Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km,37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:41.7±1.4,22°.1S×0°.2×179°.3W×0°.2,h600km,n22,
σ1§55/24,mb4.4/9,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HBZ	**Hicks Bay**	**15.60**	**187**	*e*P		**P**	**18 48 53.1**	**-2.1**
URZ	**Urewera**	**16.41**	**190**	P		**P**	**18 49 01.5**	**-1.1**
MRZ	**Mangatainoka R**	**19.02**	**192**	*e*P		**P**	**18 49 26.7**	**+0.3**
DIW	**D'Urville Isla**	**19.52**	**195**	*e*P		**P**	**18 49 27.3**	**-3.6**
CAW	**Cannon Point**	**19.55**	**193**	*e*P		**P**	**18 49 31.7**	**+0.5**
OTW	**Orongorongo Tu**	**19.73**	**193**	*e*P		**P**	**18 49 33.0**	**+0.2**
MOW	**Moikau**	**19.82**	**192**	*e*P		**P**	**18 49 35.5**	**+1.9**
THZ	**Tophouse**	**20.68**	**197**	*e*P		**P**	**18 49 42.0**	**+0.5**
KHZ	**Kahutara**	**21.14**	**195**	P		**P**	**18 49 46.2**	**+0.8**
ARMA	**Armidale**	**27.28**	**246**	*e*P		**P**	**18 50 42.4**	**+2.3**
	4.9nm,0.5s							
CTA	**Charters Tower**	**32.13**	**267**	⇑*i*P		**P**	**18 51 22.3**	**+0.5**
	13nm,0.5s							
STKA	**Stephens Creek**	**36.00**	**246**	*e*P		**P**	**18 51 55.3**	**+1.5**
	3.1nm,0.4s							
ASAR	**Alice Springs**	**42.97**	**259**	P		**P**	**18 52 50.1**	**+0.4**
	9.8nm,0.5s,baz=92,slow=8.2,SNR=47							
ASAR				S		**S**	**18 58 31.3**	**-1.6**
	1.0nm,0.8s,baz=95,slow=15,SNR=5.7							
ASPA	**Alice Springs**	**42.97**	**259**	*e*P		**P**	**18 52 50.1**	**+0.4**
WRA	**Warramunga Arr**	**43.18**	**264**	P		**P**	**18 52 51.0**	**-0.4**
	1.8nm,0.3s,baz=96,slow=7.8,SNR=93							
WRA				S		**S**	**18 58 33.0**	**-2.9**
	0.3nm,0.9s,baz=99,slow=14,SNR=3.0							
KAKA	**Kakadu**	**46.79**	**273**	*e*P		**P**	**18 53 18.2**	**-0.7**
	14nm,0.4s							
FITZ	**Fitzroy Crossi**	**51.61**	**264**	*e*P		**P**	**18 53 54.3**	**+0.1**
	12nm,0.3s							
MBWA	**Marble Bar**	**56.31**	**259**	*e*P		**P**	**18 54 27.1**	**-0.1**
	11nm,0.6s							
CMAR	**Chiang Mai Arr**	**89.48**	**290**	P		**P**	**18 57 38.1**	**+1.7**
	1.3nm,0.8s,baz=135,slow=3.1,SNR=8.1							
ARCES	**ARCESS Array B**	**130.23**	**349**	PKP		**PKiKP**	**19 03 43.7**	**-1.2**
	0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5							
FINES	**FINESS Array B**	**136.91**	**342**	PKP		**PKiKP**	**19 03 57.3**	**-1.3**
	3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4							
MLR	**Muntele Rosu**	**148.83**	**325**	PKPbc		**PKiKP**	**19 04 22.7**	**-1.0**
	0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3							

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*ISK **01** 00:51:32.6, 38°.24N×38°.74E, h10km, ML2.5/10*
*AFAD **01** 00:51:33.4, 38°.25N×38°.76E, h7km±1km, ML2.2*
ISC 01 00:51:33.2±1.0, **38°.24N**±0°.03×**38°.74E**±0°.03, **h13**km±9km, **n19**, **σ0.45/27**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDYL	**Doganyol-Malat**	**0.24**	**71**	Pg	**Pg**	**00 51 38.3**	**-0.2**
MAYA	**Malatya/Merkez**	**0.27**	**290**	P	**Pg**	**00 51 39.0**	**+0.1**
MAYA				S	**Sb**	**00 51 43.7**	**-0.7**
MAYA				IAML		00 51 45.0	
	comp=E,457nm,0.1s						
MAYA				IAML		00 51 46.0	
	comp=N,672nm,0.2s						
ESGZ	**Sivrice-Elazig**	**0.32**	**52**	Pg	**Pg**	**00 51 39.3**	**-0.5**
ELZG	**Elazig**	**0.32**	**36**	P	**Pg**	**00 51 39.7**	**-0.2**
ELZG				S	**Sg**	**00 51 44.5**	**0.0**
ELZG				IAML		00 51 45.0	
	comp=N,900nm,0.2s						
NARI	**Adyaman-Kaht**	**0.35**	**178**	P	**Pb**	**00 51 41.0**	**-0.4**
NARI				S	**Sb**	**00 51 46.5**	**-0.3**
NARI				IAML		00 51 52.0	
	comp=N,236nm,0.7s						
NARI				IAML		00 51 52.0	
	comp=E,208nm,1.0s						
CNGT	**ngs**	**0.44**	**93**	P	**Pg**	**00 51 41.5**	**-0.4**
CNGT				S	**Sg**	**00 51 48.3**	**+0.3**
CNGT				IAML		00 51 49.0	
	comp=N,356nm,0.8s						
CNGT				IAML		00 51 49.0	
	comp=E,177nm,0.2s						
SVRC	**Sivrice-ELAZID**	**0.47**	**72**	Pg	**Pg**	**00 51 42.0**	**-0.5**
SVRC				Sg	**Sg**	**00 51 49.3**	**+0.5**
ESIJ	**Sivrice-Elazig**	**0.49**	**64**	Pg	**Pg**	**00 51 42.9**	**-0.1**
ELZ	**Elazig**	**0.58**	**39**	P	**Pg**	**00 51 44.1**	**-0.5**
ELZ				S	**Sg**	**00 51 52.6**	**+0.2**
ELZ				IAML		00 51 54.0	
	comp=N,98nm,0.4s						
ELZ				IAML		00 51 54.0	
	comp=E,119nm,0.4s						
MDNT	**Maden**	**0.76**	**78**	P	**Pg**	**00 51 47.6**	**-0.3**
MDNT				S	**Sb**	**00 51 58.3**	**-0.2**
MDNT				IAML		00 52 00.0	
	comp=E,53nm,0.5s						
MDNT				IAML		00 52 02.0	
	comp=N,74nm,0.4s						
URFA	**Urfa**	**0.80**	**175**	Pg	**Pg**	**00 51 48.5**	**-0.2**
MCKZ	**Bingol**	**0.90**	**12**	P	**Pg**	**00 51 49.9**	**-0.8**
MCKZ				S	**Sb**	**00 52 02.9**	**+0.2**
MCKZ				IAML		00 52 03.0	
	comp=E,122nm,0.3s						
MCKZ				IAML		00 52 04.0	
	comp=N,78nm,0.5s						
ARPR	**Arapgir-MALATY**	**0.91**	**340**	Pg	**Pg**	**00 51 50.6**	**-0.3**
DYBB	**Diyarbakir**	**1.14**	**104**	Pn	**Pn**	**00 51 55.1**	**+0.2**
ILIC	**ilic-Erzincan**	**1.22**	**354**	Pn	**Pb**	**00 51 56.3**	**0.0**
ERZN	**Erzincan**	**1.55**	**29**	Pn	**Pn**	**00 52 00.9**	**+0.3**
YEDI	**Yedisu-Bingol**	**1.85**	**49**	Pn	**Pn**	**00 52 05.3**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.94**	**92**	Pn	**Pn**	**00 52 06.7**	**+0.9**
KARO	**Karliova-Bingo**	**2.10**	**59**	Pn	**Pn**	**00 52 08.8**	**+0.6**

*IDC **01** 01:06:41.6±0.5, 5°.27S×140°.66E, h0km, mb4.3/16, mbtmp4.4/22, ML4.4/5, MS3.5/12, Error ellipse: s-maj=19.5km s-min=12.5km az=81.0*
*BJI **01** 01:06:41.4, 5°.59S×140°.76E, h19km, mB5.0/5, mb4.7/33, Ms7 3.9/1*
*DJA **01** 01:06:43.7±0.2, 5°.2S±2°×14°.1E±°, h10km, ML5.1/37, mb4.7/37, mB5.7/9, MLv5.2/11, Mw4.6/48, Mw(mB)5.2/9*
*GFZ **01** 01:06:43.4±0.2, 5°.3S±3°×14°.1E±°, h10km, M4.6/29, mb4.7/29, Error ellipse: s-maj=7.2km s-min=4.2km az=45.9, confirmed*
*NEIC **01** 01:06:43.5±1.5, 5°.33S±0°.05×140°.50E±0°.06, h10km±1km, mb4.8/55, Error ellipse: s-maj=10.9km s-min=6.4km az=237.0*
ISC 01 01:06:43.0±0.3, **5°.41S**±0°.04×**140°.51E**±0°.05, **h10**km, **n368**, **σ1°.24/362**, **mb4.8/51**, **MS3.6/8**, **2D**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**2.82**	**353**	P	**Pn**	**01 07 29.8**	**+1.6**
GENI	**Genyem**	**2.82**	**353**	P	**Pn**	**01 07 29.6**	**+1.3**
JAY	**Jayapura**	**2.89**	**4**	Pn	**Pn**	**01 07 28.6**	**-0.5**
	72nm,0.3s,baz=191,slow=11,SNR=90						
JAY				Sn	**Sn**	**01 08 02.9**	**-1.1**
	91nm,0.3s,baz=102,slow=23,SNR=6.2						
	440nm,0.7s						
JAY	**Jayapura**	**2.89**	**4**	P	**Pn**	**01 07 28.6**	**-0.5**
JAY	**Jayapura**	**2.89**	**4**	P	**Pn**	**01 07 28.6**	**-0.5**
SRPI	**Serui, Papua**	**5.53**	**309**	P	Pn	01 08 10.7	+5.2
BAKI	**Biak**	**6.08**	**313**	P	**Pn**	**01 08 17.4**	**+4.4**
	0.5nm159nm,1.0s						
RKPI	**Ransiki, Papua**	**7.42**	**301**	P	**Pn**	**01 08 34.4**	**+3.0**
	69nm,0.7s						
RKPI	**Ransiki, Papua**	**7.42**	**301**	P	**Pn**	**01 08 33.1**	**+1.7**
MANU	**Manus Island**	**7.61**	**64**		**Pn**	**01 08 34.4**	**+0.2**
PMG	**Port Moresby**	**7.69**	**121**	Pn	**Pn**	**01 08 34.0**	**-1.2**
	6.9nm,0.3s,baz=256,slow=17,SNR=4.0						
PMG				Sn	**Sn**	**01 10 02.8**	**+0.4**
	2.3nm,0.3s,baz=281,slow=17,SNR=1.3						
PMG	**Port Moresby**	**7.69**	**121**	Pn	**Pn**	**01 08 35.7**	**+0.5**
PMG	**Port Moresby**	**7.69**	**121**	P	**Pn**	**01 08 31.7**	**-3.5**
	57nm,0.8s						
PMG	**Port Moresby**	**7.69**	**121**	P	**Pn**	**01 08 36.3**	**+1.1**
FAKI	**Fak Fak**	**8.61**	**286**		**Pn**	**01 08 48.1**	**+0.3**
FAKI	**Fak Fak**	**8.61**	**286**	P	**Pn**	**01 08 51.4**	**+3.6**
	59nm,0.8s						
FAKI	**Fak Fak**	**8.61**	**286**	P	**Pn**	**01 08 49.1**	**+1.3**
COEN	**Coen**	**8.89**	**163**		**Pn**	**01 08 54.0**	**+2.4**
COEN	**Coen**	**8.89**	**163**	P	**Pn**	**01 08 53.8**	**+2.2**
SAUI	**Saumlaki**	**9.50**	**254**	Pn	**Pn**	**01 09 01.4**	**+1.4**
SIJI	**Sorong**	**10.28**	**296**	Pn	**Pn**	**01 09 11.6**	**+0.9**
	4.3nm,0.3s,baz=83,slow=11,SNR=13						
SIJI				Sn	**Sn**	**01 11 04.5**	**-1.5**
	2.3nm,0.3s,baz=247,slow=23,SNR=2.0						
SIJI				LR	LR	01 14 12.9	
	comp=Z,317nm,18.0s,baz=237,slow=44						
	22nm,0.6s						
SIJI	**Sorong**	**10.28**	**296**	P	**Pn**	**01 09 14.2**	**+3.5**
	40nm,0.8s						
SIJI	**Sorong**	**10.28**	**296**	P	**Pn**	**01 09 12.7**	**+2.0**
SWI	**Sorong**	**10.28**	**296**	P	**Pn**	**01 09 12.6**	**+1.8**
MTN	**Manton Dam**	**11.84**	**231**		**Pn**	**01 09 32.4**	**+0.3**
MTN	**Manton Dam**	**11.84**	**231**	P	**Pn**	**01 09 32.5**	**+0.4**
KRAI	**Karang Ratu**	**12.26**	**279**	P	**Pn**	**01 09 38.1**	**+0.3**
MTSU	**Mount Surprise**	**13.18**	**164**	P	**Pn**	**01 09 51.4**	**+1.0**
QIS	**Mount Isa**	**15.08**	**183**	P	**Pn**	**01 10 15.8**	**-0.5**
KNRA	**Kununurra**	**15.40**	**228**	P	**Pn**	**01 10 19.1**	**-1.4**
KNRA				IAmb	IAmb	01 10 26.6	
	comp=Z,36nm,0.8s						
WB0	**Warramunga Arr**	**15.46**	**202**		**Pn**	**01 10 20.2**	**-1.2**
CTA	**Charters Tower**	**15.62**	**160**	Pn	**P**	**01 10 30.5**	**+2.8**
	comp=Z,1.1nm,0.3s,baz=345,slow=11,SNR=15						
CTA				Lg	Lg	01 15 00.4	
	comp=Z,0.4nm,0.3s,baz=244,slow=21,SNR=4.1						
CTA				LR	LR	01 15 44.5	
	comp=Z,86nm,21.6s,baz=346,slow=35						
CTAO	**Charters Tower**	**15.62**	**160**	Pn	**Pn**	**01 10 25.0**	**+1.6**
CTAO	**Charters Tower**	**15.62**	**160**	P	**Pn**	**01 10 22.7**	**-0.7**
WRAB	**Tennant Creek**	**15.63**	**202**	P	**Pn**	**01 10 22.3**	**-1.3**
WRA	**Warramunga Arr**	**15.64**	**202**	Pn	**Pn**	**01 10 23.5**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=14,slow=13,SNR=45						
WRA				Sn	**Sn**	**01 13 13.4**	**-3.9**
	comp=Z,1.0nm,0.3s,baz=20,slow=22,SNR=6.7						
WRA				Lg	Lg	01 15 01.4	
	comp=Z,1.5nm,0.3s,baz=24,slow=30,SNR=5.9						
WRA	**Warramunga Arr**	**15.64**	**202**		**Pn**	**01 10 21.3**	**-2.5**
SOEI	**Soe**	**16.67**	**254**		**Pn**	**01 10 37.2**	**+0.1**
SOEI				IAmb	IAmb	01 10 46.5	
	comp=Z,96nm,0.9s						
SOEI	**Soe**	**16.67**	**254**	P	**P**	**01 10 43.1**	**+3.6**
SOEI	**Soe**	**16.67**	**254**	P	**Pn**	**01 10 38.0**	**+1.0**
BATI	**Baumata**	**17.36**	**253**	P	**Pn**	**01 10 46.1**	**+0.5**
	comp=Z,2.1nm,0.3s,baz=82,slow=9.9,SNR=1.6						
BATI				S	**Sn**	**01 13 50.3**	**-8.7**
	comp=Z,38nm,0.5s,baz=50,slow=8.6,SNR=1.9						
	comp=Z,31nm,0.4s						
MMRI	**Maumere**	**18.42**	**259**	P	**Pn**	**01 10 59.6**	**+0.9**
GTOI	**Gorontalo**	**18.48**	**288**	P	**Pn**	**01 11 04.1**	**+4.6**
	comp=Z,34nm,0.9s						
AS31	**Alice Springs**	**19.23**	**199**		**P**	**01 11 07.8**	**+0.2**
ASAR	**Alice Springs**	**19.23**	**199**	P	**Pn**	**01 11 09.9**	**+1.4**
	comp=Z,2.0nm,0.3s,baz=27,slow=8.3,SNR=47						
ASAR				S	**Sn**	**01 14 38.0**	**-6.3**
	comp=Z,8.4nm,1.0s,baz=16,slow=27,SNR=4.3						
ASAR				Lg	Lg	01 16 53.3	
	comp=Z,0.2nm,0.3s,baz=14,slow=29,SNR=4.4						
ASAR				LR	LR	01 19 08.4	
	comp=Z,307nm,20.6s,baz=7.0,slow=38						
	comp=Z,9.6nm,0.5s						
ASAR	**Alice Springs**	**19.23**	**199**		**P**	**01 11 08.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.24**	**228**	P	**P**	**01 11 08.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=57,slow=8.7,SNR=14						
FITZ				S	Sn	01 14 35.0	-9.5
	comp=Z,16nm,0.4s,baz=134,slow=15,SNR=6.7						
FITZ				Lg	Lg	01 16 57.2	
	comp=Z,0.9nm,0.3s,baz=162,slow=17,SNR=3.2						
FITZ				LR	LR	01 19 22.8	
	comp=Z,248nm,21.8s,baz=36,slow=39						
	comp=Z,8.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.24**	**228**		**P**	**01 11 06.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.24**	**228**	P	**P**	**01 11 08.3**	**+0.6**
APSI	**Ampana**	**19.36**	**283**	P	**Pn**	**01 11 12.9**	**+2.8**
	comp=Z,44nm,1.1s						
GUMO	**Guam**	**19.37**	**13**	S	Sn	01 14 31.2	-16
	comp=Z,128nm,0.3s,baz=62,slow=22,SNR=5.6						
GUMO				LR	LR	01 18 20.8	
	comp=Z,81nm,18.8s,baz=189,slow=36						
BSSI	**Bau Bau, Buton**	**19.93**	**267**	P	**P**	**01 11 14.2**	**-1.2**
KAPI	**Kappang**	**20.68**	**270**	P	**P**	**01 11 24.4**	**+1.0**
	comp=Z,4.8nm,0.6s,baz=131,slow=12,SNR=2.0						
	comp=Z,4.8nm,0.6s						
KAPI	**Kappang**	**20.68**	**270**	P	Pn	01 11 26.6	+0.8
KAPI	**Kappang**	**20.68**	**270**	P	**P**	**01 11 23.0**	**-0.4**
SPSI	**Sidrap Palu**	**20.73**	**273**	P	Pn	01 11 27.1	+0.8
SPSI	**Sidrap Palu**	**20.73**	**273**	P	**P**	**01 11 25.0**	**+1.1**
TOLI2	**Tolitoli**	**20.75**	**288**	P	**P**	**01 11 22.5**	**-1.7**
TOLI2				IAmb	IAmb	01 11 28.8	
	comp=Z,33nm,0.9s						
TOLI2	**Tolitoli**	**20.75**	**288**	P	**P**	**01 11 24.4**	**+0.3**
PCI	**Palu**	**21.12**	**282**	P	**P**	**01 11 32.9**	**+4.7**
	comp=Z,73nm,1.1s						
QLP	**Quilpie**	**21.35**	**171**	P	**P**	**01 11 32.0**	**+1.5**
WBSI	**Waikabubak, Su**	**21.35**	**257**	P	**P**	**01 11 33.5**	**+2.7**
	comp=Z,80nm,0.8s						
WBSI	**Waikabubak, Su**	**21.35**	**257**	P	**P**	**01 11 31.7**	**+1.0**
MPSI	**Mapaga**	**21.36**	**285**	P	**P**	**01 11 31.6**	**+0.7**
PATS	**Pohnpei**	**21.53**	**56**	P	**P**	**01 11 30.3**	**-2.3**
MMSI	**Mamuju**	**21.72**	**276**	P	**P**	**01 11 37.2**	**+2.6**
	comp=Z,14nm,0.4s						
INKA	**Innaminka**	**22.21**	**179**		**P**	**01 11 39.5**	**-0.2**
EIDS	**Eidsvold**	**22.28**	**154**	P	**P**	**01 11 40.1**	**-0.4**
EIDS				IAmb	IAmb	01 11 48.3	
	comp=Z,16nm,0.8s						
EIDS	**Eidsvold**	**22.28**	**154**	P	**P**	**01 11 42.4**	**+1.8**
RMQ	**Roma**	**22.39**	**160**	P	**P**	**01 11 42.4**	**+0.6**
TWSI	**Taliwang, Sumb**	**23.68**	**261**	P	**P**	**01 11 53.8**	**-1.3**
JAGI	**Jajag, Banyuwa**	**26.34**	**262**	P	**P**	**01 12 20.2**	**+0.7**
STKA	**Stephens Creek**	**26.35**	**178**	P	**P**	**01 12 21.0**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=10,slow=7.4,SNR=4.6						
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**26.35**	**178**	P	**P**	**01 12 20.2**	**+0.8**
CMSA	**Cobar Meteorol**	**26.44**	**170**	P	**P**	**01 12 20.0**	**-0.2**
ARMA	**Armidale**	**26.99**	**158**	P	**P**	**01 12 25.1**	**-0.1**
BBOO	**Buckleboo**	**27.57**	**188**	P	**P**	**01 12 30.2**	**-0.2**
BBOO	**Buckleboo**	**27.57**	**188**	P	**P**	**01 12 32.0**	**+1.6**
MGCD	**Mangrove Creek**	**29.36**	**162**	P	**P**	**01 12 47.5**	**+1.1**
MEEK	**Meekatharra**	**29.70**	**222**	P	**P**	**01 12 50.4**	**+0.9**
JCJ	**Chichijima**	**32.36**	**3**	LR	LR	01 24 09.4	
	comp=Z,56nm,20.0s,baz=119,slow=32						
MILA	**Mila**	**32.47**	**167**	P	**P**	**01 13 15.2**	**+1.4**
LEM	**Lembang**	**32.73**	**266**	LR	LR	01 31 26.4	
	comp=Z,149nm,18.1s,baz=284,slow=45						
BLDU	**Ballidu**	**33.62**	**219**	P	**P**	**01 13 24.6**	**+0.7**
MJAR	**Matsushiro Arr**	**41.79**	**357**	P	**P**	**01 14 30.0**	**-2.9**
	comp=Z,1.8nm,0.7s,baz=163,slow=8.9,SNR=2.7						
	comp=Z,1.8nm,0.7s						
RPSI	**Rantau Prapat**	**42.32**	**280**	P	**P**	**01 14 36.4**	**-1.1**
NJ2	**Nanjing**	**42.59**	**332**	eP	**P**	**01 14 41.2**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,33nm,0.6s						
KSRS	**Korea Array**	**44.23**	**346**	P	**P**	**01 14 51.4**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=169,slow=8.5,SNR=1.7						
KSRS				LR	LR	01 30 37.5	
	comp=Z,28nm,20.9s,baz=240,slow=32						
	comp=Z,1.0nm,0.6s						
MLZ	**Mavora Lakes**	**46.49**	**153**	P	**P**	**01 15 10.9**	**+0.3**
TUWZ	**Tuamarina**	**46.64**	**145**	P	**P**	**01 15 12.4**	**+0.7**
CM31	**Chiang Mai Arr**	**47.35**	**301**	P	**P**	**01 15 16.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**47.35**	**301**	P	**P**	**01 15 18.2**	**+0.6**
	comp=Z,7.1nm,0.9s,baz=126,slow=6.2,SNR=12						
	comp=Z,7.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**47.35**	**301**		**P**	**01 15 16.6**	**-0.9**
CHTO	**Chiang Mai**	**47.51**	**302**	P	**P**	**01 15 18.6**	**-0.2**
CHTO				IAmb	IAmb	01 15 22.9	
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**47.51**	**302**	P	**P**	**01 15 18.9**	**+0.1**
	comp=Z,8.8nm,1.0s						
LYN	**LuoYang**	**47.75**	**328**	P	**P**	**01 15 24.4**	**+4.0**
LYN				pmax	pmax		
	comp=Z,24nm,0.8s						
PZH	**PanZhiHua**	**49.16**	**312**	P	**P**	**01 15 33.5**	**+1.9**
BNX	**BinXian**	**52.25**	**348**	⇓P	**P**	**01 15 54.5**	**+0.1**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**53.14**	**333**	eP	**PKiKP**	**01 23 41.1**	**-6.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**53.14**	**333**	eP	**P**	**01 16 02.9**	**+1.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,47nm,5.0s						
LZH	**Lanzhou**	**53.71**	**323**	eP	**P**	**01 16 07.2**	**+1.6**
LZH				sP	sP	01 16 14.1	+4.0
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA2	**Gaotai**	**58.38**	**324**	eP	**P**	**01 16 40.4**	**+1.5**
GTA2				pP	sP	01 16 43.9	+0.5
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PETK	**Petropavlovsk-**	**60.09**	**12**	P	**P**	**01 16 47.5**	**-2.8**
	comp=Z,1.4nm,0.4s,baz=188,slow=7.0,SNR=5.4						
PETK				LR	LR	01 40 45.5	
	comp=Z,22nm,20.3s,baz=224,slow=34						
	comp=Z,1.4nm,0.4s						
PETK	**Petropavlovsk-**	**60.09**	**12**	P	**P**	**01 16 48.0**	**-2.3**
ULN	**Ulaanbaatar**	**60.66**	**335**	P	**P**	**01 16 52.8**	**-1.8**
ULN				IAmb	IAmb	01 18 47.3	
	comp=Z,16nm,1.9s						
SONM	**Songino Array**	**60.92**	**334**	P	**P**	**01 16 56.1**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=164,slow=6.5,SNR=4.6						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**60.92**	**334**	P	**P**	**01 16 55.3**	**-0.9**
SONM				IAmb	IAmb	01 17 02.1	
	comp=Z,10nm,1.9s						
EVN	**Everest**	**61.46**	**306**		**P**	**01 16 59.5**	**-1.5**
EVN				IAmb	IAmb	01 17 13.3	
	comp=Z,9.1nm,1.2s						
WMQ	**Urumqi**	**68.23**	**322**	eP	**P**	**01 17 46.1**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				L	L		
	comp=Z,55nm,15.1s						
VNDA	**Vanda**	**72.95**	**175**	P	**P**	**01 18 13.0**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=318,slow=7.1,SNR=6.1						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**72.95**	**175**	P	**P**	**01 18 12.6**	**+0.4**
MKAR	**Makanchi Array**	**73.01**	**322**	P	**P**	**01 18 13.9**	**+0.7**
	comp=Z,4.8nm,0.8s,baz=118,slow=7.2,SNR=30						
	comp=Z,4.8nm,0.8s						
MKAR	**Makanchi Array**	**73.01**	**322**		**P**	**01 18 12.9**	**-0.3**
MAKZ	**Makanchi**	**73.21**	**322**		**P**	**01 18 13.4**	**-0.9**
MAKZ				IAmb	IAmb	01 18 19.2	
	comp=Z,10nm,0.9s						
PDGK	**Podgornoye**	**73.27**	**318**		**P**	**01 18 14.4**	**-0.5**
PRZ	**Przheval'sk**	**73.66**	**317**	P	**P**	**01 18 16.7**	**-0.5**
PRZ				IAmb	IAmb	01 18 23.4	
	comp=Z,15nm,1.0s						
UNV	**Unalaska Valle**	**73.76**	**30**	P	**P**	**01 18 17.6**	**+0.3**
	baz=236						
KDJ	**Kajisay**	**74.35**	**316**		**P**	**01 18 21.0**	**-0.4**
KDJ				IAmb	IAmb	01 18 26.6	
	comp=Z,6.7nm,1.0s						
NIL	**Nilore**	**74.38**	**307**	P	**P**	**01 18 19.9**	**-1.6**
NIL				IAmb	IAmb	01 18 26.1	
	comp=Z,18nm,1.2s						
KSH2	**Kashi**	**74.40**	**313**	P	**P**	**01 18 22.6**	**+0.9**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	**Zalesovo Array**	**75.16**	**330**	P	**P**	**01 18 24.6**	**-0.9**
ZALV	**Zalesovo Beam**	**75.16**	**330**	P	**P**	**01 18 25.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=114,slow=6.6,SNR=6.3						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**75.16**	**330**		**P**	**01 18 23.9**	**-1.6**
BOOM	**Boomskoye usch**	**75.34**	**316**	P	**P**	**01 18 26.6**	**-0.5**
BOOM				IAmb	IAmb	01 18 32.9	
	comp=Z,9.7nm,1.0s						
AAK	**Ala-Archa**	**76.39**	**316**	P	**P**	**01 18 32.2**	**-0.8**
KURK	**Kurchatov**	**76.95**	**325**		**P**	**01 18 35.1**	**-0.7**
KURK				IAmb	IAmb	01 18 40.8	
	comp=Z,6.7nm,1.1s						
KURBB	**Kurchatov Arra**	**76.96**	**325**	P	**P**	**01 18 36.1**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=120,slow=3.9,SNR=12						
	comp=Z,2.5nm,0.9s						
TIXI	**Tiksi**	**77.29**	**356**	LR	LR	01 52 40.2	
	comp=Z,19nm,18.1s,baz=336,slow=36						
SDPT	**Sand Point**	**77.53**	**30**	P	**P**	**01 18 39.0**	**+0.1**
	baz=241						
M11K	**Mekoryuk**	**77.63**	**24**	P	**P**	**01 18 39.6**	**+0.3**
	baz=235						
GAMB	**Gambell**	**77.69**	**20**	P	**P**	**01 18 40.0**	**+0.4**
	baz=229						
CNBA	**Chernabura Isl**	**77.73**	**31**	P	**P**	**01 18 39.7**	**-0.3**
CHNA	**Chernabura Isl**	**77.73**	**31**	P	**P**	**01 18 40.2**	**+0.2**
	baz=242						
BTK	**Batken**	**78.17**	**313**	P	**P**	**01 18 42.3**	**-0.7**
GAR	**Garm**	**78.22**	**312**	P	**P**	**01 18 42.4**	**-0.9**
GAR				IAmb	IAmb	01 18 47.9	
	comp=Z,9.2nm,0.8s						
S14K	**Fog Glacier**	**78.44**	**30**	P	**P**	**01 18 44.1**	**0.0**
	baz=242						
M13K	**Dall Lake**	**78.82**	**25**	P	**P**	**01 18 46.5**	**+0.6**
	baz=237						
CHGR	**Chuyangaron**	**78.99**	**311**	P	**P**	**01 18 46.2**	**-1.3**
CHGN	**Chignik**	**79.01**	**30**	P	**P**	**01 18 47.5**	**+0.4**
	baz=243						
K13K	**Kusilvak Mount**	**79.13**	**23**	P	**P**	**01 18 48.3**	**+0.7**
	baz=236						
KK31	**Karatay Array**	**79.31**	**316**		**P**	**01 18 48.9**	**-0.2**
KKAR	**Karatay Array**	**79.31**	**316**		**P**	**01 18 48.9**	**-0.2**
M14K	**Bethel**	**79.58**	**25**	P	**P**	**01 18 50.8**	**+0.7**
	baz=239						
L14K	**Kuka Creek**	**79.59**	**24**	P	**P**	**01 18 50.5**	**+0.3**
L14K				IAmb	IAmb	01 18 51.6	
	comp=Z,8.7nm,0.7s						
L14K	**Kuka Creek**	**79.59**	**24**	P	**P**	**01 18 50.8**	**+0.7**
	baz=238						
O15K	**Ungalikthiuk R**	**79.71**	**27**	P	**P**	**01 18 51.5**	**+0.7**
	baz=241						
N15K	**Kwethluk River**	**80.08**	**26**	P	**P**	**01 18 53.4**	**+0.5**
	baz=240						
TNA	**Tin City**	**80.08**	**19**	P	**P**	**01 18 53.1**	**+0.4**
	baz=232						
M15K	**Kasigluk River**	**80.09**	**25**	P	**P**	**01 18 53.5**	**+0.6**
	baz=240						
L15K	**Ungalak Mounta**	**80.26**	**24**	P	**P**	**01 18 53.8**	**+0.1**
	baz=239						
MAW	**Mawson**	**80.32**	**202**	P	**P**	**01 18 55.8**	**+1.8**
	comp=Z,5.6nm,1.0s,baz=88,slow=5.0,SNR=6.5						
	comp=Z,5.6nm,1.0s						
MAW	**Mawson**	**80.32**	**202**		**P**	**01 18 55.5**	**+1.4**
K15K	**Wolf Creek Mou**	**80.56**	**24**	P	**P**	**01 18 55.8**	**+0.4**
	baz=239						
R17L	**Mt. Peulik Vol**	**80.61**	**29**	P	**P**	**01 18 56.0**	**+0.2**
	baz=244						
O16K	**Kokwok River B**	**80.69**	**27**	P	**P**	**01 18 56.6**	**+0.4**
	baz=242						
N16K	**Nishlik Lake**	**80.81**	**26**	P	**P**	**01 18 57.2**	**+0.4**
	baz=242						
M16K	**Timber Creek**	**80.98**	**25**	P	**P**	**01 18 58.2**	**+0.4**
	baz=241,SNR=5.1						
G15K	**Niukluk**	**81.07**	**21**	P	**P**	**01 18 58.5**	**+0.4**
	baz=236						
L16K	**Owhat River**	**81.10**	**25**	P	**P**	**01 18 58.8**	**+0.5**
	baz=241						
Q17K	**Contact Creek**	**81.12**	**29**	P	**P**	**01 18 58.1**	**-0.5**
	baz=244						
O17K	**Koliganek Bris**	**81.22**	**27**	P	**P**	**01 18 59.4**	**+0.4**
	baz=243,SNR=7.5						
SII	**Sitkinak Islan**	**81.24**	**31**	P	**P**	**01 18 59.1**	**-0.1**
	baz=246

baz=241
E18K Tukpahlearik C 83.56 19 P P 01 19 11.5 +0.5
baz=239
J19K Poorman 83.73 23 P P 01 19 12.3 +0.3
baz=244
M20K Styx River 83.88 26 P P 01 19 13.1 +0.2
baz=246
K20K Telida 84.08 24 P P 01 19 14.1 +0.2
baz=246
H19K Roundabout Mou 84.10 22 P 01 19 13.8 0.0
H19K IAmb IAmb 01 19 15.2
comp=Z,6.4nm,1.1s
H19K Roundabout Mou 84.10 22 P P 01 19 14.1 +0.3
baz=243
G19K Purcell Mounta 84.15 21 P P 01 19 14.3 +0.2
baz=242,SNR=6.2
BRSE Bradley Lake S 84.15 28 P P 01 19 14.0 -0.2
baz=249
F19K Shaleruckik Mo 84.23 20 P P 01 19 14.7 +0.2
baz=242
J20K Nowinta River 84.39 24 P P 01 19 15.7 +0.3
J20K IAmb IAmb 01 19 16.9
comp=Z,4.8nm,1.0s
J20K Nowinta River 84.39 24 P P 01 19 15.5 +0.1
baz=245
QSPA South Pole Qui 84.55 180 P P 01 19 17.0 +0.6
comp=Z,1.4nm,0.6s,baz=344,slow=5.1,SNR=11
comp=Z,1.4nm,0.6s
QSPA South Pole Qui 84.55 180 P P 01 19 16.6 +0.2
SKT Skwentna 84.61 26 P P 01 19 16.4 -0.2
baz=248
H20K Anotleneega Mo 84.67 22 P P 01 19 16.5 -0.3
baz=245
PPLA Purkeypile 84.68 25 P P 01 19 17.2 +0.1
baz=247
E19K Redstone River 84.71 20 P P 01 19 17.1 +0.1
baz=242
C19K Lookout Ridge 84.74 18 P P 01 19 17.1 0.0
baz=240
SEW Seward 84.88 28 P P 01 19 18.1 +0.2
baz=250
CAST Castle Rocks 84.93 25 P P 01 19 17.6 -0.6
CAST IAmb IAmb 01 19 18.6
comp=Z,4.1nm,0.8s
CAST Castle Rocks 84.93 25 P P 01 19 18.0 -0.1
baz=247
CHUM Lake Minchumin 85.01 24 P P 01 19 18.3 -0.2
baz=247
F20K Avaraart Lake 85.04 21 P P 01 19 18.8 +0.3
baz=244,SNR=7.3
RC01 Rabbit Creek A 85.09 27 P P 01 19 18.4 -0.5
baz=250
L22K Petersville 85.15 26 P P 01 19 18.6 -0.7
baz=249
CUT Chulitna 85.32 26 P P 01 19 19.6 -0.4
baz=249
D20K Etivluk River 85.50 19 P P 01 19 20.3 -0.5
baz=243
H21K Melozitna Rive 85.52 22 P P 01 19 20.8 -0.2
baz=246
PMR Palmer 85.54 27 P P 01 19 21.1 0.0
baz=250
G21K Allakaket 85.61 22 P P 01 19 21.2 -0.2
baz=246
I21K Tanana 85.65 23 P P 01 19 21.7 0.0
baz=247
TRF Thorofare Moun 85.69 25 P P 01 19 21.2 -0.9
baz=249
KNK Knik Glacier 85.78 27 P P 01 19 21.6 -0.9
KNK IAmb IAmb 01 19 22.6
comp=Z,13nm,1.2s
KNK Knik Glacier 85.78 27 P P 01 19 21.8 -0.7
baz=251
P23K Montague Islan 85.82 29 P P 01 19 22.3 -0.4
baz=252
F21K Alatna River 85.91 21 P P 01 19 23.0 0.0
baz=246
B20K Meade River 85.93 18 P P 01 19 22.9 0.0
baz=242
SML Sawmill 85.97 27 P P 01 19 22.9 -0.5
SML Sawmill 85.97 27 P P 01 19 23.3 -0.2
baz=251
MLY Manley 86.08 23 P P 01 19 23.8 -0.1
baz=248
Q23K Middleton Isla 86.15 29 P P 01 19 23.9 -0.3
baz=253
H22K Ishtalitna Cre 86.16 22 P P 01 19 23.9 -0.3
baz=248
WAT1 Susitna Watana 86.21 26 P P 01 19 24.2 -0.4
baz=251
GLI Glacier Island 86.24 28 P P 01 19 24.1 -0.6
baz=252
M23K Glacier View 86.24 27 P P 01 19 24.4 -0.3
baz=251
C21K Knifeblade Rid 86.29 19 P P 01 19 24.9 +0.2
baz=244
MCK McKinley 86.36 25 P P 01 19 24.7 -0.6
baz=250
SCM Sheep Creek Mo 86.43 27 P P 01 19 25.3 -0.5
SCM Sheep Creek Mo 86.43 27 P P 01 19 25.5 -0.3
baz=252
WAT6 Susitna Watana 86.49 26 P P 01 19 26.0 -0.1
baz=251
B21K Ikpikpuk River 86.54 19 P P 01 19 26.2 +0.3
baz=245
NEA2 Nenana 86.59 24 P P 01 19 26.1 -0.3
baz=250
I23K Minto, Yukon-K 86.67 23 P P 01 19 26.7 0.0
baz=250
DHY Denali Highway 86.80 26 P P 01 19 27.3 -0.3
DHY Denali Highway 86.80 26 P P 01 19 27.6 0.0
baz=252
H23K Yukon River 86.83 23 P P 01 19 27.6 +0.1
baz=250
E22K Anaktuvuk Pass 86.86 20 P P 01 19 27.6 0.0
E22K IAmb IAmb 01 19 29.1
comp=Z,12nm,1.3s
E22K Anaktuvuk Pass 86.86 20 P P 01 19 28.0 +0.4
baz=247
KLU Klutina 86.97 27 P P 01 19 28.6 +0.2
baz=253
G23K Bananza Creek 86.97 22 P P 01 19 28.4 +0.2
baz=249
A22K Sinclair Lake 87.03 17 P P 01 19 28.9 +0.6
baz=244
M24K Tolsona, Glenn 87.03 27 P P 01 19 28.8 +0.2
baz=253
COLD Coldfoot 87.09 21 P P 01 19 29.3 +0.5
baz=249
CCB Clear Creek Bu 87.13 24 P 01 19 27.5 -1.4
CCB IAmb IAmb 01 19 28.5
comp=Z,10nm,1.3s
KAIM Kayak Island 87.23 29 P P 01 19 29.7 +0.2
baz=254
HDA Harding Lake 87.40 25 P P 01 19 30.8 +0.5
baz=252
POKR Poker Plat Res 87.43 24 P P 01 19 30.7 +0.3
baz=252
BMRM Bremner River 87.43 28 P P 01 19 30.6 0.0
baz=254
H24K Noodor Dome 87.48 23 P P 01 19 31.0 +0.3
baz=251
ILAR Eielson Array 87.54 24 P P 01 19 29.6 -1.4
comp=Z,3.3nm,0.9s,baz=256,slow=4.9,SNR=24
comp=Z,3.3nm,0.9s
D23K Nanushuk River 87.56 20 P 01 19 31.5 +0.6
D23K Nanushuk River 87.56 20 P P 01 19 31.4 +0.5
baz=248,SNR=16
E23K Chandalar 87.60 21 P P 01 19 31.6 +0.4
baz=249,SNR=10
PAX Paxson 87.60 26 P P 01 19 31.5 +0.1
baz=253
N25K Chitina, Valde 87.61 28 P P 01 19 31.8 +0.3
baz=254
K24K Donnelly Dome 87.71 25 P P 01 19 32.1 +0.3
baz=253
TOLK Toolik Lake Re 87.82 20 P P 01 19 32.9 +0.7
baz=249,SNR=6.6
C23K Itkillik River 87.91 19 P P 01 19 33.1 +0.5
baz=248,SNR=6.1
G24K Hadweenzic Riv 87.92 22 P P 01 19 33.2 +0.4
baz=251,SNR=5.4
AB31 Akbulak array 87.93 320 P 01 19 31.9 -1.2
AB31 IAmb IAmb 01 19 38.0
comp=Z,7.1nm,1.3s
ABKAR Akbulak array 87.93 320 P 01 19 31.9 -1.3
E24K Your Creek 88.00 21 P P 01 19 33.4 +0.2
baz=250
F24K Squaw Lake 88.03 21 P P 01 19 33.7 +0.4
baz=251,SNR=11
CRQE Cirque 88.09 29 P P 01 19 33.9 +0.1
baz=256
RIDG Independent Ri 88.09 25 P P 01 19 33.5 -0.2
baz=254,SNR=7.2
J25K Salcha River, 88.11 25 P P 01 19 33.3 -0.5
baz=253,SNR=6.9
D24K Happy Valley 88.25 20 P P 01 19 34.7 +0.4
D24K Happy Valley 88.25 20 P P 01 19 34.7 +0.4
baz=250
MCARA McCarthy VSAT 88.28 28 P P 01 19 34.7 +0.1
baz=256
G25K Bearman Lake 88.46 22 P P 01 19 35.3 +0.1
baz=253
C24K Franklin Bluff 88.49 19 P P 01 19 35.7 +0.4
baz=250
SCRK Sand Creek 88.52 25 P P 01 19 35.7 -0.1
baz=255
M26K Nabesna, AK 88.55 27 P P 01 19 36.2 +0.3
baz=256
L26K Log Cabin Wild 88.55 26 P P 01 19 35.7 -0.1
baz=255
F25K Christian Rive 88.87 22 P P 01 19 37.7 +0.4
baz=253,SNR=5.7
M27K Edge Creek, AK 89.04 27 P P 01 19 38.5 +0.2
baz=257,SNR=7.7
E25K Arctic Village 89.06 21 P P 01 19 38.1 0.0
baz=253
D25K Kavik River 89.13 20 P P 01 19 39.0 +0.6
baz=252
I26K Coal Creek Min 89.21 24 P P 01 19 39.0 +0.1
baz=255
BCAR Beaver Creek A 89.25 26 P 01 19 39.8 +0.6
K27K Chicken 89.35 25 P P 01 19 39.0 -0.5
G26K Porcupine Rive 89.39 22 P P 01 19 40.5 +0.9
baz=255,SNR=5.4
F26K Sheenjek River 89.45 22 P P 01 19 40.7 +0.7
baz=254,SNR=7.6
O28M Mount Upton 89.48 29 P P 01 19 40.9 +0.3
baz=258
BVCY Beaver Creek 89.52 27 P P 01 19 40.9 +0.5
baz=258
YUK3 Moose Creek 89.56 28 P P 01 19 40.9 0.0
baz=258,SNR=8.2
YUK8 Steele Glacier 89.79 28 P P 01 19 42.1 +0.2
baz=258
I27K Kandik River 89.91 24 P P 01 19 42.6 +0.4
baz=257,SNR=6.5
H27K Steamboat Moun 90.08 23 P P 01 19 43.9 +0.9
H27K IAmb IAmb 01 19 44.8
comp=Z,7.8nm,1.5s
H27K Steamboat Moun 90.08 23 P P 01 19 43.5 +0.5
baz=257
C27K Jago River 90.12 20 P P 01 19 43.3 +0.3
baz=255
P29M Windy Craggy 90.47 30 P P 01 19 45.3 +0.4
baz=260
DAWY Dawson 90.51 26 P P 01 19 45.5 +0.5
baz=259,SNR=5.9
E27K Coleen River 90.51 21 P P 01 19 45.4 +0.5
baz=257
I28M Miner Creek 90.56 24 P P 01 19 45.8 +0.5
baz=258
M29M Somme Creek 90.61 27 P P 01 19 45.9 +0.3
baz=260,SNR=6.5
HYT Haines Junctio 90.78 29 P P 01 19 46.6 +0.1
baz=260
L29M L29M 90.88 27 P P 01 19 46.9 +0.1
baz=260,SNR=9.1
D27M Malcolm River 90.97 20 P P 01 19 47.2 +0.1
baz=257
N30M Aishikik Lake 91.08 28 P P 01 19 47.4 -0.4
baz=261
K29M Barlow Dome 91.28 26 P P 01 19 48.9 +0.2
baz=260,SNR=11
H29M Whitestone 91.34 24 P P 01 19 48.9 +0.1
baz=260
E28M Babbage River 91.34 21 P P 01 19 48.9 +0.2
baz=259
M30M Minto, Yukon 91.40 27 P P 01 19 49.0 -0.2
baz=261
O30N Mendenhall 91.46 29 P P 01 19 49.6 +0.1
baz=262
G29M Pine Creek 91.59 23 P P 01 19 50.0 0.0
baz=260
SKAG Skagway 91.65 31 P P 01 19 50.1 -0.2
baz=262
N31M Braeburn, Yuko 91.71 29 P P 01 19 50.3 -0.3
baz=262
S32K Killisnoo 91.78 33 P P 01 19 50.9 -0.1
baz=263
E29M Blow River 91.90 22 P P 01 19 51.4 +0.1
baz=260
J30M Hart River 91.91 25 P P 01 19 51.0 -0.6
baz=262
R32K Eaglecrest 91.92 32 P P 01 19 51.2 -0.4
baz=263
I30M Mount Dempster 91.99 25 P P 01 19 51.7 -0.3
baz=262
EPYK Eagle Plains 92.02 24 P P 01 19 51.9 -0.1
baz=261
WHY Whitehorse 92.03 29 P P 01 19 52.0 -0.3
baz=263
U33K Whale Pass 92.42 34 P P 01 19 53.6 -0.4
baz=264
F30M Barrier River 92.56 22 P P 01 19 54.2 -0.2
baz=262
WRAK Wrangell Islan 92.88 34 P P 01 19 56.0 -0.1
baz=265
H31M Peel River 92.90 24 P P 01 19 55.7 -0.3
baz=263
N32M Quiet Lake 92.96 29 P P 01 19 56.3 -0.2
baz=264
P33M Teslin, Yukon 93.00 30 P P 01 19 56.3 -0.4
baz=264
ELIB Princess Elisa 93.02 196 *dP* P 01 19 57.9 +1.2
comp=Z,4.1nm,0.8s
G31M Satah River 93.06 23 P P 01 19 56.5 -0.1
baz=264
Q32M Nakina River 93.16 31 P P 01 19 57.1 -0.5
baz=265
V35K Ketchikan 93.20 35 P P 01 19 57.2 -0.3
baz=265
INK Inuvik 93.49 22 P P 01 19 58.7 +0.1
baz=264
MMPY Sheldon Lake, 93.95 28 P P 01 20 00.6 -0.3
baz=266
T35M Bob Quinn 94.08 33 P P 01 20 01.1 -0.6
baz=266
DLBC Dease Lake 94.29 32 P P 01 20 02.5 -0.2
baz=267
C36M Paulatuk 96.95 21 P P 01 20 14.5 +0.1
baz=273
YBH Yreka Blue Hor 98.63 49 LR LR 02 01 16.1
comp=Z,29nm,18.0s,baz=354,slow=33
SNAA Sanae 99.43 191 LR LR 02 07 38.1
comp=Z,43nm,18.4s,baz=316,slow=37
YKA Yellowknife Ar 101.64 27 P **Pdif** 01 20 34.7 -0.8
comp=Z,0.3nm,0.5s,baz=286,slow=4.6,SNR=4.0
EKA Eskdalemuir Ar 122.36 336 PKP **PKPdf** 01 25 38.8 +0.3
comp=Z,0.3nm,0.6s,baz=31,slow=1.9,SNR=1.7
PLCA Paso Flores 125.96 151 PKP **PKiKP** 01 25 47.7 +1.3
comp=Z,1.9nm,0.9s,baz=216,slow=7.1,SNR=4.3
PLCA Paso Flores 125.96 151 PKPdf **PKiKP** 01 25 47.3 +1.0
TORD Torodi Ar. Bea 138.69 284 PKhKP PKPpre 01 25 59.6
comp=Z,0.3nm,0.5s,baz=101,slow=36,SNR=3.3
TORD PKP **PKPdf** 01 26 10.6 +0.2
comp=Z,0.9nm,0.7s,baz=97,slow=1.5,SNR=4.0
CPUP Villa Florida 144.01 152 PKP PKPbc 01 26 18.1 +0.6
comp=Z,3.2nm,0.9s,baz=207,slow=1.6,SNR=3.2
CPUP Villa Florida 144.01 152 PKPbc 01 26 17.7 +0.2
CZSB Cruzeiro do Su 144.38 111 PKPdf PKPbc 01 26 19.6 +0.5
LPAZ La Paz 144.39 128 PKP **PKPdf** 01 26 21.2 -0.3
comp=Z,6.0nm,0.7s,baz=227,slow=2.1,SNR=32
LPAZ La Paz 144.39 128 **PKPab** 01 26 19.0 -0.4
ROSC El Rosal 145.30 89 PKPbc **PKPbc** 01 26 22.3 -0.2
comp=Z,6.7nm,0.5s,baz=270,slow=3.1,SNR=5.0
ROSC El Rosal 145.30 89 **PKPbc** 01 26 20.9 -1.7
DBIC Dimbokro 145.54 274 PKPbc **PKPbc** 01 26 23.4 +0.6
comp=Z,13nm,0.9s,baz=112,slow=2.8,SNR=8.2
DBIC Dimbokro 145.54 274 **PKPdf** 01 26 21.4 -1.3

*NEIC **01** 01:11:03.9±1.5,44.1°13N±0.03°×115.1°09W±0.1°06,h10km±7km, ML3.6/112,Mwr3.6/46,ML4.0/31(BUT),Error ellipse: s-maj=6.4km s-min=3.3km az=69.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-3.34; Mθθ2.50; Mθθ0.84; Mrθ0.97; Mrθ-1.73; Mrr0.62; Fault plane solution: Mo3.66000×10¹⁴ NP1:φ=138.43000°, δ43.38000°,λ-65.15000°. NP2:φ=285.92000°,δ51.44000°, λ-111.66000°. Principal axes: T 3.6293, Plg4.0000°, Azm31.0000°; N 0.0634, Plg17.0000°, Azm300.0000°; P -3.6926, Plg73.0000°, Azm135.0000°;*

*NEIC **01** 01:11:04.5,44.1°14N×115.1°09W,h14km*

*BUT **01** 01:11:04.9±1.7,44.1°13N±0.0°03×115.1°08W±0.0°03,h9km±8km, Error ellipse: s-maj=3.9km s-min=2.9km az=210.0*

*IDC **01** 01:11:05.0±0.8,44.2°28N×114.1°86W,h0km,mb3.3/1, mbtmp3.4/7,ML3.5/6,Error ellipse: s-maj=12.5km s-min=8.2km az=64.0*

ISC 01 01:11:04.6±0.8, 44.1°13N±0.0°03×115.1°12W±0.0°03, h10km, n90, σ0.994/92, Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HLID	**Hailey**	**0.76**	**138**		**Pg**	**01 11 18.7**	**-0.6**
HLID				Sg	**Sg**	**01 11 28.7**	**-0.6**
HLID				IAML		01 11 29.9	
	2µm,0.2s						
HLID				IAML		01 11 34.0	
	2µm,0.3s						
MFID	**Camas Ranch**	**0.88**	**216**		**Pg**	**01 11 21.7**	**+0.3**
MFID				Sg	**Sg**	**01 11 33.6**	**+0.7**
PLID	**Pearl Lake**	**1.15**	**327**		**Pb**	**01 11 26.5**	**-0.2**
PLID					**Sg**	**01 11 41.5**	**-0.1**
PLID				IAML		01 11 45.2	
	2µm,0.5s						
PLID				IAML		01 11 46.2	
	1µm,0.6s						
CNCI	**Crows Nest Can**	**1.22**	**99**		**Pb**	**01 11 26.8**	**-1.1**
BCYI	**Bear Canyon**	**1.25**	**81**		**Pb**	**01 11 27.7**	**-0.7**
ICI	**Italian Canyon**	**1.58**	**82**		**Pn**	**01 11 33.3**	**+0.4**
BMO	**Blue Mountains**	**1.72**	**296**		**Pn**	**01 11 35.1**	**+0.4**
MCMT	**McKenzie Canyo**	**1.77**	**66**		**Pn**	**01 11 35.7**	**+0.2**
MOMT	**Monida**	**2.01**	**76**		**Pb**	**01 11 40.3**	**-1.1**
DLMT	**Dillon**	**2.18**	**55**		**Pn**	**01 11 41.4**	**+0.3**
F10A	**Beach Ranch, E**	**2.37**	**322**		**Pn**	**01 11 44.6**	**+1.0**
VCMT	**Victor**	**2.41**	**16**		**Pn**	**01 11 44.5**	**+0.4**
HBMT	**Mount Humbug**	**2.44**	**46**		**Pn**	**01 11 44.9**	**+0.1**
BGMT	**Barton Gulch**	**2.46**	**62**		**Pn**	**01 11 45.8**	**+0.8**
LRM	**Limekiln Ridge**	**2.54**	**47**		**Pn**	**01 11 46.2**	**+0.1**
BPMT	**Black Pine Rid**	**2.59**	**27**		**Pn**	**01 11 46.9**	**0.0**
BUT	**Butte**	**2.62**	**43**		**Pn**	**01 11 47.1**	**+0.1**
QLMT	**Earthquake Lak**	**2.73**	**74**		**Pn**	**01 11 49.8**	**+1.1**
MSO	**Missoula**	**2.83**	**17**		**Pn**	**01 11 50.3**	**+0.4**
MSO				IAML		01 12 46.6	
	309nm,0.8s						
MSO				IAML		01 12 52.0	
	311nm,0.9s						
LNOR	**Lincton Mounta**	**2.84**	**309**		**Pn**	**01 11 51.1**	**+1.0**
LCCM	**Lewis and Clar**	**2.87**	**52**		**Pn**	**01 11 50.5**	**0.0**
YHB	**Horse Butte**	**2.88**	**76**		**Pn**	**01 11 51.7**	**+0.9**
YHB				IAML		01 12 37.6	
	comp=N,267nm,0.9s						
BOZ	**Bozeman (W)**	**2.89**	**58**		**Pn**	**01 11 51.0**	**+0.3**
BOZ				IAML		01 12 36.9	
	comp=N,290nm,0.5s						
YHL	**Hebgen Lake**	**2.91**	**74**		**Pn**	**01 11 50.4**	**-0.9**
HVU	**Hansel Valley**	**2.91**	**143**		**Pn**	**01 11 51.8**	**+0.7**
ECR	**Eagle Creek**	**2.93**	**110**		**Pn**	**01 11 52.8**	**+1.4**
G08A	**Pilot Rock**	**2.97**	**294**		**Pn**	**01 11 52.0**	**+0.1**
FXWY	**Fox Creek**	**3.00**	**98**		**Pn**	**01 11 53.5**	**+1.1**
ELMT	**Elliston**	**3.03**	**37**		**Pn**	**01 11 52.4**	**-0.4**
WVOR	**Wild Horse Val**	**3.07**	**238**		**Pn**	**01 11 52.7**	**-0.6**
WVOR				IAML		01 12 44.0	
	comp=N,170nm,0.8s						
WVOR				IAML		01 12 56.7	
	comp=N,194nm,1.1s						
CHMT	**Chamberlain Mo**	**3.08**	**25**		**Pn**	**01 11 53.5**	**0.0**
YPP	**Pitchstone Pla**	**3.11**	**86**		**Pn**	**01 11 54.4**	**+0.4**
YPP				IAML		01 12 47.4	
	comp=E,125nm,1.0s						
YHH	**Holmes Hill**	**3.13**	**76**		**Pn**	**01 11 54.8**	**+0.6**
I07A	**Izee**	**3.16**	**271**		**Pn**	**01 11 55.3**	**+0.9**
I07A				IAML		01 12 36.0	
	comp=N,106nm,0.5s						
PCMT	**Pistol Creek**	**3.18**	**14**		**Pn**	**01 11 55.3**	**+0.4**
MOOW	**Moose Ponds**	**3.19**	**95**		**Pn**	**01 11 55.5**	**+0.5**
MOOW				IAML		01 12 51.0	
	comp=N,181nm,1.2s						
MOOW				IAML		01 12 51.7	
	comp=N,142nm,1.1s						
FLWY	**Flagg Ranch**	**3.19**	**89**		**Pn**	**01 11 55.6**	**+0.6**
FLWY				IAML		01 12 45.9	
	comp=N,186nm,1.1s						
E09A	**Wood Farm, Sta**	**3.20**	**319**		**Pn**	**01 11 54.9**	**0.0**
E09A				IAML		01 12 48.6	
	comp=N,151nm,0.8s						
E09A				IAML		01 12 55.2	
	comp=E,116nm,1.2s						
AHID	**Auburn Hatcher**	**3.23**	**114**		**Pn**	**01 11 55.8**	**+0.2**
AHID				IAML		01 12 53.1	
	comp=E,205nm,0.7s						
SNOW	**Snow King Moun**	**3.23**	**100**		**Pn**	**01 11 55.9**	**+0.3**
SNOW				IAML		01 12 51.9	
	comp=E,223nm,1.3s						
SNOW				IAML		01 12 55.5	
	comp=E,205nm,1.7s						
H17A	**Grant Village**	**3.28**	**84**		**Pn**	**01 11 55.0**	**-1.2**
LOHW	**Long Hollow**	**3.31**	**97**		**Pn**	**01 11 55.9**	**-0.8**
LOHW				IAML		01 12 53.9	
	comp=E,166nm,1.1s						
FBMT	**Ferry Basin**	**3.32**	**8**		**Pn**	**01 11 56.9**	**+0.3**
ELK	**Elko**	**3.38**	**181**	Pn	**Pb**	**01 12 02.3**	**-2.4**
	comp=E,9.7nm,0.3s,baz=348,slow=16,SNR=159						
ELK				Lg	Lg	01 12 47.6	
	comp=E,32nm,0.3s,baz=116,slow=16,SNR=21						
	comp=E,69nm,0.6s						
ELK	**Elko**	**3.38**	**181**		**Pn**	**01 11 59.3**	**+1.6**
ELK				IAML		01 12 49.4	
	comp=E,103nm,1.0s						
ELK				IAML		01 12 50.8	
	comp=E,128nm,0.9s						
SPUT	**South Promonto**	**3.44**	**144**		**Pn**	**01 11 58.6**	**+0.2**
SPUT				IAML		01 12 50.6	
	comp=E,144nm,1.2s						
SPUT				IAML		01 12 57.3	
	comp=N,178nm,0.7s						
LYMT	**Lyon Mountain**	**3.47**	**34**		**Pn**	**01 11 58.8**	**-0.1**
BGU	**Big Grassy Mou**	**3.55**	**153**		**Pn**	**01 12 00.3**	**+0.4**
BGU				IAML		01 13 00.4	
	comp=N,117nm,0.9s						
BGU				IAML		01 13 02.0	
	comp=E,114nm,0.7s						
HWUT	**Hardware Ranch**	**3.63**	**133**		**Pn**	**01 12 00.9**	**-0.1**
HWUT				IAML		01 12 59.4	
	comp=E,103nm,1.1s						
HWUT				IAML		01 13 03.5	
	comp=E,93nm,1.1s						
E08A	**Dider Farm, El**	**3.65**	**312**		**Pn**	**01 12 01.6**	**+0.5**
JTMT	**Jette**	**3.67**	**9**		**Pn**	**01 12 00.6**	**-0.8**
YNE	**Yellowstone No**	**3.76**	**75**		**Pn**	**01 12 03.3**	**+0.4**
YNE				IAML		01 13 06.3	
	comp=N,147nm,1.0s						
YNE				IAML		01 13 10.7	
	comp=E,108nm,1.1s						
F07A	**Phinny Hill Vi**	**3.84**	**299**		**Pn**	**01 12 03.2**	**-0.4**
F07A				IAML		01 13 09.8	
	comp=E,88nm,0.8s						
F07A				IAML		01 13 20.9	
	comp=N,96nm,0.6s						
HAWA	**Hanford**	**3.85**	**308**		**Pn**	**01 12 04.3**	**+0.4**
D08A	**Wollman Farm,**	**3.96**	**319**		**Pn**	**01 12 05.6**	**+0.2**
D08A				IAML		01 13 23.7	
	comp=N,66nm,1.2s						
G06A	**Carlson Farm,**	**4.08**	**288**		**Pn**	**01 12 08.1**	**+1.0**
G06A				IAML		01 13 15.0	
	comp=N,50nm,1.2s						
WAH2	**Wahluke Slope**	**4.08**	**312**		**Pn**	**01 12 07.8**	**+0.7**
PINE	**Pine Mountain**	**4.21**	**267**		**Pn**	**01 12 09.7**	**+0.6**
PINE				IAML		01 13 38.2	
	comp=E,54nm,1.1s						
PDAR	**Pinedale Array**	**4.27**	**107**	Pn	**Pn**	**01 12 12.9**	**+3.0**
	comp=E,0.6nm,0.3s,baz=291,slow=15,SNR=44						
PDAR				Lg	Lg	01 13 14.1	
	comp=E,1.1nm,0.3s,baz=311,slow=29,SNR=5.5						
	comp=E,6.3nm,0.7s						
PDAR	**Pinedale Array**	**4.27**	**107**		**Pn**	**01 12 10.2**	**+0.3**
C09A	**Chrisman Ranch**	**4.28**	**330**		**Pn**	**01 12 10.6**	**+0.8**
DUG	**Dugway, Tooele**	**4.29**	**156**		**Pn**	**01 12 10.5**	**+0.4**

RLMT	**Red Lodge**	**4.30**	**75**			**Pn**	**01 12 10.6**	**+0.4**
RLMT					IAML		01 13 25.0	
	comp=E,90nm,0.7s							
RLMT					IAML		01 13 29.6	
	comp=E,84nm,0.7s							
LDM	**Libby Dam**	**4.33**	**358**			**Pn**	**01 12 11.2**	**+0.7**
NEW	**Newport**	**4.36**	**342**	Pn		**Pn**	**01 12 12.1**	**+1.1**
	comp=E,2.5nm,0.3s,baz=153,slow=13,SNR=21							
NEW				Sn		**Sn**	**01 13 00.1**	**-1.8**
	comp=E,4.6nm,0.3s,baz=166,slow=18,SNR=3.2							
NEW				Lg	Lg		01 13 19.4	
	comp=E,22nm,0.3s,baz=96,slow=21,SNR=5.5							
	comp=E,9.8nm,0.5s							
NEW	**Newport**	**4.36**	**342**			**Pn**	**01 12 11.8**	**+0.8**
NEW					IAML		01 13 27.8	
	comp=E,71nm,1.4s							
MXC	**Moxie City**	**4.39**	**306**			**Pn**	**01 12 11.7**	**+0.4**
MXC					IAML		01 13 50.6	
	comp=N,40nm,0.8s							
K05A	**Summer Lake**	**4.43**	**254**			**Pn**	**01 12 12.8**	**+0.8**
K05A					IAML		01 13 39.0	
	comp=E,53nm,2.0s							
I05D	**Terrebonne, OR**	**4.47**	**275**			**Pn**	**01 12 12.5**	**0.0**
I05D					IAML		01 13 33.8	
	comp=E,53nm,1.9s							
I05D					IAML		01 13 39.4	
	comp=N,59nm,1.7s							
EPH	**Ephrata**	**4.50**	**317**			**Pn**	**01 12 15.1**	**+2.4**
EPH					IAML		01 13 35.7	
	comp=N,60nm,0.7s							
EPH					IAML		01 13 43.2	
	comp=E,40nm,0.8s							
J05D	**Fort Rock, OR**	**4.51**	**261**			**Pn**	**01 12 13.4**	**+0.4**
J05D					IAML		01 13 37.5	
	comp=N,43nm,1.2s							
J05D					IAML		01 13 38.7	
	comp=E,42nm,1.1s							
NLU	**North Lily Min**	**4.75**	**150**			**Pn**	**01 12 16.9**	**+0.5**
NLU					IAML		01 13 46.8	
	comp=N,32nm,1.5s							
WIFE	**Three Sisters-**	**4.82**	**272**			**Pn**	**01 12 17.9**	**+0.5**
WIFE					IAML		01 13 56.7	
	comp=N,33nm,3.3s							
WIFE					IAML		01 14 02.7	
	comp=E,39nm,3.1s							
H04A	**Detroit Lake**	**5.09**	**279**	Pn		**Pn**	**01 12 21.0**	**0.0**
H04A					IAML		01 13 47.6	
	comp=N,24nm,0.6s							
H04A					IAML		01 13 51.3	
	comp=E,28nm,2.0s							
J04A	**Umpqua Nationa**	**5.14**	**262**			**Pn**	**01 12 21.8**	**0.0**
I04A	**Tendick Farm,**	**5.27**	**269**			**Pn**	**01 12 23.1**	**-0.4**
LON	**Longmire**	**5.39**	**301**			**Pn**	**01 12 25.3**	**+0.3**
EGMT	**Eagleton**	**5.40**	**42**			**Pn**	**01 12 25.1**	**-0.1**
L04D	**Klamath Falls**	**5.59**	**253**			**Pn**	**01 12 28.3**	**+0.4**
BBOR	**Butler Butte**	**5.63**	**260**			**Pn**	**01 12 28.9**	**+0.4**
TMUT	**Trail Mountain**	**5.65**	**147**			**Pn**	**01 12 29.2**	**+0.4**
PSUT	**Pine Spring**	**5.67**	**170**			**Pn**	**01 12 29.7**	**+0.6**
D05A	**Enumclaw**	**5.70**	**305**	Pn		**Pn**	**01 12 30.3**	**+1.0**
YBH	**Yreka Blue Hor**	**6.06**	**249**	Pg		**Pg**	**01 12 57.9**	**-2.7**
	comp=E,0.3nm,0.3s,baz=80,slow=17,SNR=3.6							
NVAR	**Mina Array Bea**	**6.18**	**204**	Pn		Pn	01 12 42.0	+5.9
	comp=E,0.7nm,0.3s,baz=16,slow=14,SNR=11							
NVAR				Lg	Lg		01 14 18.0	
	comp=E,1.6nm,0.3s,baz=27,slow=32,SNR=2.5							
	comp=E,1.7nm,0.5s							
PV10	**Paradox Valley**	**7.35**	**139**			**Pn**	**01 12 53.1**	**+1.0**
ULM	**Lac du Bonnet**	**14.43**	**58**	Lg	Lg		01 18 24.7	
	comp=E,0.1nm,0.3s,baz=159,slow=17,SNR=3.5							
TXAR	**Lajitas Array**	**17.36**	**144**	P		**P**	**01 15 10.2**	**+1.8**
	baz=334,slow=13,SNR=4.2							
	comp=E,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**18.40**	**1**	P		**P**	**01 15 19.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=6.4							
	comp=E,0.8nm,0.8s							
ILAR	**Eielson Array**	**27.21**	**330**	P		**P**	**01 16 51.5**	**+3.3**
	comp=E,0.3nm,0.7s,baz=134,slow=7.7,SNR=4.4							
	comp=E,0.3nm,0.7s							

LJU 01 01:24:20.3, 45°.88N×15°.98E, h4km, ML0.5, 1C-1D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
PTJ	**Puntijarka**	**0.03**	**342**	*e*Pg		Pg	01 24 21.0		-0.3
PTJ				Sg		Sg	01 24 21.9		-0.2
ZAG	**Zagreb**	**0.05**	**176**	*e*Pg		Pg	01 24 21.6		+0.1
ZAG				Sg		Sg	01 24 22.6		+0.2
GCIS	**Gornji Cirnik**	**0.25**	**268**	*i*Pg		Pg	01 24 25.2		+0.1
GCIS				*i* Sg		Sg	01 24 28.9		+0.5
GCIS				IAML			01 24 29.2		
	comp=Z,3.9nm,0.1s								
GOLS	**Golise**	**0.28**	**298**	*i* Pg		Pg	01 24 25.9		+0.1
GOLS				*i* Sg		Sg	01 24 30.5		+1.0
GOLS				IAML			01 24 31.9		
	comp=Z,2.6nm,0.1s								
LOBO	**Lobor**	**0.28**	**12**	*e*Pg		Pg	01 24 26.6		+0.7
LOBO				Sg		Sg	01 24 29.8		+0.2
CRES	**Cresnjevec Ost**	**0.37**	**262**	*i* Pg		Pg	01 24 27.4		-0.1
CRES				*i* Sg		Sg	01 24 32.7		+0.4
CRES				IAML			01 24 34.2		
	comp=Z,1.2nm,0.1s								
KALN	**Kalnik**	**0.42**	**52**	Sg		Sg	01 24 33.6		-0.2
OZLJ	**Ozalj**	**0.45**	**234**	*e*Pg		Pg	01 24 29.0		+0.1
OZLJ				Sg		Sg	01 24 34.8		+0.2
DOBS	**Dobrina**	**0.45**	**308**	*i* Pg		Pg	01 24 29.1		+0.2
DOBS				*i* Sg		Sg	01 24 36.1		+1.3
DOBS				IAML			01 24 36.7		
	comp=Z,1.6nm,0.1s								
MOSL	**Moslavina**	**0.60**	**116**	*e*Pg		Pg	01 24 31.2		-0.7
MOSL				Sg		Sg	01 24 38.9		-0.7
PDKS	**Podkum**	**0.71**	**285**	⇑*i* Pg		Pg	01 24 34.0		0.0
PDKS				*i* Sg		Sg	01 24 43.0		-0.1

VIE 01 01:24:26.4±0.3, 47°.70N×15°.98E, h4km±4km, ml0.0/2,
Error ellipse: s-maj=2.8km s-min=1.1km az=83.0 3 km
WNW of Sankt Valentin, Austria

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
RONA	**Rosalia, Austr**	**0.21**	**89**	*i* Pg		Pg	01 24 30.7		+0.1
	0.2nm,0.1s								
CONA	**Conrad Observa**	**0.24**	**341**	*e*Pg		Pg	01 24 31.3		+0.1
	0.2nm,0.2s								
CONA				*e*Sg		Sg	01 24 34.7		+0.4
	0.6nm,0.1s								

*IDC **01** 01:48:39.6±3.4, 29°.36S×68°.31W, h67km±27km, mb3.6/2,*
mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=50.9km
s-min=25.3km az=112.0
*SJA **01** 01:48:43.8±0.6, 29°.19S×68°.08W, h116km±3km, ML3.7,*
MW3.7
ISC 01 01:48:44.3±0.8, 29°.17S±0°.03×68°.05W±0°.04, h118km±7km,
n32, σ1s05/50, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
VCA	**Vinchina**	**0.45**	**343**	*e*P		**Pn**	**01 49 02.5**		**+0.5**
VCA				*e*S		**Sn**	**01 49 15.2**		**-0.1**
VCA				IAML			01 49 20.1		
	comp=Z,2μm,0.2s								
ACLC	**CERRO LA CRUZ**	**1.00**	**105**	*e*P		**Pn**	**01 49 07.0**		**+0.7**
ACLC				*e*S		**Sn**	**01 49 23.5**		**+0.5**
ACLC				IAML			01 49 24.7		
	comp=Z,802nm,0.2s								
TINO	**Tinogasta**	**1.18**	**21**	*e*P		**Pn**	**01 49 09.8**		**+1.6**
TINO				*e*S		**Sn**	**01 49 28.4**		**+2.1**
TINO				IAML			01 49 30.7		
	comp=Z,1μm,0.3s								
ACDV	**Cuesta del Vie**	**1.36**	**223**	*e*P		**Pn**	**01 49 09.5**		**-0.7**
ACDV				IAML			01 49 30.0		
	comp=Z,1μm,0.5s								
ACDV				*e*S		**Sn**	**01 49 30.1**		**+0.2**
AVFE	**Valle Fertil**	**1.58**	**161**	*e*P		**Pn**	**01 49 12.9**		**+0.3**
AVFE				*e*S		**Sn**	**01 49 34.2**		**0.0**
AVFE				IAML			01 49 34.3		
	comp=Z,792nm,0.5s								
AROD	**Rodeo**	**1.59**	**231**	*e*P		**Pn**	**01 49 13.5**		**+0.5**
AROD				*e*S		**Sn**	**01 49 35.3**		**+0.5**
ACCO	**Cerro Coronel**	**1.67**	**212**	*e*P		**Pn**	**01 49 14.1**		**+0.2**
ACCO				*e*S		**Sn**	**01 49 36.9**		**+0.4**
ACCO				IAML			01 49 37.2		
	comp=Z,983nm,0.8s								
CO01	**Juntas del Tor**	**1.95**	**245**	*e*P		**Pn**	**01 49 18.6**		**+1.3**
CO01				*e*S		**Sn**	**01 49 44.1**		**+1.6**
AC05	**El Transito**	**1.97**	**279**	*e*P		**Pn**	**01 49 18.6**		**+1.1**
AC05				*e*S		**Sn**	**01 49 43.7**		**+1.0**
RTLL	**Cerro Villicun**	**2.19**	**189**	*e*P		**Pn**	**01 49 20.3**		**+0.3**
RTLL				*e*S		**Sn**	**01 49 47.2**		**-0.3**
RTLL				IAML			01 49 49.0		
	comp=Z,406nm,0.3s								
LCO	**Las Campanas**	**2.32**	**273**	*e*P		**Pn**	**01 49 22.4**		**+0.4**
LCO				*e*S		**Sn**	**01 49 50.9**		**0.0**
LCO				IAML			01 49 51.9		
	comp=Z,442nm,0.5s								
SJA	**San Juan**	**2.40**	**190**	*e*P		**Pn**	**01 49 23.4**		**+0.7**
SJA				*e*S		**Sn**	**01 49 51.8**		**-0.4**
SJA				IAML			01 49 52.9		
	comp=Z,262nm,0.2s								
ZON	**Zonda**	**2.43**	**193**	*e*P		**Pn**	**01 49 23.3**		**+0.1**
ZON				*e*S		**Sn**	**01 49 52.8**		**-0.3**
ZON				IAML			01 49 53.9		
	comp=Z,162nm,0.6s								
GO03	**Copiapo**	**2.48**	**309**	*e*P		Pn	01 49 29.9		+6.1
GO03				*e*S		**Sn**	**01 49 54.0**		**-0.1**
GO03				IAML			01 49 56.0		
	comp=Z,140nm,0.4s								
GO04	**Tololo Observa**	**2.59**	**247**	*e*P		**Pn**	**01 49 25.4**		**0.0**
GO04				*e*S		**Sn**	**01 49 57.5**		**+0.5**
GO04				IAML			01 49 60.0		
	comp=Z,507nm,0.3s								
AC04	**Llanos de Chal**	**2.82**	**289**	*e*P		**Pn**	**01 49 27.8**		**-0.4**
AC04				*e*S		**Sn**	**01 50 00.1**		**-1.9**
CO03	**El Pedregal**	**2.83**	**233**	*e*P		**Pn**	**01 49 28.7**		**+0.3**
CO03				*e*S		**Sn**	**01 50 03.1**		**+0.8**
CO03				IAML			01 50 12.6		
	comp=Z,130nm,0.3s								
RTLS	**Leoncito**	**2.84**	**202**	*e*P		**Pn**	**01 49 29.1**		**+0.4**
RTLS				*e*S		**Sn**	**01 50 03.7**		**+0.9**
RTLS				IAML			01 50 04.0		
	comp=Z,460nm,0.4s								
CO02	**Combarbal**	**3.26**	**231**	*e*P		**Pn**	**01 49 33.4**		**-0.7**
CO02				*e*S		**Sn**	**01 50 12.8**		**+0.3**
CO02				IAML			01 50 13.1		
	comp=Z,102nm,0.3s								
AHML	**Horco Molle**	**3.38**	**46**	*e*P		**Pn**	**01 49 31.6**		**-4.0**
AHML				*e*S		Sn	01 50 04.8		-10
AHML				IAML			01 50 46.2		
	comp=Z,54nm,0.5s								
ASAL	**Salagasta**	**3.48**	**191**	*e*P		**Pn**	**01 49 37.2**		**+0.3**
ASAL				*e*S		**Sn**	**01 50 17.7**		**0.0**
ARCO	**CERRO ARCO**	**3.74**	**191**	*e*S		**Sn**	**01 50 25.5**		**+1.5**
ARCO				IAML			01 50 27.0		
	comp=Z,98nm,0.4s								
CPUP	**Villa Florida**	**9.91**	**76**	P		**Pn**	**01 51 03.0**		**-0.5**
	comp=Z,0.4nm,0.3s,baz=241,slow=12,SNR=6.2								
	comp=Z,1.4nm,0.4s								
PLCA	**Paso Flores**	**11.72**	**189**	P		Pn	01 51 21.3		-6.5
	baz=5.2,slow=11,SNR=0.9								
	comp=Z,0.6nm,0.7s								
LPAZ	**La Paz**	**12.82**	**360**	P		**Pn**	**01 51 41.6**		**-1.3**
	comp=Z,0.1nm,0.3s,baz=175,slow=13,SNR=2.2								
	comp=Z,0.3nm,0.3s								
QSPA	**South Pole Qui**	**61.06**	**180**	P		**P**	**01 58 44.7**		**-0.7**
	comp=Z,1.8nm,1.2s,baz=68,slow=3.3,SNR=1.7								
	comp=Z,1.8nm,1.2s								
TORD	**Toroel Ar. Bea**	**79.32**	**68**	P		**P**	**02 00 39.4**		**+2.1**
	comp=Z,1.0nm,0.8s,baz=234,slow=4.9,SNR=4.4								
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**123.38**	**204**	PKP		**PKiKP**	**02 07 28.4**		**+0.1**
	comp=Z,0.2nm,0.4s,baz=171,slow=1.2,SNR=1.1								
WRA	**Warramunga Arr**	**126.61**	**207**	PKP		**PKiKP**	**02 07 34.9**		**+0.2**
	comp=Z,0.4nm,0.4s,baz=142,slow=1.9,SNR=8.0								
KURBB	**Kurchatov Arra**	**147.01**	**40**	PKPbc		**PKiKP**	**02 08 15.2**		**0.0**
	comp=Z,0.6nm,0.7s,baz=297,slow=2.1,SNR=5.0								
ZALV	**Zalesovo Beam**	**148.34**	**31**	PKPbc		**PKiKP**	**02 08 18.2**		**+0.4**
	comp=Z,1.1nm,0.5s,baz=329,slow=1.7,SNR=4.3								
MKAR	**Makanchi Array**	**150.98**	**44**	PKPbc		**PKiKP**	**02 08 24.9**		**+1.3**
	comp=Z,1.0nm,0.8s,baz=310,slow=2.2,SNR=4.6								

*MDD **01** 01:54:30.0±0.9, 36°.62N×11°.28W, h12km±10km, Mb3.9/10,*
M_mb3.2/10, Error ellipse: s-maj=10.6km s-min=4.6km
az=81.0
*IGIL **01** 01:54:32.1, 36°.68N×11°.17W, h14km, ML1.7*
*INMG **01** 01:54:32.7±1.3, 36°.65N×11°.24W, h24km±37km, ML2.0,*
Error ellipse: s-maj=35.6km s-min=4.5km az=57.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe
*CNRM **01** 01:54:34.4, 36°.39N×10°.88W, h75km, ML2.6*
ISC 01 01:54:30.8±2.2, 36°.67N±0°.06×11°.2W±0°.1, h77km±28km,
n63, σ1s31/110, 10C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
PFVI	**Vila Bisbo**	**1.98**	**76**	Pn		**Pn**	**01 55 02.8**		**+0.6**
PFVI				Sn		**Sn**	**01 55 25.1**		**-1.1**
PFVI	**Vila Bisbo**	**1.98**	**76**	*e*P		**Pn**	**01 55 02.9**		**+0.6**
PFVI				*e*S		**Sn**	**01 55 25.4**		**-0.8**
PFVI				*i* IAML			01 55 26.4		
PFVI				*i* IAML			01 55 26.9		
PFVI	**Vila Bisbo**	**1.98**	**76**	P		**Pn**	**01 55 03.1**		**+0.8**
PFVI				S		**Sn**	**01 55 26.4**		**+0.1**
MORF	**Marmelete**	**2.15**	**72**	*e*P		**Pn**	**01 55 05.4**		**+0.7**
MORF				*e*S		**Sn**	**01 55 29.6**		**-1.0**
MORF				IAML			01 55 30.9		
	comp=E,7.2nm,0.2s								
MORF	**Marmelete**	**2.15**	**72**	*e*P		**Pn**	**01 55 05.5**		**+0.7**
MORF				*e*S		**Sn**	**01 55 30.4**		**-0.2**
MORF				*i* IAML			01 55 32.0		
MORF				*i* IAML			01 55 32.6		
MORF				*i* IAML			01 55 35.3		
PTEO	**Sao Teotonio**	**2.18**	**66**	*e*P		**Pn**	**01 55 06.1**		**+1.1**
PTEO				*e*S		**Sn**	**01 55 31.1**		**-0.1**
PTEO				*i* IAML			01 55 31.2		
PTEO				*i* IAML			01 55 32.7		
PTEO				*i* IAML			01 55 33.6		
PLOUS	**Minas do Lousa**	**2.62**	**58**	*e*P		**Pn**	**01 55 11.6**		**+0.7**
PLOUS				*e*S		**Sn**	**01 55 41.0**		**-0.6**
PLOUS				*i* IAML			01 55 44.8		
PLOUS				*i* IAML			01 55 44.9		
MESJ	**Messejana**	**2.67**	**63**	*e*P		**Pn**	**01 55 12.3**		**+0.8**
MESJ				*e*S		**Sn**	**01 55 41.7**		**-1.2**
MESJ				IAML			01 55 44.3		
	comp=N,2.0nm,0.2s								
MESJ	**Messejana**	**2.67**	**63**	*e*P		**Pn**	**01 55 12.6**		**+1.0**
MESJ				*e*S		**Sn**	**01 55 43.0**		**+0.1**
MESJ				*i* IAML			01 55 46.6		
MESJ				*i* IAML			01 55 48.2		
MESJ				*i* IAML			01 55 50.7		
PBDV	**Barranco-do-Ve**	**2.70**	**77**	Pn		**Pn**	**01 55 13.2**		**+1.2**
PBDV	**Barranco-do-Ve**	**2.70**	**77**	*e*P		**Pn**	**01 55 13.2**		**+1.2**
PBDV				*e*S		**Sn**	**01 55 43.9**		**+0.2**
PBDV				*i* IAML			01 55 48.5		
PBDV				*i* IAML			01 55 51.2		
PCVE	**Castro Verde**	**2.72**	**68**	Pn		**Pn**	**01 55 13.3**		**+1.0**
PCVE				Sn		**Sn**	**01 55 43.5**		**-0.7**
PCVE	**Castro Verde**	**2.72**	**68**	*e*P		**Pn**	**01 55 13.5**		**+1.2**
PCVE				*e*S		**Sn**	**01 55 43.8**		**-0.4**
PCVE				*i* IAML			01 55 44.8		
PCVE				*i* IAML			01 55 45.5		
PCVE				*i* IAML			01 55 47.4		
PMAFR	**Mafra**	**2.75**	**33**	Sn		**Sn**	**01 55 44.1**		**-0.9**
PMAFR	**Mafra**	**2.75**	**33**	*e*P		**Pn**	**01 55 13.9**		**+1.1**
PMAFR				*e*S		**Sn**	**01 55 44.9**		**-0.2**
PVAQ	**Vaqueiros**	**2.90**	**74**	*e*P		**Pn**	**01 55 15.9**		**+1.2**
PVAQ				*e*S		**Sn**	**01 55 48.1**		**-0.4**
PVAQ				*i* IAML			01 55 50.4		
PVAQ				*i* IAML			01 55 50.4		
PVAQ				*i* IAML			01 55 52.1		
PVAQ	**Vaqueiros**	**2.90**	**74**	P		**Pn**	**01 55 15.2**		**+0.4**
PVAQ				S		**Sn**	**01 55 49.2**		**+0.7**
MOE	**Montemor**	**2.94**	**50**	*e*P		**Pn**	**01 55 16.1**		**+0.9**
MOE				*e*S		**Sn**	**01 55 49.0**		**-0.5**
MOE				*i* IAML			01 55 50.6		
MOE				*i* IAML			01 55 52.3		
MOE				*i* IAML			01 55 53.2		
PBEJ	**Beja**	**3.00**	**62**	*e*P		**Pn**	**01 55 17.7**		**+1.6**
PBEJ				*e*S		**Sn**	**01 55 50.3**		**-0.7**
PBEJ				*i* IAML			01 55 52.7		
PBEJ				*i* IAML			01 55 54.3		
PBEJ				*i* IAML			01 55 55.7		
EGRO	**El Granado**	**3.11**	**73**	Pn		**Pn**	**01 55 18.9**		**+1.3**
EGRO				Sn		**Sn**	**01 55 52.9**		**-0.8**
EGRO	**El Granado**	**3.11**	**73**	Pn		**Pn**	**01 55 19.1**		**+1.5**
EGRO				⇑*i*Vmb_VC			01 55 23.8		
	comp=N,174nm,SNR=2.0								
EGRO				Sn		**Sn**	**01 55 54.1**		**+0.4**
EVO	**Evora**	**3.16**	**53**	Pn		**Pn**	**01 55 19.4**		**+1.2**
EVO				Sn		**Sn**	**01 55 53.8**		**-1.0**
EVO	**Evora**	**3.16**	**53**	*e*P		**Pn**	**01 55 19.9**		**+1.7**
EVO				*e*S		**Sn**	**01 55 54.1**		**-0.6**
EVO				*i* IAML			01 55 56.9		
EVO				*i* IAML			01 55 57.1		
EVO				*i* IAML			01 55 58.5		
PARRA	**Arraiolos**	**3.31**	**49**	*e*P		**Pn**	**01 55 21.7**		**+1.4**
PARRA				*e*S		**Sn**	**01 55 57.8**		**-0.8**
PMTG	**Montargil**	**3.37**	**44**	*e*P		**Pn**	**01 55 21.9**		**+0.8**
PMTG				*e*S		**Sn**	**01 55 59.9**		**-0.1**
PMTG				*i* IAML			01 56 05.0		
PMTG				*i* IAML			01 56 05.2		
PMTG				*i* IAML			01 56 12.9		
PSBE	**So Bento**	**3.43**	**33**	*e*P		**Pn**	**01 55 22.7**		**+0.8**
PSBE				*e*S		**Sn**	**01 56 01.2**		**-0.2**
PESTR	**Estremoz**	**3.62**	**52**	Sn		**Sn**	**01 56 04.8**		**-1.3**
PESTR	**Estremoz**	**3.62**	**52**	*e*P		**Pn**	**01 55 26.3**		**+1.8**
PESTR				*e*S		**Sn**	**01 56 05.1**		**-1.1**
PESTR				*i* IAML			01 56 09.6		
PESTR				*i* IAML			01 56 15.8		
PESTR				*i* IAML			01 56 20.2		
PBAR	**Barrancos**	**3.66**	**64**	Pn		**Pn**	**01 55 26.5**		**+1.6**
PBAR				Sn		**Sn**	**01 56 05.0**		**-1.9**
PBAR	**Barrancos**	**3.66**	**64**	*e*P		**Pn**	**01 55 26.6**		**+1.6**
PBAR				*e*S		**Sn**	**01 56 06.2**		**-0.7**
PBAR				*i* IAML			01 56 08.6		
PBAR				*i* IAML			01 56 09.1		
PBAR				*i* IAML			01 56 09.8		
EMIN	**Mina Concepcio**	**3.79**	**72**	Sn		**Sn**	**01 56 10.3**		**-0.1**
PSARD	**Sardoal**	**3.79**	**39**	*e*P		**Pn**	**01 55 28.1**		**+1.2**
PSARD				*e*S		**Sn**	**01 56 09.6**		**-0.7**
PSARD				*i* IAML			01 56 11.8		
PSARD				*i* IAML			01 56 12.2		
PSARD				*i* IAML			01 56 12.9		
EBAD	**Badajoz**	**3.94**	**57**	Pn		**Pn**	**01 55 30.3**		**+1.5**
EBAD				Sn		**Sn**	**01 56 11.8**		**-2.0**
EBAD	**Badajoz**	**3.94**	**57**	Pn		**Pn**	**01 55 30.3**		**+1.5**
EBAD				⇑*i*Vmb_VC			01 55 33.7		
	comp=N,120nm,SNR=2.1								
EBAD				Sn		**Sn**	**01 56 12.9**		**-0.9**
PCAS	**Casmilo, Conde**	**4.00**	**32**	*e*P		**Pn**	**01 55 30.5**		**+0.8**
PCAS				*e*S		**Sn**	**01 56 14.9**		**-0.5**
PMRV	**Marv??o**	**4.09**	**46**	*e*P		**Pn**	**01 55 31.6**		**+0.6**
PMRV				*e*S		**Sn**	**01 56 16.4**		**-1.2**
PMRV				*i* IAML			01 56 18.0		
PMRV				*i* IAML			01 56 19.3		
PMRV				*i* IAML			01 56 20.4		
ESPR	**Espera**	**4.31**	**86**	Pn		**Pn**	**01 55 35.2**		**+1.3**
ESPR				Sn		**Sn**	**01 56 21.5**		**-1.5**
ESPR	**Espera**	**4.31**	**86**	Pn		**Pn**	**01 55 34.9**		**+0.9**
ESPR				⇑*i*Vmb_VC			01 55 40.7		
	comp=N,92nm,SNR=1.5								
ESPR				Sn		**Sn**	**01 56 23.7**		**+0.7**
PCBR	**Castelo Branco**	**4.33**	**42**	*e*P		**Pn**	**01 55 35.5**		**+1.3**
PCBR				*e*S		**Sn**	**01 56 22.5**		**-0.8**
PCBR				*i* IAML			01 56 22.9		
PCBR				*i* IAML			01 56 24.4		
PCBR				*i* IAML			01 56 25.5		
PVIS	**Viseu**	**4.81**	**32**	*e*S		**Sn**	**01 56 33.3**		**-1.9**
ECAB	**El Cabril**	**4.83**	**71**	Pn		**Pn**	**01 55 42.2**		**+1.2**
ECAB				Sn		**Sn**	**01 56 33.6**		**-2.1**
ECAB	**El Cabril**	**4.83**	**71**	Pn		**Pn**	**01 55 42.3**		**+1.2**
ECAB				⇑*i*Vmb_VC			01 55 44.5		
	comp=N,50nm,SNR=1.2								
ECAB				Sn		**Sn**	**01 56 34.6**		**-1.1**
ZHG	**ZHG**	**4.94**	**129**	P		Pn	01 55 40.1		-2.5
ZHG				S		Sn	01 56 33.5		-5.0
EAH	**EAH**	**5.19**	**164**	P		**Pn**	**01 55 44.6**		**-1.3**
EAH				S		**Sn**	**01 56 41.2**		**-3.1**
EPLA	**Plasencia**	**5.28**	**48**	P		**Pn**	**01 55 48.2**		**+1.1**
EPLA				⇑*i*Vmb_VC			01 55 50.5		
	comp=N,81nm,SNR=1.7								
EPLA				Sn		**Sn**	**01 56 46.3**		**-0.3**
POLO	**Lamas de Olo**	**5.41**	**29**	*e*P		**Pn**	**01 55 49.4**		**+0.5**
POLO				*e*S		**Sn**	**01 56 47.1**		**-2.7**
EADA	**Adamuz**	**5.50**	**72**	Pn		**Pn**	**01 55 51.6**		**+1.5**
EADA				Sn		**Sn**	**01 56 50.6**		**-1.

MT09	**Talangante**	**1.42**	**107**	*e*P		**Pn**	**02 04 00.2**	**-1.6**
MT09				IAML			02 04 25.7	
	comp=N,2μm,0.3s							
MT05	**Renca**	**1.58**	**91**			**Pb**	**02 04 03.4**	**-1.8**
MT05	**Renca**	**1.58**	**91**	*e*P		**Pb**	**02 04 03.5**	**-1.8**
MT05				*e*S		**Sg**	**02 04 30.4**	**+3.6**
MT05				IAML			02 04 40.1	
	comp=Z,1μm,1.2s							
MT05	**Renca**	**1.58**	**91**	*e*P		**Pn**	**02 04 03.2**	**-0.7**
BO01	**Tunca**	**1.64**	**129**			**Pn**	**02 04 04.4**	**-0.3**
BO01	**Tunca**	**1.64**	**129**	*e*P		**Pn**	**02 04 04.1**	**-0.5**
BO01				IAML			02 04 34.8	
	comp=Z,731nm,0.9s							
PEL	**Peldehue**	**1.64**	**83**	*e*P		**Pb**	**02 04 04.5**	**-1.7**
PEL				*e*S		Sg	02 04 37.0	+8.2
PEL				IAML			02 04 42.9	
	comp=Z,1μm,0.9s							
PEL	**Peldehue**	**1.64**	**83**	*e*P		**Pn**	**02 04 04.3**	**-0.5**
GO05	**Hualane**	**1.73**	**161**			**Pn**	**02 04 06.0**	**0.0**
GO05	**Hualane**	**1.73**	**161**	*e*P		**Pn**	**02 04 05.5**	**-0.5**
GO05				*e*S		**Sn**	**02 04 27.4**	**-0.7**
GO05				IAML			02 04 38.1	
	comp=Z,577nm,0.7s							
GO05	**Hualane**	**1.73**	**161⇑**	*e*P		**Pn**	**02 04 05.8**	**-0.2**
MT14	**Cerro Calȷn**	**1.75**	**91⇑**	*e*P		**Pn**	**02 04 05.9**	**-0.3**
MT14				IAML			02 04 38.9	
	comp=E,2μm,0.6s							
MT16	**CCHEN**	**1.76**	**92**			**Pn**	**02 04 06.0**	**-0.4**
MT16	**CCHEN**	**1.76**	**92⇑**	*e*P		**Pn**	**02 04 06.0**	**-0.4**
MT12	**Pirque**	**1.77**	**102**	*e*P		**Pn**	**02 04 05.8**	**-0.7**
MT12				IAML			02 04 35.2	
	comp=N,2μm,0.3s							
MT03	**Universidad Ad**	**1.77**	**95**			**Pn**	**02 04 06.3**	**-0.3**
MT03	**Universidad Ad**	**1.77**	**95**	*e*P		**Pb**	**02 04 06.6**	**-1.9**
MT03				*e*S		**Sg**	**02 04 30.4**	**-2.6**
MT03				IAML			02 04 37.5	
	comp=Z,2μm,0.7s							
MT03	**Universidad Ad**	**1.77**	**95**	*e*P		**Pn**	**02 04 06.3**	**-0.3**
MT03				IAML			02 04 36.1	
	comp=E,2μm,0.4s							
BO04	**La Punta**	**1.79**	**111**			**Pn**	**02 04 05.9**	**-0.9**
BO04	**La Punta**	**1.79**	**111**	*e*P		**Pn**	**02 04 05.8**	**-0.9**
BO04				IAML			02 04 36.4	
	comp=N,1μm,0.4s							
VA03	**San Esteban**	**1.84**	**71**			**Pn**	**02 04 07.0**	**-0.5**
VA03	**San Esteban**	**1.84**	**71**	*e*P		**Pn**	**02 04 07.1**	**-0.5**
VA03				*e*S		**Sg**	**02 04 40.8**	**+5.5**
VA03				IAML			02 04 44.0	
	comp=Z,1μm,0.8s							
VA03	**San Esteban**	**1.84**	**71⇑**	*e*P		**Pn**	**02 04 07.1**	**-0.5**
VA03				IAML			02 04 45.3	
	comp=E,1μm,0.3s							
CO04	**Los Peladeros**	**1.92**	**47**			**Pn**	**02 04 08.2**	**-0.6**
FCH	**Farellones**	**1.95**	**89⇑**	*e*P		**Pn**	**02 04 09.1**	**-0.2**
FCH				IAML			02 04 42.0	
	comp=E,943nm,0.2s							
LMEL	**Las Melosas**	**2.08**	**104**	*e*P		**Pn**	**02 04 10.5**	**-0.3**
LMEL				IAML			02 04 48.5	
	comp=E,744nm,0.6s							
BO02	**Sierra Bellavi**	**2.08**	**133**			**Pn**	**02 04 10.5**	**-0.4**
BO02	**Sierra Bellavi**	**2.08**	**133**	*e*P		**Pn**	**02 04 10.9**	**0.0**
BO02				*e*S		Sn	02 04 20.5	-16
BO02				IAML			02 04 47.5	
	comp=Z,1μm,0.9s							
BO02	**Sierra Bellavi**	**2.08**	**133**	*e*P		**Pn**	**02 04 10.8**	**0.0**
BO02				IAML			02 04 48.5	
	comp=N,2μm,0.1s							
MT08	**Bocatoma Ro**	**2.18**	**93**			**Pn**	**02 04 11.8**	**-0.6**
MT08	**Bocatoma Ro**	**2.18**	**93**	*e*P		**Pb**	**02 04 13.2**	**-2.4**
MT08				*e*S		**Sb**	**02 04 38.4**	**-4.3**
MT08				IAML			02 04 51.1	
	comp=Z,590nm,0.9s							
CO02	**Combarbal**	**2.56**	**33**			**Pn**	**02 04 17.7**	**+0.3**
CO02	**Combarbal**	**2.56**	**33**	*e*P		**Pn**	**02 04 17.8**	**+0.3**
CO02				*e*S		**Sn**	**02 04 48.6**	**-0.1**
CO02				IAML			02 05 22.4	
	comp=Z,240nm,1.2s							
ML02	**Panimavida**	**2.58**	**158**			**Pn**	**02 04 17.8**	**+0.1**
ML02	**Panimavida**	**2.58**	**158**	*e*P		**Pn**	**02 04 17.5**	**-0.2**
ML02				*e*S		**Sn**	**02 04 50.0**	**+0.9**
ML02				IAML			02 05 17.0	
	comp=Z,672nm,0.9s							
ML02	**Panimavida**	**2.58**	**158**	*e*P		**Pn**	**02 04 17.9**	**+0.2**
ML02				IAML			02 04 58.8	
	comp=E,494nm,0.3s							
CO03	**El Pedregal**	**3.01**	**34**			**Pn**	**02 04 24.1**	**+0.5**
CO03	**El Pedregal**	**3.01**	**34**	*e*P		**Pn**	**02 04 24.2**	**+0.5**
CO03				*e*S		**Sn**	**02 05 00.6**	**+0.8**
CO03				IAML			02 05 27.8	
	comp=Z,147nm,1.1s							
ARCO	**CERRO ARCO**	**3.14**	**81**	*e*P		**Pb**	**02 04 28.5**	**-3.5**
ARCO				IAML			02 05 19.1	
	comp=Z,354nm,1.3s							
AAGR	**Agrelo**	**3.19**	**86**	*e*P		**Pn**	**02 04 26.6**	**+0.4**
AAGR				IAML			02 05 26.0	
	comp=Z,188nm,1.1s							
RTLS	**Leoncito**	**3.22**	**62**	*e*P		**Pn**	**02 04 24.0**	**-2.6**
RTLS				IAML			02 05 32.6	
	comp=Z,459nm,0.7s							
ASAL	**Salagasta**	**3.28**	**77**	*e*P		**Pn**	**02 04 27.2**	**-0.1**
ASAL				*e*S		**Sg**	**02 05 26.3**	**+5.0**
AVIZ	**Vizcacheras**	**3.44**	**93**	*e*P		**Pn**	**02 04 30.9**	**+1.4**
AVIZ				*e*S		**Sg**	**02 05 30.4**	**+4.0**
BI02	**San Fabin de**	**3.47**	**162**			**Pn**	**02 04 30.2**	**+0.4**
BI02	**San Fabin de**	**3.47**	**162**	*e*P		**Pn**	**02 04 30.3**	**+0.4**
BI02				IAML			02 05 43.5	
	comp=Z,118nm,2.0s							
GO04	**Tololo Observa**	**3.55**	**26**			**Pn**	**02 04 31.2**	**+0.1**
ZON	**Zonda**	**3.80**	**62**			**Pn**	**02 04 34.8**	**+0.3**
CO01	**Juntas del Tor**	**4.01**	**33**			**Pn**	**02 04 38.4**	**+0.8**
CO01	**Juntas del Tor**	**4.01**	**33**	*e*P		**Pn**	**02 04 38.6**	**+1.0**
ACCO	**Cerro Coronel**	**4.11**	**48**	*e*P		**Pn**	**02 04 42.1**	**+3.2**
ACCO				IAML			02 05 53.3	
	comp=Z,88nm,1.2s							
LCO	**Las Campanas**	**4.65**	**21**	Pn		**Pn**	**02 04 46.1**	**-0.2**
LCO	**Las Campanas**	**4.65**	**21**	*e*P		**Pn**	**02 04 47.0**	**+0.7**
LCO				*e*S		**Sn**	**02 05 39.2**	**-1.2**
LCO				IAML			02 06 24.1	
	comp=Z,86nm,0.7s							
AC05	**El Transito**	**4.95**	**25**			**Pn**	**02 04 51.2**	**+0.9**
AC05	**El Transito**	**4.95**	**25**	*e*P		**Pn**	**02 04 51.3**	**+0.9**
AC05				*e*S		**Sn**	**02 05 47.5**	**-0.1**
AC05				IAML			02 06 35.4	
	comp=Z,43nm,0.8s							
VA04	**Juan Fernndez**	**5.19**	**265**	Pn		**Pn**	**02 04 55.7**	**+2.2**
H03N1	**Juan Fernandez**	**5.26**	**268**	Pn		**Pn**	**02 04 58.3**	**+4.2**
	baz=147,slow=80							
H03N1				Sn		**Sn**	**02 05 51.5**	**-3.1**
H03N1				T		T	02 10 42.5	
	baz=89,slow=74,SNR=13							
H03S1	**Juan Fernandez**	**5.26**	**263**	Pn		**Pn**	**02 04 56.8**	**+2.6**
	baz=250,slow=11							
H03S1				Sn		**Sn**	**02 05 50.6**	**-4.1**
	baz=320,slow=17							
H03S1				T		T	02 11 02.3	
	baz=96							
H03S3	**Juan Fernandez**	**5.26**	**263**	Pn		**Pn**	**02 04 57.1**	**+2.8**
	baz=250,slow=11							
H03S3				Sn		**Sn**	**02 05 50.3**	**-4.5**
	baz=320,slow=17							
H03S3				T		T	02 11 04.0	
	baz=96,slow=74							
H03N3	**Juan Fernandez**	**5.27**	**267**	Pn		**Pn**	**02 04 58.2**	**+3.9**
	baz=147,slow=80							
H03N3				Sn		**Sn**	**02 05 51.5**	**-3.4**
H03N3				T		T	02 10 40.8	
	baz=89,slow=74,SNR=13							
H03N2	**Juan Fernandez**	**5.28**	**268**	Pn		**Pn**	**02 04 58.5**	**+4.0**
	baz=147,slow=80							
H03N2				Sn		**Sn**	**02 05 51.5**	**-3.5**
H03N2				T		T	02 10 43.1	
	baz=89,slow=74,SNR=15							
H03S2	**Juan Fernandez**	**5.28**	**263**	Pn		**Pn**	**02 04 56.9**	**+2.5**
	baz=250,slow=11							
H03S2				Sn		**Sn**	**02 05 50.6**	**-4.5**
	baz=320,slow=17							
H03S2				T		T	02 11 05.1	
	baz=96,slow=74							
AC04	**Llanos de Chal**	**5.32**	**15**	Pn		**Pn**	**02 04 54.7**	**-0.6**
AC04	**Llanos de Chal**	**5.32**	**15**	*e*P		**Pn**	**02 04 54.7**	**-0.6**
AC04				*e*S		**Sn**	**02 05 55.5**	**-1.0**
AC04				IAML			02 06 44.3	
	comp=Z,46nm,1.9s							
AC02	**Maricunga**	**7.18**	**26**	Pn		**Pn**	**02 05 21.1**	**-0.2**
PLCA	**Paso Flores**	**7.53**	**168**	LR		LR	02 08 05.5	
	comp=Z,56nm,19.8s,baz=346,slow=36							
PLCA	**Paso Flores**	**7.53**	**168**	Pn		**Pn**	**02 05 26.6**	**+0.9**
TRQA	**Tornquist**	**9.84**	**121**	Pn		**Pn**	**02 05 55.8**	**-1.5**
LPAZ	**La Paz**	**17.49**	**15**	P		**P**	**02 07 42.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=191,slow=6.9,SNR=5.9							
	comp=Z,1.8nm,0.8s							
LPAZ	**La Paz**	**17.49**	**15**			**Pn**	**02 07 40.4**	**0.0**
SIV	**San Ignacio**	**20.21**	**34**	P		Pn	02 08 13.1	+0.3
	comp=Z,1.9nm,0.8s,baz=214,slow=12,SNR=6.3							
	comp=Z,1.9nm,0.8s							
PMSA	**Palmer Station**	**31.87**	**173**	LR		LR	02 22 52.0	
	comp=Z,85nm,19.8s,baz=130,slow=36							
BELA	**Belgrano 2**	**47.58**	**170**	P		**P**	**02 12 12.5**	**+1.4**
BELA				IAmb		IAmb	02 12 23.0	
	comp=Z,3.4nm,1.4s							
SNAA	**Sanae**	**52.35**	**158**	P		**P**	**02 12 48.9**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=285,slow=9.5,SNR=4.1							
	comp=Z,1.4nm,0.8s							
SNAA	**Sanae**	**52.35**	**158**	P		**P**	**02 12 48.2**	**+0.7**
QSPA	**South Pole Qui**	**56.86**	**180**	P		**P**	**02 13 23.1**	**+2.7**
	comp=Z,1.1nm,0.9s,baz=140,slow=5.5,SNR=2.3							
	comp=Z,1.1nm,0.9s							
QSPA	**South Pole Qui**	**56.86**	**180**	P		**P**	**02 13 21.8**	**+1.4**
QSPA				IAmb		IAmb	02 13 33.1	
	comp=Z,2.9nm,1.1s							
TXAR	**Lajitas Array**	**68.95**	**331**	P		P	02 14 46.6	+5.4
	comp=Z,0.3nm,0.6s,baz=158,slow=4.5,SNR=3.7							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**84.46**	**70**	P		**P**	**02 16 09.3**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=236,slow=5.1,SNR=2.7							
	comp=Z,0.7nm,0.8s							
WRA	**Warramunga Arr**	**121.07**	**210**	PKP		**PKiKP**	**02 22 30.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=158,slow=2.0,SNR=1.9							

JMA ***01*** *02:40:41.4±1.0, 47°N±5°×15°3E±°, h30km, MV4.8/18, KURILE ISLANDS REGION*
SKHL ***01*** *02:40:43.9±0.0, 46°.80N×153°.10E, h65km±5km, mb5.4/4*
NEIC ***01*** *02:40:43.2±1.4, 46°.92N±0°.10×152°.8E±0°.1, h35km±1km, mb4.6/57, Error ellipse: s-maj=18.4km s-min=11.5km az=146.0*
MOS ***01*** *02:40:44.9±1.1, 46°.76N×152°.85E, h74km, mb4.7/27, Error ellipse: s-maj=7.6km s-min=5.8km az=87.9*
IDC ***01*** *02:40:47.2±2.7, 47°.00N×152°.82E, h72km±21km, mb3.9/24, mbtmp4.3/29, MS3.4/24, Error ellipse: s-maj=19.6km s-min=11.0km az=160.0*
ISC 01 02:40:44.5±0.6, 46°.77N±0°.05×152°.98E±0°.05, h56km±4km, n528, σ1$19/547, mb4.5/102, MS3.5/20, 17C-11D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
REI	**Reidovoe**	**3.77**	**248**	*e*P		**Pn**	**02 41 40.1**	**+0.1**
REI				AMB		AMB	02 41 41.0	
	90nm,0.2s							
REI				*e*S		**Sn**	**02 42 22.3**	**-0.7**
REI				A		A	02 42 26.6	
	420nm,0.4s							
REI				A		A	02 42 26.6	
	270nm,0.4s							
KUR	**Kuril'sk**	**3.88**	**249**	*e*PN		**Pn**	**02 41 42.1**	**+0.5**
KUR				*e*S		**Sn**	**02 42 25.9**	**+0.1**
KUR				pmax		pmax		
	comp=N,214nm,0.4s							
KUR				pmax		pmax		
	comp=Z,389nm,0.4s							
KUR				pmax		pmax		
	comp=E,149nm,0.2s							
KUR				smax		smax		
	comp=N,976nm,0.6s							
KUR				smax		smax		
	comp=E,489nm,0.3s							
KUR	**Kuril'sk**	**3.88**	**249**	*e*P		**Pn**	**02 41 42.0**	**+0.5**
KUR				AMB		AMB	02 41 44.1	
	comp=E,270nm,0.2s							
KUR				*e*S		**Sn**	**02 42 25.6**	**-0.2**
KUR				A		A	02 42 32.0	
	comp=E,790nm,0.4s							
KUR				A		A	02 42 32.0	
	comp=E,630nm,0.4s							
SKR	**Severo-Kuril's**	**4.44**	**27**	*e*PN		**Pn**	**02 41 48.8**	**-0.4**
SKR				pmax		pmax		
	comp=Z,78nm,0.6s							
SKR				MLR		MLR		
	comp=Z,300nm,10.0s							
SKR	**Severo-Kuril's**	**4.44**	**27**	*e*P		**Pn**	**02 41 49.2**	**0.0**
SKR				AMB		AMB	02 41 52.2	
	comp=Z,70nm,0.2s							
SKR				*e*S		**Sn**	**02 42 36.7**	**-2.8**
SKR				A		A	02 42 41.0	
	comp=Z,270nm,0.2s							
SKR				A		A	02 42 41.0	
	comp=Z,220nm,0.2s							
SHO	**Shikotan**	**5.21**	**238**	*e*P		Pn	02 42 10.8	+11
SHO				AMB		AMB	02 42 13.4	
	comp=Z,80nm,0.2s							
SHO				*e*S		**Sn**	**02 43 06.4**	**+7.8**
SHO				A		A	02 43 20.2	
	comp=Z,360nm,0.4s							
SHO				A		A	02 43 20.2	
	comp=Z,280nm,0.4s							
PAU	**Pauzhetka**	**5.34**	**27**	*e*P		**Pn**	**02 42 01.2**	**-0.3**
PAU				AMB		AMB	02 42 03.6	
	comp=Z,30nm,0.2s							
PAU				*e*S		**Sn**	**02 43 00.4**	**-1.2**
PAU				A		A	02 43 02.3	
	comp=Z,320nm,0.4s							
PAU				A		A	02 43 02.3	
	comp=Z,360nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**5.71**	**244**	*e*PN		**Pn**	**02 42 06.9**	**+0.3**
YUK				*i* S		**Sn**	**02 43 09.5**	**-1.2**
YUK				pmax		pmax		
	comp=Z,322nm,0.2s							
YUK				pmax		pmax		
	comp=N,83nm,0.1s							
YUK				pmax		pmax		
	comp=E,84nm,0.1s							
YUK				pmax		pmax		
	comp=Z,449nm,1.2s							
YUK				smax		smax		
	comp=N,385nm,0.6s							
YUK				smax		smax		
	comp=E,672nm,0.5s							
YUK				smax		smax		
	comp=E,1μm,0.9s							
YUK				smax		smax		
	comp=N,1μm,1.3s							
YUK	**Yuzh-Kuril'sk**	**5.71**	**244**	*e*P		**Pn**	**02 42 07.5**	**+0.9**
YUK				AMB		AMB	02 42 09.0	
	comp=N,350nm,0.4s							
YUK				*i* S		**Sn**	**02 43 10.7**	**0.0**
YUK				A		A	02 43 28.3	
	comp=N,460nm,0.5s							
YUK				A		A	02 43 28.3	
	comp=N,740nm,0.5s							
RUSJ	**Misakicho**	**6.05**	**247**	*e*PN		**Pn**	**02 42 12.3**	**+0.9**
RUSJ				S		**Sn**	**02 43 23.0**	**+3.7**
NEM2	**Nemuro 2**	**6.15**	**239**	*e*P		**Pn**	**02 42 10.8**	**-1.8**
NEM2				*e*S		**Sn**	**02 43 16.9**	**-4.7**
NMR	**Nemuro--Hokkai**	**6.15**	**239**	*i* PN		**Pn**	**02 42 10.9**	**-1.8**
NMR	**Nemuro--Hokkai**	**6.15**	**239**	*i* P		**Pn**	**02 42 11.3**	**-1.4**
JRA	**Rausu**	**6.21**	**246**	*e*P		**Pn**	**02 42 13.8**	**+0.2**
JNK	**Nakash**	**6.64**	**244**	*e*P		**Pn**	**02 42 19.9**	**+0.4**
JNK				*e*S		**Sn**	**02 43 32.2**	**-1.6**
JTKR	**Abashiri--Toko**	**6.97**	**250**	*e*P		**Pn**	**02 42 24.9**	**+1.0**
JAK	**Akkeshi**	**6.98**	**240**	*e*P		**Pn**	**02 42 22.1**	**-2.0**
JAK				*e*S		**Sn**	**02 43 36.4**	**-5.7**
YSS	**Yuzhno-Sakhali**	**7.01**	**275**			**Pn**	**02 42 21.3**	**-3.1**
YSS	**Yuzhno-Sakhali**	**7.01**	**275**	*e*PN		**Pn**	**02 42 25.5**	**+1.0**
YSS				pmax		pmax		
	comp=Z,50nm,0.9s							
YSS				MLR		MLR		
	comp=Z,300nm,15.0s							
YSS				MLR		MLR		
	comp=N,200nm,13.0s							
YSS				MLR		MLR		
	comp=E,200nm,14.0s							
YSS	**Yuzhno-Sakhali**	**7.01**	**275**	*e*P		**Pn**	**02 42 26.4**	**+1.9**
YSS				AMB		AMB	02 42 32.1	
	comp=E,60nm,0.9s							
YSS				*e*S		**Sn**	**02 43 41.9**	**-0.8**
PEA0B	**Petropavlovsk-**	**7.04**	**24**			**Pn**	**02 42 23.5**	**-1.4**
PEA0B	**Petropavlovsk-**	**7.04**	**24**	PN		**Pn**	**02 42 23.5**	**-1.4**
PETK	**Petropavlovsk-**	**7.04**	**24**	P		**Pn**	**02 42 25.3**	**+0.4**
	comp=E,5.7nm,0.8s,baz=178,slow=12,SNR=13							
PETK				S		**Sn**	**02 43 42.2**	**-1.2**
	comp=E,4.2nm,0.5s,baz=124,slow=15,SNR=1.4							
PETK				LR		LR	02 44 36.0	
	comp=E,45nm,18.8s,baz=203,slow=33							
PETK	**Petropavlovsk-**	**7.04**	**24**			**Pn**	**02 42 23.4**	**-1.4**
PET	**Petropavlovsk**	**7.26**	**28**	Pn		**Pn**	**02 42 25.9**	**-1.9**
PET	**Petropavlovsk**	**7.26**	**28**	*e*P		**Pn**	**02 42 27.6**	**-0.2**
PET				*e*S		**Sn**	**02 43 45.4**	**-3.3**
PET				A		A	02 43 46.1	
	comp=E,120nm,0.6s							
PET				A		A	02 43 46.1	
	comp=E,50nm,0.6s							
JAR	**Ashorobuto**	**7.39**	**245**	*e*P		**Pn**	**02 42 29.9**	**+0.3**
JAR				*e*S		**Sn**	**02 43 51.0**	**-1.0**
JOB	**Onbets**	**7.56**	**243**	*e*P		**Pn**	**02 42 29.7**	**-2.3**
JOB				*e*S		**Sn**	**02 43 51.5**	**-4.7**
JKA	**Kamikawa-asahi**	**7.76**	**254**			**Pn**	**02 42 33.5**	**-1.3**
JKA	**Kamikawa-asahi**	**7.76**	**254**	*e*P		**Pn**	**02 42 33.5**	**-1.3**
ASAJ	**Asahikawa**	**7.76**	**254**	PN		**Pn**	**02 42 33.5**	**-1.3**
JKK2	**Kamakawa 2**	**7.77**	**252**	*e*P		**Pn**	**02 42 36.4**	**+1.5**
JWK2	**Keihoku**	**7.84**	**263**	*e*P		**Pn**	**02 42 40.4**	**+4.5**
TYV	**Tymovskoe**	**7.95**	**305**	*e*PN		**Pn**	**02 42 39.6**	**+2.3**
TYV				*e*S		**Sn**	**02 44 07.0**	**+1.3**
TYV				pmax		pmax		
	comp=Z,15nm,0.9s							
TYV				pmax		pmax		
	comp=Z,100nm,3.0s							
TYV				smax		smax		
	comp=N,7.0nm,1.1s							
TYV				smax		smax		
	comp=E,10.0nm,1.1s							
TYV				smax		smax		
	comp=N,100nm,3.6s							
TYV				smax		smax		
	comp=E,100nm,3.6s							
TYV	**Tymovskoe**	**7.95**	**305**	*e*P		**Pn**	**02 42 38.5**	**+1.2**
TYV				AMB		AMB	02 42 43.6	
	comp=E,20nm,0.7s							
TYV				*e*S		**Sn**	**02 44 04.0**	**-1.7**
JCH	**Churui**	**8.01**	**242**	*e*P		**Pn**	**02 42 36.7**	**-1.4**
JCH				*e*S		**Sn**	**02 44 01.4**	**-5.8**
JAB	**Ashibetsu**	**8.27**	**251**	*e*P		**Pn**	**02 42 43.8**	**+2.0**
JRBN	**Rebuntou**	**8.39**	**265**	*e*P		**Pn**	**02 42 46.0**	**+2.6**
JNBK	**Urakawa-nobuka**	**8.57**	**242**	*e*P		**Pn**	**02 42 43.5**	**-2.3**
JTM	**Tenmabayashi**	**10.48**	**240**	Pn		**Pn**	**02 43 08.7**	**-3.2**
JANG	**Nango**	**10.48**	**237**	*e*P		**Pn**	**02 43 07.3**	**-4.6**
JANG				*e*S		Sn	02 44 55.7	-12
MA2	**Magadan**	**12.90**	**355**	P		**Pn**	**02 43 45.5**	**+0.6**
	comp=E,12nm,0.5s,baz=161,slow=13,SNR=10							
MA2				LR		LR	02 48 21.5	
	comp=E,88nm,21.2s,baz=94,slow=36							
MA2	**Magadan**	**12.90**	**355**			**Pn**	**02 43 42.7**	**-2.2**
MA2	**Magadan**	**12.90**	**355**	PN		**Pn**	**02 43 42.7**	**-2.2**
MA2	**Magadan**	**12.90**	**355**	P		**Pn**	**02 43 42.4**	**-2.5**
	comp=E,19nm,0.8s							
KLR	**Kul'dur**	**14.42**	**288**	P		**P**	**02 44 09.1**	**-1.7**
	comp=E,2.6nm,0.5s,baz=96,slow=13,SNR=8.2							
KLR				LR		LR	02 49 39.6	
	comp=E,142nm,20.2s,baz=92,slow=37							
KLR	**Kul'dur**	**14.42**	**288**	*i* P		**Pn**	**02 44 06.0**	**+0.6**
KLR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
SHEM	**Shemya Is, Ala**	**14.88**	**59**	LR		LR	02 48 40.7	
	comp=Z,58nm,21.8s,baz=224,slow=32							
SMY	**Shemya**	**14.88**	**59**	Pn		**Pn**	**02 44 08.9**	**-2.4**
SMY	**Shemya**	**14.88**	**59**	P		**Pn**	**02 44 08.9**	**-2.4**
USA0B	**Ussuriysk Arra**	**14.94**	**268**			**Pn**	**02 44 10.1**	**-2.1**
USA0B	**Ussuriysk Arra**	**14.94**	**268**	*i* P		**Pn**	**02 44 12.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**14.94**	**268**	P		**Pn**	**02 44 12.1**	**-0.1**
	comp=Z,6.2nm,0.6s,baz=72,slow=11,SNR=13							
USRK				LR		LR	02 49 48.6	
	comp=Z,96nm,19.8s,baz=63,slow=36							
USRK	**Ussuriysk Ar.**	**14.94**	**268**	Pn		**Pn**	**02 44 10.3**	**-1.8**
MAJO	**Matsushiro**	**15.01**	**232**			**Pn**	**02 44 09.5**	**-3.7**
MAJO				IAmb		IAmb	02 44 21.8	
	comp=Z,33nm,1.4s							
MAJO	**Matsushiro**	**15.01**	**232**	P		**Pn**	**02 44 09.5**	**-3.7**
MAJO				pmax		pmax		
	comp=Z,33nm,1.4s							
MJAR	**Matsushiro Arr**	**15.01**	**232**	P		**P**	**02 44 17.5**	**0.0**
	comp=Z,4.8nm,0.6s,baz=33,slow=9.0,SNR=12							
MJAR				LR		LR	02 50 00.0	
	comp=Z,93nm,21.2s,baz=6.5,slow=37							
MJAR	**Matsushiro Arr**	**15.01**	**232**	Pn		**Pn**	**02 44 11.7**	**-1.5**
MJAR	**Matsushiro Arr**	**15.01**	**232**	P		**Pn**	**02 44 11.7**	**-1.5**
MJAR				pmax		pmax		
	comp=Z,6.0nm,1.3s							
SEY	**Seymchan**	**16.21**	**359**	P		**Pn**	**02 44 27.3**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=173,slow=17,SNR=1.6							
HEH	**HeiHe**	**17.26**	**291**	*e*P		**P**	**02 44 42.6**	**+0.3**
HEH				pmax		pmax		
	comp=Z,21nm,0.8s							
BNX	**BinXian**	**17.70**	**276**	⇑P		**P**	**02 44 47.0**	**-0.1**
BNX				pmax		pmax		
	comp=Z,4.0nm,0.7s							
CN2	**Changchun**	**19.56**	**271**	*e*P		**P**	**02 45 05.4**	**-2.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
YAK	**Yakutsk**	**20.26**	**327**

NJ2	**Nanjing**	**29.91**	**253**	*e*P		**P**	**02 46 48.3**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,22nm,0.6s							
SDPT	**Sand Point**	**29.98**	**56**	P		**P**	**02 46 47.6**	**+0.2**
	baz=273							
M15K	**Kasigluk River**	**30.03**	**45**	P		**P**	**02 46 47.3**	**-0.4**
	baz=264							
H16K	**Elim**	**30.05**	**37**	P		**P**	**02 46 47.5**	**-0.4**
	baz=256							
HHC	**Hu-ho-hao-te**	**30.20**	**274**	*e*P		**P**	**02 46 50.7**	**+1.1**
HHC				pmax		pmax		
	comp=Z,15nm,0.7s							
N15K	**Kwethluk River**	**30.27**	**46**	P		**P**	**02 46 49.4**	**-0.5**
	baz=265							
O15K	**Ungalikthiuk R**	**30.34**	**48**	P		**P**	**02 46 50.5**	**0.0**
	baz=267							
H11S1	**WAKE ISLAND Hy**	**30.36**	**154**	T		T	03 19 31.9	
	baz=340,slow=76,SNR=2040							
H11S3	**WAKE ISLAND Hy**	**30.37**	**154**	T		T	03 19 28.8	
	baz=340,slow=76,SNR=2033							
H11S2	**WAKE ISLAND Hy**	**30.38**	**154**	T		T	03 19 29.6	
	baz=340,slow=76,SNR=1796							
J16K	**Anvik River**	**30.46**	**40**	P		**P**	**02 46 51.1**	**-0.4**
J16K				IAmb		IAmb	02 47 27.4	
	comp=Z,15nm,1.5s							
J16K	**Anvik River**	**30.46**	**40**	P		**P**	**02 46 51.6**	**+0.1**
	baz=260							
S14K	**Fog Glacier**	**30.46**	**54**	P		**P**	**02 46 51.4**	**-0.3**
	baz=272							
CHNA	**Chernabura Isl**	**30.53**	**57**	P		**P**	**02 46 52.9**	**+0.7**
	baz=275							
I17K	**Unalakleet**	**30.53**	**39**	P		**P**	**02 46 52.1**	**0.0**
	baz=258							
D17K	**Noatak River**	**30.66**	**31**	P		**P**	**02 46 53.1**	**-0.1**
	baz=250							
L16K	**Owhat River**	**30.73**	**43**	P		**P**	**02 46 53.6**	**-0.3**
	baz=263							
ULN	**Ulaanbaatar**	**30.80**	**289**	*i* P		**P**	**02 46 55.0**	**+0.1**
ULN				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ULN	**Ulaanbaatar**	**30.80**	**289**	*e*P		**P**	**02 46 55.0**	**+0.1**
M16K	**Timber Creek**	**30.90**	**45**	P		**P**	**02 46 56.3**	**+0.8**
	baz=265							
C17K	**DeLong Mountai**	**30.91**	**30**	P		**P**	**02 46 55.6**	**+0.1**
	baz=248							
E17K	**Hotham Inlet**	**30.91**	**33**	P		**P**	**02 46 55.8**	**+0.3**
	baz=252,SNR=8.8							
G17K	**Kiwalik Mounta**	**30.92**	**36**	P		**P**	**02 46 55.7**	**+0.1**
	baz=256							
F17K	**Baldwin Pennin**	**30.94**	**34**			**P**	**02 46 55.4**	**-0.2**
F17K				IAmb		IAmb	02 46 58.2	
	comp=Z,9.4nm,1.1s							
F17K	**Baldwin Pennin**	**30.94**	**34**	P		**P**	**02 46 56.4**	**+0.7**
	baz=254							
N16K	**Nishlik Lake**	**30.95**	**46**	P		**P**	**02 46 56.5**	**+0.6**
	baz=266							
H17K	**Granite Mounta**	**31.09**	**37**	P		**P**	**02 46 57.5**	**+0.5**
	baz=258							
J17K	**VABM Dome**	**31.15**	**40**	P		**P**	**02 46 57.6**	**0.0**
	baz=261							
SONM	**Songino Array**	**31.24**	**289**	P		**P**	**02 46 59.0**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=83,slow=9.1,SNR=5.6							
SONM				LR		LR	03 00 44.2	
	comp=Z,84nm,18.2s,baz=76,slow=38							
	comp=Z,0.7nm,0.7s							
SONM	**Songino Array**	**31.24**	**289**	P		**P**	**02 46 59.0**	**+0.2**
O16K	**Kokwok River B**	**31.24**	**48**	P		**P**	**02 46 58.5**	**+0.1**
	baz=268							
P16K	**Nushagak River**	**31.28**	**49**	P		**P**	**02 46 59.1**	**+0.4**
	baz=269							
L17K	**Donlin**	**31.33**	**43**	P		**P**	**02 47 00.1**	**+0.9**
	baz=264							
BTO2	**Baotou**	**31.40**	**275**	*e*P		**P**	**02 47 00.3**	**+0.1**
BTO2				pP		**pP**	**02 47 14.9**	**+1.3**
BTO2				sP		**sP**	**02 47 22.3**	**+2.4**
BTO2				pmax		pmax		
	comp=Z,16nm,0.9s							
BTO2				pmax		pmax		
	comp=Z,220nm,4.3s							
K17K	**Iditarod**	**31.40**	**42**	P		**P**	**02 47 00.6**	**+0.8**
	baz=263							
E18K	**Tukpahlearik C**	**31.47**	**32**	P		**P**	**02 47 00.4**	**+0.1**
	baz=253							
F18K	**Selawik**	**31.60**	**34**	P		**P**	**02 47 01.6**	**+0.1**
	baz=255							
M17K	**Holitna River**	**31.67**	**44**	P		**P**	**02 47 02.4**	**+0.2**
	baz=266							
N17K	**Nushagak Hills**	**31.73**	**46**	P		**P**	**02 47 02.9**	**+0.2**
	baz=267							
H18K	**Honhosa River**	**31.78**	**37**	P		**P**	**02 47 03.3**	**+0.2**
	baz=259							
G18K	**Tagagawik**	**31.82**	**36**	P		**P**	**02 47 04.4**	**+0.9**
G18K				IAmb		IAmb	02 47 05.2	
	comp=Z,4.1nm,0.6s							
G18K	**Tagagawik**	**31.82**	**36**	P		**P**	**02 47 03.9**	**+0.4**
	baz=257							
P17K	**Kvichak River**	**32.08**	**48**	P		**P**	**02 47 06.4**	**+0.7**
	baz=270							
TLY	**Talaya**	**32.09**	**297**	LR		LR	03 00 53.8	
	comp=Z,98nm,18.7s,baz=128,slow=38							
TLY	**Talaya**	**32.09**	**297**	*i* P		**P**	**02 47 04.8**	**-1.2**
TLY				pmax		pmax		
	comp=Z,1.0nm,0.8s							
TLY	**Talaya**	**32.09**	**297**	*e*P		**P**	**02 47 04.8**	**-1.2**
L18K	**Granite Mounta**	**32.09**	**43**	P		**P**	**02 47 06.4**	**+0.5**
	baz=265							
R17L	**Mt. Peulik Vol**	**32.15**	**51**	P		**P**	**02 47 07.3**	**+0.8**
	baz=273							
C19K	**Lookout Ridge**	**32.36**	**30**	P		**P**	**02 47 08.2**	**0.0**
	baz=251							
F19K	**Shaleruckik Mo**	**32.38**	**34**	P		**P**	**02 47 08.8**	**+0.5**
F19K	**Shaleruckik Mo**	**32.38**	**34**	P		**P**	**02 47 08.6**	**+0.3**
	baz=257							
N18K	**Kilae Creek**	**32.38**	**46**	P		**P**	**02 47 08.9**	**+0.4**
	baz=268							
Q17K	**Contact Creek**	**32.38**	**50**	P		**P**	**02 47 09.1**	**+0.5**
	baz=272							
M18K	**Stony River**	**32.45**	**44**	P		**P**	**02 47 09.5**	**+0.4**
	baz=267							
G19K	**Purcell Mounta**	**32.50**	**35**	P		**P**	**02 47 10.1**	**+0.7**
	baz=259							
H19K	**Roundabout Mou**	**32.64**	**37**	P		**P**	**02 47 11.4**	**+0.8**
	baz=260,SNR=12							
D19K	**Kuna River**	**32.68**	**31**	P		**P**	**02 47 11.6**	**+0.6**
D19K				IAmb		IAmb	02 47 15.2	
	comp=Z,7.8nm,0.9s							
D19K	**Kuna River**	**32.68**	**31**	P		**P**	**02 47 11.8**	**+0.7**
	baz=254							
CHIR	**Chirikof Islan**	**32.69**	**55**	P		**P**	**02 47 12.2**	**+1.0**
	baz=276							
P18K	**Big Mountain,**	**32.70**	**48**	P		**P**	**02 47 11.6**	**+0.3**
	baz=271							
O18K	**Koktuh Hills**	**32.71**	**47**	P		**P**	**02 47 11.7**	**+0.3**
	baz=270							
LYN	**LuoYang**	**32.71**	**263**	P		**P**	**02 47 11.9**	**+0.3**
LYN				pmax		pmax		
	comp=Z,22nm,0.9s							
E19K	**Redstone River**	**32.73**	**33**	P		**P**	**02 47 11.8**	**+0.3**
	baz=256							
J19K	**Poorman**	**32.76**	**40**			**P**	**02 47 12.4**	**+0.6**
J19K	**Poorman**	**32.76**	**40**	P		**P**	**02 47 11.7**	**0.0**
	baz=263,SNR=5.3							
L19K	**White Mountain**	**32.95**	**43**	P		**P**	**02 47 13.4**	**0.0**
	baz=267							
N19K	**Bonanza Creek**	**33.08**	**45**	P		**P**	**02 47 15.2**	**+0.5**
	baz=269							
M19K	**Big River Lodg**	**33.15**	**43**	P		**P**	**02 47 15.8**	**+0.6**
	baz=268							
F20K	**Avaraart Lake**	**33.21**	**34**	P		**P**	**02 47 16.0**	**+0.4**
	baz=259							
D20K	**Etivluk River**	**33.27**	**31**	P		**P**	**02 47 16.8**	**+0.6**
	baz=255,SNR=8.8							
H20K	**Anotleneega Mo**	**33.28**	**37**	P		**P**	**02 47 17.0**	**+0.8**
	baz=262,SNR=6.9							
K20K	**Telida**	**33.39**	**41**	P		**P**	**02 47 17.9**	**+0.6**
	baz=266							
J20K	**Nowinta River**	**33.43**	**39**	P		**P**	**02 47 17.5**	**0.0**
	baz=265							
B20K	**Meade River**	**33.45**	**28**	P		**P**	**02 47 18.0**	**+0.4**
	baz=253,SNR=5.2							
P19K	**Oil Pt**	**33.71**	**48**	P		**P**	**02 47 20.7**	**+0.6**
	baz=272							
M20K	**Styx River**	**33.75**	**44**	P		**P**	**02 47 20.1**	**-0.3**
	baz=269							
G21K	**Allakaket**	**33.98**	**35**			**P**	**02 47 23.3**	**+0.9**
G21K				IAmb		IAmb	02 47 24.3	
	comp=Z,3.9nm,0.7s							
G21K	**Allakaket**	**33.98**	**35**	P		**P**	**02 47 22.7**	**+0.3**
	baz=262							
O20K	**Slope Mountain**	**34.00**	**47**	P		**P**	**02 47 22.6**	**0.0**
	baz=272							
C21K	**Knifeblade Rid**	**34.02**	**30**	P		**P**	**02 47 22.3**	**-0.3**
	baz=256							
A21K	**Barrow**	**34.04**	**26**	P		**P**	**02 47 22.9**	**+0.2**
	baz=251							
F21K	**Alatna River**	**34.11**	**34**	P		**P**	**02 47 24.4**	**+0.9**
	baz=261							
H21K	**Melozitna Rive**	**34.15**	**37**	P		**P**	**02 47 24.7**	**+0.9**
	baz=264,SNR=5.8							
B21K	**Ikpikpuk River**	**34.20**	**30**	P		**P**	**02 47 24.1**	**0.0**
	baz=256							
CHUM	**Lake Minchumin**	**34.21**	**40**	P		**P**	**02 47 24.5**	**+0.2**
	baz=267							
PPLA	**Purkeypile**	**34.22**	**42**	P		**P**	**02 47 25.3**	**+0.7**
	baz=268							
CAST	**Castle Rocks**	**34.28**	**41**			**P**	**02 47 25.6**	**+0.5**
CAST				IAmb		IAmb	02 47 28.5	
	comp=Z,5.9nm,1.2s							
CAST	**Castle Rocks**	**34.28**	**41**	P		**P**	**02 47 25.7**	**+0.7**
	baz=268							
A22K	**Sinclair Lake**	**34.45**	**27**	P		**P**	**02 47 26.7**	**+0.5**
	baz=254							
H22K	**Ishtalitna Cre**	**34.77**	**36**	P		**P**	**02 47 30.1**	**+1.0**
	baz=265							
G22K	**Bettles**	**34.83**	**35**	P		**P**	**02 47 30.4**	**+0.8**
	baz=263							
L22K	**Petersville**	**34.86**	**42**	P		**P**	**02 47 31.1**	**+1.0**
	baz=270							
E22K	**Anaktuvuk Pass**	**34.89**	**33**	P		**P**	**02 47 31.0**	**+0.9**
	baz=261							
MLY	**Manley**	**34.96**	**38**	P		**P**	**02 47 31.6**	**+0.7**
	baz=267							
BRSE	**Bradley Lake S**	**34.97**	**47**	P		**P**	**02 47 32.0**	**+1.0**
	baz=274							
TRF	**Thorofare Moun**	**35.09**	**41**	P		**P**	**02 47 32.6**	**+0.5**
	baz=269							
COLD	**Coldfoot**	**35.37**	**34**	P		**P**	**02 47 34.1**	**-0.2**
COLD				IAmb		IAmb	02 47 36.1	
	comp=Z,5.8nm,1.1s							
COLD	**Coldfoot**	**35.37**	**34**	P		**P**	**02 47 35.0**	**+0.7**
	baz=264							
RC01	**Rabbit Creek A**	**35.39**	**45**	P		**P**	**02 47 35.3**	**+0.8**
	baz=273							
G23K	**Bananza Creek**	**35.39**	**35**	P		**P**	**02 47 34.7**	**+0.2**
	baz=265,SNR=5.5							
D23K	**Nanushuk River**	**35.43**	**31**	P		**P**	**02 47 35.2**	**+0.4**
	baz=261							
H23K	**Yukon River**	**35.51**	**37**	P		**P**	**02 47 35.8**	**+0.3**
	baz=267							
I23K	**Minto, Yukon-K**	**35.55**	**38**	P		**P**	**02 47 36.4**	**+0.6**
	baz=268							
C23K	**Itkillik River**	**35.60**	**30**	P		**P**	**02 47 36.5**	**+0.3**
	baz=260							
NEA2	**Nenana**	**35.65**	**39**	P		**P**	**02 47 37.3**	**+0.6**
NEA2				IAmb		IAmb	02 47 40.9	
	comp=Z,4.7nm,0.8s							
NEA2	**Nenana**	**35.65**	**39**	P		**P**	**02 47 36.8**	**+0.1**
	baz=269							
PMR	**Palmer**	**35.65**	**44**	P		**P**	**02 47 37.4**	**+0.7**
	baz=273							
E23K	**Chandalar**	**35.69**	**33**	P		**P**	**02 47 37.1**	**0.0**
	baz=263,SNR=7.5							
MCK	**McKinley**	**35.70**	**40**	P		**P**	**02 47 37.8**	**+0.6**
	baz=270							
RND	**Reindeer**	**35.74**	**41**	P		**P**	**02 47 37.5**	**-0.1**
RND	**Reindeer**	**35.74**	**41**	P		**P**	**02 47 37.5**	**-0.1**
RND				pmax		pmax		
	comp=Z,3.0nm,0.8s							
TOLK	**Toolik Lake Re**	**35.78**	**32**	P		**P**	**02 47 38.6**	**+0.7**
	baz=263							
WAT1	**Susitna Watana**	**35.88**	**42**	P		**P**	**02 47 40.0**	**+1.2**
	baz=272							
KNK	**Knik Glacier**	**35.99**	**44**	P		**P**	**02 47 40.5**	**+0.8**
	baz=274							
SML	**Sawmill**	**36.02**	**44**	P		**P**	**02 47 40.9**	**+0.9**
SML	**Sawmill**	**36.02**	**44**	P		**P**	**02 47 40.2**	**+0.2**
	baz=273							
E24K	**Your Creek**	**36.11**	**33**	P		**P**	**02 47 41.5**	**+0.8**
	baz=264,SNR=14							
D24K	**Happy Valley**	**36.12**	**31**	P		**P**	**02 47 41.5**	**+0.9**
	baz=263							
COLA	**College**	**36.18**	**38**	*i* P		**P**	**02 47 42.6**	**+1.4**
COLA				pmax		pmax		
	comp=Z,6.0nm,0.9s							
COLA	**College**	**36.18**	**38**	P		**P**	**02 47 41.5**	**+0.3**
	baz=269							
H24K	**Noodor Dome**	**36.20**	**37**	P		**P**	**02 47 41.9**	**+0.4**
	baz=268							
C24K	**Franklin Bluff**	**36.24**	**30**	P		**P**	**02 47 41.8**	**+0.1**
	baz=262							
F24K	**Squaw Lake**	**36.29**	**34**	P		**P**	**02 47 42.2**	**-0.1**
	baz=266							
POKR	**Poker Plat Res**	**36.36**	**38**	P		**P**	**02 47 42.6**	**-0.2**
	baz=270							
G24K	**Hadweenzic Riv**	**36.40**	**35**	P		**P**	**02 47 43.7**	**+0.6**
	baz=267,SNR=8.5							
DHY	**Denali Highway**	**36.41**	**41**	P		**P**	**02 47 43.0**	**-0.4**
	baz=272							
HDA	**Harding Lake**	**36.57**	**39**	P		**P**	**02 47 44.3**	**-0.3**
	baz=271							
IL31		**36.59**	**39**	P		**P**	**02 47 45.2**	**+0.5**
ILAR	**Eielson Array**	**36.59**	**39**	P		**P**	**02 47 44.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=264,slow=6.7,SNR=11							
	comp=Z,0.6nm,0.5s							
P23K	**Montague Islan**	**36.62**	**47**	P		**P**	**02 47 45.1**	**+0.1**
	baz=276							
GLI	**Glacier Island**	**36.69**	**45**	P		**P**	**02 47 45.3**	**-0.3**
	baz=276							
G25K	**Bearman Lake**	**36.95**	**35**	P		**P**	**02 47 47.6**	**-0.1**
	baz=268							
D25K	**Kavik River**	**37.01**	**31**	P		**P**	**02 47 47.8**	**-0.5**
	baz=265,SNR=12							
M24K	**Tolsona, Glenn**	**37.02**	**43**	P		**P**	**02 47 49.0**	**+0.5**
	baz=275							
K24K	**Donnelly Dome**	**37.10**	**40**	P		**P**	**02 47 49.7**	**+0.6**
	baz=273							
F25K	**Christian Rive**	**37.16**	**34**	P		**P**	**02 47 49.5**	**-0.1**
	baz=268							
KLU	**Kluina**	**37.19**	**44**	P		**P**	**02 47 49.9**	**-0.1**
	baz=276							
E25K	**Arctic Village**	**37.21**	**33**	P		**P**	**02 47 50.9**	**+0.9**
	baz=267							
J25K	**Salcha River,**	**37.25**	**39**	P		**P**	**02 47 50.0**	**-0.4**
	baz=272							
PAX	**Paxson**	**37.29**	**42**	P		**P**	**02 47 50.6**	**-0.1**
	baz=274							
EYAK	**Cordova Ski Ar**	**37.38**	**46**	P		**P**	**02 47 52.1**	**+0.7**
	baz=277							
HARP	**HAARP**	**37.47**	**42**	P		**P**	**02 47 52.8**	**+0.5**
	baz=275							
RIDG	**Independent Ri**	**37.52**	**40**	P		**P**	**02 47 53.2**	**+0.6**
	baz=274							
C26K	**Camden Bay**	**37.57**	**30**	P		**P**	**02 47 53.2**	**+0.3**
	baz=266							
F26K	**Sheenjek River**	**37.73**	**34**	P		**P**	**02 47 54.4**	**0.0**
	baz=269							
N25K	**Chitina, Valde**	**37.81**	**44**	P		**P**	**02 47 55.7**	**+0.5**
	baz=277							
G26K	**Porcupine Rive**	**37.87**	**35**			**P**	**02 47 56.7**	**+1.2**
G26K				IAmb		IAmb	02 47 57.8	
	comp=Z,4.8nm,0.7s							
G26K	**Porcupine Rive**	**37.87**	**35**	P		**P**	**02 47 56.3**	**+0.8**
	baz=270,SNR=5.1							
SCRK	**Sand Creek**	**37.88**	**40**	P		**P**	**02 47 56.2**	**+0.3**
	baz=274							
BMRM	**Bremner River**	**37.88**	**45**	P		**P**	**02 47 56.4**	**+0.6**
	baz=277							
C27K	**Jago River**	**37.97**	**31**	P		**P**	**02 47 57.1**	**+0.8**
	baz=267,SNR=6.4							
KAIM	**Kayak Island**	**38.12**	**46**	P		**P**	**02 47 58.3**	**+0.6**
	baz=279							
L26K	**Log Cabin Wild**	**38.25**	**41**	P		**P**	**02 47 59.7**	**+0.9**
	baz=276							
M26K	**Nabesna, AK**	**38.47**	**42**	P		**P**	**02 48 01.5**	**+0.8**
	baz=277							
MCARA	**McCarthy VSAT**	**38.59**	**44**	P		**P**	**02 48 02.3**	**+0.7**
	baz=278							
E27K	**Coleen River**	**38.70**	**33**	P		**P**	**02 48 03.0**	**+0.4**
	baz=271							
G27K	**Doyon Strip**	**38.71**	**35**	P		**P**	**02 48 03.2**	**+0.6**
	baz=272							
H27K	**Steamboat Moun**	**38.79**	**36**	P		**P**	**02 48 03.9**	**+0.6**
	baz=273							
I27K	**Kandik River**	**38.79**	**37**	P		**P**	**02 48 03.7**	**+0.4**
	baz=274							
GTA2	**Gaotai**	**38.88**	**279**	*e*P		**P**	**02 48 05.7**	**+1.2**
GTA2				pP		pP	02 48 16.3	-1.8
GTA2				pmax		pmax		
	comp=Z,5.0nm,1.0s							
D27M	**Malcolm River**	**38.92**	**31**	P		**P**	**02 48 04.7**	**+0.2**
	baz=270							
BCAR	**Beaver Creek A**	**38.95**	**41**	P		**P**	**02 48 05.2**	**+0.4**
M27K	**Edge Creek, AK**	**39.00**	**42**	P		**P**	**02 48 05.7**	**+0.5**
	baz=278							
F28M	**Old Crow**	**39.37**	**34**	P		**P**	**02 48 08.4**	**+0.3**
	baz=273							
E28M	**Babbage River**	**39.45**	**32**	P		**P**	**02 48 09.2**	**+0.4**
	baz=272							
BVCY	**Beaver Creek**	**39.46**	**42**	P		**P**	**02 48 09.4**	**+0.5**
	baz=279							
I28M	**Miner Creek**	**39.50**	**37**	P		**P**	**02 48 09.6**	**+0.3**
	baz=276,SNR=8.0							
DAWY	**Dawson**	**39.89**	**39**	P		**P**	**02 48 13.1**	**+0.6**
	baz=278							
O28M	**Mount Upton**	**40.05**	**45**	P		**P**	**02 48 14.2**	**+0.1**
	baz=281							
H29M	**Whitestone**	**40.06**	**36**	P		**P**	**02 48 14.6**	**+0.7**
	baz=276							
E29M	**Blow River**	**40.06**	**33**	P		**P**	**02 48 14.5**	**+0.7**
	baz=274							
G29M	**Pine Creek**	**40.13**	**35**	P		**P**	**02 48 15.3**	**+0.8**
	baz=276,SNR=5.2							
PINM	**Pinnacle**	**40.15**	**46**	P		**P**	**02 48 15.1**	**+0.3**
	baz=282							
YUK8	**Steele Glacier**	**40.16**	**44**	P		**P**	**02 48 16.0**	**+1.0**
	baz=281							
BRWY	**Burwash Landin**	**40.49**	**43**	P		**P**	**02 48 18.2**	**+0.7**
	baz=281							
M29M	**Somme Creek**	**40.55**	**42**	P		**P**	**02 48 19.1**	**+1.0**
M29M	**Somme Creek**	**40.55**	**42**	P		**P**	**02 48 18.6**	**+0.4**
	baz=280							
L29M	**L29M**	**40.59**	**41**	P		**P**	**02 48 19.7**	**+1.4**
	baz=280							
YUK4	**Talbot Arm**	**40.68**	**43**	P		**P**	**02 48 19.9**	**+0.7**
	baz=282							
EPYK	**Eagle Plains**	**40.71**	**36**	P		**P**	**02 48 20.0**	**+0.8**
	baz=277							
K29M	**Barlow Dome**	**40.74**	**40**	P		**P**	**02 48 21.0**	**+1.4**
	baz=280,SNR=5.7							
G30M	**tAoh Zraii Nji**	**40.83**	**35**	P		**P**	**02 48 21.2**	**+1.0**
	baz=277							
F30M	**Barrier River**	**40.93**	**34**	P		**P**	**02 48 21.9**	**+0.9**
	baz=277							
O29M	**Mount Kennedy**	**40.93**	**45**	P		**P**	**02 48 22.5**	**+1.3**
	baz=283							
I30M	**Mount Dempster**	**41.01**	**37**	P		**P**	**02 48 22.7**	**+0.9**
	baz=279,SNR=12							
J30M	**Hart River**	**41.13**	**38**	P		**P**	**02 48 23.7**	**+0.8**
	baz=280							
M30M	**Minto, Yukon**	**41.29**	**41**	P		**P**	**02 48 25.2**	**+1.1**
	baz=282							
G31M	**Salah River**	**41.60**	**35**	P		**P**	**02 48 26.9**	**+0.5**
	baz=279							
INK	**Inuvik**	**41.69**	**32**	P		**P**	**02 48 28.1**	**+0.9**
INK	**Inuvik**	**41.69**	**32**	P		**P**	**02 48 28.1**	**+0.9**
INK				pmax		pmax		
	comp=Z,6.0nm,1.0s							
INK	**Inuvik**	**41.69**	**32**	P		**P**	**02 48 27.5**	**+0.3**
	baz=278							
F31M	**Tsiigehtchic**	**41.73**	**34**	P		**P**	**02 48 28.4**	**+0.9**
	baz=279							
H31M	**Peel River**	**41.75**	**36**	P		**P**	**02 48 28.2**	**+0.4**
	baz=280							
P30M	**Million Dollar**	**41.75**	**45**	P		**P**	**02 48 28.5**	**+0.5**
	baz=284							
N31M	**Braeburn, Yuko**	**41.99**	**43**	P		**P**	**02 48 30.1**	**+0.3**
	baz=284							
O30N	**Mendenhall**	**42.01**	**44**	P		**P**	**02 48 30.7**	**+0.6**
	baz=284							
PLBC	**Pleasant Camp**	**42.21**	**46**	P		**P**	**02 48 31.9**	**+0.3**
	baz=285							
M31M	**Drury Creek, Y**	**42.47**	**42**	P		**P**	**02 48 34.4**	**+0.7**
	baz=284							
DGZ	**Jazzator, Alta**	**42.51**	**299**	*i* P		**P**	**02 48 34.6**	**+0.2**
DGZ				pmax		pmax		
	comp=Z,4.0nm,2.0s							
ZALV	**Zalesovo Beam**	**42.52**	**306**	P		**P**	**02 48 32.4**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=67,slow=8.6,SNR=5.1							
ZALV				PcP		**PcP**	**02 50 25.5**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=64,slow=3.4,SNR=5.9							
ZALV				LR		LR	03 07 31.5	
	comp=Z,114nm,18.4s,baz=310,slow=38							
	comp=Z,0.9nm,0.4s							
ZALV	**Zalesovo Beam**	**42.52**	**306**	*i* P		**P**	**02 48 32.7**	**-1.5**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s							
WHY	**Whitehorse**	**42.62**	**44**	P		**P**	**02 48 35.6**	**+0.5**
	baz=285							
S31K	**Pelican**	**42.69**	**48**	P		**P**	**02 48 36.6**	**+1.2**
	baz=287							
SKAG	**Skagway**	**42.72**	**46**	P		**P**	**02 48 36.4**	**+0.8**
	baz=286							
P32M	**Atlin**	**43.47**	**45**	P		**P**	**02 48 42.4**	**+0.5**
	baz=287							
S32K	**Killisnoo**	**43.69**	**48**	P		**P**	**02 48 44.3**	**+0.8**
	baz=289							
P33M	**Teslin, Yukon**	**43.73**	**44**	P		**P**	**02 48 44.7**	**+0.8**
	baz=287							
MMPY	**Sheldon Lake,**	**43.77**	**40**	P		**P**	**02 48 45.3**	**+1.1**
	baz=286							
A36M	**Sachs Harbour**	**43.88**	**26**	P		**P**	**02 48 45.1**	**+0.2**
A36M				IAmb		IAmb	02 48 47.2	
	comp=Z,8.3nm,0.7s							
A36M	**Sachs Harbour**	**43.88**	**26**	P		**P**	**02 48 45.7**	**+0.9**
	baz=281							
WMQ	**Urumqi**	**44.83**	**291**	*e*P		**P**	**02 48 55.4**	**+2.4**
WMQ				LR		LR		
	comp=Z,62nm,24.3s							
C36M	**Paulatuk**	**44.85**	**30**	P		**P**	**02 48 53.5**	**+0.9**
C36M	**Paulatuk**	**44.85**	**30**	P		**P**	**02 48 53.6**	**+0.9**
	baz=285							
R33M	**Jennings River**	**44.87**	**45**	P		**P**	**02 48 53.6**	**+0.5**
	baz=289							
U33K	**Whale Pass**	**44.90**	**50**	P		**P**	**02 48 54.2**	**+1.1**
	baz=291							
PZH	**PanZhiHua**	**44.92**	**262**	P		**P**

comp=Z,7.0nm,0.9s
SHL Shillong 52.28 268 P **P** **02 49 50.5 0.0**
SHL Shillong 52.28 268 P **P** **02 49 50.5 0.0**
SHL pmax pmax
comp=Z,17nm,0.5s
CMAR Chiang Mai Arr 52.28 256 P **P** **02 49 52.0 +1.6**
comp=Z,2.1nm,0.4s,baz=36,slow=6.4,SNR=8.9
CMAR LR LR 03 13 17.4
comp=Z,36nm,18.7s,baz=190,slow=37
comp=Z,2.1nm,0.4s
CMAR Chiang Mai Arr 52.28 256 P **P** **02 49 50.2 -0.1**
CMAR Chiang Mai Arr 52.28 256 *ce*P **P** **02 49 51.7 +1.3**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
SPITS Spitsbergen Ar 52.58 350 P **P** **02 49 50.6 -1.3**
comp=Z,3.1nm,0.8s,baz=50,slow=9.6,SNR=7.2
comp=Z,3.1nm,0.8s
BOOM Boomskoye usch 52.93 295 P **P** **02 49 54.8 -0.3**
BOOM Boomskoye usch 52.93 295 P **P** **02 49 54.8 -0.3**
BOOM pmax pmax
comp=Z,4.0nm,0.8s
TULEG Thule 54.13 11 P **P** **02 50 03.1 -0.1**
TULEG Thule 54.13 11 *i* P **P** **02 50 02.5 -0.6**
TULEG IAmb IAmb 02 50 32.4
comp=Z,48nm,1.6s
EVN Everest 54.23 274 P **P** **02 50 05.0 -0.4**
EVN IAmb IAmb 02 50 07.0
comp=Z,6.4nm,0.7s
ARTI Arti 55.04 317 LR LR 03 15 20.2
comp=Z,48nm,18.9s,baz=94,slow=38
NEEM North Greenlan 55.16 6 *i* P **P** **02 50 09.6 -1.4**
NEEM IAmb IAmb 02 50 10.7
comp=Z,16nm,0.8s
KKAR Karatay Array 55.91 299 P **P** **02 50 16.7 +0.1**
KKAR Karatay Array 55.91 299 P **P** **02 50 16.7 +0.1**
I03D Drain, OR 56.30 60 P **P** **02 50 20.8 +1.6**
EDM Edmonton 56.37 46 P **P** **02 50 19.4 -0.3**
EDM IAmb IAmb 02 50 21.2
comp=Z,6.7nm,0.7s
EDM Edmonton 56.37 46 P **P** **02 50 19.4 -0.3**
EDM pmax pmax
comp=Z,7.0nm,0.7s
DAG Danmarks Havn 56.63 358 *i* P **P** **02 50 19.1 -2.0**
DAG IAmb IAmb 02 50 21.4
comp=Z,5.8nm,1.2s
HAMF Hammerfest 57.35 342 *e*P **P** **02 50 25.3 -1.0**
ARCES ARCESS Array B 57.81 341 P **P** **02 50 28.9 -0.6**
comp=Z,18nm,1.4s,baz=30,slow=7.4,SNR=6.1
comp=Z,18nm,1.4s
ARCES ARCESS Array B 57.81 341 P **P** **02 50 28.4 -1.2**
ARCES IAmb IAmb 02 50 58.7
comp=Z,8.6nm,1.2s
ARCES ARCESS Array B 57.81 341 P **P** **02 50 28.4 -1.2**
ARCES pmax pmax
comp=Z,9.0nm,1.2s
AB31 Akbulak array 58.34 310 P **P** **02 50 32.6 -1.0**
ABKAR Akbulak array 58.34 310 P **P** **02 50 32.5 -1.1**
GAR Garm 58.42 295 P **P** **02 50 33.9 -0.5**
AKTO Aktyubinsk 58.65 312 LR LR 03 18 08.0
comp=Z,102nm,18.7s,baz=28,slow=38
JETT Jettan, Norway 58.90 342 *e*P **P** **02 50 36.9 -0.2**
CHGR Chuyangaron 59.35 295 P **P** **02 50 40.5 -0.4**
CHGR Chuyangaron 59.35 295 *i* P **P** **02 50 40.5 -0.4**
CHGR pmax pmax
comp=Z,10.0nm,0.8s
PLID Pearl Lake 59.74 55 P **P** **02 50 44.4 +0.8**
PLID IAmb IAmb 02 50 45.6
comp=Z,4.5nm,0.8s
SUMG Summit 60.69 4 P **P** **02 50 49.6 -0.3**
SUMG Summit 60.69 4 P **P** **02 50 49.6 -0.3**
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 60.69 4 *i* P P 02 50 59.2 +9.4
SUMG IAmb IAmb 02 51 01.0
comp=Z,13nm,0.8s
FFC Flin Flon 60.79 40 P **P** **02 50 50.8 +0.5**
FFC IAmb IAmb 02 50 52.1
comp=Z,4.1nm,0.9s
FFC Flin Flon 60.79 40 P **P** **02 50 50.8 +0.5**
FFC pmax pmax
comp=Z,4.0nm,1.0s
FCC Fort Churchill 61.30 33 P **P** **02 50 53.8 +0.1**
FCC IAmb IAmb 02 50 54.7
comp=Z,5.6nm,0.7s
FCC Fort Churchill 61.30 33 P **P** **02 50 53.8 +0.1**
FCC pmax pmax
comp=Z,6.0nm,0.7s
LOF Lofoten 61.46 344 *e*P **P** **02 50 53.9 -0.8**
BELG Belogornoye 62.46 318 *i* P **P** **02 51 01.8 +0.3**
BELG pmax pmax
comp=Z,1.0nm,0.9s
NVAR Mina Array Bea 62.51 62 P **P** **02 51 03.6 +1.2**
comp=Z,1.1nm,0.7s,baz=303,slow=6.3,SNR=3.5
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 62.51 62 P **P** **02 51 02.8 +0.4**
KONS Konsvik 62.96 343 *e*P **P** **02 51 04.6 -0.1**
MOR8 Moi Rana 62.98 342 *e*P **P** **02 51 03.5 -1.4**
LEIR Leirfjorden 63.30 343 *e*P **P** **02 51 06.5 -0.4**
FIA1 FINESS Array S 63.98 335 P **P** **02 51 10.7 -0.8**
FINES FINESS Array B 63.98 335 P **P** **02 51 10.8 -0.7**
comp=Z,4.7nm,0.4s,baz=33,slow=7.2,SNR=56
comp=Z,4.7nm,0.4s
FINES FINESS Array B 63.98 335 P **P** **02 51 10.7 -0.8**
FINES FINESS Array B 63.98 335 *i* P **P** **02 51 11.0 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.4s
PDAR Pinedale Array 64.81 54 P **P** **02 51 18.4 +0.8**
comp=Z,1.3nm,0.7s,baz=294,slow=1.6,SNR=12
comp=Z,1.3nm,0.7s
PDAR Pinedale Array 64.81 54 P **P** **02 51 18.2 +0.6**
NSS Namsos 64.92 343 *e*P **P** **02 51 17.1 -0.5**
FRB Frobisher Bay 65.06 19 LR LR 03 23 17.6
comp=Z,34nm,19.5s,baz=350,slow=39
SFJD Kangerlussuaq 65.15 10 LR LR 03 22 10.2
comp=Z,32nm,18.3s,baz=48,slow=38
OBN Obninsk 65.24 325 *e*P **P** **02 51 19.7 -0.1**
OBN pmax pmax
comp=Z,4.0nm,1.0s
OBN Obninsk 65.24 325 *e*P **P** **02 51 19.7 -0.1**
RDMU Red Mountain 66.26 56 P **P** **02 51 27.6 +0.7**
LCMT Little Creek M 66.48 61 P **P** **02 51 28.7 +0.4**
ULM Lac du Bonnet 66.57 41 P **P** **02 51 28.0 -0.4**
comp=Z,2.4nm,0.8s,baz=320,slow=6.3,SNR=6.1
comp=Z,2.4nm,0.8s
ULM Lac du Bonnet 66.57 41 P **P** **02 51 28.5 0.0**
ULM Lac du Bonnet 66.57 41 P **P** **02 51 28.5 0.0**
ULM pmax pmax
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 68.18 341 P **P** **02 51 38.0 -0.5**
comp=Z,3.4nm,0.6s,baz=27,slow=6.5
NB2 NORSAR Subarra 68.18 341 P **P** **02 51 38.0 -0.5**
NOA NORSAR Array B 68.18 341 P **P** **02 51 38.0 -0.5**
comp=Z,5.5nm,0.7s,baz=27,slow=6.3,SNR=16
NOA LR LR 03 25 48.8
comp=Z,19nm,18.2s,baz=30,slow=40
comp=Z,5.5nm,0.7s
HFS Hagfors 68.41 339 P **P** **02 51 39.4 -0.4**
comp=Z,12nm,0.5s,baz=34,slow=6.5,SNR=64
comp=Z,12nm,0.5s
MNK Minsk 68.94 329 *i* P **P** **02 51 43.5 +0.3**
MNK comp=E,10.0nm,0.8s *i* P **P** **02 51 43.5 +0.3**
MNK comp=N,6.0nm,0.8s *i* P **P** **02 51 43.5 +0.3**
MNK comp=Z,10.0nm,0.8s,baz=37 *i* pP **sP** **02 52 04.3 +0.3**
MNK *i* sP **PcP** **02 52 13.4 +6.2**
MNK *i* PP **PP** **02 52 15.9 +0.5**
MNK *i* PPP PPP 02 55 56.5
MNK *i* S **S** **03 00 41.8 -1.3**
MNK *i* sS **SKSac** **03 01 37.2 -0.6**
MNK *i* SS **SS** **03 05 09.4 +1.1**
MNK *i* SSS SSS 03 09 46.8
MNK comp=Z,29nm,15.0s *i* LRM MLR 03 25 52.8
MNK Minsk 68.94 329 *i* P **P** **02 51 43.5 +0.3**
MNK *i* *PP **sP** **02 52 04.3 +0.3**
MNK *i* 02 52 07.2
MNK *i* *SP **PcP** **02 52 13.4 +6.2**
MNK *i* 02 54 15.8
MNK *i* PPP PPP 02 55 56.4
MNK *i* S **S** **03 00 41.8 -1.3**
MNK *i* *SS **SKSac** **03 01 37.1 -0.6**
MNK *i* SS **SS** **03 05 09.3 +1.1**
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK MLR MLR
comp=Z,29nm,15.0s
MNK MLR MLR
comp=N,74nm,16.0s
MNK MLR MLR
comp=E,56nm,15.0s
KBZ Khabaz 70.78 314 P **P** **02 51 55.0 +0.3**
comp=E,2.3nm,0.7s,baz=37,slow=8.2,SNR=7.2
comp=E,2.3nm,0.7s
AK03 Malin Array Si 71.46 326 P **P** **02 51 57.5 -1.2**
AKASG Malin Array Be 71.48 326 P **P** **02 51 58.0 -0.8**
comp=E,5.9nm,0.4s,baz=36,slow=6.2,SNR=37
comp=E,5.9nm,0.4s
AKASG Malin Array Be 71.48 326 *i* P **P** **02 51 58.2 -0.7**
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKBB Malin Array Si 71.48 326 P **P** **02 51 58.1 -0.8**
AKBB Malin Array Si 71.48 326 P **P** **02 51 58.1 -0.8**
AKBB pmax pmax
comp=Z,9.0nm,0.6s
AKBB Malin Array Si 71.48 326 P **P** **02 51 57.6 -1.3**
AK04 Malin Array Si 71.49 326 P **P** **02 51 57.6 -1.3**
AK21 Malin Array Si 71.49 326 P **P** **02 51 57.7 -1.2**
AK22 Malin Array Si 71.49 326 P **P** **02 51 57.7 -1.2**
KIEV Kiev 71.49 326 P **P** **02 51 57.6 -1.3**
comp=Z,47nm,0.8s
AK01 Malin Array Si 71.49 326 P **P** **02 51 57.7 -1.2**
AK11 Malin Array Si 71.52 326 P **P** **02 51 57.9 -1.2**
AK02 Malin Array Si 71.52 326 P **P** **02 51 57.9 -1.2**
AK08 Malin Array Si 71.52 326 P **P** **02 51 57.9 -1.2**
AK15 Malin Array Si 71.52 326 P **P** **02 51 57.9 -1.2**
AK18 Malin Array Si 71.52 326 P **P** **02 51 57.9 -1.2**
MI28 Mi28,Pidlybu 71.89 327 P **P** **02 51 59.5 -1.8**
ANMO Albuquerque 71.91 58 *ce*P **P** **02 52 03.1 +1.1**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
RNPP9 Sopachiv 72.15 328 P **P** **02 52 01.8 -1.0**
ASAR Alice Springs 72.19 198 P **P** **02 52 04.8 +1.4**
ASAR Alice Springs 72.19 198 P **P** **02 52 04.8 +1.4**
LUBAR Lubar, Ukraine 72.67 326 P **P** **02 52 05.0 -1.0**
KMPD K-Podol'skiy 74.27 326 P **P** **02 52 13.7 -1.7**
KWP Kalwaria Pacla 74.76 329 P **P** **02 52 17.6 -0.7**
comp=Z,22nm,1.2s
KOLS Kolonicke sedl 75.50 329 *e*P **P** **02 52 23.0 +0.4**
KOLS pmax pmax
comp=Z,6.0nm,0.9s
KOLS Kolonicke sedl 75.50 329 *e*P **P** **02 52 23.0 +0.4**
BUR08 Bucovina Ar. S 75.50 326 P **P** **02 52 22.4 -0.4**
BURAR Bucovina Array 75.52 326 ⇓P **P** **02 52 23.0 +0.2**
BURAR Bucovina Array 75.52 326 P **P** **02 52 22.7 -0.1**
BURAR Bucovina Array 75.52 326 ⇓P **P** **02 52 23.0 +0.2**
NIE Niedzica 75.78 330 P **P** **02 52 23.5 -0.7**
comp=Z,2.8nm,2.0s
TESR Tescani 75.88 325 P **P** **02 52 24.0 -0.7**
comp=Z,2⇓μmcomp=Z,17nm,0.7s
ONER Baraj Valea Uz 76.12 325 ⇑P **P** **02 52 26.6 +0.5**
STEB Steborice 76.17 332 *e*P **P** **02 52 26.5 +0.2**
UPC Upice 76.22 333 *e*P **P** **02 52 27.4 +0.8**
UPC Upice 76.22 333 *e*P **P** **02 52 27.4 +0.8**
DPC Dobruska-Polom 76.27 333 *e*P **P** **02 52 26.9 0.0**
DPC Dobruska-Polom 76.27 333 *e*P **P** **02 52 26.9 0.0**
LANS Liptovska Anna 76.29 331 *e*P **P** **02 52 28.4 +1.3**
LANS pmax pmax
comp=Z,3.0nm,0.8s
LANS Liptovska Anna 76.29 331 *e*P **P** **02 52 28.4 +1.3**
EKA Eskdalemuir Ar 76.30 346 P **P** **02 52 26.1 -0.9**
comp=Z,0.3nm,0.4s,baz=22,slow=5.7,SNR=8.6
comp=Z,0.3nm,0.4s
EKA Eskdalemuir Ar 76.30 346 P **P** **02 52 26.5 -0.5**
EKA pmax pmax
comp=Z,3.0nm,1.4s
KRLC Kraliky 76.36 333 *e*P **P** **02 52 27.2 -0.3**
KRLC Kraliky 76.36 333 *e*P **P** **02 52 27.2 -0.3**
MORC Moravsky Berou 76.38 332 ⇓P **P** **02 52 27.7 +0.1**
MORC Moravsky Berou 76.38 332 **P** **02 52 27.0 -0.6**
MORC IAmb IAmb 02 52 28.6
comp=Z,5.1nm,0.8s
MORC Moravsky Berou 76.38 332 P **P** **02 52 27.0 -0.6**
MORC pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 76.41 335 P **P** **02 52 26.6 -1.0**
CLL IAmb IAmb 02 52 28.0
comp=Z,7.6nm,0.8s
CLL Collm 76.41 335 P **P** **02 52 26.6 -1.0**
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 76.41 335 P **P** **02 52 26.4 -1.3**
comp=Z,11nm,0.8s
CLL Collm 76.41 335 *i* P **P** **02 52 26.8 -0.9**
comp=Z,10.0nm,1.0s
OZUR 76.56 325 ⇓P **P** **02 52 29.9 +1.2**
UOSS Minazif 76.64 292 P **P** **02 52 29.6 +0.2**
HSKC Hora Svate Kat 76.91 335 *e*P **P** **02 52 30.2 -0.3**
MLR Muntele Rosu 77.00 325 ⇓P **P** **02 52 31.5 +0.2**
MLR Muntele Rosu 77.00 325 **P** **02 52 31.2 -0.1**
MLR IAmb IAmb 02 52 33.0
comp=Z,6.4nm,0.7s
MLR Muntele Rosu 77.00 325 P **P** **02 52 31.2 -0.1**
MLR pmax pmax
comp=Z,6.0nm,0.7s
MLR Muntele Rosu 77.00 325 P **P** **02 52 31.3 0.0**
comp=Z,9.7nm,1.3s
ISR Istrita 77.07 324 P **P** **02 52 31.4 -0.1**
comp=Z,23nm,0.9s
VYHS Vyhne 77.07 331 *e*P **P** **02 52 32.2 +0.8**
VYHS Vyhne 77.07 331 *e*P **P** **02 52 32.2 +0.8**
VRAC Vranov 77.09 332 LR LR 03 31 35.0
comp=Z,48nm,18.2s,baz=172,slow=40
DRGR 77.15 327 ⇑P **P** **02 52 32.4 +0.4**
DRGR 77.15 327 ⇑P **P** **02 52 32.4 +0.4**
VOIR 77.39 325 ⇑P **P** **02 52 33.9 +0.5**
VOIR 77.39 325 ⇑P **P** **02 52 33.9 +0.5**
VOIR 77.39 325 P **P** **02 52 33.2 -0.2**
comp=Z,9.1nm,0.8s
SMOL Smolenice 77.52 332 *e*P **P** **02 52 34.5 +0.6**
SMOL pmax pmax
comp=Z,3.0nm,0.9s
TX31 Lajitas Ar. Si 77.57 60 **P** **02 52 35.2 +0.6**
TXAR Lajitas Array 77.57 60 P **P** **02 52 35.4 +0.7**
comp=Z,1.2nm,0.5s,baz=296,slow=4.7,SNR=31
comp=Z,1.2nm,0.5s
TXAR Lajitas Array 77.57 60 **P** **02 52 35.1 +0.5**
TXAR Lajitas Array 77.57 60 P **P** **02 52 35.1 +0.5**
MODS Modra-Piesok 77.69 332 *e*P **P** **02 52 36.3 +1.4**
MODS pmax pmax
comp=Z,14nm,1.1s
MODS Modra-Piesok 77.69 332 *e*P **P** **02 52 36.3 +1.4**
ZVC Zvikov 77.72 334 *e*P **P** **02 52 35.3 +0.2**
GZR Gura Zlata 78.31 327 ⇑P **P** **02 52 38.7 +0.3**
WINA Alland / Wiene 78.31 332 *e*P **P** **02 52 38.9 +0.5**
comp=Z,2.8nm,0.6s
BR131 Keskin Array S 78.31 317 **P** **02 52 38.6 -0.1**
BR131 IAmb IAmb 02 52 39.9
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 78.31 317 *i* P **P** **02 52 38.6 -0.1**
BRTR Keskin Array B 78.31 317 P **P** **02 52 39.0 +0.3**
comp=Z,2.1nm,0.8s,baz=41,slow=5.6,SNR=15
BRTR LR LR 03 30 48.3
comp=Z,42nm,20.0s,baz=312,slow=38
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 78.31 317 **P** **02 52 38.7 0.0**
BRTR Keskin Array B 78.31 317 *i* P **P** **02 52 39.2 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BR106 Keskin Array S 78.32 317 P **P** **02 52 38.2 -0.5**
comp=Z,31nmcomp=Z,3.3nm,0.9s
BR104 Keskin Array S 78.33 317 P **P** **02 52 38.3 -0.5**
comp=Z,30nmcomp=Z,3.8nm,1.1s
BR105 Keskin Array S 78.33 317 P **P** **02 52 38.3 -0.5**
comp=Z,3.8nm,0.9s
GERES GERESS Array B 78.40 334 P **P** **02 52 38.8 -0.2**
comp=Z,1.3nm,0.7s,baz=14,slow=4.7,SNR=12
GERES LR LR 03 31 45.6
comp=Z,45nm,18.1s,baz=206,slow=39
comp=Z,1.3nm,0.7s
GERES GERESS Array B 78.40 334 P **P** **02 52 38.4 -0.5**
CONA Conrad Observa 78.54 332 *e*P **P** **02 52 40.3 +0.5**
comp=Z,3.3nm,0.7s
BZS Buzias 78.55 327 ⇑P **P** **02 52 40.1 +0.4**
BZS Buzias 78.55 327 ⇑P **P** **02 52 40.1 +0.4**
RONA Rosalia, Austr 78.60 332 *e*P **P** **02 52 40.7 +0.7**
comp=Z,5.2nm,0.9s
KIRS Kirsehir-Merke 78.65 316 ⇑P **P** **02 52 41.0 +0.5**
MPLH Magyarpolny 78.65 331 P **P** **02 52 39.8 -0.4**
comp=Z,19nm,0.9s
LMQ La Malbaie 78.74 28 P **P** **02 52 40.5 -0.2**
LMQ IAmb IAmb 02 53 07.6
comp=Z,6.3nm,1.3s
MOA Molln 79.11 333 *e*P **P** **02 52 43.5 +0.7**
comp=Z,2.9nm,0.8s
BIOA Bad Ischl, Aus 79.45 333 *e*P **P** **02 52 45.1 +0.5**
comp=Z,3.5nm,0.8s
BMRD Maredsous 79.48 340 *d*P **P** **02 52 44.5 -0.2**
comp=Z,3.6nm,0.8s
SESA Seetaler Alpe, 79.67 333 *e*P **P** **02 52 46.5 +0.5**
comp=Z,7.6nm,0.6s
SOKA Soboth 79.91 332 *e*P **P** **02 52 47.2 0.0**
comp=Z,3.3nm,0.8s
LESA Schwarzleotal 79.98 334 *e*P **P** **02 52 47.9 +0.4**
comp=Z,4.7nm,1.0s
KBA Koelnbreinsper 80.08 333 *e*P **P** **02 52 48.7 +0.4**
comp=Z,5.6nm,0.6s
OBKA Obir 80.21 332 *e*P **P** **02 52 48.7 -0.2**
comp=Z,1.3nm,0.6s
BATG Bathurst New B 80.31 26 P **P** **02 52 49.2 -0.1**
BATG IAmb IAmb 02 52 50.3
comp=Z,9.8nm,1.2s
WATA Walderalm 80.39 335 *e*P **P** **02 52 50.2 +0.4**
comp=Z,4.0nm,0.5s
WTTA Wattenberg 80.43 334 *e*P **P** **02 52 50.8 +0.6**
comp=Z,6.4nm,0.8s
RETA Reutte 80.49 335 *e*P **P** **02 52 50.6 +0.3**
comp=Z,3.8nm,1.3s
MOTA Moosalm 80.52 335 *e*P **P** **02 52 50.5 0.0**
comp=Z,8.7nm,1.2s
RDO Rodhopi 80.77 323 **P** **02 52 52.0 +0.2**
RDO IAmb IAmb 02 52 53.0
comp=Z,8.1nm,0.8s
DAVA Damuels 80.92 336 *e*P **P** **02 52 52.4 -0.4**
comp=Z,5.6nm,1.1s
TUE Stuetta 81.82 336 P **P** **02 52 56.9 -0.7**
M65A Busby, Falmout 83.88 31 P **P** **02 53 08.7 +0.7**
baz=332
NRCA Norcia 83.95 332 P **P** **02 53 08.2 -0.3**
NRCA IAmb IAmb 02 53 09.7
comp=Z,6.3nm,0.9s
QSPA South Pole Qui 136.50 180 PKP **PKiKP** **03 00 00.0 -0.6**
comp=Z,0.9nm,0.8s,baz=341,slow=1.4,SNR=5.9
QSPA South Pole Qui 136.50 180 **PKiKP** **03 00 00.3 -0.3**
H03N2 Juan Fernandez 138.85 90 T T 05 35 25.5
baz=308,slow=77,SNR=109
H03N1 Juan Fernandez 138.86 90 T T 05 35 26.8
baz=308,slow=77,SNR=117
H03N3 Juan Fernandez 138.86 90 T T 05 35 03.4
baz=308,slow=77,SNR=111
ELIB Princess Elisa 145.77 205 *d*PKPdf **PKPab** **03 00 16.5 0.0**
PLCA Paso Flores 148.30 95 PKPbc **PKPbc** **03 00 24.8 +0.7**
comp=Z,2.5nm,0.8s,baz=300,slow=2.3,SNR=4.8
CPUP Villa Florida 148.54 60 PKPbc **PKPbc** **03 00 24.9 0.0**
comp=Z,1.9nm,1.0s,baz=324,slow=2.4,SNR=4.7
CPUP Villa Florida 148.54 60 **PKPbc** **03 00 24.6 -0.4**
CPUP Villa Florida 148.54 60 PKP2 **PKPbc** **03 00 25.0 0.0**
TROLL Troll, Antarti 151.18 199 ⇓PKPdf **PKiKP** **03 00 30.9 +0.2**
comp=Z,179nm,0.6s
SNAA Sanae 152.54 196 ⇓PKPdf **PKPbc** **03 00 33.3 +0.1**
comp=Z,34nm,0.5s
SNAA Sanae 152.54 196 PKPbc **PKPbc** **03 00 32.9 -0.3**
comp=Z,0.7nm,0.7s,baz=141,slow=3.2,SNR=7.0
SNAA Sanae 152.54 196 **PKPbc** **03 00 33.2 +0.1**
SNAA Sanae 152.54 196 PKIKP **PKPbc** **03 00 33.3 +0.1**
VNA2 Neumayer--Watz 153.99 195 ⇓PKPdf **PKiKP** **03 00 36.7 +0.3**
comp=Z,3.2nm,0.7s,baz=132,slow=1.5

*IDC **01** 02:46:21.3±1.5,2°.53S×136°.06E,h0km,mb4.0/3, mbtmp4.0/7,ML3.7/4,MS3.0/2,Error ellipse: s-maj=27.5km s-min=25.3km az=161.0*
*DJA **01** 02:46:25.2±0.4,2°.5±3°×13°.6E±°,h11km±4km,M4.2/8, MLv4.2/8*
ISC 01 02:46:22.2±0.7,**2°.54S**±0°.05×**135°.93E**±0°.05,**h10**km,**n14,**
σ1**§61**/18,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.74**	**25**	P	**Pb**		**02 46 37.0**	**-0.1**
SRPI				S	**Sb**		**02 46 46.3**	**-1.0**
BAKI	**Biak**	**1.35**	**7**	P	**Pg**		**02 46 48.5**	**+0.3**
BAKI				S	**Sg**		**02 47 05.9**	**+0.1**
RKPI	**Ransiki, Papua**	**2.03**	**300**	P	**Pn**		**02 46 56.3**	**-0.2**
SMPI	**Sarmi**	**2.83**	**79**	P	**Pn**		**02 47 09.3**	**+1.8**
JAY	**Jayapura**	**4.77**	**90**	Pn	**Pn**		**02 47 33.4**	**-0.8**
	1.9nm,0.3s,baz=288,slow=9.6,SNR=3.8							
JAY				Sn	**Sn**		**02 48 27.9**	**-1.7**
	1.1nm,0.3s,baz=156,slow=7.5,SNR=2.1							
	5.5nm,0.5s							
SIJI	**Sorong**	**4.95**	**290**	Pn	**Pn**		**02 47 38.4**	**+1.6**
	7.4nm,0.3s,baz=70,slow=15,SNR=21							
SIJI				Sn	**Sn**		**02 48 32.3**	**-1.9**
	11nm,0.3s,baz=307,slow=23,SNR=6.5							
SIJI				LR	LR		02 50 24.6	
	comp=Z,83nm,20.9s,baz=25,slow=48							
	14nm,0.3s							
SIJI	**Sorong**	**4.95**	**290**	P	**Pn**		**02 47 38.2**	**+1.5**
SWI	**Sorong**	**4.96**	**290**	P	**Pn**		**02 47 40.1**	**+3.3**
WRA	**Warramunga Arr**	**17.36**	**185**	P	**Pn**		**02 50 23.6**	**-1.2**
	0.4nm,0.3s,baz=8.8,slow=13,SNR=16							
WRA				S	Sn		02 53 28.0	-10
	1.8nm,0.7s,baz=1.8,slow=23,SNR=5.0							
	1.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**18.46**	**212**	P	**P**		**02 50 38.9**	**+0.6**
	0.1nm,0.3s,baz=27,slow=10,SNR=2.2							
FITZ				S	Sn		02 53 54.4	-10
	2.3nm,0.8s,baz=190,slow=11,SNR=2.0							
	3.0nm,1.0s							
CTA	**Charters Tower**	**20.14**	**151**	P	**P**		**02 50 57.1**	**+0.4**
	4.5nm,1.0s,baz=330,slow=14,SNR=1.6							
	4.5nm,1.0s							
ASAR	**Alice Springs**	**21.09**	**185**	P	**P**		**02 51 08.7**	**+1.7**
	12nm,0.8s,baz=12,slow=12,SNR=104							
ASAR				S	**S**		**02 54 59.2**	**-2.6**
	0.7nm,0.7s,baz=4.2,slow=26,SNR=1.5							
	12nm,0.8s							
SHEM	**Shemya Is, Ala**	**63.73**	**25**	LR	LR		03 22 18.8	
	comp=Z,27nm,19.9s,baz=148,slow=34							
ILAR	**Eielson Array**	**86.84**	**25**	P	**P**		**02 59 07.1**	**+0.4**
	0.6nm,0.7s,baz=254,slow=5.4,SNR=4.1							
	0.6nm,0.7s							

*CATAC **01** 02:50:29.1±0.6,13°N±3°×8°9W±°,h10km±3km,M3.2/16, MLv3.2/16,Error ellipse: s-maj=6.8km s-min=5.5km az=42.9,confirmed*
*SNET **01** 02:50:30.0±1.1,12°.54N×89°.53W,h28km±21km,ML3.1, Presumed earthquake*
*GCG **01** 02:50:34.3±0.3,12°.85N×89°.68W,h27km±4km,MD3.9, Presumed earthquake*
ISC 01 02:50:29.5±2.8,**12°.5N**±0°.1×**89°.55W**±0°.07,**h25**km±15km,
n38,σ0**§70**/58,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.99**	**13**	P	**Pb**		**02 50 48.7**	**+0.7**
LALI				S	**Sn**		**02 51 02.4**	**+1.4**
LALI	**Alcalda de L**	**0.99**	**13**	*i* P	**Pn**		**02 50 47.9**	**+0.1**
LALI	**Alcalda de L**	**0.99**	**13**	*e*P	**Pn**		**02 50 47.6**	**-0.2**
LALI				*e*S	**Sn**		**02 51 01.6**	**+0.6**
JAYA	**Jayaque - finc**	**1.13**	**5**	P	**Pn**		**02 50 49.5**	**-0.4**
JAYA				S	**Sn**		**02 51 04.5**	**-0.3**
JAYA	**Jayaque - finc**	**1.13**	**5**	*i* P	**Pn**		**02 50 49.6**	**-0.4**
JAYA	**Jayaque - finc**	**1.13**	**5**	*e*P	**Pn**		**02 50 50.2**	**+0.3**
JAYA				*e*S	**Sb**		**02 51 05.0**	**+0.1**
LOMA	**Loma Larga**	**1.18**	**18**	P	**Pb**		**02 50 51.0**	**-0.3**

LOMA				S	**Sb**	**02 51 07.2**	**+1.0**
LOMA	**Loma Larga**	**1.18**	**18**	*e*P	**Pn**	**02 50 50.8**	**+0.2**
PMON	**Piamonte**	**1.21**	**11**	P	**Pb**	**02 50 51.6**	**-0.2**
PMON				S	**Sb**	**02 51 08.4**	**+1.4**
PMON	**Piamonte**	**1.21**	**11**	*e*P	**Pn**	**02 50 51.2**	**+0.3**
UEES	**Universidad Ev**	**1.23**	**14**	P	**Pb**	**02 50 51.8**	**-0.4**
UEES				S	**Sb**	**02 51 08.2**	**+0.6**
BOQS	**Boqueron**	**1.24**	**12**	*e*P	**Pb**	**02 50 52.0**	**-0.3**
TECO	**Alcaldia de Te**	**1.26**	**36**	P	**Pn**	**02 50 51.1**	**-0.5**
TECO				S	**Sb**	**02 51 08.0**	**-0.4**
TECO	**Alcaldia de Te**	**1.26**	**36**	*e*P	**Pn**	**02 50 50.7**	**-0.9**
COEG	**Centro de Oper**	**1.27**	**31**	P	**Pn**	**02 50 51.6**	**-0.2**
COEG				S	**Sb**	**02 51 09.2**	**+0.3**
COEG	**Centro de Oper**	**1.27**	**31**	*e*P	**Pn**	**02 50 51.5**	**-0.4**
CEDA	**San Andres**	**1.28**	**7**	S	**Sb**	**02 51 09.7**	**+0.5**
CEVE	**Cerro Verde**	**1.30**	**357**	P	**Pn**	**02 50 52.8**	**+0.5**
CEVE				S	**Sb**	**02 51 10.5**	**+0.6**
CEVE	**Cerro Verde**	**1.30**	**357**	*e*P	**Pb**	**02 50 53.8**	**+0.3**
SBLS	**San Blas**	**1.31**	**357**	*e*P	**Pn**	**02 50 53.0**	**+0.5**
PAVA	**Las Pavas**	**1.33**	**27**	P	**Pn**	**02 50 52.9**	**+0.3**
PAVA				S	**Sb**	**02 51 10.3**	**-0.3**
PAVA	**Las Pavas**	**1.33**	**27**	*e*P	**Pn**	**02 50 52.9**	**+0.3**
FAME	**Alcaldia de Sa**	**1.39**	**341**	P	**Pb**	**02 50 54.5**	**-0.4**
NUBE	**Las Nubes**	**1.39**	**351**	P	**Pn**	**02 50 54.0**	**+0.4**
NUBE				S	**Sb**	**02 51 13.1**	**+0.7**
NUBE	**Las Nubes**	**1.39**	**351**	*i* P	**Pn**	**02 50 53.6**	**+0.1**
NUBE				*i* S	**Sn**	**02 51 08.7**	**-2.5**
NUBE	**Las Nubes**	**1.39**	**351**	*e*P	**Pn**	**02 50 53.6**	**+0.1**
TECA	**Tecapa**	**1.41**	**46**	*e*P	**Pn**	**02 50 53.5**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.52**	**351**	P	**Pb**	**02 50 56.7**	**-0.3**
SLOZ				S	**Sb**	**02 51 16.4**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.52**	**351**	*e*P	**Pb**	**02 50 56.5**	**-0.5**
PACA	**Pacayal**	**1.52**	**52**	P	**Pn**	**02 50 56.0**	**+0.7**
PACA				S	**Sb**	**02 51 15.4**	**-0.8**
PACA	**Pacayal**	**1.52**	**52**	*e*P	**Pn**	**02 50 55.5**	**+0.2**
P5NO	**Presa 5 de nov**	**1.65**	**28**	P	**Pn**	**02 50 57.5**	**+0.6**
P5NO				S	**Sb**	**02 51 19.2**	**-0.4**
LLGN	**La Laguna**	**1.74**	**20**	P	**Pn**	**02 50 58.9**	**+0.7**
LLGN				S	**Sb**	**02 51 21.5**	**-0.7**
LCND	**La Caada**	**1.80**	**64**	P	**Pn**	**02 50 59.5**	**+0.5**
LCND				S	**Sn**	**02 51 22.0**	**+1.0**
LCND	**La Caada**	**1.80**	**64**	*e*P	**Pn**	**02 50 59.1**	**+0.2**
MTO3	**Montecristo**	**1.88**	**6**	P	**Pn**	**02 51 01.0**	**+0.8**
MTO3				S	**Sb**	**02 51 26.4**	**0.0**
MTO3	**Montecristo**	**1.88**	**6**	*i* P	**Pn**	**02 51 01.1**	**+0.8**
ESQI	**Esquipulas**	**2.04**	**6**	P	**Pb**	**02 51 04.3**	**-1.7**
ESQI				S	**Sb**	**02 51 30.1**	**-0.9**

*ISK **01** 03:05:29.6, 34.°28N×26.°03E, h13km, ML2.8/11*
*IDC **01** 03:05:30.3±1.5, 34.°29N×25.°88E, h0km, mb3.4/3, mbtmp3.3/5, ML2.7/1, Error ellipse: s-maj=47.2km s-min=26.6km az=152.0*
*ATH **01** 03:05:30.6, 34.°26N×26.°25E, h35km±12km, ML3.0/7, Latitude uncertainty: 6 km; Longitude uncertainty: 3 km*
*THE **01** 03:05:32.1, 34.°N±12.°×2.°E±.°, h73km±24km, M2.8/4, MLh2.8/4*

ISC 01 03:05:30.9±1.9, 34.°35N±0.°07×25.°95E±0.°04, h5km±11km, n30, σ0°60/42, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.79**	**16**	Pg	**Pg**	**03 05 46.5**	**+0.3**
ZKR				Sg	**Sb**	**03 05 58.7**	**+0.4**
ZKR	**Zakros**	**0.79**	**16**	P	**Pg**	**03 05 46.4**	**+0.3**
ZKR				S	**Sb**	**03 05 58.1**	**-0.2**
ZKR	**Zakros**	**0.79**	**16**	P	**Pg**	**03 05 46.2**	**+0.1**
ZKR				S	**Sb**	**03 05 57.6**	**-0.7**
SIT2	**Siteia**	**0.86**	**9**	P	**Pb**	**03 05 48.3**	**-0.1**
SIT2				S	**Sb**	**03 06 00.2**	**0.0**
NPS	**Neapolis**	**0.95**	**343**	P	**Pg**	**03 05 49.0**	**-0.2**
NPS				S	**Sg**	**03 06 02.1**	**+0.6**
NPS	**Neapolis**	**0.95**	**343**	P	**Pg**	**03 05 48.8**	**-0.3**
NPS				S	**Sn**	**03 06 04.2**	**-0.7**
SIVA	**Sivas**	**1.15**	**306**	P	**Pb**	**03 05 52.5**	**-0.7**
SIVA				S	**Sg**	**03 06 08.4**	**+0.5**
IDI	**Anoyia**	**1.28**	**317**	Pn	**Pn**	**03 05 55.1**	**-0.4**
IDI	**Anoyia**	**1.28**	**317**	P	**Pn**	**03 05 54.1**	**-1.4**
IDI				S	**Sb**	**03 06 11.4**	**-0.9**
IDI	**Anoyia**	**1.28**	**317**	P	**Pn**	**03 05 55.4**	**-0.2**
IDI				S	**Sn**	**03 06 14.5**	**+1.4**
KARP	**Karpathos**	**1.56**	**39**	Pn	**Pn**	**03 05 58.1**	**-1.2**
GVD	**Gavdhos**	**1.61**	**288**	Pn	**Pn**	**03 05 59.7**	**-0.3**
GVD	**Gavdhos**	**1.61**	**288**	P	**Pn**	**03 05 59.7**	**-0.3**
GVD	**Gavdhos**	**1.61**	**288**	P	**Pn**	**03 06 00.1**	**+0.1**
GVD				S	**Sb**	**03 06 22.4**	**+0.6**
VAM	**Vamos**	**1.78**	**307**	P	**Pb**	**03 06 03.3**	**-0.8**
VAM				S	**Sb**	**03 06 27.2**	**+0.4**
IMMV	**Iera Moni Meta**	**1.96**	**305**	Pn	**Pn**	**03 06 04.9**	**+0.1**
IMMV	**Iera Moni Meta**	**1.96**	**305**	P	**Pb**	**03 06 06.7**	**-0.3**
IMMV				S	**Sb**	**03 06 31.4**	**-0.5**
KNDR	**Palaiochora Ch**	**2.11**	**295**	Pn	**Pn**	**03 06 07.2**	**+0.4**
THR5	**Thira Island,**	**2.12**	**347**	Pn	**Pn**	**03 06 07.1**	**+0.1**
DAT	**Datca**	**2.72**	**29**	Pn	**Pn**	**03 06 14.9**	**-0.5**
BODT	**Bodrum**	**2.92**	**22**	Pn	**Pn**	**03 06 17.9**	**-0.2**
TURN	**Turunc**	**3.06**	**37**	Pn	**Pn**	**03 06 19.3**	**-0.6**
MLSB	**Milas**	**3.29**	**26**	Pn	**Pn**	**03 06 22.9**	**-0.3**
DALY	**Dalyan (Mula)**	**3.30**	**41**	Pn	**Pn**	**03 06 22.9**	**-0.4**
YER	**Yerkesik**	**3.37**	**34**	Pn	**Pn**	**03 06 23.9**	**-0.3**
MMAI	**Mount Meron Ar**	**7.99**	**97**	Pn	**Pn**	**03 07 28.1**	**+0.3**
	1.4nm,0.7s,baz=275,slow=17,SNR=1.4						
GERES	**GERESS Array B**	**17.10**	**332**	P	**Pn**	**03 09 30.7**	**0.0**
	baz=148,slow=13,SNR=1.9 0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**30.48**	**232**	P	**P**	**03 11 44.5**	**-0.5**
	0.6nm,0.7s,baz=36,slow=7.5,SNR=4.6 0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**41.13**	**50**	P	**P**	**03 13 16.4**	**+0.5**
	0.2nm,0.6s,baz=282,slow=8.6,SNR=4.9 0.2nm,0.6s						
MKAR	**Makanchi Array**	**43.68**	**56**	P	**P**	**03 13 37.8**	**+1.0**
	0.2nm,0.5s,baz=272,slow=9.0,SNR=2.2 0.2nm,0.5s						

*IDC **01** 03:25:27.9±0.6, 52.°98S×21.°93E, h0km, mb4.2/14, mbtmp4.2/14, MS4.1/27, Error ellipse: s-maj=23.1km s-min=16.0km az=70.0*
*NEIC **01** 03:25:29.9±1.1, 52.°9S±0.°1×22.°0E±0.°2, h10km±1km, mb4.7/20, Error ellipse: s-maj=22.2km s-min=18.7km az=79.0*

ISC 01 03:25:29.5±0.5, 52.°93S±0.°08×22.°0E±0.°1, h10km, n79, σ0°64/54, mb4.5/19, MS4.0/27, 4C, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04S2	**CROZET ISLANDS**	**20.13**	**84**	T	T	03 51 10.8	
	baz=242,slow=74,SNR=128						
H04S3	**CROZET ISLANDS**	**20.13**	**84**	T	T	03 50 55.9	
	baz=242,slow=74,SNR=94						
H04S1	**CROZET ISLANDS**	**20.14**	**84**	T	T	03 50 55.9	
	baz=242,slow=74,SNR=86						
SUR	**Sutherland**	**20.55**	**357**	P	**P**	**03 30 07.9**	**-0.4**
	6.9nm,1.0s,baz=171,slow=14,SNR=8.6						
SUR				LR	LR	03 36 42.0	
	comp=Z,485nm,18.7s,baz=158,slow=33 6.9nm,1.0s						
SUR	**Sutherland**	**20.55**	**357**	P	**P**	**03 30 08.4**	**+0.1**
SUR				IAmb	IAmb	03 30 20.2	
	comp=Z,58nm,1.4s						
TROLL	**Troll, Antarti**	**20.94**	**197**	⇑P	**P**	**03 30 13.1**	**+1.0**
	comp=Z,1μm,0.9s						
SNAA	**Sanae**	**21.73**	**201**	⇑P	**P**	**03 30 21.0**	**+0.5**
	comp=Z,866nm,1.1s						
SNAA	**Sanae**	**21.73**	**201**	P	**P**	**03 30 20.8**	**+0.3**
	comp=Z,50nm,1.1s,baz=45,slow=10,SNR=59						
SNAA				LR	LR	03 37 00.3	
	comp=Z,630nm,18.9s,baz=86,slow=32 comp=Z,50nm,1.1s						
SNAA	**Sanae**	**21.73**	**201**	P	**P**	**03 30 20.7**	**+0.2**
SNAA				IAmb	IAmb	03 30 24.0	
	comp=Z,59nm,1.1s						
VNA2	**Neumayer--Watz**	**22.30**	**205**	⇑P	**P**	**03 30 26.8**	**+0.2**
	comp=Z,28nm,0.7s,baz=43,slow=9.8						
VNA1	**Neumayer--Stat**	**22.36**	**206**	⇑P	**P**	**03 30 27.9**	**+0.7**
	comp=Z,16nm,0.8s						
MAW	**Mawson**	**24.43**	**143**	P	**P**	**03 30 47.0**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=291,slow=17,SNR=9.0						
MAW				LR	LR	03 38 16.1	
	comp=Z,219nm,21.5s,baz=302,slow=32 comp=Z,4.3nm,0.9s						
MAW	**Mawson**	**24.43**	**143**	P	**P**	**03 30 46.6**	**-1.1**

LBTB	**Lobatse**	**28.01**	**7**	LR	LR	03 40 32.9	
	comp=Z,447nm,21.7s,baz=180,slow=32						
LBTB	**Lobatse**	**28.01**	**7**	P	**P**	**03 31 19.2**	**-1.4**
LBTB				IAmb	IAmb	03 31 29.7	
	comp=Z,12nm,1.2s						
BELA	**Belgrano 2**	**31.96**	**199**	P	**P**	**03 31 54.8**	**-0.2**
BELA				IAmb	IAmb	03 32 04.2	
	comp=Z,4.7nm,0.9s						
MATP	**Mapo**	**32.84**	**11**	LR	LR	03 43 39.7	
	comp=Z,688nm,19.8s,baz=210,slow=33						
TSUM	**Tsumeb**	**33.83**	**353**	LR	LR	03 43 51.7	
	comp=Z,264nm,20.1s,baz=171,slow=33						
QSPA	**South Pole Qui**	**37.30**	**180**	P	**P**	**03 32 41.3**	**-0.1**
	comp=Z,23nm,0.8s,baz=245,slow=2.6,SNR=112						
QSPA				LR	LR	03 46 50.5	
	comp=Z,249nm,21.2s,baz=238,slow=34 comp=Z,23nm,0.8s						
QSPA	**South Pole Qui**	**37.30**	**180**	P	**P**	**03 32 41.6**	**+0.3**
QSPA				IAmb	IAmb	03 32 43.6	
	comp=Z,22nm,0.8s						
QSPA				PcP	**PcP**	**03 35 00.3**	**-0.1**
LSZ	**Lusaka**	**37.89**	**10**	LR	LR	03 46 48.3	
	comp=Z,696nm,19.6s,baz=166,slow=34						
PMSA	**Palmer Station**	**42.50**	**219**	LR	LR	03 46 50.3	
	comp=Z,277nm,20.6s,baz=114,slow=30						
PMSA	**Palmer Station**	**42.50**	**219**	P	**P**	**03 33 23.5**	**-0.9**
CASY	**Casey**	**42.78**	**143**	P	**P**	**03 33 27.4**	**+0.8**
CASY				IAmb	IAmb	03 33 29.5	
	comp=Z,4.5nm,0.8s						
VNDA	**Vanda**	**47.46**	**169**	P	**P**	**03 34 03.1**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=235,slow=9.4,SNR=7.6						
VNDA				LR	LR	03 53 43.3	
	comp=Z,263nm,19.1s,baz=226,slow=36 comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**47.46**	**169**	P	**P**	**03 34 03.8**	**+0.2**
SBA	**Scott Base**	**47.69**	**170**	P	**P**	**03 34 06.3**	**+0.8**
SBA				IAmb	IAmb	03 34 25.3	
	comp=Z,7.1nm,1.1s						
USHA	**Ushuaia**	**49.70**	**229**	LR	LR	03 50 38.5	
	comp=Z,182nm,20.6s,baz=173,slow=30						
MBAR	**Mbarara**	**52.66**	**11**	LR	LR	03 55 01.6	
	comp=Z,269nm,21.8s,baz=160,slow=34						
H10S2	**ASCENSION HYDR**	**52.89**	**312**	T	T	04 31 58.0	
	baz=68,slow=74,SNR=25						
H10S3	**ASCENSION HYDR**	**52.91**	**312**	T	T	04 31 56.5	
	baz=152,slow=74,SNR=26						
KMBO	**Kilima Mbogo**	**53.17**	**19**	LR	LR	03 56 50.8	
	comp=Z,181nm,18.1s,baz=129,slow=35						
PLCA	**Paso Flores**	**60.18**	**241**	P	**P**	**03 35 35.3**	**-2.0**
	comp=Z,2.3nm,0.9s,baz=114,slow=2.5,SNR=3.3 comp=Z,2.3nm,0.9s						
PLCA	**Paso Flores**	**60.18**	**241**	P	**P**	**03 35 37.2**	**-0.1**
PLCA				IAmb	IAmb	03 35 43.9	
	comp=Z,9.5nm,1.2s						
LL07	**Hotel Espejo d**	**60.20**	**238**	P	**P**	**03 35 38.0**	**+0.7**
CPUP	**Villa Florida**	**63.12**	**261**	P	**P**	**03 35 56.4**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=148,slow=14,SNR=4.8						
CPUP				LR	LR	03 58 39.0	
	comp=Z,62nm,22.0s,baz=94,slow=32 comp=Z,2.0nm,0.7s						
CPUP	**Villa Florida**	**63.12**	**261**	P	**P**	**03 35 56.8**	**-0.4**
DBIC	**Dimbokro**	**63.59**	**330**	P	**P**	**03 36 01.1**	**+0.8**
	comp=Z,4.5nm,1.0s,baz=219,slow=5.1,SNR=1.8						
DBIC				LR	LR	03 57 02.7	
	comp=Z,101nm,20.5s,baz=148,slow=30 comp=Z,4.5nm,1.0s						
DBIC	**Dimbokro**	**63.59**	**330**	P	**P**	**03 36 00.7**	**+0.5**
H01W2	**Cape Leeuwin H**	**64.25**	**114**	T	T	04 46 35.5	
	baz=222,slow=75,SNR=5.4						
H01W3	**Cape Leeuwin H**	**64.27**	**114**	T	T	04 46 38.2	
	baz=222,slow=75,SNR=6.9						
H01W1	**Cape Leeuwin H**	**64.27**	**114**	T	T	04 46 37.6	
	baz=222,slow=75,SNR=5.1						
BDFB	**Brasilia**	**65.60**	**276**	P	**P**	**03 36 13.9**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=145,slow=9.3,SNR=3.1 comp=Z,1.6nm,0.7s						
BDFB	**Brasilia**	**65.60**	**276**	P	**P**	**03 36 14.3**	**+0.6**
BDFB				IAmb	IAmb	03 36 37.7	
	comp=Z,14nm,1.4s						
CO01	**Juntas del Tor**	**67.86**	**249**		**P**	**03 36 28.4**	**+0.3**
CO01				IAmb	IAmb	03 36 36.5	
	comp=Z,11nm,0.8s						
TORD	**Torodi Ar. Bea**	**68.08**	**339**	P	**P**	**03 36 29.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=166,slow=5.6,SNR=5.9 comp=Z,1.0nm,0.7s						
SIV	**San Ignacio**	**73.23**	**266**	LR	LR	04 04 30.0	
	comp=Z,63nm,20.9s,baz=115,slow=32						
PB11	**IPOC Station P**	**75.44**	**257**	P	**P**	**03 37 14.0**	**+0.2**
LPAZ	**La Paz**	**77.23**	**260**	P	**P**	**03 37 24.1**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=142,slow=5.7,SNR=3.6						
LPAZ				LR	LR	04 06 53.8	
	comp=Z,37nm,22.0s,baz=82,slow=32 comp=Z,1.1nm,0.7s						
LPAZ	**La Paz**	**77.23**	**260**	P	**P**	**03 37 24.1**	**-0.5**
PALK	**Pallekele**	**77.79**	**60**	LR	LR	04 05 13.4	
	comp=Z,72nm,21.6s,baz=142,slow=31						
RPZ	**Rata Peaks**	**80.13**	**158**	LR	LR	04 11 56.8	
	comp=Z,26nm,19.0s,baz=129,slow=35						
EIL	**Elat**	**83.03**	**11**	LR	LR	04 15 04.5	
	comp=Z,140nm,19.1s,baz=294,slow=36						
ASAR	**Alice Springs**	**83.67**	**121**	P	**P**	**03 37 58.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=197,slow=4.3,SNR=6.0						
ASAR				LR	LR	04 11 04.1	
	comp=Z,117nm,19.4s,baz=260,slow=33 comp=Z,0.9nm,0.6s						
MMAI	**Mount Meron Ar**	**86.38**	**11**	LR	LR	04 17 45.2	
	comp=Z,86nm,18.9s,baz=247,slow=36						
WRA	**Warramunga Arr**	**86.96**	**119**	P	**P**	**03 38 14.5**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=195,slow=3.3,SNR=7.0 comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**86.96**	**119**	P	**P**	**03 38 15.9**	**+1.0**
MDT	**Mideit**	**88.47**	**338**	LR	LR	04 14 23.9	
	comp=Z,57nm,18.2s,baz=218,slow=33						
VAE	**Valguarnera**	**90.28**	**354**	LR	LR	04 20 41.7	
	comp=Z,124nm,18.1s,baz=128,slow=37						
BRTR	**Keskin Array B**	**92.83**	**9**	P	**P**	**03 38 41.9**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=203,slow=5.4,SNR=3.9 comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**92.83**	**9**	P	**P**	**03 38 42.3**	**+0.4**
BRDH	**Bariadhala**	**96.37**	**61**	LR	LR	04 18 20.9	
	comp=Z,184nm,19.0s,baz=140,slow=33						
CMAR	**Chiang Mai Arr**	**96.95**	**69**	LR	LR	04 14 36.5	
	comp=Z,57nm,19.9s,baz=245,slow=30						
SDV	**Santo Domingo**	**98.58**	**273**	LR	LR	04 21 20.0	
	comp=Z,74nm,20.1s,baz=84,slow=34						
SONM	**Songino Array**	**123.27**	**53**	PKP	**PKPdf**	**03 44 25.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=210,slow=2.1,SNR=5.5						
SONM	**Songino Array**	**123.27**	**53**		**PKPdf**	**03 44 25.6**	**-0.2**
SCHQ	**Schefferville**	**129.93**	**311**	PKP	**PKiKP**	**03 44 39.5**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=126,slow=1.9,SNR=4.4						
SCHQ	**Schefferville**	**129.93**	**311**		**PKiKP**	**03 44 39.8**	**+1.0**
TXAR	**Lajitas Array**	**134.09**	**261**	PKP	**PKPdf**	**03 44 47.0**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=124,slow=2.1,SNR=3.9						
ULM	**Lac du Bonnet**	**142.34**	**292**	PKP	**PKPdf**	**03 45 00.2**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=135,slow=1.4,SNR=2.2						
ULM	**Lac du Bonnet**	**142.34**	**292**		**PKPdf**	**03 45 01.6**	**+0.4**
PDAR	**Pinedale Array**	**146.51**	**272**	PKPbc	**PKPdf**	**03 45 09.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=123,slow=5.5,SNR=10						
PDAR	**Pinedale Array**	**146.51**	**272**	PKPdf	**PKPbc**	**03 45 10.6**	**+0.1**
NVAR	**Mina Array Bea**	**149.12**	**258**	PKPbc	**PKiKP**	**03 45 18.3**	**-0.6**
	comp=Z,2.3nm,1.0s,baz=130,slow=3.2,SNR=3.8						
NVAR	**Mina Array Bea**	**149.12**	**258**		**PKPbc**	**03 45 17.4**	**-0.3**
PETK	**Petropavlovsk-**	**153.69**	**72**	PKPbc	**PKiKP**	**03 45 27.7**	**+0.1**
	comp=Z,3.4nm,0.6s,baz=243,slow=1.9,SNR=9.3						
PETK	**Petropavlovsk-**	**153.69**	**72**		**PKiKP**	**03 45 27.5**	**-0.1**
YKA	**Yellowknife Ar**	**155.37**	**310**	PKPbc	PKPdf	03 45 30.7	+9.0
YKA				PKPab	**PKPab**	**03 45 47.2**	**0.0**
	comp=Z,1.3nm,0.7s,baz=97,slow=5.1,SNR=17						
YKA	**Yellowknife Ar**	**155.37**	**310**	PKPdf		03 45 30.5	+8.9
YKA					**PKPab**	**03 45 47.8**	**+0.6**

*SOF **01** 03:25:34.1, 41.°81N±0.°01×22.°81E±0.°01, h14km±3km, MD2.5/5*
*SKO **01** 03:25:36.1, 41.°77N×22.°91E, h16km, ML1.8*

ISC 01 03:25:34.4±1.7, 41.°80N±0.°05×22.°8E±0.°1, h16km±15km, n7, σ0°43/13, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.24**	**79**	*i* Pg	**Pg**	**03 25 40.0**	**+0.3**
KKB				Sg	**Sg**	**03 25 42.7**	**-0.6**
VAY	**Valandovo**	**0.51**	**201**	*i* Pg	**Pn**	**03 25 47.3**	**+0.2**
VAY				*e*Lg	Lg	03 25 55.0	
	comp=E,37nm,0.3s						
VAY				*i* Sg	**Sn**	**03 25 55.0**	**-0.5**
VAY				*e*Lg	Lg	03 25 55.5	
	comp=N,26nm,0.3s						
MMB	**Musomishta**	**0.74**	**109**	*i* Pg	**Pb**	**03 25 49.3**	**+0.3**
MMB				Sg	**Sg**	**03 25 58.5**	**-0.2**
PLNA	**Plana**	**0.81**	**34**	*i* Pg	**Pg**	**03 25 50.7**	**+0.4**
PLNA				Sg	**Sg**	**03 26 01.0**	**0.0**
VTS	**Vitosha**	**0.88**	**21**	*i* Pg	**Pb**	**03 25 51.5**	**+0.2**
VTS				Sg	**Sg**	**03 26 02.3**	**-0.7**
RZN	**Rozhen**	**1.44**	**94**	P	**Pg**	**03 26 01.8**	**-0.3**
RZN				Sg	**Sg**	**03 26 20.9**	**0.0**
MPEP	**Malo Peshtene**	**1.70**	**23**	Pg	**Pg**	**03 26 06.9**	**-0.1**

*NEIC **01** 03:29:37.6±1.3, 1.°4N±0.°2×95.°8W±0.°2, h10km±2km, mb4.4/14, Error ellipse: s-maj=30.6km s-min=27.0km az=267.0*
*IDC **01** 03:29:38.6±3.2, 1.°99N×95.°82W, h0km, mb3.9/6, mbtmp3.9/6, MS3.6/22, Error ellipse: s-maj=122.8km s-min=65.4km az=77.0*

ISC 01 03:29:37.5±2.3, 1.°5N±0.°3×95.°8W±0.°2, h10km, n51, σ0°84/25, mb4.2/11, MS3.7/20, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUD3	**Juan Diaz 3**	**13.37**	**49**	Pn	**Pn**	**03 32 48.0**	**+0.5**
CMIG	**Matias Romero**	**15.53**	**3**	LR	LR	03 37 43.7	
	comp=Z,193nm,20.9s,baz=178,slow=32						
ATAH	**Atahualpa**	**19.39**	**116**	LR	LR	03 40 29.3	
	comp=Z,101nm,20.2s,baz=292,slow=33						
ROSC	**El Rosal**	**21.72**	**81**	LR	LR	03 41 44.6	
	comp=Z,108nm,19.1s,baz=257,slow=34						
ZAIG	**Zacatecas**	**22.14**	**343**		**P**	**03 34 34.4**	**+0.5**
ZAIG				IAmb	IAmb	03 34 41.5	
	comp=Z,16nm,1.3s						
HBVL	**Hebbronville**	**25.57**	**354**	P	**P**	**03 35 07.0**	**+0.2**
HBVL				IAmb	IAmb	03 35 10.6	
	comp=Z,10nm,0.9s						
SDV	**Santo Domingo**	**26.12**	**73**	LR	LR	03 44 14.4	
	comp=Z,64nm,20.6s,baz=254,slow=34						
SDV	**Santo Domingo**	**26.12**	**73**	P	**P**	**03 35 11.2**	**-1.0**
SDV				IAmb	IAmb	03 35 37.1	
	comp=Z,9.2nm,1.3s						
LPIG	**La Paz**	**26.49**	**329**	LR	LR	03 43 02.7	
	comp=Z,166nm,20.5s,baz=172,slow=31						
TXAR	**Lajitas Array**	**28.68**	**346**	P	**P**	**03 35 33.3**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=164,slow=10,SNR=18						
TXAR				LR	LR	03 45 17.7	
	comp=Z,74nm,18.9s,baz=137,slow=33 comp=Z,1.8nm,0.8s						
TXAR	**Lajitas Array**	**28.68**	**346**	P	**P**	**03 35 33.8**	**-1.0**
TX31	**Lajitas Ar. Si**	**28.68**	**346**	P	**P**	**03 35 34.1**	**-0.7**
VHRN	**Van Horn**	**30.40**	**344**	P	**P**	**03 35 49.5**	**-0.6**
FW06	**Azle**	**31.36**	**357**	P	**P**	**03 35 58.1**	**-0.3**
LPAZ	**La Paz**	**32.55**	**124**	LR	LR	03 48 48.9	
	comp=Z,37nm,18.9s,baz=306,slow=35						
ANMO	**Albuquerque**	**34.73**	**345**	LR	LR	03 49 16.6	
	comp=Z,168nm,19.9s,baz=148,slow=34						
TKL	**Tuckaleechee C**	**35.79**	**17**	LR	LR	03 50 18.7	
	comp=Z,80nm,20.8s,baz=171,slow=35						
PFO	**Pinyon Flats O**	**37.35**	**331**	LR	LR	03 48 51.3	
	comp=Z,135nm,21.8s,baz=178,slow=31						
H03N2	**Juan Fernandez**	**38.22**	**157**	T	T	04 18 44.6	
	baz=333,slow=77,SNR=138						
H03N1	**Juan Fernandez**	**38.23**	**157**	T	T	04 18 44.1	
	baz=333,slow=77,SNR=139						
H03N3	**Juan Fernandez**	**38.24**	**157**	T	T	04 18 49.4	
	baz=333,slow=77,SNR=126						
CCUT	**Cedar City**	**39.35**	**338**		**P**	**03 37 07.8**	**+0.4**
NVAR	**Mina Array Bea**	**42.14**	**333**	P	**P**	**03 37 29.3**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=157,slow=8.3,SNR=6.7						
NVAR				LR	LR	03 53 18.5	
	comp=Z,75nm,18.6s,baz=160,slow=34 comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**42.14**	**333**	P	**P**	**03 37 30.9**	**+0.5**
ELK	**Elko**	**42.85**	**338**	LR	LR	03 54 47.2	
	comp=Z,117nm,

MSTX					IAmb	IAmb	03 36 17.6	
	comp=Z,9.8nm,1.3s							
DUN6	**Lazy B Ranch**	**28.48**	**339**	P	**P**		**03 36 14.6**	**+0.3**
TUC	**Tucson**	**28.90**	**336**		**P**		**03 36 17.9**	**-0.1**
CRNM	**Carthage**	**29.03**	**344**	P	**P**		**03 36 19.1**	**-0.1**
Y22A	**Socorro**	**29.08**	**344**		**P**		**03 36 19.0**	**-0.7**
LENM	**Lemitar**	**29.30**	**344**		**P**		**03 36 21.5**	**-0.1**
ANMO	**Albuquerque**	**29.89**	**345**		**P**		**03 36 27.3**	**+0.4**
X16A	**Lo Mia Camp, P**	**31.02**	**337**		**P**		**03 36 36.6**	**-0.3**
X16A					IAmb	IAmb	03 36 43.3	
	comp=Z,6.7nm,1.2s							
WVT	**Waverly**	**31.18**	**15**	P	**P**		**03 36 38.5**	**+0.5**
WVT					IAmb	IAmb	03 36 39.4	
	comp=Z,5.6nm,0.9s							
T25A	**Trinidad**	**31.55**	**349**	P	**P**		**03 36 41.9**	**+0.3**
T25A					IAmb	IAmb	03 36 47.9	
	comp=Z,6.2nm,1.0s							
WUAZ	**Wupatki**	**31.96**	**338**	P	**P**		**03 36 45.2**	**0.0**
WUAZ					IAmb	IAmb	03 36 52.2	
	comp=Z,8.4nm,1.0s							
BC3	**Big Chuckawall**	**32.11**	**331**	P	**P**		**03 36 46.6**	**+0.2**
BC3					IAmb	IAmb	03 36 52.5	
	comp=Z,10nm,1.5s							
IRM	**Iron Mountain**	**32.38**	**332**	P	**P**		**03 36 49.2**	**+0.6**
IRM					IAmb	IAmb	03 36 54.3	
	comp=Z,6.7nm,1.4s							
R40A	**Maddies Statio**	**32.40**	**8**	P	**P**		**03 36 49.2**	**+0.5**
R40A					IAmb	IAmb	03 36 51.4	
	comp=Z,5.5nm,1.1s							
MVCO	**Mesa Verde**	**32.58**	**344**	P	**P**		**03 36 50.3**	**-0.3**
MVCO					IAmb	IAmb	03 36 56.9	
	comp=Z,6.9nm,1.0s							
MVCO	**Mesa Verde**	**32.58**	**344**		**P**		**03 36 50.7**	**+0.1**
W13A	**Hualapai Mount**	**32.60**	**335**	P	**P**		**03 36 50.6**	**-0.2**
W13A					IAmb	IAmb	03 36 56.8	
	comp=Z,4.6nm,1.1s							
S22A	**4UR Ranch, Cre**	**32.65**	**346**	P	**P**		**03 36 50.4**	**-0.9**
S22A					IAmb	IAmb	03 37 03.1	
	comp=Z,4.0nm,1.2s							
PV01	**Paradox Valley**	**33.46**	**344**	P	**P**		**03 36 58.1**	**-0.2**
PV01					IAmb	IAmb	03 37 04.5	
	comp=Z,6.3nm,1.1s							
PV13	**Radium Mtn., P**	**33.55**	**344**	P	**P**		**03 36 58.2**	**-0.8**
PV13					IAmb	IAmb	03 37 05.1	
	comp=Z,6.1nm,1.0s							
PV02	**Paradox Valley**	**33.57**	**344**	P	**P**		**03 36 58.7**	**-0.6**
PV15	**Paradox Valley**	**33.63**	**344**	P	**P**		**03 36 59.7**	**-0.1**
PV15					IAmb	IAmb	03 37 06.3	
	comp=Z,8.4nm,1.1s							
PV03	**Paradox Valley**	**33.65**	**344**	P	**P**		**03 36 59.6**	**-0.3**
PV03					IAmb	IAmb	03 37 05.3	
	comp=Z,5.4nm,1.1s							
PV03	**Paradox Valley**	**33.65**	**344**	P	**P**		**03 36 59.6**	**-0.3**
PV18	**Skein Mesa, Pa**	**33.66**	**344**	P	**P**		**03 36 59.0**	**-0.9**
PV18					IAmb	IAmb	03 37 05.3	
	comp=Z,8.7nm,1.0s							
PV12	**Saucer Basin,**	**33.70**	**344**	P	**P**		**03 37 00.2**	**-0.2**
KNB	**Kanab**	**33.83**	**338**	P	**P**		**03 37 01.8**	**+0.3**
KNB					IAmb	IAmb	03 37 07.5	
	comp=Z,7.2nm,1.3s							
HMU	**Henry Mountain**	**33.93**	**341**	P	**P**		**03 37 02.3**	**-0.1**
LCMT	**Little Creek M**	**33.99**	**337**	P	**P**		**03 37 03.0**	**+0.2**
LCMT					IAmb	IAmb	03 37 09.0	
	comp=Z,3.6nm,1.0s							
ISCO	**Idaho Springs**	**34.36**	**349**		**P**		**03 37 05.5**	**-0.6**
ISCO					IAmb	IAmb	03 37 12.3	
	comp=Z,5.4nm,1.2s							
CCUT	**Cedar City**	**34.51**	**337**	P	**P**		**03 37 06.7**	**-0.7**
CCUT					IAmb	IAmb	03 37 13.4	
	comp=Z,3.6nm,1.1s							
MTPU	**Mount Pierson**	**34.51**	**339**	P	**P**		**03 37 06.5**	**-1.1**
GWY	**Greenwater Val**	**34.75**	**332**	P	**P**		**03 37 09.4**	**-0.1**
TCRU	**Three Creeks R**	**35.11**	**339**	P	**P**		**03 37 12.0**	**-0.6**
RDMU	**Red Mountain**	**36.01**	**344**	P	**P**		**03 37 19.9**	**-0.4**
RDMU					IAmb	IAmb	03 37 25.8	
	comp=Z,5.8nm,0.9s							
NLU	**North Lily Min**	**36.19**	**341**	P	**P**		**03 37 21.4**	**-0.4**
BSUT	**Blindstream Ca**	**36.31**	**343**		**P**		**03 37 22.4**	**-0.7**
BSUT					IAmb	IAmb	03 37 28.8	
	comp=Z,5.5nm,0.9s							
DUG	**Dugway, Tooele**	**36.65**	**340**		**P**		**03 37 25.1**	**-0.6**
DUG					IAmb	IAmb	03 37 31.6	
	comp=Z,5.0nm,1.0s							
TCUT	**Toone Canyon**	**37.04**	**342**	P	**P**		**03 37 28.4**	**-0.8**
TCUT					IAmb	IAmb	03 37 35.0	
	comp=Z,16nm,1.4s							
HWUT	**Hardware Ranch**	**37.54**	**343**	P	**P**		**03 37 33.0**	**-0.3**
HWUT					IAmb	IAmb	03 37 38.4	
	comp=Z,4.7nm,0.9s							
MACA	**Manacapuru-AM**	**37.85**	**103**	P	**P**		**03 37 36.4**	**+0.3**
ELK	**Elko**	**38.00**	**338**		**P**		**03 37 37.6**	**+0.3**
BW06	**Boulder Array**	**38.06**	**346**	P	**P**		**03 37 35.6**	**-2.2**
PD31	**Pinedale Array**	**38.06**	**346**	P	**P**		**03 37 35.8**	**-2.0**
HVU	**Hansel Valley**	**38.07**	**341**	P	**P**		**03 37 36.7**	**-1.0**
HVU					IAmb	IAmb	03 37 42.7	
	comp=Z,10nm,0.9s							
FXWY	**Fox Creek**	**39.26**	**344**	P	**P**		**03 37 46.0**	**-1.8**
YNE	**Yellowstone No**	**40.28**	**346**	P	**P**		**03 37 55.2**	**-1.1**
MCMT	**McKenzie Canyo**	**40.86**	**343**	P	**P**		**03 38 00.4**	**-0.7**
TRQA	**Tornquist**	**54.93**	**146**	P	**P**		**03 39 50.0**	**0.0**
BCAR	**Beaver Creek A**	**65.31**	**339**	P	**P**		**03 41 00.7**	**-0.1**
MCK	**McKinley**	**68.29**	**338**	P	**P**		**03 41 20.3**	**+0.6**
MCK					IAmb	IAmb	03 41 27.1	
	comp=Z,5.2nm,1.2s							
P17K	**Kvichak River**	**69.26**	**332**	P	**P**		**03 41 25.5**	**-0.3**
SPB2	**Spitsbergen Ar**	**88.84**	**11**	P	**P**		**03 43 14.3**	**+1.7**
ARCES	**ARCESS Array B**	**95.26**	**17**	P	**P**		**03 43 43.5**	**+1.0**
SENIN	**Lac Senin/Sane**	**95.71**	**42**	P	**P**		**03 43 45.3**	**0.0**
CLL	**Collm**	**97.83**	**36**	P	**P**		**03 43 53.5**	**-1.0**
CLL	**Collm**	**97.83**	**36**	*eP*	Pdif		03 43 55.0	+0.5
SALO	**Salr**	**98.07**	**42**	P	**P**		**03 43 53.5**	**-2.3**
ZAA0	**Zalesovo Array**	**120.16**	**358**	PKPdf	**PKiKP**		**03 49 10.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**126.23**	**333**	*eP*	**PKPdf**		**03 49 19.9**	**-2.3**
WMQ	**Urumqi**	**130.10**	**355**	*e*PKP	**PKiKP**		**03 49 30.8**	**+0.6**
WMQ				pPKP	sPKPdf		03 49 45.7	+13
PZH	**PanZhiHua**	**142.63**	**331**	PKP	**PKPdf**		**03 49 54.1**	**+0.9**
EVN	**Everest**	**145.90**	**353**	PKPdf	**PKPdf**		**03 49 58.6**	**-0.8**

MEX 01 03:32:05.8±0.5,15°91N×95°10W,h17km±48km,MD4.0,
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.98**	**262**	*e*P	Pb	03 32 21.0	-3.3
HUIG				*e*S	Sb	03 32 32.9	-4.0
CMIG	**Matias Romero**	**1.19**	**10**	*e*P	Pn	03 32 24.5	-3.2
CMIG				*e*S	Sb	03 32 38.2	-4.9
NEUV	**Arroyo Zacate**	**1.91**	**340**	*e*P	Pn	03 32 34.9	-2.8
NEUV				*e*S	Sn	03 32 57.5	-3.9
VHO	**Vista Hermosa**	**1.94**	**307**	*e*P	Pn	03 32 35.5	-2.8
VHO				*e*S	Sn	03 32 57.5	-4.9
PEIG	**Puerto Escondi**	**1.97**	**273**	*e*P	Pn	03 32 36.2	-2.2
PEIG				*e*S	Sn	03 32 59.5	-3.3
TGIG		**2.09**	**65**	*e*P	Pn	03 32 37.7	-2.5
TGIG				*e*S	Sn	03 33 02.6	-3.3
TOIG	**Toxpalan**	**2.87**	**319**	*e*P	Pn	03 32 53.0	+2.1
TOIG				*e*S	Sn	03 33 27.6	+2.4
HLIG	**Huajuapan de L**	**3.21**	**307**	*e*P	Pn	03 32 53.7	-2.0
HLIG				*e*S	Sn	03 33 30.9	-2.9
FTIG	**Fresnillo de T**	**3.51**	**305**	*e*P	Pn	03 32 58.0	-1.8
FTIG				*e*S	Sn	03 33 38.3	-2.8
TLIG	**Tlapa**	**3.70**	**297**	*e*S	Sn	03 33 44.1	-1.6

*IDC **01** 03:32:53.6±6.7,7.°48S×124.°51E,h120km±73km,mb3.1/1, mbtmp3.9/5,Error ellipse: s-maj=75.7km s-min=32.3km az=43.0*
*NEIC **01** 03:33:00.1±2.1,8.°1S±0.°1×124.°0E±0.°1,h200km±7km, mb4.1/8,Error ellipse: s-maj=19.9km s-min=12.1km az=211.0*
ISC 01 03:33:00.8±1.0,8°14S±0°09×124°08E±0°09,h200km,n32,
σ1§71/37,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.61**	**173**	P	**Pn**	**03 33 37.3**	**+1.7**
SOEI				S	**Sn**	**03 34 04.3**	**+1.4**
SOEI	**Soe**	**1.61**	**173**		**Pn**	**03 33 37.3**	**+1.7**
MMRI	**Maumere**	**1.89**	**255**	Pn	**Pn**	**03 33 36.6**	**-1.5**
BATI	**Baumata**	**2.09**	**191**	P	**Pn**	**03 33 39.1**	**-1.1**
	67nm,0.3s,baz=87,slow=2.7,SNR=5.7						
BATI				S	**Sn**	**03 34 12.2**	**+1.0**
	150nm,0.3s,baz=150,slow=18,SNR=14						
PLAI	**Plampang**	**6.27**	**263**	P	**Pn**	**03 34 32.3**	**+0.7**
DRS	**Darwin Rock St**	**7.95**	**123**	P	**Pn**	**03 34 53.8**	**+0.4**
MTN	**Manton Dam**	**8.36**	**125**		**Pn**	**03 34 58.9**	**+0.1**
KNRA	**Kununurra**	**8.78**	**149**	Pn	**Pn**	**03 35 04.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**10.01**	**171**	P	**Pn**	**03 35 20.9**	**+0.8**
	1.2nm,0.5s,baz=358,slow=11,SNR=17						
FITZ				S	**Sn**	**03 37 09.7**	**-2.4**
	8.6nm,0.4s,baz=142,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**10.01**	**171**	P	**Pn**	**03 35 21.7**	**+1.5**
FITZ	**Fitzroy Crossi**	**10.01**	**171**		**Pn**	**03 35 20.4**	**+0.2**
MBWA	**Marble Bar**	**13.60**	**198**		**Pn**	**03 36 06.1**	**+0.3**
WB0	**Warramunga Arr**	**15.28**	**140**		**Pn**	**03 36 25.6**	**-0.9**
WB0				IAmb	IAmb	03 36 59.2	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**15.37**	**141**	P	**Pn**	**03 36 27.1**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=320,slow=12,SNR=33						
WRA				S	**S**	**03 39 11.6**	**-6.8**
	comp=Z,1.3nm,0.6s,baz=319,slow=25,SNR=8.1						
WRA	**Warramunga Arr**	**15.37**	**141**	P	**Pn**	**03 36 27.1**	**-0.6**
WRAB	**Tennant Creek**	**15.37**	**141**	P	**P**	**03 36 29.5**	**+1.6**
WRAB	**Tennant Creek**	**15.37**	**141**		**Pn**	**03 36 28.4**	**+0.7**
WRAB				IAmb	IAmb	03 37 04.5	
	comp=Z,8.5nm,1.4s						
WR8	**Warramunga Arr**	**15.48**	**140**		**Pn**	**03 36 28.9**	**-0.1**
WR8				IAmb	IAmb	03 36 59.3	
	comp=Z,7.3nm,1.3s						
AS31	**Alice Springs**	**18.08**	**150**	P	**P**	**03 36 56.0**	**-1.6**
ASAR	**Alice Springs**	**18.08**	**150**	P	**Pn**	**03 37 00.9**	**+1.1**
	comp=Z,4.3nm,0.6s,baz=332,slow=12,SNR=35						
ASAR				S	**S**	**03 40 16.7**	**+2.2**
	comp=Z,0.3nm,0.4s,baz=332,slow=23,SNR=4.2						
ASAR	**Alice Springs**	**18.08**	**150**	P	**Pn**	**03 36 59.6**	**-0.3**
AS01	**Alice Springs**	**18.10**	**150**	P	**Pn**	**03 37 00.9**	**+0.8**
MEEK	**Meekatharra**	**19.11**	**195**	P	**Pn**	**03 37 11.8**	**-0.1**
QIS	**Mount Isa**	**19.43**	**131**	P	**P**	**03 37 14.5**	**+2.3**
COEN	**Coen**	**19.61**	**109**	P	**P**	**03 37 15.1**	**+1.0**
COEN	**Coen**	**19.61**	**109**	P	**P**	**03 37 14.6**	**+0.5**
COEN				IAmb	IAmb	03 37 55.6	
	comp=Z,17nm,1.4s						
MORW	**Morawa**	**22.15**	**199**	P	**P**	**03 37 42.6**	**+2.2**
MORW	**Morawa**	**22.15**	**199**	P	**P**	**03 37 39.5**	**-0.9**
BBOO	**Buckleboo**	**26.94**	**157**	P	**P**	**03 38 25.5**	**+1.8**
MKAR	**Makanchi Array**	**66.11**	**330**	P	**P**	**03 43 25.6**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=137,slow=6.2,SNR=2.8						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**66.11**	**330**	P	**P**	**03 43 25.4**	**-1.1**
QSPA	**South Pole Qui**	**81.84**	**180**	P	**P**	**03 44 56.9**	**-0.5**

*JMA **01** 04:12:00.1±0.1,38.°8N±0.°3×141.°9E±0.°6,h53km,MV3.6/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
*IDC **01** 04:12:01.8±3.4,38.°77N×142.°02E,h78km±32km,mb3.3/7, mbtmp3.6/9,Error ellipse: s-maj=28.4km s-min=21.9km az=112.0*
ISC 01 04:11:59.0±1.5,38°80N±0°07×142°1E±0°1,h50km±11km,
n24,σ1§10/25,mb3.5/7,10D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.41**	**314**	*i*P	**Pn**	**04 12 10.0**	**+0.6**
OFUJ				⇓S	**Sn**	**04 12 16.7**	**0.0**
JKMT	**Kesennumamotoy**	**0.45**	**272**	*i*P	**Pn**	**04 12 10.0**	**+0.3**
JKMT				⇓S	**Sn**	**04 12 16.9**	**-0.6**
JIO	**Ouri**	**0.65**	**239**	*i*P	**Pn**	**04 12 12.4**	**+0.3**
JIO				S	**Sn**	**04 12 20.8**	**-0.8**
JMK	**Ichinoseki**	**0.67**	**284**	*i*P	**Pn**	**04 12 12.4**	**+0.1**
JMK				⇓S	**Sn**	**04 12 21.1**	**-1.0**
JOM	**Ohasama**	**0.90**	**319**	*i*P	**Pn**	**04 12 15.6**	**+0.2**
JOM				⇓S	**Sn**	**04 12 26.8**	**-0.7**
JOU	**Okura**	**1.17**	**249**	*i*P	**Pn**	**04 12 19.0**	**-0.1**
JOU				S	**Sn**	**04 12 33.1**	**-0.9**
JRG	**Rokugo**	**1.26**	**299**	*i*P	**Pn**	**04 12 20.0**	**-0.2**
JYK	**Kaneyama**	**1.33**	**276**	*i*P	**Pn**	**04 12 21.0**	**-0.2**
JMM	**Marumori**	**1.36**	**227**	*i*P	**Pn**	**04 12 21.5**	**-0.1**
MJAR	**Matsushiro Arr**	**3.79**	**235**	P	**Pn**	**04 12 56.2**	**+1.2**
	1.1nm,0.4s,baz=37,slow=12,SNR=6.6						
MJAR				S	**Sn**	**04 13 40.8**	**+2.5**
	1.2nm,0.3s,baz=328,slow=17,SNR=1.4						
USRK	**Ussuriysk Ar.**	**9.28**	**309**	P	**Pn**	**04 14 12.9**	**+2.8**
	3.5nm,0.6s,baz=116,slow=13,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**28.67**	**124**	T	T	04 48 27.9	
	baz=317,slow=76,SNR=78						
H11N1	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	04 48 28.6	
	baz=317,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**28.69**	**124**	T	T	04 48 29.2	
	baz=317,slow=76,SNR=78						
H11S1	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	04 49 25.4	
	baz=319,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	04 49 25.7	
	baz=319,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**29.46**	**126**	T	T	04 49 26.8	
	baz=319,slow=76,SNR=22						
ZALV	**Zalesovo Beam**	**41.12**	**311**	P	**P**	**04 19 37.8**	**-0.1**
	0.4nm,0.4s,baz=88,slow=8.2,SNR=1.7						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**43.64**	**301**	P	**P**	**04 19 58.2**	**-0.2**
	0.4nm,0.6s,baz=82,slow=8.7,SNR=3.6						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**45.34**	**307**	P	**P**	**04 20 11.3**	**-0.6**
	1.4nm,0.4s,baz=81,slow=8.0,SNR=7.4						
	1.4nm,0.4s						
ILAR	**Eielson Array**	**47.74**	**33**	P	**P**	**04 20 32.1**	**+1.5**
	0.3nm,0.6s,baz=269,slow=7.5,SNR=6.3						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**49.78**	**311**	P	**P**	**04 20 46.4**	**+0.1**
	0.8nm,0.5s,baz=77,slow=7.6,SNR=2.8						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**58.87**	**188**	P	**P**	**04 21 52.4**	**-0.3**
	0.3nm,0.8s,baz=6.3,slow=6.9,SNR=1.3						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**62.03**	**31**	P	**P**	**04 22 12.0**	**-1.8**
	0.4nm,0.8s,baz=308,slow=6.9,SNR=3.8						
	0.4nm,0.8s						

*IDC **01** 04:21:09.1±1.2,6.°06S×127.°76E,h384km±14km,mb3.5/10, mbtmp4.3/14,Error ellipse: s-maj=18.8km s-min=8.8km az=81.0*
*NEIC **01** 04:21:09.8±1.7,6.°05S±0.°05×127.°69E±0.°07,h390km±5km, mb4.3/40,Error ellipse: s-maj=10.6km s-min=7.7km az=76.0*
*GFZ **01** 04:21:10.1±0.4,6.°S±5.°×12.°8E±.°,h388km±6km,M4.2/10, mb4.2/10,Error ellipse: s-maj=12.4km s-min=8.0km az=27.7,confirmed*
*DJA **01** 04:21:10.1±0.2,6.°S±2.°×12.°8E±.°,h399km±4km,M4.4/25, mb4.2/25,mB5.0/9,MLv4.6/21,Mw(mB)4.3/9*
ISC 01 04:21:10.3±0.4,6°09S±0°05×127°68E±0°05,h404km,n109,
σ1§41/115,mb4.2/27,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.71**	**55**	P	**P**	**04 22 11.7**	**+0.2**
KRAI	**Karang Ratu**	**2.84**	**15**	P	**P**	**04 22 11.7**	**-0.9**
NLAI	**Namlea**	**2.89**	**349**	P	**P**	**04 22 13.2**	**+0.3**
MSAI	**Masohi**	**3.00**	**25**	P	**P**	**04 22 13.3**	**-0.5**
SAUI	**Saumlaki**	**4.06**	**118**	P	**P**	**04 22 23.4**	**+0.3**
SAUI	**Saumlaki**	**4.06**	**118**	Pn	**P**	**04 22 22.4**	**-0.7**
SAUI				Sn	**S**	**04 23 16.3**	**-6.1**
SAUI	**Saumlaki**	**4.06**	**118**	P	**P**	**04 22 23.6**	**+0.5**
SOEI	**Soe**	**4.97**	**223**	P	**P**	**04 22 31.7**	**-0.4**
SOEI	**Soe**	**4.97**	**223**		**P**	**04 22 31.7**	**-0.4**
SOEI	**Soe**	**4.97**	**223**	P	**P**	**04 22 31.9**	**-0.2**
SOEI	**Soe**	**4.97**	**223**	P	**P**	**04 22 32.1**	**0.0**
FAKI	**Fak Fak**	**5.54**	**56**	P	**P**	**04 22 36.7**	**-1.3**
FAKI	**Fak Fak**	**5.54**	**56**		**P**	**04 22 37.0**	**-1.0**
FAKI	**Fak Fak**	**5.54**	**56**	P	**P**	**04 22 36.6**	**-1.4**
	0.9nm3µm194nm,0.9s						
FAKI	**Fak Fak**	**5.54**	**56**	P	**P**	**04 22 37.1**	**-0.9**
BATI	**Baumata**	**5.70**	**224**	P	**P**	**04 22 36.9**	**-2.8**
	579nm,0.4s,baz=90,slow=0.2,SNR=46						
BATI				S	**Sn**	**04 23 48.2**	**-4.7**
	322nm,0.8s,baz=284,slow=20,SNR=15						
BATI	**Baumata**	**5.70**	**224**	P	**P**	**04 22 36.9**	**-2.8**
MMRI	**Maumere**	**5.96**	**245**	Pn	**P**	**04 22 42.3**	**-0.1**
SIJI	**Sorong**	**6.30**	**35**	P	**P**	**04 22 44.7**	**-1.5**
	20nm,0.3s,baz=243,slow=23,SNR=10						
SIJI				S	**S**	**04 23 59.7**	**-5.2**
	27nm,0.2s,baz=304,slow=22,SNR=8.4						
SIJI	**Sorong**	**6.30**	**35**	P	**P**	**04 22 45.2**	**-1.0**
	0.2nm1µm27nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**6.47**	**68**	P	**P**	**04 22 47.6**	**-0.4**
	1.2nm4µm222nm,0.9s						
TNTI	**Ternate**	**6.82**	**357**	Pn	**P**	**04 22 50.3**	**-2.4**
DRS	**Darwin Rock St**	**7.06**	**153**	P	**P**	**04 22 56.3**	**+1.0**
MTN	**Manton Dam**	**7.53**	**153**		**P**	**04 23 00.4**	**-0.1**
RKPI	**Ransiki, Papua**	**7.92**	**55**	P	**P**	**04 23 04.5**	**-0.4**
	4µm152nm,0.9s						
KAPI	**Kappang**	**7.96**	**277**	P	P	04 23 13.9	+8.6
	51nm,0.7s,baz=246,slow=23,SNR=24						
KAPI	**Kappang**	**7.96**	**277**	P	P	04 23 13.3	+8.0
SPSI	**Sidrap Palu**	**8.15**	**285**	P	**P**	**04 23 06.8**	**-0.6**
	3µm39nm,0.8s						
KNRA	**Kununurra**	**9.59**	**174**	P	**P**	**04 23 24.2**	**+0.9**
DBNI	**Kabupaten Domp**	**9.59**	**255**	P	**P**	**04 23 22.7**	**-0.7**
	15nm,1.0s						
TOLI2	**Tolitoli**	**9.93**	**316**	P	**P**	**04 23 26.9**	**-0.2**
TOLI2				S	**S**	**04 25 16.9**	**-3.0**
TOLI2	**Tolitoli**	**9.93**	**316**		**P**	**04 23 26.9**	**-0.2**
TOLI2	**Tolitoli**	**9.93**	**316**	P	**P**	**04 23 26.8**	**-0.3**
PLAI	**Plampang**	**10.19**	**254**	P	**P**	**04 23 28.1**	**-1.9**
	49nm,1.1s						
TWSI	**Taliwang, Sumb**	**11.02**	**256**	P	**P**	**04 23 38.1**	**-1.1**
	20nm,1.1s						
FITZ	**Fitzroy Crossi**	**12.10**	**189**	P	**P**	**04 23 51.3**	**+0.2**
	5.1nm,0.5s,baz=18,slow=9.5,SNR=41						
FITZ	**Fitzroy Crossi**	**12.10**	**189**	P	**P**	**04 23 51.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**12.10**	**189**		**P**	**04 23 51.2**	**+0.1**
WB0	**Warramunga Arr**	**15.08**	**155**		**P**	**04 24 24.6**	**+0.9**
WRAB	**Tennant Creek**	**15.21**	**155**	P	**P**	**04 24 25.9**	**+0.8**
WRAB	**Tennant Creek**	**15.21**	**155**	P	**P**	**04 24 25.6**	**+0.5**
WRAB				IAmb	IAmb	04 24 58.0	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**15.22**	**155**	P	**P**	**04 24 25.6**	**+0.5**
	comp=Z,6.2nm,0.4s,baz=333,slow=11,SNR=123						
WRA				S	**S**	**04 27 04.5**	**-1.8**
	comp=Z,3.7nm,0.9s,baz=329,slow=19,SNR=8.7						
WRA	**Warramunga Arr**	**15.22**	**155**	P	**P**	**04 24 24.5**	**-0.6**
WRA					**S**	**04 27 04.5**	**-1.8**
WR8	**Warramunga Arr**	**15.30**	**155**		**P**	**04 24 26.8**	**+0.8**
MBWA	**Marble Bar**	**16.84**	**206**	P	**P**	**04 24 42.3**	**-0.2**
MBWA				IAmb	IAmb	04 25 13.2	
	comp=Z,19nm,1.3s						
COEN	**Coen**	**17.14**	**118**	P	**P**	**04 24 46.2**	**+0.5**
COEN	**Coen**	**17.14**	**118**	P	**P**	**04 24 46.5**	**+0.7**
COEN				IAmb	IAmb	04 25 26.9	
	comp=Z,25nm,1.3s						
COEN	**Coen**	**17.14**	**118**	P	**P**	**04 24 46.5**	**+0.7**
SBUM	**Sibu**	**17.61**	**298**	P	**P**	**04 24 52.1**	**+1.4**
SBUM				IAmb	IAmb	04 24 52.7	
	comp=Z,6.3nm,0.7s						
SBUM	**Sibu**	**17.61**	**298**	P	**P**	**04 24 52.2**	**+1.4**
QIS	**Mount Isa**	**18.46**	**142**	P	**P**	**04 25 00.5**	**+0.8**
QIS				S	**S**	**04 28 11.9**	**+3.2**
QIS	**Mount Isa**	**18.46**	**142**	P	**P**	**04 25 00.5**	**+0.8**
AS31	**Alice Springs**	**18.48**	**162**	P	**P**	**04 25 00.1**	**+0.2**
ASAR	**Alice Springs**	**18.48**	**162**	P	**P**	**04 25 00.8**	**+0.9**
	comp=Z,2.0nm,0.4s,baz=344,slow=12,SNR=25						
ASAR				S	**S**	**04 28 09.4**	**+0.5**
	comp=Z,7.4nm,0.8s,baz=338,slow=18,SNR=25						
PMG	**Port Moresby**	**19.58**	**101**	P	**P**	**04 25 10.6**	**-0.2**
BBJI	**Bungbulang**	**19.93**	**265**	P	**P**	**04 25 14.1**	**0.0**
BBJI	**Bungbulang**	**19.93**	**265**		**P**	**04 25 13.9**	**-0.3**
BBJI	**Bungbulang**	**19.93**	**265**	P	**P**	**04 25 13.5**	**-0.6**
STKA	**Stephens Creek**	**28.77**	**155**	P	**P**	**04 26 34.8**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=306,slow=13,SNR=2.9						
	comp=Z,1.3nm,0.6s						
MNSI	**Mandailing Nat**	**28.87**	**283**	P	**P**	**04 26 34.6**	**+0.5**
KULM	**Kulim**	**29.25**	**292**	P

	comp=Z,2.6nm,0.8s						
SCM	**Sheep Creek Mo**	**92.96**	**28**	P	**P**	**04 33 38.8**	**+0.1**
I27K	**Kandik River**	**95.79**	**25**	P	**P**	**04 33 51.9**	**+0.3**

*ATH **01** 04:23:05.9, 40˚.51N×20˚.40E, h5$^{km}_{\pm}$1^{km}, ML3.4/13, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 04:23:07.5, 41˚.N±1˚×2˚.0E±˚, h0$^{km}_{\pm}$1^{km}, M3.3/46, MLh3.3/46*
*TIR **01** 04:23:07.4, 40˚.48N×20˚.46E, h17$^{km}_{\pm}$1^{km}, Ml4.0/2*
*SOF **01** 04:23:07.1, 40˚.50N±0˚.03×20˚.40E±0˚.04, h15$^{km}_{\pm}$3^{km}, MD3.8/3*
*PDG **01** 04:23:07.2±1.1, 40˚.54N×20˚.37E, h12$^{km}_{\pm}$2^{km}, ML3.3/12, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
*GFZ **01** 04:23:07.8±0.2, 41˚.N±2˚×2˚.0E±˚, h10^{km}, M4.2/9, mb4.2/9*
*BEO **01** 04:23:09.9±0.7, 40˚.46N×20˚.48E, h38$^{km}_{\pm}$4^{km}, ML3.0/10*
*IDC **01** 04:23:12.4±1.9, 40˚.61N×20˚.29E, h49$^{km}_{\pm}$22^{km}, mb3.2/6, mbtmp3.5/13, ML3.5/6, MS3.5/1, Error ellipse: s-maj=18.6km s-min=16.9km az=143.0*

ISC 01 04:23:07.4±0.9, 40˚.52N±0˚.02×20˚.43E±0˚.02, h14$^{km}_{\pm}$6^{km}, n230, σ1^{s}55/307, mb3.2/5, 25C-10D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.29**	**69**	P	**Pg**	**04 23 13.3**	**-0.3**
KBN				S	**Sg**	**04 23 18.4**	**+0.7**
KBN				AML	AML	04 23 19.2	
	71nm,0.4s						
KBN	**Korca**	**0.29**	**69**	P	**Pg**	**04 23 13.2**	**-0.3**
KBN				S	**Sg**	**04 23 18.1**	**+0.4**
KBN	**Korca**	**0.29**	**69**	P	**Pg**	**04 23 13.3**	**-0.3**
KBN				S	**Sg**	**04 23 17.9**	**+0.2**
KBN	**Korca**	**0.29**	**69**	P	**Pg**	**04 23 13.3**	**-0.3**
NEST	**Nestorio**	**0.48**	**102**	P	**Pg**	**04 23 16.4**	**-0.7**
NEST				S	**Sg**	**04 23 24.1**	**+0.6**
NEST	**Nestorio**	**0.48**	**102**	P	**Pg**	**04 23 16.4**	**-0.7**
NEST				S	**Sg**	**04 23 23.7**	**+0.2**
NEST	**Nestorio**	**0.48**	**102**	P	**Pg**	**04 23 16.5**	**-0.7**
NEST				S	**Sg**	**04 23 23.6**	**0.0**
NEST	**Nestorio**	**0.48**	**102**	P	**Pg**	**04 23 16.3**	**-0.7**
NEST				S	**Sg**	**04 23 22.7**	**-0.9**
LMS2	**Laimos Florina**	**0.63**	**60**	P	**Pg**	**04 23 18.7**	**-1.0**
LMS2				S	**Sg**	**04 23 27.8**	**-0.2**
PENT	**Pentalofos**	**0.63**	**121**	P	**Pg**	**04 23 18.7**	**-1.1**
PENT	**Pentalofos**	**0.63**	**121**	P	**Pg**	**04 23 18.6**	**-1.1**
PENT				S	**Sg**	**04 23 27.2**	**-1.0**
OHR	**Ohrid**	**0.65**	**25**	*i* Pg		**04 23 19.9**	**-0.4**
OHR				*i* Sg		**04 23 30.8**	**+1.1**
VLO	**Vlora**	**0.71**	**266**	P	**Pg**	**04 23 21.4**	**0.0**
VLO				S	**Sn**	**04 23 35.8**	**+1.9**
VLO	**Vlora**	**0.71**	**266**	P	**Pg**	**04 23 21.0**	**-0.3**
VLO				S	**Sn**	**04 23 34.8**	**+0.9**
VLO				AML	AML	04 23 37.2	
	21nm,0.4s						
VLO				AML	AML	04 23 38.1	
	19nm,0.5s						
VLO	**Vlora**	**0.71**	**266**	P	**Pg**	**04 23 21.5**	**+0.2**
VLO				S	**Sn**	**04 23 33.1**	**-0.8**
VLO	**Vlora**	**0.71**	**266**	P	**Pg**	**04 23 21.3**	**0.0**
SRN	**Sarande**	**0.72**	**207**	P	**Pg**	**04 23 21.0**	**-0.4**
SRN				S	**Sb**	**04 23 32.8**	**+1.3**
SRN	**Sarande**	**0.72**	**207**	P	**Pg**	**04 23 21.0**	**-0.4**
SRN				S	**Sb**	**04 23 32.8**	**+1.3**
SRN	**Sarande**	**0.72**	**207**	P	**Pg**	**04 23 21.1**	**-0.4**
SRN				S	**Sb**	**04 23 32.9**	**+1.4**
SRN	**Sarande**	**0.72**	**207**	P	**Pg**	**04 23 20.9**	**-0.4**
JAN	**Janina**	**0.92**	**159**	P	**Pb**	**04 23 24.2**	**-1.1**
JAN	**Janina**	**0.92**	**159**	P	**Pb**	**04 23 23.9**	**-1.3**
JAN				S	**Sg**	**04 23 35.7**	**-1.6**
TIR	**Tirane**	**0.93**	**333**	P	**Pn**	**04 23 26.1**	**-0.1**
TIR				S	**Sn**	**04 23 41.9**	**+2.6**
TIR	**Tirane**	**0.93**	**333**	P	**Pn**	**04 23 26.1**	**-0.1**
TIR				S	**Sn**	**04 23 40.6**	**+1.2**
KEK	**Kerkira**	**0.94**	**211**	P	**Pb**	**04 23 23.9**	**-1.7**
KEK				S	**Sb**	**04 23 38.1**	**+0.2**
KEK	**Kerkira**	**0.94**	**211**	P	**Pb**	**04 23 24.1**	**-1.5**
KEK	**Kerkira**	**0.94**	**211**	P	**Pb**	**04 23 23.6**	**-1.9**
IGT	**Igoumenitsa**	**0.99**	**184**	P	**Pb**	**04 23 25.9**	**-0.5**
IGT	**Igoumenitsa**	**0.99**	**184**	P	**Pb**	**04 23 25.7**	**-0.7**
IGT				S	**Sn**	**04 23 42.0**	**+1.3**
IGT	**Igoumenitsa**	**0.99**	**184**	P	**Pb**	**04 23 25.9**	**-0.5**
IGT				S	**Sn**	**04 23 41.2**	**+0.4**
IGT	**Igoumenitsa**	**0.99**	**184**	P	**Pb**	**04 23 24.8**	**-1.5**
IGT				S	**Sb**	**04 23 38.3**	**-1.0**
KZN	**Kozani**	**1.05**	**101**	P	**Pb**	**04 23 26.2**	**-1.2**
KZN	**Kozani**	**1.05**	**101**	P	**Pb**	**04 23 25.2**	**-2.2**
KZN				S	**Sb**	**04 23 40.9**	**-0.1**
LFKM	**Lefkimmi**	**1.11**	**195**	P	**Pb**	**04 23 28.5**	**+0.1**
LFKM				S	**Sn**	**04 23 45.7**	**+2.0**
PRMD	**Pramanda**	**1.11**	**152**	P	**Pb**	**04 23 27.3**	**-1.3**
PRMD				S	**Sn**	**04 23 44.7**	**+0.7**
PRMD	**Pramanda**	**1.11**	**152**	P	**Pb**	**04 23 27.2**	**-1.4**
PHP	**Peshkopia**	**1.16**	**0**	P	**Pn**	**04 23 29.7**	**+0.3**
PHP				S	**Sn**	**04 23 47.0**	**+1.8**
PHP				AML	AML	04 23 52.5	
	11nm,0.6s						
PHP	**Peshkopia**	**1.16**	**0**	P	**Pn**	**04 23 29.7**	**+0.3**
PHP				S	**Sn**	**04 23 46.8**	**+1.6**
PHP				AML	AML	04 23 52.5	
	11nm,0.6s						
PHP	**Peshkopia**	**1.16**	**0**	P	**Pb**	**04 23 29.4**	**0.0**
PHP	**Peshkopia**	**1.16**	**0**	P	**Pb**	**04 23 28.9**	**-0.5**
TETR	**Tetrakomo, Epi**	**1.34**	**151**	P	**Pg**	**04 23 33.7**	**+0.4**
TETR	**Tetrakomo, Epi**	**1.34**	**151**	P	**Pb**	**04 23 33.0**	**+0.5**
THL	**Klokotos Trika**	**1.55**	**128**	P	**Pn**	**04 23 35.1**	**+0.5**
THL				S	**Sb**	**04 23 56.5**	**+1.1**
THL	**Klokotos Trika**	**1.55**	**128**	P	**Pn**	**04 23 33.9**	**-0.7**
TYRN	**Tyrnavos**	**1.60**	**120**	P	**Pb**	**04 23 36.7**	**-0.2**
LIT	**Litokhoron**	**1.63**	**104**	P	**Pn**	**04 23 36.4**	**+0.6**
LIT	**Litokhoron**	**1.63**	**104**	P	**Pn**	**04 23 36.5**	**+0.6**
SKO	**Skopje**	**1.64**	**27**	*i* Pn	**Pb**	**04 23 37.1**	**-0.3**
ULC	**Ulcinj**	**1.70**	**329**	⇓*i* Pn	**Pb**	**04 23 37.2**	**+0.5**
ULC				*i* Sn	**Sb**	**04 24 00.5**	**+0.8**
TSLK	**Tsoukalades, L**	**1.70**	**174**	P	**Pb**	**04 23 38.8**	**+0.3**
AMPL	**Ampelaki**	**1.71**	**159**	P	**Pb**	**04 23 38.5**	**-0.1**
AMPL	**Ampelaki**	**1.71**	**159**	P	**Pn**	**04 23 37.8**	**+1.0**
LKD2	**Lefkada island**	**1.74**	**174**	P	**Pb**	**04 23 39.0**	**-0.2**
LKD2	**Lefkada island**	**1.74**	**174**	P	**Pb**	**04 23 38.8**	**-0.4**
LKD2				S	**Sg**	**04 24 02.7**	**-0.6**
LKD2	**Lefkada island**	**1.74**	**174**	P	**Pn**	**04 23 38.3**	**+1.0**
LKD2	**Lefkada island**	**1.74**	**174**	P	**Pg**	**04 23 40.4**	**-0.4**
VAY	**Valandovo**	**1.81**	**63**	*i* Pn	**Pn**	**04 23 39.2**	**+1.0**
NYDR	**Nydri-Lefkada**	**1.82**	**173**	P	**Pn**	**04 23 39.4**	**+1.1**
DRAG	**Dragano-Lefkad**	**1.84**	**176**	P	**Pn**	**04 23 39.4**	**+0.8**
EVGI	**Lefkada island**	**1.91**	**175**	P	**Pn**	**04 23 40.7**	**+1.2**
DRME	**Dracevica, Mon**	**1.91**	**331**	*e*Pn	**Pn**	**04 23 40.7**	**+1.1**
DRME	**Dracevica, Mon**	**1.91**	**331**	⇑*i* Pn	**Pn**	**04 23 40.6**	**+1.0**
DRME				*i* Sn	**Sb**	**04 24 05.7**	**-0.1**
EVR	**Evrytania**	**1.92**	**146**	P	**Pb**	**04 23 41.7**	**-0.6**
EVR	**Evrytania**	**1.92**	**146**	P	**Pb**	**04 23 41.8**	**-0.6**
THE	**Thessaloniki**	**1.94**	**86**	P	**Pn**	**04 23 39.8**	**-0.1**
THE	**Thessaloniki**	**1.94**	**86**	P	**Pb**	**04 23 41.9**	**-0.6**
KNT	**Kendrikon**	**1.98**	**70**	P	**Pn**	**04 23 40.1**	**-0.5**
KNT	**Kendrikon**	**1.98**	**70**	P	**Pn**	**04 23 40.1**	**-0.5**
HORT	**Hortiatis**	**2.04**	**87**	P	**Pn**	**04 23 41.0**	**-0.4**
FSK	**Fiskardo**	**2.06**	**177**	P	**Pn**	**04 23 42.0**	**+0.3**
FSK	**Fiskardo**	**2.06**	**177**	P	**Pn**	**04 23 40.7**	**-1.0**
PVO	**Paravola**	**2.08**	**156**	P	**Pb**	**04 23 44.0**	**-1.0**
PVO	**Paravola**	**2.08**	**156**	P	**Pn**	**04 23 43.7**	**+1.7**
AGG	**Agios Georgios**	**2.09**	**135**	P	**Pb**	**04 23 44.1**	**-1.1**
AGG				S	**Sb**	**04 24 11.1**	**0.0**
AGG	**Agios Georgios**	**2.09**	**135**	P	**Pb**	**04 23 44.5**	**-0.7**
PDG	**Podgorica**	**2.10**	**336**	⇓P	**Pn**	**04 23 43.3**	**+1.1**
PDG				⇓S	**Sb**	**04 24 10.3**	**-1.0**
PDG	**Podgorica**	**2.10**	**336**	P	**Pn**	**04 23 43.7**	**+1.4**
PDG				S	**Sb**	**04 24 11.7**	**+0.4**
PDG	**Podgorica**	**2.10**	**336**	P	**Pn**	**04 23 43.7**	**+1.4**
PDG				S	**Sg**	**04 24 14.5**	**-0.5**
PDG	**Podgorica**	**2.10**	**336**	*e*Pn	**Pn**	**04 23 43.6**	**+1.4**
PDG				*e*Sn	**Sb**	**04 24 11.5**	**+0.2**
PDG	**Podgorica**	**2.10**	**336**	*e*Pn	**Pn**	**04 23 43.3**	**+1.1**
PDG	**Podgorica**	**2.10**	**336**	P	**Pn**	**04 23 43.6**	**+1.4**
PDG	**Podgorica**	**2.10**	**336**	⇑*i* Pn	**Pn**	**04 23 43.2**	**+1.0**
PDG				*i* Sn	**Sb**	**04 24 11.5**	**+0.2**
PVY	**Plav**	**2.10**	**350**	⇑*i* Pn	**Pb**	**04 23 44.5**	**-0.9**
PVY				*i* Sn	**Sb**	**04 24 11.0**	**-0.5**
BUM	**Brajici-Budva**	**2.12**	**328**	⇑*i* Pn	**Pn**	**04 23 43.2**	**+0.6**
BUM				*i* Sn	**Sb**	**04 24 11.3**	**-0.7**
PLEV	**Plevrona-Mesol**	**2.24**	**160**	P	**Pn**	**04 23 45.0**	**+0.9**
ANX	**Ano Chora**	**2.24**	**149**	P	**Pn**	**04 23 46.3**	**+2.1**
ANX	**Ano Chora**	**2.24**	**149**	P	**Pn**	**04 23 46.4**	**+2.1**
SOH	**Sokhos**	**2.25**	**81**	P	**Pn**	**04 23 44.9**	**+0.6**
SOH	**Sokhos**	**2.25**	**81**	P	**Pn**	**04 23 45.0**	**+0.8**
PLG	**Polygyros**	**2.31**	**93**	P	**Pn**	**04 23 45.5**	**+0.4**
CEME	**Cevo**	**2.32**	**331**	⇑*i* Pn	**Pn**	**04 23 45.6**	**+0.3**
CEME				*i* Sn	**Sn**	**04 24 15.3**	**+1.6**
VLS	**Valsamata**	**2.34**	**177**	P	**Pn**	**04 23 45.9**	**+0.3**
VLS	**Valsamata**	**2.34**	**177**	P	**Pn**	**04 23 45.5**	**-0.1**
EFP	**Efpalio**	**2.38**	**151**	P	**Pn**	**04 23 48.2**	**+2.1**
EFP	**Efpalio**	**2.38**	**151**	P	**Pn**	**04 23 48.0**	**+1.9**
IVA	**Berane**	**2.38**	**350**	⇑*i* Pn	**Pb**	**04 23 48.6**	**-1.6**
IVA				*i* Sn	**Sn**	**04 24 16.6**	**+1.3**
HCY	**Herceg Novi**	**2.41**	**324**	*e*Pn	**Pn**	**04 23 46.2**	**-0.3**
HCY	**Herceg Novi**	**2.41**	**324**	⇑*i* Pn	**Pn**	**04 23 46.6**	**+0.1**
HCY				*i* Sn	**Sn**	**04 24 17.6**	**+1.7**
KKB	**Krupnik**	**2.43**	**56**	P	**Pn**	**04 23 48.4**	**+1.6**
KKB				S	**Sb**	**04 24 18.8**	**-1.9**
KKB	**Krupnik**	**2.43**	**56**	P	**Pn**	**04 23 48.2**	**+1.4**
AXS	**Araxos**	**2.43**	**162**	P	**Pn**	**04 23 48.4**	**+1.6**
AXS	**Araxos**	**2.43**	**162**	P	**Pn**	**04 23 47.5**	**+0.7**
SERG	**Sergoula**	**2.45**	**149**	P	**Pn**	**04 23 49.0**	**+1.9**
RTZL	**Ratzakli, Kefa**	**2.46**	**174**	P	**Pn**	**04 23 47.4**	**+0.3**
AXAR	**Agios Charalam**	**2.46**	**135**	P	**Pn**	**04 23 48.7**	**+1.5**
NEO	**Neokhori**	**2.47**	**119**	P	**Pn**	**04 23 48.3**	**+1.0**
NEO	**Neokhori**	**2.47**	**119**	P	**Pn**	**04 23 47.3**	**0.0**
SRS	**Serrai**	**2.47**	**75**	P	**Pn**	**04 23 49.0**	**+1.7**
NKME	**Niksic**	**2.50**	**334**	⇑*i* Pn	**Pn**	**04 23 48.7**	**+0.9**
NKME				*i* Sn	**Sb**	**04 24 21.1**	**-1.8**
BOSS	**Bosilegrad**	**2.50**	**37**	*e*Pn	**Pn**	**04 23 48.4**	**+0.6**
KALE	**Kalithea**	**2.50**	**148**	P	**Pn**	**04 23 49.4**	**+1.6**
BARS	**Barje**	**2.52**	**24**	*e*Pn	**Pn**	**04 23 49.9**	**+1.9**
BARS				*e*Sn	**Sn**	**04 24 19.7**	**+1.2**
PAIG	**Paliouri**	**2.56**	**102**	P	**Pn**	**04 23 48.9**	**+0.4**
PAIG	**Paliouri**	**2.56**	**102**	P	**Pn**	**04 23 49.0**	**+0.4**
RLS	**Riolos of Patr**	**2.59**	**162**	P	**Pn**	**04 23 50.8**	**+1.9**
ORTH	**Orthonies,Zaky**	**2.67**	**175**	P	**Pn**	**04 23 50.1**	**0.0**
TREB	**Trebinje**	**2.69**	**325**	*e*Pn	**Pn**	**04 23 50.0**	**-0.4**
ATAL	**Atalanti**	**2.71**	**132**	P	**Pn**	**04 23 51.9**	**+1.2**
MMB	**Musomishta**	**2.71**	**67**	P	**Pn**	**04 23 52.5**	**+1.8**
MMB	**Musomishta**	**2.71**	**67**	P	**Pn**	**04 23 51.2**	**+0.5**
OUR	**Ouranopolis**	**2.72**	**93**	P	**Pn**	**04 23 51.1**	**+0.4**
DRO	**Drossia**	**2.75**	**158**	P	**Pn**	**04 23 53.0**	**+1.8**
SJES	**Sjenica**	**2.76**	**353**	*e*Pn	**Pn**	**04 23 53.7**	**+2.3**
SJES	**Sjenica**	**2.76**	**353**	*e*Pn	**Pn**	**04 23 53.7**	**+2.3**
BRY	**Bratogost**	**2.77**	**330**	*e*Pn	**Pn**	**04 23 52.0**	**+0.4**
BRY	**Bratogost**	**2.77**	**330**	⇑*i* Pn	**Pn**	**04 23 51.8**	**+0.2**
BRY				*i* Sn	**Sn**	**04 24 26.9**	**+2.0**
KLV	**Kalavryta, Ach**	**2.81**	**151**	P	**Pn**	**04 23 54.0**	**+1.9**
LTHK	**Lithakia**	**2.83**	**173**	P	**Pn**	**04 23 52.4**	**+0.2**
MATE	**Matera**	**2.84**	**274**	⇑P	**Pn**	**04 23 52.0**	**-0.3**
MATE				⇓S	**Sn**	**04 24 26.6**	**+0.3**
UPM	**Unac-Piva**	**2.91**	**338**	*e*Pn	**Pn**	**04 23 55.0**	**+1.4**
UPM	**Unac-Piva**	**2.91**	**338**	⇑*i* Pn	**Pn**	**04 23 54.9**	**+1.4**
UPM				*i* Sn	**Sn**	**04 24 29.8**	**+1.3**
PLE	**Pljevlja**	**2.91**	**345**	⇓*i* Pn	**Pn**	**04 23 54.9**	**+1.4**
PLE				*i* Sn	**Sn**	**04 24 29.9**	**+1.5**
VTS	**Vitosha**	**2.97**	**44**	*i* P	**Pn**	**04 23 55.2**	**+0.9**
VTS				S	**Sn**	**04 24 30.1**	**+0.2**
VTS	**Vitosha**	**2.97**	**44**	P	**Pn**	**04 23 55.0**	**+0.7**
GUR	**Goura**	**2.98**	**149**	P	**Pn**	**04 23 56.0**	**+1.6**
AOS	**Alonnisos**	**2.98**	**116**	P	**Pn**	**04 23 54.0**	**-0.3**
PLNA	**Plana**	**2.98**	**48**	P	**Pn**	**04 23 56.4**	**+1.9**
KLINJ	**Klinje**	**2.98**	**333**	*e*Pn	**Pn**	**04 23 55.5**	**+1.0**
GOCS	**Kraljevo Serbi**	**3.06**	**6**	*e*Pn	**Pn**	**04 23 56.6**	**+1.1**
GOCS				*e*Sn	**Sn**	**04 24 32.5**	**+0.5**
IVAS	**Ivanjica**	**3.06**	**356**	*e*Pn	**Pn**	**04 23 56.9**	**+1.4**
STON	**Ston**	**3.11**	**320**	*e*Pn	**Pn**	**04 23 55.9**	**-0.2**
STON				*e*Sn	**Sn**	**04 24 33.0**	**-0.1**
TIP	**Timpagrande**	**3.13**	**246**	⇑P	**Pn**	**04 23 56.2**	**-0.2**
BLSH	**Balsha**	**3.16**	**42**	P	**Pn**	**04 23 58.1**	**+1.2**
BOVS	**Bovan**	**3.25**	**17**	⇑P	**Pn**	**04 24 00.1**	**+2.0**
GRUS	**Gruza**	**3.37**	**4**	*e*Pn	**Pn**	**04 24 01.2**	**+1.5**
BBLS	**Lazi&#263i**	**3.43**	**348**	*e*Pn	**Pn**	**04 24 01.6**	**+1.0**
BBLS				*e*Sn	**Sn**	**04 24 42.1**	**+1.0**
BBLS	**Lazi&#263i**	**3.43**	**348**	*e*Pn	**Pn**	**04 24 01.7**	**+1.1**
RZN	**Rozhen**	**3.46**	**69**	P	**Pn**	**04 24 02.7**	**+1.6**
RZN				S	**Sb**	**04 24 48.0**	**-2.6**
ITM	**Ithomi**	**3.54**	**160**	P	**Pn**	**04 24 04.4**	**+2.5**
MARCO	**Tramutola**	**3.54**	**268**	P	**Pn**	**04 24 02.5**	**+0.5**
ZAGS	**Zajecar**	**3.55**	**22**	*e*Sn	Pn	04 23 55.3	-6.9
ZAGS				*e*Pn	**Sn**	**04 24 42.2**	**-1.8**
DIVS	**Divibare**	**3.59**	**355**	*e*Pn	**Pn**	**04 24 04.1**	**+1.3**
DIVS				*e*Sn	**Sn**	**04 24 43.0**	**-2.1**
PLD	**Plovdiv**	**3.63**	**62**	*e*Pn	**Pn**	**04 24 04.9**	**+1.6**
BORS2	**Bor- Borsko je**	**3.76**	**18**	*e*Pn	**Pn**	**04 24 04.7**	**-0.3**
BORS2				*e*Sn	**Sn**	**04 24 48.5**	**-0.6**
MPEP	**Malo Peshtene**	**3.76**	**40**	P	**Pn**	**04 24 08.3**	**+3.3**
RDO	**Rodhopi**	**3.93**	**79**	P	**Pn**	**04 24 09.0**	**+1.7**
KUBS	**Kucevo**	**4.00**	**13**	*e*Pn	**Pn**	**04 24 07.2**	**-1.1**
KUBS				*e*Sn	**Sn**	**04 24 52.3**	**-2.7**
TEKS	**Tekeris**	**4.08**	**351**	*e*Pn	**Pn**	**04 24 10.0**	**+0.5**
TEKS	**Tekeris**	**4.08**	**351**	*e*Pn	**Pn**	**04 24 10.3**	**+0.8**
CEL	**Celeste**	**4.18**	**239**	P	**Pn**	**04 24 09.2**	**-1.7**
PLVB	**Pleven**	**4.24**	**46**	⇑P	**Pn**	**04 24 13.9**	**+2.3**
MDVR	**Moldovita**	**4.36**	**12**	⇓P	**Pn**	**04 24 14.9**	**+1.5**
HERR	**Herculane**	**4.60**	**18**	⇓P	**Pn**	**04 24 18.9**	**+2.4**
VRSS	**Vrsac**	**4.65**	**8**	*e*Pn	**Pn**	**04 24 17.0**	**-0.2**
VRSS				*e*Sn	**Sn**	**04 25 07.3**	**-3.7**
FRGS	**Fruska Gora**	**4.66**	**355**	*e*Pn	**Pn**	**04 24 18.4**	**+1.0**
BLY	**Banja Luka**	**4.86**	**332**	⇑P	**Pn**	**04 24 21.0**	**+0.9**
BLY	**Banja Luka**	**4.86**	**332**	*e*Pn	**Pn**	**04 24 20.8**	**-1.2**
BLY	**Banja Luka**	**4.86**	**332**	P	**Pn**	**04 24 20.5**	**+0.4**
GZR	**Gura Zlata**	**5.17**	**19**	⇑P	**Pn**	**04 24 26.8**	**+2.4**
BZS	**Buzias**	**5.17**	**9**	⇑P	**Pn**	**04 24 27.1**	**+2.7**
LOT	**Lotru**	**5.50**	**25**	⇓P	**Pn**	**04 24 31.8**	**+2.8**
VAE	**Valguarnera**	**5.58**	**239**	P	Pb	04 24 38.8	-6.0
	13nm,0.5s,baz=54,slow=3.4,SNR=4.0						
AQU	**L'Aquila**	**5.59**	**291**	*e*Pn	**Pn**	**04 24 29.1**	**-1.1**
AQU	**L'Aquila**	**5.59**	**291**	P	**Pn**	**04 24 30.8**	**+0.6**
ARR	**Arges**	**5.74**	**31**	⇓P	**Pn**	**04 24 34.6**	**+2.2**
SIRR	**Siria**	**5.81**	**8**	⇓P	**Pn**	**04 24 35.4**	**+2.1**
MORH	**Mrgy, Hungar**	**5.84**	**348**	⇑P	**Pn**	**04 24 34.5**	**+1.0**
MORH	**Mrgy, Hungar**	**5.84**	**348**	*e*Pn	**Pn**	**04 24 33.6**	**0.0**
VOIR		**5.97**	**33**	⇑P	**Pn**	**04 24 38.3**	**+2.8**
VOIR		**5.97**	**33**	P	**Pn**	**04 24 39.8**	**+4.4**
BOJS	**Bojanci**	**6.26**	**324**	*i* Pn	**Pn**	**04 24 39.2**	**-0.2**
BOJS				*i* Sn	**Sn**	**04 25 47.0**	**-3.7**
IDI	**Anoyia**	**6.30**	**145**	P	**Pn**	**04 24 44.8**	**+4.7**
	2.6nm,0.4s,baz=284,slow=19,SNR=5.6						
IDI				S	**Sn**	**04 25 50.8**	**-1.1**
	4.3nm,0.3s,baz=142,slow=23,SNR=5.6						
MLR	**Muntele Rosu**	**6.40**	**37**	P	**Pn**	**04 24 45.2**	**+3.7**
	1.4nm,0.3s,baz=257,slow=8.8,SNR=8.4						
MLR				S	**Sn**	**04 25 56.2**	**+1.8**
	4.9nm,0.5s						
	5.0nm,0.9s,baz=165,slow=18,SNR=1.5						
MLR	**Muntele Rosu**	**6.40**	**37**	⇑P	**Pn**	**04 24 44.5**	**+3.0**
MLR	**Muntele Rosu**	**6.40**	**37**	P	**Pn**	**04 24 42.0**	**+0.5**
ISR	**Istrita**	**6.43**	**42**	⇑P	**Pn**	**04 24 45.0**	**+3.2**
KNDS	**Knezji Dol**	**6.68**	**320**	*e*Pn	**Pn**	**04 24 44.3**	**-0.9**
KNDS				*e*Sn	**Sn**	**04 25 59.2**	**-2.0**
PLOR	**Plostina**	**7.00**	**38**	⇑P	**Pn**	**04 24 53.0**	**+3.4**
SILT	**Sile**	**7.02**	**82**	⇑P	**Pn**	**04 24 53.2**	**+3.4**
VRI	**Vrincioaia**	**7.05**	**39**	⇑P	**Pn**	**04 24 53.0**	**+2.8**
VRI	**Vrincioaia**	**7.05**	**39**	P	**Pn**	**04 24 53.1**	**+2.8**
MOZS	**Mozjanca**	**7.23**	**325**	*e*Pn	**Pn**	**04 24 52.0**	**-0.7**
SOKA	**Soboth**	**7.29**	**329**	Pn	**Pn**	**04 24 53.5**	**-0.2**
	2.6nm,0.4s,SNR=6.1						
SOKA				*e*Sn	**Sn**	**04 26 14.1**	**-2.2**
	2.2nm,0.6s						
CFR	**Carcaliu**	**7.33**	**48**	⇑P	**Pn**	**04 24 57.2**	**+3.2**
OBKA	**Obir**	**7.35**	**326**	*e*Pn	**Pn**	**04 24 54.3**	**-0.1**
	3.7nm,0.4s						
OBKA				*e*Sn	**Sn**	**04 26 17.7**	**0.0**
	6.4nm,0.5s,SNR=2.7						
OBKA	**Obir**	**7.35**	**326**	P	**Pn**	**04 24 54.9**	**+0.4**
PSZ	**Piszkesteto**	**7.41**	**357**	P	**Pn**	**04 24 58.8**	**+3.6**
GORS	**Gorjuse**	**7.45**	**323**	*i* Pn	**Pn**	**04 24 54.8**	**-1.0**
GORS				*e*Sn	**Sn**	**04 26 16.6**	**-3.5**
DRE	**Drenchia**	**7.51**	**321**	P	**Pn**	**04 24 55.6**	**-0.9**
ARSA	**Arzberg**	**7.60**	**334**	Pn	**Pn**	**04 24 57.7**	**-0.1**
	3.6nm,0.4s,SNR=6.3						
SESA	**Seetaler Alpe,**	**7.83**	**329**	*e*Pn	**Pn**	**04 25 00.8**	**-0.4**
	6.9nm,0.6s						
SESA				*e*Sb	**Sb**	**04 27 00.4**	**+4.1**
	6.6nm,0.4s						
ACOM	**Acomizza, Ital**	**7.84**	**322**	P	**Pn**	**04 25 00.8**	**-0.5**
MYKA	**Terra Mystica**	**7.84**	**323**	*e*Pn	**Pn**	**04 25 00.8**	**-0.4**
	2.0nm,0.7s						
MYKA				*e*Sn	**Sn**	**04 26 26.0**	**-3.8**
	3.1nm,0.4s						
KECS	**Kecovo**	**7.96**	**0**	*e*PN	**Pn**	**04 25 06.2**	**+3.5**
KBA	**Koelnbreinsper**	**8.32**	**324**	*e*Pn	**Pn**	**04 25 07.3**	**-0.4**
	2.4nm,0.5s						
KBA				*e*Sn	**Sn**	**04 26 37.1**	**-4.4**
	5.4nm,1.6s						
KBA	**Koelnbreinsper**	**8.32**	**324**	P	**Pn**	**04 25 08.1**	**+0.3**
ABTA	**Abfaltersbach**	**8.46**	**320**	*e*Pn	**Pn**	**04 25 09.5**	**-0.2**
	1.7nm,0.4s						
ABTA				*e*Sn	**Sn**	**04 26 43.6**	**-1.5**
	6.1nm,0.8s						
KOLS	**Kolonicke sedl**	**8.51**	**8**	*e*PN	**Pn**	**04 25 14.0**	**+3.7**
MOA	**Molln**	**8.56**	**331**	*e*Pn	**Pn**	**04 25 11.2**	**+0.3**
	1.2nm,0.4s						
LESA	**Schwarzleotal**	**8.88**	**324**	*e*Pn	**Pn**	**04 25 15.2**	**-0.2**
	1.7nm,0.4s						
LESA				*e*Sn	**Sn**	**04 26 53.5**	**-1.7**
	2.1nm,0.5s						
WTTA	**Wattenberg**	**9.25**	**320**	*e*Pn	**Pn**	**04 25 20.5**	**-0.1**
	3.4nm,0.5s						
WTTA				*e*Sn	**Sn**	**04 27 02.1**	**-2.5**
	4.8nm,0.6s						
WTTA	**Wattenberg**	**9.25**	**320**	P	**Pn**	**04 25 21.3**	**+0.7**
**WAT

PDGK	**Podgornoye**	**18.07**	**64**	P	**P**	**04 30 27.9**	**+0.8**
BORK	**Borovoye**	**18.12**	**27**	P	**Pn**	**04 30 27.5**	**+0.6**
BORK				IAmb	IAmb	04 30 41.1	
	comp=Z,4.9nm,0.6s						
BVAR	**Borovoye Array**	**18.13**	**27**	P	**Pn**	**04 30 26.8**	**-0.2**
	comp=Z,8.5nm,0.6s,baz=214,slow=10.0,SNR=26						
BRTR	**Keskin Array B**	**18.39**	**284**	P	**Pn**	**04 30 31.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=96,slow=13,SNR=3.2						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**18.39**	**284**	P	**Pn**	**04 30 33.2**	**+2.8**
ARTI	**Arti**	**18.93**	**2**	P	**P**	**04 30 36.9**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=194,slow=8.7,SNR=4.4						
	comp=Z,2.3nm,0.4s						
ARTI	**Arti**	**18.93**	**2**	P	**Pn**	**04 30 37.6**	**+0.7**
ARTI				IAmb	IAmb	04 30 46.6	
	comp=Z,6.9nm,0.6s						
KURK	**Kurchatov**	**20.30**	**42**	P	**P**	**04 30 50.7**	**-0.5**
MAKZ	**Makanchi**	**20.66**	**55**	P	**P**	**04 30 54.3**	**-0.8**
MAKZ				IAmb	IAmb	04 31 06.7	
	comp=Z,4.3nm,1.1s						
MKAR	**Makanchi Array**	**20.86**	**56**	P	Pn	04 30 59.8	0.0
	comp=Z,1.5nm,0.5s,baz=244,slow=10.0,SNR=14						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**20.86**	**56**	P	**P**	**04 30 58.2**	**+0.9**
ELL	**Elmali**	**21.59**	**276**	P	**P**	**04 31 08.6**	**+3.2**
ELL				IAmb	IAmb	04 31 09.4	
	comp=Z,6.4nm,0.8s						
AKASG	**Malin Array Be**	**23.76**	**313**	P	**P**	**04 31 28.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=110,slow=8.9,SNR=2.8						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**23.76**	**313**	P	**P**	**04 31 28.2**	**+0.5**
AKBB	**Malin Array Si**	**23.76**	**313**	P	**P**	**04 31 30.4**	**+2.7**
AKBB				IAmb	IAmb	04 31 38.5	
	comp=Z,16nm,1.4s						
MLR	**Muntele Rosu**	**24.48**	**299**	P	**P**	**04 31 36.5**	**+1.9**
	comp=Z,3.2nm,0.7s,baz=99,slow=9.2,SNR=5.2						
MLR				LR	LR	04 43 46.6	
	comp=Z,95nm,20.0s,baz=196,slow=43						
	comp=Z,3.2nm,0.7s						
MLR	**Muntele Rosu**	**24.48**	**299**	P	**P**	**04 31 36.7**	**+2.1**
MLR				IAmb	IAmb	04 31 38.3	
	comp=Z,4.4nm,0.8s						
ZAA0	**Zalesovo Array**	**25.23**	**40**	P	**P**	**04 31 42.4**	**+1.3**
ZAA0				IAmb	IAmb	04 32 23.4	
	comp=Z,1.9nm,0.8s						
BURAR	**Bucovina Array**	**25.35**	**304**	P	**P**	**04 31 42.7**	**+0.3**
BUR08	**Bucovina Ar. S**	**25.36**	**304**	P	**P**	**04 31 43.5**	**+0.9**
BUR08				IAmb	IAmb	04 32 21.7	
	comp=Z,10.0nm,1.5s						
KEK	**Kerkira**	**29.02**	**286**	P	**P**	**04 32 18.9**	**+3.5**
FINES	**FINESS Array B**	**30.76**	**331**	P	**P**	**04 32 33.7**	**+3.2**
	comp=Z,5.5nm,0.9s,baz=133,slow=8.4,SNR=5.4						
	comp=Z,5.5nm,0.9s						
FINES	**FINESS Array B**	**30.76**	**331**	P	**P**	**04 32 31.0**	**+0.5**
FUORN	**Ofenpass-Fuorn**	**35.43**	**300**	P	**P**	**04 33 12.3**	**+0.6**
FUORN				IAmb	IAmb	04 33 46.4	
	comp=Z,4.4nm,1.2s						
HFS	**Hagfors**	**35.48**	**324**	P	**P**	**04 33 13.3**	**+1.7**
	comp=Z,2.5nm,0.7s,baz=110,slow=12,SNR=4.6						
	comp=Z,2.5nm,0.7s						
NC405	**NORSAR Array S**	**36.72**	**325**	P	**P**	**04 33 23.9**	**+1.6**
NB2	**NORSAR Subarra**	**36.93**	**325**	P	**P**	**04 33 27.5**	**+3.3**
	comp=Z,0.6nm,0.5s,baz=107,slow=8.6						
NOA	**NORSAR Array B**	**36.93**	**325**	P	**P**	**04 33 27.1**	**+2.9**
	comp=Z,0.7nm,0.5s,baz=109,slow=8.4,SNR=4.2						
NOA				LR	LR	04 50 15.0	
	comp=Z,25nm,21.7s,baz=150,slow=39						
	comp=Z,0.7nm,0.5s						
KONO	**Kongsberg**	**37.30**	**322**	P	**P**	**04 33 28.4**	**+1.2**
MBAR	**Mbarara**	**45.01**	**219**	LR	LR	04 54 19.9	
	comp=Z,70nm,22.0s,baz=40,slow=37						
PAB	**San Pablo**	**47.22**	**292**	P	**P**	**04 34 50.5**	**+2.1**

*IDC **01** 04:42:58.1±42.0, 36.69N×72.20E, h177km±137km, mb3.6/3, mbtmp4.1/5, ML3.7/2, Error ellipse: s-maj=545.8km s-min=55.7km az=165.0*
*NEIC **01** 04:43:04.2±0.8, 37.30N±0.03×71.9E±0.1, h199km±7km, mb4.3/6, Error ellipse: s-maj=12.3km s-min=3.2km az=71.0*
*NNC **01** 04:43:08.1±4.4, 37.57N×71.63E, h164km±67km, mb2.7, mpv3.4, Error ellipse: s-maj=45.8km s-min=28.2km az=19.0*

ISC 01 04:43:03.4±0.7, 37°24N±0.06×71°99E±0.07, h200km, n35, σ1§72/41, mb4.2/5, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**0.39**	**321**		**Pn**	**04 43 31.0**	**+0.6**
GAR	**Garm**	**2.20**	**324**	Pn	**Pn**	**04 43 43.9**	**-0.1**
DRK	**Karamyk**	**2.25**	**356**		**Pn**	**04 43 45.3**	**+0.6**
CHGR	**Chuyangaron**	**2.65**	**303**		**Pn**	**04 43 48.7**	**-0.3**
SHAA	**Shahritus**	**3.09**	**277**		**Pn**	**04 43 53.6**	**-0.6**
KBL	**Kabul**	**3.60**	**222**	Pn	**Pn**	**04 44 00.9**	**+0.5**
NIL	**Nilore**	**3.73**	**164**	Pn	**Pn**	**04 44 04.0**	**+2.1**
ARSB	**Arslanbob**	**4.15**	**10**		**Pn**	**04 44 06.9**	**-0.3**
JMU	**Jammu**	**5.02**	**151**	*e*S	**Sn**	**04 45 14.8**	**-2.1**
TSSA	**Tissa**	**5.56**	**141**	*e*P	**Pn**	**04 44 26.1**	**+0.8**
TSSA				*e*S	**Sn**	**04 45 26.5**	**-3.3**
TSSA				IAML		04 45 29.9	
	comp=E,128nm,0.3s						
TSSA				IAML		04 45 41.6	
	comp=E,162nm,0.3s						
THN	**Thein Dam**	**5.70**	**146**	*e*P	**Pn**	**04 44 27.4**	**+0.6**
THN				*e*S	**Sn**	**04 45 30.8**	**-2.0**
THN				IAML		04 45 33.2	
	comp=E,156nm,0.8s						
THN				IAML		04 45 45.4	
	comp=E,247nm,0.4s						
AAK	**Ala-Archa**	**5.73**	**19**	P	**Pn**	**04 44 27.8**	**+0.6**
	comp=E,2.8nm,0.3s,baz=189,slow=14,SNR=15						
	comp=E,7.6nm,0.4s						
AAK	**Ala-Archa**	**5.73**	**19**	⇓P	**Pn**	**04 44 27.9**	**+0.7**
	comp=E,2.6nm,0.5s						
AAK				⇓S	**Sn**	**04 45 32.4**	**-1.1**
	comp=E,9.5nm,0.6s						
KK31	**Karatay Array**	**5.97**	**350**		**Pn**	**04 44 29.8**	**-0.3**
KK31	**Karatay Array**	**5.97**	**350**	P	**Pn**	**04 44 30.0**	**-0.1**
	comp=E,1.2nm,0.2s,baz=158,slow=11,SNR=24						
KK31				⇑S	**Sn**	**04 45 33.5**	**-5.4**
	comp=E,8.9nm,0.2s,baz=160,slow=16,SNR=25						
KKAR	**Karatay Array**	**5.97**	**350**		**Pn**	**04 44 29.2**	**-0.9**
BOOM	**Boomskoye usch**	**6.06**	**29**	Pn	**Pn**	**04 44 32.1**	**+0.5**
HNLY	**HANLEY**	**7.25**	**126**	*e*P	**Pn**	**04 44 48.5**	**+1.0**
HNLY				*e*S	**Sn**	**04 46 06.5**	**-3.5**
HNLY				IAML		04 46 11.3	
	comp=N,6.2nm,0.6s						
HNLY				IAML		04 46 11.9	
	comp=E,8.8nm,1.1s						
KLP	**Kalpa**	**7.69**	**136**	*e*P	**Pn**	**04 44 55.3**	**+2.4**
KLP				*e*S	**Sn**	**04 46 15.4**	**-4.6**
KLP				IAML		04 46 19.9	
	comp=N,49nm,0.6s						
KLP				IAML		04 46 20.0	
	comp=E,88nm,0.5s						
AB31	**Akbulak array**	**14.85**	**328**		**Pn**	**04 46 23.8**	**+0.3**
AB31	**Akbulak array**	**14.85**	**328**	⇑P	**P**	**04 46 25.3**	**+0.9**
	comp=E,0.3nm,0.4s,baz=143,slow=10,SNR=14						
ABKAR	**Akbulak array**	**14.85**	**328**		**Pn**	**04 46 23.0**	**-0.6**
EVN	**Everest**	**15.54**	**122**	P	**P**	**04 46 34.7**	**+1.8**
EVN				IAmb	IAmb	04 46 38.5	
	comp=Z,7.0nm,1.2s						
AKTO	**Aktyubinsk**	**16.56**	**327**	⇓P	**Pn**	**04 46 44.7**	**+0.5**
	comp=Z,2.6nm,0.6s						
ZAA0	**Zalesovo Array**	**18.92**	**24**	P	**P**	**04 47 10.0**	**+1.1**
ZALV	**Zalesovo Beam**	**18.92**	**24**	P	**P**	**04 47 09.9**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=220,slow=12,SNR=8.7						
	comp=Z,1.9nm,0.4s						
ZALV	**Zalesovo Beam**	**18.92**	**24**	P	**P**	**04 47 08.9**	**0.0**
ENH	**Enshi**	**31.79**	**91**	P	**P**	**04 49 09.8**	**+0.7**
ENH				IAmb	IAmb	04 49 39.3	
	comp=Z,9.2nm,0.4s						
ELL	**Elmali**	**33.41**	**282**	P	**P**	**04 49 22.5**	**-0.7**
ELL				IAmb	IAmb	04 50 01.7	
	comp=Z,6.1nm,1.0s						
FINES	**FINESS Array B**	**37.32**	**325**	P	**P**	**04 49 57.7**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=107,slow=8.7,SNR=1.5						
	comp=Z,1.8nm,0.8s						
FINES	**FINESS Array B**	**37.32**	**325**	P	**P**	**04 49 56.9**	**+0.9**
KEV	**Kevo**	**40.42**	**338**	P	**P**	**04 50 21.4**	**-0.1**
ARCES	**ARCESS Array B**	**40.77**	**337**	P	**P**	**04 50 25.8**	**+1.3**
	comp=Z,5.2nm,1.1s,baz=118,slow=8.3,SNR=3.6						
	comp=Z,5.2nm,1.1s						
ARCES	**ARCESS Array B**	**40.77**	**337**	P	**P**	**04 50 24.5**	**-0.1**
ARCES				IAmb	IAmb	04 50 28.1	
	comp=Z,17nm,1.4s						
HFS	**Hagfors**	**42.98**	**321**	P	**P**	**04 50 43.4**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=103,slow=6.5,SNR=5.7						
	comp=Z,1.5nm,0.5s						

*NNC **01** 05:00:26.9±1.4, 40.83N×79.67E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=11.6km s-min=9.1km az=78.0*

SOME 01 05:00:26.1, 40.82N×79.67E, h5km, 1C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**2.34**	**356**	Pg	Pb	05 01 09.8	+0.9
	14nm,0.3s						
SHLS				Lg	Lg	05 01 41.2	
	29nm,0.3s						
SHLS	**Shalkode**	**2.34**	**356**	*e*P	Pb	05 01 09.8	+0.9
	14nm,0.3s						
SHLS				*e*S	Sg	05 01 41.2	-0.1
	29nm,0.3s						
UZB	**Uzynbulak**	**2.38**	**349**	Pg	Pb	05 01 10.2	+0.7
	7.3nm,0.4s						
UZB				Lg	Lg	05 01 42.3	
	7.2nm,0.5s						
UZB	**Uzynbulak**	**2.38**	**349**	*e*P	Pb	05 01 10.2	+0.7
	7.3nm,0.4s						
UZB				*e*S	Sg	05 01 42.3	-0.2
	7.2nm,0.5s						
SATY	**Saty**	**2.43**	**338**	Pg	Pb	05 01 11.1	+0.7
	4.2nm,0.8s						
SATY				Lg	Lg	05 01 43.6	
	21nm,0.5s						
SATY	**Saty**	**2.43**	**338**	*e*P	Pb	05 01 11.1	+0.7
	4.2nm,0.8s						
SATY				*e*S	Sg	05 01 43.6	-0.5
	21nm,0.5s						
PDGK	**Podgornoye**	**2.51**	**357**	⇓Pg	Pb	05 01 11.4	-0.4
	3.8nm,0.3s						
PDGK				⇑Lg	Lg	05 01 46.1	
	20nm,0.8s						
KPKS	**Kokpek**	**2.75**	**345**	Pg	Pb	05 01 16.9	+1.2
KPKS				Lg	Lg	05 01 53.6	
KPKS	**Kokpek**	**2.75**	**345**	*e*P	Pb	05 01 16.9	+1.2
	6.9nm,0.3s						
KPKS				*e*S	Sg	05 01 53.6	-0.7
	24nm,0.4s						
KURS	**Kuram**	**2.89**	**338**	Pg	Pg	05 01 20.1	-1.4
	3.6nm,0.8s						
KURS				Lg	Lg	05 01 58.8	
	7.1nm,0.7s						
KURS	**Kuram**	**2.89**	**338**	*e*P	Pg	05 01 20.1	-1.4
	3.6nm,0.8s						
KURS				*e*S	Sg	05 01 58.8	-0.2
	7.1nm,0.7s						
KOTS	**Kotyrbulak**	**3.08**	**323**	*e*P	Pb	05 01 22.7	+1.4
	6.1nm,0.2s						
KOTS				*e*S	Sg	05 02 03.2	-1.6
	17nm,0.4s						
KTBS	**Karatobe**	**3.64**	**324**	Pg	Pb	05 01 32.9	+1.9
	0.4nm,0.1s						
KTBS				Lg	Lg	05 02 21.1	
	4.6nm,0.8s						
KTBS	**Karatobe**	**3.64**	**324**	*e*P	Pb	05 01 32.9	+1.9
	0.4nm,0.1s						
KTBS				*e*S	Sg	05 02 21.1	-2.0
	4.6nm,0.8s						

*IDC **01** 05:16:25.9±1.8, 33.65N×46.86E, h0km, mb3.7/9, mbtmp3.8/12, ML3.7/3, MS2.9/6, Error ellipse: s-maj=33.3km s-min=21.6km az=25.0*
*TEH **01** 05:16:28.6, 34.04N×47.17E, h6km±27km, ML3.9, Presumed earthquake*
*ISN **01** 05:16:29.8±2.6, 34.10N×46.97E, h18km±24km, ML3.9, Presumed earthquake*

ISC 01 05:16:30.0±0.6, 34.03N±0.04×47.02E±0.04, h12km, n37, σ1§52/37, mb3.6/9, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCHF	**Cheshme Sefid,**	**0.24**	**3**	Pg	**Pg**	**05 16 35.4**	**+0.2**
KCHF				Sg	**Sg**	**05 16 40.2**	**+1.5**
IGHG	**Ghaleghazi**	**0.48**	**308**	Pg	**Pb**	**05 16 41.1**	**+0.5**
ILBA	**Ilam Banvizeh**	**0.79**	**239**	Pg	**Pn**	**05 16 46.9**	**-0.2**
IBZA	**Bozab**	**0.82**	**58**	Pg	**Pg**	**05 16 43.4**	**-2.5**
IDHR	**Dehrash**	**0.85**	**322**	Pg	**Pn**	**05 16 47.2**	**-0.8**
SNQR	**Sonqor, Kerman**	**0.96**	**31**	Pg	**Pg**	**05 16 47.0**	**-1.6**
IDOB	**Doab**	**0.99**	**104**	Pg	**Pg**	**05 16 46.6**	**-2.5**
SNJK	**Sanadaj _Korde**	**1.39**	**2**	Pg	**Pb**	**05 16 55.9**	**-0.2**
BHD	**Baghdad**	**2.33**	**252**	*e*Pg	**Pn**	**05 17 09.0**	**+0.8**
	baz=68						
BHD				*e*Sg	**Sb**	**05 17 42.0**	**+1.2**
BHD				AML	AML	05 17 58.3	
	comp=E,421nm,0.6s						
RAFI	**Al-Rafai**	**2.43**	**199**	*e*Pn	**Pn**	**05 17 11.0**	**+1.5**
RAFI				*e*Sn	**Sb**	**05 17 42.0**	**-1.5**
RAFI				AML	AML	05 17 57.7	
	comp=N,315nm,0.5s						
RAFI				AML	AML	05 18 04.5	
	comp=E,449nm,0.4s						
AMIS	**Naft Sefid**	**3.03**	**141**	Pn	**Pn**	**05 17 18.7**	**+0.8**
IQOM	**Qom**	**3.44**	**75**	Pn	**Pn**	**05 17 24.3**	**+0.6**
IPIR	**Pirpir**	**3.50**	**112**	Pn	**Pn**	**05 17 25.3**	**+0.7**
JHBN	**Jahan bin**	**3.54**	**119**	Pn	**Pn**	**05 17 25.8**	**+0.6**
KRSH	**Karshahi**	**4.25**	**89**	Pn	**Pn**	**05 17 35.4**	**+0.8**
IDMV	**Damavand**	**4.40**	**68**	Pn	**Pn**	**05 17 38.2**	**+1.3**
MZPU	**Pul - Mazandar**	**4.43**	**56**	Pn	**Pn**	**05 17 37.6**	**+0.5**
IGAR	**Gharneh**	**4.51**	**110**	Pn	**Pn**	**05 17 38.5**	**+0.2**
KLNJ	**Kolanjah**	**4.90**	**127**	Pn	**Pn**	**05 17 44.5**	**+0.7**
ANAR	**Anarak**	**5.66**	**97**	Pn	**Pn**	**05 17 55.1**	**+1.0**
GNI	**Garni**	**6.37**	**344**	Pg	**Pg**	**05 18 27.3**	**-4.7**
	comp=E,0.6nm,0.3s,baz=140,slow=17,SNR=1.1						
GNI				Lg	Lg	05 19 58.4	
	comp=E,1.0nm,0.3s,baz=96,slow=24,SNR=1.2						
GNI				LR	LR	05 21 05.2	
	comp=E,76nm,20.0s,baz=188,slow=42						
DSBU	**Dashti - Bushe**	**6.72**	**146**	Pn	**Pn**	**05 18 09.6**	**+1.1**
ASF	**Jabal al Asfar**	**8.70**	**260**	Lg	Lg	05 20 57.3	
	comp=E,0.2nm,0.3s,baz=272,slow=20,SNR=1.2						
ASF				LR	LR	05 23 05.7	
	comp=E,70nm,18.0s,baz=20,slow=47						
KBZ	**Khabaz**	**10.20**	**343**	LR	LR	05 24 01.4	
	comp=E,36nm,21.4s,baz=136,slow=43						
EIL	**Elat**	**11.15**	**250**	LR	LR	05 23 28.6	
	comp=E,65nm,19.5s,baz=92,slow=39						
BRTR	**Keskin Array B**	**12.12**	**302**	Pn	**Pn**	**05 19 23.2**	**+0.5**
	comp=E,0.3nm,0.3s,baz=125,slow=15,SNR=3.3						
	comp=E,0.6nm,0.2s						
AKTO	**Aktyubinsk**	**18.26**	**23**	P	**P**	**05 20 45.8**	**+2.5**
	comp=E,0.1nm,0.3s,baz=205,slow=16,SNR=1.6						
AKTO				LR	LR	05 30 19.0	
	comp=E,52nm,18.6s,baz=52,slow=45						
	comp=E,1.8nm,0.8s						
BELG	**Belogornoye**	**18.36**	**1**	P	**P**	**05 20 46.0**	**+1.7**
	comp=E,0.7nm,0.3s,baz=124,slow=8.0,SNR=3.9						
BELG				LR	LR	05 30 17.4	
	comp=E,51nm,20.1s,baz=103,slow=44						
	comp=E,4.3nm,0.5s						
AKASG	**Malin Array Be**	**21.13**	**327**	P	**P**	**05 21 14.4**	**-0.1**
	comp=E,0.3nm,0.3s,baz=128,slow=12,SNR=4.5						
	comp=E,0.3nm,0.3s						
BVAR	**Borovoye Array**	**25.25**	**34**	P	**P**	**05 21 55.0**	**-0.7**
	comp=E,0.4nm,0.4s,baz=232,slow=7.3,SNR=6.0						
	comp=E,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**28.30**	**45**	P	**P**	**05 22 25.4**	**+2.1**
	comp=E,0.6nm,0.6s,baz=245,slow=9.2,SNR=4.0						
	comp=E,0.6nm,0.6s						
MKAR	**Makanchi Array**	**29.47**	**54**	P	**P**	**05 22 35.2**	**+1.5**
	comp=E,1.0nm,0.7s,baz=252,slow=8.6,SNR=8.6						
	comp=E,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**33.15**	**41**	P	**P**	**05 23 06.5**	**+0.6**
	comp=E,0.5nm,0.5s,baz=257,slow=10,SNR=1.7						
	comp=E,0.5nm,0.5s						
HFS	**Hagfors**	**33.94**	**330**	P	**P**	**05 23 13.5**	**+0.7**
	comp=E,2.1nm,0.7s,baz=128,slow=9.3,SNR=2.1						
	comp=E,2.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**40.44**	**317**	P	**P**	**05 24 08.3**	**+0.2**
	comp=E,0.3nm,0.5s,baz=96,slow=8.4,SNR=2.1						
	comp=E,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**82.67**	**352**	P	**P**	**05 28 52.3**	**-0.8**
	comp=E,0.4nm,0.9s,baz=16,slow=4.4,SNR=4.4						
	comp=E,0.4nm,0.9s						
WRA	**Warramunga Arr**	**98.76**	**108**	P	**P**	**05 30 07.4**	**-2.5**
	comp=E,0.5nm,1.0s,baz=318,slow=4.2,SNR=1.7						
	comp=E,0.5nm,1.0s						

*IDC **01** 05:18:37.8±1.5, 6.47S×11.31W, h0km, mb4.0/12, mbtmp4.0/12, MS3.6/29, Error ellipse: s-maj=75.8km s-min=27.2km az=99.0*

ISC 01 05:18:40.3±1.2, 6.4S±0.2×11.3W±0.5, h11km, n55, σ0§80/25, mb4.4/23, MS3.6/28, 3C, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**3.46**	**245**	T	T	05 23 05.3	
	baz=66,slow=74,SNR=2903						
H10N1	**ASCENSION HYDR**	**3.46**	**245**	T	T	05 23 05.5	
	baz=66,slow=74,SNR=3503						
H10N3	**ASCENSION HYDR**	**3.48**	**245**	T	T	05 23 06.7	
	baz=66,slow=74,SNR=3088						
H10S2	**ASCENSION HYDR**	**4.18**	**232**	T	T	05 23 59.6	
	baz=166,slow=74,SNR=572						
H10S3	**ASCENSION HYDR**	**4.20**	**232**	T	T	05 24 00.4	
	baz=54,slow=74,SNR=502						
DBIC	**Dimbokro**	**14.47**	**27**	LR	LR	05 26 29.8	
	comp=Z,154nm,19.8s,baz=173,slow=32						
TORD	**Torodi Ar. Bea**	**23.30**	**34**	P	**P**	**05 23 47.4**	**-1.1**
	8.6nm,1.1s,baz=216,slow=5.1,SNR=18						
	8.6nm,1.1s						
RCBR	**Riachuelo**	**24.45**	**270**	LR	LR	05 31 30.5	
	comp=Z,72nm,19.7s,baz=71,slow=32						
TSUM	**Tsumeb**	**30.87**	**117**	LR	LR	05 34 33.4	
	comp=Z,163nm,21.5s,baz=323,slow=31						
BDFB	**Brasília**	**37.13**	**253**	LR	LR	05 38 19.2	
	comp=Z,91nm,19.6s,baz=98,slow=32						
MDT	**Midelt**	**39.48**	**9**	P	**P**	**05 26 11.1**	**0.0**
	1.6nm,0.8s,baz=190,slow=7.7,SNR=3.6						
MDT				LR	LR	05 41 44.5	
	comp=Z,86nm,20.6s,baz=180,slow=35						
	1.6nm,0.8s						
SUR	**Sutherland**	**39.57**	**135**	LR	LR	05 39 16.2	
	comp=Z,80nm,21.6s,baz=333,slow=31						
LSZ	**Lusaka**	**39.74**	**106**	LR	LR	05 39 52.9	
	comp=Z,100nm,19.3s,baz=164,slow=32						
LBTB	**Lobatse**	**39.89**	**122**	LR	LR	05 41 30.4	
	comp=Z,72nm,18.2s,baz=332,slow=34						
MATP	**Matopo**	**41.04**	**114**	LR	LR	05 41 40.0	
	comp=Z,94nm,18.9s,baz=314,slow=34						
MBAR	**Mbarara**	**42.35**	**84**	LR	LR	05 42 50.0	
	comp=Z,234nm,18.8s,baz=255,slow=34						
MDP	**Montagnes des**	**42.80**	**285**	LR	LR	05 42 50.5	
	comp=Z,49nm,18.7s,baz=58,slow=34						
KEST	**Kesra**	**46.16**	**23**	P	**P**	**05 27 06.0**	**+0.8**
	2.4nm,0.9s,baz=207,slow=7.6,SNR=3.9						
KEST				LR	LR	05 46 28.3	
	comp=Z,128nm,19.8s,baz=280,slow=36						
	2.4nm,0.9s						
ESDC	**Sonseca Array**	**46.31**	**8**	P	**P**	**05 27 06.7**	**+0.4**
	1.2nm,1.0s,baz=192,slow=9.5,SNR=6.9						
	1.2nm,1.0s						
CPUP	**Villa Florida**	**48.08**	**240**	LR	LR	05 45 19.1	
	comp=Z,83nm,20.6s,baz=76,slow=33						
KMBO	**Kilima Mbogo**	**48.72**	**86**	LR	LR	05 47 18.2	
	comp=Z,66nm,18.6s,baz=278,slow=35						
SIV	**San Ignacio**	**49.63**	**254**	LR	LR	05 47 58.1	
	comp=Z,104nm,18.4s,baz=110,slow=36						
VAE	**Valguarnera**	**49.79**	**27**	LR	LR	05 49 12.1	
	comp=Z,120nm,18.6s,baz=138,slow=37						
IDI	**Amoyia**	**53.65**	**37**	LR	LR	05 53 19.0	
	comp=Z,50nm,18.4s,baz=134,slow=39						
DAVOX	**Davos/Dischmat**	**56.16**	**17**	LR	LR	05 53 40.3	
	comp=Z,58nm,18.7s,baz=212,slow=37						
LPAZ	**La Paz**	**56.41**	**255**	LR	LR	05 52 01.7	
	comp=Z,66nm,19.6s,baz=72,slow=36						
DAVA	**Damuels**	**56.62**	**17**	*e*P	**P**	**05 28 23.7**	**+0.2**
	comp=Z,8.1nm,1.1s						
FETA	**Feichten**	**56.63**	**18**	*e*P	**P**	**05 28 24.1**	**+0.4**
	comp=Z,3.6nm,0.7s						
SQTA	**Sankt Quirin**	**56.96**	**18**	*e*P	**P**	**05 28 26.5**	**+0.6**
	comp=Z,11nm,1.1s						
MOTA	**Moosalm**	**57.04**	**18**	*e*P	**P**	**05 28 26.3**	**-0.2**
	comp=Z,5.5nm,0.8s						
EIL	**Elat**	**57.06**	**49**	LR	LR	05 53 48.8	
	comp=Z,82nm,19.1s,baz=259,slow=37						
RETA	**Reutte**	**57.06**	**18**	*e*P	**P**	**05 28 26.5**	**-0.1**
	comp=Z,2.8nm,0.6s						
WTTA	**Wettenberg**	**57.13**	**18**	*e*P	**P**	**05 28 27.7**	**+0.5**
	comp=Z,11nm,1.2s						
KBA	**Koelnbreinsper**	**57.52**	**20**	*e*P	**P**	**05 28 30.0**	**+0.1**
	comp=Z,3.5nm,1.3s						
SESA	**Seetaler Alpe,**	**57.97**	**21**	*e*P	**P**	**05 28 34.3**	**+1.1**
	comp=Z,13nm,1.4s						
RONA	**Rosalia, Austr**	**59.09**	**21**	*e*P	**P**	**05 28 42.5**	**+1.7**
	comp=Z,7.8nm,1.4s						
CONA	**Conrad Observa**	**59.13**	**21**	*e*P	**P**	**05 28 42.5**	**+1.4**
	comp=Z,8.1nm,1.7s						
GERES	**GERESS Array B**	**59.18**	**19**	P	**P**	**05 28 41.2**	**-0.2**
	1.5nm,0.7s,baz=198,slow=7.0,SNR=13						
GERES				LR	LR	05 55 11.2

GERES	**GERESS Array B**	59.40	19	P		P	05 30 46.9	-0.5	
	1.2nm,0.7s,baz=205,slow=5.7,SNR=6.6								
	1.2nm,0.7s								
BRTR	**Keskin Array B**	61.95	38	P		P	05 31 05.8	+0.8	
	0.3nm,0.3s,baz=236,slow=8.2,SNR=2.3								
	0.3nm,0.3s								
FINES	**FINESS Array B**	73.80	18	P		P	05 32 18.6	-0.4	
	2.5nm,0.8s,baz=215,slow=6.0,SNR=3.3								
	2.5nm,0.8s								

*SSNC **01** 05:27:35.5±1.2, 19.78N×75.99W, h7km±8km, MD3.7, ML3.2, MW3.3, Presumed earthquake*
*JSN **01** 05:27:37.0±1.3, 19.73N×75.99W, h29km±27km, MD4.3, Presumed earthquake*
ISC 01 05:27:32.1±1.1, **19.76N**±0.03×**75.98W**±0.03, **h16**km±10km, **n22**, σ1§17/38, **1C-5D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
MARVS	**Santiago de Cu**	0.25	17	eP		Pn	05 27 40.0	-1.2
MARVS				eS		Sb	05 27 42.9	+0.4
MARVS				IAML			05 27 43.1	
	comp=N,7μm,0.1s							
MARVS				IAML			05 27 43.2	
	comp=E,19μm,0.2s							
RCC	**Rio Carpintero**	0.35	48	eP		Pn	05 27 42.1	-0.5
RCC				eS		Sb	05 27 46.7	+1.3
RCC				IAML			05 27 47.1	
	comp=E,1μm,0.2s							
RCC				IAML			05 27 47.8	
	comp=N,1μm,0.2s							
CHIV	**Chivirico**	0.47	298	eP		Pn	05 27 43.9	-0.2
CHIV				eS		Sb	05 27 49.7	+1.1
YAR	**Yar**	0.71	330	eP		Pn	05 27 47.2	-0.2
YAR				eS		Sg	05 27 55.0	-0.4
YAR				IAML			05 27 56.1	
	comp=E,736nm,0.3s							
YAR				IAML			05 27 56.3	
	comp=N,581nm,0.1s							
GTBY	**Guantanamo Bay**	0.83	78	iP		Pn	05 27 51.3	+2.2
LMGC	**Las Mercedes**	1.01	288	eP		Pg	05 27 52.8	+1.1
HLGC	**Holguin**	1.13	356	eP		Pg	05 27 55.1	+1.1
QMBU	**Quimbuelo**	1.18	68	eP		Pg	05 27 55.4	+0.2
QMBU				eS		Sg	05 28 10.9	+0.5
QMBU				IAML			05 28 13.5	
	comp=E,931nm,0.1s							
QMBU				IAML			05 28 14.0	
	comp=N,1μm,0.3s							
NMDO	**Nuevo Mundo**	1.23	49	eP		Pg	05 27 55.5	-0.4
MOAC	**Moa**	1.31	47	eP		Pb	05 27 56.7	+0.4
MOAC				eS		Sg	05 28 14.1	-0.5
MASC	**Masc**	1.69	76	eP		Pb	05 28 02.9	0.0
MASC				eS		Sb	05 28 24.4	+0.5
BNJ	**Bonny Gate**	1.70	213	⇓iP		Pg	05 28 03.8	-1.0
BNJ				iS		Sb	05 28 24.0	-0.2
GWJ	**Greenwich**	1.82	203	⇓iP		Pg	05 28 05.3	+0.3
GWJ				iP		Pb	05 28 05.4	+0.3
STH	**Stony Hill**	1.85	205	⇓iP		Pb	05 28 05.7	+0.2
STH				⇓iP		Pb	05 28 05.7	+0.2
STH				iS		Sn	05 28 26.2	0.0
STH				iS		Sb	05 28 26.8	-1.6
STH	**Stony Hill**	1.85	205	iP		Pb	05 28 05.5	0.0
STH				eS		Sn	05 28 25.3	-0.9
STH				eSg		Sb	05 28 28.6	+0.2
HOJ	**Hope**	1.89	203	iP		Pb	05 28 06.9	+0.7
CVJ	**Coleyville**	2.12	224	⇑iP		Pb	05 28 09.3	-0.9
CVJ				iS		Sn	05 28 33.4	+0.4
MTDJ	**Mount Denham**	2.12	224	eP		Pb	05 28 09.1	-1.1
CCCC	**Cccc**	2.21	311	eP		Pn	05 28 06.3	-1.7
PCJ	**Portland Cotta**	2.29	209	⇓iP		Pb	05 28 12.4	-0.7
MCJ	**Malvern**	2.44	222	iP		Pn	05 28 14.8	+3.5
MCJ				iP		Pb	05 28 14.4	-1.2
LGNH	**Logne**	3.42	111	eP		Pb	05 28 29.4	-3.0

*MDD **01** 05:33:55.6±0.6, 27.59N×17.97W, h23km±4km, mb_Lg3.9/39, Error ellipse: s-maj=5.2km s-min=3.3km az=31.0*
*INMG **01** 05:33:55.9±1.4, 27.54N×18.05W, h24km±3km, ML3.0, Error ellipse: s-maj=3.0km s-min=2.9km az=58.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canary Islands, Spain Region*
*CNRM **01** 05:33:58.8, 28.43N×17.66W, h19km, ML3.9*
ISC 01 05:33:53.5±1.1, **27.68N**±0.09×**17.93W**±0.07, **h35**km±5km, **n57**, σ1§56/106, **8C-14D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
CNAO	**La Restinga, E**	0.06	239	P		Pb	05 33 59.7	+0.3
CNAO				S		Sb	05 34 03.0	-0.3
CNAO				iVmb_Lg			05 34 03.3	
CTAC	**Tacoron (Front**	0.08	268	⇑P		Pb	05 33 59.7	+0.3
CTAC				S		Sb	05 34 03.0	-0.5
CTAC				iVmb_Lg			05 34 03.3	
CMCL	**Mercadel, El H**	0.09	294	P		Pb	05 34 00.1	+0.5
CMCL				S		Sb	05 34 03.5	-0.3
CMCL				iVmb_Lg			05 34 04.3	
CCUM	**Cumbre, El Hie**	0.11	308	P		Pb	05 34 00.9	+0.4
CCUM				S		Sb	05 34 03.4	-0.4
CCUM				iVmb_Lg			05 34 04.1	
CTIG	**El Hierro**	0.11	4	P		Pb	05 34 00.7	+1.1
CTIG				S		Sb	05 34 04.6	+0.8
CTIG				iVmb_Lg			05 34 06.0	
CTAN	**El Hierro**	0.13	305	⇓P		Pb	05 33 59.9	+0.2
CTAN				S		Sb	05 34 03.4	-0.6
CTAN				iVmb_Lg			05 34 05.4	
CJUL	**El Julan, El H**	0.14	291	⇓P		Pb	05 34 00.0	+0.1
CJUL				S		Sb	05 34 03.6	-0.8
CJUL				iVmb_Lg			05 34 04.3	
CTAD	**Las Tabladas,**	0.15	298	⇓P		Pb	05 33 59.9	+0.1
CTAD				S		Sb	05 34 03.4	-0.9
CTAD				iVmb_Lg			05 34 04.0	
CCAL	**Punta Orchilla**	0.19	280	⇓P		Pb	05 34 00.2	0.0
CCAL				S		Sb	05 34 03.4	-1.4
CCAL				iVmb_Lg			05 34 04.6	
CTEN	**Fuencaliente,**	0.81	6	P		Pn	05 34 10.0	+1.6
CTEN				S		Sn	05 34 21.2	+2.0
CTEN				iVmb_Lg			05 34 23.6	
EHIG	**Higuera**	0.88	7	⇑P		Pn	05 34 11.1	+1.6
EHIG				S		Sn	05 34 23.2	+2.0
EHIG				iVmb_Lg			05 34 24.4	
CJED	**Jedey, El Paso**	0.90	3	⇑P		Pn	05 34 11.3	+1.5
CJED				S		Sn	05 34 23.9	+2.3
CJED				iVmb_Lg			05 34 25.8	
CVIE	**Villa de Mazo,**	0.92	6	⇑P		Pn	05 34 11.4	+1.4
CVIE				S		Sn	05 34 24.2	+2.0
CENR	**El Paso, La Pa**	0.95	5	S		Sn	05 34 23.9	+1.1
CENR				iVmb_Lg			05 34 28.9	
CBRE	**Brena Baja,La**	0.95	7	⇑P		Pn	05 34 12.0	+1.5
CBRE				S		Sn	05 34 25.1	+2.2
CBRE				iVmb_Lg			05 34 27.1	
TBT	**Taburiente**	1.00	1	⇑P		Pn	05 34 11.9	+0.8
TBT				S		Sn	05 34 24.5	+0.6
TBT				iVmb_Lg			05 34 26.7	
CMIR	**El Paso, La Pa**	1.02	3	⇑P		Pn	05 34 12.1	+0.7
CMIR				S		Sn	05 34 25.2	+0.6
CMIR				iVmb_Lg			05 34 27.1	
CPUN	**Puntallana, La**	1.06	8	⇑P		Pn	05 34 13.5	+1.5
CPUN				S		Sn	05 34 26.4	+0.8
CPUN				iVmb_Lg			05 34 29.7	
CROM	**Garafia, La Pa**	1.08	2	P		Pn	05 34 13.2	+0.8
CROM				S		Sn	05 34 26.7	+0.4
CROM				iVmb_Lg			05 34 28.1	
CADE	**Adeje, Tenerif**	1.16	65	⇓P		Pn	05 34 14.8	+1.5
CADE				S		Sn	05 34 28.2	+0.2
CADE				iVmb_Lg			05 34 30.5	
CBOL	**Buenavista del**	1.16	57	⇓P		Pn	05 34 14.9	+1.5
CBOL				S		Sn	05 34 28.4	+0.2
CBOL				iVmb_Lg			05 34 30.1	
CLAJ	**Vilaflor (Tene**	1.21	67	⇓P		Pn	05 34 15.4	+1.3
CLAJ				S		Sn	05 34 29.7	+0.3
CLAJ				iVmb_Lg			05 34 30.8	
GUIA	**Guia de Isora,**	1.21	62	P		Pn	05 34 15.7	+1.5
GUIA				S		Sn	05 34 30.5	+1.0
GUIA				iVmb_Lg			05 34 33.6	
CTFS	**San Miguel de**	1.22	70	⇓P		Pn	05 34 15.6	+1.5
CTFS				S		Sn	05 34 30.1	+0.7
CTFS				iVmb_Lg			05 34 31.4	
CDOS	**Garachico, Isl**	1.22	60	P		Pn	05 34 16.0	+1.7
CDOS				S		Sn	05 34 30.6	+0.9
CDOS				iVmb_Lg			05 34 31.6	
CVIL	**Vilaflor**	1.24	67	⇓P		Pn	05 34 15.7	+1.2
CVIL				S		Sn	05 34 30.2	+0.1
CVIL				iVmb_Lg			05 34 31.4	
CCHO	**La Orotava (Te**	1.24	64	⇓P		Pn	05 34 15.7	+1.1
CCHO				S		Sn	05 34 30.3	+0.1
CCHO				iVmb_Lg			05 34 32.0	
CPVI	**La Orotava (Te**	1.27	62	P		Pn	05 34 16.3	+1.3
CPVI				S		Sn	05 34 32.0	+0.9
CNOR	**Icod de los Vi**	1.29	60	⇓P		Pn	05 34 16.7	+1.4
CNOR				S		Sn	05 34 32.1	+0.7
CCAN	**Las Canadas**	1.29	65	P		Pn	05 34 16.3	+1.0
CCAN				S		Sn	05 34 31.2	-0.4
CCAN				iVmb_Lg			05 34 32.4	
CGRA	**Granadilla de**	1.31	71	P		Pn	05 34 17.1	+1.8
CGRA				S		Sn	05 34 32.7	+1.1
CGRA				iVmb_Lg			05 34 33.9	
CRAJ	**Montana Rajada**	1.32	63	P		Pn	05 34 16.9	+1.2
CRAJ				S		Sn	05 34 32.4	+0.2
CRAJ				iVmb_Lg			05 34 35.7	
CFOR	**Fortaleza, Los**	1.34	62	P		Pn	05 34 17.4	+1.4
CFOR				S		Sn	05 34 33.7	+0.9
CFOR				iVmb_Lg			05 34 35.5	
CDIE	**La Orotava (Te**	1.36	63	⇓P		Pn	05 34 17.4	+1.2
CDIE				S		Sn	05 34 33.4	+0.3
CREA	**Los Realejos,**	1.37	60	P		Pn	05 34 17.6	+1.4
CREA				S		Sn	05 34 34.4	+1.2
CREA				iVmb_Lg			05 34 39.1	
MACI	**Morro de la Ar**	1.38	65	P		Pn	05 34 17.8	+1.3
MACI				S		Sn	05 34 33.7	0.0
MACI				iVmb_Lg			05 34 37.6	
CGUI	**Guimar, Teneri**	1.47	64	⇓P		Pn	05 34 19.1	+1.6
CGUI				S		Sn	05 34 36.2	+0.6
CGUI				iVmb_Lg			05 34 37.8	
EBAJ	**Bajamar**	1.65	58	P		Pn	05 34 21.4	+1.4
EBAJ				S		Sn	05 34 40.4	+0.5
EBAJ				iVmb_Lg			05 34 42.5	
CLUM	**San Bartolome**	2.03	86	⇓P		Pn	05 34 26.5	+1.3
CLUM				S		Sn	05 34 48.4	-1.0
CLUM				iVmb_Lg			05 34 49.5	
GGC	**Guia, Gran Can**	2.08	77	S		Sn	05 34 49.2	-1.5
CGIN	**Giniginamar, F**	3.45	80	P		Pn	05 34 46.4	+1.7
CGIN				S		Sn	05 35 23.6	-0.8
CGIN				iVmb_Lg			05 35 28.7	
CFTV	**Fuerteventura**	3.48	77	P		Pn	05 34 47.2	+2.0
CFTV				iVmb_Lg			05 35 27.4	
CTIM	**Tinajo, Isla d**	3.91	69	P		Pn	05 34 52.2	+1.0
CTIM				S		Sn	05 35 34.3	-1.6
CBLAA	**Tinajo**	3.96	69	P		Pn	05 34 52.2	+1.3
CBLAA				S		Sn	05 35 34.7	-2.5
EFAM	**Famara**	4.14	69	P		Pn	05 34 55.1	+0.9
EFAM				S		Sn	05 35 39.4	-2.0
EFAM				iVmb_Lg			05 35 44.9	
CDLV	**Cueva Verdes**	4.22	68	P		Pn	05 34 57.5	+2.1
CDLV				S		Sn	05 35 42.0	-1.4
CDLV				iVmb_Lg			05 35 46.8	
FUL	**Funchal**	5.04	10	eP		Pn	05 35 10.2	+3.7
FUL				eS		Sn	05 36 01.2	-2.3
FUL				iAML			05 36 02.3	
FUL				iAML			05 36 02.9	
FUL				iAML			05 36 08.1	
PMAR	**Madeira**	5.11	10	eP		Pn	05 35 04.5	-3.2
PMAR				eS		Sn	05 36 03.1	-2.4
PMAR				iAML			05 36 07.2	
PMAR				iAML			05 36 09.8	
PMAR				iAML			05 36 11.1	
PMAR	**Madeira**	5.11	10	P		Pn	05 35 03.0	-4.7
PMAR				S		Sn	05 35 55.0	-11
PMOZ	**Porto Moniz, M**	5.17	7	eP		Pn	05 35 09.7	+1.3
PMOZ				eS		Sn	05 36 04.6	-2.3
PMOZ				iAML			05 36 05.0	
PMOZ				iAML			05 36 09.4	
PMOZ				iAML			05 36 10.4	
PMOZ	**Porto Moniz, M**	5.17	7	P		Pn	05 35 04.8	-3.6
PMOZ				S		Sn	05 35 56.6	-10
PMPST	**Porto Santo, M**	5.56	14	eP		Pn	05 35 14.6	+0.8
PMPST				eS		Sn	05 36 13.4	-3.1
PMPST				iAML			05 36 16.0	
PMPST				iAML			05 36 16.6	
TANT	**Tantan**	5.96	81	P		Pn	05 35 21.9	+2.6
TANT				S		Sn	05 36 28.4	+2.0
OUK	**Oukaimeden**	9.45	66	P		Pn	05 36 07.4	-0.1
ZGR	**Zagora**	11.06	74	P		Pn	05 36 30.7	+1.4
ZGR				S		Sn	05 37 29.9	-2.1
MD31	**MD31**	12.50	62	P		Pn	05 36 48.9	-0.1
MD31				S		Sn	05 39 02.5	-4.6
MDT	**Midelt**	12.60	63	P		Pn	05 36 49.3	-1.1
MDT				S		Sn	05 39 04.3	-5.3

*KRSC **01** 05:35:28.7±0.8, 52.84N×159.35E, h112km±5km, Ml3.8*
*IDC **01** 05:35:31.1±1.2, 52.97N×158.90E, h126km±7km, mb3.2/4, mbtmp3.6/4, Error ellipse: s-maj=35.6km s-min=23.5km az=173.0*
ISC 01 05:35:29.8±0.9, **52.86N**±0.05×**159.33E**±0.06, **h112**km±6km, **n37**, σ0§84/49, **mb3.3**/4, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
NLC	**Nalytchevo**	0.31	2	eP		Pn	05 35 46.2	+0.3
NLC				eS		Sn	05 35 58.2	+0.3
DALK	**Dalny**	0.39	296	eP		Pn	05 35 46.4	+0.2
DALK				eS		Sn	05 35 58.3	-0.3
PET	**Petropavlovsk**	0.44	292	iP		Pn	05 35 46.5	+0.1
PET				eS		Sn	05 35 58.7	-0.3
UGLR	**Uglovaya**	0.46	319	eP		Pn	05 35 47.0	+0.2
SPN	**Mys Shipunski**	0.48	60	eP		Pn	05 35 47.4	+0.7
SPN				eS		Sn	05 35 59.6	+0.1
INSR	**Institute**	0.48	295	eP		Pn	05 35 46.9	+0.2
INSR				eS		Sn	05 35 59.8	+0.3
SDLR	**Sedlovina**	0.50	327	eP		Pn	05 35 47.3	+0.3
SMAR	**Somma**	0.51	322	eP		Pn	05 35 47.3	+0.1
AVH	**Avacha**	0.54	319	eP		Pn	05 35 47.8	+0.5
KRER	**Koryakskii**	0.56	322	eP		Pn	05 35 48.1	+0.5
KOK	**Koryaka**	0.60	316	eP		Pn	05 35 48.1	+0.4
KRX	**Arik**	0.65	321	eP		Pn	05 35 48.3	+0.2
RUS	**Russkaya**	0.66	230	eP		Pn	05 35 48.0	+0.1
RUS				eS		Sn	05 35 58.8	+0.1
KRMR	**Karymshinskiy**	0.73	268	eP		Pn	05 35 48.2	+0.4
KRMR				eS		Sn	05 36 02.4	-0.3
MTVR	**Mutnovka**	0.79	242	eP		Pn	05 35 49.8	+0.4
MTVR				eS		Sn	05 36 05.0	+0.9
GRL	**Gorelyy**	0.82	248	eP		Pn	05 35 50.3	+0.7
ASAK	**Asacha**	0.99	242	eP		Pn	05 35 51.7	+0.5
PETK	**Petropavlovsk-**	1.02	285	P		Pn	05 35 51.3	0.0
	42nm,0.3s,baz=101,slow=16,SNR=430							
PETK				S		Sn	05 36 07.7	+0.1
	28nm,0.5s,baz=180,slow=0.9,SNR=20							
GNL	**Ganaly**	1.18	316	eP		Pn	05 35 53.3	+0.2
KII	**Karymskiy**	1.18	3	eP		Pn	05 35 54.4	+1.3
KDTR	**Khodutka, Kamc**	1.30	217	eP		Pn	05 35 54.4	-0.1
KDTR				eS		Sn	05 36 11.9	-1.2
APC	**Apacha**	1.32	274	iP		Pn	05 35 55.3	+0.7
APC				eS		Sn	05 36 14.2	+0.8
MIPR	**Malaya Ipel'ka**	1.68	251	eP		Pn	05 35 59.8	+0.9
MIPR				eS		Sn	05 36 22.8	+1.8
PAU	**Pauzhetka**	2.09	229	eP		Pn	05 36 04.8	+0.8
MKZ	**Mys Kozlova**	2.22	39	eP		Pn	05 36 05.6	0.0
MKZ				eS		Sn	05 36 32.1	-0.9
TUMD	**Tumrok D**	2.43	15	eP		Pn	05 36 09.4	+1.1
TUMD				eS		Sn	05 36 38.7	+0.8
TUMR	**Tumrok**	2.47	11	eP		Pn	05 36 10.1	+1.1
SKR	**Severo-Kuril's**	2.96	224	eP		Pn	05 36 16.2	+1.0
SKR				eS		Sn	05 36 50.3	+0.1
KBTR	**Krutoberegovo**	3.92	30	eP		Pn	05 36 28.5	+0.5
SMKR	**Semkarok**	3.93	18	eP		Pn	05 36 27.9	-0.3
ILAR	**Eielson Array**	29.31	45	P		P	05 41 21.8	+0.6
	0.3nm,0.7s,baz=272,slow=7.8,SNR=2.9							
	0.3nm,0.7s							
H11N2	**WAKE ISLAND Hy**	33.59	167	T		T	06 18 12.2	
	baz=352,slow=76,SNR=8.6							
H11N3	**WAKE ISLAND Hy**	33.60	167	T		T	06 18 07.2	
	baz=352,slow=76,SNR=4.3							
H11N1	**WAKE ISLAND Hy**	33.60	167	T		T	06 18 10.8	
	baz=352,slow=76,SNR=6.2							
KURBB	**Kurchatov Arra**	47.56	302	P		P	05 43 51.3	-2.3
	0.9nm,0.3s,baz=63,slow=7.4,SNR=3.4							
	0.9nm,0.3s							
MKAR	**Makanchi Array**	47.84	295	P		P	05 43 53.4	-2.4
	0.4nm,0.4s,baz=52,slow=7.6,SNR=6.8							
	0.4nm,0.4s							
TXAR	**Lajitas Array**	71.15	66	P		P	05 46 37.7	+1.4
	0.1nm,0.4s,baz=289,slow=4.9,SNR=7.8							
	0.1nm,0.4s							

*BJI **01** 05:39:41.2, 6.30S×148.22E, h83km, mB5.2/4, mb4.9/26, Ms4.4/1, Ms7 4.1/4*
*IDC **01** 05:39:43.4±1.7, 6.18S×147.47E, h56km±15km, mb4.3/20, mbtmp4.6/24, MS3.7/42, Error ellipse: s-maj=24.6km s-min=9.4km az=86.0*
*GFZ **01** 05:39:44.0±0.4, 6°S±4°×14°8E±°, h58km, M5.0/18, mb5.0/18, confirmed*
*NEIC **01** 05:39:45.2±1.9, 6.22S±0.06×147.41E±0.07, h65km±5km, mb4.8/76, Error ellipse: s-maj=10.8km s-min=9.0km az=80.0*
*GCMT **01** 05:39:46.2±0.2, 6.43S±0.01×147.52E±0.02, h84km±2km, MW5.0/105, Moment Tensor Solution. s71,c87; s105,c153; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.61±.12; Mθθ-2.19±.12; Mϕϕ-0.41±.11; Mrθ2.67±.07; Mrϕ-0.95±.12; Mθϕ-0.05±.08; Best double couple: M₀3.72700×10¹⁶ NP1:ϕ232.00000°, δ25.00000°, λ62.00000°. NP2:ϕ83.00000°, δ68.00000°, λ102.00000°. Principal axes: T 3.8450, Plg65.0000°, Azm14.0000°; N -0.2350, Plg11.0000°, Azm258.0000°; P -3.6090, Plg22.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **01** 05:39:46.3±2.7, 6°S±14°×14°8E±2°8, h82km±28km, M5.2/7, mB5.5/6, mb4.9/7, MLv5.5/3, Mw(mB)4.9/6*
ISC 01 05:39:44.7±0.3, **6°23S**±0.04×**147°43E**±0.06, **h65**km, **n248, σ1§45/202, mb4.8/61, 3D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PMG	**Port Moresby**	3.17	185	P		Pn	05 40 32.2	0.0
	404nm,0.5s,baz=6.0,slow=14,SNR=102							
PMG				S		Sn	05 41 09.4	+0.6
	736nm,0.4s,baz=189,slow=18,SNR=9.2							
PMG				LR		LR	05 41 38.8	
	comp=Z,2μm,18.6s,baz=28,slow=36							
PMG	**Port Moresby**	3.17	185	P		Pn	05 40 31.2	-0.9
PMG	**Port Moresby**	3.17	185	S		Sn	05 41 13.1	+4.3
PMG	**Port Moresby**	3.17	185	P		Pn	05 40 31.0	-1.1
PMG	**Port Moresby**	3.17	185	S		Sn	05 41 13.3	+4.5
PMG	**Port Moresby**	3.17	185	P		Pn	05 40 32.1	0.0
PMG	**Port Moresby**	3.17	185	P		Pn	05 40 32.3	0.0
I40PG	**Keravat**	4.95	67	I		I	06 13 10.0	
	baz=248,slow=313,SNR=0.5							
KRVT	**Keravat (AS076**	4.96	68	LR		LR	05 42 27.3	
	comp=Z,62nm,19.8s,baz=194,slow=33							
RABL	**Rabaul**	5.13	67	Pn		Pn	05 40 58.6	-0.4
JAY	**Jayapura**	7.65	299	P		Pn	05 41 35.7	+2.1
	16nm,0.3s,baz=119,slow=14,SNR=12							
JAY				S		Sn	05 42 58.7	-0.2
	6.8nm,0.3s,baz=109,slow=18,SNR=0.9							
JAY	**Jayapura**	7.65	299	P		Pn	05 41 37.2	+3.6
GENI	**Genyem**	8.09	296	P		Pn	05 41 34.8	-4.8
GENI	**Genyem**	8.09	296	P		Pn	05 41 46.7	+7.1
	3μm131nm,1.4s							
COEN	**Coen**	8.75	208	P		Pn	05 41 48.2	-0.3
COEN	**Coen**	8.75	208			Pn	05 41 48.6	+0.1
COEN	**Coen**	8.75	208	P		Pn	05 41 48.6	+0.1
MTSU	**Mount Surprise**	12.22	194	P		Pn	05 42 37.3	+1.3
CTA	**Charters Tower**	13.82	185	P		Pn	05 42 58.2	+0.6
	19nm,0.7s,baz=8.7,slow=12,SNR=9.4							
CTA				S		Sn	05 45 30.4	+0.7
	3.7nm,0.5s,baz=272,slow=13,SNR=1.8							
CTA				LR		LR	05 48 11.0	
	comp=Z,251nm,18.0s,baz=14,slow=37							
CTAO	**Charters Tower**	13.82	185	Pn		Pn	05 42 58.7	+1.0
QIS	**Mount Isa**	16.14	207	P		Pn	05 43 28.7	+1.1
QIS	**Mount Isa**	16.14	207	P		Pn	05 43 27.6	+0.1
SIJI	**Sorong**	16.98	288	P		Pn	05 43 38.5	+0.3
	12nm,0.3s,baz=101,slow=11,SNR=4.3							
SIJI				LR		LR	05 51 54.1	
	comp=Z,341nm,21.2s,baz=120,slow=43							
MTN	**Manton Dam**	17.36	247			Pn	05 43 43.2	+0.5
WB0	**Warramunga Arr**	18.49	222	P		P	05 43 56.4	+0.8
WR0	**Warramunga Arr**	18.52	221	P		P	05 43 56.4	+0.4
WR0				IAmb		IAmb	05 44 05.0	
	comp=Z,95nm,1.4s							
WR8	**Warramunga Arr**	18.55	221	P		P	05 43 56.3	0.0
WR8				IAmb		IAmb	05 44 05.3	
	comp=Z,79nm,1.2s							
WRAB	**Tennant Creek**	18.63	222	P		Pn	05 43 58.5	+0.3
WRAB	**Tennant Creek**	18.63	222	S		Sn	05 47 37.8	+12
WRAB	**Tennant Creek**	18.63	222	P		P	05 43 57.5	+0.3
WRAB	**Tennant Creek**	18.63	222	P		Pn	05 43 58.5	+0.3
WRA	**Warramunga Arr**	18.64	222	P		P	05 43 57.0	-0.4
	comp=Z,18nm,0.8s,baz=46,slow=11,SNR=52							
WRA				S		S	05 47 20.3	-6.0
	comp=Z,7.6nm,1.0s,baz=46,slow=22,SNR=5.5							
WRA				PcP		PcP	05 48 24.3	+0.4
	comp=Z,5.0nm,0.8s,baz=38,slow=1.7,SNR=6.1							
WRA				ScP		ScP	05 51 56.1	+2.1
	comp=Z,4.7nm,0.9s,baz=37,slow=2.1,SNR=6.5							
WRA	**Warramunga Arr**	18.64	222			P	05 43 57.5	+0.1
WRA						S	05 47

MBWA Marble Bar 30.65 238 P P 05 45 53.8 +0.7
H11S3 WAKE ISLAND Hy 31.05 37 T T 06 18 44.9
baz=218,slow=75
H11S2 WAKE ISLAND Hy 31.06 37 T T 06 18 44.9
baz=218
H11S1 WAKE ISLAND Hy 31.07 37 T T 06 18 48.3
baz=218,slow=75
TOO Toolangi 31.25 183 P P 05 45 57.9 -0.3
MSVF Nonsavu 32.00 114 LR LR 05 55 32.4
comp=Z,53nm,20.7s,baz=195,slow=30
H11N1 WAKE ISLAND Hy 32.12 36 T T 06 20 18.6
baz=216
H11N3 WAKE ISLAND Hy 32.13 36 T T 06 20 17.3
baz=216
H11N2 WAKE ISLAND Hy 32.13 36 T T 06 20 12.8
baz=216
JCJ Chichijima 33.52 352 P P 05 46 16.9 -1.2
MEEK Meekatharra 34.14 230 P P 05 46 24.3 +0.6
GIRL Giralia 35.92 240 P P 05 46 39.8 +0.7
SBUM Sibu 36.20 283 P P 05 46 41.9 +0.3
SBUM IAmb IAmb 05 46 43.9
comp=Z,18nm,1.2s
SBUM Sibu 36.20 283 P P 05 46 43.1 +1.6
MORW Morawa 37.34 229 P P 05 46 51.5 +0.4
KLBR Kellerberrin 37.51 224 P P 05 46 52.3 -0.1
KLBR Kellerberrin 37.51 224 P P 05 46 52.8 +0.4
BLDU Ballidu 37.68 226 P P 05 46 54.8 +0.9
NWAO Narrogin (SRO) 38.65 223 LR LR 06 03 22.5
comp=Z,313nm,21.4s,baz=79,slow=37
NWAO Narrogin (SRO) 38.65 223 P P 05 47 01.9 -0.1
NWAO Narrogin (SRO) 38.65 223 P P 05 47 02.2 +0.2
NACB Ninganchiao 39.34 321 P P 05 47 02.3 -5.6
BBJI Bungbulang 39.51 266 P P 05 47 08.9 -0.6
BBJI Bungbulang 39.51 266 P P 05 47 08.7 -0.8
LEM Lembang 39.55 267 LR LR 06 06 25.9
comp=Z,254nm,18.1s,baz=184,slow=40
YHNB Yeheng 39.84 321 P P 05 47 07.2 -4.9
YHNB Yeheng 39.84 321 P P 05 47 12.1 0.0
URZ Urewera 41.72 144 LR LR 06 03 45.3
comp=Z,171nm,19.4s,baz=312,slow=35
JNU Nakatsue 42.17 339 LR LR 06 03 00.1
comp=Z,117nm,18.4s,baz=166,slow=33
LTZ Lake Taylor 42.51 153 P P 05 47 33.4 -0.4
RPZ Rata Peaks 42.72 155 LR LR 06 04 07.7
comp=Z,82nm,18.1s,baz=337,slow=34
LBZ Lake Benmore 42.91 156 P P 05 47 37.3 +0.4
MJAR Matsushiro Arr 43.41 349 P P 05 47 40.6 -0.5
comp=Z,4.0nm,0.9s,baz=172,slow=5.7,SNR=5.8
MJAR LR LR 06 05 03.6
comp=Z,67nm,19.7s,baz=164,slow=35
comp=Z,4.0nm,0.9s
MJAR Matsushiro Arr 43.41 349 P P 05 47 40.6 -0.5
MYKOM Kota Tinggi 44.23 279 P P 05 47 48.0 0.0
MYKOM Kota Tinggi 44.23 279 P P 05 47 49.7 +1.7
BKNI Bangkinang 46.76 276 P P 05 48 05.4 -2.6
NJ2 Nanjing 46.81 326 *eP* **P 05 48 10.2 +2.2**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
KSRS Korea Array 47.12 339 P P 05 48 10.0 -0.4
comp=Z,3.1nm,0.5s,baz=153,slow=8.8,SNR=9.4
KSRS LR LR 06 05 25.1
comp=Z,83nm,20.4s,baz=150,slow=33
comp=Z,3.1nm,0.5s
KSAR Wonju Array Be 47.12 339 P P 05 48 10.0 -0.3
KULM Kulim 48.08 283 P P 05 48 17.1 -1.2
WHN Wuhan 48.38 321 P P 05 48 20.6 +0.3
RPSI Rantau Prapat 49.24 279 P 05 48 26.5 -0.6
PSI Prapat 49.26 279 P P 05 48 26.5 -0.9
GSI Gunungsitoli 50.33 277 P P 05 48 35.1 -0.4
GSI Gunungsitoli 50.33 277 P 05 48 34.5 -1.0
GSI Gunungsitoli 50.33 277 P P 05 48 35.6 +0.1
USRK Ussuriysk Ar. 52.09 346 P P 05 48 48.0 -0.1
comp=Z,2.1nm,0.5s,baz=142,slow=7.5,SNR=4.2
USRK LR LR 06 08 35.3
comp=Z,57nm,19.8s,baz=166,slow=33
comp=Z,2.1nm,0.5s
HNS HongShan 53.07 327 ⇓P **P 05 48 55.5 +0.1**
HNS pmax pmax
comp=Z,24nm,1.0s
RAR Rarotonga 53.15 112 LR LR 06 09 28.6
comp=Z,19nm,18.9s,baz=282,slow=34
CMAR Chiang Mai Arr 53.74 298 P P 05 48 59.7 -1.0
comp=Z,1.7nm,0.3s,baz=120,slow=6.3,SNR=6.6
CMAR LR LR 06 10 51.7
comp=Z,33nm,21.8s,baz=145,slow=35
comp=Z,1.7nm,0.3s
BJI2 Beijing 54.30 331 P P 05 49 05.1 +0.7
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
BJI2 L L
comp=Z,110nm,21.0s
BNX BinXian 54.75 343 ⇓P **P 05 49 07.3 -0.2**
BNX pmax pmax
comp=Z,16nm,0.9s
PZH PanZhiHua 54.94 308 P P 05 49 11.7 +2.3
KLR Kul'dur 56.90 348 P P 05 49 22.8 -0.1
comp=Z,2.6nm,0.4s,baz=163,slow=5.8,SNR=15
KLR LR LR 06 12 55.8
comp=Z,40nm,19.6s,baz=160,slow=35
comp=Z,2.6nm,0.4s
HHC Hu-ho-hao-te 57.25 328 *eP* **P 05 49 28.0 +2.3**
HHC pmax pmax
comp=Z,7.0nm,0.6s
LZH Lanzhou 58.66 319 *eP* **P 05 49 36.8 +1.1**
LZH pmax pmax
comp=Z,17nm,1.1s
LZDM Lanzhou Array 58.68 319 LR LR 06 10 59.2
comp=Z,63nm,20.7s,baz=135,slow=32
PETK Petropavlovsk- 59.75 7 P P 05 49 43.0 +0.3
comp=Z,11nm,0.8s,baz=184,slow=7.1,SNR=16
PETK LR LR 06 12 06.0
comp=Z,95nm,21.0s,baz=202,slow=32
comp=Z,11nm,0.8s
PETK Petropavlovsk- 59.75 7 P P 05 49 42.5 -0.2
HIA Hailar 60.32 339 P P 05 49 45.9 -0.8
DRV Dumont d'Urvil 60.56 183 P P 05 49 48.1 +0.1
DRV x x 05 50 12.1
HILR Hailar Array B 60.56 340 P P 05 49 48.7 +0.4
comp=Z,9.4nm,0.7s,baz=146,slow=9.0,SNR=7.6
comp=Z,9.4nm,0.7s
PPT2 Papeete2 62.42 107 *e*LR LR 06 08 42.7
comp=Z,140nm,26.8s
TBI Tubuai 62.89 113 *e*LR LR 06 08 49.6
comp=Z,1μm,36.2s
SHEM Shemya Is, Ala 62.95 18 LR LR 06 11 44.2
comp=Z,65nm,21.7s,baz=272,slow=30
GTA2 Gaotai 63.27 320 *eP* **P 05 50 07.4 +0.6**
GTA2 pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 64.52 331 P 05 50 15.1 +0.2
ULN IAmb IAmb 05 50 16.2
comp=Z,9.9nm,0.8s
ULN Ulaanbaatar 64.52 331 P P 05 50 15.7 +0.8
ULN Ulaanbaatar 64.52 331 P P 05 50 15.7 +0.8
ULN x x 05 50 36.4
ULN PcP **PcP 05 50 48.6 +0.1**
SONM Songino Array 64.81 331 P P 05 50 17.1 +0.3
comp=Z,8.8nm,1.0s,baz=150,slow=7.7,SNR=28
SONM LR LR 06 17 58.0
comp=Z,110nm,21.4s,baz=148,slow=35
comp=Z,8.8nm,1.0s
SONM Songino Array 64.81 331 P 05 50 16.5 -0.3
SONM IAmb IAmb 05 50 18.0
comp=Z,9.9nm,1.1s
CASY Casey 65.15 196 P P 05 50 18.2 -0.3
CASY IAmb IAmb 05 50 20.3
comp=Z,7.4nm,0.8s
CASY Casey 65.15 196 P P 05 50 19.2 +0.7
CASY Casey 65.15 196 P P 05 50 18.2 -0.3
CASY x x 05 50 35.4
CASY pP **pP 05 50 37.2 +0.9**
MA2 Magadan 65.65 2 LR LR 06 14 40.2
comp=Z,65nm,21.9s,baz=189,slow=32
TLY Talaya 68.75 332 LR LR 06 20 12.7
comp=Z,63nm,21.7s,baz=141,slow=35
YAK Yakutsk 69.43 351 LR LR 06 18 34.3
comp=Z,60nm,21.4s,baz=172,slow=34
CCD Concordia, Ant 70.20 186 P P 05 50 51.2 +0.6
VNDA Vanda 71.66 177 P P 05 50 59.1 +0.2
comp=Z,3.0nm,0.7s,baz=332,slow=6.8,SNR=34
comp=Z,3.0nm,0.7s
VNDA Vanda 71.66 177 P 05 50 59.5 +0.5
VNDA Vanda 71.66 177 P P 05 50 59.5 +0.5
WMQ Urumqi 73.24 319 *eP* **P 05 51 10.3 +1.2**

ZSN Zaisan 76.60 322 *eP* **P 05 51 27.6 -0.7**
MKAR Makanchi Array 77.95 320 P P 05 51 35.4 -0.5
comp=Z,1.2nm,0.4s,baz=109,slow=7.1,SNR=16
MKAR LR LR 06 25 08.4
comp=Z,36nm,21.0s,baz=58,slow=35
comp=Z,1.2nm,0.4s
MKAR Makanchi Array 77.95 320 P 05 51 35.3 -0.6
MAKZ Makanchi 78.15 320 P 05 51 36.4 -0.6
MAKZ IAmb IAmb 05 51 37.3
comp=Z,7.2nm,0.9s
MAKZ Makanchi 78.15 320 P P 05 51 36.2 -0.8
MAKZ Makanchi 78.15 320 P P 05 51 36.8 -0.2
MAKZ pP **pP 05 51 56.5 +1.4**
SHLS Shalkode 78.50 316 *eP* **P 05 51 36.6 -2.5**
PDGK Podgornoye 78.54 316 P 05 51 38.4 -1.0
TIXI Tiksi 78.68 354 LR LR 06 24 19.6
comp=Z,53nm,21.6s,baz=194,slow=34
UZB Uzynbulak 78.80 316 *eP* **P 05 51 39.9 -0.9**
comp=Z,6.9nm,1.4s
SATY Saty 79.19 316 *eP* **P 05 51 41.9 -1.0**
comp=Z,7.0nm,0.8s
ZAA0 Zalesovo Array 79.43 328 IAmb IAmb 05 51 43.1
comp=Z,5.9nm,0.7s
ZALV Zalesovo Beam 79.43 328 P P 05 51 42.5 -1.3
comp=Z,7.1nm,0.7s,baz=112,slow=5.5,SNR=25
ZALV LR LR 06 27 43.1
comp=Z,54nm,19.7s,baz=134,slow=36
comp=Z,7.1nm,0.7s
ZALV Zalesovo Beam 79.43 328 P 05 51 42.3 -1.5
TDK Taldyorghan 79.83 318 *eP* **P 05 51 45.3 -0.9**
KDAK Kodiak Island 79.90 28 LR LR 06 25 11.8
comp=Z,43nm,18.4s,baz=236,slow=34
KSH2 Kashi 80.05 311 P P 05 51 47.5 -0.2
KSH2 pmax pmax
comp=Z,2.0nm,0.5s
MDOK Medeo 80.17 316 *eP* **P 05 51 47.2 -1.1**
TNSS Tian-Shan 80.20 315 *eP* **P 05 51 47.3 -1.4**
NIL Nilore 80.41 306 P P 05 51 48.4 -1.2
NIL IAmb IAmb 05 51 52.3
comp=Z,13nm,0.8s
KURK Kurchatov 81.65 323 P 05 51 54.3 -1.4
KURK Kurchatov 81.65 323 P P 05 51 54.4 -1.4
KURK Kurchatov 81.65 323 P P 05 51 55.5 -0.2
KURK pP **pP 05 52 15.7 +1.8**
KURBB Kurchatov Arra 81.67 323 P P 05 51 54.8 -1.1
comp=Z,0.8nm,0.3s,baz=109,slow=4.0,SNR=12
comp=Z,0.8nm,0.3s
SGDS Sogindy 81.94 315 *eP* **P 05 51 56.5 -1.1**
BTLS Baital 82.79 317 *eP* **P 05 52 01.3 -0.6**
CAST Castle Rocks 82.87 23 P P 05 52 02.2 +0.3
ARK Arkit 83.40 313 P P 05 52 05.3 0.0
QSPA South Pole Qui 83.74 180 P P 05 52 06.0 -0.6
comp=Z,8.8nm,0.7s,baz=6.3,slow=5.1,SNR=75
QSPA LR LR 06 28 28.3
comp=Z,40nm,18.2s,baz=346,slow=35
comp=Z,8.8nm,0.7s
QSPA South Pole Qui 83.74 180 P P 05 52 06.8 +0.3
QSPA IAmb IAmb 05 52 08.6
comp=Z,9.6nm,0.7s
QSPA South Pole Qui 83.74 180 P P 05 52 06.8 +0.3
DZA Taraz 84.12 314 *eP* **P 05 52 07.8 -1.0**
MCK McKinley 84.26 24 IAmb IAmb 05 52 10.7
comp=Z,6.4nm,1.0s
KK31 Karatay Array 84.76 314 IAmb IAmb 05 52 12.3
comp=Z,10nm,1.2s
KKAR Karatay Array 84.76 314 P 05 52 11.0 -1.0
IUG Iuzhnay 84.88 313 *eP* **P 05 52 11.8 -0.9**
BRZS Berezniki 85.04 321 *eP* **P 05 52 12.3 -0.9**
BRLS Borolday 85.22 314 *eP* **P 05 52 13.4 -1.0**
CHM Chimkent 85.23 313 *eP* **P 05 52 13.3 -1.1**
IL31 85.52 23 IAmb IAmb 05 53 25.9
comp=Z,7.4nm,1.4s
ILAR Eielson Array 85.52 23 P P 05 52 13.1 -2.2
comp=Z,2.2nm,0.8s,baz=254,slow=4.9,SNR=19
ILAR LR LR 06 23 24.2
comp=Z,30nm,21.5s,baz=273,slow=31
comp=Z,2.2nm,0.8s
ILAR Eielson Array 85.52 23 P P 05 52 13.2 -2.1
NRIK Noril'sk 85.62 342 P P 05 52 14.6 -1.1
comp=Z,4.9nm,0.7s,baz=120,slow=5.9,SNR=3.9
comp=Z,4.9nm,0.7s
NRIK Noril'sk 85.62 342 IAmb IAmb 05 52 16.1
comp=Z,9.0nm,0.9s
J25K Salcha River, 86.05 23 IAmb IAmb 05 52 20.0
comp=Z,5.8nm,1.0s
D23K Nanushuk River 86.06 19 P 05 52 17.6 -0.4
D23K IAmb IAmb 05 52 52.3
comp=Z,7.7nm,1.1s
C23K Itkillik River 86.50 18 P 05 52 20.0 0.0
M27K Edge Creek, AK 86.68 26 IAmb IAmb 05 52 22.3
comp=Z,7.0nm,1.0s
D24K Happy Valley 86.74 19 IAmb IAmb 05 52 26.4
comp=Z,12nm,1.2s
C24K Franklin Bluff 87.04 18 IAmb IAmb 05 52 23.9
comp=Z,11nm,1.1s
K27K Chicken 87.17 25 IAmb IAmb 05 52 25.6
comp=Z,16nm,1.6s
BVAR Borovoye Array 87.21 324 P P 05 52 22.4 -1.4
comp=Z,6.7nm,0.8s,baz=102,slow=5.0,SNR=21
comp=Z,6.7nm,0.8s
BORK Borovoye 87.25 324 P 05 52 22.0 -2.0
BORK IAmb IAmb 05 52 23.7
comp=Z,6.5nm,1.0s
G26K Porcupine Rive 87.56 22 IAmb IAmb 05 52 26.6
comp=Z,7.3nm,1.1s
D25K Kavik River 87.61 19 IAmb IAmb 05 52 26.3
comp=Z,7.7nm,1.2s
F26K Sheenjek River 87.71 21 IAmb IAmb 05 52 27.5
comp=Z,9.5nm,1.5s
I27K Kandik River 87.90 23 IAmb IAmb 05 52 27.9
comp=Z,8.2nm,1.2s
H27K Steamboat Moun 88.14 23 IAmb IAmb 05 52 29.3
comp=Z,6.4nm,1.1s
HYT Haines Junctio 88.19 28 IAmb IAmb 05 52 30.4
comp=Z,15nm,1.6s
DAWY Dawson 88.30 25 P 05 52 29.1 +0.2
DAWY IAmb IAmb 05 52 30.6
comp=Z,12nm,1.4s
I28M Miner Creek 88.51 24 IAmb IAmb 05 52 31.4
comp=Z,18nm,1.9s
L29M L29M 88.55 26 IAmb IAmb 05 52 31.4
comp=Z,11nm,1.4s
C27K Jago River 88.59 19 IAmb IAmb 05 52 31.5
comp=Z,5.0nm,0.9s
K29M Barlow Dome 89.02 25 IAmb IAmb 05 52 33.5
comp=Z,5.7nm,1.2s
G30M tAoh Zrail Nji 90.39 22 IAmb IAmb 05 52 38.0
comp=Z,11nm,1.4s
BBB Bella Bella 91.48 38 LR LR 06 28 51.1
comp=Z,51nm,18.8s,baz=233,slow=32
INK Inuvik 91.71 21 LR LR 06 29 03.6
comp=Z,53nm,19.8s,baz=231,slow=32
AB31 Akbulak array 93.03 319 P 05 52 48.3 -2.9
AB31 IAmb IAmb 05 52 50.3
comp=Z,3.9nm,0.8s
ABKAR Akbulak array 93.03 319 P P 05 52 48.2 -2.9
YBH Yreka Blue Hor 93.99 49 LR LR 06 32 28.9
comp=Z,50nm,18.3s,baz=307,slow=34
ELIB Princess Elisa 94.09 195 *dP* **P**
comp=Z,2.0nm,1.0s
A36M Sachs Harbour 95.05 18 IAmb IAmb 05 53 02.0
comp=Z,4.7nm,0.9s
NVAR Mina Array Bea 97.17 52 P P 05 53 10.3 -0.4
comp=Z,0.6nm,0.8s,baz=237,slow=6.8,SNR=3.6
NVAR LR LR 06 33 36.4
comp=Z,25nm,18.2s,baz=264,slow=33
comp=Z,0.6nm,0.8s
NEW Newport 98.23 42 LR LR 06 33 03.8
comp=Z,29nm,18.5s,baz=262,slow=33
PFO Pinyon Flats O 98.49 57 LR LR 06 31 45.7
comp=Z,45nm,19.3s,baz=278,slow=32
RPN Rapa Nui 98.86 119 LR LR 06 31 41.1
comp=Z,20nm,18.8s,baz=216,slow=32
YKA Yellowknife Ar 99.17 28 P Pdif 05 53 17.9 -0.8
comp=Z,0.4nm,1.1s,baz=274,slow=4.1,SNR=2.2
comp=Z,0.4nm,1.1s
KIRV Kirov 99.46 328 LR LR 06 38 55.5
comp=Z,84nm,20.9s,baz=80,slow=36
SNAA Sanae 99.84 189 LR LR 06 36 51.7
comp=Z,85nm,21.8s,baz=66,slow=34
PLCA Paso Flores 121.70 147 PKP **PKPdf 05 58 31.6 -0.1**
comp=Z,1.6nm,0.6s,baz=228,slow=1.9,SNR=6.8
GERES GERESS Array B 122.34 326 PKP **PKPdf 05 58 31.4 -1.3**
comp=Z,0.6nm,0.4s,baz=69,slow=2.1,SNR=8.4
SESA Seetaler Alpe, 122.73 323 *e*PKP **PKPdf 05 58 32.6 -1.0**
comp=Z,5.6nm,0.9s
KBA Koelnbreinsper 123.46 324 *e*PKP **PKPdf 05 58 34.4 -0.6**
comp=Z,0.9nm,0.4s
ABTA Abfaltersbach 124.12 324 *e*PKP **PKPdf 05 58 35.0 -1.1**
comp=Z,3.1nm,0.6s
WTTA Wattenberg 124.35 325 *e*PKP **PKPdf 05 58 36.1 -0.6**
comp=Z,2.4nm,0.5s
MOTA Moosalm 124.61 325 *e*PKP **PKPdf 05 58 36.4 -0.8**
comp=Z,3.3nm,0.7s
FETA Feichten 125.00 325 *e*PKP **PKPdf 05 58 37.3 -0.6**
comp=Z,3.4nm,0.6s
EKA Eskdalemuir Ar 125.68 340 PKP **PKPdf 05 58 37.5 -1.3**
comp=Z,1.7nm,0.7s,baz=17,slow=3.5,SNR=5.4
TUE Stuetta 126.10 325 PKP **PKPdf 05 58 40.5 +0.4**
LPAZ La Paz 138.30 123 PKhKP PKPpre 05 58 56.1
comp=Z,2.8nm,0.8s,baz=275,slow=2.3,SNR=5.6
ROSC El Rosal 138.43 90 PKP **PKPdf 05 59 04.9 +0.4**
comp=Z,19nm,0.9s,baz=265,slow=1.6,SNR=14
ROSC El Rosal 138.43 90 PKPdf 05 59 02.9 -1.5
TORD Torodi Ar. Bea 145.56 284 PKPbc **PKPdf 05 59 16.4 -0.2**
comp=Z,31nm,0.7s,baz=75,slow=3.6,SNR=114
TORD Torodi Ar. Bea 145.56 284 PKPab 05 59 17.9 +0.7
DBIC Dimbokro 152.46 272 PKPbc **PKPbc 05 59 34.3 -0.4**
comp=Z,17nm,1.0s,baz=112,slow=2.1,SNR=14
DBIC Dimbokro 152.46 272 PKPbc 05 59 34.6 -0.1
BDFB Brasilia 153.43 145 PKPbc **PKPbc 05 59 36.4 -0.5**
comp=Z,10nm,0.8s,baz=217,slow=0.0,SNR=16

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*DJA **01** 05:41:15.8±0.2, 0°S±2°×12°4E±°, h67km±6km, M4.6/37, mB5.0/6, mb4.8/12, MLv4.7/37, Mw(mB)4.4/6*
ISC 01 05:41:15.9±1.1, 0°21S±0°08×124°10E±0°08, h35km, n20, σ1§26/20, 1D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**1.37**	**308**	P	**Pn**	**05 41 38.9**	**+0.3**
GTOI				S	**Sn**	**05 41 57.4**	**+1.9**
LUWI	**Luwuk**	**1.56**	**238**	P	**Pn**	**05 41 41.5**	**+0.4**
APSI	**Ampana**	**2.54**	**254**	P	**Pn**	**05 41 53.1**	**-1.6**
SANI	**Sanana**	**2.63**	**134**	P	**Pn**	**05 41 55.6**	**-0.2**
TNTI	**Ternate**	**3.41**	**73**	P	**Pn**	**05 42 07.9**	**+1.3**
KDI	**Kendari**	**4.00**	**202**	P	**Pn**	**05 42 14.7**	**0.0**
NLAI	**Namlea**	**4.25**	**135**	P	**Pn**	**05 42 19.4**	**+1.3**
PCI	**Palu**	**4.31**	**261**	P	**Pn**	**05 42 19.5**	**+0.5**
TTSI	**Tana Toraja** 1.2nm195nm,0.8s	**5.12**	**237**	P	**Pn**	**05 42 29.1**	**-1.0**
KRAI	**Karang Ratu** 0.5nm42nm,0.8s	**5.29**	**126**	P	**Pn**	**05 42 34.6**	**+2.2**
SPSI	**Sidrap Palu** 0.2nm1μm46nm,0.6s	**5.71**	**229**	P	**Pn**	**05 42 38.3**	**+0.1**
MMSI	**Mamuju** 0.3nm817nm77nm,0.6s	**5.74**	**245**	P	**Pn**	**05 42 38.2**	**-0.4**
MSAI	**Masohi**	**5.75**	**123**	P	**Pn**	**05 42 41.2**	**+2.5**
PMSI	**Majene** 0.4nm58nm,0.4s	**6.12**	**238**	P	**Pn**	**05 42 45.1**	**+1.2**
BSSI	**Bau Bau, Buton** 0.3nm66nm,0.9s	**6.90**	**211**	P	**Pn**	**05 42 55.5**	**+0.9**
FAKI	**Fak Fak**	**8.58**	**108**	P	**Pn**	**05 43 17.0**	**-0.7**
FAKI	**Fak Fak**	**8.58**	**108**	Pn	**Pn**	**05 43 17.1**	**-0.7**
FAKI	**Fak Fak**	**8.58**	**108**	P	**Pn**	**05 43 16.9**	**-0.7**
LYN	**LuoYang**	**36.26**	**344**	P	**P**	**05 48 14.5**	**-1.3**
LYN	comp=Z,16nm,0.7s			pmax	pmax		
BNX	**BinXian**	**45.85**	**3**	⇓P	P	05 49 29.8	-4.8
BNX	comp=Z,10.0nm,1.2s			pmax	pmax		

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*MED_RC **01** 06:06:40.0, 34°.31N×5°.19W, h12km, Mw4.5, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr5.72±.73; Mθθ-5.16±.44; Mϕϕ0.00±.37; Mrθ0.97±.67; Mθϕ2.46±.24; Mϕr-2.77±.93; Fault plane solution: M≥6.67000×10¹⁵ NP1:ϕs276.00000°,δ39.00000°, λ60.00000°. NP2:ϕs132.00000°,δ57.00000°,λ112.00000°. Principal axes: T 6.7700, Plg69.0000°, Azm89.0000°; N -0.2000, Plg18.0000°, Azm300.0000°; P -6.5700, Plg10.0000°, Azm206.0000°;*
*IDC **01** 06:06:41.9±0.5, 34°.45N×4°.88W, h0km, mb4.1/26, mbtmp4.2/29, ML4.1/3, MS3.7/34 Error ellipse: s-maj=15.7km s-min=8.8km az=96.0*
*INMG **01** 06:06:44.8±1.6, 34°.42N×5°.11W, h0km±6km, ML3.8, Error ellipse: s-maj=3.5km s-min=2.9km az=82.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Fez (Marr)*
*GFZ **01** 06:06:44.3±0.2, 34°N±2°×±°, h10km, M4.3/63, mb4.4/63, Error ellipse: s-maj=5.5km s-min=4.2km az=155.6, confirmed*
*NEIC **01** 06:06:44.4±2.1, 34°.39N±0°.04×4°.97W±0°.07, h10km±1km, mb4.5/69, Error ellipse: s-maj=10.2km s-min=7.5km az=88.0*
*MDD **01** 06:06:45.2±0.3, 34°.39N×5°.11W, h0km, mb_Lg4.0/32, Error ellipse: s-maj=2.9km s-min=2.6km az=131.0*
*SFS **01** 06:06:45.3, 34°.42N×5°.07W, h0km, mb5.1/7, mB5.1/5, ML4.7/24, ML4.8/25, MLv4.6/25, Mw(mB)4.4/5*
*IGIL **01** 06:06:45.3, 34°.43N×5°.01W, h5km, ML3.8*
*GFZ **01** 06:06:46.0, 34°.30N×5°.01W, h12km, Mw4.4/32, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.06; Mθθ-1.54; Mϕϕ1.60; Mrθ-0.04; Mθϕ4.03; Mϕr-0.51; Fault plane solution: M≥4.35747×10¹⁵ NP1: ϕs169.27030°,δ88.39066°,λ173.50175°. NP2: ϕs259.45359°,δ83.50433°,λ1.61974°. Principal axes: T 4.4002, Plg5.7307°, Azm124.1882°; N -0.0868, Plg83.3063°, Azm335.4196°; P -4.3134, Plg3.4476°, Azm214.5346°;*
*CNRM **01** 06:06:45.8, 34°.37N×5°.04W, h24km, ML4.7*
ISC 01 06:06:43.3±0.8, 34°40N±0°02×5°07W±0°02, h5km±4km, n427, σ1§64/497, mb4.5/65, MS3.8/34, 12C-14D, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.36**	**215**	P	**Pb**	**06 06 53.5**	**+1.3**
SICH				S	**Sb**	**06 06 59.8**	**+1.6**
LCRM	**LCR**	**0.73**	**166**	P	**Pn**	**06 07 00.3**	**-0.2**
LCRM				S	**Sn**	**06 07 12.9**	**+0.8**
CHEFC	**Chefchaouen**	**0.74**	**343**	P	**Pn**	**06 07 00.5**	**0.0**
CHEFC				S	**Sn**	**06 07 11.6**	**-0.7**
RSA	**Sarsar**	**0.79**	**308**	P	**Pn**	**06 07 02.6**	**+1.4**
RSA				S	**Sn**	**06 07 13.8**	**+0.5**
IFR	**Ifrane**	**0.88**	**183**	Pg	**Pg**	**06 07 00.6**	**+0.4**
IFR				Sg	**Sb**	**06 07 14.3**	**+0.9**
IFR	**Ifrane**	**0.88**	**183**	P	**Pg**	**06 07 00.7**	**+0.4**
AKLM	**AKL**	**1.00**	**83**	P	**Pg**	**06 07 02.6**	**0.0**
AKLM				S	**Sg**	**06 07 15.7**	**+0.1**
PALE	**Palemas**	**1.24**	**48**	P	**Pn**	**06 07 07.5**	**+0.2**
PALE				S	**Sn**	**06 07 24.7**	**+0.2**
SMIR	**Smir Dam**	**1.30**	**349**	P	**Pg**	**06 07 09.5**	**+1.1**
SMIR				S	**Sn**	**06 07 26.6**	**+0.6**
CZD	**Col de Zad**	**1.36**	**179**	P	**Pn**	**06 07 09.1**	**-0.2**
CZD				S	**Sg**	**06 07 27.2**	**+0.1**
RTC	**Rabat Centre**	**1.54**	**255**	Pn	**Pb**	**06 07 12.8**	**+0.5**
RTC				Sn	**Sg**	**06 07 34.8**	**+2.0**
RTC	**Rabat Centre**	**1.54**	**255**	P	**Pb**	**06 07 12.3**	**0.0**
RTC				S	**Sn**	**06 07 32.1**	**+0.4**
RTC	**Rabat Centre**	**1.54**	**255**	P	**Pg**	**06 07 13.1**	**+0.2**
CPS	**Cap Spartel**	**1.54**	**334**	P	**Pg**	**06 07 13.4**	**+0.4**
CPS				S	**Sg**	**06 07 33.4**	**+0.4**
MD01	**Midelt array s**	**1.55**	**170**		**Pn**	**06 07 11.2**	**-0.6**
MD31	**MD31**	**1.55**	**170**		**Pn**	**06 07 11.2**	**-0.4**
MD31	**MD31**	**1.55**	**170**	P	**Pn**	**06 07 11.3**	**-0.4**
MD31				S	**Sn**	**06 07 31.7**	**+0.5**
ZHG	**ZHG**	**1.62**	**234**	P	**Pb**	**06 07 14.0**	**+0.3**
ZHG				S	**Sg**	**06 07 37.0**	**+1.7**
MDT	**Midelt** 140nm,0.3s,baz=351,slow=16,SNR=245	**1.63**	**166**	Pg	**Pn**	**06 07 12.0**	**-0.7**
MDT	145nm,0.3s,baz=352,slow=19,SNR=11			Lg	Lg	06 07 35.0	
MDT	**Midelt**	**1.63**	**166**	P	**Pn**	**06 07 11.8**	**-1.0**
MDT				S	**Sn**	**06 07 33.5**	**-0.6**
EMEL	**Melilla**	**1.96**	**62**	Pn	**Pn**	**06 07 17.9**	**+0.7**
EMEL				Sn	**Sb**	**06 07 44.7**	**+0.5**
EMEL				*i* lVmb_Lg		06 07 56.9	
EMLI	**Melilla**	**1.96**	**62**	Pn	**Pn**	**06 07 17.6**	**+0.4**
EMLI				Sn	**Sb**	**06 07 45.1**	**+0.9**
WMELI	**Melilla**	**1.97**	**62**	Pn	**Pn**	**06 07 17.4**	**+0.1**
WMELI				Sn	**Sb**	**06 07 44.8**	**+0.3**
WMELI	**Melilla**	**1.97**	**62**	P	**Pn**	**06 07 17.6**	**+0.3**
JBK	**JBK**	**2.07**	**91**	P	**Pn**	**06 07 17.5**	**-1.4**
JBK				S	**Sn**	**06 07 41.8**	**-3.4**
EJIF	**Jimena Fronter**	**2.07**	**351**	Pn	**Pb**	**06 07 21.4**	**-0.1**

EJIF Sn Sn 06 07 46.4 +1.4
CNIL Conil 2.12 338 Pn Pb 06 07 23.2 +0.9
EMIJ Mijas 2.17 6 Pn Pn 06 07 19.3 -0.9
EMIJ Mijas 2.17 6 ⇓Pn Pn 06 07 19.7 -0.6
EMIJ Sn Sn 06 07 47.7 +0.1
EMIJ *i* IVmb_Lg 06 08 04.7
TAF Taforalt 2.23 79 P Pn 06 07 20.7 -0.3
TAF S Sn 06 07 48.6 -0.4
AVE Averroes 2.24 241 Pn Pn 06 07 21.9 +0.8
AVE Averroes 2.24 241 Pn Pn 06 07 22.1 +1.1
AVE Averroes 2.24 241 P Pn 06 07 22.0 +0.9
AVE S Sn 06 07 49.6 +0.5
AVE Averroes 2.24 241 P Pn 06 07 22.1 +1.1
SFS San Fernando 2.26 336 Pn Pn 06 07 22.9 +1.6
SFS San Fernando 2.26 336 P Pn 06 07 23.3 -1.4
EALB Alboran 2.27 47 Pn Pn 06 07 20.9 -0.5
EALB Sn Sn 06 07 50.2 +0.4
EALB Alboran 2.27 47 Pn Pn 06 07 21.0 -0.5
EALB Sn Sn 06 07 51.2 +1.4
EALB *i* IVmb_Lg 06 08 07.4
ESPR Espera 2.55 346 Pn Pn 06 07 26.5 +1.2
ESPR Espera 2.55 346 Pn Pn 06 07 26.4 +1.1
ESPR Sn Sn 06 07 57.7 +1.0
ESPR *i* IVmb_Lg 06 08 35.6
GOLM Goulmima 2.69 178 P Pn 06 07 29.0 +1.6
GOLM S Sn 06 08 02.7 +2.3
ELGU Los Guajares, 2.73 25 Pn Pn 06 07 27.5 -0.4
ELGU Los Guajares, 2.73 25 Pn Pn 06 07 27.5 -0.4
ELGU Sn Sn 06 08 02.7 +1.4
ELGU *i* IVmb_Lg 06 08 18.7
EGOR Sierra Gorda, 2.82 16 Pn Pn 06 07 29.4 +0.2
EGOR Sierra Gorda, 2.82 16 P Pn 06 07 29.2 +0.1
EGOR Sn Sn 06 08 02.9 -0.7
EGOR *i* IVmb_Lg 06 08 20.2
TISM Timmit 2.91 204 P Pn 06 07 29.8 -0.4
TISM S Sn 06 08 05.6 0.0
ARNO Arenosillo 3.01 334 Pn Pn 06 07 33.0 +1.2
ARNO Arenosillo 3.01 334 P Pn 06 07 32.4 +0.7
ARF Arif 3.04 166 P Pn 06 07 32.6 +0.4
ARF S Sn 06 08 09.0 -0.1
SRHM Skhour des Reh 3.05 232 P Pb 06 07 35.5 -2.7
SRHM S Sb 06 08 15.9 +0.3
EBER Berja 3.06 35 Pn Pn 06 07 32.3 -0.3
EBER Berja 3.06 35 Pn Pn 06 07 33.1 +0.5
EBER Sn Sn 06 08 10.8 +1.1
EBER *i* IVmb_Lg 06 08 31.3
EQUE Quentar 3.10 25 Pn Pn 06 07 35.1 +2.2
EQUE Sn Sn 06 08 11.9 +1.5
EQUE *i* IVmb_Lg 06 08 19.7
EQTA Presa de Quent 3.10 25 Pn Pn 06 07 35.2 +2.2
EQTA P Pn 06 07 35.2 +2.2
ENIJ Nijar 3.47 41 Pn Pn 06 07 39.1 +1.1
ENIJ Nijar 3.47 41 Pn Pn 06 07 38.6 +0.6
ENIJ Sn Sn 06 08 19.2 -0.3
ENIJ *i* IVmb_Lg 06 08 30.2
EMIN Mina Concepcio 3.60 339 Pn Pn 06 07 39.8 0.0
EMIN Sn Sn 06 08 20.6 -2.2
EMIN Mina Concepcio 3.60 339 Pn Pn 06 07 40.1 +0.2
EMIN Sn Sn 06 08 21.7 -1.1
EMIN *i* IVmb_Lg 06 08 32.0
TZRR Tazzarine 3.63 187 P Pn 06 07 40.7 +0.4
TZRR S Sn 06 08 23.5 0.0
PBDV Barranco-do-Ve 3.67 321 Pn Pn 06 07 40.9 +0.1
PBDV Sn Sn 06 08 23.7 -0.7
PBDV Barranco-do-Ve 3.67 321 *e*Pn Pn 06 07 40.9 +0.1
PBDV *e*Sn Sn 06 08 22.9 -1.5
PBDV *i* IAML 06 08 36.8
PBDV *i* IAML 06 08 38.6
PBDV *i* IAML 06 08 40.8
ECAB El Cabril 3.68 356 Pn Pn 06 07 41.2 +0.2
ECAB Sn Sn 06 08 24.9 +0.2
ECAB El Cabril 3.68 356 Pn Pn 06 07 41.6 +0.7
ECAB Sn Sn 06 08 23.8 -0.9
ECAB *i* IVmb_Lg 06 08 33.2
PVAQ Vaqueiros 3.69 325 P Pn 06 07 41.5 +0.6
PVAQ Vaqueiros 3.69 325 *e*Pn Pn 06 07 41.2 +0.2
PVAQ *e*Sn Sn 06 08 24.1 -0.8
PVAQ *i* IAML 06 08 26.8
PVAQ *i* IAML 06 08 28.2
PVAQ *i* IAML 06 08 38.9
PVAQ Vaqueiros 3.69 325 P Pn 06 07 40.9 -0.1
PVAQ S Sn 06 08 25.0 +0.1
PVAQ Vaqueiros 3.69 325 P Pn 06 07 41.6 +0.6
EGRO El Granado 3.69 329 Pn Pn 06 07 41.1 +0.1
EGRO Sn Sn 06 08 24.0 -0.8
EGRO El Granado 3.69 329 Pn Pn 06 07 41.4 +0.3
EGRO Sn Sn 06 08 24.1 -0.8
EGRO *i* IVmb_Lg 06 08 32.9
OUZM OUZ 3.76 203 P Pn 06 07 43.4 +1.3
OUZM S Sn 06 08 30.6 +3.7
EQES Quesada 3.76 25 Pn Pn 06 07 45.3 +3.2
EQES Sn Sn 06 08 27.3 +0.4
EQES *i* IVmb_Lg 06 08 45.0
EADA Adamuz 3.78 6 Pn Pn 06 07 43.1 +0.8
EADA Adamuz 3.78 6 Pn Pn 06 07 43.1 +0.8
EADA Sn Sn 06 08 26.3 -0.9
EADA *i* IVmb_Lg 06 08 46.6
FIGM Figuig 3.91 124 P Pn 06 07 44.0 -0.2
FIGM S Sn 06 08 30.0 -0.5
TIO Tiouine 3.92 209 Pn Pn 06 07 44.5 +0.1
TIO Sn Sn 06 08 31.8 +0.9
TIO Tiouine 3.92 209 P Pn 06 07 45.4 +1.0
TIO S Sn 06 08 31.1 +0.2
TIO Tiouine 3.92 209 P Pn 06 07 44.4 +0.1
OUK Oukaimeden 3.96 217 P Pn 06 07 45.7 +0.6
OUK S Sn 06 08 32.1 0.0
PCVE Castro Verde 4.03 324 Pn Pn 06 07 45.9 +0.3
PCVE Sn Sn 06 08 32.6 -0.6
PCVE Castro Verde 4.03 324 *e*Pn Pn 06 07 46.0 +0.3
PCVE *e*Sn Sn 06 08 32.2 -0.9
PCVE *i* IAML 06 08 45.5
PCVE *i* IAML 06 08 48.5
PCVE *i* IAML 06 08 55.0
PBAR Barrancos 4.09 338 Pn Pn 06 07 46.7 +0.2
PBAR Sn Sn 06 08 33.3 -1.5
PBAR Barrancos 4.09 338 *e*Pn Pn 06 07 47.0 +0.5
PBAR *e*Sn Sn 06 08 33.1 -1.7
PBAR *i* IAML 06 08 41.5
PBAR *i* IAML 06 08 42.9
PBAR *i* IAML 06 08 47.4
PFVI Vila Bisbo 4.10 313 Pn Pn 06 07 48.1 +1.5
PFVI Sn Sn 06 08 34.1 -0.8
PFVI Vila Bisbo 4.10 313 Pn Pn 06 07 46.5 -0.1
PFVI Vila Bisbo 4.10 313 *e*Pn Pn 06 07 48.6 +2.0
PFVI *e*Sn Sn 06 08 33.6 -1.3
PFVI *i* IAML 06 08 38.7
PFVI *i* IAML 06 08 43.7
PFVI *i* IAML 06 08 49.9
PFVI Vila Bisbo 4.10 313 P Pn 06 07 47.4 +0.8
PFVI S Sn 06 08 36.1 +1.2
PFVI Vila Bisbo 4.10 313 P Pn 06 07 48.5 +1.9
MORF Marmelete 4.11 316 *e*P Pn 06 07 46.8 0.0
MORF *e*S Sn 06 08 32.4 -2.9
MORF IAML 06 08 39.2
comp=N,167nm,0.4s
MORF Marmelete 4.11 316 Pn Pn 06 07 46.8 0.0
MORF Marmelete 4.11 316 *e*Pn Pn 06 07 46.8 0.0
MORF *e*Sn Sn 06 08 34.3 -1.0
MORF *i* IAML 06 08 37.6
MORF *i* IAML 06 08 40.7
MORF *i* IAML 06 08 54.4
PBEJ Beja 4.27 329 *e*Pn Pn 06 07 49.7 +0.7
PBEJ *e*Sn Sn 06 08 38.2 -0.9
PBEJ *i* IAML 06 08 51.2
PBEJ *i* IAML 06 08 53.9
PBEJ *i* IAML 06 08 54.7
MESJ Messejana 4.28 324 *e*P Pn 06 07 49.3 +0.2
MESJ *e*S Sn 06 08 35.8 -3.6
MESJ IAML 06 08 41.9
comp=N,192nm,0.7s
MESJ Messejana 4.28 324 Pn Pn 06 07 49.1 +0.1
MESJ Messejana 4.28 324 *e*Pn Pn 06 07 49.4 +0.3
MESJ *e*Sn Sn 06 08 37.7 -1.7
MESJ *i* IAML 06 08 46.4
MESJ *i* IAML 06 08 48.5
MESJ *i* IAML 06 08 51.0
ZGR Zagora 4.29 186 P Pn 06 07 49.9 +0.4
ZGR S Sn 06 08 40.2 +0.3
PTEO Sao Teotonio 4.32 318 *e*Pn Pn 06 07 49.9 +0.2

PTEO *e*Sn Sn 06 08 39.5 -0.8
PTEO *i* IAML 06 08 44.9
PTEO *i* IAML 06 08 46.5
PTEO *i* IAML 06 08 57.9
PLOUS Minas do Lousa 4.53 324 *e*Pn Pn 06 07 52.9 +0.4
PLOUS *e*Sn Sn 06 08 44.8 -0.7
PLOUS *i* IAML 06 08 54.0
PLOUS *i* IAML 06 08 59.6
PLOUS *i* IAML 06 09 21.9
PSIM Granatula de C 4.54 13 Pn Pn 06 07 53.7 +0.9
PSIM Sn Sn 06 08 44.5 -1.4
CART Cartagena 4.58 45 Pn Pn 06 07 53.7 +0.4
CART Cartagena 4.58 45 P Pn 06 07 55.4 +2.1
CART Cartagena 4.58 45 P Pn 06 07 53.5 +0.2
CART S Sn 06 08 47.0 +0.2
CART Cartagena 4.58 45 P Pn 06 07 55.0 +1.7
EBAD Badajoz 4.62 341 Pn Pn 06 07 54.2 +0.3
EBAD Sn Sn 06 08 45.4 -2.4
EBAD Badajoz 4.62 341 Pn Pn 06 07 54.5 +0.7
EBAD Sn Sn 06 08 45.3 -2.5
EBAD *i* IVmb_Lg 06 08 51.4
EMUR La Murta 4.63 41 Pn Pn 06 07 55.9 +1.9
EAH EAH 4.68 235 P Pn 06 07 54.9 +0.3
EAH S Sn 06 08 50.0 +0.6
EVO Evora 4.76 331 Pn Pn 06 07 56.1 +0.4
EVO Sn Sn 06 08 49.1 -2.2
EVO Evora 4.76 331 *e*Pn Pn 06 07 56.3 +0.6
EVO *e*Sn Sn 06 08 50.3 -1.0
EVO *i* IAML 06 08 52.8
EVO *i* IAML 06 08 55.2
EVO *i* IAML 06 09 01.8
TTIG Tnine Tigouga, 4.78 217 P Pn 06 07 56.6 +0.4
TTIG S Sn 06 08 51.3 -0.8
MOE Montemor 4.89 328 *e*Pn Pn 06 07 58.0 +0.4
MOE *e*Sn Sn 06 08 52.8 -1.8
MOE *i* IAML 06 09 05.5
MOE *i* IAML 06 09 11.8
MOE *i* IAML 06 09 16.0
PESTR Estremoz 4.90 336 Pn Pn 06 07 58.5 +0.8
PESTR Sn Sn 06 08 53.3 -1.4
PESTR Estremoz 4.90 336 Pn Pn 06 07 59.2 +1.6
PESTR Estremoz 4.90 336 *e*Pn Pn 06 07 59.1 +1.4
PESTR *e*Sn Sn 06 08 52.7 -2.0
PESTR *i* IAML 06 09 02.7
PESTR *i* IAML 06 09 13.3
PESTR *i* IAML 06 09 20.8
PESTR Estremoz 4.90 336 P Pn 06 07 58.6 +0.9
PESTR Estremoz 4.90 336 P Pn 06 07 59.3 +1.6
PARRA Arraiolos 5.01 332 *e*Pn Pn 06 08 00.0 +0.8
PARRA *e*Sn Sn 06 08 55.2 -2.4
PARRA *i* IAML 06 08 58.2
PARRA *i* IAML 06 08 59.7
PARRA *i* IAML 06 09 08.7
ETOB Tobarra 5.10 33 Pn Pn 06 08 03.0 +2.6
ETOB Tobarra 5.10 33 Pn Pn 06 08 02.9 +2.4
ETOB Sn Sn 06 09 02.4 +2.7
ETOB *i* IVmb_Lg 06 09 33.8
PAB San Pablo 5.17 6 Pn Pn 06 08 01.8 +0.3
PAB Sn Sn 06 08 57.5 -4.0
PAB *i* IVmb_Lg 06 09 14.3
PAB San Pablo 5.17 6 Pn 06 08 02.1 +0.6
PAB San Pablo 5.17 6 P Pn 06 08 04.6 +3.2
PMTG Montargil 5.30 332 *e*Pn Pn 06 08 04.0 +0.8
PMTG *e*Sn Sn 06 09 04.2 -0.5
PMTG *i* IAML 06 09 05.2
PMTG *i* IAML 06 09 21.3
PMTG *i* IAML 06 09 23.1
ESDC Sonseca Array 5.34 9 Pn Pn 06 08 03.7 -0.1
comp=N,4.0nm,0.3s,baz=193,slow=15,SNR=101
ESDC Sn Sn 06 09 03.6 -2.0
comp=N,2.6nm,0.3s,baz=192,slow=29,SNR=6.7
ESDC Lg Lg 06 09 29.2
comp=N,1.8nm,0.3s,baz=183,slow=28,SNR=5.2
ESDC LR LR 06 10 33.3
comp=N,797nm,19.6s,baz=198,slow=44
comp=N,20nm,0.5s
ESDC Sonseca Array 5.34 9 Pn Pn 06 08 04.5 +0.7
ESDC Sn Sn 06 09 03.4 -2.3
ESDC *i* IVmb_Lg 06 09 45.2
ESDC Sonseca Array 5.34 9 Pn 06 08 04.3 +0.5
ESDC Sn 06 09 03.6 -2.0
ESBB Sonseca Array 5.34 9 Pn Pn 06 08 04.3 +0.5
ESBB Sn Sn 06 09 03.5 -2.2
ESBB Sonseca Array 5.34 9 Pn 06 08 04.6 +0.8
PMRV Marv??o 5.35 340 *e*Pn Pn 06 08 04.8 +0.9
PMRV *e*Sn Sn 06 09 04.7 -1.2
PMRV *i* IAML 06 09 14.6
PMRV *i* IAML 06 09 21.7
PMRV *i* IAML 06 09 25.4
PMAFR Mafra 5.67 325 Pn Pn 06 08 09.0 +0.8
PMAFR Sn Sn 06 09 13.1 -0.6
PMAFR Mafra 5.67 325 *e*Pn Pn 06 08 09.2 +0.9
PMAFR *e*Sn Sn 06 09 12.7 -1.0
PMAFR *i* IAML 06 09 21.0
PMAFR *i* IAML 06 09 24.1
PMAFR *i* IAML 06 09 39.7
EPLA Plasencia 5.71 352 Pn Pn 06 08 09.5 +0.7
EPLA Sn Sn 06 09 11.8 -3.0
PSARD Sardoal 5.75 335 *e*Pn Pn 06 08 10.0 +0.6
PSARD *e*Sn Sn 06 09 14.2 -1.6
PSARD *i* IAML 06 09 22.6
PSARD *i* IAML 06 09 29.4
PSARD *i* IAML 06 09 30.3
PCBR Castelo Branco 5.76 341 *e*Pn Pn 06 08 10.3 +0.9
PCBR *e*Sn Sn 06 09 13.4 -2.6
PCBR *i* IAML 06 09 20.3
PCBR *i* IAML 06 09 28.2
PCBR *i* IAML 06 09 30.0
EVIV Cofrentes, Val 5.80 32 Pn Pn 06 08 11.1 +1.0
EVIV *i* IVmb_Lg 06 09 48.8
PSBE So Bento 5.91 331 *e*Pn Pn 06 08 12.8 +1.2
PSBE *e*Sn Sn 06 09 16.4 -3.4
PSBE *i* IAML 06 09 32.0
PSBE *i* IAML 06 09 33.8
PSBE *i* IAML 06 09 49.9
UCM Universidad Co 6.07 13 Pn Pn 06 08 15.4 +1.5
UCM Universidad Co 6.07 13 P Pn 06 08 16.1 +2.2
ECHE Chera 6.13 31 Pn Pn 06 08 16.0 +1.4
ECHE Chera 6.13 31 Pn Pn 06 08 15.9 +1.2
ECHE *i* IVmb_Lg 06 10 04.2
PCAS Casmilo, Conde 6.27 335 *e*Pn Pn 06 08 17.4 +0.9
PCAS *e*Sn Sn 06 09 26.4 -2.2
PCAS *i* IAML 06 09 49.9
PCAS *i* IAML 06 09 50.5
PCAS *i* IAML 06 10 06.3
MTE Manteigas 6.30 343 Pn 06 08 17.9 +0.9
MTE Manteigas 6.30 343 *e*Pn Pn 06 08 17.9 +0.9
MTE *e*Sn Sn 06 09 26.4 -3.1
MTE *i* IAML 06 09 45.3
MTE *i* IAML 06 09 52.5
MTE *i* IAML 06 09 57.3
MTE Manteigas 6.30 343 P Pn 06 08 17.5 +0.5
PVIS Viseu 6.69 341 *e*Pn Pn 06 08 22.8 +0.5
PVIS *e*Sn Sn 06 09 36.0 -3.0
MVO Moncorvo 6.93 348 *e*Pn Pn 06 08 26.6 +1.0
MVO *e*Sn Sn 06 09 41.6 -3.2
MVO *i* IAML 06 09 43.7
MVO *i* IAML 06 09 50.9
MVO *i* IAML 06 10 03.0
PVRL Vila Real 7.18 344 *e*Pn Pn 06 08 29.7 +0.7
PVRL *e*Sn Sn 06 09 47.1 -3.8
PVRL *i* IAML 06 09 50.1
PVRL *i* IAML 06 09 55.8
PVRL *i* IAML 06 09 55.8
PTO Porto 7.29 338 *e*Pn Pn 06 08 31.4 +1.0
PTO *e*Sn Sn 06 08 50.4 -3.0
POLO Lamas de Olo 7.29 344 *e*Pn Pn 06 08 31.3 +0.7
POLO *e*Sn Sn 06 09 49.7 -4.0
POLO *i* IAML 06 09 58.0
POLO *i* IAML 06 09 58.4
POLO *i* IAML 06 09 58.5
PBRG Braganca 7.51 350 *e*Pn Pn 06 08 34.2 +0.7
PBRG *e*Sn Sn 06 09 56.6 -2.5
PBRG *i* IAML 06 10 08.0
PBRG *i* IAML 06 10 18.5
PBRG *i* IAML 06 10 51.4
ECAL Calabor 7.64 351 Pn Pn 06 08 36.0 +0.6
ECAL Sn Sn 06 09 59.4 -3.0
ECAL Calabor 7.64 351 P Pn 06 08 37.6 +2.2
PCAB Cabril 7.66 343 *e*Pn Pn 06 08 36.2 +0.6

PCAB *e*Sn Sn 06 09 58.2 -4.7
PCAB *i* IAML 06 10 06.9
PCAB *i* IAML 06 10 07.7
PCAB *i* IAML 06 10 15.3
EBR Ebro Roquetas 7.78 33 Pn 06 08 39.2 +2.0
PGAV Gavieira, Arco 7.96 343 *e*Pn Pn 06 08 40.3 +0.5
PGAV *e*Sn Sn 06 10 05.2 -5.0
PGAV *i* IAML 06 10 13.9
PGAV *i* IAML 06 10 26.1
PGAV *i* IAML 06 10 27.2
TANT Tantan 7.96 223 P Pn 06 08 39.7 -0.1
ETOS Mallorca 8.27 47 Pn Pn 06 08 45.6 +1.7
ATE Arette 9.32 20 P Pn 06 09 00.7 +2.3
CORI Orista 9.41 34 Pn 06 09 01.3 +1.8
CEST Esterri de Car 9.57 29 Pn 06 09 03.5 +1.7
PMAR Madeira 10.02 264 P Pn 06 09 08.2 0.0
EJON La Jonquera 10.17 35 P Pn 06 09 10.7 +0.7
PMOZ Porto Moniz, M 10.24 265 Pn Pn 06 09 12.4 +1.4
PMOZ Sn Sn 06 10 59.7 -6.5
PMOZ Porto Moniz, M 10.24 265 P Pn 06 09 10.3 -0.7
KEST Kesra 11.89 79 Pn Pn 06 09 34.0 +0.4
comp=N,0.3nm,0.3s,baz=232,slow=6.3,SNR=7.5
KEST LR LR 06 14 10.5
comp=N,291nm,19.6s,baz=214,slow=38
VSL Villasalto 12.62 62 P Pn 06 09 44.2 +0.6
TAM Tamanrasset 14.83 138 Pn 06 10 13.8 -0.1
GIMEL St. Georges / 14.86 32 P Pn 06 10 16.2 +2.1
BOURR Bourrignon 15.94 32 P Pn 06 10 30.2 +1.8
VAE Valguarnera 16.07 73 LR LR 06 16 57.7
comp=N,278nm,19.2s,baz=323,slow=39
BNALP Bannalp 16.10 35 P Pn 06 10 32.1 +1.6
TUE Stuetta 16.27 38 P P 06 10 36.2 +0.3
TUE Stuetta 16.27 38 P P 06 10 34.7 -1.2
AQU L'Aquila 16.50 56 P P 06 10 40.0 +1.8
DAVOX Davos/Dischmat 16.75 38 Pn Pn 06 10 38.3 -0.6
comp=N,0.9nm,0.3s,baz=199,slow=12,SNR=6.0
DAVOX LR LR 06 16 38.4
comp=N,117nm,21.7s,baz=247,slow=36
comp=N,2.9nm,0.8s
FUORN Ofenpass-Fuorn 16.84 39 P 06 10 43.6 +1.4
FUORN Ofenpass-Fuorn 16.84 39 P Pn 06 10 41.0 +0.9
DAVA Damuels 17.10 37 *e*Pn P 06 10 46.1 +1.1
comp=N,6.0nm,0.8s
DAVA *e*S S 06 14 18.4 +15
comp=N,12nm,1.0s
DAVA Damuels 17.10 37 P P 06 10 44.9 -0.1
BFO Black Forest 17.13 32 P P 06 10 45.0 -0.2
DOU Dourbes 17.22 21 *d*P Pn 06 10 44.1 -0.3
comp=Z,10.0nm,1.1s
CGRP Cima Grappa 17.22 43 P P 06 10 46.9 +0.6
CTI Castel Tesino 17.23 43 P P 06 10 47.3 +0.9
FETA Feichten 17.35 39 *e*Pn P 06 10 47.6 -0.1
comp=Z,6.7nm,0.6s
FETA *e*S S 06 14 20.1 +11
comp=Z,8.0nm,1.2s
WLF Walferdange 17.35 25 *d*P P 06 10 48.8 +1.3
BMRD Maredsous 17.45 21 *d*P P 06 10 50.0 +1.4
RCHB Rochefort 17.46 23 P P 06 10 50.5 +1.7
MARCO Tramutola 17.60 64 P P 06 10 50.0 -0.4
RETA Reutte 17.67 38 *e*Pn P 06 10 52.0 +0.8
comp=Z,2.8nm,0.4s
BCLA Clavier 17.72 22 *d*P P 06 10 54.2 +2.6
comp=Z,12nm,1.1s
SQTA Sankt Quirin 17.73 39 *e*Pn P 06 10 52.9 +1.0
comp=Z,7.9nm,0.5s
UCC Uccle 17.77 20 *d*P Pn 06 10 51.2 -0.1
UCC *d*S Sn 06 14 11.6 +2.0
STAL STALIGIAL 17.96 43 P Pn 06 10 53.4 -0.3
WTTA Wattenberg 17.98 39 *e*Pn P 06 10 55.5 +0.8
comp=Z,13nm,0.7s
WTTA *e*S S 06 14 30.6 +9.1
comp=Z,26nm,1.0s
WTTA Wattenberg 17.98 39 P P 06 10 54.6 -0.1
WATA Walderalm 17.99 39 *e*Pn P 06 10 56.5 +1.7
comp=Z,9.9nm,0.8s
WATA *e*S S 06 14 30.1 +8.4
comp=Z,30nm,1.1s
TIP Timpagrande 18.11 68 ⇓P P 06 11 01.4 +5.3
TIP Timpagrande 18.11 68 P Pn 06 10 55.5 -0.2
TIP Timpagrande 18.11 68 P P 06 10 56.5 +0.4
comp=Z,5.7nm,0.7s
TIP Timpagrande 18.11 68 P Pn 06 10 55.7 0.0
ABTA Abfaltersbach 18.13 42 *e*Pn P 06 10 58.6 +2.3
comp=Z,13nm,0.9s
ABTA *e*S S 06 14 34.5 +10
comp=Z,8.6nm,1.3s
FUSE Fusea 18.21 43 P Pn 06 10 56.6 -0.2
MATE Matera 18.34 64 P P 06 10 58.7 +0.1
DRE Drenchia 18.44 45 P Pn 06 11 00.7 +1.0
ACOM Acomizza, Ital 18.58 44 P P 06 11 01.3 0.0
LESA Schwarzleotal 18.63 40 *e*Pn Pn 06 11 03.5 +1.5
comp=Z,7.3nm,1.0s
CEY Cerknica 18.68 47 *i* P Pn 06 11 03.4 +0.8
KBA Koelnbreinsper 18.79 42 *e*Pn Pn 06 11 04.2 +0.1
comp=Z,7.0nm,0.8s
KBA *e*S S 06 14 45.2 +7.4
comp=Z,2.5nm,0.9s
KBA Koelnbreinsper 18.79 42 P Pn 06 11 04.0 -0.1
BOJS Bojanci 19.07 48 *i* P Pn 06 11 07.8 +0.5
OBKA Obir 19.15 45 *e*Pn Pn 06 11 08.8 +0.4
comp=Z,17nm,0.7s
OBKA Obir 19.15 45 P Pn 06 11 08.8 +0.4
BIOA Bad Ischl, Aus 19.31 41 *e*P Pn 06 11 10.0 -0.2
comp=Z,9.1nm,0.9s
GRB1 Grafenberg Arr 19.41 34 P P 06 11 09.6 -0.7
GRB4 Grafenberg Arr 19.42 34 P Pn 06 11 11.0 -0.5
GRA1 Grafenberg Arr 19.43 33 P P 06 11 10.4 0.0
GRA1 IAmb IAmb 06 11 15.9
comp=Z,18nm,0.7s
GRB3 Grafenberg Arr 19.45 35 P P 06 11 11.2 +0.5
GCIS Gornji Cirnik 19.47 48 *e*P P 06 11 11.5 +0.5
SESA Seetaler Alpe, 19.49 43 *e*P P 06 11 11.4 0.0
comp=Z,14nm,0.8s
SESA *e*S S 06 14 57.6 +5.5
comp=Z,12nm,1.1s
GRA3 Grafenberg Arr 19.52 33 P P 06 11 12.0 +0.6
SOKA Soboth 19.53 45 *e*P P 06 11 11.9 +0.3
comp=Z,15nm,1.2s
MOA Molln 19.74 41 *e*P P 06 11 13.2 -0.7
comp=Z,4.7nm,0.5s
MOA *e*Sn Sn 06 14 58.3 +0.9
comp=Z,3.7nm,0.8s
MOA Molln 19.74 41 P P 06 11 12.7 -1.2
WET Wettzell 19.83 37 P Pn 06 11 16.2 -0.1
GEC2 GERESS Array S 20.05 38 P 06 11 16.5 -0.9
GERES GERESS Array B 20.05 38 P P 06 11 17.1 -0.3
comp=Z,0.2nm,0.3s,baz=225,slow=13,SNR=19
GERES LR LR 06 18 41.7
comp=Z,198nm,20.9s,baz=244,slow=36
comp=Z,5.1nm,0.5s
GERES GERESS Array B 20.05 38 P P 06 11 16.0 -1.3
ARSA Arzberg 20.11 44 P P 06 11 18.8 +0.8
KHC Kasperske Hory 20.17 38 P P 06 11 18.7 +0.1
KHC Kasperske Hory 20.17 38 *e*P P 06 11 19.2 +0.6
KHC AMS AMS 06 18 30.0
comp=Z,300nm,14.6s
KHC Kasperske Hory 20.17 38 P P 06 11 16.9 -1.7
comp=Z,18nm,0.8s
KHC Kasperske Hory 20.17 38 P P 06 11 18.4 -0.1
MOX Moxa 20.29 32 P P 06 11 20.1 +0.2
NKC Novy Kostel 20.37 34 P Pn 06 11 21.9 -0.9
TANN Tannenbergstha 20.50 33 P P 06 11 22.1 -0.1
PDG Podgorica 20.63 60 P P 06 11 23.1 -0.4
CONA Conrad Observa 20.67 43 *e*P P 06 11 23.2 -1.0
comp=Z,12nm,0.6s
ZVC Zvikov 20.68 38 *e*P Pn 06 11 26.3 0.0
ZVC AMS AMS 06 18 40.0
comp=Z,300nm,18.9s
NEUB Neuenburg 20.77 31 P P 06 11 25.5 +0.5
RONA Rosalia, Austr 20.80 44 *e*P P 06 11 25.1 -0.3
comp=Z,7.2nm,0.6s
WIMM Wimmelburg 20.89 30 P Pn 06 11 28.3 -0.4
WINA Allard / Wiene 20.89 43 *e*P P 06 11 26.5 +0.2
comp=Z,9.3nm,0.7s
EKA Eskdalemuir Ar 20.98 3 P P 06 11 27.6 +0.4
comp=Z,2.8nm,0.5s,baz=182,slow=11,SNR=12
comp=Z,2.8nm,0.5s
RETH Rethem/Aller, 21.03 25 P P 06 11 29.1 +1.3
HSKC Hora Svate Kat 21.08 34 P P 06 11 29.1 +0.6
PRU Pruhonice 21.20 37 P P 06 11 30.9 +1.2
MPLH Magyarpolny 21.26 46 P P 06 11 28.7 -1.6
comp=Z,83nm,0.9s
MPLH Magyarpolny 21.26 46 P P 06 11 30.2 -0.1
PHP Peshkopia 21.32 63 P P 06 11 31.7 +0.6

CLL	**Collm**	**21.38**	**32**	P	**P**	**06 11 31.1**	**-0.4**
	comp=Z,12nm,0.8s						
CLL	**Collm**	**21.38**	**32**	*e*P	**P**	**06 11 32.0**	**+0.5**
CLL				*i* pP	**sP**	**06 11 34.0**	**+0.3**
	comp=Z,10.0nm,0.8s						
CLL				*ex*	x	06 11 42.0	
CLL				*i* PPP	PPP	06 12 01.4	
CLL				*e*S	**S**	**06 15 29.0**	**-0.1**
CLL	**Collm**	**21.38**	**32**	P	**P**	**06 11 33.3**	**+1.7**
BRG	**Berggiesshubel**	**21.50**	**34**	P	**P**	**06 11 34.5**	**+1.6**
BRG	**Berggiesshubel**	**21.50**	**34**	*e*P	**P**	**06 11 36.1**	**+3.2**
BRG				Amp		06 11 37.0	
	comp=Z,7.7nm,0.8s						
BRG	**Berggiesshubel**	**21.50**	**34**	S	Sn	06 15 36.0	-3.5
MORH	**Mrgy, Hungar**	**21.50**	**50**	⇓P	**P**	**06 11 32.3**	**-0.7**
MORH	**Mrgy, Hungar**	**21.50**	**50**	P	**P**	**06 11 31.7**	**-1.3**
	comp=Z,11nm,1.1s						
MORH	**Mrgy, Hungar**	**21.50**	**50**	P	**P**	**06 11 33.4**	**+0.4**
KRUC	**Moravsky**	**21.60**	**41**	*e*P	**P**	**06 11 32.4**	**-1.6**
KRUC	**Moravsky**	**21.60**	**41**	P	**P**	**06 11 32.6**	**-1.4**
MODS	**Modra-Piesok**	**21.71**	**43**	P	**P**	**06 11 34.4**	**-0.8**
MODS	**Modra-Piesok**	**21.71**	**43**	*e*P	**P**	**06 11 34.7**	**-0.5**
VRAC	**Vranov**	**21.85**	**40**	P	**P**	**06 11 35.5**	**-1.2**
	comp=Z,7.2nm,0.7s,baz=246,slow=12,SNR=7.3						
VRAC				LR	LR	06 20 49.3	
	comp=Z,44nm,19.2s,baz=234,slow=39						
	comp=Z,7.2nm,0.7s						
VRAC	**Vranov**	**21.85**	**40**	⇓P	**P**	**06 11 34.2**	**-2.4**
VRAC	**Vranov**	**21.85**	**40**	*e*P	**P**	**06 11 34.6**	**-2.1**
VRAC	**Vranov**	**21.85**	**40**	P	**P**	**06 11 35.0**	**-1.7**
TORD	**Torodi Ar. Bea**	**22.03**	**162**	P	**P**	**06 11 38.8**	**0.0**
	comp=Z,13nm,1.0s,baz=344,slow=10.0,SNR=35						
	comp=Z,13nm,1.0s						
TORD	**Torodi Ar. Bea**	**22.03**	**162**	P	**P**	**06 11 38.8**	**0.0**
TORD				IAmb	IAmb	06 11 43.3	
	comp=Z,25nm,1.2s						
ITM	**Ithomi**	**22.05**	**75**	P	**P**	**06 11 38.8**	**-0.2**
JAVC	**Velka Javorina**	**22.19**	**43**	P	**P**	**06 11 42.7**	**+2.3**
UPC	**Upice**	**22.26**	**37**	P	**P**	**06 11 39.7**	**-1.4**
DPC	**Dobruska-Polom**	**22.32**	**38**	*e*P	**P**	**06 11 41.4**	**-0.4**
DPC				AMS	AMS	06 22 10.0	
	comp=Z,200nm,11.8s						
DPC	**Dobruska-Polom**	**22.32**	**38**	P	**P**	**06 11 37.1**	**-4.7**
DPC	**Dobruska-Polom**	**22.32**	**38**	P	**P**	**06 11 40.5**	**-1.3**
KRLC	**Kraliky**	**22.40**	**39**	*e*P	**P**	**06 11 42.0**	**-0.6**
KRLC				AMS	AMS	06 21 50.0	
	comp=Z,200nm,13.5s						
KRLC	**Kraliky**	**22.40**	**39**	P	**P**	**06 11 42.6**	**+0.1**
AGG	**Agios Georgios**	**22.41**	**70**	P	**P**	**06 11 43.8**	**+1.0**
MAUC	**Maruska**	**22.55**	**42**	*e*P	**P**	**06 11 43.8**	**-0.4**
KSP	**Ksiaz**	**22.61**	**37**	P	**P**	**06 11 44.5**	**-0.3**
	comp=Z,5.2nm,0.7s						
MORC	**Moravsky Berou**	**22.62**	**40**	⇓P	**P**	**06 11 42.4**	**-2.6**
MORC	**Moravsky Berou**	**22.62**	**40**	P	**P**	**06 11 43.4**	**-1.6**
MORC				IAmb	IAmb	06 11 46.5	
	comp=Z,9.6nm,0.8s						
MORC	**Moravsky Berou**	**22.62**	**40**	*e*P	**P**	**06 11 44.0**	**-1.0**
MORC	**Moravsky Berou**	**22.62**	**40**	P	**P**	**06 11 44.2**	**-0.8**
VYHS	**Vyhne**	**22.67**	**44**	*e*P	**P**	**06 11 45.4**	**0.0**
MDVR	**Moldovita**	**23.00**	**55**	⇓P	**P**	**06 11 49.6**	**+0.6**
PSZ	**Piszkesteto**	**23.02**	**47**	⇑P	**P**	**06 11 47.6**	**-1.6**
PSZ	**Piszkesteto**	**23.02**	**47**	P	**P**	**06 11 50.0**	**+0.8**
KNT	**Kendrikon**	**23.05**	**65**	P	**P**	**06 11 49.0**	**-0.6**
BZS	**Buzias**	**23.20**	**53**	P	**P**	**06 11 50.7**	**-0.3**
LANS	**Liptovska Anna**	**23.36**	**43**	*e*P	**P**	**06 11 53.2**	**+0.6**
SIRR	**Siria**	**23.45**	**52**	⇑P	**P**	**06 11 53.2**	**-0.4**
HERR	**Herculane**	**23.51**	**55**	⇑P	**P**	**06 11 54.6**	**+0.5**
PAIG	**Paliouri**	**23.51**	**68**	P	**P**	**06 11 54.1**	**0.0**
GZR	**Gura Zlata**	**23.90**	**54**	⇑P	**P**	**06 11 57.6**	**-0.4**
NIE	**Niedzica**	**23.96**	**44**	P	**P**	**06 11 54.9**	**-3.6**
	comp=Z,4.7nm,1.4s						
ABAH	**Abaujker**	**23.99**	**47**	P	**P**	**06 11 57.6**	**-1.2**
OJC	**Ojcow**	**24.09**	**41**	P	**P**	**06 11 56.0**	**-3.7**
	comp=Z,10nm,0.9s						
DRGR		**24.32**	**51**	⇑P	**P**	**06 12 00.7**	**-1.2**
MARR	**Marisel-Cluj**	**24.54**	**52**	⇑P	**P**	**06 12 03.0**	**-1.0**
TRPA	**Tarpa**	**24.71**	**48**	P	**P**	**06 12 04.2**	**-1.2**
KOLS	**Kolonicke sedl**	**24.89**	**46**	P	**P**	**06 12 08.0**	**+1.1**
KOLS	**Kolonicke sedl**	**24.89**	**46**	*e*P	**P**	**06 12 08.3**	**+1.3**
RDO	**Rodhopi**	**25.03**	**65**	IAmb	IAmb	06 12 15.6	
	comp=Z,11nm,1.1s						
RDO	**Rodhopi**	**25.03**	**65**	P	**P**	**06 12 07.5**	**-0.8**
ARR	**Arges**	**25.15**	**55**	⇑P	**P**	**06 12 09.3**	**-0.1**
ARR	**Arges**	**25.15**	**55**	P	**P**	**06 12 07.5**	**-2.0**
KWP	**Kalwaria Pacla**	**25.45**	**45**	P	**P**	**06 12 09.7**	**-2.3**
	comp=Z,25nm,0.8s						
VOIR		**25.45**	**55**	⇑P	**P**	**06 12 11.9**	**-0.2**
VOIR		**25.45**	**55**	P	**P**	**06 12 10.6**	**-1.6**
	comp=Z,14nm,1.0s						
VOIR		**25.45**	**55**	P	**P**	**06 12 11.5**	**-0.7**
DOPR	**Dopca**	**25.82**	**54**	⇑P	**P**	**06 12 15.6**	**+0.1**
MLR	**Muntele Rosu**	**26.08**	**56**	LR	LR	06 23 45.3	
	comp=Z,155nm,18.2s,baz=254,slow=40						
MLR	**Muntele Rosu**	**26.08**	**56**	⇓P	**P**	**06 12 18.2**	**+0.3**
MLR	**Muntele Rosu**	**26.08**	**56**	P	**P**	**06 12 16.2**	**-1.7**
MLR				IAmb	IAmb	06 12 30.1	
	comp=Z,12nm,0.7s						
MLR	**Muntele Rosu**	**26.08**	**56**	P	**P**	**06 12 15.3**	**-2.6**
	comp=Z,17nm,0.9s						
MLR	**Muntele Rosu**	**26.08**	**56**	P	**P**	**06 12 18.3**	**+0.4**
BUR08	**Bucovina Ar. S**	**26.20**	**51**	P	**P**	**06 12 19.4**	**+0.3**
BUR08				IAmb	IAmb	06 12 31.9	
	comp=Z,8.1nm,0.9s						
BURAR	**Bucovina Array**	**26.21**	**51**	⇑P	**P**	**06 12 18.2**	**-0.8**
BURAR	**Bucovina Array**	**26.21**	**51**	P	**P**	**06 12 19.3**	**+0.3**
PLOR	**Plostina**	**26.64**	**55**	⇑P	**P**	**06 12 23.2**	**+0.2**
VRI	**Vrincioaia**	**26.70**	**55**	⇓P	**P**	**06 12 23.4**	**0.0**
VRI	**Vrincioaia**	**26.70**	**55**	P	**P**	**06 12 22.6**	**-0.8**
AYDN	**Tasoluk**	**26.77**	**73**	P	**P**	**06 12 24.1**	**0.0**
KMPD	**K-Podol'skiy**	**27.31**	**49**	P	P	06 12 21.2	-7.6
DBIC	**Dimbokro**	**27.59**	**180**	P	**P**	**06 12 31.0**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=18,slow=12,SNR=3.5						
DBIC				LR	LR	06 23 19.2	
	comp=Z,298nm,18.0s,baz=14,slow=36						
	comp=Z,3.4nm,0.7s						
DBIC	**Dimbokro**	**27.59**	**180**	P	**P**	**06 12 31.0**	**-0.6**
DBIC				IAmb	IAmb	06 12 39.1	
	comp=Z,12nm,1.1s						
RNPP8	**Varash**	**28.00**	**43**	P	**P**	**06 12 33.7**	**-1.3**
RNPP9	**Sopachiv**	**28.05**	**43**	P	**P**	**06 12 31.4**	**-4.0**
SORM	**Soroca**	**28.37**	**51**	⇑P	**P**	**06 12 37.4**	**-0.9**
HFS	**Hagfors**	**28.51**	**20**	P	**P**	**06 12 37.5**	**-1.9**
	comp=Z,3.1nm,0.7s,baz=202,slow=7.4,SNR=5.0						
HFS				LR	LR	06 25 34.6	
	comp=Z,147nm,18.3s,baz=208,slow=40						
	comp=Z,3.1nm,0.7s						
LUBAR	**Lubar, Ukraine**	**28.57**	**47**	P	**P**	**06 12 41.5**	**+1.4**
NOA	**NORSAR Array B**	**28.65**	**17**	P	**P**	**06 12 38.4**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=211,slow=9.0,SNR=2.8						
NOA				LR	LR	06 26 16.6	
	comp=Z,315nm,18.6s,baz=215,slow=41						
	comp=Z,0.9nm,0.7s						
MI28	**Mi28,Pidlybu**	**28.89**	**45**	P	**P**	**06 12 40.4**	**-2.5**
BAL3X	**Bal3x, Balta**	**29.13**	**52**	P	**P**	**06 12 45.3**	**+0.3**
AK16	**Malin Array Si**	**29.64**	**46**	P	**P**	06 12 42.8	-6.8
AK02	**Malin Array Si**	**29.70**	**46**	P	**P**	**06 12 45.9**	**-4.2**
KIEV	**Kiev**	**29.71**	**46**	P	**P**	**06 12 48.8**	**-1.4**
KIEV	**Kiev**	**29.71**	**46**	P	P	06 12 44.9	-5.3
AK08	**Malin Array Si**	**29.72**	**46**	P	P	06 12 44.4	-5.8
AKASG	**Malin Array Be**	**29.72**	**46**	P	**P**	**06 12 47.3**	**-3.0**
	comp=Z,1.1nm,0.5s,baz=248,slow=9.4,SNR=3.7						
AKASG				LR	LR	06 25 47.8	
	comp=Z,49nm,19.2s,baz=218,slow=39						
	comp=Z,1.1nm,0.5s						
AKASG	**Malin Array Be**	**29.72**	**46**	P	**P**	**06 12 47.3**	**-3.0**
AKBB	**Malin Array Si**	**29.72**	**46**	IAmb	IAmb	06 12 49.8	
	comp=Z,7.0nm,1.1s						
AKBB	**Malin Array Si**	**29.72**	**46**	P	P	06 12 44.9	-5.4
BR106	**Keskin Array S**	**31.16**	**69**	P	**P**	**06 13 03.3**	**0.0**
	comp=Z,2.1nm,0.8s						
BORG	**Borgarnes**	**31.95**	**347**	LR	LR	06 25 19.6	
	comp=Z,104nm,20.9s,baz=155,slow=35						
FINES	**FINESS Array B**	**33.57**	**27**	P	**P**	**06 13 22.0**	**-2.0**
	comp=Z,2.7nm,0.7s,baz=232,slow=6.8,SNR=9.1						
	comp=Z,2.7nm,0.7s						
KBZ	**Khabaz**	**37.93**	**61**	P	**P**	**06 13 58.4**	**-3.2**
	comp=Z,1.0nm,0.8s,baz=255,slow=12,SNR=2.0						
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**39.03**	**17**	P	**P**	**06 14 08.5**	**-2.1**
	comp=Z,2.9nm,0.9s,baz=237,slow=8.4,SNR=7.8						
	comp=Z,2.9nm,0.9s						
ARCES	**ARCESS Array B**	**39.03**	**17**	P	**P**	**06 14 08.5**	**-2.1**
ARCES				IAmb	IAmb	06 14 36.7	
	comp=Z,24nm,1.4s						

DAG	**Danmarks Havn**	**42.92**	**355**	P	**P**	**06 14 43.9**	**+1.4**
DAG	**Danmarks Havn**	**42.92**	**355**	*i* P	**P**	**06 14 43.0**	**+0.6**
KIRV	**Kirov**	**43.06**	**39**	P	**P**	**06 14 41.9**	**-2.0**
	comp=Z,42nm,0.3s,baz=277,slow=1.5,SNR=4.4						
SPITS	**Spitsbergen Ar**	**44.85**	**6**	P	**P**	**06 14 56.8**	**-1.2**
	comp=Z,11nm,1.1s,baz=204,slow=7.8,SNR=1.8						
	comp=Z,11nm,1.1s						
SCHQ	**Schefferville**	**46.76**	**316**	P	**P**	**06 15 13.3**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=77,slow=5.3,SNR=4.3						
	comp=Z,1.6nm,0.6s						
SCHQ	**Schefferville**	**46.76**	**316**	IAmb	IAmb	06 15 47.5	
	comp=Z,9.0nm,1.3s						
NEEM	**North Greenlan**	**47.59**	**348**	*i* P	**P**	**06 15 21.3**	**+1.4**
ARTI	**Arti**	**47.71**	**42**	P	**P**	**06 15 18.5**	**-2.2**
	comp=Z,14nm,0.7s,baz=256,slow=3.5,SNR=18						
	comp=Z,14nm,0.7s						
ARTI	**Arti**	**47.71**	**42**		**P**	**06 15 18.5**	**-2.2**
G65A	**Princeton**	**48.11**	**303**	P	**P**	**06 15 24.1**	**+0.1**
D62A	**Allapoint, All**	**48.82**	**305**		**P**	**06 15 30.2**	**+0.7**
ATD	**Arta Tunnel**	**49.09**	**106**	LR	LR	06 38 25.6	
	comp=Z,11nm,19.3s,baz=260,slow=39						
AB31	**Akbulak array**	**49.18**	**52**		**P**	**06 15 32.6**	**+0.4**
RCBR	**Riachuelo**	**49.48**	**222**	LR	LR	06 34 14.1	
	comp=Z,49nm,19.6s,baz=68,slow=33						
LDAQ	**Lac Daran**	**50.14**	**307**		**P**	**06 15 40.3**	**+0.6**
LDAQ				IAmb	IAmb	06 15 45.0	
	comp=Z,7.8nm,0.9s						
MDP	**Montagnes des**	**52.74**	**247**	LR	LR	06 36 20.4	
	comp=Z,39nm,18.2s,baz=43,slow=34						
NCB	**Newcomb**	**53.02**	**302**	IAmb	IAmb	06 16 06.7	
	comp=Z,7.0nm,0.9s						
ILON	**Igloolik, Nuna**	**53.63**	**335**	P	**P**	**06 16 05.7**	**+0.5**
ILON				IAmb	IAmb	06 16 06.5	
	comp=Z,5.2nm,1.1s						
BVAR	**Borovoye Array**	**55.00**	**46**	P	**P**	**06 16 13.0**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=297,slow=6.5,SNR=4.5						
	comp=Z,0.6nm,0.5s						
LSZ	**Lusaka**	**58.66**	**142**	LR	LR	06 43 05.7	
	comp=Z,92nm,18.4s,baz=176,slow=37						
GAR	**Garm**	**59.00**	**62**		**P**	**06 16 43.1**	**-1.1**
GAR	**Garm**	**59.00**	**62**	P	**P**	**06 16 42.8**	**-1.5**
NRIK	**Noril'sk**	**59.18**	**24**	LR	LR	06 46 40.3	
	comp=Z,65nm,19.6s,baz=250,slow=41						
KURBB	**Kurchatov Arra**	**60.51**	**47**	P	**P**	**06 16 52.0**	**-2.3**
	comp=Z,4.4nm,0.7s,baz=293,slow=7.8,SNR=18						
	comp=Z,4.4nm,0.7s						
KURK	**Kurchatov**	**60.53**	**47**		**P**	**06 16 53.0**	**-1.4**
KURK				IAmb	IAmb	06 17 19.9	
	comp=Z,4.2nm,0.8s						
KURK	**Kurchatov**	**60.53**	**47**	P	**P**	**06 16 53.2**	**-1.2**
AAK	**Ala-Archa**	**60.66**	**56**	P	**P**	**06 16 54.7**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=293,slow=6.5,SNR=3.9						
AAK				LR	LR	06 45 15.1	
	comp=Z,68nm,19.1s,baz=206,slow=38						
	comp=Z,1.3nm,0.3s						
AAK	**Ala-Archa**	**60.66**	**56**	P	**P**	**06 16 54.7**	**-0.9**
AAK				IAmb	IAmb	06 16 58.9	
	comp=Z,3.3nm,0.9s						
KSH2	**Kashi**	**62.73**	**60**	P	**P**	**06 17 09.0**	**-0.6**
KSH2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV	**Zalesovo Beam**	**62.96**	**42**	P	**P**	**06 17 09.4**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=299,slow=7.2,SNR=8.6						
ZALV				LR	LR	06 44 26.7	
	comp=Z,51nm,20.5s,baz=256,slow=36						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	**64.23**	**50**	P	**P**	**06 17 17.4**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=290,slow=4.7,SNR=11						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**64.23**	**50**		**P**	**06 17 17.7**	**-1.5**
ULM	**Lac du Bonnet**	**64.93**	**315**	P	**P**	**06 17 23.9**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=59,slow=5.9,SNR=4.1						
	comp=Z,1.3nm,0.3s						
T42A	**Van Buren**	**67.47**	**300**	IAmb	IAmb	06 17 43.8	
	comp=Z,3.9nm,1.0s						
YKA	**Yellowknife Ar**	**68.30**	**332**	P	**P**	**06 17 44.9**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=65,slow=6.4,SNR=14						
YKA				LR	LR	06 44 42.5	
	comp=Z,81nm,20.8s,baz=8.0,slow=33						
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**69.41**	**14**	LR	LR	06 54 15.5	
	comp=Z,41nm,18.5s,baz=329,slow=41						
HHAR	**Hobbs**	**69.85**	**301**	IAmb	IAmb	06 17 59.5	
	comp=Z,4.2nm,0.8s						
X40A	**Basin Creek Fa**	**69.90**	**298**	IAmb	IAmb	06 17 59.2	
	comp=Z,4.2nm,1.0s						
MIAR	**Mount Ida**	**70.41**	**299**	P	**P**	**06 17 58.9**	**+0.3**
MIAR				IAmb	IAmb	06 18 02.9	
	comp=Z,6.1nm,1.1s						
MIAR	**Mount Ida**	**70.41**	**299**	P	**P**	**06 17 59.4**	**+0.7**
T35A	**Sooner Cattle**	**71.36**	**302**	P	**P**	**06 18 05.0**	**+0.6**
C27K	**Jago River**	**71.98**	**346**	IAmb	IAmb	06 18 17.5	
	comp=Z,8.0nm,1.2s						
D25K	**Kavik River**	**72.75**	**347**	IAmb	IAmb	06 18 18.6	
	comp=Z,4.1nm,0.8s						
H29M	**Whitestone**	**73.50**	**342**		**P**	**06 18 17.4**	**+0.8**
H29M				IAmb	IAmb	06 18 22.0	
	comp=Z,5.3nm,0.8s						
E25K	**Arctic Village**	**73.61**	**346**	IAmb	IAmb	06 18 31.1	
	comp=Z,2.9nm,0.8s						
I30M	**Mount Dempster**	**73.74**	**341**		**P**	**06 18 19.0**	**+0.8**
I30M				IAmb	IAmb	06 18 24.2	
	comp=Z,4.3nm,0.8s						
WMOK	**Wichita Mounta**	**74.04**	**301**	IAmb	IAmb	06 18 28.6	
	comp=Z,7.5nm,1.4s						
WMOK	**Wichita Mounta**	**74.04**	**301**	P	**P**	**06 18 21.4**	**+1.0**
TLY	**Talaya**	**74.04**	**38**	LR	LR	06 52 02.8	
	comp=Z,59nm,19.3s,baz=209,slow=37						
MMPY	**Sheldon Lake,**	**74.16**	**337**	IAmb	IAmb	06 18 23.3	
	comp=Z,4.5nm,1.0s						
G26K	**Porcupine Rive**	**74.20**	**344**	IAmb	IAmb	06 18 27.8	
	comp=Z,3.6nm,0.7s						
H27K	**Steamboat Moun**	**74.27**	**343**	IAmb	IAmb	06 18 27.5	
	comp=Z,6.1nm,0.9s						
E23K	**Chandalar**	**74.45**	**347**	IAmb	IAmb	06 18 29.4	
	comp=Z,4.0nm,1.0s						
I28M	**Miner Creek**	**74.50**	**342**		**P**	**06 18 23.3**	**+0.7**
I28M				IAmb	IAmb	06 18 28.3	
	comp=Z,5.8nm,0.8s						
I27K	**Kandik River**	**74.80**	**343**	IAmb	IAmb	06 18 30.6	
	comp=Z,6.5nm,1.0s						
ISCO	**Idaho Springs**	**76.00**	**309**	P	**P**	**06 18 32.8**	**+0.9**
M29M	**Somme Creek**	**76.49**	**340**	IAmb	IAmb	06 18 40.7	
	comp=Z,3.5nm,0.8s						
ILAR	**Eielson Array**	**76.73**	**344**	P	**P**	**06 18 34.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=20,slow=6.5,SNR=1.4						
ILAR				LR	LR	06 54 45.8	
	comp=Z,38nm,18.1s,baz=90,slow=38						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**76.81**	**313**	P	**P**	**06 18 36.0**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=76,slow=6.3,SNR=7.1						
	comp=Z,0.7nm,0.8s						
N30M	**Aishikik Lake**	**76.85**	**339**	IAmb	IAmb	06 18 38.2	
	comp=Z,5.7nm,1.0s						
YAK	**Yakutsk**	**77.20**	**20**	LR	LR	06 58 50.6	
	comp=Z,71nm,18.8s,baz=300,slow=41						
SONM	**Songino Array**	**77.78**	**40**	P	**P**	**06 18 40.4**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=296,slow=6.4,SNR=8.2						
SONM				LR	LR	06 57 01.7	
	comp=Z,51nm,18.2s,baz=270,slow=39						
	comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**77.78**	**40**	P	**P**	**06 18 40.4**	**-1.2**
CPUP	**Villa Florida**	**78.11**	**226**	P	**P**	**06 18 43.6**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=46,slow=10,SNR=5.0						
CPUP				LR	LR	06 53 40.0	
	comp=Z,85nm,18.1s,baz=60,slow=36						
	comp=Z,2.7nm,0.9s						
CPUP	**Villa Florida**	**78.11**	**226**	P	**P**	**06 18 43.6**	**+0.2**
LPAZ	**La Paz**	**78.29**	**241**	P	**P**	**06 18 45.1**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=49,slow=6.0,SNR=5.2						
LPAZ				LR	LR	06 49 34.2	
	comp=Z,25nm,21.2s,baz=63,slow=33						
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**78.29**	**241**	P	**P**	**06 18 45.1**	**-0.3**
MNHN	**Monahans**	**78.68**	**300**	IAmb	IAmb	06 18 55.1	
	comp=Z,2.9nm,0.9s						
TXAR	**Lajitas Array**	**80.44**	**299**	P	**P**	**06 18 57.2**	**+0.7**
	comp=Z,0.3nm,0.9s,baz=60,slow=7.4,SNR=4.4						
	comp=Z,0.3nm,0.9s						
BBB	**Bella Bella**	**80.47**	**328**	LR	LR	06 53 10.5	
	comp=Z,56nm,18.5s,baz=51,slow=35						
TUC	**Tucson**	**83.71**	**305**	P	**P**	**06 19 14.9**	**+1.3**
KDAK	**Kodiak Island**	**84.19**	**343**	LR	LR	06 56 47.2	
	comp=Z,60nm,19.5s,baz=65,slow=36						
MA2	**Magadan**	**84.25**	**12**	LR	LR	07 04 15.0	
	comp=Z,47nm,18.2s,baz=298,slow=41						
HHC	**Hu-ho-hao-te**	**85.11**	**43**	*e*P	**P**	**06 19 19.2**	**-1.4**
HHC				pmax	pmax		

	comp=Z,10.0nm,0.7s						
PZH	**PanZhiHua**	**87.98**	**59**	P	**P**	**06 19 34.7**	**-0.2**
KLR	**Kul'dur**	**88.31**	**27**	LR	LR	07 04 44.2	
	comp=Z,69nm,18.6s,baz=258,slow=40						
CMAR	**Chiang Mai Arr**	**90.75**	**67**	LR	LR	07 05 14.1	
	comp=Z,19nm,18.6s,baz=195,slow=39						
PLCA	**Paso Flores**	**96.02**	**224**	LR	LR	07 01 34.7	
	comp=Z,43nm,20.2s,baz=78,slow=34						
KSRS	**Korea Array**	**96.21**	**36**	LR	LR	07 07 00.6	
	comp=Z,39nm,19.0s,baz=230,slow=38						

*AFAD **01** 06:09:40.0,38.56N×45.55E,h5km±3km,ML2.5*
*AZER **01** 06:09:45.4,38.49N×44.95E,h12km,ml2.8*
*TEH **01** 06:09:45.3,38.32N×45.05E,h12km±999km,ML2.8,*
Presumed earthquake
ISC 01 06:09:46.6±1.1,38.49N±0.03×45.14E±0.02,h10km±10km,
n23,σ1.68/41,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.43**	**118**	Pg	**Pb**	**06 09 55.8**	**-0.6**
ISHB				Sg	**Sg**	**06 10 02.0**	**+1.4**
IMRD	**Marand**	**0.50**	**63**	Pg	**Pb**	**06 09 58.0**	**+0.5**
NAX	**Nakhchivan**	**0.74**	**22**	P	**Pn**	**06 10 02.7**	**-0.5**
NAX				S	**Sn**	**06 10 15.2**	**+0.7**
ORD	**Ordubad**	**0.80**	**56**	P	**Pn**	**06 10 03.5**	**-0.5**
ORD				S	**Sn**	**06 10 16.4**	**+0.3**
ITBZ	**Tabriz**	**0.83**	**107**	Pg	**Pg**	**06 10 01.4**	**-1.2**
OZAP	**Van, Ozalp-Mer**	**0.92**	**281**	P	**Pn**	**06 10 03.7**	**-2.0**
OZAP				S	**Sn**	**06 10 20.4**	**+1.3**
OZAP				IAML		06 10 23.0	
	comp=N,71nm,0.7s						
OZAP				IAML		06 10 34.0	
	comp=E,44nm,0.6s						
SBZ	**Shahbuz**	**0.97**	**19**	P	**Pn**	**06 10 06.8**	**+0.5**
SBZ				S	**Sn**	**06 10 22.4**	**+2.2**
IAZR	**Azarshahr**	**1.04**	**140**	Pg	**Pb**	**06 10 04.9**	**-1.9**
YOVA	**Hakkari_Yksek**	**1.12**	**217**	P	**Pn**	**06 10 06.6**	**-1.9**
YOVA				IAML		06 10 26.0	
	comp=N,113nm,1.0s						
YOVA				IAML		06 10 26.0	
	comp=E,152nm,0.9s						
YOVA				S	**Sn**	**06 10 26.8**	**+2.7**
CLDR	**Caldiran**	**1.16**	**305**	P	**Pb**	**06 10 06.4**	**-2.5**
CLDR				IAML		06 10 26.0	
	comp=N,154nm,0.4s						
CLDR				S	**Sn**	**06 10 26.1**	**+1.0**
CLDR				IAML		06 10 29.0	
	comp=E,216nm,0.6s						
HYR	**Heyderabad**	**1.25**	**350**	P	**Pg**	**06 10 10.8**	**+0.2**
HYR				S	**Sg**	**06 10 29.1**	**+2.2**
VMUR	**Van-Muradiye**	**1.33**	**293**	P	**Pg**	**06 10 12.8**	**+0.7**
VMUR				S	**Sg**	**06 10 34.2**	**+5.0**
VMUR				IAML		06 10 37.0	
	comp=E,58nm,0.5s						
VMUR				IAML		06 10 42.0	
	comp=N,65nm,1.0s						
HAKT	**HAKKARI**	**1.46**	**231**	P	**Pg**	**06 10 13.3**	**-1.3**
HAKT				S	**Sg**	**06 10 36.1**	**+2.5**
HAKT				IAML		06 10 45.0	
	comp=E,37nm,0.8s				

PAVB	**Pavas, San Jos**	**0.67**	**331**	*eP*	**Pb**	**06 17 38.9**	**-0.8**
CVIMO	**Finca Echandi**	**0.69**	**347**	*iP*	**Pn**	**06 17 43.8**	**+3.7**
EDP2	**Potrero Grande**	**0.69**	**119**	*eP*	**Pb**	**06 17 39.7**	**-0.3**
RESJ	**San Isidro (Tu**	**0.69**	**12**	*eP*	**Pb**	**06 17 39.3**	**-0.8**
DOMI	**Santo Domingo**	**0.69**	**335**	*eP*	**Pb**	**06 17 39.6**	**-0.6**
SANTA	**Santa Ana**	**0.70**	**326**	*eP*	**Pb**	**06 17 39.1**	**-1.1**
PURI	**Puriscal**	**0.71**	**314**	*eP*	**Pb**	**06 17 39.8**	**-0.6**
HEME	**Heredia, Merce**	**0.73**	**332**	*eP*	**Pb**	**06 17 40.0**	**-0.7**
LCOCO	**El Coco**	**0.77**	**18**	*eP*	**Pb**	**06 17 40.2**	**-1.1**
RVLA	**Villa Bonita**	**0.78**	**15**	*eP*	**Pb**	**06 17 40.5**	**-1.0**
UELA	**Alajuela**	**0.78**	**328**	*eP*	**Pb**	**06 17 40.9**	**-0.7**
CVTG	**V. Turrialba,**	**0.79**	**1**	*eP*	**Pb**	**06 17 41.1**	**-0.7**
IRES	**Siquirres**	**0.79**	**21**	*eP*	**Pb**	**06 17 40.7**	**-1.0**
VBV1	**V. Barva**	**0.82**	**338**	*eP*	**Pb**	**06 17 41.5**	**-0.8**
POAS	**San Pedro de P**	**0.85**	**328**	*eP*	**Pb**	**06 17 42.3**	**-0.4**
TAAN	**Batan**	**0.85**	**31**	*eP*	**Pb**	**06 17 41.8**	**-0.9**
TCS1	**Tacares**	**0.85**	**324**	*P*	**Pb**	**06 17 42.2**	**-0.5**
ATEO	**Atenas**	**0.85**	**317**	*eP*	**Pb**	**06 17 41.8**	**-1.0**
TRB2	**Turrubares**	**0.86**	**311**	*P*	**Pb**	**06 17 42.0**	**-0.8**
TRB2				*S*	**Sb**	**06 17 53.8**	**-0.2**
TRB2	**Turrubares**	**0.86**	**311**	*eP*	**Pb**	**06 17 41.9**	**-0.8**
PILE	**Guapiles**	**0.86**	**0**	*eP*	**Pb**	**06 17 41.9**	**-1.0**
GREC	**Grecia**	**0.88**	**325**	*eP*	**Pb**	**06 17 42.9**	**+0.3**
OROT	**Orotina**	**0.92**	**308**	*eP*	**Pb**	**06 17 42.9**	**-0.9**
SARCI	**Sarchi**	**0.92**	**323**	*eP*	**Pb**	**06 17 43.4**	**-0.4**
EDAD	**Golfito**	**0.93**	**138**	*eP*	**Pb**	**06 17 42.0**	**-2.0**
VPS8	**V Poas**	**0.94**	**332**	*eP*	**Pb**	**06 17 43.8**	**-0.5**
NARAN	**Naranjo de Ala**	**0.94**	**322**	*eP*	**Pb**	**06 17 43.4**	**-0.9**
VPS5	**V. Poas**	**0.94**	**333**	*eP*	**Pb**	**06 17 43.6**	**-0.8**
PALD	**Palmares**	**0.94**	**318**	*eP*	**Pb**	**06 17 43.1**	**-1.2**
FITO	**Golfito**	**0.96**	**139**	*eP*	**Pb**	**06 17 42.4**	**-2.0**
VITO	**San Vito**	**0.97**	**123**	*eP*	**Pb**	**06 17 44.1**	**-0.6**
RAMO	**San Ramon**	**0.99**	**318**	*eP*	**Pb**	**06 17 44.0**	**-1.1**
CARI	**Cariari**	**1.01**	**3**	*eP*	**Pn**	**06 17 44.2**	**-0.1**
ZARE	**Zarcero**	**1.02**	**325**	*eP*	**Pb**	**06 17 44.7**	**-0.9**
PIRO	**Carate, Puerto**	**1.04**	**154**	*P*	**Pb**	**06 17 46.0**	**+0.1**
PIRO				*S*	**Sn**	**06 18 01.2**	**+3.0**
PIRO	**Carate, Puerto**	**1.04**	**154**	*eP*	**Pb**	**06 17 45.9**	**+0.1**
VPL1	**V. Platanar**	**1.06**	**328**	*eP*	**Pn**	**06 17 45.2**	**0.0**
ARTO	**Ro Cuarto**	**1.07**	**337**	*eP*	**Pn**	**06 17 45.4**	**+0.1**
ARZA	**Esparza**	**1.07**	**306**	*eP*	**Pn**	**06 17 45.3**	**0.0**
VPL3	**V. Platanar**	**1.12**	**333**	*eP*	**Pn**	**06 17 46.3**	**+0.5**
SCLRA	**Santa Clara, W**	**1.12**	**117**	*eP*	**Pn**	**06 17 45.9**	**0.0**
SCLRA	**Santa Clara, W**	**1.12**	**117**	*iP*	**Pn**	**06 17 46.1**	**+0.1**
SCLRA				*iS*	**Sn**	**06 18 02.0**	**+1.6**
RGM0	**Gandoca**	**1.19**	**78**	*P*	**Pb**	**06 17 48.0**	**-0.4**
RGM0	**Gandoca**	**1.19**	**78**	*eP*	**Pb**	**06 17 47.8**	**-0.6**
ITAL	**Pital**	**1.19**	**337**	*eP*	**Pn**	**06 17 47.2**	**+0.3**
TRT2	**Tortugero**	**1.20**	**3**	*P*	**Pn**	**06 17 47.0**	**+0.1**
TRT2				*S*	**Sn**	**06 18 02.9**	**+0.7**
TRT2	**Tortugero**	**1.20**	**3**	*eP*	**Pn**	**06 17 46.5**	**-0.4**
BRU2	**Volcan**	**1.22**	**117**	*P*	**Pn**	**06 17 47.5**	**+0.2**
BRU2	**Volcan**	**1.22**	**117**	*eP*	**Pn**	**06 17 47.2**	**-0.1**
BRU2	**Volcan**	**1.22**	**117**	*iP*	**Pn**	**06 17 47.2**	**-0.1**
BRU2				*iP*	**Pb**	**06 17 47.9**	**-1.0**
BRU2				*eS*	**Sb**	**06 18 04.0**	**-0.4**
CLLRA	**Cordillera,**	**1.31**	**117**	*eP*	**Pn**	**06 17 48.5**	**0.0**
CLLRA	**Cordillera,**	**1.31**	**117**	*iP*	**Pn**	**06 17 48.6**	**0.0**
CLLRA				*eS*	**Sb**	**06 18 06.9**	**0.0**
MTEVE	**Monteverde**	**1.40**	**313**	*eP*	**Pn**	**06 17 50.5**	**+0.6**
FORC	**Fortuna**	**1.41**	**322**	*eP*	**Pn**	**06 17 50.9**	**+1.1**
JEFFS	**S de V. Baru**	**1.41**	**118**	*iP*	**Pn**	**06 17 49.9**	**0.0**
VACR	**Volcan Arenal**	**1.42**	**322**	*eP*	**Pn**	**06 17 50.7**	**+0.7**
VARE2	**V. Arenal**	**1.43**	**320**	*eP*	**Pb**	**06 17 51.4**	**-1.1**
BQTLY	**Boquete Panama**	**1.44**	**114**	*eP*	**Pn**	**06 17 50.4**	**0.0**
BQTLY	**Boquete Panama**	**1.44**	**114**	*iP*	**Pn**	**06 17 50.4**	**0.0**
JTS	**Las Juntas de**	**1.48**	**309**	*P*	**Pn**	**06 17 51.7**	**+0.9**
JTS				*S*	**Sn**	**06 18 10.1**	**+1.1**
JTS	**Las Juntas de**	**1.48**	**309**	*eP*	**Pn**	**06 17 51.2**	**+0.4**
JUNT	**Juntas**	**1.48**	**309**	*eP*	**Pn**	**06 17 51.8**	**+1.0**
LMNES	**Limones**	**1.54**	**143**	*eP*	**Pb**	**06 17 53.4**	**-1.0**
NYURE	**Nandayure**	**1.58**	**294**	*eP*	**Pn**	**06 17 53.2**	**+1.1**
PBNVO	**Pueblo Nuevo,**	**1.64**	**106**	*eP*	**Pn**	**06 17 53.0**	**0.0**
PBNVO	**Pueblo Nuevo,**	**1.64**	**106**	*iP*	**Pn**	**06 17 53.2**	**+0.2**
PBNVO				*eS*	**Sn**	**06 18 13.6**	**+0.5**
PBNVO				IAML		06 18 15.4	
	comp=Z,302nm,0.2s						
BGUAL	**Bijagual, Pana**	**1.67**	**120**	*eP*	**Pn**	**06 17 53.3**	**0.0**
BGUAL	**Bijagual, Pana**	**1.67**	**120**	*iP*	**Pn**	**06 17 53.5**	**+0.2**
RBALA	**Bur**	**1.68**	**106**	*eP*	**Pn**	**06 17 53.4**	**-0.2**
RBALA	**Bur**	**1.68**	**106**	*iP*	**Pn**	**06 17 53.7**	**+0.1**
RBALA				*eS*	**Sn**	**06 18 14.7**	**+0.6**
CMARA	**Lajas Hojancha**	**1.74**	**293**	*P*	**Pb**	**06 17 55.4**	**+0.9**
CMARA				*S*	**Sb**	**06 18 17.8**	**-1.5**
TENO	**El Achiote**	**1.78**	**319**	*eP*	**Pn**	**06 17 56.7**	**+1.7**
UPAL	**Upala**	**1.95**	**322**	*P*	**Pn**	**06 17 58.9**	**+1.6**
KKNTU	**Kakint²**	**2.02**	**104**	*eP*	**Pn**	**06 17 58.7**	**+0.4**
ALIBA	**Liberia Airpor**	**2.12**	**306**	*eP*	**Pb**	**06 18 02.3**	**-1.9**
LAPC	**Finca la Perla**	**2.15**	**311**	*eP*	**Pn**	**06 18 00.7**	**+0.7**
BOAB	**BOACO BROADBAN**	**2.59**	**329**	*P*	**Pn**	**06 18 20.9**	**+1.1**
BCIP	**Isla Barro Col**	**3.91**	**92**	*P*	**Pn**	**06 18 24.7**	**+0.5**
BCIP	**Isla Barro Col**	**3.91**	**92**	*eP*	**Pn**	**06 18 24.4**	**+0.2**

*RSNC **01** 06:38:14.3±0.0,7°N±1°×7°3W±°, h145km±2km, M2.4, ML2.2*
*FUNV **01** 06:38:16.0, 7°.13N×73°.12W, h5km, MW2.9, Presumed earthquake*

ISC 01 06:38:12.8±1.5, 6°.88N±0°.04×73°.13W±0°.05, h151km±9km, n19, σ1°23/38, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.62**	**43**	*P*	**Pn**	**06 38 36.7**	**+1.2**
PAMC				*S*	**Sn**	**06 38 53.6**	**+0.8**
BRJC	**Barrancabermej**	**0.62**	**278**	*P*	**Pn**	**06 38 35.6**	**+0.7**
BRJC				*S*	**Sn**	**06 38 52.6**	**+0.9**
RUSC	**La Rusia**	**0.99**	**178**	*P*	**Pn**	**06 38 37.8**	**-0.3**
RUSC				*S*	**Sn**	**06 38 56.0**	**-1.4**
RUSC	**La Rusia**	**0.99**	**178**	*eP*	**Pn**	**06 38 38.0**	**-0.1**
RUSC				*eS*	**Sn**	**06 38 55.0**	**-2.4**
OCAC	**Ocana**	**1.36**	**352**	*P*	**Pn**	**06 38 42.0**	**+0.8**
OCAC				*S*	**Sn**	**06 39 03.8**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	*P*	**Pn**	**06 38 40.4**	**-0.7**
PTBC				*S*	**Sn**	**06 39 01.5**	**-1.2**
SPBC	**San Pablo de B**	**1.54**	**218**	*P*	**Pn**	**06 38 42.8**	**-0.2**
SPBC				*S*	**Sn**	**06 39 04.9**	**-1.3**
CHIC	**Chingaza**	**2.32**	**195**	*P*	**Pn**	**06 38 52.2**	**0.0**
CHIC				*S*	**Sn**	**06 39 21.6**	**-0.9**
ROSC	**El Rosal**	**2.35**	**210**	*P*	**Pn**	**06 38 53.8**	**+1.2**
ROSC				*S*	**Sn**	**06 39 23.1**	**-0.1**
CVER	**Cruz Verde, Cu**	**2.53**	**202**	*P*	**Pn**	**06 38 55.5**	**+0.7**
CVER				*S*	**Sn**	**06 39 30.5**	**+3.3**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*P*	**Pn**	**06 38 58.4**	**+0.6**
GUY2C				*S*	**Sn**	**06 39 32.7**	**+0.2**
VILC	**Villavicencio,**	**2.81**	**192**	*P*	**Pn**	**06 38 58.3**	**+0.3**
VILC				*S*	**Sn**	**06 39 31.8**	**-1.1**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*P*	**Pn**	**06 39 02.2**	**+1.3**
CBOC				*S*	**Sn**	**06 39 38.5**	**+0.4**
SDV	**Santo Domingo**	**3.17**	**51**	*eP*	**Pn**	**06 39 03.6**	**+1.0**
SDV				*eS*	**Sn**	**06 39 39.1**	**-2.0**
PRAC	**Prado**	**3.60**	**209**	*P*	**Pn**	**06 39 07.4**	**-0.6**
PRAC				*S*	**Sn**	**06 39 50.2**	**-0.7**
SJCC	**San Jacinto, C**	**3.62**	**326**	*P*	**Pn**	**06 39 08.5**	**+0.3**
SJCC				*S*	**Sn**	**06 39 49.7**	**-1.5**
SJCC	**San Jacinto, C**	**3.62**	**326**	*eP*	**Pn**	**06 39 08.6**	**+0.4**
SJCC				*eS*	**Sn**	**06 39 48.6**	**-2.6**
PLMC	**San Jos del P**	**3.71**	**238**	*P*	**Pn**	**06 39 09.8**	**+0.4**
PLMC				*S*	**Sn**	**06 39 52.4**	**-0.8**
URMC	**La Uribe, Meta**	**3.82**	**199**	*P*	**Pn**	**06 39 11.7**	**+0.8**
URMC				*S*	**Sn**	**06 39 57.0**	**+1.0**

TRN 01 06:55:35.8, 16°.79N×57°.86W, h18km, MD4.5, Far East of Antigua., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	**3.39**	**256**	*eP*	**Pn**	**06 56 30.0**	**+2.1**
DWS	**Wesley**	**3.53**	**250**	*eP*	**Pn**	**06 56 31.8**	**+2.0**
DWS				*eS*	**Sn**	**06 57 12.9**	**+1.7**
DSLB	**Salisbury**	**3.68**	**249**	*eP*	**Pn**	**06 56 34.0**	**+2.1**
DSLB				*eS*	**Sn**	**06 57 17.5**	**+2.7**
SVN	**Savane Anatole**	**3.73**	**239**	*eP*	**Pn**	**06 56 35.6**	**+3.0**
SVN				*eS*	**Sn**	**06 57 17.1**	**+1.1**
MMLZ	**Guadeloupe Bro**	**3.73**	**259**	*eP*	**Pn**	**06 56 34.5**	**+1.9**
MMLZ				*eS*	**Sn**	**06 57 17.0**	**+0.9**
TBG	**Guadaloupe-3**	**3.75**	**256**	*eP*	**Pn**	**06 56 35.4**	**+2.6**
TBG				*eS*	**Sn**	**06 57 18.2**	**+1.6**
DHSZ	**Broadband at M**	**3.78**	**263**	*eP*	**Pn**	**06 56 35.8**	**+2.5**
DHSZ				*eS*	**Sn**	**06 57 19.6**	**+2.3**

BIM	**Bigot**	**3.83**	**234**	*eP*	**Pn**	**06 56 36.0**	**+2.0**
BIM				*eS*	**Sn**	**06 57 20.9**	**+2.3**
ANWB	**Willy Bob**	**3.85**	**284**	*eP*	**Pn**	**06 56 35.5**	**+1.3**
ANWB				*eS*	**Sn**	**06 57 20.2**	**+1.1**
SLBI	**Saint Lucia, B**	**4.07**	**228**	*eP*	**Pn**	**06 56 39.0**	**+1.8**
SLBI				*eS*	**Sn**	**06 57 26.0**	**+1.5**
SLCP	**Castries, St.**	**4.09**	**228**	*eP*	**Pn**	**06 56 39.2**	**+1.6**
SLCP				*eS*	**Sn**	**06 57 26.1**	**+1.1**
SLAC	**Saint Lucia, A**	**4.10**	**226**	*eP*	**Pn**	**06 56 39.9**	**+2.2**
SLAC				*eS*	**Sn**	**06 57 27.9**	**+2.6**
MBWH	**Windy Hill**	**4.15**	**270**	*eP*	**Pn**	**06 56 40.3**	**+1.9**
MBWH				*eS*	**Sn**	**06 57 28.5**	**+2.0**
SKI	**Saint Kitts**	**4.70**	**277**	*eP*	**Pn**	**06 56 47.9**	**+2.0**
SKI				*eS*	**Sn**	**06 57 42.2**	**+2.1**
SEUS	**St. Eustatius**	**4.95**	**279**	*eP*	**Pn**	**06 56 51.6**	**+2.3**
SEUS				*eS*	**Sn**	**06 57 48.4**	**+2.3**
SABA	**Saba**	**5.21**	**280**	*eP*	**Pn**	**06 56 55.8**	**+2.9**
SABA				*eS*	**Sn**	**06 57 52.9**	**+0.3**
GCMP	**Grenada, Carri**	**5.49**	**219**	*eP*	**Pn**	**06 56 59.7**	**+2.9**
GCMP				*eS*	**Sn**	**06 57 59.7**	**0.0**
GRGR	**Grenville**	**5.91**	**219**	*eP*	**Pn**	**06 57 05.5**	**+2.9**
GRGR				*eS*	**Sn**	**06 58 10.9**	**+1.0**
GRFF	**Grenada Fort F**	**6.02**	**219**	*eP*	**Pn**	**06 57 06.9**	**+2.8**
GRFF				*eS*	**Sn**	**06 58 13.8**	**+1.0**
TRN	**Trinidad (W)**	**7.01**	**210**	*eP*	**Pn**	**06 57 20.6**	**+3.0**
TRN				*eS*	**Sn**	**06 58 35.8**	**-1.1**
DMDM	**Guralp CMG5TDE**	**7.04**	**211**	*eP*	**Pn**	**06 57 21.2**	**+3.2**
DMDM				*eS*	**Sn**	**06 58 37.4**	**-0.3**

*IDC **01** 06:56:34.0±1.5, 37°.07N×21°.29E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=52.2km s-min=27.8km az=129.0*
*ATH **01** 06:56:36.7, 36°.96N×21°.19E, h24km±2km, ML3.0/11, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 06:56:37.1, 37°.N±2°×2°.1E±°, h0km±1km, M2.9/26, MLh2.9/26*

ISC 01 06:56:36.4±1.3, 36°.97N±0°.04×21°.26E±0°.03, h16km±8km, n50, σ1°09/73, mb3.7/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL1	**Pylos**	**0.36**	**99**	*P*	**Pn**	**06 56 45.4**	**-1.5**
PYL1				*S*	**Sb**	**06 56 51.6**	**+1.9**
MTHA	**Methoni**	**0.39**	**113**	*P*	**Pn**	**06 56 46.4**	**-1.0**
MTHA				*S*	**Sb**	**06 56 53.2**	**+2.5**
PYL	**PYLOS**	**0.40**	**101**	*P*	**Pn**	**06 56 45.9**	**-1.5**
PYL				*S*	**Sb**	**06 56 53.3**	**+2.4**
PYL	**PYLOS**	**0.40**	**101**	*P*	**Pn**	**06 56 46.0**	**-1.5**
PYL				*S*	**Sb**	**06 56 52.2**	**+1.3**
ITM	**Ithomi**	**0.57**	**69**	*P*	**Pn**	**06 56 48.6**	**-1.3**
ITM				*S*	**Sn**	**06 56 58.1**	**-1.0**
ITM	**Ithomi**	**0.57**	**69**	*P*	**Pn**	**06 56 48.7**	**-1.3**
ITM				*S*	**Sb**	**06 56 56.0**	**-0.1**
ZARO	**Zacharo**	**0.60**	**31**	*P*	**Pn**	**06 56 49.4**	**-0.9**
ZARO				*S*	**Sb**	**06 56 58.8**	**+2.0**
VALY	**Valyra**	**0.61**	**72**	*P*	**Pn**	**06 56 49.4**	**-1.0**
VALY				*S*	**Sn**	**06 56 59.6**	**-0.4**
VALY	**Valyra**	**0.61**	**72**	*P*	**Pn**	**06 56 49.3**	**-1.0**
VALY				*S*	**Sn**	**06 56 58.5**	**-1.4**
AMT	**Artemida-Makis**	**0.67**	**33**	*P*	**Pn**	**06 56 50.4**	**-0.9**
AMT				*S*	**Sb**	**06 57 00.2**	**+1.5**
AMT	**Artemida-Makis**	**0.67**	**33**	*P*	**Pn**	**06 56 50.3**	**-0.9**
AMT				*S*	**Sb**	**06 56 59.7**	**+1.0**
LTHK	**Lithakia**	**0.81**	**336**	*P*	**Pg**	**06 56 51.7**	**-0.4**
LTHK				*S*	**Sg**	**06 57 03.3**	**+0.5**
LTHK	**Lithakia**	**0.81**	**336**	*P*	**Pg**	**06 56 51.4**	**-0.7**
LTHK				*S*	**Sg**	**06 57 02.3**	**-0.5**
KYPS	**Kipseli, Zakin**	**0.91**	**338**	*P*	**Pb**	**06 56 53.9**	**0.0**
KYPS				*S*	**Sg**	**06 57 06.8**	**+0.7**
CLEM	**Kyllini,Ilia,G**	**0.92**	**354**	*P*	**Pb**	**06 56 54.2**	**+0.2**
CLEM				*S*	**Sb**	**06 57 07.8**	**+1.8**
VLX	**Vlachokerasia**	**0.98**	**66**	*P*	**Pn**	**06 56 56.2**	**+0.6**
VLX				*S*	**Sn**	**06 57 10.7**	**+1.5**
ORTH	**Orthonies,Zaky**	**0.98**	**333**	*P*	**Pg**	**06 56 54.3**	**-1.1**
ORTH				*S*	**Sb**	**06 57 09.4**	**+1.6**
ORTH	**Orthonies,Zaky**	**0.98**	**333**	*P*	**Pg**	**06 56 54.5**	**-0.9**
ORTH				*S*	**Sg**	**06 57 08.3**	**0.0**
DRO	**Drossia**	**1.04**	**20**	*P*	**Pn**	**06 56 56.4**	**0.0**
DRO	**Drossia**	**1.04**	**20**	*P*	**Pn**	**06 56 56.1**	**-0.2**
RLS	**Riolos of Patr**	**1.10**	**9**	*P*	**Pg**	**06 56 57.0**	**-0.5**
RLS				*S*	**Sn**	**06 57 12.8**	**+0.9**
RLS	**Riolos of Patr**	**1.10**	**9**	*P*	**Pg**	**06 56 57.1**	**-0.5**
RTZL	**Ratzakli, Kefa**	**1.17**	**341**	*P*	**Pn**	**06 56 57.8**	**-0.3**
RTZL				*S*	**Sn**	**06 57 15.5**	**+1.9**
RTZL	**Ratzakli, Kefa**	**1.17**	**341**	*P*	**Pn**	**06 56 57.6**	**-0.4**
AXS	**Araxos**	**1.23**	**4**	*P*	**Pb**	**06 56 59.2**	**0.0**
AXS	**Araxos**	**1.23**	**4**	*P*	**Pb**	**06 56 59.2**	**0.0**
KLV	**Kalavryta, Ach**	**1.28**	**33**	*P*	**Pg**	**06 57 00.6**	**-0.6**
KLV				*S*	**Sg**	**06 57 20.3**	**+2.4**
KLV	**Kalavryta, Ach**	**1.28**	**33**	*P*	**Pb**	**06 56 59.8**	**-0.4**
GUR	**Goura**	**1.29**	**42**	*P*	**Pg**	**06 57 01.0**	**-0.4**
GUR	**Goura**	**1.29**	**42**	*P*	**Pg**	**06 57 00.1**	**-1.3**
VLS	**Valsamata**	**1.31**	**336**	*P*	**Pn**	**06 56 60.0**	**-0.1**
VLS				*S*	**Sg**	**06 57 19.6**	**+0.7**
VLS	**Valsamata**	**1.31**	**336**	*P*	**Pn**	**06 56 59.5**	**-0.7**
VLI	**Veliai**	**1.37**	**100**	*P*	**Pg**	**06 57 04.2**	**+1.4**
PLEV	**Plevrona-Mesol**	**1.44**	**5**	*P*	**Pb**	**06 57 03.0**	**+0.1**
DMLN	**Damoulianata-K**	**1.45**	**331**	*P*	**Pn**	**06 57 02.4**	**+0.5**
DMLN				*S*	**Sg**	**06 57 23.6**	**+0.6**
SERG	**Sergoula**	**1.57**	**24**	*P*	**Pg**	**06 57 05.7**	**-0.9**
FSK	**Fiskardo**	**1.58**	**340**	*P*	**Pb**	**06 57 04.7**	**-0.5**
ANX	**Ano Chora**	**1.70**	**18**	*P*	**Pb**	**06 57 07.8**	**+0.4**
EVGI	**Lefkada island**	**1.71**	**344**	*P*	**Pb**	**06 57 06.8**	**-0.7**
LTK	**Loutraki**	**1.72**	**52**	*P*	**Pg**	**06 57 08.5**	**-0.9**
LKD2	**Lefkada island**	**1.88**	**346**	*P*	**Pb**	**06 57 09.8**	**-0.4**
TSLK	**Tsoukalades, L**	**1.91**	**346**	*P*	**Pb**	**06 57 10.1**	**-0.7**
AMPL	**Ampelaki**	**1.95**	**359**	*P*	**Pb**	**06 57 11.1**	**-0.4**
ATAL	**Atalanti**	**2.21**	**39**	*P*	**Pb**	**06 57 15.2**	**-0.8**
FINES	**FINESS Array B** 1.4nm,0.7s,baz=169,slow=14,SNR=4.3 1.4nm,0.7s	**24.68**	**6**	*P*	**P**	**07 01 55.2**	**-1.1**
TORD	**Torodi Ar. Bea** 0.2nm,0.4s,baz=38,slow=9.9,SNR=1.7 0.2nm,0.4s	**29.49**	**221**	*P*	**P**	**07 02 40.6**	**+0.8**
ARCES	**ARCESS Array B** 3.0nm,0.9s,baz=185,slow=9.7,SNR=1.7 3.0nm,0.9s	**32.70**	**3**	*P*	**P**	**07 03 07.1**	**-0.6**
KURBB	**Kurchatov Arra** 0.4nm,0.4s,baz=275,slow=9.0,SNR=1.9 0.4nm,0.4s	**42.49**	**53**	*P*	**P**	**07 04 30.9**	**+0.3**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=267,slow=8.0,SNR=4.5 0.1nm,0.3s	**45.45**	**58**	*P*	**P**	**07 04 54.0**	**-0.5**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=274,slow=7.4,SNR=2.7 0.5nm,0.4s	**46.07**	**47**	*P*	**P**	**07 04 57.4**	**-1.8**

IDC 01 07:03:26.1±7.5, 18°.48S×178°.52W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=309.6km s-min=117.5km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=97,slow=7.5,SNR=15 0.2nm,0.3s	**44.43**	**260**	*P*	*P*	07 11 39.2	+0.1
ASAR	**Alice Springs** 0.7nm,0.6s,baz=79,slow=9.0,SNR=5.3 0.7nm,0.8s	**44.54**	**255**	*P*	*P*	07 11 39.5	-0.5
AKASG	**Malin Array Be** 0.4nm,0.3s,baz=63,slow=1.4,SNR=3.6	**141.02**	**332**	*PKP*	*PKPdf*	07 22 57.6	-0.6

ISC 01 07:07:17.1±1.1, 49°.04N±0°.06×18°.31E±0°.05, h10km, n7, σ0°54/8, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVC	**Velka Javorina**	**0.45**	**247**	*ePG*	**Pg**	**07 07 26.3**	**+0.3**
VYHS	**Vyhne**	**0.65**	**147**	*ePG*	**Pg**	**07 07 29.0**	**-0.6**
VYHS				*eSG*	**Sg**	**07 07 37.7**	**-0.3**
LANS	**Liptovska Anna**	**0.77**	**81**	*ePG*	**Pg**	**07 07 32.5**	**+0.5**
MORC	**Moravsky Berou**	**0.90**	**326**	*ePG*	**Pb**	**07 07 34.2**	**-0.6**
MODS	**Modra-Piesok**	**0.95**	**226**	*ePG*	**Pb**	**07 07 36.0**	**+0.3**
VRAC	**Vranov**	**1.16**	**284**	*ePG*	**Pn**	**07 07 39.4**	**0.0**
KECS	**Kecovo**	**1.54**	**110**	*ePG*	**Pg**	**07 07 47.2**	**+0.5**

*NOU **01** 07:13:15.3, 41°.64S×173°.13E, h2km, MLv3.8/20, South Island, New Zealand*
*WEL **01** 07:13:15.6±0.3, 42°.S±2°×17°.3E±°, h4km±1km, M3.5/43, ML3.3/15, MLv3.5/43, Error ellipse: s-maj=2.5km s-min=2.3km az=95.5*

ISC 01 07:13:15.6±0.9, 41°.63S±0°.02×173°.19E±0°.02, h7km±7km, n114, σ1°16/123, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVFS	**Wairau Valley**	**0.12**	**85**	*P*	**Pg**	**07 13 18.0**	**-0.2**
WVFS				*S*	**Sg**	**07 13 19.8**	**-0.2**
KLDS	**Kikiwa Line De**	**0.24**	**260**	*P*	**Pg**	**07 13 20.9**	**+0.5**
BTWS	**Nelson Brightw**	**0.25**	**349**	*P*	**Pg**	**07 13 20.7**	**+0.3**
BTWS				*S*	**Sg**	**07 13 24.9**	**+1.2**
THZ	**Tophouse**	**0.25**	**239**	*P*	**Pg**	**07 13 20.6**	**+0.1**
THZ				*S*	**Sg**	**07 13 24.4**	**+0.5**
NELH	**Nelson Hospita**	**0.35**	**10**	*P*	**Pg**	**07 13 23.0**	**+0.6**
NCBS	**Nelson Council**	**0.37**	**11**	*P*	**Pg**	**07 13 23.0**	**+0.3**
MRNZ	**Matariki Terra**	**0.40**	**305**	*P*	**Pg**	**07 13 23.9**	**+0.5**
MRNZ				*S*	**Sb**	**07 13 29.8**	**-1.5**
MATW	**Matariki Wadsw**	**0.42**	**299**	*P*	**Pg**	**07 13 24.3**	**+0.6**
LOKS	**Mount Lookout**	**0.44**	**150**	*P*	**Pg**	**07 13 24.9**	**+0.7**
NNZ	**Nelson**	**0.44**	**19**	*P*	**Pg**	**07 13 23.6**	**-0.5**
NNZ				*S*	**Sg**	**07 13 30.0**	**+0.2**
MOLW	**Molesworth Sta**	**0.46**	**174**	*P*	**Pg**	**07 13 25.0**	**+0.5**
MOLW				*S*	**Sg**	**07 13 31.2**	**+0.6**
BSWZ	**Blackbirch Sta**	**0.52**	**99**	*P*	**Pg**	**07 13 25.9**	**+0.3**
BSWZ				*S*	**Sg**	**07 13 33.2**	**+0.8**
MOTS	**Motueka DOC wo**	**0.53**	**345**	*P*	**Pg**	**07 13 25.8**	**+0.1**
BWRS	**Waikakaho Road**	**0.57**	**71**	*P*	**Pg**	**07 13 25.6**	**-1.0**
TUWZ	**Tuamarina**	**0.60**	**71**	*P*	**Pg**	**07 13 26.7**	**-0.5**
TKNZ	**Takaka Hill**	**0.62**	**344**	*P*	**Pg**	**07 13 27.4**	**-0.2**
SEDS	**Seddon Fire St**	**0.67**	**94**	*P*	**Pb**	**07 13 29.2**	**-0.4**
KEKS	**Kekerengu Val**	**0.67**	**119**	*P*	**Pb**	**07 13 29.2**	**-0.5**
QCCS	**Picton Queen C**	**0.72**	**61**	*P*	**Pg**	**07 13 28.0**	**-1.3**
CMWZ	**Cape Campbell**	**0.78**	**99**	*P*	**Pb**	**07 13 31.4**	**0.0**
KHZ	**Kahutara**	**0.82**	**162**	*P*	**Pb**	**07 13 32.0**	**-0.3**
KHZ	**Kahutara**	**0.82**	**162**	*P*	**Pb**	**07 13 32.2

GNL	**Ganaly**	**4.36**	**353**	*e*P	Pn	07 22 37.4 +5.4
MKZ	**Mys Kozlova**	**5.48**	**18**	*e*P	Pn	07 22 51.6 +4.3
KBTR	**Krutoberegovo**	**7.25**	**18**	*e*P	Pn	07 23 16.0 +4.5
SMKR	**Semkarok**	**7.39**	**11**	*e*P	Pn	07 23 18.1 +4.7

*IDC **01** 07:38:18.4±1.4, 14°.80S×167°.37E, h110km±12km, mb4.1/21, mbtmp4.4/24, MS3.4/8, Error ellipse: s-maj=13.1km s-min=10.8km az=69.0*
*NOU **01** 07:38:19.3, 14°.84S×167°.41E, h110km, mb5.1/39, Vanuatu Islands*
*GFZ **01** 07:38:20.1±0.3, 15°S±4°×167°E±°, h131km, M5.0/24, mb5.0/24*
*NEIC **01** 07:38:21.1±2.1, 14°.86S±0°.07×167°.31E±0°.09, h124km±6km, mb4.9/32, Error ellipse: s-maj=12.7km s-min=10.5km az=70.0*

ISC 01 07:38:20.1±0.6, 14°.85S±0°.05×167°.37E±0°.06, h123km±4km, h124km; pP-P, n196, σ1°09/203, mb4.8/54, 4C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.38**	**207**	P		**Pn**	**07 39 52.0**	**+0.2**
KOUNC	**Koumac, New Ca**	**6.38**	**207**			**Pn**	**07 39 51.5**	**-0.3**
MARNC	**Mare, Loyalty**	**6.62**	**175**	P		**Pn**	**07 39 53.0**	**-2.5**
MARNC	**Mare, Loyalty**	**6.62**	**175**			**Pn**	**07 39 52.5**	**-2.5**
HURO	**Huro Makira**	**6.89**	**309**	P		**Pn**	**07 39 57.3**	**-1.4**
YATNC	**Mamie plateau,**	**7.18**	**184**	P		**Pn**	**07 40 00.8**	**-1.7**
YATNC	**Mamie plateau,**	**7.18**	**184**	S		**Sn**	**07 41 22.7**	**0.0**
DZM	**Mont Dzumac**	**7.23**	**187**	P		**Pn**	**07 40 03.2**	**-0.1**
	149nm,0.7s,baz=325,slow=23,SNR=106							
DZM				S		**Sn**	**07 41 24.1**	**+0.1**
	116nm,0.4s,baz=139,slow=22,SNR=9.3							
ONTNC	**Ouen Toro**	**7.46**	**187**	P		**Pn**	**07 40 06.0**	**-0.4**
ONTNC	**Ouen Toro**	**7.46**	**187**	S		**Sn**	**07 41 29.8**	**+0.3**
ONTNC	**Ouen Toro**	**7.46**	**187**			**Pn**	**07 40 05.8**	**-0.6**
OUENC	**Ouen Island, N**	**7.54**	**184**	P		**Pn**	**07 40 07.2**	**-0.2**
OUENC	**Ouen Island, N**	**7.54**	**184**	S		**Sn**	**07 41 31.2**	**-0.2**
OUENC	**Ouen Island, N**	**7.54**	**184**			**Pn**	**07 40 07.9**	**+0.5**
HNR	**Honiara**	**9.04**	**306**	P		**Pn**	**07 40 27.0**	**-0.7**
	13nm,0.8s,baz=328,slow=2.0,SNR=12							
HNR				S		**Sn**	**07 42 05.0**	**-2.8**
	7.5nm,0.4s,baz=89,slow=22,SNR=8.0							
HNR				LR		LR	07 43 45.0	
	comp=Z,7.9nm,20.8s,baz=240,slow=36							
HNR	**Honiara**	**9.04**	**306**	P		**Pn**	**07 40 28.6**	**+0.9**
HNR	**Honiara**	**9.04**	**306**	S		**Sn**	**07 42 07.9**	**+0.1**
HNR	**Honiara**	**9.04**	**306**			**Pn**	**07 40 27.3**	**-0.4**
HNR						**Sn**	**07 42 05.0**	**-2.8**
HNR	**Honiara**	**9.04**	**306**	P		**Pn**	**07 40 27.9**	**+0.2**
SAVO	**Savo Central**	**9.32**	**307**	P		**Pn**	**07 40 31.6**	**+0.1**
SAVO	**Savo Central**	**9.32**	**307**	S		**Sn**	**07 42 14.9**	**+0.3**
TATA	**Tatamba Isabel**	**9.81**	**310**	P		**Pn**	**07 40 37.6**	**-0.5**
TATA	**Tatamba Isabel**	**9.81**	**310**	S		**Sn**	**07 42 26.7**	**+0.2**
MSVF	**Nonsavu**	**10.64**	**107**	P		**Pn**	**07 40 49.4**	**0.0**
	1.0nm,0.3s,baz=302,slow=7.7,SNR=1.8							
MSVF				LR		LR	07 44 26.6	
	comp=Z,314nm,18.1s,baz=5.9,slow=34							
MSVF	**Nonsavu**	**10.64**	**107**	Pn		**Pn**	**07 40 51.2**	**+1.9**
KRVT	**Keravat (AS076**	**18.39**	**303**	LR		LR	07 50 43.0	
	comp=Z,12nm,18.3s,baz=95,slow=41							
EIDS	**Eidsvold**	**18.51**	**233**	P		**Pn**	**07 42 28.6**	**-0.1**
	comp=Z,67nm,1.0s							
EIDS	**Eidsvold**	**18.51**	**233**	P		**Pn**	**07 42 28.7**	**0.0**
EIDS	**Eidsvold**	**18.51**	**233**			**Pn**	**07 42 28.7**	**0.0**
EIDS	**Eidsvold**	**18.51**	**233**	P		**Pn**	**07 42 29.2**	**+0.5**
AFI	**Afiamalu**	**20.22**	**90**	P		**P**	**07 42 44.6**	**-1.1**
	comp=Z,11nm,0.8s							
	comp=Z,11nm,0.8s							
PMG	**Port Moresby**	**20.48**	**283**	P		**P**	**07 42 48.0**	**-0.5**
	comp=Z,32nm,0.9s,baz=31,slow=10,SNR=4.8							
	comp=Z,32nm,0.9s							
PMG	**Port Moresby**	**20.48**	**283**			**P**	**07 42 49.1**	**+0.6**
CTA	**Charters Tower**	**20.80**	**252**	P		**P**	**07 42 52.0**	**+0.2**
	comp=Z,6.9nm,0.7s,baz=91,slow=10,SNR=5.4							
	comp=Z,6.9nm,0.7s							
CTAO	**Charters Tower**	**20.80**	**252**	P		**P**	**07 42 52.8**	**+1.0**
OUZ	**Omahuta**	**21.04**	**166**	P		**P**	**07 42 55.4**	**+1.2**
OUZ	**Omahuta**	**21.04**	**166**	P		**P**	**07 42 55.1**	**+0.9**
ARMA	**Armidale**	**21.20**	**220**	P		**P**	**07 42 57.3**	**+1.2**
	comp=Z,49nm,1.1s							
ARMA	**Armidale**	**21.20**	**220**	P		**P**	**07 42 57.6**	**+1.5**
ARMA	**Armidale**	**21.20**	**220**			**P**	**07 42 57.0**	**+0.9**
ARMA	**Armidale**	**21.20**	**220**	P		**P**	**07 42 57.7**	**+1.5**
MTSU	**Mount Surprise**	**22.34**	**258**	P		**P**	**07 43 08.9**	**+0.7**
	comp=Z,8.6nm,0.9s							
MTSU	**Mount Surprise**	**22.34**	**258**	P		**P**	**07 43 07.5**	**-0.7**
PATS	**Pohnpei**	**23.35**	**337**	P		**P**	**07 43 18.6**	**+0.8**
PATS	**Pohnpei**	**23.35**	**337**	P		**P**	**07 43 15.7**	**-2.0**
MGCD	**Mangrove Creek**	**23.49**	**216**	P		**P**	**07 43 20.5**	**+1.6**
	comp=Z,88nm,0.8s							
MGCD	**Mangrove Creek**	**23.49**	**216**	P		**P**	**07 43 20.5**	**+1.6**
MGCD	**Mangrove Creek**	**23.49**	**216**	P		**P**	**07 43 19.5**	**+0.6**
MANU	**Manus Island**	**23.49**	**301**	P		**P**	**07 43 17.6**	**-1.5**
TOZ	**Tahuroa Road**	**23.90**	**164**			**P**	**07 43 23.3**	**+0.8**
RIV	**Riverview**	**23.92**	**215**	P		**P**	**07 43 24.1**	**+1.4**
	comp=Z,194nm,0.9s							
RIV	**Riverview**	**23.92**	**215**	P		**P**	**07 43 23.1**	**+0.4**
HIZ	**Hauiti**	**24.48**	**166**	P		**P**	**07 43 28.2**	**+0.4**
HIZ	**Hauiti**	**24.48**	**166**	P		**P**	**07 43 29.3**	**+1.5**
HIZ				IAmb		IAmb	07 43 32.2	
	comp=Z,54nm,0.7s							
HIZ	**Hauiti**	**24.48**	**166**	P		**P**	**07 43 29.4**	**+1.7**
QLP	**Quilpie**	**24.54**	**238**	P		**P**	**07 43 29.0**	**+0.5**
	comp=Z,88nm,0.7s							
QLP	**Quilpie**	**24.54**	**238**	P		**P**	**07 43 29.4**	**+0.9**
QLP	**Quilpie**	**24.54**	**238**	P		**P**	**07 43 28.1**	**-0.4**
MXZ	**Matakaoa Point**	**24.61**	**159**	P		**P**	**07 43 29.6**	**+0.6**
URZ	**Urewera**	**24.85**	**162**	P		**P**	**07 43 31.1**	**-0.1**
	comp=Z,33nm,0.7s,baz=285,slow=1.9,SNR=22							
	comp=Z,33nm,0.7s							
URZ	**Urewera**	**24.85**	**162**	P		**P**	**07 43 31.7**	**+0.5**
URZ	**Urewera**	**24.85**	**162**	P		**P**	**07 43 31.0**	**-0.2**
BKZ	**Black Stump Fm**	**25.51**	**163**	P		**P**	**07 43 37.6**	**+0.4**
BKZ	**Black Stump Fm**	**25.51**	**163**			**P**	**07 43 37.8**	**+0.6**
BKZ	**Black Stump Fm**	**25.51**	**163**	P		**P**	**07 43 37.8**	**+0.6**
CMSA	**Cobar Meteorol**	**25.86**	**226**	P		**P**	**07 43 40.8**	**+0.4**
	comp=Z,34nm,1.1s							
CMSA	**Cobar Meteorol**	**25.86**	**226**	P		**P**	**07 43 40.6**	**+0.2**
CMSA	**Cobar Meteorol**	**25.86**	**226**	P		**P**	**07 43 40.8**	**+0.4**
QRZ	**Quartz Range**	**26.26**	**171**	P		**P**	**07 43 44.4**	**+0.5**
TKNZ	**Takaka Hill**	**26.53**	**171**	P		**P**	**07 43 47.8**	**+1.4**
BFZ	**Birch Farm**	**26.87**	**165**	P		**P**	**07 43 48.5**	**-0.9**
BFZ	**Birch Farm**	**26.87**	**165**	P		**P**	**07 43 48.2**	**-1.2**
QIS	**Mount Isa**	**27.03**	**254**	P		**P**	**07 43 49.7**	**-1.4**
THZ	**Tophouse**	**27.24**	**171**	P		**P**	**07 43 53.3**	**+0.6**
MILA	**Mila**	**27.42**	**213**	P		**P**	**07 43 54.9**	**+0.5**
INKA	**Innaminka**	**27.85**	**238**			**P**	**07 43 58.6**	**+0.3**
INKA				IAmb		IAmb	07 43 59.7	
	comp=Z,16nm,0.9s							
KHZ	**Kahutara**	**27.98**	**170**	P		**P**	**07 43 59.4**	**+0.2**
INZ	**Inchbonnie**	**27.99**	**174**			**P**	**07 43 59.6**	**+0.2**
LTZ	**Lake Taylor**	**28.15**	**172**			**P**	**07 44 01.1**	**+0.3**
FOZ	**Fox Glacier**	**28.66**	**176**	P		**P**	**07 44 06.0**	**+0.8**
FOZ				IAmb		IAmb	07 44 07.2	
	comp=Z,55nm,1.1s							
RPZ	**Rata Peaks**	**28.93**	**174**	P		**P**	**07 44 08.0**	**+0.3**
RPZ	**Rata Peaks**	**28.93**	**174**	P		**P**	**07 44 07.8**	**+0.1**
STKA	**Stephens Creek**	**28.99**	**230**	P		**P**	**07 44 08.6**	**+0.3**
	comp=Z,50nm,0.5s,baz=48,slow=8.1,SNR=89							
STKA				PcP		**PcP**	**07 47 14.1**	**-0.1**
	comp=Z,4.9nm,0.7s,baz=333,slow=2.1,SNR=3.7							
STKA				LR		LR	07 53 55.3	
	comp=Z,160nm,18.7s,baz=226,slow=32							
STKA	**Stephens Creek**	**28.99**	**230**	P		**P**	**07 44 09.3**	**+1.0**
JCZ	**Jackson Bay**	**29.15**	**178**	P		**P**	**07 44 10.8**	**+1.1**
TOO	**Toolangi**	**29.81**	**217**	P		**P**	**07 44 15.9**	**+0.4**
	comp=Z,7.1nm,1.2s							
TOO	**Toolangi**	**29.81**	**217**			**P**	**07 44 16.0**	**+0.4**
ODZ	**Otahua Downs**	**30.22**	**175**	P		**P**	**07 44 19.5**	**+0.5**
SMPI	**Sarmi**	**31.04**	**292**	P		**P**	**07 44 27.1**	**+0.5**
	comp=Z,56nm,1.4s							
SMPI	**Sarmi**	**31.04**	**292**	P		**P**	**07 44 25.4**	**-1.3**
HTT	**Hallett**	**31.71**	**229**	P		**P**	**07 44 33.4**	**+1.0**
	comp=Z,19nm,1.3s,comp=Z,0.0nm							
HTT	**Hallett**	**31.71**	**229**	P		**P**	**07 44 32.6**	**+0.2**
RAR	**Rarotonga**	**31.83**	**106**	LR		LR	07 54 56.8	
	comp=Z,39nm,21.6s,baz=211,slow=31							
WRAB	**Tennant Creek**	**31.88**	**256**	P		**P**	**07 44 33.9**	**-0.1**
WRAB	**Tennant Creek**	**31.88**	**256**	P		**P**	**07 44 32.7**	**-1.3**
WRA	**Warramunga Arr**	**31.89**	**256**	P		**P**	**07 44 32.4**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=86,slow=8.7,SNR=17							
WRA				PcP		**PcP**	**07 47 21.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=80,slow=3.3,SNR=5.2							
WRA				ScP		**ScP**	**07 50 54.8**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=84,slow=3.6,SNR=8.6							
	comp=Z,1.1nm,0.6s							
WRA	**Warramunga Arr**	**31.89**	**256**	P		**P**	**07 44 32.4**	**-1.7**
MOO	**Moorlands**	**32.53**	**208**	P		**P**	**07 44 39.0**	**-0.4**
AS17	**Alice Springs**	**32.64**	**249**	P		**P**	**07 44 39.8**	**-0.9**
	comp=Z,12nm,1.1s							
AS01	**Alice Springs**	**32.68**	**249**	P		**P**	**07 44 39.8**	**-1.2**
AS09	**Alice Springs**	**32.69**	**249**	P		**P**	**07 44 40.2**	**-0.9**
	comp=Z,18nm,0.9s							
AS15	**Alice Springs**	**32.71**	**249**	P		**P**	**07 44 40.2**	**-1.0**
	comp=Z,11nm,0.7s							
AS31	**Alice Springs**	**32.72**	**249**	P		**P**	**07 44 40.3**	**-1.0**
	comp=Z,4.3nm,0.7s							
AS31	**Alice Springs**	**32.72**	**249**	P		**P**	**07 44 40.1**	**-1.3**
ASAR	**Alice Springs**	**32.72**	**249**	P		**P**	**07 44 40.1**	**-1.3**
	comp=Z,7.9nm,0.7s,baz=77,slow=9.0,SNR=107							
ASAR				PcP		**PcP**	**07 47 23.2**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=99,slow=3.7,SNR=5.5							
ASAR				ScP		**ScP**	**07 50 57.4**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=89,slow=3.7,SNR=7.1							
ASAR				LR		LR	07 56 08.3	
	comp=Z,114nm,19.6s,baz=304,slow=33							
	comp=Z,7.9nm,0.7s							
ASAR	**Alice Springs**	**32.72**	**249**	P		**P**	**07 44 40.3**	**-1.0**
BBOO	**Buckleboo**	**33.58**	**232**	P		**P**	**07 44 45.5**	**-3.1**
BBOO	**Buckleboo**	**33.58**	**232**	P		**P**	**07 44 49.0**	**+0.3**
BBOO	**Buckleboo**	**33.58**	**232**	P		**P**	**07 44 49.4**	**+0.7**
BBOO				IAmb		IAmb	07 44 50.1	
	comp=Z,42nm,0.9s							
BBOO	**Buckleboo**	**33.58**	**232**	P		**P**	**07 44 49.2**	**+0.5**
GUMO	**Guam**	**35.98**	**321**	LR		LR	07 57 35.6	
	comp=Z,37nm,21.0s,baz=137,slow=32							
KNRA	**Kununurra**	**37.22**	**264**	P		**P**	**07 45 20.1**	**+0.1**
	comp=Z,13nm,1.5s							
KNRA	**Kununurra**	**37.22**	**264**	P		**P**	**07 45 19.1**	**-0.9**
KNRA				IAmb		IAmb	07 45 26.6	
	comp=Z,9.1nm,0.8s							
WRKA	**Warakurna**	**37.98**	**248**	P		**P**	**07 45 25.8**	**-0.6**
	comp=Z,11nm,0.6s							
SWI	**Sorong**	**38.28**	**288**	P		**P**	**07 45 28.6**	**-0.4**
SWI				pP		**pP**	**07 45 56.3**	**+0.1**
FORT	**Forrest**	**39.32**	**239**	P		**P**	**07 45 37.6**	**+0.1**
	comp=Z,37nm,0.7s							
FORT	**Forrest**	**39.32**	**239**	P		**P**	**07 45 37.5**	**+0.1**
FORT				IAmb		IAmb	07 45 38.0	
	comp=Z,24nm,0.7s							
FITZ	**Fitzroy Crossi**	**40.09**	**259**	P		**P**	**07 45 43.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.09**	**259**	P		**P**	**07 45 43.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**40.09**	**259**	P		**P**	**07 45 43.4**	**-0.6**
FITZ				pP		**pP**	**07 46 11.8**	**+0.7**
NLAI	**Namlea**	**41.33**	**282**	pP		pP	07 46 22.6	+0.7
PPT2	**Papeete2**	**41.37**	**100**	*e*SS		SS	07 55 17.8	+8.7
	comp=Z,71nm,23.5s							
PPT2				*e*LR		LR	07 57 28.5	
	comp=Z,128nm,30.8s							
PPT2				*e*LR		LR	07 57 35.6	
	comp=Z,113nm,30.2s							
TBI	**Tubuai**	**41.53**	**108**	*e*LR		LR	07 57 29.7	
	comp=Z,521nm,36.8s							
MBWA	**Marble Bar**	**45.61**	**255**	P		**P**	**07 46 28.5**	**0.0**
MBWA				IAmb		IAmb	07 48 09.3	
	comp=Z,48nm,1.6s							
MEEK	**Meekatharra**	**46.83**	**247**	P		**P**	**07 46 37.9**	**-0.1**
	comp=Z,36nm,1.9s							
MEEK	**Meekatharra**	**46.83**	**247**	P		**P**	**07 46 38.0**	**0.0**
MEEK	**Meekatharra**	**46.83**	**247**	P		**P**	**07 46 37.4**	**-0.6**
KLBR	**Kellerberrin**	**48.13**	**241**	P		**P**	**07 46 48.1**	**+0.2**
MORW	**Morawa**	**49.30**	**244**	P		**P**	**07 46 57.0**	**+0.1**
MORW	**Morawa**	**49.30**	**244**	P		**P**	**07 46 56.8**	**-0.2**
MORW	**Morawa**	**49.30**	**244**	P		**P**	**07 46 56.2**	**-0.8**
HATHI	**Halema'uma'u T**	**50.12**	**48**	P		**P**	**07 47 05.2**	**+1.8**
DRV	**Dumont d'Urvil**	**54.84**	**193**	P		**P**	**07 47 36.7**	**-0.6**
DRV				P		**P**	**07 47 37.0**	**-0.3**
DRV				pP		**pP**	**07 48 05.5**	**-0.9**
MJAR	**Matsushiro Arr**	**58.06**	**332**	P		**P**	**07 47 57.7**	**-2.8**
	comp=Z,1.5nm,0.7s,baz=169,slow=8.5,SNR=4.3							
	comp=Z,1.5nm,0.7s							
MJAR	**Matsushiro Arr**	**58.06**	**332**	P		**P**	**07 47 57.7**	**-2.8**
MJAR				IAmb		IAmb	07 49 33.9	
	comp=Z,10nm,1.6s							
VNDA	**Vanda**	**62.74**	**181**	P		**P**	**07 48 32.1**	**+0.4**
	comp=Z,5.2nm,0.5s,baz=356,slow=7.8,SNR=88							
	comp=Z,5.2nm,0.5s							
VNDA	**Vanda**	**62.74**	**181**	P		**P**	**07 48 32.1**	**+0.4**
SBA	**Scott Base**	**63.01**	**180**	P		**P**	**07 48 33.0**	**-0.5**
SBA	**Scott Base**	**63.01**	**180**	P		**P**	**07 48 34.8**	**+1.2**
SBA				PcP		**pP**	**07 49 06.4**	**+3.5**
SBA				x		x	07 49 16.3	
CASY	**Casey**	**63.45**	**202**	P		**P**	**07 48 36.4**	**-0.2**
CASY				IAmb		IAmb	07 48 37.2	
	comp=Z,15nm,0.7s							
CASY	**Casey**	**63.45**	**202**	P		**P**	**07 48 35.8**	**-0.8**
CASY	**Casey**	**63.45**	**202**	P		**P**	**07 48 36.8**	**+0.2**
CASY				pP		**pP**	**07 49 05.7**	**-0.7**
KSRS	**Korea Array**	**63.90**	**326**	P		**P**	**07 48 39.6**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=143,slow=7.5,SNR=1.8							
	comp=Z,1.1nm,0.9s							
CCD	**Concordia, Ant**	**64.80**	**191**	P		**P**	**07 48 45.9**	**+0.2**
NJ2	**Nanjing**	**65.83**	**316**	*e*P		**P**	**07 48 56.1**	**+3.5**
NJ2				pmax		pmax		
	comp=Z,16nm,0.6s							
PETK	**Petropavlovsk-**	**68.19**	**354**	P		**P**	**07 49 07.2**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=157,slow=5.8,SNR=4.6							
	comp=Z,2.7nm,0.8s							
BNX	**BinXian**	**70.30**	**331**	⇓P		**P**	**07 49 21.3**	**+1.1**
BNX				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**75.09**	**294**	P		**P**	**07 49 49.9**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=97,slow=4.6,SNR=4.2							
	comp=Z,0.8nm,0.3s							
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**07 49 49.0**	**0.0**
	comp=Z,28nm,0.8s,baz=309,slow=0.5,SNR=137							
	comp=Z,28nm,0.8s							
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**07 49 48.8**	**-0.2**
QSPA				IAmb		IAmb	07 49 49.9	
	comp=Z,31nm,0.9s							
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**07 49 49.2**	**+0.2**
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**07 49 49.0**	**0.0**
MA2	**Magadan**	**75.39**	**351**	LR		LR	08 17 59.7	
	comp=Z,30nm,21.1s,baz=50,slow=32							
HHC	**Hu-ho-hao-te**	**75.74**	**320**	*e*P		**P**	**07 49 57.0**	**+4.4**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
PZH	**PanZhiHua**	**75.85**	**303**	P		**P**	**07 49 56.1**	**+2.6**
MAW	**Mawson**	**81.81**	**202**	P		**P**	**07 50 25.9**	**+0.8**
	comp=Z,1.6nm,1.8s							
MAW	**Mawson**	**81.81**	**202**	P		**P**	**07 50 25.0**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=122,slow=6.6,SNR=17							
	comp=Z,6.0nm,0.8s							
MAW	**Mawson**	**81.81**	**202**	P		**P**	**07 50 25.4**	**+0.3**
MAW	**Mawson**	**81.81**	**202**	P		**P**	**07 50 24.9**	**-0.3**
SONM	**Songino Array**	**82.66**	**324**	P		**P**	**07 50 31.0**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=134,slow=6.1,SNR=5.3							
	comp=Z,1.6nm,0.7s							
SONM	**Songino Array**	**82.66**	**324**	P		**P**	**07 50 31.0**	**+1.0**
GTA2	**Gaotai**	**82.90**	**314**	*e*P		**P**	**07 50 33.0**	**+1.5**
GTA2				pP		pP	07 51 02.4	+0.1
GTA2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
CAST	**Castle Rocks**	**84.08**	**17**	IAmb		IAmb	07 50 36.6	
	comp=Z,5.0nm,0.9s							
G19K	**Purcell Mounta**	**84.99**	**14**			**P**	**07 50 42.5**	**+1.2**
G19K				IAmb		IAmb	07 53 27.0	
	comp=Z,19nm,1.9s							
I21K	**Tanana**	**85.48**	**16**	P		**P**	**07 50 44.5**	**+0.7**
F20K	**Avaart Lake**	**86.05**	**14**	IAmb		IAmb	07 51 28.9	
	comp=Z,11nm,1.6s							
HDA	**Harding Lake**	**86.33**	**18**	P		**P**	**07 50 47.8**	**-0.2**
BELA	**Belgrano 2**	**86.59**	**175**	P		**P**	**07 50 48.2**	**-1.0**
BELA				IAmb		IAmb	07 50 49.6	
	comp=Z,18nm,1.5s							
ILAR	**Eielson Array**	**86.61**	**18**	P		**P**	**07 50 48.2**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=243,slow=5.5,SNR=14							
ILAR				LR		LR	08 24 08.7	
	comp=Z,27nm,21.1s,baz=226,slow=32							
	comp=Z,1.3nm,0.8s							
NVAR	**Mina Array Bea**	**87.28**	**49**	P		**P**	**07 50 52.9**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=224,slow=8.3,SNR=3.6							
	comp=Z,0.9nm,0.7s							
EVN	**Everest**	**88.76**	**299**	P		**P**	**07 51 01.4**	**+0.2**
EVN				IAmb		IAmb	07 51 03.0	
	comp=Z,5.9nm,0.6s							
EVN	**Everest**	**88.76**	**299**	P		**P**	**07 50 59.5**	**-1.8**
EVN				pP		**pP**	**07 51 32.0**	**-0.5**
PRN	**Pahroc Range**	**89.34**	**51**			**P**	**07 51 03.5**	**+0.3**
ELIB	**Princess Elisa**	**90.11**	**191**	*d*P		**P**	**07 51 05.6**	**-0.5**
	comp=Z,7.2nm,0.9s							
TROLL	**Troll, Antarti**	**92.75**	**185**	⇑P		**P**	**07 51 17.7**	**-0.7**
	comp=Z,657nm,0.6s							
WMQ	**Urumqi**	**92.89**	**315**	*e*P		**P**	**07 51 20.2**	**+0.9**
WMQ				pmax		pmax		
	comp=Z,20nm,0.7s							
SNAA	**Sanae**	**93.43**	**183**	⇑P		**P**	**07 51 20.3**	**-1.1**
	comp=Z,117nm,0.7s							
SNAA	**Sanae**	**93.43**	**183**	P		**P**	**07 51 20.5**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=202,slow=4.4,SNR=17							
	comp=Z,5.7nm,0.8s							
SNAA	**Sanae**	**93.43**	**183**	P		**P**	**07 51 19.9**	**-1.5**
SNAA				IAmb		IAmb	07 51 22.1	
	comp=Z,7.0nm,0.9s							
SNAA	**Sanae**	**93.43**	**183**	P		**P**	**07 51 20.5**	**-0.9**
VNA2	**Neumayer--Watz**	**94.36**	**182**	⇑P		**P**	**07 51 24.5**	**-1.1**
	comp=Z,9.8nm,0.6s,baz=173,slow=4.8							
VNA2	**Neumayer--Watz**	**94.36**	**182**	P		**P**	**07 51 24.7**	**-0.9**
VNA1	**Neumayer--Stat**	**94.66**	**181**	⇑P		**P**	**07 51 25.9**	**-1.0**
	comp=Z,4.3nm,0.6s							
TXAR	**Lajitas Array**	**96.25**	**61**	P		**P**	**07 51 35.6**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=221,slow=5.6,SNR=4.9							
	comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**97.36**	**316**	P		Pdif	07 51 40.2	+0.5
	comp=Z,0.8nm,0.6s,baz=95,slow=6.8,SNR=8.0							
MKAR				PKiKP		**PKiKP**	**07 56 13.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=135,slow=0.7,SNR=4.8							
	comp=Z,0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**97.55**	**324**	P		**P**	**07 51 39.1**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=130,slow=6.2,SNR=3.6							
	comp=Z,0.5nm,0.5s							
YKA	**Yellowknife Ar**	**97.61**	**27**	P		**P**	**07 51 37.8**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=262,slow=4.7,SNR=2.7							
	comp=Z,0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**100.60**	**320**	P		**Pdif**	**07 51 52.6**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=112,slow=1.0,SNR=1.1							
SPITS	**Spitsbergen Ar**	**115.07**	**354**	PKP		**PKiKP**	**07 56 44.9**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=65,slow=6.8,SNR=1.5							
ARCES	**ARCESS Array B**	**120.40**	**345**	PKP		**PKPdf**	**07 56 55.9**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=72,slow=1.8,SNR=17							
FINES	**FINESS Array B**	**125.88**	**338**	PKP		**PKPdf**	**07 57 05.8**	**-1.4**
	comp=Z,6.1nm,1.1s,baz=89,slow=2.8,SNR=6.0							
NB2	**NORSAR Array B**	**130.77**	**345**	SKPa			08 00 32.7	
	comp=Z,1.9nm,0.7s,baz=38,slow=4.8							
NOA

FITZ	**Fitzroy Crossi**	**11.49**	**197**		**Pn**	**08 46 23.2**	**-0.2**
FITZ					**Sn**	**08 48 25.8**	**-5.2**
WB0	**Warramunga Arr**	**13.58**	**159**	Pn	**Pn**	**08 46 50.9**	**+0.8**
WRAB	**Tennant Creek**	**13.72**	**159**	Pn	**Pn**	**08 46 51.8**	**0.0**
WRA	**Warramunga Arr**	**13.73**	**159**	P	**Pn**	**08 46 51.9**	**0.0**
	2.2nm,0.5s,baz=335,slow=14,SNR=22						
WRA				S	**Sn**	**08 49 19.0**	**-5.6**
	1.9nm,0.4s,baz=338,slow=22,SNR=7.7						
WRA	**Warramunga Arr**	**13.73**	**159**	Pn	**Pn**	**08 46 50.2**	**-1.6**
WRA					**Sn**	**08 49 19.0**	**-5.6**
WR8	**Warramunga Arr**	**13.79**	**159**		**Pn**	**08 46 52.5**	**-0.3**
COEN	**Coen**	**15.34**	**118**		**Pn**	**08 47 14.1**	**+2.2**
COEN				IAmb	IAmb	08 47 19.9	
	comp=Z,25nm,1.5s						
AS31	**Alice Springs**	**17.10**	**165**		**Pn**	**08 47 34.9**	**+1.7**
AS31				IAmb	IAmb	08 47 37.5	
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**17.10**	**165**	P	**Pn**	**08 47 35.5**	**+2.3**
	comp=Z,13nm,0.5s,baz=342,slow=9.9,SNR=168						
ASAR				S	**S**	**08 50 39.8**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=338,slow=24,SNR=3.3						
ASAR	**Alice Springs**	**17.10**	**165**		**P**	**08 47 34.8**	**+2.7**
ASAR					**S**	**08 50 39.8**	**-1.7**
FORT	**Forrest**	**23.61**	**182**	P	**P**	**08 48 42.0**	**+2.7**
FORT				IAmb	IAmb	08 48 56.1	
	comp=Z,20nm,1.1s						
BBOO	**Buckleboo**	**26.39**	**167**	P	**P**	**08 49 06.3**	**+1.8**
STKA	**Stephens Creek**	**27.25**	**157**	P	**P**	**08 49 14.4**	**+2.2**
	comp=Z,5.0nm,1.1s,baz=336,slow=8.1,SNR=4.2						
	comp=Z,5.0nm,1.1s						

*IDC **01** 08:45:12.1±0.5,26°42N×141°71E, h0km, mb4.3/21, mbtmp4.2/24, ML3.5/3, MS3.1/4, Error ellipse: s-maj=17.3km s-min=11.8km az=95.0*
*NEIC **01** 08:45:17.5±1.5,26°46N±0°08×141°67E±0°09, h30km±1km, mb4.6/35, Error ellipse: s-maj=13.2km s-min=9.2km az=130.0*
*JMA **01** 08:45:19.2±0.1,26°5N±0°5×14°2E±°, h56km, MD4.1/15, MV4.3/15, NEAR CHICHIJIMA ISLAND*
JMA Felt I J1 at NEAR CHICHIJIMA ISLAND .

ISC 01 08:45:17.5±0.5,26°44N±0°06×141°67E±0°07,h35km,n84, σ1§02/79,mb4.5/40,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHH2	**Haha-jima-NKT2**	**0.49**	**67**	P		**Pn**	**08 45 28.7**	**+0.7**
JHH2				A		A	08 45 28.7	
	comp=N,67nm,0.4s,comp=E,61nm,0.4s							
JHH2				S		**Sn**	**08 45 35.4**	**+0.2**
CBIJ	**Chichi jima**	**0.80**	**35**	P		**Pn**	**08 45 32.9**	**+0.7**
CBIJ				A		A	08 45 32.9	
	comp=N,11nm,0.4s,comp=E,17nm,1.1s							
CBIJ				eS		**Sn**	**08 45 43.7**	**+0.8**
JCJ	**Chichijima**	**0.80**	**35**	Pn		**Pn**	**08 45 31.9**	**-0.3**
	comp=E,466nm,0.3s,baz=279,slow=24,SNR=1263							
JCJ				Sn		**Sn**	**08 45 41.4**	**-1.5**
	comp=E,825nm,0.3s,baz=294,slow=23,SNR=17							
JCJ				LR		LR	08 45 59.8	
	comp=E,259nm,21.2s,baz=160,slow=60							
JCJ	**Chichijima**	**0.80**	**35**			**Pn**	**08 45 32.9**	**+0.7**
JCJ						**Sn**	**08 45 41.4**	**-1.5**
JHJ	**Hachijo jima 2**	**6.86**	**347**	Pn		**Pn**	**08 46 55.0**	**-0.5**
	comp=E,6.4nm,0.3s,baz=151,slow=16,SNR=1.8							
JHJ				Sn		**Sn**	**08 48 12.8**	**+0.6**
	comp=E,5.4nm,0.3s,baz=252,slow=20,SNR=2.1							
	comp=E,41nm,0.5s							
BSO4	**Boso 4**	**8.60**	**353**	*eP*		**Pn**	**08 47 23.6**	**+4.3**
JAG	**Ashikaga**	**10.13**	**350**	*eP*		**Pn**	**08 47 41.8**	**+1.3**
JAG				S		**Sn**	**08 49 30.5**	**-2.3**
MJAR	**Matsushiro Arr**	**10.49**	**345**	Pn		**Pn**	**08 47 45.3**	**-0.1**
	comp=E,0.2nm,0.3s,baz=158,slow=11,SNR=7.6							
	comp=E,0.4nm,0.3s							
MAJO	**Matsushiro**	**10.49**	**344**	Pn		**Pn**	**08 47 46.0**	**+0.6**
GUMO	**Guam**	**13.13**	**166**	LR		LR	08 52 23.6	
	comp=E,38nm,19.1s,baz=320,slow=33							
JTM	**Tenmabayashi**	**14.32**	**358**	Pn		**Pn**	**08 48 38.5**	**+0.9**
KSRS	**Korea Array**	**16.00**	**317**	Pn		**P**	**08 49 01.0**	**-2.0**
	comp=E,0.2nm,0.3s,baz=130,slow=13,SNR=4.2							
KSRS				LR		LR	08 54 55.9	
	comp=E,28nm,20.0s,baz=130,slow=36							
	comp=E,1.2nm,0.9s							
JKA	**Kamikawa-asahi**	**17.65**	**2**			**Pn**	**08 49 21.0**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**24.12**	**101**	T		T	09 14 58.6	
	baz=291,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**24.12**	**101**	T		T	09 15 01.4	
	baz=291,slow=75,SNR=9.8							
H11N3	**WAKE ISLAND Hy**	**24.14**	**101**	T		T	09 15 01.5	
	baz=291,slow=75,SNR=12							
H11S3	**WAKE ISLAND Hy**	**24.40**	**104**	T		T	09 15 22.0	
	baz=294,slow=75,SNR=8.0							
H11S1	**WAKE ISLAND Hy**	**24.41**	**104**	T		T	09 15 25.2	
	baz=294,slow=75,SNR=7.6							
H11S2	**WAKE ISLAND Hy**	**24.42**	**104**	T		T	09 15 23.2	
	baz=294,slow=75,SNR=6.1							
LZDM	**Lanzhou Array**	**33.66**	**296**	P		**P**	**08 51 56.6**	**+1.1**
	comp=E,4.1nm,0.3s,baz=138,slow=9.1,SNR=8.0							
	comp=E,4.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**40.14**	**268**	P		**P**	**08 52 51.9**	**+1.6**
	comp=E,1.2nm,0.3s,baz=68,slow=5.7,SNR=4.1							
	comp=E,1.2nm,0.3s							
MTN	**Manton Dam**	**40.37**	**196**	P		**P**	**08 52 51.9**	**-0.2**
MTN				IAmb		IAmb	08 52 52.2	
	comp=Z,6.0nm,0.6s							
KNRA	**Kununurra**	**43.71**	**198**	P		**P**	**08 53 18.2**	**-1.1**
KNRA				IAmb		IAmb	08 53 51.0	
	comp=Z,12nm,1.4s							
CTA	**Charters Tower**	**46.47**	**174**	P		**P**	**08 53 41.5**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=350,slow=9.5,SNR=1.7							
	comp=Z,3.9nm,0.6s							
CTAO	**Charters Tower**	**46.47**	**174**	P		**P**	**08 53 41.9**	**+0.7**
WB0	**Warramunga Arr**	**46.47**	**189**	P		**P**	**08 53 41.3**	**0.0**
WR8	**Warramunga Arr**	**46.64**	**189**			**P**	**08 53 42.7**	**+0.1**
WRAB	**Tennant Creek**	**46.64**	**189**	P		**P**	**08 53 42.8**	**+0.2**
WRA	**Warramunga Arr**	**46.65**	**190**	P		**P**	**08 53 42.7**	**0.0**
	comp=Z,12nm,0.6s,baz=10,slow=8.5,SNR=36							
	comp=Z,12nm,0.6s							
WRA	**Warramunga Arr**	**46.65**	**190**	P		**P**	**08 53 41.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**46.93**	**201**	P		**P**	**08 53 45.1**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=18,slow=4.3,SNR=4.3							
	comp=Z,3.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**46.93**	**201**	P		**P**	**08 53 45.1**	**+0.3**
EVN	**Everest**	**48.47**	**285**	P		**P**	**08 53 57.7**	**+0.1**
EVN				IAmb		IAmb	08 53 59.4	
	comp=Z,2.6nm,0.6s							
ZALV	**Zalesovo Beam**	**49.68**	**320**	PcP		**PcP**	**08 55 26.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=104,slow=3.0,SNR=2.0							
AS31	**Alice Springs**	**50.38**	**189**	P		**P**	**08 54 11.2**	**-0.1**
ASAR	**Alice Springs**	**50.38**	**189**	P		**P**	**08 54 11.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=14,slow=8.1,SNR=9.5							
	comp=Z,0.9nm,0.3s							
MKAR	**Makanchi Array**	**50.54**	**310**	P		**P**	**08 54 11.7**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=85,slow=10,SNR=9.5							
	comp=Z,0.5nm,0.3s							
EIDS	**Eidsvold**	**52.30**	**169**	P		**P**	**08 54 25.1**	**-0.5**
KURK	**Kurchatov**	**53.12**	**315**	P		**P**	**08 54 31.2**	**-0.2**
KURK				IAmb		IAmb	08 54 55.3	
	comp=Z,6.7nm,0.6s							
KURBB	**Kurchatov Arra**	**53.17**	**315**	P		**P**	**08 54 31.2**	**-0.6**
	comp=Z,2.9nm,0.4s,baz=90,slow=7.6,SNR=26							
	comp=Z,2.9nm,0.4s							
M17K	**Holitna River**	**53.26**	**32**	P		**P**	**08 54 33.8**	**+1.4**
M17K				IAmb		IAmb	08 54 59.2	
	comp=Z,8.3nm,1.4s							
O18K	**Koktuh Hills**	**54.06**	**34**	P		**P**	**08 54 38.1**	**-0.2**
O18K				IAmb		IAmb	08 54 45.3	
	comp=Z,8.8nm,1.4s							
J19K	**Poorman**	**54.64**	**29**	P		**P**	**08 54 43.2**	**+0.8**
J19K				IAmb		IAmb	08 54 59.0	
	comp=Z,6.9nm,1.4s							
K20K	**Telida**	**55.19**	**30**	P		**P**	**08 54 48.0**	**+1.5**
K20K				IAmb		IAmb	08 55 23.2	
	comp=Z,6.0nm,1.4s							
D20K	**Etivluk River**	**55.43**	**23**	P		**P**	**08 54 49.6**	**+1.6**
D20K				IAmb		IAmb	08 54 50.3	
	comp=Z,6.2nm,0.7s							
CAST	**Castle Rocks**	**56.08**	**30**	P		**P**	**08 54 53.3**	**+0.5**
MLY	**Manley**	**56.90**	**28**	P		**P**	**08 55 00.2**	**+1.5**
ARSB	**Arslanbob**	**57.54**	**304**	P		**P**	**08 55 03.2**	**-0.5**
ARSB				IAmb		IAmb	08 55 04.5	
	comp=Z,2.4nm,0.6s							
STKA	**Stephens Creek**	**57.99**	**180**	P		**P**	**08 55 06.1**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=355,slow=7.7,SNR=8.3							
	comp=Z,1.6nm,0.3s							
BVAR	**Borovoye Array**	**58.22**	**318**	P		**P**	**08 55 07.7**	**-0.3**
	comp=Z,2.7nm,0.4s,baz=89,slow=6.9,SNR=10							
	comp=Z,2.7nm,0.4s							
BORK	**Borovoye**	**58.26**	**318**	P		**P**	**08 55 08.3**	**-0.1**
BORK				IAmb		IAmb	08 55 34.7	
	comp=Z,4.5nm,0.8s							
ILAR	**Eielson Array**	**58.50**	**28**	P		**P**	**08 55 09.8**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=266,slow=6.0,SNR=10							
	comp=Z,1.0nm,0.8s							
KK31	**Karatay Array**	**59.10**	**306**	IAmb		IAmb	08 55 15.7	
	comp=Z,3.7nm,0.6s							
KKAR	**Karatay Array**	**59.10**	**306**			**P**	**08 55 14.3**	**-0.1**
BBOO	**Buckleboo**	**59.16**	**186**	P		**P**	**08 55 13.8**	**-0.9**
SCRK	**Sand Creek**	**59.72**	**29**			**P**	**08 55 18.8**	**+0.3**
SCRK				IAmb		IAmb	08 55 19.7	
	comp=Z,2.3nm,0.7s							
F26K	**Sheenjek River**	**59.83**	**25**	P		**P**	**08 55 19.1**	**+0.1**
H27K	**Steamboat Moun**	**60.80**	**27**	P		**P**	**08 55 26.7**	**+1.0**
H27K				IAmb		IAmb	08 55 28.3	
	comp=Z,3.5nm,1.1s							
E29M	**Blow River**	**62.19**	**24**	P		**P**	**08 55 36.6**	**+1.6**
E29M				IAmb		IAmb	08 56 16.7	
	comp=Z,7.6nm,1.4s							
G31M	**Satah River**	**63.66**	**26**	P		**P**	**08 55 45.8**	**+1.0**
INK	**Inuvik**	**63.81**	**24**	P		**P**	**08 55 46.4**	**+0.6**
INK				IAmb		IAmb	08 55 46.7	
	comp=Z,7.0nm,1.3s							
AB31	**Akbulak array**	**65.22**	**314**	IAmb		IAmb	08 55 55.6	
	comp=Z,3.5nm,0.5s							
ABKAR	**Akbulak array**	**65.22**	**314**			**P**	**08 55 54.8**	**-0.6**
DLBC	**Dease Lake**	**67.00**	**35**	LR		LR	09 23 55.6	
	comp=Z,20nm,21.4s,baz=221,slow=35							
C36M	**Paulatuk**	**67.02**	**23**	P		**P**	**08 56 06.6**	**+0.2**
C36M				IAmb		IAmb	08 56 15.5	
	comp=Z,3.8nm,1.0s							
SPITS	**Spitsbergen Ar**	**70.94**	**350**	P		**P**	**08 56 32.6**	**+1.9**
	comp=Z,1.6nm,0.5s,baz=94,slow=9.3,SNR=6.7							
	comp=Z,1.6nm,0.5s							
YKA	**Yellowknife Ar**	**72.93**	**28**	P		**P**	**08 56 42.9**	**0.0**
	comp=Z,1.5nm,0.4s,baz=297,slow=6.3,SNR=21							
	comp=Z,1.5nm,0.4s							
ARCES	**ARCESS Array B**	**74.01**	**341**	P		**P**	**08 56 50.8**	**+1.6**
	comp=Z,1.9nm,0.5s,baz=66,slow=8.1,SNR=17							
	comp=Z,1.9nm,0.5s							
ARCES	**ARCESS Array B**	**74.01**	**341**	P		**P**	**08 56 50.8**	**+1.6**
KBZ	**Khabaz**	**78.12**	**313**	P		**P**	**08 57 12.9**	**0.0**
	comp=Z,1.0nm,0.5s,baz=59,slow=7.1,SNR=4.2							
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**78.33**	**334**	P		**P**	**08 57 13.8**	**0.0**
	comp=Z,4.6nm,0.4s,baz=64,slow=4.9,SNR=48							
	comp=Z,4.6nm,0.4s							
GNI	**Garni**	**78.38**	**309**	LR		LR	09 37 24.9	
	comp=Z,26nm,18.3s,baz=278,slow=40							
NVAR	**Mina Array Bea**	**81.28**	**51**	P		**P**	**08 57 29.1**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=347,slow=6.1,SNR=4.0							
	comp=Z,0.5nm,0.5s							
AKASG	**Malin Array Be**	**82.87**	**324**	P		**P**	**08 57 37.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=53,slow=5.3,SNR=1.9							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**82.87**	**324**	P		**P**	**08 57 37.2**	**-1.1**
HFS	**Hagfors**	**83.84**	**337**	P		**P**	**08 57 42.5**	**-0.7**
	comp=Z,2.3nm,0.4s,baz=76,slow=0.6,SNR=18							
	comp=Z,2.3nm,0.4s							
NOA	**NORSAR Array B**	**84.05**	**338**	P		**P**	**08 57 44.3**	**0.0**
	comp=Z,0.6nm,0.4s,baz=46,slow=5.0,SNR=4.6							
	comp=Z,0.6nm,0.4s							
RAYN	**Ar Rayn**	**84.99**	**294**	P		**P**	**08 57 49.6**	**-0.2**
RAYN				IAmb		IAmb	08 57 50.4	
	comp=Z,4.1nm,0.7s							
PDAR	**Pinedale Array**	**85.00**	**44**	P		**P**	**08 57 49.9**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=348,slow=1.1,SNR=5.2							
	comp=Z,0.3nm,0.4s							
TORD	**Torodi Ar. Bea**	**124.66**	**310**	PKP		**PKPdf**	**09 04 12.9**	**-1.2**
	comp=Z,9.9nm,0.9s,baz=228,slow=11,SNR=12							
PLCA	**Paso Flores**	**149.80**	**126**	PKPbc		**PKiKP**	**09 05 04.3**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=212,slow=10,SNR=3.0							
LPAZ	**La Paz**	**150.53**	**76**	PKPbc		**PKPbc**	**09 05 07.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=355,slow=4.8,SNR=6.6							
MT02	**Curacav**	**150.82**	**111**	PKPbc		**PKPbc**	**09 05 06.0**	**-0.5**
BO02	**Sierra Bellavi**	**150.95**	**115**	PKPbc		**PKPbc**	**09 05 07.0**	**+0.1**

*IDC **01** 08:56:50.5±2.3, 17°59S×178°86W, h591km±19km, mb3.1/4, mbtmp4.0/6, Error ellipse: s-maj=113.9km s-min=27.1km az=156.0*

ISC 01 08:56:51.2±1.6,17°2S±1°0×179°1W±0°5,h600km,n6, σ0§66/8,mb3.7/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**2.78**	**259**	P		**P**	**08 58 08.4**	**-0.8**
	13nm,0.6s,baz=117,slow=11,SNR=9.9							
DZM	**Mont Dzumac**	**14.45**	**248**	P		**P**	**08 59 54.5**	**0.0**
	6.1nm,0.9s,baz=75,slow=20,SNR=2.0							
STKA	**Stephens Creek**	**38.39**	**240**	P		**P**	**09 03 22.9**	**0.0**
	1.6nm,0.4s,baz=94,slow=12,SNR=5.3							
	1.6nm,0.4s							
WRA	**Warramunga Arr**	**44.12**	**259**	P		**P**	**09 04 08.8**	**+0.6**
	0.7nm,0.5s,baz=96,slow=8.0,SNR=34							
WRA				PcP		**PcP**	**09 05 39.4**	**-0.4**
	0.1nm,0.4s,baz=92,slow=2.9,SNR=1.3							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**44.35**	**254**	P		**P**	**09 04 10.8**	**+0.8**
	8.5nm,0.6s,baz=88,slow=8.3,SNR=174							
ASAR				PcP		**PcP**	**09 05 40.2**	**-0.4**
	0.3nm,0.6s,baz=94,slow=4.0,SNR=2.1							
	8.5nm,0.6s							
TXAR	**Lajitas Array**	**86.19**	**58**	P		**P**	**09 08 30.9**	**+0.3**
	0.2nm,0.7s,baz=212,slow=7.1,SNR=3.5							
	0.2nm,0.7s							

*IDC **01** 09:07:13.2±1.7, 67°49N×23°39E, h0km, mbtmp2.7/2, ML1.6/2, Error ellipse: s-maj=32.5km s-min=8.0km az=96.0*
*HEL **01** 09:07:13.8±0.1, 67°43N×23°34E, h0km, ML1.3, Suspected explosion*
*BER **01** 09:07:15.4±1.3, 67°47N×23°36E, h0km, Suspected explosion*

ISC 01 09:07:12.2±0.8,67°46N±0°02×23°32E±0°03,h0km,n25, σ1§05/42,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KLF	**Kolari**	**0.34**	**132**	PG		**Pg**	**09 07 19.1**	**+0.4**
	baz=313							
KLF				SG		**Sg**	**09 07 24.0**	**+0.9**
KLF				smax		smax	09 07 24.7	
	comp=Z,7.0nm,0.2s							
PAJU	**Pajala**	**0.45**	**190**	PG		**Pg**	**09 07 21.2**	**+0.4**
PAJU				SG		**Sg**	**09 07 25.0**	**-1.6**
LANU	**Lannavaara**	**0.77**	**320**	*eP*		**Pb**	**09 07 28.4**	**-0.1**
LANU				*eS*		**Sb**	**09 07 39.9**	**+0.3**
LANU	**Lannavaara**	**0.77**	**320**	PG		**Pb**	**09 07 28.4**	**-0.1**
LANU				SG		**Sg**	**09 07 34.5**	**-2.5**
HEF	**Hetta**	**0.96**	**8**	*eP*		**Pb**	**09 07 31.7**	**0.0**
HEF				*eS*		**Sb**	**09 07 45.5**	**+0.6**
HEF	**Hetta**	**0.96**	**8**	PG		**Pb**	**09 07 31.9**	**+0.2**
HEF				smax		smax	09 07 44.1	
	comp=Z,3.2nm,0.2s							
HEF				SB		**Sb**	**09 07 45.7**	**+0.8**
ERTU	**Ertsjaerv**	**1.01**	**206**	PB		**Pb**	**09 07 31.8**	**-0.8**
ERTU				SB		**Sg**	**09 07 44.8**	**+0.1**
RNF	**Rovaniemi**	**1.36**	**128**	PG		**Pg**	**09 07 37.6**	**-0.6**
RNF				SB		**Sn**	**09 07 56.3**	**-0.9**
TOF	**Tornio**	**1.45**	**163**	PG		**Pb**	**09 07 39.6**	**-0.4**
TOF				smax		smax	09 07 56.3	
	comp=Z,1.8nm,0.2s							
TOF				SB		**Sg**	**09 07 57.8**	**-0.8**
KTK1	**Kautokeino**	**1.56**	**359**	*eP*		**Pg**	**09 07 42.3**	**+0.3**
KTK1				*eS*		**Sg**	**09 08 02.2**	**0.0**
KTK1	**Kautokeino**	**1.56**	**359**	PG		**Pg**	**09 07 42.2**	**+0.1**
KTK1				SG		**Sg**	**09 08 02.5**	**+0.3**
KALU	**Kalix**	**1.61**	**179**	PG		**Pb**	**09 07 42.3**	**-0.4**
KALU				SN		**Sg**	**09 08 06.0**	**+2.2**
SALU	**Saltoluokta**	**1.86**	**270**	*eP*		**Pg**	**09 07 47.5**	**-0.3**
RANF	**Ranua**	**2.00**	**135**	PG		**Pb**	**09 07 48.9**	**-0.6**
	baz=316							
RANF				SG		**Sb**	**09 08 14.0**	**-0.9**
RAJF	**Raja-Jooseppi**	**2.14**	**59**	PB		**Pb**	**09 07 50.9**	**-0.9**
RAJF				SG		**Sg**	**09 08 20.6**	**-0.3**
ARA0	**ARCESS Array S**	**2.23**	**20**	PB		**Pb**	**09 07 52.9**	**-0.5**
ARA0				SB		**Sb**	**09 08 21.6**	**+0.1**
ARCES	**ARCESS Array B**	**2.23**	**20**	Pn		**Pb**	**09 07 52.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=199,slow=15,SNR=5.4							
ARCES				Lg		Lg	09 08 21.8	
	comp=Z,0.3nm,0.3s,baz=204,slow=28,SNR=6.4							
	comp=Z,1.0nm,0.6s							
I37NO	**I37NO**	**2.39**	**315**	I		I	09 21 50.0	
	baz=131,slow=325,SNR=2.6							
VRF	**Varrio**	**2.43**	**80**	PN		**Pb**	**09 07 55.7**	**-1.0**
VRF				smax		smax	09 08 25.6	
	comp=Z,1.4nm,0.2s							
VRF				SB		**Sb**	**09 08 27.5**	**+0.4**
OUL	**Oulu**	**2.61**	**155**	PB		**Pb**	**09 07 58.4**	**-1.3**
KEV	**Kevo**	**2.67**	**29**	PN		**Pb**	**09 07 58.9**	**-2.0**
KEV				SB		**Sb**	**09 08 32.8**	**-1.3**
MSF	**Maaselka**	**2.76**	**122**	SG		**Sb**	**09 08 37.3**	**+0.7**
KU1	**Kurvinen**	**3.14**	**124**	PN		**Pn**	**09 08 04.5**	**+1.6**
OUF	**Merijarvi**	**3.16**	**169**	PB		**Pb**	**09 08 06.8**	**-2.4**
	baz=345							
OUF				smax		smax	09 08 45.5	
	comp=Z,0.6nm,0.2s							
FINES	**FINESS Array B**	**6.16**	**168**	Pn		**Pn**	**09 08 46.1**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=354,slow=13,SNR=1.9							
FINES				Sn		**Sn**	**09 09 55.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=334,slow=22,SNR=1.5							
FINES				Lg		Lg	09 10 27.9	
	comp=Z,0.1nm,0.3s,baz=347,slow=30,SNR=2.2							
	comp=Z,2.5nm,0.9s							

*OSPL **01** 09:07:33.5±1.2, 18°51N×69°56W, h145km±14km, ML2.4, Presumed earthquake*
*SDD **01** 09:07:43.9±1.6, 18°25N×69°49W, h7km±238km, MD2.5, ML1.6, MW2.7, Presumed earthquake*

ISC 01 09:07:34.9±2.2,18°6N±0°1×69°59W±0°05,h107km±17km, n9,σ1§09/14,3C-3D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HATOM	**Hato Mayor del**	**0.30**	**43**	⇓*iP*		**Pn**	**09 07 49.2**	**-1.1**
HATOM				⇑*iS*		**Sn**	**09 08 01.4**	**-0.5**
HATOM				IAML			09 08 01.7	
	comp=N,17nm,0.3s							
BANI	**BANI**	**0.75**	**256**	⇓*iP*		Pn	09 07 59.8	+6.4
BANI				⇑*iS*		**Sn**	**09 08 09.6**	**+2.2**
BANI				IAML			09 08 12.8	
	comp=N,61nm,0.6s							
HIDR	**Higuey Centro**	**0.83**	**88**	⇓*iP*		Pn	09 07 58.1	+4.0
HIDR				⇑*iS*		**Sn**	**09 08 09.1**	**+0.6**
HIDR				IAML			09 08 10.3	
	comp=N,20nm,0.9s							
PCDR	**Punta Cana, DR**	**1.15**	**93**	*i* P		**Pn**	**09 07 57.0**	**-0.4**
PCDR				*eS*		**Sn**	**09 08 15.9**	**+1.4**
PCDR				IAML			09 08 16.3	
	comp=Z,35nm,1.0s							
SDDR	**Presa de Saban**	**1.66**	**285**	*i* P		**Pn**	**09 08 03.4**	**-0.1**
SDDR				IAML			09 08 29.9	
	comp=Z,105nm,0.1s							
LONE3	**El Aguacate, B**	**1.77**	**271**	*i* P		**Pn**	**09 08 04.8**	**-0.1**
LONE3				*eS*		**Sn**	**09 08 28.6**	**+0.7**
LONE3				IAML			09 08 33.2	
	comp=Z,9.7nm,2.4s							
LODU1	**El Espartillar**	**1.80**	**263**	*i* P		**Pn**	**09 08 05.3**	**+0.1**
LODU1				IAML			09 08 30.8	
	comp=Z,24nm,3.3s							
LOVI	**El Cajuil, Ovi**	**1.85**	**246**	*i* P		**Pn**	**09 08 05.3**	**-0.6**
LOVI				*eS*		**Sn**	**09 08 28.1**	**-1.4**
LOVI				IAML			09 08 32.7	
	comp=Z,53nm,2.8s							
LOPP1	**Punta Rusia, P**	**1.98**	**310**	*i* P		**Pn**	**09 08 07.7**	**+0.2**
LOPP1				*eS*		**Sn**	**09 08 31.9**	**-0.5**

*BJI **01** 09:24:58.8, 35°31N×140°89E, h56km, mB4.7/13, mb4.7/57, Ms4.1/19, Ms7 3.8/21*
*MOS **01** 09:24:59.7±0.9, 35°34N×140°52E, h40km, mb4.9/46, MS4.0/5, Error ellipse: s-maj=9.4km s-min=4.7km az=125.0*
*NEIC **01** 09:25:02.6±1.1, 35°35N±0°06×140°52E±0°09, h46km±5km, mb4.7/93, Error ellipse: s-maj=10.4km s-min=8.3km az=92.0*
*GFZ **01** 09:25:03.0±0.2, 35°N±3°×14°1E±°, h52km, M5.3/37, mb4.8/37, confirmed*
*NIED **01** 09:25:03.0, 35°40N×140°45E, h57km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.03; Mθθ0.23; M

JKT **Katashina** 1.81 324 A A 09 25 30.6
comp=N,9.0nm,0.8s,comp=E,12nm,1.3s
SHZ3 **Shizuoka 3** 1.96 264 A A 09 25 33.2
comp=N,16nm,0.8s,comp=E,8.0nm,0.9s
JGK **Kuni** 2.01 309 A A 09 25 33.4
comp=N,7.0nm,4.0s,comp=E,6.0nm,4.3s
JSG **Sagara** 2.06 253 **Pn** **09 25 34.0 -0.3**
JSG **Sagara** 2.06 253 P **Pn** **09 25 34.5 +0.2**
JFK **Kawauchi** 2.07 7 A A 09 25 35.1
comp=N,2.0nm,2.3s,comp=E,4.0nm,4.0s
JNT **Takato** 2.07 287 A A 09 25 34.4
comp=N,5.0nm,3.3s,comp=E,5.0nm,2.4s
JFY **Yanaizu** 2.21 342 A A 09 25 36.5
comp=N,2.0nm,1.6s,comp=E,4.0nm,1.8s
JNY **Yasuok** 2.22 272 A A 09 25 36.8
comp=N,7.0nm,2.0s,comp=E,6.0nm,1.8s
MJA0 **Matsu Arr-Jizo** 2.26 304 *e*P **Pn** **09 25 37.7 +0.7**
JHJ2 **Mitsune** 2.28 196 **Pn** **09 25 38.6 +1.3**
JHJ2 **Mitsune** 2.28 196 P **Pn** **09 25 39.2 +1.9**
JHJ **Hachijo jima 2** 2.28 197 P **Pn** **09 25 38.5 +1.2**
comp=E,658nm,0.3s,baz=53,slow=4.2,SNR=66
JHJ S **Sn** **09 26 05.7 +1.4**
comp=E,1µm,0.4s,baz=58,slow=24,SNR=11
MJAR **Matsushiro Arr** 2.28 303 P **Pn** **09 25 37.1 -0.2**
comp=E,176nm,0.5s,baz=131,slow=16,SNR=306
MJAR S **Sn** **09 26 02.0 -2.2**
comp=E,392nm,1.0s,baz=119,slow=21,SNR=5.5
MJAR **Matsushiro Arr** 2.28 303 Pn **Pn** **09 25 37.7 +0.4**
MAJO **Matsushiro** 2.29 303 **Pn** **09 25 37.6 +0.3**
MAJO **Matsushiro** 2.29 303 *d* iP **Pn** **09 25 37.4 +0.1**
MAJO **Matsushiro** 2.29 303 P **Pn** **09 25 37.6 +0.3**
MJB9 **Matsu-Tunnel** 2.29 303 **Pn** **09 25 37.2 -0.1**
JYAR **Yonezawaarcadi** 2.62 352 A A 09 25 42.6
comp=N,7.0nm,3.6s,comp=E,7.0nm,1.3s
JGF **Kuroka** 2.65 277 **Pn** **09 25 43.6 +1.3**
JGF **Kuroka** 2.65 277 P **Pn** **09 25 43.5 +1.3**
JJN **Nakama** 2.65 313 A A 09 25 42.4
comp=N,5.0nm,4.0s,comp=E,5.0nm,1.4s
JIZZ **Izumozaki** 2.68 326 A A 09 25 43.0
comp=N,10.0nm,1.9s,comp=E,10.0nm,3.7s
INU **Inuyama** 2.91 272 **Pn** **09 25 45.6 -0.3**
JTT **Ttatey** 2.93 297 A A 09 25 46.5
comp=N,7.0nm,3.7s,comp=E,5.0nm,4.4s
JOU **Okura** 3.05 1 A A 09 25 48.9
comp=N,5.0nm,3.3s,comp=E,5.0nm,2.6s
JICN **Ichinomiyachia** 3.06 271 A A 09 25 48.5
comp=N,7.0nm,3.3s,comp=E,6.0nm,2.8s
JTM **Tenmabayashi** 5.48 4 **Pn** **09 26 21.8 +0.7**
JTM **Tenmabayashi** 5.48 4 P **Pn** **09 26 22.7 +1.6**
JMN **Monobe** 5.75 256 **Pn** **09 26 25.8 +0.8**
JCJ **Chichijima** 8.30 170 P **Pn** **09 26 58.6 -1.3**
comp=E,254nm,0.4s,baz=53,slow=5.1,SNR=74
JCJ S **Sn** **09 28 26.4 -5.9**
comp=E,64nm,0.5s,baz=335,slow=23,SNR=1.9
JCJ **Chichijima** 8.30 170 **Pn** **09 26 60.0 +0.1**
JCJ **Chichijima** 8.30 170 P **Pn** **09 26 59.9 0.0**
JNU **Nakatsue** 8.33 258 LR LR 09 30 36.0
comp=E,395nm,18.6s,baz=71,slow=41
JNU **Nakatsue** 8.33 258 P **Pn** **09 27 02.8 +2.6**
ASAJ **Asahikawa** 8.93 9 P **Pn** **09 27 07.3 -1.1**
JKA **Kamikawa-asahi** 8.93 9 **Pn** **09 27 07.3 -1.1**
JKA **Kamikawa-asahi** 8.93 9 P **Pn** **09 27 07.3 -1.1**
JSU **Suzuyama** 9.27 249 **Pn** **09 27 16.0 +2.9**
JSU **Suzuyama** 9.27 249 P **Pn** **09 27 15.6 +2.5**
MSHR **Mys Shultsa** 10.32 318 *e*P **Pn** **09 27 26.9 -0.4**
KSRS **Korea Array** 10.43 286 P **Pn** **09 27 27.9 -1.0**
comp=E,4.6nm,0.7s,baz=102,slow=13,SNR=27
KSRS LR LR 09 31 23.5
comp=E,649nm,21.7s,baz=95,slow=37
KS19 **Wonju Array Si** 10.48 286 **Pn** **09 27 31.7 +2.1**
USA0B **Ussuriysk Arra** 11.06 326 **Pn** **09 27 37.7 +0.1**
USA0B **Ussuriysk Arra** 11.06 326 *e*P **Pn** **09 27 35.2 -2.3**
USRK **Ussuriysk Ar.** 11.06 326 P **Pn** **09 27 36.5 -1.0**
comp=E,7.4nm,0.7s,baz=120,slow=10,SNR=8.9
USRK LR LR 09 31 35.5
comp=E,242nm,20.0s,baz=150,slow=36
USRK **Ussuriysk Ar.** 11.06 326 **Pn** **09 27 37.5 0.0**
KUR **Kuril'sk** 11.36 27 P Pn 09 27 47.6 +6.0
KUR *e*S **Sn** **09 29 39.3 -7.7**
KUR smax smax
comp=N,52nm,0.5s
KUR smax smax
comp=E,73nm,0.5s
YSS **Yuzhno-Sakhali** 11.75 7 *e*P **Pn** **09 27 44.5 -2.3**
YSS *e*S **Sn** **09 29 52.4 -4.0**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,100nm,14.0s
YSS MLR MLR
comp=N,100nm,19.0s
MDJ **Mudanjiang** 12.54 321 P **Pn** **09 28 00.8 +3.2**
MDJ pmax pmax
comp=N,14nm,1.2s
CN2 **Changchun** 14.41 311 *e*P **Pn** **09 28 24.7 +1.6**
CN2 *e*S **Sn** **09 31 05.3 +3.9**
CN2 pmax pmax
comp=N,10.0nm,0.7s
CN2 pmax pmax
comp=N,100nm,3.0s
CN2 L L
comp=N,200nm,11.0s
CN2 L L
comp=N,300nm,11.0s
CN2 L L
comp=N,200nm,12.0s
BNX **BinXian** 14.43 320 ⇑P **Pn** **09 28 22.2 -1.1**
BNX pmax pmax
comp=N,16nm,1.0s
KLR **Kul'dur** 15.35 338 P **Pn** **09 28 32.4 -2.9**
comp=N,2.9nm,0.6s,baz=159,slow=9.0,SNR=11
KLR LR LR 09 33 59.3
comp=N,198nm,21.7s,baz=168,slow=35
KLR **Kul'dur** 15.35 338 ⇑*i*P **Pn** **09 28 33.6 -1.7**
DL2 **Dalian** 15.54 289 P **P** **09 28 40.3 -1.0**
DL2 S **Sn** **09 31 34.4 +5.6**
DL2 pmax pmax
comp=N,34nm,1.0s
DL2 pmax pmax
comp=N,320nm,4.0s
DL2 L L
comp=N,280nm,18.1s
DL2 L L
comp=N,720nm,17.7s
DL2 L L
comp=N,640nm,21.8s
TYV **Tymovskoe** 15.62 5 *e*P **P** **09 28 44.8 +2.7**
TYV pmax pmax
comp=Z,11nm,0.8s
TYV pmax pmax
comp=Z,100nm,2.5s
NJ2 **Nanjing** 18.37 266 *e*P **Pn** **09 29 13.9 +0.9**
NJ2 pmax pmax
comp=Z,21nm,0.5s
TIA **Tai'an** 19.05 280 P **P** **09 29 18.6 -1.5**
TIA pmax pmax
comp=Z,14nm,0.7s
TIA L L
comp=Z,300nm,19.6s
TIA L L
comp=Z,200nm,17.2s
TIA L L
comp=Z,400nm,22.6s
BJI2 **Beijing** 19.86 291 P **P** **09 29 27.5 -1.4**
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
BJI2 L L
comp=Z,83nm,12.6s
BJI2 L L
comp=Z,96nm,12.6s
BJI2 L L
comp=Z,110nm,17.7s
BJT **Baijiatuau** 19.87 291 P **P** **09 29 28.4 -0.6**
ZEA **Zeya** 20.67 337 *e*P **P** **09 29 34.5 -3.0**
ZEA pmax pmax
comp=N,20nm,0.6s
ZEA pmax pmax
comp=Z,30nm,0.6s
ZEA MLR MLR
comp=Z,100nm,13.0s
XLT **XiLinHaoTe** 20.68 302 *e*P **P** **09 29 35.8 -2.0**
XLT PcS **PcS** **09 37 17.2 -6.8**
XLT pmax pmax
comp=Z,19nm,0.8s
XLT pmax pmax
comp=Z,50nm,3.7s
XLT L L
comp=Z,270nm,20.1s
XLT L L
comp=Z,270nm,19.6s
HILR **Hailar Array B** 20.86 319 P **P** **09 29 36.5 -3.1**
comp=Z,8.4nm,0.5s,baz=120,slow=10,SNR=10
HILR LR LR 09 37 50.2
comp=Z,134nm,19.3s,baz=90,slow=37
HNS **HongShan** 20.92 283 ⇓P **P** **09 29 37.8 -2.6**
HNS pmax pmax
comp=Z,31nm,0.6s
HNS L L
comp=Z,200nm,17.5s
HNS L L
comp=Z,250nm,20.2s
HNS L L
comp=Z,230nm,16.3s
PETK **Petropavlovsk-** 21.52 29 P **P** **09 29 48.9 +2.2**
comp=Z,1.6nm,0.7s,baz=242,slow=9.5,SNR=4.2
PETK LR LR 09 39 07.2
comp=Z,60nm,19.9s,baz=216,slow=39
PETK **Petropavlovsk-** 21.52 29 P **P** **09 29 46.4 -0.2**
PETK **Petropavlovsk-** 21.52 29 P **P** **09 29 46.4 -0.2**
PET **Petropavlovsk** 21.84 30 P **P** **09 29 49.5 -0.5**
PET IAmb IAmb 09 30 05.2
comp=Z,24nm,1.0s
WHN **Wuhan** 22.50 265 P **P** **09 29 56.1 -1.2**
WHN pmax pmax
comp=Z,100nm,0.6s
HHC **Hu-ho-hao-te** 23.44 292 ⇑*i*P **P** **09 30 06.5 -0.4**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,96nm,5.9s
BTO2 **Baotou** 24.71 292 *e*P **P** **09 30 18.8 +0.2**
BTO2 pP **pP** **09 30 30.4 -1.1**
BTO2 sP **sP** **09 30 36.3 -1.2**
BTO2 S **S** **09 34 34.2 -2.9**
BTO2 sS **sS** **09 34 53.7 -5.1**
BTO2 SS **SnSn** **09 35 32.2 +5.2**
BTO2 pmax pmax
comp=Z,23nm,0.7s
BTO2 pmax pmax
comp=Z,130nm,4.3s
BTO2 L L
comp=Z,380nm,22.7s
BTO2 L L
comp=Z,460nm,18.6s
MA2 **Magadan** 25.18 12 P **P** **09 30 22.9 +0.4**
comp=Z,17nm,0.8s,baz=197,slow=7.1,SNR=9.0
MA2 LR LR 09 41 08.8
comp=Z,28nm,18.9s,baz=186,slow=38
comp=Z,17nm,0.8s
MA2 **Magadan** 25.18 12 **P** **09 30 21.8 -0.6**
MA2 IAmb IAmb 09 30 25.9
comp=Z,19nm,0.9s
MA2 **Magadan** 25.18 12 *d* iP **P** **09 30 23.9 +1.4**
MA2 pmax pmax
comp=Z,17nm,0.9s
MA2 **Magadan** 25.18 12 P **P** **09 30 23.8 +1.3**
comp=Z,26nm,0.8s
MA2 **Magadan** 25.18 12 P **P** **09 30 21.9 -0.6**
ENH **Enshi** 26.55 268 **P** **09 30 33.6 -1.7**
ENH **Enshi** 26.55 268 P **P** **09 30 34.0 -1.3**
YAK **Yakutsk** 27.61 349 P **P** **09 30 43.3 -1.1**
comp=Z,8.5nm,0.4s,baz=79,slow=0.8,SNR=4.3
YAK LR LR 09 41 35.5
comp=Z,98nm,20.5s,baz=178,slow=36
comp=Z,8.5nm,0.4s
YAK **Yakutsk** 27.61 349 P **P** **09 30 44.1 -0.3**
YAK IAmb IAmb 09 30 49.3
comp=Z,21nm,0.8s
YAK **Yakutsk** 27.61 349 *e*P **P** **09 30 44.4 0.0**
YAK *e**PP **pP** **09 30 59.0 +1.7**
YAK *e**SS **S** **09 35 27.6 +5.3**
YAK pmax pmax
comp=Z,13nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK pmax pmax
comp=Z,250nm,8.1s
YAK pmax pmax
comp=N,38nm,2.4s
YAK pmax pmax
comp=E,55nm,3.3s
ULN **Ulaanbaatar** 27.81 307 **P** **09 30 45.7 -0.8**
ULN **Ulaanbaatar** 27.81 307 *ce*P **P** **09 30 45.3 -1.2**
ULN pmax pmax
comp=Z,3.0nm,0.8s
H11N2 **WAKE ISLAND Hy** 27.91 117 T T 10 00 07.6
baz=309,slow=75,SNR=74
H11N1 **WAKE ISLAND Hy** 27.92 117 T T 10 00 07.6
baz=309,slow=75,SNR=99
H11N3 **WAKE ISLAND Hy** 27.93 117 T T 10 00 09.3
baz=309,slow=75,SNR=87
SONM **Songino Array** 28.23 307 P **P** **09 30 49.2 -1.1**
comp=Z,3.8nm,0.6s,baz=113,slow=8.2,SNR=14
SONM LR LR 09 42 12.8
comp=Z,224nm,21.1s,baz=103,slow=37
comp=Z,3.8nm,0.6s
SONM **Songino Array** 28.23 307 P **P** **09 30 49.5 -0.8**
SONM **Songino Array** 28.23 307 P **P** **09 30 49.5 -0.8**
SONM pmax pmax
comp=Z,3.0nm,0.7s
H11S3 **WAKE ISLAND Hy** 28.55 119 T T 10 00 54.0
baz=312,slow=75,SNR=108
H11S1 **WAKE ISLAND Hy** 28.55 119 T T 10 00 57.4
baz=312,slow=75,SNR=96
H11S2 **WAKE ISLAND Hy** 28.57 119 T T 10 00 55.2
baz=312,slow=75,SNR=103
SEY **Seymchan** 28.61 11 ⇑*i*P **P** **09 30 51.5 -1.8**
SEY pmax pmax
comp=Z,7.0nm,1.1s
BOD **Bodaibo** 28.66 330 *e*P **P** **09 30 53.7 0.0**
BOD pmax pmax
comp=Z,15nm,0.8s
SHEM **Shemya Is, Ala** 29.37 43 LR LR 09 41 23.5
comp=Z,70nm,20.6s,baz=293,slow=33
LZH **Lanzhou** 29.73 282 *e*P **P** **09 31 04.0 +0.2**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH L L
comp=Z,210nm,14.1s
LZH L L
comp=Z,300nm,16.3s
LZH L L
comp=Z,380nm,19.2s
LZDM **Lanzhou Array** 29.87 282 P **P** **09 31 04.5 -0.7**
comp=Z,1.6nm,0.3s,baz=75,slow=8.2,SNR=4.0
LZDM LR LR 09 43 37.2
comp=Z,129nm,21.5s,baz=5.0,slow=38
comp=Z,1.6nm,0.3s
TLY **Talaya** 30.99 313 LR LR 09 42 32.5
comp=Z,133nm,22.0s,baz=108,slow=34
TLY **Talaya** 30.99 313 **P** **09 31 13.6 -0.9**
CD2 **Chengdu** 31.04 272 P **P** **09 31 14.1 -1.1**
CD2 S **S** **09 36 16.9 +0.1**
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 L L
comp=Z,370nm,15.9s
CD2 L L
comp=Z,430nm,14.6s
CD2 L L
comp=Z,510nm,14.0s
DAV **Davao City (W)** 31.30 210 LR LR 09 43 04.6
comp=Z,89nm,21.2s,baz=219,slow=35
GTA2 **Gaotai** 32.50 290 P **P** **09 31 27.6 -0.4**
GTA2 pmax pmax
comp=Z,10.0nm,0.8s
GTA2 L L
comp=Z,140nm,14.4s
GTA2 L L
comp=Z,190nm,18.9s
GTA2 L L
comp=Z,280nm,19.6s
PZH **PanZhiHua** 34.28 266 P **P** **09 31 45.5 +1.8**
BILL **Bilibino** 35.87 16 *ce*P **P** **09 31 58.3 +1.6**
BILL pmax pmax
comp=Z,4.0nm,1.0s
GOMU **GeErMu** 36.89 285 P **P** **09 32 05.2 -1.0**
GOMU pmax pmax
comp=Z,16nm,0.8s
TIXI **Tiksi** 36.92 354 LR LR 09 47 23.9
comp=Z,48nm,21.0s,baz=198,slow=36
TIXI **Tiksi** 36.92 354 ⇑*e*P **P** **09 32 05.5 -0.1**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
DLV **Lat** 37.21 239 P **P** **09 32 09.1 +0.2**
DLV **Lat** 37.21 239 P **P** **09 32 09.9 +0.9**
FAKI **Fak Fak** 38.82 193 P **P** **09 32 22.1 -0.2**
CHTO **Chiang Mai** 40.23 257 P **P** **09 32 32.9 -1.1**
CHTO **Chiang Mai** 40.23 257 P **P** **09 32 32.9 -1.1**
CHTO pmax pmax
comp=Z,3.0nm,0.7s
CHTO **Chiang Mai** 40.23 257 P **P** **09 32 33.1 -0.9**
CMAR **Chiang Mai Arr** 40.42 257 P **P** **09 32 34.5 -1.2**
comp=Z,1.2nm,0.4s,baz=55,slow=5.6,SNR=6.7
CMAR LR LR 09 49 58.9
comp=Z,61nm,20.6s,baz=60,slow=37
comp=Z,1.2nm,0.4s
DGZ **Jazzator, Alta** 40.88 307 *c* iP **P** **09 32 39.9 +0.7**
DGZ pmax pmax
comp=Z,44nm,0.8s
WMQ **Urumqi** 41.04 298 *e*P **P** **09 32 42.2 +1.7**
WMQ pP pP 09 32 55.2 +1.4
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ L L
comp=Z,95nm,24.3s
LSA **Lhasa** 41.72 277 P **P** **09 32 46.3 -0.4**
LSA IAmb IAmb 09 32 49.0
comp=Z,14nm,1.0s
LSA **Lhasa** 41.72 277 P **P** **09 32 46.3 -0.4**
LSA pmax pmax
comp=Z,14nm,1.0s
ZAA0 **Zalesovo Array** 42.60 314 **P** **09 32 52.8 -0.2**
ZALV **Zalesovo Beam** 42.60 314 P **P** **09 32 53.0 0.0**
comp=Z,4.4nm,0.4s,baz=102,slow=7.6,SNR=16
ZALV PcP **PcP** **09 34 44.6 +0.3**
comp=Z,2.5nm,0.5s,baz=115,slow=4.1,SNR=5.0
ZALV LR LR 09 50 00.3
comp=Z,54nm,20.1s,baz=118,slow=35
comp=Z,4.4nm,0.4s
ZSN **Zaisan** 42.67 304 *e*P **P** **09 32 54.4 +0.7**
ZSN pmax pmax
comp=Z,10.0nm,0.9s
ZSN **Zaisan** 42.67 304 *e*P **P** **09 32 54.5 +0.7**
comp=Z,10nm,0.9s
MK31 **Makanchi Array** 44.48 303 *c* iP **P** **09 33 08.0 -0.3**
MKAR **Makanchi Array** 44.48 303 P **P** **09 33 08.2 -0.2**
comp=Z,5.5nm,0.8s,baz=89,slow=9.9,SNR=37
MKAR PcP **PcP** **09 34 50.5 -0.5**
comp=Z,0.6nm,0.5s,baz=83,slow=6.1,SNR=1.7
MKAR ScP **ScP** **09 38 39.3 +0.4**
comp=Z,0.3nm,0.7s,baz=90,slow=4.3,SNR=2.2
MKAR LR LR 09 52 29.1
comp=Z,96nm,19.7s,baz=83,slow=37
comp=Z,5.5nm,0.8s
MKAR **Makanchi Array** 44.48 303 **P** **09 33 08.6 +0.2**
NRIK **Noril'sk** 44.56 336 P **P** **09 33 08.5 0.0**
comp=Z,5.1nm,0.5s,baz=127,slow=7.8,SNR=5.5
NRIK LR LR 09 53 04.8
comp=Z,86nm,19.6s,baz=142,slow=38
comp=Z,5.1nm,0.5s
NRIK **Noril'sk** 44.56 336 **P** **09 33 08.5 0.0**
NRIK IAmb IAmb 09 33 10.1
comp=Z,13nm,1.0s
KAPI **Kappang** 44.64 210 LR LR 09 50 28.1
comp=Z,81nm,20.9s,baz=283,slow=34
MAKZ **Makanchi** 44.70 304 **P** **09 33 10.2 +0.2**
MAKZ IAmb IAmb 09 33 11.7
comp=Z,8.4nm,0.9s
MAKZ **Makanchi** 44.70 304 P **P** **09 33 10.2 +0.2**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MAKZ **Makanchi** 44.70 304 P **P** **09 33 09.8 -0.2**
PMG **Port Moresby** 44.91 171 LR LR 09 51 42.7
comp=Z,57nm,19.8s,baz=329,slow=36
M16K **Timber Creek** 45.66 36 P **P** **09 33 18.4 +1.0**
M16K IAmb IAmb 09 33 19.2
comp=Z,16nm,1.4s
EVN **Everest** 45.89 276 **P** **09 33 20.4 -0.1**
EVN IAmb IAmb 09 33 21.3
comp=Z,10nm,0.8s
EVN **Everest** 45.89 276 P **P** **09 33 20.9 +0.4**
KURK **Kurchatov** 46.48 309 **P** **09 33 23.8 -0.2**
KURK **Kurchatov** 46.48 309 *ce*P **P** **09 33 23.6 -0.4**
KURK pmax pmax
comp=Z,17nm,0.8s
KURK **Kurchatov** 46.48 309 P **P** **09 33 23.8 -0.2**
KURBB **Kurchatov Arra** 46.55 309 P **P** **09 33 24.2 -0.3**
comp=Z,11nm,0.7s,baz=85,slow=7.9,SNR=81
KURBB PcP **PcP** **09 34 56.8 -1.2**
comp=Z,0.9nm,0.4s,baz=90,slow=3.8,SNR=1.9
KURBB LR LR 09 54 31.6
comp=Z,34nm,18.3s,baz=176,slow=38
comp=Z,11nm,0.7s
PDGK **Podgornoye** 47.00 299 **P** **09 33 28.2 -0.2**
PDGK **Podgornoye** 47.00 299 P **P** **09 33 28.2 -0.2**
SHLS **Shalkode** 47.06 299 *e*P **P** **09 33 26.7 -2.1**
SHLS pmax pmax
comp=Z,4.0nm,0.5s
SHLS **Shalkode** 47.06 299 *e*P **P** **09 33 26.7 -2.1**
comp=Z,4.3nm,0.5s
E19K **Redstone River** 47.31 28 IAmb IAmb 09 33 58.9
comp=Z,8.4nm,0.9s
UZB **Uzynbulak** 47.38 299 *e*P **P** **09 33 31.4 +0.1**
UZB pmax pmax
comp=Z,4.0nm,0.8s
UZB **Uzynbulak** 47.38 299 *e*P **P** **09 33 31.5 +0.1**
comp=Z,4.4nm,0.8s
TDK **Taldyqorghan** 47.44 302 *e*P **P** **09 33 32.2 +0.6**
TDK **Taldyqorghan** 47.44 302 *e*P **P** **09 33 32.2 +0.6**
KPKS **Kokpek** 47.55 299 *e*P **P** **09 33 32.8 +0.2**
KPKS **Kokpek** 47.55 299 *e*P **P** **09 33 32.8 +0.2**
D20K **Eitvluk River** 47.77 26 IAmb IAmb 09 34 02.0
comp=Z,7.0nm,0.9s
SATY **Saty** 47.84 299 *e*P **P** **09 33 35.2 +0.4**
SATY pmax pmax
comp=Z,7.0nm,1.3s
SATY **Saty** 47.84 299 *e*P **P** **09 33 35.3 +0.4**
comp=Z,7.2nm,1.3s
K20K **Telida** 48.13 33 **P** **09 33 37.6 +0.9**
TARG **Taragay, Kyrgy** 48.58 297 **P** **09 33 40.3 -0.6**
TARG IAmb IAmb 09 33 45.7
comp=Z,11nm,0.9s
TARG **Taragay, Kyrgy** 48.58 297 P **P** **09 33 40.3 -0.6**
TARG pmax pmax
comp=Z,11nm,0.9s
TARG **Taragay, Kyrgy** 48.58 297 P **P** **09 33 40.0 -0.9**
MTN **Manton Dam** 48.72 192 P **P** **09 33 42.3 +0.7**
MTN IAmb IAmb 09 33 51.2
comp=Z,16nm,1.4s
MDOK **Medeo** 48.78 299 *e*P **P** **09 33 42.7 +0.6**
MDOK **Medeo** 48.78 299 *e*P **P** **09 33 42.7 +0.6**
KDAK **Kodiak Island** 48.84 41 *e*P **P** **09 33 43.0 +0.9**
KDAK pmax pmax
comp=Z,8.0nm,1.0s
AAA **Alma-Ata** 48.87 300 *e*P **P** **09 33 43.2 +0.5**
AAA **Alma-Ata** 48.87 300 *e*P **P** **09 33 43.2 +0.5**
TNSS **Tian-Shan** 48.88 299 *e*P **P** **09 33 43.0 -0.2**
TNSS **Tian-Shan** 48.88 299 *e*P **P** **09 33 43.1 -0.2**
MLY **Manley** 49.67 31 **P** **09 33 52.0 +3.6**
ASAI **AK-SAY(Kyrgyzs** 49.72 297 P **P** **09 33 50.4 +0.8**
BOOM **Boomskoye usch** 49.73 299 P **P** **09 33 49.6 +0.1**
H23K **Yukon River** 50.19 30 IAmb IAmb 09 34 18.8
comp=Z,5.8nm,1.0s
E23K **Chandalar** 50.26 27 IAmb IAmb 09 34 21.5
comp=Z,9.3nm,1.0s
BRZS **Berezniki** 50.35 309 *e*P **P** **09 33 54.3 +0.5**
BRZS **Berezniki** 50.35 309 *e*P **P** **09 33 54.4 +0.5**
NEA2 **Nenana** 50.38 32 IAmb IAmb 09 34 23.4
comp=Z,5.7nm,0.9s
SGDS **Sogindy** 50.43 300 *e*P **P** **09 33 54.8 +0.2**
comp=Z,7.1nm,1.3s
C24K **Franklin Bluff** 50.69 25 IAmb IAmb 09 34 27.0
comp=Z,14nm,1.4s
AAK **Ala-Archa** 50.73 299 LR LR 09 56 36.7
comp=Z,85nm,21.0s,baz=100,slow=37
AAK **Ala-Archa** 50.73 299 **P** **09 33 56.9 -0.1**
AAK IAmb IAmb 09 34 13.9
comp=Z,6.3nm,0.9s
AAK **Ala-Archa** 50.73 299 *c* iP **P** **09 33 57.1 +0.1**
AAK pmax pmax
comp=Z,2.0nm,0.6s
AAK **Ala-Archa** 50.73 299 P **P** **09 33 57.6 +0.6**
SML **Sawmill** 50.78 35 IAmb IAmb 09 34 10.8
comp=Z,6.0nm,0.8s
H24K **Noodor Dome** 50.88 30 IAmb IAmb 09 34 19.1

	comp=Z,6.5nm,1.2s							
COLA	**College**	**50.90**	**31**	*e*P		**P**	**09 33 59.2**	**+1.6**
COLA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KSH2	**Kashi**	**50.92**	**295**	P		**P**	**09 33 59.0**	**+0.6**
KSH2				sP		pP	09 34 14.4	+2.3
KSH2				pmax		pmax		
	comp=Z,4.0nm,0.6s							
BVAR	**Borovoye Array**	**51.24**	**313**	P		**P**	**09 34 00.4**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=80,slow=7.1,SNR=10							
BVAR				PcP		**PcP**	**09 35 13.7**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=82,slow=3.8,SNR=3.6							
	comp=Z,1.7nm,0.4s							
BORK	**Borovoye**	**51.28**	**313**	P		**P**	**09 34 02.9**	**+2.1**
BORK				IAmb		IAmb	09 34 17.1	
	comp=Z,4.0nm,0.8s							
BORK	**Borovoye**	**51.28**	**313**	P		**P**	**09 34 02.9**	**+2.1**
BORK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HDA	**Harding Lake**	**51.30**	**32**	IAmb		IAmb	09 34 29.2	
	comp=Z,5.3nm,0.9s							
ILAR	**Eielson Array**	**51.31**	**32**	P		**P**	**09 34 02.2**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=273,slow=6.2,SNR=20							
	comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**51.31**	**32**	P		**P**	**09 34 00.7**	**-0.1**
D25K	**Kavik River**	**51.49**	**26**	P		**P**	**09 34 03.3**	**+1.1**
F25K	**Christian Rive**	**51.75**	**28**			**P**	**09 34 05.1**	**+1.0**
KNRA	**Kununurra**	**51.93**	**195**			**P**	**09 34 06.0**	**+0.2**
ARSB	**Arslanbob**	**52.17**	**298**	IAmb		IAmb	09 34 33.1	
	comp=Z,11nm,0.9s							
F26K	**Sheenjek River**	**52.32**	**28**	IAmb		IAmb	09 34 38.1	
	comp=Z,7.0nm,1.1s							
SCRK	**Sand Creek**	**52.62**	**32**	IAmb		IAmb	09 34 38.5	
	comp=Z,4.9nm,1.0s							
ARK	**Arkit**	**52.77**	**299**	P		**P**	**09 34 11.5**	**-0.6**
DZA	**Taraz**	**52.90**	**300**	*e*P		**P**	**09 34 13.4**	**+0.4**
DZA	**Taraz**	**52.90**	**300**	*e*P		**P**	**09 34 13.5**	**+0.4**
L26K	**Log Cabin Wild**	**53.00**	**34**	IAmb		IAmb	09 34 27.3	
	comp=Z,5.4nm,0.9s							
KK31	**Karatay Array**	**53.42**	**301**			**P**	**09 34 16.5**	**-0.3**
KK31				IAmb		IAmb	09 34 23.1	
	comp=Z,8.8nm,0.9s							
KK31	**Karatay Array**	**53.42**	**301**	P		**P**	**09 34 16.5**	**-0.3**
KK31				pmax		pmax		
	comp=Z,9.0nm,0.9s							
KKAR	**Karatay Array**	**53.42**	**301**			**P**	**09 34 17.0**	**+0.2**
KKAR	**Karatay Array**	**53.42**	**301**	P		**P**	**09 34 17.0**	**+0.2**
H27K	**Steamboat Moun**	**53.45**	**30**	P		**P**	**09 34 18.1**	**+1.4**
DRK	**Karamyk**	**53.59**	**296**	P		**P**	**09 34 18.4**	**0.0**
DRK				IAmb		IAmb	09 34 24.1	
	comp=Z,10nm,1.0s							
DRK	**Karamyk**	**53.59**	**296**	P		**P**	**09 34 18.4**	**0.0**
DRK				pmax		pmax		
	comp=Z,10.0nm,1.0s							
M27K	**Edge Creek, AK**	**53.75**	**34**	IAmb		IAmb	09 34 48.5	
	comp=Z,4.5nm,0.9s							
BRLS	**Borolday**	**53.91**	**301**	*e*P		**P**	**09 34 22.0**	**+1.6**
BRLS	**Borolday**	**53.91**	**301**	*e*P		**P**	**09 34 22.1**	**+1.6**
IUG	**luzhnay**	**54.04**	**300**	*e*P		**P**	**09 34 21.9**	**+0.5**
IUG				pmax		pmax		
	comp=Z,14nm,1.0s							
IUG	**luzhnay**	**54.04**	**300**	*e*P		**P**	**09 34 21.9**	**+0.5**
	comp=Z,14nm,1.0s							
CHM	**Chimkent**	**54.29**	**300**	*e*P		**P**	**09 34 23.4**	**+0.3**
CHM	**Chimkent**	**54.29**	**300**	*e*P		**P**	**09 34 23.5**	**+0.3**
NIL	**Nilore**	**54.53**	**289**	P		**P**	**09 34 25.0**	**0.0**
NIL	**Nilore**	**54.53**	**289**	P		**P**	**09 34 25.0**	**0.0**
NIL				pmax		pmax		
	comp=Z,11nm,0.9s							
G29M	**Pine Creek**	**54.76**	**29**	IAmb		IAmb	09 34 51.3	
	comp=Z,8.2nm,1.0s							
GAR	**Garm**	**54.84**	**296**			**P**	**09 34 26.9**	**-0.4**
GAR	**Garm**	**54.84**	**296**	P		**P**	**09 34 26.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**54.98**	**197**	P		**P**	**09 34 29.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**54.98**	**197**	P		**P**	**09 34 29.2**	**+1.0**
WB0	**Warramunga Arr**	**55.09**	**187**			**P**	**09 34 29.8**	**+0.8**
WRAB	**Tennant Creek**	**55.26**	**187**	P		**P**	**09 34 31.0**	**+0.8**
WRAB				IAmb		IAmb	09 34 34.6	
	comp=Z,7.6nm,0.9s							
WRAB	**Tennant Creek**	**55.26**	**187**	*ce*P		**P**	**09 34 30.8**	**+0.5**
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.9s							
WRAB	**Tennant Creek**	**55.26**	**187**	P		**P**	**09 34 30.7**	**+0.5**
WR8	**Warramunga Arr**	**55.26**	**187**	P		**P**	**09 34 31.1**	**+0.8**
WR8				IAmb		IAmb	09 34 34.3	
	comp=Z,8.4nm,0.7s							
WRA	**Warramunga Arr**	**55.27**	**187**	P		**P**	**09 34 31.0**	**+0.7**
	comp=Z,7.7nm,0.8s,baz=1.8,slow=7.6,SNR=68							
	comp=Z,7.7nm,0.8s							
WRA	**Warramunga Arr**	**55.27**	**187**			**P**	**09 34 30.3**	**0.0**
WRA	**Warramunga Arr**	**55.27**	**187**	P		**P**	**09 34 30.3**	**0.0**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
CTA	**Charters Tower**	**55.36**	**174**	LR		LR	09 59 06.0	
	comp=Z,39nm,18.1s,baz=258,slow=37							
EPYK	**Eagle Plains**	**55.36**	**29**	P		**P**	**09 34 31.5**	**+1.0**
CHGR	**Chuyangaron**	**55.81**	**296**			**P**	**09 34 34.4**	**+0.2**
CHGR	**Chuyangaron**	**55.81**	**296**	*i* P		**P**	**09 34 34.1**	**-0.1**
CHGR				pmax		pmax		
	comp=Z,21nm,0.8s							
CHGR	**Chuyangaron**	**55.81**	**296**	P		**P**	**09 34 34.2**	**0.0**
SVE	**Sverdlovsk**	**56.00**	**319**	*e*P		**P**	**09 34 35.5**	**+0.3**
SVE				pmax		pmax		
	comp=Z,13nm,0.6s							
INK	**Inuvik**	**56.23**	**26**	P		**P**	**09 34 38.9**	**+2.3**
INK				pP		**pP**	**09 34 51.8**	**+1.4**
H31M	**Peel River**	**56.41**	**30**	IAmb		IAmb	09 35 07.1	
	comp=Z,11nm,1.1s							
SHAA	**Shahritus**	**56.96**	**295**	IAmb		IAmb	09 35 04.7	
	comp=Z,29nm,0.9s							
ARTI	**Arti**	**57.32**	**319**			**P**	**09 34 43.8**	**-0.8**
ARTI	**Arti**	**57.32**	**319**	*c i*P		**P**	**09 34 44.4**	**-0.2**
ARTI				*PP		**pP**	**09 34 57.5**	**-0.9**
ARTI							09 35 34.1	
ARTI				S		**S**	**09 42 38.7**	**+1.7**
ARTI				SS		**SS**	**09 46 28.8**	**+2.5**
ARTI				pmax		pmax		
	comp=Z,21nm,0.7s							
KBL	**Kabul**	**57.41**	**292**	P		**P**	**09 34 45.3**	**-0.5**
KBL				IAmb		IAmb	09 35 02.6	
	comp=Z,7.8nm,1.1s							
KBL	**Kabul**	**57.41**	**292**	P		**P**	**09 34 45.3**	**-0.5**
KBL				pmax		pmax		
	comp=Z,8.0nm,1.1s							
A36M	**Sachs Harbour**	**58.11**	**21**	IAmb		IAmb	09 35 09.4	
	comp=Z,6.5nm,0.8s							
AB31	**Akbulak array**	**58.54**	**311**			**P**	**09 34 53.1**	**-0.1**
ABKAR	**Akbulak array**	**58.54**	**311**			**P**	**09 34 53.0**	**-0.2**
AS31	**Alice Springs**	**58.99**	**187**			**P**	**09 34 57.6**	**+1.0**
ASAR	**Alice Springs**	**58.99**	**187**	P		**P**	**09 34 57.4**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=2.9,slow=7.1,SNR=36							
	comp=Z,0.9nm,0.4s							
ASAR	**Alice Springs**	**58.99**	**187**	P		**P**	**09 34 57.5**	**+0.9**
ASAR	**Alice Springs**	**58.99**	**187**	P		**P**	**09 34 57.5**	**+0.9**
AKTO	**Aktyubinsk**	**59.33**	**313**	LR		LR	10 01 34.4	
	comp=Z,71nm,22.0s,baz=108,slow=37							
MBWA	**Marble Bar**	**59.54**	**203**			**P**	**09 35 00.9**	**+0.5**
MBWA	**Marble Bar**	**59.54**	**203**	P		**P**	**09 35 00.8**	**+0.5**
KIRV	**Kirov**	**61.22**	**323**	*c i*P		**P**	**09 35 11.7**	**+0.3**
SPITS	**Spitsbergen Ar**	**62.08**	**349**	P		**P**	**09 35 18.2**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=86,slow=6.1,SNR=5.5							
SPITS				LR		LR	10 03 45.1	
	comp=Z,32nm,20.0s,baz=80,slow=37							
	comp=Z,2.8nm,0.6s							
APA	**Apatity**	**63.98**	**336**	*e*P		**P**	**09 35 31.7**	**+2.0**
APA				pmax		pmax		
	comp=Z,9.0nm,1.1s							
APA				MLR		MLR		
	comp=Z,426nm,3.5s							
RES	**Resolute Bay**	**64.43**	**14**	LR		LR	10 06 41.8	
	comp=Z,31nm,19.1s,baz=3.5,slow=39							
RES	**Resolute Bay**	**64.43**	**14**	P		**P**	**09 35 34.1**	**+1.6**
BELG	**Belogornoye**	**64.60**	**317**	*i* P		**P**	**09 35 33.9**	**-0.1**
BELG				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KLMR	**Klimovskoe**	**64.85**	**328**	*e*P		**P**	**09 35 33.6**	**-1.9**
KLMR				*e*PP		**pP**	**09 35 47.3**	**-2.3**
KLMR				*e*			09 37 56.5	
KLMR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ARCES	**ARCESS Array B**	**65.37**	**339**	P		**P**	**09 35 38.5**	**-0.2**
	comp=Z,7.4nm,0.9s,baz=46,slow=7.5,SNR=6.7							
	comp=Z,7.4nm,0.9s							
ARCES	**ARCESS Array B**	**65.37**	**339**	P		**P**	**09 35 39.0**	**+0.2**
ARCES	**ARCESS Array B**	**65.37**	**339**	P		**P**	**09 35 39.0**	**+0.2**
ARCES				pmax		pmax		
	comp=Z,27nm,1.5s							
YKA	**Yellowknife Ar**	**65.64**	**30**	P		**P**	**09 35 42.2**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=299,slow=6.6,SNR=4.3							
YKA				LR		LR	10 08 42.1	
	comp=Z,33nm,18.2s,baz=290,slow=40							
	comp=Z,1.0nm,0.8s							
YKA	**Yellowknife Ar**	**65.64**	**30**	P		**P**	**09 35 40.5**	**0.0**
AFI	**Afiamalu**	**66.57**	**129**	LR		LR	09 58 56.7	
	comp=Z,27nm,19.9s,baz=294,slow=30							
AFI	**Afiamalu**	**66.57**	**129**	P		**P**	**09 35 47.7**	**+0.4**
RNF	**Rovaniemi**	**66.93**	**337**	P		**P**	**09 35 49.3**	**+0.5**
NEEM	**North Greenlan**	**67.28**	**3**	*i* P		**P**	**09 35 48.6**	**-2.7**
DAG	**Danmarks Havn**	**67.43**	**355**	P		**P**	**09 35 51.0**	**-0.8**
VRH	**Novokhopyorsk**	**68.41**	**318**	*e*P		**P**	**09 35 54.8**	**-3.5**
VRH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
OBN	**Obninsk**	**69.07**	**323**	⇓ *i*P		**P**	**09 36 02.7**	**+0.3**
OBN				*e*			09 38 34.0	
OBN				pmax		pmax		
	comp=Z,9.0nm,1.0s							
OBN				MLR		MLR		
	comp=Z,67nm,20.0s							
LPSR	**Galich'ya Gora**	**69.19**	**320**	*e*P		**P**	**09 36 00.6**	**-2.6**
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
AKT	**Akhty**	**69.56**	**307**	*e*P		**P**	**09 36 05.3**	**-0.6**
AKT				*eS*		**S**	**09 45 09.0**	**-1.2**
AKT				pmax		pmax		
	comp=Z,18nm,1.0s							
AKT				MLR		MLR		
	comp=Z,155nm,16.0s							
VSR	**Storozhevoye**	**69.78**	**319**	*e*P		**P**	**09 36 05.2**	**-1.7**
VSR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
FINES	**FINESS Array B**	**70.02**	**332**	P		**P**	**09 36 08.4**	**+0.3**
	comp=Z,7.6nm,0.7s,baz=68,slow=7.3,SNR=12							
FINES				LR		LR	10 09 56.6	
	comp=Z,43nm,19.6s,baz=40,slow=38							
	comp=Z,7.6nm,0.7s							
FINES	**FINESS Array B**	**70.02**	**332**	P		**P**	**09 36 08.2**	**0.0**
BLKN	**Baker Lake**	**71.24**	**23**	P		**P**	**09 36 16.6**	**+1.1**
KBZ	**Khabaz**	**71.51**	**311**	P		**P**	**09 36 17.8**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=49,slow=2.5,SNR=22							
KBZ				LR		LR	10 10 25.3	
	comp=Z,54nm,19.7s,baz=64,slow=38							
	comp=Z,8.4nm,0.8s							
KBZ	**Khabaz**	**71.51**	**311**	*d i*P		**P**	**09 36 18.4**	**+0.9**
KBZ				pmax		pmax		
	comp=Z,13nm,1.0s							
KIV	**Kislovodsk**	**71.53**	**311**			**P**	**09 36 18.4**	**+0.7**
KIV	**Kislovodsk**	**71.53**	**311**	*e*P		**P**	**09 36 18.9**	**+1.2**
KIV				pmax		pmax		
	comp=Z,17nm,1.0s							
KIV				MLR		MLR		
	comp=Z,30nm,18.0s							
KIV	**Kislovodsk**	**71.53**	**311**	P		**P**	**09 36 18.5**	**+0.7**
	comp=Z,17nm,1.1s							
KIV	**Kislovodsk**	**71.53**	**311**	P		**P**	**09 36 19.5**	**+1.7**
SHA1	**Shidzhatmaz**	**71.66**	**311**	⇑ *i*P		**P**	**09 36 19.0**	**+0.3**
GNI	**Garni**	**72.19**	**307**	LR		LR	10 10 20.2	
	comp=Z,76nm,19.8s,baz=56,slow=38							
SUMG	**Summit**	**72.40**	**360**			**P**	**09 36 23.5**	**+0.6**
SUMG				IAmb		IAmb	09 36 44.3	
	comp=Z,5.5nm,0.9s							
SUMG	**Summit**	**72.40**	**360**	P		**P**	**09 36 23.5**	**+0.6**
SUMG				pmax		pmax		
	comp=Z,6.0nm,0.9s							
GUZR	**Guzeripl'**	**73.07**	**312**	⇑ *i*P		**P**	**09 36 27.2**	**+0.3**
GUZR				pmax		pmax		
	comp=Z,8.0nm,1.0s							
MNK	**Minsk**	**73.54**	**326**	*i* P		**P**	**09 36 30.3**	**+0.9**
	comp=E,16nm,0.9s							
MNK				*i* P		**P**	**09 36 30.3**	**+0.9**
	comp=N,12nm,0.8s							
MNK				*i* P		**P**	**09 36 30.3**	**+0.9**
	comp=Z,19nm,0.8s,baz=52							
MNK				*i* sP		**sP**	**09 36 49.3**	**-0.1**
MNK				*i* PP		**PP**	**09 39 16.6**	**+3.4**
MNK				*i* PPP		PPP	09 41 02.1	
MNK				*i* S		**S**	**09 45 57.7**	**+2.4**
MNK				*i* sS		**SKSac**	**09 46 26.0**	**-5.6**
MNK				*i* PS		PnS	09 46 59.3	+26
MNK				*i* SS		SS	09 50 49.1	+11
MNK				*i* LQ		LQ	10 03 52.7	
MNK				*i* LRM		MLR	10 10 05.0	
	comp=Z,56nm,17.1s							
MNK				*i* LRM		MLR	10 10 05.5	
	comp=N,121nm,16.1s							
MNK				*i* LRM		MLR	10 11 39.1	
	comp=E,179nm,17.8s							
MNK	**Minsk**	**73.54**	**326**	*i* P		**P**	**09 36 30.3**	**+0.9**
MNK				*i*			09 36 44.6	
MNK				*i* *SP		**sP**	**09 36 49.3**	**-0.1**
MNK				*i*			09 39 16.6	
MNK				*i* PPP		PPP	09 41 02.0	
MNK				*i* S		**S**	**09 45 57.7**	**+2.4**
MNK				*i* *SS		**SKSac**	**09 46 25.9**	**-5.6**
MNK				pmax		pmax		
	comp=E,16nm,0.9s							
MNK				pmax		pmax		
	comp=N,12nm,0.8s							
MNK				pmax		pmax		
	comp=Z,19nm,0.8s							
MNK				MLR		MLR		
	comp=Z,56nm,17.0s							
MNK				MLR		MLR		
	comp=N,121nm,16.0s							
MNK				MLR		MLR		
	comp=E,179nm,18.0s							
SOC	**Sochi**	**73.54**	**312**	*e*P		**P**	**09 36 28.5**	**-1.1**
SOC				*e*PPP		PPP	09 40 58.4	
SOC				*eS*		**SKiKP**	**09 45 53.6**	**-1.8**
SOC				*e*SS		**SS**	**09 50 41.9**	**+3.4**
SOC				*e*SSS		SSS	09 53 57.1	
SOC				MLR		MLR		
	comp=Z,155nm,20.0s							
AK03	**Malin Array Si**	**75.23**	**322**	P		**P**	**09 36 38.5**	**-0.8**
AKASG	**Malin Array Be**	**75.24**	**322**	P		**P**	**09 36 39.2**	**-0.1**
	comp=Z,3.1nm,0.4s,baz=49,slow=5.9,SNR=33							
AKASG				LR		LR	10 11 41.0	
	comp=Z,92nm,20.1s,baz=52,slow=37							
	comp=Z,3.1nm,0.4s							
AKASG	**Malin Array Be**	**75.24**	**322**	P		**P**	**09 36 39.5**	**+0.2**
AKASG	**Malin Array Be**	**75.24**	**322**	P		**P**	**09 36 39.5**	**+0.2**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.9s							
AKBB	**Malin Array Si**	**75.24**	**322**			**P**	**09 36 39.3**	**-0.1**
AKBB	**Malin Array Si**	**75.24**	**322**	*c i*P		**P**	**09 36 39.3**	**-0.1**
AKBB				pmax		pmax		
	comp=Z,11nm,0.7s							
AKBB	**Malin Array Si**	**75.24**	**322**	P		**P**	**09 36 38.9**	**-0.4**
KIEV	**Kiev**	**75.26**	**322**			**P**	**09 36 39.6**	**+0.2**
KIEV	**Kiev**	**75.26**	**322**	P		**P**	**09 36 39.6**	**+0.2**
KIEV	**Kiev**	**75.26**	**322**	P		**P**	**09 36 38.6**	**-0.8**
KIEV	**Kiev**	**75.26**	**322**	P		**P**	**09 36 38.6**	**-0.8**
NC405	**NORSAR Array S**	**75.30**	**337**	P		**P**	**09 36 40.1**	**+0.6**
NC405				IAmb		IAmb	09 36 40.5	
	comp=Z,8.8nm,0.8s							
HFS	**Hagfors**	**75.38**	**336**	P		**P**	**09 36 40.3**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=207,slow=1.7,SNR=9.2							
HFS				LR		LR	10 12 05.8	
	comp=Z,54nm,20.8s,baz=82,slow=38							
	comp=Z,4.0nm,0.7s							
NB2	**NORSAR Subarra**	**75.51**	**337**	P		**P**	**09 36 41.3**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=41,slow=6.2							
NOA	**NORSAR Array B**	**75.51**	**337**	P		**P**	**09 36 41.1**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=40,slow=5.8,SNR=16							
NOA				LR		LR	10 12 12.4	
	comp=Z,29nm,20.5s,baz=15,slow=38							
	comp=Z,5.2nm,0.8s							
MI28	**Mi28,Pidlybu**	**75.87**	**323**	P		**P**	**09 36 41.6**	**-1.3**
RNPP9	**Sopachiv**	**76.43**	**324**	P		**P**	**09 36 46.0**	**-0.1**
LUBAR	**Lubar, Ukraine**	**76.47**	**322**	P		**P**	**09 36 45.7**	**-0.7**
RNPP5	**Staryi Chirto**	**76.55**	**324**	P		**P**	**09 36 46.8**	**0.0**
NVAR	**Mina Array Bea**	**76.57**	**52**	P		**P**	**09 36 49.4**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=290,slow=5.1,SNR=6.0							
	comp=Z,0.9nm,0.7s							
ARPR	**Arapgir-MALATY**	**76.92**	**309**	P		**P**	**09 36 51.0**	**+1.6**
KMPD	**K-Podol'skiy**	**77.99**	**322**	P		**P**	**09 36 51.2**	**-3.7**
CLC	**China Lake**	**78.52**	**54**	P		**P**	**09 36 59.0**	**+0.8**
CLC	**China Lake**	**78.52**	**54**	P		**P**	**09 36 59.0**	**+0.8**
CLC				pmax		pmax		
	comp=Z,23nm,0.3s							
BNN	**Bunyan**	**78.63**	**310**	P		**P**	**09 36 59.0**	**+0.2**
BNN				IAmb		IAmb	09 37 20.4	
	comp=Z,6.6nm,1.0s							
ANDN	**Andirin**	**79.07**	**308**	P		**P**	**09 37 02.5**	**+1.3**
BURAR	**Bucovina Array**	**79.24**	**322**	P		**P**	**09 37 02.5**	**+0.5**
BORG	**Borgarnes**	**79.26**	**352**	LR		LR	10 13 44.1	
	comp=Z,22nm,18.3s,baz=102,slow=37							
PDAR	**Pinedale Array**	**79.36**	**45**	P		**P**	**09 37 05.0**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=296,slow=0.9,SNR=7.1							
	comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**79.36**	**45**	P		**P**	**09 37 03.2**	**+0.3**
BR131	**Keskin Array S**	**79.48**	**311**	P		**P**	**09 37 02.9**	**-0.6**
BR131	**Keskin Array S**	**79.48**	**311**	P		**P**	**09 37 02.9**	**-0.6**
BR131				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**79.48**	**311**	P		**P**	**09 37 03.5**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=116,slow=2.9,SNR=6.0							
	comp=Z,2.4nm,0.8s							
BRTR	**Keskin Array B**	**79.48**	**311**	P		**P**	**09 37 02.9**	**-0.6**
BRTR	**Keskin Array B**	**79.48**	**311**	P		**P**	**09 37 02.9**	**-0.6**
VRI	**Vrincioaia**	**79.60**	**319**	P		**P**	**09 37 05.2**	**+1.3**
TRPA	**Tarpa**	**80.23**	**323**	P		**P**	**09 37 08.2**	**+1.0**
MLR	**Muntele Rosu**	**80.26**	**320**	LR		LR	10 14 51.5	
	comp=Z,50nm,19.8s,baz=98,slow=37							
PFO	**Pinyon Flats O**	**80.56**	**56**	LR		LR	10 05 26.7	
	comp=Z,68nm,20.0s,baz=327,slow=30							
RAYN	**Ar Rayn**	**80.68**	**292**	P		**P**	**09 37 09.8**	**-0.3**
RAYN				IAmb		IAmb	09 37 11.0	
	comp=Z,6.6nm,1.1s							
RAYN	**Ar Rayn**	**80.68**	**292**	P		**P**	**09 37 09.8**	**-0.3**
RAYN				pmax		pmax		
	comp=Z,7.0nm,1.1s							
RAYN	**Ar Rayn**	**80.68**	**292**	P		**P**	**09 37 10.4**	**+0.3**
ARR	**Arges**	**81.03**	**320**	P		**P**	**09 37 13.4**	**+1.8**
STEB	**Steborice**	**81.21**	**327**	*e*P		**P**	**09 37 12.1**	**-0.3**
DPC	**Dobruska-Polom**	**81.55**	**328**	*e*P		**P**	**09 37 15.2**	**+0.9**
DPC	**Dobruska-Polom**	**81.55**	**328**	*e*P		**P**	**09 37 15.2**	**+0.9**
HMU	**Henry Mountain**	**81.65**	**49**	P		**P**	**09 37 15.4**	**+0.1**
HMU				IAmb		IAmb	09 37 40.1	
	comp=Z,5.5nm,0.9s							
PSZ	**Piszkesteto**	**81.66**	**324**	P		**P**	**09 37 14.9**	**0.0**
VYHS	**Vyhne**	**81.75**	**325**	*e*P		**P**	**09 37 15.5**	**+0.2**
VYHS	**Vyhne**	**81.75**	**325**	*e*P		**P**	**09 37 15.5**	**+0.2**
VRAC	**Vranov**	**82.19**	**327**	LR		LR	10 16 28.8	
	comp=Z,30nm,18.6s,baz=50,slow=38							
CLL	**Collm**	**82.25**	**330**	IAmb		IAmb	09 37 18.9	
	comp=Z,6.9nm,0.8s							
CLL	**Collm**	**82.25**	**330**	*e*P		**P**	**09 37 18.0**	**+0.2**
CLL				pmax		pmax		
	comp=Z,9.0nm,1.0s							
CLL	**Collm**	**82.25**	**330**	*e*P		**P**	**09 37 18.0**	**+0.2**
	comp=Z,9.0nm,1.0s							
CLL				AMS		AMS	10 50 00.0	
	comp=Z,200nm,20.7s							
PV23	**Carpenter Ridg**	**82.39**	**48**	P		**P**	**09 37 19.3**	**+0.1**
PV23				IAmb		IAmb	09 37 45.8	
	comp=Z,7.6nm,0.9s							
MMAI	**Mount Meron Ar**	**82.41**	**305**	LR		LR	10 18 05.0	
	comp=Z,56nm,18.2s,baz=37,slow=39							
KRUC	**Moravsky**	**82.46**	**327**	P		**P**	**09 37 19.8**	**+0.8**
KRUC				pP		**pP**	**09 37 34.4**	**+0.8**
PV05	**Paradox Valley**	**82.57**	**48**	IAmb		IAmb	09 37 50.7	
	comp=Z,8.8nm,0.9s							
PV18	**Skein Mesa, Pa**	**82.58**	**48**	P		**P**	**09 37 23.3**	**+3.2**
PRU	**Pruhonice**	**82.59**	**328**	*e*P		**P**	**09 37 20.8**	**+1.2**
PRU	**Pruhonice**	**82.59**	**328**	*e*P		**P**	**09 37 20.8**	**+1.2**
PV13	**Radium Mtn., P**	**82.69**	**48**	IAmb		IAmb	09 37 51.8	
	comp=Z,8.2nm,1.0s							
KHC	**Kasperske Hory**	**83.65**	**328**	⇑ *i*P		**P**	**09 37 26.0**	**+0.8**
KHC				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KHC	**Kasperske Hory**	**83.65**	**328**	*e*P		**P**	**09 37 26.3**	**+1.1**
KHC	**Kasperske Hory**	**83.65**	**328**	P		**P**	**09 37 26.3**	**+1.1**
PMOR	**Pomariorio Ree**	**84.12**	**113**	*e*T		T	11 10 08.9	
	comp=Z,7.0nm,0.2s							
AYDN	**Tasoluk**	**84.28**	**313**	P		**P**	**09 37 30.2**	**+1.6**
MOA	**Molln**	**84.31**	**327**	P		**P**	**09 37 29.9**	**+1.3**
KZIT	**Kziot**	**84.37**	**304**	P		**P**	**09 37 30.0**	**+0.9**
HRFI	**Mount Harif**	**84.46**	**303**	P		**P**	**09 37 30.7**	**+1.0**
PPT

RTZ	**Ruatahuna**	**6.30 220**	P	**Pn**	**09 38 02.8**	**+1.2**
RTZ			S	**Sn**	**09 39 13.0**	**-0.6**
MUGZ	**Murupara**	**6.31 222**	P	**Pn**	**09 38 02.2**	**+0.5**
MUGZ			S	**Sn**	**09 39 12.2**	**-1.6**
MTHZ	**Maungataniwha**	**6.55 219**	P	**Pn**	**09 38 06.9**	**+2.0**
MTHZ			S	**Sn**	**09 39 19.4**	**-0.3**
MSVF	**Nonsavu**	**16.47 346**	Pn	**Pn**	**09 40 20.6**	**+0.8**
MSVF			IAmb	IAmb	09 40 44.9	
	comp=Z,41nm,1.4s					
ARMA	**Armidale**	**25.99 269**	P	**P**	**09 42 01.1**	**-0.6**
ARMA			IAmb	IAmb	09 42 26.0	
	comp=Z,2.5nm,0.9s					
EIDS	**Eidsvold**	**28.19 279**	P	**P**	**09 42 20.8**	**-0.6**
EIDS			IAmb	IAmb	09 42 42.8	
	comp=Z,4.2nm,0.9s					
CTA	**Charters Tower**	**34.59 284**	P	**P**	**09 43 18.6**	**+0.8**
	comp=Z,7.1nm,0.7s,baz=112,slow=11,SNR=8.8					
	comp=Z,7.1nm,0.7s					
CTAO	**Charters Tower**	**34.59 284**	P	**P**	**09 43 17.0**	**-0.8**
INKA	**Innaminka**	**35.87 268**	P	**P**	**09 43 28.5**	**-0.2**
INKA			IAmb	IAmb	09 43 37.6	
	comp=Z,8.4nm,1.4s					
BBOO	**Buckleboo**	**38.24 258**	P	**P**	**09 43 48.1**	**-0.7**
AS31	**Alice Springs**	**43.13 271**	P	**P**	**09 44 28.4**	**-1.0**
ASAR	**Alice Springs**	**43.13 271**	P	**P**	**09 44 29.4**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=110,slow=7.4,SNR=20					
ASAR			PcP	**PcP**	**09 46 18.9**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=119,slow=3.8,SNR=4.7					
	comp=Z,1.3nm,0.7s					
ASAR	**Alice Springs**	**43.13 271**	P	**P**	**09 44 28.8**	**-0.6**
WR8	**Warramunga Arr**	**44.29 276**	P	**P**	**09 44 38.3**	**-0.4**
WR8			IAmb	IAmb	09 44 48.6	
	comp=Z,4.0nm,1.1s					
WRAB	**Tennant Creek**	**44.42 276**	P	**P**	**09 44 39.5**	**-0.2**
WRAB			IAmb	IAmb	09 44 50.5	
	comp=Z,3.6nm,1.1s					
WRA	**Warramunga Arr**	**44.43 276**	P	**P**	**09 44 39.5**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=117,slow=7.7,SNR=33					
WRA			PcP	**PcP**	**09 46 23.5**	**0.0**
	comp=Z,0.4nm,0.8s,baz=116,slow=3.2,SNR=2.4					
	comp=Z,1.3nm,0.4s					
WRA	**Warramunga Arr**	**44.43 276**	P	**P**	**09 44 39.1**	**-0.7**
WB0	**Warramunga Arr**	**44.46 276**	P	**P**	**09 44 39.8**	**-0.3**
KNRA	**Kununurra**	**51.14 277**		**P**	**09 45 32.2**	**+0.3**
KNRA			IAmb	IAmb	09 45 33.0	
	comp=Z,3.8nm,1.0s					
CASY	**Casey**	**52.15 209**	P	**P**	**09 45 38.6**	**-0.1**
CASY			IAmb	IAmb	09 45 39.9	
	comp=Z,3.0nm,1.1s					
FITZ	**Fitzroy Crossi**	**52.53 272**	P	**P**	**09 45 41.4**	**-0.8**
QSPA	**South Pole Qui**	**56.26 180**	P	**P**	**09 46 09.7**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=26,slow=3.3,SNR=1.8					
	comp=Z,0.9nm,0.7s					
QSPA	**South Pole Qui**	**56.26 180**	P	**P**	**09 46 09.5**	**+0.6**
QSPA			IAmb	IAmb	09 46 13.6	
	comp=Z,0.6nm,0.8s					
FINES	**FINESS Array B**	**148.41 338**	PKPbc	**PKPbc**	**09 56 14.2**	**-0.3**
	comp=Z,4.4nm,1.0s,baz=51,slow=4.4,SNR=2.2					

*FUNV **01** 09:38:55.9, 12˚.01N×70˚.73W, h35km, MW3.7, Presumed earthquake*
*RSNC **01** 09:38:57.5±0.0, 12˚N±3˚×7˚1W±˚, h84km±5km, M3.6, mb4.4, ML3.3, MLv4.2*
*SDD **01** 09:39:11.2±1.6, 12˚.87N×70˚.00W, h15km±631km, MD4.5, ML4.1, MW3.4, Presumed earthquake*

ISC 01 09:38:54.9±1.1, **11˚.83N**±0˚.05×**70˚.80W**±0˚.06, **h70**km, **n32,**
σ1§**67**/53, **4C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**1.18**	**264**	P	**Pn**	**09 39 16.7**	**+1.0**
URIC				S	**Sn**	**09 39 31.9**	**+0.7**
URIC	**Uribia, Colomb**	**1.18**	**264**	*e*P	**Pn**	**09 39 16.8**	**+1.0**
URIC				*e*S	**Sn**	**09 39 31.9**	**+0.7**
SDV	**Santo Domingo**	**2.93**	**177**	*e*P	**Pn**	**09 39 41.8**	**+2.4**
SDV				*e*S	**Sn**	**09 40 15.5**	**+1.9**
ARGC	**Ariguani, Magd**	**3.92**	**240**	P	**Pn**	**09 39 53.0**	**+0.3**
ARGC				S	**Sn**	**09 40 36.1**	**-1.3**
FUNV	**FUNVISIS**	**4.14**	**109**	*e*P	**Pn**	**09 39 54.8**	**-1.0**
FUNV				*e*S	**Sn**	**09 40 39.6**	**-3.4**
OCAC	**Ocana**	**4.35**	**215**	P	**Pn**	**09 39 59.7**	**+1.0**
OCAC				S	**Sn**	**09 40 47.2**	**-1.1**
SJCC	**San Jacinto, C**	**4.71**	**246**	P	**Pn**	**09 40 03.6**	**0.0**
SJCC				S	**Sn**	**09 40 56.4**	**-0.7**
SJCC	**San Jacinto, C**	**4.71**	**246**	*e*P	**Pn**	**09 40 05.1**	**+1.4**
SJCC				*e*S	**Sn**	**09 40 56.6**	**-0.5**
PAMC	**Pamplona, Colo**	**4.84**	**203**	P	**Pn**	**09 40 07.5**	**+1.7**
PAMC				S	**Sn**	**09 41 00.5**	**-0.3**
BRJC	**Barrancabermej**	**5.63**	**211**	P	**Pn**	**09 40 17.3**	**+1.1**
	88nm,0.5s						
BRJC				S	**Sn**	**09 41 18.4**	**-1.2**
	88nm,0.5s						
BARC	**Barichara**	**5.71**	**205**	P	**Pn**	**09 40 19.2**	**+1.7**
	28nm,0.5s						
BARC				S	**Sn**	**09 41 21.5**	**-0.3**
	28nm,0.5s						
UREC	**San Jos de Ur**	**6.18**	**229**	P	**Pn**	**09 40 23.4**	**-0.3**
	18nm,0.4s						
UREC				S	**Sn**	**09 41 30.9**	**-2.1**
	18nm,0.4s						
LCBC	**Los crdobas,**	**6.23**	**242**	P	**Pn**	**09 40 24.1**	**-0.2**
LCBC				S	**Sn**	**09 41 31.9**	**-2.2**
RUSC	**La Rusia**	**6.32**	**201**	P	**Pn**	**09 40 27.4**	**+1.4**
RUSC				S	**Sn**	**09 41 35.7**	**-1.3**
RUSC	**La Rusia**	**6.32**	**201**	*e*P	**Pn**	**09 40 27.2**	**+1.2**
RUSC				*e*S	**Sn**	**09 41 33.9**	**-3.1**
PTBC	**PUERTO BERRIO,**	**6.38**	**215**	P	**Pn**	**09 40 26.0**	**-0.4**
	35nm,0.8s						
PTBC				S	**Sn**	**09 41 36.3**	**-1.6**
	35nm,0.8s						
BANI	**BANI**	**6.54**	**4**	⇑*i*P	**Pn**	**09 40 30.5**	**+1.8**
BANI				IAML		09 41 49.4	
	comp=N,138nm,1.6s						
APAC	**Apartado, Choc**	**6.91**	**236**	P	**Pn**	**09 40 33.2**	**-0.4**
	comp=N,18nm,0.8s						
APAC				S	**Sn**	**09 41 48.8**	**-2.0**
	comp=N,18nm,0.8s						
PCDR	**Punta Cana, DR**	**7.04**	**19**	⇓*i*P	**Pn**	**09 40 33.7**	**-1.7**
PCDR				IAML		09 41 51.0	
	comp=N,73nm,1.4s						
SDDR	**Presa de Saban**	**7.13**	**356**	P	**Pn**	**09 40 39.7**	**+3.1**
	comp=N,29nm,1.0s						
SDDR				S	**Sn**	**09 41 53.4**	**-2.8**
	comp=N,29nm,1.0s						
SDDR	**Presa de Saban**	**7.13**	**356**	⇓*i*P	**Pn**	**09 40 40.1**	**+3.5**
SDDR				IAML		09 41 59.6	
	comp=N,49nm,0.3s						
REDR	**Restauracion**	**7.32**	**356**	⇑*i*P	Pn	09 40 44.6	+5.5
REDR				IAML		09 42 08.6	
	comp=E,30nm,0.3s						
REDR				IAML		09 42 11.9	
	comp=N,40nm,0.4s						
AOPR	**Arecibo Observ**	**7.56**	**31**	⇑*i*P	**Pn**	**09 40 41.2**	**-1.4**
AOPR				IAML		09 42 07.6	
	comp=N,56nm,0.7s						
SMDR	**Samana, DR**	**7.58**	**12**	⇑*i*P	**Pn**	**09 40 43.9**	**+1.2**
CHIC	**Chingaza**	**7.72**	**202**	P	**Pn**	**09 40 46.2**	**+1.1**
	comp=N,18nm,0.7s						
CHIC				S	**Sn**	**09 42 08.0**	**-3.3**
	comp=N,18nm,0.7s						
ROSC	**El Rosal**	**7.77**	**207**	P	Pn	09 40 44.1	-1.7
ROSC				S	**Sn**	**09 42 11.8**	**-0.7**
CBOC	**Ciudad Bolivar**	**7.85**	**221**	P	**Pn**	**09 40 47.7**	**+1.0**
	comp=N,15nm,0.5s						
CBOC				S	**Sn**	**09 42 14.3**	**+0.1**
	comp=N,15nm,0.5s						
CVER	**Cruz Verde, Cu**	**7.95**	**204**	P	**Pn**	**09 40 50.5**	**+2.2**
	comp=N,29nm,0.6s						
GUY2C	**Guyana, Caldas**	**7.97**	**215**	P	**Pn**	**09 40 48.8**	**+0.3**
	comp=N,29nm,0.6s						
GUY2C				S	**Sn**	**09 42 18.0**	**+0.6**
	comp=N,29nm,0.6s						
VILC	**Villavicencio,**	**8.19**	**201**	P	**Pn**	**09 40 50.8**	**-0.4**
VILC				S	**Sn**	**09 42 19.3**	**-3.0**
PLMC	**San Jos del P**	**8.76**	**219**	P	**Pn**	**09 41 00.0**	**+1.0**
	comp=N,14nm,0.5s						
BCIP	**Isla Barro Col**	**9.28**	**254**	P	**Pn**	**09 41 06.1**	**+0.1**
BCIP				S	Sn	09 42 40.2	-8.6

*NOU **01** 09:46:24.4, 34˚.20S×177˚.31W, h97km, ML4.6/6, South of Kermadec Islands*
*IDC **01** 09:46:32.1±3.5, 34˚.36S×178˚.64W, h0km, mb3.9/2, mbtmp4.0/3, ML4.1/1, Error ellipse: s-maj=79.8km s-min=47.8km az=125.0*
*WEL **01** 09:46:37.1±1.9, **34˚.61S**±0˚.09×**178˚.4W**±0˚.2, **h35**km, **n51,***
σ1§**04**/65, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.99**	**221**	P	**Pn**	**09 47 35.7**	**0.0**
MXZ	**Matakaoa Point**	**3.99**	**221**	P	**Pn**	**09 47 35.8**	**+0.1**
MXZ				S	**Sn**	**09 48 21.1**	**-0.2**
WMGZ	**Waiomatatini S**	**4.12**	**218**	P	**Pn**	**09 47 37.7**	**+0.1**
WMGZ				S	**Sn**	**09 48 27.4**	**+2.9**
PKGZ	**Pakihiroa**	**4.33**	**220**	P	**Pn**	**09 47 40.5**	**0.0**
PKGZ				S	**Sn**	**09 48 31.7**	**+1.9**
PUZ	**Puketiti**	**4.40**	**217**	P	**Pn**	**09 47 41.9**	**+0.5**
PUZ				S	**Sn**	**09 48 30.8**	**-0.5**
HAZ	**Te Kaha**	**4.42**	**224**	P	**Pn**	**09 47 42.3**	**+0.6**
HAZ				S	**Sn**	**09 48 33.8**	**+2.0**
TWGZ	**Tauwhareparae**	**4.62**	**219**	P	**Pn**	**09 47 46.0**	**+1.6**
TWGZ				S	**Sn**	**09 48 38.0**	**+1.1**
RUGZ	**Raukumara Rang**	**4.62**	**222**	P	**Pn**	**09 47 44.8**	**+0.2**
RUGZ				S	**Sn**	**09 48 39.3**	**+2.2**
CNGZ	**Carnagh Statio**	**4.75**	**214**	P	**Pn**	**09 47 46.2**	**0.0**
TKGZ	**Te Karaka**	**4.88**	**217**	P	**Pn**	**09 47 48.3**	**+0.3**
TKGZ				S	**Sn**	**09 48 44.0**	**+0.6**
MWZ	**Matawai**	**4.97**	**220**	P	**Pn**	**09 47 48.9**	**-0.4**
MWZ				S	**Sn**	**09 48 46.2**	**+0.6**
RIGZ	**Rimuhau**	**5.13**	**216**	P	**Pn**	**09 47 52.6**	**+1.1**
RIGZ				S	**Sn**	**09 48 49.3**	**-0.3**
URZ	**Urewera**	**5.15**	**224**	Pn	**Pn**	**09 47 50.5**	**-1.1**
	6.4nm,0.3s,baz=274,slow=2.7,SNR=39						
URZ				Sn	**Sn**	**09 48 49.3**	**-0.6**
	8.6nm,0.3s,baz=270,slow=2.2,SNR=12						
	16nm,0.3s						
URZ	**Urewera**	**5.15**	**224**	P	**Pn**	**09 47 51.4**	**-0.3**
URZ	**Urewera**	**5.15**	**224**	P	**Pn**	**09 47 51.4**	**-0.3**
URZ				S	**Sn**	**09 48 49.1**	**-0.7**
RAGZ	**Rawiri**	**5.15**	**220**	P	**Pn**	**09 47 51.8**	**0.0**
RAGZ				S	**Sn**	**09 48 49.7**	**-0.4**
PRGZ	**Paritu Road**	**5.25**	**214**	P	**Pn**	**09 47 53.9**	**+0.8**
PRGZ				S	**Sn**	**09 48 51.6**	**-0.7**
SNGZ	**Shannon Statio**	**5.40**	**218**	P	**Pn**	**09 47 55.6**	**+0.4**
SNGZ				S	**Sn**	**09 48 55.8**	**-0.4**
KNZ	**Kokohu**	**5.43**	**215**	P	**Pn**	**09 47 55.1**	**-0.3**
MHGZ	**Mahia Peninsul**	**5.43**	**212**	P	**Pn**	**09 47 54.9**	**-0.6**
MUGZ	**Murupara**	**5.49**	**224**	P	**Pn**	**09 47 56.3**	**-0.1**
RAHZ	**Arahi**	**5.63**	**219**	P	**Pn**	**09 47 59.2**	**+0.8**
MTHZ	**Maungataniwha**	**5.72**	**221**	P	**Pn**	**09 47 59.6**	**+0.1**
TOZ	**Tahuroa Road**	**5.85**	**236**	P	**Pn**	**09 48 01.8**	**+0.5**
NMHZ	**Naumai**	**5.92**	**219**	P	**Pn**	**09 48 03.0**	**+0.8**
MRHZ	**Matea Rd**	**5.94**	**223**	P	**Pn**	**09 48 02.8**	**+0.3**
ARHZ	**Aropaoanui**	**5.94**	**217**	P	**Pn**	**09 48 02.7**	**+0.1**
WCZ	**Waipu Caves**	**6.10**	**255**	P	Pn	09 48 13.2	+8.5
BKZ	**Black Stump Fm**	**6.13**	**221**	P	**Pn**	**09 48 04.8**	**-0.4**
BKZ	**Black Stump Fm**	**6.13**	**221**	P	**Pn**	**09 48 04.7**	**-0.5**
MCHZ	**McNeill Hill**	**6.23**	**218**	P	**Pn**	**09 48 06.3**	**-0.3**
TMVZ	**Te Maari**	**6.54**	**225**	P	**Pn**	**09 48 10.6**	**-0.3**
NTVZ	**North Tongarir**	**6.54**	**225**	P	**Pn**	**09 48 11.3**	**+0.4**
KRHZ	**Kereru**	**6.55**	**218**	P	**Pn**	**09 48 10.8**	**-0.1**
OTVZ	**Oturere**	**6.59**	**225**	P	**Pn**	**09 48 11.7**	**+0.1**
BHHZ	**Black Hill Sta**	**6.59**	**221**	P	**Pn**	**09 48 12.3**	**+0.7**
SNVZ	**South Ngauruho**	**6.62**	**225**	P	**Pn**	**09 48 11.9**	**-0.2**
OUZ	**Omahuta**	**6.63**	**262**	P	**Pn**	**09 48 11.9**	**-0.1**
OUZ	**Omahuta**	**6.63**	**262**	P	**Pn**	**09 48 11.8**	**-0.1**
HIZ	**Hauiti**	**6.70**	**232**	P	**Pn**	**09 48 13.1**	**+0.2**
MOVZ	**Moawhango**	**6.71**	**223**	P	**Pn**	**09 48 12.7**	**-0.4**
PNHZ	**Pukenui**	**6.84**	**218**	P	**Pn**	**09 48 14.2**	**-0.7**
DVHZ	**Dannevirke**	**7.15**	**216**	P	**Pn**	**09 48 18.5**	**-0.6**
BFZ	**Birch Farm**	**7.41**	**214**	P	**Pn**	**09 48 21.3**	**-1.4**
BFZ	**Birch Farm**	**7.41**	**214**	P	**Pn**	**09 48 21.7**	**-1.1**
PRWZ	**Pori Road**	**7.44**	**215**	P	**Pn**	**09 48 23.4**	**+0.3**
MRZ	**Mangatainoka R**	**7.71**	**217**	P	**Pn**	**09 48 24.6**	**-2.2**
HOWZ	**Holdsworth Sta**	**7.92**	**216**	P	**Pn**	**09 48 27.6**	**-2.2**
ASAR	**Alice Springs**	**42.74**	**272**	P	**P**	**09 54 29.4**	**-1.7**
	1.0nm,0.7s,baz=113,slow=7.3,SNR=12						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**44.11**	**277**	P	**P**	**09 54 40.2**	**-2.0**
	1.0nm,0.5s,baz=118,slow=7.6,SNR=25						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**148.94**	**337**	PKPbc	**PKPdf**	**10 06 19.7**	**+3.4**
	2.0nm,0.8s,baz=70,slow=4.1,SNR=1.2						

*AFAD **01** 09:59:44.0, 38˚.52N×27˚.53E, h18km±4km, ML3.5*
*ATH **01** 09:59:44.6, 38˚.52N×27˚.55E, h9km±3km, ML3.6/7, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*ISK **01** 09:59:44.4, 38˚.52N×27˚.54E, h13km, ML3.6/38*
*IDC **01** 09:59:44.0±1.2, 38˚.37N×27˚.72E, h0km, mb3.8/3, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=20.3km s-min=15.6km az=137.0*
*THE **01** 09:59:45.3, 39˚N±2˚×2˚8E±˚, h6km±9km, M3.4/10, MLh3.4/10*

ISC 01 09:59:44.7±1.0, **38˚.51N**±0˚.02×**27˚.53E**±0˚.01, **h9**km±8km,
n107, σ0§**71**/141, **mb3.4**/3, **7C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMT	**Merkez**	**0.29**	**324**	P	**Pg**	**09 59 50.2**	**-0.4**
CAMT				S	**Sg**	**09 59 55.3**	**+0.8**
CAMT				IAML		09 59 56.0	
	comp=N,6μm,0.5s						
CAMT				IAML		09 59 57.0	
	comp=E,8μm,0.5s						
GOMA	**Golmarmara-Man**	**0.36**	**57**	Pg	**Pb**	**09 59 52.2**	**-1.0**
GOMA				Sg	**Sg**	**09 59 57.2**	**+0.7**
BLCB	**Balcova**	**0.41**	**252**	Pg	**Pg**	**09 59 52.7**	**+0.1**
BLCB				Sg	**Sb**	**09 59 59.5**	**-0.8**
BLCB	**Balcova**	**0.41**	**252**	P	**Pg**	**09 59 52.4**	**-0.2**
BLCB				S	**Sb**	**09 59 59.2**	**-1.1**
AKHS	**Akhisar**	**0.43**	**31**	P	**Pg**	**09 59 52.4**	**-0.6**
AKHS				S	**Sg**	**09 59 58.9**	**+0.2**
AKS	**Akhisar**	**0.43**	**31**	Pg	**Pg**	**09 59 52.9**	**-0.1**
KTTT	**Salihli**	**0.47**	**68**	P	**Pg**	**09 59 53.6**	**-0.3**
KTTT				S	**Sb**	**10 00 01.1**	**-1.2**
ODEM	**Odemis-Izmir**	**0.49**	**119**	Pg	**Pb**	**09 59 54.7**	**-0.7**
IZMR	**zmir-demi**	**0.50**	**139**	P	**Pg**	**09 59 54.7**	**+0.3**
IZMR				S	**Sb**	**10 00 01.7**	**-1.3**
BAGT	**Foa**	**0.55**	**285**	P	**Pg**	**09 59 55.3**	**-0.1**
BAGT				S	**Sb**	**10 00 04.0**	**-0.5**
BAGT				IAML		10 00 05.0	
	comp=E,3μm,0.8s						
ZEDA	**zmir-Bergama**	**0.58**	**322**	P	**Pg**	**09 59 55.5**	**-0.3**
ZEDA				S	**Sb**	**10 00 04.4**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**0.63**	**153**	Pg	**Pb**	**09 59 57.5**	**-0.4**
GORD	**Gordes-Manisa**	**0.64**	**52**	Pg	**Pb**	**09 59 57.2**	**-0.9**
SOMA	**Soma-Manisa**	**0.64**	**0**	Pg	**Pb**	**09 59 57.3**	**-0.8**
GMLD	**Gumuldur**	**0.65**	**228**	Pg	**Pb**	**09 59 58.4**	**+0.2**
FOCM	**Foa**	**0.66**	**288**	Pg	**Pb**	**09 59 57.8**	**-0.5**
KUSD	**Kusadasi-Aydin**	**0.68**	**197**	Pg	**Pb**	**09 59 58.2**	**-0.5**
DGB	**zmir**	**0.69**	**228**	P	**Pg**	**09 59 58.0**	**+0.1**
DGB				S	**Sn**	**10 00 10.7**	**-0.6**
DGB				IAML		10 00 13.0	
	comp=N,1μm,0.3s						
DGB				IAML		10 00 13.0	
	comp=E,2μm,0.3s						
DKL	**Dikili**	**0.74**	**319**	Pg	**Pb**	**09 59 59.2**	**-0.6**
DKL	**Dikili**	**0.74**	**319**	P	**Pg**	**09 59 58.9**	**-0.1**
DKL				S	**Sb**	**10 00 09.4**	**-0.6**
KIRA	**zmir-Kiraz**	**0.75**	**115**	P	**Pg**	**09 59 59.1**	**0.0**
KIRA				S	**Sb**	**10 00 10.3**	**0.0**
URLA	**Izmir**	**0.75**	**259**	Pg	**Pb**	**09 59 59.8**	**-0.1**
URLA	**Izmir**	**0.75**	**259**	P	**Pg**	**09 59 58.8**	**-0.4**
URLA				S	**Sn**	**10 00 12.4**	**-0.6**
URLA				IAML		10 00 13.0	
	comp=N,2μm,0.4s						
URLA				IAML		10 00 18.0	
	comp=E,2μm,0.8s						
KRBN	**Karaburun**	**0.77**	**276**	Pg	**Pb**	**10 00 00.1**	**-0.2**
MANT	**Manisa**	**0.80**	**91**	P	**Pg**	**10 00 00.1**	**-0.1**
MANT				S	**Sn**	**10 00 13.3**	**-1.2**
NAZL	**Nazilli-Aydin**	**0.81**	**132**	Pg	**Pb**	**10 00 00.8**	**-0.1**
GCAM	**G?zelcaml?**	**0.84**	**196**	Pg	**Pb**	**10 00 01.2**	**-0.3**
STEP	**BALIKESIR_Sava**	**0.88**	**9**	P	**Pg**	**10 00 01.4**	**-0.1**
STEP				S	**Sb**	**10 00 14.2**	**+0.3**
STEP				IAML		10 00 17.0	
	comp=N,3μm,0.7s						
STEP				IAML		10 00 17.0	
	comp=E,2μm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.88**	**89**	Pg	**Pb**	**10 00 01.9**	**-0.3**
KARB	**zmir-Karabur**	**0.89**	**280**	P	**Pg**	**10 00 01.3**	**-0.5**
KARB				S	**Sn**	**10 00 16.6**	**+0.2**
KARB				IAML		10 00 20.0	
	comp=N,3μm,0.7s						
KARB				IAML		10 00 20.0	
	comp=E,2μm,0.7s						
KRL1	**Karlovasi Samo**	**0.97**	**223**	P	**Pb**	**10 00 03.5**	**-0.1**
KRL1				S	**Sn**	**10 00 17.4**	**-0.8**
AYVA	**Ayvalik**	**1.03**	**321**	P	**Pg**	**10 00 03.5**	**-1.0**
AYVA				S	**Sn**	**10 00 18.9**	**-0.9**
AYVA				IAML		10 00 28.0	
	comp=N,1μm,0.3s						
BUHA	**Balikesir, Bur**	**1.05**	**340**	P	**Pg**	**10 00 04.2**	**-0.6**
BUHA				S	**Sb**	**10 00 18.5**	**-0.4**
BUHA				IAML		10 00 22.0	
	comp=N,1μm,0.6s						
BUHA				IAML		10 00 28.0	
	comp=E,1μm,0.5s						
DEMI	**Demirci**	**1.07**	**60**	P	**Pg**	**10 00 04.6**	**-0.5**
DEMI				S	**Sb**	**10 00 19.4**	**+0.1**
SULTU	**Buldan**	**1.07**	**115**	P	**Pg**	**10 00 04.9**	**-0.4**
SULTU				S	**Sn**	**10 00 20.5**	**-0.5**
SULTU				IAML		10 00 29.0	
	comp=E,874nm,0.6s						
SULTU				IAML		10 00 33.0	
	comp=N,873nm,0.8s						
BALB	**Balikesir**	**1.16**	**13**	Pn	**Pn**	**10 00 06.7**	**-0.4**
BALB	**Balikesir**	**1.16**	**13**	P	**Pn**	**10 00 06.6**	**-0.4**
BALB				S	**Sb**	**10 00 22.1**	**+0.1**
CHOS	**Chios island**	**1.17**	**264**	Pn	**Pn**	**10 00 07.2**	**0.0**
CHOS	**Chios island**	**1.17**	**264**	P	**Pb**	**10 00 06.7**	**-0.4**
CHOS				S	**Sn**	**10 00 24.5**	**+1.2**
CHOS	**Chios island**	**1.17**	**264**	P	**Pb**	**10 00 06.6**	**-0.4**
CHOS				S	**Sn**	**10 00 23.9**	**+0.5**
USAK	**Uak-Merkez**	**1.18**	**80**	P	**Pb**	**10 00 06.6**	**-0.6**
USAK				S	**Sn**	**10 00 24.3**	**+0.7**
PRK	**Paraskevi**	**1.23**	**307**	P	**Pg**	**10 00 08.2**	**0.0**
PRK				S	**Sn**	**10 00 25.4**	**+0.7**
PRK	**Paraskevi**	**1.23**	**307**	P	**Pg**	**10 00 08.0**	**-0.2**
PRK				S	**Sn**	**10 00 24.8**	**+0.1**
BALY	**Balya**	**1.23**	**3**	P	**Pb**	**10 00 07.2**	**-0.9**
BALY				S	**Sg**	**10 00 24.1**	**-0.1**
BALY				IAML		10 00 25.0	
	comp=E,1μm,0.7s						
BALY				IAML		10 00 26.0	
	comp=N,3μm,0.6s						
MLSB	**Milas**	**1.23**	**171**	Pn	**Pn**	**10 00 07.7**	**-0.3**
BKES	**Balkesir-Mer**	**1.26**	**14**	P	**Pn**	**10 00 07.8**	**-0.6**
BKES				S	**Sg**	**10 00 24.8**	**-0.4**
BKES				IAML		10 00 26.0	
	comp=N,1μm,0.8s						
BKES				IAML		10 00 30.0	
	comp=E,687nm,0.6s						
SIMA	**Simav-Kutahya**	**1.27**	**63**	Pn	**Pn**	**10 00 08.1**	**-0.5**
SMAA	**Simav-Kutahya**	**1.27**	**62**	Pn	**Pb**	**10 00 08.6**	**-0.3**
DURS	**Dursunbey**	**1.31**	**34**	P	**Pn**	**10 00 08.2**	**-1.0**
DURS				S	**Sn**	**10 00 27.1**	**+0.2**
DURS				IAML		10 00 28.0	
	comp=E,1μm,0.7s						
DURS				IAML		10 00 29.0	
	comp=N,653nm,0.4s						
DST	**Dursunbey**	**1.38**	**37**	Pn	**Pn**	**10 00 09.9**	**-0.2**
SHAP	**Saphane-Kutahy**	**1.42**	**68**	Pn	**Pn**	**10 00 10.4**	**-0.3**
YENI	**Yenice-Canakka**	**1.44**	**351**	Pn	**Pn**	**10 00 10.9**	**0.0**
BODT	**Bodrum**	**1.46**	**187**	Pn	**Pn**	**10 00 11.3**	**+0.1**
BODT	**Bodrum**	**1.46**	**187**	P	**Pn**	**10 00 11.1**	**-0.1**
YER	**Yerkesik**	**1.50**	**156**	Pn	**Pn**	**10 00 11.6**	**-0.1**
YER	**Yerkesik**	**1.50**	**156**	P	**Pb**	**10 00 12.1**	**-0.6**
YER				S	**Sb**	**10 00 32.1**	**+0.3**
SUSR	**Susurluk-Balik**	**1.51**	**16**	Pn	**Pn**	**10 00 12.0**	**+0.1**
CMHT	**Manyas**	**1.54**	**13**	P	**Pn**	**10 00 11.4**	**-0.8**
CMHT				S	**Sb**	**10 00 32.3**	**-0.5**
GONE	**Gonen-Balikesi**	**1.54**	**4**	Pn	**Pn**	**10 00 12.0**	**-0.2**
CANM	**Can-anakkale**	**1.54**	**346**	Pn	**Pn**	**10 00 12.4**	**+0.1**
GEDZ	**Gediz**	**1.56**	**69**	Pn	**Pn**	**10 00 12.3**	**-0.3**
EZN	**Ezine**	**1.61**	**325**	Pn	**Pn**	**10 00 13.2**	**-0.1**
EZN	**Ezine**	**1.61**	**325**	P	**Pn**	**10 00 13.2**	**-0.1**
EZN				S	**Sb**	**10 00 35.1**

PTBC	**PUERTO BERRIO,**	**1.41**	**255**	P	**Pn**	**10 06 39.3**	**-0.4**
PTBC				S	**Sn**	**10 07 00.0**	**-2.4**
CHIC	**Chingaza**	**2.35**	**196**	P	**Pn**	**10 06 51.1**	**+0.6**
CHIC				S	**Sn**	**10 07 22.3**	**+0.7**
ROSC	**El Rosal**	**2.39**	**211**	P	**Pn**	**10 06 53.1**	**+2.1**
ROSC				S	**Sn**	**10 07 22.3**	**-0.2**
UREC	**San Jos de Ur**	**2.57**	**289**	P	**Pn**	**10 06 54.2**	**+1.5**
UREC				S	**Sn**	**10 07 23.7**	**-1.9**
GUY2C	**Guyana, Caldas**	**2.81**	**234**	P	**Pn**	**10 06 57.1**	**+0.9**
GUY2C				S	**Sn**	**10 07 31.6**	**-0.1**
VILC	**Villavicencio,**	**2.84**	**192**	P	**Pn**	**10 06 56.4**	**+0.2**
VILC				S	**Sn**	**10 07 33.4**	**+1.6**
SDV	**Santo Domingo**	**3.13**	**51**	*eP*	**Pn**	**10 07 00.7**	**+0.9**
SDV				*eS*	**Sn**	**10 07 35.7**	**-2.6**
SJCC	**San Jacinto, C**	**3.62**	**325**	P	**Pn**	**10 07 06.9**	**+0.9**
SJCC				S	**Sn**	**10 07 48.1**	**-1.3**
SJCC	**San Jacinto, C**	**3.62**	**325**	*eP*	**Pn**	**10 07 07.0**	**+1.0**
SJCC				*eS*	**Sn**	**10 07 47.2**	**-2.2**
PRAC	**Prado**	**3.64**	**210**	P	**Pn**	**10 07 06.3**	**+0.1**
PRAC				S	**Sn**	**10 07 48.7**	**-1.1**

IDC 01 10:10:55.0±3.1,**42°25N**×**129°30E, h0**km**, mbtmp2.5**/2, **ML2.2**/2, **Error ellipse: s-maj=42.3km s-min=21.0km az=121.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I45RU	**USSURIYSK INFR**	**2.76**	**44**	I	I	10 31 57.8	
	baz=225,slow=317,SNR=8.6						
USRK	**Ussuriysk Ar.**	**2.77**	**44**	Pn	Pn	10 11 40.1	-0.5
	0.3nm,0.3s,baz=231,slow=15,SNR=2.6						
USRK				Pg	Pb	10 11 45.4	+0.1
	1.4nm,0.3s,baz=226,slow=15,SNR=17						
USRK				Lg	Lg	10 12 23.0	
	1.3nm,0.3s,baz=225,slow=28,SNR=6.1						
	2.0nm,0.6s						
KSRS	**Korea Array**	**4.91**	**193**	Pn	Pn	10 12 10.8	+0.8
	0.2nm,0.3s,baz=9.5,slow=13,SNR=1.9						
	0.5nm,0.4s						

KRNET ***01*** *10:12:04.5*±*0.1, 39.°62N*×*77.°31E, mb3.2*
SOME ***01*** *10:12:06.8, 39.°68N*×*77.°22E, h15km*
NNC ***01*** *10:12:07.5*±*2.0, 39.°74N*×*77.°17E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=13.8km s-min=10.0km az=176.0*

ISC 01 10:12:06.0±2.1,**39°5N**±0°.1×**77°34E**±0°.07,**h10**km,**n26, σ1**§**30**/42,**14C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.19**	**333**	⇓*iP*	**Pn**	**10 12 42.4**	**-0.4**
NRN				⇓*iS*	**Sn**	**10 13 10.4**	**+0.3**
TARG	**Taragay, Kyrgy**	**2.26**	**9**	⇑*iP*	**Pn**	**10 12 43.8**	**-0.1**
TARG				⇑*iS*	**Sn**	**10 13 12.2**	**+0.2**
KDJ	**Kajisay**	**2.63**	**357**	⇑*iP*	**Pn**	**10 12 48.6**	**-0.2**
KDJ				⇑*iS*	**Sn**	**10 13 20.8**	**-0.1**
SFK	**Sufi-Kurgan**	**3.00**	**281**	⇑*iP*	**Pn**	**10 12 55.0**	**+1.1**
SFK				⇑*iS*	**Sn**	**10 13 31.8**	**+1.8**
BOOM	**Boomskoye usch**	**3.17**	**341**	⇑*iP*	**Pn**	**10 12 56.1**	**-0.1**
BOOM				⇑*iS*	**Sn**	**10 13 33.8**	**-0.4**
ANVS	**Anan'yevo**	**3.29**	**4**	⇑*iP*	**Pn**	**10 12 57.9**	**0.0**
ANVS				⇑*iS*	**Sn**	**10 13 36.7**	**-0.5**
UCH	**Uchtor**	**3.47**	**323**	⇑*iP*	**Pn**	**10 13 00.6**	**+0.1**
UCH				⇑*iS*	**Sn**	**10 13 41.7**	**-0.1**
SATY	**Saty**	**3.65**	**12**	Pg	**Pb**	**10 13 10.1**	**-0.6**
	10nm,0.5s						
SATY				Lg	Lg	10 13 55.7	
	17nm,0.6s						
SATY	**Saty**	**3.65**	**12**	*eP*	**Pb**	**10 13 10.1**	**-0.6**
	10nm,0.5s						
SATY				*eS*	**Sb**	**10 13 55.7**	**+0.6**
	17nm,0.6s						
KST	**Kastek**	**3.69**	**344**	Pg	**Pb**	**10 13 11.2**	**-0.2**
	2.6nm,0.3s						
KST				Lg	Lg	10 13 57.5	
	19nm,1.1s						
KST	**Kastek**	**3.69**	**344**	*eP*	**Pb**	**10 13 11.2**	**-0.2**
	2.6nm,0.3s						
KST				*eS*	**Sb**	**10 13 57.5**	**+1.2**
	19nm,1.1s						
KOTS	**Kotyrbulak**	**3.74**	**357**	Pg	**Pb**	**10 13 12.7**	**+0.4**
	5.1nm,0.2s						
KOTS				Lg	Lg	10 13 59.9	
	46nm,0.8s						
KOTS	**Kotyrbulak**	**3.74**	**357**	*eP*	**Pb**	**10 13 12.0**	**-0.2**
	5.1nm,0.2s						
KOTS				*eS*	**Sb**	**10 13 58.9**	**+1.3**
	54nm,0.6s						
AAK	**Ala-Archa**	**3.80**	**327**	⇑Pg	**Pb**	**10 13 09.5**	**-3.8**
	2.1nm,0.9s						
AAK				⇑Lg	Lg	10 14 00.9	
	4.7nm,0.6s						
UZB	**Uzunbulak**	**3.86**	**19**	Pg	**Pb**	**10 13 14.4**	**+0.1**
	4.6nm,0.4s						
UZB				Lg	Lg	10 14 03.0	
	5.0nm,0.5s						
UZB	**Uzunbulak**	**3.86**	**19**	*eP*	**Pb**	**10 13 14.4**	**+0.1**
	4.6nm,0.4s						
UZB				*eS*	**Sb**	**10 14 03.0**	**+1.7**
	5.0nm,0.5s						
SHLS	**Shalkode**	**3.99**	**23**	Pg	**Pg**	**10 13 20.6**	**-1.9**
	11nm,0.3s						
SHLS				Lg	Lg	10 14 13.9	
	13nm,0.7s						
SHLS	**Shalkode**	**3.99**	**23**	*eP*	**Pg**	**10 13 20.6**	**-1.9**
	11nm,0.3s						
SHLS				*eS*	**Sg**	**10 14 13.8**	**-0.4**
	13nm,0.7s						
KPKS	**Kokpek**	**4.09**	**14**	Pg	**Pb**	**10 13 18.5**	**+0.2**
	0.1nm,0.1s						
KPKS				Lg	Lg	10 14 10.2	
	5.8nm,0.4s						
KPKS	**Kokpek**	**4.09**	**14**	*eP*	**Pb**	**10 13 18.5**	**+0.2**
	0.1nm,0.1s						
KPKS				*eS*	**Sb**	**10 14 10.2**	**+2.4**
	5.8nm,0.4s						
KTBS	**Karatobe**	**4.24**	**354**	Pg	**Pb**	**10 13 20.6**	**-0.2**
KTBS				Lg	Lg	10 14 13.8	
KTBS	**Karatobe**	**4.24**	**354**	*eP*	**Pb**	**10 13 20.6**	**-0.2**
KTBS				*eS*	**Sb**	**10 14 13.8**	**+1.8**
KRBS	**Karabastau**	**4.38**	**344**	Pg	**Pb**	**10 13 22.8**	**-0.3**
	1.7nm,0.4s						
KRBS				Lg	Lg	10 14 17.5	
	25nm,0.6s						
KRBS	**Karabastau**	**4.38**	**344**	*eP*	**Pb**	**10 13 22.8**	**-0.3**
	1.7nm,0.4s						
KRBS				*eS*	**Sb**	**10 14 17.5**	**+1.6**
	25nm,0.6s						
SGDS	**Sogindy**	**4.44**	**334**	Pg	**Pb**	**10 13 24.2**	**0.0**
	0.8nm,0.2s						
SGDS				Lg	Lg	10 14 20.0	
	6.4nm,0.5s						
ARXS	**Arharly**	**4.73**	**4**	*eP*	**Pb**	**10 13 30.3**	**+1.2**
	2.6nm,0.3s						
ARXS				*eS*	**Sb**	**10 14 30.2**	**+4.2**
	10nm,0.5s						

NEIC ***01*** *10:13:55.0*±*1.0, 6.°9S*±*0.°1*×*10.°78W*±*0.°07, h10km*±*1km, mb4.5/26, Error ellipse: s-maj=25.1km s-min=7.1km az=156.0*
IDC ***01*** *10:13:55.8*±*3.0, 6.°30S*×*11.°13W, h0km, mb4.1/10, mbtmp4.1/10, MS4.4/12, Error ellipse: s-maj=97.9km s-min=29.6km az=148.0*
GCMT ***01*** *10:14:04.0*±*0.2, 6.°35S*±*0.°02*×*11.°39W*±*0.°01, h12km, MW5.1/122, Moment Tensor Solution. s38,c43; s122,c196; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-5.34*±*.10; Mθθ0.49*±*.10; Mϕϕ4.85*±*.10; Mrθ0.99*±*.43; Mθϕ-1.37*±*.08; Mrϕ-0.54*±*.34; Best double couple: M₀5.40900×10¹⁶ NP1:ϕ₁172.00000°, δ41.00000°, λ-78.00000°. NP2:ϕ₂336.00000°, δ50.00000°, λ-101.00000°. Principal axes: T 5.3050, Plg4.0000°, Azm73.0000°; N 0.2090, Plg8.0000°, Azm343.0000°; P -5.5130, Plg81.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 10:13:54.3±0.8,**6.°9S**±0.°1×**10.°8W**±0.°1,**h10**km,**n68, σ1**§**20**/53,**mb4.5**/29,**MS4.4**/11,**Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR**	**3.77**	**256**	T	T	10 18 25.8	
	baz=66,slow=74,SNR=1257						
H10N2	**ASCENSION HYDR**	**3.77**	**256**	T	T	10 18 26.1	
	baz=66,slow=74,SNR=1321						
H10N3	**ASCENSION HYDR**	**3.79**	**256**	T	T	10 18 27.1	
	baz=66,slow=74,SNR=1751						
H10S2	**ASCENSION HYDR**	**4.32**	**242**	T	T	10 19 18.4	
	baz=166,slow=74,SNR=438						
H10S3	**ASCENSION HYDR**	**4.33**	**242**	T	T	10 19 19.8	
	baz=54,slow=74,SNR=639						
DBIC	**Dimbokro**	**14.74**	**24**	LR	LR	10 21 47.8	
	comp=Z,1μm,20.0s,baz=210,slow=33						
ACRG	**Accra**	**16.35**	**41**	Pn	**Pn**	**10 17 43.7**	**-0.4**
ACRG				IAmb	IAmb	10 17 50.0	
	comp=Z,55nm,1.4s						
EDA	**Edea**	**23.45**	**64**		**P**	**10 19 03.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**23.48**	**32**	P	**P**	**10 19 03.7**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=213,slow=10,SNR=18						
TORD				LR	LR	10 27 04.5	
	comp=Z,1μm,19.8s,baz=208,slow=34						
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**23.48**	**32**	P	**P**	**10 19 04.3**	**-0.1**
RCBR	**Riachuelo**	**24.98**	**271**	LR	LR	10 26 19.6	
	comp=Z,666nm,21.4s,baz=88,slow=30						
RCBR	**Riachuelo**	**24.98**	**271**	P	**P**	**10 19 18.2**	**-0.2**
RCBR				IAmb	IAmb	10 19 23.8	
	comp=Z,16nm,1.1s						
TSUM	**Tsumeb**	**30.16**	**117**	LR	LR	10 30 03.1	
	comp=Z,1μm,22.0s,baz=331,slow=32						
MACI	**Morro de la Ar**	**35.39**	**351**	P	**P**	**10 20 50.7**	**0.0**
BDFB	**Brasilia**	**37.46**	**253**	LR	LR	10 33 18.3	
	comp=Z,730nm,22.0s,baz=75,slow=31						
LSZ	**Lusaka**	**39.09**	**106**	LR	LR	10 35 33.8	
	comp=Z,630nm,20.2s,baz=312,slow=33						
LSZ	**Lusaka**	**39.09**	**106**	P	**P**	**10 21 21.5**	**-0.7**
MDT	**Midelt**	**39.94**	**8**	LR	LR	10 37 13.3	
	comp=Z,715nm,19.3s,baz=191,slow=36						
MD31	**MD31**	**39.98**	**8**	P	**P**	**10 21 29.2**	**-0.1**
MD01	**Midelt array s**	**39.98**	**8**	P	**P**	**10 21 29.7**	**+0.3**
MBAR	**Mbarara**	**41.89**	**83**	P	**P**	**10 21 45.5**	**0.0**
MBAR				IAmb	IAmb	10 22 02.4	
	comp=Z,12nm,1.3s						
KEST	**Kesra**	**46.46**	**23**		**P**	**10 22 21.6**	**-0.1**
PAB	**San Pablo**	**46.61**	**7**	P	**P**	**10 22 22.6**	**-0.2**
PAB				IAmb	IAmb	10 22 34.1	
	comp=Z,7.2nm,1.3s						
ESDC	**Sonseca Array**	**46.78**	**7**	P	**P**	**10 22 22.7**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=190,slow=8.9,SNR=7.3						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**46.78**	**7**	P	**P**	**10 22 24.4**	**+0.3**
CPUP	**Villa Florida**	**48.27**	**241**	LR	LR	10 41 05.4	
	comp=Z,513nm,18.6s,baz=53,slow=34						
EBR	**Ebro Roquetas**	**48.62**	**11**	P	**P**	**10 22 38.5**	**+0.3**
SIV	**San Ignacio**	**49.99**	**255**	LR	LR	10 43 26.4	
	comp=Z,600nm,18.2s,baz=112,slow=36						
CORI	**Orista**	**50.05**	**12**	P	**P**	**10 22 49.5**	**+0.3**
CORI				IAmb	IAmb	10 22 57.2	
	comp=Z,4.0nm,0.9s						
CEST	**Esterri de Car**	**50.49**	**12**	P	**P**	**10 22 52.4**	**-0.2**
CEST				IAmb	IAmb	10 23 08.6	
	comp=Z,7.8nm,1.2s						
BOAV	**Boa Vista**	**50.49**	**279**	P	**P**	**10 22 52.2**	**-0.9**
BOAV				IAmb	IAmb	10 23 02.7	
	comp=Z,5.6nm,1.0s						
CEL	**Celeste**	**51.35**	**27**	P	**P**	**10 22 58.7**	**-0.4**
CEL				IAmb	IAmb	10 23 17.3	
	comp=Z,3.2nm,0.8s						
INTR	**Introdacqua**	**53.67**	**23**	P	**P**	**10 23 15.1**	**-1.2**
INTR				IAmb	IAmb	10 23 30.1	
	comp=Z,6.8nm,1.2s						
CESX	**Cesi**	**53.69**	**21**	P	**P**	**10 23 15.9**	**-0.5**
CESX				IAmb	IAmb	10 23 26.2	
	comp=Z,4.0nm,0.5s						
AQU	**L'Aquila**	**53.77**	**22**	P	**P**	**10 23 17.8**	**+0.7**
NRCA	**Norcia**	**54.08**	**22**	P	**P**	**10 23 20.0**	**+0.7**
NRCA				IAmb	IAmb	10 23 31.1	
	comp=Z,2.3nm,0.8s						
FDMO	**Fiordimonte**	**54.25**	**21**	P	**P**	**10 23 21.1**	**+0.6**
FDMO				IAmb	IAmb	10 23 35.7	
	comp=Z,3.6nm,0.9s						
TUE	**Stuetta**	**56.10**	**17**	P	**P**	**10 23 34.4**	**+0.3**
PDG	**Podgorica**	**56.23**	**26**	P	**P**	**10 23 36.8**	**+2.0**
STAL	**STALIGIAL**	**56.94**	**19**	P	**P**	**10 23 40.9**	**+1.1**
STAL				IAmb	IAmb	10 23 49.2	
	comp=Z,3.1nm,0.9s						
DAVA	**Damuels**	**56.99**	**17**	*eP*	**P**	**10 23 43.4**	**+3.1**
	comp=Z,8.1nm,0.9s						
FETA	**Feichten**	**57.00**	**17**	*i* P	**P**	**10 23 42.1**	**+1.7**
	comp=Z,5.8nm,1.1s						
ABTA	**Abfaltersbach**	**57.30**	**19**	*eP*	**P**	**10 23 44.8**	**+2.3**
	comp=Z,8.0nm,1.4s						
SQTA	**Sankt Quirin**	**57.32**	**18**	*eP*	**P**	**10 23 43.9**	**+1.3**
	comp=Z,1.9nm,1.1s						
MOTA	**Mosalm**	**57.40**	**18**	*eP*	**P**	**10 23 44.1**	**+0.9**
	comp=Z,7.5nm,0.9s						
WTTA	**Wattenberg**	**57.49**	**18**	*eP*	**P**	**10 23 45.5**	**+1.6**
	comp=Z,7.8nm,1.2s						
SESA	**Seetaler Alpe,**	**58.30**	**20**	*eP*	**P**	**10 23 52.2**	**+2.6**
	comp=Z,16nm,1.2s						
MOA	**Molln**	**58.84**	**19**	*eP*	**P**	**10 23 55.1**	**+2.0**
	comp=Z,4.2nm,1.1s						
GEC2	**GERESS Array S**	**59.53**	**19**		**P**	**10 23 58.2**	**+0.2**
GERES	**GERESS Array B**	**59.53**	**19**	P	**P**	**10 23 58.0**	**0.0**
	comp=Z,1.8nm,0.8s,baz=211,slow=7.6,SNR=11						
	comp=Z,1.8nm,0.8s						
GERES	**GERESS Array B**	**59.53**	**19**	P	**P**	**10 23 57.0**	**-1.0**
SJG	**San Juan**	**60.01**	**295**	LR	LR	10 44 40.2	
	comp=Z,254nm,19.8s,baz=87,slow=31						
KRUC	**Moravsky**	**60.61**	**20**	*eP*	**P**	**10 24 07.4**	**+2.2**
JAVC	**Velka Javorina**	**60.88**	**21**	*eP*	**P**	**10 24 09.3**	**+2.1**
VRAC	**Vranov**	**60.89**	**20**	*eP*	**P**	**10 24 08.4**	**+1.3**
MORC	**Moravsky Berou**	**61.61**	**20**	*eP*	**P**	**10 24 14.8**	**+2.7**
EKA	**Eskdalemuir Ar**	**62.35**	**5**	P	**P**	**10 24 16.0**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=173,slow=4.0,SNR=4.0						
EKA				LR	LR	10 49 53.8	
	comp=Z,123nm,20.0s,baz=182,slow=35						
	comp=Z,1.4nm,0.7s						
ROSC	**El Rosal**	**64.47**	**279**	P	**P**	**10 24 32.6**	**+0.4**
	comp=Z,6.1nm,0.4s,baz=120,slow=11,SNR=3.6						
	comp=Z,6.1nm,0.4s						
ROSC	**El Rosal**	**64.47**	**279**	P	**P**	**10 24 31.8**	**-0.4**
AY03	**Cochrane**	**65.97**	**221**	P	**P**	**10 24 41.4**	**+0.5**
AKASG	**Malin Array Be**	**66.97**	**26**	P	**P**	**10 24 48.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=228,slow=6.8,SNR=9.7						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**66.97**	**26**	P	**P**	**10 24 46.8**	**-0.4**
AKASG				IAmb	IAmb	10 24 51.0	
	comp=Z,2.3nm,0.9s						
HFS	**Hagfors**	**69.59**	**13**	P	**P**	**10 25 03.3**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=196,slow=7.4,SNR=4.2						
	comp=Z,2.3nm,0.6s						
FINES	**FINESS Array B**	**73.93**	**17**	P	**P**	**10 25 29.1**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=216,slow=7.8,SNR=2.1						
	comp=Z,2.8nm,0.8s						
SPITS	**Spitsbergen Ar**	**86.27**	**5**	LR	LR	11 03 34.5	
	comp=Z,64nm,21.8s,baz=172,slow=35						
KURBB	**Kurchatov Arra**	**94.86**	**40**	P	**P**	**10 27 18.5**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=273,slow=4.9,SNR=4.8						
	comp=Z,0.3nm,0.3s						
TXAR	**Lajitas Array**	**95.84**	**299**	P	**P**	**10 27 22.1**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=119,slow=8.0,SNR=3.8						
	comp=Z,0.3nm,0.8s						
SDCO	**Great Sand Dun**	**97.90**	**307**	P	**P**	**10 27 30.7**	**-0.5**

IDC ***01*** *10:15:21.5*±*5.2, 6.°42S*×*11.°02W, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=171.4km s-min=48.2km az=146.0*
NEIC ***01*** *10:15:23.8*±*0.6, 6.°3S*±*0.°1*×*11.°0W*±*0.°1, h10km*±*2km, mb4.3/15, Error ellipse: s-maj=28.1km s-min=11.1km az=240.0*

ISC 01 10:15:23.6±0.9,**6.°3S**±0.°1×**10.°9W**±0.°2,**h10**km,**n34, σ0**§**51**/29,**mb4.3**/15,**1C, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.87**	**247**	T	T	10 19 50.6	
	baz=66,slow=74,SNR=9.7						
H10N1	**ASCENSION HYDR**	**3.87**	**247**	T	T	10 19 52.0	
	baz=66,slow=74,SNR=13						
H10N3	**ASCENSION HYDR**	**3.89**	**247**	T	T	10 19 53.1	
	baz=66,slow=74,SNR=9.9						
H10S2	**ASCENSION HYDR**	**4.55**	**235**	T	T	10 20 44.7	
	baz=53,slow=74,SNR=2.7						
H10S3	**ASCENSION HYDR**	**4.56**	**235**	T	T	10 20 44.6	
	baz=167,slow=74,SNR=4.0						
TORD	**Torodi Ar. Bea**	**23.03**	**33**	P	**P**	**10 20 30.0**	**+0.8**
	7.4nm,1.0s,baz=218,slow=10.0,SNR=6.5						
	7.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**23.03**	**33**	P	**P**	**10 20 28.6**	**-0.5**
TORD				IAmb	IAmb	10 20 32.4	
	comp=Z,6.6nm,1.1s						
TSUM	**Tsumeb**	**30.52**	**117**	P	**P**	**10 21 37.6**	**0.0**
SUR	**Sutherland**	**39.30**	**135**	P	**P**	**10 22 52.9**	**-0.3**
SUR				IAmb	IAmb	10 22 57.2	
	comp=Z,7.6nm,1.1s						
LSZ	**Lusaka**	**39.35**	**106**	P	**P**	**10 22 53.4**	**-0.3**
MD01	**Midelt array s**	**39.40**	**8**	P	**P**	**10 22 54.2**	**+0.3**
KEST	**Kesra**	**45.95**	**23**	P	**P**	**10 23 46.9**	**-0.1**
ESDC	**Sonseca Array**	**46.21**	**7**	P	**P**	**10 23 49.4**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=205,slow=9.8,SNR=5.0						
	comp=Z,0.7nm,0.9s						
ESDC	**Sonseca Array**	**46.21**	**7**	P	**P**	**10 23 48.5**	**-0.4**
LODK	**Lodwar**	**47.19**	**79**	P	**P**	**10 23 56.9**	**-0.2**
LODK				IAmb	IAmb	10 23 57.6	
	comp=Z,3.4nm,1.1s						
CESX	**Cesi**	**53.17**	**22**	P	**P**	**10 24 41.8**	**-0.1**
CESX				IAmb	IAmb	10 24 45.3	
	comp=Z,3.7nm,0.6s						
GEC2	**GERESS Array S**	**59.00**	**19**	P	**P**	**10 25 23.6**	**0.0**
GEC2				IAmb	IAmb	10 25 26.4	
	comp=Z,5.8nm,1.1s						
GERES	**GERESS Array B**	**59.00**	**19**	P	**P**	**10 25 24.3**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=202,slow=6.9,SNR=7.3						
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**59.00**	**19**	P	**P**	**10 25 24.1**	**+0.4**
KHC	**Kasperske Hory**	**59.21**	**18**	P	**P**	**10 25 24.9**	**-0.1**
KHC				IAmb	IAmb	10 25 36.0	
	comp=Z,2.1nm,0.9s						
PSZ	**Piszkesteto**	**60.43**	**23**	P	**P**	**10 25 34.0**	**+0.5**
BURAR	**Bucovina Array**	**62.43**	**27**	P	**P**	**10 25 47.8**	**+0.7**
RAYN	**Ar Rayn**	**62.51**	**60**	P	**P**	**10 25 48.0**	**0.0**
RAYN				IAmb	IAmb	10 25 53.0	
	comp=Z,1.7nm,0.9s						
SNOP	**Sinop**	**63.85**	**37**	P	**P**	**10 25 56.4**	**-0.1**
VNA1	**Neumayer--Stat**	**64.28**	**179**	P	**P**	**10 25 59.8**	**+1.1**
	comp=Z,4.1nm,1.0s						
VNA2	**Neumayer--Watz**	**64.57**	**179**	⇑P	**P**	**10 26 01.3**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=352,slow=8.4						
SNAA	**Sanae**	**65.48**	**177**	P	**P**	**10 26 06.9**	**+0.2**
SNAA				IAmb	IAmb	10 26 18.1	
	comp=Z,1.8nm,0.9s						
AKASG	**Malin Array Be**	**66.48**	**27**	P	**P**	**10 26 14.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=231,slow=7.0,SNR=4.0						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**66.48**	**27**	P	**P**	**10 26 12.7**	**-0.7**
AKASG				IAmb	IAmb	10 26 20.9	
	comp=Z,2.1nm,0.9s						
HFS	**Hagfors**	**69.04**	**13**	P	**P**	**10 26 28.8**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=193,slow=5.0,SNR=2.5						
	comp=Z,3.8nm,0.8s						
FINES	**FINESS Array B**	**73.40**	**18**	P	**P**	**10 26 56.2**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=142,slow=9.5,SNR=3.9						
	comp=Z,2.3nm,0.7s						
FINES	**FINESS Array B**	**73.40**	**18**	P	**P**	**10 26 55.3**	**-0.3**
FIA1	**FINESS Array S**	**73.40**	**18**	P	**P**	**10 26 55.6**	**0.0**
TXAR	**Lajitas Array**	**95.47**	**299**	P	**P**	**10 28 48.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=120,slow=6.2,SNR=3.8						
	comp=Z,0.3nm,0.7s						

SOME ***01*** *10:33:06.6, 44.°85N*×*81.°70E, h5km*
NNC ***01*** *10:33:07.7*±*1.6, 44.°71N*×*81.°92E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=19.1km s-min=7.5km az=124.0, Suspected Mining explosion.*

ISC 01 10:33:05.7±1.5,**44.°74N**±0.°06×**81.°97E**±0.°09,**h0**km,**n16, σ1**§**06**/27,**3C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.61**	**256**	P	**Pg**	**10 33 37.5**	**+0.9**
	4.6nm,0.2s						
DJR				S	**Sg**	**10 33 60.0**	**+2.5**
	6.3nm,0.3s						
DJR	**Jarkent**	**1.61**	**256**	*eP*	**Pn**	**10 33 34.3**	**-1.2**
	4.6nm,0.2s						
DJR				*eS*	**Sn**	**10 33 54.2**	**-2.9**
	6.4nm,0.3s						
KTMS	**Ketmen**	**1.75**	**223**	P	**Pb**	**10 33 38.6**	**-0.1**
	2.6nm,0.1s						
KTMS				S	**Sg**	**10 34 01.7**	**-0.1**
	10.0nm,0.2s						
KTMS	**Ketmen**	**1.75**	**223**	*eP*	**Pb**	**10 33 38.6**	**-0.1**
	2.6nm,0.1s						
KTMS				*eS*	**Sg**	**10 34 01.7**	**-0.1**
	10.0nm,0.2s						
KNOS	**Konyrlen**	**2.03**	**260**	Pg	**Pb**	**10 33 43.6**	**-0.1**
	8.3nm,0.3s						
KNOS				Lg	Lg	10 34 10.1	
	20nm,0.3s						
MK31	**Makanchi Array**	**2.06**	**6**	Pn	**Pb**	**10 33 44.2**	**+0.1**
	2.5nm,0.3s,baz=191,slow=12,SNR=72						
MK31				⇑Sn	**Sg**	**10 34 12.2**	**+0.2**
	4.0nm,0.5s,baz=192,slow=27,SNR=20						
PDGK	**Podgornoye**	**2.28**	**233**	⇑Pn	**Pn**	**10 33 46.0**	**+1.2**
	4.1nm,0.5s						
PDGK				⇑Sn	**Sb**	**10 34 16.8**	**+0.2**
	14nm,0.9s						
**S

MDOK					*e*S		Sg	10 38 27.6	+0.7	
	420nm,0.3s									
SHLS	**Shalkode**	**0.93**	**89**	*e*P			Pn	10 38 21.9	+2.6	
	74nm,0.1s									
SHLS					*e*S		Sn	10 38 38.0	+5.2	
	103nm,0.2s									
PDGK	**Podgornoye**	**0.96**	**79**	⇑P			Pg	10 38 17.3	-0.9	
	18nm,0.3s									
PDGK					⇑S		Sg	10 38 29.5	-1.2	
	30nm,0.3s									
ARXS	**Arharly**	**1.09**	**346**	*e*P			Pg	10 38 20.1	-0.6	
	17nm,0.2s									
ARXS					*e*S		Sg	10 38 34.9	-0.1	
	63nm,0.1s									
KTBS	**Karatobe**	**1.24**	**297**	*e*P			Pn	10 38 22.8	-0.7	
	12nm,0.1s									
KTBS					*e*S		Sb	10 38 39.3	-0.3	
	42nm,0.2s									
KDJ	**Kajisay**	**1.27**	**217**	⇑*i*P			Pn	10 38 23.2	-0.9	
KDJ				⇑*i*S			Sb	10 38 39.5	-1.2	
TARG	**Taragay, Kyrgy**	**1.45**	**192**	⇑*i*P			Pn	10 38 26.9	+0.1	
TARG				⇑*i*S			Sn	10 38 45.3	-1.0	
KUU	**Kurty**	**1.54**	**299**	*e*P			Pb	10 38 28.9	+0.3	
	4.6nm,0.1s									
KUU					*e*S		Sg	10 38 49.8	+0.5	
	32nm,0.1s									
BOOM	**Boomskoye usch**	**1.79**	**249**	⇑*i*P			Pn	10 38 31.7	+0.5	
BOOM				⇑*i*S			Sn	10 38 54.1	-0.1	
TKM2	**Tokmak 2**	**1.92**	**264**	P			Pb	10 38 36.0	+0.7	
	SNR=25									
TKM2	**Tokmak 2**	**1.92**	**264**	⇑*i*P			Pn	10 38 33.7	+0.7	
TKM2				⇑*i*S			Sn	10 38 57.5	0.0	
KAPS	**Kapalarasan**	**2.29**	**21**	*e*P			Pb	10 38 42.1	+0.7	
	24nm,0.1s									
KAPS					*e*S		Sg	10 39 12.5	-0.8	
	409nm,0.1s									
NRN	**Naryn**	**2.37**	**224**	⇑*i*P			Pn	10 38 40.2	+0.9	
NRN				⇑*i*S			Sn	10 39 08.8	0.0	
KBK	**Karagaybulak**	**2.44**	**259**	P			Pb	10 38 45.2	+1.2	
	SNR=21									
KBK	**Karagaybulak**	**2.44**	**259**	⇓*i*P			Pn	10 38 40.9	+0.8	
KBK				⇓*i*S			Sn	10 39 09.7	-0.6	
CHMS	**Chumysh**	**2.53**	**268**	P			Pb	10 38 45.9	+0.4	
	SNR=6.7									
CHMS	**Chumysh**	**2.53**	**268**	⇑*i*P			Pn	10 38 42.1	+0.9	
CHMS				⇑*i*S			Sn	10 39 11.9	-0.4	
USP	**Ospenovka**	**2.71**	**274**	P			Pb	10 38 49.0	+0.5	
	SNR=6.3									
USP	**Ospenovka**	**2.71**	**274**	⇓*i*P			Pn	10 38 44.6	+0.9	
USP				⇓*i*S			Sn	10 39 16.1	-0.6	
AAK	**Ala-Archa**	**2.77**	**261**	P			Pb	10 38 48.3	-1.3	
	SNR=7.5									
AAK	**Ala-Archa**	**2.77**	**261**	⇑Pg			Pb	10 38 50.5	+0.8	
	0.9nm,0.4s									
AAK					⇓Lg		Lg	10 39 27.7		
	3.9nm,0.6s									
AAK	**Ala-Archa**	**2.77**	**261**	⇑*i*P			Pn	10 38 45.5	+0.8	
AAK				⇑*i*S			Sn	10 39 17.7	-0.7	
UCH	**Uchtor**	**2.87**	**252**	P			Pb	10 38 51.8	+0.3	
	SNR=26									
UCH	**Uchtor**	**2.87**	**252**	⇓*i*P			Pn	10 38 47.1	+0.8	
UCH				⇓*i*S			Sn	10 39 20.6	-0.7	
MK31	**Makanchi Array**	**4.65**	**37**	⇓Pn			Pn	10 39 12.6	+2.2	
	0.1nm,0.1s,baz=210,slow=11,SNR=54									
MK31					⇑Sn		Sn	10 39 58.2	-6.4	
	0.3nm,0.3s									
MK31					⇓Lg		Lg	10 40 24.8		
	0.4nm,0.2s,baz=217,slow=28,SNR=6.4									
KURBB	**Kurchatov Arra**	**7.47**	**2**	⇓Lg			Lg	10 41 54.6		
	8.3nm,0.6s									
KURK	**Kurchatov**	**7.57**	**2**	⇑Lg			Lg	10 41 55.9		
	1.9nm,0.6s									

*IDC **01** 10:58:28.6±2.4, 16°.79S×174°.14W, h169km±23km, mb3.1/5, mbtmp3.6/7, Error ellipse: s-maj=50.1km s-min=15.6km az=152.0*
ISC 01 10:58:27.1±1.0, 17°.0S±0°.2×174°.0W±0°.2, h150km, n7, σ1§26/8, mb3.3/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.79**	**35**	P	Pn	**10 59 26.3**	**+1.5**
	20nm,0.4s,baz=347,slow=4.8,SNR=9.7						
AFI				S	Sn	**11 00 08.9**	**-0.6**
	172nm,0.4s,baz=76,slow=22,SNR=23						
MSVF	**Nonsavu**	**7.60**	**264**	P	Pn	**11 00 16.1**	**+0.8**
	3.0nm,0.6s,baz=90,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**48.91**	**258**	P	P	**11 06 57.2**	**-1.1**
	0.4nm,0.6s,baz=97,slow=7.0,SNR=10						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**49.05**	**253**	P	P	**11 06 58.5**	**-0.8**
	1.7nm,0.6s,baz=88,slow=8.7,SNR=42						
	1.7nm,0.6s						
QSPA	**South Pole Qui**	**73.01**	**180**	P	P	**11 09 41.4**	**+1.0**
	0.5nm,0.7s,baz=346,slow=3.9,SNR=1.4						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**82.02**	**56**	P	P	**11 10 29.8**	**-1.1**
	0.3nm,0.9s,baz=217,slow=5.2,SNR=2.3						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**83.88**	**42**	P	P	**11 10 39.8**	**-0.6**
	0.1nm,0.4s,baz=238,slow=4.9,SNR=2.0						
	0.1nm,0.4s						

*NNC **01** 11:04:03.0±0.6, 42°.90N×78°.08E, h4km±3km, mb3.0, mpv2.9, Error ellipse: s-maj=6.4km s-min=2.3km az=178.0*
*KRNET **01** 11:04:03.5±0.1, 42°.88N×78°.02E, h30km, mb2.8*
*SOME **01** 11:04:04.0, 42°.87N×78°.02E, h10km*
ISC 01 11:04:03.3±1.1, 42°.88N±0°.02×78°.02E±0°.02, h6km±9km, n39, σ1§38/74, 11C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANVS	**Anan'yevo**	**0.28**	**249**	⇑*e*P	Pb	**11 04 10.8**	**0.0**
ANVS				⇑*e*S	Sb	**11 04 15.7**	**-0.1**
SATY	**Saty**	**0.34**	**58**	P	Pg	**11 04 10.1**	**+0.2**
	6.4nm,0.1s						
SATY				S	Sg	**11 04 14.6**	**+0.2**
	430nm,0.1s						
SATY	**Saty**	**0.34**	**58**	*e*P	Pg	**11 04 10.1**	**+0.2**
	6.4nm,0.1s						
SATY				*e*S	Sg	**11 04 14.6**	**+0.2**
	430nm,0.1s						
PRZ	**Przheval'sk**	**0.49**	**145**	⇑*e*P	Pb	**11 04 13.8**	**-0.7**
PRZ				⇑*e*S	Sb	**11 04 20.9**	**-1.1**
KURS	**Kuram**	**0.61**	**10**	P	Pg	**11 04 15.5**	**+0.3**
	9.0nm,0.1s						
KURS				S	Sg	**11 04 23.6**	**+0.3**
	9.7nm,0.3s						
KURS	**Kuram**	**0.61**	**10**	*e*P	Pg	**11 04 15.5**	**+0.3**
	9.0nm,0.1s						
KURS				*e*S	Sg	**11 04 23.6**	**+0.3**
	9.7nm,0.3s						
KOTS	**Kotyrbulak**	**0.75**	**298**	P	Pg	**11 04 18.1**	**+0.3**
	6.0nm,0.2s						
KOTS				S	Sg	**11 04 28.1**	**+0.7**
	16nm,0.4s						
KOTS	**Kotyrbulak**	**0.75**	**298**	*e*P	Pg	**11 04 18.1**	**+0.3**
KOTS				*e*S	Sg	**11 04 28.2**	**+0.7**
KOTS	**Kotyrbulak**	**0.75**	**298**	*e*P	Pg	**11 04 18.1**	**+0.3**
	6.0nm,0.2s						
KOTS				*e*S	Sg	**11 04 28.1**	**+0.7**
	16nm,0.4s						
KPKS	**Kokpek**	**0.76**	**40**	P	Pg	**11 04 17.7**	**-0.3**
	0.3nm,0.1s						
KPKS				S	Sg	**11 04 27.5**	**-0.3**
	28nm,0.2s						
KPKS	**Kokpek**	**0.76**	**40**	*e*P	Pg	**11 04 17.7**	**-0.3**
	0.3nm,0.1s						
KPKS				*e*S	Sg	**11 04 27.5**	**-0.3**
	28nm,0.2s						
MDOK	**Medeo**	**0.76**	**292**	Pg	Pb	**11 04 18.7**	**-0.5**
	2.3nm,0.2s						
MDOK				Lg	Lg	11 04 29.3	
	13nm,0.4s						
MDOK	**Medeo**	**0.76**	**292**	*e*P	Pb	**11 04 18.7**	**-0.5**
	2.3nm,0.2s						
MDOK				*e*S	Sb	**11 04 29.3**	**-0.6**
	13nm,0.4s						
UZB	**Uzynbulak**	**0.78**	**70**	P	Pg	**11 04 17.6**	**-0.8**
	13nm,0.1s						
UZB				S	Sg	**11 04 27.2**	**-1.4**
	58nm,0.1s						
KDJ	**Kajisay**	**0.97**	**220**	⇑*e*P	Pg	**11 04 21.7**	**-0.3**
KDJ				⇑*e*S	Sg	**11 04 34.5**	**-0.2**
IZV	**Izvestkoviy**	**1.04**	**279**	P	Pb	**11 04 24.0**	**+0.2**
	2.6nm,0.1s						
IZV				S	Sn	**11 04 38.5**	**-1.2**
	19nm,0.1s						
IZV	**Izvestkoviy**	**1.04**	**279**	*e*P	Pb	**11 04 24.0**	**+0.2**
IZV				*e*S	Sn	**11 04 38.5**	**-1.2**
SHLS	**Shalkode**	**1.09**	**75**	P	Pn	**11 04 28.9**	**+3.5**
	4.1nm,0.2s						
SHLS				S	Sn	**11 04 46.8**	**+5.9**
	17nm,0.2s						
SHLS	**Shalkode**	**1.09**	**75**	*e*P	Pn	**11 04 28.9**	**+3.5**
	4.1nm,0.2s						
SHLS				*e*S	Sn	**11 04 46.8**	**+5.9**
	17nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.16**	**188**	⇓*e*P	Pg	**11 04 25.3**	**-0.4**
TARG				⇓*e*S	Sg	**11 04 40.6**	**-0.2**
PDGK	**Podgornoye**	**1.17**	**67**	⇑P	Pb	**11 04 24.0**	**-2.1**
	1.8nm,0.3s						
PDGK				⇑S	Sb	**11 04 38.1**	**-3.3**
	9.3nm,0.5s						
KTBS	**Karatobe**	**1.28**	**311**	P	Pn	**11 04 27.2**	**-0.6**
	2.9nm,0.1s						
KTBS				S	Sb	**11 04 43.7**	**-0.9**
	24nm,0.3s						
KTBS	**Karatobe**	**1.28**	**311**	*e*P	Pn	**11 04 27.2**	**-0.6**
	2.9nm,0.1s						
KTBS				*e*S	Sb	**11 04 43.7**	**-0.9**
	24nm,0.3s						
ARXS	**Arharly**	**1.34**	**354**	P	Pn	**11 04 28.5**	**-0.2**
	9.4nm,0.2s						
ARXS				S	Sn	**11 04 46.1**	**-0.7**
	44nm,0.3s						
ARXS	**Arharly**	**1.34**	**354**	*e*P	Pn	**11 04 28.5**	**-0.2**
	9.4nm,0.2s						
ARXS				*e*S	Sn	**11 04 46.1**	**-0.7**
	44nm,0.3s						
KST	**Kastek**	**1.52**	**277**	P	Pg	**11 04 32.6**	**+0.2**
	1.1nm,0.2s						
KST				S	Sg	**11 04 53.2**	**+1.1**
	8.3nm,0.2s						
KST	**Kastek**	**1.52**	**277**	*e*P	Pg	**11 04 32.6**	**+0.2**
	1.1nm,0.2s						
KST				*e*S	Sg	**11 04 53.2**	**+1.1**
	8.3nm,0.2s						
BOOM	**Boomskoye usch**	**1.58**	**256**	⇓*e*P	Pn	**11 04 32.0**	**-0.1**
BOOM				⇓*e*S	Sn	**11 04 52.3**	**-0.6**
KUU	**Kurty**	**1.59**	**310**	P	Pb	**11 04 32.4**	**-0.7**
KUU				S	Sb	**11 04 52.7**	**-0.7**
KUU	**Kurty**	**1.59**	**310**	*e*P	Pb	**11 04 32.9**	**-0.2**
	5.8nm,0.1s						
KUU				*e*S	Sb	**11 04 53.5**	**+0.1**
	8.4nm,0.1s						
KNOS	**Konyrlen**	**1.70**	**29**	P	Pb	**11 04 34.2**	**-0.9**
	5.7nm,0.1s						
KNOS				S	Sn	**11 04 55.7**	**-0.2**
	7.3nm,0.2s						
TKM2	**Tokmak 2**	**1.78**	**272**	⇑*e*P	Pn	**11 04 34.8**	**0.0**
TKM2				⇑*i*S	Sn	**11 04 57.3**	**-0.6**
KTMS	**Ketmen**	**1.80**	**71**	P	Pn	**11 04 34.8**	**-0.2**
	1.0nm,0.2s						
KTMS				S	Sn	**11 04 57.0**	**-1.3**
	6.7nm,0.4s						
KTMS	**Ketmen**	**1.80**	**71**	*e*P	Pn	**11 04 35.6**	**+0.5**
	1.4nm,0.1s						
KTMS				*e*S	Sn	**11 04 58.1**	**-0.2**
	6.7nm,0.4s						
KRBS	**Karabastau**	**1.89**	**296**	P	Pb	**11 04 38.3**	**-0.1**
	2.5nm,0.2s						
KRBS				S	Sb	**11 05 03.1**	**+0.8**
	2.4nm,0.5s						
KRBS	**Karabastau**	**1.89**	**296**	*e*P	Pb	**11 04 38.3**	**-0.1**
	2.5nm,0.2s						
KRBS				*e*S	Sb	**11 05 03.1**	**+0.8**
	2.4nm,0.5s						
NRN	**Naryn**	**2.08**	**227**	⇓*e*P	Pn	**11 04 39.3**	**+0.2**
NRN				⇓*e*S	Sn	**11 05 04.9**	**-0.7**
SGDS	**Sogindy**	**2.54**	**284**	Pg	Pb	**11 04 50.3**	**+0.9**
	0.3nm,0.1s						
SGDS				Lg	Lg	11 05 23.5	
	2.6nm,0.2s						
AAK	**Ala-Archa**	**2.60**	**266**	⇑Lg	Lg	11 05 25.9	
	1.1nm,0.5s						

*ISU **01** 11:05:31, 41°.81N×70°.44E, h15km*
*KRNET **01** 11:05:32.8±0.1, 41°.58N×70°.20E, h14km, mb2.7*
ISC 01 11:05:33.2±1.1, 41°.80N±0°.04×70°.22E±0°.04, h7km±9km, n8, σ1§92/16, 4C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSK	**Pskem**	**0.17**	**41**	P	Pg	**11 05 35.3**	**-1.5**
PSK				S	Sg	**11 05 37.3**	**-1.9**
CHMG	**Chimgan**	**0.30**	**213**	P	Pg	**11 05 39.9**	**+0.8**
CHMG				S	Sb	**11 05 45.3**	**-0.8**
TVKS	**Tavaksay**	**0.48**	**242**	P	Pg	**11 05 43.3**	**+0.7**
TVKS				S	Sb	**11 05 52.4**	**+1.0**
TRKS	**Terek-Say**	**0.74**	**111**	⇑*i*P	Pg	**11 05 47.1**	**-0.3**
TRKS				⇑*i*S	Sg	**11 05 57.6**	**+0.5**
ARK	**Arkit**	**1.30**	**90**	⇓*i*P	Pn	**11 05 58.5**	**+0.5**
ARK				⇓*i*S	Sn	**11 06 16.9**	**+1.2**
KK31	**Karatay Array**	**1.32**	**9**	P	Pn	**11 05 57.7**	**-0.4**
	0.5nm,0.2s,baz=188,slow=17,SNR=8.9						
KK31				⇓S	Sn	**11 06 14.6**	**-1.4**
	0.7nm,0.3s,baz=190,slow=32,SNR=5.7						
BTK	**Batken**	**1.80**	**165**	⇑*i*P	Pn	**11 06 02.8**	**-2.0**
BTK				⇑*i*S	Sn	**11 06 24.3**	**-3.6**
MNAS	**Manas**	**1.83**	**67**	⇓*i*P	Pb	**11 06 08.7**	**+1.6**
MNAS				⇓*i*S	Sg	**11 06 35.6**	**+3.6**

*IDC **01** 11:46:14.1±1.5, 10°.38S×118°.59E, h0km, mb3.9/3, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=68.3km s-min=26.8km az=50.0*
ISC 01 11:46:19.5±1.3, 10°.3S±0°.3×118°.9E±0°.3, h35km, n6, σ0§88/8, mb4.0/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.17**	**141**	Pn	Pn	**11 48 42.8**	**-0.3**
	0.2nm,0.3s,baz=321,slow=13,SNR=17						
FITZ				Sn	Sn	**11 50 36.0**	**+0.1**
	0.1nm,0.3s,baz=243,slow=7.9,SNR=2.5						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**17.72**	**125**	P	Pn	**11 50 23.6**	**-0.1**
	0.1nm,0.3s,baz=298,slow=14,SNR=6.3						
WRA				S	Sn	**11 53 39.2**	**-1.1**
	0.3nm,0.7s,baz=300,slow=22,SNR=2.0						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**19.56**	**135**	P	Pn	**11 50 46.1**	**+0.1**
	baz=313,slow=9.5,SNR=4.5						
	0.4nm,0.7s						
STKA	**Stephens Creek**	**30.06**	**139**	P	P	**11 52 26.9**	**+1.4**
	2.5nm,0.8s,baz=302,slow=11,SNR=1.2						
	2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**70.04**	**334**	P	P	**11 57 27.6**	**-0.1**
	0.2nm,0.5s,baz=140,slow=7.5,SNR=1.6						
	0.2nm,0.5s						
QSPA	**South Pole Qui**	**79.76**	**180**	P	P	**11 58 23.1**	**-0.8**
	2.0nm,0.7s,baz=303,slow=6.7,SNR=18						
	2.0nm,0.7s						

IDC 01 12:07:58.5±2.1, 7°.46S×127°.40E, h0km, mb3.4/1, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=42.3km s-min=28.7km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.59**	**233**	Pn	Pn	12 09 09.9	+0.7
	2.5nm,0.3s,baz=228,slow=23,SNR=1.5						
BATI				Sn	Sn	12 10 03.9	+0.6
	2.6nm,0.3s,baz=95,slow=23,SNR=1.3						
	12nm,0.4s						
FITZ	**Fitzroy Crossi**	**10.71**	**189**	Pn	Pn	12 10 32.5	-0.8
	0.3nm,0.3s,baz=14,slow=12,SNR=9.8						
FITZ				Sn	Sn	12 12 27.6	-6.5
	0.2nm,0.3s,baz=348,slow=20,SNR=2.5						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**14.12**	**152**	Pn	Pn	12 11 19.4	-0.5
	0.2nm,0.3s,baz=329,slow=14,SNR=8.7						
WRA				Sn	Sn	12 13 50.5	-7.0
	0.1nm,0.3s,baz=322,slow=26,SNR=6.1						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**17.28**	**160**	P	P	12 12 02.4	-0.6
	0.1nm,0.3s,baz=339,slow=14,SNR=7.6						
ASAR				S	Sn	12 15 03.1	-11
	0.4nm,0.7s,baz=334,slow=21,SNR=2.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**67.22**	**328**	P	P	12 18 54.6	-0.1
	0.2nm,0.5s,baz=141,slow=7.1,SNR=3.2						
	0.2nm,0.5s						

*SJA **01** 12:09:37.0±1.4, 26°.87S×72°.14W, h10km, ML3.7, MW3.6*
*IDC **01** 12:09:41.1±0.9, 26°.99S×72°.06W, h0km, mb4.0/4, mbtmp4.0/5, ML4.2/1, MS3.1/1, Error ellipse: s-maj=45.9km s-min=24.3km az=91.0*
*GUC **01** 12:09:44.3±0.6, 27°.12S×72°.03W, h28km±5km, ML3.4*
ISC 01 12:09:41.8±0.8, 26°.96S±0°.03×71°.87W±0°.06, h10km, n37, σ1§50/54, mb4.0/3, 3C-4D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC01	**Pan de Azucar**	**1.40**	**55**	*e*P	Pg	**12 10 08.7**	**+0.1**
AC01				*e*S	Sg	**12 10 26.9**	**+0.2**
AC01	**Pan de Azucar**	**1.40**	**55**	⇑*i*P	Pg	**12 10 08.5**	**0.0**
AC01				*i* S	Sg	**12 10 26.8**	**0.0**
AC01				IAML		12 10 28.6	
	comp=E,400nm,0.3s						
AC04	**Llanos de Chal**	**1.43**	**151**	*e*P	Pn	**12 10 07.8**	**+0.1**
AC04				*e*S	Sb	**12 10 25.9**	**-0.7**
AC04	**Llanos de Chal**	**1.43**	**151**	⇓*i*P	Pn	**12 10 07.8**	**+0.1**
AC04				*i* S	Sb	**12 10 25.5**	**-1.2**
AC04				IAML		12 10 27.3	
	comp=N,680nm,0.2s						
GO03	**Copiapo**	**1.58**	**114**	*e*P	Pg	**12 10 11.9**	**-0.2**
GO03				*e*S	Sg	**12 10 35.5**	**+2.7**
GO03				IAML		12 10 36.2	
	comp=Z,965nm,0.5s						
GO03	**Copiapo**	**1.58**	**114**	⇑*i*P	Pg	**12 10 12.6**	**+0.4**
GO03				*i* S	Sg	**12 10 34.1**	**+1.4**
GO03				IAML		12 10 37.1	
	comp=E,750nm,0.4s						
LCO	**Las Campanas**	**2.29**	**153**	*e*P	Pn	**12 10 21.1**	**+1.3**
LCO				*e*S	Sn	**12 10 48.7**	**+0.5**
LCO				IAML		12 10 49.8	
	comp=Z,962nm,0.6s						
LCO	**Las Campanas**	**2.29**	**153**	⇓*i*P	Pn	**12 10 20.9**	**+1.1**
LCO				*i* S	Sn	**12 10 48.4**	**+0.1**
AC05	**El Transito**	**2.34**	**143**	*e*P	Pb	**12 10 22.7**	**-1.5**
AC05				*e*S	Sb	**12 10 51.8**	**-1.4**
AC05				IAML		12 10 52.6	
	comp=Z,271nm,0.7s						
AC05	**El Transito**	**2.34**	**143**	⇓*i*P	Pb	**12 10 22.8**	**-1.3**
AC05				*i* S	Sn	**12 10 50.0**	**+0.6**
AC05				IAML		12 10 52.8	
	comp=E,368nm,0.8s						
AC02	**Maricunga**	**2.45**	**88**	*e*P	Pb	**12 10 26.1**	**-0.1**
AC02				*e*S	Sg	**12 10 58.5**	**-2.0**
AC02				IAML		12 11 01.0	
	comp=Z,320nm,0.3s						
AC02	**Maricunga**	**2.45**	**88**	⇑*i*P	Pb	**12 10 26.8**	**+0.6**
AC02				*i* S	Sg	**12 10 58.0**	**-2.5**
AC02				IAML		12 11 01.3	
	comp=N,507nm,0.3s						
PB14	**IPOC Station P**	**2.67**	**30**	*e*P	Pn	**12 10 24.3**	**-0.9**
PB14				*e*S	Sn	**12 10 55.6**	**-2.3**
PB14				IAML		12 10 56.7	
	comp=Z,164nm,0.4s						
PB14	**IPOC Station P**	**2.67**	**30**	IAML		12 10 57.4	
	comp=E,137nm,0.2s						
GO04	**Tololo Observa**	**3.33**	**164**	*e*P	Pn	**12 10 34.6**	**+0.4**
GO04				*e*S	Sn	**12 11 14.0**	**0.0**
GO04				IAML		12 11 19.7	
	comp=Z,168nm,0.7s						
GO04	**Tololo Observa**	**3.33**	**164**	⇓*i*P	Pn	**12 10 34.5**	**+0.3**
GO04				*i* S	Sn	**12 11 12.4**	**-1.6**
CO01	**Juntas del Tor**	**3.39**	**153**	*e*P	Pn	**12 10 37.5**	**+2.5**
CO01				*e*S	Sn	**12 11 17.3**	**+2.0**
CO01				IAML		12 11 17.8	
	comp=Z,132nm,0.8s						
CO01	**Juntas del Tor**	**3.39**	**153**	*e*P	Pn	**12 10 37.4**	**+2.5**
CO01				*i* S	Sn	**12 11 16.8**	**+1.5**
CO01				IAML		12 11 19.7	
	comp=N,184nm,0.7s						
PB10	**IPOC Station P**	**3.63**	**19**	*e*P	Pn	**12 10 36.8**	**-1.3**
PB10				*e*S	Sn	**12 11 19.0**	**-2.0**
PB10				IAML		12 11 19.3	
	comp=Z,104nm,0.3s						
CO03	**El Pedregal**	**4.00**	**165**	*e*P	Pn	**12 10 43.5**	**+0.3**
CO03				*e*S	Sn	**12 11 28.2**	**-2.0**
CO03				IAML		12 11 39.5	
	comp=Z,48nm,0.5s						
CO03	**El Pedregal**	**4.00**	**165**	*e*P	Pn	**12 10 43.4**	**+0.2**
CO03				*i* S	Sn	**12 11 27.7**	**-2.5**
ACDV	**Cuesta del Vie**	**4.01**	**144**	*e*P	Pb	**12 10 48.9**	**-3.7**
ACDV				*e*S	Sb	**12 11 39.7**	**-1.5**
ACDV				IAML		12 11 49.9	
	comp=Z,42nm,0.6s						
CO02	**Combarbal**	**4.29**	**170**	*e*P	Pn	**12 10 47.1**	**-0.2**
CO02				*e*S	Sn	**12 11 35.3**	**-2.2**
CO02				IAML		12 12 00.7	
	comp=Z,64nm,0.7s						
H03N1	**Juan Fernandez**	**8.88**	**222**	T	T	12 20 42.0	
	baz=51						
H03N2	**Juan Fernandez**	**8.89**	**222**	T	T	12 20 45.4	
	baz=51						
H03N3	**Juan Fernandez**	**8.89**	**222**	T	T	12 20 40.6	
	baz=51						
LPAZ	**La Paz**	**11.17**	**19**	Pn	Pn	**12 12 23.3**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=172,slow=6.3,SNR=11						
	comp=Z,1.6nm,0.4s						
CPUP	**Villa Florida**	**13.02**	**91**	LR	LR	12 18 19.3	
	comp=Z,95nm,20.9s,baz=212,slow=39						
SIV	**San Ignacio**	**14.82**	**45**	Pn	Pn	**12 13 08.7**	**-2.9**
	baz=214,slow=11,SNR=5.6						
SNAA	**Sanae**	**58.07**	**160**	P	P	**12 19 35.6**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=257,slow=6.1,SNR=4.6						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**63.25**	**180**	P	P	**12 20 11.7**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=156,slow=1.5,SNR=10						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**63.73**	**329**	P	P	**12 20 14.6**	**+0.8**
	comp=Z,0.3nm,0.7s,baz

KBTR	**Krutoberegovo**	**7.16**	**18**	*eP*		**Pn**	12 30 45.9	+4.2			

*RSNC **01** 12:57:55.2±0.0, 7.1°N×7.3°W, h148km±2km, M2.4, ML2.1*
*FUNV **01** 12:57:56.9, 7.15°N×73.19°W, h17km, MW2.6, Presumed earthquake*

ISC 01 12:57:52.2±1.5, 6.88°N±0.04×73.08°W±0.05, h163km±9km, n19, σ1.79/37, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.30**	**199**	**P**	**Pn**	**12 58 15.1**	**+0.4**
BARC				S	**Sn**	**12 58 30.5**	**-1.3**
PAMC	**Pamplona, Colo**	**0.59**	**40**	**P**	**Pn**	**12 58 18.1**	**+2.0**
PAMC				S	**Sn**	**12 58 35.1**	**+0.7**
BRJC	**Barrancabermej**	**0.67**	**278**	**P**	**Pn**	**12 58 16.8**	**+0.9**
BRJC				S	**Sn**	**12 58 33.8**	**-0.2**
RUSC	**La Rusia**	**0.98**	**180**	**P**	**Pn**	**12 58 19.2**	**+0.5**
RUSC				S	**Sn**	**12 58 37.7**	**-1.3**
RUSC	**La Rusia**	**0.98**	**180**	*eP*	**Pn**	**12 58 19.3**	**+0.6**
RUSC				*eS*	**Sn**	**12 58 36.0**	**-3.0**
OCAC	**Ocana**	**1.37**	**350**	**P**	**Pn**	**12 58 23.5**	**+1.8**
OCAC				S	**Sn**	**12 58 45.4**	**+0.9**
PTBC	**PUERTO BERRIO,**	**1.41**	**256**	**P**	**Pn**	**12 58 21.4**	**-0.5**
PTBC				S	**Sn**	**12 58 43.0**	**-1.7**
SPBC	**San Pablo de B**	**1.57**	**219**	**P**	**Pn**	**12 58 24.3**	**+0.7**
SPBC				S	**Sn**	**12 58 46.4**	**-1.4**
NORC	**Norcasia**	**2.21**	**234**	**P**	**Pn**	**12 58 31.0**	**+0.4**
NORC				S	**Sn**	**12 58 58.8**	**-1.4**
CHIC	**Chingaza**	**2.33**	**196**	**P**	**Pn**	**12 58 33.2**	**+0.8**
CHIC				S	**Sn**	**12 59 02.5**	**-0.9**
HELC	**Santa Helena**	**2.53**	**254**	**P**	**Pn**	**12 58 37.2**	**+2.5**
HELC				S	**Sn**	**12 59 07.7**	**+0.2**
HELC	**Santa Helena**	**2.53**	**254**	*eP*	**Pn**	**12 58 36.6**	**+2.0**
HELC				*eS*	**Sn**	**12 59 05.9**	**-1.6**
GUY2C	**Guyana, Caldas**	**2.80**	**234**	**P**	**Pn**	**12 58 39.8**	**+1.6**
GUY2C				S	**Sn**	**12 59 15.6**	**+1.9**
PTGC	**Puerto Gaitan,**	**2.83**	**160**	**P**	**Pn**	**12 58 38.2**	**+0.2**
PTGC				S	**Sn**	**12 59 12.0**	**-1.5**
SDV	**Santo Domingo**	**3.14**	**50**	*eP*	**Pn**	**12 58 43.6**	**+1.6**
SDV				*eS*	**Sn**	**12 59 18.8**	**-1.9**
PRAC	**Prado**	**3.62**	**210**	**P**	**Pn**	**12 58 49.6**	**+1.5**
PRAC				S	**Sn**	**12 59 31.7**	**+0.2**
SJCC	**San Jacinto, C**	**3.65**	**325**	**P**	**Pn**	**12 58 49.1**	**+0.7**
SJCC				S	**Sn**	**12 59 32.4**	**+0.3**
SJCC	**San Jacinto, C**	**3.65**	**325**	*eP*	**Pn**	**12 58 48.0**	**-0.3**
SJCC				*eS*	**Sn**	**12 59 25.5**	**-6.5**
PLMC	**San Jos del P**	**3.74**	**239**	**P**	**Pn**	**12 58 50.2**	**+0.6**

KRSC 01 13:03:52.2±1.6, 49.47°N×158.81°E, h42km±32km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.12**	**306**	*eP*	Pn	13 04 26.4	+1.3
SKR				*eS*	Sn	13 04 51.4	+1.2
PAU	**Pauzhetka**	**2.38**	**328**	*eS*	Sn	13 05 00.1	+3.6
KDTR	**Khodutka, Kamc**	**2.39**	**349**	*eP*	Pn	13 04 31.8	+2.9
KDTR				*eS*	Sn	13 05 00.5	+3.6
ASAK	**Asacha**	**2.98**	**349**	*eP*	Pn	13 04 40.9	+3.9
RUS	**Russkaya**	**2.98**	**357**	*eP*	Pn	13 04 40.4	+3.6
RUS				*eS*	Sn	13 05 15.1	+3.8
MTVR	**Mutnovka**	**3.05**	**353**	*eP*	Pn	13 04 41.6	+3.5
MTVR				*eS*	Sn	13 05 17.1	+3.9
GRL	**Gorelyy**	**3.12**	**352**	*eP*	Pn	13 04 42.8	+3.7
GRL				*eS*	Sn	13 05 19.7	+4.5
KRMR	**Karymshinskiy**	**3.40**	**353**	*eS*	Sn	13 05 27.0	+5.3
PET	**Petropavlovsk**	**3.56**	**358**	*eP*	Pn	13 04 48.6	+3.7
PET				*eS*	Sn	13 05 29.3	+3.6
DALK	**Dalny**	**3.57**	**359**	*eP*	Pn	13 04 48.1	+3.1
SPN	**Mys Shipunski**	**3.71**	**11**	*eP*	Pn	13 04 51.6	+4.6
SPN				*eS*	Sn	13 05 35.1	+5.6
UGLR	**Uglovaya**	**3.75**	**0**	*eP*	Pn	13 04 52.8	+5.2
SMAR	**Somma**	**3.80**	**360**	*eP*	Pn	13 04 53.7	+5.2
AVH	**Avacha**	**3.80**	**359**	*eP*	Pn	13 04 53.4	+5.1
SDLR	**Sedlovina**	**3.82**	**1**	*eP*	Pn	13 04 52.0	+3.4
KOK	**Koryaka**	**3.83**	**358**	*eP*	Pn	13 04 53.3	+4.5
KRX	**Arik**	**3.90**	**359**	*eP*	Pn	13 04 53.5	+3.8
GNL	**Ganaly**	**4.27**	**353**	*eP*	Pn	13 04 59.9	+5.1
MKZ	**Mys Kozlova**	**5.41**	**18**	*eP*	Pn	13 05 14.3	+4.1
KBTR	**Krutoberegovo**	**7.17**	**18**	*eP*	Pn	13 05 39.0	+4.5

*IDC **01** 13:24:11.2±3.0, 35.54°N×140.96°E, h0km, mb3.4/3, mbtmp3.4/4, ML2.5/1, MS2.8/1, Error ellipse: s-maj=89.1km s-min=29.4km az=60.0*
*JMA **01** 13:24:20.3±0.2, 35.4°N±0.5×140.4°E±1.0, h57km±1km, MV2.7/38, KUJUKURI COAST BOSO PEN*
JMA Felt I J1 at KUJUKURI COAST BOSO PEN .

ISC 01 13:24:20.4±1.1, 35.36°N±0.05×140.41°E±0.07, h60km±7km, n23, σ0.49/23, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCCN	**Chibachonan**	**0.14**	**279**	*iP*	**Pn**	**13 24 29.7**	**+0.1**
JCCN				S	**Sn**	**13 24 37.0**	**+0.8**
KTR	**Katsuura**	**0.23**	**200**	**P**	**Pn**	**13 24 29.9**	**-0.1**
KTR				S	**Sn**	**13 24 36.6**	**-0.3**
JKUC	**kamogawauchiur**	**0.27**	**220**	*iP*	**Pn**	**13 24 30.1**	**-0.2**
JKUC				S	**Sn**	**13 24 37.0**	**-0.3**
JSMT	**Sammumatsuo**	**0.28**	**6**	**P**	**Pn**	**13 24 30.0**	**-0.3**
JSMT				S	**Sn**	**13 24 37.2**	**-0.4**
BSO4	**Boso 4**	**0.38**	**189**	**P**	**Pn**	**13 24 31.5**	**+0.5**
BSO4				X		13 24 39.9	
BSO3	**Boso 3**	**0.56**	**172**	*iP*	**Pn**	**13 24 32.9**	**+0.1**
BSO3				X		13 24 43.3	
BSO1	**Boso 1**	**0.85**	**146**	**P**	**Pn**	**13 24 35.6**	**-0.3**
JYT	**Yasato**	**0.88**	**349**	**P**	**Pn**	**13 24 36.3**	**-0.6**
JIM2	**Oshima 3**	**1.03**	**232**	**P**	**Pn**	**13 24 38.4**	**-0.5**
JIM2				S	**Sn**	**13 24 51.5**	**-0.9**
JOD2	**Odawara 2**	**1.08**	**265**	**P**	**Pn**	**13 24 39.5**	**0.0**
JOD2				S	**Sn**	**13 24 53.3**	**-0.5**
JAG	**Ashikaga**	**1.31**	**324**	**P**	**Pn**	**13 24 42.7**	**+0.1**
JRY	**Ryogami san**	**1.39**	**298**	**P**	**Pn**	**13 24 44.1**	**+0.5**
MJAR	**Matsushiro Arr** 1.0nm,0.3s,baz=113,slow=14,SNR=52	**2.14**	**304**	Pn	**Pn**	**13 24 53.2**	**-0.5**
MJAR	0.5nm,0.3s,baz=138,slow=13,SNR=2.8 3.9nm,0.3s			Sn	**Sn**	**13 25 19.5**	**+0.3**
USRK	**Ussuriysk Ar.** comp=Z,50nm,20.1s,baz=183,slow=32	**10.94**	**326**	LR	LR	13 30 09.7	
H11N2	**WAKE ISLAND Hy 28.06** baz=309,slow=75,SNR=13	**117**		T	T	13 59 24.8	
H11N1	**WAKE ISLAND Hy 28.06** baz=309,slow=75,SNR=13	**117**		T	T	13 59 25.4	
H11N3	**WAKE ISLAND Hy 28.07** baz=309,slow=75,SNR=11	**117**		T	T	13 59 25.4	
H11S1	**WAKE ISLAND Hy 28.70** baz=312,slow=75,SNR=13	**119**		T	T	14 00 06.7	
H11S3	**WAKE ISLAND Hy 28.70** baz=312,slow=75,SNR=11	**119**		T	T	14 00 05.3	
H11S2	**WAKE ISLAND Hy 28.71** baz=312,slow=75,SNR=11	**119**		T	T	14 00 06.7	
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=76,slow=9.3,SNR=1.6 0.1nm,0.5s	**44.34**	**303**	P	**P**	**13 32 24.0**	**-0.5**
KURBB	**Kurchatov Arra** 0.4nm,0.3s,baz=84,slow=7.5,SNR=1.5 0.4nm,0.3s	**46.41**	**309**	P	**P**	**13 32 41.3**	**+0.6**
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=1.2,slow=7.6,SNR=5.7 0.2nm,0.6s	**55.30**	**187**	P	**P**	**13 33 48.3**	**+0.4**

*NOU **01** 13:37:01.8, 34.05°S×177.48°E, h115km, MLv4.4/7, North of New Zealand*

WEL 01 13:36:55.5±1.4, 34°S±20°×178°0E±1°, h311km±20km, M4.1/24, mB4.7/9, ML4.1/32, MLv4.3/24, Mw(mB)3.9/9, Error ellipse: s-maj=28.1km s-min=22.0km az=139.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.33**	**198**	**P**	Pn	13 37 54.8	-0.3
MXZ	**Matakaoa Point**	**3.33**	**198**	**P**	Pn	13 37 54.9	-0.2
WMGZ	**Waiomatatini S**	**3.55**	**195**	**P**	Pn	13 37 58.2	+0.8
WMGZ				S	S	13 38 48.0	+1.1
HAZ	**Te Kaha**	**3.66**	**203**	**P**	Pn	13 37 57.7	-0.8
HAZ				S	S	13 38 48.8	-0.2
PKGZ	**Pakihiroa**	**3.67**	**199**	**P**	Pn	13 37 58.7	0.0
PUZ	**Puketiti**	**3.82**	**196**	**P**	Pn	13 38 00.2	-0.1
PUZ				S	S	13 38 52.2	-0.1
RUGZ	**Raukumara Rang**	**3.88**	**203**	**P**	Pn	13 37 60.0	-1.1
TWGZ	**Tauwhareparae**	**3.99**	**198**	**P**	Pn	13 38 02.3	+0.2
TWGZ				S	S	13 38 57.3	+1.8
CNGZ	**Carnagh Statio**	**4.23**	**195**	**P**	Pn	13 38 05.3	+0.7
MWZ	**Matawai**	**4.27**	**202**	**P**	Pn	13 38 04.6	-0.5
TKGZ	**Te Karaka**	**4.27**	**199**	**P**	Pn	13 38 04.8	-0.3
TKGZ				S	S	13 39 01.0	0.0
URZ	**Urewera**	**4.34**	**207**	**P**	Pn	13 38 04.4	-1.5
URZ	**Urewera**	**4.34**	**207**	**P**	Pn	13 38 04.6	-1.3
RAGZ	**Rawiri**	**4.45**	**202**	**P**	Pn	13 38 06.9	-0.3
RIGZ	**Rimuhau**	**4.54**	**198**	**P**	Pn	13 38 07.7	-0.5
MUGZ	**Murupara**	**4.66**	**208**	**P**	Pn	13 38 08.3	-1.2
TOZ	**Tahuroa Road**	**4.69**	**224**	**P**	Pn	13 38 10.2	+0.4
PRGZ	**Paritu Road**	**4.72**	**196**	**P**	Pn	13 38 11.9	+1.8
SNGZ	**Shannon Statio**	**4.74**	**202**	**P**	Pn	13 38 10.2	-0.1
PRRZ	**Plateau Road**	**4.84**	**211**	**P**	Pn	13 38 12.4	+0.9
KNZ	**Kokohu**	**4.87**	**198**	**P**	Pn	13 38 12.9	+1.1
ALRZ	**Allen Road**	**4.91**	**211**	**P**	Pn	13 38 13.2	+0.9
RAHZ	**Arahi**	**4.94**	**203**	**P**	Pn	13 38 11.8	-0.9
MTHZ	**Maungataniwha**	**4.96**	**206**	**P**	Pn	13 38 12.1	-0.9
WHHZ	**Waihua**	**5.04**	**201**	**P**	Pn	13 38 15.5	+1.7
KUTZ	**Kaahu Road**	**5.09**	**215**	**P**	Pn	13 38 16.1	+1.8
TLZ	**Tolley Road**	**5.11**	**219**	**P**	Pn	13 38 16.7	+2.1
MRHZ	**Matea Rd**	**5.11**	**209**	**P**	Pn	13 38 14.9	+0.3
NMHZ	**Naumai**	**5.20**	**205**	**P**	Pn	13 38 15.1	-0.5
ARHZ	**Aropaoanui**	**5.28**	**202**	**P**	Pn	13 38 15.8	-0.8
BKZ	**Black Stump Fm**	**5.37**	**207**	**P**	Pn	13 38 16.7	-0.9
BKZ	**Black Stump Fm**	**5.37**	**207**	**P**	Pn	13 38 16.6	-1.0
MCHZ	**McNeill Hill**	**5.54**	**204**	**P**	Pn	13 38 21.0	+1.4
HIZ	**Hauiti**	**5.60**	**221**	**P**	Pn	13 38 20.7	+0.4
KWHZ	**Kaweka Forest**	**5.62**	**206**	**P**	Pn	13 38 20.9	+0.3
CKHZ	**Cape Kidnapper**	**5.62**	**200**	**P**	Pn	13 38 21.1	+0.6
NTVZ	**North Tongarir**	**5.64**	**213**	**P**	Pn	13 38 21.5	+0.5
TMVZ	**Te Maari**	**5.65**	**212**	**P**	Pn	13 38 21.5	+0.6
OTVZ	**Oturere**	**5.70**	**212**	**P**	Pn	13 38 19.9	-1.7
SNVZ	**South Ngauruho**	**5.73**	**212**	**P**	Pn	13 38 21.2	-0.8
NGZ	**Ngauruhoe**	**5.74**	**213**	**P**	Pn	13 38 22.0	-0.1
KAHZ	**Kahuranaki**	**5.81**	**201**	**P**	Pn	13 38 23.9	+1.1
BHHZ	**Black Hill Sta**	**5.81**	**208**	**P**	Pn	13 38 22.4	-0.4
FWVZ	**Far West T-bar**	**5.83**	**212**	**P**	Pn	13 38 22.3	-0.9
KRHZ	**Kereru**	**5.83**	**205**	**P**	Pn	13 38 22.1	-0.9
WHVZ	**Whangaehu Hut**	**5.83**	**212**	**P**	Pn	13 38 23.1	-0.2
MOVZ	**Moawhango**	**5.87**	**210**	**P**	Pn	13 38 21.3	-2.2
PXZ	**Pawanui**	**6.03**	**200**	**P**	Pn	13 38 25.6	+0.3
TSZ	**Takapari Road**	**6.35**	**206**	**P**	Pn	13 38 28.3	-0.9
WAZ	**Wanganui**	**6.49**	**213**	**P**	Pn	13 38 30.2	-0.7
BFZ	**Birch Farm**	**6.81**	**202**	S	S	13 39 52.9	-2.0
BFZ	**Birch Farm**	**6.81**	**202**	**P**	Pn	13 38 33.6	-1.1
MRZ	**Mangatainoka R**	**7.02**	**206**	**P**	Pn	13 38 34.5	-2.6
NNZ	**Nelson**	**8.39**	**214**	**P**	Pn	13 38 51.2	-2.6
QRZ	**Quartz Range**	**8.51**	**219**	**P**	Pn	13 38 53.9	-1.4
QRZ	**Quartz Range**	**8.51**	**219**	**P**	Pn	13 38 52.3	-3.0
THZ	**Tophouse**	**9.04**	**214**	**P**	Pn	13 39 00.2	-1.6
DSZ	**Denniston Nort**	**9.56**	**218**	**P**	Pn	13 39 04.6	-3.4
LTZ	**Lake Taylor**	**10.14**	**212**	**P**	Pn	13 39 12.7	-2.4
INZ	**Inchbonnie**	**10.47**	**215**	**P**	Pn	13 39 15.7	-3.4
FOZ	**Fox Glacier**	**11.87**	**217**	**P**	Pn	13 39 33.3	-2.7
TMZ	**Timaru**	**11.97**	**211**	**P**	Pn	13 39 35.7	-1.6
JCZ	**Jackson Bay**	**12.77**	**218**	**P**	P	13 39 49.0	+1.6

*MEX **01** 13:39:24.7±0.8, 14.89°N×92.59°W, h94km±8km, MD4.3*
*GCG **01** 13:39:24.6±2.4, 14.88°N×92.52°W, h87km±19km, MD4.6, ML4.4, MW3.7, Presumed earthquake*
*CATAC **01** 13:39:25.4±0.5, 15°N±3°×93°W±1°, h77km±4km, M4.2/10, MLv4.2/10, Error ellipse: s-maj=9.1km s-min=4.7km az=43.2, confirmed*
*IDC **01** 13:39:26.5±2.7, 15.09°N×92.43°W, h94km±14km, mb3.5/3, mbtmp3.6/5, Error ellipse: s-maj=57.2km s-min=13.6km az=25.0*

ISC 01 13:39:23.9±0.9, 14.81°N±0.05×92.59°W±0.03, h94km±6km, n49, σ2.58/78, mb3.8/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.33**	**72**	*eP*	**Pn**	**13 39 37.8**	**0.0**
THIG				*eS*	**Sn**	**13 39 47.0**	**-1.3**
THIG		**0.33**	**72**	*iP*	**Pn**	**13 39 37.7**	**0.0**
THIG				IAML		13 39 48.6	
	comp=E,23μm,0.3s						
PATR	**El Naranjo**	**0.46**	**48**	*eP*	**Pn**	**13 39 38.0**	**-0.9**
PATR				*eS*	**Sn**	**13 39 48.0**	**-2.2**
CHUJ	**Union Juarez**	**0.54**	**58**	*eP*	**Pn**	**13 39 38.9**	**-0.7**
CHUJ				*eS*	**Sn**	**13 39 50.1**	**-1.2**
PAVE	**Pavencul**	**0.55**	**46**	*eP*	**Pn**	**13 39 38.9**	**-0.7**
PAVE				*eS*	**Sn**	**13 39 50.3**	**-1.1**
RTAL	**Retalhuleu**	**0.91**	**108**	**P**	**Pn**	**13 39 43.5**	**+0.7**
RTAL				S	**Sn**	**13 39 56.9**	**-0.1**
RTAL	**Retalhuleu**	**0.91**	**108**	*eP*	**Pn**	**13 39 43.4**	**+0.7**
RTAL				*eS*	**Sn**	**13 39 57.0**	**0.0**
QUEO	**Labor Ovalle**	**1.04**	**86**	*iP*	**Pn**	**13 39 45.6**	**+1.1**
QUEO				*eS*	**Sn**	**13 40 01.3**	**+1.2**
QUEO				IAML		13 40 04.9	
	comp=N,8μm,0.4s						
HUEH	**Huehuetenango**	**1.16**	**64**	P	**Pn**	**13 39 45.6**	**-0.4**
HUEH	**Huehuetenango**	**1.16**	**64**	*eP*	**Pn**	**13 39 46.3**	**+0.4**
HUEH				*eS*	**Sn**	**13 40 03.2**	**+0.7**
HUEH	**Huehuetenango**	**1.16**	**64**	*iP*	**Pn**	**13 39 45.2**	**-0.7**
HUEH				IAML		13 40 08.5	
	comp=E,4μm,0.7s						
STG2	**El Palmar, Qui**	**1.23**	**107**	*iP*	**Pn**	**13 39 43.4**	**-3.2**
STG8	**El Palmar, Qui**	**1.25**	**106**	*iP*	**Pn**	**13 39 43.8**	**-3.1**
STG8				IAML		13 40 00.7	
	comp=E,14μm,0.2s						
STG5	**El Palmar, Qui**	**1.26**	**108**	*iP*	**Pn**	**13 39 44.0**	**-3.0**
STG5				*iS*	**Sn**	**13 39 57.2**	**-7.2**
CARR	**Arriaga**	**1.92**	**318**	*iP*	**Pn**	**13 39 57.0**	**+1.8**
CARR				*iS*	**Sn**	**13 40 20.2**	**+1.2**
TGIG		**2.03**	**345**	*eP*	**Pn**	**13 39 56.0**	**-0.6**
TGIG				*eS*	**Sn**	**13 40 17.7**	**-3.8**
TGIG		**2.03**	**345**	*iP*	**Pn**	**13 39 56.0**	**-0.6**
FG8	**Yepocapa, Chim**	**2.04**	**105**	*iP*	Pn	13 39 52.4	-4.3
APG	**El Apazote**	**2.06**	**84**	P	**Pn**	**13 39 58.0**	**+0.8**
	comp=E,7.0nm,0.3s,baz=146,slow=9.9,SNR=151						
APG				S	**Sn**	**13 40 18.1**	**-4.5**
	comp=E,9.9nm,0.4s,baz=213,slow=16,SNR=9.1						
APG	**El Apazote**	**2.06**	**84**	*iP*	**Pn**	**13 39 58.2**	**+1.0**
FG16	**Alotenango, Sa**	**2.08**	**105**	*iP*	**Pn**	**13 39 54.2**	**-3.3**
PCG5	**San Vicente Pa**	**2.22**	**105**	*iP*	**Pn**	**13 39 56.9**	**-2.3**
PCG5				IAML		13 40 24.3	
	comp=N,3μm,0.3s						
FAME	**Alcaldia de Sa**	**2.67**	**111**	P	**Pn**	**13 40 06.5**	**+1.4**
FAME				S	**Sn**	**13 40 37.1**	**+0.4**
SLOZ	**Alcaldia de Sa**	**2.82**	**106**	P	**Pn**	**13 40 11.1**	**+4.0**
LOAL	**Lomas de Alarc**	**2.83**	**106**	P	**Pn**	**13 40 10.5**	**+3.2**
NUBE	**Las Nubes**	**2.86**	**108**	P	**Pn**	**13 40 09.6**	**+1.8**
NUBE				S	**Sn**	**13 40 43.5**	**+1.9**
CMIG	**Matias Romero**	**3.17**	**316**	P	**Pn**	**13 40 13.0**	**+1.3**
	comp=N,16nm,0.3s,baz=142,slow=11,SNR=40						
CMIG				S	**Sn**	**13 40 49.8**	**+1.1**
	comp=N,68nm,0.3s,baz=286,slow=20,SNR=14						
CMIG	**Matias Romero**	**3.17**	**316**	*eP*	**Pn**	**13 40 10.9**	**-0.9**
CMIG				*eS*	**Sn**	**13 40 46.3**	**-2.4**
JAYA	**Jayaque - finc**	**3.25**	**110**	P	**Pn**	**13 40 14.4**	**+1.4**
JAYA				S	**Sn**	**13 40 52.9**	**+2.0**
JAYA	**Jayaque - finc**	**3.25**	**110**	*iP*	**Pn**	**13 40 10.6**	**-2.4**
JAYA				IAML		13 40 57.0	
	comp=N,846nm,0.3s						
PETF	**Flores**	**3.35**	**51**	P	**Pn**	**13 40 14.5**	**+0.3**
PETF				S	**Sn**	**13 40 50.2**	**-3.0**
PETF	**Flores**	**3.35**	**51**	*eP*	**Pn**	**13 40 14.3**	**+0.1**
PETF				*eS*	**Sn**	**13 40 49.4**	**-3.7**
PETF	**Flores**	**3.35**	**51**	*iP*	**Pn**	**13 40 14.3**	**+0.1**
PETF				IAML		13 40 55.1	
	comp=N,1μm,0.6s						
HUIG	**Huatulco**	**3.53**	**286**	*eP*	**Pn**	**13 40 17.6**	**+1.0**
HUIG				*eS*	**Sn**	**13 40 52.2**	**-5.3**
NEUV	**Arroyo Zacate**	**4.23**	**314**	*eP*	**Pn**	**13 40 25.8**	**-0.3**
NEUV				*eS*	**Sn**	**13 41 07.8**	**-6.5**
SCIG	**Sabancuy**	**4.35**	**18**	*eP*	**Pn**	**13 40 27.3**	**-0.4**
SCIG				*eS*	**Sn**	**13 41 12.1**	**-5.1**
PEIG	**Puerto Escondi**	**4.56**	**286**	*eP*	**Pn**	**13 40 29.2**	**-1.3**
PEIG				*eS*	**Sn**	**13 41 16.4**	**-5.9**
VHO	**Vista Hermosa**	**4.58**	**300**	*eP*	**Pn**	**13 40 31.9**	**+0.8**
VHO				*eS*	**Sn**	**13 41 26.1**	**+2.9**
TOIG	**Toxpalan**	**5.40**	**308**	*eP*	**Pn**	**13 40 42.9**	**+0.9**
TOIG				*eS*	**Sn**	**13 41 41.5**	**-1.5**
HLIG	**Huajuapan de L**	**5.84**	**302**	*eP*	**Pn**	**13 40 49.3**	**+1.1**
HLIG				*eS*	**Sn**	**13 41 49.5**	**-4.4**
JAUV	**Jalcomulco**	**6.07**	**319**	*eP*	**Pn**	**13 40 49.2**	**-1.9**
JAUV				*eS*	**Sn**	**13 41 53.9**	**-5.3**
FTIG	**Fresnillo de T**	**6.15**	**301**	*eP*	**Pn**	**13 40 53.3**	**+1.0**
FTIG				*eS*	**Sn**	**13 41 58.6**	**-2.8**
MGIG	**Malinaltepec**	**6.30**	**293**	*eP*	**Pn**	**13 40 55.1**	**+0.8**
MGIG				*eS*	**Sn**	**13 42 01.5**	**-3.4**
TLIG	**Tlapa**	**6.37**	**296**	*eP*	**Pn**	**13 40 58.3**	**+3.1**
TLIG				*eS*	**Sn**	**13 42 02.3**	**-4.3**
TXAR	**Lajitas Array** comp=N,0.2nm,0.5s,baz=145,slow=13,SNR=3.8	**17.71**	**327**	P	**Pn**	**13 43 25.7**	**+1.1**
TKL	**Tuckaleechee C** comp=N,2.8nm,0.7s,baz=196,slow=12,SNR=4.2 comp=N,2.8nm,0.7s	**22.22**	**19**	P	**P**	**13 44 11.4**	**-1.3**
NVAR	**Mina Array Bea** comp=N,1.0nm,0.7s,baz=129,slow=9.5,SNR=7.6 comp=N,1.0nm,0.7s	**32.69**	**321**	P	**P**	**13 45 49.8**	**+2.2**
ILAR	**Eielson Array** comp=N,0.5nm,0.6s,baz=120,slow=4.8,SNR=9.1 comp=N,0.5nm,0.6s	**61.88**	**337**	P	**P**	**13 49 34.4**	**+1.3**
CMAR	**Chiang Mai Arr** comp=N,0.9nm,0.5s,baz=352,slow=3.7,SNR=6.9	**145.05**	**341**	PKP	**PKPab**	**13 58 51.9**	**+1.2**

*NEIC **01** 13:43:57.9±2.0, 17.80°N±0.01×66.81°W±0.01, h10km±1km, ML3.7/32, Md3.1/14(RSPR), Error ellipse: s-maj=3.1km s-min=2.0km az=347.0*
*OSPL **01** 13:43:59.6±0.3, 17.84°N×66.78°W, h10km±3km, ML3.4, Presumed earthquake*
*SDD **01** 13:43:59.6±0.9, 17.97°N×66.82°W, h20km±5km, MD2.9, ML3.3, MW3.5, Presumed earthquake*
*RSPR **01** 13:44:00.0, 18.01°N×66.82°W, h15km, MD3.0/14*

ISC 01 13:43:58.5±1.0, 17.96°N±0.04×66.83°W±0.02, h25km±5km, n50, σ0.49/74, 19C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.05**	**287**		**Pb**	**13 44 02.9**	**+0.2**
GBPR					**Sb**	**13 44 05.2**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.05**	**287**	*iP*	**Pb**	**13 44 02.9**	**+0.2**
GBPR				*eS*	**Sb**	**13 44 05.2**	**-0.5**
MLPR	**Magueyes Islan**	**0.20**	**272**		**Pb**	**13 44 04.4**	**+0.3**
MLPR					**Sb**	**13 44 08.0**	**+0.1**
MLPR	9μm,0.3s			IAML		13 44 08.5	
MLPR	13μm,0.5s			IAML		13 44 08.6	
MLPR	**Magueyes Islan**	**0.20**	**272**	*ePg*	**Pb**	**13 44 04.4**	**+0.3**
MLPR				*eSg*	**Sb**	**13 44 08.0**	**+0.1**
MLPR				IAML		13 44 08.4	
	comp=E,5μm,0.2s						
MLPR				IAML		13 44 08.5	
	comp=N,3μm,0.2s						
MLPR	**Magueyes Islan**	**0.20**	**272**	*eP*	**Pb**	**13 44 04.5**	**+0.4**
OBIP	**Obispado Ponce**	**0.23**	**69**		**Sb**	**13 44 08.3**	**-0.3**
OBIP	**Obispado Ponce**	**0.23**	**69**	*iP*	**Pb**	**13 44 04.5**	**+0.1**
OBIP				*eS*	**Sb**	**13 44 08.2**	**-0.3**
OBIP				IAML		13 44 09.0	
	comp=Z,17μm,0.1s						
OBIP	**Obispado Ponce**	**0.23**	**69**	*iP*	**Pb**	**13 44 04.6**	**+0.1**
OBIP				*eS*	**Sb**	**13 44 08.2**	**-0.3**
CELP	**Cerrillos**	**0.27**	**65**		**Sb**	**13 44 09.1**	**-0.3**
CELP	**Cerrillos**	**0.27**	**65**	*ePg*	**Pb**	**13 44 05.1**	**+0.2**
CELP				*eSg*	**Sb**	**13 44 09.1**	**-0.3**
CELP				IAML		13 44 09.2	
	comp=E,2μm,0.4s						
CELP				IAML		13 44 09.3	
	comp=N,2μm,0.2s						
CELP	**Cerrillos**	**0.27**	**65**	*iP*	**Pb**	**13 44 05.2**	**+0.2**

comp=N,140nm,1.1s
BANI BANI 3.38 278 Pn Pn 13 44 49.2 -0.6

*IDC **01** 13:44:59.1±1.5,34°.62N×25°.00E,h0km,mb3.7/4, mbtmp3.7/4,MS3.6/2,Error ellipse: s-maj=353.7km s-min=25.4km az=141.0*
*ATH **01** 13:44:59.3±0.7,34°.12N×25°.59E,h10km,ML3.0/6, Latitude uncertainty: 4 km; Longitude uncertainty: 3 km*
*THE **01** 13:45:01.6,34°N±52"×2"6E±3",h2km±29km,M2.8/5, MLh2.8/5*
ISC 01 13:44:58.9±2.2,34°.15N±0°.08×25°.57E±0°.05,h1km±13km, n23,σ0s49/27,mb3.7/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGNA	**Agios Nikolaos**	**1.04**	**7**	P	**Pb**	**13 45 19.2**	**-0.6**
AGNA				S	**Sb**	**13 45 34.2**	**+0.2**
SIVA	**Sivas**	**1.07**	**324**	P	**Pb**	**13 45 20.2**	**0.0**
SIVA	**Sivas**	**1.07**	**324**	P	**Pb**	**13 45 19.9**	**-0.3**
SIVA				S	**Sb**	**13 45 35.0**	**+0.3**
ZKR	**Zakros**	**1.10**	**29**	P	**Pb**	**13 45 20.7**	**0.0**
ZKR	**Zakros**	**1.10**	**29**	P	**Pg**	**13 45 20.0**	**0.0**
ZKR				S	**Sb**	**13 45 35.4**	**-0.2**
NPS	**Neapolis**	**1.11**	**2**	P	**Pb**	**13 45 20.7**	**-0.2**
NPS				S	**Sb**	**13 45 36.2**	**+0.3**
NPS	**Neapolis**	**1.11**	**2**	P	**Pg**	**13 45 20.3**	**+0.1**
NPS				S	**Sn**	**13 45 36.8**	**-0.9**
SIT2	**Siteia**	**1.14**	**23**	P	**Pb**	**13 45 21.0**	**-0.5**
IDI	**Anoyia**	**1.27**	**334**	P	**Pn**	**13 45 24.2**	**+0.4**
IDI	**Anoyia**	**1.27**	**334**	P	**Pg**	**13 45 23.4**	**+0.2**
IDI				S	**Sb**	**13 45 40.6**	**+0.2**
GVD	**Gavdhos**	**1.40**	**300**	P	**Pn**	**13 45 24.7**	**-1.0**
VAM	**Vamos**	**1.69**	**318**	P	**Pb**	**13 45 31.1**	**+0.3**
VAM	**Vamos**	**1.69**	**318**	P	**Pn**	**13 45 29.4**	**-0.2**
IMMV	**Iera Moni Meta**	**1.85**	**315**	P	**Pb**	**13 45 33.5**	**-0.1**
IMMV	**Iera Moni Meta**	**1.85**	**315**	P	**Pn**	**13 45 31.7**	**-0.1**
KARP	**Karpathos**	**1.91**	**43**	P	**Pn**	**13 45 32.5**	**-0.2**
KNDR	**Palaiochora Ch**	**1.93**	**305**	P	**Pn**	**13 45 32.5**	**-0.5**
TORD	**Torodi Ar. Bea** 0.6nm,0.7s,baz=31,slow=8.6,SNR=6.1 0.6nm,0.7s	**30.12**	**232**	P	**P**	**13 51 10.0**	**-0.3**
KURBB	**Kurchatov Arra** 0.4nm,0.2s,baz=277,slow=9.0,SNR=4.2 0.4nm,0.2s	**41.50**	**50**	P	**P**	**13 52 48.6**	**+1.1**
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=276,slow=6.9,SNR=7.4 0.6nm,0.6s	**44.05**	**56**	P	**P**	**13 53 09.3**	**+0.9**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=274,slow=8.0,SNR=2.2 0.4nm,0.4s	**45.46**	**45**	P	**P**	**13 53 19.7**	**+0.3**
SONM	**Songino Array** comp=Z,64nm,19.3s,baz=218,slow=38	**59.87**	**50**	LR	LR	14 22 38.7	
PETK	**Petropavlovsk-** comp=Z,27nm,19.4s,baz=251,slow=38	**83.66**	**27**	LR	LR	14 37 18.3	

*IDC **01** 14:14:43.3±1.4,12°.70N×145°.50E,h0km,mb3.5/3, mbtmp3.5/3,MS3.8/1,Error ellipse: s-maj=45.7km s-min=20.3km az=86.0*
*NEIC **01** 14:14:50.0±1.5,12°.87N±0°.03×144°.9E±0°.1,h35km±2km, mb4.7/21,Error ellipse: s-maj=19.3km s-min=3.3km az=76.0*
ISC 01 14:14:51.4±0.6,12°.84N±0°.07×144°.85E±0°.10,h57km,n39, σ0s91/33,mb4.6/14,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 980nm,0.3s,baz=108,slow=1.3,SNR=899	**0.74**	**1**	Pn	**Pn**	**14 15 06.1**	**+0.1**
GUMO				Sn	**Sn**	**14 15 17.7**	**+0.9**
GUMO	**Guam**	**0.74**	**1**		**Pn**	**14 15 06.5**	**+0.4**
DPSS	**Saipan**	**2.55**	**21**	Pn	**Pn**	**14 15 32.4**	**+2.0**
JCJ	**Chichijima**	**14.40**	**350**	Pn	**Pn**	**14 18 12.2**	**0.0**
PATS	**Pohnpei**	**14.54**	**113**	Pn	**Pn**	**14 18 14.2**	**+0.1**
H11S3	**WAKE ISLAND Hy** baz=258,slow=75,SNR=19	**21.75**	**72**	T	T	14 42 21.5	
H11S1	**WAKE ISLAND Hy** baz=258,slow=75,SNR=19	**21.77**	**72**	T	T	14 42 20.4	
H11S2	**WAKE ISLAND Hy** baz=258,slow=75,SNR=16	**21.77**	**72**	T	T	14 42 21.5	
H11N1	**WAKE ISLAND Hy** baz=255,slow=75,SNR=63	**22.22**	**69**	T	T	14 42 43.7	
H11N2	**WAKE ISLAND Hy** baz=255,slow=75,SNR=41	**22.23**	**69**	T	T	14 42 45.4	
H11N3	**WAKE ISLAND Hy** baz=255,slow=75,SNR=52	**22.23**	**69**	T	T	14 42 43.7	
JGF	**Kuroka** comp=Z,39nm,1.4s	**23.65**	**345**	P	**P**	**14 19 57.4**	**-0.3**
JGF				IAmb	IAmb	14 20 02.9	
NACB	**Ninganchiao** comp=Z,23nm,1.2s	**24.73**	**300**	P	**P**	**14 20 08.6**	**+1.0**
NACB				IAmb	IAmb	14 20 14.8	
YHNB	**Yeheng** comp=Z,37nm,1.2s	**25.11**	**301**	P	**P**	**14 20 12.3**	**+1.2**
YHNB				IAmb	IAmb	14 20 38.0	
SSLB	**Suanglung** comp=Z,29nm,1.4s	**25.12**	**299**	P	**P**	**14 20 12.2**	**+1.0**
SSLB				IAmb	IAmb	14 20 24.4	
SOEI	**Soe**	**30.36**	**223**	P	**P**	**14 20 58.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**33.14**	**343**	P	**P**	**14 21 21.2**	**-1.0**
USA0B				IAmb	IAmb	14 21 44.7	
USRK	**Ussuriysk Ar.**	**33.14**	**343**	P	**P**	**14 21 20.9**	**-1.3**
WB0	**Warramunga Arr**	**34.00**	**198**	P	**P**	**14 21 29.9**	**0.0**
WB0				IAmb	IAmb	14 21 43.3	
WR8	**Warramunga Arr**	**34.15**	**198**	P	**P**	**14 21 31.7**	**+0.5**
WRA	**Warramunga Arr** comp=Z,0.8nm,0.9s,baz=14,slow=8.9,SNR=7.2 comp=Z,0.8nm,0.9s	**34.18**	**198**	P	**P**	**14 21 31.2**	**-0.3**
WRA	**Warramunga Arr**	**34.18**	**198**	P	**P**	**14 21 31.3**	**-0.2**
FITZ	**Fitzroy Crossi**	**36.12**	**212**	P	**P**	**14 21 48.2**	**0.0**
ENH	**Enshi**	**36.98**	**304**	P	**P**	**14 21 54.1**	**-1.4**
ENH				IAmb	IAmb	14 21 55.9	
AS31	**Alice Springs**	**37.83**	**196**	P	**P**	**14 22 02.9**	**+0.2**
ASAR	**Alice Springs** comp=Z,0.2nm,0.4s,baz=16,slow=10.0,SNR=11 comp=Z,0.2nm,0.4s	**37.83**	**196**	P	**P**	**14 22 02.2**	**-0.5**
ASAR	**Alice Springs**	**37.83**	**196**	P	**P**	**14 22 03.1**	**+0.4**
EIDS	**Eidsvold**	**38.46**	**171**	P	**P**	**14 22 08.4**	**+0.5**
EIDS				IAmb	IAmb	14 22 34.2	
BBJI	**Bungbulang** comp=Z,15nm,1.4s	**42.11**	**243**	P	**P**	**14 22 38.8**	**+0.4**
KULM	**Kulim**	**44.24**	**264**	P	**P**	**14 22 55.7**	**+0.2**
KULM				IAmb	IAmb	14 23 03.7	
STKA	**Stephens Creek** comp=Z,104nm,18.5s,baz=230,slow=39	**44.57**	**184**	LR	LR	14 43 33.8	
MSVF	**Nonsavu**	**44.68**	**132**	P	**P**	**14 22 58.5**	**-0.6**
FORT	**Forrest**	**46.28**	**200**	P	**P**	**14 23 11.4**	**+0.1**
M14K	**Bethel**	**61.36**	**27**	P	**P**	**14 24 58.9**	**-2.2**
M17K	**Holitna River**	**63.62**	**27**	P	**P**	**14 25 15.5**	**-0.8**
M17K				IAmb	IAmb	14 25 28.5	
NRN	**Naryn**	**65.79**	**310**	P	**P**	**14 25 32.0**	**+0.8**
PPLA	**Purkeypile** comp=Z,10nm,1.4s	**66.46**	**26**	P	**P**	**14 25 34.7**	**-0.1**
PPLA				IAmb	IAmb	14 25 51.1	
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=249,slow=5.9,SNR=5.9 comp=Z,0.2nm,0.5s	**69.25**	**25**	P	**P**	**14 25 50.7**	**-1.4**
ILAR	**Eielson Array**	**69.25**	**25**	P	**P**	**14 25 51.1**	**-1.0**

KRSC 01 14:21:53.8±0.8,56°.08N×164°.35E,h49km±17km,MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.87**	**279**	*eP*	Pn	14 22 09.9	+0.2
BKI	**Bering**	**1.27**	**133**	*eP*	Pn	14 22 16.5	+1.5
BKI				*eS*	Sn	14 22 32.9	+2.0
SMKR	**Semkarok**	**1.69**	**289**	*eP*	Pn	14 22 22.4	+1.6
MKZ	**Mys Kozlova**	**2.14**	**226**	*eP*	Pn	14 22 29.7	+2.8
MKZ				*eS*	Sn	14 22 55.8	+3.5
TUMD	**Tumrok D**	**2.41**	**250**	*eS*	Sn	14 23 03.0	+4.1
TUMR	**Tumrok**	**2.51**	**253**	*eP*	Pn	14 22 35.5	+3.3
TUMR				*eS*	Sn	14 23 05.2	+3.6
SRDR	**Sredinnyy**	**2.60**	**277**	*eP*	Pn	14 22 37.0	+3.7
SPN	**Mys Shipunski**	**3.91**	**222**	*eP*	Pn	14 22 55.4	+4.3
SPN				*eS*	Sn	14 23 37.7	+2.0
SDLR	**Sedlovina**	**4.24**	**231**	*eP*	Pn	14 22 59.1	+3.3
AVH	**Avacha**	**4.31**	**231**	*eP*	Pn	14 23 01.0	+4.2
UGLR	**Uglovaya**	**4.31**	**230**	*eP*	Pn	14 23 00.8	+3.9
GNL	**Ganaly**	**4.40**	**240**	*eP*	Pn	14 23 02.4	+4.2
GRL	**Gorelyy**	**5.10**	**229**	*eP*	Pn	14 23 11.4	+3.8
MTVR	**Mutnovka**	**5.10**	**228**	*eP*	Pn	14 23 12.0	+4.3

*MEX **01** 14:31:47.8±0.6,15°.33N×96°.19W,h11km±5km, MD4.5(UNK)*
*IDC **01** 14:31:49.1±1.1,15°.64N×95°.88W,h0km,mb4.1/12, mbtmp4.1/14,ML4.0/2,MS3.7/24,Error ellipse: s-maj=26.6km s-min=15.5km az=45.0*
*NEIC **01** 14:31:50.4±1.4,15°.63N±0°.04×95°.99W±0°.05,h10km±1km, mb4.5/234,Md4.5/99(MEX),Error ellipse: s-maj=9.3km s-min=5.4km az=226.0*
ISC 01 14:31:47.3±1.3,15°.35N±0°.04×96°.18W±0°.03,h8km±7km, n283,σ2s24/275,mb4.5/93,MS3.6/22,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.42**	**10**		**Pg**	**14 31 56.3**	**+0.7**
HUIG	**Huatulco**	**0.42**	**10**	*eP*	**Pg**	**14 31 56.3**	**+0.7**
HUIG	baz=191,slow=16			*e*		14 31 56.9	
HUIG				*eS*	**Sg**	**14 32 02.1**	**+0.9**
PEIG	**Puerto Escondi**	**1.13**	**305**		**Pb**	**14 32 07.8**	**-1.3**
PEIG					**Sb**	**14 32 20.9**	**-3.1**
PEIG	**Puerto Escondi**	**1.13**	**305**	*eP*	**Pb**	**14 32 07.8**	**-1.3**
PEIG				*eS*	**Sb**	**14 32 20.9**	**-3.1**
OXLC	**Oaxaca**	**1.78**	**344**		**Pn**	**14 32 18.8**	**+0.2**
OXLC					**Sn**	**14 32 40.3**	**-1.2**
OXLC	**Oaxaca**	**1.78**	**344**	*eP*	**Pn**	**14 32 18.8**	**+0.2**
OXLC				*eS*	**Sn**	**14 32 40.3**	**-1.2**
OXBJ	**Oaxaca**	**1.79**	**343**		**Pn**	**14 32 18.9**	**+0.3**
OXBJ					**Pb**	**14 32 19.1**	**-1.3**
OXBJ					**Sn**	**14 32 40.6**	**-1.0**
OXBJ	**Oaxaca**	**1.79**	**343**	*eP*	**Pn**	**14 32 18.9**	**+0.3**
OXBJ				*eP*	**Pb**	**14 32 19.1**	**-1.3**
OXBJ				*eS*	**Sn**	**14 32 40.6**	**-1.0**
OXIG	**Oaxaca**	**1.79**	**343**		**Pn**	**14 32 18.7**	**0.0**
OXIG					**Sn**	**14 32 41.1**	**-0.7**
VHO	**Vista Hermosa**	**1.79**	**343**	*i* P	**Pn**	**14 32 18.7**	**0.0**
VHO				*eS*	**Sn**	**14 32 41.1**	**-0.7**
CMIG	**Matias Romero** 19nm,0.3s,baz=211,slow=10,SNR=98	**2.13**	**36**	Pn	**Pn**	**14 32 21.9**	**-1.3**
CMIG	44nm,0.3s,baz=231,slow=18,SNR=12			Sn	**Sn**	**14 32 45.3**	**-4.6**
CMIG	**Matias Romero**	**2.13**	**36**		**Pn**	**14 32 21.8**	**-1.5**
CMIG					**Sn**	**14 32 48.4**	**-1.5**
CMIG	**Matias Romero**	**2.13**	**36**	*i* P	**Pn**	**14 32 21.8**	**-1.5**
CMIG				*eS*	**Sn**	**14 32 48.4**	**-1.5**
CARR	**Arriaga**	**2.36**	**67**	*eP*	**Pn**	**14 32 24.1**	**-2.2**
CARR				*eS*	**Sn**	**14 32 51.1**	**-4.4**
NEUV	**Arroyo Zacate**	**2.38**	**9**		**Pn**	**14 32 25.9**	**-0.7**
NEUV					**Sn**	**14 32 55.2**	**-0.8**
NEUV	**Arroyo Zacate**	**2.38**	**9**	*eP*	**Pn**	**14 32 25.9**	**-0.7**
NEUV				*eS*	**Sn**	**14 32 55.2**	**-0.8**
TOIG	**Toxpalan**	**2.86**	**343**		**Pn**	**14 32 33.4**	**0.0**
TOIG					**Sn**	**14 33 09.4**	**+1.5**
TOIG	**Toxpalan**	**2.86**	**343**	*eP*	**Pn**	**14 32 33.4**	**0.0**
TOIG				*eS*	**Sn**	**14 33 09.4**	**+1.5**
HLIG	**Huajuapan de L**	**2.92**	**328**		**Pn**	**14 32 35.1**	**+0.9**
HLIG					**Sn**	**14 33 08.6**	**-1.0**
HLIG	**Huajuapan de L**	**2.92**	**328**	*eP*	**Pn**	**14 32 35.1**	**+0.9**
HLIG				*eS*	**Sn**	**14 33 08.6**	**-1.0**
MGIG	**Malinaltepec**	**3.01**	**309**		**Pn**	**14 32 37.1**	**+1.7**
MGIG					**Sn**	**14 33 09.6**	**-2.2**
MGIG	**Malinaltepec**	**3.01**	**309**	*eP*	**Pn**	**14 32 37.1**	**+1.7**
MGIG				*eS*	**Sn**	**14 33 09.6**	**-2.2**
CRIG	**Cruz Grande**	**3.15**	**296**		**Pn**	**14 32 37.5**	**+0.2**
CRIG					**Sn**	**14 33 09.3**	**-5.8**
CRIG	**Cruz Grande**	**3.15**	**296**	*eP*	**Pn**	**14 32 37.5**	**+0.2**
CRIG				*i* S	**Sn**	**14 33 09.3**	**-5.8**
FTIG	**Fresnillo de T**	**3.16**	**324**		**Pn**	**14 32 38.6**	**+1.2**
FTIG					**Sn**	**14 33 14.4**	**-1.0**
FTIG	**Fresnillo de T**	**3.16**	**324**	*eP*	**Pn**	**14 32 38.6**	**+1.2**
FTIG				*eS*	**Sn**	**14 33 14.4**	**-1.0**
TLIG	**Tlapa**	**3.17**	**314**		**Pn**	**14 32 39.5**	**+1.8**
TLIG				Sn	**Sn**	**14 33 15.8**	**0.0**
TLIG	**Tlapa**	**3.17**	**314**	*eP*	**Pn**	**14 32 39.2**	**+1.5**
TLIG				*eS*	**Sn**	**14 33 11.1**	**-4.7**
TPIG	**Tehuac#an**	**3.26**	**340**		**Pb**	**14 32 46.7**	**+1.3**
TPIG					**Sn**	**14 33 18.3**	**+0.4**
TPIG	**Tehuac#an**	**3.26**	**340**	*eP*	**Pb**	**14 32 46.7**	**+1.3**
TPIG				*eS*	**Sn**	**14 33 18.3**	**+0.4**
TGIG		**3.27**	**64**		**Pn**	**14 32 38.8**	**-0.1**
TGIG					**Sn**	**14 33 15.2**	**-2.8**
TGIG		**3.27**	**64**	*eP*	**Pn**	**14 32 38.8**	**-0.1**
TGIG				*eS*	**Sn**	**14 33 15.2**	**-2.8**
DAIG	**Los Arroyos**	**3.73**	**297**		**Pn**	**14 32 45.9**	**+0.8**
DAIG					**Sn**	**14 33 24.2**	**-5.0**
DAIG	**Los Arroyos**	**3.73**	**297**	*eP*	**Pn**	**14 32 45.9**	**+0.8**
DAIG				*eS*	**Sn**	**14 33 24.2**	**-5.0**
PATR	**El Naranjo**	**3.82**	**93**		**Pn**	**14 32 46.4**	**-0.3**
PATR					**Sn**	**14 33 24.6**	**-7.3**
PATR	**El Naranjo**	**3.82**	**93**	*eP*	**Pn**	**14 32 46.4**	**-0.3**
PATR				*eS*	**Sn**	**14 33 24.6**	**-7.3**
PAVE	**Pavencul**	**3.87**	**92**		**Pn**	**14 32 47.1**	**-0.2**
PAVE					**Sn**	**14 33 27.8**	**-5.3**
PAVE	**Pavencul**	**3.87**	**92**	*eP*	**Pn**	**14 32 47.1**	**-0.2**
PAVE				*eS*	**Sn**	**14 33 27.8**	**-5.3**
CHUJ	**Union Juarez**	**3.94**	**93**	*eP*	**Pn**	**14 32 48.4**	**+0.1**
CHUJ				*eS*	**Sn**	**14 33 28.7**	**-6.1**
JAUV	**Jalcomulco**	**4.04**	**352**		**Pn**	**14 32 49.4**	**-0.1**
JAUV					**Sn**	**14 33 33.5**	**-3.5**
JAUV	**Jalcomulco**	**4.04**	**352**	*eP*	**Pn**	**14 32 49.4**	**-0.1**
JAUV				*eS*	**Sn**	**14 33 33.5**	**-3.5**
PPAX	**Atlixo**	**4.15**	**329**	*eP*	**Pb**	**14 33 00.4**	**-0.3**
PPAX				*eS*	**Sb**	**14 33 49.4**	**-1.6**
MEIG	**Mezcala**	**4.17**	**308**		**Pn**	**14 32 53.9**	**+2.5**
MEIG					**Sn**	**14 33 38.0**	**-2.4**
MEIG	**Mezcala**	**4.17**	**308**	*eP*	**Pn**	**14 32 53.9**	**+2.5**
MEIG				*eS*	**Sn**	**14 33 38.0**	**-2.4**
PBCV	**Popocatepetl**	**4.27**	**328**	*eP*	**Pb**	**14 33 01.4**	**-1.5**
PBCV				*eS*	**Sn**	**14 33 48.5**	**+5.4**
CAIG	**El Cayaco**	**4.27**	**294**		**Pn**	**14 32 53.5**	**+0.9**
CAIG	**El Cayaco**	**4.27**	**294**	*eP*	**Pn**	**14 32 53.5**	**+0.9**
CAIG				*eS*	**Sn**	**14 33 34.9**	**-7.9**
PPCU	**Popocatapetl**	**4.32**	**328**	*eP*	**Pn**	**14 32 58.1**	**+4.3**
PPCU				*eS*	**Sb**	**14 33 52.4**	**-3.8**
PPSX	**Xalitzintla**	**4.33**	**329**	*eP*	**Pn**	**14 32 58.0**	**+4.3**
PPSX				*eS*	**Sn**	**14 33 43.2**	**-1.4**
PBXN	**Popocatepetl**	**4.34**	**327**	*eP*	**Pn**	**14 32 56.8**	**+2.8**
PBXN				*eS*	**Sn**	**14 33 43.7**	**-1.4**
PBPN	**Popocatepetl**	**4.35**	**328**	*eP*	**Pn**	**14 32 56.9**	**+2.7**
PBPN				*eS*	**Sn**	**14 33 45.6**	**+0.1**
LVIG	**Laguna Verde**	**4.36**	**357**		**Pn**	**14 32 55.3**	**+1.6**
LVIG					**Sn**	**14 33 39.7**	**-5.1**
LVIG	**Laguna Verde**	**4.36**	**357**	*eP*	**Pn**	**14 32 55.3**	**+1.6**
LVIG				*eS*	**Sn**	**14 33 39.7**	**-5.1**
PLIG	**Platanillo**	**4.39**	**314**		**Pn**	**14 32 55.8**	**+1.5**
PLIG					**Sn**	**14 33 43.8**	**-1.9**
PLIG	**Platanillo**	**4.39**	**314**	*eP*	**Pn**	**14 32 55.8**	**+1.5**
PLIG				*eS*	**Sn**	**14 33 43.8**	**-1.9**
RTAL	**Retalhuleu**	**4.41**	**100**	Pn	**Pn**	**14 32 54.5**	**-0.1**
RTAL	**Retalhuleu**	**4.41**	**100**	*eS*	Sn	14 33 37.7	-8.5
YAIG	**Yautepec**	**4.45**	**322**		**Pn**	**14 32 55.0**	**-0.2**
YAIG					**Sn**	**14 33 45.6**	**-1.8**
YAIG	**Yautepec**	**4.45**	**322**	*eP*	**Pn**	**14 32 55.0**	**-0.2**
YAIG				*eS*	**Sn**	**14 33 45.6**	**-1.8**
HUEH	**Huehuetenango**	**4.51**	**90**	Sn	**Sn**	**14 33 48.0**	**-1.0**
MPVM	**San Francisco**	**4.69**	**325**		**Pn**	**14 33 02.8**	**+4.2**
MPVM					**Sn**	**14 33 50.8**	**-2.5**
MPVM	**San Francisco**	**4.69**	**325**	*eP*	**Pn**	**14 33 02.8**	**+4.2**
MPVM				*eS*	**Sn**	**14 33 50.8**	**-2.5**
THVM	**De Xico**	**4.76**	**326**		**Pb**	**14 33 08.5**	**-2.6**
THVM					**Sn**	**14 33 57.1**	**+2.0**
THVM	**De Xico**	**4.76**	**326**	*eP*	**Pb**	**14 33 08.5**	**-2.6**
THVM				*eS*	**Sn**	**14 33 57.1**	**+2.0**
TLVM	**San Miguel Top**	**4.78**	**324**		**Pb**	**14 33 08.7**	**-2.7**
TLVM					**Sn**	**14 33 53.8**	**-1.8**
TLVM	**San Miguel Top**	**4.78**	**324**	*eP*	**Pb**	**14 33 08.7**	**-2.7**
TLVM				*eS*	**Sn**	**14 33 53.8**	**-1.8**
XCVM	**Xochimilco**	**4.79**	**325**		Pn	14 33 04.8	+4.8
XCVM					**Sn**	**14 33 54.4**	**-1.4**
XCVM	**Xochimilco**	**4.79**	**325**	*eP*	Pn	14 33 04.8	+4.8
XCVM				*eS*	**Sn**	**14 33 54.4**	**-1.4**
UNM	**Universidad Na**	**4.88**	**325**	*eP*	**Pn**	**14 33 03.1**	**+1.8**
UNM				*eS*	**Sn**	**14 34 00.6**	**+2.4**
AOVM	**Tlapan**	**4.92**	**323**		Pb	14 33 09.1	-4.9
AOVM					**Sn**	**14 33 56.4**	**-2.9**
AOVM	**Tlapan**	**4.92**	**323**	*eP*	Pb	14 33 09.1	-4.9
AOVM				*eS*	**Sn**	**14 33 56.4**	**-2.9**
CXUV	**Coxquihui**	**4.98**	**345**		**Pn**	**14 33 04.7**	**+2.3**
CXUV					**Sn**	**14 34 00.3**	**0.0**
CXUV	**Coxquihui**	**4.98**	**345**	*eP*	**Pn**	**14 33 04.7**	**+2.3**
CXUV				*eS*	**Sn**	**14 34 00.3**	**0.0**
APG	**El Apazote** 0.2nm,0.3s,baz=205,slow=16,SNR=14	**5.53**	**93**	Pn	**Pn**	**14 33 10.4**	**+0.3**
APG	0.3nm,0.3s,baz=60,slow=23,SNR=8.6			Sn	**Sn**	**14 34 12.8**	**-1.2**
ZIIG	**Zihuatanejo**	**5.54**	**295**		**Pn**	**14 33 10.2**	**+0.1**
ZIIG					**Sn**	**14 34 08.3**	**-5.7**
ZIIG	**Zihuatanejo**	**5.54**	**295**	*eP*	**Pn**	**14 33 10.2**	**+0.1**
ZIIG				*eS*	**Sn**	**14 34 08.3**	**-5.7**
DEIG	**Demacu**	**5.62**	**332**	*eP*	Pn	14 33 16.5	+5.0
DEIG				*eS*	**Sn**	**14 34 15.8**	**-0.7**
DHIG	**Demacu**	**5.62**	**332**		Pn	14 33 16.5	+5.1
DHIG					**Sn**	**14 34 15.8**	**-0.7**
PETF	**Flores**	**6.27**	**75**		**Pn**	**14 33 19.9**	**-0.1**
CTUV	**Llano Grande**	**6.43**	**342**		Pb	14 33 31.5	-8.0
CTUV					**Sn**	**14 34 36.1**	**+0.2**
CTUV	**Llano Grande**	**6.43**	**342**	*eP*	Pb	14 33 31.5	-8.0
CTUV				*eS*	**Sn**	**14 34 36.1**	**+0.2**
MOIG	**Morelia**	**6.43**	**313**	Pn	**Pn**	**14 33 24.8**	**+2.3**
MOIG	**Morelia**	**6.43**	**313**	*eP*	**Pn**	**14 33 24.9**	**+2.3**
MOIG				*eS*	**Sn**	**14 34 29.2**	**-7.0**
ESQI	**Esquipulas**	**6.66**	**96**	Pn	**Pn**	**14 33 26.5**	**+0.9**
MTO3	**Montecristo**	**6.66**	**97**		**Pn**	**14 33 27.0**	**+1.3**
RPIG	**Rio Verde**	**7.43**	**332**		Pn	14 33 41.0	+4.8
RPIG					**Sn**	**14 34 56.7**	**-4.1**
RPIG	**Rio Verde**	**7.43**	**332**	*eP*	Pn	14 33 41.0	+4.8
RPIG				*eS*	**Sn**	**14 34 56.7**	**-4.1**
INCO	**Volcan de Coli**	**8.21**	**301**	*eP*	**Pn**	**14 33 50.9**	**+3.7**
INCO				*eS*	**Sn**	**14 35 18.8**	**-1.6**
CEGR	**Campo Tres**	**8.36**	**300**		**Pn**	**14 33 53.1**	**+4.1**
CEGR					**Sn**	**14 35 20.1**	**-3.5**
CEGR	**Campo Tres**	**8.36**	**300**	*eP*	**Pn**	**14 33 53.1**	**+4.1**
CEGR				*eS*	**Sn**	**14 35 20.1**	**-3.5**
TEIG	**Tepich**	**8.96**	**56**		**Pn**	**14 33 54.8**	**-2.2**
ZAIG	**Zacatecas**	**9.53**	**322**	Pn	**Pn**	**14 34 05.8**	**+0.6**
JTS	**Las Juntas de** 1.2nm,0.3s,baz=312,slow=2.9,SNR=5.2 2.7nm,0.3s	**12.05**	**113**	Pn	**Pn**	**14 34 41.3**	**+1.9**
JTS	**Las Juntas de**	**12.05**	**113**		**Pn**	**14 34 41.9**	**+2.4**
833A	**Chaparral WMA,**	**13.25**	**348**	Pn	**Pn**	**14 34 55.2**	**-0.6**
HNDO	**Hondo**	**14.40**	**349**		**Pn**	**14 35 10.5**	**-1.0**
SOR	**Soroa**	**14.48**	**57**	Pn	**Pn**	**14 35 10.1**	**-2.5**
HPIG		**14.52**	**324**	Pn	**Pn**	**14 35 14.4**	**+1.0**
HKT	**Hockley**	**14.54**	**1**	Pn	**Pn**	**14 35 10.9**	**-2.4**
HKT	**Hockley**	**14.54**	**1**		**Pn**	**14 35 11.5**	**-1.8**
JCT	**Junction City**	**15.42**	**348**	Pn	**Pn**	**14 35 24.4**	**-0.9**
JCT	comp=Z,8.0nm,0.3s			IAmb	IAmb	14 35 29.2	
SAND	**Sanderson**	**15.53**	**340**	Pn	**Pn**	**14 35 26.9**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=158,slow=14,SNR=33	**15.54**	**335**	Pn	**P**	**14 35 29.4**	**-1.8**
TXAR	comp=Z,410nm,18.7s,baz=143,slow=38 comp=Z,0.9nm,0.9s			LR	LR	14 41 34.3	
TXAR	**Lajitas Array**	**15.54**	**335**	Pn	**Pn**	**14 35 26.9**	**+0.1**
TX31	**Lajitas Ar. Si**	**15.54**	**335**	Pn	**Pn**	**14 35 27.5**	**+0.6**
LPIG	**La Paz** comp=Z,244nm,19.8s,baz=74,slow=35	**15.88**	**305**	LR	LR	14 41 05.1	
BRDY	**Brady**	**16.07**	**351**	Pn	**Pn**	**14 35 33.3**	**-0.4**
OZNA	**Ozona**	**16.15**	**345**		**Pn**	**14 35 33.9**	**-0.8**
ALPN	**Alpine** comp=Z,32nm,1.1s	**16.45**	**337**	P	**P**	**14 35 40.8**	**-0.7**
ALPN				IAmb	IAmb	14 35 45.9	
FW13	**Cleburne**	**16.97**	**356**		**Pn**	**14 35 46.0**	**+0.9**
FW13	comp=Z,18nm,0.7s			IAmb	IAmb	14 35 49.5	
MNHN	**Monahans**	**17.02**	**340**		**Pn**	**14 35 46.7**	**+0.9**
SGCY	**Sterling City**	**17.10**	**346**		**Pn**	**14 35 47.6**	**+0.8**
TREL	**Terrell**	**17.31**	**0**		**Pn**	**14 35 50.0**	**+0.

T25A	**Trinidad**	**22.90**	**343**	IAmb	IAmb	14 36 56.8	
	comp=Z,24nm,1.0s						
T47A	**Sharon Grove**	**23.02**	**19**	IAmb	IAmb	14 36 56.3	
	comp=Z,19nm,0.8s						
U49A	**Red Boiling Sp**	**23.03**	**22**	P	**P**	**14 36 50.9**	**-1.9**
S44A	**Carbondale**	**23.09**	**14**	IAmb	IAmb	14 36 55.1	
	comp=Z,24nm,0.9s						
113A	**Mohawk Valley,**	**23.57**	**320**	P	**P**	**14 36 58.9**	**+0.5**
USIN	**University of**	**23.75**	**17**	P	**P**	**14 36 59.2**	**-0.9**
Y14A	**Wickenburg**	**23.94**	**324**	IAmb	IAmb	14 37 07.1	
	comp=Z,8.8nm,1.0s						
P38A	**Dawn**	**24.30**	**5**	IAmb	IAmb	14 37 06.4	
	comp=Z,16nm,1.1s						
Q44A	**Meyer Farm, Va**	**24.30**	**14**	P	**P**	**14 37 04.4**	**-0.8**
P40A	**Paris**	**24.36**	**8**		**P**	**14 37 05.2**	**-0.5**
WCI	**Wyandotte Cave**	**24.41**	**19**	P	**P**	**14 37 05.3**	**-0.9**
GLA	**Glamis**	**24.42**	**320**	P	**P**	**14 37 07.4**	**+0.9**
GLA				IAmb	IAmb	14 37 11.8	
	comp=Z,11nm,1.0s						
U54A	**Nelsons Funny**	**24.67**	**29**	IAmb	IAmb	14 37 09.1	
	comp=Z,13nm,1.0s						
R49A	**Shelbyville**	**24.84**	**21**	IAmb	IAmb	14 37 12.3	
	comp=Z,11nm,0.8s						
S51A	**Beattyville**	**24.85**	**24**		**P**	**14 37 09.2**	**-1.1**
S51A				IAmb	IAmb	14 37 12.6	
	comp=Z,9.3nm,0.9s						
BC3	**Big Chuckawall**	**25.21**	**320**		**P**	**14 37 14.9**	**+1.2**
BC3				IAmb	IAmb	14 37 20.1	
	comp=Z,12nm,1.2s						
W13A	**Hualapai Mount**	**25.29**	**324**	IAmb	IAmb	14 37 25.8	
	comp=Z,9.2nm,1.3s						
PV13	**Radium Mtn., P**	**25.32**	**336**	IAmb	IAmb	14 37 20.0	
	comp=Z,13nm,1.2s						
PV05	**Paradox Valley**	**25.36**	**336**	IAmb	IAmb	14 37 20.2	
	comp=Z,11nm,1.1s						
IRM	**Iron Mountain**	**25.36**	**321**	IAmb	IAmb	14 37 21.5	
	comp=Z,17nm,1.2s						
PV03	**Paradox Valley**	**25.41**	**336**	IAmb	IAmb	14 37 20.9	
	comp=Z,16nm,1.1s						
U15A	**North Rim**	**25.44**	**329**	IAmb	IAmb	14 37 23.5	
	comp=Z,9nm,1.4s						
PV11	**David Mesa, Pa**	**25.46**	**336**	P	**P**	**14 37 16.2**	**+0.3**
PV11				IAmb	IAmb	14 37 36.6	
	comp=Z,15nm,1.1s						
PV16	**Nyswonger Mesa**	**25.48**	**336**	IAmb	IAmb	14 37 21.7	
	comp=Z,14nm,1.2s						
PV19	**Morning Glory**	**25.51**	**336**	IAmb	IAmb	14 37 21.2	
	comp=Z,14nm,1.0s						
PV20	**West Nyswonger**	**25.53**	**336**	IAmb	IAmb	14 37 23.6	
	comp=Z,12nm,0.9s						
ISCO	**Idaho Springs**	**25.72**	**343**	IAmb	IAmb	14 37 23.9	
	comp=Z,11nm,1.1s						
SDV	**Santo Domingo**	**25.78**	**101**	LR	LR	14 49 50.1	
	comp=Z,115nm,18.1s,baz=65,slow=42						
SDV	**Santo Domingo**	**25.78**	**101**		**P**	**14 37 20.0**	**+0.9**
SDV				IAmb	IAmb	14 37 27.0	
	comp=Z,6.8nm,0.8s						
BELC	**Belle Mtn. Jos**	**25.78**	**320**		**P**	**14 37 20.5**	**+1.6**
BELC				IAmb	IAmb	14 37 33.6	
	comp=Z,13nm,1.5s						
PMD	**Palm Desert**	**25.79**	**319**	P	**P**	**14 37 19.8**	**+1.0**
SFIN	**Lafayette**	**26.17**	**16**	IAmb	IAmb	14 37 23.0	
	comp=Z,14nm,0.8s						
Q52A	**Bidwell**	**26.52**	**25**	IAmb	IAmb	14 37 28.3	
	comp=Z,11nm,0.8s						
MTPU	**Mount Pierson**	**26.66**	**331**	IAmb	IAmb	14 37 35.6	
	comp=Z,9.1nm,1.2s						
CCUT	**Cedar City**	**26.85**	**329**	P	**P**	**14 37 29.2**	**+0.6**
L40A	**Anamosa**	**26.96**	**8**	IAmb	IAmb	14 37 40.0	
	comp=Z,15nm,1.1s						
P53A	**Whipple**	**27.32**	**26**	IAmb	IAmb	14 37 35.0	
	comp=Z,9.2nm,0.9s						
O52A	**Adamsville**	**27.67**	**24**	IAmb	IAmb	14 37 37.4	
	comp=Z,11nm,1.0s						
JFWS	**Jewell Farm**	**27.94**	**9**	IAmb	IAmb	14 37 39.2	
	comp=Z,14nm,0.9s						
BSUT	**Blindstream Ca**	**28.12**	**336**		**P**	**14 37 40.3**	**+0.1**
GMN	**Gold Mountain**	**28.77**	**323**	P	**P**	**14 37 46.8**	**+1.0**
TCUT	**Toone Canyon**	**28.88**	**336**	P	**P**	**14 37 46.4**	**-0.3**
TCUT				IAmb	IAmb	14 37 51.1	
	comp=Z,11nm,0.9s						
DSP	**Deep Springs**	**29.23**	**323**	IAmb	IAmb	14 37 54.8	
	comp=Z,8.7nm,1.4s						
PDAR	**Pinedale Array**	**29.64**	**340**	P	**P**	**14 37 55.1**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=169,slow=9.1,SNR=6.4						
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**29.64**	**340**	P	**P**	**14 37 54.0**	**+0.5**
H43A	**Windswept, Lux**	**29.89**	**12**	IAmb	IAmb	14 37 57.6	
	comp=Z,11nm,0.9s						
SPMN	**Marine on St.**	**29.92**	**5**	P	**P**	**14 37 54.2**	**-1.4**
SPMN				IAmb	IAmb	14 37 57.2	
	comp=Z,6.0nm,0.6s						
NVAR	**Mina Array Bea**	**30.14**	**324**	P	**P**	**14 38 02.1**	**+4.1**
	comp=Z,4.3nm,0.9s,baz=144,slow=9.8,SNR=17						
NVAR				LR	LR	14 51 00.8	
	comp=Z,158nm,20.2s,baz=138,slow=38						
	comp=Z,4.3nm,0.9s						
NVAR	**Mina Array Bea**	**30.14**	**324**	P	**P**	**14 37 59.4**	**+1.4**
ELK	**Elko**	**30.25**	**330**	LR	LR	14 51 13.0	
	comp=Z,172nm,19.4s,baz=126,slow=39						
ELK	**Elko**	**30.25**	**330**		**P**	**14 38 00.1**	**+1.2**
ECR	**Eagle Creek**	**30.52**	**338**	P	**P**	**14 38 01.1**	**-0.2**
ECR				IAmb	IAmb	14 38 06.2	
	comp=Z,6.1nm,0.9s						
I49A	**Point Hope**	**30.68**	**19**	P	**P**	**14 38 01.6**	**-0.8**
LOHW	**Long Hollow**	**30.74**	**339**	IAmb	IAmb	14 38 07.0	
	comp=Z,5.9nm,0.9s						
E38A	**The Farm, Brul**	**31.40**	**6**	IAmb	IAmb	14 38 11.5	
	comp=Z,12nm,1.1s						
HLID	**Hailey**	**32.14**	**335**	IAmb	IAmb	14 38 18.9	
	comp=Z,5.1nm,1.3s						
SADO	**Sadowa**	**32.68**	**23**	LR	LR	14 54 30.8	
	comp=Z,41nm,19.2s,baz=180,slow=42						
AGMN	**Agassiz Nation**	**32.86**	**0**		**P**	**14 38 21.3**	**-0.2**
AGMN				IAmb	IAmb	14 38 22.5	
	comp=Z,7.1nm,0.9s						
BUKO	**Buck Lake**	**33.16**	**22**	IAmb	IAmb	14 38 25.0	
	comp=Z,8.2nm,0.9s						
WVOR	**Wild Horse Val**	**33.18**	**329**	P	**P**	**14 38 25.9**	**+1.3**
WVOR				IAmb	IAmb	14 38 28.8	
	comp=Z,8.4nm,1.2s						
PLID	**Pearl Lake**	**34.04**	**335**	IAmb	IAmb	14 38 35.2	
	comp=Z,6.3nm,1.1s						
EPLO	**Experimental L**	**34.29**	**3**	IAmb	IAmb	14 38 36.7	
	comp=Z,5.0nm,0.9s						
ULM	**Lac du Bonnet**	**34.81**	**0**	P	**P**	**14 38 38.1**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=171,slow=5.9,SNR=4.2						
ULM				LR	LR	14 53 43.1	
	comp=Z,87nm,18.3s,baz=144,slow=38						
	comp=Z,3.8nm,0.9s						
ULM	**Lac du Bonnet**	**34.81**	**0**	IAmb	IAmb	14 38 43.3	
	comp=Z,4.0nm,0.9s						
YBH	**Yreka Blue Hor**	**34.86**	**324**	LR	LR	14 53 45.1	
	comp=Z,38nm,20.8s,baz=156,slow=38						
NEW	**Newport**	**37.08**	**337**	LR	LR	14 54 55.8	
	comp=Z,101nm,19.5s,baz=168,slow=38						
D62A	**Allapoint, All**	**38.85**	**30**	IAmb	IAmb	14 39 17.9	
	comp=Z,12nm,1.2s						
EDM	**Edmonton**	**40.14**	**344**	IAmb	IAmb	14 39 26.1	
	comp=Z,13nm,1.0s						
LPAZ	**La Paz**	**41.89**	**137**	P	**P**	**14 39 41.8**	**+2.6**
	comp=Z,1.3nm,0.8s,baz=335,slow=8.1,SNR=4.6						
	comp=Z,1.3nm,0.8s						
LPAZ	**La Paz**	**41.89**	**137**	P	**P**	**14 39 41.7**	**+2.6**
FCC	**Fort Churchill**	**43.37**	**2**	P	**P**	**14 39 50.5**	**+0.7**
MDP	**Montagnes des**	**43.96**	**99**	LR	LR	14 58 43.6	
	comp=Z,71nm,20.2s,baz=266,slow=37						
BBB	**Bella Bella**	**44.65**	**332**	LR	LR	14 58 24.7	
	comp=Z,198nm,18.1s,baz=166,slow=36						
SCHQ	**Schefferville**	**45.49**	**23**	P	**P**	**14 40 05.5**	**-1.5**
	comp=Z,3.8nm,0.9s,baz=234,slow=8.2,SNR=4.9						
SCHQ				LR	LR	15 01 51.8	
	comp=Z,63nm,18.4s,baz=118,slow=40						
	comp=Z,3.8nm,0.9s						
SCHQ	**Schefferville**	**45.49**	**23**	P	**P**	**14 40 06.0**	**-0.9**
SCHQ				IAmb	IAmb	14 40 09.9	
	comp=Z,7.8nm,1.1s						
YKA	**Yellowknife Ar**	**48.86**	**349**	P	**P**	**14 40 33.6**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=157,slow=7.5,SNR=5.8						
YKA				LR	LR	15 03 10.7	
	comp=Z,104nm,19.8s,baz=260,slow=39						
	comp=Z,2.1nm,0.8s						
YKA	**Yellowknife Ar**	**48.86**	**349**	P	**P**	**14 40 34.1**	**+1.1**
BLKN	**Baker Lake**	**48.92**	**0**		**P**	**14 40 33.8**	**+0.3**
BLKN				IAmb	IAmb	14 40 35.5	
	comp=Z,6.1nm,1.1s						
YKAW3	**Yellowknife Wh**	**48.92**	**349**	P	**P**	**14 40 34.5**	**+0.9**
YKAW3				IAmb	IAmb	14 40 39.7	
	comp=Z,4.5nm,0.9s						
DLBC	**Dease Lake**	**49.82**	**337**	LR	LR	15 00 45.6	
	comp=Z,270nm,18.1s,baz=114,slow=35						
WTLY	**Watson Lake, Y**	**50.60**	**340**	P	**P**	**14 40 48.7**	**+2.2**
WTLY				IAmb	IAmb	14 40 50.5	
	comp=Z,5.5nm,0.9s						
FRB	**Frobisher Bay**	**52.00**	**15**	LR	LR	15 05 59.8	
	comp=Z,41nm,18.1s,baz=144,slow=40						
MMPY	**Sheldon Lake,**	**53.25**	**341**	IAmb	IAmb	14 41 10.2	
	comp=Z,9.1nm,1.2s						
ILON	**Igloolik, Nuna**	**54.75**	**6**		**P**	**14 41 17.4**	**+0.5**
M29M	**Somme Creek**	**55.61**	**338**	IAmb	IAmb	14 41 29.0	
	comp=Z,5.7nm,1.2s						
L29M	**L29M**	**55.91**	**338**	IAmb	IAmb	14 41 31.1	
	comp=Z,5.0nm,0.9s						
BDFB	**Brasilia**	**56.67**	**121**	P	**P**	**14 41 35.0**	**+3.3**
	comp=Z,1.1nm,0.3s,baz=295,slow=15,SNR=1.9						
	comp=Z,1.1nm,0.3s						
BDFB	**Brasilia**	**56.67**	**121**	P	**P**	**14 41 34.0**	**+2.3**
DAWY	**Dawson**	**56.94**	**339**	P	**P**	**14 41 34.6**	**+1.7**
K27K	**Chicken**	**57.87**	**338**	IAmb	IAmb	14 41 43.6	
	comp=Z,6.1nm,1.2s						
INK	**Inuvik**	**58.04**	**345**	LR	LR	15 07 19.0	
	comp=Z,136nm,18.2s,baz=210,slow=37						
INK	**Inuvik**	**58.04**	**345**		**P**	**14 41 41.9**	**+1.5**
INK				IAmb	IAmb	14 41 43.3	
	comp=Z,6.7nm,0.8s						
F30M	**Barrier River**	**58.15**	**343**	IAmb	IAmb	14 41 44.3	
	comp=Z,6.8nm,1.0s						
POIN	**Pond Inlet**	**58.32**	**6**	P	**P**	**14 41 42.9**	**+0.6**
POIN				IAmb	IAmb	14 41 44.7	
	comp=Z,5.9nm,1.0s						
SCRK	**Sand Creek**	**58.54**	**337**		**P**	**14 41 45.5**	**+1.3**
SCRK				IAmb	IAmb	14 41 48.2	
	comp=Z,5.2nm,1.2s						
H27K	**Steamboat Moun**	**58.98**	**340**	IAmb	IAmb	14 41 50.8	
	comp=Z,8.1nm,1.5s						
F28M	**Old Crow**	**59.32**	**342**	IAmb	IAmb	14 41 52.8	
	comp=Z,6.6nm,1.1s						
RES	**Resolute Bay**	**59.34**	**0**	LR	LR	15 08 21.5	
	comp=Z,46nm,18.9s,baz=114,slow=37						
G27K	**Doyon Strip**	**59.37**	**341**	IAmb	IAmb	14 41 52.2	
	comp=Z,4.0nm,1.2s						
PRP	**Porcupine Dome**	**59.93**	**339**	IAmb	IAmb	14 41 57.3	
	comp=Z,8.6nm,1.4s						
ILAR	**Eielson Array**	**60.03**	**337**	P	**P**	**14 41 56.5**	**+2.1**
	comp=Z,2.1nm,1.0s,baz=132,slow=4.7,SNR=18						
ILAR				LR	LR	15 10 36.5	
	comp=Z,103nm,19.1s,baz=108,slow=39						
	comp=Z,2.1nm,1.0s						
ILAR	**Eielson Array**	**60.03**	**337**		**P**	**14 41 56.1**	**+1.8**
E27K	**Coleen River**	**60.19**	**342**	IAmb	IAmb	14 41 58.3	
	comp=Z,6.1nm,1.2s						
WRH	**Wood River Hil**	**60.33**	**337**	P	**P**	**14 41 58.3**	**+1.9**
WRH				IAmb	IAmb	14 42 01.4	
	comp=Z,3.9nm,1.1s						
RED	**Redoubt Volcan**	**60.53**	**332**	P	**P**	**14 41 59.9**	**+1.9**
H24K	**Noodor Dome**	**60.93**	**338**	IAmb	IAmb	14 42 03.2	
	comp=Z,8.1nm,1.4s						
F25K	**Christian Rive**	**61.10**	**341**	IAmb	IAmb	14 42 06.7	
	comp=Z,3.6nm,1.4s						
I23K	**Minto, Yukon-K**	**61.13**	**337**	P	**P**	**14 42 04.0**	**+2.2**
CAST	**Castle Rocks**	**61.43**	**335**	IAmb	IAmb	14 42 06.7	
	comp=Z,9.4nm,1.5s						
N19K	**Bonanza Creek**	**61.46**	**332**		**P**	**14 42 06.7**	**+2.5**
MLY	**Manley**	**61.60**	**337**		**P**	**14 42 07.2**	**+2.2**
MLY				IAmb	IAmb	14 42 09.9	
	comp=Z,5.8nm,1.1s						
I21K	**Tanana**	**62.14**	**337**	IAmb	IAmb	14 42 15.1	
	comp=Z,5.6nm,1.2s						
D25K	**Kavik River**	**62.27**	**342**	IAmb	IAmb	14 42 14.0	
	comp=Z,3.6nm,1.1s						
E23K	**Chandalar**	**62.63**	**340**	IAmb	IAmb	14 42 15.4	
	comp=Z,4.9nm,1.2s						
J19K	**Poorman**	**63.10**	**335**		**P**	**14 42 15.9**	**+0.8**
C24K	**Franklin Bluff**	**63.18**	**342**	P	**P**	**14 42 17.8**	**+2.4**
F20K	**Avaraart Lake**	**64.29**	**338**	IAmb	IAmb	14 42 25.7	
	comp=Z,6.4nm,1.4s						
D20K	**Etivluk River**	**65.25**	**340**	IAmb	IAmb	14 42 31.9	
	comp=Z,3.0nm,0.9s						
BORG	**Borgarnes**	**69.77**	**26**	LR	LR	15 14 35.5	
	comp=Z,27nm,18.3s,baz=232,slow=37						
EKA	**Eskdalemuir Ar**	**79.23**	**36**	P	**P**	**14 43 53.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=278,slow=5.7,SNR=3.5						
	comp=Z,0.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**79.57**	**11**	LR	LR	15 21 31.9	
	comp=Z,56nm,18.9s,baz=296,slow=38						
ESDC	**Sonseca Array**	**82.04**	**51**	P	**P**	**14 44 09.1**	**+0.7**
	comp=Z,2.0nm,1.1s,baz=285,slow=4.9,SNR=7.6						
	comp=Z,2.0nm,1.1s						
ESDC	**Sonseca Array**	**82.04**	**51**	P	**P**	**14 44 08.2**	**-0.2**
MD01	**Midelt array s**	**83.00**	**58**	P	**P**	**14 44 14.6**	**+0.9**
NOA	**NORSAR Array B**	**84.87**	**28**	P	**P**	**14 44 24.3**	**+1.8**
	comp=Z,1.4nm,0.9s,baz=297,slow=5.1,SNR=3.5						
NOA				LR	LR	15 21 53.1	
	comp=Z,10nm,20.6s,baz=300,slow=36						
	comp=Z,1.4nm,0.9s						
HFS	**Hagfors**	**86.36**	**28**	LR	LR	15 24 15.7	
	comp=Z,23nm,18.3s,baz=192,slow=37						
TIXI	**Tiksi**	**88.08**	**347**	LR	LR	15 29 55.4	
	comp=Z,46nm,18.3s,baz=82,slow=40						

*SOME **01** 14:42:13.6, 39°.32N×73°.83E, h15km*
*NNC **01** 14:42:13.1±3.6, 39°.34N×73°.84E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=26.7km s-min=15.6km az=171.0*
*KRNET **01** 14:42:26.2±0.1, 39°.72N×73°.83E, h15km, mb3.4*
*NEIC **01** 14:42:27.4±1.3, 39°.80N±0°.05×73°.84E±0°.07, h10km±1km, mb4.5/17, Error ellipse: s-maj=10.0km s-min=8.0km az=139.0*

ISC 01 14:42:26.7±0.6, 39°.74N±0°.03×73°.85E±0°.03, h10km, n81, σ1$59/109, mb4.5/9, 30C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.39**	**316**	⇓	*eP*	**14 42 33.4**	**-1.0**
SFK				⇓	*eS*	**14 42 40.1**	**+0.5**
OHH	**Osh**	**1.14**	**314**	⇑	*iP*	**14 42 47.2**	**-1.3**
OHH				⇑	*iS*	**14 43 02.7**	**-0.6**
DRK	**Karamyk**	**1.61**	**261**			**14 42 55.8**	**+0.4**
DRK	**Karamyk**	**1.61**	**261**	⇑	*iP*	**14 42 55.5**	**+0.1**
DRK				⇑	*iS*	**14 43 16.5**	**+0.1**
ARSB	**Arslanbob**	**1.72**	**338**			**14 42 57.4**	**+0.6**
ARSB	**Arslanbob**	**1.72**	**338**	⇑	*iP*	**14 42 57.7**	**+0.9**
ARSB				⇑	*iS*	**14 43 20.5**	**+0.3**
NRN	**Naryn**	**2.35**	**43**			**14 43 04.9**	**-0.8**
NRN	**Naryn**	**2.35**	**43**	⇑	*iP*	**14 43 06.1**	**+0.4**
NRN				⇑	*iS*	**14 43 35.3**	**+0.4**
BTK	**Batken**	**2.36**	**279**			**14 43 05.7**	**+0.1**
BTK	**Batken**	**2.36**	**279**	⇑	*iP*	**14 43 06.3**	**+0.7**
BTK				⇑	*iS*	**14 43 35.2**	**+0.6**
ARK	**Arkit**	**2.51**	**326**	⇑	*iP*	**14 43 08.8**	**+1.1**
ARK				⇑	*iS*	**14 43 39.5**	**+1.1**
UCH	**Uchtor**	**2.54**	**11**	⇓	*iP*	**14 43 09.6**	**+1.2**
UCH				⇓	*iS*	**14 43 41.1**	**+1.5**
TRKS	**Terek-Say**	**2.73**	**312**	⇑	*iP*	**14 43 11.0**	**+0.2**
TRKS				⇑	*iS*	**14 43 43.5**	**-0.5**
MANEM	**Manem**	**2.77**	**219**			**14 43 13.2**	**+1.7**
GAR	**Garm**	**2.84**	**256**			**14 43 13.6**	**+1.3**
GAR	**Garm**	**2.84**	**256**	⇓	*iP*	**14 43 12.7**	**+0.5**
GAR				⇓	*iS*	**14 43 46.8**	**+0.3**
EKS2	**Erkin-Say**	**2.92**	**359**	⇓	*iP*	**14 43 14.7**	**+1.3**
EKS2				⇓	*iS*	**14 43 49.5**	**+0.9**
MNAS	**Manas**	**2.93**	**340**	⇑	*iP*	**14 43 14.8**	**+1.3**
MNAS				⇑	*iS*	**14 43 50.1**	**+1.3**
AAK	**Ala-Archa**	**2.94**	**9**			**14 43 13.1**	**-0.5**
AAK	**Ala-Archa**	**2.94**	**9**	⇓	*iP*	**14 43 15.1**	**+1.5**
AAK				⇓	*iS*	**14 43 50.1**	**+1.1**
KBK	**Karagaybulak**	**3.03**	**15**	⇓	*iP*	**14 43 16.2**	**+1.3**
KBK				⇓	*iS*	**14 43 52.6**	**+1.3**
MRKS	**Merke**	**3.04**	**351**		Pg	**14 43 17.5**	**+2.5**
	6.7nm,0.2s						
MRKS					Lg	14 44 04.3	
	35nm,0.3s						
MRKS	**Merke**	**3.04**	**351**		*eP*	**14 43 16.8**	**+1.8**
	6.7nm,0.2s						
MRKS					*eS*	**14 44 02.1**	**-2.3**
	40nm,0.3s						
FRU1	**Bishkek**	**3.12**	**11**	⇑	*iP*	**14 43 17.6**	**+1.5**
FRU1				⇑	*iS*	**14 43 55.1**	**+1.6**
BOOM	**Boomskoye usch**	**3.17**	**29**			**14 43 17.5**	**+0.6**
BOOM	**Boomskoye usch**	**3.17**	**29**	⇑	*iP*	**14 43 17.7**	**+0.9**
BOOM				⇑	*iS*	**14 43 55.9**	**+1.1**
CHMS	**Chumysh**	**3.33**	**11**	⇑	*iP*	**14 43 20.3**	**+1.4**
CHMS				⇑	*iS*	**14 43 59.3**	**+0.8**
TKM2	**Tokmak 2**	**3.44**	**22**	⇑	*iP*	**14 43 21.8**	**+1.2**
TKM2				⇑	*iS*	**14 44 02.2**	**+0.7**
KDJ	**Kajisay**	**3.47**	**45**		Pn	**14 43 22.1**	**+1.2**
KDJ	**Kajisay**	**3.47**	**45**	⇓	*iP*	**14 43 22.4**	**+1.4**
KDJ				⇓	*iS*	**14 44 03.2**	**+0.9**
USP	**Ospenovka**	**3.56**	**8**	⇑	*iP*	**14 43 23.5**	**+1.4**
USP				⇑	*iS*	**14 44 04.9**	**+0.7**
TARG	**Taragay, Kyrgy**	**3.60**	**55**		Pn	**14 43 22.2**	**-0.7**
TARG	**Taragay, Kyrgy**	**3.60**	**55**	⇑	*iP*	**14 43 24.2**	**+1.2**
TARG				⇑	*iS*	**14 44 06.1**	**+0.4**
KST	**Kastek**	**3.66**	**25**		Pg	**14 43 22.9**	**-0.6**
	2.7nm,0.2s						
KST					Lg	14 44 12.7	
	11nm,0.3s						
KST	**Kastek**	**3.66**	**25**		*eP*	**14 43 27.0**	**+3.4**
	2.9nm,0.5s						
KST					*eS*	**14 44 19.5**	**+3.4**
	16nm,0.7s						
SGDS	**Sogindy**	**3.76**	**9**		Pg	**14 43 30.7**	**-2.5**
	5.0nm,0.3s						
SGDS					Lg	14 44 26.2	
	6.2nm,0.5s						
IUG	**Iuzhnay**	**3.77**	**311**		Pg	**14 43 25.7**	**+0.8**
	33nm,0.2s						
IUG					Lg	14 44 17.9	
	37nm,0.5s						
IUG	**Iuzhnay**	**3.77**	**311**		*eP*	**14 43 27.7**	**+2.8**
	33nm,0.2s						
IUG					*eS*	**14 44 20.9**	**+1.9**
	31nm,0.7s						
CHGR	**Chuyangaron**	**3.80**	**255**		Pn	**14 43 25.0**	**-0.4**
CHGR	**Chuyangaron**	**3.80**	**255**	⇑	*iP*	**14 43 26.2**	**+0.7**
CHGR				⇑	*iS*	**14 44 09.6**	**-0.7**
IZV	**Izvestkoviy**	**3.89**	**31**		Pg	**14 43 28.5**	**+1.7**
	5.7nm,0.3s						
IZV					Lg	14 44 23.3	
	12nm,0.5s						
IZV	**Izvestkoviy**	**3.89**	**31**		*eP*	**14 43 30.8**	**+4.0**
	3.2nm,0.2s						
IZV					*eS*	**14 44 26.2**	**+3.4**
	13nm,0.5s						
MDOK	**Medeo**	**4.18**	**34**		Pg	**14 43 37.2**	**-3.2**
	6.4nm,0.4s						
MDOK					Lg	14 44 38.1	
	19nm,0.7s						
KRBS	**Karabastau**	**4.18**	**18**		Pg	**14 43 38.3**	**-2.2**
	4.6nm,0.4s						
KRBS					Lg	14 44 39.4	
	14nm,0.7s						
KRBS	**Karabastau**	**4.18**	**18**		*eP*	**14 43 38.3**	**-2.2**
	4.6nm,0.4s						
KRBS					*eS*	**14 44 39.4**	**-1.6**
	14nm,0.7s						
KK31	**Karatay Array**	**4.20**	**324**			**14 43 31.6**	**+0.9**
KKAR	**Karatay Array**	**4.20**	**324**			**14 43 30.6**	**-0.2**
KOTS	**Kotyrbulak**	**4.26**	**34**		Pg	14 43 37.7	-4.2
	9.7nm,0.5s						
KOTS					Lg	14 44 38.7	
	20nm,0.7s						
KOTS	**Kotyrbulak**	**4.26**	**34**		*eP*	Pb	14 43 37.7 -4.2
	9.7nm,0.5s						
KOTS					*eS*	**14 44 38.7**	**+5.2**
	20nm,0.7s						
PRZ	**Przheval'sk**	**4.39**	**50**	Pn	Pn	**14 43 34.4**	**+0.7**
KTBS	**Karatobe**	**4.50**	**27**	Pg	**Pb**	**14 43 42.7**	**-3.1**
	0.3nm,0.1s						
KTBS					Lg	14 44 46.9	
	16nm,0.6s						
KTBS	**Karatobe**	**4.50**	**27**		*eP*	**Pb**	**14 43 42.7**	**-3.1**
	0.3nm,0.1s						
KTBS					*eS*	**Sg**	**14 44 46.9**	**-4.2**
	16nm,0.6s						
SHAA	**Shahritus**	**4.98**	**246**	Pn	Pn	**14 43 41.4**	**-0.2**
KPKS	**Kokpek**	**5.19**	**43**	Pg	Pb	14 43 53.6	-4.1
	0.3nm,0.1s						
KPKS					Lg	14 45 06.1	
	7.5nm,0.4s						
KPKS	**Kokpek**	**5.19**	**43**		*eP*	**Pb**	**14 43 56.0**	**-1.7**
	0.3nm,0.3s						
KPKS					*eS*	**Sg**	**14 45 09.4**	**-4.1**
	7.5nm,0.4s						
ARXS	**Arharly**	**5.36**	**32**	Pg	Pb	**14 43 58.2**	**-2.3**
	4.9nm,0.5s						
ARXS					Lg	14 45 14.0	
	10.0nm,0.5s						
ARXS	**Arharly**	**5.36**	**32**		*eP*	**Pb**	**14 44 00.9**	**+0.3**
	3.0nm,0.5s						
ARXS					*eS*

OUENC	**Ouen Island, N**	**5.93**	**181**	P		**Pn**	**14 59 56.5**	**+0.9**
OUENC	**Ouen Island, N**	**5.93**	**181**			**Pn**	**14 59 56.5**	**+0.9**
OUENC						**Sn**	**15 01 01.1**	**-2.0**
HURO	**Huro Makira**	**7.72**	**320**	P		Pn	15 00 27.0	+6.8
HNR	**Honiara**	**9.76**	**315**	Pn		**Pn**	**15 00 47.7**	**-0.5**
	0.4nm,0.3s,baz=246,slow=3.2,SNR=5.3							
HNR				Sn		**Sn**	**15 02 30.9**	**-6.6**
	baz=355,slow=7.1,SNR=1.5							
HNR				LR	LR		15 04 01.9	
	comp=Z,11nm,21.8s,baz=248,slow=35							
HNR	**Honiara**	**9.76**	**315**	Pn		**Pn**	**15 00 49.0**	**+0.8**
SAVO	**Savo Central**	**10.06**	**315**	P		Pn	15 00 59.5	+7.2
MSVF	**Nonsavu**	**10.69**	**98**	Pn		**Pn**	**15 01 01.4**	**+0.3**
	0.2nm,0.3s,baz=221,slow=20,SNR=1.9							
MSVF				LR	LR		15 04 25.7	
	comp=Z,520nm,19.1s,baz=216,slow=33							
	0.8nm,0.3s							
MSVF	**Nonsavu**	**10.69**	**98**	Pn		**Pn**	**15 00 59.5**	**-1.6**
LHI	**Lord Howe Isla**	**16.62**	**204**	P		**P**	**15 02 23.4**	**+0.2**
EIDS	**Eidsvold**	**17.26**	**236**	P		**P**	**15 02 30.8**	**+0.6**
	comp=Z,20nm,1.0s,comp=Z,0.0nm,7.1s							
EIDS	**Eidsvold**	**17.26**	**236**	P		**P**	**15 02 30.9**	**+0.6**
ARMA	**Armidale**	**19.73**	**223**	P		**Pn**	**15 03 05.0**	**+5.9**
	comp=Z,27nm,0.8s,comp=Z,0.0nm,7.1s							
ARMA	**Armidale**	**19.73**	**223**	P		**P**	**15 02 57.6**	**+0.1**
CTA	**Charters Tower**	**19.98**	**256**	P		**P**	**15 02 59.3**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=149,slow=2.0,SNR=3.3							
CTA				LR	LR		15 09 48.2	
	comp=Z,177nm,18.1s,baz=90,slow=34							
	comp=Z,4.6nm,0.8s							
CTAO	**Charters Tower**	**19.98**	**256**	P		**P**	**15 02 59.6**	**-0.6**
PMG	**Port Moresby**	**20.51**	**288**	LR		LR	15 10 02.5	
	comp=Z,323nm,18.5s,baz=106,slow=34							
MTSU	**Mount Surprise**	**21.67**	**262**	P		**P**	**15 03 20.1**	**+1.6**
	comp=Z,25nm,0.9s,comp=Z,0.0nm,1.1s							
NIUE	**Niue**	**22.17**	**100**	P		**P**	**15 03 22.8**	**-1.1**
COEN	**Coen**	**23.07**	**273**	P		**P**	**15 03 33.1**	**-0.3**
	comp=Z,28nm,1.1s,comp=Z,0.0nm,6.9s							
COEN	**Coen**	**23.07**	**273**	P		**P**	**15 03 34.1**	**+0.6**
COEN				IAmb	IAmb		15 03 36.4	
	comp=Z,32nm,1.1s							
QLP	**Quilpie**	**23.37**	**241**	P		**P**	**15 03 39.1**	**+2.7**
	comp=Z,30nm,1.7s,comp=Z,0.0nm,1.0s							
MANU	**Manus Island**	**24.01**	**305**	P		**P**	**15 03 43.1**	**+0.4**
CMSA	**Cobar Meteorol**	**24.48**	**228**	P		**P**	**15 03 47.2**	**+0.4**
	comp=Z,48nm,0.8s,comp=Z,0.0nm,6.7s							
INKA	**Innaminka**	**26.69**	**241**	P		**P**	**15 04 05.8**	**-1.0**
RPZ	**Rata Peaks**	**27.39**	**174**	LR		LR	15 14 09.4	
	comp=Z,50nm,19.6s,baz=245,slow=34							
STKA	**Stephens Creek**	**27.66**	**232**	P		P	15 04 26.3	+11
	comp=Z,85nm,1.5s,comp=Z,0.0nm,7.1s							
STKA	**Stephens Creek**	**27.66**	**232**	P		**P**	**15 04 15.6**	**0.0**
	comp=Z,3.8nm,0.7s,baz=39,slow=6.6,SNR=4.4							
	comp=Z,3.8nm,0.7s							
WR8	**Warramunga Arr**	**30.99**	**259**	P		**P**	**15 04 44.7**	**-0.6**
WR8				IAmb	IAmb		15 05 13.5	
	comp=Z,9.5nm,1.1s							
WB0	**Warramunga Arr**	**31.09**	**259**	P		**P**	**15 04 45.4**	**-0.8**
WB0				IAmb	IAmb		15 05 03.2	
	comp=Z,12nm,1.0s							
WRA	**Warramunga Arr**	**31.14**	**259**	P		**P**	**15 04 45.5**	**-1.2**
	comp=Z,3.5nm,0.9s,baz=87,slow=7.9,SNR=23							
	comp=Z,3.5nm,0.9s							
WRA	**Warramunga Arr**	**31.14**	**259**			**P**	**15 04 45.8**	**-0.8**
AS17	**Alice Springs**	**31.72**	**252**	P		**P**	**15 04 52.2**	**+0.5**
	comp=Z,18nm,0.9s,comp=Z,0.0nm,0.9s							
AS09	**Alice Springs**	**31.77**	**252**	P		**P**	**15 04 52.4**	**+0.2**
	comp=Z,20nm,0.8s,comp=Z,0.0nm,0.7s							
AS15	**Alice Springs**	**31.79**	**252**	P		**P**	**15 04 52.5**	**+0.1**
	comp=Z,19nm,0.9s,comp=Z,0.0nm,1.3s							
AS31	**Alice Springs**	**31.80**	**252**	P		**P**	**15 04 52.2**	**-0.2**
	comp=Z,5.5nm,0.7s,comp=Z,0.0nm,4.7s							
AS31	**Alice Springs**	**31.80**	**252**			**P**	**15 04 52.2**	**-0.2**
ASAR	**Alice Springs**	**31.80**	**252**	P		**P**	**15 04 52.0**	**-0.5**
	comp=Z,11nm,0.8s,baz=78,slow=9.1,SNR=77							
ASAR				LR	LR		15 17 14.9	
	comp=Z,282nm,18.6s,baz=80,slow=36							
	comp=Z,11nm,0.8s							
ASAR	**Alice Springs**	**31.80**	**252**	P		**P**	**15 04 51.8**	**-0.6**
RAR	**Rarotonga**	**31.81**	**104**	LR		LR	15 15 10.4	
	comp=Z,48nm,20.9s,baz=222,slow=32							
BBOO	**Buckleboo**	**32.30**	**234**	P		**P**	**15 04 56.2**	**-0.4**
KNRA	**Kununurra**	**36.67**	**266**	P		**P**	**15 05 30.3**	**-4.3**
	comp=Z,31nm,1.2s,comp=Z,0.0nm,7.8s							
GUMO	**Guam**	**36.98**	**323**	LR		LR	15 19 37.6	
	comp=Z,67nm,19.2s,baz=141,slow=34							
SIJI	**Sorong**	**38.41**	**290**	LR		LR	15 21 13.9	
	comp=Z,147nm,20.5s,baz=124,slow=36							
FITZ	**Fitzroy Crossi**	**39.42**	**261**	LR		LR	15 22 13.4	
	comp=Z,243nm,18.0s,baz=50,slow=36							
FITZ	**Fitzroy Crossi**	**39.42**	**261**			**P**	**15 05 57.8**	**-0.1**
TBI	**Tubuai**	**41.44**	**107**	*e*LR		LR	15 17 36.8	
	comp=Z,1µm,30.5s							
TBI				*e*LR		LR	15 17 42.1	
	comp=Z,792nm,36.5s							
PPT2	**Papeete2**	**41.52**	**98**	*e*LR		LR	15 17 39.0	
	comp=Z,88nm,27.0s							
PPT2				*e*LR		LR	15 17 41.8	
	comp=Z,97nm,27.0s							
PPT	**Papeete**	**41.52**	**98**	LR		LR	15 19 35.2	
	comp=Z,140nm,21.9s,baz=270,slow=30							
MBWA	**Marble Bar**	**44.81**	**256**	P		**P**	**15 06 42.1**	**+0.2**
MBWA				IAmb	IAmb		15 06 47.5	
	comp=Z,9.7nm,1.2s							
MORW	**Morawa**	**48.26**	**246**	P		**P**	**15 07 09.2**	**+0.4**
TOLI2	**Tolitoli**	**48.77**	**286**	P		**P**	**15 07 12.1**	**-0.8**
TOLI2				IAmb	IAmb		15 07 25.4	
	comp=Z,6.8nm,0.8s							
KKM	**Kota Kinabalu**	**54.93**	**290**	P		**P**	**15 07 59.6**	**+0.5**
JHJ2	**Mitsune**	**55.69**	**332**	P		**P**	**15 08 04.8**	**+0.8**
SBUM	**Sibu**	**57.20**	**284**	P		**P**	**15 08 15.3**	**+0.1**
MJAR	**Matsushiro Arr**	**59.29**	**333**	LR		LR	15 31 27.3	
	comp=Z,30nm,21.1s,baz=141,slow=34							
CASY	**Casey**	**61.82**	**202**	P		**P**	**15 08 47.0**	**+0.8**
CASY				IAmb	IAmb		15 08 54.3	
	comp=Z,4.4nm,1.0s							
JKA	**Kamikawa-asahi**	**64.26**	**341**	P		**P**	**15 09 03.9**	**+1.3**
KSRS	**Korea Array**	**64.99**	**326**	P		**P**	**15 09 07.8**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=141,slow=6.9,SNR=8.7							
	comp=Z,2.3nm,0.9s							
KULM	**Kulim**	**69.00**	**282**	P		**P**	**15 09 33.5**	**-0.2**
KULM				IAmb	IAmb		15 09 42.3	
	comp=Z,9.9nm,1.1s							
PEA0B	**Petropavlovsk-**	**69.74**	**354**	P		**P**	**15 09 37.3**	**0.0**
PEA0B				IAmb	IAmb		15 10 04.0	
	comp=Z,12nm,1.2s							
PETK	**Petropavlovsk-**	**69.74**	**354**	P		**P**	**15 09 36.6**	**-0.7**
	comp=Z,5.8nm,1.0s,baz=157,slow=3.3,SNR=11							
	comp=Z,5.8nm,1.0s							
PETK	**Petropavlovsk-**	**69.74**	**354**	P		**P**	**15 09 37.2**	**-0.1**
ATKA	**Atka Island**	**70.31**	**12**	P		**P**	**15 09 41.1**	**+0.3**
GSI	**Gunungsitoli**	**70.63**	**277**	P		**P**	**15 09 43.6**	**-0.1**
QSPA	**South Pole Qui**	**73.58**	**180**	P		**P**	**15 10 01.7**	**+1.2**
	comp=Z,3.5nm,0.9s,baz=349,slow=1.1,SNR=8.8							
	comp=Z,3.5nm,0.9s							
QSPA	**South Pole Qui**	**73.58**	**180**	P		**P**	**15 10 01.8**	**+1.2**
QSPA				IAmb	IAmb		15 10 14.8	
	comp=Z,7.8nm,0.9s							
CMAR	**Chiang Mai Arr**	**75.37**	**295**	P		**P**	**15 10 11.7**	**+0.1**
MA2	**Magadan**	**76.90**	**352**	P		**P**	**15 10 19.8**	**+0.4**
MAW	**Mawson**	**80.17**	**202**	P		**P**	**15 10 38.3**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=87,slow=4.5,SNR=4.1							
	comp=Z,2.6nm,0.9s							
MAW	**Mawson**	**80.17**	**202**	P		**P**	**15 10 37.9**	**+0.4**
N15K	**Kwethluk River**	**80.87**	**16**	P		**P**	**15 10 41.7**	**+0.5**
N15K				IAmb	IAmb		15 10 43.7	
	comp=Z,20nm,1.4s							
O16K	**Kokwok River B**	**80.93**	**17**	P		**P**	**15 10 41.9**	**+0.3**
O16K				IAmb	IAmb		15 10 57.4	
	comp=Z,8.5nm,1.4s							
M16K	**Timber Creek**	**81.89**	**16**	P		**P**	**15 10 46.9**	**+0.2**
M16K				IAmb	IAmb		15 10 56.0	
	comp=Z,14nm,1.4s							
K15K	**Wolf Creek Mou**	**82.33**	**14**	P		**P**	**15 10 49.7**	**+0.8**
K15K				IAmb	IAmb		15 10 50.3	
	comp=Z,20nm,1.5s							
M17K	**Holitna River**	**82.62**	**16**	P		**P**	**15 10 51.1**	**+0.7**
M17K				IAmb	IAmb		15 11 00.2	
	comp=Z,9.2nm,1.4s							
BRLK	**Bradley Lake**	**83.28**	**20**	P		**P**	**15 10 54.6**	**+0.7**
SONM	**Songino Array**	**83.70**	**324**	P		**P**	**15 10 56.5**	**0.0**
	comp=Z,2.4nm,0.8s,baz=141,slow=4.9,SNR=11							
	comp=Z,2.4nm,0.8s							
GTA2	**Gaotai**	**83.71**	**314**	*e*P		**P**	**15 10 57.5**	**+0.8**
GTA2				pP		pwP	15 11 06.5	-0.5
GTA2				pmax		pmax		
	comp=Z,7.0nm,1.0s							
L19K	**White Mountain**	**83.97**	**17**	P		**P**	**15 10 58.4**	**+1.0**
L19K				IAmb	IAmb		15 11 06.9	
	comp=Z,6.0nm,1.2s							
H17K	**Granite Mounta**	**84.98**	**14**	P		**P**	**15 11 03.9**	**+1.5**
H17K				IAmb	IAmb		15 11 06.1	
	comp=Z,5.7nm,1.0s							
BELA	**Belgrano 2**	**85.03**	**176**	P		**P**	**15 11 03.1**	**+0.4**
BELA				IAmb	IAmb		15 11 15.9	
	comp=Z,5.0nm,0.8s							
J19K	**Poorman**	**85.23**	**16**	P		**P**	**15 11 05.1**	**+1.4**
J19K				IAmb	IAmb		15 11 05.7	
	comp=Z,3.9nm,0.9s							
PPLA	**Purkeypile**	**85.29**	**17**	P		**P**	**15 11 03.8**	**-0.4**
PPLA				IAmb	IAmb		15 11 24.9	
	comp=Z,4.6nm,1.1s							
KCPM	**Cahto Peak**	**85.38**	**46**	P		**P**	**15 11 05.2**	**0.0**
GHO	**Glory Hole Cre**	**85.43**	**19**	P		**P**	**15 11 05.4**	**+0.6**
GHO				IAmb	IAmb		15 11 20.7	
	comp=Z,8.5nm,1.4s							
CUT	**Chulitna**	**85.48**	**18**	P		**P**	**15 11 05.2**	**+0.2**
J20K	**Nowinta River**	**85.76**	**16**			**P**	**15 11 07.4**	**+1.0**
SCM	**Sheep Creek Mo**	**85.99**	**20**	P		**P**	**15 11 08.5**	**+0.8**
SCM				IAmb	IAmb		15 11 20.9	
	comp=Z,11nm,1.2s							
G19K	**Purcell Mounta**	**86.64**	**14**			**P**	**15 11 12.0**	**+1.4**
G19K				IAmb	IAmb		15 11 26.6	
	comp=Z,4.7nm,0.8s							
ILAR	**Eielson Array**	**88.26**	**18**	P		**P**	**15 11 17.4**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=238,slow=5.1,SNR=28							
	comp=Z,1.7nm,0.6s							
ELIB	**Princess Elisa**	**88.47**	**191**	*d*P		**P**	**15 11 19.9**	**+0.2**
	comp=Z,2.3nm,1.2s							
DLBC	**Dease Lake**	**90.60**	**28**	LR		LR	15 43 35.1	
	comp=Z,60nm,21.1s,baz=206,slow=30							
MKAR	**Makanchi Array**	**98.23**	**316**	P		**P**	**15 12 03.9**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=82,slow=6.9,SNR=5.4							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**98.23**	**316**	P		Pdif	15 12 05.1	+0.2
YKA	**Yellowknife Ar**	**99.22**	**27**	LR		LR	15 49 58.9	
	comp=Z,20nm,19.4s,baz=216,slow=31							
ARCES	**ARCESS Array B**	**121.83**	**345**	PKP		**PKPdf**	**15 17 21.2**	**+0.1**
	comp=Z,8.4nm,1.0s,baz=26,slow=4.2,SNR=4.8							
FINES	**FINESS Array B**	**127.20**	**338**	PKP		**PKiKP**	**15 17 32.0**	**-0.1**
	comp=Z,5.5nm,1.0s,baz=50,slow=3.0,SNR=5.4							
GERES	**GERESS Array B**	**141.02**	**332**	PKP		**PKPdf**	**15 17 58.8**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=48,slow=1.5,SNR=3.4							
LESA	**Schwarzleotal**	**142.53**	**331**	*i* PKiKP		**PKiKP**	**15 18 03.4**	**-0.4**
	comp=Z,2.4nm,0.7s							
MOTA	**Moosalm**	**143.30**	**332**	*e*PKP		PKPbc	15 17 59.9	+0.7
	comp=Z,3.4nm,1.0s							
FETA	**Feichten**	**143.72**	**332**	*i* PKP		PKPbc	15 18 01.0	+0.6
	comp=Z,4.4nm,1.1s							
DAVA	**Damuels**	**143.89**	**333**	*e*PKP		PKPbc	15 18 01.4	+0.5
	comp=Z,7.8nm,1.3s							
SGRT	**San Giovanni R**	**144.68**	**321**	PKPdf		PKPbc	15 18 03.8	+0.4
TUE	**Stuetta**	**144.75**	**333**	PKPdf		**PKPdf**	**15 18 05.3**	**+0.6**
NRCA	**Norcia**	**145.51**	**325**	PKPdf		**PKPdf**	**15 18 05.5**	**-0.5**
TIP	**Timpagrande**	**145.51**	**317**	PKPdf		**PKPdf**	**15 18 05.3**	**-0.9**
ZCCA	**Zocca**	**145.58**	**329**	PKPdf		**PKPdf**	**15 18 06.1**	**+0.1**
SENIN	**Lac Senin/Sane**	**145.70**	**335**	PKPdf		**PKPbc**	**15 18 06.8**	**0.0**
CASP	**Castiglione de**	**146.75**	**327**	PKPdf		**PKPdf**	**15 18 07.8**	**-0.2**
SHEL	**Horse Pasture**	**146.99**	**193**	PKPdf		**PKPdf**	**15 18 08.4**	**-0.8**
BNI	**Bardonecchia**	**147.02**	**334**	PKPdf		**PKPdf**	**15 18 08.3**	**-0.3**

*RSNC **01** 15:00:34.6±0.0, 7°N±2°×7°3W±°, h144km±3km, M2.4, ML2.1*
*FUNV **01** 15:00:34.8, 7°.17N×73°.05W, h5km, MW2.8, Presumed earthquake*

ISC 01 15:00:31.1±1.4, **6°.89N**±0°.03×**73°.06W**±0°.05, **h164**km±8km, **n23**, σ1§**72**/46, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.32**	**202**	P	Pn	**15 00 54.3**	**+0.6**
BARC				S	Sn	**15 01 09.5**	**-1.4**
PAMC	**Pamplona, Colo**	**0.57**	**39**	P	Pn	**15 00 57.1**	**+2.1**
PAMC				S	Sn	**15 01 14.2**	**+1.0**
BRJC	**Barrancabermej**	**0.68**	**277**	P	Pn	**15 00 56.1**	**+1.2**
BRJC				S	Sn	**15 01 13.1**	**-0.1**
RUSC	**La Rusia**	**0.99**	**181**	P	Pn	**15 00 58.2**	**+0.5**
RUSC				S	Sn	**15 01 16.9**	**-1.3**
RUSC	**La Rusia**	**0.99**	**181**	*e*P	Pn	**15 00 57.7**	**-0.1**
RUSC				*e*S	Sn	**15 01 15.2**	**-3.0**
OCAC	**Ocana**	**1.36**	**349**	P	Pn	**15 01 02.5**	**+2.0**
OCAC				S	Sn	**15 01 25.3**	**+2.0**
PTBC	**PUERTO BERRIO,**	**1.43**	**256**	P	Pn	**15 01 01.0**	**0.0**
PTBC				S	Sn	**15 01 22.0**	**-2.0**
SPBC	**San Pablo de B**	**1.59**	**219**	P	Pn	**15 01 02.2**	**-0.6**
SPBC				S	Sn	**15 01 24.3**	**-2.8**
NORC	**Norcasia**	**2.23**	**234**	P	Pn	**15 01 10.8**	**+1.0**
NORC				S	Sn	**15 01 38.1**	**-1.6**
CHIC	**Chingaza**	**2.35**	**197**	P	Pn	**15 01 12.6**	**+1.1**
CHIC				S	Sn	**15 01 41.8**	**-1.0**
ROSC	**El Rosal**	**2.39**	**212**	P	Pn	**15 01 14.6**	**+2.6**
ROSC				S	Sn	**15 01 45.3**	**+1.6**
UREC	**San Jos de Ur**	**2.59**	**289**	P	Pn	**15 01 14.8**	**+0.7**
UREC				S	Sn	**15 01 44.8**	**-2.5**
GUY2C	**Guyana, Caldas**	**2.83**	**234**	P	Pn	**15 01 19.5**	**+2.1**
GUY2C				S	Sn	**15 01 51.4**	**-1.8**
PTGC	**Puerto Gaitan,**	**2.83**	**161**	P	Pn	**15 01 17.2**	**+0.2**
PTGC				S	Sn	**15 01 51.2**	**-1.4**
VILC	**Villavicencio,**	**2.83**	**193**	P	Pn	**15 01 18.9**	**+1.8**
VILC				S	Sn	**15 01 53.0**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.10**	**251**	P	Pn	**15 01 22.7**	**+2.2**
CBOC				S	Sn	**15 01 59.7**	**+0.9**
SDV	**Santo Domingo**	**3.12**	**50**	*e*P	Pn	**15 01 21.3**	**+0.6**
SDV				*e*S	Sn	**15 01 56.1**	**-3.0**
PRAC	**Prado**	**3.64**	**210**	P	Pn	**15 01 28.4**	**+1.2**
PRAC				S	Sn	**15 02 10.7**	**-0.2**
SJCC	**San Jacinto, C**	**3.65**	**325**	P	Pn	**15 01 28.1**	**+0.9**
SJCC				S	Sn	**15 02 10.6**	**-0.4**
SJCC	**San Jacinto, C**	**3.65**	**325**	*e*P	Pn	**15 01 27.3**	**+0.1**
SJCC				*e*S	Sn	**15 02 07.6**	**-3.4**
ORTC	**Ortega, Tolima**	**3.68**	**216**	P	Pn	**15 01 28.9**	**+1.3**
ORTC				S	Sn	**15 02 11.9**	**+0.2**
PLMC	**San Jos del P**	**3.76**	**239**	P	Pn	**15 01 29.8**	**+1.0**
PLMC				S	Sn	**15 02 09.8**	**-3.9**
URMC	**La Uribe, Meta**	**3.85**	**200**	P	Pn	**15 01 31.3**	**+1.4**
URMC				S	Sn	**15 02 15.2**	**-0.6**

IDC 01 15:03:04.9±2.4, **6°.05S×130°.34E, h0**km, **mb3.8**/1, **mbtmp3.7**/3, **ML3.7**/2, **Error ellipse: s-maj=142.0km s-min=31.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.35**	**165**	Pn	Pn	15 06 28.4	-1.1
	0.4nm,0.3s,baz=348,slow=13,SNR=20						
WRA				Sn	Sn	15 08 56.4	-13
	0.5nm,0.3s,baz=346,slow=24,SNR=8.4						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**17.85**	**169**	P	P	15 07 15.5	-0.2
	0.2nm,0.3s,baz=349,slow=11,SNR=17						
ASAR				S	Sn	15 10 21.7	-13
	0.3nm,0.5s,baz=2.1,slow=27,SNR=5.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**67.62**	**326**	P	P	15 14 03.7	0.0
	0.5nm,0.5s,baz=119,slow=7.6,SNR=6.4						
	0.5nm,0.5s						

*RSNC **01** 15:14:12.5±0.0, 7°N±1°×7°3W±°, h141km±2km, M2.7, ML2.3*
*FUNV **01** 15:14:14.4, 7°.07N×73°.20W, h17km, MW2.8, Presumed earthquake*

ISC 01 15:14:10.6±1.4, **6°.85N**±0°.03×**73°.10W**±0°.04, **h149**km±8km, **n26**, σ1§**14**/51, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**198**	P	Pn	**15 14 31.6**	**+0.4**
BARC				S	Sn	**15 14 46.5**	**-0.4**
PAMC	**Pamplona, Colo**	**0.63**	**39**	P	Pn	**15 14 34.6**	**+1.5**
PAMC				S	Sn	**15 14 51.4**	**+1.1**
BRJC	**Barrancabermej**	**0.65**	**281**	P	Pn	**15 14 33.4**	**+0.8**
BRJC				S	Sn	**15 14 50.0**	**+0.6**
RUSC	**La Rusia**	**0.95**	**179**	P	Pn	**15 14 35.7**	**+0.3**
RUSC				S	Sn	**15 14 53.8**	**-0.5**
RUSC	**La Rusia**	**0.95**	**179**	*e*P	Pn	**15 14 35.8**	**+0.3**
RUSC				*e*S	Sn	**15 14 51.1**	**-3.2**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P	Pn	**15 14 38.7**	**-0.1**
PTBC				S	Sn	**15 14 58.8**	**-1.6**
OCAC	**Ocana**	**1.40**	**351**	P	Pn	**15 14 39.9**	**+0.7**
OCAC				S	Sn	**15 15 01.1**	**-0.1**
SPBC	**San Pablo de B**	**1.53**	**219**	P	Pn	**15 14 40.6**	**+0.1**
SPBC				S	Sn	**15 15 02.3**	**-1.1**
NORC	**Norcasia**	**2.17**	**234**	P	Pn	**15 14 48.2**	**+0.5**
NORC				S	Sn	**15 15 15.6**	**-0.7**
CHIC	**Chingaza**	**2.29**	**196**	P	Pn	**15 14 50.2**	**+0.7**
CHIC				S	Sn	**15 15 18.5**	**-0.9**
ROSC	**El Rosal**	**2.33**	**211**	P	Pn	**15 14 51.8**	**+1.8**
ROSC				S	Sn	**15 15 20.3**	**0.0**
HELC	**Santa Helena**	**2.50**	**255**	P	Pn	**15 14 53.0**	**+1.0**
HELC				S	Sn	**15 15 23.3**	**-0.5**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	Pn	**15 14 53.6**	**+1.7**
HELC				*e*S	Sn	**15 15 22.7**	**-1.1**
UREC	**San Jos de Ur**	**2.57**	**291**	P	Pn	**15 14 53.0**	**+0.4**
UREC				S	Sn	**15 15 23.2**	**-1.8**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	P	Pn	**15 14 56.5**	**+1.1**
GUY2C				S	Sn	**15 15 29.1**	**-0.9**
VILC	**Villavicencio,**	**2.78**	**192**	P	Pn	**15 14 56.3**	**+1.0**
VILC				S	Sn	**15 15 29.0**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.80**	**160**	P	Pn	**15 14 55.3**	**-0.1**
PTGC				S	Sn	**15 15 28.2**	**-1.9**
CBOC	**Ciudad Bolivar**	**3.05**	**252**	P	Pn	**15 14 59.9**	**+1.2**
CBOC				S	Sn	**15 15 36.0**	**0.0**
DBBC	**Dabeiba**	**3.09**	**273**	P	Pn	**15 15 00.0**	**+0.9**
DBBC				S	Sn	**15 15 34.8**	**-1.9**
SDV	**Santo Domingo**	**3.18**	**50**	*e*P	Pn	**15 15 01.5**	**+1.1**
SDV				*e*S	Sn	**15 15 37.9**	**-1.0**
PRAC	**Prado**	**3.58**	**210**	P	Pn	**15 15 06.2**	**+0.7**
PRAC				S	Sn	**15 15 47.9**	**-0.1**
APAC	**Apartado, Choc**	**3.61**	**287**	P	Pn	**15 15 06.7**	**+1.0**
APAC				S	Sn	**15 15 49.0**	**+0.6**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	Pn	**15 15 07.1**	**+1.2**
ORTC				S	Sn	**15 15 49.0**	**+0.2**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	Pn	**15 15 06.4**	**-0.1**
SJCC				S	Sn	**15 15 47.0**	**-2.9**
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	Pn	**15 15 06.4**	**-0.1**
PLMC	**San Jos del P**	**3.71**	**239**	P	Pn	**15 15 07.9**	**+0.8**
PLMC				S	Sn	**15 15 50.9**	**0.0**

NNC 01 15:27:37.7±6.9, **38°.38N×75°.82E, h0**km, **mb4.0, mpv3.6, 3C, Error ellipse: s-maj=61.6km s-min=40.9km az=113.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.37**	**347**	⇑Pn	Pn	15 28 46.9	+1.4
	1.7nm,0.7s						
AAK				⇑Sn	Sn	15 29 38.4	+1.3
	0.6nm,0.4s						
KST	**Kastek**	**4.66**	**1**	Pg	Pn	15 28 51.1	+1.7
	8.2nm,0.3s						
KST				Lg	Lg	15 30 08.3	
	7.1nm,0.5s						
SGDS	**Sogindy**	**5.14**	**350**	Pg	Pn	15 28 58.2	+2.1
	1.2nm,0.2s						
SGDS				Lg	Lg	15 30 20.6	
	4.2nm,0.4s						
SHLS	**Shalkode**	**5.51**	**29**	Pg	Pn	15 29 04.9	+3.7
	4.5nm,0.2s						
SHLS				Lg	Lg	15 30 32.3	
	9.9nm,0.3s						
KK31	**Karatay Array**	**6.20**	**321**	Pn	Pn	15 29 09.3	-1.3
	1.0nm,0.2s,baz=120,slow=12,SNR=54						
KK31				⇑Sn	Sn	15 30 21.1	-1.1
	0.8nm,0.3s,baz=150,slow=24,SNR=3.1						

*JMA **01** 15:40:30.8±0.2, 43°.2N±0°.6×14°6E±°, h63km±1km, MV2.9/40, OFF NEMURO PENINSULA*
*SKHL **01** 15

OCAC	**Ocana**	**1.93**	**64**	P	**Pn**	15 45 32.0	**+0.1**
OCAC				S	**Sn**	15 45 56.5	**+0.1**
LCBC	**Los crdobas,**	**1.94**	**319**	P	**Pn**	15 45 33.0	**+1.1**
LCBC				S	**Sb**	15 46 00.0	**+1.4**
SPBC	**San Pablo de B**	**2.00**	**150**	P	**Pn**	15 45 32.9	**0.0**
SPBC				S	**Sn**	15 45 57.4	**-0.7**
BARC	**Barichara**	**2.04**	**113**	P	**Pn**	15 45 34.3	**+0.7**
BARC				S	**Sn**	15 46 00.6	**+1.3**
GUY2C	**Guyana, Caldas**	**2.18**	**188**	P	**Pn**	15 45 36.6	**+0.9**
GUY2C				S	**Sn**	15 46 03.5	**+0.4**
PAMC	**Pamplona, Colo**	**2.35**	**91**	P	**Pn**	15 45 39.0	**+0.9**
PAMC				S	**Sn**	15 46 07.8	**+0.4**
NIZA	**Niza - Manizal**	**2.36**	**190**	P	**Pn**	15 45 39.7	**+1.7**
NIZA				S	**Sn**	15 46 09.2	**+2.0**
RUSC	**La Rusia**	**2.48**	**127**	P	**Pn**	15 45 40.3	**+0.5**
RUSC				S	**Sn**	15 46 10.2	**-0.2**
RUSC	**La Rusia**	**2.48**	**127**	P	**Pn**	15 45 40.2	**+0.4**
RUSC				S	**Sn**	15 46 10.0	**-0.4**
SJCC	**San Jacinto, C**	**2.48**	**358**	P	**Pn**	15 45 39.5	**0.0**
SJCC				S	**Sn**	15 46 09.8	**-0.2**
SJCC	**San Jacinto, C**	**2.48**	**358**	P	**Pn**	15 45 39.5	**0.0**
SJCC				S	**Sn**	15 46 09.8	**-0.2**
ARGC	**Ariguani, Magd**	**2.58**	**18**	P	**Pb**	15 45 44.3	**-0.9**
ARGC				S	**Sb**	15 46 16.4	**-0.6**
ROSC	**El Rosal**	**2.65**	**164**	P	**Pb**	15 45 45.4	**-1.3**
	47nm,0.3s,baz=130,slow=19,SNR=15						
ROSC				S	**Sn**	15 46 16.0	**+1.4**
	125nm,0.3s,baz=206,slow=24,SNR=9.9						
ROSC	**El Rosal**	**2.65**	**164**	P	**Pn**	15 45 44.5	**+2.4**
ROSC				S	**Sn**	15 46 16.0	**+1.4**
PTAC	**Punta Ardita,**	**2.73**	**265**	P	**Pn**	15 45 43.5	**+0.7**
PTAC				S	**Sn**	15 46 13.8	**-2.1**
PLMC	**San Jos del P**	**2.75**	**206**	P	**Pn**	15 45 44.5	**+1.2**
PLMC				S	**Sn**	15 46 18.5	**+1.8**
CVER	**Cruz Verde, Cu**	**3.03**	**161**	P	**Pn**	15 45 48.7	**+1.3**
CVER				S	**Sn**	15 46 25.1	**+1.1**
CHIC	**Chingaza**	**3.06**	**154**	P	**Pn**	15 45 48.7	**+1.0**
CHIC				S	**Sn**	15 46 26.3	**+1.7**
ORTC	**Ortega, Tolima**	**3.47**	**183**	P	**Pn**	15 45 54.9	**+1.8**
ORTC				S	**Sb**	15 46 43.6	**+0.7**
VILC	**Villavicencio,**	**3.54**	**157**	P	**Pn**	15 45 55.0	**+0.8**
VILC				S	**Sn**	15 46 37.2	**+1.0**
PRAC	**Prado**	**3.67**	**177**	P	**Pn**	15 45 57.3	**+1.5**
PRAC	**Prado**	**3.67**	**177**	P	**Pn**	15 45 57.6	**+1.8**
PRAC				S	**Sn**	15 46 41.7	**+2.5**
SMRC	**Santa Marta, M**	**3.83**	**13**	P	**Pn**	15 46 02.3	**+4.3**
SMRC				S	**Sn**	15 46 46.4	**+3.2**
URMC	**La Uribe, Meta**	**4.18**	**170**	P	**Pn**	15 46 05.0	**+2.1**
URMC				S	**Sn**	15 46 53.7	**+1.7**
PTGC	**Puerto Gaitan,**	**4.32**	**137**	P	**Pn**	15 46 04.3	**-0.4**
PTGC				S	**Sn**	15 46 54.2	**-1.0**
JAMC	**Jamundi, Valle**	**4.45**	**201**	P	**Pn**	15 46 07.6	**+0.8**
JAMC				S	**Sn**	15 46 58.9	**+0.1**
SDV	**Santo Domingo**	**4.64**	**71**	P	**Pn**	15 46 10.1	**+0.8**
	7.2nm,0.3s,baz=235,slow=12,SNR=10.0						
SDV				S	**Sn**	15 47 01.4	**-1.9**
	37nm,0.3s,baz=192,slow=20,SNR=8.4						
POPC	**Popayan, Colom**	**5.08**	**198**	P	**Pn**	15 46 15.9	**+0.4**
	11nm,0.5s						
POPC				S	**Sn**	15 47 13.3	**-1.2**
	11nm,0.5s						
AZU	**Azuero**	**5.17**	**275**	P	**Pn**	15 46 17.1	**+0.6**
	15nm,1.5s						
AZU				S	**Sn**	15 47 12.4	**-3.9**
	15nm,1.5s						
URIC	**Uribia, Colomb**	**5.24**	**35**	P	**Pn**	15 46 21.3	**+3.9**
	857nm21nm,0.8s						
URIC				S	**Sn**	15 47 21.2	**+3.1**
	857nm21nm,0.8s						
MACC	**Macarena, Meta**	**5.36**	**167**	P	**Pn**	15 46 21.4	**+2.3**
MACC				S	**Sn**	15 47 20.2	**-0.8**
YKA	**Yellowknife Ar**	**62.07**	**340**	P	P	15 55 14.2	-5.3
	0.7nm,0.8s,baz=142,slow=8.6,SNR=1.6						
	0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.52**	**78**	P	P	15 56 38.6	-5.7
	0.2nm,0.3s,baz=284,slow=5.8,SNR=5.2						
	0.2nm,0.3s						
SNAA	**Sanae**	**91.47**	**162**	P	P	15 58 00.2	-5.1
	0.6nm,0.2s,baz=275,slow=10,SNR=7.1						
	0.6nm,0.2s						
ASAR	**Alice Springs**	**147.84**	**237**	PKPbc	**PKPdf**	**16 04 39.3**	**-3.0**
	0.5nm,0.5s,baz=118,slow=3.6,SNR=16						
WRA	**Warramunga Arr**	**148.89**	**243**	PKPbc	**PKPdf**	**16 04 42.4**	**-1.7**
	0.4nm,0.4s,baz=105,slow=3.3,SNR=30						
CMAR	**Chiang Mai Arr**	**153.64**	**13**	PKPbc	**PKPdf**	**16 04 51.4**	**0.0**
	0.5nm,0.3s,baz=266,slow=21,SNR=4.3						

*IDC **01** 16:01:51.4±3.0,22°.39N×143°.75E,h108km±25km,mb3.4/9, mbtmp3.8/10,MS3.5/1,Error ellipse: s-maj=37.4km s-min=16.3km az=87.0*

ISC 01 16:01:50.5±1.0,22°.3N±0°.1×143°.8E±0°.3,h100km,n15, σ1s17/11,mb3.6/9,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.97**	**343**	P	**Pn**	**16 03 04.7**	**+1.9**
	20nm,0.4s,baz=107,slow=22,SNR=1.8						
JCJ				S	**Sn**	**16 03 57.8**	**-1.2**
	31nm,0.4s,baz=278,slow=23,SNR=7.4						
KSRS	**Korea Array**	**20.36**	**321**	P	Pn	16 06 21.8	0.0
	0.9nm,0.4s,baz=147,slow=8.3,SNR=7.9						
H11S3	**WAKE ISLAND Hy 21.81**	**96**		T	T	16 29 27.1	
	baz=284,slow=74,SNR=6.6						
H11S1	**WAKE ISLAND Hy 21.82**	**96**		T	T	16 29 27.5	
	baz=284,slow=74,SNR=5.8						
H11S2	**WAKE ISLAND Hy 21.83**	**96**		T	T	16 29 26.5	
	baz=284,slow=74,SNR=5.9						
WRA	**Warramunga Arr**	**43.00**	**193**	P	**P**	**16 09 40.2**	**+0.1**
	0.5nm,0.8s,baz=10,slow=8.3,SNR=9.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**46.71**	**192**	P	**P**	**16 10 10.1**	**+0.6**
	0.2nm,0.8s,baz=14,slow=8.7,SNR=5.8						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**54.68**	**312**	P	**P**	**16 11 09.2**	**0.0**
	0.2nm,0.5s,baz=104,slow=4.6,SNR=2.4						
	0.2nm,0.5s						
AFI	**Afiamalu**	**56.52**	**125**	LR	LR	16 31 43.7	
	comp=Z,36nm,18.8s,baz=206,slow=32						
KURBB	**Kurchatov Arra**	**57.44**	**317**	P	**P**	**16 11 28.8**	**0.0**
	0.8nm,0.5s,baz=91,slow=8.0,SNR=7.1						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**61.24**	**27**	P	**P**	**16 11 54.9**	**+0.2**
	0.3nm,0.6s,baz=273,slow=7.1,SNR=3.1						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**62.55**	**319**	P	**P**	**16 12 04.0**	**+0.3**
	1.4nm,0.4s,baz=90,slow=7.0,SNR=8.8						
	1.4nm,0.4s						
YKA	**Yellowknife Ar**	**75.65**	**28**	P	**P**	**16 13 24.4**	**0.0**
	0.5nm,0.5s,baz=291,slow=5.9,SNR=2.3						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**82.85**	**335**	P	**P**	**16 14 02.6**	**-1.0**
	0.7nm,0.3s,baz=54,slow=4.7,SNR=12						
	0.7nm,0.3s						
HFS	**Hagfors**	**88.36**	**337**	P	**P**	**16 14 28.8**	**-2.1**
	3.0nm,0.9s,baz=55,slow=5.5,SNR=1.7						
	3.0nm,0.9s						

IDC 01 16:14:31.8±4.0,21°.50S×169°.96E,h0km,mb3.2/2, mbtmp3.3/3,ML3.3/1,Error ellipse: s-maj=187.7km s-min=30.9km az=157.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.31**	**260**	Pn	Pn	16 15 26.8	+1.8
	2.8nm,0.3s,baz=135,slow=8.9,SNR=308						
DZM				Sn	Sn	16 16 05.1	-0.1
	9.0nm,0.3s,baz=156,slow=20,SNR=13						
	8.1nm,0.3s						
ASAR	**Alice Springs**	**33.31**	**259**	P	P	16 21 11.1	-0.5
	0.2nm,0.7s,baz=84,slow=10,SNR=4.8						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**33.31**	**266**	P	P	16 21 10.9	-0.6
	0.3nm,0.5s,baz=98,slow=8.3,SNR=11						
	0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**145.83**	**353**	PKPbc	PKPdf	16 34 11.7	-0.5
	0.7nm,0.4s,baz=357,slow=2.7,SNR=8.3						
GERES	**GERESS Array B**	**146.79**	**331**	PKPbc	PKPbc	16 34 15.8	-0.1
	0.5nm,0.6s,baz=32,slow=3.8,SNR=2.3						

*IDC **01** 16:16:45.0±1.0,33°.60S×178°.60W,h0km,mb4.4/5, mbtmp4.4/7,ML3.9/2,MS3.5/5,Error ellipse: s-maj=31.6km s-min=26.9km az=65.0*

*NEIC **01** 16:16:47.4±1.7,33°.78S±0°.07×178°.6W±0°.1,h10km±1km, mb4.4/10,Error ellipse: s-maj=20.4km s-min=5.0km az=124.0*

*WEL **01** 16:16:47.7±0.7,34°.5±6°×17°.9W±1°.0,h12km,M4.4/19, mB5.0/11,ML4.5/19,MLv4.6/19,Mw(mB)4.3/11,Error ellipse: s-maj=14.0km s-min=5.7km az=117.2*

ISC 01 16:16:45.7±0.8,33°.70S±0°.07×178°.4W±0°.1,h10km,n68, σ1s37/74,mb4.4/11,MS3.6/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.44**	**6**	P	**Pn**	**16 17 50.9**	**-2.2**
MXZ	**Matakaoa Point**	**4.68**	**214**	Pn	**Pn**	**16 17 55.7**	**-0.7**
MXZ	**Matakaoa Point**	**4.68**	**214**	P	**Pn**	**16 17 56.6**	**+0.2**
MXZ				S	**Sn**	**16 18 50.6**	**-0.2**
WMGZ	**Waiomatatini S**	**4.85**	**211**	P	**Pn**	**16 18 00.3**	**+1.6**
WMGZ				S	**Sn**	**16 18 55.6**	**+0.7**
PKGZ	**Pakihiroa**	**5.04**	**213**	P	**Pn**	**16 18 00.9**	**-0.4**
PKGZ				S	**Sn**	**16 18 59.2**	**-0.4**
HAZ	**Te Kaha**	**5.09**	**216**	P	**Pn**	**16 18 03.4**	**+1.5**
HAZ				S	**Sn**	**16 19 02.2**	**+1.4**
PUZ	**Puketiti**	**5.13**	**211**	P	**Pn**	**16 18 03.3**	**+0.7**
PUZ				S	**Sn**	**16 19 02.0**	**+0.2**
RUGZ	**Raukumara Rang**	**5.30**	**215**	P	**Pn**	**16 18 06.3**	**+1.2**
TWGZ	**Tauwhareparae**	**5.33**	**212**	P	**Pn**	**16 18 07.4**	**+2.0**
CNGZ	**Carnagh Statio**	**5.50**	**209**	P	**Pn**	**16 18 07.5**	**0.0**
TKGZ	**Te Karaka**	**5.61**	**211**	P	**Pn**	**16 18 10.2**	**+1.1**
MWZ	**Matawai**	**5.67**	**214**	P	**Pn**	**16 18 11.1**	**+1.2**
OPRZ	**Ohinepanea**	**5.81**	**223**	P	**Pn**	**16 18 13.3**	**+1.5**
OPRZ				S	**Sn**	**16 19 18.6**	**+0.1**
URZ	**Urewera**	**5.81**	**217**	Pn	**Pn**	**16 18 12.2**	**+0.3**
	10nm,0.3s,baz=33,slow=4.3,SNR=40						
URZ				Sn	**Sn**	**16 19 15.9**	**-2.7**
	9.9nm,0.3s,baz=248,slow=4.6,SNR=7.0						
	82nm,0.5s						
URZ	**Urewera**	**5.81**	**217**	P	**Pn**	**16 18 12.3**	**+0.4**
URZ				S	**Sn**	**16 19 16.0**	**-2.6**
RAGZ	**Rawiri**	**5.85**	**214**	P	**Pn**	**16 18 13.5**	**+0.9**
RIGZ	**Rimuhau**	**5.87**	**211**	P	**Pn**	**16 18 13.4**	**+0.7**
TGRZ	**Tauranga**	**5.90**	**226**	P	**Pn**	**16 18 14.7**	**+1.6**
SNGZ	**Shannon Statio**	**6.12**	**213**	P	**Pn**	**16 18 17.0**	**+0.9**
MUGZ	**Murupara**	**6.15**	**218**	P	**Pn**	**16 18 17.0**	**+0.4**
MUGZ				S	**Sn**	**16 19 24.0**	**-3.0**
RTZ	**Ruatahuna**	**6.15**	**216**	Pn	**Pn**	**16 18 16.4**	**-0.3**
RTZ	**Ruatahuna**	**6.15**	**216**	P	**Pn**	**16 18 17.0**	**+0.3**
RAHZ	**Arahi**	**6.34**	**213**	P	**Pn**	**16 18 20.4**	**+1.2**
RAHZ				S	**Sn**	**16 19 29.2**	**-2.5**
WCZ	**Waipu Caves**	**6.35**	**247**	P	**Pn**	**16 18 20.4**	**+1.1**
PRRZ	**Plateau Road**	**6.37**	**220**	P	**Pn**	**16 18 19.9**	**+0.4**
PRRZ				S	**Sn**	**16 19 30.1**	**-2.2**
TOZ	**Tahuroa Road**	**6.37**	**229**	Pn	**Pn**	**16 18 20.9**	**+1.4**
TOZ	**Tahuroa Road**	**6.37**	**229**	P	**Pn**	**16 18 21.0**	**+1.4**
MTHZ	**Maungataniwha**	**6.41**	**215**	P	**Pn**	**16 18 21.4**	**+1.3**
OUZ	**Omahuta**	**6.76**	**255**	P	**Pn**	**16 18 28.3**	**+3.4**
BKZ	**Black Stump Fm**	**6.82**	**215**	Pn	**Pn**	**16 18 24.5**	**-1.3**
BFZ	**Birch Farm**	**8.16**	**210**	Pn	**Pn**	**16 18 42.0**	**-2.2**
MRZ	**Mangatainoka R**	**8.43**	**213**	Pn	**Pn**	**16 18 46.2**	**-1.7**
NNZ	**Nelson**	**9.93**	**219**	Pn	**Pn**	**16 19 08.6**	**+0.2**
CTZ	**Chatham Island**	**10.12**	**172**	Pn	**Pn**	**16 19 12.2**	**+1.2**
CTZ	**Chatham Island**	**10.12**	**172**	P	**Pn**	**16 19 12.0**	**+1.0**
LTZ	**Lake Taylor**	**11.64**	**216**	Pn	**Pn**	**16 19 29.6**	**-2.3**
RPZ	**Rata Peaks**	**12.93**	**216**	Pn	**Pn**	**16 19 46.3**	**-3.1**
	0.1nm,0.3s,baz=314,slow=18,SNR=1.5						
RPZ				Sn	Sn	16 21 58.9	-14
	0.2nm,0.3s,baz=0.5,slow=22,SNR=1.4						
ODZ	**Otahua Downs**	**14.12**	**213**	Pn	**Pn**	**16 20 03.3**	**-2.3**
DZM	**Mont Dzumac**	**17.66**	**307**	P	**Pn**	**16 20 51.3**	**-0.6**
	0.2nm,0.3s,baz=129,slow=9.5,SNR=3.5						
	8.3nm,0.9s						
RAR	**Rarotonga**	**20.67**	**58**	LR	LR	16 29 21.8	
	comp=Z,57nm,18.7s,baz=262,slow=36						
PPT	**Papeete**	**30.43**	**65**	LR	LR	16 34 41.3	
	comp=Z,61nm,19.4s,baz=213,slow=35						
INKA	**Innaminka**	**35.42**	**268**	P	**P**	**16 23 43.2**	**+1.2**
INKA				IAmb	IAmb	16 23 55.4	
	comp=Z,8.0nm,1.4s						
AS31	**Alice Springs**	**42.67**	**271**	P	**P**	**16 24 42.6**	**-0.2**
AS31				IAmb	IAmb	16 24 43.6	
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**42.67**	**271**	P	**P**	**16 24 42.5**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=114,slow=7.3,SNR=39						
	comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**42.67**	**271**	P	**P**	**16 24 42.0**	**-0.8**
WR8	**Warramunga Arr**	**43.82**	**276**	P	**P**	**16 24 51.5**	**-0.6**
WR8				IAmb	IAmb	16 24 52.5	
	comp=Z,7.4nm,0.8s						
WRAB	**Tennant Creek**	**43.95**	**276**	P	**P**	**16 24 52.2**	**-1.0**
WRAB				IAmb	IAmb	16 24 53.8	
	comp=Z,6.3nm,1.0s						
WRA	**Warramunga Arr**	**43.96**	**276**	P	**P**	**16 24 52.7**	**-0.5**
	comp=Z,5.6nm,0.8s,baz=118,slow=7.6,SNR=24						
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**43.96**	**276**	P	**P**	**16 24 52.2**	**-1.0**
WB0	**Warramunga Arr**	**44.00**	**276**	P	**P**	**16 24 52.7**	**-0.8**
WB0				IAmb	IAmb	16 24 53.8	
	comp=Z,7.1nm,0.8s						
KNRA	**Kununurra**	**50.67**	**277**	P	**P**	**16 25 45.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**52.07**	**273**	P	**P**	**16 25 55.5**	**-0.5**
	comp=Z,3.8nm,0.9s,baz=164,slow=7.8,SNR=6.1						
	comp=Z,3.8nm,0.9s						
FITZ	**Fitroy Crossi**	**52.07**	**273**	P	**P**	**16 25 55.7**	**-0.2**
CASY	**Casey**	**52.08**	**209**	P	**P**	**16 25 56.3**	**+0.9**
CASY				IAmb	IAmb	16 25 58.0	
	comp=Z,5.2nm,0.8s						
QSPA	**South Pole Qui**	**56.42**	**180**	P	**P**	**16 26 29.4**	**+2.2**
	comp=Z,3.0nm,1.0s,baz=1.7,slow=1.5,SNR=6.9						
	comp=Z,3.0nm,1.0s						
QSPA	**South Pole Qui**	**56.42**	**180**	P	**P**	**16 26 29.2**	**+2.0**
RPN	**Rapa Nui**	**58.97**	**104**	LR	LR	16 48 02.2	
	comp=Z,48nm,18.4s,baz=173,slow=32						
PFO	**Pinyon Flats O**	**88.70**	**47**	LR	LR	17 03 43.9	
	comp=Z,27nm,18.1s,baz=52,slow=32						
PETK	**Petropavlovsk-**	**88.91**	**346**	P	**P**	**16 29 40.6**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=162,slow=5.2,SNR=4.4						
	comp=Z,2.3nm,0.8s						
PETK	**Petropavlovsk-**	**88.91**	**346**	P	**P**	**16 29 40.2**	**+0.5**
NEW	**Newport**	**98.25**	**36**	LR	LR	17 09 49.4	
	comp=Z,33nm,18.4s,baz=266,slow=32						
KURBB	**Kurchatov Arra**	**123.06**	**312**	PKP	**PKPdf**	**16 35 41.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=104,slow=2.1,SNR=7.2						
KBZ	**Khabaz**	**146.53**	**300**	PKPbc	**PKPab**	**16 36 27.5**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=107,slow=3.8,SNR=5.6						
FINES	**FINESS Array B**	**148.08**	**338**	PKPbc	**PKPbc**	**16 36 31.3**	**+0.5**
	comp=Z,7.2nm,0.8s,baz=36,slow=3.5,SNR=10						
FINES	**FINESS Array B**	**148.08**	**338**		**PKPbc**	**16 36 30.8**	**+0.1**
AKASG	**Malin Array Be**	**153.61**	**318**	PKPbc	**PKiKP**	**16 36 44.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=64,slow=1.9,SNR=4.8						
BRTR	**Keskin Array B**	**153.68**	**293**	PKPbc	**PKiKP**	**16 36 45.0**	**0.0**
	comp=Z,2.2nm,0.8s,baz=107,slow=3.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**159.54**	**180**	PKPab	**PKPab**	**16 37 23.8**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=176,slow=3.8,SNR=3.4						

*MAN **01** 16:23:18.0,2°.21N×126°.70E,h33km,MS4.4*

IDC 01 16:23:15.2±1.2,2°.12N×126°.10E,h0km,mb3.5/4, mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=74.1km s-min=19.9km az=61.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.96**	**120**	Pn	Pn	16 24 44.0	-0.9
	1.0nm,0.3s,baz=151,slow=21,SNR=2.5						
	3.3nm,0.4s						
WRA	**Warramunga Arr**	**23.37**	**160**	P	P	16 28 25.5	-0.1
	1.1nm,0.7s,baz=338,slow=11,SNR=13						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**26.73**	**164**	P	P	16 28 57.4	+0.7
	0.2nm,0.4s,baz=342,slow=7.7,SNR=6.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.52**	**326**	P	P	16 33 13.7	+0.1
	0.3nm,0.4s,baz=116,slow=7.3,SNR=6.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.76**	**328**	P	P	16 33 41.9	-0.4
	0.6nm,0.5s,baz=128,slow=6.1,SNR=6.5						
	0.6nm,0.5s						

*IDC **01** 16:34:21.1±5.2,33°.46S×178°.23W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=214.7km s-min=62.4km az=161.0*

*WEL **01** 16:34:22.7±1.2,34°.5±20°×17°.8W±2°.4,h5km±23km,M3.9/4, mB4.3/3,ML4.0/8,MLv4.0/4,Mw(mB)3.5/3,Error ellipse: s-maj=31.8km s-min=25.1km az=115.1*

ISC 01 16:34:20.7±2.5,33°.8S±0°.2×177°.9W±0°.4,h10km,n15, σ1s12/20,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.88**	**218**	P	**Pn**	**16 35 34.0**	**-0.2**
MXZ				S	**Sn**	**16 36 28.9**	**-1.9**
WMGZ	**Waiomatatini S**	**5.03**	**216**	P	**Pn**	**16 35 36.5**	**+0.3**
WMGZ				S	**Sn**	**16 36 35.8**	**+1.4**
PKGZ	**Pakihiroa**	**5.23**	**218**	P	**Pn**	**16 35 38.8**	**-0.3**
PKGZ				S	**Sn**	**16 36 39.6**	**+0.2**
HAZ	**Te Kaha**	**5.30**	**220**	P	**Pn**	**16 35 41.0**	**+1.1**
PUZ	**Puketiti**	**5.30**	**215**	P	**Pn**	**16 35 38.8**	**-1.2**
PUZ				S	**Sn**	**16 36 41.2**	**0.0**
RUGZ	**Raukumara Rang**	**5.51**	**219**	P	**Pn**	**16 35 43.7**	**+0.7**
CNGZ	**Carnagh Statio**	**5.66**	**213**	P	**Pn**	**16 35 44.5**	**-0.4**
MWZ	**Matawai**	**5.87**	**218**	P	**Pn**	**16 35 47.1**	**-0.7**
URZ	**Urewera**	**6.03**	**221**	P	**Pn**	**16 35 51.1**	**+1.1**
URZ				S	**Sn**	**16 36 57.9**	**-1.3**
SNGZ	**Shannon Statio**	**6.31**	**216**	P	**Pn**	**16 35 55.7**	**+1.9**
MUGZ	**Murupara**	**6.38**	**221**	P	**Pn**	**16 35 56.0**	**+1.2**
BKZ	**Black Stump Fm**	**7.03**	**218**	P	**Pn**	**16 36 05.5**	**+1.8**
ASAR	**Alice Springs**	**43.12**	**270**	P	**P**	**16 42 21.3**	**-0.2**
	0.6nm,0.6s,baz=108,slow=7.7,SNR=7.9						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**44.41**	**276**	P	**P**	**16 42 31.1**	**-0.7**
	0.3nm,0.3s,baz=118,slow=8.2,SNR=17						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**148.32**	**338**	PKPbc	**PKPbc**	**16 54 06.6**	**+0.2**
	1.8nm,0.8s,baz=56,slow=3.9,SNR=1.4						

IDC 01 16:34:22.8±2.4,6°.76S×153°.79E,h0km,mb3.4/3, mbtmp3.6/4,ML1.8/1,MS3.3/1,Error ellipse: s-maj=75.6km s-min=37.6km az=158.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.07**	**248**	Pn	Pn	16 36 09.6	+2.0
	0.9nm,0.3s,baz=158,slow=20,SNR=3.0						
PMG				Sn	Sn	16 37 29.0	+0.2
	1.5nm,0.3s,baz=298,slow=17,SNR=5.6						
	20nm,0.8s						
WRA	**Warramunga Arr**	**22.98**	**233**	P	P	16 39 28.6	-0.7
	1.0nm,1.1s,baz=60,slow=11,SNR=5.8						
	1.0nm,1.1s						
SIJI	**Sorong**	**23.21**	**284**	LR	LR	16 50 07.2	
	comp=Z,66nm,19.1s,baz=233,slow=41						
ASAR	**Alice Springs**	**25.45**	**227**	P	P	16 39 53.1	+0.5
	0.2nm,0.4s,baz=56,slow=9.0,SNR=4.4						
	0.2nm,0.4s						
QSPA	**South Pole Qui**	**83.21**	**180**	P	P	16 46 50.9	-0.1
	0.6nm,0.7s,baz=264,slow=0.6,SNR=1.9						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.81**	**285**	PKPbc	PKPbc	16 54 20.4	-0.4
	0.4nm,0.5s,baz=76,slow=2.9,SNR=2.0						

*IDC **01** 16:40:10.0±1.0,44°.08N×115°.23W,h0km,mbtmp2.7/4, ML3.4/3,Error ellipse: s-maj=12.4km s-min=7.7km az=92.0*

*NEIC **01** 16:40:11.3±1.6,44°.14N±0°.03×115°.07W±0°.03,h10km±2km, ML3.1/56,ML3.4/27(BUT),Error ellipse: s-maj=4.9km s-min=3.2km az=219.0*

*BUT **01** 16:40:12.2±2.7,44°.13N±0°.02×115°.09W±0°.03,h8km±5km, Error ellipse: s-maj=3.6km s-min=2.8km az=51.0*

ISC 01 16:40:11.8±0.9,44°.14N±0°.03×115°.09W±0°.03,h10km,n45, σ1s06/48,Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HLID	**Hailey**	**0.76**	**139**		**Pg**	**16 40 26.1**	**-0.4**
HLID					**Sg**	**16 40 35.9**	**-0.5**
HLID				IAML		16 40 37.6	
	872nm,0.4s						
HLID				IAML		16 40 39.0	
	585nm,0.2s						
MFID	**Camas Ranch**	**0.90**	**217**	Pg	**Pg**	**16 40 28.8**	**-0.4**
MFID			

NEW	**Newport**	**4.36**	**342**	Pn	**Pn**	**16 41 19.6**	**+1.4**
	comp=E,0.7nm,0.3s,baz=167,slow=13,SNR=3.0							
NEW				Lg	Lg	16 42 26.0		
	comp=E,5.9nm,0.3s,baz=169,slow=10,SNR=7.2							
	comp=E,2.1nm,0.4s							
NEW	**Newport**	**4.36**	**342**	Pn	**Pn**	**16 41 19.3**	**+1.2**
NEW				IAML		16 42 35.3		
	comp=E,18nm,0.8s							
NEW				IAML		16 42 38.0		
	comp=E,28nm,1.1s							
K05A	**Summer Lake**	**4.46**	**254**	Pn	**Pn**	**16 41 21.4**	**+1.8**
K05A				IAML		16 42 46.1		
	comp=E,19nm,3.9s							
K05A				IAML		16 43 57.4		
	comp=N,16nm,4.6s							
NVAR	**Mina Array Bea**	**6.20**	**204**	Pn	**Pn**	**16 41 42.6**	**-0.9**
	comp=N,0.4nm,0.7s,baz=18,slow=15,SNR=1.4							
NVAR				Lg	Lg	16 43 20.1		
	baz=24,slow=29							
NVAR	**Mina Array Bea**	**6.20**	**204**		**Pn**	**16 41 42.2**	**-1.3**
TXAR	**Lajitas Array**	**17.36**	**145**	Pn	**P**	**16 44 16.4**	**+0.8**
	baz=336,slow=12,SNR=1.4							
	comp=N,0.1nm,0.7s							

IDC 01 16:47:27.0±4.2, 0°.23N×17°.35W, h0km, mb3.7/2, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=109.6km s-min=64.8km az=156.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**8.50**	**160**	T	T	16 58 36.8	
	baz=339,slow=74,SNR=219						
H10N3	**ASCENSION HYDR**	**8.51**	**161**	T	T	16 58 36.0	
	baz=339,slow=74,SNR=271						
H10N1	**ASCENSION HYDR**	**8.52**	**160**	T	T	16 58 38.2	
	baz=339,slow=74,SNR=423						
H10S3	**ASCENSION HYDR**	**9.51**	**164**	T	T	16 59 50.3	
	baz=342,slow=74,SNR=68						
H10S2	**ASCENSION HYDR**	**9.52**	**164**	T	T	16 59 51.5	
	baz=238,slow=74,SNR=54						
DBIC	**Dimbokro**	**14.01**	**63**	Pn	Pn	16 50 46.8	-0.2
	0.8nm,0.3s,baz=240,slow=18,SNR=7.4						
DBIC				Sn	Sn	16 53 14.0	-9.3
	0.8nm,0.3s,baz=149,slow=16,SNR=4.0						
	3.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**22.82**	**55**	P	P	16 52 31.9	+0.1
	1.9nm,0.7s,baz=238,slow=11,SNR=10						
	1.9nm,0.7s						
GERES	**GERESS Array B**	**55.32**	**24**	P	P	16 57 02.5	-0.1
	0.5nm,0.6s,baz=224,slow=8.1,SNR=4.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**143.66**	**132**	PKP	PKPdf	17 07 04.3	-0.6
	0.7nm,1.1s,baz=228,slow=2.3,SNR=2.0						

IDC 01 16:53:01.4±3.3, 13°.29N×145°.40E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=107.9km s-min=33.3km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**38.41**	**197**	P	P	17 00 24.7	-0.2
	1.4nm,1.2s,baz=13,slow=7.8,SNR=2.3						
	1.4nm,1.2s						
CMAR	**Chiang Mai Arr**	**44.89**	**283**	P	P	17 01 18.0	0.0
	0.4nm,0.6s,baz=87,slow=8.0,SNR=2.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**62.06**	**316**	P	P	17 03 24.3	+0.4
	0.9nm,0.3s,baz=93,slow=8.5,SNR=19						
	0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**65.18**	**320**	P	P	17 03 44.0	-0.3
	1.7nm,0.4s,baz=104,slow=6.9,SNR=28						
	1.7nm,0.4s						
BVAR	**Borovoye Array**	**70.48**	**322**	P	P	17 04 17.6	-0.2
	1.1nm,0.5s,baz=99,slow=7.8,SNR=1.9						
	1.1nm,0.5s						

*IDC **01** 16:56:33.3±0.9, 15°.75N×121°.46E, h0km, mb3.8/11, mbtmp3.8/11, Error ellipse: s-maj=41.6km s-min=17.6km az=67.0*

*MAN **01** 16:56:50.0, 15°.37N×120°.35E, h137km, MS3.2*

ISC 01 16:56:50.8±0.8, 15°.3N±0°.4×120°.6E±0°.5, h150km, n14, σ1s86/15, mb3.6/10, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCPS	**Palayan City**	**0.81**	**142**	*i* P	**Pn**	**16 57 12.2**	**-1.9**
PCPS				*e*S	**Sn**	**16 57 28.1**	**-3.7**
BOLP	**Bolinao**	**1.24**	**331**	*i* P	**Pn**	**16 57 16.8**	**-0.8**
BOLP				*e*S	**Sn**	**16 57 35.3**	**-3.0**
LQP	**Lukban**	**1.52**	**141**	*e*P	**Pn**	**16 57 22.2**	**+1.4**
LQP				*e*S	**Sn**	**16 57 42.2**	**-1.5**
CMAR	**Chiang Mai Arr**	**20.91**	**282**	P	Pn	17 01 24.8	-1.3
	0.4nm,0.7s,baz=93,slow=7.6,SNR=5.0						
	0.4nm,0.7s						
KSRS	**Korea Array**	**23.02**	**15**	P	P	17 01 31.4	-11
	0.2nm,0.4s,baz=220,slow=14,SNR=4.1						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**37.56**	**158**	P	**P**	**17 03 50.2**	**-0.5**
	0.7nm,0.8s,baz=341,slow=8.3,SNR=10.0						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**40.87**	**161**	P	**P**	**17 04 18.6**	**+0.4**
	0.3nm,0.5s,baz=342,slow=8.3,SNR=9.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**44.67**	**323**	P	**P**	**17 04 48.5**	**-0.1**
	0.4nm,0.6s,baz=111,slow=8.0,SNR=3.3						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**47.58**	**332**	P	**P**	**17 05 11.3**	**+0.2**
	0.4nm,0.4s,baz=118,slow=7.4,SNR=2.4						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**48.79**	**325**	P	**P**	**17 05 22.3**	**+1.8**
	1.0nm,0.6s,baz=124,slow=8.7,SNR=14						
	1.0nm,0.6s						
ARCES	**ARCESS Array B**	**77.55**	**339**	P	**P**	**17 08 31.1**	**+1.5**
	5.0nm,1.0s,baz=65,slow=6.2,SNR=3.5						
	5.0nm,1.0s						
FINES	**FINESS Array B**	**78.82**	**331**	P	**P**	**17 08 38.2**	**+1.4**
	6.5nm,1.2s,baz=60,slow=7.1,SNR=1.1						
	6.5nm,1.2s						
HFS	**Hagfors**	**85.01**	**331**	P	**P**	**17 09 09.9**	**+0.8**
	1.6nm,0.7s,baz=73,slow=6.8,SNR=2.0						
	1.6nm,0.7s						
NOA	**NORSAR Array B**	**85.78**	**333**	P	**P**	**17 09 14.4**	**+1.4**
	1.0nm,0.7s,baz=71,slow=5.0,SNR=3.3						
	1.0nm,0.7s						

IDC 01 17:24:55.5±2.1, 27°.91N×98°.57E, h0km, mb3.3/4, mbtmp3.4/4, MS2.4/1, Error ellipse: s-maj=350.7km s-min=23.6km az=57.0, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.42**	**178**	LR	LR	17 31 01.8	
	comp=Z,24nm,20.1s,baz=170,slow=39						
MKAR	**Makanchi Array**	**22.78**	**330**	P	P	17 29 58.8	-0.8
	0.4nm,0.8s,baz=148,slow=11,SNR=3.6						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**27.31**	**332**	P	P	17 30 42.4	+0.6
	0.9nm,1.1s,baz=137,slow=11,SNR=3.8						
	0.9nm,1.1s						
WRA	**Warramunga Arr**	**58.83**	**140**	P	P	17 34 55.6	-0.5
	0.4nm,0.6s,baz=329,slow=7.5,SNR=5.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**61.57**	**143**	P	P	17 35 15.4	+0.5
	0.4nm,1.0s,baz=324,slow=6.5,SNR=2.1						
	0.4nm,1.0s						

*ISU **01** 17:33:24, 41°.58N×69°.97E, h10km*

*NNC **01** 17:33:25.9±1.0, 41°.68N×69°.91E, h1km±3km, mb2.8, mpv2.7, Error ellipse: s-maj=6.7km s-min=3.2km az=28.0*

*KRNET **01** 17:33:26.0±0.1, 41°.54N×70°.05E, h16km, mb2.2*

*SOME **01** 17:33:25.5, 41°.60N×70°.08E, h5km*

ISC 01 17:33:23.1±0.9, 41°.65N±0°.03×69°.92E±0°.04, h18km±5km, n15, σ1s21/28, 8C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHRV	**Charvak**	**0.03**	**112**	P	**Pg**	**17 33 26.6**	**+0.3**
CHRV				S	**Sg**	**17 33 28.2**	**-0.3**
CHMG	**Chimgan**	**0.12**	**145**	S	**Sg**	**17 33 28.9**	**-1.0**
TVKS	**Tavaksay**	**0.21**	**249**	P	**Pb**	**17 33 29.6**	**+1.3**
TVKS				S	**Sb**	**17 33 33.2**	**+1.4**
IUG	**Iuzhnay**	**0.50**	**10**	P	**Pn**	**17 33 35.3**	**-0.3**
	20nm,0.2s						
IUG				S	**Sn**	**17 33 42.5**	**-1.3**
	21nm,0.1s						
IUG	**Iuzhnay**	**0.50**	**10**	*e*P	**Pn**	**17 33 35.3**	**-0.3**
	20nm,0.2s						
IUG				*e*S	**Sn**	**17 33 42.5**	**-1.3**
	21nm,0.1s						
TRKS	**Terek-Say**	**0.93**	**97**	⇑*e*P	**Pn**	**17 33 42.1**	**+0.7**
TRKS				⇑*e*S	**Sn**	**17 33 53.8**	**-0.5**
BRLS	**Boroldav**	**1.38**	**358**	P	**Pb**	**17 33 47.5**	**-0.8**
	0.3nm,0.1s						
BRLS				S	**Sn**	**17 34 03.0**	**-2.4**
	10nm,0.2s						
BRLS	**Boroldav**	**1.38**	**358**	*e*P	**Pb**	**17 33 47.5**	**-0.8**
	0.3nm,0.1s						
BRLS				*e*S	**Sn**	**17 34 03.0**	**-2.4**
	10nm,0.2s						
KK31	**Karatay Array**	**1.52**	**17**	Pn	**Pg**	**17 33 53.8**	**+1.4**
	1.7nm,0.4s,baz=197,slow=17,SNR=10						
KK31				⇓Sn	**Sg**	**17 34 14.6**	**+2.5**
	1.3nm,0.3s,baz=198,slow=29,SNR=7.4						
ARK	**Arkit**	**1.54**	**84**	⇑*e*P	**Pg**	**17 33 53.1**	**+0.4**
ARK				⇑*e*S	**Sg**	**17 34 12.9**	**+0.1**
BTK	**Batken**	**1.73**	**156**	⇑*e*P	**Pg**	**17 33 55.3**	**-1.1**
BTK				⇑*e*S	**Sb**	**17 34 16.8**	**+0.9**
MNAS	**Manas**	**2.10**	**66**	⇑*e*P	**Pg**	**17 34 03.1**	**-0.3**
MNAS				⇑*e*S	**Sg**	**17 34 30.1**	**-0.6**
ARSB	**Arslanbob**	**2.33**	**97**	⇓*e*P	**Pb**	**17 34 05.1**	**+0.5**
ARSB				⇓*e*S	**Sb**	**17 34 33.8**	**+0.7**
MRKS	**Merke**	**2.69**	**65**	Pg	**Pg**	**17 34 15.1**	**+0.4**
	1.4nm,0.3s						
MRKS				Lg	Lg	17 34 50.6	
	6.1nm,0.5s						
MRKS	**Merke**	**2.69**	**65**	*e*P	**Pg**	**17 34 15.1**	**+0.4**
	1.4nm,0.3s						
MRKS				*e*S	**Sg**	**17 34 50.6**	**+1.0**
	6.1nm,0.5s						

*MEX **01** 17:43:01.1±0.5, 15°.15N×93°.25W, h85km±14km, MD3.8*

*GCG **01** 17:43:03.6±2.0, 15°.32N×92°.93W, h36km±999km, MD4.0, Presumed earthquake*

ISC 01 17:42:58.2±1.9, 15°.13N±0°.10×93°.20W±0°.08, h104km±18km, n13, σ1s26/22, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.93**	**103**	*e*P	**Pn**	**17 43 19.2**	**+1.1**
THIG				*e*S	**Sn**	**17 43 33.5**	**+0.2**
PATR	**El Naranjo**	**0.93**	**91**	*e*P	**Pn**	**17 43 18.9**	**+0.4**
PATR				*e*S	**Sn**	**17 43 32.9**	**-0.9**
PAVE	**Pavencul**	**0.99**	**86**	*e*P	**Pn**	**17 43 20.1**	**+1.0**
PAVE				*e*S	**Sn**	**17 43 34.8**	**0.0**
CHUJ	**Union Juarez**	**1.05**	**92**	*e*P	**Pn**	**17 43 20.6**	**+0.8**
CHUJ				*e*S	**Sn**	**17 43 35.9**	**-0.2**
CARR	**Arriaga**	**1.31**	**328**	*e*P	**Pn**	**17 43 22.9**	**+0.5**
CARR				*e*S	**Sn**	**17 43 39.5**	**-1.3**
RTAL	**Retalhuleu**	**1.57**	**112**	*e*P	**Pn**	**17 43 27.2**	**+1.5**
RTAL				*e*S	**Sn**	**17 43 46.3**	**-0.2**
TGIG		**1.64**	**3**	*e*P	**Pn**	**17 43 27.1**	**+0.5**
TGIG				*e*S	**Sn**	**17 43 45.4**	**-2.6**
TGIG		**1.64**	**3**	*i* P	**Pn**	**17 43 27.0**	**+0.5**
STG8	**El Palmar, Qui**	**1.91**	**110**	*i* P	**Pn**	**17 43 28.2**	**-1.9**
STG5	**El Palmar, Qui**	**1.93**	**112**	*i* P	**Pn**	**17 43 28.5**	**-1.7**
STG5				*i* S	Sn	17 43 44.9	-10
CMIG	**Matias Romero**	**2.54**	**321**	*e*P	**Pn**	**17 43 38.8**	**+0.8**
CMIG				*e*S	**Sn**	**17 44 07.5**	**-1.0**
NEUV	**Arroyo Zacate**	**3.58**	**316**	*e*P	**Pn**	**17 43 53.3**	**+1.4**
NEUV				*e*S	**Sn**	**17 44 32.9**	**-0.5**
PETF	**Flores**	**3.67**	**61**	*i* P	**Pn**	**17 43 54.6**	**+1.6**

IDC 01 17:46:09.6±10.0, 14°.87S×167°.11E, h160km±64km, mb3.2/4, mbtmp3.7/5, Error ellipse: s-maj=95.6km s-min=28.5km az=35.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.19**	**185**	P	Pn	17 47 52.7	+0.4
	5.1nm,0.3s,baz=334,slow=12,SNR=31						
DZM				S	Sn	17 49 12.8	-0.3
	6.6nm,0.6s,baz=242,slow=21,SNR=1.1						
WRA	**Warramunga Arr**	**31.65**	**256**	P	P	17 52 17.7	-0.2
	0.1nm,0.3s,baz=85,slow=8.9,SNR=8.3						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**32.48**	**249**	P	P	17 52 25.4	+0.1
	0.5nm,0.5s,baz=77,slow=9.5,SNR=23						
	0.5nm,0.5s						
VNDA	**Vanda**	**62.72**	**181**	P	P	17 56 17.4	+0.4
	0.2nm,0.5s,baz=19,slow=6.5,SNR=3.1						
	0.2nm,0.5s						
QSPA	**South Pole Qui**	**75.16**	**180**	P	P	17 57 33.8	-0.4
	1.2nm,0.9s,baz=306,slow=1.9,SNR=3.2						
	1.2nm,0.9s						

IDC 01 18:22:09.7±11.0, 4°.89N×96°.16E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=599.8km s-min=32.3km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**43.43**	**346**	P	P	18 30 14.2	-0.2
	0.2nm,0.7s,baz=157,slow=7.8,SNR=2.0						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**44.92**	**125**	P	P	18 30 25.7	-1.0
	0.2nm,0.7s,baz=291,slow=7.6,SNR=1.8						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**46.48**	**129**	P	P	18 30 39.6	+0.6
	0.3nm,0.9s,baz=302,slow=8.5,SNR=4.4						
	0.3nm,0.9s						

*IDC **01** 18:34:13.2±1.6, 3°.77N×124°.35E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, MS3.5/1, Error ellipse: s-maj=85.0km s-min=25.4km az=59.0*

*MAN **01** 18:34:29.0, 4°.43N×125°.95E, h139km, MS3.3*

ISC 01 18:34:28.6±1.1, 4°.42N±0°.08×125°.9E±0°.1, h150km, n11, σ1s13/14, mb3.3/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.69**	**353**	*i* P	**Pn**	**18 35 00.7**	**+0.5**
DDMP				*e*S	**Sn**	**18 35 23.1**	**-1.5**
GSPH	**General Santos**	**1.92**	**330**	*i* P	**Pn**	**18 35 02.9**	**-0.1**
GSPH				*i* S	**Sn**	**18 35 28.9**	**-0.5**
KCP	**Kidapawan**	**2.71**	**342**	*e*P	**Pn**	**18 35 13.1**	**+0.7**
KCP				*i* S	**Sn**	**18 35 48.5**	**+2.3**
CTBH	**Cotabato--PC H**	**3.25**	**329**	*i* P	Pn	18 35 13.6	-5.6
CDOP	**Cateel, Davao**	**3.38**	**9**	*i* P	**Pn**	**18 35 20.9**	**+0.1**
CDOP				*i* S	**Sn**	**18 36 00.1**	**-1.3**
BIPH	**Bislig**	**3.77**	**7**	*e*P	**Pn**	**18 35 26.7**	**+0.9**
BIPH				*e*S	**Sn**	**18 36 10.2**	**-0.2**
SIJI	**Sorong**	**7.49**	**134**	Pn	**Pn**	**18 36 16.4**	**+1.2**
	0.5nm,0.3s,baz=139,slow=21,SNR=1.5						
	1.7nm,0.4s						
WRA	**Warramunga Arr**	**25.58**	**161**	P	**P**	**18 39 42.8**	**-1.1**
	0.3nm,0.5s,baz=338,slow=10,SNR=14						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**28.98**	**165**	P	**P**	**18 40 13.9**	**-0.3**
	0.4nm,0.5s,baz=341,slow=7.2,SNR=24						
	0.4nm,0.5s						
KLR	**Kul'dur**	**44.93**	**5**	LR	LR	19 05 04.5	
	comp=Z,46nm,18.5s,baz=204,slow=40						
MKAR	**Makanchi Array**	**56.54**	**325**	P	**P**	**18 43 55.0**	**-0.4**
	0.2nm,0.5s,baz=125,slow=8.9,SNR=4.6						
	0.2nm,0.5s						

*JMA **01** 19:20:37.5±0.8, 46°.N±5°.×15°.2E±°, h30km, MV3.9/12, KURILE ISLANDS REGION*

SKHL 01 19:20:40.1±0.9, 45°.50N×151°.60E, h31km±5km, mb4.6/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**2.54**	**266**	*e*P	Pn	19 21 18.6	-0.5
REI				AMB	AMB	19 21 19.8	
	20nm,0.3s						
REI				*e*S	Sn	19 21 46.8	-2.1
REI				A	A	19 21 53.1	
	60nm,0.2s						
REI				A	A	19 21 53.1	
	50nm,0.2s						
KUR	**Kuril'sk**	**2.65**	**266**	*e*P	Pn	19 21 20.5	-0.1
KUR				AMB	AMB	19 21 22.1	
	80nm,0.3s						
KUR				*e*S	Sn	19 21 50.5	-1.1
KUR				A	A	19 22 02.0	
	170nm,0.3s						
KUR				A	A	19 22 02.0	
	150nm,0.3s						
SHO	**Shikotan**	**3.77**	**246**	*e*P	Pb	19 21 48.1	+2.2
SHO				AMB	AMB	19 21 49.6	
	30nm,0.2s						
SHO				*e*S	Sb	19 22 31.5	+0.4
SHO				A	A	19 22 45.6	
	40nm,0.2s						
SHO				A	A	19 22 45.6	
	60nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.34**	**252**	*e*P	Pn	19 21 45.1	+1.2
YUK				AMB	AMB	19 21 48.8	
	50nm,0.4s						
YUK				*i* S	Sn	19 22 33.0	-0.4
YUK				A	A	19 22 46.9	
	110nm,0.4s						
YUK				A	A	19 22 46.9	
	120nm,0.4s						
NEM2	**Nemuro 2**	**4.71**	**245**	*e*P	Pn	19 21 48.6	-0.3
NEM2				*e*S	Sn	19 22 40.7	-1.7
NMR	**Nemuro--Hokkai**	**4.71**	**245**	*e*P	Pn	19 21 48.7	-0.3
NMR				*i* S	Sn	19 22 41.9	-0.7
JRA	**Rausu**	**4.87**	**254**	*e*P	Pn	19 21 53.3	+2.1
JNK	**Nakash**	**5.28**	**251**	*e*P	Pn	19 21 58.1	+1.3
AKK	**Akkeshi**	**5.45**	**245**	*e*P	Pn	19 22 00.1	+1.0
JAK	**Akkeshi**	**5.55**	**246**	*e*P	Pn	19 22 00.1	-0.4
JTKR	**Abashiri--Toko**	**5.69**	**257**	*e*P	Pn	19 22 05.0	+2.6
JAR	**Ashorobuto**	**6.03**	**251**	*e*P	Pn	19 22 08.6	+1.5
JAR				*e*S	Sn	19 23 15.8	+0.8
JOB	**Onbets**	**6.16**	**248**	*e*S	Sn	19 23 16.8	-1.3
YSS	**Yuzhno-Sakhali**	**6.31**	**286**	*e*P	Pn	19 22 12.5	+1.6
JCH	**Churui**	**6.60**	**247**	*e*P	Pn	19 22 14.3	-0.6
JCH				*e*S	Sn	19 23 25.5	-3.5
JNBK	**Urakawa-nobuka**	**7.16**	**246**	*e*P	Pn	19 22 22.4	-0.1

*BJI **01** 19:22:31.9, 24°.68N×123°.48E, h13km, mB5.0/31, mb4.3/55, ML4.4/1, Ms4.7/54, Ms7 4.6/53*

*IDC **01** 19:22:32.3±0.6, 24°.89N×123°.44E, h0km, mb4.2/26, mbtmp4.2/29, ML3.1/3, MS4.0/49, Error ellipse: s-maj=17.5km s-min=12.7km az=70.0*

*NIED **01** 19:22:33.6, 24°.92N×123°.47E, h17km, MW4.6, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁶Nm; Mrr-1.01; Mθθ 0.93; Mφφ 0.08; Mrθ-0.22; Mθφ-0.02; Mφr 0.15; Fault plane solution: Mo1.00000×10¹⁶ NP1: φs265.00000°, δ39.00000°, λ-101.00000°. NP2: φs99.00000°, δ52.00000°, λ-81.00000°.*

*JMA **01** 19:22:33.6±0.3, 24°.9N±0°.9×123°.5E±0°.4, h17km±4km, MD5.0/15, MW4.7/15, NW OFF ISHIGAKIJIMA IS*

*NEIC **01** 19:22:34.6±1.2, 24°.92N±0°.06×123°.37E±0°.07, h12km±3km, mb4.6/60, Error ellipse: s-maj=11.1km s-min=5.6km az=135.0*

*GFZ **01** 19:22:35.2±0.3, 25°.N±3°.×12°.3E±°, h10km, M4.7/16, mb4.7/16*

*GCMT **01** 19:22:36.6±0.4, 24°.89N±0°.02×123°.43E±0°.05, h13km±1km, MW4.7/70, Moment Tensor Solution. s8, c8; s70, c94; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.06±.12; Mθθ 1.14±.09; Mφφ-0.08±.07; Mrθ 0.64±.18; Mθφ 0.18±.04; Mφr-0.75±.24; Best double couple: Mo1.46500×10¹⁶ NP1: φ60.00000°, δ37.00000°, λ-135.00000°. NP2: φs291.00000°, δ65.00000°, λ-62.00000°. Principal axes: T 1.3130, Plg15.0000°, Azm1.0000°; N 0.3030, Plg25.0000°, Azm98.0000°; P -1.6160, Plg60.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 19:22:34.9±0.5, 24°.80N±0°.03×123°.48E±0°.02, h17km±3km, n231, σ1s84/217, mb4.5/70, MS4.1/50, 3C-1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.52**	**154**	*e*P	**Pb**	**19 22 45.7**	**+0.3**
IRIF				A	A	19 22 45.7	
	comp=N,113nm,6.1s,comp=E,102nm,6.1s						
IRIF				S	**Sb**	**19 22 54.7**	**+2.0**
YOJ	**Yonaguni jima**	**0.54**	**232**	P	**Pg**	**19 22 45.1**	**-0.6**
YOJ	**Yonaguni jima**	**0.54**	**232**		**Pg**	**19 22 45.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.54**	**232**	P	**Pg**	**19 22 45.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.54**	**232**	P	**Pg**	**19 22 45.6**	**-0.1**
YOJ				A	A	19 22 45.6	
	comp=N,137nm,3.1s,comp=E,104nm,3.8s						
JYNG	**Yonagunijimaku**	**0.60**	**235**	*i* P	**Pg**	**19 22 46.3**	**-0.4**
JYNG				A	A	19 22 46.3	
	comp=N,121nm,3.3s,comp=E,89nm,3.8s						
JYNG				S	**Sb**	**19 22 55.0**	**+0.1**
JKRS	**Kuro-shima**	**0.74**	**139**	*i* P	**Pb**	**19 22 49.4**	**+0.2**
JKRS				A	A	19 22 49.4	
	comp=N,125nm,2.3s,comp=E,187nm,4.1s						
JKRS				*e*S	**Sb**	**19 22 59.9**	**+0.8**
JIJ	**Ishigaki jima**	**0.74**	**126**	*i* P	**Pg**	**19 22 48.8**	**-0.7**
JIJ				A	A	19 22 48.8	
	comp=N,32nm,5.7s,comp=E,37nm,4.7s						
JIJ				*e*S	**Sg**	**19 22 59.2**	**-0.1**
JISG	**Ishigakijimahi**	**0.78**	**105**	*i* P	**Pg**	**19 22 49.1**	**-1.1**
JISG				A	A	19 22 49.1	
	comp=N,29nm,6.2s,comp=E,32nm,0.7s						
HATJ	**Hateruma jima**	**0.80**	**158**	P	**Pb**	**19 22 50.7**	**+0.4**
HATJ				A	A	19 22 50.7	
	comp=N,235nm,3.3s,comp=E,214nm,2.4s						
JTJ	**Tarama**	**1.12**	**98**	*e*P	**Pb**	**19 22 54.8**	**-1.0**
JTJ				A	A	19 22 54.8	
	comp=N,73nm,5.6s,comp=E,43nm,5.3s						
JTJ				S	**Sb**	**19 23 10.8**	**+0.6**
JIRJ	**Irabujima**	**1.56**	**88**	*e*P	**Pn**	**19 23 01.7**	**-0.1**
JIRJ				A	A	19 23 01.7	
	comp=N,30nm,5.4s,comp=E,32nm,4.3s						
JIKM	**Ikemajima**	**1.61**	**85**	*e*P	**Pn**	**19 23 02.4**	**-0.1**
JIKM				A	A	19 23 02.4	
	comp=N,31nm,5.3s,comp=E,37nm,5.2s						
JMJ	**Miyako jima 2**	**1.65**	**89**	P	Pg	19 23 14.1	+7.5
JMJ2	**Miyako jima3**	**1.68**	**92**	*e*P	**Pn**	**19 23 03.8**	**+0.3**
JMJ2				A	A	19 23 03.8	
	comp=N,72nm,5.9s,comp=E,43nm,6.2s						
JOGS	**Gusukube**	**1.75**	**91**	*e*P	**Pn**	**19 23 04.6**	**+0.2**
JOGS				A	A	19 23 04.6	
	comp=N,55nm,5.5s,comp=E,39nm,3.9s			

NJ2 L L
comp=E,9µm,11.4s
NJ2 L L
comp=E,4µm,10.4s
NJ2 L L
comp=E,8µm,12.3s
JNU Nakatsue 10.52 36 LR LR 19 29 45.7
comp=E,593nm,18.5s,baz=219,slow=41
LQP Lukban 10.79 190 *e*P Pn 19 25 15.1 +6.3
KSRS Korea Array 13.17 16 Pn **Pn 19 25 41.2 0.0**
comp=E,0.1nm,0.3s,baz=198,slow=14,SNR=15
KSRS LR LR 19 31 27.3
comp=E,766nm,19.1s,baz=205,slow=41
comp=E,1.0nm,0.7s
PLP Palo 13.63 174 *e*P **P 19 25 53.8 -2.6**
QIZ Qiongzhong 13.89 248 P **Pn 19 25 50.6 -0.5**
QIZ S **Sn 19 28 27.4 +2.4**
QIZ L L
comp=E,720nm,14.3s
QIZ L L
comp=E,430nm,11.8s
QIZ L L
comp=E,500nm,13.8s
DL2 Dalian 14.15 354 *e*P **Pn 19 25 55.0 +0.5**
DL2 *e*S **Sn 19 28 35.8 +4.7**
DL2 pmax pmax
comp=E,10.0nm,1.4s
DL2 pmax pmax
comp=E,210nm,4.4s
DL2 L L
comp=E,2µm,13.3s
DL2 L L
comp=E,2µm,11.8s
DL2 L L
comp=E,3µm,12.8s
HNS HongShan 14.63 331 ⇓P **Pn 19 25 57.4 -3.6**
HNS pmax pmax
comp=E,130nm,4.3s
HNS L L
comp=E,2µm,13.5s
HNS L L
comp=E,1µm,13.8s
HNS L L
comp=E,2µm,14.6s
GYA Guiyang 15.26 280 ⇑P **Pn 19 26 10.4 +0.7**
GYA pmax pmax
comp=E,6.0nm,0.6s
DCPH Dipolog City 16.13 180 *e*P **P 19 26 25.2 +1.2**
CGP Cagayan de Oro 16.30 176 *e*P **P 19 26 26.8 +0.9**
BJI2 Beijing 16.37 340 P **P 19 26 27.5 +0.8**
BJI2 pmax pmax
comp=E,2.0nm,0.9s
BJI2 pmax pmax
comp=E,85nm,9.0s
BJI2 L L
comp=E,670nm,12.9s
BJI2 L L
comp=E,140nm,11.8s
BJI2 L L
comp=E,890nm,14.3s
JCJ Chichijima 16.98 78 LR LR 19 32 14.0
comp=E,118nm,20.3s,baz=146,slow=34
MJAR Matsushiro Arr 17.22 44 P **Pn 19 26 34.6 -0.1**
baz=231,slow=9.7,SNR=4.1
MJAR LR LR 19 33 16.8
comp=E,350nm,20.6s,baz=230,slow=38
comp=E,1.9nm,0.8s
MJAR Matsushiro Arr 17.22 44 P **Pn 19 26 34.6 -0.1**
DAV Davao City (W) 17.74 173 LR LR 19 33 21.1
comp=E,541nm,21.4s,baz=355,slow=36
SLVN Son La 18.34 263 P **P 19 26 48.9 +0.3**
CD2 Chengdu 18.46 294 P **P 19 26 48.5 -1.4**
CD2 pP pP 19 26 51.9 -2.3
CD2 sP sP 19 26 55.2 -1.1
CD2 S **Sn 19 30 13.8 -2.2**
CD2 sS sS 19 30 25.9 -1.1
CD2 pmax pmax
comp=E,30nm,1.0s
CD2 pmax pmax
comp=E,360nm,8.2s
CD2 L L
comp=E,2µm,7.6s
CD2 L L
comp=E,2µm,8.4s
CD2 L L
comp=E,1µm,7.6s
KMI2 Kunming 18.80 275 P **Pn 19 26 56.5 +2.1**
KMI2 pmax pmax
comp=E,7.0nm,0.9s
KMI2 pmax pmax
comp=E,260nm,7.8s
KMI2 L L
comp=E,830nm,7.1s
KMI2 L L
comp=E,1µm,10.4s
KMI2 L L
comp=E,1µm,10.6s
HHC Hu-ho-hao-te 18.85 331 ⇑*i*P **Pn 19 26 57.4 +2.7**
HHC sP pwP 19 27 04.8 +3.9
HHC S **Sn 19 30 21.5 -3.8**
HHC pmax pmax
comp=E,14nm,0.9s
HHC L L
comp=E,1µm,13.0s
HHC L L
comp=E,570nm,13.3s
HHC L L
comp=E,1µm,13.7s
CN2 Changchun 19.02 4 *e*P **Pn 19 26 58.9 +2.2**
CN2 *e*S **S 19 30 34.4 +3.2**
CN2 pmax pmax
comp=E,10.0nm,0.4s
CN2 pmax pmax
comp=E,400nm,6.2s
CN2 L L
comp=E,3µm,12.0s
CN2 L L
comp=E,2µm,12.0s
CN2 L L
comp=E,3µm,14.4s
BTO2 Baotou 19.55 328 *e*P **Pn 19 27 03.8 +0.7**
BTO2 pP **pwP 19 27 07.6 -0.9**
BTO2 sP **sP 19 27 11.2 +3.1**
BTO2 S **Sn 19 30 36.5 -5.7**
BTO2 sS **SnSn 19 30 44.4 +2.4**
BTO2 SS **SnSn 19 31 04.1 +7.5**
BTO2 pmax pmax
comp=E,21nm,2.0s
BTO2 pmax pmax
comp=E,810nm,7.4s
BTO2 L L
comp=E,2µm,14.1s
BTO2 L L
comp=E,2µm,14.9s
BTO2 L L
comp=E,3µm,16.4s
PZH PanZhiHua 19.67 280 P **Pn 19 27 04.9 +0.2**
PZH S **S 19 30 39.7 -5.0**
PZH pmax pmax
comp=E,10.0nm,1.6s
PZH pmax pmax
comp=E,230nm,5.8s
PZH L L
comp=E,840nm,10.6s
PZH L L
comp=E,570nm,12.4s
PZH L L
comp=E,660nm,12.0s
KKM Kota Kinabalu 19.91 202 P **Pn 19 27 07.2 -0.3**
comp=E,36nm,1.1s
KKM Kota Kinabalu 19.91 202 P **Pn 19 27 10.0 +2.5**
XLT XiLinHaoTe 19.99 344 *e*P **Pn 19 27 09.6 +1.2**
XLT pP pwP 19 27 12.7 -0.7
XLT sP sP 19 27 17.9 +5.0
XLT S **Sn 19 30 55.3 +2.5**
XLT SS **SnSn 19 31 17.6 +10**
XLT PcS **PcS 19 35 01.2 +1.3**
XLT pmax pmax
comp=E,11nm,0.8s
XLT pmax pmax
comp=E,220nm,6.9s
XLT L L
comp=E,160nm,12.6s
XLT L L
comp=E,640nm,12.8s
XLT L L
comp=E,2µm,12.8s
LZH Lanzhou 20.29 308 P Pn 19 27 11.7 -0.3
LZH sP pwP 19 27 16.4 -0.4
LZH SS **SnSn 19 31 27.8 +13**
LZH pmax pmax
comp=E,39nm,1.0s
LZH pmax pmax
comp=E,310nm,4.1s
LZH L L
comp=E,600nm,12.4s
LZH L L
comp=E,1µm,12.7s
LZH L L
comp=E,2µm,14.3s
LZDM Lanzhou Array 20.33 308 P **P 19 27 09.8 -0.8**
comp=E,1.5nm,0.3s,baz=139,slow=9.6,SNR=4.6
comp=E,1.5nm,0.3s
MDJ Mudanjiang 20.39 13 **P 19 27 09.6 -1.2**
MDJ Mudanjiang 20.39 13 P **P 19 27 09.8 -1.0**
MDJ pmax pmax
comp=E,7.0nm,1.7s
MDJ pmax pmax
comp=E,310nm,4.3s
MDJ Mudanjiang 20.39 13 P Pn 19 27 14.2 +1.3
USRK Ussuriysk Ar. 20.56 18 P **P 19 27 11.8 -0.9**
comp=E,2.4nm,0.7s,baz=208,slow=10,SNR=5.3
USRK LR LR 19 35 20.6
comp=E,403nm,19.8s,baz=193,slow=38
comp=E,2.4nm,0.7s
BNX BinXian 21.13 8 ⇑P **P 19 27 20.1 +1.3**
BNX pP **pP 19 27 22.8 -0.4**
BNX sP **sP 19 27 24.2 -0.9**
BNX S Sn 19 31 17.0 -3.1
BNX sS **pS 19 31 22.2 -0.1**
BNX pmax pmax
comp=E,15nm,1.0s
BNX pmax pmax
comp=E,390nm,4.6s
BNX L L
comp=E,2µm,11.9s
BNX L L
comp=E,730nm,9.8s
BNX L L
comp=E,2µm,12.0s
GUMO Guam 23.04 115 LR LR 19 34 46.1
comp=E,92nm,21.6s,baz=278,slow=32
CHTO Chiang Mai 23.53 260 **P 19 27 43.4 -0.9**
CHTO IAmb IAmb 19 27 51.3
comp=Z,16nm,1.1s
CHTO Chiang Mai 23.53 260 P **P 19 27 45.0 +0.7**
CHTO Chiang Mai 23.53 260 P **P 19 27 44.4 0.0**
CM31 Chiang Mai Arr 23.65 259 P **P 19 27 45.1 -0.4**
CMAR Chiang Mai Arr 23.65 259 P **P 19 27 45.7 +0.2**
comp=Z,3.4nm,1.0s,baz=62,slow=7.9,SNR=20
CMAR PcP **PcP 19 31 30.9 +0.8**
comp=Z,1.1nm,0.7s,baz=78,slow=0.4,SNR=7.4
CMAR LR LR 19 37 21.2
comp=Z,88nm,21.4s,baz=85,slow=38
comp=Z,3.4nm,1.0s
CMAR Chiang Mai Arr 23.65 259 **P 19 27 44.7 -0.8**
CMAR **PcP 19 31 30.9 +0.8**
TOLI2 Tolitoli 23.69 187 **P 19 27 45.8 -0.1**
TOLI2 IAmb IAmb 19 27 52.7
comp=Z,19nm,0.9s
TOLI2 Tolitoli 23.69 187 P **P 19 27 46.9 +1.0**
GTOI Gorontalo 24.02 181 P **P 19 27 51.5 +2.5**
comp=Z,36nm,0.7s
HIA Hailar 24.60 354 P **P 19 27 54.1 0.0**
SBUM Sibu 24.73 208 P **P 19 27 54.9 -0.6**
SBUM IAmb IAmb 19 28 01.6
comp=Z,35nm,1.3s
SBUM Sibu 24.73 208 P **P 19 27 55.9 +0.4**
comp=Z,26nm,1.2s
SBUM Sibu 24.73 208 P **P 19 27 56.3 +0.7**
GTA2 Gaotai 24.76 312 P **P 19 27 55.4 -0.4**
GTA2 pP pP 19 27 59.7 -0.7
GTA2 pmax pmax
comp=Z,10.0nm,1.0s
GTA2 pmax pmax
comp=Z,220nm,6.5s
GTA2 L L
comp=Z,640nm,11.7s
GTA2 L L
comp=Z,480nm,12.4s
GTA2 L L
comp=Z,730nm,14.4s
HILR Hailar Array B 24.89 354 P **P 19 27 56.3 -0.4**
comp=Z,10nm,0.7s,baz=187,slow=10,SNR=7.4
HILR LR LR 19 39 10.5
comp=Z,496nm,18.5s,baz=130,slow=40
comp=Z,10nm,0.7s
KLR Kul'dur 25.23 13 LR LR 19 39 02.2
comp=Z,579nm,18.3s,baz=202,slow=39
HEH HeiHe 25.59 6 *e*P **P 19 28 03.4 +0.4**
HEH pP **pP 19 28 07.4 -0.3**
HEH pmax pmax
comp=Z,23nm,1.0s
HEH pmax pmax
comp=Z,300nm,6.5s
HEH L L
comp=Z,1µm,11.6s
HEH L L
comp=Z,1µm,10.7s
HEH L L
comp=Z,2µm,12.2s
APSI Ampana 25.62 184 P **P 19 28 08.3 +4.8**
comp=Z,759nmcomp=Z,68nm,1.3s
NPW Naypyitaw 25.77 264 P **P 19 28 06.5 +1.6**
PCI Palu 25.80 188 P **P 19 28 09.6 +4.4**
comp=Z,1µmcomp=Z,42nm,1.1s
ULN Ulaanbaatar 26.44 335 **P 19 28 10.7 -0.3**
ULN IAmb IAmb 19 28 16.9
comp=Z,19nm,1.4s
ULN Ulaanbaatar 26.44 335 P **P 19 28 11.0 0.0**
comp=Z,46nm,1.2s
ULN Ulaanbaatar 26.44 335 P **P 19 28 11.6 +0.6**
SIJI Sorong 26.61 162 LR LR 19 36 36.2
comp=Z,239nm,21.8s,baz=288,slow=32
SONM Songino Array 26.68 334 P **P 19 28 13.2 +0.1**
comp=Z,7.4nm,0.8s,baz=150,slow=9.6,SNR=51
SONM LR LR 19 39 28.7
comp=Z,502nm,20.1s,baz=155,slow=38
comp=Z,7.4nm,0.8s
SONM Songino Array 26.68 334 **P 19 28 12.5 -0.6**
SONM IAmb IAmb 19 28 14.3
comp=Z,11nm,0.9s
MMSI Mamuju 27.68 190 P **P 19 28 24.0 +1.8**
comp=Z,31nm,2.1s
SHL Shillong 28.57 278 P **P 19 28 29.4 -0.9**
SHL IAmb IAmb 19 28 56.7
comp=Z,8.9nm,1.0s
BRDH Bariadhala 29.19 272 LR LR 19 42 11.5
comp=Z,240nm,18.9s,baz=152,slow=40
KAPI Kappang 29.85 187 LR LR 19 42 02.1
comp=Z,280nm,18.8s,baz=344,slow=39
TLY Talaya 30.83 336 LR LR 19 42 02.4
comp=Z,263nm,19.9s,baz=133,slow=38
TLY Talaya 30.83 336 P **P 19 28 48.0 -1.8**
JAY Jayapura 31.89 146 LR LR 19 40 07.1
comp=Z,334nm,20.3s,baz=320,slow=33
MNSI Mandailing Nat 33.22 228 P **P 19 29 11.3 +0.2**
comp=Z,24nm,0.9s
LBFI Labuhan Bajo, 33.26 186 P **P 19 29 15.6 +4.1**
PPI Padang Panjang 33.62 225 P **P 19 29 15.5 +0.9**
comp=Z,24nm,1.1s
WMQ Urumqi 34.77 312 *e*P **P 19 29 25.4 +0.9**
WMQ L L
comp=Z,410nm,12.3s
WMQ L L
comp=Z,440nm,12.3s
WMQ L L
comp=Z,220nm,16.3s
BATI Baumata 34.79 180 LR LR 19 43 57.2
comp=Z,854nm,18.9s,baz=286,slow=37
YAK Yakutsk 37.46 5 LR LR 19 45 44.4
comp=Z,194nm,21.4s,baz=178,slow=37
YAK Yakutsk 37.46 5 **P 19 29 45.4 -1.7**
YAK Yakutsk 37.46 5 P **P 19 29 45.9 -1.2**
MTN Manton Dam 38.15 168 **P 19 29 54.5 +1.0**
PETK Petropavlovsk- 38.20 33 P **P 19 29 52.1 -1.4**
comp=Z,1.4nm,0.7s,baz=226,slow=7.5,SNR=4.2
PETK LR LR 19 45 37.6
comp=Z,209nm,19.3s,baz=236,slow=36
comp=Z,1.4nm,0.7s
MKAR Makanchi Array 39.38 315 P **P 19 30 03.2 -0.3**
comp=Z,4.5nm,0.7s,baz=100,slow=10,SNR=55
MKAR PcP **PcP 19 32 11.3 -0.4**
comp=Z,1.3nm,0.9s,baz=78,slow=5.6,SNR=2.8
MKAR LR LR 19 46 53.6
comp=Z,202nm,18.2s,baz=101,slow=37
comp=Z,4.5nm,0.7s
MKAR Makanchi Array 39.38 315 **P 19 30 02.3 -1.3**
MKAR **PcP 19 32 11.3 -0.4**
MAKZ Makanchi 39.59 314 **P 19 30 04.3 -0.9**
MAKZ IAmb IAmb 19 30 10.7
comp=Z,9.5nm,0.8s
MAKZ Makanchi 39.59 314 P **P 19 30 04.9 -0.3**
MA2 Magadan 39.63 21 LR LR 19 48 03.7
comp=Z,292nm,18.3s,baz=216,slow=39
KRVT Keravat (AS076 40.09 132 LR LR 19 43 39.3
comp=Z,17nm,21.8s,baz=233,slow=32
PDGK Podgornoye 40.33 308 **P 19 30 10.5 -1.1**
ZAA0 Zalesovo Array 40.89 326 **P 19 30 14.7 -1.3**
ZALV Zalesovo Beam 40.89 326 P **P 19 30 15.0 -0.9**
comp=Z,5.2nm,0.7s,baz=106,slow=8.3,SNR=28
ZALV LR LR 19 48 13.5
comp=Z,318nm,21.5s,baz=120,slow=38
comp=Z,5.2nm,0.7s
ZALV Zalesovo Beam 40.89 326 **P 19 30 14.3 -1.6**
NRN Naryn 42.54 305 P **P 19 30 30.2 +0.2**
NRN IAmb IAmb 19 30 36.1
comp=Z,10nm,1.1s
KSH2 Kashi 42.61 302 P **P 19 30 30.2 -0.3**
KSH2 pP sP 19 30 35.3 -1.8
KSH2 pmax pmax
comp=Z,4.0nm,1.5s
KSH2 L L
comp=Z,300nm,16.3s
KSH2 L L
comp=Z,330nm,16.1s
KSH2 L L
comp=Z,560nm,15.1s
KURK Kurchatov 42.99 319 **P 19 30 31.8 -1.3**
KURK IAmb IAmb 19 30 38.0
comp=Z,14nm,1.2s
KURK Kurchatov 42.99 319 P **P 19 30 32.3 -0.8**
KURBB Kurchatov Arra 43.01 319 P **P 19 30 31.8 -1.4**
comp=Z,1.7nm,0.4s,baz=111,slow=8.1,SNR=14
KURBB LR LR 19 49 29.3
comp=Z,104nm,18.8s,baz=180,slow=38
comp=Z,1.7nm,0.4s
AAK Ala-Archa 43.81 306 LR LR 19 51 35.0
comp=Z,203nm,18.4s,baz=100,slow=40
AAK Ala-Archa 43.81 306 P **P 19 30 39.8 -0.3**
AAK Ala-Archa 43.81 306 P **P 19 30 40.4 +0.2**
PALK Pallekele 44.42 254 LR LR 19 48 37.5
comp=Z,48nm,20.5s,baz=78,slow=35
DRK Karamyk 45.55 302 P **P 19 30 51.7 -2.5**
WRAB Tennant Creek 45.70 166 P **P 19 30 55.5 +0.3**
WRAB Tennant Creek 45.70 166 P **P 19 30 56.3 +1.2**
WRA Warramunga Arr 45.71 166 P **P 19 30 55.8 +0.6**
comp=Z,12nm,0.7s,baz=348,slow=8.6,SNR=79
WRA PcP **PcP 19 32 33.3 +0.2**
comp=Z,1.9nm,1.0s,baz=346,slow=3.7,SNR=1.5
comp=Z,12nm,0.7s
WRA Warramunga Arr 45.71 166 P **P 19 30 55.6 +0.4**
WRA **PcP 19 32 33.3 +0.2**
WR8 Warramunga Arr 45.76 165 **P 19 30 56.2 +0.7**
GAR Garm 46.69 301 P **P 19 31 01.6 -1.3**
GAR IAmb IAmb 19 31 08.0
comp=Z,16nm,1.3s
GAR Garm 46.69 301 P **P 19 31 03.1 +0.2**
KK31 Karatay Array 46.77 307 P **P 19 31 02.9 -0.6**
KKAR Karatay Array 46.77 307 P **P 19 31 02.8 -0.7**
TIXI Tiksi 46.98 2 LR LR 19 53 01.1
comp=Z,574nm,18.8s,baz=210,slow=39
TIXI Tiksi 46.98 2 **P 19 31 02.9 -1.6**
BVAR Borovoye Array 48.54 320 P **P 19 31 16.4 -0.6**
comp=Z,2.4nm,0.5s,baz=107,slow=7.2,SNR=17
comp=Z,2.4nm,0.5s
BORK Borovoye 48.59 320 P **P 19 31 15.9 -1.4**
ASAR Alice Springs 49.23 167 P **P 19 31 23.8 +1.2**
comp=Z,3.8nm,0.7s,baz=347,slow=10,SNR=29
ASAR PcP **PcP 19 32 45.9 +0.3**
comp=Z,1.6nm,0.9s,baz=348,slow=4.0,SNR=1.9
comp=Z,3.8nm,0.7s
NRIK Noril'sk 49.37 344 P **P 19 31 22.4 -0.7**
comp=Z,4.9nm,0.8s,baz=112,slow=8.9,SNR=6.1
NRIK LR LR 19 54 18.7
comp=Z,404nm,19.5s,baz=146,slow=39
comp=Z,4.9nm,0.8s
NRIK Noril'sk 49.37 344 IAmb IAmb 19 31 23.3
comp=Z,6.6nm,0.8s
CTA Charters Tower 49.82 152 LR LR 19 54 23.5
comp=Z,115nm,18.0s,baz=20,slow=38
AB31 Akbulak array 54.52 314 IAmb IAmb 19 32 06.8
comp=Z,9.5nm,0.8s
ABKAR Akbulak array 54.52 314 **P 19 32 00.8 -0.9**
INKA Innaminka 54.82 161 IAmb IAmb 19 32 11.1
comp=Z,7.2nm,0.8s
AKTO Aktyubinsk 55.80 315 LR LR 19 57 22.9
comp=Z,156nm,19.8s,baz=49,slow=38
ARTI Arti 55.98 323 LR LR 19 56 21.0
comp=Z,134nm,21.0s,baz=99,slow=36
ARTI Arti 55.98 323 **P 19 32 10.2 -1.9**
STKA Stephens Creek 58.96 162 P **P 19 32 33.6 +0.3**
comp=Z,5.5nm,0.9s,baz=326,slow=6.1,SNR=5.4
comp=Z,5.5nm,0.9s
CMSA Cobar Meteorol 59.91 158 P P 19 32 45.5 +5.5
KIRV Kirov 60.92 325 LR LR 20 01 25.4
comp=Z,663nm,18.1s,baz=95,slow=38
J19K Poorman 64.04 29 **P 19 33 07.3 -0.1**
J19K IAmb IAmb 19 33 10.9
comp=Z,5.6nm,1.1s
IMAR Indian Mountai 64.70 27 P **P 19 33 11.2 -0.4**
K20K Telida 64.78 30 P **P 19 33 12.6 +0.4**
K20K IAmb IAmb 19 33 14.0
comp=Z,2.9nm,0.8s
H21K Melozitna Rive 65.11 27 IAmb IAmb 19 33 20.4
comp=Z,3.1nm,0.8s
CAST Castle Rocks 65.66 29 **P 19 33 17.8 -0.2**
CAST IAmb IAmb 19 33 19.7
comp=Z,3.2nm,0.8s
H22K Ishtalitna Cre 65.67 27 P **P 19 33 18.2 +0.1**
H22K IAmb IAmb 19 33 24.5
comp=Z,4.3nm,0.8s
GNI Garni 66.18 305 LR LR 20 05 19.7
comp=Z,79nm,18.2s,baz=79,slow=39
L22K Petersville 66.37 30 IAmb IAmb 19 33 23.1
comp=Z,4.0nm,0.7s
KBZ Khabaz 66.73 309 P **P 19 33 25.2 +0.1**
comp=Z,3.2nm,0.9s,baz=150,slow=4.7,SNR=4.9
KBZ LR LR 20 05 49.4
comp=Z,105nm,20.2s,baz=60,slow=39
comp=Z,3.2nm,0.9s
NEA2 Nenana 66.81 28 IAmb IAmb 19 33 59.7
comp=Z,3.8nm,1.0s
KIV Kislovodsk 66.83 309 P **P 19 33 25.1 -0.8**
KIV Kislovodsk 66.83 309 P **P 19 33 25.2 -0.7**
comp=Z,8.3nm,1.1s
KIV Kislovodsk 66.83 309 P **P 19 33 26.1 +0.2**
RND Reindeer 67.10 29 IAmb IAmb 19 33 31.9
comp=Z,4.9nm,0.7s
ILAR Eielson Array 67.71 28 P **P 19 33 31.1 +0.1**
comp=Z,0.3nm,0.6s,baz=229,slow=5.3,SNR=5.6
comp=Z,0.3nm,0.6s
MSVF Nonsavu 67.92 123 LR LR 20 01 07.5
comp=Z,46nm,19.6s,baz=173,slow=34
BMAR Burnt Mountain 68.11 25 P **P 19 33 33.4 -0.1**
OBN Obninsk 68.31 322 LR LR 20 06 18.8
comp=Z,139nm,19.4s,baz=30,slow=38
RIDG Independent Ri 68.79 28 P **P 19 33 38.4 +0.6**
RIDG IAmb IAmb 19 34 13.4
comp=Z,4.8nm,1.1s
SPITS Spitsbergen Ar 69.33 348 P **P 19 33 41.7 +0.7**
comp=Z,2.9nm,0.7s,baz=91,slow=10,SNR=2.0
SPITS LR LR 20 07 45.9
comp=Z,149nm,19.4s,baz=54,slow=39
comp=Z,2.9nm,0.7s
I27K Kandik River 69.69 26 IAmb IAmb 19 34 13.6
comp=Z,4.8nm,1.0s
ARCES ARCESS Array B 69.75 338 LR LR 20 10 59.7
comp=Z,91nm,18.1s,baz=92,slow=42
GLB Gilahina Butte 69.81 31 P **P 19 33 44.5 +0.3**
GLB IAmb IAmb 19 34 13.1
comp=Z,8.1nm,1.2s
M26K Nabesna, AK 69.93 30 P **P 19 33 44.4 -0.6**
M26K IAmb IAmb 19 34 20.4
comp=Z,5.6nm,1.1s
INK Inuvik 71.87 22 LR LR 20 08 01.7
comp=Z,94nm,20.1s,baz=182,slow=38
FINES FINESS Array B 71.97 330 P **P 19 33 56.5 -0.7**
comp=Z,4.2nm,0.9s,baz=124,slow=3.4,SNR=5.1
FINES LR LR 20 08 32.0

	comp=Z,344nm,19.0s,baz=65,slow=38						
	comp=Z,4.2nm,0.9s						
AK09	**Malin Array Si**	**73.79**	**319**	P	**P**	**19 34 07.9**	**-0.3**
AKASG	**Malin Array Be**	**73.80**	**319**	P	**P**	**19 34 07.4**	**-0.9**
AKASG	comp=Z,0.4nm,0.4s,baz=65,slow=4.5,SNR=4.6			LR	LR	20 08 28.9	
	comp=Z,68nm,18.7s,baz=56,slow=37						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**73.80**	**319**	P	**P**	**19 34 07.4**	**-0.9**
AKBB	**Malin Array Si**	**73.80**	**319**	P	**P**	**19 34 07.9**	**-0.4**
KIEV	**Kiev**	**73.81**	**319**	P	**P**	**19 34 08.4**	**0.0**
	comp=Z,20nm,1.5s						
AK10	**Malin Array Si**	**73.82**	**319**	P	**P**	**19 34 07.4**	**-1.0**
AK07	**Malin Array Si**	**73.86**	**319**	P	**P**	**19 34 08.3**	**-0.4**
BRTR	**Keskin Array B**	**74.49**	**307**	P	**P**	**19 34 12.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=81,slow=5.9,SNR=5.3						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**74.49**	**307**	P	**P**	**19 34 11.5**	**-1.2**
BR104	**Keskin Array S**	**74.49**	**307**	P	**P**	**19 34 12.3**	**-0.5**
	comp=Z,1.6nm,1.0s						
BR106	**Keskin Array S**	**74.50**	**307**	P	**P**	**19 34 12.2**	**-0.6**
	comp=Z,1.9nm,1.0s						
BR105	**Keskin Array S**	**74.50**	**307**	P	**P**	**19 34 12.3**	**-0.5**
	comp=Z,2.2nm,1.0s						
LUBAR	**Lubar, Ukraine**	**74.95**	**318**	P	**P**	**19 34 14.7**	**-0.3**
KMPD	**K-Podol'skiy**	**76.23**	**317**	P	**P**	**19 34 22.0**	**-0.4**
CSS	**Mathiatis**	**76.35**	**302**	P	**P**	**19 34 22.9**	**-0.5**
	comp=Z,9.0nm,0.7s						
EIL	**Elat**	**76.95**	**297**	LR	LR	20 13 25.6	
	comp=Z,59nm,18.6s,baz=85,slow=40						
VRI	**Vrincioaia**	**77.07**	**315**	P	**P**	**19 34 26.9**	**-0.3**
	comp=Z,5.1nm,2.1s						
MLR	**Muntele Rosu**	**77.72**	**314**	LR	LR	20 13 15.3	
	comp=Z,85nm,18.1s,baz=44,slow=39						
HFS	**Hagfors**	**78.05**	**331**	P	**P**	**19 34 32.1**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=81,slow=8.9,SNR=2.5						
HFS				LR	LR	20 12 30.6	
	comp=Z,448nm,18.3s,baz=60,slow=38						
	comp=Z,2.9nm,0.9s						
NB2	**NORSAR Subarra**	**78.65**	**333**	P	**P**	**19 34 34.6**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=61,slow=5.3						
NOA	**NORSAR Array B**	**78.65**	**333**	P	**P**	**19 34 34.0**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=56,slow=5.7,SNR=6.7						
NOA				LR	LR	20 13 01.2	
	comp=Z,252nm,18.4s,baz=70,slow=39						
	comp=Z,1.2nm,0.7s						
JMIC	**Jan Mayen**	**78.77**	**346**	LR	LR	20 14 42.9	
	comp=Z,119nm,19.0s,baz=280,slow=40						
OJC	**Ojcow**	**79.54**	**321**	P	**P**	**19 34 40.5**	**-0.3**
	comp=Z,4.5nm,0.7s						
RPZ	**Rata Peaks**	**80.95**	**147**	LR	LR	20 11 40.4	
	comp=Z,18nm,18.7s,baz=257,slow=36						
YKA	**Yellowknife Ar**	**81.58**	**23**	P	**P**	**19 34 51.0**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=310,slow=5.4,SNR=6.3						
	comp=Z,2.9nm,0.8s						
VRAC	**Vranov**	**81.80**	**321**	LR	LR	20 14 18.6	
	comp=Z,98nm,18.9s,baz=60,slow=38						
SCO	**Scoresbysund**	**81.88**	**349**	P	**P**	**19 34 52.8**	**0.0**
SCO				IAmb	IAmb	19 34 58.0	
	comp=Z,5.5nm,1.1s						
SUMG	**Summit**	**82.10**	**355**	P	**P**	**19 34 53.5**	**-1.0**
SUMG				IAmb	IAmb	19 34 59.6	
	comp=Z,8.3nm,1.0s						
GERES	**GERESS Array B**	**83.69**	**321**	P	**P**	**19 35 01.5**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=96,slow=6.8,SNR=4.4						
GERES				LR	LR	20 14 44.4	
	comp=Z,74nm,18.1s,baz=80,slow=38						
	comp=Z,0.3nm,0.6s						
GERES	**GERESS Array B**	**83.69**	**321**	P	**P**	**19 35 01.8**	**-1.0**
ILON	**Igloolik, Nuna**	**84.33**	**9**	IAmb	IAmb	19 35 09.7	
	comp=Z,4.5nm,0.8s						
BLKN	**Baker Lake**	**86.00**	**16**	IAmb	IAmb	19 35 13.4	
	comp=Z,4.4nm,1.0s						
CUC	**Castrocucco**	**86.84**	**313**	P	**P**	**19 35 19.6**	**+0.8**
CEL	**Celeste**	**87.65**	**311**	P	**P**	**19 35 22.7**	**0.0**
	comp=Z,5.6nm,1.3s						
EDM	**Edmonton**	**88.03**	**30**		**P**	**19 35 23.9**	**-0.3**
EKA	**Eskdalemuir Ar**	**88.14**	**333**	P	**P**	**19 35 24.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=56,slow=3.8,SNR=3.0						
	comp=Z,0.8nm,0.7s						
FFC	**Flin Flon**	**91.72**	**24**	P	**P**	**19 35 40.3**	**-1.1**
FFC	**Flin Flon**	**91.72**	**24**	P	**P**	**19 35 41.1**	**-0.3**
HLID	**Hailey**	**93.71**	**38**	P	**P**	**19 35 50.6**	**-0.4**
PPT2	**Papeete2**	**94.53**	**107**	*e*LR	LR	20 06 23.8	
	comp=Z,73nm,24.8s						
NVAR	**Mina Array Bea**	**94.55**	**44**	P	**P**	**19 35 55.5**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=294,slow=6.3,SNR=4.4						
	comp=Z,0.6nm,0.7s						

*IDC **01** 19:46:29.7±1.6,5.°85S×147.°10E,h87km±13km,mb3.9/15, mbtmp4.3/20,MS3.0/3,Error ellipse: s-maj=15.9km s-min=8.4km az=95.0*

*NEIC **01** 19:46:31.4±2.1,5.°92S±0.°06×147.°1E±0.°1,h90km±7km, mb4.4/22,Error ellipse: s-maj=16.2km s-min=8.9km az=79.0*

*GFZ **01** 19:46:32.6±0.3,6.°S±3.°×14.°7E±.°,h104km,M4.7/30, mb4.7/30*

*DJA **01** 19:46:33.1±0.8,6.°S±6.°×14.°7E±.°,h98km±6km,M4.9/15, mb4.7/15,mB5.6/4,MLv4.9/3,Mw(mB)5.1/4*

ISC 01 19:46:31.8±0.4,5.°96S±0.°04×147.°09E±0.°05,h100km,n130, σ1§36/136,mb4.3/23,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.42**	**179**	P	**Pn**	**19 47 23.6**	**+0.3**
	306nm,0.3s,baz=4.5,slow=5.5,SNR=365						
PMG				S	**Sn**	**19 48 01.9**	**-1.1**
	115nm,0.3s,baz=277,slow=6.6,SNR=3.9						
PMG	**Port Moresby**	**3.42**	**179**	P	**Pn**	**19 47 23.4**	**+0.1**
PMG	**Port Moresby**	**3.42**	**179**	P	**Pn**	**19 47 23.7**	**+0.4**
PMG	**Port Moresby**	**3.42**	**179**	S	**Sn**	**19 48 04.7**	**+1.7**
PMG	**Port Moresby**	**3.42**	**179**		**Pn**	**19 47 22.8**	**-0.5**
PMG					**Sn**	**19 48 01.9**	**-1.1**
PMG	**Port Moresby**	**3.42**	**179**	P	**Pn**	**19 47 23.4**	**+0.1**
PMG	**Port Moresby**	**3.42**	**179**	P	**Pn**	**19 47 23.7**	**+0.4**
MANU	**Manus Island**	**3.90**	**4**	Pn	**Pn**	**19 47 29.1**	**-0.7**
JAY	**Jayapura**	**7.22**	**298**	P	**Pn**	**19 48 13.5**	**-1.4**
	7.4nm,0.3s,baz=107,slow=6.2,SNR=25						
JAY				S	**Sn**	**19 49 33.9**	**-1.6**
	8.3nm,0.5s,baz=84,slow=21,SNR=1.4						
JAY	**Jayapura**	**7.22**	**298**	P	**Pn**	**19 48 14.5**	**-0.4**
JAY				S	**Sn**	**19 49 36.4**	**+0.9**
JAY	**Jayapura**	**7.22**	**298**	P	**Pn**	**19 48 14.8**	**-0.1**
GENI	**Genyem**	**7.67**	**296**	P	**Pn**	**19 48 21.5**	**+0.6**
	0.9nm7μm44nm,0.8s						
GENI	**Genyem**	**7.67**	**296**	P	**Pn**	**19 48 21.6**	**+0.8**
COEN	**Coen**	**8.83**	**206**	P	**Pn**	**19 48 35.8**	**-0.9**
COEN	**Coen**	**8.83**	**206**	S	**Sn**	**19 50 11.0**	**-3.4**
COEN	**Coen**	**8.83**	**206**		**Pn**	**19 48 36.2**	**-0.5**
COEN	**Coen**	**8.83**	**206**	P	**Pn**	**19 48 37.0**	**+0.4**
SRPI	**Serui, Papua**	**11.56**	**290**	P	**Pn**	**19 49 13.0**	**-0.7**
MTSU	**Mount Surprise**	**12.39**	**192**	P	**Pn**	**19 49 25.9**	**+1.0**
MTSU	**Mount Surprise**	**12.39**	**192**	S	**Sn**	**19 51 40.7**	**-0.5**
MTSU	**Mount Surprise**	**12.39**	**192**	P	**Pn**	**19 49 26.4**	**+1.5**
TATA	**Tatamba Isabel**	**12.85**	**102**	P	**P**	**19 49 39.9**	**+2.1**
TATA	**Tatamba Isabel**	**12.85**	**102**	S	**S**	**19 52 05.8**	**-5.4**
RKPI	**Ransiki, Papua**	**13.62**	**288**	P	**Pn**	**19 49 40.6**	**-0.3**
CTA	**Charters Tower**	**14.06**	**183**	P	**Pn**	**19 49 48.1**	**+1.5**
	2.1nm,0.4s,baz=355,slow=13,SNR=8.1						
CTA	**Charters Tower**	**14.06**	**183**	P	**Pn**	**19 49 48.3**	**+1.6**
CTAO	**Charters Tower**	**14.06**	**183**	P	**Pn**	**19 49 48.6**	**+1.9**
CTAO	**Charters Tower**	**14.06**	**183**	P	**P**	**19 49 50.3**	**-0.9**
QIS	**Mount Isa**	**16.22**	**206**	P	**Pn**	**19 50 14.7**	**+0.7**
QIS	**Mount Isa**	**16.22**	**206**	P	**Pn**	**19 50 13.8**	**-0.2**
SIJI	**Sorong**	**16.58**	**287**	P	**Pn**	**19 50 16.6**	**-1.8**
	8.0nm,0.6s,baz=215,slow=22,SNR=7.2						
SIJI	**Sorong**	**16.58**	**287**	P	**P**	**19 50 19.1**	**-0.1**
	15nm,0.7s						
SIJI	**Sorong**	**16.58**	**287**	P	**Pn**	**19 50 18.0**	**-0.4**
SWI	**Sorong**	**16.58**	**287**	P	**P**	**19 50 18.8**	**-0.5**
PATS	**Pohnpei**	**16.95**	**42**	P	P	19 50 30.8	+7.5
PATS	**Pohnpei**	**16.95**	**42**	P	**P**	**19 50 23.5**	**+0.2**
MTN	**Manton Dam**	**17.15**	**245**		**Pn**	**19 50 23.8**	**-1.7**
MTN	**Manton Dam**	**17.15**	**245**	P	**Pn**	**19 50 24.5**	**-0.9**
WB0	**Warramunga Arr**	**18.45**	**221**	P	**P**	**19 50 40.0**	**+0.1**
WB0				IAmb	IAmb	19 50 43.2	
	comp=Z,37nm,0.8s						
WR8	**Warramunga Arr**	**18.52**	**220**		**P**	**19 50 40.3**	**-0.3**
WR8				IAmb	IAmb	19 50 44.0	
	comp=Z,25nm,0.7s						
WRAB	**Tennant Creek**	**18.60**	**221**	P	**P**	**19 50 41.3**	**-0.2**
WRAB	**Tennant Creek**	**18.60**	**221**	P	**P**	**19 50 41.3**	**-0.2**
WRAB	**Tennant Creek**	**18.60**	**221**	P	**P**	**19 50 42.3**	**+0.8**
WRA	**Warramunga Arr**	**18.62**	**221**	P	**P**	**19 50 41.7**	**+0.1**
	comp=Z,38nm,0.8s,baz=42,slow=12,SNR=107						
WRA				S	**Sn**	**19 54 11.2**	**-0.3**
	comp=Z,5.8nm,1.1s,baz=40,slow=17,SNR=5.8						
WRA				PcP	**PcP**	**19 55 07.1**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=25,slow=1.3,SNR=5.7						
WRA	**Warramunga Arr**	**18.62**	**221**		**P**	**19 50 42.5**	**+0.9**
WRA					**Sn**	**19 54 11.2**	**-0.3**
WRA					**PcP**	**19 55 07.1**	**+0.4**
GUMO	**Guam**	**19.55**	**354**	LR	LR	19 57 53.3	
	comp=Z,24nm,18.6s,baz=140,slow=35						
GUMO	**Guam**	**19.55**	**354**	P	**Pn**	**19 50 56.3**	**+2.3**
GUMO	**Guam**	**19.55**	**354**	P	**P**	**19 50 51.8**	**0.0**
EIDS	**Eidsvold**	**19.67**	**169**		**P**	**19 50 54.4**	**+1.4**
EIDS				IAmb	IAmb	19 50 56.5	
	comp=Z,24nm,0.9s						
EIDS	**Eidsvold**	**19.67**	**169**	P	**P**	**19 50 54.4**	**+1.4**
NLAI	**Namlea**	**20.10**	**277**	P	**P**	**19 50 57.4**	**-0.4**
KNRA	**Kununurra**	**20.40**	**240**		**P**	**19 51 00.9**	**-0.1**
KNRA				IAmb	IAmb	19 51 05.6	
	comp=Z,16nm,1.1s						
QLP	**Quilpie**	**20.68**	**187**	P	**P**	**19 51 05.9**	**+1.9**
QLP	**Quilpie**	**20.68**	**187**	P	**P**	**19 51 04.4**	**+0.4**
SANI	**Sanana**	**21.40**	**280**	P	**P**	**19 51 10.9**	**-0.8**
SANI	**Sanana**	**21.40**	**280**	P	**P**	**19 51 09.9**	**-1.9**
AS01	**Alice Springs**	**21.67**	**214**	P	**P**	**19 51 14.8**	**+0.2**
AS31	**Alice Springs**	**21.70**	**214**		**P**	**19 51 15.3**	**+0.5**
AS31				IAmb	IAmb	19 51 17.6	
	comp=Z,7.6nm,0.4s						
ASAR	**Alice Springs**	**21.70**	**214**	P	**P**	**19 51 15.5**	**+0.6**
	comp=Z,7.4nm,0.4s,baz=54,slow=8.9,SNR=166						
ASAR				S	**S**	**19 55 11.2**	**+1.7**
	comp=Z,3.0nm,1.0s,baz=38,slow=18,SNR=8.7						
	comp=Z,7.4nm,0.4s						
ASAR	**Alice Springs**	**21.70**	**214**	P	**P**	**19 51 14.9**	**0.0**
INKA	**Innaminka**	**22.48**	**195**		**P**	**19 51 23.4**	**+0.4**
SOEI	**Soe**	**22.91**	**259**	P	**P**	**19 51 25.9**	**-1.7**
SOEI				IAmb	IAmb	19 51 57.5	
	comp=Z,34nm,1.2s						
SOEI	**Soe**	**22.91**	**259**	P	**P**	**19 51 26.8**	**-0.8**
BATI	**Baumata**	**23.56**	**258**	P	**P**	**19 51 31.9**	**-1.7**
SGSI	**Sangihe**	**23.56**	**293**	P	**P**	**19 51 33.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**24.16**	**238**	P	**P**	**19 51 39.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**24.16**	**238**	P	**P**	**19 51 39.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**24.16**	**238**	P	**P**	**19 51 39.7**	**+0.8**
ARMA	**Armidale**	**24.70**	**171**	P	**P**	**19 51 46.2**	**+2.4**
ARMA	**Armidale**	**24.70**	**171**	P	**P**	**19 51 45.5**	**+1.7**
ARMA				IAmb	IAmb	19 51 48.5	
	comp=Z,9.3nm,0.8s						
ARMA	**Armidale**	**24.70**	**171**	P	**P**	**19 51 45.3**	**+1.4**
LUWI	**Luwuk**	**24.75**	**280**	P	**P**	**19 51 44.5**	**+0.1**
MMRI	**Maumere**	**24.79**	**262**	P	**P**	**19 51 44.8**	**+0.1**
MMRI	**Maumere**	**24.79**	**262**	P	**P**	**19 51 44.7**	**0.0**
MMRI	**Maumere**	**24.79**	**262**	P	**P**	**19 51 43.8**	**-0.9**
KKSI	**Kolaka, Sulawe**	**25.39**	**273**	P	**P**	**19 51 50.0**	**-0.2**
CMSA	**Cobar Meteorol**	**25.48**	**183**	P	**P**	**19 51 54.1**	**+3.4**
CMSA	**Cobar Meteorol**	**25.48**	**183**	P	**P**	**19 51 51.2**	**+0.5**
STKA	**Stephens Creek**	**26.29**	**191**	P	**P**	**19 51 58.7**	**+0.6**
	comp=Z,6.9nm,0.7s,baz=354,slow=11,SNR=2.9						
	comp=Z,6.9nm,0.7s						
STKA	**Stephens Creek**	**26.29**	**191**	P	**P**	**19 52 00.4**	**+2.3**
STKA	**Stephens Creek**	**26.29**	**191**	P	**P**	**19 51 58.9**	**+0.8**
BSSI	**Bau Bau, Buton**	**26.45**	**268**	P	**P**	**19 51 59.4**	**-0.4**
TOLI2	**Tolitoli**	**27.19**	**284**	P	**P**	**19 52 06.1**	**-0.2**
TOLI2	**Tolitoli**	**27.19**	**284**	P	**P**	**19 52 04.4**	**-1.9**
TOLI2				IAmb	IAmb	19 52 14.0	
	comp=Z,3.9nm,0.7s						
MMSI	**Mamuju**	**28.28**	**275**	P	**P**	**19 52 15.5**	**-0.6**
HTT	**Hallett**	**28.36**	**194**	P	**P**	**19 52 19.1**	**+2.4**
BBOO	**Buckleboo**	**28.62**	**200**	P	**P**	**19 52 19.1**	**+0.2**
MBWA	**Marble Bar**	**30.50**	**238**	P	**P**	**19 52 35.9**	**+0.2**
MBWA	**Marble Bar**	**30.50**	**238**	P	**P**	**19 52 36.1**	**+0.4**
MBWA				IAmb	IAmb	19 52 56.0	
	comp=Z,17nm,1.3s						
MBWA	**Marble Bar**	**30.50**	**238**	P	**P**	**19 52 35.1**	**-0.6**
MILA	**Mila**	**31.00**	**177**	P	**P**	**19 52 40.5**	**+0.5**
ABJI	**Asem Bagus**	**32.66**	**265**	P	**P**	**19 52 54.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**32.76**	**264**	P	**P**	**19 52 56.1**	**+0.5**
JCJ	**Chichijima**	**33.20**	**352**	LR	LR	20 04 19.4	
	comp=Z,38nm,21.2s,baz=138,slow=32						
BLJI	**Banyuglugur**	**33.29**	**265**	P	**P**	**19 53 01.2**	**+1.0**
MEEK	**Meekatharra**	**34.04**	**230**	P	**P**	**19 53 07.9**	**+1.2**
MEEK	**Meekatharra**	**34.04**	**230**	P	**P**	**19 53 06.4**	**-0.3**
MORW	**Morawa**	**37.26**	**228**	P	**P**	**19 53 35.1**	**+1.0**
BBJI	**Bungbulang**	**39.18**	**266**	P	**P**	**19 53 49.9**	**-0.6**
YHNB	**Yeheng**	**39.42**	**322**	P	**P**	**19 53 55.2**	**+2.9**
NJ2	**Nanjing**	**46.40**	**326**	*e*P	**P**	**19 54 51.6**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	**Korea Array**	**46.75**	**339**	P	**P**	**19 54 48.6**	**-2.4**
	comp=Z,1.7nm,0.8s,baz=153,slow=9.0,SNR=7.8						
KSRS				LR	LR	20 14 14.2	
	comp=Z,21nm,18.5s,baz=230,slow=36						
	comp=Z,1.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.76**	**346**	P	**P**	**19 55 27.6**	**-1.4**
	comp=Z,2.2nm,0.6s,baz=165,slow=8.4,SNR=2.2						
	comp=Z,2.2nm,0.6s						
PZH	**PanZhiHua**	**54.50**	**308**	P	**P**	**19 55 52.2**	**+2.4**
HHC	**Hu-ho-hao-te**	**56.85**	**328**	*e*P	**P**	**19 56 08.9**	**+2.7**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
PETK	**Petropavlovsk-**	**59.53**	**7**	P	**P**	**19 56 24.2**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=149,slow=5.5,SNR=6.5						
	comp=Z,2.6nm,0.6s						
HILR	**Hailar Array B**	**60.19**	**340**	P	**P**	**19 56 27.5**	**-1.8**
	comp=Z,2.1nm,0.5s,baz=131,slow=7.9,SNR=2.1						
	comp=Z,2.1nm,0.5s						
ULN	**Ulaanbaatar**	**64.12**	**331**		**P**	**19 56 54.6**	**-1.0**
ULN				IAmb	IAmb	19 56 55.6	
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**64.41**	**331**	P	**P**	**19 56 56.1**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=151,slow=6.1,SNR=7.0						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**64.41**	**331**	P	**P**	**19 56 56.1**	**-1.5**
VNDA	**Vanda**	**71.94**	**177**	P	**P**	**19 57 44.9**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=329,slow=6.6,SNR=8.4						
	comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**71.94**	**177**	P	**P**	**19 57 44.9**	**+0.9**
VNDA				IAmb	IAmb	19 58 01.2	
	comp=Z,6.5nm,1.4s						
WMQ	**Urumqi**	**72.82**	**319**	*e*P	**P**	**19 57 53.1**	**+3.3**
MKAR	**Makanchi Array**	**77.52**	**320**	P	**P**	**19 58 14.9**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=97,slow=8.1,SNR=8.0						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**79.03**	**328**	P	**P**	**19 58 23.1**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=112,slow=6.5,SNR=5.1						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**81.23**	**323**	P	**P**	**19 58 36.3**	**-0.4**
KURBB	**Kurchatov Arra**	**81.25**	**323**	P	**P**	**19 58 36.3**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=126,slow=4.9,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MAW	**Mawson**	**82.31**	**203**	P	**P**	**19 58 42.4**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=67,slow=13,SNR=2.9						
	comp=Z,1.4nm,0.8s						
MAW	**Mawson**	**82.31**	**203**	P	**P**	**19 58 42.4**	**+0.3**
QSPA	**South Pole Qui**	**84.00**	**180**	P	**P**	**19 58 51.5**	**+0.5**
	comp=Z,3.9nm,0.5s,baz=293,slow=0.5,SNR=47						
	comp=Z,3.9nm,0.5s						
QSPA	**South Pole Qui**	**84.00**	**180**	P	**P**	**19 58 51.5**	**+0.5**
QSPA				IAmb	IAmb	19 58 52.2	
	comp=Z,3.6nm,0.6s						
ILAR	**Eielson Array**	**85.41**	**23**	P	**P**	**19 58 55.7**	**-2.2**
	comp=Z,2.7nm,0.6s,baz=254,slow=5.0,SNR=32						
	comp=Z,2.7nm,0.6s						
ILAR	**Eielson Array**	**85.41**	**23**	P	**P**	**19 58 55.4**	**-2.5**
BVAR	**Borovoye Array**	**86.79**	**324**	P	**P**	**19 59 02.6**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=111,slow=5.6,SNR=2.5						
	comp=Z,0.5nm,0.4s						
GERES	**GERESS Array B**	**121.92**	**326**	PKP	**PKPdf**	**20 05 13.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=2.9,slow=2.0,SNR=2.0						
EKA	**Eskdalemuir Ar**	**125.32**	**340**	PKP	**PKPdf**	**20 05 20.0**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=33,slow=2.7,SNR=1.7						
CPUP	**Villa Florida**	**140.11**	**145**	PKP	**PKPdf**	**20 05 49.9**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=270,slow=2.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**145.16**	**284**	PKPbc	**PKPbc**	**20 05 57.2**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=73,slow=3.9,SNR=13						
DBIC	**Dimbokro**	**152.10**	**273**	PKPbc	**PKPbc**	**20 06 15.3**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=138,slow=4.2,SNR=1.8						
BDFB	**Brasilia**	**153.84**	**145**	PKPbc	**PKiKP**	**20 06 21.0**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=154,slow=2.5,SNR=5.2						

*RSNC **01** 19:53:56.1±2.0,16.°N±12.°×9.°8W±2.°2,h0km,M4.9,mB5.5, mb4.8,Mw(mB)4.9*

*IDC **01** 19:54:05.0±0.7,15.°87N×96.°72W,h0km,mb4.2/15, mbtmp4.2/18,ML3.6/4,MS4.2/52,Error ellipse: s-maj=15.0km s-min=12.0km az=40.0*

*MEX **01** 19:54:08.7±0.7,15.°82N×96.°82W,h28km±14km,MD4.9, Fault plane solution: NP1:φs128.24000°,δ10.00000°, λ90.00000°.*

*NEIC **01** 19:54:08.6±1.7,15.°99N±0.°07×96.°64W±0.°08,h21km±4km, mb4.9/358,Md4.9/157(MEX),Error ellipse: s-maj=13.7km s-min=7.7km az=46.0*

*GCMT **01** 19:54:09.6±0.4,16.°11N±0.°03×96.°56W±0.°03,h32km, MW5.0/85,Moment Tensor Solution. s51,c62; s85,c114; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.21±.15; Mθθ-2.88±.10; Mφφ-0.33±.11; Mrθ-1.69±.09; Mφθ0.63±.08; Mφr0.35±.11; Best double couple: M◎3.56400×10^16 NP1:φs104.00000°,δ31.00000°,λ91.00000°. NP2: φs283.00000°,δ59.00000°,λ89.00000°. Principal axes: T 3.6560, Plg76.0000°, Azm191.0000°; N -0.1900, Plg1.0000°, Azm283.0000°; P -3.4720, Plg14.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **01** 19:54:10.5±0.2,16.°N±4.°×9.°7W±.°,h22km,M4.6/34, mb4.7/34*

ISC 01 19:54:07.8±0.6,15.°88N±0.°04×96.°77W±0.°02,h23km±4km, h23km:pP-P,n760,σ1§79/715,mb4.9/158,MS4.2/53, 6C-15D,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.38**	**288**		**Pb**	**19 54 15.6**	**-0.5**
PEIG					**Sb**	**19 54 21.4**	**-0.3**
PEIG	**Puerto Escondi**	**0.38**	**288**	⇓*e*P	**Pb**	**19 54 15.6**	**-0.5**
	baz=119,slow=6.9						
PEIG				*e*S	**Sb**	**19 54 21.4**	**-0.3**
HUIG	**Huatulco**	**0.64**	**100**		**Pb**	**19 54 20.1**	**-0.3**
HUIG					**Sb**	**19 54 29.2**	**+0.2**
HUIG	**Huatulco**	**0.64**	**100**	⇑*e*P	**Pb**	**19 54 20.1**	**-0.3**
	baz=272,slow=16						
HUIG				*e*S	**Sb**	**19 54 29.2**	**+0.2**
OXLC	**Oaxaca**	**1.18**	**3**		**Pn**	**19 54 27.6**	**-1.5**
OXLC					**Sn**	**19 54 42.9**	**-1.7**
OXLC	**Oaxaca**	**1.18**	**3**	⇓*e*P	**Pn**	**19 54 27.6**	**-1.5**
OXLC				*e*S	**Sn**	**19 54 42.9**	**-1.7**
OXBJ	**Oaxaca**	**1.18**	**2**		**Pn**	**19 54 27.6**	**-1.5**
OXBJ					**Sn**	**19 54 43.1**	**-1.5**
OXBJ	**Oaxaca**	**1.18**	**2**	⇓*e*P	**Pn**	**19 54 27.6**	**-1.5**
OXBJ				*e*S	**Sn**	**19 54 43.1**	**-1.5**
VHO	**Vista Hermosa**	**1.19**	**2**	⇓*e*P	**Pn**	**19 54 27.7**	**-1.5**
OXIG	**Oaxaca**	**1.19**	**2**		**Pn**	**19 54 27.7**	**-1.5**
NEUV	**Arroyo Zacate**	**2.05**	**27**		**Pn**	**19 54 40.2**	**-0.6**
NEUV					**Pb**	**19 54 40.3**	**-4.0**
NEUV					**Sn**	**19 55 04.7**	**-1.0**
NEUV	**Arroyo Zacate**	**2.05**	**27**	⇓*e*P	**Pn**	**19 54 40.2**	**-0.6**
NEUV				*e*P	**Pb**	**19 54 40.3**	**-4.0**
NEUV				*e*S	**Sn**	**19 55 04.7**	**-1.0**
CMIG	**Matias Romero**	**2.17**	**56**	Pn	**Pn**	**19 54 41.1**	**-1.4**
	37nm,0.3s,baz=232,slow=12,SNR=

XCVM Xochimilco 4.04 327 eP Pn 19 55 08.9 +0.5
XCVM eS Sn 19 55 50.4 -4.7
MZVM 4.04 325 Sn 19 55 52.4 -2.5
MZVM 4.04 325 eS Sn 19 55 52.4 -2.5
CNCY Coyoacan 4.12 326 eP Pn 19 55 10.1 +0.5
CNCY eS Sn 19 55 58.1 +0.9
COVM Coyoacan 4.14 327 eS Sn 19 55 57.4 -0.2
AOVM Tlapan 4.16 325 Pn 19 55 11.9 +1.6
AOVM Sn 19 55 58.2 -0.3
AOVM Tlapan 4.16 325 eP Pn 19 55 11.9 +1.6
AOVM eS Sn 19 55 58.2 -0.3
VRVM Mexico City 4.17 328 Sn 19 56 00.6 +2.1
VRVM Mexico City 4.17 328 eS Sn 19 56 00.6 +2.1
PBVM Pinon 4.18 328 Pn 19 55 07.7 -2.4
PBVM Sn 19 55 59.1 +0.9
PBVM Pinon 4.18 328 eP Pn 19 55 07.7 -2.4
PBVM eS Sn 19 55 59.1 +0.9
INVM La Marquesa 4.21 324 Pn 19 55 07.9 -3.0
INVM Sn 19 55 57.5 -2.1
INVM La Marquesa 4.21 324 eP Pn 19 55 07.9 -3.0
INVM eS Sn 19 55 57.5 -2.1
MHVM Bosque de Chap 4.21 327 Pb 19 55 18.7 -2.7
MHVM Sn 19 55 59.1 -0.4
MHVM Bosque de Chap 4.21 327 eP Pb 19 55 18.7 -2.7
MHVM eS Sn 19 55 59.1 -0.4
CTVM Cuauhtemoc 4.22 328 Pn 19 55 10.8 -0.2
CTVM Sn 19 55 54.4 -5.3
CTVM Cuauhtemoc 4.22 328 eP Pn 19 55 10.8 -0.2
CTVM eS Sn 19 55 54.4 -5.3
APVM Azcapotzalco 4.28 327 Pn 19 55 16.2 +4.4
APVM Sn 19 56 01.6 +0.5
APVM Azcapotzalco 4.28 327 *i* P Pn 19 55 16.2 +4.4
APVM eS Sn 19 56 01.6 +0.5
VTVM Tizayuca 4.32 334 Pn 19 55 14.4 +2.1
VTVM Sn 19 56 04.3 +2.2
VTVM Tizayuca 4.32 334 eP Pn 19 55 14.4 +2.1
VTVM eS Sn 19 56 04.3 +2.2
PTVM Pico Tres Padr 4.32 329 Pn 19 55 13.9 +1.6
PTVM Sn 19 56 05.8 +3.7
PTVM Pico Tres Padr 4.32 329 eP Pn 19 55 13.9 +1.6
PTVM eS Sn 19 56 05.8 +3.7
CXUV Coxquihui 4.34 350 Pn 19 55 12.9 +0.5
CXUV Sn 19 55 59.5 -2.9
CXUV Coxquihui 4.34 350‖ eP Pn 19 55 12.9 +0.5
CXUV eS Sn 19 55 59.5 -2.9
TOVM TOLUCA 4.38 321 Pn 19 55 12.7 -0.5
TOVM Sn 19 56 03.8 +0.1
TOVM TOLUCA 4.38 321 eP Pn 19 55 12.7 -0.5
TOVM eS Sn 19 56 03.8 +0.1
AZVM Cuida Lopez Ma 4.40 327 Pn 19 55 15.9 +2.5
AZVM Sn 19 56 00.8 -3.3
AZVM Cuida Lopez Ma 4.40 327 eP Pn 19 55 15.9 +2.5
AZVM eS Sn 19 56 00.8 -3.3
PATR El Naranjo 4.44 99 Pn 19 55 13.8 -0.1
PATR Sn 19 56 02.0 -2.9
PATR El Naranjo 4.44 99 eP Pn 19 55 13.8 -0.1
PATR eS Sn 19 56 02.0 -2.9
PAVE Pavencul 4.48 98 Pn 19 55 15.1 +0.6
PAVE Sn 19 56 02.8 -3.2
PAVE Pavencul 4.48 98 *i* P Pn 19 55 15.1 +0.6
PAVE eS Sn 19 56 02.8 -3.2
ZUVM ZUMPANGO 4.50 331 Pn 19 55 16.7 +1.9
ZUVM Sn 19 56 06.6 0.0
ZUVM ZUMPANGO 4.50 331 eP Pn 19 55 16.7 +1.9
ZUVM eS Sn 19 56 06.6 0.0
CHUJ Union Juarez 4.56 99 eP Pn 19 55 15.8 +0.2
CHUJ eS Sn 19 56 04.6 -3.4
ZIIG Zihuatanejo 4.82 292⇑ Pn 19 55 19.7 +0.7
ZIIG Sn 19 56 10.3 -3.8
ZIIG Zihuatanejo 4.82 292⇑ *i* P Pn 19 55 19.7 +0.7
ZIIG eS Sn 19 56 10.3 -3.8
ATVM ATLACOMULCO 4.85 323 Pn 19 55 23.8 +4.2
ATVM Sn 19 56 15.5 +0.3
ATVM ATLACOMULCO 4.85 323 eP Pn 19 55 23.8 +4.2
ATVM eS Sn 19 56 15.5 +0.3
DEIG Demacu 4.90 334 eP Pn 19 55 19.4 -0.8
DEIG eS Sn 19 56 16.6 +0.2
DHIG Demacu 4.90 334 Pn 19 55 19.4 -0.8
DHIG Sn 19 56 16.6 +0.2
RTAL Retalhuleu 5.08 105 Pn 19 55 22.7 +0.2
RTAL Retalhuleu 5.08 105 eP Pn 19 55 23.4 +0.8
RTAL eS Sn 19 56 17.0 -3.5
HUEH Huehuetenango 5.10 96 Pn 19 55 23.9 +0.8
HUEH Sn 19 56 18.6 -2.9
HUEH Huehuetenango 5.10 96 eP Pn 19 55 24.0 -2.7
HUEH eS Sn 19 56 18.6 -2.9
MOIG Morelia 5.66 313 Pn 19 55 31.7 +1.0
MOIG Sn 19 56 35.4 +0.3
MOIG Morelia 5.66 313 *i* P Pn 19 55 30.4 -0.3
MOIG eS Sn 19 56 35.4 +0.3
CTUV Llano Grande 5.76 345 Pn 19 55 32.1 +0.2
CTUV Sn 19 56 36.1 -1.2
CTUV Llano Grande 5.76 345 eP Pn 19 55 32.1 +0.2
CTUV eS Sn 19 56 36.1 -1.2
APG El Apazote 6.14 97 Pn Pn 19 55 36.9 -0.4
0.3nm,0.3s,baz=175,slow=10,SNR=11
APG Sn Sn 19 56 47.3 +0.3
0.6nm,0.3s,baz=227,slow=20,SNR=4.7
APG Lg Lg 19 57 20.3
1.0nm,0.3s,baz=226,slow=19,SNR=3.6
SCIG Sabancuy 6.15 59 Pn 19 55 32.8 -4.5
SCIG Sn 19 56 42.6 -4.3
SCIG Sabancuy 6.15 59 eP Pn 19 55 32.8 -4.5
SCIG eS Sn 19 56 42.6 -4.3
IGIG Irapuato, Guan 6.50 319 Pn 19 55 45.5 +3.3
IGIG Sn 19 56 56.8 +1.0
IGIG Irapuato, Guan 6.50 319 eP Pn 19 55 45.5 +3.3
IGIG eS Sn 19 56 56.8 +1.0
PETF Flores 6.70 80 Pn Pn 19 55 44.2 -0.6
PETF Sn 19 56 57.0 -3.6
PETF Flores 6.70 80 eP Pn 19 55 46.4 +1.5
PETF eS Sn 19 56 57.0 -3.6
RPIG Rio Verde 6.71 334 Pn 19 55 42.3 -2.7
RPIG Sn 19 57 03.4 +2.6
RPIG Rio Verde 6.71 334 eP Pn 19 55 42.3 -2.7
RPIG eS Sn 19 57 03.4 +2.6
MMIG Aquila 6.73 292 Pn 19 55 46.2 +1.0
MMIG Sn 19 56 54.8 -6.4
MMIG Aquila 6.73 292⇑ eP Pn 19 55 46.2 +1.0
MMIG eS Sn 19 56 54.8 -6.4
ESQI Esquipulas 7.29 99 Pn Pn 19 55 51.9 -1.1
MTO3 Montecristo 7.30 101 Pn Pn 19 55 51.9 -1.4
INCO Volcan de Coli 7.46 300 eP Pn 19 55 59.3 +3.7
INCO eS Sn 19 57 21.1 +1.4
GTIG Gomez Farias 7.50 343 Pn 19 55 55.4 -0.5
GTIG Sn 19 57 16.6 -3.6
GTIG Gomez Farias 7.50 343 eP Pn 19 55 55.4 -0.5
GTIG eS Sn 19 57 16.6 -3.6
CDAR Ciudad de Arme 7.55 295 *i* P Pn 19 55 58.9 +2.4
CDAR eS Sn 19 57 17.0 -4.5
CEGR Campo Tres 7.61 298 Pn 19 56 00.5 +3.1
CEGR Sn 19 57 24.0 +0.9
CEGR Campo Tres 7.61 298 eP Pn 19 56 00.5 +3.1
CEGR eS Sn 19 57 24.0 +0.9
CJM Chamela 8.67 296 eP Pn 19 56 14.3 +2.4
CJM eS Sn 19 57 49.7 +0.8
ZAIG Zacatecas 8.77 322 Pn 19 56 14.6 +1.1
ZAIG Sn 19 57 57.4 +5.6
ZAIG Zacatecas 8.77 322 *i* P Pn 19 56 21.1 +7.6
ZAIG eS Sn 19 57 57.4 +5.6
ZAIG Zacatecas 8.77 322 P Pn 19 56 15.8 +2.3
ANIG Ahuacatlan 8.98 306 Pn 19 56 20.1 +3.9
ANIG Sn 19 57 57.7 +1.0
ANIG Ahuacatlan 8.98 306 eP Pn 19 56 20.1 +3.9
ANIG eS Sn 19 57 57.7 +1.0
TEIG Tepich 9.16 61 Pn 19 56 17.6 -1.0
TEIG Sn 19 57 54.8 -6.3
TEIG Tepich 9.16 61 eP Pn 19 56 15.3 -3.3
TEIG eS Sn 19 57 54.8 -6.3
TEIG Tepich 9.16 61 P Pn 19 56 18.0 -0.6
3µm160nm,0.6s
TEIG Tepich 9.16 61 P Pn 19 56 18.2 -0.4
LNIG Linares 9.32 345 Pn 19 56 23.2 +2.4
LNIG Sn 19 58 05.0 0.0
LNIG Linares 9.32 345 eP Pn 19 56 23.2 +2.4
LNIG eS Sn 19 58 05.0 0.0
MNIG Monterrey 10.23 342 Sn 19 58 34.4 +7.1
MNIG Monterrey 10.23 342 eP Pn 19 56 40.8 +7.5
MNIG eS Sn 19 58 34.4 +7.1
MAIG Mazatlaan 11.65 310 eP Pn 19 57 04.8 +12

PDIG Papasquiaro 12.18 320 Pn 19 56 51.1 -9.0
PDIG Sn 19 59 23.1 +7.7
PDIG Papasquiaro 12.18 320 eP Pn 19 56 51.1 -9.0
PDIG eS Sn 19 59 23.1 +7.7
JUD3 Juan Diaz 3 12.32 116 Pn 19 57 04.4 +2.4
833A Chaparral WMA, 12.62 349 Pn 19 57 03.3 -2.6
JTS Las Juntas de 12.78 114 Pn Pn 19 57 08.9 +0.7
2.3nm,0.3s,baz=296,slow=14,SNR=5.4
6.8nm,0.8s
JTS Las Juntas de 12.78 114 Pn 19 57 12.1 +3.9
JTS Las Juntas de 12.78 114 P P 19 57 14.7 -4.3
JTS Las Juntas de 12.78 114 P Pn 19 57 11.3 +3.1
735A Kenedy 12.95 356 Pn Pn 19 57 09.9 -0.5
HPIG 13.77 325 Pn 19 57 23.1 +1.3
HPIG 13.77 325 P Pn 19 57 23.1 +1.3
HNDO Hondo 13.78 351 Pn 19 57 21.0 -0.8
MLDN Muldoon 13.84 359 Pn Pn 19 57 21.6 -1.0
HKT Hockley 14.03 3 P Pn 19 57 23.1 -2.1
SLBS Sierra La Lagu 14.62 304 Pn 19 57 34.8 +1.3
SLBS Sierra La Lagu 14.62 304 P P 19 57 37.4 -2.2
SOR Soroa 14.69 60 Pn 19 57 31.3 -2.9
JCT Junction City 14.80 350 Pn 19 57 36.4 +0.6
TXAR Lajitas Array 14.82 336 Pn Pn 19 57 37.3 +1.2
baz=151,slow=8.8,SNR=8.5
TXAR Lg Lg 20 01 58.4
baz=152,slow=23,SNR=1.2
TXAR LR LR 20 03 38.1
comp=Z,2µm,18.8s,baz=142,slow=39
1.7nm,1.0s
TXAR Lajitas Array 14.82 336 Pn 19 57 36.4 +0.3
TX31 Lajitas Ar. Si 14.82 336 Pn 19 57 36.7 +0.6
SAND Sanderson 14.85 342 Pn 19 57 36.4 -0.1
435B Jarrell 14.86 357 Pn 19 57 35.9 -0.5
LPIG La Paz 15.12 305 LR LR 20 02 56.1
comp=Z,739nm,21.7s,baz=119,slow=35
CSIG Choix 15.34 317 P P 19 57 50.6 +3.2
CSIG Choix 15.34 317 eP P 19 57 50.6 +3.2
BRU2 Volcan 15.44 115 P P 19 57 46.9 -1.9
BRU2 Volcan 15.44 115 P P 19 57 47.5 -1.4
BRDY Brady 15.47 353 Pn 19 57 41.9 -2.8
OZNA Ozona 15.50 346 Pn 19 57 43.2 -1.8
ALPN Alpine 15.74 338 Pn 19 57 49.0 +0.7
WHTX Lake Whitney, 16.05 358 Pn 19 57 49.9 -2.2
MNHN Monahans 16.34 341 Pn 19 57 55.5 -0.2
FW13 Cleburne 16.41 358 Pn 19 57 53.5 -3.2
SGCY Sterling City 16.45 347 Pn 19 57 55.8 -1.5
229A Bryant Ranch, 16.66 345 IAmb IAmb 19 58 07.1
comp=Z,20nm,1.0s
PECS Pecos 16.73 338 P 19 58 02.0 -0.9
ODSA Odessa 17.00 343 IAmb IAmb 19 58 09.9
comp=Z,64nm,0.9s
129A Stewart Farms, 17.31 345 IAmb IAmb 19 58 13.9
comp=Z,27nm,0.9s
Z38A Mt. Pleasant 17.38 5 Pn 19 58 07.5 -1.4
128A Castleberry Fa 17.46 344 IAmb IAmb 19 58 20.1
comp=Z,39nm,1.1s
MNTX Cornudas Mount 17.60 335 P P 19 58 12.3 -0.2
APMT Aspermont 17.64 351 Pn 19 58 11.2 -0.8
POST Post 17.64 347 IAmb IAmb 19 58 22.2
comp=Z,67nm,1.0s
Z41A Richland Creek 17.67 11 IAmb IAmb 19 58 20.8
comp=Z,76nm,0.9s
MIAR Mount Ida 18.81 8 P P 19 58 24.8 -1.0
MSTX Muleshoe 18.81 344 IAmb IAmb 19 58 34.6
comp=Z,107nm,1.2s
WMOK Wichita Mounta 18.87 355 P P 19 58 25.2 -1.2
Z47A Carrollton 18.96 23 IAmb IAmb 19 58 35.8
comp=Z,71nm,1.4s
W35A Tecumseh 19.20 360 IAmb IAmb 19 58 38.5
comp=Z,60nm,1.0s
UALR University of 19.23 11 P 19 58 28.5 -1.9
UALR IAmb IAmb 19 58 38.7
comp=Z,102nm,0.9s
AMTX Amarillo 19.43 348 IAmb IAmb 19 58 42.6
comp=Z,66nm,1.2s
OXF Oxford 19.70 18 IAmb IAmb 19 58 43.5
comp=Z,102nm,1.0s
WHAR Wooly Hollow 19.74 11 IAmb IAmb 19 58 43.7
comp=Z,57nm,1.2s
DEOK Depew 19.89 1 IAmb IAmb 19 58 46.0
comp=Z,55nm,1.0s
TUL3 Leonard 19.97 2 P 19 58 37.4 -1.0
TUL3 IAmb IAmb 19 58 48.8
comp=Z,125nm,1.2s
PH02 Texas Public H 19.98 348 IAmb IAmb 19 58 47.7
comp=Z,39nm,1.0s
DUN6 Lazy B Ranch 20.02 328 IAmb IAmb 19 58 51.0
comp=Z,76nm,1.2s
Y22A Socorro 20.20 335 IAmb IAmb 19 58 54.2
comp=Z,48nm,1.1s
QUOK Quay 20.21 0 IAmb IAmb 19 58 49.7
comp=Z,121nm,1.2s
ELIS Ellis County 20.24 354 IAmb IAmb 19 58 57.6
comp=Z,46nm,1.1s
RLO Rose Lookout 20.27 4 IAmb IAmb 19 58 51.5
comp=Z,47nm,1.1s
SBM South Baldy 20.32 334 P P 19 58 43.1 +0.4
FCAR Ozark Folk Cen 20.36 11 IAmb IAmb 19 58 50.8
comp=Z,81nm,0.9s
LENM Lemitar 20.40 335 P 19 58 44.3 +0.9
OK048 Pawnee Station 20.46 360 IAmb IAmb 19 58 56.7
comp=Z,112nm,1.1s
X48A Hartselle 20.46 24 IAmb IAmb 19 58 51.0
comp=Z,66nm,1.3s
HHAR Hobbs 20.48 7 IAmb IAmb 19 58 54.7
comp=Z,47nm,1.0s
U38A Gravette 20.59 5 IAmb IAmb 19 58 58.0
comp=Z,60nm,1.1s
OK038 West end E0370 20.59 355 IAmb IAmb 19 58 58.4
comp=Z,44nm,0.9s
LCAR Lake Charles 20.72 13 IAmb IAmb 19 58 54.3
comp=Z,74nm,1.1s
TUC Tucson 20.73 325 Pn 19 58 48.3 -1.0
TUC Tucson 20.73 325 P Pn 19 58 48.9 -0.4
NOKA Waynoka 20.76 355 IAmb IAmb 19 59 00.9
comp=Z,50nm,0.9s
ANMO Albuquerque 20.88 337 P P 19 58 49.8 +1.3
comp=Z,6.7nm,0.9s,baz=143,slow=9.3,SNR=12
ANMO LR LR 20 07 44.6
comp=Z,2µm,18.1s,baz=157,slow=39
comp=Z,6.7nm,0.9s
ANMO Albuquerque 20.88 337 P 19 58 48.7 +0.1
ANMO Albuquerque 20.88 337 P P 19 58 49.9 +1.3
T35A Sooner Cattle 20.96 1 P P 19 58 47.6 -1.5
GTBY Guantanamo Bay 20.99 76 P P 19 58 54.0 +4.3
comp=Z,38nm,1.0s
FPAL Fort Paine 21.12 26 P 19 58 48.3 -2.6
RTBA Rita Blanca 21.16 347 P 19 58 50.8 -0.6
GOGA Godfrey 21.20 32 P 19 58 49.3 -2.5
GOGA Godfrey 21.20 32 P P 19 58 49.6 -2.1
Y52A Lilburn 21.26 30 P 19 58 50.2 -2.3
T42A Van Buren 21.66 12 P 19 58 53.2 -3.5
T42A IAmb IAmb 19 59 04.5
comp=Z,71nm,1.1s
V48A Smith Brothers 21.68 22 IAmb IAmb 19 59 11.0
comp=Z,47nm,1.0s
WVT Waverly 21.69 20 P 19 58 53.9 -3.1
WVT IAmb IAmb 19 59 04.0
comp=Z,87nm,1.2s
WVT Waverly 21.69 20 P P 19 58 55.4 -1.6
W50A Signal Mountai 21.81 26 P P 19 58 55.8 -2.6
SJCC San Jacinto, C 21.86 103 P P 19 59 03.4 +4.3
comp=Z,41nm,1.2s
S39A Bolivar 21.94 7 IAmb IAmb 19 59 08.7
comp=Z,67nm,1.0s
X18A Snowflake 22.03 330 IAmb IAmb 19 59 17.4
comp=Z,54nm,1.1s
T25A Trinidad 22.23 344 IAmb IAmb 19 59 15.6
comp=Z,90nm,1.3s
UREC San Jos de Ur 22.28 109 P P 19 59 05.1 +1.5
comp=Z,47nm,1.1s
W52A Murphy 22.33 29 IAmb IAmb 19 59 13.6
comp=Z,89nm,1.7s
HODGE Hodges 22.46 33 IAmb IAmb 19 59 16.5
comp=Z,54nm,1.6s
R32A Long Quarter, 22.52 356 P 19 59 05.4 -0.6
R32A IAmb IAmb 19 59 17.9
comp=Z,82nm,1.0s
CBOC Ciudad Bolivar 22.66 114 P P 19 59 10.5 +2.7
comp=Z,742nmcomp=Z,59nm,1.1s
S44A Carbondale 22.72 16 IAmb IAmb 19 59 23.8
comp=Z,37nm,0.8s
U49A Red Boiling Sp 22.76 23 IAmb IAmb 19 59 18.0
comp=Z,51nm,1.2s
113A Mohawk Valley, 22.81 321 IAmb IAmb 19 59 20.1
comp=Z,71nm,1.6s
TKL Tuckaleechee C 22.87 28 LR LR 20 10 59.7
comp=Z,109nm,18.5s,baz=210,slow=44
TKL Tuckaleechee C 22.87 28 IAmb IAmb 19 59 19.0
comp=Z,40nm,1.1s
PLMC San Jos del P 22.88 116 P P 19 59 12.6 +2.6
comp=Z,35nm,1.3s
HELC Santa Helena 22.94 112 P P 19 59 12.7 +1.8
comp=Z,18nm,1.3s
CBKS Cedar Bluff 23.00 354 P 19 59 09.8 -1.1
SDCO Great Sand Dun 23.11 342 IAmb IAmb 19 59 23.4
comp=Z,32nm,1.1s
Y14A Wickenburg 23.19 324 IAmb IAmb 19 59 24.6
comp=Z,55nm,1.2s
V53A Saluda 23.32 30 IAmb IAmb 19 59 23.7
comp=Z,58nm,1.3s
JAMC Jamundi, Valle 23.44 120 P P 19 59 08.5 -7.3
comp=Z,27nm,1.7s
GUY2C Guyana, Caldas 23.53 114 P P 19 59 19.4 +2.4
comp=Z,39nm,1.0s
BBAC Balboa, Cauca 23.65 124 P P 19 59 20.3 +2.4
comp=Z,867nmcomp=Z,41nm,1.7s
GLA Glamis 23.65 320 IAmb IAmb 19 59 27.9
comp=Z,31nm,1.1s
MVCO Mesa Verde 23.66 336 P P 19 59 18.0 +0.2
TZTN Tazewell 23.70 27 P P 19 59 17.4 -0.6
ESJX Sierra Juarez 23.71 316 P P 19 59 19.1 +0.9
PTBC PUERTO BERRIO, 23.75 111 P P 19 59 19.9 +1.3
comp=Z,590nmcomp=Z,27nm,1.1s
POPC Popayan, Colom 23.82 122 P P 19 59 22.3 +2.8
comp=Z,1µmcomp=Z,33nm,1.9s
P38A Dawn 23.83 6 IAmb IAmb 19 59 26.8
comp=Z,36nm,1.1s
OLIL Olney 24.01 17 IAmb IAmb 19 59 29.2
comp=Z,58nm,1.1s
WCI Wyandotte Cave 24.10 21 P P 19 59 20.3 -1.4
WCI Wyandotte Cave 24.10 21 P P 19 59 20.0 -1.7
ORTC Ortega, Tolima 24.27 117 P P 19 59 26.1 +2.5
comp=Z,44nm,1.5s
W57A Gilead 24.38 35 IAmb IAmb 19 59 33.2
comp=Z,25nm,1.0s
BC3 Big Chuckawall 24.45 320 P 19 59 21.7 -3.4
BC3 IAmb IAmb 19 59 35.5
comp=Z,22nm,1.0s
P43A Skaggs, Pawnee 24.51 14 IAmb IAmb 19 59 33.0
comp=Z,60nm,1.2s
R49A Shelbyville 24.55 22 IAmb IAmb 19 59 38.3
comp=Z,50nm,1.1s
PV13 Radium Mtn., P 24.61 337 IAmb IAmb 19 59 37.7
comp=Z,42nm,1.1s
ROSC El Rosal 24.62 114 P P 19 59 27.7 +0.6
comp=Z,7.0nm,0.4s,baz=306,slow=20,SNR=3.7
comp=Z,7.0nm,0.4s
ROSC El Rosal 24.62 114 IAmb IAmb 19 59 50.3
comp=Z,30nm,1.1s
PV05 Paradox Valley 24.64 336 IAmb IAmb 19 59 37.2
comp=Z,30nm,1.1s
PRAC Prado 24.68 117 P P 19 59 22.6 -4.7
comp=Z,23nm,1.6s
U15A North Rim 24.69 329 IAmb IAmb 19 59 45.2
comp=Z,58nm,1.2s
R50A Paris 24.86 24 IAmb IAmb 19 59 54.4
comp=Z,20nm,0.8s
BARC Barichara 24.88 109 P P 19 59 32.0 +2.7
comp=Z,2µmcomp=Z,69nm,1.3s
N35A Tabor 24.91 2 IAmb IAmb 19 59 49.7
comp=Z,56nm,1.0s
BELC Belle Mtn. Jos 25.01 320 P 19 59 30.8 +0.6
BELC IAmb IAmb 19 59 41.6
comp=Z,20nm,1.0s
PAMC Pamplona, Colo 25.03 107 P P 19 59 31.9 +0.9
comp=Z,3µmcomp=Z,20nm,1.1s
PFO Pinyon Flats O 25.05 318 P P 19 59 31.1 +0.6
ISCO Idaho Springs 25.05 344 IAmb IAmb 19 59 41.3
comp=Z,44nm,1.2s
ISCO Idaho Springs 25.05 344 P P 19 59 31.6 +0.9
CHIC Chingaza 25.24 114 P P 19 59 35.9 +3.2
comp=Z,48nm,1.0s
RUSC La Rusia 25.26 111 P P 19 59 33.1 +0.1
V58A Windy Hill, Pi 25.33 35 IAmb IAmb 19 59 33.5
comp=Z,20nm,0.9s
KNB Kanab 25.42 329 P 19 59 34.6 +0.7
KNB IAmb IAmb 19 59 54.8
comp=Z,24nm,1.0s
MTPC Mountain Pass 25.76 323 IAmb IAmb 19 59 49.1
comp=Z,24nm,1.0s
L34A Svendsen Farm, 26.00 1 P 19 59 38.9 0.0
SRU San Rafael Swe 26.10 335 P P 19 59 39.5 -0.6
SRU IAmb IAmb 19 59 52.2
comp=Z,38nm,1.3s
CCUT Cedar City 26.10 329 P 19 59 42.0 +1.8
O20A White River Ci 26.16 340 IAmb IAmb 20 00 07.2
comp=Z,36nm,1.1s
HAYD Hayden 26.19 342 IAmb IAmb 19 59 40.6
comp=Z,20nm,0.8s
Q16A Castle Valley 26.20 334 P 19 59 42.2 +1.2
Q16A IAmb IAmb 19 59 53.7
comp=Z,57nm,1.4s
P18A Preston Nutter 26.43 336 IAmb IAmb 19 59 56.1
comp=Z,42nm,1.2s
SDV Santo Domingo 26.44 102 LR LR 20 12 09.7
comp=Z,289nm,18.6s,baz=253,slow=41
SDV Santo Domingo 26.44 102 P 19 59 43.3 0.0
SDV IAmb IAmb 19 59 52.9
comp=Z,37nm,1.1s
L40A Anamosa 26.53 9 IAmb IAmb 19 59 52.4
comp=Z,59nm,1.1s
PRN Pahroc Range 26.86 326 P 19 59 47.2 +0.2
BSUT Blindstream Ca 27.42 336 IAmb IAmb 20 00 06.6
comp=Z,26nm,1.3s
JFWS Jewell Farm 27.52 10 IAmb IAmb 20 00 08.4
comp=Z,35nm,0.8s
ECSD EROS Data Cent 27.77 0 P P 19 59 53.8 -1.0
DUG Dugway, Tooele 27.97 333 P 19 59 55.4 -1.4
DUG Dugway, Tooele 27.97 333 P P 20 00 00.1 +3.3
DSP Deep Springs 28.46 323 P 20 00 02.2 +1.1
HWUT Hardware Ranch 28.64 336 P P 20 00 05.7 +2.8
P57A Homestead Farm 28.67 31 IAmb IAmb 20 00 23.6
comp=Z,15nm,0.7s
I42A Draeger Farm, 28.71 12 P 20 00 02.1 -1.1
I42A IAmb IAmb 20 00 10.9
comp=Z,29nm,1.3s
RSSD Black Hills 28.82 349 P 20 00 04.1 -0.3
PD31 Pinedale Array 28.95 340 P 20 00 03.1 -2.6
PDAR Pinedale Array 28.95 340 P P 20 00 06.9 +1.2
comp=Z,0.4nm,0.5s,baz=128,slow=14,SNR=4.3
PDAR LR LR 20 12 44.8
comp=Z,471nm,19.3s,baz=154,slow=39
comp=Z,0.4nm,0.5s
PDAR Pinedale Array 28.95 340 P P 20 00 05.4 -0.3
ATAH Atahualpa 29.22 140 LR LR 20 09 47.1
comp=Z,534nm,18.3s,baz=296,slow=32
MDPB Devils Postpil 29.29 322 P 20 00 09.8 +1.0
MDPB IAmb IAmb 20 00 20.1
comp=Z,18nm,0.9s
SJG San Juan 29.35 81 LR LR 20 12 37.6
comp=Z,283nm,21.3s,baz=245,slow=38
NVAR Mina Array Bea 29.39 324 P P 20 00 11.1 +1.6
comp=Z,3.9nm,0.8s,baz=147,slow=10.0,SNR=9.8
comp=Z,2.3nm,0.8s
NVAR Mina Array Bea 29.39 324 P P 20 00 11.3 +1.8
SPMN Marine on St. 29.45 6 IAmb IAmb 20 00 22.4
comp=Z,34nm,0.9s
MVL Millersville 29.90 33 IAmb IAmb 20 01 11.8
comp=Z,10nm,0.5s
LOHW Long Hollow 30.05 340 IAmb IAmb 20 00 25.2
comp=Z,16nm,1.0s
WAKR Walker 30.09 323 IAmb IAmb 20 00 26.9
comp=Z,16nm,1.2s
CMB Columbia Colle 30.34 321 P 20 00 18.2 +0.4
PAHR Pah Rah Range 30.88 325 P 20 00 22.8 +0.2
PAHR IAmb IAmb 20 00 33.5
comp=Z,13nm,1.0s
L56A Greenwood 30.95 28 IAmb IAmb 20 01 28.3
comp=Z,13nm,0.6s
RLMT Red Lodge 31.00 343 IAmb IAmb 20 00 33.2
comp=Z,18nm,0.9s
MEDO Medina 31.37 26 P P 20 00 28.2 +1.4
HLID Hailey 31.42 335 P P 20 00 30.1 +2.7
BEKR Beckworth 31.53 324 P 20 00 27.6 -0.9
BEKR IAmb IAmb 20 00 39.3
comp=Z,17nm,1.0s
J55A Hilton 31.73 27 P P 20 00 27.3 -2.5
BINY Binghamton 31.73 30 IAmb IAmb 20 00 46.8
comp=Z,11nm,1.1s
MDND Maddock 31.97 356 P 20 00 30.5 -1.5
L59A Walton 32.19 31 IAmb IAmb 20 00 35.4

comp=Z,16nm,1.0s
EYMN Ely 32.27 7 P **P** **20 00 35.4 +0.7**
AGMN Agassiz Nation 32.34 1 IAmb IAmb 20 00 44.8
comp=Z,16nm,0.8s
AGMN Agassiz Nation 32.34 1 P **P** **20 00 34.9 -0.3**
SADO Sadowa 32.42 24 LR LR 20 16 56.8
comp=Z,218nm,18.1s,baz=160,slow=42
PECO Prince Edward 32.62 27 IAmb IAmb 20 00 38.9
comp=Z,23nm,0.9s
J57A Williamstown 32.66 29 IAmb IAmb 20 00 54.3
comp=Z,27nm,1.0s
PLID Pearl Lake 33.33 335 IAmb IAmb 20 00 53.9
comp=Z,26nm,1.1s
J59A Piesco 33.40 30 IAmb IAmb 20 00 58.1
comp=Z,16nm,1.3s
BMO Blue Mountains 33.69 333 IAmb IAmb 20 00 56.3
comp=Z,16nm,1.6s
EPLO Experimental L 33.80 4 IAmb IAmb 20 00 55.5
comp=Z,20nm,1.1s
NCB Newcomb 33.92 30 IAmb IAmb 20 00 50.3
comp=Z,11nm,0.9s
M65A Busby, Falmout 34.09 36 P **P** **20 00 49.2 -1.4**
baz=229
YBH Yreka Blue Hor 34.10 324 LR LR 20 17 03.3
comp=Z,343nm,18.1s,baz=146,slow=40
WBO Williamsburg 34.22 28 P **P** **20 00 50.4 -1.2**
LONY Lake Ozonia 34.24 29 IAmb IAmb 20 01 04.8
comp=Z,25nm,0.9s
ULM Lac du Bonnet 34.29 1 P **P** **20 00 53.5 +1.3**
comp=Z,1.9nm,0.6s,baz=184,slow=7.2,SNR=6.8
comp=Z,1.9nm,0.6s
ULM Lac du Bonnet 34.29 1 **P** **20 00 50.2 -2.0**
ULM IAmb IAmb 20 01 22.6
comp=Z,13nm,1.1s
F10A Beach Ranch, E 34.55 335 **P** **20 00 53.8 -0.9**
F10A IAmb IAmb 20 01 04.2
comp=Z,37nm,1.2s
FRNY Flat Rock 34.87 29 **P** **20 00 55.5 -1.7**
FRNY IAmb IAmb 20 01 13.8
comp=Z,14nm,1.1s
I62A Tamworth 35.29 33 **P** **20 01 00.0 -0.9**
I62A IAmb IAmb 20 01 15.6
comp=Z,16nm,1.1s
MNTQ Montreal, Queb 35.35 29 P **P** **20 01 00.3 -1.1**
H04A Detroit Lake 35.85 328 **P** **20 01 04.9 -0.8**
H04A IAmb IAmb 20 01 15.4
comp=Z,33nm,1.2s
LDM Libby Dam 35.88 339 **P** **20 01 06.2 +0.2**
NEW Newport 36.38 337 LR LR 20 16 01.6
comp=Z,237nm,18.1s,baz=158,slow=36
NEW Newport 36.38 337 **P** **20 01 09.7 -0.5**
NEW Newport 36.38 337 P **P** **20 01 11.2 +1.0**
C09A Chrisman Ranch 36.45 335 **P** **20 01 10.9 +0.1**
C09A IAmb IAmb 20 01 21.2
comp=Z,14nm,0.8s
G62A West of Eustis 36.64 32 IAmb IAmb 20 01 24.9
comp=Z,16nm,0.9s
LTY Liberty 37.03 333 IAmb IAmb 20 01 25.6
comp=Z,22nm,1.2s
LDAQ Lac Daran 38.28 28 **P** **20 01 28.2 +1.7**
LDAQ IAmb IAmb 20 01 38.7
comp=Z,19nm,0.9s
LMQ La Malbaie 38.40 29 IAmb IAmb 20 01 35.1
comp=Z,42nm,1.3s
D62A Allapoint, All 38.68 31 IAmb IAmb 20 01 37.7
comp=Z,42nm,1.2s
FFC Flin Flon 38.98 355 P **P** **20 01 34.1 +2.0**
EDM Edmonton 39.48 344 IAmb IAmb 20 01 45.1
comp=Z,21nm,1.0s
LLLB Lillooet 40.12 335 **P** **20 01 41.8 +0.1**
LLLB IAmb IAmb 20 01 51.3
comp=Z,16nm,1.0s
BATG Bathurst New B 40.31 33 **P** **20 01 42.2 -1.2**
MACA Manacapuru-AM 40.39 115 P **P** **20 01 42.3 -2.1**
MACA IAmb IAmb 20 01 54.0
comp=Z,57nm,1.5s
LPAZ La Paz 42.66 137 P **P** **20 02 05.2 +1.6**
comp=Z,2.5nm,0.8s,baz=341,slow=9.2,SNR=7.8
LPAZ LR LR 20 19 00.6
comp=Z,236nm,18.3s,baz=303,slow=35
comp=Z,2.5nm,0.8s
LPAZ La Paz 42.66 137 **P** **20 02 03.3 -0.3**
LPAZ La Paz 42.66 137 P **P** **20 02 04.9 +1.3**
PB16 IPOC Station P 43.32 141 **P** **20 02 09.6 +0.8**
PB16 IAmb IAmb 20 02 28.4
comp=Z,46nm,1.8s
BBB Bella Bella 43.92 333 LR LR 20 23 45.6
comp=Z,276nm,19.8s,baz=144,slow=40
RPN Rapa Nui 44.45 196 LR LR 20 15 53.4
comp=Z,181nm,21.1s,baz=256,slow=29
GO01 Chusmiza 44.53 142 IAmb IAmb 20 02 32.8
comp=Z,31nm,1.6s
GO01 Chusmiza 44.53 142 P **P** **20 02 21.0 +2.5**
MDP Montagnes des 44.60 99 LR LR 20 23 08.4
comp=Z,192nm,19.7s,baz=280,slow=39
SCHQ Schefferville 45.23 24 P **P** **20 02 24.2 +1.1**
comp=Z,6.2nm,1.0s,baz=212,slow=9.4,SNR=6.7
SCHQ LR LR 20 24 19.5
comp=Z,240nm,19.2s,baz=260,slow=40
comp=Z,6.2nm,1.0s
SCHQ Schefferville 45.23 24 IAmb IAmb 20 02 37.1
comp=Z,15nm,0.9s
SIV San Ignacio 47.37 130 LR LR 20 21 58.0
comp=Z,250nm,18.0s,baz=300,slow=35
V35K Ketchikan 47.59 334 P **P** **20 02 41.3 -0.2**
baz=132
T35M Bob Quinn 48.17 336 P **P** **20 02 46.0 -0.1**
baz=134
YKA Yellowknife Ar 48.23 349 P **P** **20 02 48.0 +1.6**
comp=Z,0.5nm,0.5s,baz=154,slow=7.8,SNR=8.5
YKA LR LR 20 24 13.2
comp=Z,180nm,20.2s,baz=126,slow=38
comp=Z,0.5nm,0.5s
YKA Yellowknife Ar 48.23 349 P **P** **20 02 47.4 +1.0**
CRAG Craig 48.33 333 P **P** **20 02 47.6 +0.3**
baz=130
BLKN Baker Lake 48.39 0 P **P** **20 02 46.1 -1.5**
BLKN IAmb IAmb 20 02 56.0
comp=Z,17nm,1.0s
KOTAN Kotaneelee Air 48.43 342 P **P** **20 02 47.7 -0.4**
baz=144
PTLB Pontes e Lacer 48.47 128 **P** **20 02 48.0 -0.9**
PTLB IAmb IAmb 20 02 50.1
comp=Z,16nm,1.2s
CLDB Colider 48.49 121 P **P** **20 02 48.8 -0.4**
LIRD Liard River Hi 48.49 340 P **P** **20 02 48.5 -0.1**
baz=141
WRAK Wrangell Islan 48.63 334 P **P** **20 02 49.0 -0.6**
baz=132
U33K Whale Pass 48.75 334 P **P** **20 02 49.8 -0.7**
baz=130
DLBC Dease Lake 49.12 338 LR LR 20 26 46.2
comp=Z,426nm,18.2s,baz=101,slow=40
DLBC Dease Lake 49.12 338 P **P** **20 02 52.5 -0.9**
baz=136,SNR=7.2
T33K Petersburg 49.14 335 P **P** **20 02 53.2 -0.3**
baz=131
S34M Telegraph Cree 49.16 337 P **P** **20 02 53.5 -0.2**
baz=134
TAOE Nuku Hiva Isla 49.49 243 *e*LR LR 20 16 52.0
comp=Z,374nm,25.4s
TAOE *e*T T 20 55 43.3
comp=Z,85nm,0.2s
SALTA 49.71 143 P **P** **20 03 01.7 +2.8**
WTLY Watson Lake, Y 49.91 340 P **P** **20 02 59.0 -0.5**
WTLY IAmb IAmb 20 03 09.7
comp=Z,21nm,0.9s
R33M Jennings River 50.15 338 P **P** **20 03 01.3 0.0**
baz=135
S32K Killisnoo 50.24 334 P **P** **20 03 01.2 -0.6**
baz=130
SIT Sitka 50.29 334 P **P** **20 03 01.6 -0.6**
baz=129
Q32M Nakina River 50.32 337 P **P** **20 03 02.3 -0.5**
baz=133
R32K Eaglecrest 50.74 335 P **P** **20 03 05.2 -0.5**
baz=130
TGTN Hyland Airport 50.81 341 P **P** **20 03 06.1 -0.2**
baz=139
S31K Pelican 51.24 334 P **P** **20 03 09.4 0.0**
baz=128
P32M Atlin 51.29 337 **P** **20 03 09.8 -0.1**
P32M IAmb IAmb 20 03 20.8
comp=Z,20nm,1.1s
P32M Atlin 51.29 337 P **P** **20 03 09.3 -0.6**
baz=132
P33M Teslin, Yukon 51.39 338 P **P** **20 03 10.5 -0.1**
baz=133
FRB Frobisher Bay 51.64 16 LR LR 20 29 02.7
comp=Z,249nm,18.6s,baz=216,slow=41
SKAG Skagway 51.83 336 P **P** **20 03 13.2 -0.6**
baz=130
PLBC Pleasant Camp 52.23 336 P **P** **20 03 16.5 -0.3**
baz=129
WHY Whitehorse 52.45 337 P **P** **20 03 17.3 -1.3**
baz=131
MMPY Sheldon Lake, 52.57 341 IAmb IAmb 20 03 30.4
comp=Z,30nm,1.1s
MMPY Sheldon Lake, 52.57 341 P **P** **20 03 18.8 -0.5**
baz=136
CO03 El Pedregal 52.79 152 IAmb IAmb 20 03 24.0
comp=Z,28nm,0.9s
CO03 El Pedregal 52.79 152 P **P** **20 03 23.4 +2.0**
P30M Million Dollar 52.89 336 P **P** **20 03 21.3 -0.5**
baz=129
P29M Windy Craggy 52.89 335 P **P** **20 03 21.6 -0.1**
baz=128
CO02 Combarbal 52.96 152 **P** **20 03 23.9 +1.2**
CO02 Combarbal 52.96 152 P **P** **20 03 27.0 +4.3**
O30N Mendenhall 52.97 337 P **P** **20 03 22.0 -0.3**
baz=130,SNR=5.2
M31M Drury Creek, Y 53.31 339 P **P** **20 03 24.0 -0.7**
baz=133
N31M Braeburn, Yuko 53.32 338 P **P** **20 03 24.3 -0.6**
baz=131
HYT Haines Junctio 53.54 337 **P** **20 03 27.6 +1.0**
HYT IAmb IAmb 20 03 37.9
comp=Z,21nm,1.3s
HYT Haines Junctio 53.54 337 **P** **20 03 26.1 -0.5**
baz=128
O29M Mount Kennedy 53.63 336 P **P** **20 03 26.5 -0.8**
baz=127
N30M Aishikik Lake 53.78 337 P **P** **20 03 27.5 -0.8**
baz=129
YUK6 Outpost Mounta 53.94 336 P **P** **20 03 29.7 +0.1**
baz=128
PINM Pinnacle 54.19 335 P **P** **20 03 31.3 0.0**
baz=125
ILON Igloolik, Nuna 54.28 6 **P** **20 03 31.8 +0.1**
ILON IAmb IAmb 20 03 40.3
comp=Z,19nm,1.3s
YUK4 Talbot Arm 54.30 337 P **P** **20 03 32.3 0.0**
baz=128
M30M Minto, Yukon 54.40 339 **P** **20 03 33.8 +1.1**
M30M Minto, Yukon 54.40 339 P **P** **20 03 32.8 +0.1**
baz=130
BRWY Burwash Landin 54.46 337 P **P** **20 03 32.9 -0.3**
baz=127,SNR=6.3
VA03 San Esteban 54.48 153 IAmb IAmb 20 03 36.5
comp=Z,23nm,1.1s
O28M Mount Upton 54.55 336 P **P** **20 03 33.9 -0.3**
baz=126
YUK8 Steele Glacier 54.69 336 P **P** **20 03 35.2 0.0**
baz=126,SNR=7.4
M29M Somme Creek 54.91 338 P **P** **20 03 37.1 +0.6**
baz=128
GRNC Granite Creek 55.16 335 IAmb IAmb 20 03 49.5
comp=Z,19nm,1.0s
L29M L29M 55.21 339 P **P** **20 03 39.3 +0.7**
baz=129
YUK3 Moose Creek 55.25 336 P **P** **20 03 39.4 +0.3**
baz=126,SNR=5.9
MT08 Bocatoma Ro 55.30 153 P **P** **20 03 42.4 +2.6**
MT08 IAmb IAmb 20 03 43.4
comp=Z,20nm,1.0s
K29M Barlow Dome 55.47 339 P **P** **20 03 40.3 -0.3**
baz=130
J30M Hart River 55.56 341 P **P** **20 03 40.5 -0.8**
baz=132
CRQE Cirque 55.72 335 P **P** **20 03 42.8 +0.3**
baz=122
BVCY Beaver Creek 55.78 337 P **P** **20 03 43.1 +0.4**
baz=126,SNR=5.9
H31M Peel River 55.80 342 P **P** **20 03 42.9 +0.1**
baz=135
KAIM Kayak Island 55.85 333 P **P** **20 03 42.9 -0.3**
baz=120
I30M Mount Dempster 56.01 341 P **P** **20 03 43.8 -0.6**
baz=132
MCARA McCarthy VSAT 56.04 335 P **P** **20 03 44.3 -0.3**
baz=123,SNR=5.6
C36M Paulatuk 56.11 349 P **P** **20 03 44.4 -0.5**
baz=148
M27K Edge Creek, AK 56.13 337 P **P** **20 03 46.1 +0.7**
baz=125
DAWY Dawson 56.25 339 P **P** **20 03 46.7 +0.6**
baz=128
GLB Gilahina Butte 56.39 335 **P** **20 03 47.5 +0.3**
GLB IAmb IAmb 20 03 57.9
comp=Z,18nm,1.1s
Q23K Middleton Isla 56.45 332 P **P** **20 03 48.2 +0.7**
baz=118
BMRM Bremner River 56.47 334 P **P** **20 03 47.8 +0.1**
baz=121
BCAR Beaver Creek A 56.51 337 **P** **20 03 48.1 +0.2**
G31M Satah River 56.58 343 IAmb IAmb 20 03 57.5
comp=Z,14nm,0.9s
G31M Satah River 56.58 343 P **P** **20 03 48.5 +0.3**
baz=135
M26K Nabesna, AK 56.59 336 IAmb IAmb 20 03 59.0
comp=Z,18nm,1.1s
M26K Nabesna, AK 56.59 336 P **P** **20 03 49.0 +0.5**
baz=123,SNR=7.0
EYAK Cordova Ski Ar 56.74 334 P **P** **20 03 49.9 +0.3**
baz=120
N25K Chitina, Valde 56.80 335 P **P** **20 03 50.4 +0.3**
baz=121
F31M Tsiigehtchic 56.81 344 P **P** **20 03 50.6 +0.8**
baz=136
CPUP Vila Florida 56.84 137 LR LR 20 27 54.0
comp=Z,148nm,19.8s,baz=311,slow=36
EPYK Eagle Plains 56.89 342 P **P** **20 03 50.5 -0.1**
baz=132
L26K Log Cabin Wild 57.07 337 P **P** **20 03 52.4 +0.5**
baz=123
G30M tAoh Zrail Nji 57.17 343 P **P** **20 03 52.3 -0.3**
baz=133
P23K Montague Islan 57.19 332 P **P** **20 03 53.1 +0.3**
baz=118
KLU Klutina 57.28 334 IAmb IAmb 20 04 04.2
comp=Z,22nm,1.1s
KLU Klutina 57.28 334 P **P** **20 03 53.1 -0.4**
baz=120,SNR=5.3
H29M Whitestone 57.29 341 P **P** **20 03 54.1 +0.7**
baz=130
I28M Miner Creek 57.30 340 P **P** **20 03 54.6 +1.0**
baz=128
INK Inuvik 57.38 345 LR LR 20 31 59.9
comp=Z,519nm,18.5s,baz=142,slow=40
INK Inuvik 57.38 345 IAmb IAmb 20 04 03.0
comp=Z,15nm,1.0s
INK Inuvik 57.38 345 P **P** **20 03 54.1 +0.1**
baz=137,SNR=5.5
INK Inuvik 57.38 345 P **P** **20 03 54.9 +1.0**
INK pP **pP** **20 04 02.3 +0.8**
BDFB Brasilia 57.42 121 P **P** **20 03 55.0 -0.2**
comp=Z,5.4nm,0.7s,baz=272,slow=8.4,SNR=5.4
comp=Z,5.4nm,0.7s
BDFB Brasilia 57.42 121 IAmb IAmb 20 05 53.9
comp=Z,20nm,1.3s
HARP HAARP 57.44 336 P **P** **20 03 54.2 -0.3**
baz=121
GLI Glacier Island 57.48 333 P **P** **20 03 55.8 +1.0**
baz=118
F30M Barrier River 57.48 343 P **P** **20 03 54.6 -0.1**
baz=134
G29M Pine Creek 57.64 342 P **P** **20 03 55.4 -0.5**
baz=131
M24K Tolsona, Glenn 57.70 335 P **P** **20 03 56.6 +0.2**
baz=120
SCRK Sand Creek 57.84 338 IAmb IAmb 20 04 07.7
comp=Z,16nm,1.1s
SCRK Sand Creek 57.84 338 P **P** **20 03 57.7 +0.3**
baz=123,SNR=7.3
PAX Paxson 57.86 336 IAmb IAmb 20 04 07.5
comp=Z,16nm,1.0s
PAX Paxson 57.86 336 P **P** **20 03 58.0 +0.4**
baz=121,SNR=7.4
I27K Kandik River 57.95 340 IAmb IAmb 20 04 07.5
comp=Z,9.9nm,1.3s
I27K Kandik River 57.95 340 P **P** **20 03 58.8 +0.8**
baz=127
RIDG Independent Ri 58.03 337 P **P** **20 03 58.6 -0.1**
baz=122,SNR=6.0
SCM Sheep Creek Mo 58.03 334 P **P** **20 03 59.4 +0.7**
baz=119
SEW Seward 58.16 332 P **P** **20 04 00.5 +0.9**
baz=116
M23K Glacier View 58.18 334 P **P** **20 04 00.1 +0.4**
baz=118
I26K Coal Creek Min 58.29 339 P **P** **20 03 59.8 -0.6**
baz=125
H27K Steamboat Moun 58.30 340 P **P** **20 03 59.7 -0.8**
baz=127
KNK Knik Glacier 58.31 334 P **P** **20 04 00.9 +0.3**
baz=117
K24K Donnelly Dome 58.41 337 IAmb IAmb 20 04 11.3
comp=Z,19nm,0.9s
K24K Donnelly Dome 58.41 337 P **P** **20 04 00.7 -0.7**
baz=121
SML Sawmill 58.44 334 P **P** **20 04 01.2 -0.4**
baz=118
O22K Cooper Landing 58.45 332 P **P** **20 04 02.1 +0.6**
baz=116
A36M Sachs Harbour 58.56 350 P **P** **20 04 02.9 +0.7**
baz=147
WAT6 Susitna Watana 58.56 335 P **P** **20 04 03.1 +0.5**
baz=119,SNR=7.3
BRSE Bradley Lake S 58.59 331 P **P** **20 04 03.4 +0.7**
baz=114
E29M Blow River 58.60 343 P **P** **20 04 03.4 +1.0**
baz=132
F28M Old Crow 58.65 342 IAmb IAmb 20 04 12.5
comp=Z,19nm,1.0s
F28M Old Crow 58.65 342 P **P** **20 04 03.9 +0.9**
baz=129,SNR=10
DHY Denali Highway 58.66 336 P **P** **20 04 04.0 +0.8**
baz=119
PMR Palmer 58.68 334 P **P** **20 04 03.9 +0.8**
baz=117
G27K Doyon Strip 58.69 341 P **P** **20 04 03.3 0.0**
baz=127
J25K Salcha River, 58.69 338 IAmb IAmb 20 04 13.2
comp=Z,11nm,1.1s
J25K Salcha River, 58.69 338 P **P** **20 04 04.1 +0.8**
baz=122,SNR=5.7
RC01 Rabbit Creek A 58.72 333 IAmb IAmb 20 04 13.4
comp=Z,17nm,1.0s
RC01 Rabbit Creek A 58.72 333 P **P** **20 04 04.1 +0.7**
baz=116
KDAK Kodiak Island 58.72 329 P **P** **20 04 04.4 +0.9**
baz=111
RES Resolute Bay 58.82 1 LR LR 20 30 41.7
comp=Z,481nm,18.3s,baz=198,slow=37
OHAK Old Harbor 58.88 328 P **P** **20 04 04.8 +0.2**
baz=110
WAT1 Susitna Watana 59.01 335 P **P** **20 04 06.2 +0.7**
baz=118
PMOR Pomariorio Ree 59.09 241 *e*T T 21 07 59.0
comp=Z,2.8nm,0.2s
SII Sitkinak Islan 59.11 327 P **P** **20 04 07.0 +0.7**
baz=109
HDA Harding Lake 59.17 337 IAmb IAmb 20 04 15.8
comp=Z,16nm,1.0s
HDA Harding Lake 59.17 337 P **P** **20 04 07.3 +0.7**
baz=120,SNR=6.2
E28M Babbage River 59.19 343 P **P** **20 04 07.4 +0.8**
baz=130
SFJD Kangerlussuaq 59.20 19 LR LR 20 33 48.5
comp=Z,168nm,18.0s,baz=272,slow=40
CAPN Captain Cook N 59.21 332 P **P** **20 04 07.7 +0.9**
baz=114
PRP Porcupine Dome 59.23 339 IAmb IAmb 20 04 16.9
comp=Z,18nm,1.0s
PRP Porcupine Dome 59.23 339 P **P** **20 04 07.6 +0.4**
baz=122,SNR=5.5
ILAR Eielson Array 59.33 338 P **P** **20 04 08.5 +0.9**
comp=Z,2.6nm,0.8s,baz=134,slow=4.8,SNR=25
comp=Z,2.6nm,0.8s
ILAR Eielson Array 59.33 338 **P** **20 04 07.9 +0.3**
G26K Porcupine Rive 59.45 340 P **P** **20 04 09.4 +1.0**
baz=125
E27K Coleen River 59.52 342 P **P** **20 04 09.9 +1.0**
baz=128,SNR=5.3
MCK McKinley 59.59 336 **P** **20 04 09.4 -0.2**
MCK IAmb IAmb 20 04 19.2
comp=Z,15nm,0.9s
MCK McKinley 59.59 336 P **P** **20 04 10.3 +0.8**
baz=118,SNR=5.4
O20K Slope Mountain 59.60 331 P **P** **20 04 10.0 +0.3**
baz=112
CCB Clear Creek Bu 59.61 337 IAmb IAmb 20 04 19.4
comp=Z,6.8nm,1.0s
WRH Wood River Hil 59.63 337 IAmb IAmb 20 04 19.1
comp=Z,8.8nm,0.9s
CHIR Chirikof Islan 59.65 326 P **P** **20 04 10.7 +0.7**
baz=107
Q19K Cape Douglas, 59.66 330 P **P** **20 04 10.8 +0.7**
baz=111
POKR Poker Plat Res 59.71 338 P **P** **20 04 10.5 +0.2**
baz=120
P19K Oil Pt 59.72 331 P **P** **20 04 10.2 -0.3**
baz=112
COLA College 59.74 337 P **P** **20 04 10.6 +0.2**
baz=120
COLA College 59.74 337 P **P** **20 04 11.1 +0.7**
COLA pP **pP** **20 04 18.9 +0.9**
L22K Petersville 59.79 334 IAmb IAmb 20 04 20.6
comp=Z,22nm,1.1s
L22K Petersville 59.79 334 P **P** **20 04 11.9 +1.0**
baz=116,SNR=7.8
ILSW Iliamna Southw 59.80 331 IAmb IAmb 20 04 21.1
comp=Z,16nm,1.0s
STLK Strandline Lak 59.81 333 IAmb IAmb 20 04 20.9
comp=Z,13nm,1.0s
SKT Skwentna 59.88 334 P **P** **20 04 12.5 +1.0**
baz=114,SNR=6.7
BMAR Burnt Mountain 59.98 341 P **P** **20 04 11.4 -0.7**
F26K Sheenjek River 60.00 341 P **P** **20 04 13.6 +1.3**
baz=125
TRF Thorofare Moun 60.00 335 P **P** **20 04 12.5 +0.1**
baz=116,SNR=8.6
D27M Malcolm River 60.00 343 P **P** **20 04 12.6 +0.3**
baz=129
NEA2 Nenana 60.06 337 IAmb IAmb 20 04 22.6
comp=Z,7.6nm,0.9s
NEA2 Nenana 60.06 337 P **P** **20 04 13.0 +0.4**
baz=118
G25K Bearman Lake 60.11 340 P **P** **20 04 13.5 +0.6**
baz=122
Q18K Katmai Hardscr 60.23 329 P **P** **20 04 14.8 +0.7**
baz=109
H24K Noodor Dome 60.23 338 P **P** **20 04 14.2 +0.3**
baz=120,SNR=7.9
KTH Kantishna Hill 60.30 335 **P** **20 04 14.4 0.0**
KTH IAmb IAmb 20 04 23.7
comp=Z,16nm,0.8s
F25K Christian Rive 60.41 341 P **P** **20 04 15.3 +0.1**
baz=123
I23K Minto, Yukon-K 60.43 337 P **P** **20 04 15.3 +0.1**
baz=118,SNR=8.3
M20K Styx River 60.53 333 IAmb IAmb 20 04 25.6
comp=Z,17nm,0.9s
M20K Styx River 60.53 333 P **P** **20 04 16.8 +0.8**
baz=113,SNR=5.7
G24K Hadweenzic Riv 60.54 339 P **P** **20 04 16.6 +0.6**
baz=121
Q17K Contact Creek 60.54 329 P **P** **20 04 16.9 +0.7**
baz=108
PPLA Purkeypile 60.54 334 **P** **20 04 16.4 +0.2**
PPLA IAmb IAmb 20 04 35.0
comp=Z,15nm,1.0s
PPLA Purkeypile 60.54 334 P **P** **20 04 16.8 +0.7**
baz=114
R17L Mt. Peulik Vol 60.58 328 P **P** **20 04 16.5 +0.1**
baz=108,SNR=5.1
P18K Big Mountain, 60.58 330 P **P** **20 04 17.2 +0.8**
baz=110
E25K Arctic Village 60.68 341 P **P** **20 04 17.5 +0.6**
E25K IAmb IAmb 20 04 26.8
comp=Z,11nm,1.1s
E25K Arctic Village 60.68 341 P **P** **20 04 17.7 +0.8**
baz=124
CAST Castle Rocks 60.71 335 P **P** **20 04 17.3 +0.1**
baz=115,SNR=6.4
O18K Koktuh Hills 60.73 330 P **P** **20 04 17.7 +0.3**
O18K Koktuh Hills 60.73 330 P **P** **20 04 18.0 +0.6**
baz=110,SNR=6.9
N19K Bonanza Creek 60.73 332 P **P** **20 04 17.6 +0.2**
baz=111,SNR=7.3
H23K Yukon River 60.82 338 P **P** **20 04 18.3 +0.3**
baz=118
MLY Manley 60.89 337 P **P** **20 04 18.0 -0.4**

baz=117,SNR=26
C27K **Jago River** 61.00 343 P P 20 04 19.2 +0.2
baz=126
CHUM **Lake Minchumin** 61.00 335 P P 20 04 19.4 +0.3
baz=115
Q16K **King Salmon** 61.05 329 P P 20 04 19.7 +0.2
baz=108
M19K **Big River Lodg** 61.09 333 P P 20 04 19.1 -0.6
baz=112
F24K **Squaw Lake** 61.10 340 P P 20 04 19.2 -0.6
baz=121
P17K **Kvichak River** 61.10 330 P P 20 04 20.3 +0.5
baz=108
CHGN **Chignik** 61.28 326 P P 20 04 21.6 +0.5
baz=105
N18K **Kilae Creek** 61.33 331 P P 20 04 21.8 +0.4
baz=110,SNR=6.6
PLCA **Paso Flores** 61.36 158 P P 20 04 22.5 +0.6
comp=Z,7.6nm,1.0s,baz=270,slow=24,SNR=12
PLCA LR LR 20 25 38.9
comp=Z,250nm,18.1s,baz=0.0,slow=31
comp=Z,7.6nm,1.0s
PLCA **Paso Flores** 61.36 158 P P 20 04 22.3 +0.5
PLCA IAmb IAmb 20 04 24.2
comp=Z,8.4nm,0.9s
L19K **White Mountain** 61.40 333 IAmb IAmb 20 04 31.2
comp=Z,12nm,1.0s
L19K **White Mountain** 61.40 333 P P 20 04 21.2 -0.7
baz=111,SNR=5.3
G23K **Bananza Creek** 61.42 339 P P 20 04 21.7 -0.3
baz=118
I21K **Tanana** 61.43 337 IAmb IAmb 20 04 31.4
comp=Z,15nm,1.0s
I21K **Tanana** 61.43 337 P P 20 04 21.4 -0.6
baz=116,SNR=5.1
K20K **Telida** 61.51 334 P 20 04 22.4 -0.2
K20K **Telida** 61.51 334 P P 20 04 22.7 +0.1
baz=113
C26K **Camden Bay** 61.51 343 P P 20 04 22.0 -0.5
baz=125
H22K **Ishtalitna Cre** 61.52 338 IAmb IAmb 20 04 32.1
comp=Z,14nm,0.9s
H22K **Ishtalitna Cre** 61.52 338 P P 20 04 22.8 +0.1
baz=117,SNR=7.6
CHNA **Chernabura Isl** 61.57 324 P P 20 04 22.6 -0.5
baz=103
M18K **Stony River** 61.58 332 P P 20 04 22.7 -0.3
baz=110
E24K **Your Creek** 61.58 340 P P 20 04 21.7 -1.3
baz=121
D25K **Kavik River** 61.60 342 P P 20 04 22.8 -0.3
baz=123,SNR=6.8
O17K **Koliganek Bris** 61.60 330 P P 20 04 23.1 -0.1
baz=108,SNR=6.2
COLD **Coldfoot** 61.73 339 IAmb IAmb 20 04 34.1
comp=Z,12nm,1.1s
COLD **Coldfoot** 61.73 339 P P 20 04 24.5 +0.5
baz=118,SNR=6.6
PPT **Papeete** 61.75 240 LR LR 20 23 48.4
comp=Z,132nm,20.0s,baz=6.5,slow=29
PPT2 **Papeete2** 61.76 240 eLR LR 20 22 35.5
comp=Z,250nm,23.8s
PPT2 eLR LR 20 22 41.7
comp=Z,189nm,24.2s
P16K **Nushagak River** 61.82 329 P P 20 04 25.2 +0.6
baz=107
J20K **Nowinta River** 61.86 335 IAmb IAmb 20 04 34.0
comp=Z,18nm,1.0s
J20K **Nowinta River** 61.86 335 P P 20 04 25.4 +0.5
baz=113,SNR=7.0
N17K **Nushagak Hills** 61.88 331 P P 20 04 26.0 +0.9
baz=108
S14K **Fog Glacier** 61.89 326 P P 20 04 25.7 +0.3
baz=104
E23K **Chandalar** 61.94 340 P P 20 04 25.3 -0.2
baz=119
H21K **Melozitna Rive** 61.95 337 IAmb IAmb 20 04 34.4
comp=Z,8.8nm,1.0s
H21K **Melozitna Rive** 61.95 337 P P 20 04 25.1 -0.4
baz=115,SNR=7.1
O16K **Kokwok River B** 62.03 330 P P 20 04 25.7 -0.4
baz=107
G22K **Bettles** 62.04 339 P P 20 04 26.1 +0.1
baz=117
SDPT **Sand Point** 62.18 325 P P 20 04 27.9 +0.7
baz=102
L18K **Granite Mounta** 62.21 333 IAmb IAmb 20 04 36.6
comp=Z,18nm,1.0s
L18K **Granite Mounta** 62.21 333 P P 20 04 27.8 +0.5
baz=110,SNR=5.8
TOLK **Toolik Lake Re** 62.22 341 P P 20 04 26.6 -0.7
baz=120
I20K **Naaghedeneel** 62.24 336 P P 20 04 27.7 +0.3
baz=113
D24K **Happy Valley** 62.24 341 P P 20 04 27.5 +0.1
baz=121
M17K **Holitna River** 62.28 332 P P 20 04 28.9 +1.1
baz=108
J19K **Poorman** 62.39 335 P P 20 04 29.2 +0.7
baz=111,SNR=6.9
C24K **Franklin Bluff** 62.50 342 P P 20 04 30.1 +1.0
baz=121
G21K **Allakaket** 62.57 338 P P 20 04 29.6 -0.1
baz=115
N16K **Nishlik Lake** 62.62 330 P P 20 04 30.3 +0.2
baz=107
H20K **Anotleneega Mo** 62.67 337 P P 20 04 30.8 +0.5
baz=113
E22K **Anaktuvuk Pass** 62.70 340 P P 20 04 31.0 +0.4
baz=117
D23K **Nanushuk River** 62.73 341 P P 20 04 31.0 +0.3
baz=119
O15K **Ungalikthiuk R** 62.77 329 P P 20 04 30.9 -0.2
baz=105
M16K **Timber Creek** 62.87 331 P P 20 04 32.1 +0.4
baz=107
F21K **Alatna River** 62.87 339 P P 20 04 30.8 -0.8
baz=115
L17K **Donlin** 62.90 332 P P 20 04 31.9 0.0
baz=108
K17K **Iditarod** 63.08 333 P P 20 04 33.7 +0.5
baz=108
C23K **Itkillik River** 63.13 342 P P 20 04 34.4 +1.1
baz=119
N15K **Kwethluk River** 63.16 330 P P 20 04 34.4 +0.7
baz=105
GCSA **Galena City Sc** 63.17 335 P P 20 04 34.1 +0.5
baz=111
H19K **Roundabout Mou** 63.29 336 P P 20 04 34.5 +0.1
baz=111
L16K **Owhat River** 63.30 332 P P 20 04 35.4 +0.9
baz=107
O14K **Tigyukauivet M** 63.50 329 P P 20 04 36.2 +0.3
baz=104
M15K **Kasigluk River** 63.59 330 P P 20 04 37.2 +0.7
baz=105
F20K **Avaraarl Lake** 63.59 338 P P 20 04 36.1 -0.3
baz=113
J17K **VABM Dome** 63.63 334 P P 20 04 37.4 +0.7
baz=108
G19K **Purcell Mounta** 63.76 337 P P 20 04 38.3 +0.8
baz=111
N14K **Kuskokwak Cree** 63.87 329 P P 20 04 39.7 +1.3
baz=104
H18K **Honhosa River** 63.91 336 P P 20 04 39.2 +0.6
baz=105
RCBR **Riachuelo** 63.98 105 LR LR 20 34 07.5
comp=Z,100nm,19.4s,baz=266,slow=38
C21K **Knifeblade Rid** 64.13 340 P P 20 04 40.7 +0.8
baz=115
M14K **Bethel** 64.21 330 P P 20 04 41.4 +0.9
baz=104
L15K **Ungalak Mounta** 64.22 331 P P 20 04 41.1 +0.6
baz=105
B22K **Teshekpuk Lake** 64.22 342 P P 20 04 41.4 +1.0
baz=117
J16K **Anvik River** 64.26 333 P P 20 04 41.7 +0.8
baz=106
F19K **Shaleruckik Mo** 64.26 337 P P 20 04 41.3 +0.5
baz=111
G18K **Tagagawik** 64.27 336 P P 20 04 41.8 +0.9
baz=109
B21K **Ikpikpuk River** 64.27 341 P P 20 04 41.6 +0.8
baz=115
E19K **Redstone River** 64.29 338 P P 20 04 41.5 +0.5
baz=112
K15K **Wolf Creek Mou** 64.40 332 P P 20 04 42.2 +0.4
baz=105

H17K **Granite Mounta** 64.46 335 P P 20 04 43.2 +1.1
baz=108
I17K **Unalakleet** 64.47 334 P P 20 04 43.2 +1.0
baz=106
D20K **Etivluk River** 64.56 340 P P 20 04 42.9 +0.2
baz=113
TBI **Tubuai** 64.60 234 eLR LR 20 24 04.8
comp=Z,906nm,23.8s
TBI eT T 21 14 41.0
comp=Z,7.3nm,0.3s
L14K **Kuka Creek** 64.69 331 P P 20 04 43.9 +0.3
baz=103
M13K **Dall Lake** 64.80 330 P P 20 04 44.5 +0.2
baz=102
F18K **Selawik** 64.88 337 P P 20 04 45.2 +0.4
baz=109
G17K **Kiwalik Mounta** 64.93 336 P P 20 04 45.1 -0.1
baz=107
A22K **Sinclair Lake** 64.98 342 P P 20 04 46.0 +0.7
baz=115
D19K **Kuna River** 64.98 339 P P 20 04 46.0 +0.4
baz=111
B20K **Meade River** 65.24 341 P P 20 04 47.5 +0.4
baz=113
H16K **Elim** 65.33 334 P P 20 04 48.0 +0.2
baz=105
UNV **Unalaska Valle** 65.39 322 P P 20 04 48.8 +0.5
baz=97
F17K **Baldwin Pennin** 65.44 336 P P 20 04 48.9 +0.4
baz=107
E18K **Tukpahlearik C** 65.50 338 P P 20 04 49.4 +0.5
baz=108
A21K **Barrow** 65.60 342 P P 20 04 49.9 +0.5
baz=114
C19K **Lookout Ridge** 65.70 340 P P 20 04 51.6 +1.4
baz=110
K13K **Kusilvak Mount** 65.74 331 P P 20 04 51.3 +0.8
baz=102
E17K **Hotham Inlet** 65.85 337 P P 20 04 51.9 +0.8
baz=107
D17K **Noatak River** 66.49 338 P P 20 04 55.6 +0.3
baz=106
RDOG **Red Dog Mine** 66.53 338 P P 20 04 56.0 +0.5
baz=106
ANM **Nome** 66.62 334 P P 20 04 56.7 +0.6
baz=102
C17K **DeLong Mountai** 66.75 338 P P 20 04 58.5 +1.6
baz=106
SPIA **Saint Paul Isl** 67.85 326 P P 20 05 05.0 +1.0
baz=95
BORG **Borgarnes** 69.55 26 LR LR 20 35 44.1
comp=Z,87nm,19.7s,baz=266,slow=36
DAG **Danmarks Havn** 71.93 14 P P 20 05 28.9 +0.2
RAR **Rarotonga** 71.95 241 LR LR 20 29 45.3
comp=Z,62nm,18.6s,baz=44,slow=30
PMOZ **Porto Moniz, M** 72.94 60 eLR LR 20 28 51.4
PMOZ *i* IAms_20 IAms_20 20 31 20.4
comp=Z,152nm,20.0s
JMIC **Jan Mayen** 74.55 20 LR LR 20 41 35.6
comp=Z,99nm,19.2s,baz=280,slow=38
PGAV **Gavieira, Arco** 78.47 50 eLR LR 20 34 55.2
PGAV *i* IAms_20 IAms_20 20 37 29.6
comp=Z,232nm,18.0s
PCAS **Casmilo, Conde** 78.66 51 eP P 20 06 08.8 +0.6
PCAS *i* IAmb IAmb 20 06 15.9
comp=Z,28nm,1.5s
PCAS ePcP pP 20 06 16.4 +0.4
PVIS **Viseu** 78.99 51 eP P 20 06 10.3 +0.2
PVIS ePcP PcP 20 06 18.4 -0.2
PSARD **Sardoal** 79.01 52 ePcP PcP 20 06 18.7 0.0
PMTG **Montargil** 79.06 52 eP P 20 06 10.8 +0.4
PMTG ePcP pP 20 06 18.1 0.0
PMTG *i* IAmb IAmb 20 06 19.5
comp=Z,19nm,1.5s
EKA **Eskdalemuir Ar** 79.13 35 P P 20 06 09.6 -0.8
comp=Z,1.4nm,0.6s,baz=264,slow=7.5,SNR=6.1
EKA LR LR 20 39 39.6
comp=Z,131nm,21.6s,baz=352,slow=35
comp=Z,1.4nm,0.6s
SPITS **Spitsbergen Ar** 79.16 11 LR LR 20 43 30.0
comp=Z,146nm,20.2s,baz=294,slow=38
PARRA **Arraiolos** 79.26 53 ePcP PcP 20 06 19.4 -0.3
MTE **Manteigas** 79.31 51 ePcP PcP 20 06 19.9 -0.1
MTE eLR LR 20 33 23.2
MTE *i* IAms_20 IAms_20 20 38 39.9
comp=Z,252nm,20.0s
PCBR **Castelo Branco** 79.47 52 eP P 20 06 12.9 +0.3
PCBR ePcP PcP 20 06 20.8 +0.1
PCBR *i* IAmb IAmb 20 06 22.3
comp=Z,20nm,1.5s
PCVE **Castro Verde** 79.50 54 eP P 20 06 13.4 +0.6
MVO **Moncorvo** 79.54 50 *i* IAms_20 IAms_20 20 38 10.9
comp=Z,208nm,18.0s
PMRV **Marv??o** 79.62 52 ePcP PcP 20 06 21.5 +0.2
PMRV eLR LR 20 33 44.9
PMRV *i* IAms_20 IAms_20 20 38 32.8
comp=Z,298nm,20.0s
PVAQ **Vaqueiros** 79.80 54 eLR LR 20 33 32.9
PVAQ *i* IAMs_20 IAMs_20 20 40 02.3
comp=Z,270nm,20.0s
AFI **Afiamalu** 79.82 252 LR LR 20 34 33.1
comp=Z,84nm,19.5s,baz=173,slow=30
PBAR **Barrancos** 80.16 53 eP P 20 06 16.8 +0.4
PBAR ePcP pP 20 06 24.5 +0.4
PAB **San Pablo** 81.89 51 P P 20 06 25.4 -0.4
PAB IAmb IAmb 20 06 35.2
comp=Z,17nm,1.2s
ESDC **Sonseca Array** 82.15 51 P P 20 06 27.3 +0.2
comp=Z,2.7nm,1.1s,baz=284,slow=4.9,SNR=13
ESDC LR LR 20 39 46.3
comp=Z,248nm,19.4s,baz=282,slow=33
comp=Z,2.7nm,1.1s
ESDC **Sonseca Array** 82.15 51 P P 20 06 26.7 -0.4
MD01 **Midelt array s** 83.20 58 P P 20 06 31.6 -1.1
MDT **Midelt** 83.33 58 LR LR 20 39 45.9
comp=Z,92nm,20.8s,baz=290,slow=33
PMSA **Palmer Station** 84.19 167 LR LR 20 36 26.3
comp=Z,132nm,18.8s,baz=260,slow=30
NB2 **NORSAR Subarra** 84.67 28 P P 20 06 40.1 +0.5
comp=Z,26nm,1.4s,baz=297,slow=5.3
NB2 **NORSAR Subarra** 84.67 28 P P 20 06 40.1 +0.5
NOA **NORSAR Array B** 84.67 28 P P 20 06 40.7 +1.1
comp=Z,2.0nm,1.0s,baz=297,slow=4.9,SNR=7.8
NOA LR LR 20 45 02.2
comp=Z,64nm,20.8s,baz=290,slow=36
comp=Z,2.0nm,1.0s
ESPZ **Base Esperanza** 84.82 163 P P 20 06 41.0 +1.1
ESPZ IAmb IAmb 20 06 42.3
comp=Z,12nm,1.1s
HGN **Heimansgroeve** 85.66 38 P P 20 06 45.6 +1.0
ARCES **ARCESS Array B** 85.77 17 LR LR 20 48 11.3
comp=Z,80nm,18.5s,baz=285,slow=38
HFS **Hagfors** 86.16 28 LR LR 20 45 47.2
comp=Z,77nm,20.7s,baz=281,slow=36
IBBN **Ibbenburen** 86.19 37 P P 20 06 48.0 +0.7
PETK **Petropavlovsk-** 86.47 324 P P 20 06 49.3 +0.7
comp=Z,4.8nm,1.1s,baz=69,slow=8.3,SNR=5.1
comp=Z,4.8nm,1.1s
MA2 **Magadan** 87.31 332 LR LR 20 49 54.0
comp=Z,74nm,18.1s,baz=77,slow=38
TIXI **Tiksi** 87.44 347 LR LR 20 53 10.0
comp=Z,103nm,18.3s,baz=48,slow=40
TIXI **Tiksi** 87.44 347 P 20 06 52.5 -0.4
TIXI IAmb IAmb 20 07 01.8
comp=Z,24nm,1.7s
DAVOX **Davos/Dischmat** 89.54 41 LR LR 20 47 28.7
comp=Z,86nm,18.2s,baz=264,slow=36
CLL **Collm** 89.58 36 eP P 20 07 04.0 +0.5
NKC **Novy Kostel** 89.71 37 P P 20 07 06.5 +2.3
BRG **Berggiesshubel** 90.30 36 eP P 20 07 07.3 +0.4
BRG Amp 20 07 07.7
comp=Z,3.2nm,0.9s
BRG **Berggiesshubel** 90.30 36 P P 20 07 15.5 +8.6
BRG Amp 20 07 16.6
comp=Z,4.0nm,1.1s
MSVF **Nonsavu** 90.30 252 LR LR 20 38 05.7
comp=Z,104nm,20.5s,baz=157,slow=29
WET **Wettzell** 90.42 38 P P 20 07 10.6 +3.1
FINES **FINESS Array B** 90.71 24 LR LR 20 50 24.9
comp=Z,103nm,18.2s,baz=286,slow=37
KHC **Kasperske Hory** 90.85 38 AMS AMS 20 45 40.0
comp=Z,200nm,17.7s
ZVC **Zvikov** 91.07 38 AMS AMS 20 47 40.0
comp=Z,200nm,16.8s
DPC **Dobruska-Polom** 91.89 36 P P 20 07 16.2 +1.9
VRAC **Vranov** 92.53 37 LR LR 20 46 52.8
comp=Z,114nm,21.8s,baz=283,slow=34

KEST **Kesra** 93.40 52 LR LR 20 46 18.8
comp=Z,126nm,19.9s,baz=315,slow=34
YAK **Yakutsk** 94.18 340 LR LR 20 53 49.3
comp=Z,125nm,19.6s,baz=30,slow=38
VYHS **Vyhne** 94.22 37 eP P 20 07 26.6 +1.5
NACGM **Naroch** 94.89 29 eP P 20 07 22.4 -5.6
comp=Z,10.0nm,0.8s,baz=306
VAE **Valguarnera** 96.42 48 LR LR 20 49 18.4
comp=Z,316nm,18.2s,baz=328,slow=34
URZ **Urewera** 96.69 232 LR LR 20 42 12.0
comp=Z,128nm,20.6s,baz=277,slow=30
AKASG **Malin Array Be** 98.61 31 LR LR 20 56 07.3
comp=Z,108nm,18.2s,baz=309,slow=38
OBN **Obninsk** 99.03 25 LR LR 20 55 36.3
comp=Z,82nm,18.6s,baz=323,slow=37
MLR **Muntele Rosu** 99.94 37 LR LR 20 52 45.0
comp=Z,107nm,21.7s,baz=342,slow=35
HHC **Hu-ho-hao-te** 117.74 336 eP PKPdf 20 12 52.4 -0.2
WMQ **Urumqi** 120.45 356 ePKP PKiKP 20 12 58.3 +0.5
WMQ LR LR
comp=Z,140nm,24.7s
NJ2 **Nanjing** 121.38 325 eP PKiKP 20 13 00.8 +1.0
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
GAR **Garm** 124.09 12 PKiKP 20 13 05.5 +0.3
MAW **Mawson** 126.64 170 PKP PKiKP 20 13 09.6 +0.5
comp=Z,2.2nm,0.9s,baz=174,slow=2.3,SNR=4.1
WRA **Warramunga Arr** 131.35 257 PKP PKiKP 20 13 19.7 -0.3
comp=Z,1.9nm,0.9s,baz=86,slow=2.6,SNR=15
ASAR **Alice Springs** 131.89 252 PKP PKPdf 20 13 20.1 +0.1
comp=Z,1.1nm,0.8s,baz=86,slow=2.1,SNR=8.8
PZH **PanZhiHua** 134.19 337 PKP PKPdf 20 13 23.3 -1.2
MORE **Moreh** 138.69 345 PKPdf 20 13 32.2 -0.5
CMAR **Chiang Mai Arr** 142.54 335 PKhKP PKPpre 20 13 35.7
comp=Z,1.7nm,0.9s,baz=346,slow=2.1,SNR=4.9
CMAR PKP PKPdf 20 13 40.6 +0.8
comp=Z,1.1nm,0.7s,baz=343,slow=1.9,SNR=8.6
MBWA **Marble Bar** 145.05 256 PKPbc 20 13 40.4 -3.1

IDC 01 20:01:58.2±2.2, 31°91S×178°26W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=61.9km s-min=36.8km az=42.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.83**	**269**	P	P	20 09 57.9	-0.3
	0.9nm,0.6s,baz=109,slow=7.1,SNR=21						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**43.95**	**274**	P	P	20 10 07.3	+0.1
	1.4nm,0.7s,baz=114,slow=7.9,SNR=16						
	1.4nm,0.7s						
QSPA	**South Pole Qui**	**58.20**	**180**	P	P	20 11 53.9	-0.1
	0.6nm,0.7s,baz=307,slow=21,SNR=5.6						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**146.48**	**339**	PKPbc	PKPdf	20 21 39.8	+0.6
	3.2nm,0.9s,baz=33,slow=3.3,SNR=4.9						

*IDC **01** 20:07:36.1±1.2, 34°08N×102°58E, h0km, mb3.3/5, mbtmp3.3/8, ML3.7/2, MS3.2/3, Error ellipse: s-maj=27.3km s-min=19.0km az=72.0*

ISC 01 20:07:40.8±1.3, 34°1N±0°1×102°6E±0°2, h35km, n9, σ1s47/9, mb3.4/4, Gansu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**2.08**	**27**	Pn	**Pn**	**20 08 13.4**	**-0.1**
	baz=202,slow=20						
LZDM				Sn	**Sn**	**20 08 40.4**	**+2.1**
	baz=196,slow=32						
	40nm,0.3s						
SONM	**Songino Array**	**14.03**	**11**	Pn	**Pn**	**20 10 55.3**	**-1.8**
	0.4nm,0.5s,baz=194,slow=10,SNR=2.2						
SONM				Lg	Lg	20 15 00.2	
	0.2nm,0.3s,baz=197,slow=30,SNR=5.7						
MKAR	**Makanchi Array**	**19.89**	**316**	P	**P**	**20 12 09.8**	**+0.7**
	0.1nm,0.3s,baz=110,slow=12,SNR=5.1						
MKAR				LR	LR	20 20 38.6	
	comp=Z,103nm,18.1s,baz=130,slow=39						
	0.4nm,0.7s						
KSRS	**Korea Array**	**20.84**	**73**	P	**P**	**20 12 18.8**	**-0.6**
	0.9nm,0.7s,baz=256,slow=9.4,SNR=4.9						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**23.46**	**333**	P	**P**	**20 12 46.9**	**0.0**
	0.4nm,0.4s,baz=123,slow=11,SNR=3.7						
ZALV				LR	LR	20 22 16.6	
	comp=Z,39nm,21.5s,baz=154,slow=38						
	0.4nm,0.4s						
AAK	**Ala-Archa**	**23.51**	**300**	LR	LR	20 22 41.5	
	comp=Z,54nm,22.0s,baz=154,slow=38						
KURBB	**Kurchatov Arra**	**24.08**	**321**	P	**P**	**20 12 53.4**	**+0.6**
	1.0nm,0.7s,baz=126,slow=10.0,SNR=13						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**61.68**	**146**	P	**P**	**20 17 54.4**	**-1.0**
	0.3nm,0.9s,baz=340,slow=6.5,SNR=1.2						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**64.72**	**148**	P	**P**	**20 18 17.3**	**+1.8**
	0.2nm,0.7s,baz=336,slow=8.1,SNR=2.1						
	0.2nm,0.7s						

*NEIC **01** 20:17:31.1±1.5, 20°31S±0°09×169°80E±0°09, h109km±5km, mb4.5/30, Error ellipse: s-maj=12.6km s-min=11.5km az=149.0*

*IDC **01** 20:17:32.0±1.7, 20°28S×169°61E, h118km±14km, mb3.9/15, mbtmp4.3/18, MS3.5/2, Error ellipse: s-maj=15.0km s-min=13.4km az=143.0*

*NOU **01** 20:17:37.8, 20°67S×169°28E, h130km, mb4.2/19, Vanuatu Islands*

ISC 01 20:17:29.7±0.4, 20°30S±0°06×169°81E±0°07, h100km, n129, σ1s32/134, mb4.4/32, 5D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.04**	**235**	P	**Pn**	**20 18 04.3**	**+1.6**
MARNC	**Mare, Loyalty**	**2.04**	**235**		**Pn**	**20 18 04.5**	**+1.8**
MARNC				Sn	**Sn**	**20 18 26.3**	**-1.7**
YATNC	**Mamie plateau,**	**3.24**	**237**	P	**Pn**	**20 18 19.0**	**+0.4**
OUENC	**Ouen Island, N**	**3.48**	**232**	P	**Pn**	**20 18 23.6**	**+1.8**
OUENC	**Ouen Island, N**	**3.48**	**232**		**Pn**	**20 18 23.6**	**+1.8**
DZM	**Mont Dzumac**	**3.60**	**240**	P	**Pn**	**20 18 25.2**	**+1.6**
	585nm,0.6s,baz=296,slow=24,SNR=860						
DZM				S	**Sn**	**20 19 04.3**	**-0.9**
	365nm,0.4s,baz=326,slow=23,SNR=22						
DZM				LR	LR	20 19 46.6	
	comp=Z,356nm,18.2s,baz=114,slow=39						
ONTNC	**Ouen Toro**	**3.71**	**237**	P	**Pn**	**20 18 25.8**	**+0.8**
ONTNC	**Ouen Toro**	**3.71**	**237**		**Pn**	**20 18 25.8**	**+0.8**
ONTNC				Sn	**Sn**	**20 19 07.0**	**-0.7**
KOUNC	**Koumac, New Ca**	**5.19**	**266**	P	**Pn**	**20 18 47.1**	**+2.2**
KOUNC	**Koumac, New Ca**	**5.19**	**266**		**Pn**	**20 18 46.6**	**+1.7**
MSVF	**Nonsavu**	**8.20**	**73**	P	Pn	20 19 32.6	+6.6
	14nm,0.8s,baz=248,slow=10,SNR=5.8						
MSVF	**Nonsavu**	**8.20**	**73**	Pn	Pn	20 19 35.0	+9.0
TATA	**Tatamba Isabel**	**15.30**	**319**	P	**P**	**20 21 07.4**	**+4.6**
EIDS	**Eidsvold**	**17.98**	**250**	P	**P**	**20 21 29.5**	**-2.9**
URZ	**Urewera**	**18.98**	**162**	P	**Pn**	**20 21 45.8**	**+0.8**
	8.7nm,0.6s,baz=13,slow=2.0,SNR=8.4						
URZ	**Urewera**	**18.98**	**162**	P	**Pn**	**20 21 48.4**	**+3.4**
NIUE	**Niue**	**19.12**	**90**	P	**P**	**20 21 44.7**	**-0.2**
ARMA	**Armidale**	**19.25**	**235**		**P**	**20 21 46.8**	**+0.4**
RTZ	**Ruatahuna**	**19.27**	**163**	P	**Pn**	**20 21 49.8**	**+1.2**
RTZ				IAmb	IAmb	20 22 00.0	
	comp=Z,49nm,1.1s						
BKZ	**Black Stump Fm**	**19.66**	**164**	P	**Pn**	**20 21 53.8**	**+0.8**
BKZ	**Black Stump Fm**	**19.66**	**164**	P	**Pn**	**20 21 53.3**	**+0.3**
MRZ	**Mangatainoka R**	**20.88**	**168**	P	**P**	**20 22 04.7**	**+0.9**
MRZ				IAmb	IAmb	20 22 08.7	
	comp=Z,41nm,1.0s						
BFZ	**Birch Farm**	**21.04**	**166**	P	**P**	**20 22 07.6**	**+2.1**
BFZ	**Birch Farm**	**21.04**	**166**	P	**P**	**20 22 06.7**	**+1.2**
CTA	**Charters Tower**	**22.11**	**266**	P	**P**	**20 22 17.9**	**+0.8**
	comp=Z,5.5nm,0.5s,baz=85,slow=10,SNR=8.8						
	comp=Z,5.5nm,0.5s						
CTA	**Charters Tower**	**22.11**	**266**	P	**P**	**20 22 18.3**	**+1.2**
CTAO	**Charters Tower**	**22.11**	**266**	P	**P**	**20 22 18.5**	**+1.4**
CTAO	**Charters Tower**	**22.11**	**266**	P	**P**	**20 22 16.7**	**-0.4**
CTAO				IAmb	IAmb	20 23 02.4	
	comp=Z,34nm,1.3s						
LTZ	**Lake Taylor**	**22.51**	**175**	P	**P**	**20 22 23.4**	**+2.4**
FOZ	**Fox Glacier**	**23.16**	**180**	P	**P**	**20 22 24.7**	**-2.7**
FOZ				IAmb	IAmb	20 22 55.5	
	comp=Z,55nm,1.3s						
JCZ	**Jackson Bay**	**23.72**	**182**	P	**P**	**20 22 35.2**	**+2.6**

LBZ	**Lake Benmore**	**24.02 179**	P	**P**	**20 22 35.1**	**-0.1**
LBZ			IAmb	IAmb	20 22 46.5	
	comp=Z,34nm,1.2s					
CMSA	**Cobar Meteorol**	**24.35 238**	P	**P**	**20 22 38.8**	**+0.4**
STKA	**Stephens Creek**	**27.75 240**	P	**P**	**20 23 09.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=98,slow=8.8,SNR=3.1					
STKA			PcP	**PcP**	**20 26 22.4**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=197,slow=4.5,SNR=3.6					
	comp=Z,1.6nm,0.6s					
WR8	**Warramunga Arr**	**33.12 264**	P	**P**	**20 23 55.0**	**-1.5**
WR8			IAmb	IAmb	20 23 56.4	
	comp=Z,12nm,1.5s					
WB0	**Warramunga Arr**	**33.24 265**	P	**P**	**20 23 55.6**	**-1.9**
WB0			IAmb	IAmb	20 24 32.0	
	comp=Z,16nm,1.5s					
WRAB	**Tennant Creek**	**33.26 264**	P	**P**	**20 23 56.4**	**-1.3**
WRAB	**Tennant Creek**	**33.26 264**	P	**P**	**20 23 55.8**	**-1.9**
WRAB			IAmb	IAmb	20 24 20.3	
	comp=Z,10nm,1.4s					
WRA	**Warramunga Arr**	**33.27 264**	P	**P**	**20 23 56.3**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=95,slow=7.9,SNR=18					
WRA			PcP	**PcP**	**20 26 36.9**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=92,slow=3.1,SNR=7.3					
WRA			S	S	20 29 00.4	-11
	comp=Z,0.4nm,0.8s,baz=93,slow=15,SNR=2.1					
WRA			ScP	**ScP**	**20 30 12.2**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=91,slow=3.7,SNR=2.3					
	comp=Z,0.6nm,0.5s					
WRA	**Warramunga Arr**	**33.27 264**	P	**P**	**20 23 55.7**	**-2.1**
WRA				**PcP**	**20 26 36.9**	**-1.1**
WRA				S	20 29 00.4	-11
WRA				**ScP**	**20 30 12.2**	**-1.2**
AS01	**Alice Springs**	**33.37 258**	P	**P**	**20 23 58.5**	**-0.2**
AS31	**Alice Springs**	**33.41 258**	P	**P**	**20 23 58.0**	**-1.1**
ASAR	**Alice Springs**	**33.41 258**	P	**P**	**20 23 58.1**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=90,slow=8.9,SNR=38					
ASAR			PcP	**PcP**	**20 26 37.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=94,slow=3.0,SNR=6.9					
ASAR			S	S	20 29 02.4	-11
	comp=Z,0.2nm,0.6s,baz=89,slow=16,SNR=1.7					
	comp=Z,1.9nm,0.5s					
ASAR	**Alice Springs**	**33.41 258**	P	**P**	**20 23 56.8**	**-2.2**
ASAR				**PcP**	**20 26 37.4**	**-1.1**
ASAR				S	20 29 02.4	-11
FORT	**Forrest**	**38.89 246**	P	**P**	**20 24 44.4**	**-1.3**
FITZ	**Fitzroy Crossi**	**41.68 265**	P	**P**	**20 25 09.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.68 265**	P	**P**	**20 25 08.8**	**0.0**
MBWA	**Marble Bar**	**46.69 260**	P	**P**	**20 25 48.1**	**-0.6**
MBWA			IAmb	IAmb	20 25 49.1	
	comp=Z,8.5nm,1.1s					
MEEK	**Meekatharra**	**47.13 252**	P	**P**	**20 25 51.5**	**-0.7**
TOLI2	**Tolitoli**	**52.51 288**	P	**P**	**20 26 34.4**	**+1.4**
TOLI2	**Tolitoli**	**52.51 288**	P	**P**	**20 26 33.2**	**+0.3**
TOLI2			IAmb	IAmb	20 26 58.5	
	comp=Z,3.1nm,0.8s					
VNDA	**Vanda**	**57.39 182**	P	**P**	**20 27 07.5**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=358,slow=7.4,SNR=9.1					
VNDA			LR	LR	20 47 41.3	
	comp=Z,68nm,19.3s,baz=144,slow=32					
	comp=Z,0.8nm,0.5s					
VNDA	**Vanda**	**57.39 182**	P	**P**	**20 27 07.6**	**+0.4**
VNDA			IAmb	IAmb	20 27 12.2	
	comp=Z,4.1nm,1.4s					
SBA	**Scott Base**	**57.61 181**	P	**P**	**20 27 09.2**	**+0.5**
CASY	**Casey**	**59.37 204**	P	**P**	**20 27 20.7**	**-0.4**
CASY			IAmb	IAmb	20 27 21.1	
	comp=Z,3.4nm,0.7s					
MJAR	**Matsushiro Arr**	**63.94 332**	P	**P**	**20 27 50.5**	**-1.7**
	comp=Z,2.7nm,0.9s,baz=160,slow=8.5,SNR=5.3					
	comp=Z,2.7nm,0.9s					
MJAR	**Matsushiro Arr**	**63.94 332**	P	**P**	**20 27 50.8**	**-1.3**
QSPA	**South Pole Qui**	**69.76 180**	P	**P**	**20 28 29.2**	**+0.3**
	comp=Z,12nm,0.7s,baz=14,slow=1.2,SNR=83					
	comp=Z,12nm,0.7s					
QSPA	**South Pole Qui**	**69.76 180**	P	**P**	**20 28 29.0**	**+0.2**
NJ2	**Nanjing**	**71.34 316**	*e*P	**P**	**20 28 41.4**	**+2.6**
NJ2			pmax	pmax		
	comp=Z,16nm,0.5s					
PETK	**Petropavlovsk-**	**73.85 352**	P	**P**	**20 28 53.5**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=108,slow=4.7,SNR=2.7					
	comp=Z,1.1nm,0.7s					
PETK	**Petropavlovsk-**	**73.85 352**	P	**P**	**20 28 53.4**	**+0.1**
DL2	**Dalian**	**74.18 323**	P	**P**	**20 28 55.7**	**+0.2**
DL2			pmax	pmax		
	comp=Z,13nm,0.7s					
MAW	**Mawson**	**77.65 202**	P	**P**	**20 29 15.1**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=88,slow=6.8,SNR=7.9					
	comp=Z,3.2nm,0.7s					
MAW	**Mawson**	**77.65 202**	P	**P**	**20 29 15.4**	**+0.6**
KMI2	**Kunming**	**79.30 302**	P	**P**	**20 29 25.7**	**+0.8**
KMI2			pmax	pmax		
	comp=Z,7.0nm,0.9s					
CMAR	**Chiang Mai Arr**	**79.43 294**	P	**P**	**20 29 25.9**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=132,slow=4.5,SNR=16					
	comp=Z,2.0nm,0.6s					
CMAR	**Chiang Mai Arr**	**79.43 294**		**P**	**20 29 25.0**	**-0.5**
CHTO	**Chiang Mai**	**79.58 295**	P	**P**	**20 29 26.6**	**+0.3**
CHTO			IAmb	IAmb	20 29 27.7	
	comp=Z,3.5nm,0.7s					
PZH	**PanZhiHua**	**80.73 303**	P	**P**	**20 29 33.8**	**+1.4**
HHC	**Hu-ho-hao-te**	**81.37 319**	*e*P	**P**	**20 29 38.1**	**+2.6**
HHC			pmax	pmax		
	comp=Z,10.0nm,0.6s					
ELIB	**Princess Elisa**	**85.19 190**	*d*P	**P**	**20 29 54.1**	**-0.6**
	comp=Z,4.3nm,0.9s					
TROLL	**Troll, Antarti**	**87.52 184**	⇓P	**P**	**20 30 05.5**	**-0.6**
	comp=Z,481nm,0.6s					
ULN	**Ulaanbaatar**	**88.03 323**		**P**	**20 30 08.7**	**-0.2**
ULN			IAmb	IAmb	20 30 09.8	
	comp=Z,5.0nm,1.1s					
SNAA	**Sanae**	**88.13 182**	⇓P	**P**	**20 30 08.1**	**-0.8**
	comp=Z,64nm,0.5s					
SNAA	**Sanae**	**88.13 182**	P	**P**	**20 30 08.1**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=214,slow=8.4,SNR=10					
	comp=Z,2.2nm,0.5s					
SNAA	**Sanae**	**88.13 182**	P	**P**	**20 30 07.9**	**-1.0**
SNAA			IAmb	IAmb	20 30 08.9	
	comp=Z,4.3nm,0.9s					
SONM	**Songino Array**	**88.39 323**	P	**P**	**20 30 09.4**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=145,slow=5.2,SNR=9.3					
	comp=Z,1.3nm,0.8s					
SONM	**Songino Array**	**88.39 323**	P	**P**	**20 30 10.2**	**-0.3**
SONM			IAmb	IAmb	20 30 11.4	
	comp=Z,3.2nm,1.1s					
VNA2	**Neumayer--Watz**	**89.00 181**	⇓P	**P**	**20 30 12.3**	**-0.6**
	comp=Z,13nm,0.7s,baz=171,slow=4.7					
NVAR	**Mina Array Bea**	**89.10 48**	P	**P**	**20 30 15.8**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=226,slow=6.7,SNR=5.2					
	comp=Z,0.7nm,0.6s					
NVAR	**Mina Array Bea**	**89.10 48**	P	**P**	**20 30 15.2**	**+1.0**
VNA1	**Neumayer--Stat**	**89.28 181**	⇓P	**P**	**20 30 13.2**	**-1.0**
	comp=Z,9.6nm,1.2s					
ILAR	**Eielson Array**	**91.08 17**	P	**P**	**20 30 21.1**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=235,slow=4.8,SNR=9.8					
	comp=Z,0.7nm,0.6s					
ILAR	**Eielson Array**	**91.08 17**	P	**P**	**20 30 20.9**	**-1.6**
TXAR	**Lajitas Array**	**96.80 61**	P	**P**	**20 30 50.5**	**+0.8**
	comp=Z,0.1nm,0.6s,baz=259,slow=4.9,SNR=1.5					
	comp=Z,0.1nm,0.6s					
TXAR	**Lajitas Array**	**96.80 61**	P	**P**	**20 30 49.5**	**-0.3**
WMQ	**Urumqi**	**98.33 314**	*e*P	Pdif	20 30 56.9	+0.7
WMQ			LR	LR		
	comp=Z,120nm,15.9s					
MKAR	**Makanchi Array**	**102.87 315**	P	**Pdif**	**20 31 16.0**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=79,slow=6.4,SNR=4.1					
MKAR	**Makanchi Array**	**102.87 315**		**Pdif**	**20 31 15.6**	**-0.7**
ARCES	**ARCESS Array B**	**126.23 345**	PKP	**PKPdf**	**20 36 18.8**	**-1.0**
	comp=Z,5.8nm,0.8s,baz=31,slow=2.5,SNR=5.2					
ARCES	**ARCESS Array B**	**126.23 345**		**PKPdf**	**20 36 18.6**	**-1.2**
FINES	**FINESS Array B**	**131.77 338**	PKP	**PKPdf**	**20 36 30.4**	**-0.1**
	comp=Z,5.5nm,1.1s,baz=116,slow=8.7,SNR=3.7					
KRLC	**Kralky**	**143.40 331**	*e*PKP	PKPbc	20 36 48.8	-1.0
DPC	**Dobruska-Polom**	**143.41 331**	*e*PKP	PKPbc	20 36 49.1	-0.7
PVCC	**Panska Ves**	**144.05 333**	*e*PKP	PKPbc	20 36 51.4	-0.2
CLL	**Collm**	**144.10 335**	*i* PKPdf	**PKPab**	**20 36 51.0**	**-0.3**
	comp=Z,7.0nm,0.7s					
CLL			*i* pPKPdf	**pPKPdf**	**20 37 25.3**	**+4.2**
KRUC	**Moravsky**	**144.28 330**	*e*PKP	**PKPab**	**20 36 51.7**	**-0.3**
PRU	**Pruhonice**	**144.46 332**	*e*PKP	**PKPab**	**20 36 50.8**	**-1.9**
HSKC	**Hora Svate Kat**	**144.47 334**	*e*PKP	**PKPab**	**20 36 52.3**	**-0.4**
EKA	**Eskdalemuir Ar**	**144.62 353**	PKP	**PKPab**	**20 36 52.3**	**-0.8**
	comp=Z,2.4nm,0.4s,baz=357,slow=2.4,SNR=43					
NEWG	**New Galloway**	**144.95 354**	*e*P	**PKPab**	**20 36 53.3**	**-1.0**
EDMD	**Edmundbyers**	**144.97 352**	*e*P	**PKPab**	**20 36 53.6**	**-0.8**
ZVC	**Zvikov**	**145.02 332**	*e*PKP	PKPbc	20 36 54.2	-0.5
NKC	**Novy Kostel**	**145.16 334**	*e*PKP	**PKPbc**	**20 36 54.3**	**-0.9**
GDLE	**Glaisdale, N Y**	**145.20 350**	*e*P	**PKPbc**	**20 36 53.9**	**-1.2**
RONA	**Rosalia, Austr**	**145.27 328**	*i* PKP	**PKPab**	**20 36 55.8**	**-0.1**
	comp=Z,15nm,1.1s,SNR=7.1					
CONA	**Conrad Observa**	**145.33 329**	*e*PKP	**PKPab**	**20 36 55.8**	**-0.3**
	comp=Z,10nm,0.7s					
KHC	**Kasperske Hory**	**145.52 332**	*e*PKP	**PKPdf**	**20 36 53.6**	**-2.5**
GERES	**GERESS Array B**	**145.68 332**	PKPbc	**PKPbc**	**20 36 56.5**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=29,slow=3.0,SNR=34					
GERES	**GERESS Array B**	**145.68 332**		**PKPdf**	**20 36 56.2**	**-0.3**
IOMK	**Kirk Michael**	**145.83 354**	*e*P	**PKPdf**	**20 36 55.9**	**-0.4**
ARSA	**Arzberg**	**145.96 328**	*i* PKP	**PKPab**	**20 36 58.1**	**-0.3**
	comp=Z,1.4nm,0.7s					
MOA	**Molln**	**146.15 330**	*i* PKP	**PKPab**	**20 36 58.7**	**-0.4**
	comp=Z,5.0nm,0.7s					
WLF1	**Llynfaes**	**146.77 354**	*e*P	**PKPdf**	**20 36 58.3**	**+0.4**
OBKA	**Obir**	**146.95 328**	*i* PKP	**PKPbc**	**20 37 00.4**	**-0.4**
	comp=Z,1.8nm,0.8s					
KBA	**Koelnbreinsper**	**147.13 330**	*i* PKP	**PKPdf**	**20 36 59.8**	**+0.7**
	comp=Z,4.0nm,1.1s					
LESA	**Schwarzleotal**	**147.19 331**	*i* PKP	**PKPbc**	**20 37 00.3**	**-1.1**
	comp=Z,2.8nm,0.5s,SNR=4.4					
MYKA	**Terra Mystica**	**147.31 329**	*i* PKP	**PKPab**	**20 37 02.9**	**-0.9**
	comp=Z,3.2nm,0.4s					
WATA	**Walderalm**	**147.75 332**	*i* PKP	**PKPbc**	**20 37 01.7**	**-1.3**
	comp=Z,2.3nm,1.0s					
ABTA	**Abfaltersbach**	**147.77 330**	*i* PKP	**PKPbc**	**20 37 01.5**	**-1.5**
	comp=Z,2.1nm,0.6s					
WTTA	**Wattenberg**	**147.78 332**	*e*PKP	**PKPbc**	**20 37 01.9**	**-1.3**
	comp=Z,4.9nm,1.1s					
MOTA	**Moosalm**	**147.95 332**	*i* PKP	**PKPbc**	**20 37 02.7**	**-0.9**
	comp=Z,5.1nm,0.9s,SNR=5.0					
RETA	**Reutte**	**147.99 333**	*i* PKP	**PKPbc**	**20 37 02.7**	**-0.8**
	comp=Z,2.9nm,0.9s					
SQTA	**Sankt Quirin**	**148.00 332**	*i* PKP	**PKPbc**	**20 37 02.9**	**-0.7**
	comp=Z,4.3nm,0.6s					
FETA	**Feichten**	**148.37 332**	*i* PKP	**PKPbc**	**20 37 04.0**	**-0.7**
	comp=Z,4.0nm,0.6s,SNR=5.0					
DAVA	**Damuels**	**148.52 333**	*i* PKP	**PKPbc**	**20 37 04.4**	**-0.6**
	comp=Z,1.9nm,0.6s					
DBIC	**Dimbokro**	**165.49 202**	PKPab	**PKPab**	**20 38 22.1**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=237,slow=1.7,SNR=3.4					
TORD	**Torodi Ar. Bea**	**166.58 240**	PKP	**PKPdf**	**20 37 23.1**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=293,slow=0.2,SNR=3.0					
TORD			PKPab	**PKPab**	**20 38 26.3**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=94,slow=5.5,SNR=1.8					

*IDC **01** 20:35:12.4±5.9, 2°.95S×126°.74E, h110km±67km, mb3.2/2, mbtmp3.7/5, Error ellipse: s-maj=54.3km s-min=20.5km az=93.0*

ISC 01 20:35:06.3±0.9, **2°.76S**±0°.10×**126°.33E**±0°.08, **h32**km, **n12, σ1°86/13, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.78**	**334**	P			**Pn**	**20 35 20.3**	**-0.8**
LUWI	**Luwuk**	**3.94**	**296**	P			**Pn**	**20 36 04.2**	**-0.4**
SIJI	**Sorong**	**5.28**	**69**	P			**Pn**	**20 36 23.8**	**+0.7**
	16nm,0.3s,baz=238,slow=13,SNR=41								
SIJI				S			**Sn**	**20 37 22.8**	**-0.1**
	3.5nm,0.3s,baz=53,slow=16,SNR=4.0								
FAKI	**Fak Fak**	**5.92**	**92**	P			**Pn**	**20 36 31.5**	**-0.3**
TOLI2	**Tolitoli**	**6.75**	**305**	P			**Pn**	**20 36 45.0**	**+1.8**
FITZ	**Fitzroy Crossi**	**15.26**	**182**	P			**Pn**	**20 38 41.2**	**+1.7**
	2.7nm,0.6s,baz=11,slow=12,SNR=14								
FITZ	**Fitzroy Crossi**	**15.26**	**182**	P			**Pn**	**20 38 39.8**	**+0.3**
WRAB	**Tennant Creek**	**18.78**	**156**	P			**Pn**	**20 39 24.2**	**+0.5**
WRA	**Warramunga Arr**	**18.79**	**156**	P			**P**	**20 39 19.5**	**-3.6**
	0.5nm,0.5s,baz=336,slow=12,SNR=9.8								
ASAR	**Alice Springs**	**22.04**	**161**	P			**P**	**20 39 54.8**	**-3.7**
	1.2nm,0.7s,baz=344,slow=12,SNR=17								
	1.2nm,0.7s								
AS01	**Alice Springs**	**22.05**	**161**	P			**P**	**20 39 58.8**	**+0.2**
MKAR	**Makanchi Array**	**62.70**	**327**	P			**P**	**20 45 28.2**	**+0.1**
	0.4nm,0.7s,baz=120,slow=8.5,SNR=4.3								
	0.4nm,0.7s								

*SJA **01** 20:44:14.4±1.9, 33°.41S×70°.17W, h121km±10km, ML3.5, MW3.4*
*GUC **01** 20:44:16.5±0.6, 33°.34S×70°.20W, h120km±1km, ML4.0*
*NEIC **01** 20:44:16.5±1.0, 33°.34S±0°.04×70°.14W±0°.06, h110km±7km, mb4.1/5, ML4.0(GUC), Error ellipse: s-maj=9.0km s-min=4.3km az=128.0*
*IDC **01** 20:44:16.5±3.5, 33°.31S×69°.87W, h104km±32km, mb3.7/6, mbtmp3.9/8, MS3.0/1, Error ellipse: s-maj=35.3km s-min=18.4km az=93.0*

ISC 01 20:44:16.6±0.7, **33°.33S**±0°.03×**70°.19W**±0°.04, **h113**km±5km, **n82, σ0°69/111, mb4.0/6, 14C-11D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MT08	**Bocatoma Ro**	**0.18**	**127**				**Pn**	**20 44 32.5**	**-0.2**
MT08	**Bocatoma Ro**	**0.18**	**127**	⇓*i*P			**Pn**	**20 44 32.6**	**-0.1**
MT08					*e*S		**Sn**	**20 44 44.4**	**-0.3**
MT08					IAML			20 44 46.5	
	comp=E,3μm,0.5s								
MT16	**CCHEN**	**0.29**	**251**				**Pn**	**20 44 32.6**	**-0.3**
MT16	**CCHEN**	**0.29**	**251**	⇑*i*P			**Pn**	**20 44 32.7**	**-0.1**
MT16					*e*S		**Sn**	**20 44 45.1**	**+0.2**
MT16					IAML			20 44 47.7	
	comp=E,3μm,0.5s								
MT10	**Hacienda Santa**	**0.29**	**282**	⇑*i*P			**Pn**	**20 44 32.9**	**0.0**
MT10					*e*S		**Sn**	**20 44 45.4**	**+0.2**
MT14	**Cerro Cal¡n**	**0.29**	**258**	⇑*i*P			**Pn**	**20 44 32.8**	**-0.1**
MT14					*e*S		**Sn**	**20 44 45.3**	**+0.3**
MT14					IAML			20 44 46.8	
	comp=N,12μm,0.4s								
MT03	**Universidad Ad**	**0.31**	**239**				**Pn**	**20 44 32.8**	**-0.2**
MT03	**Universidad Ad**	**0.31**	**239**	⇑*i*P			**Pn**	**20 44 32.8**	**-0.2**
MT03					*e*S		**Sn**	**20 44 45.5**	**+0.3**
MT03					IAML			20 44 46.8	
	comp=E,14μm,0.2s								
PEL	**Peldehue**	**0.45**	**295**	⇑*i*P			**Pn**	**20 44 33.5**	**-0.1**
PEL					*e*S		**Sn**	**20 44 46.2**	**-0.1**
PEL					IAML			20 44 48.1	
	comp=N,6μm,0.4s								
MT05	**Renca**	**0.46**	**263**				**Pn**	**20 44 33.6**	**-0.1**
MT05	**Renca**	**0.46**	**263**	⇑*i*P			**Pn**	**20 44 33.7**	**0.0**
MT05					*e*S		**Sn**	**20 44 46.7**	**+0.3**
MT12	**Pirque**	**0.50**	**217**	⇑*i*P			**Pn**	**20 44 33.9**	**0.0**
MT12					*e*S		**Sn**	**20 44 47.1**	**+0.2**
MT12					IAML			20 44 48.0	
	comp=N,9μm,0.5s								
LMEL	**Las Melosas**	**0.51**	**181**	⇓*i*P			**Pn**	**20 44 33.9**	**-0.3**
LMEL					*e*S		**Sn**	**20 44 47.0**	**-0.3**
VA03	**San Esteban**	**0.64**	**332**				**Pn**	**20 44 34.6**	**-0.4**
VA03	**San Esteban**	**0.64**	**332**	⇓*e*P			**Pn**	**20 44 34.6**	**-0.4**
VA03					*e*S		**Sn**	**20 44 48.5**	**-0.3**
VA03					IAML			20 44 52.0	
	comp=Z,3μm,0.5s								
VA03	**San Esteban**	**0.64**	**332**	⇑*i*P			**Pn**	**20 44 34.9**	**-0.1**
VA03					*e*S		**Sn**	**20 44 49.0**	**+0.3**
VA03					IAML			20 44 50.7	
	comp=N,5μm,0.2s								
BO04	**La Punta**	**0.74**	**208**				**Pn**	**20 44 35.7**	**0.0**
BO04	**La Punta**	**0.74**	**208**	⇑*i*P			**Pn**	**20 44 35.7**	**0.0**
BO04					*e*S		**Sn**	**20 44 50.0**	**0.0**
BO04					IAML			20 44 51.3	
	comp=N,4μm,0.6s								
ROCH	**El Roble**	**0.77**	**298**	⇑*i*P			**Pn**	**20 44 36.2**	**0.0**
ROCH					*e*S		**Sn**	**20 44 50.9**	**0.0**
ROCH					IAML			20 44 51.6	
	comp=N,9μm,0.3s								
MT02	**Curacav**	**0.79**	**275**				**Pn**	**20 44 35.9**	**-0.2**
MT02	**Curacav**	**0.79**	**275**	⇑*i*P			**Pn**	**20 44 36.0**	**-0.1**
MT02					*e*S		**Sn**	**20 44 50.4**	**-0.4**
MT02					IAML			20 44 51.5	
	comp=E,3μm,0.2s								
MT09	**Talagante**	**0.80**	**236**				**Pn**	**20 44 35.9**	**-0.4**
MT09	**Talagante**	**0.80**	**236**	⇑*i*P			**Pn**	**20 44 36.0**	**-0.4**
MT09					*e*S		**Sn**	**20 44 51.0**	**-0.1**
MT01	**Popeta**	**1.03**	**239**	⇑*i*P			**Pn**	**20 44 38.0**	**-0.4**
MT01					*e*S		**Sn**	**20 44 54.3**	**-0.5**
MT01					IAML			20 44 56.0	
	comp=N,3μm,0.4s								
ARCO	**CERRO ARCO**	**1.17**	**66**	⇓*e*P			**Pn**	**20 44 39.8**	**-0.3**
ARCO					*e*S		**Sn**	**20 44 58.8**	**+1.1**
ARCO					IAML			20 44 58.9	
	comp=Z,697nm,0.7s								
AAGR	**Agrelo**	**1.17**	**78**	⇓*e*P			**Pn**	**20 44 39.8**	**-0.3**
AAGR					IAML			20 45 12.3	
	comp=Z,164nm,0.4s								
VA01	**Torpederas**	**1.26**	**284**				**Pn**	**20 44 40.9**	**+0.1**
VA01	**Torpederas**	**1.26**	**284**	*e*P			**Pn**	**20 44 40.6**	**-0.2**
VA01					*e*S		**Sn**	**20 44 59.3**	**+0.2**
VA01					IAML			20 45 01.8	
	comp=N,2μm,0.1s								
BO01	**Tunca**	**1.29**	**215**				**Pn**	**20 44 41.1**	**-0.1**
BO01	**Tunca**	**1.29**	**215**	*e*P			**Pn**	**20 44 41.1**	**-0.1**
BO01					*e*S		**Sn**	**20 44 59.8**	**-0.1**
AUSP	**Uspallata**	**1.30**	**32**	*e*P			**Pn**	**20 44 42.1**	**+0.5**
AUSP					*e*S		**Sn**	**20 45 00.8**	**+0.3**
ASAL	**Salagasta**	**1.36**	**57**	*e*P			**Pn**	**20 44 42.1**	**0.0**
ASAL					*e*S		**Sn**	**20 45 03.1**	**+1.7**
ASAL					IAML			20 45 05.6	
	comp=Z,0.3nm,0.8s								
CO04	**Los Peladeros**	**1.45**	**333**				**Pn**	**20 44 43.2**	**-0.1**
CO04	**Los Peladeros**	**1.45**	**333**	⇑*i*P			**Pn**	**20 44 43.2**	**-0.1**
CO04					*e*S		**Sn**	**20 45 03.2**	**-0.3**
CO04					IAML			20 45 05.1	
	comp=E,3μm,0.2s								
BO02	**Sierra Bellavi**	**1.54**	**198**				**Pn**	**20 44 44.5**	**+0.3**
BO02	**Sierra Bellavi**	**1.54**	**198**	*e*P			**Pn**	**20 44 44.6**	**+0.5**
BO02					*e*S		**Sn**	**20 45 06.0**	**+1.0**
BO02					IAML			20 45 07.7	
	comp=N,2μm,0.2s								
RTLS	**Leoncito**	**1.71**	**27**	*e*P			**Pn**	**20 44 47.3**	**+0.8**
RTLS					*e*S		**Sn**	**20 45 10.3**	**+1.2**
RTLS					IAML			20 45 11.6	
	comp=Z,4μm,0.4s								
BO03	**Pichilemu**	**1.87**	**231**	*i* P			**Pn**	**20 44 47.7**	**-0.5**
BO03					IAML			20 45 15.1	
	comp=N,532nm,0.7s								
ZON	**Zonda**	**2.19**	**36**				**Pn**	**20 44 52.1**	**-0.3**
ZON	**Zonda**	**2.19**	**36**	*e*P			**Pn**	**20 44 52.4**	**+0.1**
ZON					*e*S		**Sn**	**20 45 19.4**	**-0.2**
ZON					IAML			20 45 21.0	
	comp=Z,251nm,0.5s								
GO05	**Hualane**	**2.21**	**220**				**Pn**	**20 44 51.8**	**-0.7**
GO05	**Hualane**	**2.21**	**220**	*e*P			**Pn**	**20 44 51.7**	**-0.7**
GO05					IAML			20 45 25.4	
	comp=E,428nm,0.3s								
CO02	**Combarbal**	**2.23**	**342**				**Pn**	**20 44 52.6**	**-0.3**
CO02	**Combarbal**	**2.23**	**342**	⇓*e*P			**Pn**	**20 44 52.4**	**-0.4**
CO02					IAML			20 45 35.6	
	comp=Z,315nm,0.3s								
CO02	**Combarbal**	**2.23**	**342**	*e*P			**Pn**	**20 44 52.6**	**-0.3**
CO02					IAML			20 45 25.1	
	comp=E,2μm,0.2s								
RTLL	**Cerro Villicun**	**2.47**	**37**	*e*P			**Pn**	**20 44 56.0**	**+0.1**
RTLL					*e*S		**Sn**	**20 45 25.7**	**-0.2**
RTLL					*e*S			20 45 26.5	
RTLL					*e*S			20 45 26.9	
RTLL					IAML			20 45 27.2	
	comp=Z,433nm,0.3s								
CO03	**El Pedregal**	**2.52**	**350**	⇓*e*P			**Pn**	**20 44 57.2**	**+0.6**
CO03					*e*S		**Sn**	**20 45 26.9**	**-0.3**
CO03					IAML			20 45 33.3	
	comp=Z,431nm,0.7s								
CO03	**El Pedregal**	**2.52**	**350**	*e*P			**Pn**	**20 44 56.9**	**+0.3**
CO03					IAML			20 45 33.0	
	comp=E,985nm,0.3s								
ML02	**Panimavida**	**2.63**	**202**				**Pn**	**20 44 57.3**	**-0.4**
ML02	**Panimavida**	**2.63**	**202**	*e*P			**Pn**	**20 44 57.4**	**-0.4**
ML02					IAML			20 45 34.0	
	comp=E,355nm,0.5s								
ACAN	**Cantantal**	**2.74**	**68**	⇓*e*P			**Pn**	**20 44 58.4**	**-1.0**
ACAN

PS1A	**Pavlof South-1**	**1.70**	**349**			**Pn**	**20 51 57.6**	**+0.4**
PS1A						**Pb**	**20 51 58.1**	**-0.8**
PS1A						**Sb**	**20 52 20.6**	**+0.3**
PN7A	**Pavlof North-7**	**1.74**	**344**			**Pn**	**20 51 58.7**	**+0.7**
ISNN	**Isanotski Nort**	**1.87**	**306**			**Pn**	**20 51 59.6**	**0.0**
ISNN						**Pb**	**20 51 60.0**	**-1.8**
ISNN						**Sb**	**20 52 24.4**	**-0.8**
SSLN	**Shishaldin Nor**	**1.96**	**304**			**Pn**	**20 52 01.0**	**+0.1**
SSLN						**Sb**	**20 52 27.2**	**-0.8**
VNKR	**Veniaminof 5**	**2.50**	**24**			**Pn**	**20 52 08.7**	**+0.3**
VNFG	**Fog Glacier, M**	**2.70**	**20**			**Pn**	**20 52 12.0**	**+0.9**
AKSA	**Akutan Strait**	**2.70**	**280**			**Pn**	**20 52 11.0**	**0.0**
AKSA						**Sn**	**20 52 42.9**	**-0.8**
AKBBA	**Akutan Broad B**	**2.83**	**279**			**Pn**	**20 52 13.1**	**+0.2**
CHGN	**Chignik**	**3.00**	**31**			**Pn**	**20 52 15.3**	**+0.2**
CHGN					IAML		20 53 07.8	
	comp=E,96nm,0.8s							
UNV	**Unalaska Valle**	**3.16**	**274**	Pn		**Pn**	**20 52 17.3**	**-0.1**
UNV					IAML		20 52 54.6	
	comp=N,54nm,0.8s							
UNV					IAML		20 52 55.2	
	comp=E,65nm,0.4s							
MNAT	**Makushin Natee**	**3.27**	**274**			**Pn**	**20 52 18.6**	**-0.3**
MGOD	**Makushin Gods**	**3.38**	**273**			**Pn**	**20 52 20.2**	**-0.3**
CHIR	**Chirikof Islan**	**3.82**	**55**	Pn		**Pn**	**20 52 26.6**	**+0.2**
CHIR					IAML		20 53 20.0	
	comp=E,43nm,1.3s							
CHIR					IAML		20 54 33.5	
	comp=N,51nm,1.6s							
OKSP	**Okmok Steeple**	**4.28**	**266**			**Pn**	**20 52 32.3**	**-0.5**
R17L	**Mt. Peulik Vol**	**4.74**	**33**			**Pn**	**20 52 40.4**	**+1.3**
SII	**Sitkinak Islan**	**4.89**	**52**	Pn		**Pn**	**20 52 37.9**	**-3.2**
SII					IAML		20 55 09.8	
	comp=N,36nm,1.8s							
Q17K	**Contact Creek**	**5.40**	**31**			**Pn**	**20 52 48.5**	**+0.3**
ANCK	**Angle Creek**	**5.47**	**33**			**Pn**	**20 52 49.9**	**+0.8**
O15K	**Ungalikthiuk R**	**5.48**	**7**			**Pn**	**20 52 49.5**	**+0.3**
O14K	**Tigyukauivet M**	**5.51**	**360**	Pn		**Pn**	**20 52 50.8**	**+1.3**
MGLS	**Mageik Gandsli**	**5.53**	**35**			**Pn**	**20 52 50.7**	**+0.7**
ACHA	**Angle Creek He**	**5.54**	**34**	Pn		**Pn**	**20 52 48.5**	**-1.5**
OHAK	**Old Harbor**	**5.67**	**49**	Pn		**Pn**	**20 52 50.9**	**-0.9**
P17K	**Kvichak River**	**6.04**	**24**			**Pn**	**20 52 56.9**	**-0.1**
O16K	**Kokwok River B**	**6.09**	**15**	Pn		**Pn**	**20 52 59.1**	**+1.6**
N14K	**Kuskokwak Cree**	**6.19**	**358**	Pn		**Pn**	**20 52 59.6**	**+0.7**
KDAK	**Kodiak Island**	**6.30**	**47**	Pn		**Pn**	**20 53 00.2**	**-0.2**
	comp=N,0.4nm,0.3s,baz=266,slow=3.1,SNR=7.7							
KDAK					Sn	**Sn**	**20 54 09.4**	**-3.0**
	baz=265,slow=20 comp=N,4.1nm,0.6s							
KDAK	**Kodiak Island**	**6.30**	**47**	Pn		**Pn**	**20 52 57.6**	**-2.8**
N15K	**Kwethluk River**	**6.45**	**5**			**Pn**	**20 53 02.6**	**+0.1**
Q19K	**Cape Douglas,**	**6.66**	**36**	Pn		**Pn**	**20 53 06.0**	**+0.6**
N16K	**Nishlik Lake**	**6.86**	**10**			**Pn**	**20 53 09.4**	**+1.3**
O18K	**Koktuh Hills**	**6.93**	**26**	Pn		**Pn**	**20 53 10.6**	**+1.5**
M14K	**Bethel**	**7.02**	**357**	Pn		**Pn**	**20 53 09.7**	**-0.6**
N17K	**Nushagak Hills**	**7.12**	**16**	Pn		**Pn**	**20 53 10.8**	**-0.9**
M16K	**Timber Creek**	**7.38**	**8**	Pn		**Pn**	**20 53 15.7**	**+0.5**
N18K	**Kilae Creek**	**7.50**	**20**	Pn		**Pn**	**20 53 18.1**	**+1.1**
L14K	**Kuka Creek**	**7.65**	**355**	Pn		**Pn**	**20 53 20.4**	**+1.6**
M17K	**Holitna River**	**7.92**	**13**	Pn		**Pn**	**20 53 23.8**	**+1.2**
N19K	**Bonanza Creek**	**7.94**	**24**			**Pn**	**20 53 25.4**	**+2.3**
CNPM	**China Poot**	**7.96**	**39**	Pn		**Pn**	**20 53 24.7**	**+1.6**
KLU	**Klutina**	**11.24**	**40**			**Pn**	**20 54 07.5**	**-0.6**
ILAR	**Eielson Array**	**13.19**	**28**	Pn		**Pn**	**20 54 30.8**	**-4.0**
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=2.5 comp=N,0.3nm,0.6s							
M29M	**Somme Creek**	**14.75**	**45**			**Pn**	**20 54 56.0**	**-0.1**
E22K	**Anaktuvuk Pass**	**15.09**	**14**			**Pn**	**20 55 00.8**	**+0.2**
E22K					IAmb	IAmb	20 55 11.6	
	comp=Z,3.0nm,1.0s							
E21K	**Killik River**	**15.12**	**10**			**Pn**	**20 55 02.2**	**+1.2**
E21K					IAmb	IAmb	20 55 20.1	
	comp=Z,5.2nm,1.2s							
H29M	**Whitestone**	**16.77**	**33**			**Pn**	**20 55 20.4**	**-1.8**
H29M					IAmb	IAmb	20 55 53.4	
	comp=Z,7.3nm,1.4s							
C23K	**Itkillik River**	**16.84**	**13**	Pn		**Pn**	**20 55 20.5**	**-2.6**
I30M	**Mount Dempster**	**16.89**	**37**			**Pn**	**20 55 23.4**	**-0.5**
I30M					IAmb	IAmb	20 55 44.8	
	comp=Z,5.2nm,0.7s							
C24K	**Franklin Bluff**	**17.00**	**15**	IAmb		IAmb	20 55 46.8	
	comp=Z,6.1nm,1.1s							
B22K	**Teshekpuk Lake**	**17.00**	**9**			**Pn**	**20 55 25.4**	**+0.3**
EPYK	**Eagle Plains**	**17.40**	**34**	IAmb		IAmb	20 55 48.4	
	comp=Z,6.0nm,0.9s							
H31M	**Peel River**	**17.92**	**37**	IAmb		IAmb	20 55 58.6	
	comp=Z,8.6nm,1.1s							
PETK	**Petropavlovsk-**	**24.27**	**285**	P		**P**	**20 56 44.9**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=78,slow=13,SNR=28							
PETK					LR	LR	21 06 40.2	
	comp=Z,36nm,19.2s,baz=87,slow=38 comp=Z,6.3nm,0.8s							
PETK	**Petropavlovsk-**	**24.27**	**285**	P		**P**	**20 56 43.7**	**-1.0**
PDAR	**Pinedale Array**	**35.33**	**87**	P		**P**	**20 58 25.9**	**+3.0**
	comp=Z,0.5nm,0.6s,baz=296,slow=3.9,SNR=5.6 comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**35.33**	**87**	P		**P**	**20 58 21.4**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**41.87**	**228**	T		T	21 44 11.0	
	baz=27,slow=76,SNR=24							
H11N3	**WAKE ISLAND Hy**	**41.87**	**228**	T		T	21 44 09.2	
	baz=27,slow=76,SNR=22							
H11N1	**WAKE ISLAND Hy**	**41.88**	**228**	T		T	21 44 06.1	
	baz=27,slow=76,SNR=17							
H11S1	**WAKE ISLAND Hy**	**43.03**	**228**	T		T	21 45 56.8	
	baz=26,slow=75,SNR=31							
H11S2	**WAKE ISLAND Hy**	**43.04**	**228**	T		T	21 45 55.3	
	baz=26,slow=75,SNR=32							
H11S3	**WAKE ISLAND Hy**	**43.05**	**228**	T		T	21 45 56.5	
	baz=26,slow=75,SNR=23							
TXAR	**Lajitas Array**	**47.88**	**97**	P		**P**	**21 00 08.8**	**+3.0**
	comp=Z,1.9nm,0.6s,baz=303,slow=5.4,SNR=29 comp=Z,1.9nm,0.6s							
TXAR	**Lajitas Array**	**47.88**	**97**	P		**P**	**21 00 07.6**	**+1.9**
SONM	**Songino Array**	**54.72**	**304**	P		**P**	**21 00 57.6**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=64,slow=6.6,SNR=2.3 comp=Z,0.4nm,0.8s							
SONM	**Songino Array**	**54.72**	**304**	P		**P**	**21 00 56.9**	**0.0**
ARCES	**ARCESS Array B**	**56.92**	**357**	P		**P**	**21 01 12.4**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=345,slow=3.2,SNR=1.4 comp=Z,3.0nm,0.8s							
ARCES	**ARCESS Array B**	**56.92**	**357**	P		**P**	**21 01 12.4**	**+0.2**
KURK	**Kurchatov**	**64.45**	**322**	P		**P**	**21 02 04.4**	**+0.7**
KURBB	**Kurchatov Arra**	**64.56**	**322**	P		**P**	**21 02 04.4**	**0.0**
	comp=Z,0.5nm,0.9s,baz=23,slow=6.4,SNR=3.9 comp=Z,0.5nm,0.9s							
FINES	**FINESS Array B**	**65.00**	**356**	P		**P**	**21 02 07.2**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=5.4,slow=6.1,SNR=5.5 comp=Z,3.4nm,0.9s							
FINES	**FINESS Array B**	**65.00**	**356**	P		**P**	**21 02 06.8**	**-0.3**
BVAR	**Borovoye Array**	**65.27**	**329**	P		**P**	**21 02 09.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=27,slow=6.8,SNR=5.8 comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**66.27**	**318**	P		**P**	**21 02 15.0**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=52,slow=7.9,SNR=4.3 comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**	**66.27**	**318**	P		**P**	**21 02 14.7**	**-0.9**
HFS	**Hagfors**	**66.38**	**3**	P		**P**	**21 02 16.8**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=53,slow=7.4,SNR=4.1 comp=Z,2.3nm,0.7s							

*SDD **01** 21:30:54.8±2.0, 19°.30N×73°.05W, h22km±649km, MD3.4, ML2.6, MW3.7, Presumed earthquake*
*OSPL **01** 21:30:55.8±1.5, 19°.31N×72°.92W, h0km±8km, ML2.6, Presumed earthquake*
ISC 01 21:30:55.3±1.5, 19°.33N±0°.06×72°.98W±0°.05, h21km±5km, n14, σ0°53/18, 5C-5D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODA1	**ITESIL, Dajabo**	**1.22**	**79**	*e*S	**Sb**	**21 31 31.8**	**-1.2**
JIDR	**Jimani**	**1.35**	**128**	IAML		21 31 36.3	
	comp=E,117nm,1.1s						
JIDR				⇓*e*Sg	**Sb**	**21 31 37.1**	**+0.3**
JIDR				IAML		21 31 40.3	
	comp=N,54nm,0.3s						
MCDR	**Montecristi**	**1.37**	**65**	⇑*e*Pg	**Pb**	**21 31 20.0**	**-0.2**
MCDR				⇓*e*Sg	**Sn**	**21 31 37.4**	**+0.7**
MCDR				IAML		21 31 38.3	
	comp=N,186nm,0.4s						
MCDR				IAML		21 31 39.5	
	comp=E,132nm,0.1s						
MASC	**Masc**	**1.45**	**306**	*i* P	**Pb**	**21 31 22.1**	**+0.4**
MASC				IAML		21 31 44.6	
	comp=Z,6.5nm,0.6s						
REDR	**Restauracion**	**1.50**	**96**	⇓*e*Pg	Pn	21 31 16.6	-4.4
REDR				⇑*e*Sg	Sn	21 31 32.1	-7.9
REDR				IAML		21 31 35.6	
	comp=N,3μm,0.3s						
LONE3	**El Aguacate, B**	**1.60**	**116**	*i* P	**Pn**	**21 31 22.8**	**+0.2**
LONE3				*e*S	**Sb**	**21 31 44.3**	**0.0**
LONE3				IAML		21 31 48.6	
	comp=Z,21nm,0.4s						
SDDR	**Presa de Saban**	**1.63**	**102**	⇓*e*Pg	**Pn**	**21 31 22.6**	**-0.2**
SDDR				⇑*e*Sg	**Sn**	**21 31 43.3**	**0.0**
SDDR				IAML		21 31 44.4	
	comp=N,45nm,0.3s						
SDDR				IAML		21 31 52.8	
	comp=E,31nm,0.3s						
SDDR	**Presa de Saban**	**1.63**	**102**	*i* P	**Pn**	**21 31 22.8**	**-0.1**
SDDR				*e*S	**Sn**	**21 31 42.9**	**-0.4**
SDDR				IAML		21 31 46.8	
	comp=Z,614nm,0.2s						
LODU1	**El Espartillar**	**1.72**	**124**	*i* P	**Pn**	**21 31 23.9**	**-0.1**
LODU1				IAML		21 31 52.4	
	comp=Z,60nm,2.0s						
LOBH	**Bahia de las A**	**1.93**	**139**	*i* P	**Pn**	**21 31 27.1**	**+0.2**
LOBH				*e*S	**Sn**	**21 31 50.5**	**0.0**
LOBH				IAML		21 31 54.6	
	comp=Z,65nm,2.0s						
QMBU	**Quimbuelo**	**1.94**	**297**	⇑*e*Pg	**Pn**	**21 31 26.4**	**-0.7**
QMBU				IAML		21 31 54.0	
	comp=N,14nm,0.2s						
QMBU				IAML		21 31 58.4	
	comp=N,8.7nm,0.5s						
LUDR	**Luperon**	**1.99**	**73**	⇓*e*Sg	**Sb**	**21 31 56.0**	**+0.8**
GTBY	**Guantanamo Bay**	**2.10**	**287**	⇑*e*Pg	**Pn**	**21 31 29.1**	**-0.1**
GRTK	**Grand Turk**	**2.78**	**38**	*e*S	**Sn**	**21 32 12.1**	**+0.6**
GRTK				IAML		21 32 14.6	
	comp=Z,48nm,2.0s						

*IDC **01** 21:34:57.8±29.0, 4°.13N×95°.41E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=571.5km s-min=263.5km az=146.0*
*DJA **01** 21:35:53.5±0.2, 0°.S±2°.×9°.9E±°, h55km±5km, M3.9/36, mb4.0/11, MLv3.9/36*
ISC 01 21:35:52.6±1.0, 0°.05S±0°.07×99°.20E±0°.05, h50km, n21, σ2°.02/19, mb3.5/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.92**	**270**	P	**Pn**	**21 36 10.9**	**+1.7**
PBSI				S	**Sn**	**21 36 23.8**	**+2.5**
MNSI	**Mandailing Nat**	**0.92**	**25**	P	**Pn**	**21 36 11.9**	**+2.6**
PPI	**Padang Panjang**	**1.27**	**109**	P	**Pn**	**21 36 16.0**	**+2.1**
PPI				S	**Sn**	**21 36 32.6**	**+2.7**
PDSI	**Padang**	**1.53**	**124**	P	**Pn**	**21 36 18.3**	**+0.8**
SBSI	**Sibolga**	**1.62**	**349**	P	**Pn**	**21 36 18.2**	**-0.5**
GSI	**Gunungsitoli**	**2.10**	**310**	P	**Pn**	**21 36 26.8**	**+1.4**
PSI	**Prapat**	**2.84**	**355**	P	**Pn**	**21 36 36.1**	**+0.4**
TPTI		**3.85**	**329**	P	**Pn**	**21 36 50.0**	**+0.6**
MASI	**Maura Aman, Be**	**4.32**	**135**	P	**Pn**	**21 36 56.7**	**+0.8**
MYKOM	**Kota Tinggi**	**5.00**	**69**	P	**Pn**	**21 37 06.5**	**+1.4**
MLSI	**Meulaboh, Aceh**	**5.11**	**327**	P	**Pn**	**21 37 07.7**	**+1.0**
	0.3nm40nm,1.1s						
MDSI	**Maura Dua**	**6.65**	**132**	P	**Pn**	**21 37 28.0**	**+0.2**
	0.1nm11nm,2.4s						
BSI	**Banda Aceh**	**6.75**	**325**	P	**Pn**	**21 37 28.9**	**-0.2**
KLSI		**7.20**	**130**	P	**Pn**	**21 37 35.8**	**+0.5**
PLAI	**Plampang**	**20.46**	**116**	P	**P**	**21 40 27.7**	**+1.5**
WRA	**Warramunga Arr**	**39.69**	**122**	P	**P**	**21 43 16.4**	**-3.9**
	0.2nm,0.5s,baz=302,slow=9.1,SNR=12 0.2nm,0.5s						
ASAR	**Alice Springs**	**41.06**	**127**	P	**P**	**21 43 27.9**	**-3.6**
	0.3nm,0.3s,baz=299,slow=7.5,SNR=9.3 0.3nm,0.3s						
STKA	**Stephens Creek**	**51.05**	**132**	P	P	21 44 42.5	-7.6
	5.3nm,1.2s,baz=291,slow=8.6,SNR=2.8 5.3nm,1.2s						
H04N2	**CROZET ISLANDS**	**61.89**	**215**	T	T	22 52 24.2	
	baz=57						
H04N1	**CROZET ISLANDS**	**61.90**	**215**	T	T	22 52 37.4	
	baz=57						
H04N3	**CROZET ISLANDS**	**61.91**	**215**	T	T	22 52 16.2	
	baz=57						

*IDC **01** 21:37:11.7±3.3, 36°.40N×71°.02E, h191km±31km, mb3.4/17, mbtmp4.0/22, MS3.4/1, Error ellipse: s-maj=21.5km s-min=12.5km az=24.0*
*NEIC **01** 21:37:15.2±2.0, 36°.69N±0°.06×70°.98E±0°.08, h218km±7km, mb4.1/20, Error ellipse: s-maj=10.3km s-min=7.0km az=130.0*
*NNC **01** 21:37:22.4±5.5, 37°.31N×71°.06E, h226km±63km, mb2.8, mpv3.9, Error ellipse: s-maj=56.7km s-min=31.0km az=12.0*
ISC 01 21:37:14.5±0.6, 36°.66N±0°.05×71°.10E±0°.04, h215km±6km, n88, σ1°.40/98, mb3.8/23, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.00**	**28**		**Pn**	**21 37 48.0**	**+1.9**
MANEM				Sn	**S**	**21 38 11.9**	**+1.2**
GAR	**Garm**	**2.42**	**345**		**Pn**	**21 37 59.3**	**+0.8**
GAR				Sn	**S**	**21 38 30.6**	**-2.2**
CHGR	**Chuyangaron**	**2.52**	**323**		**Pn**	**21 37 60.0**	**+0.4**
CHGR				Sn	**S**	**21 38 32.3**	**-2.3**
SHAA	**Shahritus**	**2.54**	**292**		**Pn**	**21 38 00.3**	**+0.5**
SHAA				Sn	**S**	**21 38 33.4**	**-1.6**
KBL	**Kabul**	**2.69**	**219**		**Pn**	**21 38 02.8**	**+1.0**
KBL				Sn	**S**	**21 38 37.6**	**-0.7**
BTK	**Batken**	**3.40**	**356**	Pn	**Pn**	**21 38 11.1**	**+1.5**
NIL	**Nilore**	**3.48**	**149**		**Pn**	**21 38 13.0**	**+2.3**
KSH2	**Kashi**	**4.32**	**54**	Pn	**Pn**	**21 38 23.1**	**+2.2**
KSH2				Sn	**S**	**21 39 13.1**	**+0.2**
KSH2				smax	smax		
	comp=N,380nm,0.7s						
KSH2				smax	smax		
	comp=E,290nm,0.6s						
JMU	**Jammu**	**4.94**	**140**	*e*S	**S**	**21 39 27.3**	**+0.4**
JMU				IAML		21 39 30.4	
	comp=E,236nm,0.4s						
JMU				IAML		21 39 30.9	
	comp=N,364nm,0.3s						
TSSA	**Tissa**	**5.64**	**131**	*e*P	**Pn**	**21 38 38.7**	**+1.1**
TSSA				*e*S	**S**	**21 39 40.7**	**-2.6**
TSSA				IAML		21 39 43.0	
	comp=E,389nm,0.6s						
TSSA				IAML		21 39 43.1	
	comp=N,391nm,0.1s						
TSSA				IAML		21 39 44.4	
	comp=Z,283nm,0.6s						
THN	**Thein Dam**	**5.70**	**136**	*e*P	**Pn**	**21 38 40.0**	**+1.8**
THN				*e*S	**S**	**21 39 43.4**	**-1.0**
THN				IAML		21 39 45.5	
	comp=E,201nm,0.9s						
NRN	**Naryn**	**6.11**	**37**		**Pn**	**21 38 42.7**	**-0.9**
UCH	**Uchtor**	**6.16**	**24**	P	**Pn**	**21 38 44.9**	**+0.5**
	SNR=48						
EKS2	**Erkin-Say**	**6.34**	**18**	P	**Pn**	**21 38 46.9**	**+0.5**
	SNR=9.5						
KK31	**Karatay Array**	**6.45**	**356**		**Pn**	**21 38 47.7**	**0.0**
KK31	**Karatay Array**	**6.45**	**356**	⇓P	**Pn**	**21 38 48.0**	**+0.2**
	comp=E,6.5nm,0.3s,baz=162,slow=12,SNR=68						
KK31				⇑S	**S**	**21 39 54.8**	**-6.9**
	comp=E,34nm,0.6s,baz=180,slow=15,SNR=18						
KKAR	**Karatay Array**	**6.45**	**356**		**Pn**	**21 38 47.9**	**+0.2**
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**21 38 49.6**	**+0.9**
	comp=E,13nm,0.3s,baz=214,slow=6.3,SNR=34						
AAK				S	**S**	**21 39 59.8**	**-3.8**
	comp=E,9.0nm,0.5s,baz=317,slow=23,SNR=10.0						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**21 38 49.4**	**+0.6**
	SNR=19						
AAK	**Ala-Archa**	**6.52**	**23**		**Pn**	**21 38 49.3**	**+0.6**
AAK	**Ala-Archa**	**6.52**	**23**	⇑P	**Pn**	**21 38 49.0**	**+0.2**
	comp=E,3.0nm,0.4s						
AAK				⇑S	**S**	**21 40 00.1**	**-3.5**
	comp=E,26nm,0.9s						
KBK	**Karagaybulak**	**6.69**	**25**	P	**Pn**	**21 38 51.9**	**+1.0**
	SNR=7.4						
BOOM	**Boomskoye usch**	**6.92**	**31**		**Pn**	**21 38 54.2**	**+0.3**
USP	**Ospenovka**	**7.10**	**21**	P	**Pn**	**21 38 56.6**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**7.15**	**28**	P	**Pn**	**21 38 57.8**	**+0.9**
	SNR=13						
KDJ	**Kajisay**	**7.21**	**39**	Pn	**Pn**	**21 38 58.0**	**+0.3**
TARG	**Taragay, Kyrgy**	**7.26**	**44**	Pn	**Pn**	**21 38 58.6**	**+0.1**
HRA	**Herat**	**7.56**	**255**		**Pn**	**21 39 03.1**	**+0.8**
KLP	**Kalpa**	**7.83**	**129**	*e*P	**Pn**	**21 39 07.0**	**+1.1**
KLP				*e*S	**S**	**21 40 30.4**	**-4.4**
KLP				IAML		21 40 31.3	
	comp=E,152nm,0.5s						
KLP				IAML		21 40 32.0	
	comp=N,118nm,0.7s						
PDGK	**Podgornoye**	**9.26**	**41**		**Pn**	**21 39 23.1**	**-1.0**
MAKZ	**Makanchi**	**12.98**	**35**		**Pn**	**21 40 11.1**	**-0.1**
MK31	**Makanchi Array**	**13.12**	**36**	P	**Pn**	**21 40 12.6**	**-0.3**
	comp=N,1.0nm,0.5s,baz=220,slow=16,SNR=35						
MKAR	**Makanchi Array**	**13.12**	**36**	P	**Pn**	**21 40 13.2**	**+0.3**
	comp=N,3.7nm,0.7s,baz=222,slow=18,SNR=20						
MKAR	**Makanchi Array**	**13.12**	**36**		**Pn**	**21 40 13.0**	**+0.2**
WMQ	**Urumqi**	**14.54**	**55**	*e*P	**Pn**	**21 40 31.4**	**+0.9**
KURBB	**Kurchatov Arra**	**14.95**	**19**	P	**Pn**	**21 40 35.6**	**+0.4**
	comp=N,2.2nm,0.2s,baz=206,slow=11,SNR=6.1						
AB31	**Akbulak array**	**14.98**	**331**	P	**Pn**	**21 40 35.5**	**-0.3**
AB31	**Akbulak array**	**14.98**	**331**	⇓P	**P**	**21 40 37.7**	**+1.6**
	comp=N,0.8nm,0.4s,baz=144,slow=14,SNR=30						
ABKAR	**Akbulak array**	**14.98**	**331**		**Pn**	**21 40 35.2**	**-0.5**
KURK	**Kurchatov**	**15.06**	**19**		**Pn**	**21 40 36.5**	**-0.1**
EVN	**Everest**	**15.86**	**119**	P	**P**	**21 40 47.6**	**+1.0**
BVAR	**Borovoye Array**	**16.37**	**358**	P	**Pn**	**21 40 54.0**	**+1.6**
	comp=N,0.7nm,0.4s,baz=158,slow=11,SNR=6.7						
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**Pn**	**21 40 56.4**	**+0.3**
	comp=N,2.1nm,0.4s,baz=141,slow=4.8,SNR=7.1						
AKTO	**Aktyubinsk**	**16.68**	**330**	⇑P	**Pn**	**21 40 56.0**	**-0.1**
	comp=N,1.9nm,0.6s						
UOSS	**Minazif**	**17.29**	**232**	P	**P**	**21 41 01.0**	**-0.7**
LSA	**Lhasa**	**18.15**	**107**	⇑*i*P	P	21 41 02.5	-9.0
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZAA0	**Zalesovo Array**	**19.74**	**25**		**P**	**21 41 27.5**	**-0.3**
ZAA0				IAmb	IAmb	21 41 29.0	
	comp=Z,4.2nm,0.7s						
ZALV	**Zalesovo Beam**	**19.74**	**25**	P	**P**	**21 41 28.6**	**+0.8**
	comp=Z,4.3nm,0.6s,baz=222,slow=12,SNR=21 comp=Z,4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**19.74**	**25**	P	**P**	**21 41 27.0**	**-0.8**
SHL	**Shillong**	**20.91**	**116**	P	**P**	**21 41 40.6**	**-0.1**
SHL				IAmb	IAmb	21 41 49.0	
	comp=Z,7.8nm,0.6s						
ARTI	**Arti**	**21.52**	**341**	P	**P**	**21 41 46.7**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=238,slow=5.2,SNR=3.5 comp=Z,1.8nm,0.7s						
KBZ	**Khabaz**	**22.60**	**297**	P	**P**	**21 41 57.7**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=133,slow=11,SNR=4.3 comp=Z,1.6nm,0.8s						
RAYN	**Ar Rayn**	**25.63**	**246**	P	**P**	**21 42 23.3**	**-1.2**
RAYN				IAmb	IAmb	21 42 31.3	
	comp=Z,4.7nm,0.7s						
PZH	**PanZhiHua**	**27.90**	**103**	P	**P**	**21 42 46.6**	**+1.8**
SONM	**Songino Array**	**28.18**	**56**	P	**P**	**21 42 48.2**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=258,slow=9.0,SNR=5.9 comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**29.46**	**288**	P	**P**	**21 42 57.2**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=85,slow=8.3,SNR=2.5 comp=Z,0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.46**	**119**	P	**P**	**21 43 06.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=306,slow=8.5,SNR=5.0 comp=Z,0.4nm,0.5s						
AK10	**Malin Array Si**	**32.88**	**308**	P	**P**	**21 43 29.0**	**+1.0**
AKASG	**Malin Array Be**	**32.91**	**309**	P	**P**	**21 43 28.2**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=81,slow=7.0,SNR=8.1 comp=Z,1.3nm,0.6s						
AKASG	**Malin Array Be**	**32.91**	**309**	P	**P**	**21 43 27.3**	**-1.0**
AKBB	**Malin Array Si**	**32.91**	**309**	P	**P**	**21 43 27.1**	**-1.2**
AKBB				IAmb	IAmb	21 44 11.3	
	comp=Z,4.9nm,1.1s						
MLR	**Muntele Rosu**	**34.77**	**299**	P	**P**	**21 43 44.5**	**-0.2**
MLR				IAmb	IAmb	21 43 48.8	
	comp=Z,3.2nm,0.9s						
BURAR	**Bucovina Array**	**35.27**	**303**	P	**P**	**21 43 48.7**	**-0.1**
BUR08	**Bucovina Ar. S**	**35.28**	**303**	P	**P**	**21 43 48.5**	**-0.3**
HILR	**Hailar Array B**	**37.15**	**54**	LR	LR	22 02 53.8	
	comp=Z,65nm,21.2s,baz=0.0,slow=41						
FIA1	**FINESS Array S**	**37.40**	**326**	P	**P**	**21 44 06.6**	**+0.2**
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**21 44 07.

UMZA					S		Sn	22 10 58.8	-0.8
FAQ	**Al Faqa, Dubai**	**5.74**	**82**		P		Pn	22 10 00.5	+1.6
FAQ					S		Sn	22 11 07.4	+2.6
ALNE	**Al Ain**	**5.86**	**89**		P		Pn	22 10 02.4	+1.8
ALNE	**Al Ain**	**5.86**	**89**		P		Pn	22 10 01.5	+0.9
ALNE					S		Sn	22 11 08.1	+0.2
ASHO	**Ashiyiah**	**6.15**	**83**	*i*	P		Pn	22 10 05.6	+1.0
	SNR=22								
ASHO					S		Sn	22 11 13.9	-1.3
ASHO	**Ashiyiah**	**6.15**	**83**		P		Pn	22 10 05.7	+1.0
	SNR=22								
ASHO					S		Sn	22 11 15.4	+0.2
HATD	**Hatta, Dubai**	**6.23**	**82**		P		Pn	22 10 07.0	+1.3
HATD	**Hatta, Dubai**	**6.23**	**82**		P		Pn	22 10 07.0	+1.3
HATD					S		Sn	22 11 16.9	-0.1
UOSS	**Minazif**	**6.31**	**81**	*i*	P		Pn	22 10 07.5	+0.8
	SNR=5.5								
UOSS	**Minazif**	**6.31**	**81**		P		Pn	22 10 07.5	+0.8
UOSS					S		Sn	22 11 17.6	-1.3
MASF	**Masafi**	**6.33**	**77**		P		Pn	22 10 07.1	0.0
MASF					S		Sn	22 11 19.0	-0.5
MDH	**Madha**	**6.44**	**78**		P		Pn	22 10 09.1	+0.5
MDH	**Madha**	**6.44**	**78**		P		Pn	22 10 08.7	+0.1
MDH					S		Sn	22 11 22.1	-0.1
SHME	**Shamm**	**6.46**	**71**		P		Pn	22 10 08.0	-0.8
SHME	**Shamm**	**6.46**	**71**		P		Pn	22 10 08.2	-0.6
SHME					S		Sn	22 11 24.2	+1.5
BANOM	**Banah**	**6.57**	**73**		P		Pn	22 10 10.2	-0.1
BANOM	**Banah**	**6.57**	**73**		P		Pn	22 10 10.3	-0.1
SOHO	**SOHO**	**6.57**	**88**	*i*	P		Pn	22 10 11.5	+1.1
	SNR=9.4								
SOHO	**SOHO**	**6.57**	**88**		P		Pn	22 10 11.5	+1.1
SOHO					S		Sn	22 11 21.8	-3.6
ARQ	**Araqi**	**6.63**	**95**		P		Pn	22 10 12.2	+1.1
	SNR=12								
ARQ					S		Sn	22 11 25.4	-1.5
HOQ	**Hoqain**	**7.32**	**92**		P		Pn	22 10 21.2	+0.5
	SNR=6.3								
HOQ					S		Sn	22 11 41.9	-1.9
BSY	**Bisya**	**7.35**	**99**		P		Pn	22 10 21.5	+0.5
BSY					S		Sn	22 11 43.2	-1.3
SMDO	**Samad**	**8.06**	**96**		P		Pn	22 10 31.9	+1.1
SMDO					S		Sn	22 11 59.5	-2.7
BIDO	**Bidbid**	**8.07**	**92**		P		Pn	22 10 30.4	-0.5
BIDO					S		Sn	22 11 59.8	-2.5
JMDO	**Jabal Madar**	**8.24**	**100**		P		Pn	22 10 33.1	-0.2
JMDO					S		Sn	22 12 00.8	-5.8
JMDO					S		Sn	22 12 03.5	-3.1
MHTO	**MHTO**	**8.56**	**110**		P		Pn	22 10 38.2	+0.5
MHTO					S		Sn	22 12 09.2	-5.1
WSAR	**Wadi Sarin**	**8.56**	**94**		P		Pn	22 10 38.4	+0.7
DQM	**DQM**	**8.67**	**117**		P		Pn	22 10 40.6	+1.5
WBK	**Wadi Bani Khal**	**8.97**	**98**		P		Pn	22 10 43.0	-0.4
	SNR=13								
KBZ	**Khabaz**	**20.28**	**346**		P		**P**	22 13 08.8	-0.5
	0.7nm,0.6s,baz=124,slow=10,SNR=1.8								
KBZ					LR		LR	22 22 50.1	
	comp=Z,43nm,18.8s,baz=186,slow=42								
	0.7nm,0.6s								
BRTR	**Keskin Array B**	**20.45**	**323**		P		**P**	22 13 09.1	-2.3
	0.5nm,0.7s,baz=144,slow=11,SNR=3.0								
	0.5nm,0.7s								
KVAR	**Kislovodsk Arr**	**20.54**	**346**		LR		LR	22 23 05.5	
	comp=Z,42nm,21.8s,baz=22,slow=42								
MKAR	**Makanchi Array**	**34.72**	**41**		P		**P**	22 15 25.8	+2.0
	0.3nm,0.7s,baz=237,slow=7.2,SNR=3.6								
	0.3nm,0.7s								
ZALV	**Zalesovo Beam**	**39.88**	**32**		P		**P**	22 16 06.9	-0.4
	1.0nm,0.4s,baz=241,slow=8.1,SNR=6.5								
	1.0nm,0.4s								
FINES	**FINESS Array B**	**40.57**	**343**		P		**P**	22 16 11.0	-2.0
	3.2nm,0.9s,baz=157,slow=7.5,SNR=8.5								
	3.2nm,0.9s								
NOA	**NORSAR Array B**	**45.20**	**335**		LR		LR	22 38 23.9	
	comp=Z,16nm,18.4s,baz=95,slow=40								
TORD	**Torodi Ar. Bea**	**46.25**	**265**		P		P	22 16 55.4	-4.1
	0.2nm,0.5s,baz=68,slow=7.6,SNR=1.7								
	0.2nm,0.5s								
ESDC	**Sonseca Array**	**47.18**	**302**		P		**P**	22 17 04.3	-2.3
	0.2nm,0.6s,baz=93,slow=7.0,SNR=2.0								
	0.2nm,0.6s								

TAP ***01*** *22:16:21.6,24.˚67N×122.˚24E,h69km±1km,ML2.9,C*
JMA ***01*** *22:16:21.5±0.2,25.˚1±1.˚1×122.˚3E±0.˚4,h73km±3km,*
MV2.3/12,TAIWAN REGION

ISC 01 22:16:21.4±1.3**,24.˚67N**±0.˚03×**122.˚24E**±0.˚02**,h75**km±7km,**
n67,σ0°**68**/123**,4C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.25**	**182**	*i* P	Pn	**22 16 33.2**	**+0.4**
EOS2				*i* S	Sn	22 16 42.2	+1.2
EGS		**0.33**	**302**	*i* P	Pn	**22 16 33.5**	**+0.1**
EGS				*i* S	Sn	22 16 42.0	-0.2
TWC	**Suao**	**0.36**	**261**	⇑*i* P	Pn	**22 16 33.3**	**-0.3**
TWC				*i* S	Sn	22 16 41.5	-1.0
ESAO	**Su ao**	**0.37**	**256**	P	Pn	**22 16 33.6**	**-0.1**
ESAO				S	Sn	22 16 41.8	-0.9
EOS3	**EOS3**	**0.39**	**170**	*i* P	Pn	**22 16 34.3**	**+0.6**
EOS3				S	Sn	22 16 44.1	+1.5
TWB1	**Santiao Chiao**	**0.41**	**326**	⇑*i* P	Pn	**22 16 33.6**	**-0.4**
TWB1				*i* S	Sn	22 16 42.2	-1.0
ILA	**Ilan**	**0.46**	**282**	P	Pn	**22 16 34.5**	**+0.2**
ILA				eS	Sn	22 16 44.8	+0.9
EWUT	**Wuta**	**0.48**	**242**	P	Pn	**22 16 34.9**	**+0.4**
NDS	**Dongshan**	**0.48**	**266**	P	Pn	**22 16 34.8**	**+0.2**
NDS				eS	Sn	22 16 42.4	-1.8
TIPB	**Shuangxi**	**0.48**	**309**	P	Pn	**22 16 34.5**	**-0.1**
TIPB				S	Sn	22 16 43.5	-0.9
TWE	**Neicheng**	**0.52**	**276**	⇑*i* P	Pn	**22 16 35.1**	**+0.2**
TWE				*i* S	Sn	22 16 44.3	-0.6
SXI1	**Grass Mountain**	**0.54**	**322**	P	Pn	**22 16 35.0**	**-0.2**
EOS4	**EOS4**	**0.55**	**173**	P	Pn	**22 16 35.2**	**+0.4**
EOS4				*i* S	Sn	22 16 44.9	+0.2
EAHA	**Aohua**	**0.57**	**234**	*e*P	Pn	**22 16 34.5**	**-0.9**
EAHA				eS	Sn	22 16 46.3	+0.6
FUSB	**Fushanzhiwuyua**	**0.60**	**279**	⇑P	Pn	**22 16 36.1**	**+0.3**
FUSB				*i* S	Sn	22 16 46.0	-0.4
ENTT	**Nioudou**	**0.61**	**267**	*i* P	Pn	**22 16 36.4**	**+0.5**
ENTT				*i* S	Sn	22 16 46.5	0.0
LATG	**Datong**	**0.66**	**259**	P	Pn	**22 16 37.3**	**+0.8**
LATG				S	Sn	22 16 48.4	+0.8
NDT	**Datong Townshi**	**0.67**	**264**	P	Pn	**22 16 37.3**	**+0.9**
NDT				S	Sn	22 16 48.3	+0.9
TWA	**Mucha**	**0.67**	**298**	*i* P	Pn	**22 16 36.7**	**+0.2**
TWA				*i* S	Sn	22 16 47.0	-0.6
JYNG	**Yonagunijimaku**	**0.68**	**109**	*e*P	Pn	**22 16 36.3**	**-0.2**
JYNG				eS	Sn	22 16 47.2	-0.4
NWLT	**Wulai**	**0.68**	**279**	*e*P	Pn	**22 16 36.9**	**+0.3**
NWLT				eS	Sn	22 16 47.1	-0.6
NHDH	**Xindian Distri**	**0.71**	**294**	P	Pn	**22 16 37.2**	**+0.3**
NHDH				S	Sn	22 16 48.2	-0.1
YOJ	**Yonaguni jima**	**0.73**	**106**	P	Pn	**22 16 36.9**	**-0.2**
YOJ				S	Sn	22 16 48.2	-0.5
YOJ	**Yonaguni jima**	**0.73**	**106**	*e*P	Pn	**22 16 36.9**	**-0.2**
YOJ				eS	Sn	22 16 48.0	-0.6
ETL	**Fush Village**	**0.76**	**228**	P	Pn	**22 16 37.4**	**-0.1**
ETL				S	Sn	22 16 48.9	-0.4
NACB	**Ninganchiao**	**0.77**	**230**	*i* P	Pn	**22 16 37.3**	**-0.2**
NACB				S	Sn	22 16 49.1	-0.3
YM01	**YM01**	**0.77**	**308**	*i* P	Pn	**22 16 37.7**	**+0.1**
YM01				*i* S	Sn	22 16 49.0	-0.6
YM08	**YM08**	**0.78**	**311**	*e*P	Pn	**22 16 37.8**	**+0.1**
YM08				eS	Sn	22 16 49.1	-0.7
YHNB	**Yeheng**	**0.79**	**270**	P	Pn	**22 16 38.5**	**+0.7**
YHNB				S	Sn	22 16 50.4	+0.5
ZUZH	**Zhuzihu**	**0.80**	**308**	P	Pn	**22 16 38.1**	**+0.2**
ZUZH				S	Sn	22 16 49.6	-0.5
NSK	**Sanguang**	**0.80**	**271**	*i* P	Pn	**22 16 38.7**	**+0.8**
NSK				*i* S	Sn	22 16 50.8	+0.6
NNSB	**Datong**	**0.82**	**253**	P	Pn	**22 16 38.6**	**+0.5**
NNSB				S	Sn	22 16 51.1	+0.5
NNS	**Nan Shan**	**0.82**	**254**	*i* P	Pn	**22 16 38.7**	**+0.5**
NNS				*i* S	Sn	22 16 51.2	+0.5
ETLH	**Xiulin Townshi**	**0.83**	**236**	P	Pn	**22 16 38.4**	**+0.1**
ETLH				S	Sn	22 16 50.7	-0.1
TWD	**Chiawan**	**0.83**	**225**	*i* P	Pn	**22 16 38.2**	**0.0**
TWD				*i* S	Sn	22 16 50.1	-0.5
TWY	**Chenhua**	**0.84**	**316**	*i* P	Pn	**22 16 38.7**	**+0.4**
TWY				*i* S	Sn	22 16 50.9	**0.0**
TWS1	**Kuangyinshan**	**0.86**	**300**	⇓*i* P	Pn	**22 16 38.9**	**+0.4**
TWS1				*i* S	Sn	22 16 51.8	+0.5
NTST	**Danshui**	**0.87**	**305**	*e*P	Pn	**22 16 39.0**	**+0.4**
NTST				eS	Sn	22 16 51.6	+0.1
HWA	**Hwalien**	**0.90**	**220**	*i* S	Sn	**22 16 52.0**	**-0.1**
KSHI	**Guanxi Townshi**	**0.97**	**277**	*e*P	Pn	**22 16 40.1**	**+0.2**
KSHI				eS	Sn	22 16 55.7	+2.0
ETM	**Tongmen**	**0.98**	**224**	P	Pn	**22 16 39.7**	**-0.3**
ETM				S	Sn	22 16 53.0	-0.7
TEYL	**Yanliau Villag**	**0.99**	**216**	*e*P	Pn	**22 16 39.3**	**-0.8**
TEYL				S	Sn	22 16 53.4	-0.6
LXIB	**Xiulin Townshi**	**0.99**	**230**	P	Pn	**22 16 40.0**	**-0.3**
LXIB				eS	Sn	22 16 52.8	-1.6
FUSS	**Fushou**	**1.00**	**245**	*e*P	Pn	**22 16 41.1**	**+0.7**
FUSS				eS	Sn	22 16 55.9	+1.3
NFF	**Wufeng Townshi**	**1.02**	**268**	P	Pn	**22 16 41.1**	**+0.6**
NFF				S	Sn	22 16 55.4	+0.6
WHF	**Hehuan Shan**	**1.03**	**240**	*i* P	Pn	**22 16 41.4**	**+0.4**
WHF				*i* S	Sn	22 16 55.1	-0.5
TDCB	**Techi**	**1.07**	**247**	*e*P	Pn	**22 16 42.6**	**+1.4**
TDCB				eS	Sn	22 16 56.3	+0.3
SHUL	**Shoufeng**	**1.07**	**215**	*e*P	Pn	**22 16 41.5**	**+0.4**
SHUL				eS	Sn	22 16 56.3	+0.4
LIOB	**Emei**	**1.11**	**269**	P	Pn	**22 16 42.5**	**+0.9**
LIOB				S	Sn	22 16 57.9	+1.2
ESL	**Shilin**	**1.13**	**221**	*i* P	Pn	**22 16 41.3**	**-0.5**
ESL				*i* S	Sn	22 16 55.7	-1.3
TEGC	**Jichi Village**	**1.15**	**214**	*e*P	Pn	**22 16 42.4**	**+0.4**
TEGC				eS	Sn	22 16 56.6	-0.9
OWD	**Renai**	**1.20**	**234**	*e*P	Pn	**22 16 42.7**	**-0.2**
OWD				S	Sn	22 16 59.2	+0.2
WUSB	**Renai**	**1.23**	**237**	P	Pn	**22 16 44.0**	**+0.8**
WUSB				eS	Sn	22 16 59.3	-0.1
WARRT	**Fenglin Townsh**	**1.23**	**220**	P	Pn	**22 16 42.3**	**-0.8**
WHP	**Taichung City**	**1.24**	**252**	*e*P	Pn	**22 16 44.5**	**+1.2**
HGSD	**Ruisui**	**1.39**	**213**	*e*P	Pn	**22 16 45.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.40**	**103**	*e*P	Pn	**22 16 44.9**	**-0.3**
IRIF				eS	Sn	22 17 02.9	-0.3
EHYH	**Wanrong**	**1.43**	**215**	*e*P	Pn	**22 16 45.8**	**+0.1**
EHY	**Hungye**	**1.43**	**216**	P	Pn	**22 16 44.9**	**-0.8**
SSLB	**Suanglung**	**1.47**	**233**	*e*P	Pn	**22 16 46.7**	**+0.5**
YULB	**Yu-li**	**1.54**	**214**	*e*P	Pn	**22 16 46.7**	**-0.4**
TWF1	**Yuli**	**1.57**	**214**	P	Pn	**22 16 47.3**	**-0.3**
JKRS	**Kuro-shima**	**1.67**	**105**	*e*P	Pn	**22 16 49.2**	**+0.5**
JKRS				eS	Sn	22 17 10.1	+0.6
JIJ	**Ishigaki jima**	**1.76**	**100**	*e*P	Pn	**22 16 50.1**	**+0.2**
JIJ				eS	Sn	22 17 11.9	+0.2
JISG	**Ishigakijimahi**	**1.89**	**92**	*e*P	Pn	**22 16 52.0**	**+0.4**
JISG				eS	Sn	22 17 15.7	+1.0
VWUC	**VWUC**	**2.56**	**278**	*i* P	Pn	**22 17 00.7**	**+0.1**
VWUC				*i* S	Sn	22 17 28.9	-2.0
PTMZ	**Houxiangcun**	**2.86**	**278**	*e*P	Pn	**22 17 05.0**	**+0.2**
PTMZ				*i* S	Sn	**22 17 36.5**	**-1.7**

IDC ***01*** *22:18:47.8±1.4,11.˚24S×165.˚48E,h0km,mb3.9/5,*
mbtmp3.9/6,ML2.3/1,MS1.5/1,Error ellipse: s-maj=33.9km
s-min=29.8km az=108.0
NEIC ***01*** *22:18:49.1±1.6,11.˚20S±0.˚03×165.˚4E±0.˚1,h10km±1km,*
mb4.2/7,Error ellipse: s-maj=22.5km s-min=5.0km
az=97.0

ISC 01 22:18:49.1±1.0**,11.˚2S**±0.˚1×**165.˚4E**±0.˚1**,h10**km**,n20,**
σ0°**89/21,mb4.1/9,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.64**	**288**	Pn	**Pn**	**22 20 15.0**	**+1.9**
	0.1nm,0.3s,baz=181,slow=0.6,SNR=2.0						
HNR				Sn	Sn	**22 21 17.4**	**-0.6**
	1.4nm,0.3s,baz=258,slow=9.9,SNR=5.4						
HNR				LR	LR	22 22 25.6	
	comp=Z,4.7nm,21.2s,baz=326,slow=38						
HNR	**Honiara**	**5.64**	**288**		**Pn**	**22 20 12.3**	**-0.8**
KOUNC	**Koumac, New Ca**	**9.34**	**186**	Pn	**Pn**	**22 21 03.9**	**0.0**
DZM	**Mont Dzumac**	**10.84**	**175**	Pn	**Pn**	**22 21 25.5**	**+1.0**
	4.8nm,0.4s,baz=344,slow=12,SNR=14						
ONTNC	**Ouen Toro**	**11.07**	**175**	Pn	**Pn**	**22 21 26.8**	**-0.8**
WB0	**Warramunga Arr**	**31.01**	**250**	P	**P**	**22 25 06.9**	**-0.3**
WB0				IAmb	IAmb	22 25 19.2	
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**31.10**	**250**	P	**P**	**22 25 08.8**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=82,slow=8.9,SNR=16						
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**31.10**	**250**	P	**P**	**22 25 07.5**	**-0.5**
ASAR	**Alice Springs**	**32.40**	**243**	P	**P**	**22 25 19.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=62,slow=10,SNR=5.3						
	comp=Z,0.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**39.00**	**255**	P	**P**	**22 26 14.2**	**-1.8**
FITZ				IAmb	IAmb	22 26 32.3	
	comp=Z,0.5nm,0.9s						
QSPA	**South Pole Qui**	**78.79**	**180**	P	**P**	**22 30 51.9**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=353,slow=17,SNR=2.0						
	comp=Z,1.1nm,1.0s						
QSPA	**South Pole Qui**	**78.79**	**180**	P	**P**	**22 30 51.7**	**-0.3**
QSPA				IAmb	IAmb	22 31 20.4	
	comp=Z,3.0nm,1.1s						
L19K	**White Mountain**	**79.45**	**18**	P	**P**	**22 30 54.4**	**-1.1**
VRDI	**Verde Repeater**	**82.61**	**22**	P	**P**	**22 31 12.1**	**-0.4**
VRDI				IAmb	IAmb	22 31 15.2	
	comp=Z,3.3nm,1.1s						
GLB	**Gilahina Butte**	**82.62**	**22**	P	**P**	**22 31 11.6**	**-0.8**
IMAR	**Indian Mountai**	**82.69**	**16**	P	**P**	**22 31 12.4**	**-0.1**
E19K	**Redstone River**	**82.98**	**14**	P	**P**	**22 31 14.4**	**+0.3**
E19K				IAmb	IAmb	22 31 16.0	
	comp=Z,1.9nm,1.0s						
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**22 31 18.4**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=222,slow=5.5,SNR=5.2						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**93.41**	**317**	P	**P**	**22 32 05.9**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=104,slow=5.1,SNR=6.1						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**93.41**	**317**	P	**P**	**22 32 05.1**	**+0.3**

MDD ***01*** *22:35:30.2±0.9,36.˚75N×11.˚14W,h21km±9km,mb_Lg3.0/8,*
Error ellipse: s-maj=9.1km s-min=4.4km az=74.0
INMG ***01*** *22:35:31.5±1.4,36.˚72N×11.˚14W,h30km±13km,ML2.1,*
Error ellipse: s-maj=8.9km s-min=4.0km az=66.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe
IGIL ***01*** *22:35:32.0,36.˚74N×11.˚07W,h30km,ML1.7*
CNRM ***01*** *22:35:32.8,36.˚54N×10.˚77W,h30km*

ISC 01 22:35:30.1±1.9**,36.77N**±0.˚05×**11.˚1W**±0.˚1**,h70**km±29km,**
n65,σ1°**23**/124**,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.82**	**78**	P	**Pn**	**22 35 59.4**	**+0.2**
PFVI				S	Sn	**22 36 20.6**	**-0.8**
PFVI	**Vila Bisbo**	**1.82**	**78**	*e*P	**Pn**	**22 36 00.0**	**+0.7**
PFVI				eS	Sn	**22 36 20.8**	**-0.6**
PFVI				*i* IAML		22 36 21.3	
PFVI				*i* IAML		22 36 22.2	
PFVI				*i* IAML		22 36 22.6	
PFVI	**Vila Bisbo**	**1.82**	**78**	P	**Pn**	**22 35 59.5**	**+0.2**
PFVI				S	Sn	**22 36 20.7**	**-0.8**
MORF	**Marmelete**	**1.99**	**74**	*e*P	**Pn**	**22 36 02.7**	**+1.1**
MORF				eS	Sn	**22 36 25.1**	**-0.6**
MORF				IAML		22 36 27.0	
	comp=N,11nm,0.1s						
MORF	**Marmelete**	**1.99**	**74**	*e*P	**Pn**	**22 36 02.9**	**+1.3**
MORF				eS	Sn	**22 36 25.6**	**-0.1**
MORF				*i* IAML		22 36 27.4	
MORF				*i* IAML		22 36 28.1	
MORF				*i* IAML		22 36 30.0	
PTEO	**Sao Teotonio**	**2.02**	**67**	*e*P	**Pn**	**22 36 02.9**	**+1.0**
PTEO				eS	Sn	**22 36 26.7**	**+0.5**
PTEO				*i* IAML		22 36 28.3	
PTEO				*i* IAML		22 36 32.1	
PTEO				*i* IAML		22 36 36.7	
PLOUS	**Minas do Lousa**	**2.45**	**58**	*e*P	**Pn**	**22 36 08.5**	**+0.8**
PLOUS				eS	Sn	**22 36 36.5**	**-0.1**
PLOUS				*i* IAML		22 36 38.9	
PLOUS				*i* IAML		22 36 39.1	
PLOUS				*i* IAML		22 36 40.0	
MESJ	**Messejana**	**2.50**	**64**	*e*P	**Pn**	**22 36 09.6**	**+1.1**
MESJ				eS	Sn	**22 36 37.4**	**-0.6**
MESJ				IAML		22 36 40.6	
	comp=E,1.7nm,0.2s						
MESJ	**Messejana**	**2.50**	**64**	*e*P	**Pn**	**22 36 09.6**	**+1.1**
MESJ				eS	Sn	**22 36 38.0**	**+0.1**
MESJ				*i* IAML		22 36 42.5	
MESJ				*i* IAML		22 36 44.6	
MESJ				*i* IAML		22 36 44.8	
PBDV	**Barranco-do-Ve**	**2.54**	**78**	*e*P	**Pn**	**22 36 10.5**	**+1.4**
PBDV				eS	Sn	**22 36 39.0**	**0.0**
PBDV				*i* IAML		22 36 41.5	
PBDV				*i* IAML		22 36 42.5	
PBDV				*i* IAML		22 36 45.7	
PCVE	**Castro Verde**	**2.56**	**69**	P	**Pn**	**22 36 10.1**	**+0.8**
PCVE				S	Sn	**22 36 39.0**	**-0.2**
PCVE	**Castro Verde**	**2.56**	**69**	*e*P	**Pn**	**22 36 10.5**	**+1.3**
PCVE				eS	Sn	**22 36 39.3**	**0.0**
PCVE				*i* IAML		22 36 41.8	
PCVE				*i* IAML		22 36 42.5	
PCVE				*i* IAML		22 36 49.3	
PMAFR	**Mafra**	**2.60**	**32**	P	**Pn**	**22 36 09.9**	**+0.1**
PMAFR				S	Sn	**22 36 39.5**	**-0.8**
PMAFR	**Mafra**	**2.60**	**32**	*e*P	**Pn**	**22 36 10.3**	**+0.6**
PMAFR				eS	Sn	**22 36 40.2**	**-0.1**
PMAFR				*i* IAML		22 36 40.9	
PMAFR				*i* IAML		22 36 41.5	
PMAFR				*i* IAML		22 36 42.1	
PVAQ	**Vaqueiros**	**2.74**	**76**	*e*P	**Pn**	**22 36 13.1**	**+1.3**
PVAQ				eS	Sn	**22 36 43.8**	**0.0**
PVAQ				*i* IAML		22 36 46.7	
PVAQ				*i* IAML		22 36 52.4	
PVAQ				*i* IAML		22 36 55.6	
PVAQ	**Vaqueiros**	**2.74**	**76**	P	**Pn**	**22 36 12.5**	**+0.8**
PVAQ				S	Sn	**22 36 44.1**	**+0.3**
MOE	**Montemor**	**2.77**	**50**	*e*P	**Pn**	**22 36 13.1**	**+0.9**
MOE				eS	Sn	**22 36 44.3**	**-0.2**
MOE				*i* IAML		22 36 45.6	
MOE				*i* IAML		22 36 45.9	
MOE				*i* IAML		22 36 48.2	
PBEJ	**Beja**	**2.83**	**63**	*e*P	**Pn**	**22 36 13.7**	**+0.8**
PBEJ				eS	Sn	**22 36 45.5**	**-0.5**
PBEJ				*i* IAML		22 36 48.7	
PBEJ				*i* IAML		22 36 49.6	
PBEJ				*i* IAML		22 36 50.8	
EGRO	**El Granado**	**2.95**	**74**	P	**Pn**	**22 36 14.8**	**+0.2**
EGRO				S	Sn	**22 36 49.0**	**+0.1**
EGRO	**El Granado**	**2.95**	**74**	Pn	**Pn**	**22 36 16.9**	**+2.3**
EGRO				Sn	Sn	**22 36 49.7**	**+0.8**
EVO	**Evora**	**2.99**	**53**	P	**Pn**	**22 36 15.0**	**-0.1**
EVO				S	Sn	**22 36 49.7**	**-0.1**
EVO	**Evora**	**2.99**	**53**	*e*P	**Pn**	**22 36 16.1**	**+1.0**
EVO				eS	Sn	**22 36 49.9**	**+0.1**
EVO				*i* IAML		22 36 53.1	
EVO				*i* IAML		22 36 53.1	
EVO				*i* IAML		22 36 54.5	
PARRA	**Arraiolos**	**3.14**	**48**	*e*P	**Pn**	**22 36 17.9**	**+0.7**
PARRA				eS	Sn	**22 36 52.2**	**-0.4**
PARRA				*i* IAML		22 36 55.2	
PARRA				*i* IAML		22 36 57.1	
PARRA				*i* IAML		22 36 57.4	
PMTG	**Montargil**	**3.21**	**43**	*e*P	**Pn**	**22 36 18.7**	**+0.6**
PMTG				eS	Sn	**22 36 55.0**	**-0.1**
PMTG				*i* IAML		22 36 57.2	
PMTG				*i* IAML		22 36 57.3	
PMTG				*i* IAML		22 36 59.2	
PSBE	**So Bento**	**3.27**	**32**	*e*P	**Pn**	**22 36 19.9**	**+0.9**
PSBE				eS	Sn	**22 36 56.8**	**+0.1**
PSBE				*i* IAML		22 37 00.7	
PSBE				*i* IAML		22 37 03.6	
PESTR	**Estremoz**	**3.45**	**52**	P	**Pn**	**22 36 23.1**	**+1.7**
PESTR				S	Sn	**22 37 01.5**	**+0.3**
PESTR	**Estremoz**	**3.45**	**52**	*e*P	**Pn**	**22 36 23.6**	**+2.2**
PESTR				eS	Sn	**22 37 01.0**	**-0.1**
PESTR				*i* IAML		22 37 02.3	
PESTR				*i* IAML		22 37 03.1	
PESTR				*i* IAML		22 37 04.2	
PBAR	**Barrancos**	**3.49**	**65**	P	**Pn**	**22 36 23.6**	**+1.6**
PBAR				S	Sn	**22 37 01.5**	**-0.5**
PBAR	**Barrancos**	**3.49**	**65**	*e*P	**Pn**	**22 36 23.8**	**+1.9**
PBAR				eS	Sn	**22 37 01.6**	**-0.4**
PBAR				*i* IAML		22 37 05.0	
PBAR				*i* IAML		22 37 05.4	
PBAR				*i* IAML		22 37 08.1	
PSARD	**Sardoal**	**3.63**	**38**	*e*P	**Pn**	**22 36 24.9**	**+1.0**
PSARD				eS	Sn	**22 37 04.9**	**-0.6**
PSARD				*i* IAML		22 37 06.8	
PSARD				*i* IAML		22 37 07.4	
PSARD				*i* IA

PSIM				Sn	Sn	22 38 06.3	-0.5
OUK	**Oukaimeden**	**6.14**	**154**	P	Pn	22 36 58.6	0.0
OUK				S	Sn	22 38 05.3	-2.3
ECAL	**Calabor**	**6.16**	**32**	Pn	Pn	22 36 59.1	+0.7
ECAL				Sn	Sn	22 38 05.6	-1.8
EMAZ	**Mazaricos**	**6.38**	**14**	Pn	Pn	22 37 01.8	+0.4
EMAZ				Sn	Sn	22 38 09.5	-3.3
EMAZ				*i* IVmb_Lg		22 40 58.1	
EAGO	**Agolada(Pontev**	**6.45**	**20**	Pn	Pn	22 37 03.7	+1.4
EAGO				Sn	Sn	22 38 12.5	-1.9
EAGO				*i* IVmb_Lg		22 41 36.7	
MD31	**MD31**	**6.47**	**125**	P	Pn	22 37 02.8	0.0
MD31				S	Sn	22 38 12.6	-2.6
MDT	**Midelt**	**6.61**	**125**	P	Pn	22 37 03.9	-0.7
MDT				S	Sn	22 38 16.2	-2.3
TIO	**Tiouine**	**6.62**	**150**	P	Pn	22 37 04.6	-0.4
TIO				S	Sn	22 38 16.3	-2.7
TIO	**Tiouine**	**6.62**	**150**	P	Pn	22 37 05.0	+0.1
TIO				S	Sn	22 38 17.7	-1.4
UCM	**Universidad Co**	**7.07**	**58**	P	Pn	22 37 12.1	+1.3

*IDC **01** 22:39:05.7±1.2, 7°.39S×67°.69E, h0km, mb3.8/13, mbtmp3.8/13, Error ellipse: s-maj=34.6km s-min=23.1km az=32.0*

*NEIC **01** 22:39:07.0±1.6, 7°.3S±0°.1×68°.0E±0°.1, h10km±2km, mb4.4/14, Error ellipse: s-maj=25.4km s-min=19.8km az=216.0*

ISC 01 22:39:07.1±1.0, **7°.3S**±0°.2×**67°.9E**±0°.1, **h12km, n42,** σ1§**26**/36, **mb4.1**/18, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.53**	**92**	Pn	**Pn**	**22 40 14.9**	**-0.6**
HMDM	**Hanimaadhoo**	**14.94**	**21**	Pn	**Pn**	**22 42 37.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**39.92**	**50**	P	**P**	**22 46 44.7**	**+3.2**
	0.8nm,0.3s,baz=231,slow=8.2,SNR=4.7						
	0.8nm,0.3s						
H04N2	**CROZET ISLANDS**	**41.13**	**197**	T	T	23 30 59.1	
	baz=26,slow=75,SNR=7.5						
H04N1	**CROZET ISLANDS**	**41.13**	**197**	T	T	23 30 56.9	
	baz=26,slow=75,SNR=8.3						
H04N3	**CROZET ISLANDS**	**41.15**	**197**	T	T	23 30 52.9	
	baz=26,slow=75,SNR=7.1						
LSA	**Lhasa**	**43.05**	**30**	P	**P**	**22 47 06.1**	**-1.5**
LSA				IAmb	IAmb	22 47 33.5	
	comp=Z,3.5nm,0.5s						
MANEM	**Manem**	**44.75**	**4**	P	**P**	**22 47 19.5**	**-1.3**
MANEM				IAmb	IAmb	22 47 33.4	
	comp=Z,19nm,1.3s						
GAR	**Garm**	**46.12**	**3**		**P**	**22 47 30.1**	**-1.4**
NRN	**Naryn**	**49.06**	**8**	P	**P**	**22 47 55.0**	**+0.4**
H01W3	**Cape Leeuwin H**	**50.52**	**130**	T	T	23 42 29.4	
	baz=292,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**50.52**	**130**	T	T	23 42 16.8	
	baz=292,slow=75,SNR=8.6						
H01W1	**Cape Leeuwin H**	**50.53**	**130**	T	T	23 42 43.4	
	baz=292,slow=75,SNR=12						
MAKZ	**Makanchi**	**55.31**	**12**	P	**P**	**22 48 40.9**	**+0.4**
MAKZ				IAmb	IAmb	22 48 42.9	
	comp=Z,3.4nm,1.1s						
MKAR	**Makanchi Array**	**55.36**	**12**	P	**P**	**22 48 41.9**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=204,slow=9.8,SNR=4.8						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**55.36**	**12**	P	**P**	**22 48 41.1**	**+0.2**
KBZ	**Khabaz**	**55.61**	**338**	P	**P**	**22 48 44.5**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=170,slow=5.0,SNR=3.8						
	comp=Z,0.7nm,0.9s						
BR131	**Keskin Array S**	**56.49**	**329**	P	**P**	**22 48 49.5**	**+0.1**
BR131				IAmb	IAmb	22 48 58.5	
	comp=Z,4.4nm,1.2s						
BRTR	**Keskin Array B**	**56.49**	**329**	P	**P**	**22 48 48.9**	**-0.5**
	comp=Z,1.0nm,1.0s,baz=154,slow=9.6,SNR=5.2						
	comp=Z,1.0nm,1.0s						
BRTR	**Keskin Array B**	**56.49**	**329**	P	**P**	**22 48 48.4**	**-0.9**
AB31	**Akbulak array**	**56.74**	**354**	P	**P**	**22 48 50.8**	**0.0**
ABKAR	**Akbulak array**	**56.74**	**354**	P	**P**	**22 48 50.7**	**-0.1**
AKTO	**Aktyubinsk**	**58.13**	**353**	P	**P**	**22 49 00.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=173,slow=3.5,SNR=4.0						
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**58.42**	**8**	P	**P**	**22 49 04.1**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=204,slow=7.1,SNR=5.1						
	comp=Z,1.3nm,0.8s						
ZAA0	**Zalesovo Array**	**62.67**	**11**	P	**P**	**22 49 29.2**	**-2.3**
ZAA0				IAmb	IAmb	22 49 49.3	
	comp=Z,1.3nm,0.9s						
ZALV	**Zalesovo Beam**	**62.67**	**11**	P	**P**	**22 49 32.1**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=233,slow=7.2,SNR=3.8						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**62.67**	**11**	P	**P**	**22 49 29.9**	**-1.6**
ARTI	**Arti**	**63.95**	**354**	P	**P**	**22 49 39.8**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=236,slow=2.3,SNR=4.7						
	comp=Z,1.6nm,0.5s						
SONM	**Songino Array**	**64.55**	**28**	P	**P**	**22 49 46.5**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=214,slow=10,SNR=5.1						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**64.55**	**28**	P	**P**	**22 49 42.0**	**-2.2**
SONM				IAmb	IAmb	22 49 54.0	
	comp=Z,3.1nm,1.3s						
ASAR	**Alice Springs**	**65.16**	**113**	P	**P**	**22 49 50.1**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=262,slow=8.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**65.16**	**113**	P	**P**	**22 49 47.4**	**-1.2**
WRA	**Warramunga Arr**	**65.44**	**109**	P	**P**	**22 49 51.5**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=279,slow=6.1,SNR=3.9						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**65.44**	**109**	P	**P**	**22 49 49.6**	**-0.9**
WB0	**Warramunga Arr**	**65.49**	**108**	P	**P**	**22 49 49.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**68.81**	**287**	P	**P**	**22 50 12.1**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=81,slow=6.9,SNR=3.6						
	comp=Z,0.9nm,1.0s						
BLY	**Banja Luka**	**68.95**	**324**	P	**P**	**22 50 12.1**	**-0.2**
BLY				IAmb	IAmb	22 50 22.1	
	comp=Z,5.7nm,1.3s						
NRCA	**Norcia**	**70.40**	**320**	P	**P**	**22 50 20.6**	**-0.7**
NRCA				IAmb	IAmb	22 50 30.5	
	comp=Z,6.3nm,1.3s						
STAL	**STALIGIAL**	**72.42**	**323**	P	**P**	**22 50 33.3**	**-0.1**
STAL				IAmb	IAmb	22 51 01.9	
	comp=Z,5.6nm,1.4s						
ESDC	**Sonseca Array**	**80.90**	**312**	P	**P**	**22 51 21.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=102,slow=5.2,SNR=2.2						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**144.60**	**357**	PKP	**PKPdf**	**22 58 44.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=337,slow=3.6,SNR=3.8						
TXAR	**Lajitas Array**	**156.68**	**341**	PKPab	**PKPab**	**22 59 32.9**	**+0.7**
	comp=Z,0.9nm,1.0s,baz=28,slow=5.7,SNR=5.2						

*IDC **01** 22:42:52.7±0.5, 7°.09S×68°.02E, h0km, mb4.3/30, mbtmp4.3/31, ML4.2/1, MS4.0/54, Error ellipse: s-maj=16.7km s-min=13.2km az=74.0*

*NEIC **01** 22:42:53.9±1.3, 7°.22S±0°.09×68°.00E±0°.08, h10km±1km, mb4.9/83, Error ellipse: s-maj=14.7km s-min=13.0km az=177.0*

*GFZ **01** 22:42:53.4±0.5, 7°.5S±9°×6°.8E±°, h10km, M5.0/35, mb4.8/35*

*GCMT **01** 22:42:54.9±0.2, 7°.35S±0°.02×68°.03E±0°.02, h12km, MW4.9/99, Moment Tensor Solution. s32,c38; s99,c147; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.52±.06; Mθθ 1.34±.06; Mϕϕ 1.18±.07; Mrθ-0.12±.25; Mrϕ-1.24±.05; Mθϕ-0.49±.25; Best double couple: Mo2.56000×10^16^ NP1:ϕs124.00000°, δ43.00000°, λ-104.00000°. NP2: ϕs323.00000°, δ49.00000°, λ-77.00000°. Principal axes: T 2.5150, Plg3.0000°, Azm44.0000°; N 0.0900, Plg9.0000°, Azm134.0000°; P -2.6050, Plg80.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 22:42:55.5±0.7, **7°.17S**±0°.07×**68°.00E**±0°.06, **h20**km±2km, **h20**km:**pP-P, n279,** σ1§**10**/243, **mb4.7**/96, **MS4.0**/57, **4D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.43**	**93**		**Pn**	**22 44 00.0**	**-1.5**
DGAR	**Diego Garcia**	**4.43**	**93**	P	**Pn**	**22 44 00.4**	**-1.1**
KAAM	**Kaadhehdhoo**	**9.10**	**33**	Pn	**Pn**	**22 45 05.0**	**-0.8**
MSEY	**Mahe Island**	**12.69**	**281**	Pn	**Pn**	**22 45 53.7**	**-1.3**
PALK	**Pallekele**	**19.14**	**42**	P	**P**	**22 47 17.1**	**-0.6**
	0.7nm,0.3s,baz=228,slow=14,SNR=4.5						
PALK				LR	LR	22 52 56.6	
	comp=Z,1μm,20.6s,baz=213,slow=32						
	3.9nm,0.7s						
PALK	**Pallekele**	**19.14**	**42**	P	**P**	**22 47 17.9**	**+0.2**
PALK				IAmb	IAmb	22 47 23.2	
	comp=Z,92nm,1.9s						
OPO	**Ambohidratompo**	**23.20**	**239**	LR	LR	22 54 52.0	
	comp=Z,392nm,19.7s,baz=252,slow=31						
ATD	**Arta Tunnel**	**31.16**	**306**	LR	LR	22 59 49.3	
	comp=Z,6.5nm,18.3s,baz=169,slow=33						
RAYN	**Ar Rayn**	**37.60**	**325**		**P**	**22 50 08.3**	**-0.7**
RAYN	**Ar Rayn**	**37.60**	**325**	P	**P**	**22 50 11.1**	**+2.1**
BRDH	**Bariadhala**	**37.63**	**37**	LR	LR	23 05 57.5	
	comp=Z,720nm,18.6s,baz=198,slow=37						
MBAR	**Mbarara**	**37.72**	**278**	LR	LR	23 04 11.5	
	comp=Z,168nm,18.5s,baz=98,slow=34						
EVN	**Everest**	**39.37**	**27**		**P**	**22 50 22.1**	**-2.5**
EVN				IAmb	IAmb	22 50 29.2	
	comp=Z,38nm,2.0s						
CMAR	**Chiang Mai Arr**	**39.76**	**50**	P	**P**	**22 50 26.4**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=242,slow=9.2,SNR=16						
CMAR				PcP	**PcP**	**22 52 34.2**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=213,slow=3.5,SNR=4.5						
CMAR				LR	LR	23 05 51.2	
	comp=Z,92nm,19.0s,baz=240,slow=35						
	comp=Z,3.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.76**	**50**	P	**P**	**22 50 24.2**	**-3.0**
LSZ	**Lusaka**	**39.81**	**255**	LR	LR	23 04 19.8	
	comp=Z,360nm,20.3s,baz=96,slow=32						
LSZ	**Lusaka**	**39.81**	**255**	P	**P**	**22 50 25.5**	**-2.3**
LSZ	**Lusaka**	**39.81**	**255**	P	**P**	**22 50 28.5**	**+0.6**
CHTO	**Chiang Mai**	**39.97**	**49**		**P**	**22 50 26.9**	**-2.1**
CHTO	**Chiang Mai**	**39.97**	**49**	P	**P**	**22 50 31.0**	**+2.0**
SHL	**Shillong**	**39.98**	**35**	P	**P**	**22 50 26.7**	**-2.4**
MATP	**Matopo**	**40.43**	**247**	LR	LR	23 06 13.5	
	comp=Z,654nm,18.1s,baz=85,slow=35						
NIL	**Nilore**	**40.90**	**7**	P	**P**	**22 50 36.0**	**-0.4**
NIL				IAmb	IAmb	22 50 54.1	
	comp=Z,27nm,1.6s						
H04N2	**CROZET ISLANDS**	**41.29**	**197**	T	T	23 34 39.6	
	baz=26,slow=75,SNR=21						
H04N1	**CROZET ISLANDS**	**41.29**	**197**	T	T	23 34 43.6	
	baz=26,slow=75,SNR=16						
H04N3	**CROZET ISLANDS**	**41.30**	**197**	T	T	23 34 40.6	
	baz=26,slow=75,SNR=20						
KBL	**Kabul**	**41.49**	**1**		**P**	**22 50 42.1**	**+0.6**
KBL	**Kabul**	**41.49**	**1**	P	**P**	**22 50 45.3**	**+3.8**
HRA	**Herat**	**41.69**	**353**	P	**P**	**22 50 42.2**	**-0.9**
LSA	**Lhasa**	**42.89**	**30**	P	**P**	**22 50 51.9**	**-1.4**
LSA	**Lhasa**	**42.89**	**30**	*e*P	P	22 50 43.9	-9.4
LBTB	**Lobatse**	**44.20**	**241**	LR	LR	23 07 58.9	
	comp=Z,439nm,18.3s,baz=70,slow=34						
MANEM	**Manem**	**44.61**	**4**		**P**	**22 51 06.6**	**-0.2**
MANEM				IAmb	IAmb	22 51 10.6	
	comp=Z,33nm,1.1s						
SBUM	**Sibu**	**45.16**	**79**	P	**P**	**22 51 10.3**	**-1.0**
SBUM				IAmb	IAmb	22 51 21.1	
	comp=Z,20nm,1.4s						
GAR	**Garm**	**45.98**	**3**		**P**	**22 51 17.1**	**-0.3**
GAR	**Garm**	**45.98**	**3**	P	**P**	**22 51 19.0**	**+1.5**
PZH	**PanZhiHua**	**46.82**	**43**	P	**P**	**22 51 27.6**	**+3.3**
BTK	**Batken**	**47.06**	**3**	P	**P**	**22 51 25.6**	**-0.3**
BTK				IAmb	IAmb	22 51 29.3	
	comp=Z,15nm,1.0s						
ARSB	**Arslanbob**	**48.47**	**5**	P	**P**	**22 51 36.5**	**-0.3**
EIL	**Elat**	**48.48**	**321**	LR	LR	23 08 29.5	
	comp=Z,71nm,19.9s,baz=88,slow=32						
HRFI	**Mount Harif**	**48.68**	**321**	P	**P**	**22 51 39.4**	**+0.8**
NRN	**Naryn**	**48.92**	**8**	P	**P**	**22 51 40.0**	**-0.5**
ASF	**Jabal al Asfar**	**49.09**	**325**	LR	LR	23 09 37.5	
	comp=Z,62nm,18.2s,baz=153,slow=33						
WUS	**Wushi**	**49.22**	**11**	P	**P**	**22 51 43.3**	**+0.6**
WUS				IAmb	IAmb	22 51 51.7	
	comp=Z,28nm,1.8s						
KDJ	**Kajisay**	**49.77**	**9**	P	**P**	**22 51 46.8**	**-0.1**
KDJ				IAmb	IAmb	22 51 55.9	
	comp=Z,19nm,1.5s						
AAK	**Ala-Archa**	**49.92**	**6**	LR	LR	23 12 50.0	
	comp=Z,183nm,18.6s,baz=192,slow=36						
AAK	**Ala-Archa**	**49.92**	**6**		**P**	**22 51 48.7**	**+0.7**
AAK				IAmb	IAmb	22 51 57.4	
	comp=Z,15nm,1.2s						
AAK	**Ala-Archa**	**49.92**	**6**	P	**P**	**22 51 51.3**	**+3.3**
HAKT	**HAKKARI**	**49.94**	**335**	P	**P**	**22 51 47.8**	**-0.5**
BOOM	**Boomskoye usch**	**49.95**	**8**	P	**P**	**22 51 48.7**	**+0.5**
BOOM	**Boomskoye usch**	**49.95**	**8**	P	**P**	**22 51 49.8**	**+1.6**
KK31	**Karatay Array**	**50.09**	**2**	P	**P**	**22 51 48.5**	**-0.6**
KKAR	**Karatay Array**	**50.09**	**2**		**P**	**22 51 49.1**	**+0.1**
TSUM	**Tsumeb**	**50.35**	**251**	LR	LR	23 11 45.9	
	comp=Z,197nm,19.0s,baz=90,slow=34						
SUR	**Sutherland**	**50.45**	**234**	LR	LR	23 12 25.2	
	comp=Z,194nm,18.2s,baz=76,slow=35						
H01W3	**Cape Leeuwin H**	**50.52**	**130**	T	T	23 45 59.8	
	baz=292,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**50.52**	**130**	T	T	23 46 02.3	
	baz=292,slow=75,SNR=12						
H01W1	**Cape Leeuwin H**	**50.54**	**130**	T	T	23 46 02.2	
	baz=292,slow=75,SNR=12						
PDGK	**Podgornoye**	**51.33**	**11**	P	**P**	**22 51 59.0**	**+0.5**
KAPI	**Kappang**	**51.49**	**91**	LR	LR	23 10 31.6	
	comp=Z,141nm,21.5s,baz=268,slow=32						
GNI	**Garni**	**51.74**	**337**	LR	LR	23 13 16.6	
	comp=Z,56nm,21.1s,baz=134,slow=35						
DIGO	**Kars**	**52.51**	**336**	P	**P**	**22 52 09.0**	**+1.5**
GAZ	**Gaziantep**	**52.67**	**329**	P	**P**	**22 52 08.7**	**+0.1**
GAZ				IAmb	IAmb	22 52 18.4	
	comp=Z,22nm,1.4s						
TOLI2	**Tolitoli**	**53.30**	**83**	P	**P**	**22 52 12.6**	**-1.0**
TOLI2				IAmb	IAmb	22 52 22.8	
	comp=Z,11nm,1.1s						
TOLI2	**Tolitoli**	**53.30**	**83**	P	**P**	**22 52 14.6**	**+1.0**
KOPT	**Kop Dagi**	**53.38**	**334**	P	**P**	**22 52 13.4**	**-0.6**
KOPT				IAmb	IAmb	22 52 24.8	
	comp=Z,28nm,1.6s						
ANDN	**Andirin**	**53.43**	**329**	P	**P**	**22 52 16.0**	**+1.8**
ARPR	**Arapgir-MALATY**	**53.62**	**331**	P	**P**	**22 52 13.1**	**-2.5**
EPOS	**Posof**	**53.69**	**337**	P	**P**	**22 52 19.9**	**+3.8**
WMQ	**Urumqi**	**53.80**	**18**	*e*P	**P**	**22 52 19.8**	**+3.1**
WMQ				L	L		
	comp=Z,520nm,17.9s						
WMQ				L	L		
	comp=Z,320nm,17.9s						
WMQ				L	L		
	comp=Z,380nm,22.7s						
KELT	**Kelkit**	**54.04**	**333**	P	**P**	**22 52 20.7**	**+2.0**
LZDM	**Lanzhou Array**	**54.46**	**36**	P	**P**	**22 52 21.0**	**-1.0**
LZDM	comp=Z,1.3nm,0.3s,baz=189,slow=6.6,SNR=2.2			LR	LR	23 16 04.0	
	comp=Z,100nm,20.4s,baz=315,slow=37						
	comp=Z,1.3nm,0.3s						
ENH	**Enshi**	**54.49**	**45**	P	**P**	**22 52 21.6**	**-0.4**
LZH	**Lanzhou**	**54.63**	**36**	*e*P	**P**	**22 52 26.6**	**+3.5**
LZH				sP	pwP	22 52 34.5	+1.8
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				L	L		
	comp=Z,270nm,19.6s						
LZH				L	L		
	comp=Z,200nm,20.5s						
LZH				L	L		
	comp=Z,370nm,21.9s						
BNN	**Bunyan**	**54.65**	**329**	P	**P**	**22 52 22.9**	**-0.2**
BNN				IAmb	IAmb	22 52 32.2	
	comp=Z,22nm,1.4s						
GTA2	**Gaotai**	**54.95**	**30**	*e*P	**P**	**22 52 27.7**	**+2.4**
GTA2				pP	pP	22 52 31.0	+0.2
GTA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA2				L	L		
	comp=Z,200nm,16.5s						
GTA2				L	L		
	comp=Z,260nm,16.5s						
GTA2				L	L		
	comp=Z,270nm,17.5s						
MAKZ	**Makanchi**	**55.16**	**12**		**P**	**22 52 26.4**	**-0.2**
MAKZ				IAmb	IAmb	22 52 28.9	
	comp=Z,8.6nm,1.1s						
MKAR	**Makanchi Array**	**55.21**	**12**	P	**P**	**22 52 26.4**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=201,slow=6.5,SNR=18						
MKAR				PcP	**PcP**	**22 53 28.1**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=212,slow=3.9,SNR=3.8						
MKAR				LR	LR	23 15 23.5	
	comp=Z,196nm,20.0s,baz=195,slow=35						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**55.21**	**12**	P	**P**	**22 52 26.9**	**0.0**
TOKA	**Tokat**	**55.47**	**331**	P	**P**	**22 52 28.9**	**-0.1**
TOKA				IAmb	IAmb	22 52 38.1	
	comp=Z,13nm,1.1s						
KBZ	**Khabaz**	**55.52**	**338**	P	**P**	**22 52 29.2**	**+0.1**
	comp=Z,5.5nm,1.1s,baz=167,slow=4.2,SNR=7.7						
KBZ				LR	LR	23 17 21.6	
	comp=Z,40nm,19.1s,baz=158,slow=37						
	comp=Z,5.5nm,1.1s						
SOEI	**Soe**	**55.67**	**97**	P	**P**	**22 52 30.1**	**-0.8**
KIV	**Kislovodsk**	**55.80**	**338**	P	**P**	**22 52 30.6**	**-0.7**
KIV				IAmb	IAmb	22 52 40.0	
	comp=Z,26nm,1.6s						
KIV	**Kislovodsk**	**55.80**	**338**	P	P	22 52 40.3	+9.0
	comp=Z,6.3nm,1.4s						
KIV	**Kislovodsk**	**55.80**	**338**	P	**P**	**22 52 30.8**	**-0.5**
KKUL	**Konya-Kulu**	**56.41**	**328**	P	**P**	**22 52 36.4**	**+0.7**
BR104	**Keskin Array S**	**56.42**	**328**	P	**P**	**22 52 36.3**	**+0.4**
	comp=Z,80nmcomp=Z,8.3nm,1.2s						
BR104				pP	**pP**	**22 52 40.1**	**-1.1**
	comp=Z,80nmcomp=Z,8.3nm,1.2s						
BR131	**Keskin Array S**	**56.44**	**329**	P	**P**	**22 52 35.8**	**-0.2**
BR131				IAmb	IAmb	22 52 44.4	
	comp=Z,16nm,1.2s						
BRTR	**Keskin Array B**	**56.44**	**329**	P	**P**	**22 52 36.1**	**+0.1**
	comp=Z,4.3nm,1.0s,baz=144,slow=8.7,SNR=17						
BRTR				LR	LR	23 14 38.1	
	comp=Z,31nm,18.7s,baz=106,slow=34						
	comp=Z,4.3nm,1.0s						
BRTR	**Keskin Array B**	**56.44**	**329**	P	**P**	**22 52 35.7**	**-0.2**
BR105	**Keskin Array S**	**56.44**	**328**	P	**P**	**22 52 36.5**	**+0.5**
	comp=Z,82nmcomp=Z,8.7nm,1.2s						
BR106	**Keskin Array S**	**56.45**	**329**	P	**P**	**22 52 36.5**	**+0.4**
	comp=Z,74nmcomp=Z,7.8nm,1.2s						
AB31	**Akbulak array**	**56.63**	**354**	P	**P**	**22 52 37.0**	**0.0**
AB31				IAmb	IAmb	22 52 39.6	
	comp=Z,10nm,1.1s						
ABKAR	**Akbulak array**	**56.63**	**354**	P	**P**	**22 52 36.9**	**0.0**
FITZ	**Fitzroy Crossi**	**57.09**	**107**	LR	LR	23 17 49.1	
	comp=Z,107nm,18.1s,baz=312,slow=37						
AKTO	**Aktyubinsk**	**58.02**	**352**	P	**P**	**22 52 47.3**	**+0.5**
	comp=Z,6.0nm,0.9s,baz=172,slow=6.9,SNR=12						
AKTO				LR	LR	23 16 39.5	
	comp=Z,69nm,21.3s,baz=142,slow=35						
	comp=Z,6.0nm,0.9s						
MDUB	**Mudurnu**	**58.26**	**328**	P	**P**	**22 52 48.8**	**-0.1**
KURBB	**Kurchatov Arra**	**58.27**	**8**	P	**P**	**22 52 48.5**	**-0.1**
	comp=Z,7.4nm,1.0s,baz=204,slow=7.1,SNR=28						
KURBB				LR	LR	23 16 29.8	
	comp=Z,200nm,21.9s,baz=194,slow=35						
	comp=Z,7.4nm,1.0s						
KURK	**Kurchatov**	**58.38**	**8**	P	**P**	**22 52 49.3**	**+0.1**
KURK				IAmb	IAmb	22 52 51.9	
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**58.38**	**8**	P	**P**	**22 52 50.2**	**+0.9**
EDA	**Edea**	**58.74**	**279**	P	**P**	**22 52 52.0**	**-0.6**
EDA				IAmb	IAmb	22 53 00.7	
	comp=Z,14nm,1.2s						
DAV	**Davao City (W)**	**59.15**	**77**	LR	LR	23 20 57.4	
	comp=Z,60nm,18.1s,baz=184,slow=39						
BVAR	**Borovoye Array**	**60.00**	**2**	P	**P**	**22 53 00.5**	**0.0**
	comp=Z,4.1nm,0.8s,baz=152,slow=6.7,SNR=13						
	comp=Z,4.1nm,0.9s						
BORK	**Borovoye**	**60.02**	**2**	P	**P**	**22 53 00.5**	**-0.1**
BORK				IAmb	IAmb	22 53 03.3	
	comp=Z,6.1nm,0.9s						
MAW	**Mawson**	**60.45**	**182**	P	**P**	**22 53 04.9**	**+1.5**
	comp=Z,3.1nm,1.0s,baz=19,slow=10,SNR=4.8						
MAW				LR	LR	23 12 39.9	
	comp=Z,195nm,21.8s,baz=360,slow=30						
	comp=Z,3.1nm,1.0s						
MAW	**Mawson**	**60.45**	**182**	P	**P**	**22 53 03.0**	**-0.4**
BTO2	**Baotou**	**61.27**	**35**	*e*P	**P**	**22 53 11.8**	**+2.2**
BTO2				pP	**sP**	**22 53 18.0**	**+1.0**
BTO2				sP	**pwP**	**22 53 20.9**	**+1.8**
BTO2				pmax	pmax		
	comp=Z,22nm,1.0s						
BELG	**Belogornoye**	**61.83**	**346**	P	**P**	**22 53 13.4**	**+0.5**
	comp=Z,14nm,1.1s,baz=1.7,slow=5.9,SNR=3.8						
	comp=Z,14nm,1.1s						
RDO	**Rodhopi**	**61.86**	**325**	P	**P**	**22 53 12.9**	**-0.5**
RDO				IAmb	IAmb	22 53 21.6	
	comp=Z,10.0nm,1.2s						
RDO	**Rodhopi**	**61.86**	**325**	P	**P**	**22 53 13.7**	**+0.4**
NJ2	**Nanjing**	**62.20**	**48**	*e*P	**P**	**22 53 17.1**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
AGG	**Agios Georgios**	**62.45**	**321**	P	**P**	**22 53 16.4**	**-1.0**
ZAA0	**Zalesovo Array**	**62.52**	**11**	P	**P**	**22 53 16.5**	**-1.0**
ZAA0				IAmb	IAmb	22 53 19.6	
	comp=Z,7.3nm,1.1s						
ZALV	**Zalesovo Beam**	**62.52**	**11**	P	**P**	**22 53 17.4**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=224,slow=6.2,SNR=13						
ZALV				LR	LR	23 19 37.8	

comp=Z,7.5nm,0.7s,baz=324,slow=4.2,SNR=3.7
KIRV LR LR 23 23 39.2
comp=Z,66nm,20.1s,baz=152,slow=36
comp=Z,7.5nm,0.7s
MARCO **Tramutola 67.33 319** P **P** **22 53 50.1 +0.8**
OBN Obninsk 67.36 341 P **P** **22 53 48.3 -0.6**
JOW Kunigami 67.42 57 LR LR 23 22 51.1
comp=Z,74nm,19.5s,baz=2.5,slow=36
TRPA Tarpa 68.02 329 P **P** **22 53 53.8 +0.5**
SGRT San Giovanni R 68.14 320 P **P** **22 53 53.6 -0.8**
RNPP8 **Varash 68.59 333** P **P** **22 53 58.3 +1.5**
ABAH Abaujker 68.80 329 P **P** **22 53 58.5 +0.3**
TORD Torodi Ar. Bea 68.87 287 P **P** **22 53 59.2 -0.1**
comp=Z,2.4nm,1.0s,baz=104,slow=6.6,SNR=8.1
comp=Z,2.4nm,1.0s
TORD Torodi Ar. Bea 68.87 287 P **P** **22 53 58.5 -0.8**
TORD IAmb IAmb 22 54 07.0
comp=Z,7.0nm,1.1s
BLY Banja Luka 68.91 324 P **P** **22 53 58.6 -0.4**
BLY Banja Luka 68.91 324 P **P** **22 53 59.3 +0.3**
MORH Mrgy. Hungar 68.92 326 P **P** **22 53 59.3 +0.3**
INTR Introdacqua 69.45 320 P **P** **22 54 01.6 -0.8**
INTR IAmb IAmb 22 54 11.0
comp=Z,15nm,1.3s
AQU L'Aquila 69.94 320 P **P** **22 54 04.9 -0.6**
AQU IAmb IAmb 22 54 14.0
comp=Z,19nm,1.5s
AQU L'Aquila 69.94 320 P **P** **22 54 09.5 +4.0**
MPLH Magyarpolny 70.10 326 P **P** **22 54 05.8 -0.5**
MPLH Magyarpolny 70.10 326 P **P** **22 54 06.7 +0.4**
VYHS Vyhne 70.18 328 P **P** **22 54 05.7 -1.1**
VYHS Vyhne 70.18 328 *eP* **P** **22 54 05.7 -1.1**
VYHS *e* 22 54 14.3
ELIB Princess Elisa 70.25 193 *dP* **P** **22 54 07.3 +0.3**
comp=Z,2.3nm,1.1s
NRCA Norcia 70.37 320 P **P** **22 54 07.7 -0.4**
MODS Modra-Piesok 70.94 327 P **P** **22 54 11.6 +0.1**
MODS Modra-Piesok 70.94 327 *eP* **P** **22 54 11.1 -0.3**
MODS *e* 22 54 18.8
MURB Monte Urbino 70.96 320 P **P** **22 54 11.2 -0.5**
MURB IAmb IAmb 22 54 25.0
comp=Z,15nm,1.3s
JAVC Velka Javorina 71.02 327 *eP* **P** **22 54 11.7 -0.2**
RONA Rosalia, Austr 71.09 326 *i P* **P** **22 54 12.9 +0.5**
comp=Z,5.2nm,1.1s
MAUC Maruska 71.23 328 *eP* **P** **22 54 11.3 -1.9**
MAUC *ex* x 22 54 20.1
SOKA Soboth 71.24 325 *i P* **P** **22 54 13.4 +0.1**
comp=Z,3.9nm,1.3s
KSAR Wonju Array Be 71.27 47 P **P** **22 54 13.3 -0.3**
ARSA Arzberg 71.28 325 P **P** **22 54 13.2 -0.3**
ARSA IAmb IAmb 22 54 21.9
comp=Z,16nm,1.4s
ARSA Arzberg 71.28 325 *i P* **P** **22 54 13.8 +0.3**
comp=Z,0.1nm,0.3s
KSRS Korea Array 71.30 47 LR LR 23 25 42.4
comp=Z,121nm,20.4s,baz=245,slow=36
OBKA Obir 71.43 324 *i P* **P** **22 54 15.4 +0.9**
comp=Z,3.2nm,1.1s
INKA Innaminka 71.45 117 P **P** **22 54 15.1 +0.1**
INKA IAmb IAmb 22 54 24.4
comp=Z,7.5nm,1.1s
CONA Conrad Observa 71.46 326 *i P* **P** **22 54 14.2 -0.5**
comp=Z,5.5nm,1.0s
STEB Steborice 71.60 328 *eP* P 22 54 22.2 +6.8
MORC Moravsky Berou 71.63 328 P **P** **22 54 15.1 -0.5**
MORC IAmb IAmb 22 54 23.5
comp=Z,16nm,1.5s
MORC Moravsky Berou 71.63 328 *eP* **P** **22 54 15.0 -0.5**
SESA Seetaler Alpe, 71.74 325 *i P* **P** **22 54 16.5 0.0**
SNR=5.2
JNU Nakatsue 71.81 52 LR LR 23 27 18.7
comp=Z,76nm,18.1s,baz=234,slow=37
KRUC Moravsky 71.82 327 *eP* **P** **22 54 16.0 -0.7**
KRUC Moravsky 71.82 327 P **P** **22 54 16.7 0.0**
VRAC Vranov 71.85 327 P **P** **22 54 16.9 0.0**
comp=Z,1.5nm,0.2s,baz=206,slow=6.0,SNR=3.0
VRAC LR LR 23 24 20.2
comp=Z,30nm,22.0s,baz=104,slow=35
comp=Z,1.5nm,0.2s
VRAC Vranov 71.85 327 *eP* **P** **22 54 15.6 -1.3**
MYKA Terra Mystica 72.02 324 *i P* **P** **22 54 18.9 +0.9**
comp=Z,4.7nm,1.2s
MOA Molln 72.31 325 *i P* **P** **22 54 20.0 +0.3**
comp=Z,7.7nm,1.1s,SNR=6.2
STKA Stephens Creek 72.33 121 LR LR 23 24 45.7
comp=Z,106nm,18.2s,baz=208,slow=35
KBA Koelnbreinsper 72.43 324 *i P* **P** **22 54 20.6 0.0**
comp=Z,3.6nm,1.1s
CN2 Changchun 72.48 40 *eP* **P** **22 54 22.7 +1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BIOA Bad Ischl, Aus 72.59 325 *i P* **P** **22 54 21.2 -0.1**
comp=Z,2.2nm,0.7s
DPC Dobruska-Polom 72.60 328 *eP* **P** **22 54 17.7 -3.7**
DPC *epP* **pP** **22 54 27.6 +0.8**
ABTA Abfaltersbach 72.74 324 *i P* **P** **22 54 22.7 +0.3**
comp=Z,14nm,1.4s,SNR=7.3
OSTC Ostas 72.78 328 *eP* **P** **22 54 22.2 -0.2**
OSTC *ex* x 22 54 28.6
LESA Schwarzleotal 73.00 324 *i P* **P** **22 54 23.4 -0.5**
comp=Z,4.8nm,0.9s
ZVC Zvikov 73.22 327 *eP* **P** **22 54 22.7 -2.4**
ZVC *epP* **pP** **22 54 31.5 +1.0**
KHC Kasperske Hory 73.39 326 **P** **22 54 25.1 -1.0**
KHC Kasperske Hory 73.39 326 *eP* **P** **22 54 25.6 -0.5**
KHC *ex* x 22 54 32.9
WTTA Wattenberg 73.52 324 *i P* **P** **22 54 26.7 -0.4**
comp=Z,16nm,1.4s,SNR=5.7
WATA Walderalm 73.59 324 *i P* **P** **22 54 27.2 -0.2**
comp=Z,13nm,1.3s,SNR=5.4
SQTA Sankt Quirin 73.75 324 *i P* **P** **22 54 28.3 -0.1**
comp=Z,10nm,1.0s
MOTA Moosalm 73.88 324 *i P* **P** **22 54 29.0 -0.1**
comp=Z,14nm,1.3s,SNR=7.2
FETA Feichten 73.94 323 *i P* **P** **22 54 29.7 +0.1**
comp=Z,6.4nm,1.0s,SNR=6.8
DBIC Dimbokro 73.96 279 P **P** **22 54 31.7 +1.6**
comp=Z,2.9nm,0.9s,baz=87,slow=5.6,SNR=3.5
DBIC LR LR 23 26 53.5
comp=Z,83nm,18.3s,baz=133,slow=36
comp=Z,2.9nm,0.9s
FUORN **Ofenpass-Fuorn 74.02 323** **P** **22 54 29.2 -0.9**
BRG Berggiesshubel 74.15 328 *eP* **P** **22 54 31.0 +0.6**
BRG Amp 22 54 32.1
comp=Z,9.7nm,1.4s
BRG Berggiesshubel 74.15 328 P P 22 54 38.5 +8.1
BRG Amp 22 54 40.2
comp=Z,22nm,1.5s
RETA Reutte 74.15 324 *i P* **P** **22 54 30.1 -0.5**
comp=Z,8.6nm,1.3s
HSKC Hora Svate Kat 74.27 327 *eP* **P** **22 54 31.7 +0.5**
HSKC *ex* x 22 54 39.6
TUE Stuetta 74.50 322 **P** **22 54 32.3 -0.6**
TUE IAmb IAmb 22 54 43.9
comp=Z,14nm,1.2s
DAVA Damuels 74.57 323 *i P* **P** **22 54 33.4 +0.2**
comp=Z,14nm,1.1s
NKC Novy Kostel 74.60 327 *eP* **P** **22 54 33.9 +0.8**
CLL Collm 74.88 328 **P** **22 54 34.3 -0.4**
CLL IAmb IAmb 22 54 43.7
comp=Z,16nm,1.2s
CLL Collm 74.88 328 *i P* **P** **22 54 35.0 +0.3**
comp=Z,11nm,1.4s
CLL *i* x x 22 54 42.1
comp=Z,24nm,1.4s
CLL *ex* x 22 54 54.0
MDJ Mudanjiang 75.50 40 P **P** **22 54 38.3 -0.1**
MDJ IAmb IAmb 22 54 47.6
comp=Z,19nm,1.2s
BNI Bardonecchia 75.51 320 P **P** **22 54 37.9 -0.8**
SENIN Lac Senin/Sane 75.71 321 **P** **22 54 38.3 -1.6**
SENIN IAmb IAmb 22 54 48.0
comp=Z,10.0nm,0.9s
FINES FINESS Array B 75.75 341 P **P** **22 54 40.0 +0.6**
comp=Z,2.9nm,0.9s,baz=64,slow=9.3,SNR=4.8
comp=Z,2.9nm,0.9s
FINES FINESS Array B 75.75 341 P **P** **22 54 39.4 -0.1**
TROLL Troll, Antarti 75.77 197 ⇓P **P** **22 54 41.5 +1.8**
comp=Z,126nm,1.0s
CTA Charters Tower 76.58 109 LR LR 23 24 49.0
comp=Z,78nm,21.9s,baz=235,slow=33
USRK Ussuriysk Ar. 76.89 42 P **P** **22 54 46.6 +0.3**
comp=Z,1.0nm,0.7s,baz=238,slow=13,SNR=4.0
USRK LR LR 23 28 56.9
comp=Z,87nm,20.7s,baz=218,slow=36
comp=Z,1.0nm,0.7s
USRK Ussuriysk Ar. 76.89 42 P **P** **22 54 45.5 -0.8**
SNAA Sanae 77.25 198 ⇓P **P** **22 54 49.4 +1.5**
comp=Z,44nm,1.0s
SNAA Sanae 77.25 198 P **P** **22 54 48.7 +0.8**
comp=Z,1.9nm,0.9s,baz=55,slow=5.3,SNR=4.4
SNAA LR LR 23 20 37.1
comp=Z,211nm,21.6s,baz=46,slow=29
comp=Z,1.9nm,0.9s
SNAA Sanae 77.25 198 P **P** **22 54 47.3 -0.7**
NRIK Noril'sk 77.53 7 P **P** **22 54 49.8 +0.4**
comp=Z,1.2nm,0.5s,baz=161,slow=7.5,SNR=4.0
NRIK LR LR 23 31 13.8
comp=Z,120nm,18.5s,baz=196,slow=38
comp=Z,1.2nm,0.5s
NRIK Noril'sk 77.53 7 P **P** **22 54 50.6 +1.3**
NRIK IAmb IAmb 22 54 59.2
comp=Z,26nm,2.0s
VNA2 Neumayer--Watz 78.50 199 ⇓P **P** **22 54 55.6 +0.7**
comp=Z,2.5nm,0.9s,baz=51,slow=4.7
MJAR Matsushiro Arr 78.64 51 P **P** **22 54 56.9 +0.7**
comp=Z,2.8nm,1.0s,baz=249,slow=7.6,SNR=4.3
MJAR LR LR 23 30 31.7
comp=Z,50nm,18.8s,baz=232,slow=36
comp=Z,2.8nm,1.0s
MJAR Matsushiro Arr 78.64 51 P **P** **22 54 56.3 0.0**
MJAR IAmb IAmb 22 55 04.7
comp=Z,16nm,1.6s
KLR Kul'dur 78.81 37 LR LR 23 31 48.2
comp=Z,70nm,20.6s,baz=240,slow=37
GUMO Guam 79.04 75 LR LR 23 27 18.6
comp=Z,61nm,21.3s,baz=134,slow=34
MDT Midelt 79.46 305 LR LR 23 31 28.1
comp=Z,62nm,18.1s,baz=166,slow=37
HFS Hagfors 79.49 336 P **P** **22 55 00.8 +0.4**
comp=Z,2.9nm,0.8s,baz=155,slow=8.2,SNR=5.8
comp=Z,2.9nm,0.8s
MD01 Midelt array s 79.59 305 P **P** **22 55 00.3 -1.5**
ESBB Sonseca Array 80.89 312 P **P** **22 55 07.9 -0.6**
ESBB IAmb IAmb 22 55 10.0
comp=Z,15nm,1.4s
ESDC Sonseca Array 80.89 312 P **P** **22 55 08.7 +0.2**
comp=Z,2.9nm,1.1s,baz=91,slow=5.0,SNR=11
comp=Z,2.9nm,1.1s
ESDC Sonseca Array 80.89 312 P **P** **22 55 08.1 -0.4**
PAB San Pablo 81.14 312 P **P** **22 55 09.9 +0.1**
PAB IAmb IAmb 22 55 19.5
comp=Z,17nm,1.2s
ARCES **ARCESS Array B 81.88 346** LR LR 23 33 29.4
comp=Z,40nm,19.0s,baz=102,slow=37
QSPA South Pole Qui 82.86 180 P **P** **22 55 19.0 +0.5**
comp=Z,4.4nm,1.1s,baz=214,slow=0.4,SNR=6.5
QSPA LR LR 23 26 52.1
comp=Z,115nm,21.7s,baz=282,slow=32
comp=Z,4.4nm,1.1s
QSPA South Pole Qui 82.86 180 **P** **22 55 18.3 -0.1**
YAK Yakutsk 83.54 25 LR LR 23 33 06.6
comp=Z,124nm,20.2s,baz=228,slow=36
VNDA Vanda 83.89 167 P **P** **22 55 24.6 +1.3**
comp=Z,1.8nm,1.0s,baz=334,slow=6.1,SNR=5.2
VNDA LR LR 23 27 21.4
comp=Z,139nm,18.9s,baz=272,slow=32
comp=Z,1.8nm,1.0s
VNDA Vanda 83.89 167 P **P** **22 55 23.6 +0.2**
VNDA IAmb IAmb 22 55 33.0
comp=Z,10nm,1.4s
SBA Scott Base 84.89 168 P **P** **22 55 28.5 +0.1**
EKA Eskdalemuir Ar 85.33 327 P **P** **22 55 30.8 -0.2**
comp=Z,1.1nm,0.7s,baz=126,slow=5.4,SNR=3.7
comp=Z,1.1nm,0.7s
TIXI Tiksi 87.97 16 LR LR 23 35 44.3
comp=Z,235nm,21.5s,baz=246,slow=36
TIXI Tiksi 87.97 16 P **P** **22 55 43.1 -0.4**
SPITS Spitsbergen Ar 89.67 351 LR LR 23 38 35.9
comp=Z,39nm,20.0s,baz=93,slow=37
MA2 Magadan 92.47 30 LR LR 23 40 02.4
comp=Z,57nm,18.6s,baz=248,slow=37
PETK Petropavlovsk- 95.50 37 LR LR 23 44 00.1
comp=Z,60nm,18.2s,baz=265,slow=38
ILAR Eielson Array 117.44 16 PKP **PKiKP** **23 01 39.8 +0.4**
comp=Z,0.7nm,0.9s,baz=316,slow=3.3,SNR=5.4
YKA Yellowknife Ar 124.75 1 PKP **PKiKP** **23 01 54.4 +0.6**
comp=Z,3.0nm,0.9s,baz=9.9,slow=2.9,SNR=5.2
PDAR Pinedale Array 144.48 357 PKP PKPbc 23 02 30.2 +0.7
comp=Z,0.8nm,0.5s,baz=99,slow=3.3,SNR=8.3
PDAR Pinedale Array 144.48 357 PKPbc 23 02 29.8 +0.2
T42A Van Buren 144.70 330 PKPdf **PKPab** **23 02 29.9 0.0**
352A Blakely 145.01 317 PKPbc **PKPbc** **23 02 30.3 -1.0**
S39A Bolivar 145.20 334 PKPbc **PKPbc** **23 02 30.8 -0.9**
LCAR Lake Charles 145.48 329 **PKPbc** **23 02 32.4 -0.3**
HVU Hansel Valley 145.53 1 **PKPdf** **23 02 32.6 -0.2**
NVAR Mina Array Bea 148.36 9 PKPbc **PKPbc** **23 02 40.2 -0.9**
comp=Z,2.9nm,0.8s,baz=31,slow=1.0,SNR=9.6
NVAR Mina Array Bea 148.36 9 **PKPdf** **23 02 36.7 -1.1**
TXAR Lajitas Array 156.59 341 PKP **PKPdf** **23 02 50.4 +0.4**
comp=Z,0.8nm,1.0s,baz=345,slow=3.9,SNR=4.5
TXAR PKPab **PKPab** **23 03 19.4 +0.7**
comp=Z,3.1nm,1.0s,baz=35,slow=3.1,SNR=13
TXAR Lajitas Array 156.59 341 **PKPab** **23 03 18.2 -0.5**

*IDC **01** 23:37:18.2±1.8,21°.15N×121°.54E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=158.7km s-min=24.3km az=65.0*
*TAP **01** 23:37:29.4,21°.42N×121°.44E,h99km,ML3.8,D*
ISC 01 23:37:28.5±0.9,21°.27N±0°.04×121°.49E±0°.04,h92km±6km, n96,σ1s52/173,mb3.5/5,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**0.73**	**7**	*eP*	**Pn**	**23 37 45.0**	**-0.5**
LYUB				*i* S	**Sn**	**23 37 57.7**	**-0.5**
LAY	**Lan-yu**	**0.76**	**4**	*eP*	**Pn**	**23 37 45.1**	**-0.8**
LAY				*eS*	**Sn**	**23 37 57.5**	**-1.4**
TSEB	**Hengchuen, Pin**	**0.83**	**318**	P	**Pn**	**23 37 47.5**	**+0.9**
TSEB				*i* S	**Sn**	**23 38 01.2**	**+1.2**
TWKBT	**Hengchun**	**0.92**	**316**	*i* P	**Pn**	**23 37 48.1**	**+0.6**
TWKBT				*i* S	**Sn**	**23 38 01.6**	**0.0**
TWK1	**Hengchun**	**0.92**	**316**	P	**Pn**	**23 37 48.0**	**+0.4**
TWK1				*i* S	**Sn**	**23 38 01.6**	**-0.2**
BBP	**Basco**	**0.94**	**152**	*i* P	**Pn**	**23 37 46.9**	**-0.8**
BBP				*i* S	**Sn**	**23 37 59.2**	**-2.9**
SMST	**Manzhou Townsh**	**0.96**	**321**	P	**Pn**	**23 37 48.1**	**+0.1**
SMST				S	**Sn**	**23 38 01.8**	**-0.7**
HEN	**Hengchun**	**1.01**	**316**	P	**Pn**	**23 37 49.2**	**+0.7**
HEN				*eS*	**Sn**	**23 38 04.2**	**+0.7**
SLIU	**Shizi**	**1.14**	**326**	P	**Pn**	**23 37 50.3**	**+0.3**
SLIU				*eS*	**Sn**	**23 38 06.1**	**-0.1**
TAW	**Tawu**	**1.21**	**333**	P	**Pn**	**23 37 50.2**	**-0.6**
TAW				S	**Sn**	**23 38 05.7**	**-1.9**
EAST	**Anshuo**	**1.26**	**332**	*eP*	**Pn**	**23 37 51.2**	**-0.3**
EAST				*i* S	**Sn**	**23 38 07.1**	**-1.6**
SCZT	**Fangliau**	**1.36**	**324**	*i* P	**Pn**	**23 37 52.8**	**+0.1**
SCZT				S	**Sn**	**23 38 09.9**	**-1.0**
LDUT	**Ludao**	**1.39**	**359**	*eP*	**Pn**	**23 37 51.8**	**-1.2**
LDUT				*eS*	**Sn**	**23 38 09.1**	**-2.5**
ECL	**Taimali**	**1.41**	**339**	*eP*	**Pn**	**23 37 52.9**	**-0.3**
ECL				*eS*	**Sn**	**23 38 09.2**	**-2.7**
SSPT	**Xinbi**	**1.48**	**325**	*eP*	**Pn**	**23 37 54.9**	**+0.8**
TWP	**Hsiaoliuchiu**	**1.50**	**316**	*i* P	**Pn**	**23 37 56.0**	**+1.7**
TWP				*eS*	**Sn**	**23 38 16.0**	**+2.1**
MASBT	**Mashibuluo**	**1.55**	**329**	*eP*	**Pn**	**23 37 55.5**	**+0.4**
MASBT				*eS*	**Sn**	**23 38 14.4**	**-0.8**
TWGBT	**Beinan**	**1.58**	**346**	*eP*	**Pn**	**23 37 55.4**	**-0.1**
TWGBT				*eS*	**Sn**	**23 38 13.1**	**-2.7**
TWG	**Pinlang**	**1.59**	**346**	*eP*	**Pn**	**23 37 55.3**	**-0.2**
TWG				S	**Sn**	**23 38 13.0**	**-2.9**
LONT	**Longtian**	**1.66**	**348**	*eP*	**Pn**	**23 37 56.2**	**-0.3**
LONT				*eS*	**Sn**	**23 38 17.2**	**-0.4**
SSD	**Sandimen**	**1.67**	**332**	*eP*	**Pn**	**23 37 56.9**	**+0.4**
SSD				*eS*	**Sn**	**23 38 16.7**	**-1.1**
EDH	**Donghe**	**1.70**	**354**	*eP*	**Pn**	**23 37 56.4**	**-0.6**
EDH				S	**Sn**	**23 38 17.0**	**-1.5**
CHKT	**Chengkung**	**1.82**	**356**	*eP*	**Pn**	**23 37 58.3**	**-0.2**
CHKT				*eS*	**Sn**	**23 38 18.2**	**-3.0**
TWM1	**Shoushan**	**1.83**	**327**	*eP*	**Pn**	**23 38 00.6**	**+1.9**
SCST	**Cishan**	**1.85**	**330**	*eP*	**Pn**	**23 37 59.5**	**+0.6**
SCST				*eS*	**Sn**	**23 38 21.4**	**-0.7**
CHKH	**Chenggong**	**1.91**	**357**	*eP*	**Pn**	**23 37 59.3**	**-0.4**
CHKH				*i* S	**Sn**	**23 38 21.7**	**-1.7**
FULB	**Fuli**	**1.92**	**354**	*eP*	**Pn**	**23 38 01.0**	**+1.2**
FULB				*eS*	**Sn**	**23 38 23.8**	**+0.1**
ELDTW	**Lidau**	**1.96**	**347**	*eP*	**Pn**	**23 38 01.9**	**+1.6**
ELDTW				*eS*	**Sn**	**23 38 22.4**	**-2.2**
STYH	**Taoyuan**	**2.00**	**341**	*eP*	**Pn**	**23 38 02.8**	**+1.9**
ECBN	**Changbin**	**2.03**	**359**	P	**Pn**	**23 38 00.6**	**-0.7**
ECBN				S	**Sn**	**23 38 24.4**	**-1.7**
EYUL	**Yuli**	**2.07**	**356**	*eP*	**Pn**	**23 38 02.5**	**+0.7**
TWF1	**Yuli**	**2.08**	**355**	*eP*	**Pn**	**23 38 02.0**	**+0.2**
CHN1	**Nanshi**	**2.10**	**335**	*eP*	**Pn**	**23 38 02.6**	**+0.4**
CHN1				*eS*	**Sn**	**23 38 26.0**	**-1.9**
YULB	**Yu-li**	**2.12**	**355**	*eP*	**Pn**	**23 38 02.9**	**+0.5**
YULB				*eS*	**Sn**	**23 38 27.0**	**-1.2**
WTP	**Ta-pu**	**2.12**	**338**	P	**Pn**	**23 38 02.5**	**0.0**
WTP				*eS*	**Sn**	**23 38 27.0**	**-1.5**
SSHA	**Shanhua**	**2.16**	**329**	*eP*	**Pn**	**23 38 02.5**	**-0.5**
SSHA				*eS*	**Sn**	**23 38 28.8**	**-0.5**
TPUB	**Ta-pu**	**2.17**	**338**	P	**Pn**	**23 38 03.5**	**+0.4**
TPUB				S	**Sn**	**23 38 27.7**	**-1.8**
TWK	**Hsinying**	**2.19**	**335**	*eP*	**Pn**	**23 38 03.0**	**-0.4**
TWK				*eS*	**Sn**	**23 38 28.0**	**-2.1**
HGSD	**Ruisui**	**2.21**	**358**	*eP*	**Pn**	**23 38 03.4**	**-0.2**
HGSD				*eS*	**Sn**	**23 38 28.2**	**-2.2**
EHYH	**Wanrong**	**2.21**	**356**	*eP*	**Pn**	**23 38 04.8**	**+1.2**
EHYH				*eS*	**Sn**	**23 38 28.9**	**-1.5**
EHY	**Hungye**	**2.23**	**356**	*eP*	**Pn**	**23 38 03.8**	**0.0**
EHY				*eS*	**Sn**	**23 38 28.6**	**-2.2**
SCLT	**Jiali**	**2.24**	**328**	*eP*	**Pn**	**23 38 03.2**	**-0.8**
SCLT				*eS*	**Sn**	**23 38 30.0**	**-1.1**
TSCK	**Chigu Township**	**2.27**	**325**	*eP*	**Pn**	**23 38 03.3**	**-1.1**
TSCK				*eS*	**Sn**	**23 38 30.9**	**-1.0**
WCKO	**Fanlu**	**2.31**	**339**	*eP*	**Pn**	**23 38 04.9**	**0.0**
WCKO				*eS*	**Sn**	**23 38 31.6**	**-1.1**
ALS	**Alishan**	**2.31**	**344**	*eP*	**Pn**	**23 38 06.7**	**+1.4**
ALS				*eS*	**Sn**	**23 38 29.0**	**-1.3**
ICHU	**Yijhu**	**2.36**	**332**	*eP*	**Pn**	**23 38 05.3**	**-0.2**
ICHU				*eS*	**Sn**	**23 38 31.3**	**-2.6**
CHY	**Chiayi**	**2.42**	**336**	*eP*	**Pn**	**23 38 06.0**	**-0.4**
CHY				*eS*	**Sn**	**23 38 33.4**	**-2.1**
CHN5	**Tsauling**	**2.43**	**342**	*eP*	**Pn**	**23 38 07.2**	**+0.6**
CHN5				*eS*	**Sn**	**23 38 34.3**	**-1.5**
WARBT	**Fenglin Townsh**	**2.43**	**358**	*eP*	**Pn**	**23 38 05.7**	**-0.8**
WARBT				*eS*	**Sn**	**23 38 33.7**	**-2.0**
WHYT	**Xinyi Township**	**2.48**	**346**	*eP*	**Pn**	**23 38 06.3**	**-1.0**
SHUL	**Shoufeng**	**2.50**	**1**	*i* P	**Pn**	**23 38 07.4**	**0.0**
SHUL				*eS*	**Sn**	**23 38 36.2**	**-1.1**
WSL	**Shuilin Townsh**	**2.53**	**333**	*eP*	**Pn**	**23 38 07.5**	**-0.3**
WSL				*eS*	**Sn**	**23 38 35.8**	**-2.1**
SSLB	**Suanglung**	**2.55**	**349**	*eP*	**Pn**	**23 38 08.6**	**+0.4**
SSLB				*eS*	**Sn**	**23 38 37.3**	**-1.3**
TEYL	**Yanliau Villag**	**2.58**	**2**	*eP*	**Pn**	**23 38 08.7**	**+0.2**
TEYL				*eS*	**Sn**	**23 38 39.1**	**-0.1**
WDGT	**Dungji**	**2.61**	**320**	*eP*	**Pn**	**23 38 08.4**	**-0.4**
WDGT				*eS*	**Sn**	**23 38 37.3**	**-2.4**
WSF	**Szhu**	**2.63**	**334**	*eP*	**Pn**	**23 38 08.3**	**-0.9**
WSF				*eS*	**Sn**	**23 38 37.7**	**-2.7**
SMLT	**Sun Moon Lake**	**2.65**	**348**	*eP*	**Pn**	**23 38 10.3**	**+0.7**
SMLT				*eS*	**Sn**	**23 38 39.4**	**-1.7**
ETM	**Tongmen**	**2.68**	**360**	*eP*	**Pn**	**23 38 09.6**	**-0.2**
ETM				*eS*	**Sn**	**23 38 39.8**	**-1.7**
TYC	**Yuchr**	**2.68**	**347**	*eP*	**Pn**	**23 38 12.5**	**+2.6**
TYC				*eS*	**Sn**	**23 38 40.5**	**-1.1**
OWD	**Renai**	**2.68**	**354**	*eP*	**Pn**	**23 38 10.3**	**+0.3**
OWD				S	**Sn**	**23 38 40.8**	**-1.1**
VCHM	**Qimei**	**2.71**	**316**	*eP*	**Pn**	**23 38 09.9**	**-0.3**
VCHM				*eS*	**Sn**	**23 38 39.3**	**-3.1**
WUSB	**Renai**	**2.73**	**353**	*eP*	**Pn**	**23 38 11.8**	**+1.2**
WUSB				*eS*	**Sn**	**23 38 42.5**	**-0.4**
LXIB	**Xiulin Townshi**	**2.73**	**358**	*eP*	**Pn**	**23 38 10.8**	**+0.1**
LXIB				*eS*	**Sn**	**23 38 41.8**	**-1.7**
PACPP	**Pamplona Cagay**	**2.80**	**183**	*i* P	**Pn**	**23 38 12.0**	**+0.5**
PACPP				*i* S	Sn	23 38 37.0	-7.5
WCS	**Beigang Elemen**	**2.82**	**349**	*eP*	**Pn**	**23 38 11.7**	**-0.1**
WCS				*eS*	**Sn**	**23 38 42.9**	**-2.0**
PHUB	**P'eng-hu**	**2.85**	**322**	*eP*	**Pn**	**23 38 09.8**	**-2.3**
PHUB				*eS*	**Sn**	**23 38 42.9**	**-2.7**
WHF	**Hehuan Shan**	**2.87**	**356**	*eP*	**Pn**	**23 38 13.7**	**+1.0**
WHF				*eS*	**Sn**	**23 38 43.9**	**-2.7**
NACB	**Ninganchiao**	**2.89**	**2**	*eP*	**Pn**	**23 38 12.4**	**-0.2**
NACB				*eS*	**Sn**	**23 38 45.6**	**-0.9**
PNG	**Penghu**	**2.90**	**322**	*eP*	**Pn**	**23 38 12.2**	**-0.6**
PNG				*eS*	**Sn**	**23 38 43.3**	**-3.5**
ETLH	**Xiulin Townshi**	**2.92**	**360**	*eP*	**Pn**	**23 38 13.3**	**+0.2**
ETLH				*eS*	**Sn**	**23 38 47.6**	**+0.2**
EOS4	**EOS4**	**2.93**	**15**	*eP*	**Pn**	**23 38 13.0**	**+0.1**
EOS4				*eS*	**Sn**	**23 38 45.6**	**-1.5**
FUSS	**Fushou**	**2.97**	**356**	*eP*	**Pn**	**23 38 15.5**	**+1.6**
FUSS				*eS*	**Sn**	**23 38 49.0**	**+0.4**
WHP	**Taichung City**	**3.03**	**350**	*eP*	**Pn**	**23 38 15.7**	**+1.1**
WHP				*eS*	**Sn**	**23 38 49.4**	**-0.7**
EOS3	**EOS3**	**3.09**	**14**	*eP*	**Pn**	**23 38 15.7**	**+0.5**
EOS3				*eS*	**Sn**	**23 38 50.5**	**-0.7**
NNSB	**Datong**	**3.14**	**358**	*eP*	**Pn**	**23 38 17.7**	**+1.6**
NNSB				*eS*	**Sn**	**23 38 51.5**	**-1.3**
EOS2	**EOS2**	**3.20**	**12**	*eP*	**Pn**	**23 38 17.0**	**+0.3**
LATG	**Datong**	**3.25**	**1**	*eP*	**Pn**	**23 38 18.1**	**+0.6**
TWC	**Suao**	**3.33**	**6**	*eP*	**Pn**	**23 38 19.2**	**+0.6**
NDS	**Dongshan**	**3.35**	**3**	*eP*	**Pn**	**23 38 19.7**	**+0.9**
NFF	**Wufeng Townshi**	**3.36**	**354**	*eP*	**Pn**	**23 38 22.2**	**+3.1**
NSK	**Sanguang**	**3.39**	**358**	*eP*	**Pn**	**23 38 21.1**	**+1.7**
YOJ	**Yonaguni jima**	**3.47**	**24**	*eP*	**Pn**	**23 38 20.0**	**-0.4**
YOJ				*eS*	**Sn**	**23 38 58.3**	**-2.2**
FUSB	**Fushanzhiwuyua**	**3.47**	**1**	*eP*	**Pn**	**23 38 21.8**	**+1.2**
TIPB	**Shuangxi**	**3.69**	**5**	*eP*	**Pn**	**23 38 24.4**	**+1.0**
TIPB				*eS*	**Sn**	**23 39 06.2**	**+0.2**
SXI1	**Grass Mountain**	**3.82**	**5**	*eP*	**Pn**	**23 38 26.6**	**+1.4**
SXI1				*eS*	**Sn**	**23 39 09.1**	**0.0**
VWUC	**VWUC**	**4.15**	**333**	*eP*	**Pn**	**23 38 29.5**	**-0.2**
VWUC				*eS*	**Sn**	**23 39 14.2**	**-2.8**
KNMB	**Chin-men Tao**	**4.28**	**319**	P	**Pn**	**23 38 30.8**	**-0.5**
KNMB				*eS*	**Sn**	**23 39 16.1**	**-4.0**
PTMZ	**Houxiangcun**	**4.34**	**330**	*eP*	**Pn**	**23 38 31.6**	**-0.6**
PTMZ				*eS*	**Sn**	**23 39 17.0**	**-4.6**
ZPLA	**Ao Xicun**	**4.35**	**308**	P	**Pn**	**23 38 32.8**	**+0.4**
ZPLA				*eS*	**Sn**	**23 39 19.8**	**-2.1**
MATB	**Ma-tsu**	**5.06**	**344**	*eP*	**Pn**	**23 38 40.8**	**-1.2**
MATB				*eS*	**Sn**	**23 39 34.4**	**-4.7**
MHZQ	**Yeshan**	**5.31**	**335**	*eP*	**Pn**	**23 38 46.1**	**+0.8**
MHZQ				*eS*	**Sn**	**23 39 40.6**	**-4.6**
SONM	**Songino Array**	**29.16**	**339**	P	**P**	**

BYXU	**Byxelkrok**	**2.32**	**348**	P		**Pb**	**23 50 29.6**	**-1.1**
BYXU				S		**Sb**	**23 51 00.8**	**+0.8**
BYXU	**Byxelkrok**	**2.32**	**348**	P		**Pb**	**23 50 29.6**	**-1.1**
BYXU				S		**Sb**	**23 51 00.8**	**+0.8**
OSKU	**Oskarshamn**	**2.39**	**336**	P		**Pb**	**23 50 30.7**	**-1.2**
OSKU	**Oskarshamn**	**2.39**	**336**	P		**Pb**	**23 50 30.7**	**-1.2**
PBUR	**Paburge**	**2.51**	**65**	*e*P		**Pn**	**23 50 31.4**	**+1.3**
PBUR				*e*S		**Sn**	**23 51 02.3**	**+1.0**
VXJU	**Vaexsjoe** baz=133	**2.52**	**320**	P		**Pn**	**23 50 31.8**	**+1.6**
VXJU	**Vaexsjoe** baz=133	**2.52**	**320**	P		**Pn**	**23 50 31.8**	**+1.6**
LUNU	**Lund**	**2.61**	**285**	*i* P		**Pn**	**23 50 32.8**	**+1.4**
LUNU				*i* S		**Sb**	**23 51 06.3**	**-1.8**
DEL	**Delary**	**2.69**	**304**	P		**Pn**	**23 50 34.3**	**+1.8**
DEL	**Delary**	**2.69**	**304**	*i* P		**Pn**	**23 50 33.9**	**+1.4**
DEL				P		**Pn**	**23 50 34.3**	**+1.8**
DEL				*i* S		**Sn**	**23 51 07.5**	**+1.8**
DEL	comp=Z,2.9nm,0.4s			IAML			23 51 21.0	
VSTU	**Vaestervik**	**2.75**	**345**	P		**Pn**	**23 50 35.5**	**+2.2**
VSTU	**Vaestervik**	**2.75**	**345**	P		**Pn**	**23 50 35.5**	**+2.2**
EKSU	**Eksjoe**	**2.93**	**332**	P		**Pn**	**23 50 37.8**	**+2.0**
EKSU	**Eksjoe**	**2.93**	**332**	P		**Pn**	**23 50 37.8**	**+2.0**
BJUU	**Bjuv**	**2.95**	**293**	P		**Pn**	**23 50 37.5**	**+1.4**
BJUU	**Bjuv**	**2.95**	**293**	P		**Pn**	**23 50 37.5**	**+1.4**
BJUU				*i* P		**Pb**	**23 50 38.0**	**-2.4**
GNOU	**Gnosjoe**	**3.24**	**316**	P		**Pn**	**23 50 42.1**	**+2.1**
GNOU	**Gnosjoe**	**3.24**	**316**	P		**Pn**	**23 50 42.1**	**+2.1**
LLD	**Lille Linde**	**3.26**	**278**	*i* P		**Pb**	**23 50 45.0**	**-1.8**
LNKU	**Linkoeping**	**3.46**	**339**	P		**Pn**	**23 50 45.2**	**+2.0**
LNKU	**Linkoeping**	**3.46**	**339**	P		**Pn**	**23 50 45.2**	**+2.0**
FABU	**Falkenberg**	**3.51**	**306**	*i* P		**Pn**	**23 50 46.1**	**+2.3**
PABE	**Paberze**	**3.52**	**80**	*e*P		**Pn**	**23 50 45.8**	**+1.9**
VIKU	**Vikbolandet** baz=159	**3.55**	**350**	P		**Pn**	**23 50 46.8**	**+2.5**
VIKU	**Vikbolandet** baz=159	**3.55**	**350**	P		**Pn**	**23 50 46.8**	**+2.5**
SLIT	**Slitere, Latvi**	**3.58**	**41**	*e*P		**Pn**	**23 50 46.3**	**+1.5**
FKPU	**Falk**	**3.89**	**326**	P		**Pn**	**23 50 51.2**	**+2.2**
FKPU	**Falk**	**3.89**	**326**	P		**Pn**	**23 50 51.2**	**+2.2**
NYNU	**Nynaeshamn**	**3.99**	**1**	P		**Pn**	**23 50 52.4**	**+2.0**
NYNU	**Nynaeshamn**	**3.99**	**1**	P		**Pn**	**23 50 52.4**	**+2.0**
ONAU	**Onsala**	**4.09**	**308**	*i* P		**Pn**	**23 50 54.4**	**+2.7**
TJOU	**Tjoern**	**4.59**	**314**	*i* P		**Pn**	**23 51 01.8**	**+3.2**
CLL	**Collm**	**4.74**	**220**	*e*Pg		**Pn**	**23 51 03.0**	**+2.3**
CLL				*ex*		x	23 51 51.0	
CLL				*e*Sg		**Sn**	**23 51 56.0**	**-0.3**
MTSE	**Matsula**	**4.93**	**39**	*e*P		**Pn**	**23 51 04.7**	**+1.5**
MORC	**Moravsky Berou**	**5.26**	**182**	*e*PN		**Pn**	**23 51 10.5**	**+2.6**
AAL	**Aland**	**5.29**	**12**	*e*P		**Pn**	**23 51 10.5**	**+2.3**
AAL	comp=Z,2.8nm,0.3s			smax		smax	23 52 20.5	
STRU	**Stroemstad**	**5.43**	**320**	*e*P		**Pn**	**23 51 11.1**	**+1.0**
STRU	**Stroemstad**	**5.43**	**320**	*e*P		**Pn**	**23 51 11.1**	**+1.0**
STRU				*i* P		**Pb**	**23 51 19.7**	**-1.2**
STRU				*i* S		**Sn**	**23 52 12.6**	**-0.7**
HFS	**Hagfors** comp=Z,0.3nm,0.3s,baz=150,slow=9.9,SNR=33	**5.59**	**338**	Pn		**Pn**	**23 51 13.4**	**+1.0**
HFS				Pg		**Pb**	**23 51 27.5**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=160,slow=23,SNR=7.2							
HFS				Sn		**Sn**	**23 52 15.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=157,slow=19,SNR=2.0							
HFS				Lg		Lg	23 52 44.8	
	comp=Z,0.5nm,0.3s,baz=149,slow=33,SNR=5.6 comp=Z,1.0nm,0.2s							
TVF	**Tvarminne**	**5.63**	**29**	*e*P		**Pn**	**23 51 14.3**	**+1.4**
TVF				*e*S		**Sn**	**23 52 16.4**	**-1.8**
TVF	comp=Z,0.8nm,0.2s			smax		smax	23 52 19.5	
VRAC	**Vranov** comp=Z,0.5nm,0.3s,baz=105,slow=8.0,SNR=2.1 comp=Z,1.1nm,0.3s	**5.78**	**188**	Pn		**Pn**	**23 51 15.8**	**+0.8**
VRAC	**Vranov**	**5.78**	**188**	*e*PN		**Pn**	**23 51 18.9**	**+3.9**
VSU	**Vasula**	**5.96**	**51**	*e*P		**Pn**	**23 51 18.6**	**+1.2**
KRUC	**Moravsky**	**6.04**	**189**	*e*PN		**Pn**	**23 51 21.8**	**+3.2**
HOMB	**Homborsund**	**6.11**	**306**	*e*P		**Pn**	**23 51 19.6**	**+0.1**
HOMB	**Homborsund**	**6.11**	**306**	*e*P		**Pn**	**23 51 19.6**	**+0.1**
MEF	**Metsahovi**	**6.27**	**31**	*e*P		**Pn**	**23 51 23.7**	**+2.0**
MEF	comp=Z,0.9nm,0.2s			smax		smax	23 52 37.6	
RAF	**Rauma**	**6.36**	**17**	*e*P		**Pn**	**23 51 23.7**	**+0.8**
LAUT	**Lauttasaari He**	**6.36**	**33**	*e*P		**Pn**	**23 51 24.2**	**+1.3**
LAUT	comp=Z,0.9nm,0.3s			smax		smax	23 52 38.2	
HEL1	**Helsinki**	**6.39**	**33**	*e*P		**Pn**	**23 51 25.0**	**+1.7**
KONO	**Kongsberg**	**6.45**	**319**	*e*P		**Pn**	**23 51 24.9**	**+0.8**
KONO	**Kongsberg**	**6.45**	**319**	*e*P		**Pn**	**23 51 24.9**	**+0.8**
VUOS	**Vuosaari Helsi**	**6.48**	**34**	*e*P		**Pn**	**23 51 25.0**	**+0.4**
NUR	**Nurmijarvi**	**6.58**	**31**	*e*P		**Pn**	**23 51 27.9**	**+2.0**
NC602	**NORSAR Array S**	**6.65**	**332**	*e*P		**Pn**	**23 51 27.1**	**+0.3**
NC602	**NORSAR Array S**	**6.65**	**332**	*e*P		**Pn**	**23 51 27.1**	**+0.3**
ARNU	**Arnoeviken**	**6.69**	**358**	*e*P		**Pn**	**23 51 28.6**	**+1.1**
SNART	**Snartemo**	**6.75**	**304**	*e*P		**Pn**	**23 51 29.9**	**+1.6**
SNART	**Snartemo**	**6.75**	**304**	*e*P		**Pn**	**23 51 29.9**	**+1.6**
PVF	**Pernaja**	**6.98**	**34**	*e*P		**Pn**	**23 51 32.7**	**+1.3**
NOA	**NORSAR Array B** baz=141,slow=13,SNR=8.1	**6.99**	**332**	Pn		**Pn**	**23 51 31.2**	**-0.4**
NOA	baz=157,slow=15,SNR=2.4			Sn		**Sn**	**23 52 48.6**	**-3.2**
NOA	baz=140,slow=14,SNR=4.3 comp=Z,0.1nm,0.3s			Lg		Lg	23 53 28.2	
KPF	**Kankaanpaa**	**7.17**	**16**	*e*P		**Pn**	**23 51 35.2**	**+1.2**
BLS5	**Blasjo**	**7.60**	**310**	*e*P		**Pn**	**23 51 41.0**	**+1.0**
BLS5	**Blasjo**	**7.60**	**310**	*e*P		**Pn**	**23 51 41.0**	**+1.0**
SKAR	**Skarslia**	**7.63**	**322**	*e*P		**Pn**	**23 51 40.9**	**+0.5**
SKAR	**Skarslia**	**7.63**	**322**	*e*P		**Pn**	**23 51 40.9**	**+0.5**
FIA0	**FINESS Array S**	**7.75**	**31**	*e*S		**Sn**	**23 53 07.8**	**-2.5**
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=224,slow=12,SNR=11	**7.75**	**31**	Pn		**Pn**	**23 51 42.7**	**+0.8**
FINES	comp=Z,0.2nm,0.3s,baz=217,slow=21,SNR=2.3			Sn		**Sn**	**23 53 05.4**	**-4.9**
FINES	comp=Z,0.2nm,0.3s,baz=214,slow=27,SNR=1.9 comp=Z,2.1nm,0.8s			Lg		Lg	23 53 52.6	
FIA1	**FINESS Array S**	**7.75**	**31**	*e*P		**Pn**	**23 51 43.1**	**+1.2**
KMY	**Karmoy**	**8.05**	**307**	*e*P		**Pn**	**23 51 46.2**	**+0.1**
KMY	**Karmoy**	**8.05**	**307**	*e*P		**Pn**	**23 51 46.2**	**+0.1**
AKASG	**Malin Array Be** comp=Z,0.3nm,0.3s,baz=309,slow=12,SNR=2.7 comp=Z,0.1nm,0.2s	**8.11**	**118**	Pn		**Pn**	**23 51 46.0**	**-1.0**
VAF	**Ylistaro**	**8.41**	**15**	*e*P		**Pn**	**23 51 51.5**	**+0.5**
AKN	**Aaknes**	**9.14**	**326**	*e*P		**Pn**	**23 52 01.4**	**+0.4**
AKN	**Aaknes**	**9.14**	**326**	*e*P		**Pn**	**23 52 01.4**	**+0.4**
NSS	**Namsos**	**9.98**	**345**	*e*P		**Pn**	**23 52 12.8**	**+0.3**
NSS	**Namsos**	**9.98**	**345**	*e*P		**Pn**	**23 52 12.8**	**+0.3**
MOR8	**Moi Rana**	**11.31**	**353**	*e*P		**Pn**	**23 52 31.9**	**+1.2**
LEIR	**Leirfjorden**	**11.36**	**350**	*e*P		**Pn**	**23 52 32.4**	**+1.1**
KONS	**Konsvik**	**11.74**	**351**	*e*P		**Pn**	**23 52 36.5**	**0.0**
KONS	**Konsvik**	**11.74**	**351**	*e*P		**Pn**	**23 52 36.5**	**0.0**
VAGH	**Vaagaholmen**	**11.95**	**351**	*e*P		**Pn**	**23 52 39.3**	**-0.1**
EKA	**Eskdalemuir Ar** baz=84,slow=14 comp=Z,0.1nm,0.3s	**12.03**	**280**	Pn		**Pn**	**23 52 41.2**	**+0.7**
ARCES	**ARCESS Array B** comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=1.3 comp=Z,0.9nm,0.6s	**14.97**	**10**	Pn		**Pn**	**23 53 16.2**	**-4.3**

PRU 01 23:50:52.6,50.96N×16.56E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSTC	**Ostas**	**0.46**	**209**	*e*PG	Pg	23 51 01.3	-0.1
OSTC				*e*SG	Sg	23 51 07.9	+0.6
CHVC	**Chvalec**	**0.49**	**221**	*e*PG	Pg	23 51 02.1	+0.1
CHVC				*e*SG	Sg	23 51 08.1	-0.2
UPC	**Upice**	**0.57**	**218**	*e*PG	Pg	23 51 02.7	-0.8
UPC	comp=Z,1.3nm,0.2s			*e*SG	Sg	23 51 11.7	+0.8
DPC	**Dobruska-Polom**	**0.63**	**194**	*e*PG	Pg	23 51 03.3	-1.3
DPC				*e*SG	Sg	23 51 11.9	-0.9

IDC ***01*** *23:55:58.9±1.0, 66.55N×38.07W, h0km, mb3.5/7, mbtmp3.5/7, MS3.1/9, Error ellipse: s-maj=37.6km s-min=20.8km az=21.0*

ISC 01 23:55:59.9±0.7, 66.48N±0.06×38.22W±0.09, h10km, n18, σ2s 00/12, mb3.4/6, MS3.2/7, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANGG	**Ammassalik, Gr**	**0.90**	**164**	*i* P	**Pg**	**23 56 14.4**	**-2.7**
ANGG	comp=Z,293nm,0.4s			IAML		23 56 17.4	
SOEG	**Soedalen**	**3.17**	**54**	*i* P	**Pn**	**23 56 50.5**	**+0.8**
SOEG				*i* S	**Sb**	**23 57 34.5**	**-0.1**
SOEG	comp=Z,107nm,0.5s			IAML		23 57 41.4	
SUMG	**Summit**	**6.13**	**359**	*e*P	**Pb**	**23 57 47.6**	**+0.9**
SUMG				*e*S	**Sb**	**23 58 55.5**	**-4.8**
SUMG	comp=Z,20nm,0.9s			IAML		23 59 29.8	
FRB	**Frobisher Bay** comp=Z,58nm,21.0s,baz=85,slow=38	**12.98**	**272**	LR	LR	00 04 17.8	
SCHQ	**Schefferville** comp=Z,43nm,20.9s,baz=77,slow=33	**18.03**	**244**	LR	LR	00 05 53.0	
NOA	**NORSAR Array B** comp=Z,21nm,19.9s,baz=315,slow=37	**22.00**	**81**	LR	LR	00 09 20.7	
HFS	**Hagfors** comp=Z,43nm,20.9s,baz=314,slow=34	**23.53**	**81**	LR	LR	00 09 27.4	
ESDC	**Sonseca Array** comp=Z,0.7nm,0.7s,baz=334,slow=9.0,SNR=7.0 comp=Z,0.7nm,0.7s	**33.02**	**127**	P	**P**	**00 02 35.7**	**+0.7**
INK	**Inuvik** comp=Z,53nm,18.9s,baz=98,slow=36	**33.23**	**318**	LR	LR	00 15 39.6	
AKASG	**Malin Array Be** comp=Z,37nm,18.5s,baz=284,slow=36	**36.41**	**82**	LR	LR	00 17 52.2	
ILAR	**Eielson Array** comp=Z,0.5nm,0.7s,baz=33,slow=6.0,SNR=6.1 comp=Z,0.5nm,0.7s	**39.42**	**320**	P	**P**	**00 03 29.5**	**+0.2**
TKL	**Tuckaleechee C** comp=Z,46nm,19.8s,baz=336,slow=34	**40.50**	**244**	LR	LR	00 19 00.2	
PDAR	**Pinedale Array** comp=Z,0.3nm,0.6s,baz=24,slow=8.3,SNR=2.3	**44.42**	**275**	P	**P**	**00 04 11.5**	**+0.9**
PDAR	comp=Z,47nm,18.5s,baz=28,slow=38 comp=Z,0.3nm,0.6s			LR	LR	00 24 02.8	
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.4s,baz=30,slow=9.0,SNR=3.5 comp=Z,0.2nm,0.4s	**51.59**	**279**	P	**P**	**00 05 07.8**	**+1.6**
TXAR	**Lajitas Array** comp=Z,0.4nm,0.8s,baz=23,slow=8.2,SNR=5.3 comp=Z,0.4nm,0.8s	**53.70**	**260**	P	**P**	**00 05 22.0**	**+0.3**
MA2	**Magadan**	**54.08**	**354**	LR	LR	00 30 26.0	
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,baz=335,slow=6.4,SNR=3.6 comp=Z,0.3nm,0.6s	**58.30**	**44**	P	**P**	**00 05 54.1**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.8s,baz=351,slow=6.9,SNR=2.4 comp=Z,0.5nm,0.8s	**59.54**	**134**	P	**P**	**00 06 03.6**	**+0.4**

IDC ***02*** *00:16:33.7±0.7, 49.58S×126.11E, h0km, mb4.4/9, mbtmp4.5/10, ML3.0/1, MS4.1/37, Error ellipse: s-maj=38.9km s-min=13.4km az=98.0*

NEIC ***02*** *00:16:33.5±2.1, 49.68S±0.10×125.8E±0.2, h10km±1km, mb4.6/25, Error ellipse: s-maj=22.6km s-min=15.6km az=284.0*

GFZ ***02*** *00:16:36.2, 49.61S×125.95E, h16km, Mw5.1/29, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr=1.28; Mθθ3.60; Mϕϕ-2.31; Mrθ-0.31; Mθϕ4.36; Mϕr2.07; Fault plane solution: M05.77776×1016 NP1: ϕs104.51902°, δ68.23737°, λ-14.21897°. NP2: ϕs199.88608°, δ76.81348°, λ-157.61657°. Principal axes: T 5.9807, Plg5.7888°, Azm330.9714°; N -0.4299, Plg64.1943°, Azm228.8690°; P -5.5508, Plg25.0542°, Azm63.6877°;*

GFZ ***02*** *00:16:36.2±0.3, 50.3S×12.6E±°, h10km, M4.8/16, mb4.8/16, confirmed*

GCMT ***02*** *00:16:37.5±0.1, 49.60S±0.01×125.92E±0.1, h21km, MW5.2/120, Moment Tensor Solution. s82,c122; s120,c209; Duration: 1s0 Moment tensor: Scale 1016 Nm; Mrr-1.23±.15; Mθθ4.33±.15; Mϕϕ-3.11±.14; Mrθ1.69±.23; Mθϕ6.78±.11; Mϕr-0.56±.23; Best double couple: M07.95200×1016 NP1:ϕs15.00000°, δ76.00000°, λ-176.00000°. NP2:ϕs284.00000°, δ86.00000°, λ-14.00000°. Principal axes: T 8.4860, Plg7.0000°, Azm330.0000°; N -1.0780, Plg76.0000°, Azm89.0000°; P -7.4180, Plg12.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 00:16:34.1±0.5, 49.68S±0.06×126.1E±0.1, h10km, n114, σ1s 75/75, mb4.6/19, MS4.2/37, 4C-2D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGBR	**Mount Gambier**	**15.86**	**47**	Pn	**Pn**	**00 20 17.6**	**+0.2**
TAU	**Tasmania Unive**	**16.14**	**73**	Pn	**P**	**00 20 22.4**	**-1.7**
TAU	comp=Z,98nm,1.3s			IAmb	IAmb	00 20 38.3	
MOO	**Moorlands**	**16.31**	**72**	P	P	00 20 36.2	+10
H01W1	**Cape Leeuwin H** baz=151,slow=74,SNR=230	**17.18**	**325**	T	T	00 37 60.0	
H01W2	**Cape Leeuwin H** baz=151,slow=74,SNR=193	**17.18**	**325**	T	T	00 37 59.9	
H01W3	**Cape Leeuwin H** baz=151,slow=74,SNR=233	**17.19**	**325**	T	T	00 38 00.7	
BRAT	**Ballarat**	**17.67**	**53**	P	P	00 20 47.9	+6.8
NWAO	**Narrogin (SRO)** comp=Z,2.4nm,0.3s,baz=154,slow=8.8,SNR=17	**17.98**	**335**	P	**Pn**	**00 20 44.5**	**+0.4**
NWAO	comp=Z,2μm,19.2s,baz=132,slow=32 comp=Z,23nm,0.6s			LR	LR	00 26 00.8	
NWAO	**Narrogin (SRO)**	**17.98**	**335**	P	**P**	**00 20 47.2**	**+2.5**
NWAO	**Narrogin (SRO)**	**17.98**	**335**	P	**Pn**	**00 20 41.3**	**-2.8**
NWAO	comp=Z,22nm,0.6s			IAmb	IAmb	00 20 49.0	
AUKUL	**Kulin High Sch**	**17.99**	**338**	P	**P**	**00 20 46.9**	**+2.1**
BBOO	**Buckleboo**	**18.42**	**28**	P	**P**	**00 20 48.8**	**-0.7**
BBOO	comp=Z,48nm,1.4s			IAmb	IAmb	00 21 06.2	
CASY	**Casey**	**18.47**	**200**	P	**P**	**00 20 46.0**	**-3.8**
CASY	**Casey**	**18.47**	**200**	P	**P**	**00 20 50.3**	**+0.5**
TOO	**Toolangi**	**18.48**	**56**		**P**	**00 20 49.6**	**-0.6**
FORT	**Forrest**	**18.94**	**5**		**P**	**00 20 53.8**	**-1.3**
FORT	comp=Z,21nm,0.9s			IAmb	IAmb	00 20 57.8	
KLBR	**Kellerberrin**	**19.12**	**338**	P	**P**	**00 20 57.6**	**+0.4**
KLBR	**Kellerberrin**	**19.12**	**338**	P	**P**	**00 20 57.2**	**0.0**
BLDU	**Ballidu**	**20.31**	**336**	P	**P**	**00 21 09.0**	**-1.2**
STKA	**Stephens Creek** comp=Z,12nm,0.9s,baz=202,slow=7.2,SNR=12	**21.24**	**39**	P	**P**	**00 21 20.8**	**+0.6**
STKA	comp=Z,556nm,21.9s,baz=207,slow=33 comp=Z,12nm,0.9s			LR	LR	00 28 09.0	
STKA	**Stephens Creek**	**21.24**	**39**	P	**P**	**00 21 22.0**	**+1.8**
STKA	**Stephens Creek**	**21.24**	**39**	P	**P**	**00 21 22.2**	**+2.0**
MORW	**Morawa**	**21.96**	**336**	P	**P**	**00 21 29.1**	**+1.2**
MORW	**Morawa**	**21.96**	**336**		**P**	**00 21 23.1**	**-4.9**
MORW	comp=Z,48nm,1.1s			IAmb	IAmb	00 21 30.0	
MORW	**Morawa**	**21.96**	**336**	P	**P**	**00 21 28.7**	**+0.8**
CMSA	**Cobar Meteorol**	**23.33**	**46**	P	**P**	**00 21 44.0**	**+1.6**
MEEK	**Meekatharra**	**23.72**	**343**	P	**P**	**00 21 47.3**	**+1.1**
MEEK	**Meekatharra**	**23.72**	**343**	P	**P**	**00 21 47.6**	**+1.3**
ASAR	**Alice Springs** comp=Z,17nm,0.8s,baz=187,slow=10.0,SNR=37	**26.68**	**16**	P	**P**	**00 22 13.3**	**0.0**
ASAR	comp=Z,0.7nm,1.0s,baz=193,slow=24,SNR=1.3			S	**S**	**00 26 49.7**	**+1.1**
ASAR	comp=Z,284nm,20.6s,baz=189,slow=34 comp=Z,17nm,0.8s			LR	LR	00 31 48.2	
ASAR	**Alice Springs**	**26.68**	**16**		**P**	**00 22 12.9**	**-0.4**
AS31	**Alice Springs**	**26.68**	**16**		**P**	**00 22 11.8**	**-1.5**
ARMA	**Armidale**	**27.22**	**55**	P	**P**	**00 22 17.5**	**-0.7**
ARMA	comp=Z,7.6nm,0.9s			IAmb	IAmb	00 22 30.1	
WRA	**Warramunga Arr** comp=Z,3.7nm,1.0s,baz=194,slow=8.3,SNR=11 comp=Z,3.7nm,1.0s	**30.39**	**15**	P	**P**	**00 22 45.9**	**-0.5**
WRA	**Warramunga Arr**	**30.39**	**15**	P	**P**	**00 22 46.2**	**-0.2**
WRAB	**Tennant Creek**	**30.41**	**16**	P	**P**	**00 22 48.7**	**+2.2**
WB0	**Warramunga Arr**	**30.58**	**16**	P	**P**	**00 22 46.0**	**-2.0**
WB0	comp=Z,9.7nm,1.2s			IAmb	IAmb	00 23 01.1	
RPZ	**Rata Peaks** comp=Z,170nm,20.5s,baz=252,slow=31	**31.04**	**96**	LR	LR	00 32 49.4	
VNDA	**Vanda** comp=Z,8.5nm,0.8s,baz=311,slow=8.1,SNR=33	**31.05**	**166**	P	**P**	**00 22 53.4**	**+1.8**
VNDA	comp=Z,1μm,19.7s,baz=324,slow=34			LR	LR	00 34 25.3	
VNDA	**Vanda**	**31.05**	**166**		**P**	**00 22 51.0**	**-0.7**
VNDA	comp=Z,11nm,0.9s			IAmb	IAmb	00 22 54.8	
FITZ	**Fitzroy Crossi** comp=Z,452nm,21.5s,baz=182,slow=34	**31.51**	**359**	LR	LR	00 34 28.6	
FITZ	**Fitzroy Crossi**	**31.51**	**359**	P	**P**	**00 22 54.6**	**-1.5**
SBA	**Scott Base**	**32.07**	**165**	P	**P**	**00 22 59.3**	**-1.3**
SBA	comp=Z,9.6nm,1.1s			IAmb	IAmb	00 23 21.6	
CTA	**Charters Tower** comp=Z,492nm,20.9s,baz=209,slow=34	**33.62**	**36**	LR	LR	00 35 49.2	
KNRA	**Kununurra**	**33.98**	**5**	P	**P**	**00 23 15.1**	**-2.7**
KNRA	comp=Z,6.9nm,0.9s			IAmb	IAmb	00 23 30.5	
MAW	**Mawson** comp=Z,299nm,19.0s,baz=83,slow=32	**35.47**	**216**	LR	LR	00 35 32.4	
MAW	**Mawson**	**35.47**	**216**	P	**P**	**00 23 28.5**	**-1.7**
URZ	**Urewera** comp=Z,321nm,19.6s,baz=226,slow=33	**37.77**	**92**	LR	LR	00 37 12.8	
BATI	**Baumata** comp=Z,696nm,22.0s,baz=210,slow=34	**39.40**	**356**	LR	LR	00 39 04.8	
QSPA	**South Pole Qui** comp=Z,9.8nm,1.1s,baz=220,slow=1.0,SNR=21	**40.44**	**180**	P	**P**	**00 24 14.5**	**+2.0**
QSPA	comp=Z,365nm,19.1s,baz=343,slow=35 comp=Z,9.8nm,1.1s			LR	LR	00 40 04.3	
QSPA	**South Pole Qui**	**40.44**	**180**	P	**P**	**00 24 11.8**	**-0.6**
QSPA	comp=Z,34nm,1.4s			IAmb	IAmb	00 24 18.8	
QSPA	**South Pole Qui**	**40.44**	**180**	P	**P**	**00 24 14.8**	**+2.4**
PMG	**Port Moresby** comp=Z,298nm,18.0s,baz=195,slow=40	**43.82**	**31**	LR	LR	00 45 34.7	
KAPI	**Kappang** comp=Z,199nm,22.0s,baz=177,slow=34	**44.83**	**351**	LR	LR	00 41 35.0	
LEM	**Lembang** comp=Z,300nm,19.9s,baz=164,slow=36	**45.44**	**334**	LR	LR	00 43 42.0	
ELIB	**Princess Elisa** comp=Z,8.7nm,1.0s	**47.33**	**204**	*d*P	**P**	**00 25 07.6**	**0.0**
ELIB				*dx*	x	00 25 09.8	
KLSI		**48.34**	**331**	P	**P**	**00 25 17.6**	**+1.8**
MDSI	**Maura Dua**	**48.70**	**330**	P	**P**	**00 25 20.3**	**+1.6**
SIJI	**Sorong** comp=Z,144nm,19.2s,baz=110,slow=39	**48.83**	**7**	LR	LR	00 48 13.2	
HNR	**Honiara** comp=Z,21nm,18.8s,baz=292,slow=34	**49.01**	**47**	LR	LR	00 44 13.3	
KRVT	**Keravat (AS076** comp=Z,19nm,18.4s,baz=126,slow=38	**50.27**	**35**	LR	LR	00 48 04.1	
TOLI2	**Tolitoli**	**50.80**	**353**	P	**P**	**00 25 33.7**	**-0.9**
TOLI2	comp=Z,5.2nm,1.0s			IAmb	IAmb	00 25 52.1	
MSVF	**Nonsavu** comp=Z,249nm,21.5s,baz=179,slow=30	**52.30**	**72**	LR	LR	00 43 07.1	
TROLL	**Troll, Antarti** comp=Z,256nm,0.6s	**52.33**	**199**	⇑P	**P**	**00 25 47.4**	**+1.8**
SNAA	**Sanae** comp=Z,173nm,0.8s	**53.69**	**198**	⇑P	**P**	**00 25 57.2**	**+1.6**
SNAA	**Sanae** comp=Z,6.9nm,0.8s,baz=142,slow=8.7,SNR=26	**53.69**	**198**	P	**P**	**00 25 57.0**	**+1.4**
SNAA	comp=Z,257nm,20.9s,baz=185,slow=34 comp=Z,6.9nm,0.8s			LR	LR	00 47 25.1	
SNAA	**Sanae**	**53.69**	**198**		**P**	**00 25 54.8**	**-0.8**
SNAA	comp=Z,13nm,1.0s			IAmb	IAmb	00 26 07.6	
SNAA	**Sanae**	**53.69**	**198**	P	**P**	**00 25 58.0**	**+2.4**
VNA2	**Neumayer--Watz** comp=Z,4.9nm,0.8s,baz=144,slow=7.4	**55.17**	**197**	⇑P	**P**	**00 26 08.9**	**+2.6**
VNA2	**Neumayer--Watz**	**55.17**	**197**	P	**P**	**00 26 09.0**	**+2.7**
MNSI	**Mandailing Nat**	**55.19**	**327**	P	**P**	**00 26 08.2**	**+1.2**
VNA1	**Neumayer--Stat** comp=Z,10nm,0.9s	**55.56**	**197**	⇑P	**P**	**00 26 12.0**	**+2.9**
GSI	**Gunungsitoli**	**56.39**	**325**		**P**	**00 26 14.9**	**-0.8**
GSI	**Gunungsitoli**	**56.39**	**325**	P	**P**	**00 26 18.7**	**+3.0**
DAV	**Davao City (W)** comp=Z,122nm,21.1s,baz=118,slow=36	**56.51**	**359**	LR	LR	00 49 59.7	
RPSI	**Rantau Prapat**	**57.19**	**327**	P	**P**	**00 26 20.0**	**-1.3**
KCSI	**Kotacane, Aceh**	**58.37**	**326**	P	**P**	**00 26 29.9**	**+0.3**
KULM	**Kulim**	**59.03**	**330**	P	**P**	**00 26 32.8**	**-1.3**
H08S2	**Diego Garcia H** baz=144,slow=76,SNR=14	**61.14**	**294**	T	T	01 33 00.4	
H08S1	**Diego Garcia H** baz=144,slow=76,SNR=24	**61.15**	**294**	T	T	01 32 59.9	
H08S3	**Diego Garcia H** baz=144,slow=76,SNR=41	**61.16**	**294**	T	T	01 33 07.0	
AFI	**Afiamalu** comp=Z,128nm,21.1s,baz=185,slow=31	**61.55**	**78**	LR	LR	00 48 10.2	
RAR	**Rarotonga** comp=Z,108nm,20.9s,baz=225,slow=31	**63.96**	**93**	LR	LR	00 49 56.1	
GUMO	**Gm** comp=Z,59nm,21.9s,baz=148,slow=36	**65.14**	**20**	LR	LR	00 55 04.3	
PMSA	**Palmer Station** comp=Z,191nm,21.1s,baz=190,slow=35	**65.61**	**175**	LR	LR	00 54 29.4	
ESPZ	**Base Esperanza**	**67.24**	**178**	P	**P**	**00 27 27.5**	**-0.6**
TBI	**Tubuai** comp=Z,1μm,28.2s	**69.07**	**102**	*e*LR	LR	00 48 36.6	
PALK	**Pallekele** comp=Z,194nm,19.6s,baz=146,slow=31	**69.08**	**311**	LR	LR	00 52 31.0	
**CM

ml4.3/18, Error ellipse: s-maj=8.1km s-min=5.1km az=358.0
IDC 02 00:29:28.4±4.3, 27°87'N×52°85'E, h94km, 38km, mb3.8/23, mbtmp4.1/28, MS3.5/20, Error ellipse: s-maj=19.9km s-min=11.6km az=172.0
ISC 02 00:29:18.4±0.3, 27.79N±0'04×52'92E±0'03, h14km, n270, σ1§66/293, mb4.2/62, MS3.6/6, 12C-12D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.37**	**114**		**Pg**	**Pg**	**00 29 24.9**	**-1.0**
LMD1	**Lamerd**	**0.50**	**154**		**Pg**	**Pb**	**00 29 27.5**	**-0.8**
QIR1	**Qir**	**0.69**	**9**		**Pg**	**Pb**	**00 29 32.4**	**0.0**
JHRM	**Jahrom**	**0.92**	**39**		**Pg**	**Pb**	**00 29 36.4**	**+0.2**
DSBU	**Dashti - Bushe**	**1.57**	**292**		**Pg**	**Pn**	**00 29 47.8**	**+1.8**
SHI	**Shiraz**	**1.88**	**349**		**Pn**	**Pb**	**00 29 52.0**	**-0.7**
KAZ2	**Kazeron-Fars-I**	**2.13**	**329**		**Pn**	**Pn**	**00 29 55.4**	**+1.8**
SAKB	**Bahrain**	**2.79**	**230**		**P**	**Pn**	**00 30 05.8**	**+3.2**
SAKB					**S**	**Sn**	**00 30 37.4**	**+1.3**
JRN	**Qarnain Island**	**2.84**	**181**		**P**	**Pn**	**00 30 06.1**	**+2.9**
JRN					**S**	**Sn**	**00 30 37.8**	**+0.6**
GENO	**Geno**	**2.91**	**97**		**Pn**	**Pn**	**00 30 07.3**	**+2.9**
UMQ	**Umm Al-Quwin**	**3.33**	**132**		**P**	**Pn**	**00 30 14.7**	**+4.6**
UMQ					**S**	**Sn**	**00 30 53.2**	**+3.7**
SHME	**Shamm**	**3.36**	**120**		**P**	**Pn**	**00 30 11.5**	**+1.1**
SHME	**Shamm**	**3.36**	**120**		**P**	**Pn**	**00 30 12.5**	**+2.1**
SHME					**S**	**Sn**	**00 30 51.6**	**+1.4**
BANOM	**Banah**	**3.54**	**121**		**P**	**Pn**	**00 30 14.6**	**+1.5**
AJN	**Ajban** SNR=5.9	**3.71**	**150**	*i* P		**Pn**	**00 30 18.0**	**+2.7**
AJN	**Ajban** SNR=8.0	**3.71**	**150**		**P**	**Pn**	**00 30 18.7**	**+3.4**
AJN					**S**	**Sn**	**00 31 02.9**	**+4.0**
NAZ	**Nazwa, Dubai** SNR=9.0	**3.72**	**138**	*i* P		**Pn**	**00 30 17.8**	**+2.4**
NAZ	**Nazwa, Dubai** SNR=9.1	**3.72**	**138**		**P**	**Pn**	**00 30 17.7**	**+2.3**
NAZ					**S**	**Sn**	**00 31 01.1**	**+2.1**
MASF	**Masafi**	**3.77**	**129**		**P**	**Pn**	**00 30 18.5**	**+2.4**
MASF					**S**	**Sn**	**00 31 01.1**	**+0.7**
GHWR	**Ruwais**	**3.81**	**181**		**P**	**Pn**	**00 30 17.5**	**+0.9**
GHWR					**S**	**Sn**	**00 30 59.0**	**-2.2**
ASUD	**Al Ashush, Dub** SNR=14	**3.82**	**145**	*i* P		**Pn**	**00 30 19.2**	**+2.3**
ASUD	**Al Ashush, Dub** SNR=14	**3.82**	**145**		**P**	**Pn**	**00 30 20.0**	**+3.1**
ASUD					**S**	**Sn**	**00 31 03.6**	**+2.0**
NGRK	**Negar Kerman**	**3.82**	**60**		**Pn**	**Pn**	**00 30 19.5**	**+2.3**
FAQ	**Al Faqa, Dubai** SNR=9.4	**3.87**	**141**	*i* P		**Pn**	**00 30 19.8**	**+2.3**
FAQ	**Al Faqa, Dubai** SNR=7.6	**3.87**	**141**		**P**	**Pn**	**00 30 19.6**	**+2.2**
FAQ					**S**	**Sn**	**00 31 04.2**	**+1.6**
MDH	**Madha**	**3.91**	**129**		**P**	**Pn**	**00 30 19.8**	**+1.7**
MDH	**Madha**	**3.91**	**129**		**P**	**Pn**	**00 30 20.9**	**+2.8**
MDH					**S**	**Sn**	**00 31 04.6**	**+0.8**
KRBR	**Kerman**	**4.01**	**56**		**Pn**	**Pn**	**00 30 23.0**	**+3.2**
KHGB	**Koh Gabri**	**4.04**	**50**		**Pn**	**Pn**	**00 30 22.6**	**+2.6**
UOSS	**Minazif** SNR=24	**4.09**	**133**	*i* P		**Pn**	**00 30 21.7**	**+1.3**
UOSS	**Minazif**	**4.09**	**133**		**P**	**Pn**	**00 30 21.8**	**+1.3**
UOSS	**Minazif**	**4.09**	**133**		**P**	**Pn**	**00 30 22.2**	**+1.7**
UOSS					**S**	**Sn**	**00 31 08.0**	**-0.1**
MZWR	**Madinat Zayed**	**4.10**	**168**		**P**	**Pn**	**00 30 22.6**	**+1.9**
MZWR					**S**	**Sn**	**00 31 09.1**	**+0.6**
HATD	**Hatta, Dubai** SNR=8.3	**4.12**	**135**	*i* P		**Pn**	**00 30 22.8**	**+1.8**
HATD					**S**	**Sn**	**00 31 08.0**	**-1.1**
HATD	**Hatta, Dubai**	**4.12**	**135**		**P**	**Pn**	**00 30 22.5**	**+1.5**
HATD					**S**	**Sn**	**00 31 09.4**	**+0.3**
ASHO	**Ashiyiah** SNR=39	**4.18**	**137**	*i* P		**Pn**	**00 30 22.9**	**+1.0**
ASHO	**Ashiyiah** SNR=38	**4.18**	**137**		**P**	**Pn**	**00 30 23.4**	**+1.6**
ASHO					**S**	**Sn**	**00 31 10.9**	**+0.3**
KHNJ	**Kahnooj**	**4.24**	**87**		**Pn**	**Pn**	**00 30 24.7**	**+2.1**
IBAF	**Bafgh**	**4.43**	**31**		**Pn**	**Pn**	**00 30 28.2**	**+2.8**
ZRDN	**Zarand Kerman**	**4.47**	**44**		**Pn**	**Pn**	**00 30 28.7**	**+2.7**
ALNE	**Al Ain** SNR=27	**4.51**	**145**	*i* P		**Pn**	**00 30 28.6**	**+2.3**
ALNE	**Al Ain** SNR=27	**4.51**	**145**		**P**	**Pn**	**00 30 28.8**	**+2.6**
ALNE					**S**	**Sn**	**00 31 18.7**	**+0.2**
MZR	**Muzera**	**4.79**	**174**		**P**	**Pn**	**00 30 32.0**	**+1.8**
MZR	**Muzera** SNR=5.2	**4.79**	**174**		**P**	**Pn**	**00 30 31.7**	**+1.5**
MZR					**S**	**Sn**	**00 31 27.8**	**+2.2**
SOHO	**SOHO** SNR=20	**4.88**	**137**	*i* P		**Pn**	**00 30 32.3**	**+0.9**
SOHO	**SOHO**	**4.88**	**137**		**P**	**Pn**	**00 30 32.5**	**+1.1**
SOHO					**S**	**Sn**	**00 31 29.7**	**+2.0**
KBAM	**BAM**	**5.05**	**73**		**Pn**	**Pn**	**00 30 36.5**	**+2.7**
ANAR	**Anarak**	**5.43**	**7**		**Pn**	**Pn**	**00 30 41.5**	**+2.5**
UMZA	**Um Al Zommool**	**5.45**	**158**		**P**	**Pn**	**00 30 40.5**	**+1.4**
UMZA					**S**	**Sn**	**00 31 40.5**	**-1.1**
ARQ	**Araqi** SNR=26	**5.50**	**143**		**P**	**Pn**	**00 30 41.2**	**+1.3**
ARQ					**S**	**Sn**	**00 31 42.5**	**-0.4**
HOQ	**Hoqain** SNR=20	**5.76**	**136**		**P**	**Pn**	**00 30 44.8**	**+1.2**
HOQ					**S**	**Sn**	**00 31 47.9**	**-1.6**
TPRV	**Parvadeh(Tabas**	**6.15**	**31**		**Pn**	**Pn**	**00 30 51.5**	**+2.6**
BIDO	**Bidbid**	**6.33**	**131**		**P**	**Pn**	**00 30 53.1**	**+1.8**
BIDO					**S**	**Sn**	**00 32 03.0**	**-0.5**
BSY	**Bisya** SNR=46	**6.34**	**141**		**P**	**Pn**	**00 30 53.0**	**+1.5**
BSY	SNR=26				**P**	**Pn**	**00 30 53.0**	**+1.5**
BSY					**S**	**Sn**	**00 32 01.6**	**-2.2**
SMDO	**Samad** SNR=30	**6.61**	**134**		**P**	**Pn**	**00 30 57.0**	**+1.7**
SMDO					**S**	**Sn**	**00 32 08.8**	**-1.7**
WSAR	**Wadi Sarin** SNR=8.3	**6.87**	**130**		**P**	**Pn**	**00 31 00.0**	**+1.3**
WSAR					**S**	**Sn**	**00 32 15.1**	**-1.6**
JMDO	**Jabal Madar**	**7.15**	**138**		**P**	**Pn**	**00 31 03.1**	**+0.5**
JMDO					**S**	**Sn**	**00 32 24.1**	**+0.3**
WBK	**Wadi Bani Khal** SNR=18	**7.52**	**132**		**P**	**Pn**	**00 31 09.0**	**+1.2**
WBK					**S**	**Sn**	**00 32 30.6**	**-2.2**
RAYN	**Ar Rayn**	**7.92**	**239**			**Pn**	**00 31 13.8**	**+0.5**
RAYN	**Ar Rayn**	**7.92**	**239**		**P**	**Pn**	**00 31 14.1**	**+0.8**
RAYN	**Ar Rayn**	**7.92**	**239**		**P**	**Pn**	**00 31 14.1**	**+0.8**
JLN	**Jalan Bani Buh**	**8.13**	**132**		**P**	**Pn**	**00 31 16.6**	**+0.5**
JLN					**S**	**Sn**	**00 32 44.7**	**-3.2**
MHTO	**MHTO** SNR=40	**8.19**	**145**		**P**	**Pn**	**00 31 18.0**	**+1.2**
DQM	**DQM**	**8.89**	**151**		**P**	**Pn**	**00 31 26.9**	**+0.4**
WHFO	**Wadi Hawf**	**9.86**	**175**		**P**	**Pn**	**00 31 39.2**	**-0.6**
DMTO	**DMTO**	**10.20**	**169**		**P**	**Pn**	**00 31 44.4**	**-0.1**
HRA	**Herat**	**10.35**	**48**			**Pn**	**00 31 44.9**	**-1.7**
HAKT	**HAKKARI**	**12.45**	**324**		**P**	**Pn**	**00 32 14.1**	**-1.3**
GEVA	**Gevas**	**13.35**	**324**		**Pn**	**Pn**	**00 32 26.2**	**-1.4**
GNI	**Garni** 6.0nm,0.5s,baz=310,slow=5.0,SNR=7.9	**14.06**	**333**		**P**	**P**	**00 32 47.6**	**+2.5**
GNI	comp=Z,71nm,21.6s,baz=142,slow=43				LR	LR	00 39 26.2	
ASF	**Jabal al Asfar** 2.2nm,0.5s,baz=88,slow=6.9,SNR=8.5	**14.55**	**291**		**P**	**Pn**	**00 32 47.5**	**+3.5**
ASF	1.2nm,0.5s,baz=290,slow=20,SNR=2.3				S	Sn	00 35 16.8	-8.5
ASF	comp=Z,89nm,18.1s,baz=24,slow=42				LR	LR	00 39 42.0	
KBL	**Kabul**	**15.35**	**60**		**Pn**	**Pn**	**00 32 54.1**	**-0.7**
KBL	comp=Z,16nm,1.5s				IAmb	IAmb	00 33 08.4	
KBL	**Kabul**	**15.35**	**60**		**P**	**P**	**00 32 58.3**	**-1.2**
HRFI	**Mount Harif**	**15.82**	**282**		**P**	**P**	**00 33 06.0**	**+1.4**
EIL	**Elat**	**15.88**	**281**		**P**	**P**	**00 33 05.4**	**+0.2**
EIL	comp=Z,7.7nm,0.9s,baz=63,slow=12,SNR=5.4				S	Sn	**00 35 52.0**	**-5.3**
EIL	comp=Z,1.6nm,0.6s,baz=176,slow=13,SNR=1.1				LR	LR	00 40 47.7	
KOPT	**Kop Dagi**	**15.95**	**323**			**Pn**	**00 33 01.0**	**-1.7**
KOPT	comp=Z,24nm,1.4s				IAmb	IAmb	00 33 10.4	
MMAI	**Mount Meron Ar** comp=Z,0.7nm,0.3s,baz=32,slow=18,SNR=7.0	**15.98**	**293**		**P**	**Pn**	**00 33 05.1**	**+2.2**
MMAI	comp=Z,0.4nm,0.4s,baz=110,slow=42,SNR=1.7				S	Sn	**00 35 54.0**	**-5.9**
MMAI	comp=Z,81nm,18.2s,baz=96,slow=42				LR	LR	00 40 38.5	
EPOS	**Posof**	**16.03**	**331**		**P**	**P**	**00 33 09.4**	**+2.4**
SHAA	**Shahritus**	**16.07**	**49**			**Pn**	**00 33 03.4**	**-0.6**
SHAA					IAmb	IAmb	00 33 11.1	
GAZ	**Gaziantep**	**16.21**	**309**			**Pn**	**00 33 04.7**	**-1.1**
KZIT	**Kziot**	**16.45**	**285**		**P**	**Pn**	**00 33 11.1**	**+2.3**
ARPR	**Arapgir-MALATY**	**16.57**	**317**			**Pn**	**00 33 09.5**	**-0.9**
ARPR	comp=Z,18nm,1.0s				IAmb	IAmb	00 33 18.5	
ARPR	**Arapgir-MALATY**	**16.57**	**317**		**P**	**P**	**00 33 16.2**	**+3.3**
ANDN	**Andirin**	**17.01**	**309**		**P**	**Pn**	**00 33 15.6**	**-0.4**
CHGR	**Chuyangaron**	**17.35**	**47**		Pn	**Pn**	**00 33 18.2**	**-2.0**
KBZ	**Khabaz** comp=Z,1.8nm,0.8s,baz=126,slow=7.9,SNR=5.3	**17.84**	**336**		**P**	**P**	**00 33 28.4**	**+1.6**
BNN	**Bunyan**	**18.01**	**312**			**Pn**	**00 33 26.0**	**-2.4**
KIV	**Kislovodsk**	**18.11**	**336**			**Pn**	**00 33 28.5**	**-1.1**
KIV	comp=Z,13nm,0.6s				IAmb	IAmb	00 33 37.7	
KIV	**Kislovodsk** comp=Z,11nm,0.9s	**18.11**	**336**		**P**	**P**	**00 33 35.1**	**+5.2**
KIV	**Kislovodsk**	**18.11**	**336**		**P**	**P**	**00 33 32.9**	**+2.9**
CSS	**Mathiatis**	**18.18**	**298**			**Pn**	**00 33 28.5**	**-1.9**
CSS	comp=Z,20nm,1.1s				IAmb	IAmb	00 33 31.8	
GAR	**Garm**	**18.30**	**48**		**P**	**Pn**	**00 33 30.3**	**-1.6**
GAR	comp=Z,22nm,0.9s				IAmb	IAmb	00 33 35.0	
GAR	**Garm**	**18.30**	**48**		**P**	**Pn**	**00 33 31.9**	**-0.1**
NIL	**Nilore**	**18.42**	**67**		**P**	**Pn**	**00 33 32.9**	**-0.5**
TOKA	**Tokat**	**18.45**	**317**		**P**	**P**	**00 33 31.6**	**-2.1**
MANEM	**Manem**	**18.52**	**54**		**P**	**P**	**00 33 32.3**	**-2.3**
MANEM	comp=Z,16nm,0.7s				IAmb	IAmb	00 33 42.9	
ATD	**Arta Tunnel** comp=Z,8.8nm,21.4s,baz=10.0,slow=39	**18.73**	**212**		LR	LR	00 41 39.2	
BTK	**Batken**	**19.20**	**46**			**P**	**00 33 40.4**	**-1.5**
BTK	comp=Z,14nm,1.0s				IAmb	IAmb	00 33 47.0	
BTK	**Batken**	**19.20**	**46**		P	**Pn**	**00 33 43.3**	**+0.4**
KIRS	**Kirsehir-Merke**	**19.44**	**310**		⇓P	**P**	**00 33 45.9**	**+1.4**
BR131	**Keskin Array S**	**19.92**	**312**		P	**P**	**00 33 49.1**	**-0.7**
BRTR	**Keskin Array B** comp=Z,3.3nm,0.9s,baz=133,slow=13,SNR=15	**19.92**	**312**		P	**Pn**	**00 33 51.5**	**0.0**
BRTR	comp=Z,0.5nm,0.7s,baz=146,slow=2.9,SNR=3.1				PcP	**PcP**	**00 38 05.2**	**-1.4**
BRTR	comp=Z,68nm,19.2s,baz=92,slow=40				LR	LR	00 42 50.9	
BRTR	**Keskin Array B**	**19.92**	**312**		**P**	**P**	**00 33 48.7**	**-1.1**
KKUL	**Konya-Kulu**	**20.13**	**309**		P	Pn	00 33 56.1	+2.1
KK31	**Karatay Array**	**20.89**	**38**		**P**	**P**	**00 33 59.4**	**-0.8**
KKAR	**Karatay Array**	**20.89**	**38**		**P**	**P**	**00 33 59.4**	**-0.8**
ARK	**Arkit**	**20.91**	**43**		**P**	**P**	**00 34 01.9**	**+1.3**
ARSB	**Arslanbob**	**21.27**	**45**			**P**	**00 34 04.4**	**-0.1**
ELL	**Elmali**	**21.37**	**300**		**P**	**P**	**00 34 04.5**	**-1.1**
ELL	comp=Z,11nm,0.7s				IAmb	IAmb	00 34 13.2	
MDUB	**Mudurnu**	**21.92**	**311**		**P**	**P**	**00 34 10.1**	**-1.3**
KSH2	**Kashi**	**21.97**	**53**		**P**	**P**	**00 34 11.4**	**-0.6**
KSH2	comp=Z,7.0nm,0.6s				pmax	pmax		
AB31	**Akbulak array**	**22.11**	**12**		**P**	**P**	**00 34 11.4**	**-1.7**
ABKAR	**Akbulak array**	**22.11**	**12**		**P**	**P**	**00 34 12.5**	**-0.7**
AAK	**Ala-Archa** comp=Z,274nm,18.5s,baz=243,slow=40	**22.93**	**44**		LR	LR	00 44 56.0	
AAK	**Ala-Archa**	**22.93**	**44**		**P**	**P**	**00 34 22.1**	**-0.2**
AAK	comp=Z,6.6nm,0.8s				IAmb	IAmb	00 34 33.1	
AAK	**Ala-Archa**	**22.93**	**44**		**P**	**P**	**00 34 25.9**	**+3.6**
AKTO	**Aktyubinsk** comp=Z,338nm,18.1s,baz=232,slow=42	**22.95**	**8**		LR	LR	00 45 33.9	
KARP	**Karpathos**	**23.20**	**296**		P	**P**	**00 34 24.5**	**-0.5**
NRN	**Naryn**	**23.28**	**48**			**P**	**00 34 25.1**	**-0.9**
NRN	comp=Z,7.9nm,0.9s				IAmb	IAmb	00 34 56.8	
BOOM	**Boomskoye usch**	**23.76**	**46**		P	**P**	**00 34 29.9**	**-0.7**
BOOM	comp=Z,7.6nm,0.8s				IAmb	IAmb	00 34 39.5	
BOOM	**Boomskoye usch**	**23.76**	**46**		P	**P**	**00 34 33.0**	**+2.4**
BALB	**Balikesir**	**23.87**	**306**		P	**P**	**00 34 30.8**	**-0.5**
BALB	comp=Z,7.8nm,0.7s				IAmb	IAmb	00 34 36.5	
KDJ	**Kajisay**	**24.39**	**48**		P	**P**	**00 34 35.9**	**-0.5**
KDJ	comp=Z,6.4nm,1.0s				IAmb	IAmb	00 35 13.8	
TARG	**Taragay, Kyrgy**	**24.62**	**49**		P	**P**	**00 34 38.1**	**-0.7**
TARG	comp=Z,6.0nm,1.1s				IAmb	IAmb	00 35 20.2	
TARG	**Taragay, Kyrgy**	**24.62**	**49**		P	**P**	**00 34 40.7**	**+2.0**
IDI	**Anoyia**	**24.98**	**294**		P	**P**	**00 34 40.4**	**-1.3**
PRZ	**Przheval'sk**	**25.35**	**48**		P	**P**	**00 34 44.7**	**-0.5**
PRZ	comp=Z,8.5nm,0.8s				IAmb	IAmb	00 35 13.4	
WUS	**Wushi**	**25.36**	**51**		P	**P**	**00 34 44.1**	**-1.1**
TIRR	**Tirgusor**	**25.71**	**317**		⇑P	**P**	**00 34 48.4**	**+0.3**
TIRR	**Tirgusor**	**25.71**	**317**		P	**P**	**00 34 46.4**	**-1.8**
TIRR	comp=Z,12nm,1.2s				IAmb	IAmb	00 34 54.8	
TPGR	**Topolog**	**25.92**	**318**		⇓P	**P**	**00 34 51.2**	**+1.1**
RDO	**Rodhopi**	**26.09**	**308**		P	**P**	**00 34 49.6**	**-2.0**
RDO	comp=Z,7.0nm,1.1s				IAmb	IAmb	00 35 08.5	
CFR	**Carcaliu**	**26.27**	**318**		⇓P	**P**	**00 34 53.4**	**+0.3**
PDGK	**Podgornoye**	**26.45**	**47**		P	**P**	**00 34 53.1**	**-2.0**
VLDR	**Vladesti**	**26.66**	**319**		⇑P	**P**	**00 34 58.2**	**+1.5**
SRS	**Serrai**	**27.45**	**307**		P	**P**	**00 35 06.1**	**+2.2**
VRI	**Vrincioaia**	**27.47**	**318**		⇑P	**P**	**00 35 04.9**	**+0.9**
NEHR	**Nehoiu**	**27.50**	**317**		⇑P	**P**	**00 35 05.5**	**+1.1**
PLOR	**Plostina**	**27.51**	**318**		⇓P	**P**	**00 35 05.5**	**+1.0**
ITM	**Ithomi**	**27.67**	**298**		P	**P**	**00 35 04.7**	**-1.2**
ITM	comp=Z,5.1nm,0.9s				IAmb	IAmb	00 35 45.9	
MLR	**Muntele Rosu**	**27.75**	**317**		⇓P	**P**	**00 35 07.3**	**+0.6**
MLR	**Muntele Rosu**	**27.75**	**317**		P	**P**	**00 35 05.9**	**-0.7**
MLR	comp=Z,3.7nm,0.9s				IAmb	IAmb	00 35 46.7	
COVR	**Voineasa-Covas**	**27.77**	**318**		⇑P	**P**	**00 35 08.0**	**+1.2**
SORM	**Soroca**	**27.86**	**323**		⇓P	**P**	**00 35 07.8**	**+0.3**
TESR	**Tescani**	**27.86**	**319**		⇓P	**P**	**00 35 08.7**	**+1.1**
TESR	**Tescani**	**27.86**	**319**		P	**P**	**00 35 08.1**	**+0.5**
ONER	**Baraj Valea Uz**	**27.92**	**319**		⇑P	**P**	**00 35 09.1**	**+1.1**
TURI	**Turia**	**27.99**	**318**		⇑P	**P**	**00 35 09.1**	**+0.8**
VOIR		**28.27**	**316**		⇑P	**P**	**00 35 11.8**	**+0.5**
VOIR		**28.27**	**316**		P	**P**	**00 35 13.4**	**+2.1**
BORK	**Borovoye**	**28.34**	**22**		P	**P**	**00 35 11.1**	**-0.6**
BVAR	**Borovoye Array** comp=Z,2.8nm,0.7s,baz=216,slow=7.3,SNR=16	**28.35**	**22**		P	**P**	**00 35 12.6**	**+0.8**
ARR	**Arges**	**28.49**	**316**		⇑P	**P**	**00 35 13.9**	**+0.7**
ARR	**Arges**	**28.49**	**316**		P	**P**	**00 35 13.7**	**+0.5**
ARTI	**Arti** comp=Z,169nm,18.5s,baz=196,slow=40	**28.85**	**6**		LR	LR	00 48 51.0	
AKASG	**Malin Array Be** comp=Z,0.9nm,0.5s,baz=134,slow=7.9,SNR=8.6	**29.10**	**328**		P	**P**	**00 35 18.8**	**+0.4**
AKBB	**Malin Array Si** comp=Z,0.9nm,0.5s	**29.10**	**328**		P	**P**	**00 35 17.5**	**-1.0**
AKBB	comp=Z,4.8nm,0.9s				IAmb	IAmb	00 35 55.4	
KIEV	**Kiev**	**29.10**	**328**		⇓P	**P**	**00 35 19.3**	**+0.8**
BURAR	**Bucovina Array**	**29.28**	**320**		⇑P	**P**	**00 35 21.2**	**+0.9**
BUR08	**Bucovina Ar. S**	**29.31**	**320**		P	**P**	**00 35 19.5**	**-1.0**
MAKZ	**Makanchi**	**29.66**	**42**		P	**P**	**00 35 23.5**	**-0.1**
MAKZ	comp=Z,2.8nm,0.8s				IAmb	IAmb	00 35 32.4	
MAKZ	**Makanchi**	**29.66**	**42**		P	**P**	**00 35 24.8**	**+1.3**
HERR	**Herculane**	**29.68**	**313**		⇓P	**P**	**00 35 24.2**	**+0.5**
MKAR	**Makanchi Array** comp=Z,1.1nm,0.7s,baz=223,slow=8.2,SNR=9.4	**29.84**	**43**		P	**P**	**00 35 26.1**	**+0.9**
MKAR	comp=Z,0.3nm,0.4s,baz=228,slow=1.7,SNR=3.3				PcP	**PcP**	**00 38 26.1**	**-2.1**
MKAR	comp=Z,51nm,18.7s,baz=207,slow=39 comp=Z,1.1nm,0.7s				LR	LR	00 48 38.6	
MKAR	**Makanchi Array**	**29.84**	**43**		P	**P**	**00 35 24.9**	**-0.2**
PHP	**Peshkopia**	**29.88**	**306**		P	**P**	**00 35 27.4**	**+1.8**
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.2s,baz=233,slow=9.0,SNR=9.1	**29.96**	**33**		P	**P**	**00 35 26.9**	**+0.8**
KURBB	comp=Z,0.3nm,0.5s,baz=235,slow=3.3,SNR=1.5				PcP	**PcP**	**00 38 27.4**	**-1.0**
KURBB	comp=Z,146nm,21.3s,baz=176,slow=40 comp=Z,0.8nm,0.2s				LR	LR	00 49 13.4	
MARR	**Marisel-Cluj**	**30.04**	**317**		⇓P	**P**	**00 35 27.7**	**+0.6**
KURK	**Kurchatov**	**30.06**	**33**		P	**P**	**00 35 24.6**	**-2.3**
DRGR		**30.34**	**317**		⇑P	**P**	**00 35 30.5**	**+0.9**
DRGR		**30.34**	**317**		P	**P**	**00 35 31.6**	**+2.0**
KIRV	**Kirov** comp=Z,57nm,21.1s,baz=211,slow=42	**30.88**	**356**		LR	LR	00 51 06.1	
TRPA	**Tarpa**	**31.09**	**319**		P	**P**	**00 35 33.2**	**-2.9**
KOLS	**Kolonicke sedl**	**31.65**	**320**		P	**P**	**00 35 43.9**	**+2.8**
KOLS	**Kolonicke sedl**	**31.65**	**320**		*e*P	**P**	**00 35 43.9**	**+2.8**
TIP	**Timpagrande**	**32.03**	**300**		⇑P	**P**	**00 35 46.1**	**+1.5**
TIP	**Timpagrande**	**32.03**	**300**		P	**P**	**00 35 41.5**	**-3.1**
TIP	comp=Z,4.5nm,0.9s				IAmb	IAmb	00 35 49.3	
TIP	**Timpagrande**	**32.03**	**300**		P	**P**	**00 35 46.9**	**+2.2**
WMQ	**Urumqi**	**32.14**	**51**		*e*P	P	00 35 50.5	+5.0
WMQ					S	**S**	**00 40 58.4**	**+0.7**
WMQ	comp=Z,10.0nm,0.9s				pmax	pmax		
WMQ	comp=N,160nm,18.9s				LR	LR		
WMQ	comp=E,170nm,17.5s				LR	LR		
WMQ	comp=Z,94nm,21.5s							
MORH	**Mrgy, Hungar**	**32.64**	**314**		⇓P	**P**	**00 35 50.8**	**+1.1**
MORH	**Mrgy, Hungar**	**32.64**	**314**		P	**P**	**00 35 48.9**	**-0.9**
MARCO	**Tramutola**	**32.95**	**302**		P	**P**	**00 35 55.3**	**+2.6**
LANS	**Liptovska Anna**	**33.37**	**319**		*e*P	**P**	**00 35 58.6**	**+2.4**
OJC	**Ojcow**	**33.69**	**321**		P	**P**	**00 35 58.3**	**-0.5**
OJC	**Ojcow**	**33.69**	**321**		P	**P**	**00 36 00.1**	**+1.2**
MODS	**Modra-Piesok**	**34.34**	**316**		*e*P	**P**	**00 36 04.8**	**+0.2**
MAUC	**Maruska**	**34.43**	**318**		*e*P	**P**	**00 36 05.6**	**+0.2**
RONA	**Rosalia, Austr** comp=Z,1.5nm,0.6s	**34.69**	**315**		*e*P	**P**	**00 36 08.9**	**+1.2**
STEB	**Steborice**	**34.71**	**319**		*e*P	**P**	**00 36 08.6**	**+0.9**
MORC	**Moravsky Berou**	**34.77**	**319**		⇓P	**P**	**00 36 08.7**	**+0.3**
MORC	**Moravsky Berou**	**34.77**	**319**		P	**P**	**00 36 07.4**	**-1.0**
MORC	comp=Z,2.9nm,0.8s				IAmb	IAmb	00 36 09.9	
CONA	**Conrad Observa** comp=Z,2.7nm,1.2s	**35.04**	**315**		*e*P	**P**	**00 36 11.9**	**+1.1**
ZAA0	**Zalesovo Array**	**35.05**	**33**		P	**P**	**00 36 10.6**	**0.0**
ZAA0	comp=Z,3.9nm,0.8s				IAmb	IAmb	00 36 20.1	
ZALV	**Zalesovo Beam** comp=Z,1.7nm,0.4s,baz=242,slow=9.5,SNR=12	**35.05**	**33**		P	**P**	**00 36 11.8**	**+1.2**
ZALV	comp=Z,76nm,18.2s,baz=232,slow=39 comp=Z,1.7nm,0.4s				LR	LR	00 52 04.8	
ZALV	**Zalesovo Beam**	**35.05**	**33**		P	**P**	**00 36 10.2**	**-0.4**
VRAC	**Vranov** comp=Z,31nm,19.1s,baz=110,slow=42	**35.13**	**318**		LR	LR	00 54 17.2	
KRLC	**Kraliky**	**35.35**	**319**		*e*P	P	00 36 07.5	-5.8
DPC	**Dobruska-Polom**	**35.73**	**319**		*e*P	**P**	**00 36 16.7**	**+0.1**
DRE	**Drenchia**	**35.90**	**311**		P	**P**	**00 36 19.2**	**+1.1**
CHVC	**Chvalec**	**35.99**	**319**		*e*P	**P**	**00 36 19.7**	**+0.9**
MOA	**Molln** comp=Z,1.9nm,0.8s	**36.02**	**314**	*i*	P	**P**	**00 36 20.3**	**+1.2**
KBA	**Koelnbreinsper** comp=Z,2.5nm,0.7s	**36.36**	**313**	*i*	pP	**P**	**00 36 23.6**	**+1.4**
BIOA	**Bad Ischl, Aus** comp=Z,2.5nm,0.5s	**36.37**	**314**		*e*P	**P**	**00 36 23.1**	**+1.1**
ZVC	**Zvikov**	**36.63**	**317**		*e*P	**P**	**00 36 24.2**	**-0.1**
ABTA	**Abfaltersbach** comp=Z,2.6nm,0.7s	**36.81**	**312**	*i*	pP	**P**	**00 36 27.5**	**+1.6**
KHC	**Kasperske Hory**	**36.89**	**316**		*e*P	**P**	**00 36 27.0**	**+0.5**
LESA	**Schwarzleotal** comp=Z,2.4nm,0.8s	**36.90**	**313**	*i*	P	**P**	**00 36 27.5**	**+0.8**
WTTA	**Wattenberg** comp=Z,5.1nm,0.7s	**37.53**	**312**	*i*	P	**P**	**00 36 32.7**	**+0.5**
WTTA	**Wattenberg**	**37.53**	**312**		P	**P**	**00 36 32.8**	**+0.6**
WATA	**Walderalm** comp=Z,4.4nm,0.9s	**37.59**	**313**	*i*	P	**P**	**00 36 33.2**	**+0.6**
KEST	**Kesra** comp=Z,3.3nm,0.6s,baz=88,slow=6.3,SN

comp=Z,4.3nm,0.7s,baz=60,slow=7.6,SNR=6.2
comp=Z,4.3nm,0.7s

DBIC	**Dimbokro**	**58.48**	**260**	P	**P**	**00 39 14.0**	**-0.4**
LBTB	**Lobatse**	**58.73**	**209**	P	**P**	**00 39 16.4**	**+0.5**
KSRS	**Korea Array**	**62.40**	**60**	P	**P**	**00 39 40.7**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=281,slow=7.2,SNR=5.0						
	comp=Z,0.7nm,0.4s						
KLR	**Kul'dur**	**62.44**	**47**	P	**P**	**00 39 41.3**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=277,slow=8.1,SNR=3.8						
	comp=Z,1.1nm,0.7s						
MA2	**Magadan**	**70.27**	**32**	LR	LR	01 14 38.7	
	comp=Z,60nm,19.3s,baz=246,slow=39						
JHJ	**Hachijo jima 2**	**72.97**	**61**	LR	LR	01 17 43.9	
	comp=Z,227nm,18.3s,baz=345,slow=40						
ILAR	**Eielson Array**	**86.46**	**8**	P	**P**	**00 41 59.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=312,slow=3.8,SNR=6.6						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**89.48**	**354**	P	**P**	**00 42 13.4**	**-1.3**
	comp=Z,2.1nm,0.8s,baz=7.1,slow=5.5,SNR=4.5						
	comp=Z,2.1nm,0.8s						
WB0	**Warramunga Arr**	**91.84**	**111**	P	**P**	**00 42 24.8**	**-1.7**
WRA	**Warramunga Arr**	**91.88**	**111**	P	**P**	**00 42 26.0**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=313,slow=4.2,SNR=4.9						
	comp=Z,0.4nm,0.9s						
WRA	**Warramunga Arr**	**91.88**	**111**	P	**P**	**00 42 23.2**	**-3.5**
ASAR	**Alice Springs**	**93.31**	**115**	P	**P**	**00 42 32.6**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=299,slow=4.7,SNR=5.1						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**93.31**	**115**	P	**P**	**00 42 31.9**	**-1.3**
DLBC	**Dease Lake**	**94.07**	**2**	LR	LR	01 34 36.8	
	comp=Z,58nm,18.1s,baz=220,slow=42						

CATAC ***02*** *00:35:32.9±0.2, 12°N±2°×8°3W±°, h29km, M4.5/42, MLv4.5/42, Error ellipse: s-maj=4.2km s-min=1.6km az=27.2, confirmed*
SNET ***02*** *00:35:34.1±1.2, 12°.59N×87°.90W, h50km, ML4.1, Presumed earthquake*
UCR ***02*** *00:36:02.7±1.6, 10°.98N×86°.24W, h0km±198km, MW3.5, Presumed earthquake*

ISC 02 00:35:33.7±1.6**, 12°.52N**±0°.04×**87°.91W**±0°.03**, h30**km±15km**, n87**, σ0**99**/126**, 3C-10D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**0.69**	**348**	*i* P	**Pb**	**00 35 47.0**	**-0.3**
CNCH	**Conchagua**	**0.75**	**6**	⇓P	**Pb**	**00 35 48.5**	**0.0**
CNCH	**Conchagua**	**0.75**	**6**	*i* P	**Pb**	**00 35 48.3**	**-0.1**
CNCH				*eS*	**Sn**	**00 35 60.0**	**+1.1**
LCND	**La Caada**	**0.78**	**2**	⇓P	**Pn**	**00 35 48.7**	**0.0**
LCND	**La Caada**	**0.78**	**2**	*i* P	**Pn**	**00 35 48.7**	**0.0**
LCND				*eS*	**Sn**	**00 36 00.2**	**+0.7**
PACA	**Pacayal**	**1.02**	**337**	P	**Pn**	**00 35 51.8**	**-0.4**
PACA				S	**Sn**	**00 36 05.8**	**+0.2**
PACA	**Pacayal**	**1.02**	**337**	*i* P	**Pn**	**00 35 52.1**	**-0.1**
QUEN	**Al S del Volca**	**1.04**	**86**	S	**Sn**	**00 36 05.3**	**-0.6**
PLRN	**Geotermica Pol**	**1.12**	**87**	P	**Pn**	**00 35 52.7**	**-0.7**
PLRN				S	**Sn**	**00 36 07.0**	**-0.8**
ROCN	**Rota Cerro Neg**	**1.14**	**90**	⇓P	**Pn**	**00 35 53.1**	**-0.6**
ROCN				S	**Sn**	**00 36 07.8**	**-0.6**
CNGA	**Al SSO del Vol**	**1.18**	**91**	⇓P	**Pn**	**00 35 53.6**	**-0.7**
CNGA				S	**Sn**	**00 36 09.0**	**-0.4**
CNGN	**Cerro Negro**	**1.19**	**91**	⇓P	**Pn**	**00 35 53.5**	**-0.8**
CNGN				S	**Sn**	**00 36 09.6**	**+0.1**
MACN	**El Madrono**	**1.21**	**93**	⇓P	**Pn**	**00 35 53.9**	**-0.8**
MACN				S	**Sn**	**00 36 09.7**	**-0.4**
TECO	**Alcaldia de Te**	**1.32**	**320**	P	**Pn**	**00 35 55.2**	**-1.0**
TECO	**Alcaldia de Te**	**1.32**	**320**	*i* P	**Pn**	**00 35 55.1**	**-1.0**
TECO				*eS*	**Sn**	**00 36 11.8**	**-0.8**
MOMN	**Momotombo**	**1.34**	**95**	P	**Pn**	**00 35 55.7**	**-0.8**
MOMN				S	**Sn**	**00 36 12.4**	**-1.0**
AESN	**El Sauce Leon**	**1.39**	**75**	P	**Pn**	**00 35 56.2**	**-0.8**
AESN				S	**Sn**	**00 36 14.0**	**-0.5**
MOM2	**El Cardon**	**1.40**	**93**	P	**Pn**	**00 35 56.8**	**-0.4**
MOM2				S	**Sn**	**00 36 14.4**	**-0.3**
COEG	**Centro de Oper**	**1.44**	**319**	P	**Pn**	**00 35 57.4**	**-0.5**
COEG	**Centro de Oper**	**1.44**	**319**	*i* P	**Pn**	**00 35 58.1**	**+0.2**
COEG				*eS*	**Sn**	**00 36 15.4**	**-0.4**
AMTN	**Mateare**	**1.48**	**101**	P	**Pn**	**00 35 57.6**	**-0.7**
AMTN				S	**Sn**	**00 36 16.2**	**-0.3**
SJTE	**Alcalda de S**	**1.52**	**316**	*i* P	**Pn**	**00 35 58.7**	**-0.3**
SJTE				*eS*	**Sn**	**00 36 17.3**	**-0.5**
APQ3	**Volcan Apoyequ**	**1.53**	**99**	P	**Pn**	**00 35 58.5**	**-0.5**
APQ3				S	**Sn**	**00 36 17.4**	**-0.5**
PAVA	**Las Pavas**	**1.55**	**320**	P	**Pn**	**00 35 59.1**	**-0.3**
PAVA				S	**Sn**	**00 36 18.6**	**+0.1**
APYN	**Apoyeque**	**1.55**	**100**	P	**Pn**	**00 35 58.7**	**-0.7**
APYN				S	**Sn**	**00 36 17.6**	**-1.0**
LFRS	**El Faro**	**1.56**	**314**	*i* P	**Pn**	**00 35 59.4**	**-0.2**
APQ2	**Apoyeque**	**1.58**	**102**	P	**Pn**	**00 35 59.1**	**-0.7**
APQ2				S	**Sn**	**00 36 18.3**	**-1.0**
LIMN	**Finca el Limon**	**1.60**	**70**	P	**Pn**	**00 35 59.4**	**-0.7**
LIMN				S	**Sn**	**00 36 19.6**	**-0.2**
MARCA	**Marcala la Paz**	**1.63**	**356**	⇑P	**Pn**	**00 36 00.8**	**+0.2**
MARCA				S	**Sn**	**00 36 20.9**	**+0.3**
TISN	**Laguna Tiscapa**	**1.65**	**103**	P	**Pn**	**00 35 59.0**	**-1.7**
UNAN	**Cigeo UNAN**	**1.66**	**104**	P	**Pn**	**00 35 60.0**	**-0.8**
UNAN				S	**Sn**	**00 36 19.7**	**-1.3**
LOMA	**Loma Larga**	**1.66**	**312**	P	**Pn**	**00 36 00.4**	**-0.6**
LOMA				S	**Sn**	**00 36 20.8**	**-0.5**
MGAN	**Managua**	**1.67**	**103**	P	**Pn**	**00 36 00.2**	**-0.7**
MGAN				S	**Sn**	**00 36 20.2**	**-1.2**
P5NO	**Presa 5 de nov**	**1.67**	**331**	P	**Pn**	**00 36 00.8**	**-0.1**
WILN	**Americas 2**	**1.72**	**102**	P	**Pn**	**00 36 00.9**	**-0.8**
WILN				S	**Sn**	**00 36 22.2**	**-0.5**
MAS3	**Al N del Volca**	**1.77**	**106**	⇓P	**Pn**	**00 36 01.3**	**-1.0**
PIC2	**El Picacho**	**1.79**	**313**	*i* P	**Pn**	**00 36 02.8**	**0.0**
BOQS	**Boqueron**	**1.80**	**312**	*i* P	**Pn**	**00 36 02.8**	**-0.1**
BOQS				*eS*	**Sn**	**00 36 24.8**	**0.0**
SABN	**Sabanita**	**1.80**	**108**	P	**Pn**	**00 36 01.0**	**-1.7**
MASN	**Masaya**	**1.80**	**107**	P	**Pn**	**00 36 02.2**	**-0.6**
MASN				S	**Sn**	**00 36 23.8**	**-0.9**
PMON	**Piamonte**	**1.81**	**311**	P	**Pn**	**00 36 02.4**	**-0.5**
PMON				S	**Sn**	**00 36 25.2**	**+0.2**
NANN	**Nandasmo**	**1.84**	**108**	P	**Pn**	**00 36 03.5**	**+0.1**
NANN				S	**Sn**	**00 36 25.4**	**-0.4**
JAYA	**Jayaque - finc**	**1.87**	**307**	P	**Pn**	**00 36 02.9**	**-1.0**
JAYA				S	**Sn**	**00 36 26.1**	**-0.5**
JAYA	**Jayaque - finc**	**1.87**	**307**	*i* P	**Pn**	**00 36 03.2**	**-0.7**
JAYA				*eS*	**Sn**	**00 36 25.4**	**-1.2**
RCFN	**Al S de San Ju**	**1.94**	**59**	⇑P	**Pn**	**00 36 04.8**	**0.0**
RCFN				S	**Sn**	**00 36 28.2**	**0.0**
RCON	**San Juan de Ri**	**1.96**	**61**	⇓P	**Pn**	**00 36 05.1**	**0.0**
RCON				S	**Sn**	**00 36 29.4**	**+0.6**
RCVN	**Varillal2**	**1.98**	**58**	⇓P	**Pn**	**00 36 05.3**	**0.0**
RCVN				S	**Sn**	**00 36 29.2**	**-0.1**
MATN	**Matagalpa**	**1.98**	**78**	P	**Pn**	**00 36 04.6**	**-0.7**
MATN				S	**Sn**	**00 36 28.4**	**-0.7**
RCPN	**Sur Rio San Ju**	**2.03**	**60**	⇓P	**Pn**	**00 36 06.2**	**+0.1**
CEVE	**Cerro Verde**	**2.11**	**308**	P	**Pn**	**00 36 07.2**	**-0.1**
CEVE	**Cerro Verde**	**2.11**	**308**	*i* P	**Pn**	**00 36 07.5**	**+0.2**
SBLS	**San Blas**	**2.12**	**308**	*i* P	**Pn**	**00 36 07.7**	**+0.4**
SBLS				*eS*	**Sn**	**00 36 33.7**	**+0.9**
BOAB	**BOACO BROADBAN**	**2.19**	**92**	⇑P	**Pn**	**00 36 07.1**	**-1.1**
BOAB				S	**Sn**	**00 36 33.1**	**-1.2**
NUBE	**Las Nubes**	**2.28**	**307**	P	**Pn**	**00 36 08.9**	**-0.6**
NUBE				S	**Sn**	**00 36 36.1**	**-0.6**
MTO3	**Montecristo**	**2.34**	**323**	P	**Pn**	**00 36 10.2**	**-0.2**
MTO3	**Montecristo**	**2.34**	**323**	*i* P	**Pn**	**00 36 10.0**	**-0.4**
RBDL	**Robledal**	**2.34**	**313**	*i* P	**Pn**	**00 36 10.5**	**+0.2**
SARH	**Santa Rosa de**	**2.39**	**340**	P	**Pn**	**00 36 10.4**	**-0.5**
FAME	**Alcaldia de Sa**	**2.43**	**303**	P	**Pn**	**00 36 10.8**	**-0.7**
ESQI	**Esquipulas**	**2.46**	**326**	P	**Pn**	**00 36 11.9**	**0.0**
LCRUZ	**La Cruz**	**2.66**	**122**	*eP*	**Pn**	**00 36 13.9**	**-0.6**
LAPC	**Finca la Perla**	**2.99**	**125**	*eP*	**Pn**	**00 36 17.8**	**-0.3**
VRLE	**La Escondida,**	**3.03**	**124**	*eP*	**Pn**	**00 36 20.8**	**+0.9**
GPS3	**Bodega del ICE**	**3.05**	**125**	*eP*	**Pn**	**00 36 19.9**	**-0.2**
GPS1	**Guardaparques**	**3.05**	**124**	*eP*	**Pn**	**00 36 20.6**	**+0.6**
GPS2	**Hotel Rincn d**	**3.06**	**125**	*eP*	**Pn**	**00 36 21.4**	**+1.2**
CLARA	**Aguas Claras**	**3.19**	**123**	*eP*	**Pn**	**00 36 21.8**	**-0.1**
HORNC	**Hornillas**	**3.23**	**124**	*eP*	**Pn**	**00 36 23.2**	**+0.8**
SIUN	**Universidad Ur**	**3.28**	**68**	P	**Pn**	**00 36 23.1**	**0.0**
SIUN				S	**Sn**	**00 37 01.0**	**-0.1**
JUD3	**Juan Diaz 3**	**3.30**	**135**	*eP*	**Pn**	**00 36 23.1**	**-0.4**
PLVR	**Palo Verde**	**3.31**	**130**	*eP*	**Pn**	**00 36 24.1**	**+0.4**
TENO	**El Achiote**	**3.40**	**122**	*eP*	**Pn**	**00 36 24.6**	**-0.2**
CMARA	**Lajas Hojancha**	**3.49**	**135**	P	**Pn**	**00 36 25.5**	**-0.5**
CMARA	**Lajas Hojancha**	**3.49**	**135**	*eP*	**Pn**	**00 36 25.6**	**-0.4**
JTS	**Las Juntas de**	**3.65**	**127**	*eP*	**Pn**	**00 36 29.2**	**+0.9**
TABAC	**Tabacon**	**3.68**	**123**	*eP*	**Pn**	**00 36 30.7**	**+2.0**
ARE1	**Arenal 1**	**3.74**	**123**	*eP*	**Pn**	**00 36 31.9**	**+2.4**
VARE2	**V. Arenal**	**3.74**	**123**	*eP*	**Pn**	**00 36 31.5**	**+2.0**
PICV	**PH. Pirrs**	**4.65**	**128**	*eP*	**Pn**	**00 36 44.9**	**+2.9**
VICA	**Volcano Irazu**	**4.72**	**122**	*eP*	**Pn**	**00 36 46.1**	**+2.8**
VTR0	**Volcan Turrial**	**4.77**	**121**	*eP*	**Pn**	**00 36 48.1**	**+4.0**
ABRB	**Las Abras (San**	**4.82**	**121**	*eP*	**Pn**	**00 36 48.2**	**+3.8**
PIEC	**Cerro El Cedra**	**4.83**	**126**	*eP*	**Pn**	**00 36 46.3**	**+1.5**
EDPE	**Pejibaye, P**	**5.42**	**128**	*eP*	**Pn**	**00 36 54.4**	**+1.8**
FIMO	**Fila Mora**	**5.69**	**128**	*eP*	**Pn**	**00 36 58.8**	**+2.4**
ALCO	**Alturas Coton,**	**6.12**	**125**	*eP*	**Pn**	**00 37 03.4**	**+1.0**
CLLRA	**Cordillera,**	**6.42**	**125**	*eP*	**Pn**	**00 37 07.1**	**+0.6**

RSNC ***02*** *00:38:48.1±0.4, 10°N±3°×8°3W±°, h0km, ML2.6*
CATAC ***02*** *00:38:49.5±0.4, 10°N±2°×8°3W±°, h12km±2km, M3.7/11, MLv3.7/11, Error ellipse: s-maj=6.1km s-min=3.4km az=50.0, confirmed*
UCR ***02*** *00:38:49.8±0.7, 10°.20N×83°.12W, h12km±2km, MW3.9, Presumed earthquake*
UPA ***02*** *00:38:52.8±2.2, 10°.01N×82°.81W, h3km±12km, MW3.2, Presumed earthquake*

ISC 02 00:38:46.4±1.1**, 10°.30N**±0°.03×**82°.99W**±0°.02**, h10**km±9km**, n93**, σ1**901**/116**, 9C-10D, North of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAAN	**Batan**	**0.41**	**239**	*eP*	**Pb**	**00 38 56.0**	**+0.2**
TAAN				*eS*	**Sg**	**00 39 01.2**	**+1.2**
LCOCO	**El Coco**	**0.60**	**249**	*eP*	**Pb**	**00 38 59.4**	**+0.4**
LCOCO				*eS*	**Sg**	**00 39 06.2**	**+0.2**
RVLA	**Villa Bonita**	**0.62**	**252**	⇓*iP*	**Pb**	**00 38 59.9**	**+0.5**
RVLA				*eS*	**Sg**	**00 39 07.1**	**+0.4**
RESJ	**San Isidro (Tu**	**0.70**	**247**	⇓*iP*	**Pg**	**00 39 00.8**	**+0.9**
CARI	**Cariari**	**0.74**	**275**	⇑*iP*	**Pb**	**00 39 02.2**	**+0.8**
CARI				*eS*	**Sb**	**00 39 11.8**	**+0.3**
ABRB	**Las Abras (San**	**0.78**	**248**	⇓*eP*	**Pg**	**00 39 02.2**	**+0.7**
TRT2	**Tortugero**	**0.78**	**289**	⇑P	**Pn**	**00 39 03.3**	**-0.1**
TRT2				S	**Sb**	**00 39 13.6**	**+0.9**
TRT2	**Tortugero**	**0.78**	**289**	⇑*iP*	**Pn**	**00 39 03.3**	**-0.1**
VERB	**Verbena**	**0.78**	**243**	⇑*iP*	**Pg**	**00 39 02.3**	**+0.6**
CVTG	**V. Turrialba,**	**0.79**	**259**	*eP*	**Pb**	**00 39 02.7**	**+0.4**
TURIB	**Turrialba**	**0.79**	**240**	⇓*iP*	**Pg**	**00 39 01.8**	**+0.1**
TURIB				*eS*	**Sg**	**00 39 10.3**	**-1.8**
PILE	**Guapiles**	**0.79**	**264**	*eP*	**Pg**	**00 39 02.6**	**+0.8**
VTCV	**VTCV, Calle Va**	**0.79**	**247**	⇓*eP*	**Pg**	**00 39 02.2**	**+0.4**
VTCV				*eS*	**Sg**	**00 39 11.1**	**-1.1**
RGM0	**Gandoca**	**0.80**	**152**	S	**Sn**	**00 39 17.5**	**+1.9**
CVTR	**Volcan Turrial**	**0.81**	**250**	*eP*	**Pg**	**00 39 02.3**	**+0.2**
VTR0	**Volcan Turrial**	**0.81**	**250**	*eP*	**Pg**	**00 39 02.8**	**+0.7**
VINA	**Juan Vinas**	**0.85**	**242**	⇓*iP*	**Pg**	**00 39 02.8**	**0.0**
RAFA	**San Farael, Vo**	**0.88**	**247**	*eP*	**Pg**	**00 39 03.6**	**+0.2**
PCAYA	**Pacayas**	**0.90**	**245**	*eP*	**Pg**	**00 39 03.8**	**+0.1**
VICA	**Volcano Irazu**	**0.90**	**250**	*eP*	**Pg**	**00 39 04.0**	**+0.2**
CVIMO	**Finca Echandi**	**0.98**	**254**	*eP*	**Pn**	**00 39 09.5**	**+3.1**
REPA	**Paraso**	**0.99**	**242**	*eP*	**Pg**	**00 39 05.0**	**-0.4**
CNI2	**El Empalme, Bo**	**1.01**	**150**	*eP*	**Pn**	**00 39 07.0**	**+0.4**
CNI2				*eS*	**Sg**	**00 39 18.4**	**-2.6**
TAGO	**Cartago**	**1.02**	**245**	*eP*	**Pb**	**00 39 06.1**	**-0.1**
ECI	**Escuela Centro**	**1.11**	**251**	*eP*	**Pb**	**00 39 07.5**	**-0.3**
VBV1	**V. Barva**	**1.11**	**260**	⇑*iP*	**Pb**	**00 39 07.4**	**-0.5**
ZEDO	**Perez Zeledon**	**1.16**	**216**	*eP*	**Pb**	**00 39 07.6**	**-1.0**
PIEC	**Cerro El Cedra**	**1.17**	**235**	*eP*	**Pb**	**00 39 07.5**	**-1.4**
BURE	**Buenos Aires**	**1.17**	**197**	*eP*	**Pb**	**00 39 07.8**	**-0.9**
PITB	**Pirrs, San**	**1.20**	**238**	*eP*	**Pn**	**00 39 08.1**	**-1.3**
RAZU	**San Marcos de**	**1.20**	**238**	⇓*iP*	**Pn**	**00 39 08.4**	**-1.1**
ABE2	**San Pablo**	**1.21**	**241**	⇓*eP*	**Pn**	**00 39 08.5**	**-1.1**
ARTO	**Ro Cuarto**	**1.21**	**272**	*eP*	**Pn**	**00 39 09.7**	**+0.2**
BELE	**Belen**	**1.23**	**255**	*eP*	**Pn**	**00 39 09.4**	**-0.3**
VPS5	**V. Poas**	**1.23**	**265**	*eP*	**Pn**	**00 39 09.8**	**-0.1**
SANTA	**Santa Ana**	**1.23**	**253**	*eP*	**Pn**	**00 39 09.5**	**-0.3**
VPS8	**V Poas**	**1.24**	**265**	*eP*	**Pn**	**00 39 09.5**	**-0.6**
ACOS	**Acosta**	**1.26**	**247**	*eP*	**Pn**	**00 39 09.5**	**-0.7**
EDPE	**Pejibaye, P**	**1.27**	**207**	*eP*	**Pn**	**00 39 09.7**	**-0.6**
ITAL	**Pital**	**1.27**	**277**	*eP*	**Pn**	**00 39 10.8**	**+0.5**
EDP2	**Potrero Grande**	**1.29**	**188**	⇓*iP*	**Pn**	**00 39 10.7**	**+0.2**
VPL3	**V. Platanar**	**1.30**	**272**	*eP*	**Pn**	**00 39 11.3**	**+0.5**
ALCO	**Alturas Coton,**	**1.35**	**174**	⇓*iP*	**Pn**	**00 39 11.7**	**+0.2**
FIMO	**Fila Mora**	**1.35**	**196**	*eP*	**Pn**	**00 39 12.0**	**+0.5**
VPL1	**V. Platanar**	**1.36**	**268**	*eP*	**Pn**	**00 39 11.7**	**+0.1**
OCHAL	**Ojochal**	**1.36**	**209**	P	**Pn**	**00 39 11.6**	**+0.1**
OCHAL				S	**Sb**	**00 39 28.1**	**-1.3**
PICV	**PH. Pirrs**	**1.36**	**241**	*eP*	**Pn**	**00 39 10.5**	**-1.0**
ZARE	**Zarcero**	**1.39**	**265**	*eP*	**Pb**	**00 39 13.4**	**+0.8**
PANP	**Palmar Norte**	**1.41**	**199**	*eP*	**Pb**	**00 39 13.0**	**+0.2**
QUEP	**Quepos**	**1.45**	**233**	P	**Pn**	**00 39 12.4**	**-0.3**
QUEP				S	**Sn**	**00 39 29.5**	**-2.1**
QUEP	**Quepos**	**1.45**	**233**	*eP*	**Pn**	**00 39 12.3**	**-0.3**
SCLRA	**Santa Clara, W**	**1.47**	**172**	*eS*	**Sb**	**00 39 32.8**	**0.0**
TRB2	**Turrubares**	**1.49**	**255**	P	**Pn**	**00 39 13.5**	**+0.2**
TRB2	**Turrubares**	**1.49**	**255**	*eP*	**Pn**	**00 39 13.5**	**+0.2**
BRU2	**Volcan**	**1.52**	**169**	P	**Pb**	**00 39 14.7**	**-0.1**
BRU2				S	**Sn**	**00 39 33.4**	**-0.4**
BRU2	**Volcan**	**1.52**	**169**	⇑*eP*	**Pb**	**00 39 14.8**	**-0.1**
BRU2	**Volcan**	**1.52**	**169**	⇑*iP*	**Pb**	**00 39 15.1**	**+0.2**
BRU2				*eS*	**Sn**	**00 39 33.2**	**-0.6**
CLLRA	**Cordillera,**	**1.59**	**167**	*eP*	**Pb**	**00 39 15.9**	**-0.1**
CLLRA				*eS*	**Sb**	**00 39 36.0**	**-0.2**
LNBQ3	**Los Naranjos,**	**1.59**	**160**	*eP*	**Pg**	**00 39 17.0**	**0.0**
LNBQ3				*eS*	**Sn**	**00 39 33.3**	**-2.2**
PBNVO	**Pueblo Nuevo,**	**1.60**	**151**	*eS*	**Sb**	**00 39 36.9**	**+0.4**
BQTLY	**Boquete Panama**	**1.62**	**161**	*eP*	**Pb**	**00 39 17.4**	**+0.9**
BQTLY	**Boquete Panama**	**1.62**	**161**	*eS*	**Sn**	**00 39 35.9**	**-0.2**
NELY	**Ciudad Neily**	**1.64**	**179**	*eP*	**Pb**	**00 39 17.7**	**+1.0**
FORC	**Fortuna**	**1.66**	**276**	*eP*	**Pb**	**00 39 17.3**	**+0.2**
FITO	**Golfito**	**1.67**	**186**	*eP*	**Pn**	**00 39 16.3**	**+0.6**
VACR	**Volcan Arenal**	**1.67**	**276**	⇑*iP*	**Pb**	**00 39 17.5**	**+0.2**
JEFFS	**S de V. Baru**	**1.68**	**165**	*eP*	**Pb**	**00 39 17.7**	**+0.2**
JEFFS	**S de V. Baru**	**1.68**	**165**	*eP*	**Pg**	**00 39 20.0**	**+1.3**
JEFFS				*eS*	**Sb**	**00 39 38.8**	**-0.4**
CEDE	**Laguna Cedeo**	**1.70**	**276**	⇑*iP*	**Pb**	**00 39 18.0**	**+0.3**
REZ	**Monterrey de S**	**1.70**	**278**	*eP*	**Pb**	**00 39 17.8**	**0.0**
ARE1	**Arenal 1**	**1.71**	**276**	⇑*iP*	**Pb**	**00 39 18.1**	**+0.1**
VARE2	**V. Arenal**	**1.71**	**276**	⇑*iP*	**Pb**	**00 39 18.4**	**+0.4**
CDITO	**Canoas**	**1.72**	**176**	P	**Pb**	**00 39 17.7**	**-0.4**
CDITO				S	**Sn**	**00 39 38.8**	**+0.4**
CASO	**Castillo**	**1.72**	**275**	*eP*	**Pb**	**00 39 18.2**	**0.0**
LPPC	**Paso Canoas**	**1.76**	**175**	*eP*	**Pb**	**00 39 19.0**	**+0.2**
TABAC	**Tabacon**	**1.76**	**277**	*eP*	**Pb**	**00 39 18.9**	**0.0**
MTEVE	**Monteverde**	**1.81**	**271**	*eP*	**Pn**	**00 39 18.5**	**+0.7**
BLUN	**Bluefields**	**1.86**	**336**	P	**Pb**	**00 39 20.8**	**+0.2**
LESP3	**La Esperanza,**	**1.89**	**174**	*eP*	**Pb**	**00 39 21.3**	**+0.3**
BGUAL	**Bijagual, Pana**	**1.89**	**160**	*eP*	**Pg**	**00 39 22.4**	**-0.4**
BGUAL				*eS*	**Sb**	**00 39 45.6**	**+0.8**
PIRO	**Carate, Puerto**	**1.92**	**190**	P	**Pn**	**00 39 20.5**	**+1.4**
PIRO	**Carate, Puerto**	**1.92**	**190**	*eP*	**Pb**	**00 39 20.8**	**-0.7**
COTE	**Lago Cote**	**1.92**	**278**	*eP*	**Pb**	**00 39 21.0**	**-0.5**
DVD	**David**	**1.93**	**164**	*eP*	**Pb**	**00 39 21.2**	**-0.4**
DVD				*eS*	**Sn**	**00 39 42.0**	**-1.5**
JTS	**Las Juntas de**	**1.93**	**270**	P	**Pn**	**00 39 20.3**	**+0.9**
JTS	**Las Juntas de**	**1.93**	**270**	P	**Pn**	**00 39 20.3**	**+0.9**
JTS				S	**Sn**	**00 39 44.5**	**+0.7**
JTS	**Las Juntas de**	**1.93**	**270**	*eP*	**Pn**	**00 39 20.3**	**+0.9**
JTS	**Las Juntas de**	**1.93**	**270**	*eP*	**Pn**	**00 39 20.5**	**+1.1**
CMARA	**Lajas Hojancha**	**2.42**	**264**	P	**Pn**	**00 39 28.3**	**+2.2**
GMAL	**Guarumal, Vera**	**3.06**	**145**	P	**Pb**	**00 39 41.3**	**+0.3**
GMAL				S	**Sb**	**00 40 17.3**	**-1.1**
BCIP	**Isla Barro Col**	**3.30**	**110**	P	**Pn**	**00 39 40.9**	**+2.7**
BCIP				S	**Sn**	**00 40 18.2**	**+0.7**
BCIP	**Isla Barro Col**	**3.30**	**110**	*eP*	**Pn**	**00 39 41.4**	**+3.2**
BCIP				*eS*	**Sn**	**00 40 18.9**	**+1.4**
PRVC	**Isla de Provid**	**3.45**	**27**	P	**Pb**	**00 39 44.9**	**-2.7**
PRVC				S	**Sb**	**00 40 26.3**	**-3.2**

IDC ***02*** *01:03:27.9±0.7, 2°.94S×130°.05E, h0km, mb4.2/11, mbtmp4.2/16, ML4.0/5, MS3.5/8, Error ellipse: s-maj=25.1km s-min=14.4km az=76.0*
NEIC ***02*** *01:03:29.7±1.8, 3°.04S±0°.06×130°.02E±0°.07, h10km±1km, mb4.3/18, Error ellipse: s-maj=12.2km s-min=10.8km az=86.0*
DJA ***02*** *01:03:31.8±0.4, 3°S±2°×13°0E±°, h12km±3km, M4.4/18, mB5.2/3, mb4.7/7, MLv4.3/18, Mw(mB)4.6/3*

ISC 02 01:03:32.2±1.3**, 2°.98S**±0°.05×**130°.01E**±0°.04**, h27**km±10km**, n59**, σ1**956**/63**, mb4.3**/16**, MS3.3**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.14**	**251**	P	**Pn**	**01 03 51.8**	**-0.6**
MSAI				S	**Sb**	**01 04 06.8**	**-0.9**

BNDI	**Bandanaira**	**1.54**	**184**	P	**Pb**	**01 04 01.6**	**+1.6**
BNDI				S	**Sb**	**01 04 22.6**	**+3.5**
KRAI	**Karang Ratu**	**1.65**	**258**	P	**Pn**	**01 04 00.0**	**+0.6**
FAKI	**Fak Fak**	**2.24**	**89**	Pn	**Pn**	**01 04 08.2**	**+0.7**
FAKI	**Fak Fak**	**2.24**	**89**	P	**Pb**	**01 04 10.2**	**-1.8**
FAKI				S	**Sb**	**01 04 40.2**	**+0.9**
SIJI	**Sorong**	**2.44**	**31**	Pn	**Pn**	**01 04 09.9**	**-0.4**
	40nm,0.3s,baz=187,slow=22,SNR=71						
SIJI				Lg	Lg	01 04 40.6	
	39nm,0.3s,baz=294,slow=8.3,SNR=6.8						
	89nm,0.2s						
SIJI	**Sorong**	**2.44**	**31**	P	**Pn**	**01 04 10.9**	**+0.6**
SIJI				S	**Sn**	**01 04 40.6**	**+1.3**
NLAI	**Namlea**	**2.92**	**265**	P	**Pn**	**01 04 17.4**	**+0.6**
NLAI				S	**Sn**	**01 04 53.2**	**+2.2**
SANI	**Sanana**	**4.12**	**283**	P	**Pn**	**01 04 31.7**	**-1.7**
RKPI	**Ransiki, Papua**	**4.41**	**71**	P	**Pn**	**01 04 39.8**	**+2.4**
RKPI				S	**Sn**	**01 05 32.1**	**+4.1**
APSI	**Ampana**	**8.60**	**284**	P	**Pn**	**01 05 34.4**	**-0.6**
	852nm82nm,0.9s						
BATI	**Baumata**	**9.55**	**221**	LR	LR	01 09 48.0	
	comp=Z,491nm,18.0s,baz=41,slow=40						
MTN	**Manton Dam**	**9.87**	**174**		**Pn**	**01 05 49.3**	**-3.1**
TOLI2	**

STG5			*i* S	Sn	01 07 28.7	-7.8
CMIG	**Matias Romero**	**2.38 327**	*e*P	**Pn**	**01 07 12.3**	**+1.6**
CMIG			*e*S	**Sn**	**01 07 38.8**	**-1.0**
NEUV	**Arroyo Zacate**	**3.40 321**	*e*P	**Pn**	**01 07 26.3**	**+2.2**
NEUV			*e*S	**Sn**	**01 08 01.5**	**-2.3**

BEO ***02*** *01:11:43.4±0.4, 41.°92N×23.°11E, h0km, ML1.6/4*
SKO ***02*** *01:11:43.4, 41.°87N×23.°14E, h15km, ML1.6*
SOF 02 01:11:42.4, 41.°95N±0.°01×23.°18E±0.°02, h13km±2km**, MD2.5/6, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.11**	**199**	*i* P	Pg	01 11 45.7	+0.1
KKB				S	Sg	01 11 47.9	+0.1
PLNA	**Plana**	**0.56**	**19**	P	Pb	01 11 53.9	-0.2
PLNA				*i* S	Sb	01 12 01.8	-0.3
MMB	**Musomishta**	**0.59**	**133**	*i* P	Pg	01 11 54.1	+0.2
VTS	**Vitosha**	**0.67**	**4**	*i* P	Pg	01 11 55.4	-0.1
VTS				S	Sg	01 12 04.1	-0.2
VTS	**Vitosha**	**0.67**	**4**	*e*Pg	Pg	01 11 55.3	-0.2
VTS				*e*Sg	Sg	01 12 04.1	-0.2
SOF	**Sofia**	**0.74**	**11**	P	Pb	01 11 57.4	+0.2
BOSS	**Bosilegrad**	**0.75**	**317**	*e*Pg	Pg	01 11 56.3	-0.7
BOSS				*e*Sg	Sb	01 12 07.5	-0.1
VAY	**Valandovo**	**0.78**	**216**	*i* Pg	Pn	01 11 59.2	+0.2
VAY				*i* Sg	Sg	01 12 07.8	+0.2
VAY				*e*Lg	Lg	01 12 07.9	
	comp=E,18nm,0.6s						
VAY				*e*Lg	Lg	01 12 09.0	
	comp=N,16nm,0.6s						
SRS	**Serrai**	**0.89**	**159**	*e*Pg	Pg	01 11 59.4	-0.2
SRS				*e*Sg	Sg	01 12 11.3	+0.1
BLSH	**Balsha**	**0.91**	**5**	*i* P	Pb	01 12 00.5	+0.4
BLSH				S	Sb	01 12 13.0	+0.9
PLD	**Plovdiv**	**1.19**	**80**	*e*Sg	Sn	01 12 21.8	+1.1
RZN	**Rozhen**	**1.19**	**102**	*i* P	Pg	01 12 05.4	0.0
RZN				*i* S	Sn	01 12 23.1	+1.9
BARS	**Barje**	**1.33**	**311**	*e*Pg	Pb	01 12 07.3	+0.1
ZAPS	**Zavoj**	**1.38**	**343**	*e*Pg	Pg	01 12 08.9	-0.1
ZAPS				*e*Sg	Sg	01 12 27.6	+0.6
MPEP	**Malo Peshtene**	**1.47**	**16**	P	Pg	01 12 10.9	+0.3
BLKB	**Belogradchik**	**1.71**	**348**	*e*Pg	Pg	01 12 14.9	-0.4
VALD	**Valchedram**	**1.75**	**6**	P	Pg	01 12 16.7	+0.7

IDC ***02*** *01:18:24.3±2.7, 14.°92N×96.°26W, h0km, mb3.4/2, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=42.9km s-min=21.8km az=144.0*
MEX ***02*** *01:18:35.9±0.3, 15.°83N×96.°83W, h36km±5km, MD4.3*
ISC 02 01:18:32.2±1.4, 15.°88N±0.°04×96.°82W±0.°03, h8km±9km**, n57, σ2°36/102, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi** baz=118,slow=6.2	**0.34**	**291**	⇑*i* P	**Pn**	**01 18 42.9**	**-0.6**
PEIG				*e*S	**Sb**	**01 18 48.5**	**+2.3**
HUIG	**Huatulco**	**0.69**	**99**	*e*P	**Pb**	**01 18 47.6**	**+1.1**
HUIG				*e*S	**Sg**	**01 18 56.5**	**+1.9**
OXLC	**Oaxaca**	**1.19**	**5**	*e*P	**Pb**	**01 18 54.9**	**-0.2**
OXLC				*e*S	**Sg**	**01 19 10.0**	**-0.5**
OXBJ	**Oaxaca**	**1.19**	**4**	*e*P	**Pg**	**01 18 54.8**	**-0.3**
OXBJ				*e*S	**Sg**	**01 19 09.7**	**-0.8**
VHO	**Vista Hermosa**	**1.19**	**4**	*e*P	**Pn**	**01 18 55.1**	**-0.3**
VHO				*e*S	**Sg**	**01 19 10.0**	**-0.6**
NEUV	**Arroyo Zacate**	**2.07**	**28**	*e*P	**Pn**	**01 19 07.8**	**+0.5**
NEUV				*e*S	**Sn**	**01 19 32.6**	**-0.6**
HLIG	**Huajuapan de L**	**2.16**	**334**	*e*P	**Pb**	**01 19 10.8**	**-0.9**
HLIG				*e*S	**Sn**	**01 19 35.6**	**-0.3**
MGIG	**Malinaltepec**	**2.20**	**308**	*e*P	**Pb**	**01 19 11.1**	**-1.3**
MGIG				*e*S	**Sb**	**01 19 36.7**	**-3.3**
CMIG	**Matias Romero** 8.0nm,0.3s,baz=250,slow=12,SNR=49	**2.21**	**57**	Pn	**Pn**	**01 19 08.4**	**-0.8**
CMIG				Pg	**Pg**	**01 19 15.8**	**+1.1**
	57nm,0.3s,baz=249,slow=16,SNR=70						
CMIG				Sn	**Sn**	**01 19 39.5**	**+2.7**
	79nm,0.3s,baz=357,slow=19,SNR=8.5						
CMIG				Lg	Lg	01 19 44.0	
	82nm,0.3s,baz=166,slow=4.5,SNR=7.1						
	34nm,0.3s						
CMIG	**Matias Romero**	**2.21**	**57**	*e*P	**Pn**	**01 19 08.9**	**-0.4**
CMIG				*e*S	**Sn**	**01 19 34.9**	**-2.0**
TOIG	**Toxpalan**	**2.22**	**354**	*e*P	**Pb**	**01 19 11.8**	**-0.9**
TOIG				*e*S	**Sn**	**01 19 35.4**	**-1.7**
TLIG	**Tlapa**	**2.37**	**315**	*e*P	**Pb**	**01 19 14.2**	**-1.0**
TLIG				*e*S	**Sn**	**01 19 40.3**	**-0.7**
FTIG	**Fresnillo de T**	**2.38**	**328**	*e*P	**Pb**	**01 19 13.8**	**-1.6**
FTIG				*e*S	**Sn**	**01 19 41.0**	**-0.2**
CRIG	**Cruz Grande**	**2.38**	**291**	*e*P	**Pn**	**01 19 11.8**	**+0.3**
CRIG				*e*S	**Sn**	**01 19 36.6**	**-4.3**
HMTT	**Tlapaneco**	**2.54**	**319**	*e*P	**Pn**	**01 19 13.3**	**-0.5**
HMTT				*e*S	**Sn**	**01 19 44.4**	**-0.6**
TPIG	**Tehuac#an**	**2.58**	**348**	*e*P	**Pb**	**01 19 18.0**	**-0.9**
TPIG				*e*S	**Sn**	**01 19 42.5**	**-3.7**
CARR	**Arriaga**	**2.82**	**82**	*e*P	**Pn**	**01 19 14.1**	**-3.5**
CARR				*e*S	**Sn**	**01 19 47.9**	**-3.8**
DAIG	**Los Arroyos**	**2.95**	**293**	*e*P	**Pn**	**01 19 18.5**	**-0.9**
DAIG				*e*S	**Sn**	**01 19 52.4**	**-2.6**
PMUV	**Sontecomapan**	**3.11**	**31**	*e*P	**Pn**	**01 19 20.9**	**-0.8**
PMUV				*e*S	**Sn**	**01 19 51.6**	**-7.4**
MEIG	**Mezcala**	**3.37**	**308**	*e*P	**Pn**	**01 19 27.1**	**+1.8**
MEIG				*e*S	**Sn**	**01 20 05.7**	**+0.2**
PPAX	**Atlixo**	**3.39**	**333**	*e*P	**Pn**	**01 19 27.0**	**+1.3**
PPAX				*e*S	**Sn**	**01 20 06.3**	**0.0**
JAUV	**Jalcomulco**	**3.47**	**0**	*e*P	**Pn**	**01 19 25.7**	**-0.9**
JAUV				*e*S	**Sn**	**01 20 07.4**	**-0.6**
CAIG	**El Cayaco**	**3.51**	**290**	*e*P	**Pn**	**01 19 25.3**	**-1.8**
CAIG				*e*S	**Sn**	**01 20 03.7**	**-5.2**
PBCV	**Popocatepetl**	**3.51**	**332**	*e*P	**Pn**	**01 19 30.0**	**+2.6**
PBCV				*e*S	**Sn**	**01 20 09.5**	**+0.2**
PPCU	**Popocatapetl**	**3.55**	**331**	*e*P	**Pn**	**01 19 29.2**	**+1.0**
PPCU				*e*S	**Sn**	**01 20 10.1**	**-0.6**
PBXN	**Popocatepetl**	**3.58**	**331**	*e*P	**Pn**	**01 19 29.1**	**+0.7**
PBXN				*e*S	**Sn**	**01 20 12.1**	**+0.9**
PPSX	**Xalitzintla**	**3.58**	**333**	*e*P	**Pn**	**01 19 30.2**	**+1.8**
PPSX				*e*S	**Sn**	**01 20 10.1**	**-0.9**
PLIG	**Platanillo**	**3.58**	**315**	*e*P	**Pn**	**01 19 30.6**	**+2.4**
PLIG				*e*S	**Sn**	**01 20 12.0**	**+1.1**
PBPN	**Popocatepetl**	**3.59**	**331**	*e*P	**Pn**	**01 19 30.5**	**+1.8**
PBPN				*e*S	**Sn**	**01 20 11.7**	**+0.1**
TGIG		**3.66**	**75**	*e*P	**Pn**	**01 19 27.8**	**-1.5**
TGIG				*e*S	**Sn**	**01 20 11.6**	**-1.0**
YAIG	**Yautepec**	**3.66**	**324**	*e*P	**Pn**	**01 19 26.7**	**-2.7**
YAIG				*e*S	**Sn**	**01 20 12.9**	**0.0**
LVIG	**Laguna Verde**	**3.84**	**6**	*e*P	**Pn**	**01 19 31.2**	**-0.4**
LVIG				*e*S	**Sn**	**01 20 16.4**	**-0.6**
MPVM	**San Francisco**	**3.91**	**328**	*e*S	**Sn**	**01 20 19.2**	**+0.1**
THVM	**De Xico**	**3.99**	**329**	*e*S	**Sn**	**01 20 15.4**	**-5.6**
MAVM	**Malinalco, Edo**	**3.99**	**321**	*e*P	**Pb**	**01 19 39.7**	**-3.2**
MAVM				*e*S	**Sn**	**01 20 23.1**	**+2.1**
TLVM	**San Miguel Top**	**3.99**	**326**	*e*S	**Sn**	**01 20 18.8**	**-2.5**
XCVM	**Xochimilco**	**4.01**	**327**	*e*S	**Sn**	**01 20 21.0**	**-0.6**
MZVM		**4.02**	**325**	*e*P	**Pn**	**01 19 36.5**	**+2.4**
MZVM				*e*S	**Sn**	**01 20 23.4**	**+2.0**
AOVM	**Tlapan**	**4.13**	**325**	*e*P	Pb	01 19 40.1	-5.4
AOVM				*e*S	**Sn**	**01 20 27.1**	**+2.2**
ARIG	**Puente Sto Nin**	**4.14**	**306**	*e*P	**Pn**	**01 19 37.0**	**+1.2**
ARIG				*e*S	**Sn**	**01 20 24.3**	**-0.1**
PBVM	**Pinon**	**4.15**	**329**	*e*S	**Sb**	**01 20 29.0**	**-6.9**
INVM	**La Marquesa**	**4.18**	**325**	*e*P	**Pn**	**01 19 36.7**	**0.0**
INVM				*e*S	**Sn**	**01 20 20.6**	**-5.4**
PTVM	**Pico Tres Padr**	**4.29**	**330**	*e*P	**Pn**	**01 19 41.4**	**+3.3**
PTVM				*e*S	**Sn**	**01 20 31.4**	**+2.7**
VTVM	**Tizayuca**	**4.30**	**335**	*e*P	**Pn**	**01 19 39.9**	**+1.7**
VTVM				*e*S	**Sn**	**01 20 28.1**	**-0.6**
CXUV	**Coxquihui**	**4.34**	**350**	*e*P	**Pn**	**01 19 36.3**	**-2.2**
CXUV				*e*S	**Sn**	**01 20 33.5**	**+4.2**
TOVM	**TOLUCA**	**4.35**	**322**	*e*P	Pb	01 19 44.1	-5.0
TOVM				*e*S	**Sn**	**01 20 30.4**	**+0.3**
AZVM	**Cuida Lopez Ma**	**4.37**	**328**	*e*P	**Pb**	**01 19 48.1**	**-1.4**
AZVM				*e*S	**Sn**	**01 20 31.1**	**+0.6**
PATR	**El Naranjo**	**4.48**	**99**	*e*P	**Pn**	**01 19 39.4**	**-1.3**
PATR				*e*S	**Sn**	**01 20 27.4**	**-5.8**
PAVE	**Pavencul**	**4.52**	**98**	*e*P	**Pn**	**01 19 42.5**	**+1.2**
PAVE				*e*S	**Sn**	**01 20 30.1**	**-4.1**
CHUJ	**Union Juarez**	**4.61**	**99**	*e*P	**Pn**	**01 19 42.8**	**+0.4**
CHUJ				*e*S	**Sn**	**01 20 32.7**	**-3.5**
ZIIG	**Zihuatanejo**	**4.77**	**292**	*e*P	**Pn**	**01 19 40.0**	**-4.5**
ZIIG				*e*S	**Sn**	**01 20 37.5**	**-2.6**
MOIG	**Morelia**	**5.62**	**313**	*e*S	**Sn**	**01 21 01.1**	**-0.3**
CTUV	**Llano Grande**	**5.75**	**346**	*e*S	**Sn**	**01 21 05.6**	**+1.4**
APG	**El Apazote** 0.1nm,0.3s,baz=246,slow=20,SNR=2.1	**6.19**	**97**	Pg	**Pn**	**01 20 05.4**	**+1.2**
APG				Lg	Lg	01 21 15.0	
	0.2nm,0.3s,baz=65,slow=22,SNR=6.5						
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=149,slow=11,SNR=5.5	**14.80**	**336**	Pn	**P**	**01 22 10.3**	**+2.2**
	0.2nm,0.5s						
NVAR	**Mina Array Bea** 0.6nm,0.8s,baz=163,slow=5.1,SNR=2.1	**29.36**	**324**	P	**P**	**01 24 39.0**	**+3.0**
	0.6nm,0.8s						
ILAR	**Eielson Array** 0.2nm,0.7s,baz=136,slow=5.7,SNR=5.8	**59.31**	**338**	P	**P**	**01 28 35.0**	**+0.7**
	0.2nm,0.7s						

GCG ***02*** *01:21:58.8±2.1, 15.°39N×90.°61W, h6km±16km, MD4.0, ML4.0, Presumed earthquake*
CATAC ***02*** *01:21:59.2±0.2, 15.°N±1.°×9.°1W±.°, h1km±1km, M3.3/18, MLv3.3/18, Error ellipse: s-maj=3.0km s-min=2.3km az=7.2, confirmed*
ISC 02 01:21:58.3±1.1, 15.°35N±0.°03×90.°62W±0.°02, h8km±9km**, n41, σ1°902/59, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVCB	**Coban**	**0.24**	**60**	*i* P	**Pg**	**01 22 04.1**	**+0.8**
AVCB				*i* S	**Sg**	**01 22 06.7**	**+0.1**
AVCB				IAML		01 22 08.8	
	comp=E,34μm,0.2s						
APG	**El Apazote**	**0.38**	**156**	*i* P	**Pg**	**01 22 06.5**	**+0.7**
APG				*i* S	**Sg**	**01 22 10.3**	**-0.4**
HUEH	**Huehuetenango**	**0.85**	**268**	P	**Pb**	**01 22 15.4**	**-0.1**
HUEH				S	**Sb**	**01 22 26.7**	**-0.4**
HUEH	**Huehuetenango**	**0.85**	**268**	*i* P	**Pg**	**01 22 14.3**	**-0.4**
ESSG	**Sabana Grande**	**0.98**	**192**	*i* P	**Pb**	**01 22 17.7**	**+0.1**
FG16	**Alotenango, Sa**	**1.07**	**174**	*i* P	**Pg**	**01 22 16.8**	**-2.2**
FG8	**Yepocapa, Chim**	**1.08**	**177**	*i* P	**Pg**	**01 22 17.7**	**-1.5**
STG8	**El Palmar, Qui**	**1.14**	**218**	*i* P	**Pb**	**01 22 20.1**	**-0.3**
PCG5	**San Vicente Pa**	**1.15**	**168**	*i* P	**Pb**	**01 22 18.0**	**-2.6**
STG5	**El Palmar, Qui**	**1.17**	**217**	*i* P	**Pb**	**01 22 20.7**	**-0.2**
RTAL	**Retalhuleu**	**1.32**	**232**	P	**Pg**	**01 22 24.7**	**+1.0**
RTAL				S	**Sg**	**01 22 41.4**	**+0.6**
JUAM	**Asuncion Mita**	**1.34**	**138**	*i* S	**Sb**	**01 22 40.8**	**-0.3**
ZAFR2	**Estanzuela, Za**	**1.45**	**122**	*i* P	Pn	01 22 18.2	-6.6
ESQI	**Esquipulas**	**1.47**	**122**	P	**Pg**	**01 22 26.5**	**0.0**
ESQI				S	**Sg**	**01 22 46.2**	**+0.6**
MTO3	**Montecristo**	**1.54**	**128**	P	**Pb**	**01 22 27.2**	**-0.2**
MTO3				S	**Sg**	**01 22 48.2**	**+0.2**
MTO3	**Montecristo**	**1.54**	**128**	*i* P	**Pb**	**01 22 26.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.55**	**148**	P	**Sn**	**01 22 48.6**	**+2.0**
SLOZ	**Alcaldia de Sa**	**1.55**	**148**	P	**Pb**	**01 22 27.2**	**0.0**
LOAL	**Lomas de Alarc**	**1.57**	**149**	P	**Pb**	**01 22 27.9**	**+0.2**
LOAL				S	**Sg**	**01 22 49.1**	**+0.2**
FAME	**Alcaldia de Sa**	**1.61**	**158**	P	**Pg**	**01 22 29.5**	**+0.3**
FAME				S	**Sg**	**01 22 50.0**	**0.0**
NUBE	**Las Nubes**	**1.65**	**150**	P	**Pb**	**01 22 29.7**	**+0.5**
NUBE				S	**Sg**	**01 22 51.7**	**+0.1**
NUBE	**Las Nubes**	**1.65**	**150**	*i* P	**Pb**	**01 22 29.4**	**+0.2**
UNIC	**Universidad Ca**	**1.71**	**142**	P	**Pb**	**01 22 29.8**	**-0.3**
UNIC				S	**Sg**	**01 22 52.9**	**-0.5**
PETF	**Flores**	**1.72**	**25**	P	**Pb**	**01 22 29.3**	**-0.9**
PETF				S	**Sb**	**01 22 51.2**	**-0.8**
PETF	**Flores**	**1.72**	**25**	*i* P	**Pn**	**01 22 29.1**	**+0.5**
PETF				*i* S	**Sn**	**01 22 49.1**	**-1.6**
CEVE	**Cerro Verde**	**1.80**	**147**	P	**Pb**	**01 22 31.9**	**+0.3**
CEVE				S	**Sb**	**01 22 55.3**	**+0.9**
SARH	**Santa Rosa de**	**1.89**	**107**	P	**Pb**	**01 22 33.6**	**+0.5**
SARH				S	**Sb**	**01 22 57.9**	**+1.0**
SARH	**Santa Rosa de**	**1.89**	**107**	*i* P	**Pb**	**01 22 32.0**	**-1.1**
IZABA	**Izabal, Puerto**	**2.00**	**79**	S	**Sb**	**01 22 59.9**	**-0.2**
LLGN	**La Laguna**	**2.01**	**126**	P	**Pb**	**01 22 34.2**	**-0.9**
LLGN				S	**Sb**	**01 23 00.3**	**0.0**
JAYA	**Jayaque - finc**	**2.03**	**146**	P	**Pb**	**01 22 34.6**	**-1.0**
JAYA				S	**Sb**	**01 23 00.6**	**-0.5**
PMON	**Piamonte**	**2.06**	**142**	P	**Pb**	**01 22 35.0**	**-1.1**
PMON				S	**Sb**	**01 23 01.8**	**-0.2**
UEES	**Universidad Ev**	**2.10**	**140**	S	**Sb**	**01 23 02.6**	**-0.6**
LOMA	**Loma Larga**	**2.20**	**140**	P	**Pb**	**01 22 37.6**	**-0.9**
LOMA				S	**Sb**	**01 23 05.7**	**-0.3**
P5NO	**Presa 5 de nov**	**2.26**	**127**	S	**Sb**	**01 23 08.3**	**+0.9**
PAVA	**Las Pavas**	**2.31**	**135**	P	**Pb**	**01 22 38.5**	**-1.8**
PAVA				S	**Sb**	**01 23 08.8**	**-0.2**
COEG	**Centro de Oper**	**2.41**	**135**	S	**Sb**	**01 23 10.8**	**-1.1**
SCLA	**Alcaldia de Sa**	**2.46**	**131**	S	**Sb**	**01 23 11.7**	**-1.7**
TECO	**Alcaldia de Te**	**2.54**	**135**	S	**Sb**	**01 23 13.6**	**-1.9**
MARCA	**Marcala la Paz**	**2.77**	**115**	S	**Sb**	**01 23 20.7**	**-1.7**
CNCH	**Conchagua**	**3.40**	**127**	S	**Sn**	**01 23 35.1**	**+2.7**

NNC 02 01:27:11.3±6.2, 36.°96N×70.°76E, h0km, mb3.6, mpv3.5, 4C-2D, Error ellipse: s-maj=49.2km s-min=40.8km az=163.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 2.7nm,0.2s,baz=179,slow=13,SNR=49	**6.14**	**358**	⇓P	Pn	01 28 45.2	+1.8
KK31				⇓S	Sn	01 29 56.2	+1.9
	2.1nm,0.4s,baz=189,slow=26,SNR=7.0						
AAK	**Ala-Archa** 0.7nm,0.4s	**6.36**	**26**	⇑P	Pn	01 28 45.6	-0.8
AAK				⇑S	Sn	01 30 00.3	+0.5
	2.3nm,0.5s						
AB31	**Akbulak array** 0.1nm,0.3s,baz=203,slow=4.3,SNR=3.7	**14.59**	**331**	⇑P	Pn	01 30 37.5	-1.5
AB31				⇑S	Sn	01 33 20.0	-1.4
	1.0nm,0.8s,baz=146,slow=23,SNR=2.9						

IDC ***02*** *01:40:20.7±1.0, 33.°34S×178.°70W, h0km, mb4.3/3, mbtmp4.3/4, ML4.1/1, Error ellipse: s-maj=34.5km s-min=30.9km az=103.0*
NEIC ***02*** *01:40:23.2±1.1, 33.°5S±0.°1×178.°72W±0.°06, h10km±1km, mb4.3/11, Error ellipse: s-maj=19.3km s-min=8.1km az=356.0*
ISC 02 01:40:27.9±0.9, 33.°5S±0.°1×178.°9W±0.°2, h48km**, n29, σ0°81/33, mb4.2/9, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.65**	**209**	Pn	**Pn**	**01 41 33.6**	**-2.0**
URZ	**Urewera**	**5.75**	**214**	Pn	**Pn**	**01 41 49.5**	**-1.2**
	4.9nm,0.3s,baz=62,slow=18,SNR=20						
URZ				Sn	**Sn**	**01 42 55.3**	**-0.1**
	5.7nm,0.3s,baz=108,slow=20,SNR=6.8						
	17nm,0.3s						
RTZ	**Ruatahuna**	**6.10**	**212**		**Pn**	**01 41 54.6**	**-1.0**
HIZ	**Hauiti**	**7.13**	**224**	Pn	**Pn**	**01 42 10.0**	**+0.4**
MCQ	**Macquarie Isla**	**26.15**	**210**	P	**P**	**01 45 57.0**	**-0.4**
EIDS	**Eidsvold**	**27.34**	**279**	P	**P**	**01 46 09.0**	**+0.5**
EIDS				IAmb	IAmb	01 46 11.6	
	comp=Z,7.1nm,0.9s						
PPT2	**Papeete2** comp=Z,53nm,23.0s	**30.67**	**66**	*e*LR	LR	01 54 07.1	
COEN	**Coen**	**39.55**	**290**	P	**P**	**01 47 54.9**	**+0.4**
AS31	**Alice Springs**	**42.32**	**271**	P	**P**	**01 48 16.9**	**-0.4**
AS31				IAmb	IAmb	01 48 18.4	
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**42.32**	**271**	P	**P**	**01 48 17.9**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=110,slow=7.3,SNR=34						
ASAR				PcP	**PcP**	**01 50 09.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=124,slow=3.7,SNR=2.1						
	comp=Z,2.7nm,0.6s						
ASAR	**Alice Springs**	**42.32**	**271**	P	**P**	**01 48 17.4**	**+0.1**
ASAR				PcP	**PcP**	**01 50 10.4**	**+0.1**
WR8	**Warramunga Arr**	**43.45**	**276**	P	**P**	**01 48 26.6**	**+0.1**
WR8				IAmb	IAmb	01 48 27.8	
	comp=Z,4.3nm,0.8s						
WRA	**Warramunga Arr** comp=Z,4.1nm,0.7s,baz=118,slow=7.5,SNR=41	**43.59**	**276**	P	**P**	**01 48 27.8**	**+0.2**
WRA				PcP	**PcP**	**01 50 13.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=112,slow=3.0,SNR=1.5						
	comp=Z,4.1nm,0.7s						
WRA	**Warramunga Arr**	**43.59**	**276**	P	**P**	**01 48 27.9**	**+0.2**
WRA					**PcP**	**01 50 13.3**	**-1.2**
WB0	**Warramunga Arr**	**43.63**	**276**	P	**P**	**01 48 27.8**	**-0.1**
WB0				IAmb	IAmb	01 48 29.1	
	comp=Z,5.8nm,0.9s						
VNDA	**Vanda**	**44.93**	**186**	P	**P**	**01 48 38.9**	**+1.4**
VNDA				IAmb	IAmb	01 49 01.3	
	comp=Z,4.1nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.71**	**273**	P	**P**	**01 49 30.5**	**0.0**
CASY	**Casey**	**52.06**	**209**	P	**P**	**01 49 33.2**	**+0.8**
CASY				IAmb	IAmb	01 49 35.9	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui** comp=Z,2.6nm,0.8s,baz=101,slow=1.4,SNR=7.9	**56.60**	**180**	P	**P**	**01 50 07.0**	**+1.3**
	comp=Z,2.6nm,0.8s						
QSPA	**South Pole Qui**	**56.60**	**180**	P	**P**	**01 50 05.9**	**+0.2**
QSPA				IAmb	IAmb	01 50 19.5	
	comp=Z,4.0nm,0.9s						
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.6s,baz=106,slow=2.0,SNR=6.0	**122.68**	**312**	PKP	**PKPdf**	**01 59 16.7**	**-1.1**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.4s,baz=100,slow=3.2,SNR=2.7	**128.09**	**314**	PKP	**PKPdf**	**01 59 27.8**	**-0.3**
FINES	**FINESS Array B** comp=Z,1.9nm,0.5s,baz=46,slow=3.6,SNR=18	**147.79**	**338**	PKPbc	**PKPbc**	**02 00 06.0**	**-0.7**
FINES	**FINESS Array B**	**147.79**	**338**	PKPbc	**PKPdf**	**02 00 04.6**	**+0.9**
MMAI	**Mount Meron Ar** comp=Z,2.9nm,0.8s,baz=66,slow=3.5,SNR=6.5	**151.43**	**279**	PKPbc	**PKiKP**	**02 00 17.1**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.8s,baz=23,slow=3.0,SNR=3.2	**151.70**	**350**	PKPbc	**PKPbc**	**02 00 16.0**	**-0.4**
HFS	**Hagfors** comp=Z,1.6nm,0.8s,baz=42,slow=4.5,SNR=1.7	**152.13**	**347**	PKPbc	**PKiKP**	**02 00 17.3**	**-0.3**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.8s,baz=129,slow=4.4,SNR=6.7	**153.29**	**293**	PKPbc	**PKPbc**	**02 00 20.4**	**-0.4**
BRTR	**Keskin Array B**	**153.29**	**293**		**PKPbc**	**02 00 19.7**	**-1.0**

IDC ***02*** *02:07:02.6±1.2, 3.°57S×127.°11E, h0km, mb4.1/4, mbtmp4.2/6, ML3.8/2, MS3.0/1, Error ellipse: s-maj=41.3km s-min=24.2km az=78.0*
DJA ***02*** *02:07:05.6±0.3, 4.°S±2.°×12.°7E±.°, h10km, M4.4/14, mB4.8/2, mb4.8/3, MLv4.2/14, Mw(mB)4.0/2*
ISC 02 02:07:05.0±0.8, 3.°73S±0.°06×127.°37E±0.°04, h10km**, n15, σ2°818/20, mb4.2/4, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.55**	**331**	P	**Pg**	**02 07 15.1**	**-0.7**
NLAI				S	**Sg**	**02 07 21.2**	**-1.9**
KRAI	**Karang Ratu**	**1.10**	**68**	P	**Pb**	**02 07 25.4**	**-0.8**
KRAI				S	**Sg**	**02 07 42.5**	**+1.9**
MSAI	**Masohi**	**1.60**	**76**	P	**Pn**	**02 07 33.9**	**+0.5**
MSAI				S	**Sn**	**02 07 55.8**	**+1.6**
SANI	**Sanana**	**2.16**	**320**	P	**Pn**	**02 07 40.3**	**-0.8**
SANI				S	**Sn**	**02 08 07.0**	**-1.0**
SIJI	**Sorong** 24nm,0.3s,baz=239,slow=17,SNR=29	**4.82**	**54**	Pn	**Pn**	**02 08 17.8**	**0.0**
SIJI				Sn	**Sn**	**02 09 10.7**	**-3.0**
	16nm,0.3s,baz=127,slow=23,SNR=11						
SIJI				LR	LR	02 10 59.4	
	comp=Z,157nm,19.1s,baz=315,slow=48						
	54nm,0.3s						
SIJI	**Sorong**	**4.82**	**54**	P	**Pn**	**02 08 17.7**	**0.0**
FAKI	**Fak Fak**	**4.94**	**81**	P	**Pn**	**02 08 21.0**	**+1.6**
GTOI	**Gorontalo**	**6.14**	**315**	P	**Pn**	**02 08 39.5**	**+3.6**
GTOI				S	**Sn**	**02 09 50.2**	**+3.9**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=8.7,slow=13,SNR=1.7	**14.38**	**187**	Pn	**Pn**	**02 10 29.5**	**+0.6**
FITZ				Sn	**Sn**	**02 13 05.3**	**-3.2**
	0.2nm,0.3s,baz=24,slow=8.5,SNR=1.5						
	3.0nm,1.1s						
WRA	**Warramunga Arr** 1.1nm,0.6s,baz=342,slow=10,SNR=15	**17.49**	**158**	P	**Pn**	**02 11 07.2**	**-2.1**
ASAR	**Alice Springs** 12nm,0.7s,baz=341,slow=11,SNR=99	**20.80**	**163**	P	**P**	**02 11 48.2**	**+1.5**
	12nm,0.

LRK				Sn	**Sg**	**02 12 51.6**	**-3.1**
ASTR	**Astara**	**3.64**	**113**	Pn	**Pb**	**02 12 11.9**	**-1.6**
ASTR				Sn	**Sg**	**02 13 02.0**	**-4.0**

IDC 02 02:30:09.5±3.1, 33°61′S×178°71′W, h0km, mb3.4/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=74.6km s-min=36.6km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.75**	**215**	Pn	Pn	02 31 37.0	+1.0
	1.5nm,0.3s,baz=45,slow=2.9,SNR=10						
URZ				Sn	Sn	02 32 41.3	-1.5
	0.6nm,0.3s,baz=106,slow=20,SNR=1.4						
	5.4nm,0.4s						
ASAR	**Alice Springs**	**42.44**	**271**	P	P	02 38 05.9	-0.4
	0.3nm,0.6s,baz=108,slow=7.4,SNR=4.9						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.72**	**276**	P	P	02 38 16.9	+0.2
	0.3nm,0.5s,baz=117,slow=7.7,SNR=5.7						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**147.91**	**338**	PKPbc	PKPbc	02 49 54.9	-0.9
	1.4nm,0.7s,baz=48,slow=2.8,SNR=5.7						

*IDC **02** 02:50:23.5±1.4, 31°.74S×71°.29W, h0km, mb3.5/2, mbtmp3.4/5, ML3.6/3, Error ellipse: s-maj=48.1km s-min=38.9km az=141.0*
*SJA **02** 02:50:32.0±0.8, 31°.60S×71°.72W, h63km±6km, ML3.8, MW3.8*
*NEIC **02** 02:50:33.1±1.2, 31°.55S±0°.04×71°.81W±0°.07, h35km±2km, mb4.4/9, ML4.0(GUC), Error ellipse: s-maj=9.6km s-min=5.9km az=276.0*
*GUC **02** 02:50:33.7±0.7, 31°.63S×71°.70W, h40km, ML4.2*
ISC 02 02:50:32.4±0.9, 31°56S±0°.03×71°.77W±0°.05, h59km±9km, n124, σ1s91/149, mb4.5/4, 28C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.75**	**62**		**Pn**	**02 50 48.5**	**+1.1**
CO02				Sn	**Sn**	**02 50 58.5**	**+0.2**
CO02	**Combarbal**	**0.75**	**62**	*e*P	**Pn**	**02 50 48.1**	**+0.8**
CO02				*e*S	**Sn**	**02 50 59.3**	**+1.0**
CO02				IAML		02 50 59.9	
	comp=Z,7μm,0.2s						
CO02	**Combarbal**	**0.75**	**62**	⇓*i*P	**Pn**	**02 50 48.5**	**+1.1**
CO02				*e*S	**Sn**	**02 50 58.8**	**+0.5**
CO02				IAML		02 50 59.5	
	comp=N,31μm,0.2s						
CO02	**Combarbal**	**0.75**	**62**	⇓*i*P	**Pn**	**02 50 48.5**	**+1.1**
CO02				*i* S	**Sn**	**02 50 58.7**	**+0.4**
CO02				IAML		02 50 59.5	
	comp=N,30μm,0.2s						
CO04	**Los Peladeros**	**0.83**	**126**		**Pn**	**02 50 49.2**	**+0.7**
CO04					**Sn**	**02 50 60.0**	**-0.4**
CO04	**Los Peladeros**	**0.83**	**126**	⇓*i*P	**Pn**	**02 50 49.3**	**+0.8**
CO04				*e*S	**Sn**	**02 51 00.4**	**+0.1**
CO04				IAML		02 51 01.1	
	comp=N,11μm,0.2s						
CO04	**Los Peladeros**	**0.83**	**126**	*i* P	**Pn**	**02 50 49.4**	**+0.8**
CO04				*i* S	**Sn**	**02 51 00.5**	**+0.1**
CO04				IAML		02 51 01.1	
	comp=N,11μm,0.2s						
CO03	**El Pedregal**	**1.17**	**52**		**Pn**	**02 50 53.3**	**+0.5**
VA01	**Torpederas**	**1.46**	**176**		**Pn**	**02 50 58.0**	**+1.4**
VA01	**Torpederas**	**1.46**	**176**	*e*P	**Pn**	**02 50 57.4**	**+0.9**
VA01				*e*S	**Sn**	**02 51 15.2**	**+0.5**
VA01				IAML		02 51 16.8	
	comp=Z,535nm,0.1s						
VA01	**Torpederas**	**1.46**	**176**	⇑*i*P	**Pn**	**02 50 58.1**	**+1.5**
VA01				*e*S	**Sn**	**02 51 16.2**	**+1.5**
VA01	**Torpederas**	**1.46**	**176**	*i* P	**Pn**	**02 50 58.1**	**+1.5**
VA01				*i* S	**Sn**	**02 51 16.1**	**+1.4**
ROCH	**El Roble**	**1.55**	**156**	⇑*i*P	**Pn**	**02 50 58.9**	**+1.0**
ROCH				⇑*i*P		02 50 59.0	
ROCH				IAML		02 51 19.8	
	comp=N,7μm,0.2s						
ROCH	**El Roble**	**1.55**	**156**	⇑*i*P	**Pn**	**02 50 59.0**	**+1.0**
ROCH				*i* S	**Sn**	**02 51 16.7**	**-0.4**
ROCH				IAML		02 51 19.0	
	comp=N,1μm,0.4s						
VA03	**San Esteban**	**1.58**	**140**		**Pn**	**02 50 58.8**	**+0.5**
VA03	**San Esteban**	**1.58**	**140**	*e*P	**Pn**	**02 50 58.9**	**+0.5**
VA03				*e*S	**Sn**	**02 51 17.7**	**-0.2**
VA03				IAML		02 51 21.0	
	comp=Z,1μm,0.2s						
VA03	**San Esteban**	**1.58**	**140**	⇑*i*P	**Pn**	**02 50 58.9**	**+0.5**
VA03				IAML		02 51 20.9	
	comp=E,8μm,0.1s						
VA03	**San Esteban**	**1.58**	**140**	⇑*i*P	**Pn**	**02 50 58.9**	**+0.5**
VA03				*i* S	**Sn**	**02 51 17.0**	**-0.8**
VA03				IAML		02 51 20.4	
	comp=E,6μm,0.2s						
GO04	**Tololo Observa**	**1.62**	**31**	Pn	**Pn**	**02 50 59.6**	**+0.6**
GO04	**Tololo Observa**	**1.62**	**31**	*e*P	**Pn**	**02 50 59.5**	**+0.6**
GO04				*e*S	**Sn**	**02 51 18.9**	**+0.1**
GO04				IAML		02 51 20.1	
	comp=Z,4μm,0.5s						
GO04	**Tololo Observa**	**1.62**	**31**	*i* P	**Pn**	**02 50 59.5**	**+0.6**
GO04	**Tololo Observa**	**1.62**	**31**	*i* P	**Pn**	**02 50 59.5**	**+0.6**
GO04				IAML		02 51 20.6	
	comp=E,11μm,0.5s						
MT02	**Curacav**	**1.78**	**163**		**Pn**	**02 51 01.3**	**+0.5**
MT02	**Curacav**	**1.78**	**163**	*e*P	**Pn**	**02 51 00.9**	**0.0**
MT02				*e*S	**Sn**	**02 51 21.4**	**-1.0**
MT02				IAML		02 51 25.8	
	comp=Z,550nm,0.5s						
MT02	**Curacav**	**1.78**	**163**	⇑*i*P	**Pn**	**02 51 01.6**	**+0.8**
MT02				*e*S	**Sn**	**02 51 23.4**	**+1.1**
MT02	**Curacav**	**1.78**	**163**	⇑*i*P	**Pn**	**02 51 01.6**	**+0.8**
PEL	**Peldehue**	**1.83**	**150**	*e*P	**Pn**	**02 51 02.5**	**+0.9**
PEL				*e*S	**Sn**	**02 51 24.1**	**+0.4**
PEL				IAML		02 51 29.5	
	comp=Z,580nm,0.5s						
PEL	**Peldehue**	**1.83**	**150**	*e*P	**Pn**	**02 51 02.2**	**+0.6**
PEL				*e*S	**Sn**	**02 51 23.4**	**-0.3**
MT10	**Hacienda Santa**	**2.00**	**149**	⇑*i*P	**Pn**	**02 51 05.0**	**+1.0**
MT10				IAML		02 51 28.8	
	comp=N,3μm,0.5s						
MT10				IAML		02 51 30.3	
	comp=E,2μm,0.2s						
MT10	**Hacienda Santa**	**2.00**	**149**	⇑*i*P	**Pn**	**02 51 05.0**	**+1.0**
MT10				*i* S	**Sn**	**02 51 27.8**	**-0.3**
MT05	**Renca**	**2.02**	**155**	Pn	**Pn**	**02 51 05.2**	**+0.9**
MT05	**Renca**	**2.02**	**155**	*e*P	**Pn**	**02 51 05.2**	**+0.9**
MT05				*e*S	**Sn**	**02 51 29.2**	**+0.7**
MT05				IAML		02 51 32.6	
	comp=Z,686nm,0.3s						
MT05	**Renca**	**2.02**	**155**	⇑*i*P	**Pn**	**02 51 05.2**	**+0.9**
MT05				IAML		02 51 29.5	
	comp=N,2μm,0.2s						
MT05	**Renca**	**2.02**	**155**	⇑*i*P	**Pn**	**02 51 05.2**	**+0.9**
MT05				*i* S	**Sn**	**02 51 27.8**	**-0.7**
MT05				IAML		02 51 29.5	
	comp=N,2μm,0.3s						
MT14	**Cerro Cal¡n**	**2.11**	**151**	⇑*i*P	**Pn**	**02 51 06.4**	**+1.0**
MT14				IAML		02 51 31.4	
	comp=E,1μm,0.4s						
MT14	**Cerro Cal¡n**	**2.11**	**151**	⇑*i*P	**Pn**	**02 51 06.4**	**+1.0**
MT14				*i* S	**Sn**	**02 51 30.0**	**-0.5**
RTLS	**Leoncito**	**2.12**	**97**	*e*P	**Pn**	**02 51 07.0**	**+1.2**
RTLS				*e*S	**Sn**	**02 51 32.9**	**+1.6**
RTLS				IAML		02 51 39.6	
	comp=Z,1μm,0.6s						
CO01	**Juntas del Tor**	**2.14**	**43**		**Pn**	**02 51 06.8**	**+0.8**
CO01	**Juntas del Tor**	**2.14**	**43**	*e*P	**Pn**	**02 51 06.8**	**+0.8**
CO01				*e*S	**Sn**	**02 51 31.3**	**-0.3**
CO01				IAML		02 51 32.8	
	comp=Z,1μm,0.3s						
CO01	**Juntas del Tor**	**2.14**	**43**	⇑*i*P	**Pn**	**02 51 06.9**	**+0.8**
MT16	**CCHEN**	**2.14**	**151**		**Pn**	**02 51 06.7**	**+0.8**
MT16	**CCHEN**	**2.14**	**151**	⇑*i*P	**Pn**	**02 51 06.8**	**+1.0**
MT03	**Universidad Ad**	**2.20**	**151**		**Pn**	**02 51 07.6**	**+0.9**
MT03	**Universidad Ad**	**2.20**	**151**	*e*P	**Pn**	**02 51 07.7**	**+0.9**
MT03				*e*S	**Sn**	**02 51 33.3**	**+0.4**
MT03				IAML		02 51 35.0	
	comp=Z,956nm,0.2s						
MT03	**Universidad Ad**	**2.20**	**151**	⇑*i*P	**Pn**	**02 51 07.8**	**+1.0**
MT03				IAML		02 51 35.6	
	comp=E,2μm,0.3s						
MT09	**Talagante**	**2.31**	**164**		**Pn**	**02 51 09.3**	**+1.1**
MT09	**Talagante**	**2.31**	**164**	⇑*i*P	**Pn**	**02 51 09.7**	**+1.4**
MT09				IAML		02 51 39.4	
	comp=N,2μm,0.2s						
MT09	**Talagante**	**2.31**	**164**	⇑*i*P	**Pn**	**02 51 09.6**	**+1.4**
MT09				*i* S	**Sn**	**02 51 35.2**	**-0.3**
MT01	**Popeta**	**2.34**	**169**		**Pn**	**02 51 09.4**	**+0.9**
MT01	**Popeta**	**2.34**	**169**	*e*P	**Pn**	**02 51 09.7**	**+1.2**
MT01				*e*S	**Sn**	**02 51 36.0**	**-0.1**
MT01				IAML		02 51 37.5	
	comp=Z,488nm,0.1s						
MT01	**Popeta**	**2.34**	**169**	⇑*i*P	**Pn**	**02 51 09.7**	**+1.2**
MT08	**Bocatoma Ro**	**2.39**	**142**		**Pn**	**02 51 09.8**	**+0.4**
MT08	**Bocatoma Ro**	**2.39**	**142**	*e*P	**Pn**	**02 51 11.6**	**+2.1**
MT08				*e*S	**Sn**	**02 51 39.8**	**+2.0**
MT08				IAML		02 51 42.3	
	comp=Z,399nm,0.8s						
MT08	**Bocatoma Ro**	**2.39**	**142**	⇑*i*P	**Pn**	**02 51 11.4**	**+2.0**
MT08				*e*S	**Sn**	**02 51 39.4**	**+1.6**
MT08	**Bocatoma Ro**	**2.39**	**142**	⇑*i*P	**Pn**	**02 51 11.4**	**+2.0**
MT12	**Pirque**	**2.40**	**155**	⇑*i*P	**Pn**	**02 51 10.4**	**+1.0**
MT12				IAML		02 51 38.0	
	comp=N,2μm,0.3s						
MT12	**Pirque**	**2.40**	**155**	⇑*i*P	**Pn**	**02 51 10.4**	**+1.0**
MT12				*i* S	**Sn**	**02 51 36.9**	**-0.7**
MT12				IAML		02 51 38.0	
	comp=N,2μm,0.3s						
AROD	**Rodeo**	**2.42**	**55**	*e*P	Pn	02 50 56.9	-13
AROD				*e*S	**Sn**	**02 51 35.9**	**-2.5**
ACCO	**Cerro Coronel**	**2.52**	**68**	*e*P	**Pn**	**02 51 13.0**	**+1.7**
ACCO				*e*S	**Sn**	**02 51 45.8**	**+4.9**
ACCO				IAML		02 51 47.1	
	comp=Z,239nm,0.7s						
BO04	**La Punta**	**2.61**	**158**		**Pn**	**02 51 13.2**	**+0.9**
BO04	**La Punta**	**2.61**	**158**	⇑*i*P	**Pn**	**02 51 13.3**	**+1.0**
BO04				IAML		02 51 43.8	
	comp=E,889nm,0.1s						
ZON	**Zonda**	**2.64**	**90**		**Pn**	**02 51 13.7**	**+1.0**
ZON	**Zonda**	**2.64**	**90**	*e*P	**Pn**	**02 51 14.3**	**+1.6**
ZON				*e*S	**Sn**	**02 51 44.7**	**+1.2**
ZON				IAML		02 51 48.2	
	comp=Z,260nm,0.4s						
ARCO	**CERRO ARCO**	**2.72**	**119**	*e*P	**Pn**	**02 51 16.5**	**+2.6**
ARCO				*e*S	**Sn**	**02 51 38.2**	**-7.6**
ACDV	**Cuesta del Vie**	**2.67**	**59**	*e*P	**Pn**	**02 51 14.9**	**+1.7**
ASAL	**Salagasta**	**2.70**	**113**	*e*P	**Pn**	**02 51 15.6**	**+2.1**
ASAL				*e*S	**Sn**	**02 51 43.9**	**-1.1**
LCO	**Las Campanas**	**2.71**	**20**		**Pn**	**02 51 14.3**	**+0.5**
LCO	**Las Campanas**	**2.71**	**20**	*e*P	**Pn**	**02 51 14.4**	**+0.7**
LCO				*e*S	**Sn**	**02 51 46.3**	**+0.8**
LCO				IAML		02 51 47.2	
	comp=Z,663nm,0.5s						
ARCO	**CERRO ARCO**	**2.72**	**119**	*e*P	**Pn**	**02 51 16.5**	**+2.6**
ARCO				*e*S	**Sn**	**02 51 38.2**	**-7.6**
SJA	**San Juan**	**2.74**	**90**	*e*P	Pn	02 51 02.4	-12
SJA				IAML		02 51 34.2	
	comp=Z,572nm,0.9s						
RTLL	**Cerro Villicun**	**2.83**	**86**	*e*P	**Pn**	**02 51 16.3**	**+1.1**
RTLL				*e*S	**Sn**	**02 51 48.6**	**+0.4**
RTLL				IAML		02 51 49.9	
	comp=Z,181nm,0.3s						
BO01	**Tunca**	**2.88**	**169**		**Pn**	**02 51 17.0**	**+1.1**
BO01	**Tunca**	**2.88**	**169**	*e*P	**Pn**	**02 51 16.3**	**+0.4**
BO01				IAML		02 51 54.4	
	comp=Z,115nm,0.2s						
BO01	**Tunca**	**2.88**	**169**	⇓*e*P	**Pn**	**02 51 17.1**	**+1.1**
AAGR	**Agrelo**	**2.92**	**122**	*e*P	**Pn**	**02 51 19.3**	**+2.8**
AAGR				*e*S	Sn	02 51 40.4	-10
AAGR				IAML		02 51 41.0	
	comp=Z,449nm,0.5s						
BO03	**Pichilemu**	**2.93**	**183**	⇑*e*P	**Pn**	**02 51 17.4**	**+0.8**
AC05	**El Transito**	**3.01**	**26**		**Pn**	**02 51 18.7**	**+1.0**
AC05	**El Transito**	**3.01**	**26**	*e*S	**Sn**	**02 51 53.1**	**+0.3**
AC05				IAML		02 52 11.0	
	comp=Z,211nm,0.7s						
AC05	**El Transito**	**3.01**	**26**	*e*P	**Pn**	**02 51 18.8**	**+1.0**
BO02	**Sierra Bellavi**	**3.33**	**166**		**Pn**	**02 51 23.0**	**+0.9**
BO02	**Sierra Bellavi**	**3.33**	**166**	*e*P	**Pn**	**02 51 23.3**	**+1.2**
AC04	**Llanos de Chal**	**3.40**	**10**		**Pn**	**02 51 23.5**	**+0.5**
AC04	**Llanos de Chal**	**3.40**	**10**	⇑*e*P	**Pn**	**02 51 23.5**	**+0.5**
GO05	**Hualane**	**3.44**	**182**		**Pn**	**02 51 24.1**	**+0.6**
GO05	**Hualane**	**3.44**	**182**	⇑*i*P	**Pn**	**02 51 24.2**	**+0.6**
GO05				IAML		02 52 03.2	
	comp=N,698nm,0.4s						
GO03	**Copiapo**	**4.17**	**19**		**Pn**	**02 51 33.6**	**0.0**
GO03	**Copiapo**	**4.17**	**19**	*e*P	**Pn**	**02 51 34.1**	**+0.4**
GO03				*e*S	**Sn**	**02 52 22.7**	**+1.5**
GO03				IAML		02 52 49.9	
	comp=Z,102nm,1.0s						
GO03	**Copiapo**	**4.17**	**19**	*e*P	**Pn**	**02 51 33.8**	**+0.1**
VCA	**Vinchina**	**4.18**	**49**	*e*P	**Pn**	**02 51 35.3**	**+1.5**
ML02	**Panimavida**	**4.20**	**176**		**Pn**	**02 51 34.6**	**+0.6**
BI02	**San Fabin de**	**5.11**	**176**		**Pn**	**02 51 47.5**	**+1.1**
AC02	**Maricunga**	**5.24**	**27**		**Pn**	**02 51 48.9**	**+0.1**
BI05	**Punc Hualpn**	**5.31**	**192**	Pn	**Pn**	**02 51 49.5**	**+0.5**
AC01	**Pan de Azucar**	**5.49**	**11**	Pn	**Pn**	**02 51 49.9**	**-1.8**
TCA	**Tanti**	**6.13**	**90**	*e*P	**Pn**	**02 51 59.0**	**-1.6**
VA04	**Juan Fernndez**	**6.31**	**249**	Pn	**Pn**	**02 52 02.3**	**-0.5**
H03N1	**Juan Fernandez**	**6.32**	**251**	T	T	02 58 55.4	
	baz=77,slow=73,SNR=72						
H03N3	**Juan Fernandez**	**6.33**	**251**	T	T	02 58 56.2	
	baz=77,slow=73,SNR=656						
H03N2	**Juan Fernandez**	**6.33**	**251**	T	T	02 58 56.2	
	baz=77,slow=73,SNR=41						
H03S3	**Juan Fernandez**	**6.43**	**248**	T	T	02 58 51.7	
	baz=83,slow=75,SNR=6.7						
H03S1	**Juan Fernandez**	**6.43**	**247**	T	T	02 58 55.0	
	baz=83,slow=75,SNR=6.9						
H03S2	**Juan Fernandez**	**6.44**	**247**	T	T	02 58 57.5	
	baz=83,slow=75,SNR=13						
PB14	**IPOC Station P**	**7.01**	**10**	Pn	**Pn**	**02 52 10.2**	**-2.7**
GO06	**Curarrehue**	**8.01**	**178**	Pn	**Pn**	**02 52 26.6**	**+0.4**
LR05	**Currie**	**8.65**	**181**	Pn	**Pn**	**02 52 35.4**	**+0.5**
PB06	**IPOC Station P**	**9.04**	**13**	Pn	**Pn**	**02 52 39.6**	**-0.7**
TRQA	**Tornquist**	**10.33**	**132**	Pn	**Pn**	**02 52 56.6**	**-1.3**
PB02	**IPOC Station P**	**10.34**	**10**	Pn	**Pn**	**02 52 58.0**	**-0.1**
PB08	**IPOC Station P**	**11.61**	**12**	Pn	**Pn**	**02 53 13.6**	**-2.2**
CPUP	**Villa Florida**	**13.67**	**71**	Pn	Pn	02 53 33.0	-10
	comp=Z,0.1nm,0.3s,baz=241,slow=17,SNR=2.2						
	comp=Z,1.3nm,0.9s						
LPAZ	**La Paz**	**15.56**	**13**	Pn	**Pn**	**02 54 06.1**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=2.1						
	comp=Z,0.5nm,0.6s						
AQDB	**Aquidauana**	**18.16**	**56**	P	**Pn**	**02 54 41.4**	**+1.0**
SIV	**San Ignacio**	**18.31**	**35**	P	**P**	**02 54 37.5**	**-4.4**
	baz=198,slow=19,SNR=1.2						
	comp=Z,0.3nm,0.4s						
MG05	**Puerto Natales**	**20.11**	**181**	P	Pn	02 55 02.3	-1.1
MG05				IAmb	IAmb	02 55 06.8	
	comp=Z,14nm,1.2s						
VILB	**Vilhena**	**21.36**	**32**	P	**P**	**02 55 14.5**	**-0.5**
MG03	**Isla Dawson**	**22.30**	**178**	P	**P**	**02 55 27.2**	**+2.6**
MG03				IAmb	IAmb	02 55 31.3	
	comp=Z,35nm,1.2s						
EFI	**East Falkland**	**22.49**	**157**	P	**P**	**02 55 28.8**	**+2.1**
ESPZ	**Base Esperanza**	**33.21**	**168**	P	P	02 57 06.5	+3.3
ESPZ				IAmb	IAmb	02 57 10.6	
	comp=Z,15nm,1.5s						
ECPR	**Experimental S**	**49.87**	**7**	P	**P**	**02 59 21.6**	**+1.7**
SNAA	**Sanae**	**53.76**	**159**	P	P	02 59 52.2	+3.9
SNAA				IAmb	IAmb	02 59 56.2	
	comp=Z,4.1nm,1.3s						
352A	**Blakely**	**63.92**	**347**	P	P	03 01 01.5	+2.3
TXAR	**Lajitas Array**	**67.73**	**330**	P	**P**	**03 01 25.3**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=147,slow=7.7,SNR=3.7						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**83.17**	**70**	P	**P**	**03 02 51.2**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=241,slow=2.6,SNR=2.8						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**122.99**	**210**	PKP	**PKiKP**	**03 09 21.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=142,slow=1.9,SNR=9.6						
ZALV	**Zalesovo Beam**	**152.03**	**30**	PKPbc	**PKiKP**	**03 10 20.1**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=315,slow=2.5,SNR=7.7						

*IDC **02** 03:11:35.9±0.6, 27°.17N×104°.67E, h0km, mb4.2/29, mbtmp4.2/31, ML4.6/2, MS3.8/47, Error ellipse: s-maj=16.6km s-min=12.4km az=47.0*
*BJI **02** 03:11:36.7, 27°.13N×104°.67E, h10km, mB4.8/24, mb4.7/47, ML4.9/20, Ms4.5/57, Ms7 4.3/55*
*MOS **02** 03:11:37.1±0.8, 27°.16N×104°.69E, h20km, mb4.7/42, MS4.0/5, Error ellipse: s-maj=7.4km s-min=4.7km az=110.7*
*NEIC **02** 03:11:38.3±1.0, 27°.21N±0°.06×104°.69E±0°.03, h10km±1km, mb4.6/111, Error ellipse: s-maj=11.2km s-min=2.9km az=155.0*
*GFZ **02** 03:11:38.3±0.2, 27°N±3°×10°5E±°, h10km, M4.5/31, mb4.7/31, confirmed*
ISC 02 03:11:37.9±0.3, 27°20N±0°.03×104°70E±0°.03, h10km, n590, σ1s02/596, mb4.6/140, MS3.9/55, 35C-14D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**1.90**	**112**	Pn	**Pb**	**03 12 12.5**	**-0.3**
GYA				Sn	**Sg**	**03 12 39.7**	**+0.6**
GYA				SMN			
	17μm,1.0s						
GYA				SME			
	17μm,0.9s						
KMI2	**Kunming**	**2.69**	**221**	⇑Pn	**Pn**	**03 12 22.2**	**+0.8**
KMI2				Pg	**Pb**	**03 12 27.3**	**+1.0**
KMI2				Sn	**Sn**	**03 12 56.3**	**+2.1**
KMI2				SMN			
	1μm,0.9s						
KMI2				SME			
	790nm,1.0s						
PZH	**PanZhiHua**	**2.73**	**256**	Pg	**Pn**	**03 12 23.4**	**+1.5**
PZH				Sg	**Sb**	**03 13 01.2**	**+0.7**
CD2	**Chengdu**	**3.79**	**348**	Pn	**Pn**	**03 12 37.7**	**+1.2**
CD2				Pg	**Pg**	**03 12 48.2**	**-2.4**
CD2				Sn	**Sn**	**03 13 20.5**	**-0.7**
CD2				Sg	**Sg**	**03 13 38.6**	**-1.1**
CD2				SMN			
	3μm,0.8s						
CD2				SME			
	5μm,1.0s						
ENH	**Enshi**	**5.20**	**53**		**Pn**	**03 12 57.7**	**+1.8**
ENH	**Enshi**	**5.20**	**53**	P	**Pn**	**03 12 58.8**	**+2.9**
SLVN	**Son La**	**5.88**	**187**		**Pn**	**03 13 05.3**	**+0.1**
TNCH	**TengChong**	**5.96**	**250**	Pg	**Pg**	**03 13 31.1**	**-1.0**
TNCH				Sg	**Sg**	**03 14 50.0**	**+0.7**
TNCH				smax	smax		
	comp=N,520nm,1.1s						
TNCH				smax	smax		
	comp=E,210nm,0.6s						
TNCH				LR	LR		
	comp=N,9μm,3.3s						
TNCH				LR	LR		
	comp=E,4μm,3.2s						
CNSH	**ChangSha**	**7.36**	**80**	Pn	**Pn**	**03 13 27.4**	**+1.9**
CNSH				Sn	**Sn**	**03 14 47.9**	**-1.2**
CNSH				SMN			
	comp=E,610nm,1.0s						
CNSH				SME			
	comp=E,470nm,1.1s						
XAN	**Xi'an**	**7.73**	**27**	Pn	**Pn**	**03 13 31.4**	**+0.9**
XAN				Sn	**Sn**	**03 15 00.7**	**+2.5**
XAN				Sg	**Sg**	**03 15 44.1**	**-1.9**
XAN				SMN			
	comp=E,1μm,1.4s						
XAN				SME			
	comp=E,990nm,1.8s						
XAN				L	L		
	comp=E,4μm,7.9s						
XAN				L	L		
	comp=E,4μm,8.9s						
XAN				L	L		
	comp=E,2μm,10.0s						
LZDM	**Lanzhou Array**	**8.78**	**355**	Pn	**Pn**	**03 13 43.7**	**-1.5**
	baz=172,slow=12						
	comp=E,2.5nm,0.3s						
GZH2	**Guangzhou**	**8.83**	**112**	P	**Pn**	**03 13 46.4**	**+0.8**
GZH2				S	**Sn**	**03 15 26.9**	**+1.7**
GZH2				L	L		
	comp=E,1μm,3.8s						
GZH2				L	L		
	comp=E,2μm,4.4s						
LZH	**Lanzhou**	**8.89**	**356**	P	Pn	03 13 53.5	+6.9
LZH				S	**Sn**	**03 15 35.8**	**+8.8**
LZH				SMN			
	comp=E,300nm,1.5s						
LZH				SME			
	comp=E,420nm,1.4s						
LZH				L	L		
	comp=E,3μm,6.7s						
LZH				L	L		
	comp=E,2μm,7.0s						
WHN	**Wuhan**	**9.09**	**66**	P	**Pn**	**03 13 51.0**	**+1.8**
WHN				S	**Sn**	**03 15 27.2**	**-4.5**
WHN				L	L		
	comp=E,5μm,5.3s						
WHN				L	L		
	comp=E,5μm,4.0s						
WHN				L	L		
	comp=E,7μm,5.0s						
QIZ	**Qiongzhong**	**9.40**	**149**		**Pn**	**03 13 52.7**	**-0.8**
QIZ	**Qiongzhong**	**9.40**	**149**	P	**Pn**	**03 13 52.0**	**-1.5**
QIZ				S	**Sn**	**03 15 38.1**	**-1.3**
QIZ				pmax	pmax		
	comp=E,150nm,4.1s						
QIZ				L	L		
	comp=E,2μm,7.6s						
QIZ				L	L		
	comp=E,1μm,6.1s						
MORE	**Moreh**	**9.83**	**255**	Pn	**Pn**	**03 13 59.1**	**-0.2**
HKPS	**Hong Kong Po S**	**9.88**	**118**	Pn	**Pn**	**03 14 01.8**	**+1.8**
CHTO	**Chiang Mai**	**9.88**	**214**		**Pn**	**03 14 02.2**	**+2.1**
CHTO	**Chiang Mai**	**9.88**	**214**	P	**Pn**	**03 14 02.2**	**+2.1**
LYN	**LuoYang**	**9.91**	**40**	P	**Pn**	**03 13 59.9**	**-0.5**
LYN				S	**Sn**	**03 15 51.4**	**-0.3**
LYN				pmax	pmax		
	comp=E,58nm,0.8s						
LYN				L	L		
	comp=E,3μm,10.0s						
LYN				L	L		
	comp=E,3μm,12.7s						
CM31	**Chiang Mai Arr**	**10.19**

comp=E,2µm,12.2s
BTO2 Baotou 14.18 16 *e*P **Pn** **03 14 59.0 +0.2**
BTO2 pP **P** **03 15 02.5 -3.9**
BTO2 sP 03 15 05.7
BTO2 PP **PnPn** **03 15 10.7 +3.8**
BTO2 S **Sn** **03 17 38.0 +1.7**
BTO2 pmax pmax
comp=E,41nm,0.9s
BTO2 pmax pmax
comp=E,200nm,5.9s
BTO2 L L
comp=E,2µm,9.0s
BTO2 L L
comp=E,2µm,8.5s
BTO2 L L
comp=E,2µm,9.3s
SSLB Suanglung 15.06 99 P **P** **03 15 14.5 -1.8**
SSLB IAmb IAmb 03 15 23.0
comp=Z,24nm,1.0s
EVN Everest 15.88 277 **Pn** **03 15 19.3 -2.9**
EVN IAmb IAmb 03 15 30.8
comp=Z,27nm,0.8s
EVN Everest 15.88 277 P **Pn** **03 15 20.6 -1.5**
BJI2 Beijing 15.95 34 P **Pn** **03 15 21.8 -0.5**
BJI2 pmax pmax
comp=Z,3.0nm,0.9s
DL2 Dalian 18.34 46 P **P** **03 15 54.0 +1.5**
DL2 pmax pmax
comp=Z,71nm,1.0s
DL2 pmax pmax
comp=Z,180nm,4.6s
DL2 L L
comp=Z,480nm,14.2s
DL2 L L
comp=Z,710nm,13.7s
DL2 L L
comp=Z,690nm,12.7s
XLT XiLinHaoTe 19.04 26 *e*P **Pn** **03 16 01.5 +0.6**
XLT sS sS 03 19 42.1 +0.6
XLT pmax pmax
comp=Z,28nm,1.0s
XLT pmax pmax
comp=Z,100nm,3.7s
XLT L L
comp=Z,59nm,11.0s
XLT L L
comp=Z,580nm,11.1s
XLT L L
comp=Z,660nm,14.9s
SONM Songino Array 20.65 3 P **P** **03 16 18.9 +1.2**
comp=Z,6.1nm,0.7s,baz=167,slow=11,SNR=24
SONM LR LR 03 24 41.5
comp=Z,310nm,19.9s,baz=181,slow=38
comp=Z,6.1nm,0.7s
SONM Songino Array 20.65 3 **P** **03 16 17.9 +0.2**
ULN Ulaanbaatar 20.72 4 **P** **03 16 18.9 +0.4**
ULN IAmb IAmb 03 16 24.3
comp=Z,24nm,1.1s
ULN Ulaanbaatar 20.72 4*c**e*P **P** **03 16 19.6 +1.1**
ULN pmax pmax
comp=Z,16nm,0.8s
ULN Ulaanbaatar 20.72 4 P Pn 03 16 20.1 -0.7
JOW Kunigami 21.00 86 P **P** **03 16 23.6 +2.0**
INCN Inchon 21.14 55 P **P** **03 16 21.8 -1.2**
INCN IAmb IAmb 03 16 30.8
comp=Z,52nm,1.1s
INCN Inchon 21.14 55 P **P** **03 16 21.8 -1.2**
INCN pmax pmax
comp=Z,52nm,1.2s
SNY Shenyang 21.27 42 ⇑P **P** **03 16 28.1 +3.8**
SNY S **S** **03 20 24.0 +3.5**
SNY pmax pmax
comp=Z,17nm,0.9s
SNY pmax pmax
comp=Z,110nm,3.5s
SNY L L
comp=Z,360nm,15.5s
SNY L L
comp=Z,410nm,12.6s
SNY L L
comp=Z,460nm,14.5s
TJN Taejon 21.29 59 P **P** **03 16 24.8 +0.1**
TJN Taejon 21.29 59⇑*i*P **P** **03 16 25.1 +0.5**
WMQ Urumqi 21.54 325 *e*P **P** **03 16 26.6 -0.7**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ L L
comp=Z,380nm,11.3s
WMQ L L
comp=Z,500nm,13.5s
WMQ L L
comp=Z,180nm,15.9s
KS19 Wonju Array Si 22.05 56 P **P** **03 16 33.5 +0.7**
KSRS Korea Array 22.08 57 P **P** **03 16 32.4 -0.7**
comp=Z,4.5nm,0.6s,baz=242,slow=10,SNR=18
KSRS LR LR 03 24 52.0
comp=Z,255nm,18.0s,baz=265,slow=36
comp=Z,4.5nm,0.6s
JSU Suzuyama 22.84 73 P **P** **03 16 40.9 -0.3**
JSU Suzuyama 22.84 73 P **P** **03 16 42.9 +1.7**
ZAK Zakamensk 23.18 358 *e*P **P** **03 16 45.4 +0.7**
ZAK pmax pmax
comp=Z,16nm,1.4s
JNU Nakatsue 23.36 69 P **P** **03 16 46.5 -0.2**
CN2 Changchun 23.56 40 *e*P **P** **03 16 49.2 +0.7**
CN2 *e*S **S** **03 21 02.3 -0.2**
CN2 pmax pmax
comp=Z,40nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 L L
comp=Z,500nm,14.0s
CN2 L L
comp=Z,400nm,14.0s
CN2 L L
comp=Z,600nm,13.0s
KNGR Kungurtug, Tuv 24.01 349 *e*P **P** **03 16 51.6 -1.3**
KNGR pmax pmax
comp=Z,19nm,1.7s
TLY Talaya 24.47 358 P **P** **03 16 58.2 +1.3**
comp=Z,1.0nm,0.3s,baz=194,slow=9.4,SNR=3.8
TLY LR LR 03 27 06.4
comp=Z,194nm,18.8s,baz=167,slow=38
comp=Z,1.0nm,0.3s
TLY Talaya 24.47 358 P **P** **03 16 58.2 +1.3**
MOY Mondy 24.60 354 *e*P **P** **03 17 00.7 +2.4**
PSI Prapat 24.88 194 P **P** **03 17 01.1 0.0**
PSI pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 24.91 24 P **P** **03 17 01.1 +0.1**
HIA Hailar 24.91 24*d**i*P **P** **03 17 01.7 +0.7**
HIA pmax pmax
comp=Z,7.0nm,0.3s
HIA Hailar 24.91 24 P **P** **03 17 02.8 +1.7**
RPSI Rantau Prapat 24.98 194 **P** **03 17 01.1 -0.7**
RPSI IAmb IAmb 03 17 03.8
comp=Z,11nm,0.8s
HILR Hailar Array B 25.16 23 P **P** **03 17 03.5 +0.2**
comp=Z,14nm,0.8s,baz=195,slow=11,SNR=11
comp=Z,14nm,0.8s
ZSN Zaisan 25.51 328 *e*P **P** **03 17 06.9 +0.5**
ZSN Zaisan 25.51 328 *e*P **P** **03 17 07.0 +0.5**
BNX BinXian 25.85 38 ⇓P **P** **03 17 10.0 +0.5**
BNX pP **pP** **03 17 13.3 +0.2**
BNX S **S** **03 21 38.9 -0.2**
BNX sS **sS** **03 21 47.3 +2.3**
BNX pmax pmax
comp=Z,14nm,0.8s
BNX pmax pmax
comp=Z,100nm,4.1s
BNX L L
comp=Z,350nm,12.2s
BNX L L
comp=Z,250nm,10.6s
BNX L L
comp=Z,420nm,11.8s
SHLS Shalkode 25.92 314 *e*P **P** **03 17 08.2 -2.1**
SHLS pmax pmax
comp=Z,8.0nm,0.8s
SHLS Shalkode 25.92 314 *e*P **P** **03 17 08.2 -2.1**
comp=Z,8.5nm,0.8s
PDGK Podgornoye 25.99 315 P **P** **03 17 10.8 -0.2**
PDGK Podgornoye 25.99 315 P **P** **03 17 10.8 -0.2**
HYB Hyderabad 26.03 254 *e*P **P** **03 17 09.9 -1.5**
HYB *e*S **S** **03 21 42.0 -0.5**
DGZ Jazzator, Alta 26.10 334⇓*i*P **P** **03 17 12.4 +0.4**
DGZ pmax pmax
comp=Z,36nm,1.2s
UZB Uzynbulak 26.20 314 *e*P **P** **03 17 12.9 0.0**
UZB pmax pmax
comp=Z,10.0nm,1.2s
UZB Uzynbulak 26.20 314 *e*P **P** **03 17 12.9 0.0**
comp=Z,10nm,1.2s
MK31 Makanchi Array 26.36 324*d**i*P **P** **03 17 13.7 -0.4**
MKAR Makanchi Array 26.36 324 P **P** **03 17 14.2 0.0**
comp=Z,5.9nm,0.8s,baz=122,slow=12,SNR=28
MKAR LR LR 03 27 58.8
comp=Z,184nm,19.1s,baz=120,slow=37
comp=Z,5.9nm,0.8s
MKAR Makanchi Array 26.36 324 **P** **03 17 14.0 -0.1**
MAKZ Makanchi 26.53 324 **P** **03 17 15.6 -0.1**
MAKZ Makanchi 26.53 324 P **P** **03 17 15.6 -0.1**
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 26.53 324 P **P** **03 17 15.8 +0.1**
KPKS Kokpek 26.57 314 *e*P **P** **03 17 16.3 +0.2**
KPKS Kokpek 26.57 314 *e*P **P** **03 17 16.4 +0.2**
ASAI AK-SAY(Kyrgyzs 26.93 308 P **P** **03 17 21.1 +1.4**
KSH2 Kashi 27.02 304 P **P** **03 17 21.5 +1.1**
KSH2 S **S** **03 22 04.3 +6.1**
KSH2 pmax pmax
comp=Z,5.0nm,0.8s
KSH2 L L
comp=Z,430nm,13.1s
KSH2 L L
comp=Z,210nm,13.1s
KSH2 L L
comp=Z,310nm,16.5s
MDOK Medeo 27.48 313 *e*P **P** **03 17 24.5 +0.1**
MDOK Medeo 27.48 313 *e*P **P** **03 17 24.6 +0.1**
NRN Naryn 27.48 309 **P** **03 17 24.9 +0.2**
NRN Naryn 27.48 309 P **P** **03 17 24.9 +0.2**
NRN pmax pmax
comp=Z,10.0nm,1.3s
TDK Taldyqorghan 27.51 317 *e*P **P** **03 17 25.0 +0.4**
TDK pmax pmax
comp=Z,8.0nm,0.6s
TDK Taldyqorghan 27.51 317 *e*P **P** **03 17 25.0 +0.4**
comp=Z,7.7nm,0.6s
AAA Alma-Ata 27.59 313 *e*P **P** **03 17 25.4 +0.1**
AAA pmax pmax
comp=Z,8.0nm,0.4s
AAA Alma-Ata 27.59 313 *e*P **P** **03 17 25.5 +0.1**
comp=Z,8.2nm,0.4s
USA0B Ussuriysk Arra 27.73 45 P **P** **03 17 26.4 -0.1**
USA0B IAmb IAmb 03 17 28.8
comp=Z,17nm,1.1s
USA0B Ussuriysk Arra 27.73 45*c**i*P **P** **03 17 26.1 -0.3**
USRK Ussuriysk Ar. 27.73 45 P **P** **03 17 26.4 -0.1**
comp=Z,8.3nm,0.8s,baz=241,slow=8.9,SNR=15
USRK LR LR 03 28 14.4
comp=Z,228nm,19.8s,baz=223,slow=36
comp=Z,8.3nm,0.8s
USRK Ussuriysk Ar. 27.73 45 **P** **03 17 26.2 -0.2**
USRK Ussuriysk Ar. 27.73 45 P **P** **03 17 26.2 -0.2**
BOOM Boomskoye usch 27.93 311 **P** **03 17 28.1 -0.4**
BOOM Boomskoye usch 27.93 311 P **P** **03 17 28.1 -0.4**
BOOM pmax pmax
comp=Z,11nm,1.4s
BOOM Boomskoye usch 27.93 311 P **P** **03 17 30.1 +1.5**
DAV Davao City (W) 28.17 131 LR LR 03 30 36.5
comp=Z,257nm,18.5s,baz=18,slow=40
AAK Ala-Archa 28.98 310 P **P** **03 17 38.4 +0.6**
comp=Z,1.6nm,0.5s,baz=133,slow=18,SNR=1.4
AAK LR LR 03 29 57.8
comp=Z,188nm,20.1s,baz=163,slow=38
comp=Z,1.6nm,0.5s
AAK Ala-Archa 28.98 310 P **P** **03 17 35.5 -2.3**
AAK Ala-Archa 28.98 310⇑*i*P **P** **03 17 38.1 +0.3**
AAK pmax pmax
comp=Z,4.0nm,1.2s
SGDS Sogindy 29.20 312 *e*P **P** **03 17 39.9 +0.2**
OHH Osh 29.48 305 P **P** **03 17 42.9 +0.7**
MANEM Manem 29.60 299 **P** **03 17 43.2 -0.4**
MANEM IAmb IAmb 03 18 29.2
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 29.82 63 P **P** **03 17 45.0 -0.2**
comp=Z,1.8nm,0.8s,baz=277,slow=10.0,SNR=4.3
MJAR LR LR 03 30 25.1
comp=Z,292nm,20.5s,baz=262,slow=38
comp=Z,1.8nm,0.8s
MJAR Matsushiro Arr 29.82 63 P **P** **03 17 44.5 -0.7**
MJAR Matsushiro Arr 29.82 63 P **P** **03 17 44.5 -0.7**
MJAR pmax pmax
comp=Z,5.0nm,1.3s
PALK Pallekele 30.18 233 P **P** **03 17 49.1 +0.5**
KLR Kul'dur 30.31 36 LR LR 03 31 37.1
comp=Z,419nm,18.3s,baz=248,slow=40
KLR Kul'dur 30.31 36⇑*i*P **P** **03 17 49.2 -0.1**
KLR pmax pmax
comp=Z,6.0nm,0.9s
ZAA0 Zalesovo Array 30.48 337 **P** **03 17 50.3 -0.5**
ZAA0 IAmb IAmb 03 17 59.5
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 30.48 337 P **P** **03 17 50.5 -0.3**
comp=Z,11nm,0.7s,baz=139,slow=8.5,SNR=42
ZALV LR LR 03 31 22.9
comp=Z,126nm,21.9s,baz=138,slow=39
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 30.48 337 **P** **03 17 50.0 -0.8**
ZALV Zalesovo Beam 30.48 337 P **P** **03 17 50.0 -0.8**
KURBB Kurchatov Arra 30.72 327 P **P** **03 17 52.9 -0.1**
comp=Z,3.1nm,0.3s,baz=132,slow=9.7,SNR=34
KURBB LR LR 03 31 29.8
comp=Z,153nm,18.2s,baz=162,slow=39
comp=Z,3.1nm,0.3s
KURK Kurchatov 30.74 327 **P** **03 17 52.1 -0.9**
KURK IAmb IAmb 03 17 56.7
comp=Z,8.1nm,0.8s
KURK Kurchatov 30.74 327*d**i*P **P** **03 17 52.7 -0.4**
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURK Kurchatov 30.74 327 P **P** **03 17 52.2 -0.9**
BTK Batken 30.80 303 P **P** **03 17 55.3 +1.4**
DZA Taraz 31.24 309 *e*P **P** **03 17 57.8 +0.1**
DZA pmax pmax
comp=Z,4.0nm,0.4s
DZA Taraz 31.24 309 *e*P **P** **03 17 57.9 +0.1**
comp=Z,4.0nm,0.4s
ZEA Zeya 31.31 26 *e*P **P** **03 17 59.3 +1.2**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=E,200nm,10.0s
ZEA MLR MLR
comp=N,200nm,19.0s
ZEA MLR MLR
comp=Z,300nm,12.0s
KKAR Karatay Array 31.88 309 **P** **03 18 02.9 -0.4**
KKAR Karatay Array 31.88 309 P **P** **03 18 02.9 -0.4**
IUG Iuzhnay 31.93 307 *e*P **P** **03 18 03.9 +0.1**
IUG Iuzhnay 31.93 307 *e*P **P** **03 18 04.0 +0.1**
CHM Chimkent 32.28 307 *e*P **P** **03 18 06.9 +0.1**
CHM Chimkent 32.28 307 *e*P **P** **03 18 07.0 +0.1**
JCJ Chichijima 33.28 81 LR LR 03 30 16.5
comp=Z,196nm,21.8s,baz=136,slow=34
BRZS Berezniki 33.42 322 *e*P **P** **03 18 17.0 +0.4**
BRZS Berezniki 33.42 322 *e*P **P** **03 18 17.1 +0.4**
YSS Yuzhno-Sakhali 35.74 46 *e*P **P** **03 18 37.6 +0.8**
YSS *e*S **S** **03 24 14.0 +0.3**
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS MLR MLR
comp=Z,300nm,13.0s
YSS MLR MLR
comp=N,200nm,12.0s
YSS MLR MLR
comp=E,200nm,14.0s
BVAR Borovoye Array 36.23 325 P **P** **03 18 40.7 -0.2**
comp=E,2.1nm,0.7s,baz=111,slow=7.9,SNR=3.4
comp=E,2.1nm,0.7s
BORK Borovoye 36.27 325 *i*P **P** **03 18 41.1 -0.2**
BORK pmax pmax
comp=Z,6.0nm,1.1s
SIJI Sorong 37.84 133 LR LR 03 35 59.6
comp=Z,53nm,18.2s,baz=40,slow=39
YAK Yakutsk 38.60 19 LR LR 03 36 04.0
comp=Z,221nm,18.1s,baz=214,slow=38
YAK Yakutsk 38.60 19⇑*i*P **P** **03 18 59.9 -0.9**
YAK pmax pmax
comp=Z,17nm,0.9s
GUMO Guam 39.83 102 LR LR 03 35 56.6
comp=Z,54nm,19.9s,baz=100,slow=37
AB31 Akbulak array 40.73 315 **P** **03 19 18.1 -0.7**
ABKAR Akbulak array 40.73 315 **P** **03 19 17.8 -0.9**
AKTO Aktyubinsk 42.25 316 P **P** **03 19 31.7 +0.5**
comp=Z,4.5nm,0.6s,baz=99,slow=11,SNR=17
AKTO LR LR 03 38 36.8
comp=Z,94nm,20.4s,baz=149,slow=38
comp=Z,4.5nm,0.6s
NRIK Noril'sk 43.36 351 P **P** **03 19 39.8 -0.2**
comp=Z,7.7nm,0.6s,baz=154,slow=8.5,SNR=7.0
comp=Z,7.7nm,0.6s
NRIK Noril'sk 43.36 351 **P** **03 19 39.7 -0.3**
NRIK IAmb IAmb 03 19 45.5
comp=Z,9.5nm,0.8s
NRIK Noril'sk 43.36 351*c**i*P **P** **03 19 40.1 +0.2**
NRIK pmax pmax
comp=Z,11nm,0.9s
ARTI Arti 43.95 325 P **P** **03 19 44.6 -0.3**
comp=Z,1.5nm,0.3s,baz=258,slow=1.4,SNR=5.2
ARTI LR LR 03 39 18.5
comp=Z,115nm,18.2s,baz=114,slow=38
comp=Z,1.5nm,0.3s
ARTI Arti 43.95 325 **P** **03 19 44.4 -0.5**
ARTI IAmb IAmb 03 19 50.3
comp=Z,11nm,1.1s
ARTI Arti 43.95 325*d**i*P **P** **03 19 44.5 -0.4**
ARTI *i**PP **sP** **03 19 49.7 -0.3**
ARTI pmax pmax
comp=Z,7.0nm,1.4s
MA2 Magadan 45.10 31 LR LR 03 39 34.3
comp=Z,37nm,18.2s,baz=290,slow=37
TIXI Tiksi 46.48 10 LR LR 03 41 05.4
comp=Z,226nm,18.9s,baz=241,slow=38
TIXI Tiksi 46.48 10⇑*i*P **P** **03 20 05.5 +0.7**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
PETK Petropavlovsk- 46.70 41 P **P** **03 20 07.0 +0.3**
comp=Z,0.6nm,0.6s,baz=224,slow=8.1,SNR=1.8
PETK LR LR 03 40 13.4
comp=Z,158nm,20.7s,baz=241,slow=37
comp=Z,0.6nm,0.6s
PETK Petropavlovsk- 46.70 41 P **P** **03 20 06.4 -0.4**
SEY Seymchan 47.27 27 *e*P **P** **03 20 10.5 -0.5**
SEY pmax pmax
comp=Z,2.0nm,1.0s
BELG Belogornoye 49.01 317⇑*i*P **P** **03 20 24.4 -0.2**
BELG pmax pmax
comp=Z,3.0nm,0.8s
KIRV Kirov 49.24 325 LR LR 03 41 26.8
comp=Z,103nm,18.3s,baz=123,slow=36
KIRV Kirov 49.24 325⇑*i*P **P** **03 20 26.4 +0.1**
GNI Garni 50.67 301 LR LR 03 44 57.0
comp=Z,57nm,22.0s,baz=98,slow=40
KBZ Khabaz 51.81 306 P **P** **03 20 46.5 +0.5**
comp=Z,1.4nm,0.7s,baz=288,slow=12,SNR=3.7
KBZ LR LR 03 46 10.0
comp=Z,150nm,19.1s,baz=80,slow=40
comp=Z,1.4nm,0.7s
KBZ Khabaz 51.81 306⇑*i*P **P** **03 20 45.8 -0.2**
KBZ pmax pmax
comp=Z,4.0nm,1.6s
KIV Kislovodsk 51.95 306 **P** **03 20 46.7 -0.5**
KIV Kislovodsk 51.95 306 *e*P **P** **03 20 46.7 -0.5**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,56nm,17.0s
KIV Kislovodsk 51.95 306 P **P** **03 20 47.1 -0.1**
comp=Z,13nm,1.0s
KIV Kislovodsk 51.95 306 P **P** **03 20 47.3 +0.1**
SHA1 Shidzhatmaz 51.99 306⇑*i*P **P** **03 20 46.6 -1.0**
EPOS Posof 52.09 303 P **P** **03 20 49.0 +0.7**
GURO Guroymak-BITLI 52.93 299 P **P** **03 20 55.0 +0.4**
GURO IAmb IAmb 03 20 57.8
comp=Z,14nm,1.1s
RAYN Ar Rayn 53.20 280 P **P** **03 20 56.5 -0.2**
RAYN Ar Rayn 53.20 280 P **P** **03 20 56.5 -0.2**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
KLMR Klimovskoe 54.59 327 *e*P **P** **03 21 04.3 -1.9**
KLMR *e* 03 23 06.2
KLMR pmax pmax
comp=Z,18nm,1.0s
KLMR MLR MLR
comp=Z,131nm,15.0s
WRAB Tennant Creek 54.96 145⇑*i*P **P** **03 21 08.9 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,1.3s
WRAB Tennant Creek 54.96 145 P **P** **03 21 09.6 +0.3**
WRA Warramunga Arr 54.96 145 P **P** **03 21 08.9 -0.4**
comp=Z,2.5nm,0.7s,baz=334,slow=8.4,SNR=21
comp=Z,2.5nm,0.7s
WRA Warramunga Arr 54.96 145 P **P** **03 21 08.7 -0.7**
WRA Warramunga Arr 54.96 145 P **P** **03 21 08.7 -0.7**
WRA pmax pmax
comp=Z,1.0nm,1.5s
OBN Obninsk 55.76 320 LR LR 03 46 36.4
comp=Z,161nm,20.0s,baz=176,slow=38
OBN Obninsk 55.76 320⇑*e*P **P** **03 21 14.0 -0.7**
OBN *e* 03 21 19.6
OBN PPP PPP 03 24 29.0
OBN *e*S **S** **03 28 59.0 -2.3**
OBN SS **SS** **03 32 45.0 -1.4**
OBN pmax pmax
comp=Z,4.0nm,0.4s
OBN MLR MLR
comp=Z,138nm,19.0s
SHEM Shemya Is, Ala 56.53 43 LR LR 03 45 57.6
comp=Z,55nm,20.4s,baz=262,slow=36
ANDN Andirin 57.51 299 P **P** **03 21 26.7 -0.9**
ASAR Alice Springs 57.90 148 P **P** **03 21 30.4 +0.2**
comp=Z,1.6nm,0.6s,baz=332,slow=6.7,SNR=16
ASAR LR LR 03 48 08.4
comp=Z,68nm,18.9s,baz=335,slow=38
comp=Z,1.6nm,0.6s
ASF Jabal al Asfar 58.25 293 LR LR 03 49 10.1
comp=Z,89nm,19.1s,baz=67,slow=39
QIS Mount Isa 58.28 141 P **P** **03 21 32.2 -0.8**
KIRS Kirsehir-Merke 59.09 301 ⇑P **P** **03 21 37.4 -1.2**
BR131 Keskin Array S 59.18 302 **P** **03 21 38.9 -0.4**
BR131 Keskin Array S 59.18 302 P **P** **03 21 38.9 -0.4**
BR131 pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 59.18 302 P **P** **03 21 38.5 -0.8**
comp=Z,2.4nm,0.9s,baz=102,slow=6.1,SNR=14
BRTR LR LR 03 48 34.9
comp=Z,35nm,20.0s,baz=54,slow=38
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 59.18 302 **P** **03 21 38.9 -0.4**
BRTR Keskin Array B 59.18 302 P **P** **03 21 38.9 -0.4**
BR104 Keskin Array S 59.18 302 P **P** **03 21 39.7 +0.4**
comp=Z,1.6nm,0.7s
BR106 Keskin Array S 59.20 302 P **P** **03 21 38.3 -1.1**
comp=Z,25nmcomp=Z,3.8nm,0.9s
MMAI Mount Meron Ar 59.26 294 LR LR 03 49 37.7
comp=Z,95nm,19.7s,baz=69,slow=38
KLBR Kellerberrin 59.77 167 P **P** **03 21 43.3 +0.2**
KKUL Konya-Kulu 59.84 301 P **P** **03 21 43.6 -0.2**
AK09 Malin Array Si 60.44 315 P **P** **03 21 46.1 -1.5**
AKASG Malin Array Be 60.47 315 P **P** **03 21 46.8 -1.0**
comp=Z,0.4nm,0.3s,baz=76,slow=6.0,SNR=5.8
AKASG LR LR 03 49 54.3
comp=Z,65nm,20.2s,baz=91,slow=38
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 60.47 315 P **P** **03 21 46.1 -1.7**
AKASG Malin Array Be 60.47 315*ce*P **P** **03 21 46.7 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 60.47 315⇑*i*P **P** **03 21 46.6 -1.2**
AKBB pmax pmax
comp=Z,6.0nm,1.0s
AKBB Malin Array Si 60.47 315 P **P** **03 21 46.6 -1.2**
KIEV Kiev 60.48 315 ⇑P **P** **03 21 45.8 -2.1**
KIEV Kiev 60.48 315 ⇑P **P** **03 21 45.8 -2.1**
KIEV Kiev 60.48 315 P **P** **03 21 46.3 -1.6**
comp=Z,16nm,0.8s
EIL Elat 60.51 290 LR LR 03 51 15.7
comp=Z,135nm,19.5s,baz=84,slow=39
SGF Sodankyl 60.67 334 P **P** **03 21 47.9 -1.0**
OUL Oulu 60.98 332 P **P** **03 21 50.0 -1.0**
ARCES ARCESS Array B 61.03 337 P **P** **03 21 51.2 -0.1**
comp=Z,4.4nm,0.9s,baz=91,slow=7.8,SNR=14
ARCES LR LR 03 49 17.1
comp=Z,86nm,19.6s,baz=70,slow=37
comp=Z,4.4nm,0.9s
ARCES ARCESS Array B 61.03 337 P **P** **03 21 52.0 +0.6**

ARCES ARCESS Array B 61.03 337 P **P** **03 21 52.0 +0.6**
ARCES pmax pmax
comp=Z,27nm,1.5s

FINES FINESS Array B 61.11 327 P **P** **03 21 50.5 -1.4**
comp=Z,2.7nm,0.8s,baz=86,slow=7.9,SNR=8.3
FINES LR LR 03 50 12.6
comp=Z,149nm,20.1s,baz=98,slow=38
comp=Z,2.7nm,0.8s

FINES FINESS Array B 61.11 327 P **P** **03 21 52.2 +0.2**
FINES FINESS Array B 61.11 327 *ce*P **P** **03 21 54.2 +2.2**
FINES pmax pmax
comp=Z,3.0nm,0.8s

NACGM Naroch 61.39 320 *e*P **P** **03 21 56.1 +2.1**
comp=Z,17nm,0.8s,baz=83

MI28 Mi28,Pidlybu 61.41 315 P **P** **03 21 52.6 -1.6**
LUBAR Lubar, Ukraine 61.51 314 P **P** **03 21 52.3 -2.6**
TPGR Topolog 61.98 308 ⇑P **P** **03 21 57.4 -0.8**
CFR Carcaliu 62.11 309 ⇓P **P** **03 21 57.3 -1.7**
CFR Carcaliu 62.11 309 ⇓P **P** **03 21 57.3 -1.7**
RNPP9 Sopachiv 62.44 316 P **P** **03 21 59.0 -2.1**
KMPD K-Podol'skiy 62.59 313 P **P** **03 21 59.8 -2.3**
ELL Elmali 62.71 299 P **P** **03 22 03.1 -0.2**
ELL Elmali 62.71 299 P **P** **03 22 03.1 -0.2**
ELL pmax pmax
comp=Z,13nm,1.1s

VRI Vrincioaia 62.94 310 ⇑P **P** **03 22 04.2 -0.4**
VRI Vrincioaia 62.94 310 ⇑P **P** **03 22 04.2 -0.4**
VRI Vrincioaia 62.94 310 P **P** **03 22 03.8 -0.8**
comp=Z,9.9nm,1.4s

VRI Vrincioaia 62.94 310 P **P** **03 22 05.0 +0.4**
PLOR Plostina 63.00 310 ⇓P **P** **03 22 05.8 +0.8**
PLOR Plostina 63.00 310 ⇓P **P** **03 22 05.8 +0.8**
SAHR Sahastru 63.00 310 ⇓P **P** **03 22 05.6 +0.6**
ONER Baraj Valea Uz 63.07 310 ⇑P **P** **03 22 05.3 -0.1**
GAMB Gambell 63.17 30 P **P** **03 22 05.8 +0.1**
baz=277

ISR Istrita 63.23 309 ⇑P **P** **03 22 06.5 -0.1**
ISR Istrita 63.23 309 ⇑P **P** **03 22 06.5 -0.1**
ISR Istrita 63.23 309 P **P** **03 22 06.2 -0.3**
comp=Z,14nm,0.9s

SPITS Spitsbergen Ar 63.24 347 LR LR 03 51 39.6
comp=Z,147nm,20.6s,baz=84,slow=38

MLR Muntele Rosu 63.56 310 LR LR 03 54 39.4
comp=Z,120nm,21.9s,baz=62,slow=41

MLR Muntele Rosu 63.56 310 ⇓P **P** **03 22 09.4 +0.6**
MLR Muntele Rosu 63.56 310 **P** **03 22 08.8 0.0**
MLR IAmb IAmb 03 22 19.7
comp=Z,5.5nm,0.8s

MLR Muntele Rosu 63.56 310 P **P** **03 22 08.8 0.0**
MLR pmax pmax
comp=Z,6.0nm,0.8s

MLR Muntele Rosu 63.56 310 P **P** **03 22 08.1 -0.7**
comp=Z,8.2nm,0.9s

MLR Muntele Rosu 63.56 310 P **P** **03 22 09.0 +0.2**
BALY Balya 63.70 303 P **P** **03 22 10.6 +0.9**
VOIR 64.18 310 ⇑P **P** **03 22 12.2 -0.7**
VOIR 64.18 310 ⇑P **P** **03 22 12.2 -0.7**
VOIR 64.18 310 P **P** **03 22 12.2 -0.7**
comp=Z,3.6nm,1.4s

ARR Arges 64.48 310 ⇑P **P** **03 22 13.8 -1.0**
ARR Arges 64.48 310 P **P** **03 22 14.7 -0.1**
TNA Tin City 64.51 27 P **P** **03 22 15.0 +0.5**
baz=280

KWP Kalwaria Pacla 64.78 315 P **P** **03 22 16.1 -0.5**
comp=Z,12nm,0.8s

C16K Lisburne Hills 65.03 24 P **P** **03 22 18.3 +0.4**
baz=281

MARR Marisel-Cluj 65.20 311 ⇓P **P** **03 22 19.3 -0.3**
KOLS Kolonicke sedl 65.22 314 *e*P **P** **03 22 23.4 +3.9**
KOLS Kolonicke sedl 65.22 314 *e*P **P** **03 22 23.4 +3.9**
DRGR 65.44 312 ⇑P **P** **03 22 20.7 -0.4**
DRGR 65.44 312 ⇑P **P** **03 22 20.7 -0.4**
DRGR 65.44 312 P **P** **03 22 20.6 -0.4**
ANM Nome 65.76 28 P **P** **03 22 22.9 +0.2**
baz=282

C17K DeLong Mountai 65.77 24 P **P** **03 22 23.1 +0.3**
baz=283

F15K North Star Dit 65.81 27 P **P** **03 22 23.4 +0.3**
baz=283

D17K Noatak River 65.98 25 P **P** **03 22 24.7 +0.6**
baz=283

HERR Herculane 66.13 310 ⇑P **P** **03 22 24.9 -0.5**
G15K Niukluk 66.22 28 P **P** **03 22 26.0 +0.3**
baz=283

M11K Mekoryuk 66.33 33 P **P** **03 22 26.7 +0.4**
baz=284

NIE Niedzica 66.36 315 P **P** **03 22 26.2 -0.7**
comp=Z,2.3nm,1.1s

OJC Ojcow 66.47 316 P **P** **03 22 26.7 -0.8**
comp=Z,6.6nm,0.7s

E17K Hotham Inlet 66.60 25 P **P** **03 22 29.1 +1.0**
baz=284

K13K Kusilvak Mount 66.68 31 P **P** **03 22 29.8 +1.1**
baz=284

E18K Tukpahlearik C 66.97 25 P **P** **03 22 31.6 +1.1**
baz=285

F17K Baldwin Pennin 66.98 26 P **P** **03 22 31.5 +1.1**
baz=285

H16K Elim 67.06 28 P **P** **03 22 32.1 +1.1**
baz=285

A21K Barrow 67.23 20 P **P** **03 22 32.9 +1.0**
baz=287

HFS Hagfors 67.31 327 P **P** **03 22 31.2 -1.5**
comp=Z,1.3nm,0.7s,baz=129,slow=4.0,SNR=7.8
HFS LR LR 03 53 51.1
comp=Z,126nm,18.4s,baz=66,slow=38
comp=Z,1.3nm,0.7s

B20K Meade River 67.45 22 P **P** **03 22 34.7 +1.3**
B20K Meade River 67.45 22 P **P** **03 22 34.0 +0.6**
baz=287

G17K Kiwalik Mounta 67.47 27 P **P** **03 22 34.1 +0.4**
baz=286

F18K Selawik 67.56 25 P **P** **03 22 33.9 -0.2**
baz=286

D19K Kuna River 67.57 23 P **P** **03 22 34.3 0.0**
D19K Kuna River 67.57 23 P **P** **03 22 34.2 0.0**
baz=287

IMMV Iera Moni Meta 67.68 299 P **P** **03 22 34.9 -0.5**
M13K Dall Lake 67.69 32 P **P** **03 22 35.4 +0.3**
baz=286

L14K Kuka Creek 67.75 31 P **P** **03 22 35.4 0.0**
baz=286

UNV Unalaska Valle 67.83 40 P **P** **03 22 36.8 +0.7**
baz=286

A22K Sinclair Lake 67.84 20 P **P** **03 22 36.4 +0.6**
baz=289

AGG Agios Georgios 67.84 304 P **P** **03 22 36.1 -0.4**
I17K Unalakleet 67.91 28 P **P** **03 22 37.1 +0.7**
baz=287

H17K Granite Mounta 67.93 27 P **P** **03 22 36.6 +0.1**
baz=287

K15K Wolf Creek Mou 68.00 30 P **P** **03 22 37.2 +0.2**
baz=287

D20K Etivluk River 68.03 23 **P** **03 22 38.3 +1.1**
D20K Etivluk River 68.03 23 P **P** **03 22 37.7 +0.5**
baz=288,SNR=9.4

J16K Anvik River 68.13 29 P **P** **03 22 38.5 +0.7**
baz=287

G18K Tagagawik 68.15 26 P **P** **03 22 38.4 +0.5**
baz=288

F19K Shaleruckik Mo 68.20 25 P **P** **03 22 38.1 -0.1**
F19K IAmb IAmb 03 22 41.8
comp=Z,4.8nm,0.8s

F19K Shaleruckik Mo 68.20 25 P **P** **03 22 38.5 +0.3**
baz=288

L15K Ungalak Mounta 68.20 31 P **P** **03 22 38.3 0.0**
baz=287

E19K Redstone River 68.21 24 P **P** **03 22 37.6 -0.6**
E19K IAmb IAmb 03 22 42.2
comp=Z,3.3nm,0.6s

E19K Redstone River 68.21 24 P **P** **03 22 39.1 +0.9**
baz=288

NB2 NORSAR Subarra 68.24 328 P **P** **03 22 36.6 -2.0**
comp=Z,4.5nm,1.1s,baz=74,slow=6.5

NOA NORSAR Array B 68.24 328 P **P** **03 22 36.6 -2.0**
comp=Z,0.5nm,0.6s,baz=74,slow=6.4,SNR=3.6
NOA LR LR 03 54 22.4
comp=Z,115nm,18.1s,baz=85,slow=38
comp=Z,0.5nm,0.6s

M14K Bethel 68.25 32 P **P** **03 22 38.9 +0.3**
baz=287

MORH Mrgy, Hungar 68.31 312 P **P** **03 22 37.7 -1.5**
comp=Z,4.3nm,1.2s

B21K Ikpikpuk River 68.41 22 P **P** **03 22 39.7 +0.2**
baz=290

STKA Stephens Creek 68.46 147 P **P** **03 22 39.1 -1.2**
comp=Z,3.0nm,0.7s,baz=98,slow=1.1,SNR=3.4
comp=Z,3.0nm,0.7s

H18K Honhosa River 68.50 27 P **P** **03 22 39.4 -0.7**
baz=288

C21K Knifeblade Rid 68.51 22 P **P** **03 22 40.3 +0.2**
baz=290,SNR=5.3

B22K Teshekpuk Lake 68.55 21 P **P** **03 22 40.5 +0.3**
baz=291

N14K Kuskokwak Cree 68.63 33 P **P** **03 22 41.6 +0.7**
baz=287

G19K Purcell Mounta 68.68 26 P **P** **03 22 41.5 +0.3**
baz=289

ITM Ithomi 68.71 302 P **P** **03 22 41.4 -0.6**
VRAC Vranov 68.72 315 LR LR 03 54 54.8
comp=Z,63nm,21.7s,baz=67,slow=38

MPLH Magyarpolny 68.75 313 P **P** **03 22 40.2 -1.8**
comp=Z,510nmcomp=Z,19nm,2.2s

J17K VABM Dome 68.75 29 P **P** **03 22 41.7 +0.1**
baz=288

M15K Kasigluk River 68.87 32 P **P** **03 22 42.6 +0.2**
baz=288

F20K Avaraart Lake 68.89 24 P **P** **03 22 42.7 +0.2**
F20K IAmb IAmb 03 22 46.4
comp=Z,3.3nm,0.8s

F20K Avaraart Lake 68.89 24 P **P** **03 22 43.2 +0.7**
baz=290

O14K Tigyukauivet M 69.03 33 P **P** **03 22 43.3 -0.2**
baz=288

E21K Killik River 69.04 23 P **P** **03 22 44.2 +0.7**
E21K Killik River 69.04 23 P **P** **03 22 43.8 +0.4**
baz=291

L16K Owhat River 69.11 30 P **P** **03 22 44.3 +0.4**
baz=289

H19K Roundabout Mou 69.13 26 **P** **03 22 44.0 +0.1**
H19K Roundabout Mou 69.13 26 P **P** **03 22 44.7 +0.7**
baz=290

GCSA Gale City Sc 69.23 27 P **P** **03 22 44.4 -0.1**
baz=290

K17K Iditarod 69.30 29 P **P** **03 22 46.0 +0.9**
K17K Iditarod 69.30 29 P **P** **03 22 45.1 -0.1**
baz=289

N15K Kwethluk River 69.31 32 P **P** **03 22 45.0 -0.2**
baz=289

L17K Donlin 69.50 30 P **P** **03 22 46.3 -0.1**
baz=289

M16K Timber Creek 69.56 31 P **P** **03 22 47.3 +0.5**
baz=289

CONA Conrad Observa 69.60 314 *i* P **P** **03 22 47.5 +0.2**
comp=Z,3.2nm,0.8s

C23K Itkillik River 69.63 21 **P** **03 22 47.2 +0.2**
C23K Itkillik River 69.63 21 P **P** **03 22 47.5 +0.4**
baz=293,SNR=10

F21K Alatna River 69.65 24 **P** **03 22 47.6 +0.4**
F21K IAmb IAmb 03 22 51.6
comp=Z,4.4nm,0.7s

F21K Alatna River 69.65 24 P **P** **03 22 47.4 +0.1**
baz=292,SNR=8.9

H20K Anotleneega Mo 69.76 26 P **P** **03 22 47.8 -0.1**
baz=291

O15K Ungalikthiuk R 69.76 33 P **P** **03 22 48.4 +0.4**
baz=289

N16K Nishlik Lake 69.83 32 P **P** **03 22 49.0 +0.6**
baz=290

G21K Allakaket 69.91 25 **P** **03 22 49.2 +0.4**
G21K Allakaket 69.91 25 P **P** **03 22 49.4 +0.6**
baz=292,SNR=5.9

D23K Nanushuk River 69.95 22 **P** **03 22 49.5 +0.4**
D23K IAmb IAmb 03 22 53.6
comp=Z,7.6nm,0.9s

D23K Nanushuk River 69.95 22 P **P** **03 22 49.9 +0.9**
baz=294

J19K Poorman 70.00 28 P **P** **03 22 50.4 +1.0**
baz=291

F22K John River 70.01 23 P **P** **03 22 50.3 +0.8**
baz=293

ARSA Arzberg 70.03 314 *e*P **P** **03 22 49.2 -0.7**
comp=Z,2.0nm,0.8s

M17K Holitna River 70.13 30 P **P** **03 22 50.7 +0.5**
baz=290

I20K Naaghedeneel 70.17 27 P **P** **03 22 50.7 +0.3**
baz=292

L18K Granite Mounta 70.18 30 P **P** **03 22 50.7 +0.1**
baz=291

CMSA Cobar Meteorol 70.28 143 P **P** **03 22 51.9 +0.4**
CLL Collm 70.29 318 *e*P **P** **03 22 50.0 -1.4**
CLL Collm 70.29 318 *e*P **P** **03 22 50.0 -1.4**
CLL *e*PS **PnS** **03 32 30.0 +0.3**
CLL *e*SS SS 03 36 12.0 -21
CLL AMS AMS 03 57 00.0
comp=Z,100nm,18.9s

O16K Kokwok River B 70.45 32 P **P** **03 22 52.2 -0.1**
baz=290

TOLK Toolik Lake Re 70.45 22 P **P** **03 22 51.8 -0.4**
baz=295

G22K Bettles 70.48 24 P **P** **03 22 52.6 +0.3**
baz=294

D24K Happy Valley 70.49 21 P **P** **03 22 53.6 +1.3**
D24K IAmb IAmb 03 22 56.3
comp=Z,6.4nm,0.8s

D24K Happy Valley 70.49 21 P **P** **03 22 52.8 +0.5**
baz=295

H21K Melozitna Rive 70.50 25 P **P** **03 22 53.0 +0.5**
H21K IAmb IAmb 03 22 56.9
comp=Z,5.0nm,1.0s

H21K Melozitna Rive 70.50 25 P **P** **03 22 52.8 +0.4**
baz=293

SOKA Soboth 70.53 313 *e*P **P** **03 22 52.7 -0.4**
comp=Z,1.7nm,0.9s

J20K Nowinta River 70.54 27 **P** **03 22 53.7 +1.0**
J20K Nowinta River 70.54 27 P **P** **03 22 53.2 +0.5**
baz=292

N17K Nushagak Hills 70.55 31 P **P** **03 22 53.2 +0.4**
baz=291

KMBO Kilima Mbogo 70.57 258 LR LR 03 52 31.8
comp=Z,78nm,21.6s,baz=102,slow=35

MOA Molln 70.64 314 *e*P **P** **03 22 54.5 +0.8**
comp=Z,4.1nm,1.4s

GERES GERESS Array B 70.67 316 P **P** **03 22 53.1 -0.8**
comp=Z,1.4nm,0.7s,baz=74,slow=4.7,SNR=12
GERES LR LR 03 54 54.3
comp=Z,61nm,20.2s,baz=76,slow=37
comp=Z,1.4nm,0.7s

GERES GERESS Array B 70.67 316 P **P** **03 22 53.8 -0.1**
GERES GERESS Array B 70.67 316 P **P** **03 22 53.8 -0.1**
P16K Nushagak River 70.70 33 P **P** **03 22 54.6 +0.8**
baz=291

M18K Stony River 70.82 30 P **P** **03 22 54.9 +0.5**
baz=292

COLD Coldfoot 70.83 23 P **P** **03 22 55.2 +0.8**
COLD IAmb IAmb 03 22 59.5
comp=Z,3.5nm,0.8s

COLD Coldfoot 70.83 23 P **P** **03 22 54.7 +0.3**
baz=294

O17K Koliganek Bris 70.86 32 P **P** **03 22 54.9 +0.2**
baz=291

S14K Fog Glacier 70.88 36 P **P** **03 22 55.2 +0.2**
baz=290

K20K Telida 70.88 28 P **P** **03 22 55.1 +0.3**
baz=292

OBKA Obir 70.91 313 *ep*P **P** **03 22 56.7 +1.3**
comp=Z,1.3nm,0.6s

H22K Ishtalitna Cre 70.95 25 **P** **03 22 55.2 0.0**
H22K IAmb IAmb 03 23 35.9
comp=Z,8.2nm,1.5s

H22K Ishtalitna Cre 70.95 25 P **P** **03 22 55.4 +0.2**
baz=294

L19K White Mountain 70.99 29 P **P** **03 22 56.3 +0.7**
L19K IAmb IAmb 03 23 19.5
comp=Z,7.0nm,1.2s

L19K White Mountain 70.99 29 P **P** **03 22 55.6 +0.1**
baz=292

I21K Tanana 71.00 26 **P** **03 22 56.7 +1.2**
I21K IAmb IAmb 03 23 00.3
comp=Z,4.8nm,0.8s

I21K Tanana 71.00 26 P **P** **03 22 55.4 -0.1**
baz=294

E24K Your Creek 71.06 22 P **P** **03 22 56.0 +0.1**
E24K Your Creek 71.06 22 P **P** **03 22 56.2 +0.3**
baz=296

N18K Kilae Creek 71.09 31 P **P** **03 22 55.8 -0.3**
baz=292

BIOA Bad Ischl, Aus 71.09 314 *e*P **P** **03 22 57.3 +0.9**
comp=Z,3.6nm,0.9s

G23K Bananza Creek 71.11 24 **P** **03 22 56.6 +0.4**
G23K IAmb IAmb 03 23 00.4
comp=Z,3.5nm,0.8s

G23K Bananza Creek 71.11 24 P **P** **03 22 56.4 +0.2**
baz=295,SNR=6.3

D25K Kavik River 71.19 21 P **P** **03 22 57.0 +0.3**
D25K IAmb IAmb 03 23 03.4
comp=Z,4.0nm,0.8s

D25K Kavik River 71.19 21 P **P** **03 22 56.8 +0.1**
baz=297

CHNA Chernabura Isl 71.37 37 P **P** **03 22 57.3 -0.6**
baz=291

C26K Camden Bay 71.37 20 P **P** **03 22 57.3 -0.4**
baz=298

P17K Kvichak River 71.39 32 P **P** **03 22 57.3 -0.6**
baz=292

CHUM Lake Minchumin 71.39 27 P **P** **03 22 57.3 -0.5**
baz=294

KBA Koelnbreinsper 71.49 314 *e*P **P** **03 22 58.8 -0.2**
comp=Z,3.3nm,1.1s

F24K Squaw Lake 71.51 23 P **P** **03 22 58.6 -0.1**
F24K IAmb IAmb 03 23 27.0
comp=Z,4.9nm,1.3s

F24K Squaw Lake 71.51 23 P **P** **03 22 58.8 +0.2**
baz=296

MLY Manley 71.55 26 **P** **03 22 59.0 +0.2**
MLY IAmb IAmb 03 23 03.3
comp=Z,4.4nm,0.8s

MLY Manley 71.55 26 P **P** **03 22 59.1 +0.3**
baz=295,SNR=7.8

H23K Yukon River 71.66 25 P **P** **03 23 00.0 +0.5**
H23K IAmb IAmb 03 23 27.5
comp=Z,3.8nm,0.8s

H23K Yukon River 71.66 25 P **P** **03 22 60.0 +0.5**
baz=296

CAST Castle Rocks 71.68 27 **P** **03 22 59.8 +0.2**
CAST IAmb IAmb 03 23 11.8
comp=Z,6.1nm,1.3s

CAST Castle Rocks 71.68 27 P **P** **03 22 60.0 +0.3**
baz=294,SNR=5.4

N19K Bonanza Creek 71.68 30 P **P** **03 23 00.1 +0.3**
baz=293

O18K Koktuh Hills 71.72 32 **P** **03 23 00.1 +0.1**
O18K Koktuh Hills 71.72 32 P **P** **03 23 00.3 +0.3**
baz=293

LESA Schwarzleotal 71.80 314 *e*P **P** **03 23 01.2 +0.5**
comp=Z,6.5nm,1.2s

PPLA Purkeypile 71.85 28 **P** **03 23 01.1 +0.3**
PPLA Purkeypile 71.85 28 P **P** **03 23 01.0 +0.1**
baz=294,SNR=5.6

M20K Styx River 71.86 29 P **P** **03 23 01.2 +0.3**
M20K IAmb IAmb 03 23 06.6
comp=Z,7.1nm,1.1s

M20K Styx River 71.86 29 P **P** **03 23 00.7 -0.1**
baz=294

C27K Jago River 71.88 20 P **P** **03 23 00.7 0.0**
C27K Jago River 71.88 20 P **P** **03 23 01.1 +0.4**
baz=299,SNR=12

P18K Big Mountain, 71.89 32 P **P** **03 23 01.5 +0.5**
baz=293

O19K Port Alsworth 72.00 31 P **P** **03 23 02.8 +1.2**
baz=293

Q17K Contact Creek 72.01 33 P **P** **03 23 02.0 +0.2**
baz=293

R17L Mt. Peulik Vol 72.02 34 P **P** **03 23 02.3 +0.5**
baz=292

E25K Arctic Village 72.02 22 P **P** **03 23 02.1 +0.4**
baz=298

G24K Hadweenzic Riv 72.02 23 **P** **03 23 02.5 +0.9**
G24K IAmb IAmb 03 23 04.7
comp=Z,7.6nm,1.3s

G24K Hadweenzic Riv 72.02 23 P **P** **03 23 02.2 +0.5**
baz=297

I23K Minto, Yukon-K 72.02 25 P **P** **03 23 02.2 +0.6**
I23K IAmb IAmb 03 23 12.0
comp=Z,7.4nm,1.4s

I23K Minto, Yukon-K 72.02 25 P **P** **03 23 02.4 +0.8**
baz=296

KTH Kantishna Hill 72.09 27 **P** **03 23 02.0 -0.2**
KTH IAmb IAmb 03 23 07.0
comp=Z,3.7nm,0.8s

F25K Christian Rive 72.24 22 P **P** **03 23 03.6 +0.5**
F25K IAmb IAmb 03 23 17.6
comp=Z,5.4nm,1.4s

F25K Christian Rive 72.24 22 P **P** **03 23 03.5 +0.5**
baz=298

H24K Noodor Dome 72.27 24 **P** **03 23 03.2 0.0**
H24K IAmb IAmb 03 23 08.0
comp=Z,3.4nm,0.8s

H24K Noodor Dome 72.27 24 P **P** **03 23 02.8 -0.4**
baz=297

Q18K Katmai Hardscr 72.28 33 P **P** **03 23 03.9 +0.4**
baz=293

NEA2 Nenana 72.38 26 P **P** **03 23 03.7 -0.1**
NEA2 IAmb IAmb 03 23 08.0
comp=Z,5.6nm,0.6s

NEA2 Nenana 72.38 26 P **P** **03 23 04.3 +0.5**
baz=296,SNR=10

TRF Thorofare Moun 72.40 27 P **P** **03 23 04.8 +0.6**
TRF IAmb IAmb 03 23 31.6
comp=Z,7.5nm,1.3s

TRF Thorofare Moun 72.40 27 P **P** **03 23 04.4 +0.2**
baz=296

G25K Bearman Lake 72.48 23 P **P** **03 23 04.6 +0.3**
baz=298,SNR=5.2

SKT Skwentna 72.51 29 P **P** **03 23 04.6 0.0**
baz=295

WTTA Wattenberg 72.52 315 *e*P **P** **03 23 04.2 -1.0**
comp=Z,2.0nm,0.7s

L22K Petersville 72.60 28 P **P** **03 23 04.7 -0.5**
L22K Petersville 72.60 28 P **P** **03 23 05.6 +0.4**
baz=295,SNR=12

BMAR Burnt Mountain 72.68 22 P **P** **03 23 05.9 +0.3**
F26K Sheenjek River 72.69 22 P **P** **03 23 05.8 +0.1**
baz=300

P19K Oil Pt 72.72 31 P **P** **03 23 06.1 +0.2**
baz=294

COLA College 72.72 25 *i* P **P** **03 23 06.6 +0.8**
COLA pmax pmax
comp=Z,6.0nm,0.9s

COLA College 72.72 25 P **P** **03 23 06.4 +0.6**
POKR Poker Plat Res 72.77 25 P **P** **03 23 06.2 +0.1**
baz=298

SQTA Sankt Quirin 72.80 315 *e*P **P** **03 23 05.9 -0.9**
comp=Z,3.6nm,0.6s

MCK McKinley 72.82 27 P **P** **03 23 06.5 +0.1**
baz=297

O20K Slope Mountain 72.82 31 P **P** **03 23 06.2 -0.4**
baz=295

Q19K Cape Douglas, 72.82 32 P **P** **03 23 06.4 -0.2**
baz=294

MOTA Moosalm 72.82 315 *e*P **P** **03 23 05.8 -1.1**
comp=Z,2.1nm,0.6s

CCB Clear Creek Bu 72.84 25 **P** **03 23 06.8 +0.3**
D27M Malcolm River 72.91 20 P **P** **03 23 07.7 +0.7**
baz=302

RETA Reutte 72.99 315 *e*P **P** **03 23 07.9 +0.1**
comp=Z,1.4nm,0.6s

RND Reindeer 73.00 27 P **P** **03 23 07.9 +0.3**
RND IAmb IAmb 03 23 13.2
comp=Z,5.1nm,0.8s

RND Reindeer 73.00 27 P **P** **03 23 07.9 +0.3**
RND pmax pmax
comp=Z,5.0nm,0.8s

ILAR Eielson Array 73.13 25 P **P** **03 23 07.5 -0.8**
comp=Z,0.7nm,0.5s,baz=283,slow=4.2,SNR=20
comp=Z,0.7nm,0.5s

ILAR Eielson Array 73.13 25 P **P** **03 23 07.0 -1.3**
FETA Feichten 73.18 315 *i* P **P** **03 23 08.3 -0.8**
comp=Z,1.8nm,0.7s

G26K Porcupine Rive 73.19 22 **P** **03 23 09.0 +0.4**
G26K IAmb IAmb 03 23 13.3
comp=Z,4.4nm,0.8s

G26K Porcupine Rive 73.19 22 P **P** **03 23 09.7 +1.2**
baz=300,SNR=5.8

E27K Coleen River 73.27 21 **P** **03 23 09.8 +0.7**
E27K Coleen River 73.27 21 P **P** **03 23 09.3 +0.2**
baz=302

PRP Porcupine Dome 73.28 24 P **P** **03 23 09.7 +0.4**
PRP Porcupine Dome 73.28 24 P **P** **03 23 09.8 +0.4**
baz=299,SNR=12

MURB Monte Urbino 73.40 310 P **P** **03 23 11.4 +1.1**
DAVA Damuels 73.62 315 *ep*P **P** **03 23 13.7 +2.0**
comp=Z,4.4nm,0.9s

E28M Babbage River 73.69 20 P **P** **03 23 12.0 +0.4**
E28M Babbage River 73.69 20 P **P** **03 23 12.0 +0.4**
baz=303

PMR Palmer 73.70 29 P **P** **03 23 12.5 +0.8**
baz=297

OHAK Old Harbor 73.70 34 P **P** **03 23 12.3 +0.5**
baz=295

DHY	**Denali Highway**	**73.74**	**27**	P	**P**	**03 23 12.6**	**+0.5**
DHY				lAmb	lAmb	03 23 23.6	
	comp=Z,4.6nm,1.0s						
DHY	**Denali Highway**	**73.74**	**27**	P	**P**	**03 23 12.6**	**+0.5**
	baz=298						
J25K	**Salcha River,**	**73.78**	**25**	P	**P**	**03 23 11.0**	**-1.2**
J25K	**Salcha River,**	**73.78**	**25**	P	**P**	**03 23 12.7**	**+0.5**
	baz=299						
KDAK	**Kodiak Island**	**73.81**	**33**	P	**P**	**03 23 12.8**	**+0.4**
	baz=295						
DAVOX	**Davos/Dischmat**	**73.81**	**315**	LR	LR	03 58 58.5	
	comp=Z,91nm,20.9s,baz=62,slow=38						
BRSE	**Bradley Lake S**	**73.82**	**31**	P	**P**	**03 23 13.0**	**+0.5**
	baz=296						
WAT6	**Susitna Watana**	**73.83**	**27**	P	**P**	**03 23 13.1**	**+0.4**
	baz=298						
SML	**Sawmill**	**73.94**	**28**	P	**P**	**03 23 13.3**	**+0.1**
SML				lAmb	lAmb	03 23 28.4	
	comp=Z,7.3nm,0.9s						
SML	**Sawmill**	**73.94**	**28**	P	**P**	**03 23 13.5**	**+0.3**
	baz=298						
G27K	**Doyon Strip**	**73.98**	**22**		**P**	**03 23 13.6**	**+0.3**
G27K	**Doyon Strip**	**73.98**	**22**	P	**P**	**03 23 14.2**	**+1.0**
	baz=302,SNR=7.7						
K24K	**Donnelly Dome**	**74.02**	**26**	P	**P**	**03 23 12.9**	**-0.7**
K24K	**Donnelly Dome**	**74.02**	**26**	P	**P**	**03 23 14.2**	**+0.6**
	baz=299,SNR=9.6						
KNK	**Knik Glacier**	**74.07**	**29**	P	**P**	**03 23 14.2**	**+0.3**
	baz=298						
F28M	**Old Crow**	**74.13**	**21**	P	**P**	**03 23 14.4**	**+0.3**
	baz=303						
SEW	**Seward**	**74.24**	**30**	P	**P**	**03 23 15.4**	**+0.6**
	baz=297						
TUE	**Stuetta**	**74.27**	**314**	P	**P**	**03 23 14.6**	**-1.0**
	comp=Z,23nm,1.4s						
E29M	**Blow River**	**74.31**	**20**		**P**	**03 23 14.6**	**-0.6**
E29M				lAmb	lAmb	03 23 19.4	
	comp=Z,4.0nm,0.8s						
E29M	**Blow River**	**74.31**	**20**	P	**P**	**03 23 15.9**	**+0.8**
	baz=305,SNR=6.4						
H27K	**Steamboat Moun**	**74.33**	**23**		**P**	**03 23 15.5**	**+0.1**
H27K				lAmb	lAmb	03 23 19.9	
	comp=Z,3.8nm,0.8s						
H27K	**Steamboat Moun**	**74.33**	**23**	P	**P**	**03 23 16.1**	**+0.7**
	baz=302,SNR=6.3						
SCM	**Sheep Creek Mo**	**74.35**	**28**	P	**P**	**03 23 16.2**	**+0.6**
	baz=298						
RIDG	**Independent Ri**	**74.41**	**26**	P	**P**	**03 23 14.8**	**-1.1**
RIDG	**Independent Ri**	**74.41**	**26**	P	**P**	**03 23 16.3**	**+0.4**
	baz=300						
PAX	**Paxson**	**74.55**	**26**	P	**P**	**03 23 16.7**	**-0.1**
	baz=300						
SCRK	**Sand Creek**	**74.62**	**25**		**P**	**03 23 16.8**	**-0.4**
SCRK	**Sand Creek**	**74.62**	**25**	P	**P**	**03 23 17.0**	**-0.2**
	baz=301,SNR=7.7						
I27K	**Kandik River**	**74.64**	**23**		**P**	**03 23 17.2**	**0.0**
I27K	**Kandik River**	**74.64**	**23**	P	**P**	**03 23 16.7**	**-0.5**
	baz=302						
M24K	**Tolsona, Glenn**	**74.69**	**27**		**P**	**03 23 18.0**	**+0.5**
M24K	**Tolsona, Glenn**	**74.69**	**27**	P	**P**	**03 23 16.7**	**-0.8**
	baz=299						
GLI	**Glacier Island**	**74.91**	**29**	P	**P**	**03 23 18.8**	**+0.1**
	baz=299						
HARP	**HAARP**	**74.97**	**27**	P	**P**	**03 23 18.9**	**-0.2**
	baz=300						
KLU	**Klutina**	**75.10**	**28**	P	**P**	**03 23 19.9**	**-0.1**
KLU				lAmb	lAmb	03 23 26.4	
	comp=Z,9.9nm,1.1s						
KLU	**Klutina**	**75.10**	**28**	P	**P**	**03 23 19.9**	**-0.1**
	baz=300						
G29M	**Pine Creek**	**75.12**	**21**		**P**	**03 23 19.7**	**-0.2**
G29M				lAmb	lAmb	03 23 32.8	
	comp=Z,6.0nm,1.1s						
G29M	**Pine Creek**	**75.12**	**21**	P	**P**	**03 23 19.7**	**-0.2**
	baz=305						
I28M	**Miner Creek**	**75.31**	**23**		**P**	**03 23 21.2**	**+0.1**
I28M	**Miner Creek**	**75.31**	**23**	P	**P**	**03 23 20.6**	**-0.5**
	baz=304						
K27K	**Chicken**	**75.31**	**25**	P	**P**	**03 23 21.2**	**+0.2**
K27K				lAmb	lAmb	03 23 25.5	
	comp=Z,5.3nm,1.1s						
H29M	**Whitestone**	**75.41**	**22**	P	**P**	**03 23 21.2**	**-0.3**
	baz=305						
F30M	**Barrier River**	**75.42**	**20**	P	**P**	**03 23 20.7**	**-0.8**
	baz=307						
N25K	**Chitina, Valde**	**75.59**	**27**	P	**P**	**03 23 22.4**	**-0.4**
	baz=301						
G30M	**tAoh Zraii Nji**	**75.66**	**21**		**P**	**03 23 22.5**	**-0.5**
G30M				lAmb	lAmb	03 23 29.5	
	comp=Z,9.2nm,1.3s						
G30M	**tAoh Zraii Nji**	**75.66**	**21**	P	**P**	**03 23 22.9**	**-0.1**
	baz=307						
INK	**Inuvik**	**75.66**	**19**	P	**P**	**03 23 23.1**	**+0.2**
INK				lAmb	lAmb	03 23 27.0	
	comp=Z,3.7nm,0.8s						
INK	**Inuvik**	**75.66**	**19**	P	**P**	**03 23 23.1**	**+0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**75.66**	**19**	P	**P**	**03 23 23.0**	**+0.2**
	baz=309						
INK	**Inuvik**	**75.66**	**19**	P	**P**	**03 23 24.1**	**+1.3**
M26K	**Nabesna, AK**	**75.83**	**26**	P	**P**	**03 23 23.6**	**-0.4**
M26K				lAmb	lAmb	03 23 28.6	
	comp=Z,3.3nm,0.7s						
M26K	**Nabesna, AK**	**75.83**	**26**	P	**P**	**03 23 24.5**	**+0.4**
	baz=302						
EPYK	**Eagle Plains**	**75.86**	**21**	P	**P**	**03 23 24.8**	**+0.6**
EPYK				lAmb	lAmb	03 23 27.3	
	comp=Z,4.3nm,1.1s						
EPYK	**Eagle Plains**	**75.86**	**21**	P	**P**	**03 23 24.3**	**+0.1**
	baz=306						
BMRM	**Bremner River**	**75.92**	**28**	P	**P**	**03 23 24.3**	**-0.3**
BMRM	**Bremner River**	**75.92**	**28**	P	**P**	**03 23 24.2**	**-0.3**
	baz=301						
BCAR	**Beaver Creek A**	**75.94**	**25**		**P**	**03 23 24.3**	**-0.4**
MBAR	**Mbarara**	**76.03**	**262**	LR	LR	03 56 27.3	
	comp=Z,56nm,18.9s,baz=134,slow=35						
F31M	**Tsiigehtchic**	**76.14**	**20**	P	**P**	**03 23 26.0**	**+0.3**
	baz=309						
VRDI	**Verde Repeater**	**76.26**	**28**	P	**P**	**03 23 26.4**	**-0.3**
VRDI				lAmb	lAmb	03 23 34.6	
	comp=Z,7.5nm,1.3s						
DAWY	**Dawson**	**76.28**	**24**		**P**	**03 23 26.1**	**-0.5**
DAWY	**Dawson**	**76.28**	**24**	P	**P**	**03 23 26.5**	**-0.1**
	baz=304						
M27K	**Edge Creek, AK**	**76.29**	**26**	P	**P**	**03 23 27.1**	**+0.3**
M27K				lAmb	lAmb	03 23 57.4	
	comp=Z,6.2nm,1.2s						
M27K	**Edge Creek, AK**	**76.29**	**26**	P	**P**	**03 23 26.0**	**-0.8**
	baz=303						
G31M	**Satah River**	**76.30**	**20**	P	**P**	**03 23 26.7**	**+0.1**
	baz=308						
MCARA	**McCarthy VSAT**	**76.36**	**27**	P	**P**	**03 23 27.4**	**+0.4**
	baz=302						
KAIM	**Kayak Island**	**76.53**	**29**	P	**P**	**03 23 27.8**	**-0.3**
	baz=301						
BERG	**Berg Lake**	**76.60**	**28**	P	**P**	**03 23 28.0**	**-0.4**
I30M	**Mount Dempster**	**76.66**	**22**		**P**	**03 23 28.0**	**-0.8**
I30M	**Mount Dempster**	**76.66**	**22**	P	**P**	**03 23 28.0**	**-0.8**
	baz=307						
H31M	**Peel River**	**76.98**	**21**		**P**	**03 23 30.7**	**+0.2**
H31M				lAmb	lAmb	03 23 32.3	
	comp=Z,7.8nm,1.1s						
H31M	**Peel River**	**76.98**	**21**	P	**P**	**03 23 30.3**	**-0.2**
	baz=308						
J30M	**Hart River**	**77.07**	**23**		**P**	**03 23 31.6**	**+0.5**
J30M	**Hart River**	**77.07**	**23**	P	**P**	**03 23 30.8**	**-0.4**
	baz=307						
K29M	**Barlow Dome**	**77.08**	**24**		**P**	**03 23 31.4**	**+0.2**
K29M				lAmb	lAmb	03 23 35.9	
	comp=Z,5.8nm,0.8s						
K29M	**Barlow Dome**	**77.08**	**24**	P	**P**	**03 23 31.2**	**0.0**
	baz=306						
YUK3	**Moose Creek**	**77.17**	**26**	P	**P**	**03 23 31.7**	**-0.1**
	baz=304						
L29M	**L29M**	**77.30**	**24**		**P**	**03 23 32.4**	**0.0**
L29M				lAmb	lAmb	03 23 37.0	
	comp=Z,6.0nm,1.1s						
L29M	**L29M**	**77.30**	**24**	P	**P**	**03 23 32.4**	**0.0**
	baz=306						
EKA	**Eskdalemuir Ar**	**77.47**	**326**	P	**P**	**03 23 32.2**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=56,slow=6.2,SNR=3.5						
EKA				LR	LR	03 58 25.5	
	comp=Z,123nm,20.2s,baz=67,slow=36						
	comp=Z,0.5nm,0.6s						
C36M	**Paulatuk**	**77.48**	**16**		**P**	**03 23 33.0**	**-0.2**
C36M				lAmb	lAmb	03 23 36.7	
	comp=Z,6.0nm,0.7s						
C36M	**Paulatuk**	**77.48**	**16**	P	**P**	**03 23 33.9**	**+0.8**
	baz=317						
M29M	**Somme Creek**	**77.56**	**25**		**P**	**03 23 35.1**	**+1.1**
M29M	**Somme Creek**	**77.56**	**25**	P	**P**	**03 23 34.0**	**+0.1**
	baz=306						
YUK8	**Steele Glacier**	**77.72**	**26**	P	**P**	**03 23 34.8**	**-0.2**
	baz=305						
O28M	**Mount Upton**	**77.84**	**27**	P	**P**	**03 23 35.3**	**-0.5**
	baz=304						
M30M	**Minto, Yukon**	**78.11**	**25**	P	**P**	**03 23 36.6**	**-0.3**
M30M	**Minto, Yukon**	**78.11**	**25**	P	**P**	**03 23 36.7**	**-0.2**
	baz=307						
YUK4	**Talbot Arm**	**78.13**	**26**	P	**P**	**03 23 36.7**	**-0.6**
	baz=306						
PINM	**Pinnacle**	**78.20**	**28**	P	**P**	**03 23 37.5**	**0.0**
	baz=305						
YUK6	**Outpost Mounta**	**78.48**	**26**	P	**P**	**03 23 38.4**	**-0.8**
	baz=306						
N30M	**Aishikik Lake**	**78.67**	**26**	P	**P**	**03 23 40.5**	**+0.5**
	baz=307						
O29M	**Mount Kennedy**	**78.77**	**27**	P	**P**	**03 23 40.6**	**-0.1**
	baz=306						
HYT	**Haines Junctio**	**78.89**	**26**	P	**P**	**03 23 41.4**	**0.0**
	baz=307						
N31M	**Braeburn, Yuko**	**79.15**	**25**	P	**P**	**03 23 42.0**	**-0.6**
	baz=308						
M31M	**Drury Creek, Y**	**79.22**	**24**	P	**P**	**03 23 43.2**	**+0.2**
	baz=309						
O30N	**Mendenhall**	**79.47**	**26**	P	**P**	**03 23 44.8**	**+0.3**
	baz=308						
P29M	**Windy Craggy**	**79.51**	**27**	P	**P**	**03 23 44.3**	**-0.3**
	baz=307						
P30M	**Million Dollar**	**79.52**	**27**	P	**P**	**03 23 44.5**	**-0.2**
	baz=307						
WHY	**Whitehorse**	**80.01**	**26**	P	**P**	**03 23 47.5**	**0.0**
	baz=309						
MMPY	**Sheldon Lake,**	**80.06**	**23**	P	**P**	**03 23 47.7**	**+0.1**
	baz=312						
PLBC	**Pleasant Camp**	**80.17**	**27**	P	**P**	**03 23 48.7**	**+0.6**
	baz=308						
SKAG	**Skagway**	**80.58**	**27**	P	**P**	**03 23 50.2**	**-0.1**
	baz=309						
P33M	**Teslin, Yukon**	**81.08**	**25**	P	**P**	**03 23 52.8**	**-0.4**
	baz=311						
P32M	**Atlin**	**81.14**	**26**	P	**P**	**03 23 53.3**	**-0.1**
	baz=310						
S31K	**Pelican**	**81.14**	**28**	P	**P**	**03 23 53.1**	**-0.2**
	baz=308						
R32K	**Eaglecrest**	**81.66**	**27**	P	**P**	**03 23 55.7**	**-0.4**
	baz=309						
SIT	**Sitka**	**82.09**	**29**	P	**P**	**03 23 58.0**	**-0.4**
	baz=309						
Q32M	**Nakina River**	**82.11**	**26**	P	**P**	**03 23 58.2**	**-0.6**
	baz=311						
R33M	**Jennings River**	**82.33**	**25**	P	**P**	**03 23 59.5**	**-0.3**
	baz=312						
U33K	**Whale Pass**	**83.63**	**28**	P	**P**	**03 24 06.4**	**0.0**
	baz=311						
WRAK	**Wrangell Islan**	**83.76**	**28**	P	**P**	**03 24 07.1**	**+0.1**
	baz=311						
CRAG	**Craig**	**84.05**	**29**	P	**P**	**03 24 08.9**	**+0.3**
	baz=311						
T35M	**Bob Quinn**	**84.24**	**27**	P	**P**	**03 24 09.4**	**-0.1**
	baz=313						
SFJD	**Kangerlussuaq**	**84.27**	**351**	LR	LR	04 04 48.9	
	comp=Z,89nm,18.9s,baz=32,slow=38						
V35K	**Ketchikan**	**84.79**	**29**	P	**P**	**03 24 12.5**	**+0.1**
	baz=312						
ESDC	**Sonseca Array**	**86.04**	**313**	P	**P**	**03 24 18.2**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=35,slow=5.9,SNR=2.4						
ESDC				LR	LR	04 06 08.3	
	comp=Z,49nm,19.7s,baz=76,slow=38						
	comp=Z,0.3nm,0.5s						
ESDC	**Sonseca Array**	**86.04**	**313**	P	**P**	**03 24 17.8**	**-1.2**
ESDC				lAmb	lAmb	03 24 35.9	
	comp=Z,4.7nm,1.4s						
KIP	**Kipapa**	**86.57**	**68**	*e*P	**P**	**03 24 22.0**	**+0.2**
KIP				pmax	pmax		
	comp=Z,75nm,1.3s						
ROSC	**El Rosal**	**148.14**	**358**	PKPbc	**PKPbc**	**03 31 26.1**	**+0.9**
	comp=Z,13nm,0.6s,baz=53,slow=9.5,SNR=5.4						
ROSC	**El Rosal**	**148.14**	**358**	PKPab	**PKiKP**	**03 31 26.9**	**-0.2**
ROSC	**El Rosal**	**148.14**	**358**	PKP2	**PKiKP**	**03 31 26.9**	**-0.2**

*IDC **02** 03:19:45.0±1.5, 12°.34N×143°.85E, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=95.1km s-min=33.7km az=105.0*
*NEIC **02** 03:19:51.2±1.4, 12°.4N±0°.2×143°.6E±0°.2, h35km±2km, mb4.3/10, Error ellipse: s-maj=39.5km s-min=13.3km az=130.0*

ISC 02 03:19:49.2±0.9, 12°.4N±0°.2×143°.7E±0°.2, h27km, n19,
σ 0s 90/20, mb4.4/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.65**	**44**	Pn	**Pn**	**03 20 15.6**	**-0.9**
GUMO				Sn	**Sb**	**03 20 40.1**	**+0.6**
WB0	**Warramunga Arr**	**33.24**	**196**	P	**P**	**03 26 24.6**	**+0.3**
WR0	**Warramunga Arr**	**33.38**	**196**	P	**P**	**03 26 26.0**	**+0.5**
WR0				lAmb	lAmb	03 26 57.7	
	comp=Z,5.3nm,1.2s						
WR8	**Warramunga Arr**	**33.39**	**196**	P	**P**	**03 26 26.6**	**+1.0**
WR8				lAmb	lAmb	03 26 36.7	
	comp=Z,8.5nm,1.3s						
WB2	**Warramunga Arr**	**33.42**	**196**	P	**P**	**03 26 26.1**	**+0.3**
WB2				lAmb	lAmb	03 26 26.7	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**33.42**	**196**	P	**P**	**03 26 25.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=17,slow=8.1,SNR=1.8						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**33.42**	**196**	P	**P**	**03 26 24.4**	**-1.5**
PEA0B	**Petropavlovsk-**	**42.13**	**13**	P	**P**	**03 27 39.2**	**+0.1**
PEA0B				lAmb	lAmb	03 28 22.3	
	comp=Z,9.3nm,1.1s						
PETK	**Petropavlovsk-**	**42.13**	**13**	P	**P**	**03 27 38.5**	**-0.6**
D20K	**Etivluk River**	**67.76**	**20**	P	**P**	**03 30 45.4**	**+1.2**
D20K				lAmb	lAmb	03 31 17.2	
	comp=Z,4.4nm,1.3s						
IL31		**70.14**	**25**	P	**P**	**03 30 59.1**	**+0.1**
IL31				lAmb	lAmb	03 31 30.0	
	comp=Z,2.4nm,1.4s						
ILAR	**Eielson Array**	**70.14**	**25**	P	**P**	**03 30 58.9**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=248,slow=5.9,SNR=7.1						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**70.14**	**25**	P	**P**	**03 30 59.1**	**+0.1**
BMAR	**Burnt Mountain**	**71.65**	**23**	P	**P**	**03 31 10.2**	**+2.0**
R32K	**Eaglecrest**	**75.24**	**33**	P	**P**	**03 31 29.0**	**-0.5**
AB31	**Akbulak array**	**76.66**	**318**	P	**P**	**03 31 37.3**	**-0.5**
ABKAR	**Akbulak array**	**76.66**	**318**	P	**P**	**03 31 36.8**	**-1.0**
ARCES	**ARCESS Array B**	**87.87**	**342**	P	**P**	**03 32 37.2**	**+1.2**
	comp=Z,7.6nm,1.0s,baz=63,slow=6.2,SNR=4.8						
	comp=Z,7.6nm,1.0s						
FINES	**FINESS Array B**	**91.76**	**335**	P	**P**	**03 32 54.6**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=46,slow=4.0,SNR=7.2						
	comp=Z,1.9nm,0.7s						

*MEX **02** 03:27:08.6±16.0, 14°.55N×92°.91W, h42km±789km, MD3.7*
*GCG **02** 03:27:09.3±0.3, 14°.94N×92°.17W, h83km±6km, MD3.4, Presumed earthquake*

ISC 02 03:27:07.5±1.3, 14°.9N±0°.2×91°.9W±0°.2, h100km, n8,
σ 1s 57/15, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHUJ	**Union Juarez**	**0.26**	**322**	*e*P	**Pn**	**03 27 22.6**	**+0.4**
CHUJ				*e*S	**Sn**	**03 27 33.9**	**+0.7**
THIG		**0.31**	**274**	*e*P	**Pn**	**03 27 21.9**	**-0.2**
THIG				*e*S	**Sn**	**03 27 32.4**	**-0.6**
THIG		**0.31**	**274**	*i* S	**Sn**	**03 27 30.5**	**-2.5**
PATR	**El Naranjo**	**0.36**	**309**	*e*P	**Pn**	**03 27 22.5**	**-0.2**
PATR				*e*S	**Sn**	**03 27 33.2**	**-0.9**
PAVE	**Pavencul**	**0.38**	**324**	*e*P	**Pn**	**03 27 23.6**	**+0.8**
PAVE				*e*S	**Sn**	**03 27 34.9**	**+0.6**
RTAL	**Retalhuleu**	**0.43**	**146**	*e*P	**Pn**	**03 27 25.4**	**+2.5**
RTAL				*e*S	**Sn**	**03 27 37.1**	**+2.7**
STG8	**El Palmar, Qui**	**0.72**	**127**	*i* P	**Pn**	**03 27 25.0**	**-0.4**
STG8				*i* S	**Sn**	**03 27 37.4**	**-1.3**
STG5	**El Palmar, Qui**	**0.75**	**130**	*i* P	**Pn**	**03 27 24.9**	**-0.6**
STG5				*i* S	**Sn**	**03 27 36.9**	**-2.0**

*IDC **02** 03:35:15.9±0.7, 49°.30S×116°.31W, h0km, mb4.0/9, mbtmp4.0/9, MS4.4/43, Error ellipse: s-maj=29.9km s-min=20.1km az=126.0*
*NEIC **02** 03:35:18.6±1.7, 49°.4S±0°.1×116°.2W±0°.1, h10km±1km, mb4.6/13, Error ellipse: s-maj=22.2km s-min=16.0km az=9.0*
*GFZ **02** 03:35:20.7±0.3, 49°.5S±7°×11°.5W±°, h10km, M4.5/8, mb4.5/8, Error ellipse: s-maj=18.0km s-min=14.5km az=114.8, confirmed*
*GFZ **02** 03:35:20.7, 49°.48S×115°.49W, h12km, Mw5.1/28, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.46; $M_{\theta\theta}$1.26; $M_{\phi\phi}$-1.72; $M_{r\theta}$-0.37; $M_{\theta\phi}$4.72; $M_{r\phi}$0.09; Fault plane solution: $M_0$4.97774×10^{16} NP1: ϕ_s278.78650°, δ89.73294°, λ4.39480°. NP2:ϕ_s188.76597°, δ85.60525°, λ179.73216°. Principal axes: T 4.7331, Plg3.2952°, Azm143.8603°; N 0.4577, Plg85.5971°, Azm282.2571°; P -5.1908, Plg2.9169°, Azm53.6922°;*
*GCMT **02** 03:35:21.6±0.2, 49°.66S±0°.01×116°.12W±0°.02, h12km, MW5.1/118, Moment Tensor Solution. s51,c65; s118,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52±.11; $M_{\theta\theta}$2.08±.11; $M_{\phi\phi}$-1.56±.11; $M_{r\theta}$1.16±.28; $M_{\theta\phi}$4.35±.08; $M_{r\phi}$2.18±.29; Best double couple: $M_0$5.28100×10^{16} NP1:ϕ_s103.00000°, δ64.00000°, λ2.00000°. NP2:ϕ_s12.00000°, δ88.00000°, λ154.00000°. Principal axes: T 5.7460, Plg20.0000°, Azm324.0000°; N -0.9310, Plg64.0000°, Azm188.0000°; P -4.8160, Plg17.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 03:35:18.3±0.5, 49°.4S±0°.1×116°.27W±0°.08, h10km, n101,
σ 1s 83/50, mb4.4/14, MS4.5/43, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**22.83**	**16**	LR	LR	03 46 52.2	
	comp=Z,229nm,19.8s,baz=187,slow=31						
USHA	**Ushuaia**		**29.42**	**119**	LR	LR	03 50 22.3
	comp=Z,801nm,19.1s,baz=228,slow=31						
PMSA	**Palmer Station**	**31.21**	**139**	LR	LR	03 50 39.4	
	comp=Z,1μm,18.9s,baz=268,slow=30						
H03S2	**Juan Fernandez**	**31.57**	**75**	T	T	04 14 44.7	
	baz=227,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**31.58**	**75**	T	T	04 14 47.3	
	baz=227,slow=74,SNR=41						
H03S3	**Juan Fernandez**	**31.59**	**75**	T	T	04 14 43.8	
	baz=227,slow=74,SNR=63						
H03N3	**Juan Fernandez**	**31.82**	**74**	T	T	04 15 00.0	
	baz=230,slow=72,SNR=26						
H03N2	**Juan Fernandez**	**31.82**	**74**	T	T	04 14 58.6	
	baz=230,slow=72,SNR=29						
H03N1	**Juan Fernandez**	**31.84**	**74**	T	T	04 15 04.9	
	baz=230,slow=72,SNR=31						
BI02	**San Fabin de**	**34.76**	**86**	P	**P**	**03 42 08.8**	**0.0**
BI02				lAmb	lAmb	03 42 45.9	
	comp=Z,18nm,1.5s						
TBI	**Tubuai**	**36.76**	**303**	*e*S	**S**	**03 48 13.0**	**+3.3**
TBI	comp=Z,1μm,37.0s			*e*SS	**SnSn**	**03 50 40.5**	**-0.1**
	comp=Z,2μm,26.0s						
TBI				*e*LR	LR	03 52 12.0	
	comp=Z,6μm,25.2s						
TBI				*e*LR	LR	03 52 14.4	
	comp=Z,2μm,26.8s						
MT03	**Universidad Ad**	**37.18**	**82**	P	**P**	**03 42 29.2**	**-0.3**
MT03				lAmb	lAmb	03 43 08.0	
	comp=Z,29nm,1.5s						
TRQA	**Tornquist**	**40.03**	**95**	P	**P**	**03 42 52.0**	**-1.4**
TRQA				lAmb	lAmb	03 42 58.6	
	comp=Z,16nm,1.4s						
VNDA	**Vanda**	**40.66**	**199**	P	**P**	**03 42 59.0**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=104,slow=6.9,SNR=2.1						
VNDA				LR	LR	03 56 27.4	
	comp=Z,535nm,18.5s,baz=97,slow=31						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**40.66**	**199**	P	**P**	**03 42 58.3**	**+0.2**
QSPA	**South Pole Qui**	**40.85**	**180**	P	**P**	**03 42 59.6**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=116,slow=1.7,SNR=20						
QSPA				LR	LR	03 57 41.5	
	comp=Z,487nm,19.6s,baz=97,slow=33						
	comp=Z,5.6nm,0.9s						
QSPA	**South Pole Qui**	**40.85**	**180**	P	**P**	**03 42 59.6**	**-0.4**
QSPA				lAmb	lAmb	03 43 16.6	
	comp=Z,17nm,1.1s						
QSPA	**South Pole Qui**	**40.85**	**180**	P	**P**	**03 43 01.4**	**+1.4**
PPT2	**Papeete2**	**41.54**	**308**	*e*S	**S**	**03 49 19.9**	**-1.9**
	comp=Z,77nm,24.2s						
PPT2				*e*SS	**SS**	**03 52 22.8**	**-3.6**
	comp=Z,718nm,27.5s						
PPT2				*e*LR	LR	03 54 21.3	
	comp=Z,2μm,26.8s						
PPT2				*e*LR	LR	03 54 23.5	
	comp=Z,2μm,24.5s						
PPT	**Papeete**	**41.55**	**308**	LR	LR	03 55 52.6	
	comp=Z,773nm,18.6s,baz=140,slow=30						
AC01	**Pan de Azucar**	**42.07**	**74**	P	**P**	**03 43 09.5**	**-0.8**
RAR	**Rarotonga**	**44.38**	**293**	LR	LR	03 57 11.0	
	comp=Z,213nm,18.4s,baz=139,slow=30						
RAR	**Rarotonga**	**44.38**	**293**	P	P	03 43 35.2	+6.3
TAOE	**Nuku Hiva Isla**	**45.04**	**326**	eLR	LR	03 56 04.0	
	comp=Z,2μm,26.5s						
PB08	**IPOC Station P**	**47.39**	**69**	P	**P**	**03 43 52.4**	**-0.8**
PB08				lAmb	lAmb	03 43 52.8	
	comp=Z,5.7nm,0.9s						
URZ	**Urewera**	**47.87**	**257**	LR	LR	03 59 30.7	
	comp=Z,449nm,19.9s,baz=136,slow=30						
RPZ	**Rata Peaks**	**48.53**	**247**	LR	LR	04 00 03.2	
	comp=Z,86nm,19.6s,baz=108,slow=31						
CPUP	**Villa Florida**	**50.47**	**85**	LR	LR	04 01 54.9	
	comp=Z,470nm,21.6s,baz=234,slow=32						
SNAA	**Sanae**	**50.55**	**158**	LR	LR	04 02 57.9	
	comp=Z,761nm,21.7s,baz=248,slow=33						
LPAZ	**La Paz**	**50.95**	**67**	P	**P**	**03 44 20.1**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=209,slow=1.8,SNR=6.6						
LPAZ				LR	LR	04 00 48.8	

TXAR	Lajitas Array	79.14	11	P		P	03 47 21.7	-1.2
RCBR	Riachuelo	79.33	87	LR		LR	04 19 34.8	
	comp=Z,190nm,21.6s,baz=230,slow=34							
CTA	Charters Tower	79.72	251	LR		LR	04 18 12.4	
	comp=Z,101nm,18.8s,baz=192,slow=32							
SJG	San Juan	80.51	48	LR		LR	04 19 12.4	
	comp=Z,121nm,20.7s,baz=241,slow=33							
PFO	Pinyon Flats O	82.60	36	LR		LR	04 15 34.6	
	comp=Z,224nm,21.1s,baz=210,slow=29							
QIS	Mount Isa	83.42	246	P		P	03 47 49.5	+3.5
ASAR	Alice Springs	84.34	240	P		P	03 47 49.1	-1.6
	comp=Z,1.2nm,0.8s,baz=149,slow=4.6,SNR=15							
ASAR				LR		LR	04 19 17.1	
	comp=Z,320nm,20.3s,baz=134,slow=31							
	comp=Z,1.2nm,0.8s							
ASAR	Alice Springs	84.34	240	P		P	03 47 49.6	-1.1
ANMO	Albuquerque	84.38	8	LR		LR	04 18 45.4	
	comp=Z,102nm,18.8s,baz=185,slow=31							
ANMO	Albuquerque	84.38	8	P		P	03 47 54.1	+3.5
H01W1	Cape Leeuwin H	84.93	220	T		T	05 22 34.1	
	baz=149,slow=76,SNR=17							
H01W2	Cape Leeuwin H	84.93	219	T		T	05 22 33.8	
	baz=149,slow=76,SNR=16							
H01W3	Cape Leeuwin H	84.94	219	T		T	05 22 35.4	
	baz=149,slow=76,SNR=17							
NWAO	Narrogin (SRO)	85.28	223	LR		LR	04 17 04.3	
	comp=Z,189nm,21.1s,baz=244,slow=29							
MVCO	Mesa Verde	86.46	6	P		P	03 48 03.2	+2.2
WRA	Warramunga Arr	87.00	243	P		P	03 48 02.7	-1.3
	comp=Z,0.4nm,0.7s,baz=146,slow=4.9,SNR=8.2							
	comp=Z,0.4nm,0.7s							
WRA	Warramunga Arr	87.00	243	P		P	03 48 02.4	-1.6
PMG	Port Moresby	87.19	259	LR		LR	04 22 11.5	
	comp=Z,203nm,18.6s,baz=140,slow=32							
NVAR	Mina Array Bea	87.42	358	LR		LR	04 19 29.9	
	comp=Z,361nm,18.3s,baz=160,slow=30							
WVT	Waverly	88.78	23	P		P	03 48 14.0	+2.2
TKL	Tuckaleechee C	89.42	28	LR		LR	04 22 17.2	
	comp=Z,99nm,21.8s,baz=171,slow=32							
ELK	Elko	89.72	1	LR		LR	04 20 32.2	
	comp=Z,190nm,19.8s,baz=189,slow=30							
SUR	Sutherland	90.11	145	LR		LR	04 21 54.5	
	comp=Z,245nm,18.4s,baz=174,slow=31							
YBH	Yreka Blue Hor	90.88	355	LR		LR	04 19 42.1	
	comp=Z,295nm,21.6s,baz=176,slow=29							
PDAR	Pinedale Array	91.93	5	P		P	03 48 25.2	-1.4
	comp=Z,1.1nm,1.0s,baz=180,slow=2.8,SNR=4.4							
PDAR				LR		LR	04 23 00.5	
	comp=Z,105nm,18.4s,baz=172,slow=31							
	comp=Z,1.1nm,1.0s							
FITZ	Fitzroy Crossi	93.39	237	LR		LR	04 23 11.9	
	comp=Z,280nm,19.6s,baz=168,slow=31							
FITZ	Fitzroy Crossi	93.39	237	P		P	03 48 37.6	+3.7
H11S2	WAKE ISLAND Hy	95.69	292	T		T	05 35 12.3	
	baz=140,slow=76,SNR=309							
H11S3	WAKE ISLAND Hy	95.70	292	T		T	05 35 10.9	
	baz=140,slow=76,SNR=147							
H11S1	WAKE ISLAND Hy	95.71	292	T		T	05 35 04.6	
	baz=140,slow=76,SNR=184							
H11N3	WAKE ISLAND Hy	96.50	293	T		T	05 36 09.4	
	baz=143,slow=75,SNR=49							
H11N1	WAKE ISLAND Hy	96.51	293	T		T	05 36 08.8	
	baz=143,slow=75,SNR=22							
H11N2	WAKE ISLAND Hy	96.52	293	T		T	05 36 10.7	
	baz=143,slow=75,SNR=55							
NEW	Newport	97.24	359	LR		LR	04 25 46.3	
	comp=Z,230nm,18.2s,baz=185,slow=31							
LBTB	Lobatse	98.54	145	LR		LR	04 24 49.3	
	comp=Z,321nm,21.9s,baz=200,slow=30							
SADO	Sadowa	99.19	26	LR		LR	04 30 42.0	
	comp=Z,95nm,18.4s,baz=204,slow=34							
HILR	Hailar Array B	144.31	292	PKP		PKPdf	03 54 54.1	+0.4
	comp=Z,4.2nm,0.7s,baz=123,slow=5.5,SNR=4.5							
GERES	GERESS Array B	147.73	71	PKPbc		PKPbc	03 55 01.2	-1.3
	comp=Z,1.1nm,0.8s,baz=251,slow=4.1,SNR=7.7							
GERES	GERESS Array B	147.73	71			PKPbc	03 55 02.8	+0.2
CLL	Collm	148.08	67	*i* PKPbc		PKiKP	03 55 05.4	+0.4
CLL				*i* PKiKP		pPKPab	03 55 07.9	-0.5
BRG	Berggiesshubel	148.52	68	*e*PKP		PKPab	03 55 07.7	-0.2
BRG				Amp			03 55 11.5	
	comp=Z,3.5nm,1.1s							
BRG	Berggiesshubel	148.52	68	P		PKPab	03 55 15.0	+7.1
BRG				Amp			03 55 16.0	
	comp=Z,4.5nm,1.1s							
JAVC	Velka Javorina	150.20	73	*e*PKP		PKiKP	03 55 09.6	+0.1
MORC	Moravsky Berou	150.41	71	*e*PKP		PKiKP	03 55 10.3	+0.4
SONM	Songino Array	152.01	283	PKPbc		PKPbc	03 55 11.8	-1.3
	comp=Z,0.9nm,0.8s,baz=131,slow=1.7,SNR=4.9							
SONM	Songino Array	152.01	283	PKPdf		PKPdf	03 55 06.0	-0.5
BRTR	Keskin Array B	156.63	103	PKPab		PKPab	03 55 41.8	-0.7
	comp=Z,3.5nm,1.0s,baz=210,slow=4.3,SNR=7.5							
BRTR	Keskin Array B	156.63	103			PKPab	03 55 41.5	-1.0
MKAR	Makanchi Array	167.32	265	PKPab		PKPab	03 56 29.0	0.0
	comp=Z,0.6nm,0.8s,baz=113,slow=5.4,SNR=3.8							
MKAR	Makanchi Array	167.32	265			PKPab	03 56 28.1	-0.8

*NEIC **02** 03:37:08.9, 17°.87N×66°.88W, h10km*
*NEIC **02** 03:37:08.5±1.0, 17°.89N±0°.02×66°.92W±0°.01, h16km±2km, ML4.0/39, Mwr3.8/18, Md3.8/18(RSPR), Mwr3.7/17(SLM), Error ellipse: s-maj=2.4km s-min=1.2km az=151.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.21; Mθθ=1.23; Mϕϕ=-0.02; Mrθ=1.96; Mϕr=5.48; Mθr=-1.07; Fault plane solution: M₀6.04000×10¹⁴ NP1:ϕ₁=270.58000°, δ=68.42000°, λ=-166.40000°. NP2:ϕ₂=270.58000°, δ=77.37000°, λ=-22.15000°. Principal axes: T 6.2008, Plg=6.0000°, Azm=319.0000°; N -0.3330, Plg=65.0000°, Azm=62.0000°; P -5.8677, Plg=25.0000°, Azm=227.0000°;*
*OSPL **02** 03:37:09.5±2.6, 17°.75N×66°.83W, h8km±39km, ML3.8, Presumed earthquake*
*NEIC **02** 03:37:09, 17°.95N×66°.92W, h14km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.28; Mθθ=0.66; Mϕϕ=0.62; Mrθ=0.91; Mϕϕ=3.57; Mθr=1.96; Fault plane solution: M₀4.32000×10¹⁴ NP1:ϕ₁=5.00000°, δ=73.00000°, λ=-148.00000°. NP2:ϕ₂=265.00000°, δ=60.00000°, λ=-20.00000°. Principal axes: T 4.3175, Plg=8.0000°, Azm=133.0000°; N 0.0014, Plg=54.0000°, Azm=31.0000°; P -4.3189, Plg=34.0000°, Azm=229.0000°;*
*RSPR **02** 03:37:09.6, 17°.95N×66°.92W, h10km, MD3.8/18*
*PTWC **02** 03:37:09, 17°.90N×66°.90W, MI4.1/15*
*SDD **02** 03:37:10.4±1.2, 17°.94N×66°.91W, h6km±6km, MD3.0, ML3.7, MW3.5, Presumed earthquake*

ISC 02 03:37:07.0±0.9, 17°.81N±0°.04×66°.94W±0°.02, h18km±4km, n101, σ1§69/143, 18C-17D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GBPR	Guanica, Bosqu	0.18	19			Pb	03 37 12.0	+0.3
GBPR	Guanica, Bosqu	0.18	19	↑*e*	P	Pb	03 37 12.0	+0.3
MLPR	Magueyes Islan	0.19	328			Pb	03 37 12.4	+0.5
MLPR					Sg	Sg	03 37 15.0	-0.1
MLPR	Magueyes Islan	0.19	328		P	Pb	03 37 12.5	+0.5
MLPR	Magueyes Islan	0.19	328	↑*i*	P	Pb	03 37 12.6	+0.7
MLPR				↓*i*	S	Sg	03 37 15.2	+0.1
MLPR					IAML		03 37 15.5	
	comp=N,23μm,0.4s							
MLPR	Magueyes Islan	0.19	328	↑*e*	P	Pb	03 37 12.6	+0.7
CRPR	Cabo Rojo, PR	0.26	321			Pb	03 37 13.6	+0.5
CRPR						Sg	03 37 17.1	+0.2
CRPR					IAML		03 37 17.4	
	comp=N,20μm,0.8s							
CRPR					IAML		03 37 17.6	
	comp=N,27μm,0.7s							
CRPR	Cabo Rojo, PR	0.26	321		P	Pb	03 37 13.7	+0.5
CRPR	Cabo Rojo, PR	0.26	321	↑*e*	P	Pb	03 37 13.6	+0.5
LSP	Las Mesas	0.39	339			Pg	03 37 15.3	+0.1
LSP	Las Mesas	0.39	339	↓*e*	P	Pg	03 37 15.3	+0.1
OBIP	Obispado Ponce	0.40	53			Pb	03 37 15.7	+0.2
OBIP						Sg	03 37 20.5	-0.2
OBIP	Obispado Ponce	0.40	53	*i*	P	Pb	03 37 15.7	+0.2
OBIP	Obispado Ponce	0.40	53	*i*	P	Pb	03 37 15.8	+0.2
OBIP					eS	Sg	03 37 20.7	-0.1
OBIP					IAML		03 37 21.5	
	comp=Z,61μm,0.3s							
OBIP	Obispado Ponce	0.40	53	↓*e*	P	Pb	03 37 15.7	+0.2
OBIP					eS	Sg	03 37 20.5	-0.2
CELP	Cerrillos	0.43	52			Pb	03 37 16.4	+0.2
CELP						Sg	03 37 22.1	+0.2
CELP					IAML		03 37 22.5	
	comp=Z,11μm,0.3s							
CELP	Cerrillos	0.43	52	P		Pb	03 37 16.4	+0.2
CELP	Cerrillos	0.43	52	↓*i*	P	Pb	03 37 16.4	+0.2
CELP				↓*i*	S	Sg	03 37 21.9	0.0
CELP					IAML		03 37 22.3	
	comp=N,3μm,0.2s							
CELP	Cerrillos	0.43	52	↓*e*	P	Pb	03 37 16.4	+0.2
PRSN	Puerto Rico Se	0.45	334			Pg	03 37 16.4	+0.1
PRSN						Sg	03 37 22.0	-0.4
PRSN					IAML		03 37 26.9	
	comp=N,20μm,0.3s							
PRSN	Puerto Rico Se	0.45	334	P		Pg	03 37 16.5	+0.2
PRSN	Puerto Rico Se	0.45	334	↑*i*	P	Pg	03 37 16.3	+0.1
PRSN				↑*i*	S	Sg	03 37 22.1	-0.4
PRSN					IAML		03 37 23.9	
	comp=N,21μm,0.3s							
PRSN	Puerto Rico Se	0.45	334	↑*e*	P	Pg	03 37 16.4	+0.1
UUPR	Utuado, UPR, P	0.49	25			Pg	03 37 16.5	-0.4
UUPR						Sg	03 37 21.8	-1.9
UUPR	Utuado, UPR, P	0.49	25	P		Pg	03 37 16.6	-0.4
UUPR					S	Sg	03 37 22.1	-1.5
UUPR	Utuado, UPR, P	0.49	25	↓*e*	P	Pg	03 37 16.5	-0.4
AOPR	Arecibo Observ	0.57	18			Pg	03 37 17.8	-0.6
AOPR						Sg	03 37 24.0	-2.0
AOPR					IAML		03 37 24.9	
	comp=N,12μm,0.5s							
AOPR	Arecibo Observ	0.57	18	P		Pg	03 37 17.8	-0.6
AOPR	Arecibo Observ	0.57	18	↓*i*	P	Pg	03 37 17.8	-0.6
AOPR				↓*i*	S	Sg	03 37 24.0	-2.0
AOPR					IAML		03 37 24.8	
	comp=N,10μm,0.6s							
AOPR	Arecibo Observ	0.57	18	↓*e*	P	Pg	03 37 17.8	-0.6
AGPR	Aguadilla, PR	0.68	346			Pg	03 37 20.0	-0.4
AGPR						Sg	03 37 28.1	-1.4
AGPR					IAML		03 37 28.5	
	comp=N,15μm,0.6s							
AGPR					IAML		03 37 28.8	
	comp=N,6μm,0.2s							
AGPR	Aguadilla, PR	0.68	346	P		Pg	03 37 20.0	-0.4
AGPR	Aguadilla, PR	0.68	346	↑*i*	P	Pg	03 37 20.0	-0.4
AGPR				↑*i*	S	Sg	03 37 28.1	-1.4
AGPR					IAML		03 37 28.4	
	comp=N,11μm,0.6s							
AGPR	Aguadilla, PR	0.68	346	↑*e*	P	Pg	03 37 20.0	-0.4
ECPR	Experimental S	0.75	47			Pg	03 37 21.2	-0.5
ECPR						Sg	03 37 30.3	-1.4
ECPR					IAML		03 37 31.6	
	comp=N,10μm,0.2s							
ECPR					IAML		03 37 32.4	
	comp=N,11μm,0.2s							
ECPR	Experimental S	0.75	47	P		Pg	03 37 21.3	-0.5
ECPR	Experimental S	0.75	47	↓*e*	P	Pg	03 37 21.2	-0.5
IDE	Isla Desecheo	0.77	319			Pg	03 37 22.1	0.0
IDE						Sg	03 37 31.9	-0.4
IDE	Isla Desecheo	0.77	319	↑*e*	P	Pg	03 37 22.1	0.0
IDE					eS	Sg	03 37 31.9	-0.4
EMPR	Esperanza - Ma	0.77	30			Pb	03 37 21.8	-0.1
EMPR						Sg	03 37 31.2	-1.2
EMPR	Esperanza - Ma	0.77	30	P		Pb	03 37 21.9	-0.1
EMPR	Esperanza - Ma	0.77	30	↓*e*	P	Pb	03 37 21.8	-0.1
EMPR					eS	Sg	03 37 31.2	-1.2
IGPR	InterUniversit	0.81	79			Pn	03 37 23.6	0.0
IGPR						Sg	03 37 34.7	+1.1
IGPR	InterUniversit	0.81	79	P		Pg	03 37 23.5	+0.7
IGPR	InterUniversit	0.81	79	↓*e*	P	Pn	03 37 23.6	0.0
SJG	San Juan	0.81	68			Pb	03 37 23.1	+0.5
SJG					IAML		03 37 34.2	
	comp=N,8μm,0.5s							
SJG					IAML		03 37 34.8	
	comp=N,4μm,0.3s							
SJG	San Juan	0.81	68	P		Pb	03 37 22.9	+0.3
SJG	San Juan	0.81	68	*e*P		Pb	03 37 22.9	+0.3
SJG	San Juan	0.81	68	*i* P		Pb	03 37 22.9	+0.3
SJG					eS	Sb	03 37 32.9	-0.4
SJG	San Juan	0.81	68	↓*e*	P	Pb	03 37 23.1	+0.5
PDPR	Patillas Dam,	0.90	76			Pg	03 37 24.9	+0.4
PDPR						Sg	03 37 36.8	+0.4
PDPR	Patillas Dam,	0.90	76	↓*e*	P	Pg	03 37 24.9	+0.4
HUMP	Col San Antoni	1.09	72			Pb	03 37 27.8	+0.4
HUMP						Sb	03 37 41.7	+0.4
HUMP					IAML		03 37 45.1	
	comp=N,3μm,0.8s							
HUMP	Col San Antoni	1.09	72	↑*e*	P	Pb	03 37 27.8	+0.4
PCDR	Punta Cana, DR	1.54	297			Pb	03 37 35.7	+0.6
PCDR					IAML		03 38 03.9	
	comp=N,2μm,0.7s							
PCDR	Punta Cana, DR	1.54	297	↓*i*	P	Pb	03 37 35.7	+0.6
PCDR					IAML		03 38 03.8	
	comp=N,845nm,0.5s							
PCDR	Punta Cana, DR	1.54	297	*i*	P	Pb	03 37 35.8	+0.7
PCDR					IAML		03 38 00.9	
	comp=Z,351nm,0.4s							
PCDR	Punta Cana, DR	1.54	297	↓*e*	P	Pb	03 37 35.7	+0.6
HIDR	Higuey Centro	1.86	295	↑*i*	P	Pb	03 37 40.4	-0.2
HIDR					IAML		03 38 13.4	
	comp=N,832nm,0.2s							
HIDR	Higuey Centro	1.86	295	↑*e*	P	Pb	03 37 40.4	-0.2
DR12	Loma Pena Alta	2.52	293			Pb	03 37 50.8	-1.0
HATOM	Hato Mayor del	2.52	293	↑*i*	P	Pb	03 37 50.7	-1.1
HATOM					IAML		03 38 30.8	
	comp=N,320nm,0.6s							
SMDR	Samana, DR	2.59	305			Pb	03 37 53.5	+0.5
SMDR	Samana, DR	2.59	305	↑*e*	P	Pb	03 37 53.5	+0.5
SDD	Santo Domingo	2.90	283		Pn	Pn	03 37 55.0	+2.6
SDD					IAML		03 38 58.7	
	comp=N,368nm,1.0s							
SDD	Santo Domingo	2.90	283	*i*	P	Pb	03 37 57.1	-1.2
BANI	BANI	3.30	281			Pn	03 38 00.6	+2.6
SABA	Saba	3.53	92			Pn	03 38 02.5	+1.5
SABA	Saba	3.53	92	*e*P		Pn	03 38 03.7	+2.7
SABA					eS	Sb	03 38 47.7	-3.9
SMRT	St. Maarten	3.69	86			Pn	03 38 05.2	+2.0
SMRT	St. Maarten	3.69	86	*e*P		Pn	03 38 04.8	+1.6
SMRT					eS	Sn	03 38 48.0	+1.7
SEUS	St. Eustatius	3.79	94	*e*P		Pn	03 38 08.0	+3.5
SC01	Santiago de lo	3.94	295			Pn	03 38 10.0	+3.4
SC01	Santiago de lo	3.94	295	↑*e*	P	Pb	03 38 14.4	-1.5
SKI	Saint Kitts	4.03	96	*e*P		Pn	03 38 11.0	+3.0
LOVI	El Cajuil, Ovi	4.22	271	*i*	P	Pn	03 38 12.2	+1.7
LOVI					eS	Sn	03 39 00.3	+0.9
LOVI					IAML		03 39 06.3	
	comp=Z,100nm,1.0s							
SDDR	Presa de Saban	4.29	286			Pn	03 38 14.9	+3.3
SDDR	Presa de Saban	4.29	286	*e*P		Pb	03 38 18.4	-3.6
SDDR					eS	Sn	03 39 06.6	+5.3
SDDR					IAML		03 39 26.6	
	comp=Z,125nm,0.6s							
SDDR					IAML		03 39 38.6	
	comp=Z,145nm,1.1s							
SDDR	Presa de Saban	4.29	286	↑*e*	P	Pb	03 38 18.9	-3.2
LODU1	El Espartillar	4.35	278	*i*	P	Pn	03 38 15.7	+3.4
LODU1					IAML		03 39 14.5	
	comp=Z,92nm,0.3s							
LONE3	El Aguacate, B	4.37	281	*i*	P	Pn	03 38 16.8	+4.1
LONE3					IAML		03 39 09.7	
	comp=Z,33nm,0.5s							
LOBH	Bahia de las A	4.48	271	*i*	P	Pn	03 38 16.2	+2.1
LOBH					IAML		03 39 10.8	
	comp=Z,96nm,0.4s							
LOPP1	Punta Rusia, P	4.52	297	*i*	P	Pn	03 38 19.7	+5.0
LOPP1					IAML		03 39 29.8	
	comp=Z,149nm,0.5s							
MBWH	Windy Hill	4.66	102	*e*	P	Pn	03 38 18.5	+1.9
MBWH					eS	Sn	03 39 10.2	-0.1
ANWB	Willy Bob	4.91	91	*e*	P	Pn	03 38 21.1	+1.1
ANWB					eS	Sn	03 39 20.1	+3.6
DHSZ	Broadband at M	5.18	106	*e*	P	Pn	03 38 25.9	+2.2
DHSZ					eS	Sn	03 39 23.0	0.0
GRTK	Grand Turk	5.40	314			Pn	03 38 28.6	+1.8
GRTK	Grand Turk	5.40	314	*i*	P	Pn	03 38 29.5	+2.8
GRTK					IAML		03 39 36.0	
	comp=Z,60nm,1.4s							
GRTK	Grand Turk	5.40	314	*e*	P	Pn	03 38 28.4	+1.6
GRTK					eS	Sn	03 39 29.3	+0.7
TBG	Guadaloupe-3	5.43	110	*e*	P	Pn	03 38 29.2	+2.0
TBG					eS	Sn	03 39 29.0	-0.3
MAGL	Barre de l'ile	5.72	108	*e*	S	Sn	03 39 37.3	+0.8
DSLB	Salisbury	5.79	113	*e*	P	Pn	03 38 34.2	+2.1
DSLB					eS	Sn	03 39 36.5	-1.7
BIM	Bigot	6.52	119	*e*	P	Pn	03 38 43.8	+1.6
BIM					eS	Sn	03 39 51.7	-4.5
SLBI	Saint Lucia, B	6.86	122	*e*	P	Pn	03 38 48.1	+1.3
SLBI					eS	Sn	03 39 59.0	-5.5
MASC	Masc	7.29	290	*e*	P	Pn	03 38 55.5	+2.7
MASC					eS	Sn	03 40 12.9	-2.1
QMBU	Quimbuelo	7.82	289	*e*	P	Pn	03 39 01.5	+1.5
QMBU				*i*	P	Pn	03 39 01.9	+1.9
QMBU				*e*	P	Sn	03 40 26.5	-1.7
GTBY	Guantanamo Bay	8.02	287	*e*	P	Pn	03 39 04.2	+1.5
GTBY				*e*	S	Sn	03 40 33.7	+0.7
RCC	Rio Carpintero	8.57	286	*e*	P	Pn	03 39 12.1	+1.8
RCC				*e*	S	Sn	03 40 47.3	+0.7
TRN	Trinidad (W)	8.91	142	*e*	P	Pn	03 39 25.8	+11
TRN				*e*	S	Sn	03 40 52.0	-3.0
YAR	Yar	9.27	287	*e*	P	Pn	03 39 22.1	+2.2
YAR				*e*	S	Sn	03 40 59.5	-4.2
SDV	Santo Domingo	9.57	203			Pn	03 39 28.0	+3.8

*ISK **02** 03:45:24.2, 35°.62N×30°.79E, h8km, ML2.6/21*
*AFAD **02** 03:45:25.0, 35°.68N×30°.76E, h30km±2km, ML2.7*
*NIC **02** 03:45:29.7, 35°.87N×30°.94E, h26km±3km, Ml2.7/9*

ISC 02 03:45:25.2±1.1, 35°.65N±0°.03×30°.80E±0°.03, h10km±11km, n65, σ1§03/76, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKUM	Antalya-Kumluc	0.76	331	P		Pg	03 45 39.6	-0.3
AKUM				S		Sg	03 45 50.6	+0.7
AKUM					IAML		03 45 56.0	
	comp=N,240nm,0.4s							
AKUM					IAML		03 45 57.0	
	comp=E,280nm,0.6s							
DEMR	Demre-Antalya	0.93	309	Pg		Pg	03 45 42.9	-0.2
KEMT	Kemer-ANTALYA	0.97	348	Pg		Pg	03 45 43.3	-0.5
KEMT				Sg		Sn	03 45 58.2	-0.3
AKAS	Kas	1.13	301	Pn		Pb	03 45 46.5	-0.3
AKAS	Kas	1.13	301	P		Pn	03 45 48.7	+1.6
AKAS				S		Sn	03 46 04.3	+1.6
MNVG	Manavgat-Antal	1.24	24	Pn		Pg	03 45 48.9	-0.2
ANTB	Antalya	1.25	355	Pn		Pb	03 45 48.9	+0.1
ELL	Elmali	1.31	327	Pn		Pn	03 45 49.6	0.0
ELL	Elmali	1.31	327	P		Pb	03 45 50.2	+0.4
ELL				S		Sb	03 46 07.2	+0.5
ELL					AML	AML	03 46 14.1	
	0.6nm,1.0s							
ELL					AML	AML	03 46 17.7	
	1.0nm,0.8s							
ALAN	Alanya-ANTALYA	1.35	48	Pn		Pn	03 45 49.8	-0.2
GAZI	Gazipasa	1.36	64	Pn		Pb	03 45 50.4	-0.3
GAZI	Gazipasa	1.36	64	P		Pb	03 45 50.4	-0.3
KORT	Korkueli	1.39	345	Pn		Pn	03 45 51.1	+0.4
KORT	Korkueli	1.39	345	P		Pb	03 45 51.4	0.0
KORT				S		Sg	03 46 11.3	+1.3
KEPZ	Antalya-Kepez	1.41	27	P		Pn	03 45 50.2	-0.6
AKMS	Akamas	1.41	116	P		Pg	03 45 53.3	+1.1
AKMS				S		Sg	03 46 12.6	+2.1
AKMS					AML	AML	03 46 20.9	
	0.4nm,0.9s							
AKMS					AML	AML	03 46 26.4	
	0.4nm,0.4s							
IZZE	Mula-Seydike	1.49	302	P		Pn	03 45 51.8	-0.3
KNIK	Mula-Seydike	1.55	321	P		Pn	03 45 52.8	-0.1
ALFC	Alefka	1.55	108	P		Pg	03 45 54.3	-0.7
ALFC				S		Sg	03 46 15.0	-0.2
ALFC					AML	AML	03 46 24.2	
	0.3nm,0.3s							
ALFC					AML	AML	03 46 28.3	
	0.4nm,0.5s							
BUCA	Burdur, Bucak-	1.68	354	P		Pn	03 45 55.0	+0.3
NATA	Nata	1.69	121	P		Pg	03 45 58.7	+1.0
NATA					AML	AML	03 46 34.4	
	0.8nm,0.6s							
NATA					AML	AML	03 46 37.0	
	0.8nm,0.5s							
CAME	Cameli-Denizli	1.76	317	Pn		Pn	03 45 55.3	-0.6
TROD	Troodos	1.83	112	P		Pg	03 45 59.4	-0.9
TROD				S		Sg	03 46 23.3	-0.9
TROD					AML	AML	03 46 37.7	
	0.2nm,0.6s							
TROD					AML	AML	03 46 39.9	
	0.1nm,1.0s							
GOLH	Golhisar	1.87	328	P		Pn	03 45 58.2	+0.9
SABU	Mula-Dalaman	1.88	309	P		Pn	03 45 56.7	-0.7
CAEL	Denizli, Camel	1.89	321	P		Pg	03 46 01.2	-0.2
SEYD	Seydisehir-KON	1.94	25	Pn		Pn	03 45 58.8	+0.5
XYLS	Xyliatos	1.95	108	P		Pb	03 46 00.7	-0.1
XYLS				S		Sb	03 46 24.8	-0.3
XYLS					AML	AML	03 46 41.2	
	0.1nm,0.3s							
XYLS					AML	AML	03 46 42.2	
	0.2nm,0.7s							
SEDI	Konya, Seydise	1.95	23	P		Pn	03 45 59.1	+0.7
ERMK	Ermenek	1.98	59	P		Pb	03 46 00

LMNES	**Limones**	0.30	239	⇑	*i*P	**Pb**	03 51 23.4	-0.9
LMNES	**Limones**	0.30	239	⇑	*i*P	**Pb**	03 51 23.4	-0.9
LMNES					*e*S	**Sb**	03 51 30.1	+0.8
LIMO3	**Limones**	0.30	239	⇑	*i*P	**Pb**	03 51 23.5	-0.9
LIMO3					*e*S	**Sb**	03 51 30.0	+0.7
LPPC	**Paso Canoas**	0.36	319	⇑	*i*P	**Pb**	03 51 24.6	-0.7
LPPC					*e*S	**Sb**	03 51 30.7	-0.1
BGUAL	**Bijagual, Pana**	0.36	46		*e*P	**Pb**	03 51 25.2	-0.1
BGUAL	**Bijagual, Pana**	0.36	46	⇓	*i*P	**Pb**	03 51 25.2	-0.1
CDITO	**Canoas**	0.41	319		P	**Pb**	03 51 25.3	-0.8
CDITO					S	**Sb**	03 51 31.7	-0.4
JEFFS	**S de V. Baru**	0.41	9		*e*P	**Pb**	03 51 26.1	0.0
JEFFS	**S de V. Baru**	0.41	9	⇓	*i*P	**Pb**	03 51 26.1	0.0
JEFFS					*e*S	**Sb**	03 51 32.6	+0.3
PTAR3	**Potrerillos Ar**	0.45	13		*i*P	**Pb**	03 51 26.4	-0.3
PTAR3					*e*S	**Sb**	03 51 33.0	-0.1
CLLRA	**Cordillera,**	0.48	358		*e*P	**Pb**	03 51 26.9	-0.4
CLLRA	**Cordillera,**	0.48	358	⇓	*i*P	**Pb**	03 51 27.0	-0.4
CLLRA					*e*S	**Sb**	03 51 34.8	+0.6
BQSF3	**Alto Boquete,**	0.51	19	⇓	*i*P	**Pb**	03 51 27.1	-0.6
BQSF3					*e*S	**Sb**	03 51 34.6	-0.2
BQTLY	**Boquete Panama**	0.52	15	⇓	*e*P	**Pb**	03 51 27.2	-0.6
BQTLY	**Boquete Panama**	0.52	15	⇓	*i*P	**Pb**	03 51 27.3	-0.6
BQTLY					*e*S	**Sn**	03 51 35.9	-0.9
NELY	**Ciudad Neily**	0.52	319		*e*P	**Pb**	03 51 26.8	-1.0
NELY					*e*S	**Sb**	03 51 34.7	-0.3
BRU2	**Volcan**	0.54	350		P	**Pb**	03 51 27.6	-0.7
BRU2					S	**Sb**	03 51 36.1	+0.3
BRU2	**Volcan**	0.54	350		*e*P	**Pb**	03 51 27.6	-0.7
BRU2	**Volcan**	0.54	350	⇓	*i*P	**Pb**	03 51 27.7	-0.6
BRU2					*e*S	**Sb**	03 51 36.2	+0.4
LNBQ3	**Los Naranjos,**	0.55	16	⇓	*i*P	**Pb**	03 51 27.6	-0.8
LNBQ3					*e*S	**Sb**	03 51 36.3	-0.4
SCLRA	**Santa Clara, W**	0.60	342		*e*P	**Pb**	03 51 28.5	-0.7
SCLRA	**Santa Clara, W**	0.60	342		*i*P	**Pb**	03 51 28.8	-0.5
SCLRA					*e*S	**Sb**	03 51 36.6	-0.8
FITO	**Golfito**	0.66	304	⇑	*i*P	**Pb**	03 51 28.0	-2.1
FITO					*e*S	**Sb**	03 51 36.8	-2.1
VITO	**San Vito**	0.67	327	⇑	*i*P	**Pb**	03 51 29.9	-0.4
ALCO	**Alturas Coton,**	0.73	341	⇓	*i*P	**Pb**	03 51 30.1	-1.2
PIRO	**Carate, Puerto**	0.74	281		P	**Pb**	03 51 30.1	-1.4
PIRO					S	**Sb**	03 51 40.6	-0.7
PIRO	**Carate, Puerto**	0.74	281	⇑	*e*P	**Pb**	03 51 29.9	-1.6
PIRO	**Carate, Puerto**	0.74	281	⇑	*i*P	**Pb**	03 51 30.1	-1.4
PIRO					*e*S	**Sn**	03 51 42.4	+0.2
PBNVO	**Pueblo Nuevo,**	0.75	33	⇓	*i*P	**Pb**	03 51 30.2	-1.4
PBNVO	**Pueblo Nuevo,**	0.75	33	⇓	*i*P	**Pb**	03 51 30.1	-1.4
PBNVO					*e*S	**Sb**	03 51 41.0	-0.5
RBALA	**Bur**	0.76	36	⇓	*i*P	**Pb**	03 51 30.8	-1.0
RBALA	**Bur**	0.76	36	⇓	*i*P	**Pb**	03 51 30.7	-1.0
RBALA					*e*S	**Sb**	03 51 41.0	-0.8
NANC3	**Nancito, Chiri**	0.86	91		*e*P	**Pb**	03 51 32.1	-1.4
NANC3					*e*S	**Sn**	03 51 45.2	+0.1
PDCAN	**Manzana , Fuen**	0.89	88		*e*P	**Pb**	03 51 32.4	-1.6
PDCAN	**Manzana , Fuen**	0.89	88	⇑	*i*P	**Pb**	03 51 32.7	-1.4
EDP2	**Potrero Grande**	0.94	323		*e*P	**Pb**	03 51 33.8	-1.1
KKNTU	**Kakint²**	0.97	54	⇓	*i*P	**Pn**	03 51 33.8	-1.2
KKNTU	**Kakint²**	0.97	54	⇓	*i*P	**Pn**	03 51 33.7	-1.2
KKNTU					*e*S	**Sb**	03 51 46.6	-1.3
PVID3	**Puerto Vidal,**	1.00	102		*e*P	**Pn**	03 51 35.1	-0.3
FIMO	**Fila Mora**	1.04	314	⇑	*e*P	**Pn**	03 51 35.1	-1.0
PANP	**Palmar Norte**	1.10	309		*e*P	**Pn**	03 51 35.4	-1.3
CNI2	**El Empalme, Bo**	1.17	6	⇓	*i*P	**Pn**	03 51 37.4	-0.3
CNI2					*e*S	**Sn**	03 51 52.6	-0.1
BURE	**Buenos Aires**	1.17	321		*e*P	**Pn**	03 51 38.0	+0.3
EDPE	**Pejibaye, P**	1.31	313	⇓	*e*P	**Pn**	03 51 39.1	-0.6
RGM0	**Gandoca**	1.32	360		P	**Pn**	03 51 39.9	+0.1
RGM0					S	**Sb**	03 51 57.8	-0.1
RGM0	**Gandoca**	1.32	360		*e*P	**Pb**	03 51 40.9	-0.4
OCHAL	**Ojochal**	1.33	309		P	**Pn**	03 51 38.9	-1.0
OCHAL					S	**Sn**	03 51 56.5	-0.2
GMAL	**Guarumal, Vera**	1.44	110		*e*P	**Pn**	03 51 39.8	-1.6
GMAL	**Guarumal, Vera**	1.44	110		*e*P	**Pn**	03 51 41.7	+0.3
GMAL					*e*S	**Sn**	03 52 00.3	+0.8
RSUS3	**Rio de Jesus,**	1.45	101		*e*P	**Pn**	03 51 42.4	+0.9
RSUS3					*e*S	**Sn**	03 52 00.1	+0.4
STIA3	**Santiago, Vera**	1.62	95		*e*P	**Pn**	03 51 44.1	+0.2
STIA3					*e*S	**Sn**	03 52 04.3	+0.4
CALO3	**Calobre, Verag**	1.74	88	⇑	*i*P	**Pn**	03 51 45.7	+0.1
CALO3					*e*S	**Sn**	03 52 07.8	+0.9
PIEC	**Cerro El Cedra**	1.91	315		*e*P	**Pn**	03 51 48.0	-0.1
QUEP	**Quepos**	1.94	307		P	**Pn**	03 51 48.9	+0.7
QUEP					S	**Sn**	03 52 12.0	+0.3
CACAO	**El Cacao, Vera**	1.95	118		*e*P	**Pn**	03 51 49.1	+0.7
CACAO					*e*S	**Sn**	03 52 13.4	+1.5
CACAO					*e*S	**Sb**	03 52 14.1	+1.7
RAZU	**San Marcos de**	1.98	315		*e*P	**Pn**	03 51 50.5	+1.4
PITB	**Pirrs, San**	1.98	315		*e*P	**Pn**	03 51 51.2	-1.5
VINA	**Juan Vinas**	1.98	325		*e*P	**Pn**	03 51 49.8	+0.7
VERB	**Verbena**	2.00	327		*e*P	**Pn**	03 51 50.2	+1.0
REPA	**Paraso**	2.00	321		*e*P	**Pn**	03 51 50.2	+0.9
CHIT3	**Chitre**	2.18	98		*e*P	**Pn**	03 51 52.3	+0.7
CHIT3					*e*S	**Sn**	03 52 19.6	+1.8
TOSI3	**Tonosi**	2.30	111		*e*P	**Pn**	03 51 54.4	+1.2
TOSI3					*e*S	**Sn**	03 52 22.2	+1.5
AZU	**Azuero**	2.35	101	⇑	*i*P	**Pn**	03 51 55.4	+1.5
AZU					*e*S	**Sn**	03 52 22.8	+0.9
TCS1	**Tacares**	2.44	317		P	**Pn**	03 51 57.8	+2.5
TRB2	**Turrubares**	2.46	312		P	**Pn**	03 51 56.9	+1.4
TRB2					S	**Sn**	03 52 26.1	+1.5
ACHO3	**Achotines, Los**	2.54	109		*e*P	**Pn**	03 51 58.1	+1.4
TRT2	**Tortugero**	2.54	334		P	**Pn**	03 51 57.5	+0.9
TRT2					S	**Sn**	03 52 28.1	+1.4
ZANG	**Zanguenga, Cho**	2.79	75		*e*P	**Pn**	03 51 59.9	-0.1
CHOR3	**La Chorrera**	2.87	77		*e*P	**Pn**	03 52 02.4	+1.2
BCIP	**Isla Barro Col**	2.88	71		P	**Pn**	03 52 03.1	+1.9
BCIP					S	**Sn**	03 52 38.0	+3.0
BCIP	**Isla Barro Col**	2.88	71		*e*P	**Pn**	03 52 01.6	+0.4
BCIP					*e*S	**Sn**	03 52 35.8	+0.8
FRIJ	**El Hiral**	3.00	71		*e*P	**Pn**	03 52 04.0	+1.1
JTS	**Las Juntas de**	3.08	311		P	**Pn**	03 52 05.7	+1.7
JTS					S	**Sn**	03 52 40.7	+0.7
JTS	**Las Juntas de**	3.08	311		*e*P	**Pn**	03 52 05.3	+1.3
CMARA	**Lajas Hojancha**	3.29	302		P	**Pn**	03 52 07.5	+0.5
CMARA					S	**Sn**	03 52 46.2	+0.9
UPAL	**Upala**	3.54	318		S	**Sn**	03 52 51.7	+0.4
BLUN	**Bluefields**	3.90	343		P	**Pn**	03 52 15.5	+0.3
CONN	**Concepcion**	4.44	318		P	**Pn**	03 52 23.7	+1.0
ACON	**Acoyapa**	4.47	326		P	**Pn**	03 52 25.4	+2.2
ACON					S	**Sn**	03 53 19.7	+0.7
BOAB	**BOACO BROADBAN**	5.14	324		P	**Pn**	03 52 33.7	+1.3
BOAB					S	**Sn**	03 53 31.4	+0.5

IDC ***02*** *03:57:57.3±1.5,27.˚12N×104.˚73E,h0km,mb3.6/7, mbtmp3.7/7,MS4.2/3,Error ellipse: s-maj=42.4km s-min=24.0km az=52.0*
NEIC ***02*** *03:57:59.6±0.5,27.˚22N±0.˚10×104.˚9E±0.˚2,h10km±2km, mb4.2/6,Error ellipse: s-maj=24.4km s-min=15.0km az=292.0*

ISC 02 03:58:02.4±0.8,27.˚17N±0.˚09×104.˚7E±0.˚1,h35km,n20, σ1§26/18,mb3.7/9,MS4.2/3,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**5.23**	**53**		**Pn**	**03 59 15.8**	**-2.3**
ENH				Sn	**Sn**	**04 00 20.4**	**+3.3**
SLVN	**Son La**	**5.85**	**187**		**Pn**	**03 59 27.2**	**+0.5**
SONM	**Songino Array**	**20.68**	**3**	P	**P**	**04 02 39.5**	**+0.2**
	1.2nm,0.8s,baz=179,slow=11,SNR=6.0 1.2nm,0.8s						
SONM	**Songino Array**	**20.68**	**3**	P	**P**	**04 02 38.0**	**-1.3**
SONM				IAmb	IAmb	04 02 44.7	
	comp=Z,3.9nm,1.4s						
KSRS	**Korea Array**	**22.10**	**57**	P	**P**	**04 02 54.0**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=242,slow=11,SNR=2.4 comp=Z,0.6nm,0.4s						
PDGK	**Podgornoye**	**26.00**	**315**	P	**P**	**04 03 32.6**	**+0.5**
MKAR	**Makanchi Array**	**26.37**	**324**	P	**P**	**04 03 37.0**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=132,slow=12,SNR=6.2 comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**26.37**	**324**	P	**P**	**04 03 36.2**	**+0.9**
ZALV	**Zalesovo Beam**	**30.51**	**337**	P	**P**	**04 04 12.6**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=137,slow=7.3,SNR=8.8 comp=Z,2.7nm,0.7s						
KURBB	**Kurchatov Arra**	**30.75**	**327**	P	**P**	**04 04 13.4**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=130,slow=10,SNR=9.2 comp=Z,0.8nm,0.7s						
KURK	**Kurchatov**	**30.76**	**327**	P	**P**	**04 04 14.7**	**+0.4**
KURK				IAmb	IAmb	04 04 17.4	
	comp=Z,1.2nm,0.8s						
WB0	**Warramunga Arr**	**54.82**	**145**	P	**P**	**04 07 28.8**	**-0.4**
WB0				IAmb	IAmb	04 07 32.9	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**54.94**	**145**	P	**P**	**04 07 29.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=332,slow=8.1,SNR=4.8 comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**54.94**	**145**	P	**P**	**04 07 29.7**	**-0.3**
WR8	**Warramunga Arr**	**55.03**	**145**	P	**P**	**04 07 31.1**	**+0.4**
WR8				IAmb	IAmb	04 08 13.7	
	comp=Z,11nm,1.5s						
COEN	**Coen**	**55.37**	**133**		**P**	**04 07 33.3**	**0.0**
SHEM	**Shemya Is, Ala**	**56.56**	**43**	LR	LR	04 34 55.2	
	comp=Z,212nm,19.9s,baz=144,slow=39						
KMBO	**Kilima Mbogo**	**70.56**	**258**	LR	LR	04 41 39.5	
	comp=Z,190nm,19.2s,baz=170,slow=37						
ILAR	**Eielson Array**	**73.16**	**25**	P	**P**	**04 09 29.3**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=299,slow=6.1,SNR=2.4 comp=Z,0.2nm,0.4s						
KEST	**Kesra**	**78.67**	**304**	LR	LR	04 53 04.0	
	comp=Z,82nm,19.1s,baz=259,slow=42						

IDC ***02*** *04:23:16.8±5.5,36.˚34N×71.˚18E,h141km±49km,mb3.4/8, mbtmp3.9/14,MS3.4/5,Error ellipse: s-maj=38.8km s-min=19.4km az=32.0*
NEIC ***02*** *04:23:18.5±1.3,36.˚48N±0.˚05×71.˚06E±0.˚07,h156km±6km, mb4.2/14,Error ellipse: s-maj=8.9km s-min=6.5km az=116.0*
NNC ***02*** *04:23:21.9±2.9,36.˚77N×70.˚92E,h156km±46km,mb3.6, mpv4.4,Error ellipse: s-maj=26.7km s-min=18.1km az=31.0*

ISC 02 04:23:17.5±0.6,36.˚49N±0.˚05×71.˚11E±0.˚05,h150km,n75, σ1§80/80,mb4.0/11,2C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**1.15**	**23**		**Pn**	**04 23 46.0**	**+2.0**
MANEM				Sn	**Sn**	**04 24 05.0**	**+0.9**
KBL	**Kabul**	**2.57**	**222**		**Pn**	**04 24 01.2**	**+1.4**
KBL				Sn	**Sn**	**04 24 32.0**	**-0.3**
GAR	**Garm**	**2.59**	**346**		**Pn**	**04 24 01.0**	**+1.2**
GAR				Sn	**Sn**	**04 24 32.1**	**-0.5**
SHAA	**Shahritus**	**2.62**	**295**		**Pn**	**04 24 00.7**	**+0.5**
SHAA				Sn	**Sn**	**04 24 32.8**	**-0.3**
CHGR	**Chuyangaron**	**2.66**	**325**		**Pn**	**04 24 01.4**	**+0.7**
DRK	**Karamyk**	**3.04**	**10**		**Pn**	**04 24 06.5**	**+0.9**
NIL	**Nilore**	**3.33**	**148**	Pn	**Pn**	**04 24 11.5**	**+2.3**
BTK	**Batken**	**3.57**	**356**		**Pn**	**04 24 14.5**	**+2.2**
JMU	**Jammu**	**4.80**	**139**	*e*S	**Sn**	**04 25 25.6**	**+2.0**
JMU				IAML		04 25 27.1	
	comp=N,261nm,0.3s						
ARSB	**Arslanbob**	**5.05**	**16**		**Pn**	**04 24 32.4**	**+0.8**
TSSA	**Tissa**	**5.52**	**130**	*e*P	**Pn**	**04 24 40.2**	**+2.1**
TSSA				*e*S	**Sn**	**04 25 38.0**	**-3.0**
TSSA				IAML		04 25 41.9	
	comp=N,179nm,0.6s						
TSSA				IAML		04 25 42.9	
	comp=E,161nm,0.5s						
THN	**Thein Dam**	**5.57**	**135**	*e*S	**Sn**	**04 25 40.6**	**-1.2**
THN				IAML		04 25 42.8	
	comp=E,115nm,1.0s						
IUG	**Iuzhnay**	**5.71**	**352**	Pg	**Pn**	**04 24 42.0**	**+1.5**
	comp=E,62nm,0.4s						
IUG				Lg	Lg	04 25 43.8	
	comp=E,93nm,0.4s						
DHRM	**DHARAMSHALA**	**6.02**	**133**	*e*P	**Pn**	**04 24 46.1**	**+1.3**
DHRM				*e*S	**Sn**	**04 25 50.8**	**-2.1**
DHRM				IAML		04 25 55.1	
	comp=N,168nm,0.4s						
DHRM				IAML		04 25 55.4	
	comp=E,83nm,0.3s						
DHRM				IAML		04 26 10.6	
	comp=E,109nm,0.5s						
NRN	**Naryn**	**6.24**	**36**		**Pn**	**04 24 48.1**	**+0.5**
UCH	**Uchtor**	**6.31**	**24**	P	**Pn**	**04 24 50.1**	**+1.4**
	SNR=31						
EKS2	**Erkin-Say**	**6.50**	**18**	P	**Pn**	**04 24 52.9**	**+1.9**
	SNR=18						
BRLS	**Borolday**	**6.61**	**352**	P	**Pn**	**04 24 50.2**	**-2.1**
	comp=E,14nm,0.3s						
KK31	**Karatay Array**	**6.62**	**356**		**Pn**	**04 24 53.7**	**+1.2**
KK31	**Karatay Array**	**6.62**	**356**	⇑P	**Pn**	**04 24 53.4**	**+0.9**
	comp=E,30nm,0.5s,baz=184,slow=13,SNR=268						
KK31				⇓S	**Sn**	**04 26 05.2**	**-1.7**
	comp=E,8.3nm,0.3s,baz=181,slow=20,SNR=14						
KKAR	**Karatay Array**	**6.62**	**356**		**Pn**	**04 24 53.8**	**+1.3**
AAK	**Ala-Archa**	**6.68**	**22**	P	**Pn**	**04 24 54.5**	**+1.2**
	comp=E,12nm,0.3s,baz=192,slow=5.5,SNR=27						
AAK				S	**Sn**	**04 26 07.9**	**-0.5**
	comp=E,13nm,0.6s,baz=338,slow=22,SNR=11						
AAK	**Ala-Archa**	**6.68**	**22**	P	**Pn**	**04 24 55.1**	**+1.8**
	SNR=20						
AAK	**Ala-Archa**	**6.68**	**22**		**Pn**	**04 24 54.9**	**+1.5**
AAK	**Ala-Archa**	**6.68**	**22**	⇓P	**Pn**	**04 24 54.1**	**+0.8**
	comp=E,3.1nm,0.4s						
AAK				⇓S	**Sn**	**04 26 08.8**	**+0.4**
	comp=E,23nm,1.0s						
BOOM	**Boomskoye usch**	**7.06**	**30**		**Pn**	**04 25 00.2**	**+1.7**
USP	**Ospenovka**	**7.26**	**20**	P	**Pn**	**04 25 02.7**	**+1.7**
	SNR=5.4						
TKM2	**Tokmak 2**	**7.30**	**27**	P	**Pn**	**04 25 05.0**	**+3.4**
	SNR=44						
KDJ	**Kajisay**	**7.34**	**38**	Pn	**Pn**	**04 25 03.1**	**+0.9**
HNLY	**HANLEY**	**7.46**	**117**	*ex*	**Sn**	**04 26 27.6**	**-0.3**
SGDS	**Sogindy**	**7.46**	**20**	P	**Pn**	**04 25 04.9**	**+1.1**
	comp=E,7.7nm,0.2s						
KST	**Kastek**	**7.54**	**28**	Lg	Lg	04 26 28.1	
	comp=E,14nm,0.9s						
KLP	**Kalpa**	**7.71**	**128**	*e*S	**Sn**	**04 26 28.6**	**-5.2**
BTLS	**Baital**	**8.83**	**14**	P	**Pn**	**04 25 22.2**	**+0.3**
	comp=E,2.2nm,0.2s						
ARXS	**Arharly**	**9.26**	**32**	P	**Pn**	**04 25 29.3**	**+1.6**
	comp=E,8.8nm,0.5s						
PDGK	**Podgornoye**	**9.38**	**41**		**Pn**	**04 25 31.0**	**+1.6**
MAKZ	**Makanchi**	**13.12**	**35**	Pn	**Pn**	**04 26 19.1**	**+1.0**
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**04 26 22.1**	**+2.3**
	comp=E,0.4nm,0.4s,baz=213,slow=11,SNR=11						
MKAR	**Makanchi Array**	**13.25**	**36**	Pn	**Pn**	**04 26 21.1**	**+1.3**
KURBB	**Kurchatov Arra**	**15.11**	**18**	P	**P**	**04 26 44.8**	**+0.1**
	comp=E,1.6nm,0.8s,baz=206,slow=11,SNR=8.6						
AB31	**Akbulak array**	**15.14**	**331**		**Pn**	**04 26 44.0**	**+0.5**
AB31	**Akbulak array**	**15.14**	**331**	⇓P	**Pn**	**04 26 43.9**	**+0.4**
	comp=E,1.5nm,0.3s,baz=143,slow=12,SNR=62						
AB31				⇑S	**Sn**	**04 29 24.9**	**-6.7**
	comp=E,2.6nm,0.6s,baz=149,slow=23,SNR=8.3						
ABKAR	**Akbulak array**	**15.14**	**331**	Pn	**Pn**	**04 26 43.1**	**-0.4**
KURK	**Kurchatov**	**15.22**	**18**		**P**	**04 26 46.1**	**+0.3**
EVN	**Everest**	**15.77**	**118**	Pn	**Pn**	**04 26 49.9**	**-2.2**
EVN				IAmb	IAmb	04 26 52.6	
	comp=Z,8.9nm,1.5s						
BVAR	**Borovoye Array**	**16.55**	**358**	P	**Pn**	**04 27 02.5**	**+1.9**
	comp=Z,2.8nm,0.6s,baz=162,slow=10,SNR=9.7						
AKTO	**Aktyubinsk**	**16.84**	**330**	P	**P**	**04 27 05.6**	**+1.8**
	comp=Z,8.4nm,0.8s,baz=133,slow=9.2,SNR=18						
AKTO				S	**S**	**04 30 06.2**	**-5.0**
	comp=Z,0.9nm,0.4s,baz=3.7,slow=24,SNR=6.1						
AKTO	**Aktyubinsk**	**16.84**	**330**	⇓P	**P**	**04 27 06.2**	**+2.3**
	comp=Z,4.3nm,0.7s						
ZAA0	**Zalesovo Array**	**19.89**	**24**		**P**	**04 27 38.8**	**+1.8**
ZAA0				IAmb	IAmb	04 27 39.9	
	comp=Z,6.6nm,0.6s						
ZALV	**Zalesovo Beam**	**19.89**	**24**	P	**P**	**04 27 39.3**	**+2.3**
	comp=Z,4.8nm,0.3s,baz=222,slow=11,SNR=23						
ZALV				LR	LR	04 35 27.3	
	comp=Z,31nm,20.1s,baz=102,slow=36						
ZALV	**Zalesovo Beam**	**19.89**	**24**		**P**	**04 27 37.2**	**+0.2**
ARTI	**Arti**	**21.68**	**341**	P	**P**	**04 27 58.1**	**+2.0**
	comp=Z,1.8nm,0.4s,baz=194,slow=4.6,SNR=3.9 comp=Z,1.8nm,0.4s						
ARTI	**Arti**	**21.68**	**341**	P	**P**	**04 27 56.4**	**+0.2**
ARTI				IAmb	IAmb	04 27 59.0	
	comp=Z,6.0nm,0.4s						
HHC	**Hu-ho-hao-te**	**31.68**	**70**	*e*P	P	04 29 22.9	-4.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,85nm,3.9s						
BJT	**Baijiatuau**	**35.27**	**70**	P	**P**	**04 29 58.2**	**+0.3**
BJT				IAmb	IAmb	04 30 07.5	
	comp=Z,3.9nm,0.5s						
ATD	**Arta Tunnel**	**35.58**	**233**	LR	LR	04 48 27.4	
	comp=Z,8.8nm,20.1s,baz=208,slow=42						
FINES	**FINESS Array B**	**37.54**	**326**	P	**P**	**04 30 18.6**	**+1.9**
	comp=Z,3.9nm,1.1s,baz=104,slow=8.0,SNR=4.5 comp=Z,3.9nm,1.1s						
FINES	**FINESS Array B**	**37.54**	**326**	P	**P**	**04 30 18.1**	**+1.4**
KEV	**Kevo**	**40.85**	**338**	P	**P**	**04 30 42.9**	**-1.1**
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**04 30 47.1**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=117,slow=8.6,SNR=4.1 comp=Z,2.8nm,0.9s						
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**04 30 47.2**	**+0.2**
HFS	**Hagfors**	**43.13**	**322**	P	**P**	**04 31 03.2**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=93,slow=11,SNR=7.8 comp=Z,1.4nm,0.6s						
NC405	**NORSAR Array S**	**44.21**	**323**	P	**P**	**04 31 11.3**	**0.0**
NC405				IAmb	IAmb	04 31 36.2	
	comp=Z,8.9nm,1.3s						
NB2	**NORSAR Subarra**	**44.44**	**323**	P	**P**	**04 31 14.8**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.44**	**323**	P	**P**	**04 31 15.1**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=96,slow=7.8,SNR=6.5 comp=Z,0.9nm,0.5s						
VAE	**Valguarnera**	**44.70**	**289**	LR	LR	04 54 05.3	
	comp=Z,106nm,18.6s,baz=153,slow=41						
DAVOX	**Davos/Dischmat**	**45.84**	**303**	LR	LR	04 57 18.6	
	comp=Z,74nm,18.2s,baz=253,slow=44						
STU	**Stuttgart**	**45.98**	**306**	P	**P**	**04 31 25.2**	**-0.2**
SPITS	**Spitsbergen Ar**	**47.53**	**347**	LR	LR	04 55 03.3	
	comp=Z,165nm,21.0s,baz=298,slow=40						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**04 33 47.5**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=54,slow=5.8,SNR=5.9 comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**04 33 45.6**	**-1.3**
TORD				IAmb	IAmb	04 33 48.9	
	comp=Z,2.1nm,0.8s						
WRA	**Warramunga Arr**	**81.91**	**122**	P	**P**	**04 35 20.2**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=324,slow=4.9,SNR=5.7 comp=Z,0.4nm,1.0s						
WRA	**Warramunga Arr**	**81.91**	**122**	P	**P**	**04 35 19.8**	**-0.7**
ASAR	**Alice Springs**	**84.17**	**125**	P	**P**	**04 35 31.0**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=312,slow=4.7,SNR=2.3 comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**84.17**	**125**	P	**P**	**04 35 32.1**	**+0.1**

GCG ***02*** *04:40:30.7±1.3,13.˚18N×91.˚86W,h0km±11km,MD4.4, MW3.3,Presumed earthquake*
SNET ***02*** *04:40:39.9±2.6,13.˚34N×91.˚47W,h20km,ML3.7, Presumed earthquake*
CATAC ***02*** *04:40:39.3±0.3,13.˚N±2.˚×9.˚2W±.˚,h33km,M4.1/31, mb4.6/1,MLv3.8/31,Error ellipse: s-maj=4.8km s-min=2.3km az=30.7,confirmed*

ISC 02 04:40:38.6±2.2,13.˚39N±0.˚08×91.˚61W±0.˚08,h28km,n59, σ0§80/93,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**1.04**	**14**	*i* P	**Pn**	**04 40 59.4**	**+1.9**
STG8	**El Palmar, Qui**	**1.08**	**13**	*i* P	**Pn**	**04 41 00.3**	**+2.1**
RTAL	**Retalhuleu**	**1.13**	**356**	P	**Pn**	**04 40 58.2**	**-0.5**
RTAL				S	**Sn**	**

	9.9nm,0.3s,baz=322,slow=30,SNR=28							
KURBB	**Kurchatov Arra**	**5.17**	**221**	Pg	Pb	05 10 50.5	-0.4	
	0.2nm,0.3s,baz=42,slow=16,SNR=5.6							
KURBB				Lg	Lg	05 12 05.1		
	baz=42,slow=32							
MKAR	**Makanchi Array**	**7.91**	**188**	Pn	Pn	05 11 15.2	-0.8	
	0.1nm,0.3s,baz=15,slow=16,SNR=3.3							
MKAR				Lg	Lg	05 13 32.2		
	0.1nm,0.3s,baz=13,slow=27,SNR=5.3							
	0.2nm,0.5s							

ASRS ***02*** *05:16:40.0±1.8,54°.61N×83°.73E,h0km,M2.8(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 02 05:16:42.3±2.5,54°.67N×83°.76E,h0km,mbtmp2.7/2, ML2.4/2,Error ellipse: s-maj=20.1km s-min=12.5km az=172.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**139**	I	I	05 23 25.0	
	baz=317,slow=316,SNR=12						
ZALV	**Zalesovo Beam**	**0.95**	**139**	Pg	Pg	05 16 59.6	-0.9
	4.3nm,0.3s,baz=324,slow=19,SNR=26						
ZALV				Lg	Lg	05 17 14.8	
	17nm,0.3s,baz=322,slow=29,SNR=38						
KURBB	**Kurchatov Arra**	**5.15**	**220**	Pn	Pn	05 18 01.4	+0.8
	0.1nm,0.3s,baz=41,slow=13,SNR=2.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.94**	**187**	Pn	Pn	05 18 38.6	-0.3
	0.1nm,0.3s,baz=10,slow=12,SNR=3.6						
MKAR				Lg	Lg	05 20 53.8	
	0.1nm,0.3s,baz=17,slow=26,SNR=6.0						
	0.2nm,0.3s						

IDC ***02*** *05:19:27.1±4.1,42°.78N×143°.12E,h0km,mb3.9/6, mbtmp3.9/6,Error ellipse: s-maj=118.1km s-min=33.1km az=4.0*

JMA ***02*** *05:19:44.8±0.2,42°.9N±0°.6×143°.2E±0°.8,h129km±1km, MV3.3/39,TOKACHI REGION*

ISC 02 05:19:44.2±0.8,42°.95N±0°.06×143°.19E±0°.04,h135km±6km, n29,σ0s93/37,mb3.6/6,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.36**	**159**	P	**Pn**	**05 20 02.9**	**-0.3**
JCH				S	**Sn**	**05 20 16.3**	**-1.1**
JOB	**Onbets**	**0.48**	**95**	*i* P	**Pn**	**05 20 04.2**	**+0.6**
JOB				S	**Sn**	**05 20 18.9**	**+0.6**
JFR	**Furan**	**0.49**	**296**	*i* P	**Pn**	**05 20 03.6**	**-0.1**
JFR				S	**Sn**	**05 20 17.9**	**-0.6**
JAR	**Ashorobuto**	**0.55**	**50**	*i* P	**Pn**	**05 20 04.0**	**-0.1**
JAR				S	**Sn**	**05 20 18.5**	**-0.6**
JBT2	**Biratori 2**	**0.63**	**255**	*i* P	**Pn**	**05 20 04.5**	**0.0**
JBT2				S	**Sn**	**05 20 19.6**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.74**	**206**	*i* P	**Pn**	**05 20 05.8**	**+0.5**
JAB	**Ashibetsu**	**0.90**	**309**	*i* P	**Pn**	**05 20 06.8**	**+0.2**
JAB				*i* S	**Sn**	**05 20 24.0**	**+0.4**
JEM	**Erimo**	**0.93**	**181**	*i* P	**Pn**	**05 20 07.5**	**+0.6**
JEM				*e*S	**Sn**	**05 20 25.5**	**+1.4**
JKK2	**Kamakawa 2**	**0.98**	**341**	*i* P	**Pn**	**05 20 07.5**	**+0.2**
JKK2				S	**Sn**	**05 20 25.2**	**+0.3**
JIAM	**Iburiatsuma**	**0.99**	**251**	*i* P	**Pn**	**05 20 08.6**	**+1.3**
JAK	**Akkeshi**	**1.11**	**87**	*i* P	**Pn**	**05 20 08.4**	**-0.1**
JAK				S	**Sn**	**05 20 26.3**	**-0.6**
JTKR	**Abashiri--Toko**	**1.15**	**27**	*i* P	**Pn**	**05 20 09.2**	**+0.3**
JTKR				S	**Sn**	**05 20 27.5**	**-0.2**
JEW	**Eniwo**	**1.28**	**266**	*i* P	**Pn**	**05 20 10.3**	**+0.1**
JEW				S	**Sn**	**05 20 29.7**	**-0.4**
JHR	**Hokuryu**	**1.33**	**307**	P	**Pn**	**05 20 11.0**	**+0.2**
JHR				S	**Sn**	**05 20 31.4**	**+0.4**
JRA	**Rausu**	**1.72**	**54**	P	**Pn**	**05 20 15.7**	**+0.7**
JRA				S	**Sn**	**05 20 42.5**	**+3.9**
NEM2	**Nemuro 2**	**1.91**	**77**	*i* P	**Pn**	**05 20 16.8**	**-0.5**
NEM2				S	**Sn**	**05 20 40.9**	**-1.8**
JSE	**Soyaes**	**2.06**	**348**	P	**Pn**	**05 20 19.1**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**30.56**	**132**	T	T	05 57 23.0	
	baz=327,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.57**	**132**	T	T	05 57 25.2	
	baz=327,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**30.57**	**132**	T	T	05 57 26.0	
	baz=327,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**31.45**	**133**	T	T	05 58 32.2	
	baz=328,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**31.45**	**134**	T	T	05 58 33.8	
	baz=328,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**31.47**	**133**	T	T	05 58 34.7	
	baz=328,slow=76,SNR=21						
KURBB	**Kurchatov Arra**	**43.65**	**303**	P	**P**	**05 27 34.6**	**-0.5**
	2.0nm,0.2s,baz=71,slow=8.2,SNR=2.3						
	2.0nm,0.2s						
ILAR	**Eielson Array**	**43.83**	**36**	P	**P**	**05 27 36.3**	**-0.1**
	0.8nm,1.0s,baz=266,slow=6.8,SNR=6.2						
	0.8nm,1.0s						
FINES	**FINESS Array B**	**64.24**	**332**	P	**P**	**05 30 03.6**	**-0.7**
	0.8nm,0.6s,baz=94,slow=5.6,SNR=6.4						
	0.8nm,0.6s						
HFS	**Hagfors**	**69.27**	**336**	P	**P**	**05 30 35.8**	**-0.4**
	0.8nm,0.5s,baz=61,slow=7.1,SNR=1.9						
	0.8nm,0.5s						
PDAR	**Pinedale Array**	**72.61**	**47**	P	**P**	**05 30 57.3**	**+0.3**
	0.2nm,0.5s,baz=308,slow=7.6,SNR=3.9						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**85.47**	**54**	P	**P**	**05 32 07.5**	**+0.5**
	0.3nm,0.5s,baz=285,slow=4.3,SNR=6.6						
	0.3nm,0.5s						

IDC ***02*** *05:27:47.4±2.1,32°.80N×69°.95E,h0km,mb3.7/4, mbtmp3.6/8,ML3.4/4,Error ellipse: s-maj=65.6km s-min=22.0km az=79.0*

NDI ***02*** *05:27:48.3±2.5,32°.73N×69°.42E,h33km±174km,ML3.9, MW3.9,Presumed earthquake*

ISC 02 05:27:50.8±1.2,32°.74N±0°.08×69°.76E±0°.09,h35km,n19, σ1s87/27,mb4.0/3,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.27**	**88**	*e*S	**Sn**	**05 29 43.3**	**+1.2**
JMU				IAML		05 29 45.0	
	comp=N,398nm,0.4s						
JMU				IAML		05 29 45.4	
	comp=E,684nm,0.4s						
THN	**Thein Dam**	**5.07**	**92**	*e*P	**Pn**	**05 29 04.4**	**0.0**
THN				*e*S	**Sn**	**05 30 03.7**	**+1.8**
THN				IAML		05 30 06.8	
	comp=N,170nm,0.8s						
TLWR	**Talawar**	**5.30**	**97**	*e*P	**Pn**	**05 29 10.4**	**+2.8**
TLWR				*e*S	**Sn**	**05 30 08.6**	**+1.1**
TSSA	**Tissa**	**5.38**	**87**	*e*P	**Pn**	**05 29 09.0**	**+0.1**
TSSA				*e*S	**Sn**	**05 30 08.5**	**-1.3**
TSSA				IAML		05 30 16.2	
	comp=E,192nm,1.0s						
TSSA				IAML		05 30 16.2	
	comp=N,198nm,0.4s						
DHRM	**DHARAMSHALA**	**5.55**	**93**	*e*P	**Pn**	**05 29 12.1**	**+0.9**
DHRM				*e*S	**Sn**	**05 30 13.8**	**0.0**
BHK	**Bhakra**	**5.78**	**102**	*ex*	**Sn**	**05 30 20.5**	**+1.3**
BHK				IAML		05 30 26.9	
	comp=N,100nm,0.2s						
BHK				IAML		05 30 27.2	
	comp=E,80nm,0.6s						
KLP	**Kalpa**	**7.30**	**97**	*e*S	**Sn**	**05 30 54.9**	**-2.3**
KLP				IAML		05 31 00.1	
	comp=N,69nm,0.4s						
KLP				IAML		05 31 01.1	
	comp=E,110nm,1.0s						
KUDL	**Kundal**	**7.39**	**126**	*e*P	**Pn**	**05 29 37.1**	**+0.8**
KUDL				*ex*	x	05 30 52.4	
KUDL				*e*S	**Sn**	**05 30 55.2**	**-3.7**
NDI	**New Delhi**	**7.58**	**120**	*e*P	**Pn**	**05 29 39.3**	**+0.4**
NDI				*e*S	**Sn**	**05 30 59.6**	**-4.1**
HNLY	**HANLEY**	**7.76**	**87**	*e*P	**Pn**	**05 29 43.1**	**+1.3**
HNLY				*e*S	**Sn**	**05 31 06.8**	**-1.9**
AAK	**Ala-Archa**	**10.57**	**19**	Pn	**Pn**	**05 30 19.3**	**-0.7**
	comp=E,0.4nm,0.3s,baz=226,slow=9.6,SNR=4.9						
AAK				Sn	**Sn**	**05 32 13.1**	**-4.0**
	comp=E,0.2nm,0.3s,baz=329,slow=21,SNR=2.1						
	comp=E,1.0nm,0.3s						
BHPL	**Bhopal**	**11.63**	**142**	*e*P	**Pn**	**05 30 33.7**	**-0.6**
BHPL				*ex*	x	05 32 38.7	
MKAR	**Makanchi Array**	**17.00**	**31**	Pn	**Pn**	**05 31 45.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=212,slow=11,SNR=7.2						
	comp=E,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**19.01**	**17**	P	**P**	**05 32 09.3**	**-0.2**
	baz=206,slow=10,SNR=4.5						
	comp=E,0.3nm,0.4s						
AKTO	**Aktyubinsk**	**19.70**	**337**	P	**Pn**	**05 32 18.4**	**-0.2**
	comp=E,0.3nm,0.3s,baz=156,slow=12,SNR=4.0						
	comp=E,1.6nm,0.6s						
BVAR	**Borovoye Array**	**20.28**	**1**	P	**P**	**05 32 23.5**	**+0.1**
	comp=E,0.6nm,0.4s,baz=162,slow=10,SNR=4.4						
	comp=E,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**23.77**	**22**	P	**P**	**05 33 01.4**	**+1.5**
	comp=E,0.3nm,0.3s,baz=214,slow=10,SNR=3.5						
	comp=E,0.3nm,0.3s						
WRA	**Warramunga Ar**	**80.92**	**121**	P	**P**	**05 40 03.2**	**+1.5**
	comp=E,1.5nm,0.5s,baz=323,slow=4.9,SNR=54						
	comp=E,1.5nm,0.5s						
ASAR	**Alice Springs**	**82.98**	**124**	P	**P**	**05 40 14.2**	**+1.6**
	comp=E,0.7nm,0.6s,baz=308,slow=5.3,SNR=9.8						
	comp=E,0.7nm,0.6s						

ASRS ***02*** *05:55:40.0±0.8,54°.34N×86°.16E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 02 05:55:42.5±2.6,54°.31N×86°.18E,h0km,mbtmp3.2/2, ML3.2/2,Error ellipse: s-maj=21.4km s-min=13.0km az=49.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**246**	I	I	06 00 10.0	
	baz=64,slow=321,SNR=1.5						
ZALV	**Zalesovo Beam**	**0.88**	**246**	Pg	Pg	05 55 59.0	-0.4
	2.7nm,0.3s,baz=65,slow=17,SNR=9.1						
ZALV				Lg	Lg	05 56 11.8	
	4.2nm,0.3s,baz=64,slow=27,SNR=6.5						
KURBB	**Kurchatov Arra**	**5.96**	**235**	Pn	Pn	05 57 13.2	+1.3
	0.2nm,0.3s,baz=52,slow=14,SNR=9.4						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.92**	**200**	Pn	Pn	05 57 39.3	+0.4
	0.7nm,0.3s,baz=24,slow=14,SNR=13						
	0.7nm,0.3s						

REN ***02*** *06:10:20.5±0.7,37°.52N±0°.01×117°.45W±0°.01,h4km,Error ellipse: s-maj=1.8km s-min=1.5km az=82.0*

NEIC 02 06:10:20.3±0.8,37°.531N±0°.010×117°.44W±0°.02, h5km±1km,ML2.8/40,ML2.9/8(REN),Error ellipse: s-maj=2.9km s-min=2.0km az=104.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMN	**Gold Mountain**	**0.27**	**148**		Pg	06 10 25.8	+0.2
GMN				IAML		06 10 26.8	
	comp=N,1μm,0.3s						
GMN					Sg	06 10 29.7	+0.5
GMN				IAML		06 10 29.9	
	comp=E,1μm,0.4s						
LCH	**Last Change Ra**	**0.34**	**209**		Pg	06 10 27.1	+0.2
LCH					Sg	06 10 31.9	+0.5
DSP	**Deep Springs**	**0.45**	**249**		Pg	06 10 29.4	+0.4
DSP					Sg	06 10 35.6	+0.7
DSP				IAML		06 10 35.9	
	comp=E,522nm,0.7s						
TPH	**Tonopah**	**0.57**	**17**	Pg	Pg	06 10 29.8	-1.5
TPH					Sg	06 10 39.5	+0.8
TPH				IAML		06 10 39.8	
	comp=N,293nm,0.5s						
TPH				IAML		06 10 45.7	
	comp=E,236nm,0.6s						
WCT	**Wildcat Mounta**	**0.98**	**138**	Pg	Pg	06 10 38.6	-0.4
NV11	**Mina Array Sit**	**1.06**	**328**	Pg	Pg	06 10 40.4	-0.3
LHV	**Little Huntoon**	**1.11**	**311**	Pg	Pg	06 10 41.5	0.0
TPNV	**Topopah Spring**	**1.11**	**121**	Pg	Pg	06 10 41.1	-0.5
NVAR	**Mina Array Bea**	**1.13**	**323**	Pg	Pg	06 10 41.3	-0.7
FURC	**Furnace Creek,**	**1.16**	**156**	Pg	Pg	06 10 41.9	-0.6
CWC	**Cottonwood Cre**	**1.20**	**205**	Pg	Pg	06 10 43.4	0.0
MDPB	**Devils Postpil**	**1.31**	**275**	Pg	Pg	06 10 44.9	-0.5
Q09A	**Carvers**	**1.32**	**9**	Pg	Pn	06 10 44.9	-0.6
S11A	**Rachel**	**1.35**	**85**		Pb	06 10 46.1	0.0
GWY	**Greenwater Val**	**1.48**	**155**		Pn	06 10 47.9	+0.3
KVN	**Kaiserville**	**1.60**	**341**		Pn	06 10 49.7	+0.2
QSM	**Queen of Sheba**	**1.63**	**164**		Pb	06 10 50.4	-0.4

ASRS ***02*** *06:29:40.0±0.5,54°.14N×86°.49E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 02 06:29:41.4±2.8,54°.17N×86°.59E,h0km,mbtmp2.9/2, ML2.7/2,Error ellipse: s-maj=23.9km s-min=14.1km az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**259**	I	I	06 34 40.0	
	baz=78,slow=320,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.07**	**259**	Pg	Pg	06 30 00.1	-1.7
	0.7nm,0.3s,baz=80,slow=17,SNR=8.0						
ZALV				Lg	Lg	06 30 17.5	
	1.9nm,0.3s,baz=77,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**6.08**	**237**	Pn	Pn	06 31 13.1	+0.7
	0.1nm,0.3s,baz=54,slow=13,SNR=6.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.88**	**202**	Pn	Pn	06 31 38.3	+1.2
	0.2nm,0.3s,baz=25,slow=14,SNR=9.3						
	0.2nm,0.3s						

IDC ***02*** *06:36:43.4±3.3,53°.46N×87°.50E,h0km,mbtmp2.5/2, ML2.2/2,Error ellipse: s-maj=32.6km s-min=18.2km az=60.0*

ASRS 02 06:36:41.0±1.4,53°.46N×87°.43E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**288**	I	I	06 45 28.1	
	baz=106,slow=315,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.63**	**288**	Pn	Pg	06 37 13.9	+1.7
	0.3nm,0.3s,baz=107,slow=14,SNR=6.7						
ZALV				Lg	Lg	06 37 36.2	
	0.4nm,0.3s,baz=105,slow=27,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.18**	**246**	Pn	Pn	06 38 17.1	+3.6
	baz=63,slow=14,SNR=4.1						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.45**	**208**	Pn	Pn	06 38 34.5	+3.7
	0.1nm,0.3s,baz=29,slow=14,SNR=1.9						
	0.1nm,0.4s						

IDC ***02*** *06:42:17.7±3.4,53°.67N×88°.02E,h0km,mbtmp2.9/2, ML2.5/2,Error ellipse: s-maj=32.2km s-min=19.1km az=54.0*

ASRS 02 06:42:13.0±1.2,53°.72N×88°.12E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.97**	**278**	I	I	06 52 56.0	
	0.2nm,0.8s,baz=94,slow=317,SNR=8.5						
ZALV	**Zalesovo Beam**	**1.97**	**278**	Pn	Pg	06 42 51.6	+0.9
	1.5nm,0.3s,baz=98,slow=13,SNR=38						
ZALV				Lg	Lg	06 43 18.6	
	2.1nm,0.3s,baz=101,slow=21,SNR=17						
KURBB	**Kurchatov Arra**	**6.66**	**246**	Pn	Pn	06 43 56.5	+4.4
	0.1nm,0.3s,baz=61,slow=14,SNR=6.8						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**7.87**	**211**	Pn	Pn	06 44 13.2	+4.5
	0.1nm,0.3s,baz=30,slow=13,SNR=3.1						
MKAR				Lg	Lg	06 46 25.2	
	baz=22,slow=34,SNR=4.3						
	0.1nm,0.3s						

NAO ***02*** *06:54:35.1±0.7,75°.53N×7°.63E,h10km,ML3.7*

IDC ***02*** *06:54:35.7±0.7,75°.42N×8°.02E,h0km,mb3.8/13, mbtmp3.8/19,ML2.6/4,MS3.3/23,Error ellipse: s-maj=13.8km s-min=11.1km az=79.0*

BER ***02*** *06:54:36.6±3.0,75°.53N×7°.75E,h10km,Mw4.6, ML3.7(NAO),Confirmed Earthquake*

NEIC ***02*** *06:54:36.8±1.3,75°.49N±0°.07×8°.2E±0°.3,h10km±1km, mb4.2/15,Error ellipse: s-maj=14.0km s-min=11.7km az=255.0*

FCIAR ***02*** *06:54:36.0,74°.90N×10°.87E,h10km*

DNK ***02*** *06:54:40.6±3.5,75°.66N×7°.44E,h39km±303km,ML1.8, Presumed earthquake*

KOLA ***02*** *06:54:46.2,76°.42N×8°.89E,h0km,ML2.7,Error ellipse: s-maj=30.1km s-min=15.6km az=20.0,Greenland sea,Knipovich ridge, middle*

ISC 02 06:54:35.0±2.8,75°.49N±0°.04×8°.14E±0°.03,h0km±19km, n112,σ2s09/106,mb4.1/19,MS3.3/18,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.33**	**46**	Pn	**Pn**	**06 55 13.9**	**-0.6**
HSPB				Sn	**Sn**	**06 55 38.9**	**-4.8**
HSPB	**Hornsund (broa**	**2.33**	**46**	*e*P	**Pn**	**06 55 13.9**	**-0.6**
HSPB				*e*S	**Sn**	**06 55 39.2**	**-4.5**
HSPB				IAMLHF		06 55 41.8	
	comp=Z,12nm,0.1s						
HSPB	**Hornsund (broa**	**2.33**	**46**	P	**Pn**	**06 55 13.8**	**-0.6**
HSPB				S	**Sn**	**06 55 38.7**	**-5.0**
BRBA	**Barentsburg A**	**2.94**	**25**	Pn	**Pn**	**06 55 22.5**	**-0.3**
BRBA	**Barentsburg A**	**2.94**	**25**	*e*P	**Pn**	**06 55 22.6**	**-0.1**
BRBB	**Barentsburg B**	**2.97**	**25**	*e*P	**Pn**	**06 55 24.5**	**+1.3**
BRBB	**Barentsburg B**	**2.97**	**25**	S	Sn	06 55 51.8	-7.6
BJO1	**Bjornoya**	**2.99**	**104**	Pn	**Pn**	**06 55 24.9**	**+1.3**
BJO1	**Bjornoya**	**2.99**	**104**	*e*P	**Pn**	**06 55 24.8**	**+1.3**
BJO1				*e*S	**Sn**	**06 55 55.6**	**-4.5**
BJO1	**Bjornoya**	**2.99**	**104**	*e*P	**Pn**	**06 55 25.2**	**+1.7**
BJO1				*e*S	**Sn**	**06 55 53.8**	**-6.2**
BEA1	**Bear Island, N**	**3.00**	**104**	Pn	**Pn**	**06 55 23.5**	**-0.1**
BEA1	**Bear Island, N**	**3.00**	**104**	Pn	**Pn**	**06 55 23.5**	**-0.1**
BEA3	**Bear Island, N**	**3.00**	**104**	Pn	**Pn**	**06 55 23.0**	**-0.6**
SPB2	**Spitsbergen Ar**	**3.29**	**31**		**Pn**	**06 55 28.1**	**+0.4**
SPB2				Sn	**Sn**	**06 56 05.2**	**-2.2**
SPA0	**Spitsbergen Ar**	**3.29**	**31**	Pn	**Pn**	**06 55 28.5**	**+0.8**
	baz=219,slow=16						
SPA0				Sn	**Sn**	**06 56 05.6**	**-1.9**
	baz=210,slow=28						
SPA0	**Spitsbergen Ar**	**3.29**	**31**	Pn	**Pn**	**06 55 28.5**	**+0.8**
SPA0				Sn	**Sn**	**06 56 05.6**	**-1.9**
SPITS	**Spitsbergen Ar**	**3.29**	**31**	Pn	**Pn**	**06 55 28.1**	**+0.4**
	comp=Z,12nm,0.3s,baz=211,slow=16,SNR=100						
SPITS				Sn	**Sn**	**06 56 05.9**	**-1.6**
	baz=212,slow=11						
SPITS	**Spitsbergen Ar**	**3.29**	**31**	P	**Pn**	**06 55 27.8**	**+0.1**
SPITS				S	Sn	06 55 55.3	-12
KBS	**Kingsbay**	**3.56**	**12**	Pn	**Pn**	**06 55 30.3**	**-1.0**
KBS	**Kingsbay**	**3.56**	**12**		**Pn**	**06 55 30.7**	**-0.6**
KBS	**Kingsbay**	**3.56**	**12**	*e*P	**Pn**	**06 55 30.5**	**-0.8**
KBS				*e*S	**Sn**	**06 56 07.2**	**-6.8**
KBS				IAMLHF		06 56 13.6	
	comp=Z,9.7nm,0.2s						
KBS	**Kingsbay**	**3.56**	**12**	P	**Pn**	**06 55 30.3**	**-1.0**
KBS				S	Sn	06 56 02.1	-12
KBS	**Kingsbay**	**3.56**	**12**	*i* P	**Pn**	**06 55 31.5**	**+0.2**
KBS				*i* S	Sn	06 56 06.0	-7.9
HOPEN	**Hopen**	**4.22**	**68**	Pn	**Pn**	**06 55 40.7**	**+0.3**
HOPEN				Sn	**Sn**	**06 56 25.4**	**-4.8**
HOPEN	**Hopen**	**4.22**	**68**	*e*P	**Pn**	**06 55 40.5**	**+0.1**
HOPEN				*e*S	**Sn**	**06 56 25.2**	**-5.0**
HOPEN				IAMLHF		06 56 29.8	
	comp=Z,22nm,0.2s						
HOPEN	**Hopen**	**4.22**	**68**	*e*P	**Pn**	**06 55 39.0**	**-1.3**
HOPEN				*e*S	**Sn**	**06 56 25.2**	**-5.0**
JNW	**Jan Mayen West**	**6.53**	**235**	*e*P	**Pn**	**06 56 09.9**	**-2.2**
DAG	**Danmarks Havn**	**6.53**	**294**	*i* S	Sn	06 57 14.4	-13
DAG				IAML		06 57 27.2	
	comp=Z,4.8nm,0.8s						
JNE	**Jan Mayen East**	**6.53**	**235**	*e*P	**Pn**	**06 56 09.8**	**-2.3**
JMIC	**Jan Mayen**	**6.58**	**235**	Pn	**Pn**	**06 56 10.9**	**-1.8**
	comp=Z,30nm,0.6s,baz=181,slow=5.8,SNR=1.9						
JMIC				LR	LR	06 58 00.9	
	comp=Z,139nm,19.2s,baz=69,slow=32						
JMIC	**Jan Mayen**	**6.58**	**235**	*e*P	**Pn**	**06 56 10.8**	**-1.9**
JMIC	**Jan Mayen**	**6.58**	**235**	*i* P	**Pn**	**06 56 10.4**	**-2.3**
JETT	**Jettan, Norway**	**6.99**	**142**	*e*P	**Pn**	**06 56 22.6**	**+4.0**
DBG	**Daneborg**	**7.45**	**275**	Pn	Pn	06 56 19.8	-5.0
DBG				Sn	Sn	06 57 36.0	-14
DBG	**Daneborg**	**7.45**	**275**	*e*P	Pn	06 56 19.7	-5.0
DBG				*e*S	Sn	06 57 36.0	-14
DBG				IAMLHF		06 57 40.4	
	comp=Z,0.4nm,0.2s						
DBG	**Daneborg**	**7.45**	**275**	*i* P	**Pn**	**06 56 22.3**	**-2.4**
DBG				*i* S	Sn	06 57 36.4	-13
DBG				IAML		06 57 42.3	
	comp=Z,3.4nm,0.7s						
NOR	**Nord**	**7.77**	**333**	*e*P	**Pn**	**06 56 27.0**	**-2.0**
ARA0	**ARCESS Array S**	**7.90**	**130**	Pn	**Pn**	**06 56 31.4**	**+0.5**
	baz=326,slow=12						
ARA0				Sn	Sn	06 57 52.6	-8.3
	baz=330,slow=22						
ARA0	**ARCESS Array S**	**7.90**	**130**	*e*P	**Pn**	**06 56 32.8**	**+1.9**
ARA0				*e*S	Sn	06 57 53.1	-7.8
ARCES	**ARCESS Array B**	**7.90**	**130**	Pn	**Pn**	**06 56 29.7**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=322,slow=10,SNR=27						
ARCES				Sn	Sn	06 57 51.7	-9.2
	comp=Z,0.6nm,0.3s,baz=329,slow=19,SNR=7.6						
ARCES				LR	LR	06 59 42.3	
	comp=Z,129nm,20.5s,baz=311,slow=39						
	comp=Z,4.9nm,0.5s						
ARCES	**ARCESS Array B**	**7.90**	**130**		**Pn**	**06 56 30.6**	**-0.3**
KTK1	**Kautokeino**	**7.94**	**137**	*e*P	**Pn**	**06 56 34.6**	**+3.1**
KEV	**Kevo**	**8.02**	**126**	Pn	**Pn**	**06 56 33.2**	**+0.6**
KEV	**Kevo**	**8.02**	**126**	Pn	**Pn**	**06 56 32.9**	**+0.5**
KEV	**Kevo**	**8.02**	**126**	*e*P	**Pn**	**06 56 32.5**	**+0.1**
KEV				*e*S	Sn	06 57 53.6	-10
VADS	**Vadso**	**8.22**	**120**	Pn	**Pn**	**06 56 35.2**	**-0.1**
VADS				Sn	Sn	06 58 01.2	-7.6
VADS	**Vadso**	**8.22**	**120**	*e*P	**Pn**	**06 56 34.2**	**-1.1**
VADS				*e*S	Sn	06 58 01.0	-7.8
VADS	**Vadso

OJC	Ojcow	25.81	163	P	P	07 00 07.9 +0.6
AKASG	Malin Array Be	26.31	149	LR	LR	07 11 03.2
	comp=Z,46nm,19.1s,baz=38,slow=38					
AKBB	Malin Array Si	26.31	149	P	P	07 00 11.8 +0.1
AKBB				IAmb	IAmb	07 00 28.3
	comp=Z,6.6nm,1.1s					
ARTI	Arti	26.63	107	P	P	07 00 16.0 +1.3
	comp=Z,5.0nm,0.7s,baz=305,slow=3.5,SNR=6.5					
ARTI				LR	LR	07 11 29.3
	comp=Z,60nm,19.8s,baz=24,slow=38					
	comp=Z,5.0nm,0.7s					
ARTI	Arti	26.63	107	P	P	07 00 15.2 +0.5
FRB	Frobisher Bay	26.80	286	LR	LR	07 10 30.6
	comp=Z,84nm,19.6s,baz=60,slow=36					
GERES	GERESS Array B	26.84	172	P	P	07 00 17.5 +0.8
	comp=Z,0.3nm,0.2s,baz=352,slow=4.6,SNR=4.7					
	comp=Z,0.3nm,0.2s					
GERES	GERESS Array B	26.84	172	P	P	07 00 16.9 +0.2
ECH	Echery	27.37	181	P	P	07 00 22.0 +0.5
ECH				IAmb	IAmb	07 00 29.8
	comp=Z,8.6nm,1.4s					
CLF	Chambon-Foret	27.67	189	P	P	07 00 24.2 +0.1
BELG	Belogornoye	27.88	124	LR	LR	07 11 55.5
	comp=Z,137nm,19.3s,baz=276,slow=37					
BURAR	Bucovina Array	28.88	156	P	P	07 00 35.9 +0.9
SABO	M.te Sabotino	29.70	172	P	P	07 00 42.5 +0.3
SABO				IAmb	IAmb	07 00 44.7
	comp=Z,5.0nm,0.9s					
MLR	Muntele Rosu	31.05	155	LR	LR	07 14 03.1
	comp=Z,42nm,20.2s,baz=108,slow=38					
AKTO	Aktyubinsk	32.02	113	P	P	07 01 02.8 +0.2
	comp=Z,2.5nm,0.7s,baz=346,slow=6.8,SNR=7.3					
AKTO				LR	LR	07 14 27.4
	comp=Z,87nm,20.4s,baz=48,slow=37					
	comp=Z,2.5nm,0.7s					
AB31	Akbulak array	33.57	111	P	P	07 01 16.0 -0.2
AB31				IAmb	IAmb	07 01 18.9
	comp=Z,1.9nm,0.8s					
ABKAR	Akbulak array	33.57	111	P	P	07 01 16.2 +0.1
SCHQ	Schefferville	34.20	276	LR	LR	07 13 32.1
	comp=Z,60nm,21.8s,baz=79,slow=33					
E29M	Blow River	34.78	339	P	P	07 01 26.6 +0.2
E29M				IAmb	IAmb	07 01 35.6
	comp=Z,4.4nm,1.1s					
KBZ	Khabaz	35.24	134	LR	LR	07 16 36.2
	comp=Z,51nm,18.5s,baz=5.0,slow=38					
D20K	Etivluk River	35.70	351	P	P	07 01 34.1 -0.3
KURBB	Kurchatov Arra	36.88	91	P	P	07 01 46.4 +1.8
	comp=Z,2.4nm,0.2s,baz=327,slow=6.8,SNR=4.6					
KURBB				LR	LR	07 20 09.0
	comp=Z,82nm,20.1s,baz=187,slow=42					
	comp=Z,2.4nm,0.2s					
BRTR	Keskin Array B	37.67	147	LR	LR	07 19 14.8
	comp=Z,34nm,19.0s,baz=74,slow=39					
I30M	Mount Dempster	37.72	336	P	P	07 01 52.8 +1.0
I30M				IAmb	IAmb	07 02 00.0
	comp=Z,4.3nm,1.2s					
ILAR	Eielson Array	39.07	343	P	P	07 02 04.0 +1.1
	comp=Z,0.4nm,0.9s,baz=345,slow=3.3,SNR=4.2					
	comp=Z,0.4nm,0.9s					
BCAR	Beaver Creek A	40.34	339	P	P	07 02 14.4 +0.8
MK31	Makanchi Array	41.37	90	P	P	07 02 22.8 +0.6
MKAR	Makanchi Array	41.37	90	P	P	07 02 21.7 -0.6
	comp=Z,0.9nm,0.9s,baz=336,slow=8.1,SNR=5.7					
	comp=Z,0.9nm,0.9s					
MKAR	Makanchi Array	41.37	90	P	P	07 02 21.8 -0.5
ULM	Lac du Bonnet	45.35	299	P	P	07 02 55.5 +1.3
	comp=Z,0.4nm,0.3s,baz=24,slow=5.3,SNR=4.0					
ULM				LR	LR	07 21 56.4
	comp=Z,62nm,18.5s,baz=17,slow=36					
	comp=Z,0.4nm,0.3s					
SONM	Songino Array	46.32	67	P	P	07 03 04.3 +2.2
	comp=Z,0.2nm,0.3s,baz=343,slow=4.5,SNR=2.1					
	comp=Z,0.2nm,0.3s					
SONM	Songino Array	46.32	67	P	P	07 03 01.7 -0.4
SADO	Sadowa	46.55	281	LR	LR	07 23 57.4
	comp=Z,42nm,19.1s,baz=40,slow=38					
PDAR	Pinedale Array	55.36	308	P	P	07 04 11.2 +0.9
	comp=Z,0.1nm,0.4s,baz=27,slow=7.2,SNR=6.4					
PDAR				LR	LR	07 26 58.8
	comp=Z,39nm,19.9s,baz=334,slow=35					
	comp=Z,0.1nm,0.4s					
PDAR	Pinedale Array	55.36	308	P	P	07 04 10.8 +0.4
ANMO	Albuquerque	62.25	302	LR	LR	07 33 04.2
	comp=Z,67nm,18.0s,baz=354,slow=37					
TORD	Torodi Ar. Bea	62.43	187	P	P	07 04 59.7 +0.2
	comp=Z,0.7nm,0.9s,baz=4.6,slow=5.4,SNR=3.6					
	comp=Z,0.7nm,0.9s					
MJAR	Matsushiro Arr	63.71	43	P	P	07 05 09.1 +1.3
	comp=Z,0.7nm,0.3s,baz=14,slow=5.6,SNR=4.1					
	comp=Z,0.7nm,0.3s					
TXAR	Lajitas Array	67.05	298	P	P	07 05 29.9 +0.2
	comp=Z,0.2nm,0.6s,baz=46,slow=7.2,SNR=4.1					
	comp=Z,0.2nm,0.6s					
LPIG	La Paz	73.55	303	LR	LR	07 39 04.9
	comp=Z,40nm,18.8s,baz=342,slow=36					

IDC 02 06:56:26.4±3.2, 33°.05S×178°.94W, h0km, mb3.4/2, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=72.4km s-min=47.4km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.11	211	Pn	Pn	06 57 57.4	-0.6
	1.8nm,0.3s,baz=294,slow=6.8,SNR=7.0						
URZ				Sn	Sn	06 59 03.3	-5.3
	1.7nm,0.3s,baz=229,slow=22,SNR=5.6						
	6.1nm,0.4s						
ASAR	Alice Springs	42.24	270	P	P	07 04 21.8	+0.2
	0.4nm,0.6s,baz=107,slow=7.4,SNR=6.7						
	0.4nm,0.6s						
WRA	Warramunga Arr	43.47	275	P	P	07 04 31.2	-0.4
	0.2nm,0.5s,baz=115,slow=7.6,SNR=8.8						
	0.2nm,0.5s						
FINES	FINESS Array B	147.32	338	PKPbc	PKPbc	07 16 10.5	-0.6
	2.6nm,0.9s,baz=41,slow=5.7,SNR=4.0						

IDC 02 07:00:14.2±3.6, 54°.42N×87°.13E, h0km, mbtmp3.1/2, ML2.4/2, Error ellipse: s-maj=31.6km s-min=21.0km az=47.0

ASRS 02 07:00:15.0±0.5, 54°.35N×86°.93E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.30	253	I	I	07 07 50.0	
	baz=70,slow=313,SNR=1.4						
ZALV	Zalesovo Beam	1.30	253	Pg	Pg	07 00 39.9	-0.1
	0.7nm,0.3s,baz=71,slow=19,SNR=8.3						
ZALV				Lg	Lg	07 01 00.6	
	1.3nm,0.3s,baz=73,slow=27,SNR=9.1						
KURBB	Kurchatov Arra	6.34	237	Pn	Pn	07 01 50.7	+1.1
	0.1nm,0.3s,baz=52,slow=14,SNR=2.3						
	2.0nm,0.2s						
MKAR	Makanchi Array	8.12	203	Pn	Pn	07 02 16.5	+2.5
	baz=16,slow=11,SNR=1.9						
	0.1nm,0.3s						

ASRS 02 07:05:02.0±1.3, 53°.65N×87°.91E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.

IDC 02 07:05:05.8±2.9, 53°.62N×87°.85E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=26.6km s-min=16.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.83	282	I	I	07 14 50.0	
	baz=97,slow=314,SNR=2.1						
ZALV	Zalesovo Beam	1.83	282	Pn	Pn	07 05 38.8	+0.4
	2.0nm,0.3s,baz=100,slow=15,SNR=16						
ZALV				Lg	Lg	07 06 03.4	
	6.2nm,0.3s,baz=100,slow=28,SNR=22						
KURBB	Kurchatov Arra	6.47	246	Pn	Pn	07 06 43.0	+0.8
	0.2nm,0.3s,baz=61,slow=14,SNR=3.7						
KURBB				Lg	Lg	07 08 31.7	
	0.1nm,0.3s,baz=61,slow=31,SNR=4.8						
	0.6nm,0.4s						
MKAR	Makanchi Array	7.71	210	Pn	Pn	07 07 00.1	+0.9
	0.3nm,0.3s,baz=28,slow=14,SNR=9.6						
MKAR				Lg	Lg	07 09 10.4	
	0.1nm,0.3s,baz=35,slow=33,SNR=3.0						
	0.3nm,0.3s						

BJI 02 07:07:23.2, 43°.84N×147°.85E, h50km, mB5.0/31, mb5.1/69, Ms4.3/47, Ms7 4.0/47

MOS 02 07:07:23.0±1.0, 43°.72N×147°.94E, h50km, mb5.6/70, MS4.0/11, Error ellipse: s-maj=5.3km s-min=3.8km az=113.6

MOS Felt (III) at Gornyy, Goryachiy Plyazh, Krabozavodskoye, Lagunnoye, Malokuril'skoye, Yuzhno-Kuril'sk.

NIED 02 07:07:24.9, 43°.61N×147°.67E, h11km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr 0.57; Mθθ 0.75; Mϕϕ -1.32; Mrθ 2.21; Mϕθ -0.55; Mrϕ 0.82; Fault plane solution: M0 2.65000×10^16 NP1: ϕs 161.00000°, δ 28.00000°, λ 13.00000°. NP2: ϕs 60.00000°, δ 84.00000°, λ 117.00000°.

NEIC 02 07:07:24.4±1.8, 43°.72N±0°.07×147°.99E±0°.10, h41km±3km, mb5.2/742 Error ellipse: s-maj=10.9km s-min=8.6km az=130.0

JMA 02 07:07:24.9±0.2, 43°.6N±0°.9×14°8E±°, h11km, MD4.8/40, MW5.0/40, E OFF HOKKAIDO

JMA Felt II J1 at E OFF HOKKAIDO .

SKHL 02 07:07:25.1±0.2, 43°.70N×148°.00E, h71km±8km, mb6.1/7

SKHL Felt (III) at Yushno-Kuril'sk, Malokuril'skoe, Krabozavodskoe, Lagunnoe, Goryachy Plyash, Gornyi.

GFZ 02 07:07:26.1±0.2, 44°.N±4°×14°8E±°, h53km, M5.2/166, mB5.6/76, mb5.4/166, Mw(mB)5.2/76

IDC 02 07:07:27.0±0.5, 43°.91N×147°.79E, h62km±4km, mb4.9/35, mbtmp5.1/44, MS3.8/71, Error ellipse: s-maj=11.4km s-min=9.6km az=149.0

GCMT 02 07:07:27.4±0.3, 43°.82N±0°.02×148°.01E±0°.03, h65km±3km, MW4.9/94, Moment Tensor Solution. s26, c28; s94, c128; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.28±.14; Mθθ 0.19±.11; Mϕϕ -1.47±.10; Mrθ 1.69±.07; Mϕθ -1.19±.08; Mrϕ 0.81±.07; Best double couple: M0 2.61000×10^16 NP1: ϕs 175.00000°, δ 33.00000°, λ 33.00000°. NP2: ϕs 57.00000°, δ 72.00000°, λ 119.00000°. Principal axes: T 2.5110, Plg 54.0000°, Azm 1.0000°; N 0.1970, Plg 27.0000°, Azm 227.0000°; P -2.7090, Plg 22.0000°, Azm 125.0000°; nsta 1 refers to body waves, cutoff=40s. nsta 2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR 02 07:07:34.8, 45°.02N×145°.59E, h33km, mb5.3, Ms4.3

ISC 02 07:07:24.8±0.3, 43°.75N±0°.03×147°.92E±0°.03, h50km±2km, h50km:pP-P, n1684, σ1926/1460, mb5.2/552, MS4.0/82, 94C-50D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.80	279	eP	Pn	07 07 52.7	+13
SHO				AMB	AMB	07 07 53.7	
	44μm,0.3s						
SHO				eS	Sn	07 08 03.1	+12
SHO				A	A	07 08 04.3	
	178μm,0.4s						
SHO				A	A	07 08 04.3	
	104μm,0.4s						
KUR	Kuril'sk	1.48	359	d iPN	Pn	07 07 49.5	+0.5
KUR				eS	Sn	07 08 07.5	+0.3
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				smax	smax		
	comp=E,13μm,0.4s						
KUR				smax	smax		
	comp=N,8μm,0.5s						
KUR				smax	smax		
	comp=N,30μm,1.4s						
KUR				smax	smax		
	comp=E,17μm,1.5s						
KUR	Kuril'sk	1.48	359	i P	Pn	07 07 49.8	+0.8
KUR				AMB	AMB	07 07 51.2	
	comp=E,2μm,0.2s						
KUR				eS	Sn	07 08 07.8	+0.6
KUR				A	A	07 08 09.2	
	comp=E,11μm,0.4s						
KUR				A	A	07 08 09.2	
	comp=E,14μm,0.4s						
YUK	Yuzh-Kuril'sk	1.52	281	d iPN	Pn	07 07 49.5	+0.1
YUK				i S	Sn	07 08 06.8	-1.2
YUK				pmax	pmax		
	comp=Z,10μm,0.3s						
YUK				pmax	pmax		
	comp=N,1μm,0.1s						
YUK				pmax	pmax		
	comp=E,1μm,0.1s						
YUK				smax	smax		
	comp=N,54μm,0.5s						
YUK				smax	smax		
	comp=E,84μm,0.5s						
YUK	Yuzh-Kuril'sk	1.52	281	i P	Pn	07 07 49.6	+0.1
YUK				AMB	AMB	07 07 50.1	
	comp=E,12μm,0.3s						
YUK				i S	Sn	07 08 07.7	-0.3
YUK				A	A	07 08 09.0	
	comp=E,54μm,0.6s						
YUK				A	A	07 08 09.0	
	comp=E,84μm,0.6s						
REI	Reidovoe	1.52	3	i P	Pn	07 07 49.9	+0.4
REI				AMB	AMB	07 07 51.3	
	comp=E,1μm,0.2s						
REI				eS	Sn	07 08 08.8	+0.7
REI				A	A	07 08 09.6	
	comp=E,4μm,0.3s						
REI				A	A	07 08 09.6	
	comp=E,8μm,0.3s						
NEM2	Nemuro 2	1.63	257	i P	Pn	07 07 50.9	-0.1
NEM2				A	A	07 07 50.9	
	comp=N,18nm,3.3s,comp=E,15nm,0.4s						
NEM2				S	Sn	07 08 09.3	-1.5
NMR	Nemuro--Hokkai	1.64	257	↓i PN	Pn	07 07 50.9	-0.2
NMR				i S	Sn	07 08 09.2	-1.9
NMR	Nemuro--Hokkai	1.64	257	i P	Pn	07 07 51.0	-0.2
NMR				i S	Sn	07 08 09.5	-1.6
RUSJ	Misakicho	1.96	281	↓i PN	Pn	07 07 56.8	+1.2
RUSJ				i S	Sn	07 08 20.2	+1.2
JRA	Rausu	2.03	276	i P	Pn	07 07 57.4	+0.9
JRA				A	A	07 07 57.4	
	comp=N,55nm,1.5s,comp=E,53nm,1.3s						
JRA				S	Sn	07 08 21.3	+0.6
JNSB	Nemuroshibetsu	2.11	272	i P	Pn	07 07 58.6	+1.0
JNSB				A	A	07 07 58.6	
	comp=N,33nm,2.3s,comp=E,33nm,1.1s						
JNSB				S	Sn	07 08 22.9	+0.2
JKHN	Kushirohamanak	2.12	253	i P	Pn	07 07 58.2	+0.4
JKHN				A	A	07 07 58.2	
	comp=N,22nm,0.7s,comp=E,19nm,1.4s						
JKHN				S	Sn	07 08 21.9	-0.9
JNK	Nakash	2.33	267	i P	Pn	07 08 01.1	+0.4
JNK				A	A	07 08 01.1	
	comp=N,17nm,1.2s,comp=E,15nm,0.6s						
JNK				S	Sn	07 08 27.5	-0.5
AKK	Akkeshi	2.36	253	eP	Pn	07 08 01.0	0.0
JAK	Akkeshi	2.47	253	i P	Pn	07 08 02.7	+0.2
JAK				A	A	07 08 02.7	
	comp=N,16nm,0.6s,comp=E,18nm,0.9s						
JAK				S	Sn	07 08 29.6	-1.8
JTKR	Abashiri--Toko	2.91	276	i P	Pn	07 08 10.1	+1.5
JTKR				A	A	07 08 10.1	
	comp=N,5.0nm,4.4s,comp=E,4.0nm,5.7s						
JTKR				S	Sn	07 08 45.2	+3.0
JAR	Ashorobuto	3.05	263	i P	Pn	07 08 11.7	+1.1
JAR				A	A	07 08 11.7	
	comp=N,10.0nm,0.5s,comp=E,11nm,0.4s						
JAR				eS	Sn	07 08 46.5	+0.7
JOB	Onbets	3.10	256	i P	Pn	07 08 11.8	+0.7
JOB				A	A	07 08 11.8	
	comp=N,9.0nm,0.7s,comp=E,9.0nm,1.8s						
JOB				eS	Sn	07 08 46.4	-0.5
JMP	Maruseppu	3.31	276	i P	Pn	07 08 15.8	+1.7
JMP				A	A	07 08 15.8	
	comp=N,7.0nm,0.7s,comp=E,5.0nm,1.4s						
JCH	Churui	3.52	253	P	Pn	07 08 17.5	+0.6
JCH				A	A	07 08 17.5	
	comp=N,5.0nm,1.0s,comp=E,4.0nm,0.9s						
JCH				S	Sn	07 08 56.1	-1.2
JTHR	Tokachihiroo	3.69	248	A	A	07 08 20.4	
	comp=N,5.0nm,2.9s,comp=E,6.0nm,1.6s						
JKK2	Kamakawa 2	3.75	274	P	Pn	07 08 22.1	+2.0
JKA	Kamikawa-asahi	3.86	277		Pn	07 08 23.9	+2.4
JKA				Sn	Sn	07 09 09.0	+3.3
JKA	Kamikawa-asahi	3.86	277	P	Pn	07 08 21.6	0.0
JKA	Kamikawa-asahi	3.86	277	eP	Pn	07 08 24.0	+2.4
ASAJ	Asahikawa	3.86	277	PN	Pn	07 08 24.0	+2.4
ASAJ						07 09 09.0	
JEM	Erimo	3.91	245	P	Pn	07 08 24.0	+1.8
JEM	Erimo	3.91	245	P	Pn	07 08 24.1	+1.9
JEM				eS	Sn	07 09 07.5	+0.8
JSE	Soyaes	4.01	289	P	Pn	07 08 25.2	+1.5
JSE				eS	Sn	07 09 09.8	+0.4
JNBK	Urakawa-nobuka	4.06	251	i P	Pn	07 08 24.6	+0.2
JNBK				A	A	07 08 24.6	
	comp=N,9.0nm,0.9s,comp=E,11nm,0.6s						
JAB	Ashibetsu	4.14	269	A	A	07 08 27.4	
	comp=N,6.0nm,2.3s,comp=E,4.0nm,3.1s						
JSHD	Hidakashinhida	4.21	253	A	A	07 08 27.9	
	comp=N,6.0nm,6.0s,comp=E,7.0nm,2.9s						
JSS	Shosan	4.42	281	P	Pn	07 08 32.2	+2.9
JHR	Hokuryu	4.49	272	P	Pn	07 08 33.0	+2.8
JIAM	Iburiatsuma	4.53	258	A	A	07 08 32.5	
	comp=N,9.0nm,0.5s,comp=E,10.0nm,0.5s						
JWK2	Keihoku	4.58	292	P	Pn	07 08 34.5	+3.0
JWK2				S	Sn	07 09 28.6	+5.3
KRS4	Mayak Korsakov	4.61	310	eP	Pn	07 08 34.5	+2.6
KRS4				eS	Sn	07 09 23.4	-0.7
JEW	Eniwo	4.81	261	i P	Pn	07 08 36.4	+1.8
JEW				eS	Sn	07 09 29.9	+0.9
YSS	Yuzhno-Sakhali	4.85	313	S	Sn	07 09 29.1	-0.8
YSS	Yuzhno-Sakhali	4.85	313	P	Pn	07 08 35.8	+0.7
YSS	Yuzhno-Sakhali	4.85	313		Pn	07 08 36.9	+1.7
YSS				Sn	Sn	07 09 28.6	-1.3
YSS	Yuzhno-Sakhali	4.85	313	κ iPN	Pn	07 08 36.8	+1.7
YSS				pmax	pmax		
	comp=Z,450nm,0.7s						
YSS				MLR	MLR		
	comp=N,1μm,18.0s						
YSS				MLR	MLR		
	comp=Z,2μm,18.0s						
YSS	Yuzhno-Sakhali	4.85	313	eP	Pn	07 08 36.8	+1.7
YSS				AMB	AMB	07 08 37.4	
	comp=Z,740nm,0.4s						
YSS				eS	Sn	07 09 28.6	-1.3
YSS				A	A	07 09 29.9	
	comp=Z,710nm,0.3s						
YSS				A	A	07 09 29.9	
	comp=Z,700nm,0.3s						
JAHD	Aomorihigashid	5.46	245	A	A	07 08 45.4	
	comp=N,13nm,1.4s,comp=E,10.0nm,0.6s						
JARK	Aomorikkasho	5.57	243	A	A	07 08 46.9	
	comp=N,19nm,0.7s,comp=E,9.0nm,0.8s						
JANG	Nango	5.84	237	A	A	07 08 50.5	
	comp=N,4.0nm,0.4s,comp=E,4.0nm,1.0s						
JTM	Tenmabayashi	5.88	242	P	Pn	07 08 50.0	+0.6
JTM	Tenmabayashi	5.88	242		Pn	07 08 49.5	+0.1
JTM	Tenmabayashi	5.88	242	P	Pn	07 08 49.8	+0.4
JOM	Ohasama	6.55	232	A	A	07 09 00.5	
	comp=N,5.0nm,0.3s,comp=E,7.0nm,0.8s						
UGL	Uglegorsk	6.69	325	ePN	Pn	07 09 01.9	+1.6
UGL				pmax	pmax		
	comp=Z,400nm,2.0s						
UGL				pmax	pmax		
	comp=Z,149nm,0.9s						
UGL	Uglegorsk	6.69	325	eP	Pn	07 09 02.4	+2.1
UGL				AMB	AMB	07 09 04.9	
	comp=Z,130nm,0.5s						
UGL				eS	Sn	07 10 14.3	-0.8
TYV	Tymovskoe	7.96	335	ePN	Pn	07 09 20.6	+2.8
TYV				pmax	pmax		
	comp=Z,18nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,4.1s						
TYV				MLR	MLR		
	comp=Z,1μm,18.0s						
TYV	Tymovskoe	7.96	335	eP	Pn	07 09 19.6	+1.8
TYV				AMB	AMB	07 09 20.8	
	comp=Z,20nm,0.7s						
TYV				eS	Sn	07 10 44.9	-1.5
SKR	Severo-Kuril's	8.89	36	ePN	Pn	07 09 31.1	+0.6
SKR				pmax	pmax		
	comp=Z,100nm,2.9s						
SKR				pmax	pmax		
	comp=Z,102nm,0.5s						
SKR				MLR	MLR		
	comp=Z,900nm,15.0s						
SKR	Severo-Kuril's	8.89	36	eP	Pn	07 09 31.5	+1.0
SKR				AMB	AMB	07 09 35.8	
	comp=Z,170nm,0.3s						
SKR				eS	Sn	07 11 07.8	-1.4
JYT	Yasato	9.57	221	Pn	Pn	07 09 39.4	-0.4
PAU	Pauzhetka	9.77	35	i P	Pn	07 09 42.5	0.0
PAU				AMB	AMB	07 09 44.6	
	comp=Z,190nm,0.3s						
PAU				eS	Sn	07 11 27.4	-3.3
MJB9	Matsu-Tunnel	10.34	229		Pn	07 09 50.1	-0.4
OKH	Okha	10.34	343	dePN	Pn	07 09 43.6	-6.7
OKH				pmax	pmax		
	comp=Z,100nm,5.1s						
OKH				MLR	MLR		
	comp=E,500nm,15.0s						
OKH				MLR	MLR		
	comp=Z,600nm,13.0s						
OKH				MLR	MLR		
	comp=N,600nm,13.0s						
MAJO	Matsushiro	10.34	229	P	Pn	07 09 50.6	+0.1
MAJO	Matsushiro	10.34	229		Pn	07 09 50.1	-0.3
MAJO	Matsushiro	10.34	229	i PN	Pn	07 09 50.0	-0.5
MAJO	Matsushiro	10.34	229	P	Pn	07 09 50.8	+0.3
MJAR	Matsushiro Arr	10.34	229	P	Pn	07 09 50.9	+0.5
	comp=N,5.3nm,0.4s,baz=30,slow=13,SNR=14						
MJAR				S	Sn	07 11 55.5	+11
	comp=N,7.3nm,0.4s,baz=77,slow=22,SNR=4.6						
MJAR				LR	LR	07 14 09.9	
	comp=N,308nm,21.6s,baz=46,slow=39						
MJAR	Matsushiro Arr	10.34	229		Pn	07 09 49.6	-0.9
GRNR	Gornyy	10.50	316	↑i PN	Pn	07 09 54.9	+2.4
GRNR				pmax	pmax		
	comp=E,10.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,460nm,14.0s						
GRNR	Gornyy	10.50	316	eP	Pn	07 09 54.9	+2.4
NKL	Nikolayevsk	10.56	336	eP	Pn	07 09 55.3	+2.1
PEA0B	Petropavlovsk-	11.38	31		Pn	07 10 04.6	0.0
PEA0B	Petropavlovsk-	11.38	31	cePN	Pn	07 10 04.7	+0.1
PETK	Petropavlovsk-	11.38	31	P	Pn	07 10 03.7	-0.9
	comp=Z,220nm,0.6s,baz=198,slow=10,SNR=64						
PETK				LR	LR	07 14 45.0	
	comp=Z,381nm,19.8s,baz=222,slow=39						
PETK	Petropavlovsk-	11.38	31		Pn	07 10 04.4	-0.2
USRK	Ussuriysk Ar.	11.49	278	P	Pn	07 10 05.2	-0.9
	comp=Z,16nm,0.8s,baz=86,slow=13,SNR=14						
USRK				LR	LR	07 14 27.5	
	comp=Z,582nm,21.7s,baz=91,slow=37						
USRK	Ussuriysk Ar.	11.49	278		Pn	07 10 07.1	+1.0
USRK	Ussuriysk Ar.	11.49	278	PN	Pn	07 10 07.1	+1.0
USRK	Ussuriysk Ar.	11.49	278	eP	Pn	07 10 07.1	+1.0
USA0B	Ussuriysk Arra	11.49	278		Pn	07 10 07.2	+1.1
USA0B	Ussuriysk Arra	11.49	278	PN	Pn	07 10 07.2	+1.1
JGF	Kuroka	11.50	229	P	Pn	07 10 07.5	+1.2
JGF	Kuroka	11.50	229		Pn	07 10 06.1	-0.2
JGF	Kuroka	11.50	229	P	Pn	07 10 06.0	-0.3
PET	Petropavlovsk	11.69	34	Pn	Pn	07 10 08.7	0.0
PET	Petropavlovsk	11.69	34	ePN	Pn	07 10 07.8	-0.9
PET				pmax	p

KLR	**Kul'dur**	**12.41**	**302**	*ce*PN	**Pn**	**07 10 21.2**	**+2.6**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KLR	**Kul'dur**	**12.41**	**302**	*e*P	**Pn**	**07 10 21.2**	**+2.6**
MDJ	**Mudanjiang**	**13.19**	**280**	Pn	**Pn**	**07 10 29.9**	**+0.7**
MDJ	**Mudanjiang**	**13.19**	**280**	P	**Pn**	**07 10 29.7**	**+0.5**
MDJ				pP	P	07 10 37.4	-0.4
MDJ				S	**Sn**	**07 12 56.1**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,12nm,0.7s						
MDJ				L	L		
	comp=Z,320nm,19.8s						
MDJ				L	L		
	comp=Z,370nm,19.5s						
MDJ				L	L		
	comp=Z,930nm,23.4s						
MDJ	**Mudanjiang**	**13.19**	**280**	P	**Pn**	**07 10 30.3**	**+1.0**
BNX	**BinXian**	**14.71**	**285**	⇑P	**Pn**	**07 10 49.1**	**-0.6**
BNX				S	**Sn**	**07 13 30.3**	**-1.0**
BNX				pmax	pmax		
	comp=Z,19nm,0.8s						
BNX				pmax	pmax		
	comp=Z,180nm,6.0s						
BNX				L	L		
	comp=Z,350nm,13.3s						
BNX				L	L		
	comp=Z,400nm,15.2s						
BNX				L	L		
	comp=Z,640nm,23.8s						
MA2	**Magadan**	**15.94**	**5**	P	**Pn**	**07 11 05.1**	**-0.4**
	comp=Z,124nm,0.6s,baz=186,slow=9.5,SNR=42						
MA2				LR	LR	07 16 55.4	
	comp=Z,414nm,20.6s,baz=190,slow=36						
MA2	**Magadan**	**15.94**	**5**	P	**Pn**	**07 11 05.2**	**-0.3**
MA2	**Magadan**	**15.94**	**5**	Pn	**Pn**	**07 11 04.6**	**-0.9**
MA2				IAmb	IAmb	07 11 08.7	
	comp=Z,149nm,0.7s						
MA2	**Magadan**	**15.94**	**5**	*ce*P	**Pn**	**07 11 05.5**	**0.0**
MA2				pmax	pmax		
	comp=Z,152nm,0.7s						
MA2	**Magadan**	**15.94**	**5**	P	**Pn**	**07 11 04.6**	**-0.9**
	comp=Z,2µmcomp=Z,221nm,0.8s						
MA2	**Magadan**	**15.94**	**5**	P	**Pn**	**07 11 05.2**	**-0.3**
MA2	**Magadan**	**15.94**	**5**	*e*P	**Pn**	**07 11 05.5**	**0.0**
CN2	**Changchun**	**16.23**	**278**	*e*P	**Pn**	**07 11 07.6**	**-1.6**
CN2				*e*S	Sn	07 13 56.1	-12
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				L	L		
	comp=Z,400nm,15.0s						
CN2				L	L		
	comp=Z,300nm,15.0s						
CN2				L	L		
	comp=Z,400nm,16.0s						
KSRS	**Korea Array**	**16.42**	**254**	P	**Pn**	**07 11 11.3**	**-0.3**
	comp=Z,10nm,0.8s,baz=63,slow=12,SNR=36						
KSRS				PcP	**PcP**	**07 16 02.5**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=16,slow=1.1,SNR=9.9						
KSRS				pPcP		07 16 20.4	
	comp=Z,2.6nm,0.7s,baz=353,slow=0.9,SNR=7.2						
KS19	**Wonju Array Si**	**16.44**	**255**	Pn	**Pn**	**07 11 11.4**	**-0.5**
KSAR	**Wonju Array Be**	**16.45**	**254**	Pn	**Pn**	**07 11 11.2**	**-0.9**
KSAR	**Wonju Array Be**	**16.45**	**254**	P	**Pn**	**07 11 11.2**	**-0.9**
KSAR	**Wonju Array Be**	**16.45**	**254**	*e*P	**Pn**	**07 11 11.2**	**-0.9**
ZEA	**Zeya**	**16.84**	**314**	*e*P	**P**	**07 11 17.9**	**-0.4**
ZEA				*e*		07 14 23.9	
ZEA				pmax	pmax		
	comp=E,100nm,3.9s						
ZEA				pmax	pmax		
	comp=Z,200nm,3.6s						
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.1s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=N,100nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
ZEA	**Zeya**	**16.84**	**314**	*e*P	**P**	**07 11 17.9**	**-0.4**
JNU	**Nakatsue**	**17.02**	**237**	LR	LR	07 18 02.9	
	comp=Z,260nm,21.2s,baz=40,slow=37						
JNU	**Nakatsue**	**17.02**	**237**	P	**P**	**07 11 20.1**	**-0.4**
JCJ	**Chichijima**	**17.26**	**197**	S	Sn	07 14 20.9	-12
	comp=Z,77nm,0.4s,baz=93,slow=23,SNR=9.4						
JCJ				LR	LR	07 16 58.5	
	comp=Z,180nm,22.0s,baz=54,slow=33						
INCN	**Inchon**	**17.31**	**256**	P	**Pn**	**07 11 22.5**	**-0.3**
INCN	**Inchon**	**17.31**	**256**	P	**Pn**	**07 11 22.5**	**-0.3**
INCN				pmax	pmax		
	comp=Z,16nm,0.5s						
INCN	**Inchon**	**17.31**	**256**	*e*P	**Pn**	**07 11 22.5**	**-0.3**
TJN	**Taejon**	**17.35**	**252**	Pn	**Pn**	**07 11 22.1**	**-1.1**
TJN	**Taejon**	**17.35**	**252**	P	**Pn**	**07 11 22.1**	**-1.1**
TJN				pmax	pmax		
	comp=Z,70nm,1.0s						
SNY	**Shenyang**	**17.96**	**272**	⇓P	**P**	**07 11 31.7**	**+1.0**
SNY				S	**Sn**	**07 14 43.2**	**-6.8**
SNY				pmax	pmax		
	comp=Z,35nm,0.9s						
SNY				pmax	pmax		
	comp=Z,86nm,4.0s						
SNY				L	L		
	comp=Z,160nm,11.7s						
SNY				L	L		
	comp=Z,350nm,16.5s						
SNY				L	L		
	comp=Z,330nm,21.1s						
SEY	**Seymchan**	**19.39**	**6**	P	**P**	**07 11 45.5**	**-0.8**
	comp=Z,78nm,0.8s,baz=182,slow=8.6,SNR=95						
SEY	**Seymchan**	**19.39**	**6**	*ce*P	**P**	**07 11 45.6**	**-0.6**
SEY				pmax	pmax		
	comp=Z,105nm,0.8s						
SHEM	**Shemya Is, Ala**	**19.52**	**53**	P	**Pn**	**07 11 49.3**	**-0.1**
	comp=Z,57nm,0.9s,baz=320,slow=8.6,SNR=3.8						
SMY	**Shemya**	**19.52**	**53**	P	**P**	**07 11 47.1**	**-0.6**
SMY				IAmb	IAmb	07 11 51.9	
	comp=Z,162nm,1.2s						
SMY	**Shemya**	**19.52**	**53**	P	**P**	**07 11 47.2**	**-0.6**
SMY				pmax	pmax		
	comp=Z,162nm,1.2s						
HIA	**Hailar**	**20.10**	**296**	P	**P**	**07 11 54.2**	**+0.1**
HIA	**Hailar**	**20.10**	**296**	P	**P**	**07 11 54.2**	**+0.1**
HIA				pmax	pmax		
	comp=Z,26nm,0.6s						
HIA	**Hailar**	**20.10**	**296**	P	**P**	**07 11 53.1**	**-1.0**
HILR	**Hailar Array B**	**20.12**	**297**	P	**P**	**07 11 52.2**	**-2.1**
	comp=Z,23nm,0.5s,baz=94,slow=9.8,SNR=30						
HILR				LR	LR	07 20 31.6	
	comp=Z,407nm,19.0s,baz=105,slow=39						
DL2	**Dalian**	**20.29**	**265**	P	Pn	07 11 57.7	-0.9
DL2				pmax	pmax		
	comp=Z,41nm,0.8s						
DL2				pmax	pmax		
	comp=Z,180nm,5.7s						
DL2				L	L		
	comp=Z,150nm,18.6s						
DL2				L	L		
	comp=Z,280nm,18.7s						
DL2				L	L		
	comp=Z,290nm,14.1s						
YAK	**Yakutsk**	**21.22**	**336**	P	**P**	**07 12 02.2**	**-3.9**
	comp=Z,470nm,0.6s,baz=122,slow=0.3,SNR=66						
YAK				LR	LR	07 20 47.7	
	comp=Z,476nm,19.5s,baz=134,slow=38						
YAK	**Yakutsk**	**21.22**	**336**	*e*P	**P**	**07 12 02.0**	**-4.0**
YAK				*e*		07 12 20.2	
YAK				*e*S	**S**	**07 15 54.9**	**-4.0**
YAK				*e*		07 16 08.0	
YAK				*e*SS	**SnSn**	**07 16 16.1**	**-7.5**
YAK				*e*SSS	SSS	07 16 25.8	
YAK				*e*		07 23 31.0	
YAK				pmax	pmax		
	comp=Z,64nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.3s						
YAK				pmax	pmax		
	comp=N,13nm,0.9s						
YAK				smax	smax		
	comp=E,50nm,1.5s						
YAK				smax	smax		
	comp=N,36nm,0.9s						
YAK				MLR	MLR		
	comp=Z,614nm,24.0s						
YAK				MLR	MLR		
	comp=E,162nm,17.0s						
YAK				MLR	MLR		
	comp=N,234nm,19.0s						
XLT	**XiLinHaoTe**	**22.90**	**281**	*e*P	**P**	**07 12 22.7**	**-1.6**
XLT				pP	pP	07 12 36.8	+0.9
XLT				S	**S**	**07 16 31.0**	**+0.6**
XLT				pmax	pmax		
	comp=N,45nm,0.8s						
XLT				pmax	pmax		
	comp=N,110nm,5.0s						
XLT				L	L		
	comp=N,24nm,12.3s						
XLT				L	L		
	comp=N,230nm,15.8s						
XLT				L	L		
	comp=N,330nm,17.1s						
JOW	**Kunigami**	**23.19**	**230**	LR	LR	07 21 21.4	
	comp=N,96nm,21.7s,baz=124,slow=36						
BJI2	**Beijing**	**23.85**	**272**	P	**P**	**07 12 32.8**	**-0.5**
BJI2				sP	**pP**	**07 12 45.8**	**-0.1**
BJI2				S	**S**	**07 16 39.6**	**-6.1**
BJI2				pmax	pmax		
	comp=N,23nm,0.8s						
BJI2				L	L		
	comp=N,75nm,13.5s						
BJI2				L	L		
	comp=N,110nm,19.3s						
BJI2				L	L		
	comp=N,180nm,18.5s						
BJT	**Baijiatuan**	**23.85**	**272**	P	**P**	**07 12 33.1**	**-0.2**
BJT	**Baijiatuan**	**23.85**	**272**	P	**P**	**07 12 33.1**	**-0.2**
BJT				pmax	pmax		
	comp=Z,36nm,0.8s						
BJT	**Baijiatuan**	**23.85**	**272**	P	**P**	**07 12 32.9**	**-0.4**
KIWB	**Kanaga Island**	**24.63**	**58**	P	**P**	**07 12 39.4**	**-0.9**
KIWB				IAmb	IAmb	07 13 01.3	
	comp=Z,74nm,1.4s						
TIA	**Tai'an**	**24.67**	**263**	P	**P**	**07 12 41.1**	**+0.3**
TIA				S	**S**	**07 17 00.4**	**+1.5**
TIA				pmax	pmax		
	comp=Z,39nm,0.9s						
TIA				pmax	pmax		
	comp=Z,150nm,3.6s						
ADK	**Adak**	**24.92**	**58**	P	**P**	**07 12 44.0**	**+1.1**
ADK	**Adak**	**24.92**	**58**	P	**P**	**07 12 42.3**	**-0.6**
ADK				IAmb	IAmb	07 13 00.5	
	comp=Z,161nm,1.6s						
ADK	**Adak**	**24.92**	**58**	P	**P**	**07 12 42.3**	**-0.6**
ADK				pmax	pmax		
	comp=Z,161nm,1.7s						
BOD	**Bodaibo**	**25.32**	**316**	*e*P	**P**	**07 12 42.6**	**-3.9**
BOD				pmax	pmax		
	comp=Z,27nm,0.9s						
GSTR	**Great Sitkin T**	**25.32**	**58**	P	**P**	**07 12 44.3**	**-2.3**
NJ2	**Nanjing**	**25.61**	**253**	*e*P	**P**	**07 12 49.4**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,77nm,0.8s						
HNS	**HongShan**	**25.89**	**267**	⇑P	**P**	**07 12 52.6**	**+0.7**
HNS				pmax	pmax		
	comp=Z,28nm,1.0s						
HNS				L	L		
	comp=Z,180nm,16.9s						
HNS				L	L		
	comp=Z,190nm,17.3s						
BILL	**Bilibino**	**26.21**	**16**		**P**	**07 12 54.5**	**+0.1**
BILL				IAmb	IAmb	07 12 56.3	
	comp=Z,40nm,0.9s						
BILL	**Bilibino**	**26.21**	**16**	*ce*P	**P**	**07 12 53.1**	**-1.3**
BILL				pmax	pmax		
	comp=Z,64nm,1.3s						
BILL	**Bilibino**	**26.21**	**16**	*e*P	**P**	**07 12 53.1**	**-1.3**
BTO2	**Baotou**	**28.16**	**277**	*e*P	**P**	**07 13 13.2**	**+0.8**
BTO2				pP	**pP**	**07 13 27.7**	**+2.6**
BTO2				sP	**sP**	**07 13 35.0**	**+4.0**
BTO2				PP	**PnPn**	**07 14 04.8**	**+2.7**
BTO2				S	**S**	**07 17 51.9**	**-2.3**
BTO2				sS	**sS**	**07 18 17.2**	**+2.4**
BTO2				SS	**SnSn**	**07 19 18.9**	**+5.3**
BTO2				pmax	pmax		
	comp=Z,35nm,1.1s						
BTO2				pmax	pmax		
	comp=Z,290nm,8.2s						
BTO2				L	L		
	comp=Z,520nm,18.1s						
BTO2				L	L		
	comp=Z,560nm,21.0s						
BTO2				L	L		
	comp=Z,780nm,18.2s						
ULN	**Ulaanbaatar**	**28.54**	**293**		**P**	**07 13 16.0**	**+0.3**
ULN				IAmb	IAmb	07 13 17.1	
	comp=Z,50nm,0.9s						
ULN	**Ulaanbaatar**	**28.54**	**293**	*ce*P	**P**	**07 13 16.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,66nm,1.0s						
ULN	**Ulaanbaatar**	**28.54**	**293**	P	**P**	**07 13 16.6**	**+0.8**
ULN	**Ulaanbaatar**	**28.54**	**293**	P	**P**	**07 13 16.3**	**+0.6**
ULN	**Ulaanbaatar**	**28.54**	**293**	P	**P**	**07 13 16.2**	**+0.4**
ULN	**Ulaanbaatar**	**28.54**	**293**	*e*P	**P**	**07 13 16.0**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**28.74**	**140**	T	T	07 44 09.0	
	baz=331,slow=76,SNR=918						
H11N1	**WAKE ISLAND Hy**	**28.75**	**140**	T	T	07 44 04.2	
	baz=331,slow=76,SNR=850						
H11N3	**WAKE ISLAND Hy**	**28.76**	**140**	T	T	07 44 07.2	
	baz=331,slow=76,SNR=876						
LYN	**LuoYang**	**28.80**	**264**	P	**P**	**07 13 19.6**	**+1.6**
LYN				pmax	pmax		
	comp=Z,24nm,1.1s						
LYN				pmax	pmax		
	comp=Z,130nm,3.8s						
SONM	**Songino Array**	**28.98**	**293**	P	**P**	**07 13 20.0**	**+0.3**
	comp=Z,25nm,0.7s,baz=83,slow=8.9,SNR=84						
SONM				LR	LR	07 25 59.3	
	comp=Z,429nm,19.3s,baz=90,slow=39						
	comp=Z,25nm,0.7s						
SONM	**Songino Array**	**28.98**	**293**		**P**	**07 13 20.0**	**+0.3**
SONM				IAmb	IAmb	07 13 21.0	
	comp=Z,34nm,0.9s						
SONM	**Songino Array**	**28.98**	**293**	P	**P**	**07 13 20.0**	**+0.3**
TIXI	**Tiksi**	**29.47**	**348**	LR	LR	07 26 57.8	
	comp=Z,177nm,18.3s,baz=174,slow=40						
TIXI	**Tiksi**	**29.47**	**348**	*ce*P	**P**	**07 13 19.9**	**-3.6**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
WHN	**Wuhan**	**29.61**	**255**	P	**P**	**07 13 25.5**	**+0.3**
WHN				pmax	pmax		
	comp=Z,54nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**29.72**	**142**	T	T	07 45 15.8	
	baz=332,slow=76,SNR=2510						
H11S3	**WAKE ISLAND Hy**	**29.73**	**142**	T	T	07 45 12.9	
	baz=332,slow=76,SNR=2039						
H11S2	**WAKE ISLAND Hy**	**29.74**	**142**	T	T	07 45 17.2	
	baz=332,slow=76,SNR=2335						
GUMO	**Guam**	**30.17**	**186**	LR	LR	07 24 05.8	
	comp=Z,92nm,21.4s,baz=26,slow=33						
TLY	**Talaya**	**30.43**	**301**	LR	LR	07 26 55.9	
	comp=Z,413nm,18.2s,baz=84,slow=39						
TLY	**Talaya**	**30.43**	**301**	P	**P**	**07 13 31.5**	**-0.7**
TLY	**Talaya**	**30.43**	**301**	*ce*P	**P**	**07 13 33.2**	**+1.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY	**Talaya**	**30.43**	**301**	*e*P	**P**	**07 13 33.3**	**+1.0**
MIDW	**Midway**	**31.81**	**108**	P	**P**	**07 13 43.2**	**-1.3**
MOY	**Mondy**	**32.07**	**301**	*e*P	**P**	**07 13 46.4**	**-0.4**
MOY				pmax	pmax		
	comp=Z,17nm,1.6s						
MOY	**Mondy**	**32.07**	**301**	*e*P	**P**	**07 13 46.4**	**-0.4**
TNA	**Tin City**	**32.55**	**33**	P	**P**	**07 13 48.6**	**-2.1**
TNA	**Tin City**	**32.55**	**33**	P	**P**	**07 13 52.1**	**+1.5**
	baz=250						
K13K	**Kusilvak Mount**	**32.96**	**40**	P	**P**	**07 13 55.5**	**+1.2**
	baz=259						
F14K	**Arctic Creek**	**33.15**	**33**	P	**P**	**07 13 57.5**	**+1.6**
	baz=252						
ENH	**Enshi**	**33.20**	**259**	P	**P**	**07 13 56.4**	**-0.4**
ENH				IAmb	IAmb	07 13 57.4	
	comp=Z,21nm,0.6s						
ANM	**Nome**	**33.27**	**35**	P	**P**	**07 13 58.6**	**+1.6**
	baz=254						
M13K	**Dall Lake**	**33.34**	**43**	P	**P**	**07 13 58.8**	**+1.3**
	baz=262						
L14K	**Kuka Creek**	**33.79**	**41**	P	**P**	**07 14 02.9**	**+1.4**
L14K				IAmb	IAmb	07 14 04.4	
	comp=Z,31nm,0.8s						
L14K	**Kuka Creek**	**33.79**	**41**	P	**P**	**07 14 02.8**	**+1.3**
	baz=262						
F15K	**North Star Dit**	**33.88**	**33**	P	**P**	**07 14 01.9**	**-0.4**
F15K	**North Star Dit**	**33.88**	**33**	P	**P**	**07 14 03.6**	**+1.3**
	baz=253						
G15K	**Niukluk**	**33.93**	**34**	P	**P**	**07 14 03.8**	**+1.1**
	baz=255,SNR=8.9						
M14K	**Bethel**	**34.06**	**42**	P	**P**	**07 14 05.2**	**+1.4**
M14K	**Bethel**	**34.06**	**42**	P	**P**	**07 14 05.4**	**+1.6**
	baz=263,SNR=9.5						
N14K	**Kuskokwak Cree**	**34.11**	**44**	P	**P**	**07 14 05.6**	**+1.4**
	baz=264						
O14K	**Tigyukauivet M**	**34.27**	**45**	P	**P**	**07 14 06.6**	**+1.0**
	baz=266						
LZH	**Lanzhou**	**34.33**	**272**	P	**P**	**07 14 07.8**	**+1.1**
LZH				pP	pP	07 14 19.4	-0.2
LZH				sP	sP	07 14 27.7	+2.2
LZH				pmax	pmax		
	comp=Z,67nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.5s						
LZH				L	L		
	comp=Z,260nm,16.5s						
LZH				L	L		
	comp=Z,210nm,15.6s						
LZH				L	L		
	comp=Z,230nm,16.8s						
KNGR	**Kungurtug, Tuv**	**34.37**	**300**	*i*P	**P**	**07 14 06.0**	**-0.9**
KNGR				pmax	pmax		
	comp=Z,12nm,0.8s						
L15K	**Ungalak Mounta**	**34.40**	**41**	P	**P**	**07 14 08.2**	**+1.3**
	baz=262						
C16K	**Lisburne Hills**	**34.47**	**29**	P	**P**	**07 14 07.8**	**+0.6**
C16K	**Lisburne Hills**	**34.47**	**29**	P	**P**	**07 14 07.6**	**+0.3**
	baz=249						
K15K	**Wolf Creek Mou**	**34.47**	**40**	P	**P**	**07 14 09.1**	**+1.7**
	baz=261						
LZDM	**Lanzhou Array**	**34.50**	**272**	P	**P**	**07 14 09.1**	**+0.8**
	comp=Z,24nm,0.9s,baz=71,slow=6.4,SNR=9.9						
	comp=Z,24nm,0.9s						
H16K	**Elim**	**34.59**	**35**	P	**P**	**07 14 10.0**	**+1.5**
	baz=257,SNR=11						
SDPT	**Sand Point**	**34.64**	**52**	P	**P**	**07 14 10.1**	**+1.2**
	baz=272						
M15K	**Kasigluk River**	**34.67**	**43**	P	**P**	**07 14 10.5**	**+1.3**
	baz=264,SNR=20						
N15K	**Kwethluk River**	**34.92**	**43**	IAmb	IAmb	07 14 15.7	
	comp=Z,50nm,1.1s						
N15K	**Kwethluk River**	**34.92**	**43**	P	**P**	**07 14 12.9**	**+1.5**
	baz=266,SNR=12						
O15K	**Ungalikthiuk R**	**35.00**	**45**		**P**	**07 14 12.2**	**+0.2**
O15K				IAmb	IAmb	07 14 14.5	
	comp=Z,28nm,1.0s						
O15K	**Ungalikthiuk R**	**35.00**	**45**	P	**P**	**07 14 13.0**	**+0.9**
	baz=267						
J16K	**Anvik River**	**35.05**	**38**	P	**P**	**07 14 13.9**	**+1.6**
	baz=261						
D17K	**Noatak River**	**35.08**	**30**	P	**P**	**07 14 13.6**	**+1.0**
	baz=252,SNR=15						
I17K	**Unalakleet**	**35.11**	**37**	IAmb	IAmb	07 14 16.5	
	comp=Z,30nm,1.0s						
I17K	**Unalakleet**	**35.11**	**37**	P	**P**	**07 14 14.4**	**+1.5**
	baz=260,SNR=7.7						
S14K	**Fog Glacier**	**35.13**	**50**	P	**P**	**07 14 15.1**	**+1.9**
	baz=272						
CHNA	**Chernabura Isl**	**35.18**	**53**	P	**P**	**07 14 14.8**	**+1.2**
	baz=274						
CNBA	**Chernabura Isl**	**35.18**	**53**	P	**P**	**07 14 13.1**	**-0.5**
RDOG	**Red Dog Mine**	**35.25**	**30**	IAmb	IAmb	07 14 16.0	
	comp=Z,25nm,0.9s						
RDOG	**Red Dog Mine**	**35.25**	**30**	P	**P**	**07 14 15.0**	**+0.9**
	baz=252						
C17K	**DeLong Mountai**	**35.29**	**29**	P	**P**	**07 14 15.2**	**+0.8**
	baz=251						
L16K	**Owhat River**	**35.36**	**41**	IAmb	IAmb	07 14 17.4	
	comp=Z,25nm,1.0s						
L16K	**Owhat River**	**35.36**	**41**	P	**P**	**07 14 16.4**	**+1.3**
	baz=264,SNR=13						
E17K	**Hotham Inlet**	**35.36**	**31**	P	**P**	**07 14 16.4**	**+1.4**
	baz=254,SNR=18						
F17K	**Baldwin Pennin**	**35.42**	**33**	P	**P**	**07 14 17.3**	**+1.8**
	baz=256,SNR=20						
G17K	**Kiwalik Mounta**	**35.44**	**34**	P	**P**	**07 14 17.4**	**+1.7**
	baz=258,SNR=37						
M16K	**Timber Creek**	**35.55**	**42**	IAmb	IAmb	07 14 19.9	
	comp=Z,40nm,1.1s						
M16K	**Timber Creek**	**35.55**	**42**	P	**P**	**07 14 18.3**	**+1.6**
	baz=266,SNR=14						
N16K	**Nishlik Lake**	**35.60**	**43**	P	**P**	**07 14 18.9**	**+1.7**
	baz=266,SNR=32						
H17K	**Granite Mounta**	**35.63**	**35**	IAmb	IAmb	07 14 20.4	
	comp=Z,57nm,1.2s						
H17K	**Granite Mounta**	**35.63**	**35**	P	**P**	**07 14 19.1**	**+1.7**
	baz=259,SNR=15						
J17K	**VABM Dome**	**35.74**	**38**	IAmb	IAmb	07 14 22.5	
	comp=Z,35nm,1.0s						
J17K	**VABM Dome**	**35.74**	**38**	P	**P**	**07 14 20.2**	**+1.9**
	baz=262,SNR=12						
CHGN	**Chignik**	**35.76**	**50**	P	**P**	**07 14 18.1**	**-0.5**
CHGN				IAmb	IAmb	07 14 20.9	
	comp=Z,34nm,1.4s						
CHGN	**Chignik**	**35.76**	**50**	P	**P**	**07 14 19.9**	**+1.3**
	baz=273						
GTA2	**Gaotai**	**35.85**	**280**	P	**P**	**07 14 20.5**	**+0.7**
GTA2				PcP	**PcP**	**07 16 47.5**	**+1.3**
GTA2				pmax	pmax		
	comp=Z,30nm,1.3s						
GTA2				L	L		
	comp=Z,150nm,13.1s						
GTA2				L	L		
	comp=Z,180nm,14.4s						
GTA2				L	L		
	comp=Z,140nm,14.1s						
O16K	**Kokwok River B**	**35.90**	**45**	P	**P**	**07 14 21.0**	**+1.3**
	baz=268,SNR=6.1						
E18K	**Tukpahlearik C**	**35.91**	**31**	IAmb	IAmb	07 14 23.0	
	comp=Z,22nm,0.5s						
E18K	**Tukpahlearik C**	**35.91**	**31**	P	**P**	**07 14 20.9**	**+1.2**
	baz=255,SNR=16						
P16K	**Nushagak River**	**35.94**	**46**	IAmb	IAmb	07 14 38.3	
	comp=Z,42nm,0.9s						
P16K	**Nushagak River**	**35.94**	**46**	P	**P**	**07 14 21.8**	**+1.8**
	baz=269						
L17K	**Donlin**	**35.95**	**40**	P	**P**	**07 14 22.3**	**+2.1**
	baz=265,SNR=14						
K17K	**Iditarod**	**36.01**	**39**	P	**P**	**07 14 22.6**	**+1.9**
	baz=264,SNR=8.0						
F18K	**Selawik**	**36.08**	**33**	P	**P**	**07 14 22.8**	**+1.7**
	baz=257,SNR=21						
M17K	**Holitna River**	**36.31**	**42**	P	**P**	**07 14 25.2**	**+2.0**
	baz=266,SNR=22						
H18K	**Honhosa River**	**36.31**	**35**	P	**P**	**07 14 25.0**	**+1.7**
	baz=260,SNR=29						
G18K	**Tagagawik**	**36.33**	**34**	P	**P**	**07 14 24.9**	**+1.6**
	baz=259,SNR=74						
N17K	**Nushagak Hills**	**36.39**	**43**	IAmb	IAmb	07 14 27.8	
	comp=Z,18nm,0.7s						
N17K	**Nushagak Hills**	**36.39**	**43**	P	**P**	**07 14 25.4**	**+1.5**
	baz=268,SNR=17						
O17K	**Koliganek Bris**	**36.41**	**44**	P	**P**	**07 14 25.5**	**+1.5**
	baz=269,SNR=18						
A19K	**Wainwright**	**36.56**	**26**	P	**P**	**07 14 26.2**	**+1.0**
	baz=251						
Q16K	**King Salmon**	**36.64**	**46**	P	**P**	**07 14 27.2**	**+1.2**
	baz=271						
L18K	**Granite Mounta**	**36.71**	**40**	IAmb	IAmb	07 14 29.8	
	comp=Z,24nm,0.9s						
L18K	**Granite Mounta**	**36.71**	**40**	P	**P**	**07 14 28.8**	**+2.1**
	baz=266,SNR=12						
P17K	**Kvichak River**	**36.74**	**45**	IAmb	IAmb	07 15 05.8	
	comp=Z,19nm,0.7s						
P17K	**Kvichak River**	**36.74**	**45**	P	**P**	**07 14 27.6**	**+0.7**
	baz=270						
R17L	**Mt. Peulik Vol**	**36.83**	**48**	P	**P**

baz=269,SNR=26
Q17K Contact Creek 37.05 47 P P 07 14 30.8 +1.1
baz=272
D19K Kuna River 37.09 30 P P 07 14 30.7 +0.9
baz=256,SNR=79
M18K Stony River 37.09 41 P P 07 14 31.6 +1.8
baz=268,SNR=15
H19K Roundabout Mou 37.17 35 P P 07 14 32.3 +1.9
baz=262
E19K Redstone River 37.19 31 P P 07 14 32.3 +1.6
baz=258
J19K Poorman 37.34 37 IAmb IAmb 07 14 35.3
comp=Z,29nm,0.9s
J19K Poorman 37.34 37 P P 07 14 33.3 +1.3
baz=265,SNR=30
CHIR Chirikof Islan 37.36 51 P P 07 14 32.8 +0.6
baz=275
P18K Big Mountain, 37.36 45 P P 07 14 33.7 +1.5
baz=271,SNR=15
O18K Koktuh Hills 37.37 44 IAmb IAmb 07 14 36.7
comp=Z,22nm,1.0s
O18K Koktuh Hills 37.37 44 P P 07 14 33.7 +1.5
baz=270,SNR=16
Q18K Katmai Hardscr 37.50 46 P P 07 14 34.2 +0.7
baz=272
L19K White Mountain 37.57 40 P P 07 14 35.5 +1.5
baz=268,SNR=11
D20K Etivluk River 37.67 29 P P 07 14 35.7 +1.0
baz=258,SNR=80
F20K Avaraart Lake 37.69 32 IAmb IAmb 07 14 36.6
comp=Z,24nm,0.7s
F20K Avaraart Lake 37.69 32 P P 07 14 36.1 +1.2
baz=260
N19K Bonanza Creek 37.72 43 IAmb IAmb 07 14 38.2
comp=Z,19nm,0.9s
N19K Bonanza Creek 37.72 43 P P 07 14 37.1 +1.7
baz=270,SNR=14
B20K Meade River 37.79 27 P P 07 14 36.3 +0.7
baz=255
O19K Port Alsworth 37.81 44 P P 07 14 36.9 +1.0
baz=271
H20K Anotleneega Mo 37.81 35 P P 07 14 37.4 +1.5
baz=263,SNR=54
I20K Naaghedeneel 37.91 36 IAmb IAmb 07 14 45.1
comp=Z,40nm,1.0s
I20K Naaghedeneel 37.91 36 P P 07 14 38.5 +1.8
baz=265,SNR=9.7
K20K Telida 37.98 38 IAmb IAmb 07 14 41.5
comp=Z,22nm,1.1s
K20K Telida 37.98 38 P P 07 14 39.1 +1.7
baz=267,SNR=12
J20K Nowinta River 38.00 37 P P 07 14 39.2 +1.6
baz=266,SNR=29
SII Sitkinak Islan 38.09 49 P P 07 14 38.7 +0.3
SII Sitkinak Islan 38.09 49 S S 07 20 29.3 +1.9
SII Sitkinak Islan 38.09 49 P P 07 14 38.4 +0.1
baz=276
Q19K Cape Douglas, 38.19 46 IAmb IAmb 07 14 48.1
comp=Z,54nm,1.2s
Q19K Cape Douglas, 38.19 46 P P 07 14 39.4 +0.2
baz=273
A21K Barrow 38.30 25 P P 07 14 40.2 +0.2
baz=254,SNR=7.9
IMAR Indian Mountai 38.33 34 P P 07 14 41.0 +0.8
P19K Oil Pt 38.37 44 P P 07 14 41.8 +1.0
baz=272
M20K Styx River 38.38 41 P P 07 14 42.6 +1.7
baz=270
C21K Knifeblade Rid 38.41 29 P P 07 14 42.2 +1.3
baz=259,SNR=54
G21K Allakaket 38.48 33 P 07 14 43.2 +1.7
G21K Allakaket 38.48 33 P P 07 14 43.3 +1.7
baz=263,SNR=115
OHAK Old Harbor 38.51 48 P P 07 14 42.0 +0.1
OHAK Old Harbor 38.51 48 P P 07 14 41.9 0.0
baz=275
B21K Ikpikpuk River 38.56 28 P P 07 14 43.0 +0.9
baz=258
RED Redoubt Volcan 38.57 43 IAmb IAmb 07 14 46.5
comp=Z,19nm,0.8s
E21K Killik River 38.57 30 IAmb IAmb 07 14 45.1
comp=Z,38nm,0.8s
E21K Killik River 38.57 30 P P 07 14 43.1 +0.7
baz=260
F21K Alatna River 38.58 32 P P 07 14 43.5 +1.1
baz=262
O20K Slope Mountain 38.66 44 P P 07 14 44.2 +1.0
baz=272,SNR=5.1
H21K Melozitna Rive 38.69 35 P P 07 14 44.7 +1.4
baz=265,SNR=80
A22K Sinclair Lake 38.74 26 P P 07 14 44.0 +0.4
baz=256
CHUM Lake Minchumin 38.79 38 P P 07 14 45.9 +1.8
baz=268
PPLA Purkeypile 38.82 39 IAmb IAmb 07 14 53.9
comp=Z,52nm,1.2s
PPLA Purkeypile 38.82 39 P P 07 14 46.7 +2.1
baz=269,SNR=19
SPCR Spurr Chakacha 38.83 42 P P 07 14 46.1 +1.5
baz=271,SNR=7.0
KDAK Kodiak Island 38.84 47 P 07 14 44.7 +0.1
KDAK IAmb IAmb 07 14 45.7
comp=Z,28nm,0.8s
KDAK Kodiak Island 38.84 47 P P 07 14 44.7 +0.1
KDAK pmax pmax
comp=Z,28nm,0.8s
KDAK Kodiak Island 38.84 47 P P 07 14 44.7 +0.1
baz=275
KDAK Kodiak Island 38.84 47 P P 07 14 44.9 +0.4
CAST Castle Rocks 38.88 38 IAmb IAmb 07 14 49.1
comp=Z,28nm,0.9s
CAST Castle Rocks 38.88 38 P P 07 14 47.0 +2.0
baz=269,SNR=42
I21K Tanana 38.99 36 IAmb IAmb 07 14 48.9
comp=Z,41nm,1.0s
I21K Tanana 38.99 36 P P 07 14 47.8 +2.0
baz=266,SNR=31
B22K Teshekpuk Lake 39.10 27 P P 07 14 47.3 +0.6
baz=259,SNR=13
F22K John River 39.12 32 P P 07 14 48.5 +1.6
baz=264
SKT Skwentna 39.13 41 P P 07 14 48.2 +1.1
baz=271
HOM Homer 39.18 44 P P 07 14 48.1 +0.7
baz=274
H22K Ishtalitna Cre 39.29 34 IAmb IAmb 07 14 51.4
comp=Z,47nm,1.0s
H22K Ishtalitna Cre 39.29 34 P P 07 14 50.1 +1.7
baz=266,SNR=51
G22K Bettles 39.32 33 P P 07 14 49.9 +1.4
baz=265
CAPN Captain Cook N 39.35 43 P P 07 14 50.0 +1.1
baz=273
CNPM China Poot 39.39 45 P P 07 14 49.7 +0.4
KTH Kantishna Hill 39.40 38 IAmb IAmb 07 14 52.2
comp=Z,39nm,1.0s
L22K Petersville 39.48 40 IAmb IAmb 07 14 59.8
comp=Z,15nm,0.6s
L22K Petersville 39.48 40 P P 07 14 50.9 +0.9
baz=271,SNR=17
MLY Manley 39.51 36 IAmb IAmb 07 14 53.1
comp=Z,81nm,1.6s
MLY Manley 39.51 36 P P 07 14 52.0 +1.8
baz=268,SNR=40
NRIK Noril'sk 39.52 331 P P 07 14 47.7 -2.4
comp=Z,5.9nm,0.4s,baz=108,slow=6.0,SNR=8.1
NRIK PcP PcP 07 16 57.4 +0.7
comp=Z,7.1nm,0.5s,baz=9.3,slow=2.4,SNR=4.4
comp=Z,5.9nm,0.4s
NRIK Noril'sk 39.52 331 *i* P P 07 14 47.5 -2.6
NRIK pmax pmax
comp=Z,17nm,1.2s
BRLK Bradley Lake 39.55 44 IAmb IAmb 07 14 53.3
comp=Z,22nm,0.6s
BRSE Bradley Lake S 39.63 44 P P 07 14 51.9 +0.7
baz=274,SNR=11
TRF Thorofare Moun 39.69 38 P P 07 14 52.8 +0.9
baz=270,SNR=14
CUT Chulitna 39.72 40 P P 07 14 52.0 +0.2
CUT IAmb IAmb 07 15 02.6
comp=Z,25nm,0.6s
CUT Chulitna 39.72 40 P P 07 14 52.5 +0.6
baz=272
M22K Willow 39.81 41 P P 07 14 53.3 +0.7
baz=272
D23K Nanushuk River 39.84 30 P P 07 14 54.0 +1.1
baz=263,SNR=43
COLD Coldfoot 39.85 32 P P 07 14 54.5 +1.5
baz=266
G23K Bananza Creek 39.89 33 P P 07 14 54.7 +1.4
baz=266,SNR=111
C23K Itkillik River 39.97 28 P P 07 14 54.9 +1.0
baz=262,SNR=79
RC01 Rabbit Creek A 40.03 42 IAmb IAmb 07 14 56.1
comp=Z,30nm,0.7s
RC01 Rabbit Creek A 40.03 42 P P 07 14 55.0 +0.5
baz=274,SNR=25
H23K Yukon River 40.04 35 P P 07 14 56.7 +2.1
baz=268
O22K Cooper Landing 40.08 43 P P 07 14 54.6 -0.3
O22K Cooper Landing 40.08 43 P P 07 14 55.4 +0.5
baz=274
I23K Minto, Yukon-K 40.10 36 IAmb IAmb 07 14 58.6
comp=Z,112nm,1.7s
I23K Minto, Yukon-K 40.10 36 P P 07 14 56.7 +1.7
baz=269,SNR=36
E23K Chandalar 40.14 31 P P 07 14 57.0 +1.6
baz=265,SNR=84
TOLK Toolik Lake Re 40.20 30 P P 07 14 57.2 +1.3
baz=265,SNR=78
NEA2 Nenana 40.22 37 IAmb IAmb 07 14 59.0
comp=Z,30nm,0.6s
NEA2 Nenana 40.22 37 P P 07 14 57.5 +1.4
baz=270,SNR=17
SEW Seward 40.24 44 P P 07 14 56.4 +0.1
SEW IAmb IAmb 07 15 08.5
comp=Z,19nm,0.6s
SEW Seward 40.24 44 P P 07 14 56.4 +0.1
baz=275,SNR=8.3
QIZ Qiongzhong 40.27 244 P P 07 14 58.0 +1.0
QIZ S S 07 21 06.6 +5.7
QIZ L L
comp=Z,140nm,14.9s
QIZ L L
comp=Z,220nm,13.8s
QIZ L L
comp=Z,180nm,16.0s
PMR Palmer 40.29 41 P P 07 14 58.1 +1.5
PMR Palmer 40.29 41 P P 07 14 56.9 +0.3
baz=273,SNR=13
MCK McKinley 40.29 38 P P 07 14 57.6 +0.9
baz=271,SNR=11
GHO Glory Hole Cre 40.38 41 IAmb IAmb 07 15 07.8
comp=Z,28nm,0.9s
WAT1 Susitna Watana 40.49 39 P P 07 14 58.9 +0.5
baz=272
D24K Happy Valley 40.52 29 P P 07 14 59.6 +1.1
baz=265
E24K Your Creek 40.56 31 P P 07 15 00.7 +1.8
baz=266
C24K Franklin Bluff 40.62 29 P P 07 15 00.2 +1.0
baz=264
KNK Knik Glacier 40.62 41 IAmb IAmb 07 15 02.0
comp=Z,32nm,0.8s
KNK Knik Glacier 40.62 41 P P 07 15 00.4 +1.0
baz=274,SNR=16
WRH Wood River Hil 40.65 37 IAmb IAmb 07 15 03.0
comp=Z,24nm,0.7s
SML Sawmill 40.65 41 IAmb IAmb 07 15 03.4
comp=Z,60nm,1.0s
SML Sawmill 40.65 41 P P 07 15 00.5 +0.8
baz=274,SNR=32
H24K Noodor Dome 40.73 35 IAmb IAmb 07 15 03.5
comp=Z,48nm,1.0s
H24K Noodor Dome 40.73 35 P P 07 15 02.4 +2.1
baz=270,SNR=57
COLA College 40.74 36 P P 07 15 01.9 +1.6
COLA College 40.74 36 P P 07 15 01.8 +1.6
COLA IAmb IAmb 07 15 09.3
comp=Z,41nm,0.6s
COLA College 40.74 36 *i* P P 07 15 01.4 +1.1
COLA pmax pmax
comp=Z,33nm,0.8s
COLA College 40.74 36 P P 07 15 01.8 +1.6
baz=271
COLA College 40.74 36 P P 07 15 00.7 +0.4
COLA College 40.74 36 P P 07 15 01.8 +1.5
COLA sP sP 07 15 17.6 -1.0
F24K Squaw Lake 40.76 32 IAmb IAmb 07 15 02.9
comp=Z,39nm,0.8s
F24K Squaw Lake 40.76 32 P P 07 15 01.8 +1.3
baz=268,SNR=82
CCB Clear Creek Bu 40.77 36 IAmb IAmb 07 15 06.4
comp=Z,41nm,1.4s
GOMU GeErMu 40.79 278 P P 07 15 01.4 -0.2
GOMU PcP PcP 07 17 03.5 +1.6
GOMU pmax pmax
comp=Z,37nm,0.8s
WAT6 Susitna Watana 40.88 40 P P 07 15 02.2 +0.5
baz=274,SNR=14
DGZ Jazzator, Alta 40.90 300 *i* P P 07 15 02.6 +0.6
DGZ pmax pmax
comp=Z,21nm,0.9s
G24K Hadweenzic Riv 40.90 33 P P 07 15 03.8 +2.2
baz=269,SNR=150
POKR Poker Flat Res 40.91 36 P P 07 15 03.5 +1.7
baz=271
PZH PanZhiHua 40.93 261 P P 07 15 03.6 +1.1
M23K Glacier View 40.94 41 P P 07 15 02.7 +0.6
baz=274,SNR=12
DHY Denali Highway 41.02 39 P P 07 15 03.4 +0.6
baz=273,SNR=28
SCM Sheep Creek Mo 41.13 41 P P 07 15 04.6 +1.0
baz=275,SNR=14
HDA Harding Lake 41.14 37 IAmb IAmb 07 15 11.2
comp=Z,24nm,0.5s
HDA Harding Lake 41.14 37 P P 07 15 04.1 +0.4
baz=272,SNR=26
IL31 41.16 36 P P 07 15 04.5 +0.8
IL31 IAmb IAmb 07 15 12.7
comp=Z,26nm,0.7s
ILAR Eielson Array 41.16 36 P P 07 15 03.1 -0.6
comp=Z,9.1nm,0.7s,baz=266,slow=9.2,SNR=141
ILAR LR LR 07 34 36.5
comp=Z,99nm,18.4s,baz=258,slow=40
comp=Z,9.1nm,0.7s
ILAR Eielson Array 41.16 36 P P 07 15 04.3 +0.6
GLI Glacier Island 41.33 42 P P 07 15 05.8 +0.6
GLI IAmb IAmb 07 15 06.7
comp=Z,20nm,0.7s
GLI Glacier Island 41.33 42 P P 07 15 05.8 +0.6
baz=276
D25K Kavik River 41.40 29 P P 07 15 06.8 +1.0
baz=267
ZAA0 Zalesovo Array 41.44 307 P P 07 15 05.2 -1.1
ZAA0 PcP PcP 07 17 03.7 +0.5
ZALV Zalesovo Beam 41.44 307 P P 07 15 04.4 -1.8
comp=Z,12nm,0.6s,baz=83,slow=6.4,SNR=31
ZALV PcP PcP 07 17 02.4 -0.8
comp=Z,15nm,0.7s,baz=86,slow=2.7,SNR=16
ZALV pPcP 07 17 19.6
comp=Z,20nm,0.7s,baz=87,slow=2.9,SNR=12
ZALV LR LR 07 33 25.7
comp=Z,174nm,18.7s,baz=84,slow=38
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 41.44 307 P P 07 15 05.8 -0.4
ZALV PcP 07 17 03.6 +0.4
G25K Bearman Lake 41.45 33 P P 07 15 08.2 +2.1
baz=270,SNR=55
DAV Davao City (W) 41.45 215 LR LR 07 31 13.3
comp=Z,28nm,21.7s,baz=348,slow=34
F25K Christian Rive 41.62 32 IAmb IAmb 07 15 10.3
comp=Z,32nm,0.7s
F25K Christian Rive 41.62 32 P P 07 15 09.7 +2.1
baz=270,SNR=84
FID Port Fidalgo 41.64 42 IAmb IAmb 07 15 09.5
comp=Z,49nm,1.5s
M24K Tolsona, Glenn 41.65 40 IAmb IAmb 07 15 10.6
comp=Z,36nm,0.9s
M24K Tolsona, Glenn 41.65 40 P P 07 15 09.5 +1.6
baz=275,SNR=12
E25K Arctic Village 41.66 31 IAmb IAmb 07 15 10.9
comp=Z,63nm,1.0s
E25K Arctic Village 41.66 31 P P 07 15 09.8 +1.9
baz=269,SNR=88
HIN Hinchinbrook I 41.67 43 IAmb IAmb 07 15 11.2
comp=Z,24nm,0.8s
K24K Donnelly Dome 41.69 38 IAmb IAmb 07 15 09.8
comp=Z,39nm,0.9s
K24K Donnelly Dome 41.69 38 P P 07 15 08.8 +0.6
baz=274,SNR=16
PRP Porcupine Dome 41.71 35 IAmb IAmb 07 15 17.9
comp=Z,29nm,0.6s
PRP Porcupine Dome 41.71 35 P P 07 15 09.8 +1.4
baz=272,SNR=69
J25K Salcha River, 41.81 36 P P 07 15 08.9 -0.4
J25K Salcha River, 41.81 36 P P 07 15 08.9 -0.4
baz=273,SNR=20
KLU Klutina 41.83 41 IAmb IAmb 07 15 13.3
comp=Z,32nm,1.0s
KLU Klutina 41.83 41 P P 07 15 10.5 +1.1
baz=276,SNR=25
Q23K Middleton Isla 41.88 44 P P 07 15 10.0 +0.3
baz=278
PAX Paxson 41.89 39 P P 07 15 11.1 +1.2
PAX Paxson 41.89 39 P P 07 15 11.1 +1.2
PAX pmax pmax
comp=Z,7.0nm,0.7s
PAX Paxson 41.89 39 P P 07 15 11.2 +1.2
baz=275,SNR=11
C26K Camden Bay 41.94 28 P P 07 15 11.8 +1.7
baz=268,SNR=14
EYAK Cordova Ski Ar 42.02 43 P P 07 15 12.1 +1.3
EYAK Cordova Ski Ar 42.02 43 P P 07 15 12.2 +1.3
baz=277
BMAR Burnt Mountain 42.03 32 P P 07 15 12.8 +1.8
HARP HAARP 42.09 40 P P 07 15 12.0 +0.6
HARP IAmb IAmb 07 15 15.2
comp=Z,31nm,0.7s
HARP HAARP 42.09 40 P P 07 15 13.0 +1.6
baz=276,SNR=7.2
RIDG Independent Ri 42.10 38 P P 07 15 11.9 +0.3
baz=275,SNR=20
F26K Sheenjek River 42.20 32 P P 07 15 14.6 +2.3
baz=271,SNR=136
C27K Jago River 42.35 29 P P 07 15 14.9 +1.4
baz=269,SNR=119
G26K Porcupine Rive 42.36 33 P P 07 15 15.6 +2.1
baz=272
N25K Chitina, Valde 42.44 41 P P 07 15 15.8 +1.4
baz=277,SNR=9.8
SCRK Sand Creek 42.46 37 P P 07 15 15.1 +0.5
baz=275,SNR=44
BMRM Bremner River 42.52 42 IAmb IAmb 07 15 17.5
comp=Z,31nm,0.9s
BMRM Bremner River 42.52 42 P P 07 15 16.5 +1.5
baz=278,SNR=17
RAGM Ragged Mountai 42.58 43 IAmb IAmb 07 15 21.1
comp=Z,20nm,0.7s
WMQ Urumqi 42.61 292 *e*P P 07 15 16.7 +0.7
WMQ pP pP 07 15 27.0 -2.2
WMQ S S 07 21 34.3 -1.0
WMQ pmax pmax
comp=Z,40nm,0.7s
WMQ pmax pmax
comp=Z,90nm,3.7s
WMQ L L
comp=Z,380nm,21.9s
WMQ L L
comp=Z,490nm,19.5s
WMQ L L
comp=Z,290nm,20.7s
SLVN Son La 42.68 253 P P 07 15 17.7 +0.9
I26K Coal Creek Min 42.71 35 P P 07 15 16.4 0.0
baz=274
KAIM Kayak Island 42.77 43 P P 07 15 18.8 +1.8
baz=279
L26K Log Cabin Wild 42.85 39 P P 07 15 19.4 +1.8
baz=277,SNR=23
VRDI Verde Repeater 43.04 41 P 07 15 20.6 +1.3
BERG Berg Lake 43.05 43 IAmb IAmb 07 15 21.5
comp=Z,24nm,0.6s
M26K Nabesna, AK 43.09 40 IAmb IAmb 07 15 29.6
comp=Z,25nm,0.8s
M26K Nabesna, AK 43.09 40 P P 07 15 21.3 +1.8
baz=278,SNR=38
E27K Coleen River 43.14 31 IAmb IAmb 07 15 22.8
comp=Z,61nm,1.1s
E27K Coleen River 43.14 31 P P 07 15 21.7 +1.8
baz=273,SNR=72
ZSN Zaisan 43.20 298 *e*P P 07 15 20.4 -0.2
ZSN pmax pmax
comp=Z,23nm,0.9s
ZSN Zaisan 43.20 298 *e*P P 07 15 20.4 -0.2
comp=Z,24nm,0.9s
G27K Doyon Strip 43.20 33 P P 07 15 22.5 +2.0
baz=274,SNR=54
MCARA McCarthy VSAT 43.22 41 P P 07 15 22.1 +1.5
MCARA IAmb IAmb 07 15 33.1
comp=Z,22nm,0.7s
MCARA McCarthy VSAT 43.22 41 P P 07 15 22.4 +1.7
baz=279,SNR=6.7
CRQE Iqrue 43.29 42 P P 07 15 23.1 +1.7
baz=279,SNR=18
K27K Chicken 43.30 37 IAmb IAmb 07 15 31.1
comp=Z,30nm,0.7s
H27K Steamboat Moun 43.30 34 IAmb IAmb 07 15 24.8
comp=Z,88nm,1.2s
H27K Steamboat Moun 43.30 34 P P 07 15 23.7 +2.4
baz=275,SNR=91
I27K Kandik River 43.32 35 P P 07 15 22.2 +0.8
baz=276,SNR=19
D27M Malcolm River 43.33 29 IAmb IAmb 07 15 24.2
comp=Z,94nm,1.3s
D27M Malcolm River 43.33 29 P P 07 15 23.1 +1.6
baz=272
TGL Tana Glacier 43.42 42 IAmb IAmb 07 15 25.1
comp=Z,45nm,1.2s
BCAR Beaver Creek A 43.55 38 P P 07 15 25.1 +1.8
M27K Edge Creek, AK 43.61 40 IAmb IAmb 07 15 34.2
comp=Z,24nm,0.7s
M27K Edge Creek, AK 43.61 40 P P 07 15 25.7 +1.8
baz=279,SNR=39
F28M Old Crow 43.83 32 P P 07 15 27.6 +2.2
baz=275,SNR=156
E28M Babbage River 43.88 30 P P 07 15 27.5 +1.7
baz=274
BARN Barnard Glacie 43.93 41 IAmb IAmb 07 15 29.2
comp=Z,29nm,0.9s
I28M Miner Creek 44.03 35 P P 07 15 28.9 +1.7
baz=277,SNR=69
BVCY Beaver Creek 44.07 39 P P 07 15 29.0 +1.5
baz=279,SNR=30
D28M Stokes Point 44.11 29 P P 07 15 29.3 +1.7
baz=274
LOGN Logan Glacier 44.29 42 IAmb IAmb 07 15 42.1
comp=Z,23nm,0.8s
YUK3 Moose Creek 44.37 40 P P 07 15 31.4 +1.3
baz=280,SNR=19
DAWY Dawson 44.46 37 P P 07 15 31.8 +1.2
baz=279,SNR=8.3
E29M Blow River 44.50 31 P P 07 15 32.9 +2.1
E29M Blow River 44.50 31 P P 07 15 32.9 +2.1
baz=276,SNR=192
H29M Whitestone 44.58 34 IAmb IAmb 07 15 34.6
comp=Z,62nm,1.3s
H29M Whitestone 44.58 34 P P 07 15 33.5 +2.1
baz=278,SNR=42
G29M Pine Creek 44.62 33 P P 07 15 34.2 +2.4
baz=277,SNR=81
O28M Mount Upton 44.69 42 P P 07 15 34.1 +1.4
baz=282,SNR=9.3
YUK8 Steele Glacier 44.79 41 P P 07 15 34.5 +1.0
baz=281,SNR=10
PCA Pinnacle 44.80 43 IAmb IAmb 07 15 35.4
comp=Z,24nm,0.6s
PINM Pinnacle 44.80 43 P P 07 15 34.4 +1.1
baz=282,SNR=7.5
J29N Klondike Camp 44.91 36 P P 07 15 35.5 +1.3
baz=280
MK31 Makanchi Array 45.08 298*c* *i*P P 07 15 35.4 -0.3
MKAR Makanchi Array 45.08 298 P P 07 15 35.8 +0.1
comp=Z,59nm,0.8s,baz=78,slow=8.4,SNR=412
MKAR PcP PcP 07 17 16.0 +0.4
comp=Z,3.1nm,0.5s,baz=72,slow=3.0,SNR=2.6
MKAR pPcP 07 17 31.8
comp=Z,9.4nm,0.7s,baz=57,slow=2.1,SNR=5.5
MKAR LR LR 07 35 49.0
comp=Z,344nm,18.9s,baz=58,slow=38
comp=Z,59nm,0.8s
MKAR Makanchi Array 45.08 298 P P 07 15 35.6 -0.1
MKAR PcP 07 17 15.8 +0.2
SEM Semipalatinsk 45.11 303 *e*P P 07 15 35.2 -0.9
SEM pmax pmax
comp=Z,32nm,0.5s
SEM Semipalatinsk 45.11 303 *e*P P 07 15 35.2 -0.9
comp=Z,32nm,0.5s
BRWY Burwash Landin 45.12 41 P P 07 15 37.2 +1.4
baz=282,SNR=14
M29M Somme Creek 45.16 39 P P 07 15 38.1 +1.8
baz=281,SNR=19
L29M L29M 45.18 38 IAmb IAmb 07 15 46.7

comp=Z,24nm,0.7s
L29M L29M 45.18 38 P P 07 15 38.5 +2.2
baz=281,SNR=17
EPYK Eagle Plains 45.21 33 P P 07 15 38.3 +1.8
baz=279,SNR=63
MAKZ Makanchi 45.27 298 P 07 15 37.4 +0.1
MAKZ Makanchi 45.27 298 P P 07 15 37.4 +0.1
MAKZ pmax pmax
comp=Z,76nm,0.9s
MAKZ Makanchi 45.27 298 P P 07 15 37.5 +0.2
MAKZ Makanchi 45.27 298 P P 07 15 37.3 +0.1
MAKZ pP pP 07 15 48.0 -2.5
YUK4 Talbot Arm 45.30 41 P P 07 15 39.2 +1.7
baz=282,SNR=5.4
K29M Barlow Dome 45.31 37 P P 07 15 39.3 +1.8
baz=281,SNR=21
G30M tAoh Zraii Nji 45.31 32 P P 07 15 38.8 +1.5
baz=279,SNR=93
F30M Barrier River 45.39 32 P P 07 15 40.2 +2.4
baz=278,SNR=273
YUK6 Outpost Mounta 45.52 41 P P 07 15 41.1 +1.8
baz=283
I30M Mount Dempster 45.55 35 IAmb IAmb 07 15 42.0
comp=Z,45nm,0.8s
I30M Mount Dempster 45.55 35 P P 07 15 41.0 +1.7
baz=280,SNR=79
O29M Mount Kennedy 45.57 42 P P 07 15 41.1 +1.6
baz=283
J30M Hart River 45.69 36 P P 07 15 42.0 +1.6
baz=281,SNR=29
M30M Minto, Yukon 45.89 39 P P 07 15 44.0 +2.0
baz=282,SNR=14
HYT Haines Junctio 45.96 41 P P 07 15 45.1 +2.5
baz=284,SNR=56
KURK Kurchatov 45.99 304 P P 07 15 42.1 -0.7
KURK PcP PcP 07 17 19.1 +0.4
KURK Kurchatov 45.99 304*c* *i*P P 07 15 42.1 -0.7
KURK pmax pmax
comp=Z,50nm,0.6s
KURK Kurchatov 45.99 304 P P 07 15 42.3 -0.4
KURK Kurchatov 45.99 304 P P 07 15 42.2 -0.6
KURK Kurchatov 45.99 304 *e*P P 07 15 42.1 -0.7
N30M Aishikik Lake 46.01 40 P P 07 15 44.4 +1.5
baz=283,SNR=9.1
KURBB Kurchatov Arra 46.08 304 P P 07 15 42.7 -0.7
comp=Z,64nm,0.8s,baz=74,slow=8.8,SNR=227
KURBB PcP PcP 07 17 19.2 +0.2
comp=Z,10nm,0.8s,baz=74,slow=3.3,SNR=8.9
KURBB pPcP 07 17 35.3
comp=Z,10nm,0.7s,baz=79,slow=3.7,SNR=8.7
KURBB LR LR 07 36 12.3
comp=Z,234nm,19.6s,baz=184,slow=38
comp=Z,64nm,0.8s
KURBB Kurchatov Arra 46.08 304 P P 07 15 41.7 -1.8
G31M Satah River 46.08 32 P P 07 15 44.6 +1.3
baz=280,SNR=72
INK Inuvik 46.12 30 LR LR 07 37 53.5
comp=Z,109nm,19.5s,baz=262,slow=40
INK Inuvik 46.12 30 P P 07 15 45.1 +1.6
INK Inuvik 46.12 30 P P 07 15 45.1 +1.6
INK pmax pmax
comp=Z,87nm,0.8s
INK Inuvik 46.12 30 P P 07 15 45.1 +1.6
baz=280,SNR=107
INK Inuvik 46.12 30 P P 07 15 45.2 +1.6
P29M Windy Craggy 46.14 43 P P 07 15 46.2 +2.3
baz=284,SNR=36
F31M Tsiigehtchic 46.19 32 P P 07 15 45.8 +1.6
baz=280,SNR=13
H31M Peel River 46.27 34 IAmb IAmb 07 15 51.9
comp=Z,36nm,0.8s
H31M Peel River 46.27 34 P P 07 15 46.5 +1.7
baz=281,SNR=50
SMPI Sarmi 46.28 193 P P 07 16 05.1 +20
comp=Z,54nm,0.9s
P30M Million Dollar 46.40 42 P P 07 15 48.2 +2.3
baz=285
JAY Jayapura 46.51 190 LR LR 07 33 27.1
comp=Z,52nm,20.1s,baz=6.0,slow=33
N31M Braeburn, Yuko 46.61 40 IAmb IAmb 07 15 51.0
comp=Z,18nm,0.8s
N31M Braeburn, Yuko 46.61 40 P P 07 15 49.8 +2.3
baz=284,SNR=16
O30N Mendenhall 46.65 41 IAmb IAmb 07 15 50.7
comp=Z,11nm,0.6s
O30N Mendenhall 46.65 41 P P 07 15 49.7 +1.9
baz=285,SNR=12
LSA Lhasa 46.75 272 P P 07 15 51.0 +1.4
LSA Lhasa 46.75 272 P P 07 15 51.0 +1.4
LSA IAmb IAmb 07 16 05.3
comp=Z,41nm,1.0s
LSA Lhasa 46.75 272 P P 07 15 51.0 +1.4
LSA pmax pmax
comp=Z,41nm,1.0s
LSA Lhasa 46.75 272 P P 07 15 49.8 +0.2
LSA pP pP 07 16 04.5 +1.5
SIJI Sorong 46.86 203 LR LR 07 32 59.6
comp=Z,49nm,21.3s,baz=273,slow=33
PLBC Pleasant Camp 46.86 43 P P 07 15 51.7 +2.2
baz=286,SNR=11
M31M Drury Creek, Y 47.07 39 P P 07 15 53.1 +2.0
M31M Drury Creek, Y 47.07 39 P P 07 15 52.9 +1.8
baz=285,SNR=7.6
WHY Whitehorse 47.25 41 P 07 15 54.9 +2.2
WHY IAmb IAmb 07 15 55.7
comp=Z,21nm,0.7s
WHY Whitehorse 47.25 41 P P 07 15 54.4 +1.8
baz=286,SNR=5.1
TEZP TEZPUR 47.31 268 *e*P P 07 15 53.5 +0.1
TEZP *i* pP pP 07 16 06.9 +0.3
SKAG Skagway 47.37 43 P P 07 15 55.3 +1.9
baz=286
CHTO Chiang Mai 47.82 255 P P 07 15 58.2 +0.7
CHTO IAmb IAmb 07 16 13.9
comp=Z,15nm,0.8s
CHTO Chiang Mai 47.82 255 P P 07 15 58.2 +0.7
CHTO pmax pmax
comp=Z,15nm,0.8s
CHTO Chiang Mai 47.82 255 P P 07 15 58.8 +1.4
CHTO Chiang Mai 47.82 255 P P 07 15 58.6 +1.1
CHTO pP pP 07 16 12.5 +1.9
N32M Quiet Lake 47.95 40 P P 07 15 59.2 +1.2
baz=287
KRVT Keravat (AS076 47.98 174 LR LR 07 34 43.2
comp=Z,15nm,19.7s,baz=55,slow=34
CMAR Chiang Mai Arr 48.06 254 P P 07 16 00.7 +1.3
comp=Z,4.1nm,0.7s,baz=45,slow=7.4,SNR=22
CMAR LR LR 07 37 35.2
comp=Z,78nm,19.6s,baz=50,slow=38
comp=Z,4.1nm,0.7s
CMAR Chiang Mai Arr 48.06 254 P P 07 16 00.0 +0.7
SIT Sitka 48.10 46 P P 07 16 00.8 +1.8
baz=288
P32M Atlin 48.12 42 IAmb IAmb 07 16 02.2
comp=Z,12nm,0.8s
P32M Atlin 48.12 42 P P 07 16 01.1 +1.8
baz=288,SNR=6.7
R32K Eaglecrest 48.12 44 IAmb IAmb 07 16 02.5
comp=Z,14nm,0.7s
R32K Eaglecrest 48.12 44 P P 07 16 01.6 +2.3
baz=288
A36M Sachs Harbour 48.14 25 P P 07 16 00.2 +1.0
baz=284,SNR=10
PDGK Podgornoye 48.27 295 P P 07 15 58.0 -2.9
TDK Taldyqorghan 48.27 297*c* *i*P P 07 16 00.6 -0.1
TDK pmax pmax
comp=Z,21nm,0.5s
TDK Taldyqorghan 48.27 297⇑ *i*P P 07 16 00.7 0.0
comp=Z,21nm,0.5s
S32K Killisnoo 48.35 45 P P 07 16 03.1 +2.1
baz=289
MMPY Sheldon Lake, 48.36 38 P P 07 16 03.1 +1.9
baz=287,SNR=7.1
P33M Teslin, Yukon 48.36 41 IAmb IAmb 07 16 04.2
comp=Z,18nm,0.9s
P33M Teslin, Yukon 48.36 41 P P 07 16 03.2 +2.0
baz=288,SNR=12
GUWA GUWAHATI 48.36 268 *e*P P 07 16 01.9 +0.4
SHLS Shalkode 48.37 294*c* *i*P P 07 15 58.9 -2.6
SHLS pmax pmax
comp=Z,20nm,0.6s
SHLS Shalkode 48.37 294⇑ *i*P P 07 15 59.0 -2.6
comp=Z,20nm,0.6s
SHL Shillong 48.59 267 *e*P P 07 16 01.5 -2.1
SHL IAmb IAmb 07 16 05.1
comp=Z,14nm,0.8s
SHL *i* pP pP 07 16 15.6 -0.9

UZB Uzynbulak 48.66 295*c* *i*P P 07 16 03.6 -0.2
UZB pmax pmax
comp=Z,32nm,1.2s
UZB Uzynbulak 48.66 295⇑ *i*P P 07 16 03.7 -0.2
comp=Z,32nm,1.2s
KPKS Kokpek 48.74 295 *e*P P 07 16 04.1 -0.3
KPKS Kokpek 48.74 295 *e*P P 07 16 04.2 -0.3
Q32M Nakina River 49.02 42 P P 07 16 08.7 +2.3
baz=289
SATY Saty 49.10 295 *e*P P 07 16 07.1 -0.1
SATY pmax pmax
comp=Z,16nm,0.9s
SATY Saty 49.10 295 *e*P P 07 16 07.1 -0.1
comp=Z,16nm,0.9s
C36M Paulatuk 49.22 28 P P 07 16 08.7 +1.2
baz=287,SNR=61
PRZ Przheval'sk 49.36 294 P P 07 16 07.5 -1.8
WUS Wushi 49.40 292 P P 07 16 10.1 +0.6
T33K Petersburg 49.40 45 P P 07 16 10.6 +1.5
baz=290
R33M Jennings River 49.51 42 IAmb IAmb 07 16 13.5
comp=Z,13nm,0.8s
R33M Jennings River 49.51 42 P P 07 16 12.3 +2.2
baz=290,SNR=10.0
U33K Whale Pass 49.56 46 P P 07 16 12.7 +2.4
baz=291
CRAG Craig 49.80 47 P P 07 16 13.8 +1.7
baz=291
BRZS Berezniki 49.80 305*c* *i*P P 07 16 12.1 -0.2
BRZS Berezniki 49.80 305⇑ *i*P P 07 16 12.2 -0.1
WRAK Wrangell Islan 49.86 46 P P 07 16 14.7 +2.2
baz=291
BVAR Borovoye Array 49.93 310 P P 07 16 13.1 -0.1
comp=Z,26nm,0.5s,baz=72,slow=9.5,SNR=88
BVAR PcP PcP 07 17 33.5 +0.6
comp=Z,9.7nm,0.8s,baz=46,slow=4.3,SNR=4.6
comp=Z,26nm,0.5s
S34M Telegraph Cree 49.94 44 P P 07 16 15.5 +2.3
baz=291
MDOK Medeo 49.95 295 *e*P P 07 16 13.7 0.0
MDOK Medeo 49.95 295 *e*P P 07 16 13.7 0.0
BORK Borovoye 49.96 310 P P 07 16 13.2 -0.2
BORK PcP PcP 07 17 33.8 +0.9
BORK Borovoye 49.96 310 *i*P P 07 16 13.1 -0.4
BORK pmax pmax
comp=Z,67nm,1.0s
AAA Alma-Ata 50.02 296 *e*P P 07 16 14.0 -0.1
AAA pmax pmax
comp=Z,12nm,0.4s
AAA Alma-Ata 50.02 296 *e*P P 07 16 14.0 -0.1
comp=Z,12nm,0.4s
AAA Alma-Ata 50.02 296 *e*P P 07 16 14.0 -0.1
TARG Taragay, Kyrgy 50.10 293 P P 07 16 16.4 +1.2
TARG PcP PcP 07 17 35.7 +1.5
TARG IAmb IAmb 07 17 53.1
comp=Z,14nm,0.7s
TARG Taragay, Kyrgy 50.10 293 P P 07 16 16.4 +1.2
TARG 07 17 35.7
TARG pmax pmax
comp=Z,14nm,0.7s
TARG Taragay, Kyrgy 50.10 293 P P 07 16 15.2 0.0
WTLY Watson Lake, Y 50.29 40 IAmb IAmb 07 16 18.5
comp=Z,10nm,0.6s
WTLY Watson Lake, Y 50.29 40 P P 07 16 17.5 +1.6
baz=291,SNR=9.5
DLBC Dease Lake 50.30 43 LR LR 07 39 16.0
comp=Z,34nm,18.4s,baz=276,slow=38
DLBC Dease Lake 50.30 43 P P 07 16 18.4 +2.4
baz=291,SNR=6.5
KDJ Kajisay 50.33 294 P P 07 16 17.4 +0.7
KDJ IAmb IAmb 07 16 19.1
comp=Z,29nm,0.7s
KDJ PcP PcP 07 17 35.3 +0.6
KDJ Kajisay 50.33 294 P P 07 16 17.3 +0.7
KPA Kalaupapa 50.61 98 P P 07 16 17.0 -1.7
KPA PcP PcP 07 17 36.2 +0.5
KPA Kalaupapa 50.61 98 P P 07 16 17.0 -1.7
KPA 07 17 36.2
V35K Ketchikan 50.65 47 P P 07 16 21.1 +2.5
baz=292
T35M Bob Quinn 50.73 44 IAmb IAmb 07 16 23.1
comp=Z,22nm,0.7s
T35M Bob Quinn 50.73 44 P P 07 16 22.0 +2.8
baz=292
EVN Everest 50.87 273 P P 07 16 21.9 +0.5
EVN Everest 50.87 273 P P 07 16 21.1 -0.3
EVN pP pP 07 16 35.5 +0.7
BOOM Boomskoye usch 50.98 295 P P 07 16 22.6 +1.1
BOOM Boomskoye usch 50.98 295 P P 07 16 22.6 +1.1
BOOM pmax pmax
comp=Z,42nm,0.8s
BOOM Boomskoye usch 50.98 295 P P 07 16 21.4 -0.1
TKM2 Tokmak 2 51.01 296 P P 07 16 22.6 +0.8
SNR=46
BTLS Baital 51.05 299 *e*P P 07 16 21.7 0.0
BTLS Baital 51.05 299 *e*P P 07 16 21.8 0.0
ASAI AK-SAY(Kyrgyzs 51.33 293 P P 07 16 25.2 +0.8
SGDS Sogindy 51.39 297⇑ *i*P P 07 16 24.4 -0.1
comp=Z,11nm,0.6s
KBK Karagaybulak 51.55 296 P P 07 16 26.6 +0.8
SNR=23
USP Ospenovka 51.56 297 P P 07 16 26.3 +0.6
SNR=19
LIRD Liard River Hi 51.82 40 P P 07 16 29.3 +2.0
baz=293
AAK Ala-Archa 51.86 296 P P 07 16 28.6 +0.5
SNR=21
AAK Ala-Archa 51.86 296 *i*P P 07 16 28.4 +0.3
SNR=22
AAK Ala-Archa 51.86 296 P 07 16 28.3 +0.2
AAK Ala-Archa 51.86 296*c* *i*P P 07 16 28.5 +0.5
AAK pmax pmax
comp=Z,18nm,0.6s
AAK Ala-Archa 51.86 296 P P 07 16 28.3 +0.2
AAK P P 07 16 28.6 +0.5
AAK Ala-Archa 51.86 296 P P 07 16 28.5 +0.5
AAK Ala-Archa 51.86 296 *e*P P 07 16 28.5 +0.5
AAK Ala-Archa 51.86 296 P P 07 16 28.4 +0.3
AAK pP pP 07 16 39.0 -2.6
AAK PcP PcP 07 17 41.1 +0.8
UCH Uchtor 52.04 295 P P 07 16 30.4 +0.7
SNR=10.0
EKS2 Erkin-Say 52.31 296 P P 07 16 31.8 +0.4
SNR=31
KSH2 Kashi 52.84 292 P P 07 16 36.0 +0.6
KSH2 pP pP 07 16 49.6 +0.7
KSH2 pmax pmax
comp=Z,18nm,0.8s
KSH2 L L
comp=Z,260nm,15.5s
KSH2 L L
comp=Z,280nm,16.1s
KSH2 L L
comp=Z,470nm,18.2s
PMG Port Moresby 52.91 181 LR LR 07 36 03.9
comp=Z,58nm,21.9s,baz=332,slow=32
SVE Sverdlovsk 53.52 317*de*P P 07 16 39.8 -0.1
SVE pmax pmax
comp=Z,76nm,1.0s
SVE Sverdlovsk 53.52 317 *e*P P 07 16 39.8 -0.1
DZA Taraz 53.78 298 *e*P P 07 16 42.0 -0.1
DZA pmax pmax
comp=Z,31nm,1.3s
DZA Taraz 53.78 298 *e*P P 07 16 42.0 -0.1
comp=Z,31nm,1.3s
HNLY HANLEY 53.80 283 *e*P P 07 16 43.5 +0.6
ARK Arkit 53.91 296 P P 07 16 43.5 +0.3
OHH Osh 54.00 294 P P 07 16 42.8 -1.0
HNR Honiara 54.05 165 LR LR 07 36 59.7
comp=Z,6.9nm,21.9s,baz=57,slow=33
KK31 Karatay Array 54.20 298 P 07 16 45.2 0.0
KK31 IAmb IAmb 07 16 45.7
comp=Z,24nm,0.7s
KK31 Karatay Array 54.20 298 P P 07 16 45.2 0.0
KK31 pmax pmax
comp=Z,24nm,0.7s
KKAR Karatay Array 54.20 298 P 07 16 45.2 +0.1
KKAR Karatay Array 54.20 298 P P 07 16 45.2 +0.1
NOR Nord 54.63 357 P P 07 16 45.9 -1.7
NOR Nord 54.63 357 *i*P P 07 16 45.3 -2.4
NOR IAmb IAmb 07 16 46.3
comp=Z,6.0nm,0.6s
BRLS Borolday 54.67 298 *e*P P 07 16 49.9 +1.4
BRLS Borolday 54.67 298 *e*P P 07 16 50.0 +1.4
KAPI Kappang 54.79 215 LR LR 07 43 13.4

comp=Z,71nm,18.0s,baz=42,slow=39
RES Resolute Bay 54.80 17 LR LR 07 43 58.3
comp=Z,75nm,19.4s,baz=5.5,slow=40
RES Resolute Bay 54.80 17 P 07 16 49.5 +0.5
RES Resolute Bay 54.80 17 P P 07 16 49.5 +0.5
RES pmax pmax
comp=Z,90nm,0.7s
RES Resolute Bay 54.80 17 P P 07 16 49.6 +0.6
ARTI Arti 54.83 317 LR LR 07 42 42.5
comp=Z,204nm,19.8s,baz=54,slow=39
ARTI Arti 54.83 317 P 07 16 48.7 -0.7
ARTI Arti 54.83 317*c* *i*P P 07 16 48.1 -1.3
ARTI *PP pP 07 17 03.9 +0.9
ARTI 07 17 50.5
ARTI S S 07 24 23.6 -3.0
ARTI SS SS 07 28 05.9 -3.8
ARTI pmax pmax
comp=Z,46nm,0.6s
ARTI Arti 54.83 317 P P 07 16 48.1 -1.3
ARTI pP pP 07 16 58.8 -4.2
KBS Kingsbay 54.88 351 P P 07 16 48.2 -1.2
KBS IAmb IAmb 07 16 48.8
comp=Z,25nm,0.7s
KBS Kingsbay 54.88 351 P P 07 16 48.2 -1.2
KBS pmax pmax
comp=Z,25nm,0.7s
KBS Kingsbay 54.88 351 *e*P P 07 16 47.7 -1.7
KBS IAmb IAmb 07 16 48.6
comp=Z,24nm,0.7s
SPA0 Spitsbergen Ar 54.89 349 *e*P P 07 16 46.9 -2.7
SPITS Spitsbergen Ar 54.89 349 P P 07 16 47.2 -2.3
comp=Z,3.0nm,0.5s,baz=62,slow=7.6,SNR=16
SPITS PcP PcP 07 17 50.6 -0.5
comp=Z,11nm,0.8s,baz=98,slow=6.2,SNR=4.1
SPITS LR LR 07 43 46.7
comp=Z,88nm,18.2s,baz=46,slow=40
comp=Z,3.0nm,0.5s
SPITS Spitsbergen Ar 54.89 349 P P 07 16 47.7 -1.9
SPITS pmax pmax
comp=Z,56nm,1.5s
IUG Iuzhnay 54.99 297 *e*P P 07 16 50.7 -0.2
IUG pmax pmax
comp=Z,30nm,1.3s
IUG Iuzhnay 54.99 297 *e*P P 07 16 50.8 -0.2
comp=Z,30nm,1.3s
CHM Chimkent 55.17 298 *e*P P 07 16 52.0 -0.2
CHM pmax pmax
comp=Z,23nm,0.6s
CHM Chimkent 55.17 298 *e*P P 07 16 51.1 -1.1
comp=Z,23nm,0.6s
DRK Karamyk 55.19 294 P P 07 16 53.3 +0.7
DRK Karamyk 55.19 294 P P 07 16 53.3 +0.7
DRK pmax pmax
comp=Z,53nm,0.3s
YKAW3 Yellowknife Wh 55.45 34 P P 07 16 54.8 +1.0
YKAW3 IAmb IAmb 07 17 00.9
comp=Z,16nm,0.7s
YKA Yellowknife Ar 55.49 34 P P 07 16 55.0 +0.9
comp=Z,12nm,0.6s,baz=303,slow=7.0,SNR=34
comp=Z,12nm,0.6s
YKA Yellowknife Ar 55.49 34 P P 07 16 54.2 +0.1
BTK Batken 55.54 295 P P 07 16 55.0 +0.1
BTK IAmb IAmb 07 16 56.0
comp=Z,20nm,0.6s
BTK Batken 55.54 295 P P 07 16 55.0 +0.1
BTK pmax pmax
comp=Z,20nm,0.6s
BTK Batken 55.54 295 P P 07 16 55.0 +0.1
YKAW1 Yellowknife Wh 55.54 34 IAmb IAmb 07 17 01.9
comp=Z,16nm,0.7s
DHRM DHARAMSHALA 55.97 284 *e*P P 07 16 58.4 +0.1
DHRM IAmb IAmb 07 17 00.6
comp=Z,63nm,0.4s
ALBI Allahabad 56.04 274 *e*P P 07 16 58.8 +0.2
ALBI *i* pP pP 07 17 11.8 -0.4
MANEM Manem 56.28 292 P 07 17 01.2 +0.7
MANEM IAmb IAmb 07 17 03.6
comp=Z,48nm,0.8s
GAR Garm 56.42 294 P 07 17 01.3 +0.1
GAR Garm 56.42 294 P P 07 17 01.4 +0.1
BJO1 Bjornoya 57.23 346 *e*P P 07 17 04.9 -1.4
NIL Nilore 57.32 287 P P 07 17 08.6 +1.0
NIL Nilore 57.32 287 P P 07 17 08.6 +1.0
NIL pmax pmax
comp=Z,107nm,1.0s
CHGR Chuyangaron 57.37 294 P P 07 17 08.0 +0.1
CHGR Chuyangaron 57.37 294*c* *i*P P 07 17 07.9 0.0
CHGR pmax pmax
comp=Z,93nm,0.6s
CHGR Chuyangaron 57.37 294 P P 07 17 08.1 +0.1
AB31 Akbulak array 57.50 309 P P 07 17 08.9 +0.3
AB31 Akbulak array 57.50 309 *i*P P 07 17 07.6 -1.0
ABKAR Akbulak array 57.50 309 P P 07 17 08.7 +0.2
TULEG Thule 57.73 10 P P 07 17 09.1 -0.7
TULEG Thule 57.73 10 P P 07 17 08.8 -1.1
TULEG Thule 57.73 10 *i*P P 07 17 06.7 -3.1
BLSP Bilaspur 57.73 271 *e*P P 07 17 10.2 -0.4
BLSP *i* x x 07 17 24.1
KDU Kakadu 57.91 198 P P 07 17 10.7 -1.0
comp=Z,10nm,1.4s
KIRV Kirov 57.94 322 LR LR 07 44 34.3
comp=Z,178nm,18.2s,baz=60,slow=39
KIRV Kirov 57.94 322 *i*P P 07 17 10.8 -0.6
AKTO Aktyubinsk 57.96 311 LR LR 07 44 23.3
comp=Z,209nm,18.0s,baz=50,slow=38
AKTO Aktyubinsk 57.96 311 P P 07 17 09.2 -2.6
LVZ Lovozero 58.03 336 P P 07 17 11.4 -0.7
VADS Vadso 58.06 339 *e*P P 07 17 10.9 -1.3
JHNI Jhansi 58.26 276 *e*P P 07 17 13.6 -0.7
JHNI *i* x x 07 17 27.8
MTN Manton Dam 58.37 199 P P 07 17 14.5 -0.5
NEEM North Greenlan 58.50 5 *i*P P 07 17 13.6 -1.9
NEEM IAmb IAmb 07 17 15.9
comp=Z,68nm,0.9s
NLWA Neilton Lookou 58.60 53 IAmb IAmb 07 17 19.1
comp=Z,16nm,0.8s
APA Apatity 58.60 336⇓ *e*P P 07 17 12.0 -4.0
APA *e* 07 18 02.3
APA *e* 07 19 22.0
APA *e*S S 07 25 06.3 -10
APA *e* 07 26 55.7
APA pmax pmax
comp=Z,17nm,0.7s
SHAA Shahritus 58.65 294 P P 07 17 17.4 +0.6
SHAA IAmb IAmb 07 17 17.8
comp=Z,77nm,0.6s
KEV Kevo 58.91 340 P P 07 17 17.2 -0.9
KEV Kevo 58.91 340 P P 07 17 17.2 -0.9
KEV pmax pmax
comp=Z,42nm,0.8s
HAMF Hammerfest 59.09 341 *e*P P 07 17 17.8 -1.5
HAMF IAmb IAmb 07 17 17.9
comp=Z,34nm,0.8s
ADZR Andozero 59.30 331 *e*P P 07 17 17.0 -3.8
ADZR pmax pmax
comp=Z,59nm,1.3s
ARA0 ARCESS Array S 59.44 340 *e*P P 07 17 20.7 -1.1
ARCES ARCESS Array B 59.44 340 P P 07 17 20.8 -0.9
comp=Z,5.4nm,0.3s,baz=45,slow=7.4,SNR=88
ARCES PcP PcP 07 18 08.9 -0.1
comp=Z,4.0nm,0.6s,baz=47,slow=5.5,SNR=4.0
ARCES LR LR 07 46 44.7
comp=Z,138nm,20.6s,baz=43,slow=40
comp=Z,5.4nm,0.3s
ARCES ARCESS Array B 59.44 340 P P 07 17 20.9 -0.9
ARCES PcP 07 18 09.5 +0.5
ARCES ARCESS Array B 59.44 340 P P 07 17 20.9 -0.9
ARCES 07 18 09.5
ARCES pmax pmax
comp=Z,47nm,1.1s
PSI Prapat 59.45 241 P P 07 17 22.2 -0.5
PSI pmax pmax
comp=Z,11nm,1.2s
DAG Danmarks Havn 59.45 356 P P 07 17 20.5 -1.2
DAG Danmarks Havn 59.45 356 *i*P P 07 17 19.3 -2.4
DAG IAmb IAmb 07 17 22.1
comp=Z,11nm,1.3s
RPSI Rantau Prapat 59.53 241 P P 07 17 22.2 -0.9
POIN Pond Inlet 59.56 14 P 07 17 22.6 0.0
GUNA GUNA 59.67 276 *e*P P 07 17 23.7 -0.4
GUNA *i* x x 07 17 37.8
KBL Kabul 59.71 290 P P 07 17 23.8 -0.7
KBL Kabul 59.71 290 P P 07 17 23.8 -0.7
KBL pmax pmax

comp=Z,48nm,0.8s
KBL **Kabul** 59.71 290 P **P** 07 17 24.1 -0.4
KBL **Kabul** 59.71 290 P **P** 07 17 23.8 -0.7
LON **Longmire** 60.13 52 P **P** 07 17 27.0 0.0
LON **Longmire** 60.13 52 P **P** 07 17 27.0 0.0
KTK1 **Kautokeino** 60.38 340 *e*P **P** 07 17 27.1 -1.1
KTK1 IAmb IAmb 07 17 27.9
comp=Z,45nm,0.7s
BHPL **Bhopal** 60.47 275 *e*P **P** 07 17 29.0 -0.5
BHPL IAmb IAmb 07 17 30.7
comp=Z,30nm,0.9s
BHPL *i* x x 07 17 43.6
LTY **Liberty** 60.50 51 P **P** 07 17 29.5 0.0
AJM **Ajmer** 60.54 279 *e*P **P** 07 17 30.0 0.0
AJM *i* x x 07 17 44.3
G04A **Mulino** 60.60 54 IAmb IAmb 07 17 32.8
comp=Z,26nm,0.8s
JETT **Jettan, Norway** 60.65 341 *e*P **P** 07 17 29.1 -1.1
JETT IAmb IAmb 07 17 29.9
comp=Z,240nm,1.3s
SGF **Sodankyl** 60.65 338 P **P** 07 17 29.5 -0.6
KLMR **Klimovskoe** 60.73 328 *e*P **P** 07 17 27.7 -3.0
KLMR *e**PP **pP** 07 17 44.3 -0.2
KLMR pmax pmax
comp=Z,63nm,1.4s
KULLO **Kullorsuaq** 60.76 7 P **P** 07 17 30.4 -0.4
H04D **Lebanon** 60.82 55 P **P** 07 17 32.0 +0.3
I03D **Drain, OR** 60.92 56 P **P** 07 17 32.8 +0.5
I03D IAmb IAmb 07 17 35.5
comp=Z,19nm,0.8s
TRO **Tromso** 60.93 342 *e*P **P** 07 17 31.1 -0.8
TRO IAmb IAmb 07 17 31.5
comp=Z,148nm,1.2s
MSF **Maaselka** 61.01 336 P **P** 07 17 31.8 -0.7
EDM **Edmonton** 61.02 43 **P** 07 17 33.8 +0.9
EDM IAmb IAmb 07 17 34.7
comp=Z,29nm,1.1s
EDM **Edmonton** 61.02 43 P **P** 07 17 33.8 +0.9
EDM pmax pmax
comp=Z,29nm,1.1s
H04A **Detroit Lake** 61.06 55 **P** 07 17 34.1 +0.8
H04A IAmb IAmb 07 17 35.8
comp=Z,18nm,0.8s
MXC **Moxie City** 61.10 52 IAmb IAmb 07 17 36.0
comp=Z,13nm,0.7s
BLKN **Baker Lake** 61.22 27 **P** 07 17 34.4 +0.4
ILON **Igloolik, Nuna** 61.42 18 **P** 07 17 35.1 -0.2
I04A **Tendick Farm,** 61.43 56 IAmb IAmb 07 17 38.3
comp=Z,15nm,0.8s
C09A **Chrisman Ranch** 61.54 50 IAmb IAmb 07 17 38.3
comp=Z,12nm,0.7s
WIFE **Three Sisters-** 61.63 55 IAmb IAmb 07 17 40.1
comp=Z,13nm,0.8s
HAWA **Hanford** 61.63 52 IAmb IAmb 07 17 39.5
comp=Z,14nm,1.1s
I05D **Terrebonne, OR** 61.76 55 IAmb IAmb 07 17 40.5
comp=Z,15nm,0.8s
E08A **Dider Farm, El** 61.85 51 IAmb IAmb 07 17 40.7
comp=Z,13nm,1.0s
NEW **Newport** 61.91 49 LR LR 07 45 54.4
comp=Z,30nm,19.3s,baz=316,slow=37
NEW **Newport** 61.91 49 **P** 07 17 40.1 +1.1
NEW IAmb IAmb 07 17 41.0
comp=Z,12nm,0.9s
NEW **Newport** 61.91 49 P **P** 07 17 40.1 +1.1
NEW pmax pmax
comp=Z,12nm,0.9s
NEW **Newport** 61.91 49 P **P** 07 17 40.2 +1.2
DBG **Daneborg** 61.96 356 P **P** 07 17 37.8 -1.1
DBG **Daneborg** 61.96 356 *i* P **P** 07 17 37.1 -1.7
BELG **Belogornoye** 62.28 317 LR LR 07 48 46.8
comp=Z,146nm,18.1s,baz=44,slow=40
BELG **Belogornoye** 62.28 317 *c i*P **P** 07 17 41.1 -0.2
BELG pmax pmax
comp=Z,35nm,0.9s
PINE **Pine Mountain** 62.30 55 IAmb IAmb 07 17 44.9
comp=Z,25nm,0.8s
AKL **Akola** 62.35 273 *e*P **P** 07 17 43.0 +0.7
AKL *i* x x 07 17 56.6
E09A **Wood Farm, Sta** 62.35 51 IAmb IAmb 07 17 44.1
comp=Z,14nm,0.8s
OUL **Oulu** 62.52 336 P **P** 07 17 42.1 -0.6
M02C **Callahan** 62.53 58 IAmb IAmb 07 17 46.1
comp=Z,11nm,0.9s
N02D **Trinity Center** 62.86 58 IAmb IAmb 07 17 48.5
comp=Z,12nm,0.7s
K05A **Summer Lake** 62.95 56 IAmb IAmb 07 17 49.2
comp=Z,27nm,0.9s
M03C **McCloud** 63.05 58 IAmb IAmb 07 17 49.9
comp=Z,16nm,0.8s
STEI **Steigen** 63.10 342 *e*P **P** 07 17 45.5 -1.0
STEI IAmb IAmb 07 17 46.2
comp=Z,31nm,0.8s
F10A **Beach Ranch, E** 63.18 51 IAmb IAmb 07 18 12.7
comp=Z,30nm,2.0s
O02D **Mt. Diablo Mer** 63.28 59 IAmb IAmb 07 17 53.1
comp=Z,12nm,1.0s
LOF **Lofoten** 63.32 343 *e*P **P** 07 17 47.0 -0.9
HYB **Hyderabad** 63.33 269 *e*P **P** 07 17 48.2 -0.7
HYB IAmb IAmb 07 17 49.2
comp=Z,23nm,0.9s
HYB *i* x x 07 18 02.5
HYB **Hyderabad** 63.33 269 *e*P **P** 07 17 49.7 +0.8
HYB *e*PcP **PcP** 07 18 25.9 +0.3
HYB *e*S **S** 07 26 18.6 +1.0
FAUS **Fauske** 63.54 341 *e*P **P** 07 17 48.4 -1.0
FAUS IAmb IAmb 07 17 49.3
comp=Z,105nm,0.7s
CTA **Charters Tower** 63.54 182 LR LR 07 41 16.4
comp=Z,66nm,21.4s,baz=34,slow=32
HATC **Hat Creek Radi** 63.72 58 IAmb IAmb 07 17 54.3
comp=Z,29nm,1.1s
O03E **Paynes Creek** 63.82 58 IAmb IAmb 07 17 54.5
comp=Z,23nm,0.9s
JMIC **Jan Mayen** 64.32 352 LR LR 07 44 25.6
comp=Z,26nm,21.2s,baz=244,slow=35
PLID **Pearl Lake** 64.41 51 IAmb IAmb 07 17 57.6
comp=Z,23nm,1.2s
WB0 **Warramunga Arr** 64.41 194 IAmb IAmb 07 18 16.6
comp=Z,34nm,1.2s
WVOR **Wild Horse Val** 64.47 55 P **P** 07 17 57.6 +1.5
MSO **Missoula** 64.50 49 IAmb IAmb 07 17 58.3
comp=Z,18nm,0.9s
VAGH **Vaagaholmen** 64.53 342 *e*P **P** 07 17 55.1 -0.8
VAGH IAmb IAmb 07 17 55.9
comp=Z,49nm,0.8s
WR8 **Warramunga Arr** 64.58 194 P **P** 07 17 57.0 +0.3
WR8 IAmb IAmb 07 18 17.8
comp=Z,36nm,1.4s
WRAB **Tennant Creek** 64.58 194 P **P** 07 17 56.3 -0.5
WRAB IAmb IAmb 07 18 17.1
comp=Z,14nm,0.9s
WRAB **Tennant Creek** 64.58 194 *i* P **P** 07 17 55.7 -1.1
WRAB pmax pmax
comp=Z,12nm,1.5s
WRAB **Tennant Creek** 64.58 194 P **P** 07 17 57.4 +0.6
RAUS **Rausandaksla** 64.59 341 *e*P **P** 07 17 55.4 -1.0
RAUS IAmb IAmb 07 17 56.2
comp=Z,52nm,0.7s
WRA **Warramunga Arr** 64.59 194 P **P** 07 17 56.9 0.0
comp=Z,4.8nm,1.0s,baz=12,slow=6.6,SNR=21
WRA pP **sP** 07 18 15.9 +0.5
comp=Z,12nm,0.9s,baz=12,slow=6.5,SNR=13
WRA PKPPKP P'P'df 07 46 47.1 +8.4
comp=Z,1.8nm,0.9s,baz=201,slow=2.7,SNR=9.0
comp=Z,4.8nm,1.0s
WRA **Warramunga Arr** 64.59 194 P **P** 07 17 56.6 -0.3
WRA **Warramunga Arr** 64.59 194 P **P** 07 17 56.6 -0.3
MOR8 **Moi Rana** 64.72 341 *e*P **P** 07 17 55.0 -2.2
MOR8 IAmb IAmb 07 17 55.9
comp=Z,156nm,0.6s
KONS **Konsvik** 64.75 342 *e*P **P** 07 17 56.6 -0.8
KONS IAmb IAmb 07 17 58.2
comp=Z,28nm,0.7s
MOS **Moscow** 64.78 324 *e*P **P** 07 17 58.2 +0.5
MOS *e**PP **sP** 07 18 14.4 -2.6
MOS *e* 07 18 31.9
MOS pmax pmax
comp=Z,75nm,1.1s
MOS **Moscow** 64.78 324 *e*P **P** 07 17 58.0 +0.3
FITZ **Fitzroy Crossi** 64.85 203 LR LR 07 47 40.4
comp=Z,66nm,19.2s,baz=11,slow=37
SAATT **Saattut** 64.88 7 *i* P **P** 07 17 56.7 -1.4
STOK **Stokkvaagen** 64.92 342 *e*P **P** 07 17 57.6 -0.8
STOK IAmb IAmb 07 17 58.9
comp=Z,27nm,0.7s
BEKR **Beckworth** 64.96 58 P **P** 07 18 00.4 +1.0
BEKR IAmb IAmb 07 18 01.6
comp=Z,16nm,0.8s
LEIR **Leirfjorden** 65.08 341 *e*P **P** 07 17 58.8 -0.7
LEIR IAmb IAmb 07 17 59.2
comp=Z,23nm,0.6s
FINES **FINESS Array B** 65.12 333 P **P** 07 17 58.9 -1.0
comp=Z,83nm,0.7s,baz=46,slow=8.2,SNR=156
FINES LR LR 07 49 33.4
comp=Z,185nm,18.9s,baz=47,slow=39
comp=Z,83nm,0.7s
FINES **FINESS Array B** 65.12 333 P **P** 07 17 59.1 -0.8
FFC **Flin Flon** 65.36 37 P **P** 07 18 02.4 +0.8
FFC IAmb IAmb 07 18 03.5
comp=Z,36nm,0.9s
FFC **Flin Flon** 65.36 37 P **P** 07 18 02.4 +0.8
FFC pmax pmax
comp=Z,36nm,1.0s
FFC **Flin Flon** 65.36 37 P **P** 07 18 02.7 +1.1
FFC **Flin Flon** 65.36 37 P **P** 07 18 02.4 +0.8
FFC sP **pwP** 07 18 18.8 +0.9
MPK **Martis Peak** 65.51 58 IAmb IAmb 07 18 05.6
comp=Z,25nm,0.9s
OBN **Obninsk** 65.64 324 P **P** 07 18 02.8 -0.5
comp=Z,36nm,0.5s,baz=91,slow=1.6,SNR=2.4
OBN LR LR 07 49 05.7
comp=Z,106nm,19.6s,baz=166,slow=38
comp=Z,36nm,0.5s
OBN **Obninsk** 65.64 324 ⇓P **P** 07 18 03.3 0.0
OBN **Obninsk** 65.64 324 P **P** 07 18 02.9 -0.4
OBN **Obninsk** 65.64 324 *c i*P **P** 07 18 02.9 -0.4
OBN *PP **pP** 07 18 17.0 -0.1
OBN *e**SP **sP** 07 18 23.8 +1.2
OBN 07 18 34.0
OBN *i* S **S** 07 26 46.7 +1.8
OBN SS **SS** 07 31 08.0 +9.3
OBN pmax pmax
comp=Z,136nm,1.4s
OBN MLR MLR
comp=Z,118nm,15.0s
OBN **Obninsk** 65.64 324 P **P** 07 18 03.0 -0.4
comp=Z,1μmcomp=Z,87nm,1.0s
OBN **Obninsk** 65.64 324 P **P** 07 18 03.3 0.0
OBN **Obninsk** 65.64 324 *e*P **P** 07 18 02.6 -0.7
PAHR **Pah Rah Range** 65.66 58 IAmb IAmb 07 18 06.2
comp=Z,15nm,1.0s
FCC **Fort Churchill** 65.74 30 P **P** 07 18 04.2 +0.4
FCC IAmb IAmb 07 18 05.2
comp=Z,29nm,0.8s
FCC **Fort Churchill** 65.74 30 P **P** 07 18 04.3 +0.4
FCC pmax pmax
comp=Z,29nm,0.8s
SCO **Scoresbysund** 65.84 356 IAmb IAmb 07 18 05.8
comp=Z,27nm,1.1s
SCO **Scoresbysund** 65.84 356 P **P** 07 18 04.8 +0.5
SCO **Scoresbysund** 65.84 356 *i* P **P** 07 18 03.9 -0.4
VRH **Novokhopyorsk** 65.89 319 *e*P **P** 07 18 02.0 -3.0
VRH pmax pmax
comp=Z,110nm,1.0s
PNTR **Pine Nut** 65.90 58 IAmb IAmb 07 18 08.2
comp=Z,17nm,0.8s
EGMT **Eagleton** 65.99 46 IAmb IAmb 07 18 07.8
comp=Z,21nm,0.9s
DLMT **Dillon** 66.14 49 P **P** 07 18 07.9 +1.0
DLMT IAmb IAmb 07 18 09.7
comp=Z,14nm,1.1s
HLID **Hailey** 66.24 52 P **P** 07 18 09.1 +1.5
LPSR **Galich'ya Gora** 66.28 321 ⇑*i*P **P** 07 18 07.2 -0.3
LPSR pmax pmax
comp=Z,137nm,0.8s
WAKR **Walker** 66.36 59 IAmb IAmb 07 18 11.2
comp=Z,12nm,0.9s
ILULI **Ilulissat** 66.48 7 P **P** 07 18 08.2 -0.2
ILULI **Ilulissat** 66.48 7 P **P** 07 18 08.2 -0.2
ILULI pmax pmax
comp=Z,67nm,1.1s
ILULI **Ilulissat** 66.48 7 P **P** 07 18 08.4 0.0
ILULI **Ilulissat** 66.48 7 *i* P **P** 07 18 06.9 -1.5
BOZ **Bozeman (W)** 66.52 49 IAmb IAmb 07 18 11.5
comp=Z,20nm,0.8s
ARBE **Arbavere** 66.64 332 P **P** 07 18 09.2 -0.5
NSS **Namsos** 66.66 341 *e*P **P** 07 18 08.9 -0.8
VORR **Voronezh** 66.77 320 *e*P **P** 07 18 10.5 -0.1
VORR pmax pmax
comp=Z,125nm,0.5s
KVN **Kaiserville** 66.84 58 IAmb IAmb 07 18 14.1
comp=Z,14nm,0.9s
LHV **Little Huntoon** 67.09 59 IAmb IAmb 07 18 16.0
comp=Z,30nm,0.8s
VSR **Storozhevoye** 67.09 320 ⇑*i*P **P** 07 18 12.6 -0.1
VSR pmax pmax
comp=Z,157nm,1.0s
NVAR **Mina Array Bea** 67.10 58 P **P** 07 18 14.8 +1.5
comp=Z,13nm,0.7s,baz=294,slow=6.9,SNR=75
comp=Z,13nm,0.7s
VSU **Vasula** 67.11 331 P **P** 07 18 11.4 -1.2
MSVF **Nonsavu** 67.12 149 LR LR 07 44 38.7
comp=Z,75nm,18.6s,baz=168,slow=33
NV11 **Mina Array Sit** 67.19 58 P **P** 07 18 15.0 +1.2
VORD **Divnogorie** 67.20 319 *e*P **P** 07 18 11.6 -1.8
VORD pmax pmax
comp=Z,90nm,1.0s
YHL **Hebgen Lake** 67.24 49 P **P** 07 18 15.4 +1.3
YHL IAmb IAmb 07 18 16.5
comp=Z,12nm,0.9s
YHB **Horse Butte** 67.29 49 IAmb IAmb 07 18 16.7
comp=Z,16nm,0.8s
GCMT **Greycliff** 67.46 48 P **P** 07 18 16.6 +1.3
YMR **Madison River** 67.47 49 IAmb IAmb 07 18 18.0
comp=Z,13nm,0.8s
ELK **Elko** 67.51 55 P **P** 07 18 17.0 +1.2
ELK **Elko** 67.51 55 P **P** 07 18 17.0 +1.2
ELK pmax pmax
comp=Z,3.0nm,0.6s
YNE **Yellowstone No** 67.78 49 IAmb IAmb 07 18 19.6
comp=Z,10nm,0.8s
MTSE **Matsula** 67.93 332 P **P** 07 18 18.1 +0.4
DSP **Deep Springs** 67.97 59 IAmb IAmb 07 18 21.3
comp=Z,15nm,0.9s
AFI **Afiamalu** 68.16 137 LR LR 07 43 22.8
comp=Z,23nm,21.7s,baz=208,slow=32
MAK **Makhachkala** 68.17 309 *e*P **P** 07 18 15.8 -3.8
MAK *e*PPP PPP 07 22 26.1
MAK *e*S **S** 07 27 10.4 -5.5
MAK pmax pmax
comp=Z,227nm,1.0s
MAK MLR MLR
comp=Z,219nm,20.0s
ASAR **Alice Springs** 68.31 194 P **P** 07 18 21.8 +1.2
comp=Z,2.3nm,0.7s,baz=14,slow=5.8,SNR=21
ASAR pP **sP** 07 18 39.5 +0.2
comp=Z,7.9nm,0.9s,baz=10,slow=6.2,SNR=16
ASAR PKPPKP **P'P'df** 07 46 37.0 +4.5
comp=Z,1.0nm,0.8s,baz=195,slow=3.6,SNR=8.3
ASAR LR LR 07 50 54.4
comp=Z,43nm,18.1s,baz=35,slow=38
comp=Z,2.3nm,0.7s
AS09 **Alice Springs** 68.34 194 P **P** 07 18 21.8 +1.0
comp=Z,13nm,0.8s
LOHW **Long Hollow** 68.35 50 IAmb IAmb 07 18 23.8
comp=Z,41nm,1.8s
SOEG **Soedalen** 68.37 360 *i* P **P** 07 18 19.9 -0.5
DGMT **Dagmar** 68.52 43 IAmb IAmb 07 18 23.5
comp=Z,47nm,1.2s
AHID **Auburn Hatcher** 68.62 51 P **P** 07 18 24.1 +1.4
SFJD **Kangerlussuaq** 68.68 8 P **P** 07 18 22.1 -0.3
SFJD **Kangerlussuaq** 68.68 8 P **P** 07 18 22.1 -0.3
SFJD pmax pmax
comp=Z,39nm,0.9s
SFJD **Kangerlussuaq** 68.68 8 *i* P **P** 07 18 21.4 -0.9
LAO **LASA Array** 68.68 45 IAmb IAmb 07 18 25.2
comp=Z,22nm,1.1s
AKT **Akhty** 69.00 308 *e*P **P** 07 18 25.4 +0.4
AKT *e**PP **pP** 07 18 38.2 -0.8
AKT *e**SP **sP** 07 18 44.7 +0.1
AKT *e* 07 18 46.6
AKT *e*PPP PPP 07 22 36.8
AKT *e*S **S** 07 27 28.7 +2.7
AKT pmax pmax
comp=Z,94nm,1.0s
AKT MLR MLR
comp=Z,336nm,20.0s
FRB **Frobisher Bay** 69.02 16 LR LR 07 49 33.3
comp=Z,74nm,22.0s,baz=318,slow=37
FRB **Frobisher Bay** 69.02 16 P **P** 07 18 24.5 -0.1
HWUT **Hardware Ranch** 69.10 52 P **P** 07 18 27.3 +1.6
S11A **Rachel** 69.17 58 IAmb IAmb 07 18 28.6
comp=Z,27nm,0.7s
FURC **Furnace Creek,** 69.23 59 IAmb IAmb 07 18 28.8
comp=Z,30nm,0.8s
GOF **Gofitskoye** 69.25 313 *ce*P **P** 07 18 26.8 +0.5
SLIT **Slitere, Latvi** 69.28 332 P **P** 07 18 26.0 -0.2
DUG **Dugway, Tooele** 69.29 54 P **P** 07 18 28.5 +1.6
TPNV **Topopah Spring** 69.30 58 IAmb IAmb 07 18 29.3
comp=Z,18nm,1.0s
MOL **Molde** 69.37 342 *e*P **P** 07 18 26.6 -0.1
MOL IAmb IAmb 07 18 27.3
comp=Z,24nm,0.7s
DOMB **Dombas** 69.48 341 *e*P **P** 07 18 27.4 -0.1
DOMB IAmb IAmb 07 18 27.8
comp=Z,58nm,0.8s
PDAR **Pinedale Array** 69.48 50 P **P** 07 18 28.9 +0.8
comp=Z,6.9nm,0.7s,baz=264,slow=1.8,SNR=66
PDAR LR LR 07 48 50.7
comp=Z,19nm,20.2s,baz=316,slow=36
comp=Z,6.9nm,0.7s
PDAR **Pinedale Array** 69.48 50 P **P** 07 18 28.7 +0.6
GWY **Greenwater Val** 69.53 59 IAmb IAmb 07 18 30.5
comp=Z,16nm,0.8s
QSM **Queen of Sheba** 69.54 60 IAmb IAmb 07 18 30.6
comp=Z,16nm,0.8s
MNK **Minsk** 69.62 327 *i* P **P** 07 18 28.9 +0.5
comp=E,75nm,0.9s
MNK *i* P **P** 07 18 28.9 +0.5
comp=N,43nm,1.1s
MNK *i* P **P** 07 18 28.9 +0.5
comp=Z,146nm,0.9s,baz=42
MNK *i* pP **sP** 07 18 45.4 -2.6
MNK *i* sP **PcP** 07 18 51.9 +0.8
MNK *i* PP **PP** 07 21 02.9 +0.7
MNK *i* PPP PPP 07 22 46.2
MNK *i* S **S** 07 27 33.7 +1.0
MNK *i* sS **sS** 07 28 02.0 +5.7
MNK *i* SS **SS** 07 32 03.9 +3.7
MNK *i* SSS SSS 07 35 17.5
MNK *i* LQ LQ 07 44 26.4
MNK *i* LRM MLR 07 50 06.8
comp=E,227nm,19.8s
MNK *i* LRM MLR 07 50 23.0
comp=Z,189nm,20.7s
MNK *i* LRM MLR 07 50 32.1
comp=N,104nm,17.0s
MNK **Minsk** 69.62 327 *i* P **P** 07 18 28.9 +0.5
MNK *i* *PP **sP** 07 18 45.3 -2.6
MNK *i* *SP **PcP** 07 18 51.9 +0.8
MNK *i* 07 21 02.8
MNK *i* PPP PPP 07 22 46.2
MNK *i* S **S** 07 27 33.7 +1.0
MNK *i* *SS **sS** 07 28 02.0 +5.7
MNK *i* SS **SS** 07 32 03.9 +3.7
MNK pmax pmax
comp=Z,146nm,0.9s
MNK pmax pmax
comp=E,75nm,0.9s
MNK pmax pmax
comp=N,43nm,1.1s
MNK MLR MLR
comp=E,227nm,20.0s
MNK MLR MLR
comp=Z,189nm,21.0s
MNK MLR MLR
comp=N,104nm,17.0s
NACGM **Naroch** 69.75 328 ⇑*i*P **P** 07 18 28.8 -0.4
comp=Z,189nm,0.9s,baz=42
NB2 **NORSAR Subarra** 69.80 339 P **P** 07 18 29.2 -0.3
comp=Z,65nm,0.7s,baz=31,slow=6.5
NB2 **NORSAR Subarra** 69.80 339 P **P** 07 18 29.2 -0.3
NOA **NORSAR Array B** 69.80 339 P **P** 07 18 29.1 -0.4
comp=Z,50nm,0.6s,baz=31,slow=6.3,SNR=252
NOA LR LR 07 52 23.7
comp=Z,128nm,21.8s,baz=25,slow=39
comp=Z,50nm,0.6s
AKN **Aaknes** 69.84 342 *e*P **P** 07 18 30.0 +0.3
AKN IAmb IAmb 07 18 30.4
comp=Z,29nm,0.9s
HFS **Hagfors** 69.90 338 P **P** 07 18 29.6 -0.5
comp=Z,81nm,0.6s,baz=35,slow=5.4,SNR=246
HFS LR LR 07 52 10.1
comp=Z,106nm,21.3s,baz=30,slow=38
comp=Z,81nm,0.6s
NC602 **NORSAR Array S** 69.97 339 IAmb IAmb 07 18 30.8
comp=Z,41nm,1.0s
NC602 **NORSAR Array S** 69.97 339 *e*P **P** 07 18 30.0 -0.5
NC602 IAmb IAmb 07 18 30.5
comp=Z,42nm,1.0s
NAO01 **NORSAR Array S** 70.05 339 P **P** 07 18 31.0 0.0
ERBR **Yeremizino-Bor** 70.15 315 *e*P **P** 07 18 32.4 +0.6
ERBR *e**PP **pP** 07 18 46.7 +0.8
ERBR pmax pmax
comp=Z,151nm,0.8s
KIV **Kislovodsk** 70.18 312 ⇑P **P** 07 18 33.2 +1.1
KIV **Kislovodsk** 70.18 312 *i* P **P** 07 18 33.1 +0.9
SNR=11
KIV **Kislovodsk** 70.18 312 P **P** 07 18 32.6 +0.5
KIV **Kislovodsk** 70.18 312 *e*P **P** 07 18 30.8 -1.4
KIV *e*S **S** 07 27 37.6 -2.1
KIV pmax pmax
comp=Z,19nm,4.0s
KIV pmax pmax
comp=Z,126nm,1.0s
KIV MLR MLR
comp=Z,143nm,18.0s
KIV **Kislovodsk** 70.18 312 P **P** 07 18 32.8 +0.7
KIV **Kislovodsk** 70.18 312 P **P** 07 18 32.7 +0.5
comp=Z,1μmcomp=Z,140nm,0.8s
KIV **Kislovodsk** 70.18 312 P **P** 07 18 33.3 +1.1
KIV **Kislovodsk** 70.18 312 P **P** 07 18 32.8 +0.7
KBZ **Khabaz** 70.21 312 P **P** 07 18 33.2 +1.0
comp=Z,79nm,0.8s,baz=74,slow=3.9,SNR=159
KBZ LR LR 07 54 15.6
comp=Z,247nm,18.8s,baz=46,slow=40
comp=Z,79nm,0.8s
KBZ **Khabaz** 70.21 312 *c i*P **P** 07 18 33.0 +0.8
KBZ pmax pmax
comp=Z,77nm,0.8s
PABE **Paberze** 70.34 330 P **P** 07 18 32.8 0.0
PABE **Paberze** 70.34 330 P **P** 07 18 32.8 0.0
SHA1 **Shidzhatmaz** 70.34 312 *c i*P **P** 07 18 33.8 +0.5
LABN **Labinsk** 70.75 314 *e*P **P** 07 18 33.9 -1.6
LABN *e**PP **pP** 07 18 51.3 +1.7
LABN *e*S **S** 07 27 45.3 -1.0
LABN pmax pmax
comp=Z,111nm,0.7s
LABN MLR MLR
comp=Z,341nm,19.0s
FOO **Floro** 70.79 342 *e*P **P** 07 18 35.8 +0.3
FOO IAmb IAmb 07 18 36.1
comp=Z,41nm,0.8s
SKAR **Skarslia** 70.84 340 *e*P **P** 07 18 36.1 +0.2
SKAR IAmb IAmb 07 18 36.8
comp=Z,49nm,1.1s
OSL **Oslo** 70.87 339 *e*P **P** 07 18 36.2 +0.3
ANGG **Ammassalik, Gr** 70.88 2 IAmb IAmb 07 18 36.5
comp=Z,36nm,1.0s
ANGG **Ammassalik, Gr** 70.88 2 P **P** 07 18 35.2 -0.7
ANGG **Ammassalik, Gr** 70.88 2 *i* P **P** 07 18 33.5 -2.5
HYA **Hoyanger** 70.92 341 *e*P **P** 07 18 36.3 +0.1
HYA IAmb IAmb 07 18 37.0
comp=Z,89nm,0.8s
P17A **Butcher Ranch,** 70.97 53 IAmb IAmb 07 18 39.4
comp=Z,15nm,0.9s
P18A **Preston Nutter** 71.16 53 IAmb IAmb 07 21 14.7
comp=Z,24nm,0.7s
ULM **Lac du Bonnet** 71.16 37 P **P** 07 18 38.0 +0.1
comp=Z,7.3nm,0.5s,baz=310,slow=6.2,SNR=30
comp=Z,7.3nm,0.5s
ULM **Lac du Bonnet** 71.16 37 IAmb IAmb 07 18 38.5
comp=Z,12nm,0.6s
K22A **Casper** 71.23 49 IAmb IAmb 07 18 40.5
comp=Z,29nm,1.4s
NUUK **Nuuk** 71.30 9 P **P** 07 18 39.3 +0.9
NUUK **Nuuk** 71.30 9 *i* P **P** 07 18 38.3 -0.2
PFO **Pinyon Flats O** 71.31 61 LR LR 07 55 32.3
comp=Z,12nm,18.1s,baz=254,slow=40
PFO **Pinyon Flats O** 71.31 61 P **P** 07 18 40.2 +0.9
PFO **Pinyon Flats O** 71.31 61 *i* P **P** 07 18 39.7 +0.4
PFO pmax pmax
comp=Z,10.0nm,0.9s
SRU **San Rafael Swe** 71.34 54 IAmb IAmb 07 18 41.4
comp=Z,20nm,0.9s

SUE Sulen 71.34 342 *e*P **P 07 18 38.8 0.0**
SUE IAmb IAmb 07 18 39.6
comp=Z,38nm,0.8s
KONO Kongsberg 71.41 339 P **P 07 18 39.5 +0.3**
KONO IAmb IAmb 07 18 40.1
comp=Z,26nm,0.8s
KONO Kongsberg 71.41 339 P **P 07 18 39.5 +0.3**
KONO pmax pmax
comp=Z,26nm,0.8s
KONO Kongsberg 71.41 339 *e*P **P 07 18 39.3 +0.1**
KONO IAmb IAmb 07 18 39.5
comp=Z,26nm,0.8s
KONO Kongsberg 71.41 339 P **P 07 18 39.2 0.0**
BORG Borgarnes 71.51 355 LR LR 07 49 46.7
comp=Z,21nm,20.0s,baz=14,slow=36
BORG Borgarnes 71.51 355 P **P 07 18 41.8 +2.0**
BORG Borgarnes 71.51 355 P **P 07 18 41.8 +2.0**
BORG pmax pmax
comp=Z,50nm,0.7s
BORG Borgarnes 71.51 355 P **P 07 18 41.4 +1.6**
STRU Stroemstad 71.52 338 *i* P **P 07 18 39.4 -0.5**
E28A Huff 71.54 43 IAmb IAmb 07 18 41.9
comp=Z,16nm,0.8s
RSSD Black Hills 71.55 46 P **P 07 18 40.8 +0.1**
RSSD Black Hills 71.55 46 P **P 07 18 40.8 +0.1**
RSSD pmax pmax
comp=Z,8.0nm,0.7s
RSSD Black Hills 71.55 46 P **P 07 18 41.0 +0.3**
RSSD Black Hills 71.55 46 P **P 07 18 40.7 +0.1**
RSSD pP **pP 07 18 53.3 -0.7**
GNI Garni 71.58 308 LR LR 07 53 30.4
comp=Z,130nm,18.8s,baz=55,slow=39
GNI Garni 71.58 308 P **P 07 18 42.3 +1.5**
GNI Garni 71.58 308 P **P 07 18 42.5 +1.7**
GNI IAmb IAmb 07 19 19.8
comp=Z,37nm,0.8s
GNI Garni 71.58 308 *i* P **P 07 18 42.1 +1.2**
GNI pmax pmax
comp=Z,37nm,1.2s
GNI Garni 71.58 308 P **P 07 18 42.8 +1.9**
ASK Askoy 71.75 342 *e*P **P 07 18 41.8 +0.5**
ASK IAmb IAmb 07 18 42.2
comp=Z,79nm,0.9s
IRM Iron Mountain 71.78 60 P **P 07 18 43.0 +0.9**
EPOS Posof 71.80 310 P **P 07 18 41.2 -1.0**
BER Bergen 71.81 341 *e*P **P 07 18 42.2 +0.6**
BER IAmb IAmb 07 18 42.5
comp=Z,77nm,0.8s
AK03 Malin Array Si 71.89 324 P **P 07 18 41.6 -0.7**
AK23 Malin Array Si 71.90 324 P **P 07 18 41.7 -0.6**
AKASG Malin Array Be 71.91 324 P **P 07 18 42.0 -0.3**
comp=Z,33nm,0.6s,baz=41,slow=6.3,SNR=138
AKASG LR LR 07 52 23.5
comp=Z,68nm,19.0s,baz=48,slow=38
comp=Z,33nm,0.6s
AKASG Malin Array Be 71.91 324 P **P 07 18 42.0 -0.3**
AKBB Malin Array Si 71.91 324 *i* P **P 07 18 42.0 -0.4**
AKBB pmax pmax
comp=Z,87nm,1.1s
AKBB Malin Array Si 71.91 324 P **P 07 18 41.7 -0.7**
AK04 Malin Array Si 71.92 324 P **P 07 18 41.8 -0.6**
AK01 Malin Array Si 71.92 324 P **P 07 18 41.8 -0.6**
KIEV Kiev 71.92 324 ⇓P **P 07 18 42.4 0.0**
KIEV Kiev 71.92 324 *i* P **P 07 18 41.9 -0.5**
SNR=6.3
KIEV Kiev 71.92 324 P **P 07 18 42.0 -0.5**
KIEV Kiev 71.92 324 P **P 07 18 42.0 -0.5**
KIEV pmax pmax
comp=Z,76nm,1.1s
KIEV Kiev 71.92 324 P **P 07 18 41.7 -0.7**
comp=Z,3μmcomp=Z,292nm,1.1s
KIEV Kiev 71.92 324 P **P 07 18 42.2 -0.3**
ODD1 Odda 71.92 341 *e*P **P 07 18 42.8 +0.4**
ODD1 IAmb IAmb 07 18 43.4
comp=Z,46nm,0.8s
AK22 Malin Array Si 71.93 324 P **P 07 18 41.7 -0.8**
AK21 Malin Array Si 71.93 324 P **P 07 18 41.7 -0.8**
AK08 Malin Array Si 71.94 324 P **P 07 18 41.8 -0.8**
AK09 Malin Array Si 71.94 324 P **P 07 18 41.8 -0.8**
AK02 Malin Array Si 71.95 324 P **P 07 18 41.8 -0.8**
AK11 Malin Array Si 71.95 324 P **P 07 18 41.8 -0.8**
AK15 Malin Array Si 71.95 324 P **P 07 18 41.9 -0.8**
AK18 Malin Array Si 71.96 324 P **P 07 18 41.9 -0.8**
AK20 Malin Array Si 71.97 324 P **P 07 18 41.9 -0.8**
AK10 Malin Array Si 71.97 324 P **P 07 18 42.0 -0.8**
AK05 Malin Array Si 71.98 324 P **P 07 18 42.0 -0.8**
AK12 Malin Array Si 71.98 324 P **P 07 18 42.0 -0.8**
AK16 Malin Array Si 71.98 324 P **P 07 18 42.0 -0.8**
AK19 Malin Array Si 71.98 324 P **P 07 18 42.0 -0.8**
HMU Henry Mountain 71.99 55 IAmb IAmb 07 18 45.5
comp=Z,20nm,0.7s
AK17 Malin Array Si 71.99 324 P **P 07 18 42.1 -0.8**
AK06 Malin Array Si 72.00 324 P **P 07 18 42.2 -0.8**
SOC Sochi 72.01 313 *e*P **P 07 18 42.6 -0.5**
SOC *e*PPP PPP 07 23 04.4
SOC *e*S **S 07 27 59.6 -1.1**
SOC pmax pmax
comp=Z,32nm,0.6s
SOC MLR MLR
comp=Z,252nm,20.0s
AK14 Malin Array Si 72.01 324 P **P 07 18 42.2 -0.8**
AK07 Malin Array Si 72.03 324 P **P 07 18 42.5 -0.6**
AK13 Malin Array Si 72.04 324 P **P 07 18 42.6 -0.6**
DIGO Kars 72.18 309 P **P 07 18 46.0 +1.5**
TJOU Tjoern 72.25 337 *i* P **P 07 18 43.0 -1.3**
YUH Yuha Desert 72.28 62 IAmb IAmb 07 21 18.5
comp=Z,7.7nm,0.5s
BATM Batumi 72.30 311 ⇓P **P 07 18 45.9 +1.0**
BATM Batumi 72.30 311 P **P 07 18 45.9 +1.0**
ANN Anapa 72.34 316 *e*P **P 07 18 44.6 -0.5**
ANN *e**PP **pP 07 18 57.8 -1.4**
ANN *e*S **S 07 28 03.2 -1.3**
ANN pmax pmax
comp=Z,32nm,0.5s
MI28 Mi28,Pidlybu 72.39 325 P **P 07 18 43.9 -1.3**
BLS5 Blasjo 72.39 340 *e*P **P 07 18 45.6 +0.4**
BLS5 IAmb IAmb 07 18 46.2
comp=Z,104nm,1.4s
BLEU Blekinge 72.46 334 *i* P **P 07 18 43.6 -1.9**
EPLO Experimental L 72.53 37 IAmb IAmb 07 18 47.1
comp=Z,31nm,0.9s
AGMN Agassiz Nation 72.59 39 IAmb IAmb 07 18 47.6
comp=Z,22nm,1.1s
AGMN Agassiz Nation 72.59 39 P **P 07 18 46.7 +0.2**
PV21 Cone Mtn., Par 72.60 53 IAmb IAmb 07 18 49.1
comp=Z,14nm,0.7s
PV23 Carpenter Ridg 72.66 53 IAmb IAmb 07 18 49.0
comp=Z,19nm,0.8s
ESJX Sierra Juarez 72.68 62 IAmb IAmb 07 21 26.8
comp=Z,39nm,1.3s
ONAU Onsala 72.71 337 *i* P **P 07 18 46.0 -1.1**
RNPP9 Sopachiv 72.75 326 P **P 07 18 47.3 -0.1**
PV20 West Nyswonger 72.76 53 IAmb IAmb 07 18 49.9
comp=Z,26nm,0.7s
PV17 East Wray Mesa 72.80 53 IAmb IAmb 07 18 50.2
comp=Z,25nm,0.7s
PV16 Nyswonger Mesa 72.81 53 IAmb IAmb 07 18 50.3
comp=Z,12nm,0.7s
FABU Falkenberg 72.82 336 *i* P **P 07 18 45.2 -2.4**
RNPP8 Varash 72.82 326 P **P 07 18 47.6 -0.2**
PV11 David Mesa, Pa 72.84 53 IAmb IAmb 07 18 50.5
comp=Z,60nm,1.5s
PV18 Skein Mesa, Pa 72.85 53 IAmb IAmb 07 18 50.5
comp=Z,29nm,0.7s
PV05 Paradox Valley 72.86 54 IAmb IAmb 07 18 50.8
comp=Z,16nm,0.8s
KMY Karmoy 72.87 341 *e*P **P 07 18 48.5 +0.5**
KMY IAmb IAmb 07 18 49.1
comp=Z,69nm,0.8s
PV03 Paradox Valley 72.88 53 IAmb IAmb 07 18 50.7
comp=Z,12nm,0.7s
HOMB Homborsund 72.89 339 *e*P **P 07 18 48.7 +0.6**
HOMB Homborsund 72.89 339 *i* P **P 07 18 47.2 -0.8**
RNPP5 Staryi Chortor 72.89 326 P **P 07 18 47.9 -0.3**
DEL Delary 72.92 335 *i* P **P 07 18 47.0 -1.4**
PV13 Radium Mtn., P 72.96 53 IAmb IAmb 07 18 51.3
comp=Z,17nm,0.7s
LUBAR Lubar, Ukraine 73.11 324 P **P 07 18 48.7 -0.9**
SNART Snartemo 73.16 340 *e*P **P 07 18 50.0 +0.3**
SNART IAmb IAmb 07 18 50.7
comp=Z,160nm,0.9s
SNART Snartemo 73.16 340 *i* P **P 07 18 49.0 -0.7**
OVD Ostervraa, Den 73.26 338 *i* P **P 07 18 50.4 +0.1**
LRW Lerwick 73.42 344 *e*P **P 07 18 51.1 0.0**
LRW IAmb IAmb 07 18 52.0
comp=Z,29nm,0.6s
BJUU Bjuv 73.51 336 *i* P **P 07 18 50.6 -1.1**
BANOM Banah 73.67 290 P **P 07 18 53.8 +0.5**
BANOM Banah 73.67 290 P **P 07 18 53.9 +0.6**
ISCO Idaho Springs 73.67 50 P **P 07 18 54.9 +1.4**
SHME Shamm 73.69 290 *i* P **P 07 18 53.6 +0.3**
SNR=8.1
SHME Shamm 73.69 290 P **P 07 18 53.7 +0.3**
SNR=8.6
BSD Bornholm Skovb 73.74 334 P **P 07 18 53.4 +0.3**
BSD Bornholm Skovb 73.74 334 *i* P **P 07 18 51.9 -1.3**
LUNU Lund 73.76 335 *i* P **P 07 18 52.2 -1.0**
GEVA Gevas 73.79 308 IAmb IAmb 07 18 57.5
comp=Z,14nm,0.6s
MVCO Mesa Verde 73.79 54 P **P 07 18 55.2 +1.1**
BAL3X Bal3x, Balta 73.81 322 P **P 07 18 53.9 +0.2**
WSAR Wadi Sarin 73.82 287 P **P 07 18 54.8 +0.6**
SIM Simferopol' 73.89 317 *e*P **P 07 18 55.3 +1.1**
SIM pmax pmax
comp=Z,87nm,1.0s
SIM MLR MLR
comp=Z,80nm,17.0s
HAKT HAKKARI 73.93 307 P **P 07 18 55.7 +0.8**
BIDO Bidbid 73.99 287 P **P 07 18 55.7 +0.5**
JLN Jalan Bani Buh 73.99 285 P **P 07 18 56.2 +1.1**
WBK Wadi Bani Khal 74.00 286 P **P 07 18 56.0 +0.7**
COP Copenhagen 74.02 336 *i* P **P 07 18 54.5 -0.3**
COP IAmb IAmb 07 18 55.9
comp=Z,130nm,0.9s
KOPT Kop Dagi 74.05 310 IAmb IAmb 07 18 59.3
comp=Z,15nm,0.7s
MDH Madha 74.08 290 P **P 07 18 55.9 +0.2**
MDH Madha 74.08 290 P **P 07 18 56.1 +0.4**
MASF Masafi 74.13 290 P **P 07 18 56.5 +0.5**
MSFE Esma-Masafi 74.13 290 P **P 07 18 56.5 +0.5**
F33A 5 Mile Ranch, 74.19 41 IAmb IAmb 07 18 57.4
comp=Z,26nm,1.1s
GURO Guroymak-BITLI 74.21 308 IAmb IAmb 07 18 58.8
comp=Z,37nm,0.8s
SORM Soroca 74.21 323 ⇓P **P 07 18 56.1 0.0**
SORM Soroca 74.21 323 P **P 07 18 56.0 0.0**
MUD Monsted U'grnd 74.29 338 *i* P **P 07 18 56.0 -0.3**
MUD IAmb IAmb 07 18 57.6
comp=Z,38nm,0.7s
SMDO Samad 74.34 287 P **P 07 18 57.8 +0.4**
UOSS Minazif 74.38 290 *i* P **P 07 18 57.8 +0.4**
SNR=9.7
UOSS Minazif 74.38 290 P **P 07 18 57.7 +0.4**
UOSS IAmb IAmb 07 18 58.2
comp=Z,37nm,0.8s
UOSS Minazif 74.38 290 P **P 07 18 57.7 +0.4**
UOSS Minazif 74.38 290 P **P 07 18 57.9 +0.4**
LLD Lille Linde 74.39 336 *i* P **P 07 18 56.0 -0.8**
LLD IAmb IAmb 07 18 57.9
comp=Z,50nm,0.4s
HATD Hatta, Dubai 74.50 290 *i* P **P 07 18 59.0 +0.8**
SNR=7.5
HATD Hatta, Dubai 74.50 290 P **P 07 18 58.4 +0.2**
HOQ Hoqain 74.51 288 P **P 07 18 58.5 +0.3**
IVI Ivigtut 74.58 8 P **P 07 18 58.3 +0.4**
IVI IAmb IAmb 07 18 59.1
comp=Z,34nm,0.8s
IVI Ivigtut 74.58 8 P **P 07 18 58.1 +0.1**
IVI pP **pP 07 19 09.4 -2.6**
KELT Kelkit 74.64 311 P **P 07 19 00.2 +1.3**
ASHO Ashiyiah 74.65 289 *i* P **P 07 18 59.6 +0.6**
SNR=7.2
ASHO Ashiyiah 74.65 289 P **P 07 18 59.2 +0.1**
SOHO SOHO 74.68 289 *i* P **P 07 18 59.5 +0.4**
SNR=7.1
SOHO SOHO 74.68 289 P **P 07 18 59.4 +0.2**
KMPD K-Podol'skiy 74.70 324 P **P 07 18 57.8 -1.1**
NAZ Nazwa, Dubai 74.72 290 P **P 07 18 59.7 +0.3**
NAZ Nazwa, Dubai 74.72 290 P **P 07 18 60.0 +0.6**
JMDO Jabal Madar 74.76 286 P **P 07 19 00.0 +0.4**
EYMN Ely 74.80 37 IAmb IAmb 07 19 00.6
comp=Z,22nm,0.8s
EYMN Ely 74.80 37 P **P 07 18 59.6 +0.2**
K30B Basset 74.86 45 IAmb IAmb 07 19 01.6
comp=Z,33nm,0.8s
NRS Narsarsuaq 74.88 7 IAmb IAmb 07 19 01.7
comp=Z,22nm,0.8s
FAQ Al Faqa, Dubai 74.92 290 P **P 07 19 00.7 +0.1**
FAQ Al Faqa, Dubai 74.92 290 P **P 07 19 00.6 +0.1**
BSY Bisya 75.14 287 P **P 07 19 02.3 +0.5**
ASUD Al Ashush, Dub 75.18 290 P **P 07 19 02.6 +0.6**
ASUD Al Ashush, Dub 75.18 290 P **P 07 19 02.7 +0.6**
ARQ Araqi 75.22 288 P **P 07 19 02.7 +0.4**
ALNE Al Ain 75.27 289 *i* P **P 07 19 03.0 +0.4**
SNR=10.0
ALNE Al Ain 75.27 289 P **P 07 19 02.8 +0.2**
KWP Kalwaria Pacla 75.41 327 P **P 07 19 03.3 +0.3**
STKA Stephens Creek 75.49 186 LR LR 07 50 02.3
comp=Z,71nm,21.9s,baz=15,slow=34
ECSD EROS Data Cent 75.59 43 IAmb IAmb 07 19 05.5
comp=Z,27nm,1.2s
ECSD EROS Data Cent 75.59 43 P **P 07 19 04.3 +0.2**
VASR Vaslui 75.59 322 ⇑P **P 07 19 04.1 +0.1**
PRAR RASCA 75.73 323 ⇓P **P 07 19 04.7 -0.1**
TUC Tucson 75.74 59 P **P 07 19 05.7 +0.5**
TUC Tucson 75.74 59 P **P 07 19 05.7 +0.5**
TUC pmax pmax
comp=Z,4.0nm,0.9s
TUC Tucson 75.74 59 P **P 07 19 06.5 +1.2**
MHTO MHTO 75.76 285 P **P 07 19 06.2 +0.8**
E38A The Farm, Brul 75.80 38 P **P 07 19 05.2 0.0**
ARPR Arapgir-MALATY 75.89 311 P **P 07 19 07.8 +1.6**
GIRR Girov 75.92 323 ⇓P **P 07 19 06.7 +0.8**
BIR Birlad 75.95 322 ⇑P **P 07 19 07.4 +1.3**
BIR Birlad 75.95 322 P **P 07 19 07.4 +1.3**
BURAR Bucovina Array 75.96 324 ⇑P **P 07 19 06.8 +0.4**
BURAR Bucovina Array 75.96 324 P **P 07 19 06.5 +0.2**
BURAR Bucovina Array 75.96 324 P **P 07 19 06.7 +0.4**
OJC Ojcow 76.07 329 P **P 07 19 07.3 +0.6**
VLDR Vladesti 76.07 321 ⇑P **P 07 19 07.6 +0.9**
BZK Bozkurt 76.12 315 ⇑P **P 07 19 08.2 +1.1**
KOLS Kolonicke sedl 76.14 326 *e*P **P 07 19 07.7 +0.6**
KOLS pmax pmax
comp=Z,38nm,0.9s
KOLS Kolonicke sedl 76.14 326 P **P 07 19 07.8 +0.6**
KOLS Kolonicke sedl 76.14 326 *e*P **P 07 19 07.7 +0.6**
BSEG Bad Segeberg 76.15 336 *e*P **P 07 19 07.7 +0.7**
comp=Z,20nm,0.8s,baz=31,slow=5.6
BSEG Bad Segeberg 76.15 336 P **P 07 19 07.8 +0.7**
STHS Stebnicka Huta 76.16 327 *e*P **P 07 19 07.7 +0.4**
STHS pmax pmax
comp=Z,36nm,1.4s
STHS Stebnicka Huta 76.16 327 *e*P **P 07 19 07.6 +0.3**
TESR Tescani 76.20 323 ⇑P **P 07 19 07.5 0.0**
TESR Tescani 76.20 323 P **P 07 19 07.7 +0.1**
GHRR 76.21 322 ⇓P **P 07 19 09.1 +1.5**
GHRR 76.21 322 P **P 07 19 09.0 +1.5**
TLCR 76.23 320 ⇑P **P 07 19 08.6 +0.8**
TLCR 76.23 320 P **P 07 19 08.5 +0.8**
SCTR Scanteiesti 76.24 321 ⇑P **P 07 19 08.6 +0.8**
SPMN Marine on St. 76.28 39 IAmb IAmb 07 19 09.1
comp=Z,16nm,0.9s
COSR Cosmesti PH 76.41 322 ⇓P **P 07 19 10.0 +1.3**
ONER Baraj Valea Uz 76.45 323 ⇑P **P 07 19 09.8 +0.9**
PANC Panciu 76.47 322 ⇑P **P 07 19 10.1 +1.1**
BGNE Belgrade 76.53 45 IAmb IAmb 07 19 10.6
comp=Z,34nm,0.8s
ANMO Albuquerque 76.55 54 P **P 07 19 09.8 -0.2**
ANMO Albuquerque 76.55 54 *i* P **P 07 19 10.4 +0.4**
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 76.55 54 P **P 07 19 11.4 +1.5**
ANMO Albuquerque 76.55 54 P **P 07 19 11.2 +1.2**
ANMO sP **pwP 07 19 26.7 -0.2**
CFR Carcaliu 76.55 321 ⇓P **P 07 19 09.5 -0.1**
CFR Carcaliu 76.55 321 P **P 07 19 09.4 -0.1**
UMZA Um Al Zommool 76.56 289 P **P 07 19 09.7 -0.2**
ODBI Odobesti 76.59 322 ⇓P **P 07 19 10.9 +1.2**
DUN6 Lazy B Ranch 76.62 58 IAmb IAmb 07 19 12.7
comp=Z,18nm,0.8s
VRI Vrincioaia 76.66 322 ⇑P **P 07 19 10.2 0.0**
VRI Vrincioaia 76.66 322 P **P 07 19 10.2 0.0**
VRI Vrincioaia 76.66 322 P **P 07 19 10.8 +0.6**
TPGR Topolog 76.67 320 ⇑P **P 07 19 10.9 +0.7**
DRUM Mains of Drumt 76.67 344 *e*P **P 07 19 09.6 -0.4**
DRUM IAmb IAmb 07 19 11.2
comp=Z,16nm,1.1s
GORT1 Trebel 76.67 335 *e*P **P 07 19 10.7 +0.7**
comp=Z,67nm,1.3s,baz=31,slow=5.6
TRPA Tarpa 76.67 326 P **P 07 19 11.0 +0.8**
PLOR Plostina 76.71 322 ⇓P **P 07 19 10.4 0.0**
PLOR Plostina 76.71 322 P **P 07 19 10.4 0.0**
CIDE Kastamonu/Cide 76.71 316 ⇓P **P 07 19 10.4 -0.1**
ARCR ARCALIA 76.74 324 ⇑P **P 07 19 11.5 +0.9**
SAHR Sahastru 76.79 322 ⇓P **P 07 19 11.9 +0.9**
TURR Turia 76.83 323 ⇑P **P 07 19 12.3 +1.2**
KPL Plockton 76.87 346 *e*P **P 07 19 11.1 +0.1**
KPL IAmb IAmb 07 19 12.5
comp=Z,32nm,0.9s
OZUR 76.90 323 ⇑P **P 07 19 12.9 +1.3**
COVR Voineasa-Covas 76.91 322 ⇓P **P 07 19 12.5 +0.9**
TIRR Tirgusor 76.97 320 ⇑P **P 07 19 12.4 +0.4**
TIRR Tirgusor 76.97 320 IAmb IAmb 07 20 25.7
comp=Z,20nm,0.7s
TIRR Tirgusor 76.97 320 P **P 07 19 12.3 +0.4**
TIRR Tirgusor 76.97 320 P **P 07 19 12.3 +0.4**
OKC Ostrava-Krasne 77.00 329 P **P 07 19 12.7 +0.8**
L34A Svendsen Farm, 77.02 44 IAmb IAmb 07 19 13.1
comp=Z,28nm,0.7s
ABAH Abaujker 77.06 327 P **P 07 19 13.0 +0.7**
LANS Liptovska Anna 77.06 328 *e*P **P 07 19 13.6 +1.2**
LANS pmax pmax
comp=Z,22nm,1.0s
LANS Liptovska Anna 77.06 328 *e*P **P 07 19 13.6 +1.2**
TLBR Topalu 77.08 320 ⇑P **P 07 19 13.2 +0.7**
OSTC Ostas 77.10 331 *e*P **P 07 19 13.4 +0.8**
OSTC Ostas 77.10 331 *e*P **P 07 19 13.4 +0.8**
CHVC Chvalec 77.13 331 *e*P **P 07 19 13.4 +0.6**
CHVC Chvalec 77.13 331 *e*P **P 07 19 13.4 +0.6**
DOPR Dopca 77.17 323 ⇓P **P 07 19 13.6 +0.6**
KBD Kabd 77.19 298 P **P 07 19 13.9 +0.5**
NEHR Nehoiu 77.19 322 ⇓P **P 07 19 14.5 +1.3**
KECS Kecovo 77.21 327 *e*P **P 07 19 14.9 +1.7**
KECS Kecovo 77.21 327 *e*P **P 07 19 14.9 +1.7**
UPC Upice 77.22 331 P **P 07 19 13.8 +0.6**
DPC Dobruska-Polom 77.24 331 *e*P **P 07 19 14.4 +1.0**
DPC Dobruska-Polom 77.24 331 *e*P **P 07 19 14.4 +1.0**
DPC Dobruska-Polom 77.24 331 P **P 07 19 13.9 +0.5**
FLTG Flechtingen 77.26 334 *e*P **P 07 19 13.2 -0.2**
comp=Z,36nm,0.8s,baz=31,slow=5.6
MORC Moravsky Berou 77.27 330 ⇑P **P 07 19 14.0 +0.4**
MORC Moravsky Berou 77.27 330 IAmb IAmb 07 19 16.1
comp=Z,29nm,0.7s
MORC Moravsky Berou 77.27 330 P **P 07 19 13.9 +0.4**
MORC Moravsky Berou 77.27 330 *e*P **P 07 19 13.6 0.0**
MORC Moravsky Berou 77.27 330 P **P 07 19 14.2 +0.7**
MLR Muntele Rosu 77.30 322 P **P 07 19 14.3 +0.4**
comp=Z,17nm,0.7s,baz=191,slow=5.1,SNR=21
MLR LR LR 07 55 50.7
comp=Z,112nm,20.0s,baz=29,slow=38
comp=Z,17nm,0.7s
MLR Muntele Rosu 77.30 322 ⇓P **P 07 19 14.5 +0.6**
MLR Muntele Rosu 77.30 322 IAmb IAmb 07 19 17.3
comp=Z,20nm,0.7s
MLR Muntele Rosu 77.30 322 P **P 07 19 14.7 +0.8**
KRLC Kraliky 77.30 330 *e*P **P 07 19 14.5 +0.8**
KRLC Kraliky 77.30 330 *e*P **P 07 19 14.5 +0.8**
KRLC Kraliky 77.30 330 P **P 07 19 14.3 +0.6**
319A Douglas 77.31 59 IAmb IAmb 07 19 16.5
comp=Z,15nm,0.8s
ISR Istrita 77.32 322 ⇓P **P 07 19 14.8 +0.9**
ISR Istrita 77.32 322 P **P 07 19 14.8 +0.9**
CJR Cluj-Napoca 77.36 324 ⇑P **P 07 19 14.9 +0.8**
CJR Cluj-Napoca 77.36 324 P **P 07 19 14.9 +0.8**
BNN Bunyan 77.42 312 IAmb IAmb 07 19 16.5
comp=Z,24nm,0.8s
G40A Rib Lake 77.43 38 IAmb IAmb 07 19 15.0
comp=Z,20nm,0.5s
INVG Invergeldie, C 77.43 344 *e*P **P 07 19 14.0 -0.2**
INVG IAmb IAmb 07 19 15.4
comp=Z,11nm,0.8s
SCHQ Schefferville 77.43 20 P **P 07 19 14.8 +0.5**
comp=Z,16nm,0.5s,baz=334,slow=4.4,SNR=37
SCHQ LR LR 07 56 27.4
comp=Z,80nm,20.3s,baz=333,slow=38
comp=Z,16nm,0.5s
SCHQ Schefferville 77.43 20 IAmb IAmb 07 19 15.3
comp=Z,22nm,0.7s
RETH Rethem/Aller, 77.48 336 *e*P **P 07 19 15.0 +0.5**
comp=Z,29nm,0.9s,baz=31,slow=5.6
RETH Rethem/Aller, 77.48 336 P **P 07 19 15.1 +0.5**
ICOR Ion Corvin 77.52 320 ⇓P **P 07 19 16.1 +1.1**
MZR Muzera 77.52 290 *i* P **P 07 19 15.4 0.0**
SNR=15
MZR Muzera 77.52 290 P **P 07 19 15.6 +0.3**
CLL Collm 77.57 333 ⇑*i*P **P 07 19 15.0 -0.1**
CLL *e**PP **pP 07 19 31.0 +1.7**
CLL pmax pmax
comp=Z,48nm,0.6s
CLL Collm 77.57 333 *e*P **P 07 19 15.0 -0.1**
comp=Z,44nm,0.7s,baz=31,slow=5.6
CLL Collm 77.57 333 ⇑*i*P **P 07 19 15.0 -0.1**
comp=Z,48nm,0.6s
CLL *e*(pP) **pP 07 19 31.0 +1.7**
CLL AMS AMS 07 57 00.0
comp=Z,200nm,20.4s
CLL Collm 77.57 333 P **P 07 19 15.1 0.0**
CBKS Cedar Bluff 77.59 48 IAmb IAmb 07 19 16.2
comp=Z,14nm,0.8s
MARR Marisel-Cluj 77.59 325 ⇑P **P 07 19 15.7 +0.2**
ASSE Asse, Remlinge 77.61 335 *e*P **P 07 19 15.4 +0.2**
comp=Z,23nm,1.0s,baz=31,slow=5.6
ASSE Asse, Remlinge 77.61 335 P **P 07 19 15.7 +0.4**
BRG Berggiesshubel 77.62 332 *e*P **P 07 19 15.5 +0.1**
comp=Z,15nm,0.8s,baz=31,slow=5.6
BRG Berggiesshubel 77.62 332 P **P 07 19 15.6 +0.1**
BRG Berggiesshubel 77.62 332 *i* P **P 07 19 15.5 +0.1**
BRG Amp 07 19 17.2
comp=Z,15nm,0.8s
BRG Berggiesshubel 77.62 332 P P 07 19 24.4 +9.0
BRG Amp 07 19 25.1
comp=Z,6.0nm,0.7s
DRGR 77.67 325 P **P 07 19 16.2 +0.4**
PVCC Panska Ves 77.70 332 P **P 07 19 16.6 +0.7**
PSN Preselentsi 77.73 320 P **P 07 19 16.8 +0.6**
EDI Edinburgh 77.73 344 *e*P **P 07 19 16.3 +0.4**
EDI IAmb IAmb 07 19 18.1
comp=Z,12nm,0.8s
VOIR 77.73 323 ⇑P **P 07 19 17.0 +0.6**
VOIR 77.73 323 P **P 07 19 16.9 +0.6**
VOIR 77.73 323 P **P 07 19 16.9 +0.6**
WIMM Wimmelburg 77.87 334 P **P 07 19 16.6 -0.2**
PSZ Piszkesteto 77.90 327 ⇑P **P 07 19 17.6 +0.4**
PSZ Piszkesteto 77.90 327 IAmb IAmb 07 19 20.4
comp=Z,23nm,0.9s
PSZ Piszkesteto 77.90 327 P **P 07 19 17.5 +0.4**
PSZ Piszkesteto 77.90 327 P **P 07 19 17.9 +0.8**
BR131 Keskin Array S 77.94 314 IAmb IAmb 07 19 19.1
comp=Z,14nm,0.8s
BR131 Keskin Array S 77.94 314 P **P 07 19 18.1 +0.4**
BRTR Keskin Array B 77.94 314 P **P 07 19 18.1 +0.4**
comp=Z,7.8nm,0.7s,baz=80,slow=3.6,SNR=25
BRTR LR LR 08 00 18.7
comp=Z,84nm,18.3s,baz=69,slow=41
comp=Z,7.8nm,0.7s
BRTR Keskin Array B 77.94 314 P **P 07 19 18.0 +0.4**
F42A Maple Grove Fa 77.95 36 IAmb IAmb 07 19 18.5
comp=Z,24nm,0.9s
CLZ Clausthal 77.95 335 *e*P **P 07 19 17.7 +0.4**
comp=Z,110nm,1.4s,baz=31,slow=5.6
CLZ Clausthal 77.95 335 P **P 07 19 18.0 +0.7**
ARR Arges 77.97 323 ⇓P **P 07 19 18.7 +1.1**
ARR Arges 77.97 323 P **P 07 19 18.9 +1.3**
JAVC Velka Javorina 77.98 329 *e*P **P 07 19 18.7 +1.1**
JAVC Velka Javorina 77.98 329 P **P 07 19 17.4 -0.1**
VRAC Vranov 78.01 330 P **P 07 19 18.4 +0.8**
comp=Z,27nm,0.9s,baz=45,slow=6.5,SNR=26
VRAC LR LR 07 58 24.0
comp=Z,137nm,19.2s,baz=36,slow=39
comp=Z,27nm,0.9s
VRAC Vranov 78.01 330 ⇑P **P 07 19 18.1 +0.4**
VRAC Vranov 78.01 330 P **P 07 19 18.0 +0.4**
VRAC Vranov 78.01 330 *e*P **P 07 19 18.0 +0.4**
VRAC Vranov 78.01 330 P **P 07 19 18.4 +0.8**
HSKC Hora Svate Kat 78.02 332 *e*P **P 07 19 18.1 +0.4**
HSKC Hora Svate Kat 78.02 332 P **P 07 19 18.1 +0.4**
NEUB Neuenburg 78.05 334 *e*P **P 07 19 17.8 -0.1**
comp=Z,66nm,1.2s,baz=31,slow=5.6
NEUB Neuenburg 78.05 334 P **P 07 19 18.1 +0.3**
ANDN Andirin 78.07 311 P **P 07 19 19.5 +1.2**
PGBU Glenifferbraes 78.10 344 *e*P **P 07 19 18.0 +0.1**

PGBU IAmb IAmb 07 19 19.7
comp=Z,64nm,0.8s
PRU Pruhonice 78.17 331 *eP* **P 07 19 18.9 +0.4**
PRU Pruhonice 78.17 331 *eP* **P 07 19 18.9 +0.4**
PRU Pruhonice 78.17 331 P **P 07 19 19.1 +0.6**
KIRS Kirsehir-Merke 78.24 313 ⇑P **P 07 19 19.7 +0.5**
EKA Eskdalemuir Ar 78.28 344 P **P 07 19 19.1 +0.1**
comp=Z,24nm,0.7s,baz=22,slow=5.3,SNR=69
EKA LR LR 08 00 32.1
comp=Z,63nm,19.1s,baz=7.5,slow=41
comp=Z,24nm,0.7s
KRUC Moravsky 78.28 330 *eP* **P 07 19 19.2 +0.1**
KRUC Moravsky 78.28 330 P **P 07 19 19.8 +0.7**
LOT Lotru 78.28 323 ⇓P **P 07 19 19.4 +0.1**
ESK Eskdalemuir 78.31 344 P **P 07 19 19.4 +0.3**
ESK IAmb IAmb 07 19 20.2
comp=Z,20nm,0.7s
ESK Eskdalemuir 78.31 344 P **P 07 19 19.4 +0.3**
ESK pmax pmax
comp=Z,20nm,0.7s
ESK Eskdalemuir 78.31 344 P **P 07 19 19.4 +0.3**
ESK Eskdalemuir 78.31 344 *eP* **P 07 19 19.2 0.0**
ESK IAmb IAmb 07 19 20.5
comp=Z,19nm,0.7s
I40A Norwalk 78.31 39 IAmb IAmb 07 19 20.3
comp=Z,50nm,1.5s
IBBN Ibbenburen 78.33 336 *eP* **P 07 19 19.5 +0.1**
comp=Z,36nm,0.6s,baz=31,slow=5.6
IBBN Ibbenburen 78.33 336 P **P 07 19 19.6 +0.3**
GTTG Gottingen 78.33 335 *eP* **P 07 19 19.6 +0.2**
comp=Z,46nm,1.0s,baz=31,slow=5.6
GTTG Gottingen 78.33 335 P **P 07 19 19.7 +0.3**
SMOL Smolenice 78.36 329 *eP* **P 07 19 20.7 +1.1**
SMOL pmax pmax
comp=Z,12nm,0.7s
TREC Trest 78.42 330 *eP* **P 07 19 20.7 +0.8**
TREC Trest 78.42 330 *eP* **P 07 19 20.7 +0.8**
TREC Trest 78.42 330 P **P 07 19 20.5 +0.6**
EDMD Edmundbyers 78.50 343 *eP* **P 07 19 19.7 -0.5**
EDMD IAmb IAmb 07 19 21.0
comp=Z,11nm,0.8s
TANN Tannenbergstha 78.51 333 *eP* **P 07 19 20.1 -0.3**
comp=Z,8.1nm,0.8s,baz=31,slow=5.6
TANN Tannenbergstha 78.51 333 P **P 07 19 20.5 +0.1**
SIRR Siria 78.52 325 ⇑P **P 07 19 20.7 +0.2**
MODS Modra-Piesok 78.53 329 *eP* **P 07 19 21.5 +1.0**
MODS pmax pmax
comp=Z,49nm,1.0s
MODS Modra-Piesok 78.53 329 P **P 07 19 21.7 +1.2**
MODS Modra-Piesok 78.53 329 *eP* **P 07 19 21.5 +1.0**
RAZG Razgrad 78.54 321 ⇓P **P 07 19 21.4 +0.7**
PLN Plauen 78.55 333 *eP* **P 07 19 20.7 +0.1**
comp=Z,3.9nm,0.7s,baz=31,slow=5.6
MOX Moxa 78.59 333 *eP* **P 07 19 20.9 +0.1**
comp=Z,26nm,1.1s,baz=31,slow=5.6
MOX *eL* L 07 58 40.4
comp=Z,140nm,18.6s
MOX Moxa 78.59 333 P **P 07 19 21.0 +0.2**
NKC Novy Kostel 78.67 333 *eP* **P 07 19 21.8 +0.5**
NKC Novy Kostel 78.67 333 *eP* **P 07 19 21.8 +0.5**
NKC Novy Kostel 78.67 333 P **P 07 19 22.0 +0.7**
COPA Copaceanca 78.68 322 ⇓P **P 07 19 21.1 -0.3**
NEWG New Galloway 78.70 344 *eP* **P 07 19 20.9 -0.4**
NEWG IAmb IAmb 07 19 22.1
comp=Z,9.9nm,0.8s
KKUL Konya-Kulu 78.73 314 P **P 07 19 23.1 +1.2**
GZR Gura Zlata 78.75 324 ⇑P **P 07 19 22.0 +0.1**
GZR Gura Zlata 78.75 324 P **P 07 19 22.0 +0.1**
ZVC Zvikov 78.75 331 *eP* **P 07 19 22.5 +0.8**
PH02 Texas Public H 78.84 51 IAmb IAmb 07 19 25.6
comp=Z,37nm,0.7s
WTSB Winterswijk 78.91 337 P **P 07 19 22.7 +0.3**
UBBA Unterbreizbach 78.96 334 *eP* **P 07 19 22.6 0.0**
comp=Z,11nm,0.7s,baz=31,slow=5.6
UBBA Unterbreizbach 78.96 334 P **P 07 19 22.8 +0.1**
KESW Keswick, Cumbr 78.97 343 *eP* **P 07 19 23.1 +0.3**
KESW IAmb IAmb 07 19 25.0
comp=Z,26nm,0.8s
SZH Strazhitsa 79.02 321 P **P 07 19 23.3 0.0**
E46A Sault Ste Mari 79.06 34 IAmb IAmb 07 19 24.1
comp=Z,48nm,1.5s
BZS Buzias 79.06 325 ⇑P **P 07 19 23.2 -0.3**
BZS Buzias 79.06 325 P **P 07 19 23.2 -0.3**
BZS Buzias 79.06 325 P **P 07 19 23.5 0.0**
I42A Draeger Farm, 79.08 38 IAmb IAmb 07 19 24.6
comp=Z,22nm,0.8s
CLGH Cloghs, Cushen 79.09 345 *eP* **P 07 19 23.1 -0.3**
CLGH IAmb IAmb 07 19 25.5
comp=Z,27nm,0.8s
KASTN Kahler Asten 79.11 335 *eP* **P 07 19 23.9 +0.2**
comp=Z,24nm,0.8s,baz=31,slow=5.6
H43A Windswept, Lux 79.13 37 IAmb IAmb 07 19 34.7
comp=Z,22nm,0.7s
ROTZ Rotzenmuhle 79.15 333 *eP* **P 07 19 24.3 +0.4**
comp=Z,3.4nm,0.8s,baz=31,slow=5.6
WINA Alland / Wiene 79.20 329 *i* P **P 07 19 24.9 +0.7**
SNR=15
KHC Kasperske Hory 79.23 331 *eP* **P 07 19 25.2 +0.8**
KHC Kasperske Hory 79.23 331 *eP* **P 07 19 25.2 +0.8**
KHC Kasperske Hory 79.23 331 P **P 07 19 25.0 +0.6**
HPK Haverah Park 79.24 342 *eP* **P 07 19 24.7 +0.4**
HPK IAmb IAmb 07 19 27.3
comp=Z,66nm,0.6s
BUG Bochum--Univer 79.24 336 *eP* **P 07 19 24.3 0.0**
comp=Z,42nm,1.0s,baz=31,slow=5.6
BUG Bochum--Univer 79.24 336 P **P 07 19 24.5 +0.2**
HERR Herculane 79.31 324 ⇓P **P 07 19 24.6 -0.2**
SOP Sopron 79.37 329 P **P 07 19 26.2 +1.0**
CONA Conrad Observa 79.43 329 *i* P **P 07 19 26.3 +0.7**
comp=Z,16nm,0.7s,SNR=26
GEC2 GERESS Array S 79.43 331 IAmb IAmb 07 19 26.0
comp=Z,12nm,0.7s
GEC2 GERESS Array S 79.43 331 *eP* **P 07 19 25.5 0.0**
comp=Z,12nm,0.7s,baz=31,slow=5.6
GERES GERESS Array B 79.43 331 P **P 07 19 25.6 0.0**
comp=Z,7.4nm,0.4s,baz=26,slow=4.5,SNR=74
comp=Z,7.4nm,0.4s
GERES GERESS Array B 79.43 331 P **P 07 19 25.4 -0.2**
GERES GERESS Array B 79.43 331 P **P 07 19 25.4 -0.2**
MPLH Magyarpolny 79.43 328 P **P 07 19 25.9 +0.5**
L40A Anamosa 79.44 41 IAmb IAmb 07 19 26.4
comp=Z,26nm,1.0s
GRA3 Grafenberg Arr 79.45 333 P **P 07 19 26.2 +0.7**
N38A Joes South For 79.45 43 IAmb IAmb 07 19 26.9
comp=Z,27nm,0.8s
RONA Rosalia, Austr 79.46 329 *i* P **P 07 19 26.4 +0.8**
comp=Z,26nm,0.9s,SNR=14
WET Wettzell 79.46 332 *eP* **P 07 19 26.2 +0.6**
comp=Z,24nm,0.7s,baz=31,slow=5.6
WET Wettzell 79.46 332 P **P 07 19 26.2 +0.6**
MNTX Cornudas Mount 79.46 56 P **P 07 19 27.1 +1.2**
GRA2 Grafenberg Arr 79.53 333 P **P 07 19 26.7 +0.7**
GRA1 Grafenberg Arr 79.54 333 P **P 07 19 26.8 +0.7**
GRF Grafenberg Arr 79.54 333 *eP* **P 07 19 26.5 +0.5**
comp=Z,56nm,0.7s,baz=31,slow=5.6
GRF *eL* L 07 59 09.0
comp=Z,120nm,20.1s
GRFO Grafenberg 79.54 333 P **P 07 19 27.0 +1.0**
GRFO Grafenberg 79.54 333 P **P 07 19 27.0 +1.0**
GRFO Grafenberg 79.54 333 P **P 07 19 26.8 +0.7**
GRFO Grafenberg 79.54 333 P **P 07 19 26.5 +0.5**
GRFO PcP **PcP 07 19 34.1 +0.2**
GRB4 Grafenberg Arr 79.62 333 P **P 07 19 27.4 +0.9**
GRB3 Grafenberg Arr 79.65 333 P **P 07 19 27.1 +0.5**
GRB1 Grafenberg Arr 79.66 333 P **P 07 19 27.3 +0.6**
MDVR Moldovita 79.69 324 ⇓P **P 07 19 26.8 -0.2**
GRB2 Grafenberg Arr 79.76 333 P **P 07 19 27.8 +0.6**
LBWR Ladybower, Pea 79.78 342 P **P 07 19 27.9 +0.7**
LBWR Ladybower, Pea 79.78 342 *eP* **P 07 19 27.6 +0.4**
LBWR IAmb IAmb 07 19 29.9
comp=Z,98nm,0.7s
MORH Mrgy, Hungar 79.78 327 ⇑P **P 07 19 27.2 -0.1**
MORH Mrgy, Hungar 79.78 327 *i*P **P 07 19 26.1 -1.3**
MORH Mrgy, Hungar 79.78 327 P **P 07 19 26.8 -0.6**
GRB5 Grafenberg Arr 79.89 333 P **P 07 19 28.2 +0.3**
MPEP Malo Peshtene 79.95 322 P **P 07 19 28.4 0.0**
TNS Taunus Mts 79.96 335 *eP* **P 07 19 28.6 +0.2**
comp=Z,26nm,0.8s,baz=31,slow=5.6
TNS Taunus Mts 79.96 335 P **P 07 19 28.8 +0.4**
GRC4 Grafenberg Arr 79.96 333 P **P 07 19 28.7 +0.4**
GRC1 Grafenberg Arr 80.04 333 P **P 07 19 29.1 +0.3**
DMTO DMTO 80.06 285 P **P 07 19 29.0 -0.3**
MOA Molln 80.07 330 *i* P **P 07 19 29.2 +0.3**
comp=Z,15nm,0.8s,SNR=9.1
MOA Molln 80.07 330 P **P 07 19 29.4 +0.4**
GRC3 Grafenberg Arr 80.11 332 P **P 07 19 29.5 +0.4**
ARSA Arzberg 80.12 329 *i* P **P 07 19 29.8 +0.6**
comp=Z,15nm,1.1s,SNR=5.9
ARSA Arzberg 80.12 329 P **P 07 19 29.8 +0.6**
FRGS Fruska Gora 80.18 326 *i*P **P 07 19 29.3 -0.3**
VLDQ Val d'Or 80.19 29 IAmb IAmb 07 19 29.6
comp=Z,47nm,1.1s
P38A Dawn 80.20 44 IAmb IAmb 07 19 31.0
comp=Z,22nm,0.7s
GRC2 Grafenberg Arr 80.20 333 P **P 07 19 29.7 +0.1**
L42A Oliver, Polo 80.22 40 IAmb IAmb 07 19 30.3
comp=Z,20nm,0.7s
CROK Carrier 80.22 48 IAmb IAmb 07 19 31.4
comp=Z,28nm,0.8s
HGN Heimansgroeve 80.23 337 P **P 07 19 30.0 +0.3**
BAND Balkesir-Ban 80.27 318 ⇑P **P 07 19 29.8 -0.3**
BEBN Eben Emael 80.27 337 *dP* **P 07 19 29.9 0.0**
comp=Z,106nm,0.7s
K43A Burlington 80.28 38 IAmb IAmb 07 19 31.0
comp=Z,43nm,1.3s
CWF Charnwood Fore 80.30 342 P **P 07 19 30.6 +0.6**
BTNL Ternell 80.33 336 *dP* **P 07 19 30.4 +0.2**
comp=Z,17nm,1.0s
MEM Membach 80.34 337 *dP* **P 07 19 30.4 +0.1**
comp=Z,32nm,0.9s
MEM Membach 80.34 337 P **P 07 19 30.9 +0.6**
ELMS Elmsett, Ipswi 80.35 340 *eP* **P 07 19 30.7 +0.4**
ELMS IAmb IAmb 07 19 33.5
comp=Z,108nm,0.7s
PGB Panagyurishte 80.42 321 P **P 07 19 31.3 +0.3**
BIOA Bad Ischl, Aus 80.43 331 *i* P **P 07 19 31.2 +0.3**
comp=Z,10nm,0.8s,SNR=8.3
RAR Rarotonga 80.47 132 LR LR 07 47 39.0
comp=Z,52nm,20.5s,baz=326,slow=30
BSTI Sart Tilman 80.49 337 *dP* **P 07 19 31.6 +0.5**
128A Castleberry Fa 80.52 54 IAmb IAmb 07 19 33.7
comp=Z,9.3nm,0.8s
BLSH Balsha 80.55 322 P **P 07 19 32.2 +0.5**
BHOU Houvegnez 80.57 336 *dP* **P 07 19 31.8 +0.2**
comp=Z,22nm,1.0s
FOEL Foel Wylfa 80.58 343 P **P 07 19 32.4 +0.8**
FOEL Foel Wylfa 80.58 343 *eP* **P 07 19 31.7 +0.1**
FOEL IAmb IAmb 07 19 33.4
comp=Z,43nm,0.6s
SESA Seetaler Alpe, 80.59 330 *i* P **P 07 19 32.4 +0.4**
SNR=31
BOVS Bovan 80.62 324 ⇓P **P 07 19 31.9 0.0**
UCC Uccle 80.64 338 *dP* **P 07 19 32.5 +0.6**
T35A Sooner Cattle 80.71 47 IAmb IAmb 07 19 34.0
comp=Z,25nm,0.8s
BCLA Clavier 80.72 337 *dP* **P 07 19 32.3 0.0**
comp=Z,27nm,0.9s
WHFO Wadi Hawf 80.75 286 P **P 07 19 32.8 -0.3**
VTS Vitosha 80.76 322 P **P 07 19 33.4 +0.5**
SOKA Soboth 80.78 329 *i* P **P 07 19 33.0 +0.1**
comp=Z,22nm,0.7s,SNR=31
PERS Pernice 80.79 329 *eP* **P 07 19 32.8 -0.1**
GROS Grobnik 80.79 329 *i* P **P 07 19 32.8 -0.2**
PLNA Plana 80.79 322 P **P 07 19 33.9 +0.9**
TEKS Tekeris 80.79 325 *i*P **P 07 19 32.2 -0.7**
TPB06 Permian Basin 80.79 55 IAmb IAmb 07 19 35.2
comp=Z,13nm,0.9s
BGES Gesves 80.81 337 *dP* **P 07 19 33.0 +0.2**
comp=Z,36nm,0.9s
ALN Alexandroupoli 80.83 319 IAmb IAmb 07 19 34.5
comp=Z,25nm,1.1s
ALN Alexandroupoli 80.83 319 P **P 07 19 33.6 +0.5**
FUR Furstenfeldbru 80.84 332 *eP* **P 07 19 33.6 +0.5**
comp=Z,39nm,1.0s,baz=31,slow=5.6
OK048 Pawnee Station 80.85 48 IAmb IAmb 07 19 34.9
comp=Z,19nm,1.0s
HLM1 Long Mynd 80.86 342 *eP* **P 07 19 33.3 +0.3**
HLM1 IAmb IAmb 07 19 34.2
comp=Z,17nm,0.5s
RDO Rodhopi 80.88 320 P **P 07 19 32.6 -0.7**
129A Stewart Farms, 80.88 53 IAmb IAmb 07 19 35.2
comp=Z,3.9nm,0.8s
BALB Balikesir 80.92 317 IAmb IAmb 07 19 56.7
comp=Z,38nm,1.0s
TPB01 Permian Basin 80.96 56 IAmb IAmb 07 19 35.7
comp=Z,4.8nm,0.9s
BALY Balya 80.97 318 P **P 07 19 34.5 +0.6**
BMRD Maredsous 80.97 337 *dP* **P 07 19 33.8 +0.1**
comp=Z,36nm,0.9s
RCHB Rochefort 80.97 337 *dP* **P 07 19 33.5 -0.2**
comp=Z,18nm,0.9s
RCHB Rochefort 80.97 337 P **P 07 19 33.7 0.0**
LESA Schwarzleotal 81.00 331 *i* P **P 07 19 34.4 +0.4**
comp=Z,25nm,0.8s,SNR=17
STU Stuttgart 81.00 334 *eP* **P 07 19 34.1 +0.2**
comp=Z,68nm,0.7s,baz=31,slow=5.6
STU Stuttgart 81.00 334 P **P 07 19 33.6 -0.2**
P40A Paris 81.00 43 IAmb IAmb 07 19 35.5
comp=Z,20nm,0.7s
OK029 Liberty Lake 81.04 48 IAmb IAmb 07 19 36.0
comp=Z,19nm,0.7s
KBA Koelnbreinsper 81.06 330 *i* P **P 07 19 35.2 +0.7**
comp=Z,30nm,0.6s,SNR=28
KBA Koelnbreinsper 81.06 330 P **P 07 19 35.4 +0.9**
WMOK Wichita Mounta 81.09 50 P **P 07 19 35.3 +0.6**
OBKA Obir 81.10 329 *i* P **P 07 19 34.9 +0.3**
comp=Z,23nm,0.7s,SNR=9.4
OBKA Obir 81.10 329 P **P 07 19 35.0 +0.3**
WLF Walferdange 81.14 336 *dP* **P 07 19 35.9 +1.2**
comp=Z,12nm,0.8s
WLF Walferdange 81.14 336 *eP* **P 07 19 36.6 +2.0**
comp=Z,15nm,0.9s,baz=31,slow=5.6
DOU Dourbes 81.21 337 *dP* **P 07 19 34.9 0.0**
OK052 Battle Ridge R 81.24 48 IAmb IAmb 07 19 37.0
comp=Z,15nm,0.8s
GCIS Gornji Cirnik 81.24 328 *i* P **P 07 19 34.9 -0.3**
IGLA Glengowla, Co 81.26 346 *eP* **P 07 19 34.8 -0.3**
IGLA IAmb IAmb 07 19 36.1
comp=Z,22nm,0.8s
MYKA Terra Mystica 81.33 330 *i* P **P 07 19 35.4 -0.3**
comp=Z,16nm,0.7s
CRES Cresnjevec Ost 81.34 329 *i* P **P 07 19 35.5 -0.3**
MCH1 Michaelchurch 81.37 342 *eP* **P 07 19 36.1 +0.4**
MCH1 IAmb IAmb 07 19 37.0
comp=Z,32nm,0.6s
MMB Musomishta 81.38 321 P **P 07 19 36.6 +0.5**
J47A Sunmer 81.39 36 IAmb IAmb 07 19 37.6
comp=Z,36nm,0.9s
229A Bryant Ranch, 81.39 54 IAmb IAmb 07 19 38.4
comp=Z,8.6nm,0.9s
BBLS Lazi&#263i 81.40 325 ⇑*i*P **P 07 19 36.4 +0.2**
ACOM Acomizia, Ital 81.45 330 P **P 07 19 36.0 -0.5**
WATA Walderalm 81.46 332 *i* P **P 07 19 36.9 +0.3**
comp=Z,22nm,0.6s,SNR=7.9
FNO Franklin 81.47 49 IAmb IAmb 07 19 38.5
comp=Z,21nm,0.8s
MANT Manisa 81.47 316 IAmb IAmb 07 19 38.0
comp=Z,22nm,0.8s
MONM Monmouth 81.47 342 *eP* **P 07 19 36.6 +0.3**
MONM IAmb IAmb 07 19 38.0
comp=Z,21nm,0.8s
WTTA Wattenberg 81.50 332 *i* P **P 07 19 37.1 +0.3**
comp=Z,29nm,0.5s,SNR=16
WTTA Wattenberg 81.50 332 P **P 07 19 37.3 +0.5**
DEOK Depew 81.52 48 IAmb IAmb 07 19 38.4
comp=Z,13nm,0.7s
BLY Banja Luka 81.58 327 *eP* **P 07 19 34.0 -3.0**
RETA Reutte 81.60 332 *i* P **P 07 19 37.5 +0.3**
comp=Z,22nm,1.0s,SNR=13
MOTA Moosalm 81.61 332 *i* P **P 07 19 37.6 +0.3**
comp=Z,30nm,0.7s,SNR=22
ABTA Abfaltersbach 81.64 331 *i* P **P 07 19 37.3 -0.1**
comp=Z,36nm,1.2s
CSS Mathiatis 81.64 311 IAmb IAmb 07 19 39.6
comp=Z,18nm,0.8s
CSS Mathiatis 81.64 311 P **P 07 19 38.3 +0.8**
I49A Point Hope 81.65 34 IAmb IAmb 07 19 38.8
comp=Z,27nm,0.8s
SJES Sjenica 81.66 324 ⇑*i*P **P 07 19 37.8 +0.2**
BFO Black Forest 81.66 334 P **P 07 19 37.3 -0.1**
BFO IAmb IAmb 07 19 39.6
comp=Z,24nm,0.9s
BFO Black Forest 81.66 334 P **P 07 19 37.3 -0.1**
BFO pmax pmax
comp=Z,24nm,0.9s
BFO Black Forest 81.66 334 *eP* **P 07 19 37.5 +0.1**
comp=Z,21nm,0.9s,baz=31,slow=5.6
BFO Black Forest 81.66 334 P **P 07 19 37.4 -0.1**
ASF Jabal al Asfar 81.68 307 LR LR 08 02 01.8
comp=Z,86nm,18.1s,baz=32,slow=40
SQTA Sankt Quirin 81.68 332 *i* P **P 07 19 38.1 +0.4**
comp=Z,23nm,0.6s,SNR=15
X34A Smith Ranch, M 81.72 49 IAmb IAmb 07 19 40.1
comp=Z,14nm,0.9s
BUKO Buck Lake 81.75 32 IAmb IAmb 07 19 38.6
comp=Z,16nm,1.0s
FUSE Fusea 81.75 330 P **P 07 19 37.2 -0.7**
S39A Bolivar 81.78 45 IAmb IAmb 07 19 38.9
comp=Z,17nm,0.9s
IWEX Carrickbyrne, 81.79 345 *eP* **P 07 19 38.4 +0.4**
IWEX IAmb IAmb 07 19 39.3
comp=Z,29nm,0.6s
SRS Serrai 81.80 321 P **P 07 19 38.2 0.0**
TUL3 Leonard 81.84 47 IAmb IAmb 07 19 40.0
comp=Z,12nm,0.7s
PLE Pljevlja 81.85 325 ⇑*i*P **P 07 19 37.9 -0.7**
R40A Maddies Statio 81.85 44 P **P 07 19 38.8 +0.2**
R40A IAmb IAmb 07 19 39.6
comp=Z,21nm,0.7s
MMAI Mount Meron Ar 81.92 308 P **P 07 19 39.8 +0.7**
comp=Z,22nm,0.7s,baz=27,slow=13,SNR=36
MMAI LR LR 08 00 30.8
comp=Z,117nm,19.3s,baz=21,slow=39
comp=Z,22nm,0.7s
STAL STALIGIAL 81.98 330 IAmb IAmb 07 19 38.8
comp=Z,14nm,0.7s
IVA Berane 82.01 324 ⇑*i*P **P 07 19 38.7 -0.8**
FETA Feichten 82.02 332 *i* P **P 07 19 39.8 +0.3**
comp=Z,11nm,0.8s,SNR=12
RLO Rose Lookout 82.06 47 IAmb IAmb 07 19 41.0
comp=Z,13nm,0.7s
DAVA Damuels 82.07 333 *i* P **P 07 19 39.8 0.0**
comp=Z,28nm,1.0s,SNR=10.0
DAVA Damuels 82.07 333 P **P 07 19 39.8 0.0**
SKO Skopje 82.08 323 *i* P **P 07 19 40.6 +0.9**
KNT Kendrikon 82.08 321 P **P 07 19 39.0 -0.8**
VAY Valandovo 82.10 322 *i* P **P 07 19 40.2 +0.4**
SLE Schleitheim 82.11 334 P **P 07 19 39.7 -0.1**
ELL Elmali 82.12 314 IAmb IAmb 07 19 41.2
comp=Z,28nm,0.9s
ECH Echery 82.13 335 IAmb IAmb 07 19 40.8
comp=Z,16nm,0.8s
P43A Skaggs, Pawnee 82.14 41 IAmb IAmb 07 19 41.2
comp=Z,19nm,0.8s
UPM Unac-Piva 82.16 325 ⇑*i*P **P 07 19 39.7 -0.6**
UPM Unac-Piva 82.16 325 ⇑*i*P **P 07 19 39.0 -1.3**
TXAR Lajitas Array 82.18 57 P **P 07 19 41.6 +1.0**
comp=Z,9.3nm,0.8s,baz=296,slow=4.1,SNR=113
TXAR pP **sP 07 19 58.8 -0.7**
comp=Z,8.6nm,0.7s,baz=304,slow=3.7,SNR=12
TXAR PKKPbc **PKKPbc 07 38 10.7 +4.1**
comp=Z,0.2nm,0.8s,baz=142,slow=6.2,SNR=3.6
comp=Z,9.3nm,0.8s
TXAR Lajitas Array 82.18 57 P **P 07 19 41.3 +0.7**
KOME Kolasin 82.19 324 ⇑*i*P **P 07 19 39.8 -0.6**
PVY Plav 82.21 324 ⇑*i*P **P 07 19 39.6 -1.0**
MMLI Mount Malkishu 82.33 308 P **P 07 19 42.6 +1.3**
LDAQ Lac Daran 82.38 25 IAmb IAmb 07 19 42.2
comp=Z,24nm,1.0s
SADO Sadowa 82.41 32 LR LR 07 57 16.9
comp=Z,43nm,21.9s,baz=7.0,slow=36
NKME Niksic 82.49 325 ⇑*i*P **P 07 19 41.0 -0.9**
RAYN Ar Rayn 82.50 295 *i* P **P 07 19 42.9 +0.6**
SNR=10
RAYN Ar Rayn 82.50 295 P **P 07 19 42.8 +0.6**
RAYN IAmb IAmb 07 19 43.7
comp=Z,16nm,0.9s
RAYN Ar Rayn 82.50 295 P **P 07 19 42.8 +0.6**
RAYN Ar Rayn 82.50 295 P **P 07 19 42.8 +0.5**
RAYN Ar Rayn 82.50 295 P **P 07 19 43.0 +0.5**
DAVOX Davos/Dischmat 82.52 332 P **P 07 19 42.8 +0.6**
comp=Z,10nm,0.5s,baz=32,slow=4.0,SNR=15
DAVOX LR LR 08 01 25.2
comp=Z,103nm,18.9s,baz=80,slow=39
comp=Z,10nm,0.5s
FUORN Ofenpass-Fuorn 82.53 332 P **P 07 19 43.1 +0.8**
FUORN IAmb IAmb 07 19 43.8
comp=Z,34nm,1.1s
FUORN Ofenpass-Fuorn 82.53 332 P **P 07 19 42.9 +0.6**
CCM Cathedral Cave 82.54 43 P **P 07 19 42.4 +0.2**
CCM IAmb IAmb 07 19 43.5
comp=Z,23nm,0.8s
CCM Cathedral Cave 82.54 43 P **P 07 19 42.4 +0.2**
CCM pmax pmax
comp=Z,23nm,0.8s
CCM Cathedral Cave 82.54 43 P **P 07 19 42.3 +0.2**
CCM pP **pP 07 19 54.9 -1.2**
BRY Bratogost 82.56 325 ⇑*i*P **P 07 19 41.4 -1.0**
BRY Bratogost 82.56 325 ⇑*i*P **P 07 19 41.3 -1.1**
CGRP Cima Grappa 82.63 331 P **P 07 19 41.9 -0.9**
PDG Podgorica 82.64 324 ⇑P **P 07 19 42.4 -0.2**
PDG Podgorica 82.64 324 ⇑*i*P **P 07 19 42.1 -0.5**
PDG Podgorica 82.64 324 P **P 07 19 42.4 -0.2**
PDG Podgorica 82.64 324 ⇑*i*P **P 07 19 42.3 -0.3**
AAM Ann Arbor 82.65 36 IAmb IAmb 07 19 44.2
comp=Z,29nm,0.9s
HPIG 82.67 60 P **P 07 19 43.7 +0.4**
PMOR Pomariorio Ree 82.67 119 *eT* T 08 51 10.9
comp=Z,19nm,0.2s
SFIN Lafayette 82.69 39 IAmb IAmb 07 19 44.1
comp=Z,44nm,1.3s
CEME Cevo 82.69 325 ⇑*i*P **P 07 19 42.2 -0.8**
K50A Casco 82.69 35 IAmb IAmb 07 19 44.3
comp=Z,33nm,1.1s
PHP Peshkopia 82.75 323 P **P 07 19 43.0 -0.3**
TRQ Mont Tremblant 82.83 28 IAmb IAmb 07 19 44.4
comp=Z,41nm,1.2s
BOURR Bourrignon 82.84 334 P **P 07 19 43.9 +0.2**
DRME Dracevica, Mon 82.87 324 ⇑*i*P **P 07 19 43.6 -0.3**
DRME Dracevica, Mon 82.87 324 ⇑*i*P **P 07 19 43.5 -0.3**
BUM Brajici-Budva 82.90 324 ⇑*i*P **P 07 19 42.9 -1.2**
BNALP Bannalp 82.92 333 P **P 07 19 44.6 +0.5**
N47A Urbana 82.92 38 IAmb IAmb 07 19 45.0
comp=Z,36nm,0.9s
HCY Herceg Novi 82.95 325 ⇑*i*P **P 07 19 43.0 -1.2**
HCY Herceg Novi 82.95 325 ⇑*i*P **P 07 19 43.2 -1.0**
Q44A Meyer Farm, Va 82.96 41 IAmb IAmb 07 19 45.7
comp=Z,20nm,0.9s
TUE Stuetta 82.96 333 IAmb IAmb 07 19 48.2
comp=Z,18nm,0.8s
TUE Stuetta 82.96 333 P **P 07 19 44.7 +0.2**
FVM French Village 83.00 43 IAmb IAmb 07 19 45.5
comp=Z,9.3nm,0.7s
ULC Ulcinj 83.03 324 ⇑*i*P **P 07 19 43.9 -0.8**
OHR Ohrid 83.06 323 *i* P **P 07 19 45.1 +0.2**
LIT Litokhoron 83.11 321 IAmb IAmb 07 19 45.5
comp=Z,14nm,1.0s
LIT Litokhoron 83.11 321 P **P 07 19 44.5 -0.6**
DELO Deloro Mine 83.20 31 IAmb IAmb 07 19 46.3
comp=Z,22nm,1.1s
ARG Arkhangelos 83.44 315 P **P 07 19 47.7 +0.8**
BRDY Brady 83.52 52 IAmb IAmb 07 19 49.2
comp=Z,50nm,2.0s
OLIL Olney 83.53 41 IAmb IAmb 07 19 50.2
comp=Z,11nm,0.8s
PPT Papeete 83.55 122 LR LR 07 49 01.8
comp=Z,71nm,21.5s,baz=332,slow=30
N49A Columbus Grove 83.55 37 IAmb IAmb 07 19 48.6
comp=Z,29nm,0.9s
CCA1 Carnmenellis 83.55 343 *eP* **P 07 19 47.5 +0.3**
CCA1 IAmb IAmb 07 19 48.2
comp=Z,19nm,0.6s
PPT2 Papeete2 83.56 122 *e*LR LR 07 45 50.8
comp=Z,237nm,29.8s
PPT2 *e*LR LR 07 45 58.4
comp=Z,404nm,29.0s
PPT2 *e*T T 08 52 23.6
comp=Z,4.1nm,0.3s
WBO Williamsburg 83.64 29 IAmb IAmb 07 19 48.2
comp=Z,20nm,0.9s
M50A Fremont 83.64 36 IAmb IAmb 07 19 48.9
comp=Z,26nm,0.8s
JCT Junction City 83.65 53 IAmb IAmb 07 19 49.8
comp=Z,14nm,0.9s
O48B Farmland 83.66 38 IAmb IAmb 07 19 48.9
comp=Z,22nm,0.7s
SENIN Lac Senin/Sane 83.73 334 IAmb IAmb 07 19 49.4
comp=Z,16nm,0.7s
CLF Chambon-Foret 83.74 338 IAmb IAmb 07 19 51.4
comp=Z,23nm,1.0s
MNTQ Montreal, Queb 83.78 28 IAmb IAmb 07 19 49.3
comp=Z,25nm,0.8s
FCAR Ozark Folk Cen 83.78 45 IAmb IAmb 07 19 49.6
comp=Z,16nm,1.0s
BLO Bloomington 83.92 39 IAmb IAmb 07 19 50.1
comp=Z,10nm,0.8s

PECO	**Prince Edward**	**83.93**	**31**	IAmb	IAmb	07 19 49.9
	comp=Z,16nm,0.8s					
KZIT	**Kziot**	**84.05**	**308**	P	**P**	**07 19 51.1 +1.0**
MIAR	**Mount Ida**	**84.06**	**47**	IAmb	IAmb	07 19 51.8
	comp=Z,20nm,0.9s					
MIAR	**Mount Ida**	**84.06**	**47**	P	**P**	**07 19 51.2 +1.2**
O49A	**Covington**	**84.08**	**38**	IAmb	IAmb	07 19 51.2
	comp=Z,14nm,1.0s					
WHAR	**Wooly Hollow**	**84.16**	**46**	IAmb	IAmb	07 19 51.9
	comp=Z,25nm,0.9s					
P48A	**Milroy**	**84.19**	**39**	IAmb	IAmb	07 19 51.7
	comp=Z,13nm,0.8s					
J55A	**Hilton**	**84.19**	**32**	IAmb	IAmb	07 19 51.5
	comp=Z,20nm,0.9s					
ERPA	**Erie**	**84.32**	**34**	IAmb	IAmb	07 19 52.6
	comp=Z,54nm,1.6s					
HRFI	**Mount Harif**	**84.33**	**307**	P	**P**	**07 19 52.6 +1.0**
N51A	**Ashland**	**84.33**	**36**	IAmb	IAmb	07 19 52.5
	comp=Z,22nm,0.8s					
SRN	**Sarande**	**84.41**	**322**	P	**P**	**07 19 51.2 -0.5**
BATG	**Bathurst New B**	**84.52**	**22**	IAmb	IAmb	07 19 53.6
	comp=Z,27nm,0.9s					
FDMO	**Fiordimonte**	**84.61**	**329**	IAmb	IAmb	07 19 56.4
	comp=Z,26nm,0.8s					
MMNY	**Mt. Morris Dam**	**84.61**	**32**	IAmb	IAmb	07 19 53.6
	comp=Z,24nm,0.8s					
VLC	**Villacollemand**	**84.63**	**331**	P	**P**	**07 19 52.7 -0.1**
KEK	**Kerkira**	**84.64**	**322**	IAmb	IAmb	07 19 52.5
	comp=Z,25nm,1.1s					
KEK	**Kerkira**	**84.64**	**322**	P	**P**	**07 19 51.6 -1.3**
EIL	**Elat**	**84.65**	**306**	LR	LR	08 04 04.8
	comp=Z,140nm,18.7s,baz=84,slow=40					
EIL	**Elat**	**84.65**	**306**	P	**P**	**07 19 54.1 +1.0**
SGRT	**San Giovanni R**	**84.66**	**326**	IAmb	IAmb	07 20 15.3
	comp=Z,35nm,1.3s					
NRCA	**Norcia**	**84.77**	**328**	P	**P**	**07 19 53.8 +0.2**
WCI	**Wyandotte Cave**	**84.78**	**40**	P	**P**	**07 19 53.8 +0.1**
WCI				IAmb	IAmb	07 19 55.2
	comp=Z,21nm,1.0s					
WCI	**Wyandotte Cave**	**84.78**	**40**	P	**P**	**07 19 53.8 +0.1**
WCI				pmax	pmax	
	comp=Z,21nm,1.0s					
WCI	**Wyandotte Cave**	**84.78**	**40**	P	**P**	**07 19 54.5 +0.8**
WCI	**Wyandotte Cave**	**84.78**	**40**	P	**P**	**07 19 54.2 +0.6**
NCB	**Newcomb**	**84.90**	**29**	IAmb	IAmb	07 19 55.1
	comp=Z,16nm,1.0s					
PAOC	**Oil Creek Stat**	**84.95**	**34**	IAmb	IAmb	07 19 55.7
	comp=Z,34nm,1.1s					
WLAR	**White Oak Lake**	**84.96**	**47**	IAmb	IAmb	07 19 56.6
	comp=Z,21nm,0.9s					
LKD2	**Lefkada Island**	**85.01**	**321**	P	**P**	**07 19 54.3 -0.5**
AQU	**L'Aquila**	**85.07**	**328**	P	**P**	**07 19 55.8 +0.7**
BNI	**Bardonecchia**	**85.09**	**334**	IAmb	IAmb	07 20 01.6
	comp=Z,11nm,0.8s					
BNI	**Bardonecchia**	**85.09**	**334**	P	**P**	**07 19 55.7 +0.4**
F64A	**Sherman**	**85.14**	**25**	IAmb	IAmb	07 19 56.4
	comp=Z,31nm,1.2s					
K57A	**Scipio Center**	**85.14**	**31**	IAmb	IAmb	07 19 55.8
	comp=Z,9.9nm,0.7s					
CESX	**Cesi**	**85.16**	**329**	IAmb	IAmb	07 19 55.9
	comp=Z,14nm,1.0s					
INTR	**Introdacqua**	**85.17**	**327**	IAmb	IAmb	07 19 56.6
	comp=Z,18nm,0.8s					
MATE	**Matera**	**85.19**	**325**	⇓P	**P**	**07 19 55.1 -0.5**
MATE	**Matera**	**85.19**	**325**	P	**P**	**07 19 55.3 -0.3**
O52A	**Adamsville**	**85.22**	**36**	IAmb	IAmb	07 19 57.1
	comp=Z,25nm,0.9s					
J59A	**Piesco**	**85.25**	**30**	IAmb	IAmb	07 19 56.6
	comp=Z,15nm,0.6s					
PKME	**Peaks-Kenny Pk**	**85.39**	**25**	IAmb	IAmb	07 19 58.1
	comp=Z,20nm,0.9s					
CCAR	**Cane Creek**	**85.49**	**46**	IAmb	IAmb	07 19 59.5
	comp=Z,24nm,0.8s					
P52A	**Corning**	**85.50**	**36**	IAmb	IAmb	07 19 58.2
	comp=Z,20nm,0.9s					
R50A	**Paris**	**85.64**	**39**	IAmb	IAmb	07 19 59.5
	comp=Z,11nm,1.0s					
ITM	**Ithomi**	**85.73**	**320**	P	**P**	**07 19 57.9 -0.5**
WVT	**Waverly**	**85.74**	**42**	P	**P**	**07 19 58.5 0.0**
WVT				IAmb	IAmb	07 19 59.9
	comp=Z,8.9nm,0.8s					
WVT	**Waverly**	**85.74**	**42**	P	**P**	**07 19 58.5 0.0**
WVT				pmax	pmax	
	comp=Z,9.0nm,0.8s					
WVT	**Waverly**	**85.74**	**42**	P	**P**	**07 19 59.2 +0.7**
WVT	**Waverly**	**85.74**	**42**	P	**P**	**07 19 59.0 +0.5**
WVT				pP	**pP**	**07 20 10.1 -2.3**
ISO	**Isola**	**85.75**	**333**	P	**P**	**07 19 58.8 +0.4**
BINY	**Binghamton**	**85.80**	**31**	IAmb	IAmb	07 19 59.8
	comp=Z,9.8nm,0.8s					
BINY	**Binghamton**	**85.80**	**31**	P	**P**	**07 19 59.0 +0.2**
IDI	**Anoyia**	**85.80**	**317**	P	**P**	**07 19 59.0 +0.1**
	comp=Z,19nm,0.6s,baz=64,slow=8.3,SNR=14					
	comp=Z,19nm,0.6s					
HNH	**Hanover**	**85.81**	**28**	IAmb	IAmb	07 19 59.8
	comp=Z,10nm,0.7s					
WVL	**Waterville**	**85.91**	**26**	IAmb	IAmb	07 20 00.6
	comp=Z,17nm,0.9s					
P53A	**Whipple**	**85.94**	**36**	IAmb	IAmb	07 20 00.8
	comp=Z,16nm,0.9s					
ESCA	**l'Escarene**	**85.95**	**333**	P	**P**	**07 19 59.1 -0.3**
G65A	**Princeton**	**85.98**	**24**	IAmb	IAmb	07 20 00.5
	comp=Z,16nm,0.7s					
J61A	**Chester**	**86.03**	**28**	IAmb	IAmb	07 20 01.3
	comp=Z,12nm,0.7s					
IMMV	**Iera Moni Meta**	**86.12**	**317**	P	**P**	**07 20 00.6 +0.2**
TIP	**Timpagrande**	**86.40**	**324**	⇑P	**P**	**07 20 01.2 -0.5**
TIP	**Timpagrande**	**86.40**	**324**	IAmb	IAmb	07 20 25.3
	comp=Z,33nm,1.4s					
TIP	**Timpagrande**	**86.40**	**324**	P	**P**	**07 20 01.6 -0.2**
KSPA	**Keystone Colle**	**86.44**	**31**	IAmb	IAmb	07 20 02.9
	comp=Z,15nm,0.8s					
EMMW	**East Machias**	**86.46**	**24**	IAmb	IAmb	07 20 03.1
	comp=Z,20nm,1.0s					
S51A	**Beattyville**	**86.50**	**39**	IAmb	IAmb	07 20 03.0
	comp=Z,8.4nm,0.7s					
V48A	**Smith Brothers**	**86.54**	**42**	IAmb	IAmb	07 20 03.3
	comp=Z,8.5nm,0.8s					
HRV	**Adam Dziewonsk**	**87.12**	**28**	P	**P**	**07 20 05.4 +0.3**
HRV				IAmb	IAmb	07 20 06.9
	comp=Z,22nm,1.1s					
HRV	**Adam Dziewonsk**	**87.12**	**28**	P	**P**	**07 20 05.4 +0.3**
HRV				pmax	pmax	
	comp=Z,22nm,1.2s					
HRV	**Adam Dziewonsk**	**87.12**	**28**	P	**P**	**07 20 06.0 +0.9**
KSCT	**Kent School, K**	**87.13**	**30**	IAmb	IAmb	07 20 06.7
	comp=Z,24nm,1.4s					
Q56A	**Snyder Ridge,**	**87.24**	**35**	IAmb	IAmb	07 20 07.3
	comp=Z,18nm,0.9s					
WES	**Weston**	**87.31**	**28**	IAmb	IAmb	07 20 07.7
	comp=Z,18nm,0.9s					
P57A	**Homestead Farm**	**87.34**	**34**	IAmb	IAmb	07 20 07.8
	comp=Z,16nm,1.1s					
S54A	**Dingess, Beckl**	**87.38**	**37**	IAmb	IAmb	07 20 08.0
	comp=Z,12nm,0.9s					
TZTN	**Tazewell**	**87.42**	**39**	IAmb	IAmb	07 20 08.3
	comp=Z,11nm,0.8s					
TZTN	**Tazewell**	**87.42**	**39**	P	**P**	**07 20 07.6 +0.9**
VBMS	**Vicksburg**	**87.47**	**46**	IAmb	IAmb	07 20 09.3
	comp=Z,24nm,0.9s					
MVL	**Millersville**	**87.56**	**32**	IAmb	IAmb	07 20 08.7
	comp=Z,16nm,0.7s					
W50A	**Signal Mountai**	**87.70**	**41**	IAmb	IAmb	07 20 09.4
	comp=Z,12nm,0.8s					
CPCT	**Cooper Cave**	**87.87**	**40**	IAmb	IAmb	07 20 10.2
	comp=Z,15nm,0.8s					
Z47A	**Carrollton**	**87.95**	**44**	IAmb	IAmb	07 20 10.8
	comp=Z,16nm,0.9s					
TBI	**Tubuai**	**88.01**	**125**	*e*LR	LR	07 48 05.3
	comp=Z,1μm,28.0s					
TBI				*e*LR	LR	07 48 05.5
	comp=Z,800nm,25.8s					
TKL	**Tuckaleechee C**	**88.04**	**40**	LR	LR	08 02 31.3
	comp=Z,38nm,19.0s,baz=320,slow=38					
TKL	**Tuckaleechee C**	**88.04**	**40**	IAmb	IAmb	07 20 11.1
	comp=Z,17nm,0.8s					
U54A	**Nelsons Funny**	**88.22**	**38**	IAmb	IAmb	07 20 12.0
	comp=Z,17nm,0.8s					
Y49A	**Blount Mountai**	**88.25**	**43**	IAmb	IAmb	07 20 11.8
	comp=Z,11nm,0.9s					
BLA	**Blacksburg**	**88.26**	**37**	IAmb	IAmb	07 20 12.3
	comp=Z,22nm,1.1s					
S57A	**Dark Hollow, R**	**88.42**	**35**	IAmb	IAmb	07 20 13.2
	comp=Z,26nm,1.6s					
X51A	**Calhoun**	**88.43**	**41**	IAmb	IAmb	07 20 12.9
	comp=Z,12nm,1.0s					
V53A	**Saluda**	**88.48**	**39**	IAmb	IAmb	07 20 13.4
	comp=Z,13nm,1.2s					
VAE	**Valguarnera**	**88.82**	**325**	LR	LR	08 03 28.3
	comp=Z,93nm,18.2s,baz=112,slow=38					
CEST	**Esterri de Car**	**88.99**	**336**	IAmb	IAmb	07 20 15.7
	comp=Z,21nm,1.0s					
V55A	**Taylorsville**	**89.05**	**38**	IAmb	IAmb	07 20 15.9
	comp=Z,30nm,1.5s					
Y52A	**Lilburn**	**89.38**	**41**	IAmb	IAmb	07 20 17.6
	comp=Z,12nm,0.9s					
KMSC	**Kings Mountain**	**89.59**	**38**	IAmb	IAmb	07 20 18.3
	comp=Z,13nm,1.0s					
PAULI	**Pauline**	**89.64**	**39**	IAmb	IAmb	07 20 19.0
	comp=Z,11nm,0.9s					
250A	**Grady**	**89.84**	**44**	IAmb	IAmb	07 20 20.0
	comp=Z,20nm,1.0s					
HODGE	**Hodges**	**89.92**	**40**	IAmb	IAmb	07 20 20.2
	comp=Z,9.8nm,1.0s					
GOGA	**Godfrey**	**90.03**	**41**	IAmb	IAmb	07 20 20.8
	comp=Z,13nm,1.2s					
BIRD	**Birdtown, Kers**	**90.39**	**38**	IAmb	IAmb	07 20 22.1
	comp=Z,8.0nm,0.8s					
KEST	**Kesra**	**92.37**	**327**	P	**P**	**07 20 29.4 -0.6**
	comp=Z,3.4nm,0.6s,baz=340,slow=2.2,SNR=4.2					
KEST				LR	LR	08 08 26.2
	comp=Z,196nm,18.7s,baz=34,slow=40					
	comp=Z,3.4nm,0.6s					
ESDC	**Sonseca Array**	**93.16**	**339**	P	**P**	**07 20 33.3 -0.2**
	comp=Z,2.8nm,0.8s,baz=18,slow=3.6,SNR=16					
ESDC				LR	LR	08 06 47.5
	comp=Z,96nm,22.0s,baz=19,slow=38					
	comp=Z,2.8nm,0.8s					
ESDC	**Sonseca Array**	**93.16**	**339**	P	**P**	**07 20 32.3 -1.2**
CMIG	**Matias Romero**	**96.63**	**59**	LR	LR	07 59 40.7
	comp=Z,18nm,20.7s,baz=269,slow=32					
TORD	**Tondi Ar. Bea**	**115.53**	**323**	PKP	**PKiKP**	**07 26 00.5 -1.0**
	comp=Z,1.4nm,0.5s,baz=12,slow=2.3,SNR=14					
TORD				PP	**PP**	**07 27 01.4 -1.5**
	comp=Z,3.1nm,0.9s,baz=9.2,slow=8.3,SNR=8.1					
DBIC	**Dimbokro**	**124.09**	**327**	PKP	**PKPdf**	**07 26 17.6 -0.5**
	comp=Z,3.4nm,0.5s,baz=50,slow=4.4,SNR=6.9					
QSPA	**South Pole Qui**	**133.49**	**180**	PKP	**PKiKP**	**07 26 36.0 +0.5**
	comp=Z,0.5nm,0.4s,baz=200,slow=0.6,SNR=6.8					
QSPA				pPKP	**sPKPdf**	**07 26 53.4 -0.1**
	comp=Z,2.6nm,0.8s,baz=200,slow=2.6,SNR=5.3					
LPAZ	**La Paz**	**139.00**	**59**	PKP	**PKiKP**	**07 26 48.0 -1.0**
	comp=Z,1.8nm,0.9s,baz=24,slow=5.3,SNR=9.1					
LPAZ	**La Paz**	**139.00**	**59**		**PKiKP**	**07 26 48.0 -1.0**
LPAZ	**La Paz**	**139.00**	**59**	PKIKP	**PKiKP**	**07 26 48.0 -1.0**
ELIB	**Princess Elisa**	**141.53**	**204**	*d*PKPdf	**PKPdf**	**07 26 46.5 -2.5**
H03N2	**Juan Fernandez**	**142.41**	**90**	T	T	10 06 04.5
	baz=304,slow=77,SNR=23					
H03N3	**Juan Fernandez**	**142.42**	**90**	T	T	10 06 05.3
	baz=304,slow=77,SNR=22					
H03N1	**Juan Fernandez**	**142.42**	**90**	T	T	10 06 05.8
	baz=304,slow=77,SNR=25					
NVL	**N'lazarevskaya**	**145.40**	**204**	*e*PKIKP	**PKiKP**	**07 26 59.1 -0.6**
NVL				pmax	pmax	
	comp=Z,9.0nm,0.9s					
BELA	**Belgrano 2**	**145.75**	**179**		**PKPab**	**07 26 57.4 +0.2**
AC05	**El Transito**	**146.13**	**77**	PKPbc	**PKPab**	**07 27 00.6 +0.4**
GO04	**Tololo Observa**	**146.54**	**79**	PKPbc	**PKPab**	**07 27 01.6 -0.3**
CO01	**Juntas del Tor**	**146.93**	**78**	PKPbc	**PKPab**	**07 27 03.1 -0.3**
TROLL	**Troll, Antarti**	**147.18**	**199**	⇑PKPbc	**PKPab**	**07 27 02.4 -0.7**
	comp=Z,152nm,0.5s					
CO04	**Los Peladeros**	**147.44**	**82**	PKPbc	**PKPbc**	**07 27 03.9 +0.6**
SNAA	**Sanae**	**148.62**	**197**	⇑PKPbc	**PKPbc**	**07 27 05.5 +0.5**
	comp=Z,64nm,0.8s					
SNAA	**Sanae**	**148.62**	**197**	PKPbc	**PKPbc**	**07 27 05.1 +0.1**
	comp=Z,2.2nm,0.7s,baz=193,slow=3.0,SNR=8.1					
SNAA	**Sanae**	**148.62**	**197**	PKP2	**PKPbc**	**07 27 05.2 +0.2**
BDFB	**Brasilia**	**148.87**	**31**	PKPbc	**PKiKP**	**07 27 08.0 -0.6**
	comp=Z,8.8nm,0.7s,baz=334,slow=1.5,SNR=15					
BDFB				pPKPbc	**pPKPab**	**07 27 24.7 -0.6**
	comp=Z,14nm,0.8s,baz=228,slow=4.3,SNR=8.0					
BDFB	**Brasilia**	**148.87**	**31**	PKP2	**PKiKP**	**07 27 08.0 -0.6**
BO02	**Sierra Bellavi**	**148.97**	**87**		**PKPbc**	**07 27 06.5 -0.5**
SMAI	**San Martin Ant**	**149.46**	**155**		**PKPab**	**07 27 13.7 +1.6**
VNA2	**Neumayer--Watz**	**150.14**	**196**	⇑PKPbc	**PKiKP**	**07 27 09.6 +0.1**
	comp=Z,7.6nm,0.6s,baz=136,slow=2.0					
VNA2				pPKPab	**sPKPbc**	**07 27 27.4 -0.8**
	baz=134,slow=2.3					
VNA1	**Neumayer--Stat**	**150.54**	**196**	⇑PKPbc	**PKiKP**	**07 27 10.7 +0.4**
	comp=Z,8.0nm,1.0s					
CPUP	**Villa Florida**	**153.15**	**58**	PKPbc	**PKiKP**	**07 27 17.1 0.0**
	comp=Z,1.1nm,0.7s,baz=9.8,slow=3.1,SNR=9.8					

JMA ***02*** *07:09:41.9±0.3, 44°N±1°×14°8E±°, h10km, MV4.4/26, E OFF HOKKAIDO*

SKHL ***02*** *07:09:43.8±0.2, 43°.80N×147°.80E, h65km±5km, mb5.3/3*

ISC 02 07:09:40.3±2.6, 43°.81N±0°.09×147°.7E±0°.1, h8km±14km, n19, σ1s40/27, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.64**	**276**	*e*P		Pn	07 10 09.1	+13
SHO				AMB		AMB	07 10 10.1	
	1μm,0.2s							
SHO				*e*S		Sn	07 10 20.0	+14
SHO				A		A	07 10 21.0	
	11μm,0.4s							
SHO				A		A	07 10 21.0	
	5μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.36**	**280**	*i* P		**Pg**	**07 10 06.3**	**0.0**
YUK				AMB		AMB	07 10 06.7	
	930nm,0.3s							
YUK				*i* S		**Sb**	**07 10 23.5**	**+0.1**
YUK				A		A	07 10 25.0	
	4μm,0.5s							
YUK				A		A	07 10 25.0	
	5μm,0.5s							
KUR	**Kuril'sk**	**1.43**	**4**	*e*P		**Pb**	**07 10 06.4**	**-0.7**
KUR				AMB		AMB	07 10 07.7	
	460nm,0.2s							
KUR				*e*S		**Sn**	**07 10 23.5**	**-1.9**
KUR				A		A	07 10 25.4	
	1μm,0.2s							
KUR				A		A	07 10 25.4	
	2μm,0.2s							
REI	**Reidovoe**	**1.47**	**8**	*e*P		**Pb**	**07 10 07.1**	**-0.8**
REI				AMB		AMB	07 10 08.0	
	330nm,0.4s							
REI				*e*S		**Sn**	**07 10 25.2**	**-1.3**
REI				A		A	07 10 26.0	
	470nm,0.3s							
REI				A		A	07 10 26.0	
	1μm,0.3s							
NEM2	**Nemuro 2**	**1.50**	**253**	*e*P		**Pb**	**07 10 07.8**	**-0.5**
NEM2				S		**Sn**	**07 10 26.0**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.51**	**254**	*e*P		**Pb**	**07 10 07.9**	**-0.6**
NMR				*i* S		**Sn**	**07 10 26.0**	**-1.4**
JRA	**Rausu**	**1.88**	**275**	P		**Pb**	**07 10 14.1**	**-0.7**
JRA				*e*S		**Sb**	**07 10 38.2**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.96**	**270**	P		**Pb**	**07 10 15.3**	**-0.9**
JNSB				S		**Sb**	**07 10 39.9**	**-1.0**
JKHN	**Kushirohamanak**	**2.00**	**250**	P		**Pb**	**07 10 15.0**	**-1.8**
JKHN				S		**Sn**	**07 10 39.5**	**0.0**
JNK	**Nakash**	**2.18**	**265**	S		**Sn**	**07 10 44.6**	**+0.5**
AKK	**Akkeshi**	**2.24**	**250**	*e*P		**Pb**	**07 10 19.2**	**-1.7**
JAK	**Akkeshi**	**2.34**	**251**	S		**Sn**	**07 10 46.9**	**-1.1**
JTKR	**Abashiri--Toko**	**2.76**	**275**	*e*S		**Sb**	**07 11 02.4**	**-1.3**
JAR	**Ashorobuto**	**2.91**	**261**	*e*S		**Sn**	**07 11 03.8**	**+1.8**
JOB	**Onbets**	**2.97**	**254**	S		**Sn**	**07 11 03.3**	**-0.2**
JCH	**Churui**	**3.40**	**251**	*e*S		**Sn**	**07 11 13.8**	**-0.2**
KRS4	**Mayak Korsakov**	**4.46**	**311**	*e*P		**Pn**	**07 10 50.7**	**+2.6**
YSS	**Yuzhno-Sakhali**	**4.70**	**314**	*e*P		**Pn**	**07 10 53.5**	**+2.1**
YSS				AMB		AMB	07 10 53.6	
	80nm,0.4s							
YSS				*e*S		**Sn**	**07 11 44.1**	**-2.0**
TYV	**Tymovskoe**	**7.85**	**336**	*e*P		**Pn**	**07 11 36.9**	**+2.3**

CATAC ***02*** *07:10:56.5±0.4, 14°N±2°×9°1W±°, h8km±3km, M4.3/28, mb5.0/2, mB5.3/1, MLv3.9/28, Mw(mB)4.7/1, Error ellipse: s-maj=7.1km s-min=3.9km az=66.8, confirmed*

GCG ***02*** *07:10:56.8±1.9, 13°.75N×91°.55W, h36km±723km, MD4.4, ML4.2, MW3.5, Presumed earthquake*

SNET ***02*** *07:11:00.8±3.1, 13°.92N×91°.31W, h25km, ML3.7, Presumed earthquake*

ISC 02 07:10:55.1±1.9, 13°.73N±0°.07×91°.49W±0°.06, h9km±11km, n59, σ1s90/94, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**0.73**	**11**	*i* P		**Pn**	**07 11 14.1**	**+2.3**

RTAL	**Retalhuleu**	**0.82**	**346**	P	**Pg**	**07 11 11.7 +0.8**
RTAL				S	**Sg**	**07 11 21.5 0.0**
FG8	**Yepocapa, Chim**	**1.05**	**59**	*i* P	**Pb**	**07 11 13.5 -1.9**
FG16	**Alotenango, Sa**	**1.10**	**60**	*i* P	**Pb**	**07 11 14.5 -1.8**
QUEO	**Labor Ovalle**	**1.14**	**359**	*i* P	**Pb**	**07 11 15.5 -1.6**
PCG5	**San Vicente Pa**	**1.19**	**66**	*i* P	**Pb**	**07 11 15.8 -2.1**
PCG5				IAML		07 11 37.7
	comp=N,6μm,0.5s					
GCG4	**OSOP**	**1.26**	**47**	*i* P	**Pn**	**07 11 18.6 -0.4**
THIG		**1.39**	**328**	*i* P	**Pn**	**07 11 18.9 -1.8**
FAME	**Alcaldia de Sa**	**1.44**	**85**	P	**Pn**	**07 11 20.8 -0.5**
FAME				S	**Sn**	**07 11 39.2 -0.8**
HUEH	**Huehuetenango**	**1.58**	**360**	P	**Pn**	**07 11 24.2 +0.7**
HUEH				S	**Sb**	**07 11 44.3 +0.6**
HUEH	**Huehuetenango**	**1.58**	**360**	*i* P	**Pn**	**07 11 23.7 +0.2**
HUEH	**Huehuetenango**	**1.58**	**360**	*i* P	**Pb**	**07 11 25.1 +0.5**
NUBE	**Las Nubes**	**1.67**	**84**	P	**Pn**	**07 11 24.6 -0.1**
NUBE				S	**Sn**	**07 11 45.8 -0.5**
NUBE	**Las Nubes**	**1.67**	**84**	*i* P	**Pn**	**07 11 24.5 -0.1**
NUBE	**Las Nubes**	**1.67**	**84**	*i* P	**Pb**	**07 11 25.9 -0.2**
LOAL	**Lomas de Alarc**	**1.68**	**81**	P	**Pn**	**07 11 25.7 +1.0**
LOAL				S	**Sb**	**07 11 46.5 -1.0**
LOAL	**Lomas de Alarc**	**1.68**	**81**	*i* P	**Pb**	**07 11 27.2 +0.9**
SLOZ	**Alcaldia de Sa**	**1.69**	**80**	P	**Pn**	**07 11 25.1 +0.4**
SLOZ				S	**Sb**	**07 11 46.8 -0.8**
RBDL	**Robledal**	**1.79**	**77**	*i* P	**Pn**	**07 11 27.6 +1.2**
RBDL				*e*S	**Sg**	**07 11 52.8 0.0**
CEVE	**Cerro Verde**	**1.82**	**87**	P	**Pn**	**07 11 26.9 +0.2**
CEVE				S	**Sb**	**07 11 50.3 -1.3**
SBLS	**San Blas**	**1.82**	**86**	*i* P	**Pn**	**07 11 27.7 +1.0**
JUAM	**Asuncion Mita**	**1.83**	**71**	*i* P	**Pn**	**07 11 27.0 +0.2**
UNIC	**Universidad Ca**	**1.90**	**82**	P	**Pn**	**07 11 28.7 +0.9**
UNIC				S	**Sb**	**07 11 52.7 -1.2**
JAYA	**Jayaque - finc**	**1.99**	**92**	P	**Pn**	**07 11 29.0 0.0**
JAYA	**Jayaque - finc**	**1.99**	**92**	*i* P	**Pn**	**07 11 28.3 -0.6**
JAYA				*i* S	**Sn**	**07 11 51.8 -2.2**
JAYA				IAML		07 11 57.9
	comp=N,2μm,0.3s					
JAYA	**Jayaque - finc**	**1.99**	**92**	*i* P	**Pn**	**07 11 28.9 -0.1**
JAYA				*e*S	**Sn**	**07 11 54.1 0.0**
CEDA	**San Andres**	**2.04**	**88**	P	**Pn**	**07 11 30.3 +0.7**
CEDA				S	**Sn**	**07 11 55.4 +0.3**
CEDA	**San Andres**	**2.04**	**88**	*i* P	**Pn**	**07 11 30.6 +1.0**
CEDA				*e*S	**Sb**	**07 11 56.5 -1.2**
PMON	**Piamonte**	**2.12**	**90**	P	**Pn**	**07 11 31.4 +0.7**
PMON				S	**Sn**	**07 11 57.3 +0.1**
PMON	**Piamonte**	**2.12**	**90**	*i* P	**Pn**	**07 11 31.3 +0.7**
LALI	**Alcalda de L**	**2.12**	**96**	P	**Pn**	**07 11 31.2 +0.5**
LALI				S	**Sn**	**07 11 58.3 +1.1**
MTO3	**Montecristo**	**2.17**	**72**	P	**Pn**	**07 11 32.2 +0.6**
MTO3				S	**Sn**	**07 11 59.2 +0.5**
MTO3	**Montecristo**	**2.17**	**72**	*i* P	**Pn**	**07 11 32.2 +0.6**
UEES	**Universidad Ev**	**2.19**	**90**	P	**Pn**	**07 11 32.8 +1.1**
UEES				S	**Sn**	**07 11 59.4 +0.5**
ESQI	**Esquipulas**	**2.24**	**68**	P	**Pn**	**07 11 33.6 +1.1**
ESQI				S	**Sb**	**07 12 01.5 -2.3**
IGN	**Direccin Gen**	**2.26**	**90**	S	**Sn**	**07 12 01.2 +0.6**
LOMA	**Loma Larga**	**2.26**	**92**	P	**Pn**	**07 11 33.2 +0.5**
LOMA				S	**Sn**	**07 12 00.9 +0.2**
LOMA	**Loma Larga**	**2.26**	**92**	*i* P	**Pn**	**07 11 33.4 +0.7**
LOMA				*e*S	**Sn**	**07 12 02.0 +1.3**
SJTE	**Alcalda de S**	**2.42**	**92**	*i* P	**Pn**	**07 11 35.8 +1.0**
PAVA	**Las Pavas**	**2.48**	**90**	P	**Pn**	**07 11 36.0 +1.1**
PAVA				S	**Sn**	**07 12 07.5 +1.3**
LLGN	**La Laguna**	**2.51**	**80**	P	**Pn**	**07 11 36.6 +0.5**
LLGN				S	**Sn**	**07 12 07.7 +0.8**
COEG	**Centro de Oper**	**2.54**	**92**	P	**Pn**	**07 11 37.5 +1.0**
COEG				S	**Sn**	**07 12 08.4 +0.8**
COEG	**Centro de Oper**	**2.54**	**92**	*i* P	**Pn**	**07 11 37.9 +1.4**
TECO	**Alcaldia de Te**	**2.64**	**94**	P	**Pn**	**07 11 38.7 +0.9**
TECO				S	**Sn**	**07 12 11.0 +1.0**
P5NO	**Presa 5 de nov**	**2.67**	**84**	P	**Pn**	**07 11 38.6 +0.4**
P5NO				S	**Sn**	**07 12 11.1 +0.5**
SCLA	**Alcaldia de Sa**	**2.69**	**90**	S	**Sn**	**07 12 12.2 +1.0**
SARH	**Santa Rosa de**	**2.84**	**68**	P	**Pn**	**07 11 41.9 +1.2**
SARH				S	**Sn**	**07 12 16.0 +0.9**
SARH	**Santa Rosa de**	**2.84**	**68**	*i* P	**Pn**

MOVZ	**Moawhango**	**8.03**	**221**	P	**Pn**	**07 15 01.8**	**+2.4**
BFZ	**Birch Farm**	**8.74**	**213**	P	**Pn**	**07 15 11.8**	**+2.8**
BFZ	**Birch Farm**	**8.74**	**213**	P	**Pn**	**07 15 08.1**	**-0.9**
MRZ	**Mangatainoka R**	**9.04**	**216**	P	**Pn**	**07 15 12.5**	**-0.7**
OGWZ	**Otaki Gorge**	**9.36**	**217**	P	**Pn**	**07 15 17.4**	**-0.1**
DUWZ	**D'Urville Isla**	**10.00**	**221**	P	**Pn**	**07 15 28.3**	**+1.8**
TUWZ	**Tuamarina**	**10.44**	**218**	P	**Pn**	**07 15 32.5**	**+0.2**
NNZ	**Nelson**	**10.59**	**221**	P	**Pn**	**07 15 35.6**	**+1.2**
NNZ				S	Sn	07 17 24.5	-8.5
TKNZ	**Takaka Hill**	**10.70**	**223**	P	**Pn**	**07 15 35.3**	**-0.6**
QRZ	**Quartz Range**	**10.81**	**225**	P	**Pn**	**07 15 39.2**	**+1.7**
QRZ	**Quartz Range**	**10.81**	**225**	P	**Pn**	**07 15 37.0**	**-0.4**
MRNZ	**Matariki Terra**	**11.05**	**222**	P	**Pn**	**07 15 39.6**	**-1.2**
THZ	**Tophouse**	**11.22**	**220**	P	**Pn**	**07 15 42.9**	**-0.2**
KHZ	**Kahutara**	**11.37**	**216**	P	**Pn**	**07 15 47.4**	**+2.4**
KHZ	**Kahutara**	**11.37**	**216**	P	**Pn**	**07 15 47.7**	**+2.7**
DSZ	**Denniston Nort**	**11.82**	**223**	P	**Pn**	**07 15 52.0**	**+0.7**
GVZ	**Greta Valley S**	**12.03**	**216**	P	**Pn**	**07 15 56.0**	**+2.0**
LTZ	**Lake Taylor**	**12.27**	**218**	P	**Pn**	**07 15 56.6**	**-0.9**
OKCZ	**Okains Bay**	**12.59**	**213**	P	**Pn**	**07 16 01.4**	**-0.4**
INZ	**Inchbonnie**	**12.67**	**220**	P	**Pn**	**07 16 03.1**	**+0.3**
MQZ	**McQueen's Vall**	**12.77**	**214**	P	**Pn**	**07 16 03.4**	**-0.8**
OXZ	**Oxford**	**12.78**	**217**	P	**Pn**	**07 16 03.1**	**-1.3**
RACZ	**Rakaia**	**13.03**	**216**	P	**Pn**	**07 16 08.1**	**+0.4**
WVZ	**Waitaha Valley**	**13.29**	**221**	P	**Pn**	**07 16 11.5**	**+0.2**
RPZ	**Rata Peaks**	**13.56**	**218**	Pn	**Pn**	**07 16 14.7**	**-0.3**
	1.5nm,0.3s,baz=54,slow=3.2,SNR=22						
	3.5nm,0.4s						
RPZ	**Rata Peaks**	**13.56**	**218**	P	**Pn**	**07 16 15.3**	**+0.3**
ARCZ	**Arundel**	**13.66**	**217**	P	**Pn**	**07 16 16.4**	**-0.1**
GCSZ	**Gaunt Creek Bo**	**13.68**	**221**	P	**Pn**	**07 16 16.3**	**-0.2**
TMZ	**Timaru**	**14.06**	**216**	P	**Pn**	**07 16 19.6**	**-2.3**
FOZ	**Fox Glacier**	**14.10**	**221**	P	**Pn**	**07 16 20.9**	**-1.4**
LBZ	**Lake Benmore**	**14.48**	**218**	P	**Pn**	**07 16 27.5**	**-0.1**
JCZ	**Jackson Bay**	**15.02**	**221**	P	**Pn**	**07 16 33.6**	**-1.3**
WKZ	**Wanaka**	**15.39**	**219**	P	**Pn**	**07 16 38.9**	**-0.9**
MSZ	**Milford Sound**	**15.87**	**221**	P	**Pn**	**07 16 44.6**	**-1.5**
MLZ	**Mavora Lakes**	**16.22**	**219**	P	**Pn**	**07 16 50.1**	**-0.5**
MSVF	**Nonsavu**	**16.23**	**344**	Pn	**Pn**	**07 16 51.3**	**+0.4**
WHZ	**Wether Hill Ro**	**16.66**	**218**	P	**Pn**	**07 16 54.0**	**-2.2**
DCZ	**Deep Cove**	**16.80**	**220**	P	**Pn**	**07 16 58.0**	**+0.1**
APZ	**The Paps**	**17.30**	**215**	P	**Pn**	**07 17 05.5**	**+1.4**
PYZ	**Puysegur Point**	**17.51**	**219**	P	**Pn**	**07 17 06.6**	**-0.2**
MARNC	**Mare, Loyalty**	**17.57**	**309**		**Pn**	**07 17 08.1**	**+0.3**
MARNC				IAmb	IAmb	07 17 11.2	
	comp=Z,49nm,0.9s						
OUENC	**Ouen Island, N**	**17.72**	**305**	Pn	**Pn**	**07 17 08.8**	**-0.7**
ONTNC	**Ouen Toro**	**18.06**	**304**		**Pn**	**07 17 13.7**	**0.0**
ONTNC				IAmb	IAmb	07 17 22.4	
	comp=Z,41nm,1.2s						
FUNA	**Funafuti**	**25.07**	**352**	P	**P**	**07 18 27.9**	**+0.6**
FUNA				IAmb	IAmb	07 18 41.1	
	comp=Z,52nm,0.9s						
CTAO	**Charters Tower**	**34.86**	**283**	P	**P**	**07 19 53.7**	**-0.5**
CTAO				IAmb	IAmb	07 20 03.3	
	comp=Z,46nm,1.6s						
INKA	**Innaminka**	**36.25**	**268**	P	**P**	**07 20 05.1**	**-0.9**
INKA				IAmb	IAmb	07 20 11.7	
	comp=Z,10nm,1.5s						
PMG	**Port Moresby**	**40.43**	**298**	P	**P**	**07 20 40.3**	**-1.0**
PMG				IAmb	IAmb	07 20 53.6	
	comp=Z,48nm,1.2s						
COEN	**Coen**	**40.65**	**289**	P	**P**	**07 20 42.7**	**-0.5**
COEN				IAmb	IAmb	07 22 09.9	
	comp=Z,33nm,1.2s						
AS31	**Alice Springs**	**43.49**	**270**	P	**P**	**07 21 07.5**	**+1.1**
ASAR	**Alice Springs**	**43.49**	**270**	P	**P**	**07 21 07.7**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=110,slow=7.6,SNR=23						
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**43.49**	**270**	P	**P**	**07 21 06.5**	**+0.1**
WR8	**Warramunga Arr**	**44.62**	**275**	P	**P**	**07 21 16.4**	**+1.0**
WR8				IAmb	IAmb	07 22 17.6	
	comp=Z,39nm,1.9s						
WRAB	**Tennant Creek**	**44.75**	**275**	P	**P**	**07 21 16.6**	**+0.1**
WRAB				IAmb	IAmb	07 21 29.4	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**44.76**	**275**	P	**P**	**07 21 17.4**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=115,slow=7.7,SNR=26						
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**44.76**	**275**	P	**P**	**07 21 16.9**	**+0.3**
BBJI	**Bungbulang**	**73.34**	**272**	P	**P**	**07 24 33.9**	**-1.2**
ADK	**Adak**	**85.04**	**0**	P	**P**	**07 25 39.0**	**+1.1**
CO03	**El Pedregal**	**85.81**	**124**	P	**P**	**07 25 43.4**	**+0.7**
KS19	**Wonju Array Si**	**87.08**	**319**	P	**P**	**07 25 49.6**	**+1.2**
BORG	**Borgarnes**	**145.51**	**18**	PKPdf	**PKPab**	**07 32 41.7**	**+1.2**
FINES	**FINESS Array B**	**148.22**	**339**	PKPbc	**PKPab**	**07 32 51.6**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=56,slow=5.2,SNR=1.0						

*IPEC **02** 07:19:18.3±0.2,51°.48N×16°.21E,h1km,ML2.3/7,Error ellipse: s-maj=1.8km s-min=1.1km az=65.0*
*VIE **02** 07:19:19.4±1.4,51°.31N×15°.93E,h0km,mb2.4/2,ml2.6/3, Error ellipse: s-maj=10.1km s-min=7.8km az=17.0 79 km WNW of Wroclaw Suspected Mining induced.*
*PRU **02** 07:19:19.4,51°.46N×16°.28E,h0km*
ISC 02 07:19:20.0±1.1,51°.38N±0°.05×16°.22E±0°.03,h0km,n28, σ0s85/57,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.54**	**175**	*e*Pg	**Pg**	**07 19 30.8**	**+0.5**
KSP				*e*Sg	**Sg**	**07 19 38.4**	**+1.2**
CHVC	**Chvalec**	**0.80**	**188**	*e*PG	**Pg**	**07 19 35.9**	**+0.6**
CHVC				*e*SG	**Sb**	**07 19 48.0**	**-0.1**
	comp=Z,37nm,0.5s						
OSTC	**Ostas**	**0.82**	**180**	*e*PG	**Pg**	**07 19 36.3**	**+0.6**
OSTC				*e*SG	**Sb**	**07 19 47.9**	**-0.9**
	comp=Z,31nm,0.3s						
UPC	**Upice**	**0.88**	**189**	*e*PG	**Pg**	**07 19 37.0**	**+0.1**
UPC				*e*SG	**Sb**	**07 19 50.6**	**+0.1**
	comp=Z,59nm,0.3s						
DPC	**Dobruska-Polom**	**1.03**	**176**	*e*PG	**Pg**	**07 19 39.9**	**+0.2**
DPC				*e*SG	**Sb**	**07 19 55.6**	**+0.8**
	comp=Z,44nm,0.5s						
PIVO	**Bartosovice**	**1.21**	**170**	*e*Pg	**Pg**	**07 19 43.1**	**-0.1**
	baz=351						
PIVO				*e*Sg	**Sb**	**07 19 59.5**	**-0.5**
	baz=351						
PVCC	**Panska Ves**	**1.35**	**232**	*e*PG	**Pg**	**07 19 45.6**	**-0.2**
PVCC				*e*SG	**Sn**	**07 20 05.4**	**+0.8**
	comp=Z,68nm,0.3s						
KRLC	**Kraliky**	**1.35**	**164**	*e*PG	**Pg**	**07 19 45.5**	**-0.4**
KRLC				*e*SG	**Sb**	**07 20 04.4**	**+0.4**
	comp=Z,58nm,1.0s						
ANAC	**Anensky vrch**	**1.50**	**150**	*e*Pn	**Pn**	**07 19 47.5**	**-0.7**
	baz=333						
ANAC				*e*Sg	**Sb**	**07 20 08.2**	**-0.1**
	32nm,0.4s,baz=333						
BRG	**Berggiesshubel**	**1.52**	**252**	Pg	**Pn**	**07 19 48.4**	**-0.1**
BRG				Sg	**Sg**	**07 20 08.4**	**-0.5**
BRG				Amp		07 20 11.1	
	comp=Z,26nm,0.3s						
RYBC	**Ceska Rybna**	**1.57**	**184**	*e*Pn	**Pn**	**07 19 48.5**	**-0.7**
	baz=3.1						
RYBC				*e*Sg	**Sg**	**07 20 10.9**	**+0.4**
	comp=Z,29nm,0.3s,baz=3.1						
PRU	**Pruhonice**	**1.75**	**218**	*e*PG	**Pn**	**07 19 51.9**	**+0.3**
PRU				*e*SG	**Sg**	**07 20 17.6**	**+1.3**
	comp=Z,28nm,0.9s						
MORC	**Moravsky Berou**	**1.81**	**152**	*e*Pn	**Pn**	**07 19 51.9**	**-0.6**
	baz=334						
MORC				*e*Sg	**Sg**	**07 20 18.0**	**-0.1**
	comp=Z,25nm,0.5s,baz=334						
OKC	**Ostrava-Krasne**	**1.97**	**141**	*e*SG	**Sg**	**07 20 22.9**	**-0.4**
	comp=Z,18nm,0.5s						
CLL	**Collm**	**2.02**	**269**	*e*Pn	**Pn**	**07 19 54.0**	**-1.3**
CLL				*e*Pg	**Pb**	**07 19 57.0**	**-0.6**
CLL				*ex*	x	07 20 12.0	
CLL				*e*Sg	**Sb**	**07 20 24.0**	**+0.8**
CLL				AMS	AMS	13 40 00.0	
	comp=Z,100nm,20.8s						
VRAC	**Vranov**	**2.08**	**173**	*e*Pn	**Pn**	**07 19 55.8**	**-0.4**
	baz=354						
VRAC				*e*Sg	**Sg**	**07 20 26.8**	**-0.1**
	comp=Z,7.4nm,0.3s,baz=354						
MAUC	**Maruska**	**2.26**	**152**	*e*PG	**Pb**	**07 20 01.4**	**-0.3**
MAUC				*e*SG	**Sg**	**07 20 33.0**	**+0.4**
KRUC	**Moravsky**	**2.32**	**177**	*e*Pn	**Pn**	**07 19 59.4**	**0.0**
	baz=357						
KRUC				*e*Sg	**Sg**	**07 20 34.6**	**+0.1**
	comp=Z,25nm,0.8s,baz=357						
ZVC	**Zvikov**	**2.33**	**215**	*e*PN	**Pn**	**07 19 59.5**	**-0.1**
ZVC				*e*PG	**Pb**	**07 20 03.5**	**+0.6**
ZVC				*e*SG	**Sg**	**07 20 35.4**	**+0.4**
	comp=Z,10nm,0.7s						
STAC	**Stalkov**	**2.42**	**194**	*e*Pn	**Pn**	**07 20 00.3**	**-0.6**
	baz=13						
STAC				*e*Sg	**Sg**	**07 20 37.3**	**-0.5**
	comp=Z,7.6nm,0.2s,baz=13						
OJC	**Ojcow**	**2.55**	**116**	*e*Pg	**Pg**	**07 20 10.3**	**+1.5**
OJC				*e*Sg	**Sg**	**07 20 44.5**	**+2.7**
JAVC	**Velka Javorina**	**2.69**	**159**	*e*Pn	**Pn**	**07 20 04.3**	**-0.2**
	baz=341						
KHC	**Kasperske Hory**	**2.82**	**218**	*e*PN	**Pn**	**07 20 06.3**	**0.0**
KHC				*e*PG	**Pb**	**07 20 11.4**	**+0.2**
KHC				*e*SN	**Sn**	**07 20 41.7**	**+0.7**
KHC				*e*SG	**Sg**	**07 20 51.5**	**+1.1**
	comp=Z,7.9nm,0.4s						
LANS	**Liptovska Anna**	**3.05**	**136**	*e*PG	**Pg**	**07 20 17.4**	**-1.0**
MODS	**Modra-Piesok**	**3.08**	**167**	*e*PN	**Pn**	**07 20 08.9**	**-1.0**
MODS				*e*PG	**Pg**	**07 20 20.3**	**+1.2**
MODS				*e*SG	**Sg**	**07 20 59.4**	**+0.4**
CONA	**Conrad Observa**	**3.46**	**184**	*i* Pn	**Pn**	**07 20 15.2**	**0.0**
	comp=Z,5.1nm,0.4s						
CONA				*e*Sn	**Sn**	**07 20 57.1**	**+0.2**
	comp=Z,2.6nm,0.3s						
STHS	**Stebnicka Huta**	**3.77**	**119**	*e*PG	**Pg**	**07 20 31.8**	**-0.3**
ARSA	**Arzberg**	**4.16**	**187**	*i* Pn	**Pn**	**07 20 21.9**	**-2.8**
	comp=Z,1.4nm,0.3s						
ARSA				*i* Sn	**Sn**	**07 21 12.1**	**-1.9**
	comp=Z,2.1nm,0.4s						

*MOS **02** 07:28:25.9,42°.92N×45°.72E,h20km,MPVA3.5*
*NORS **02** 07:28:25.6,42°.90N×45°.72E,h13km,MPVA3.4*
*DRS **02** 07:28:27.1,42°.94N×45°.82E,h15km*
ISC 02 07:28:26.9±1.0,42°.90N±0°.03×45°.72E±0°.02,h18km±4km, n41,σ1s21/78,1C,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.31**	**11**	*e*PG	**Pb**	**07 28 33.3**	**-0.5**
GROC				*e*S	**Sb**	**07 28 38.1**	**-0.4**
GROC				pmax	pmax		
	comp=Z,237nm,0.4s						
GROC	**Groznyy**	**0.31**	**11**	*i* Pg	**Pb**	**07 28 33.4**	**-0.5**
GROC				*e*Sg	**Sb**	**07 28 39.3**	**+0.8**
BTLR	**Botlikh**	**0.44**	**122**	*e*PG	**Pb**	**07 28 35.9**	**-0.3**
BTLR				*e*S	**Sb**	**07 28 42.9**	**+0.4**
BTLR				pmax	pmax		
	comp=Z,23nm,0.4s						
BTLR	**Botlikh**	**0.44**	**122**	*e*Pg	**Pb**	**07 28 36.0**	**-0.3**
BTLR				*e*Sg	**Sn**	**07 28 44.1**	**-1.9**
DLMR	**Dylym**	**0.69**	**76**	PG	**Pb**	**07 28 39.4**	**-1.0**
DLMR				S	**Sb**	**07 28 48.9**	**-0.7**
DLMR	**Dylym**	**0.69**	**76**	*e*Pg	**Pn**	**07 28 40.5**	**-1.2**
DLMR				*e*Sg	**Sn**	**07 28 51.6**	**-0.4**
XNZR	**Khunzakh**	**0.81**	**116**	*e*Pg	**Pn**	**07 28 42.8**	**-0.7**
XNZR				*e*Sg	**Sn**	**07 28 55.5**	**+0.3**
HNZR	**Khunzah**	**0.81**	**115**	*e*PG	**Pn**	**07 28 42.8**	**-0.8**
HNZR				*e*S	**Sn**	**07 28 55.0**	**-0.3**
HNZR				pmax	pmax		
	comp=Z,18nm,0.3s						
UNCR	**Uncukul**	**0.82**	**103**	*e*PG	**Pb**	**07 28 42.0**	**-0.5**
UNCR				*e*S	**Sb**	**07 28 53.6**	**+0.4**
UNCR				pmax	pmax		
	comp=Z,29nm,0.4s						
UNCR	**Uncukul**	**0.82**	**103**	*e*Pg	**Pb**	**07 28 42.1**	**-0.5**
UNCR				*e*Sg	**Sn**	**07 28 55.5**	**+0.4**
DBC	**Dubki**	**0.83**	**81**	PG	**Pn**	**07 28 43.0**	**-0.7**
DBC				S	**Sn**	**07 28 54.6**	**-0.9**
DBC	**Dubki**	**0.83**	**81**	*e*Pg	**Pn**	**07 28 43.0**	**-0.7**
DBC				*e*Sg	**Sn**	**07 28 55.1**	**-0.3**
KRNR	**Karanay**	**0.88**	**94**	*e*PG	**Pg**	**07 28 43.3**	**-0.7**
KRNR				*e*S	**Sn**	**07 28 55.4**	**-1.4**
KRNR				pmax	pmax		
	comp=Z,12nm,0.3s						
KRNR	**Karanay**	**0.88**	**94**	*e*Pg	**Pg**	**07 28 43.3**	**-0.7**
KRNR				*e*Sg	**Sn**	**07 28 57.7**	**+0.9**
TLTR	**Tlyarata**	**0.93**	**149**	*e*PG	**Pn**	**07 28 45.3**	**+0.2**
TLTR				*e*S	**Sn**	**07 28 58.8**	**+0.9**
TLTR				pmax	pmax		
	comp=Z,13nm,0.2s						
TLTR	**Tlyarata**	**0.93**	**149**	*e*Pg	**Pn**	**07 28 45.3**	**+0.2**
TLTR				*e*Sg	**Sn**	**07 28 58.9**	**+0.9**
ARKR	**Arakani**	**0.99**	**107**	*e*PG	**Pn**	**07 28 45.8**	**-0.1**
ARKR				*e*S	**Sn**	**07 29 01.1**	**+1.7**
ARKR	**Arakani**	**0.99**	**107**	*e*Pg	**Pn**	**07 28 45.8**	**-0.1**
ARKR				*e*Sg	**Sn**	**07 29 01.1**	**+1.7**
LACR	**Lac**	**1.04**	**266**	*e*PG	**Pg**	**07 28 46.8**	**-0.4**
LACR				*e*S	**Sn**	**07 29 02.6**	**+1.7**
LACR	**Lac**	**1.04**	**266**	*e*Pg	**Pg**	**07 28 46.8**	**-0.4**
LACR				*e*Sg	**Sn**	**07 29 02.6**	**+1.7**
GNBR	**Gunib**	**1.05**	**119**	*e*PG	**Pg**	**07 28 47.6**	**+0.3**
GNBR				*e*S	**Sn**	**07 29 02.8**	**+1.8**
GNBR				pmax	pmax		
	comp=Z,33nm,0.5s						
GNBR	**Gunib**	**1.05**	**119**	*e*Pg	**Pg**	**07 28 47.7**	**+0.4**
GNBR				*e*Sg	**Sn**	**07 29 03.6**	**+2.5**
KMKR	**Kumukh**	**1.28**	**126**	*e*PG	**Pg**	**07 28 51.7**	**+0.1**
KMKR				*e*S	**Sg**	**07 29 09.1**	**+0.7**
KMKR				pmax	pmax		
	comp=Z,30nm,0.2s						
STDR	**Stavd-Durt**	**1.30**	**292**	*e*PG	**Pg**	**07 28 51.7**	**-0.2**
STDR				*e*S	**Sg**	**07 29 11.5**	**+2.7**
STDR	**Stavd-Durt**	**1.30**	**292**	*e*Pg	**Pg**	**07 28 51.7**	**-0.2**
STDR				*e*Sg	**Sg**	**07 29 11.5**	**+2.7**
MAK	**Makhachkala**	**1.32**	**87**	*i* PG	**Pg**	**07 28 52.8**	**+0.6**
MAK				*e*S	**Sg**	**07 29 12.0**	**+2.6**
MAK				pmax	pmax		
	comp=Z,111nm,0.2s						
MAK				smax	smax		
	comp=N,309nm,0.5s						
MAK				smax	smax		
	comp=N,254nm,0.5s						
DIGR	**Digorskoe uzhe**	**1.57**	**271**	*e*PG	**Pg**	**07 28 55.6**	**-1.5**
DIGR				*e*S	**Sg**	**07 29 17.5**	**0.0**
DIGR	**Digorskoe uzhe**	**1.57**	**271**	*e*Pg	**Pg**	**07 28 55.6**	**-1.5**
DIGR				*e*Sg	**Sg**	**07 29 17.5**	**0.0**
URKR	**Urkarakh**	**1.60**	**117**	PN	**Pb**	**07 28 55.6**	**-0.3**
URKR				S	**Sg**	**07 29 17.0**	**-1.4**
URKR	**Urkarakh**	**1.60**	**117**	*e*Pg	**Pg**	**07 28 56.0**	**-1.6**
URKR				*e*Sg	**Sg**	**07 29 20.0**	**+1.6**
NCK	**Nalchik**	**1.66**	**292**	*i* PN	**Pb**	**07 28 56.3**	**-0.6**
AKT	**Akhty**	**2.06**	**133**	*e*PN	**Pg**	**07 29 06.2**	**-0.3**
AKT				*e*S	**Sg**	**07 29 35.8**	**+2.5**
AKT				pmax	pmax		
	comp=Z,15nm,0.5s						
AKT				smax	smax		
	comp=E,21nm,0.4s						
AKT				smax	smax		
	comp=N,29nm,0.4s						
AKT				smax	smax		
	comp=N,24nm,0.5s						
AKT	**Akhty**	**2.06**	**133**	*e*Pg	**Pg**	**07 29 05.7**	**-0.8**
AKT				*e*Sg	**Sg**	**07 29 31.4**	**-1.9**
DRN	**Derbent**	**2.12**	**113**	*i* PN	**Pb**	**07 29 03.0**	**-1.7**
KBZ	**Khabaz**	**2.22**	**293**	*e*PN	**Pn**	**07 29 03.6**	**+0.9**
KBZ				*e*S	**Sb**	**07 29 34.6**	**+1.2**
KBZ	**Khabaz**	**2.22**	**293**	*e*Pg	**Pn**	**07 29 03.6**	**+0.9**
KBZ				*e*Sg	**Sb**	**07 29 34.6**	**+1.2**
SHA1	**Shidzhatmaz**	**2.38**	**292**	*e*PN	**Pb**	**07 29 07.2**	**-2.1**
SHA1				*e*S	**Sb**	**07 29 38.1**	**-0.4**
SHA1	**Shidzhatmaz**	**2.38**	**292**	*e*Pn	**Pb**	**07 29 07.2**	**-2.1**
SHA1				*e*Sn	**Sb**	**07 29 38.1**	**-0.4**
GUZR	**Guzeripl'**	**4.22**	**287**	*i* PN	**Pn**	**07 29 30.1**	**-0.2**
SOC	**Sochi**	**4.43**	**281**	*e*PN	**Pn**	**07 29 31.0**	**-2.2**
SOC				*e*PPP	PPP	07 29 48.1	
SOC				*e*SS	**Sb**	**07 30 36.0**	**-1.3**
SOC				MLR	MLR		
	comp=Z,12nm,6.0s						
AAK	**Ala-Archa**	**21.09**	**81**	*i* P	**P**	**07 33 11.7**	**+1.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						

*HEL **02** 07:30:14.6±0.1,63°.97N×28°.08E,h0km,ML1.5,Explosion*
*IDC **02** 07:30:15.6±2.0,63°.88N×28°.50E,h0km,mbtmp3.1/3, ML1.9/3,Error ellipse: s-maj=36.2km s-min=13.6km az=99.0*
ISC 02 07:30:13.4±0.7,63°.95N±0°.02×28°.10E±0°.03,h0km,n34, σ1s29/49,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.57**	**193**	PG	**Pb**	**07 30 25.4**	**-0.9**
	baz=10.0						
NIF				SG	**Sb**	**07 30 33.2**	**-1.7**
NIF				smax	smax	07 30 33.5	
	comp=Z,9.9nm,0.2s						
RMF	**Romuvaara**	**0.85**	**70**	PG	**Pb**	**07 30 30.2**	**-0.8**
RMF				SG	**Sg**	**07 30 40.9**	**+0.2**
RMF				smax	smax	07 30 41.1	
	comp=Z,4.6nm,0.2s						
OUL	**Oulu**	**1.49**	**321**	PN	**Pg**	**07 30 41.7**	**-0.2**
OUL				SN	**Sn**	**07 31 01.0**	**-0.5**
SUF	**Sumiainen**	**1.51**	**216**	*e*P	**Pg**	**07 30 43.3**	**+1.0**
SUF	**Sumiainen**	**1.51**	**216**	PN	**Pg**	**07 30 42.6**	**+0.2**
SUF				smax	smax	07 31 00.2	
	comp=Z,1.3nm,0.2s						
OUF	**Merijarvi**	**1.54**	**288**	PN	**Pg**	**07 30 42.3**	**-0.5**
OUF				smax	smax	07 31 00.2	
	comp=Z,3.0nm,0.2s						
OUF				SN	**Sg**	**07 31 02.7**	**0.0**
KU1	**Kurvinen**	**1.74**	**20**	PG	**Pb**	**07 30 45.6**	**-0.6**
KU2	**Taivalkoski**	**1.77**	**2**	PG	**Pb**	**07 30 46.0**	**-0.8**
KU2				SN	**Sg**	**07 31 09.8**	**-0.5**
JOF	**Joensuu**	**1.77**	**124**	*e*P	**Pg**	**07 30 47.2**	**-0.2**
JOF	**Joensuu**	**1.77**	**124**	PG	**Pg**	**07 30 46.8**	**-0.6**
	baz=307						
JOF				SG	**Sg**	**07 31 10.0**	**-0.3**
OBF0	**Syolatti, Pyha**	**1.78**	**290**	PG	**Pg**	**07 30 46.8**	**-0.6**
OBF0				smax	smax	07 31 07.2	
	comp=Z,5.9nm,0.2s						
OBF0				SN	**Sg**	**07 31 09.8**	**-0.6**
KAF	**Kangasniemi**	**2.01**	**205**	PG	**Pb**	**07 30 50.8**	**0.0**
	baz=20						
KAF				smax	smax	07 31 14.7	
	comp=Z,3.3nm,0.2s						
KAF				SG	**Sg**	**07 31 18.0**	**0.0**
MSF	**Maaselka**	**2.02**	**11**	PG	**Pb**	**07 30 50.9**	**0.0**
MSF				SG	**Sg**	**07 31 17.2**	**-0.9**
OBF8	**Ulkokalla**	**2.08**	**283**	PG	**Pb**	**07 30 51.8**	**-0.1**
OBF8				smax	smax	07 31 15.8	
	comp=Z,2.0nm,0.2s						
RANF	**Ranua**	**2.15**	**346**	PG	**Pb**	**07 30 52.7**	**-0.5**
	baz=166						
RANF				SG	**Sb**	**07 31 19.9**	**-0.5**
KU6	**Riekki**	**2.22**	**19**	PG	**Pb**	**07 30 54.0**	**-0.4**
	baz=199						
KU6				smax	smax	07 31 19.9	
	comp=Z,1.3nm,0.2s						
KU6				SG	**Sb**	**07 31 22.0**	**-0.5**
KEF	**Keuruu**	**2.31**	**221**	*e*P	**Pg**	**07 30 56.3**	**-1.3**
KEF	**Keuruu**	**2.31**	**221**	PG	**Pb**	**07 30 56.0**	**+0.1**
	baz=33						
KEF				smax	smax	07 31 23.3	
	comp=Z,2.6nm,0.2s						
KEF				SG	**Sg**	**07 31 26.2**	**-1.4**
RUF	**Ruokolahti**	**2.56**	**171**	PG	**Pb**	**07 30 60.0**	**-0.2**
	baz=352						
RUF				smax	smax	07 31 30.8	
	comp=Z,2.4nm,0.2s						
RUF				SG	**Sg**	**07 31 34.0**	**-1.6**
VAF	**Ylistaro**	**2.60**	**252**	*e*P	**Pb**	**07 31 00.1**	**-0.7**
VAF	**Ylistaro**	**2.60**	**252**	PG	**Pb**	**07 31 00.1**	**-0.7**
VAF				smax	smax	07 31 31.0	
	comp=Z,1.6nm,0.2s						
VAF				SG	**Sb**	**07 31 34.0**	**+0.8**
TOF	**Tornio**	**2.68**	**325**	SB	**Sn**	**07 31 31.5**	**+0.8**
TOF				smax	smax	07 31 32.6	
	comp=Z,1.3nm,0.2s						
FIA0	**FINESS Array S**	**2.68**	**201**	PG	**Pb**	**07 31 01.3**	**-0.8**
FIA0				smax	smax	07 31 33.9	
	comp=Z,1.5nm,0.2s						
FIA0				SG	**Sb**	**07 31 35.1**	**-0.4**
FINES	**FINESS Array B**	**2.68**	**201**	Pn	**Pb**	**07 31 01.6**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=20,slow=16,SNR=16						
FINES				Sn	**Sb**	**07 31 35.9**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=23,slow=26,SNR=13						
	comp=Z,1.5nm,0.4s						
RNF	**Rovaniemi**	**2.81**	**343**	SG	**Sb**	**07 31 39.1**	**-0.3**
ERTU	**Ertsjaerv**	**3.61**	**319**	PB	**Pb**	**07 31 14.1**	**-4.0**
KLF	**Kolari**	**3.72**	**334**	SN	**Sn**	**07 31 55.7**	**-0.8**
VRF	**Varrio**	**3.87**	**9**	SB	**Sb**	**07 32 07.3**	**-2.5**
HEL1	**Helsinki**	**4.07**	**203**	PB	**Pb**	**07 31 24.0**	**-1.9**
LAUT	**Lauttasaari He**	**4.10**	**203**	PB	**Pb**	**

AROD eS Sn 07 40 43.8 +0.5
ACDV Cuesta del Vie 1.56 9 eP Pn 07 40 21.8 +0.4
ACDV eS Sn 07 40 44.0 +0.7
ACDV IAML 07 40 44.5
comp=Z,990nm,0.4s
PEL Peldehue 1.79 217 eP Pn 07 40 23.9 0.0
PEL eS Sn 07 40 47.2 -0.6
PEL IAML 07 40 52.7
comp=Z,525nm,0.3s
MT08 Bocatoma Ro 1.80 197 eP Pn 07 40 25.0 +0.7
MT08 eS Sn 07 40 49.2 +0.8
CO01 Juntas del Tor 1.83 341 eP Pn 07 40 25.5 +0.8
CO01 eS Sn 07 40 51.4 +2.3
CO01 IAML 07 40 52.5
comp=Z,460nm,0.2s
AVIZ Vizcacheras 1.91 157 eP Pn 07 40 26.3 +0.9
AVIZ eS Sn 07 40 50.9 +0.4
GO04 Tololo Observa 1.95 322 eP Pn 07 40 25.0 -1.1
GO04 eS Sn 07 40 51.2 -0.4
GO04 IAML 07 40 52.6
comp=Z,1μm,0.2s
ACAN Cantantal 1.96 107 eP Pn 07 40 25.9 -0.2
AVFE Valle Fertil 1.98 58 eP Pn 07 40 26.2 0.0
AVFE eS Sn 07 40 52.2 +0.3
AVFE IAML 07 40 54.4
comp=Z,348nm,0.4s
MT03 Universidad Ad 2.00 207 eP Pn 07 40 26.6 0.0
MT03 eS Sn 07 40 53.9 +1.4
MT03 IAML 07 40 55.1
comp=Z,1μm,0.6s
MT05 Renca 2.01 214 eP Pn 07 40 26.4 -0.3
MT05 eS Sn 07 40 53.6 +0.9
MT05 IAML 07 40 54.4
comp=Z,787nm,0.6s
MT02 Curacav 2.12 223 eP Pn 07 40 27.1 -0.9
MT02 eS Sn 07 40 54.7 -0.4
MT02 IAML 07 40 57.8
comp=Z,246nm,0.9s
VA01 Torpederas 2.30 235 eP Pn 07 40 29.4 -0.8
VA01 IAML 07 41 03.0
comp=Z,146nm,0.1s
MT01 Popeta 2.65 215 eP Pn 07 40 33.5 -1.1
MT01 eS Sn 07 41 05.2 -1.7
MT01 IAML 07 41 06.7
comp=Z,282nm,0.4s
LCO Las Campanas 2.92 337 eP Pn 07 40 38.1 -0.3
LCO eS Sn 07 41 12.9 -0.7
AC05 El Transito 2.97 345 eP Pn 07 40 39.0 +0.1
AC05 eS Sn 07 41 14.9 +0.4
AC05 IAML 07 41 16.9
comp=Z,226nm,0.3s
BO01 Tunca 3.02 207 eP Pn 07 40 38.6 -0.8
BO01 eS Sn 07 41 14.5 -0.9
BO01 IAML 07 41 15.3
comp=Z,179nm,0.4s
ACLC CERRO LA CRUZ 3.11 43 eP Pn 07 40 40.8 0.0
ACLC IAML 07 41 46.9
comp=Z,161nm,0.5s
VCA Vinchina 3.15 20 eP Pn 07 40 41.5 +0.2
VCA eS Sn 07 41 06.9 -12
VCA IAML 07 41 24.1
comp=Z,416nm,0.3s
MRA San Martin 3.21 104 eP Pn 07 40 41.2 -0.7
MRA eS Sn 07 41 32.3 +12
MRA IAML 07 41 45.2
comp=Z,186nm,0.7s
BO02 Sierra Bellavi 3.28 200 eP Pn 07 40 42.8 -0.1
BO02 eS Sn 07 41 23.1 +1.5
BO02 IAML 07 41 27.6
comp=Z,171nm,0.5s
AC04 Llanos de Chal 3.79 337 eP Pn 07 40 48.7 -0.8
AC04 eS Sn 07 41 32.5 -1.1
AC04 IAML 07 41 38.5
comp=Z,68nm,0.5s
GO05 Hualane 3.91 212 eP Pn 07 40 48.8 -2.2
GO05 eS Sn 07 41 35.3 -1.0
GO05 IAML 07 41 46.5
comp=Z,60nm,0.6s
TINO Tinogasta 3.98 24 eP Pn 07 40 52.6 +0.5
TINO eS Sn 07 41 34.0 -4.2
TINO IAML 07 41 44.6
comp=Z,126nm,0.6s
TCA Tanti 4.12 86 eP Pn 07 40 53.9 -0.1
TCA eS Sn 07 41 40.4 -1.3
TCA IAML 07 41 56.1
comp=Z,85nm,0.4s
GO03 Copiapo 4.17 350 eP Pn 07 40 54.6 -0.1
GO03 eS Sn 07 41 41.0 -1.9
GO03 IAML 07 41 44.2
comp=Z,78nm,0.3s
ML02 Panimavida 4.37 202 eP Pn 07 40 55.8 -1.4
ML02 eS Sn 07 41 45.0 -2.3
ML02 IAML 07 41 47.7
comp=Z,66nm,0.5s
AC02 Maricunga 4.87 3 eP Pn 07 41 04.7 +0.2
AC02 eS Sn 07 42 00.5 +0.3
AC02 IAML 07 42 03.8
comp=Z,30nm,1.2s
BI02 San Fabin de 5.17 197 eP Pn 07 41 06.5 -1.5
BI02 IAML 07 42 07.4
comp=Z,19nm,0.5s
CPUP Villa Florida 11.85 66 P Pn 07 42 31.2 -6.5
comp=Z,3.5nm,1.2s,baz=214,slow=19,SNR=1.9
LPAZ La Paz 15.40 5 P **P** **07 43 26.4 +0.7**
comp=Z,2.0nm,0.6s,baz=184,slow=7.8,SNR=17
SIV San Ignacio 17.40 28 P **Pn** **07 43 46.8 -0.9**
comp=Z,0.8nm,0.8s,baz=195,slow=12,SNR=4.1
QSPA South Pole Qui 58.52 180 P P 07 49 27.2 -8.2
comp=Z,1.2nm,0.8s,baz=218,slow=3.5,SNR=2.0
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 68.90 328 P **P** **07 50 46.6 +2.8**
comp=Z,0.7nm,0.8s,baz=156,slow=8.2,SNR=7.5
comp=Z,0.7nm,0.8s
KURBB Kurchatov Arra 149.69 42 PKPbc **PKPbc** **07 59 24.8 -2.1**
comp=Z,0.3nm,0.6s,baz=308,slow=1.0,SNR=4.1
ZALV Zalesovo Beam 151.12 32 PKPbc **PKPdf** **07 59 24.5 +0.2**
comp=Z,0.7nm,0.5s,baz=302,slow=1.4,SNR=4.5

*IDC **02** 07:40:35.3±0.8,32.°93N×75.°88E,h0km,mb3.8/16, mbtmp3.8/19,ML3.6/3,MS3.3/12,Error ellipse: s-maj=22.7km s-min=14.9km az=45.0*
*NEIC **02** 07:40:37.2±1.7,33.°0N±0.°1×75.°95E±0.°10,h10km±1km, mb4.6/20,Error ellipse: s-maj=19.3km s-min=12.4km az=204.0*
*NDI **02** 07:40:38.8±1.8,33.°04N×75.°89E,h5km,ML4.0,MW3.8, Presumed earthquake*
ISC 02 07:40:38.7±1.0,32.°94N±0.°04×75.°86E±0.°04,h23km±7km, n95,σ1≗52/92,mb4.0/23,MS3.5/9,Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TSSA	**Tissa**	**0.26**	**112**	*eP*		**Pb**	**07 40 44.6**	**-0.6**
TSSA				*ePg*		**Pb**	**07 40 45.1**	**-0.2**
TSSA				*i* Sg		**Sb**	**07 40 48.4**	**-1.3**
TSSA				IAML			07 40 50.5	
	comp=E,15μm,0.3s							
TSSA				IAML			07 41 02.3	
	comp=E,28μm,0.2s							
THN	**Thein Dam**	**0.50**	**190**	*eP*		**Pb**	**07 40 50.2**	**+1.2**
THN				*eS*		**Sn**	**07 40 59.1**	**+0.7**
THN				IAML			07 41 00.9	
	comp=E,3μm,0.5s							
THN				IAML			07 41 09.0	
	comp=E,4μm,0.7s							
JMU	**Jammu**	**0.88**	**260**	*ePg*		**Pn**	**07 40 56.8**	**+1.0**
JMU				*i* Sg		**Sn**	**07 41 09.5**	**+1.8**
JMU				IAML			07 41 21.5	
	comp=E,1μm,0.7s							
JMU				IAML			07 41 21.5	
	comp=N,1μm,0.3s							
BHK	**Bhakra**	**1.60**	**164**	*ex*		Pg	07 41 09.7	
BHK				*ex*		Sg	07 41 32.5	
BHK				IAML			07 41 34.3	
	comp=N,7μm,0.4s							
BHK				IAML			07 41 34.5	
	comp=E,5μm,0.6s							
ALCI	**Alchi Leh**	**1.69**	**41**	*ePg*		**Pb**	**07 41 09.4**	**+0.1**
ALCI				*i* Sg		**Sb**	**07 41 31.4**	**+1.1**
NIL	**Nilore**	**2.30**	**289**			**Pn**	**07 41 16.1**	**+0.8**
KLP	**Kalpa**	**2.46**	**124**	*eP*		**Pb**	**07 41 20.7**	**-1.8**
HNLY	**HANLEY**	**2.62**	**93**	*eP*		**Pb**	**07 41 25.3**	**-0.1**
HNLY				*eS*		**Sb**	**07 41 58.9**	**+1.5**
UTK	**UTTARKASHI**	**3.11**	**134**	*eP*		**Pb**	**07 41 30.7**	**-2.7**
UTK				*eS*		**Sn**	**07 42 07.2**	**+4.2**
UTK				IAML			07 42 10.7	
	comp=E,1μm,0.5s							
AYAN	**Aya Nagar**	**4.57**	**166**	*ex*		Pg	07 42 03.6	
SONA	**Sohna**	**4.79**	**167**	*ex*		**Pn**	**07 41 51.3**	**+1.9**
KUDL	**Kundal**	**4.81**	**173**	*eP*		**Pn**	**07 41 53.3**	**+3.6**
KUDL				*eS*		**Sn**	**07 42 47.5**	**+2.9**
KUDL				*eS*		**Sn**	**07 42 48.3**	**+3.6**
KUDL				IAML			07 43 06.6	
	comp=E,250nm,1.7s							
KUDL				IAML			07 43 17.0	
	comp=E,164nm,0.0s							
PTH	**Pithoragarh**	**5.00**	**131**	*eP*		**Pn**	**07 41 56.0**	**+3.5**
LGTI	**Lohaghat**	**5.05**	**133**	*eP*		**Pn**	**07 41 56.9**	**+3.6**
MANEM	**Manem**	**5.73**	**325**	Pn		Pn	07 41 57.0	-5.6
KBL	**Kabul**	**5.90**	**288**	Pn		**Pn**	**07 42 03.9**	**-1.0**
KSH2	**Kashi**	**6.20**	**358**	Pn		Pn	07 42 14.7	+5.7
KSH2				Sn		**Sn**	**07 43 22.1**	**+2.9**
KSH2				smax		smax		
	comp=N,54nm,0.6s							
KSH2				smax		smax		
	comp=E,69nm,0.7s							
AJM	**Ajmer**	**6.58**	**190**	*eP*		**Pn**	**07 42 16.7**	**+2.6**
AJM				*eS*		**Sn**	**07 43 29.1**	**+0.7**
AJM				IAML			07 44 12.6	
	comp=N,145nm,0.3s							
AJM				IAML			07 44 14.4	
	comp=E,230nm,0.0s							
DRK	**Karamyk**	**7.31**	**334**	Pn		**Pn**	**07 42 23.7**	**-0.6**
GAR	**Garm**	**7.54**	**325**	Pn		**Pn**	**07 42 25.3**	**-2.0**
SHAA	**Shahritus**	**7.83**	**308**	Pn		**Pn**	**07 42 30.9**	**-0.4**
CHGR	**Chuyangaron**	**7.89**	**318**	Pn		**Pn**	**07 42 32.4**	**+0.3**
BTK	**Batken**	**8.18**	**332**			**Pn**	**07 42 37.1**	**+1.0**
GUNA	**GUNA**	**8.36**	**171**	*ex*		**Sn**	**07 44 11.1**	**-1.1**
GUNA				IAmb		IAmb	07 44 13.6	
	comp=Z,22nm,0.5s							
NRN	**Naryn**	**8.48**	**1**	Pn		**Pn**	**07 42 42.6**	**+2.2**
UDPR	**Udaipur**	**8.54**	**193**	*ex*		x	07 43 19.9	
UDPR				*eS*		**Sn**	**07 44 15.5**	**-1.1**
WUS	**Wushi**	**8.67**	**17**	Pn		**Pn**	**07 42 44.7**	**+1.8**
ARSB	**Arslanbob**	**8.68**	**345**			**Pn**	**07 42 43.1**	**+0.1**
TARG	**Taragay, Kyrgy**	**8.91**	**9**			**Pn**	**07 42 46.2**	**-0.2**
KDJ	**Kajisay**	**9.24**	**6**			**Pn**	**07 42 49.7**	**-1.0**
BOOM	**Boomskoye usch**	**9.54**	**0**			**Pn**	**07 42 56.6**	**+1.8**
AAK	**Ala-Archa**	**9.74**	**354**	Pn		**Pn**	**07 42 57.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=157,slow=9.5,SNR=6.3							
AAK				LR		LR	07 47 11.0	
	comp=Z,206nm,20.8s,baz=206,slow=41 comp=Z,2.8nm,0.7s							
AAK	**Ala-Archa**	**9.74**	**354**			**Pn**	**07 42 57.6**	**0.0**
BHPL	**Bhopal**	**9.76**	**171**	*ex*		**Sn**	**07 44 41.5**	**-5.1**
BHPL				*ex*		x	07 45 39.1	
EVN	**Everest**	**10.68**	**115**			**Pn**	**07 43 10.3**	**-0.5**
PDGK	**Podgornoye**	**10.76**	**14**	Pn		**Pn**	**07 43 12.8**	**+1.3**
KK31	**Karatay Array**	**10.99**	**339**			**Pn**	**07 43 14.8**	**+0.4**
KKAR	**Karatay Array**	**10.99**	**339**			**Pn**	**07 43 14.8**	**+0.3**
BLSP	**Bilaspur**	**12.16**	**151**	*ex*		x	07 45 33.5	
BLSP				IAmb		IAmb	07 45 35.9	
	comp=Z,10nm,0.6s							
AKL	**Akola**	**12.23**	**175**	*ex*		x	07 45 43.8	
AKL				IAmb		IAmb	07 45 47.3	
	comp=Z,14nm,0.9s							
MAKZ	**Makanchi**	**14.62**	**17**			**Pn**	**07 44 03.6**	**-0.5**
MKAR	**Makanchi Array**	**14.69**	**18**	Pn		**Pn**	**07 44 02.5**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=192,slow=12,SNR=8.7							
MKAR				Sn		Sn	07 46 37.1	-10
	comp=Z,0.2nm,0.3s,baz=193,slow=19,SNR=3.6							
MKAR				LR		LR	07 49 10.4	
	comp=Z,39nm,19.1s,baz=152,slow=35 comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**14.69**	**18**			**Pn**	**07 44 03.9**	**-1.1**
SHL	**Shillong**	**15.79**	**114**	Pn		**Pn**	**07 44 19.9**	**+0.1**
SHL				IAmb		IAmb	07 44 49.0	
	comp=Z,10.0nm,0.3s							
KURBB	**Kurchatov Arra**	**17.78**	**6**	P		**Pn**	**07 44 42.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=193,slow=11,SNR=15							
KURBB				LR		LR	07 51 12.5	
	comp=Z,32nm,20.0s,baz=177,slow=36 comp=Z,2.6nm,0.8s							
KURK	**Kurchatov**	**17.88**	**6**			**Pn**	**07 44 44.2**	**-1.6**
AB31	**Akbulak array**	**20.17**	**329**			**P**	**07 45 12.0**	**+0.6**
ABKAR	**Akbulak array**	**20.17**	**329**	P		**P**	**07 45 11.9**	**+0.5**
BVAR	**Borovoye Array**	**20.46**	**351**	P		Pn	07 45 15.4	-1.3
	comp=Z,7.8nm,0.7s,baz=160,slow=9.5,SNR=31 comp=Z,7.8nm,0.7s							
BORK	**Borovoye**	**20.49**	**350**			**P**	**07 45 15.6**	**+0.7**
AKTO	**Aktyubinsk**	**21.89**	**328**	P		**P**	**07 45 30.2**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=117,slow=11,SNR=7.0 comp=Z,2.8nm,0.6s							
ZAA0	**Zalesovo Array**	**21.95**	**14**	P		**P**	**07 45 29.9**	**-0.7**
ZALV	**Zalesovo Beam**	**21.95**	**14**	P		**P**	**07 45 29.9**	**-0.6**
	comp=Z,3.4nm,0.6s,baz=208,slow=9.0,SNR=12							
ZALV				LR		LR	07 55 48.3	
	comp=Z,24nm,22.0s,baz=250,slow=42 comp=Z,3.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**25.23**	**119**	P		**P**	**07 46 04.2**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=311,slow=9.6,SNR=9.5 comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**25.23**	**119**	P		**P**	**07 46 03.1**	**+0.1**
GNI	**Garni**	**25.93**	**295**	P		**P**	**07 46 10.1**	**+0.8**
GNI				IAmb		IAmb	07 46 26.9	
	comp=Z,24nm,1.2s							
ARTI	**Arti**	**26.39**	**338**	LR		LR	07 57 31.7	
	comp=Z,52nm,19.9s,baz=345,slow=38							
SONM	**Songino Array**	**27.39**	**48**	P		**P**	**07 46 23.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=244,slow=8.1,SNR=3.9							
SONM				LR		LR	07 58 13.1	
	comp=Z,90nm,18.0s,baz=274,slow=39 comp=Z,0.6nm,0.5s							
TLY	**Talaya**	**27.54**	**39**	LR		LR	07 58 38.9	
	comp=Z,128nm,18.4s,baz=228,slow=39							
ENH	**Enshi**	**28.70**	**86**	P		**P**	**07 46 32.5**	**-1.6**
ENH				IAmb		IAmb	07 46 32.6	
	comp=Z,14nm,1.2s							
BRTR	**Keskin Array B**	**34.44**	**294**	P		**P**	**07 47 26.1**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=111,slow=7.0,SNR=5.3 comp=Z,0.3nm,0.4s							
BRTR	**Keskin Array B**	**34.44**	**294**	P		**P**	**07 47 24.4**	**-0.2**
AKASG	**Malin Array Be**	**38.30**	**312**	P		**P**	**07 47 56.7**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=105,slow=9.3,SNR=1.4 comp=Z,0.3nm,0.4s							
KSRS	**Korea Array**	**42.34**	**69**	LR		LR	08 08 07.8	
	comp=Z,50nm,18.1s,baz=235,slow=39							
FINES	**FINESS Array B**	**42.65**	**327**	P		**P**	**07 48 33.7**	**+0.6**
	comp=Z,2.9nm,1.0s,baz=123,slow=14,SNR=4.1 comp=Z,2.9nm,1.0s							
FINES	**FINESS Array B**	**42.65**	**327**	P		**P**	**07 48 33.2**	**+0.1**
YAK	**Yakutsk**	**44.66**	**33**	LR		LR	08 09 17.8	
	comp=Z,69nm,21.1s,baz=238,slow=39							
ARCES	**ARCESS Array B**	**45.95**	**338**	P		**P**	**07 49 00.4**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=111,slow=9.2,SNR=3.6 comp=Z,1.1nm,0.6s							
ARCES	**ARCESS Array B**	**45.95**	**338**	P		**P**	**07 49 00.3**	**+0.9**
HFS	**Hagfors**	**48.32**	**324**	P		**P**	**07 49 18.3**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=31,slow=3.5,SNR=4.7 comp=Z,1.8nm,0.7s							
NC405	**NORSAR Array S**	**49.37**	**325**	P		**P**	**07 49 25.9**	**-0.3**
NC405				IAmb		IAmb	07 49 37.3	
	comp=Z,11nm,1.2s							
NB201	**NORSAR Array S**	**49.57**	**325**	P		**P**	**07 49 28.0**	**+0.4**
NB201				IAmb		IAmb	07 49 56.8	
	comp=Z,8.3nm,1.4s							
NB2	**NORSAR Subarra**	**49.61**	**325**	P		**P**	**07 49 28.2**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**49.61**	**325**	P		**P**	**07 49 28.6**	**+0.7**
	comp=Z,1.1nm,1.1s,baz=96,slow=8.1,SNR=5.0 comp=Z,1.1nm,1.1s							
INU	**Inuyama**	**49.96**	**69**	P		**P**	**07 49 29.9**	**-1.1**
MJAR	**Matsushiro Arr**	**50.57**	**67**	LR		LR	08 14 41.9	
	comp=Z,48nm,18.4s,baz=208,slow=40							
PETK	**Petropavlovsk-**	**59.76**	**44**	LR		LR	08 18 39.5	
	comp=Z,36nm,20.3s,baz=232,slow=38							
ESDC	**Sonseca Array**	**62.69**	**301**	P		**P**	**07 51 01.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=58,slow=7.5,SNR=6.0 comp=Z,0.2nm,0.3s							
ESDC	**Sonseca Array**	**62.69**	**301**	P		**P**	**07 51 01.7**	**-0.1**
SUMG	**Summit**	**65.69**	**342**	P		**P**	**07 51 20.7**	**-0.6**
SUMG				IAmb		IAmb	07 51 37.3	
	comp=Z,9.3nm,1.4s							
TORD	**Torodi Ar. Bea**	**69.77**	**273**	P		**P**	**07 51 47.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=59,slow=4.8,SNR=3.8 comp=Z,0.4nm,0.5s							
TSUM	**Tsumeb**	**76.06**	**236**	LR		LR	08 26 32.8	
	comp=Z,58nm,19.4s,baz=154,slow=36							
WB0	**Warramunga Arr**	**76.61**	**124**	P		**P**	**07 52 28.0**	**+0.3**
WB0				IAmb		IAmb	07 52 38.8	
	comp=Z,5.6nm,1.2s							
WRA	**Warramunga Arr**	**76.69**	**125**	P		**P**	**07 52 27.7**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=323,slow=5.9,SNR=7.8 comp=Z,0.4nm,0.6s							
WRA	**Warramunga Arr**	**76.69**	**125**	P		**P**	**07 52 27.8**	**-0.4**
BWN	**Browne**	**76.85**	**19**	P		**P**	**07 52 28.2**	**-0.3**
ILAR	**Eielson Array**	**77.04**	**17**	P		**P**	**07 52 29.8**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=292,slow=4.9,SNR=4.5 comp=Z,0.3nm,0.5s							
ILAR	**Eielson Array**	**77.04**	**17**	P		**P**	**07 52 29.2**	**-0.2**
PPLA	**Purkeypile**	**77.08**	**20**	P		**P**	**07 52 29.9**	**0.0**
PPLA				IAmb		IAmb	07 52 30.2	
	comp=Z,11nm,1.4s							
O15K	**Ungalikthiuk R**	**77.31**	**26**	P		**P**	**07 52 30.2**	**-0.8**
J25K	**Salcha River,**	**77.55**	**17**	P		**P**	**07 52 32.0**	**-0.4**
J25K				IAmb		IAmb	07 52 39.2	
	comp=Z,3.4nm,1.3s							
O16K	**Kokwok River B**	**77.63**	**25**	P		**P**	**07 52 32.3**	**-0.6**
SKT	**Skwentna**	**77.99**	**21**	P		**P**	**07 52 35.2**	**+0.4**
SKT				IAmb		IAmb	07 52 57.8	
	comp=Z,7.7nm,1.5s							
ASAR	**Alice Springs**	**78.92**	**128**	P		**P**	**07 52 40.4**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=328,slow=5.9,SNR=4.9 comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**78.92**	**128**	P		**P**	**07 52 39.7**	**-0.8**

JMA 02 07:45:21.8±0.2,38.°4N±0.°8×14.°5E±°,h54km,MV3.6/26, FAR E OFF NORTH HONSHU,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.36**	**287**	P		Pn	07 45 59.2	+1.1
MIYJ	**Miyakonagasawa**	**2.43**	**299**	P		Pn	07 45 59.9	+0.9
MIYJ				*eS*		Sn	07 46 28.4	+0.8
JIKH	**Ishinomakikobu**	**2.44**	**268**	*eP*		Pn	07 46 00.2	+1.0
JIKH				*eS*		Sn	07 46 28.9	+1.0
JKMT	**Kesennumamotoy**	**2.46**	**280**	*eP*		Pn	07 46 00.7	+1.3
JMK	**Ichinoseki**	**2.67**	**282**	*eP*		Pn	07 46 03.9	+1.5
JMK				*eS*		Sn	07 46 35.2	+1.7
JOM	**Ohasama**	**2.76**	**293**	P		Pn	07 46 05.0	+1.4
JOM				*eS*		Sn	07 46 37.7	+2.0
JOT	**Ohata**	**4.01**	**319**	*eP*		Pn	07 46 22.9	+2.3
JCH	**Churui**	**4.29**	**348**	*eP*		Pn	07 46 24.0	-0.4
JCH				*eS*		Sn	07 47 10.5	-2.6
NEM2	**Nemuro 2**	**5.01**	**10**	*eP*		Pn	07 46 31.9	-2.5
NEM2				S		Sn	07 47 25.1	-5.9
JRY	**Ryogami san**	**5.12**	**244**	*eP*		Pn	07 46 37.3	+1.4
JRY				*eS*		Sn	07 47 32.6	-1.2
JTKR	**Abashiri--Toko**	**5.56**	**355**	*eP*		Pn	07 46 41.7	-0.2
JTKR				*eS*		Sn	07 47 40.5	-4.0

*IDC **02** 07:54:15.5±8.9,35.°00N×73.°35E,h0km,mb3.6/2, mbtmp3.4/4,ML2.8/2,MS3.1/1,Error ellipse: s-maj=264.1km s-min=31.9km az=132.0*
ISC 02 07:54:31.1±1.8,37.°4N±0.°1×70.°5E±0.°2,h10km,n6,σ1≗81/7, 3C,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.67**	**0**	⇑Pn		**Pb**	**07 56 10.9**	**+0.7**
	0.6nm,0.3s,baz=164,slow=11,SNR=9.1							
KK31				Sn		**Sb**	**07 57 16.9**	**-1.3**
	1.5nm,0.2s,baz=173,slow=19,SNR=13							
AAK	**Ala-Archa**	**6.04**	**29**	⇑Pn		Pb	07 56 08.8	-7.7
	0.7nm,0.4s							
AAK				⇑Sn		**Sn**	**07 57 12.5**	**+2.6**
	1.1nm,0.4s							
MKAR	**Makanchi Array**	**12.80**	**39**	Pn		**Pn**	**07 57 32.5**	**-0.6**
	baz=206,slow=9.6,SNR=1.5 0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**14.39**	**21**	Pn		**P**	**07 58 00.2**	**-1.5**
	baz=200,slow=9.4,SNR=4.2							
KURBB				LR		LR	08 04 46.1	
	comp=Z,71nm,19.9s,baz=167,slow=39 0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**19.25**	**26**	P		**P**	**07 58 54.5**	**-1.0**
	1.4nm,0.3s,baz=200,slow=9.7,SNR=6.1 1.4nm,0.3s							
TORD	**Torodi Ar. Bea**	**65.35**	**268**	P		**P**	**08 05 14.6**	**+0.8**
	0.4nm,0.8s,baz=60,slow=6.0,SNR=2.4 0.4nm,0.8s							

*ASRS **02** 08:03:41.0±2.0,53.°72N×91.°06E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 02 08:03:48.6±3.7,53.°57N×90.°79E,h0km,mbtmp3.0/3, ML2.8/3,Error ellipse: s-maj=33.4km s-min=26.2km az=29.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.56**	**279**			I	08 25 20.0	
	0.1nm,1.0s,baz=90,slow=312,SNR=7.2							
ZALV	**Zalesovo Beam**	**3.56**	**279**	Pn		Pn	08 04 46.3	+1.2
	1.0nm,0.3s,baz=91,slow=15,SNR=6.0							
ZALV				Lg		Lg	08 05 40.9	
	1.1nm,0.3s,baz=96,slow=26,SNR=6.1 0.9nm,0.3s							
KURBB	**Kurchatov Arra**	**8.10**	**254**	Pn		Pn	08 05 47.1	-0.3
	0.1nm,0.3s,baz=63,slow=15,SNR=4.0							
KURBB				Sn		Sn	08 07 17.9	-1.7
	0.1nm,0.3s,baz=68,slow=27,SNR=8.2							
KURBB				Lg		Lg	08 08 06.8	
	baz=67,slow=28,SNR=4.9 0.6nm,0.3s							
MKAR	**Makanchi Array**	**8.69**	**222**	Pn		Pn	08 05 56.1	+0.6
	0.4nm,0.3s,baz=32,slow=12,SNR=3.0							
MKAR				Lg		Lg	08 08 25.4	
	0.1nm,0.3s,baz=40,slow=25,SNR=3.8 0.3nm,0.4s							
SONM	**Songino Array**	**11.43**	**114**	Lg		Lg	08 09 42.5	
	0.3nm,0.3s,baz=322,slow=34,SNR=2.6							

*IDC **02** 08:21:41.2±12.0,22.°76S×179.°29W,h459km±101km, mb3.4/4,mbtmp4.3/5,Error ellipse: s-maj=124.5km s-min=23.4km az=39.0*
*NEIC **02** 08:21:47.5±0.6,23.°2S±0.°1×179.°4W±0.°2,h524km±12km, mb4.2/25,Error ellipse: s-maj=21.1km s-min=17.2km az=63.0*
ISC 02 08:21:47.2±0.7,23.°12S±0.°09×179.°36W±0.°10,h526km, n36,σ0≗75/37,mb4.0/16,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.88**	**335**	P		**P**	**08 23 24.1**	**+0.3**
RAO	**Raoul Island**	**6.25**	**168**	P		**P**	**08 23 26.7**	**-0.2**
RAO				S		**S**	**08 24 47.5**	**-1.1**
NIUE	**Niue**	**9.68**	**67**	P		**P**	**08 24 00.9**	**-0.7**
MARNC	**Mare, Loyalty**	**11.79**	**276**	P		**P**	**08 24 24.2**	**+0.7**
TOZ	**Tahuroa Road**	**15.22**	**196**	P		**P**	**08 24 58.7**	**-0.5**
URZ	**Urewera**	**15.39**	**191**	P		**P**	**08 25 00.1**	**-0

comp=Z,3.3nm,0.6s
WRA Warramunga Arr 43.05 265 P P 08 29 00.1 -0.7
FORT Forrest 47.13 249 P P 08 29 31.0 -1.0
FORT IAmb IAmb 08 29 35.6
comp=Z,6.3nm,0.8s
MTN Manton Dam 47.99 273 P P 08 29 38.3 -0.2
MTN IAmb IAmb 08 30 00.1
comp=Z,7.0nm,1.1s
KNRA Kununurra 49.28 269 P P 08 29 48.5 +0.4
KNRA IAmb IAmb 08 30 29.0
comp=Z,12nm,1.4s
FITZ Fitzroy Crossi 51.48 265 P P 08 30 03.5 -0.7
VNDA Vanda 55.21 185 P P 08 30 31.1 +1.4
MBWA Marble Bar 56.09 259 P P 08 30 36.4 -0.4
MBWA IAmb IAmb 08 31 06.9
comp=Z,32nm,1.4s
NWAO Narrogin (SRO) 56.09 245 P P 08 30 36.5 -0.2
NWAO IAmb IAmb 08 30 48.1
comp=Z,34nm,1.3s
MORW Morawa 57.70 249 P P 08 30 47.1 -0.6
MORW IAmb IAmb 08 31 28.0
comp=Z,22nm,1.4s
CASY Casey 61.07 206 P P 08 31 09.2 -0.3
CASY IAmb IAmb 08 31 22.3
comp=Z,5.0nm,1.1s
QSPA South Pole Qui 66.96 180 P P 08 31 49.1 +1.9
comp=Z,1.8nm,0.7s,baz=350,slow=0.7,SNR=15
comp=Z,1.8nm,0.7s
QSPA South Pole Qui 66.96 180 P P 08 31 49.1 +1.9
QSPA IAmb IAmb 08 31 49.9
comp=Z,5.2nm,1.1s
JMZ Minamidaito 2 68.24 313 P P 08 31 55.6 +0.2
UGM Wanagama 68.68 270 P P 08 31 58.3 -0.2
TWG Pinlang 73.75 304 P P 08 32 28.2 +0.2
BELA Belgrano 2 77.14 173 P P 08 32 46.5 +0.6
HFS Hagfors 141.89 349 PKP PKPdf 08 40 17.5 -1.1
comp=Z,0.7nm,0.3s,baz=58,slow=6.0,SNR=5.8

*IDC **02** 08:32:07.3±2.0, 32.°98N×75.°85E, h0km, mb3.6/5, mbtmp3.6/7, ML2.7/1, MS3.3/4, Error ellipse: s-maj=70.5km s-min=21.7km az=63.0*
*NDI **02** 08:32:10.2±0.9, 33.°00N×75.°90E, h12km±2km, ML3.2, MW3.3, Presumed earthquake*
ISC 02 08:32:10.2±1.1, 33.°02N±0.°04×75.°87E±0.°05, h17km±8km, n20, σ0§64/22, mb3.5/4, MS3.6/3, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**0.30**	**128**	*e*Pg	**Pg**	**08 32 16.9**	**+0.2**
TSSA				*i* Sg	**Sg**	**08 32 20.6**	**-0.6**
TSSA				IAML		08 32 21.9	
	comp=E,7μm,0.2s						
TSSA				IAML		08 32 30.6	
	comp=E,6μm,0.2s						
THN	**Thein Dam**	**0.59**	**189**	*e*P	**Pg**	**08 32 21.8**	**0.0**
THN				*e*S	**Sg**	**08 32 29.2**	**-0.4**
THN				IAML		08 32 37.4	
	comp=E,1μm,0.5s						
THN				IAML		08 32 38.4	
	comp=E,2μm,0.7s						
DHRM	**DHARAMSHALA**	**0.85**	**155**	*e*P	**Pb**	**08 32 26.0**	**-0.7**
DHRM				*e*S	**Sb**	**08 32 38.4**	**+0.5**
DHRM				IAML		08 32 42.2	
	comp=E,456nm,0.3s						
DHRM				IAML		08 32 42.3	
	comp=N,668nm,0.2s						
JMU	**Jammu**	**0.91**	**255**	*e*Pg	**Pg**	**08 32 28.2**	**+0.5**
JMU				*i* Sg	**Sn**	**08 32 41.1**	**+0.2**
JMU				IAML		08 32 51.5	
	comp=E,618nm,0.6s						
JMU				IAML		08 32 52.9	
	comp=N,402nm,0.7s						
TLWR	**Talawar**	**1.06**	**176**	*e*P	**Pb**	**08 32 29.7**	**-0.5**
TLWR				*e*S	**Sn**	**08 32 45.1**	**+0.3**
TLWR				IAML		08 32 50.9	
	comp=E,174nm,0.3s						
ALCI	**Alchi Leh**	**1.62**	**42**	*ex*	**Pg**	**08 32 41.9**	**+0.5**
ALCI				IAML		08 33 07.7	
	comp=E,347nm,0.5s						
ALCI				IAML		08 33 09.2	
	comp=N,244nm,0.5s						
BHK	**Bhakra**	**1.68**	**165**	*e*P	**Pb**	**08 32 42.1**	**+1.4**
BHK				*i* S	**Sg**	**08 33 04.7**	**+0.5**
HNLY	**HANLEY**	**2.62**	**94**	*ex*	**Pb**	**08 32 57.3**	**+0.3**
HNLY				*ex*	Sg	08 33 32.5	-2.0
HNLY				IAML		08 33 38.5	
	comp=N,82nm,0.4s						
HNLY				IAML		08 33 38.5	
	comp=E,97nm,0.4s						
JOSI	**Joshimath**	**3.99**	**127**	IAML		08 34 19.2	
	comp=N,189nm,0.8s						
JOSI				IAML		08 34 19.5	
	comp=E,143nm,0.2s						
AJM	**Ajmer**	**6.66**	**190**	*ex*	**Sn**	**08 35 03.0**	**0.0**
AJM				*ex*	x	08 35 03.0	
MKAR	**Makanchi Array**	**14.60**	**18**	Pn	**Pn**	**08 35 36.0**	**-0.1**
	comp=E,0.2nm,0.4s,baz=187,slow=10,SNR=2.0						
MKAR				LR	LR	08 41 53.5	
	comp=E,38nm,18.8s,baz=189,slow=40						
KURBB	**Kurchatov Arra**	**17.70**	**6**	P	**Pn**	**08 36 14.2**	**-1.5**
	baz=192,slow=11,SNR=5.6						
	comp=E,0.7nm,0.6s						
BVAR	**Borovoye Array**	**20.38**	**350**	P	**P**	**08 36 46.0**	**+0.1**
	comp=E,2.2nm,0.7s,baz=151,slow=13,SNR=5.8						
	comp=E,2.2nm,0.7s						
AKTO	**Aktyubinsk**	**21.82**	**328**	P	**P**	**08 37 01.5**	**0.0**
	comp=E,0.7nm,0.5s,baz=58,slow=6.8,SNR=1.6						
	comp=E,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**25.27**	**119**	P	**P**	**08 37 36.0**	**+0.4**
	comp=E,0.9nm,0.3s,baz=317,slow=9.8,SNR=4.1						
	comp=E,0.9nm,0.3s						
KSRS	**Korea Array**	**42.31**	**69**	LR	LR	08 57 40.3	
	comp=E,27nm,18.0s,baz=145,slow=36						
MA2	**Magadan**	**54.67**	**37**	LR	LR	09 07 00.9	
	comp=E,50nm,18.1s,baz=1.5,slow=38						
PETK	**Petropavlovsk-**	**59.59**	**44**	LR	LR	09 11 29.8	
	comp=E,45nm,18.8s,baz=357,slow=40						
WRA	**Warramunga Arr**	**76.74**	**125**	P	**P**	**08 44 00.3**	**-0.6**
	comp=E,0.6nm,1.0s,baz=314,slow=5.9,SNR=6.2						
	comp=E,0.6nm,1.0s						
ASAR	**Alice Springs**	**78.97**	**128**	P	**P**	**08 44 12.9**	**-0.3**
	comp=E,0.3nm,0.7s,baz=321,slow=5.8,SNR=2.0						
	comp=E,0.3nm,0.7s						

*RSNC **02** 08:38:51.7±0.0, 7.°N±1.°×7.°3W±.°, h143km±1km, M3.2, mb3.7, ML2.9*
*FUNV **02** 08:38:51.9, 7.°17N×73.°16W, h5km, MW3.2, Presumed earthquake*
*IDC **02** 08:38:52.5±6.6, 6.°43N×72.°94W, h176km±54km, mbtmp3.9/1, Error ellipse: s-maj=863.2km s-min=87.2km az=133.0*
ISC 02 08:38:49.5±1.1, 6.°88N±0.°03×73.°11W±0.°05, h154km±7km, n38, σ1§44/71, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.29**	**194**	P	**Pn**	**08 39 11.2**	**+0.4**
BARC				S	**Sn**	**08 39 26.2**	**-0.8**
PAMC	**Pamplona, Colo**	**0.62**	**42**	P	**Pn**	**08 39 13.8**	**+1.3**
PAMC				S	**Sn**	**08 39 30.7**	**+0.7**
BRJC	**Barrancabermej**	**0.64**	**279**	P	**Pn**	**08 39 12.8**	**+0.8**
BRJC				S	**Sn**	**08 39 29.3**	**+0.2**
RUSC	**La Rusia**	**0.98**	**178**	P	**Pn**	**08 39 15.1**	**+0.1**
RUSC				S	**Sn**	**08 39 33.8**	**-0.7**
RUSC	**La Rusia**	**0.98**	**178**	*e*P	**Pn**	**08 39 15.2**	**+0.1**
RUSC				*e*S	**Sn**	**08 39 32.7**	**-1.8**
OCAC	**Ocana**	**1.37**	**351**	P	**Pn**	**08 39 19.0**	**+0.8**
OCAC				S	**Sn**	**08 39 40.6**	**+0.4**
PTBC	**PUERTO BERRIO,**	**1.38**	**256**	P	**Pn**	**08 39 17.7**	**-0.4**
PTBC				S	**Sn**	**08 39 39.5**	**-0.5**
SPBC	**San Pablo de B**	**1.55**	**218**	P	**Pn**	**08 39 20.1**	**+0.2**
SPBC				S	**Sn**	**08 39 42.4**	**-0.9**
CHIC	**Chingaza**	**2.32**	**195**	P	**Pn**	**08 39 29.9**	**+0.9**
CHIC				S	**Sn**	**08 39 59.1**	**-0.3**
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**08 39 30.8**	**+1.4**
	61nm,0.3s,baz=263,slow=21,SNR=78						
ROSC				S	**Sn**	**08 40 00.5**	**+0.4**
	45nm,0.5s,baz=149,slow=24,SNR=7.7						
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**08 39 30.8**	**+1.4**
ROSC				S	**Sn**	**08 40 02.1**	**+1.9**
CVER	**Cruz Verde, Cu**	**2.53**	**202**	P	**Pn**	**08 39 32.9**	**+1.3**
CVER				S	**Sn**	**08 40 05.2**	**+1.1**
MEDEC	**Medeln, Ant**	**2.53**	**257**	P	**Pn**	**08 39 33.5**	**+2.1**
MEDEC				S	**Sn**	**08 40 04.8**	**+1.1**
UREC	**San Jos de Ur**	**2.55**	**290**	P	**Pn**	**08 39 30.6**	**-0.9**
UREC				S	**Sn**	**08 40 03.2**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.78**	**234**	P	**Pn**	**08 39 35.8**	**+1.1**
GUY2C				S	**Sn**	**08 40 10.7**	**+1.2**
VILC	**Villavicencio,**	**2.81**	**192**	P	**Pn**	**08 39 34.9**	**+0.2**
VILC				S	**Sn**	**08 40 09.1**	**-0.6**
NIZA	**Niza - Manizal**	**2.96**	**233**	P	**Pn**	**08 39 38.5**	**+1.7**
NIZA				S	**Sn**	**08 40 13.5**	**+0.1**
CMAN1	**Manizales, Cal**	**3.00**	**233**	P	**Pn**	**08 39 40.4**	**+3.2**
CMAN1				S	**Sn**	**08 40 17.0**	**+2.9**
CBOC	**Ciudad Bolivar**	**3.05**	**251**	P	**Pn**	**08 39 38.9**	**+1.1**
CBOC				S	**Sn**	**08 40 15.2**	**0.0**
SDV	**Santo Domingo**	**3.17**	**51**	*e*P	**Pn**	**08 39 40.6**	**+1.3**
SDV				*e*S	**Sn**	**08 40 16.6**	**-1.2**
ARGC	**Ariguani, Magd**	**3.17**	**339**	P	**Pn**	**08 39 41.2**	**+2.1**
ARGC				S	**Sn**	**08 40 19.8**	**+2.1**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**08 39 45.1**	**+0.6**
APAC				S	**Sn**	**08 40 27.9**	**+0.7**
PRAC	**Prado**	**3.60**	**209**	P	**Pn**	**08 39 44.6**	**-0.2**
PRAC				S	**Sn**	**08 40 27.1**	**-0.6**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**08 39 44.8**	**-0.3**
SJCC				S	**Sn**	**08 40 26.1**	**-2.3**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**08 39 45.0**	**-0.1**
SJCC				*e*S	**Sn**	**08 40 24.1**	**-4.3**
PLMC	**San Jos del P**	**3.71**	**238**	P	**Pn**	**08 39 47.0**	**+0.8**
PLMC				S	**Sn**	**08 40 30.3**	**+0.1**
LCBC	**Los crdobas,**	**3.78**	**302**	P	**Pn**	**08 39 47.0**	**0.0**
LCBC				S	**Sn**	**08 40 31.2**	**-0.4**
URMC	**La Uribe, Meta**	**3.82**	**199**	P	**Pn**	**08 39 48.5**	**+0.9**
URMC				S	**Sn**	**08 40 32.1**	**-0.7**
MACC	**Macarena, Meta**	**4.76**	**189**	P	**Pn**	**08 39 58.5**	**-1.3**
MACC				S	**Sn**	**08 40 50.5**	**-4.2**
URIC	**Uribia, Colomb**	**4.92**	**13**	P	**Pn**	**08 40 01.6**	**-0.3**
URIC				S	**Sn**	**08 40 59.8**	**+1.3**
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*P	**Pn**	**08 40 01.4**	**-0.5**
JAMC	**Jamundi, Valle**	**5.08**	**224**	P	**Pn**	**08 40 05.3**	**+1.0**
	7.2nm,0.6s						
GARC	**Garzon, Huila**	**5.23**	**207**	P	**Pn**	**08 40 05.9**	**-0.4**
POPC	**Popayan, Colom**	**5.58**	**220**	P	**Pn**	**08 40 11.4**	**+0.5**
	3.6nm,0.7s						
POPC				S	**Sn**	**08 41 13.9**	**-0.7**
	3.6nm,0.7s						
FLOC	**Florencia**	**5.84**	**206**	P	**Pn**	**08 40 14.2**	**+0.1**
	5.4nm,0.5s						
FLOC				S	**Sn**	**08 41 19.3**	**-1.1**
	5.4nm,0.5s						
AZU	**Azuero**	**7.16**	**278**	P	**Pn**	**08 40 31.2**	**-0.5**
AZU				S	**Sn**	**08 41 47.4**	**-4.6**
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**08 58 20.2**	**-0.4**
	0.3nm,0.5s,baz=125,slow=3.1,SNR=4.7						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**08 58 23.4**	**-0.2**
	0.2nm,0.4s,baz=111,slow=2.2,SNR=12						

*IDC **02** 08:40:10.8±3.2, 53.°66N×87.°23E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=31.0km s-min=18.1km az=62.0*
ASRS 02 08:40:08.0±0.6, 53.°62N×87.°09E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**285**	I	I	08 47 20.0	
	baz=101,slow=321,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.39**	**285**	Pg	Pb	08 40 36.2	+1.5
	0.6nm,0.3s,baz=105,slow=17,SNR=9.5						
ZALV				Lg	Lg	08 40 57.6	
	0.8nm,0.3s,baz=99,slow=28,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.06**	**244**	Pn	Pn	08 41 43.8	+4.9
	0.1nm,0.3s,baz=61,slow=14,SNR=5.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**7.49**	**206**	Pn	Pn	08 42 03.6	+5.1
	0.1nm,0.3s,baz=28,slow=14,SNR=2.4						
	0.2nm,0.2s						

IDC 02 08:46:04.6±3.5, 19.°13N×147.°17E, h0km, mb3.5/4, mbtmp3.5/4, MS3.6/2, Error ellipse: s-maj=149.8km s-min=29.0km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**19.00**	**297**	LR	LR	08 56 21.3	
	comp=Z,195nm,21.1s,baz=73,slow=32						
JNU	**Nakatsue**	**20.16**	**317**	LR	LR	08 58 37.9	
	comp=Z,125nm,18.0s,baz=138,slow=37						
WRA	**Warramunga Arr**	**40.82**	**199**	P	P	08 53 47.6	-0.5
	0.2nm,0.4s,baz=20,slow=8.6,SNR=8.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**44.46**	**197**	P	P	08 54 18.0	+0.3
	0.3nm,0.7s,baz=15,slow=6.5,SNR=2.0						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.17**	**314**	P	P	08 56 07.7	+0.3
	0.4nm,0.4s,baz=99,slow=8.0,SNR=4.0						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**87.07**	**336**	P	P	08 58 51.7	-0.3
	0.3nm,0.3s,baz=64,slow=4.4,SNR=4.8						
	0.3nm,0.3s						

*BER **02** 09:07:20.2±2.4, 67.°48N×23.°32E, h0km, Suspected explosion*
HEL 02 09:07:17.2±0.1, 67.°46N×23.°38E, h0km, ML1.5, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLF	**Kolari**	**0.32**	**135**	PG	Pg	09 07 23.0	-0.3
KLF				SG	Sg	09 07 27.7	+0.3
KLF				smax	smax	09 07 28.4	
	comp=Z,13nm,0.2s						
LANU	**Lannavaara**	**0.79**	**319**	*e*P	Pg	09 07 32.4	0.0
LANU	**Lannavaara**	**0.79**	**319**	PB	Pg	09 07 32.4	0.0
LANU				SB	Sb	09 07 44.6	-0.5
HEF	**Hetta**	**0.96**	**6**	*e*P	Pg	09 07 35.5	0.0
HEF				*e*S	Sb	09 07 50.1	+0.2
HEF	**Hetta**	**0.96**	**6**	PG	Pb	09 07 36.3	-0.4
HEF				smax	smax	09 07 46.5	
	comp=Z,6.4nm,0.2s						
HEF				SB	Sb	09 07 50.3	+0.4
ERTU	**Ertsjaerv**	**1.02**	**208**	PG	Pg	09 07 35.4	-1.3
ERTU				SB	Sg	09 07 49.0	-1.0
RNF	**Rovaniemi**	**1.34**	**128**	PG	Pg	09 07 41.6	-1.3
RNF				SG	Sg	09 07 59.5	-0.7
TOF	**Tornio**	**1.44**	**164**	PG	Pn	09 07 43.4	-1.0
TOF				smax	smax	09 08 00.5	
	comp=Z,3.1nm,0.2s						
TOF				SG	Sg	09 08 01.9	-1.4
KTK1	**Kautokeino**	**1.56**	**358**	*e*P	Pn	09 07 46.0	-0.2
KTK1				*e*S	Sg	09 08 07.4	+0.1
KTK1	**Kautokeino**	**1.56**	**358**	PN	Pn	09 07 46.3	+0.2
KTK1				SN	Sg	09 08 07.7	+0.4
SALU	**Saltoluokta**	**1.88**	**270**	*e*P	Pn	09 07 51.0	+0.4
SALU				*e*S	Sb	09 08 16.0	-0.4
RANF	**Ranua**	**1.98**	**135**	PG	Pn	09 07 52.8	+0.9
RANF				SG	Sn	09 08 18.3	+0.8
RAJF	**Raja-Jooseppi**	**2.12**	**59**	PG	Pn	09 07 55.0	+1.1
RAJF				SG	Sb	09 08 24.1	+0.8
ARA0	**ARCESS Array S**	**2.23**	**20**	*e*P	Pn	09 07 56.4	+1.0
ARA0	**ARCESS Array S**	**2.23**	**20**	PG	Pn	09 07 56.4	+1.1
ARA0				SG	Sb	09 08 25.6	-0.8
VRF	**Varrio**	**2.40**	**80**	PG	Pb	09 07 59.8	-1.5
	baz=266						
VRF				smax	smax	09 08 28.2	
	comp=Z,3.6nm,0.2s						
VRF				SG	Sb	09 08 31.1	-0.3
KU2	**Taivalkoski**	**2.62**	**130**	PG	Pb	09 08 03.4	-1.5
KEV	**Kevo**	**2.66**	**28**	*e*P	Pb	09 08 03.6	-2.1
KEV	**Kevo**	**2.66**	**28**	PB	Pn	09 08 02.7	+1.4
KEV				SG	Sb	09 08 38.6	-0.2
MSF	**Maaselka**	**2.74**	**122**	SG	Sb	09 08 41.2	+0.2
KU6	**Riekki**	**2.96**	**116**	PB	Pn	09 08 06.4	+1.0
KU6				smax	smax	09 08 44.3	
	comp=Z,1.0nm,0.2s						
KU6				SG	Sb	09 08 48.0	+0.7
BURU	**Burvik**	**3.00**	**197**	PB	Pn	09 08 06.8	+0.8
	baz=16						
KU1	**Kurvinen**	**3.12**	**125**	PN	Pn	09 08 08.5	+0.9
STEI	**Steigen**	**3.14**	**282**	*e*P	Pn	09 08 08.1	+0.3

IDC 02 09:10:26.1±2.1, 6.°91S×130.°12E, h49km±47km, mb3.6/1, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=72.4km s-min=18.6km az=100.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.11**	**11**	P	Pn	09 11 55.5	+1.5
	1.2nm,0.3s,baz=57,slow=22,SNR=6.6						
SIJI				S	Sn	09 13 02.3	-0.3
	8.2nm,0.2s,baz=281,slow=23,SNR=6.9						
	3.2nm,0.2s						
FITZ	**Fitzroy Crossi**	**11.95**	**201**	P	Pn	09 13 14.1	+0.2
	0.2nm,0.3s,baz=9.3,slow=9.1,SNR=11						
FITZ				S	Sn	09 15 17.5	-8.3
	1.5nm,0.3s,baz=167,slow=14,SNR=7.3						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**13.58**	**163**	P	Pn	09 13 36.2	-0.1
	0.2nm,0.3s,baz=342,slow=15,SNR=12						
WRA				S	Sn	09 15 58.8	-7.0
	0.6nm,0.3s,baz=342,slow=21,SNR=10.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**17.05**	**168**	P	Pn	09 14 21.4	+0.2
	0.2nm,0.3s,baz=344,slow=9.8,SNR=15						
	0.8nm,0.5s						
STKA	**Stephens Creek**	**27.05**	**158**	P	P	09 16 03.8	-0.2
	0.9nm,0.6s,baz=338,slow=9.1,SNR=4.6						
	0.9nm,0.6s						

*IDC **02** 09:15:02.4±1.9, 4.°63N×126.°35E, h0km, mb3.5/4, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=125.4km s-min=27.6km az=75.0*
*MAN **02** 09:15:12.0, 5.°76N×125.°52E, h191km, MS3.3*
ISC 02 09:15:12.6±1.0, 5.°69N±0.°08×125.°8E±0.°3, h200km, n8, σ0§83/12, mb3.5/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.42**	**348**	*e*P	**Pn**	**09 15 39.2**	**-0.3**
DDMP				*e*S	**Sn**	**09 16 00.3**	**0.0**
DAV	**Davao City (W)**	**1.39**	**351**	Pn	**Pn**	**09 15 44.9**	**-0.4**
	25nm,0.3s,baz=333,slow=12,SNR=1.4						
DAV				Sn	**Sn**	**09 16 12.0**	**+1.2**
	60nm,0.3s,baz=248,slow=22,SNR=2.2						
	90nm,0.3s						
CDOP	**Cateel, Davao**	**2.17**	**17**	*i* P	**Pn**	**09 15 53.1**	**+0.2**
CDOP				*i* S	**Sn**	**09 16 24.0**	**-0.4**
BIPH	**Bislig**	**2.54**	**13**	*e*P	**Pn**	**09 15 57.5**	**+0.6**
BIPH				*e*S	**Sn**	**09 16 30.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**23.64**	**180**	P	**P**	**09 20 05.2**	**-0.7**
	0.8nm,0.5s,baz=357,slow=7.7,SNR=2.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**26.82**	**162**	P	**P**	**09 20 33.9**	**-0.7**
	0.2nm,0.5s,baz=342,slow=8.4,SNR=4.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**30.23**	**165**	P	**P**	**09 21 04.5**	**-0.3**
	0.3nm,0.5s,baz=341,slow=7.5,SNR=5.5						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**09 22 31.4**	**+1.1**
	2.4nm,0.9s,baz=353,slow=8.1,SNR=2.0						
	2.4nm,0.9s						

*SJA **02** 09:20:41.7±0.7, 24.°23S×67.°07W, h141km±9km, ML3.8, MW3.6*
*NEIC **02** 09:20:43.0±1.6, 24.°16S±0.°07×67.°2W±0.°1, h170km±8km, mb4.2/7, ML4.0(GUC), Error ellipse: s-maj=13.9km s-min=9.2km az=109.0*
*GUC **02** 09:20:42.7±0.6, 24.°22S×67.°29W, h189km±7km, ML3.9*
*IDC **02** 09:20:43.9±2.8, 24.°00S×67.°04W, h173km±25km, mb3.4/2, mbtmp3.9/6, Error ellipse: s-maj=27.2km s-min=21.9km az=72.0*
ISC 02 09:20:42.3±0.7, 24.°14S±0.°04×67.°21W±0.°04, h165km±7km, n77, σ1§61/102, mb4.1/3, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.80**	**96**	*e*P	**Pn**	**09 21 04.0**	**-3.6**
SALTA				*e*P		09 21 04.2	
AF01	**San Pedro de A**	**1.48**	**323**		**Pn**	**09 21 15.2**	**+2.1**
AF01	**San Pedro de A**	**1.48**	**323**	*e*P	**Pn**	**09 21 11.9**	**-1.2**
AF01				*e*S	Sn	09 21 43.0	+6.2
AF01				IAML		09 21 59.4	
	comp=Z,224nm,1.0s						
AF01	**San Pedro de A**	**1.48**	**323**	*i* P	**Pn**	**09 21 15.5**	**+2.4**
AF01				*i* S	**Sn**	**09 21 40.2**	**+3.4**
AF01				IAML		09 21 43.6	
	comp=N,566nm,0.9s						
SLA	**San Lorenzo**	**1.66**	**111**	*e*P	**Pn**	**09 21 12.0**	**-2.7**
SLA				*e*S	**Sn**	**09 21 43.9**	**+4.1**
SLA	**San Lorenzo**	**1.66**	**111**	*e*P	Pn	09 21 17.5	+2.8
SLA				*e*S	**Sn**	**09 21 43.2**	**+3.4**
HJA	**Humahuaca**	**1.89**	**61**	*e*P	**Pn**	**09 21 14.6**	**-2.8**
HJA				*e*S	**Sn**	**09 21 42.6**	**-2.0**
FSA	**Cafayete**	**2.26**	**151**	*e*P	**Pn**	**09 21 18.0**	**-3.4**
PB06	**IPOC Station P**	**2.60**	**303**		**Pn**	**09 21 26.8**	**+1.4**
PB06	**IPOC Station P**	**2.60**	**303**	*e*P	**Pn**	**09 21 26.9**	**+1.4**
PB06				*e*S	**Sn**	**09 22 00.0**	**+1.1**
PB06				IAML		09 22 04.9	
	comp=Z,215nm,0.1s						
PB06	**IPOC Station P**	**2.60**	**303**	⇑*i* P	**Pn**	**09 21 27.1**	**+1.6**
PB06				*i* S	**Sn**	**09 21 59.1**	**+0.2**
PB14	**IPOC Station P**	**2.96**	**260**		**Pn**	**09 21 30.7**	**+0.7**
PB14	**IPOC Station P**	**2.96**	**260**	*e*P	**Pn**	**09 21 30.9**	**+0.9**
PB14				*e*S	**Sn**	**09 22 06.7**	**-0.2**
PB14				IAML		09 22 08.4	
	comp=Z,168nm,0.3s						
PB14	**IPOC Station P**	**2.96**	**260**	⇑*i* P	**Pn**	**09 21 30.9**	**+0.9**
PB14				*i* S	**Sn**	**09 22 05.9**	**-1.0**
PB14				IAML		09 22 09.2	
	comp=E,149nm,0.2s						
PB09	**IPOC Station P**	**2.99**	**321**		**Pn**	**09 21 31.8**	**+1.5**
PB09	**IPOC Station P**	**2.99**	**321**	*e*P	Pn	09 21 24.0	-6.3
PB09				*e*S	**Sn**	**09 22 08.7**	**+1.2**
PB09				IAML		09 22 09.1	
	comp=Z,157nm,0.6s						
PB09	**IPOC Station P**	**2.99**	**321**	⇑*i* P	**Pn**	**09 21 32.2**	**+1.9**
PB09				*i* S	**Sn**	**09 22 07.9**	**+0.3**
PB09				IAML		09 22 09.7	
	comp=N,160nm,0.4s						
PB05	**IPOC Station P**	**3.03**	**294**		**Pn**	**09 21 31.3**	**+0.6**
PB05	**IPOC Station P**	**3.03**	**294**	*e*P	**Pn**	**09 21 31.7**	**+1.0**
PB05				*e*S	**Sn**	**09 22 08.

AC01				IAML		09 22 23.9	
	comp=Z,105nm,0.6s						
AC01	**Pan de Azucar**	**3.67**	**236**	*e*P	**Pn**	**09 21 38.8**	**+0.1**
AC01				*i* S	**Sn**	**09 22 21.1**	**-1.5**
PB02	**IPOC Station P**	**3.75**	**318**		**Pn**	**09 21 39.9**	**+0.1**
PB02	**IPOC Station P**	**3.75**	**318**	*e*P	Pn	09 21 29.1	-11
PB02				*e*S	**Sn**	**09 22 26.1**	**+1.5**
PB02				IAML		09 22 31.2	
	comp=Z,345nm,0.3s						
PB02	**IPOC Station P**	**3.75**	**318**	*i* P	**Pn**	**09 21 40.0**	**+0.2**
PB02				*e*S	**Sn**	**09 22 21.9**	**-2.6**
TINO	**Tinogasta**	**3.92**	**185**	*e*P	**Pn**	**09 21 44.9**	**+2.9**
PB08	**IPOC Station P**	**4.37**	**335**		**Pn**	**09 21 49.1**	**+1.0**
PB08	**IPOC Station P**	**4.37**	**335**	*e*P	**Pn**	**09 21 49.3**	**+1.2**
PB08				*e*S	**Sn**	**09 22 39.7**	**+0.3**
PB08				IAML		09 22 40.6	
	comp=Z,32nm,0.5s						
GO03	**Copiapo**	**4.39**	**218**		**Pn**	**09 21 47.9**	**-0.1**
GO03	**Copiapo**	**4.39**	**218**	*e*P	**Pn**	**09 21 48.2**	**+0.2**
GO03				*e*S	**Sn**	**09 22 38.4**	**-1.0**
GO03				IAML		09 22 40.6	
	comp=Z,174nm,0.4s						
GO03	**Copiapo**	**4.39**	**218**	*e*P	**Pn**	**09 21 47.9**	**-0.1**
GO03				*i* S	**Sn**	**09 22 37.2**	**-2.2**
GO01	**Chusmiza**	**4.81**	**337**		**Pn**	**09 21 55.0**	**+1.0**
GO01	**Chusmiza**	**4.81**	**337**	*e*P	**Pn**	**09 21 55.1**	**+1.1**
GO01				*e*S	**Sn**	**09 22 50.1**	**+0.1**
GO01				IAML		09 23 01.5	
	comp=Z,25nm,0.3s						
PB11	**IPOC Station P**	**4.91**	**332**		**Pn**	**09 21 54.5**	**-0.5**
PB11	**IPOC Station P**	**4.91**	**332**	*e*P	**Pn**	**09 21 54.7**	**-0.3**
PB11				*e*S	**Sn**	**09 22 47.9**	**-3.9**
PB11				IAML		09 22 49.8	
	comp=Z,66nm,0.4s						
AC04	**Llanos de Chal**	**5.34**	**220**	Pn	**Pn**	**09 21 59.5**	**-0.9**
AC04	**Llanos de Chal**	**5.34**	**220**	*e*P	**Pn**	**09 21 59.2**	**-1.1**
AC04				*e*S	Sn	09 22 48.8	-13
AC04				IAML		09 23 01.6	
	comp=Z,48nm,0.3s						
AC05	**El Transito**	**5.43**	**210**		**Pn**	**09 22 01.3**	**-0.3**
AC05	**El Transito**	**5.43**	**210**	*e*P	**Pn**	**09 22 01.4**	**-0.2**
AC05				*e*S	**Sn**	**09 23 02.0**	**-1.8**
AC05				IAML		09 23 05.9	
	comp=Z,45nm,0.5s						
PB16	**IPOC Station P**	**6.16**	**339**		**Pn**	**09 22 11.6**	**-0.2**
PB12	**IPOC Station P**	**6.22**	**332**	Pn	**Pn**	**09 22 11.0**	**-1.2**
CO03	**El Pedregal**	**7.36**	**204**	Pn	**Pn**	**09 22 27.1**	**0.0**
LPAZ	**La Paz**	**7.86**	**353**	P	**Pn**	**09 22 35.5**	**+1.1**
	comp=Z,4.2nm,0.3s,baz=160,slow=6.3,SNR=76						
LPAZ				S	**Sn**	**09 24 01.1**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=7.8,slow=16,SNR=1.5						
LPAZ	**La Paz**	**7.86**	**353**		**Pn**	**09 22 35.2**	**+0.9**
CPUP	**Villa Florida**	**9.21**	**106**	P	**Pn**	**09 22 51.4**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=262,slow=14,SNR=1.6						
SIV	**San Ignacio**	**9.94**	**37**	P	**Pn**	**09 22 59.4**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=222,slow=12,SNR=8.6						
TRCB	**Terra Rica**	**13.44**	**87**	P	**P**	**09 23 50.7**	**+0.4**
CPSB	**Cacapava Do Su**	**13.74**	**120**	P	**P**	**09 23 53.9**	**+0.5**
ITAB	**Concordia**	**13.94**	**106**	P	**P**	**09 23 55.3**	**-0.4**
TRQA	**Tornquist**	**14.57**	**163**	P	**P**	**09 24 03.3**	**+0.6**
GO06	**Curarrehue**	**15.82**	**192**	P	**Pn**	**09 24 15.6**	**-0.5**
SPB	**Sao Paulo**	**18.10**	**92**	P	**Pn**	**09 24 43.4**	**0.0**
VAO	**Valinhos**	**18.59**	**91**	P	**P**	**09 24 47.0**	**-0.1**
VAO				IAmb	IAmb	09 24 48.4	
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	**19.91**	**68**	P	**P**	**09 25 00.8**	**-0.7**
	comp=Z,9.1nm,0.7s,baz=238,slow=12,SNR=13						
BDFB	**Brasilia**	**19.91**	**68**	P	**P**	**09 25 00.8**	**-0.7**
BDFB				IAmb	IAmb	09 25 02.1	
	comp=Z,9.3nm,0.7s						
BOAV	**Boa Vista**	**27.16**	**15**	P	**P**	**09 26 10.7**	**+0.3**
BOAV				IAmb	IAmb	09 26 14.6	
	comp=Z,5.9nm,1.2s						
QSPA	**South Pole Qui**	**66.07**	**180**	P	**P**	**09 31 13.2**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=178,slow=1.6,SNR=11						
	comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**66.07**	**180**	P	**P**	**09 31 13.2**	**+1.9**
QSPA				IAmb	IAmb	09 31 20.2	
	comp=Z,3.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.79**	**69**	P	**P**	**09 32 15.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=238,slow=5.7,SNR=5.5						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.79**	**69**	P	**P**	**09 32 15.6**	**-0.5**
TORD				IAmb	IAmb	09 32 33.0	
	comp=Z,7.1nm,1.5s						
ASAR	**Alice Springs**	**128.25**	**205**	PKP	**PKPdf**	**09 39 29.8**	**0.0**
	comp=Z,0.4nm,0.7s,baz=149,slow=1.4,SNR=7.2						
WRA	**Warramunga Arr**	**131.42**	**207**	PKP	**PKPdf**	**09 39 36.2**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=158,slow=1.7,SNR=8.5						
ZALV	**Zalesovo Beam**	**143.60**	**28**	PKP	PKPab	09 39 55.3	+1.3
	comp=Z,0.9nm,0.6s,baz=283,slow=4.0,SNR=3.8						
MKAR	**Makanchi Array**	**146.75**	**39**	PKPbc	**PKPdf**	**09 40 05.2**	**+2.4**
	comp=Z,0.7nm,0.6s,baz=288,slow=2.7,SNR=6.5						

*IDC **02** 09:23:07.0±2.8, 0°.51N×125°.09E, h47km±30km, mb4.0/12, mbtmp4.2/15, ML3.8/3, MS3.5/4, Error ellipse: s-maj=25.5km s-min=15.0km az=79.0*
*DJA **02** 09:23:07.1±0.5, 1°.1N×12°.5E±°, h11km±4km, M4.8/31, mB5.4/8, mb4.9/17, MLv4.6/31, Mw(mB)4.9/8*
*NEIC **02** 09:23:08.5±1.8, 0°.53N±0°.09×125°.28E±0°.06, h55km±9km, mb4.4/20, Error ellipse: s-maj=12.4km s-min=9.0km az=177.0*

ISC 02 09:23:09.5±0.5, 0°.53N±0°.04×125°.37E±0°.04, h73km, n69, σ1§54/72, mb4.3/21, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.05**	**330**	P	**Pn**	**09 23 26.9**	**-1.9**
MNI				S	**Sn**	**09 23 40.4**	**-2.9**
TNTI	**Ternate**	**2.02**	**83**	P	**Pn**	**09 23 41.5**	**+0.1**
TNTI	**Ternate**	**2.02**	**83**	S	**Sn**	**09 24 07.0**	**+1.2**
TNTI	**Ternate**	**2.02**	**83**		**Pn**	**09 23 40.9**	**-0.6**
TNTI	**Ternate**	**2.02**	**83**	P	**Pn**	**09 23 41.5**	**+0.1**
TNTI				S	**Sn**	**09 24 06.8**	**+1.0**
GTOI	**Gorontalo**	**2.36**	**273**	P	**Pn**	**09 23 47.0**	**+1.0**
GTOI				S	**Sn**	**09 24 19.7**	**+5.7**
SANI	**Sanana**	**2.63**	**166**	P	**Pn**	**09 23 47.6**	**-2.2**
SANI	**Sanana**	**2.63**	**166**	S	**Sn**	**09 24 18.7**	**-2.0**
SANI	**Sanana**	**2.63**	**166**	P	**Pn**	**09 23 47.3**	**-2.5**
LUWI	**Luwuk**	**3.02**	**239**	P	**Pn**	**09 23 54.6**	**-0.5**
LUWI	**Luwuk**	**3.02**	**239**	S	**Sn**	**09 24 28.9**	**-1.4**
LUWI	**Luwuk**	**3.02**	**239**		**Pn**	**09 23 54.6**	**-0.5**
LUWI	**Luwuk**	**3.02**	**239**	P	**Pn**	**09 23 55.5**	**+0.4**
LUWI				S	**Sn**	**09 24 32.7**	**+2.4**
SGSI	**Sangihe**	**3.14**	**3**	P	**Pn**	**09 23 56.1**	**-0.6**
APSI	**Ampana**	**3.98**	**249**	P	**Pn**	**09 24 09.4**	**+1.3**
NLAI	**Namlea**	**4.12**	**155**	P	**Pn**	**09 24 08.6**	**-1.4**
TOLI2	**Tolitoli**	**4.62**	**277**	P	**Pn**	**09 24 15.1**	**-1.8**
TOLI2	**Tolitoli**	**4.62**	**277**	S	**Sn**	**09 25 09.5**	**+0.2**
TOLI2	**Tolitoli**	**4.62**	**277**		**Pn**	**09 24 14.5**	**-2.4**
KDI	**Kendari**	**5.23**	**212**	P	**Pn**	**09 24 24.6**	**-0.6**
	0.5nm11µm59nm,0.7s						
MSAI	**Masohi**	**5.24**	**137**	P	**Pn**	**09 24 26.3**	**+0.9**
	1.2nm6µm191nm,0.8s						
DDMP	**Don Marcelino,**	**5.55**	**4**	*e*P	**Pn**	**09 24 28.3**	**-1.3**
DDMP				*e*S	**Sn**	**09 25 27.6**	**-4.5**
SIJI	**Sorong**	**6.06**	**103**	P	**Pn**	**09 24 37.1**	**+0.6**
	2.0nm,0.3s,baz=284,slow=8.4,SNR=4.3						
	8.4nm,0.5s						
DAV	**Davao City (W)**	**6.50**	**2**	LR	LR	09 27 40.9	
	comp=Z,226nm,19.9s,baz=179,slow=42						
SPSI	**Sidrap Palu**	**7.15**	**231**	P	**Pn**	**09 24 52.4**	**+0.9**
	0.4nm2µm95nm,0.5s						
MMSI	**Mamuju**	**7.20**	**244**	P	**Pn**	**09 24 52.6**	**+0.4**
	0.2nm33nm,0.6s						
BIPH	**Bislig**	**7.67**	**7**	*e*P	**Pn**	**09 24 58.8**	**+0.2**
BIPH				*e*S	**Sn**	**09 26 29.1**	**+5.0**
FAKI	**Fak Fak**	**7.68**	**116**	P	**Pn**	**09 24 57.9**	**-0.9**
FAKI	**Fak Fak**	**7.68**	**116**	S	**Sn**	**09 26 23.7**	**-0.7**
FAKI	**Fak Fak**	**7.68**	**116**	Pn	**Pn**	**09 24 57.9**	**-0.9**
FAKI	**Fak Fak**	**7.68**	**116**	P	**Pn**	**09 24 57.7**	**-1.1**
KAPI	**Kappang**	**7.86**	**225**	P	Pn	09 24 55.9	-5.2
	3.8nm,0.3s,baz=74,slow=3.7,SNR=6.5						
KAPI				LR	LR	09 28 46.2	
	comp=Z,157nm,18.6s,baz=59,slow=44						
	4.1nm,0.4s						
KKM	**Kota Kinabalu**	**10.65**	**301**	Pn	**Pn**	**09 25 37.5**	**-1.9**
BATI	**Baumata**	**10.79**	**189**	LR	LR	09 30 50.4	
	comp=Z,360nm,18.5s,baz=136,slow=43						
KNRA	**Kununurra**	**16.45**	**168**		**Pn**	**09 26 55.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.51**	**179**	P	**Pn**	**09 27 20.9**	**-0.1**
	0.1nm,0.3s,baz=359,slow=9.2,SNR=1.9						
	1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.51**	**179**	P	**Pn**	**09 27 20.9**	**-0.1**
WB0	**Warramunga Arr**	**22.02**	**157**	P	**P**	**09 27 57.4**	**-0.7**
WB0				IAmb	IAmb	09 28 00.7	
	comp=Z,8.0nm,0.8s						
WRAB	**Tennant Creek**	**22.16**	**157**	P	**P**	**09 27 59.5**	**0.0**
WRAB				IAmb	IAmb	09 28 02.0	
	comp=Z,9.3nm,0.9s						
WRA	**Warramunga Arr**	**22.16**	**157**	P	**P**	**09 27 59.0**	**-0.6**
	comp=Z,4.9nm,0.6s,baz=338,slow=11,SNR=55						
	comp=Z,4.9nm,0.6s						
WRA	**Warramunga Arr**	**22.16**	**157**	P	**P**	**09 27 59.0**	**-0.6**
WR8	**Warramunga Arr**	**22.24**	**157**	P	**P**	**09 27 59.8**	**-0.6**
MBWA	**Marble Bar**	**22.24**	**194**	P	**P**	**09 28 00.2**	**-0.2**
MBWA				IAmb	IAmb	09 28 22.8	
	comp=Z,18nm,1.4s						
COEN	**Coen**	**22.76**	**130**	P	**P**	**09 28 06.2**	**+0.2**
COEN				IAmb	IAmb	09 28 24.3	
	comp=Z,35nm,1.4s						
AS31	**Alice Springs**	**25.44**	**162**	P	**P**	**09 28 31.5**	**+0.8**
ASAR	**Alice Springs**	**25.44**	**162**	P	**P**	**09 28 31.9**	**+1.2**
	comp=Z,4.1nm,0.7s,baz=343,slow=9.4,SNR=31						
	comp=Z,4.1nm,0.7s						
JOW	**Kunigami**	**26.30**	**6**	P	**P**	**09 28 38.5**	**+0.1**
INKA	**Innaminka**	**31.75**	**153**	P	**P**	**09 29 28.3**	**+1.5**
INKA				IAmb	IAmb	09 29 30.7	
	comp=Z,5.3nm,1.2s						
BBOO	**Buckleboo**	**34.66**	**164**	P	**P**	**09 29 51.1**	**-0.9**
STKA	**Stephens Creek**	**35.70**	**156**	P	**P**	**09 30 01.6**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=332,slow=9.5,SNR=6.5						
	comp=Z,3.4nm,0.8s						
INU	**Inuyama**	**36.31**	**16**	P	**P**	**09 30 06.5**	**+0.3**
JGF	**Kuroka**	**36.64**	**16**	P	**P**	**09 30 09.0**	**-0.1**
JGF				IAmb	IAmb	09 30 12.4	
	comp=Z,8.0nm,0.9s						
KSRS	**Korea Array**	**36.82**	**3**	P	**P**	**09 30 11.7**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=177,slow=9.8,SNR=10						
	comp=Z,2.2nm,0.7s						
MAJO	**Matsushiro**	**37.76**	**17**	P	**P**	**09 30 18.5**	**0.0**
MJAR	**Matsushiro Arr**	**37.76**	**17**	P	**P**	**09 30 18.6**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=194,slow=8.8,SNR=9.6						
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**37.76**	**17**	P	**P**	**09 30 18.5**	**-0.1**
MJAR				IAmb	IAmb	09 30 31.4	
	comp=Z,5.1nm,1.5s						
ARMA	**Armidale**	**39.64**	**143**	P	**P**	**09 30 35.9**	**+1.4**
ARMA				IAmb	IAmb	09 31 06.7	
	comp=Z,13nm,1.4s						
USRK	**Ussuriysk Ar.**	**43.88**	**7**	P	**P**	**09 31 09.4**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=191,slow=6.9,SNR=6.9						
	comp=Z,2.1nm,0.5s						
PALK	**Pallekele**	**45.03**	**280**	LR	LR	09 53 15.8	
	comp=Z,79nm,18.1s,baz=112,slow=40						
JKA	**Kamikawa-asahi**	**46.03**	**17**	P	**P**	**09 31 26.9**	**+1.0**
JKA				IAmb	IAmb	09 31 28.2	
	comp=Z,7.3nm,1.0s						
HEH	**HeiHe**	**49.57**	**2**	*e*P	**P**	**09 31 53.2**	**+0.1**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PETK	**Petropavlovsk-**	**58.89**	**22**	P	**P**	**09 33 02.5**	**+1.7**
	comp=Z,2.9nm,0.6s,baz=191,slow=3.6,SNR=18						
	comp=Z,2.9nm,0.6s						
MKAR	**Makanchi Array**	**59.44**	**327**	P	**P**	**09 33 04.0**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=122,slow=8.2,SNR=14						
MKAR				PcP	**PcP**	**09 33 52.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=118,slow=4.8,SNR=3.6						
	comp=Z,1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**62.84**	**334**	P	**P**	**09 33 25.6**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=118,slow=5.6,SNR=3.8						
	comp=Z,0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**63.72**	**329**	P	**P**	**09 33 32.5**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=134,slow=6.8,SNR=27						
	comp=Z,1.1nm,0.5s						
KURK	**Kurchatov**	**63.73**	**329**	P	**P**	**09 33 32.3**	**-1.1**
NRIK	**Noril'sk**	**73.21**	**347**	P	**P**	**09 34 32.6**	**+0.4**
	comp=Z,2.4nm,0.4s,baz=140,slow=7.7,SNR=4.5						
	comp=Z,2.4nm,0.4s						
NRIK	**Noril'sk**	**73.21**	**347**	P	**P**	**09 34 32.6**	**+0.4**
NRIK				IAmb	IAmb	09 34 33.1	
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**88.56**	**25**	P	**P**	**09 35 54.3**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=225,slow=4.1,SNR=5.6						
	comp=Z,0.3nm,0.5s						

*AZER **02** 09:28:02.9, 38°.37N×44°.99E, h10km, ml2.8*
*AFAD **02** 09:28:03.3, 38°.39N×45°.11E, h7km±3km, ML2.4*
*TEH **02** 09:28:05.0, 38°.39N×44°.94E, h8km±43km, ML2.8, Presumed earthquake*
*ISK **02** 09:28:07.5, 38°.61N×44°.66E, h5km, ML2.6/5*

ISC 02 09:28:05.0±1.2, 38°.40N±0°.03×44°.96E±0°.02, h1km±10km, n35, σ1§44/55, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.53**	**103**	Pg	**Pb**	**09 28 16.6**	**-0.6**
IMRD	**Marand**	**0.66**	**62**	Pg	**Pg**	**09 28 18.0**	**+0.3**
IMRD				Sg	**Sg**	**09 28 27.7**	**+1.5**
OZAP	**Van, Ozalp-Mer**	**0.80**	**289**	P	**Pg**	**09 28 20.6**	**+0.3**
OZAP				S	**Sn**	**09 28 34.0**	**-2.4**
OZAP				IAML		09 28 38.0	
	comp=N,126nm,0.7s						
OZAP				IAML		09 28 40.0	
	comp=E,139nm,0.5s						
NAX	**Nakhchivan**	**0.88**	**28**	P	**Pg**	**09 28 21.7**	**-0.1**
NAX				S	**Sg**	**09 28 33.8**	**+0.6**
ITBZ	**Tabriz**	**0.95**	**100**	Pg	**Pg**	**09 28 22.0**	**-1.1**
ORD	**Ordubad**	**0.96**	**57**	P	**Pg**	**09 28 23.2**	**-0.3**
ORD				S	**Sg**	**09 28 36.7**	**+0.7**
YOVA	**Hakkari_Yksek**	**0.97**	**213**	P	**Pg**	**09 28 23.6**	**+0.1**
YOVA				IAML		09 28 46.0	
	comp=N,81nm,0.6s						
IAZR	**Azarshahr**	**1.08**	**132**	Pg	**Pg**	**09 28 25.3**	**-0.4**
SBZ	**Shahbuz**	**1.10**	**25**	P	**Pg**	**09 28 25.4**	**-0.6**
SBZ				S	**Sb**	**09 28 41.1**	**-0.6**
CLDR	**Caldiran**	**1.10**	**313**	Pg	**Pg**	**09 28 23.9**	**-2.2**
CLDR	**Caldiran**	**1.10**	**313**	P	**Pg**	**09 28 23.3**	**-2.8**
CLDR				S	**Sg**	**09 28 39.0**	**-1.3**
CLDR				IAML		09 28 45.0	
	comp=N,125nm,0.4s						
TVAN	**Van**	**1.23**	**276**	P	**Pn**	**09 28 29.5**	**0.0**
TVAN				S	**Sn**	**09 28 48.8**	**+2.0**
TVAN				IAML		09 28 54.0	
	comp=N,114nm,0.6s						
TVAN				IAML		09 28 58.0	
	comp=E,91nm,1.0s						
VMUR	**Van-Muradiye**	**1.23**	**299**	P	**Pg**	**09 28 25.5**	**-0.1**
VMUR				S	**Sn**	**09 28 48.9**	**+1.9**
VMUR				IAML		09 28 51.0	
	comp=E,61nm,0.4s						
VMUR				IAML		09 28 53.0	
	comp=N,80nm,0.6s						
HAKT	**HAKKARI**	**1.30**	**230**	P	**Pg**	**09 28 29.6**	**-0.2**
HAKT				IAML		09 28 53.0	
	comp=E,58nm,0.8s						
HAKT				IAML		09 29 01.0	
	comp=N,46nm,0.6s						
HAKT	**HAKKARI**	**1.30**	**230**	P	**Pg**	**09 28 29.8**	**-0.1**
HAKT				S	**Sn**	**09 28 50.8**	**+2.1**
HYR	**Heyderabad**	**1.32**	**356**	P	**Pg**	**09 28 30.4**	**+0.1**
HYR				S	**Sn**	**09 28 50.9**	**+1.9**
GEVA	**Gevas**	**1.50**	**267**	P	**Pn**	**09 28 32.2**	**-1.0**
GEVA				S	**Sg**	**09 28 56.2**	**+3.1**
GEVA				IAML		09 28 58.0	
	comp=N,38nm,0.7s						
GEVA				IAML		09 29 00.0	
	comp=E,58nm,0.6s						
AKDM	**Akdamar-Van**	**1.56**	**268**	Pn	**Pb**	**09 28 34.1**	**-0.6**
AKDM				Sn	**Sg**	**09 28 54.2**	**-0.8**
IGDI	**IGDIR**	**1.62**	**335**	P	**Pb**	**09 28 35.3**	**-0.4**
IGDI				IAML		09 29 06.0	
	comp=N,37nm,0.6s						
IGDI	**IGDIR**	**1.62**	**335**	P	**Pb**	**09 28 35.3**	**-0.4**
IGDI				S	**Sg**	**09 29 01.2**	**+4.2**
IHRS	**Heris**	**1.64**	**92**	Pg	**Pb**	**09 28 35.4**	**-0.7**
TASB	**TASBURUN-IGDIR**	**1.68**	**341**	Pn	**Pn**	**09 28 35.4**	**-0.2**
TASB				Sn	**Sn**	**09 28 55.6**	**-2.2**
GNI	**Garni**	**1.75**	**355**	Pn	**Pb**	**09 28 37.2**	**-0.9**
GNI	**Garni**	**1.75**	**355**	Pg	**Pb**	**09 28 37.8**	**-0.2**
AGRB	**Hanur-Agry**	**1.93**	**308**	Pn	**Pn**	**09 28 38.4**	**-0.8**
KOTA	**Agri, Merkez-K**	**1.95**	**316**	P	**Pb**	**09 28 41.1**	**-0.4**
KOTA				S	**Sg**	**09 29 11.1**	**+3.4**
PERV	**Siirt/Pervari-**	**1.96**	**257**	P	**Pb**	**09 28 41.2**	**-0.3**
PERV				IAML		09 29 20.0	
	comp=E,81nm,0.7s						
PERV				IAML		09 29 25.0	
	comp=N,60nm,0.9s						
DORK	**Agr/Tutak/Do**	**1.96**	**301**	P	**Pn**	**09 28 38.3**	**-1.3**
DORK				IAML		09 29 14.0	
	comp=E,26nm,0.7s						
IHSH	**Hashtrud**	**2.13**	**120**	Pn	**Pb**	**09 28 43.0**	**-1.5**
GRMI	**Germi**	**2.33**	**79**	Pn	**Pb**	**09 28 46.2**	**-1.7**
AGDM	**Agdam**	**2.38**	**44**	P	**Pb**	**09 28 47.1**	**-1.6**
AGDM				S	**Sb**	**09 29 18.8**	**+0.1**
GDB	**GEDABAY**	**2.40**	**15**	P	**Pn**	**09 28 46.4**	**+0.9**
GDB				S	**Sb**	**09 29 19.2**	**0.0**
GANJ	**Ganja**	**2.48**	**25**	P	**Pn**	**09 28 47.7**	**+1.1**
GANJ				S	**Sb**	**09 29 21.4**	**0.0**
YRD	**Yardimli**	**2.62**	**78**	P	**Pn**	**09 28 48.7**	**+0.1**
YRD				S	**Sn**	**09 29 22.4**	**+1.2**
QZX	**Qazax, Azerbai**	**2.67**	**7**	P	**Pb**	**09 28 53.1**	**-0.5**
QZX				S	**Sb**	**09 29 25.6**	**-1.4**

*ISK **02** 09:31:25.8, 35°.52N×31°.56E, h5km, ML2.7/20*
*NIC **02** 09:31:25.0, 35°.58N×31°.42E, h3km±1km, Ml2.5/5*
*AFAD **02** 09:31:30.5, 35°.74N×31°.61E, h7km±7km, ML2.3*

ISC 02 09:31:28.8±1.3, 35°.55N±0°.03×31°.67E±0°.04, h9km±10km, n37, σ1§54/50, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.76**	**134**	P	**Pg**	**09 31 42.9**	**-0.6**
AKMS				S	**Sn**	**09 31 57.4**	**+0.1**
AKMS				AML	AML	09 32 01.1	
	0.6nm,0.5s						
AKMS				AML	AML	09 32 05.5	
	0.4nm,0.9s						
ALFC	**Alefka**	**0.86**	**117**	P	**Pg**	**09 31 45.0**	**-0.3**
ALFC				S	**Sn**	**09 32 01.3**	**+1.6**
ALFC				AML	AML	09 32 02.8	
	0.4nm,0.3s						
ALFC				AML	AML	09 32 03.6	
	0.5nm,0.4s						
GAZI	**Gazipasa**	**0.86**	**37**	Pg	**Pg**	**09 31 45.1**	**-0.3**
GAZI	**Gazipasa**	**0.86**	**37**	P	**Pb**	**09 31 45.6**	**-0.4**
GAZI				S	**Sg**	**09 31 54.9**	**-1.8**
GAZI				IAML		09 32 01.0	
	comp=E,109nm,0.8s						
GAZI	**Gazipasa**	**0.86**	**37**	P	**Pb**	**09 31 45.4**	**-0.5**
GAZI				IAML		09 32 02.0	
	comp=N,134nm,0.5s						
GAZI				IAML		09 32 03.0	
	comp=E,137nm,0.3s						
ALAN	**Alanya-ANTALYA**	**1.05**	**16**	Pn	**Pg**	**09 31 47.5**	**-1.5**
ALAN				Sn	**Sn**	**09 32 04.5**	**+0.1**
NATA	**Nata**	**1.07**	**136**	P	**Pg**	**09 31 49.0**	**-0.4**
NATA				S	**Sn**	**09 32 05.7**	**+0.9**
NATA				AML	AML	09 32 18.5	
	0.7nm,0.7s						
NATA				AML	AML	09 32 19.4	
	0.8nm,0.7s						
TROD	**Troodos**	**1.15**	**121**	P	**Pb**	**09 31 50.4**	**-0.6**
TROD				S	**Sn**	**09 32 10.1**	**+2.9**
TROD				AML	AML	09 32 15.7	
	0.1nm,0.3s						
TROD				AML	AML	09 32 21.4	
	0.1nm,0.6s						
XYLS	**Xyliatos**	**1.25**	**115**	P	**Pn**	**09 31 52.1**	**-0.4**
TEKE	**Tekeli-Mersin**	**1.32**	**63**	Pn	**Pn**	**09 31 52.8**	**-0.5**
TEKE				Sn	**Sg**	**09 32 13.9**	**+2.7**
AKUM	**Antalya-Kumluc**	**1.32**	**306**	P	**Pn**	**09 31 52.3**	**-1.2**
AKUM				IAML		09 32 16.0	
	comp=N,56nm,0.6s						
AKUM				IAML		09 32 16.0	
	comp=E,80nm,0.4s						
KEPZ	**Antalya-Kepez**	**1.35**	**358**	P	**Pn**	**09 31 51.2**	**-2.6**
KEPZ				S	**Sb**	**09 32 10.0**	**-1.7**
KEPZ				IAML		09 32 13.0	
	comp=E,54nm,0.6s						
KEPZ				IAML		09 32 14.0	
	comp=N,47nm,0.5s						
CSS	**Mathiatis**	**1.48**	**113**	Pn	**Pb**	**09 31 55.6**	**-0.9**
ERMK	**Ermenek**	**1.48**	**42**	P	**Pg**	**09 31 58.0**	**+0.7**
ERMK				IAML		09 32 21.0	
	comp=N,81nm,0.6s						
ERMK				S	**Sg**

*FCIAR **02** 09:46:18.0, 75°.59N×10°.13E, h10km, station SPA0 has station magnitude of 2.90*
*KOLA **02** 09:46:28.2, 73°.94N×8°.39E, h0km, ML2.0, Norwegian sea, Knipovich ridge, south*
ISC 02 09:46:08.6±0.8, 75°.51N±0°.04×8°.94E±0°.05, h10km, n44, σ1s76/39, MS3.1/9, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**2.17**	**43**	Pn	**Pg**	**09 46 50.8**	**+0.5**
HSPB				Sn	**Sg**	**09 47 18.6**	**+0.3**
HSPB	**Hornsund (broa**	**2.17**	**43**	*eP*	**Pg**	**09 46 50.8**	**+0.5**
HSPB				IAML		09 46 52.7	
	comp=Z,9.2nm,0.4s						
HSPB				*eS*	**Sg**	**09 47 18.7**	**+0.3**
BEA1	**Bear Island, N**	**2.81**	**106**	Pn	**Pg**	**09 47 01.5**	**-0.8**
BEA1	**Bear Island, N**	**2.81**	**106**	Pn	**Pg**	**09 47 01.5**	**-0.8**
BEA3	**Bear Island, N**	**2.81**	**106**	Pn	**Pg**	**09 47 02.1**	**-0.2**
BRBA	**Barentsburg A**	**2.83**	**23**	Pn	**Pb**	**09 46 59.3**	**+0.1**
BRBA	**Barentsburg A**	**2.83**	**23**	*eP*	**Pb**	**09 46 58.9**	**-0.3**
SPA0	**Spitsbergen Ar**	**3.17**	**29**	Pn	**Pb**	**09 47 05.0**	**0.0**
	baz=220,slow=16						
SPA0				Sn	**Sb**	**09 47 42.4**	**-1.3**
	baz=227,slow=18						
SPA0	**Spitsbergen Ar**	**3.17**	**29**	Pn	**Pb**	**09 47 05.0**	**0.0**
SPA0				Sn	**Sb**	**09 47 42.4**	**-1.3**
SPA0	**Spitsbergen Ar**	**3.17**	**29**	*eP*	**Pb**	**09 47 04.3**	**-0.7**
SPA0				*eS*	**Sb**	**09 47 40.0**	**-3.7**
	comp=Z,32nm,1.3s						
SPITS	**Spitsbergen Ar**	**3.17**	**29**	Pn	**Pb**	**09 47 05.0**	**0.0**
	comp=Z,4.5nm,0.2s,baz=211,slow=16,SNR=188						
SPITS				Sn	**Sb**	**09 47 42.1**	**-1.5**
	baz=198,slow=16						
KBS	**Kingsbay**	**3.50**	**10**	Pn	**Pb**	**09 47 08.6**	**-2.0**
KBS	**Kingsbay**	**3.50**	**10**	*eP*	**Pb**	**09 47 07.6**	**-3.0**
KBS				IAML		09 47 10.1	
	comp=Z,9.3nm,0.1s						
KBS				*eS*	**Sn**	**09 47 46.3**	**+2.0**
HOPEN	**Hopen**	**4.02**	**68**	Pn	**Pb**	**09 47 17.4**	**-2.1**
HOPEN	**Hopen**	**4.02**	**68**	*eP*	**Pb**	**09 47 17.3**	**-2.1**
HOPEN				IAML		09 47 17.9	
	comp=Z,27nm,0.2s						
HOPEN	**Hopen**	**4.02**	**68**	*eP*	**Pb**	**09 47 16.2**	**-3.3**
HOPEN				*eS*	**Sn**	**09 48 00.0**	**+2.8**
JNW	**Jan Mayen West**	**6.71**	**237**	*eP*	**Pn**	**09 47 46.0**	**-1.0**
JNW				IAML		09 47 48.8	
	comp=Z,14nm,0.5s						
JNE	**Jan Mayen East**	**6.71**	**236**	*eP*	**Pn**	**09 47 46.6**	**-0.5**
JNE				IAML		09 47 48.0	
	comp=Z,21nm,0.8s						
JMIC	**Jan Mayen**	**6.76**	**237**	Pn	**Pn**	**09 47 46.8**	**-0.8**
	comp=Z,10nm,0.4s,baz=109,slow=7.8,SNR=1.1						
JMIC	**Jan Mayen**	**6.76**	**237**	*eP*	**Pn**	**09 47 47.0**	**-0.6**
DBG	**Daneborg**	**7.65**	**275**	Pn	**Pn**	**09 47 56.8**	**-3.2**
DBG				Sn	Sn	09 49 13.3	-13
DBG	**Daneborg**	**7.65**	**275**	*eP*	**Pn**	**09 47 57.2**	**-2.7**
DBG				*eS*	Sn	09 49 13.1	-14
ARA0	**ARCESS Array S**	**7.76**	**132**	Pn	Pn	09 48 07.8	+6.3
	baz=331,slow=12						
ARA0				Sn	**Sn**	**09 49 30.0**	**+0.7**
	baz=327,slow=22						
ARA0	**ARCESS Array S**	**7.76**	**132**	Pn	Pn	09 48 07.8	+6.3
ARA0				Sn	**Sn**	**09 49 30.0**	**+0.7**
ARCES	**ARCESS Array B**	**7.76**	**132**	Pn	Pn	09 48 08.3	+6.8
	comp=Z,1.9nm,0.4s,baz=325,slow=12,SNR=17						
ARCES				LR	LR	09 51 18.2	
	comp=Z,45nm,21.9s,baz=296,slow=38						
ARCES	**ARCESS Array B**	**7.76**	**132**	P	Pn	09 48 09.4	+7.9
ARCES				S	**Sn**	**09 49 27.6**	**-1.7**
VADS	**Vadso**	**8.06**	**122**	S	**Sn**	**09 49 37.4**	**+0.9**
OMEGA	**Omega**	**9.33**	**39**	*eP*	Pn	09 48 27.6	+4.7
	comp=Z,20nm,2.7s						
OMEGA				*eS*	**Sn**	**09 50 09.5**	**+1.8**
TERR	**Teriberka**	**10.05**	**115**	S	**Sn**	**09 50 26.2**	**+0.9**
KVDA	**Kovda**	**11.64**	**127**	S	Sn	09 50 55.8	-8.4
FINES	**FINESS Array B**	**15.34**	**148**	Pn	**P**	**09 49 52.1**	**+2.5**
	baz=350,slow=14,SNR=1.9						
	comp=Z,1.3nm,0.7s						
HFS	**Hagfors**	**15.54**	**171**	Pn	**P**	**09 49 53.4**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=339,slow=7.9,SNR=3.6						
	comp=Z,1.5nm,0.9s						
SFJD	**Kangerlussuaq**	**19.94**	**277**	LR	LR	09 57 26.7	
	comp=Z,20nm,20.1s,baz=31,slow=34						
ARTI	**Arti**	**26.45**	**108**	LR	LR	10 03 40.2	
	comp=Z,33nm,18.5s,baz=5.0,slow=39						
FRB	**Frobisher Bay**	**26.99**	**287**	LR	LR	10 01 33.5	
	comp=Z,60nm,20.8s,baz=18,slow=35						
MLR	**Muntele Rosu**	**30.99**	**156**	LR	LR	10 04 19.9	
	comp=Z,34nm,18.7s,baz=237,slow=35						
AKTO	**Aktyubinsk**	**31.84**	**114**	LR	LR	10 07 26.2	
	comp=Z,35nm,19.0s,baz=284,slow=40						
SCHQ	**Schefferville**	**34.40**	**277**	LR	LR	10 06 48.5	
	comp=Z,40nm,18.2s,baz=61,slow=36						
ZALV	**Zalesovo Beam**	**35.22**	**84**	LR	LR	10 09 18.0	
	comp=Z,22nm,19.5s,baz=265,slow=39						
KURBB	**Kurchatov Arra**	**36.68**	**92**	LR	LR	10 11 56.8	
	comp=Z,49nm,18.8s,baz=190,slow=42						
ILAR	**Eielson Array**	**39.11**	**344**	P	P	09 53 39.8	+4.3
	comp=Z,0.1nm,0.5s,baz=16,slow=7.6,SNR=4.5						
	comp=Z,0.1nm,0.5s						
MKAR	**Makanchi Array**	**41.17**	**91**	LR	LR	10 15 19.6	
	comp=Z,47nm,18.0s,baz=314,slow=42						
AAK	**Ala-Archa**	**43.11**	**101**	LR	LR	10 14 08.4	
	comp=Z,50nm,18.5s,baz=174,slow=39						
TXAR	**Lajitas Array**	**67.22**	**299**	P	**P**	**09 57 05.6**	**+2.8**
	comp=Z,0.1nm,0.6s,baz=37,slow=5.0,SNR=5.0						
	comp=Z,0.1nm,0.6s						

*ASRS **02** 09:50:19.0±0.9, 54°.33N×86°.90E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 02 09:50:19.9±3.2, 54°.30N×86°.96E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=27.7km s-min=18.7km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**255**	I	I	09 56 50.0	
	baz=72,slow=324,SNR=6.3						
ZALV	**Zalesovo Beam**	**1.31**	**255**	Pg	Pg	09 50 44.7	-0.2
	1.6nm,0.3s,baz=73,slow=17,SNR=9.2						
ZALV				Lg	Lg	09 51 02.5	
	1.9nm,0.3s,baz=78,slow=31,SNR=7.0						
KURBB	**Kurchatov Arra**	**6.33**	**238**	Pn	Pn	09 51 54.6	+0.3
	0.1nm,0.3s,baz=56,slow=14,SNR=5.1						
KURBB				Lg	Lg	09 53 39.5	
	baz=45,slow=34,SNR=1.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.08**	**203**	Pn	Pn	09 52 19.4	+1.1
	baz=24,slow=14,SNR=1.7						
	0.1nm,0.3s						

*TAP **02** 09:54:52.6, 21°.93N×121°.83E, h185km, ML4.1, D*
ISC 02 09:54:54.8±2.4, 22°.04N±0°.07×121°.75E±0°.06, h176km±11km, n116, σ0s93/210, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**0.16**	**258**	P	**Pn**	**09 55 17.0**	**-1.1**
LYUB				S	**Sn**	**09 55 34.1**	**-1.8**
LAY	**Lan-yu**	**0.19**	**271**	P	**Pn**	**09 55 17.2**	**-1.0**
LAY				*eS*	**Sn**	**09 55 35.3**	**-0.7**
LDUT	**Ludao**	**0.69**	**337**	*i* P	**Pn**	**09 55 19.2**	**-0.8**
LDUT				S	**Sn**	**09 55 40.2**	**+0.8**
TSEB	**Hengchuen, Pin**	**0.81**	**260**	P	**Pn**	**09 55 20.8**	**+0.1**
TSEB				S	**Sn**	**09 55 41.9**	**+1.3**
SMST	**Manzhou Townsh**	**0.85**	**269**	*i* P	**Pn**	**09 55 20.6**	**-0.4**
SMST				S	**Sn**	**09 55 41.3**	**+0.2**
TAW	**Tawu**	**0.86**	**292**	P	**Pn**	**09 55 20.1**	**-0.9**
TAW				*eS*	**Sn**	**09 55 40.6**	**-0.6**
TWKBT	**Hengchun**	**0.88**	**264**	*i* P	**Pn**	**09 55 21.1**	**-0.1**
TWKBT				S	**Sn**	**09 55 42.0**	**+0.6**
TWK1	**Hengchun**	**0.89**	**264**	*i* P	**Pn**	**09 55 21.1**	**-0.1**
TWK1				S	**Sn**	**09 55 41.9**	**+0.4**
SLIU	**Shizi**	**0.90**	**282**	*i* P	**Pn**	**09 55 21.0**	**-0.3**
SLIU				S	**Sn**	**09 55 42.0**	**+0.2**
EAST	**Anshuo**	**0.91**	**293**	*i* P	**Pn**	**09 55 20.8**	**-0.6**
EAST				*eS*	**Sn**	**09 55 42.0**	**+0.1**
TTN	**Taitung**	**0.91**	**322**	P	**Pn**	**09 55 21.4**	**+0.1**
ECL	**Taimali**	**0.93**	**307**	P	**Pn**	**09 55 20.6**	**-0.9**
ECL				S	**Sn**	**09 55 41.7**	**-0.4**
HEN	**Hengchun**	**0.94**	**268**	*i* P	**Pn**	**09 55 21.6**	**0.0**
HEN				S	**Sn**	**09 55 42.9**	**+0.7**
TWGBT	**Beinan**	**1.00**	**321**	P	**Pn**	**09 55 21.0**	**-1.0**
TWGBT				S	**Sn**	**09 55 42.1**	**-1.1**
TWG	**Pinlang**	**1.00**	**321**	*i* P	**Pn**	**09 55 21.1**	**-0.9**
TWG				*i* S	**Sn**	**09 55 42.1**	**-1.1**
EDH	**Donghe**	**1.02**	**336**	P	**Pn**	**09 55 21.9**	**-0.2**
EDH				S	**Sn**	**09 55 44.3**	**+0.8**
LONT	**Longtian**	**1.04**	**326**	P	**Pn**	**09 55 21.6**	**-0.7**
LONT				*eS*	**Sn**	**09 55 42.9**	**-0.8**
SCZT	**Fangliau**	**1.10**	**288**	*i* P	**Pn**	**09 55 22.3**	**-0.5**
SCZT				S	**Sn**	**09 55 44.1**	**-0.3**
CHKT	**Chengkung**	**1.12**	**341**	P	**Pn**	**09 55 22.8**	**-0.2**
CHKT				S	**Sn**	**09 55 46.2**	**+1.4**
ECS	**Chishang**	**1.16**	**335**	P	**Pn**	**09 55 23.4**	**+0.1**
ECS				S	**Sn**	**09 55 47.0**	**+1.5**
MASBT	**Mashibuluo**	**1.19**	**299**	*i* P	**Pn**	**09 55 23.1**	**-0.4**
MASBT				S	**Sn**	**09 55 45.3**	**-0.4**
SSPT	**Xinbi**	**1.19**	**292**	P	**Pn**	**09 55 23.7**	**+0.2**
SSPT				S	**Sn**	**09 55 46.4**	**+0.8**
CHKH	**Chenggong**	**1.20**	**344**	P	**Pn**	**09 55 23.5**	**-0.1**
CHKH				*i* S	**Sn**	**09 55 47.3**	**+1.3**
EHD	**Haiduan**	**1.22**	**336**	P	**Pn**	**09 55 23.3**	**-0.5**
EHD				*eS*	**Sn**	**09 55 46.1**	**-0.2**
TSMG	**Majia**	**1.22**	**303**	*i* P	**Pn**	**09 55 23.6**	**-0.2**
TSMG				S	**Sn**	**09 55 46.4**	**0.0**
FULB	**Fuli**	**1.23**	**340**	*i* P	**Pn**	**09 55 23.9**	**0.0**
FULB				S	**Sn**	**09 55 47.9**	**+1.2**
SSD	**Sandimen**	**1.26**	**304**	*i* P	**Pn**	**09 55 23.9**	**-0.2**
SSD				S	**Sn**	**09 55 47.0**	**+0.1**
ECBN	**Changbin**	**1.30**	**348**	*i* P	**Pn**	**09 55 24.8**	**+0.2**
ECBN				S	**Sn**	**09 55 49.3**	**+1.6**
WLCH	**Liuqiu**	**1.31**	**284**	P	**Pn**	**09 55 25.8**	**+1.3**
WLCH				*eS*	**Sn**	**09 55 50.9**	**+3.3**
TWP	**Hsiaoliuchiu**	**1.33**	**284**	*i* P	**Pn**	**09 55 25.8**	**+1.1**
TWP				S	**Sn**	**09 55 51.4**	**+3.6**
ELDTW	**Lidau**	**1.33**	**329**	P	**Pn**	**09 55 24.8**	**-0.1**
ELDTW				S	**Sn**	**09 55 48.7**	**+0.4**
EYUL	**Yuli**	**1.36**	**343**	P	**Pn**	**09 55 24.6**	**-0.4**
EYUL				S	**Sn**	**09 55 48.9**	**+0.2**
TWF1	**Yuli**	**1.38**	**342**	*i* P	**Pn**	**09 55 24.5**	**-0.7**
TWF1				S	**Sn**	**09 55 48.8**	**-0.1**
SLGT	**Liugui**	**1.40**	**313**	P	**Pn**	**09 55 25.5**	**+0.1**
SLGT				S	**Sn**	**09 55 49.9**	**+0.7**
YULB	**Yu-li**	**1.41**	**343**	P	**Pn**	**09 55 24.7**	**-0.8**
YULB	**Yu-li**	**1.41**	**343**	*i* P	**Pn**	**09 55 24.8**	**-0.8**
YULB				S	**Sn**	**09 55 48.8**	**-0.8**
SCST	**Cishan**	**1.44**	**306**	P	**Pn**	**09 55 25.9**	**+0.1**
SCST				S	**Sn**	**09 55 50.9**	**+1.1**
STYH	**Taoyuan**	**1.45**	**321**	P	**Pn**	**09 55 25.7**	**-0.1**
STYH				S	**Sn**	**09 55 50.3**	**+0.4**
TWM1	**Shoushan**	**1.46**	**303**	P	**Pn**	**09 55 25.7**	**+0.7**
TWM1				*eS*	**Sn**	**09 55 54.1**	**+4.0**
EHYH	**Wanrong**	**1.50**	**345**	P	**Pn**	**09 55 25.7**	**-0.7**
EHYH				S	**Sn**	**09 55 50.5**	**-0.5**
EHY	**Hungye**	**1.52**	**345**	P	**Pn**	**09 55 25.8**	**-0.7**
EHY				S	**Sn**	**09 55 50.0**	**-1.2**
CHN1	**Nanshi**	**1.61**	**315**	P	**Pn**	**09 55 27.3**	**-0.2**
CHN1				S	**Sn**	**09 55 53.3**	**+0.5**
TPUB	**Ta-pu**	**1.63**	**321**	P	**Pn**	**09 55 27.3**	**-0.4**
TPUB	**Ta-pu**	**1.63**	**321**	P	**Pn**	**09 55 27.3**	**-0.4**
TPUB				S	**Sn**	**09 55 53.5**	**+0.2**
CHN3	**Shinhua**	**1.65**	**309**	S	**Sn**	**09 55 55.8**	**+2.3**
TEGC	**Jichi Village**	**1.68**	**353**	*eP*	**Pn**	**09 55 27.7**	**-0.4**
TEGC				*eS*	**Sn**	**09 55 56.4**	**+2.4**
TWK	**Hsinying**	**1.69**	**317**	P	**Pn**	**09 55 28.1**	**-0.2**
TWK				S	**Sn**	**09 55 54.8**	**+0.4**
WARBT	**Fenglin Townsh**	**1.71**	**349**	P	**Pn**	**09 55 27.7**	**-0.8**
WARBT				S	**Sn**	**09 55 54.7**	**-0.8**
ALS	**Alishan**	**1.71**	**329**	*i* P	**Pn**	**09 55 28.6**	**-0.1**
ALS				*i* S	**Sn**	**09 55 55.3**	**+0.2**
SSHA	**Shanhua**	**1.74**	**309**	S	**Sn**	**09 55 57.2**	**+2.1**
SHUL	**Shoufeng**	**1.75**	**354**	P	**Pn**	**09 55 28.8**	**-0.1**
SHUL				S	**Sn**	**09 55 57.1**	**+1.6**
WCKO	**Fanlu**	**1.75**	**323**	P	**Pn**	**09 55 28.4**	**-0.5**
WCKO				S	**Sn**	**09 55 55.6**	**+0.2**
ESL	**Shilin**	**1.79**	**351**	P	**Pn**	**09 55 28.6**	**-0.8**
ESL				S	**Sn**	**09 55 55.1**	**-1.2**
TEYL	**Yanliau Villag**	**1.83**	**356**	P	**Pn**	**09 55 27.9**	**-1.8**
TEYL				S	**Sn**	**09 56 00.7**	**+3.9**
CHN5	**Tsauling**	**1.84**	**328**	P	**Pn**	**09 55 29.7**	**-0.2**
CHN5				S	**Sn**	**09 55 57.6**	**+0.3**
WHYT	**Xinyi Township**	**1.85**	**333**	P	**Pn**	**09 55 29.4**	**-0.5**
WHYT				S	**Sn**	**09 55 57.1**	**-0.3**
SSLB	**Suanglung**	**1.89**	**337**	P	**Pn**	**09 55 29.8**	**-0.6**
SSLB	**Suanglung**	**1.89**	**337**	S	**Sn**	**09 55 58.1**	**0.0**
SSLB	**Suanglung**	**1.89**	**337**	P	**Pn**	**09 55 29.9**	**-0.5**
SSLB				S	**Sn**	**09 55 57.7**	**-0.4**
ICHU	**Yijhu**	**1.90**	**314**	*i* P	**Pn**	**09 55 29.9**	**-0.5**
ICHU				S	**Sn**	**09 55 57.9**	**-0.1**
TSCK	**Chigu Township**	**1.90**	**306**	*i* P	**Pn**	**09 55 30.1**	**-0.3**
TSCK				*i* S	**Sn**	**09 55 58.4**	**+0.4**
CHY	**Chiayi**	**1.90**	**320**	P	**Pn**	**09 55 30.0**	**-0.5**
CHY				*i* S	**Sn**	**09 55 58.3**	**+0.1**
CHN8	**Yiju**	**1.93**	**313**	P	**Pn**	**09 55 30.3**	**-0.4**
CHN8				S	**Sn**	**09 55 59.5**	**+0.8**
ETM	**Tongmen**	**1.94**	**353**	P	**Pn**	**09 55 30.3**	**-0.5**
ETM				*eS*	**Sn**	**09 55 58.5**	**-0.5**
WGK	**Gukeng**	**1.98**	**326**	P	**Pn**	**09 55 31.1**	**-0.2**
WGK				S	**Sn**	**09 56 00.6**	**+1.0**
OWD	**Renai**	**1.98**	**345**	*i* P	**Pn**	**09 55 31.7**	**+0.2**
OWD				S	**Sn**	**09 56 00.5**	**+0.4**
WDLH	**Douliu**	**1.99**	**326**	P	**Pn**	**09 55 31.1**	**-0.2**
WDLH				S	**Sn**	**09 56 00.3**	**+0.4**
LXIB	**Xiulin Townshi**	**2.00**	**351**	*i* P	**Pn**	**09 55 31.3**	**-0.7**
LXIB				S	**Sn**	**09 56 00.1**	**-0.3**
SMLT	**Sun Moon Lake**	**2.00**	**337**	P	**Pn**	**09 55 31.4**	**-0.3**
SMLT				S	**Sn**	**09 56 00.3**	**0.0**
WUSB	**Renai**	**2.03**	**343**	P	**Pn**	**09 55 32.2**	**+0.2**
WUSB				S	**Sn**	**09 56 02.0**	**+1.0**
TYC	**Yuchr**	**2.04**	**336**	P	**Pn**	**09 55 31.7**	**-0.2**
TYC				S	**Sn**	**09 56 01.1**	**+0.3**
TWD	**Chiawan**	**2.04**	**356**	P	**Pn**	**09 55 31.9**	**0.0**
TWD				*eS*	**Sn**	**09 55 59.9**	**-1.0**
WSL	**Shuilin Townsh**	**2.04**	**317**	*i* P	**Pn**	**09 55 31.4**	**-0.6**
WSL				S	**Sn**	**09 56 00.6**	**-0.3**
WTK	**Tuku**	**2.07**	**323**	P	**Pn**	**09 55 31.7**	**-0.5**
WTK				S	**Sn**	**09 56 01.0**	**-0.5**
WNT	**Mingjian**	**2.08**	**332**	P	**Pn**	**09 55 32.5**	**+0.1**
WNT				S	**Sn**	**09 56 02.1**	**+0.4**
ETL	**Fush Village**	**2.12**	**357**	*eP*	**Pn**	**09 55 32.9**	**+0.1**
WSF	**Szhu**	**2.13**	**319**	*eS*	**Sn**	**09 55 59.7**	**+0.1**
NACB	**Ninganchiao**	**2.13**	**356**	P	**Pn**	**09 55 32.4**	**-0.5**
NACB	**Ninganchiao**	**2.13**	**356**	P	**Pn**	**09 55 32.5**	**-0.5**
NACB				S	**Sn**	**09 56 02.3**	**-0.5**
WHF	**Hehuan Shan**	**2.15**	**348**	P	**Pn**	**09 55 33.8**	**+0.2**
WHF				S	**Sn**	**09 56 04.3**	**+0.5**
WCS	**Beigang Elemen**	**2.16**	**339**	*i* P	**Pn**	**09 55 33.4**	**+0.1**
WCS				*i* S	**Sn**	**09 56 04.3**	**+1.1**
ETLH	**Xiulin Townshi**	**2.17**	**353**	P	**Pn**	**09 55 33.1**	**-0.5**
ETLH				S	**Sn**	**09 56 03.4**	**-0.4**
WRL	**Guolierlin Hig**	**2.25**	**326**	*i* P	**Pn**	**09 55 34.0**	**-0.3**
WRL				S	**Sn**	**09 56 04.8**	**-0.3**
RLNB	**Erlin**	**2.25**	**325**	*eS*	**Sn**	**09 56 05.6**	**+0.5**
FUSS	**Fushou**	**2.25**	**348**	*i* P	**Pn**	**09 55 35.0**	**+0.4**
FUSS				*i* S	**Sn**	**09 56 06.4**	**+0.8**
TWT	**Tachien**	**2.27**	**347**	*eP*	**Pn**	**09 55 35.6**	**+0.8**
TWT				*eS*	**Sn**	**09 56 07.0**	**+1.1**
WTCT	**Ta-ch'eng**	**2.27**	**324**	*eS*	**Sn**	**09 56 06.6**	**+1.1**
TDCB	**Techi**	**2.27**	**346**	*i* P	**Pn**	**09 55 35.2**	**+0.7**
TDCB				S	**Sn**	**09 56 07.7**	**+1.8**
WDGT	**Dungji**	**2.29**	**303**	*eP*	**Pn**	**09 55 33.9**	**-0.8**
WDGT				*eS*	**Sn**	**09 56 04.4**	**-1.4**
WCH1	**Changhua City**	**2.31**	**331**	*eS*	**Sn**	**09 56 07.8**	**+1.4**
WCHH	**Zhanghua**	**2.31**	**332**	P	**Pn**	**09 55 35.0**	**0.0**
WCHH				*eS*	**Sn**	**09 56 06.3**	**-0.1**
WHP	**Taichung City**	**2.35**	**342**	*eP*	**Pn**	**09 55 35.3**	**-0.3**
WHP				S	**Sn**	**09 56 07.8**	**+0.4**
NNSB	**Datong**	**2.41**	**352**	*i* P	**Pn**	**09 55 36.6**	**+0.4**
NNSB				S	**Sn**	**09 56 09.2**	**+0.7**
EOS2	**EOS2**	**2.41**	**10**	*eP*	**Pn**	**09 55 36.5**	**+0.5**
VCHM	**Qimei**	**2.44**	**299**	*i* P	**Pn**	**09 55 35.7**	**-0.9**
VCHM				*i* S	**Sn**	**09 56 09.4**	**+0.4**
TWQ1	**Liyutan**	**2.47**	**339**	*eP*	**Pn**	**09 55 36.5**	**-0.3**
PHUB	**P'eng-hu**	**2.49**	**307**	*i* P	**Pn**	**09 55 36.2**	**-0.9**
PHUB				S	**Sn**	**09 56 09.3**	**-0.8**
LATG	**Datong**	**2.50**	**355**	*eP*	**Pn**	**09 55 38.9**	**+1.6**
LATG				*eS*	**Sn**	**09 56 12.4**	**+2.0**
WDJ	**Dajia District**	**2.52**	**336**	*eS*	**Sn**	**09 56 09.5**	**-1.2**
PNG	**Penghu**	**2.54**	**307**	P	**Pn**	**09 55 36.7**	**-1.0**
PNG				*eS*	**Sn**	**09 56 09.9**	**-1.1**
ENTT	**Nioudou**	**2.60**	**356**	*eP*	**Pn**	**09 55 39.0**	**+0.6**
ENTT				S	**Sn**	**09 56 13.4**	**+1.0**
YHNB	**Yeheng**	**2.64**	**353**	P	**Pn**	**09 55 39.4**	**+0.4**
YHNB	**Yeheng**	**2.64**	**353**	S	**Sn**	**09 56 13.4**	**-0.1**
YHNB	**Yeheng**	**2.64**	**353**	*eP*	**Pn**	**09 55 39.6**	**+0.7**
NFF	**Wufeng Townshi**	**2.65**	**347**	*eP*	**Pn**	**09 55 38.7**	**-0.3**
NFF				S	**Sn**	**09 56 13.1**	**-0.5**
YOJ	**Yonaguni jima**	**2.68**	**25**	P	**Pn**	**09 55 40.2**	**+1.0**
YOJ	**Yonaguni jima**	**2.68**	**25**	*eP*	**Pn**	**09 55 40.2**	**+1.0**
YOJ				*eS*	**Sn**	**09 56 12.7**	**-1.3**
LIOB	**Emei**	**2.69**	**345**	*eP*	**Pn**	**09 55 39.2**	**-0.2**
LIOB				S	**Sn**	**09 56 13.6**	**-0.6**
FUSB	**Fushanzhiwuyua**	**2.71**	**357**	P	**Pn**	**09 55 40.2**	**+0.4**
FUSB				S	**Sn**	**09 56 16.3**	**+1.3**
ILA	**Ilan**	**2.72**	**360**	*eP*	**Pn**	**09 55 37.9**	**-1.8**
NWLT	**Wulai**	**2.74**	**355**	*i* P	**Pn**	**09 55 40.7**	**+0.6**
NWLT				*i* S	**Sn**	**09 56 16.6**	**+1.2**
KSHI	**Guanxi Townshi**	**2.78**	**349**	*eP*	**Pn**	**09 55 40.2**	**-0.3**
KSHI				*eS*	**Sn**	**09 56 16.7**	**+0.4**
TIPB	**Shuangxi**	**2.92**	**1**	*eP*	**Pn**	**09 55 43.4**	**+1.1**
TIPB				*eS*	**Sn**	**09 56 18.9**	**-0.5**
VWUC	**VWUC**	**3.62**	**325**	P	**Pn**	**09 55 49.9**	**-1.0**
VWUC				*eS*	**Sn**	**09 56 33.9**	**-1.0**
MATB	**Ma-tsu**	**4.42**	**338**	*eP*	**Pn**	**09 56 00.4**	**-0.6**
MATB				*i* S	**Sn**	**09 56 51.4**	**-1.7**

*IDC **02** 09:59:09.4±1.1, 55°.55N×158°.74W, h0km, mb3.7/9, mbtmp3.7/12, ML3.7/3, MS3.2/5, Error ellipse: s-maj=27.5km s-min=16.3km az=152.0*
*AEIC **02** 09:59:11.7±2.1, 55°.96N±0°.02×158°.58W±0°.06, h9km±3km, Error ellipse: s-maj=4.8km s-min=3.1km az=85.0*
*NEIC **02** 09:59:12.1±1.8, 55°.93N±0°.02×158°.59W±0°.06, h10km±1km, ML3.9/60, ML3.7(AEIC), Error ellipse: s-maj=5.7km s-min=3.4km az=275.0*
ISC 02 09:59:10.9±1.1, 55°.95N±0°.03×158°.58W±0°.02, h3km±8km, n181, σ1s12/230, mb3.8/9, MS3.1/5, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNSG	**Veniaminof 6**	**0.34**	**302**		**Pg**	**09 59 18.2**	**+0.9**
CHGN	**Chignik**	**0.36**	**15**	Pg	**Pg**	**09 59 18.3**	**+0.4**
CHGN				IAML		09 59 23.5	
	comp=E,15μm,0.1s						
VNHG	**Veniaminof 1**	**0.43**	**310**		**Pg**	**09 59 20.0**	**+0.9**
VNHG					**Sg**	**09 59 20.1**	**-4.5**
VNKR	**Veniaminof 5**	**0.45**	**281**		**Pg**	**09 59 20.5**	**+0.9**
VNNF	**Veniaminof 3**	**0.53**	**309**		**Pg**	**09 59 22.2**	**+1.1**
VNSS	**Veniaminof 8**	**0.56**	**300**		**Pg**	**09 59 22.6**	**+0.9**
VNSW	**Veniaminof 7**	**0.56**	**283**		**Pg**	**09 59 22.7**	**+0.9**
VNWF	**Veniaminof 8**	**0.59**	**290**		**Pg**	**09 59 23.2**	**+1.1**
VNFG	**Fog Glacier, M**	**0.64**	**302**		**Pg**	**09 59 24.4**	**+1.2**
VNFG					**Sg**	**09 59 33.4**	**+1.8**
VNFG				IAML		09 59 43.6	
	comp=N,7μm,0.9s						
VNFG				IAML		09 59 45.5	
	comp=E,9μm,1.1s						
VNFG	**Fog Glacier, M**	**0.64**	**302**		**Pg**	**09 59 24.4**	**+1.2**
BPBCA	**

comp=E,4.8nm,0.3s,baz=259,slow=12,SNR=4.3
comp=E,15nm,0.3s

KDAK	**Kodiak Island**	**3.77**	**58**			**Pn**	**10 00 10.6**	**+0.8**
KDAK						**Sn**	**10 00 55.3**	**+0.7**
KDAK	**Kodiak Island**	**3.77**	**58**	IAML			10 01 13.9	
	comp=E,128nm,1.0s							
P18K	**Big Mountain,**	**3.89**	**26**			**Pn**	**10 00 12.1**	**+0.5**
O17K	**Koliganek Bris**	**3.92**	**11**			**Pn**	**10 00 12.3**	**+0.5**
Q19K	**Cape Douglas,**	**4.00**	**40**			**Pn**	**10 00 14.1**	**+0.9**
Q19K				IAML			10 01 24.9	
	comp=N,247nm,1.0s							
N15K	**Kwethluk River**	**4.31**	**350**			**Pn**	**10 00 18.2**	**+0.9**
N15K				IAML			10 01 32.4	
	comp=N,152nm,0.6s							
O18K	**Koktuh Hills**	**4.31**	**23**			**Pn**	**10 00 17.7**	**+0.4**
O18K						**Pn**	**10 00 18.2**	**+0.9**
N14K	**Kuskokwak Cree**	**4.32**	**339**			**Pn**	**10 00 18.0**	**+0.6**
AUI	**Augustine Isla**	**4.38**	**37**			**Pn**	**10 00 18.7**	**+0.4**
AUI						**Pn**	**10 00 19.8**	**+1.6**
AUJK	**Augustine Jueg**	**4.40**	**37**			**Pn**	**10 00 19.0**	**+0.5**
AUJK						**Pn**	**10 00 20.2**	**+1.7**
AKSA	**Akutan Strait**	**4.48**	**249**			**Pn**	**10 00 20.4**	**+0.8**
AKSA						**Pn**	**10 00 21.0**	**+1.4**
AKUT	**Akutan**	**4.52**	**249**	P		**Pn**	**10 00 21.8**	**+1.6**
AKUT	**Akutan**	**4.52**	**249**	S		**Sn**	**10 01 14.9**	**+1.7**
AKUT	**Akutan**	**4.52**	**249**	Pn		**Pn**	**10 00 21.5**	**+1.4**
AKUT				IAML			10 01 34.7	
	comp=N,183nm,1.4s							
AKUT				IAML			10 01 37.3	
	comp=E,168nm,0.7s							
N16K	**Nishlik Lake**	**4.54**	**359**			**Pn**	**10 00 20.9**	**+0.5**
N16K						**Pn**	**10 00 21.4**	**+0.9**
N17K	**Nushagak Hills**	**4.65**	**9**			**Pn**	**10 00 22.6**	**+0.7**
N17K				IAML			10 01 50.9	
	comp=E,80nm,0.8s							
N17K				IAML			10 02 09.4	
	comp=N,75nm,0.9s							
ZRO	**Akutan Zero**	**4.65**	**249**			**Pn**	**10 00 22.6**	**+0.7**
AKRB	**Akutan Reef Bi**	**4.68**	**250**			**Pn**	**10 00 23.2**	**+0.8**
O19K	**Port Alsworth**	**4.82**	**26**			**Pn**	**10 00 26.0**	**+1.7**
O19K				IAML			10 01 28.3	
	comp=E,119nm,0.4s							
O19K				IAML			10 01 48.6	
	comp=N,96nm,0.5s							
M15K	**Kasigluk River**	**4.89**	**348**			**Pn**	**10 00 25.8**	**+0.6**
N18K	**Kilae Creek**	**4.95**	**16**			**Pn**	**10 00 26.9**	**+0.8**
N18K						**Pn**	**10 00 27.3**	**+1.2**
N18K				IAML			10 01 58.5	
	comp=E,59nm,1.1s							
N18K				IAML			10 02 09.4	
	comp=N,51nm,0.9s							
ILSW	**Iliamna Southw**	**4.97**	**33**			**Pn**	**10 00 27.0**	**+0.5**
ILSW						**Pn**	**10 00 27.5**	**+1.0**
IVE	**Iliamna Volcan**	**5.04**	**34**			**Pn**	**10 00 28.4**	**+1.0**
IVE						**Pn**	**10 00 28.8**	**+1.4**
UNV	**Unalaska Valle**	**5.04**	**249**	P		**Pn**	**10 00 27.8**	**+0.5**
	comp=N,56nm,1.3s							
UNV	**Unalaska Valle**	**5.04**	**249**	S		**Sn**	**10 01 27.8**	**+1.9**
	comp=N,56nm,1.3s							
UNV	**Unalaska Valle**	**5.04**	**249**			**Pn**	**10 00 27.8**	**+0.5**
UNV				IAML			10 01 50.4	
	comp=N,50nm,0.9s							
M16K	**Timber Creek**	**5.09**	**358**			**Pn**	**10 00 29.0**	**+1.0**
M16K				IAML			10 02 02.6	
	comp=E,119nm,1.3s							
M16K				IAML			10 02 08.4	
	comp=N,88nm,1.2s							
MNAT	**Makushin Natee**	**5.11**	**249**			**Pn**	**10 00 28.8**	**+0.4**
MNAT						**Pn**	**10 00 29.8**	**+1.5**
M14K	**Bethel**	**5.13**	**341**			**Pn**	**10 00 29.6**	**+1.0**
M13K	**Dall Lake**	**5.14**	**333**			**Pn**	**10 00 29.6**	**+1.0**
MREP	**Makushin Rep't**	**5.18**	**249**			**Pn**	**10 00 29.7**	**+0.4**
MREP						**Pn**	**10 00 30.3**	**+0.9**
O20K	**Slope Mountain**	**5.21**	**35**			**Pn**	**10 00 30.5**	**+0.8**
O20K						**Pn**	**10 00 31.7**	**+1.9**
HOM	**Homer**	**5.25**	**42**	Pn		**Pn**	**10 00 31.1**	**+0.9**
HOM				IAML			10 02 28.2	
	comp=E,113nm,1.3s							
HOM				IAML			10 03 30.8	
	comp=N,112nm,1.0s							
MGOD	**Makushin Gods**	**5.25**	**249**			**Pn**	**10 00 31.1**	**+0.8**
CNPM	**China Poot**	**5.32**	**45**			**Pn**	**10 00 33.3**	**+2.1**
N19K	**Bonanza Creek**	**5.33**	**22**			**Pn**	**10 00 32.6**	**+1.2**
N19K				IAML			10 02 15.0	
	comp=N,46nm,0.7s							
N19K				IAML			10 02 20.4	
	comp=E,54nm,1.3s							
RED	**Redoubt Volcan**	**5.43**	**32**			**Pn**	**10 00 34.6**	**+1.8**
M17K	**Holitna River**	**5.50**	**6**			**Pn**	**10 00 34.2**	**+0.5**
NCT	**North Crescent**	**5.50**	**30**			**Pn**	**10 00 34.5**	**+0.7**
NCT						**Pn**	**10 00 35.1**	**+1.4**
RDT	**Redoubt**	**5.67**	**33**			**Pn**	**10 00 37.2**	**+1.2**
RDT						**Pn**	**10 00 37.6**	**+1.7**
M18K	**Stony River**	**5.74**	**13**			**Pn**	**10 00 38.0**	**+1.0**
L16K	**Owhat River**	**5.80**	**356**			**Pn**	**10 00 38.2**	**+0.5**
L16K						**Pn**	**10 00 38.5**	**+0.8**
L14K	**Kuka Creek**	**5.81**	**340**			**Pn**	**10 00 37.9**	**-0.1**
L14K						**Pn**	**10 00 38.3**	**+0.4**
L15K	**Ungalak Mounta**	**5.94**	**346**			**Pn**	**10 00 39.4**	**-0.3**
L17K	**Donlin**	**6.21**	**1**			**Pn**	**10 00 43.8**	**+0.5**
SPU	**Mount Spurr**	**6.26**	**30**			**Pn**	**10 00 45.0**	**+0.9**
L18K	**Granite Mounta**	**6.36**	**8**			**Pn**	**10 00 45.9**	**+0.4**
SEW	**Seward**	**6.39**	**46**			**Pn**	**10 00 46.5**	**+0.7**
L19K	**White Mountain**	**6.54**	**16**			**Pn**	**10 00 48.8**	**+0.9**
K15K	**Wolf Creek Mou**	**6.54**	**348**			**Pn**	**10 00 48.9**	**+0.9**
SPIA	**Saint Paul Isl**	**6.57**	**286**	Pn		**Pn**	**10 00 48.9**	**+0.7**
M20K	**Styx River**	**6.58**	**23**			**Pn**	**10 00 51.1**	**+2.6**
K13K	**Kusilvak Mount**	**6.77**	**335**			**Pn**	**10 00 51.5**	**+0.4**
K17K	**Iditarod**	**6.79**	**1**			**Pn**	**10 00 52.1**	**+0.8**
RC01	**Rabbit Creek A**	**6.92**	**38**	Pn		**Pn**	**10 00 54.0**	**+0.8**
SKT	**Skwentna**	**7.06**	**28**			**Pn**	**10 00 55.6**	**+0.6**
J16K	**Anvik River**	**7.43**	**353**			**Pn**	**10 01 00.5**	**+0.4**
J17K	**VABM Dome**	**7.47**	**358**			**Pn**	**10 01 00.7**	**0.0**
PMR	**Palmer**	**7.49**	**37**	Pn		**Pn**	**10 01 02.9**	**+2.0**
GHO	**Glory Hole Cre**	**7.68**	**37**			**Pn**	**10 01 03.9**	**+0.3**
L22K	**Petersville**	**7.71**	**28**			**Pn**	**10 01 04.9**	**+0.9**
K20K	**Telida**	**7.77**	**15**			**Pn**	**10 01 05.2**	**+0.4**
HIN	**Hinchinbrook I**	**7.78**	**50**			**Pn**	**10 01 05.3**	**+0.3**
GLI	**Glacier Island**	**7.79**	**46**			**Pn**	**10 01 05.2**	**+0.2**
SML	**Sawmill**	**7.91**	**38**			**Pn**	**10 01 07.8**	**+1.0**
FID	**Port Fidalgo**	**7.97**	**48**			**Pn**	**10 01 07.7**	**+0.1**
I17K	**Unalakleet**	**8.03**	**353**			**Pn**	**10 01 08.8**	**+0.5**
EYAK	**Cordova Ski Ar**	**8.18**	**50**			**Pn**	**10 01 11.1**	**+0.7**
J19K	**Poorman**	**8.20**	**9**			**Pn**	**10 01 11.4**	**+0.6**
WAT7	**Susitna Watana**	**8.49**	**32**			**Pn**	**10 01 15.7**	**+0.9**
KTH	**Kantishna Hill**	**8.54**	**24**			**Pn**	**10 01 17.1**	**+1.7**
J20K	**Nowinta River**	**8.54**	**13**			**Pn**	**10 01 16.4**	**+1.1**
TRF	**Thorofare Moun**	**8.60**	**26**			**Pn**	**10 01 18.9**	**+2.5**
KLU	**Klutina**	**8.61**	**45**			**Pn**	**10 01 17.1**	**+0.8**
WAT6	**Susitna Watana**	**8.65**	**35**			**Pn**	**10 01 17.4**	**+0.4**
M24K	**Tolsona, Glenn**	**8.88**	**41**			**Pn**	**10 01 20.6**	**+0.6**
H17K	**Granite Mounta**	**9.04**	**356**			**Pn**	**10 01 23.1**	**+0.9**
DHY	**Denali Highway**	**9.12**	**34**			**Pn**	**10 01 24.0**	**+0.6**
H18K	**Honhosa River**	**9.23**	**1**			**Pn**	**10 01 25.1**	**+0.3**
GLB	**Gilahina Butte**	**9.44**	**48**	Pn		**Pn**	**10 01 27.4**	**-0.3**
VRDI	**Verde Repeater**	**9.49**	**50**	Pn		**Pn**	**10 01 28.9**	**+0.4**
H19K	**Roundabout Mou**	**9.67**	**5**			**Pn**	**10 01 31.1**	**+0.4**
H20K	**Anotleneega Mo**	**9.74**	**9**			**Pn**	**10 01 32.6**	**+0.9**
KIAG	**Kiagna River**	**9.84**	**53**			**Pn**	**10 01 34.4**	**+1.0**
NEA2	**Nenana**	**9.86**	**25**			**Pn**	**10 01 34.4**	**+1.0**
MLY	**Manley**	**9.89**	**20**			**Pn**	**10 01 34.5**	**+0.7**
WRH	**Wood River Hil**	**10.00**	**27**			**Pn**	**10 01 35.1**	**-0.1**
GRNC	**Granite Creek**	**10.05**	**55**			**Pn**	**10 01 37.5**	**+1.3**
K24K	**Donnelly Dome**	**10.15**	**34**			**Pn**	**10 01 40.7**	**+3.3**
HDA	**Harding Lake**	**10.25**	**29**			**Pn**	**10 01 38.5**	**-0.3**
G19K	**Purcell Mounta**	**10.25**	**3**			**Pn**	**10 01 39.4**	**+0.7**
I23K	**Minto, Yukon-K**	**10.27**	**22**			**Pn**	**10 01 38.6**	**-0.3**
IMAR	**Indian Mountai**	**10.33**	**11**			**Pn**	**10 01 40.4**	**+0.5**
RIDG	**Independent Ri**	**10.40**	**36**			**Pn**	**10 01 42.4**	**+1.6**
ILAR	**Eielson Array**	**10.55**	**28**	Pn		**Pn**	**10 01 42.8**	**-0.1**
	comp=E,0.2nm,0.3s,baz=217,slow=13,SNR=12							
ILAR					Sn	**Sn**	**10 03 41.1**	**-0.3**
	comp=E,0.1nm,0.3s,baz=218,slow=21,SNR=4.4							
	comp=E,1.0nm,0.5s							
H22K	**Ishtalitna Cre**	**10.56**	**16**			**Pn**	**10 01 44.1**	**+1.0**
G21K	**Allakaket**	**10.87**	**11**			**Pn**	**10 01 48.8**	**+1.5**
F19K	**Shaleruckik Mo**	**10.93**	**2**			**Pn**	**10 01 49.4**	**+1.4**
BCAR	**Beaver Creek A**	**11.09**	**43**	Pn		**Pn**	**10 01 51.4**	**+1.1**
F20K	**Avaraart Lake**	**11.22**	**6**			**Pn**	**10 01 53.8**	**+1.8**
PRP	**Porcupine Dome**	**11.50**	**28**			**Pn**	**10 01 57.4**	**+1.6**
G23K	**Bananza Creek**	**11.54**	**17**			**Pn**	**10 01 57.9**	**+1.6**
F21K	**Alatna River**	**11.56**	**10**			**Pn**	**10 01 58.8**	**+2.1**

I26K	**Coal Creek Min**	**12.01**	**32**			**Pn**	**10 02 03.6**	**+0.8**
M29M	**Somme Creek**	**12.15**	**49**			**Pn**	**10 02 05.8**	**+0.9**
DAWY	**Dawson**	**12.53**	**42**			**Pn**	**10 02 11.1**	**+1.2**
E21K	**Killik River**	**12.71**	**8**			**Pn**	**10 02 14.8**	**+2.4**
I30M	**Mount Dempster**	**14.24**	**40**	Pn		**Pn**	**10 02 34.6**	**+1.3**
INK	**Inuvik**	**16.86**	**33**	P		**P**	**10 03 10.6**	**+0.8**
	comp=E,0.3nm,0.3s,baz=232,slow=17,SNR=7.2							
	comp=E,0.7nm,0.4s							
YKA	**Yellowknife Ar**	**23.04**	**55**	P		**P**	**10 04 18.6**	**+1.7**
	comp=E,0.6nm,0.5s,baz=273,slow=11,SNR=1.8							
	comp=E,0.6nm,0.5s							
PETK	**Petropavlovsk-**	**25.21**	**282**	P		**P**	**10 04 35.8**	**-1.8**
	comp=E,1.4nm,0.5s,baz=46,slow=8.3,SNR=3.5							
PETK				LR		LR	10 14 38.8	
	comp=E,45nm,18.9s,baz=102,slow=37							
	comp=E,1.4nm,0.5s							
YBH	**Yreka Blue Hor**	**27.19**	**106**	LR		LR	10 13 34.5	
	comp=E,48nm,18.4s,baz=328,slow=32							
PDAR	**Pinedale Array**	**33.80**	**92**	P		**P**	**10 05 52.3**	**-1.9**
	comp=E,0.2nm,0.7s,baz=66,slow=3.7,SNR=3.9							
PDAR				LR		LR	10 18 10.8	
	comp=E,19nm,20.5s,baz=336,slow=34							
	comp=E,0.2nm,0.7s							
KLR	**Kul'dur**	**41.20**	**291**	LR		LR	10 24 10.9	
	comp=E,33nm,18.3s,baz=200,slow=36							
TXAR	**Lajitas Array**	**46.74**	**101**	LR		LR	10 27 07.1	
	comp=E,62nm,18.2s,baz=268,slow=36							
KSRS	**Korea Array**	**51.11**	**281**	P		**P**	**10 08 14.2**	**-0.4**
	comp=E,0.6nm,0.5s,baz=37,slow=7.3,SNR=2.4							
	comp=E,0.6nm,0.5s							
SONM	**Songino Array**	**54.71**	**305**	P		**P**	**10 08 41.7**	**+0.6**
	comp=E,0.7nm,0.6s,baz=72,slow=7.1,SNR=3.7							
	comp=E,0.7nm,0.6s							
BVAR	**Borovoye Array**	**64.16**	**330**	P		**P**	**10 09 46.4**	**+0.1**
	comp=E,0.6nm,0.6s,baz=359,slow=8.6,SNR=1.6							
	comp=E,0.6nm,0.6s							
MKAR	**Makanchi Array**	**65.63**	**319**	P		**P**	**10 09 54.9**	**-1.1**
	comp=E,0.2nm,0.4s,baz=40,slow=3.8,SNR=2.2							
	comp=E,0.2nm,0.4s							
CMAR	**Chiang Mai Arr**	**81.67**	**291**	P		**P**	**10 11 30.2**	**-0.4**
	comp=E,0.9nm,0.3s,baz=41,slow=6.0,SNR=1.4							
	comp=E,0.9nm,0.3s							
ESDC	**Sonseca Array**	**82.33**	**20**	P		**P**	**10 11 33.5**	**-0.2**
	comp=E,0.7nm,0.9s,baz=349,slow=4.7,SNR=4.3							
	comp=E,0.7nm,0.9s							
QSPA	**South Pole Qui**	**145.73**	**180**	PKPbc		**PKPdf**	**10 18 48.7**	**-0.5**
	comp=E,4.8nm,1.2s,baz=290,slow=1.7,SNR=15							

TAP 02 10:00:38.9, 23°.06N×120°.85E, h6km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STYH	**Taoyuan**	**0.13**	**328**	*i* P	Pg	10 00 42.0	+0.4
STYH				*i* S	Sg	10 00 44.0	+0.6
STYT	**Tauyuan**	**0.13**	**320**	*i* P	Pg	10 00 42.1	+0.4
STYT				*i* S	Sg	10 00 44.0	+0.4
SLGT	**Liugui**	**0.20**	**251**	*i* P	Pg	10 00 43.7	+0.9
SLGT				*i* S	Sg	10 00 46.7	+1.2
ELDTW	**Lidau**	**0.20**	**50**	*i* P	Pg	10 00 43.8	+0.8
ELDTW				*i* S	Sg	10 00 46.6	+1.0
LONT	**Longtian**	**0.30**	**120**	*e*P	Pg	10 00 45.7	+1.0
TPUB	**Ta-pu**	**0.32**	**320**	*e*P	Pb	10 00 46.1	-0.9
TPUB				*e*S	Sb	10 00 51.1	-1.3

TAP 02 10:00:40.4, 23°.57N×120°.68E, h8km, ML1.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHN5	**Tsauling**	**0.03**	**356**	*i* P	Pg	10 00 42.4	+0.3
CHN5				*i* S	Sg	10 00 43.9	+0.6
ALS	**Alishan**	**0.13**	**118**	*i* P	Pg	10 00 44.4	+0.9
ALS				*i* S	Sg	10 00 47.1	+1.5
WCKO	**Fanlu**	**0.15**	**207**	*i* P	Pg	10 00 44.3	+0.7
WCKO				*i* S	Sg	10 00 47.5	+1.7
WGK	**Gukeng**	**0.16**	**316**	P	Pg	10 00 44.7	+0.9
WGK				*e*S	Sg	10 00 48.1	+2.1
WDLH	**Douliu**	**0.17**	**312**	*e*P	Pg	10 00 45.4	+1.3
WDLH				*e*S	Sg	10 00 49.0	+2.4
WHYT	**Xinyi Township**	**0.20**	**52**	P	Pg	10 00 45.5	+1.0
WHYT				S	Sg	10 00 49.3	+1.9
CHN4	**Tsaushan**	**0.23**	**200**	P	Pg	10 00 46.2	+1.1
CHN4				*e*S	Sg	10 00 50.6	+2.2
TPUB	**Ta-pu**	**0.27**	**190**	P	Pb	10 00 46.8	-0.8
TPUB				S	Sb	10 00 51.8	-0.6
SSLB	**Suanglung**	**0.33**	**49**	P	Pb	10 00 47.9	-0.7
SSLB				*e*S	Sb	10 00 53.6	-0.5
TWK	**Hsinying**	**0.35**	**210**	*e*P	Pg	10 00 48.1	+0.8
TWK				*e*S	Sb	10 00 54.6	0.0
TWK	**Hsinying**	**0.35**	**210**	P	Pg	10 00 48.1	+0.8
TWK				*e*S	Sb	10 00 54.4	-0.3
SMLT	**Sun Moon Lake**	**0.37**	**33**	*e*P	Pb	10 00 48.8	-0.5

HEL 02 10:04:15.3±0.0, 63°.93N×22°.93E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBF0	**Syolatti, Pyha**	**0.81**	**44**	*e*P	Pg	10 04 29.7	-1.1
OBF0				smax	smax	10 04 40.1	
	comp=Z,2.0nm,0.2s						
OBF0				*e*SB	Sg	10 04 41.7	+0.4
VAF	**Ylistaro**	**0.90**	**188**	*e*P	Pg	10 04 32.4	0.0
VAF	**Ylistaro**	**0.90**	**188**	*e*PB	Pg	10 04 32.2	-0.2
VAF				smax	smax	10 04 43.0	
	comp=Z,1.2nm,0.2s						
VAF				*e*SB	Sg	10 04 44.0	0.0
OUF	**Merijarvi**	**0.91**	**60**	*e*P	Pg	10 04 31.3	-1.3
OUF				*e*S	Sg	10 04 42.7	-1.7
OUF				smax	smax	10 04 43.0	
	comp=Z,1.2nm,0.2s						
BURU	**Burvik**	**0.95**	**315**	*e*P	Pg	10 04 31.7	-1.7
BURU				*e*SB	Sg	10 04 45.6	-0.1
UMAU	**Umeaa**	**1.00**	**269**	*e*P	Pg	10 04 33.1	-1.3
OUL	**Oulu**	**1.73**	**46**	*e*PG	Pn	10 04 46.4	-0.2
OUL				*e*SN	Sn	10 05 09.7	+0.3
HUSU	**Husum**	**1.76**	**252**	*e*PN	Pn	10 04 46.9	-0.1
SUF	**Sumiainen**	**1.89**	**128**	*e*P	Pn	10 04 49.2	+0.4
SUF	**Sumiainen**	**1.89**	**128**	*e*PG	Pn	10 04 49.6	+0.8
SUF				smax	smax	10 05 11.4	
	comp=Z,0.8nm,0.2s						
KEF	**Keuruu**	**1.97**	**153**	*e*P	Pn	10 04 50.7	+0.7
KEF	**Keuruu**	**1.97**	**153**	*e*PG	Pn	10 04 50.4	+0.5
KEF				smax	smax	10 05 14.0	
	comp=Z,1.2nm,0.2s						
KPF	**Kankaanpaa**	**2.14**	**191**	*e*PG	Pn	10 04 53.4	+1.2
KPF				smax	smax	10 05 18.9	
	comp=Z,0.8nm,0.2s						
NIF	**Nilsia**	**2.24**	**102**	*e*PB	Pn	10 04 54.4	+0.8
NIF				smax	smax	10 05 21.5	
	comp=Z,1.7nm,0.2s						
NIF				*e*SG	Sb	10 05 24.1	-0.8
TOF	**Tornio**	**2.24**	**15**	*e*PB	Pn	10 04 54.5	+0.9
TOF				smax	smax	10 05 21.3	
	comp=Z,1.0nm,0.2s						
TOF				*e*SB	Sn	10 05 23.2	+1.3
KAF	**Kangasniemi**	**2.38**	**138**	smax	smax	10 05 25.7	
	comp=Z,1.8nm,0.2s						
KAF				*e*SG	Sb	10 05 28.4	-0.6
HEMU	**Hemsoen**	**2.54**	**243**	*e*P	Pn	10 04 57.7	0.0
HEMU				*e*SB	Sb	10 05 32.0	-1.5
ERTU	**Ertsjaerv**	**2.66**	**354**	*e*SG	Sb	10 05 36.0	-0.8
RANF	**Ranua**	**2.66**	**36**	*e*SB	Sb	10 05 36.1	-0.9
FIA0	**FINESS Array S**	**2.88**	**148**	*e*PB	Pn	10 05 04.0	+1.6
FIA0				smax	smax	10 05 40.2	
	comp=Z,0.5nm,0.2s						
FIA0				*e*SB	Sb	10 05 41.8	-1.5

*HEL **02** 10:05:40.0±0.2, 64°.79N×30°.71E, h0km, ML2.0, Explosion*
*IDC **02** 10:05:41.6±2.6, 64°.73N×30°.65E, h0km, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=38.6km s-min=9.4km az=103.0*
*KOLA **02** 10:05:41.3, 64°.80N×30°.93E, h0km, ML2.4, Kostomuksha, Karelia*
*IGKR **02** 10:05:41.0±0.4, 64°.75N±0°.03×30°.7E±0°.2, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

ISC 02 10:05:40.0±0.9, 64°.84N±0°.02×30°.57E±0°.04, h0km, n46, σ1°63/63, Finland-Karelia border region

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

RMF	**Romuvaara**	**0.68**	**204**	PG		**Pg**	**10 05 52.4**	**-0.7**
RMF				smax	smax	10 06 01.0		
	comp=Z,18nm,0.2s							
KU1	**Kurvinen**	**0.85**	**330**	*e*SG		**Pg**	**10 05 56.7**	**+0.5**
KU1	**Kurvinen**	**0.85**	**330**	PG		**Pg**	**10 05 56.7**	**+0.5**
KU6	**Riekki**	**1.23**	**347**	*e*SB		**Pg**	**10 06 03.3**	**-0.2**
KU6	**Riekki**	**1.23**	**347**	PG		**Pg**	**10 06 03.3**	**-0.2**
	baz=162							
KU6				smax	smax	10 06 19.1		
	comp=Z,11nm,0.2s							
KU6				SB		**Sb**	**10 06 20.3**	**-0.1**
KU2	**Taivalkoski**	**1.32**	**313**	PG		**Pg**	**10 06 05.3**	**0.0**
	baz=129							
NIF	**Nilsia**	**1.89**	**221**	PG		**Pn**	**10 06 14.3**	**+0.8**
	baz=40							
NIF				smax	smax	10 06 36.2		
	comp=Z,8.9nm,0.2s							
NIF				SN		**Sn**	**10 06 39.0**	**+0.9**
JOF	**Joensuu**	**1.96**	**170**	*e*P		**Pn**	**10 06 14.8**	**+0.3**
JOF	**Joensuu**	**1.96**	**170**	PG		**Pn**	**10 06 13.4**	**-1.0**
	baz=352							
JOF				SG		**Sn**	**10 06 39.9**	**+0.3**
RANF	**Ranua**	**1.97**	**308**	PG		**Pb**	**10 06 16.7**	**-0.1**
	baz=124							
RANF				SG		**Sg**	**10 06 43.0**	**-0.4**
OUL	**Oulu**	**2.00**	**279**	PG		**Pb**	**10 06 16.9**	**-0.4**
	baz=99							
OUL				SG		**Sb**	**10 06 43.2**	**+0.4**
KVDA	**Kovda**	**2.09**	**26**	P		**Pn**	**10 06 16.6**	**+0.4**
KVDA				S		**Sn**	**10 06 41.3**	**-1.6**
OUF	**Merijarvi**	**2.56**	**262**	PB		**Pn**	**10 06 24.6**	**+1.8**
	baz=82							
OUF				smax	smax	10 06 57.2		
	comp=Z,9.2nm,0.2s							
OUF				SG		**Sb**	**10 06 59.4**	**+0.6**
RNF	**Rovaniemi**	**2.59**	**315**	PB		**Pb**	**10 06 26.1**	**-1.2**
RNF				SG		**Sb**	**10 07 00.9**	**+1.3**
OBF0	**Syolatti, Pyha**	**2.75**	**266**	PB		**Pn**	**10 06 27.7**	**+2.4**
OBF0				smax	smax	10 07 02.4		
	comp=Z,9.1nm,0.2s							
OBF0				SG		**Sb**	**10 07 06.1**	**+2.0**
TOF	**Tornio**	**2.89**	**298**	PB		**Pb**	**10 06 30.5**	**-1.9**
TOF				smax	smax	10 07 07.3		
	comp=Z,4.1nm,0.2s							
TOF				SG		**Sb**	**10 07 08.8**	**+0.5**
SUF	**Sumiainen**	**2.90**	**225**	*e*P		**Pn**	**10 06 29.6**	**+2.3**
SUF	**Sumiainen**	**2.90**	**225**	PB		**Pn**	**10 06 30.0**	**+2.7**
SUF				smax	smax	10 07 05.2		
	comp=Z,2.9nm,0.2s							
APA0	**Apatity Array**	**2.95**	**18**	P		**Pn**	**10 06 29.0**	**+0.9**
APA0				S		**Sn**	**10 07 04.8**	**+0.8**
VRF	**Varrio**	**2.95**	**353**	PN		**Pn**	**10 06 29.4**	**+1.3**
VRF				smax	smax	10 07 08.4		
	comp=Z,4.6nm,0.2s							
VRF				SG		**Sg**	**10 07 12.2**	**-2.4**
KAF	**Kangasniemi**	**3.34**	**217**	PB		**Pb**	**10 06 37.2**	**-2.9**
KAF				SG		**Sb**	**10 07 21.4**	**+0.2**
LVZ	**Lovozero**	**3.48**	**26**	S		**Sn**	**10 07 16.9**	**-0.4**
LVZ	**Lovozero**	**3.48**	**26**	PN		**Pn**	**10 06 36.2**	**+0.7**
LVZ				SN		**Sn**	**10 07 17.5**	**+0.1**
RUF	**Ruokolahti**	**3.51**	**193**	PN		**Pn**	**10 06 36.8**	**+1.1**
KLF	**Kolari**	**3.61**	**315**	PG		**Pb**	**10 06 45.5**	**+0.8**
KEF	**Keuruu**	**3.70**	**226**	*e*P		**Pn**	**10 06 40.5**	**+2.1**
KEF	**Keuruu**	**3.70**	**226**	PB		**Pn**	**10 06 41.4**	**+3.0**
	baz=45							
RAJF	**Raja-Jooseppi**	**3.76**	**347**	PN		**Pn**	**10 06 40

CPUP PcP 10 31 51.3 -0.3
MT02 Curacav 38.17 290 P P 10 29 40.8 -1.3
MT02 IAmb IAmb 10 30 02.9
comp=Z,19nm,1.2s
MAW Mawson 39.27 143 P P 10 29 51.0 +0.3
comp=Z,1.4nm,0.6s,baz=227,slow=7.2,SNR=6.4
comp=Z,1.4nm,0.6s
MAW Mawson 39.27 143 P P 10 29 51.0 +0.3
CO02 Combarbal 39.74 292 P P 10 29 54.1 -1.1
CO01 Juntas del Tor 40.28 294 P P 10 30 00.3 +0.5
CO01 IAmb IAmb 10 30 23.7
comp=Z,14nm,1.2s
SUR Sutherland 40.89 74 P P 10 30 06.0 +1.2
AC05 El Transito 41.30 295 P P 10 30 07.4 -0.6
AC05 IAmb IAmb 10 30 21.1
comp=Z,15nm,1.1s
AQDB Aquidauana 42.22 318 P P 10 30 14.9 -0.5
AC02 Maricunga 42.40 298 P P 10 30 17.5 +0.1
AC02 IAmb IAmb 10 30 18.1
comp=Z,7.8nm,0.8s
BDFB Brasilia 44.32 331 P P 10 30 33.4 +1.0
comp=Z,3.5nm,0.5s,baz=124,slow=1.4,SNR=5.2
comp=Z,3.5nm,0.5s
BDFB Brasilia 44.32 331 P P 10 30 33.4 +1.0
BDFB IAmb IAmb 10 30 36.2
comp=Z,4.8nm,0.6s
VNDA Vanda 45.50 183 P P 10 30 41.7 +0.8
comp=Z,2.0nm,0.7s,baz=214,slow=4.2,SNR=6.2
comp=Z,2.0nm,0.7s
VNDA Vanda 45.50 183 P P 10 30 41.7 +0.8
PB09 IPOC Station P 46.73 301 P P 10 30 51.5 +0.1
PB09 IAmb IAmb 10 31 22.9
comp=Z,27nm,1.3s
PB03 IPOC Station P 46.76 300 P P 10 30 50.6 -1.0
PB03 IAmb IAmb 10 31 32.6
comp=Z,25nm,1.4s
PB07 IPOC Station P 47.10 300 P P 10 30 53.5 -0.7
PB07 IAmb IAmb 10 30 56.2
comp=Z,27nm,1.3s
PTLB Pontes e Lacer 48.10 317 P P 10 31 02.1 +0.3
PTLB IAmb IAmb 10 31 02.6
comp=Z,7.2nm,0.9s
PB08 IPOC Station P 48.12 302 P P 10 31 01.1 -1.3
GO01 Chusmiza 48.55 303 P P 10 31 05.8 -0.1
PB11 IPOC Station P 48.69 302 P P 10 31 06.1 -0.4
PB11 IAmb IAmb 10 31 07.4
comp=Z,20nm,1.3s
PSGCX Pisagua 49.04 302 P P 10 31 08.3 -0.9
PSGCX IAmb IAmb 10 31 14.8
comp=Z,15nm,1.2s
LBTB Lobatse 49.29 72 P P 10 31 10.7 -0.3
LBTB IAmb IAmb 10 31 12.0
comp=Z,6.6nm,0.8s
PB16 IPOC Station P 49.86 303 P P 10 31 15.8 -0.1
LPAZ La Paz 51.03 306 P P 10 31 24.8 0.0
comp=Z,10nm,0.7s,baz=165,slow=5.9,SNR=41
LPAZ PcP PcP 10 32 38.7 +0.1
comp=Z,1.4nm,0.4s,baz=71,slow=0.7,SNR=4.7
comp=Z,10nm,0.7s
LPAZ La Paz 51.03 306 P P 10 31 24.3 -0.4
LPAZ IAmb IAmb 10 31 26.6
comp=Z,8.6nm,0.7s
BOAV Boa Vista 65.16 323 P P 10 33 01.5 -0.7
BOAV IAmb IAmb 10 33 02.4
comp=Z,11nm,1.3s
TORD Torodi Ar. Bea 73.97 29 P P 10 33 57.1 +1.0
comp=Z,2.6nm,0.5s,baz=200,slow=6.3,SNR=21
comp=Z,2.6nm,0.5s
ASAR Alice Springs 97.95 162 P P 10 35 55.0 -1.3
comp=Z,0.6nm,0.8s,baz=186,slow=3.8,SNR=4.7
comp=Z,0.6nm,0.8s
PDAR Pinedale Array 120.95 302 PKP PKPdf 10 41 10.5 -0.8
comp=Z,0.2nm,0.5s,baz=42,slow=3.2,SNR=2.4
FINES FINESS Array B 125.31 28 PKP PKPdf 10 41 17.8 -0.9
comp=Z,1.6nm,0.5s,baz=152,slow=1.4,SNR=16
ARCES ARCESS Array B 131.93 22 PKP PKPdf 10 41 31.9 +0.8
comp=Z,2.7nm,0.9s,baz=332,slow=4.1,SNR=6.8
YKA Yellowknife Ar 136.99 317 PKP PKPdf 10 41 40.4 -0.4
comp=Z,0.7nm,0.4s,baz=140,slow=2.0,SNR=10
MKAR Makanchi Array 137.18 72 PKP PKPdf 10 41 42.0 +0.3
comp=Z,0.2nm,0.5s,baz=225,slow=1.5,SNR=2.3
SONM Songino Array 150.74 88 PKPbc PKPbc 10 42 10.6 -0.3
comp=Z,0.4nm,0.3s,baz=210,slow=2.3,SNR=4.4
ILAR Eielson Array 150.85 310 PKPbc PKPbc 10 42 09.9 -0.6
comp=Z,1.8nm,0.6s,baz=148,slow=2.6,SNR=34
ILAR Eielson Array 150.85 310 PKPbc 10 42 10.0 -0.4
GHO Glory Hole Cre 150.93 304 PKPbc PKPbc 10 42 10.9 0.0
CNPM China Poot 151.29 299 PKPbc PKPbc 10 42 11.2 -0.5
KDAK Kodiak Island 151.32 295 PKPbc PKPbc 10 42 11.7 0.0
OHAK Old Harbor 151.45 293 PKPbc PKPbc 10 42 12.0 -0.1

*SJA **02** 10:32:59.6±0.8, 30°.81S×71°.60W, h27km±2km, ML4.3, MW4.2*
*GUC **02** 10:33:02.6±0.7, 30°.82S×71°.39W, h50km±2km, ML4.5*
*NEIC **02** 10:33:03.1±2.1, 30°.80S±0°.05×71°.50W±0°.09, h40km±4km, mb4.5/18, ML4.5(GUC), Error ellipse: s-maj=10.8km s-min=7.0km az=100.0*
*IDC **02** 10:33:03.0±0.8, 30°.82S×71°.30W, h47km±6km, mb4.1/8, mbtmp4.2/11, MS3.3/5, Error ellipse: s-maj=23.7km s-min=15.3km az=94.0*
ISC 02 10:33:02.5±0.6, 30°.83S±0°.02×71°.43W±0°.04, h45km±5km, n134, σ2s25/158, mb4.5/14, MS3.3/4, 6C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO06	**Fray Jorge**	**0.23**	**312**			**Pn**	**10 33 11.1**	**+0.5**
CO02	**Combarbal**	**0.53**	**135**			**Pn**	**10 33 14.2**	**+0.3**
CO02	**Combarbal**	**0.53**	**135**	*eP*		**Pn**	**10 33 13.2**	**-0.8**
CO02				*eS*		**Sn**	**10 33 22.6**	**+0.6**
CO02				IAML			10 33 23.9	
comp=Z,18μm,0.2s								
CO02	**Combarbal**	**0.53**	**135**	*i*P		**Pn**	**10 33 14.2**	**+0.3**
CO02				*i* S		**Sn**	**10 33 22.4**	**+0.3**
CO02				IAML			10 33 22.9	
comp=N,64μm,0.4s								
CO03	**El Pedregal**	**0.64**	**91**			**Pn**	**10 33 15.3**	**0.0**
CO03	**El Pedregal**	**0.64**	**91**	*eP*		Pn	10 33 09.7	-5.7
CO03				*eP*			10 33 15.2	
CO03				*eS*		**Sn**	**10 33 24.7**	**+0.1**
CO03				IAML			10 33 25.1	
comp=Z,10μm,0.4s								
CO03	**El Pedregal**	**0.64**	**91**	*i*P		**Pn**	**10 33 15.4**	**0.0**
CO03				*i* S		**Sn**	**10 33 24.3**	**-0.3**
CO03				IAML			10 33 25.3	
comp=E,23μm,0.3s								
GO04	**Tololo Observa**	**0.85**	**40**			**Pn**	**10 33 18.6**	**+0.3**
GO04	**Tololo Observa**	**0.85**	**40**	*eP*		**Pn**	**10 33 18.2**	**-0.2**
GO04				*eS*		**Sn**	**10 33 29.7**	**-0.3**
GO04				IAML			10 33 31.7	
comp=Z,31μm,0.2s								
GO04	**Tololo Observa**	**0.85**	**40**	*i* P		**Pn**	**10 33 18.2**	**-0.2**
GO04				*i* S		**Sn**	**10 33 29.6**	**-0.3**
GO04				IAML			10 33 31.5	
comp=N,74μm,0.3s								
CO04	**Los Peladeros**	**1.27**	**162**			**Pn**	**10 33 24.7**	**+0.6**
CO04	**Los Peladeros**	**1.27**	**162**	*i*P		**Pn**	**10 33 24.7**	**+0.6**
CO04				*i* S		**Sn**	**10 33 41.4**	**+1.2**
CO04				IAML			10 33 44.2	
comp=E,15μm,0.2s								
CO01	**Juntas del Tor**	**1.44**	**54**			**Pn**	**10 33 27.5**	**+1.2**
CO01	**Juntas del Tor**	**1.44**	**54**	*eP*		**Pn**	**10 33 27.5**	**+1.2**
CO01				*eS*		**Sn**	**10 33 46.0**	**+1.9**
CO01				IAML			10 33 50.0	
comp=Z,4μm,0.5s								
CO01	**Juntas del Tor**	**1.44**	**54**	*i*P		**Pn**	**10 33 27.5**	**+1.2**
CO01				*i* S		**Sn**	**10 33 45.3**	**+1.2**
CO01				IAML			10 33 46.4	
comp=N,9μm,0.3s								
AROD	**Rodeo**	**1.81**	**69**	*eP*		**Pn**	**10 33 34.6**	**+3.0**
LCO	**Las Campanas**	**1.92**	**19**			**Pn**	**10 33 33.8**	**+0.8**
LCO	**Las Campanas**	**1.92**	**19**	*eP*		**Pn**	**10 33 33.7**	**+0.7**
LCO				IAML			10 34 07.2	
comp=Z,3μm,0.2s								
LCO	**Las Campanas**	**1.92**	**19**	*i* P		**Pn**	**10 33 33.3**	**+0.3**
LCO				*i* S		**Sn**	**10 33 56.5**	**+0.4**
ACCO	**Cerro Coronel**	**2.05**	**84**	*eP*		**Pn**	**10 33 38.0**	**+3.2**
ACCO				*eS*		**Sn**	**10 33 50.9**	**-8.5**
ACCO				IAML			10 33 51.6	
comp=Z,1μm,0.4s								
RTLS	**Leoncito**	**2.07**	**118**	*eP*		**Pn**	**10 33 38.0**	**+3.0**
RTLS				*eS*		**Sn**	**10 33 51.3**	**-8.4**
RTLS				IAML			10 33 51.8	
comp=Z,4μm,0.3s								
VA03	**San Esteban**	**2.07**	**159**			**Pn**	**10 33 36.4**	**+1.5**
ACDV	**Cuesta del Vie**	**2.10**	**72**	*eP*		**Pn**	**10 33 38.5**	**+3.1**
ACDV				*eS*		**Sn**	**10 33 52.1**	**-8.3**
ACDV				IAML			10 33 53.6	
comp=Z,994nm,0.6s								
ROCH	**El Roble**	**2.17**	**171**	*iP*		**Pn**	**10 33 37.5**	**+1.2**
ROCH				IAML			10 34 17.4	
comp=N,3μm,0.4s								
VA01	**Torpederas**	**2.19**	**185**			**Pn**	**10 33 36.8**	**+0.4**
VA01	**Torpederas**	**2.19**	**185**	*eP*		Pn	10 33 31.3	-5.2
VA01				*eS*		**Sn**	**10 33 54.8**	**-7.6**
VA01	**Torpederas**	**2.19**	**185**	*i* P		**Pn**	**10 33 36.6**	**+0.2**
AC05	**El Transito**	**2.23**	**27**			**Pn**	**10 33 38.7**	**+1.6**
AC05	**El Transito**	**2.23**	**27**	*eP*		**Pn**	**10 33 38.7**	**+1.6**
AC05				*eS*		**Sn**	**10 34 06.2**	**+2.7**
AC05				IAML			10 34 12.7	
comp=Z,1μm,0.5s								
AC05	**El Transito**	**2.23**	**27**	*i* P		**Pn**	**10 33 38.6**	**+1.6**
AC05				*i* S		**Sn**	**10 34 04.8**	**+1.4**
AC05				IAML			10 34 20.1	
comp=E,3μm,0.5s								
PEL	**Peldehue**	**2.39**	**165**	*eP*		**Pn**	**10 33 40.2**	**+1.0**
PEL				*eS*		**Sn**	**10 34 11.2**	**+3.8**
PEL				IAML			10 34 31.9	
comp=Z,777nm,0.8s								
PEL	**Peldehue**	**2.39**	**165**	*eP*		**Pn**	**10 33 40.6**	**+1.3**
PEL				IAML			10 34 22.2	
comp=N,1μm,0.4s								
MT02	**Curacav**	**2.43**	**174**			**Pn**	**10 33 40.8**	**+1.0**
MT02	**Curacav**	**2.43**	**174**	*eP*		**Pn**	**10 33 40.7**	**+0.9**
MT02				*eS*		**Sn**	**10 34 14.8**	**+6.4**
MT02				IAML			10 34 21.4	
comp=Z,1μm,0.5s								
MT02	**Curacav**	**2.43**	**174**	*i* P		**Pn**	**10 33 40.4**	**+0.6**
MT02				*i* S		**Sn**	**10 34 10.1**	**+1.8**
ZON	**Zonda**	**2.46**	**108**			**Pn**	**10 33 43.4**	**+3.1**
ZON	**Zonda**	**2.46**	**108**	*eP*		**Pn**	**10 33 43.4**	**+3.1**
ZON				*eS*		**Sn**	**10 34 12.0**	**+2.8**
ZON				IAML			10 34 34.9	
comp=Z,898nm,0.5s								
MT10	**Hacienda Santa**	**2.55**	**163**	*i* P		**Pn**	**10 33 43.2**	**+1.7**
MT10				*i* S		**Sn**	**10 34 12.3**	**+0.8**
MT10				IAML			10 34 27.1	
comp=E,2μm,0.5s								
SJA	**San Juan**	**2.56**	**107**	*eP*		**Pn**	**10 33 40.8**	**-0.7**
SJA				IAML			10 34 35.6	
comp=Z,1μm,0.9s								
RTLL	**Cerro Villicun**	**2.58**	**102**	*eP*		**Pn**	**10 33 44.5**	**+2.6**
RTLL				*eS*		Sn	10 34 02.7	-9.4
RTLL				IAML			10 34 38.4	
comp=Z,1μm,0.4s								
MT05	**Renca**	**2.62**	**167**			**Pn**	**10 33 44.1**	**+1.6**
MT05	**Renca**	**2.62**	**167**	*eP*		**Pn**	**10 33 44.0**	**+1.6**
MT05				*eS*		**Sn**	**10 34 15.8**	**+2.8**
MT05				IAML			10 34 28.9	
comp=Z,1μm,0.5s								
MT05	**Renca**	**2.62**	**167**	*i* P		**Pn**	**10 33 43.8**	**+1.4**
MT05				*i* S		**Sn**	**10 34 14.9**	**+1.9**
MT05				IAML			10 34 27.7	
comp=E,3μm,0.3s								
AC04	**Llanos de Chal**	**2.64**	**7**			**Pn**	**10 33 43.6**	**+1.1**
AC04	**Llanos de Chal**	**2.64**	**7**	*eP*		**Pn**	**10 33 43.3**	**+0.8**
AC04				IAML			10 34 33.9	
comp=Z,808nm,0.8s								
AC04	**Llanos de Chal**	**2.64**	**7**	*i* P		**Pn**	**10 33 43.4**	**+0.8**
AC04				*i* S		**Sn**	**10 34 14.9**	**+1.6**
AC04				IAML			10 34 24.9	
comp=E,1μm,0.1s								
MT14	**Cerro Cal¡n**	**2.67**	**164**	*i* P		**Pn**	**10 33 44.9**	**+1.8**
MT14				*i* S		**Sn**	**10 34 16.0**	**+1.8**
MT14				IAML			10 34 30.3	
comp=N,4μm,0.3s								
MT16	**CCHEN**	**2.70**	**164**			**Pn**	**10 33 45.4**	**+1.8**
MT16	**CCHEN**	**2.70**	**164**	*i* P		**Pn**	**10 33 44.9**	**+1.3**
MT16				*i* S		**Sn**	**10 34 16.5**	**+1.4**
MT16				IAML			10 34 37.2	
comp=N,904nm,0.6s								
MT03	**Universidad Ad**	**2.77**	**164**			**Pn**	**10 33 46.5**	**+2.0**
MT03	**Universidad Ad**	**2.77**	**164**	*eP*		**Pn**	**10 33 46.0**	**+1.5**
MT03				*eS*		**Sn**	**10 34 18.4**	**+1.7**
MT03				IAML			10 34 27.8	
comp=Z,818nm,0.2s								
MT03	**Universidad Ad**	**2.77**	**164**	*i* P		**Pn**	**10 33 45.8**	**+1.4**
MT03				IAML			10 34 34.8	
comp=E,3μm,0.7s								
MT08	**Bocatoma Ro**	**2.87**	**156**			**Pn**	**10 33 49.3**	**+3.3**
MT08	**Bocatoma Ro**	**2.87**	**156**	*eP*		**Pn**	**10 33 44.5**	**-1.5**
MT08				*eS*		**Sn**	**10 34 23.5**	**+4.1**
MT08				IAML			10 34 32.7	
comp=Z,576nm,0.4s								
MT08	**Bocatoma Ro**	**2.87**	**156**	*i* P		**Pn**	**10 33 49.3**	**+3.3**
MT08				IAML			10 34 32.7	
comp=E,852nm,0.6s								
ARCO	**CERRO ARCO**	**2.92**	**134**	*eP*		**Pn**	**10 33 50.5**	**+3.9**
ARCO				*eS*		Sn	10 34 35.8	+15
ARCO				IAML			10 34 38.6	
comp=Z,968nm,0.7s								
MT09	**Talagante**	**2.96**	**173**			**Pn**	**10 33 48.2**	**+1.1**
MT09	**Talagante**	**2.96**	**173**	*i* P		**Pn**	**10 33 48.4**	**+1.3**
MT09				*eS*		**Sn**	**10 34 22.7**	**+1.2**
MT09				IAML			10 34 37.2	
comp=N,1μm,0.1s								
MT12	**Pirque**	**2.99**	**166**	*i* P		**Pn**	**10 33 48.5**	**+1.1**
MT12				*i* S		**Sn**	**10 34 23.7**	**+1.6**
MT12				IAML			10 34 40.1	
comp=N,3μm,0.4s								
MT01	**Popeta**	**3.03**	**177**			**Pn**	**10 33 48.9**	**+1.0**
MT01	**Popeta**	**3.03**	**177**	*eP*		**Pn**	**10 33 48.7**	**+0.7**
MT01	**Popeta**	**3.03**	**177**	*i*P		**Pn**	**10 33 48.6**	**+0.6**
MT01				*i* S		**Sn**	**10 34 24.2**	**+1.2**
MT01				IAML			10 34 43.6	
comp=E,911nm,0.3s								
AAGR	**Agrelo**	**3.15**	**136**	*eP*		**Pn**	**10 33 53.7**	**+3.9**
AAGR				IAML			10 34 13.4	
comp=Z,608nm,0.8s								
BO04	**La Punta**	**3.23**	**168**			**Pn**	**10 33 52.2**	**+1.5**
BO04	**La Punta**	**3.23**	**168**	*iP*		**Pn**	**10 33 52.1**	**+1.4**
BO04				*i* S		**Sn**	**10 34 29.1**	**+1.2**
GO03	**Copiapo**	**3.39**	**18**	*i* P		**Pn**	**10 33 53.5**	**+0.5**
GO03				*i* S		**Sn**	**10 34 32.6**	**+0.6**
AVFE	**Valle Fertil**	**3.43**	**88**	IAML			10 34 47.7	
comp=Z,890nm,0.5s								
VCA	**Vinchina**	**3.50**	**54**	*eP*		**Pn**	**10 33 58.5**	**+4.0**
BO01	**Tunca**	**3.56**	**175**			**Pn**	**10 33 57.7**	**+2.4**
BO01	**Tunca**	**3.56**	**175**	*eP*		**Pn**	**10 33 56.0**	**+0.7**
BO03	**Pichilemu**	**3.68**	**187**	*iP*		**Pn**	**10 33 56.2**	**-0.7**
BO02	**Sierra Bellavi**	**3.99**	**172**	*eP*		**Pn**	**10 34 02.8**	**+1.6**
BO02	**Sierra Bellavi**	**3.99**	**172**	*eP*		**Pn**	**10 34 02.3**	**+1.1**
BO02				*eS*		**Sn**	**10 34 48.0**	**+1.3**
ACLC	**CERRO LA CRUZ**	**4.12**	**71**	*eP*		**Pn**	**10 34 05.4**	**+2.2**
ACLC				*eP*		**Pn**	**10 34 05.4**	**+2.2**
ACLC				*eP*		**Pn**	**10 34 05.4**	**+2.2**
ACLC				*eS*		**Sn**	**10 34 55.6**	**+5.4**
ACLC				IAML			10 35 02.1	
comp=Z,912nm,0.4s								
ACLC				IAML			10 35 02.1	
comp=Z,912nm,0.4s								
ACLC				IAML			10 35 02.1	
comp=Z,912nm,0.4s								
ACLC				IAML			10 35 02.1	
comp=Z,912nm,0.4s								
GO05	**Hualane**	**4.19**	**186**			**Pn**	**10 34 03.2**	**-0.7**
GO05	**Hualane**	**4.19**	**186**	*eP*		**Pn**	**10 34 03.4**	**-0.6**
GO05				IAML			10 35 23.4	
comp=Z,158nm,1.2s								
TINO	**Tinogasta**	**4.35**	**52**	*eP*		**Pn**	**10 34 08.7**	**+2.4**
TINO				*eP*		**Pn**	**10 34 08.7**	**+2.4**
AC02	**Maricunga**	**4.46**	**27**			**Pn**	**10 34 09.6**	**+1.4**
AC02	**Maricunga**	**4.46**	**27**	*eP*		**Pn**	**10 34 09.7**	**+1.5**
AC02				*eP*		**Pn**	**10 34 09.7**	**+1.5**
AC02				*eS*		**Sn**	**10 35 05.7**	**+6.6**
AC02				IAML			10 35 21.1	
comp=Z,294nm,1.7s								
AC02	**Maricunga**	**4.46**	**27**	*eP*		**Pn**	**10 34 09.7**	**+1.5**
AC02				*eS*		**Sn**	**10 34 58.8**	**-0.3**
AC01	**Pan de Azucar**	**4.72**	**9**			**Pn**	**10 34 10.9**	**-0.4**
AC01	**Pan de Azucar**	**4.72**	**9**	IAML			10 35 28.9	
comp=Z,302nm,0.6s								
ML02	**Panimavida**	**4.92**	**180**			**Pn**	**10 34 14.8**	**+0.9**
ML02	**Panimavida**	**4.92**	**180**	*eP*		**Pn**	**10 34 11.2**	**-2.7**
ML02				IAML			10 35 41.5	
comp=Z,210nm,0.9s								
PB14	**IPOC Station P**	**6.25**	**9**			**Pn**	**10 34 32.9**	**+0.5**
H03N1	**Juan Fernandez**	**6.86**	**246**	T		T	10 41 31.5	
baz=73,slow=72,SNR=946								
VA04	**Juan Fernndez**	**6.87**	**244**			**Pn**	**10 34 39.3**	**-1.3**
H03N3	**Juan Fernandez**	**6.87**	**246**	T		T	10 41 31.1	
baz=73,slow=72,SNR=796								
H03N2	**Juan Fernandez**	**6.87**	**246**	T		T	10 41 32.5	
baz=73,slow=72,SNR=833								
TRQA	**Tornquist**	**10.62**	**135**			**Pn**	**10 35 32.3**	**+0.3**
CPUP	**Villa Florida**	**13.18**	**74**	P		**Pn**	**10 36 04.2**	**-2.8**
comp=Z,0.6nm,0.3s,baz=246,slow=13,SNR=4.0								
CPUP				LR		LR	10 41 39.6	
comp=Z,103nm,20.2s,baz=253,slow=40								
LPAZ	**La Paz**	**14.79**	**13**	P		**Pn**	**10 36 30.4**	**+1.0**
comp=Z,2.1nm,0.6s,baz=183,slow=7.8,SNR=8.1								
SIV	**San Ignacio**	**17.55**	**35**	P		**P**	**10 37 04.6**	**+0.1**
comp=Z,4.7nm,0.6s,baz=208,slow=10,SNR=25								
BDFB	**Brasilia**	**26.22**	**60**	P		**P**	**10 38 32.9**	**-0.6**
comp=Z,5.3nm,0.6s,baz=225,slow=7.1,SNR=6.7								
BDFB				LR		LR	10 50 08.6	
comp=Z,88nm,18.4s,baz=290,slow=39								
comp=Z,5.3nm,0.6s								
BDFB	**Brasilia**	**26.22**	**60**	P		**P**	**10 38 32.9**	**-0.6**
BDFB				IAmb		IAmb	10 38 34.2	
comp=Z,14nm,1.2s								
PMSA	**Palmer Station**	**34.28**	**174**	LR		LR	10 53 01.7	
comp=Z,51nm,21.0s,baz=48,slow=35								
MDP	**Montagnes des**	**39.99**	**30**	LR		LR	10 59 10.7	
comp=Z,54nm,21.0s,baz=238,slow=39								
SJG	**San Juan**	**48.92**	**7**	LR		LR	11 04 00.2	
comp=Z,30nm,18.3s,baz=140,slow=38								
VNA2	**Neumayer--Watz**	**52.74**	**158**	⇑P		**P**	**10 42 12.4**	**+0.1**
comp=Z,2.8nm,0.5s,baz=284,slow=7.7								
SNAA	**Sanae**	**54.33**	**159**	⇑P		**P**	**10 42 24.2**	**+0.1**
comp=Z,53nm,0.5s								
SNAA	**Sanae**	**54.33**	**159**	P		**P**	**10 42 23.9**	**-0.2**
comp=Z,2.3nm,0.6s,baz=271,slow=9.7,SNR=13								
SNAA				pP		**pP**	**10 42 37.4**	**+0.4**
comp=Z,1.4nm,0.6s,baz=285,slow=5.9,SNR=3.7								
comp=Z,2.3nm,0.6s								
SNAA	**Sanae**	**54.33**	**159**	P		**P**	**10 42 23.9**	**-0.2**
SNAA				IAmb		IAmb	10 42 44.6	
comp=Z,5.9nm,1.2s								
TROLL	**Troll, Antarti**	**56.04**	**159**	⇑P		**P**	**10 42 36.6**	**0.0**
comp=Z,76nm,0.5s								
QSPA	**South Pole Qui**	**59.40**	**180**	P		**P**	**10 43 00.8**	**+0.7**
comp=Z,1.0nm,0.5s,baz=233,slow=1.1,SNR=19								
QSPA				pP		**pP**	**10 43 14.1**	**+0.9**
comp=Z,3.1nm,1.0s,baz=162,slow=2.8,SNR=4.4								
comp=Z,1.0nm,0.5s								
QSPA	**South Pole Qui**	**59.40**	**180**	P		**P**	**10 43 00.8**	**+0.7**
QSPA				IAmb		IAmb	10 43 05.9	
comp=Z,7.0nm,1.3s								
SAND	**Sanderson**	**67.13**	**331**	P		**P**	**10 43 53.0**	**+1.4**
TXAR	**Lajitas Array**	**67.25**	**330**	P		**P**	**10 43 53.6**	**+1.2**
comp=Z,0.4nm,0.6s,baz=154,slow=8.4,SNR=6.1								
TXAR				pP		**pP**	**10 44 06.1**	**+0.6**
comp=Z,0.7nm,0.9s,baz=146,slow=9.1,SNR=4.6								
comp=Z,0.4nm,0.6s								
WVT	**Waverly**	**68.36**	**346**			**P**	**10 43 58.5**	**-0.7**
WVT				IAmb		IAmb	10 44 00.0	
comp=Z,5.5nm,0.9s								
LCAR	**Lake Charles**	**69.08**	**343**	IAmb		IAmb	10 44 04.5	
comp=Z,4.7nm,0.7s								
HHAR	**Hobbs**	**70.02**	**341**	IAmb		IAmb	10 44 10.2	
comp=Z,3.7nm,0.6s								
P38A	**Dawn**	**73.05**	**342**	IAmb		IAmb	10 44 28.5	
comp=Z,3.8nm,0.8s								
DBIC	**Dimbokro**	**73.69**	**72**	P		**P**	**10 44 31.9**	**-0.1**
comp=Z,6.4nm,0.5s,baz=240,slow=5.6,SNR=9.7								
comp=Z,6.4nm,0.5s								
DBIC	**Dimbokro**	**73.69**	**72**	P		**P**	**10 44 31.9**	**-0.1**
MAW	**Mawson**	**76.06**	**164**	P		**P**	**10 44 45.2**	**+0.4**
comp=Z,1.7nm,0.5s,baz=209,slow=8.2,SNR=11								
comp=Z,1.7nm,0.5s								
MAW	**Mawson**	**76.06**	**164**	P		**P**	**10 44 45.2**	**+0.4**
ECSD	**EROS Data Cent**	**77.70**	**342**			**P**	**10 44 54.5**	**+0.3**
ECSD				IAmb		IAmb	10 44 55.4	
comp=Z,5.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**82.65**	**70**	P		**P**	**10 45 21.1**	**-0.4**
comp=Z,1.8nm,0.6s,baz=276,slow=6.8,SNR=25								
TORD				pP		**pP**	**10 45 34.9**	**-0.1**
comp=Z,0.6nm,0.6s,baz=273,slow=5.5,SNR=2.7								
comp=Z,1.8nm,0.6s								
TORD	**Torodi Ar. Bea**	**82.65**	**70**	P		**P**	**10 45 21.1**	**-0.4**
TORD				IAmb		IAmb	10 45 32.6	
comp=Z,2.2nm,0.6s								
ULM	**Lac du Bonnet**	**83.58**	**344**	P		**P**	**10 45 25.5**	**0.0**
comp=Z,4.1nm,1.0s,baz=151,slow=7.2,SNR=5.0								
comp=Z,4.1nm,1.0s								
ULM	**Lac du Bonnet**	**83.58**	**344**	IAmb		IAmb	10 45 54.6	
comp=Z,7.5nm,1.4s								
WRA	**Warrunqua Arr**	**123.77**	**209**	PKP		**PKPdf**	**10 51 55.0**	**-1.0**
comp=Z,0.3nm,0.5s,baz=153,slow=1.9,SNR=8.0								
H11S2	**WAKE ISLAND Hyl**	**26.28**	**271**	T		T	13 10 46.9	
baz=115,slow=75,SNR=105								
H11S1	**WAKE ISLAND Hyl**	**26.29**	**271**	T		T	13 10 47.9	
baz=115,slow=75,SNR=160								
H11S3	**WAKE ISLAND Hyl**	**26.30**	**271**	T		T	13 10 48.2	
baz=115,slow=75,SNR=96								
H11N3	**WAKE ISLAND Hyl**	**26.61**	**273**	T		T	13 11 12.7	
baz=117,slow=75,SNR=17								
H11N1	**WAKE ISLAND Hyl**	**26.62**	**273**	T		T	13 11 15.5	
baz=117,slow=75,

NMDO					*e*S	**Sb**	**10 45 58.7**	**-1.0**
NMDO					IAML		10 46 00.1	
	comp=E,196nm,0.1s							
NMDO					IAML		10 46 00.4	
	comp=N,204nm,0.1s							
MOAC	**Moa**	**1.05**	**27**	*e*P		**Pb**	**10 45 48.7**	**-0.3**
MOAC				*e*S		**Sb**	**10 46 01.1**	**-1.4**
MOAC				IAML			10 46 03.5	
	comp=N,85nm,0.2s							
MOAC				IAML			10 46 04.2	
	comp=E,122nm,0.2s							
YAR	**Yar**	**1.05**	**308**	*e*P		**Pb**	**10 45 49.1**	**0.0**
YAR				*e*S		**Sn**	**10 46 02.4**	**+0.8**
YAR				IAML			10 46 03.1	
	comp=N,32nm,0.3s							
YAR				IAML			10 46 04.9	
	comp=E,47nm,0.3s							
MASC	**Masc**	**1.25**	**69**	*e*P		**Pb**	**10 45 51.9**	**-0.6**
MASC				*e*S		**Sb**	**10 46 06.9**	**-1.4**
MASC				IAML			10 46 09.1	
	comp=N,54nm,0.1s							
MASC				IAML			10 46 11.2	
	comp=E,55nm,0.1s							
HLGC	**Holguin**	**1.28**	**335**	*e*P		**Pb**	**10 45 55.0**	**+2.0**
HLGC				*e*S		**Sb**	**10 46 13.1**	**+3.9**
HLGC				IAML			10 46 14.0	
	comp=N,66nm,0.4s							
HLGC				IAML			10 46 15.6	
	comp=E,90nm,0.3s							
LMGC	**Las Mercedes**	**1.48**	**284**	*e*P		**Pn**	**10 45 54.5**	**+0.7**
LMGC				*e*S		**Sn**	**10 46 10.4**	**-1.7**
LMGC				IAML			10 46 12.7	
	comp=N,120nm,0.1s							
LMGC				IAML			10 46 13.5	
	comp=E,98nm,0.1s							
BNJ	**Bonny Gate**	**1.97**	**225**	*i*P		**Pb**	**10 46 02.6**	**-2.0**
BNJ				*i* S		**Sn**	**10 46 24.7**	**+0.3**
GWJ	**Greenwich**	**2.02**	**216**	*i*P		**Pn**	**10 46 03.4**	**+1.9**
GWJ				*i*P		**Pn**	**10 46 03.5**	**+1.9**
GWJ				*i* S		**Sn**	**10 46 25.6**	**-0.2**
STH	**Stony Hill**	**2.07**	**218**	*i*P		**Pn**	**10 46 03.9**	**+1.9**
STH				*i*P		**Pn**	**10 46 03.9**	**+1.9**
HOJ	**Hope**	**2.09**	**215**	*i* P		**Pn**	**10 46 03.3**	**+0.9**
CVJ	**Coleyville**	**2.45**	**233**	*i*P		**Pn**	**10 46 09.1**	**+1.7**
MTDJ	**Mount Denham**	**2.45**	**233**	*e*P		**Pn**	**10 46 08.8**	**+1.4**
MTDJ				*e*S		**Sn**	**10 46 35.3**	**-1.0**
MTDJ				IAML			10 46 37.1	
	comp=E,26nm,0.2s							
MTDJ				IAML			10 46 37.6	
	comp=E,25nm,0.1s							
PCJ	**Portland Cotta**	**2.54**	**219**	*i* P		**Pn**	**10 46 11.2**	**+2.8**
PCJ				*i* S		**Sn**	**10 46 39.5**	**+1.3**
CCCC	**Cccc**	**2.60**	**305**	*e*P		**Pn**	**10 46 09.0**	**-0.3**
CCCC				*e*S		**Sn**	**10 46 33.7**	**-6.1**
CCCC				IAML			10 46 38.2	
	comp=E,8.0nm,0.4s							
CCCC				IAML			10 46 40.3	
	comp=N,6.1nm,0.5s							
MCJ	**Malvern**	**2.75**	**230**	*i* P		**Pb**	**10 46 14.9**	**-3.1**
MCJ				*i* S		**Sn**	**10 46 45.1**	**+1.3**

*IDC **02** 11:05:33.5±7.5,36°.27N×71°.04E,h108km±65km,mb3.4/6, mbtmp3.8/11,Error ellipse: s-maj=54.6km s-min=22.6km az=33.0*
*NNC **02** 11:05:37.5±7.8,36°.94N×70°.86E,h0km,mb4.0,mpv3.8, Error ellipse: s-maj=62.2km s-min=52.4km az=161.0*
ISC 02 11:05:31.4±1.0,36°.46N±0°.08×70°.8E±0°.1,h100km,n15, σ3°66/17,mb3.4/5,2C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**6.21**	**131**	*e*P		**Pn**	**11 07 02.3**	**+1.6**
DHRM				*e*S		**Sn**	**11 08 05.9**	**-4.6**
DHRM				IAML			11 08 09.5	
	comp=E,206nm,0.4s							
DHRM				IAML			11 08 09.6	
	comp=N,176nm,0.3s							
KK31	**Karatay Array**	**6.64**	**358**	P		Pn	11 07 10.9	+4.6
	comp=N,3.8nm,0.2s,baz=18,slow=26,SNR=51							
KK31				⇑S		**Sn**	**11 08 23.6**	**+3.1**
	comp=N,11nm,0.5s,baz=136,slow=67,SNR=2.6							
AAK	**Ala-Archa**	**6.81**	**24**	P		Pn	11 07 13.1	+4.3
	comp=N,7.5nm,0.4s,baz=170,slow=6.2,SNR=12							
AAK				S		**Sn**	**11 08 26.4**	**+1.6**
	comp=N,27nm,0.7s,baz=359,slow=20,SNR=20							
AAK	**Ala-Archa**	**6.81**	**24**	⇓P		Pn	11 07 12.9	+4.2
	comp=N,1.6nm,0.4s							
AAK				⇑S		**Sn**	**11 08 25.3**	**+0.5**
	comp=N,28nm,0.8s							
MKAR	**Makanchi Array**	**13.44**	**36**	P		**P**	**11 08 41.6**	**-2.0**
	comp=N,0.5nm,0.6s,baz=224,slow=14,SNR=4.7							
AB31	**Akbulak array**	**15.03**	**332**	P		**P**	**11 09 03.0**	**+1.8**
	comp=N,1.0nm,0.5s,baz=177,slow=10,SNR=37							
AB31				⇓S		**S**	**11 11 46.9**	**-8.0**
	comp=N,0.9nm,0.5s,baz=148,slow=24,SNR=2.7							
KURBB	**Kurchatov Arra**	**15.22**	**19**	P		**P**	**11 09 05.2**	**+1.8**
	comp=N,2.0nm,0.8s,baz=207,slow=10,SNR=9.6							
BVAR	**Borovoye Array**	**16.57**	**359**	P		**P**	**11 09 21.8**	**+3.5**
	comp=N,0.9nm,0.4s,baz=170,slow=9.0,SNR=4.7							
AKTO	**Aktyubinsk**	**16.72**	**331**	P		**P**	**11 09 23.9**	**+3.9**
	comp=N,2.0nm,0.3s,baz=155,slow=6.9,SNR=11							
AKTO				S		**Sn**	**11 12 18.9**	**-5.9**
	comp=N,0.9nm,0.3s,baz=57,slow=2.1,SNR=1.5							
ZALV	**Zalesovo Beam**	**20.03**	**25**	P		**Pn**	**11 09 59.8**	**+1.0**
	comp=N,9.6nm,0.5s,baz=223,slow=10,SNR=41							
	comp=N,9.6nm,0.5s							
FINES	**FINESS Array B**	**37.41**	**326**	P		P	11 12 39.4	+5.1
	comp=N,2.0nm,0.9s,baz=103,slow=8.3,SNR=2.3							
	comp=N,2.0nm,0.9s							
HFS	**Hagfors**	**42.98**	**322**	P		**P**	**11 13 23.2**	**+2.9**
	comp=N,1.1nm,0.7s,baz=97,slow=13,SNR=4.4							
	comp=N,1.1nm,0.7s							
NOA	**NORSAR Array B**	**44.30**	**323**	P		**P**	**11 13 33.2**	**+2.3**
	comp=N,0.4nm,0.6s,baz=98,slow=7.9,SNR=3.5							
	comp=N,0.4nm,0.6s							
WRA	**Warramunga Arr**	**82.13**	**122**	P		**P**	**11 17 40.2**	**-0.9**
	comp=N,0.2nm,0.5s,baz=323,slow=4.8,SNR=5.1							
	comp=N,0.2nm,0.5s							
ASAR	**Alice Springs**	**84.39**	**125**	P		**P**	**11 17 52.5**	**-0.3**
	comp=N,0.3nm,0.8s,baz=312,slow=4.8,SNR=4.1							
	comp=N,0.3nm,0.8s							

KRSC 02 11:08:50.5±1.8,50°.19N×156°.18E,h121km±16km,MI3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.50**	**355**	*i* P		Pn	11 09 09.1	+0.7
PAU	**Pauzhetka**	**1.34**	**17**	*e*P		Pn	11 09 16.8	+0.8
KDTR	**Khodutka, Kamc**	**2.02**	**36**	*e*P		Pn	11 09 25.3	+1.2
KDTR				*e*S		Sn	11 09 51.6	+1.7
ASAK	**Asacha**	**2.45**	**26**	*e*P		Pn	11 09 31.6	+2.0
MTVR	**Mutnovka**	**2.62**	**28**	*e*P		Pn	11 09 34.2	+2.3
GRL	**Gorelyy**	**2.65**	**26**	*e*P		Pn	11 09 34.8	+2.6
RUS	**Russkaya**	**2.68**	**32**	*e*P		Pn	11 09 33.6	+1.1
RUS				*e*S		Sn	11 10 06.7	+1.8
APC	**Apacha**	**2.81**	**12**	*e*P		Pn	11 09 35.0	+0.9
PET	**Petropavlovsk**	**3.23**	**28**	*e*P		Pn	11 09 41.1	+1.4
PET				*e*S		Sn	11 10 20.3	+2.6
DALK	**Dalny**	**3.27**	**28**	*e*P		Pn	11 09 40.8	+0.6
UGLR	**Uglovaya**	**3.44**	**28**	*e*P		Pn	11 09 43.8	+1.2
KOK	**Koryaka**	**3.46**	**25**	*e*P		Pn	11 09 45.7	+2.8
AVH	**Avacha**	**3.47**	**26**	*e*P		Pn	11 09 46.3	+3.4
SMAR	**Somma**	**3.48**	**27**	*e*P		Pn	11 09 43.8	+0.5
KRER	**Koryakskii**	**3.50**	**26**	*e*P		Pn	11 09 46.4	+2.9
SDLR	**Sedlovina**	**3.52**	**27**	*e*P		Pn	11 09 45.4	+1.8
KRX	**Arik**	**3.52**	**25**	*e*P		Pn	11 09 46.2	+2.5
NLC	**Nalytchevo**	**3.58**	**32**	*e*S		Sn	11 10 26.5	+0.6
SPN	**Mys Shipunski**	**3.77**	**38**	*e*P		Pn	11 09 49.2	+2.4
SPN				*e*S		Sn	11 10 32.1	+1.5
KBTR	**Krutoberegovo**	**7.22**	**31**	*e*P		Pn	11 10 35.4	+2.1

*NEIC **02** 11:12:08.0±0.9,17°.91N±0°.02×67°.14W±0°.02,h12km±3km, ML3.4/35,Md2.7/15(RSPR),Error ellipse: s-maj=3.1km s-min=1.7km az=57.0*
*RSPR **02** 11:12:08.8,17°.95N×67°.09W,h11km,MD2.7/15*
ISC 02 11:12:07.8±1.2,17°.91N±0°.05×67°.11W±0°.03,h17km±5km, n35,σ0°38/56,7C-9D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.08**	**45**			**Pg**	**11 12 11.0**	**-0.1**
MLPR						**Sg**	**11 12 12.8**	**-0.5**
MLPR				IAML			11 12 12.9	
	10μm,0.2s							
MLPR				IAML			11 12 12.9	
	12μm,0.3s							
MLPR	**Magueyes Islan**	**0.08**	**45**	⇓*i*P		**Pg**	**11 12 11.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.10**	**357**			**Pg**	**11 12 11.1**	**-0.1**
CRPR						**Sg**	**11 12 13.0**	**-0.6**
CRPR				IAML			11 12 13.2	
	9μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.10**	**357**	⇑*e*P		**Pg**	**11 12 11.1**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.22**	**73**			**Pg**	**11 12 13.2**	**+0.2**
GBPR						**Sg**	**11 12 16.9**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.22**	**73**	⇑*i*P		**Pg**	**11 12 13.2**	**+0.2**
GBPR				*e*S		**Sg**	**11 12 16.9**	**+0.4**
LSP	**Las Mesas**	**0.26**	**4**			**Pg**	**11 12 13.9**	**+0.2**
LSP						**Sg**	**11 12 17.9**	**+0.2**
LSP	**Las Mesas**	**0.26**	**4**	⇑*e*P		**Pg**	**11 12 13.9**	**+0.2**
LSP				*e*S		**Sg**	**11 12 17.9**	**+0.2**
PRSN	**Puerto Rico Se**	**0.31**	**353**			**Pg**	**11 12 14.5**	**+0.1**
PRSN						**Sg**	**11 12 18.9**	**+0.1**
PRSN	**Puerto Rico Se**	**0.31**	**353**	⇑*e*P		**Pg**	**11 12 14.5**	**+0.1**
OBIP	**Obispado Ponce**	**0.49**	**74**			**Pg**	**11 12 18.0**	**+0.3**
OBIP						**Sg**	**11 12 24.7**	**+0.3**
OBIP	**Obispado Ponce**	**0.49**	**74**	⇑*e*P		**Pg**	**11 12 18.0**	**+0.3**
OBIP				*e*S		**Sg**	**11 12 24.7**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.50**	**47**			**Pg**	**11 12 17.5**	**-0.3**
UUPR						**Sg**	**11 12 24.4**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.50**	**47**	⇓*e*P		**Pg**	**11 12 17.5**	**-0.3**
CELP	**Cerrillos**	**0.53**	**72**			**Pg**	**11 12 18.6**	**+0.3**
CELP						**Sg**	**11 12 25.3**	**-0.1**
CELP	**Cerrillos**	**0.53**	**72**	⇓*e*P		**Pg**	**11 12 18.6**	**+0.3**
AOPR	**Arecibo Observ**	**0.55**	**38**			**Pg**	**11 12 18.4**	**-0.4**
AOPR						**Sg**	**11 12 25.6**	**-0.5**
AOPR				IAML			11 12 27.7	
	2μm,0.3s							
AOPR	**Arecibo Observ**	**0.55**	**38**	⇓*i*P		**Pg**	**11 12 18.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.55**	**359**			**Pg**	**11 12 18.6**	**-0.3**
AGPR						**Sg**	**11 12 26.2**	**-0.1**
AGPR				IAML			11 12 26.4	
	3μm,0.5s							
AGPR	**Aguadilla, PR**	**0.55**	**359**	⇑*e*P		**Pg**	**11 12 18.6**	**-0.3**
IDE	**Isla Desecheo**	**0.59**	**323**			**Pg**	**11 12 19.2**	**-0.4**
IDE						**Sg**	**11 12 27.5**	**+0.1**
IDE	**Isla Desecheo**	**0.59**	**323**	⇓*e*P		**Pg**	**11 12 19.2**	**-0.4**
IDE				*e*S		**Sg**	**11 12 27.5**	**+0.1**
EMPR	**Esperanza - Ma**	**0.79**	**44**			**Pg**	**11 12 23.2**	**0.0**
EMPR						**Sb**	**11 12 34.1**	**+0.7**
EMPR	**Esperanza - Ma**	**0.79**	**44**	⇓*e*P		**Pg**	**11 12 23.2**	**0.0**
EMPR				*e*S		**Sb**	**11 12 34.1**	**+0.7**
ECPR	**Experimental S**	**0.81**	**60**			**Pg**	**11 12 22.9**	**-0.8**
ECPR						**Sg**	**11 12 34.4**	**-0.1**
ECPR				IAML			11 12 35.1	
	1μm,0.2s							
ECPR				IAML			11 12 41.6	
	2μm,0.2s							
ECPR	**Experimental S**	**0.81**	**60**	⇓*e*P		**Pg**	**11 12 22.9**	**-0.8**
SJG	**San Juan**	**0.93**	**77**			**Pg**	**11 12 25.2**	**-0.7**
SJG	**San Juan**	**0.93**	**77**	⇓*e*P		**Pg**	**11 12 25.2**	**-0.7**
IGPR	**InterUniversit**	**0.95**	**87**			**Pg**	**11 12 26.1**	**-0.2**
IGPR						**Sg**	**11 12 38.7**	**-0.1**
IGPR	**InterUniversit**	**0.95**	**87**	⇓*e*P		**Pg**	**11 12 26.1**	**-0.2**
PDPR	**Patillas Dam,**	**1.04**	**84**			**Pb**	**11 12 26.9**	**-0.4**
PDPR						**Sb**	**11 12 40.1**	**-0.5**
PDPR				IAML			11 12 43.9	
	841nm,0.6s							
PDPR	**Patillas Dam,**	**1.04**	**84**	⇑*e*P		**Pb**	**11 12 26.9**	**-0.4**
HUMP	**Col San Antoni**	**1.22**	**79**			**Pn**	**11 12 30.4**	**+0.3**
HUMP						**Sb**	**11 12 46.1**	**+0.2**
HUMP				IAML			11 12 49.7	
	642nm,0.3s							
HUMP	**Col San Antoni**	**1.22**	**79**	⇑*e*P		**Pn**	**11 12 30.4**	**+0.3**
SDDR	**Presa de Saban**	**4.11**	**286**	Pn		**Pn**	**11 13 10.5**	**+0.5**

*NEIC **02** 12:00:41.1±2.0,7°.64S±0°.06×106°.58E±0°.05,h32km±6km, mb4.0/6,Error ellipse: s-maj=10.2km s-min=4.9km az=147.0*
*DJA **02** 12:00:44.3±0.3,8°.S±2°.×10°.7E±°,h18km±2km,M4.4/30, mB5.5/1,mb4.6/3,MLv4.3/30,Mw(mB)5.0/1*
*IDC **02** 12:00:46.4±3.8,7°.43S×106°.79E,h86km±26km,mb3.6/10, mbtmp3.9/10,MS3.0/1,Error ellipse: s-maj=54.5km s-min=13.8km az=55.0*
ISC 02 12:00:44.2±0.7,7°.74S±0°.05×106°.88E±0°.05,h63km,n54, σ1°79/50,mb4.0/12,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
BBJI	**Bungbulang**	**0.81**	**70**	P		**Pn**	**12 00 59.3**	**-0.8**
BBJI	**Bungbulang**	**0.81**	**70**			**Pn**	**12 00 59.2**	**-0.8**
BBJI	**Bungbulang**	**0.81**	**70**	P		**Pn**	**12 01 02.2**	**-0.8**
BBJI				S		**Sn**	**12 01 09.4**	**-2.3**
LEM	**Lembang**	**1.16**	**39**	P		**Pn**	**12 01 05.3**	**+0.6**
	2μm,0.3s,baz=123,slow=22,SNR=262							
LEM				S		**Sn**	**12 01 21.5**	**+1.6**
	1μm,0.4s,baz=328,slow=21,SNR=16							
LEM	**Lembang**	**1.16**	**39**	P		**Pn**	**12 01 04.7**	**0.0**
LEM				S		**Sn**	**12 01 20.0**	**+0.1**
DBJI	**Dramaga**	**1.19**	**354**	P		**Pn**	**12 01 05.0**	**+0.2**
DBJI				S		**Sn**	**12 01 20.3**	**+0.1**
SBJI	**Serang**	**1.77**	**335**	P		**Pn**	**12 01 13.7**	**+1.0**
SBJI				S		**Sn**	**12 01 36.0**	**+1.8**
XMI	**Christmas Isla**	**2.94**	**204**	P		**Pn**	**12 01 28.5**	**-0.1**
KASI	**Kota Agung**	**3.23**	**313**	P		**Pn**	**12 01 34.3**	**+1.7**
KASI				S		**Sn**	**12 02 12.9**	**+3.0**
SMRI	**Semarang**	**3.60**	**79**	Pn		**Pn**	**12 01 38.9**	**+1.4**
SMRI	**Semarang**	**3.60**	**79**	P		**Pn**	**12 01 39.3**	**+1.8**
UGM	**Wanagama**	**3.61**	**93**	P		**Pn**	**12 01 38.4**	**+0.6**
UGM	**Wanagama**	**3.61**	**93**	Pn		**Pn**	**12 01 38.3**	**+0.6**
UGM	**Wanagama**	**3.61**	**93**	P		**Pn**	**12 01 38.3**	**+0.6**
KLSI		**3.71**	**325**	P		**Pn**	**12 01 41.3**	**+2.2**
SNJI	**Sawahan-Nganju**	**4.83**	**91**	P		**Pn**	**12 01 57.0**	**+2.4**
TPI	**Tanjungpandan**	**5.01**	**9**	P		**Pn**	**12 01 57.3**	**+0.4**
TPI				S		**Sn**	**12 02 55.7**	**+2.2**
MNAI	**Manna**	**5.15**	**310**	Pn		Pn	12 01 51.9	-6.9
EGSI	**Enggano, Bengk**	**5.15**	**297**	P		**Pn**	**12 02 00.1**	**+1.3**
	5μm196nm,1.0s							
JAGI	**Jajag, Banyuwa**	**7.24**	**96**	P		**Pn**	**12 02 30.5**	**+3.1**
KHKI	**Kahang-Kahang**	**8.66**	**95**	P		**Pn**	**12 02 49.3**	**+2.4**
PLAI	**Plampang**	**10.84**	**96**	P		**Pn**	**12 03 19.5**	**+2.9**
FITZ	**Fitzroy Crossi**	**20.96**	**121**	P		**P**	**12 05 24.3**	**+2.1**
	1.1nm,0.8s,baz=333,slow=9.0,SNR=2.0							
	1.1nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.96**	**121**	P		**P**	**12 05 24.3**	**+2.1**
FITZ				IAmb		IAmb	12 05 39.0	
	comp=Z,0.6nm,0.9s							
KNRA	**Kununurra**	**22.82**	**112**	P		**P**	**12 05 43.3**	**+1.2**
KNRA				IAmb		IAmb	12 06 05.1	
	comp=Z,7.2nm,1.1s							
CMAR	**Chiang Mai Arr**	**27.18**	**343**	P		**P**	**12 06 18.7**	**-3.4**
	comp=Z,0.4nm,0.4s,baz=176,slow=8.1,SNR=5.4							
CMAR				LR		LR	12 18 13.6	
	comp=Z,30nm,19.4s,baz=195,slow=39							
	comp=Z,0.4nm,0.4s							
H01W3	**Cape Leeuwin H**	**27.83**	**167**	T		T	12 36 00.1	
	baz=347,slow=76,SNR=39							
H01W1	**Cape Leeuwin H**	**27.84**	**167**	T		T	12 36 03.7	
	baz=347,slow=76,SNR=29							
H01W2	**Cape Leeuwin H**	**27.84**	**167**	T		T	12 36 03.6	
	baz=347,slow=76,SNR=56							
WB0	**Warramunga Arr**	**29.22**	**117**	P		**P**	**12 06 41.2**	**+1.0**
WB0				IAmb		IAmb	12 06 46.8	
	comp=Z,5.3nm,1.1s							
WRA	**Warramunga Arr**	**29.23**	**117**	P		**P**	**12 06 41.7**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=290,slow=11,SNR=15							
WRA				PcP		**PcP**	**12 09 47.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=308,slow=1.9,SNR=6.0							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**29.23**	**117**	P		**P**	**12 06 41.7**	**+1.3**
WRA				P		**PcP**	**12 09 47.2**	**+0.8**
WR8	**Warramunga Arr**	**29.38**	**117**	P		**P**	**12 06 43.3**	**+1.7**
WR8				IAmb		IAmb	12 06 55.6	
	comp=Z,5.0nm,1.0s							
ASAR	**Alice Springs**	**30.36**	**124**	P		**P**	**12 06 52.8**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=300,slow=8.7,SNR=5.3							
	comp=Z,0.2nm,0.4s							
H08S2	**Diego Garcia H**	**34.07**	**268**	T		T	12 43 01.0	
	baz=91,slow=74							
H08S3	**Diego Garcia H**	**34.08**	**268**	T		T	12 43 01.8	
	baz=91,slow=74							
H08S1	**Diego Carcia H**	**34.09**	**268**	T		T	12 43 02.5	
	baz=91							

STKA	**Stephens Creek**	**40.24**	**131**	P		**P**	**12 08 17.5**	**+2.5**
	comp=Z,4.0nm,0.5s,baz=308,slow=6.3,SNR=13							
	comp=Z,4.0nm,0.5s							
SONM	**Songino Array**	**55.33**	**360**	PcP		**PcP**	**12 11 11.1**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=170,slow=4.1,SNR=7.5							
SONM	**Songino Array**	**55.33**	**360**			**PcP**	**12 11 09.8**	**-1.7**
MKAR	**Makanchi Array**	**58.54**	**340**	P		**P**	**12 10 31.1**	**-3.1**
	comp=Z,0.6nm,0.5s,baz=147,slow=8.2,SNR=9.6							
	comp=Z,0.6nm,0.5s							
H04N2	**CROZET ISLANDS**	**60.63**	**221**	T		T	13 17 16.4	
	baz=69,slow=75,SNR=75							
H04N1	**CROZET ISLANDS**	**60.64**	**221**	T		T	13 17 17.7	
	baz=69,slow=75,SNR=65							
H04N3	**CROZET ISLANDS**	**60.65**	**221**	T		T	13 17 16.4	
	baz=69,slow=75,SNR=70							
H04S1	**CROZET ISLANDS**	**60.80**	**220**	T		T	13 17 44.1	
	baz=67,slow=76,SNR=25							
H04S3	**CROZET ISLANDS**	**60.82**	**220**	T		T	13 17 25.6	
	baz=67,slow=76,SNR=6.5							
H04S2	**CROZET ISLANDS**	**60.82**	**220**	T		T	13 17 24.6	
	baz=67,slow=76,SNR=6.9							
KURBB	**Kurchatov Arra**	**63.10**	**340**	P		**P**	**12 11 03.3**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=149,slow=6.2,SNR=5.9							
	comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**64.22**	**346**	P		**P**	**12 11 11.4**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=190,slow=7.3,SNR=2.2							
	comp=Z,0.4nm,0.4s							
BVAR	**Borovoye Array**	**68.00**	**337**	P		**P**	**12 11 34.1**	**-2.5**
	comp=Z,1.6nm,0.4s,baz=149,slow=8.9,SNR=5.4							
	comp=Z,1.6nm,0.4s							
AB31	**Akbulak array**	**69.98**	**329**	P		**P**	**12 11 48.0**	**-1.0**
ABKAR	**Akbulak array**	**69.98**	**329**	P		**P**	**12 11 47.6**	**-1.4**
PETK	**Petropavlovsk-**	**74.29**	**29**	P		**P**	**12 12 11.9**	**-2.8**
	comp=Z,0.9nm,0.7s,baz=217,slow=7.2,SNR=4.4							
	comp=Z,0.9nm,0.7s							
TXAR	**Lajitas Array**	**144.14**	**49**	PKP		**PKPab**	**12 20 12.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=330,slow=2.7,SNR=6.0							

*SJA **02** 12:02:15.5±0.6,23°.09S×68°.73W,h95km±4km,ML3.8, MW3.8*
*GUC **02** 12:02:16.1±0.8,23°.08S×68°.72W,h108km±5km,ML3.9*
ISC 02 12:02:17.8±1.4,23°.11S±0°.04×68°.75W±0°.05,h87km±11km, n24,σ1°09/36,2C-6D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.55**	**74**	*e*P		**Pn**	**12 02 32.2**	**-0.7**
AF01				*e*S		**Sn**	**12 02 44.2**	**-0.1**
AF01				IAML			12 03 04.8	
	comp=Z,3μm,0.3s							
AF01	**San Pedro de A**	**0.55**	**74**	⇑*i*P		**Pn**	**12 02 32.4**	**-0.7**
AF01				*i* S		**Sn**	**12 02 44.7**	**+0.4**
AF01				IAML			12 02 51.4	
	comp=E,8μm,0.3s							
PB06	**IPOC Station P**	**0.86**	**297**	*e*P		**Pn**	**12 02 35.0**	**-0.8**
PB06				IAML			12 02 51.3	
	comp=Z,2μm,0.2s							
PB06	**IPOC Station P**	**0.86**	**297**	⇓*i*P		**Pn**	**12 02 35.7**	**-0.2**
PB06				*i* S		**Sn**	**12 02 50.5**	**+1.1**
PB06				IAML			12 02 51.4	
	comp=N,4μm,0.1s							
PB05	**IPOC Station P**	**1.36**	**280**	*e*P		**Pn**	**12 02 41.1**	**-0.7**
PB05				*e*S		**Sn**	**12 03 00.4**	**+0.5**
PB05				IAML			12 03 08.1	
	comp=Z,888nm,0.2s							
PB05	**IPOC Station P**	**1.36**	**280**	⇓*i*P		**Pn**	**12 02 41.1**	**-0.7**
PB05				IAML			12 03 05.7	
	comp=N,2μm,0.1s							
PB09	**IPOC Station P**	**1.38**	**341**	*e*P		**Pn**	**12 02 41.5**	**-0.6**
PB09				IAML			12 03 04.6	
	comp=E,611nm,0.5s							
PB09	**IPOC Station P**	**1.38**	**341**	⇓*i*P		**Pn**	**12 02 42.0**	**-0.1**
PB09				*i* S		**Sn**	**12 03 01.5**	**+1.2**
PB09				IAML			12 03 02.8	
	comp=N,975nm,0.4s							
PB03	**IPOC Station P**	**1.40**	**318**	*e*P		**Pn**	**12 02 41.1**	**-1.2**
PB03				IAML			12 03 04.9

*GFZ **02** 12:35:46.4±0.2,34˚S±2˚×7˚2W±˚,h10km,M5.1/20, mb5.2/20*

*MOS **02** 12:35:47.9±0.9,34˚.03S×72˚.12W,h33km,mb5.3/19,Error ellipse: s-maj=13.8km s-min=8.7km az=84.7*

*NEIC **02** 12:35:49.3±1.9,34˚.14S±0˚.03×72˚.11W±0˚.05,h35km±1km, mb5.0/386,Mwr4.7/95,Mwr5.0(GUC),Error ellipse: s-maj=6.8km s-min=4.6km az=285.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.77; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-0.53; $M_{r\theta}$0.36; $M_{r\phi}$-0.31; $M_{\theta\phi}$-1.29; Fault plane solution: $M_0$1.54000×10^{16} NP1:ϕ_s42.79000°, δ19.23000°,λ138.06000°. NP2:ϕ_s173.10000°,δ77.28000°, λ75.46000°. Principal axes: T 1.6808, Plg55.0000°, Azm65.0000°; N -0.3494, Plg14.0000°, Azm176.0000°; P -1.3315, Plg31.0000°, Azm275.0000°;*

*GCMT **02** 12:35:51.3±0.3,34˚.14S±0˚.02×72˚.34W±0˚.03,h33km, MW5.0/75,Moment Tensor Solution. s45,c49; s75,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.95±.21; $M_{\theta\theta}$-0.48±.13; $M_{\phi\phi}$-3.47±.14; $M_{r\theta}$-0.34±.12; $M_{\theta\phi}$-0.43±.10; $M_{r\phi}$-2.37±.14; Best double couple: $M_0$4.44100×10^{16} NP1:ϕ_s8.00000°,δ29.00000°,λ90.00000°. NP2: ϕ_s188.00000°,δ61.00000°,λ90.00000°. Principal axes: T 4.6500, Plg74.0000°, Azm98.0000°; N -0.4210, Plg0.0000°, Azm188.0000°; P -4.2310, Plg16.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 12:35:46.6±0.8,34˚.12S±0˚.02×72˚.22W±0˚.03,h20km±3km, n507,σ1§22/388,mb5.1/183,MS4.4/38,13C-19D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.43**	**150**	⇓*iP*			**Pb**	**12 35 55.5**	**-0.1**
BO03				*i* S			**Sb**	**12 36 01.5**	**-0.2**
BO03	**Pichilemu**	**0.43**	**150**	P			**Pb**	**12 35 55.5**	**-0.1**
MT01	**Popeta**	**0.84**	**72**				**Pb**	**12 36 02.4**	**-0.2**
MT01				Sn			**Sb**	**12 36 13.2**	**-0.4**
MT01	**Popeta**	**0.84**	**72**	*eP*			**Pb**	**12 36 02.1**	**-0.5**
MT01	**Popeta**	**0.84**	**72**	⇓*iP*			**Pb**	**12 36 02.4**	**-0.2**
MT01				*i* S			**Sb**	**12 36 13.9**	**+0.4**
GO05	**Hualane**	**0.92**	**165**				**Pb**	**12 36 03.2**	**-0.6**
GO05				Sn			**Sb**	**12 36 14.9**	**-0.7**
GO05	**Hualane**	**0.92**	**165**	*eP*			**Pb**	**12 36 02.8**	**-1.1**
GO05				IAML				12 36 17.6	
	comp=Z,23μm,0.8s								
GO05	**Hualane**	**0.92**	**165**	⇓*iP*			**Pb**	**12 36 03.1**	**-0.8**
GO05				*i* S			**Sb**	**12 36 14.5**	**-1.1**
GO05				IAML				12 36 17.9	
	comp=E,114μm,0.6s								
GO05	**Hualane**	**0.92**	**165**	P			**Pb**	**12 36 03.2**	**-0.6**
BO01	**Tunca**	**0.98**	**106**				**Pb**	**12 36 03.9**	**-1.0**
BO01				Sn			**Sb**	**12 36 14.7**	**-2.6**
BO01	**Tunca**	**0.98**	**106**	*eP*			**Pb**	**12 36 03.3**	**-1.6**
BO01				*eS*			Sb	12 36 03.9	-14
BO01				IAML				12 36 23.6	
	comp=Z,24μm,0.7s								
BO01	**Tunca**	**0.98**	**106**	⇓*iP*			**Pb**	**12 36 03.8**	**-1.0**
BO01				*i* S			**Sb**	**12 36 15.1**	**-2.2**
BO01	**Tunca**	**0.98**	**106**	P			**Pb**	**12 36 03.9**	**-1.0**
MT09	**Talagante**	**1.08**	**72**				**Pb**	**12 36 05.9**	**-0.7**
MT09	**Talagante**	**1.08**	**72**	⇓*iP*			**Pb**	**12 36 06.0**	**-0.7**
MT09				*i* S			**Sb**	**12 36 20.9**	**+0.4**
MT09				IAML				12 36 26.6	
	comp=N,34μm,0.7s								
VA01	**Torpederas**	**1.20**	**24**				**Pn**	**12 36 07.9**	**-0.3**
VA01	**Torpederas**	**1.20**	**24**	*eP*			**Pn**	**12 36 08.3**	**+0.1**
VA01				*eS*			**Sg**	**12 36 28.3**	**+2.9**
VA01	**Torpederas**	**1.20**	**24**	⇑*iP*			**Pn**	**12 36 08.3**	**+0.1**
VA01				*i* S			**Sb**	**12 36 23.9**	**+0.2**
VA01	**Torpederas**	**1.20**	**24**	P			**Pn**	**12 36 08.4**	**+0.1**
MT02	**Curacav**	**1.25**	**47**				**Pn**	**12 36 08.5**	**-0.4**
MT02				Sn			**Sb**	**12 36 23.6**	**-1.5**
MT02	**Curacav**	**1.25**	**47**	*eP*			**Pn**	**12 36 08.7**	**-0.3**
MT02				*eS*			**Sg**	**12 36 26.9**	**-0.2**
MT02	**Curacav**	**1.25**	**47**	⇓*iP*			**Pn**	**12 36 08.8**	**-0.2**
MT02				*i* S			**Sb**	**12 36 25.5**	**+0.4**
BO04	**La Punta**	**1.34**	**85**				**Pn**	**12 36 10.0**	**-0.3**
BO04				Sn			**Sn**	**12 36 27.6**	**-0.1**
BO04	**La Punta**	**1.34**	**85**	⇓*iP*			**Pn**	**12 36 10.2**	**-0.1**
BO04				*i* S			**Sg**	**12 36 29.4**	**-0.8**
BO04				IAML				12 36 34.6	
	comp=N,38μm,0.8s								
BO02	**Sierra Bellavi**	**1.36**	**120**				**Pn**	**12 36 10.5**	**-0.1**
BO02				Sn			**Sb**	**12 36 28.7**	**+0.2**
BO02	**Sierra Bellavi**	**1.36**	**120**	*eP*			**Pn**	**12 36 10.3**	**-0.3**
BO02				*eS*			**Sg**	**12 36 30.4**	**-0.4**
BO02				IAML				12 36 32.6	
	comp=Z,50μm,0.6s								
BO02	**Sierra Bellavi**	**1.36**	**120**	⇓*iP*			**Pn**	**12 36 10.0**	**-0.6**
BO02				*i* S			**Sn**	**12 36 28.0**	**-0.2**
BO02				IAML				12 36 31.8	
	comp=N,59μm,0.3s								
BO02	**Sierra Bellavi**	**1.36**	**120**	P			**Pn**	**12 36 10.2**	**-0.3**
MT05	**Renca**	**1.43**	**60**				**Pn**	**12 36 11.3**	**-0.3**
MT05	**Renca**	**1.43**	**60**	*eP*			**Pn**	**12 36 11.6**	**+0.1**
MT05				*eS*			**Sg**	**12 36 36.2**	**+3.2**
MT05				IAML				12 36 42.8	
	comp=Z,13μm,1.2s								
MT05	**Renca**	**1.43**	**60**	⇓*iP*			**Pn**	**12 36 11.8**	**+0.2**
MT05				*i* S			**Sg**	**12 36 32.4**	**-0.7**
MT05				IAML				12 36 38.6	
	comp=N,31μm,0.5s								
MT12	**Pirque**	**1.44**	**75**	⇓*iP*			**Pn**	**12 36 11.8**	**+0.1**
MT12				*i* S			**Sb**	**12 36 32.2**	**+1.4**
ROCH	**El Roble**	**1.53**	**42**	⇓*iP*			**Pn**	**12 36 13.4**	**+0.4**
ROCH				*i* S			**Sb**	**12 36 34.7**	**+1.3**
ROCH				IAML				12 36 45.4	
	comp=N,34μm,0.8s								
MT03	**Universidad Ad**	**1.56**	**67**				**Pn**	**12 36 13.4**	**+0.2**
MT03	**Universidad Ad**	**1.56**	**67**	*eP*			**Pn**	**12 36 14.1**	**+0.8**
MT03				*eS*			**Sg**	**12 36 36.6**	**-0.3**
MT03				IAML				12 36 42.3	
	comp=Z,19μm,0.8s								
MT03	**Universidad Ad**	**1.56**	**67**	⇓*iP*			**Pn**	**12 36 13.6**	**+0.3**
MT03				*i* S			**Sb**	**12 36 34.3**	**+0.2**
MT03				IAML				12 36 40.2	
	comp=E,24μm,0.4s								
MT16	**CCHEN**	**1.57**	**64**				**Pn**	**12 36 14.2**	**+0.6**
MT16	**CCHEN**	**1.57**	**64**	⇓*iP*			**Pn**	**12 36 14.1**	**+0.6**
MT16				*i* S			**Sb**	**12 36 34.5**	**-0.1**
MT16				IAML				12 36 43.5	
	comp=N,19μm,0.5s								
MT14	**Cerro Cal¡n**	**1.58**	**63**	⇓*iP*			**Pn**	**12 36 14.3**	**+0.7**
MT14				*i* S			**Sb**	**12 36 35.1**	**+0.4**
MT14				IAML				12 36 44.7	
	comp=E,32μm,0.6s								
PEL	**Peldehue**	**1.61**	**53**	*eP*			**Pn**	**12 36 14.8**	**+0.8**
PEL				*eS*			**Sg**	**12 36 42.0**	**+3.3**
PEL				IAML				12 36 44.2	
	comp=Z,13μm,0.5s								
PEL	**Peldehue**	**1.61**	**53**	⇓*iP*			**Pn**	**12 36 14.8**	**+0.8**
PEL				*i* S			**Sb**	**12 36 36.0**	**+0.4**
PEL				IAML				12 36 45.1	
	comp=E,12μm,0.3s								
MT10	**Hacienda Santa**	**1.64**	**59**	⇓*iP*			**Pn**	**12 36 15.3**	**+0.9**
MT10				*i* S			**Sb**	**12 36 38.0**	**+1.4**
MT10				IAML				12 36 44.6	
	comp=E,25μm,0.3s								
ML02	**Panimavida**	**1.76**	**158**				**Pn**	**12 36 16.5**	**+0.4**
ML02	**Panimavida**	**1.76**	**158**	*eP*			**Pn**	**12 36 16.7**	**+0.7**
ML02				*eS*			**Sb**	**12 36 40.1**	**+0.1**
ML02				IAML				12 36 48.9	
	comp=Z,19μm,0.7s								
ML02	**Panimavida**	**1.76**	**158**	*eP*			**Pn**	**12 36 16.7**	**+0.7**
ML02				*i* S			**Sb**	**12 36 39.1**	**-0.9**
ML02				IAML				12 36 44.0	
	comp=E,36μm,0.6s								
ML02	**Panimavida**	**1.76**	**158**	P			**Pn**	**12 36 16.8**	**+0.8**
VA03	**San Esteban**	**1.94**	**46**				**Pn**	**12 36 19.9**	**+1.3**
MT08	**Bocatoma Ro**	**1.96**	**70**				**Pn**	**12 36 19.5**	**+0.6**
MT08	**Bocatoma Ro**	**1.96**	**70**	*eP*			**Pn**	**12 36 20.1**	**+1.2**
MT08				*eS*			**Sb**	**12 36 47.9**	**+2.1**
MT08				IAML				12 36 51.5	
	comp=Z,14μm,0.8s								
MT08	**Bocatoma Ro**	**1.96**	**70**	⇓*iP*			**Pn**	**12 36 20.0**	**+1.2**
MT08				*i* S			**Sb**	**12 36 45.8**	**+0.1**
CO04	**Los Peladeros**	**2.32**	**27**				**Pn**	**12 36 24.0**	**0.0**
CO04	**Los Peladeros**	**2.32**	**27**	⇑*iP*			**Pn**	**12 36 23.9**	**-0.1**
CO04				*i* S			**Sb**	**12 36 58.5**	**+2.1**
CO04				IAML				12 37 07.8	
	comp=N,13μm,0.8s								
CO04	**Los Peladeros**	**2.32**	**27**	P			**Pn**	**12 36 24.0**	**0.0**
BI02	**San Fabin de**	**2.65**	**163**				**Pn**	**12 36 28.7**	**+0.4**
BI02	**San Fabin de**	**2.65**	**163**	*eP*			**Pn**	**12 36 28.5**	**+0.2**
BI02				IAML				12 37 09.9	
	comp=Z,5μm,1.5s								
BI02	**San Fabin de**	**2.65**	**163**	⇑*iP*			**Pn**	**12 36 28.9**	**+0.6**
BI02				*eS*			**Sb**	**12 37 03.9**	**-1.7**
BI02				IAML				12 37 13.7	
	comp=N,8μm,0.6s								
BI02	**San Fabin de**	**2.65**	**163**	P			**Pn**	**12 36 29.1**	**+0.8**
BI05	**Punta Hualpn**	**2.74**	**197**				**Pn**	**12 36 28.5**	**-0.9**
BI05	**Punta Hualpn**	**2.74**	**197**	*eP*			**Pn**	**12 36 28.9**	**-0.5**
BI05				IAML				12 37 24.0	
	comp=Z,3μm,0.8s								
BI05	**Punta Hualpn**	**2.74**	**197**	*i* P			**Pn**	**12 36 28.3**	**-1.1**
EDS3	**Malargue**	**2.84**	**126**	*eP*			**Pb**	**12 36 36.5**	**-0.2**
AAGR	**Agrelo**	**3.01**	**71**	*eP*			**Pb**	**12 36 37.1**	**-2.6**
ARCO	**CERRO ARCO**	**3.03**	**66**	*eP*			**Pb**	**12 36 37.1**	**-2.8**
ARCO				IAML				12 37 25.6	
	comp=Z,6μm,1.1s								
CO02	**Combarbal**	**3.09**	**20**				**Pn**	**12 36 34.8**	**+0.5**
CO02	**Combarbal**	**3.09**	**20**	*eP*			**Pn**	**12 36 34.5**	**+0.2**
CO02				*eS*			**Sg**	**12 37 26.8**	**+0.9**
CO02				IAML				12 37 28.5	
	comp=Z,5μm,0.9s								
CO02	**Combarbal**	**3.09**	**20**	⇑*iP*			**Pn**	**12 36 34.7**	**+0.3**
CO02	**Combarbal**	**3.09**	**20**	P			**Pn**	**12 36 34.9**	**+0.5**
AVIZ	**Vizcacheras**	**3.15**	**79**	*eP*			**Pb**	**12 36 39.0**	**-2.9**
RTLS	**Leoncito**	**3.38**	**47**	*eP*			**Pn**	**12 36 39.9**	**+1.4**
RTLS				*eS*			**Sg**	**12 37 35.4**	**+0.2**
RTLS				IAML				12 37 42.7	
	comp=Z,7μm,0.6s								
CO03	**El Pedregal**	**3.52**	**22**				**Pn**	**12 36 41.0**	**+0.7**
CO03	**El Pedregal**	**3.52**	**22**	*eP*			**Pn**	**12 36 41.5**	**+1.2**
CO03				*eS*			**Sg**	**12 37 38.5**	**-0.8**
CO03				IAML				12 37 43.3	
	comp=Z,3μm,1.1s								
CO03	**El Pedregal**	**3.52**	**22**	⇑*eP*			**Pn**	**12 36 40.8**	**+0.5**
CO03	**El Pedregal**	**3.52**	**22**	P			**Pn**	**12 36 41.1**	**+0.7**
ZON	**Zonda**	**3.94**	**50**				**Pn**	**12 36 48.4**	**+2.4**
ZON	**Zonda**	**3.94**	**50**	P			**Pn**	**12 36 48.4**	**+2.4**
ZON	**Zonda**	**3.94**	**50**	P			**Pn**	**12 36 49.8**	**+3.8**
GO04	**Tololo Observa**	**4.12**	**17**				**Pn**	**12 36 48.8**	**+0.2**
GO04	**Tololo Observa**	**4.12**	**17**	*eP*			**Pn**	**12 36 48.5**	**-0.1**
GO04				*eS*			**Sg**	**12 37 58.6**	**-0.3**
GO04				IAML				12 38 05.2	
	comp=Z,3μm,0.7s								
GO04	**Tololo Observa**	**4.12**	**17**	⇑*eP*			**Pn**	**12 36 48.6**	**-0.1**
GO04	**Tololo Observa**	**4.12**	**17**	P			**Pn**	**12 36 48.9**	**+0.2**
RTLL	**Cerro Villicun**	**4.21**	**50**	*eP*			**Pn**	**12 36 52.3**	**+2.6**
RTLL				*eS*			**Sb**	**12 37 50.3**	**-0.2**
RTLL				IAML				12 37 57.5	
	comp=Z,2μm,0.8s								
ACCO	**Cerro Coronel**	**4.42**	**38**	*eP*			**Pn**	**12 36 55.6**	**+2.7**
ACCO				*eS*			**Sg**	**12 38 05.0**	**-3.6**
ACCO				IAML				12 38 21.6	
	comp=Z,1μm,1.0s								
CO01	**Juntas del Tor**	**4.51**	**24**				**Pn**	**12 36 55.1**	**+1.1**
CO01	**Juntas del Tor**	**4.51**	**24**	*eP*			**Pn**	**12 36 55.2**	**+1.2**
CO01				*eS*			**Sg**	**12 38 09.4**	**-2.0**
CO01				IAML				12 38 12.5	
	comp=Z,2μm,1.1s								
CO01	**Juntas del Tor**	**4.51**	**24**	⇑*eP*			**Pn**	**12 36 55.2**	**+1.2**
CO01	**Juntas del Tor**	**4.51**	**24**	P			**Pn**	**12 36 55.4**	**+1.4**
AROD	**Rodeo**	**4.58**	**31**	*eP*			**Pn**	**12 36 58.0**	**+3.0**
AROD				*eS*			**Sg**	**12 38 09.2**	**-4.5**
ACAN	**Cantantal**	**4.60**	**68**	*eP*			**Pn**	**12 36 57.4**	**+2.3**
ACAN				IAML				12 38 15.2	
	comp=Z,5μm,0.8s								
ACDV	**Cuesta del Vie**	**4.74**	**35**	*eP*			**Pn**	**12 36 59.6**	**+2.5**
ACDV				IAML				12 38 34.5	
	comp=Z,1μm,1.7s								
LC02	**Puerto Saavedr**	**4.75**	**191**	*eP*			**Pn**	**12 36 56.3**	**-0.8**
LC01	**Cunco**	**4.77**	**177**	*eP*			**Pn**	**12 36 56.9**	**-0.5**
LCO	**Las Campanas**	**5.26**	**15**				**Pn**	**12 37 04.0**	**-0.4**
LCO	**Las Campanas**	**5.26**	**15**	P			**Pn**	**12 37 04.0**	**-0.4**
AVFE	**Valle Fertil**	**5.31**	**51**	*eP*			**Pn**	**12 37 06.4**	**+1.6**
GO06	**Curarrehue**	**5.48**	**174**				**Pn**	**12 37 07.4**	**+0.1**
GO06	**Curarrehue**	**5.48**	**174**	P			**Pn**	**12 37 08.0**	**+0.8**
VA04	**Juan Fernndez**	**5.52**	**273**				**Pn**	**12 37 07.0**	**-0.6**
VA04	**Juan Fernndez**	**5.52**	**273**	*eP*			**Pn**	**12 37 06.9**	**-0.7**
VA04	**Juan Fernndez**	**5.52**	**273**	P			**Pn**	**12 37 07.3**	**-0.4**
AC05	**El Transito**	**5.53**	**18**				**Pn**	**12 37 07.9**	**0.0**
AC05	**El Transito**	**5.53**	**18**	P			**Pn**	**12 37 08.4**	**+0.5**
H03S1	**Juan Fernandez**	**5.56**	**271**	Pn			**Pn**	**12 37 06.8**	**-1.2**
	baz=58,slow=16								
H03S1				T			T	12 43 06.4	
	baz=97,slow=75,SNR=7667								
H03S3	**Juan Fernandez**	**5.57**	**271**	Pn			**Pn**	**12 37 07.2**	**-0.8**
	baz=58,slow=16								
H03S3				T			T	12 43 07.8	
	baz=97,slow=75,SNR=8133								
H03S2	**Juan Fernandez**	**5.58**	**271**	Pn			**Pn**	**12 37 07.0**	**-1.2**
	baz=58,slow=16								
H03S2				T			T	12 43 06.4	
	baz=97,slow=75,SNR=7293								
H03N1	**Juan Fernandez**	**5.61**	**275**	Pn			**Pn**	**12 37 09.6**	**+0.9**
	baz=131,slow=24								
H03N1				T			T	12 43 31.2	
	baz=89,slow=73,SNR=70								
H03N3	**Juan Fernandez**	**5.62**	**275**	Pn			**Pn**	**12 37 09.0**	**+0.2**
	baz=131,slow=24								
H03N3				T			T	12 43 20.1	
	baz=89,slow=73,SNR=21								
H03N2	**Juan Fernandez**	**5.63**	**275**	Pn			**Pn**	**12 37 09.4**	**+0.5**
	baz=131,slow=24								
H03N2				T			T	12 43 17.2	
	baz=89,slow=73,SNR=50								
GO03	**Copiapo**	**6.73**	**15**	P			**Pn**	**12 37 24.0**	**-0.4**
TCA	**Tanti**	**7.00**	**69**	⇓*eP*			**Pn**	**12 37 28.4**	**+0.3**
AC02	**Maricunga**	**7.74**	**21**	P			**Pn**	**12 37 38.3**	**-0.3**
TRQA	**Tornquist**	**9.17**	**118**				**Pn**	**12 37 58.7**	**+0.9**
TRQA	**Tornquist**	**9.17**	**118**	P			**Pn**	**12 37 58.7**	**+0.9**
SALTA		**11.12**	**29**	P			**Pn**	**12 38 29.4**	**+4.4**
PB05	**IPOC Station P**	**11.37**	**9**	Pn			**Pn**	**12 38 26.6**	**-1.4**
COYC	**Coyhaique**	**11.44**	**180**				**Pn**	**12 38 30.6**	**+1.8**
PB03	**IPOC Station P**	**12.22**	**11**				**Pn**	**12 38 38.9**	**-0.9**
PSAL	**Palomas, Salto**	**12.69**	**80**	*eP*			**Pn**	**12 38 46.1**	**+0.2**
PSAL				*eS*			**Sn**	**12 41 09.7**	**+3.1**
PB08	**IPOC Station P**	**14.19**	**12**				**Pn**	**12 39 06.9**	**0.0**
PB08	**IPOC Station P**	**14.19**	**12**	P			**Pn**	**12 39 08.9**	**+2.0**
PB11	**IPOC Station P**	**14.49**	**10**				**Pn**	**12 39 10.2**	**-0.5**
PB11	**IPOC Station P**	**14.49**	**10**	P			**Pn**	**12 39 14.0**	**+3.3**
GO01	**Chusmiza**	**14.65**	**11**	P			**Pn**	**12 39 15.7**	**+2.5**
CPUP	**Villa Florida**	**15.02**	**63**	Pn			**Pn**	**12 39 16.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=228,slow=13,SNR=12								
CPUP					Sn		**Sn**	**12 42 00.4**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=142,slow=20,SNR=1.3								
CPUP					LR	LR		12 45 54.4	
	comp=Z,2μm,18.2s,baz=242,slow=41								
	comp=Z,5.4nm,0.7s								
CPUP	**Villa Florida**	**15.02**	**63**	P			**Pn**	**12 39 18.0**	**+0.2**
CPUP	**Villa Florida**	**15.02**	**63**	P			**Pn**	**12 39 20.3**	**+2.5**
PB12	**IPOC Station P**	**15.54**	**7**	P			**Pn**	**12 39 25.2**	**+0.5**
PB12	**IPOC Station P**	**15.54**	**7**	P			**Pn**	**12 39 23.5**	**-1.2**
PB16	**IPOC Station P**	**15.91**	**9**	IAmb	IAmb			12 39 38.2	
	comp=Z,86nm,1.0s								
PB16	**IPOC Station P**	**15.91**	**9**	P			**P**	**12 39 32.0**	**-1.6**
CPSB	**Cacapava Do Su**	**16.31**	**82**	P			**Pn**	**12 39 34.4**	**-0.1**
CPSB	**Cacapava Do Su**	**16.31**	**82**	*eP*			**Pn**	**12 39 34.9**	**+0.3**
CPSB				*eS*			**Sn**	**12 42 37.4**	**+2.4**
CPSB	**Cacapava Do Su**	**16.31**	**82**	P			**Pn**	**12 39 35.9**	**+1.4**
PB18	**Visviri**	**16.65**	**9**	IAmb	IAmb			12 39 47.2	
	comp=Z,204nm,1.1s								
PB18	**Visviri**	**16.65**	**9**	P			**P**	**12 39 43.5**	**+1.8**
MG05	**Puerto Natales**	**17.55**	**181**	P			**P**	**12 39 51.2**	**+0.4**
MURT	**Porto Murtinho**	**17.89**	**50**	*eP*			**Pn**	**12 39 53.2**	**-1.1**
LPAZ	**La Paz**	**18.14**	**13**	P			**Pn**	**12 39 57.9**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=180,slow=7.9,SNR=28								
	comp=Z,45nm,0.9s								
LPAZ	**La Paz**	**18.14**	**13**	P			**P**	**12 39 59.0**	**+0.7**
LPAZ	**La Paz**	**18.14**	**13**	P			**P**	**12 39 59.0**	**+0.7**
LPAZ					pmax	pmax			
	comp=Z,57nm,1.0s								
LPAZ	**La Paz**	**18.14**	**13**	*eP*			**Pn**	**12 39 56.5**	**-1.5**
LPAZ	**La Paz**	**18.14**	**13**	P			**P**	**12 39 59.4**	**+1.1**
ITAB	**Concordia**	**18.58**	**74**	P			**P**	**12 40 02.0**	**-0.5**
AMBA	**Amambai (Brazi**	**18.77**	**58**	*eP*			**P**	**12 40 05.0**	**+0.4**
GO10	**Punta Arenas**	**19.04**	**178**	P			**Pn**	**12 40 10.1**	**+1.9**
COIM	**Forte Coimbra**	**19.09**	**46**	*eP*			**P**	**12 40 08.2**	**+0.1**
BDQN	**Bodoquena, MS**	**19.32**	**49**	*eP*			**P**	**12 40 10.2**	**-0.4**
MG03	**Isla Dawson**	**19.76**	**177**	P			**Pn**	**12 40 15.8**	**-0.9**
MG03				IAmb		IAmb		12 40 19.7	
	comp=Z,72nm,1.0s								
BBSD	**Serra de San D**	**19.82**	**35**	*eP*			**P**	**12 40 15.7**	**-0.4**
PTGB	**Pitanga**	**19.87**	**67**	*eP*			**P**	**12 40 15.6**	**-1.1**
AQDB	**Aquidauana**	**19.97**	**51**	P			**P**	**12 40 17.5**	**-0.2**
AQDB				IAmb		IAmb		12 40 23.5	
	comp=Z,84nm,0.9s								
AQDB	**Aquidauana**	**19.97**	**51**	*eP*			**P**	**12 40 18.2**	**+0.5**
AQDB	**Aquidauana**	**19.97**	**51**	P			**P**	**12 40 18.5**	**+0.8**
EFI	**East Falkland**	**20.31**	**154**	P			**P**	**12 40 20.5**	**-0.7**
EFI				IAmb		IAmb		12 40 32.7	
	comp=Z,49nm,0.8s								
EFI	**East Falkland**	**20.31**	**154**	*i* P			**P**	**12 40 19.7**	**-1.5**
EFI				pmax		pmax			
	comp=Z,63nm,0.8s								
TRCB	**Terra Rica**	**20.55**	**62**	P			**P**	**12 40 23.7**	**-0.3**
TRCB	**Terra Rica**	**20.55**	**62**	*eP*			**P**	**12 40 23.4**	**-0.7**
TRCB	**Terra Rica**	**20.55**	**62**	P			**P**	**12 40 23.9**	**-0.2**
SIV	**San Ignacio**	**20.66**	**32**	P			**P**	**12 40 24.7**	**-0.5**
	comp=Z,45nm,0.8s,baz=210,slow=8.2,SNR=71								
SIV					LR	LR		12 49 58.4	
	comp=Z,2μm,19.4s,baz=229,slow=42								
	comp=Z,45nm,0.8s								
USHA	**Ushuaia**	**20.88**	**174**	P			**P**	**12 40 28.4**	**+1.1**
	comp=Z,16nm,0.9s,baz=339,slow=6.3,SNR=10								
USHA					LR	LR		12 49 21.8	
	comp=Z,820nm,19.0s,baz=248,slow=39								
	comp=Z,16nm,0.9s								
PTLB	**Pontes e Lacer**	**22.02**	**36**	P			**P**	**12 40 39.5**	**-0.4**
PTLB				IAmb		IAmb		12 40 42.8	
	comp=Z,106nm,1.1s								
PTLB	**Pontes e Lacer**	**22.02**	**36**	*eP*			**P**	**12 40 39.6**	**-0.2**
PP1B	**Ponte de Pedra**	**22.62**	**48**	*eP*			**P**	**12 40 44.7**	**-1.6**
C2SB	**Chapadao do Su**	**23.07**	**53**	*eP*			**P**	**12 40 50.5**	**-0.4**
C2SB	**Chapadao do Su**	**23.07**	**53**	P			**P**	**12 40 50.6**	**-0.4**
SALV	**Santo Antonio**	**23.46**	**43**	*eP*			**P**	**12 40 53.4**	**-1.6**
VILB	**Vilhena**	**23.74**	**30**	P			**P**	**12 40 57.4**	**-0.3**
VILB	**Vilhena**	**23.74**	**30**	*eP*			**P**	**12 40 57.0**	**-0.7**
RCLB	**Rio Claro- Sao**	**24.61**	**68**	*eP*			**P**	**12 41 04.4**	**-1.3**
BB19B	**Bebedouro**	**24.63**	**64**	*eP*			**P**	**12 41 04.7**	**-1.2**
VAO	**Valinhos**	**24.73**	**70**	P			**P**	**12 41 06.8**	**0.0**
VAO				IAmb		IAmb		12 41 15.1	
	comp=Z,70nm,1.2s								
VAO	**Valinhos**	**24.73**	**70**	*eP*			**P**	**12 41 07.1**	**+0.3**
ARAG	**Araguaiana, MT**	**25.96**	**50**	*eP*			**P**	**12 41 15.7**	**-2.2**
CZSB	**Cruzeiro do Su**	**26.27**	**359**	*eP*

TBI Tubuai 67.14 257 *e*S **S 12 55 35.9 +3.1**
comp=Z,771nm,28.0s
TBI *e*LR LR 13 06 47.6
comp=Z,3µm,27.5s
TBI *e*LR LR 13 06 55.7
comp=Z,891nm,25.0s
152A Waverly Hall 67.47 349 IAmb IAmb 12 46 41.8
comp=Z,16nm,0.9s
HKT Hockley 67.52 338 *i* P **P 12 46 41.5 +0.3**
HKT pmax pmax
comp=Z,21nm,1.4s
GOGA Godfrey 68.00 350 IAmb IAmb 12 46 45.2
comp=Z,14nm,0.8s
LRAL Lakeview Retre 68.23 347 IAmb IAmb 12 46 47.0
comp=Z,14nm,1.0s
HNDO Hondo 68.28 335 IAmb IAmb 12 46 48.6
comp=Z,16nm,0.8s
LPIG La Paz 68.29 323 LR LR 13 09 46.2
comp=Z,47nm,18.9s,baz=144,slow=30
HPIG 68.51 328 IAmb IAmb 12 47 00.6
comp=Z,11nm,1.1s
JSC Jenkinsville 68.57 352 IAmb IAmb 12 46 49.0
comp=Z,11nm,0.9s
Y49A Blount Mountai 68.92 347 P 12 46 50.0 0.0
Y49A IAmb IAmb 12 46 51.3
comp=Z,16nm,1.1s
PAULI Pauline 69.17 352 IAmb IAmb 12 46 52.9
comp=Z,19nm,0.9s
W57A Gilead 69.30 353 IAmb IAmb 12 46 53.4
comp=Z,18nm,0.8s
JCT Junction City 69.33 335 P **P 12 46 52.6 -0.1**
JCT IAmb IAmb 12 46 54.8
comp=Z,15nm,0.8s
JCT Junction City 69.33 335 P **P 12 46 52.6 -0.1**
JCT pmax pmax
comp=Z,15nm,0.8s
KMSC Kings Mountain 69.43 352 IAmb IAmb 12 46 54.3
comp=Z,16nm,0.8s
BG3 Lake Jocassee 69.48 351 IAmb IAmb 12 46 55.0
comp=Z,19nm,0.8s
SAND Sanderson 69.71 333 IAmb IAmb 12 46 57.5
comp=Z,14nm,0.9s
W52A Murphy 69.72 350 IAmb IAmb 12 46 56.5
comp=Z,15nm,0.8s
TXAR Lajitas Array 69.77 331 P **P 12 46 56.6 +1.1**
comp=Z,3.2nm,0.7s,baz=147,slow=8.7,SNR=31
TXAR LR LR 13 13 15.1
comp=Z,312nm,18.5s,baz=138,slow=32
comp=Z,3.2nm,0.7s
TXAR Lajitas Array 69.77 331 P 12 46 56.5 +1.0
BRDY Brady 69.79 336 IAmb IAmb 12 46 57.2
comp=Z,10nm,0.9s
V58A Windy Hill, Pi 69.85 354 IAmb IAmb 12 46 56.8
comp=Z,17nm,0.7s
PPT2 Papeete2 70.07 262 *e*S **S 12 56 04.0 -3.8**
comp=Z,134nm,23.5s
PPT2 *e*SS **SS 13 00 34.0 -3.4**
comp=Z,57nm,24.0s
PPT2 *e*LR LR 13 08 05.9
comp=Z,262nm,29.2s
PPT2 *e*LR LR 13 08 09.0
comp=Z,366nm,26.8s
V53A Saluda 70.14 351 IAmb IAmb 12 46 58.7
comp=Z,16nm,0.8s
OZNA Ozona 70.21 334 IAmb IAmb 12 47 00.0
comp=Z,13nm,0.8s
TKL Tuckaleechee C 70.26 350 IAmb IAmb 12 46 59.1
comp=Z,17nm,0.8s
PLPT Palo Pinto 70.96 337 IAmb IAmb 12 47 04.4
comp=Z,21nm,1.2s
CLTN Cedars of Leba 71.08 348 IAmb IAmb 12 47 04.7
comp=Z,18nm,0.9s
SGCY Sterling City 71.11 334 IAmb IAmb 12 47 06.4
comp=Z,11nm,0.9s
MNHN Monahans 71.20 333 IAmb IAmb 12 47 06.0
comp=Z,11nm,0.8s
ABTX Abilene, Hawle 71.23 336 IAmb IAmb 12 47 06.0
comp=Z,19nm,0.8s
TPB01 Permian Basin 71.24 332 IAmb IAmb 12 47 06.8
comp=Z,10nm,0.7s
WVT Waverly 71.39 347 P 12 47 05.5 +0.4
WVT Waverly 71.39 347 P **P 12 47 05.5 +0.4**
WVT pmax pmax
comp=Z,84nm,0.8s
U49A Red Boiling Sp 71.40 349 IAmb IAmb 12 47 05.8
comp=Z,11nm,0.8s
WHAR Wooly Hollow 71.56 343 IAmb IAmb 12 47 07.8
comp=Z,24nm,1.1s
WTFS Witchita Falls 71.89 337 IAmb IAmb 12 47 09.8
comp=Z,17nm,0.9s
R58B Mineral 71.91 355 IAmb IAmb 12 47 10.3
comp=Z,34nm,1.3s
129A Stewart Farms, 72.02 334 IAmb IAmb 12 47 10.7
comp=Z,11nm,1.1s
APMT Aspermont 72.03 336 IAmb IAmb 12 47 10.4
comp=Z,11nm,0.7s
SN07 Snyder 07 72.09 335 IAmb IAmb 12 47 10.9
comp=Z,11nm,0.9s
FCAR Ozark Folk Cen 72.09 343 IAmb IAmb 12 47 10.5
comp=Z,13nm,0.8s
S51A Beattyville 72.18 351 IAmb IAmb 12 47 10.9
comp=Z,23nm,0.8s
128A Castleberry Fa 72.24 333 IAmb IAmb 12 47 12.2
comp=Z,6.1nm,0.8s
POST Post 72.28 334 IAmb IAmb 12 47 13.2
comp=Z,16nm,1.1s
R55A Marlinton 72.41 353 IAmb IAmb 12 47 13.1
comp=Z,23nm,0.8s
X34A Smith Ranch, M 72.46 338 IAmb IAmb 12 47 13.4
comp=Z,16nm,0.8s
PBMO Poplar Bluff 72.55 345 IAmb IAmb 12 47 13.2
comp=Z,19nm,0.8s
DKNS Dickens 72.62 335 IAmb IAmb 12 47 14.1
comp=Z,10nm,0.7s
R50A Paris 72.91 350 IAmb IAmb 12 47 15.0
comp=Z,16nm,0.8s
HHAR Hobbs 72.92 342 IAmb IAmb 12 47 15.5
comp=Z,9.9nm,0.8s
R49A Shelbyville 73.05 349 IAmb IAmb 12 47 15.8
comp=Z,16nm,0.8s
TUL3 Leonard 73.07 340 IAmb IAmb 12 47 16.4
comp=Z,15nm,0.9s
Q56A Snyder Ridge, 73.08 354 IAmb IAmb 12 47 16.6
comp=Z,14nm,0.9s
MAW Mawson 73.11 164 P **P 12 47 15.9 +0.9**
comp=Z,5.4nm,1.0s
MAW Mawson 73.11 164 P **P 12 47 15.8 +0.7**
comp=Z,16nm,0.8s,baz=211,slow=6.7,SNR=38
MAW LR LR 13 22 12.0
comp=Z,382nm,18.1s,baz=228,slow=38
comp=Z,16nm,0.8s
MAW Mawson 73.11 164 P 12 47 15.5 +0.5
MAW Mawson 73.11 164 P **P 12 47 15.5 +0.5**
MAW pmax pmax
comp=Z,5.0nm,1.1s
Q54A Coxs Mills 73.18 353 IAmb IAmb 12 47 16.4
comp=Z,10nm,0.7s
S44A Carbondale 73.19 346 IAmb IAmb 12 47 16.8
comp=Z,22nm,0.8s
P57A Homestead Farm 73.44 355 IAmb IAmb 12 47 19.4
comp=Z,22nm,0.9s
MSTX Muleshoe 73.55 334 IAmb IAmb 12 47 19.8
comp=Z,17nm,0.9s
P53A Whipple 73.73 353 IAmb IAmb 12 47 20.1
comp=Z,12nm,0.9s
WUPA West Chester U 73.75 357 IAmb IAmb 12 47 21.2
comp=Z,14nm,0.8s
MVL Millersville 73.85 357 IAmb IAmb 12 47 21.8
comp=Z,28nm,1.3s
319A Douglas 73.92 328 IAmb IAmb 12 47 23.3
comp=Z,12nm,0.9s
CCM Cathedral Cave 73.96 344 P **P 12 47 20.6 +0.3**
CCM Cathedral Cave 73.96 344 P **P 12 47 20.6 +0.3**
CCM pmax pmax
comp=Z,34nm,0.9s
AMTX Amarillo 73.98 335 IAmb IAmb 12 47 24.6
comp=Z,22nm,1.1s
S39A Bolivar 74.10 343 IAmb IAmb 12 47 22.5
comp=Z,18nm,1.3s
T35A Sooner Cattle 74.21 340 IAmb IAmb 12 47 23.5
comp=Z,16nm,0.9s
CROK Carrier 74.26 339 IAmb IAmb 12 47 23.6
comp=Z,24nm,0.9s
121A Cookes Peak, D 74.27 329 IAmb IAmb 12 47 25.5
comp=Z,16nm,0.9s
ELIS Ellis County 74.30 337 IAmb IAmb 12 47 25.1
comp=Z,14nm,1.0s
Q44A Meyer Farm, Va 74.31 346 IAmb IAmb 12 47 22.9
comp=Z,12nm,0.9s
O52A Adamsville 74.40 352 IAmb IAmb 12 47 23.8
comp=Z,17nm,0.8s
R40A Maddies Statio 74.42 344 IAmb IAmb 12 47 24.3
comp=Z,24nm,0.8s
OK038 West end E0370 74.47 338 IAmb IAmb 12 47 25.0
comp=Z,24nm,0.9s
N58A Sunbury 74.71 356 IAmb IAmb 12 47 26.5
comp=Z,13nm,0.9s
KAN01 Argonia South 74.80 339 IAmb IAmb 12 47 26.6
comp=Z,18nm,0.9s
SUR Sutherland 74.90 119 LR LR 13 14 45.3
comp=Z,144nm,20.4s,baz=200,slow=31
SUR Sutherland 74.90 119 P 12 47 28.0 +1.5
O48B Farmland 74.97 350 IAmb IAmb 12 47 26.6
comp=Z,20nm,0.7s
N53A Lisbon 74.98 353 IAmb IAmb 12 47 27.6
comp=Z,16nm,1.1s
M57A Sunshine Farm, 75.23 356 IAmb IAmb 12 47 29.5
comp=Z,26nm,1.2s
DBIC Dimbokro 75.36 71 P **P 12 47 28.8 -0.3**
comp=Z,14nm,0.8s,baz=239,slow=7.0,SNR=8.1
DBIC LR LR 13 19 06.9
comp=Z,250nm,19.0s,baz=221,slow=35
comp=Z,14nm,0.8s
DBIC Dimbokro 75.36 71 P **P 12 47 28.8 -0.3**
DBIC IAmb IAmb 12 47 29.7
comp=Z,13nm,0.8s
TUC Tucson 75.39 327 P 12 47 29.8 +0.9
TUC Tucson 75.39 327 P **P 12 47 29.8 +0.9**
TUC pmax pmax
comp=Z,5.0nm,1.1s
SFIN Lafayette 75.39 348 IAmb IAmb 12 47 28.8
comp=Z,10.0nm,0.8s
ANMO Albuquerque 75.82 332 LR LR 13 16 33.8
comp=Z,265nm,19.5s,baz=156,slow=32
ANMO Albuquerque 75.82 332 P 12 47 32.0 +0.6
ANMO Albuquerque 75.82 332 *ce* P **P 12 47 32.8 +1.4**
ANMO pmax pmax
comp=Z,9.0nm,1.0s
P38A Dawn 75.98 343 IAmb IAmb 12 47 33.0
comp=Z,22nm,0.9s
L59A Walton 75.99 358 IAmb IAmb 12 47 34.0
comp=Z,18nm,0.9s
L61B Northampton 76.20 360 IAmb IAmb 12 47 35.2
comp=Z,21nm,1.0s
R32A Long Quarter, 76.25 339 IAmb IAmb 12 47 35.5
comp=Z,17nm,0.8s
K62A Royalston 76.42 360 IAmb IAmb 12 47 36.9
comp=Z,24nm,1.1s
RAR Rarotonga 76.47 253 LR LR 13 13 24.7
comp=Z,143nm,18.7s,baz=122,slow=30
TRY Troy 76.50 359 IAmb IAmb 12 47 37.1
comp=Z,24nm,1.0s
MMNY Mt. Morris Dam 76.66 356 IAmb IAmb 12 47 37.2
comp=Z,17nm,0.8s
CBKS Cedar Bluff 76.93 338 IAmb IAmb 12 47 39.5
comp=Z,17nm,0.8s
T25A Trinidad 76.98 334 IAmb IAmb 12 47 40.8
comp=Z,20nm,0.9s
J61A Chester 77.10 360 IAmb IAmb 12 47 40.7
comp=Z,18nm,1.2s
WIN Windhoek 77.16 109 IAmb IAmb 12 47 51.2
comp=Z,26nm,1.0s
J57A Williamstown 77.24 357 IAmb IAmb 12 47 40.4
comp=Z,16nm,0.9s
J59A Piesco 77.25 358 IAmb IAmb 12 47 40.6
comp=Z,21nm,1.2s
HNH Hanover 77.46 360 IAmb IAmb 12 47 42.7
comp=Z,14nm,0.9s
X16A Lo Mia Camp, P 77.46 328 IAmb IAmb 12 47 44.2
comp=Z,11nm,1.0s
SCIA State Center 78.08 344 IAmb IAmb 12 47 45.7
comp=Z,17nm,0.8s
WVL Waterville 78.35 2 P 12 47 46.2 +1.1
WVL IAmb IAmb 12 47 47.7
comp=Z,22nm,0.9s
WUAZ Wupatki 78.36 328 IAmb IAmb 12 47 48.7
comp=Z,12nm,0.9s
GRHM Grahamstown, E 78.40 122 P **P 12 47 46.4 +0.4**
LONY Lake Ozonia 78.40 358 IAmb IAmb 12 47 47.2
comp=Z,16nm,1.1s
JFWS Jewell Farm 78.42 347 IAmb IAmb 12 47 46.8
comp=Z,20nm,0.8s
FRNY Flat Rock 78.60 359 IAmb IAmb 12 47 48.4
comp=Z,18nm,0.8s
SADO Sadowa 78.77 355 LR LR 13 25 01.8
comp=Z,36nm,19.1s,baz=176,slow=38
SADO Sadowa 78.77 355 IAmb IAmb 12 47 48.6
comp=Z,14nm,0.9s
L34A Svendsen Farm, 78.90 342 IAmb IAmb 12 47 50.6
comp=Z,19nm,0.8s
PKME Peaks-Kenny Pk 79.06 2 IAmb IAmb 12 47 51.3
comp=Z,18nm,0.8s
G65A Princeton 79.06 3 IAmb IAmb 12 47 51.5
comp=Z,19nm,0.9s
I42A Draeger Farm, 79.12 348 IAmb IAmb 12 47 50.5
comp=Z,20nm,0.9s
PFO Pinyon Flats O 79.14 324 LR LR 13 17 03.9
comp=Z,110nm,18.0s,baz=146,slow=31
PFO Pinyon Flats O 79.14 324 P 12 47 51.5 +1.6
PFO Pinyon Flats O 79.14 324 *i* P **P 12 47 51.1 +1.1**
PFO pmax pmax
comp=Z,16nm,0.9s
DNR Dunn Ranch,Anz 79.19 323 IAmb IAmb 12 47 53.6
comp=Z,14nm,0.9s
TSUM Tsumeb 79.33 106 LR LR 13 17 57.9
comp=Z,344nm,20.7s,baz=162,slow=32
TSUM Tsumeb 79.33 106 P 12 47 51.2 -0.2
TSUM IAmb IAmb 12 48 03.0
comp=Z,12nm,0.9s
I40A Norwalk 79.44 347 IAmb IAmb 12 47 52.1
comp=Z,13nm,0.9s
BUKO Buck Lake 79.46 355 IAmb IAmb 12 47 52.8
comp=Z,36nm,1.4s
H43A Windswept, Lux 79.49 349 IAmb IAmb 12 47 52.6
comp=Z,31nm,1.2s
PV02 Paradox Valley 79.56 332 IAmb IAmb 12 47 54.7
comp=Z,16nm,1.0s
PV18 Skein Mesa, Pa 79.66 331 IAmb IAmb 12 47 55.0
comp=Z,13nm,0.9s
PV12 Saucer Basin, 79.68 332 IAmb IAmb 12 48 04.5
comp=Z,13nm,1.0s
F64A Sherman 79.69 3 P 12 47 53.3 +0.8
F64A IAmb IAmb 12 47 54.9
comp=Z,17nm,0.9s
PV20 West Nyswonger 79.76 331 IAmb IAmb 12 47 55.5
comp=Z,16nm,1.2s
PV10 Paradox Valley 79.82 331 IAmb IAmb 12 47 55.5
comp=Z,16nm,0.9s
PV23 Carpenter Ridg 79.87 331 IAmb IAmb 12 47 56.4
comp=Z,12nm,1.0s
CASY Casey 79.90 181 P **P 12 47 54.1 +0.6**
CASY IAmb IAmb 12 48 03.7
comp=Z,29nm,1.2s
KNB Kanab 80.25 328 IAmb IAmb 12 47 59.1
comp=Z,14nm,1.0s
D62A Allapoint, All 80.89 2 P 12 47 58.9 0.0
D62A IAmb IAmb 12 48 00.8
comp=Z,21nm,0.9s
CCUT Cedar City 80.93 328 IAmb IAmb 12 48 03.0
comp=Z,13nm,1.0s
SPMN Marine on St. 81.15 345 IAmb IAmb 12 48 01.0
comp=Z,14nm,0.7s
P18A Preston Nutter 81.38 331 IAmb IAmb 12 48 04.6
comp=Z,13nm,0.9s
TCRU Three Creeks R 81.42 329 IAmb IAmb 12 48 06.5
comp=Z,8.1nm,0.4s
P17A Butcher Ranch, 81.44 331 IAmb IAmb 12 48 04.5
comp=Z,15nm,1.2s
PRN Pahroc Range 81.56 327 IAmb IAmb 12 48 06.2
comp=Z,18nm,0.9s
RDMU Red Mountain 81.92 332 IAmb IAmb 12 48 06.8
comp=Z,11nm,0.9s
VES Vestal, Richgr 82.22 323 IAmb IAmb 12 48 09.0
comp=Z,20nm,0.8s
E38A The Farm, Brul 82.23 347 IAmb IAmb 12 48 06.9
comp=Z,12nm,0.8s
BSUT Blindstream Ca 82.36 331 IAmb IAmb 12 48 09.8
comp=Z,11nm,1.1s
LBTB Lobatse 82.39 115 LR LR 13 22 43.3
comp=Z,184nm,18.1s,baz=230,slow=34
NLU North Lily Min 82.39 330 IAmb IAmb 12 48 09.9
comp=Z,17nm,1.5s
K22A Casper 82.61 335 IAmb IAmb 12 48 10.5
comp=Z,12nm,1.0s
DUG Dugway, Tooele 82.90 330 IAmb IAmb 12 48 12.5
comp=Z,23nm,1.5s
RSSD Black Hills 83.09 338 P 12 48 11.2 +0.3
RSSD IAmb IAmb 12 48 12.5
comp=Z,9.9nm,0.9s
RSSD Black Hills 83.09 338 P **P 12 48 11.2 +0.3**
RSSD pmax pmax
comp=Z,10.0nm,1.0s
TPH Tonopah 83.11 326 IAmb IAmb 12 48 13.8
comp=Z,12nm,1.0s
URZ Urewera 83.47 228 LR LR 13 18 60.0
comp=Z,164nm,18.8s,baz=156,slow=31
EYMN Ely 83.51 347 IAmb IAmb 12 48 13.6
comp=Z,17nm,1.0s
HWUT Hardware Ranch 83.58 331 IAmb IAmb 12 48 15.3
comp=Z,12nm,0.9s
Q09A Carvers 83.70 326 IAmb IAmb 12 48 27.1
comp=Z,19nm,1.0s
PDAR Pinedale Array 83.80 333 P **P 12 48 14.8 +0.2**
comp=Z,3.0nm,0.8s,baz=151,slow=6.4,SNR=25
PDAR LR LR 13 22 04.7
comp=Z,123nm,18.4s,baz=148,slow=33
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 83.80 333 P **P 12 48 14.3 -0.3**
TBO Thunder Bay 83.82 349 IAmb IAmb 12 48 15.2
comp=Z,14nm,0.9s
LHV Little Huntoon 83.85 325 IAmb IAmb 12 48 17.9
comp=Z,8.9nm,0.9s
NVAR Mina Array Bea 83.90 325 P **P 12 48 16.5 +1.3**
comp=Z,4.9nm,0.8s,baz=156,slow=6.2,SNR=37
NVAR LR LR 13 21 14.9
comp=Z,51nm,19.9s,baz=164,slow=33
comp=Z,4.9nm,0.8s
HVU Hansel Valley 84.22 331 IAmb IAmb 12 48 18.3
comp=Z,10nm,0.8s
ELK Elko 84.39 329 LR LR 13 23 19.3
comp=Z,114nm,19.1s,baz=148,slow=34
ELK Elko 84.39 329 IAmb IAmb 12 48 19.8
comp=Z,7.6nm,0.9s
TORD Torodi Ar. Bea 84.39 70 P **P 12 48 17.9 0.0**
comp=Z,21nm,0.8s,baz=255,slow=4.1,SNR=83
comp=Z,21nm,0.8s
TORD Torodi Ar. Bea 84.39 70 P 12 48 17.6 -0.4
WAKR Walker 84.50 325 IAmb IAmb 12 48 23.3
comp=Z,7.8nm,1.0s
AGMN Agassiz Nation 84.73 344 IAmb IAmb 12 48 20.0
comp=Z,11nm,0.7s
PNTR Pine Nut 85.04 325 IAmb IAmb 12 48 23.9
comp=Z,11nm,0.8s
FLWY Flagg Ranch 85.36 333 IAmb IAmb 12 48 24.5
comp=Z,12nm,0.8s
MPK Martis Peak 85.41 325 IAmb IAmb 12 48 25.9
comp=Z,12nm,1.1s
PAHR Pah Rah Range 85.42 325 IAmb IAmb 12 48 35.5
comp=Z,8.1nm,1.1s
EPLO Experimental L 85.59 346 IAmb IAmb 12 48 23.9
comp=Z,14nm,1.0s
AFDM Forest Hills D 85.59 324 IAmb IAmb 12 48 25.8
comp=Z,7.3nm,1.0s
RLMT Red Lodge 85.73 335 IAmb IAmb 12 48 26.0
comp=Z,10nm,0.8s
YNE Yellowstone No 85.90 334 IAmb IAmb 12 48 26.6
comp=Z,7.8nm,0.7s
BEKR Beckworth 86.01 325 IAmb IAmb 12 48 39.2
comp=Z,9.3nm,1.1s
YHB Horse Butte 86.12 333 IAmb IAmb 12 48 27.7
comp=Z,11nm,1.3s
ORV Oroville 86.32 324 IAmb IAmb 12 48 29.9
comp=Z,18nm,1.1s
HLID Hailey 86.37 331 IAmb IAmb 12 48 29.9
comp=Z,8.3nm,0.9s
ULM Lac du Bonnet 86.58 345 P **P 12 48 27.8 -0.2**
comp=Z,11nm,0.9s,baz=152,slow=4.1,SNR=16
comp=Z,11nm,0.9s
ULM Lac du Bonnet 86.58 345 IAmb IAmb 12 48 28.9
comp=Z,17nm,1.0s
ULM Lac du Bonnet 86.58 345 *i* P **P 12 48 27.6 -0.3**
BCYI Bear Canyon 86.59 332 IAmb IAmb 12 48 31.1
comp=Z,11nm,1.0s
DLMT Dillon 87.16 333 IAmb IAmb 12 48 33.5
comp=Z,11nm,1.1s
MATP Matopo 87.19 113 LR LR 13 26 31.0
comp=Z,249nm,18.2s,baz=231,slow=35
EGMT Eagleton 88.41 336 IAmb IAmb 12 48 38.1
comp=Z,5.2nm,0.8s
YBH Yreka Blue Hor 88.58 325 LR LR 13 22 47.3
comp=Z,62nm,18.3s,baz=146,slow=32
YBH Yreka Blue Hor 88.58 325 IAmb IAmb 12 48 41.3
comp=Z,9.8nm,1.1s
SCHQ Schefferville 88.72 3 LR LR 13 29 08.1
comp=Z,58nm,20.7s,baz=150,slow=36
I07A Izee 88.94 328 IAmb IAmb 12 48 42.3
comp=Z,6.8nm,1.1s
PINE Pine Mountain 89.36 327 IAmb IAmb 12 48 44.5
comp=Z,12nm,1.0s
LSZ Lusaka 89.91 108 LR LR 13 24 49.9
comp=Z,309nm,20.2s,baz=212,slow=33
LSZ Lusaka 89.91 108 P 12 48 46.2 +1.2
LSZ IAmb IAmb 12 48 47.8
comp=Z,12nm,1.1s
LSZ Lusaka 89.91 108 P **P 12 48 46.2 +1.2**
LSZ pmax pmax
comp=Z,12nm,1.1s
AFI Afiamalu 90.02 253 LR LR 13 19 54.6
comp=Z,180nm,19.9s,baz=116,slow=29
LDM Libby Dam 90.77 333 IAmb IAmb 12 48 51.1
comp=Z,6.5nm,0.9s
NEW Newport 91.31 332 LR LR 13 26 33.8
comp=Z,111nm,19.1s,baz=151,slow=33
MD01 Midelt array s 91.95 51 P 12 48 54.9 +0.9
EDM Edmonton 94.04 337 IAmb IAmb 12 49 02.9
comp=Z,8.6nm,0.9s
MSVF Nonsuch 95.62 244 LR LR 13 25 51.3
comp=Z,60nm,18.0s,baz=168,slow=31
ESDC Sonseca Array 96.77 46 P **P 12 49 15.4 -0.4**
comp=Z,1.3nm,0.9s,baz=254,slow=3.7,SNR=7.2
ESDC LR LR 13 32 38.7
comp=Z,97nm,18.3s,baz=229,slow=35
comp=Z,1.3nm,0.9s
FRB Frobisher Bay 97.58 2 LR LR 13 35 13.8
comp=Z,54nm,20.9s,baz=235,slow=37
ILAR Eielson Array 114.24 333 PKP PKPdf 12 54 23.3 -0.5
comp=Z,0.6nm,1.0s,baz=210,slow=2.0,SNR=5.1
ASAR Alice Springs 117.39 207 PKP **PKPdf 12 54 30.3 -1.0**
comp=Z,1.0nm,0.8s,baz=147,slow=2.8,SNR=8.3
CSS Mathiatis 120.08 66 PKP **PKPdf 12 54 35.9 -0.1**
RNPP5 Staryi Chortor 120.51 46 PKP **PKPdf 12 54 35.9 -0.3**
WRA Warramunga Arr 120.58 209 PKP **PKPdf 12 54 36.8 -0.7**
comp=Z,2.0nm,0.6s,baz=158,slow=1.7,SNR=16
LUBAR Lubar, Ukraine 121.26 48 PKP **PKPdf 12 54 37.4 -0.3**
BR105 Keskin Array S 122.01 61 PKP **PKPdf 12 54 39.4 -0.3**
BR106 Keskin Array S 122.01 61 PKP **PKPdf 12 54 39.4 -0.3**
BR104 Keskin Array S 122.02 61 PKP **PKPdf 12 54 39.4 -0.3**
BRTR Keskin Array B 122.03 61 PKP **PKPdf 12 54 39.0 -0.7**
comp=Z,2.7nm,0.8s,baz=212,slow=4.4,SNR=6.3
KBS Kingsbay 122.11 13 *i* PKIKP **PKPdf 12 54 38.4 -0.2**
AK17 Malin Array Si 122.28 48 PKP **PKPdf 12 54 39.1 -0.5**
AK21 Malin Array Si 122.29 47 PKP **PKPdf 12 54 39.1 -0.6**
AK14 Malin Array Si 122.30 48 PKP **PKPdf 12 54 39.1 -0.6**
AK07 Malin Array Si 122.33 48 PKP **PKPdf 12 54 38.9 -0.8**
AKASG Malin Array Be 122.39 48 PKP **PKPdf 12 54 38.9 -1.0**
comp=Z,3.4nm,0.8s,baz=262,slow=2.9,SNR=7.8
AKBB Malin Array Si 122.39 48 *i* PKIKP **PKPdf 12 54 38.0 -1.8**
MNK Minsk 122.58 43 *i* PKP **PKPdf 12 54 39.2 -0.9**
comp=E,30nm,0.7s
MNK *i* PKP **PKPdf 12 54 39.2 -0.9**
comp=N,12nm,0.6s
MNK *i* PKP **PKPdf 12 54 39.2 -0.9**
comp=Z,15nm,0.7s,baz=255
MNK *i* PP **PP 12 56 16.0 -1.9**
MNK *i* PPP PPP 12 58 52.0
MNK *i* SKS **SKSdf 13 01 51.2 +0.6**
MNK *i* SS **SS 13 12 58.7 +0.2**
MNK *i* SSS SSS 13 17 31.6
MNK *i* LRM MLR 13 47 32.5
comp=Z,122nm,19.6s
MNK Minsk 122.58 43 *i* PKIKP **PKPdf 12 54 39.2 -0.9**
MNK *i* 12 56 15.9
MNK *i* PPP PPP 12 58 52.0
MNK *i* 13 01 51.2
MNK *i* SS SS 13 12 58.6 +0.1
MNK *i* SSS SSS 13 17 31.5
MNK pmax pmax
comp=Z,15nm,0.7s
MNK pmax pmax
comp=N,12nm,0.6s
MNK pmax pmax
comp=E,30nm,0.7s
MNK MLR MLR

comp=Z,122nm,20.0s
MNK MLR MLR
comp=N,584nm,21.0s
MNK MLR MLR
comp=E,801nm,22.0s
ARCES ARCESS Array B 124.19 25 PKP **PKPdf 12 54 42.6 -0.1**
comp=E,1.9nm,0.7s,baz=259,slow=1.8,SNR=4.8
FITZ Fitzroy Crossi 125.35 201 PKP **PKPdf 12 54 46.2 -0.4**
comp=E,3.9nm,0.8s,baz=206,slow=6.8,SNR=9.0
H11S2 WAKE ISLAND Hyl 25.62 269 T T 15 13 56.3
baz=118,slow=74
H11S1 WAKE ISLAND Hyl 25.63 269 T T 15 13 57.4
baz=118,slow=74
H11S3 WAKE ISLAND Hyl 25.64 269 T T 15 13 58.6
baz=118
APA Apatity 126.97 28 *i* PKIKP **PKPdf 12 54 47.7 -0.4**
APA *e* 12 56 44.8
APA pmax pmax
comp=Z,6.0nm,1.4s
APA MLR MLR
comp=Z,458nm,3.4s
OBN Obninsk 127.63 43 ⇑*i* PKIKP **PKiKP 12 54 50.3 0.0**
OBN 13 02 01.0
OBN *i* PS **PS 13 06 48.9 -8.4**
OBN *i* SS SS 13 14 23.9 +22
OBN pmax pmax
comp=Z,14nm,0.5s
OBN MLR MLR
comp=Z,142nm,20.0s
MOS Moscow 128.30 43 *e*PKiKP **PKiKP 12 54 51.4 -0.2**
KLMR Klimovskoe 129.59 36 *e*PKIKP **PKPdf 12 54 52.2 -1.1**
KLMR pmax pmax
comp=Z,24nm,1.2s
KIV Kislovodsk 129.68 58 *i* PKIKP **PKPdf 12 54 53.5 -0.7**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,56nm,23.0s
KBZ Khabaz 129.78 59 PKP **PKiKP 12 54 55.1 +0.1**
comp=Z,2.4nm,0.9s,baz=58,slow=3.8,SNR=4.8
KBZ Khabaz 129.78 59 *i* PKIKP **PKPdf 12 54 53.7 -0.5**
BILL Bilibino 132.88 334 *i* PKIKP **PKPdf 12 54 59.0 -0.4**
BELG Belogornoye 133.97 48 *i* PKIKP **PKPdf 12 55 01.1 -0.7**
KIRV Kirov 134.72 39 *i* PKIKP **PKPdf 12 55 02.8 -0.2**
ARTI Arti 139.85 41 *i* PKIKP **PKPdf 12 55 12.3 -0.3**
ARTI 12 58 05.2
ARTI SS SS 13 16 22.6 -6.7
SEY Seymchan 140.06 330 *i* PKIKP **PKPdf 12 55 11.9 -0.9**
PETK Petropavlovsk- 140.13 314 PKP **PKPdf 12 55 14.0 +0.8**
comp=Z,2.4nm,0.8s,baz=76,slow=7.6,SNR=7.3
TIXI Tiksi 140.79 350 *i* PKIKP **PKPdf 12 55 13.5 -0.4**
NRIK Noril'sk 142.97 12 PKP **PKPdf 12 55 17.4 -0.5**
comp=Z,2.2nm,0.6s,baz=343,slow=1.2,SNR=3.9
KAD Karad 145.61 111 *eP* **PKPdf 12 55 24.1 0.0**
KAD *i* x x 12 55 34.8
BORK Borovoye 147.43 43 *i* PKIKP **PKPdf 12 55 26.7 +0.7**
BVAR Borovoye Array 147.47 43 PKPbc **PKPbc 12 55 27.6 -1.1**
comp=Z,11nm,0.6s,baz=298,slow=3.8,SNR=31
CHGR Chuyangaron 148.74 70 *i* PKIKP **PKPdf 12 55 29.4 +0.6**
YAK Yakutsk 148.79 340 *e*PKHKP PKPpre 12 55 25.5
YAK pmax pmax
comp=Z,43nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=Z,175nm,4.4s
YAK pmax pmax
comp=N,123nm,2.7s
YAK pmax pmax
comp=E,82nm,3.3s
TYV Tymovskoe 149.68 314 *e*PKP2 **PKPbc 12 55 34.9 +0.5**
TYV pmax pmax
comp=Z,19nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.9s
YSS Yuzhno-Sakhali 150.75 307 *e*PKIKP **PKiKP 12 55 37.6 -0.1**
YSS pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 152.70 62 *i* PKIKP **PKPbc 12 55 40.5 -1.4**
KURBB Kurchatov Arra 153.06 43 PKP **PKPdf 12 55 35.0 +0.1**
comp=Z,1.2nm,0.3s,baz=302,slow=2.3,SNR=6.4
KURBB PKPbc **sPKPdf 12 55 42.7 -1.1**
comp=Z,7.1nm,0.6s,baz=295,slow=3.0,SNR=22
KURK Kurchatov 153.07 43 PKIKP **PKPdf 12 55 35.0 +0.1**
KURK 12 55 42.7
ZALV Zalesovo Beam 154.41 32 PKP **PKPdf 12 55 36.7 0.0**
comp=Z,3.6nm,0.8s,baz=305,slow=3.1,SNR=12
ZALV PKPbc **PKiKP 12 55 45.5 +0.4**
comp=Z,16nm,0.7s,baz=299,slow=2.7,SNR=36
ZALV PKPab **PKPab 12 56 00.0 +0.7**
comp=Z,15nm,0.7s,baz=303,slow=4.7,SNR=12
KLR Kul'dur 156.72 318 PKP **PKPdf 12 55 38.0 -2.0**
MK31 Makanchi Array 156.96 49 *i* PKIKP **PKPdf 12 55 39.8 -0.6**
MKAR Makanchi Array 156.96 49 PKP **PKPdf 12 55 40.5 +0.1**
comp=Z,1.6nm,0.8s,baz=318,slow=1.6,SNR=12
MKAR PKPab **PKPab 12 56 10.7 0.0**
comp=Z,5.0nm,0.8s,baz=305,slow=4.3,SNR=16
HEH HeiHe 158.39 324 *eP* **PKPab 12 56 17.1 +0.5**
HEH pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 161.66 52 *e*PKP **PKPdf 12 55 46.9 +0.9**
WMQ L L
comp=Z,100nm,20.1s
CMAR Chiang Mai Arr 162.52 151 PKP **PKPdf 12 55 46.8 -0.7**
comp=Z,2.5nm,1.0s,baz=258,slow=2.8,SNR=9.5
KSRS Korea Array 163.32 287 PKP **PKPdf 12 55 47.4 -0.4**
comp=Z,1.6nm,0.9s,baz=142,slow=0.5,SNR=9.2
KSRS PKPab **PKPab 12 56 40.0 +1.4**
comp=Z,1.5nm,0.8s,baz=84,slow=4.2,SNR=5.9
SONM Songino Array 166.26 4 PKP **PKPdf 12 55 49.9 -0.3**
comp=Z,0.9nm,0.7s,baz=164,slow=2.4,SNR=5.0
SONM PKPab **PKPab 12 56 51.9 +0.7**
comp=Z,2.5nm,0.8s,baz=334,slow=4.1,SNR=9.9
NJ2 Nanjing 170.48 261 *e*PKP **PKPdf 12 55 53.3 0.0**
PZH PanZhiHua 170.79 144 PKP **PKPdf 12 55 53.1 -0.7**
GTA2 Gaotai 171.63 48 PKP **PKPdf 12 55 54.3 +0.5**
HNS HongShan 173.49 302 ⇓PKP **PKPdf 12 55 55.2 +0.7**

*IDC **02** 12:44:15.9±0.7,28°.37N×105°.14E, h0km, mb3.9/11, mbtmp3.9/14, ML3.0/2, MS3.6/9, Error ellipse: s-maj=29.2km s-min=14.2km az=66.0*
*NEIC **02** 12:44:17.9±0.9,28°.33N±0°.08×105°.0E±0°.1, h10km±1km, mb4.2/13, Error ellipse: s-maj=16.4km s-min=12.7km az=273.0*
ISC 02 12:44:18.7±0.6, 28°34N±0°.08×105°0E±0°.1, h19km, n39, σ0°70/35, mb4.0/17, MS3.7/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.33**	**63**			**Pn**	**12 45 24.5**	**+0.9**
SLVN	**Son La**	**7.05**	**189**	Pn		**Pn**	**12 46 01.2**	**+0.1**
LZDM	**Lanzhou Array**	**7.68**	**352**	Pn		**Pn**	**12 46 09.8**	**0.0**
	3.5nm,0.3s,baz=178,slow=17,SNR=4.1							
CMAR	**Chiang Mai Arr**	**11.32**	**211**	Pn		**Pn**	**12 47 01.6**	**+2.1**
	baz=18,slow=12,SNR=20							
	3.7nm,0.9s							
CMAR	**Chiang Mai Arr**	**11.32**	**211**			**Pn**	**12 46 58.1**	**-1.4**
SONM	**Songino Array**	**19.49**	**3**	P		**P**	**12 48 44.8**	**+0.1**
	0.4nm,0.3s,baz=179,slow=10.0,SNR=8.8							
SONM				LR		LR	12 57 02.1	
	comp=Z,58nm,18.9s,baz=202,slow=39							
	1.2nm,0.4s							
SONM	**Songino Array**	**19.49**	**3**	P		**P**	**12 48 44.8**	**+0.1**
KSRS	**Korea Array**	**21.21**	**59**	P		**P**	**12 49 02.8**	**-0.5**
	0.8nm,0.4s,baz=242,slow=11,SNR=5.6							
	0.8nm,0.4s							
TLY	**Talaya**	**23.34**	**358**	LR		LR	12 59 28.6	
	comp=Z,47nm,19.1s,baz=173,slow=39							
PDGK	**Podgornoye**	**25.41**	**313**	P		**P**	**12 49 44.7**	**-0.5**
MKAR	**Makanchi Array**	**25.62**	**322**	P		**P**	**12 49 47.3**	**+0.3**
	1.5nm,0.7s,baz=124,slow=11,SNR=11							
MKAR				LR		LR	13 00 42.6	
	comp=Z,56nm,19.4s,baz=30,slow=38							
	1.5nm,0.7s							
MKAR	**Makanchi Array**	**25.62**	**322**	P		**P**	**12 49 47.8**	**+0.9**
ZALV	**Zalesovo Beam**	**29.56**	**336**	P		**P**	**12 50 21.8**	**-0.3**
	0.6nm,0.4s,baz=123,slow=5.5,SNR=3.8							
ZALV				LR		LR	13 03 00.9	
	comp=Z,38nm,20.9s,baz=83,slow=38							
	0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**29.95**	**325**	P		**P**	**12 50 26.6**	**+1.0**
	1.0nm,0.3s,baz=155,slow=8.4,SNR=4.8							
	1.0nm,0.3s							

KURK	**Kurchatov**	**29.96**	**325**	P		**P**	**12 50 26.6**	**+0.9**
KURK				IAmb		IAmb	12 50 59.6	
	comp=Z,1.9nm,0.9s							
BVAR	**Borovoye Array**	**35.48**	**324**	P		**P**	**12 51 14.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=128,slow=9.5,SNR=3.0							
	comp=Z,0.6nm,0.4s							
AB31	**Akbulak array**	**40.14**	**314**	P		**P**	**12 51 53.6**	**+0.3**
AB31				IAmb		IAmb	12 51 55.1	
	comp=Z,1.2nm,0.7s							
ABKAR	**Akbulak array**	**40.14**	**314**	P		**P**	**12 51 54.0**	**+0.6**
NRIK	**Noril'sk**	**42.28**	**351**	P		**P**	**12 52 11.2**	**+0.6**
	comp=Z,2.8nm,0.5s,baz=130,slow=8.9,SNR=5.6							
	comp=Z,2.8nm,0.5s							
NRIK	**Noril'sk**	**42.28**	**351**	P		**P**	**12 52 11.2**	**+0.6**
NRIK				IAmb		IAmb	12 52 12.5	
	comp=Z,5.2nm,1.1s							
TIXI	**Tiksi**	**45.30**	**10**	P		**P**	**12 52 34.8**	**-0.1**
KIRV	**Kirov**	**48.47**	**325**	LR		LR	13 16 31.6	
	comp=Z,37nm,18.7s,baz=356,slow=40							
KNRA	**Kununurra**	**49.42**	**149**	P		**P**	**12 53 07.1**	**-0.5**
KNRA				IAmb		IAmb	12 53 50.2	
	comp=Z,7.2nm,1.2s							
WB0	**Warramunga Arr**	**55.61**	**146**	P		**P**	**12 53 53.3**	**-0.1**
WB0				IAmb		IAmb	12 54 08.6	
	comp=Z,9.4nm,1.4s							
WRAB	**Tennant Creek**	**55.73**	**146**	P		**P**	**12 53 54.4**	**+0.1**
WRAB				IAmb		IAmb	12 54 37.6	
	comp=Z,3.5nm,0.7s							
WRA	**Warramunga Arr**	**55.73**	**146**	P		**P**	**12 53 54.4**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=316,slow=12,SNR=22							
WRA				PcP		**PcP**	**12 54 51.8**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=148,slow=1.8,SNR=4.5							
	comp=Z,2.6nm,0.9s							
WRA	**Warramunga Arr**	**55.73**	**146**	P		**P**	**12 53 54.4**	**+0.1**
WR8	**Warramunga Arr**	**55.82**	**146**	P		**P**	**12 53 55.0**	**0.0**
AS31	**Alice Springs**	**58.72**	**149**	P		**P**	**12 54 15.4**	**0.0**
AS31				IAmb		IAmb	12 54 33.3	
	comp=Z,1.5nm,1.2s							
ASAR	**Alice Springs**	**58.72**	**149**	P		**P**	**12 54 15.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=331,slow=7.0,SNR=24							
ASAR				PcP		**PcP**	**12 55 05.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=339,slow=2.3,SNR=4.6							
	comp=Z,0.8nm,0.6s							
FIA1	**FINESS Array S**	**60.31**	**327**	P		**P**	**12 54 25.4**	**-0.4**
FINES	**FINESS Array B**	**60.31**	**327**	P		**P**	**12 54 26.1**	**+0.2**
HFS	**Hagfors**	**66.52**	**327**	P		**P**	**12 55 07.0**	**0.0**
	comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=1.4							
	comp=Z,0.5nm,0.4s							
NOA	**NORSAR Array B**	**67.42**	**328**	P		**P**	**12 55 12.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=64,slow=5.3,SNR=2.1							
	comp=Z,0.4nm,0.5s							
ILAR	**Eielson Array**	**71.97**	**25**	P		**P**	**12 55 40.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=299,slow=4.9,SNR=4.0							
	comp=Z,0.1nm,0.3s							
MBAR	**Mbarara**	**76.50**	**262**	LR		LR	13 32 36.4	
	comp=Z,250nm,18.7s,baz=211,slow=38							
KEST	**Kesra**	**78.26**	**304**	LR		LR	13 40 40.7	
	comp=Z,283nm,18.1s,baz=288,slow=43							
BORG	**Borgarnes**	**78.32**	**339**	LR		LR	13 35 54.5	
	comp=Z,70nm,19.2s,baz=240,slow=40							
SFJD	**Kangerlussuaq**	**83.19**	**351**	LR		LR	13 36 04.1	
	comp=Z,65nm,21.2s,baz=196,slow=37							

JMA 02 12:47:59.2±0.2, 24°.9N±1°.0×123°.5E±0°.3, h27km, MV1.6/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.60**	**224**	*eP*		Pb	12 48 10.8	-0.3
YOJ				*eS*		Sb	12 48 18.6	-0.7
YOJ	**Yonaguni jima**	**0.60**	**224**			Pb	12 48 11.1	-0.1
IRIF	**Iriomote-Funau**	**0.61**	**157**	*eP*		Pb	12 48 10.9	-0.4
IRIF				*eS*		Sb	12 48 19.7	+0.2
JYNG	**Yonagunijimaku**	**0.65**	**227**	*eP*		Pb	12 48 11.7	-0.3
JYNG				*eS*		Sb	12 48 20.3	-0.4
JIJ	**Ishigaki jima**	**0.81**	**131**	*eP*		Pb	12 48 14.0	-0.7
JIJ				*eS*		Sb	12 48 23.9	-1.4
JKRS	**Kuro-shima**	**0.82**	**143**	*eP*		Pb	12 48 14.6	-0.3
JISG	**Ishigakijimahi**	**0.82**	**112**	*eS*		Sb	12 48 25.3	-0.4
HATJ	**Hateruma jima**	**0.89**	**160**	*eP*		Pn	12 48 15.6	-0.3

*AZER **02** 12:59:40.2,41°.80N×49°.99E, h17km, ml2.6*
*MOS **02** 12:59:41.4,41°.81N×49°.66E, h5km, MPVA3.6*
*DRS **02** 12:59:44.3,41°.78N×49°.85E, h69km*
ISC 02 12:59:38.9±2.8, 41°.97N±0°.05×50°.02E±0°.09, h13km±16km, n29, σ1°11/51, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIZA	**Siyzn**	**1.23**	**224**	P		**Pn**	**13 00 01.6**	**-0.3**
SIZA				S		**Sb**	**13 00 17.6**	**-0.2**
DRN	**Derbent**	**1.26**	**273**	*e*Pg		**Pb**	**13 00 03.0**	**+0.5**
DRN				*e*Sg		**Sn**	**13 00 18.3**	**-0.7**
QUBA	**Quba, Azerbaij**	**1.30**	**242**	P		**Pb**	**13 00 03.5**	**+0.3**
QUBA				S		**Sb**	**13 00 19.9**	**+0.2**
ATGJ	**Altiaghaj**	**1.37**	**217**	P		**Pn**	**13 00 03.7**	**-0.1**
ATGJ				S		**Sn**	**13 00 21.1**	**-0.8**
NDR	**Nardaran**	**1.39**	**181**	S		**Sn**	**13 00 21.6**	**-0.3**
QSAR	**Qusar**	**1.39**	**252**	Pn		**Pb**	**13 00 05.3**	**+0.6**
QSAR				Sn		**Sb**	**13 00 23.6**	**+1.1**
KSMR	**Kasumkent**	**1.46**	**256**	*e*Pg		**Pb**	**13 00 06.4**	**+0.4**
KSMR				*e*Sg		**Sn**	**13 00 22.4**	**-1.7**
GOBA	**Gobu**	**1.58**	**188**	S		**Sn**	**13 00 25.9**	**-0.9**
PQL	**Pirkuli**	**1.59**	**223**	Sn		**Sn**	**13 00 27.2**	**-0.3**
XNQ	**Khinaliq**	**1.62**	**241**	Pn		**Pn**	**13 00 07.5**	**+0.2**
XNQ				Sn		**Sb**	**13 00 29.7**	**+0.5**
GBS	**Qobustan**	**1.65**	**210**	Pn		**Pb**	**13 00 09.9**	**-0.6**
GBS				Sn		**Sn**	**13 00 27.4**	**-1.2**
AKT	**Akhty**	**1.79**	**255**	*e*Pg		**Pb**	**13 00 11.8**	**+0.3**
AKT				*e*Sg		**Sb**	**13 00 33.6**	**-0.2**
URKR	**Urkarakh**	**1.79**	**277**	*e*Pg		**Pb**	**13 00 13.0**	**+1.4**
URKR				*e*Sg		**Sg**	**13 00 36.1**	**-0.5**
IML	**Ismayilli**	**1.81**	**230**	Pg		**Pn**	**13 00 10.9**	**+1.0**
IML				Sg		**Sb**	**13 00 35.2**	**+0.5**
QBL	**Gabala**	**1.93**	**239**	Pg		**Pn**	**13 00 11.7**	**+0.2**
QBL				Sg		**Sb**	**13 00 38.6**	**+0.5**
ALIB	**&Aumlli-Bayram**	**2.15**	**201**	Pn		**Pn**	**13 00 13.8**	**-0.6**
ALIB				Sn		**Sn**	**13 00 41.5**	**+0.6**
KMKR	**Kumukh**	**2.19**	**275**	*e*Pg		**Pb**	**13 00 18.9**	**+0.6**
KMKR				*e*Sg		**Sb**	**13 00 46.8**	**+1.3**
SEKA	**Sheki**	**2.25**	**251**	Pn		**Pn**	**13 00 16.4**	**+0.5**
SEKA				Sn		**Sn**	**13 00 43.2**	**-0.3**
ARKR	**Arakani**	**2.34**	**287**	*e*Pg		**Pb**	**13 00 21.6**	**+0.7**
ARKR				*e*Sg		**Sb**	**13 00 51.7**	**+2.1**
KRNR	**Karanay**	**2.46**	**291**	*e*Pn		**Pb**	**13 00 23.2**	**+0.2**
KRNR				*e*Sn		**Sb**	**13 00 54.7**	**+1.4**
UNCR	**Uncukul**	**2.51**	**288**	*e*Pn		**Pb**	**13 00 24.1**	**+0.3**
UNCR				*e*Sn		**Sb**	**13 00 55.8**	**+1.2**
XNZR	**Khunzakh**	**2.53**	**284**	*e*Pn		**Pb**	**13 00 24.0**	**-0.3**
XNZR				*e*Sn		**Sb**	**13 00 55.9**	**+0.5**
DBC	**Dubki**	**2.59**	**295**	*e*Pn		**Pb**	**13 00 24.8**	**-0.3**
DBC				*e*Sn		**Sb**	**13 00 54.4**	**-2.5**
TLTR	**Tlyarata**	**2.74**	**274**	*e*Pn		**Pb**	**13 00 25.7**	**-2.0**
TLTR				*e*Sn		**Sb**	**13 00 58.9**	**-2.3**
BTLR	**Botlikh**	**2.90**	**285**	*e*Pn		**Pb**	**13 00 29.2**	**-1.4**
BTLR				*e*Sn		**Sb**	**13 01 04.6**	**-1.4**
YRD	**Yardimli**	**3.34**	**205**	Pn		**Pn**	**13 00 32.6**	**+1.7**
GDB	**GEDABAY**	**3.45**	**250**	Pg		**Pb**	**13 00 39.9**	**0.0**
KBZ	**Khabaz**	**5.53**	**291**	*e*Sn		**Sn**	**13 02 06.9**	**+2.8**
SHA1	**Shidzhatmaz**	**5.70**	**291**	*e*Pn		Pn	13 01 08.5	+5.1
SHA1				*e*Sn		**Sn**	**13 02 07.2**	**-1.5**

NNC 02 13:14:09.5±0.6, 43°.15N×78°.37E, h0km, mpv2.3, Error ellipse: s-maj=5.0km s-min=2.0km az=103.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.10**	**163**	P		Pg	13 14 11.6	+0.3
	28nm,0.1s							
SATY				S		Sg	13 14 12.7	+0.2
	256nm,0.1s							
SATY	**Saty**	**0.10**	**163**	*e*S		Sg	13 14 12.7	+0.2
	256nm,0.1s							
SATY	**Saty**	**0.10**	**163**	*e*P		Pg	13 14 11.6	+0.3
	26nm,0.1s							
KPKS	**Kokpek**	**0.39**	**36**	P		Pg	13 14 16.9	-0.1
	0.1nm,0.0s							
KPKS				S		Sg	13 14 21.7	-0.3
	1.3nm,0.0s							
KPKS	**Kokpek**	**0.39**	**36**	*e*S		Sg	13 14 21.7	-0.3
	1.4nm,0.0s							
KPKS	**Kokpek**	**0.39**	**36**	*e*P		Pg	13 14 16.9	0.0
	0.1nm,0.1s							
UZB	**Uzynbulak**	**0.48**	**90**	P		Pg	13 14 19.1	+0.4
	0.3nm,0.1s							
UZB				S		Sg	13 14 25.7	+0.9
	1.0nm,0.1s							
UZB	**Uzynbulak**	**0.48**	**90**	*e*S		Sg	13 14 25.7	+0.9
	1.0nm,0.1s							
UZB	**Uzynbulak**	**0.48**	**90**	*e*P		Pg	13 14 19.1	+0.4
	0.4nm,0.1s							

GUC 02 13:16:25.7±0.8, 31°.10S×71°.67W, h48km±5km, ML3.7, 4C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.59**	**101**	⇓*i*	*P*	Pn	13 16 40.1	+2.1
CO02				*e*	S	Sn	13 16 50.3	+3.4
CO02				IAML			13 16 52.2	
	comp=N,7μm,0.2s							
CO03	**El Pedregal**	**0.88**	**73**	⇓*i*	*P*	Pn	13 16 42.9	+1.0
CO03				*e*	S	Sn	13 16 55.4	+1.6
CO03				IAML			13 16 55.9	
	comp=E,3μm,0.1s							
CO04	**Los Peladeros**	**1.11**	**148**	*eP*		Pn	13 16 46.3	+1.1
CO04				*e*	S	Sn	13 17 01.5	+1.9
CO04				IAML			13 17 02.1	
	comp=E,4μm,0.1s							
GO04	**Tololo Observa**	**1.19**	**39**	⇓*eP*		Pn	13 16 47.0	+0.7
GO04				*e*	S	Sn	13 17 02.9	+1.5
GO04				IAML			13 17 04.8	
	comp=E,4μm,0.4s							
CO01	**Juntas del Tor**	**1.76**	**51**	⇓*eP*		Pn	13 16 55.2	+1.2
CO01				*e*	S	Sn	13 17 16.8	+1.4
VA01	**Torpederas**	**1.92**	**179**	*eP*		Pn	13 16 56.1	+0.2
VA01				IAML			13 17 20.0	
	comp=N,1μm,0.1s							
ROCH	**El Roble**	**1.95**	**163**	⇓*eP*			13 16 57.4	
ROCH				⇓*eP*		Pn	13 16 57.3	+0.7
ROCH				IAML			13 17 22.3	
	comp=N,816nm,0.4s							
MT02	**Curacav**	**2.20**	**168**	⇓*eP*		Pn	13 17 00.0	+0.2
MT02				IAML			13 17 28.9	
	comp=N,247nm,0.2s							
PEL	**Peldehue**	**2.21**	**158**	*eP*		Pn	13 17 00.8	+0.9
LCO	**Las Campanas**	**2.24**	**22**	⇑*eP*		Pn	13 17 01.1	+0.5
LCO				IAML			13 17 31.1	
	comp=N,941nm,0.2s							
MT10	**Hacienda Santa**	**2.37**	**156**	⇓*eP*		Pn	13 17 03.4	+1.1
MT05	**Renca**	**2.42**	**161**	*eP*		Pn	13 17 03.8	+1.0
MT05				*e*	S	Sn	13 17 32.5	+1.2
MT05				IAML			13 17 34.2	
	comp=E,504nm,0.2s							
MT14	**Cerro Cal¡n**	**2.48**	**158**	*eP*		Pn	13 17 04.2	+0.4
MT14				IAML			13 17 38.5	
	comp=N,370nm,0.3s							
MT16	**CCHEN**	**2.52**	**158**	*eP*		Pn	13 17 05.4	+1.2
AC05	**El Transito**	**2.56**	**29**	*eP*		Pn	13 17 05.8	+1.0
MT03	**Universidad Ad**	**2.58**	**158**	⇑*eP*		Pn	13 17 06.2	+1.1
MT08	**Bocatoma Ro**	**2.73**	**150**	⇓*eP*		Pn	13 17 10.1	+2.9
MT09	**Talagante**	**2.73**	**168**	*eP*		Pn	13 17 08.0	+0.8
MT09				IAML			13 17 43.2	
	comp=N,278nm,0.5s							
MT01	**Popeta**	**2.78**	**173**	⇑*eP*		Pn	13 17 08.2	+0.4
MT01				IAML			13 17 49.2	
	comp=E,187nm,0.1s							
AC04	**Llanos de Chal**	**2.93**	**10**	*eP*		Pn	13 17 09.7	-0.2
BO04	**La Punta**	**3.02**	**163**	⇑*eP*		Pn	13 17 12.1	+1.0
BO03	**Pichilemu**	**3.40**	**184**	*eP*		Pn	13 17 15.6	-0.6
VCA	**Vinchina**	**3.82**	**53**	*eP*		Pn	13 17 25.7	+3.5
AC02	**Maricunga**	**4.80**	**28**	*eP*		Pn	13 17 36.0	+0.1
AC01	**Pan de Azucar**	**5.02**	**11**	*eP*		Pn	13 17 36.6	-2.0

*AZER **02** 13:20:15.1,41°.78N×49°.74E, h60km, ml2.3*
*MOS **02** 13:20:15.3,41°.74N×49°.69E, h9km, MPVA3.4*
*DRS **02** 13:20:18.9,41°.68N×49°.71E, h60km*
ISC 02 13:20:19.5±3.5, 41°.55N±0°.08×49°.8E±0°.2, h58km±30km, n14, σ2°.9/05/26, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIZA	**Siyzn**	**0.81**	**235**	P		**Pn**	**13 20 33.8**	**-1.4**
SIZA				S		**Sn**	**13 20 50.1**	**+3.5**
ATGJ	**Altiaghaj**	**0.94**	**223**	P		**Pn**	**13 20 35.8**	**-0.9**
ATGJ				S		**Sn**	**13 20 52.3**	**+2.9**
QUBA	**Quba, Azerbaij**	**0.99**	**259**	P		**Pn**	**13 20 35.9**	**-1.4**
QUBA				S		**Sn**	**13 20 52.0**	**+1.5**
DRN	**Derbent**	**1.19**	**294**	*e*Pg		**Pn**	**13 20 37.5**	**-2.4**
DRN				*e*Sg		**Sn**	**13 20 52.2**	**-3.0**
KSMR	**Kasumkent**	**1.24**	**273**	*e*Pg		**Pn**	**13 20 39.9**	**-0.9**
KSMR				*e*Sg		**Sn**	**13 20 55.3**	**-1.3**
XNQ	**Khinaliq**	**1.29**	**254**	P		**Pn**	**13 20 40.5**	**-1.0**
XNQ				S		**Sn**	**13 20 56.9**	**-1.1**
AKT	**Akhty**	**1.54**	**268**	*e*Pg		**Pn**	**13 20 44.8**	**0.0**
AKT				*e*Sg		**Sn**	**13 21 06.2**	**+2.4**
KMKR	**Kumukh**	**2.09**	**287**	*e*Pg		**Pn**	**13 20 52.9**	**+0.5**
KMKR				*e*Sg		**Sn**	**13 21 20.6**	**+3.3**
ARKR	**Arakani**	**2.33**	**298**	*e*Pg		**Pn**	**13 20 54.7**	**-0.7**
ARKR				*e*Sg		**Sn**	**13 21 24.3**	**+1.4**
KRNR	**Karanay**	**2.49**	**302**	*e*Pn		**Pn**	**13 20 56.7**	**-1.0**
KRNR				*e*Sn		**Sn**	**13 21 27.9**	**+0.9**
UNCR	**Uncukul**	**2.51**	**299**	*e*Pn		**Pn**	**13 20 58.1**	**+0.2**
UNCR				*e*Sn		**Sn**	**13 21 30.2**	**+2.9**
TLTR	**Tlyarata**	**2.62**	**283**	*e*Pn		**Pn**	**13 20 59.6**	**+0.1**
TLTR				*e*Sn		**Sn**	**13 21 32.7**	**+2.5**
GANJ	**Ganja**	**2.77**	**252**	S		**Sn**	**13 21 33.0**	**-0.6**

YSS	**Yuzhno-Sakhali**	**1.14**	**173**	*e*Pg		**Pn**	**13 48 10.1**	**-0.1**
YSS				AMB		AMB	13 48 14.6	
	comp=E,690nm,0.4s							
YSS				*e*Sg		**Sn**	**13 48 26.5**	**+0.3**
YSS				A		A	13 48 28.5	
	comp=E,2µm,0.7s							
YSS				A		A	13 48 28.5	
	comp=E,1µm,0.7s							
KRS4	**Mayak Korsakov**	**1.48**	**174**	*e*Pg		**Pg**	**13 48 15.9**	**-0.2**
KRS4				AMB		AMB	13 48 17.3	
	comp=E,400nm,0.6s							
KRS4				*e*Sg		**Sg**	**13 48 36.8**	**+1.5**
KRS4				A		A	13 48 40.8	
	comp=E,1µm,0.5s							
KRS4				A		A	13 48 40.8	
	comp=E,910nm,0.5s							
NEVR	**Nevel`sk**	**1.49**	**199**	*e*P		**Pn**	**13 48 14.0**	**-1.0**
NEVR				*e*Pg		**Pb**	**13 48 15.3**	**-0.5**
NEVR				*e*Sg		**Sg**	**13 48 35.6**	**+0.2**
TYV	**Tymovskoe**	**2.78**	**1**	*e*PN		**Pg**	**13 48 39.4**	**-1.5**
TYV				*e*S		**Sg**	**13 49 18.6**	**+1.7**
TYV				pmax	pmax			
	comp=Z,66nm,0.9s							
TYV				pmax	pmax			
	comp=Z,300nm,2.1s							
TYV				smax	smax			
	comp=N,92nm,1.0s							
TYV				smax	smax			
	comp=E,80nm,1.0s							
TYV				smax	smax			
	comp=N,400nm,2.0s							
TYV	**Tymovskoe**	**2.78**	**1**	*e*P		**Pn**	**13 48 32.4**	**-0.4**
TYV				*e*P		**Pb**	**13 48 36.9**	**-0.9**
TYV				*e*Pg		**Pg**	**13 48 41.2**	**+0.3**
TYV				AMB		AMB	13 48 42.7	
	comp=N,70nm,0.7s							
TYV				*e*S		**Sn**	**13 49 05.8**	**-0.9**
TYV				*e*Sg		**Sg**	**13 49 21.5**	**+4.6**
TYV				A		A	13 49 26.4	
	comp=N,160nm,0.9s							
TYV				A		A	13 49 26.4	
	comp=N,150nm,0.9s							
GRNR	**Gornyy**	**4.83**	**306**	*i*PN		**Pn**	**13 48 59.2**	**-1.7**
GRNR				pmax	pmax			
	comp=E,3.0nm,0.4s							
GRNR				pmax	pmax			
	comp=N,3.0nm,0.5s							
GRNR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
GRNR				MLR	MLR			
	comp=E,160nm,10.0s							
GRNR				MLR	MLR			
	comp=N,170nm,16.0s							
GRNR				MLR	MLR			
	comp=Z,160nm,18.0s							
GRNR	**Gornyy**	**4.83**	**306**	*e*P		**Pn**	**13 48 59.2**	**-1.7**
NKL	**Nikolayevsk**	**5.21**	**347**	*e*P		**Pn**	**13 49 06.1**	**-0.1**
NKL				*e*Pg		**Pg**	**13 49 29.3**	**+1.9**
NKL				AMB		AMB	13 49 30.6	
	comp=Z,40nm,0.8s							
KLR	**Kul'dur**	**7.25**	**283**	P		Pn	13 49 43.7	+9.5
	comp=Z,0.6nm,0.3s,baz=140,slow=18,SNR=2.2							
KLR				S		Sn	13 51 07.7	+11
	comp=Z,2.5nm,0.6s,baz=58,slow=20,SNR=3.8							
KLR	**Kul'dur**	**7.25**	**283**	*i* PN		**Pn**	**13 49 36.6**	**+2.3**
KLR				*i* S		**Sn**	**13 50 59.8**	**+2.8**
KLR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KLR				smax	smax			
	comp=Z,2.0nm,0.6s							
KLR	**Kul'dur**	**7.25**	**283**	*e*P		**Pn**	**13 49 36.6**	**+2.3**
PETK	**Petropavlovsk-**	**10.85**	**57**	P		Pn	13 50 33.3	+10
	comp=Z,0.6nm,0.6s,baz=247,slow=19,SNR=1.5							
YAK	**Yakutsk**	**15.76**	**337**	*i* P		**Pn**	**13 51 30.7**	**+0.7**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
YAK	**Yakutsk**	**15.76**	**337**	*e*P		**Pn**	**13 51 30.7**	**+0.7**
SEY	**Seymchan**	**15.85**	**17**	P		**P**	**13 51 36.8**	**+1.7**
	comp=Z,2.7nm,0.8s,baz=189,slow=14,SNR=6.4							
SEY	**Seymchan**	**15.85**	**17**	*i* P		**Pn**	**13 51 31.7**	**+0.4**
SEY				pmax	pmax			
	comp=Z,3.0nm,1.0s							
SEY	**Seymchan**	**15.85**	**17**	*e*P		**Pn**	**13 51 31.7**	**+0.4**
BILL	**Bilibino**	**23.32**	**22**	*i* P		**P**	**13 52 59.4**	**+3.2**
BILL				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BILL	**Bilibino**	**23.32**	**22**	*e*P		**P**	**13 52 59.4**	**+3.2**
SONM	**Songino Array**	**24.09**	**283**	P		**P**	**13 53 04.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=69,slow=7.9,SNR=2.5							
	comp=Z,0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**35.91**	**302**	PcP		**PcP**	**13 57 14.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=76,slow=6.1,SNR=1.4							
MKAR	**Makanchi Array**	**39.87**	**291**	P		**P**	**13 55 21.1**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=46,slow=4.2,SNR=2.8							
MKAR				PcP		**PcP**	**13 57 26.2**	**-1.5**
	comp=Z,0.6nm,0.9s,baz=58,slow=3.0,SNR=3.8							
	comp=Z,0.4nm,0.7s							
ILAR	**Eielson Array**	**40.00**	**39**	P		**P**	**13 55 22.7**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=281,slow=10,SNR=7.3							
	comp=Z,0.4nm,0.6s							
KURK	**Kurchatov**	**40.54**	**299**	P		**P**	**13 55 28.0**	**+0.5**
KURK							13 57 28.8	
KURK	**Kurchatov**	**40.54**	**299**	*e*P		**P**	**13 55 28.0**	**+0.5**
KURBB	**Kurchatov Arra**	**40.63**	**298**	P		**P**	**13 55 28.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=71,slow=8.6,SNR=2.7							
KURBB				PcP		**PcP**	**13 57 28.8**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=66,slow=3.2,SNR=2.7							
	comp=Z,0.3nm,0.5s							
BVAR	**Borovoye Array**	**44.34**	**305**	PcP		**PcP**	**13 57 41.2**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=132,slow=2.2,SNR=4.8							
WRA	**Warramunga Arr**	**68.11**	**188**	P		**P**	**13 58 46.6**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=6.1,slow=6.5,SNR=1.7							
	comp=Z,0.5nm,0.8s							
PDAR	**Pinedale Array**	**69.49**	**48**	P		**P**	**13 58 56.7**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=316,slow=3.3,SNR=4.0							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**71.84**	**188**	P		**P**	**13 59 10.6**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=8.7,slow=6.5,SNR=4.2							
	comp=Z,0.4nm,0.6s							
TXAR	**Lajitas Array**	**82.78**	**54**	P		**P**	**14 00 12.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=284,slow=5.0,SNR=4.5							
	comp=Z,0.4nm,0.6s							

*SKHL **02** 13:48:13.7±0.5,48°10N×142°50E,h3km±1km, mb5.1/8*
SKHL Felt (II) at Tikhaya, Pugachyovo, Arsent`evka, (II) at Vzmor`e.

ISC 02 13:48:15.1±1.2,48°09N±0°03×142°5E±0°1,h14km±9km, n17,σ1§49/21,mb3.6/7,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UGL	**Uglegorsk**	**1.02**	**345**	*e*Pg		**Pg**	**13 48 33.5**	**-1.4**
UGL				AMB		AMB	13 48 33.9	
	1µm,0.7s							
UGL				*e*Sg		**Sg**	**13 48 46.9**	**-1.4**
UGL				A		A	13 48 49.0	
	4µm,5.0s							
UGL				A		A	13 48 49.0	
	7µm,5.0s							
KHLM	**Kholmsk**	**1.08**	**196**	*e*Pg		**Pb**	**13 48 35.2**	**-0.2**
KHLM				AMB		AMB	13 48 38.4	
	1µm,0.7s							
KHLM				*e*Sg		**Sb**	**13 48 50.3**	**+1.0**
KHLM				A		A	13 48 53.7	
	9µm,0.3s							
KHLM				A		A	13 48 53.7	
	8µm,0.3s							
YSS	**Yuzhno-Sakhali**	**1.15**	**171**	*e*Pg		**Pn**	**13 48 37.4**	**+0.7**
YSS				AMB		AMB	13 48 38.9	
	790nm,0.5s							
YSS				*e*Sg		**Sn**	**13 48 53.8**	**+1.5**
YSS				A		A	13 48 55.3	
	3µm,0.5s							
YSS				A		A	13 48 55.3	
	2µm,0.5s							
YSS				A		A	13 48 57.1	
	3µm,2.1s							
YSS				A		A	13 48 57.1	
	2µm,2.1s							
YSS				AMB		AMB	13 49 58.5	
	1µm,2.9s							
NEVR	**Nevel`sk**	**1.48**	**197**	*e*Pg		**Pg**	**13 48 42.6**	**-0.8**
NEVR				AMB		AMB	13 48 42.7	
	1µm,0.7s							
NEVR				*e*Sg		**Sg**	**13 49 02.7**	**+0.1**
NEVR				A		A	13 49 04.7	
	3µm,0.5s							
NEVR				A		A	13 49 04.7	
	2µm,0.5s							
KRS4	**Mayak Korsakov**	**1.50**	**171**	*e*Pg		**Pg**	**13 48 43.6**	**-0.3**
KRS4				AMB		AMB	13 48 46.3	
	730nm,0.6s							
KRS4				*e*Sg		**Sg**	**13 49 04.4**	**+1.1**
KRS4				A		A	13 49 06.6	
	2µm,0.4s							
KRS4				A		A	13 49 06.6	
	1µm,0.4s							
TYV	**Tymovskoe**	**2.78**	**2**	*e*Pg		**Pg**	**13 49 07.7**	**-0.6**
TYV				AMB		AMB	13 49 09.1	
	80nm,0.6s							
TYV				*e*Sg		**Sg**	**13 49 44.9**	**+0.6**
NKL	**Nikolayevsk**	**5.19**	**348**	*e*Pg		**Pg**	**13 49 55.8**	**+1.3**
NKL				AMB		AMB	13 49 58.5	
	40nm,0.7s							
NKL				*e*Sg		**Sg**	**13 51 06.2**	**+4.5**
SONM	**Songino Array**	**24.03**	**283**	pP		**P**	**13 53 29.9**	**+0.4**
	0.6nm,0.7s,baz=80,slow=9.2,SNR=2.4							
ZALV	**Zalesovo Beam**	**35.86**	**302**	pPcP				
	0.7nm,0.5s,baz=14,slow=7.6,SNR=3.9							
MKAR	**Makanchi Array**	**39.81**	**291**	pP		**P**	**13 55 46.4**	**-1.2**
	0.5nm,0.7s,baz=79,slow=8.8,SNR=3.6							
ILAR	**Eielson Array**	**40.03**	**39**	pP		**P**	**13 55 47.6**	**-1.6**
	0.3nm,0.5s,baz=280,slow=10,SNR=3.2							
KURBB	**Kurchatov Arra**	**40.58**	**298**	pPcP				
	0.4nm,0.5s,baz=74,slow=3.3,SNR=4.2							
BVAR	**Borovoye Array**	**44.29**	**305**	pPcP				
	0.8nm,0.5s,baz=152,slow=6.7,SNR=4.2							
WRA	**Warramunga Arr**	**68.11**	**188**	pP		**P**	**13 59 14.3**	**0.0**
	0.5nm,0.7s,baz=5.6,slow=6.4,SNR=3.3							
PDAR	**Pinedale Array**	**69.53**	**48**	pP		**P**	**13 59 22.9**	**-0.5**
	0.4nm,0.6s,baz=307,slow=3.4,SNR=3.0							
ASAR	**Alice Springs**	**71.84**	**188**	pP		**P**	**13 59 37.9**	**+0.7**
	0.5nm,0.5s,baz=0.6,slow=5.3,SNR=3.9							
TXAR	**Lajitas Array**	**82.83**	**54**	pP		**P**	**14 00 38.9**	**-0.1**
	0.3nm,0.6s,baz=289,slow=3.9,SNR=2.8							

IDC 02 13:48:57.6±1.9,7°27S×129°31E,h112km±26km,mb3.0/1, mbtmp3.7/5,Error ellipse: s-maj=28.4km s-min=14.6km az=121.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**6.30**	**242**	P		Pn	13 50 27.9	-0.2
	16nm,0.3s,baz=320,slow=9.3,SNR=2.1							
BATI				S		Sn	13 51 39.3	+0.6
	22nm,0.5s,baz=96,slow=12,SNR=7.0							
SIJI	**Sorong**	**6.65**	**17**	P		Pn	13 50 32.9	+0.1
	4.5nm,0.4s,baz=197,slow=23,SNR=8.6							
SIJI				S		Sn	13 51 48.0	+0.9
	6.1nm,0.2s,baz=258,slow=23,SNR=7.9							
WRA	**Warramunga Arr**	**13.51**	**159**	P		Pn	13 52 03.1	-1.8
	0.6nm,0.4s,baz=344,slow=12,SNR=21							
WRA				S		Sn	13 54 20.7	-13
	2.3nm,0.5s,baz=334,slow=22,SNR=14							
ASAR	**Alice Springs**	**16.89**	**165**	P		P	13 52 49.2	+1.7
	0.5nm,0.4s,baz=339,slow=9.7,SNR=24							
ASAR				S		Sn	13 55 42.0	-13
	0.8nm,0.5s,baz=317,slow=20,SNR=6.9							
MKAR	**Makanchi Array**	**68.07**	**327**	P		P	13 59 45.1	-0.1
	0.2nm,0.7s,baz=126,slow=7.3,SNR=2.2							
	0.2nm,0.7s							

*KRNET **02** 14:00:40.0±0.1,41°99N×72°17E,h28km,mb2.8*
*SOME **02** 14:00:40.0,42°00N×72°23E,h15km*
*NNC **02** 14:00:43.1±1.2,42°15N×72°19E,h0km,mb3.1,mpv3.1,*
Error ellipse: s-maj=14.1km s-min=4.4km az=1.0

ISC 02 14:00:40.3±1.1,41°99N±0°03×72°18E±0°02,h12km±10km, n35,σ1§28/61,22C-16D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARK	**Arkit**	**0.25**	**221**	⇑*e*P		**Pb**	**14 00 46.2**	**-0.7**
ARK				⇑*e*S		**Sb**	**14 00 50.5**	**-0.8**
MNAS	**Manas**	**0.55**	**26**	⇓*e*P		**Pb**	**14 00 51.2**	**-0.8**
MNAS				⇓*e*S		**Sb**	**14 00 59.2**	**-0.7**
ARSB	**Arslanbob**	**0.90**	**138**	⇑*e*P		**Pb**	**14 00 57.0**	**-0.8**
ARSB				⇑*e*S		**Sb**	**14 01 09.2**	**-0.6**
TRKS	**Terek-Say**	**0.91**	**240**	⇓*e*P		**Pb**	**14 00 57.1**	**-0.9**
TRKS				⇓*e*S		**Sb**	**14 01 09.5**	**-0.6**
MRKS	**Merke**	**1.08**	**45**	P		**Pg**	**14 01 01.1**	**0.0**
	9.0nm,0.1s							
MRKS				S		**Sn**	**14 01 15.5**	**-0.8**
	45nm,0.3s							
MRKS	**Merke**	**1.08**	**45**	*e*P		**Pg**	**14 01 01.1**	**0.0**
	6.0nm,0.2s							
MRKS				*e*S		**Sn**	**14 01 15.7**	**-0.6**
	27nm,0.1s							
EKS2	**Erkin-Say**	**1.36**	**60**	⇓*e*P		**Pb**	**14 01 05.1**	**-0.6**
EKS2				⇓*e*S		**Sg**	**14 01 23.2**	**-0.9**
OHH	**Osh**	**1.53**	**163**	⇓*e*P		**Pb**	**14 01 07.8**	**-0.9**
OHH				⇓*e*S		**Sb**	**14 01 27.8**	**-0.3**
IUG	**Iuzhnay**	**1.61**	**276**	P		**Pg**	**14 01 12.3**	**+1.1**
	28nm,0.1s							
IUG				S		**Sg**	**14 01 35.3**	**+3.2**
	132nm,0.3s							
IUG	**Iuzhnay**	**1.61**	**276**	*e*P		**Pg**	**14 01 10.7**	**-0.5**
	12nm,0.2s							
IUG				*e*S		**Sg**	**14 01 32.6**	**+0.5**
	132nm,0.3s							
KK31	**Karatay Array**	**1.66**	**313**	⇓P		**Pg**	**14 01 11.0**	**-1.1**
	1.5nm,0.2s,baz=132,slow=15,SNR=34							
KK31				⇓S		**Sg**	**14 01 33.2**	**-0.5**
	5.9nm,0.3s,baz=128,slow=26,SNR=11							
UCH	**Uchtor**	**1.75**	**81**	P		**Pg**	**14 01 14.3**	**+0.4**
	SNR=11							
UCH	**Uchtor**	**1.75**	**81**	⇑*e*P		**Pb**	**14 01 11.3**	**-1.3**
UCH				⇑*e*S		**Sb**	**14 01 34.2**	**-0.5**
AAK	**Ala-Archa**	**1.83**	**69**	P		**Pg**	**14 01 18.1**	**+2.6**
	SNR=6.5							
AAK	**Ala-Archa**	**1.83**	**69**	⇑Pn		**Pg**	**14 01 15.3**	**-0.2**
	3.1nm,0.6s							
AAK				⇑Sn		**Sg**	**14 01 41.1**	**+1.9**
	0.6nm,0.3s							
AAK	**Ala-Archa**	**1.83**	**69**	⇑*e*P		**Pb**	**14 01 12.4**	**-1.4**
AAK				⇑*e*S		**Sb**	**14 01 35.8**	**-1.0**
FRU1	**Bishkek**	**1.99**	**65**	⇑*e*P		**Pb**	**14 01 14.6**	**-1.8**
FRU1				⇑*e*S		**Sb**	**14 01 39.8**	**-1.4**
BRLS	**Borolday**	**2.02**	**302**	Pg		**Pg**	**14 01 18.4**	**-0.7**
	5.8nm,0.3s							
BRLS				Lg		Lg	14 01 45.7	
	26nm,0.6s							
BRLS	**Borolday**	**2.02**	**302**	*e*P		**Pg**	**14 01 18.4**	**-0.7**
	5.8nm,0.3s							
BRLS				*e*S		**Sg**	**14 01 45.7**	**+0.4**
	7.3nm,0.1s							
USP	**Ospenovka**	**2.13**	**53**	⇓*e*P		**Pn**	**14 01 16.4**	**+0.6**
USP				⇓*e*S		**Sn**	**14 01 42.8**	**+0.6**
CHMS	**Chumysh**	**2.15**	**61**	P		**Pg**	**14 01 20.3**	**-1.2**
	SNR=5.8							
CHMS	**Chumysh**	**2.15**	**61**	⇓*e*P		**Pn**	**14 01 16.6**	**+0.6**
CHMS				⇓*e*S		**Sn**	**14 01 43.2**	**+0.6**
KBK	**Karagaybulak**	**2.15**	**71**	P		**Pg**	**14 01 22.3**	**+0.7**
	SNR=7.9							
KBK	**Karagaybulak**	**2.15**	**71**	⇑*e*P		**Pn**	**14 01 16.9**	**+0.7**
KBK				⇑*e*S		**Sn**	**14 01 43.6**	**+0.7**
BTK	**Batken**	**2.19**	**209**	⇑*e*P		**Pn**	**14 01 17.0**	**+0.4**
BTK				⇑*e*S		**Sn**	**14 01 43.8**	**+0.1**
SFK	**Sufi-Kurgan**	**2.21**	**153**	⇑*e*P		**Pn**	**14 01 17.5**	**+0.4**
SFK				⇑*e*S		**Sn**	**14 01 44.8**	**+0.3**
SGDS	**Sogindy**	**2.32**	**50**	Pg		**Pb**	**14 01 22.6**	**+0.5**
	3.1nm,0.3s							
SGDS				Lg		Lg	14 01 53.9	
	48nm,0.4s							
TKM2	**Tokmak 2**	**2.69**	**69**	P		**Pb**	**14 01 28.5**	**0.0**
	SNR=9.8							
TKM2	**Tokmak 2**	**2.69**	**69**	⇑*e*P		**Pn**	**14 01 24.4**	**+0.8**
TKM2				⇑*e*S		**Sn**	**14 01 56.6**	**+0.4**
BOOM	**Boomskoye usch**	**2.83**	**79**	⇓*e*P		**Pn**	**14 01 26.4**	**+0.9**
BOOM				⇓*e*S		**Sn**	**14 02 00.0**	**+0.3**
NRN	**Naryn**	**2.91**	**100**	⇑*e*P		**Pn**	**14 01 27.2**	**+0.5**
NRN				⇑*e*S		**Sn**	**14 02 01.3**	**-0.5**
KST	**Kastek**	**2.98**	**68**	Pg		**Pb**	**14 01 32.4**	**-1.1**
	2.0nm,0.7s							
KST				Lg		Lg	14 02 12.1	
	14nm,0.7s							
KST	**Kastek**	**2.98**	**68**	*e*P		**Pb**	**14 01 33.9**	**+0.5**
	0.9nm,0.2s							
KST				*e*S		**Sb**	**14 02 12.4**	**+2.5**
	13nm,0.4s							
ARXS	**Arharly**	**4.69**	**60**	Pg		**Pb**	**14 02 04.6**	**+2.1**
	1.8nm,0.3s							
ARXS				Lg		Lg	14 03 05.7	
	8.3nm,0.6s							
ARXS	**Arharly**	**4.69**	**60**	*e*P		**Pb**	**14 02 04.6**	**+2.1**
	0.5nm,0.3s							
ARXS				*e*S		**Sg**	**14 03 05.7**	**-5.1**
	6.3nm,0.6s							

PRE 02 14:29:08.2±1.0,28°05S×22°99E,h0km,ML1.7, Suspected explosion,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRAK	**Brakfontein**	**3.72**	**181**	*e*P		Pn	14 30 08.8	+1.7
BRAK				*e*S		Sn	14 30 51.7	0.0
BRAK				IAML			14 31 16.8	
	comp=Z,1.9nm,0.3s							
LBTB	**Lobatse**	**3.82**	**38**	*e*P		Pn	14 30 09.7	+1.4
LBTB				*e*S		Sn	14 30 53.2	-0.9
LBTB				IAML			14 31 04.8	
	comp=Z,2.5nm,0.3s							
FRAZ	**Fraserburg**	**4.11**	**199**	*e*P		Pn	14 30 13.4	+1.1
FRAZ				*e*S		Sn	14 31 00.5	-0.7
FRAZ				IAML			14 31 25.9	
	comp=Z,3.3nm,0.4s							
GRAN	**Grantham**	**4.30**	**189**	*e*P		Pn	14 30 15.4	+0.4
GRAN				*e*S		Sn	14 31 04.6	-1.3

*IDC **02** 14:29:09.5±1.0,35°05N×137°76E,h0km,mb3.5/4,*
mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=29.1km
s-min=16.3km az=78.0
*JMA **02** 14:29:10.7±0.1,36°0N±0°3×140°1E±0°4,h59km,MV3.3/40,*
SOUTHERN IBARAKI PREF
JMA Felt I J1 at SOUTHERN IBARAKI PREF .

ISC 02 14:29:10.2±1.0,35°97N±0°04×140°15E±0°06,h65km±8km, n16,σ0§64/24,mb3.6/4,9D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYT	**Yasato**	**0.26**	**8**	⇓*i*P		**Pn**	**14 29 20.3**	**-0.3**
JYT				⇓S		**Sn**	**14 29 27.5**	**-0.6**
JIHU	**Itakohorinouch**	**0.30**	**90**	*i* P		**Pn**	**14 29 21.1**	**+0.3**
JIHU				S		**Sn**	**14 29 29.7**	**+1.0**
JAG	**Ashikaga**	**0.72**	**309**	⇓*i*P		**Pn**	**14 29 25.1**	**+0.1**
JAG				⇓S		**Sn**	**14 29 35.8**	**-0.2**
JRY	**Ryogami san**	**1.01**	**273**	⇓*i*P		**Pn**	**14 29 29.1**	**+0.5**
JRY				⇓S		**Sn**	**14 29 42.7**	**+0.4**
JKT	**Katashina**	**1.08**	**318**	⇓*i*P		**Pn**	**14 29 29.6**	**+0.1**
JKT				⇓S		**Sn**	**14 29 44.6**	**+0.7**
JOD2	**Odawara 2**	**1.11**	**231**	*i* P		**Pn**	**14 29 30.1**	**+0.2**
JOD2				S		**Sn**	**14 29 44.1**	**-0.5**
BSO3	**Boso 3**	**1.20**	**166**	P		**Pn**	**14 29 31.8**	**+1.0**
JIM2	**Oshima 3**	**1.38**	**205**	S		**Sn**	**14 29 49.8**	**-1.1**
JYN	**Shimob**	**1.39**	**251**	⇓*i*P		**Pn**	**14 29 34.3**	**+0.7**
JFY	**Yanaizu**	**1.48**	**346**	P		**Pn**	**14 29 35.2**	**+0.5**
MJAR	**Matsushiro Arr**	**1.67**	**291**	Pn		**Pn**	**14 29 37.6**	**+0.3**
	6.4nm,0.3s,baz=103,slow=25,SNR=395							
MJAR				Sn		**Sn**	**14 29 59.0**	**+1.2**
	2.5nm,0.3s,baz=227,slow=48,SNR=3.8							
JHJ	**Hachijo jima 2**	**2.86**	**186**	Pn		**Pn**	**14 29 53.7**	**+0.3**
	17nm,0.3s,baz=318,slow=21,SNR=16							
JHJ				Sn		**Sn**	**14 30 27.0**	**+0.4**
	28nm,0.3s,baz=78,slow=23,SNR=7.2							
	45nm,0.3s							
MKAR	**Makanchi Array**	**43.83**	**303**	P		**P**	**14 37 09.5**	**-0.2**
	0.3nm,0.5s,baz=113,slow=11,SNR=2.4							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**45.86**	**309**	P		**P**	**14 37 25.5**	**-0.2**
	0.8nm,0.7s,baz=85,slow=7.8,SNR=8.9							
	0.8nm,0.7s							
WRA	**Warramunga Arr**	**55.88**	**187**	P		**P**	**14 38 40.4**	**-0.7**
	0.7nm,0.5s,baz=1.6,slow=7.5,SNR=22							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**59.60**	**187**	P		**P**	**14 39 07.1**	**-0.2**
	0.3nm,0.8s,baz=16,slow=11,SNR=4.1							
	0.3nm,0.8s							

*IDC **02** 14:31:39.8±1.2,62°48N×22°73E,h0km,mbtmp3.1/2,*
ML2.2/2,Error ellipse: s-maj=14.6km s-min=7.8km
az=42.0
*HEL **02** 14:31:40.1±0.1,62°46N×22°68E,h0km,ML1.4,Explosion*

ISC 02 14:31:38.7±0.7,62°45N±0°02×22°75E±0°03,h0km,n30, σ1§05/39,Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VAF	**Ylistaro**	**0.59**	**357**	*e*P		**Pg**	**14 31 50.4**	**+0.4**
VAF	**Ylistaro**	**0.59**	**357**	PG		**Pg**	**14 31 50.6**	**+0.6**
	baz=181							
VAF				SG		**Sg**	**14 31 58.2**	**+0.5**
VAF				smax		smax	14 31 58.8	
	comp=Z,2.3nm,0.2s							
KPF	**Kankaanpaa**	**0.70**	**207**	PG		**Pg**	**14 31 52.8**	**+0.8**
KPF				smax		smax	14 32 01.9	
	comp=Z,2.6nm,0.2s							
KEF	**Keuruu**	**1.03**	**105**	*e*P		**Pb**	**14 31 59.3**	**0.0**
KEF	**Keuruu**	**1.03**	**105**	PG		**Pb**	**14 31 59.2**	**-0.2**
KEF				smax		smax	14 32 12.5	
	comp=Z,1.7nm,0.2s							
KEF				SB		**Sb**	**14 32 13.5**	**0.0**
RAF	**Rauma**	**1.51**	**198**	*e*P		**Pb**	**14 32 07.6**	**+0.1**
RAF	**Rauma**	**1.51**	**198**	PN

comp=Z,1.4nm,0.2s
TVF **Tvarminne** **2.63 174** smax smax 14 32 58.1
comp=Z,1.1nm,0.2s
TVF SG **Sg** **14 33 01.6 -1.4**
AAL **Aland** **2.64 211** SG **Sb** **14 33 00.7 +1.1**
ERTU **Ertsjaerv** **4.13 357** SN **Sn** **14 33 32.6 +0.9**
HFS **Hagfors** **4.95 246** Pn **Pn** **14 32 55.9 +1.8**
comp=Z,0.1nm,0.3s,baz=65,slow=14,SNR=1.5
comp=Z,2.6nm,1.0s
I37NO **I37NO** **6.86 347** I I 15 12 20.0
baz=165,slow=324,SNR=1.4
ARCES **ARCESS Array B** **7.20 8** Pn **Pn** **14 33 24.5 -0.5**
comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=1.2
ARCES Sn **Sn** **14 34 43.7 -3.8**
comp=Z,0.1nm,0.3s,baz=182,slow=26,SNR=1.5
comp=Z,1.4nm,0.9s

IDC 02 15:09:50.7±4.1, 17°.69N×147°.11E, h237km±29km, mb3.1/3, mbtmp3.8/4, Error ellipse: s-maj=295.4km s-min=29.3km az=121.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.61**	**208**	P		P	Pn	15 11 02.2	+0.8
	99nm,1.2s,baz=205,slow=9.4,SNR=2.2								
GUMO				S		S		15 11 57.5	0.0
	50nm,0.9s,baz=293,slow=1.4,SNR=2.0								
WRA	**Warramunga Arr**	**39.44**	**199**	P		P		15 16 57.8	-0.4
	1.4nm,0.6s,baz=23,slow=8.8,SNR=20								
	1.4nm,0.6s								
ASAR	**Alice Springs**	**43.08**	**198**	P		P		15 17 28.0	+0.3
	0.2nm,0.5s,baz=14,slow=7.9,SNR=7.7								
	0.2nm,0.5s								
NVAR	**Mina Array Bea**	**82.70**	**52**	P		P		15 21 48.3	-0.1
	0.6nm,0.6s,baz=285,slow=7.3,SNR=3.6								
	0.6nm,0.6s								

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*IDC **02** 15:27:58.2±1.1, 37°.01N×15°.74E, h0km, mb3.6/7, mbtmp3.6/12, ML3.0/4, MS2.4/1, Error ellipse: s-maj=22.3km s-min=15.8km az=172.0*
*BEO **02** 15:27:59.1±2.3, 36°.82N×15°.54E, h72km±6km, ML4.2/8*
*ROM **02** 15:28:00.8±0.1, 37°.041N±0°.004×15°.654E±0°.007, h30km, ML3.7/180, Error ellipse: s-maj=0.5km s-min=0.4km az=130.0*

ISC 02 15:28:00.2±1.3, 37°.06N±0°.04×15°.78E±0°.04, h25km±11km, n83, σ2s31/118, mb3.5/7, 5C-23D, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HAGA	**Augusta**	**0.55**	**295**	⇓P		**Pn**		**15 28 10.8**	**-1.6**
HAGA				S		**Sn**		**15 28 17.8**	**-2.9**
HAGA				AML		AML			
	comp=N,16150μm,0.4s								
HAGA				AML		AML			
	comp=E,15800μm,0.6s								
HAGA				AML		AML			
	comp=E,15800μm,1.4s								
HPAC	**Pachino**	**0.65**	**236**	⇑P		**Pn**		**15 28 13.2**	**-0.5**
HPAC				S		**Sn**		**15 28 22.0**	**-1.1**
HPAC				AML		AML			
	comp=N,34050μm,0.3s								
HPAC				AML		AML			
	comp=E,35850μm,0.6s								
MEU	**Monte Lauro**	**0.68**	**274**	⇑P		**Pn**		**15 28 13.8**	**-0.5**
MEU				S		**Sn**		**15 28 23.1**	**-1.1**
MEU				AML		AML			
	comp=E,26150μm,0.3s								
MEU				AML		AML			
	comp=N,46400μm,1.6s								
MEU				AML		AML			
	comp=E,26150μm,1.7s								
MEU				AML		AML			
	comp=N,46400μm,0.4s								
EPOZ	**Pozzillo**	**0.72**	**310**	⇓P		**Pn**		**15 28 15.4**	**+0.6**
EPOZ				S		**Sn**		**15 28 25.0**	**0.0**
EPOZ				AML		AML			
	comp=E,6290μm,0.4s								
EPOZ				AML		AML			
	comp=N,4835μm,1.2s								
EPOZ				AML		AML			
	comp=N,4840μm,1.2s								
EPOZ				AML		AML			
	comp=N,4840μm,1.2s								
EPOZ				AML		AML			
	comp=E,7675μm,0.4s								
EPOZ				AML		AML			
	comp=N,5465μm,1.1s								
EPOZ				AML		AML			
	comp=E,6295μm,0.4s								
ISPIC	**ISPICA**	**0.75**	**249**	P		**Pn**		**15 28 13.8**	**-1.4**
ISPIC				S		**Sn**		**15 28 23.4**	**-2.4**
ISPIC				AML		AML			
	comp=N,15550μm,0.8s								
ISPIC				AML		AML			
	comp=E,13150μm,0.3s								
HLNI	**Lentini**	**0.78**	**292**	⇓P		**Pn**		**15 28 14.3**	**-1.3**
HLNI				S		**Sn**		**15 28 23.9**	**-2.6**
HLNI				AML		AML			
	comp=E,23950μm,0.3s								
HLNI				AML		AML			
	comp=N,24100μm,0.9s								
EVRN	**Santa Venerina**	**0.81**	**321**	⇓P		**Pb**		**15 28 16.0**	**+0.4**
EVRN				AML		AML			
	comp=N,19750μm,0.7s								
EVRN				AML		AML			
	comp=E,16400μm,0.2s								
EVRN				AML		AML			
	comp=N,23500μm,0.7s								
EVRN				AML		AML			
	comp=E,16400μm,0.2s								
EVRN				AML		AML			
	comp=N,19750μm,1.3s								
EVRN				AML		AML			
	comp=N,23500μm,1.3s								
EVRN				AML		AML			
	comp=E,19950μm,0.2s								
ENIC	**Nicolosi**	**0.83**	**314**	⇓P		**Pb**		**15 28 16.5**	**+0.5**
ENIC				AML		AML			
	comp=E,26350μm,0.9s								
ENIC				AML		AML			
	comp=N,18900μm,1.4s								
ENIC				AML		AML			
	comp=N,19500μm,1.3s								
ENIC				AML		AML			
	comp=E,20050μm,0.2s								
ENIC				AML		AML			
	comp=E,26350μm,1.1s								
ENIC				AML		AML			
	comp=N,19500μm,0.7s								
ENIC				AML		AML			
	comp=N,18900μm,0.6s								
HVZN	**Vizzini**	**0.86**	**278**	⇑P		**Pb**		**15 28 15.6**	**-0.9**
HVZN				S		**Sn**		**15 28 26.3**	**-2.2**
HVZN				AML		AML			
	comp=N,53800μm,0.4s								
HVZN				AML		AML			
	comp=E,44850μm,0.5s								
HVZN				AML		AML			
	comp=N,53800μm,1.6s								
EFIU	**Fiumefreddo**	**0.86**	**328**	⇓P		**Pb**		**15 28 16.8**	**+0.4**
ESLN	**Serra La Nave**	**0.90**	**315**	⇓P		**Pb**		**15 28 17.1**	**-0.2**
ESLN				S		**Sn**		**15 28 28.5**	**-1.3**
ESLN				AML		AML			
	comp=N,10750μm,0.3s								
ESLN				AML		AML			
	comp=N,10750μm,1.7s								
ESLN				AML		AML			
	comp=E,8990μm,0.8s								
ECBD	**Case Bada**	**0.91**	**323**	⇓P		**Pb**		**15 28 17.7**	**+0.4**
ECBD				S		**Sn**		**15 28 29.0**	**-0.9**
ESML	**S. M. di Licod**	**0.91**	**308**	⇓P		**Pb**		**15 28 17.0**	**-0.3**
ESML				S		**Sn**		**15 28 29.0**	**-0.7**
ESML				AML		AML			
	comp=N,5050μm,0.5s								
ESML				AML		AML			
	comp=N,5050μm,1.5s								
ESML				AML		AML			
	comp=E,5655μm,0.2s								
ECPN	**Case del Piano**	**0.93**	**318**	P		**Pb**		**15 28 17.6**	**-0.3**
ECHR	**Santa Chiara**	**0.93**	**313**	⇓P		**Pb**		**15 28 17.8**	**+0.1**
ECHR				S		**Sb**		**15 28 30.9**	**+1.1**
ECNE	**Crateri Nord E**	**0.94**	**319**	P		**Pb**		**15 28 17.6**	**-0.4**
EMCN	**Etna Monte Con**	**0.94**	**321**	P		**Pb**		**15 28 17.9**	**-0.1**
EMCN				AML		AML			
	comp=E,7025μm,0.6s								
EMCN				AML		AML			
	comp=N,5215μm,1.5s								
EMCN				AML		AML			
	comp=E,7290μm,0.6s								
EMCN				AML		AML			
	comp=N,5275μm,0.4s								
EMCN				AML		AML			
	comp=N,5215μm,0.5s								
EMCN				AML		AML			
	comp=E,7290μm,1.4s								
EMCN				AML		AML			
	comp=E,7025μm,1.4s								
MTTG	**Motta San Giov**	**0.94**	**356**	⇓P		**Pb**		**15 28 18.4**	**+0.4**
EPIT	**Pozzo Pitarron**	**0.95**	**323**	⇓P		**Pb**		**15 28 18.4**	**+0.4**
ECTS	**Castiglione**	**0.97**	**328**	⇓P		**Pb**		**15 28 18.3**	**-0.1**
ECTS				AML		AML			
	comp=N,2610μm,0.7s								
ECTS				AML		AML			
	comp=E,3625μm,0.4s								
ECTS				AML		AML			
	comp=N,2610μm,1.3s								
EMSG	**Monte Spagnolo**	**1.01**	**319**	⇓P		**Pb**		**15 28 19.0**	**-0.1**
EMSG				AML		AML			
	comp=N,6815μm,0.3s								
EMSG				AML		AML			
	comp=E,5155μm,0.3s								
EMSG				AML		AML			
	comp=E,5155μm,1.7s								
AIO	**Antillo**	**1.01**	**335**	⇓P		**Pb**		**15 28 18.8**	**-0.2**
AIO				S		**Sb**		**15 28 33.7**	**+1.7**
AIO				AML		AML			
	comp=N,2935μm,0.3s								
AIO				AML		AML			
	comp=E,3075μm,0.4s								
CROCE	**Santa Croce Ca**	**1.02**	**258**	⇑P		**Pb**		**15 28 17.8**	**-1.4**
CROCE				S		**Sb**		**15 28 30.6**	**-1.6**
CROCE				AML		AML			
	comp=E,4895μm,0.8s								
CROCE				AML		AML			
	comp=E,5895μm,0.8s								
CROCE				AML		AML			
	comp=N,6500μm,0.6s								
CROCE				AML		AML			
	comp=N,5275μm,0.6s								
ACATE	**Acate (RG)**	**1.02**	**268**	P		**Pb**		**15 28 18.1**	**-1.1**
ACATE				S		**Sb**		**15 28 31.0**	**-1.2**
ACATE				AML		AML			
	comp=N,10360μm,0.6s								
ACATE				AML		AML			
	comp=E,12900μm,0.5s								
ACATE				AML		AML			
	comp=N,10365μm,0.6s								
ACATE				AML		AML			
	comp=N,10630μm,0.6s								
ACATE				AML		AML			
	comp=E,14600μm,0.6s								
SOI	**Samo**	**1.04**	**12**	⇓P		**Pb**		**15 28 20.1**	**+0.6**
SOI				S		**Sb**		**15 28 33.8**	**+1.1**
SOI				AML		AML			
	comp=N,3180μm,0.9s								
SOI				AML		AML			
	comp=E,5810μm,0.5s								
SOI				AML		AML			
	comp=N,3180μm,1.1s								
EPZF	**Pizzo Felice**	**1.06**	**316**	P		**Pb**		**15 28 19.8**	**-0.1**
EPZF				AML		AML			
	comp=E,4780μm,0.6s								
EPZF				AML		AML			
	comp=E,4780μm,1.4s								
EPZF				AML		AML			
	comp=N,6370μm,1.1s								
GMB	**Gambarie**	**1.11**	**2**	P		**Pb**		**15 28 20.7**	**-0.1**
GMB				AML		AML			
	comp=E,13450μm,1.4s								
GMB				AML		AML			
	comp=N,13950μm,0.2s								
GMB				AML		AML			
	comp=E,13450μm,0.6s								
MPNC	**Port Mandanici**	**1.14**	**343**	P		**Pb**		**15 28 20.7**	**-0.5**
MPNC				AML		AML			
	comp=E,4050μm,0.3s								
MPNC				AML		AML			
	comp=N,4795μm,0.5s								
RAFF	**Raffo Rosso**	**1.14**	**279**	⇑P		**Pb**		**15 28 20.4**	**-0.9**
RAFF				AML		AML			
	comp=E,7065μm,0.2s								
RAFF				AML		AML			
	comp=N,7140μm,0.2s								
CAGR	**Agira**	**1.16**	**299**	P		**Pb**		**15 28 21.4**	**-0.2**
CAGR				AML		AML			
	comp=E,4285μm,0.5s								
CAGR				AML		AML			
	comp=N,3570μm,1.5s								
CAGR				AML		AML			
	comp=N,3570μm,0.5s								
GALF	**Gagliano Caste**	**1.16**	**304**	⇓P		**Pb**		**15 28 21.4**	**-0.3**
GALF				AML		AML			
	comp=N,1063μm,0.8s								
GALF				AML		AML			
	comp=N,8975μm,0.7s								
GALF				AML		AML			
	comp=N,1063μm,0.7s								
GALF				AML		AML			
	comp=N,8975μm,1.3s								
GALF				AML		AML			
	comp=E,792μm,0.4s								
GALF				AML		AML			
	comp=N,1063μm,1.3s								
GALF				AML		AML			
	comp=E,7090μm,0.4s								
VAE	**Valguarnera**	**1.17**	**291**	Pn		**Pb**		**15 28 23.0**	**+1.3**
	comp=E,36nm,0.3s,baz=114,slow=8.2,SNR=20								
VAE				Sn		**Sb**		**15 28 35.8**	**-0.7**
	comp=E,176nm,0.3s,baz=356,slow=18,SNR=13								
VAE	**Valguarnera**	**1.17**	**291**	P		**Pb**		**15 28 22.5**	**+0.8**
VAE				AML		AML			
	comp=E,2105μm,0.5s								
VAE				AML		AML			
	comp=N,2370μm,0.5s								
VAE				AML		AML			
	comp=E,2105μm,1.5s								
VAE				AML		AML			
	comp=N,2370μm,1.5s								
SICLA	**Scilla**	**1.20**	**358**	⇓P		**Pb**		**15 28 22.0**	**-0.2**
SICLA				AML		AML			
	comp=N,782μm,0.4s								
SICLA				AML		AML			
	comp=E,550μm,0.4s								
CEL	**Celeste**	**1.20**	**4**	⇓P		**Pb**		**15 28 22.3**	**0.0**
CEL				AML		AML			
	comp=E,2430μm,0.8s								
CEL				AML		AML			
	comp=N,2370μm,0.7s								
CEL				AML		AML			
	comp=E,2385μm,0.8s								
CEL				AML		AML			
	comp=N,2425μm,0.7s								
MUCR	**Ucria**	**1.22**	**324**	⇓P		**Pb**		**15 28 22.3**	**-0.3**
MUCR				S		**Sb**		**15 28 38.5**	**+0.5**
MUCR				AML		AML			
	comp=E,3290μm,0.4s								
MUCR				AML		AML			
	comp=N,3515μm,0.9s								
MSRU	**Castanea**	**1.22**	**350**	⇓P		**Pb**		**15 28 22.4**	**-0.2**
MSRU				AML		AML			
	comp=N,2580μm,1.4s								
MSRU				AML		AML			
	comp=N,2580μm,0.6s								
MSRU				AML		AML			
	comp=E,3600μm,0.3s								
MILZ	**Milazzo**	**1.29**	**340**	⇓P		**Pb**		**15 28 23.0**	**-0.7**
MILZ				S		**Sb**		**15 28 40.6**	**+0.8**
MILZ				AML		AML			
	comp=N,4855μm,0.3s								
MILZ				AML		AML			
	comp=E,13100μm,0.4s								
CPTP	**Pietraperzia**	**1.34**	**286**	P		**Pb**		**15 28 24.8**	**+0.3**
CPTP				AML		AML			
	comp=N,6480μm,1.2s								
CPTP				AML		AML			
	comp=E,3775μm,0.6s								
CPTP				AML		AML			
	comp=N,6480μm,0.8s								
MSFR	**San Fratello**	**1.36**	**316**	⇓P		**Pb**		**15 28 24.1**	**-0.8**
MSFR				AML		AML			
	comp=E,894μm,1.0s								
MSFR				AML		AML			
	comp=N,644μm,0.4s								
MSFR				AML		AML			
	comp=E,894μm,1.0s								
IGT	**Igoumenitsa**	**4.35**	**54**	*e*Pn		**Pn**		**15 29 04.5**	**-0.2**
KEST	**Kesra**	**5.35**	**258**	Pn		**Pn**		**15 29 18.5**	**-0.1**
	comp=E,1.1nm,0.3s,baz=109,slow=6.4,SNR=10								
KEST				Sn		**Sn**		**15 30 17.3**	**-2.2**
	comp=E,0.5nm,0.3s,baz=314,slow=20,SNR=1.2								
	comp=E,10nm,0.7s								
DRME	**Dracevica, Mon**	**5.76**	**26**	*e*Pn		**Pn**		**15 29 23.3**	**-0.7**
HCY	**Herceg Novi**	**5.78**	**20**	*e*Pn		**Pn**		**15 29 22.6**	**-1.7**
TREB	**Trebinje**	**5.99**	**18**	*e*Pn		**Pn**		**15 29 26.3**	**-0.9**
TREB				*e*Sn		**Sn**		**15 30 29.3**	**-5.6**
TREB	**Trebinje**	**5.99**	**18**	*e*Pn		**Pn**		**15 29 25.3**	**-1.9**
STON	**Ston**	**5.99**	**14**	*e*Pn		**Pn**		**15 29 26.8**	**-0.4**
STON				*e*Sn		**Sn**		**15 30 29.8**	**-5.2**
PDG	**Podgorica**	**6.00**	**25**	*e*Pn		**Pn**		**15 29 25.8**	**-1.5**
BRY	**Bratogost**	**6.21**	**19**	*e*Pn		**Pn**		**15 29 28.9**	**-1.5**
KLINJ	**Klinje**	**6.47**	**19**	*e*Pn		**Pn**		**15 29 32.5**	**-1.4**
UPM	**Unac-Piva**	**6.59**	**20**	*e*Pn		**Pn**		**15 29 35.8**	**+0.2**
SJES	**Sjenica**	**6.98**	**26**	*e*Pn		**Pn**		**15 29 42.1**	**+1.2**
SJES				*e*Sn		**Sn**		**15 30 58.0**	**-1.5**
SJES	**Sjenica**	**6.98**	**26**	*e*Pn		**Pn**		**15 29 40.7**	**-0.2**
SRS	**Serrai**	**7.30**	**54**	*e*Pn		**Pn**		**15 29 44.5**	**-0.8**
SRS				*e*Sn		**Sn**		**15 31 02.2**	**-5.2**
IVAS	**Ivanjica**	**7.32**	**26**	*e*Pn		**Pn**		**15 29 45.7**	**+0.2**
IVAS				*e*Sn		**Sn**		**15 31 03.7**	**-4.0**
BBLS	**Lazi&#263i**	**7.34**	**21**	*e*Pn		**Pn**		**15 29 46.0**	**+0.2**
BBLS				*e*Sn		**Sn**		**15 31 03.1**	**-5.2**
BBLS	**Lazi&#263i**	**7.34**	**21**	*e*Pn		**Pn**		**15 29 45.6**	**-0.2**
BOSS	**Bosilegrad**	**7.49**	**41**	*e*Pn		**Pn**		**15 29 47.6**	**-0.2**
GOCS	**Kraljevo Serbi**	**7.57**	**29**	*e*Pn		**Pn**		**15 29 49.6**	**+0.6**
GOCS				*e*Sn		**Sn**		**15 31 09.3**	**-4.8**
IDI	**Anoyia**	**7.58**	**101**	Pn		**Pn**		**15 29 50.5**	**+1.4**
	comp=E,1.3nm,0.3s,baz=222,slow=12,SNR=15								
IDI				Sn		**Sn**		**15 31 10.8**	**-3.4**
	comp=E,8.4nm,0.3s,baz=90,slow=13,SNR=10								
	comp=E,5.0nm,0.5s								
DIVS	**Divibare**	**7.73**	**23**	*e*Pn		**Pn**		**15 29 51.2**	**+0.1**
DIVS				*e*Sn		**Sn**		**15 31 11.9**	**-6.0**
BLY	**Banja Luka**	**7.76**	**7**	*e*Pn		**Pn**		**15 29 53.4**	**+2.0**
BLY				*e*Sn		**Sn**		**15 31 14.7**	**-3.7**
BLY	**Banja Luka**	**7.76**	**7**	*e*Pn		**Pn**		**15 29 52.9**	**+1.5**
VTS	**Vitosha**	**7.98**	**44**	*e*Pn		**Pn**		**15 29 54.9**	**+0.2**
VTS				*e*Sn		**Sn**		**15 31 19.5**	**-4.7**
TEKS	**Tekeris**	**8.01**	**20**	*e*Pn		**Pn**		**15 29 54.0**	**-0.9**
TEKS				*e*Sn		**Sn**		**15 31 17.7**	**-6.9**
TEKS	**Tekeris**	**8.01**	**20**	*e*Pn		**Pn**		**15 29 53.7**	**-1.2**
ZAPS	**Zavoj**	**8.13**	**38**	*e*Pn		**Pn**		**15 29 56.8**	**+0.2**
ZAPS				*e*Sn		**Sn**		**15 31 22.8**	**-4.8**
ZAGS	**Zajecar**	**8.35**	**34**	*e*Pn		**Pn**		**15 29 59.9**	**+0.3**
ZAGS				*e*Sn		**Sn**		**15 31 27.4**	**-5.6**
MDVR	**Moldovita**	**8.93**	**28**	*e*Pn		**Pn**		**15 30 06.9**	**-0.6**
MDVR				*e*Sn		**Sn**		**15 31 39.2**	**-8.0**
MORH	**Mrgy, Hungar**	**9.40**	**12**	*e*Pn		**Pn**		**15 30 09.9**	**-4.0**
BZS	**Buzias**	**9.61**	**25**	*e*Pn		**Pn**		**15 30 16.0**	**-0.8**
BZS				*e*Sn		**Sn**		**15 31 56.1**	**-7.8**
MLR	**Muntele Rosu**	**11.37**	**39**	LR		LR		15 35 54.0	
	comp=E,20nm,19.3s,baz=76,slow=42								
GERES	**GERESS Array B**	**11.88**	**353**	Pn		**Pn**		**15 30 49.5**	**+1.5**
	baz=171,slow=11,SNR=5.1								
	comp=E,0.4nm,0.4s								
MMAI	**Mount Meron Ar**	**16.57**	**98**	Pn		**Pn**		**15 31 51.3**	**+0.5**
	comp=E,0.6nm,0.2s,baz=317,slow=10,SNR=5.5								
AKASG	**Malin Array Be**	**16.69**	**31**	Pn		**P**		**15 31 54.2**	**-0.2**
	comp=E,0.5nm,0.3s,baz=229,slow=10,SNR=1.9								
	comp=E,0.3nm,0.4s								
KBZ	**Khabaz**	**21.64**	**64**	P		**P**		**15 32 50.4**	**+1.8**
	comp=E,2.8nm,0.7s,baz=270,slow=9.0,SNR=9.0								
	comp=E,2.8nm,0.7s								
EKA	**Eskdalemuir Ar**	**22.36**	**331**	P		**P**		**15 32 57.4**	**+1.3**
	comp=E,0.5nm,0.4s,baz=137,slow=11,SNR=3.5								
	comp=E,0.5nm,0.4s								
FINES	**FINESS Array B**	**25.25**	**12**	P		**P**		**15 33 25.5**	**+1.5**
	comp=E,0.7nm,0.6s,baz=189,slow=8.0,SNR=5.0								
	comp=E,0.7nm,0.6s								
TORD	**Torodi Ar. Bea**	**26.94**	**212**	P		**P**		**15 33 40.6**	**+0.9**
	comp=E,0.7nm,0.7s,baz=15,slow=10,SNR=4.5								
	comp=E,0.7nm,0.7s								
BVAR	**Borovoye Array**	**40.71**	**49**	P		**P**		**15 35 41.9**	**+3.3**
	comp=E,0.3nm,0.5s,baz=236,slow=10,SNR=5.1								
BVAR				PP		**PP**		**15 37 13.9**	**+1.6**
	comp=E,0.8nm,0.7s,baz=340,slow=8.1,SNR=4.5								
	comp=E,0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**45.90**	**52**	P		**P**		**15 36 22.6**	**+2.1**
	comp=E,0.5nm,0.8s,baz=280,slow=8.8,SNR=4.2								
	comp=E,0.5nm,0.8s								
MKAR	**Makanchi Array**	**49.08**	**57**	P		**P**		**15 36 47.6**	**+2.3**
	comp=E,1.1nm,0.6s,baz=271,slow=7.4,SNR=4.4								
ZALV	**Zalesovo Beam**	**49.22**	**47**	P		**P**		**15 36 47.8**	**+1.6**
	comp=E,0.5nm,0.3s,baz=283,slow=8.7,SNR=1.6								
	comp=E,0.5nm,0.3s								

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*MDD **02** 15:30:11.1±0.6, 36°.65N×9°.77W, h26km±4km, mb_Lg3.3/18, Error ellipse: s-maj=4.8km s-min=3.2km az=69.0*
*SFS **02** 15:30:11.1, 36°.62N×9°.82W, h42km, ML3.5/14, ML3.4/14, MLv3.3/14*
*IGIL **02** 15:30:12.6, 36°.65N×9°.76W, h32km, ML2.5*
*INMG **02** 15:30:12.7±1.1, 36°.66N×9°.76W, h32km±7km, ML2.7, Error ellipse: s-maj=4.3km s-min=2.7km az=60.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Cabo S.Vicente*
*CNRM **02** 15:30:21.3, 35°.69N×9°.00W, h0km, ML3.1*

ISC 02 15:30:09.1±1.6, 36°.62N±0°.05×9°.81W±0°.07, h35km, n75, σ1s89/140, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.94**	**57**	P		**Pn**		**15 30 27.6**	**+1.8**
PFVI				S		**Sn**		**15 30 38.8**	**+0.8**
PFVI	**Vila Bisbo**	**0.94**	**57**	⇑*i*P		**Pn**		**15 30 27.6**	**+1.8**
PFVI				*e*S		**Sn**		**15 30 39.1**	**+1.1**
PFVI				*i* IAML				15 30 39.8	
PFVI				*i* IAML				15 30 40.0	
PFVI				*i* IAML				15 30 40.2	
MORF	**Marmelete**	**1.15**	**53**	*e*P		**Pn**		**15 30 30.6**	**+1.9**
MORF				*e*S		**Sn**		**15 30 43.8**	**+0.5**
MORF				IAML				15 30 44.4	
	comp=E,140nm,0.2s								
MORF	**Marmelete**	**1.15**	**53**	*e*P		**Pn**		**15 30 30.6**	**+1.9**
MORF				*e*S		**Sn**		**15 30 44.1**	**+0.8**
MORF				*i* IAML				15 30 44.8	
MORF				*i* IAML				15 30 45.9	
MORF				*i* IAML				15 30 46.0	
PTEO	**Sao Teotonio**	**1.27**	**43**	*e*P		**Pn**		**15 30 31.5**	**+1.2**
PTEO				*e*S		**Sn**		**15 30 46.9**	**+0.8**
PTEO				*i* IAML				15 30 47.6	
PTEO				*i* IAML				15 30 49.6	
PTEO				*i* IAML				15 30 50.8	
PBDV	**Barranco-do-Ve**	**1.63**	**67**	⇑*i*P		**Pn**		**15 30 37.4**	**+2.1**
PBDV				*e*S		**Sn**		**15 30 55.5**	**+0.4**
PBDV				*i* IAML				15 30 58.0	
PBDV				*i* IAML				15 30 58.8	
PBDV				*i* IAML				15 31 13.7	
PCVE	**Castro Verde**	**1.74**	**54**	P		**Pn**		**15 30 38.7**	**+2.0**
PCVE				S		**Sn**		**15 30 58.5**	**+0.8**
PCVE	**Castro Verde**	**1.74**	**54**	*e*P		**Pn**		**15 30 38.9**	**+2.1**
PCVE				*e*S		**Sn**		**15 30 58.4**	**+0.7**
PCVE				*i* IAML				15 30 59.5	
PCVE				*i* IAML				15 30 59.9	
PCVE				*i* IAML				15 31 00.4	
MESJ	**Messejana**	**1.76**	**46**	*e*P		**Pn**		**15 30 38.8**	**+1.8**
MESJ				*e*S		**Sn**		**15 30 58.2**	**0.0**
MESJ	

EXAYA	**Ayamonte**	**2.02**	**72**	Pn		**Pn**	**15 30 43.0**	**+2.4**
EXAYA				Sn		**Sn**	**15 31 03.5**	**-1.1**
EGRO	**El Granado**	**2.07**	**63**	P		**Pn**	**15 30 43.2**	**+1.8**
EGRO				S		**Sn**	**15 31 05.8**	**-0.2**
EGRO	**El Granado**	**2.07**	**63**	Pn		**Pn**	**15 30 43.4**	**+2.0**
EGRO				Sn		**Sn**	**15 31 05.9**	**-0.1**
EGRO				*i* IVmb_Lg			15 31 09.4	
PBEJ	**Beja**	**2.09**	**47**	*eP*		**Pn**	**15 30 43.2**	**+1.6**
PBEJ				*eS*		**Sn**	**15 31 06.3**	**-0.1**
PBEJ				*i* IAML			15 31 08.7	
PBEJ				*i* IAML			15 31 08.7	
PBEJ				*i* IAML			15 31 18.5	
MOE	**Montemor**	**2.22**	**31**	*eP*		**Pn**	**15 30 45.5**	**+2.0**
MOE				*eS*		**Sn**	**15 31 10.0**	**+0.2**
MOE				*i* IAML			15 31 11.3	
MOE				*i* IAML			15 31 12.1	
MOE				*i* IAML			15 31 12.3	
PMAFR	**Mafra**	**2.37**	**10**	P		**Pn**	**15 30 46.8**	**+1.4**
PMAFR				S		**Sn**	**15 31 12.8**	**-0.4**
PMAFR	**Mafra**	**2.37**	**10**	*eP*		**Pn**	**15 30 46.8**	**+1.4**
PMAFR				*eS*		**Sn**	**15 31 13.4**	**+0.2**
PMAFR				*i* IAML			15 31 14.3	
PMAFR				*i* IAML			15 31 15.3	
PMAFR				*i* IAML			15 31 16.8	
EVO	**Evora**	**2.38**	**36**	P		**Pn**	**15 30 47.1**	**+1.5**
EVO				S		**Sn**	**15 31 12.9**	**-0.7**
EVO	**Evora**	**2.38**	**36**	*eP*		**Pn**	**15 30 47.2**	**+1.5**
EVO				*eS*		**Sn**	**15 31 13.2**	**-0.5**
EVO				*i* IAML			15 31 13.9	
EVO				*i* IAML			15 31 13.9	
EVO				*i* IAML			15 31 14.9	
PARRA	**Arraiolos**	**2.60**	**32**	*eP*		**Pn**	**15 30 50.4**	**+1.7**
PARRA				*eS*		**Sn**	**15 31 18.2**	**-0.8**
PARRA				*i* IAML			15 31 20.7	
PARRA				*i* IAML			15 31 20.7	
PARRA				*i* IAML			15 31 21.0	
PBAR	**Barrancos**	**2.70**	**54**	P		**Pn**	**15 30 51.6**	**+1.6**
PBAR				S		**Sn**	**15 31 21.2**	**-0.2**
PBAR	**Barrancos**	**2.70**	**54**	*eP*		**Pn**	**15 30 51.7**	**+1.8**
PBAR				*eS*		**Sn**	**15 31 21.1**	**-0.2**
PBAR				*i* IAML			15 31 22.4	
PBAR				*i* IAML			15 31 22.4	
PBAR				*i* IAML			15 31 23.7	
PMTG	**Montargil**	**2.75**	**27**	*eP*		**Pn**	**15 30 52.4**	**+1.7**
PMTG				*eS*		**Sn**	**15 31 22.1**	**-0.5**
PMTG				*i* IAML			15 31 23.7	
PMTG				*i* IAML			15 31 24.0	
PMTG				*i* IAML			15 31 24.3	
EMIN	**Mina Concepcio**	**2.75**	**65**	P		**Pn**	**15 30 52.0**	**+1.3**
EMIN	**Mina Concepcio**	**2.75**	**65**	Pn		**Pn**	**15 30 53.1**	**+2.3**
EMIN				Sn		**Sn**	**15 31 21.5**	**-1.3**
EMIN				*i* IVmb_Lg			15 31 24.8	
PESTR	**Estremoz**	**2.85**	**37**	P		**Pn**	**15 30 53.8**	**+1.7**
PESTR				S		**Sn**	**15 31 24.1**	**-1.1**
PESTR	**Estremoz**	**2.85**	**37**	*eP*		**Pn**	**15 30 53.7**	**+1.6**
PESTR				*eS*		**Sn**	**15 31 24.5**	**-0.7**
PESTR				*i* IAML			15 31 25.7	
PESTR				*i* IAML			15 31 25.9	
PESTR				*i* IAML			15 31 27.8	
PSBE	**So Bento**	**3.00**	**15**	*eP*		**Pn**	**15 30 55.7**	**+1.6**
PSBE				*eS*		**Sn**	**15 31 27.9**	**-0.9**
PSBE				*i* IAML			15 31 31.3	
PSBE				*i* IAML			15 31 31.9	
PSBE				*i* IAML			15 31 36.6	
EBAD	**Badajoz**	**3.08**	**45**	P		**Pn**	**15 30 56.3**	**+1.1**
EBAD				S		**Sn**	**15 31 29.7**	**-1.0**
EBAD	**Badajoz**	**3.08**	**45**	Pn		**Pn**	**15 30 56.7**	**+1.5**
EBAD				Sn		**Sn**	**15 31 28.9**	**-1.8**
EBAD				*i* IVmb_Lg			15 31 31.9	
ESPR	**Espera**	**3.18**	**84**	P		**Pn**	**15 30 58.6**	**+2.0**
ESPR				S		**Sn**	**15 31 33.6**	**+0.2**
ESPR	**Espera**	**3.18**	**84**	Pn		**Pn**	**15 30 58.5**	**+1.8**
ESPR				Sn		**Sn**	**15 31 32.3**	**-1.1**
ESPR				*i* IVmb_Lg			15 31 35.4	
PSARD	**Sardoal**	**3.25**	**23**	*eP*		**Pn**	**15 30 59.3**	**+1.8**
PSARD				*eS*		**Sn**	**15 31 33.9**	**-1.0**
PSARD				*i* IAML			15 31 36.3	
PSARD				*i* IAML			15 31 36.4	
PSARD				*i* IAML			15 31 36.7	
PMRV	**Marv??o**	**3.39**	**34**	*eP*		**Pn**	**15 31 01.1**	**+1.6**
PMRV				*eS*		**Sn**	**15 31 36.9**	**-1.6**
PMRV				*i* IAML			15 31 39.3	
PMRV				*i* IAML			15 31 39.3	
PMRV				*i* IAML			15 31 39.6	
PCAS	**Casmilo, Conde**	**3.58**	**16**	*eP*		**Pn**	**15 31 03.8**	**+1.7**
PCAS				*eS*		**Sn**	**15 31 42.5**	**-0.6**
PCAS				*i* IAML			15 31 44.3	
PCAS				*i* IAML			15 31 45.0	
PCAS				*i* IAML			15 31 48.5	
PCBR	**Castelo Branco**	**3.70**	**29**	*eP*		**Pn**	**15 31 05.7**	**+1.9**
PCBR				*eS*		**Sn**	**15 31 45.1**	**-1.0**
PCBR				*i* IAML			15 31 47.0	
PCBR				*i* IAML			15 31 47.7	
PCBR				*i* IAML			15 31 49.4	
ECAB	**El Cabril**	**3.79**	**66**	P		**Pn**	**15 31 06.5**	**+1.5**
ECAB				S		**Sn**	**15 31 47.0**	**-1.3**
ECAB	**El Cabril**	**3.79**	**66**	Pn		**Pn**	**15 31 06.9**	**+1.9**
ECAB				Sn		**Sn**	**15 31 46.8**	**-1.6**
ECAB				*i* IVmb_Lg			15 31 49.2	
AVE	**Averroes**	**3.85**	**149**	P		**Pn**	**15 31 07.8**	**+1.9**
ZHG	**ZHG**	**4.10**	**140**	P		**Pn**	**15 31 10.9**	**+1.6**
ZHG				S		**Sn**	**15 31 46.9**	**-9.2**
MTE	**Manteigas**	**4.17**	**25**	*eP*		**Pn**	**15 31 11.9**	**+1.6**
MTE				*eS*		**Sn**	**15 31 56.3**	**-1.5**
MTE				*i* IAML			15 31 58.8	
MTE				*i* IAML			15 31 59.0	
MTE				*i* IAML			15 32 03.4	
PVIS	**Viseu**	**4.35**	**20**	*eP*		**Pn**	**15 31 14.0**	**+1.2**
PVIS				*eS*		**Sn**	**15 31 58.5**	**-3.9**
EADA	**Adamuz**	**4.44**	**68**	P		**Pn**	**15 31 15.6**	**+1.6**
EADA				S		**Sn**	**15 32 02.9**	**-1.6**
EADA	**Adamuz**	**4.44**	**68**	Pn		**Pn**	**15 31 15.6**	**+1.6**
EADA				Sn		**Sn**	**15 32 02.9**	**-1.6**
EADA				*i* IVmb_Lg			15 32 07.8	
EPLA	**Plasencia**	**4.52**	**39**	Pn		**Pn**	**15 31 16.0**	**+1.0**
EPLA				Sn		**Sn**	**15 32 03.8**	**-2.5**
EPLA				*i* IVmb_Lg			15 32 06.2	
EGOR	**Sierra Gorda,**	**4.60**	**82**	Pn		**Pn**	**15 31 17.3**	**+1.0**
EGOR				Sn		**Sn**	**15 32 07.4**	**-1.1**
PVRL	**Vila Real**	**4.92**	**19**	*eS*		**Sn**	**15 32 13.2**	**-2.5**
PVRL				*i* IAML			15 32 16.4	
PVRL				*i* IAML			15 32 18.4	
PVRL				*i* IAML			15 32 18.5	
IFR	**Ifrane**	**4.93**	**128**	P		**Pn**	**15 31 21.7**	**+0.8**
IFR				S		**Sn**	**15 32 13.4**	**-3.4**
ELGU	**Los Guajares,**	**4.97**	**85**	Pn		**Pn**	**15 31 22.6**	**+1.3**
ELGU				Sn		**Sn**	**15 32 16.3**	**-1.3**
ELGU				*i* IVmb_Lg			15 32 24.5	
POLO	**Lamas de Olo**	**5.00**	**18**	*eP*		**Pn**	**15 31 22.9**	**+1.2**
POLO				*eS*		**Sn**	**15 32 16.0**	**-2.3**
POLO				*i* IAML			15 32 17.9	
POLO				*i* IAML			15 32 18.5	
MVO	**Moncorvo**	**5.03**	**25**	*eP*		**Pn**	**15 31 23.4**	**+1.4**
MVO				*eS*		**Sn**	**15 32 16.4**	**-2.6**
MVO				*i* IAML			15 32 18.4	
MVO				*i* IAML			15 32 18.9	
MVO				*i* IAML			15 32 19.8	
PAB	**San Pablo**	**5.20**	**54**	Pn		**Pn**	**15 31 26.3**	**+1.8**
PAB				Sn		**Sn**	**15 32 20.5**	**-2.8**
PAB				*i* IVmb_Lg			15 32 22.7	
PSIM	**Granatula de C**	**5.28**	**64**	Pn		**Pn**	**15 31 27.5**	**+2.0**
PSIM				Sn		**Sn**	**15 32 22.7**	**-2.4**
AKLM	**AKL**	**5.28**	**112**	P		**Pn**	**15 31 28.3**	**+2.6**
ELOB	**Lobios**	**5.41**	**14**	Pn		**Pn**	**15 31 28.6**	**+1.3**
ELOB				Sn		**Sn**	**15 32 25.6**	**-2.8**
ELOB				*i* IVmb_Lg			15 32 29.4	
PGAV	**Gavieira, Arco**	**5.47**	**12**	*eP*		**Pn**	**15 31 29.4**	**+1.3**
PGAV				*eS*		**Sn**	**15 32 26.8**	**-3.0**
PGAV				*i* IAML			15 32 29.7	
PGAV				*i* IAML			15 32 30.0	
PGAV				*i* IAML			15 32 30.5	
EQES	**Quesada**	**5.50**	**76**	Pn		**Pn**	**15 31 29.3**	**+0.6**
EQES				Sn		**Sn**	**15 32 29.1**	**-1.7**
EQES				*i* IVmb_Lg			15 32 31.3	
ESDC	**Sonseca Array**	**5.52**	**55**	Pn		**Pn**	**15 31 30.3**	**+1.4**
ESDC				Sn		**Sn**	**15 32 27.8**	**-3.4**
ESDC				*i* IVmb_Lg			15 32 29.9	
ESBB	**Sonseca Array**	**5.53**	**55**	Pn		**Pn**	**15 31 30.3**	**+1.4**
ESBB				Sn		**Sn**	**15 32 28.1**	**-3.1**
MD31	**MD31**	**5.59**	**131**	P		**Pn**	**15 31 30.7**	**+0.8**
TISM	**Timmit**	**5.63**	**149**	P		**Pn**	**15 31 28.5**	**-1.8**
OUK	**Oukaimeden**	**5.64**	**163**	P		**Pn**	**15 31 31.6**	**+0.8**
OUK				S		**Sn**	**15 32 28.4**	**-6.0**
PBRG	**Braganca**	**5.70**	**24**	*eP*		**Pn**	**15 31 32.4**	**+1.1**
PBRG				*eS*		**Sn**	**15 32 32.3**	**-3.2**
PBRG				*i* IAML			15 32 36.1	
MDT	**Midelt**	**5.72**	**130**	P		**Pn**	**15 31 33.2**	**+1.5**
ECAL	**Calabor**	**5.82**	**23**	P		**Pn**	**15 31 34.1**	**+1.1**
ECAL				S		**Sn**	**15 32 35.3**	**-3.2**
ECAL	**Calabor**	**5.82**	**23**	Pn		**Pn**	**15 31 34.2**	**+1.2**
ECAL				Sn		**Sn**	**15 32 36.1**	**-2.4**
ECAL				*i* IVmb_Lg			15 32 38.6	
TIO	**Tiouine**	**6.06**	**159**	P		**Pn**	**15 31 37.7**	**+1.3**
TIO				S		**Sn**	**15 32 40.9**	**-3.7**
TIO	**Tiouine**	**6.06**	**159**	P		**Pn**	**15 31 38.0**	**+1.6**
TIO				S		Sn	15 32 36.3	-8.3
OUZM	**OUZ**	**6.24**	**155**	P		**Pn**	**15 31 40.3**	**+1.5**
OUZM				S		**Sn**	**15 32 43.3**	**-5.6**
EAGO	**Agolada(Pontev**	**6.31**	**12**	Pn		**Pn**	**15 31 40.9**	**+1.2**
EAGO				Sn		**Sn**	**15 32 46.3**	**-4.2**
EAGO				*i* IVmb_Lg			15 32 50.3	
UCM	**Universidad Co**	**6.33**	**52**	P		**Pn**	**15 31 40.3**	**+0.3**
EMAZ	**Mazaricos**	**6.35**	**6**	Pn		**Pn**	**15 31 40.8**	**+0.6**
EMAZ				Sn		**Sn**	**15 32 47.0**	**-4.5**
EMAZ				*i* IVmb_Lg			15 32 47.1	
EARI	**Arriondas**	**7.55**	**26**	Pn		**Pn**	**15 31 58.5**	**+1.9**
EARI				Sn		**Sn**	**15 33 18.3**	**-2.7**
EARI				*i* IVmb_Lg			15 33 19.5	

*IDC **02** 15:51:31.6±1.9, 3°.83S×151°.41E, h0km, mb3.6/4, mbtmp3.7/5, ML1.9/1, MS2.8/4, Error ellipse: s-maj=113.5km s-min=20.8km az=120.0*

ISC 02 15:51:36.3±2.2, 3°.8S±0°.4×151°.3E±0°.8, h35km, n11, σ0s58/6, mb3.5/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.91**	**122**	LR	LR	15 52 21.6	
	comp=Z,165nm,18.1s,baz=39,slow=65						
PMG	**Port Moresby**	**6.88**	**216**	Pn	**Pn**	**15 53 14.4**	**-0.4**
	1.3nm,0.3s,baz=4.9,slow=11,SNR=6.0						
	14nm,0.8s						
HNR	**Honiara**	**10.28**	**123**	LR	LR	15 57 59.6	
	comp=Z,7.1nm,19.7s,baz=33,slow=38						
GUMO	**Guam**	**18.42**	**340**	LR	LR	16 01 32.0	
	comp=Z,14nm,21.2s,baz=172,slow=32						
WRA	**Warramunga Arr**	**23.00**	**224**	P	**P**	**15 56 38.6**	**+0.4**
	1.1nm,0.7s,baz=48,slow=9.2,SNR=12						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**25.89**	**219**	P	**P**	**15 57 05.9**	**+0.7**
	1.4nm,0.8s,baz=51,slow=8.6,SNR=12						
	1.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.81**	**239**	LR	LR	16 09 53.3	
	comp=Z,146nm,20.4s,baz=52,slow=38						
MJAR	**Matsushiro Arr**	**41.96**	**344**	LR	LR	16 17 19.2	
	comp=Z,20nm,18.1s,baz=174,slow=37						
PETK	**Petropavlovsk-**	**56.98**	**5**	P	**P**	**16 01 18.4**	**+0.2**
	0.7nm,0.7s,baz=181,slow=3.3,SNR=5.3						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**81.84**	**22**	P	**P**	**16 03 51.5**	**-0.2**
	0.3nm,0.7s,baz=249,slow=5.6,SNR=7.7						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.53**	**289**	PKPbc	**PKPab**	**16 11 23.7**	**-0.3**
	0.8nm,0.8s,baz=74,slow=3.1,SNR=4.2						

*IDC **02** 15:59:58.9±2.0, 10°.66N×63°.42W, h0km, mb3.5/3, mbtmp3.5/3, MS3.2/2, Error ellipse: s-maj=56.4km s-min=29.3km az=90.0*

ISC 02 15:59:59.8±1.2, 10°.6N±0°.1×63°.33W±0°.09, h10km, n11, σ0s83/11, mb3.5/3, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**1.75**	**87**	*eP*		**Pn**	**16 00 29.1**	**-1.0**
DMDM				*eS*		**Sn**	**16 00 53.0**	**+0.5**
TRN	**Trinidad (W)**	**1.89**	**89**	*eP*		**Pn**	**16 00 32.0**	**-0.2**
TRN				*eS*		**Sn**	**16 00 56.6**	**+0.5**
GRFF	**Grenada Fort F**	**2.10**	**48**	*eP*		**Pn**	**16 00 34.1**	**-1.0**
GRGR	**Grenville**	**2.22**	**47**	*eP*		**Pn**	**16 00 36.3**	**-0.5**
GCMP	**Grenada, Carri**	**2.62**	**45**	*eP*		**Pn**	**16 00 42.7**	**+0.4**
H05N1	**Guadeloupe/Mar**	**6.07**	**21**	Pn		**Pn**	**16 01 29.7**	**0.0**
SDV	**Santo Domingo**	**7.41**	**257**	LR	LR	16 05 03.9	
	comp=Z,104nm,21.0s,baz=54,slow=42						
ROSC	**El Rosal**	**12.31**	**243**	LR	LR	16 08 52.7	
	comp=Z,180nm,19.3s,baz=260,slow=44						
LPAZ	**La Paz**	**27.16**	**190**	P	**P**	**16 05 45.0**	**+0.8**
	0.8nm,0.8s,baz=11,slow=7.2,SNR=3.9						
	0.8nm,0.8s						
TXAR	**Lajitas Array**	**41.97**	**302**	P	**P**	**16 07 50.2**	**-1.1**
	0.3nm,0.8s,baz=110,slow=9.4,SNR=4.3						
	0.3nm,0.8s						
PDAR	**Pinedale Array**	**51.34**	**317**	P	**P**	**16 09 05.6**	**+0.8**
	1.0nm,0.8s,baz=116,slow=7.7,SNR=6.4						
	1.0nm,0.8s						

*IDC **02** 16:17:51.2±0.7, 16°.23N×97°.90W, h0km, mb4.5/21, mbtmp4.5/23, ML3.9/2, MS4.2/53, Error ellipse: s-maj=18.4km s-min=11.2km az=42.0*

*NEIC **02** 16:17:55.1±1.9, 16°.54N±0°.07×97°.80W±0°.08, h8km±4km, mb5.1/672, Mww4.9/17, Md5.2/141(MEX), Error ellipse: s-maj=13.0km s-min=6.5km az=45.0*

*MEX **02** 16:17:56.2±2.0, 16°.17N×98°.04W, h16km±73km, MD5.2*

*MOS **02** 16:17:56.2±1.2, 16°.54N×97°.80W, h33km, mb5.2/24, Error ellipse: s-maj=11.3km s-min=6.5km az=98.3*

*GCMT **02** 16:17:57.3±0.4, 16°.30N±0°.02×97°.94W±0°.02, h27km±1km, MW5.0/91, Moment Tensor Solution. s40,c51; s91,c129; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.58±.16; Mθθ-2.39±.10; Mϕϕ-0.18±.09; Mrθ3.01±.20; Mrϕ0.38±.06; Mθϕ-1.73±.18; Best double couple: M0 4.28100×10^16 NP1:ϕs268.00000°, δ20.00000°, λ64.00000°. NP2: ϕs115.00000°, δ72.00000°, λ99.00000°. Principal axes: T 4.4370, Plg62.0000°, Azm39.0000°; N -0.3100, Plg9.0000°, Azm293.0000°; P -4.1260, Plg27.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **02** 16:17:57.8, 16°.74N×97°.60W, h21km, Mw4.9/23, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr2.39; Mθθ-2.02; Mϕϕ-0.37; Mrθ-0.91; Mθϕ0.54; Mϕr-0.17; Fault plane solution: M0 2.47111×10^16 NP1: ϕs114.48390°, δ35.55117°, λ103.75782°. NP2: ϕs277.73530°, δ55.61519°, λ80.35446°. Principal axes: T 2.5928, Plg77.0682°, Azm155.7697°; N -0.2646, Plg7.9480°, Azm283.2178°; P -2.3282, Plg10.1347°, Azm14.6479°;*

*GFZ **02** 16:17:58.8±0.2, 17°N±4°×9°8W±°, h26km, M4.8/42, mb4.9/42*

ISC 02 16:17:54.0±0.6, 16°.29N±0°.03×98°.01W±0°.03, h14km±3km, n956, σ1s88/769, mb5.1/304, MS4.2/55, 17C-4D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEIG	**Puerto Escondi**	**0.88**	**109**		**Pg**	**16 18 09.8**	**-1.2**
PEIG					**Sg**	**16 18 21.1**	**-1.4**
PEIG	**Puerto Escondi**	**0.88**	**109**	*eP*	**Pg**	**16 18 09.8**	**-1.2**
PEIG				⇑*iP*	**Pg**	**16 18 09.8**	**-1.2**
	baz=289,slow=8.6						
PEIG				*eS*	**Sg**	**16 18 21.1**	**-1.4**
MGIG	**Malinaltepec**	**1.11**	**328**		**Pb**	**16 18 14.3**	**-0.8**
MGIG					**Sb**	**16 18 29.1**	**-0.4**
MGIG	**Malinaltepec**	**1.11**	**328**	‖*eP*	**Pb**	**16 18 14.3**	**-0.8**
MGIG				*eS*	**Sb**	**16 18 29.1**	**-0.4**
CRIG	**Cruz Grande**	**1.16**	**293**		**Pb**	**16 18 13.6**	**-2.2**
CRIG					**Sb**	**16 18 29.7**	**-1.1**
CRIG	**Cruz Grande**	**1.16**	**293**	⇑*eP*	**Pb**	**16 18 13.6**	**-2.2**
CRIG				*eS*	**Sb**	**16 18 29.7**	**-1.1**
TLIG	**Tlapa**	**1.37**	**337**		**Pn**	**16 18 18.6**	**-0.2**
TLIG				Sn	**Sn**	**16 18 35.6**	**-1.3**
TLIG	**Tlapa**	**1.37**	**337**	⇑*eP*	**Pn**	**16 18 18.8**	**0.0**
	baz=170,slow=14						
HLIG	**Huajuapan de L**	**1.54**	**7**		**Pn**	**16 18 21.5**	**+0.2**
HLIG					**Sb**	**16 18 42.0**	**0.0**
HLIG	**Huajuapan de L**	**1.54**	**7**	⇑*eP*	**Pn**	**16 18 21.5**	**+0.2**
HLIG				*eS*	**Sb**	**16 18 42.0**	**0.0**
HMTT	**Tlapaneco**	**1.59**	**341**		**Pn**	**16 18 21.1**	**-0.6**
HMTT	**Tlapaneco**	**1.59**	**341**	*eP*	**Pn**	**16 18 21.1**	**-0.6**
FTIG	**Fresnillo de T**	**1.61**	**356**		**Pn**	**16 18 22.7**	**+0.6**
FTIG					**Sn**	**16 18 41.8**	**-1.0**
FTIG	**Fresnillo de T**	**1.61**	**356**	⇑*eP*	**Pn**	**16 18 22.7**	**+0.6**
FTIG				*eS*	**Sn**	**16 18 41.8**	**-1.0**
DAIG	**Los Arroyos**	**1.73**	**295**		**Pn**	**16 18 21.8**	**-1.9**
DAIG					**Sn**	**16 18 41.8**	**-3.8**
DAIG	**Los Arroyos**	**1.73**	**295**	⇑*eP*	**Pn**	**16 18 21.8**	**-1.9**
DAIG				*eS*	**Sn**	**16 18 41.8**	**-3.8**
HUIG	**Huatulco**	**1.90**	**106**		**Pn**	**16 18 24.2**	**-1.8**
HUIG					**Sn**	**16 18 44.8**	**-5.0**
HUIG	**Huatulco**	**1.90**	**106**	*eP*	**Pn**	**16 18 24.2**	**-1.8**
HUIG				*eS*	**Sn**	**16 18 44.8**	**-5.0**
TOIG	**Toxpalan**	**2.01**	**27**		**Pn**	**16 18 27.7**	**+0.1**
TOIG					**Sn**	**16 18 51.5**	**-1.1**
TOIG	**Toxpalan**	**2.01**	**27**	⇑*eP*	**Pn**	**16 18 27.7**	**+0.1**
TOIG				*eS*	**Sn**	**16 18 51.5**	**-1.1**
TPIG	**Tehuac#an**	**2.21**	**16**		**Pn**	**16 18 31.0**	**+0.6**
TPIG					**Sn**	**16 18 55.3**	**-2.2**
TPIG	**Tehuac#an**	**2.21**	**16**	⇑*eP*	**Pn**	**16 18 31.0**	**+0.6**
TPIG				*eS*	**Sn**	**16 18 55.3**	**-2.2**
MEIG	**Mezcala**	**2.24**	**317**		**Pn**	**16 18 30.8**	**+0.1**
MEIG					**Sn**	**16 18 56.8**	**-1.5**
MEIG	**Mezcala**	**2.24**	**317**	⇑*iP*	**Pn**	**16 18 30.8**	**+0.1**
MEIG				*eS*	**Sn**	**16 18 56.8**	**-1.5**
CAIG	**El Cayaco**	**2.29**	**289**		**Pn**	**16 18 28.5**	**-2.9**
CAIG					**Sn**	**16 19 00.8**	**+1.4**
CAIG	**El Cayaco**	**2.29**	**289**	⇑*eP*	**Pn**	**16 18 28.5**	**-2.9**
CAIG				*eS*	**Sn**	**16 19 00.8**	**+1.4**
ATYC	**Atoyac**	**2.49**	**292**		**Pn**	**16 18 35.6**	**+1.4**
ATYC					**Sn**	**16 19 02.9**	**-1.5**
ATYC	**Atoyac**	**2.49**	**292**	*eP*	**Pn**	**16 18 35.6**	**+1.4**
ATYC				*eS*	**Sn**	**16 19 02.9**	**-1.5**
PLIG	**Platanillo**	**2.53**	**326**		**Pn**	**16 18 35.4**	**+0.7**
PLIG					**Sn**	**16 19 05.8**	**+0.4**
PLIG	**Platanillo**	**2.53**	**326**	⇑*iP*	**Pn**	**16 18 35.4**	**+0.7**
PLIG				*eS*	**Sn**	**16 19 05.8**	**+0.4**
PPAX	**Atlixo**	**2.65**	**352**	*eP*	**Pn**	**16 18 36.7**	**+0.3**
PPAX				*eS*	**Sn**	**16 19 06.8**	**-1.7**
PBCV	**Popocatepetl**	**2.73**	**349**	*eP*	**Pn**	**16 18 38.5**	**+0.8**
PBCV				*eS*	**Sn**	**16 19 12.2**	**+1.4**
YAIG	**Yautepec**	**2.75**	**339**		**Pn**	**16 18 38.5**	**+0.7**
YAIG					**Sn**	**16 19 10.5**	**-0.4**
YAIG	**Yautepec**	**2.75**	**339**	⇑*eP*	**Pn**	**16 18 38.5**	**+0.7**
YAIG				*eS*	**Sn**	**16 19 10.5**	**-0.4**
PPCU	**Popocatapetl**	**2.76**	**348**	*eP*	**Pn**	**16 18 39.8**	**+1.5**
PPCU				*eS*	**Sn**	**16 19 10.4**	**-1.2**
PBXN	**Popocatepetl**	**2.77**	**347**	*eP*	**Pn**	**16 18 38.6**	**-0.2**
PBXN				*eS*	**Sn**	**16 19 11.4**	**-0.6**
PBPN	**Popocatepetl**	**2.80**	**348**	*eP*	**Pn**	**16 18 39.9**	**+1.0**
PBPN				*eS*	**Sn**	**16 19 12.4**	**-0.2**
PPSX	**Xalitzintla**	**2.82**	**350**	*eP*	**Pn**	**16 18 41.2**	**+2.2**
PPSX				*eS*	**Sn**	**16 19 13.7**	**+0.8**
PPIG	**Popocatepetl**	**2.82**	**348**		**Pn**	**16 18 40.4**	**+1.3**
PPM	**Popocatepetl**	**2.82**	**348**	⇑*eP*	**Pn**	**16 18 40.4**	**+1.3**
AMVM	**AMECAMECA**	**2.92**	**345**		**Pn**	**16 18 41.3**	**+1.0**
AMVM					**Sn**	**16 19 16.4**	**+1.1**
AMVM	**AMECAMECA**	**2.92**	**345**	*eP*	**Pn**	**16 18 41.3**	**+1.0**
AMVM				*eS*	**Sn**	**16 19 16.4**	**+1.1**
ARIG	**Puente Sto Nin**	**2.98**	**312**		**Pn**	**16 18 41.6**	**+0.6**
ARIG					**Sn**	**16 19 15.8**	**-0.8**
ARIG	**Puente Sto Nin**	**2.98**	**312**	⇑*iP*	**Pn**	**16 18 41.6**	**+0.6**
	baz=134,slow=14						
ARIG				*eS*	**Sn**	**16 19 15.8**	**-0.8**
MAVM	**Malinalco, Edo**	**3.00**	**332**		**Pn**	**16 18 42.7**	**+1.3**
MAVM					**Sn**	**16 19 18.1**	**+0.7**
MAVM	**Malinalco, Edo**	**3.00**	**332**	*eP*	**Pn**	**16 18 42.7**	**+1.3**
MAVM				*eS*	**Sn**	**16 19 18.1**	**+0.7**
MPVM	**San Francisco**	**3.05**	**342**		**Pn**	**16 18 44.4**	**+2.4**
MPVM					**Sn**	**16 19 17.5**	**-0.9**
MPVM	**San Francisco**	**3.05**	**342**	*eP*	**Pn**	**16 18 44.4**	**+2.4**
MPVM				*eS*	**Sn**	**16 19 17.5**	**-0.9**
CMIG	**Matias Romero**	**3.10**	**75**	Pn	**Pn**	**16 18 41.0**	**-1.5**
	22nm,0.3s,baz=265,slow=12,SNR=266						
CMIG				Lg	Lg	16 19 29.8	
	95nm,0.3s,baz=234,slow=15,SNR=4.3

DEIG eS Sn 16 19 45.6 +1.1
MOIG Morelia 4.53 319 Pn 16 19 04.4 +2.1
MOIG Sn 16 19 58.8 +3.8
MOIG Morelia 4.53 319 eP Pn 16 19 03.4 +1.1
MOIG eS Sn 16 19 58.8 +3.8
MMIG Aquila 5.47 292 Pn 16 19 15.4 +0.4
MMIG Sn 16 20 11.3 -6.5
MMIG Aquila 5.47 292⇑ eP Pn 16 19 15.4 +0.4
MMIG eS Sn 16 20 11.3 -6.5
PATR El Naranjo 5.69 101 Pn 16 19 18.5 +0.2
PATR Sn 16 20 19.7 -3.9
PATR El Naranjo 5.69 101 eP Pn 16 19 18.5 +0.2
PATR eS Sn 16 20 19.7 -3.9
PAVE Pavencul 5.72 100 Pn 16 19 18.5 -0.3
PAVE Sn 16 20 22.9 -1.5
PAVE Pavencul 5.72 100 eP Pn 16 19 18.5 -0.3
PAVE eS Sn 16 20 22.9 -1.5
CHUJ Union Juarez 5.81 101 eP Pn 16 19 18.9 -1.1
CHUJ eS Sn 16 20 23.8 -2.7
RPIG Rio Verde 5.87 342 *e* Pb 16 19 37.3 +1.2
RPIG *e* 16 20 49.2
INCO Volcan de Coli 6.22 302 eP Pn 16 19 27.9 +2.1
INCO eS Sn 16 20 43.5 +6.5
CDAR Ciudad de Arme 6.30 296 eP Pn 16 19 26.8 +0.4
CDAR eS Sn 16 20 29.5 -8.8
HUEH Huehuetenango 6.34 98 Pn Pn 16 19 28.5 +1.2
RTAL Retalhuleu 6.34 105 Pn Pn 16 19 27.2 +0.1
CEGR Campo Tres 6.36 300 Pn 16 19 27.8 +0.2
CEGR Sn 16 20 41.1 +0.9
CEGR Campo Tres 6.36 300 eP Pn 16 19 27.8 +0.2
CEGR eS Sn 16 20 41.1 +0.9
GTIG Gomez Farias 6.83 351 Pn 16 19 35.2 +1.5
GTIG Sn 16 20 53.0 +1.6
GTIG Gomez Farias 6.83 351⇑ eP Pn 16 19 35.2 +1.5
GTIG eS Sn 16 20 53.0 +1.6
APG El Apazote 7.38 99 Pn Pn 16 19 40.1 -1.5
0.1nm,0.3s,baz=233,slow=20,SNR=3.9
APG Sn **Sn 16 21 01.4 -4.0**
0.2nm,0.3s,baz=235,slow=19,SNR=4.6
APG Lg Lg 16 21 38.5
0.4nm,0.3s,baz=232,slow=19,SNR=4.1
CJM Chamela 7.42 297 eP Pn 16 19 40.4 -1.5
CJM eS Sn 16 21 03.8 -2.1
ZAIG Zacatecas 7.74 327 Pn 16 19 40.8 +1.4
ZAIG Zacatecas 7.74 327 P Pn 16 19 50.5 +3.9
ANIG Ahuacatlan 7.78 309 Pn 16 19 57.5 +11
ANIG Sn 16 21 11.2 -3.7
ANIG Ahuacatlan 7.78 309 eP Pn 16 19 57.5 +11
ANIG eS Sn 16 21 11.2 -3.7
PETF Flores 7.83 84 Pn Pn 16 19 45.6 -2.0
ESQI Esquipulas 8.54 100 Pn Pn 16 19 58.2 +0.8
MTO3 Montecristo 8.55 102 Pn Pn 16 19 57.5 -0.2
LNIG Linares 8.67 351 Pn 16 19 57.9 -1.2
LNIG Sn 16 21 42.7 +6.0
LNIG Linares 8.67 351 eP Pn 16 19 57.9 -1.2
LNIG eS Sn 16 21 42.7 +6.0
MNIG Monterrey 9.51 347 Sn 16 22 03.6 +6.2
MNIG Monterrey 9.51 347 eP Pn 16 20 20.0 +9.3
MNIG eS Sn 16 22 03.6 +6.2
TEIG Tepich 10.04 66 Pn 16 20 14.9 -2.9
TEIG Tepich 10.04 66 P Pn 16 20 15.8 -2.0
MAIG Mazatlaan 10.48 312 *e* 16 22 35.9
PDIG Papasquiaro 11.11 323 Pn 16 22 38.6 +1.7
PDIG Sn 16 22 38.6 +1.7
PDIG Papasquiaro 11.11 323 eP Pn 16 20 30.2 -2.5
PDIG eS Sn 16 22 38.6 +1.7
833A Chaparral WMA, 12.04 354 Pn 16 20 48.0 +2.7
BOAB BOACO BROADBAN 12.55 106 P Pn 16 20 55.4 +3.1
HPIG 12.76 327 Pn 16 20 51.4 -3.8
HPIG Sn 16 23 21.8 +4.6
HPIG 12.76 327 eP Pn 16 20 51.4 -3.8
HPIG eS Sn 16 23 21.8 +4.6
HPIG 12.76 327 P Pn 16 20 58.6 +3.4
SIUN Universidad Ur 13.04 100 Pn Pn 16 20 57.5 -1.5
HNDO Hondo 13.23 355 Pn 16 20 58.4 -3.1
SLBS Sierra La Lagu 13.41 305 Pn 16 21 05.9 +1.9
SLBS Sierra La Lagu 13.41 305 P Pn 16 21 07.8 +3.8
MLDN Muldoon 13.46 4 Pn Pn 16 21 02.2 -2.3
JUD3 Juan Diaz 3 13.58 115 Pn 16 21 06.8 +0.5
HKT Hockley 13.74 8 Pn 16 21 05.2 -3.2
HKT Hockley 13.74 8 P Pn 16 21 05.2 -3.2
LPIG La Paz 13.91 306 Pn Pn 16 21 14.8 +4.0
baz=121,slow=5.9
TX31 Lajitas Ar. Si 13.98 339 Pn 16 21 09.9 -1.9
TXAR Lajitas Array 13.98 339 Pn Pn 16 21 13.9 +2.0
0.1nm,0.3s,baz=151,slow=12,SNR=30
TXAR Lg Lg 16 25 18.7
0.1nm,0.3s,baz=158,slow=23,SNR=5.0
7.4nm,1.0s
JTS Las Juntas de 14.04 114 Pn Pn 16 21 14.4 +1.9
0.8nm,0.3s,baz=292,slow=19,SNR=9.0
JTS Las Juntas de 14.04 114 Pn 16 21 13.4 +0.8
JTS Las Juntas de 14.04 114 *i* P Pn 16 21 15.0 +2.4
JTS Las Juntas de 14.04 114 P Pn 16 21 14.5 +1.9
SAND Sanderson 14.11 345 Pn Pn 16 21 12.0 -1.6
JCT Junction City 14.22 354 Pn Pn 16 21 12.7 -2.3
JCT Junction City 14.22 354 P Pn 16 21 12.7 -2.3
CSIG Choix 14.23 319 Pn 16 21 09.7 -5.5
CSIG Sn 16 24 00.3 +7.3
CSIG Choix 14.23 319 eP Pn 16 21 09.7 -5.5
CSIG eS Sn 16 24 00.3 +7.3
BILN Bilwi Airport 14.30 97 Pn 16 21 15.0 -1.3
435B Jarrell 14.43 1 Pn 16 21 13.9 -4.0
BRDY Brady 14.95 357 Pn 16 21 21.8 -3.3
441A DeRidder 15.05 16 Pn Pn 16 21 22.1 -4.2
RAFA San Farael, Vo 15.19 113 Pn Pn 16 21 28.7 +0.1
SOR Soroa 15.54 63 Pn Pn 16 21 30.5 -2.3
SOR Soroa 15.54 63 P Pn 16 21 30.5 -2.3
SOR pmax pmax
comp=Z,13nm,1.3s
SOR Soroa 15.54 63 P Pn 16 21 32.1 -0.7
MNHN Monahans 15.60 345 Pn 16 21 33.5 -0.1
MNHN lAmb lAmb 16 21 40.7
comp=Z,72nm,0.8s
WHTX Lake Whitney, 15.64 2 Pn 16 21 32.3 -1.8
VHRN Van Horn 15.77 337 Pn 16 21 36.3 +0.3
SGCY Sterling City 15.81 350 Pn 16 21 36.1 -0.2
PECS Pecos 15.93 341 lAmb lAmb 16 21 44.3
comp=Z,97nm,0.8s
229A Bryant Ranch, 15.98 348 lAmb lAmb 16 21 45.7
comp=Z,27nm,0.8s
FW13 Cleburne 16.00 2 Pn 16 21 36.1 -2.6
TPB06 Permian Basin 16.01 344 lAmb lAmb 16 21 44.7
comp=Z,58nm,0.8s
TPB13 Reeves - Culbe 16.10 342 lAmb lAmb 16 21 46.8
comp=Z,221nm,0.9s
ODSA Odessa 16.29 346 Pn 16 21 41.6 -0.9
ODSA lAmb lAmb 16 21 49.7
comp=Z,227nm,1.8s
ABTX Abilene, Hawle 16.33 355 Pn 16 21 42.6 -0.3
ABTX lAmb lAmb 16 21 48.5
comp=Z,231nm,0.9s
PLPT Palo Pinto 16.45 359 lAmb lAmb 16 21 49.7
comp=Z,263nm,1.0s
TREL Terrell 16.46 6 lAmb lAmb 16 21 49.2
comp=Z,121nm,0.8s
FW06 Azle 16.61 1 P Pn 16 21 46.0 -0.5
FW06 lAmb lAmb 16 21 50.6
comp=Z,118nm,0.7s
BRU2 Volcan 16.70 115 P 16 21 49.6 -0.6
MNTX Cornudas Mount 16.74 338 P P 16 21 49.5 -0.9
SN07 Snyder 07 16.93 352 lAmb lAmb 16 21 55.1
comp=Z,144nm,1.1s
Z35A Perchaven, San 16.98 2 P Pn 16 21 49.4 -1.8
Z35A lAmb lAmb 16 21 54.8
comp=Z,101nm,0.8s
CAMR Camarioca 17.05 64 Pn Pn 16 21 49.6 -2.4
SRIG Santa Rosalia 17.16 312 P P 16 21 58.0 +3.0
VBMS Vicksburg 17.25 22 P Pn 16 21 52.9 -1.6
VBMS lAmb lAmb 16 21 57.1
comp=Z,154nm,0.9s
HSIG 17.39 319 Pn 16 21 50.4 -5.9
HSIG P P 16 21 56.5 -1.0
HSIG 17.39 319 eP Pn 16 21 50.4 -5.9
143A Socs Landing, 17.40 19 Pn 16 21 53.0 -3.4
143A lAmb lAmb 16 21 59.1
comp=Z,125nm,1.0s
WTFS Witchita Falls 17.41 359 P Pn 16 21 54.2 -2.2
DKNS Dickens 17.50 352 lAmb lAmb 16 22 02.1
comp=Z,151nm,0.8s
NZIG Nacozari, Sono 17.55 325 P Pn 16 21 55.7 -2.8
NZIG Nacozari, Sono 17.55 325 eP Pn 16 21 55.7 -2.8

LOOK Love County 17.64 2 Pn 16 21 56.7 -2.7
146A Union 18.18 25 P Pn 16 22 04.0 -2.0
146A lAmb lAmb 16 22 07.5
comp=Z,124nm,1.1s
X34A Smith Ranch, M 18.23 0 P Pn 16 22 05.6 -1.1
WMOK Wichita Mounta 18.38 358 P Pn 16 22 07.7 -0.8
CCAR Cane Creek 18.43 17 P P 16 22 06.7 -2.3
CCAR lAmb lAmb 16 22 17.2
comp=Z,120nm,1.1s
CAIB Caibarien 18.54 68 P P 16 22 08.5 -1.8
553A Crawfordville 18.60 40 P P 16 22 07.7 -3.2
MIAR Mount Ida 18.61 12 P P 16 22 10.0 -1.0
AMTX Amarillo 18.80 351 lAmb lAmb 16 22 19.1
comp=Z,135nm,1.0s
W35A Tecumseh 18.81 3 lAmb lAmb 16 22 23.2
comp=Z,134nm,1.1s
250A Grady 18.91 32 P P 16 22 12.1 -2.3
Z47A Carrollton 19.08 26 P P 16 22 13.5 -2.7
Z47A lAmb lAmb 16 22 26.1
comp=Z,286nm,1.7s
352A Blakely 19.25 36 P P 16 22 15.8 -2.3
DWPF Disney Wildern 19.31 50 P P 16 22 16.1 -2.7
Y22A Socorro 19.33 337 lAmb lAmb 16 22 28.9
comp=Z,73nm,0.8s
PH02 Texas Public H 19.34 350 lAmb lAmb 16 22 21.9
comp=Z,100nm,0.9s
OK029 Liberty Lake 19.43 1 lAmb lAmb 16 22 30.5
comp=Z,119nm,1.0s
DEOK Depew 19.52 4 lAmb lAmb 16 22 31.0
comp=Z,128nm,0.9s
TUL3 Leonard 19.64 5 lAmb lAmb 16 22 31.1
comp=Z,157nm,1.0s
MTDJ Mount Denham 19.65 81 P P 16 22 21.8 -0.9
OK052 Battle Ridge R 19.65 3 lAmb lAmb 16 22 32.5
comp=Z,172nm,1.0s
TUC Tucson 19.71 326 P P 16 22 22.1 -1.1
TUC Tucson 19.71 326 P P 16 22 22.1 -1.1
TUC pmax pmax
comp=Z,28nm,1.0s
TUC Tucson 19.71 326 P Pn 16 22 26.2 +1.5
OXF Oxford 19.72 21 lAmb lAmb 16 22 24.1
comp=Z,94nm,0.9s
QUOK Quay 19.83 3 lAmb lAmb 16 22 30.5
comp=Z,160nm,1.2s
RLO Rose Lookout 19.97 7 lAmb lAmb 16 22 36.5
comp=Z,104nm,1.1s
TIGA Tifton 20.00 38 P P 16 22 23.1 -3.1
ANMO Albuquerque 20.06 339 P Pn 16 22 28.3 -0.5
comp=Z,44nm,1.0s,baz=149,slow=12,SNR=52
ANMO Lg Lg 16 28 29.5
comp=Z,0.1nm,0.3s,baz=221,slow=19,SNR=1.6
ANMO LR LR 16 30 53.1
comp=Z,3µm,18.0s,baz=154,slow=39
comp=Z,44nm,1.0s
ANMO Albuquerque 20.06 339 P P 16 22 27.6 +0.5
ANMO Albuquerque 20.06 339 *i* P Pn 16 22 28.7 -0.2
ANMO pmax pmax
comp=Z,78nm,1.2s
ANMO Albuquerque 20.06 339 P Pn 16 22 29.1 +0.2
OK048 Pawnee Station 20.07 3 lAmb lAmb 16 22 37.7
comp=Z,172nm,1.1s
OK038 West end E0370 20.12 358 lAmb lAmb 16 22 35.1
comp=Z,143nm,1.2s
CROK Carrier 20.13 0 lAmb lAmb 16 22 35.1
comp=Z,170nm,1.1s
FCAR Ozark Folk Cen 20.21 14 P P 16 22 27.2 -1.3
HHAR Hobbs 20.24 10 P P 16 22 26.8 -2.0
HHAR lAmb lAmb 16 22 34.9
comp=Z,75nm,1.1s
152A Waverly Hall 20.27 34 P P 16 22 26.4 -2.7
HBAR Harrisburg 20.28 18 P P 16 22 27.5 -1.7
HBAR lAmb lAmb 16 22 39.8
comp=Z,215nm,1.4s
U38A Gravette 20.32 8 P P 16 22 28.0 -1.7
U38A lAmb lAmb 16 22 40.4
comp=Z,79nm,1.1s
Y49A Blount Mountai 20.37 29 P P 16 22 28.0 -2.3
Y49A lAmb lAmb 16 22 38.4
comp=Z,100nm,1.0s
BLOK Blackwell 20.40 2 P P 16 22 28.6 -1.9
456A Hilliard 20.49 43 P P 16 22 31.0 -0.5
456A lAmb lAmb 16 22 37.3
comp=Z,55nm,0.7s
RTBA Rita Blanca 20.50 349 P P 16 22 31.4 -0.4
RTBA lAmb lAmb 16 22 41.4
comp=Z,163nm,1.2s
T35A Sooner Cattle 20.59 3 P P 16 22 31.1 -1.5
T35A lAmb lAmb 16 22 40.4
comp=Z,98nm,0.8s
X48A Hartselle 20.59 27 P P 16 22 30.5 -2.1
X48A lAmb lAmb 16 22 40.4
comp=Z,289nm,1.9s
LCAR Lake Charles 20.62 16 P P 16 22 31.7 -1.3
CHIV Chivirico 20.84 77 P P 16 22 33.8 -1.7
HALT Halls 21.01 20 P P 16 22 35.7 -1.5
PEBM Pemiscott Bayo 21.03 19 P P 16 22 36.4 -1.0
154A Montrose 21.13 37 P P 16 22 37.6 -0.8
FPAL Fort Paine 21.31 29 P P 16 22 38.7 -1.7
PBMO Poplar Bluff 21.49 17 lAmb lAmb 16 22 45.8
comp=Z,110nm,0.8s
GOGA Godfrey 21.51 35 lAmb lAmb 16 22 50.5
comp=Z,83nm,0.9s
GOGA Godfrey 21.51 35 P P 16 22 41.4 -1.2
Y52A Lilburn 21.54 33 P P 16 22 41.3 -1.6
Y52A lAmb lAmb 16 22 50.8
comp=Z,130nm,0.9s
T42A Van Buren 21.55 15 lAmb lAmb 16 22 55.3
comp=Z,76nm,1.0s
X51A Calhoun 21.69 31 lAmb lAmb 16 22 52.7
comp=Z,118nm,1.4s
X16A Lo Mia Camp, P 21.71 329 lAmb lAmb 16 22 57.5
comp=Z,99nm,0.9s
S39A Bolivar 21.71 10 lAmb lAmb 16 22 56.0
comp=Z,133nm,1.3s
WVT Waverly 21.74 23 P P 16 22 42.8 -2.2
WVT lAmb lAmb 16 22 51.9
comp=Z,56nm,0.8s
WVT Waverly 21.74 23 P P 16 22 42.8 -2.2
WVT pmax pmax
comp=Z,56nm,0.9s
WVT Waverly 21.74 23 P P 16 22 43.6 -1.4
W50A Signal Mountai 21.99 29 lAmb lAmb 16 22 55.3
comp=Z,133nm,1.0s
R32A Long Quarter, 22.06 359 lAmb lAmb 16 22 59.6
comp=Z,78nm,1.0s
GTBY Guantanamo Bay 22.06 77 P P 16 22 46.1 -2.5
GTBY Guantanamo Bay 22.06 77 P P 16 22 48.7 +0.1
Y14A Wickenburg 22.16 325 lAmb lAmb 16 23 00.7
comp=Z,64nm,0.9s
T45A Pascua 22.25 20 P P 16 22 48.5 -2.0
CLTN Cedars of Leba 22.29 26 P P 16 22 48.9 -2.0
R40A Maddies Statio 22.49 12 lAmb lAmb 16 22 55.2
comp=Z,87nm,1.0s
WUAZ Wupatki 22.56 331 lAmb lAmb 16 23 07.0
comp=Z,114nm,1.0s
CPCT Cooper Cave 22.57 30 lAmb lAmb 16 23 01.6
comp=Z,58nm,0.8s
GLA Glamis 22.57 321 lAmb lAmb 16 23 05.9
comp=Z,71nm,1.1s
ESJX Sierra Juarez 22.59 317 P P 16 22 55.5 +1.1
ESJX lAmb lAmb 16 23 07.3
comp=Z,62nm,1.3s
FVM French Village 22.62 16 lAmb lAmb 16 23 03.8
comp=Z,65nm,1.1s
S44A Carbondale 22.68 18 lAmb lAmb 16 23 04.6
comp=Z,116nm,1.0s
S22A 4UR Ranch, Cre 22.75 342 lAmb lAmb 16 23 00.2
comp=Z,44nm,0.9s
KSU1 Kansas State U 22.76 3 lAmb lAmb 16 23 06.7
comp=Z,81nm,0.8s
HODGE Hodges 22.79 35 P P 16 22 53.2 -3.1
HODGE lAmb lAmb 16 23 03.7
comp=Z,88nm,0.8s
MVCO Mesa Verde 22.81 338 P P 16 22 58.1 +1.4
BLYC Blythe 22.88 322 P P 16 22 58.9 +1.7
KSCO Kaye Shedlock' 22.99 351 P P 16 22 57.5 -1.0
KSCO lAmb lAmb 16 23 07.5
comp=Z,75nm,1.0s
BG3 Lake Jocassee 23.00 33 lAmb lAmb 16 23 09.6
comp=Z,43nm,0.8s
TKL Tuckaleechee C 23.10 31 LR LR 16 35 31.7
comp=Z,240nm,19.2s,baz=204,slow=46
TKL Tuckaleechee C 23.10 31 lAmb lAmb 16 23 08.3
comp=Z,58nm,0.9s
NHSC New Hope 23.24 41 P P 16 22 58.5 -2.3

CBX Cerro Bola 23.25 317 lAmb lAmb 16 23 13.4
comp=Z,153nm,2.0s
BC3 Big Chuckawall 23.37 321 P P 16 23 02.9 +0.6
BC3 lAmb lAmb 16 23 13.5
comp=Z,62nm,1.1s
PAULI Pauline 23.48 35 lAmb lAmb 16 23 12.8
comp=Z,73nm,1.0s
BAR Barrett 23.49 317 P P 16 23 05.0 +1.5
IRM Iron Mountain 23.53 322 P P 16 23 03.8 -0.1
IRM lAmb lAmb 16 23 15.0
comp=Z,58nm,1.2s
P38A Dawn 23.57 9 lAmb lAmb 16 23 13.4
comp=Z,75nm,0.9s
V53A Saluda 23.59 32 lAmb lAmb 16 23 13.5
comp=Z,51nm,1.1s
U15A North Rim 23.73 330 lAmb lAmb 16 23 18.6
comp=Z,71nm,1.0s
PV13 Radium Mtn., P 23.77 338 lAmb lAmb 16 23 17.6
comp=Z,85nm,0.9s
PV05 Paradox Valley 23.80 338 lAmb lAmb 16 23 17.4
comp=Z,61nm,0.9s
PV15 Paradox Valley 23.82 339 lAmb lAmb 16 23 19.4
comp=Z,87nm,1.1s
PV03 Paradox Valley 23.87 339 P P 16 23 06.7 -0.6
PV03 lAmb lAmb 16 23 18.5
comp=Z,61nm,0.9s
TZTN Tazewell 23.91 30 lAmb lAmb 16 23 17.8
comp=Z,68nm,1.1s
TZTN Tazewell 23.91 30 P P 16 23 07.4 -0.1
PV11 David Mesa, Pa 23.91 339 lAmb lAmb 16 23 21.9
comp=Z,62nm,0.9s
PV17 East Wray Mesa 23.93 338 lAmb lAmb 16 23 10.3
comp=Z,42nm,0.8s
PMD Palm Desert 23.93 320 lAmb lAmb 16 23 18.7
comp=Z,69nm,1.7s
BELC Belle Mtn. Jos 23.93 321 lAmb lAmb 16 23 18.8
comp=Z,79nm,1.4s
PV16 Nyswonger Mesa 23.94 338 lAmb lAmb 16 23 24.9
comp=Z,42nm,0.9s
PFO Pinyon Flats O 23.96 319 LR LR 16 34 00.4
comp=Z,402nm,18.3s,baz=136,slow=40
PFO Pinyon Flats O 23.96 319 P P 16 23 09.4 +1.3
PFO Pinyon Flats O 23.96 319 P P 16 23 09.4 +1.3
PFO pmax pmax
comp=Z,32nm,1.3s
PV07 Paradox Valley 23.96 339 lAmb lAmb 16 23 11.3
comp=Z,77nm,1.0s
PV19 Morning Glory 23.96 338 lAmb lAmb 16 23 25.0
comp=Z,91nm,1.0s
KMSC Kings Mountain 23.98 35 lAmb lAmb 16 23 17.5
comp=Z,85nm,0.9s
PV20 West Nyswonger 23.99 338 lAmb lAmb 16 23 24.6
comp=Z,78nm,1.0s
DNR Dunn Ranch,Anz 24.03 319 lAmb lAmb 16 23 20.2
comp=Z,70nm,1.3s
PV10 Paradox Valley 24.04 338 lAmb lAmb 16 23 10.8
comp=Z,77nm,0.9s
Y58A Scranton 24.09 40 P P 16 23 05.5 -3.6
PV22 Blue Mesa, Par 24.10 339 lAmb lAmb 16 23 20.0
comp=Z,73nm,1.0s
BIRD Birdtown, Kers 24.12 37 lAmb lAmb 16 23 18.8
comp=Z,84nm,1.2s
WCI Wyandotte Cave 24.16 23 P P 16 23 09.8 0.0
PV21 Cone Mtn., Par 24.19 339 lAmb lAmb 16 23 20.6
comp=Z,54nm,0.9s
ISCO Idaho Springs 24.34 346 P P 16 23 13.3 +1.5
P43A Skaggs, Pawnee 24.42 16 lAmb lAmb 16 23 20.8
comp=Z,94nm,1.1s
KNB Kanab 24.46 330 P P 16 23 11.7 -1.1
KNB lAmb lAmb 16 23 26.0
comp=Z,47nm,1.0s
KNB Kanab 24.46 330 P P 16 23 11.7 -1.1
KNB pmax pmax
comp=Z,47nm,1.0s
R49A Shelbyville 24.66 25 lAmb lAmb 16 23 24.9
comp=Z,63nm,1.2s
BLO Bloomington 24.91 22 P P 16 23 16.0 -0.6
BLO lAmb lAmb 16 23 25.2
comp=Z,66nm,0.9s
BLO Bloomington 24.91 22 P P 16 23 16.0 -0.6
BLO pmax pmax
comp=Z,67nm,0.9s
R50A Paris 25.00 26 lAmb lAmb 16 23 26.2
comp=Z,72nm,1.1s
SZCU Shurtz Canyon 25.05 331 lAmb lAmb 16 23 30.6
comp=Z,38nm,0.9s
N41A Harden Midland 25.11 13 lAmb lAmb 16 23 27.8
comp=Z,59nm,0.8s
BFSC Mount Baldy Ra 25.12 319 lAmb lAmb 16 23 30.6
comp=Z,60nm,1.9s
MWC Mount Wilson 25.36 318 lAmb lAmb 16 23 34.1
comp=Z,73nm,1.5s
U56A King 25.39 35 lAmb lAmb 16 23 30.1
comp=Z,44nm,0.9s
HAYD Hayden 25.44 343 lAmb lAmb 16 23 35.3
comp=Z,31nm,0.8s
P48A Milroy 25.57 23 lAmb lAmb 16 23 31.0
comp=Z,41nm,1.0s
TCRU Three Creeks R 25.59 333 lAmb lAmb 16 23 58.7
comp=Z,24nm,0.8s
SDDR Presa de Saban 25.60 80 P P 16 23 22.7 -0.4
SDDR Presa de Saban 25.60 80 P P 16 23 24.6 +1.5
P17A Butcher Ranch, 25.63 337 lAmb lAmb 16 23 35.1
comp=Z,39nm,1.0s
TMUT Trail Mountain 25.66 336 lAmb lAmb 16 23 35.8
comp=Z,34nm,1.0s
CCCA Chr Cany lake 25.79 322 lAmb lAmb 16 23 37.4
comp=Z,31nm,1.0s
QSM Queen of Sheba 25.81 323 lAmb lAmb 16 23 37.9
comp=Z,44nm,1.2s
ROSC El Rosal 25.88 113 P P 16 23 24.2 -1.8
comp=Z,11nm,0.3s,baz=317,slow=18,SNR=7.0
comp=Z,11nm,0.3s
ROSC El Rosal 25.88 113 P P 16 23 24.9 -1.2
ROSC lAmb lAmb 16 24 01.8
comp=Z,27nm,0.7s
ROSC El Rosal 25.88 113 P P 16 23 24.9 -1.2
ROSC pmax pmax
comp=Z,27nm,0.7s
ROSC El Rosal 25.88 113 P P 16 23 25.3 -0.8
TPO Tropico Hills 25.89 319 lAmb lAmb 16 23 37.8
comp=Z,46nm,1.0s
SC01 Santiago de lo 26.14 79 P P 16 23 27.2 -0.8
PSUT Pine Spring 26.16 331 lAmb lAmb 16 23 56.8
comp=Z,30nm,0.9s
RDMU Red Mountain 26.19 340 lAmb lAmb 16 23 38.9
comp=Z,50nm,1.0s
S11A Rachel 26.41 327 lAmb lAmb 16 23 46.4
comp=Z,120nm,1.8s
MPU Maple Canyon 26.45 336 lAmb lAmb 16 23 36.4
comp=Z,32nm,1.0s
BANI BANI 26.47 81 P P 16 23 29.9 -1.1
NLU North Lily Min 26.57 335 lAmb lAmb 16 23 35.1
comp=Z,38nm,1.0s
BSUT Blindstream Ca 26.57 338 lAmb lAmb 16 23 42.8
comp=Z,30nm,1.0s
DUG Dugway, Tooele 27.07 335 lAmb lAmb 16 23 39.8
comp=Z,37nm,1.0s
DUG Dugway, Tooele 27.07 335 P P 16 23 38.7 +2.4
Q54A Coxs Mills 27.16 30 lAmb lAmb 16 23 51.0
comp=Z,73nm,1.1s
ACSO Alum Creek Sta 27.20 26 lAmb lAmb 16 24 11.1
comp=Z,41nm,0.9s
S57A Dark Hollow, R 27.20 34 lAmb lAmb 16 23 47.9
comp=Z,36nm,1.0s
V61A Roper 27.24 40 P P 16 23 37.4 -0.2
P53A Whipple 27.29 29 lAmb lAmb 16 23 47.3
comp=Z,50nm,1.2s
TCUT Toone Canyon 27.32 338 lAmb lAmb 16 23 52.4
comp=Z,46nm,0.9s
ECSD EROS Data Cent 27.38 2 lAmb lAmb 16 23 47.3
comp=Z,30nm,0.8s
ECSD EROS Data Cent 27.38 2 P P 16 23 38.7 -0.2
T59A Double "B" Far 27.43 37 lAmb lAmb 16 23 48.6
comp=Z,64nm,1.1s
O52A Adamsville 27.59 27 lAmb lAmb 16 23 48.0
comp=Z,32nm,1.0s
SDV Santo Domingo 27.69 102 LR LR 16 36 09.6
comp=Z,238nm,19.9s,baz=340,slow=40
SDV Santo Domingo 27.69 102 P P 16 23 42.4 +0.3
BGU Big Grassy Mou 27.78 335 lAmb lAmb 16 23 54.1
comp=Z,32nm,1.1s
HWUT Hardware Ranch 27.80 338 lAmb lAmb 16 23 57.1
comp=Z,28nm,0.8s
HWUT Hardware Ranch 27.80 338 P P 16 23 44.6 +1.7
I37A Lemond, Waseca 27.91 7 lAmb lAmb 16 23 51.1
comp=Z,34nm,0.9s

R58B Mineral 27.94 35 IAmb IAmb 16 23 53.1
comp=Z,27nm,0.9s
Q56A Snyder Ridge, 28.02 32 IAmb IAmb 16 23 56.3
comp=Z,41nm,1.0s
BW06 Boulder Array 28.18 342 IAmb IAmb 16 24 00.2
comp=Z,28nm,1.1s
PD31 Pinedale Array 28.18 342 IAmb IAmb 16 24 00.2
comp=Z,27nm,1.1s
PDAR Pinedale Array 28.18 342 P P **16 23 47.0 +0.8**
comp=Z,5.5nm,0.8s,baz=147,slow=7.8,SNR=31
PDAR LR LR 16 36 15.8
comp=Z,550nm,20.4s,baz=154,slow=39
comp=Z,5.5nm,0.8s
PDAR Pinedale Array 28.18 342 P P **16 23 46.7 +0.4**
RSSD Black Hills 28.21 351 P P **16 23 46.1 -0.4**
RSSD Black Hills 28.21 351 P P **16 23 46.1 -0.4**
RSSD pmax pmax
comp=Z,8.0nm,0.8s
RSSD Black Hills 28.21 351 P P **16 23 47.9 +1.3**
I40A Norwalk 28.22 11 IAmb IAmb 16 23 54.8
comp=Z,46nm,1.0s
MDPB Devils Postpil 28.24 323 IAmb IAmb 16 23 58.8
comp=Z,41nm,1.5s
NV11 Mina Array Sit 28.28 325 IAmb IAmb 16 23 51.0
comp=Z,24nm,1.0s
O54A Avella 28.31 29 IAmb IAmb 16 23 54.8
comp=Z,35nm,1.1s
NVAR Mina Array Bea 28.36 325 P P **16 23 50.1 +2.2**
comp=Z,17nm,1.0s,baz=134,slow=8.9,SNR=70
NVAR LR LR 16 35 30.1
comp=Z,547nm,18.5s,baz=136,slow=37
comp=Z,17nm,1.0s
NVAR Mina Array Bea 28.36 325 P P **16 23 49.7 +1.8**
ELK Elko 28.57 332 LR LR 16 35 05.2
comp=Z,1μm,18.3s,baz=162,slow=36
I42A Draeger Farm, 28.57 14 IAmb IAmb 16 23 58.1
comp=Z,34nm,0.9s
N53A Lisbon 28.60 28 IAmb IAmb 16 24 00.5
comp=Z,32nm,1.1s
AHID Auburn Hatcher 28.66 340 P P **16 23 51.9 +1.3**
P57A Homestead Farm 28.96 33 IAmb IAmb 16 24 03.6
comp=Z,36nm,1.2s
ECR Eagle Creek 29.01 340 IAmb IAmb 16 24 02.3
comp=Z,18nm,0.7s
WAKR Walker 29.04 324 IAmb IAmb 16 24 07.8
comp=Z,39nm,1.7s
SNOW Snow King Moun 29.18 341 IAmb IAmb 16 24 05.8
comp=Z,30nm,0.9s
LOHW Long Hollow 29.26 341 IAmb IAmb 16 24 06.4
comp=Z,24nm,0.9s
H43A Windswept, Lux 29.39 15 IAmb IAmb 16 24 05.2
comp=Z,37nm,1.0s
FLWY Flagg Ranch 29.72 341 IAmb IAmb 16 24 21.2
comp=Z,37nm,1.4s
UUPR Utuado, UPR, P 29.93 82 P P **16 24 00.1 -1.7**
MVL Millersville 30.22 34 IAmb IAmb 16 24 14.3
comp=Z,32nm,1.2s
RLMT Red Lodge 30.26 344 IAmb IAmb 16 24 15.2
comp=Z,50nm,1.1s
ATAH Atahualpa 30.31 139 LR LR 16 34 14.6
comp=Z,566nm,18.1s,baz=327,slow=33
SJG San Juan 30.47 82 LR LR 16 37 37.5
comp=Z,284nm,20.9s,baz=166,slow=39
HLID Hailey 30.55 336 P P **16 24 09.2 +1.9**
YHL Hebgen Lake 30.56 341 IAmb IAmb 16 24 29.9
comp=Z,54nm,1.9s
PDPR Patillas Dam, 30.59 82 P P **16 24 06.1 -1.7**
PDPR IAmb IAmb 16 24 24.5
comp=Z,24nm,1.1s
E38A The Farm, Brul 30.70 9 IAmb IAmb 16 24 16.9
comp=Z,63nm,1.3s
HUMP Col San Antoni 30.75 82 P P **16 24 07.8 -1.4**
HUMP IAmb IAmb 16 24 28.6
comp=Z,24nm,1.1s
MFID Camas Ranch 31.00 334 IAmb IAmb 16 24 28.0
comp=Z,28nm,1.2s
LAO LASA Array 31.07 349 IAmb IAmb 16 24 21.4
comp=Z,59nm,1.4s
WVOR Wild Horse Val 31.48 330 P P **16 24 17.5 +2.1**
AGMN Agassiz Nation 31.97 3 P P **16 24 19.3 -0.2**
BINY Binghamton 32.00 32 IAmb IAmb 16 24 29.4
comp=Z,20nm,1.1s
BINY Binghamton 32.00 32 P P **16 24 19.8 0.0**
EYMN Ely 32.02 8 IAmb IAmb 16 24 28.3
comp=Z,31nm,1.0s
EYMN Ely 32.02 8 P P **16 24 18.8 -1.2**
E46A Sault Ste Mari 32.09 18 IAmb IAmb 16 24 28.9
comp=Z,17nm,0.8s
PLID Pearl Lake 32.45 336 IAmb IAmb 16 24 34.5
comp=Z,48nm,1.1s
DGMT Dagmar 32.49 352 IAmb IAmb 16 24 26.2
comp=Z,38nm,0.9s
SADO Sadowa 32.54 25 LR LR 16 40 31.3
comp=Z,163nm,18.7s,baz=164,slow=42
K05A Summer Lake 32.81 328 IAmb IAmb 16 24 41.9
comp=Z,27nm,1.3s
J57A Williamstown 32.89 30 IAmb IAmb 16 24 37.9
comp=Z,21nm,0.9s
DELO Deloro Mine 32.99 27 IAmb IAmb 16 24 39.0
comp=Z,22nm,1.2s
BUKO Buck Lake 32.99 24 IAmb IAmb 16 24 36.9
comp=Z,16nm,0.8s
YBH Yreka Blue Hor 33.08 325 LR LR 16 38 03.3
comp=Z,244nm,20.0s,baz=158,slow=36
TRY Troy 33.57 33 IAmb IAmb 16 24 43.9
comp=Z,25nm,1.1s
PINE Pine Mountain 33.62 329 IAmb IAmb 16 24 37.1
comp=Z,15nm,0.8s
F10A Beach Ranch, E 33.67 336 IAmb IAmb 16 24 38.3
comp=Z,29nm,1.0s
G08A Pilot Rock 33.84 333 IAmb IAmb 16 24 46.1
comp=Z,25nm,1.1s
L61B Northampton 33.91 35 IAmb IAmb 16 24 46.3
comp=Z,40nm,1.4s
ULM Lac du Bonnet 33.92 2 P P **16 24 35.5 -1.0**
comp=Z,28nm,1.1s,baz=183,slow=11,SNR=19
ULM LR LR 16 39 11.8
comp=Z,272nm,20.4s,baz=190,slow=38
comp=Z,28nm,1.1s
ULM Lac du Bonnet 33.92 2 IAmb IAmb 16 24 44.5
comp=Z,25nm,0.9s
I05D Terrebonne, OR 34.21 330 IAmb IAmb 16 24 42.2
comp=Z,20nm,0.9s
WIFE Three Sisters- 34.24 329 IAmb IAmb 16 24 50.3
comp=Z,35nm,1.1s
I04A Tendick Farm, 34.35 328 IAmb IAmb 16 24 52.5
comp=Z,38nm,1.2s
WBO Williamsburg 34.42 29 IAmb IAmb 16 24 51.7
comp=Z,18nm,1.0s
LONY Lake Ozonia 34.47 30 IAmb IAmb 16 24 51.0
comp=Z,19nm,1.1s
HRV Adam Dziewonsk 34.57 35 P P **16 24 41.6 -0.6**
HRV IAmb IAmb 16 24 51.9
comp=Z,22nm,1.0s
HRV Adam Dziewonsk 34.57 35 P P **16 24 41.6 -0.6**
HRV pmax pmax
comp=Z,22nm,1.0s
HRV Adam Dziewonsk 34.57 35 P P **16 24 40.8 -1.5**
J61A Chester 34.59 34 IAmb IAmb 16 24 53.1
comp=Z,38nm,1.1s
I03D Drain, OR 34.77 327 IAmb IAmb 16 24 55.6
comp=Z,38nm,1.0s
H04D Lebanon 35.04 329 IAmb IAmb 16 24 55.9
comp=Z,47nm,1.0s
LDM Libby Dam 35.07 340 IAmb IAmb 16 24 49.1
comp=Z,37nm,1.0s
NEW Newport 35.54 338 LR LR 16 40 45.7
comp=Z,1μm,18.4s,baz=156,slow=39
NEW Newport 35.54 338 P P **16 24 51.8 +1.2**
MNTQ Montreal, Queb 35.58 30 IAmb IAmb 16 25 01.2
comp=Z,29nm,1.1s
C09A Chrisman Ranch 35.58 336 IAmb IAmb 16 25 02.1
comp=Z,24nm,1.0s
TRQ Mont Tremblant 35.68 28 IAmb IAmb 16 25 03.1
comp=Z,38nm,1.3s
EPH Ephrata 35.75 335 IAmb IAmb 16 25 07.9
comp=Z,13nm,1.2s
I63A Otisfield 36.12 34 IAmb IAmb 16 25 05.9
comp=Z,37nm,1.0s
LTY Liberty 36.12 334 IAmb IAmb 16 24 58.5
comp=Z,60nm,1.5s
H62A Milan 36.16 33 IAmb IAmb 16 25 06.0
comp=Z,34nm,1.1s
LON Longmire 36.23 332 IAmb IAmb 16 25 07.1
comp=Z,29nm,1.0s
B08A Colville Reser 36.45 336 IAmb IAmb 16 25 09.2
comp=Z,26nm,1.1s
E03A Lebam 36.89 330 IAmb IAmb 16 25 05.3
comp=Z,49nm,0.9s
G62A West of Eustis 36.93 33 IAmb IAmb 16 25 14.8
comp=Z,44nm,1.1s
GNW Green Mountain 37.30 332 IAmb IAmb 16 25 15.3
comp=Z,34nm,0.9s
FFC Flin Flon 38.48 356 P P **16 25 15.2 -0.2**
FFC IAmb IAmb 16 25 24.6
comp=Z,48nm,0.9s
FFC Flin Flon 38.48 356 P P **16 25 15.3 -0.2**
FFC pmax pmax
comp=Z,48nm,1.0s
FFC Flin Flon 38.48 356 P P **16 25 15.8 +0.4**
FFC pP sP **16 25 23.6 +2.0**
G65A Princeton 38.51 35 IAmb IAmb 16 25 26.1
comp=Z,32nm,1.0s
EDM Edmonton 38.77 345 IAmb IAmb 16 25 27.5
comp=Z,46nm,1.0s
BOAV Boa Vista 39.38 107 P P **16 25 24.1 +0.6**
FCC Fort Churchill 42.50 3 P P **16 25 48.6 +0.1**
FCC IAmb IAmb 16 25 57.9
comp=Z,74nm,1.6s
FCC Fort Churchill 42.50 3 P P **16 25 48.7 +0.1**
FCC pmax pmax
comp=Z,74nm,1.6s
BBB Bella Bella 43.01 333 LR LR 16 44 41.7
comp=Z,240nm,18.2s,baz=148,slow=37
LPAZ La Paz 43.78 136 P P **16 25 60.0 -0.2**
comp=Z,0.7nm,0.7s,baz=321,slow=8.5,SNR=20
LPAZ LR LR 16 42 18.8
comp=Z,288nm,22.0s,baz=306,slow=34
comp=Z,0.7nm,0.7s
LPAZ La Paz 43.78 136 P P **16 26 02.4 +2.2**
LPAZ La Paz 43.78 136 P P **16 26 02.4 +2.2**
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
LPAZ La Paz 43.78 136 P P **16 26 03.3 +3.1**
PB16 IPOC Station P 44.40 140 P P **16 26 07.9 +2.8**
PB16 IPOC Station P 44.40 140 P P **16 26 07.6 +2.5**
RPN Rapa Nui 44.54 194 LR LR 16 40 57.4
comp=Z,76nm,19.2s,baz=80,slow=31
PSGCX Pisagua 44.98 141 P P **16 26 11.3 +2.0**
PSGCX IAmb IAmb 16 27 25.1
comp=Z,38nm,1.5s
SCHQ Schefferville 45.35 25 P P **16 26 10.7 -0.9**
comp=Z,6.3nm,1.0s,baz=228,slow=4.3,SNR=6.4
SCHQ LR LR 16 49 12.5
comp=Z,241nm,18.9s,baz=238,slow=42
comp=Z,6.3nm,1.0s
PB11 IPOC Station P 45.39 141 P P **16 26 14.6 +2.1**
PB11 IAmb IAmb 16 26 21.1
comp=Z,26nm,1.0s
PB11 IPOC Station P 45.39 141 P P **16 26 16.3 +3.7**
GO01 Chusmiza 45.60 141 P P **16 26 19.3 +4.7**
GO01 Chusmiza 45.60 141 P P **16 26 16.6 +2.1**
PB08 IPOC Station P 45.98 141 P P **16 26 19.7 +2.2**
PB02 IPOC Station P 46.45 143 P P **16 26 25.3 +4.5**
PB02 IAmb IAmb 16 26 27.9
comp=Z,23nm,0.8s
V35K Ketchikan 46.70 334 P P **16 26 23.1 +1.0**
baz=133
PB09 IPOC Station P 47.20 142 P P **16 26 30.7 +3.9**
PB09 IAmb IAmb 16 26 33.8
comp=Z,25nm,1.0s
T35M Bob Quinn 47.31 337 P P **16 26 28.5 +1.5**
baz=135
CRAG Craig 47.43 334 P P **16 26 29.6 +1.7**
baz=131
PB05 IPOC Station P 47.48 144 P P **16 26 32.4 +3.5**
PB05 IAmb IAmb 16 26 37.7
comp=Z,23nm,1.1s
YKAW1 Yellowknife Wh 47.57 350 IAmb IAmb 16 26 37.9
comp=Z,7nm,1.1s
YKA Yellowknife A 47.60 350 P P **16 26 28.8 -0.4**
comp=Z,13nm,1.1s,baz=160,slow=8.1,SNR=16
YKA LR LR 16 46 06.8
comp=Z,161nm,20.4s,baz=166,slow=36
comp=Z,13nm,1.1s
YKA Yellowknife Ar 47.60 350 *e*P P **16 26 29.2 0.0**
YKA pmax pmax
comp=Z,14nm,1.1s
YKAW3 Yellowknife Wh 47.67 350 IAmb IAmb 16 26 38.7
comp=Z,31nm,1.3s
KOTAN Kotaneelee Air 47.68 343 P P **16 26 32.0 +2.1**
baz=145
WRAK Wrangell Islan 47.74 335 P P **16 26 32.6 +2.3**
baz=133
U33K Whale Pass 47.86 334 P P **16 26 33.0 +1.8**
baz=131
DLBC Dease Lake 48.29 338 LR LR 16 48 54.8
comp=Z,742nm,20.0s,baz=113,slow=38
DLBC Dease Lake 48.29 338 P P **16 26 37.0 +2.4**
baz=137,SNR=11
S34M Telegraph Cree 48.31 337 P P **16 26 37.4 +2.6**
baz=135
SIV San Ignacio 48.55 130 LR LR 16 46 19.2
comp=Z,316nm,18.2s,baz=313,slow=35
TAOE Nuku Hiva Isla 48.61 242 *e*LR LR 16 40 28.4
comp=Z,646nm,25.2s
WTLY Watson Lake, Y 49.12 340 IAmb IAmb 16 26 51.9
comp=Z,30nm,1.0s
WTLY Watson Lake, Y 49.12 340 P P **16 26 42.6 +1.7**
baz=139,SNR=5.4
R33M Jennings River 49.32 338 IAmb IAmb 16 26 54.3
comp=Z,27nm,1.1s
R33M Jennings River 49.32 338 P P **16 26 45.1 +2.5**
baz=136,SNR=8.8
Q32M Nakina River 49.48 337 P P **16 26 45.9 +1.9**
baz=134
PTLB Pontes e Lacer 49.67 127 P P **16 26 48.5 +2.8**
CLDB Colider 49.73 120 P P **16 26 47.2 +1.0**
TGTN Hyland Airport 50.04 342 P P **16 26 50.0 +2.0**
baz=140
S31K Pelican 50.35 335 P P **16 26 51.6 +1.4**
baz=129
P32M Atlin 50.45 337 IAmb IAmb 16 26 54.5
comp=Z,25nm,1.1s
P32M Atlin 50.45 337 P P **16 26 52.8 +1.7**
baz=133,SNR=8.1
P33M Teslin, Yukon 50.56 338 IAmb IAmb 16 27 03.2
comp=Z,21nm,1.2s
P33M Teslin, Yukon 50.56 338 P P **16 26 53.8 +1.8**
baz=134
SALTA 50.77 142 P P **16 26 59.0 +4.5**
SKAG Skagway 50.97 337 P P **16 26 57.6 +2.7**
baz=131
AC02 Maricunga 51.23 146 P P **16 26 59.8 +1.9**
FRB Frobisher Bay 51.57 16 LR LR 16 50 48.8
comp=Z,230nm,19.2s,baz=186,slow=38
FRB Frobisher Bay 51.57 16 P P **16 26 59.5 +0.2**
WHY Whitehorse 51.61 338 P P **16 27 01.6 +1.7**
baz=132,SNR=5.2
MMPY Sheldon Lake, 51.79 341 IAmb IAmb 16 27 04.8
comp=Z,32nm,0.9s
MMPY Sheldon Lake, 51.79 341 P P **16 27 03.3 +2.1**
baz=138,SNR=27
P29M Windy Craggy 52.02 336 IAmb IAmb 16 27 20.4
comp=Z,22nm,1.2s
P29M Windy Craggy 52.02 336 P P **16 27 04.8 +1.9**
baz=128
P30M Million Dollar 52.03 336 P P **16 27 04.8 +1.9**
baz=130
O30N Mendenhall 52.13 337 P P **16 27 05.9 +2.3**
baz=131,SNR=6.8
N31M Braeburn, Yuko 52.49 338 IAmb IAmb 16 27 09.6
comp=Z,36nm,1.1s
N31M Braeburn, Yuko 52.49 338 P P **16 27 08.3 +1.9**
baz=132,SNR=11
M31M Drury Creek, Y 52.50 339 P P **16 27 08.4 +1.9**
baz=134,SNR=6.1
HYT Haines Junctio 52.69 337 IAmb IAmb 16 27 11.9
comp=Z,27nm,1.2s
HYT Haines Junctio 52.69 337 P P **16 27 10.7 +2.7**
baz=129,SNR=9.2
H03N2 Juan Fernandez 52.70 160 T T 17 24 02.3
baz=337,slow=77,SNR=360
H03N1 Juan Fernandez 52.71 160 T T 17 23 38.7
baz=337,slow=77,SNR=416
H03N3 Juan Fernandez 52.72 160 T T 17 24 02.4
baz=337,slow=77,SNR=124
O29M Mount Kennedy 52.77 336 P P **16 27 10.5 +2.0**
baz=128,SNR=5.9
N30M Aishikik Lake 52.95 338 P P **16 27 12.0 +2.3**
baz=130,SNR=7.8
YUK6 Outpost Mounta 53.09 337 P P **16 27 13.6 +2.6**
baz=129,SNR=7.3
GO04 Tololo Observa 53.12 150 P P **16 27 15.1 +3.5**
PINM Pinnacle 53.31 335 P P **16 27 14.6 +2.1**
baz=126
PCA Pinnacle 53.31 335 IAmb IAmb 16 27 16.0
comp=Z,27nm,1.0s
YUK4 Talbot Arm 53.45 337 P P **16 27 16.1 +2.5**
baz=129
M30M Minto, Yukon 53.58 339 P P **16 27 16.0 +1.6**
baz=131,SNR=11
BRWY Burwash Landin 53.61 337 P P **16 27 17.0 +2.4**
baz=128,SNR=10
O28M Mount Upton 53.69 336 P P **16 27 17.8 +2.3**
baz=126
YUK8 Steele Glacier 53.83 337 P P **16 27 18.9 +2.3**
baz=127,SNR=16
ILON Igloolik, Nuna 54.02 7 P P **16 27 17.3 -0.1**
ILON IAmb IAmb 16 27 18.4
comp=Z,29nm,0.8s
LOGN Logan Glacier 54.04 336 IAmb IAmb 16 27 29.4
comp=Z,19nm,1.1s
M29M Somme Creek 54.08 338 IAmb IAmb 16 27 21.4
comp=Z,21nm,0.9s
M29M Somme Creek 54.08 338 P P **16 27 20.2 +2.1**
baz=129,SNR=26
GRNC Granite Creek 54.29 335 IAmb IAmb 16 27 23.2
comp=Z,28nm,1.0s
L29M L29M 54.39 339 P P **16 27 22.3 +2.0**
baz=130,SNR=30
YUK3 Moose Creek 54.40 337 P P **16 27 22.2 +1.6**
baz=127,SNR=12
K29M Barlow Dome 54.67 340 IAmb IAmb 16 27 33.0
comp=Z,23nm,1.2s
K29M Barlow Dome 54.67 340 P P **16 27 23.6 +1.2**
baz=131,SNR=13
TGL Tana Glacier 54.73 335 IAmb IAmb 16 27 34.1
comp=Z,33nm,1.1s
J30M Hart River 54.78 341 P P **16 27 24.4 +1.2**
baz=133,SNR=7.9
CRQE Cirque 54.84 335 P P **16 27 25.8 +2.1**
baz=123,SNR=5.6
CRQM Cirque 54.86 335 IAmb IAmb 16 27 26.9
comp=Z,24nm,1.0s
BVCY Beaver Creek 54.94 337 P P **16 27 26.1 +1.8**
baz=127,SNR=9.8
KAIM Kayak Island 54.95 334 P P **16 27 26.6 +2.3**
baz=122
H31M Peel River 55.05 343 IAmb IAmb 16 27 35.1
comp=Z,17nm,1.2s
H31M Peel River 55.05 343 P P **16 27 25.9 +0.9**
baz=136,SNR=6.7
MCARA McCarthy VSAT 55.17 335 IAmb IAmb 16 27 29.5
comp=Z,29nm,0.9s
MCARA McCarthy VSAT 55.17 335 P P **16 27 28.1 +2.2**
baz=124,SNR=9.6
I30M Mount Dempster 55.24 341 P P **16 27 27.4 +0.9**
baz=133,SNR=14
VRDI Verde Repeater 55.25 335 IAmb IAmb 16 27 37.8
comp=Z,20nm,1.2s
M27K Edge Creek, AK 55.28 337 P P **16 27 28.7 +1.8**
baz=126,SNR=9.8
DAWY Dawson 55.44 339 P P **16 27 28.4 +0.5**
baz=129
C36M Paulatuk 55.48 349 P P **16 27 29.8 +1.8**
baz=149
GLB Gilahina Butte 55.51 335 IAmb IAmb 16 27 39.6
comp=Z,24nm,1.0s
Q23K Middleton Isla 55.53 332 P P **16 27 31.3 +2.7**
baz=119
BMRM Bremner River 55.58 335 P P **16 27 31.0 +2.1**
baz=122,SNR=7.9
BCAR Beaver Creek A 55.67 338 P P **16 27 30.8 +1.3**
BCAR PcP PcP **16 28 28.1 -0.8**
M26K Nabesna, AK 55.73 337 IAmb IAmb 16 27 41.6
comp=Z,21nm,1.0s
M26K Nabesna, AK 55.73 337 P P **16 27 31.9 +1.9**
baz=124,SNR=16
EYAK Cordova Ski Ar 55.84 334 IAmb IAmb 16 27 42.1
comp=Z,32nm,1.1s
EYAK Cordova Ski Ar 55.84 334 P P **16 27 32.7 +2.1**
baz=120
G31M Satah River 55.84 344 P P **16 27 31.4 +0.8**
baz=136,SNR=20
N25K Chitina, Valde 55.92 335 P P **16 27 33.7 +2.3**
baz=122,SNR=9.9
F31M Tsiigehtchic 56.08 344 P P **16 27 32.8 +0.4**
baz=137
EPYK Eagle Plains 56.14 342 P P **16 27 33.4 +0.6**
baz=133
DIV Divide 56.15 334 IAmb IAmb 16 27 44.0
comp=Z,28nm,1.1s
L26K Log Cabin Wild 56.22 337 P P **16 27 35.0 +1.5**
baz=124,SNR=6.8
P23K Montague Islan 56.28 333 P P **16 27 35.6 +1.7**
baz=118
MENT Mentasta 56.31 337 IAmb IAmb 16 27 44.8
comp=Z,24nm,1.2s
KLU Klutina 56.40 335 IAmb IAmb 16 27 46.0
comp=Z,29nm,1.0s
KLU Klutina 56.40 335 P P **16 27 36.6 +1.8**
baz=121,SNR=14
G30M tAoh Zraii Nji 56.42 343 P P **16 27 35.0 +0.1**
baz=134
I28M Miner Creek 56.51 340 P P **16 27 35.8 +0.3**
baz=129
H29M Whitestone 56.52 342 IAmb IAmb 16 27 37.5
comp=Z,15nm,0.9s
H29M Whitestone 56.52 342 P P **16 27 36.3 +0.8**
baz=131,SNR=14
HARP HAARP 56.57 336 P P **16 27 37.6 +1.6**
baz=122,SNR=5.3
GLI Glacier Island 56.58 334 P P **16 27 37.1 +1.1**
baz=119
INK Inuvik 56.67 345 LR LR 16 54 30.7
comp=Z,277nm,19.0s,baz=130,slow=39
INK Inuvik 56.67 345 P P **16 27 36.9 +0.4**
baz=138,SNR=28
INK Inuvik 56.67 345 P P **16 27 37.2 +0.7**
INK pP sP **16 27 44.9 +2.2**
GO05 Hualane 56.71 154 P P **16 27 40.3 +3.0**
F30M Barrier River 56.75 344 IAmb IAmb 16 27 38.9
comp=Z,23nm,0.9s
F30M Barrier River 56.75 344 P P **16 27 37.5 +0.3**
baz=135,SNR=16
M24K Tolsona, Glenn 56.82 335 IAmb IAmb 16 27 42.5
comp=Z,32nm,1.0s
M24K Tolsona, Glenn 56.82 335 P P **16 27 38.9 +1.1**
baz=121,SNR=6.4
G29M Pine Creek 56.89 342 P P **16 27 38.8 +0.7**
baz=132,SNR=10
PAX Paxson 57.00 336 IAmb IAmb 16 27 49.5
comp=Z,23nm,1.1s
PAX Paxson 57.00 336 P P **16 27 40.3 +1.2**
baz=122,SNR=20
SCRK Sand Creek 57.00 338 IAmb IAmb 16 27 42.0
comp=Z,16nm,1.0s
SCRK Sand Creek 57.00 338 P P **16 27 40.4 +1.3**
baz=124,SNR=34
SCM Sheep Creek Mo 57.15 335 IAmb IAmb 16 27 57.2
comp=Z,58nm,1.8s
SCM Sheep Creek Mo 57.15 335 P P **16 27 41.4 +1.2**
baz=120
I27K Kandik River 57.15 340 P P **16 27 40.6 +0.5**
baz=128,SNR=10
RIDG Independent Ri 57.18 337 P P **16 27 41.8 +1.5**
baz=123,SNR=29
SEW Seward 57.24 332 IAmb IAmb 16 27 42.9
comp=Z,27nm,1.1s
SEW Seward 57.24 332 P P **16 27 41.8 +1.2**
baz=116
M23K Glacier View 57.29 334 P P **16 27 42.1 +1.0**
baz=119
KNK Knik Glacier 57.41 334 IAmb IAmb 16 27 44.5
comp=Z,34nm,1.3s
KNK Knik Glacier 57.41 334 P P **16 27 43.3 +1.3**
baz=118
I26K Coal Creek Min 57.48 339 P P **16 27 43.2 +0.8**
baz=126
H27K Steamboat Moun 57.51 341 P P **16 27 43.2 +0.6**
baz=128,SNR=6.9
SML Sawmill 57.55 334 IAmb IAmb 16 27 53.2
comp=Z,38nm,1.3s
SML Sawmill 57.55 334 P P **16 27 43.9 +1.0**
baz=118,SNR=9.4
K24K Donnelly Dome 57.57 337 IAmb IAmb 16 27 45.5
comp=Z,21nm,0.9s
K24K Donnelly Dome 57.57 337 P P **16 27 44.3 +1.3**
baz=122,SNR=10
ML02 Panimavida 57.57 154 P P **16 27 46.5 +3.1**
POIN Pond Inlet 57.59 7 P P **16 27 43.1 +0.2**
POIN IAmb IAmb 16 27 52.4

comp=Z,22nm,1.0s
BRSE Bradley Lake S 57.66 332 P P 16 27 44.9 +1.2
baz=115
WAT6 Susitna Watana 57.69 335 P P 16 27 45.2 +1.1
baz=120,SNR=17
BRLK Bradley Lake 57.74 331 IAmb IAmb 16 27 46.6
comp=Z,29nm,0.9s
KDAK Kodiak Island 57.75 329 LR LR 16 52 55.2
comp=Z,397nm,18.0s,baz=107,slow=36
KDAK Kodiak Island 57.75 329 P P 16 27 45.5 +1.2
baz=112
SLKM Skilak Lake 57.76 332 IAmb IAmb 16 27 46.7
comp=Z,33nm,1.0s
PMR Palmer 57.78 334 IAmb IAmb 16 27 46.8
comp=Z,19nm,0.8s
PMR Palmer 57.78 334 P P 16 27 45.6 +1.1
baz=118
DHY Denali Highway 57.80 336 P P 16 27 45.4 +0.6
baz=120,SNR=6.6
CNPM China Poot 57.80 331 IAmb IAmb 16 27 47.1
comp=Z,24nm,1.2s
RC01 Rabbit Creek A 57.81 333 IAmb IAmb 16 27 54.9
comp=Z,22nm,1.1s
RC01 Rabbit Creek A 57.81 333 P P 16 27 45.9 +1.2
baz=117,SNR=5.7
J25K Salcha River, 57.86 338 P P 16 27 46.2 +1.1
baz=123,SNR=13
E29M Blow River 57.86 344 IAmb IAmb 16 27 55.1
comp=Z,20nm,1.1s
E29M Blow River 57.86 344 P P 16 27 45.9 +0.9
baz=133,SNR=18
F28M Old Crow 57.89 342 IAmb IAmb 16 27 47.4
comp=Z,25nm,0.9s
F28M Old Crow 57.89 342 P P 16 27 46.1 +0.8
baz=130,SNR=19
OHAK Old Harbor 57.89 328 IAmb IAmb 16 27 55.7
comp=Z,28nm,1.1s
OHAK Old Harbor 57.89 328 P P 16 27 46.3 +1.0
baz=111
G27K Doyon Strip 57.91 341 P P 16 27 45.9 +0.5
baz=128,SNR=19
A36M Sachs Harbour 57.95 350 P P 16 27 45.5 0.0
baz=148
CPUP Villa Florida 57.95 136 P P 16 27 44.8 -1.4
comp=Z,0.6nm,0.4s,baz=321,slow=6.5,SNR=3.5
CPUP LR LR 16 51 54.4
comp=Z,107nm,20.6s,baz=298,slow=35
comp=Z,0.6nm,0.4s
CPUP Villa Florida 57.95 136 IAmb IAmb 16 29 07.3
comp=Z,29nm,1.9s
SII Sitkinak Islan 58.12 327 P P 16 27 48.1 +1.1
baz=110
WAT1 Susitna Watana 58.14 335 P P 16 27 47.8 +0.7
baz=119
M22K Willow 58.28 334 P P 16 27 49.0 +1.1
baz=117
HDA Harding Lake 58.33 337 IAmb IAmb 16 27 50.1
comp=Z,14nm,0.9s
HDA Harding Lake 58.33 337 P P 16 27 49.1 +0.9
baz=121,SNR=9.0
BI02 San Fabin de 58.41 155 P P 16 27 52.6 +3.3
BI02 IAmb IAmb 16 27 57.7
comp=Z,26nm,1.6s
PRP Porcupine Dome 58.42 339 IAmb IAmb 16 27 51.3
comp=Z,22nm,1.0s
PRP Porcupine Dome 58.42 339 P P 16 27 49.8 +0.8
baz=123,SNR=19
RES Resolute Bay 58.43 1 LR LR 16 53 16.6
comp=Z,200nm,19.7s,baz=188,slow=36
E28M Babbage River 58.45 343 IAmb IAmb 16 27 50.7
comp=Z,15nm,0.9s
E28M Babbage River 58.45 343 P P 16 27 49.5 +0.4
baz=131,SNR=24
IL31 58.49 338 IAmb IAmb 16 27 59.5
comp=Z,32nm,1.2s
ILAR Eielson Array 58.49 338 P P 16 27 49.9 +0.4
comp=Z,8.6nm,1.0s,baz=120,slow=7.2,SNR=64
comp=Z,8.6nm,1.0s
ILAR Eielson Array 58.49 338 P P 16 27 49.4 -0.1
ILAR Eielson Array 58.49 338 eP P 16 27 50.1 +0.6
ILAR pmax pmax
comp=Z,9.0nm,1.0s
CHIR Chirikof Islan 58.64 326 P P 16 27 51.5 +0.9
baz=108
CUT Chulitna 58.64 334 P P 16 27 51.3 +0.9
baz=117
BDFB Brasilia 58.66 120 P P 16 27 50.5 -1.0
comp=Z,4.7nm,0.7s,baz=270,slow=3.0,SNR=5.2
comp=Z,4.7nm,0.7s
G26K Porcupine Rive 58.67 341 P P 16 27 51.4 +0.8
baz=126,SNR=7.4
O20K Slope Mountain 58.67 331 P P 16 27 51.9 +1.1
baz=113
D28M Stokes Point 58.73 344 P P 16 27 51.6 +0.6
baz=132
MCK McKinley 58.73 336 IAmb IAmb 16 27 53.3
comp=Z,20nm,0.9s
MCK McKinley 58.73 336 P P 16 27 52.1 +0.9
baz=119,SNR=7.2
E27K Coleen River 58.76 342 IAmb IAmb 16 27 53.5
comp=Z,25nm,1.1s
E27K Coleen River 58.76 342 P P 16 27 52.3 +1.0
baz=129,SNR=26
P19K Oil Pt 58.78 331 P P 16 27 52.6 +1.1
baz=112
ILSW Iliamna Southw 58.87 331 IAmb IAmb 16 28 02.0
comp=Z,17nm,1.1s
POKR Poker Flat Res 58.88 338 P P 16 27 52.8 +0.7
baz=121
COLA College 58.90 338 P P 16 27 52.3 +0.1
COLA IAmb IAmb 16 27 53.8
comp=Z,18nm,1.1s
COLA College 58.90 338 i P P 16 27 52.5 +0.3
COLA pmax pmax
comp=Z,17nm,1.0s
COLA College 58.90 338 P P 16 27 52.7 +0.4
baz=121
COLA College 58.90 338 P P 16 27 53.3 +1.1
L22K Petersville 58.90 334 IAmb IAmb 16 27 54.6
comp=Z,26nm,1.1s
L22K Petersville 58.90 334 P P 16 27 53.6 +1.2
baz=116
STLK Strandline Lak 58.90 333 IAmb IAmb 16 27 54.6
comp=Z,15nm,0.9s
FYU Fort Yukon 58.91 340 IAmb IAmb 16 28 02.5
comp=Z,40nm,1.5s
SPCR Spurr Chakacha 58.94 333 P P 16 27 53.6 +0.9
baz=114
SKT Skwentna 58.98 334 P P 16 27 54.1 +1.2
baz=115
TRF Thorofare Moun 59.13 336 P P 16 27 54.9 +0.8
baz=117,SNR=40
BMAR Burnt Mountain 59.20 341 P P 16 27 55.0 +0.6
NEA2 Nenana 59.21 337 IAmb IAmb 16 28 04.2
comp=Z,20nm,1.4s
NEA2 Nenana 59.21 337 P P 16 27 55.1 +0.7
baz=119,SNR=10.0
SFJD Kangerlussuaq 59.21 20 LR LR 16 55 25.0
comp=Z,338nm,21.1s,baz=234,slow=38
SFJD Kangerlussuaq 59.21 20 P P 16 27 54.3 0.0
SFJD IAmb IAmb 16 27 55.4
comp=Z,26nm,1.0s
SFJD Kangerlussuaq 59.21 20 P P 16 27 54.3 0.0
SFJD pmax pmax
comp=Z,26nm,1.0s
F26K Sheenjek River 59.22 341 P P 16 27 55.6 +1.1
baz=126,SNR=12
Q18K Katmai Hardscr 59.26 329 P P 16 27 55.4 +0.4
baz=110,SNR=6.6
D27M Malcolm River 59.27 344 IAmb IAmb 16 28 04.7
comp=Z,13nm,1.1s
D27M Malcolm River 59.27 344 P P 16 27 55.8 +0.9
baz=130,SNR=9.8
G25K Bearman Lake 59.31 340 P P 16 27 55.9 +0.8
baz=123,SNR=7.8
H24K Noodor Dome 59.41 339 IAmb IAmb 16 27 58.0
comp=Z,27nm,1.1s
H24K Noodor Dome 59.41 339 P P 16 27 56.9 +1.1
baz=121
O19K Port Alsworth 59.49 331 IAmb IAmb 16 27 57.9
comp=Z,23nm,1.2s
O19K Port Alsworth 59.49 331 P P 16 27 57.1 +0.7
baz=112
Q17K Contact Creek 59.56 329 P P 16 27 57.5 +0.4
baz=109
I23K Minto, Yukon-K 59.59 338 P P 16 27 58.2 +1.1
baz=119
R17L Mt. Peulik Vol 59.59 328 P P 16 27 58.2 +0.9
baz=108
M20K Styx River 59.62 333 P P 16 27 58.3 +0.9
baz=114
F25K Christian Rive 59.63 341 P P 16 27 58.8 +1.4
baz=124,SNR=10
P18K Big Mountain, 59.63 330 P P 16 27 58.0 +0.5
baz=110,SNR=7.8
PPLA Purkeypile 59.65 335 P P 16 27 58.6 +0.9
baz=115,SNR=6.6
G24K Hadweenzic Riv 59.73 340 IAmb IAmb 16 28 08.2
comp=Z,26nm,1.1s
G24K Hadweenzic Riv 59.73 340 P P 16 27 59.1 +1.1
baz=122,SNR=13
O18K Koktuh Hills 59.78 331 IAmb IAmb 16 28 00.2
comp=Z,22nm,1.0s
O18K Koktuh Hills 59.78 331 P P 16 27 59.2 +0.7
baz=110
N19K Bonanza Creek 59.80 332 P P 16 27 59.4 +0.7
baz=112
CAST Castle Rocks 59.84 335 P P 16 27 59.2 +0.4
baz=116
E25K Arctic Village 59.91 341 IAmb IAmb 16 28 09.6
comp=Z,14nm,1.2s
E25K Arctic Village 59.91 341 P P 16 28 00.3 +1.0
baz=125,SNR=9.3
H23K Yukon River 59.99 338 IAmb IAmb 16 28 09.9
comp=Z,36nm,1.8s
H23K Yukon River 59.99 338 P P 16 28 00.6 +0.8
baz=119
MLY Manley 60.05 337 P P 16 28 01.0 +0.8
baz=118
Q16K King Salmon 60.08 329 P P 16 28 01.4 +0.9
baz=108
CHUM Lake Minchumin 60.13 336 P P 16 28 00.9 +0.2
baz=116
P17K Kvichak River 60.15 330 P P 16 28 01.7 +0.8
baz=109
M19K Big River Lodg 60.18 333 P P 16 28 02.0 +0.8
baz=112
C27K Jago River 60.26 343 IAmb IAmb 16 28 03.6
comp=Z,17nm,0.9s
C27K Jago River 60.26 343 P P 16 28 02.6 +1.0
baz=127,SNR=15
CHGN Chignik 60.27 326 P P 16 28 02.0 +0.2
baz=106
F24K Squaw Lake 60.31 340 P P 16 28 03.2 +1.2
baz=122
N18K Kilae Creek 60.40 331 IAmb IAmb 16 28 04.5
comp=Z,25nm,1.0s
N18K Kilae Creek 60.40 331 P P 16 28 03.5 +0.8
baz=110,SNR=10
L19K White Mountain 60.49 333 IAmb IAmb 16 28 05.1
comp=Z,20nm,1.1s
L19K White Mountain 60.49 333 P P 16 28 04.2 +0.9
baz=112,SNR=10.0
CHNA Chernabura Isl 60.54 324 P P 16 28 05.5 +1.9
baz=104
I21K Tanana 60.58 337 IAmb IAmb 16 28 13.8
comp=Z,29nm,1.2s
I21K Tanana 60.58 337 P P 16 28 04.6 +0.8
baz=117,SNR=12
G23K Bananza Creek 60.60 339 IAmb IAmb 16 28 06.1
comp=Z,16nm,1.1s
G23K Bananza Creek 60.60 339 P P 16 28 05.0 +1.0
baz=119,SNR=13
K20K Telida 60.62 335 P P 16 28 04.8 +0.7
baz=114
O17K Koliganek Bris 60.65 330 P P 16 28 05.4 +1.0
baz=109,SNR=8.6
M18K Stony River 60.66 332 P P 16 28 04.9 +0.5
baz=111,SNR=10
H22K Ishtalita Cre 60.69 338 IAmb IAmb 16 28 06.1
comp=Z,15nm,0.9s
H22K Ishtalita Cre 60.69 338 P P 16 28 05.2 +0.6
baz=118,SNR=17
C26K Camden Bay 60.77 343 P P 16 28 06.4 +1.4
baz=126
E24K Your Creek 60.80 341 IAmb IAmb 16 28 07.7
comp=Z,15nm,1.1s
E24K Your Creek 60.80 341 P P 16 28 06.5 +1.2
baz=122,SNR=14
D25K Kavik River 60.84 342 IAmb IAmb 16 28 07.6
comp=Z,20nm,0.9s
D25K Kavik River 60.84 342 P P 16 28 06.7 +1.1
baz=124,SNR=29
P16K Nushagak River 60.85 329 P P 16 28 06.3 +0.5
baz=107
GO06 Curarrehue 60.86 157 P P 16 28 09.3 +3.2
S14K Fog Glacier 60.88 326 P P 16 28 07.3 +1.1
baz=104
COLD Coldfoot 60.92 339 IAmb IAmb 16 28 10.4
comp=Z,14nm,1.1s
COLD Coldfoot 60.92 339 P P 16 28 07.6 +1.5
baz=119,SNR=9.1
PPT Papeete 60.93 239 LR LR 16 47 50.6
comp=Z,148nm,19.3s,baz=61,slow=30
PPT2 Papeete2 60.94 239 eS S 16 36 35.1 +10
comp=Z,74nm,26.5s
PPT2 eLR LR 16 45 53.7
comp=Z,273nm,27.8s
PPT2 eLR LR 16 46 12.4
comp=Z,271nm,23.5s
N17K Nushagak Hills 60.94 331 IAmb IAmb 16 28 16.4
comp=Z,24nm,1.1s
N17K Nushagak Hills 60.94 331 P P 16 28 07.4 +1.0
baz=109,SNR=5.8
J20K Nowinta River 60.99 335 P P 16 28 07.2 +0.6
baz=114,SNR=16
O16K Kokwok River B 61.08 330 IAmb IAmb 16 28 08.8
comp=Z,16nm,0.8s
O16K Kokwok River B 61.08 330 P P 16 28 08.0 +0.7
baz=108,SNR=6.7
H21K Melozitna Rive 61.10 337 IAmb IAmb 16 28 16.8
comp=Z,16nm,1.1s
H21K Melozitna Rive 61.10 337 P P 16 28 07.9 +0.4
baz=116,SNR=14
E23K Chandalar 61.15 340 P P 16 28 08.6 +0.8
E23K IAmb IAmb 16 28 10.5
comp=Z,28nm,1.1s
E23K Chandalar 61.15 340 P P 16 28 09.3 +1.6
baz=120,SNR=18
SDPT Sand Point 61.16 325 P P 16 28 08.2 +0.3
baz=103
G22K Bettles 61.22 339 P P 16 28 09.2 +1.0
baz=118
L18K Granite Mounta 61.30 333 IAmb IAmb 16 28 18.5
comp=Z,20nm,1.0s
L18K Granite Mounta 61.30 333 P P 16 28 09.6 +0.8
baz=110,SNR=7.7
M17K Holitna River 61.35 332 P P 16 28 09.3 +0.2
M17K Holitna River 61.35 332 P P 16 28 09.9 +0.8
baz=109,SNR=6.7
I20K Naaghedeneel 61.37 336 P P 16 28 09.8 +0.7
baz=114,SNR=8.0
TOLK Toolik Lake Re 61.44 341 P P 16 28 10.6 +0.9
baz=121,SNR=15
D24K Happy Valley 61.48 342 IAmb IAmb 16 28 19.6
comp=Z,24nm,1.2s
D24K Happy Valley 61.48 342 P P 16 28 10.4 +0.5
baz=122
J19K Poorman 61.51 335 P P 16 28 10.5 +0.3
baz=112,SNR=22
N16K Nishlik Lake 61.67 331 P P 16 28 12.2 +0.9
baz=108,SNR=8.8
F22K John River 61.73 339 P P 16 28 13.1 +1.4
baz=118,SNR=8.6
G21K Allakaket 61.74 338 IAmb IAmb 16 28 21.3
comp=Z,17nm,1.1s
G21K Allakaket 61.74 338 P P 16 28 11.8 +0.1
baz=116
C24K Franklin Bluff 61.74 342 P P 16 28 12.5 +0.9
baz=122
O15K Ungalikthiuk R 61.80 329 P P 16 28 12.1 -0.1
baz=106
H20K Anotelenegga Mo 61.81 337 P P 16 28 12.8 +0.5
baz=114,SNR=8.6
E22K Anaktuvuk Pass 61.90 340 IAmb IAmb 16 28 14.8
comp=Z,14nm,1.1s
E22K Anaktuvuk Pass 61.90 340 P P 16 28 13.4 +0.6
baz=118
M16K Timber Creek 61.93 331 IAmb IAmb 16 28 15.0
comp=Z,16nm,0.9s
M16K Timber Creek 61.93 331 P P 16 28 14.0 +0.9
baz=108
D23K Nanushuk River 61.95 341 IAmb IAmb 16 28 15.7
comp=Z,22nm,1.0s
D23K Nanushuk River 61.95 341 P P 16 28 14.6 +1.5
baz=120,SNR=14
L17K Donlin 61.98 332 P P 16 28 14.0 +0.6
baz=109
F21K Alatna River 62.05 339 P P 16 28 15.2 +1.4
baz=116,SNR=32
K17K Iditarod 62.18 333 IAmb IAmb 16 28 16.3
comp=Z,17nm,1.1s
K17K Iditarod 62.18 333 P P 16 28 15.0 +0.3
baz=109
PLCA Paso Flores 62.20 157 P P 16 28 13.7 -1.5
comp=Z,1.6nm,0.8s,baz=270,slow=5.1,SNR=2.9
PLCA LR LR 16 50 07.0
comp=Z,254nm,18.4s,baz=332,slow=31
comp=Z,1.6nm,0.8s
PLCA Paso Flores 62.20 157 P P 16 28 18.3 +3.1
PLCA IAmb IAmb 16 28 21.8
comp=Z,14nm,1.1s
PLCA Paso Flores 62.20 157 eP P 16 28 16.5 +1.3
PLCA pmax pmax
comp=Z,7.0nm,1.0s
N15K Kwethluk River 62.21 330 P P 16 28 15.4 +0.5
baz=106
GCSA Galena City Sc 62.30 335 P P 16 28 16.2 +0.8
baz=112,SNR=5.4
C23K Itkillik River 62.37 342 P P 16 28 17.0 +1.2
baz=120,SNR=16
L16K Owhat River 62.38 332 IAmb IAmb 16 28 25.9
comp=Z,20nm,1.1s
L16K Owhat River 62.38 332 P P 16 28 16.7 +0.7
baz=107
KULLO Kullorsuaq 62.41 11 P P 16 28 16.7 +0.7
H19K Roundabout Mou 62.43 336 IAmb IAmb 16 28 25.7
comp=Z,23nm,1.1s
H19K Roundabout Mou 62.43 336 P P 16 28 16.8 +0.5
baz=112,SNR=11
O14K Tigyukauivet M 62.53 329 P P 16 28 18.4 +1.3
baz=104
M15K Kasigluk River 62.64 331 P P 16 28 18.5 +0.7
baz=106
J17K VABM Dome 62.73 334 P P 16 28 19.2 +0.8
baz=109
E21K Killik River 62.76 340 P P 16 28 19.3 +0.8
baz=116
F20K Avaraart Lake 62.77 338 IAmb IAmb 16 28 20.6
comp=Z,16nm,1.1s
F20K Avaraart Lake 62.77 338 P P 16 28 19.6 +1.1
baz=114,SNR=14
G19K Purcell Mounta 62.91 337 P P 16 28 20.2 +0.7
baz=112,SNR=17
N14K Kuskokwak Cree 62.91 330 P P 16 28 20.5 +1.0
baz=104
H18K Honhosa River 63.04 336 P P 16 28 21.4 +1.0
baz=110
CPSB Cacapava Do Su 63.21 137 P P 16 28 24.8 +2.8
M14K Bethel 63.26 330 P P 16 28 22.8 +0.9
baz=105,SNR=5.3
L15K Ungalak Mounta 63.28 331 P P 16 28 23.1 +1.1
baz=106,SNR=9.5
C21K Knifeblade Rid 63.34 340 P P 16 28 23.4 +1.1
baz=116
J16K Anvik River 63.35 333 P P 16 28 24.0 +1.5
baz=107,SNR=5.4
G18K Tagagawik 63.41 336 P P 16 28 23.9 +1.0
baz=110,SNR=5.6
E20K Nigu River 63.42 339 P P 16 28 23.9 +0.9
baz=114
F19K Shaleruckik Mo 63.42 338 IAmb IAmb 16 28 24.9
comp=Z,25nm,1.2s
F19K Shaleruckik Mo 63.42 338 P P 16 28 23.8 +0.9
baz=112,SNR=11
B22K Teshekpuk Lake 63.46 342 P P 16 28 23.7 +0.6
baz=118
E19K Redstone River 63.47 338 IAmb IAmb 16 28 33.0
comp=Z,19nm,1.0s
E19K Redstone River 63.47 338 P P 16 28 24.0 +0.8
baz=112
K15K Wolf Creek Mou 63.47 332 P P 16 28 24.7 +1.4
baz=106,SNR=5.1
B21K Ikpikpuk River 63.49 341 IAmb IAmb 16 28 28.4
comp=Z,21nm,1.2s
B21K Ikpikpuk River 63.49 341 P P 16 28 23.9 +0.6
baz=116
I17K Unalakleet 63.57 334 P P 16 28 25.3 +1.4
baz=107
H17K Granite Mounta 63.58 335 P P 16 28 25.1 +1.1
baz=109
L14K Kuka Creek 63.75 331 P P 16 28 26.0 +0.9
baz=104
D20K Etivluk River 63.75 340 P P 16 28 25.8 +0.7
baz=114
TRQA Tornquist 63.77 149 P P 16 28 29.8 +4.2
TRQA IAmb IAmb 16 28 33.7
comp=Z,30nm,1.4s
TRQA Tornquist 63.77 149 P P 16 28 29.8 +4.2
TRQA pmax pmax
comp=Z,30nm,1.5s
M13K Dall Lake 63.84 330 P P 16 28 26.7 +1.0
baz=103
TBI Tubuai 63.88 233 eLR LR 16 47 33.4
comp=Z,2µm,26.0s
F18K Selawik 64.04 337 P P 16 28 27.8 +0.9
baz=110
G17K Kiwalik Mounta 64.06 336 P P 16 28 28.5 +1.4
baz=108
D19K Kuna River 64.17 339 IAmb IAmb 16 28 29.5
comp=Z,22nm,1.1s
D19K Kuna River 64.17 339 P P 16 28 28.5 +0.6
baz=112
A22K Sinclair Lake 64.22 342 P P 16 28 29.0 +0.9
baz=116,SNR=5.5
UNV Unalaska Valle 64.33 322 P P 16 28 29.9 +0.8
baz=97
H16K Elim 64.44 335 P P 16 28 31.0 +1.3
baz=106
B20K Meade River 64.46 341 P P 16 28 30.8 +1.1
baz=114,SNR=7.8
F17K Baldwin Pennin 64.59 337 P P 16 28 31.4 +0.8
baz=108
E18K Tukpahlearik C 64.67 338 P P 16 28 31.6 +0.5
baz=109
K13K Kusilvak Mount 64.81 331 P P 16 28 32.6 +0.6
baz=103
A21K Barrow 64.84 342 P P 16 28 32.9 +0.7
baz=115
C19K Lookout Ridge 64.90 340 P P 16 28 33.8 +1.1
baz=111
E17K Hotham Inlet 65.01 337 P P 16 28 34.2 +0.9
baz=108,SNR=7.7
M11K Mekoryuk 65.22 329 P P 16 28 35.9 +1.2
baz=100
RCBR Riachuelo 65.24 104 LR LR 17 00 00.4
comp=Z,36nm,18.2s,baz=288,slow=39
G15K Niukluk 65.28 335 P P 16 28 36.5 +1.4
baz=105
C18K Utukok River 65.29 339 IAmb IAmb 16 28 36.4
comp=Z,21nm,0.9s
C18K Utukok River 65.29 339 P P 16 28 35.7 +0.5
baz=109
NEEM North Greenlan 65.45 10 i P P 16 28 35.4 -1.0
NEEM IAmb IAmb 16 28 37.3
comp=Z,22nm,0.7s
SUMG Summit 65.64 17 P P 16 28 37.8 0.0
SUMG IAmb IAmb 16 28 47.3
comp=Z,22nm,1.1s
SUMG Summit 65.64 17 P P 16 28 37.8 0.0
SUMG pmax pmax
comp=Z,22nm,1.1s
SUMG Summit 65.64 17 P P 16 28 38.2 +0.4
SUMG Summit 65.64 17 i P P 16 28 36.0 -1.8
SUMG IAmb IAmb 16 28 38.8
comp=Z,8.5nm,0.8s
D17K Noatak River 65.66 338 P P 16 28 38.1 +0.6
baz=107,SNR=6.1
RDOG Red Dog Mine 65.70 338 IAmb IAmb 16 28 39.4
comp=Z,23nm,1.1s
RDOG Red Dog Mine 65.70 338 P P 16 28 38.5 +0.7
baz=107
F15K North Star Dit 65.71 335 P P 16 28 39.3 +1.4
baz=104
ANM Nome 65.73 334 P P 16 28 38.7 +0.7
baz=103
A19K Wainwright 65.77 341 P P 16 28 39.1 +0.9
baz=110
C17K DeLong Mountai 65.92 338 P P 16 28 39.8 +0.5
baz=107,SNR=5.6
F14K Arctic Creek 66.33 335 P P 16 28 42.7 +0.8
baz=103
C16K Lisburne Hills 66.64 338 P P 16 28 44.5 +0.7
baz=105

SPIA	**Saint Paul Isl**	**66.83**	**326**	P		**P**	**16 28 46.1**	**+0.9**
	baz=96							
TNA	**Tin City**	**67.00**	**335**	P		**P**	**16 28 47.0**	**+0.9**
	baz=101							
GAMB	**Gambell**	**68.31**	**333**	P		**P**	**16 28 55.3**	**+0.9**
	baz=97							
BORG	**Borgarnes**	**69.71**	**26**	LR		LR	17 01 42.8	
	comp=Z,119nm,18.3s,baz=297,slow=38							
RAR	**Rarotonga**	**71.11**	**240**	LR		LR	16 53 48.7	
	comp=Z,136nm,18.4s,baz=78,slow=30							
SACV	**Santiago Islan**	**71.27**	**79**	P		**P**	**16 29 13.2**	**-0.4**
DAG	**Danmarks Havn**	**71.81**	**14**	P		**P**	**16 29 15.2**	**-0.5**
DAG	**Danmarks Havn**	**71.81**	**14**	*i* P		**P**	**16 29 15.0**	**-0.7**
DAG				IAmb		IAmb	16 29 15.5	
	comp=Z,7.0nm,0.9s							
NOR	**Nord**	**72.72**	**9**	P		**P**	**16 29 21.5**	**+0.4**
JMIC	**Jan Mayen**	**74.57**	**20**	LR		LR	17 05 12.5	
	comp=Z,115nm,18.0s,baz=232,slow=38							
BILL	**Bilibino**	**77.15**	**337**	P		**P**	**16 29 47.5**	**+0.6**
BILL				IAmb		IAmb	16 29 56.2	
	comp=Z,23nm,1.3s							
BILL	**Bilibino**	**77.15**	**337**	*i* P		**P**	**16 29 47.0**	**+0.1**
BILL				pmax		pmax		
	comp=Z,16nm,1.3s							
AFI	**Afiamalu**	**78.81**	**252**	LR		LR	16 57 41.6	
	comp=Z,102nm,18.0s,baz=75,slow=30							
SPITS	**Spitsbergen Ar**	**78.99**	**11**	LR		LR	17 06 50.4	
	comp=Z,194nm,21.4s,baz=297,slow=37							
PCAS	**Casmilo, Conde**	**79.34**	**51**	*e*P		**P**	**16 30 00.2**	**+0.6**
PCAS				*i* tx		tx	16 30 09.3	
EKA	**Eskdalemuir Ar**	**79.49**	**35**	P		**P**	**16 29 59.5**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=278,slow=5.4,SNR=7.0							
EKA				LR		LR	17 05 36.3	
	comp=Z,100nm,20.2s,baz=278,slow=36							
	comp=Z,2.5nm,0.8s							
EKA	**Eskdalemuir Ar**	**79.49**	**35**	P		**P**	**16 30 00.2**	**+0.1**
EKA				pmax		pmax		
	comp=Z,9.0nm,1.2s							
POLO	**Lamas de Olo**	**79.58**	**50**	*e*P		**P**	**16 30 00.9**	**-0.1**
POLO				*i* tx		tx	16 30 10.1	
PVIS	**Viseu**	**79.65**	**51**	*e*P		**P**	**16 30 01.6**	**+0.3**
PVIS				*i* tx		tx	16 30 09.8	
PVRL	**Vila Real**	**79.66**	**50**	*e*P		**P**	**16 30 01.8**	**+0.4**
PVRL				*i* IAmb		IAmb	16 30 11.9	
	comp=Z,32nm,1.7s							
PSARD	**Sardoal**	**79.69**	**52**	*e*P		**P**	**16 30 01.7**	**+0.1**
PSARD				*i* IAmb		IAmb	16 30 02.6	
	comp=Z,17nm,1.1s							
PSARD				*i* tx		tx	16 30 09.8	
PTEO	**Sao Teotonio**	**79.71**	**54**	*e*P		**P**	**16 30 02.4**	**+0.8**
PTEO				*i* tx		tx	16 30 10.7	
PMTG	**Montargil**	**79.76**	**52**	*e*P		**P**	**16 30 02.1**	**+0.2**
PMTG				*i* tx		tx	16 30 10.1	
PMTG				*i* IAmb		IAmb	16 30 11.1	
	comp=Z,37nm,1.3s							
MOE	**Montemor**	**79.78**	**53**	*e*P		**P**	**16 30 02.9**	**+0.8**
MOE				*i* IAmb		IAmb	16 30 03.3	
	comp=Z,43nm,1.4s							
MORF	**Marmelete**	**79.81**	**54**	P		**P**	**16 30 01.2**	**-1.1**
MORF				IAmb		IAmb	16 31 21.3	
	comp=Z,37nm,1.4s							
MORF	**Marmelete**	**79.81**	**54**	P		**P**	**16 30 01.2**	**-1.1**
MORF				pmax		pmax		
	comp=Z,37nm,1.4s							
PLOUS	**Minas do Lousa**	**79.83**	**53**	*e*P		**P**	**16 30 02.5**	**+0.2**
PLOUS				*i* IAmb		IAmb	16 30 12.1	
	comp=Z,24nm,1.8s							
PARRA	**Arraiolos**	**79.95**	**53**	*e*P		**P**	**16 30 03.3**	**+0.3**
PARRA				*i* IAmb		IAmb	16 30 12.8	
	comp=Z,22nm,1.5s							
MTE	**Manteigas**	**79.98**	**51**	P		**P**	**16 30 02.5**	**-0.6**
MTE				IAmb		IAmb	16 30 12.1	
	comp=Z,32nm,1.1s							
MTE	**Manteigas**	**79.98**	**51**	*e*P		**P**	**16 30 03.4**	**+0.3**
MTE				*i* IAmb		IAmb	16 30 12.8	
	comp=Z,52nm,1.6s							
MTE	**Manteigas**	**79.98**	**51**	P		**P**	**16 30 02.9**	**-0.3**
MESJ	**Messejana**	**80.03**	**53**	P		**P**	**16 30 02.0**	**-1.4**
MESJ				IAmb		IAmb	16 30 12.8	
	comp=Z,16nm,1.1s							
MESJ	**Messejana**	**80.03**	**53**	P		**P**	**16 30 02.0**	**-1.4**
MESJ				pmax		pmax		
	comp=Z,16nm,1.1s							
PCBR	**Castelo Branco**	**80.15**	**51**	*e*P		**P**	**16 30 04.2**	**+0.2**
PCBR				*i* IAmb		IAmb	16 30 05.7	
	comp=Z,24nm,1.4s							
MVO	**Moncorvo**	**80.19**	**50**	*e*P		**P**	**16 30 05.4**	**+1.1**
MVO				*i* IAmb		IAmb	16 30 07.5	
	comp=Z,29nm,1.5s							
PCVE	**Castro Verde**	**80.22**	**54**	*e*P		**P**	**16 30 04.8**	**+0.4**
PCVE				*i* tx		tx	16 30 13.4	
PCVE				*i* IAmb		IAmb	16 30 14.7	
	comp=Z,31nm,1.6s							
PBRG	**Braganca**	**80.26**	**49**	*e*P		**P**	**16 30 04.6**	**0.0**
PBRG				*i* IAmb		IAmb	16 30 16.6	
	comp=Z,24nm,1.4s							
PBEJ	**Beja**	**80.26**	**53**	*e*P		**P**	**16 30 05.1**	**+0.4**
PBEJ				*i* IAmb		IAmb	16 30 14.7	
	comp=Z,29nm,1.5s							
PMRV	**Marv??o**	**80.31**	**52**	*e*P		**P**	**16 30 04.5**	**-0.4**
PMRV				*i* IAmb		IAmb	16 30 14.8	
	comp=Z,25nm,1.4s							
PBDV	**Barranco-do-Ve**	**80.39**	**54**	*e*P		**P**	**16 30 04.6**	**-0.8**
PBDV				*i* IAmb		IAmb	16 30 15.9	
	comp=Z,41nm,1.7s							
PVAQ	**Vaqueiros**	**80.52**	**54**	P		**P**	**16 30 04.8**	**-1.3**
PVAQ				IAmb		IAmb	16 30 07.4	
	comp=Z,15nm,0.9s							
PVAQ	**Vaqueiros**	**80.52**	**54**	*e*P		**P**	**16 30 06.5**	**+0.5**
PVAQ				*i* tx		tx	16 30 14.7	
PVAQ				*i* IAmb		IAmb	16 30 15.6	
	comp=Z,29nm,1.3s							
PBAR	**Barrancos**	**80.86**	**53**	*e*P		**P**	**16 30 08.4**	**+0.6**
PBAR				*i* IAmb		IAmb	16 30 17.3	
	comp=Z,18nm,1.1s							
PAB	**San Pablo**	**82.57**	**51**	P		**P**	**16 30 16.9**	**0.0**
PAB				IAmb		IAmb	16 30 26.4	
	comp=Z,26nm,1.2s							
PAB	**San Pablo**	**82.57**	**51**	P		**P**	**16 30 16.9**	**0.0**
PAB				pmax		pmax		
	comp=Z,26nm,1.2s							
ESDC	**Sonseca Array**	**82.82**	**51**	P		**P**	**16 30 17.4**	**-0.8**
	comp=Z,3.9nm,1.0s,baz=289,slow=5.7,SNR=16							
ESDC				LR		LR	17 02 05.5	
	comp=Z,92nm,20.8s,baz=287,slow=32							
	comp=Z,3.9nm,1.0s							
ESDC	**Sonseca Array**	**82.82**	**51**	P		**P**	**16 30 18.0**	**-0.3**
MDT	**Midelt**	**84.13**	**58**	LR		LR	17 03 29.0	
	comp=Z,182nm,20.8s,baz=262,slow=33							
SEY	**Seymchan**	**84.23**	**334**	*i* P		**P**	**16 30 25.7**	**+0.8**
SEY				pmax		pmax		
	comp=Z,10.0nm,1.5s							
NB2	**NORSAR Subarra**	**84.86**	**27**	P		**P**	**16 30 28.5**	**+0.3**
	comp=Z,29nm,1.7s,baz=298,slow=5.3							
NB2	**NORSAR Subarra**	**84.86**	**27**	P		**P**	**16 30 28.5**	**+0.3**
NOA	**NORSAR Array B**	**84.86**	**27**	P		**P**	**16 30 27.7**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=292,slow=4.8,SNR=5.2							
NOA				LR		LR	17 07 19.7	
	comp=Z,54nm,21.9s,baz=300,slow=35							
	comp=Z,2.2nm,1.0s							
PMSA	**Palmer Station**	**84.87**	**166**	LR		LR	16 59 54.7	
	comp=Z,136nm,18.5s,baz=261,slow=30							
PETK	**Petropavlovsk-**	**85.44**	**324**	P		**P**	**16 30 31.3**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=72,slow=9.5,SNR=8.5							
	comp=Z,3.9nm,0.8s							
DOU	**Dourbes**	**85.51**	**39**	*d*P		**P**	**16 30 31.7**	**+0.1**
	comp=Z,7.6nm,1.4s							
BMRD	**Maredsous**	**85.54**	**39**	*d*P		**P**	**16 30 31.7**	**-0.1**
	comp=Z,10nm,1.2s							
ESPZ	**Base Esperanza**	**85.57**	**163**	P		**P**	**16 30 34.5**	**+3.1**
ARCES	**ARCESS Array B**	**85.73**	**17**	P		**P**	**16 30 31.5**	**-0.8**
	comp=Z,9.4nm,1.1s,baz=305,slow=6.4,SNR=4.2							
ARCES				LR		LR	17 10 57.1	
	comp=Z,91nm,20.0s,baz=290,slow=37							
	comp=Z,9.4nm,1.1s							
ARCES	**ARCESS Array B**	**85.73**	**17**	P		**P**	**16 30 31.5**	**-0.8**
ARCES	**ARCESS Array B**	**85.73**	**17**	*e*P		**P**	**16 30 31.7**	**-0.6**
ARCES				pmax		pmax		
	comp=Z,6.0nm,0.9s							
RCHB	**Rochefort**	**85.87**	**39**	P		**P**	**16 30 34.0**	**+0.6**
MEM	**Membach**	**86.18**	**38**	*d*P		**P**	**16 30 35.0**	**+0.1**
HFS	**Hagfors**	**86.35**	**28**	LR		LR	17 09 54.8	
	comp=Z,81nm,20.1s,baz=284,slow=36							
TIXI	**Tiksi**	**86.76**	**347**	LR		LR	17 15 07.5	
	comp=Z,82nm,18.2s,baz=30,slow=40							
TIXI	**Tiksi**	**86.76**	**347**	*i* P		**P**	**16 30 36.5**	**-0.8**
TIXI				pmax		pmax		
	comp=Z,10.0nm,1.0s							
APA	**Apatity**	**89.22**	**17**	*e*P		**P**	**16 30 46.8**	**-2.3**
APA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
APA				MLR		MLR		
	comp=Z,462nm,3.7s							
MSVF	**Nonsavu**	**89.30**	**251**	LR		LR	17 02 14.0	
	comp=Z,142nm,21.4s,baz=169,slow=30							
RAO	**Raoul Island**	**89.34**	**239**	LR		LR	17 00 30.1	
	comp=Z,46nm,19.9s,baz=308,slow=29							
CLL	**Collm**	**89.95**	**36**	*e*P		**P**	**16 30 53.0**	**+0.1**
CLL	**Collm**	**89.95**	**36**	*e*P		**P**	**16 30 53.0**	**+0.1**
CLL				*e*S		**S**	**16 41 42.0**	**-3.3**
CLL				*e*SSSS			16 54 42.0	
DAVOX	**Davos/Dischmat**	**90.01**	**41**	LR		LR	17 13 41.6	
	comp=Z,93nm,18.5s,baz=261,slow=37							
FUORN	**Ofenpass-Fuorn**	**90.32**	**41**	P		**P**	**16 30 55.0**	**-0.1**
BRG	**Berggiesshubel**	**90.67**	**36**	*e*P		P	16 31 04.6	+8.3
BRG				Amp			16 31 07.2	
	comp=Z,2.7nm,0.9s							
BRG	**Berggiesshubel**	**90.67**	**36**	PP		PP	16 34 32.0	+0.9
FINES	**FINESS Array B**	**90.81**	**23**	P		**P**	**16 30 55.4**	**-1.3**
	comp=Z,3.3nm,1.0s,baz=300,slow=9.5,SNR=4.3							
FINES				LR		LR	17 15 12.1	
	comp=Z,109nm,19.1s,baz=309,slow=38							
	comp=Z,3.3nm,1.0s							
FINES	**FINESS Array B**	**90.81**	**23**	*e*P		**P**	**16 30 57.8**	**+1.1**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**91.45**	**38**	P		**P**	**16 30 58.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=289,slow=3.0,SNR=1.9							
	comp=Z,0.1nm,0.3s							
KBA	**Koelnbreinsper**	**92.03**	**40**	P		**P**	**16 31 02.1**	**-0.8**
VSU	**Vasula**	**92.90**	**26**	*i* P		**P**	**16 31 04.2**	**-2.2**
VSU				pmax		pmax		
	comp=Z,8.0nm,0.9s							
VRAC	**Vranov**	**92.92**	**37**	LR		LR	17 16 14.9	
	comp=Z,94nm,18.6s,baz=301,slow=38							
YAK	**Yakutsk**	**93.38**	**340**	LR		LR	17 17 58.2	
	comp=Z,146nm,18.6s,baz=10,slow=39							
YAK	**Yakutsk**	**93.38**	**340**	*i* P		**P**	**16 31 09.2**	**+0.7**
YAK				pmax		pmax		
	comp=Z,13nm,0.9s							
PUL	**Pulkovo**	**93.49**	**23**	*i* P		**P**	**16 31 08.9**	**-0.2**
PUL				pmax		pmax		
	comp=Z,44nm,1.0s							
NRIK	**Noril'sk**	**94.51**	**358**	P		**P**	**16 31 13.2**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=21,slow=4.9,SNR=4.8							
NRIK				LR		LR	17 17 43.9	
	comp=Z,64nm,19.6s,baz=43,slow=38							
	comp=Z,2.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**95.43**	**75**	P		**P**	**16 31 17.3**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=284,slow=5.2,SNR=3.8							
	comp=Z,1.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**95.43**	**75**	P		**P**	**16 31 17.2**	**-1.7**
KLMR	**Klimovskoe**	**95.95**	**19**	*e*P		**P**	**16 31 17.1**	**-3.2**
KLMR				pmax		pmax		
	comp=Z,15nm,1.6s							
KLMR				MLR		MLR		
	comp=Z,128nm,20.0s							
URZ	**Urewera**	**95.99**	**232**	LR		LR	17 04 14.6	
	comp=Z,136nm,21.9s,baz=58,slow=29							
VAE	**Valguarnera**	**97.04**	**48**	LR		LR	17 12 22.8	
	comp=Z,64nm,19.3s,baz=316,slow=34							
AKASG	**Malin Array Be**	**98.88**	**31**	LR		LR	17 18 27.6	
	comp=Z,109nm,19.4s,baz=317,slow=37							
OBN	**Obninsk**	**99.15**	**24**	LR		LR	17 16 58.7	
	comp=Z,111nm,22.0s,baz=103,slow=36							
ZALV	**Zalesovo Beam**	**110.00**	**358**	PP		**PP**	**16 36 54.7**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=3.3,slow=10,SNR=4.4							
BVAR	**Borovoye Array**	**110.25**	**7**	PP		**PP**	**16 36 58.9**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=333,slow=12,SNR=2.7							
SONM	**Songino Array**	**112.53**	**342**	PP		**PP**	**16 37 15.0**	**-0.5**
	comp=Z,1.0nm,1.1s,baz=45,slow=6.3,SNR=2.4							
KURBB	**Kurchatov Arra**	**113.31**	**2**	PP		**PP**	**16 37 17.5**	**-3.1**
	comp=Z,1.0nm,0.8s,baz=357,slow=5.9,SNR=5.5							
WMQ	**Urumqi**	**119.95**	**355**	*e*PKP		**PKiKP**	**16 36 44.8**	**+0.2**
WMQ				L		L		
	comp=Z,90nm,23.9s							
NJ2	**Nanjing**	**120.34**	**324**	*e*PKP		**PKiKP**	**16 36 47.2**	**+1.7**
LZH	**Lanzhou**	**123.95**	**339**	*e*PKP		**PKiKP**	**16 36 59.5**	**+6.7**
LZH				pPKP		sPKPdf	16 37 11.0	+12
KSH2	**Kashi**	**124.53**	**6**	PKP		**PKiKP**	**16 36 53.8**	**0.0**
WRA	**Warramunga Arr**	**130.27**	**257**	PKP		**PKPdf**	**16 37 03.5**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=89,slow=3.0,SNR=5.6							
WRA	**Warramunga Arr**	**130.27**	**257**	PKP		**PKPdf**	**16 37 03.9**	**-0.8**
WRA	**Warramunga Arr**	**130.27**	**257**	*e*PKIKP		**PKPdf**	**16 37 03.9**	**-0.8**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**130.88**	**253**	PKP		**PKPdf**	**16 37 04.7**	**-1.2**
	comp=Z,1.4nm,1.0s,baz=71,slow=2.7,SNR=6.4							
PZH	**PanZhiHua**	**133.33**	**335**	PKP		**PKPdf**	**16 37 10.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**141.65**	**334**	PKhKP		PKPpre	16 37 21.4	
	comp=Z,1.5nm,1.0s,baz=22,slow=3.3,SNR=5.7							

RSNC 02 16:22:45.6±0.0, 7°N±1°×7°3W±°, h144km±2km, M2.7, ML2.4, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**186**	P	Pn	16 23 05.2	-0.3
BARC				S	Sn	16 23 19.7	-0.9
BRJC	**Barrancabermej**	**0.60**	**286**	P	Pn	16 23 06.9	+0.1
BRJC				S	Sn	16 23 23.8	+0.9
PAMC	**Pamplona, Colo**	**0.70**	**41**	P	Pn	16 23 08.0	0.0
PAMC				S	Sn	16 23 24.7	-0.3
RUSC	**La Rusia**	**0.92**	**175**	P	Pn	16 23 09.4	-0.3
RUSC				S	Sn	16 23 27.1	-0.9
PTBC	**PUERTO BERRIO,**	**1.31**	**258**	P	Pn	16 23 12.0	-0.8
PTBC				S	Sn	16 23 32.8	-0.7
OCAC	**Ocana**	**1.43**	**354**	P	Pn	16 23 13.5	-0.6
OCAC				S	Sn	16 23 35.3	-0.7
SPBC	**San Pablo de B**	**1.47**	**218**	P	Pn	16 23 14.2	-0.3
SPBC				S	Sn	16 23 36.0	-0.5
NORC	**Norcasia**	**2.10**	**234**	P	Pn	16 23 21.6	-0.1
NORC				S	Sn	16 23 48.8	-0.5
CHIC	**Chingaza**	**2.24**	**195**	P	Pn	16 23 23.4	-0.3
CHIC				S	Sn	16 23 53.3	+0.4
ROSC	**El Rosal**	**2.27**	**211**	S	Sn	16 23 57.5	+3.9
BOG	**Bogota**	**2.35**	**203**	P	Pn	16 23 24.5	-0.5
HELC	**Santa Helena**	**2.43**	**255**	P	Pn	16 23 26.8	+0.8
HELC				S	Sn	16 23 55.7	-1.3
CVER	**Cruz Verde, Cu**	**2.45**	**202**	P	Pn	16 23 26.3	0.0
CVER				S	Sn	16 23 56.5	-1.1
UREC	**San Jos de Ur**	**2.53**	**292**	P	Pn	16 23 26.4	-0.5
UREC				S	Sn	16 23 57.4	-1.2
GUY2C	**Guyana, Caldas**	**2.70**	**234**	P	Pn	16 23 29.3	-0.1
GUY2C				S	Sn	16 24 05.4	+2.3
PTGC	**Puerto Gaitan,**	**2.79**	**158**	P	Pn	16 23 28.3	-1.8
PTGC				S	Sn	16 24 00.9	-3.5
CBOC	**Ciudad Bolivar**	**2.99**	**252**	P	Pn	16 23 33.1	+0.4
CBOC				S	Sn	16 24 10.6	+1.5
DBBC	**Dabeiba**	**3.04**	**274**	P	Pn	16 23 33.1	-0.2
DBBC				S	Sn	16 24 09.4	-0.7
ARGC	**Ariguani, Magd**	**3.21**	**341**	P	Pn	16 23 36.3	+0.8
PRAC	**Prado**	**3.52**	**209**	P	Pn	16 23 38.9	-0.7
PRAC				S	Sn	16 24 21.5	+0.1
ORTC	**Ortega, Tolima**	**3.55**	**216**	P	Pn	16 23 40.0	+0.1
ORTC				S	Sn	16 24 23.6	+1.6
APAC	**Apartado, Choc**	**3.56**	**288**	P	Pn	16 23 40.2	+0.2
APAC				S	Sn	16 24 20.4	-1.7
SJCC	**San Jacinto, C**	**3.66**	**327**	P	Pn	16 23 39.3	-2.0
SJCC				S	Sn	16 24 21.3	-3.3
URMC	**La Uribe, Meta**	**3.74**	**199**	P	Pn	16 23 42.5	0.0
URMC				S	Sn	16 24 26.9	+0.4

*NOU **02** 16:46:00.8, 18°.41S×120°.56E, h0km, mb4.0/9, Western Australia*
AUST 02 16:45:57.3±0.4, 18°S±4°×120°E±°, h10km, ML3.4/4, Error ellipse: s-maj=10.5km s-min=7.0km az=127.1, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUBRM	**Broome Senior**	**1.98**	**86**	P	Pb	16 46 32.8	-0.7
AUBRM				S	Sn	16 46 55.8	-0.1
MBWA	**Marble Bar**	**3.07**	**187**	P	Pn	16 46 48.4	+2.4
MBWA				S	Sn	16 47 23.4	+0.6
MBWA	**Marble Bar**	**3.07**	**187**	P	Pn	16 46 47.6	+1.6
FITZ	**Fitzroy Crossi**	**5.22**	**91**	P	Pn	16 47 15.2	-0.2
	comp=Z,2.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**5.22**	**91**	P	Pn	16 47 14.9	-0.6
FITZ	**Fitzroy Crossi**	**5.22**	**91**	S	Sn	16 48 12.0	-3.7
GIRL	**Giralia**	**7.16**	**230**	P	Pn	16 47 45.1	+2.9
GIRL				S	Sn	16 49 00.9	-2.8
KNRA	**Kununurra**	**8.58**	**75**	P	Pn	16 48 01.7	0.0
	comp=Z,7.1nm,1.6s,comp=Z,0.0nm						
MEEK	**Meekatharra**	**8.62**	**189**	P	Pn	16 48 03.6	+1.4
	comp=Z,17nm,2.5s,comp=Z,0.1nm						
MEEK	**Meekatharra**	**8.62**	**189**	P	Pn	16 48 03.5	+1.3
WRKA	**Warakurna**	**10.25**	**134**	P	Pn	16 48 25.1	+0.5
	comp=Z,5.3nm,2.6s,comp=Z,0.0nm						
JAGI	**Jajag, Banyuwa**	**11.21**	**328**	P	Pn	16 48 37.8	+0.1
	comp=Z,33nm,1.3s						
MORW	**Morawa**	**11.55**	**198**	P	Pn	16 48 42.0	-0.4
MORW	**Morawa**	**11.55**	**198**	P	Pn	16 48 43.9	+1.5
MTN	**Manton Dam**	**11.80**	**65**	P	Pn	16 48 44.9	-0.9
	comp=Z,7.1nm,0.8s						
AUKAT	**Katherine High**	**12.19**	**75**	P	Pn	16 48 50.2	-1.0
LAROZ	**Larrimah, NT**	**12.75**	**81**	P	Pn	16 48 58.2	-0.7
BLDU	**Ballidu**	**12.85**	**193**	P	Pn	16 49 00.2	0.0
	comp=Z,19nm,2.1s						
BLDU	**Ballidu**	**12.85**	**193**	P	Pn	16 49 02.0	+1.9
KMBL	**Kambalda**	**13.30**	**174**	P	Pn	16 49 05.1	-1.2
	comp=Z,8.4nm,2.3s						
WRAB	**Tennant Creek**	**13.55**	**100**	P	Pn	16 49 08.7	-1.0
KLBR	**Kellerberrin**	**13.61**	**189**	P	Pn	16 49 09.4	-1.2
KLBR	**Kellerberrin**	**13.61**	**189**	P	Pn	16 49 12.0	+1.5
MUN	**Mundaring**	**14.27**	**194**	P	Pn	16 49 19.0	-0.6
MUN	**Mundaring**	**14.27**	**194**	P	Pn	16 49 21.4	+1.8
FORT	**Forrest**	**14.53**	**152**	P	Pn	16 49 22.2	-0.9
	comp=Z,9.8nm,1.0s						
NWAO	**Narrogin (SRO)**	**15.00**	**190**	P	Pn	16 49 27.4	-2.1

*IDC **02** 16:54:11.9±1.6, 1°.71N×127°.64E, h0km, mb3.8/4, mbtmp3.7/5, ML3.1/1, Error ellipse: s-maj=112.0km s-min=19.7km az=69.0*
*DJA **02** 16:54:34.3±0.5, 1°N±4°×12°8E±°, h181km±5km, M3.9/20, mb4.0/8, MLv3.8/20*
ISC 02 16:54:33.5±1.1, 1°.45N±0°.09×127°.6E±0°.1, h200km, n15, σ0s99/15, mb3.6/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.71**	**200**	P	**Pn**	**16 55 00.8**	**-0.7**
MNI	**Manado**	**2.77**	**270**	P	**Pn**	**16 55 18.8**	**-1.6**
SGSI	**Sangihe**	**3.04**	**317**	P	**Pn**	**16 55 22.8**	**-0.9**
SANI	**Sanana**	**3.83**	**205**	P	**Pn**	**16 55 31.8**	**-1.4**
GTOI	**Gorontalo**	**4.67**	**260**	P	**Pn**	**16 55 44.8**	**+1.1**
NLAI	**Namlea**	**4.68**	**186**	P	**Pn**	**16 55 44.0**	**+0.2**
LUWI	**Luwuk**	**5.43**	**243**	P	**Pn**	**16 55 53.8**	**+0.4**
	0.2nm51nm,0.9s						
APSI	**Ampana**	**6.40**	**249**	P	**Pn**	**16 56 05.2**	**-0.8**
	0.1nm17nm,0.6s						
KDI	**Kendari**	**7.33**	**223**	P	**Pn**	**16 56 17.8**	**-0.2**
	0.1nm23nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.52**	**186**	P	**P**	**16 58 44.6**	**-1.2**
	baz=351,slow=13,SNR=1.3						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**22.26**	**163**	P	**P**	**16 59 14.1**	**-0.2**
	2.0nm,0.5s,baz=341,slow=9.6,SNR=22						
	2.0nm,0.5s						
ASAR	**Alice Springs**	**25.70**	**167**	P	**P**	**16 59 44.9**	**-0.6**
	0.5nm,0.5s,baz=344,slow=9.2,SNR=20						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**35.70**	**159**	P	**P**	**17 01 13.8**	**+1.0**
	1.4nm,0.6s,baz=332,slow=11,SNR=3.2						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**59.92**	**326**	P	**P**	**17 04 19.5**	**+0.9**
	0.3nm,0.3s,baz=115,slow=8.8,SNR=2.9						
KURBB	**Kurchatov Arra**	**64.12**	**328**	P	**P**	**17 04 46.8**	**+0.5**
	0.4nm,0.4s,baz=130,slow=5.8,SNR=5.4						
	0.4nm,0.4s						

*HEL **02** 17:00:31.7±0.3, 67°.03N×20°.75E, h0km, ML1.4, Explosion*
*IDC **02** 17:00:32.4±2.5, 67°.09N×20°.89E, h0km, mbtmp2.6/2, ML2.0/2, Error ellipse: s-maj=41.0km s-min=15.3km az=101.0*
ISC 02 17:00:32.6±0.9, 67°.08N±0°.03×20°.96E±0°.04, h0km, n28, σ0s92/39, Sweden

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

GO04					*i* S		**Sg**	**17 12 20.8**	**+0.7**
LCO	**Las Campanas**	**1.48**	**57**		*e*P		**Pn**	**17 12 08.7**	**-0.5**
LCO					IAML			17 12 35.1	
	comp=Z,3μm,0.6s								
LCO	**Las Campanas**	**1.48**	**57**		*e*P		**Pn**	**17 12 09.2**	**-0.1**
LCO					*i* S		**Sn**	**17 12 29.5**	**+0.2**
CO03	**El Pedregal**	**1.60**	**129**		*e*P		**Pn**	**17 12 10.2**	**-0.6**
CO03					*e*S		**Sb**	**17 12 32.8**	**+0.5**
CO03					IAML			17 12 35.7	
	comp=Z,821nm,0.9s								
CO03	**El Pedregal**	**1.60**	**129**		*e*P		**Pn**	**17 12 10.9**	**+0.2**
CO03					*i* S		**Sn**	**17 12 31.8**	**-0.1**
CO03					IAML			17 12 37.5	
	comp=E,1μm,0.4s								
CO02	**Combarbal**	**1.68**	**145**		*e*P		**Pn**	**17 12 12.3**	**+0.5**
CO02					*e*S		**Sg**	**17 12 36.2**	**+0.7**
CO02					IAML			17 12 42.2	
	comp=Z,2μm,0.6s								
CO02	**Combarbal**	**1.68**	**145**		*e*P		**Pn**	**17 12 12.2**	**+0.4**
CO02					*i* S		**Sn**	**17 12 33.6**	**-0.4**
CO02					IAML			17 12 44.8	
	comp=N,3μm,0.5s								
CO01	**Juntas del Tor**	**1.77**	**95**		*e*P		**Pn**	**17 12 14.2**	**+1.0**
CO01					*e*S		**Sg**	**17 12 39.0**	**+0.7**
CO01					IAML			17 12 41.2	
	comp=Z,1μm,0.8s								
CO01	**Juntas del Tor**	**1.77**	**95**		*e*P		**Pn**	**17 12 14.1**	**+0.9**
CO01					*i* S		**Sb**	**17 12 37.2**	**-0.2**
CO01					IAML			17 12 41.2	
	comp=E,484nm,0.4s								
AC04	**Llanos de Chal**	**1.86**	**30**		*e*P		**Pn**	**17 12 13.8**	**-0.4**
AC04					*e*S		**Sg**	**17 12 43.9**	**+2.7**
AC04					IAML			17 12 49.6	
	comp=Z,503nm,0.6s								
AC04	**Llanos de Chal**	**1.86**	**30**		IAML			17 12 55.7	
	comp=E,482nm,0.5s								
AC05	**El Transito**	**1.89**	**59**		*e*P		**Pn**	**17 12 15.0**	**+0.2**
AC05					*e*S		**Sg**	**17 12 42.3**	**0.0**
AC05					IAML			17 12 50.5	
	comp=Z,1μm,0.7s								
AC05	**El Transito**	**1.89**	**59**		*e*P		**Pn**	**17 12 15.6**	**+0.8**
AC05					*i* S		**Sb**	**17 12 40.5**	**-0.3**
AC05					IAML			17 12 51.3	
	comp=E,2μm,0.8s								
AROD	**Rodeo**	**2.32**	**99**		*e*P		**Pb**	**17 12 23.7**	**-0.5**
AROD					*e*S		**Sb**	**17 12 51.9**	**-1.5**
CO04	**Los Peladeros**	**2.42**	**156**		*e*P		**Pn**	**17 12 22.7**	**+0.5**
CO04					*i* S		**Sn**	**17 12 51.1**	**-1.3**
CO04					IAML			17 13 13.4	
	comp=N,558nm,0.5s								
ACDV	**Cuesta del Vie**	**2.63**	**98**		*e*P		Pn	17 12 15.4	-9.5
ACDV					IAML			17 13 22.2	
	comp=Z,276nm,0.7s								
ACCO	**Cerro Coronel**	**2.75**	**107**		*e*P		**Pn**	**17 12 25.4**	**-1.4**
ACCO					*e*S		**Sg**	**17 13 11.1**	**+1.1**
ACCO					IAML			17 13 13.1	
	comp=Z,276nm,1.5s								
GO03	**Copiapo**	**2.77**	**37**		*e*P		**Pn**	**17 12 27.3**	**+0.5**
GO03					*e*S		**Sb**	**17 13 07.6**	**+1.5**
GO03					IAML			17 13 20.9	
	comp=Z,396nm,0.8s								
RTLS	**Leoncito**	**3.13**	**130**		*e*P		**Pb**	**17 12 36.2**	**-1.6**
RTLS					*e*S		**Sb**	**17 13 17.5**	**+1.0**
RTLS					IAML			17 13 25.1	
	comp=Z,698nm,0.6s								
VA01	**Torpederas**	**3.21**	**173**		*e*P		**Pn**	**17 12 32.5**	**-0.3**
VA03	**San Esteban**	**3.22**	**156**		*e*P		**Pn**	**17 12 34.4**	**+1.3**
VA03					*e*S		**Sb**	**17 13 19.9**	**+0.8**
VA03					IAML			17 13 37.6	
	comp=Z,293nm,0.9s								
VA03	**San Esteban**	**3.22**	**156**		*e*P		**Pn**	**17 12 34.4**	**+1.3**
VA03					*i* S		**Sn**	**17 13 11.0**	**-1.0**
VA03					IAML			17 13 30.0	
	comp=E,413nm,0.3s								
ROCH	**El Roble**	**3.28**	**163**		*e*P		Pb	17 12 34.3	-6.1
ROCH					*e*P		**Pn**	**17 12 34.1**	**+0.2**
ROCH					*i* S		**Sn**	**17 13 12.5**	**-1.0**
ROCH					IAML			17 13 32.1	
	comp=N,317nm,0.3s								
ROCH					IAML			17 13 45.0	
	comp=N,160nm,0.6s								
MT02	**Curacav**	**3.52**	**166**		*e*P		**Pn**	**17 12 37.2**	**+0.1**
MT02					*e*S		**Sg**	**17 13 32.5**	**-2.2**
MT02					IAML			17 13 43.1	
	comp=Z,111nm,1.6s								
MT02	**Curacav**	**3.52**	**166**		*e*P		**Pn**	**17 12 37.3**	**+0.1**
VCA	**Vinchina**	**3.59**	**73**		*e*P		**Pn**	**17 12 38.3**	**+0.1**
VCA					*e*S		**Sg**	**17 13 36.6**	**-0.3**
VCA					IAML			17 13 43.1	
	comp=Z,392nm,1.4s								
MT05	**Renca**	**3.75**	**162**		*e*P		**Pn**	**17 12 41.2**	**+1.0**
MT05					*e*S		**Sn**	**17 13 25.1**	**+0.2**
MT05					IAML			17 13 58.8	
	comp=Z,214nm,1.0s								
MT05	**Renca**	**3.75**	**162**		*e*P		**Pn**	**17 12 41.0**	**+0.8**
MT05					*i* S		**Sn**	**17 13 23.7**	**-1.1**
MT14	**Cerro Calฺn**	**3.81**	**160**		*e*P		**Pn**	**17 12 42.7**	**+1.6**
MT16	**CCHEN**	**3.84**	**160**		*e*P		**Pn**	**17 12 43.0**	**+1.5**
AC01	**Pan de Azucar**	**3.91**	**21**		*e*P		**Pn**	**17 12 40.9**	**-1.4**
AC01					*e*S		**Sg**	**17 13 44.7**	**-2.3**
AC01					IAML			17 13 54.8	
	comp=Z,122nm,1.1s								
MT03	**Universidad Ad**	**3.91**	**160**		*e*P		**Pn**	**17 12 43.9**	**+1.4**
MT03					*e*S		**Sn**	**17 13 29.8**	**+1.0**
MT03					IAML			17 14 03.6	
	comp=Z,321nm,1.2s								
MT03	**Universidad Ad**	**3.91**	**160**		*e*P		**Pn**	**17 12 43.3**	**+0.8**
MT03					*i* S		**Sn**	**17 13 27.2**	**-1.6**
ASAL	**Salagasta**	**3.94**	**135**		*e*P		**Pn**	**17 12 42.1**	**-0.8**
ASAL					*e*S		**Sb**	**17 13 42.6**	**+2.8**
MT04	**Ro Olivares**	**3.95**	**155**		*e*P		**Pn**	**17 12 45.3**	**+2.2**
MT04					*e*S		**Sn**	**17 13 32.7**	**+2.6**
MT04					IAML			17 13 53.5	
	comp=Z,222nm,1.1s								
AC02	**Maricunga**	**3.98**	**42**		*e*P		**Pn**	**17 12 45.2**	**+1.4**
AC02					*e*S		**Sb**	**17 13 44.2**	**+2.9**
AC02					IAML			17 13 55.0	
	comp=Z,219nm,0.9s								
MT08	**Bocatoma Ro**	**4.03**	**154**		*e*P		**Pn**	**17 12 42.5**	**-1.8**
MT08					*e*S		**Sn**	**17 13 33.9**	**+1.8**
MT08					IAML			17 14 00.6	
	comp=Z,156nm,0.8s								
MT08	**Bocatoma Ro**	**4.03**	**154**		*e*P		**Pn**	**17 12 47.2**	**+2.9**
MT09	**Talagante**	**4.05**	**167**		*e*P		**Pn**	**17 12 45.1**	**+0.6**
MT09					*i* S		**Sn**	**17 13 31.1**	**-1.5**
MT01	**Popeta**	**4.09**	**170**		*e*P		**Pn**	**17 12 45.0**	**+0.1**
MT01					*e*S		**Sn**	**17 13 34.6**	**+1.3**
MT01	**Popeta**	**4.09**	**170**		*e*P		**Pn**	**17 12 45.0**	**+0.1**
MT12	**Pirque**	**4.12**	**161**		*e*P		**Pn**	**17 12 46.3**	**+1.0**
AVFE	**Valle Fertil**	**4.12**	**103**		*e*S		**Sb**	**17 13 42.2**	**-2.8**
AVFE					IAML			17 13 57.0	
	comp=Z,162nm,0.7s								
LMEL	**Las Melosas**	**4.33**	**158**		*e*P		**Pn**	**17 12 50.1**	**+1.8**
LMEL					*i* S		**Sn**	**17 13 39.4**	**+0.1**

*IDC **02** 17:12:10.6±3.2, 19°.36N×143°.60E, h0km, mb3.8/7, mbtmp3.8/8, ML2.8/1, Error ellipse: s-maj=81.4km s-min=41.2km az=7.0*
*NEIC **02** 17:12:14.6±1.9, 19°.56N±0°.07×143°.5E±0°.2, h10km±2km, mb4.3/13, Error ellipse: s-maj=30.0km s-min=9.7km az=77.0*

ISC 02 17:12:17.6±1.5, **19°.6N**±0°.2×**143°.5E**±0°.2, **h35**km, **n22, σ0s91/22, mb4.1/13, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**17.53**	**346**	P	**Pn**	**17 16 18.1**	**-1.1**
	baz=167,slow=11,SNR=1.4						
	0.8nm,0.9s						
MJAR	**Matsushiro Arr**	**17.53**	**346**	P	**Pn**	**17 16 18.1**	**-1.1**
NACB	**Ninganchiao**	**20.78**	**287**	P	**P**	**17 16 56.4**	**+0.6**
NACB				IAmb	IAmb	17 16 59.4	
	comp=Z,16nm,1.2s						
KSRS	**Korea Array**	**22.39**	**326**	P	**P**	**17 17 13.8**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.8,SNR=2.9						
	comp=Z,0.5nm,0.6s						
KKM	**Kota Kinabalu**	**29.70**	**247**	P	**P**	**17 18 20.1**	**-0.5**
KURK	**Kurchatov**	**59.20**	**318**	P	**P**	**17 22 15.4**	**+0.2**
KURBB	**Kurchatov Arra**	**59.25**	**318**	P	**P**	**17 22 15.8**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=92,slow=7.8,SNR=9.8						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**63.82**	**27**	P	**P**	**17 22 45.7**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=270,slow=8.0,SNR=4.2						
	comp=Z,0.3nm,0.6s						
BVAR	**Borovoye Array**	**64.45**	**320**	P	**P**	**17 22 50.7**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=102,slow=7.2,SNR=13						
	comp=Z,1.3nm,0.3s						
BORK	**Borovoye**	**64.49**	**320**	P	**P**	**17 22 51.0**	**+0.3**
BORK				IAmb	IAmb	17 22 58.1	
	comp=Z,1.4nm,0.5s						
D25K	**Kavik River**	**64.86**	**22**	P	**P**	**17 22 53.9**	**+0.9**
D25K				IAmb	IAmb	17 23 09.1	
	comp=Z,4.4nm,1.4s						
F26K	**Sheenjek River**	**65.39**	**24**	P	**P**	**17 22 58.1**	**+1.7**
F26K				IAmb	IAmb	17 23 15.3	
	comp=Z,3.8nm,1.5s						
H27K	**Steamboat Moun**	**66.23**	**25**	P	**P**	**17 23 02.9**	**+1.1**
H27K				IAmb	IAmb	17 23 26.0	
	comp=Z,3.1nm,1.4s						
I28M	**Miner Creek**	**66.82**	**26**	P	**P**	**17 23 06.9**	**+1.2**
I28M				IAmb	IAmb	17 23 27.0	
	comp=Z,2.4nm,1.4s						
H29M	**Whitestone**	**67.51**	**25**	P	**P**	**17 23 10.4**	**+0.6**
H29M				IAmb	IAmb	17 23 52.0	
	comp=Z,2.2nm,1.2s						
G31M	**Satah River**	**69.16**	**25**	P	**P**	**17 23 21.4**	**+1.3**
AB31	**Akbulak array**	**71.25**	**317**	P	**P**	**17 23 34.0**	**+0.7**
ABKAR	**Akbulak array**	**71.25**	**317**	P	**P**	**17 23 34.0**	**+0.6**
YKA	**Yellowknife Ar**	**78.22**	**28**	P	**P**	**17 24 12.6**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=286,slow=5.8,SNR=1.9						
	comp=Z,0.6nm,0.6s						
ARCES	**ARCESS Array B**	**81.01**	**342**	P	**P**	**17 24 28.2**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=58,slow=7.1,SNR=5.2						
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**81.01**	**342**	P	**P**	**17 24 28.2**	**-0.2**
FINES	**FINESS Array B**	**85.20**	**335**	P	**P**	**17 24 49.1**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=59,slow=5.4,SNR=8.3						
	comp=Z,0.5nm,0.4s						

*IDC **02** 17:34:43.7±0.9, 21°.69N×120°.48E, h0km, mb3.3/6, mbtmp3.4/6, MS2.9/1, Error ellipse: s-maj=38.0km s-min=20.4km az=70.0*
*MAN **02** 17:34:46.0, 21°.45N×120°.10E, h5km, MS3.3*
*TAP **02** 17:34:47.2, 21°.76N×120°.05E, h53km, ML3.9, D*
*JMA **02** 17:34:47.5±0.3, 22°.N±2°.×12°.0E±°, h75km, MV3.3/13, TAIWAN REGION*

ISC 02 17:34:46.9±1.3, **21°.67N**±0°.04×**119°.99E**±0°.03, **h30**km±10km, **n136, σ1s23/202, mb3.4/7, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu**	**0.75**	**27**	*i* P	**Pn**	**17 35 00.7**	**-0.9**
TWP				*i* S	**Sn**	**17 35 12.3**	**+0.3**
WLCH	**Liuqiu**	**0.77**	**28**	P	**Pn**	**17 35 01.5**	**-0.2**
WLCH				S	**Sb**	**17 35 13.8**	**+1.9**
HEN	**Hengchun**	**0.77**	**64**	*i* P	**Pn**	**17 35 01.8**	**0.0**
HEN				*i* S	**Sb**	**17 35 12.9**	**+0.9**
TWK1	**Hengchun**	**0.80**	**70**	*i* P	**Pn**	**17 35 01.9**	**-0.4**
TWK1				*i* S	**Sn**	**17 35 12.3**	**-0.9**
TWKB1	**Hengchun**	**0.81**	**71**	P	**Pn**	**17 35 01.9**	**-0.4**
TWKB1				S	**Sn**	**17 35 11.3**	**-2.0**
SMST	**Manzhou Townsh**	**0.86**	**66**	P	**Pn**	**17 35 02.6**	**-0.4**
SMST				*i* S	**Sn**	**17 35 13.9**	**-0.6**
TSEB	**Hengchuen, Pin**	**0.87**	**75**	*i* P	**Pn**	**17 35 02.5**	**-0.7**
TSEB				*i* S	**Sn**	**17 35 14.0**	**-1.0**
SCZT	**Fangliau**	**0.91**	**40**	⇓*i* P	**Pn**	**17 35 03.1**	**-0.6**
SCZT				*i* S	**Sn**	**17 35 14.7**	**-1.1**
SLIU	**Shizi**	**0.93**	**54**	P	**Pn**	**17 35 03.8**	**-0.1**
SLIU				S	**Sn**	**17 35 16.3**	**+0.1**
KAU	**Kaohsiung**	**0.94**	**18**	*e*S	**Sb**	**17 35 17.6**	**+0.8**
SSPT	**Xinbi**	**0.97**	**33**	*e*P	**Pn**	**17 35 04.3**	**-0.2**
SSPT				*e*S	**Sn**	**17 35 17.2**	**0.0**
EAST	**Anshuo**	**1.06**	**48**	*i* P	**Pn**	**17 35 05.5**	**-0.4**
EAST				*i* S	**Sn**	**17 35 18.7**	**-1.0**
TAW	**Tawu**	**1.08**	**51**	⇑*i* P	**Pn**	**17 35 05.7**	**-0.3**
TAW				*i* S	**Sn**	**17 35 18.6**	**-1.4**
MASBT	**Mashibuluo**	**1.11**	**32**	⇓P	**Pn**	**17 35 05.8**	**-0.6**
MASBT				*e*S	**Sn**	**17 35 18.8**	**-1.9**
SNJT	**Kaohsiung City**	**1.12**	**16**	*e*S	**Sb**	**17 35 21.8**	**-0.2**
SGLT	**Jiouru**	**1.15**	**24**	*i* P	**Pb**	**17 35 07.7**	**-0.5**
SGLT				*e*S	**Sb**	**17 35 22.9**	**+0.3**
TSMG	**Majia**	**1.19**	**30**	P	**Pn**	**17 35 07.0**	**-0.6**
TSMG				S	**Sn**	**17 35 21.6**	**-1.2**
TWM1	**Shoushan**	**1.21**	**19**	*i* P	**Pn**	**17 35 08.7**	**+0.8**
TWM1				*i* S	**Sb**	**17 35 25.3**	**+0.7**
SSD	**Sandimen**	**1.22**	**29**	*i* P	**Pn**	**17 35 07.5**	**-0.6**
SSD				*i* S	**Sn**	**17 35 22.2**	**-1.4**
ECL	**Taimali**	**1.28**	**44**	⇓*i* P	**Pn**	**17 35 08.3**	**-0.5**
ECL				*i* S	**Sn**	**17 35 22.5**	**-2.5**
SCST	**Cishan**	**1.29**	**21**	*e*P	**Pn**	**17 35 09.3**	**+0.3**
SCST				S	**Sn**	**17 35 25.0**	**-0.3**
CHN3	**Shinhua**	**1.44**	**14**	*e*S	**Sn**	**17 35 29.2**	**+0.4**
SLGT	**Liugui**	**1.45**	**25**	*e*P	**Pn**	**17 35 10.9**	**-0.2**
TSCK	**Chigu Township**	**1.47**	**3**	*e*P	**Pn**	**17 35 10.6**	**-0.8**
TSCK				*e*S	**Sn**	**17 35 28.1**	**-1.5**
SSHA	**Shanhua**	**1.48**	**11**	*e*S	**Sn**	**17 35 29.6**	**-0.3**
LAY	**Lan-yu**	**1.49**	**76**	*i* P	**Pn**	**17 35 10.3**	**-1.4**
SGST	**Jiashian**	**1.51**	**21**	*i* P	**Pn**	**17 35 10.9**	**-1.0**
SGST				*i* S	**Sn**	**17 35 28.6**	**-2.0**
SCLT	**Jiali**	**1.51**	**7**	*e*S	**Sn**	**17 35 29.5**	**-1.1**
LYUB	**Lan-yu**	**1.52**	**77**	*e*P	**Pn**	**17 35 10.0**	**-2.0**
TTN	**Taitung**	**1.52**	**45**	P	**Pn**	**17 35 12.4**	**+0.3**
TWG	**Pinlang**	**1.52**	**41**	*i* P	**Pn**	**17 35 12.4**	**+0.3**
TWG				*i* S	**Sn**	**17 35 29.8**	**-1.1**
TWGBT	**Beinan**	**1.52**	**41**	P	**Pn**	**17 35 12.2**	**0.0**
TWGBT	**Beinan**	**1.52**	**41**	P	**Pn**	**17 35 12.1**	**0.0**
TWGBT				*e*S	**Sn**	**17 35 29.2**	**-1.7**
CHN1	**Nanshi**	**1.59**	**18**	*i* P	**Pn**	**17 35 12.8**	**-0.3**
CHN1				S	**Sn**	**17 35 31.2**	**-1.3**
WDGT	**Dungji**	**1.61**	**349**	P	**Pn**	**17 35 12.9**	**-0.4**
WDGT				*i* S	**Sn**	**17 35 31.3**	**-1.8**
VCHM	**Qimei**	**1.62**	**341**	*e*P	**Pn**	**17 35 12.4**	**-1.0**
VCHM				S	**Sn**	**17 35 31.2**	**-2.0**
LONT	**Longtian**	**1.62**	**40**	*e*P	**Pn**	**17 35 13.8**	**+0.4**
LONT				*e*S	**Sn**	**17 35 33.0**	**-0.3**
TWK	**Hsinying**	**1.65**	**16**	*i* P	**Pn**	**17 35 13.7**	**-0.3**
TWK				S	**Sn**	**17 35 33.0**	**-1.3**
WTP	**Ta-pu**	**1.67**	**20**	*i* P	**Pn**	**17 35 13.7**	**-0.5**
CHN8	**Yiju**	**1.68**	**7**	*e*S	**Sn**	**17 35 34.7**	**-0.1**
LDUT	**Ludao**	**1.69**	**54**	*i* P	**Pn**	**17 35 13.7**	**-0.8**
LDUT				S	**Sn**	**17 35 33.7**	**-1.5**
ICHU	**Yijhu**	**1.70**	**9**	*e*P	**Pn**	**17 35 14.4**	**-0.2**
ICHU				*e*S	**Sn**	**17 35 33.6**	**-1.7**
TPUB	**Ta-pu**	**1.73**	**20**	P	**Pn**	**17 35 14.2**	**-0.7**
TPUB	**Ta-pu**	**1.73**	**20**	S	Sn	17 35 23.9	-12
TPUB	**Ta-pu**	**1.73**	**20**	P	**Pn**	**17 35 14.3**	**-0.7**
TPUB				S	**Sn**	**17 35 34.1**	**-1.9**
EDH	**Donghe**	**1.78**	**43**	*i* P	**Pn**	**17 35 15.9**	**+0.3**
ELDTW	**Lidau**	**1.78**	**32**	*i* P	**Pn**	**17 35 15.8**	**-0.1**
ELDTW				*e*S	**Sn**	**17 35 36.4**	**-1.1**
ECS	**Chishang**	**1.82**	**38**	*e*P	**Pn**	**17 35 16.9**	**+0.8**
WCKO	**Fanlu**	**1.85**	**18**	*e*P	**Pn**	**17 35 16.1**	**-0.5**
WCKO				*i* S	**Sn**	**17 35 37.0**	**-2.0**
EHD	**Haiduan**	**1.85**	**37**	*e*P	**Pn**	**17 35 16.1**	**-0.6**
WSL	**Shuilin Townsh**	**1.85**	**7**	*e*P	**Pn**	**17 35 16.2**	**-0.5**
WSL				*e*S	**Sn**	**17 35 37.0**	**-2.1**
CHY	**Chiayi**	**1.86**	**12**	*e*S	**Sn**	**17 35 37.8**	**-1.5**
PHUB	**P'eng-hu**	**1.87**	**348**	*e*P	**Pn**	**17 35 16.0**	**-1.0**
PHUB				*i* S	**Sn**	**17 35 37.7**	**-1.9**
CHKT	**Chengkung**	**1.91**	**42**	P	**Pn**	**17 35 17.7**	**+0.3**
PNG	**Penghu**	**1.93**	**348**	P	**Pn**	**17 35 16.9**	**-0.8**
PNG				*e*S	**Sn**	**17 35 38.6**	**-2.3**
FULB	**Fuli**	**1.94**	**38**	*e*P	**Pn**	**17 35 18.3**	**+0.4**
WSF	**Szhu**	**1.97**	**6**	*e*S	**Sn**	**17 35 41.0**	**-0.9**
ALS	**Alishan**	**1.98**	**22**	*i* P	**Pn**	**17 35 18.4**	**-0.3**
ALS				*i* S	**Sn**	**17 35 41.8**	**-0.8**
CHKH	**Chenggong**	**1.99**	**40**	P	**Pn**	**17 35 19.2**	**+0.6**
CHKH				*e*S	**Sn**	**17 35 42.2**	**-0.3**
CHN5	**Tsauling**	**2.02**	**18**	P	**Pn**	**17 35 18.4**	**-0.6**
CHN5				*i* S	**Sn**	**17 35 41.9**	**-1.4**
WTK	**Tuku**	**2.04**	**10**	*e*S	**Sn**	**17 35 41.3**	**-2.4**
TWF1	**Yuli**	**2.06**	**36**	P	**Pn**	**17 35 19.8**	**+0.2**
TWF1				*e*S	**Sn**	**17 35 43.5**	**-0.9**
WDLH	**Douliu**	**2.07**	**14**	*e*P	**Pn**	**17 35 19.4**	**-0.3**
WDLH				*i* S	**Sn**	**17 35 42.7**	**-1.7**
EYUL	**Yuli**	**2.07**	**36**	*e*P	**Pn**	**17 35 20.2**	**+0.5**
WGK	**Gukeng**	**2.07**	**15**	P	**Pn**	**17 35 19.6**	**-0.1**
WGK				*e*S	**Sn**	**17 35 44.2**	**-0.4**
YULB	**Yu-li**	**2.10**	**35**	P	**Pn**	**17 35 20.2**	**+0.2**
YULB	**Yu-li**	**2.10**	**35**	S	Sn	17 35 34.0	-11
YULB	**Yu-li**	**2.10**	**35**	*e*P	**Pn**	**17 35 20.4**	**+0.4**
YULB				S	**Sn**	**17 35 44.5**	**-0.6**
ECBN	**Changbin**	**2.12**	**39**	*e*P	**Pn**	**17 35 21.0**	**+0.6**
WHYT	**Xinyi Township**	**2.17**	**21**	*e*P	**Pn**	**17 35 20.8**	**-0.2**
WHYT				*e*S	**Sn**	**17 35 45.4**	**-1.5**
WTCT	**Ta-ch'eng**	**2.20**	**7**	*e*S	**Sn**	**17 35 47.9**	**+0.3**
EHY	**Hungye**	**2.20**	**34**	P	**Pn**	**17 35 22.1**	**+0.6**
EHY				*e*S	**Sn**	**17 35 47.2**	**-0.6**
EHYH	**Wanrong**	**2.20**	**34**	*e*P	**Pn**	**17 35 21.9**	**+0.4**
WRL	**Guolierlin Hig**	**2.25**	**9**	*e*S	**Sn**	**17 35 47.3**	**-1.6**
SSLB	**Suanglung**	**2.29**	**23**	P	**Pn**	**17 35 22.3**	**-0.4**
SSLB	**Suanglung**	**2.29**	**23**	S	Sn	17 35 39.5	-10
SSLB	**Suanglung**	**2.29**	**23**	*e*P	**Pn**	**17 35 22.6**	**-0.1**
SSLB				*e*S	**Sn**	**17 35 48.8**	**-1.0**
WNT	**Mingjian**	**2.29**	**16**	P	**Pn**	**17 35 22.5**	**-0.2**
SMLT	**Sun Moon Lake**	**2.35**	**21**	P	**Pn**	**17 35 23.8**	**+0.1**
SMLT				*e*S	**Sn**	**17 35 51.7**	**0.0**
TYC	**Yuchr**	**2.36**	**20**	P	**Pn**	**17 35 23.5**	**-0.1**
TYC				*e*S	**Sn**	**17 35 51.2**	**-0.5**
WARBT	**Fenglin Townsh**	**2.41**	**32**	*e*P	**Pn**	**17 35 25.8**	**+1.4**
WARBT				*i* S	**Sn**	**17 35 52.8**	**-0.1**
TEGC	**Jichi Village**	**2.48**	**35**	*e*P	**Pn**	**17 35 26.6**	**+1.3**
ESL	**Shilin**	**2.51**	**32**	*e*P	**Pn**	**17 35 26.1**	**+0.4**
ESL				*e*S	**Sn**	**17 35 54.8**	**-0.6**
OWD	**Renai**	**2.52**	**25**	P	**Pn**	**17 35 26.6**	**+0.6**
WCS	**Beigang Elemen**	**2.52**	**19**	*e*P	**Pn**	**17 35 25.8**	**0.0**
WCS				*i* S	**Sn**	**17 35 54.0**	**-1.6**
WUSB	**Renai**	**2.53**	**24**	P	**Pn**	**17 35 26.5**	**+0.3**
WUSB				*e*S	**Sn**	**17 35 54.4**	**-1.6**
SHUL	**Shoufeng**	**2.56**	**34**	*e*P	**Pn**	**17 35 27.0**	**+0.7**
ETM	**Tongmen**	**2.67**	**31**	*e*P	**Pn**	**17 35 28.9**	**+0.9**
LXIB	**Xiulin Townshi**	**2.68**	**29**	*e*P	**Pn**	**17 35 29.1**	**+0.9**
LXIB				*e*S	**Sn**	**17 35 58.9**	**-0.9**
WHF	**Hehuan Shan**	**2.73**	**25**	*e*P	**Pn**	**17 35 30.1**	**+1.0**
WHF				S	**Sn**	**17 35 58.4**	**-2.9**
WHP	**Taichung City**	**2.74**	**19**	*e*P	**Pn**	**17 35 29.5**	**+0.5**
WHP				S	**Sn**	**17 36 00.2**	**-0.9**
TDCB	**Techi**	**2.79**	**22**	*e*P	**Pn**	**17 35 29.8**	**+0.1**
FUSS	**Fushou**	**2.81**	**24**	*e*P	**Pn**	**17 35 30.8**	**+0.7**
TWD	**Chiawan**	**2.82**	**31**	*e*P	**Pn**	**17 35 29.9**	**0.0**
ETLH	**Xiulin Townshi**	**2.87**	**28**	P	**Pn**	**17 35 31.9**	**+1.1**
NACB	**Ninganchiao**	**2.90**	**30**	P	**Pn**	**17 35 30.9**	**-0.1**
NACB	**Ninganchiao**	**2.90**	**30**	*e*P	**Pn**	**17 35 31.0**	**0.0**
NNSB	**Datong**	**3.03**	**25**	*e*P	**Pn**	**17 35 33.9**	**+0.9**
NNS	**Nan Shan**	**3.04**	**25**	*e*P	**Pn**	**17 35 34.5**	**+1.4**
NNS				*e*S	**Sn**	**17 36 08.2**	**-0.3**
ZPLA	**Ao Xicun**	**3.06**	**318**	*e*P	**Pn**	**17 35 34.4**	**+1.2**
ZPLA				S	**Sn**	**17 36 07.2**	**-1.5**
NSTT	**Nanjuang**	**3.09**	**17**	*e*P	**Pn**	**17 35 34.3**	**+0.6**
NSTT				*e*S	**Sn**	**17 36 08.9**	**-0.7**
LIOB	**Emei**	**3.11**	**17**	*e*P	**Pn**	**17 35 34.2**	**+0.2**
LIOB				S	**Sn**	**17 36 09.7**	**-0.4**
DSXP	**Dongshan**	**3.12**	**311**	*e*P	**Pn**	**17 35 34.5**	**+0.4**
DSXP				S	**Sn**	**17 36 09.7**	**-0.6**
NFF	**Wufeng Townsh

LATG				*e*S		**Sn**	17 49 40.5	+0.3
NTST	**Danshui**	**0.61**	**297**	*e*S		**Sn**	17 49 39.7	-0.6
TWS1	**Kuangyinshan**	**0.61**	**290**	*i* P		**Pn**	17 49 26.6	0.0
TWS1				*e*S		**Sn**	17 49 41.0	+0.7
EOS3	**EOS3**	**0.64**	**158**	*e*P		**Pn**	17 49 27.8	+1.2
YHNB	**Yeheng**	**0.65**	**251**	P		**Pn**	17 49 26.5	-0.5
YHNB				S		**Sn**	17 49 40.3	-0.7
NNS	**Nan Shan**	**0.76**	**234**	*i* P		**Pn**	17 49 28.0	+0.1
NNS				*i* S		**Sn**	17 49 42.6	0.0
NNSB	**Datong**	**0.76**	**233**	P		**Pn**	17 49 28.0	+0.1
NNSB				S		**Sn**	17 49 42.4	-0.3
EOS4	**EOS4**	**0.80**	**162**	*e*S		**Sn**	17 49 42.7	+0.4
KSHI	**Guanxi Townshi**	**0.80**	**262**	*e*P		**Pn**	17 49 28.2	+0.1
KSHI				S		**Sn**	17 49 43.1	0.0
NACB	**Ninganchiao**	**0.82**	**211**	P		**Pn**	17 49 28.0	-0.4
NACB				*i* S		**Sn**	17 49 42.7	-0.7
ETL	**Fush Village**	**0.82**	**208**	*e*P		**Pn**	17 49 28.4	0.0
ETL				*e*S		**Sn**	17 49 42.5	-0.9
ETLH	**Xiulin Townshi**	**0.85**	**218**	*i* P		**Pn**	17 49 28.6	-0.1
ETLH				*e*S		**Sn**	17 49 43.6	-0.4
NFF	**Wufeng Townshi**	**0.89**	**254**	*e*P		**Pn**	17 49 28.4	-0.5
NFF				*i* S		**Sn**	17 49 43.4	-1.1
TWD	**Chiawan**	**0.91**	**208**	*i* P		**Pn**	17 49 28.4	-0.7
TWD				*e*S		**Sn**	17 49 44.3	-0.4
YOJ	**Yonaguni jima**	**0.97**	**116**	*e*P		**Pn**	17 49 29.7	0.0
YOJ				*e*S		**Sn**	17 49 45.1	-0.7
LIOB	**Emei**	**0.97**	**256**	*e*P		**Pn**	17 49 29.5	-0.2
LIOB				S		**Sn**	17 49 44.9	-1.0
FUSS	**Fushou**	**0.97**	**229**	*e*P		**Pn**	17 49 30.4	+0.4
FUSS				*i* S		**Sn**	17 49 46.4	0.0
NSTT	**Nanjuang**	**0.99**	**255**	*i* P		**Pn**	17 49 29.5	-0.4
NSTT				S		**Sn**	17 49 45.2	-0.9
TWT	**Tachien**	**1.02**	**232**	*i* P		**Pn**	17 49 30.9	+0.6
TWT				*i* S		**Sn**	17 49 48.0	+1.0
TDCB	**Techi**	**1.03**	**232**	P		**Pn**	17 49 30.9	+0.4
TDCB				*i* S		**Sn**	17 49 46.9	-0.2
WHF	**Hehuan Shan**	**1.03**	**224**	*i* P		**Pn**	17 49 31.3	+0.5
WHF				*e*S		**Sn**	17 49 47.7	0.0
LXIB	**Xiulin Townshi**	**1.04**	**214**	*e*P		**Pn**	17 49 30.4	-0.2
LXIB				S		**Sn**	17 49 47.3	0.0
ETM	**Tongmen**	**1.05**	**209**	*e*P		**Pn**	17 49 30.2	-0.4
ETM				*e*S		**Sn**	17 49 46.5	-0.7
TEYL	**Yanliau Villag**	**1.10**	**202**	*e*P		**Pn**	17 49 30.6	-0.3
TEYL				*e*S		**Sn**	17 49 48.4	+0.3
WHP	**Taichung City**	**1.18**	**239**	*e*P		**Pn**	17 49 32.1	+0.2
WHP				*i* S		**Sn**	17 49 49.2	-0.6
SHUL	**Shoufeng**	**1.18**	**202**	*e*P		**Pn**	17 49 32.0	+0.1
SHUL				S		**Sn**	17 49 50.0	+0.3
ESL	**Shilin**	**1.21**	**208**	P		**Pn**	17 49 32.1	-0.1
ESL				*i* S		**Sn**	17 49 49.0	-1.3
OWD	**Renai**	**1.23**	**221**	P		**Pn**	17 49 33.0	+0.5
OWD				*i* S		**Sn**	17 49 50.6	-0.2
WUSB	**Renai**	**1.23**	**224**	P		**Pn**	17 49 33.6	+1.1
WUSB				*i* S		**Sn**	17 49 51.5	+0.6
WARBT	**Fenglin Townsh**	**1.31**	**208**	*e*P		**Pn**	17 49 32.6	-0.8
WCS	**Beigang Elemen**	**1.33**	**232**	P		**Pn**	17 49 33.8	+0.3
WCS				*i* S		**Sn**	17 49 52.5	0.0
SMLT	**Sun Moon Lake**	**1.45**	**227**	P		**Pn**	17 49 35.7	+0.6
SSLB	**Suanglung**	**1.48**	**223**	*e*P		**Pn**	17 49 35.8	+0.5
SSLB				S		**Sn**	17 49 56.4	+0.6
EHY	**Hungye**	**1.53**	**206**	P		**Pn**	17 49 36.3	+0.5
EHYH	**Wanrong**	**1.53**	**205**	*e*P		**Pn**	17 49 36.1	+0.3
WHYT	**Xinyi Township**	**1.61**	**223**	*e*P		**Pn**	17 49 37.3	+0.4
IRIF	**Iriomote-Funau**	**1.62**	**109**	*e*P		**Pn**	17 49 36.8	-0.1
YULB	**Yu-li**	**1.64**	**205**	*e*P		**Pn**	17 49 36.4	-0.8
ALS	**Alishan**	**1.78**	**220**	P		**Pn**	17 49 39.8	+0.6
JKRS	**Kuro-shima**	**1.90**	**110**	*e*P		**Pn**	17 49 40.5	+0.2
JIJ	**Ishigaki jima**	**1.97**	**105**	*e*P		**Pn**	17 49 41.1	-0.1
JISG	**Ishigakijimahi**	**2.07**	**98**	*e*P		**Pn**	17 49 42.1	-0.4

NEIC ***02*** *17:51:03.0±1.7, 22°.5S±0°.1×175°.1W±0°.2, h10km±1km, mb4.6/16, Error ellipse: s-maj=24.2km s-min=17.3km az=90.0*

IDC ***02*** *17:51:11.7±4.2, 22°.55S×175°.18W, h84km±35km, mb3.9/13, mbtmp4.2/15, MS3.3/3, Error ellipse: s-maj=29.4km s-min=18.9km az=136.0*

ISC 02 17:51:06.0±0.6, 22°.5S±0°.1×175°.2W±0°.1, h33km, n43, σ1§05/42, mb4.3/18, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**7.16**	**200**	Pn	**Pn**	**17 52 48.2**	**-0.2**
MSVF	**Nonsavu**	**7.94**	**306**	P	Pn	17 53 06.5	+7.3
	14nm,0.6s,baz=119,slow=17,SNR=12						
MSVF	**Nonsavu**				Pn	17 53 07.0	+7.8
RAR	**Rarotonga**	**14.36**	**88**	LR	LR	17 59 11.2	
	comp=Z,114nm,18.7s,baz=310,slow=33						
URZ	**Urewera**	**17.04**	**201**	P	**P**	**17 55 03.7**	**+0.5**
	3.7nm,0.3s,baz=23,slow=15,SNR=1.3						
URZ				S	Sn	17 57 53.6	-17
	5.1nm,0.7s,baz=20,slow=12,SNR=1.1						
KOUNC	**Koumac, New Ca**	**19.21**	**272**	P	**P**	**17 55 27.8**	**+0.5**
KOUNC				IAmb	IAmb	17 55 30.1	
	comp=Z,44nm,1.2s						
PPT	**Papeete**	**24.53**	**83**	LR	LR	18 05 05.7	
	comp=Z,67nm,18.4s,baz=270,slow=34						
EIDS	**Eidsvold**	**30.93**	**258**	P	**P**	**17 57 20.6**	**+0.6**
EIDS				IAmb	IAmb	17 57 29.9	
	comp=Z,13nm,1.4s						
CTA	**Charters Tower**	**35.96**	**266**	P	**P**	**17 58 04.1**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=90,slow=10.0,SNR=2.0						
	comp=Z,3.5nm,0.7s						
CTAO	**Charters Tower**	**35.96**	**266**	P	**P**	**17 58 04.0**	**+0.3**
CTAO				IAmb	IAmb	17 58 47.4	
	comp=Z,30nm,1.5s						
STKA	**Stephens Creek**	**39.36**	**247**	P	**P**	**17 58 33.5**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=94,slow=13,SNR=5.6						
	comp=Z,2.6nm,0.8s						
AS31	**Alice Springs**	**46.66**	**258**	P	**P**	**17 59 30.9**	**-0.8**
ASAR	**Alice Springs**	**46.66**	**258**	P	**P**	**17 59 30.9**	**-0.8**
	comp=Z,3.6nm,0.7s,baz=100,slow=8.2,SNR=20						
ASAR				PcP	**PcP**	**18 01 05.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=95,slow=4.1,SNR=2.3						
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**46.66**	**258**	P	**P**	**17 59 30.2**	**-1.4**
ASAR					**PcP**	**18 01 05.5**	**+0.4**
WB0	**Warramunga Arr**	**46.95**	**264**	P	**P**	**17 59 33.1**	**-0.8**
WB0				IAmb	IAmb	18 00 01.6	
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**46.96**	**263**	P	**P**	**17 59 32.6**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=101,slow=7.8,SNR=16						
WRA				PcP	**PcP**	**18 01 06.5**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=102,slow=3.2,SNR=4.5						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**46.96**	**263**	P	**P**	**17 59 32.9**	**-1.2**
WRA					**PcP**	**18 01 06.5**	**+0.2**
FORT	**Forrest**	**50.95**	**248**	P	**P**	**18 00 02.1**	**-2.5**
FORT				IAmb	IAmb	18 00 03.0	
	comp=Z,6.8nm,0.9s						
MTN	**Manton Dam**	**51.83**	**271**	P	**P**	**18 00 07.8**	**-3.4**
KNRA	**Kununurra**	**53.17**	**267**	P	**P**	**18 00 20.1**	**-1.0**
KNRA				IAmb	IAmb	18 00 21.8	
	comp=Z,4.7nm,0.6s						
SOEI	**Soe**	**59.20**	**272**	P	**P**	**18 01 04.9**	**+0.5**
JCJ	**Chichijima**	**64.28**	**318**	LR	LR	18 26 49.5	
	comp=Z,20nm,20.1s,baz=133,slow=33						
MJAR	**Matsushiro Arr**	**73.39**	**322**	P	**P**	**18 02 34.1**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=154,slow=6.0,SNR=7.2						
	comp=Z,1.6nm,0.8s						
MJAR	**Matsushiro Arr**	**73.39**	**322**	P	**P**	**18 02 35.1**	**+0.3**
JKA	**Kamikawa-asahi**	**76.75**	**330**	P	**P**	**18 02 54.7**	**+0.7**
BELA	**Belgrano 2**	**77.23**	**172**	P	**P**	**18 02 56.5**	**+0.2**
BELA				IAmb	IAmb	18 03 14.8	
	comp=Z,3.2nm,1.3s						
PETK	**Petropavlovsk-**	**78.90**	**344**	P	**P**	**18 03 05.1**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=158,slow=5.2,SNR=3.8						
	comp=Z,2.3nm,0.7s						
MAW	**Mawson**	**80.56**	**199**	P	**P**	**18 03 14.8**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=158,slow=5.4,SNR=3.6						
	comp=Z,1.0nm,0.6s						
MAW	**Mawson**	**80.56**	**199**	P	**P**	**18 03 14.7**	**0.0**
NVAR	**Mina Array Bea**	**80.71**	**42**	P	**P**	**18 03 15.5**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=236,slow=4.4,SNR=4.1						
	comp=Z,0.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**82.11**	**325**	P	**P**	**18 03 24.3**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=151,slow=3.3,SNR=6.0						
	comp=Z,3.2nm,0.8s						
TXAR	**Lajitas Array**	**85.95**	**56**	P	**P**	**18 03 42.8**	**-0.4**
	comp=Z,1.1nm,1.1s,baz=250,slow=4.2,SNR=7.0						
	comp=Z,1.1nm,1.1s						
ANMO	**Albuquerque**	**86.63**	**50**	P	**P**	**18 03 46.5**	**0.0**
	comp=Z,1.2nm,0.8s,baz=228,slow=7.3,SNR=3.0						
	comp=Z,1.2nm,0.8s						
ANMO	**Albuquerque**	**86.63**	**50**	P	**P**	**18 03 46.6**	**+0.1**
ANMO				IAmb	IAmb	18 03 49.5	
	comp=Z,6.2nm,1.5s						
GSI	**Gunungsitoli**	**87.95**	**272**	P	**P**	**18 03 53.0**	**-0.2**
ILAR	**Eielson Array**	**89.71**	**12**	P	**P**	**18 03 59.3**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=205,slow=5.1,SNR=4.8						
	comp=Z,0.5nm,0.8s						
IMAR	**Indian Mountai**	**89.71**	**9**	P	**P**	**18 04 00.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**93.25**	**289**	P	**P**	**18 04 19.1**	**+1.3**
	comp=Z,2.7nm,0.9s,baz=119,slow=4.9,SNR=11						
	comp=Z,2.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.25**	**289**	P	**P**	**18 04 19.2**	**+1.5**
KURK	**Kurchatov**	**117.25**	**317**		**PKPdf**	**18 09 47.0**	**-0.7**
KURBB	**Kurchatov Arra**	**117.30**	**317**	PKP	**PKPdf**	**18 09 47.0**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=80,slow=2.1,SNR=1.9						
AKASG	**Malin Array Be**	**146.03**	**332**	PKPbc	**PKPdf**	**18 10 41.3**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=42,slow=4.1,SNR=11						
CLL	**Collm**	**150.56**	**350**	*e*PKPbc	**PKiKP**	**18 10 57.0**	**+2.1**

IDC ***02*** *17:51:52.8±1.9, 45°.86N×106°.66W, h0km, mbtmp2.9/3, ML2.9/3, Error ellipse: s-maj=51.0km s-min=10.6km az=133.0*

NEIC ***02*** *17:51:52.7±2.1, 45°.78N±0°.04×106°.64W±0°.06, h0km±1km, ML3.0/46, Error ellipse: s-maj=8.0km s-min=6.6km az=129.0*

ISC 02 17:51:50.6±0.8, 45°.57N±0°.04×106°.51W±0°.04, h0km, n35, σ1§54/35, Montana

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**1.13**	**10**		**Pg**	**17 52 11.4**	**-0.9**
RLMT	**Red Lodge**	**2.00**	**258**	Pn	**Pg**	**17 52 29.2**	**+0.4**
RLMT				IAML		17 53 01.0	
	101nm,0.6s						
GCMT	**Greycliff**	**2.22**	**277**	Pn	**Pb**	**17 52 31.1**	**-0.6**
GCMT					**Sn**	**17 52 57.8**	**+0.7**
RSSD	**Black Hills**	**2.28**	**129**		**Pg**	**17 52 34.1**	**-0.2**
RSSD				IAML		17 53 15.7	
	88nm,0.6s						
RSSD				IAML		17 53 20.2	
	61nm,0.6s						
YNE	**Yellowstone No**	**2.53**	**258**	Pn	**Pb**	**17 52 35.7**	**-1.3**
YNE					**Sg**	**17 53 10.9**	**-1.1**
YNE				IAML		17 53 16.8	
	comp=E,67nm,1.0s						
K22A	**Casper**	**2.92**	**180**		**Pg**	**17 52 45.8**	**-0.8**
K22A				IAML		17 53 34.7	
	comp=E,44nm,0.3s						
K22A				IAML		17 54 46.5	
	comp=E,40nm,0.3s						
YNR	**Norris Junctio**	**3.07**	**255**	Pn	**Pn**	**17 52 40.9**	**+0.3**
YNR				IAML		17 53 36.0	
	comp=N,32nm,0.6s						
YNR				IAML		17 53 39.4	
	comp=E,34nm,0.6s						
YHH	**Holmes Hill**	**3.17**	**257**		**Pn**	**17 52 41.6**	**-0.3**
YMR	**Madison River**	**3.28**	**256**	Pn	**Pn**	**17 52 45.0**	**+1.6**
DGMT	**Dagmar**	**3.30**	**28**		**Pb**	**17 52 50.1**	**0.0**
EGMT	**Eagleton**	**3.31**	**319**		**Pn**	**17 52 43.8**	**0.0**
EGMT				IAML		17 53 35.2	
	comp=E,56nm,0.6s						
YPP	**Pitchstone Pla**	**3.32**	**248**		**Pg**	**17 52 53.6**	**-0.5**
FLWY	**Flagg Ranch**	**3.33**	**245**		**Pb**	**17 52 47.9**	**-2.8**
YHL	**Hebgen Lake**	**3.38**	**259**		**Pn**	**17 52 45.9**	**+1.0**
YHL				IAML		17 53 56.1	
	comp=E,36nm,1.1s						
YHL				IAML		17 53 56.2	
	comp=N,33nm,1.4s						
YHB	**Horse Butte**	**3.41**	**258**	Pn	**Pg**	**17 52 56.1**	**+0.1**
YHB				IAML		17 53 47.9	
	comp=N,22nm,1.3s						
YHB				IAML		17 53 54.5	
	comp=E,33nm,0.8s						
LOHW	**Long Hollow**	**3.52**	**238**		**Pn**	**17 52 49.4**	**+2.7**
LOHW				IAML		17 54 57.7	
	comp=E,19nm,4.1s						
LOHW				IAML		17 54 59.6	
	comp=E,18nm,4.2s						
MOOW	**Moose Ponds**	**3.53**	**240**	Pn	**Pn**	**17 52 49.1**	**+2.2**
BW06	**Boulder Array**	**3.56**	**219**		**Pg**	**17 52 58.5**	**-0.3**
BW06				IAML		17 53 56.1	
	comp=E,16nm,0.9s						
BW06				IAML		17 53 56.4	
	comp=E,20nm,0.7s						
PD31	**Pinedale Array**	**3.56**	**219**		**Pb**	**17 52 55.0**	**+0.5**
PDAR	**Pinedale Array**	**3.56**	**219**	Pn	**Pb**	**17 52 53.9**	**-0.7**
	comp=E,0.3nm,0.3s,baz=38,slow=17,SNR=8.5						
PDAR				Lg	Lg	17 53 49.1	
	comp=E,3.0nm,0.3s,baz=38,slow=30,SNR=11						
	comp=E,0.3nm,0.3s						
PDAR	**Pinedale Array**	**3.56**	**219**		**Pb**	**17 52 53.7**	**-0.9**
BOZ	**Bozeman (W)**	**3.59**	**272**	Pn	**Pn**	**17 52 48.9**	**+1.2**
BOZ				IAML		17 53 48.8	
	comp=E,37nm,2.8s						
FXWY	**Fox Creek**	**3.76**	**241**		**Pg**	**17 53 00.7**	**-1.9**
LYMT	**Lyon Mountain**	**4.24**	**291**	Pn	**Pn**	**17 52 56.3**	**-0.4**
AHID	**Auburn Hatcher**	**4.33**	**231**		**Pn**	**17 53 00.1**	**+2.2**
AHID				IAML		17 54 26.1	
	comp=E,19nm,0.5s						
AHID				IAML		17 55 13.7	
	comp=E,12nm,4.8s						
MCMT	**McKenzie Canyo**	**4.54**	**263**		**Pn**	**17 53 01.9**	**+1.1**
BCYI	**Bear Canyon**	**5.05**	**258**		**Pb**	**17 53 19.7**	**-0.3**
HAYD	**Hayden**	**5.08**	**186**	Pn	**Pb**	**17 53 16.6**	**-3.8**
MSO	**Missoula**	**5.31**	**286**		**Pn**	**17 53 10.6**	**-0.6**
MSO				IAML		17 54 44.1	
	comp=E,11nm,3.1s						
MSO				IAML		17 54 59.4	
	comp=E,13nm,2.8s						
HWUT	**Hardware Ranch**	**5.40**	**225**	Pn	**Pb**	**17 53 24.2**	**-1.7**
BSUT	**Blindstream Ca**	**5.92**	**213**		**Pb**	**17 53 32.0**	**-2.9**
P18A	**Preston Nutter**	**6.55**	**206**		Pn	17 53 36.0	+7.5
I56US	**NEWPORT INFRAS**	**7.75**	**294**	I	I	18 34 42.2	
	baz=105,slow=309,SNR=5.4						
ULM	**Lac du Bonnet**	**8.54**	**53**	Pn	**Pn**	**17 53 55.7**	**+0.4**
	comp=E,0.3nm,0.3s,baz=247,slow=13,SNR=1.8						
ULM				Lg	Lg	17 56 09.8	
	baz=294,slow=20						
	comp=E,1.0nm,0.5s						
TXAR	**Lajitas Array**	**16.36**	**171**	Pn	**P**	**17 55 47.5**	**+2.8**
	comp=E,0.1nm,0.3s,baz=354,slow=11,SNR=1.9						
	comp=E,0.1nm,0.3s						

NOU ***02*** *17:52:11.8, 39°.78S×174°.58E, h110km, MLv3.8/18, North Island, New Zealand*

WEL ***02*** *17:52:11.8±0.3, 40°.3°±1°.×17°.5E±°, h118km±3km, M3.7/88, ML3.4/30, MLv3.7/88, Error ellipse: s-maj=2.8km s-min=1.6km az=120.2*

ISC 02 17:52:08.2±1.3, 39°.77S±0°.03×174°.52E±0°.03, h150km±6km, n214, σ1§88/266, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LREZ	**Lake Rotokare**	**0.32**	**344**	P	**Pn**	**17 52 30.0**	**+1.1**
LREZ				S	**Sn**	**17 52 43.4**	**-1.1**
WAZ	**Wanganui**	**0.36**	**88**	P	**Pn**	**17 52 30.4**	**+1.4**
WAZ				S	**Sn**	**17 52 43.6**	**-1.3**
WCDS	**Wanganui Civil**	**0.44**	**112**	P	**Pn**	**17 52 30.8**	**+1.5**
WCDS				S	**Sn**	**17 52 44.3**	**-1.0**
PREZ	**Palmer Road**	**0.50**	**327**	P	**Pn**	**17 52 30.6**	**+0.9**
HUKS	**Huiakama Schoo**	**0.51**	**5**	P	**Pn**	**17 52 30.3**	**+0.6**
NEZ	**North Egmont**	**0.59**	**327**	P	**Pn**	**17 52 31.3**	**+1.1**
NEZ				S	**Sn**	**17 52 45.0**	**-1.9**
OPSS	**Opunake Primar**	**0.60**	**301**	P	**Pn**	**17 52 31.4**	**+1.3**
NMEZ	**Namu Road**	**0.60**	**305**	P	**Pn**	**17 52 31.2**	**+1.0**
NMEZ				S	**Sn**	**17 52 45.7**	**-1.1**
KHEZ	**Kahui Hut**	**0.61**	**320**	P	**Pn**	**17 52 31.2**	**+0.9**
KHEZ	**Kahui Hut**	**0.61**	**320**	S	**Sn**	**17 52 45.7**	**-1.4**
KHEZ	**Kahui Hut**	**0.61**	**320**	P	**Pn**	**17 52 31.4**	**+1.0**
DREZ	**Durham Road**	**0.62**	**337**	P	**Pn**	**17 52 31.3**	**+0.9**
INHS	**Inglewood High**	**0.66**	**337**	P	**Pn**	**17 52 31.5**	**+0.9**
INHS				S	**Sn**	**17 52 46.1**	**-1.4**
VRZ	**Vera Road**	**0.67**	**17**	P	**Pn**	**17 52 31.3**	**+0.7**
VRZ				S	**Sn**	**17 52 45.6**	**-2.0**
MHEZ	**Mangahewa**	**0.70**	**348**	P	**Pn**	**17 52 32.1**	**+1.3**
NBEZ	**Newall Road No**	**0.70**	**315**	P	**Pn**	**17 52 32.1**	**+1.3**
NBEZ				S	**Sn**	**17 52 47.1**	**-0.8**
OHWZ	**Ohakea**	**0.76**	**126**	P	**Pn**	**17 52 33.0**	**+2.0**
OHWZ				S	**Sn**	**17 52 48.0**	**-0.6**
ORCS	**Ohakune Ruapeh**	**0.78**	**64**	P	**Pn**	**17 52 32.2**	**+0.9**
NPCS	**New Plymouth C**	**0.78**	**334**	P	**Pn**	**17 52 32.4**	**+1.1**
PKVZ	**Pokaka**	**0.80**	**54**	P	**Pn**	**17 52 32.4**	**+0.9**
MTVZ	**Mangateitei**	**0.83**	**63**	P	**Pn**	**17 52 32.6**	**+0.9**
MTVZ				S	**Sn**	**17 52 47.1**	**-2.5**
FXBS	**Foxton Beach S**	**0.88**	**142**	P	**Pn**	**17 52 34.1**	**+2.1**
TRVZ	**Turoa**	**0.93**	**60**	P	**Pn**	**17 52 33.6**	**+0.9**
TRVZ				S	**Sn**	**17 52 48.7**	**-2.6**
FAHS	**Feilding Agric**	**0.93**	**119**	P	**Pn**	**17 52 34.5**	**+2.1**
FAHS				S	**Sn**	**17 52 50.5**	**-0.3**
MAVZ	**Matarangi**	**0.95**	**59**	P	**Pn**	**17 52 33.8**	**+0.8**
FWVZ	**Far West T-bar**	**0.95**	**58**	P	**Pn**	**17 52 33.8**	**+0.9**
COVZ	**Chateau Observ**	**0.97**	**55**	P	**Pn**	**17 52 33.8**	**+0.9**
TWVZ	**Taurewa**	**1.00**	**46**	P	**Pn**	**17 52 33.9**	**+0.8**
PNMS	**Monrad Interme**	**1.02**	**126**	P	**Pn**	**17 52 35.3**	**+2.2**
PNMS				S	**Sn**	**17 52 51.7**	**-0.5**
MOVZ	**Moawhango**	**1.02**	**70**	P	**Pn**	**17 52 34.2**	**+0.9**
MOVZ				S	**Sn**	**17 52 49.4**	**-3.0**
PNBS	**Palmerston Nor**	**1.02**	**125**	P	**Pn**	**17 52 35.2**	**+2.1**
NGZ	**Ngauruhoe**	**1.03**	**55**	P	**Pn**	**17 52 34.4**	**+1.0**
PNRS	**Palmerston Nor**	**1.03**	**124**	P	**Pn**	**17 52 35.2**	**+2.0**
PNRS				S	**Sn**	**17 52 51.4**	**-0.9**
HOCS	**Levin Horowhen**	**1.04**	**146**	P	**Pn**	**17 52 35.4**	**+2.2**
SNVZ	**South Ngauruho**	**1.05**	**57**	P	**Pn**	**17 52 34.8**	**+1.1**
WTVZ	**West Tongariro**	**1.06**	**52**	P	**Pn**	**17 52 34.7**	**+1.0**
TUHS	**Taumarunui Hig**	**1.06**	**33**	P	**Pn**	**17 52 34.5**	**+0.9**
KRVZ	**Karewarewa**	**1.10**	**53**	P	**Pn**	**17 52 35.1**	**+1.0**
OTKS	**Otaki School**	**1.10**	**154**	P	**Pn**	**17 52 35.8**	**+2.0**
ETVZ	**East Tongariro**	**1.12**	**56**	P	**Pn**	**17 52 35.8**	**+1.5**
NTVZ	**North Tongarir**	**1.12**	**54**	P	**Pn**	**17 52 35.4**	**+1.2**
TMVZ	**Te Maari**	**1.13**	**55**	P	**Pn**	**17 52 35.7**	**+1.4**
DUWZ	**D'Urville Isla**	**1.13**	**203**	P	**Pn**	**17 52 36.1**	**+1.9**
DUWZ				S	**Sn**	**17 52 53.3**	**-0.8**
KIWI	**Kapiti Island**	**1.14**	**165**	P	**Pn**	**17 52 36.0**	**+1.8**
POWZ	**Post Office Ro**	**1.15**	**123**	P	**Pn**	**17 52 35.9**	**+1.6**
TSZ	**Takapari Road**	**1.15**	**105**	P	**Pn**	**17 52 35.8**	**+1.4**
TSZ				S	**Sn**	**17 52 52.3**	**-2.1**
OGWZ	**Otaki Gorge**	**1.16**	**155**	P	**Pn**	**17 52 36.5**	**+2.0**
OGWZ				S	**Sn**	**17 52 53.3**	**-1.3**
PAPS	**Paraparaumu Pr**	**1.21**	**162**	P	**Pn**	**17 52 36.8**	**+2.0**
KATZ	**Kakaramea**	**1.21**	**50**	P	**Pn**	**17 52 36.4**	**+1.3**
MRZ	**Mangatainoka R**	**1.21**	**138**	P	**Pn**	**17 52 36.7**	**+1.8**
MRZ				S	**Sn**	**17 52 53.4**	**-1.9**
EKTS	**Eketahuna Scho**	**1.27**	**134**	P	**Pn**	**17 52 37.5**	**+2.0**
HIZ	**Hauiti**	**1.28**	**12**	P	**Pn**	**17 52 36.4**	**+0.8**
HIZ	**Hauiti**	**1.28**	**12**	S	**Sn**	**17 52 55.0**	**-1.5**
HIZ	**Hauiti**	**1.28**	**12**	P	**Pn**	**17 52 36.7**	**+1.1**
RITZ	**Rihia Road**	**1.30**	**53**	P	**Pn**	**17 52 37.7**	**+1.9**
PNHZ	**Pukenui**	**1.31**	**97**	P	**Pn**	**17 52 37.3**	**+1.5**
PNHZ				S	**Sn**	**17 52 55.3**	**-1.7**
RATZ	**Rangitukua**	**1.32**	**48**	P	**Pn**	**17 52 37.7**	**+1.6**
HOWZ	**Holdsworth Sta**	**1.36**	**146**	P	**Pn**	**17 52 38.4**	**+1.9**
PRWZ	**Pori Road**	**1.37**	**126**	P	**Pn**	**17 52 38.6**	**+2.2**
DVHZ	**Dannevirke**	**1.38**	**113**	P	**Pn**	**17 52 38.1**	**+1.6**
POKS	**Katoa Kinderga**	**1.38**	**170**	P	**Pn**	**17 52 38.8**	**+2.3**
PWES	**Porirua West**	**1.38**	**170**	P	**Pn**	**17 52 38.8**	**+2.2**
PFAS	**Porirua Free A**	**1.40**	**170**	P	**Pn**	**17 52 38.9**	**+2.3**
TMDS	**Te Marua Water**	**1.40**	**160**	P	**Pn**	**17 52 38.9**	**+2.2**
CAW	**Cannon Point**	**1.41**	**163**	P	**Pn**

RTZ	Ruatahuna	2.23	60	P		Pn	17 52 47.1	+0.9
THZ	Tophouse	2.34	211	P		Pn	17 52 49.9	+2.5
SNGZ	Shannon Statio	2.40	67	P		Pn	17 52 49.8	+1.6
TGRZ	Tauranga	2.45	34	P		Pn	17 52 50.9	+2.1
MARZ	Manawahe	2.45	44	P		Pn	17 52 50.8	+2.0
OPRZ	Ohinepanea	2.49	40	P		Pn	17 52 51.3	+2.0
URZ	Urewera	2.52	54	P		Pn	17 52 50.3	+0.7
URZ	Urewera	2.52	54	P		Pn	17 52 50.3	+0.7
KNZ	Kokohu	2.56	74	P		Pn	17 52 51.3	+1.3
MHGZ	Mahia Peninsul	2.70	78	P		Pn	17 52 53.4	+1.6
AWAZ	Awhitu Peninsu	2.70	2	P		Pn	17 52 54.7	+2.9
MKAZ	Moumakai	2.71	11	P		Pn	17 52 53.9	+2.0
RIGZ	Rimuhau	2.73	68	P		Pn	17 52 53.6	+1.3
MWZ	Matawai	2.75	60	P		Pn	17 52 53.4	+0.9
KHZ	Kahutara	2.75	195	P		Pn	17 52 56.8	+0.4
KHZ	Kahutara	2.75	195	P		Pn	17 52 54.9	+2.6
KHZ	Kahutara	2.75	195	P		Pn	17 52 55.0	+2.7
DSZ	Denniston Nort	2.85	225	P		Pn	17 52 55.8	+2.1
TKGZ	Te Karaka	2.91	64	P		Pn	17 52 55.8	+1.4
MBAZ	Motutapu North	3.01	6	P		Pn	17 52 58.4	+2.7
WIAZ	Waiheke Island	3.01	10	P		Pn	17 52 58.2	+2.5
RUGZ	Raukumara Rang	3.05	55	P		Pn	17 52 56.8	+0.4
TWGZ	Tauwhareparae	3.13	61	P		Pn	17 52 58.6	+1.3
CNGZ	Carnagh Statio	3.14	67	P		Pn	17 52 59.0	+1.6
HAZ	Te Kaha	3.25	53	P		Pn	17 52 58.9	+0.2
PKGZ	Pakihiroa	3.37	57	P		Pn	17 53 01.2	+0.9
PUZ	Puketiti	3.37	61	P		Pn	17 53 01.0	+0.7
PUZ				S		Sn	17 53 38.5	-2.3
GVZ	Greta Valley S	3.39	199	P		Pn	17 53 02.5	+2.0
GVZ				S		Sn	17 53 39.8	-1.3
LTZ	Lake Taylor	3.46	209	P		Pn	17 53 03.1	+1.7
LTZ				S		Sn	17 53 40.5	-2.2
WMGZ	Waiomatatini S	3.61	59	P		Pn	17 53 04.1	+0.6
WMGZ				S		Sn	17 53 45.1	-1.2
AMCZ	Amberley	3.69	202	P		Pn	17 53 06.0	+1.7
AMCZ				S		Sn	17 53 47.6	-0.3
MXZ	Matakaoa Point	3.69	55	P		Pn	17 53 06.0	+1.5
MXZ	Matakaoa Point	3.69	55	S		Sn	17 53 48.7	+0.6
MXZ	Matakaoa Point	3.69	55	P		Pn	17 53 05.5	+1.1
MXZ				S		Sn	17 53 47.4	-0.7
INZ	Inchbonnie	3.75	217	P		Pn	17 53 07.1	+1.9
INZ				S		Sn	17 53 49.0	-0.5
OXZ	Oxford	4.01	207	P		Pn	17 53 09.7	+1.1
OXZ				S		Sn	17 53 52.4	-3.2
OKCZ	Okains Bay	4.10	195	P		Pn	17 53 11.1	+1.4
OKCZ				S		Sn	17 53 55.0	-2.7
MQZ	McQueen's Vall	4.18	199	P		Pn	17 53 11.5	+0.9
MQZ				S		Sn	17 53 56.2	-3.1
AKCZ	Akaroa Harbour	4.28	196	P		Pn	17 53 13.2	+1.2
AKCZ				S		Sn	17 53 59.7	-2.0
RACZ	Rakaia	4.34	203	P		Pn	17 53 13.9	+1.1
RACZ				S		Sn	17 54 00.6	-2.6
WVZ	Waitaha Valley	4.36	219	P		Pn	17 53 14.4	+1.3
WVZ				S		Sn	17 54 01.5	-2.1
MHCZ	Mount Hutt	4.36	209	P		Pn	17 53 14.2	+1.0
MHCZ				S		Sn	17 54 01.3	-2.5
OUZ	Omahuta	4.60	351	P		Pn	17 53 20.2	+3.9
OUZ	Omahuta	4.60	351	P		Pn	17 53 20.5	+4.2
WACZ	Wakanui South	4.63	205	P		Pn	17 53 17.7	+1.1
WACZ				S		Sn	17 54 07.6	-2.3
RPZ	Rata Peaks	4.72	212	P		Pn	17 53 20.2	+2.3
RPZ	Rata Peaks	4.72	212	P		Pn	17 53 19.8	+1.9
RPZ				S		Sn	17 54 09.6	-2.6
GCSZ	Gaunt Creek Bo	4.74	220	P		Pn	17 53 19.5	+1.4
GCSZ				S		Sn	17 54 09.6	-3.0
ARCZ	Arundel	4.87	210	P		Pn	17 53 20.9	+1.1
ARCZ				S		Sn	17 54 12.5	-3.1
FOZ	Fox Glacier	5.15	222	P		Pn	17 53 24.4	+0.9
FOZ				S		Sn	17 54 19.2	-3.2
TMZ	Timaru	5.30	208	P		Pn	17 53 26.3	+0.8
TMZ				S		Sn	17 54 23.6	-2.3
LBZ	Lake Benmore	5.63	213	P		Pn	17 53 30.6	+0.6
LBZ				S		Sn	17 54 30.3	-3.5
ODZ	Otahua Downs	6.00	207	P		Pn	17 53 36.0	+1.2
ODZ				S		Sn	17 54 40.3	-2.3
JCZ	Jackson Bay	6.07	223	P		Pn	17 53 36.4	+0.7
JCZ				S		Sn	17 54 41.6	-2.7
WKZ	Wanaka	6.50	217	P		Pn	17 53 42.2	+0.7
WKZ				S		Sn	17 54 51.2	-3.3
MSZ	Milford Sound	6.92	223	P		Pn	17 53 48.5	+1.4
MSZ				S		Sn	17 55 02.0	-2.7

IDC ***02*** *18:04:05.1±1.3, 9˚.21S×124˚.19E, h113km±12km, mb3.3/5, mbtmp3.8/10, Error ellipse: s-maj=28.0km s-min=16.6km az=70.0*

NEIC ***02*** *18:04:05.4±1.4, 9˚.20S±0˚.04×124˚.08E±0˚.07, h114km±5km, mb4.1/7, Error ellipse: s-maj=10.5km s-min=3.1km az=66.0*

DJA ***02*** *18:04:06.1±0.4, 9˚S±3˚×12˚4E±˚, h78km±6km, M4.2/14, mb4.3/6, MLv4.1/14*

ISC 02 18:04:05.0±0.6, 9˚22S±0˚05×124˚08E±0˚05, h100km, n52, σ2°13/58, mb3.7/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.56	161	P	Pn	18 04 24.4	+2.9
SOEI	Soe	0.56	161	S	Sn	18 04 38.8	+5.1
SOEI	Soe	0.56	161		Pn	18 04 24.1	+2.7
SOEI				Sn	Sn	18 04 35.8	+2.1
SOEI	Soe	0.56	161	P	Pn	18 04 24.2	+2.7
SOEI				S	Sn	18 04 37.2	+3.5
BATI	Baumata	1.06	203	P	Pn	18 04 27.5	+1.3
	101nm,0.3s,baz=60,slow=2.2,SNR=44						
BATI				S	Sn	18 04 45.2	+3.0
	262nm,0.3s,baz=90,slow=5.6,SNR=10						
MMRI	Maumere	1.91	288	P	Pn	18 04 37.7	+1.2
MMRI	Maumere	1.91	288	S	Sn	18 05 03.3	+2.8
MMRI	Maumere	1.91	288		Pn	18 04 37.2	+0.7
MMRI	Maumere	1.91	288	P	Pn	18 04 37.7	+1.2
WSI	Waingapu	3.76	263	P	Pn	18 05 03.5	+2.5
BBSI	Bau Bau	4.00	338	P	Pn	18 05 03.8	-0.5
WBSI	Waikabubak, Su	4.65	264	P	Pn	18 05 14.9	+1.9
BSSI	Bau Bau, Buton	4.69	310	P	Pn	18 05 14.6	+1.0
KKSI	Kolaka, Sulawe	5.56	334	P	Pn	18 05 25.0	-0.5
	0.1nm13nm,0.7s						
DBNI	Kabupaten Domp	5.75	277	P	Pn	18 05 30.4	+2.5
	0.1nm29nm,0.8s						
KAPI	Kappang	5.99	314	P	Pn	18 05 32.1	+0.8
	3.6nm,0.3s,baz=65,slow=17,SNR=1.7						
KAPI	Kappang	5.99	314	P	Pn	18 05 33.7	+2.4
PLAI	Plampang	6.24	273	P	Pn	18 05 36.8	+2.2
PLAI	Plampang	6.24	273	S	Sn	18 06 46.5	+1.9
PLAI	Plampang	6.24	273	P	Pn	18 05 37.0	+2.4
	0.2nm47nm,0.5s						
MTN	Manton Dam	7.80	118		Pn	18 05 56.1	+0.2
MTNI	Mataram	7.84	274	P	Pn	18 05 56.4	0.0
KNRA	Kununurra	7.88	145		Pn	18 05 57.5	+0.5
FITZ	Fitzroy Crossi	8.96	170	P	Pn	18 06 11.2	-0.3
	1.8nm,0.2s,baz=351,slow=10,SNR=51						
FITZ				S	Sn	18 07 47.5	-3.1
	28nm,0.5s,baz=213,slow=6.7,SNR=18						
FITZ	Fitzroy Crossi	8.96	170	P	Pn	18 06 12.3	+0.7
FITZ	Fitzroy Crossi	8.96	170	S	Sn	18 07 51.9	+1.2
FITZ	Fitzroy Crossi	8.96	170		Pn	18 06 12.8	+1.2
FITZ					Sn	18 07 49.4	-1.3
JAGI	Jajag, Banyuwa	9.84	274	Pn	Pn	18 06 23.4	-0.3
FAKI	Fak Fak	10.25	53	P	Pn	18 06 31.3	+2.0
TOLI2	Tolitoli	10.78	342	P	Pn	18 06 39.7	+3.3
SIJI	Sorong	10.95	41	P	Pn	18 06 38.1	-0.6
	10nm,0.8s,baz=191,slow=10,SNR=8.3						
WB0	Warramunga Arr	14.47	138	Pn	Pn	18 07 24.0	-1.1
WRA	Warramunga Arr	14.56	138	P	Pn	18 07 24.4	-1.8
	0.7nm,0.3s,baz=314,slow=15,SNR=17						
WRA				S	Sn	18 09 56.8	-10
	5.9nm,0.5s,baz=313,slow=23,SNR=14						
WR8	Warramunga Ar	14.67	138	Pn	Pn	18 07 27.3	-0.4
AS31	Alice Springs	17.16	148		P	18 07 58.5	-0.4
ASAR	Alice Springs	17.16	148	P	P	18 07 59.2	+0.3
	2.0nm,0.6s,baz=333,slow=13,SNR=26						
ASAR				S	Sn	18 11 03.1	-6.6
	1.6nm,0.4s,baz=324,slow=24,SNR=8.1						
AS01	Alice Springs	17.19	148	P	P	18 08 00.3	+1.2
QIS	Mount Isa	18.75	129	P	Pn	18 08 19.4	+1.6
COEN	Coen	19.28	106	P	Pn	18 08 23.9	-0.3
COEN	Coen	19.28	106	Pn	Pn	18 08 23.5	-0.7
COEN				IAmb	IAmb	18 08 44.2	
	comp=Z,14nm,1.1s						
MTSU	Mount Surprise	21.55	116	P	P	18 08 49.3	+2.8
BBOO	Buckleboo	25.96	156	P	P	18 09 31.2	+2.9
BBOO				IAmb	IAmb	18 09 32.3	
	comp=Z,38nm,1.4s						
CMAR	Chiang Mai Arr	37.04	318	P	P	18 11 06.0	+0.5
	comp=Z,0.3nm,0.4s,baz=149,slow=6.5,SNR=6.1						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	67.04	330	P	P	18 14 46.6	-0.9
	comp=Z,0.4nm,0.5s,baz=123,slow=6.9,SNR=6.0						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	67.04	330	P	P	18 14 46.3	-1.2
ZAA0	Zalesovo Array	71.13	337	P	P	18 15 10.3	-2.3
ZAA0				IAmb	IAmb	18 15 33.6	
	comp=Z,1.1nm,0.8s						
ZALV	Zalesovo Beam	71.13	337	P	P	18 15 10.2	-2.4
	comp=Z,0.3nm,0.4s,baz=66,slow=8.1,SNR=1.9						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	71.48	331	P	P	18 15 12.7	-2.1
	comp=Z,0.3nm,0.7s,baz=136,slow=4.9,SNR=4.4						
	comp=Z,0.3nm,0.7s						
KURK	Kurchatov	71.50	331	P	P	18 15 13.1	-1.8
KURK				IAmb	IAmb	18 15 14.3	
	comp=Z,1.4nm,0.9s						
ATKA	Atka Island	80.66	33	P	P	18 16 05.1	-1.6
QSPA	South Pole Qui	80.77	180	P	P	18 16 06.2	-1.2
	comp=Z,0.6nm,0.8s,baz=304,slow=3.6,SNR=6.4						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	80.77	180	P	P	18 16 06.2	-1.2
QSPA				IAmb	IAmb	18 16 21.8	
	comp=Z,4.2nm,1.4s						

IDC ***02*** *18:16:53.7±0.4, 8˚.09N×38˚.04W, h0km, mb4.4/28, mbtmp4.4/29, ML4.0/1, MS4.2/68, Error ellipse: s-maj=16.2km s-min=10.8km az=131.0*

NEIC ***02*** *18:16:56.0±2.3, 8˚.08N±0˚.10×38˚.09W±0˚.09, h10km±1km, mb4.9/215, Error ellipse: s-maj=16.4km s-min=15.3km az=334.0*

GFZ ***02*** *18:16:56.9±0.2, 8˚N±4˚×3˚8W±˚, h10km, M5.0/82, mb4.8/82, confirmed*

GFZ ***02*** *18:16:56.9, 8˚.22N×38˚.12W, h10km, Mw5.0/43, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr=3.86; Mθθ=1.56; Mφφ=2.29; Mrθ=0.74; Mθφ=-0.33; Mrφ=1.67; Fault plane solution: M0=3.84006×1016 NP1: φs=180.41697°, δ=58.98502°, λ=-79.36307°. NP2: φs=340.39027°, δ=32.61558°, λ=-107.06747°. Principal axes: T 2.7375, Plg=13.3710°, Azm=262.7070°; N 1.6521, Plg=9.1022°, Azm=354.8895°; P -4.3896, Plg=73.7287°, Azm=118.1814°;*

GCMT ***02*** *18:16:57.0±0.2, 8˚.21N±0˚.01×38˚.01W±0˚.01, h12km, MW5.0/117, Moment Tensor Solution. s49,c60; s117,c189; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=1.50±.09; Mθθ=0.71±.10; Mφφ=0.79±.09; Mrθ=0.18±.25; Mθφ=-3.81±.07; Mrφ=0.42±.24; Best double couple: M=3.86700×1016 NP1=φs=271.00000°, δ=79.00000°, λ=-171.00000°. NP2=φs=179.00000°, δ=81.00000°, λ=-11.00000°. Principal axes: T 4.5660, Plg2.0000°, Azm225.0000°; N -1.3960, Plg76.0000°, Azm322.0000°; P -3.1680, Plg14.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

INMG ***02*** *18:16:57.0±3.9, 8˚.42N×38˚.37W, h10km, M5.0, mb5.0, Ms4.4, #DIST_RANGE: DISTANT*

BGR ***02*** *18:16:57.3, 7˚.31N×37˚.19W, h33km, mb4.6*

ISC 02 18:16:56.3±0.3, 8˚.04N±0˚.05×38˚.14W±0˚.06, h16km, n481, σ1°25/368, mb4.9/186, MS4.3/72, 6C-9D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBPS	Pedro II - PI	12.78	195	eP	Pn	18 19 57.5	-0.2
RCBR	Riachuelo	13.95	171	Pn	Pn	18 20 11.2	-2.4
	0.8nm,0.3s,baz=353,slow=20,SNR=7.1						
RCBR				Sn	Sn	18 22 43.2	-5.1
	0.3nm,0.3s,baz=80,slow=23,SNR=2.2						
RCBR				LR	LR	18 24 13.6	
	comp=Z,266nm,19.7s,baz=13,slow=31						
	1.3nm,0.4s						
RCBR	Riachuelo	13.95	171	eP	Pn	18 20 14.9	+1.4
NBPV	Pedro Velho	14.64	169	eP	Pn	18 20 24.4	+1.5
MDP	Montagnes des	14.70	259	Pn	Pn	18 20 19.8	-4.0
	0.7nm,0.3s,baz=74,slow=14,SNR=5.2						
MDP				Sn	Sn	18 22 48.1	-18
	0.9nm,0.3s,baz=345,slow=2.0,SNR=4.3						
MDP				LR	LR	18 25 05.9	
	comp=Z,584nm,21.4s,baz=84,slow=33						
NBMA	Muriti-CE	15.31	182	eP	Pn	18 20 33.4	+1.4
PRPB	Parauapebas	18.30	220	eP	P	18 21 10.2	+0.3
SMTB	Santa Maria do	19.25	209	eP	P	18 21 21.5	+1.3
SDBA	SAO DESIDERIO	21.40	198	eP	P	18 21 44.8	+1.2
ITTB	Itaituba	21.45	236	eP	P	18 21 45.1	+1.0
NPGB	Novo Progresso	22.79	229	eP	P	18 21 59.1	+0.6
BOAV	Boa Vista	22.98	257		P	18 22 00.4	-0.1
BOAV	Boa Vista	22.98	257	eP	P	18 22 01.2	+0.7
H05S1	Guadeloupe/Mar	23.14	288	T	T	18 45 54.6	
	SNR=9.7						
CMC01	Camacan, BA	23.29	183	eP	P	18 22 05.1	+1.6
CMC01				eS	S	18 26 18.1	+2.6
JANB	Januaria	23.75	195	eP	P	18 22 09.4	+1.2
SNDB	Serra Nova Dou	23.80	214	eP	P	18 22 08.3	-0.3
H05N1	Guadeloupe/Mar	23.85	292	T	T	18 46 46.9	
	SNR=6.0						
GUA01	Guaratinga, BA	24.52	184	eP	P	18 22 17.3	+2.0
MACA	Manacapuru-AM	25.09	245	P	P	18 22 21.1	+0.6
MACA				IAmb	IAmb	18 22 34.5	
	comp=Z,30nm,1.0s						
MACA	Manacapuru-AM	25.09	245	eP	P	18 22 21.5	+1.0
BDFB	Brasilia	25.48	203	P	P	18 22 23.0	-1.1
	comp=Z,6.1nm,0.7s,baz=36,slow=10,SNR=22						
BDFB				LR	LR	18 32 08.7	
	comp=Z,892nm,19.1s,baz=17,slow=36						
	comp=Z,6.1nm,0.7s						
BDFB	Brasilia	25.48	203		P	18 22 24.8	+0.7
BDFB				IAmb	IAmb	18 22 38.5	
	comp=Z,34nm,1.0s						
CLDB	Colider	25.73	223	eP	P	18 22 27.5	+1.3
CLDB	Colider	25.73	223	P	P	18 22 27.6	+1.3
SJMB	Sao Joao De Ma	26.74	186	eP	P	18 22 36.6	+1.2
ARAG	Araguaiana, MT	27.20	210	eP	P	18 22 41.6	+2.0
H10N3	ASCENSION HYDR	28.35	123	T	T	18 52 30.6	
	baz=303,slow=75,SNR=85						
H10N2	ASCENSION HYDR	28.36	123	T	T	18 52 30.9	
	baz=303,slow=75,SNR=80						
H10N1	ASCENSION HYDR	28.37	123	T	T	18 52 32.1	
	baz=303,slow=75,SNR=82						
H10S3	ASCENSION HYDR	28.84	125	T	T	18 53 07.9	
	baz=282,slow=74,SNR=77						
H10S2	ASCENSION HYDR	28.86	125	T	T	18 53 07.2	
	baz=298,slow=74,SNR=82						
SJG	San Juan	29.02	293	LR	LR	18 33 29.5	
	comp=Z,369nm,18.6s,baz=92,slow=34						
CELP	Cerrillos	29.41	293	P	P	18 22 57.5	-1.8
CELP				IAmb	IAmb	18 23 10.1	
	comp=Z,21nm,1.0s						
SALV	Santo Antonio	29.46	216	eP	P	18 23 01.3	+1.6
PP1B	Ponte de Pedra	30.38	213	eP	P	18 23 09.5	+1.7
PTLB	Pontes e Lacer	31.27	222	P	P	18 23 16.0	+0.3
PTLB				IAmb	IAmb	18 24 23.5	
	comp=Z,30nm,1.9s						
PMOZ	Porto Moniz, M	31.38	35	eLR	LR	18 30 55.6	
PMOZ				i IAMs_20	IAMs_20	18 32 48.5	
	comp=Z,469nm,20.0s						
PMPST	Porto Santo, M	32.07	36	eP	P	18 23 23.1	+0.5
PMPST				i IAmb	IAmb	18 23 26.1	
	comp=Z,151nm,1.5s						
SDV	Santo Domingo	32.15	274	LR	LR	18 36 59.8	
	comp=Z,241nm,20.3s,baz=86,slow=37						
SIV	San Ignacio	32.95	224	P	P	18 23 32.4	+1.9
	comp=Z,3.2nm,0.6s,baz=66,slow=10.0,SNR=13						
SIV				LR	LR	18 36 27.0	
	comp=Z,1μm,18.5s,baz=70,slow=36						
	comp=Z,3.2nm,0.6s						
BANI	BANI	32.96	291	P	P	18 23 31.8	+1.2
DBIC	Dimbokro	33.03	90	P	P	18 23 28.6	-2.7
	comp=Z,4.4nm,0.7s,baz=254,slow=6.1,SNR=4.7						
DBIC				LR	LR	18 33 46.1	
	comp=Z,133nm,18.9s,baz=277,slow=31						
	comp=Z,4.4nm,0.7s						
DBIC	Dimbokro	33.03	90	P	P	18 23 28.6	-2.7
AQDB	Aquidauana	33.19	211	P	P	18 23 36.6	+4.1
AQDB				IAmb	IAmb	18 24 30.1	
	comp=Z,40nm,1.7s						
BBSD	Serra de San D	33.49	221	eP	P	18 23 36.5	+1.2
BDQN	Bodoquena, MS	33.71	213	eP	P	18 23 38.4	+1.3

TRCB	Terra Rica	33.77	205	P		P	18 23 37.9	+0.3
COIM	Forte Coimbra	33.85	215	eP		P	18 23 40.0	+1.7
SDDR	Presa de Saban	33.95	292	P		P	18 23 40.5	+1.2
AMBA	Amambai (Brazi	34.92	208	eP		P	18 23 48.6	+1.1
MURT	Porto Murtinho	35.16	213	eP		P	18 23 52.3	+2.8
ROSC	El Rosal	36.09	267	P		P	18 23 59.7	+1.5
	comp=Z,16nm,0.6s,baz=113,slow=13,SNR=5.9							
	comp=Z,16nm,0.6s							
ROSC	El Rosal	36.09	267	P		P	18 23 57.4	-0.8
ROSC				IAmb	IAmb		18 24 01.7	
	comp=Z,20nm,0.8s							
CZSB	Cruzeiro do Su	37.85	246	P		P	18 24 12.1	-0.6
CZSB	Cruzeiro do Su	37.85	246	eP		P	18 24 13.3	+0.5
LPAZ	La Paz	38.28	231	P		P	18 24 19.1	+2.1
	comp=Z,7.6nm,0.9s,baz=34,slow=5.1,SNR=16							
	comp=Z,7.6nm,0.9s							
LPAZ	La Paz	38.28	231			P	18 24 17.8	+0.7
LPAZ	La Paz	38.28	231	eP		P	18 24 17.6	+0.6
LPAZ				eS		S	18 30 12.7	+1.5
LPAZ	La Paz	38.28	231	P		P	18 24 19.2	+2.2
CPUP	Villa Florida	38.92	208	P		P	18 24 23.1	+1.6
	comp=Z,0.7nm,0.4s,baz=281,slow=5.2,SNR=2.1							
CPUP				LR	LR		18 40 52.6	
	comp=Z,1μm,18.1s,baz=28,slow=37							
	comp=Z,0.7nm,0.4s							
CPUP	Villa Florida	38.92	208	P		P	18 24 22.0	+0.5
TORD	Torodi Ar. Bea	39.45	79	P		P	18 24 25.0	-1.2
	comp=Z,32nm,0.8s,baz=274,slow=8.3,SNR=52							
	comp=Z,32nm,0.8s							
TORD	Torodi Ar. Bea	39.45	79			P	18 24 24.7	-1.4
TORD				IAmb	IAmb		18 24 27.9	
	comp=Z,23nm,0.9s							
MORF	Marmelete	39.54	38	eP		P	18 24 26.0	-0.7
MORF				IAMs_20	IAMs_20		18 36 06.9	
	comp=E,990nm,19.7s							
MORF	Marmelete	39.54	38	P		P	18 24 26.3	-0.3
MORF				IAmb	IAmb		18 24 27.6	
	comp=Z,22nm,0.8s							
MORF	Marmelete	39.54	38	eP		P	18 24 26.4	-0.3
MD31	MD31	39.56	47			P	18 24 27.0	+0.1
MD01	Midelt array s	39.56	47			P	18 24 26.2	-0.8
MDT	Midelt	39.64	47	LR		LR	18 40 00.8	
	comp=Z,444nm,18.1s,baz=244,slow=35							
PTEO	Sao Teotonio	39.65	38	eP		P	18 24 27.0	-0.5
PBDV	Barranco-do-Ve	39.94	39	eP		P	18 24 30.3	+0.3
PBDV				i IAmb	IAmb		18 24 47.0	
	comp=Z,44nm,1.7s							
MESJ	Messejana	40.14	38	eP		P	18 24 31.0	-0.6
MESJ				IAMs_20	IAMs_20		18 37 02.8	
	comp=Z,773nm,19.1s							
MESJ	Messejana	40.14	38	P		P	18 24 31.9	+0.3
MESJ	Messejana	40.14	38	eP		P	18 24 32.1	+0.5
PLOUS	Minas do Lousa	40.15	37	eP		P	18 24 30.0	-1.6
PLOUS				i IAmb	IAmb		18 24 36.5	
	comp=Z,32nm,1.4s							
PVAQ	Vaqueiros	40.17	39	P		P	18 24 31.2	-0.7
PVAQ	Vaqueiros	40.17	39	eP		P	18 24 32.0	+0.1
PVAQ				i IAmb	IAmb		18 24 41.9	
	comp=Z,35nm,2.0s							
PVAQ				eLR	LR		18 35 17.9	
PVAQ				i IAMs_20	IAMs_20		18 37 34.5	
	comp=Z,774nm,22.0s							
PMAFR	Mafra	40.25	36	eP		P	18 24 34.0	+1.5
PBEJ	Beja	40.48	38	eP		P	18 24 34.8	+0.3
PBEJ				i IAmb	IAmb		18 24 38.5	
	comp=Z,26nm,1.6s							
MOE	Montemor	40.51	37	eP		P	18 24 34.8	+0.2
MOE				i IAmb	IAmb		18 24 38.5	
	comp=Z,51nm,2.0s							
EVO	Evora	40.71	37	eP		P	18 24 36.5	+0.2
EVO				i IAmb	IAmb		18 24 39.4	
	comp=Z,45nm,1.9s							
PARRA	Arraiolos	40.88	37	eP		P	18 24 37.8	+0.1
PARRA				i IAmb	IAmb		18 24 41.8	
	comp=Z,42nm,1.5s							
PSBE	So Bento	40.90	35	eP		P	18 24 38.2	+0.3
PSBE				i IAmb	IAmb		18 24 43.3	
	comp=Z,73nm,1.7s							
PMTG	Montargil	40.94	36	eP		P	18 24 38.4	+0.2
PMTG				i IAmb	IAmb		18 24 42.0	
	comp=Z,43nm,1.5s							
PBAR	Barrancos	41.08	38	eP		P	18 24 39.5	+0.1
PBAR				i IAmb	IAmb		18 24 43.4	
	comp=Z,40nm,1.6s							
PSARD	Sardoal	41.33	36	eP		P	18 24 41.5	+0.1
PSARD				i IAmb	IAmb		18 24 46.1	
	comp=Z,45nm,2.0s							
PCAS	Casmilo, Conde	41.43	35	eP		P	18 24 42.5	+0.3
PMRV	Marv??o	41.66	37	eP		P	18 24 44.4	+0.2
PMRV				i IAmb	IAmb		18 24 49.2	
	comp=Z,52nm,1.5s							
PMRV				eLR	LR		18 35 54.3	
PMRV				i IAMs_20	IAMs_20		18 38 27

CEST Esterri de Car 48.79 39 P **P** **18 25 41.2 +0.4**
CEST IAmb IAmb 18 25 45.0
comp=Z,25nm,1.3s
S54A Dingess, Becki 48.94 314 P **P** **18 25 40.2 -1.8**
ZON Zonda 49.01 215 P **P** **18 25 42.4 -0.2**
V53A Saluda 49.15 311 **P** **18 25 44.6 +0.9**
V53A IAmb IAmb 18 25 47.9
comp=Z,12nm,1.1s
TRQ Mont Tremblant 49.21 327 **P** **18 25 44.1 +0.2**
PECO Prince Edward 49.22 323 P **P** **18 25 42.5 -1.4**
PECO IAmb IAmb 18 25 47.2
comp=Z,11nm,0.9s
Y52A Lilburn 49.44 308 P **P** **18 25 45.4 -0.4**
Y52A IAmb IAmb 18 25 50.3
comp=Z,17nm,1.1s
152A Waverly Hall 49.55 306 P **P** **18 25 46.7 0.0**
PAOC Oil Creek Stat 49.58 319 IAmb IAmb 18 25 50.5
comp=Z,9.1nm,0.9s
P53A Whipple 49.75 316 IAmb IAmb 18 25 52.0
comp=Z,12nm,0.9s
TKL Tuckaleechee C 49.87 310 LR LR 18 42 36.5
comp=Z,482nm,21.7s,baz=120,slow=31
N53A Lisbon 49.99 318 P **P** **18 25 49.8 -0.2**
N53A IAmb IAmb 18 25 58.9
comp=Z,30nm,1.4s
TZTN Tazewell 50.04 312 **P** **18 25 48.3 -2.2**
TZTN IAmb IAmb 18 26 13.3
comp=Z,23nm,1.2s
TZTN Tazewell 50.04 312 P **P** **18 25 52.7 +2.3**
O52A Adamsville 50.34 317 **P** **18 25 51.4 -1.2**
O52A IAmb IAmb 18 25 56.6
comp=Z,26nm,1.2s
CPCT Cooper Cave 50.36 310 **P** **18 25 51.3 -1.6**
CPCT IAmb IAmb 18 25 56.3
comp=Z,18nm,1.5s
W50A Signal Mountai 50.88 309 IAmb IAmb 18 26 03.6
comp=Z,16nm,1.0s
FPAL Fort Paine 50.88 308 **P** **18 25 57.1 +0.3**
Q51A Peebles 50.91 315 IAmb IAmb 18 26 00.8
comp=Z,16nm,0.9s
SADO Sadowa 50.96 323 LR LR 18 44 07.4
comp=Z,136nm,18.9s,baz=176,slow=32
MT08 Bocatoma Ro 51.18 215 IAmb IAmb 18 26 19.4
comp=Z,30nm,1.4s
T50A Nancy 51.18 312 IAmb IAmb 18 26 08.2
comp=Z,18nm,1.5s
KEST Kesra 51.30 50 P **P** **18 26 00.4 +0.4**
comp=Z,13nm,0.9s,baz=270,slow=3.6,SNR=11
KEST LR LR 18 47 54.9
comp=Z,772nm,19.1s,baz=233,slow=36
comp=Z,13nm,0.9s
KEST Kesra 51.30 50 **P** **18 25 59.3 -0.7**
KEST IAmb IAmb 18 26 03.2
comp=Z,20nm,1.1s
U49A Red Boiling Sp 51.70 311 IAmb IAmb 18 26 10.8
comp=Z,33nm,1.7s
SCHQ Schefferville 51.98 339 P **P** **18 26 05.0 +0.3**
comp=Z,2.4nm,0.5s,baz=143,slow=10,SNR=3.6
SCHQ LR LR 18 44 54.3
comp=Z,76nm,21.5s,baz=124,slow=32
comp=Z,2.4nm,0.5s
V48A Smith Brothers 52.22 309 IAmb IAmb 18 26 10.8
comp=Z,11nm,1.0s
BO02 Sierra Bellavi 52.60 214 P **P** **18 26 09.1 -0.6**
BO02 IAmb IAmb 18 26 27.9
comp=Z,18nm,1.1s
BO02 Sierra Bellavi 52.60 214 P **P** **18 26 12.4 +2.8**
T47A Sharon Grove 52.86 311 IAmb IAmb 18 26 15.5
comp=Z,28nm,1.2s
CALF Calern 52.94 40 P **P** **18 26 12.8 +0.7**
WVT Waverly 53.12 309 **P** **18 26 13.4 0.0**
WVT IAmb IAmb 18 26 16.8
comp=Z,15nm,1.1s
WVT Waverly 53.12 309 P **P** **18 26 14.1 +0.7**
ISO Isola 53.23 40 P **P** **18 26 14.8 +0.7**
BNI Bardonecchia 53.42 38 P **P** **18 26 13.6 -2.1**
ML02 Panimavida 53.67 214 **P** **18 26 18.2 +0.8**
ML02 Panimavida 53.67 214 P **P** **18 26 18.6 +1.2**
BI02 San Fabin de 54.26 213 **P** **18 26 21.7 0.0**
BI02 San Fabin de 54.26 213 P **P** **18 26 22.6 +0.9**
S44A Carbondale 54.71 311 IAmb IAmb 18 26 31.6
comp=Z,15nm,1.0s
EKA Eskdalemuir Ar 54.71 24 P **P** **18 26 23.4 -1.3**
comp=Z,2.8nm,0.8s,baz=224,slow=5.8,SNR=9.1
EKA LR LR 18 47 05.2
comp=Z,223nm,18.1s,baz=212,slow=33
comp=Z,2.8nm,0.8s
DOU Dourbes 54.92 32 *d*P **P** **18 26 24.2 -2.1**
UCC Uccle 55.20 31 *d*P **P** **18 26 28.2 0.0**
BNALP Bannalp 55.37 37 P **P** **18 26 30.5 +0.7**
WLF Walferdange 55.51 33 *d*P **P** **18 26 30.6 0.0**
VAE Valguarnera 55.72 50 LR LR 18 48 52.0
comp=Z,568nm,21.2s,baz=290,slow=34
CMIG Matias Romero 55.95 285 LR LR 18 47 21.9
comp=Z,64nm,21.1s,baz=52,slow=33
MEM Membach 55.95 32 *d*P **P** **18 26 33.3 -0.4**
comp=Z,9.2nm,1.0s
MEM *d*PcP **PcP** **18 27 33.7 +1.5**
MEM Membach 55.95 32 P **P** **18 26 33.7 0.0**
BFO Black Forest 56.04 36 **P** **18 26 33.5 -1.0**
BFO Black Forest 56.04 36 *e*P **P** **18 26 34.4 0.0**
comp=Z,7.7nm,0.9s,baz=240,slow=7.0
CESX Cesi 56.18 43 **P** **18 26 35.1 -0.5**
CESX IAmb IAmb 18 26 38.3
comp=Z,15nm,1.1s
H43A Windswept, Lux 56.21 319 IAmb IAmb 18 26 41.1
comp=Z,12nm,0.9s
DAVOX Davos/Dischmat 56.21 38 LR LR 18 47 06.5
comp=Z,814nm,21.3s,baz=260,slow=32
WHAR Wooly Hollow 56.34 307 IAmb IAmb 18 27 16.0
comp=Z,12nm,1.3s
FUORN Ofenpass-Fuorn 56.37 38 P **P** **18 26 38.5 +1.4**
MURB Monte Urbino 56.40 43 IAmb IAmb 18 26 47.3
comp=Z,14nm,0.9s
DAVA Damuels 56.45 37 *i* P **P** **18 26 37.4 -0.2**
comp=Z,12nm,1.1s,SNR=6.5
DAVA Damuels 56.45 37 P **P** **18 26 37.4 -0.2**
AQU L'Aquila 56.65 44 P **P** **18 26 41.0 +2.1**
comp=Z,18nm,0.8s
AQU L'Aquila 56.65 44 P **P** **18 26 39.5 +0.6**
comp=Z,18nm,0.8s
AQU L'Aquila 56.65 44 P **P** **18 26 39.6 +0.6**
FDMO Fiordimonte 56.69 43 IAmb IAmb 18 26 41.7
comp=Z,13nm,1.2s
I42A Draeger Farm, 56.72 318 IAmb IAmb 18 26 42.8
comp=Z,13nm,1.1s
FETA Feichten 56.84 38 *i* P **P** **18 26 39.3 -1.0**
comp=Z,8.2nm,1.0s
PLCA Paso Flores 56.98 209 P **P** **18 26 41.5 +0.2**
comp=Z,2.6nm,0.9s,baz=16,slow=4.8,SNR=3.5
PLCA LR LR 18 52 18.0
comp=Z,522nm,18.1s,baz=38,slow=37
comp=Z,2.6nm,0.9s
CGRP Cima Grappa 57.00 40 P **P** **18 26 40.5 -1.0**
TNS Taunus Mts 57.07 34 P **P** **18 26 42.1 +0.4**
RETA Reutte 57.07 38 *i* P **P** **18 26 41.3 -0.5**
comp=Z,11nm,0.9s
BUG Bochum--Univer 57.08 32 *e*P **P** **18 26 41.8 +0.1**
comp=Z,4.6nm,0.8s,baz=240,slow=7.0
R40A Maddies Statio 57.16 311 IAmb IAmb 18 26 48.0
comp=Z,12nm,1.0s
MIAR Mount Ida 57.17 306 P **P** **18 26 44.1 +1.4**
MOTA Moosalm 57.21 38 *i* P **P** **18 26 41.9 -1.1**
comp=Z,4.2nm,0.7s
SQTA Sankt Quirin 57.22 38 *i* P **P** **18 26 42.5 -0.5**
comp=Z,13nm,0.8s,SNR=7.6
WATA Walderalm 57.49 38 *i* P **P** **18 26 44.1 -0.8**
comp=Z,5.8nm,0.9s
WTTA Wattenberg 57.50 38 *i* P **P** **18 26 44.4 -0.6**
comp=Z,11nm,0.9s
WTTA Wattenberg 57.50 38 P **P** **18 26 44.2 -0.8**
L40A Anamosa 57.61 315 IAmb IAmb 18 27 07.6
comp=Z,18nm,1.3s
MARCO Tramutola 57.63 47 P **P** **18 26 48.3 +2.3**
S39A Bolivar 57.78 310 IAmb IAmb 18 26 49.9
comp=Z,12nm,1.0s
IBBN Ibbenburen 57.80 31 *e*P **P** **18 26 46.6 -0.2**
comp=Z,7.9nm,0.8s,baz=240,slow=7.0
ABTA Abfaltersbach 57.81 39 *i* P **P** **18 26 46.9 -0.2**
comp=Z,5.1nm,0.8s
BORG Borgarnes 57.85 8 LR LR 18 47 26.8
comp=Z,73nm,18.0s,baz=204,slow=32
FUSE Fusea 57.98 39 P **P** **18 26 47.6 -0.6**
TIP Timpagrande 57.99 49 P **P** **18 26 46.8 -1.7**
comp=Z,4.4nm,1.1s
GRC2 Grafenberg Arr 58.07 36 P **P** **18 26 48.8 0.0**

G40A Rib Lake 58.11 319 IAmb IAmb 18 26 53.9
comp=Z,15nm,1.4s
SABO M.te Sabotino 58.18 40 **P** **18 26 48.8 -0.9**
SABO IAmb IAmb 18 26 51.9
comp=Z,19nm,1.0s
GRC3 Grafenberg Arr 58.20 36 P **P** **18 26 49.4 -0.3**
LESA Schwarzleotal 58.21 38 *i* P **P** **18 26 49.1 -0.7**
comp=Z,6.7nm,0.8s,SNR=9.2
GRC1 Grafenberg Arr 58.21 36 P **P** **18 26 49.3 -0.5**
GRC4 Grafenberg Arr 58.26 36 P **P** **18 26 50.1 -0.1**
DRE Drenchia 58.29 40 P **P** **18 26 50.2 -0.3**
ACOM Acomizza, Ital 58.36 39 P **P** **18 26 51.3 +0.2**
GRFO Grafenberg 58.36 35 P **P** **18 26 51.0 +0.2**
GRA1 Grafenberg Arr 58.36 35 **P** **18 26 49.3 -1.5**
GRA1 IAmb IAmb 18 26 60.0
comp=Z,17nm,0.9s
GRA1 Grafenberg Arr 58.36 35 P **P** **18 26 51.0 +0.2**
GRF Grafenberg Arr 58.36 35 *e*P **P** **18 26 50.4 -0.5**
comp=Z,12nm,0.8s,baz=240,slow=7.0
GRA2 Grafenberg Arr 58.43 35 P **P** **18 26 51.5 +0.2**
GRA3 Grafenberg Arr 58.45 35 P **P** **18 26 51.6 +0.2**
KBA Koelnbreinsper 58.47 39 *i* P **P** **18 26 51.0 -0.8**
comp=Z,9.3nm,0.8s
KBA Koelnbreinsper 58.47 39 P **P** **18 26 51.4 -0.4**
MYKA Terra Mystica 58.47 39 *i* P **P** **18 26 51.2 -0.5**
comp=Z,5.5nm,0.7s
P38A Dawn 58.49 312 IAmb IAmb 18 26 55.9
comp=Z,9.7nm,0.9s
GTTG Gottingen 58.57 33 *e*P **P** **18 26 52.7 +0.5**
comp=Z,6.6nm,0.8s,baz=240,slow=7.0
RETH Rethem/Aller, 58.86 32 P **P** **18 26 56.6 +2.4**
BIOA Bad Ischl, Aus 58.91 38 *i* P **P** **18 26 53.4 -1.3**
comp=Z,14nm,1.1s
ROTZ Rotzenmuhle 58.97 36 *e*P **P** **18 26 54.8 -0.3**
comp=Z,1.7nm,1.0s,baz=240,slow=7.0
OBKA Obir 59.00 40 *i* P **P** **18 26 55.6 +0.2**
comp=Z,7.0nm,0.8s,SNR=9.9
OBKA Obir 59.00 40 P **P** **18 26 55.7 +0.3**
TBO Thunder Bay 59.01 323 P **P** **18 26 56.3 +1.0**
TBO IAmb IAmb 18 27 03.3
comp=Z,19nm,1.5s
MOX Moxa 59.04 35 *e*P **P** **18 26 55.9 +0.4**
comp=Z,3.9nm,0.9s,baz=240,slow=7.0
MOX Moxa 59.04 35 P **P** **18 26 55.8 +0.2**
WET Wettzell 59.08 37 *e*P **P** **18 26 55.2 -0.6**
comp=Z,3.5nm,0.9s,baz=240,slow=7.0
WET Wettzell 59.08 37 P **P** **18 26 55.5 -0.3**
NKC Novy Kostel 59.32 35 *e*P **P** **18 26 57.7 +0.2**
NKC AMS AMS 18 44 50.0
comp=Z,200nm,19.1s
NKC Novy Kostel 59.32 35 P **P** **18 26 57.9 +0.4**
MOA Molln 59.36 38 *i* P **P** **18 26 57.0 -0.8**
comp=Z,9.6nm,1.2s,SNR=6.1
SOKA Soboth 59.37 40 *i* P **P** **18 26 57.1 -0.9**
comp=Z,14nm,1.5s,SNR=6.4
NEUB Neuenburg 59.39 34 *e*P **P** **18 26 57.9 0.0**
comp=Z,11nm,0.8s,baz=240,slow=7.0
NEUB Neuenburg 59.39 34 P **P** **18 26 57.8 -0.1**
WIMM Wimmelburg 59.39 34 P **P** **18 26 58.1 +0.2**
TANN Tannenbergstha 59.41 35 *e*P **P** **18 26 58.5 +0.3**
comp=Z,8.5nm,1.1s,baz=240,slow=7.0
TANN Tannenbergstha 59.41 35 P **P** **18 26 58.4 +0.3**
GEC2 GERESS Array S 59.44 37 *e*P **P** **18 26 57.8 -0.6**
comp=Z,2.9nm,0.9s,baz=240,slow=7.0
GERES GERESS Array B 59.44 37 P **P** **18 26 57.2 -1.2**
comp=Z,2.0nm,0.8s,baz=254,slow=5.0,SNR=15
GERES LR LR 18 49 18.5
comp=Z,110nm,21.9s,baz=206,slow=33
comp=Z,2.0nm,0.8s
GERES GERESS Array B 59.44 37 P **P** **18 26 56.9 -1.5**
KHC Kasperske Hory 59.48 37 *e*P **P** **18 26 58.4 -0.3**
KHC AMS AMS 18 46 20.0
comp=Z,400nm,28.1s
KHC Kasperske Hory 59.48 37 P **P** **18 26 58.0 -0.7**
comp=Z,7.7nm,1.4s
KHC Kasperske Hory 59.48 37 P **P** **18 26 58.5 -0.3**
SFJD Kangerlussuaq 59.49 354 LR LR 18 48 48.1
comp=Z,52nm,18.8s,baz=168,slow=32
FLTG Flechtingen 59.64 33 *e*P **P** **18 26 59.5 -0.1**
comp=Z,4.4nm,0.9s,baz=240,slow=7.0
FRB Frobisher Bay 59.72 345 LR LR 18 49 45.0
comp=Z,88nm,18.9s,baz=139,slow=33
ARSA Arzberg 59.90 39 *i* P **P** **18 27 00.6 -1.0**
comp=Z,5.1nm,0.9s
ARSA Arzberg 59.90 39 P **P** **18 27 01.0 -0.6**
BSEG Bad Segeberg 59.97 31 *e*P **P** **18 27 02.0 +0.1**
comp=Z,12nm,0.9s,baz=240,slow=7.0
BSEG Bad Segeberg 59.97 31 P **P** **18 27 02.2 +0.3**
ZVC Zvikov 59.98 37 *e*P **P** **18 27 01.6 -0.4**
ZVC AMS AMS 18 46 00.0
comp=Z,300nm,25.3s
HSKC Hora Svate Kat 60.05 35 P **P** **18 27 02.4 -0.1**
CLL Collm 60.12 34 *e*P **P** **18 27 04.7 +1.8**
comp=Z,4.0nm,0.9s,baz=240,slow=7.0
CLL Collm 60.12 34 P **P** **18 27 03.8 +0.8**
OK048 Pawnee Station 60.28 307 **P** **18 27 03.4 -0.9**
CONA Conrad Observa 60.38 39 *i* P **P** **18 27 04.5 -0.3**
comp=Z,8.0nm,1.3s
PRU Pruhonice 60.42 36 *e*P **P** **18 27 05.6 +0.6**
PRU Pruhonice 60.42 36 P **P** **18 27 04.7 -0.3**
BRG Berggiesshubel 60.46 35 *e*P **P** **18 27 04.9 -0.4**
BRG Amp 18 27 08.1
comp=Z,3.8nm,0.9s
BRG Berggiesshubel 60.46 35 P **P** 18 27 14.1 +8.8
BRG Amp 18 27 18.2
comp=Z,4.8nm,1.0s
BRG Berggiesshubel 60.46 35 S **S** **18 35 25.0 +5.1**
RONA Rosalia, Austr 60.56 39 *e*P **P** **18 27 05.8 -0.3**
comp=Z,9.7nm,1.0s
WINA Alland / Wiene 60.58 39 *i* P **P** **18 27 06.0 -0.2**
SNR=7.4
PVCC Panska Ves 60.66 36 P **P** **18 27 07.3 +0.6**
TREC Trest 60.69 37 P **P** **18 27 06.6 -0.3**
PDG Podgorica 60.76 46 P **P** **18 27 08.5 +1.0**
BRDY Brady 61.01 301 IAmb IAmb 18 27 12.0
comp=Z,8.8nm,1.0s
KRUC Moravsky 61.15 38 *e*P **P** **18 27 09.2 -0.8**
KRUC Moravsky 61.15 38 P **P** **18 27 07.9 -2.1**
MPLH Magyarpolny 61.15 40 P **P** **18 27 10.0 0.0**
comp=Z,37nm,1.1s
MPLH Magyarpolny 61.15 40 P **P** **18 27 10.2 +0.2**
TSUM Tsumeb 61.20 117 LR LR 18 49 17.0
comp=Z,213nm,18.1s,baz=296,slow=32
VRAC Vranov 61.36 38 LR LR 18 50 03.1
comp=Z,339nm,21.9s,baz=242,slow=32
VRAC Vranov 61.36 38 *e*P **P** **18 27 10.3 -1.2**
VRAC Vranov 61.36 38 P **P** **18 27 11.5 0.0**
WMOK Wichita Mounta 61.41 305 P **P** **18 27 11.6 -0.5**
MODS Modra-Piesok 61.42 39 P **P** **18 27 11.9 0.0**
MODS Modra-Piesok 61.42 39 *e*P **P** **18 27 11.3 -0.6**
UPC Upice 61.49 36 P **P** **18 27 12.8 +0.4**
MORH Mrgy, Hungar 61.53 41 P **P** **18 27 12.4 -0.2**
comp=Z,5.3nm,1.2s
MORH Mrgy, Hungar 61.53 41 P **P** **18 27 12.8 +0.2**
DPC Dobruska-Polom 61.61 36 AMS AMS 18 47 20.0
comp=Z,200nm,22.8s
DPC Dobruska-Polom 61.61 36 P **P** **18 27 13.3 +0.1**
comp=Z,7.1nm,1.5s
DPC Dobruska-Polom 61.61 36 P **P** **18 27 13.6 +0.4**
KRLC Kraliky 61.77 37 P **P** **18 27 14.8 +0.6**
KSP Ksiaz 61.79 36 P **P** **18 27 14.6 +0.3**
comp=Z,7.0nm,1.7s
ECSD EROS Data Cent 61.90 316 IAmb IAmb 18 27 17.7
comp=Z,10nm,1.1s
ECSD EROS Data Cent 61.90 316 P **P** **18 27 15.9 +0.6**
COP Copenhagen 61.92 30 *i* P **P** **18 27 17.9 +2.8**
COP IAmb IAmb 18 27 22.9
comp=Z,95nm,1.0s
EPLO Experimental L 62.02 323 **P** **18 27 15.7 -0.2**
MORC Moravsky Berou 62.11 37 *e*P **P** **18 27 14.5 -2.1**
APMT Aspermont 62.26 303 IAmb IAmb 18 27 20.6
comp=Z,7.2nm,0.9s
OZNA Ozona 62.77 301 IAmb IAmb 18 27 28.5
comp=Z,14nm,1.4s
AGMN Agassiz Nation 62.84 321 IAmb IAmb 18 27 29.1
comp=Z,11nm,1.2s
AGMN Agassiz Nation 62.84 321 P **P** **18 27 20.8 -0.6**
PSZ Piszkesteto 62.90 40 P **P** **18 27 18.2 -3.7**
PSZ Piszkesteto 62.90 40 **P** **18 27 20.4 -1.6**
PSZ IAmb IAmb 18 27 24.2
comp=Z,11nm,1.0s
PSZ Piszkesteto 62.90 40 P **P** **18 27 22.3 +0.4**
KNT Kendrikon 63.05 48 P **P** **18 27 22.7 -0.2**
SCO Scoresbysund 63.23 6 *i* P **P** **18 27 22.5 -1.1**
SCO IAmb IAmb 18 27 32.9
comp=Z,5.2nm,1.2s
SOH Sokhos 63.31 48 P **P** **18 27 25.4 +0.7**
BZS Buzias 63.32 43 P **P** **18 27 25.4 +0.7**
BZS Buzias 63.32 43 P **P** **18 27 25.3 +0.7**
IDI Anoyia 63.43 55 LR LR 18 54 30.5
comp=Z,324nm,21.9s,baz=290,slow=36
SAND Sanderson 63.52 299 IAmb IAmb 18 27 29.6
comp=Z,11nm,1.3s
ULM Lac du Bonnet 63.52 323 P **P** **18 27 24.8 -1.0**
comp=Z,8.8nm,0.9s,baz=104,slow=7.5,SNR=11
ULM LR LR 18 50 53.5
comp=Z,133nm,20.2s,baz=92,slow=32
comp=Z,8.8nm,0.9s
ULM Lac du Bonnet 63.52 323 **P** **18 27 24.9 -1.0**
SRS Serrai 63.55 48 P **P** **18 27 27.0 +0.8**
OJC Ojcow 63.63 37 P **P** **18 27 27.3 +0.7**
comp=Z,12nm,1.6s
OJC Ojcow 63.63 37 P **P** **18 27 27.5 +0.9**
GZR Gura Zlata 64.04 43 P **P** **18 27 30.1 +0.7**
NB2 NORSAR Subarra 64.19 24 P **P** **18 27 30.0 -0.2**
comp=Z,27nm,1.2s,baz=237,slow=6.9
NB2 NORSAR Subarra 64.19 24 P **P** **18 27 30.0 -0.2**
NOA NORSAR Array B 64.19 24 P **P** **18 27 30.0 -0.2**
comp=Z,6.7nm,0.9s,baz=236,slow=6.8,SNR=13
NOA LR LR 18 53 26.3
comp=Z,217nm,18.2s,baz=235,slow=34
comp=Z,6.7nm,0.9s
STHS Stebnicka Huta 64.24 39 *e*P **P** **18 27 33.3 +2.6**
DEV Deva 64.26 43 P **P** **18 27 31.7 +0.9**
SUMG Summit 64.48 360 P **P** **18 27 32.9 +0.6**
SUMG Summit 64.48 360 *i* P **P** **18 27 31.0 -1.3**
SUMG IAmb IAmb 18 27 42.4
comp=Z,15nm,1.0s
TRPA Tarpa 64.66 40 P **P** **18 27 33.0 -0.3**
KOLS Kolonicke sedl 64.73 39 *e*P **P** **18 27 33.7 -0.2**
HFS Hagfors 64.75 26 P **P** **18 27 33.1 -0.6**
comp=Z,8.1nm,0.9s,baz=243,slow=15,SNR=7.6
HFS LR LR 18 50 47.3
comp=Z,199nm,21.9s,baz=234,slow=32
comp=Z,8.1nm,0.9s
TX31 Lajitas Ar. Si 64.79 299 IAmb IAmb 18 27 42.5
comp=Z,11nm,1.6s
TXAR Lajitas Array 64.79 299 P **P** **18 27 34.9 +0.1**
comp=Z,1.4nm,0.5s,baz=104,slow=6.7,SNR=29
TXAR LR LR 18 57 39.5
comp=Z,26nm,18.9s,baz=96,slow=38
comp=Z,1.4nm,0.5s
TXAR Lajitas Array 64.79 299 P **P** **18 27 33.7 -1.1**
ALPN Alpine 64.86 300 IAmb IAmb 18 27 38.8
comp=Z,6.2nm,0.9s
RTBA Rita Blanca 64.87 306 IAmb IAmb 18 27 59.1
comp=Z,11nm,1.3s
RDO Rodhopi 64.99 48 P **P** **18 27 35.6 -0.1**
ARR Arges 65.29 44 P **P** **18 27 38.8 +1.1**
ARR Arges 65.29 44 P **P** **18 27 38.4 +0.7**
KARP Karpathos 65.30 55 P **P** **18 27 38.8 +1.0**
JMIC Jan Mayen 65.58 10 LR LR 18 48 39.3
comp=Z,106nm,21.1s,baz=228,slow=29
VOIR 65.59 44 P **P** **18 27 40.3 +0.7**
VOIR 65.59 44 P **P** **18 27 40.8 +1.1**
comp=Z,6.8nm,0.9s
VOIR 65.59 44 P **P** **18 27 40.8 +1.1**
VHRN Van Horn 66.06 300 IAmb IAmb 18 28 02.5
comp=Z,15nm,1.6s
MLR Muntele Rosu 66.22 44 LR LR 18 56 55.0
comp=Z,242nm,18.4s,baz=269,slow=36
MLR Muntele Rosu 66.22 44 P **P** **18 27 45.8 +2.1**
MLR Muntele Rosu 66.22 44 P **P** **18 27 43.9 +0.2**
comp=Z,24nm,1.6s
MLR Muntele Rosu 66.22 44 P **P** **18 27 44.5 +0.7**
BUR08 Bucovina Ar. S 66.24 41 IAmb IAmb 18 27 58.1
comp=Z,11nm,1.1s
BURAR Bucovina Array 66.25 41 **P** **18 27 43.2 -0.6**
T25A Trinidad 66.30 307 IAmb IAmb 18 28 09.5
comp=Z,20nm,1.5s
MNTX Cornudas Mount 66.48 301 P **P** **18 27 45.8 +0.3**
COVR Voineasa-Covas 66.48 43 P **P** **18 27 45.1 -0.2**
ISR Istrita 66.55 44 P **P** **18 27 46.2 +0.5**
comp=Z,24nm,0.8s
VRI Vrincioaia 66.84 43 P **P** **18 27 48.3 +0.8**
VRI Vrincioaia 66.84 43 P **P** **18 27 47.3 -0.2**
comp=Z,14nm,0.9s
VRI Vrincioaia 66.84 43 P **P** **18 27 47.8 +0.2**
TESR Tescani 66.93 43 P **P** **18 27 48.0 -0.1**
comp=Z,13nm,2.0s
TESR Tescani 66.93 43 P **P** **18 27 47.4 -0.7**
KMPD K-Podol'skiy 67.29 41 P **P** **18 27 49.0 -1.3**
ISCO Idaho Springs 67.62 310 IAmb IAmb 18 27 57.2
comp=Z,9.1nm,1.1s
ISCO Idaho Springs 67.62 310 P **P** **18 27 55.4 +2.4**
RNPP5 Staryi Chortor 67.62 38 P **P** **18 27 52.3 0.0**
ANMO Albuquerque 67.68 304 LR LR 18 53 55.0
comp=Z,386nm,21.1s,baz=96,slow=33
SORM Soroca 68.42 41 P **P** **18 27 56.9 -0.5**
LUBAR Lubar, Ukraine 68.44 39 P **P** **18 27 56.4 -1.1**
FFC Flin Flon 68.50 326 P **P** **18 27 56.9 -1.0**
FFC Flin Flon 68.50 326 P **P** **18 27 59.0 +1.1**
MI28 Mi28,Pidlybu 68.63 38 P **P** **18 27 58.0 -0.7**
SUR Sutherland 69.01 129 LR LR 18 51 49.9
comp=Z,168nm,18.1s,baz=302,slow=30
MBAR Mbarara 69.18 94 LR LR 18 55 37.9
comp=Z,101nm,20.0s,baz=304,slow=34
AK19 Malin Array Si 69.41 39 P **P** **18 28 03.0 -0.5**
AK20 Malin Array Si 69.41 39 P **P** **18 28 02.9 -0.7**
DAG Danmarks Havn 69.50 5 P **P** **18 28 03.6 -0.1**
DAG Danmarks Havn 69.50 5 *i* P **P** **18 28 01.4 -2.3**
DAG IAmb IAmb 18 28 24.8
comp=Z,228nm,4.1s
KIEV Kiev 69.53 39 P **P** **18 28 04.1 -0.2**
AKASG Malin Array Be 69.54 39 P **P** **18 28 03.5 -0.9**
comp=Z,6.4nm,0.9s,baz=264,slow=5.8,SNR=19
AKASG LR LR 18 55 49.8
comp=Z,269nm,21.2s,baz=260,slow=34
comp=Z,6.4nm,0.9s
AKASG Malin Array Be 69.54 39 P **P** **18 28 03.1 -1.3**
AKASG IAmb IAmb 18 28 06.3
comp=Z,14nm,1.6s
AKBB Malin Array Si 69.54 39 IAmb IAmb 18 28 05.9
comp=Z,11nm,1.0s
AKBB Malin Array Si 69.54 39 P **P** **18 28 04.2 -0.1**
LSZ Lusaka 69.67 110 **P** **18 28 04.7 -1.2**
LSZ IAmb IAmb 18 28 16.0
comp=Z,17nm,1.3s
LSZ Lusaka 69.67 110 P **P** **18 28 07.5 +1.6**
NEEM North Greenlan 69.71 357 *i* P **P** **18 28 04.0 -1.4**
NEEM IAmb IAmb 18 28 11.9
comp=Z,95nm,2.4s
PV18 Skein Mesa, Pa 69.97 308 IAmb IAmb 18 28 14.3
comp=Z,13nm,1.2s
LBTB Lobatse 70.17 120 LR LR 18 52 58.1
comp=Z,251nm,20.1s,baz=284,slow=31
KKUL Konya-Kulu 70.29 51 P **P** **18 28 10.2 +0.8**
LPIG La Paz 70.52 293 LR LR 18 59 04.3
comp=Z,60nm,20.0s,baz=87,slow=36
FINES FINESS Array B 70.80 27 P **P** **18 28 11.8 -0.1**
comp=Z,5.4nm,1.0s,baz=178,slow=5.2,SNR=7.7
FINES LR LR 18 55 43.3
comp=Z,210nm,20.7s,baz=252,slow=33
comp=Z,5.4nm,1.0s
FINES FINESS Array B 70.80 27 P **P** **18 28 10.2 -1.7**
BRTR Keskin Array B 70.90 51 P **P** **18 28 13.0 -0.1**
comp=Z,3.7nm,0.8s,baz=257,slow=4.9,SNR=9.0
BRTR LR LR 18 59 39.2
comp=Z,90nm,21.9s,baz=251,slow=36
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 70.90 51 **P** **18 28 12.2 -0.8**
BW06 Boulder Array 70.95 312 IAmb IAmb 18 28 16.8
comp=Z,17nm,1.9s
PD31 Pinedale Array 70.95 312 IAmb IAmb 18 28 16.8
comp=Z,14nm,1.8s
PDAR Pinedale Array 70.95 312 P **P** **18 28 14.4 +0.9**
comp=Z,0.3nm,0.3s,baz=69,slow=3.2,SNR=4.2
PDAR LR LR 18 55 22.8
comp=Z,254nm,21.7s,baz=121,slow=32
comp=Z,0.3nm,0.3s
PDAR Pinedale Array 70.95 312 P **P** **18 28 13.8 +0.3**
RLMT Red Lodge 71.04 315 IAmb IAmb 18 28 17.8
comp=Z,9.9nm,1.1s
MATP Matopo 71.33 115 LR LR 18 56 14.1
comp=Z,88nm,18.4s,baz=286,slow=33
EIL Elat 71.39 61 LR LR 18 58 12.6
comp=Z,313nm,22.0s,baz=270,slow=35
HRFI Mount Harif 71.47 61 P **P** **18 28 19.1 +2.5**
BSUT Blindstream Ca 71.62 310 IAmb IAmb 18 28 24.7
comp=Z,7.3nm,0.9s
LOHW Long Hollow 71.81 313 IAmb IAmb 18 28 22.3

comp=Z,9.8nm,1.1s
MMAI Mount Meron Ar 71.88 58 P **P 18 28 20.4 +1.4**
comp=Z,0.2nm,0.3s,baz=229,slow=13,SNR=1.9
MMAI LR LR 19 00 20.5
comp=Z,146nm,20.4s,baz=280,slow=36
comp=Z,0.2nm,0.3s
AHID Auburn Hatcher 72.08 312 P **P 18 28 21.9 +1.6**
FXWY Fox Creek 72.12 313 IAmb IAmb 18 28 24.2
comp=Z,9.9nm,1.1s
TCUT Toone Canyon 72.16 311 IAmb IAmb 18 28 24.5
comp=Z,16nm,1.1s
HWUT Hardware Ranch 72.32 311 IAmb IAmb 18 28 26.7
comp=Z,15nm,0.9s
HWUT Hardware Ranch 72.32 311 P **P 18 28 22.6 +0.9**
YHL Hebgen Lake 72.36 314 IAmb IAmb 18 28 47.6
comp=Z,18nm,1.1s
BNN Bunyan 72.53 52 IAmb IAmb 18 28 26.1
comp=Z,12nm,1.3s
MTPU Mount Pierson 72.53 307 IAmb IAmb 18 28 35.3
comp=Z,16nm,1.5s
ESPZ Base Esperanza 72.67 189 P **P 18 28 24.0 +1.0**
ESPZ IAmb IAmb 18 28 28.4
comp=Z,6.5nm,0.8s
ANDN Andirin 72.85 53 P **P 18 28 27.4 +2.6**
ASF Jabal al Asfar 73.11 59 LR LR 19 01 44.0
comp=Z,55nm,20.7s,baz=249,slow=37
DUG Dugway, Tooele 73.16 309 P **P 18 28 27.5 +0.8**
LODK Lodwar 73.20 89 **P 18 28 26.7 -0.6**
LODK Lodwar 73.20 89 P **P 18 28 28.6 +1.3**
BGU Big Grassy Mou 73.37 310 IAmb IAmb 18 28 32.0
comp=Z,14nm,1.0s
DLMT Dillon 73.41 315 IAmb IAmb 18 28 32.5
comp=Z,17nm,1.1s
ARCES ARCESS Array B 73.46 19 P **P 18 28 27.0 -0.7**
comp=Z,4.9nm,0.9s,baz=253,slow=5.6,SNR=4.7
ARCES LR LR 18 55 55.1
comp=Z,117nm,20.5s,baz=248,slow=32
comp=Z,4.9nm,0.9s
ARCES ARCESS Array B 73.46 19 P **P 18 28 26.6 -1.1**
BCYI Bear Canyon 73.89 314 IAmb IAmb 18 28 54.9
comp=Z,19nm,1.8s
NOR Nord 74.16 3 P **P 18 28 31.4 -0.2**
NOR Nord 74.16 3 *i*P **P 18 28 29.0 -2.6**
NOR IAmb IAmb 18 28 39.1
comp=Z,4.9nm,0.6s
ARPR Arapgir-MALATY 74.48 52 P **P 18 28 37.0 +2.6**
HLID Hailey 74.56 313 P **P 18 28 35.7 +0.8**
OBN Obninsk 74.70 35 LR LR 18 59 59.6
comp=Z,270nm,19.5s,baz=200,slow=35
EDM Edmonton 74.75 323 IAmb IAmb 18 28 38.8
comp=Z,16nm,0.9s
KELT Kelkit 75.23 51 P **P 18 28 41.6 +2.7**
SPITS Spitsbergen Ar 75.26 10 LR LR 18 53 50.0
comp=Z,156nm,21.9s,baz=229,slow=30
LDM Libby Dam 75.53 318 IAmb IAmb 18 28 44.2
comp=Z,16nm,0.9s
PLID Pearl Lake 75.79 314 IAmb IAmb 18 29 04.8
comp=Z,21nm,1.8s
PFO Pinyon Flats O 75.89 303 LR LR 19 02 08.8
comp=Z,135nm,18.2s,baz=122,slow=36
YKA Yellowknife Ar 76.67 332 P **P 18 28 44.6 -1.6**
comp=Z,1.4nm,0.6s,baz=104,slow=5.7,SNR=6.5
YKA LR LR 18 58 53.7
comp=Z,123nm,20.5s,baz=120,slow=33
comp=Z,1.4nm,0.6s
YKA Yellowknife Ar 76.67 332 P **P 18 28 45.2 -1.0**
BMO Blue Mountains 76.70 314 IAmb IAmb 18 29 13.4
comp=Z,19nm,1.8s
NEW Newport 76.72 318 LR LR 18 59 39.1
comp=Z,107nm,20.4s,baz=96,slow=33
NVAR Mina Array Bea 77.36 308 LR LR 19 02 18.9
comp=Z,96nm,18.3s,baz=98,slow=35
LHV Little Huntoon 77.52 307 IAmb IAmb 18 29 16.1
comp=Z,13nm,1.3s
KIV Kislovodsk 77.87 47 P **P 18 28 54.0 +0.4**
KIV IAmb IAmb 18 28 57.0
comp=Z,21nm,1.3s
KIV Kislovodsk 77.87 47 P **P 18 28 56.5 +2.9**
KVAR Kislovodsk Arr 77.88 47 LR LR 19 02 51.8
comp=Z,66nm,21.4s,baz=357,slow=36
EPOS Posof 77.89 49 P **P 18 28 56.7 +2.9**
KBZ Khabaz 78.02 47 P **P 18 28 54.4 +0.2**
comp=Z,5.7nm,0.9s,baz=289,slow=1.2,SNR=12
KBZ LR LR 19 06 19.1
comp=Z,72nm,18.1s,baz=294,slow=38
comp=Z,5.7nm,0.9s
BEKR Beckworth 78.94 309 **P 18 28 59.2 -0.5**
GNI Garni 79.44 51 LR LR 19 04 19.3
comp=Z,57nm,21.9s,baz=292,slow=36
YBH Yreka Blue Hor 80.66 311 LR LR 19 01 40.7
comp=Z,226nm,21.7s,baz=107,slow=33
BELG Belogornoye 81.10 38 LR LR 19 05 36.2
comp=Z,168nm,18.5s,baz=275,slow=36
VNA2 Neumayer--Watz 81.45 170 P **P 18 29 16.5 +4.3**
KIRV Kirov 81.92 32 LR LR 19 03 31.7
comp=Z,224nm,20.0s,baz=270,slow=34
SNAA Sanae 82.88 169 P **P 18 29 20.2 +0.4**
comp=Z,1.6nm,0.7s,baz=320,slow=5.8,SNR=7.3
comp=Z,1.6nm,0.7s
SNAA Sanae 82.88 169 **P 18 29 20.6 +0.8**
SNAA IAmb IAmb 18 29 30.8
comp=Z,8.5nm,1.1s
BBB Bella Bella 83.70 322 LR LR 19 03 55.4
comp=Z,125nm,20.7s,baz=108,slow=34
DLBC Dease Lake 84.20 328 LR LR 19 05 19.5
comp=Z,97nm,18.2s,baz=42,slow=34
INK Inuvik 84.58 338 LR LR 19 04 27.7
comp=Z,224nm,19.5s,baz=75,slow=34
INK Inuvik 84.58 338 P **P 18 29 30.4 +1.8**
BELA Belgrano 2 85.80 179 **P 18 29 34.2 -0.3**
E28M Babbage River 86.71 339 IAmb IAmb 18 29 47.5
comp=Z,19nm,2.0s
H29M Whitestone 86.81 336 IAmb IAmb 18 29 49.3
comp=Z,9.8nm,1.1s
K29M Barlow Dome 86.96 334 IAmb IAmb 18 29 58.7
comp=Z,14nm,1.6s
ARTI Arti 86.97 34 LR LR 19 05 38.3
comp=Z,354nm,21.4s,baz=272,slow=34
ARTI Arti 86.97 34 **P 18 29 42.4 +1.7**
AKTO Aktyubinsk 87.77 40 LR LR 19 07 28.5
comp=Z,124nm,21.8s,baz=38,slow=35
C27K Jago River 87.88 340 IAmb IAmb 18 30 03.7
comp=Z,10nm,1.2s
D25K Kavik River 88.87 340 IAmb IAmb 18 30 00.1
comp=Z,6.9nm,0.9s
ELIB Princess Elisa 89.12 164 *d*P P 18 29 59.4 +8.7
comp=Z,3.1nm,1.1s
AB31 Akbulak array 89.21 40 IAmb IAmb 18 29 55.1
comp=Z,7.0nm,1.1s
ABKAR Akbulak array 89.21 40 **P 18 29 52.7 +1.2**
ILAR Eielson Array 90.62 336 P **P 18 29 57.4 -0.4**
comp=Z,0.7nm,0.7s,baz=63,slow=5.9,SNR=8.0
ILAR LR LR 19 08 12.2
comp=Z,94nm,20.1s,baz=87,slow=34
comp=Z,0.7nm,0.7s
ILAR Eielson Array 90.62 336 P **P 18 29 56.6 -1.2**
NRIK Noril'sk 94.31 17 P **P 18 30 12.9 -1.8**
comp=Z,1.8nm,0.4s,baz=117,slow=9.6,SNR=2.3
NRIK LR LR 19 10 53.9
comp=Z,76nm,20.9s,baz=296,slow=34
comp=Z,1.8nm,0.4s
NRIK Noril'sk 94.31 17 P **P 18 30 12.9 -1.8**
NRIK IAmb IAmb 18 30 16.5
comp=Z,4.8nm,1.1s
KDAK Kodiak Island 95.87 331 LR LR 19 10 33.0
comp=Z,132nm,21.5s,baz=62,slow=34
TIXI Tiksi 100.01 4 LR LR 19 08 22.7
comp=Z,64nm,21.1s,baz=1.5,slow=31
SONM Songino Array 116.15 26 PKP **PKiKP 18 35 39.2 0.0**
comp=Z,0.2nm,0.4s,baz=48,slow=2.1,SNR=1.9
LZH Lanzhou 123.40 37 *e*PKP **PKPdf 18 35 52.3 -1.2**
LZH pPKP pPKPdf 18 35 58.5 +0.5
PZH PanZhiHua 128.09 47 PKP **PKPdf 18 36 01.6 -1.1**
CMAR Chiang Mai Arr 130.14 58 PKP **PKPdf 18 36 05.3 -1.3**
comp=Z,0.3nm,0.3s,baz=314,slow=2.3,SNR=1.7
NJ2 Nanjing 134.48 28 *e*P **PKPdf 18 36 13.4 -1.1**
NJ2 pmax pmax
comp=Z,14nm,1.1s
H01W2 Cape Leeuwin H 143.09 140 T T 21 16 33.2
baz=238,slow=75,SNR=5.9
H01W3 Cape Leeuwin H 143.11 140 T T 21 16 31.3
baz=238,slow=75,SNR=4.2
H01W1 Cape Leeuwin H 143.11 140 T T 21 16 37.6
baz=238,slow=75,SNR=5.8
ASAR Alice Springs 162.69 155 PKPab **PKPab 18 37 46.8 -0.1**
comp=Z,1.5nm,1.0s,baz=217,slow=4.8,SNR=6.4
ASAR Alice Springs 162.69 155 **PKPab 18 37 44.0 -2.8**
WRA Warramunga Arr 166.10 149 PKPab **PKPab 18 38 00.4 -1.5**
comp=Z,0.6nm,0.9s,baz=216,slow=4.8,SNR=3.0

*KRNET **02** 18:24:34.9±0.1,39.°69N×73.°94E, h21km, mb3.4*
*SOME **02** 18:24:35.8, 39.°73N×74.°00E, h5km*
*NNC **02** 18:24:38.5±1.3, 39.°79N×74.°02E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=9.7km s-min=5.1km az=176.0
ISC 02 18:24:34.8±1.2, 39.°72N±0.°05×73.°96E±0.°02, h10km, n49,
σ1§99/82, 33C-21D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SFK	**Sufi-Kurgan**	**0.46**	**310**	⇑*i*P		**Pg**	**18 24 44.2**	**+0.3**
SFK				⇑*i*S		**Sg**	**18 24 51.0**	**+0.9**
OHH	**Osh**	**1.21**	**312**	⇓*e*P		**Pn**	**18 24 57.2**	**-0.7**
OHH				⇓*i*S		**Sb**	**18 25 13.6**	**-0.1**
ARSB	**Arslanbob**	**1.77**	**335**	⇓*i*P		**Pb**	**18 25 07.4**	**-0.1**
ARSB				⇓*i*S		**Sg**	**18 25 31.0**	**-0.8**
JNKS	**Jany-Kuch**	**1.84**	**43**	⇑*i*P		**Pb**	**18 25 08.8**	**0.0**
JNKS				⇑*i*S		**Sg**	**18 25 33.7**	**-0.4**
NRN	**Naryn**	**2.31**	**41**	⇓*i*P		**Pb**	**18 25 14.8**	**-2.0**
NRN				⇓*i*S		**Sb**	**18 25 44.0**	**-1.6**
BTK	**Batken**	**2.44**	**279**	⇓*i*P		**Pn**	**18 25 16.4**	**+1.5**
BTK				⇓*i*S		**Sn**	**18 25 46.4**	**+1.5**
UCH	**Uchtor**	**2.54**	**9**	P		**Pb**	**18 25 21.7**	**+0.9**
	SNR=36							
UCH	**Uchtor**	**2.54**	**9**	⇓*i*P		**Pb**	**18 25 18.6**	**-2.2**
UCH				⇓*i*S		**Sb**	**18 25 50.5**	**-1.8**
ARK	**Arkit**	**2.58**	**324**	⇑*i*P		**Pn**	**18 25 18.4**	**+1.7**
ARK				⇑*i*S		**Sn**	**18 25 50.3**	**+2.1**
TRKS	**Terek-Say**	**2.81**	**311**	⇑*i*P		**Pn**	**18 25 20.8**	**+0.8**
TRKS				⇑*i*S		**Sn**	**18 25 54.4**	**+0.4**
GAR	**Garm**	**2.92**	**257**	⇑*e*P		**Pn**	**18 25 22.8**	**+1.4**
GAR				⇑*e*S		**Sn**	**18 25 57.7**	**+1.1**
AAK	**Ala-Archa**	**2.94**	**8**	P		**Pg**	**18 25 31.3**	**0.0**
	SNR=13							
AAK	**Ala-Archa**	**2.94**	**8**	⇓Pg		**Pg**	**18 25 29.9**	**-1.4**
	2.2nm,0.4s							
AAK				⇑Lg		Lg	18 26 10.7	
	16nm,0.6s							
AAK	**Ala-Archa**	**2.94**	**8**	⇑*i*P		**Pn**	**18 25 23.9**	**+2.1**
AAK				⇑*i*S		**Sn**	**18 25 59.8**	**+2.5**
EKS2	**Erkin-Say**	**2.94**	**357**	P		**Pg**	**18 25 30.6**	**-0.7**
	SNR=5.3							
EKS2	**Erkin-Say**	**2.94**	**357**	⇑*i*P		**Pn**	**18 25 23.7**	**+1.9**
EKS2				⇑*i*S		**Sn**	**18 25 59.7**	**+2.4**
MNAS	**Manas**	**2.98**	**339**	⇓*i*P		**Pn**	**18 25 24.2**	**+1.9**
MNAS				⇓*i*S		**Sn**	**18 26 00.2**	**+2.0**
KBK	**Karagaybulak**	**3.03**	**14**	P		**Pb**	**18 25 30.3**	**+1.4**
	SNR=13							
KBK	**Karagaybulak**	**3.03**	**14**	⇑*i*P		**Pn**	**18 25 25.2**	**+2.2**
KBK				⇑*i*S		**Sn**	**18 26 01.8**	**+2.4**
MRKS	**Merke**	**3.08**	**350**	Pg		**Pg**	**18 25 32.2**	**-1.6**
	17nm,0.5s							
MRKS				Lg		Lg	18 26 12.8	
	27nm,0.2s							
MRKS	**Merke**	**3.08**	**350**	*e*P		**Pg**	**18 25 32.2**	**-1.6**
	17nm,0.5s							
MRKS				*e*S		**Sg**	**18 26 12.8**	**-0.8**
	29nm,0.4s							
FRU1	**Bishkek**	**3.13**	**9**	⇓*e*P		**Pn**	**18 25 26.7**	**+2.4**
FRU1				⇓*i*S		**Sn**	**18 26 04.4**	**+2.6**
BOOM	**Boomskoye usch**	**3.15**	**28**	⇓*i*P		**Pn**	**18 25 26.7**	**+2.1**
BOOM				⇓*i*S		**Sn**	**18 26 04.8**	**+2.5**
CHMS	**Chumysh**	**3.33**	**10**	P		**Sg**	**18 26 23.5**	**+1.7**
	SNR=5.3							
CHMS	**Chumysh**	**3.33**	**10**	⇑*i*P		**Pn**	**18 25 29.2**	**+2.2**
CHMS				⇑*i*S		**Sn**	**18 26 08.7**	**+2.0**
KDJ	**Kajisay**	**3.43**	**44**	⇓*i*P		**Pn**	**18 25 30.8**	**+2.3**
KDJ				⇓*e*S		**Sn**	**18 26 11.5**	**+2.2**
TKM2	**Tokmak 2**	**3.43**	**20**	⇓*i*P		**Pn**	**18 25 30.7**	**+2.2**
TKM2				⇓*i*S		**Sn**	**18 26 11.6**	**+2.3**
TARG	**Taragay, Kyrgy**	**3.54**	**54**	⇑*i*P		**Pn**	**18 25 32.5**	**+2.2**
TARG				⇑*i*S		**Sn**	**18 26 14.5**	**+2.1**
USP	**Ospenovka**	**3.57**	**6**	P		**Pg**	**18 25 41.6**	**-1.6**
	SNR=11							
USP	**Ospenovka**	**3.57**	**6**	⇑*e*P		**Pn**	**18 25 32.5**	**+2.2**
USP				⇑*i*S		**Sn**	**18 26 14.6**	**+2.0**
KST	**Kastek**	**3.65**	**24**	Pg		**Pg**	**18 25 43.5**	**-1.2**
	4.4nm,0.5s							
KST				Lg		Lg	18 26 32.4	
	31nm,0.6s							
KST	**Kastek**	**3.65**	**24**	*e*P		**Pg**	**18 25 43.5**	**-1.2**
	4.4nm,0.5s							
KST				*e*S		**Sg**	**18 26 32.4**	**+0.4**
	31nm,0.7s							
SGDS	**Sogindy**	**3.77**	**7**	Pg		**Pg**	**18 25 45.0**	**-2.0**
	14nm,0.3s							
SGDS				Lg		Lg	18 26 36.2	
	13nm,0.3s							
IUG	**luzhnay**	**3.84**	**310**	Pg		**Pg**	**18 25 47.9**	**-0.6**
	36nm,0.3s							
IUG				Lg		Lg	18 26 39.5	
	56nm,0.6s							
IUG	**luzhnay**	**3.84**	**310**	*e*P		**Pg**	**18 25 47.9**	**-0.6**
	37nm,0.3s							
IUG				*e*S		**Sg**	**18 26 39.5**	**+1.3**
	57nm,0.4s							
TNSS	**Tian-Shan**	**4.00**	**33**	Pg		**Pg**	**18 25 49.4**	**-2.1**
	2.6nm,0.4s							
TNSS				Lg		Lg	18 26 44.1	
	3.3nm,0.6s							
TNSS	**Tian-Shan**	**4.00**	**33**	*e*P		**Pg**	**18 25 49.4**	**-2.1**
	2.6nm,0.4s							
TNSS				*e*S		**Sg**	**18 26 42.4**	**-1.1**
	3.3nm,0.6s							
ANVS	**Anan'yevo**	**4.14**	**41**	⇑*e*P		**Pn**	**18 25 40.4**	**+2.1**
ANVS				⇑*e*S		**Sn**	**18 26 28.9**	**+2.0**
KRBS	**Karabastau**	**4.18**	**17**	Pg		**Pg**	**18 25 52.7**	**-2.1**
	4.5nm,0.2s							
KRBS				Lg		Lg	18 26 48.1	
	37nm,0.6s							
KRBS	**Karabastau**	**4.18**	**17**	*e*P		**Pg**	**18 25 52.7**	**-2.1**
	4.9nm,0.3s							
KRBS				*e*S		**Sg**	**18 26 48.1**	**-0.8**
	38nm,0.7s							
KOTS	**Kotyrbulak**	**4.24**	**33**	Pg		**Pg**	**18 25 54.2**	**-1.8**
	8.8nm,0.5s							
KOTS				Lg		Lg	18 26 51.5	
	35nm,0.8s							
KOTS	**Kotyrbulak**	**4.24**	**33**	*e*P		**Pg**	**18 25 54.2**	**-1.8**
	4.5nm,0.2s							
KOTS				*e*S		**Sg**	**18 26 50.2**	**-0.6**
	35nm,0.8s							
KK31	**Karatay Array**	**4.26**	**324**	Pn		**Pn**	**18 25 43.8**	**+4.0**
	0.6nm,0.3s,baz=144,slow=12,SNR=15							
KK31				⇑Pg		Pg	18 25 56.3	-0.2
	1.4nm,0.3s,baz=146,slow=17,SNR=7.5							
KK31				⇑Sn		**Sb**	**18 26 36.8**	**-4.6**
	2.3nm,0.3s							
KK31				⇑Lg		Lg	18 26 52.4	
	3.7nm,0.3s,baz=144,slow=28,SNR=3.6							
PRZ	**Przheval'sk**	**4.34**	**49**	⇓*e*P		**Pn**	**18 25 43.3**	**+2.2**
PRZ				⇑*e*S		**Sn**	**18 26 33.6**	**+1.7**
BRLS	**Boroldaу**	**4.54**	**318**	Pg		**Pg**	**18 25 58.2**	**-3.6**
	5.9nm,0.2s							
BRLS				Lg		Lg	18 26 58.3	
	11nm,0.3s							
BRLS	**Boroldaу**	**4.54**	**318**	*e*P		**Pg**	**18 25 58.2**	**-3.6**
	2.5nm,0.2s							
BRLS				*e*S		**Sg**	**18 26 57.2**	**-3.3**
	12nm,0.4s							
ARXS	**Arharly**	**5.33**	**31**	Pg		**Pg**	**18 26 13.5**	**-3.5**
	2.7nm,0.3s							
ARXS				Lg		Lg	18 27 24.2	
	7.1nm,0.5s							
ARXS	**Arharly**	**5.33**	**31**	*e*P		**Pg**	**18 26 13.5**	**-3.5**
	2.7nm,0.3s							
ARXS				*e*S		**Sg**	**18 27 24.2**	**-1.9**
	6.5nm,0.5s							
PDGK	**Podgornoye**	**5.50**	**47**	⇓Pn		Pn	18 26 02.3	+5.4
	3.1nm,1.2s							
PDGK				⇑Pg		**Pg**	**18 26 18.4**	**-1.7**
	3.6nm,0.7s							
PDGK				⇓Lg		Lg	18 27 27.6	
	12nm,0.8s							

*IDC **02** 18:36:32.8±1.6, 19.°27S×179.°62W, h562km±35km, mb2.8/3, mbtmp3.8/4, Error ellipse: s-maj=124.0km s-min=21.2km az=175.0*
*NEIC **02** 18:36:33.3±0.9, 19.°4S±0.°2×179.°6W±0.°1, h558km±13km, mb4.1/9, Error ellipse: s-maj=32.8km s-min=11.4km az=158.0*
ISC 02 18:36:32.3±1.1, 19.°4S±0.°2×179.°6W±0.°1, h550km, n15,
σ0§74/15, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MSVF	**Nonsavu**	**2.76**	**307**	P		**P**	**18 37 47.2**	**+1.1**
	20nm,0.7s,baz=116,slow=11,SNR=11							
MSVF	**Nonsavu**	**2.76**	**307**	P		**P**	**18 37 46.8**	**+0.7**
RTZ	**Ruatahuna**	**19.36**	**188**	P		**P**	**18 40 23.0**	**+0.5**
PPT	**Papeete**	**28.55**	**91**	P		**P**	**18 41 44.0**	**-0.3**
	59nm,0.9s,baz=69,slow=8.6,SNR=2.9							
COEN	**Coen**	**35.99**	**273**	P		**P**	**18 42 47.4**	**-0.2**
COEN				IAmb	IAmb		18 43 04.6	
	comp=Z,17nm,1.1s							
STKA	**Stephens Creek**	**36.90**	**243**	P		**P**	**18 42 54.7**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=106,slow=18,SNR=1.1							
	comp=Z,0.9nm,0.6s							
INKA	**Innaminka**	**37.12**	**249**	P		**P**	**18 42 56.9**	**+0.2**
INKA				IAmb	IAmb		18 43 11.2	
	comp=Z,8.8nm,1.5s							
BBOO	**Buckleboo**	**41.67**	**242**	P		**P**	**18 43 33.8**	**+0.5**
WR8	**Warramunga Arr**	**43.09**	**261**	P		**P**	**18 43 44.3**	**-0.2**
WR8				IAmb	IAmb		18 44 10.4	
	comp=Z,9.6nm,1.4s							
WB0	**Warramunga Arr**	**43.21**	**262**	P		**P**	**18 43 45.3**	**-0.2**
WB0				IAmb	IAmb		18 44 01.9	
	comp=Z,6.4nm,1.2s							
WRA	**Warramunga Arr**	**43.24**	**261**	P		**P**	**18 43 45.0**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=98,slow=8.2,SNR=14							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**43.24**	**261**	P		**P**	**18 43 45.0**	**-0.8**
AS31	**Alice Springs**	**43.28**	**256**	P		**P**	**18 43 46.2**	**+0.2**
ASAR	**Alice Springs**	**43.28**	**256**	P		**P**	**18 43 46.5**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=90,slow=8.1,SNR=27							
	comp=Z,0.8nm,0.4s							
FITZ	**Fitzroy Crossi**	**51.65**	**262**	P		**P**	**18 44 47.2**	**-1.6**
FITZ				IAmb	IAmb		18 45 09.7	
	comp=Z,2.4nm,1.4s							

*IDC **02** 18:57:53.5±0.9, 53.°68S×134.°65W, h0km, mb4.0/9, mbtmp4.0/9, MS4.1/38, Error ellipse: s-maj=29.8km s-min=23.0km az=145.0*
*NEIC **02** 18:57:55.4±1.9, 53.°6S±0.°2×134.°66W±0.°06, h10km±1km, mb4.4/9, Error ellipse: s-maj=28.6km s-min=6.2km az=357.0*
*GCMT **02** 18:57:59.5±0.2, 53.°79S±0.°02×134.°42W±0.°02, h21km±1km, MW5.0/100, Moment Tensor Solution. s36,c38; s100,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.02±.16; $M_{\theta\theta}$-0.01±.14; $M_{\phi\phi}$-0.01±.13; $M_{r\theta}$0.33±.23; $M_{\theta\phi}$3.61±.11; $M_{\phi r}$1.54±.27; Best double couple: M_o3.93400×10^{16} NP1:ϕ_s91.00000°, δ67.00000°, λ4.00000°. NP2:ϕ_s359.00000°, δ86.00000°, λ157.00000°. Principal axes: T 4.0430, Plg19.0000°, Azm313.0000°; N -0.2180, Plg67.0000°, Azm171.0000°; P -3.8250, Plg13.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 18:57:55.4±1.0, 53.°7S±0.°2×134.°6W±0.°2, h10km, n69,
σ1§21/18, mb4.2/10, MS4.1/38, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TBI	**Tubuai**	**32.28**	**334**	*e*LR		LR	19 12 15.9	
	1μm,26.8s							
TBI				*e*LR		LR	19 12 28.6	
	4μm,28.0s							
TBI				*e*T		T	19 38 16.2	
	2.8nm,0.1s							
RPN	**Rapa Nui**	**32.42**	**45**	LR		LR	19 14 15.7	
	comp=Z,718nm,18.8s,baz=210,slow=30							
VNDA	**Vanda**	**32.65**	**201**	P		**P**	**19 04 28.0**	**+1.1**
	1.0nm,0.9s,baz=84,slow=10.0,SNR=4.7							
VNDA				LR		LR	19 14 00.5	
	comp=Z,270nm,21.3s,baz=86,slow=30							
	1.0nm,0.9s							
VNDA	**Vanda**	**32.65**	**201**	P		**P**	**19 04 28.0**	**+1.1**
VNDA				IAmb	IAmb		19 04 49.6	
	comp=Z,7.2nm,1.4s							
PMSA	**Palmer Station**	**35.82**	**136**	LR		LR	19 16 06.3	
	comp=Z,555nm,18.0s,baz=255,slow=30							
URZ	**Urewera**	**36.16**	**275**	LR		LR	19 15 58.8	
	comp=Z,466nm,20.6s,baz=141,slow=30							
RPZ	**Rata Peaks**	**36.39**	**263**	LR		LR	19 16 03.8	
	comp=Z,99nm,20.1s,baz=153,slow=30							
QSPA	**South Pole Qui**	**36.52**	**180**	P		**P**	**19 05 01.3**	**+0.6**
	comp=Z,2.5nm,1.1s,baz=209,slow=0.9,SNR=7.7							
QSPA				LR		LR	19 18 05.6	
	comp=Z,176nm,19.6s,baz=71,slow=33							
	comp=Z,2.5nm,1.1s							
QSPA	**South Pole Qui**	**36.52**	**180**	P		**P**	**19 05 00.9**	**+0.2**
QSPA				IAmb	IAmb		19 05 36.2	
	comp=Z,9.5nm,1.4s							
MG05	**Puerto Natales**	**36.66**	**113**	P		**P**	**19 05 02.1**	**+0.3**
USHA	**Ushuaia**	**37.39**	**119**	LR		LR	19 16 21.9	
	comp=Z,334nm,19.8s,baz=193,slow=30							
RAR	**Rarotonga**	**37.65**	**320**	LR		LR	19 16 11.8	
	comp=Z,456nm,19.6s,baz=154,slow=29							
PPT2	**Papeete2**	**37.83**	**336**	*e*LR		LR	19 15 07.4	
	comp=Z,665nm,27.0s							
PPT2				*e*LR		LR	19 15 13.0	
	comp=Z,833nm,25.2s							
PPT	**Papeete**	**37.85**	**336**	LR		LR	19 16 12.3	
	comp=Z,390nm,21.3s,baz=144,slow=29							
VAH	**Vaihoa**	**39.67**	**340**	*e*T		T	19 47 34.0	
	comp=Z,16nm,0.2s							
RAO	**Raoul Island**	**39.72**	**290**	LR		LR	19 18 13.2	
	comp=Z,184nm,19.6s,baz=63,slow=31							
BELA	**Belgrano 2**	**40.22**	**161**	P		**P**	**19 05 31.8**	**+0.3**
BELA				IAmb	IAmb		19 05 38.6	
	comp=Z,6.1nm,1.1s							
H03S2	**Juan Fernandez**	**43.56**	**86**	T		T	19 52 24.8	
	baz=223,slow=74,SNR=11							
H03S1	**Juan Fernandez**	**43.57**	**86**	T		T	19 52 27.2	
	baz=223,slow=74,SNR=9.4							
H03S3	**Juan Fernandez**	**43.58**	**86**	T		T	19 52 25.5	
	baz=223,slow=74,SNR=9.6							
H03N3	**Juan Fernandez**	**43.83**	**86**	T		T	19 52 47.5	
	baz=226,slow=72,SNR=40							
H03N2	**Juan Fernandez**	**43.83**	**86**	T		T	19 52 51.1	
	baz=226,slow=72,SNR=64							
H03N1	**Juan Fernandez**	**43.84**	**86**	T		T	19 52 43.9	
	baz=226,slow=72,SNR=44							
PLCA	**Paso Flores**	**43.93**	**100**	LR		LR	19 19 23.6	
	comp=Z,327nm,21.5s,baz=229,slow=29							
AFI	**Afiamalu**	**49.26**	**309**	LR		LR	19 23 29.1	
	comp=Z,181nm,18.3s,baz=144,slow=31							
SNAA	**Sanae**	**50.45**	**162**	P		**P**	**19 06 50.2**	**-2.5**
	comp=Z,1.1nm,0.7s,baz=254,slow=4.5,SNR=4.2							
SNAA				LR		LR	19 25 58.1	
	comp=Z,272nm,21.0s,baz=310,slow=33							
	comp=Z,1.1nm,0.7s							
SNAA	**Sanae**	**50.45**	**162**	P		**P**	**19 06 54.3**	**+1.6**
SNAA				IAmb	IAmb		19 07 21.0	
	comp=Z,5.9nm,1.4s							
MSVF	**

H01W2	**Cape Leeuwin H**	**73.72**	**233**	T		T	20 30 54.5	
	baz=144,slow=76,SNR=26							
H01W3	**Cape Leeuwin H**	**73.73**	**233**	T		T	20 30 44.4	
	baz=144,slow=76,SNR=21							
WRA	**Warramunga Arr**	**74.80**	**257**	P		**P**	**19 09 34.2**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=138,slow=5.5,SNR=5.7							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**74.80**	**257**	P		**P**	**19 09 35.0**	**-0.9**
PMG	**Port Moresby**	**75.50**	**274**	LR		LR	19 39 17.6	
	comp=Z,85nm,18.4s,baz=150,slow=33							
BDFB	**Brasilia**	**75.56**	**97**	LR		LR	19 39 50.2	
	comp=Z,237nm,20.1s,baz=152,slow=33							
JTS	**Las Juntas de**	**76.31**	**51**	LR		LR	19 35 22.2	
	comp=Z,288nm,20.2s,baz=217,slow=30							
CMIG	**Matias Romero**	**78.28**	**39**	LR		LR	19 37 40.4	
	comp=Z,77nm,20.5s,baz=178,slow=30							
LPIG	**La Paz**	**80.24**	**22**	LR		LR	19 38 17.9	
	comp=Z,94nm,18.1s,baz=192,slow=30							
FITZ	**Fitzroy Crossi**	**81.24**	**252**	LR		LR	19 43 36.2	
	comp=Z,143nm,18.4s,baz=171,slow=34							
TXAR	**Lajitas Array**	**86.90**	**27**	P		**P**	**19 10 41.8**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=194,slow=4.9,SNR=5.8							
TXAR				LR		LR	19 43 23.8	
	comp=Z,63nm,18.5s,baz=162,slow=31							
	comp=Z,0.6nm,0.8s							
H11S2	**WAKE ISLAND Hy**	**87.69**	**306**	T		T	20 47 55.4	
	baz=144,slow=76,SNR=20							
H11S3	**WAKE ISLAND Hy**	**87.70**	**306**	T		T	20 48 00.5	
	baz=144,slow=76,SNR=21							
H11S1	**WAKE ISLAND Hy**	**87.71**	**306**	T		T	20 48 11.3	
	baz=144,slow=76,SNR=17							
PFO	**Pinyon Flats O**	**88.32**	**15**	LR		LR	19 42 08.2	
	comp=Z,61nm,19.4s,baz=144,slow=30							
H11N3	**WAKE ISLAND Hy**	**88.64**	**307**	T		T	20 48 57.5	
	baz=148,slow=76,SNR=13							
H11N1	**WAKE ISLAND Hy**	**88.65**	**307**	T		T	20 49 00.7	
	baz=148,slow=76,SNR=18							
H11N2	**WAKE ISLAND Hy**	**88.66**	**307**	T		T	20 49 01.7	
	baz=148,slow=76,SNR=14							
MDP	**Montagnes des**	**89.32**	**81**	LR		LR	19 44 50.7	
	comp=Z,81nm,20.6s,baz=310,slow=32							
RCBR	**Riachuelo**	**90.50**	**100**	LR		LR	19 48 16.4	
	comp=Z,53nm,19.4s,baz=224,slow=33							
ANMO	**Albuquerque**	**91.55**	**23**	LR		LR	19 45 34.2	
	comp=Z,74nm,18.2s,baz=172,slow=31							
SUR	**Sutherland**	**91.71**	**159**	LR		LR	19 46 19.3	
	comp=Z,211nm,18.3s,baz=174,slow=32							
SIJI	**Sorong**	**91.76**	**266**	LR		LR	19 48 59.2	
	comp=Z,55nm,20.2s,baz=90,slow=33							
SJG	**San Juan**	**92.32**	**62**	LR		LR	19 47 21.1	
	comp=Z,56nm,20.2s,baz=124,slow=32							
NVAR	**Mina Array Bea**	**92.79**	**13**	LR		LR	19 45 16.2	
	comp=Z,50nm,18.2s,baz=162,slow=31							
KAPI	**Kappang**	**95.17**	**254**	LR		LR	19 52 38.2	
	comp=Z,126nm,18.4s,baz=200,slow=34							
GUMO	**Guam**	**95.29**	**286**	LR		LR	19 48 41.8	
	comp=Z,28nm,20.3s,baz=102,slow=32							
PDAR	**Pinedale Array**	**98.43**	**18**	LR		LR	19 49 41.5	
	comp=Z,41nm,18.1s,baz=180,slow=32							
TKL	**Tuckaleechee C**	**99.22**	**40**	LR		LR	19 49 39.0	
	comp=Z,98nm,20.8s,baz=176,slow=31							
LBTB	**Lobatse**	**99.80**	**162**	LR		LR	19 52 03.4	
	comp=Z,143nm,19.6s,baz=182,slow=33							
H02S1	**DAWSON INLET Tl**	**106.50**	**1**	T		T	21 10 10.1	
	SNR=12							
H02S2	**DAWSON INLET Tl**	**106.50**	**1**	T		T	21 10 10.6	
	SNR=12							

*IDC **02** 18:57:53.9±1.2,2.82S×129.71E,h0km,mb3.7/3, mbtmp3.9/7,ML3.7/4, Error ellipse: s-maj=30.2km s-min=20.7km az=94.0*

ISC 02 18:57:56.5±1.2,3.0S±0.1×129.8E±0.1,h25km,n7,σ1s25/7, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.58**	**36**	Pn		**Pn**	**18 58 37.3**	**+0.5**
	15nm,0.3s,baz=254,slow=20,SNR=342							
SIJI						Sn	**18 59 07.2**	**-0.2**
	15nm,0.3s,baz=54,slow=21,SNR=13							
	33nm,0.3s							
JAY	**Jayapura**	**10.95**	**88**	Pn		**Pn**	**19 00 31.1**	**-0.6**
	0.2nm,0.3s,baz=3.8,slow=15,SNR=3.6							
	11nm,1.0s							
FITZ	**Fitzroy Crossi**	**15.56**	**195**	Pn		**P**	**19 01 37.5**	**-0.8**
	0.2nm,0.3s,baz=16,slow=15,SNR=10							
	1.0nm,0.5s							
WRA	**Warramunga Arr**	**17.44**	**165**	P		**Pn**	**19 01 59.3**	**+1.1**
	0.4nm,0.3s,baz=350,slow=12,SNR=22							
	2.2nm,0.7s							
ASAR	**Alice Springs**	**20.95**	**169**	P		Pn	19 02 41.1	+0.8
	4.5nm,0.6s,baz=349,slow=10,SNR=66							
	4.5nm,0.6s							
MKAR	**Makanchi Array**	**64.77**	**326**	P		**P**	**19 08 31.6**	**-1.4**
	0.2nm,0.7s,baz=132,slow=7.5,SNR=2.3							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**68.99**	**328**	P		**P**	**19 09 01.1**	**+1.4**
	0.6nm,0.5s,baz=128,slow=6.0,SNR=6.1							
	0.6nm,0.5s							

*MAN **02** 19:00:24.0,4.92N×126.47E,h36km,MS4.8*
*DJA **02** 19:00:30.7±0.3,6.7N±3.2×126.6E±0.5,h10km,M4.8/24, mb4.9/24,mB5.3/14,MLv4.9/16,Mw(mB)4.7/14*
*IDC **02** 19:00:32.2±0.9,5.52N×126.13E,h100km±7km, mb3.9/28, mbtmp4.3/30,MS3.4/5, Error ellipse: s-maj=18.8km s-min=7.7km az=79.0*
*NEIC **02** 19:00:32.4±2.1,5.52N±0.06×126.22E±0.09,h97km±5km, mb4.5/47, Error ellipse: s-maj=13.7km s-min=7.8km az=78.0*

ISC 02 19:00:32.4±0.6,5.47N±0.03×126.28E±0.05,h100km±6km, n184,σ1s72/195,mb4.4/56,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.85**	**318**	*i* P		**Pn**	**19 00 49.1**	**-2.1**
DDMP					*e*S	**Sn**	**19 01 00.9**	**-4.4**
DAV	**Davao City (W)**	**1.74**	**337**	P		**Pn**	**19 01 01.3**	**-0.3**
	325nm,0.3s,baz=27,slow=6.2,SNR=6.4							
DAV				S		**Sn**	**19 01 21.4**	**-2.5**
	519nm,0.3s,baz=333,slow=24,SNR=10							
DAV				LR		LR	19 01 53.7	
	comp=Z,173nm,21.0s,baz=8.5,slow=50							
DAV	**Davao City (W)**	**1.74**	**337**	P		Pn	19 01 06.6	+5.0
DAV	**Davao City (W)**	**1.74**	**337**			**Pn**	**19 01 00.1**	**-1.5**
DAV						**Sn**	**19 01 21.4**	**-2.5**
DAV	**Davao City (W)**	**1.74**	**337**	P		**Pn**	**19 01 02.4**	**+0.8**
DAV				S		**Sn**	**19 01 23.9**	**0.0**
DMPH	**Davao City--Mi**	**1.78**	**335**	*e*P		**Pn**	**19 01 01.0**	**-1.2**
DMPH				*i* S		**Sn**	**19 01 24.0**	**-0.8**
SGSI	**Sangihe**	**1.92**	**203**	P		**Pn**	**19 01 05.4**	**+1.5**
SGSI				S		**Sn**	**19 01 31.3**	**+3.3**
KCP	**Kidapawan**	**1.93**	**322**	*i* P		**Pn**	**19 01 03.0**	**-1.2**
KCP				*i* S		**Sn**	**19 01 27.6**	**-0.8**
CDOP	**Cateel, Davao**	**2.31**	**4**	*i* P		**Pn**	**19 01 07.2**	**-1.8**
CDOP				*i* S		**Sn**	**19 01 35.7**	**-1.3**
CTBH	**Cotabato--PC H**	**2.67**	**311**	*e*P		**Pn**	**19 01 12.3**	**-1.4**
CTBH				*i* S		**Sn**	**19 01 44.3**	**-1.2**
BUKP	**Musuan**	**2.68**	**333**	*i* P		**Pn**	**19 01 13.4**	**-0.5**
BUKP				*i* S		**Sn**	**19 01 46.0**	**0.0**
BIPH	**Bislig**	**2.70**	**2**	*e*P		**Pn**	**19 01 13.6**	**-0.6**
BIPH				*e*S		**Sn**	**19 01 50.4**	**+4.1**
CGP	**Cagayan de Oro**	**3.36**	**332**	*i* P		**Pn**	**19 01 23.3**	**+0.3**
CGP				*i* S		**Sn**	**19 02 06.9**	**+4.8**
TSSP	**Tandag City**	**3.56**	**359**	*e*P		**Pn**	**19 01 25.5**	**-0.1**
TSSP				*e*S		**Sn**	**19 02 10.9**	**+4.2**
PAGZ	**Pagadian**	**3.72**	**310**	*e*P		**Pn**	**19 01 28.4**	**+0.5**
DCPH	**Dipolog City**	**4.24**	**317**	*e*P		Pn	19 01 40.7	+5.8
MNI	**Manado**	**4.25**	**200**	P		**Pn**	**19 01 37.1**	**+2.2**
IPIL	**Ipil**	**4.34**	**302**	*i* P		**Pn**	**19 01 36.1**	**-0.1**
IPIL				*i* S		**Sn**	**19 02 25.3**	**-0.5**
ZCP	**Zamboanga City**	**4.42**	**289**	*i* P		**Pn**	**19 01 37.2**	**-0.1**
ZCP				*i* S		**Sn**	**19 02 29.5**	**+1.8**
TNTI	**Ternate**	**4.79**	**167**	P		**Pn**	**19 01 43.7**	**+1.4**
TNTI	**Ternate**	**4.79**	**167**			**Pn**	**19 01 42.0**	**-0.3**
TNTI	**Ternate**	**4.79**	**167**	P		**Pn**	**19 01 43.3**	**+1.0**
TBP	**Tagbilaran**	**4.83**	**330**	*e*P		**Pn**	**19 01 43.6**	**+0.7**
TBP				*i* S		**Sn**	**19 02 40.2**	**+2.5**
MSLP	**Maasin**	**4.85**	**343**	*i* P		**Pn**	**19 01 43.9**	**+0.8**
MSLP				*i* S		**Sn**	**19 02 43.2**	**+5.2**
SNPH	**Sibulan**	**4.89**	**322**	*e*P		Pn	19 01 48.5	+4.8
SNPH				*e*S		**Sn**	**19 02 45.7**	**+6.5**
LLP	**Lapu-Lapu**	**5.33**	**335**	*e*P		**Pn**	**19 01 46.0**	**-3.7**
LLP				*e*S		**Sn**	**19 02 54.3**	**+4.4**
GTOI	**Gorontalo**	**5.80**	**214**	P		**Pn**	**19 01 57.3**	**+1.3**
PLP	**Palo**	**5.81**	**347**	*e*P		**Pn**	**19 01 56.6**	**+0.6**
PLP				*e*S		**Sn**	**19 02 57.0**	**-4.4**
TOLI2	**Tolitoli**	**6.99**	**232**			**Pn**	**19 02 11.9**	**-0.2**
RCP	**Roxas**	**6.99**	**330**	*e*P		**Pn**	**19 02 13.7**	**+1.5**
LUWI	**Luwuk**	**7.35**	**209**	P		Pn	19 02 22.6	+5.5
LUWI	**Luwuk**	**7.35**	**209**			**Pn**	**19 02 18.1**	**+1.0**
LUWI	**Luwuk**	**7.35**	**209**	P		Pn	19 02 23.1	+6.0
	2μm232nm,0.9s							
SANI	**Sanana**	**7.47**	**182**	P		**Pn**	**19 02 21.3**	**+2.6**
SANI	**Sanana**	**7.47**	**182**	P		**Pn**	**19 02 20.1**	**+1.4**
	0.4nm2μm88nm,0.9s							
SIJI	**Sorong**	**8.03**	**141**	P		**Pn**	**19 02 26.4**	**0.0**
	8.2nm,0.3s,baz=331,slow=20,SNR=6.9							
SIJI				S		**Sn**	**19 03 54.5**	**-1.1**
	6.5nm,0.4s,baz=5.3,slow=23,SNR=1.9							
SIJI				LR		LR	19 04 54.8	
	comp=Z,62nm,20.2s,baz=98,slow=32							
SIJI	**Sorong**	**8.03**	**141**	P		**Pn**	**19 02 26.1**	**-0.2**
NLAI	**Namlea**	**8.69**	**175**	P		**Pn**	**19 02 33.9**	**-1.4**
	4μm146nm,0.7s							
PCI	**Palu**	**9.02**	**226**	P		**Pn**	**19 02 41.6**	**+1.7**
	17nm,0.8s							
LQP	**Lukban**	**9.78**	**332**	*e*P		Pn	19 02 57.9	+7.6
KKM	**Kota Kinabalu**	**10.03**	**274**	P		**Pn**	**19 02 58.1**	**+4.5**
FAKI	**Fak Fak**	**10.25**	**144**	P		**Pn**	**19 02 59.3**	**+2.8**
SPSI	**Sidrap Palu**	**11.40**	**215**	P		**Pn**	**19 03 14.3**	**+2.2**
KAPI	**Kappang**	**12.28**	**212**	P		**Pn**	**19 03 23.9**	**+0.1**
	7.4nm,0.6s,baz=14,slow=14,SNR=4.2							
KAPI				S		**Sn**	**19 05 37.1**	**-1.9**
	9.2nm,0.4s,baz=169,slow=15,SNR=4.9							
KAPI				LR		LR	19 07 58.4	
	comp=Z,93nm,18.7s,baz=76,slow=36							
KAPI	**Kappang**	**12.28**	**212**	Pn		**Pn**	**19 03 22.0**	**-1.9**
KAPI						**Sn**	**19 05 37.1**	**-1.9**
KAPI	**Kappang**	**12.28**	**212**	P		**Pn**	**19 03 27.0**	**+3.1**
SBUM	**Sibu**	**14.34**	**258**	P		**P**	**19 03 54.1**	**-0.8**
SOEI	**Soe**	**15.25**	**188**	P		**P**	**19 04 05.4**	**+0.3**
SOEI	**Soe**	**15.25**	**188**	P		**P**	**19 04 05.8**	**+0.7**
SOEI				IAmb		IAmb	19 04 23.0	
	comp=Z,51nm,0.8s							
BATI	**Baumata**	**15.79**	**189**	P		**Pn**	**19 04 08.2**	**-0.9**
	comp=Z,77nm,0.4s,baz=54,slow=3.0,SNR=21							
PLAI	**Plampang**	**16.54**	**211**	P		**P**	**19 04 21.7**	**+2.5**
DRS	**Darwin Rock St**	**18.36**	**166**	P		**Pn**	**19 04 40.8**	**+0.2**
JAGI	**Jajag, Banyuwa**	**18.38**	**221**	P		**Pn**	**19 04 41.9**	**+1.1**
YULB	**Yu-li**	**18.46**	**345**	P		**Pn**	**19 04 42.3**	**+0.7**
TPUB	**Ta-pu**	**18.55**	**343**	P		**P**	**19 04 41.7**	**+0.3**
MTN	**Manton Dam**	**18.82**	**165**	P		**P**	**19 04 44.3**	**0.0**
YHNB	**Yeheng**	**19.67**	**347**	P		**Pn**	**19 04 55.2**	**-0.7**
GUMO	**Guam**	**20.02**	**65**	LR		LR	19 11 18.3	
	comp=Z,19nm,21.5s,baz=222,slow=32							
QIZ	**Qiongzhong**	**20.94**	**312**	P		Pn	19 05 10.0	-0.8
KNRA	**Kununurra**	**21.15**	**173**			**P**	**19 05 09.8**	**+0.3**
KNRA				IAmb		IAmb	19 05 11.4	
	comp=Z,22nm,0.9s							
LEM	**Lembang**	**22.27**	**237**	P		**P**	**19 05 21.6**	**0.0**
	comp=Z,9.0nm,0.5s,baz=339,slow=17,SNR=3.8							
	comp=Z,9.0nm,0.5s							
MYKOM	**Kota Tinggi**	**22.67**	**262**	P		**P**	**19 05 27.5**	**+1.8**
MYKOM	**Kota Tinggi**	**22.67**	**262**	P		**P**	**19 05 25.4**	**-0.2**
MYKOM				IAmb		IAmb	19 05 28.6	
	comp=Z,15nm,0.9s							
BTDF	**Bukit Timah Da**	**22.83**	**261**	P		**P**	**19 05 29.7**	**+2.5**
FITZ	**Fitzroy Crossi**	**23.42**	**182**	P		**P**	**19 05 33.0**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=354,slow=6.5,SNR=29							
	comp=Z,2.8nm,0.3s							
FITZ	**Fitzy Crossi**	**23.42**	**182**	P		**P**	**19 05 33.9**	**+1.2**
FITZ	**Fitzroy Crossi**	**23.42**	**182**			**P**	**19 05 33.2**	**+0.5**
COEN	**Coen**	**25.57**	**139**	P		**P**	**19 05 52.3**	**+0.1**
WB0	**Warramunga Arr**	**26.32**	**163**			**P**	**19 05 59.0**	**+0.1**
WB0				IAmb		IAmb	19 06 34.4	
	comp=Z,7.6nm,0.6s							
WRAB	**Tennant Creek**	**26.46**	**163**	P		**P**	**19 06 01.6**	**+1.4**
WRA	**Warramunga Arr**	**26.47**	**163**	P		**P**	**19 06 00.3**	**0.0**
	comp=Z,0.9nm,0.3s,baz=331,slow=11,SNR=15							
WRA				PcP		**PcP**	**19 09 23.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=323,slow=3.2,SNR=4.3							
WRA				ScP		**ScP**	**19 12 55.0**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=344,slow=2.6,SNR=2.6							
	comp=Z,0.9nm,0.3s							
WRA	**Warramunga Arr**	**26.47**	**163**	P		**P**	**19 05 59.9**	**-0.4**
WRA						**PcP**	**19 09 23.4**	**+0.2**
WRA						**ScP**	**19 12 55.0**	**+0.8**
WR8	**Warramunga Arr**	**26.53**	**162**	P		**P**	**19 06 01.6**	**+0.8**
WR8				IAmb		IAmb	19 06 32.7	
	comp=Z,6.6nm,0.8s							
MBWA	**Marble Bar**	**27.23**	**193**	P		**P**	**19 06 08.1**	**+1.0**
NJ2	**Nanjing**	**27.35**	**346**	*e*P		**P**	**19 06 09.0**	**+1.0**
NJ2				pmax		pmax		
	comp=Z,13nm,1.0s							
GSI	**Gunungsitoli**	**28.94**	**263**	P		**P**	**19 06 24.4**	**+1.9**
GSI	**Gunungsitoli**	**28.94**	**263**			**P**	**19 06 21.1**	**-1.4**
GSI				IAmb		IAmb	19 06 22.2	
	comp=Z,17nm,0.6s							
QIS	**Mount Isa**	**28.99**	**154**	P		**P**	**19 06 22.8**	**0.0**
CMAR	**Chiang Mai Arr**	**29.63**	**298**	P		**P**	**19 06 27.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=110,slow=7.3,SNR=7.3							
CMAR				PcP		**PcP**	**19 09 31.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=99,slow=2.7,SNR=6.7							
	comp=Z,0.8nm,0.5s							
CHTO	**Chiang Mai**	**29.77**	**299**	P		**P**	**19 06 31.0**	**+1.2**
CHTO	**Chiang Mai**	**29.77**	**299**	P		**P**	**19 06 27.7**	**-2.1**
AS31	**Alice Springs**	**29.90**	**166**			**P**	**19 06 29.9**	**-0.9**
ASAR	**Alice Springs**	**29.90**	**166**	P		**P**	**19 06 31.5**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=342,slow=6.9,SNR=33							
ASAR				PcP		**PcP**	**19 09 32.1**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=338,slow=2.4,SNR=15							
ASAR				ScP		**ScP**	**19 13 06.2**	**+1.3**
	comp=Z,0.9nm,1.0s,baz=329,slow=3.3,SNR=3.2							
	comp=Z,2.1nm,0.5s							
AS01	**Alice Springs**	**29.91**	**166**	P		**P**	**19 06 31.3**	**+0.4**
PZH	**PanZhiHua**	**31.40**	**314**	P		**P**	**19 06 45.7**	**+1.5**
KSRS	**Korea Array**	**31.87**	**2**	P		**P**	**19 06 48.4**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=186,slow=9.9,SNR=12							
	comp=Z,1.1nm,0.5s							
CTAO	**Charters Tower**	**32.10**	**143**	P		**P**	**19 06 48.8**	**-1.5**
CTAO				IAmb		IAmb	19 07 07.2	
	comp=Z,20nm,1.4s							
MEEK	**Meekatharra**	**32.77**	**193**	P		**P**	**19 06 57.4**	**+1.4**
MJAR	**Matsushiro Arr**	**32.81**	**18**	P		**P**	**19 06 56.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=286,slow=8.1,SNR=1.8							
	comp=Z,0.5nm,0.5s							
MJAR	**Matsushiro Arr**	**32.81**	**18**	P		**P**	**19 06 53.5**	**-2.8**
BJI2	**Beijing**	**35.59**	**347**	P		**P**	**19 07 20.0**	**-0.2**
BJI2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
BJI2				LR		LR		
	comp=N,75nm,18.5s							
BJI2				LR		LR		
	comp=E,51nm,16.8s							
BJI2				LR		LR		
	comp=Z,84nm,18.5s							
MORW	**Morawa**	**35.72**	**195**	P		**P**	**19 07 21.8**	**+0.3**
FORT	**Forrest**	**36.08**	**177**	P		**P**	**19 07 25.1**	**+0.6**
FORT				IAmb		IAmb	19 07 35.6	
	comp=Z,7.6nm,0.7s							
IMP	**Imphal**	**36.50**	**305**	*e*P		**P**	**19 07 26.6**	**-1.8**
LZDM	**Lanzhou Array**	**36.77**	**329**	P		**P**	**19 07 30.2**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=106,slow=11,SNR=1.9							
	comp=Z,1.6nm,0.3s							
LZH	**Lanzhou**	**36.79**	**329**	*e*P		P	19 07 37.8	+7.1
LZH				pP		sP	19 08 03.1	-0.8
LZH				pmax		pmax		
	comp=Z,17nm,0.9s							
LZH				LR		LR		
	comp=N,180nm,13.9s							
LZH				LR		LR		
	comp=E,200nm,14.8s							
LZH				LR		LR		
	comp=Z,160nm,17.0s							
BLDU	**Balliduu**	**37.03**	**194**	P		**P**	**19 07 33.6**	**+1.0**
KLBR	**Kellerberrin**	**37.74**	**192**	P		**P**	**19 07 39.4**	**+0.8**
MUN	**Mundaring**	**38.45**	**194**	P		**P**	**19 07 45.3**	**+0.7**
SHL	**Shillong**	**38.50**	**305**			**P**	**19 07 44.1**	**-1.2**
SHL	**Shillong**	**38.50**	**305**	*ex*		**P**	**19 07 44.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**38.90**	**7**	P		**P**	**19 07 48.4**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=151,slow=7.4,SNR=1.6							
	comp=Z,1.1nm,0.6s							
USRK	**Ussuriysk Ar.**	**38.90**	**7**	P		**P**	**19 07 47.4**	**-0.7**
EIDS	**Eidsvold**	**38.99**	**143**	P		**P**	**19 07 49.4**	**+0.2**
EIDS				IAmb		IAmb	19 08 14.0	
	comp=Z,13nm,1.2s							
MDJ	**Mudanjiang**	**39.10**	**4**	P		**P**	**19 07 52.1**	**+2.3**
MDJ				S		**S**	**19 13 46.5**	**+4.5**
MDJ				PcS		**PcS**	**19 13 53.8**	**+6.5**
MDJ				sS		sS	19 14 05.8	-15
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.1s							
MDJ				LR		LR		
	comp=N,120nm,7.8s							
MDJ				LR		LR		
	comp=E,64nm,5.8s							
MDJ				LR		LR		
	comp=Z,140nm,9.9s							
NWAO	**Narrogin (SRO)**	**39.14**	**192**	P		**P**	**19 07 51.4**	**+1.1**
NWAO	**Narrogin (SRO)**	**39.14**	**192**	P		**P**	**19 07 51.2**	**+0.9**
NWAO	**Narrogin (SRO)**	**39.14**	**192**	P		**P**	**19 07 51.9**	**+1.6**
BBOO	**Buckleboo**	**39.18**	**167**	P		**P**	**19 07 51.1**	**+0.4**
BBOO	**Buckleboo**	**39.18**	**167**	P		**P**	**19 07 51.9**	**+1.2**
STKA	**Stephens Creek**	**39.90**	**159**	P		**P**	**19 07 57.5**	**+0.9**
	comp=Z,9.7nm,0.8s,baz=336,slow=6.5,SNR=12							
	comp=Z,9.7nm,0.8s							
STKA	**Stephens Creek**	**39.90**	**159**	P		**P**	**19 07 57.2**	**+0.6**
PTPS	**Port Pirie**	**40.00**	**165**	P		**P**	**19 07 58.4**	**+1.0**
CMSA	**Cobar Meteorol**	**41.20**	**154**	P		**P**	**19 08 07.7**	**+0.4**
GTA2	**Gaotai**	**41.47**	**329**	*e*P		**P**	**19 08 09.0**	**-0.7**
GTA2				pP		pP	19 08 15.4	-17
GTA2				PcP		**PcP**	**19 10 06.6**	**+0.9**
GTA2				pmax		pmax		
	comp=Z,3.0nm,0.5s							
H11S3	**WAKE ISLAND Hy**	**41.48**	**68**	T		T	19 52 14.9	
	baz=257,slow=75,SNR=3.8							
H11S1	**WAKE ISLAND Hy**	**41.50**	**68**	T		T	19 52 13.7	
	baz=257,slow=75,SNR=3.6							
H11S2	**WAKE ISLAND Hy**	**41.50**	**68**	T		T	19 52 14.1	
	baz=257,slow=75,SNR=6.9							
H11N1	**WAKE ISLAND Hy**	**41.95**	**67**	T		T	19 52 51.7	
	baz=255,slow=75							
H11N2	**WAKE ISLAND Hy**	**41.96**	**67**	T		T	19 52 54.8	
	baz=255							
H11N3	**WAKE ISLAND Hy**	**41.97**	**67**	T		T	19 52 53.7	
	baz=255,slow=75							
ARMA	**Armidale**	**43.16**	**147**	P		**P**	**19 08 23.9**	**+0.5**
EVN	**Everest**	**43.61**	**305**			**P**	**19 08 27.5**	**-0.3**
HILR	**Hailar Array B**	**44.28**	**354**	P		**P**	**19 08 30.5**	**-1.6**
	comp=Z,2.9nm,0.4s,baz=163,slow=11,SNR=4.3							
	comp=Z,2.9nm,0.4s							
HEH	**HeiHe**	**44.65**	**1**	*e*P		**P**	**19 08 35.4**	**+0.5**
HEH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
KOUNC	**Koumac, New Ca**	**45.41**	**126**	P		**P**	**19 08 41.9**	**+0.5**
SONM	**Songino Array**	**45.52**	**341**	P		**P**	**19 08 40.8**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=158,slow=8.3,SNR=5.7							
	comp=Z,0.9nm,0.7s							
SONM	**Songino Array**	**45.52**	**341**	P		**P**	**19 08 41.4**	**-0.6**
WMQ	**Urumqi**	**51.05**	**325**	*e*P		**P**	**19 09 22.6**	**-2.0**
WMQ				pmax		pmax		
	comp=Z,21nm,0.7s							
DHRM	**DHARAMSHALA**	**53.65**	**306**	*e*P		**P**	**19 09 43.1**	**-1.1**
PETK	**Petropavlovsk-**	**54.01**	**23**	P		**P**	**19 09 46.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=233,slow=8.4,SNR=1.5							
	comp=Z,0.9nm,0.6s							
PDGK	**Podgornoye**	**55.80**	**320**			**P**	**19 09 58.2**	**-1.1**
MKAR	**Makanchi Array**	**55.88**	**325**	P		**P**	**19 09 58.3**	**-1.5**
	comp=Z,2.6nm,0.3s,baz=120,slow=7.6,SNR=94							
	comp=Z,2.6nm,0.3s							
MKAR	**Makanchi Array**	**55.88**	**325**			**P**	**19 09 58.6**	**-1.1**
MAKZ	**Makanchi**	**56.07**	**325**	P		**P**	**19 10 00.2**	**-0.9**
MA

TXAR	**Lajitas Array**	**120.88**	**51**			**PKPdf**	**19 19 11.4**	**-2.5**
TORD	**Torodi Ar. Bea**	**121.94**	**289**	PKP		**PKPdf**	**19 19 15.1**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=65,slow=1.8,SNR=14							
PLCA	**Paso Flores**	**141.78**	**159**	PKP		**PKPdf**	**19 19 53.5**	**+0.7**
	comp=Z,2.6nm,1.0s,baz=259,slow=5.2,SNR=3.9							
PLCA	**Paso Flores**	**141.78**	**159**	PKPdf		**PKPdf**	**19 19 53.3**	**+0.5**

*IDC **02** 19:14:44.9±0.7, 1°.71N×126°.42E, h0km, mb3.9/11, mbtmp3.9/14, ML3.6/3, MS2.5/2, Error ellipse: s-maj=30.7km s-min=13.8km az=77.0*
*DJA **02** 19:14:50.0±0.3, 2°.N±3°×12°.7E±°, h10km, M4.2/20, mB5.5/2, mb4.3/7, MLv4.1/20, Mw(mB)5.0/2*
*NEIC **02** 19:14:51.7±1.9, 1°.71N±0°.09×126°.64E±0°.07, h48km±8km, mb4.1/17, Error ellipse: s-maj=13.6km s-min=8.8km az=213.0*

IDC 02 19:14:51.4±0.5, 1°.71N±0°.05×126°.63E±0°.06, h47km, n52, σ1§48/57, mb4.0/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.19**	**141**		**Pn**	**19 15 12.0**	**+0.5**
TNTI	**Ternate**	**1.19**	**141**	P	**Pn**	**19 15 12.1**	**+0.5**
MNI	**Manado**	**1.81**	**262**	P	**Pn**	**19 15 20.5**	**+0.4**
SGSI	**Sangihe**	**2.25**	**331**	P	**Pn**	**19 15 26.6**	**+0.4**
GTOI	**Gorontalo**	**3.77**	**254**	P	**Pn**	**19 15 49.8**	**+2.8**
DDMP	**Don Marcelino,**	**4.46**	**348**	*eP*	**Pn**	**19 15 57.7**	**+1.1**
DDMP				*eS*	**Sn**	**19 16 43.6**	**-3.7**
LUWI	**Luwuk**	**4.72**	**235**		**Pn**	**19 16 00.4**	**+0.3**
LUWI	**Luwuk**	**4.72**	**235**	P	**Pn**	**19 16 02.4**	**+2.3**
NLAI	**Namlea**	**4.93**	**175**	P	**Pn**	**19 16 05.1**	**+2.1**
	0.2nm32nm,0.9s						
SIJI	**Sorong**	**5.29**	**119**	Pn	**Pn**	**19 16 08.3**	**+0.3**
	1.0nm,0.3s,baz=270,slow=18,SNR=5.6						
SIJI				LR	LR	19 17 35.1	
	comp=Z,47nm,21.3s,baz=280,slow=31						
	3.4nm,0.3s						
DAV	**Davao City (W)**	**5.43**	**349**	LR	LR	19 18 16.7	
	comp=Z,60nm,19.2s,baz=158,slow=39						
TOLI2	**Tolitoli**	**5.88**	**264**		**Pn**	**19 16 16.1**	**+0.2**
CDOP	**Cateel, Davao**	**6.04**	**358**	*i* P	**Pn**	**19 16 20.2**	**+2.0**
CDOP				*i* S	**Sn**	**19 17 27.4**	**+1.2**
BIPH	**Bislig**	**6.44**	**358**	*eP*	**Pn**	**19 16 27.2**	**+3.4**
BIPH				*eS*	**Sn**	**19 17 39.2**	**+3.2**
IPIL	**Ipil**	**7.27**	**326**	*i* P	**Pn**	**19 16 36.1**	**+1.0**
IPIL				*i* S	**Sn**	**19 17 52.9**	**-3.5**
KKSI	**Kolaka, Sulawe**	**7.67**	**220**	P	**Pn**	**19 16 41.9**	**+1.3**
KAPI	**Kappang**	**9.58**	**226**	Pn	Pn	19 17 02.5	-4.3
	0.4nm,0.3s,baz=90,slow=16,SNR=1.9						
	2.9nm,0.5s						
KKM	**Kota Kinabalu**	**11.25**	**293**	Pn	**Pn**	**19 17 32.6**	**+2.9**
MTN	**Manton Dam**	**15.13**	**163**	Pn	**Pn**	**19 18 22.9**	**+0.8**
MTN				IAmb	IAmb	19 18 25.6	
	comp=Z,21nm,1.4s						
KNRA	**Kununurra**	**17.40**	**173**		**Pn**	**19 18 50.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P	**P**	**19 19 15.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=33,slow=4.3,SNR=6.6						
	comp=Z,1.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P	**P**	**19 19 15.9**	**-1.0**
TPUB	**Ta-pu**	**22.24**	**345**	P	**P**	**19 19 42.2**	**-2.2**
WB0	**Warramunga Arr**	**22.66**	**161**	P	**P**	**19 19 48.3**	**-0.6**
WB0				IAmb	IAmb	19 19 49.8	
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**19 19 49.1**	**-1.3**
	comp=Z,5.8nm,0.8s,baz=342,slow=11,SNR=34						
WRA				PcP	**PcP**	**19 23 41.2**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=13,slow=1.8,SNR=1.7						
	comp=Z,5.8nm,0.8s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**19 19 48.1**	**-2.2**
WRA					**PcP**	**19 23 41.2**	**+0.5**
WR8	**Warramunga Arr**	**22.87**	**161**	P	**P**	**19 19 50.1**	**-0.9**
WR8				IAmb	IAmb	19 19 58.1	
	comp=Z,12nm,1.1s						
AS31	**Alice Springs**	**26.19**	**165**	P	**P**	**19 20 23.3**	**+1.4**
ASAR	**Alice Springs**	**26.19**	**165**	P	**P**	**19 20 23.3**	**+1.5**
	comp=Z,1.4nm,0.4s,baz=350,slow=14,SNR=22						
ASAR				PcP	**PcP**	**19 23 48.1**	**0.0**
	comp=Z,0.3nm,0.8s,baz=348,slow=2.4,SNR=2.8						
	comp=Z,1.4nm,0.4s						
ASAR	**Alice Springs**	**26.19**	**165**	P	**P**	**19 20 22.8**	**+0.9**
ASAR					**PcP**	**19 23 48.1**	**0.0**
FORT	**Forrest**	**32.33**	**178**	P	**P**	**19 21 16.3**	**+0.1**
FORT				IAmb	IAmb	19 22 00.5	
	comp=Z,6.8nm,0.8s						
KSRS	**Korea Array**	**35.59**	**2**	P	**P**	**19 21 44.7**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=184,slow=9.6,SNR=4.1						
	comp=Z,0.7nm,0.9s						
MJAR	**Matsushiro Arr**	**36.28**	**16**	P	**P**	**19 21 49.5**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=183,slow=9.9,SNR=4.6						
	comp=Z,0.8nm,0.7s						
MJAR	**Matsushiro Arr**	**36.28**	**16**	P	**P**	**19 21 49.5**	**-0.9**
MJAR				IAmb	IAmb	19 21 51.0	
	comp=Z,4.1nm,1.4s						
JKA	**Kamikawa-asahi**	**44.55**	**16**		**P**	**19 22 59.7**	**+1.2**
PETK	**Petropavlovsk-**	**57.33**	**22**	P	**P**	**19 24 35.7**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=152,slow=3.8,SNR=4.9						
	comp=Z,0.8nm,0.5s						
PETK	**Petropavlovsk-**	**57.33**	**22**	P	**P**	**19 24 35.9**	**+1.3**
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**19 24 46.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=119,slow=7.6,SNR=26						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**59.16**	**326**		**P**	**19 24 46.3**	**-1.2**
MAKZ	**Makanchi**	**59.34**	**326**	P	**P**	**19 24 48.3**	**-0.5**
MAKZ				IAmb	IAmb	19 24 51.6	
	comp=Z,3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**19 25 07.8**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=112,slow=7.6,SNR=2.4						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**19 25 15.4**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=129,slow=6.1,SNR=19						
	comp=Z,1.9nm,0.6s						
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**19 25 15.6**	**-0.3**
BVAR	**Borovoye Array**	**68.96**	**327**	P	**P**	**19 25 51.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=141,slow=9.3,SNR=3.7						
	comp=Z,0.4nm,0.4s						
AB31	**Akbulak array**	**73.65**	**321**	P	**P**	**19 26 19.2**	**-0.8**
AB31				IAmb	IAmb	19 26 39.0	
	comp=Z,1.7nm,1.1s						
ABKAR	**Akbulak array**	**73.65**	**321**	P	**P**	**19 26 19.7**	**-0.4**
UNV	**Unalaska Valle**	**75.14**	**34**	P	**P**	**19 26 27.1**	**-1.5**
VNDA	**Vanda**	**81.44**	**173**	P	**P**	**19 27 03.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=332,slow=6.6,SNR=2.4						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**81.44**	**173**	P	**P**	**19 27 03.1**	**+0.1**
VNDA				IAmb	IAmb	19 27 06.5	
	comp=Z,3.4nm,1.5s						
QSPA	**South Pole Qui**	**91.62**	**180**	P	**P**	**19 27 53.1**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=338,slow=7.8,SNR=1.0						
	comp=Z,0.5nm,1.0s						
QSPA	**South Pole Qui**	**91.62**	**180**	P	**P**	**19 27 53.1**	**-0.2**
QSPA				IAmb	IAmb	19 28 36.8	
	comp=Z,0.3nm,0.8s						
MBAR	**Mbarara**	**95.91**	**270**	LR	LR	20 09 30.0	
	comp=Z,86nm,18.1s,baz=169,slow=34						

IDC 02 19:46:29.4±3.4, 31°.76N×91°.02E, h0km, mb3.0/2, mbtmp3.0/5, ML3.4/3, Error ellipse: s-maj=76.6km s-min=38.4km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.06**	**150**	Pn	Pn	19 50 03.6	+0.1
	0.1nm,0.3s,baz=333,slow=13,SNR=2.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**16.45**	**338**	Pn	Pn	19 50 20.2	-1.3
	baz=152,slow=12,SNR=2.0						
	0.1nm,0.5s						
SONM	**Songino Array**	**19.87**	**32**	P	P	19 51 02.4	+0.2
	0.1nm,0.3s,baz=214,slow=4.9,SNR=4.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**21.00**	**337**	P	P	19 51 13.8	-0.5
	0.2nm,0.4s,baz=155,slow=10,SNR=1.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**22.62**	**350**	P	P	19 51 31.3	-0.3
	0.3nm,0.3s,baz=186,slow=12,SNR=4.0						
	0.3nm,0.3s						

*IDC **02** 19:50:34.0±1.6, 29°.12N×140°.94E, h0km, mb3.3/5, mbtmp3.4/8, ML3.0/3, MS2.9/1, Error ellipse: s-maj=52.0km s-min=17.7km az=66.0*
*JMA **02** 19:50:37.9±0.1, 29°.N±1°×14°.2E±°, h53km, MV3.7/20, NEAR TORISHIMA IS*

IDC 02 19:50:37.8±0.9, 29°.43N±0°.07×141°.5E±0°.2, h46km, n16, σ2§03/18, mb3.3/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.40**	**166**	*eP*	**Pn**	**19 51 16.5**	**+1.9**
CBIJ				*eS*	**Sn**	**19 51 45.4**	**+2.7**
JCJ	**Chichijima**	**2.40**	**166**	Pn	**Pn**	**19 51 13.4**	**-1.2**
	11nm,0.3s,baz=282,slow=18,SNR=5.2						
JCJ				Sn	**Sn**	**19 51 41.4**	**-1.3**
	28nm,0.3s,baz=289,slow=23,SNR=6.7						
	30nm,0.4s						
JHJ2	**Mitsune**	**3.95**	**339**	*eS*	**Sn**	**19 52 22.0**	**+1.0**
JHJ	**Hachijo jima 2**	**3.97**	**338**	Pn	**Pn**	**19 51 37.0**	**+0.9**
	2.6nm,0.3s,baz=234,slow=21,SNR=1.2						
JHJ				Sn	**Sn**	**19 52 20.2**	**-1.2**
	4.6nm,0.3s,baz=64,slow=11,SNR=1.5						
	42nm,0.7s						
BSO1	**Boso 1**	**5.23**	**355**	*eP*	**Pn**	**19 51 55.0**	**+2.1**
JHU2	**Hanno**	**6.67**	**344**	*eP*	**Pn**	**19 52 15.2**	**+2.0**
JAG	**Ashikaga**	**7.19**	**347**	*eS*	**Sn**	**19 53 39.5**	**-1.2**
JHO	**Hitachi**	**7.21**	**354**	*eP*	**Pn**	**19 52 21.1**	**+0.5**
JHO				*eS*	**Sn**	**19 53 37.3**	**-3.8**
MJAR	**Matsushiro Arr**	**7.62**	**339**	Pn	**Pn**	**19 52 29.9**	**+3.6**
	0.1nm,0.3s,baz=158,slow=11,SNR=1.1						
	0.9nm,0.5s						
JMK	**Ichinoseki**	**9.50**	**359**	*eS*	Sn	19 54 30.1	-7.3
GUMO	**Guam**	**16.07**	**168**	LR	LR	19 59 08.1	
	comp=Z,38nm,19.4s,baz=216,slow=32						
CMAR	**Chiang Mai Arr**	**40.22**	**264**	P	**P**	**19 58 07.8**	**-2.4**
	0.2nm,0.4s,baz=82,slow=7.4,SNR=1.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**48.56**	**308**	P	**P**	**19 59 17.0**	**+0.5**
	0.1nm,0.4s,baz=186,slow=24,SNR=1.5						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**49.57**	**189**	P	**P**	**19 59 24.4**	**0.0**
	0.5nm,0.7s,baz=12,slow=8.1,SNR=4.8						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**51.01**	**313**	P	**P**	**19 59 35.8**	**+0.8**
	0.1nm,0.4s,baz=92,slow=6.8,SNR=2.3						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**53.30**	**189**	P	**P**	**19 59 52.1**	**-0.1**
	0.5nm,1.0s,baz=19,slow=9.0,SNR=4.1						
	0.5nm,1.0s						

IDC 02 19:52:29.6±6.3, 7°.81S×124°.18E, h103km±70km, mb2.8/1, mbtmp3.4/5, ML3.5/4, Error ellipse: s-maj=73.3km s-min=34.9km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.44**	**192**	P	Pn	19 53 09.3	+1.2
	11nm,0.3s,baz=333,slow=9.0,SNR=15						
BATI				S	Sn	19 53 38.0	+0.5
	31nm,0.3s,baz=104,slow=19,SNR=8.8						
	26nm,0.4s						
FITZ	**Fitzroy Crossi**	**10.32**	**172**	P	Pn	19 54 52.8	-1.9
	0.3nm,0.3s,baz=358,slow=11,SNR=14						
FITZ				S	Sn	19 56 38.8	-10
	2.0nm,0.4s,baz=97,slow=20,SNR=9.4						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**15.57**	**142**	P	P	19 56 04.8	-0.8
	0.2nm,0.3s,baz=329,slow=13,SNR=10						
WRA				S	Sn	19 58 46.7	-9.0
	0.3nm,0.8s,baz=317,slow=25,SNR=1.7						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**18.32**	**150**	P	P	19 56 36.2	+0.3
	0.1nm,0.3s,baz=331,slow=13,SNR=16						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**65.88**	**330**	P	P	20 03 04.2	-0.1
	0.1nm,0.4s,baz=141,slow=9.3,SNR=1.5						
	0.1nm,0.4s						

IDC 02 19:55:33.6±1.9, 13°.85S×171°.27E, h0km, mb3.9/5, mbtmp3.8/5, Error ellipse: s-maj=121.8km s-min=34.7km az=156.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**32.54**	**232**	P	P	20 02 06.5	0.0
	0.8nm,0.4s,baz=61,slow=10,SNR=3.6						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**35.80**	**255**	P	P	20 02 35.5	+0.6
	0.8nm,0.5s,baz=76,slow=7.0,SNR=11						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**36.61**	**249**	P	P	20 02 42.0	+0.1
	1.5nm,0.5s,baz=83,slow=8.4,SNR=50						
	1.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**43.99**	**258**	P	P	20 03 42.0	-1.1
	1.0nm,0.5s,baz=90,slow=7.6,SNR=12						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**92.46**	**61**	P	P	20 08 47.1	0.0
	0.1nm,0.5s,baz=265,slow=5.8,SNR=1.4						
	0.1nm,0.5s						

*IDC **02** 19:57:50.8±7.7, 21°.57N×145°.85E, h109km±71km, mb3.2/9, mbtmp3.6/10, ML2.6/1, Error ellipse: s-maj=42.8km s-min=16.6km az=83.0*

IDC 02 19:57:49.8±1.3, 21°.6N±0°.1×145°.9E±0°.3, h100km, n10, σ0§92/10, mb3.5/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**16.34**	**338**	P	**Pn**	**20 01 32.8**	**-0.4**
	baz=168,slow=14,SNR=1.8						
	1.0nm,0.7s						
KSRS	**Korea Array**	**22.17**	**319**	P	**P**	**20 02 39.0**	**+1.4**
	1.0nm,0.7s,baz=149,slow=9.0,SNR=7.1						
	1.0nm,0.7s						
SONM	**Songino Array**	**41.05**	**319**	P	**P**	**20 05 22.3**	**-1.2**
	0.3nm,0.6s,baz=120,slow=3.8,SNR=2.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**42.78**	**196**	P	**P**	**20 05 37.8**	**+0.2**
	0.7nm,0.6s,baz=15,slow=8.6,SNR=10						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**46.46**	**195**	P	**P**	**20 06 06.5**	**-0.4**
	0.4nm,0.5s,baz=10.0,slow=8.0,SNR=9.9						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**55.86**	**321**	P	**P**	**20 07 15.5**	**-1.4**
	0.3nm,0.3s,baz=105,slow=9.1,SNR=1.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**56.62**	**313**	P	**P**	**20 07 22.7**	**+0.2**
	0.3nm,0.8s,baz=101,slow=7.5,SNR=3.0						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**59.32**	**317**	P	**P**	**20 07 41.4**	**+0.2**
	0.4nm,0.5s,baz=91,slow=7.6,SNR=7.5						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**61.01**	**27**	P	**P**	**20 07 52.7**	**+0.3**
	0.3nm,0.7s,baz=261,slow=6.7,SNR=4.1						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**64.39**	**320**	P	**P**	**20 08 15.5**	**+0.4**
	0.5nm,0.5s,baz=69,slow=8.1,SNR=2.2						
	0.5nm,0.5s						

*IDC **02** 20:05:26.6±1.2, 34°.62S×73°.37W, h0km, mb3.9/4, mbtmp4.0/6, ML4.1/2, MS3.2/3, Error ellipse: s-maj=56.6km s-min=20.5km az=82.0*
*NEIC **02** 20:05:26.9±1.7, 34°.51S±0°.05×73°.41W±0°.08, h10km±1km, mb4.3/7, ML3.8(GUC), Error ellipse: s-maj=13.3km s-min=2.9km az=306.0*
*SJA **02** 20:05:26.5±0.7, 34°.56S×73°.41W, h40km±999km, ML3.6, MW3.5*
*GUC **02** 20:05:28.0±0.8, 34°.55S×73°.36W, h36km±4km, ML3.8*

IDC 02 20:05:26.1±2.4, 34°.56S±0°.03×73°.39W±0°.04, h5km±15km, n79, σ1§31/105, mb4.3/6, 7C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**1.18**	**87**	*eP*	**Pb**	**20 05 48.9**	**0.0**
BO03				*eS*	**Sg**	**20 06 03.7**	**-0.4**
GO05	**Hualane**	**1.28**	**111**		**Pn**	**20 05 50.4**	**-0.2**
GO05	**Hualane**	**1.28**	**111**	*eP*	**Pn**	**20 05 50.1**	**-0.5**
GO05				*eS*	**Sb**	**20 06 06.3**	**-1.2**
GO05				IAML		20 06 07.4	
	comp=Z,812nm,0.1s						
GO05	**Hualane**	**1.28**	**111**	*eP*	**Pn**	**20 05 50.4**	**-0.2**
GO05				*eS*	**Sb**	**20 06 05.8**	**-1.7**
GO05				IAML		20 06 06.6	
	comp=N,2μm,0.3s						
MT01	**Popeta**	**1.91**	**69**		**Pn**	**20 05 58.5**	**-0.7**
MT01	**Popeta**	**1.91**	**69**	*eP*	**Pn**	**20 05 58.4**	**-0.8**
MT01				*eS*	**Sn**	**20 06 21.4**	**-2.1**
MT01				IAML		20 06 22.0	
	comp=Z,2μm,0.1s						
MT01	**Popeta**	**1.91**	**69**	*eP*	**Pn**	**20 05 58.6**	**-0.5**
MT01				*eS*	**Sn**	**20 06 21.0**	**-2.5**
MT01				IAML		20 06 22.3	
	comp=E,2μm,0.1s						
BO01	**Tunca**	**1.91**	**86**		**Pn**	**20 05 59.2**	**0.0**
BO01	**Tunca**	**1.91**	**86**	*eP*	**Pn**	**20 05 58.5**	**-0.8**
BO01				*eS*	**Sn**	**20 06 22.2**	**-1.4**
BO01				IAML		20 06 27.2	
	comp=Z,242nm,0.8s						
BO01	**Tunca**	**1.91**	**86**	*eP*	**Pn**	**20 05 59.4**	**+0.2**
BO01				*eS*	**Sn**	**20 06 22.0**	**-1.7**
ML02	**Panimavida**	**2.01**	**127**		**Pn**	**20 06 01.4**	**+0.8**
ML02	**Panimavida**	**2.01**	**127**	*eP*	**Pn**	**20 05 59.8**	**-0.8**
ML02				IAML		20 06 31.0	
	comp=Z,448nm,0.3s						
ML02	**Panimavida**	**2.01**	**127**	*eP*	**Pn**	**20 06 01.6**	**+1.0**
ML02				*eS*	**Sn**	**20 06 25.3**	**-0.8**
VA01	**Torpederas**	**2.11**	**44**		**Pn**	**20 06 01.1**	**-0.9**
VA01	**Torpederas**	**2.11**	**44**	*eP*	**Pn**	**20 06 01.0**	**-0.9**
VA01				*eS*	**Sn**	**20 06 27.0**	**-1.5**
VA01				IAML		20 06 29.2	
	comp=Z,231nm,0.8s						
VA01	**Torpederas**	**2.11**	**44**	*eP*	**Pn**	**20 06 01.1**	**-0.9**
VA01				*eS*	**Sn**	**20 06 25.7**	**-2.9**
VA01				IAML		20 06 27.8	
	comp=E,1μm,0.2s						
MT09	**Talagante**	**2.14**	**69**		**Pn**	**20 06 02.1**	**-0.4**
MT09	**Talagante**	**2.14**	**69**	*eP*	**Pn**	**20 06 02.1**	**-0.4**
MT09				*eS*	**Sn**	**20 06 27.5**	**-2.0**
BO02	**Sierra Bellavi**	**2.16**	**97**		**Pn**	**20 06 03.2**	**+0.5**
BO02	**Sierra Bellavi**	**2.16**	**97**	*eP*	**Pn**	**20 06 03.6**	**+0.8**
BO02				*eS*	**Sn**	**20 06 29.3**	**-0.7**
BI05	**Punta Hualpn**	**2.19**	**176**		**Pn**	**20 06 01.9**	**-1.1**
BI05	**Punta Hualpn**	**2.19**	**176**	*eP*	**Pn**	**20 06 01.9**	**-1.1**
BI05				*eS*	**Sn**	**20 06 24.9**	**-5.6**
BI05				IAML		20 06 26.6	
	comp=N,2μm,0.3s						
MT02	**Curacav**	**2.28**	**56**		**Pn**	**20 06 03.7**	**-0.6**
MT02	**Curacav**	**2.28**	**56**	*eP*	**Pn**	**20 06 03.6**	**-0.7**
MT02				*eS*	**Sn**	**20 06 31.1**	**-1.6**
MT02				IAML		20 06 33.6	
	comp=Z,397nm,0.5s						
MT02	**Curacav**	**2.28**	**56**	*eP*	**Pn**	**20 06 03.8**	**-0.6**
MT02				*eS*	**Sn**	**20 06 30.4**	**-2.3**
MT02				IAML		20 06 32.4	
	comp=N,454nm,0.3s						
BO04	**La Punta**	**2.37**	**77**		**Pn**	**20 06 06.3**	**+0.6**
BO04	**La Punta**	**2.37**	**77**	*eP*	**Pn**	**20 06 06.3**	**+0.6**
BO04				*eS*	**Sn**	**20 06 34.4**	**-0.8**
BO04				IAML		20 06 37.6	
	comp=N,860nm,0.4s						
MT05	**Renca**	**2.49**	**63**		**Pn**	**20 06 07.6**	**+0.3**
MT05	**Renca**	**2.49**	**63**	*eP*	**Pn**	**20 06 06.9**	**-0.4**
MT05				*eS*	**Sn**	**20 06 37.1**	**-1.1**
MT05				IAML		20 06 46.2	
	comp=Z,269nm,0.5s						
MT05	**Renca**	**2.49**	**63**	*eP*	**Pn**	**20 06 08.1**	**+0.8**
MT05				*eS*	**Sn**	**20 06 37.5**	**-0.7**
MT05				IAML		20 06 40.0	
	comp=E,916nm,0.4s						
ROCH	**El Roble**	**2.54**	**52**	*eP*	**Pn**	**20 06 08.0**	**-0.1**
ROCH				*eS*	**Sn**	**20 06 37.9**	**-1.5**
ROCH				IAML		20 06 40.6	
	comp=N,717nm,0.3s						
MT03	**Universidad Ad**	**2.62**	**67**		**Pn**	**20 06 09.3**	**+0.2**
MT03	**Universidad Ad**	**2.62**	**67**	*eP*	**Pn**	**20 06 08.4**	**-0.6**
MT03				*eS*	**Sn**	**20 06 40.3**	**-1.0**
MT03				IAML		20 06 43.8	
	comp=Z,387nm,0.2s						
MT16	**CCHEN**	**2.64**	**65**		**Pn**	**20 06 09.6**	**+0.3**
PEL	**Peldehue**	**2.66**	**59**	*eP*	**Pn**	**20 06 10.1**	**+0.5**
PEL				*eS*	**Sn**	**20 06 41.4**	**-0.8**
PEL				IAML		20 06 43.1	
	comp=N,748nm,0.7s						
BI02	**San Fabin de**	**2.72**	**141**		**Pn**	**20 06 10.9**	**+0.5**
BI02	**San Fabin de**	**2.72**	**141**	*eP*	**Pn**	**20 06 10.2**	**-0.2**
BI02				*eS*	**Sn**	**20 06 41.8**	**-1.9**
BI02				IAML		20 06 50.8	
	comp=Z,136nm,0.2s						
BI02	**San Fabin de**	**2.72**	**141**	*eP*	**Pn**	**20 06 10.9**	**+0.5**
BI02				*eS*	**Sn**	**20 06 41.7**	**-1.9**
BI02				IAML		20 06 45.8	
	comp=N,201nm,0.3s						
MT04	**Ro Olivares**	**2.94**	**68**	*eP*	**Pn**	**20 06 13.3**	**-0.2**
MT04				*eS*	**Sn**	**20 06 48.3**	**-1.0**
MT04				IAML		20 06 52.3	
	comp=Z,255nm,0.2s						
VA03	**San Esteban**	**2.97**	**54**		**Pn**	**20 06 14.3**	**+0.5**
VA03	**San Esteban**	**2.97**	**54**	*eP*	**Pn**	**20 06 13.7**	**-0.2**
VA03				IAML		20 06 52.2	
	comp=Z,482nm,0.8s						
VA03	**San Esteban**	**2.97**	**54**	*eP*	**Pn**	**20 06 14.4**	**+0.5**
VA03				*eS*	**Sn**	**20 06 48.7**	**-1.3**
MT08	**Bocatoma Ro**	**3.02**	**69**		**Pn**	**20 06 15.0**	**+0.4**
MT08	**Bocatoma Ro**	**3.02**	**69

SNAA IAmb IAmb 20 14 34.4
comp=Z,3.4nm,0.9s
TROLL Troll, Antarti 53.19 158 ⇑P **P 20 14 46.2 +1.4**
comp=Z,170nm,0.9s
QSPA South Pole Qui 55.67 180 P **P 20 15 04.2 +1.2**
comp=Z,2.6nm,0.9s,baz=148,slow=2.9,SNR=14
comp=Z,2.6nm,0.9s
QSPA South Pole Qui 55.67 180 P **P 20 15 04.0 +1.1**
QSPA IAmb IAmb 20 15 05.5
comp=Z,6.3nm,1.2s
TXAR Lajitas Array 69.69 332 P **P 20 16 38.3 +1.5**
comp=Z,0.3nm,0.6s,baz=165,slow=7.5,SNR=5.0
comp=Z,0.3nm,0.6s
TXAR Lajitas Array 69.69 332 P **P 20 16 37.1 +0.4**
TORD Torodi Ar. Bea 85.45 71 P **P 20 18 05.8 +0.8**
comp=Z,0.9nm,1.0s,baz=268,slow=32,SNR=2.8
comp=Z,0.9nm,1.0s
TORD Torodi Ar. Bea 85.45 71 P **P 20 18 05.8 +0.8**
TORD IAmb IAmb 20 18 45.0
comp=Z,2.6nm,0.7s

*GII **02** 20:35:41.2±0.0,33°.557N±0°.002×34°.815E±0°.001,h0km, Mws2.0, confirmed*
*GRAL **02** 20:35:43.0±0.3,33°.54N×34°.84E,h30km±2km, MD2.9*
ISC 02 20:35:42.2±1.5**, 33°.57N**±0°.03×**34°.84E**±0°.06**, h23**km±15km**, n25**, σ0°.45/45, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DQRL	**Deir Qamar**	**0.62**	**77**	*eP*		**Pb**	**20 35 54.7**	**+0.2**
DQRL				*eS*		**Sb**	**20 36 03.4**	**+0.6**
QRWL	**Qaraoun**	**0.70**	**91**	*eP*		**Pb**	**20 35 55.9**	**+0.1**
QRWL				*eS*		**Sb**	**20 36 05.3**	**+0.3**
KIRY	**Kiryat Shemona**	**0.70**	**120**	P		**Pb**	**20 35 55.4**	**-0.4**
KIRY				S		**Sb**	**20 36 04.6**	**-0.5**
MMA0B	**Mount Meron ar**	**0.72**	**139**	P		**Pb**	**20 35 55.5**	**-0.6**
MMA0B				S		**Sb**	**20 36 05.6**	**0.0**
BHL	**Bhannes**	**0.76**	**63**	*eP*		**Pb**	**20 35 56.8**	**+0.1**
GEM	**Giv'at Ha'Em**	**0.77**	**117**	P		**Pb**	**20 35 56.7**	**-0.3**
GEM				S		**Sb**	**20 36 07.4**	**+0.4**
SHBL	**Chebaa**	**0.78**	**106**	*eP*		**Pb**	**20 35 57.0**	**-0.2**
SHBL				*eS*		**Sb**	**20 36 07.4**	**-0.1**
RCY	**Rachaya**	**0.83**	**95**	*eP*		**Pb**	**20 35 58.0**	**0.0**
ZAHL	**Zahle**	**0.92**	**71**	*eP*		**Pn**	**20 35 59.3**	**-0.5**
KNHM	**Kefar Nahum**	**0.92**	**138**	P		**Pn**	**20 35 58.9**	**-0.7**
KNHM				S		**Sb**	**20 36 11.7**	**+0.4**
KSHT	**Keshet**	**1.00**	**125**	P		**Pn**	**20 36 00.3**	**-0.5**
KSHT				S		**Sb**	**20 36 14.9**	**+1.3**
HWQ	**Hawqa**	**1.16**	**52**	*eP*		**Pn**	**20 36 02.7**	**-0.4**
MMLI	**Mount Malkishu**	**1.23**	**156**	P		**Pn**	**20 36 03.5**	**-0.4**
MMLI				S		**Sn**	**20 36 20.0**	**+0.3**
SLTI	**Sal'it**	**1.33**	**173**	P		**Pn**	**20 36 05.8**	**+0.5**
SLTI				S		**Sn**	**20 36 22.5**	**+0.2**
ROII	**Roi**	**1.42**	**157**	P		**Pn**	**20 36 06.4**	**-0.1**
ROII				S		**Sn**	**20 36 25.3**	**+0.8**
BEIL	**Beino**	**1.48**	**49**	*eP*		**Pn**	**20 36 07.0**	**-0.4**
RGMN	**Argaman**	**1.51**	**158**	P		**Pn**	**20 36 07.3**	**-0.4**
RGMN				S		**Sn**	**20 36 27.0**	**+0.4**
YITV	**Yitav**	**1.69**	**163**	P		**Pn**	**20 36 09.7**	**-0.5**
YITV				S		**Sn**	**20 36 31.1**	**+0.1**
ALMO	**Almog**	**1.85**	**163**	P		**Pn**	**20 36 12.0**	**-0.4**
ALMO				S		**Sn**	**20 36 35.2**	**+0.2**
CSS	**Mathiatis**	**1.87**	**318**	P		**Pn**	**20 36 12.5**	**-0.3**
CSS				S		**Sn**	**20 36 35.8**	**+0.1**
AMAZ	**Amatzia**	**2.03**	**178**	P		**Pn**	**20 36 14.5**	**-0.5**
AMAZ				S		**Sn**	**20 36 40.0**	**+0.4**
MZS	**Mizpe Shalem**	**2.05**	**167**	P		**Pn**	**20 36 14.7**	**-0.4**
MZS				S		**Sn**	**20 36 40.3**	**+0.3**
MSBI	**Mazada**	**2.29**	**169**	P		**Pn**	**20 36 18.0**	**-0.5**
MSBI				S		**Sn**	**20 36 46.0**	**+0.1**
KZIT	**Kziot**	**2.68**	**188**	P		**Pn**	**20 36 23.7**	**-0.2**
KZIT				S		**Sn**	**20 36 55.2**	**-0.3**
RMNI	**Mount Ramon**	**2.96**	**181**	P		**Pn**	**20 36 28.1**	**+0.2**
RMNI				S		**Sn**	**20 37 03.3**	**+0.6**

IDC 02 20:53:04.1±3.5**, 4°.89S**×**129°.28E, h420**km±61km**, mb2.5**/1**, mbtmp3.3**/4**, Error ellipse: s-maj=122.2km s-min=19.6km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SIJI	**Sorong**	**4.46**	**26**	P		P	20 54 22.9	+1.2
	2.8nm,0.5s,baz=225,slow=8.6,SNR=6.8							
SIJI				S		S	20 55 24.8	-0.2
	3.3nm,0.2s,baz=224,slow=22,SNR=6.4							
WRA	**Warramunga Arr**	**15.75**	**162**	P		P	20 56 23.9	-0.2
	0.9nm,0.5s,baz=341,slow=11,SNR=11							
ASAR	**Alice Springs**	**19.19**	**167**	P		P	20 56 60.0	0.0
	0.7nm,0.8s,baz=344,slow=9.6,SNR=6.5							
MKAR	**Makanchi Array**	**66.08**	**327**	P		P	21 03 08.0	0.0
	0.1nm,0.4s,baz=141,slow=5.5,SNR=1.7							
	0.1nm,0.4s							

*NEIC **02** 20:53:32.6±2.3, 14°.85S±0°.08×167°.4E±0°.1,h142km±13km, mb4.4/11, Error ellipse: s-maj=23.4km s-min=3.5km az=60.0*
*IDC **02** 20:53:34.0±3.5, 14°.93S×167°.13E,h148km±23km, mb3.7/7, mbtmp4.2/9, Error ellipse: s-maj=40.7km s-min=14.7km az=55.0*
*NOU **02** 20:53:57.5, 17°.02S×168°.37E,h0km, mb4.5/6, Vanuatu Islands*
ISC 02 20:53:31.6±1.2**, 14°.86S**±0°.09×**167°.3E**±0°.1**, h129**km**, n29,** σ1°.39/31**, mb4.1**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DVP	**Devils Point**	**2.96**	**164**	P		Pn	20 54 11.3	-6.4
KOUNC	**Koumac, New Ca**	**6.36**	**207**	Pn		**Pn**	**20 55 05.5**	**+2.6**
KOUNC				Sn		**Sn**	**20 56 11.2**	**-3.1**
MARNC	**Mare, Loyalty**	**6.62**	**174**	P		**Pn**	**20 55 06.4**	**0.0**
MARNC	**Mare, Loyalty**	**6.62**	**174**	Pn		**Pn**	**20 55 06.3**	**0.0**
YATNC	**Mamie plateau,**	**7.17**	**183**	P		**Pn**	**20 55 15.0**	**+1.1**
DZM	**Mont Dzumac**	**7.22**	**187**	P		**Pn**	**20 55 15.9**	**+1.3**
	19nm,0.3s,baz=10,slow=13,SNR=30							
DZM				S		**Sn**	**20 56 36.3**	**+1.1**
	11nm,0.5s,baz=337,slow=23,SNR=6.1							
ONTNC	**Ouen Toro**	**7.45**	**186**	P		Pn	20 55 22.5	+4.9
ONTNC	**Ouen Toro**	**7.45**	**186**	Pn		**Pn**	**20 55 19.3**	**+1.7**
ONTNC				Sn		**Sn**	**20 56 40.1**	**-0.6**
OUENC	**Ouen Island, N**	**7.53**	**183**	P		**Pn**	**20 55 21.5**	**+2.8**
OUENC	**Ouen Island, N**	**7.53**	**183**	Pn		**Pn**	**20 55 19.8**	**+1.1**
HNR	**Honiara**	**9.01**	**306**	P		**Pn**	**20 55 38.6**	**0.0**
	4.8nm,0.8s,baz=175,slow=4.0,SNR=4.1							
HNR				S		**Sn**	**20 57 19.5**	**+1.0**
	2.5nm,0.4s,baz=10,slow=5.5,SNR=1.9							
EIDS	**Eidsvold**	**18.48**	**233**	P		**Pn**	**20 57 39.8**	**+0.5**
EIDS				IAmb		IAmb	20 57 40.7	
	comp=Z,7.6nm,0.7s							
BKZ	**Black Stump Fm**	**25.52**	**163**	P		**P**	**20 58 47.9**	**-0.2**
LTZ	**Lake Taylor**	**28.15**	**172**	P		**P**	**20 59 12.1**	**+0.5**
LTZ				IAmb		IAmb	20 59 17.4	
	comp=Z,28nm,1.4s							
STKA	**Stephens Creek**	**28.95**	**230**	P		**P**	**20 59 19.6**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=34,slow=7.3,SNR=5.9							
	comp=Z,2.5nm,0.6s							
JAY	**Jayapura**	**28.99**	**293**	P		**P**	**20 59 20.0**	**+0.6**
	comp=Z,12nm,0.9s,baz=328,slow=13,SNR=2.4							
	comp=Z,12nm,0.9s							
LBZ	**Lake Benmore**	**29.53**	**176**	P		**P**	**20 59 24.4**	**+0.6**
LBZ				IAmb		IAmb	20 59 26.7	
	comp=Z,23nm,1.3s							
WB0	**Warramunga Arr**	**31.79**	**256**	P		**P**	**20 59 42.5**	**-1.5**
WB0				IAmb		IAmb	20 59 44.1	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**31.85**	**256**	P		**P**	**20 59 42.7**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=86,slow=9.1,SNR=6.0							
	comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**31.85**	**256**	P		**P**	**20 59 42.7**	**-1.9**
ASAR	**Alice Springs**	**32.68**	**249**	P		**P**	**20 59 50.2**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=79,slow=9.4,SNR=21							
	comp=Z,0.6nm,0.3s							
BBOO	**Buckleboo**	**33.55**	**232**	P		**P**	**20 59 58.2**	**-1.0**
KNRA	**Kununurra**	**37.18**	**264**	P		**P**	**21 00 28.9**	**-1.6**
KNRA				IAmb		IAmb	21 01 07.0	
	comp=Z,9.1nm,1.2s							
FITZ	**Fitzroy Crossi**	**40.05**	**259**	P		**P**	**21 00 53.3**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=69,slow=8.2,SNR=11							
	comp=Z,2.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**40.05**	**259**	P		**P**	**21 00 53.2**	**-1.2**
VNDA	**Vanda**	**62.73**	**181**	P		**P**	**21 03 42.7**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=360,slow=8.0,SNR=8.4							
	comp=Z,0.8nm,0.5s							
VNDA	**Vanda**	**62.73**	**181**	P		**P**	**21 03 42.7**	**+0.3**
VNDA				IAmb		IAmb	21 04 20.2	
	comp=Z,4.7nm,1.5s							
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**21 04 59.2**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=40,slow=4.2,SNR=19							
	comp=Z,2.2nm,0.7s							
QSPA	**South Pole Qui**	**75.17**	**180**	P		**P**	**21 04 59.2**	**-0.4**
QSPA				IAmb		IAmb	21 04 60.0	
	comp=Z,2.2nm,0.8s							

*IDC **02** 21:07:59.3±1.1,21°.68N×145°.90E,h0km,mb3.8/10, mbtmp3.8/11,ML4.2/1,MS3.4/1, Error ellipse: s-maj=40.0km s-min=18.4km az=82.0*
ISC 02 21:08:05.3±1.2**, 21°.8N**±0°.1×**145°.7E**±0°.3**, h36**km**, n11,** σ1°.57/12**, mb3.9**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JCJ	**Chichijima**	**6.17**	**330**	Pn		**Pn**	**21 09 34.7**	**+0.8**
	5.8nm,0.3s,baz=179,slow=13,SNR=1.8							
JCJ				Sn		**Sn**	**21 10 40.3**	**-2.9**
	5.0nm,0.3s,baz=90,slow=20,SNR=2.4							
	24nm,0.6s							
KSRS	**Korea Array**	**21.89**	**319**	P		**P**	**21 12 56.7**	**+1.5**
	1.2nm,0.7s,baz=148,slow=10,SNR=7.8							
	1.2nm,0.7s							
SONM	**Songino Array**	**40.76**	**319**	P		**P**	**21 15 42.8**	**-0.3**
	0.4nm,0.5s,baz=126,slow=7.3,SNR=3.0							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**42.91**	**196**	P		**P**	**21 15 59.6**	**-1.1**
	1.7nm,0.6s,baz=17,slow=8.7,SNR=14							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**46.59**	**195**	P		**P**	**21 16 28.9**	**-1.1**
	0.8nm,0.6s,baz=13,slow=8.4,SNR=14							
ASAR				LR		LR	21 36 26.7	
	comp=Z,40nm,18.2s,baz=256,slow=37							
	0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**55.58**	**321**	P		**P**	**21 17 37.8**	**+0.6**
	0.3nm,0.3s,baz=81,slow=8.9,SNR=2.1							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**56.34**	**312**	P		**P**	**21 17 43.4**	**+0.6**
	0.3nm,0.7s,baz=108,slow=9.3,SNR=2.9							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**59.04**	**317**	P		**P**	**21 18 02.9**	**+1.3**
	1.0nm,0.6s,baz=93,slow=7.6,SNR=8.5							
	1.0nm,0.6s							
ILAR	**Eielson Array**	**60.93**	**27**	P		**P**	**21 18 13.7**	**-0.7**
	0.8nm,0.8s,baz=279,slow=6.2,SNR=7.7							
	0.8nm,0.8s							
BVAR	**Borovoye Array**	**64.11**	**320**	P		**P**	**21 18 38.1**	**+2.3**
	1.5nm,0.5s,baz=57,slow=4.7,SNR=5.0							
	1.5nm,0.5s							
FINES	**FINESS Array B**	**84.09**	**335**	P		**P**	**21 20 32.2**	**0.0**
	1.2nm,0.7s,baz=23,slow=6.2,SNR=4.9							
	1.2nm,0.7s							

*PRU **02** 21:11:25.8,51°.66N×16°.02E,h0km*
*IPEC **02** 21:11:25.3±0.2,51°.62N×16°.08E,h1km,ML2.4/8, Error ellipse: s-maj=1.9km s-min=1.1km az=65.0*
*VIE **02** 21:11:27.0±1.6,51°.47N×15°.98E,h0km,mb2.5/6,ml2.5/8, Error ellipse: s-maj=10.1km s-min=7.5km az=19.0 83 km WNW of Wroclaw Suspected Mining induced.*
*DNK **02** 21:11:26.8±2.5,51°.78N×16°.02E,h0km±341km,ML2.0, Presumed earthquake*
ISC 02 21:11:24.6±0.8**, 51°.67N**±0°.03×**16°.04E**±0°.02**, h0**km**, n43,** σ1°.31/89**, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KSP	**Ksiaz**	**0.84**	**169**	*e*Pg		**Pg**	**21 11 40.9**	**+0.3**
KSP				*e*Sg		**Sg**	**21 11 50.7**	**-0.8**
CHVC	**Chvalec**	**1.08**	**180**	*e*PG		**Pg**	**21 11 45.5**	**+0.3**
CHVC				*e*SG		**Sb**	**21 12 00.4**	**-0.3**
	comp=Z,44nm,0.7s							
OSTC	**Ostas**	**1.11**	**174**	*e*PG		**Pg**	**21 11 46.5**	**+0.6**
OSTC				*e*SG		**Sb**	**21 12 01.6**	**-0.2**
	comp=Z,37nm,0.4s							
UPC	**Upice**	**1.16**	**181**	*e*PG		**Pg**	**21 11 47.0**	**+0.3**
UPC				*e*SG		**Sb**	**21 12 02.9**	**-0.1**
	comp=Z,39nm,0.4s							
DPC	**Dobruska-Polom**	**1.33**	**172**	*e*PG		**Pg**	**21 11 49.8**	**-0.2**
DPC				*e*SG		**Sb**	**21 12 07.7**	**-0.2**
	comp=Z,36nm,0.4s							
PVCC	**Panska Ves**	**1.47**	**220**	*e*PG		**Pn**	**21 11 52.4**	**+0.1**
PVCC				*e*SG		**Sn**	**21 12 12.7**	**+0.5**
	comp=Z,96nm,0.3s							
PIVO	**Bartosovice**	**1.52**	**168**	*e*Pg		**Pn**	**21 11 52.5**	**-0.4**
	baz=348							
PIVO				*e*Sg		**Sg**	**21 12 11.2**	**-2.0**
	30nm,0.4s,baz=348							
BRG	**Berggiesshubel**	**1.54**	**240**	Pg		**Pn**	**21 11 54.1**	**+0.9**
BRG				Sg		**Sg**	**21 12 13.8**	**-0.1**
BRG				Amp			21 12 15.3	
	comp=Z,61nm,0.4s							
KRLC	**Kraliky**	**1.66**	**163**	*e*PG		**Pb**	**21 11 56.0**	**0.0**
KRLC				*e*SG		**Sg**	**21 12 17.6**	**-0.2**
	comp=Z,38nm,0.5s							
ANAC	**Anensky vrch**	**1.80**	**151**	*e*Pn		**Pn**	**21 11 56.6**	**-0.3**
	baz=332							
ANAC				*e*Sg		**Sn**	**21 12 20.6**	**+0.1**
	comp=Z,18nm,0.4s,baz=332							
RYBC	**Ceska Rybna**	**1.86**	**180**	*e*Pn		**Pn**	**21 11 57.6**	**-0.1**
	baz=0.2							
RYBC				*e*Sg		**Sn**	**21 12 22.2**	**+0.4**
	comp=Z,25nm,0.3s,baz=0.2							
PRU	**Pruhonice**	**1.93**	**210**	*e*PG		**Pn**	**21 11 59.7**	**+1.1**
PRU				*e*SG		**Sg**	**21 12 27.0**	**+0.5**
	comp=Z,12nm,0.2s							
CLL	**Collm**	**1.93**	**261**	*i* Pn		**Pn**	**21 11 58.6**	**-0.1**
CLL				*e*Pg		**Pb**	**21 12 01.0**	**+0.4**
CLL				*i* x		x	21 12 05.6	
CLL				*ex*		x	21 12 10.0	
CLL				*e*Sg		**Sg**	**21 12 27.0**	**+0.4**
	comp=Z,24nm,0.3s							
HSKC	**Hora Svate Kat**	**1.96**	**238**	*e*PG		**Pn**	**21 12 00.6**	**+1.6**
HSKC				*e*SG		**Sg**	**21 12 26.9**	**-0.5**
	comp=Z,23nm,0.4s							
STEB	**Steborice**	**2.05**	**147**	*e*PG		**Pb**	**21 12 02.1**	**-0.6**
STEB				*e*SG		**Sg**	**21 12 30.9**	**+0.5**
	comp=Z,73nm,0.5s							
MORC	**Moravsky Berou**	**2.12**	**153**	*e*Pn		**Pn**	**21 12 01.0**	**-0.2**
	baz=334							
MORC				*e*Sg		**Sb**	**21 12 30.0**	**-0.6**
	comp=Z,27nm,0.6s,baz=334							
OKC	**Ostrava-Krasne**	**2.27**	**143**	*e*SG		**Sg**	**21 12 37.2**	**-0.1**
	comp=Z,38nm,0.7s							
VRAC	**Vranov**	**2.39**	**171**	*e*Pn		**Pn**	**21 12 05.1**	**+0.2**
	baz=352							
VRAC				*e*Sg		**Sb**	**21 12 38.6**	**+0.3**
	comp=Z,23nm,1.0s,baz=352							
ZVC	**Zvikov**	**2.52**	**209**	*e*PN		**Pn**	**21 12 07.0**	**+0.2**
ZVC				*e*PG		**Pb**	**21 12 10.0**	**-0.7**
ZVC				*e*SG		**Sg**	**21 12 46.3**	**+0.8**
	comp=Z,13nm,0.5s							
MAUC	**Maruska**	**2.57**	**153**	*e*PG		**Pb**	**21 12 12.5**	**+1.0**
MAUC				*e*SG		**Sg**	**21 12 46.8**	**-0.2**
KRUC	**Moravsky**	**2.62**	**175**	*e*Pn		**Pn**	**21 12 08.2**	**+0.2**
	baz=356							
KRUC				*e*Sg		**Sb**	**21 12 45.9**	**+1.0**
	comp=Z,18nm,0.8s,baz=356							
STAC	**Stalkov**	**2.68**	**191**	*e*Pn		**Pn**	**21 12 09.2**	**+0.2**
	baz=11							
STAC				*e*Sg		**Sb**	**21 12 47.9**	**+1.1**
	comp=Z,14nm,0.4s,baz=11							
NKC	**Novy Kostel**	**2.69**	**239**	*e*PN		**Pn**	**21 12 09.8**	**+0.7**
NKC				*e*PG		**Pb**	**21 12 13.9**	**+0.4**
NKC				*e*SN		**Sn**	**21 12 43.4**	**+1.1**
NKC				*e*SG		**Sg**	**21 12 50.1**	**-0.7**
	comp=Z,24nm,0.4s							
OJC	**Ojcow**	**2.78**	**120**	*e*Pg		**Pg**	**21 12 19.2**	**+1.4**
OJC				*e*Sg		**Sg**	**21 12 54.4**	**+0.5**
KHC	**Kasperske Hory**	**2.99**	**213**	*e*PN		**Pn**	**21 12 14.3**	**+1.1**
KHC				*e*PG		**Pb**	**21 12 19.3**	**+0.7**
KHC				*e*SN		**Sn**	**21 12 49.6**	**-0.1**
KHC				*e*SG		**Sg**	**21 13 00.1**	**-0.4**
	comp=Z,6.7nm,0.2s							
JAVC	**Velka Javorina**	**3.00**	**159**	*e*Pn		**Pn**	**21 12 13.1**	**-0.2**
	baz=340							
JAVC	**Velka Javorina**	**3.00**	**159**	*e*PN		**Pn**	**21 12 13.2**	**-0.1**
LANS	**Liptovska Anna**	**3.34**	**138**	*e*PG		**Pg**	**21 12 27.7**	**-0.8**
LANS				*e*SG		**Sg**	**21 13 11.1**	**-0.6**
MODS	**Modra-Piesok**	**3.39**	**166**	*e*PN		**Pn**	**21 12 19.0**	**+0.3**
MODS				*e*PG		**Pg**	**21 12 28.9**	**-0.6**
MODS				*e*SG		**Sg**	**21 13 12.4**	**-1.0**
BSD	**Bornholm Skovb**	**3.52**	**349**	*i* P		**Pn**	**21 12 21.9**	**+1.5**
BSD				*i* S		**Sn**	**21 13 01.4**	**-1.4**
BSD				IAML			21 13 29.3	
	comp=Z,1.6nm,0.4s							
CONA	**Conrad Observa**	**3.74**	**182**	*i* Pn		**Pn**	**21 12 24.1**	**+0.5**
	comp=Z,0.7nm,0.4s							
CONA				*e*Sg		**Sb**	**21 13 20.6**	**+3.2**
	comp=Z,4.8nm,0.3s							
RONA	**Rosalia, Austr**	**3.97**	**178**	*i* Pn		**Pn**	**21 12 26.3**	**-0.5**
	comp=Z,0.4nm,0.3s							
RONA				*e*Sg		**Sb**	**21 13 27.1**	**+3.1**
	comp=Z,2.5nm,0.3s							
MOA	**Molln**	**3.99**	**197**	*i* Pn		**Pn**	**21 12 27.0**	**+0.1**
	comp=Z,2.2nm,0.2s							
MOA				*e*Sg		**Sg**	**21 13 30.1**	**-2.6**
	comp=Z,8.1nm,0.6s							
STHS	**Stebnicka Huta**	**4.01**	**122**	*e*SG		**Sg**	**21 13 35.7**	**+2.4**
LUNU	**Lund**	**4.26**	**340**	*i* P		**Pn**	**21 12 31.5**	**+0.8**
LUNU				*i* S		**Sn**	**21 13 19.4**	**-1.7**
BIOA	**Bad Ischl, Aus**	**4.27**	**202**	*e*Pn		**Pn**	**21 12 31.6**	**+0.7**
	comp=Z,1.9nm,0.2s							
BIOA				*e*Sg		**Sg**	**21 13 37.1**	**-4.7**
	comp=Z,7.0nm,0.5s							
LLD	**Lille Linde**	**4.33**	**330**	*e*P		**Pn**	**21 12 33.3**	**+1.8**
LLD				*i* S		**Sn**	**21 13 22.3**	**-0.3**
LLD				IAML			21 13 25.8	
	comp=Z,1.9nm,0.2s							
ARSA	**Arzberg**	**4.43**	**185**	*e*Pn		**Pn**	**21 12 30.6**	**-2.4**
	comp=Z,0.5nm,0.3s							
ARSA				*e*Sg		**Sg**	**21 13 44.3**	**-2.6**
	comp=Z,1.8nm,0.4s							
BLEU	**Blekinge**	**4.65**	**358**	*i* P		**Pn**	**21 12 37.7**	**+1.8**
BLEU				*i* S		**Sn**	**21 13 28.8**	**-1.8**
BJUU	**Bjuv**	**4.76**	**339**	*i* P		**Pn**	**21 12 35.6**	**-2.0**
BJUU				*i* S		**Sn**	**21 13 29.4**	**-4.0**
LESA	**Schwarzleotal**	**4.78**	**209**	*e*Pn		**Pn**	**21 12 37.6**	**-0.2**
	comp=Z,0.5nm,0.2s							
LESA				*e*Sg		**Sg**	**21 13 57.1**	**-0.8**
	comp=Z,1.0nm,0.2s							
KBA	**Koelnbreinsper**	**4.92**	**202**	*i* Pn		**Pn**	**21 12 40.1**	**+0.2**
	comp=Z,0.4nm,0.1s							
KBA				*e*Sg		**Sg**	**21 13 59.7**	**-2.8**
	comp=Z,4.9nm,0.6s							
DEL	**Delary**	**4.98**	**346**	*i* P		**Pn**	**21 12 41.5**	**+1.0**
DEL				*i* S		**Sn**	**21 13 35.8**	**-2.9**
DEL				IAML			21 13 39.6	
	comp=Z,0.9nm,0.3s							

*TAP **02** 21:38:15.0,23°.94N×122°.61E,h25km,ML2.6,D*
*JMA **02** 21:38:16.1±0.2,24°.0N±0°.9×122°.6E±0°.7,h22km,MV1.9/11, NW OFF ISHIGAKIJIMA IS*
ISC 02 21:38:15.9±1.1**, 23°.97N**±0°.04×**122°.58E**±0°.02**, h27**km**±10km, n45,** σ0°.52/79**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
EOS4	**EOS4**	**0.28**	**302**	*i* P		**Pb**	**21 38 22.6**	**+0.2**
EOS4				*i* S		**Sn**	**21 38 28.6**	**-0.5**
EOS3	**EOS3**	**0.39**	**323**	*i* P		**Pb**	**21 38 24.8**	**+0.5**
EOS3				*i* S		**Sb**	**21 38 31.5**	**-0.7**
EOS2	**EOS2**	**0.55**	**325**	P		**Pn**	**21 38 27.6**	**-0.2**
EOS2				S		**Sn**	**21 38 35.9**	**-0.1**
JYNG	**Yonagunijimaku**	**0.58**	**35**	P		**Pb**	**21 38 27.1**	**-0.5**
JYNG				*e*S		**Sb**	**21 38 34.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.63**	**39**	*i* P		**Pb**	**21 38 27.8**	**-0.5**
YOJ				S		**Sb**	**21 38 36.8**	**0.0**
YOJ	**Yonaguni jima**	**0.63**	**39**	P		**Pb**	**21 38 27.9**	**-0.5**
YOJ				S		**Sb**	**21 38 35.8**	**-1.0**
EWUT	**Wuta**	**0.87**	**303**	*e*P		**Pn**	**21 38 32.4**	**+0.1**
EWUT				*e*S		**Sn**	**21 38 44.1**	**0.0**
ETL	**Fush Village**	**0.89**	**282**	*e*P		**Pn**	**21 38 32.8**	**+0.1**
ETL				*e*S		**Sn**	**21 38 45.0**	**+0.2**
TWC	**Suao**	**0.92**	**314**	P		**Pn**	**21 38 33.0**	**0.0**
TWC				*e*S		**Sn**	**21 38 45.9**	**+0.5**
NACB	**Ninganchiao**	**0.92**	**283**	P		**Pb**	**21 38 32.5**	**-0.7**
SHUL	**Shoufeng**	**0.95**	**259**	*e*P		**Pn**	**21 38 33.7**	**+0.3**
SHUL				*e*S		**Sn**	**21 38 46.7**	**+0.6**
ETM	**Tongmen**	**0.99**	**270**	*e*P		**Pn**	**21 38 33.3**	**-0.8**
ETM				*e*S		**Sn**	**21 38 48.0**	**+0.8**
NDS	**Dongshan**	**1.03**	**310**	*e*P		**Pb**	**21 38 35.1**	**+0.1**
NDS				*e*S		**Sn**	**21 38 49.4**	**+1.3**
ETLH

LUWI	Luwuk	3.02	181	P		P	21 48 25.7	-0.8
APSI	Ampana	3.11	202	P		P	21 48 27.2	0.0
SGSI	Sangihe	3.20	58	P		P	21 48 28.2	+0.3
PCI	Palu	4.14	226	P		P	21 48 34.4	-1.3
TNTI	Ternate	4.72	105	P		P	21 48 41.1	0.0
TNTI	Ternate	4.72	105	S		S	21 49 47.7	+0.1
TNTI	Ternate	4.72	105	P		P	21 48 40.0	-1.1
TNTI	Ternate	4.72	105	P		P	21 48 40.7	-0.4
DDMP	Don Marcelino,	5.00	35	*e*P		P	21 48 44.3	+0.5
DDMP				*e*S		S	21 49 50.0	-2.5
SANI	Sanana	5.13	142	P		P	21 48 45.8	+0.8
KCP	Kidapawan	5.48	25	*i* P		P	21 48 51.2	+2.8
MMSI	Mamuju	6.07	220	P		P	21 48 53.3	-1.1
	0.2nm789nm35nm,0.6s							
SPSI	Sidrap Palu	6.65	207	P		P	21 49 00.6	+0.1
	1um103nm,0.7s							
CDOP	Cateel, Davao	6.79	32	*e*P		P	21 49 01.5	-0.4
CDOP				*i* S		S	21 50 22.4	-3.4
BIPH	Bislig	7.09	30	*e*P		P	21 49 05.5	+0.4
BIPH				*e*S		S	21 50 29.8	-1.8
KAPI	Kappang	7.60	204	P		P	21 49 10.7	+0.2
	53nm,0.9s,baz=24,slow=11,SNR=17							
KAPI	Kappang	7.60	204			P	21 49 10.0	-0.5
KAPI	Kappang	7.60	204	P		P	21 49 11.2	+0.7
	0.1nm28nm,1.0s							
KKM	Kota Kinabalu	7.71	302	P		P	21 49 10.9	-0.8
KKM	Kota Kinabalu	7.71	302	P		P	21 49 10.8	-1.0
KKM	Kota Kinabalu	7.71	302	P		P	21 49 11.2	-0.5
	0.2nm630nm56nm,0.7s							
TSSP	Tandag City	7.77	26	*e*P		P	21 49 13.2	+0.8
SIJI	Sorong	8.93	109	P		P	21 49 25.6	+0.7
	6.9nm,0.5s,baz=260,slow=11,SNR=5.1							
SIJI	Sorong	8.93	109	P		P	21 49 25.9	+1.0
PLP	Palo	9.36	13	*e*P		P	21 49 33.2	+3.7
FAKI	Fak Fak	10.63	117	P		P	21 49 43.0	-0.4
FAKI	Fak Fak	10.63	117	S		S	21 51 42.6	+0.5
FAKI	Fak Fak	10.63	117	P		P	21 49 44.4	+1.0
FAKI	Fak Fak	10.63	117	P		P	21 49 44.2	+0.8
	41nm,0.5s							
PLAI	Plampang	11.86	205	P		P	21 49 59.1	+2.3
PLAI	Plampang	11.86	205	S		S	21 52 10.2	+3.5
PLAI	Plampang	11.86	205	P		P	21 49 58.3	+1.5
	27nm,0.6s							
BATI	Baumata	12.15	176	P		P	21 49 57.1	-2.8
	27nm,0.3s,baz=270,slow=4.0,SNR=6.1							
BATI				S		S	21 52 11.6	-0.9
	17nm,0.4s,baz=342,slow=20,SNR=6.0							
JAGI	Jajag, Banyuwa	13.51	220	P		P	21 50 15.8	+1.2
JAGI	Jajag, Banyuwa	13.51	220	P		P	21 50 16.2	+1.5
JAGI	Jajag, Banyuwa	13.51	220	P		P	21 50 16.3	+1.7
	48nm,0.8s							
SNJI	Sawahan-Nganju	14.69	228	P		P	21 50 28.5	+1.1
	35nm,1.2s							
UGM	Wanagama	15.71	231	P		P	21 50 39.1	+0.9
UGM	Wanagama	15.71	231	P		P	21 50 37.9	-0.3
DRS	Darwin Rock St	16.43	151	P		P	21 50 46.4	+0.7
MTN	Manton Dam	16.90	151	P		P	21 50 50.1	-0.5
JAY	Jayapura	18.45	104	P		P	21 51 06.7	+0.1
	4.2nm,0.4s,baz=213,slow=11,SNR=7.8							
KNRA	Kununurra	18.52	162			P	21 51 07.0	-0.2
MYKOM	Kota Tinggi	18.95	270	P		P	21 51 10.7	-0.6
MYKOM				IAmb		IAmb	21 51 11.2	
	comp=Z,6.1nm,0.8s							
KLSI		19.24	250	P		P	21 51 13.6	-0.4
FITZ	Fitzroy Crossi	20.16	172	P		P	21 51 21.3	-1.0
	comp=Z,3.3nm,0.3s,baz=12,slow=9.2,SNR=44							
	comp=Z,3.3nm,0.3s							
FITZ	Fitzroy Crossi	20.16	172	P		P	21 51 21.8	-0.5
FITZ	Fitzroy Crossi	20.16	172	P		P	21 51 21.7	-0.6
TPUB	Ta-pu	21.28	354	P		P	21 51 33.4	+1.0
TPUB				IAmb		IAmb	21 51 48.2	
	comp=Z,24nm,1.1s							
YULB	Yu-li	21.32	356	P		P	21 51 33.5	+0.8
YULB				IAmb		IAmb	21 51 35.4	
	comp=Z,5.5nm,1.0s							
WB0	Warramunga Arr	24.44	153	P		P	21 51 59.6	-1.3
WRAB	Tennant Creek	24.56	153	P		P	21 52 00.8	-1.2
WRAB	Tennant Creek	24.56	153	P		P	21 52 00.6	-1.4
WRAB				IAmb		IAmb	21 52 13.6	
	comp=Z,5.1nm,0.8s							
WRA	Warramunga Arr	24.57	153	P		P	21 52 00.8	-1.2
	comp=Z,4.2nm,0.4s,baz=336,slow=9.6,SNR=93							
WRA				PcP		PcP	21 55 24.2	-1.4
	comp=Z,0.2nm,0.4s,baz=329,slow=2.3,SNR=1.7							
	comp=Z,4.2nm,0.4s							
WRA	Warramunga Arr	24.57	153	P		P	21 51 59.7	-2.4
WB2	Warramunga Arr	24.57	153	P		P	21 52 00.8	-1.3
WB2				IAmb		IAmb	21 52 01.4	
	comp=Z,9.6nm,0.5s							
WR8	Warramunga Arr	24.65	153			P	21 52 01.5	-1.3
WR8				IAmb		IAmb	21 52 01.8	
	comp=Z,5.0nm,0.5s							
AS31	Alice Springs	27.70	158			P	21 52 29.1	-0.7
AS31				IAmb		IAmb	21 52 31.3	
	comp=Z,2.4nm,0.2s							
ASAR	Alice Springs	27.70	158	P		P	21 52 29.2	-0.6
	comp=Z,1.7nm,0.5s,baz=337,slow=7.1,SNR=46							
ASAR				PcP		PcP	21 55 32.0	-1.0
	comp=Z,0.4nm,0.5s,baz=346,slow=2.8,SNR=2.1							
	comp=Z,1.7nm,0.5s							
AS01	Alice Springs	27.72	158	P		P	21 52 29.4	-0.5
QIS	Mount Isa	27.81	145	P		P	21 52 31.0	+0.2
MEEK	Meekatharra	28.75	188	P		P	21 52 38.6	-0.4
MORW	Morawa	31.56	191	P		P	21 53 02.1	-1.2
MORW				IAmb		IAmb	21 53 14.7	
	comp=Z,8.4nm,1.1s							
FORT	Forrest	32.98	172	P		P	21 53 14.8	-0.5
FORT				IAmb		IAmb	21 53 31.8	
	comp=Z,12nm,1.1s							
BBOO	Buckleboo	36.82	161	P		P	21 53 47.3	-0.4
STKA	Stephens Creek	38.12	154	P		P	21 53 58.4	0.0
	comp=Z,4.0nm,0.3s,baz=336,slow=7.8,SNR=22							
	comp=Z,4.0nm,0.3s							
ARMA	Armidale	42.36	142	P		P	21 54 34.0	+1.2
MKAR	Makanchi Array	56.83	328	P		P	21 56 18.8	-0.8
	comp=Z,0.2nm,0.3s,baz=124,slow=8.2,SNR=6.2							
	comp=Z,0.2nm,0.3s							
MKAR	Makanchi Array	56.83	328	P		P	21 56 18.6	-1.1
QSPA	South Pole Qui	91.92	180	P		P	21 59 39.0	+0.6

IDC ***02*** *22:24:59.2±0.7,53°.90N×161°.46W,h0km,mb4.3/29, mbtmp4.3/33,ML3.8/4,MS3.5/32,Error ellipse: s-maj=20.3km s-min=11.1km az=1.0*

NEIC ***02*** *22:24:59.3±2.0,53°.75N±0°.04×161°.18W±0°.07,h10km±1km, mb4.6/95,ML4.0/18,ML4.0(AEIC),Error ellipse: s-maj=6.8km s-min=6.4km az=152.0*

AEIC ***02*** *22:24:60.0±2.6,53°.70N±0°.04×161°.23W±0°.07,h16km±4km, Error ellipse: s-maj=5.6km s-min=5.4km az=69.0*

GFZ ***02*** *22:25:02.3±0.4,54°.N±9°×16°.1W±°,h10km,M4.8/23, mb4.8/23*

ISC 02 22:24:59.4±0.4,53°.76N±0°.04×161°.35W±0°.03,h10km, n587,σ1§29/586,mb4.5/95,MS3.5/32,2D,South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOL	Dolgoi Island	1.43	348		Pg	22 25.7	-1.0
DOL					Sg	22 25 45.5	+0.2
DOL					Sb	22 25 46.0	+1.7
DT1	Dutton Round H	1.46	339		Pb	22 25 25.5	-1.1
DT1					Sg	22 25 45.2	-1.1
DT1					Sb	22 25 46.0	+0.8
CNBA	Chernabura Isl	1.48	43		Pn	22 25 24.9	-1.2
CNBA				Sn	Sn	22 25 40.6	-4.9
CHNA	Chernabura Isl	1.49	43	P	Pb	22 25 25.3	-1.8
CHNA	Chernabura Isl	1.49	43	P	Pn	22 25 25.0	-1.2
	baz=226,SNR=32						
DTNA	Dutton South F	1.49	340		Pb	22 25 26.2	-1.0
HAG	Hague Volcano	1.60	349		Pg	22 25 28.4	-1.6
PS4A	Pavlof South-4	1.62	350		Pb	22 25 28.0	-1.4
PS4A					Sg	22 25 50.9	-0.6
PS4A					Sb	22 25 51.6	+1.7
SDPT	Sand Point	1.68	17	P	Pb	22 25 28.2	-2.1
SDPT	Sand Point	1.68	17		Pn	22 25 27.8	-1.0
SDPT				Sn	Sn	22 25 47.8	-2.4
SDPT				IAML		22 26 01.3	
	comp=E,2μm,0.9s						
SDPT				IAML		22 26 04.3	
	comp=N,2μm,0.7s						
SDPT	Sand Point	1.68	17	P	Pn	22 25 28.1	-0.6
	baz=197,SNR=18						
PS1A	Pavlof South-1	1.69	352		Pb	22 25 29.5	-0.9
PS1A					Sg	22 25 52.4	-1.1
PN7A	Pavlof North-7	1.72	348		Pb	22 25 30.5	-0.7
ISNN	Isanotski Nort	1.79	308		Pb	22 25 31.3	-0.9
ISNN					Sb	22 25 54.7	+0.1
ISNN					Sg	22 25 55.1	-1.6
SSLS	Shishaldin Sou	1.83	303		Pb	22 25 31.8	-1.1
SSLS					Sb	22 25 55.6	-0.2
SSLN	Shishaldin Nor	1.88	305		Pb	22 25 33.0	-0.8
SSLN					Pg	22 25 33.1	-2.3
SSLN					Sg	22 25 58.6	-1.1
AKSA	Akutan Strait	2.60	280		Pn	22 25 41.8	+0.4
AKSA					Pb	22 25 42.2	-3.8
AKSA					Sn	22 26 14.5	+1.6
AKSA					Sb	22 26 14.9	-3.0
AKSA					Lg	22 26 15.4	
VNWF	Veniaminof 8	2.61	22		Pn	22 25 42.6	+0.9
AKUT	Akutan	2.64	280	P	Pn	22 25 43.0	+1.0
AKUT	Akutan	2.64	280	S	Sb	22 26 15.8	-3.4
AKUT	Akutan	2.64	280	Pn	Pn	22 25 42.7	+0.7
AKUT				IAML		22 26 18.2	
	comp=E,592nm,0.9s						
AKUT				IAML		22 26 19.1	
	comp=N,553nm,0.6s						
AHB	Akutan Harbor	2.67	280		Pb	22 25 43.7	-3.4
AHB					Sn	22 26 18.0	+3.3
AHB					Sb	22 26 17.0	-2.9
VNSS	Veniaminof 8	2.71	23		Pn	22 25 43.6	+0.5
VNSG	Veniaminof 6	2.71	28		Pn	22 25 43.6	+0.6
AKBBA	Akutan Broad B	2.73	279		Pb	22 25 44.7	-3.6
AKBBA					Sn	22 26 18.0	+1.7
AKBBA					Sb	22 26 18.3	-3.5
S14K	Fog Glacier	2.74	21	P	Pn	22 25 43.7	+0.2
	baz=203,SNR=12						
VNFG	Fog Glacier, M	2.74	21		Pn	22 25 43.8	+0.3
VNFG	Fog Glacier, M	2.74	21		Pn	22 25 44.4	+1.0
AKLV	Akutan Long Va	2.75	280		Sb	22 26 19.7	-2.7
AKV	Akutan Volcano	2.75	280		Pb	22 25 45.1	-3.5
ZRO	Akutan Zero	2.76	279		Pn	22 25 45.0	+1.4
ZRO					Sn	22 26 18.8	+1.9
VNHG	Veniaminof 1	2.77	26		Pn	22 25 44.7	+0.8
AKGG	Akutan Green G	2.78	281		Pb	22 25 45.6	-3.4
AKMO	Akutan Morgan	2.78	279		Pb	22 25 45.4	-3.7
LVA	Lava Point	2.80	280		Pn	22 25 45.5	+1.3
LVA				IAML		22 26 33.4	
	comp=E,524nm,0.9s						
AKRB	Akutan Reef Bi	2.81	280		Pb	22 25 46.0	-3.6
UNV	Unalaska Valle	3.06	274	P	Pn	22 25 49.2	+1.5
UNV	Unalaska Valle	3.06	274	S	Sn	22 26 26.1	+1.8
UNV	Unalaska Valle	3.06	274		Pn	22 25 48.4	+0.7
UNV				Sn	Sn	22 26 25.2	+0.9
UNV	Unalaska Valle	3.06	274	P	Pn	22 25 49.1	+1.5
	baz=88						
CHGN	Chignik	3.06	32		Pn	22 25 46.5	-1.2
CHGN				IAML		22 26 39.4	
	comp=E,531nm,0.8s						
CHGN				IAML		22 26 58.4	
	comp=N,356nm,1.0s						
CHGN	Chignik	3.06	32	P	Pn	22 25 47.3	-0.4
	baz=215,SNR=11						
MNAT	Makushin Natee	3.16	274		Pn	22 25 50.3	+1.1
MGOD	Makushin Gods	3.28	273		Pn	22 25 51.9	+1.1
MGOD					Sn	22 26 31.1	+1.3
MGOD					Lg	22 26 31.3	
MAPS	Pakushin South	3.32	273		Sn	22 26 31.6	+0.8
ANPB	Aniakchak Plen	3.52	29		Pn	22 25 54.6	+0.4
ANNW	Aniakchak Nort	3.68	28		Pn	22 25 56.9	+0.5
CHIR	Chirikof Islan	3.91	56		Pn	22 25 58.0	-1.4
CHIR				IAML		22 27 24.6	
	comp=E,224nm,1.4s						
CHIR				IAML		22 27 43.0	
	comp=N,194nm,1.9s						
CHIR	Chirikof Islan	3.91	56	P	Pn	22 25 58.4	-1.0
	baz=241						
OKFG	Magazine Ridge	3.93	268		Pn	22 26 01.6	+1.9
OKTU	Okmok Mt. Tuli	4.01	267		Pn	22 26 02.2	+1.4
OKNC	Okmok New Cone	4.05	268		Pn	22 26 03.0	+1.7
OKCE	Okmok Cone E	4.07	268		Pn	22 26 03.9	+2.2
OKSP	Okmok Steeple	4.17	266		Pn	22 26 04.0	+0.9
PLBL	Peulik Blue Cr	4.71	31		Pn	22 26 10.6	+0.2
R17L	Mt. Peulik Vol	4.80	34		Pn	22 26 12.1	+0.4
R17L	Mt. Peulik Vol	4.80	34	P	Pn	22 26 11.4	-0.3
	baz=218						
PLK1	Peulik 1	4.86	32		Pn	22 26 12.5	+0.1
PLK5	Peulik 5	4.94	29		Pn	22 26 13.7	+0.2
PLK5					Pb	22 26 14.2	-12
SII	Sitkinak Islan	4.98	53	P	Pn	22 26 13.4	-0.7
SII	Sitkinak Islan	4.98	53		Pn	22 26 12.6	-1.5
SII				IAML		22 28 07.7	
	comp=N,173nm,0.9s						
SII	Sitkinak Islan	4.98	53	P	Pn	22 26 13.4	-0.7
	baz=239						
KJL	Kejulik	5.39	35		Pn	22 26 19.9	+0.1
KJL					Pn	22 26 20.2	+0.4
Q17K	Contact Creek	5.46	32		Pn	22 26 20.8	0.0
Q17K	Contact Creek	5.46	32	P	Pn	22 26 20.1	-0.7
	baz=216						
O15K	Ungalikthiuk R	5.50	8		Pn	22 26 21.2	0.0
O15K	Ungalikthiuk R	5.50	8	P	Pn	22 26 21.1	-0.2
	baz=189						
O14K	Tigyukauivet M	5.51	0		Pn	22 26 21.6	+0.2
O14K	Tigyukauivet M	5.51	0	P	Pn	22 26 21.0	-0.4
	baz=180						
ANCK	Angle Creek	5.54	34		Pn	22 26 22.0	+0.2
Q16K	King Salmon	5.58	26	P	Pn	22 26 22.1	-0.3
	baz=210						
ACHA	Angle Creek He	5.60	35		Pn	22 26 21.6	-1.1
P16K	Nushagak River	5.61	18		Pn	22 26 22.0	-0.6
P16K	Nushagak River	5.61	18	P	Pn	22 26 22.1	-0.6
	baz=201						
KELA	Mount Kelaz	5.65	31		Pn	22 26 23.8	+0.4
KABU	Katmai Buttres	5.66	34		Pn	22 26 23.6	+0.1
OHAK	Old Harbor	5.75	50	P	Pn	22 26 23.7	-0.9
OHAK	Old Harbor	5.75	50		Pn	22 26 23.0	-1.6
OHAK	Old Harbor	5.75	50	P	Pn	22 26 23.8	-0.8
	baz=237,SNR=7.5						
KAKN	Katmai Knife C	5.76	35		Pn	22 26 24.7	-0.2
KARR	Katmai Rainbow	6.03	35		Pn	22 26 28.8	+0.2
Q18K	Katmai Hardscr	6.05	33		Pn	22 26 28.9	0.0
Q18K	Katmai Hardscr	6.05	33	P	Pn	22 26 28.5	-0.3
	baz=218						
KAHG	Katmai Hook Gl	6.08	36		Pn	22 26 29.3	0.0
P17K	Kvichak River	6.09	25		Pn	22 26 28.8	-0.6
P17K	Kvichak River	6.09	25	P	Pn	22 26 29.6	+0.3
	baz=208,SNR=5.7						
O16K	Kokwok River B	6.12	16		Pn	22 26 28.8	-1.0
O16K	Kokwok River B	6.12	16	P	Pn	22 26 30.1	+0.4
	baz=198,SNR=6.1						
N14K	Kuskokwak Cree	6.19	358		Pn	22 26 29.9	-0.8
N14K	Kuskokwak Cree	6.19	358	P	Pn	22 26 30.4	-0.2
	baz=178						
KDAK	Kodiak Island	6.38	47	Pn	Pn	22 26 31.8	-1.6
	comp=N,2.2nm,0.3s,baz=255,slow=16,SNR=11						
KDAK				Sn	Sn	22 27 46.7	+0.6
	baz=207,slow=17						
	comp=N,18nm,0.6s						
KDAK	Kodiak Island	6.38	47		Pn	22 26 30.5	-2.8
KDAK	Kodiak Island	6.38	47	P	Pn	22 26 32.0	-1.3
	baz=235						
N15K	Kwethluk River	6.47	6		Pn	22 26 34.2	-0.3
N15K	Kwethluk River	6.47	6	P	Pn	22 26 34.6	+0.1
	baz=186,SNR=9.9						
O17K	Koliganek Bris	6.47	19		Pn	22 26 34.9	+0.4
O17K	Koliganek Bris	6.47	19	P	Pn	22 26 34.4	-0.1
	baz=203,SNR=5.1						
P18K	Big Mountain,	6.58	28	P	Pn	22 26 36.7	+0.5
	baz=214,SNR=12						
Q19K	Cape Douglas,	6.72	36		Pn	22 26 37.1	-1.0
Q19K	Cape Douglas,	6.72	36	P	Pn	22 26 37.7	-0.3
	baz=223,SNR=7.1						
M13K	Dall Lake	6.76	352		Pn	22 26 38.3	-0.2
M13K	Dall Lake	6.76	352	P	Pn	22 26 38.6	0.0
	baz=169						
N16K	Nishlik Lake	6.88	11		Pn	22 26 41.3	+1.1
N16K	Nishlik Lake	6.88	11	P	Pn	22 26 39.9	-0.3
	baz=193,SNR=19						
M15K	Kasigluk River	6.97	3		Pn	22 26 42.2	+0.8
M15K	Kasigluk River	6.97	3	P	Pn	22 26 41.1	-0.2
	baz=183						
O18K	Koktuh Hills	6.98	26		Pn	22 26 40.6	-1.0
O18K	Koktuh Hills	6.98	26	P	Pn	22 26 41.5	0.0
	baz=211,SNR=14						
M14K	Bethel	7.02	358		Pn	22 26 43.3	+1.2
M14K	Bethel	7.02	358	P	Pn	22 26 42.2	+0.1
	baz=177,SNR=6.0						
M11K	Mekoryuk	7.15	340		Pn	22 26 43.6	-0.2
M11K	Mekoryuk	7.15	340	P	Pn	22 26 44.0	+0.1
	baz=156						
N17K	Nushagak Hills	7.16	17		Pn	22 26 42.9	-1.1
N17K	Nushagak Hills	7.16	17	P	Pn	22 26 43.6	-0.3
	baz=200,SNR=7.0						
M16K	Timber Creek	7.40	9		Pn	22 26 47.5	+0.1
M16K	Timber Creek	7.40	9	P	Pn	22 26 47.2	-0.1
	baz=191						
P19K	Oil Pt	7.41	34		Pn	22 26 47.2	-0.2
P19K	Oil Pt	7.41	34	P	Pn	22 26 47.2	-0.2
	baz=221						
N18K	Kilae Creek	7.55	21		Pn	22 26 49.0	-0.3
N18K	Kilae Creek	7.55	21	P	Pn	22 26 49.6	+0.3
	baz=205						
L14K	Kuka Creek	7.64	355		Pn	22 26 48.6	-2.0
L14K	Kuka Creek	7.64	355	P	Pn	22 26 51.2	+0.6
	baz=174						
ILSW	Iliamna Southw	7.69	32		Pn	22 26 49.7	-1.7
IVE	Iliamna Volcan	7.76	33		Pn	22 26 52.8	+0.5
KONE	Korovin Northe	7.81	265		Pn	22 26 54.5	+1.5
ATKA	Atka Island	7.91	264	Pn	Pn	22 26 55.6	+1.4
O20K	Slope Mountain	7.93	33	P	Pn	22 26 54.6	0.0
	baz=221						
L15K	Ungalak Mounta	7.95	360	P	Pn	22 26 55.0	+0.2
	baz=179						
M17K	Holitna River	7.95	14		Pn	22 26 54.9	+0.1
M17K	Holitna River	7.95	14	P	Pn	22 26 55.3	+0.5
	baz=197						
HOM	Homer	7.96	38	P	Pn	22 26 54.8	-0.3
	baz=226						
N19K	Bonanza Creek	7.99	25		Pn	22 26 55.1	-0.4
N19K	Bonanza Creek	7.99	25	P	Pn	22 26 55.5	0.0
	baz=211						
CNPM	China Poot	8.03	40	Pn	Pn	22 26 55.6	-0.3
L16K	Owhat River	8.04	6		Pn	22 26 56.7	+0.6
L16K	Owhat River	8.04	6	P	Pn	22 26 55.9	-0.1
	baz=188						
RED	Redoubt Volcan	8.14	31		Pn	22 26 57.5	-0.1
M18K	Stony River	8.30	19		Pn	22 27 00.2	+0.5
M18K	Stony River	8.30	19	P	Pn	22 27 00.1	+0.5
	baz=203,SNR=7.8						
BRSE	Bradley Lake S	8.36	40		Pn	22 26 59.6	-0.8
BRSE	Bradley Lake S	8.36	40	P	Pn	22 26 59.8	-0.6
	baz=229						
RDT	Redoubt	8.38	32		Pn	22 27 00.7	-0.1
K13K	Kusilvak Mount	8.39	349		Pn	22 27 02.0	+1.2
K13K	Kusilvak Mount	8.39	349	P	Pn	22 27 01.2	+0.4
	baz=166,SNR=6.9						
L17K	Donlin	8.56	10		Pn	22 27 03.0	-0.2
L17K	Donlin	8.56	10	P	Pn	22 27 03.1	0.0
	baz=192						
K15K	Wolf Creek Mou	8.56	359	Pn	Pn	22 27 03.7	+0.5
K15K	Wolf Creek Mou	8.56	359	P	Pn	22 27 03.3	0.0
	baz=179						
L18K	Granite Mounta	8.84	14		Pn	22 27 07.0	-0.1
L18K	Granite Mounta	8.84	14	P	Pn	22 27 07.1	+0.1
	baz=198						
CAPN	Captain Cook N	8.93	34	P	Pn	22 27 08.6	+0.3
	baz=223						
SPU	Mount Spurr	8.96	30	Pn	Pn	22 27 06.3	-2.5
M19K	Big River Lodg	8.97	22		Pn	22 27 08.4	-0.4
M19K	Big River Lodg	8.97	22	P	Pn	22 27 09.3	+0.5
	baz=207						
GSTR	Great Sitkin T	9.04	265	Pn	Pn	22 27 11.1	+1.2
SLKM	Skilak Lake	9.07	37		Pn	22 27 08.7	-1.5
SEW	Seward	9.09	41	Pn	Pn	22 27 09.9	-0.5
SEW	Seward	9.09	41	P	Pn	22 27 10.8	+0.4
	baz=231						
L19K	White Mountain	9.12	20		Pn	22 27 11.0	+0.1
L19K	White Mountain	9.12	20	P	Pn	22 27 11.7	+0.8
	baz=205,SNR=7.1						
GSCK	Great Sitkin C	9.13	265		Pn	22 27 12.3	+1.3
K17K	Iditarod	9.13	9		Pn	22 27 10.4	-0.6
K17K	Iditarod	9.13	9	P	Pn	22 27 11.5	+0.5
	baz=191						
O22K	Cooper Landing	9.23	38	P	Pn	22 27 13.0	+0.7
	baz=228						
M20K	Styx River	9.24	25	P	Pn	22 27 13.4	+0.8
	baz=212,SNR=10						
STLK	Strandline Lak	9.28	29		Pn	22 27 13.2	0.0
ETKA	Kagalaska Isla	9.32	264		Pn	22 27 13.9	+0.4
ADK	Adak	9.47	265	Pn	Pn	22 27 16.1	+0.4
J16K	Anvik River	9.57	2		Pn	22 27 18.6	+1.6
J16K	Anvik River	9.57	2	P	Pn	22 27 18.1	+1.1
	baz=182						
RC01	Rabbit Creek A	9.64	36	P	Pn	22 27 18.6	+0.5
	baz=226						
SKT	Skwentna	9.75	28		Pn	22 27 18.3	-1.3
SKT	Skwentna	9.75	28	P	Pn	22 27 20.2	+0.6
	baz=217,SNR=9.2						
KIWB	Kanaga Island	9.76	265	Pn	Pn	22 27 20.9	+1.3
PMR	Palmer	10.21	35	Pn	Pn	22 27 25.0	-0.8
PPLA	Purkeypile	10.34	24		Pn	22 27 28.3	+0.6
PPLA	Purkeypile	10.34	24	P	Pn	22 27 27.7	-0.1
	baz=212,SNR=5.8						
K20K	Telida	10.34	19		Pn	22 27 27.4	-0.3
K20K	Telida

baz=194
CRQM Cirque 12.07 47 Pn 22 27 50.1 -1.3
CRQE Cirque 12.09 47 P Pn 22 27 51.1 -0.5
baz=243,SNR=5.3
GLB Gilahina Butte 12.12 44 Pn 22 27 49.5 -2.4
HARP HAARP 12.15 38 P Pn 22 27 52.2 -0.1
baz=232
TGL Tana Glacier 12.20 48 Pn Pn 22 27 51.7 -1.5
H20K Anotleneega Mo 12.21 13 P Pn 22 27 52.8 -0.4
baz=198
G18K Tagagawik 12.25 5 P Pn 22 27 53.6 -0.1
baz=187,SNR=11
I21K Tanana 12.39 19 P Pn 22 27 55.6 +0.1
baz=207,SNR=9.1
PAX Paxson 12.40 36 P Pn 22 27 54.6 -1.2
baz=229,SNR=12
MCARA McCarthy VSAT 12.42 45 P Pn 22 27 55.8 -0.1
baz=240
MLY Manley 12.51 21 P Pn 22 27 57.4 +0.1
baz=210,SNR=13
NEA2 Nenana 12.53 25 P Pn 22 27 56.8 -0.7
baz=216
G19K Purcell Mounta 12.61 8 Pn Pn 22 27 58.3 -0.2
G19K Purcell Mounta 12.61 8 P Pn 22 27 58.3 -0.2
baz=192
GRNC Granite Creek 12.67 49 Pn 22 27 57.2 -2.4
H21K Melozitna Rive 12.68 16 P Pn 22 27 59.2 -0.2
baz=204,SNR=6.8
WRH Wood River Hil 12.69 27 Pn 22 27 55.7 -3.9
IMAR Indian Mountai 12.83 14 Pn 22 28 01.3 -0.3
K24K Donnelly Dome 12.87 32 P Pn 22 28 01.0 -1.1
baz=226
CCB Clear Creek Bu 12.90 27 Pn 22 27 58.2 -4.3
I23K Minto, Yukon-K 12.92 23 P Pn 22 28 02.0 -0.7
baz=213
M26K Nabesna, AK 12.97 41 P Pn 22 28 03.0 -0.5
baz=236,SNR=8.1
MENT Mentasta 13.01 38 Pn 22 28 01.6 -2.4
PCA Pinnacle 13.12 53 Pn 22 28 04.2 -1.4
PINM Pinnacle 13.12 53 P Pn 22 28 04.8 -0.7
baz=250,SNR=5.4
RIDG Independent Ri 13.12 34 P Pn 22 28 04.7 -0.9
baz=228,SNR=6.0
H22K Ishtalitna Cre 13.14 18 P Pn 22 28 05.4 -0.4
baz=207,SNR=11
F19K Shaleruckik Mo 13.24 6 P Pn 22 28 07.0 -0.1
baz=189
IL31 13.25 28 Pn Pn 22 28 03.6 -3.6
ILAR Eielson Array 13.25 28 Pn Pn 22 28 04.1 -3.2
comp=N,0.2nm,0.3s,baz=219,slow=13,SNR=11
comp=N,1.0nm,0.6s
ILAR Eielson Array 13.25 28 Pn Pn 22 28 04.4 -2.9
G21K Allakaket 13.37 14 Pn 22 28 07.9 -1.0
G21K Allakaket 13.37 14 P Pn 22 28 08.1 -0.8
baz=200
POKR Poker Plat Res 13.37 26 P Pn 22 28 08.2 -0.8
baz=218
E17K Hotham Inlet 13.37 359 P Pn 22 28 07.9 -1.0
baz=178
M27K Edge Creek, AK 13.38 42 P Pn 22 28 08.2 -1.1
baz=239
O28M Mount Upton 13.39 50 Pn 22 28 07.8 -1.6
O28M Mount Upton 13.39 50 P Pn 22 28 08.4 -1.1
baz=248,SNR=7.1
H23K Yukon River 13.45 21 P Pn 22 28 08.9 -1.1
baz=211
J25K Salcha River, 13.57 30 P Pn 22 28 08.5 -3.2
baz=224,SNR=6.4
SCRK Sand Creek 13.57 34 P Pn 22 28 09.8 -1.9
baz=229
F20K Avaraart Lake 13.61 9 P Pn 22 28 10.6 -1.6
baz=194,SNR=7.6
YUK3 Moose Creek 13.69 46 P Pn 22 28 11.7 -1.8
baz=244
E18K Tukpahlearik C 13.72 1 P Pn 22 28 13.7 0.0
baz=182
YUK8 Steele Glacier 13.78 48 P Pn 22 28 14.4 -0.4
baz=247,SNR=12
BCAR Beaver Creek A 13.80 40 Pn 22 28 12.9 -1.9
H24K Noodor Dome 13.84 24 P Pn 22 28 14.7 -0.7
baz=215
E19K Redstone River 13.89 7 P Pn 22 28 15.0 -1.0
baz=190
O29M Mount Kennedy 13.98 53 Pn 22 28 14.8 -2.5
O29M Mount Kennedy 13.98 53 P Pn 22 28 16.7 -0.7
baz=252
F21K Alatna River 14.04 13 Pn 22 28 16.8 -1.2
F21K Alatna River 14.04 13 P Pn 22 28 17.6 -0.5
baz=199
G22K Bettles 14.05 16 P Pn 22 28 17.8 -0.4
baz=205
G23K Bananza Creek 14.12 19 Pn 22 28 16.3 -2.9
G23K Bananza Creek 14.12 19 P Pn 22 28 18.4 -0.9
baz=208,SNR=9.0
PRP Porcupine Dome 14.19 28 P Pn 22 28 20.1 -0.1
baz=221
P29M Windy Craggy 14.20 56 Pn 22 28 17.4 -2.9
P29M Windy Craggy 14.20 56 P Pn 22 28 20.2 -0.1
baz=256
YUK6 Outpost Mounta 14.29 51 P Pn 22 28 20.6 -1.1
baz=250
YUK4 Talbot Arm 14.30 49 P Pn 22 28 22.4 +0.6
baz=248
F22K John River 14.48 14 P Pn 22 28 24.5 +0.3
baz=202
COLD Coldfoot 14.55 17 P Pn 22 28 22.0 -3.0
baz=207,SNR=15
G24K Hadweenzic Riv 14.64 22 Pn 22 28 23.7 -2.6
G24K Hadweenzic Riv 14.64 22 P Pn 22 28 24.6 -1.7
baz=214
HYT Haines Junctio 14.64 52 Pn 22 28 24.3 -2.2
HYT Haines Junctio 14.64 52 P Pn 22 28 24.9 -1.5
baz=252
S31K Pelican 14.68 63 P Pn 22 28 25.8 -1.0
baz=264
C16K Lisburne Hills 14.69 354 P Pn 22 28 25.9 -1.1
baz=170
P30M Million Dollar 14.70 55 P Pn 22 28 27.5 +0.3
baz=255
E20K Nigu River 14.76 8 P Pn 22 28 27.8 -0.1
baz=192
M29M Somme Creek 14.82 45 Pn 22 28 27.7 -1.2
M29M Somme Creek 14.82 45 P Pn 22 28 28.3 -0.6
baz=245,SNR=18
D19K Kuna River 14.87 5 P Pn 22 28 29.4 0.0
baz=187
C18K Utukok River 14.95 0 P P 22 28 36.8 +0.7
C18K Utukok River 14.95 0 P Pn 22 28 30.6 +0.1
baz=180
G25K Bearman Lake 15.01 24 P Pn 22 28 30.7 -0.6
baz=217
N30M Aishikik Lake 15.04 49 Pn 22 28 30.2 -1.6
N30M Aishikik Lake 15.04 49 P Pn 22 28 31.0 -0.8
baz=250
SIT Sitka 15.11 67 P Pn 22 28 32.2 -0.4
baz=269
E21K Killik River 15.14 10 P Pn 22 28 33.0 -0.1
baz=197,SNR=13
D20K Etivluk River 15.17 7 P Pn 22 28 33.3 -0.2
baz=191
F24K Squaw Lake 15.24 20 P Pn 22 28 33.4 -1.0
baz=212
DAWY Dawson 15.24 39 Pn 22 28 32.8 -1.7
DAWY IAmb IAmb 22 28 43.1
comp=Z,27nm,0.7s
DAWY Dawson 15.24 39 P Pn 22 28 33.8 -0.7
baz=238,SNR=11
L29M L29M 15.26 43 P Pn 22 28 34.5 -0.1
baz=243,SNR=15
O30N Mendenhall 15.29 53 P Pn 22 28 35.1 0.0
baz=254
SKAG Skagway 15.36 58 Pn 22 28 33.5 -2.4
SKAG IAmb IAmb 22 28 39.1
comp=Z,18nm,1.0s
SKAG Skagway 15.36 58 P Pn 22 28 35.5 -0.4
baz=260
E23K Chandalar 15.39 17 P Pn 22 28 35.3 -1.2
baz=207,SNR=6.7
I27K Kandik River 15.41 32 P Pn 22 28 34.6 -1.9
baz=229
C19K Lookout Ridge 15.43 2 P Pn 22 28 35.4 -1.4
baz=184
M30M Minto, Yukon 15.59 46 Pn 22 28 37.5 -1.4
M30M Minto, Yukon 15.59 46 P Pn 22 28 38.1 -0.8
baz=247,SNR=14
E24K Your Creek 15.61 18 P Pn 22 28 38.5 -0.7
baz=209

R32K Eaglecrest 15.62 62 P Pn 22 28 38.4 -0.9
baz=265
N31M Braeburn, Yuko 15.64 50 P Pn 22 28 38.6 -1.1
baz=252
G26K Porcupine Rive 15.74 26 P Pn 22 28 40.1 -0.7
baz=221
C21K Knifeblade Rid 15.75 9 P Pn 22 28 40.8 -0.2
baz=194,SNR=15
F25K Christian Rive 15.79 22 P Pn 22 28 40.4 -1.1
baz=216
WHY Whitehorse 15.84 54 P Pn 22 28 41.4 -0.8
baz=256
K29M Barlow Dome 15.84 41 P Pn 22 28 42.0 -0.3
baz=242,SNR=13
I28M Miner Creek 15.85 34 Pn 22 28 39.1 -3.2
I28M Miner Creek 15.85 34 P Pn 22 28 39.7 -2.6
baz=233
H27K Steamboat Moun 15.85 30 Pn 22 28 40.7 -1.6
H27K Steamboat Moun 15.85 30 P Pn 22 28 40.9 -1.5
baz=228
TOLK Toolik Lake Re 15.93 16 P Pn 22 28 42.3 -0.9
baz=206,SNR=8.2
D23K Nanushuk River 16.05 14 P Pn 22 28 44.2 -0.7
baz=203
P32M Atlin 16.19 58 Pn 22 28 46.0 -0.8
P32M Atlin 16.19 58 P Pn 22 28 45.5 -1.3
baz=261
G27K Doyon Strip 16.21 29 P Pn 22 28 46.0 -1.0
baz=226
F26K Sheenjek River 16.22 24 P Pn 22 28 46.1 -0.9
baz=219
B21K Ikpikpuk River 16.22 8 P Pn 22 28 45.7 -1.2
baz=194
E25K Arctic Village 16.23 21 P Pn 22 28 46.3 -1.0
baz=215
CRAG Craig 16.39 73 P Pn 22 28 48.7 -0.6
baz=276
B20K Meade River 16.42 5 IAmb IAmb 22 28 54.2
comp=Z,26nm,0.9s
B20K Meade River 16.42 5 P Pn 22 28 48.9 -0.7
baz=189
M31M Drury Creek, Y 16.50 48 P Pn 22 28 49.8 -0.8
baz=252,SNR=6.4
D24K Happy Valley 16.51 16 P Pn 22 28 49.7 -0.9
baz=207
J30M Hart River 16.65 40 Pn 22 28 51.8 -0.9
J30M IAmb IAmb 22 29 14.1
comp=Z,34nm,0.9s
J30M Hart River 16.65 40 P P 22 28 53.0 -2.1
baz=241,SNR=35
P33M Teslin, Yukon 16.74 56 P Pn 22 28 53.1 -0.7
baz=260,SNR=5.8
WRAK Wrangell Islan 16.76 69 P Pn 22 28 53.1 -0.8
baz=273
H29M Whitestone 16.83 33 Pn 22 28 51.5 -3.3
H29M Whitestone 16.83 33 P Pn 22 28 53.6 -1.2
baz=233
Q32M Nakina River 16.85 60 Pn Pn 22 28 54.7 -0.6
Q32M Nakina River 16.85 60 P Pn 22 28 54.0 -1.3
baz=265
C23K Itkillik River 16.87 13 Pn 22 28 54.2 -1.0
C23K IAmb IAmb 22 29 13.8
comp=Z,38nm,1.4s
C23K Itkillik River 16.87 13 P Pn 22 28 54.5 -0.7
baz=202
I30M Mount Dempster 16.96 38 P Pn 22 28 55.4 -1.2
baz=239,SNR=33
C24K Franklin Bluff 17.04 15 P Pn 22 28 56.1 -1.2
baz=206
D25K Kavik River 17.08 18 Pn 22 28 55.6 -2.4
D25K Kavik River 17.08 18 P Pn 22 28 56.8 -1.2
baz=211,SNR=5.9
E27K Coleen River 17.22 25 P Pn 22 28 57.9 -1.8
baz=223
F28M Old Crow 17.27 28 Pn 22 28 59.5 -0.9
F28M Old Crow 17.27 28 P Pn 22 28 58.8 -1.5
baz=227
G29M Pine Creek 17.36 32 P Pn 22 29 00.5 -1.0
baz=232,SNR=14
S34M Telegraph Cree 17.39 64 P Pn 22 29 00.7 -1.2
baz=269
EPYK Eagle Plains 17.46 34 Pn 22 29 01.2 -1.6
EPYK IAmb IAmb 22 29 21.1
comp=Z,26nm,0.8s
EPYK Eagle Plains 17.46 34 P Pn 22 29 01.4 -1.3
baz=236,SNR=18
A22K Sinclair Lake 17.54 7 P P 22 29 02.9 -1.8
baz=192
R33M Jennings River 17.56 59 Pn 22 29 02.2 -1.8
R33M Jennings River 17.56 59 P P 22 29 03.1 -2.0
baz=265,SNR=6.7
C27K Jago River 17.86 20 P P 22 29 06.7 -1.5
baz=216
G30M tAoh Zraii Nji 17.97 33 P P 22 29 08.4 -1.2
baz=235,SNR=14
H31M Peel River 17.99 37 Pn 22 29 07.3 -1.9
H31M IAmb IAmb 22 29 30.6
comp=Z,43nm,1.0s
H31M Peel River 17.99 37 P P 22 29 08.2 -1.5
baz=241,SNR=13
DLBC Dease Lake 17.99 62 P P 22 29 09.9 +0.1
comp=Z,0.1nm,0.3s,baz=219,slow=12,SNR=3.4
comp=Z,2.7nm,0.9s
DLBC Dease Lake 17.99 62 P P 22 29 08.2 -1.7
baz=269
MMPY Sheldon Lake, 18.01 49 P P 22 29 09.6 -0.4
baz=254,SNR=12
E28M Babbage River 18.05 26 P P 22 29 09.1 -1.3
baz=225
E29M Blow River 18.35 28 P P 22 29 12.5 -1.2
E29M Blow River 18.35 28 P P 22 29 12.7 -0.9
baz=229
F30M Barrier River 18.48 31 P Pn 22 29 14.1 -1.1
baz=234
G31M Satah River 18.58 34 P Pn 22 29 15.6 -0.8
baz=238,SNR=12
WTLY Watson Lake, Y 18.72 57 P Pn 22 29 16.9 -1.3
WTLY Watson Lake, Y 18.72 57 P Pn 22 29 16.8 -1.3
baz=265
TGTN Hyland Airport 19.15 53 P Pn 22 29 22.1 -1.3
baz=261
INK Inuvik 19.58 31 P Pn 22 29 27.4 -1.1
comp=Z,0.4nm,0.3s,baz=246,slow=13,SNR=8.1
comp=Z,5.2nm,0.7s
INK Inuvik 19.58 31 P P 22 29 26.1 -1.0
INK Inuvik 19.58 31 P P 22 29 26.1 -1.0
baz=236
INK Inuvik 19.58 31 P P 22 29 25.6 -1.5
BBB Bella Bella 19.98 81 LR LR 22 35 26.7
comp=Z,60nm,19.0s,baz=204,slow=31
BILL Bilibino 20.91 326 P P 22 29 40.3 -1.2
C36M Paulatuk 23.09 33 P P 22 30 03.4 -1.3
C36M IAmb IAmb 22 30 09.4
comp=Z,14nm,1.1s
C36M Paulatuk 23.09 33 P P 22 30 04.1 -0.6
baz=246
PET Petropavlovsk 23.65 285 P P 22 30 09.5 -1.0
PET Petropavlovsk 23.65 285 P P 22 30 10.7 +0.2
comp=Z,48nm,1.1s
PET Petropavlovsk 23.65 285 P P 22 30 11.9 +1.3
PEA0B Petropavlovsk- 24.17 285 P P 22 30 15.7 +0.1
PETK Petropavlovsk- 24.17 285 P P 22 30 16.1 +0.6
comp=Z,17nm,0.5s,baz=76,slow=14,SNR=45
PETK LR LR 22 39 08.9
comp=Z,58nm,21.1s,baz=77,slow=35
comp=Z,17nm,0.5s
PETK Petropavlovsk- 24.17 285 P P 22 30 15.4 -0.1
LLLB Lillooet 24.19 81 P P 22 30 14.5 -1.2
LLLB IAmb IAmb 22 30 19.7
comp=Z,10nm,0.7s
YKA Yellowknife Ar 25.64 51 P P 22 30 29.7 +1.0
comp=Z,3.8nm,0.8s,baz=268,slow=8.2,SNR=11
comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 25.64 51 P P 22 30 28.4 -0.3
MA2 Magadan 26.45 302 LR LR 22 42 12.3
comp=Z,64nm,18.3s,baz=112,slow=39
B08A Colville Reser 26.65 84 P P 22 30 38.6 +0.5
B08A IAmb IAmb 22 30 41.7
comp=Z,9.1nm,0.8s
C09A Chrisman Ranch 27.54 85 P P 22 30 45.9 -0.2
C09A IAmb IAmb 22 30 49.4
comp=Z,11nm,1.0s
NEW Newport 28.00 83 P 22 30 50.8 +0.6
NEW IAmb IAmb 22 30 53.4
comp=Z,12nm,0.8s
NEW Newport 28.00 83 P P 22 30 52.5 +2.3
EDM Edmonton 28.14 71 P 22 30 50.8 -0.6

EDM IAmb IAmb 22 30 53.9
comp=Z,7.6nm,0.8s
YBH Yreka Blue Hor 28.27 99 LR LR 22 39 22.1
comp=Z,115nm,19.0s,baz=325,slow=30
I07A Izee 28.76 92 P 22 30 55.4 -1.7
WVOR Wild Horse Val 30.24 94 P P 22 31 12.6 +2.4
MSO Missoula 30.58 83 P P 22 31 12.4 -0.8
MSO IAmb IAmb 22 31 16.8
comp=Z,4.7nm,0.8s
LYMT Lyon Mountain 31.48 82 P P 22 31 21.6 +0.4
HLID Hailey 32.08 89 P 22 31 27.2 +0.7
HLID Hailey 32.08 89 P P 22 31 29.4 +3.0
BOZ Bozeman (W) 32.60 84 P P 22 31 31.4 +0.5
BOZ IAmb IAmb 22 31 33.8
comp=Z,5.5nm,1.1s
NVAR Mina Array Bea 32.98 100 P P 22 31 37.2 +2.8
comp=Z,2.3nm,0.8s,baz=292,slow=8.4,SNR=12
NVAR PcP PcP 22 34 19.5 +1.2
comp=Z,0.3nm,0.5s,baz=332,slow=3.8,SNR=2.6
NVAR LR LR 22 42 07.1
comp=Z,69nm,21.5s,baz=0.5,slow=31
comp=Z,2.3nm,0.8s
RES Resolute Bay 32.99 27 LR LR 22 46 56.6
comp=Z,68nm,21.0s,baz=350,slow=40
ELK Elko 33.29 94 P P 22 31 37.2 0.0
ELK IAmb IAmb 22 31 40.7
comp=Z,3.6nm,0.8s
BLKN Baker Lake 33.68 46 P P 22 31 40.3 +0.3
BLKN IAmb IAmb 22 31 41.5
comp=Z,4.9nm,0.7s
TIXI Tiksi 34.09 328 LR LR 22 47 30.1
comp=Z,126nm,18.1s,baz=130,slow=40
RLMT Red Lodge 34.25 83 P P 22 31 46.0 +0.6
AHID Auburn Hatcher 34.52 88 P P 22 31 50.4 +2.6
DUG Dugway, Tooele 35.07 93 P P 22 31 55.1 +2.6
PD31 Pinedale Array 35.43 87 P P 22 31 55.9 +0.2
PD31 IAmb IAmb 22 31 58.6
comp=Z,6.0nm,1.1s
PDAR Pinedale Array 35.43 87 P P 22 31 57.8 +2.1
comp=Z,3.4nm,0.7s,baz=297,slow=5.6,SNR=29
comp=Z,3.4nm,0.7s
PDAR Pinedale Array 35.43 87 P P 22 31 55.9 +0.2
YAK Yakutsk 35.90 311 LR LR 22 47 50.5
comp=Z,76nm,19.8s,baz=51,slow=38
Q16A Castle Valley 36.86 93 P P 22 32 08.4 +0.5
Q16A IAmb IAmb 22 32 11.8
comp=Z,9.7nm,1.0s
PFO Pinyon Flats O 37.40 104 LR LR 22 44 44.5
comp=Z,72nm,20.1s,baz=262,slow=32
ILON Igloolik, Nuna 37.76 35 P P 22 32 15.4 +0.6
HMU Henry Mountain 37.76 94 P P 22 32 16.2 +0.6
HMU IAmb IAmb 22 32 19.1
comp=Z,14nm,0.8s
ULM Lac du Bonnet 39.18 68 P P 22 32 28.1 +1.0
comp=Z,9.8nm,0.6s,baz=293,slow=8.0,SNR=15
comp=Z,9.8nm,0.6s
ULM Lac du Bonnet 39.18 68 P P 22 32 26.9 -0.1
ULM IAmb IAmb 22 32 29.0
comp=Z,11nm,0.7s
MVCO Mesa Verde 39.57 93 P P 22 32 31.1 +0.3
MVCO Mesa Verde 39.57 93 P P 22 32 32.9 +2.1
AGMN Agassiz Nation 40.23 70 P P 22 32 35.8 -0.1
AGMN Agassiz Nation 40.23 70 P P 22 32 36.8 +1.0
KLR Kul'dur 40.51 292 LR LR 22 49 25.7
comp=Z,25nm,20.3s,baz=58,slow=36
EPLO Experimental L 40.66 67 P P 22 32 39.6 +0.1
EPLO IAmb IAmb 22 32 41.3
comp=Z,13nm,0.8s
SDCO Great Sand Dun 41.00 90 P P 22 32 43.5 +0.8
SDCO IAmb IAmb 22 32 45.7
comp=Z,8.0nm,1.1s
H11N2 WAKE ISLAND Hy 41.78 228 T T 23 17 44.4
baz=27,slow=76,SNR=68
H11N3 WAKE ISLAND Hy 41.79 228 T T 23 17 40.9
baz=27,slow=76,SNR=56
H11N1 WAKE ISLAND Hy 41.80 228 T T 23 17 40.4
baz=27,slow=76,SNR=65
T25A Trinidad 42.05 89 P P 22 32 51.9 +0.7
T25A IAmb IAmb 22 32 54.4
comp=Z,14nm,0.8s
NEEM North Greenlan 42.26 18 *i* P P 22 32 50.6 -2.0
NEEM IAmb IAmb 22 32 53.8
comp=Z,13nm,1.1s
HEH HeiHe 42.31 295 *e*P P 22 32 53.4 +0.5
HEH pmax pmax
comp=Z,7.0nm,0.9s
ANMO Albuquerque 42.32 94 LR LR 22 48 06.6
comp=Z,41nm,20.6s,baz=318,slow=33
ANMO Albuquerque 42.32 94 P P 22 32 53.5 +0.1
ANMO Albuquerque 42.32 94 P P 22 32 55.8 +2.4
KULLO Kullorsuaq 42.57 23 *i* P P 22 32 53.5 -1.1
KULLO IAmb IAmb 22 32 55.2
comp=Z,9.8nm,0.5s
EYMN Ely 42.85 68 P P 22 32 57.2 -0.1
EYMN Ely 42.85 68 P P 22 32 58.7 +1.3
H11S1 WAKE ISLAND Hy 42.95 227 T T 23 19 05.8
baz=26,slow=75,SNR=41
H11S2 WAKE ISLAND Hy 42.96 227 T T 23 19 17.1
baz=26,slow=75,SNR=42
H11S3 WAKE ISLAND Hy 42.96 227 T T 23 19 06.9
baz=26,slow=75,SNR=33
USRK Ussuriysk Ar. 43.27 286 P P 22 33 01.7 +1.0
comp=Z,0.6nm,0.5s,baz=51,slow=9.9,SNR=2.0
comp=Z,0.6nm,0.5s
NOR Nord 43.56 7 *i* P P 22 33 03.5 +0.8
NOR IAmb IAmb 22 33 04.4
comp=Z,4.1nm,0.8s
MJAR Matsushiro Arr 44.53 273 P P 22 33 11.1 +0.1
comp=Z,0.8nm,0.3s,baz=44,slow=8.9,SNR=2.9
MJAR LR LR 22 50 08.4
comp=Z,28nm,21.1s,baz=66,slow=34
comp=Z,0.8nm,0.3s
MJAR Matsushiro Arr 44.53 273 P P 22 33 11.1 +0.1
BNX BinXian 44.92 290 ⇓P P 22 33 15.0 +1.0
BNX pmax pmax
comp=Z,5.0nm,0.8s
FRB Frobisher Bay 44.95 39 P P 22 33 14.8 +0.9
MNTX Cornudas Mount 45.25 96 P P 22 33 18.4 +1.6
MNTX IAmb IAmb 22 33 20.2
comp=Z,8.6nm,0.8s
MNTX Cornudas Mount 45.25 96 P P 22 33 19.3 +2.5
WMOK Wichita Mounta 47.02 88 P P 22 33 31.2 +0.5
WMOK IAmb IAmb 22 33 32.7
comp=Z,3.0nm,0.7s
WMOK Wichita Mounta 47.02 88 P P 22 33 31.8 +1.1
CN2 Changchun 47.22 289 *e*P P 22 33 30.9 -1.2
CN2 pmax pmax
comp=Z,10.0nm,0.5s
ALPN Alpine 47.24 96 P 22 33 33.5 +0.9
ALPN IAmb IAmb 22 33 35.2
comp=Z,5.5nm,0.7s
NRIK Noril'sk 47.44 333 P P 22 33 34.0 +0.5
comp=Z,7.6nm,0.9s,baz=54,slow=5.4,SNR=6.6
NRIK LR LR 22 55 50.8
comp=Z,82nm,19.7s,baz=27,slow=39
comp=Z,7.6nm,0.9s
NRIK Noril'sk 47.44 333 P 22 33 33.6 +0.1
NRIK IAmb IAmb 22 33 36.0
comp=Z,8.6nm,1.0s
DAG Danmarks Havn 47.61 11 P P 22 33 35.1 +0.4
DAG Danmarks Havn 47.61 11 *i* P P 22 33 35.0 +0.3
DAG IAmb IAmb 22 33 35.9
comp=Z,7.0nm,0.7s
SUMG Summit 47.93 20 P P 22 33 36.8 -0.9
SUMG Summit 47.93 20 *i* P P 22 33 38.0 +0.3
SUMG IAmb IAmb 22 33 41.5
comp=Z,5.9nm,0.6s
TXAR Lajitas Array 47.98 97 P P 22 33 40.4 +2.0
comp=Z,12nm,0.7s,baz=303,slow=5.5,SNR=183
TXAR PcP PcP 22 35 07.4 +1.1
comp=Z,0.4nm,0.6s,baz=299,slow=1.9,SNR=1.3
comp=Z,12nm,0.7s
TXAR Lajitas Array 47.98 97 P P 22 33 39.3 +0.9
TXAR PcP 22 35 07.5 +1.1
SPITS Spitsbergen Ar 48.32 1 P P 22 33 40.2 -0.1
comp=Z,2.6nm,0.6s,baz=319,slow=4.2,SNR=1.5
comp=Z,2.6nm,0.6s
SFJD Kangerlussuaq 48.91 29 LR LR 22 57 08.9
comp=Z,45nm,18.6s,baz=291,slow=40
JCT Junction City 49.43 92 P P 22 33 49.1 -0.3
DBG Daneborg 49.58 13 *i* P P 22 33 47.4 -2.5
DBG IAmb IAmb 22 33 51.1
comp=Z,6.0nm,0.8s
KSRS Korea Array 49.97 281 P P 22 33 54.1 +0.8
comp=Z,4.4nm,1.1s,baz=51,slow=7.4,SNR=8.4
KSRS LR LR 22 55 57.9

comp=Z,9.2nm,19.4s,baz=30,slow=37
comp=Z,4.4nm,1.1s
KSAR Wonju Array Be 50.00 281 P **P** **22 33 54.0 +0.5**
SCHQ Schefferville 51.01 48 P **P** **22 34 01.1 +0.2**
SCHQ LR LR 22 55 42.6
comp=Z,6.0nm,1.1s,baz=272,slow=9.4,SNR=3.2
comp=Z,57nm,19.1s,baz=296,slow=36
comp=Z,6.0nm,1.1s
SCHQ Schefferville 51.01 48 P **P** **22 34 01.1 +0.2**
SCHQ IAmb IAmb 22 34 02.2
comp=Z,6.9nm,1.0s
SADO Sadowa 51.53 64 LR LR 22 55 24.0
comp=Z,39nm,18.8s,baz=164,slow=35
SADO Sadowa 51.53 64 P **P** **22 34 04.2 -0.8**
SADO IAmb IAmb 22 34 05.9
comp=Z,7.3nm,0.7s
WVT Waverly 52.50 78 **P** **22 34 11.9 -0.5**
WVT Waverly 52.50 78 P **P** **22 34 12.7 +0.3**
SOEG Soedalen 52.85 21 *i* P **P** **22 34 14.0 -0.5**
SOEG IAmb IAmb 22 34 16.6
comp=Z,22nm,1.3s
TRQ Mont Tremblant 52.98 60 **P** **22 34 15.0 -0.8**
TRQ IAmb IAmb 22 34 16.4
comp=Z,7.0nm,0.9s
L56A Greenwood 54.16 66 **P** **22 34 24.4 -0.1**
ULN Ulaanbaatar 54.29 304 P **P** **22 34 27.0 +1.4**
SONM Songino Array 54.63 304 P **P** **22 34 28.5 +0.5**
comp=Z,3.1nm,1.0s,baz=49,slow=6.9,SNR=13
SONM LR LR 22 59 23.5
comp=Z,92nm,18.4s,baz=42,slow=38
comp=Z,3.1nm,1.0s
SONM Songino Array 54.63 304 P **P** **22 34 28.3 +0.3**
SONM IAmb IAmb 22 34 37.9
comp=Z,4.2nm,1.0s
BJI2 Beijing 54.90 291 P **P** **22 34 30.6 +0.7**
BJI2 pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 56.92 357 P **P** **22 34 42.6 -1.4**
comp=Z,3.1nm,0.8s,baz=14,slow=8.4,SNR=2.1
ARCES LR LR 23 00 29.3
comp=Z,34nm,19.3s,baz=0.5,slow=38
comp=Z,3.1nm,0.8s
ARCES ARCESS Array B 56.92 357 P **P** **22 34 42.6 -1.4**
HNS HongShan 57.55 290 ⇓P **P** **22 34 50.7 +1.9**
HNS pmax pmax
comp=Z,13nm,0.8s
BTO2 Baotou 57.81 296 *eP* **P** **22 34 50.6 -0.2**
BTO2 pmax pmax
comp=Z,15nm,1.1s
BTO2 pmax pmax
comp=Z,160nm,8.2s
BORG Borgarnes 57.88 19 LR LR 23 04 15.5
comp=Z,21nm,18.1s,baz=349,slow=41
NJ2 Nanjing 59.05 283 *eP* **P** **22 34 58.9 -0.5**
NJ2 pmax pmax
comp=Z,26nm,1.0s
ZALV Zalesovo Beam 59.52 321 P **P** **22 35 02.5 +0.2**
comp=Z,0.4nm,0.4s,baz=25,slow=7.4,SNR=6.1
ZALV LR LR 23 02 13.7
comp=Z,66nm,19.3s,baz=40,slow=38
comp=Z,0.4nm,0.4s
ZALV Zalesovo Beam 59.52 321 P **P** **22 35 02.6 +0.3**
GTA2 Gaotai 63.99 302 *eP* **P** **22 35 33.5 +0.7**
GTA2 sP pwP 22 35 41.4 +1.8
GTA2 pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 64.39 322 **P** **22 35 35.5 +0.4**
KURK IAmb IAmb 22 35 46.0
comp=Z,7.2nm,1.1s
KURK Kurchatov 64.39 322 **P** **22 35 37.0 +1.9**
LZH Lanzhou 64.44 297 *eP* **P** **22 35 37.8 +2.0**
LZH pP pwP 22 35 43.3 +0.7
LZH pmax pmax
comp=Z,10.0nm,1.1s
LZH LR LR
comp=N,100nm,14.3s
LZH LR LR
comp=E,130nm,13.6s
KURBB Kurchatov Arra 64.50 322 P **P** **22 35 36.7 +0.8**
comp=E,3.8nm,1.0s,baz=29,slow=7.5,SNR=11
comp=E,3.8nm,1.0s
LZDM Lanzhou Array 64.61 297 P **P** **22 35 37.2 0.0**
comp=E,1.6nm,0.4s,baz=67,slow=2.2,SNR=1.4
comp=E,1.6nm,0.4s
FIA1 FINESS Array S 65.00 356 P **P** **22 35 38.9 0.0**
FINES FINESS Array B 65.00 356 P **P** **22 35 39.2 +0.4**
comp=E,7.2nm,0.8s,baz=16,slow=7.5,SNR=28
comp=E,7.2nm,0.8s
FINES FINESS Array B 65.00 356 P **P** **22 35 39.0 +0.1**
BVAR Borovoye Array 65.22 329 P **P** **22 35 41.6 +1.1**
comp=E,6.0nm,0.7s,baz=39,slow=6.1,SNR=28
comp=E,6.0nm,0.7s
BORK Borovoye 65.23 329 **P** **22 35 41.0 +0.5**
BORK IAmb IAmb 22 35 50.4
comp=Z,4.8nm,0.8s
KIRV Kirov 65.28 343 LR LR 23 07 11.0
comp=Z,45nm,21.2s,baz=21,slow=39
NB2 NORSAR Subarra 65.40 4 P **P** **22 35 42.0 +0.4**
comp=Z,4.0nm,0.9s,baz=355,slow=6.5
NOA NORSAR Array B 65.40 4 P **P** **22 35 42.5 +0.9**
comp=Z,3.1nm,0.9s,baz=356,slow=6.6,SNR=9.4
comp=Z,3.1nm,0.9s
ARTI Arti 65.50 337 **P** **22 35 42.9 +0.7**
MKAR Makanchi Array 66.20 318 P **P** **22 35 47.0 0.0**
comp=Z,0.5nm,0.5s,baz=41,slow=5.5,SNR=6.7
MKAR LR LR 23 08 05.5
comp=Z,36nm,18.3s,baz=18,slow=39
comp=Z,0.5nm,0.5s
MKAR Makanchi Array 66.20 318 P **P** **22 35 47.0 0.0**
HFS Hagfors 66.39 3 P **P** **22 35 48.3 +0.4**
comp=Z,5.7nm,0.7s,baz=32,slow=5.8,SNR=9.2
HFS LR LR 23 07 03.6
comp=Z,24nm,18.0s,baz=340,slow=38
comp=Z,5.7nm,0.7s
EKA Eskdalemuir Ar 69.80 13 P **P** **22 36 10.0 +0.6**
comp=Z,3.3nm,0.8s,baz=343,slow=4.5,SNR=7.0
comp=Z,3.3nm,0.8s
PDGK Podgornoye 70.18 317 **P** **22 36 12.6 +0.5**
AKTO Aktyubinsk 71.04 335 LR LR 23 11 28.0
comp=Z,52nm,18.7s,baz=112,slow=39
AB31 Akbulak array 71.61 333 **P** **22 36 21.6 +1.1**
AB31 IAmb IAmb 22 36 31.3
comp=Z,8.1nm,1.0s
ABKAR Akbulak array 71.61 333 **P** **22 36 21.3 +0.8**
PPT Papeete 71.75 168 LR LR 23 00 14.5
comp=Z,34nm,19.8s,baz=343,slow=29
TARG Taragay, Kyrgy 72.20 318 IAmb IAmb 22 36 39.0
comp=Z,3.7nm,1.0s
BOOM Boomskoye usch 72.29 319 P **P** **22 36 25.5 +0.5**
AAK Ala-Archa 72.72 320 LR LR 23 11 01.4
comp=Z,114nm,18.9s,baz=30,slow=38
AAK Ala-Archa 72.72 320 **P** **22 36 27.9 +0.4**
AAK IAmb IAmb 22 36 31.9
comp=Z,6.4nm,0.9s
AAK Ala-Archa 72.72 320 P **P** **22 36 29.4 +1.9**
PZH PanZhiHua 72.95 291 P **P** **22 36 29.7 +0.6**
NRN Naryn 73.17 319 **P** **22 36 31.3 +0.9**
NRN IAmb IAmb 22 36 34.3
comp=Z,5.6nm,0.9s
KKAR Karatay Array 73.79 323 **P** **22 36 33.1 -0.5**
ARSB Arslanbob 74.43 321 P **P** **22 36 37.9 +0.4**
RNPP9 Sopachiv 75.03 355 P **P** **22 36 41.2 +0.6**
CLL Collm 75.20 4 *i* P **P** **22 36 42.7 +1.1**
KSH2 Kashi 75.30 318 P **P** **22 36 44.2 +1.6**
KSH2 pmax pmax
comp=Z,6.0nm,0.9s
AK21 Malin Array Si 75.47 353 P **P** **22 36 43.5 +0.3**
AKASG Malin Array Be 75.54 353 P **P** **22 36 43.2 -0.3**
comp=Z,1.7nm,0.5s,baz=9.2,slow=5.6,SNR=14
comp=Z,1.7nm,0.5s
AKASG Malin Array Be 75.54 353 P **P** **22 36 43.2 -0.3**
AKASG IAmb IAmb 22 36 46.3
comp=Z,4.4nm,1.4s
AKBB Malin Array Si 75.54 353 P **P** **22 36 43.6 +0.1**
AKBB IAmb IAmb 22 36 44.5
comp=Z,8.6nm,1.0s
AKBB Malin Array Si 75.54 353 P **P** **22 36 43.6 +0.1**
DPC Dobruska-Polom 76.25 2 *eP* **P** **22 36 48.9 +1.2**
DPC Dobruska-Polom 76.25 2 P **P** **22 36 49.3 +1.6**
BTK Batken 76.34 321 **P** **22 36 48.5 0.0**
BTK IAmb IAmb 22 36 58.9
comp=Z,5.6nm,0.8s
LUBAR Lubar, Ukraine 76.41 354 P **P** **22 36 48.3 -0.3**
KRLC Kraliky 76.53 1 *eP* **P** **22 36 49.5 +0.2**
STEB Steborice 76.68 1 *eP* P 22 36 58.8 +8.7
ZVC Zvikov 77.11 3 *eP* **P** **22 36 54.1 +1.6**

KHC Kasperske Hory 77.40 3 P **P** **22 36 54.9 +0.7**
KHC IAmb IAmb 22 36 56.8
comp=Z,4.2nm,1.1s
KHC Kasperske Hory 77.40 3 *eP* **P** **22 36 55.7 +1.5**
KHC *ex* x 22 37 08.0
GAR Garm 77.45 321 P **P** **22 36 55.3 +0.6**
GAR Garm 77.45 321 P **P** **22 36 56.3 +1.5**
GERES GERESS Array B 77.69 3 P **P** **22 36 56.6 +0.7**
comp=Z,1.2nm,0.8s,baz=345,slow=4.1,SNR=9.6
comp=Z,1.2nm,0.8s
GERES GERESS Array B 77.69 3 P **P** **22 36 56.5 +0.6**
KMPD K-Podol'skiy 77.84 355 P **P** **22 36 57.0 +0.4**
MANEM Manem 78.21 320 **P** **22 37 00.8 +1.6**
MANEM IAmb IAmb 22 37 11.1
comp=Z,22nm,0.9s
CONA Conrad Observa 78.66 2 *i* pP **P** **22 37 02.8 +1.5**
comp=Z,2.9nm,0.9s
BUR08 Bucovina Ar. S 78.82 355 **P** **22 37 02.9 +0.7**
BUR08 IAmb IAmb 22 37 04.3
comp=Z,7.2nm,1.4s
RONA Rosalia, Austr 78.90 2 *i* P **P** **22 37 02.1 -0.4**
comp=Z,1.0nm,0.5s
LESA Schwarzleotal 79.07 4 *eP* **P** **22 37 03.1 -0.4**
comp=Z,1.2nm,0.7s
MOTA Moosalm 79.07 5 *i* pP **P** **22 37 04.9 +1.2**
comp=Z,3.5nm,0.8s
WATA Walderalm 79.11 5 *i* pP **P** **22 37 05.4 +1.6**
comp=Z,3.3nm,0.8s
WTTA Wattenberg 79.18 5 *i* pP **P** **22 37 05.8 +1.5**
comp=Z,5.0nm,0.8s
SQTA Sankt Quirin 79.20 5 *i* pP **P** **22 37 05.9 +1.6**
comp=Z,5.3nm,0.8s
ARSA Arzberg 79.33 2 *i* pP **P** **22 37 06.8 +1.8**
comp=Z,1.4nm,0.7s
FETA Feichten 79.37 6 *i* pP **P** **22 37 06.5 +1.2**
comp=Z,3.8nm,0.9s
KBA Koelnbreinsper 79.44 4 *i* pP **P** **22 37 07.4 +1.7**
comp=Z,6.1nm,0.9s
KBA Koelnbreinsper 79.44 4 P **P** **22 37 07.6 +1.9**
SHAA Shahritus 79.53 322 **P** **22 37 06.6 +0.4**
SHAA IAmb IAmb 22 37 19.5
comp=Z,14nm,0.9s
ABTA Abfaltersbach 79.74 4 *i* pP **P** **22 37 09.1 +1.9**
comp=Z,3.3nm,1.1s
FUORN Ofenpass-Fuorn 79.75 6 IAmb IAmb 22 37 10.2
comp=Z,5.7nm,1.3s
SOKA Soboth 79.89 3 *i* pP **P** **22 37 09.8 +1.8**
comp=Z,3.6nm,0.8s
MYKA Terra Mystica 79.90 4 *e*pP **P** **22 37 09.3 +1.3**
comp=Z,2.5nm,0.8s
OBKA Obir 80.05 3 *i* pP **P** **22 37 10.4 +1.5**
comp=Z,12nm,0.7s
OBKA Obir 80.05 3 P **P** **22 37 10.7 +1.8**
DRE Drenchia 80.36 4 P **P** **22 37 11.4 +0.9**
KBZ Khabaz 80.69 342 P **P** **22 37 14.0 +1.7**
comp=Z,3.6nm,1.0s,baz=68,slow=5.4,SNR=6.4
KBZ LR LR 23 19 38.0
comp=Z,29nm,18.4s,baz=36,slow=41
comp=Z,3.6nm,1.0s
CMAR Chiang Mai Arr 80.90 289 P **P** **22 37 14.7 +0.9**
comp=Z,1.2nm,0.4s,baz=20,slow=5.4,SNR=7.7
comp=Z,1.2nm,0.4s
CMAR Chiang Mai Arr 80.90 289 **P** **22 37 13.7 -0.1**
MLR Muntele Rosu 80.93 355 LR LR 23 15 54.0
comp=Z,31nm,18.3s,baz=6.0,slow=38
KBL Kabul 81.86 320 **P** **22 37 18.5 -0.4**
KBL IAmb IAmb 22 37 29.3
comp=Z,6.8nm,0.8s
GNI Garni 83.80 340 LR LR 23 18 13.1
comp=Z,39nm,21.6s,baz=64,slow=38
PDG Podgorica 84.19 360 **P** **22 37 30.9 +0.3**
PDG IAmb IAmb 22 37 32.2
comp=Z,4.8nm,0.8s
PDG Podgorica 84.19 360 P **P** **22 37 31.8 +1.2**
ESDC Sonseca Array 84.92 17 P **P** **22 37 35.2 +0.8**
comp=Z,1.0nm,0.8s,baz=356,slow=6.2,SNR=6.5
ESDC LR LR 23 18 29.8
comp=Z,23nm,18.4s,baz=35,slow=38
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 84.92 17 P **P** **22 37 34.8 +0.4**
ESDC IAmb IAmb 22 37 47.3
comp=Z,5.7nm,1.1s
PHP Peshkopia 84.92 359 P **P** **22 37 35.6 +1.3**
BRTR Keskin Array B 86.00 348 P **P** **22 37 41.1 +1.3**
comp=Z,1.6nm,0.8s,baz=83,slow=3.0,SNR=4.5
comp=Z,1.6nm,0.8s
BNN Bunyan 86.58 347 P **P** **22 37 42.7 -0.1**
BNN IAmb IAmb 22 37 45.1
comp=Z,3.8nm,0.9s
MDT Midelt 91.46 19 LR LR 23 23 00.1
comp=Z,66nm,18.6s,baz=166,slow=38
QSPA South Pole Qui 143.53 180 PKhKP PKPpre 22 44 30.7
comp=Z,1.0nm,0.7s,baz=293,slow=2.0,SNR=9.0

WEL ***02*** *22:58:45.0±0.7,33°S±6°×17°8W±1°2,h12km,M4.7/6, mB4.8/5,MLv4.9/6,Mw(mB)4.1/5,Error ellipse: s-maj=16.7km s-min=3.9km az=113.3*
IDC ***02*** *22:58:46.7±0.9,33°48S×178°02W,h0km,mb4.4/6, mbtmp4.4/7,ML3.7/1,MS3.3/6,Error ellipse: s-maj=33.1km s-min=23.9km az=76.0*
NEIC ***02*** *22:58:49.2±1.1,33°8S±0°1×178°0W±0°1,h10km±1km, mb4.7/10,Error ellipse: s-maj=20.2km s-min=13.6km az=25.0*
ISC 02 22:58:48.6±0.7,33°82S±0°08×177°71W±0°08,h10km,n61, σ1§90/70,mb4.5/13,MS3.2/6,2C,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.54**	**358**	P	Pn	22 59 47.1	-10
GLKZ				S	Sn	23 00 34.8	-15
MXZ	**Matakaoa Point**	**4.95**	**220**	Pn	**Pn**	**23 00 01.1**	**-1.9**
MXZ	**Matakaoa Point**	**4.95**	**220**	P	**Pn**	**23 00 03.2**	**+0.2**
MXZ				S	**Sn**	**23 01 01.8**	**+1.6**
WMGZ	**Waiomatatini S**	**5.08**	**217**	P	**Pn**	**23 00 04.6**	**-0.3**
WMGZ				S	**Sn**	**23 01 05.8**	**+2.1**
PKGZ	**Pakihiroa**	**5.29**	**219**	P	**Pn**	**23 00 08.3**	**+0.5**
PKGZ				S	**Sn**	**23 01 10.0**	**+1.2**
PUZ	**Puketiti**	**5.36**	**216**	P	**Pn**	**23 00 07.4**	**-1.3**
PUZ				S	**Sn**	**23 01 12.6**	**+2.2**
HAZ	**Te Kaha**	**5.37**	**222**	P	**Pn**	**23 00 06.9**	**-1.9**
HAZ				S	**Sn**	**23 01 13.7**	**+2.9**
TWGZ	**Tauwhareparae**	**5.58**	**218**	P	**Pn**	**23 00 12.1**	**+0.4**
TWGZ				S	**Sn**	**23 01 17.7**	**+1.8**
RUGZ	**Raukumara Rang**	**5.58**	**221**	P	**Pn**	**23 00 12.6**	**+0.8**
RUGZ				S	**Sn**	**23 01 18.5**	**+2.4**
MWZ	**Matawai**	**5.93**	**219**	P	**Pn**	**23 00 15.7**	**-0.9**
MWZ				S	**Sn**	**23 01 25.4**	**+0.8**
URZ	**Urewera**	**6.10**	**222**	Pn	**Pn**	**23 00 17.8**	**-1.0**
	1.8nm,0.3s,baz=29,slow=14,SNR=9.9						
URZ				Sn	**Sn**	**23 01 27.8**	**-1.0**
	10nm,0.3s,baz=11,slow=19,SNR=16						
	10nm,0.5s						
URZ	**Urewera**	**6.10**	**222**	P	**Pn**	**23 00 20.0**	**+1.2**
URZ				S	**Sn**	**23 01 29.4**	**+0.7**
WHHZ	**Waihua**	**6.64**	**216**	P	**Sn**	**23 01 43.4**	**+1.3**
WCZ	**Waipu Caves**	**6.86**	**250**	P	Pb	23 00 38.7	-9.3
NMHZ	**Naumai**	**6.88**	**218**	P	**Pn**	**23 00 30.1**	**+0.5**
NMHZ				P	**Sn**	**23 01 49.1**	**+1.2**
MCHZ	**McNeill Hill**	**7.19**	**217**	P	**Sn**	**23 01 56.8**	**+1.2**
OUZ	**Omahuta**	**7.31**	**257**	P	Pb	23 00 46.8	-8.8
KWHZ	**Kaweka Forest**	**7.32**	**218**	P	**Pn**	**23 00 34.5**	**-1.1**
KWHZ				P	**Sn**	**23 01 58.8**	**+0.1**
KAHZ	**Kahuranaki**	**7.38**	**214**	S	**Sn**	**23 01 59.9**	**-0.3**
TMVZ	**Te Maari**	**7.49**	**223**	P	**Pn**	**23 00 38.4**	**+0.4**
TMVZ				S	**Sn**	**23 02 03.0**	**-0.1**
KRHZ	**Kereru**	**7.51**	**218**	S	**Sn**	**23 02 01.3**	**-2.1**
BHHZ	**Black Hill Sta**	**7.55**	**220**	P	**Pn**	**23 00 37.6**	**-1.3**
BHHZ				S	**Sn**	**23 02 03.0**	**-1.6**
PXZ	**Pawanui**	**7.57**	**213**	P	**Sn**	**23 02 04.0**	**-0.9**
NGZ	**Ngauruhoe**	**7.59**	**223**	S	**Sn**	**23 02 05.1**	**-0.4**
PNHZ	**Pukenui**	**7.80**	**217**	P	**Pn**	**23 00 38.8**	**-3.4**
PNHZ				S	**Sn**	**23 02 08.3**	**-2.2**
TSZ	**Takapari Road**	**8.03**	**217**	P	**Pn**	**23 00 43.6**	**-1.8**
TSZ				S	**Sn**	**23 02 13.9**	**-2.3**
CTZ	**Chatham Island**	**9.94**	**175**	P	**Pn**	**23 01 10.8**	**-0.7**
CTZ				S	**Sn**	**23 02 57.9**	**-5.2**
LTZ	**Lake Taylor**	**11.91**	**218**	Pn	**Pn**	**23 01 37.0**	**-1.5**
RPZ	**Rata Peaks**	**13.20**	**218**	Pn	**Pn**	**23 01 52.5**	**-3.6**
	0.2nm,0.3s,baz=45,slow=21,SNR=1.9						
RPZ				Sn	Sn	23 04 09.7	-13
	0.8nm,0.3s,baz=324,slow=19,SNR=4.0						

RAR Rarotonga 20.23 56 LR LR 23 09 53.8
comp=Z,43nm,20.8s,baz=173,slow=33
PPT Papeete 29.94 64 LR LR 23 13 59.2
comp=Z,28nm,21.7s,baz=191,slow=30
STKA Stephens Creek 34.09 262 LR LR 23 17 12.7
comp=Z,89nm,21.7s,baz=34,slow=33
CTA Charters Tower 34.72 284 LR LR 23 18 52.9
comp=Z,39nm,18.3s,baz=42,slow=35
AS31 Alice Springs 43.27 270 **P** **23 06 49.0 -1.6**
AS31 IAmb IAmb 23 06 59.7
comp=Z,2.4nm,0.8s
ASAR Alice Springs 43.27 270 P **P** **23 06 48.4 -2.3**
comp=Z,6.1nm,0.8s,baz=111,slow=7.5,SNR=44
ASAR PcP **PcP** **23 08 39.4 -0.3**
comp=Z,0.7nm,0.7s,baz=122,slow=3.9,SNR=1.8
comp=Z,6.1nm,0.8s
ASAR Alice Springs 43.27 270 **P** **23 06 48.6 -2.0**
WR8 Warramunga Arr 44.43 276 **P** **23 06 57.2 -2.7**
WR8 IAmb IAmb 23 06 58.5
comp=Z,13nm,1.1s
WRAB Tennant Creek 44.56 275 P **P** **23 06 58.5 -2.5**
WRA Warramunga Arr 44.57 275 P **P** **23 06 58.2 -2.8**
comp=Z,9.0nm,0.8s,baz=114,slow=7.7,SNR=28
comp=Z,9.0nm,0.8s
WRA Warramunga Arr 44.57 275 **P** **23 06 58.1 -2.9**
WB0 Warramunga Arr 44.61 276 **P** **23 06 58.8 -2.5**
WB0 IAmb IAmb 23 07 10.7
comp=Z,16nm,0.9s
KNRA Kununurra 51.28 277 P **P** **23 07 51.1 -2.0**
KNRA IAmb IAmb 23 07 51.8
comp=Z,10nm,1.1s
FITZ Fitzroy Crossi 52.67 272 LR LR 23 28 57.7
comp=Z,77nm,18.6s,baz=203,slow=35
FITZ Fitzroy Crossi 52.67 272 P **P** **23 08 01.4 -2.0**
QSPA South Pole Qui 56.30 180 P **P** **23 08 32.1 +2.8**
comp=Z,7.3nm,1.0s,baz=29,slow=3.8,SNR=12
comp=Z,7.3nm,1.0s
QSPA South Pole Qui 56.30 180 P **P** **23 08 30.5 +1.1**
QSPA IAmb IAmb 23 08 44.0
comp=Z,9.1nm,1.1s
MAW Mawson 69.21 201 P **P** **23 09 55.9 +0.8**
comp=Z,2.5nm,1.0s,baz=102,slow=8.7,SNR=5.0
comp=Z,2.5nm,1.0s
SNAA Sanae 74.74 178 P **P** **23 10 30.7 +2.4**
comp=Z,14nm,0.5s
SNAA Sanae 74.74 178 P **P** **23 10 30.0 +1.6**
comp=Z,1.8nm,1.0s,baz=208,slow=5.3,SNR=3.8
comp=Z,1.8nm,1.0s
VNA2 Neumayer--Watz 75.33 177 ⇑P **P** **23 10 33.3 +1.7**
comp=Z,3.5nm,0.7s,baz=174,slow=5.5
VNA1 Neumayer--Stat 75.56 176 ⇑P **P** **23 10 34.9 +2.0**
comp=Z,5.1nm,1.1s
MJAR Matsushiro Arr 81.18 325 LR LR 23 40 31.9
comp=Z,14nm,20.6s,baz=187,slow=31
MT09 Talagante 83.86 127 P **P** **23 11 20.1 +1.2**
VA03 San Esteban 84.76 126 P **P** **23 11 23.8 +0.4**
VA03 IAmb IAmb 23 11 28.7
comp=Z,8.1nm,1.0s
PETK Petropavlovsk- 89.17 345 P **P** **23 11 42.5 -1.4**
comp=Z,2.7nm,0.9s,baz=222,slow=7.0,SNR=4.8
comp=Z,2.7nm,0.9s
KURBB Kurchatov Arra 123.58 312 PKP **PKPdf** **23 17 43.7 -2.2**
comp=Z,0.2nm,0.4s,baz=94,slow=2.9,SNR=5.0
KBZ Khabaz 147.12 300 PKPbc **PKPdf** **23 18 30.0 +0.5**
comp=Z,1.9nm,0.9s,baz=143,slow=5.1,SNR=4.4
FINES FINESS Array B 148.41 338 PKPbc **PKPdf** **23 18 32.8 +1.7**
comp=Z,3.3nm,0.8s,baz=46,slow=5.5,SNR=9.4
NOA NORSAR Array B 152.15 351 PKPbc **PKPdf** **23 18 40.9 +3.9**
comp=Z,0.4nm,0.6s,baz=16,slow=2.6,SNR=1.9
MMAI Mount Meron Ar 152.41 278 PKPbc **PKPbc** **23 18 43.7 -1.5**
comp=Z,1.3nm,0.8s,baz=48,slow=8.7,SNR=3.6
TORD Torodi Ar. Bea 159.42 178 PKPab **PKPab** **23 19 26.4 +1.0**
comp=Z,0.6nm,0.9s,baz=195,slow=6.1,SNR=2.6

IDC ***02*** *23:21:00.9±0.8,23°90N×65°57E,h0km,mb4.0/23, mbtmp4.1/23,MS3.3/15,Error ellipse: s-maj=19.8km s-min=15.3km az=19.0*
NEIC ***02*** *23:21:02.9±1.4,24°05N±0°09×65°56E±0°07,h10km±1km, mb4.4/50,Error ellipse: s-maj=17.0km s-min=8.1km az=152.0*
MOS ***02*** *23:21:03.4±1.3,24°09N×65°64E,h26km,mb4.6/21,Error ellipse: s-maj=9.7km s-min=5.2km az=83.8*
GFZ ***02*** *23:21:03.2±0.5,24°N±6°×6°6E±°,h10km,M4.5/21, mb4.5/21,confirmed*
ISC 02 23:21:02.9±0.4,24°09N±0°05×65°65E±0°04,h10km,n247, σ1§84/270,mb4.4/58,MS3.2/15,8C,Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHUJ	**Bhuj**	**3.77**	**102**	*eP*	**Pn**	**23 21 59.9**	**-1.1**
BHUJ				*eS*	**Sn**	**23 22 42.5**	**-3.0**
BHUJ				IAML		23 22 49.5	
	comp=E,234nm,0.3s						
BHUJ				IAML		23 23 02.0	
	comp=E,316nm,0.2s						
JLN	**Jalan Bani Buh**	**6.06**	**253**	P	**Pn**	**23 22 31.5**	**-1.0**
	SNR=43						
JLN				S	**Sn**	**23 23 38.7**	**-3.2**
WBK	**Wadi Bani Khal**	**6.31**	**258**	P	**Pn**	**23 22 35.0**	**-1.1**
	SNR=88						
WBK				S	**Sn**	**23 23 44.8**	**-3.4**
WSAR	**Wadi Sarin**	**6.49**	**264**	P	**Pn**	**23 22 38.5**	**0.0**
	SNR=35						
WSAR				S	**Sn**	**23 23 48.9**	**-3.7**
BIDO	**Bidbid**	**6.91**	**267**	P	**Pn**	**23 22 44.6**	**+0.3**
	SNR=9.1						
BIDO				S	**Sn**	**23 23 58.6**	**-4.3**
SMDO	**Samad**	**7.04**	**263**	P	**Pn**	**23 22 46.5**	**+0.3**
	SNR=38						
JMDO	**Jabal Madar**	**7.15**	**258**	P	**Pn**	**23 22 48.0**	**+0.4**
	SNR=72						
JMDO				S	**Sn**	**23 24 06.2**	**-2.6**
HOQ	**Hoqain**	**7.65**	**268**	P	**Pn**	**23 22 54.8**	**+0.4**
	SNR=11						
HOQ				P	**Pn**	**23 22 54.8**	**+0.4**
	SNR=11						
MHTO	**MHTO**	**7.74**	**248**	P	**Pn**	**23 22 55.7**	**+0.1**
	SNR=13						
MHTO				P	**Pn**	**23 22 55.7**	**+0.1**
	SNR=13						
MHTO				S	**Sn**	**23 24 20.9**	**-2.5**
MHTO				S	**Sn**	**23 24 20.9**	**-2.5**
BSY	**Bisya**	**7.87**	**262**	P	**Pn**	**23 22 59.0**	**+1.5**
	SNR=48						
BSY				P	**Pn**	**23 22 59.0**	**+1.5**
	SNR=17						
SOHO	**SOHO**	**8.32**	**272**	*i* P	**Pn**	**23 23 03.5**	**-0.2**
	SNR=48						
SOHO	**SOHO**	**8.32**	**272**	P	**Pn**	**23 23 03.9**	**+0.3**
ARQ	**Araqi**	**8.39**	**267**	P	**Pn**	**23 23 07.0**	**+2.3**
	SNR=94						
AJM	**Ajmer**	**8.46**	**72**	*eP*	**Pn**	**23 23 06.1**	**+0.6**
AJM				*eS*	**Sn**	**23 24 35.0**	**-6.2**
AJM				IAML		23 24 54.9	
	comp=E,27nm,0.9s						
AJM				IAML		23 24 55.3	
	comp=N,37nm,0.7s						
MDH	**Madha**	**8.59**	**280**	*i* P	**Pn**	**23 23 06.3**	**-0.9**
	SNR=11						
MDH	**Madha**	**8.59**	**280**	P	**Pn**	**23 23 06.9**	**-0.4**
	SNR=11						
MDH				P	**Pn**	**23 23 06.9**	**-0.4**
	SNR=11						
MDH				S	**Sn**	**23 24 40.5**	**-3.7**
MDH				S	**Sn**	**23 24 40.5**	**-3.7**
DQM	**DQM**	**8.59**	**243**	P	**Pn**	**23 23 07.1**	**-0.2**
DQM				P	**Pn**	**23 23 07.1**	**-0.2**
DQM				S	**Sn**	**23 24 41.6**	**-2.7**
DQM				S	**Sn**	**23 24 41.6**	**-2.7**
UOSS	**Minazif**	**8.64**	**278**	P	**Pn**	**23 23 05.8**	**-2.2**
UOSS	**Minazif**	**8.64**	**278**		**Pn**	**23 23 05.9**	**-2.2**
UOSS	**Minazif**	**8.64**	**278**	P	**Pn**	**23 23 06.8**	**-1.2**
UOSS				P	**Pn**	**23 23 06.8**	**-1.2**
UOSS				S	**Sn**	**23 24 41.6**	**-3.9**
UOSS				S	**Sn**	**23 24 41.6**	**-3.9**
UOSS	**Minazif**	**8.64**	**278**	P	**Pn**	**23 23 07.3**	**-0.7**
BANOM	**Banah**	**8.67**	**284**	*i* P	**Pn**	**23 23 07.9**	**-0.6**
	SNR=6.7						
BANOM	**Banah**	**8.67**	**284**	P	**Pn**	**23 23 08.2**	**-0.3**
HATD	**Hatta, Dubai**	**8.70**	**277**	P	**Pn**	**23 23 08.0**	**-0.8**
HATD	**Hatta, Dubai**	**8.70**	**277**	P	**Pn**	**23 23 08.1**	**-0.7**
	SNR=28						
HATD				P	**Pn**	**23 23 08.1**	**-0.7**
	SNR=28						

MSFE	**Esma-Masafi**	**8.72**	**280**	*i* P		**Pn**	**23 23 08.5**	**-0.6**
	SNR=26								
MASF	**Masafi**	**8.72**	**280**	P		**Pn**	**23 23 08.7**	**-0.5**
MASF	SNR=26			P		**Pn**	**23 23 08.7**	**-0.5**
MASF				S		**Sn**	**23 24 43.7**	**-3.8**
MASF				S		**Sn**	**23 24 43.7**	**-3.8**
ASHO	**Ashiyiah**	**8.76**	**276**	*i* P		**Pn**	**23 23 09.8**	**+0.1**
	SNR=52								
ASHO	**Ashiyiah**	**8.76**	**276**	P		**Pn**	**23 23 10.4**	**+0.7**
ASHO	SNR=37			S		**Sn**	**23 24 45.4**	**-3.2**
SHME	**Shamm**	**8.83**	**285**	*i* P		**Pn**	**23 23 11.1**	**+0.5**
	SNR=30								
SHME	**Shamm**	**8.83**	**285**	P		**Pn**	**23 23 11.5**	**+0.9**
SHME	SNR=31			P		**Pn**	**23 23 11.5**	**+0.9**
SHME				S		**Sn**	**23 24 45.6**	**-4.7**
SHME				S		**Sn**	**23 24 45.6**	**-4.7**
ALNE	**Al Ain**	**9.04**	**272**	*i* P		**Pn**	**23 23 16.0**	**+2.5**
	SNR=145								
ALNE	**Al Ain**	**9.04**	**272**	P		**Pn**	**23 23 16.0**	**+2.5**
	SNR=146								
NAZ	**Nazwa, Dubai**	**9.13**	**278**	*i* P		**Pn**	**23 23 15.9**	**+1.1**
	SNR=31								
NAZ	**Nazwa, Dubai**	**9.13**	**278**	P		**Pn**	**23 23 15.9**	**+1.1**
NAZ	SNR=31			P		**Pn**	**23 23 15.9**	**+1.1**
NAZ				S		**Sn**	**23 24 55.7**	**-2.1**
NAZ				S		**Sn**	**23 24 55.7**	**-2.1**
FAQ	**Al Faqa, Dubai**	**9.19**	**276**	*i* P		**Pn**	**23 23 16.8**	**+1.3**
	SNR=12								
FAQ	**Al Faqa, Dubai**	**9.19**	**276**	P		**Pn**	**23 23 18.1**	**+2.6**
FAQ	SNR=12			P		**Pn**	**23 23 18.1**	**+2.6**
FAQ				S		**Sn**	**23 24 55.7**	**-3.2**
FAQ				S		**Sn**	**23 24 55.7**	**-3.2**
ASUD	**Al Ashush, Dub**	**9.42**	**275**	*i* P		**Pn**	**23 23 20.2**	**+1.5**
	SNR=9.2								
ASUD	**Al Ashush, Dub**	**9.42**	**275**	P		**Pn**	**23 23 20.3**	**+1.5**
ASUD	SNR=12			P		**Pn**	**23 23 20.3**	**+1.5**
UMZA	**Um Al Zommool**	**9.73**	**264**	P		**Pn**	**23 23 24.3**	**+1.4**
UMZA				P		**Pn**	**23 23 24.3**	**+1.4**
AJN	**Ajban**	**9.73**	**275**	*i* P		**Pn**	**23 23 24.1**	**+1.1**
	SNR=6.2								
AJN	**Ajban**	**9.73**	**275**	P		**Pn**	**23 23 25.5**	**+2.5**
	SNR=6.2								
HRA	**Herat**	**10.68**	**345**			**Pn**	**23 23 36.5**	**+0.4**
MZWR	**Madinat Zayed**	**10.77**	**271**	P		**Pn**	**23 23 39.1**	**+1.9**
KBL	**Kabul**	**10.82**	**15**			**Pn**	**23 23 39.0**	**+0.9**
KBL	**Kabul**	**10.82**	**15**	P		**Pn**	**23 23 39.0**	**+0.9**
KBL	**Kabul**	**10.82**	**15**	P		**Pn**	**23 23 41.1**	**+3.0**
BHPL	**Bhopal**	**10.83**	**92**	*e*P		**Pn**	**23 23 36.9**	**-1.2**
BHPL				*ex*		x	23 24 54.8	
AKL	**Akola**	**11.04**	**106**	*e*P		**Pn**	**23 23 41.6**	**+0.6**
MZR	**Muzera**	**11.21**	**267**	*i* P		**Pn**	**23 23 44.8**	**+1.5**
	SNR=6.2								
MZR	**Muzera**	**11.21**	**267**	P		**Pn**	**23 23 45.2**	**+1.9**
	SNR=6.2								
NIL	**Nilore**	**11.62**	**33**			**Pn**	**23 23 49.1**	**+0.3**
NIL	**Nilore**	**11.62**	**33**	P		**Pn**	**23 23 49.1**	**+0.3**
JMU	**Jammu**	**11.84**	**41**	*e*S		Sn	23 25 56.2	-7.8
DMTO	**DMTO**	**11.84**	**240**	P		**Pn**	**23 23 54.3**	**+2.5**
DMTO				S		**Sn**	**23 26 02.9**	**-1.2**
RBK	**Rabkut**	**12.54**	**241**	P		**Pn**	**23 24 02.4**	**+0.8**
WHFO	**Wadi Hawf**	**12.67**	**243**	P		**Pn**	**23 24 03.9**	**+0.6**
SHAA	**Shahritus**	**13.59**	**8**	Pn		**Pn**	**23 24 15.5**	**-0.3**
PTH	**Pithoragarh**	**14.10**	**64**	*e*P		**Pn**	**23 24 20.9**	**-1.9**
MANEM	**Manem**	**14.37**	**20**			**Pn**	**23 24 27.1**	**+0.4**
CHGR	**Chuyangaron**	**14.82**	**11**	Pn		**Pn**	**23 24 32.1**	**-0.6**
CHGR	**Chuyangaron**	**14.82**	**11**	P		**Pn**	**23 24 32.1**	**-0.6**
GAR	**Garm**	**15.38**	**14**			**Pn**	**23 24 39.6**	**-0.5**
GAR	comp=Z,8.3nm,0.6s			IAmb		IAmb	23 24 49.6	
BTK	**Batken**	**16.50**	**14**	Pn		**Pn**	**23 24 54.3**	**-0.3**
BTK	**Batken**	**16.50**	**14**	P		**Pn**	**23 24 54.3**	**-0.3**
BTK	comp=Z,6.0nm,0.6s			pmax		pmax		
BTK	**Batken**	**16.50**	**14**	P		**P**	**23 24 56.9**	**-0.4**
KSH2	**Kashi**	**17.20**	**27**	Pn		**P**	**23 25 06.9**	**+1.9**
KSH2				Sn		**Sn**	**23 28 06.4**	**-8.5**
KSH2	comp=N,8.0nm,0.7s			smax		smax		
KSH2	comp=E,6.0nm,0.8s			smax		smax		
OHH	**Osh**	**17.45**	**18**	P		**P**	**23 25 08.8**	**+1.2**
ARSB	**Arslanbob**	**18.24**	**18**			**Pn**	**23 25 15.7**	**-0.6**
ARSB	**Arslanbob**	**18.24**	**18**	P		**Pn**	**23 25 15.7**	**-0.6**
ARSB	comp=Z,11nm,0.9s			pmax		pmax		
ARK	**Arkit**	**18.43**	**15**	P		**Pn**	**23 25 21.7**	**+3.2**
RAYN	**Ar Rayn**	**18.44**	**272**			**Pn**	**23 25 16.4**	**-2.4**
RAYN	**Ar Rayn**	**18.44**	**272**	P		**Pn**	**23 25 16.4**	**-2.4**
RAYN	comp=Z,10.0nm,0.7s			pmax		pmax		
RAYN	**Ar Rayn**	**18.44**	**272**	P		**P**	**23 25 18.6**	**-0.2**
BOK	**Bokaro**	**18.50**	**87**	*e*P		**Pn**	**23 25 21.1**	**+1.6**
ASAI	**AK-SAY(Kyrgyzs**	**19.09**	**26**	P		**Pn**	**23 25 27.6**	**+0.7**
NRN	**Naryn**	**19.33**	**24**			**P**	**23 25 28.0**	**-0.7**
NRN	**Naryn**	**19.33**	**24**	P		**P**	**23 25 28.0**	**-0.7**
NRN	comp=Z,6.0nm,0.8s			pmax		pmax		
KK31	**Karatay Array**	**19.38**	**11**			**P**	**23 25 29.0**	**+0.1**
KK31	**Karatay Array**	**19.38**	**11**	P		**P**	**23 25 29.0**	**+0.1**
KK31	comp=Z,8.0nm,1.1s			pmax		pmax		
KKAR	**Karatay Array**	**19.38**	**11**	P		**P**	**23 25 29.3**	**+0.4**
KKAR	**Karatay Array**	**19.38**	**11**	P		**P**	**23 25 29.3**	**+0.4**
EVN	**Everest**	**19.41**	**74**	P		**P**	**23 25 29.2**	**-0.7**
EVN	comp=Z,9.2nm,0.7s			IAmb		IAmb	23 25 42.9	
EVN	**Everest**	**19.41**	**74**	P		**P**	**23 25 30.3**	**+0.4**
AAK	**Ala-Archa**	**19.89**	**19**	P		**Pn**	**23 25 36.6**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=214,slow=11,SNR=9.8								
AAK	comp=Z,4.4nm,0.6s **Ala-Archa**	**19.89**	**19**	P		**Pn**	**23 25 37.7**	**+1.5**
AAK	**Ala-Archa**	**19.89**	**19**			**P**	**23 25 35.6**	**+1.0**
AAK	**Ala-Archa**	**19.89**	**19**	*ce*P		**Pn**	**23 25 36.9**	**+0.7**
AAK	comp=Z,15nm,1.7s			pmax		pmax		
AAK	**Ala-Archa**	**19.89**	**19**	P		**Pn**	**23 25 38.0**	**+1.7**
BOOM	**Boomskoye usch**	**20.24**	**22**			**P**	**23 25 38.4**	**+0.1**
BOOM	comp=Z,28nm,1.1s			IAmb		IAmb	23 25 52.2	
BOOM	**Boomskoye usch**	**20.24**	**22**	P		**P**	**23 25 38.4**	**+0.1**
BOOM	comp=Z,28nm,1.1s			pmax		pmax		
BOOM	**Boomskoye usch**	**20.24**	**22**	P		Pn	23 25 41.7	+1.4
TARG	**Taragay, Kyrgy**	**20.30**	**27**	P		**P**	**23 25 37.8**	**-1.5**
TARG	**Taragay, Kyrgy**	**20.30**	**27**	P		**P**	**23 25 37.8**	**-1.5**
TARG	comp=Z,6.0nm,0.7s			pmax		pmax		
TARG	**Taragay, Kyrgy**	**20.30**	**27**	P		**P**	**23 25 41.1**	**+1.8**
KDJ	**Kajisay**	**20.38**	**25**	P		**P**	**23 25 40.3**	**+0.3**
KDJ	comp=Z,21nm,0.8s			IAmb		IAmb	23 25 52.4	
KDJ	**Kajisay**	**20.38**	**25**	P		**P**	**23 25 40.3**	**+0.3**
KDJ	comp=Z,21nm,0.8s			pmax		pmax		
KDJ	**Kajisay**	**20.38**	**25**	P		Pn	23 25 42.4	+0.4
WUS	**Wushi**	**20.49**	**30**	P		**P**	**23 25 41.4**	**+0.3**
WUS	comp=Z,17nm,1.2s			IAmb		IAmb	23 25 57.4	
PRZ	**Przheval'sk**	**21.17**	**27**	P		**P**	**23 25 48.9**	**+0.4**
PRZ	comp=Z,8.4nm,0.8s			IAmb		IAmb	23 25 58.1	
PRZ	**Przheval'sk**	**21.17**	**27**	P		**P**	**23 25 48.9**	**+0.4**
PRZ	comp=Z,8.0nm,0.8s			pmax		pmax		
PDGK	**Podgornoye**	**22.32**	**27**	P		**P**	**23 26 01.1**	**+0.3**
PDGK	**Podgornoye**	**22.32**	**27**	P		**P**	**23 26 01.1**	**+0.3**
AKT	**Akhty**	**22.89**	**324**	*e*P		**P**	**23 26 09.4**	**+2.6**
AKT				*e*			23 26 33.6	
AKT	comp=Z,30nm,1.0s			pmax		pmax		
HAKT	**HAKKARI**	**23.06**	**311**	P		**P**	**23 26 12.5**	**+3.7**
GNI	**Garni**	**23.78**	**317**	LR		LR	23 37 23.4	
	comp=Z,89nm,18.2s,baz=114,slow=41								
GNI	**Garni**	**23.78**	**317**	P		**P**	**23 26 18.4**	**+2.6**
GNI	**Garni**	**23.78**	**317**	P		**P**	**23 26 14.6**	**-1.2**
GNI	comp=Z,18nm,1.0s			IAmb		IAmb	23 26 34.1	
GNI	**Garni**	**23.78**	**317**	P		**P**	**23 26 14.6**	**-1.2**
GNI	comp=Z,18nm,1.0s			pmax		pmax		
GNI	**Garni**	**23.78**	**317**	P		**P**	**23 26 18.1**	**+2.3**
GURO	**Guroymak-BITLI**	**24.70**	**311**	P		**P**	**23 26 23.9**	**-0.5**
GURO	comp=Z,6.4nm,1.0s			IAmb		IAmb	23 26 44.9	
AB31	**Akbulak array**	**25.51**	**351**	P		**P**	**23 26 31.8**	**+0.4**
AB31	comp=Z,6.0nm,0.8s			IAmb		IAmb	23 26 33.9	
ABKAR	**Akbulak array**	**25.51**	**351**	P		**P**	**23 26 31.8**	**+0.4**
EPOS	**Posof**	**25.81**	**318**	P		**P**	**23 26 37.8**	**+3.5**
MAKZ	**Makanchi**	**26.18**	**26**	P		**P**	**23 26 38.2**	**+0.7**
MAKZ	comp=Z,8.4nm,0.6s			IAmb		IAmb	23 27 01.8	
MAKZ	**Makanchi**	**26.18**	**26**	P		**P**	**23 26 38.2**	**+0.7**
MAKZ	comp=Z,8.0nm,0.6s			pmax		pmax		
MAKZ	**Makanchi**	**26.18**	**26**	P		**P**	**23 26 40.5**	**+3.0**
MK31	**Makanchi Array**	**26.29**	**26**	*i* P		**P**	**23 26 39.9**	**+1.4**
MKAR	**Makanchi Array**	**26.29**	**26**	P		**P**	**23 26 40.4**	**+1.9**
MKAR	comp=Z,0.6nm,0.4s,baz=215,slow=8.9,SNR=10			LR		LR	23 39 27.7		
	comp=Z,44nm,18.3s,baz=223,slow=42 comp=Z,0.6nm,0.4s								
MKAR	**Makanchi Array**	**26.29**	**26**	P		**P**	**23 26 39.3**	**+0.8**
MKAR	**Makanchi Array**	**26.29**	**26**	*ce*P		**P**	**23 26 39.5**	**+1.0**
MKAR	comp=Z,1.0nm,0.5s			pmax		pmax		
KOPT	**Kop Dagi**	**26.45**	**313**	P		**P**	**23 26 39.5**	**-0.8**
KOPT	comp=Z,6.8nm,1.1s			IAmb		IAmb	23 26 57.6	
ASF	**Jabal al Asfar**	**26.54**	**294**	LR		LR	23 39 39.8	
ASF	comp=Z,52nm,18.9s,baz=166,slow=42 **Jabal al Asfar**	**26.54**	**294**	P		**P**	**23 26 46.2**	**+5.2**
WMQ	comp=Z,93nm,1.1s **Urumqi**	**26.72**	**37**	*e*P		**P**	**23 26 47.4**	**+4.9**
WMQ	comp=Z,32nm,0.9s			pmax		pmax		
AKTO	**Aktyubinsk**	**26.96**	**349**	LR		LR	23 38 49.3	
KBZ	comp=Z,38nm,18.5s,baz=44,slow=39 **Khabaz**	**27.05**	**322**	P		**P**	**23 26 46.7**	**+1.3**
KBZ	comp=Z,2.8nm,0.8s,baz=132,slow=5.8,SNR=6.9 comp=Z,24nm,19.1s,baz=86,slow=41 comp=Z,2.8nm,0.8s			LR		LR	23 39 37.0		
KBZ	**Khabaz**	**27.05**	**322**	*ce*P		**P**	**23 26 48.0**	**+2.6**
KBZ	comp=Z,5.0nm,1.0s			pmax		pmax		
SHA1	**Shidzhatmaz**	**27.19**	**322**	*i* P		**P**	**23 26 49.1**	**+2.2**
KIV	**Kislovodsk**	**27.31**	**322**	P		**P**	**23 26 47.2**	**-0.6**
KIV	comp=Z,18nm,1.2s			IAmb		IAmb	23 27 12.4	
KIV	**Kislovodsk**	**27.31**	**322**	*e*P		**P**	**23 26 50.3**	**+2.4**
KIV	comp=Z,8.0nm,1.1s			pmax		pmax		
KIV	**Kislovodsk**	**27.31**	**322**	P		**P**	**23 26 50.8**	**+2.9**
KIV	**Kislovodsk**	**27.31**	**322**	P		**P**	**23 26 49.5**	**+1.7**
KELT	**Kelkit**	**27.35**	**312**	P		**P**	**23 26 48.4**	**+0.1**
GHAJ	**Ghor Haditha**	**27.52**	**292**	P		**P**	**23 26 48.2**	**-1.5**
GHAJ	comp=Z,12nm,0.9s			IAmb		IAmb	23 27 02.3	
QRNJ	**Al-Qirein**	**27.67**	**294**	P		**P**	**23 26 55.9**	**+4.9**
UJAP	comp=Z,504nm,0.9s **Al Uja**	**27.70**	**293**	P		**P**	**23 26 56.6**	**+5.3**
GEM	comp=Z,8.0nm,0.8s **Giv'at Ha'Em**	**27.76**	**296**	P		**P**	**23 26 58.0**	**+6.1**
HRFI	comp=Z,0.1nm,4.2s **Mount Harif**	**27.84**	**289**	P		**P**	**23 26 57.3**	**+4.6**
EIL	comp=Z,9.4nm,1.0s **Elat**	**27.89**	**288**	LR		LR	23 40 51.6	
MMAI	comp=Z,59nm,19.0s,baz=87,slow=43 **Mount Meron Ar**	**27.93**	**295**	P		**P**	**23 26 54.2**	**+0.7**
KURBB	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=8.0 comp=Z,0.1nm,0.3s **Kurchatov Arra**	**28.31**	**17**	P		**P**	**23 26 57.6**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=209,slow=8.8,SNR=9.9 comp=Z,2.0nm,0.9s								
KURK	**Kurchatov**	**28.42**	**17**	P		**P**	**23 26 57.6**	**+0.1**
KURK	**Kurchatov**	**28.42**	**17**	P		**P**	**23 26 57.7**	**+0.1**
KURK	**Kurchatov**	**28.42**	**17**	P		**P**	**23 26 58.7**	**+1.2**
BVAR	**Borovoye Array**	**29.11**	**6**	P		**P**	**23 27 05.5**	**+1.8**
BRTR	comp=Z,0.7nm,0.4s,baz=179,slow=10,SNR=9.6 comp=Z,0.7nm,0.4s **Keskin Array B**	**31.12**	**308**	LR		LR	23 42 44.7	
CHTO	comp=Z,56nm,19.2s,baz=75,slow=42 **Chiang Mai**	**31.39**	**93**	P		**P**	**23 27 23.3**	**-0.9**
CHTO	comp=Z,4.3nm,0.8s			IAmb		IAmb	23 27 26.5	
CHTO	**Chiang Mai**	**31.39**	**93**	P		**P**	**23 27 23.3**	**-0.9**
CHTO	comp=Z,4.0nm,0.8s			pmax		pmax		
CMAR	**Chiang Mai Arr**	**31.48**	**94**	P		**P**	**23 27 25.2**	**+0.2**
CMAR	comp=Z,0.8nm,0.3s,baz=285,slow=9.4,SNR=1.5 comp=Z,0.8nm,0.3s **Chiang Mai Arr**	**31.48**	**94**	P		**P**	**23 27 24.8**	**-0.3**
PZH	**PanZhiHua**	**32.66**	**78**	P		**P**	**23 27 37.3**	**+1.9**
ARTI	**Arti**	**32.70**	**353**	LR		LR	23 42 50.4	
ZAA0	comp=Z,49nm,18.3s,baz=148,slow=40 **Zalesovo Array**	**33.10**	**21**	P		**P**	**23 27 39.1**	**+0.3**
ZAA0	comp=Z,3.1nm,0.8s			IAmb		IAmb	23 27 43.5	
ZALV	**Zalesovo Beam**	**33.10**	**21**	P		**P**	**23 27 39.8**	**+0.9**
ZALV	comp=Z,1.5nm,0.4s,baz=226,slow=11,SNR=10			LR		LR	23 43 35.1		
	comp=Z,44nm,19.1s,baz=207,slow=41 comp=Z,1.5nm,0.4s								
ZALV	**Zalesovo Beam**	**33.10**	**21**	P		**P**	**23 27 38.9**	**0.0**
KMI2	**Kunming**	**33.68**	**80**	P		**P**	**23 27 44.4**	**-0.1**
KMI2	comp=Z,11nm,0.6s			pmax		pmax		
KNGR	**Kungurtug, Tuv**	**36.16**	**35**	*i* P		**P**	**23 28 08.2**	**+2.7**
KNGR	comp=Z,4.0nm,1.0s			pmax		pmax		
KIRV	**Kirov**	**36.35**	**346**	*ce*P		**P**	**23 28 08.5**	**+1.7**
OBN	**Obninsk**	**37.71**	**333**	*i*P		**P**	**23 28 18.9**	**+0.5**
OBN				*i* *SP		**sP**	**23 28 24.5**	**+2.3**
OBN				*e*S		S	23 33 59.1	-9.3
OBN				SSS		SSS	23 37 21.0	
OBN	comp=Z,10.0nm,1.0s			pmax		pmax		
AK09	**Malin Array Si**	**38.58**	**323**	P		**P**	**23 28 26.9**	**+1.1**
AK10	**Malin Array Si**	**38.59**	**323**	P		**P**	**23 28 27.0**	**+1.1**
AKASG	**Malin Array Be**	**38.65**	**323**	P		**P**	**23 28 26.8**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=119,slow=7.1,SNR=9.7 comp=Z,2.1nm,0.6s								
AKASG	**Malin Array Be**	**38.65**	**323**	*ce*P		**P**	**23 28 27.2**	**+0.7**
AKASG	comp=Z,3.0nm,0.8s			pmax		pmax		
AKBB	**Malin Array Si**	**38.65**	**323**	P		**P**	**23 28 25.9**	**-0.6**
AKBB	comp=Z,6.0nm,0.8s			IAmb		IAmb	23 28 38.5	
AKBB	**Malin Array Si**	**38.65**	**323**	*ce*P		**P**	**23 28 27.1**	**+0.6**
AKBB	comp=Z,6.0nm,1.0s			pmax		pmax		
AKBB	**Malin Array Si**	**38.65**	**323**	P		**P**	**23 28 26.9**	**+0.4**
KIEV	**Kiev**	**38.66**	**323**			**P**	**23 28 27.4**	**+0.9**
KIEV	**Kiev**	**38.66**	**323**	P		**P**	**23 28 27.4**	**+0.9**
KIEV	**Kiev**	**38.66**	**323**	P		**P**	**23 28 27.6**	**+1.1**
AK17	**Malin Array Si**	**38.74**	**323**	P		**P**	**23 28 28.1**	**+0.9**
SRS	**Serrai**	**38.86**	**306**	P		**P**	**23 28 29.8**	**+1.4**
LUBAR	**Lubar, Ukraine**	**39.11**	**321**	P		**P**	**23 28 31.7**	**+1.4**
ARR	**Arges**	**39.28**	**313**	P		**P**	**23 28 33.7**	**+1.8**
KMPD	**K-Podol'skiy**	**39.29**	**318**	P		**P**	**23 28 32.8**	**+1.0**
BURAB	**Bucovina Array**	**39.68**	**317**	P		**P**	**23 28 35.1**	**-0.2**
BUR08	**Bucovina Ar. S**	**39.70**	**317**	P		**P**	**23 28 34.6**	**-0.8**
SONM	**Songino Array**	**39.97**	**43**	P		**P**	**23 28 39.6**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=242,slow=8.3,SNR=6.7 comp=Z,1.1nm,0.7s								
SONM	**Songino Array**	**39.97**	**43**	P		**P**	**23 28 38.6**	**+0.9**
TLY	**Talaya**	**40.00**	**37**	LR		LR	23 46 36.0	
KBN	comp=Z,35nm,20.2s,baz=241,slow=38 **Korca**	**40.85**	**305**	P		**P**	**23 28 46.6**	**+1.6**
KLMR	**Klimovskoe**	**40.92**	**341**	*e*P		**P**	**23 28 44.5**	**-0.6**
KLMR	comp=Z,18nm,1.4s			pmax		pmax		
VRAC	**Vranov**	**45.66**	**316**	LR		LR	23 51 47.6	
FINES	comp=Z,19nm,21.0s,baz=134,slow=40 **FINESS Array B**	**46.01**	**335**	P		**P**	**23 29 26.8**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=135,slow=8.3,SNR=31								
FINES	comp=Z,45nm,20.6s,baz=114,slow=40			LR		LR	23 51 34.1		
	comp=Z,1.4nm,0.4s								
FINES	**FINESS Array B**	**46.01**	**335**	P		**P**	**23 29 25.8**	**-0.4**
INTR	**Introdacqua**	**46.18**	**306**	P		**P**	**23 29 27.1**	**-0.8**
INTR	comp=Z,7.1nm,1.4s			IAmb		IAmb	23 29 32.2	
NRIK	**Noril'sk**	**47.12**	**10**	P		**P**	**23 29 36.1**	**+1.3**
	comp=Z,2.0nm,0.5s,baz=186,slow=6.0,SNR=3.7 comp=Z,2.0nm,0.5s								
NRIK	**Noril'sk**	**47.12**	**10**	P		**P**	**23 29 34.3**	**-0.5**
NRIK	comp=Z,3.7nm,0.9s			IAmb		IAmb	23 29 39.1	
NRIK	**Noril'sk**	**47.12**	**10**	*i* P		**P**	**23 29 35.5**	**+0.7**
NRIK	comp=Z,4.0nm,0.9s			pmax		pmax		
GERES	**GERESS Array B**	**47.40**	**315**	P		**P**	**23 29 38.0**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=112,slow=5.9,SNR=4.3 comp=Z,0.6nm,0.7s								
GERES	**GERESS Array B**	**47.40**	**315**	P		**P**	**23 29 34.8**	**-2.7**
GERES	**GERESS Array B**	**47.40**	**315**	P		**P**	**23 29 34.8**	**-2.7**
ABTA	**Abfaltersbach**	**47.80**	**312**	*i* P		**P**	**23 29 40.6**	**0.0**
LESA	comp=Z,4.1nm,0.9s **Schwarzleotal**	**47.80**	**313**	*i* P		**P**	**23 29 40.8**	**+0.3**
MOTA	comp=Z,1.6nm,0.5s **Moosalm**	**48.84**	**313**	*e*P		**P**	**23 29 48.3**	**-0.3**
FETA	comp=Z,2.3nm,0.7s **Feichten**	**49.05**	**312**	*i* P		**P**	**23 29 50.5**	**+0.3**
RETA	comp=Z,5.6nm,1.3s **Reutte**	**49.09**	**313**	*i* P		**P**	**23 29 50.1**	**-0.4**
DAVA	comp=Z,1.5nm,0.5s **Damuels**	**49.66**	**312**	*e*P		**P**	**23 29 54.8**	**-0.2**
DAVA	comp=Z,7.5nm,0.9s **Damuels**	**49.66**	**312**	P		**P**	**23 29 54.7**	**-0.3**
HFS	**Hagfors**	**50.70**	**329**	P		**P**	**23 30 02.9**	**+0.5**
ARCES	comp=Z,3.5nm,0.7s,baz=117,slow=8.8,SNR=8.0 comp=Z,3.5nm,0.7s **ARCESS Array B**	**51.27**	**343**	P		**P**	**23 30 06.9**	**+0.3**
	comp=Z,3.7nm,0.7s,baz=149,slow=7.6,SNR=13 comp=Z,3.7nm,0.7s								
BNI	**Bardonecchia**	**51.66**	**309**	P		**P**	**23 30 08.8**	**-1.3**
BNI	comp=Z,9.8nm,1.4s			IAmb		IAmb	23 30 38.9	
BNI	**Bardonecchia**	**51.66**	**309**	P		**P**	**23 30 08.8**	**-1.3**
BNI	comp=Z,10.0nm,1.4s			pmax		pmax		
NC602	**NORSAR Array S**	**51.91**	**330**	P		**P**	**23 30 11.0**	**-0.6**
NB2	**NORSAR Subarra**	**52.17**	**330**	P		**P**	**23 30 13.1**	**-0.4**
NOA	comp=Z,1.6nm,0.7s,baz=109,slow=7.4 **NORSAR Array B**	**52.17**	**330**	P		**P**	**23 30 13.4**	**0.0**
	comp=Z,1.6nm,0.7s,baz=110,slow=7.3,SNR=7.1 comp=Z,1.6nm,0.7s								
NBO00	**NORSAR Array S**	**52.37**	**330**	P		**P**	**23 30 14.6**	**-0.3**
KSRS	**Korea Array**	**54.26**	**60**	LR		LR	23 55 39.6	
CORI	comp=Z,29nm,18.4s,baz=270,slow=38 **Orista**	**55.00**	**305**	P		**P**	**23 30 34.1**	**-0.5**
KLR	**Kul'dur**	**56.69**	**46**	*ce*P		**P**	**23 30 48.5**	**+2.0**
KLR	comp=Z,2.0nm,2.5s			pmax		pmax		
EKA	**Eskdalemuir Ar**	**58.54**	**321**	P		**P**	**23 30 59.0**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=95,slow=7.4,SNR=1.5 comp=Z,0.3nm,0.5s								
EKA	**Eskdalemuir Ar**	**58.54**	**321**	P		**P**	**23 30 59.0**	**-0.4**
SPITS	**Spitsbergen Ar**	**58.66**	**349**	P		**P**	**23 31 01.0**	**+1.1**
	comp=Z,19nm,1.0s,baz=134,slow=12,SNR=3.6 comp=Z,19nm,1.0s								
TIXI	**Tiksi**	**58.97**	**19**	LR		LR	23 59 33.8	
ESDC	comp=Z,38nm,19.0s,baz=322,slow=39 **Sonseca Array**	**59.74**	**303**	P		**P**	**23 31 07.3**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=73,slow=6.2,SNR=5.7 comp=Z,0.4nm,0.6s								
KBS	**Kingsbay**	**59.81**	**350**	P		**P**	**23 31 08.1**	**+0.3**
KBS	**Kingsbay**	**59.81**	**350**	P		**P**	**23 31 08.1**	**+0.3**
KBS	comp=Z,28nm,1.1s			pmax		pmax		
PAB	**San Pablo**	**60.05**	**303**	P		**P**	**23 31 09.4**	**-0.9**
PAB	comp=Z,8.1nm,1.4s			IAmb		IAmb	23 31 29.3	
PAB	**San Pablo**	**60.05**	**303**	P		**P**	**23 31 09.4**	**-0.9**
PAB	comp=Z,8.0nm,1.5s			pmax		pmax		
TORD	**Torodi Ar. Bea**	**61.14**	**272**	P		**P**	**23 31 17.5**	**-0.4**
	comp=Z,5.0nm,0.6s,baz=71,slow=6.1,SNR=34 comp=Z,5.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**61.14**	**272**	P		**P**	**23 31 16.1**	**-1.8**
MD01	**Midelt array s**	**61.50**	**296**	P		**P**	**23 31 18.6**	**-1.8**
MD31	**MD31**	**61.50**	**296**	P		**P**	**23 31 18.4**	**-1.8**
MD31	comp=Z,3.4nm,0.9s			IAmb		IAmb	23 31 31.0	
LBTB	**Lobatse**	**62.35**	**221**	P		**P**	**23 31 25.0**	**-1.0**
LBTB	**Lobatse**	**62.35**	**221**	P		**P**	**23 31 25.0**	**-1.0**
LBTB	comp=Z,7.0nm,1.0s			pmax		pmax		
MAKGR	**Makgori**	**63.42**	**221**	P		**P**	**23 31 32.3**	**-0.8**
TSUM	**Tsumeb**	**63.61**	**232**	P		**P**	**23 31 33.7**	**-0.7**
BORG	**Borgarnes**	**67.21**	**332**	LR		LR	00 03 07.9	
H04N1	comp=Z,21nm,19.1s,baz=350,slow=38 **CROZET ISLANDS**	**71.04**	**190**	T		T	00 49 43.3	
H04N2	baz=11,slow=74,SNR=4.7 **CROZET ISLANDS**	**71.04**	**190**	T		T	00 49 42.3	
H04N3	baz=11,slow=74,SNR=5.3 **CROZET ISLANDS**	**71.06**	**190

ZALV	**Zalesovo Beam**	**46.84**	**333**	P		**P**	**23 33 43.3**	**-1.3**
	0.3nm,0.4s,baz=120,slow=8.5,SNR=2.3							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**47.95**	**326**	P		**P**	**23 33 52.9**	**-0.4**
	0.7nm,0.9s,baz=120,slow=10,SNR=5.2							
	0.7nm,0.9s							
PETK	**Petropavlovsk-**	**48.06**	**30**	P		**P**	**23 33 52.0**	**-2.3**
	1.4nm,0.4s,baz=230,slow=8.7,SNR=2.7							
	1.4nm,0.4s							
FINES	**FINESS Array B**	**78.05**	**331**	P		**P**	**23 37 12.4**	**-0.8**
	1.4nm,0.7s,baz=35,slow=5.1,SNR=4.8							
	1.4nm,0.7s							

TAP ***02*** *23:37:32.8, 24.2″4N × 122.2″52E, h14 km, ML2.9, C*
JMA ***02*** *23:37:32.0±0.3, 24′N±1.1″ × 122′16E±0.7, h7 km±4 km, MV2.5/11, NW OFF ISHIGAKIJIMA IS*

ISC 02 23:37:32.5±0.9, 24°16N±0.03 × 122°55E±0.02, h17 km±7 km, n66, σ0.86/109, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.21**	**261**	P			**Pb**	**23 37 37.6**	**-0.1**
EOS4					*e*S		**Sg**	**23 37 41.2**	**+0.9**
EOS3	**EOS3**	**0.24**	**302**	*i* P			**Pb**	**23 37 38.4**	**0.0**
EOS3				S			**Sg**	**23 37 42.8**	**+1.2**
EOS2	**EOS2**	**0.39**	**313**	*i* P			**Pb**	**23 37 41.2**	**+0.4**
EOS2				S			**Sb**	**23 37 47.8**	**+1.3**
JYNG	**Yonagunijimaku**	**0.47**	**51**	P			**Pg**	**23 37 41.7**	**-0.2**
JYNG				S			**Sb**	**23 37 48.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.52**	**54**	*e*P			**Pg**	**23 37 43.0**	**0.0**
YOJ				S			**Sg**	**23 37 50.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.52**	**54**	*e*P			**Pg**	**23 37 42.9**	**0.0**
YOJ				*e*S			**Sb**	**23 37 50.9**	**+0.4**
EWUT	**Wuta**	**0.76**	**293**	P			**Pg**	**23 37 46.9**	**-0.4**
EWUT				S			**Sg**	**23 37 57.1**	**-0.3**
ESAO	**Su ao**	**0.76**	**303**	*e*P			**Pg**	**23 37 46.9**	**-0.5**
ESAO				*e*S			**Sg**	**23 37 56.8**	**-0.8**
TWC	**Suao**	**0.78**	**306**	*e*P			**Pg**	**23 37 46.5**	**-1.2**
TWC				*i* S			**Sg**	**23 37 56.4**	**-1.6**
NACB	**Ninganchiao**	**0.87**	**271**	*e*P			**Pb**	**23 37 49.4**	**+0.3**
NACB				*e*S			**Sb**	**23 38 02.2**	**+1.7**
TWD	**Chiawan**	**0.87**	**265**	*e*P			**Pb**	**23 37 49.5**	**+0.4**
EGS		**0.89**	**321**	*e*P			**Pg**	**23 37 48.2**	**-1.5**
NDS	**Dongshan**	**0.89**	**302**	*e*P			**Pg**	**23 37 46.7**	**-3.2**
TEYL	**Yanliau Villag**	**0.91**	**252**	*e*P			**Pg**	**23 37 49.5**	**-0.7**
TEYL				*e*S			**Sn**	**23 38 04.0**	**+0.7**
SHUL	**Shoufeng**	**0.97**	**248**	P			**Pg**	**23 37 50.5**	**-0.8**
SHUL				S			**Sn**	**23 38 05.1**	**+0.4**
ETLH	**Xiulin Townshi**	**0.97**	**273**	*e*P			**Pb**	**23 37 51.2**	**+0.3**
ETLH				*e*S			**Sn**	**23 38 05.2**	**+0.3**
ETM	**Tongmen**	**0.98**	**259**	P			**Pg**	**23 37 50.0**	**-1.5**
ETM				S			**Sb**	**23 38 05.0**	**+1.3**
LATG	**Datong**	**1.00**	**292**	*i* P			**Pg**	**23 37 51.5**	**-0.5**
LATG				S			**Sg**	**23 38 04.4**	**-0.8**
ENTT	**Nioudou**	**1.01**	**299**	*e*P			**Pg**	**23 37 51.5**	**-0.6**
ENTT				*e*S			**Sg**	**23 38 03.9**	**-1.6**
TEGC	**Jichi Village**	**1.02**	**244**	*e*P			**Pn**	**23 37 52.6**	**+0.6**
NDT	**Datong Townshi**	**1.04**	**296**	*i* P			**Pb**	**23 37 52.4**	**+0.3**
NDT				*i* S			**Sg**	**23 38 05.1**	**-1.3**
LXIB	**Xiulin Townshi**	**1.04**	**263**	*e*P			**Pg**	**23 37 52.0**	**-0.7**
TIPB	**Shuangxi**	**1.04**	**321**	*e*P			**Pb**	**23 37 52.6**	**+0.5**
TIPB				*e*S			**Sg**	**23 38 05.5**	**-0.9**
FUSB	**Fushanzhiwuyua**	**1.06**	**305**	*i* P			**Pb**	**23 37 52.9**	**+0.4**
FUSB				*e*S			**Sb**	**23 38 06.7**	**+0.6**
NNSB	**Datong**	**1.09**	**285**	*e*P			**Pb**	**23 37 53.4**	**+0.3**
NNSB				S			**Sb**	**23 38 07.9**	**+0.8**
IRIF	**Iriomote-Funau**	**1.10**	**80**	P			**Pb**	**23 37 53.3**	**+0.3**
IRIF				*e*S			**Sg**	**23 38 07.4**	**-0.7**
NNS	**Nan Shan**	**1.11**	**285**	*e*P			**Pg**	**23 37 53.3**	**-0.6**
NNS				S			**Sg**	**23 38 07.4**	**-1.0**
SXI1	**Grass Mountain**	**1.12**	**327**	*e*P			**Pb**	**23 37 53.0**	**-0.4**
NWLT	**Wulai**	**1.13**	**303**	P			**Pg**	**23 37 54.0**	**-0.4**
NWLT				*i* S			**Sb**	**23 38 08.0**	**-0.1**
WARBT	**Fenglin Townsh**	**1.15**	**248**	P			**Pb**	**23 37 52.7**	**-1.1**
WARBT				S			**Sb**	**23 38 08.3**	**-0.2**
WHF	**Hehuan Shan**	**1.17**	**270**	*e*P			**Pg**	**23 37 54.2**	**-1.0**
YHNB	**Yeheng**	**1.18**	**296**	P			**Pn**	**23 37 54.9**	**+0.6**
YHNB				S			**Sb**	**23 38 09.9**	**+0.3**
FUSS	**Fushou**	**1.19**	**275**	*e*P			**Pb**	**23 37 55.0**	**+0.2**
TWT	**Tachien**	**1.25**	**275**	*e*P			**Pn**	**23 37 55.7**	**+0.2**
TWT				*e*S			**Sn**	**23 38 12.9**	**+0.9**
OWD	**Renai**	**1.27**	**261**	*e*P			**Pn**	**23 37 55.4**	**-0.2**
OWD				*e*S			**Sb**	**23 38 11.3**	**-0.8**
TDCB	**Techi**	**1.27**	**275**	*e*P			**Pn**	**23 37 56.2**	**+0.6**
EHYH	**Wanrong**	**1.28**	**239**	*e*P			**Pn**	**23 37 55.2**	**-0.4**
EHYH				S			**Sb**	**23 38 12.5**	**+0.2**
EHY	**Hungye**	**1.29**	**240**	*e*P			**Pn**	**23 37 55.3**	**-0.5**
WUSB	**Renai**	**1.31**	**263**	*i* P			**Pn**	**23 37 56.4**	**+0.2**
WUSB				*i* S			**Sb**	**23 38 14.3**	**+0.8**
YM01	**YM01**	**1.33**	**318**	*e*P			**Pg**	**23 37 58.0**	**-0.2**
YM01				*e*S			**Sb**	**23 38 13.2**	**-0.6**
JKRS	**Kuro-shima**	**1.34**	**86**	*e*P			**Pn**	**23 37 57.2**	**+0.8**
JKRS				*e*S			**Sn**	**23 38 15.3**	**+1.5**
YM08	**YM08**	**1.35**	**320**	*e*P			**Pb**	**23 37 57.6**	**+0.3**
ZUZH	**Zhuzihu**	**1.35**	**318**	*e*P			**Pb**	**23 37 57.6**	**+0.1**
YULB	**Yu-li**	**1.37**	**237**	*e*P			**Pn**	**23 37 56.3**	**-0.6**
YULB				*e*S			**Sb**	**23 38 14.7**	**-0.3**
EYUL	**Yuli**	**1.38**	**235**	*e*P			**Pn**	**23 37 56.3**	**-0.7**
NFF	**Wufeng Townshi**	**1.39**	**290**	P			**Pg**	**23 37 58.9**	**-0.3**
NFF				S			**Sb**	**23 38 15.8**	**+0.4**
KSHI	**Guanxi Townshi**	**1.39**	**297**	*e*P			**Pg**	**23 37 59.5**	**+0.2**
TWF1	**Yuli**	**1.40**	**235**	*e*P			**Pn**	**23 37 56.3**	**-0.9**
WHP	**Taichung City**	**1.47**	**275**	*e*P			**Pb**	**23 37 59.7**	**+0.4**
WHP				*e*S			**Sg**	**23 38 20.3**	**+0.5**
JJ	**Ishigaki jima**	**1.47**	**82**	*e*P			**Pn**	**23 37 58.2**	**0.0**
JJ				*e*S			**Sn**	**23 38 17.0**	**-0.2**
LIOB	**Emei**	**1.48**	**290**	*e*P			**Pb**	**23 37 59.9**	**+0.3**
FULB	**Fuli**	**1.49**	**231**	*e*P			**Pn**	**23 37 58.2**	**-0.3**
WCS	**Beigang Elemen**	**1.50**	**267**	*e*P			**Pn**	**23 37 59.1**	**+0.5**
WCS				*e*S			**Sn**	**23 38 17.0**	**-0.7**
SSLB	**Suanglung**	**1.50**	**256**	*e*P			**Pn**	**23 37 58.7**	**0.0**
SMLT	**Sun Moon Lake**	**1.53**	**260**	*e*P			**Pn**	**23 37 59.7**	**+0.6**
SMLT				*e*S			**Sg**	**23 38 21.2**	**-0.7**
TYC	**Yuchr**	**1.56**	**261**	*e*P			**Pn**	**23 38 00.1**	**+0.6**
EDH	**Donghe**	**1.64**	**224**	P			**Pn**	**23 37 59.9**	**-0.7**
JISG	**Ishigakijimahi**	**1.67**	**75**	*e*P			**Pn**	**23 37 59.5**	**-1.4**
JISG				*e*S			**Sn**	**23 38 21.1**	**-0.8**
ALS	**Alishan**	**1.72**	**248**	*e*P			**Pn**	**23 38 02.5**	**+0.6**
ALS				*e*S			**Sn**	**23 38 24.3**	**+0.7**
WNT	**Mingjian**	**1.72**	**261**	*e*P			**Pb**	**23 38 03.4**	**-0.3**
CHN5	**Tsauling**	**1.80**	**252**	*e*P			**Pn**	**23 38 04.5**	**+1.7**
CHN5				*e*S			**Sb**	**23 38 27.7**	**+0.4**
STYH	**Taoyuan**	**1.90**	**239**	*e*P			**Pn**	**23 38 03.4**	**-0.6**
WCKO	**Fanlu**	**1.92**	**249**	*e*P			**Pn**	**23 38 05.9**	**+1.5**
WCKO				*e*S			**Sb**	**23 38 31.8**	**+1.2**
WTP	**Ta-pu**	**1.99**	**243**	*e*P			**Pn**	**23 38 07.0**	**+1.6**
TWK	**Hsinying**	**2.08**	**245**	P			**Pn**	**23 38 08.6**	**+1.9**
TWK				*e*S			**Sb**	**23 38 36.8**	**+1.3**
CHN1	**Nanshi**	**2.09**	**243**	*e*P			**Pn**	**23 38 08.7**	**+2.0**
CHN1				S			**Sb**	**23 38 36.0**	**+0.4**

IDC ***02*** *23:47:14.5±1.1, 1.″68S × 100.″64E, h0 km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=58.9km s-min=17.4km az=57.0*
NEIC ***02*** *23:47:17.1±1.7, 1.″28S±0.″03 × 100.″92E±0.″09, h10 km±1 km, mb4.0/12, Error ellipse: s-maj=16.4km s-min=3.5km az=255.0*
DJA ***02*** *23:47:20.8±0.5, 2°S±2°× 10°0E±°, h18 km±4 km, M4.0/24, mB7.3/1, MLv4.0/24, Mw(mB)7.3/1*

ISC 02 23:47:19.8±0.6, 1°88S±0.″08 × 100°37E±0.″07, h35 km, n49, σ1.2/72/39, mb4.0/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.95**	**202**	P			**Pn**	**23 47 39.6**	**+3.0**
PDSI	**Padang**	**0.97**	**5**	P			**Pn**	**23 47 37.8**	**+0.9**
PPI	**Padang Panjang**	**1.41**	**1**	P			**Pn**	**23 47 44.8**	**+1.8**
MASI	**Maura Aman, Be**	**2.25**	**124**	P			**Pn**	**23 47 57.1**	**+2.5**
BKNI	**Bangkinang**	**2.29**	**17**	Pn			**Pn**	23 47 45.9	-9.2
BKNI				Sn			Sn	23 48 05.5	-17
BKNI	**Bangkinang**	**2.29**	**17**	P			**Pn**	**23 47 57.6**	**+2.5**
PBSI	**Pulau Batu**	**2.77**	**311**	P			**Pn**	**23 48 04.2**	**+2.5**
MNSI	**Mandailing Nat**	**2.77**	**343**	P			**Pn**	**23 48 05.2**	**+3.5**
MNAI	**Manna**	**3.57**	**134**	Pn			**Pn**	**23 48 15.2**	**+2.5**
MNAI				Sn			**Sn**	**23 48 55.2**	**+1.5**
GSI	**Gunungsitoli**	**4.22**	**319**	Pn			**Pn**	**23 48 21.3**	**-0.4**
MYKOM	**Kota Tinggi**	**5.04**	**44**	Pn			Pn	23 48 23.2	-10
KULM	**Kulim**	**7.13**	**2**	Pn			Pn	23 48 52.5	-9.2

BBJI	**Bungbulang**	**9.13**	**128**	Pn			**Pn**	**23 49 27.2**	**-2.0**
H08S2	**Diego Garcia H**	**28.35**	**257**	T		T		00 22 16.0
	baz=81,slow=75,SNR=5.2							
H08S3	**Diego Garcia H**	**28.36**	**257**	T		T		00 22 15.4
	baz=81,slow=75,SNR=18							
H08S1	**Diego Garcia H**	**28.37**	**257**	T		T		00 22 15.4
	baz=81,slow=75,SNR=6.0							
FITZ	**Fitzroy Crossi**	**29.57**	**125**	P		**P**		**23 53 20.3**	**-1.3**
WB0	**Warramunga Arr**	**37.71**	**121**	P		**P**		**23 54 30.3**	**-2.1**
WB0				IAmb		IAmb		23 54 31.0
	comp=Z,0.9nm,0.4s							
WRA	**Warramunga Arr**	**37.73**	**121**	P		**P**		**23 54 31.1**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=301,slow=9.2,SNR=5.6							
	comp=Z,0.3nm,0.5s							
WR8	**Warramunga Arr**	**37.88**	**121**	P		**P**		**23 54 31.4**	**-2.4**
ASAR	**Alice Springs**	**39.02**	**126**	P		**P**		**23 54 42.7**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=302,slow=7.8,SNR=17							
ASAR				PcP		PcP		**23 56 50.8**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=291,slow=3.0,SNR=2.0							
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**39.02**	**126**	P		**P**		**23 54 42.4**	**-1.0**
CTAO	**Charters Tower**	**48.31**	**115**	P		**P**		**23 55 58.8**	**+0.6**
CTAO				IAmb		IAmb		23 56 16.1
	comp=Z,0.9nm,0.7s							
KDJ	**Kajisay**	**48.58**	**337**	P		**P**		**23 55 59.3**	**-0.8**
BOOM	**Boomskoye usch**	**49.37**	**336**	P		**P**		**23 56 06.0**	**-0.2**
BOOM				IAmb		IAmb		23 56 24.2
	comp=Z,0.9nm,0.7s							
SONM	**Songino Array**	**49.79**	**5**	P		**P**		**23 56 08.6**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=192,slow=8.1,SNR=2.0							
	comp=Z,0.6nm,0.4s							
MKAR	**Makanchi Array**	**51.02**	**344**	P		**P**		**23 56 17.9**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=148,slow=8.0,SNR=16							
	comp=Z,1.9nm,0.6s							
MKAR	**Makanchi Array**	**51.02**	**344**	P		**P**		**23 56 17.3**	**-1.1**
KURBB	**Kurchatov Arra**	**55.54**	**343**	P		**P**		**23 56 50.6**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=177,slow=6.7,SNR=12							
	comp=Z,1.1nm,0.7s							
KURK	**Kurchatov**	**55.60**	**343**	P		**P**		**23 56 50.2**	**-1.7**
KURK				IAmb		IAmb		23 56 51.8
	comp=Z,1.7nm,0.7s							
ZAA0	**Zalesovo Array**	**57.12**	**349**	P		**P**		**23 57 01.0**	**-1.7**
ZALV	**Zalesovo Beam**	**57.12**	**349**	P		**P**		**23 57 01.6**	**-1.1**
	comp=Z,3.0nm,0.7s,baz=160,slow=4.7,SNR=14							
	comp=Z,3.0nm,0.7s							
ZALV	**Zalesovo Beam**	**57.12**	**349**	P		**P**		**23 57 01.4**	**-1.2**
BVAR	**Borovoye Array**	**60.20**	**340**	P		**P**		**23 57 23.0**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=163,slow=6.0,SNR=1.6							
	comp=Z,0.4nm,0.4s							
H04N2	**CROZET ISLANDS**	**61.10**	**217**	T		T		01 03 07.2
	baz=58,slow=75,SNR=35							
H04N1	**CROZET ISLANDS**	**61.12**	**217**	T		T		01 03 07.5
	baz=58,slow=75,SNR=34							
H04N3	**CROZET ISLANDS**	**61.13**	**217**	T		T		01 03 07.2
	baz=58,slow=75,SNR=39							
H04S1	**CROZET ISLANDS**	**61.40**	**216**	T		T		01 03 32.2
	baz=58,slow=75,SNR=10.0							
H04S3	**CROZET ISLANDS**	**61.41**	**216**	T		T		01 03 23.0
	baz=58,slow=75,SNR=30							
H04S2	**CROZET ISLANDS**	**61.42**	**216**	T		T		01 03 27.0
	baz=58,slow=75,SNR=12							
AB31	**Akbulak array**	**61.72**	**331**	P		**P**		**23 57 33.2**	**-1.3**
AB31				IAmb		IAmb		23 57 34.0
	comp=Z,1.4nm,0.6s							
ABKAR	**Akbulak array**	**61.72**	**331**	P		**P**		**23 57 33.0**	**-1.6**
KBZ	**Khabaz**	**68.46**	**319**	P		**P**		**23 58 18.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=72,slow=3.2,SNR=3.6							
	comp=Z,0.9nm,0.7s							
CY604	**RAF Akrotiri,**	**71.34**	**307**	P		**P**		**23 58 36.3**	**+0.3**
MLZ	**Mavora Lakes**	**73.15**	**137**	P		**P**		**23 58 48.0**	**+1.0**
BURAR	**Bucovina Array**	**81.42**	**319**	P		**P**		**23 59 33.3**	**0.0**
BUR08	**Bucovina Ar. S**	**81.43**	**319**	P		**P**		**23 59 33.3**	**-0.2**
BUR08				IAmb		IAmb		23 59 48.4
	comp=Z,1.8nm,1.1s							
QSPA	**South Pole Qui**	**88.08**	**180**	P		**P**		**00 00 09.6**	**+3.0**
	comp=Z,0.7nm,0.9s,baz=288,slow=3.2,SNR=2.4							
	comp=Z,0.7nm,0.9s							
TXAR	**Lajitas Array**	**144.38**	**38**	PKP		**PKPab**		**00 06 51.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=332,slow=1.7,SNR=5.2							

IDC ***03*** *00:04:53.8±7.4, 36.″45N × 71.″16E, h150 km±65 km, mb3.2/2, mbtmp3.8/8, MS3.4/1, Error ellipse: s-maj=58.7km s-min=41.1km az=47.0*
NNC ***03*** *00:04:53.8±9.6, 37.″03N × 70.″14E, h0 km, mb4.0, mpv3.9, Error ellipse: s-maj=75.8km s-min=58.4km az=179.0*

ISC 03 00:04:54.2±1.4, 36°64N±0.″10 × 70°6E±0.″1, h150 km, n21, σ2.2/16/25, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.34**	**27**	P			**Pn**	**00 06 25.6**	**-0.1**
	SNR=41								
KK31	**Karatay Array**	**6.46**	**359**	⇓P			**Pn**	**00 06 25.6**	**-1.4**
	7.4nm,0.3s,baz=182,slow=13,SNR=88								
KK31				⇑S			**Sn**	**00 07 36.6**	**-3.0**
	7.9nm,0.2s,baz=188,slow=25								
EKS2	**Erkin-Say**	**6.49**	**21**	P			**Pn**	**00 06 28.2**	**+0.8**
	SNR=18								
AAK	**Ala-Archa**	**6.69**	**25**	P			**Pn**	**00 06 30.6**	**+0.5**
	15nm,0.3s,baz=197,slow=8.2,SNR=14								
AAK				S			**Sn**	**00 07 44.6**	**-0.8**
	15nm,0.4s,baz=41,slow=18,SNR=18								
AAK	**Ala-Archa**	**6.69**	**25**	P			**Pn**	**00 06 30.8**	**+0.7**
	SNR=17								
AAK	**Ala-Archa**	**6.69**	**25**	⇓P			**Pn**	**00 06 30.9**	**+0.7**
	1.8nm,0.3s								
AAK				⇓S			**Sn**	**00 07 46.0**	**+0.6**
	13nm,0.6s								
KBK	**Karagaybulak**	**6.87**	**28**	P			**Pn**	**00 06 32.6**	**0.0**
	SNR=8.2								
CHMS	**Chumysh**	**7.10**	**25**	P			**Pn**	**00 06 35.8**	**+0.3**
	SNR=12								
USP	**Ospenovka**	**7.25**	**23**	P			**Pn**	**00 06 38.5**	**+0.9**
	SNR=11								
TKM2	**Tokmak 2**	**7.34**	**30**	P			**Pn**	**00 06 38.8**	**-0.1**
	SNR=17								
MK31	**Makanchi Array**	**13.35**	**37**	P			**P**	**00 08 03.6**	**+1.6**
	2.2nm,1.1s,baz=206,slow=9.5,SNR=6.6								
MKAR	**Makanchi Array**	**13.35**	**37**	P			**Pn**	**00 07 57.0**	**-0.7**
	0.6nm,0.6s,baz=215,slow=14,SNR=4.2								
AB31	**Akbulak array**	**14.83**	**332**	P			**Pn**	**00 08 17.8**	**+1.5**
	0.3nm,0.3s,baz=141,slow=12,SNR=28								
AB31				S			**Sn**	**00 10 59.0**	**-1.7**
	1.4nm,0.5s,baz=150,slow=21,SNR=6.8								
KURBB	**Kurchatov Arra**	**15.09**	**20**	P			**Pn**	**00 08 17.9**	**-1.6**
	0.6nm,0.7s,baz=209,slow=12,SNR=6.6								
BVA0	**Borovoye Array**	**16.39**	**359**	P			**Pn**	**00 08 40.2**	**+4.8**
	baz=126,slow=9.4,SNR=6.9								
BVAR	**Borovoye Array**	**16.39**	**359**	P			**Pn**	**00 08 37.6**	**+2.1**
	1.1nm,0.4s,baz=163,slow=9.4,SNR=9.0								
BVAR				S			**S**	**00 11 32.3**	**-5.0**
	1.2nm,0.6s,baz=164,slow=22,SNR=5.8								
AKTO	**Aktyubinsk**	**16.52**	**331**	P			**P**	**00 08 40.1**	**+3.2**
	1.5nm,0.6s,baz=148,slow=9.5,SNR=5.2								
AKTO				S			S	00 11 37.8	-2.6
	1.3nm,0.6s,baz=41,slow=20,SNR=3.0								
ZALV	**Zalesovo Beam**	**19.91**	**25**	P			**P**	**00 09 14.2**	**+0.3**
	2.3nm,0.4s,baz=216,slow=10.0,SNR=12								
MA2	**Magadan**	**54.43**	**38**	LR			LR	00 37 08.4	
	comp=Z,32nm,18.9s,baz=283,slow=36								
WRA	**Warramunga Arr**	**82.31**	**122**	P			**P**	**00 16 56.4**	**-2.8**
	0.4nm,0.5s,baz=319,slow=5.2,SNR=2.3								
	0.4nm,0.5s								
ASAR	**Alice Springs**	**84.57**	**125**	P			**P**	**00 17 08.0**	**-2.7**
	0.3nm,0.6s,baz=314,slow=4.8,SNR=5.6								
	0.3nm,0.6s								

SJA ***03*** *00:07:37.7±0.9, 18.″44S × 71.″43W, h22 km±5 km, ML3.7, MW4.0*
GUC ***03*** *00:07:44.8±0.8, 18.″58S × 71.″03W, h35 km±2 km, ML3.6*
IDC ***03*** *00:07:51.7±4.4, 18.″65S × 70.″80W, h86 km±34 km, mb3.5/3, mbtmp3.7/5, MS3.0/1, Error ellipse: s-maj=64.1km s-min=25.0km az=120.0*

ISC 03 00:07:44.9±2.1, 18°60S±0.″05 × 71°03W±0.″09, h28 km±13 km, n21, σ1.9/71/33, 3C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.67**	**91**	*e*P			**Pn**	**00 07 57.5**	**-1.1**
PB12				IAML				00 08 23.0	
	comp=Z,1μm,0.7s								
PB12	**IPOC Station P**	**0.67**	**91**	⇓*i*P			**Pn**	**00 07 57.8**	**-0.8**
PB12				*e*S			**Sn**	**00 08 07.1**	**-1.1**
AP01	**Chacalluta**	**0.69**	**71**	*e*P			**Pn**	**00 07 58.1**	**-0.7**
AP01				*e*S			**Sn**	**00 08 07.0**	**-1.7**
AP01				IAML				00 08 12.2	
	comp=Z,2μm,0.4s								
AP01				IAML				00 08 22.7	
	comp=Z,2μm,0.4s								
AP01	**Chacalluta**	**0.69**	**71**	*e*P			**Pn**	**00 07 58.2**	**-0.7**
AP01				*e*S			**Sn**	**00 08 07.0**	**-1.7**
AP01				IAML				00 08 12.2	
	comp=E,3μm,0.6s								
PX02	**IPOC Station P**	**0.86**	**115**	*e*P			**Pn**	**00 08 01.1**	**-0.3**
PX02				*e*S			**Sb**	**00 08 13.0**	**+0.3**
PB16	**IPOC Station P**	**1.47**	**80**	*e*P			**Pn**	**00 08 10.4**	**+0.3**
PB16				*e*S			**Sb**	**00 08 35.0**	**+4.5**
PB16				IAML				00 08 37.0	
	comp=Z,732nm,0.6s								
PB16	**IPOC Station P**	**1.47**	**80**	⇓*i*P			**Pb**	**00 08 10.8**	**-1.2**
PB16				*e*S			**Sb**	**00 08 30.1**	**-0.3**
PB11	**IPOC Station P**	**1.73**	**132**	*e*P			**Pn**	**00 08 14.4**	**+1.0**
PB11				IAML				00 08 47.1	
	comp=Z,595nm,0.4s								
PB11	**IPOC Station P**	**1.73**	**132**	⇑*i*P			**Pb**	**00 08 14.7**	**-1.5**
PB11				*e*S			**Sb**	**00 08 37.4**	**-0.3**
PB11				IAML				00 08 43.5	
	comp=N,1μm,0.5s								
PB18	**Visviri**	**1.79**	**56**	⇓*i*P			**Pb**	**00 08 17.7**	**+0.4**
PB18				*e*S			**Sb**	**00 08 41.6**	**+2.1**
TA02	**Huaiquique**	**1.86**	**153**	*e*P			**Pn**	**00 08 15.1**	**+0.1**
TA02				*e*S			**Sb**	**00 08 43.4**	**+2.2**
TA02				IAML				00 08 50.5	
	comp=Z,518nm,1.1s								
TA02				IAML				00 08 50.5	
	comp=Z,518nm,1.1s								
TA02	**Huaiquique**	**1.86**	**153**	*e*P			**Pn**	**00 08 15.5**	**+0.5**
GO01	**Chusmiza**	**2.03**	**122**	*e*P			**Pb**	**00 08 19.7**	**-1.8**
GO01				*e*S			**Sb**	**00 08 46.8**	**+0.2**
GO01				IAML				00 08 52.4	
	comp=N,922nm,0.1s								
PB08	**IPOC Station P**	**2.34**	**131**	*e*P			**Pn**	**00 08 23.3**	**+1.4**
PB08				*e*S			**Sb**	**00 08 56.7**	**+1.4**
PB08				IAML				00 09 04.7	
	comp=Z,266nm,0.7s								
PB08	**IPOC Station P**	**2.34**	**131**	⇑*i*P			**Pn**	**00 08 23.4**	**+1.5**
PB08				IAML				00 08 60.0	
	comp=E,243nm,0.5s								
PB02	**IPOC Station P**	**2.91**	**159**	⇑*i*P			**Pn**	**00 08 29.5**	**0.0**
LPAZ	**La Paz**	**3.60**	**51**	P			**Pb**	**00 08 44.9**	**-3.4**
	comp=E,9.1nm,0.6s,baz=209,slow=5.4,SNR=44								
LPAZ				S			**Sn**	**00 09 24.7**	**+3.4**
	comp=E,9.4nm,0.5s,baz=252,slow=9.6,SNR=1.5								
SIV	**

AC02					Sn		Sn	00 19 09.2	+0.3
AC02	**Maricunga**	**1.86**	**82**	*e*P			**Pn**	**00 18 47.8**	**+1.4**
AC02				*e*S			**Sn**	**00 19 10.5**	**+1.5**
AC02				IAML				00 19 12.9	
	comp=Z,4μm,0.2s								
AC02	**Maricunga**	**1.86**	**82**⇑	*e*P			**Pn**	**00 18 48.2**	**+1.8**
AC05	**El Transito**	**1.90**	**155**				**Pn**	**00 18 48.2**	**+1.6**
AC05					Sn		**Sn**	**00 19 10.1**	**+0.6**
AC05	**El Transito**	**1.90**	**155**	*e*P			**Pn**	**00 18 47.9**	**+1.3**
AC05				*e*S			**Sn**	**00 19 10.9**	**+1.5**
AC05	**El Transito**	**1.90**	**155**⇑	*e*P			**Pn**	**00 18 48.2**	**+1.6**
AC05				*e*S			**Sn**	**00 19 10.1**	**+0.6**
AC05				IAML				00 19 14.9	
	comp=N,2μm,0.3s								
LCO	**Las Campanas**	**1.94**	**167**				**Pn**	**00 18 48.4**	**+1.0**
LCO					Sn		**Sn**	**00 19 10.6**	**-0.1**
LCO	**Las Campanas**	**1.94**	**167**	*e*P			**Pn**	**00 18 48.3**	**+1.0**
LCO				*e*S			**Sn**	**00 19 12.1**	**+1.4**
LCO				IAML				00 19 19.0	
	comp=Z,2μm,0.3s								
LCO	**Las Campanas**	**1.94**	**167**	*e*P			**Pn**	**00 18 48.5**	**+1.2**
PB14	**IPOC Station P**	**2.57**	**16**				**Pn**	**00 18 57.0**	**+1.0**
PB14					Sn		**Sn**	**00 19 26.4**	**+0.1**
PB14	**IPOC Station P**	**2.57**	**16**	*e*P			**Pn**	**00 18 57.0**	**+1.0**
PB14				*e*S			**Sn**	**00 19 27.5**	**+1.2**
PB14				IAML				00 19 49.9	
	comp=Z,307nm,0.5s								
PB14	**IPOC Station P**	**2.57**	**16**	*e*P			Pn	00 19 03.9	+7.8
PB14				*e*S			Sn	00 19 36.2	+10
CO01	**Juntas del Tor**	**3.02**	**162**				**Pn**	**00 19 03.9**	**+1.8**
CO01					Sn		**Sn**	**00 19 37.6**	**+0.5**
CO01	**Juntas del Tor**	**3.02**	**162**	*e*P			**Pn**	**00 19 03.8**	**+1.6**
CO01				*e*S			**Sn**	**00 19 39.2**	**+2.1**
CO01				IAML				00 19 56.6	
	comp=Z,214nm,0.3s								
CO01	**Juntas del Tor**	**3.02**	**162**⇑	*e*P			**Pn**	**00 19 04.1**	**+2.0**
CO01				*e*S			**Sn**	**00 19 37.9**	**+0.7**
CO01				IAML				00 19 40.1	
	comp=E,310nm,0.2s								
GO04	**Tololo Observa**	**3.07**	**174**				**Pn**	**00 19 04.2**	**+1.4**
GO04					Sn		**Sn**	**00 19 39.6**	**+1.1**
GO04	**Tololo Observa**	**3.07**	**174**	*e*P			**Pn**	**00 19 04.3**	**+1.4**
GO04				IAML				00 19 44.8	
	comp=Z,498nm,0.2s								
VCA	**Vinchina**	**3.10**	**122**	*e*P			**Pn**	**00 19 05.0**	**+1.8**
VCA				*e*S			Sn	00 19 55.6	+17
VCA	**Vinchina**	**3.10**	**122**	*e*P			**Pn**	**00 19 06.8**	**+3.6**
TINO	**Tinogasta**	**3.35**	**107**	*e*P			**Pn**	**00 19 07.9**	**+1.3**
TINO				*e*S			Sn	00 19 28.2	-17
TINO				IAML				00 19 29.1	
	comp=Z,345nm,0.3s								
AROD	**Rodeo**	**3.40**	**154**	*e*P			**Pn**	**00 19 09.9**	**+2.5**
ACDV	**Cuesta del Vie**	**3.55**	**150**	*e*P			**Pn**	**00 19 11.1**	**+1.7**
PB10	**IPOC Station P**	**3.63**	**9**				**Pn**	**00 19 11.1**	**+0.8**
PB10					Sn		**Sn**	**00 19 51.1**	**-0.7**
CO03	**El Pedregal**	**3.74**	**173**				**Pn**	**00 19 13.2**	**+1.2**
CO03					Sn		**Sn**	**00 19 53.0**	**-1.8**
CO03	**El Pedregal**	**3.74**	**173**	*e*P			**Pn**	**00 19 13.5**	**+1.6**
CO03				*e*S			**Sn**	**00 19 56.7**	**+1.9**
CO02	**Combarbal**	**4.08**	**178**				**Pn**	**00 19 17.2**	**+0.5**
PB05	**IPOC Station P**	**4.33**	**12**				**Pn**	**00 19 20.0**	**-0.1**
PB06	**IPOC Station P**	**4.62**	**19**				**Pn**	**00 19 24.6**	**+0.4**
CO04	**Los Peladeros**	**4.92**	**178**				**Pn**	**00 19 28.8**	**+0.5**
ZON	**Zonda**	**4.94**	**154**				**Pn**	**00 19 29.2**	**+0.9**
PB03	**IPOC Station P**	**5.21**	**15**				**Pn**	**00 19 31.9**	**-0.2**
PB07	**IPOC Station P**	**5.49**	**13**				**Pn**	**00 19 35.8**	**-0.3**
PB09	**IPOC Station P**	**5.58**	**19**	Pn			**Pn**	**00 19 38.0**	**+0.7**
VA03	**San Esteban**	**5.66**	**175**				**Pn**	**00 19 39.3**	**+1.0**
PB02	**IPOC Station P**	**5.88**	**12**				**Pn**	**00 19 40.7**	**-0.7**
MT02	**Curacav**	**6.13**	**180**				**Pn**	**00 19 44.1**	**-0.6**
MT03	**Universidad Ad**	**6.39**	**175**				**Pn**	**00 19 49.3**	**+1.0**
MT08	**Bocatoma Ro**	**6.40**	**171**				**Pn**	**00 19 48.8**	**+0.2**
MT09	**Talagante**	**6.65**	**179**				**Pn**	**00 19 51.6**	**-0.3**
MT01	**Popeta**	**6.73**	**180**				**Pn**	**00 19 53.0**	**+0.1**
BO04	**La Punta**	**6.88**	**176**	Pn			**Pn**	**00 19 54.5**	**-0.4**
BO02	**Sierra Bellavi**	**7.67**	**177**				**Pn**	**00 20 05.1**	**-0.7**
H03N1	**Juan Fernandez**	**9.18**	**225**	T			T	00 30 04.6	
	baz=52,slow=72,SNR=544								
H03N2	**Juan Fernandez**	**9.19**	**225**	T			T	00 30 04.9	
	baz=52,slow=72,SNR=1746								
H03N3	**Juan Fernandez**	**9.20**	**225**	T			T	00 30 03.7	
	baz=52,slow=72,SNR=1133								
LPAZ	**La Paz**	**11.14**	**15**	Pn			**Pn**	**00 20 51.2**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=264,slow=6.7,SNR=2.6								
	comp=Z,0.4nm,0.4s								
LPAZ	**La Paz**	**11.14**	**15**	Pn			**Pn**	**00 20 53.8**	**-0.1**
CPUP	**Villa Florida**	**12.42**	**90**	Pn			**Pn**	**00 21 09.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=275,slow=20,SNR=1.9								
CPUP					LR		LR	00 25 00.5	
	comp=Z,54nm,21.0s,baz=250,slow=34								
CPUP	**Villa Florida**	**12.42**	**90**				**Pn**	**00 21 09.4**	**-1.5**
SIV	**San Ignacio**	**14.52**	**42**	Pn			Pn	00 21 34.1	-5.5
	baz=232,slow=11,SNR=5.0								
SIV					LR		LR	00 27 03.9	
	comp=Z,52nm,19.7s,baz=117,slow=37								
	comp=Z,0.9nm,0.4s								
ITAB	**Concordia**	**16.97**	**95**	Pn			**Pn**	**00 22 10.9**	**-0.3**
ITAB				IAmb			IAmb	00 22 28.0	
	comp=Z,29nm,1.3s								
TRCB	**Terra Rica**	**17.37**	**80**	P			**Pn**	**00 22 16.1**	**-0.2**
VAO	**Valinhos**	**22.32**	**85**	P			**P**	**00 23 09.2**	**-2.1**
VAO				IAmb			IAmb	00 23 35.9	
	comp=Z,32nm,1.4s								
BDFB	**Brasilia**	**24.37**	**67**	P			**P**	**00 23 28.1**	**-3.5**
	comp=Z,3.4nm,0.6s,baz=232,slow=12,SNR=5.3								
BDFB					LR		LR	00 34 20.7	
	comp=Z,125nm,18.7s,baz=315,slow=40								
	comp=Z,3.4nm,0.6s								
BDFB	**Brasilia**	**24.37**	**67**	P			**P**	**00 23 30.3**	**-1.3**
MDP	**Montagnes des**	**36.71**	**32**	LR			LR	00 40 46.2	
	comp=Z,62nm,20.3s,baz=206,slow=37								
VNA2	**Neumayer~Watz**	**56.12**	**159**	⇑P			**P**	**00 27 47.8**	**-4.2**
	comp=Z,1.8nm,0.6s,baz=291,slow=6.5								
SNAA	**Sanae**	**57.72**	**160**	⇑P			P	00 27 58.4	-5.1
	comp=Z,71nm,0.7s								
SNAA	**Sanae**	**57.72**	**160**	P			**P**	**00 28 02.6**	**-0.8**
SNAA				IAmb			IAmb	00 28 13.6	
	comp=Z,3.5nm,0.9s								
QSPA	**South Pole Qui**	**63.10**	**180**	P			**P**	**00 28 41.3**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=175,slow=4.2,SNR=23								
	comp=Z,3.3nm,0.7s								
QSPA	**South Pole Qui**	**63.10**	**180**	P			**P**	**00 28 40.9**	**+0.5**
QSPA				IAmb			IAmb	00 28 42.6	
	comp=Z,3.7nm,1.0s								
BRDY	**Brady**	**63.85**	**334**	P			**P**	**00 28 46.8**	**+1.3**
BRDY				IAmb			IAmb	00 28 48.1	
	comp=Z,2.5nm,0.8s								
TXAR	**Lajitas Array**	**64.17**	**329**	P			**P**	**00 28 49.4**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=119,slow=4.9,SNR=4.8								
	comp=Z,0.6nm,0.7s								
TXAR	**Lajitas Array**	**64.17**	**329**	P			**P**	**00 28 48.6**	**+0.9**
R40A	**Maddies Statio**	**67.99**	**342**	P			**P**	**00 29 12.8**	**+0.9**
PDAR	**Pinedale Array**	**77.99**	**332**	P			**P**	**00 30 13.2**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=138,slow=6.3,SNR=2.5								
	comp=Z,0.2nm,0.5s								
MAW	**Mawson**	**79.57**	**164**	P			**P**	**00 30 19.5**	**0.0**
	comp=Z,1.1nm,0.7s,baz=219,slow=13,SNR=3.5								
	comp=Z,1.1nm,0.7s								
MAW	**Mawson**	**79.57**	**164**	P			**P**	**00 30 19.8**	**+0.3**
ULM	**Lac du Bonnet**	**80.07**	**344**	P			**P**	**00 30 22.8**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=334,slow=20,SNR=2.4								
	comp=Z,1.4nm,0.6s								
ULM	**Lac du Bonnet**	**80.07**	**344**	P			**P**	**00 30 22.7**	**+0.5**
ULM				IAmb			IAmb	00 30 29.1	
	comp=Z,3.7nm,1.2s								
TORD	**Torodi Ar. Bea**	**81.20**	**70**	P			**P**	**00 30 28.4**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=254,slow=4.6,SNR=9.3								
	comp=Z,0.6nm,0.7s								
SFJD	**Kangerlussuaq**	**95.09**	**8**	LR			LR	01 14 35.6	
	comp=Z,25nm,20.0s,baz=330,slow=36								
ASAR	**Alice Springs**	**124.00**	**208**	PKP			**PKPdf**	**00 37 11.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=124,slow=1.4,SNR=5.1								
WRA	**Warramunga Arr**	**127.08**	**211**	PKP			**PKPdf**	**00 37 17.5**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=161,slow=1.6,SNR=6.6								
WRA	**Warramunga Arr**	**127.08**	**211**				**PKPdf**	**00 37 17.3**	**-0.4**
KURK	**Kurchatov**	**147.11**	**36**				**PKPdf**	**00 37 54.0**	**+0.7**
KURBB	**Kurchatov Arra**	**147.11**	**36**	PKPbc			**PKPdf**	**00 37 54.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=299,slow=2.7,SNR=8.7								
ZALV	**Zalesovo Beam**	**147.89**	**27**	PKPbc			**PKPdf**	**00 37 55.3**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=303,slow=3.3,SNR=13								
ZALV	**Zalesovo Beam**	**147.89**	**27**				**PKPbc**	**00 37 57.1**	**-0.4**
MKAR	**Makanchi Array**	**151.32**	**40**	PKPbc			**PKPbc**	**00 38 06.8**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=315,slow=1.9,SNR=14								
MKAR	**Makanchi Array**	**151.32**	**40**				**PKPbc**	**00 38 06.7**	**+0.4**
WMQ	**Urumqi**	**156.16**	**40**	*e*PKP			**PKPdf**	**00 38 05.5**	**-1.8**
WMQ				pPKP			sPKPdf	00 38 21.7	-0.5
WMQ				PKPab			**PKPab**	**00 38 39.9**	**+4.9**
HHC	**Hu-ho-hao-te**	**166.11**	**351**	*e*P			**PKPdf**	**00 38 18.0**	**0.0**
NJ2	**Nanjing**	**169.96**	**302**	*e*P			**PKPdf**	**00 38 19.3**	**-1.4**
NJ2				pmax			pmax		
	comp=Z,26nm,0.6s								
PZH	**PanZhiHua**	**173.66**	**94**	PKP			**PKPdf**	**00 38 21.3**	**-1.5**

*JSN **03** 01:11:50.8±0.3, 18°.11N×77°.93W, h15km±1km, MD3.3, Confirmed Earthquake*
*SSNC **03** 01:11:51.6±1.4, 18°.29N×77°.93W, h7km±10km, MD3.0, ML1.9, Presumed earthquake*
ISC 03 01:11:47.9±1.8, 18°.31N±0°.06×77°.95W±0°.09, h8km±12km, n14, σ0$86/30, 3C-4D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CVJ	**Coleyville**	**0.40**	**102**	⇓*i*	P		**Pb**	**01 11 58.3**	**+1.0**
CVJ				⇑*i*	S		**Sb**	**01 12 04.0**	**+0.3**
MTDJ	**Mount Denham**	**0.40**	**102**	*e*	P		**Pb**	**01 11 58.2**	**+0.9**
MTDJ				*e*	S		**Sb**	**01 12 03.7**	**+0.1**
MTDJ				IAML				01 12 04.1	
	comp=Z,185nm,0.2s								
MTDJ				IAML				01 12 06.3	
	158nm,0.3s								
MCJ	**Malvern**	**0.45**	**147**	*i*	P		**Pg**	**01 11 56.8**	**0.0**
PCJ	**Portland Cotta**	**0.94**	**127**	⇓*i*	P		**Pg**	**01 12 05.5**	**-0.5**
PCJ				*i*	S		**Sg**	**01 12 16.4**	**-1.8**
BNJ	**Bonny Gate**	**0.95**	**89**	⇑*i*	P		**Pn**	**01 12 07.7**	**+0.2**
BNJ				*i*	S		**Sn**	**01 12 20.6**	**-0.7**
STH	**Stony Hill**	**1.10**	**102**	⇓*i*	P		**Pg**	**01 12 09.5**	**+0.4**
STH				⇓*i*	P		**Pg**	**01 12 09.6**	**+0.4**
STH				*i*	S		**Sg**	**01 12 23.5**	**0.0**
STH				*i*	S		**Sb**	**01 12 23.6**	**-0.3**
GWJ	**Greenwich**	**1.18**	**101**	*i*	P		**Pg**	**01 12 10.8**	**+0.2**
GWJ				⇑*i*	P		**Pg**	**01 12 10.8**	**+0.2**
GWJ				*i*	S		**Sg**	**01 12 25.9**	**-0.1**
LMGC	**Las Mercedes**	**1.96**	**27**	*e*	P		**Pb**	**01 12 23.7**	**-0.2**
LMGC				*e*	S		**Sn**	**01 12 46.4**	**+0.1**
LMGC				*e*Sg			**Sb**	**01 12 48.1**	**-0.4**
LMGC				IAML				01 12 48.9	
	comp=N,14nm,0.0s								
LMGC				IAML				01 12 49.5	
	comp=E,18nm,0.0s								
CHIV	**Chivirico**	**2.20**	**41**	*e*	P		**Pn**	**01 12 25.6**	**+0.8**
CHIV				*e*	S		**Sn**	**01 12 51.8**	**-0.5**
CHIV				IAML				01 12 55.2	
	comp=E,2.7nm,0.1s								
CHIV				IAML				01 12 56.4	
	comp=N,3.4nm,0.1s								
YAR	**Yar**	**2.54**	**36**	*e*	P		**Pn**	**01 12 30.9**	**+1.4**
YAR				*e*	S		**Sn**	**01 13 01.1**	**+0.5**
YAR				IAML				01 13 03.1	
	comp=E,1.7nm,0.1s								
YAR				IAML				01 13 05.5	
	comp=N,1.4nm,0.1s								
MARVS	**Santiago de Cu**	**2.56**	**49**	*e*	P		**Pn**	**01 12 29.8**	**0.0**
MARVS				*e*	S		**Sn**	**01 12 58.7**	**-2.5**
MARVS				IAML				01 13 03.0	
	comp=E,1.8nm,0.1s								
MARVS				IAML				01 13 03.8	
	comp=N,3.8nm,0.1s								
RCC	**Rio Carpintero**	**2.71**	**51**	*e*	P		**Pn**	**01 12 32.0**	**+0.2**
RCC				*e*	S		**Sn**	**01 13 03.3**	**-1.5**
CCCC	**Cccc**	**2.88**	**3**	*e*	P		**Pb**	**01 12 39.6**	**0.0**
GTBY	**Guantanamo Bay**	**3.13**	**59**	*e*	P		**Pn**	**01 12 38.4**	**+0.9**
GTBY				*e*	S		**Sn**	**01 13 15.0**	**-0.1**
GTBY				IAML				01 13 16.7	
	comp=N,1.2nm,0.1s								
GTBY				IAML				01 13 20.8	
	comp=N,1.4nm,0.1s								

*SOME **03** 01:47:56.5, 40°.62N×78°.42E, h15km*
*NNC **03** 01:47:58.6±1.1, 40°.72N×78°.49E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=7.7km s-min=5.1km az=155.0*
*KRNET **03** 01:47:58.7±0.1, 40°.73N×78°.57E, h15km, mb3.3*
ISC 03 01:48:04.1±2.2, 40°.95N±0°.09×78°.43E±0°.05, h12km±12km, n35, σ1$43/54, 10C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.91**	**329**	⇓*i*	P		**Pg**	**01 48 20.9**	**-0.8**
TARG				⇓*i*	S		**Sn**	**01 48 36.8**	**+0.3**
KDJ	**Kajisay**	**1.51**	**322**	⇑*i*	P		**Pn**	**01 48 30.9**	**-0.3**
KDJ				⇑*i*	S		**Sg**	**01 48 54.9**	**+2.3**
PRZ	**Przheval'sk**	**1.53**	**359**	⇓*e*	P		**Pb**	**01 48 32.1**	**-0.5**
PRZ				⇓*e*	S		**Sg**	**01 48 56.1**	**+2.7**
NRN	**Naryn**	**1.90**	**286**	⇑*i*	P		**Pn**	**01 48 36.8**	**+0.1**
NRN				⇑*i*	S		**Sg**	**01 49 04.9**	**-0.2**
ANVS	**Anan'yevo**	**1.92**	**343**	⇑*i*	P		**Pg**	**01 48 37.7**	**-1.5**
ANVS				⇑*i*	S		**Sg**	**01 49 06.5**	**+0.7**
SATY	**Saty**	**2.11**	**359**	Pg			**Pb**	**01 48 42.1**	**-0.3**
	35nm,0.4s								
SATY				Lg			Lg	01 49 14.9	
	66nm,0.4s								
SATY	**Saty**	**2.11**	**359**	*e*P			**Pb**	**01 48 42.0**	**-0.3**
	35nm,0.4s								
SATY				*e*S			**Sg**	**01 49 14.9**	**+3.1**
	66nm,0.4s								
UZB	**Uzynbulak**	**2.24**	**11**	Pg			**Pb**	**01 48 43.4**	**-1.2**
	19nm,0.4s								
UZB				Lg			Lg	01 49 17.2	
	62nm,0.4s								
UZB	**Uzynbulak**	**2.24**	**11**	*e*P			**Pb**	**01 48 43.4**	**-1.2**
	19nm,0.4s								
UZB				*e*S			**Sg**	**01 49 17.1**	**+1.1**
	62nm,0.4s								
SHLS	**Shalkode**	**2.33**	**19**	Pg			**Pg**	**01 48 47.1**	**-1.8**
	74nm,0.5s								
SHLS				Lg			Lg	01 49 23.5	
	145nm,0.5s								
SHLS	**Shalkode**	**2.33**	**19**	*e*P			**Pg**	**01 48 47.1**	**-1.8**
	74nm,0.5s								
SHLS				*e*S			**Sg**	**01 49 23.5**	**+4.4**
	145nm,0.5s								
TNSS	**Tian-Shan**	**2.36**	**333**	Pg			**Pb**	**01 48 45.4**	**-1.4**
	2.6nm,0.3s								
TNSS				Lg			Lg	01 49 20.8	
	14nm,0.3s								
TNSS	**Tian-Shan**	**2.36**	**333**	*e*P			**Pb**	**01 48 45.4**	**-1.4**
	2.6nm,0.3s								
TNSS				*e*S			**Sg**	**01 49 20.8**	**+0.8**
	14nm,0.3s								
BOOM	**Boomskoye usch**	**2.42**	**310**	⇓*i*	P		**Pn**	**01 48 44.6**	**+0.9**
BOOM				⇓*i*	S		**Sb**	**01 49 18.1**	**+0.6**
MDOK	**Medeo**	**2.44**	**335**	Pg			**Pb**	**01 48 46.4**	**-1.6**
	8.6nm,0.5s								
MDOK				Lg			Lg	01 49 22.4	
	57nm,0.6s								
KOTS	**Kotyrbulak**	**2.48**	**337**	Pg			**Pb**	**01 48 48.2**	**-0.6**
	6.3nm,0.2s								
KOTS				Lg			Lg	01 49 25.3	
	39nm,0.4s								
KOTS	**Kotyrbulak**	**2.48**	**337**	*e*P			**Pb**	**01 48 48.2**	**-0.6**
	6.3nm,0.2s								
KOTS				*e*S			**Sg**	**01 49 25.3**	**+1.4**
	39nm,0.4s								
KPKS	**Kokpek**	**2.52**	**4**	Pg			**Pb**	**01 48 48.7**	**-0.7**
	0.3nm,0.2s								
KPKS				Lg			Lg	01 49 26.1	
	82nm,0.5s								
KPKS	**Kokpek**	**2.52**	**4**	*e*P			**Pb**	**01 48 48.7**	**-0.7**
	0.3nm,0.2s								
KPKS				*e*S			**Sg**	**01 49 26.1**	**+1.0**
	82nm,0.5s								
KURS	**Kuram**	**2.54**	**356**	Pg			**Pb**	**01 48 49.7**	**0.0**
	11nm,0.5s								
KURS				Lg			Lg	01 49 28.0	
	42nm,0.7s								
KURS	**Kuram**	**2.54**	**356**	*e*P			**Pb**	**01 48 49.7**	**0.0**
	11nm,0.5s								
KURS				*e*S			**Sg**	**01 49 28.0**	**+2.2**
	42nm,0.7s								
KST	**Kastek**	**2.78**	**319**	Pg			**Pb**	**01 48 51.9**	**-2.0**
	8.8nm,0.6s								
KST				Lg			Lg	01 49 31.9	
	61nm,0.6s								
KST	**Kastek**	**2.78**	**319**	*e*P			**Pb**	**01 48 51.9**	**-2.0**
	8.8nm,0.6s								
KST				*e*S			**Sg**	**01 49 31.9**	**-1.7**
	61nm,0.6s								
TKM2	**Tokmak 2**	**2.89**	**314**	⇑*i*	P		**Pn**	**01 48 51.3**	**+1.1**
TKM2				⇑*i*	S		**Sb**	**01 49 29.5**	**-1.6**
KTBS	**Karatobe**	**3.05**	**335**	Pg			**Pb**	**01 48 58.0**	**-0.4**
KTBS				Lg			Lg	01 49 42.6	
KTBS	**Karatobe**	**3.05**	**335**	*e*P			**Pb**	**01 48 58.0**	**-0.4**
KTBS				*e*S			**Sg**	**01 49 42.6**	**+0.6**
ARXS	**Arharly**	**3.29**	**352**	Pg			**Pb**	**01 49 02.8**	**+0.3**
	8.7nm,0.5s								
ARXS				Lg			Lg	01 49 51.0	
	40nm,0.4s								
ARXS	**Arharly**	**3.29**	**352**	*e*P			**Pb**	**01 49 02.8**	**+0.3**
	8.7nm,0.5s								
ARXS				*e*S			**Sg**	**01 49 51.0**	**+1.3**
	40nm,0.4s								
AAK	**Ala-Archa**	**3.39**	**301**	⇑Pg			**Pb**	**01 49 04.9**	**+0.6**
	3.4nm,0.8s								
AAK				⇓Lg			Lg	01 49 52.7	
	9.2nm,0.7s								
KNOS	**Konyrlen**	**3.45**	**9**	Pg			**Pb**	**01 49 04.9**	**-0.3**
	1.4nm,0.3s								
KNOS				Lg			Lg	01 49 54.3	
	25nm,0.5s								
DJR	**Jarkent**	**3.52**	**16**	Pg			**Pb**	**01 49 06.1**	**-0.4**
	0.6nm,0.2s								
DJR				Lg			Lg	01 49 55.9	
	14nm,0.5s								
DJR	**Jarkent**	**3.52**	**16**	*e*P			**Pb**	**01 49 06.1**	**-0.4**
	0.6nm,0.2s								
DJR				*e*S			**Sg**	**01 49 55.9**	**-1.4**
	14nm,0.5s								
MRKS	**Merke**	**4.28**	**296**	Pg			**Pb**	**01 49 20.3**	**+1.0**
	3.6nm,0.5s								
MRKS				Lg			Lg	01 50 21.0	
	4.1nm,0.4s								
MRKS	**Merke**	**4.28**	**296**	*e*P			**Pb**	**01 49 20.4**	**+1.0**
	3.6nm,0.5s								
MRKS				*e*S			**Sg**	**01 50 21.0**	**-0.6**
	4.1nm,0.4s								
KK31	**Karatay Array**	**6.28**	**293**	⇑Pg			**Pb**	**01 49 55.8**	**+2.4**
	0.3nm,0.5s,baz=352,slow=15,SNR=5.0								
KK31				⇓Lg			Lg	01 51 23.5	
	4.3nm,0.9s								

IDC 03 01:49:00.7±16.0, 37°.00N×69°.77E, h380km±180km, mb2.9/3, mbtmp3.7/7, Error ellipse: s-maj=103.2km s-min=26.0km az=1.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.50**	**40**	P			P	01 51 57.6	+0.2
	0.5nm,0.6s,baz=227,slow=12,SNR=1.3								
KURBB	**Kurchatov Arra**	**15.00**	**22**	P			P	01 52 14.0	+0.4
	1.8nm,0.5s,baz=211,slow=12,SNR=6.9								
BVAR	**Borovoye Array**	**16.03**	**1**	P			P	01 52 24.9	+0.1
	0.8nm,0.4s,baz=175,slow=9.9,SNR=4.7								
ZALV	**Zalesovo Beam**	**19.89**	**27**	P			P	01 53 04.9	-0.3
	1.2nm,0.3s,baz=218,slow=11,SNR=7.5								
TORD	**Torodi Ar. Bea**	**64.75**	**268**	P			P	01 59 00.0	0.0
	0.4nm,0.5s,baz=46,slow=5.9,SNR=10								
	0.4nm,0.5s								
WRA	**Warramunga Arr**	**83.09**	**121**	P			P	02 00 45.3	+0.2
	0.3nm,0.5s,baz=330,slow=5.1,SNR=1.8								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**85.35**	**124**	P			P	02 00 56.0	-0.2
	0.4nm,0.9s,baz=316,slow=5.0,SNR=2.0								
	0.4nm,0.9s								

*CATAC **03** 02:06:17.1±0.2, 10°.N±2°.×8°.4W±°., h21km±1km, M3.9/17, MLv3.9/17, Error ellipse: s-maj=4.4km s-min=2.4km az=44.4, confirmed*
*UCR **03** 02:06:17.2±1.0, 9°.54N×84°.13W, h38km±2km, MW4.4, Presumed earthquake*
*UPA **03** 02:06:17.6±1.9, 9°.57N×84°.13W, h14km±7km, MW4.2, Presumed earthquake*
**ISC 03 02:06:18.6±0.9

ARTO	**Ro Cuarto**		**0.79**	**355**	*eP*	**Pn**	**02 06 32.0**	**-1.7**
ENAS	**Puntarenas**		**0.80**	**302**	*eP*	**Pn**	**02 06 33.0**	**-0.8**
ENAS					*eS*	**Sn**	**02 06 45.5**	**+0.8**
QUEU	**Ciudad Quesada**		**0.82**	**340**	*eP*	**Pn**	**02 06 33.3**	**-0.8**
PAQE	**Paquera**		**0.82**	**289**	*eP*	**Pn**	**02 06 31.8**	**-2.3**
IRES	**Siquirres**		**0.83**	**49**	*eP*	**Pn**	**02 06 32.7**	**-1.5**
BURE	**Buenos Aires**		**0.88**	**115**	*eP*	**Pn**	**02 06 33.0**	**-2.0**
BURE					*eS*	**Sn**	**02 06 45.3**	**-1.5**
PANP	**Palmar Norte**		**0.90**	**131**	*eP*	**Pn**	**02 06 33.0**	**-2.2**
ITAL	**Pital**		**0.90**	**352**	*eP*	**Pn**	**02 06 33.7**	**-1.5**
CARI	**Cariari**		**0.90**	**27**	*eP*	**Pn**	**02 06 34.2**	**-1.1**
DRK0	**Durika**		**0.94**	**108**	⇓*iP*	Pn	02 06 23.9	-12
DRK0					*iS*	Sn	02 06 36.0	-12
TAAN	**Batan**		**0.95**	**56**	*eP*	**Pn**	**02 06 34.7**	**-1.2**
FIMO	**Fila Mora**		**0.96**	**125**	*eP*	**Pn**	**02 06 34.6**	**-1.6**
FORC	**Fortuna**		**1.04**	**330**	*eP*	**Pn**	**02 06 36.3**	**-0.9**
FORC					*eS*	**Sn**	**02 06 51.9**	**+1.0**
VACR	**Volcan Arenal**		**1.05**	**330**	*eP*	**Pn**	**02 06 36.5**	**-0.8**
ARE1	**Arenal 1**		**1.06**	**328**	*eP*	**Pn**	**02 06 35.7**	**-1.8**
VARE2	**V. Arenal**		**1.06**	**328**	*eP*	**Pn**	**02 06 35.9**	**-1.6**
TRT2	**Tortugero**		**1.08**	**22**	P	**Pn**	**02 06 36.8**	**-0.9**
TRT2	**Tortugero**		**1.08**	**22**	*eP*	**Pn**	**02 06 36.3**	**-1.4**
TRT2	**Tortugero**		**1.08**	**22**	⇓*iP*	**Pn**	**02 06 36.7**	**-0.9**
TRT2					*iS*	**Sn**	**02 06 51.8**	**+0.2**
CEDE	**Laguna Cedeo**		**1.08**	**329**	*eP*	**Pn**	**02 06 36.9**	**-0.9**
JUNT	**Juntas**		**1.08**	**312**	*eP*	**Pn**	**02 06 36.6**	**-1.1**
JTS	**Las Juntas de**		**1.08**	**313**	P	**Pn**	**02 06 36.7**	**-1.0**
JTS					S	**Sn**	**02 06 52.6**	**+0.8**
JTS	**Las Juntas de**		**1.08**	**313**	*eP*	**Pn**	**02 06 36.1**	**-1.7**
JTS	**Las Juntas de**		**1.08**	**313**	⇑*iP*	**Pn**	**02 06 36.5**	**-1.2**
JTS					*iS*	**Sn**	**02 06 51.9**	**+0.2**
EDP2	**Potrero Grande**		**1.10**	**119**	*eP*	**Pn**	**02 06 36.2**	**-1.4**
TABAC	**Tabacon**		**1.12**	**327**	*eP*	**Pn**	**02 06 38.1**	**-0.2**
CHIK	**Chiripa**		**1.16**	**320**	*eP*	**Pn**	**02 06 39.0**	**+0.1**
COVE	**Coope Vega, Sa**		**1.19**	**348**	P	**Pn**	**02 06 38.6**	**-0.5**
COVE					S	**Sn**	**02 06 55.1**	**+0.8**
TILA	**Tilaran**		**1.22**	**318**	*eP*	**Pn**	**02 06 38.7**	**-1.0**
CMARA	**Lajas Hojancha**		**1.34**	**290**	P	**Pn**	**02 06 39.6**	**-1.8**
CMARA					S	**Sn**	**02 06 58.1**	**-0.1**
CMARA	**Lajas Hojancha**		**1.34**	**290**	*eP*	**Pn**	**02 06 39.1**	**-2.3**
CMARA	**Lajas Hojancha**		**1.34**	**290**	⇓*eP*	**Pn**	**02 06 39.5**	**-1.8**
INDI	**Punta indio, G**		**1.37**	**283**	P	**Pn**	**02 06 39.4**	**-2.4**
PIRO	**Carate, Puerto**		**1.39**	**145**	P	**Pn**	**02 06 41.2**	**-0.8**
PIRO					S	**Sn**	**02 06 59.8**	**+0.4**
PIRO	**Carate, Puerto**		**1.39**	**145**	*eP*	**Pn**	**02 06 41.1**	**-1.0**
PIRO	**Carate, Puerto**		**1.39**	**145**	*eP*	**Pn**	**02 06 41.4**	**-0.6**
PIRO					*iS*	**Sn**	**02 07 00.3**	**+0.9**
PLVR	**Palo Verde**		**1.43**	**304**	*eP*	**Pn**	**02 06 41.6**	**-1.0**
ALCO	**Alturas Coton,**		**1.43**	**115**	*eP*	**Pn**	**02 06 40.7**	**-2.0**
RGM0	**Gandoca**		**1.52**	**88**	P	**Pn**	**02 06 42.8**	**-0.9**
RGM0					S	**Sn**	**02 07 02.2**	**-0.3**
RGM0	**Gandoca**		**1.52**	**88**	*eP*	**Pn**	**02 06 44.0**	**+0.2**
SCLRA	**Santa Clara, W**		**1.52**	**118**	⇓*iP*	**Pn**	**02 06 43.2**	**-0.8**
SCLRA					*eS*	**Sn**	**02 07 04.4**	**+1.5**
HORNC	**Hornillas**		**1.54**	**319**	*eP*	**Pn**	**02 06 43.5**	**-0.6**
MESS	**Mesas**		**1.57**	**319**	*eP*	**Pn**	**02 06 44.5**	**0.0**
VMAR	**Armenia, Volca**		**1.57**	**323**	*eP*	**Pn**	**02 06 44.2**	**-0.3**
UPAL	**Upala**		**1.58**	**328**	P	**Pn**	**02 06 44.7**	**+0.1**
UPAL					S	**Sn**	**02 07 06.2**	**+2.1**
CDITO	**Canoas**		**1.59**	**128**	P	**Pn**	**02 06 43.3**	**-1.5**
CDITO					S	**Sn**	**02 07 03.8**	**-0.5**
BRU2	**Volcan**		**1.62**	**118**	P	**Pn**	**02 06 44.0**	**-1.3**
BRU2					S	**Sn**	**02 07 04.7**	**-0.6**
BRU2	**Volcan**		**1.62**	**118**	*eP*	**Pn**	**02 06 43.4**	**-1.9**
BRU2	**Volcan**		**1.62**	**118**	⇑*eP*	**Pn**	**02 06 44.0**	**-1.3**
BRU2					*iS*	**Sn**	**02 07 07.0**	**+1.7**
CNJ	**El Empalme, Bo**		**1.66**	**94**	*eP*	**Pn**	**02 06 43.8**	**-1.8**
GPS2	**Hotel Rincn d**		**1.68**	**315**	*eP*	**Pn**	**02 06 46.7**	**+0.7**
GPS3	**Bodega del ICE**		**1.69**	**315**	*eP*	**Pn**	**02 06 47.2**	**+1.0**
GPS1	**Guardaparques**		**1.70**	**316**	*eP*	**Pn**	**02 06 46.7**	**+0.4**
CLLRA	**Cordillera,**		**1.71**	**118**	*eP*	**Pn**	**02 06 44.9**	**-1.6**
CLLRA	**Cordillera,**		**1.71**	**118**	*eP*	**Pn**	**02 06 45.2**	**-1.4**
CLLRA					*eS*	**Sn**	**02 07 06.1**	**-1.5**
ALIBA	**Liberia Airpor**		**1.72**	**307**	*eP*	**Pn**	**02 06 46.3**	**-0.3**
LESP3	**La Esperanza,**		**1.76**	**130**	⇓*eP*	**Pn**	**02 06 47.1**	**+0.1**
LESP3					*eS*	**Sn**	**02 07 07.8**	**-0.6**
JEFFS	**S de V. Baru**		**1.82**	**119**	*eP*	**Pn**	**02 06 46.2**	**-1.8**
JEFFS	**S de V. Baru**		**1.82**	**119**	*eP*	**Pn**	**02 06 46.5**	**-1.5**
JEFFS					*eS*	**Sn**	**02 07 14.6**	**+4.5**
PTPM	**Petroterminale**		**1.83**	**137**	⇑*iP*	**Pn**	**02 06 48.8**	**+0.8**
PTPM					*iS*	**Sn**	**02 07 13.2**	**+2.9**
PTAR3	**Potrerillos Ar**		**1.84**	**118**	⇓*eP*	**Pn**	**02 06 47.5**	**-0.7**
PTAR3					*iS*	**Sn**	**02 07 11.0**	**+0.4**
BQTLY	**Boquete Panama**		**1.84**	**115**	*eP*	**Pn**	**02 06 47.4**	**-0.9**
BQTLY					*eS*	**Sn**	**02 07 12.1**	**+1.4**
PTPA	**Petro Terminal**		**1.84**	**137**	*eP*	**Pn**	**02 06 48.0**	**-0.2**
LNBQ3	**Los Naranjos,**		**1.85**	**114**	⇓*iP*	**Pn**	**02 06 47.1**	**-1.3**
LNBQ3					*iS*	**Sn**	**02 07 09.9**	**-0.9**
BQSF3	**Alto Boquete,**		**1.87**	**115**	*eP*	**Pn**	**02 06 48.4**	**-0.3**
BQSF3					*iS*	**Sn**	**02 07 12.6**	**+1.1**
LIMO3	**Limones**		**1.92**	**139**	⇓*eP*	**Pn**	**02 06 49.9**	**+0.7**
LIMO3					*iS*	**Sn**	**02 07 13.9**	**+1.5**
LMNES	**Limones**		**1.92**	**139**	*eP*	**Pn**	**02 06 49.6**	**+0.3**
LMNES					*eS*	**Sb**	**02 07 17.4**	**+0.8**
BAGA3	**Bagala, Chiriq**		**1.93**	**124**	⇓*eP*	**Pn**	**02 06 50.1**	**+0.8**
BAGA3					*eS*	**Sn**	**02 07 14.1**	**+1.5**
DVD	**David**		**2.01**	**123**	*eP*	**Pn**	**02 06 51.1**	**+0.6**
DVD					*eP*		02 06 52.3	
DVD					*eS*	**Sn**	**02 07 15.5**	**+0.9**
DVD					*eS*		02 07 21.4	
PBNVO	**Pueblo Nuevo,**		**2.04**	**109**	⇑*iP*	**Pn**	**02 06 50.7**	**-0.2**
PBNVO					*eS*	**Sn**	**02 07 15.3**	**0.0**
BGUAL	**Bijagual, Pana**		**2.07**	**120**	*eP*	**Pn**	**02 06 49.8**	**-1.6**
BGUAL	**Bijagual, Pana**		**2.07**	**120**	*eP*	**Pn**	**02 06 50.6**	**-0.7**
BGUAL					*eS*	**Sb**	**02 07 21.6**	**+0.7**
RBALA	**Bur**		**2.08**	**109**	*eP*	**Pn**	**02 06 50.5**	**-1.0**
RBALA					*eS*	**Sn**	**02 07 16.4**	**0.0**
CARN	**Rivas**		**2.11**	**320**	P	**Pn**	**02 06 52.1**	**+0.2**
CARN					S	**Sn**	**02 07 18.4**	**+1.2**
CHIR3	**Chiriqui UPA,**		**2.13**	**123**	⇓*iP*	**Pn**	**02 06 53.8**	**+1.6**
CHIR3					*iS*	**Sn**	**02 07 20.8**	**+3.2**
KKNTU	**Kakint**[g]		**2.42**	**107**	*eP*	**Pn**	**02 06 55.3**	**-0.8**
KKNTU					*eS*	**Sn**	**02 07 28.8**	**+4.1**
BLUN	**Bluefields**		**2.46**	**8**	P	**Pn**	**02 06 56.8**	**+0.1**
NANC3	**Nancito, Chiri**		**2.72**	**118**	⇑*iP*	**Pn**	**02 07 01.3**	**+1.0**
NANC3					*iS*	**Sn**	**02 07 34.5**	**+2.3**
PVID3	**Puerto Vidal,**		**2.92**	**121**	*eP*	**Pn**	**02 07 03.7**	**+0.7**
NANN	**Nandasmo**		**3.06**	**321**	P	**Pn**	**02 07 04.9**	**-0.2**
MASN	**Masaya**		**3.12**	**321**	P	Pn	02 07 10.0	+4.2
BOAB	**BOACO BROADBAN**		**3.24**	**333**	P	**Pn**	**02 07 05.3**	**+0.3**
BOAB					S	**Sn**	**02 07 46.3**	**+1.3**
RSUS3	**Rio de Jesus,**		**3.34**	**118**	*eP*	**Pn**	**02 07 08.6**	**-0.2**
GMAL	**Guarumal, Vera**		**3.38**	**121**	⇓*eP*	**Pn**	**02 07 09.0**	**-0.5**
GMAL					*eS*	**Sn**	**02 07 48.3**	**-0.3**
STIA3	**Santiago, Vera**		**3.45**	**114**	*eP*	**Pn**	**02 07 10.7**	**+0.3**
STIA3					*eS*	**Sn**	**02 07 51.3**	**+1.0**
CALO3	**Calobre, Verag**		**3.49**	**110**	*eP*	**Pn**	**02 07 09.8**	**-1.0**
CHIT3	**Chitre**		**4.01**	**113**	*eP*	**Pn**	**02 07 18.1**	**0.0**
CHIT3					*eS*	**Sn**	**02 08 10.5**	**+6.4**
AZU	**Azuero**		**4.21**	**114**	*eP*	**Pn**	**02 07 20.8**	**0.0**
TOSI3	**Tonosi**		**4.24**	**120**	*eP*	**Pn**	**02 07 23.9**	**+2.8**
ZANG	**Zanguenga, Cho**		**4.27**	**98**	⇑*eP*	**Pn**	**02 07 20.9**	**-0.7**
BCIP	**Isla Barro Col**		**4.27**	**95**	*eP*	**Pn**	**02 07 21.3**	**-0.3**
CHOR3	**La Chorrera**		**4.37**	**98**	*eP*	Pn	02 07 29.3	+6.3
FRIJ	**El Hiral**		**4.37**	**94**	*eP*	**Pn**	**02 07 22.4**	**-0.7**
GAMB1	**Gamboa**		**4.40**	**95**	*iP*	**Pn**	**02 07 23.3**	**-0.1**
RCVN	**Varillal2**		**4.48**	**334**	P	**Pn**	**02 07 25.7**	**+1.1**

*TRN **03** 02:15:10.0, 10°.69N×62°.27W, h95km, MD2.8, Paria peninsula.*
*FUNV **03** 02:15:38.0, 10°.80N×62°.41W, h9km, MW2.4, Presumed earthquake*

ISC 03 02:15:38.2±4.8, 10°.7N±0°.2×62°.4W±0°.3, h75km, n7, σ0°.34/12, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.80**	**90**	*eP*	**Pn**	**02 15 55.0**	**+0.3**
DMDM				*eS*	**Sn**	**02 16 07.0**	**+0.2**
PSKH	**Kent House, Po**	**0.83**	**91**	*eP*	**Pn**	**02 15 54.8**	**-0.1**
TRN	**Trinidad (W)**	**0.95**	**93**	*eP*	**Pn**	**02 15 56.2**	**-0.1**
TRN				*eS*	**Sn**	**02 16 09.8**	**-0.1**
TRN	**Trinidad (W)**	**0.95**	**93**	*eP*	**Pn**	**02 15 56.2**	**-0.1**
TRN				*eS*	**Sn**	**02 16 09.7**	**-0.2**
GRGR	**Grenville**	**1.59**	**26**	*eP*	**Pn**	**02 16 04.6**	**+0.1**
GRGR				*eS*	**Sn**	**02 16 24.6**	**+0.1**
GRGR	**Grenville**	**1.59**	**26**	*eP*	**Pn**	**02 16 03.9**	**-0.6**
GRGR				*eS*	**Sn**	**02 16 24.3**	**-0.2**
GCMP	**Grenada, Carri**	**2.01**	**27**	*eP*	**Pn**	**02 16 10.6**	**+0.5**

*IDC **03** 02:20:01.3±0.4, 20°.10N×146°.23E, h0km, mb4.6/33, mbtmp4.6/38, ML4.2/5, MS4.1/56, Error ellipse: s-maj=16.4km s-min=9.8km az=85.0*
*BJI **03** 02:20:04.5, 20°.09N×146°.33E, h36km, mB5.1/19, mb4.9/46, Ms4.5/32, Ms7 4.2/31*
*GFZ **03** 02:20:05.3±0.5, 20°.1N±3°×14°.6E±°, h10km, M5.0/24, mb5.1/24*
*NEIC **03** 02:20:07.0±1.5, 20°.13N±0°.06×146°.1E±0°.1, h30km±5km, mb4.9/264, Error ellipse: s-maj=16.8km s-min=9.2km az=87.0*
*GCMT **03** 02:20:09.0±0.3, 20°.07N±0°.02×146°.46E±0°.02, h32km, MW5.0/92, Moment Tensor Solution. s62,c78; s92,c140; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.19±.14; Mθθ 0.12±.09; Mϕϕ -3.30±.09; Mrθ 0.24±.12; Mrϕ 0.52±.07; Mθϕ 1.71±.12; Best double couple: M0 3.71100×10^16 NP1: ϕs 359.00000°, δ 59.00000°, λ 98.00000°. NP2: ϕs 163.00000°, δ 32.00000°, λ 76.00000°. Principal axes: T 3.6490, Plg 75.0000°, Azm 292.0000°; N 0.1300, Plg 7.0000°, Azm 175.0000°; P -3.7740, Plg 13.0000°, Azm 83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 02:20:06.4±0.6, 20°.09N±0°.04×146°.31E±0°.06, h32km±4km, h32km:pP-P, n595, σ1s 03/470, mb4.9/186, MS4.1/70, 4C-3D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**4.85**	**186**		**Pn**	**02 21 19.0**	**+1.8**
GUMO	**Guam**	**6.61**	**192**	Pn	**Pn**	**02 21 41.3**	**-0.1**
	13nm,0.3s,baz=130,slow=4.4,SNR=8.3						
GUMO				Sn	**Sn**	**02 22 55.9**	**+0.2**
	baz=299,slow=22						
GUMO				LR	LR	02 23 50.3	
	comp=Z,852nm,18.3s,baz=21,slow=35						
	58nm,0.6s						
GUMO	**Guam**	**6.61**	**192**	P	Pn	02 21 47.0	+5.6
GUMO	**Guam**	**6.61**	**192**		**Pn**	**02 21 44.1**	**+2.7**
GUMO					**Sn**	**02 22 55.9**	**+0.2**
GUMO	**Guam**	**6.61**	**192**	P	Pn	02 21 46.7	+5.3
JCJ	**Chichijima**	**7.93**	**332**	Pn	**Pn**	**02 21 57.2**	**-2.3**
	9.0nm,0.3s,baz=321,slow=12,SNR=4.8						
JCJ				Sn	**Sn**	**02 23 25.4**	**-2.8**
	11nm,0.3s,baz=297,slow=22,SNR=7.3						
	49nm,0.5s						
JCJ	**Chichijima**	**7.93**	**332**	P	**Pn**	**02 22 03.5**	**+4.0**
JCJ	**Chichijima**	**7.93**	**332**		**Pn**	**02 21 58.8**	**-0.8**
JHJ	**Hachijo jima 2**	**14.22**	**337**	Pn	**Pn**	**02 23 23.1**	**-2.6**
	3.8nm,0.3s,baz=94,slow=18,SNR=1.2						
JHJ				LR	LR	02 29 35.5	
	comp=Z,163nm,18.2s,baz=96,slow=40						
	24nm,0.5s						
INU	**Inuyama**	**17.27**	**334**		**Pn**	**02 24 03.5**	**-1.6**
JGF	**Kuroka**	**17.35**	**335**	P	**P**	**02 24 09.1**	**+1.8**
JGF	**Kuroka**	**17.35**	**335**		**Pn**	**02 24 04.8**	**-1.3**
JGF	**Kuroka**	**17.35**	**335**	P	**Pn**	**02 24 05.5**	**-0.7**
JMN	**Monobe**	**17.51**	**323**	P	**P**	**02 24 11.6**	**+2.5**
JMN	**Monobe**	**17.51**	**323**		**P**	**02 24 08.6**	**-0.5**
JMN				IAmb	IAmb	02 24 11.4	
	comp=Z,112nm,1.3s						
JMN	**Monobe**	**17.51**	**323**	P	**P**	**02 24 10.2**	**+1.1**
JOW	**Kunigami**	**17.84**	**295**	P	**P**	**02 24 11.6**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=173,slow=9.9,SNR=1.6						
JOW				LR	LR	02 30 01.9	
	comp=Z,790nm,21.2s,baz=118,slow=34						
	comp=Z,10nm,0.5s						
JOW	**Kunigami**	**17.84**	**295**	P	**P**	**02 24 11.6**	**-1.2**
MJAR	**Matsushiro Arr**	**17.86**	**338**	P	**Pn**	**02 24 11.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=170,slow=11,SNR=14						
	comp=Z,3.2nm,0.5s						
MJAR	**Matsushiro Arr**	**17.86**	**338**		**Pn**	**02 24 11.1**	**-1.4**
MAJO	**Matsushiro**	**17.86**	**338**	P	**P**	**02 24 15.1**	**+2.2**
MAJO	**Matsushiro**	**17.86**	**338**	P	**Pn**	**02 24 12.3**	**-0.2**
MAJO	**Matsushiro**	**17.86**	**338**	P	**P**	**02 24 12.6**	**-0.4**
MJB9	**Matsu-Tunnel**	**17.87**	**338**	P	**Pn**	**02 24 12.3**	**-0.3**
JNU	**Nakatsue**	**18.91**	**316**	P	**Pn**	**02 24 26.2**	**+0.9**
JNU	**Nakatsue**	**18.91**	**316**	P	**P**	**02 24 23.9**	**-0.6**
JNU	**Nakatsue**	**18.91**	**316**	P	**Pn**	**02 24 25.1**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**19.30**	**91**	T	T	02 44 22.2	
	baz=279,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**19.31**	**91**	T	T	02 44 15.8	
	baz=279,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**19.32**	**91**	T	T	02 44 15.5	
	baz=279,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**19.36**	**88**	T	T	02 44 16.6	
	baz=275,slow=75,SNR=29						
H11N2	**WAKE ISLAND Hy**	**19.36**	**88**	T	T	02 44 13.3	
	baz=275,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**19.38**	**88**	T	T	02 44 18.0	
	baz=275,slow=75,SNR=21						
MANU	**Manus Island**	**22.02**	**177**	P	**P**	**02 24 57.6**	**-0.7**
JAY	**Jayapura**	**23.13**	**194**	P	**P**	**02 25 09.8**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=313,slow=23,SNR=4.4						
	comp=Z,2.5nm,0.4s						
JAY	**Jayapura**	**23.13**	**194**	P	**P**	**02 25 13.5**	**+3.5**
SMPI	**Sarmi**	**23.18**	**200**	P	**P**	**02 25 12.8**	**+2.3**
	comp=Z,3μmcomp=Z,46nm,1.5s						
TJN	**Taejon**	**23.21**	**318**	P	**P**	**02 25 12.3**	**+1.7**
GENI	**Genyem**	**23.33**	**196**	P	**P**	**02 25 15.4**	**+3.4**
GENI	**Genyem**	**23.33**	**196**	P	**P**	**02 25 16.0**	**+4.0**
	comp=Z,47nm,0.8s						
KSRS	**Korea Array**	**23.57**	**321**	P	**P**	**02 25 13.5**	**-0.7**
	comp=Z,13nm,0.8s,baz=153,slow=8.7,SNR=50						
	comp=Z,13nm,0.8s						
KSAR	**Wonju Array Be**	**23.59**	**321**		**P**	**02 25 12.9**	**-1.4**
KS19	**Wonju Array Si**	**23.64**	**321**	P	**P**	**02 25 13.9**	**-1.0**
KS19				IAmb	IAmb	02 25 27.5	
	comp=Z,41nm,0.8s						
SSLB	**Suanglung**	**23.79**	**284**	P	**P**	**02 25 18.0**	**+1.5**
SSLB	**Suanglung**	**23.79**	**284**		**P**	**02 25 13.2**	**-3.3**
SSLB				IAmb	IAmb	02 25 26.3	
	comp=Z,24nm,0.8s						
SSLB	**Suanglung**	**23.79**	**284**	P	**P**	**02 25 13.6**	**-2.9**
DAV	**Davao City (W)**	**23.91**	**240**	LR	LR	02 32 43.3	
	comp=Z,493nm,20.9s,baz=92,slow=32						
MWPI	**Manokwari, Pap**	**24.10**	**211**	P	**P**	**02 25 22.3**	**+2.9**
	comp=Z,133nm,0.9s						
JKA	**Kamikawa-asahi**	**24.16**	**353**		**P**	**02 25 21.6**	**+2.0**
JKA	**Kamikawa-asahi**	**24.16**	**353**	P	**P**	**02 25 21.9**	**+2.3**
KRVT	**Keravat (AS076**	**24.89**	**166**	LR	LR	02 34 43.6	
	comp=Z,14nm,21.6s,baz=138,slow=35						
TGY	**Tagaytay City**	**24.95**	**260**	LR	LR	02 33 49.3	
	comp=Z,611nm,20.1s,baz=168,slow=33						
SIJI	**Sorong**	**25.52**	**217**	P	**P**	**02 25 31.9**	**-0.4**
	comp=Z,5.8nm,0.5s,baz=20,slow=8.1,SNR=3.9						
SIJI				LR	LR	02 33 31.5	
	comp=Z,264nm,19.7s,baz=337,slow=32						
	comp=Z,5.8nm,0.5s						
SIJI	**Sorong**	**25.52**	**217**	P	**P**	**02 25 33.8**	**+1.5**
USRK	**Ussuriysk Ar.**	**26.84**	**337**	P	**P**	**02 25 43.2**	**-0.8**
	comp=Z,5.9nm,0.7s,baz=148,slow=8.3,SNR=9.9						
	comp=Z,5.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**26.84**	**337**	P	**P**	**02 25 42.7**	**-1.3**
USA0B	**Ussuriysk Arra**	**26.84**	**337**	P	**P**	**02 25 43.6**	**-0.4**
NJ2	**Nanjing**	**27.30**	**301**	*eP*	**P**	**02 25 48.1**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
DL2	**Dalian**	**28.37**	**317**	P	**P**	**02 25 58.5**	**+0.8**
DL2				*eS*	**S**	**02 30 47.4**	**+5.0**
DL2				pmax	pmax		
	comp=Z,26nm,0.7s						
DL2				pmax	pmax		
	comp=Z,160nm,4.1s						
DL2				L	L		
	comp=Z,300nm,17.2s						
DL2				L	L		
	comp=Z,350nm,15.8s						
DL2				L	L		
	comp=Z,600nm,19.2s						
PMG	**Port Moresby**	**29.32**	**178**	P	**P**	**02 26 06.3**	**0.0**
	comp=Z,21nm,0.8s,baz=286,slow=13,SNR=2.6						
PMG				LR	LR	02 37 29.8	
	comp=Z,206nm,20.6s,baz=330,slow=36						
	comp=Z,21nm,0.8s						
PMG	**Port Moresby**	**29.32**	**178**	P	**P**	**02 26 06.3**	**0.0**
BNX	**BinXian**	**29.95**	**333**	⇓P	**P**	**02 26 12.1**	**+0.5**
BNX				pmax	pmax		
	comp=Z,21nm,0.7s						
BNX				pmax	pmax		
	comp=Z,100nm,4.6s						
WHN	**Wuhan**	**30.61**	**296**	P	**P**	**02 26 17.0**	**-0.7**
TOLI2	**Tolitoli**	**31.29**	**236**	P	**P**	**02 26 23.5**	**-0.2**
TOLI2				IAmb	IAmb	02 26 37.4	
	comp=Z,36nm,1.3s						
TOLI2	**Tolitoli**	**31.29**	**236**	P	**P**	**02 26 24.2**	**+0.4**
HNR	**Honiara**	**32.26**	**154**	LR	LR	02 38 55.1	
	comp=Z,16nm,20.7s,baz=44,slow=35						
KKM	**Kota Kinabalu**	**32.39**	**249**	P	**P**	**02 26 36.5**	**+2.9**
KKM	**Kota Kinabalu**	**32.39**	**249**	P	**P**	**02 26 32.1**	**-1.4**
KKM				IAmb	IAmb	02 26 49.5	
	comp=Z,22nm,0.9s						
KKM	**Kota Kinabalu**	**32.39**	**249**	P	**P**	**02 26 36.3**	**+2.7**
	comp=Z,26nm,0.7s						
KKM	**Kota Kinabalu**	**32.39**	**249**	P	**P**	**02 26 34.3**	**+0.7**
HNS	**HongShan**	**32.43**	**309**	⇓P	**P**	**02 26 32.9**	**-0.7**
HNS				pP	**pwP**	**02 26 46.7**	**+0.6**
HNS				S	**S**	**02 31 43.5**	**-2.6**
HNS				pmax	pmax		
	comp=Z,22nm,0.8s						
HNS				L	L		
	comp=Z,470nm,17.5s						
HNS				L	L		
	comp=Z,300nm,15.1s						
HNS				L	L		
	comp=Z,360nm,14.4s						
PETK	**Petropavlovsk-**	**34.11**	**12**	P	**P**	**02 26 48.2**	**+0.1**
	comp=Z,6.8nm,0.9s,baz=192,slow=7.5,SNR=8.6						
PETK				LR	LR	02 38 42.8	
	comp=Z,268nm,21.5s,baz=195,slow=33						
	comp=Z,6.8nm,0.9s						
QIZ	**Qiongzhong**	**34.34**	**275**	P	**P**	**02 26 49.9**	**-0.5**
QIZ				S	**S**	**02 32 18.0**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,170nm,5.5s						
QIZ				L	L		
	comp=Z,160nm,15.1s						
QIZ				L	L		
	comp=Z,270nm,17.4s						
QIZ				L	L		
	comp=Z,380nm,17.1s						
SPSI	**Sidrap Palu**	**35.37**	**230**	P	**P**	**02 26 59.9**	**+0.5**
	comp=Z,2μmcomp=Z,33nm,1.2s						
HHC	**Hu-ho-hao-te**	**36.06**	**313**	*eP*	**P**	**02 27 06.1**	**+0.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,42nm,4.3s						
HHC				L	L		
	comp=Z,170nm,13.5s						
HHC				L	L		
	comp=Z,170nm,13.3s						
HHC				L	L		
	comp=Z,220nm,14.7s						
KAPI	**Kappang**	**36.11**	**229**	P	**P**	**02 27 06.0**	**+0.3**
KAPI				IAmb	IAmb	02 27 08.2	
	comp=Z,11nm,0.7s						
KAPI	**Kappang**	**36.11**	**229**	P	**P**	**02 27 06.9**	**+1.2**
	comp=Z,10nm,0.7s						
HILR	**Hailar Array B**	**36.23**	**330**	P	**P**	**02 27 05.6**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=136,slow=9.4,SNR=3.8						
	comp=Z,2.2nm,0.5s						
BSSI	**Bau Bau,

FITZ **Fitzroy Crossi** 43.03 209 P P 02 28 03.0 -0.3
FITZ **Fitzroy Crossi** 43.03 209 P P 02 28 03.1 -0.2
YAK **Yakutsk** 43.47 349 LR LR 02 47 50.8
comp=Z,156nm,19.9s,baz=180,slow=38
GTA2 **Gaotai** 44.23 306 eP P 02 28 12.2 -0.8
GTA2 pmax pmax
comp=Z,9.0nm,1.2s
GTA2 L L
comp=Z,260nm,19.2s
GTA2 L L
comp=Z,190nm,18.2s
GTA2 L L
comp=Z,250nm,21.6s
CMAR **Chiang Mai Arr** 44.62 276 P P 02 28 16.1 -0.1
comp=Z,2.0nm,0.3s,baz=65,slow=6.6,SNR=19
CMAR LR LR 02 46 32.0
comp=Z,150nm,19.5s,baz=85,slow=36
comp=Z,2.0nm,0.3s
CMAR **Chiang Mai Arr** 44.62 276 P P 02 28 15.9 -0.3
AS31 **Alice Springs** 45.14 196 P P 02 28 18.8 -1.3
ASAR **Alice Springs** 45.14 196 P P 02 28 18.8 -1.3
comp=Z,2.1nm,0.5s,baz=15,slow=7.7,SNR=25
ASAR PcP PcP 02 30 01.1 +0.7
comp=Z,0.9nm,0.7s,baz=16,slow=3.7,SNR=2.0
ASAR LR LR 02 46 56.4
comp=Z,282nm,21.7s,baz=5.5,slow=36
comp=Z,2.1nm,0.5s
ASAR **Alice Springs** 45.14 196 P P 02 28 19.6 -0.6
ASAR PcP 02 30 01.1 +0.7
MYKOM **Kota Tinggi** 45.28 252 P P 02 28 20.8 -0.6
MYKOM **Kota Tinggi** 45.28 252 P P 02 28 22.4 +1.0
comp=Z,32nm,0.8s
MYKOM **Kota Tinggi** 45.28 252 P P 02 28 22.4 +1.0
TLY **Talaya** 45.77 324 LR LR 02 47 47.5
comp=Z,370nm,21.9s,baz=112,slow=36
KLSI 47.70 243 P P 02 28 42.9 +2.5
SPIA **Saint Paul Isl** 48.85 30 P P 02 28 49.5 +0.8
baz=239
UNV **Unalaska Valle** 49.19 35 P P 02 28 52.3 +1.0
baz=246
PSI **Prapat** 49.29 256 P P 02 28 53.5 +0.6
comp=Z,11nm,1.0s
RPSI **Rantau Prapat** 49.34 256 P P 02 28 52.0 -1.0
RPSI IAmb IAmb 02 28 60.0
comp=Z,8.9nm,0.9s
SHL **Shillong** 50.18 287 P P 02 28 57.9 -1.7
LSA **Lhasa** 50.54 292 ||/P P 02 28 50.6 -12
LSA pmax pmax
comp=Z,15nm,0.6s
BRDH **Bariadhala** 50.73 283 LR LR 02 50 43.8
comp=Z,156nm,21.8s,baz=116,slow=36
GSI **Gunungsitoli** 51.13 255 P P 02 29 07.3 +0.6
comp=Z,28nm,0.8s
GSI **Gunungsitoli** 51.13 255 P P 02 29 06.4 -0.3
STKA **Stephens Creek** 51.87 185 P P 02 29 10.1 -1.7
comp=Z,1.9nm,0.6s,baz=1.9,slow=6.9,SNR=4.3
STKA LR LR 02 51 49.4
comp=Z,201nm,18.8s,baz=20,slow=37
comp=Z,1.9nm,0.6s
GAMB **Gambell** 51.95 22 P P 02 29 13.0 +1.0
baz=233
M11K **Mekoryuk** 52.28 28 P P 02 29 15.6 +1.1
baz=241
SDPT **Sand Point** 53.01 35 P P 02 29 20.8 +0.8
baz=251
CHNA **Chernabura Isl** 53.32 36 P P 02 29 23.4 +1.1
baz=252
M13K **Dall Lake** 53.55 28 P P 02 29 25.2 +1.3
baz=244
K13K **Kusilvak Mount** 53.68 26 P P 02 29 26.2 +1.4
baz=242
S14K **Fog Glacier** 53.81 34 P P 02 29 27.3 +1.3
baz=251
WMQ **Urumqi** 53.85 310 eP P 02 29 27.3 +0.8
WMQ pmax pmax
comp=Z,22nm,1.1s
WMQ pmax pmax
comp=Z,130nm,3.7s
WMQ L L
comp=Z,230nm,24.3s
O14K **Tigyukauivet M** 54.03 30 P P 02 29 28.9 +1.5
baz=247
N14K **Kuskokwak Cree** 54.10 29 P P 02 29 29.2 +1.3
baz=246
L14K **Kuka Creek** 54.25 27 P P 02 29 30.1 +1.1
baz=244
M14K **Bethel** 54.31 28 P P 02 29 30.4 +0.9
baz=245
TNA **Tin City** 54.32 22 P P 02 29 30.8 +1.4
baz=236
EVN **Everest** 54.46 291 P P 02 29 32.5 +0.7
O15K **Ungalikthiuk R** 54.68 31 P P 02 29 33.9 +1.7
O15K IAmb IAmb 02 29 42.4
comp=Z,13nm,0.9s
O15K **Ungalikthiuk R** 54.68 31 P P 02 29 32.7 +0.5
baz=249,SNR=5.1
ANM **Nome** 54.70 23 P P 02 29 33.0 +0.8
baz=239
F14K **Arctic Creek** 54.83 22 P P 02 29 34.4 +1.2
baz=238
M15K **Kasigluk River** 54.86 29 P P 02 29 34.5 +1.0
baz=247
L15K **Ungalak Mounta** 54.91 27 P P 02 29 34.5 +0.7
baz=245
N15K **Kwethluk River** 54.93 29 P P 02 29 35.6 +1.6
N15K IAmb IAmb 02 29 41.8
comp=Z,16nm,0.9s
N15K **Kwethluk River** 54.93 29 P P 02 29 34.3 +0.3
baz=248
K15K **Wolf Creek Mou** 55.16 27 P P 02 29 36.4 +0.9
baz=245
G15K **Niukluk** 55.41 23 P P 02 29 38.5 +1.1
baz=241
P16K **Nushagak River** 55.52 31 P P 02 29 39.2 +1.0
baz=250
F15K **North Star Dit** 55.55 22 P P 02 29 39.2 +0.9
baz=240
N16K **Nishlik Lake** 55.65 29 P P 02 29 40.3 +1.0
baz=249,SNR=6.6
O16K **Kokwok River B** 55.66 31 P P 02 29 40.6 +1.3
O16K IAmb IAmb 02 30 03.6
comp=Z,18nm,1.4s
O16K **Kokwok River B** 55.66 31 P P 02 29 39.8 +0.5
baz=250
M16K **Timber Creek** 55.77 29 P P 02 29 40.5 +0.5
baz=248,SNR=6.0
CHIR **Chirikof Islan** 55.77 35 P P 02 29 41.0 +0.8
baz=255
L16K **Owhat River** 55.80 28 P P 02 29 41.1 +0.9
baz=247
R17L **Mt. Peulik Vol** 55.89 33 P P 02 29 41.8 +0.8
baz=253
H16K **Elim** 55.91 24 P P 02 29 41.5 +0.5
baz=243
J16K **Anvik River** 55.96 26 P P 02 29 41.8 +0.4
baz=245
I17K **Unalakleet** 56.18 25 P P 02 29 43.3 +0.4
baz=245
O17K **Koliganek Bris** 56.20 31 P P 02 29 43.8 +0.7
baz=251,SNR=6.7
G16K **Koyuk River** 56.22 23 P P 02 29 44.3 +1.1
baz=242
ZSN **Zaisan** 56.24 314 eP P 02 29 43.6 -0.1
comp=Z,6.9nm,0.9s
Q17K **Contact Creek** 56.32 33 P P 02 29 43.9 -0.2
baz=253
P17K **Kvichak River** 56.33 31 P P 02 29 44.5 +0.5
baz=252
N17K **Nushagak Hills** 56.41 30 IAmb IAmb 02 29 52.2
comp=Z,7.7nm,0.8s
N17K **Nushagak Hills** 56.41 30 P P 02 29 45.4 +0.8
baz=250
L17K **Donlin** 56.48 28 P P 02 29 45.5 +0.4
baz=248
M17K **Holitna River** 56.59 29 IAmb IAmb 02 29 49.1
comp=Z,22nm,1.2s
M17K **Holitna River** 56.59 29 P P 02 29 45.7 -0.2
baz=250
J17K **VABM Dome** 56.64 26 P P 02 29 45.8 -0.4
baz=247
C16K **Lisburne Hills** 56.67 19 P P 02 29 46.4 +0.1
baz=237
K17K **Iditarod** 56.70 27 P P 02 29 46.5 -0.1
baz=248,SNR=5.4
SII **Sitkinak Islan** 56.74 35 P P 02 29 47.3 +0.2
baz=256
Q18K **Katmai Hardscr** 56.87 32 P P 02 29 47.6 -0.5
baz=254

G17K **Kiwalik Mounta** 56.91 23 P P 02 29 47.9 -0.2
baz=244
H17K **Granite Mounta** 56.94 24 P P 02 29 48.1 -0.2
baz=245
P18K **Big Mountain,** 56.98 31 P P 02 29 48.8 +0.1
baz=253
N18K **Kilae Creek** 57.06 30 IAmb IAmb 02 30 07.8
comp=Z,25nm,1.6s
N18K **Kilae Creek** 57.06 30 P P 02 29 49.5 +0.2
baz=252
D17K **Noatak River** 57.09 21 P P 02 29 49.7 +0.4
baz=240
F17K **Baldwin Pennin** 57.12 22 P P 02 29 50.0 +0.5
baz=243
O18K **Koktuh Hills** 57.13 31 IAmb IAmb 02 30 06.2
comp=Z,15nm,0.9s
O18K **Koktuh Hills** 57.13 31 P P 02 29 49.7 0.0
baz=253,SNR=5.4
E17K **Hotham Inlet** 57.21 21 P P 02 29 50.0 -0.2
baz=242
L18K **Granite Mounta** 57.21 28 P P 02 29 50.5 +0.2
baz=250
ZAA0 **Zalesovo Array** 57.27 322 P P 02 29 49.9 -1.0
ZAA0 IAmb IAmb 02 29 51.0
comp=Z,15nm,0.9s
ZALV **Zalesovo Beam** 57.27 322 P P 02 29 50.0 -0.8
comp=Z,12nm,0.8s,baz=103,slow=6.4,SNR=41
ZALV LR LR 02 54 16.2
comp=Z,201nm,21.9s,baz=93,slow=36
comp=Z,12nm,0.8s
ZALV **Zalesovo Beam** 57.27 322 P P 02 29 49.9 -1.0
RDOG **Red Dog Mine** 57.33 20 P P 02 29 51.7 +0.7
baz=240
M18K **Stony River** 57.35 29 P P 02 29 51.9 +0.6
baz=251,SNR=5.2
OHAK **Old Harbor** 57.38 34 P P 02 29 52.0 +0.5
baz=256
C17K **DeLong Mountai** 57.46 20 P P 02 29 52.3 +0.4
baz=240
H18K **Honhosa River** 57.63 24 P P 02 29 53.5 +0.3
baz=246
Q19K **Cape Douglas,** 57.63 32 P P 02 29 53.7 +0.4
baz=255
O19K **Port Alsworth** 57.66 31 IAmb IAmb 02 30 03.4
comp=Z,12nm,0.8s
O19K **Port Alsworth** 57.66 31 P P 02 29 53.7 +0.3
baz=253
F18K **Selawik** 57.76 22 P P 02 29 54.5 +0.5
baz=244
N19K **Bonanza Creek** 57.76 30 IAmb IAmb 02 29 58.7
comp=Z,14nm,1.0s
N19K **Bonanza Creek** 57.76 30 P P 02 29 54.3 0.0
baz=253,SNR=8.5
E18K **Tukpahlearik C** 57.79 21 IAmb IAmb 02 30 07.2
comp=Z,16nm,1.2s
E18K **Tukpahlearik C** 57.79 21 P P 02 29 54.6 +0.3
baz=243
G18K **Tagagawik** 57.82 23 IAmb IAmb 02 29 56.9
comp=Z,18nm,1.2s
G18K **Tagagawik** 57.82 23 P P 02 29 54.7 +0.1
baz=246,SNR=5.3
KDAK **Kodiak Island** 57.89 34 LR LR 02 51 15.8
comp=Z,117nm,21.6s,baz=238,slow=32
KDAK **Kodiak Island** 57.89 34 P P 02 29 55.0 -0.1
baz=256
MKAR **Makanchi Array** 57.93 313 P P 02 29 55.4 -0.3
comp=Z,4.2nm,0.6s,baz=90,slow=8.5,SNR=19
MKAR LR LR 02 57 28.7
comp=Z,133nm,18.2s,baz=107,slow=39
comp=Z,4.2nm,0.6s
MKAR **Makanchi Array** 57.93 313 P P 02 29 55.1 -0.5
L19K **White Mountain** 58.01 28 IAmb IAmb 02 29 58.7
comp=Z,12nm,1.3s
L19K **White Mountain** 58.01 28 P P 02 29 55.6 -0.4
baz=252
P19K **Oil Pt** 58.03 31 P P 02 29 56.3 +0.2
baz=255
GCSA **Galena City Sc** 58.05 25 P P 02 29 56.6 +0.5
baz=248
M19K **Big River Lodg** 58.13 29 P P 02 29 56.9 +0.1
baz=252
MAKZ **Makanchi** 58.14 313 P P 02 29 56.2 -0.9
MAKZ IAmb IAmb 02 30 08.6
comp=Z,10.0nm,0.8s
MAKZ **Makanchi** 58.14 313 P P 02 29 57.2 +0.1
MAKZ **Makanchi** 58.14 313 P P 02 29 57.1 0.0
C18K **Utukok River** 58.18 20 P P 02 29 57.4 +0.4
baz=241
KLBR **Kellerberrin** 58.23 209 P P 02 29 59.5 +1.7
J19K **Poorman** 58.29 26 IAmb IAmb 02 30 01.0
comp=Z,11nm,1.1s
J19K **Poorman** 58.29 26 P P 02 29 57.6 -0.2
baz=250,SNR=5.8
O20K **Slope Mountain** 58.44 31 P P 02 29 58.9 -0.1
baz=255
G19K **Purcell Mounta** 58.51 23 IAmb IAmb 02 30 09.4
comp=Z,6.8nm,0.8s
G19K **Purcell Mounta** 58.51 23 P P 02 30 00.1 +0.8
baz=247
H19K **Roundabout Mou** 58.51 24 IAmb IAmb 02 30 09.7
comp=Z,11nm,0.7s
H19K **Roundabout Mou** 58.51 24 P P 02 30 00.5 +1.2
baz=248,SNR=8.7
F19K **Shaleruckik Mo** 58.53 23 P P 02 30 00.2 +0.7
baz=246
M20K **Styx River** 58.70 29 IAmb IAmb 02 30 19.2
comp=Z,8.0nm,1.1s
M20K **Styx River** 58.70 29 P P 02 30 01.9 +1.1
baz=253
K20K **Telida** 58.73 27 IAmb IAmb 02 30 04.1
comp=Z,10nm,1.0s
K20K **Telida** 58.73 27 P P 02 30 02.0 +1.1
baz=252,SNR=7.9
C19K **Lookout Ridge** 58.91 20 P P 02 30 02.1 0.0
baz=243
J20K **Nowinta River** 58.96 26 P P 02 30 02.7 +0.2
baz=251,SNR=11
A19K **Wainwright** 58.97 18 P P 02 30 02.3 -0.2
baz=241
E19K **Redstone River** 58.98 22 P P 02 30 02.6 0.0
baz=246
I20K **Naaghedeneel** 59.03 25 P P 02 30 02.8 -0.1
baz=250
H20K **Anotleneega Mo** 59.11 25 P P 02 30 03.7 +0.2
baz=250,SNR=8.2
D19K **Kuna River** 59.12 21 P P 02 30 04.0 +0.4
baz=245
BRSE **Bradley Lake S** 59.28 32 P P 02 30 04.7 -0.1
baz=257
F20K **Avraaart Lake** 59.36 23 P P 02 30 05.6 +0.4
baz=248
PPLA **Purkeypile** 59.41 28 P P 02 30 05.7 -0.1
baz=254
SKT **Skwentna** 59.45 29 IAmb IAmb 02 30 23.5
comp=Z,6.9nm,0.9s
SKT **Skwentna** 59.45 29 P P 02 30 05.9 -0.1
baz=255
CAST **Castle Rocks** 59.60 27 IAmb IAmb 02 30 09.6
comp=Z,14nm,1.1s
CAST **Castle Rocks** 59.60 27 P P 02 30 06.8 -0.2
baz=254,SNR=13
CHUM **Lake Minchumin** 59.64 27 P P 02 30 07.3 +0.1
baz=253
E20K **Nigu River** 59.67 21 P P 02 30 07.1 -0.3
baz=247
D20K **Etivluk River** 59.71 21 IAmb IAmb 02 30 21.2
comp=Z,12nm,0.9s
D20K **Etivluk River** 59.71 21 P P 02 30 07.2 -0.4
baz=246,SNR=8.2
IMAR **Indian Mountai** 59.72 24 P P 02 30 09.3 +1.6
SHLS **Shalkode** 59.79 309 eP P 02 30 06.3 -2.4
comp=Z,5.0nm,0.8s
L22K **Petersville** 59.94 28 IAmb IAmb 02 30 15.0
comp=Z,19nm,1.5s
L22K **Petersville** 59.94 28 P P 02 30 09.2 -0.1
baz=255
H21K **Melozitna Rive** 59.98 25 IAmb IAmb 02 30 13.0
comp=Z,8.9nm,1.2s
H21K **Melozitna Rive** 59.98 25 P P 02 30 09.6 +0.1
baz=252,SNR=8.1
SEW **Seward** 59.99 31 P P 02 30 09.8 +0.2
baz=258
G21K **Allakaket** 59.99 24 IAmb IAmb 02 30 22.9
comp=Z,10nm,1.1s
G21K **Allakaket** 59.99 24 P P 02 30 09.3 -0.3
baz=250,SNR=5.1
RC01 **Rabbit Creek A** 60.07 30 IAmb IAmb 02 30 27.8
comp=Z,8.9nm,0.8s

RC01 **Rabbit Creek A** 60.07 30 P P 02 30 10.0 -0.2
baz=257
B20K **Meade River** 60.07 19 P P 02 30 09.8 -0.2
baz=245
UZB **Uzynbulak** 60.11 309 eP P 02 30 10.8 -0.3
comp=Z,8.4nm,1.1s
CUT **Chulitna** 60.13 29 P P 02 30 10.6 0.0
baz=256
I21K **Tanana** 60.16 25 IAmb IAmb 02 30 25.2
comp=Z,10nm,1.0s
I21K **Tanana** 60.16 25 P P 02 30 10.5 -0.2
baz=253,SNR=8.4
F21K **Alatna River** 60.24 23 P P 02 30 11.7 +0.4
baz=250
KPKS **Kokpek** 60.36 309 eP P 02 30 12.4 -0.2
TRF **Thorofare Moun** 60.39 28 P P 02 30 12.4 -0.1
baz=255,SNR=14
PMR **Palmer** 60.46 30 P P 02 30 13.5 +0.7
PMR IAmb IAmb 02 30 30.4
comp=Z,8.1nm,0.8s
PMR **Palmer** 60.46 30 P P 02 30 12.7 -0.1
baz=257
C21K **Knifeblade Rid** 60.49 21 P P 02 30 12.5 -0.5
baz=248
E21K **Killik River** 60.50 22 P P 02 30 12.5 -0.5
baz=249
NRIK **Nerl'sk** 60.51 340 P P 02 30 11.8 -1.2
comp=Z,11nm,0.6s,baz=117,slow=6.8,SNR=22
comp=Z,11nm,0.6s
TDK **Taldyqorghan** 60.56 311 eP P 02 30 13.7 -0.1
SATY **Saty** 60.56 309 eP P 02 30 13.9 -0.2
comp=Z,7.3nm,1.1s
H22K **Ishtalitna Cre** 60.61 25 P P 02 30 14.4 +0.5
baz=253
MLY **Manley** 60.62 26 IAmb IAmb 02 30 27.6
comp=Z,6.7nm,0.9s
MLY **Manley** 60.62 26 P P 02 30 14.5 +0.6
baz=254,SNR=11
KURK **Kurchatov** 60.63 318 P P 02 30 13.4 -0.8
KURK **Kurchatov** 60.63 318 P P 02 30 13.8 -0.4
KURK **Kurchatov** 60.63 318 P P 02 30 13.6 -0.6
KURK PcP PcP 02 30 57.2 -1.0
KURBB **Kurchatov Arra** 60.68 317 P P 02 30 14.1 -0.5
comp=Z,20nm,0.6s,baz=93,slow=7.6,SNR=105
KURBB LR LR 02 58 43.0
comp=Z,302nm,18.4s,baz=168,slow=38
comp=Z,20nm,0.6s
B21K **Ikpikpuk River** 60.72 20 P P 02 30 14.8 +0.4
baz=248
KNK **Knik Glacier** 60.74 30 IAmb IAmb 02 30 21.6
comp=Z,9.7nm,0.8s
KNK **Knik Glacier** 60.74 30 P P 02 30 15.2 +0.4
baz=258
A21K **Barrow** 60.80 18 P P 02 30 15.3 +0.4
baz=245
F22K **John River** 60.81 23 P P 02 30 15.4 +0.2
baz=251
G22K **Bettles** 60.88 24 P P 02 30 16.0 +0.4
baz=252
SML **Sawmill** 60.88 30 P P 02 30 16.2 +0.4
baz=258,SNR=13
WAT1 **Susitna Watana** 61.00 28 P P 02 30 16.7 +0.1
baz=257
TARG **Taragay, Kyrgy** 61.04 307 P P 02 30 18.5 +0.9
MCK **McKinley** 61.04 27 IAmb IAmb 02 30 24.5
comp=Z,6.9nm,1.0s
MCK **McKinley** 61.04 27 P P 02 30 17.2 +0.4
baz=256
A22K **Sinclair Lake** 61.15 19 P P 02 30 17.7 +0.4
baz=247
NEA2 **Nenana** 61.19 26 IAmb IAmb 02 30 31.8
comp=Z,6.8nm,0.8s
NEA2 **Nenana** 61.19 26 P P 02 30 18.1 +0.3
baz=256
I23K **Minto, Yukon-K** 61.21 26 IAmb IAmb 02 30 38.0
comp=Z,5.2nm,0.7s
I23K **Minto, Yukon-K** 61.21 26 P P 02 30 18.6 +0.7
baz=255,SNR=5.3
GLI **Glacier Island** 61.28 31 P P 02 30 18.9 +0.4
baz=260
WAT6 **Susitna Watana** 61.31 29 P P 02 30 19.0 +0.2
baz=258,SNR=9.8
H23K **Yukon River** 61.32 25 IAmb IAmb 02 30 32.9
comp=Z,18nm,1.6s
H23K **Yukon River** 61.32 25 P P 02 30 19.5 +0.8
baz=255
SCM **Sheep Creek Mo** 61.35 30 P P 02 30 19.3 +0.3
baz=259,SNR=11
G23K **Bananza Creek** 61.37 24 P P 02 30 19.5 +0.5
baz=254,SNR=7.7
B22K **Teshekpuk Lake** 61.38 20 P P 02 30 19.1 +0.2
baz=248
Q23K **Middleton Isla** 61.41 32 P P 02 30 19.8 +0.6
baz=261
COLD **Coldfoot** 61.45 23 IAmb IAmb 02 30 33.5
comp=Z,8.7nm,1.2s
COLD **Coldfoot** 61.45 23 P P 02 30 20.7 +1.2
baz=253
MDOK **Medeo** 61.56 309 eP P 02 30 20.7 -0.2
WRH **Wood River Hil** 61.58 27 IAmb IAmb 02 30 41.0
comp=Z,6.2nm,0.9s
DHY **Denali Highway** 61.58 28 IAmb IAmb 02 30 30.1
comp=Z,11nm,1.0s
DHY **Denali Highway** 61.58 28 P P 02 30 21.2 +0.5
baz=258
TNSS **Tian-Shan** 61.63 309 eP P 02 30 21.1 -0.5
AAA **Alma-Ata** 61.65 309 eP P 02 30 21.2 -0.1
D23K **Nanushuk River** 61.81 21 P P 02 30 22.8 +1.0
baz=252
EYAK **Cordova Ski Ar** 61.88 31 P P 02 30 22.8 +0.3
baz=261
E23K **Chandalar** 61.91 23 IAmb IAmb 02 30 36.5
comp=Z,17nm,1.1s
E23K **Chandalar** 61.91 23 P P 02 30 23.2 +0.5
baz=254,SNR=11
M24K **Tolsona, Glenn** 61.94 30 P P 02 30 23.8 +0.9
baz=260
KLU **Klutina** 61.95 30 IAmb IAmb 02 30 37.0
comp=Z,9.9nm,1.0s
KLU **Klutina** 61.95 30 P P 02 30 23.6 +0.5
baz=260
H24K **Noodor Dome** 61.98 25 P P 02 30 23.3 +0.1
baz=256
POKR **Poker Plat Res** 62.00 26 P P 02 30 23.6 +0.4
baz=257
TOLK **Toolik Lake Re** 62.09 22 P P 02 30 24.0 +0.1
baz=253
C23K **Itkillik River** 62.11 20 P P 02 30 24.0 +0.2
baz=252
IL31 62.15 26 IAmb IAmb 02 30 25.1
comp=Z,8.6nm,1.1s
ILAR **Eielson Array** 62.15 26 P P 02 30 23.9 -0.4
comp=Z,5.6nm,1.1s,baz=260,slow=5.9,SNR=34
ILAR LR LR 02 56 01.1
comp=Z,142nm,19.9s,baz=269,slow=35
comp=Z,5.6nm,1.1s
ILAR **Eielson Array** 62.15 26 P P 02 30 23.4 -0.8
E24K **Your Creek** 62.32 23 IAmb IAmb 02 30 28.3
comp=Z,9.1nm,1.3s
E24K **Your Creek** 62.32 23 P P 02 30 25.7 +0.3
baz=255
G24K **Hadweenzic Riv** 62.35 24 IAmb IAmb 02 31 07.7
comp=Z,9.3nm,1.3s
G24K **Hadweenzic Riv** 62.35 24 P P 02 30 26.0 +0.5
baz=256
F24K **Squaw Lake** 62.40 23 P P 02 30 26.6 +0.7
baz=255
NRN **Naryn** 62.40 307 IAmb IAmb 02 30 44.0
comp=Z,11nm,0.9s
PAX **Paxson** 62.41 29 P P 02 30 26.5 +0.4
baz=260,SNR=7.7
K24K **Donnelly Dome** 62.43 28 P P 02 30 26.6 +0.4
baz=259
KAIM **Kayak Island** 62.45 32 P P 02 30 26.8 +0.5
baz=263
HARP **HAARP** 62.46 29 P P 02 30 26.7 +0.3
baz=261
BMRM **Bremner River** 62.50 31 P P 02 30 27.0 +0.3
baz=262
D24K **Happy Valley** 62.50 21 IAmb IAmb 02 30 40.1
comp=Z,10nm,0.7s
D24K **Happy Valley** 62.50 21 P P 02 30 27.0 +0.5
baz=254
N25K **Chitina, Valde** 62.60 30 P P 02 30 27.5 +0.1
baz=262
C24K **Franklin Bluff** 62.70 21 P P 02 30 27.9 +0.1
baz=254
J25K **Salcha River,** 62.76 27 P P 02 30 28.5 +0.2

baz=259
RIDG Independent Ri 62.83 28 lAmb lAmb 02 30 49.9
comp=Z,12nm,0.9s
RIDG Independent Ri 62.83 28 P **P** **02 30 28.9 +0.1**
baz=260,SNR=7.0
PRP Porcupine Dome 62.87 26 P **P** **02 30 29.5 +0.3**
baz=259
KSH2 Kashi 62.89 304 P **P** **02 30 30.4 +0.6**
KSH2 pP pwP 02 30 41.9 -0.8
KSH2 pmax pmax
comp=Z,16nm,0.8s
KSH2 L L
comp=Z,290nm,16.1s
KSH2 L L
comp=Z,170nm,17.9s
KSH2 L L
comp=Z,230nm,15.5s
G25K Bearman Lake 62.90 24 P **P** **02 30 29.7 +0.5**
baz=258
GLB Gilahina Butte 62.95 30 lAmb lAmb 02 30 48.4
comp=Z,15nm,1.2s
CRQE Cirque 63.21 31 P **P** **02 30 31.7 +0.2**
baz=263
SCRK Sand Creek 63.24 28 lAmb lAmb 02 30 49.1
comp=Z,11nm,1.0s
SCRK Sand Creek 63.24 28 P **P** **02 30 31.6 0.0**
baz=261,SNR=13
F25K Christian Rive 63.25 23 P **P** **02 30 31.8 +0.2**
baz=258
SGDS Sogindy 63.31 309 *eP* **P** **02 30 32.2 -0.2**
MCARA McCarthy VSAT 63.31 31 lAmb lAmb 02 30 49.0
comp=Z,12nm,0.8s
MCARA McCarthy VSAT 63.31 31 P **P** **02 30 32.9 +0.8**
baz=263
L26K Log Cabin Wild 63.38 29 P **P** **02 30 32.7 +0.2**
baz=262
D25K Kavik River 63.39 22 lAmb lAmb 02 30 35.1
comp=Z,7.3nm,1.0s
D25K Kavik River 63.39 22 P **P** **02 30 32.9 +0.4**
baz=256,SNR=7.3
E25K Arctic Village 63.40 23 P **P** **02 30 33.1 +0.6**
baz=257
AAK Ala-Archa 63.45 308 LR LR 02 59 28.2
comp=Z,117nm,20.3s,baz=97,slow=37
AAK Ala-Archa 63.45 308 P **P** **02 30 33.2 -0.3**
AAK Ala-Archa 63.45 308 P **P** **02 30 33.8 +0.2**
AAK Ala-Archa 63.45 308 P **P** **02 30 33.5 -0.1**
AAK pP **pP** **02 30 42.7 +0.2**
AAK PcP **PcP** **02 31 08.7 -1.5**
M26K Nabesna, AK 63.46 29 P **P** **02 30 33.5 +0.5**
baz=263
BMAR Burnt Mountain 63.62 24 P **P** **02 30 34.8 +0.7**
BTLS Baital 63.65 311 *eP* **P** **02 30 34.6 0.0**
comp=Z,9.3nm,1.2s
I26K Coal Creek Min 63.80 26 P **P** **02 30 35.8 +0.6**
baz=261
G26K Porcupine Rive 63.83 24 lAmb lAmb 02 30 49.5
comp=Z,9.0nm,0.9s
G26K Porcupine Rive 63.83 24 P **P** **02 30 35.5 +0.2**
baz=260
F26K Sheenjek River 63.83 23 lAmb lAmb 02 30 49.7
comp=Z,13nm,1.4s
F26K Sheenjek River 63.83 23 P **P** **02 30 36.0 +0.5**
baz=259,SNR=7.7
GRNC Granite Creek 63.86 31 lAmb lAmb 02 30 54.5
comp=Z,8.6nm,0.8s
M27K Edge Creek, AK 63.97 30 P **P** **02 30 37.0 +0.5**
baz=264
C26K Camden Bay 64.03 21 P **P** **02 30 37.2 +0.6**
baz=257
BCAR Beaver Creek A 64.09 29 P **P** **02 30 38.2 +1.0**
LOGN Logan Glacier 64.23 31 lAmb lAmb 02 31 07.3
comp=Z,8.9nm,0.8s
C27K Jago River 64.37 21 P **P** **02 30 39.5 +0.6**
baz=258
BRZS Berezniki 64.42 317 *eP* **P** **02 30 40.0 +0.4**
BVCY Beaver Creek 64.44 30 P **P** **02 30 40.6 +1.1**
baz=265
I27K Kandik River 64.48 26 P **P** **02 30 40.7 +1.0**
baz=262
PINM Pinnacle 64.55 32 P **P** **02 30 41.0 +0.7**
baz=266
YUK3 Moose Creek 64.58 30 P **P** **02 30 41.0 +0.4**
baz=265
H27K Steamboat Moun 64.61 25 lAmb lAmb 02 30 43.1
comp=Z,11nm,1.2s
H27K Steamboat Moun 64.61 25 P **P** **02 30 41.4 +0.9**
baz=262,SNR=9.8
O28M Mount Upton 64.63 31 lAmb lAmb 02 31 05.6
comp=Z,17nm,1.1s
O28M Mount Upton 64.63 31 P **P** **02 30 41.7 +0.6**
baz=266
G27K Doyon Strip 64.64 25 P **P** **02 30 41.6 +0.9**
baz=262
PALK Pallekele 64.66 269 LR LR 02 56 03.4
comp=Z,36nm,20.9s,baz=56,slow=34
E27K Coleen River 64.87 23 P **P** **02 30 43.1 +0.9**
baz=261
YUK8 Steele Glacier 64.87 31 P **P** **02 30 43.5 +0.9**
baz=266,SNR=6.2
I28M Miner Creek 65.16 26 lAmb lAmb 02 30 59.3
comp=Z,12nm,1.4s
I28M Miner Creek 65.16 26 P **P** **02 30 45.0 +0.8**
baz=264
BRWY Burwash Landin 65.23 31 P **P** **02 30 45.3 +0.7**
baz=267,SNR=6.3
D27M Malcolm River 65.26 22 P **P** **02 30 45.2 +0.5**
baz=261
DAWY Dawson 65.26 28 P **P** **02 30 46.9 +2.1**
DAWY lAmb lAmb 02 31 00.1
comp=Z,9.2nm,1.3s
DAWY Dawson 65.26 28 P **P** **02 30 45.3 +0.5**
baz=265
NIL Nilore 65.37 299 P **P** **02 30 46.2 +0.2**
O29M Mount Kennedy 65.40 32 lAmb lAmb 02 31 02.5
comp=Z,10nm,0.9s
O29M Mount Kennedy 65.40 32 P **P** **02 30 46.8 +0.9**
baz=268
YUK4 Talbot Arm 65.41 31 P **P** **02 30 46.7 +0.6**
baz=267,SNR=9.6
F28M Old Crow 65.43 24 lAmb lAmb 02 30 48.5
comp=Z,9.3nm,1.2s
F28M Old Crow 65.43 24 P **P** **02 30 47.1 +1.2**
baz=263
YUK6 Outpost Mounta 65.53 31 P **P** **02 30 48.0 +1.1**
baz=268
M29M Somme Creek 65.56 30 P **P** **02 30 47.4 +0.5**
baz=267,SNR=7.2
E28M Babbage River 65.68 23 P **P** **02 30 48.6 +1.2**
baz=263
L29M L29M 65.75 29 lAmb lAmb 02 31 02.9
comp=Z,12nm,0.9s
L29M L29M 65.75 29 P **P** **02 30 49.1 +1.0**
baz=267,SNR=5.9
DZA Taraz 65.76 309 *eP* **P** **02 30 48.3 -0.1**
comp=Z,4.5nm,0.5s
BVAR Borovoye Array 65.78 320 P **P** **02 30 48.1 -0.2**
comp=Z,44nm,0.7s,baz=90,slow=7.7,SNR=124
comp=Z,44nm,0.7s
P29M Windy Craggy 65.79 33 P **P** **02 30 48.3 0.0**
baz=269
BORK Borovoye 65.82 320 P **P** **02 30 48.7 +0.1**
H29M Whitestone 65.88 25 lAmb lAmb 02 31 10.3
comp=Z,7.7nm,0.8s
H29M Whitestone 65.88 25 P **P** **02 30 49.4 +0.7**
baz=265
HYT Haines Junctio 65.94 31 P **P** **02 30 51.5 +2.2**
HYT lAmb lAmb 02 31 06.4
comp=Z,12nm,0.9s
HYT Haines Junctio 65.94 31 P **P** **02 30 49.6 +0.2**
baz=268,SNR=8.2
D28M Stokes Point 66.06 22 P **P** **02 30 50.6 +0.8**
baz=263
K29M Barlow Dome 66.07 28 P **P** **02 30 50.4 +0.3**
baz=267,SNR=7.2
G29M Pine Creek 66.08 25 lAmb lAmb 02 30 56.2
comp=Z,8.6nm,1.1s
G29M Pine Creek 66.08 25 P **P** **02 30 50.2 +0.2**
baz=265
MANEM Manem 66.09 303 P **P** **02 30 51.5 +0.5**
MANEM lAmb lAmb 02 30 53.5
comp=Z,46nm,0.7s
N30M Aishikik Lake 66.17 31 P **P** **02 30 50.4 -0.4**
baz=268
P30M Million Dollar 66.20 32 P **P** **02 30 50.8 -0.1**
baz=269
E29M Blow River 66.26 23 P **P** **02 30 51.5 +0.4**
baz=265

KKAR Karatay Array 66.33 309 P **P** **02 30 51.9 -0.2**
M30M Minto, Yukon 66.34 29 P **P** **02 30 52.0 +0.2**
baz=268
BTK Batken 66.44 306 lAmb lAmb 02 31 37.1
comp=Z,5.9nm,0.8s
EPYK Eagle Plains 66.55 25 lAmb lAmb 02 30 58.7
comp=Z,7.4nm,1.0s
EPYK Eagle Plains 66.55 25 P **P** **02 30 53.0 -0.1**
baz=267
S31K Pelican 66.57 35 P **P** **02 30 53.5 +0.3**
baz=271
J30M Hart River 66.62 27 P **P** **02 30 53.6 -0.1**
baz=268
I30M Mount Dempster 66.63 27 P **P** **02 30 53.4 -0.3**
baz=267
O30N Mendenhall 66.64 31 P **P** **02 30 53.6 -0.1**
baz=270
G30M tAoh Zraii Nji 66.79 25 P **P** **02 30 54.7 +0.1**
baz=267
IUG Iuzhnay 66.79 308 *eP* **P** **02 30 55.1 0.0**
comp=Z,11nm,1.0s
N31M Braeburn, Yuko 66.79 31 P **P** **02 30 54.9 +0.2**
baz=270
BRLS Boroldav 66.83 309 *eP* **P** **02 30 56.1 +0.9**
GAR Garm 66.97 305 P **P** **02 30 56.4 +0.1**
F30M Barrier River 66.99 24 lAmb lAmb 02 30 57.8
comp=Z,10.0nm,0.9s
F30M Barrier River 66.99 24 P **P** **02 30 55.8 0.0**
baz=267
SKAG Skagway 67.02 33 P **P** **02 30 56.4 +0.3**
baz=271
SIT Sitka 67.07 36 P **P** **02 30 57.0 +0.5**
baz=272
CHM Chimkent 67.09 308 *eP* **P** **02 30 56.9 0.0**
comp=Z,17nm,1.1s
WHY Whitehorse 67.23 32 P **P** **02 30 57.4 -0.2**
baz=271
M31M Drury Creek, Y 67.45 30 P **P** **02 30 59.4 +0.6**
baz=270
S32K Killisnoo 67.47 35 P **P** **02 30 59.6 +0.7**
baz=272
R32K Eaglecrest 67.47 34 P **P** **02 30 59.7 +0.7**
baz=272
H31M Peel River 67.50 26 lAmb lAmb 02 31 12.6
comp=Z,9.5nm,1.1s
H31M Peel River 67.50 26 P **P** **02 30 59.6 +0.5**
baz=269,SNR=6.9
G31M Satah River 67.55 25 lAmb lAmb 02 31 09.0
comp=Z,7.6nm,0.8s
G31M Satah River 67.55 25 P **P** **02 30 59.9 +0.6**
baz=269
F31M Tsiigehtchic 67.77 24 P **P** **02 31 00.8 +0.1**
baz=269
P32M Atlin 67.84 33 P **P** **02 31 01.3 0.0**
baz=272
INK Inuvik 67.87 23 P **P** **02 31 01.3 0.0**
baz=269
N32M Quiet Lake 68.10 31 P **P** **02 31 03.1 +0.1**
baz=272
P33M Teslin, Yukon 68.27 32 P **P** **02 31 04.3 +0.3**
baz=273
U33K Whale Pass 68.34 36 P **P** **02 31 04.7 +0.3**
baz=274
CRAG Craig 68.38 37 P **P** **02 31 04.7 -0.1**
baz=274
T33K Petersburg 68.38 36 P **P** **02 31 04.9 +0.2**
baz=274
Q32M Nakina River 68.61 33 P **P** **02 31 06.4 0.0**
baz=274
KBL Kabul 68.67 300 P **P** **02 31 06.8 -0.4**
KBL Kabul 68.67 300 P **P** **02 31 07.1 -0.2**
WRAK Wrangell Islan 68.75 36 P **P** **02 31 07.3 +0.3**
baz=275
SHAA Shahritus 68.89 304 lAmb lAmb 02 31 09.8
comp=Z,59nm,0.5s
MMPY Sheldon Lake, 68.90 29 P **P** **02 31 07.8 -0.2**
baz=273
R33M Jennings River 69.25 33 P **P** **02 31 09.9 -0.4**
baz=275
V35K Ketchikan 69.25 37 P **P** **02 31 10.0 -0.2**
baz=276
S34M Telegraph Cree 69.28 34 P **P** **02 31 10.2 -0.1**
baz=275
DLBC Dease Lake 69.82 34 LR LR 03 00 15.9
comp=Z,57nm,19.1s,baz=278,slow=35
DLBC Dease Lake 69.82 34 P **P** **02 31 13.7 0.0**
baz=276
T35M Bob Quinn 69.85 35 P **P** **02 31 13.9 +0.1**
baz=276
A36M Sachs Harbour 70.58 19 P **P** **02 31 18.6 +0.5**
baz=275
C36M Paulatuk 71.25 22 P **P** **02 31 22.7 +0.6**
baz=277
BBB Bella Bella 71.72 40 LR LR 02 57 41.0
comp=Z,98nm,19.3s,baz=238,slow=32
ARTI Arti 72.38 324 LR LR 03 05 01.3
comp=Z,106nm,20.7s,baz=88,slow=37
ARTI Arti 72.38 324 P **P** **02 31 28.5 -0.7**
ARTI lAmb lAmb 02 31 29.0
comp=Z,9.0nm,0.8s
ARTI Arti 72.38 324 P **P** **02 31 28.4 -0.8**
KOTAN Kotaneelee Air 72.63 32 P **P** **02 31 31.2 +0.6**
baz=280
AB31 Akbulak array 72.72 317 lAmb lAmb 02 31 33.2
comp=Z,10nm,0.7s
ABKAR Akbulak array 72.72 317 P **P** **02 31 30.8 -0.5**
PPT Papeete 73.20 116 LR LR 02 57 07.1
comp=Z,226nm,20.3s,baz=271,slow=30
PPT2 Papeete2 73.21 116 *eS* **S** **02 40 58.7 -2.5**
comp=Z,127nm,27.0s
PPT2 *e*LR LR 02 53 51.2
comp=Z,465nm,23.8s
PPT2 *e*LR LR 02 53 58.6
comp=Z,593nm,23.8s
AKTO Aktyubinsk 73.71 318 LR LR 03 06 08.0
comp=Z,155nm,19.6s,baz=80,slow=38
HRA Herat 74.20 301 lAmb lAmb 02 31 41.2
comp=Z,15nm,0.8s
TBI Tubuai 76.06 121 *e*LR LR 02 55 17.9
comp=Z,826nm,23.0s
YKA Yellowknife Ar 76.50 28 P **P** **02 31 53.3 +0.3**
comp=Z,3.1nm,0.7s,baz=291,slow=5.6,SNR=14
comp=Z,3.1nm,0.7s
YKA Yellowknife Ar 76.50 28 P **P** **02 31 52.7 -0.3**
KIRV Kirov 76.60 328 LR LR 03 08 10.0
comp=Z,136nm,20.1s,baz=68,slow=38
ALE Alert 76.69 4 P **P** **02 31 54.8 +0.9**
YBH Yreka Blue Hor 77.62 50 LR LR 03 00 11.8
comp=Z,96nm,20.8s,baz=264,slow=31
SPITS Spitsbergen Ar 77.89 351 LR LR 03 08 08.6
comp=Z,56nm,21.8s,baz=44,slow=37
RES Resolute Bay 77.94 14 LR LR 03 07 27.9
comp=Z,58nm,20.7s,baz=12,slow=36
PINE Pine Mountain 78.30 48 lAmb lAmb 02 32 20.2
comp=Z,15nm,1.0s
K05A Summer Lake 78.64 49 lAmb lAmb 02 32 22.1
comp=Z,14nm,1.0s
BELG Belogornoye 79.46 322 LR LR 03 09 04.3
comp=Z,197nm,20.0s,baz=90,slow=37
NEW Newport 79.50 42 LR LR 03 02 20.3
comp=Z,121nm,19.9s,baz=279,slow=32
BEKR Beckworth 79.86 51 lAmb lAmb 02 32 28.6
comp=Z,39nm,2.0s
EDM Edmonton 80.13 37 lAmb lAmb 02 32 15.6
comp=Z,19nm,1.5s
CMB Columbia Colle 80.40 53 lAmb lAmb 02 32 22.5
comp=Z,15nm,1.5s
ARCES ARCESS Array B 81.35 342 P **P** **02 32 19.5 0.0**
comp=Z,3.4nm,0.6s,baz=66,slow=6.8,SNR=17
ARCES LR LR 03 17 33.0
comp=Z,44nm,18.9s,baz=72,slow=42
comp=Z,3.4nm,0.6s
ARCES ARCESS Array B 81.35 342 P **P** **02 32 19.5 0.0**
NVAR Mina Array Bea 81.83 52 P **P** **02 32 24.4 +1.4**
comp=Z,1.7nm,0.7s,baz=272,slow=5.4,SNR=8.7
NVAR LR LR 03 04 04.8
comp=Z,141nm,19.6s,baz=256,slow=32
comp=Z,1.7nm,0.7s
NVAR Mina Array Bea 81.83 52 P **P** **02 32 24.2 +1.3**
UOSS Minazif 81.86 294 P **P** **02 32 22.1 -1.0**
UOSS lAmb lAmb 02 32 26.4
comp=Z,26nm,1.3s
UOSS Minazif 81.86 294 P **P** **02 32 22.9 -0.2**
UOSS PcP **PcP** **02 32 27.8 -0.8**
MFID Camas Ranch 81.94 47 lAmb lAmb 02 32 40.1
comp=Z,16nm,1.5s
DSP Deep Springs 82.43 53 lAmb lAmb 02 32 31.0
comp=Z,14nm,1.5s

BCYI Bear Canyon 83.27 45 lAmb lAmb 02 32 47.2
comp=Z,13nm,1.5s
ELK Elko 83.28 49 LR LR 03 03 50.1
comp=Z,73nm,19.4s,baz=90,slow=32
GWY Greenwater Val 83.81 54 lAmb lAmb 02 32 49.4
comp=Z,11nm,1.4s
OBN Obninsk 84.43 327 LR LR 03 12 54.9
comp=Z,215nm,21.0s,baz=200,slow=38
YHL Hebgen Lake 84.54 44 lAmb lAmb 02 32 53.4
comp=Z,9.5nm,0.9s
HVU Hansel Valley 84.63 48 lAmb lAmb 02 32 39.9
comp=Z,10nm,1.3s
PFO Pinyon Flats O 84.87 56 LR LR 03 05 09.8
comp=Z,70nm,19.3s,baz=227,slow=32
SPUT South Promonto 85.04 48 lAmb lAmb 02 32 41.6
comp=Z,8.6nm,1.2s
PSUT Pine Spring 85.07 51 lAmb lAmb 02 32 45.0
comp=Z,7.7nm,1.3s
FXWY Fox Creek 85.11 45 P **P** **02 32 41.2 +1.5**
FLWY Flagg Ranch 85.16 45 lAmb lAmb 02 32 47.5
comp=Z,7.3nm,0.7s
DUG Dugway, Tooele 85.20 49 lAmb lAmb 02 32 56.6
comp=Z,12nm,1.4s
HWUT Hardware Ranch 85.54 47 lAmb lAmb 02 32 57.6
comp=Z,8.2nm,0.9s
KBZ Khabaz 85.57 315 P **P** **02 32 41.4 -0.2**
comp=Z,5.9nm,0.8s,baz=73,slow=4.9,SNR=15
KBZ LR LR 03 14 23.2
comp=Z,177nm,21.0s,baz=60,slow=38
comp=Z,5.9nm,0.8s
FFC Flin Flon 85.62 33 P **P** **02 32 42.3 +0.6**
FFC lAmb lAmb 02 32 43.5
comp=Z,14nm,1.2s
FFC Flin Flon 85.62 33 P **P** **02 32 42.3 +0.6**
FFC pP **pP** **02 32 51.3 +0.4**
KVAR Kislovodsk Arr 85.62 315 LR LR 03 12 46.4
comp=Z,90nm,21.5s,baz=281,slow=37
GNI Garni 85.71 311 P **P** **02 32 43.4 +0.8**
GNI Garni 85.71 311 P **P** **02 32 44.7 +2.0**
comp=Z,11nm,1.2s
FINES FINESS Array B 85.87 335 P **P** **02 32 41.6 -1.1**
comp=Z,4.5nm,0.6s,baz=70,slow=4.7,SNR=51
comp=Z,4.5nm,0.6s
KNB Kanab 86.40 52 lAmb lAmb 02 32 49.0
comp=Z,13nm,1.3s
PDAR Pinedale Array 86.44 46 P **P** **02 32 46.6 +0.3**
comp=Z,0.6nm,0.5s,baz=178,slow=1.6,SNR=7.1
PDAR LR LR 03 06 16.9
comp=Z,64nm,20.5s,baz=294,slow=32
comp=Z,0.6nm,0.5s
Q16A Castle Valley 86.86 50 lAmb lAmb 02 32 51.0
comp=Z,19nm,1.5s
P17A Butcher Ranch, 86.95 49 lAmb lAmb 02 33 05.3
comp=Z,9.1nm,1.2s
SRU San Rafael Swe 87.25 49 lAmb lAmb 02 33 01.6
comp=Z,5.9nm,0.7s
HMU Henry Mountain 87.56 50 lAmb lAmb 02 32 55.4
comp=Z,4.6nm,0.8s
WUAZ Wupatki 88.06 53 lAmb lAmb 02 33 01.9
comp=Z,4.6nm,0.8s
O20A White River Ci 88.44 48 lAmb lAmb 02 32 58.3
comp=Z,7.5nm,1.0s
PV05 Paradox Valley 88.69 50 lAmb lAmb 02 32 59.3
comp=Z,12nm,1.3s
PV22 Blue Mesa, Par 88.72 49 lAmb lAmb 02 33 05.2
comp=Z,10.0nm,1.4s
PV16 Nyswonger Mesa 88.73 50 lAmb lAmb 02 33 12.9
comp=Z,11nm,1.1s
PV13 Radium Mtn., P 88.86 50 lAmb lAmb 02 33 14.9
comp=Z,6.2nm,0.9s
HAYD Hayden 88.95 47 lAmb lAmb 02 33 00.6
comp=Z,10nm,1.3s
PV01 Paradox Valley 89.05 50 lAmb lAmb 02 33 13.3
comp=Z,6.2nm,0.9s
MVCO Mesa Verde 89.49 50 lAmb lAmb 02 33 17.6
comp=Z,6.7nm,1.1s
ISCO Idaho Springs 90.40 47 lAmb lAmb 02 33 21.5
comp=Z,18nm,1.9s
S22A 4UR Ranch, Cre 90.46 49 lAmb lAmb 02 33 07.9
comp=Z,8.4nm,1.4s
AKASG Malin Array Be 90.49 326 P **P** **02 33 03.7 -1.3**
comp=Z,0.5nm,0.4s,baz=52,slow=5.2,SNR=1.9
AKASG LR LR 03 15 43.5
comp=Z,124nm,21.8s,baz=48,slow=37
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 90.49 326 P **P** **02 33 03.7 -1.3**
ULM Lac du Bonnet 91.13 35 P **P** **02 33 07.5 -0.5**
comp=Z,2.5nm,0.7s,baz=327,slow=8.5,SNR=4.1
comp=Z,2.5nm,0.7s
ULM Lac du Bonnet 91.13 35 lAmb lAmb 02 33 14.2
comp=Z,5.0nm,0.9s
HFS Hagfors 91.31 338 P **P** **02 33 06.9 -1.8**
comp=Z,3.5nm,0.9s,baz=54,slow=3.7,SNR=5.1
comp=Z,3.5nm,0.9s
SDCO Great Sand Dun 91.40 49 lAmb lAmb 02 33 12.1
comp=Z,7.2nm,1.4s
NOA NORSAR Array B 91.47 340 P **P** **02 33 08.8 -0.7**
comp=Z,1.6nm,1.1s,baz=41,slow=4.9,SNR=3.4
NOA LR LR 03 17 37.0
comp=Z,44nm,21.7s,baz=25,slow=38
comp=Z,1.6nm,1.1s
RAYN Ar Rayn 91.50 296 P **P** **02 33 08.5 -1.9**
RAYN lAmb lAmb 02 33 09.7
comp=Z,4.4nm,0.8s
ANMO Albuquerque 91.95 52 LR LR 03 09 16.7
comp=Z,86nm,19.7s,baz=294,slow=32
ANMO Albuquerque 91.95 52 P **P** **02 33 13.7 +1.2**
FRB Frobisher Bay 92.13 15 LR LR 03 12 34.6
comp=Z,38nm,21.9s,baz=308,slow=34
AGMN Agassiz Nation 92.22 36 lAmb lAmb 02 33 14.2
comp=Z,4.2nm,0.9s
SFJD Kangerlussuaq 92.26 7 LR LR 03 13 59.2
comp=Z,80nm,21.9s,baz=346,slow=35
EPLO Experimental L 92.60 34 lAmb lAmb 02 33 15.9
comp=Z,9.3nm,1.4s
F33A 5 Mile Ranch, 93.34 38 lAmb lAmb 02 33 19.5
comp=Z,5.6nm,1.1s
LPIG La Paz 93.45 63 LR LR 03 08 54.4
comp=Z,186nm,19.5s,baz=248,slow=31
BRTR Keskin Array B 93.56 315 P **P** **02 33 18.2 -1.5**
comp=Z,1.3nm,0.9s,baz=99,slow=4.5,SNR=4.0
BRTR LR LR 03 19 31.9
comp=Z,70nm,19.9s,baz=356,slow=38
comp=Z,1.3nm,0.9s
MNTX Cornudas Mount 94.19 54 lAmb lAmb 02 33 25.1
comp=Z,6.7nm,1.4s
ASF Jabal al Asfar 94.82 307 LR LR 03 19 45.7
comp=Z,89nm,21.8s,baz=27,slow=38
VHRN Van Horn 94.91 55 lAmb lAmb 02 33 30.0
comp=Z,15nm,1.9s
MLR Muntele Rosu 95.25 322 LR LR 03 20 07.2
comp=Z,82nm,18.2s,baz=59,slow=38
MMAI Mount Meron Ar 95.54 308 P **P** **02 33 28.1 -0.8**
comp=Z,0.2nm,0.2s,baz=308,slow=20,SNR=3.6
comp=Z,0.2nm,0.2s
TXAR Lajitas Array 96.58 56 P **P** **02 33 34.3 +0.7**
comp=Z,0.2nm,0.5s,baz=300,slow=2.3,SNR=3.7
comp=Z,0.2nm,0.5s
DPC Dobruska-Polom 97.17 330 AMS AMS 03 22 20.0
comp=Z,100nm,15.0s
VRAC Vranov 97.75 329 LR LR 03 20 31.5
comp=Z,105nm,22.0s,baz=47,slow=37
PRU Pruhonice 98.24 331 AMS AMS 03 23 50.0
comp=Z,200nm,20.6s
NKC Novy Kostel 99.00 332 AMS AMS 03 23 30.0
comp=Z,200nm,14.4s
KHC Kasperske Hory 99.29 331 *eP* **Pdif** **02 33 47.5 +2.1**
KHC AMS AMS 03 23 40.0
comp=Z,200nm,20.5s
GERES GERESS Array B 99.44 330 PP **PP** **02 37 48.6 -0.3**
comp=Z,0.7nm,0.9s,baz=43,slow=6.0,SNR=4.8
GERES LR LR 03 23 10.7
comp=Z,149nm,19.3s,baz=64,slow=38
QSPA South Pole Qui 109.89 180 PKiKP **PKiKP** **02 38 33.4 -0.5**
comp=Z,0.6nm,0.5s,baz=308,slow=2.3,SNR=10
ESDC Sonseca Array 114.38 335 PP **PP** **02 39 38.1 -0.3**
comp=Z,2.1nm,1.1s,baz=21,slow=6.6,SNR=7.0
TROLL Troll, Antarti 124.07 193 ⇑PKPdf **PKPdf** **02 39 00.6 -0.4**
comp=Z,174nm,0.8s
SNAA Sanae 125.39 191 ⇑PKPdf **PKPdf** **02 39 02.6 -0.9**
comp=Z,70nm,0.9s
SNAA Sanae 125.39 191 PKP **PKPdf** **02 39 02.8 -0.7**
comp=Z,1.6nm,0.6s,baz=156,slow=2.6,SNR=9.5
VNA2 Neumayer--Watz 126.83 190 ⇑PKPdf **PKPdf** **02 39 05.3 -0.9**
comp=Z,4.2nm,0.7s,baz=134,slow=2.2
VNA1 Neumayer--Stat 127.22 190 ⇑PKPdf **PKPdf** **02 39 07.3 +0.4**
comp=Z,3.0nm,0.7s
TORD Torodi Ar. Bea 132.01 311 PKP **PKPdf** **02 39 17.4 -0.3**
comp=Z,0.6nm,0.6s,baz=27,slow=1.9,SNR=5.1

TORD				PP	PP	02 41 36.0	-2.3	
	comp=Z,1.5nm,0.9s,baz=35,slow=7.3,SNR=4.8							
LPAZ	La Paz	147.10	89	PKPbc	PKPbc	02 39 48.9	+1.1	
	comp=Z,3.1nm,0.6s,baz=288,slow=3.4,SNR=18							
LPAZ	La Paz	147.10	89		PKPbc	02 39 48.8	+1.0	

*JMA **03** 02:28:22.8±0.2, 23°.8N±0°.3×121°.8E±0°.7, h9km±3km, MV3.1/12, TAIWAN REGION*
*TAP **03** 02:28:23.6, 23°.93N×121°.65E, h40km, ML3.6, C*
ISC 03 02:28:24.2±0.9, **23°.92N**±0°.02×**121°.68E**±0°.02, **h33**km±3km, **n123**, σ0.93/199, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.09**	**308**	*i* P	**Pb**	**02 28 30.3**	**+0.4**
HWA				*e*S	**Sb**	**02 28 35.5**	**+1.7**
TEYL	**Yanliau Villag**	**0.09**	**234**	*i* P	**Pb**	**02 28 30.4**	**+0.4**
TEYL				S	**Sb**	**02 28 36.1**	**+2.3**
SHUL	**Shoufeng**	**0.17**	**219**	P	**Pb**	**02 28 30.7**	**+0.2**
SHUL				*e*S	**Sb**	**02 28 37.3**	**+2.5**
TWD	**Chiawan**	**0.17**	**334**	*i* P	**Pn**	**02 28 30.4**	**+0.2**
TWD				*i* S	**Sb**	**02 28 35.8**	**+0.9**
ETM	**Tongmen**	**0.18**	**284**	*i* P	**Pn**	**02 28 30.4**	**+0.2**
ETM				S	**Sb**	**02 28 35.3**	**+0.4**
ETL	**Fush Village**	**0.24**	**347**	P	**Pn**	**02 28 31.2**	**-0.2**
ETL				*i* S	**Sb**	**02 28 36.9**	**+0.8**
TEGC	**Jichi Village**	**0.25**	**211**	P	**Pn**	**02 28 31.7**	**+0.2**
TEGC				S	**Sb**	**02 28 38.7**	**+2.6**
ESL	**Shilin**	**0.25**	**244**	*i* P	**Pn**	**02 28 30.9**	**-0.6**
ESL				S	**Sn**	**02 28 36.1**	**+0.1**
NACB	**Ninganchiao**	**0.26**	**343**	P	**Pn**	**02 28 30.9**	**-0.8**
NACB	**Ninganchiao**	**0.26**	**343**	P	**Pn**	**02 28 30.8**	**-0.9**
NACB	**Ninganchiao**	**0.26**	**343**	P	Pb	02 28 36.8	+5.3
NACB	**Ninganchiao**	**0.26**	**343**	*i* P	**Pn**	**02 28 31.2**	**-0.6**
NACB				*i* S		02 28 36.8	
LXIB	**Xiulin Townshi**	**0.26**	**292**	*i* P	**Pn**	**02 28 31.1**	**-0.8**
LXIB				*i* S	**Sn**	**02 28 36.5**	**0.0**
ETLH	**Xiulin Townshi**	**0.34**	**327**	*i* P	**Pb**	**02 28 31.9**	**-0.6**
ETLH				*i* S	**Sn**	**02 28 37.7**	**-0.9**
WARBT	**Fenglin Townsh**	**0.34**	**233**	*i* P	**Pb**	**02 28 31.6**	**-0.9**
WARBT				S	**Sn**	**02 28 37.5**	**-1.0**
EAHA	**Aohua**	**0.41**	**8**	P	**Pb**	**02 28 33.1**	**-0.4**
EAHA				*i* S	**Sb**	**02 28 40.3**	**+0.6**
WHF	**Hehuan Shan**	**0.44**	**300**	*i* P	**Pb**	**02 28 33.5**	**-0.7**
WHF				S	**Sb**	**02 28 40.6**	**-0.5**
OWD	**Renai**	**0.46**	**274**	*i* P	**Pb**	**02 28 33.7**	**-0.6**
OWD				S	**Sb**	**02 28 40.6**	**-0.7**
FUSS	**Fushou**	**0.51**	**309**	*i* P	**Pb**	**02 28 34.6**	**-0.6**
FUSS				S	**Sb**	**02 28 42.3**	**-0.5**
WUSB	**Renai**	**0.52**	**278**	*i* P	**Pn**	**02 28 34.8**	**-0.7**
WUSB				S	**Sb**	**02 28 42.7**	**-0.1**
EHYH	**Wanrong**	**0.53**	**216**	P	**Pn**	**02 28 33.9**	**-1.6**
EHYH				*e*S	**Sb**	**02 28 41.6**	**-1.3**
EWUT	**Wuta**	**0.53**	**10**	S	**Sb**	**02 28 43.1**	**+0.3**
EHY	**Hungye**	**0.53**	**218**	P	**Pn**	**02 28 33.8**	**-1.7**
EHY				*e*S	**Sb**	**02 28 41.2**	**-1.7**
TWT	**Tachien**	**0.57**	**306**	*e*P	**Pn**	**02 28 35.6**	**-0.5**
TWT				*i* S	**Sb**	**02 28 43.6**	**-0.5**
NNSB	**Datong**	**0.57**	**332**	*i* P	**Pn**	**02 28 35.3**	**-0.9**
NNSB				S	**Sn**	**02 28 43.6**	**+1.0**
TDCB	**Techi**	**0.58**	**305**	*i* P	**Pn**	**02 28 35.8**	**-0.6**
TDCB				S	**Sn**	**02 28 43.5**	**-1.3**
NNS	**Nan Shan**	**0.59**	**331**	P	**Pn**	**02 28 35.5**	**-0.9**
NNS				S	**Sn**	**02 28 44.3**	**-0.6**
EOS4	**EOS4**	**0.61**	**71**	*i* P	**Pn**	**02 28 35.8**	**-0.5**
EOS4				*e*S	**Sb**	**02 28 45.1**	**+0.4**
LATG	**Datong**	**0.62**	**347**	*i* P	**Pn**	**02 28 36.0**	**-1.0**
LATG				*e*S	**Sn**	**02 28 45.5**	**-0.4**
YULB	**Yu-li**	**0.64**	**214**	P	**Pn**	**02 28 35.2**	**-1.7**
YULB	**Yu-li**	**0.64**	**214**	P	**Pn**	**02 28 35.3**	**-1.7**
YULB	**Yu-li**	**0.64**	**214**	*e*P	**Pn**	**02 28 35.2**	**-1.7**
YULB				S	**Sn**	**02 28 44.2**	**-1.7**
TWF1	**Yuli**	**0.67**	**212**	*e*P	**Pn**	**02 28 35.7**	**-1.8**
SSLB	**Suanglung**	**0.68**	**259**	P	**Pn**	**02 28 36.6**	**-1.0**
SSLB	**Suanglung**	**0.68**	**259**	S	**Sn**	**02 28 45.8**	**-1.3**
SSLB	**Suanglung**	**0.68**	**259**	*e*P	**Pn**	**02 28 36.7**	**-0.8**
EOS3	**EOS3**	**0.69**	**58**	*e*P	**Pn**	**02 28 37.5**	**0.0**
NDT	**Datong Townshi**	**0.69**	**347**	*e*P	**Pn**	**02 28 37.1**	**-0.7**
TWC	**Suao**	**0.70**	**13**	*e*P	**Pn**	**02 28 37.7**	**-0.1**
TWC				S	**Sb**	**02 28 48.3**	**+0.8**
EOS2	**EOS2**	**0.70**	**45**	*e*P	**Pn**	**02 28 38.2**	**+0.4**
SMLT	**Sun Moon Lake**	**0.72**	**267**	P	**Pn**	**02 28 37.4**	**-0.7**
SMLT				*e*S	**Sn**	**02 28 48.5**	**+0.4**
WCS	**Beigang Elemen**	**0.72**	**281**	*e*P	**Pn**	**02 28 37.6**	**-0.5**
ENTT	**Nioudou**	**0.72**	**352**	*e*P	**Pn**	**02 28 37.4**	**-0.8**
TYC	**Yuchr**	**0.75**	**269**	*i* P	**Pn**	**02 28 38.1**	**-0.5**
TYC				S	**Sn**	**02 28 48.0**	**-0.9**
WHP	**Taichung City**	**0.76**	**298**	*e*P	**Pn**	**02 28 38.4**	**-0.3**
WHP				S	**Sn**	**02 28 49.0**	**-0.1**
CHKH	**Chenggong**	**0.77**	**200**	*e*P	**Pn**	**02 28 38.3**	**-0.6**
CHKH				S	**Sb**	**02 28 51.0**	**+1.5**
WHYT	**Xinyi Township**	**0.79**	**254**	*i* P	**Pn**	**02 28 39.0**	**-0.1**
WHYT				*e*S	**Sn**	**02 28 50.5**	**+0.6**
TWE	**Neicheng**	**0.79**	**359**	*e*P	**Pn**	**02 28 38.5**	**-0.6**
FULB	**Fuli**	**0.80**	**206**	*e*P	**Pn**	**02 28 39.3**	**-0.1**
NSK	**Sanguang**	**0.81**	**339**	*i* P	**Pn**	**02 28 38.3**	**-1.1**
NSK				*i* S	**Sn**	**02 28 49.3**	**-0.9**
FUSB	**Fushanzhiwuyua**	**0.84**	**354**	*e*P	**Pn**	**02 28 39.2**	**-0.6**
NWLT	**Wulai**	**0.86**	**349**	*e*P	**Pn**	**02 28 39.7**	**-0.5**
CHKT	**Chengkung**	**0.87**	**199**	*e*P	**Pn**	**02 28 40.2**	**0.0**
CHKT				*e*S	**Sn**	**02 28 51.7**	**0.0**
NFF	**Wufeng Townshi**	**0.87**	**324**	P	**Pn**	**02 28 40.3**	**0.0**
NFF				*e*S	**Sb**	**02 28 53.3**	**+0.8**
EHD	**Haiduan**	**0.89**	**210**	*e*P	**Pn**	**02 28 40.8**	**+0.4**
ALS	**Alishan**	**0.90**	**243**	*e*P	**Pn**	**02 28 41.1**	**+0.2**
ALS				S	**Sn**	**02 28 52.2**	**-0.7**
WNT	**Mingjian**	**0.91**	**267**	*e*P	**Pn**	**02 28 41.5**	**+0.7**
WNT				*i* S	**Sb**	**02 28 53.9**	**+0.3**
NSTT	**Nanjuang**	**0.94**	**319**	P	**Pn**	**02 28 41.6**	**+0.5**
NSTT				*e*S	**Sn**	**02 28 53.9**	**+0.4**
LIOB	**Emei**	**0.94**	**320**	*i* P	**Pn**	**02 28 41.9**	**+0.6**
LIOB				*i* S	**Sb**	**02 28 55.0**	**+0.6**
TCU	**Taichung**	**0.94**	**284**	*e*S	**Sb**	**02 28 55.5**	**+1.1**
EGS		**0.95**	**14**	*e*S	**Sb**	**02 28 56.7**	**+2.2**
ELDTW	**Lidau**	**0.95**	**220**	*e*P	**Pn**	**02 28 40.5**	**-1.0**
ELDTW				*e*S	**Sn**	**02 28 52.8**	**-1.1**
KSHI	**Guanxi Townshi**	**0.97**	**332**	P	**Pn**	**02 28 42.3**	**+0.7**
KSHI				*e*S	**Sb**	**02 28 55.3**	**+0.3**
CHN5	**Tsauling**	**0.97**	**251**	*i* P	**Pn**	**02 28 42.0**	**+0.2**
CHN5				S	**Sn**	**02 28 55.3**	**+0.9**
EDH	**Donghe**	**1.01**	**200**	P	**Pn**	**02 28 42.5**	**+0.5**
EDH				*e*S	**Sb**	**02 28 57.4**	**+1.2**
WCHH	**Zhanghua**	**1.04**	**279**	*e*P	**Pn**	**02 28 43.1**	**+0.6**
WCHH				*i* S	**Sb**	**02 28 57.6**	**+0.6**
WDJ	**Dajia District**	**1.04**	**294**	*e*P	**Pn**	**02 28 43.1**	**+0.6**
WDJ				*e*S	**Sb**	**02 28 58.0**	**+0.9**
WCH1	**Changhua City**	**1.05**	**278**	*e*S	**Sb**	**02 28 59.0**	**+1.7**
TIPB	**Shuangxi**	**1.05**	**7**	*e*P	**Pn**	**02 28 43.3**	**+0.5**
TIPB				*e*S	**Sb**	**02 28 58.3**	**+0.8**
TATO	**Taipei**	**1.06**	**351**	P	Pn	02 28 35.4	-7.4
TATO	**Taipei**	**1.06**	**351**	S	**Sn**	**02 28 56.5**	**0.0**
WDLH	**Douliu**	**1.07**	**258**	*e*P	**Pn**	**02 28 43.4**	**+0.4**
WDLH				*i* S	**Sb**	**02 28 58.1**	**+0.1**
HSN	**Hsinchu**	**1.09**	**324**	*e*S	**Sb**	**02 28 58.9**	**+0.4**
WCKO	**Fanlu**	**1.10**	**244**	*e*P	**Pn**	**02 28 44.3**	**+1.0**
WCKO				S	**Sb**	**02 28 59.0**	**+0.2**
STYH	**Taoyuan**	**1.12**	**228**	*e*P	**Pn**	**02 28 43.6**	**0.0**
STYH				*i* S	**Sn**	**02 28 58.6**	**+0.7**
NWF	**Wu-fen Shan**	**1.15**	**5**	*e*P	**Pb**	**02 28 45.8**	**+0.2**
NWF				*e*S	**Sn**	**02 28 57.6**	**-1.1**
TPUB	**Ta-pu**	**1.15**	**237**	P	**Pn**	**02 28 44.5**	**+0.4**
TPUB	**Ta-pu**	**1.15**	**237**	P	**Pn**	**02 28 44.4**	**+0.4**
TPUB	**Ta-pu**	**1.15**	**237**	S	**Sn**	**02 28 59.8**	**+1.2**
TPUB	**Ta-pu**	**1.15**	**237**	P	**Pn**	**02 28 45.0**	**+1.0**
TPUB				S	**Sb**	**02 29 00.1**	**0.0**
WFSB	**Wu-fen Shan**	**1.15**	**5**	*e*P	**Pb**	**02 28 46.0**	**+0.4**
SXI1	**Grass Mountain**	**1.18**	**9**	*e*P	**Pn**	**02 28 45.5**	**+0.9**
WTP	**Ta-pu**	**1.19**	**236**	*i* P	**Pn**	**02 28 45.3**	**+0.7**
WTP				S	**Sb**	**02 29 01.4**	**0.0**
WRL	**Guolierlin Hig**	**1.19**	**269**	*e*P	**Pn**	**02 28 45.2**	**+0.6**
WRL				*e*S	**Sn**	**02 29 00.7**	**+1.0**
TWS1	**Kuangyinshan**	**1.20**	**349**	*e*P	**Pn**	**02 28 45.1**	**+0.4**
WTK	**Tuku**	**1.21**	**259**	*i* P	**Pn**	**02 28 45.9**	**+1.1**
WTK				S	**Sb**	**02 29 02.4**	**+0.6**
RLNB	**Erlin**	**1.21**	**269**	*e*P	**Pn**	**02 28 45.6**	**+0.8**
RLNB				*i* S	**Sb**	**02 29 02.2**	**+0.3**
YM01	**YM01**	**1.22**	**355**	*e*P	**Pb**	**02 28 47.5**	**+0.6**
YM01				S	**Sn**	**02 29 00.7**	**+0.2**
CHY	**Chiayi**	**1.23**	**250**	*e*S	**Sb**	**02 29 02.6**	**+0.1**
TWGBT	**Beinan**	**1.23**	**207**	P	**Pn**	**02 28 44.3**	**-0.9**
TWGBT	**Beinan**	**1.23**	**207**	P	**Pn**	**02 28 46.5**	**+1.3**
TWGBT	**Beinan**	**1.23**	**207**	P	**Sn**	**02 29 02.8**	**+2.1**
TWGBT	**Beinan**	**1.23**	**207**	*e*P	**Pn**	**02 28 45.9**	**+0.7**
TWG	**Pinlang**	**1.23**	**207**	*e*P	**Pn**	**02 28 45.0**	**-0.2**
TWG				S	**Sb**	**02 29 02.4**	**-0.2**
ZUZH	**Zhuzihu**	**1.24**	**354**	*e*P	**Pn**	**02 28 44.7**	**-0.6**
ZUZH				*i* S	**Sn**	**02 29 00.4**	**-0.6**
LDUT	**Ludao**	**1.26**	**189**	*e*P	**Pn**	**02 28 43.6**	**-2.0**
LDUT				*e*S	**Sn**	**02 29 02.1**	**+0.7**
JYNG	**Yonagunijimaku**	**1.27**	**65**	*e*P	**Pn**	**02 28 45.3**	**-0.4**
JYNG				*e*S	**Sn**	**02 29 01.0**	**-0.5**
TWK	**Hsinying**	**1.27**	**239**	*i* P	**Pn**	**02 28 46.5**	**+0.6**
TWK				*e*S	**Sn**	**02 29 03.0**	**+1.2**
CHN1	**Nanshi**	**1.29**	**235**	*e*P	**Pn**	**02 28 46.6**	**+0.6**
CHN1				*i* S	**Sn**	**02 29 03.5**	**+1.4**
SGST	**Jiashian**	**1.31**	**230**	*e*P	**Pn**	**02 28 46.2**	**0.0**
SGST				*e*S	**Sn**	**02 29 03.9**	**+1.3**
YOJ	**Yonaguni jima**	**1.33**	**66**	*e*P	**Pn**	**02 28 46.3**	**-0.3**
YOJ				*e*S	**Sn**	**02 29 03.0**	**0.0**
YOJ	**Yonaguni jima**	**1.33**	**66**	*e*P	**Pn**	**02 28 46.2**	**-0.3**
YOJ				*e*S	**Sn**	**02 29 02.5**	**-0.5**
WSF	**Szhu**	**1.37**	**258**	*e*S	**Sb**	**02 29 06.0**	**-0.4**
WSL	**Shuilin Townsh**	**1.39**	**254**	*e*P	**Pn**	**02 28 47.7**	**+0.4**
WSL				*i* S	**Sn**	**02 29 05.7**	**+1.2**
ICHU	**Yijhu**	**1.40**	**247**	*e*P	**Pn**	**02 28 48.1**	**+0.6**
ICHU				*i* S	**Sn**	**02 29 06.3**	**+1.4**
ECL	**Taimali**	**1.48**	**207**	*e*S	**Sn**	**02 29 07.8**	**+1.0**
SCST	**Cishan**	**1.50**	**227**	*e*P	**Pb**	**02 28 50.9**	**-0.7**
SCST				*i* S	**Sb**	**02 29 10.9**	**+0.7**
SSD	**Sandimen**	**1.52**	**220**	P	**Pn**	**02 28 50.3**	**+1.2**
SSD				S	**Sn**	**02 29 09.6**	**+1.8**
MASBT	**Mashibuluo**	**1.62**	**217**	*e*P	**Pn**	**02 28 51.9**	**+1.3**
MASBT				*e*S	**Sn**	**02 29 12.0**	**+1.7**
TSCK	**Chigu Township**	**1.66**	**242**	*e*S	**Sn**	**02 29 12.2**	**+1.1**
PCYT	**Pengchaiyu**	**1.73**	**12**	*e*P	**Pn**	**02 28 53.8**	**+1.6**
SCZT	**Fangliau**	**1.83**	**213**	*e*P	**Pn**	**02 28 55.1**	**+1.8**
LAY	**Lan-yu**	**1.88**	**184**	*e*P	**Pn**	**02 28 52.3**	**-1.8**
LAY				*e*S	**Sn**	**02 29 15.3**	**-1.4**
SLIU	**Shizi**	**1.88**	**206**	*e*P	**Pb**	**02 28 56.9**	**-1.1**
IRIF	**Iriomote-Funau**	**1.92**	**77**	*e*P	**Pn**	**02 28 54.5**	**0.0**
IRIF				*e*S	**Sn**	**02 29 17.5**	**-0.1**
HATJ	**Hateruma jima**	**1.95**	**86**	*e*P	**Pn**	**02 28 54.9**	**-0.1**
HATJ				*e*S	**Sn**	**02 29 17.8**	**-0.5**
PHUB	**P'eng-hu**	**1.98**	**258**	*e*S	**Sn**	**02 29 18.7**	**-0.3**
PNG	**Penghu**	**1.98**	**260**	*e*P	**Pn**	**02 28 55.2**	**-0.3**
PNG				*e*S	**Sn**	**02 29 19.1**	**-0.1**
SMST	**Manzhou Townsh**	**2.05**	**202**	*e*P	**Pn**	**02 28 56.8**	**+0.4**
SMST				*e*S	**Sn**	**02 29 20.5**	**-0.3**
JKRS	**Kuro-shima**	**2.15**	**81**	*e*P	**Pn**	**02 28 58.2**	**+0.4**
JKRS				*e*S	**Sn**	**02 29 24.3**	**+0.9**
JIJ	**Ishigaki jima**	**2.29**	**78**	*e*P	**Pn**	**02 28 59.3**	**-0.4**
JIJ				*e*S	**Sn**	**02 29 25.6**	**-1.2**
VWUC	**VWUC**	**2.29**	**298**	*e*P	**Pn**	**02 28 58.6**	**-1.2**
VWUC				*i* S	**Sn**	**02 29 24.4**	**-2.5**
JTJ	**Tarama**	**2.85**	**75**	*e*P	**Pn**	**02 29 07.2**	**-0.2**
JTJ				*e*S	**Sn**	**02 29 39.5**	**-1.1**

*DJA **03** 02:31:49.8±1.6, 5°.1N±14°.×12°.8E±°, h10km, M5.0/12, mb4.8/9, mB5.8/5, MLv4.9/12, Mw(mB)5.3/5*
*IDC **03** 02:32:10.6±3.8, 3°.60N×127°.02E, h71km±35km, mb3.7/11, mbtmp4.0/12, ML3.7/1, Error ellipse: s-maj=36.2km s-min=14.4km az=78.0*
*NEIC **03** 02:32:10.2±1.9, 3°.65N±0°.09×127°.0E±0°.1, h62km±5km, mb4.4/19, Error ellipse: s-maj=17.1km s-min=9.4km az=55.0*
*MAN **03** 02:32:14.0, 4°.38N×127°.06E, h3km, MS3.9*
ISC 03 02:32:08.4±0.5, **3°.69N**±0°.05×**127°.00E**±0°.09, **h48**km, **n51**, σ2.905/52, **mb4.4**/18, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.47**	**270**	P	**Pn**	**02 32 35.2**	**+2.7**
GAMI	**Galela, Maluku**	**2.00**	**157**	P	**Pn**	**02 32 44.1**	**+4.4**
DDMP	**Don Marcelino,**	**2.72**	**332**	*e*P	**Pn**	**02 32 51.4**	**+1.7**
DDMP				*e*S	**Sn**	**02 33 23.5**	**+2.1**
TNTI	**Ternate**	**2.92**	**173**		**Pn**	**02 32 51.7**	**-0.7**
TNTI	**Ternate**	**2.92**	**173**	P	Pn	02 32 58.1	+5.7
MNI	**Manado**	**3.10**	**224**	P	Pn	02 33 02.0	+7.1
KCP	**Kidapawan**	**3.81**	**330**	*e*P	**Pn**	**02 33 07.7**	**+3.0**
KCP				*e*S	**Sn**	**02 33 41.3**	**-7.0**
CDOP	**Cateel, Davao**	**4.11**	**352**	*i* P	**Pn**	**02 33 08.9**	**+0.2**
CDOP				*i* S	**Sn**	**02 33 54.4**	**-1.2**
CTBH	**Cotabato--PC H**	**4.46**	**322**	*i* P	Pn	02 33 25.4	+12
CTBH				*i* S	Sn	02 33 55.3	-8.8
BIPH	**Bislig**	**4.51**	**352**	*e*P	**Pn**	**02 33 18.9**	**+4.6**
BIPH				*e*S	**Sn**	**02 34 09.5**	**+4.0**
GTOI	**Gorontalo**	**5.01**	**233**	P	Pn	02 33 26.7	+5.6
	0.2nm30nm,0.8s						
SIJI	**Sorong**	**6.22**	**137**	P	**Pn**	**02 33 40.7**	**+3.0**
	2.0nm,0.3s,baz=354,slow=15,SNR=5.5						
SIJI				S	**Sn**	**02 34 48.0**	**+0.5**
	5.5nm,0.3s,baz=247,slow=22,SNR=1.7						
	5.6nm,0.3s						
SIJI	**Sorong**	**6.22**	**137**	P	**Pn**	**02 33 33.9**	**-3.8**
TOLI2	**Tolitoli**	**6.72**	**248**		**Pn**	**02 33 47.6**	**+3.1**
APSI	**Ampana**	**7.03**	**230**	P	Pn	02 33 57.1	+8.2
	70nm,0.6s						
KRAI	**Karang Ratu**	**7.10**	**169**	P	**Pn**	**02 33 53.2**	**+3.4**
	4um17nm,0.4s						
FAKI	**Fak Fak**	**8.40**	**141**	Pn	**Pn**	**02 34 08.7**	**+1.0**
RKPI	**Ransiki, Papua**	**8.84**	**126**	P	Pn	02 34 01.3	-12
	107nm,0.5s						
MTN	**Manton Dam**	**16.93**	**166**	P	**Pn**	**02 36 00.7**	**-1.3**
MTN				IAmb	IAmb	02 36 04.5	
	comp=Z,9.9nm,0.7s						
KNRA	**Kununurra**	**19.32**	**175**	P	**P**	**02 36 29.9**	**+0.2**
KNRA				IAmb	IAmb	02 36 31.8	
	comp=Z,8.4nm,0.7s						
YULB	**Yu-li**	**20.35**	**345**	P	**P**	**02 36 39.1**	**-1.9**
YULB				IAmb	IAmb	02 36 44.5	
	comp=Z,30nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.69**	**184**	P	**P**	**02 36 54.1**	**-1.3**
	comp=Z,4.0nm,0.6s,baz=11,slow=11,SNR=18						
	comp=Z,4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.69**	**184**	P	**P**	**02 36 54.5**	**-0.8**
WRA	**Warramunga Arr**	**24.56**	**163**	P	**P**	**02 37 22.6**	**-1.4**
	comp=Z,9.0nm,0.7s,baz=343,slow=11,SNR=53						
WRA				PcP	**PcP**	**02 41 01.3**	**0.0**
	comp=Z,0.2nm,0.5s,baz=343,slow=2.3,SNR=1.8						
	comp=Z,9.0nm,0.7s						
WRA	**Warramunga Arr**	**24.56**	**163**	P	**P**	**02 37 21.7**	**-2.3**
WR8	**Warramunga Arr**	**24.62**	**163**	P	**P**	**02 37 24.0**	**-0.5**
WR8				IAmb	IAmb	02 37 25.4	
	comp=Z,9.1nm,0.8s						
AS31	**Alice Springs**	**28.01**	**166**	P	**P**	**02 37 54.0**	**-1.1**
ASAR	**Alice Springs**	**28.01**	**166**	P	**P**	**02 37 54.1**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=341,slow=10,SNR=16						
ASAR				PcP	**PcP**	**02 41 08.8**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=346,slow=2.5,SNR=6.2						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**28.01**	**166**	P	**P**	**02 37 54.8**	**-0.3**
FORT	**Forrest**	**34.29**	**178**	P	**P**	**02 38 50.3**	**+0.1**
FORT				IAmb	IAmb	02 38 53.4	
	comp=Z,15nm,1.4s						
EIDS	**Eidsvold**	**37.15**	**142**	P	**P**	**02 39 14.2**	**-0.6**
EIDS				IAmb	IAmb	02 39 32.0	
	comp=Z,12nm,1.4s						
BBOO	**Buckleboo**	**37.30**	**167**	P	**P**	**02 39 14.9**	**-1.1**
STKA	**Stephens Creek**	**37.99**	**160**	P	**P**	**02 39 21.6**	**-0.3**
	comp=Z,6.6nm,0.6s,baz=333,slow=9.0,SNR=20						
	comp=Z,9.6nm,0.6s						
ARMA	**Armidale**	**41.28**	**147**	P	**P**	**02 39 50.0**	**+0.6**
ARMA				IAmb	IAmb	02 40 23.7	
	comp=Z,14nm,1.4s						
SONM	**Songino Array**	**47.42**	**341**	P	**P**	**02 40 38.8**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=144,slow=8.2,SNR=2.2						
	comp=Z,0.3nm,0.6s						
PETK	**Petropavlovsk-**	**55.37**	**22**	P	**P**	**02 41 37.7**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=190,slow=2.9,SNR=7.2						
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**57.74**	**325**	P	**P**	**02 41 54.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=133,slow=7.6,SNR=3.5						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**60.75**	**333**	P	**P**	**02 42 16.7**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=126,slow=9.5,SNR=1.6						
	comp=Z,0.4nm,0.4s						
LBZ	**Lake Benmore**	**61.50**	**146**	P	**P**	**02 42 20.8**	**+0.4**
KURBB	**Kurchatov Arra**	**61.92**	**327**	P	**P**	**02 42 22.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=129,slow=6.1,SNR=3.6						
	comp=Z,0.6nm,0.3s						
KURK	**Kurchatov**	**61.92**	**327**	P	**P**	**02 42 23.5**	**+0.4**
KURK				IAmb	IAmb	02 42 46.0	
	comp=Z,2.3nm,0.7s						
AB31	**Akbulak array**	**72.35**	**321**	P	**P**	**02 43 28.1**	**-1.2**
ABKAR	**Akbulak array**	**72.35**	**321**	P	**P**	**02 43 28.4**	**-0.9**
M14K	**Bethel**	**77.59**	**28**	P	**P**	**02 43 58.7**	**-0.6**
M16K	**Timber Creek**	**79.08**	**28**	P	**P**	**02 44 07.7**	**+0.2**
M16K				IAmb	IAmb	02 44 10.4	
	comp=Z,16nm,1.4s						
VNDA	**Vanda**	**83.35**	**173**	P	**P**	**02 44 29.1**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=322,slow=5.3,SNR=6.7						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**83.35**	**173**	P	**P**	**02 44 29.6**	**-0.2**
VNDA				IAmb	IAmb	02 44 37.5	
	comp=Z,3.7nm,1.4s						
G24K	**Hadweenzic Riv**	**84.86**	**23**	P	**P**	**02 44 38.8**	**+1.0**
G24K				IAmb	IAmb	02 44 39.5	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**85.03**	**25**	P	**P**	**02 44 37.4**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=246,slow=5.7,SNR=5.8						
	comp=Z,0.6nm,0.9s						
BMAR	**Burnt Mountain**	**86.01**	**23**	P	**P**	**02 44 44.5**	**+0.9**
QSPA	**South Pole Qui**	**93.59**	**180**	P	**P**	**02 45 20.2**	**+1.0**

*IDC **03** 02:33:37.2±3.5, 16°.58N×100°.44W, h0km, mb3.7/4, mbtmp3.7/8, ML3.4/4, MS3.2/8, Error ellipse: s-maj=77.7km s-min=23.4km az=26.0*
*NEIC **03** 02:33:43.7±2.0, 17°.11N±0°.04×100°.18W±0°.03, h35km±5km, mb4.4/61, Md4.5/142(MEX), Error ellipse: s-maj=6.3km s-min=4.4km az=202.0*
*MEX **03** 02:33:45.3±1.7, 17°.12N×100°.20W, h36km±8km, MD4.5, Fault plane solution: NP1,φs108.51000°, δ90.00000°, λ90.00000°.*
ISC 03 02:33:43.3±0.6, **17°.05N**±0°.03×**100°.20W**±0°.02, **h35**km±1km, **n184**, σ2.916/277, **mb4.4**/20, **MS3.1**/5, **1C-13D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.06**	**270**		**Pn**	**02 33 49.8**	**+0.6**
CAIG					**Sn**	**02 33 54.5**	**+1.3**
CAIG	**El Cayaco**	**0.06**	**270**	⇓*e*P	**Pn**	**02 33 49.8**	**+0.6**
	baz=46,slow=4.1						
CAIG				*i* S	**Sn**	**02 33 54.5**	**+1.3**
ATYC	**Atoyac**	**0.27**	**307**		**Pn**	**02 33 50.9**	**0.0**
ATYC					**Sn**	**02 33 56.3**	**+0.2**
ATYC	**Atoyac**	**0.27**	**307**	⇓*e*P	**Pn**	**02 33 50

COVM	**Coyocan**	**2.50**	**23**	*eP*		**Pn**	**02 34 23.1**	**+1.4**
COVM				*eS*		**Sn**	**02 34 50.8**	**-0.4**
PPIG	**Popocatepetl**	**2.50**	**36**			**Pn**	**02 34 21.2**	**-0.9**
PPIG						**Sn**	**02 34 51.7**	**+0.1**
PPM	**Popocatepetl**	**2.51**	**37**	*eP*		**Pn**	**02 34 21.2**	**-0.9**
PPM				*i S*		**Sn**	**02 34 51.7**	**+0.1**
PPAX	**Atlixo**	**2.52**	**42**	*eP*		**Pn**	**02 34 20.9**	**-1.1**
PPAX				*eS*		**Sn**	**02 34 50.8**	**-0.8**
MHVM	**Bosque de Chap**	**2.53**	**22**			**Pn**	**02 34 24.6**	**+2.4**
MHVM						**Sn**	**02 34 59.5**	**+7.6**
MHVM	**Bosque de Chap**	**2.53**	**22**	*eP*		**Pn**	**02 34 23.2**	**+1.0**
MHVM				*eS*		**Sn**	**02 34 52.7**	**+0.7**
TACY	**Mexico City**	**2.53**	**22**	*eP*		**Pn**	**02 34 22.5**	**+0.3**
TACY				*i S*		**Sn**	**02 34 57.6**	**+5.6**
THVM	**De Xico**	**2.54**	**27**			**Pn**	**02 34 22.9**	**+0.6**
THVM						**Sn**	**02 34 57.2**	**+5.1**
THVM	**De Xico**	**2.54**	**27**	*eP*		**Pn**	**02 34 22.2**	**0.0**
THVM				*eS*		**Sn**	**02 34 51.4**	**-0.7**
YOIG	**Yosondua**	**2.55**	**94**			**Pn**	**02 34 23.6**	**+1.1**
YOIG						**Sn**	**02 34 59.6**	**+7.1**
YOIG	**Yosondua**	**2.55**	**94**	*eP*		**Pn**	**02 34 23.6**	**+1.1**
YOIG				*eS*		**Sn**	**02 34 52.9**	**+0.5**
PPSX	**Xalitzintla**	**2.59**	**38**	*eP*		**Pn**	**02 34 23.2**	**+0.2**
PPSX				*eS*		**Sn**	**02 34 53.4**	**-0.1**
APVM	**Azcapotzalco**	**2.60**	**21**			**Pn**	**02 34 24.3**	**+1.1**
APVM						**Sn**	**02 35 00.3**	**+6.6**
APVM	**Azcapotzalco**	**2.60**	**21**	*eP*		**Pn**	**02 34 23.6**	**+0.4**
APVM				*eS*		**Sn**	**02 34 52.9**	**-0.9**
PBVM	**Pinon**	**2.61**	**24**			**Pn**	**02 34 23.2**	**+0.2**
PBVM						**Sn**	**02 34 56.8**	**+3.4**
PBVM	**Pinon**	**2.61**	**24**	*eP*		**Pn**	**02 34 23.2**	**+0.2**
PBVM				*eS*		**Sn**	**02 34 52.7**	**-0.7**
AZVM	**Cuida Lopez Ma**	**2.67**	**19**			**Pn**	**02 34 24.7**	**+0.5**
AZVM						**Sn**	**02 35 02.1**	**+6.7**
AZVM	**Cuida Lopez Ma**	**2.67**	**19**	*eP*		**Pn**	**02 34 24.7**	**+0.5**
AZVM				*eS*		**Sn**	**02 34 55.1**	**-0.3**
ATVM	**ATLACOMULCO**	**2.72**	**7**			**Pn**	**02 34 21.1**	**-3.7**
ATVM						Sn	02 35 06.2	+9.5
ATVM	**ATLACOMULCO**	**2.72**	**7**	*eP*		**Pn**	**02 34 24.7**	**-0.1**
ATVM				*eS*		**Sn**	**02 34 56.5**	**-0.2**
PTVM	**Pico Tres Padr**	**2.73**	**22**			**Pn**	**02 34 24.0**	**-1.0**
PTVM						**Sn**	**02 35 01.8**	**+4.8**
PTVM	**Pico Tres Padr**	**2.73**	**22**	*eP*		**Pn**	**02 34 25.4**	**+0.4**
PTVM				*eS*		**Sn**	**02 34 56.8**	**-0.2**
PHPU	**Puebla**	**2.77**	**44**			**Pn**	**02 34 23.9**	**-1.6**
PHPU						**Sn**	**02 35 01.6**	**+3.6**
PHPU	**Puebla**	**2.77**	**44**	*eP*		**Pn**	**02 34 23.9**	**-1.6**
PHPU				*i S*		**Sn**	**02 35 01.6**	**+3.6**
MOIG	**Morelia**	**2.78**	**340**			**Pn**	**02 34 27.0**	**+1.4**
MOIG						**Sn**	**02 34 54.8**	**-3.2**
MOIG	**Morelia**	**2.78**	**340**	*i P*		**Pn**	**02 34 25.1**	**-0.5**
MOIG				*eS*		**Sn**	**02 34 54.8**	**-3.2**
URUA	**Uruapan**	**2.96**	**323**			**Pn**	**02 34 32.4**	**+4.4**
URUA						**Sn**	**02 35 09.6**	**+7.3**
URUA	**Uruapan**	**2.96**	**323**	*eP*		**Pn**	**02 34 28.9**	**+1.0**
URUA				*i S*		**Sn**	**02 35 09.6**	**+7.3**
ZUVM	**ZUMPANGO**	**2.96**	**21**			**Pn**	**02 34 30.8**	**+2.7**
ZUVM						Sn	02 35 15.3	+13
ZUVM	**ZUMPANGO**	**2.96**	**21**	*eP*		**Pn**	**02 34 28.3**	**+0.2**
ZUVM				*eS*		**Sn**	**02 35 02.5**	**-0.1**
VTVM	**Tizayuca**	**3.03**	**26**			**Pn**	**02 34 33.0**	**+4.0**
VTVM						Sn	02 35 12.9	+8.6
VTVM	**Tizayuca**	**3.03**	**26**	*eP*		**Pn**	**02 34 30.1**	**+1.1**
VTVM				*eS*		**Sn**	**02 35 04.4**	**+0.1**
TPIG	**Tehuac#an**	**3.03**	**63**			**Pn**	**02 34 28.6**	**-0.4**
TPIG						**Sn**	**02 35 03.2**	**-1.0**
TPIG	**Tehuac#an**	**3.03**	**63**	*eP*		**Pn**	**02 34 28.6**	**-0.4**
TPIG				*eS*		**Sn**	**02 35 03.2**	**-1.0**
PEIG	**Puerto Escondi**	**3.11**	**109**			**Pn**	**02 34 31.4**	**+1.5**
PEIG						**Sn**	**02 35 03.7**	**-2.3**
PEIG	**Puerto Escondi**	**3.11**	**109**	*eP*		**Pn**	**02 34 31.4**	**+1.5**
PEIG				*eS*		**Sn**	**02 35 05.6**	**-0.3**
TOIG	**Toxpalan**	**3.17**	**70**			**Pn**	**02 34 30.9**	**+0.1**
TOIG						**Sn**	**02 35 13.8**	**+6.3**
TOIG	**Toxpalan**	**3.17**	**70**	*eP*		**Pn**	**02 34 30.9**	**+0.1**
TOIG				*eS*		**Sn**	**02 35 08.3**	**+0.8**
MMIG	**Aquila**	**3.24**	**293**			**Pn**	**02 34 31.8**	**+0.1**
MMIG						Sn	02 35 22.2	+13
MMIG	**Aquila**	**3.24**	**293**	*eP*		**Pn**	**02 34 31.8**	**+0.1**
MMIG				*eS*		**Sn**	**02 35 10.3**	**+1.2**
OXIG	**Oaxaca**	**3.32**	**89**			**Pn**	**02 34 33.4**	**+0.4**
OXIG						**Sn**	**02 35 11.1**	**-0.2**
VHO	**Vista Hermosa**	**3.32**	**89**	*eP*		**Pn**	**02 34 33.4**	**+0.4**
VHO				*eS*		**Sn**	**02 35 11.1**	**-0.2**
DHIG	**Demacu**	**3.42**	**19**			**Pn**	**02 34 33.0**	**-1.4**
DHIG						Sn	02 35 26.8	+13
DEIG	**Demacu**	**3.42**	**19**	*eP*		**Pn**	**02 34 33.0**	**-1.4**
DEIG				*eS*		**Sn**	**02 35 13.4**	**-0.4**
IGIG	**Irapuato, Guan**	**3.84**	**344**			Pn	02 34 45.1	+5.0
IGIG						**Sn**	**02 35 21.9**	**-2.2**
IGIG	**Irapuato, Guan**	**3.84**	**344**	*eP*		**Pn**	**02 34 39.4**	**-0.7**
IGIG				*i S*		**Sn**	**02 35 21.9**	**-2.2**
NEUV	**Arroyo Zacate**	**4.25**	**80**			**Pn**	**02 34 45.7**	**+0.1**
NEUV						**Sn**	**02 35 33.8**	**-0.3**
NEUV	**Arroyo Zacate**	**4.25**	**80**	*eP*		**Pn**	**02 34 45.7**	**+0.1**
NEUV				*eS*		**Sn**	**02 35 33.8**	**-0.3**
LVIG	**Laguna Verde**	**4.47**	**53**			**Pn**	**02 34 49.6**	**+1.0**
LVIG						**Sn**	**02 35 39.1**	**-0.3**
LVIG	**Laguna Verde**	**4.47**	**53**	*eP*		**Pn**	**02 34 49.6**	**+1.0**
LVIG				*i S*		**Sn**	**02 35 39.1**	**-0.3**
RPIG	**Rio Verde**	**4.82**	**2**			**Pn**	**02 34 54.3**	**+0.9**
RPIG						**Sn**	**02 35 47.1**	**-1.1**
RPIG	**Rio Verde**	**4.82**	**2**	*eP*		**Pn**	**02 34 54.3**	**+0.9**
RPIG				*i S*		**Sn**	**02 35 47.1**	**-1.1**
CMIG	**Matias Romero**	**5.09**	**89**	Pn		**Pn**	**02 34 58.5**	**+1.4**
	1.4nm,0.3s,baz=265,slow=13,SNR=19							
CMIG				Pg			02 35 15.6	
	6.9nm,0.3s,baz=276,slow=14,SNR=8.0							
CMIG				Lg	Lg		02 36 16.9	
	16nm,0.3s,baz=7.8,slow=15,SNR=6.1							
CMIG				LR	LR		02 37 31.1	
	comp=Z,86nm,20.6s,baz=236,slow=44							
	5.1nm,0.3s							
CMIG	**Matias Romero**	**5.09**	**89**			**Pn**	**02 34 54.9**	**-2.2**
CMIG						**Sn**	**02 35 54.9**	**+0.2**
CMIG	**Matias Romero**	**5.09**	**89**	*eP*		**Pn**	**02 34 58.0**	**+0.8**
CMIG				*i S*		**Sn**	**02 35 54.9**	**+0.2**
CJM	**Chamela**	**5.21**	**299**	*eP*		**Pn**	**02 35 01.4**	**+2.6**
CJM				*eS*		**Sn**	**02 35 55.6**	**-1.9**
ANIG	**Ahuacatlan**	**5.71**	**315**			**Pn**	**02 35 08.3**	**+2.6**
ANIG						**Sn**	**02 36 11.7**	**+1.6**
ANIG	**Ahuacatlan**	**5.71**	**315**	*eP*		**Pn**	**02 35 08.3**	**+2.6**
ANIG				*i S*		**Sn**	**02 36 11.7**	**+1.6**
GTIG	**Gomez Farias**	**6.07**	**9**			**Pn**	**02 35 07.2**	**-3.4**
GTIG						**Sn**	**02 36 16.9**	**-1.9**
GTIG	**Gomez Farias**	**6.07**	**9**	*eP*		**Pn**	**02 35 07.2**	**-3.4**
GTIG				*eS*		**Sn**	**02 36 16.9**	**-1.9**
ZAIG	**Zacatecas**	**6.11**	**339**			**Pn**	**02 35 10.7**	**-0.8**
ZAIG						**Sn**	**02 36 20.7**	**+0.4**
ZAIG	**Zacatecas**	**6.11**	**339**	*eP*		**Pn**	**02 35 10.7**	**-0.8**
ZAIG				*i S*		**Sn**	**02 36 20.7**	**+0.4**
APG	**El Apazote**	**9.58**	**101**	LR	LR		02 39 37.0	
	comp=Z,8.6nm,21.3s,baz=177,slow=37							
TXAR	**Lajitas Array**	**12.63**	**346**	Pn	Pn		02 36 45.4	+4.7
	baz=160,slow=12,SNR=4.9							
TXAR				Lg	Lg		02 40 18.4	
	baz=164,slow=25,SNR=3.2							
TXAR				LR	LR		02 42 19.0	
	comp=Z,168nm,21.9s,baz=148,slow=40							
	1.6nm,0.9s							
TXAR	**Lajitas Array**	**12.63**	**346**	Pn		**Pn**	**02 36 40.4**	**-0.3**
SAND	**Sanderson**	**12.97**	**353**			**Pn**	**02 36 46.4**	**+1.2**
BRDY	**Brady**	**14.22**	**4**			**Pn**	**02 37 00.4**	**-1.8**
MNHN	**Monahans**	**14.42**	**351**			**Pn**	**02 37 06.4**	**+1.4**
PECS	**Pecos**	**14.64**	**348**			**Pn**	**02 37 09.1**	**+1.1**
SGCY	**Sterling City**	**14.82**	**357**	Pn		**Pn**	**02 37 11.2**	**+0.7**
ODSA	**Odessa**	**15.16**	**352**			**Pn**	**02 37 14.1**	**-0.8**
ODSA					IAmb	IAmb	02 37 29.3	
	comp=Z,17nm,1.1s							
MNTX	**Cornudas Mount**	**15.32**	**343**			**P**	**02 37 20.0**	**-1.4**
GDL2	**Guadalupe Moun**	**15.55**	**347**	P		**Pn**	**02 37 22.1**	**+2.0**
PLPT	**Palo Pinto**	**15.79**	**6**	Pn		**Pn**	**02 37 21.6**	**-1.5**
SN07	**Snyder 07**	**15.99**	**358**	P		**P**	**02 37 27.9**	**-0.9**
APMT	**Aspermont**	**16.21**	**0**	P		**P**	**02 37 30.6**	**-0.7**
APMT					IAmb	IAmb	02 37 40.7	
	comp=Z,24nm,0.9s							
JTS	**Las Juntas de**	**16.26**	**112**	Pn		**Pn**	**02 37 27.3**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=324,slow=19,SNR=1.9							
	comp=Z,3.2nm,0.8s							
Z38A	**Mt. Pleasant**	**16.81**	**15**			**Pn**	**02 37 36.4**	**+0.4**
Z38A					IAmb	IAmb	02 37 47.9	
	comp=Z,37nm,0.8s							
121A	**Cookes Peak, D**	**16.87**	**337**	P		**Pn**	**02 37 37.5**	**+0.5**
MSTX	**Muleshoe**	**17.01**	**353**	P		**Pn**	**02 37 38.3**	**-0.3**
MSTX					IAmb	IAmb	02 37 51.8	
	comp=Z,23nm,0.9s							
Z41A	**Richland Creek**	**17.46**	**21**	P		**Pn**	**02 37 43.8**	**-0.3**
Z41A					IAmb	IAmb	02 37 54.4	
	comp=Z,20nm,0.9s							
146A	**Union**	**18.50**	**31**	P		**Pn**	**02 37 56.8**	**-0.1**
146A					IAmb	IAmb	02 38 00.4	
	comp=Z,14nm,0.7s							
ANMO	**Albuquerque**	**18.68**	**344**	P		**Pn**	**02 38 00.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=161,slow=14,SNR=3.2							
ANMO				LR	LR		02 45 30.7	
	comp=Z,76nm,19.9s,baz=180,slow=37							
	comp=Z,0.7nm,0.6s							
TUL3	**Leonard**	**19.19**	**11**			**P**	**02 38 02.1**	**-2.0**
TUL3					IAmb	IAmb	02 38 19.8	
	comp=Z,18nm,0.9s							
Y45A	**Yeager Farm, C**	**19.29**	**28**	P		**P**	**02 38 02.6**	**-2.6**
Y45A					IAmb	IAmb	02 38 15.3	
	comp=Z,42nm,1.2s							
LRAL	**Lakeview Retre**	**19.88**	**34**			**P**	**02 38 09.8**	**-1.8**
Y49A	**Blount Mountai**	**20.82**	**34**	P		**P**	**02 38 20.6**	**-1.3**
Y49A					IAmb	IAmb	02 38 34.8	
	comp=Z,7.9nm,0.5s							
X48A	**Hartselle**	**20.96**	**32**			**P**	**02 38 21.6**	**-1.8**
SDCO	**Great Sand Dun**	**21.14**	**348**	P		**P**	**02 38 24.2**	**-1.3**
MVCO	**Mesa Verde**	**21.38**	**342**			**P**	**02 38 29.9**	**+1.9**
S22A	**4UR Ranch, Cre**	**21.43**	**346**	P		**P**	**02 38 29.1**	**+0.4**
FPAL	**Fort Paine**	**21.77**	**34**	P		**P**	**02 38 29.2**	**-2.9**
FPAL					IAmb	IAmb	02 38 43.9	
	comp=Z,14nm,0.8s							
WVT	**Waverly**	**21.95**	**28**	P		**P**	**02 38 31.4**	**-2.6**
X51A	**Calhoun**	**22.20**	**35**	IAmb	IAmb		02 38 46.2	
	comp=Z,9.7nm,0.9s							
R40A	**Maddies Statio**	**22.28**	**17**	IAmb	IAmb		02 38 43.3	
	comp=Z,8.8nm,0.9s							
T47A	**Sharon Grove**	**22.99**	**28**	IAmb	IAmb		02 38 54.3	
	comp=Z,12nm,0.7s							
P40A	**Paris**	**23.50**	**16**			**P**	**02 38 48.0**	**-2.0**
P40A					IAmb	IAmb	02 39 00.4	
	comp=Z,5.9nm,0.7s							
TKL	**Tuckaleechee C**	**23.61**	**35**	LR	LR		02 51 48.3	
	comp=Z,29nm,18.1s,baz=202,slow=45							
TKL	**Tuckaleechee C**	**23.61**	**35**	IAmb	IAmb		02 39 04.6	
	comp=Z,12nm,0.8s							
T50A	**Nancy**	**24.08**	**31**	IAmb	IAmb		02 39 04.2	
	comp=Z,13nm,1.1s							
PAULI	**Pauline**	**24.15**	**39**	IAmb	IAmb		02 39 05.7	
	comp=Z,10nm,1.0s							
V53A	**Saluda**	**24.15**	**36**	IAmb	IAmb		02 38 58.1	
	comp=Z,13nm,0.8s							
KMSC	**Kings Mountain**	**24.66**	**39**	P		**P**	**02 39 00.8**	**0.0**
KMSC					IAmb	IAmb	02 39 10.6	
	comp=Z,12nm,0.8s							
V55A	**Taylorsville**	**25.21**	**38**	IAmb	IAmb		02 39 15.5	
	comp=Z,9.6nm,0.6s							
O48B	**Farmland**	**26.55**	**26**	IAmb	IAmb		02 39 26.6	
	comp=Z,13nm,0.8s							
NVAR	**Mina Array Bea**	**26.56**	**327**	P		**P**	**02 39 20.6**	**+2.3**
	comp=Z,2.3nm,0.9s,baz=151,slow=11,SNR=9.9							
	comp=Z,2.3nm,0.9s							
PDAR	**Pinedale Array**	**26.85**	**345**	P		**P**	**02 39 24.6**	**+3.8**
	comp=Z,0.3nm,0.5s,baz=148,slow=7.9,SNR=4.3							
PDAR				LR	LR		02 50 52.5	
	comp=Z,45nm,21.7s,baz=161,slow=38							
	comp=Z,0.3nm,0.5s							
N47A	**Urbana**	**26.85**	**25**	IAmb	IAmb		02 39 29.3	
	comp=Z,11nm,0.9s							
S57A	**Dark Hollow, R**	**27.83**	**38**	IAmb	IAmb		02 39 39.5	
	comp=Z,12nm,0.9s							
CELP	**Cerrillos**	**32.05**	**83**	P		**P**	**02 40 02.7**	**-4.3**
SADO	**Sadowa**	**32.82**	**28**	LR	LR		02 55 32.7	
	comp=Z,49nm,20.3s,baz=260,slow=40							
ULM	**Lac du Bonnet**	**33.30**	**5**	LR	LR		02 54 27.1	
	comp=Z,36nm,19.8s,baz=164,slow=37							
PB12	**IPOC Station P**	**46.04**	**139**	P		**P**	**02 42 05.0**	**+1.1**
YKA	**Yellowknife Ar**	**46.51**	**351**	P		**P**	**02 42 08.0**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=164,slow=7.5,SNR=4.0							
	comp=Z,0.8nm,0.8s							
BLKN	**Baker Lake**	**47.31**	**2**	P		**P**	**02 42 12.3**	**-0.9**
BLKN					IAmb	IAmb	02 42 36.8	
	comp=Z,5.9nm,1.2s							
H03N2	**Juan Fernandez**	**54.16**	**158**	T		T	03 41 26.8	
	baz=338							
H03N1	**Juan Fernandez**	**54.16**	**158**	T		T	03 41 24.5	
	baz=338							
H03N3	**Juan Fernandez**	**54.17**	**158**	T		T	03 41 26.8	
	baz=338							
F28M	**Old Crow**	**56.55**	**343**	P		**P**	**02 43 21.1**	**-0.9**
F28M					IAmb	IAmb	02 43 38.4	
	comp=Z,3.5nm,1.1s							
ILAR	**Eielson Array**	**57.01**	**338**	P		**P**	**02 43 26.4**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=140,slow=3.5,SNR=6.4							
	comp=Z,0.6nm,0.9s							
ILAR	**Eielson Array**	**57.01**	**338**	P		**P**	**02 43 25.7**	**+0.4**
GO06	**Curarrehue**	**62.40**	**155**	P		**P**	**02 44 03.4**	**+0.6**
NOA	**NORSAR Array B**	**85.15**	**27**	LR	LR		03 26 17.1	
	comp=Z,26nm,18.3s,baz=30,slow=37							
HHC	**Hu-ho-hao-te**	**115.28**	**334**	*eP*		**PKiKP**	**02 52 16.1**	**-5.6**
PZH	**PanZhiHua**	**131.74**	**333**	PKP		**PKPdf**	**02 52 52.2**	**-1.4**

*GCG **03** 02:34:19.6±2.4, 15°.58N×91°.35W, h11km±10km, MD4.6, ML4.5, MW3.2, Presumed earthquake*
*CATAC **03** 02:34:20.3±0.3, 16°N±2°×91°W±°, h2km, M4.1/19, MLv4.1/19, Error ellipse: s-maj=3.5km s-min=2.9km az=169.9, confirmed*
*SNET **03** 02:34:24.6±2.9, 15°.42N×91°.44W, h5km, ML3.9, Presumed earthquake*

ISC 03 02:34:18.9±0.9, 15°.57N±0°.03×91°.39W±0°.03, h31km±7km, n53, σ2s13/81, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HUEH	**Huehuetenango**	**0.27**	**203**	P	*i* P	**Pn**	**02 34 26.2**	**-0.2**
HUEH				S		**Sb**	**02 34 31.0**	**-0.4**
HUEH	**Huehuetenango**	**0.27**	**203**	*i* P	*i* P	**Pb**	**02 34 26.2**	**-0.2**
HUEH				*i* S	*i* S	**Sb**	**02 34 30.8**	**-0.6**
HUEH				IAML			02 34 32.2	
	comp=E,73μm,0.2s							
QUEO	**Labor Ovalle**	**0.70**	**190**	*i* P	*i* P	**Pn**	**02 34 33.9**	**+1.0**
QUEO				*i* S	*i* S	**Sn**	**02 34 44.2**	**+1.3**
AVCB	**Coban**	**0.96**	**96**	*i* P	*i* P	**Pn**	**02 34 36.1**	**-0.2**
AVCB				*i* S	*i* S	**Sn**	**02 34 47.2**	**-1.8**
AVCB				IAML			02 34 55.4	
	comp=N,43μm,0.4s							
APG	**El Apazote**	**1.06**	**122**	*i* P	*i* P	**Pn**	**02 34 38.0**	**+0.3**
APG				*i* S	*i* S	**Sn**	**02 34 51.4**	**-0.1**
RTHG		**1.07**	**232**	*i* P	*i* P	**Pb**	**02 34 41.0**	**+2.1**
RTAL	**Retalhuleu**	**1.08**	**196**	P	P	**Pb**	**02 34 41.4**	**+2.4**
RTAL	**Retalhuleu**	**1.08**	**196**	*eP*	*eP*	**Pb**	**02 34 41.5**	**+2.5**
RTAL				*eS*	*eS*	**Sb**	**02 34 56.9**	**+4.0**
STG8	**El Palmar, Qui**	**1.11**	**178**	*i* P	*i* P	**Pn**	**02 34 35.8**	**-2.7**
STG8				*i* S	*i* S	**Sn**	**02 34 47.1**	**-5.8**
STG8				IAML			02 34 49.6	
	comp=E,13μm,0.2s							
STG5	**El Palmar, Qui**	**1.16**	**178**	*i* P	*i* P	**Pn**	**02 34 36.9**	**-2.1**
STG5				*i* S	*i* S	**Sn**	**02 34 48.2**	**-5.7**
GCG4	**OSOP**	**1.28**	**140**	*i* P	*i* P	**Pb**	**02 34 42.9**	**+0.3**
GCG4				*i* S	*i* S	**Sb**	**02 35 00.3**	**+1.5**
FG08	**Yepocapa, Chim**	**1.53**	**148**	*i* P	*i* P	**Pn**	**02 34 41.9**	**-2.3**
FG08				*i* S	*i* S	**Sn**	**02 34 58.0**	**-5.1**
FG16	**Alotenango, Sa**	**1.54**	**146**	*i* P	*i* P	**Pn**	**02 34 42.2**	**-2.3**
PCG5	**San Vicente Pa**	**1.67**	**144**	*i* P	*i* P	**Pn**	**02 34 44.8**	**-1.3**
PCG5				IAML			02 35 07.2	
	comp=N,5μm,0.5s							
PETF	**Flores**	**1.98**	**47**	P	P	**Pb**	**02 34 53.9**	**-0.4**
PETF				S	S	**Sb**	**02 35 18.3**	**-0.4**
PETF	**Flores**	**1.98**	**47**	*i* P	*i* P	**Pn**	**02 34 51.9**	**+1.6**
PETF				*i* S	*i* S	**Sn**	**02 35 15.6**	**+1.4**
PETF				IAML			02 35 20.7	
	comp=E,3μm,0.3s							
JUAM	**Asuncion Mita**	**2.04**	**127**	*i* P	*i* P	**Pb**	**02 34 54.5**	**-0.8**
JUAM				*i* S	*i* S	**Sb**	**02 35 21.0**	**+0.6**
TGIG		**2.05**	**306**	*i* P	*i* P	**Pb**	**02 34 55.0**	**-0.5**
TGIG				*i* S	*i* S	**Sb**	**02 35 21.8**	**+1.1**
FAME	**Alcaldia de Sa**	**2.17**	**142**	P	P	**Pb**	**02 34 58.1**	**+0.5**
SLOZ	**Alcaldia de Sa**	**2.19**	**134**	P	P	**Pb**	**02 34 58.9**	**+1.0**
SLOZ				S	S	**Sb**	**02 35 28.0**	**+3.5**
ZAFR2	**Estanzuela, Za**	**2.20**	**116**	*i* P	*i* P	**Pn**	**02 34 50.5**	**-2.8**
ZAFR2				*i* S	*i* S	**Sn**	**02 35 15.6**	**-3.9**
LOAL	**Lomas de Alarc**	**2.21**	**135**	P	P	**Pb**	**02 34 59.3**	**+1.1**
LOAL				S		**Sb**	**02 35 28.5**	**+3.4**
ESQI	**Esquipulas**	**2.22**	**117**	P	P	**Pb**	**02 34 58.6**	**+0.2**
ESQI				S		**Sb**	**02 35 28.2**	**+2.6**
NUBE	**Las Nubes**	**2.28**	**137**	P	P	**Pb**	**02 35 00.3**	**+0.9**
NUBE				S		**Sb**	**02 35 30.1**	**+2.9**
NUBE	**Las Nubes**	**2.28**	**137**	*i* P	P	**Pb**	**02 34 57.7**	**-1.7**
NUBE	**Las Nubes**	**2.28**	**137**	*eP*	P	**Pb**	**02 34 59.7**	**+0.2**
MTO3	**Montecristo**	**2.28**	**120**	P	P	**Pb**	**02 34 60.0**	**+0.4**
MTO3				S		**Sb**	**02 35 29.7**	**+2.2**
MTO3	**Montecristo**	**2.28**	**120**	*i* P	P	**Pb**	**02 34 57.5**	**-2.0**
UNIC	**Universidad Ca**	**2.38**	**131**	P	P	**Pb**	**02 35 01.8**	**+0.6**
UNIC				S		**Sb**	**02 35 32.5**	**+2.3**
SNJE	**San Jose**	**2.42**	**134**	*eP*	P	**Pb**	**02 35 02.3**	**+0.4**
SNJE				*eS*		**Sb**	**02 35 35.4**	**+4.1**
SBLS	**San Blas**	**2.43**	**135**	*eP*	P	**Pb**	**02 35 03.7**	**+1.6**
CEVE	**Cerro Verde**	**2.43**	**135**	P	P	**Pb**	**02 35 03.9**	**+1.8**
CEVE				S		**Sb**	**02 35 34.4**	**+2.5**
CEVE	**Cerro Verde**	**2.43**	**135**	*eP*	P	**Pb**	**02 35 03.9**	**+1.8**
CEDA	**San Andres**	**2.61**	**132**	P	P	**Pb**	**02 35 05.2**	**+0.1**
SARH	**Santa Rosa de**	**2.66**	**107**	P	P	**Pb**	**02 35 05.1**	**-0.8**
SARH				S		**Sb**	**02 35 39.2**	**+1.0**
SARH	**Santa Rosa de**	**2.66**	**107**	*i* P	P	**Pn**	**02 35 00.7**	**+1.0**
JAYA	**Jayaque - finc**	**2.68**	**135**	P	P	**Pb**	**02 35 05.9**	**-0.3**
JAYA				S		**Sb**	**02 35 40.3**	**+1.6**
JAYA	**Jayaque - finc**	**2.68**	**135**	*i* P	P	**Pn**	**02 35 03.0**	**+3.0**
JAYA	**Jayaque - finc**	**2.68**	**135**	*eP*	P	**Pb**	**02 35 07.0**	**+0.8**
PMON	**Piamonte**	**2.73**	**132**	P	P	**Pb**	**02 35 06.6**	**-0.5**
PMON				S		**Sb**	**02 35 42.0**	**+1.7**
BOQS	**Boqueron**	**2.74**	**131**	*eP*	P	**Pb**	**02 35 09.9**	**+2.6**
PIC2	**El Picacho**	**2.75**	**131**	*eP*	P	**Pb**	**02 35 10.8**	**+3.2**
LFRS	**El Faro**	**2.97**	**130**	*eP*	P	**Pb**	**02 35 13.7**	**+2.4**
P5NO	**Presa 5 de nov**	**2.99**	**121**	P	P	**Pb**	**02 35 12.2**	**+0.6**
PAVA	**Las Pavas**	**3.01**	**128**	P	P	**Pb**	**02 35 12.2**	**+0.3**
PAVA				S		**Sb**	**02 35 48.6**	**+0.3**
COEG	**Centro de Oper**	**3.11**	**128**	P	P	**Pb**	**02 35 14.5**	**+1.0**
COEG				S		**Sb**	**02 35 50.5**	**-0.7**
COEG	**Centro de Oper**	**3.11**	**128**	*eP*	P	**Pb**	**02 35 14.5**	**+1.0**
SCIG	**Sabancuy**	**3.38**	**3**	*i* P	P	**Pn**	**02 35 10.3**	**+0.7**
SOR	**Soroa**	**10.69**	**46**	*eP*	P	**Pn**	**02 36 52.2**	**+2.3**
CAMR	**Camarioca**	**12.04**	**50**	*eP*	P	**Pn**	**02 37 10.2**	**+1.9**
MGV	**Manicaragua**	**12.61**	**57**	*eP*	P	**Pn**	**02 37 18.2**	**+2.1**
MGV	**Manicaragua**	**

PANCS	**Alcalda de**	**0.54**	**62**	P		**Pn**	**02 41 12.2**	**+0.1**
PANCS				S		**Sn**	**02 41 22.4**	**+0.2**
NUBE	**Las Nubes**	**0.55**	**349**	P		**Pn**	**02 41 12.3**	**0.0**
NUBE				S		**Sn**	**02 41 22.4**	**-0.1**
NUBE	**Las Nubes**	**0.55**	**349**	*i* P		**Pn**	**02 41 12.1**	**-0.3**
UEES	**Universidad Ev**	**0.55**	**50**	P		**Pn**	**02 41 12.3**	**0.0**
UEES				S		**Sn**	**02 41 22.9**	**+0.5**
SEMO	**Seminario San**	**0.56**	**52**	P		**Pn**	**02 41 12.3**	**+0.1**
SEMO				S		**Sn**	**02 41 22.8**	**+0.4**
LOMA	**Loma Larga**	**0.57**	**60**	P		**Pn**	**02 41 12.5**	**+0.1**
LOMA	**Loma Larga**	**0.57**	**60**	*eP*		**Pn**	**02 41 12.4**	**0.0**
LOMA				*eS*		**Sn**	**02 41 22.9**	**+0.3**
FAME	**Alcaldia de Sa**	**0.59**	**326**	P		**Pn**	**02 41 12.6**	**0.0**
IGN	**Direccin Gen**	**0.60**	**54**	P		**Pn**	**02 41 12.7**	**-0.1**
IGN				S		**Sn**	**02 41 23.7**	**+0.4**
UNIC	**Universidad Ca**	**0.63**	**11**	P		**Pn**	**02 41 12.7**	**-0.4**
UNIC				S		**Sn**	**02 41 24.1**	**+0.4**
LOAL	**Lomas de Alarc**	**0.65**	**351**	P		**Pn**	**02 41 13.3**	**+0.1**
LOAL				S		**Sn**	**02 41 24.2**	**+0.2**
LFRS	**El Faro**	**0.65**	**66**	*eP*		**Pn**	**02 41 13.4**	**+0.1**
SLOZ	**Alcaldia de Sa**	**0.67**	**351**	P		**Pn**	**02 41 13.3**	**-0.2**
SLOZ				S		**Sn**	**02 41 25.0**	**+0.5**
PAVA	**Las Pavas**	**0.80**	**64**	P		**Pn**	**02 41 14.9**	**-0.1**
PAVA				S		**Sn**	**02 41 27.2**	**+0.1**
COEG	**Centro de Oper**	**0.81**	**71**	P		**Pn**	**02 41 15.0**	**0.0**
COEG				S		**Sn**	**02 41 27.2**	**-0.1**
COEG	**Centro de Oper**	**0.81**	**71**	*eP*		**Pn**	**02 41 15.0**	**0.0**
TECO	**Alcaldia de Te**	**0.89**	**78**	P		**Pn**	**02 41 15.8**	**0.0**
TECO				S		**Sn**	**02 41 28.6**	**-0.1**
LLGN	**La Laguna**	**1.07**	**41**	P		**Pn**	**02 41 17.9**	**-0.2**
MTO3	**Montecristo**	**1.08**	**16**	P		**Pn**	**02 41 18.3**	**-0.2**
MTO3				S		**Sn**	**02 41 32.6**	**-0.7**
MTO3	**Montecristo**	**1.08**	**16**	*i* P		**Pn**	**02 41 17.9**	**-0.5**
P5NO	**Presa 5 de nov**	**1.09**	**55**	P		**Pn**	**02 41 18.1**	**-0.2**
P5NO				S		**Sn**	**02 41 32.3**	**-0.7**
PQSS	**Presa 15 de Se**	**1.11**	**76**	P		**Pn**	**02 41 17.8**	**-0.9**
ESQI	**Esquipulas**	**1.24**	**15**	P		**Pn**	**02 41 20.3**	**0.0**
ESQI				S		**Sn**	**02 41 36.6**	**-0.1**
PACA	**Pacayal**	**1.32**	**85**	P		**Pn**	**02 41 21.4**	**+0.1**
RANC	**El Ranchito**	**1.35**	**87**	P		**Pn**	**02 41 22.3**	**+0.6**
RANC				S		**Sn**	**02 41 39.4**	**+0.1**
SARH	**Santa Rosa de**	**1.67**	**32**	P		**Pn**	**02 41 26.4**	**+0.5**
SARH				S		**Sn**	**02 41 47.1**	**+0.6**
LCND	**La Caada**	**1.74**	**91**	P		**Pn**	**02 41 26.7**	**-0.1**
STG8	**El Palmar, Qui**	**1.96**	**304**	*i* P		Pn	02 41 36.4	+6.5

*BJI **03** 02:59:56.9, 17°.51S×174°.50W, h203km, mB5.0/8, mb5.0/28*

*GFZ **03** 02:59:57.3±0.6, 18°.5±4°×17°.5W±°, h191km±6km, M5.1/26, mb5.1/26*

*NEIC **03** 02:59:58.1±2.6, 17°.84S±0°.09×175°.13W±0°.09, h193km±5km, mb4.9/51, Error ellipse: s-maj=12.6km s-min=12.4km az=107.0*

*NOU **03** 03:00:00.8, 17°.96S×174°.74W, h239km, mb5.1/53, Tonga Islands*

*IDC **03** 03:00:01.6±0.6, 17°.91S×175°.21W, h230km±5km, mb4.3/22, mbtmp4.8/23, Error ellipse: s-maj=12.4km s-min=9.8km az=122.0*

*GCMT **03** 03:00:03.1±0.2, 18°.00S±0°.01×174°.81W±0°.01, h238km±1km, MW5.3/126, Moment Tensor Solution. s101,c154; s126,c215; Duration: 1!1 Moment tensor: Scale 10^17 Nm; Mrr=0.23±.02; Mθθ=0.60±.02; Mϕϕ=-0.37±.02; Mrθ=-0.42±.02; Mrϕ=0.26±.02; Mθϕ=-0.73±.01; Best double couple: Mo1.02700×10^17 NP1:ϕ=294.00000°, δ=33.00000°, λ=-14.00000°. NP2:ϕ=36.00000°, δ=82.00000°, λ=-123.00000°. Principal axes: T 1.0130, Plg=30.0000°, Azm=152.0000°; N 0.0280, Plg=32.0000°, Azm=41.0000°; P -1.0410, Plg=43.0000°, Azm=274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **03** 03:00:06.1, 17°.47S×174°.40W, h249km±1km*

ISC 03 02:59:59.4±0.3, 17°.90S±0°.04×175°.08W±0°.04, h214km±2km, h214km:pP-P, n613, σ1s90/647, mb4.9/112, 15C-21D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.03**	**104**	P	**Pn**	**03 01 13.5**	**-0.9**
	comp=Z,3μm,1.4s						
NIUE				S	**S**	**03 02 10.9**	**-2.6**
NIUE	**Niue**	**5.03**	**104**	P	**Pn**	**03 01 13.9**	**-0.6**
NIUE	**Niue**	**5.03**	**104**		**Pn**	**03 01 13.5**	**-0.9**
NIUE	**Niue**	**5.03**	**104**	P	**Pn**	**03 01 14.2**	**-0.2**
NIUE				S	**S**	**03 02 10.4**	**-3.1**
NIUE	**Niue**	**5.03**	**104**	P	**Pn**	**03 01 13.9**	**-0.6**
AFI	**Afiamalu**	**5.08**	**39**	P	**Pn**	**03 01 11.5**	**-3.7**
	comp=Z,186nm,0.4s,baz=209,slow=2.0,SNR=36						
AFI				S	**S**	**03 02 08.1**	**-6.8**
	comp=Z,584nm,0.5s,baz=32,slow=24,SNR=16						
AFI	**Afiamalu**	**5.08**	**39**	P	**Pn**	**03 01 13.2**	**-2.0**
AFI	**Afiamalu**	**5.08**	**39**		**Pn**	**03 01 13.2**	**-2.0**
AFI					**S**	**03 02 08.1**	**-6.8**
AFI	**Afiamalu**	**5.08**	**39**	P	**Pn**	**03 01 13.0**	**-2.3**
AFI				S	**S**	**03 02 07.3**	**-7.6**
AFI	**Afiamalu**	**5.08**	**39**	P	**Pn**	**03 01 13.5**	**-1.8**
MSVF	**Nonsavu**	**6.55**	**270**	P	**Pn**	**03 01 38.8**	**+4.8**
	comp=Z,422nm,0.7s,baz=100,slow=14,SNR=193						
MSVF	**Nonsavu**	**6.55**	**270**	P	**Pn**	**03 01 38.8**	**+4.8**
	comp=Z,814nm,1.4s						
GLKZ	**Green Lake**	**11.61**	**192**	P	**Pn**	**03 02 37.1**	**-1.8**
GLKZ				S	S	03 04 36.7	-11
RAR	**Rarotonga**	**14.80**	**105**	P	**Pn**	**03 03 18.3**	**-0.3**
	comp=Z,64nm,0.9s,baz=241,slow=6.9,SNR=12						
RAR				S	**S**	**03 06 01.8**	**-0.6**
	comp=Z,9.6nm,0.4s,baz=169,slow=10,SNR=1.3						
RAR	**Rarotonga**	**14.80**	**105**	P	**Pn**	**03 03 15.7**	**-2.9**
RAR	**Rarotonga**	**14.80**	**105**		**Pn**	**03 03 17.1**	**-1.5**
RAR					**S**	**03 06 01.8**	**-0.6**
RAR	**Rarotonga**	**14.80**	**105**	P	**Pn**	**03 03 18.1**	**-0.5**
RAR	**Rarotonga**	**14.80**	**105**	P	**Pn**	**03 03 18.5**	**-0.1**
DVP	**Devils Point**	**15.94**	**268**	P	**Pn**	**03 03 36.5**	**+4.1**
	comp=Z,6μm,1.5s						
MARNC	**Mare, Loyalty**	**16.30**	**255**	P	**Pn**	**03 03 40.2**	**+3.4**
	comp=Z,336nm,1.4s						
MARNC	**Mare, Loyalty**	**16.30**	**255**	P	**Pn**	**03 03 36.9**	**+0.2**
YATNC	**Mamie plateau,**	**17.45**	**253**	P	**Pn**	**03 03 52.7**	**+2.4**
	comp=Z,48nm,0.8s						
OUENC	**Ouen Island, N**	**17.56**	**252**	P	**Pn**	**03 03 51.5**	**-0.1**
	comp=Z,71nm,1.1s						
OUENC	**Ouen Island, N**	**17.56**	**252**	P	**P**	**03 03 50.2**	**+0.6**
OUENC				IAmb	IAmb	03 03 53.2	
	comp=Z,115nm,1.2s						
DZM	**Mont Dzumac**	**17.86**	**254**	P	**P**	**03 03 53.2**	**+0.3**
	comp=Z,43nm,0.8s,baz=81,slow=19,SNR=16						
DZM				S	**S**	**03 07 06.2**	**-0.8**
	comp=Z,4.5nm,0.8s,baz=48,slow=22,SNR=1.0						
ONTNC	**Ouen Toro**	**17.89**	**253**	P	**Pn**	**03 03 56.1**	**+0.6**
	comp=Z,108nm,1.6s						
ONTNC	**Ouen Toro**	**17.89**	**253**	P	**P**	**03 03 53.2**	**0.0**
ONTNC				IAmb	IAmb	03 03 56.9	
	comp=Z,124nm,1.1s						
NFK	**Norfolk Island**	**19.10**	**231**	P	**P**	**03 04 06.7**	**+0.4**
	comp=Z,73nm,1.5s						
KOUNC	**Koumac, New Ca**	**19.66**	**259**	P	**Pn**	**03 04 15.2**	**-1.3**
	comp=Z,69nm,1.2s						
KOUNC	**Koumac, New Ca**	**19.66**	**259**		**P**	**03 04 12.0**	**-0.4**
OUZ	**Omahuta**	**19.98**	**208**	P	**Pn**	**03 04 17.9**	**-2.2**
GRZ	**Great Barrier**	**20.11**	**203**	P	**P**	**03 04 17.8**	**+0.9**
WCZ	**Waipu Caves**	**20.27**	**205**	P	**P**	**03 04 20.0**	**+1.3**
MXZ	**Matakaoa Point**	**20.44**	**195**	P	**P**	**03 04 21.5**	**+1.1**
WMGZ	**Waiomatatini S**	**20.65**	**195**	P	**P**	**03 04 24.2**	**+1.5**
WIAZ	**Waiheke Island**	**20.71**	**203**	P	**P**	**03 04 24.6**	**+1.3**
HAZ	**Te Kaha**	**20.75**	**196**	P	**P**	**03 04 23.4**	**-0.4**
MBAZ	**Motutapu North**	**20.78**	**203**	P	**P**	**03 04 25.1**	**+1.0**
PKGZ	**Pakihiroa**	**20.78**	**195**	P	**P**	**03 04 24.8**	**+0.7**
MKAZ	**Moumakai**	**20.98**	**202**	P	**P**	**03 04 26.7**	**+0.6**
RUGZ	**Raukumara Rang**	**20.98**	**196**	P	**P**	**03 04 25.7**	**-0.5**
WTAZ	**Waiatarua**	**21.04**	**204**	P	**P**	**03 04 28.6**	**+1.8**
TWGZ	**Tauwhareparae**	**21.10**	**195**	P	**P**	**03 04 28.4**	**+1.0**
CNGZ	**Carnagh Station**	**21.34**	**195**	P	**P**	**03 04 30.1**	**+0.3**
TKGZ	**Te Karaka**	**21.38**	**195**	P	**P**	**03 04 29.8**	**-0.5**
URZ	**Urewera**	**21.41**	**197**	P	**P**	**03 04 27.6**	**-3.0**
	comp=Z,40nm,0.5s,baz=344,slow=1.4,SNR=26						
URZ				S	**S**	**03 08 08.0**	**-6.0**
	comp=Z,39nm,0.7s,baz=252,slow=18,SNR=8.8						
URZ	**Urewera**	**21.41**	**197**	P	**P**	**03 04 29.4**	**-1.1**
	comp=Z,142nm,1.2s						
URZ	**Urewera**	**21.41**	**197**	P	**P**	**03 04 28.5**	**-2.0**
URZ	**Urewera**	**21.41**	**197**	P	**P**	**03 04 29.1**	**-1.4**
TOZ	**Tahuroa Road**	**21.42**	**201**		**P**	**03 04 30.8**	**+0.2**
RAGZ	**Rawiri**	**21.55**	**196**	P	**P**	**03 04 31.6**	**-0.4**
RIGZ	**Rimuhau**	**21.66**	**195**	P	**P**	**03 04 33.2**	**+0.1**
MUGZ	**Murupara**	**21.71**	**198**	P	**P**	**03 04 32.8**	**-0.8**
RTZ	**Ruatahuna**	**21.78**	**197**	P	**P**	**03 04 33.6**	**-0.7**
PRGZ	**Paritu Road**	**21.83**	**195**	P	**P**	**03 04 34.8**	**0.0**
RAHZ	**Arahi**	**22.03**	**196**	P	**P**	**03 04 35.6**	**-1.1**
MTHZ	**Maungataniwha**	**22.04**	**197**	P	**P**	**03 04 35.2**	**-1.6**
MHGZ	**Mahia Peninsul**	**22.04**	**195**	P	**P**	**03 04 37.8**	**+1.0**
MRHZ	**Matea Rd**	**22.14**	**198**	P	**P**	**03 04 35.7**	**-2.1**
WHHZ	**Waihua**	**22.14**	**196**	P	**P**	**03 04 38.7**	**+1.1**
NMHZ	**Naumai**	**22.28**	**197**	P	**P**	**03 04 38.1**	**-0.9**
HIZ	**Hauiti**	**22.34**	**201**	P	**P**	**03 04 40.9**	**+1.4**
HIZ	**Hauiti**	**22.34**	**201**	P	**P**	**03 04 41.0**	**+1.4**
BKZ	**Black Stump Fm**	**22.43**	**197**	P	**P**	**03 04 39.2**	**-1.2**
	comp=Z,34nm,0.7s						
BKZ	**Black Stump Fm**	**22.43**	**197**	S	**S**	**03 08 27.8**	**-2.7**
	comp=Z,34nm,0.7s						
MCHZ	**McNeill Hill**	**22.63**	**197**	P	**P**	**03 04 41.9**	**-0.3**
KWHZ	**Kaweka Forest**	**22.69**	**197**	P	**P**	**03 04 41.3**	**-1.5**
BHHZ	**Black Hill Sta**	**22.85**	**198**	P	**P**	**03 04 41.8**	**-2.4**
KRHZ	**Kereru**	**22.91**	**197**	P	**P**	**03 04 42.9**	**-1.8**
KAHZ	**Kahuranaki**	**22.91**	**196**	P	**P**	**03 04 45.2**	**+0.5**
PNHZ	**Pukenui**	**23.21**	**197**	P	**P**	**03 04 46.0**	**-1.3**
PAE	**Paea**	**24.28**	**93**	*eT*	T	03 29 50.6	
	comp=Z,100nm,0.4s						
PPT2	**Papete2**	**24.29**	**93**	*eP*	**P**	**03 04 58.2**	**+0.7**
	comp=Z,125nm,26.8s						
PPT2				*eS*	**S**	**03 09 02.5**	**+1.8**
	comp=Z,609nm,25.5s						
PPT2				*es*S	**sS**	**03 10 17.1**	**+3.2**
	comp=Z,746nm,25.8s						
PPT2				*eT*	T	03 29 48.0	
	comp=Z,7.8nm,0.2s						
TBI	**Tubuai**	**24.56**	**107**	*eS*	**S**	**03 09 07.2**	**+2.3**
	comp=Z,3μm,27.0s						
TBI				*es*S	sS	03 10 17.5	-1.4
	comp=Z,4μm,36.2s						
TBI				*eT*	T	03 29 57.3	
	comp=Z,28nm,0.3s						
TVO	**Taravao**	**24.58**	**94**	*eT*	T	03 29 47.0	
	comp=Z,13nm,0.3s						
QRZ	**Quartz Range**	**25.22**	**202**	P	**P**	**03 05 05.5**	**-0.1**
LHI	**Lord Howe Isla**	**27.04**	**235**	P	**P**	**03 05 22.2**	**+0.2**
	comp=Z,99nm,2.0s						
JCZ	**Jackson Bay**	**29.43**	**204**	P	**P**	**03 05 43.1**	**0.0**
	comp=Z,37nm,0.5s						
GC1S	**Gold Coast 1 S**	**30.58**	**245**	P	**P**	**03 05 54.5**	**+1.2**
AUBSH	**Beerwah State**	**30.81**	**247**	P	**P**	**03 05 55.9**	**+0.5**
	comp=Z,54nm,1.1s						
TW1H	**Toowoomba 1 Ha**	**31.79**	**246**	P	**P**	**03 06 05.7**	**+1.6**
	comp=Z,184nm,0.5s						
AUTOO	**Toowoomba Stat**	**31.79**	**246**	P	**P**	**03 06 05.4**	**+1.3**
	comp=Z,225nm,1.0s						
EIDS	**Eidsvold**	**32.26**	**251**	P	**P**	**03 06 07.9**	**-0.2**
	comp=Z,27nm,1.4s						
EIDS	**Eidsvold**	**32.26**	**251**	P	**P**	**03 06 09.2**	**+1.1**
	comp=Z,26nm,1.4s						
EIDS	**Eidsvold**	**32.26**	**251**	P	**P**	**03 06 07.2**	**-0.9**
EIDS				IAmb	IAmb	03 06 09.1	
	comp=Z,25nm,1.1s						
EIDS	**Eidsvold**	**32.26**	**251**	P	**P**	**03 06 07.4**	**-0.7**
ARMA	**Armidale**	**32.71**	**241**	P	**P**	**03 06 11.9**	**-0.2**
	comp=Z,35nm,1.3s						
ARMA	**Armidale**	**32.71**	**241**	P	**P**	**03 06 13.7**	**+1.6**
	comp=Z,35nm,1.3s						
ARMA	**Armidale**	**32.71**	**241**		**P**	**03 06 12.0**	**-0.1**
ARMA				IAmb	IAmb	03 06 13.0	
	comp=Z,23nm,0.8s						
ARMA	**Armidale**	**32.71**	**241**	P	**P**	**03 06 12.7**	**+0.6**
AUPHS	**Peel High Scho**	**33.50**	**240**	P	**P**	**03 06 20.0**	**+1.2**
	comp=Z,33nm,1.2s						
RIV	**Riverview**	**34.09**	**236**	P	**P**	**03 06 23.8**	**0.0**
	comp=Z,45nm,2.0s						
RMQ	**Roma**	**34.47**	**249**	P	**P**	**03 06 27.0**	**-0.2**
	comp=Z,28nm,1.2s						
TAOE	**Nuku Hiva Isla**	**35.09**	**80**	*eT*	T	03 43 33.6	
	comp=Z,61nm,0.3s						
PATS	**Pohnpei**	**35.98**	**311**	P	**P**	**03 06 39.1**	**-1.0**
	comp=Z,132nm,1.9s						
AUMHS	**Melrose High S**	**36.20**	**234**	P	**P**	**03 06 43.2**	**+1.3**
	comp=Z,27nm,1.3s						
CAN	**Canberra**	**36.26**	**234**	P	**P**	**03 06 42.5**	**+0.2**
	comp=Z,29nm,2.0s						
CTAO	**Charters Tower**	**36.58**	**260**		**P**	**03 06 44.1**	**-1.0**
CTAO	**Charters Tower**	**36.58**	**260**	P	**P**	**03 06 44.0**	**-1.2**
CMSA	**Cobar Meteorol**	**37.93**	**241**	P	**P**	**03 06 55.7**	**-0.7**
	comp=Z,51nm,1.2s						
CMSA	**Cobar Meteorol**	**37.93**	**241**	P	**P**	**03 06 57.0**	**+0.6**
	comp=Z,50nm,1.2s						
CMSA	**Cobar Meteorol**	**37.93**	**241**	P	**P**	**03 06 55.1**	**-1.3**
QLP	**Quilpie**	**38.51**	**250**	P	**P**	**03 07 00.1**	**-1.2**
	comp=Z,106nm,1.2s						
QLP	**Quilpie**	**38.51**	**250**	P	**P**	**03 07 02.3**	**+1.0**
	comp=Z,106nm,1.2s						
QLP	**Quilpie**	**38.51**	**250**	P	**P**	**03 07 00.2**	**-1.2**
MTSU	**Mount Surprise**	**38.56**	**263**	P	**P**	**03 07 00.8**	**-1.0**
	comp=Z,5.7nm,0.7s						
TOO	**Toolangi**	**39.66**	**232**	P	P	03 06 59.6	-11
	comp=Z,9.1nm,2.3s						
TOO	**Toolangi**	**39.66**	**232**	P	**P**	**03 07 09.8**	**-1.0**
COEN	**Coen**	**40.28**	**269**	P	P	03 07 07.9	-8.1
	comp=Z,22nm,1.1s						
COEN	**Coen**	**40.28**	**269**	P	**P**	**03 07 15.0**	**-1.0**
COEN				IAmb	IAmb	03 07 40.4	
	comp=Z,41nm,1.5s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**03 07 25.1**	**-0.1**
	comp=Z,251nm,1.3s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**03 07 24.2**	**-1.0**
	comp=Z,32nm,0.8s,baz=92,slow=8.1,SNR=29						
	comp=Z,32nm,0.8s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**03 07 25.3**	**+0.1**
	comp=Z,12nm,1.3s						
STKA	**Stephens Creek**	**41.42**	**242**	P	**P**	**03 07 24.6**	**-0.6**
INKA	**Innaminka**	**41.69**	**248**		**P**	**03 07 27.7**	**+0.3**
INKA				IAmb	IAmb	03 07 28.8	
	comp=Z,83nm,1.5s						
QIS	**Mount Isa**	**42.77**	**259**	P	**P**	**03 07 37.1**	**+0.9**
	comp=Z,5.8nm,0.7s						
AUMBR	**Murray Bridge**	**43.89**	**238**	P	**P**	**03 07 46.2**	**+1.3**
	comp=Z,100nm,1.2s						
HTT	**Hallett**	**43.90**	**240**	P	**P**	**03 07 45.5**	**+0.5**
	comp=Z,34nm,1.2s						
HTT	**Hallett**	**43.90**	**240**	P	**P**	**03 07 45.4**	**+0.3**
HTT	**Hallett**	**43.90**	**240**	P	**P**	**03 07 46.0**	**+0.9**
	comp=Z,85nm,1.2s						
JAY	**Jayapura**	**45.96**	**284**	P	**P**	**03 07 59.7**	**-1.9**
BBOO	**Buckleboo**	**46.19**	**242**	P	**P**	**03 08 02.5**	**-0.7**
	comp=Z,118nm,1.0s						
BBOO	**Buckleboo**	**46.19**	**242**	P	**P**	**03 08 04.0**	**+0.9**
	comp=Z,118nm,1.0s						
BBOO	**Buckleboo**	**46.19**	**242**		**P**	**03 08 02.3**	**-0.8**
BBOO	**Buckleboo**	**46.19**	**242**	P	**P**	**03 08 02.5**	**-0.7**
WR8	**Warramunga Arr**	**47.60**	**259**	P	**P**	**03 08 12.9**	**-1.3**
WR8				IAmb	IAmb	03 08 14.8	
	comp=Z,59nm,1.4s						
WRAB	**Tennant Creek**	**47.74**	**259**	P	**P**	**03 08 16.5**	**+1.2**
	comp=Z,20nm,1.2s						
WRAB	**Tennant Creek**	**47.74**	**259**	P	**P**	**03 08 14.0**	**-1.3**
WRAB	**Tennant Creek**	**47.74**	**259**	P	**P**	**03 08 13.7**	**-1.6**
WRAB				pP	**pP**	**03 08 56.2**	**-4.7**
WRA	**Warramunga Arr**	**47.75**	**259**	P	**P**	**03 08 13.2**	**-2.2**
	comp=Z,12nm,0.4s,baz=96,slow=6.8,SNR=159						
WRA				PcP	**PcP**	**03 09 41.4**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=94,slow=5.6,SNR=2.2						
WRA				S	**S**	**03 14 48.7**	**-6.8**
	comp=Z,3.9nm,0.8s,baz=96,slow=13,SNR=8.5						
	comp=Z,12nm,0.4s						
WRA	**Warramunga Arr**	**47.75**	**259**	P	**P**	**03 08 14.0**	**-1.4**
AS17	**Alice Springs**	**47.77**	**254**	P	**P**	**03 08 14.8**	**-0.7**
	comp=Z,197nm,0.6s						
AS01	**Alice Springs**	**47.80**	**254**	P	**P**	**03 08 14.6**	**-1.2**
	comp=Z,168nm,0.6s						
AS01	**Alice Springs**	**47.80**	**254**	P	**P**	**03 08 16.6**	**+0.9**
	comp=Z,168nm,0.6s						
AS09	**Alice Springs**	**47.81**	**254**	P	**P**	**03 08 15.1**	**-0.7**
	comp=Z,102nm,0.8s						
AS15	**Alice Springs**	**47.84**	**254**	P	**P**	**03 08 15.3**	**-0.7**
	comp=Z,146nm,0.8s						
AS31	**Alice Springs**	**47.84**	**254**	P	**P**	**03 08 15.2**	**-0.8**
	comp=Z,26nm,0.6s						
AS31	**Alice Springs**	**47.84**	**254**		**P**	**03 08 15.3**	**-0.8**
AS31				IAmb	IAmb	03 08 16.7	
	comp=Z,32nm,1.0s						
ASAR	**Alice Springs**	**47.85**	**254**	P	**P**	**03 08 14.6**	**-1.5**
	comp=Z,84nm,0.6s,baz=93,slow=7.7,SNR=1339						
ASAR				PcP	**PcP**	**03 09 40.9**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=90,slow=9.4,SNR=1.3						
ASAR				S	**S**	**03 14 51.6**	**-5.1**
	comp=Z,8.0nm,0.8s,baz=91,slow=14,SNR=31						
	comp=Z,84nm,0.6s						
ASAR	**Alice Springs**	**47.85**	**254**		**P**	**03 08 15.3**	**-0.8**
AUALC	**St Philip's Co**	**47.86**	**254**	P	**P**	**03 08 15.8**	**-0.4**
	comp=Z,128nm,1.1s						
KDU	**Kakadu**	**50.73**	**268**	P	**P**	**03 08 36.9**	**-1.0**
	comp=Z,27nm,0.8s						
MTN	**Manton Dam**	**51.97**	**268**	P	**P**	**03 08 46.0**	**-1.2**
	comp=Z,53nm,0.8s						
MTN	**Manton Dam**	**51.97**	**268**		**P**	**03 08 45.5**	**-1.6**
MTN				IAmb	IAmb	03 08 47.0	
	comp=Z,37nm,0.8s						
WRKA	**Warakurna**	**52.87**	**252**	P	**P**	**03 08 52.8**	**-0.8**
	comp=Z,44nm,0.9s						
FORT	**Forrest**	**52.88**	**245**	P	**P**	**03 08 53.0**	**-0.6**
	comp=Z,40nm,1.0s						
FORT	**Forrest**	**52.88**	**245**		**P**	**03 08 52.1**	**-1.5**
FORT				IAmb	IAmb	03 08 53.8	
	comp=Z,30nm,0.9s						
KNRA	**Kununurra**	**53.64**	**263**	P	**P**	**03 08 58.3**	**-1.0**
	comp=Z,67nm,0.9s						
KNRA	**Kununurra**	**53.64**	**263**	P	**P**	**03 08 58.3**	**-1.0**
KNRA				IAmb	IAmb	03 08 59.6	
	comp=Z,39nm,0.8s						
SIJI	**Sorong**	**55.33**	**282**	P	**P**	**03 09 10.5**	**-1.0**
	comp=Z,832nmcomp=Z,48nm,0.7s						
FITZ	**Fitzroy Crossi**	**56.16**	**260**	P	**P**	**03 09 16.8**	**-0.6**
FITZ	**Fitzroy Crossi**	**56.16**	**260**	P	**P**	**03 09 18.4**	**+1.1**
DRV	**Dumont d'Urvil**	**56.72**	**200**	P	**P**	**03 09 20.4**	**-0.1**
DRV				pP	**pP**	**03 10 03.7**	**-4.0**
KRAI	**Karang Ratu**	**57.19**	**278**	P	**P**	**03 09 24.4**	**-0.2**
NLAI	**Namlea**	**58.44**	**277**	P	**P**	**03 09 32.2**	**-1.1**
	comp=Z,40nm,1.1s						
SOEI	**Soe**	**59.24**	**269**	P	**P**	**03 09 40.0**	**+1.0**
	comp=Z,117nm,0.7s						
SOEI	**Soe**	**59.24**	**269**	P	**P**	**03 09 38.9**	**-0.1**
SOEI	**Soe**	**59.24**	**269**	P	**P**	**03 09 39.5**	**+0.5**
SBA	**Scott Base**	**60.65**	**184**	P	**P**	**03 09 49.7**	**+2.3**
SBA				IAmb	IAmb	03 09 50.6	
	comp=Z,37nm,0.8s						
SBA	**Scott Base**	**60.65**	**184**	P	**P**	**03 09 49.1**	**+1.8**
VNDA	**Vanda**	**60.75**	**186**	P	**P**	**03 09 49.5**	**+1.4**
	comp=Z,18nm,0.8s,baz=0.2,slow=7.4,SNR=86						
	comp=Z,18nm,0.8s						
VNDA	**Vanda**	**60.75**	**186**	P	**P**	**03 09 49.3**	**+1.3**
VNDA				IAmb	IAmb	03 09 50.4	
	comp=Z,22nm,0.8s						
MBWA	**Marble Bar**	**61.15**	**255**	P	**P**	**03 09 50.2**	**-1.4**
	comp=Z,44nm,1.4s						
MBWA	**Marble Bar**	**61.15**	**255**	P	**P**	**03 09 51.8**	**+0.1**
	comp=Z,25nm,1.1s						
MBWA	**Marble Bar**	**61.15**	**255**	P	**P**	**03 09 50.4**	**-1.3**
MBWA				IAmb	IAmb	03 09 52.6	
	comp=Z,50nm,1.1s						
MBWA	**Marble Bar**	**61.15**	**255**	P	**P**	**03 09 50.3**	**-1.4**
MBWA	**Marble Bar**	**61.15**	**255**	P	**P**	**03 09 50.2**	**-1.4**
MBWA				pP	**PcP**	**03 10 35.1**	**+2.6**
MEEK	**Meekatharra**	**61.40**	**249**	P	**P**	**03 09 52.8**	**-0.6**
	comp=Z,29nm,1.5s						
MEEK	**Meekatharra**	**61.40**	**249**	P	**P**	**03 09 54.2**	**+0.8**
	comp=Z,29nm,1.5s						
MMRI	**Maumere**	**61.47**	**270**	P	**P**	**03 09 53.3**	**-0.6**
	comp=Z,4μmcomp=Z,56nm,0.7s						
KLBR	**Kellerberrin**	**61.67**	**243**	P	**P**	**03 09 53.9**	**

baz=195
CHIR Chirikof Islan 75.25 11 P P 03 11 17.8 -0.6
baz=199
BBJI Bungbulang 75.67 267 P P 03 11 22.3 +0.4
comp=Z,52nm,0.9s
BBJI Bungbulang 75.67 267 IAmb IAmb 03 11 21.9
comp=Z,34nm,0.8s
BBJI Bungbulang 75.67 267 P P 03 11 20.6 -1.3
comp=Z,53nm,0.8s
LEM Lembang 75.89 267 P P 03 11 23.4 +0.2
KSRS Korea Array 76.83 317 P P 03 11 29.1 +1.4
comp=Z,18nm,0.9s,baz=134,slow=6.3,SNR=49
comp=Z,18nm,0.9s
R17L Mt. Peulik Vol 76.84 10 P P 03 11 26.7 -0.7
baz=198
KSAR Wonju Array Be 76.85 317 P P 03 11 28.8 +0.9
KS19 Wonju Array Si 76.90 317 P P 03 11 29.2 +1.1
KS19 IAmb IAmb 03 11 31.0
comp=Z,28nm,1.1s
OHAK Old Harbor 77.02 12 P P 03 11 27.3 -0.9
baz=201
NVAR Mina Array Bea 77.25 42 P P 03 11 31.2 +0.9
comp=Z,3.3nm,1.0s,baz=230,slow=9.7,SNR=7.4
NVAR pP pwP 03 12 24.9 +1.2
comp=Z,3.0nm,1.0s,baz=224,slow=7.9,SNR=2.8
comp=Z,3.3nm,1.0s
NVAR Mina Array Bea 77.25 42 P P 03 11 31.0 +0.7
Q17K Contact Creek 77.52 10 P P 03 11 30.7 -0.5
baz=199
KDAK Kodiak Island 77.68 12 P P 03 11 31.5 -0.4
baz=202
KDAK Kodiak Island 77.68 12 P P 03 11 34.0 +2.1
KDAK pP pP 03 12 19.9 -2.5
TPNV Topopah Spring 77.76 45 P P 03 11 33.7 +0.6
O15K Ungalikthiuk R 77.80 8 P P 03 11 31.8 -0.8
baz=195
P16K Nushagak River 77.92 9 P P 03 11 32.6 -0.6
baz=197
Q18K Katmai Hardscr 78.04 11 P P 03 11 33.1 -0.9
baz=200
N14K Kuskokwak Cree 78.30 7 P P 03 11 34.7 -0.6
baz=193
P17K Kvichak River 78.32 10 P P 03 11 34.5 -0.9
baz=198
M11K Mekoryuk 78.33 4 P P 03 11 34.8 -0.7
baz=189
USRK Ussuriysk Ar. 78.43 324 P P 03 11 37.2 +0.8
comp=Z,6.2nm,0.9s,baz=108,slow=4.7,SNR=13
comp=Z,6.2nm,0.9s
O16K Kokwok River B 78.45 9 P P 03 11 35.6 -0.5
baz=196
Q19K Cape Douglas, 78.55 11 P P 03 11 35.9 -0.8
baz=201
M13K Dall Lake 78.61 6 P P 03 11 36.5 -0.5
baz=191
P18K Big Mountain, 78.70 10 P P 03 11 37.1 -0.5
baz=199,SNR=7.0
N15K Kwethluk River 78.73 8 P P 03 11 37.1 -0.6
baz=195
O17K Koliganek Bris 78.77 9 P P 03 11 37.3 -0.5
baz=198,SNR=5.5
M14K Bethel 79.08 7 P P 03 11 39.1 -0.5
baz=193
O18K Koktuh Hills 79.14 10 P P 03 11 39.5 -0.5
baz=199
M15K Kasigluk River 79.17 7 P P 03 11 39.6 -0.4
baz=194
N16K Nishlik Lake 79.20 8 P P 03 11 39.8 -0.5
baz=196
P19K Oil Pt 79.30 11 P P 03 11 40.1 -0.7
baz=201
WVOR Wild Horse Val 79.38 39 P P 03 11 42.4 +0.7
N17K Nushagak Hills 79.47 9 P P 03 11 40.7 -1.0
baz=197
L14K Kuka Creek 79.59 6 P P 03 11 41.6 -0.6
baz=192
O19K Port Alsworth 79.62 10 P P 03 11 42.3 -0.2
baz=200
M16K Timber Creek 79.70 8 P P 03 11 42.6 -0.3
baz=196
O20K Slope Mountain 79.81 11 P P 03 11 43.3 -0.3
baz=202
N18K Kilae Creek 79.82 9 P P 03 11 43.7 +0.1
baz=199
BRSE Bradley Lake S 79.86 12 P P 03 11 44.0 +0.2
baz=204
K13K Kusilvak Mount 79.99 5 P P 03 11 44.5 +0.1
baz=190
MDJ Mudanjiang 80.03 323 P P 03 11 47.0 +1.9
MDJ pmax pmax
comp=Z,21nm,0.8s
L15K Ungalak Mounta 80.04 7 P P 03 11 44.5 -0.2
baz=193
N19K Bonanza Creek 80.17 10 P P 03 11 45.3 -0.2
baz=200
M17K Holitna River 80.28 9 P P 03 11 45.2 -0.8
baz=197
L16K Owhat River 80.31 7 P P 03 11 45.9 -0.2
baz=195
NJ2 Nanjing 80.40 308 eP P 03 11 49.4 +2.1
NJ2 pmax pmax
comp=Z,23nm,0.7s
SEW Seward 80.46 13 P P 03 11 45.5 -1.5
baz=205
M18K Stony River 80.60 9 P P 03 11 47.1 -0.5
baz=199
K15K Wolf Creek Mou 80.64 6 P P 03 11 46.9 -1.0
baz=193
CAPN Captain Cook N 80.73 12 P P 03 11 48.0 -0.4
baz=203
O22K Cooper Landing 80.75 12 P P 03 11 47.9 -0.6
baz=204
L17K Donlin 80.86 8 P P 03 11 48.8 -0.3
baz=196
L18K Granite Mounta 81.17 9 P P 03 11 50.6 0.0
baz=198
M19K Big River Lodg 81.22 10 P P 03 11 51.1 +0.1
baz=200
CRAG Craig 81.25 23 P P 03 11 51.0 -0.2
baz=220
RC01 Rabbit Creek A 81.30 12 P P 03 11 51.5 +0.1
baz=204
M20K Styx River 81.40 10 P P 03 11 51.7 -0.4
baz=201
L19K White Mountain 81.41 9 P P 03 11 51.8 -0.2
baz=200
K17K Iditarod 81.43 8 P P 03 11 51.2 -0.8
baz=196
KAIM Kayak Island 81.45 15 P P 03 11 52.0 -0.2
baz=209
GLI Glacier Island 81.67 13 P P 03 11 52.7 -0.6
baz=207
EYAK Cordova Ski Ar 81.68 14 P P 03 11 53.1 -0.2
baz=208
V35K Ketchikan 81.70 23 P P 03 11 52.8 -0.7
baz=221
J16K Anvik River 81.70 7 P P 03 11 53.2 -0.2
baz=194
SIT Sitka 81.71 21 P P 03 11 53.2 -0.3
baz=218
U33K Whale Pass 81.74 22 P P 03 11 53.4 -0.4
baz=220
KLR Kul'dur 81.75 328 P P 03 11 54.0 -0.1
comp=Z,2.8nm,0.9s,baz=113,slow=6.1,SNR=6.7
comp=Z,2.8nm,0.9s
SKT Skwentna 81.78 11 P P 03 11 53.2 -0.7
baz=203
KNK Knik Glacier 81.86 13 P P 03 11 54.0 -0.3
baz=206
PMR Palmer 81.88 12 P P 03 11 53.9 -0.5
baz=205,SNR=5.6
BNX BinXian 81.95 323 ⇓P P 03 11 55.4 +0.3
BNX S SKSac 03 21 55.4 +0.6
BNX pmax pmax
comp=Z,19nm,1.1s
BNX L L
comp=Z,83nm,14.1s
CN2 Changchun 81.98 321 P P 03 11 56.4 +1.1
CN2 sP sP 03 13 03.1 -5.5
CN2 SKS S 03 21 54.1 +2.8
CN2 sS sS 03 23 14.2 -6.2
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,160nm,3.5s
J17K VABM Dome 81.99 7 P P 03 11 54.3 -0.6
baz=195
S31K Pelican 82.13 20 P P 03 11 56.0 +0.2
baz=217
SML Sawmill 82.24 12 P P 03 11 56.8 +0.4
baz=206
WRAK Wrangell Islan 82.25 22 P P 03 11 56.5 +0.1
baz=221
S32K Killisnoo 82.28 21 P P 03 11 56.6 0.0
baz=219
BMRM Brennner River 82.31 14 P P 03 11 56.5 -0.3
baz=209,SNR=6.6
M23K Glacier View 82.35 13 P P 03 11 56.8 -0.1
baz=206
CUT Chulitna 82.40 11 P P 03 11 56.9 -0.2
baz=204
L22K Petersville 82.42 11 P P 03 11 57.3 0.0
baz=203
SCM Sheep Creek Mo 82.47 13 P P 03 11 57.4 -0.2
baz=207
KLU Klutina 82.47 14 P P 03 11 57.3 -0.3
baz=208
PPLA Purkeypile 82.51 10 P P 03 11 58.0 +0.1
baz=202
ANM Nome 82.54 4 P P 03 11 58.1 +0.3
baz=189
K20K Telida 82.64 9 P P 03 11 58.0 -0.3
baz=200,SNR=5.3
N25K Chitina, Valde 82.88 14 P P 03 11 58.8 -0.9
baz=209,SNR=7.3
R32K Eaglecrest 82.94 20 P P 03 12 00.1 +0.2
baz=219
M24K Tolsona, Glenn 82.96 13 P P 03 11 59.7 -0.4
baz=208
MNTX Cornudas Mount 82.99 54 P P 03 12 02.5 +1.6
J19K Poorman 83.01 9 P P 03 11 60.0 -0.3
baz=199
P29M Windy Craggy 83.01 18 P P 03 12 00.2 -0.2
baz=216
CAST Castle Rocks 83.02 10 P P 03 11 59.5 -0.8
baz=202
WAT6 Susitna Watana 83.06 12 P P 03 12 00.2 -0.5
baz=206,SNR=7.1
G15K Niukluk 83.06 5 P P 03 12 00.4 0.0
baz=191
WHN Wuhan 83.18 305 P P 03 12 03.8 +2.0
O28M Mount Upton 83.27 16 P P 03 12 01.4 -0.6
baz=213
O29M Mount Kennedy 83.32 17 P P 03 12 01.6 -0.4
baz=215
TXAR Lajitas Array 83.33 56 P P 03 12 05.0 +2.2
comp=Z,2.1nm,1.1s,baz=224,slow=5.2,SNR=14
TXAR pP pP 03 13 00.0 +5.9
comp=Z,7.6nm,1.1s,baz=222,slow=5.0,SNR=9.6
comp=Z,2.1nm,1.1s
TXAR Lajitas Array 83.33 56 P P 03 12 04.5 +1.7
TRF Thorofare Moun 83.36 11 P P 03 12 02.1 -0.1
baz=204
F14K Arctic Creek 83.38 4 P P 03 12 02.0 0.0
baz=188
H17K Granite Mounta 83.39 6 P P 03 12 02.4 +0.3
baz=195
J20K Nowinta River 83.40 9 P P 03 12 01.8 -0.4
baz=200
CHUM Lake Minchumin 83.41 10 P P 03 12 01.9 -0.4
baz=202
HARP HAARP 83.45 14 P P 03 12 02.2 -0.3
baz=209
GCSA Galena City Sc 83.56 8 P P 03 12 02.7 -0.2
baz=197
DHY Denali Highway 83.58 12 P P 03 12 02.5 -0.9
baz=206
TIA Tai'an 83.61 311 P P 03 12 05.0 +1.1
TIA pmax pmax
comp=Z,24nm,0.9s
SKAG Skagway 83.61 19 P P 03 12 02.5 -0.8
baz=218
ANMO Albuquerque 83.63 50 P P 03 12 04.8 +0.5
ANMO Albuquerque 83.63 50 P P 03 12 05.6 +1.3
ANMO Albuquerque 83.63 50 P P 03 12 04.8 +0.5
P30M Million Dollar 83.64 18 P P 03 12 02.6 -1.0
baz=216
MG05 Puerto Natales 83.69 142 P P 03 12 05.5 +1.4
F15K North Star Dit 83.72 4 P P 03 12 02.4 -1.4
baz=190
H18K Honhosa River 83.77 7 P P 03 12 03.0 -1.0
baz=196
YUK8 Steele Glacier 83.81 16 P P 03 12 03.9 -0.8
baz=214
S34M Telegraph Cree 83.82 22 P P 03 12 03.6 -0.8
baz=222
G17K Kiwalik Mounta 83.86 6 P P 03 12 03.9 -0.6
baz=194
MCK McKinley 83.87 11 P P 03 12 03.7 -0.9
baz=205
PAX Paxson 83.88 13 P P 03 12 03.9 -0.9
baz=208
YUK6 Outpost Mounta 83.91 17 P P 03 12 04.4 -0.8
baz=215
I20K Naaghedeneel 83.94 9 P P 03 12 04.6 -0.2
baz=200
M26K Nabesna, AK 83.94 14 P P 03 12 04.9 -0.2
baz=211
YUK3 Moose Creek 84.04 16 P P 03 12 05.5 -0.3
baz=213
HYT Haines Junctio 84.06 17 P P 03 12 04.9 -0.9
baz=216
BRWY Burwash Landin 84.08 17 P P 03 12 05.1 -0.7
baz=214
YUK4 Talbot Arm 84.16 17 P P 03 12 06.4 +0.1
baz=215
M27K Edge Creek, AK 84.18 15 P P 03 12 05.2 -1.1
baz=212
Q32M Nakina River 84.22 21 P P 03 12 05.9 -0.8
baz=221
P32M Atlin 84.22 20 P P 03 12 06.2 -0.3
baz=219
H19K Roundabout Mou 84.36 8 P P 03 12 06.4 -0.6
baz=198
L26K Log Cabin Wild 84.40 14 P P 03 12 06.4 -0.9
baz=210
O30N Mendenhall 84.42 18 P P 03 12 07.4 -0.1
baz=217
G18K Tagagawik 84.45 7 P P 03 12 07.6 +0.1
baz=196
BVCY Beaver Creek 84.48 15 P P 03 12 06.1 -1.7
baz=213
SEY Seymchan 84.51 346 P P 03 12 08.2 +0.4
comp=Z,5.1nm,0.6s,baz=146,slow=5.3,SNR=16
comp=Z,5.1nm,0.6s
H20K Anotleneega Mo 84.54 8 P P 03 12 06.5 -1.5
baz=199
K24K Donnelly Dome 84.56 13 P P 03 12 06.9 -1.2
baz=206
HEH HeiHe 84.60 327 eP P 03 12 10.0 +1.5
HEH pmax pmax
comp=Z,9.0nm,1.1s
DLBC Dease Lake 84.60 22 P P 03 12 07.0 -1.5
baz=223
NEA2 Nenana 84.63 11 P P 03 12 07.6 -0.8
baz=205
I21K Tanana 84.67 10 P P 03 12 07.7 -0.9
baz=202
N30M Aishikik Lake 84.69 17 P P 03 12 08.0 -0.8
baz=216
RIDG Independent Ri 84.69 13 P P 03 12 08.3 -0.5
baz=209
WHY Whitehorse 84.70 19 P P 03 12 07.9 -1.0
baz=218
F17K Baldwin Pennin 84.72 6 P P 03 12 08.3 -0.5
baz=193
MLY Manley 84.74 10 P P 03 12 08.4 -0.6
baz=203,SNR=6.4
HDA Harding Lake 84.86 12 P P 03 12 09.8 +0.2
baz=207,SNR=5.9
G19K Purcell Mounta 84.87 7 P P 03 12 09.7 +0.1
baz=197
MAW Mawson 84.92 199 P P 03 12 10.5 +0.5
comp=Z,4.7nm,0.9s,comp=Z,0.0nm
MAW Mawson 84.92 199 P P 03 12 10.3 +0.3
comp=Z,18nm,0.7s,baz=126,slow=6.0,SNR=51
comp=Z,18nm,0.7s
R33M Jennings River 84.98 21 P P 03 12 09.3 -1.2
baz=222
H21K Melozitna Rive 84.99 9 P P 03 12 10.0 -0.2
baz=201
P33M Teslin, Yukon 84.99 20 P P 03 12 10.0 -0.4
baz=220
F18K Selawik 85.03 6 P P 03 12 10.1 -0.2
baz=195
I23K Minto, Yukon-K 85.08 11 P P 03 12 10.1 -0.5
baz=204
N31M Braeburn, Yuko 85.09 18 P P 03 12 10.6 -0.1
baz=217
SCRK Sand Creek 85.09 13 P P 03 12 10.4 -0.4
baz=210
COLA College 85.11 11 P P 03 12 10.5 -0.1
COLA IAmb IAmb 03 12 11.2
comp=Z,20nm,0.8s
COLA College 85.11 11 P P 03 12 10.6 -0.1
baz=206
COLA College 85.11 11 P P 03 12 10.5 -0.1
COLA College 85.11 11 P P 03 12 09.7 -1.0
M29M Somme Creek 85.12 16 P P 03 12 10.6 -0.4
baz=215
IMAR Indian Mountai 85.16 9 P P 03 12 11.2 +0.2
H03S2 Juan Fernandez 85.16 124 T T 04 45 41.0
baz=248,slow=75,SNR=274
H03S1 Juan Fernandez 85.17 124 T T 04 45 41.2
baz=248,slow=75,SNR=549
H03S3 Juan Fernandez 85.18 124 T T 04 45 40.0
baz=248,slow=75,SNR=405
PDAR Pinedale Array 85.18 42 P P 03 12 11.9 -0.1
comp=Z,0.9nm,0.8s,baz=202,slow=3.2,SNR=8.4
PDAR pP pwP 03 13 08.1 +1.3
comp=Z,1.7nm,0.9s,baz=222,slow=4.0,SNR=3.6
comp=Z,0.9nm,0.8s
PDAR Pinedale Array 85.18 42 P P 03 12 11.4 -0.6
ILAR Eielson Array 85.20 12 P P 03 12 10.6 -0.6
comp=Z,2.6nm,0.7s,baz=226,slow=5.6,SNR=36
ILAR pP pwP 03 13 07.2 +2.0
comp=Z,6.8nm,1.1s,baz=216,slow=5.6,SNR=9.0
comp=Z,2.6nm,0.7s
ILAR Eielson Array 85.20 12 P P 03 12 10.8 -0.4
AY03 Cochrane 85.22 138 P P 03 12 13.0 +1.1
AY03 IAmb IAmb 03 12 15.8
comp=Z,22nm,1.4s
H03N2 Juan Fernandez 85.28 123 T T 04 45 49.7
baz=254,slow=71,SNR=106
H03N3 Juan Fernandez 85.28 123 T T 04 45 46.0
baz=254,slow=71,SNR=68
H03N1 Juan Fernandez 85.30 123 T T 04 45 52.6
baz=254,slow=71,SNR=50
E17K Hotham Inlet 85.30 5 P P 03 12 11.6 0.0
baz=193
J25K Salcha River, 85.36 12 P P 03 12 11.7 -0.4
baz=208
POKR Poker Plat Res 85.40 11 P P 03 12 11.5 -0.7
baz=206
H22K Ishtalitna Cre 85.43 10 P P 03 12 11.9 -0.5
baz=203
F19K Shaleruckik Mo 85.46 7 P P 03 12 12.2 -0.3
baz=196
H23K Yukon River 85.67 10 P P 03 12 13.1 -0.5
baz=204
M30M Minto, Yukon 85.68 17 P P 03 12 12.8 -0.9
baz=216
G21K Allakaket 85.69 8 P P 03 12 13.1 -0.6
baz=201
E18K Tukpahlearik C 85.74 6 P P 03 12 13.5 -0.3
baz=194
L29M L29M 85.75 16 P P 03 12 13.9 -0.1
baz=215
D17K Noatak River 85.80 5 P P 03 12 13.6 -0.5
baz=192
HNS HongShan 85.87 311 ⇑P P 03 12 16.6 +1.4
HNS pmax pmax
comp=Z,19nm,0.7s
F20K Avaraart Lake 85.91 7 P P 03 12 14.7 +0.1
baz=198
H24K Noodor Dome 85.97 11 P P 03 12 15.2 +0.1
baz=206
BJI2 Beijing 86.02 314 P P 03 12 17.8 +2.0
BJI2 SKS SKSac 03 22 20.6 -0.7
BJI2 S S 03 22 33.7 +2.1
BJI2 pmax pmax
comp=Z,5.0nm,1.1s
BJI2 pmax pmax
comp=Z,93nm,4.3s
M31M Drury Creek, Y 86.06 18 P P 03 12 15.4 -0.1
baz=218
E19K Redstone River 86.12 7 P P 03 12 15.5 -0.2
baz=197
PRP Porcupine Dome 86.13 12 P P 03 12 15.3 -0.7
baz=208
COYC Coyhaique 86.16 137 P P 03 12 17.8 +1.2
COYC pP pP 03 13 05.0 -3.2
C16K Lisburne Hills 86.22 4 P P 03 12 16.3 +0.2
baz=189
DAWY Dawson 86.23 15 P P 03 12 15.7 -0.7
baz=214
LYN LuoYang 86.30 308 P P 03 12 19.2 +1.9
LYN pmax pmax
comp=Z,37nm,0.8s
F21K Alatna River 86.36 8 P P 03 12 16.3 -0.6
baz=201
G22K Bettles 86.36 9 P P 03 12 16.5 -0.4
baz=202
G23K Bananza Creek 86.40 10 P P 03 12 18.3 +1.2
G23K Bananza Creek 86.40 10 P P 03 12 17.0 -0.2
baz=204
I26K Coal Creek Min 86.42 13 P P 03 12 17.2 0.0
baz=210
K29M Barlow Dome 86.51 16 P P 03 12 17.7 -0.1
baz=216
C17K DeLong Mountai 86.56 4 P P 03 12 17.8 0.0
baz=191
F22K John River 86.81 9 P P 03 12 19.0 0.0
baz=202
G24K Hadweenzic Riv 86.82 11 P P 03 12 19.1 0.0
baz=206
COLD Coldfoot 86.85 9 P P 03 12 18.9 -0.4
baz=204
E20K Nigu River 87.00 7 P P 03 12 19.7 -0.3
baz=198
I27K Kandik River 87.01 13 P P 03 12 19.7 -0.5
baz=212
RPSI Rantau Prapat 87.01 274 P P 03 12 21.2 -0.1
D19K Kuna River 87.02 6 P P 03 12 20.3 +0.2
baz=196
PSI Prapat 87.05 274 P P 03 12 21.7 +0.1
comp=Z,57nm,1.0s
PSI Prapat 87.05 274 P P 03 12 20.8 -0.8
comp=Z,53nm,1.0s
G25K Bearman Lake 87.12 11 P P 03 12 20.9 +0.4
baz=208
I28M Miner Creek 87.26 14 P P 03 12 21.2 -0.2
baz=213
MMPY Sheldon Lake, 87.31 19 P P 03 12 21.9 +0.2
baz=221
D20K Etivluk River 87.39 7 P P 03 12 21.8 -0.1
baz=198
J30M Hart River 87.42 16 P P 03 12 21.9 -0.3
baz=217
E21K Killik River 87.45 8 P P 03 12 22.4 +0.3
baz=200
C19K Lookout Ridge 87.47 6 P P 03 12 21.8 -0.4
baz=195
F24K Squaw Lake 87.49 10 P P 03 12 21.9 -0.5
baz=206
H27K Steamboat Moun 87.57 13 P P 03 12 21.9 -0.8
baz=212
E23K Chandalar 87.70 9 P P 03 12 23.2 -0.2
baz=204
G26K Porcupine Rive 87.73 12 P P 03 12 23.1 -0.3
baz=210
GSI Gunungsitoli 87.87 272 P P 03 12 25.9 +0.6
comp=Z,65nm,0.9s
GSI Gunungsitoli 87.87 272 P P 03 12 26.6 +1.3
GSI Gunungsitoli 87.87 272 P P 03 12 26.0 +0.6
comp=Z,3µmcomp=Z,64nm,0.9s
GSI Gunungsitoli 87.87 272 P P 03 12 26.5 +1.1
E24K Your Creek 87.89 10 P P 03 12 24.3 0.0
baz=205
I30M Mount Dempster 87.92 15 P P 03 12 24.7 +0.2
baz=217
F25K Christian Rive 87.94 11 P P 03 12 24.4 -0.1
baz=208
C21K Knifeblade Rid 88.02 7 P P 03 12 24.6 -0.2
baz=199
G27K Doyon Strip 88.03 13 P P 03 12 25.0 +0.1
baz=212
TOLK Toolik Lake Re 88.24 9 P P 03 12 25.0 -0.9
baz=204
H29M Whitestone 88.26 14 P P 03 12 26.1 +0.1
baz=215
F26K Sheenjek River 88.31 11 P P 03 12 26.1 -0.1
baz=209
HILR Hailar Array B 88.36 324 P P 03 12 26.2 -0.6

comp=Z,3.9nm,0.6s,baz=123,slow=11,SNR=5.2
comp=Z,3.9nm,0.6s
D23K Nanushuk River 88.38 9 P P 03 12 26.2 -0.3
baz=203
E25K Arctic Village 88.43 11 P P 03 12 26.6 -0.1
baz=208
B20K Meade River 88.58 6 P P 03 12 26.6 -0.7
baz=197
EPYK Eagle Plains 88.77 14 P P 03 12 27.2 -1.2
baz=216
XAN Xi'an 88.79 306 ⇑P P 03 12 30.6 +1.3
XAN pmax pmax
comp=Z,27nm,1.2s
D24K Happy Valley 88.82 9 P P 03 12 27.9 -0.6
baz=205
TPTI 88.84 274 P P 03 12 29.9 0.0
comp=Z,51nm,1.2s
H31M Peel River 88.91 16 P P 03 12 28.6 -0.4
baz=218
G29M Pine Creek 88.91 14 P P 03 12 28.4 -0.6
baz=215
PLCA Paso Flores 89.02 133 P P 03 12 30.2 -0.2
comp=Z,2.1nm,0.7s,baz=258,slow=6.5,SNR=3.1
comp=Z,2.1nm,0.7s
F28M Old Crow 89.09 13 P P 03 12 29.4 -0.5
baz=213
C23K Itkillik River 89.19 8 P P 03 12 29.9 -0.4
baz=203
E27K Coleen River 89.22 12 P P 03 12 30.0 -0.5
baz=212
B22K Teshekpuk Lake 89.31 7 P P 03 12 30.2 -0.5
baz=201
C24K Franklin Bluff 89.36 9 P P 03 12 30.6 -0.4
baz=205
D25K Kavik River 89.36 10 P P 03 12 30.6 -0.5
baz=207
G30M tAoh Zraii Nji 89.38 14 P P 03 12 30.6 -0.6
baz=217
ELIB Princess Elisa 89.51 186 *d*P P 03 12 31.8 -0.4
comp=Z,11nm,0.9s
HHC Hu-ho-hao-te 89.55 313 *e*P P 03 12 34.9 +2.2
HHC pmax pmax
comp=Z,21nm,0.7s
HHC pmax pmax
comp=Z,78nm,3.7s
G31M Satah River 89.80 15 P P 03 12 32.8 -0.3
baz=218
F30M Barrier River 89.99 14 P P 03 12 34.1 +0.1
baz=217
E28M Babbage River 89.99 12 P P 03 12 33.0 -1.0
baz=214
C27K Jago River 90.08 11 P P 03 12 33.8 -0.6
baz=210
C26K Camden Bay 90.13 10 P P 03 12 34.6 +0.1
baz=209
E29M Blow River 90.15 13 P P 03 12 33.9 -0.8
baz=215
D27M Malcolm River 90.25 12 P P 03 12 34.8 -0.4
baz=212
TROLL Troll, Antarti 90.31 179 ⇑P P 03 12 35.5 -0.4
comp=Z,520nm,0.7s
F31M Tsiigehtchic 90.34 15 P P 03 12 35.3 -0.2
baz=219
SNAA Sanae 90.50 178 ⇑P P 03 12 36.1 -0.6
comp=Z,164nm,0.8s
SNAA Sanae 90.50 178 P P 03 12 36.0 -0.6
comp=Z,7.2nm,0.8s,baz=189,slow=3.2,SNR=24
SNAA pP **pwP** 03 13 33.5 +2.4
comp=Z,5.6nm,1.2s,baz=150,slow=5.3,SNR=3.1
comp=Z,7.2nm,0.8s
SNAA Sanae 90.50 178 P P 03 12 36.6 0.0
SNAA IAmb IAmb 03 12 37.1
comp=Z,9.6nm,0.9s
SNAA Sanae 90.50 178 P P 03 12 36.2 -0.4
KMI2 Kunming 90.66 296 P P 03 12 39.8 +1.4
KMI2 pmax pmax
comp=Z,9.0nm,1.6s
VNA2 Neumayer--Watz 91.00 176 ⇑P P 03 12 38.4 -0.5
comp=Z,29nm,0.6s,baz=178,slow=4.0
INK Inuvik 91.06 14 P P 03 12 38.7 -0.3
baz=219
MT01 Popeta 91.14 126 P P 03 12 41.4 +1.1
VNA1 Neumayer--Stat 91.21 176 ⇑P P 03 12 39.8 0.0
comp=Z,30nm,0.9s
CMAR Chiang Mai Arr 91.88 289 P P 03 12 45.5 +1.5
comp=Z,3.1nm,0.5s,baz=103,slow=2.6,SNR=14
comp=Z,3.1nm,0.5s
CMAR Chiang Mai Arr 91.88 289 P P 03 12 44.8 +0.9
PZH PanZhiHua 91.96 297 P P 03 12 46.6 +2.3
CHTO Chiang Mai 91.99 289 P P 03 12 46.0 +1.6
CHTO IAmb IAmb 03 12 46.9
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 91.99 289 P P 03 12 45.6 +1.2
YKA Yellowknife Ar 93.02 24 P P 03 12 48.0 -0.1
comp=Z,1.0nm,0.8s,baz=222,slow=4.3,SNR=4.8
YKA pP **pwP** 03 13 46.0 +3.4
comp=Z,1.2nm,0.9s,baz=246,slow=4.7,SNR=3.4
comp=Z,1.0nm,0.8s
C36M Paulatuk 94.19 16 P P 03 12 52.7 -0.6
baz=228
SONM Songino Array 95.63 318 P P 03 13 00.5 -0.1
comp=Z,0.5nm,0.6s,baz=108,slow=4.8,SNR=3.7
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 111.41 314 PKiKP **PKiKP** 03 18 06.8 -1.2
comp=Z,0.5nm,0.5s,baz=117,slow=1.6,SNR=5.7
MKAR Makanchi Array 111.41 314 **PKiKP** 03 18 06.9 -1.1
KURBB **Kurchatov Arra** 113.99 318 PKiKP 03 18 11.7
comp=Z,0.2nm,0.2s,baz=99,slow=1.7,SNR=5.0
BVAR Borovoye Array 118.83 321 PKP **PKPdf** 03 18 21.2 -0.9
comp=Z,1.1nm,0.4s,baz=103,slow=2.0,SNR=10
ARCES **ARCESS Array B** 126.83 351 PKP **PKPdf** 03 18 35.9 -1.1
comp=Z,2.2nm,0.7s,baz=10,slow=3.4,SNR=15
FINES FINESS Array B 133.99 346 PKP **PKPdf** 03 18 50.6 -0.1
comp=Z,2.4nm,0.9s,baz=36,slow=3.4,SNR=6.6
AKASG **Malin Array Be** 141.96 335 PKhKP PKPpre 03 18 59.6
comp=Z,1.0nm,0.5s,baz=45,slow=4.2,SNR=8.0
KWP Kalwaria Pacla 145.25 340 *e*PKP **PKPab** 03 19 12.1 +0.2
FLTG Flechtingen 145.28 353 *e*PKPbc **PKPbc** 03 19 11.6 0.0
baz=10.0,slow=2.8
FLTG *ep*PKPbc **pPKPdf** 03 20 14.0 +8.2
baz=8.0,slow=2.9
ASSE Asse, Remlinge 145.54 354 *e*PKPbc **PKPab** 03 19 12.7 -0.1
baz=10.0,slow=2.8
ASSE *ep*PKPbc **pPKPdf** 03 20 15.3 +9.1
baz=8.0,slow=2.9
IBBN Ibbenburen 145.59 357 *e*PKPbc **PKPab** 03 19 13.1 0.0
baz=10.0,slow=2.8
IBBN *ep*PKPbc **pPKPdf** 03 20 15.2 +8.9
baz=8.0,slow=2.9
CLZ Clausthal 145.85 354 *e*PKPbc **PKPab** 03 19 14.0 -0.2
baz=10.0,slow=2.8
CLZ *ep*PKPbc pPKPab 03 20 16.3 +9.2
baz=8.0,slow=2.9
KSP Ksiaz 145.90 347 *e*PKP **PKPbc** 03 19 13.2 -0.4
KOLS Kolonicke sedl 145.99 339 *e*PKP **PKPab** 03 19 14.3 -0.5
BURAR **Bucovina Array** 146.01 335 ⇑P **PKPab** 03 19 15.0 0.0
CLL Collm 146.05 351 *e*PKPbc **PKPbc** 03 19 14.2 +0.3
baz=10.0,slow=2.8
CLL *ep*PKPbc pPKPab 03 20 16.7 +8.9
baz=8.0,slow=2.9
CLL Collm 146.05 351 ⇓*i*PKPbc **PKPbc** 03 19 13.9 -0.1
comp=Z,23nm,1.0s
OSTC Ostas 146.19 347 *e*PKP **PKPab** 03 19 15.1 -0.4
GTTG Gottingen 146.19 354 *e*PKPbc **PKPab** 03 19 15.0 -0.5
baz=10.0,slow=2.8
GTTG *ep*PKPbc pPKPab 03 20 17.0 +8.8
baz=8.0,slow=2.9
CHVC Chvalec 146.19 347 *e*PKP **PKPbc** 03 19 13.7 -0.8
TESR Tescani 146.28 333 ⇑P **PKPdf** 03 19 13.8 +0.5
NEUB Neuenburg 146.32 352 *e*PKPbc **PKPab** 03 19 15.2 -0.7
baz=10.0,slow=2.8
NEUB *ep*PKPbc pPKPab 03 20 17.8 +9.0
baz=8.0,slow=2.9
BRG Berggiesshubel 146.32 350 *e*PKPbc **PKPbc** 03 19 15.2 +0.4
baz=10.0,slow=2.8
BRG *ep*PKPbc pPKPab 03 20 17.9 +9.1
baz=8.0,slow=2.9
BRG Berggiesshubel 146.32 350⇑ *e*PKPb 03 19 14.6
BRG Amp 03 19 15.7
comp=Z,8.4nm,0.9s
BRG pPKPab pPKPab 03 20 14.2 +5.4
BRG Amp 03 20 21.2
comp=Z,9.4nm,1.2s
DPC Dobruska-Polom 146.36 347 *e*PKP **PKPab** 03 19 15.6 -0.6
STEB Steborice 146.41 345 *e*PKP **PKPbc** 03 19 15.4 +0.3
BUG Bochum--Univer 146.48 357 *e*PKPbc **PKPbc** 03 19 15.3 +0.1
baz=10.0,slow=2.8
BUG *ep*PKPbc pPKPab 03 20 17.7 +8.3
baz=8.0,slow=2.9
KRLC Kraliky 146.51 346 *e*PKP **PKPbc** 03 19 16.0 +0.6
CFR Carcaliu 146.60 330 ⇓P **PKPbc** 03 19 15.8 +0.1
KASTN **Kahler Asten** 146.65 356 *e*PKPbc **PKPbc** 03 19 16.1 +0.4
baz=10.0,slow=2.8
KASTN *ep*PKPbc pPKPab 03 20 18.6 +8.5
baz=8.0,slow=2.9
HSKC Hora Svate Kat 146.66 350 *e*PKP **PKPbc** 03 19 16.4 +0.6
TPGR Topolog 146.70 329 ⇓P **PKPbc** 03 19 16.0 -0.1
VRI Vrancioaia 146.75 332 ⇓P **PKPbc** 03 19 16.9 +0.7
MOX Moxa 146.89 352 *e*PKPbc **PKPbc** 03 19 16.7 +0.3
baz=10.0,slow=2.8
MOX *ep*PKPbc pPKPab 03 20 19.3 +8.3
baz=8.0,slow=2.9
UBBA Unterbreizbach 146.90 354 *ep*PKPbc pPKPbc 03 20 19.1 +9.1
baz=8.0,slow=2.9
MAUC Maruska 146.92 344 *e*PKP **PKPbc** 03 19 16.8 +0.2
PLN Plauen 146.97 352 *e*PKPbc **PKPbc** 03 19 17.2 +0.5
baz=10.0,slow=2.8
PLN *ep*PKPbc pPKPab 03 20 19.6 +8.3
baz=8.0,slow=2.9
BR131 Keskin Array S 146.98 317 **PKPbc** 03 19 16.2 -1.0
BRTR Keskin Array B 146.98 317 PKPbc **PKPbc** 03 19 17.1 -0.2
comp=Z,12nm,0.8s,baz=113,slow=2.8,SNR=14
BRTR Keskin Array B 146.98 317 **PKPbc** 03 19 16.9 -0.4
TANN Tannenbergstha 147.00 351 *e*PKPbc **PKPbc** 03 19 17.3 +0.5
baz=10.0,slow=2.8
TANN *ep*PKPbc **pPKPab** 03 20 19.8 +8.3
baz=8.0,slow=2.9
KIRS Kirsehir-Merke 147.11 316 ⇓P **PKPbc** 03 19 17.6 +0.1
UCC Uccle 147.17 1 *d*PKP **PKPbc** 03 19 17.4 +0.3
NKC Novy Kostel 147.18 351 *e*PKP **PKPbc** 03 19 17.9 +0.6
MEM Membach 147.35 359 *d*PKP **PKPbc** 03 19 16.7 -0.9
BTNL Ternell 147.37 359 *d*PKP **PKPbc** 03 19 18.2 +0.4
BSTI Sart Tilman 147.38 359 *d*PKP **PKPbc** 03 19 18.2 +0.5
MLR Muntele Rosu 147.38 332 ⇑P **PKiKP** 03 19 19.2 -0.9
BCLA Clavier 147.55 360 *d*PKP **PKiKP** 03 19 20.3 +0.2
BGES Gesves 147.59 360 *d*PKP **PKPab** 03 19 20.6 -0.4
BHOU Houvegnez 147.61 359 *d*PKP **PKiKP** 03 19 19.4 -0.9
TNS Taunus Mts 147.63 356 *e*PKPbc **PKPbc** 03 19 18.9 +0.3
baz=10.0,slow=2.8
ZVC Zvikov 147.65 349 *e*PKP **PKPbc** 03 19 18.9 +0.4
DRGR 147.66 337 ⇓P **PKPbc** 03 19 18.8 0.0
ROTZ Rotzenmuhle 147.67 351 *e*PKPbc **PKPbc** 03 19 19.3 +0.7
baz=10.0,slow=2.8
ROTZ *ep*PKPbc **pPKPab** 03 20 22.0 +8.0
baz=8.0,slow=2.9
BMRD Maredsous 147.67 0 *d*PKP **PKPbc** 03 19 18.8 +0.3
VOIR 147.82 333 ⇓P **PKiKP** 03 19 20.4 -0.5
DOU Dourbes 147.88 0 *d*PKP **PKPbc** 03 19 19.1 0.0
GRF Grafenberg Arr 147.88 352 *e*PKPbc **PKiKP** 03 19 19.9 -0.9
baz=10.0,slow=2.8
GRF *ep*PKPbc **pPKPab** 03 20 22.6 +7.8
baz=8.0,slow=2.9
KHC Kasperske Hory 148.06 349 *e*PKP **PKPdf** 03 19 16.2 -0.1
KHC *ex* x 03 20 23.2
WET Wettzell 148.17 350 *e*PKPbc **PKPbc** 03 19 20.3 +0.4
baz=10.0,slow=2.8
WET *ep*PKPbc **pPKPab** 03 20 23.2 +7.1
baz=8.0,slow=2.9
WLF Walferdange 148.29 358 *d*PKP **PKPbc** 03 19 20.7 +0.5
WLF Walferdange 148.29 358 *e*PKPbc **PKiKP** 03 19 21.2 -0.5
baz=10.0,slow=2.8
GEC2 GERESS Array S 148.31 349 *e*PKPbc **PKPbc** 03 19 20.7 +0.3
baz=10.0,slow=2.8
GEC2 *ep*PKPbc **pPKPab** 03 20 23.5 +6.7
baz=8.0,slow=2.9
GERES GERESS Array B 148.31 349 PKPbc **PKPbc** 03 19 20.2 -0.2
comp=Z,3.2nm,0.8s,baz=17,slow=1.4,SNR=29
LOT Lotru 148.35 334 ⇑P **PKPbc** 03 19 20.1 -0.6
SIRR Siria 148.49 338 ⇑P **PKPbc** 03 19 19.6 -1.2
CONA Conrad Observa 148.74 346 *i* PKP **PKPbc** 03 19 21.9 +0.4
comp=Z,11nm,1.2s,SNR=7.0
CONA *i* sPKP **sPKPdf** 03 20 25.5 -7.9
comp=Z,9.5nm,1.0s
MMAI Mount Meron Ar 148.77 305 PKPbc **PKiKP** 03 19 22.8 -0.6
comp=Z,9.0nm,0.8s,baz=47,slow=6.3,SNR=14
RONA Rosalia, Austr 148.85 345 *i* PKP **PKPbc** 03 19 21.9 +0.2
comp=Z,5.5nm,0.8s
RONA *i* sPKP **sPKPdf** 03 20 24.4 -9.1
comp=Z,9.0nm,0.8s
STU Stuttgart 149.01 355 *e*PKPbc **PKiKP** 03 19 22.6 -0.6
baz=10.0,slow=2.8
BZS Buzias 149.06 337 ⇓P **PKPbc** 03 19 21.2 -1.1
MOA Molln 149.16 348 *e*PKP **PKPbc** 03 19 22.3 -0.2
comp=Z,5.6nm,1.3s
MOA *i* sPKP **sPKPdf** 03 20 25.8 -8.2
comp=Z,6.4nm,1.0s
FUR Furstenfeldbru 149.37 352 *e*PKPbc **PKPbc** 03 19 23.4 +0.4
baz=10.0,slow=2.8
FUR *ep*PKPbc **pPKPab** 03 20 26.2 +5.4
baz=8.0,slow=2.9
HERR Herculane 149.37 335 ⇑P **PKPbc** 03 19 23.1 +0.1
BIOA Bad Ischl, Aus 149.44 348 *e*PKP **PKPbc** 03 19 23.1 -0.1
comp=Z,2.3nm,0.6s
ARSA Arzberg 149.45 346 *e*PKP **PKPbc** 03 19 23.5 +0.3
comp=Z,3.3nm,0.7s
BFO Black Forest 149.52 356 *e*PKPbc **PKPbc** 03 19 23.6 +0.3
baz=10.0,slow=2.8
BFO *ep*PKPbc **pPKPab** 03 20 26.5 +5.0
baz=8.0,slow=2.9
MORH Mrgy, Hungar 149.55 341 ⇓P **PKPbc** 03 19 22.0 -1.4
PLVB Pleven 149.61 331 ⇑P **PKPbc** 03 19 23.7 0.0
MDVR Moldovita 149.73 336 ⇑P **PKPbc** 03 19 23.8 -0.2
SESA Seetaler Alpe, 149.80 347 *i* PKP **PKPbc** 03 19 23.9 -0.4
SNR=7.8
LESA Schwarzleotal 149.87 349 *i* PKP **PKPbc** 03 19 24.4 +0.1
comp=Z,4.0nm,0.9s
LESA *es*PKP **sPKPdf** 03 20 28.0 -7.2
comp=Z,3.7nm,1.0s
KBA Koelnbreinsper 150.08 348 *e*PKP **PKPbc** 03 19 24.4 -0.6
comp=Z,5.7nm,0.7s
RETA Reutte 150.10 352 *e*PKP **PKPbc** 03 19 25.0 +0.2
comp=Z,7.6nm,1.1s
RETA *es*PKP **sPKPdf** 03 20 28.0 -7.6
comp=Z,4.9nm,1.1s
SOKA Soboth 150.10 346 *i* PKP **PKPbc** 03 19 24.6 -0.2
comp=Z,6.4nm,1.0s,SNR=5.5
SOKA *i* sPKP **sPKPdf** 03 20 27.9 -7.7
comp=Z,6.7nm,1.1s
WATA Walderalm 150.13 351 *i* PKP **PKPbc** 03 19 24.9 -0.1
comp=Z,10nm,0.9s
WATA *es*PKP **sPKPdf** 03 20 27.7 -8.0
comp=Z,6.4nm,1.1s
MOTA Moosalm 150.19 352 *i* PKP **PKPbc** 03 19 25.2 +0.1
comp=Z,12nm,1.0s,SNR=6.1
MOTA *es*PKP **sPKPdf** 03 20 28.3 -7.5
comp=Z,7.3nm,1.0s
WTTA Wattenberg 150.19 351 *i* PKP **PKPbc** 03 19 25.2 0.0
comp=Z,12nm,0.6s,SNR=7.9
SQTA Sankt Quirin 150.30 351 *i* PKP **PKPbc** 03 19 25.5 +0.1
comp=Z,9.0nm,0.9s
SQTA *es*PKP **sPKPdf** 03 20 28.5 -7.4
comp=Z,7.9nm,1.3s
OBKA Obir 150.37 346 *i* PKP **PKPbc** 03 19 25.1 -0.4
comp=Z,5.0nm,1.3s
OBKA *es*PKP **sPKPdf** 03 20 29.1 -6.9
comp=Z,6.3nm,1.4s
DAVA Damuels 150.41 353 *i* PKP **PKiKP** 03 19 26.1 -0.2
comp=Z,11nm,0.9s,SNR=5.5
DAVA *es*PKP **sPKPdf** 03 20 29.0 -7.2
comp=Z,6.3nm,0.8s
MYKA Terra Mystica 150.45 348 *e*PKP **PKPbc** 03 19 25.1 -0.6
comp=Z,6.7nm,1.0s
MYKA *es*PKP **sPKPdf** 03 20 29.4 -6.7
comp=Z,6.4nm,1.2s
ABTA Abfaltersbach 150.55 349 *i* PKP **PKPbc** 03 19 25.6 -0.4
comp=Z,20nm,1.4s,SNR=8.9
ABTA *es*PKP **sPKPdf** 03 20 30.0 -6.3
comp=Z,8.5nm,0.9s
FETA Feichten 150.56 352 *i* PKP **PKiKP** 03 19 26.5 -0.2
comp=Z,12nm,1.1s,SNR=7.1
FETA *i* sPKP **sPKPdf** 03 20 29.5 -6.9
comp=Z,6.7nm,0.9s
LJU Ljubljana 150.82 346 *e*PKPbc **PKPbc** 03 19 26.2 -0.2
BOJS Bojanci 151.16 345 *i* PKPbc **PKPbc** 03 19 27.4 +0.1
ESDC Sonseca Array 156.97 18 PKP **PKPdf** 03 19 30.3 +0.6
comp=Z,0.2nm,0.3s,baz=270,slow=0.9,SNR=2.6
ESDC PKPab **PKPab** 03 20 00.5 -0.2
comp=Z,0.8nm,0.7s,baz=337,slow=3.6,SNR=7.6
TORD Torodi Ar. Bea 174.35 146 PKP **PKPdf** 03 19 42.7 -1.6
comp=Z,2.4nm,1.0s,baz=162,slow=0.8,SNR=9.0
TORD PKPab **PKPab** 03 21 17.2 -0.5
comp=Z,4.1nm,0.9s,baz=228,slow=4.5,SNR=12

IDC 03 03:09:28.4±1.3, 49°24'S×30°62'E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=54.0km s-min=30.3km az=71.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04S2	**CROZET ISLANDS**	**14.42**	**89**	T	T	03 27 43.8	
	baz=256,slow=74,SNR=20						
H04S3	**CROZET ISLANDS**	**14.43**	**88**	T	T	03 27 46.5	
	baz=256,slow=74,SNR=19						
H04S1	**CROZET ISLANDS**	**14.44**	**88**	T	T	03 27 38.1	
	baz=256,slow=74,SNR=21						
QSPA	**South Pole Qui**	**40.98**	**180**	P	P	03 17 12.0	-0.6
	1.7nm,0.8s,baz=100,slow=2.4,SNR=6.9						
	1.7nm,0.8s						
VNDA	**Vanda**	**49.96**	**168**	P	P	03 18 24.1	+0.7
	0.7nm,0.8s,baz=225,slow=3.1,SNR=5.5						
	0.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**55.07**	**301**	T	T	04 18 35.9	
	baz=143,slow=74,SNR=3.8						
H10S3	**ASCENSION HYDR**	**55.09**	**301**	T	T	04 18 37.2	
	baz=77,slow=74,SNR=4.6						
TORD	**Torodi Ar. Bea**	**67.17**	**329**	P	P	03 20 24.2	+0.2
	0.6nm,0.7s,baz=169,slow=6.0,SNR=3.9						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**80.59**	**115**	P	P	03 21 43.0	+0.1
	0.9nm,0.7s,baz=222,slow=4.2,SNR=14						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**83.69**	**113**	P	P	03 21 58.6	-0.6
	0.5nm,0.7s,baz=210,slow=4.1,SNR=2.7						
	0.5nm,0.7s						

*VIE **03** 03:32:52.9±0.3, 50°13'N×19°29'E, h0km, mb2.1/1, ml2.5/1, Error ellipse: s-maj=3.5km s-min=1.8km az=159.0 19 km SE of Sosnowice Suspected Mining induced.*
*IPEC **03** 03:32:52.8±0.1, 50°12'N×19°27'E, h1km, ML2.2/6, Error ellipse: s-maj=1.8km s-min=0.8km az=175.0*
*PRU **03** 03:32:53.0, 50°22'N×19°23'E, h0km*

ISC 03 03:32:52.2±0.8, 50°12'N±0'.04×19°24'E±0'.02, h0km, n25, σ0°92/42, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.37**	**74**	*e*Pg	**Pg**	**03 32 59.5**	**+0.1**
OJC				*e*Sg	**Sg**	**03 33 04.4**	**+0.2**
OKC	**Ostrava-Krasne**	**0.76**	**249**	*e*PG	**Pg**	**03 33 07.2**	**+0.4**
OKC				*e*SG	**Sb**	**03 33 19.4**	**+0.2**
STEB	**Steborice**	**0.96**	**260**	*e*PG	**Pb**	**03 33 11.6**	**-0.2**
STEB				*e*SG	**Sb**	**03 33 25.3**	**+0.2**
	comp=Z,71nm,0.7s						
LANS	**Liptovska Anna**	**0.98**	**171**	*e*PG	**Pg**	**03 33 11.3**	**+0.3**
LANS				*e*SG	**Sb**	**03 33 24.7**	**-0.8**
LANS				*e*LG	Lg	03 33 30.0	
MORC	**Moravsky Berou**	**1.15**	**253**	*e*Pg	**Pb**	**03 33 15.3**	**+0.3**
	baz=72						
MORC				*e*Sg	**Sg**	**03 33 29.5**	**+0.4**
	46nm,0.5s,baz=72						
MAUC	**Maruska**	**1.19**	**231**	*e*PG	**Pn**	**03 33 15.9**	**-0.2**
MAUC				*e*SG	**Sn**	**03 33 33.0**	**0.0**
	comp=Z,80nm,0.4s						
ANAC	**Anensky vrch**	**1.20**	**269**	*e*Pg	**Pn**	**03 33 16.3**	**0.0**
	baz=87						
ANAC				*e*Sg	**Sg**	**03 33 31.1**	**+0.3**
	29nm,0.4s,baz=87						
LOSC	**Losov**	**1.31**	**248**	*e*Pg	**Pn**	**03 33 17.8**	**0.0**
	baz=67						
LOSC				*e*Sg	**Sg**	**03 33 34.4**	**+0.2**
	25nm,0.3s,baz=67						
STHS	**Stebnicka Huta**	**1.48**	**118**	*e*PG	**Pn**	**03 33 19.9**	**-0.2**
STHS				*e*SG	**Sn**	**03 33 41.4**	**+1.3**
STHS				*e*LG	Lg	03 33 44.0	
KRLC	**Kraliky**	**1.58**	**269**	*e*PG	**Pn**	**03 33 21.1**	**-0.5**
KRLC				*e*SG	**Sb**	**03 33 43.1**	**+0.1**
JAVC	**Velka Javorina**	**1.62**	**220**	*e*Pn	**Pb**	**03 33 22.9**	**-0.1**
	baz=39						
JAVC	**Velka Javorina**	**1.62**	**220**	*e*PN	**Pb**	**03 33 23.0**	**-0.1**
KECS	**Kecovo**	**1.83**	**153**	*e*PN	**Pb**	**03 33 25.7**	**-0.8**
KECS				*e*SN	**Sn**	**03 33 48.7**	**0.0**
KECS				*e*LG	Lg	03 33 52.1	
DPC	**Dobruska-Polom**	**1.89**	**278**	*e*PG	**Pn**	**03 33 26.2**	**+0.4**
DPC				*e*SG	**Sb**	**03 33 52.3**	**+0.5**
	comp=Z,16nm,0.4s						
VRAC	**Vranov**	**1.90**	**246**	*e*Pn	**Pn**	**03 33 26.8**	**+0.9**
	baz=64						
VRAC				*e*Sg	**Sg**	**03 33 53.0**	**-0.2**
	11nm,0.4s,baz=64						
OSTC	**Ostas**	**1.99**	**284**	*e*SG	**Sb**	**03 33 54.8**	**+0.2**
	comp=Z,9.4nm,0.5s						
KRUC	**Moravsky**	**2.13**	**241**	*e*Pn	**Pn**	**03 33 29.9**	**+0.8**
	baz=59						
KRUC				*e*Sg	**Sg**	**03 34 00.2**	**-0.5**
	9.0nm,0.6s,baz=59						
MODS	**Modra-Piesok**	**2.17**	**217**	*e*SN	**Sn**	**03 33 57.4**	**+0.2**
KOLS	**Kolonicke sedl**	**2.30**	**120**	*e*PN	**Pb**	**03 33 34.1**	**-0.6**
KOLS				*e*SN	**Sn**	**03 34 00.7**	**+0.2**
KOLS				*e*LG	Lg	03 34 07.9	
PVCC	**Panska Ves**	**3.02**	**280**	*e*SG	**Sg**	**03 34 29.0**	**-0.3**
	comp=Z,10nm,0.3s						
PRU	**Pruhonice**	**3.03**	**269**	*e*SG	**Sg**	**03 34 28.1**	**-1.5**
	comp=Z,3.6nm,0.5s						
CONA	**Conrad Observa**	**3.12**	**227**	*e*Pn	**Pn**	**03 33 44.1**	**+1.3**
	0.6nm,0.3s						
CONA				*i* Sn	**Sn**	**03 34 21.6**	**+0.9**
	0.9nm,0.3s						
BRG	**Berggiesshubel**	**3.47**	**285**	Sg	**Sg**	**03 34 42.6**	**-1.0**
BRG				Amp		03 34 52.1	
	comp=Z,3.3nm,0.6s						
KHC	**Kasperske Hory**	**3.81**	**257**	*e*PN	**Pb**	**03 33 57.0**	**-3.4**
KHC				*e*SG	**Sg**	**03 34 52.9**	**-1.7**
	comp=Z,4.3nm,0.5s						
CLL	**Collm**	**4.14**	**289**	*e*Sg	**Sb**	**03 34 59.0**	**+2.5**
	comp=Z,4.0nm,0.8s						

*IDC **03** 03:46:42.9±2.7, 27°.95N×53°.40E, h0km, mb3.7/11, mbtmp3.7/11, Error ellipse: s-maj=54.3km s-min=24.8km az=162.0*
*TEH **03** 03:46:42.8, 27°.71N×53°.46E, h8km±26km, ML3.5, Presumed earthquake*
*NEIC **03** 03:46:43.6±1.2, 27°.70N±0°.06×53°.52E±0°.06, h10km±2km, mb4.0/11, Error ellipse: s-maj=13.5km s-min=4.4km az=141.0*
*DSN **03** 03:46:44.6±1.6, 27°.58N×53°.58E, h15km, ML2.8/5, Error ellipse: s-maj=23.3km s-min=6.8km az=17.0*

ISC 03 03:46:43.5±0.6, 27°.63N±0°.05×53°.45E±0°.05, h16km, n65, σ1°21/68, mb4.0/22, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.13**	**273**	Pg	**Pg**	**03 46 46.1**	**-1.2**
KHL1				Sg	**Sg**	**03 46 49.7**	**-0.1**
LMD1	**Lamerd**	**0.39**	**221**	Pg	**Pg**	**03 46 51.3**	**-0.1**
JHRM	**Jahrom**	**0.88**	**7**	Pg	**Pb**	**03 46 58.2**	**-2.2**
QIR1	**Qir**	**0.92**	**337**	Pg	**Pb**	**03 46 59.1**	**-1.9**
SHI	**Shiraz**	**2.17**	**338**	Pn	**Pn**	**03 47 20.1**	**+1.0**
NAZ	**Nazwa, Dubai**	**3.30**	**142**	P	**Pn**	**03 47 34.3**	**-0.2**
UOSS	**Minazif**	**3.64**	**137**	P	**Pn**	**03 47 38.3**	**-1.0**
UOSS	**Minazif**	**3.64**	**137**	Pn	**Pn**	**03 47 40.4**	**+1.1**
KRBR	**Kerman**	**3.73**	**50**	Pn	**Pn**	**03 47 42.5**	**+1.8**
KLNJ	**Kolanjah**	**3.74**	**335**	Pn	**Pn**	**03 47 42.0**	**+1.1**
KHGB	**Koh Gabri**	**3.81**	**43**	Pn	**Pn**	**03 47 43.1**	**+1.3**
IMEH	**Mehriz**	**3.88**	**15**	Pn	**Pn**	**03 47 44.5**	**+1.7**
ALNE	**Al Ain**	**4.12**	**149**	P	**Pn**	**03 47 46.3**	**+0.4**
TAFT	**Taft - Yazd**	**4.13**	**9**	Pn	**Pn**	**03 47 47.6**	**+1.5**
IBAF	**Bafgh**	**4.36**	**25**	Pn	**Pn**	**03 47 50.5**	**+1.3**
SOHO	**SOHO**	**4.45**	**141**	P	**Pn**	**03 47 51.2**	**+0.8**
SOHO				S	**Sn**	**03 48 40.8**	**-1.2**
KBAM	**BAM**	**4.66**	**70**	Pn	**Pn**	**03 47 55.0**	**+1.8**
JHBN	**Jahan bin**	**5.18**	**333**	Pn	**Pn**	**03 48 02.6**	**+1.9**
RAYN	**Ar Rayn**	**8.26**	**242**	P	**Pn**	**03 48 44.1**	**+1.4**
RAYN	**Ar Rayn**	**8.26**	**242**		**Pn**	**03 48 44.0**	**+1.3**
HRA	**Herat**	**10.11**	**46**	Pn	**Pn**	**03 49 07.8**	**-0.5**
ASF	**Jabal al Asfar**	**15.05**	**291**	Pn	**P**	**03 50 19.9**	**-1.0**
	0.3nm,0.3s,baz=108,slow=14,SNR=4.7						
ASF				Sn	**Sn**	**03 52 59.2**	**-2.9**
	0.2nm,0.3s,baz=108,slow=23,SNR=1.6						
KOPT	**Kop Dagi**	**16.36**	**322**		**P**	**03 50 34.9**	**-0.8**
ARPR	**Arapgir-MALATY**	**17.01**	**316**		**Pn**	**03 50 40.7**	**-0.1**
ARPR				IAmb	IAmb	03 50 58.1	
	comp=Z,12nm,1.2s						
CHGR	**Ch

KBZ	Khabaz	18.18	335	P		P		03 50 55.9	+0.6
	comp=Z,4.1nm,1.0s,baz=136,slow=5.7,SNR=8.5								
KIV	Kislovodsk	18.45	335			Pn		03 51 00.0	+1.4
BRTR	Keskin Array B	20.38	311	P		P		03 51 19.4	-0.2
	comp=Z,0.5nm,0.4s,baz=139,slow=9.4,SNR=4.4								
	comp=Z,0.5nm,0.4s								
BRTR	Keskin Array B	20.38	311	P		P		03 51 18.5	-1.2
KK31	Karatay Array	20.72	37			P		03 51 22.6	-0.7
KK31				IAmb		IAmb		03 51 29.3	
	comp=Z,6.7nm,1.1s								
KKAR	Karatay Array	20.72	37			P		03 51 22.9	-0.3
ELL	Elmali	21.86	300			P		03 51 37.2	+1.6
ELL				IAmb		IAmb		03 51 40.6	
	comp=Z,11nm,1.0s								
AB31	Akbulak array	22.17	11			P		03 51 37.5	-1.2
ABKAR	Akbulak array	22.17	11			P		03 51 37.9	-0.8
NRN	Naryn	23.04	47	P		P		03 51 48.7	+0.4
NRN				IAmb		IAmb		03 51 51.9	
	comp=Z,4.6nm,1.2s								
AKTO	Aktyubinsk	23.04	7	P		P		03 51 47.6	-0.3
	comp=Z,0.6nm,0.3s,baz=197,slow=11,SNR=3.6								
	comp=Z,0.6nm,0.3s								
BVAR	Borovoye Array	28.32	22	P		P		03 52 36.1	-0.2
	comp=Z,2.0nm,0.8s,baz=208,slow=8.4,SNR=9.3								
	comp=Z,2.0nm,0.8s								
AKASG	Malin Array Be	29.48	328	P		P		03 52 45.5	-1.2
	comp=Z,1.0nm,0.6s,baz=139,slow=8.8,SNR=5.4								
	comp=Z,1.0nm,0.6s								
MKAR	Makanchi Array	29.64	42	P		P		03 52 48.1	-0.1
	comp=Z,0.4nm,0.7s,baz=239,slow=16,SNR=2.3								
	comp=Z,0.4nm,0.7s								
BURAR	Bucovina Array	29.71	320	P		P		03 52 49.2	+0.4
BURAR				IAmb		IAmb		03 52 51.5	
	comp=Z,1.2nm,0.7s								
WMQ	Urumqi	31.88	50	*e*P		P		03 53 12.0	+4.0
WMQ				pmax		pmax			
	comp=Z,20nm,0.7s								
KOLS	Kolonicke sedl	32.07	320	*e*P		P		03 53 11.4	+1.8
LANS	Liptovska Anna	33.80	319	*e*P		P		03 53 26.2	+1.5
OJC	Ojcow	34.11	321	P		P		03 53 27.7	+0.3
ZALV	Zalesovo Beam	34.93	33	P		P		03 53 33.5	-0.8
	comp=Z,0.6nm,0.5s,baz=224,slow=10,SNR=4.2								
	comp=Z,0.6nm,0.5s								
STEB	Steborice	35.14	319	*e*P		P		03 53 36.4	+0.2
MORC	Moravsky Berou	35.20	319			P		03 53 36.7	-0.2
MORC				IAmb		IAmb		03 53 37.8	
	comp=Z,2.9nm,0.8s								
CHVC	Chvalec	36.41	319	*e*P		P		03 53 47.6	+0.4
ZVC	Zvikov	37.07	317	*e*P		P		03 53 53.5	+0.7
GERES	GERESS Array B	37.16	316	P		P		03 53 53.2	-0.5
	comp=Z,0.3nm,0.4s,baz=98,slow=8.3,SNR=4.7								
	comp=Z,0.3nm,0.4s								
ABTA	Abfaltersbach	37.27	312	*i* P		P		03 53 55.4	+0.8
	comp=Z,4.5nm,1.3s								
KHC	Kasperske Hory	37.33	316			P		03 53 54.5	-0.6
KHC	Kasperske Hory	37.33	316	*e*P		P		03 53 54.0	-1.1
WTTA	Wattenberg	37.99	312	*i* P		P		03 54 00.4	-0.4
	comp=Z,6.1nm,0.8s								
WATA	Walderalm	38.05	313	*e*P		P		03 54 01.5	+0.2
	comp=Z,2.3nm,0.5s								
SQTA	Sankt Quirin	38.25	312	*i* P		P		03 54 03.0	0.0
	comp=Z,3.5nm,0.7s								
MOTA	Moosalm	38.36	312	*i* P		P		03 54 03.8	-0.1
	comp=Z,4.5nm,0.7s								
FINES	FINESS Array B	38.45	339	P		P		03 54 02.5	-1.8
	comp=Z,1.3nm,0.7s,baz=146,slow=14,SNR=5.4								
	comp=Z,1.3nm,0.7s								
CLL	Collm	38.47	319	*e*P		P		03 54 05.0	+0.4
FETA	Feichten	38.52	312	*i* P		P		03 54 04.7	-0.6
	comp=Z,4.9nm,1.0s								
DAVA	Damuels	39.15	312	*i* P		P		03 54 10.1	-0.4
	comp=Z,8.1nm,0.6s								
HFS	Hagfors	42.20	332	P		P		03 54 34.8	-0.6
	comp=Z,1.4nm,0.7s,baz=108,slow=9.3,SNR=1.6								
	comp=Z,1.4nm,0.7s								
NOA	NORSAR Array B	43.72	332	P		P		03 54 46.7	-1.1
	comp=Z,0.6nm,0.7s,baz=117,slow=8.6,SNR=2.6								
	comp=Z,0.6nm,0.7s								
HHC	Hu-ho-hao-te	49.00	59	*e*P		P		03 55 29.1	-0.5
HHC				pmax		pmax			
	comp=Z,11nm,0.6s								
HHC				pmax		pmax			
	comp=Z,60nm,4.2s								
TORD	Torodi Ar. Bea	50.26	264	P		P		03 55 41.4	+2.0
	comp=Z,0.3nm,0.7s,baz=64,slow=7.0,SNR=1.6								
	comp=Z,0.3nm,0.7s								

SOME ***03*** *03:59:28.6,41.°82N×81.°10E,h10km*
NNC ***03*** *03:59:29.1±1.6,41.°80N×81.°16E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=11.1km s-min=8.1km az=159.0*
ISC 03 03:59:29.3±2.8,41.°81N±0.°10×80.°99E±0.°08,h4km±13km, n30,σ1°50/45,2C-8D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	Shalkode	1.76	321	P		Pn	03 59 59.8	-0.8
	124nm,0.2s							
SHLS				S		Sn	04 00 22.7	-1.0
	367nm,0.3s							
SHLS	Shalkode	1.76	321	*e*P		Pn	03 59 59.9	-0.8
	124nm,0.2s							
SHLS				*e*S		Sn	04 00 22.7	-1.0
	367nm,0.3s							
PDGK	Podgornoye	1.88	325	⇓P		Pb	04 00 04.8	+0.5
	88nm,0.5s							
PDGK				⇑S		Sg	04 00 32.1	+2.4
	90nm,0.3s							
UZB	Uzunbulak	1.98	313	Pg		Pg	04 00 07.2	0.0
	32nm,0.3s							
UZB				Lg		Lg	04 00 35.1	
	59nm,0.2s							
UZB	Uzunbulak	1.98	313	*e*P		Pg	04 00 07.2	0.0
	32nm,0.3s							
UZB				*e*S		Sg	04 00 35.1	+2.3
	59nm,0.2s							
SATY	Saty	2.28	304	Pg		Pb	04 00 12.2	+1.1
	51nm,0.3s							
SATY				Lg		Lg	04 00 43.5	
	105nm,0.3s							
SATY	Saty	2.28	304	*e*P		Pb	04 00 12.2	+1.1
	51nm,0.3s							
SATY				*e*S		Sg	04 00 43.5	+0.8
	105nm,0.3s							
DJR	Jarkent	2.67	341	Pg		Pb	04 00 18.3	+0.6
	12nm,0.2s							
DJR				Lg		Lg	04 00 53.7	
	51nm,0.4s							
DJR	Jarkent	2.67	341	*e*P		Pb	04 00 18.3	+0.6
	12nm,0.2s							
DJR				*e*S		Sg	04 00 53.6	-1.5
	51nm,0.4s							
KURS	Kuram	2.67	310	Pg		Pb	04 00 19.3	+1.6
	16nm,0.5s							
KURS				Lg		Lg	04 00 56.1	
	37nm,0.4s							
KURS	Kuram	2.67	310	*e*P		Pb	04 00 19.3	+1.6
	16nm,0.5s							
KURS				*e*S		Sg	04 00 56.1	+1.0
	37nm,0.4s							
KNOS	Konyrlen	2.88	333	Pg		Pb	04 00 21.8	+0.6
	11nm,0.2s							
KNOS				Lg		Lg	04 00 59.8	
	116nm,0.3s							
KOTS	Kotyrbulak	3.20	298	Pg		Pb	04 00 28.1	+1.4
	12nm,0.2s							
KOTS				Lg		Lg	04 01 11.0	
	40nm,0.4s							
KOTS	Kotyrbulak	3.20	298	*e*P		Pb	04 00 28.1	+1.4
	12nm,0.2s							
KOTS				*e*S		Sg	04 01 11.0	-1.0
	40nm,0.4s							
MDOK	Medeo	3.21	296	Pg		Pb	04 00 29.3	+2.3
	14nm,0.3s							
MDOK				Lg		Lg	04 01 12.8	
	28nm,0.4s							
TNSS	Tian-Shan	3.23	294	Pg		Pg	04 00 30.5	-0.7
	2.7nm,0.3s							
TNSS				Lg		Lg	04 01 15.4	
	11nm,0.2s							
TNSS	Tian-Shan	3.23	294	*e*P		Pg	04 00 30.5	-0.7
	2.7nm,0.3s							
TNSS				*e*S		Sg	04 01 15.4	+2.2
	11nm,0.2s							
ARXS	Arharly	3.34	317	Pg		Pb	04 00 30.7	+1.5
	11nm,0.2s							
ARXS				Lg		Lg	04 01 15.4	
	41nm,0.6s							
ARXS	Arharly	3.34	317	*e*P		Pb	04 00 30.6	+1.5
	11nm,0.2s							
ARXS				*e*S		Sg	04 01 15.4	-1.2
	41nm,0.6s							
KAPS	Kapalarasan	3.67	342	Pg		Pb	04 00 36.0	+1.2
	9.7nm,0.1s							
KAPS				Lg		Lg	04 01 24.6	
	52nm,0.2s							
KTBS	Karatobe	3.70	302	Pg		Pb	04 00 37.0	+1.8
	0.7nm,0.1s							
KTBS				Lg		Lg	04 01 26.0	
	50nm,0.4s							
KTBS	Karatobe	3.70	302	*e*P		Pb	04 00 37.0	+1.8
	0.7nm,0.1s							
KTBS				*e*S		Sg	04 01 26.0	-2.0
	50nm,0.4s							
KST	Kastek	3.92	290	Pg		Pg	04 00 42.8	-1.6
	9.4nm,0.3s							
KST				Lg		Lg	04 01 36.0	
	49nm,0.5s							
KST	Kastek	3.92	290	*e*P		Pg	04 00 42.8	-1.6
	9.4nm,0.3s							
KST				*e*S		Sg	04 01 36.0	+0.9
	49nm,0.5s							
AAK	Ala-Archa	4.89	282	⇓Pg		Pg	04 01 03.3	+0.4
	2.3nm,0.5s							
AAK				⇓Lg		Lg	04 02 08.5	
	7.7nm,0.6s							
SGDS	Sogindy	4.97	291	Pg		Pg	04 01 01.3	-3.1
	2.1nm,0.2s							
SGDS				Lg		Lg	04 02 07.7	
	5.9nm,0.6s							
MAKZ	Makanchi	5.05	8	⇓Pn		Pn	04 00 46.0	+0.2
	5.2nm,0.6s							
MAKZ				⇑Sn		Sn	04 01 45.0	+0.4
	6.3nm,0.6s							
MAKZ				⇓Lg		Lg	04 02 06.9	
	12nm,0.7s							
MK31	Makanchi Array	5.07	10	⇓Pn		Pn	04 00 46.6	+0.5
	0.7nm,0.3s,baz=189,slow=13,SNR=91							
MK31				⇓Sn		Sn	04 01 45.2	0.0
	6.0nm,0.8s,baz=183,slow=25,SNR=5.5							
MK31				⇓Lg		Lg	04 02 06.7	
	9.2nm,0.6s							
MRKS	Merke	5.83	282	Pg		Pg	04 01 18.4	-2.6
	1.3nm,0.2s							
MRKS				Lg		Lg	04 02 37.9	
	13nm,0.4s							
MRKS	Merke	5.83	282	*e*P		Pg	04 01 18.4	-2.6
	1.3nm,0.2s							
MRKS				*e*S		Sg	04 02 37.9	+1.4
	13nm,0.4s							

ATH ***03*** *04:10:11.8,36.°15N×21.°82E,h18km±3km,ML3.5/24, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
THE ***03*** *04:10:13.2,36.°N±3.°×21.°2E±.°,h11km±6km,M3.3/13, MLh3.3/13*
ISC 03 04:10:08.6±1.7,36.°09N±0.°06×21.°61E±0.°05,h19km±3km, n64,σ1°03/83,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MTHA	Methoni	0.74	6	P		Pn	04 10 25.5	+1.5
MTHA				S		Sb	04 10 34.5	+2.0
PYL	PYLOS	0.81	8	P		Pn	04 10 25.6	+0.5
PYL				S		Sg	04 10 36.0	+0.5
PYL1	Pylos	0.83	5	P		Pn	04 10 26.1	+0.9
PYL1				S		Sg	04 10 36.8	+0.9
VALY	Valyra	1.12	16	P		Pg	04 10 30.1	-0.2
VALY				S		Sb	04 10 43.2	-0.2
VALY	Valyra	1.12	16	P		Pn	04 10 29.6	+0.4
VALY				S		Sb	04 10 44.2	+0.8
ITM	Ithomi	1.12	13	P		Pg	04 10 30.3	-0.1
ITM				S		Sb	04 10 43.8	+0.3
ITM	Ithomi	1.12	13	P		Pg	04 10 30.1	-0.3
ITM				S		Sb	04 10 45.0	+1.4
KTHA	Kythira Island	1.19	81	P		Pn	04 10 30.9	+0.7
KTHA	Kythira Island	1.19	81	P		Pn	04 10 30.9	+0.7
VLI	Veliai	1.24	59	P		Pn	04 10 30.9	0.0
VLI				S		Sb	04 10 45.2	-1.9
VLI	Veliai	1.24	59	P		Pn	04 10 30.4	-0.6
VLI				S		Sb	04 10 45.0	-2.2
NPS1	Neapolis Lacon	1.25	70	P		Pb	04 10 31.9	+0.4
MNVA	Monemvasia	1.30	62	P		Pn	04 10 32.2	+0.5
ANKY	Antikythira Is	1.39	99	P		Pb	04 10 34.8	+0.8
ANKY				S		Sn	04 10 50.9	+0.1
ANKY	Antikythira Is	1.39	99	P		Pg	04 10 34.8	+0.3
AMT	Artemida-Makis	1.44	3	P		Pg	04 10 36.0	-0.5
AMT				S		Sg	04 10 54.7	-0.7
LTHK	Lithakia	1.73	339	P		Pb	04 10 40.1	+0.3
LTHK	Lithakia	1.73	339	P		Pb	04 10 39.8	0.0
DRO	Drossia	1.86	2	P		Pb	04 10 42.1	+0.1
DRO				S		Sb	04 11 05.3	+0.4
DRO	Drossia	1.86	2	P		Pb	04 10 41.8	-0.3
GUR	Goura	1.94	17	P		Pb	04 10 42.6	-0.8
RLS	Riolos of Patr	1.97	357	P		Pb	04 10 43.7	-0.2
RLS				S		Sb	04 11 07.8	-0.2
RLS	Riolos of Patr	1.97	357	P		Pb	04 10 43.9	+0.1
KLV	Kalavryta, Ach	2.00	12	P		Pb	04 10 44.3	-0.1
KLV				S		Sn	04 11 06.6	+0.7
KLV	Kalavryta, Ach	2.00	12	P		Pb	04 10 43.9	-0.5
MET6	Megalochori,Me	2.06	43	P		Pn	04 10 43.5	+1.4
MET5	Makryloggos,Me	2.08	42	P		Pn	04 10 43.7	+1.2
RTZL	Ratzakli, Kefa	2.09	342	P		Pb	04 10 45.0	-1.0
RTZL				S		Sb	04 11 11.6	0.0
MET4	Agioi Theodoro	2.10	43	P		Pn	04 10 43.9	+1.1
AXS	Araxos	2.11	355	P		Pb	04 10 46.4	+0.1
LTK	Loutraki	2.22	29	P		Pn	04 10 45.4	+1.0
LTK	Loutraki	2.22	29	P		Pn	04 10 46.0	+1.6
VLS	Valsamata	2.24	339	P		Pb	04 10 47.8	-0.7
PLEV	Plevrona-Mesol	2.33	356	P		Pb	04 10 49.4	-0.6
MHLO	Agia Marina, M	2.33	74	P		Pn	04 10 46.1	+0.1
MHLO				S		Sn	04 11 12.9	-1.1
KALE	Kalithea	2.34	10	P		Pn	04 10 48.0	+1.9
KALE				S		Sb	04 11 18.2	-0.5
KALE	Kalithea	2.34	10	P		Pn	04 10 48.2	+2.1
EFP	Efpalio	2.35	6	P		Pb	04 10 49.9	-0.4
EFP				S		Sb	04 11 18.5	-0.3
SERG	Sergoula	2.35	9	P		Pb	04 10 48.9	-1.5
SERG				S		Sn	04 11 15.8	+1.3
VLY	Voula,Athens	2.48	44	P		Pn	04 10 49.4	+1.4
VILL	Platees	2.50	32	P		Pn	04 10 49.5	+1.2
FSK	Fiskardo	2.51	341	P		Pb	04 10 51.6	-1.4
ANX	Ano Chora	2.51	6	P		Pn	04 10 50.7	+2.2
ATHU	Athens Univers	2.56	42	P		Pn	04 10 50.4	+1.3
STFN	Stefani	2.60	36	P		Pn	04 10 51.1	+1.5
LKR	Lokris	2.79	23	P		Pn	04 10 52.1	-0.1
AMPL	Ampelaki	2.85	354	P		Pb	04 10 56.7	-2.1
OHR	Ohrid	5.06	353	*i* Pn		Pn	04 11 26.3	+2.9
OHR				*i* Sn		Sn	04 12 21.1	-0.2
VAY	Valandovo	5.28	8	*i* Pn		Pn	04 11 26.9	+0.5
DRME	Dracevica, Mon	6.38	344	*e*Pn		Pn	04 11 41.8	+0.3
PDG	Podgorica	6.59	345	*e*Pn		Pn	04 11 44.4	0.0
HCY	Herceg Novi	6.79	340	*e*Pn		Pn	04 11 46.4	-0.8
TREB	Trebinje	7.08	340	*e*Pn		Pn	04 11 51.0	-0.2
BRY	Bratogost	7.21	342	*e*Pn		Pn	04 11 53.1	+0.1
SJES	Sjenica	7.27	351	*e*Pn		Pn	04 11 54.6	+0.7
UPM	Unac-Piva	7.41	344	*e*Pn		Pn	04 11 56.9	+1.1
BBLS	Lazi&#263i	7.95	348	*e*Pn		Pn	04 12 02.9	-0.3
TEKS	Tekeris	8.60	350	*e*Pn		Pn	04 12 10.7	-1.3
FRGS	Fruska Gora	9.16	352	*e*Pn		Pn	04 12 19.3	-0.4
BLY	Banja Luka	9.28	340	*e*Pn		Pn	04 12 21.0	-0.4
MORH	Mrgy, Hungar	10.36	348	*e*Pn		Pn	04 12 31.3	-4.8
SOKA	Soboth	11.67	337	*i* Pn		Pn	04 12 54.5	+0.3
	1.4nm,0.5s							
OBKA	Obir	11.68	335	*e*Pn		Pn	04 12 56.1	+1.8
	1.0nm,0.5s							
NACGM	Naroch	19.15	9	*e*P		P	04 14 29.7	-0.9

SSNC ***03*** *04:21:26.1±4.0,19.°49N×70.°54W,h13km±47km,MD3.3, ML1.6,Presumed earthquake*
SDD ***03*** *04:21:27.7±2.3,19.°60N×70.°61W,h15km±18km,MD2.9, ML2.3,MW2.7,Presumed earthquake*
OSPL ***03*** *04:21:27.4±1.8,19.°59N×70.°59W,h0km±12km,ML2.6, Presumed earthquake*
ISC 03 04:21:25.5±1.0,19.°64N±0.°03×70.°60W±0.°03,h28km±8km, n22,σ0°91/36,7C-6D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SODR	Sosua Marina B	0.12	10	⇑*i*P		Pn	04 21 31.4	-0.2
SODR				IAML			04 21 36.8	
	comp=N,762nm,1.1s							
SC01	Santiago de lo	0.24	210	⇓*i*P		Pb	04 21 32.1	0.0
SC01				⇑*i*Sg		Sb	04 21 36.0	-0.6
SC01				IAML			04 21 41.9	
	comp=N,227nm,0.3s							
SC01	Santiago de lo	0.24	210	*i* P		Pb	04 21 32.0	-0.1
LUDR	Luperon	0.42	307	⇑*i*P		Pb	04 21 35.0	+0.3
MADR	Mao Valverde	0.48	262	⇑*i*P		Pb	04 21 35.9	+0.3
MADR				IAML			04 21 50.7	
	comp=N,252nm,0.6s							
LOPP1	Punta Rusia, P	0.61	291	*i* P		Pn	04 21 38.7	+0.4
LOPP1				*e*S		Sn	04 21 48.5	+1.3
LOPP1				IAML			04 21 52.5	
	comp=Z,95nm,0.4s							
SDDR	Presa de Saban	0.92	225	⇑*i*P		Pn	04 21 42.6	-0.1
SDDR				⇓*i*Sg		Sb	04 21 54.8	-0.1
SDDR				IAML			04 21 58.5	
	comp=N,24nm,0.4s							
SDDR	Presa de Saban	0.92	225	*i* P		Pn	04 21 42.5	-0.1
SDDR				*e*S		Sn	04 21 55.2	+0.2
SDDR				IAML			04 21 57.4	
	comp=Z,497nm,0.3s							
SDDR	Presa de Saban	0.92	225	*e*P		Pn	04 21 42.4	-0.2
SDDR				*e*S		Sb	04 21 54.5	-0.4
SDDR				IAML			04 21 56.5	
	comp=Z,24nm,0.2s							
SDDR				IAML			04 21 56.9	
	comp=Z,17nm,0.2s							
MCDR	Montecristi	1.03	284	⇑*i*P		Pb	04 21 46.4	+1.7
MCDR				IAML			04 22 11.9	
	comp=N,106nm,1.1s							
LODA1	ITESIL, Dajabo	1.05	265	*e*S		Sb	04 21 59.8	+1.4
BANI	BANI	1.26	170	⇓*i*P		Pb	04 21 49.1	+0.4
BANI				IAML			04 22 08.5	
	comp=N,116nm,0.2s							
LONE3	El Aguacate, B	1.31	219	*i* P		Pb	04 21 49.6	0.0
LONE3				*e*S		Sb	04 22 07.3	+1.2
LONE3				IAML			04 22 07.7	
	comp=Z,32nm,1.0s							
HATOM	Hato Mayor del	1.43	126	⇓*i*P		Pb	04 21 51.5	0.0
HATOM				⇓*i*Sg		Sb	04 22 09.4	+0.1
HATOM				IAML			04 22 12.7	
	comp=N,24nm,0.2s							
LODU1	El Espartillar	1.52	213	*i* P		Pb	04 21 54.0	+0.8
LODU1				IAML			04 22 15.6	
	comp=Z,85nm,0.5s							
GRTK	Grand Turk	1.93	345	*i* P		Pb	04 21 59.8	-0.3
GRTK				*e*S		Sb	04 22 24.4	+0.6
GRTK				IAML			04 22 30.8	
	comp=Z,39nm,1.9s							
GRTK	Grand Turk	1.93	345	*e*P		Pb	04 21 59.2	-0.9
GRTK				*e*S		Sb	04 22 24.7	+1.0
LOBH	Bahia de las A	2.02	209	*i* P		Pb	04 22 01.4	-0.3
LOBH				IAML			04 22 36.6	
	comp=Z,55nm,1.3s							
HIDR	Higuey Centro	2.06	120	⇓*i*P		Pb	04 22 02.2	-0.1
HIDR				⇑*i*Sg		Sb	04 22 28.0	+0.6
HIDR				IAML			04 22 31.8	
	comp=N,61nm,0.2s							
MASC	Masc	3.46	279	*e*P		Pn	04 22 17.6	0.0
MASC				*e*Pg		Pb	04 22 22.9	-3.3
MASC				*e*S		Sn	04 22 58.5	+0.9
QMBU	Quimbuelo	4.00	279	*e*P		Pn	04 22 24.6	-0.5
QMBU				*e*S		Sn	04 23 11.2	+0.1
RCC	Rio Carpintero	4.81	275	*e*P		Pn	04 22 35.1	-1.0
RCC				*e*S		Sn	04 23 29.9	-1.1

VAO ***03*** *04:46:12.7±0.7,39.°43S×71.°03W,h10km,mb4.5, Presumed earthquake*
SJA ***03*** *04:46:16.1±1.1,40.°98S×71.°71W,h170km±6km,ML3.7, MW4.2*
NEIC ***03*** *04:46:17.0±1.5,40.°94S±0.°05×71.°67W±0.°09,h166km±5km, mb4.3/29,Mwr4.5(GUC),Error ellipse: s-maj=9.6km s-min=7.7km az=91.0*
IDC ***03*** *04:46:17.9±0.7,40.°88S×71.°21W,h170km±5km,mb3.8/8, mbtmp4.3/10,Error ellipse: s-maj=22.8km s-min=14.4km az=93.0*
GUC ***03*** *04:46:17.2±0.9,40.°93S×71.°94W,h173km±4km,ML4.6*
ISC 03 04:46:16.5±0.6,40.°92S±0.°03×71.°69W±0.°05,h168km±5km, n105,σ1°31/117,mb4.3/19,1C-11D,Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LL03	Petrohue	0.58	248			Pn	04 46 40.9	+0.6
LL03	Petrohue	0.58	248	*i* P		Pn	04 46 40.9	+0.6
LL03				*i* S		Sn	04 46 58.0	-0.5
LL03				IAML			04 47 03.0	
	comp=Z,1μm,0.8s							
LL03	Petrohue	0.58	248	⇓*i*P		Pn	04 46 40.8	+0.6
LL03				*i* S		Sn	04 46 57.5	-0.9
LR05	Currie	0.73	341			Pn	04 46 42.2	+1.0
LR05	Currie	0.73	341	*i* P		Pn	04 46 42.1	+1.0
LR05				*i* S		Sn	04 47 01.2	+1.2
LR05				IAML			04 47 02.3	
	comp=Z,1μm,1.4s							
LR05	Currie	0.73	341	⇓*i*P		Pn	04 46 42.1	+1.0
LR05				*i* S		Sn	04 47 00.6	+0.6
LR05				IAML			04 47 02.3	
	comp=E,4μm,0.7s							
PLCA	Paso Flores	0.88	78	P		Pn	04 46 42.3	+0.1
	comp=E,2μm,0.3s,baz=261,slow=4.6							
PLCA				S		Sn	04 47 01.1	-0.8
	comp=E,127nm,0.5s,baz=93,slow=17,SNR=2.9							
PLCA	Paso Flores	0.88	78			Pn	04 46 42.6	+0.5
PLCA	Paso Flores	0.88	78	*i* P		Pn	04 46 42.6	+0.5
PLCA				*i* S		Sn	04 47 02.1	+0.2
PLCA	Paso Flores	0.88	78	*e*P		Pn	04 46 37.7	-4.4
GO06	Curarrehue	1.35	7			Pn	04 46 47.0	+0.9
GO06	Curarrehue	1.35	7	*i* P		Pn	04 46 47.

	comp=Z,12nm,0.8s								
CPSB	**Cacapava Do Su**	**18.13**	**60**	*eP*		**P**	**04 50 11.6**	**-4.2**
AF01	**San Pedro de A**	**18.16**	**10**	P		**P**	**04 50 17.4**	**+0.8**
AF01				IAmb		IAmb	04 50 24.8	
	comp=Z,24nm,0.9s							
CPUP	**Villa Florida**	**18.80**	**44**	P		**P**	**04 50 20.4**	**-2.6**
	comp=Z,2.5nm,0.6s,baz=216,slow=11,SNR=16							
CPUP	**Villa Florida**	**18.80**	**44**			**P**	**04 50 20.5**	**-2.6**
CPUP				IAmb		IAmb	04 50 27.5	
	comp=Z,6.6nm,0.6s							
CPUP	**Villa Florida**	**18.80**	**44**	*eP*		P	04 50 14.3	-8.8
ITAB	**Concordia**	**21.12**	**56**	P		**P**	**04 50 43.5**	**-4.5**
MURT	**Porto Murtinho**	**22.60**	**36**	*eP*		**P**	**04 50 59.1**	**-3.8**
AMBA	**Amambai (Brazi**	**22.79**	**43**	*eP*		**P**	**04 51 00.8**	**-3.9**
BDQN	**Bodoquena, MS**	**24.05**	**36**	*eP*		**P**	**04 51 14.4**	**-1.7**
COIM	**Forte Coimbra**	**24.07**	**34**	*eP*		**P**	**04 51 14.9**	**-1.4**
ESPZ	**Base Esperanza**	**24.12**	**164**	P		**P**	**04 51 16.1**	**-0.3**
AQDB	**Aquidauana**	**24.51**	**38**			**P**	**04 51 19.2**	**-1.1**
AQDB	**Aquidauana**	**24.51**	**38**	*eP*		**P**	**04 51 18.8**	**-1.5**
LPAZ	**La Paz**	**24.74**	**8**	P		**P**	**04 51 25.3**	**+2.1**
	comp=Z,0.7nm,0.4s,baz=134,slow=3.9,SNR=5.1							
	comp=Z,0.7nm,0.4s							
LPAZ	**La Paz**	**24.74**	**8**	P		**P**	**04 51 23.7**	**+0.6**
PP1B	**Ponte de Pedra**	**27.38**	**37**	*eP*		**P**	**04 51 45.7**	**-0.5**
PTLB	**Pontes e Lacer**	**27.62**	**27**			**P**	**04 51 48.3**	**0.0**
PTLB				IAmb		IAmb	04 51 48.5	
	comp=Z,6.0nm,0.5s							
PTLB	**Pontes e Lacer**	**27.62**	**27**	*eP*		**P**	**04 51 45.4**	**-2.9**
VILB	**Vilhena**	**29.63**	**23**	*eP*		**P**	**04 52 04.7**	**-1.4**
BDFB	**Brasilia**	**32.49**	**46**	P		**P**	**04 52 29.3**	**-2.0**
	comp=Z,8.9nm,0.6s,baz=208,slow=6.9,SNR=22							
	comp=Z,8.9nm,0.6s							
BDFB	**Brasilia**	**32.49**	**46**	P		**P**	**04 52 29.7**	**-1.6**
SDBA	**SAO DESIDERIO**	**36.85**	**47**	*eP*		**P**	**04 53 07.3**	**-1.4**
SMTB	**Santa Maria do**	**38.42**	**40**	*eP*		**P**	**04 53 20.5**	**-1.3**
MACA	**Manacapuru-AM**	**38.88**	**18**	*eP*		**P**	**04 53 25.4**	**-0.2**
ITTB	**Itaituba**	**39.12**	**26**	*eP*		**P**	**04 53 27.0**	**-0.6**
BELA	**Belgrano 2**	**40.04**	**169**			**P**	**04 53 35.2**	**+0.8**
BELA				IAmb		IAmb	04 53 57.7	
	comp=Z,3.0nm,0.6s							
OTAV	**Otavalo**	**41.43**	**350**	P		**P**	**04 53 48.5**	**+1.5**
VNA1	**Neumayer--Stat**	**43.26**	**154**	⇓P		**P**	**04 54 01.2**	**+0.5**
	comp=Z,4.1nm,0.7s							
VNA2	**Neumayer--Watz**	**43.59**	**155**	⇓P		**P**	**04 54 03.5**	**+0.1**
	comp=Z,5.7nm,0.6s,baz=283,slow=9.5							
NBMA	**Muriti-CE**	**44.44**	**50**	*eP*		**P**	**04 54 11.1**	**+0.3**
SNAA	**Sanae**	**45.13**	**155**	⇓P		**P**	**04 54 15.7**	**+0.1**
	comp=Z,33nm,0.3s							
SNAA	**Sanae**	**45.13**	**155**	P		**P**	**04 54 15.8**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=288,slow=9.0,SNR=12							
	comp=Z,3.6nm,0.6s							
SNAA	**Sanae**	**45.13**	**155**			**P**	**04 54 16.2**	**+0.6**
NBPS	**Pedro II - PI**	**45.38**	**45**	*eP*		**P**	**04 54 18.4**	**+0.1**
TROLL	**Troll, Antarti**	**46.82**	**156**	⇓P		**P**	**04 54 29.6**	**+0.6**
	comp=Z,172nm,0.4s							
RCBR	**Riachuelo**	**47.36**	**52**	P		**P**	**04 54 33.6**	**-0.1**
QSPA	**South Pole Qui**	**49.33**	**180**	P		**P**	**04 54 49.8**	**+1.6**
	comp=Z,1.1nm,0.5s,baz=261,slow=0.2,SNR=7.6							
	comp=Z,1.1nm,0.5s							
QSPA	**South Pole Qui**	**49.33**	**180**	P		**P**	**04 54 48.3**	**+0.1**
SOR	**Soroa**	**64.26**	**348**	P		**P**	**04 56 34.7**	**+1.2**
MAW	**Mawson**	**66.48**	**163**	P		**P**	**04 56 47.3**	**-0.1**
HNDO	**Hondo**	**74.61**	**335**	P		**P**	**04 57 38.9**	**+1.9**
HNDO				IAmb		IAmb	04 57 39.7	
	comp=Z,4.9nm,0.8s							
LRAL	**Lakeview Retre**	**74.94**	**347**	P		**P**	**04 57 39.5**	**+0.9**
LRAL				IAmb		IAmb	04 57 40.3	
	comp=Z,4.1nm,0.6s							
TX31	**Lajitas Ar. Si**	**75.93**	**332**			**P**	**04 57 46.3**	**+1.7**
TXAR	**Lajitas Array**	**75.93**	**332**	P		**P**	**04 57 46.5**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=153,slow=7.6,SNR=22							
	comp=Z,1.6nm,0.7s							
TXAR	**Lajitas Array**	**75.93**	**332**	P		**P**	**04 57 46.3**	**+1.7**
FPAL	**Fort Paine**	**76.18**	**348**	P		**P**	**04 57 45.9**	**+0.1**
DBIC	**Dimbokro**	**77.24**	**69**	P		**P**	**04 57 52.2**	**-0.1**
	comp=Z,5.7nm,0.5s,baz=223,slow=5.8,SNR=12							
	comp=Z,5.7nm,0.5s							
DBIC	**Dimbokro**	**77.24**	**69**	P		**P**	**04 57 52.1**	**-0.1**
TZTN	**Tazewell**	**77.86**	**350**	P		**P**	**04 57 54.8**	**-0.3**
TZTN				IAmb		IAmb	04 58 23.6	
	comp=Z,8.1nm,1.3s							
APMT	**Aspermont**	**78.40**	**336**	P		**P**	**04 57 59.2**	**+1.1**
APMT				IAmb		IAmb	04 58 00.2	
	comp=Z,3.6nm,0.6s							
LCAR	**Lake Charles**	**78.68**	**344**			**P**	**04 58 00.4**	**+0.8**
LCAR				IAmb		IAmb	04 58 01.0	
	comp=Z,8.1nm,0.7s							
LBTB	**Lobatse**	**79.21**	**114**	P		**P**	**04 58 02.7**	**-0.4**
LBTB				IAmb		IAmb	04 58 36.9	
	comp=Z,14nm,1.5s							
S39A	**Bolivar**	**80.71**	**343**			**P**	**04 58 11.2**	**+0.8**
S39A				IAmb		IAmb	04 58 12.1	
	comp=Z,5.2nm,0.9s							
P52A	**Corning**	**80.74**	**352**	P		**P**	**04 58 11.2**	**+0.6**
P52A				IAmb		IAmb	04 58 47.8	
	comp=Z,8.1nm,1.4s							
TORD	**Torodi Ar. Bea**	**86.35**	**69**	P		**P**	**04 58 39.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=220,slow=6.1,SNR=8.8							
	comp=Z,0.8nm,0.6s							
PDAR	**Pinedale Array**	**90.06**	**333**	P		**P**	**04 58 58.2**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=143,slow=6.2,SNR=10							
	comp=Z,0.9nm,0.6s							
PDAR	**Pinedale Array**	**90.06**	**333**	P		**P**	**04 58 57.9**	**+0.9**
WRA	**Warramunga Arr**	**114.79**	**207**	PKP		**PKiKP**	**04 55 37.2**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=165,slow=1.6,SNR=5.3							
PEA0B	**Petropavlovsk-**	**144.89**	**307**	PKPbc		**PKPdf**	**05 05 32.9**	**+0.3**
PETK	**Petropavlovsk-**	**144.89**	**307**	PKPbc		**PKPdf**	**05 05 33.7**	**+1.0**
	comp=Z,5.1nm,0.6s,baz=79,slow=8.0,SNR=8.5							
PETK	**Petropavlovsk-**	**144.89**	**307**			**PKPab**	**05 05 32.8**	**+0.4**
AB31	**Akbulak array**	**145.36**	**60**			**PKPab**	**05 05 34.4**	**+0.1**
ABKAR	**Akbulak array**	**145.36**	**60**	PKPdf		**PKPab**	**05 05 34.4**	**+0.2**
PZH	**PanZhiHua**	**164.62**	**157**	PKP		**PKPdf**	**05 05 59.2**	**-1.1**
NJ2	**Nanjing**	**167.75**	**227**	*eP*		**PKPdf**	**05 06 02.3**	**-0.1**
NJ2				pmax		pmax		
	comp=Z,15nm,0.6s							
HHC	**Hu-ho-hao-te**	**177.54**	**269**	*eP*		**PKPdf**	**05 06 05.7**	**-0.7**

*SJA **03** 04:58:00.2±1.5,24°.95S×71°.50W,h3km±8km,ML4.1, MW3.6*

*IDC **03** 04:58:06.5±0.8,25°.12S×70°.32W,h0km,mb4.3/4, mbtmp4.1/6,ML3.9/2,MS3.2/3,Error ellipse: s-maj=35.2km s-min=21.4km az=109.0*

*GUC **03** 04:58:08.8±0.9,24°.91S×70°.74W,h46km±8km,ML4.1*

*NEIC **03** 04:58:08.2,24°.91S×70°.90W,h18km*

*NEIC **03** 04:58:10.4±2.3,24°.92S±0°.02×70°.87W±0°.07,h35km±1km, mb4.4/10,Mwr3.9/46,ML4.1(GUC),Error ellipse: s-maj=10.5km s-min=3.3km az=260.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}6.73; $M_{\theta\theta}$3.00; $M_{\phi\phi}$-9.73; $M_{r\theta}$-4.29; $M_{r\phi}$-2.21; $M_{\theta\phi}$-0.59; Fault plane solution: $M_0$9.90000×10^{14} NP1:ϕ_s218.43000°, δ58.04000°,λ130.45000°. NP2:ϕ_s340.27000°,δ49.78000°, λ43.88000°. Principal axes: T 9.5683, Plg56.0000°, Azm184.0000°; N 0.6396, Plg33.0000°, Azm14.0000°; P -10.2080, Plg5.0000°, Azm281.0000°:*

ISC 03 04:58:06.9±1.4,24°.94S±0°.03×70°.89W±0°.07,h13km±8km, n81,σ1§40/81,mb4.4/9,7C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB14	**IPOC Station P**	**0.54**	**54**			**Pb**	**04 58 19.1**	**+0.6**
PB14				Sn		**Sb**	**04 58 26.0**	**-0.3**
PB14	**IPOC Station P**	**0.54**	**54**	⇑*i*P		**Pn**	**04 58 19.4**	**-1.2**
PB14				*i* S		**Sb**	**04 58 26.1**	**-0.1**
PB14				IAML			04 58 26.4	
	comp=N,16μm,0.3s							
AC01	**Pan de Azucar**	**1.23**	**168**			**Pg**	**04 58 30.7**	**+0.2**
AC01	**Pan de Azucar**	**1.23**	**168**	*eP*		**Pn**	**04 58 28.7**	**-1.0**
AC01				*eS*		**Sg**	**04 58 48.6**	**+2.0**
AC01				IAML			04 58 51.5	
	comp=Z,2μm,0.3s							
AC01	**Pan de Azucar**	**1.23**	**168**	⇑*i*P		**Pg**	**04 58 30.7**	**+0.2**
AC01				*i* S		**Sg**	**04 58 46.3**	**-0.2**
AC01				IAML			04 58 49.8	
	comp=E,4μm,0.5s							
PB10	**IPOC Station P**	**1.46**	**12**			**Pn**	**04 58 32.6**	**-0.3**
PB10	**IPOC Station P**	**1.46**	**12**	*eP*		**Pn**	**04 58 32.6**	**-0.3**
PB10				*eS*		**Sg**	**04 58 56.6**	**+2.7**
PB10				IAML			04 59 02.2	
	comp=Z,629nm,0.2s							
PB10	**IPOC Station P**	**1.46**	**12**	⇓*i*P		**Pn**	**04 58 32.5**	**-0.3**
PB05	**IPOC Station P**	**2.17**	**17**			**Pn**	**04 58 42.4**	**-0.4**
PB05	**IPOC Station P**	**2.17**	**17**	*eP*		**Pn**	**04 58 42.4**	**-0.4**
PB05				*eS*		**Sb**	**04 59 15.6**	**+2.5**
PB05				IAML			04 59 21.3	
	comp=Z,658nm,0.8s							
PB05	**IPOC Station P**	**2.17**	**17**	⇓*i*P		**Pn**	**04 58 42.5**	**-0.4**
PB05				IAML			04 59 24.7	
	comp=N,721nm,0.2s							
AC02	**Maricunga**	**2.46**	**140**			**Pb**	**04 58 50.3**	**-1.0**
AC02	**Maricunga**	**2.46**	**140**	*eP*		**Pb**	**04 58 50.1**	**-1.1**
AC02				IAML			04 59 33.9	
	comp=Z,470nm,0.2s							
AC02	**Maricunga**	**2.46**	**140**	⇑*i*P		**Pb**	**04 58 50.2**	**-1.0**
AC02				*i* S		**Sb**	**04 59 19.4**	**-2.3**
AC02				IAML			04 59 20.6	
	comp=E,1μm,0.3s							
PB06	**IPOC Station P**	**2.54**	**29**			**Pn**	**04 58 48.1**	**+0.3**
PB06	**IPOC Station P**	**2.54**	**29**	*eP*		**Pn**	**04 58 47.9**	**+0.1**
PB06				IAML			04 59 34.5	
	comp=N,1μm,0.6s							
GO03	**Copiapo**	**2.70**	**168**			**Pn**	**04 58 51.9**	**+1.8**
GO03	**Copiapo**	**2.70**	**168**	*eP*		**Pn**	**04 58 50.1**	**+0.1**
GO03				*eS*		**Sb**	**04 59 25.6**	**-2.7**
GO03				IAML			04 59 38.3	
	comp=Z,789nm,0.9s							
GO03	**Copiapo**	**2.70**	**168**	⇑*i*P		**Pn**	**04 58 51.6**	**+1.6**
GO03				IAML			04 59 38.7	
	comp=E,725nm,0.2s							
PB03	**IPOC Station P**	**3.07**	**20**			**Pn**	**04 58 55.2**	**+0.1**
PB03	**IPOC Station P**	**3.07**	**20**	*eP*		**Pn**	**04 58 55.1**	**+0.1**
PB03				*eS*		**Sb**	**04 59 37.6**	**-1.1**
PB03				IAML			04 59 46.8	
	comp=Z,678nm,0.3s							
PB03	**IPOC Station P**	**3.07**	**20**	*eP*		**Pn**	**04 58 54.4**	**-0.8**
PB03				IAML			04 59 47.0	
	comp=E,792nm,0.3s							
AF01	**San Pedro de A**	**3.18**	**52**			**Pn**	**04 58 59.0**	**+2.2**
AF01	**San Pedro de A**	**3.18**	**52**	*eP*		**Pb**	**04 59 00.2**	**-3.1**
AF01				*eS*		**Sg**	**04 59 45.6**	**-3.4**
AF01				IAML			05 00 04.0	
	comp=Z,2μm,0.4s							
AF01	**San Pedro de A**	**3.18**	**52**	*eP*		**Pn**	**04 58 58.7**	**+1.9**
AC04	**Llanos de Chal**	**3.25**	**183**			**Pn**	**04 58 57.3**	**-0.2**
AC04	**Llanos de Chal**	**3.25**	**183**	*eP*		**Pn**	**04 58 56.1**	**-1.4**
AC04				IAML			05 00 02.0	
	comp=Z,210nm,0.8s							
PB07	**IPOC Station P**	**3.33**	**16**			**Pn**	**04 58 59.1**	**+0.3**
PB07	**IPOC Station P**	**3.33**	**16**	*eP*		**Pn**	**04 58 58.7**	**-0.1**
PB07				*eS*		**Sb**	**04 59 43.4**	**-3.1**
PB07				IAML			05 00 08.5	
	comp=Z,448nm,0.7s							
PB09	**IPOC Station P**	**3.48**	**26**			**Pn**	**04 59 01.7**	**+0.8**
AC05	**El Transito**	**3.92**	**172**			**Pn**	**04 59 08.6**	**+1.8**
LCO	**Las Campanas**	**4.05**	**178**			**Pn**	**04 59 09.3**	**+0.5**
CO01	**Juntas del Tor**	**5.06**	**172**			**Pn**	**04 59 24.2**	**+1.6**
GO04	**Tololo Observa**	**5.21**	**179**			**Pn**	**04 59 25.4**	**+0.7**
CO03	**El Pedregal**	**5.88**	**178**			**Pn**	**04 59 34.1**	**+0.4**
ZON	**Zonda**	**6.86**	**164**			**Pn**	**04 59 49.0**	**+1.8**
VA03	**San Esteban**	**7.80**	**178**			**Pn**	**04 59 59.9**	**-0.2**
LPAZ	**La Paz**	**8.99**	**17**	Pn		**Pn**	**05 00 18.9**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=118,slow=4.5,SNR=10.0							
LPAZ				LR		LR	05 04 18.1	
	comp=Z,114nm,20.8s,baz=215,slow=41							
	comp=Z,1.1nm,0.5s							
BO02	**Sierra Bellavi**	**9.81**	**179**	Pn		**Pn**	**05 00 25.7**	**-2.0**
GO05	**Hualane**	**10.07**	**185**	Pn		**Pn**	**05 00 28.2**	**-3.0**
H03N1	**Juan Fernandez**	**10.99**	**218**	T		T	05 12 39.1	
	baz=43,slow=72,SNR=772							
H03N2	**Juan Fernandez**	**11.00**	**218**	T		T	05 12 23.8	
	baz=43,slow=72,SNR=968							
H03N3	**Juan Fernandez**	**11.00**	**218**	T		T	05 12 22.7	
	baz=43,slow=72,SNR=820							
CPUP	**Villa Florida**	**12.31**	**99**	Pn		**Pn**	**05 01 05.4**	**+3.5**
	baz=271,slow=16,SNR=1.2							
CPUP				LR		LR	05 06 18.2	
	comp=Z,104nm,20.8s,baz=276,slow=42							
SIV	**San Ignacio**	**12.80**	**48**	Pn		**Pn**	**05 01 06.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=234,slow=11,SNR=22							
	comp=Z,1.8nm,0.4s							
TRQA	**Tornquist**	**15.11**	**152**			**Pn**	**05 01 38.1**	**-1.9**
TRQA				IAmb		IAmb	05 01 46.9	
	comp=Z,17nm,0.8s							
PLCA	**Paso Flores**	**15.75**	**179**	Pn		**P**	**05 01 53.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=322,slow=12,SNR=5.7							
BDFB	**Brasilia**	**23.34**	**71**	P		**P**	**05 03 13.2**	**-1.9**
	comp=Z,1.0nm,0.4s,baz=229,slow=3.0,SNR=3.4							
	comp=Z,1.0nm,0.4s							
MDP	**Montagnes des**	**34.74**	**33**	LR		LR	05 20 44.6	
	comp=Z,75nm,19.1s,baz=192,slow=39							
ESPZ	**Base Esperanza**	**39.53**	**170**	P		**P**	**05 05 37.3**	**+0.3**
BELA	**Belgrano 2**	**55.62**	**171**	P		**P**	**05 07 42.6**	**+0.7**
VNA1	**Neumayer--Stat**	**57.69**	**159**	⇑P		**P**	**05 07 57.3**	**+0.7**
	comp=Z,4.2nm,0.8s							
SNAA	**Sanae**	**59.65**	**160**	⇑P		**P**	**05 08 10.8**	**+0.4**
	comp=Z,82nm,0.4s							
SNAA	**Sanae**	**59.65**	**160**	P		**P**	**05 08 10.9**	**+0.5**
SNAA				IAmb		IAmb	05 08 11.6	
	comp=Z,8.5nm,1.2s							
HNDO	**Hondo**	**60.64**	**332**	P		**P**	**05 08 17.4**	**-0.1**
HNDO				IAmb		IAmb	05 08 53.7	
	comp=Z,2.5nm,0.9s							
TROLL	**Troll, Antarti**	**61.37**	**160**	⇑P		**P**	**05 08 22.6**	**+0.4**
	comp=Z,143nm,0.4s							
TXAR	**Lajitas Array**	**62.48**	**328**	P		P	05 08 36.7	+6.5
	comp=Z,0.1nm,0.5s,baz=152,slow=7.5,SNR=1.8							
WVT	**Waverly**	**62.82**	**345**	P		**P**	**05 08 31.8**	**-0.3**
WVT				IAmb		IAmb	05 08 41.6	
	comp=Z,1.8nm,0.7s							
QSPA	**South Pole Qui**	**65.26**	**180**	P		**P**	**05 08 49.4**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=289,slow=1.9,SNR=13							
	comp=Z,1.6nm,0.7s							
QSPA	**South Pole Qui**	**65.26**	**180**	P		**P**	**05 08 49.5**	**+1.4**
QSPA				IAmb		IAmb	05 09 23.9	
	comp=Z,3.3nm,1.1s							
R40A	**Maddies Statio**	**66.02**	**342**	P		**P**	**05 08 53.6**	**+0.5**
R40A				IAmb		IAmb	05 09 03.5	
	comp=Z,3.4nm,0.7s							
F64A	**Sherman**	**70.51**	**2**	P		**P**	**05 09 20.9**	**0.0**
TORD	**Torodi Ar. Bea**	**80.22**	**71**	P		**P**	**05 10 16.8**	**-0.8**
	comp=Z,4.6nm,0.7s,baz=259,slow=5.4,SNR=30							
	comp=Z,4.6nm,0.7s							
MAW	**Mawson**	**81.56**	**164**	P		**P**	**05 10 24.8**	**+1.0**
	comp=Z,3.4nm,0.6s,baz=210,slow=6.1,SNR=17							
	comp=Z,3.4nm,0.6s							
MAW	**Mawson**	**81.56**	**164**	P		**P**	**05 10 24.8**	**+1.0**
ASAR	**Alice Springs**	**126.03**	**208**	PKP		**PKPdf**	**05 17 09.4**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=132,slow=1.7,SNR=10.0							
H11S2	**WAKE ISLAND Hyl**	**26.43**	**275**	T		T	07 36 47.7	
	baz=108,slow=75,SNR=286							
H11S1	**WAKE ISLAND Hyl**	**26.44**	**275**	T		T	07 36 45.1	
	baz=108,slow=75,SNR=294							
H11S3	**WAKE ISLAND Hyl**	**26.45**	**275**	T		T	07 36 48.4	
	baz=108,slow=75,SNR=229							
H11N3	**WAKE ISLAND Hyl**	**26.61**	**277**	T		T	07 36 57.1	
	baz=108,slow=75,SNR=22							
H11N1	**WAKE ISLAND Hyl**	**26.63**	**277**	T		T	07 36 57.5	
	baz=108,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hyl**	**26.63**	**277**	T		T	07 36 57.7	
	baz=108,slow=75,SNR=18							
WRA	**Warramunga Arr**	**129.08**	**211**	PKP		**PKiKP**	**05 17 16.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=136,slow=1.6,SNR=2.0							
KURBB	**Kurchatov Arra**	**145.20**	**35**	PKPbc		**PKPbc**	**05 17 43.6**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=302,slow=3.6,SNR=11							
ZAA0	**Zalesovo Array**	**145.83**	**26**	PKPdf		**PKPdf**	**05 17 43.5**	**-1.4**
ZALV	**Zalesovo Beam**	**145.83**	**26**	PKPbc		**PKPbc**	**05 17 46.0**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=309,slow=4.4,SNR=9.8							
ZALV	**Zalesovo Beam**	**145.83**	**26**			**PKPdf**	**05 17 45.0**	**+0.1**
MKAR	**Makanchi Array**	**149.47**	**38**	PKPbc		**PKPbc**	**05 17 55.9**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=320,slow=2.3,SNR=8.9							
MKAR	**Makanchi Array**	**149.47**	**38**			**PKPbc**	**05 17 55.6**	**-0.1**
NJ2	**Nanjing**	**168.89**	**312**	*eP*		**PKPdf**	**05 18 12.9**	**-1.1**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
PZH	**PanZhiHua**	**173.18**	**75**	PKP		**PKPdf**	**05 18 15.6**	**-0.9**

*IDC **03** 05:09:19.8±1.3,32°.98S×177°.79W,h0km,mb4.0/3, mbtmp4.0/6,ML3.9/3,MS3.2/2,Error ellipse: s-maj=36.3km s-min=25.8km az=98.0*

*WEL **03** 05:09:20.3±0.9,33°.5±6'×17°.8W±1°.6,h12km,M4.5/11, mB4.8/8,ML5.0/12,MLv4.9/11,Mw(mB)4.1/8,Error ellipse: s-maj=21.6km s-min=4.0km az=109.4*

*NEIC **03** 05:09:22.3±2.0,33°.06S±0°.06×177°.9W±0°.1,h10km±1km, mb4.6/12,Error ellipse: s-maj=15.4km s-min=8.4km az=66.0*

ISC 03 05:09:21.6±0.6,32°.95S±0°.07×178°.0W±0°.1,h10km,n53, σ1§66/64,mb4.5/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.68**	**1**	P		Pn	05 10 13.2	-5.3
GLKZ				S		**Sn**	**05 10 58.5**	**-3.4**
RAO	**Raoul Island**	**3.69**	**1**	Pn		**Pn**	**05 10 20.2**	**+1.5**
	90nm,0.3s,baz=230,slow=21,SNR=1.6							
RAO				Sn		**Sn**	**05 10 59.3**	**-2.9**
	182nm,0.3s,baz=94,slow=22,SNR=2.4							
	214nm,0.3s							
MXZ	**Matakaoa Point**	**5.51**	**212**	P		Pn	05 10 50.4	+6.7
MXZ	**Matakaoa Point**	**5.51**	**212**	Pn		**Pn**	**05 10 41.0**	**-2.7**
WMGZ	**Waiomatatini S**	**5.68**	**210**	P		**Pn**	**05 10 45.0**	**-1.0**
WMGZ				S		**Sn**	**05 11 47.4**	**-3.8**
PKGZ	**Pakihiroa**	**5.86**	**212**	P		**Pn**	**05 10 48.3**	**-0.2**
PKGZ				S		**Sn**	**05 11 55.7**	**-0.1**
RUGZ	**Raukumara Rang**	**6.13**	**214**	P		**Pn**	**05 10 52.0**	**-0.3**
RUGZ				S		**Sn**	**05 12 03.2**	**+0.6**
TWGZ	**Tauwhareparae**	**6.16**	**211**	P		**Pn**	**05 10 52.3**	**-0.5**
TWGZ				S		**Sn**	**05 12 02.6**	**-0.7**
CNGZ	**Carnagh Statio**	**6.33**	**208**	P		**Pn**	**05 10 53.5**	**-1.4**
TKGZ	**Te Karaka**	**6.44**	**211**	P		**Pn**	**05 10 55.5**	**-0.9**
TKGZ				S		**Sn**	**05 12 09.0**	**-1.0**
URZ	**Urewera**	**6.63**	**216**	Pn		**Pn**	**05 10 58.1**	**-1.0**
	0.8nm,0.3s,baz=30,slow=16,SNR=14							
URZ				Sn		**Sn**	**05 12 12.9**	**-1.8**
	13nm,0.3s,baz=78,slow=23,SNR=13							
	11nm,1.1s							
URZ	**Urewera**	**6.63**	**216**	P		**Pn**	**05 11 00.4**	**+1.3**
RAGZ	**Rawiri**	**6.68**	**213**	P		**Pn**	**05 10 58.1**	**-1.7**
RAGZ				S		**Sn**	**05 12 13.2**	**-2.8**
PRGZ	**Paritu Road**	**6.84**	**208**	P		**Pn**	**05 11 01.7**	**-0.2**
PRGZ				S		**Sn**	**05 12 17.4**	**-2.4**
SNGZ	**Shannon Statio**	**6.95**	**212**	P		**Pn**	**05 11 02.3**	**-1.1**
SNGZ				S		**Sn**	**05 12 21.9**	**-0.7**
MUGZ	**Murupara**	**6.97**	**216**	P		**Pn**	**05 11 02.4**	**-1.3**
MUGZ				S		**Sn**	**05 12 20.9**	**-2.2**
MHGZ	**Mahia Peninsul**	**7.03**	**207**	S		**Sn**	**05 12 22.5**	**-1.9**
RAHZ	**Arahi**	**7.17**	**212**	P		**Pn**	**05 11 07.9**	**+1.4**
RAHZ				S		**Sn**	**05 12 26.4**	**-1.6**
MTHZ	**Maungataniwha**	**7.23**	**214**	P		**Pn**	**05 11 06.3**	**-1.1**
MTHZ				S		**Sn**	**05 12 27.6**	**-1.9**
WHHZ	**Waihua**	**7.24**	**211**	S		**Sn**	**05 12 27.8**	**-1.9**
OUZ	**Omahuta**	**7.34**	**250**	P		Pn	05 11 15.7	+6.9
OUZ	**Omahuta**	**7.34**	**250**	P		Pn	05 11 15.6	+6.8
ARHZ	**Aropaoanui**	**7.49**	**211**	S		**Sn**	**05 12 33.5**	**-2.5**
BKZ	**Black Stump Fm**	**7.64**	**214**	P		**Pn**	**05 11 14.4**	**+1.3**
TMVZ	**Te Maari**	**8.00**	**218**	P		**Pn**	**05 11 18.9**	**+0.9**
TMVZ				S		**Sn**	**05 12 45.6**	**-2.9**
ETVZ	**East Tongari

JMM ⇓S **Sn** **05 13 18.7 -1.2**
ONAJ **Iwakimizuishiy** **0.73 239** ⇓*i*P **Pn** **05 13 09.1 -0.7**
ONAJ A A 05 13 09.1
comp=N,166nm,0.3s,comp=E,208nm,0.3s
ONAJ ⇓S **Sn** **05 13 18.7 -1.3**
JIKH **Ishinomakikobu** **0.83 354** ⇓*i*P **Pn** **05 13 10.1 -0.9**
JIKH A A 05 13 10.1
comp=N,30nm,1.0s,comp=E,57nm,0.4s
JIKH ⇓S **Sn** **05 13 20.2 -2.0**
JFFD **Fukushimafurud** **0.90 245** A A 05 13 11.6
comp=N,55nm,2.7s,comp=E,62nm,0.5s
JIO **Ouri** **0.99 349** ⇓*i*P **Pn** **05 13 12.4 -0.7**
JIO A A 05 13 12.4
comp=N,14nm,2.9s,comp=E,46nm,2.1s
JIO ⇓S **Sn** **05 13 24.0 -2.0**
JOTO **OTAMA OYAMA** **1.00 275** *i*P **Pn** **05 13 13.3 +0.1**
JOTO A A 05 13 13.3
comp=N,118nm,0.8s,comp=E,72nm,1.0s
JOTO *e*S **Sn** **05 13 26.3 0.0**
JOU **Okura** **1.14 321** ⇓*e*P **Pn** **05 13 14.6 -0.6**
JOU A A 05 13 14.6
comp=N,54nm,1.0s,comp=E,36nm,1.2s
JOU ⇓*e*S **Sn** **05 13 29.0 -0.8**
JHO **Hitachi** **1.19 223** ⇓*i*P **Pn** **05 13 15.0 -0.9**
JHO A A 05 13 15.0
comp=N,15nm,0.8s,comp=E,9.0nm,1.4s
JHO ⇓*e*S **Sn** **05 13 29.7 -1.2**
JYAR **Yonezawaarcadi** **1.22 291** A A 05 13 15.9
comp=N,47nm,1.3s,comp=E,55nm,1.1s
JOFO **Osakifurukawao** **1.24 335** A A 05 13 16.0
comp=N,100nm,3.6s,comp=E,111nm,3.1s
JKMT **Kesennumamotoy** **1.33 356** A A 05 13 17.4
comp=N,11nm,3.5s,comp=E,15nm,2.1s
JHYU **Hitachinakayam** **1.39 215** A A 05 13 18.8
comp=N,16nm,1.5s,comp=E,16nm,6.2s
JYS **Shirataka** **1.41 302** ⇓*i*P **Pn** **05 13 18.7 -0.2**
JYS A A 05 13 18.7
comp=N,24nm,2.4s,comp=E,36nm,1.9s
JYS ⇓*e*S **Sn** **05 13 35.5 -0.8**
JSB **Shiboa** **1.42 249** A A 05 13 19.1
comp=N,47nm,1.2s,comp=E,35nm,3.0s
JMK **Ichinoseki** **1.49 349** ⇓*i*P **Pn** **05 13 19.6 -0.3**
JMK A A 05 13 19.6
comp=N,18nm,0.9s,comp=E,30nm,1.5s
JMK ⇓S **Sn** **05 13 37.3 -1.0**
JFY **Yanaizu** **1.50 268** ⇓*i*P **Pn** **05 13 20.1 0.0**
JFY A A 05 13 20.1
comp=N,13nm,1.4s,comp=E,10.0nm,2.4s
JFY ⇓*e*S **Sn** **05 13 38.7 +0.3**
OFUJ **Ofunato** **1.59 2** A A 05 13 21.3
comp=N,7.0nm,2.3s,comp=E,12nm,3.2s
JYT **Yasato** **1.68 222** A A 05 13 22.9
comp=N,30nm,0.3s,comp=E,29nm,0.3s
JYK **Kaneyama** **1.73 326** A A 05 13 23.1
comp=N,8.0nm,3.0s,comp=E,11nm,3.4s
JIHU **Itakohorinouch** **1.74 210** A A 05 13 23.8
comp=N,45nm,1.5s,comp=E,52nm,1.6s
JNS **Sasagawa** **1.83 281** A A 05 13 24.8
comp=N,6.0nm,2.6s,comp=E,8.0nm,1.5s
JYA **Atsumi** **1.84 307** A A 05 13 24.9
comp=N,13nm,0.9s,comp=E,19nm,0.9s
JCAJ **Choshiashikaji** **1.85 199** A A 05 13 25.5
comp=N,20nm,0.9s,comp=E,21nm,1.4s
JKT **Katashina** **2.00 250** A A 05 13 27.3
comp=N,9.0nm,0.7s,comp=E,9.0nm,0.6s
JOM **Ohasama** **2.00 354** A A 05 13 27.0
comp=N,9.0nm,0.4s,comp=E,16nm,0.2s
JAG **Ashikaga** **2.01 239** A A 05 13 27.5
comp=N,11nm,1.0s,comp=E,7.0nm,2.5s
JYYZ **Yamagatayuza** **2.01 320** A A 05 13 27.1
comp=N,33nm,4.0s,comp=E,32nm,3.5s
JUON **Uonuma** **2.03 263** A A 05 13 27.7
comp=N,9.0nm,1.5s,comp=E,9.0nm,1.0s
JRG **Rokugo** **2.05 339** A A 05 13 27.8
comp=N,13nm,1.8s,comp=E,14nm,6.0s
JSMT **Sammumatsuo** **2.05 207** A A 05 13 28.3
comp=N,25nm,0.7s,comp=E,32nm,2.2s
JIZZ **Izumozaki** **2.29 272** A A 05 13 31.3
comp=N,19nm,1.7s,comp=E,20nm,2.3s
JSZI **Iwateshizukuis** **2.31 348** A A 05 13 31.4
comp=N,18nm,2.1s,comp=E,19nm,2.2s
TOK **Tokyo** **2.32 220** A A 05 13 32.1
comp=N,38nm,0.8s,comp=E,42nm,0.8s
JYW **Yuwa** **2.32 333** A A 05 13 31.6
comp=N,33nm,1.8s,comp=E,35nm,2.8s
JCCN **Chibachonan** **2.36 208** A A 05 13 32.7
comp=N,30nm,1.2s,comp=E,22nm,1.9s
JKZ **Kuzumaki** **2.50 356** A A 05 13 34.3
comp=N,13nm,1.8s,comp=E,11nm,2.1s
JGK **Kuni** **2.53 250** A A 05 13 34.9
comp=N,11nm,2.9s,comp=E,9.0nm,5.3s
JKUC **kamogawauchiur** **2.58 206** A A 05 13 35.8
comp=N,15nm,2.0s,comp=E,10.0nm,2.5s
JSGW **Sagamiharawaka** **2.68 226** A A 05 13 37.2
comp=N,9.0nm,1.1s,comp=E,15nm,1.2s
JKEN **Kujiedanarisaw** **2.72 2** A A 05 13 37.3
comp=N,27nm,0.8s,comp=E,26nm,0.9s
JYO **Yokosk** **2.74 215** A A 05 13 38.0
comp=N,13nm,1.9s,comp=E,17nm,2.0s
JJN **Nakama** **2.75 263** A A 05 13 38.0
comp=N,9.0nm,6.3s,comp=E,8.0nm,1.1s
JAH **Hinai** **2.80 345** A A 05 13 38.4
comp=N,12nm,1.3s,comp=E,18nm,2.0s
TATJ **Tateyama 2** **2.80 210** A A 05 13 39.0
comp=N,60nm,2.1s,comp=E,29nm,5.3s
MJAR **Matsushiro Arr** **2.86 252** Pn **Pn** **05 13 39.4 +0.7**
comp=E,3.5nm,0.3s,baz=80,slow=14,SNR=40
MJAR Sn **Sn** **05 14 12.7 +0.8**
comp=E,11nm,0.3s,baz=87,slow=25,SNR=6.9
MJAR LR LR 05 15 02.9
comp=E,4μm,20.2s,baz=45,slow=48
MJAR **Matsushiro Arr** **2.86 252** Pn **Pn** **05 13 39.8 +1.0**
MJAR **Matsushiro Arr** **2.86 252** P **Pn** **05 13 39.8 +1.0**
MAJO **Matsushiro** **2.86 252** P **Pn** **05 13 39.7 +0.9**
MAJO **Matsushiro** **2.86 252** **Pn** **05 13 39.8 +1.1**
MAJO Sn **Sn** **05 14 13.1 +1.2**
MAJO **Matsushiro** **2.86 252** *d*i P **Pn** **05 13 39.7 +0.9**
MAJO **Matsushiro** **2.86 252** P **Pn** **05 13 40.1 +1.4**
MJB9 **Matsu-Tunnel** **2.86 252** **Pn** **05 13 39.7 +0.9**
JANG **Nango** **2.89 359** A A 05 13 39.7
comp=N,5.0nm,2.8s,comp=E,7.0nm,2.6s
JOD2 **Odawara 2** **2.99 223** A A 05 13 41.6
comp=N,15nm,2.0s,comp=E,13nm,1.1s
JNTW **Noshirotokiwa** **3.00 339** A A 05 13 41.2
comp=N,25nm,1.8s,comp=E,46nm,3.9s
JOG3 **Oga3** **3.12 322** A A 05 13 38.4
comp=N,9.0nm,2.8s,comp=E,8.0nm,4.9s
JYN **Shimob** **3.15 232** A A 05 13 43.8
comp=N,19nm,1.7s,comp=E,23nm,2.0s
JIM2 **Oshima 3** **3.27 213** A A 05 13 45.5
comp=N,10.0nm,1.0s,comp=E,12nm,1.0s
JHTM **Izuhatsuma** **3.27 220** A A 05 13 45.5
comp=N,27nm,0.9s,comp=E,18nm,0.9s
JFNN **Fujinakano** **3.27 227** A A 05 13 45.5
comp=N,11nm,2.8s,comp=E,14nm,1.2s
JHHS **Hirosakihykuz** **3.30 344** A A 05 13 45.5
comp=N,18nm,2.1s,comp=E,18nm,5.1s
JTM **Tenmabayashi** **3.32 353** P **Pn** **05 13 46.2 +1.1**
JTM **Tenmabayashi** **3.32 353** **Pn** **05 13 45.3 +0.2**
JTM Sn **Sn** **05 14 22.1 -1.2**
JTM **Tenmabayashi** **3.32 353** P **Pn** **05 13 46.1 +1.1**
JIZS **Izushimoda** **3.52 219** A A 05 13 49.1
comp=N,5.0nm,1.2s,comp=E,5.0nm,1.0s
SHZ3 **Shizuoka 3** **3.64 229** A A 05 13 50.7
comp=N,10.0nm,0.9s,comp=E,7.0nm,1.2s
JNY **Yasuok** **3.67 236** A A 05 13 51.2
comp=N,15nm,1.3s,comp=E,9.0nm,1.2s
JAHD **Aomorihigashid** **3.78 357** A A 05 13 52.3
comp=N,18nm,1.6s,comp=E,20nm,1.6s
JGF **Kuroka** **3.89 242** P **Pn** **05 13 55.0 +2.1**
JGF **Kuroka** **3.89 242** **Pn** **05 13 54.3 +1.5**
JGF **Kuroka** **3.89 242** P **Pn** **05 13 54.8 +1.9**
JOT **Ohata** **3.92 354** A A 05 13 54.2
comp=N,4.0nm,4.6s,comp=E,5.0nm,4.4s
JSG **Sagara** **3.93 225** P **Pn** **05 13 55.6 +2.2**
JSG **Sagara** **3.93 225** Pn **Pn** **05 13 55.1 +1.7**
JSG **Sagara** **3.93 225** P **Pn** **05 13 55.3 +2.0**
JKKS **Kakegawashinom** **3.99 228** A A 05 13 55.7
comp=N,8.0nm,4.4s,comp=E,7.0nm,1.9s
JSR **Shiriuchi** **4.14 348** A A 05 13 57.3
comp=N,4.0nm,2.3s,comp=E,5.0nm,1.7s
INU **Inuyama** **4.25 241** **Pn** **05 13 58.6 +0.7**
JHJ2 **Mitsune** **4.59 199** P **Pn** **05 14 03.4 +0.9**
JHJ2 **Mitsune** **4.59 199** **Pn** **05 14 02.7 +0.2**
JHJ2 **Mitsune** **4.59 199** P **Pn** **05 14 04.1 +1.6**
JHJ **Hachijo jima 2** **4.60 199** Pn **Pn** **05 14 02.5 -0.1**
comp=E,129nm,0.3s,baz=52,slow=12,SNR=55
JHJ Sn **Sn** **05 14 53.5 -1.2**
comp=E,152nm,0.3s,baz=59,slow=19,SNR=4.5
JHJ LR LR 05 15 21.8
comp=E,98nm,19.3s,baz=64,slow=33
JEM **Erimo** **4.69 15** P **Pn** **05 14 05.0 +1.3**
JNBK **Urakawa-nobuka** **4.87 10** A A 05 14 07.7
comp=N,5.0nm,2.8s,comp=E,5.0nm,2.0s
ASAJ **Asahikawa** **6.67 6** P **Pn** **05 14 29.9 -1.1**
JKA **Kamikawa-asahi** **6.67 6** **Pn** **05 14 29.9 -1.1**
JKA **Kamikawa-asahi** **6.67 6** P **Pn** **05 14 30.8 -0.2**
JMN **Monobe** **7.31 241** P **Pn** **05 14 42.0 +2.2**
JMN **Monobe** **7.31 241** **Pn** **05 14 40.0 +0.2**
JMN **Monobe** **7.31 241** P **Pn** **05 14 42.1 +2.4**
KUR **Kuril'sk** **9.07 29** P **Pn** **05 15 04.3 +0.6**
KUR *e*S **Sn** **05 16 38.1 -6.2**
KUR pmax pmax
comp=Z,57nm,0.4s
KUR smax smax
comp=E,206nm,0.7s
KUR smax smax
comp=N,160nm,0.5s
VLA **Vladivostok** **9.30 310** *i*P **Pn** **05 15 07.4 +0.4**
MSHR **Mys Shultsa** **9.47 306** *i*P **Pn** **05 15 12.2 +2.8**
YSS **Yuzhno-Sakhali** **9.50 5** P **Pn** **05 15 10.7 +1.0**
YSS **Yuzhno-Sakhali** **9.50 5** *e*P **Pn** **05 15 09.5 -0.2**
YSS *e*S **Sn** **05 16 56.4 +1.4**
YSS pmax pmax
comp=Z,50nm,0.9s
YSS pmax pmax
comp=Z,100nm,3.2s
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS **Yuzhno-Sakhali** **9.50 5** P **Pn** **05 15 09.7 0.0**
PSTR **Posyet** **9.74 305** *i*P **Pn** **05 15 15.2 +2.2**
JNU **Nakatsue** **9.77 247** LR LR 05 19 24.1
comp=Z,1μm,19.8s,baz=59,slow=41
JNU **Nakatsue** **9.77 247** P **Pn** **05 15 16.1 +2.6**
JNU **Nakatsue** **9.77 247** Pn **Pn** **05 15 14.9 +1.4**
JNU **Nakatsue** **9.77 247** P **Pn** **05 15 16.4 +2.9**
USA0B **Ussuriysk Arra** **9.89 316** **Pn** **05 15 15.7 +0.7**
USA0B **Ussuriysk Arra** **9.89 316** *i*P **Pn** **05 15 15.3 +0.3**
USRK **Ussuriysk Ar.** **9.89 316** Pn **Pn** **05 15 15.7 +0.7**
comp=Z,1.4nm,0.3s,baz=123,slow=14,SNR=21
USRK LR LR 05 18 49.8
comp=Z,1μm,19.0s,baz=131,slow=37
USRK **Ussuriysk Ar.** **9.89 316** **Pn** **05 15 15.4 +0.4**
USRK **Ussuriysk Ar.** **9.89 316** P **Pn** **05 15 15.4 +0.4**
JCJ **Chichijima** **10.37 177** Pn **Pn** **05 15 18.6 -3.2**
comp=Z,16nm,0.3s,baz=271,slow=19,SNR=9.8
JCJ Sn Sn 05 17 05.1 -11
comp=Z,13nm,0.3s,baz=15,slow=20,SNR=5.7
comp=Z,74nm,0.5s
JCJ **Chichijima** **10.37 177** Pn **Pn** **05 15 21.8 0.0**
KSRS **Korea Array** **10.86 274** Pn **Pn** **05 15 29.1 +0.8**
comp=Z,1.1nm,0.3s,baz=90,slow=13,SNR=57
KSRS LR LR 05 19 31.6
comp=Z,745nm,18.8s,baz=85,slow=37
KSAR **Wonju Array Be** **10.89 274** **Pn** **05 15 30.5 +1.7**
KSAR **Wonju Array Be** **10.89 274** P **Pn** **05 15 30.5 +1.7**
KS19 **Wonju Array Si** **10.90 274** Pn **Pn** **05 15 29.1 +0.2**
TJN **Taejon** **11.44 269** *i*P **Pn** **05 15 39.9 +3.7**
MDJ **Mudanjiang** **11.51 312** P **Pn** **05 15 41.0 +3.8**
MDJ pmax pmax
comp=Z,48nm,1.5s
MDJ L L
comp=Z,560nm,17.9s
MDJ L L
comp=Z,680nm,18.2s
MDJ L L
comp=Z,1μm,20.6s
TYV **Tymovskoe** **13.40 3** *e*P **Pn** **05 16 02.7 -0.2**
TYV *e*S **Sn** **05 18 32.2 +2.0**
TYV pmax pmax
comp=Z,100nm,4.7s
TYV pmax pmax
comp=Z,13nm,0.8s
TYV smax smax
comp=N,13nm,1.4s
TYV smax smax
comp=E,11nm,1.4s
TYV smax smax
comp=N,200nm,5.4s
TYV smax smax
comp=E,700nm,5.4s
BNX **BinXian** **13.42 312** ⇓P **Pn** **05 16 02.3 -1.0**
BNX S **Sn** **05 18 32.6 +1.7**
BNX pmax pmax
comp=E,11nm,0.6s
BNX pmax pmax
comp=E,130nm,4.3s
BNX L L
comp=E,320nm,16.5s
BNX L L
comp=E,500nm,14.6s
BNX L L
comp=E,730nm,19.0s
KLR **Kul'dur** **13.73 332** Pn **Pn** **05 16 06.4 -1.1**
comp=E,0.6nm,0.3s,baz=130,slow=15,SNR=5.9
KLR LR LR 05 21 23.3
comp=E,626nm,18.2s,baz=146,slow=38
comp=E,1.8nm,0.3s
CN2 **Changchun** **13.77 302** P **Pn** **05 16 09.3 +1.2**
CN2 pP P 05 16 19.1 +3.8
CN2 S **Sn** **05 18 40.5 +1.1**
CN2 sS S 05 18 55.1 -4.6
CN2 pmax pmax
comp=E,20nm,1.0s
CN2 L L
comp=E,260nm,15.0s
CN2 L L
comp=E,430nm,15.0s
CN2 L L
comp=E,480nm,18.0s
GRNR **Gornyy** **13.78 346** *e*P Pn 05 15 59.6 -8.6
GRNR MLR MLR
comp=N,270nm,18.0s
GRNR MLR MLR
comp=E,250nm,18.0s
GRNR MLR MLR
comp=E,380nm,16.0s
JOW **Kunigami** **15.47 230** Pn **Pn** **05 16 28.9 -1.7**
comp=Z,1.3nm,0.3s,baz=51,slow=13,SNR=4.7
JOW LR LR 05 22 27.8
comp=Z,209nm,21.6s,baz=178,slow=38
comp=Z,27nm,0.9s
DL2 **Dalian** **15.76 281** P **Pn** **05 16 34.6 +0.4**
DL2 pP **pP** **05 16 47.0 -1.5**
DL2 sP **sP** **05 16 54.6 0.0**
DL2 *e*S **Sn** **05 19 27.4 -0.2**
DL2 pmax pmax
comp=Z,75nm,1.0s
DL2 pmax pmax
comp=Z,250nm,3.5s
DL2 L L
comp=Z,170nm,14.5s
DL2 L L
comp=Z,610nm,14.4s
DL2 L L
comp=Z,670nm,18.3s
HEH **HeiHe** **16.31 326** *e*P **Pn** **05 16 38.4 -2.8**
HEH pmax pmax
comp=Z,13nm,0.8s
HEH L L
comp=Z,340nm,15.0s
HEH L L
comp=Z,420nm,13.9s
HEH L L
comp=Z,570nm,18.8s
ZEA **Zeya** **19.04 333** *e*P **P** **05 17 13.1 -0.3**
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.7s
ZEA MLR MLR
comp=N,100nm,10.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
PEA0B **Petropavlovsk-** **19.23 31** *ce*P **Pn** **05 17 16.6 -0.3**
PETK **Petropavlovsk-** **19.23 31** P **P** **05 17 15.3 -0.2**
comp=Z,8.4nm,0.9s,baz=216,slow=9.0,SNR=10
PETK LR LR 05 25 59.7
comp=Z,48nm,18.2s,baz=221,slow=41
PETK **Petropavlovsk-** **19.23 31** **P** **05 17 15.1 -0.5**
PETK **Petropavlovsk-** **19.23 31** P **P** **05 17 15.1 -0.5**
NJ2 **Nanjing** **19.43 261** *e*P **Pn** **05 17 19.4 0.0**
NJ2 pmax pmax
comp=Z,23nm,0.5s
PET **Petropavlovsk** **19.56 32** *i*P **Pn** **05 17 20.2 -0.6**
PET **Petropavlovsk** **19.56 32** P **P** **05 17 19.4 +0.2**
comp=Z,49nm,1.1s
TIA **Tai'an** **19.61 274** P **P** **05 17 18.9 -0.9**
TIA S **S** **05 20 55.1 -3.4**
TIA pmax pmax
comp=Z,83nm,1.1s
TIA pmax pmax
comp=Z,230nm,3.9s
TIA L L
comp=Z,340nm,17.8s
TIA L L
comp=Z,340nm,13.7s
TIA L L
comp=Z,520nm,18.1s
HIA **Hailar** **19.69 314** P **P** **05 17 21.2 +0.6**
HILR **Hailar Array B** **19.82 314** P **P** **05 17 19.3 -2.8**
baz=109,slow=12
HILR LR LR 05 25 11.1
comp=Z,559nm,19.2s,baz=120,slow=38
comp=Z,5.0nm,0.4s
BJI2 **Beijing** **19.96 285** P **P** **05 17 22.3 -1.4**
BJI2 pP **pP** **05 17 32.7 -2.2**
BJI2 S **S** **05 21 04.8 -0.7**
BJI2 pmax pmax
comp=Z,15nm,1.1s
BJI2 pmax pmax
comp=Z,48nm,3.9s
BJI2 L L
comp=Z,99nm,18.8s
BJI2 L L
comp=Z,87nm,19.2s
BJT **Baijiatuau** **19.96 285** P **P** **05 17 22.9 -0.8**
BJT **Baijiatuau** **19.96 285** P **P** **05 17 22.9 -0.8**
BJT pmax pmax
comp=Z,23nm,0.7s
BJT **Baijiatuau** **19.96 285** P **P** **05 17 22.5 -1.2**
XLT **XiLinHaoTe** **20.33 296** *e*P **P** **05 17 25.0 -2.7**
XLT PcP **PcP** **05 21 38.1 -1.1**
XLT pmax pmax
comp=Z,16nm,0.8s
XLT pmax pmax
comp=Z,120nm,4.1s
XLT L L
comp=Z,460nm,16.2s
XLT L L
comp=Z,570nm,16.5s
HNS **HongShan** **21.32 278** ⇓P **P** **05 17 36.0 -2.3**
HNS S **S** **05 21 25.9 -6.5**
HNS pmax pmax
comp=Z,160nm,0.8s
HNS L L
comp=Z,230nm,12.9s
HNS L L
comp=Z,400nm,17.9s
HNS L L
comp=Z,420nm,18.8s
NACB **Ninganchiao** **21.64 238** P **P** **05 17 39.2 -2.6**
SSLB **Suanglung** **22.33 238** **P** **05 17 45.6 -3.6**
SSLB **Suanglung** **22.33 238** P **P** **05 17 46.5 -2.8**
YULB **Yu-li** **22.37 237** P **P** **05 17 47.0 -2.7**
TPUB **Ta-pu** **22.88 238** P **P** **05 17 52.0 -3.0**
TPUB IAmb IAmb 05 17 52.6
comp=Z,40nm,0.7s
MA2 **Magadan** **22.89 12** P **P** **05 17 53.1 -1.7**
comp=Z,13nm,0.7s,baz=219,slow=10,SNR=6.3
MA2 LR LR 05 26 32.2
comp=Z,113nm,21.9s,baz=198,slow=36
comp=Z,13nm,0.7s
MA2 **Magadan** **22.89 12** *ce*P **P** **05 17 55.1 +0.3**
MA2 pmax pmax
comp=Z,18nm,0.8s
MA2 **Magadan** **22.89 12** P **P** **05 17 54.5 -0.3**
comp=Z,34nm,1.0s
MA2 **Magadan** **22.89 12** P **P** **05 17 54.8 0.0**
TWG **Pinlang** **22.91 236** P **P** **05 17 53.6 -1.8**
TWG IAmb IAmb 05 17 58.8
comp=Z,108nm,1.5s
TWG **Pinlang** **22.91 236** P **P** **05 17 54.6 -0.8**
HHC **Hu-ho-hao-te** **23.46 288** *e*P **P** **05 18 04.9 +4.1**
HHC **Hu-ho-hao-te** **23.46 288** *e*P **P** **05 18 00.6 -0.2**
HHC pmax pmax
comp=Z,25nm,0.6s
HHC pmax pmax
comp=Z,49nm,3.5s
HHC L L
comp=Z,160nm,13.3s
HHC L L
comp=Z,140nm,13.5s
HHC L L
comp=Z,170nm,14.1s
WHN **Wuhan** **23.56 261** ⇑P **P** **05 18 01.6 -0.1**
WHN S **S** **05 22 13.2 +0.9**
WHN pmax pmax
comp=Z,78nm,0.7s
WHN L L
comp=Z,1μm,17.4s
WHN L L
comp=Z,780nm,13.8s
WHN L L
comp=Z,1μm,24.7s
LYN **LuoYang** **23.69 272** P **P** **05 18 02.3 -0.6**
LYN S **S** **05 22 14.8 +0.5**
LYN SS **SnSn** **05 22 59.3 +3.9**
LYN pmax pmax
comp=Z,75nm,1.1s
LYN L L
comp=Z,490nm,14.4s
LYN L L
comp=Z,500nm,16.1s
LYN L L
comp=Z,720nm,19.2s
GUMO **Guam** **23.98 172** LR LR 05 27 44.1
comp=Z,73nm,20.9s,baz=18,slow=37
BTO2 **Baotou** **24.74 287** *e*P **P** **05 18 12.2 -0.4**
BTO2 S **S** **05 22 31.8 +0.3**
BTO2 pmax pmax
comp=Z,34nm,0.8s
BTO2 pmax pmax
comp=Z,260nm,8.1s
BTO2 L L
comp=Z,560nm,13.3s
BTO2 L L
comp=Z,400nm,14.7s
BTO2 L L
comp=Z,520nm,13.7s
YAK **Yakutsk** **25.66 347** P **P** **05 18 19.4 -1.0**
comp=Z,146nm,0.8s,baz=155,slow=5.3,SNR=23
YAK LR LR 05 28 47.4
comp=Z,359nm,19.1s,baz=210,slow=37
YAK **Yakutsk** **25.66 347** **P** **05 18 19.9 -0.6**
YAK **Yakutsk** **25.66 347** *ci*P **P** **05 18 19.5 -1.0**
YAK *e**PP **pP** **05 18 34.8 +1.8**
YAK *e* 05 18 57.4
YAK *e* 05 21 48.9
YAK *e*S **S** **05 22 42.8 -2.5**
YAK *e*SS **SnSn** **05 23 42.8 -0.3**
YAK *e* 05 29 11.9
YAK pmax pmax
comp=Z,143nm,0.9s
YAK pmax pmax
comp=N,29nm,1.1s
YAK pmax pmax
comp=E,24nm,1.2s
YAK pmax pmax
comp=Z,221nm,5.1s
YAK pmax pmax
comp=N,127nm,5.0s
YAK pmax pmax
comp=E,33nm,2.8s
YAK smax smax
comp=E,83nm,2.4s
YAK smax smax
comp=N,63nm,2.2s
YAK MLR MLR
comp=N,304nm,21.0s
YAK MLR MLR
comp=Z,453nm,22.0s
YAK **Yakutsk** **25.66 347** P **P** **05 18 20.0 -0.6**
SEY **Seymchan** **26.32 11** LR LR 05 30 59.0
comp=Z,116nm,18.1s,baz=147,slow=41
SEY **Seymchan** **26.32 11** *ce*P **P** **05 18 27.8 +1.3**

SEY pmax pmax
comp=Z,34nm,1.3s
XAN Xi'an 26.65 273 ⇑P **P 05 18 28.6 -1.3**
XAN pmax pmax
comp=Z,20nm,0.8s
ULN Ulaanbaatar 27.22 303 P **P 05 18 34.2 -0.7**
ULN Ulaanbaatar 27.22 303 *ce*P **P 05 18 35.1 +0.1**
ULN pmax pmax
comp=Z,26nm,1.3s
ULN Ulaanbaatar 27.22 303 P **P 05 18 34.7 -0.2**
comp=Z,68nm,1.1s
ULN Ulaanbaatar 27.22 303 P **P 05 18 35.0 +0.1**
BOD Bodaibo 27.22 327 *e*P **P 05 18 33.7 -1.0**
BOD pmax pmax
comp=Z,36nm,0.8s
SHEM Shemya Is, Ala 27.26 46 LR LR 05 27 19.6
comp=Z,77nm,20.6s,baz=244,slow=32
ENH Enshi 27.51 264 P **P 05 18 36.2 -1.4**
ENH Enshi 27.51 264 P **P 05 18 37.3 -0.2**
SONM Songino Array 27.65 303 P **P 05 18 37.5 -1.3**
comp=Z,19nm,0.8s,baz=103,slow=8.0,SNR=68
SONM PcP **PcP 05 21 55.4 +0.5**
comp=Z,1.5nm,0.7s,baz=107,slow=3.5,SNR=3.0
SONM LR LR 05 29 52.8
comp=Z,188nm,19.9s,baz=98,slow=37
comp=Z,19nm,0.8s
SONM Songino Array 27.65 303 **P 05 18 38.0 -0.7**
SONM IAmb IAmb 05 18 40.5
comp=Z,24nm,0.9s
SONM Songino Array 27.65 303 P **P 05 18 38.1 -0.7**
SONM pmax pmax
comp=Z,24nm,0.9s
H11N2 WAKE ISLAND Hy 28.27 122 T T 05 48 57.8
baz=314,slow=75,SNR=1618
H11N1 WAKE ISLAND Hy 28.27 122 T T 05 48 58.5
baz=314,slow=75,SNR=2120
H11N3 WAKE ISLAND Hy 28.28 122 T T 05 48 59.2
baz=314,slow=75,SNR=1997
H11S1 WAKE ISLAND Hy 28.99 124 T T 05 49 55.2
baz=316,slow=75,SNR=1362
H11S3 WAKE ISLAND Hy 29.00 124 T T 05 49 55.2
baz=316,slow=75,SNR=1936
H11S2 WAKE ISLAND Hy 29.01 124 T T 05 49 52.3
baz=316,slow=75,SNR=1659
LZH Lanzhou 30.13 279 *e*P **P 05 19 00.5 -0.4**
LZH pP pP 05 19 10.6 -3.0
LZH sP sP 05 19 18.9 -0.4
LZH pmax pmax
comp=Z,51nm,1.6s
LZH L L
comp=Z,200nm,15.5s
LZH L L
comp=Z,370nm,15.2s
LZH L L
comp=Z,470nm,14.6s
TLY Talaya 30.14 310 LR LR 05 31 33.9
comp=Z,347nm,19.0s,baz=101,slow=37
TLY Talaya 30.14 310 **P 05 19 00.6 -0.1**
TLY Talaya 30.14 310 *ce*P **P 05 19 01.1 +0.4**
TLY pmax pmax
comp=Z,19nm,1.3s
TLY Talaya 30.14 310 P **P 05 19 01.1 +0.4**
TLY Talaya 30.14 310 P **P 05 19 00.9 +0.2**
LZDM Lanzhou Array 30.28 279 P **P 05 19 00.3 -2.1**
comp=Z,2.2nm,0.3s,baz=90,slow=4.3,SNR=7.4
LZDM LR LR 05 32 17.5
comp=Z,303nm,18.1s,baz=190,slow=39
comp=Z,2.2nm,0.3s
GYA Guiyang 31.43 260 ⇑P **P 05 19 11.6 -0.9**
GYA pmax pmax
comp=Z,78nm,0.9s
GYA L L
comp=Z,190nm,16.4s
GYA L L
comp=Z,310nm,18.0s
GYA L L
comp=Z,420nm,22.8s
GTA2 Gaotai 32.59 287 *e*P **P 05 19 21.1 -1.4**
GTA2 pmax pmax
comp=Z,5.0nm,0.8s
GTA2 L L
comp=Z,150nm,15.8s
GTA2 L L
comp=Z,250nm,18.9s
GTA2 L L
comp=Z,380nm,19.9s
QIZ Qiongzhong 33.24 245 P **P 05 19 30.2 +2.0**
QIZ S **S 05 24 49.0 +4.0**
QIZ pmax pmax
comp=Z,23nm,1.1s
QIZ L L
comp=Z,250nm,16.2s
QIZ L L
comp=Z,180nm,12.9s
QIZ L L
comp=Z,200nm,17.7s
BILL Bilibino 33.56 17 *ce*P **P 05 19 32.2 +1.7**
BILL pmax pmax
comp=Z,8.0nm,1.7s
DAV Davao City (W) 33.59 210 LR LR 05 34 42.8
comp=Z,67nm,18.2s,baz=8.0,slow=39
KNGR Kungurtug, Tuv 33.77 307 *i*P **P 05 19 32.5 -0.2**
KNGR pmax pmax
comp=Z,25nm,1.2s
TIXI Tiksi 34.86 353 LR LR 05 35 05.7
comp=Z,157nm,18.9s,baz=184,slow=38
TIXI Tiksi 34.86 353 *i*P **P 05 19 40.8 -0.9**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
KMI2 Kunming 35.15 261 ⇑P **P 05 19 44.5 -0.5**
KMI2 pmax pmax
comp=Z,62nm,0.9s
KMI2 pmax pmax
comp=Z,100nm,4.8s
KMI2 L L
comp=Z,160nm,22.0s
KMI2 L L
comp=Z,260nm,20.8s
KMI2 L L
comp=Z,350nm,25.9s
KMI Kunming 35.16 261 P **P 05 19 44.5 -0.6**
KMI pP **pP 05 19 56.2 -1.6**
PZH PanZhiHua 35.28 264 P **P 05 19 47.5 +1.5**
SLVN Son La 36.28 254 **P 05 19 53.9 -0.6**
SLVN IAmb IAmb 05 19 55.5
comp=Z,11nm,0.9s
SGSI Sangihe 36.72 207 P **P 05 19 59.3 +1.1**
SPIA Saint Paul Isl 37.14 42 P **P 05 20 00.4 -0.9**
baz=259
GOMU GeErMu 37.15 283 P **P 05 20 00.6 -1.6**
GOMU pmax pmax
comp=Z,31nm,0.8s
GAMB Gambell 38.26 31 P **P 05 20 10.0 -0.7**
baz=249
TNCH TengChong 38.54 264 P **P 05 20 13.8 +0.1**
TNCH pmax pmax
comp=Z,35nm,0.4s
UNV Unalaska Valle 38.84 48 P **P 05 20 14.9 -0.8**
baz=267
SIJI Sorong 39.34 196 P **P 05 20 19.2 -1.0**
comp=Z,4.8nm,0.5s,baz=26,slow=18,SNR=1.5
SIJI LR LR 05 34 41.3
comp=Z,109nm,19.6s,baz=316,slow=33
comp=Z,4.8nm,0.5s
JAY Jayapura 39.80 181 LR LR 05 36 53.8
comp=Z,60nm,18.6s,baz=334,slow=36
M11K Mekoryuk 39.82 38 P **P 05 20 22.9 -0.9**
baz=259
DGZ Jazzator, Alta 40.24 305 *ci*P **P 05 20 28.4 +0.8**
DGZ pmax pmax
comp=Z,129nm,0.9s
TNA Tin City 40.40 30 P **P 05 20 27.6 -0.9**
baz=251
GTOI Gorontalo 40.47 209 P **P 05 20 30.2 +0.5**
comp=Z,450nmcomp=Z,43nm,1.0s
WMQ Urumqi 40.76 296 *e*P **P 05 20 33.2 +1.3**
WMQ sP sP 05 20 50.7 +0.2
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ L L
comp=Z,270nm,24.1s
K13K Kusilvak Mount 40.86 36 P **P 05 20 31.6 -0.7**
baz=259
F14K Arctic Creek 41.00 30 P **P 05 20 32.1 -1.4**
baz=253

ANM Nome 41.14 32 P **P 05 20 33.5 -1.2**
baz=255
M13K Dall Lake 41.22 38 P **P 05 20 34.9 -0.4**
baz=262
CHTO Chiang Mai 41.53 255 **P 05 20 38.1 -0.3**
CHTO Chiang Mai 41.53 255 P **P 05 20 38.2 -0.3**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO Chiang Mai 41.53 255 P **P 05 20 39.0 +0.6**
CHTO Chiang Mai 41.53 255 P **P 05 20 38.5 0.0**
L14K Kuka Creek 41.68 37 P **P 05 20 38.1 -1.0**
baz=261
ZAA0 Zalesovo Array 41.71 312 **P 05 20 39.2 -0.3**
ZAA0 IAmb IAmb 05 20 40.9
comp=Z,49nm,1.0s
ZALV Zalesovo Beam 41.71 312 P **P 05 20 38.6 -0.8**
comp=Z,45nm,0.9s,baz=90,slow=7.4,SNR=93
ZALV PcP **PcP 05 22 34.8 -0.4**
comp=Z,7.3nm,0.7s,baz=106,slow=3.0,SNR=5.6
ZALV LR LR 05 38 40.0
comp=Z,280nm,18.4s,baz=84,slow=37
comp=Z,45nm,0.9s
ZALV Zalesovo Beam 41.71 312 **P 05 20 38.9 -0.6**
ZALV Zalesovo Beam 41.71 312 *i*P **P 05 20 39.5 0.0**
ZALV pmax pmax
comp=Z,45nm,0.9s
F15K North Star Dit 41.74 30 P **P 05 20 38.8 -0.7**
baz=254
CMAR Chiang Mai Arr 41.74 255 P **P 05 20 39.7 -0.4**
comp=Z,1.9nm,0.3s,baz=46,slow=7.6,SNR=12
CMAR PcP **PcP 05 22 35.9 +0.1**
comp=Z,1.5nm,0.3s,baz=58,slow=3.2,SNR=2.4
CMAR LR LR 05 39 20.5
comp=Z,108nm,18.6s,baz=60,slow=38
comp=Z,1.9nm,0.3s
CMAR Chiang Mai Arr 41.74 255 *i*P **P 05 20 41.2 +1.1**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
G15K Niukluk 41.80 31 P **P 05 20 38.6 -1.4**
baz=256
M14K Bethel 41.95 38 P **P 05 20 40.7 -0.5**
baz=263
N14K Kuskokwak Cree 41.99 39 P **P 05 20 40.9 -0.7**
baz=264
O14K Tigyukauivet M 42.14 40 P **P 05 20 42.4 -0.5**
baz=265
ZSN Zaisan 42.16 302 *e*P **P 05 20 43.4 +0.2**
ZSN pmax pmax
comp=Z,28nm,1.1s
ZSN Zaisan 42.16 302 *e*P **P 05 20 43.4 +0.2**
comp=Z,28nm,1.1s
C16K Lisburne Hills 42.24 26 P **P 05 20 43.0 -0.6**
baz=251
L15K Ungalak Mounta 42.30 36 P **P 05 20 43.6 -0.6**
baz=262
LSA Lhasa 42.30 275 ⇑*i*P P 05 20 38.0 -7.2
LSA LR LR
comp=Z,7.0nm,0.9s
K15K Wolf Creek Mou 42.37 36 P **P 05 20 44.5 -0.2**
baz=261
SDPT Sand Point 42.39 46 P **P 05 20 44.3 -0.6**
baz=270
KRAI Karang Ratu 42.41 200 P **P 05 20 46.9 +1.4**
comp=Z,35nm,0.8s
H16K Elim 42.47 32 P **P 05 20 45.0 -0.5**
baz=258
M15K Kasigluk River 42.56 38 P **P 05 20 46.1 -0.2**
baz=264
N15K Kwethluk River 42.81 39 P **P 05 20 47.7 -0.6**
baz=265
O15K Ungalikthiuk R 42.87 40 P **P 05 20 48.3 -0.5**
baz=266
D17K Noatak River 42.88 27 P **P 05 20 48.4 -0.4**
baz=254,SNR=7.9
CHNA Chernabura Isl 42.91 47 P **P 05 20 48.6 -0.5**
baz=271
S14K Fog Glacier 42.91 45 P **P 05 20 49.1 -0.2**
baz=270
NRIK Noril'sk 42.92 335 P **P 05 20 48.6 -0.4**
comp=Z,4.3nm,0.3s,baz=115,slow=8.3,SNR=7.6
NRIK LR LR 05 39 49.5
comp=Z,190nm,19.0s,baz=92,slow=38
comp=Z,4.3nm,0.3s
NRIK Noril'sk 42.92 335 P **P 05 20 48.1 -0.9**
NRIK Noril'sk 42.92 335 *i*P **P 05 20 48.3 -0.7**
NRIK pmax pmax
comp=Z,17nm,1.5s
J16K Anvik River 42.94 34 P **P 05 20 49.0 -0.4**
baz=261
I17K Unalakleet 43.00 33 P **P 05 20 49.1 -0.7**
baz=260
RDOG Red Dog Mine 43.04 27 P **P 05 20 50.1 0.0**
RDOG IAmb IAmb 05 20 52.6
comp=Z,24nm,1.2s
RDOG Red Dog Mine 43.04 27 P **P 05 20 49.8 -0.3**
baz=254
C17K DeLong Mountai 43.07 26 P **P 05 20 49.9 -0.4**
baz=253
NPW Naypyitaw 43.16 259 P **P 05 20 52.4 +0.8**
E17K Hotham Inlet 43.19 29 P **P 05 20 50.8 -0.5**
baz=256,SNR=5.2
L16K Owhat River 43.26 37 P **P 05 20 51.8 -0.1**
baz=264
F17K Baldwin Pennin 43.26 30 P **P 05 20 51.7 -0.2**
baz=257
G17K Kiwalik Mounta 43.31 31 P **P 05 20 52.1 -0.1**
baz=259
M16K Timber Creek 43.44 38 P **P 05 20 52.6 -0.7**
baz=265
N16K Nishlik Lake 43.49 38 P **P 05 20 52.6 -1.2**
baz=266
H17K Granite Mounta 43.51 32 P **P 05 20 52.8 -1.2**
baz=260
SHL Shillong 43.55 269 **P 05 20 54.1 -0.8**
SHL IAmb IAmb 05 21 15.3
comp=Z,18nm,0.9s
SHL Shillong 43.55 269 P **P 05 20 54.1 -0.8**
SHL pmax pmax
comp=Z,18nm,0.9s
SHL Shillong 43.55 269 *e*P **P 05 20 53.5 -1.4**
SHL IAmb IAmb 05 20 58.3
comp=Z,9.4nm,0.6s
CHGN Chignik 43.55 44 P **P 05 20 53.4 -0.8**
baz=271
J17K VAM Dome 43.64 34 P **P 05 20 54.0 -0.9**
baz=262
E18K Tukpahlearik C 43.73 28 P **P 05 20 55.6 0.0**
E18K IAmb IAmb 05 20 58.6
comp=Z,15nm,0.9s
E18K Tukpahlearik C 43.73 28 P **P 05 20 55.2 -0.4**
baz=257,SNR=6.5
O16K Kokwok River B 43.78 40 P **P 05 20 54.4 -1.6**
baz=267
P16K Nushagak River 43.81 41 P **P 05 20 56.1 -0.3**
baz=263
C18K Utukok River 43.81 26 P **P 05 20 56.5 +0.1**
C18K IAmb IAmb 05 20 58.6
comp=Z,29nm,0.8s
C18K Utukok River 43.81 26 P **P 05 20 54.5 -1.9**
baz=255
L17K Donlin 43.85 36 P **P 05 20 56.1 -0.6**
baz=265
K17K Iditarod 43.91 35 P **P 05 20 56.9 -0.3**
baz=264
F18K Selawik 43.92 29 P **P 05 20 56.6 -0.5**
baz=259
MK31 Makanchi Array 43.99 302 *ce*P **P 05 20 58.2 +0.1**
MKAR Makanchi Array 43.99 302 P **P 05 20 57.6 -0.5**
comp=Z,12nm,0.7s,baz=86,slow=9.5,SNR=60
MKAR PcP **PcP 05 22 42.9 -0.1**
comp=Z,2.2nm,0.7s,baz=71,slow=5.5,SNR=2.2
MKAR LR LR 05 39 42.5
comp=Z,133nm,21.6s,baz=76,slow=37
comp=Z,12nm,0.7s
MKAR Makanchi Array 43.99 302 **P 05 20 58.1 -0.1**
MKAR Makanchi Array 43.99 302 *i*P **P 05 20 58.0 -0.1**
MKAR pmax pmax
comp=Z,12nm,0.7s
G18K Tagagawik 44.19 31 P **P 05 20 58.7 -0.7**
baz=260
H18K Honhosa River 44.19 32 P **P 05 20 57.6 -1.8**
baz=261
M17K Holitna River 44.20 37 P **P 05 20 58.1 -1.4**
baz=266
MAKZ Makanchi 44.20 302 **P 05 20 59.9 +0.1**
MAKZ IAmb IAmb 05 21 01.1
comp=Z,37nm,1.4s

MAKZ Makanchi 44.20 302 P **P 05 20 59.9 +0.1**
MAKZ pmax pmax
comp=Z,37nm,1.4s
MAKZ Makanchi 44.20 302 P **P 05 20 59.7 -0.1**
N17K Nushagak Hills 44.27 38 P **P 05 20 58.9 -1.2**
baz=267
A19K Wainwright 44.28 24 P **P 05 20 59.3 -0.7**
baz=254
O17K Koliganek Bris 44.29 39 P **P 05 20 59.8 -0.4**
baz=268
C19K Lookout Ridge 44.49 26 P **P 05 21 01.1 -0.7**
baz=256,SNR=8.2
Q16K King Salmon 44.49 41 P **P 05 21 01.2 -0.6**
baz=270
P17K Kvichak River 44.61 40 P **P 05 21 02.1 -0.6**
baz=269
L18K Granite Mounta 44.61 36 P **P 05 21 01.9 -0.9**
baz=266
R17L Mt. Peulik Vol 44.66 43 P **P 05 21 01.9 -1.3**
baz=271
F19K Shaleruckik Mo 44.70 29 P **P 05 21 02.0 -1.4**
baz=260
GCSA Galena City Sc 44.76 32 P **P 05 21 02.8 -1.1**
baz=263
G19K Purcell Mounta 44.86 30 P **P 05 21 03.7 -1.1**
baz=262,SNR=5.4
D19K Kuna River 44.88 27 P **P 05 21 04.1 -0.7**
baz=258,SNR=16
Q17K Contact Creek 44.90 42 P **P 05 21 04.6 -0.6**
baz=271
N18K Kilae Creek 44.92 38 P **P 05 21 04.6 -0.7**
baz=268
M18K Stony River 44.98 37 P **P 05 21 05.2 -0.5**
baz=268
E19K Redstone River 45.01 29 P **P 05 21 05.3 -0.6**
baz=260,SNR=8.6
H19K Roundabout Mou 45.04 31 P **P 05 21 05.7 -0.3**
baz=263,SNR=9.2
CHIR Chirikof Islan 45.13 45 P **P 05 21 06.7 -0.2**
baz=273
BRDH Bariadhala 45.16 266 LR LR 05 41 28.5
comp=Z,180nm,18.1s,baz=94,slow=38
P18K Big Mountain, 45.23 40 P **P 05 21 06.9 -0.8**
baz=270
J19K Poorman 45.23 34 P **P 05 21 07.3 -0.4**
baz=265,SNR=5.9
O18K Koktuh Hills 45.24 39 P **P 05 21 07.4 -0.5**
baz=270
Q18K Katmai Hardscr 45.35 41 P **P 05 21 08.2 -0.6**
baz=271
D20K Etivluk River 45.46 27 P **P 05 21 09.2 -0.3**
baz=260,SNR=18
L19K White Mountain 45.47 36 P **P 05 21 09.0 -0.6**
baz=268
B20K Meade River 45.53 25 P **P 05 21 09.7 -0.2**
baz=258
F20K Avaraart Lake 45.53 29 P **P 05 21 09.6 -0.3**
baz=262
E20K Nigu River 45.54 28 P **P 05 21 09.9 -0.2**
baz=260,SNR=11
N19K Bonanza Creek 45.61 38 P **P 05 21 09.9 -0.9**
baz=269
M19K Big River Lodg 45.68 37 P **P 05 21 10.3 -0.9**
baz=268
H20K Anotleneega Mo 45.69 31 P **P 05 21 11.5 +0.3**
baz=264
KURK Kurchatov 45.76 308 **P 05 21 11.7 -0.4**
KURK Kurchatov 45.76 308 *ce*P **P 05 21 11.6 -0.4**
KURK pmax pmax
comp=Z,62nm,0.8s
KURK Kurchatov 45.76 308 P **P 05 21 11.9 -0.1**
I20K Naaghedeneel 45.79 32 P **P 05 21 12.6 +0.5**
baz=266
KURBB Kurchatov Arra 45.83 308 P **P 05 21 12.3 -0.3**
comp=Z,42nm,0.7s,baz=84,slow=8.3,SNR=133
KURBB PcP **PcP 05 22 48.9 -0.3**
comp=Z,3.9nm,1.0s,baz=97,slow=2.8,SNR=2.1
KURBB LR LR 05 41 02.9
comp=Z,295nm,19.6s,baz=170,slow=37
comp=Z,42nm,0.7s
K20K Telida 45.88 34 P **P 05 21 12.0 -0.8**
baz=267
J20K Nowinta River 45.89 33 P **P 05 21 12.3 -0.5**
baz=266,SNR=5.6
A21K Barrow 45.99 23 P **P 05 21 13.6 +0.1**
baz=257
Q19K Cape Douglas, 46.06 41 P **P 05 21 13.7 -0.6**
baz=272
C21K Knifeblade Rid 46.19 26 P **P 05 21 15.0 -0.2**
baz=261,SNR=6.9
IMAR Indian Mountai 46.20 31 P **P 05 21 16.1 +0.9**
M20K Styx River 46.27 37 P **P 05 21 15.5 -0.6**
baz=270
B21K Ikpikpuk River 46.32 26 P **P 05 21 15.8 -0.3**
baz=261
OHAK Old Harbor 46.33 43 P **P 05 21 16.1 -0.3**
baz=274
G21K Allakaket 46.34 30 P **P 05 21 16.3 -0.1**
baz=265
E21K Killik River 46.38 27 P **P 05 21 16.2 -0.5**
baz=262
F21K Alatna River 46.42 29 P **P 05 21 16.7 -0.3**
baz=264
A22K Sinclair Lake 46.45 24 P **P 05 21 17.3 +0.2**
baz=259
EVN Everest 46.48 275 **P 05 21 18.7 -0.1**
EVN IAmb IAmb 05 21 32.6
comp=Z,20nm,0.8s
EVN Everest 46.48 275 P **P 05 21 19.5 +0.7**
O20K Slope Mountain 46.54 39 P **P 05 21 17.6 -0.6**
baz=272
H21K Meloziina Rive 46.56 31 P **P 05 21 17.3 -0.8**
baz=266
KDAK Kodiak Island 46.67 42 LR LR 05 41 17.7
comp=Z,100nm,19.8s,baz=239,slow=37
KDAK Kodiak Island 46.67 42 *i*P **P 05 21 19.2 +0.1**
KDAK pmax pmax
comp=Z,38nm,1.5s
KDAK Kodiak Island 46.67 42 P **P 05 21 19.2 +0.1**
baz=274
CHUM Lake Minchumin 46.68 34 P **P 05 21 18.8 -0.3**
baz=268,SNR=5.9
PDGK Podgornoye 46.68 298 **P 05 21 19.1 -0.4**
PDGK Podgornoye 46.68 298 P **P 05 21 18.6 -1.0**
PPLA Purkeypile 46.72 35 P **P 05 21 19.3 -0.3**
baz=269
SHLS Shalkode 46.75 297 *ci*P **P 05 21 17.4 -2.6**
SHLS Shalkode 46.75 297 ⇑*i*P **P 05 21 17.5 -2.6**
CAST Castle Rocks 46.78 34 P **P 05 21 19.4 -0.5**
baz=269,SNR=5.2
B22K Teshekpuk Lake 46.84 25 P **P 05 21 20.0 -0.2**
baz=261
I21K Tanana 46.88 32 P **P 05 21 20.3 -0.3**
baz=267
KAPI Kappang 46.92 210 P **P 05 21 21.9 +0.5**
comp=Z,5.4nm,0.3s,baz=67,slow=4.2,SNR=2.4
KAPI LR LR 05 39 11.3
comp=Z,36nm,21.5s,baz=9.5,slow=34
comp=Z,5.4nm,0.3s
PMG Port Moresby 46.94 172 LR LR 05 40 27.3
comp=Z,30nm,21.7s,baz=58,slow=35
F22K John River 46.95 29 P **P 05 21 20.5 -0.7**
baz=265
TDK Taldyqorghan 47.02 300 *e*P **P 05 21 22.1 +0.1**
TDK pmax pmax
comp=Z,9.0nm,0.4s
TDK Taldyqorghan 47.02 300 *e*P **P 05 21 22.2 +0.1**
comp=Z,8.7nm,0.4s
SKT Skwentna 47.03 36 P **P 05 21 20.9 -1.0**
baz=271
HOM Homer 47.05 40 P **P 05 21 21.7 -0.3**
baz=273
UZB Uzynbulak 47.06 297 *ci*P **P 05 21 22.2 -0.3**
UZB Uzynbulak 47.06 297 ⇑*i*P **P 05 21 22.3 -0.3**
E22K Anaktuvuk Pass 47.14 28 P **P 05 21 21.9 -0.8**
baz=265
H22K Ishtalitna Cre 47.16 31 P **P 05 21 22.6 -0.2**
baz=267,SNR=5.5
G22K Bettles 47.17 30 P **P 05 21 22.9 +0.1**
baz=266
L22K Petersville 47.38 36 P **P 05 21 24.3 -0.3**
baz=271,SNR=6.4
MLY Manley 47.40 32 P **P 05 21 25.9 +1.2**
MLY Manley 47.40 32 P **P 05 21 24.5 -0.2**
baz=269,SNR=7.6
WUS Wushi 47.46 295 P **P 05 21 26.1 +0.4**

WUS pP **pP** 05 21 38.8 0.0
BRSE Bradley Lake S 47.50 39 P **P** 05 21 25.2 -0.4
baz=274
SATY Saty 47.52 298 *c i* P **P** 05 21 26.0 -0.1
SATY Saty 47.52 298 ⇑ *i* P **P** 05 21 26.1 -0.1
TRF Thorofare Moun 47.58 34 P **P** 05 21 25.8 -0.6
baz=271
D23K Nanushuk River 47.63 27 P **P** 05 21 25.9 -0.5
baz=265
PRZ Przheval'sk 47.68 297 P **P** 05 21 27.4 0.0
PRZ IAmb IAmb 05 21 29.3
comp=Z,25nm,0.9s
PRZ Przheval'sk 47.68 297 P **P** 05 21 27.4 0.0
PRZ pmax pmax
comp=Z,25nm,0.9s
PRZ Przheval'sk 47.68 297 P **P** 05 21 28.9 +1.4
COLD Coldfoot 47.69 29 P **P** 05 21 26.4 -0.6
baz=267
M22K Willow 47.70 37 P **P** 05 21 26.9 -0.1
baz=272
C23K Itkillik River 47.73 26 P **P** 05 21 27.1 0.0
baz=264,SNR=13
G23K Bananza Creek 47.74 30 P **P** 05 21 26.9 -0.5
baz=268,SNR=6.9
H23K Yukon River 47.91 31 P **P** 05 21 30.3 +1.6
H23K IAmb IAmb 05 21 45.2
comp=Z,15nm,1.1s
H23K Yukon River 47.91 31 P **P** 05 21 29.0 +0.3
baz=269
RC01 Rabbit Creek A 47.92 38 P **P** 05 21 28.4 -0.4
baz=273
E23K Chandalar 47.96 28 P **P** 05 21 29.1 0.0
baz=267,SNR=22
I23K Minto, Yukon-K 47.98 32 P **P** 05 21 28.7 -0.4
baz=270
TOLK Toolik Lake Re 48.01 27 P **P** 05 21 29.9 +0.5
baz=266,SNR=6.3
NEA2 Nenana 48.11 33 P **P** 05 21 30.1 0.0
baz=271,SNR=7.6
SEW Seward 48.13 39 P **P** 05 21 29.6 -0.7
baz=274
MCK McKinley 48.18 34 P **P** 05 21 30.2 -0.6
baz=272
PMR Palmer 48.18 37 **P** 05 21 30.0 -0.7
PMR IAmb IAmb 05 21 34.8
comp=Z,6.1nm,0.6s
PMR Palmer 48.18 37 P **P** 05 21 30.0 -0.7
PMR pmax pmax
comp=Z,6.0nm,0.6s
PMR Palmer 48.18 37 P **P** 05 21 30.4 -0.3
baz=273
D24K Happy Valley 48.31 27 P **P** 05 21 31.6 -0.1
baz=267
TARG Taragay, Kyrgy 48.32 296 **P** 05 21 32.7 0.0
TARG IAmb IAmb 05 21 34.3
comp=Z,21nm,0.8s
TARG Taragay, Kyrgy 48.32 296 P **P** 05 21 32.7 0.0
TARG pmax pmax
comp=Z,21nm,0.8s
TARG Taragay, Kyrgy 48.32 296 P **P** 05 21 33.5 +0.9
E24K Your Creek 48.38 28 P **P** 05 21 32.3 -0.1
baz=268
C24K Franklin Bluff 48.39 26 P **P** 05 21 32.2 0.0
baz=266
WAT1 Susitna Watana 48.39 35 P **P** 05 21 31.8 -0.7
baz=273
MDOK Medeo 48.45 298 *eP* **P** 05 21 33.2 -0.1
MDOK Medeo 48.45 298 *eP* **P** 05 21 33.2 -0.1
KNK Knik Glacier 48.52 37 P **P** 05 21 33.3 -0.1
baz=274
AAA Alma-Ata 48.53 298 *eP* **P** 05 21 33.9 +0.1
AAA pmax pmax
comp=Z,11nm,0.5s
AAA Alma-Ata 48.53 298 *eP* **P** 05 21 33.9 +0.1
comp=Z,11nm,0.5s
WRH Wood River Hil 48.53 33 P **P** 05 21 34.6 +1.2
SML Sawmill 48.55 37 P **P** 05 21 33.3 -0.4
baz=274
TNSS Tian-Shan 48.55 298 *eP* **P** 05 21 34.1 -0.3
TNSS Tian-Shan 48.55 298 *eP* **P** 05 21 34.2 -0.3
F24K Squaw Lake 48.60 29 P **P** 05 21 33.6 -0.4
baz=269
H24K Noodor Dome 48.60 31 P **P** 05 21 34.0 0.0
baz=271,SNR=6.3
COLA College 48.63 32 *i* P **P** 05 21 33.7 -0.4
COLA pmax pmax
comp=Z,5.0nm,0.9s
COLA College 48.63 32 P **P** 05 21 35.6 +1.5
KDJ Kajisay 48.65 297 P **P** 05 21 35.3 +0.4
KDJ IAmb IAmb 05 21 36.1
comp=Z,9.9nm,0.8s
KDJ Kajisay 48.65 297 P **P** 05 21 35.3 +0.4
KDJ pmax pmax
comp=Z,10.0nm,0.8s
KDJ Kajisay 48.65 297 P **P** 05 21 35.3 +0.4
CCB Clear Creek Bu 48.65 33 **P** 05 21 35.2 +0.8
G24K Hadweenzic Riv 48.75 30 P **P** 05 21 34.6 -0.5
baz=270,SNR=6.5
WAT6 Susitna Watana 48.78 36 P **P** 05 21 36.3 +0.8
baz=274
POKR Poker Plat Res 48.80 32 P **P** 05 21 35.8 +0.3
baz=272
M23K Glacier View 48.84 37 P **P** 05 21 35.9 0.0
baz=274
DHY Denali Highway 48.91 35 P **P** 05 21 36.7 +0.1
baz=274
SCM Sheep Creek Mo 49.02 36 P **P** 05 21 36.5 -0.8
baz=275,SNR=5.2
HDA Harding Lake 49.03 33 P **P** 05 21 37.6 +0.3
HDA Harding Lake 49.03 33 P **P** 05 21 36.9 -0.4
baz=273,SNR=6.0
IL31 49.04 33 P **P** 05 21 37.8 +0.5
IL31 IAmb IAmb 05 21 53.9
comp=Z,7.1nm,0.8s
ILAR Eielson Array 49.04 33 P **P** 05 21 37.7 +0.4
comp=Z,4.5nm,0.7s,baz=270,slow=6.6,SNR=52
ILAR PcP **PcP** 05 23 00.0 -0.4
comp=Z,1.6nm,0.8s,baz=277,slow=3.7,SNR=1.5
ILAR LR LR 05 43 33.9
comp=Z,62nm,19.5s,baz=246,slow=38
comp=Z,4.5nm,0.7s
BOK Bokaro 49.17 270 *eP* **P** 05 21 38.8 -0.1
BOK IAmb IAmb 05 21 40.5
comp=Z,9.3nm,0.8s
D25K Kavik River 49.19 27 P **P** 05 21 38.3 -0.2
baz=269
GLI Glacier Island 49.22 38 P **P** 05 21 38.7 -0.1
baz=276
G25K Bearman Lake 49.30 30 P **P** 05 21 39.2 0.0
baz=271
BOOM Boomskoye usch 49.42 297 P **P** 05 21 40.8 0.0
BOOM Boomskoye usch 49.42 297 P **P** 05 21 40.8 0.0
BOOM pmax pmax
comp=Z,17nm,0.6s
BOOM Boomskoye usch 49.42 297 P **P** 05 21 41.3 +0.5
F25K Christian Rive 49.46 29 P **P** 05 21 42.3 +1.7
F25K Christian Rive 49.46 29 P **P** 05 21 39.9 -0.7
baz=271,SNR=8.7
E25K Arctic Village 49.48 28 P **P** 05 21 40.3 -0.4
baz=271,SNR=7.1
ASAI AK-SAY(Kyrgyzs 49.49 295 P **P** 05 21 42.1 +0.6
TKM2 Tokmak 2 49.54 298 P **P** 05 21 42.1 +0.4
SNR=46
M24K Tolsona, Glenn 49.54 36 P **P** 05 21 40.9 -0.4
baz=275
K24K Donnelly Dome 49.58 34 P **P** 05 21 41.4 -0.1
baz=274
PRP Porcupine Dome 49.58 32 P **P** 05 21 42.3 +0.7
PRP Porcupine Dome 49.58 32 P **P** 05 21 41.4 -0.2
baz=273,SNR=7.1
BRZS Berezniki 49.64 308 *eP* **P** 05 21 41.8 -0.3
BRZS Berezniki 49.64 308 *eP* **P** 05 21 41.9 -0.3
J25K Salcha River, 49.70 33 P **P** 05 21 42.1 -0.4
baz=274
C26K Camden Bay 49.71 26 P **P** 05 21 42.3 0.0
baz=270
KLU Klutina 49.72 37 P **P** 05 21 43.5 +0.8
KLU IAmb IAmb 05 21 57.8
comp=Z,8.9nm,0.9s
KLU Klutina 49.72 37 P **P** 05 21 41.9 -0.7
baz=276
HNR Honiara 49.74 156 LR LR 05 42 03.3
comp=Z,5.2nm,19.9s,baz=58,slow=35
PAX Paxson 49.79 35 P **P** 05 21 43.1 -0.1
baz=275
BMAR Burnt Mountain 49.87 29 P **P** 05 21 45.2 +1.5

EYAK Cordova Ski Ar 49.91 38 P **P** 05 21 43.4 -0.6
baz=277
HARP HAARP 49.99 36 P **P** 05 21 44.6 0.0
baz=276
RIDG Independent Ri 50.00 34 P **P** 05 21 45.4 +0.7
baz=275
F26K Sheenjek River 50.03 29 P **P** 05 21 46.8 +2.0
F26K IAmb IAmb 05 21 48.3
comp=Z,25nm,1.2s
F26K Sheenjek River 50.03 29 P **P** 05 21 45.4 +0.5
baz=272,SNR=18
SGDS Sogindy 50.05 299 ⇑ *i* P **P** 05 21 45.5 0.0
KBK Karagaybulak 50.07 298 P **P** 05 21 46.2 +0.5
SNR=28
C27K Jago River 50.13 26 P **P** 05 21 45.7 +0.2
baz=271,SNR=7.6
USP Ospenovka 50.20 299 P **P** 05 21 46.7 +0.2
SNR=12
G26K Porcupine Rive 50.21 30 P **P** 05 21 46.2 +0.1
baz=273
N25K Chitina, Valde 50.34 37 P **P** 05 21 48.3 +0.9
baz=277
SCRK Sand Creek 50.36 33 P **P** 05 21 47.6 +0.1
baz=276,SNR=11
BVAR Borovoye Array 50.37 312 P **P** 05 21 47.2 -0.4
comp=Z,15nm,0.7s,baz=69,slow=8.1,SNR=46
BVAR PcP **PcP** 05 23 05.6 +0.1
comp=Z,10nm,0.7s,baz=71,slow=3.2,SNR=7.2
comp=Z,15nm,0.7s
AAK Ala-Archa 50.40 298 LR LR 05 44 33.9
comp=Z,341nm,18.9s,baz=82,slow=38
AAK Ala-Archa 50.40 298 P **P** 05 21 48.3 +0.2
SNR=9.5
AAK Ala-Archa 50.40 298 *i* P **P** 05 21 48.4 +0.2
SNR=9.7
AAK Ala-Archa 50.40 298 **P** 05 21 47.8 -0.3
AAK IAmb IAmb 05 21 50.7
comp=Z,9.9nm,0.7s
AAK Ala-Archa 50.40 298 *ceP* **P** 05 21 48.4 +0.2
AAK pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 50.40 298 P **P** 05 21 48.4 +0.2
AAK Ala-Archa 50.40 298 P **P** 05 21 48.2 0.0
BORK Borovoye 50.41 312 **P** 05 21 47.9 +0.1
BORK IAmb IAmb 05 21 49.7
comp=Z,18nm,0.8s
BORK Borovoye 50.41 312 *i* P **P** 05 21 47.4 -0.5
BORK pmax pmax
comp=Z,22nm,0.9s
BMRM Bremner River 50.42 37 P **P** 05 21 48.2 +0.3
baz=278
UCH Uchtor 50.51 298 P **P** 05 21 50.3 +1.0
SNR=7.0
I26K Coal Creek Min 50.59 32 P **P** 05 21 49.2 +0.2
baz=275
KAIM Kayak Island 50.66 39 P **P** 05 21 50.7 +1.0
baz=279
L26K Log Cabin Wild 50.75 35 P **P** 05 21 51.5 +1.2
L26K IAmb IAmb 05 22 06.0
comp=Z,9.5nm,0.9s
L26K Log Cabin Wild 50.75 35 P **P** 05 21 51.2 +0.9
baz=277
KSH2 Kashi 50.77 293 P **P** 05 21 51.9 +0.9
KSH2 pmax pmax
comp=Z,14nm,0.8s
KSH2 L L
comp=Z,850nm,24.4s
KSH2 L L
comp=Z,700nm,18.2s
KSH2 L L
comp=Z,470nm,15.5s
EKS2 Erkin-Say 50.89 298 P **P** 05 21 51.9 0.0
SNR=8.3
E27K Coleen River 50.96 28 P **P** 05 21 53.2 +1.3
baz=274
PTH Pithoragarh 50.98 280 *eP* **P** 05 21 52.8 +0.1
PTH IAmb IAmb 05 21 55.9
comp=Z,38nm,0.2s
M26K Nabesna, AK 50.99 35 P **P** 05 21 52.8 +0.6
baz=278
MTN Manton Dam 51.01 193 P P 05 21 47.8 -4.9
comp=Z,21nm,0.9s
G27K Doyon Strip 51.06 30 P **P** 05 21 53.3 +0.7
baz=275
D27M Malcolm River 51.12 27 P **P** 05 21 54.0 +0.9
baz=274
MCARA McCarthy VSAT 51.12 37 P **P** 05 21 54.3 +1.1
baz=279
H27K Steamboat Moun 51.16 30 P **P** 05 21 54.6 +1.1
baz=276,SNR=6.5
CRQE Cirque 51.18 38 P **P** 05 21 54.3 +0.5
baz=279
I27K Kandik River 51.20 31 P **P** 05 21 54.3 +0.7
baz=276
BCAR Beaver Creek A 51.45 35 **P** 05 21 57.2 +1.6
M27K Edge Creek, AK 51.51 35 P **P** 05 21 56.7 +0.5
baz=279,SNR=6.6
F28M Old Crow 51.66 29 P **P** 05 21 57.4 +0.3
baz=276,SNR=5.2
E28M Babbage River 51.69 27 P **P** 05 21 58.6 +1.3
E28M IAmb IAmb 05 22 00.2
comp=Z,12nm,1.1s
E28M Babbage River 51.69 27 P **P** 05 21 58.4 +1.2
baz=276,SNR=5.6
LHMI Lhok Sumawe 51.79 243 P **P** 05 22 01.1 +2.4
LHMI Lhok Sumawe 51.79 243 P **P** 05 22 00.6 +2.0
I28M Miner Creek 51.91 31 P **P** 05 21 59.8 +0.7
baz=278,SNR=8.8
PSI Prapat 52.14 239 P **P** 05 22 01.4 0.0
PSI pmax pmax
comp=Z,11nm,1.0s
PSI Prapat 52.14 239 P **P** 05 22 01.7 +0.3
comp=Z,10nm,0.9s
RPSI Rantau Prapat 52.22 239 **P** 05 22 01.4 -0.5
RPSI IAmb IAmb 05 22 06.7
comp=Z,11nm,1.0s
YUK3 Moose Creek 52.27 36 P **P** 05 22 02.1 +0.2
baz=280
OHH Osh 52.30 296 P **P** 05 22 01.9 -0.4
E29M Blow River 52.31 27 P **P** 05 22 02.8 +1.0
baz=277,SNR=9.5
DAWY Dawson 52.35 33 P **P** 05 22 03.0 +0.7
baz=280
H29M Whitestone 52.44 30 P **P** 05 22 03.8 +0.9
baz=279,SNR=6.0
ARK Arkit 52.45 298 P **P** 05 22 04.1 +0.7
G29M Pine Creek 52.47 29 P **P** 05 22 03.1 0.0
baz=278,SNR=16
DZA Taraz 52.52 299 *eP* **P** 05 22 03.9 0.0
DZA pmax pmax
comp=Z,12nm,0.8s
DZA Taraz 52.52 299 *eP* **P** 05 22 03.9 0.0
comp=Z,12nm,0.8s
O28M Mount Upton 52.58 37 P **P** 05 22 04.4 +0.1
baz=281
YUK8 Steele Glacier 52.68 37 P **P** 05 22 05.4 +0.3
baz=281
PINM Pinnacle 52.69 38 P **P** 05 22 04.8 -0.1
baz=282
DHRM DHARAMSHALA 52.87 285 *eP* **P** 05 22 06.0 -0.8
DHRM IAmb IAmb 05 22 14.1
comp=Z,32nm,1.0s
KK31 Karatay Array 53.02 300 **P** 05 22 07.0 -0.5
KK31 IAmb IAmb 05 22 09.9
comp=Z,24nm,1.1s
KK31 Karatay Array 53.02 300 P **P** 05 22 07.0 -0.5
KK31 pmax pmax
comp=Z,24nm,1.2s
KKAR Karatay Array 53.02 300 **P** 05 22 07.2 -0.3
KKAR PcP **PcP** 05 23 15.0 -0.6
KKAR Karatay Array 53.02 300 P **P** 05 22 07.2 -0.3
KKAR 05 23 15.0
M29M Somme Creek 53.06 35 P **P** 05 22 07.8 +0.2
baz=282,SNR=7.2
EPYK Eagle Plains 53.07 30 P **P** 05 22 08.7 +1.2
EPYK Eagle Plains 53.07 30 P **P** 05 22 08.2 +0.7
baz=280,SNR=18
L29M L29M 53.08 34 P **P** 05 22 08.3 +0.6
baz=281,SNR=20
G30M tAoh Zraii Nji 53.16 29 P **P** 05 22 08.3 +0.1
baz=280,SNR=11
YUK4 Talbot Arm 53.20 36 P **P** 05 22 08.7 -0.1
baz=282
K29M Barlow Dome 53.20 33 P **P** 05 22 08.8 +0.1
baz=281,SNR=16
F30M Barrier River 53.21 28 P **P** 05 22 08.9 +0.4
baz=280,SNR=11

I30M Mount Dempster 53.42 31 **P** 05 22 11.8 +1.5
I30M Mount Dempster 53.42 31 P **P** 05 22 10.2 0.0
baz=281,SNR=50
YUK6 Outpost Mounta 53.42 37 P **P** 05 22 09.8 -0.7
baz=283
O29M Mount Kennedy 53.46 38 P **P** 05 22 09.9 -0.8
baz=283
BRLS Boroldaу 53.51 300 *c i* P **P** 05 22 12.4 +1.3
BRLS pmax pmax
comp=Z,6.0nm,0.9s
BRLS Boroldaу 53.51 300 ⇑ *i* P **P** 05 22 12.5 +1.3
comp=Z,6.2nm,0.9s
J30M Hart River 53.57 32 P **P** 05 22 12.1 +0.7
baz=282,SNR=6.7
IUG Iuzhnay 53.68 299 *eP* **P** 05 22 12.5 0.0
IUG pmax pmax
comp=Z,14nm,0.9s
IUG Iuzhnay 53.68 299 *eP* **P** 05 22 12.5 0.0
comp=Z,14nm,0.9s
M30M Minto, Yukon 53.79 35 P **P** 05 22 13.9 +0.9
baz=283,SNR=6.8
HYT Haines Junctio 53.86 37 P **P** 05 22 13.3 -0.2
baz=283,SNR=13
BTK Batken 53.87 296 P **P** 05 22 13.8 -0.1
N30M Aishikik Lake 53.91 36 P **P** 05 22 13.8 0.0
baz=283
CHM Chimkent 53.91 299 *eP* **P** 05 22 14.1 0.0
CHM pmax pmax
comp=Z,12nm,0.6s
CHM Chimkent 53.91 299 *eP* **P** 05 22 14.1 0.0
comp=Z,12nm,0.6s
G31M Satah River 53.92 29 P **P** 05 22 13.2 -0.5
baz=282,SNR=5.7
INK Inuvik 53.92 27 P **P** 05 22 13.7 0.0
baz=281,SNR=5.2
INK Inuvik 53.92 27 P **P** 05 22 15.1 +1.4
F31M Tsiigehtchic 54.02 28 P **P** 05 22 14.6 +0.2
baz=282
P29M Windy Craggy 54.03 38 P **P** 05 22 15.7 +1.1
baz=284
H31M Peel River 54.13 30 P **P** 05 22 16.1 +0.8
baz=282,SNR=24
MANEM Manem 54.20 293 **P** 05 22 17.2 +0.6
MANEM IAmb IAmb 05 22 18.5
comp=Z,45nm,0.8s
KNRA Kununurra 54.24 195 P **P** 05 22 17.3 +0.8
comp=Z,47nm,0.9s
KNRA Kununurra 54.24 195 **P** 05 22 16.9 +0.3
P30M Million Dollar 54.29 38 P **P** 05 22 16.1 -0.5
baz=284
LEM Lembang 54.30 223 LR LR 05 47 26.5
comp=Z,61nm,18.4s,baz=322,slow=38
VIS Vishakhapatnam 54.39 266 *eP* **P** 05 22 18.6 +0.8
N31M Braeburn, Yuko 54.51 36 P **P** 05 22 18.5 +0.4
baz=284
O30N Mendenhall 54.54 37 P **P** 05 22 19.0 +0.6
baz=285
NIL Nilore 54.60 288 P **P** 05 22 19.8 +0.5
NIL Nilore 54.60 288 P **P** 05 22 19.8 +0.5
NIL pmax pmax
comp=Z,28nm,0.9s
GAR Garm 54.63 295 P **P** 05 22 19.5 0.0
SVE Sverdlovsk 54.90 318 *deP* **P** 05 22 21.5 +0.5
SVE pmax pmax
comp=Z,71nm,1.0s
SVE MLR MLR
comp=Z,390nm,20.0s
M31M Drury Creek, Y 54.97 35 P **P** 05 22 21.2 -0.2
baz=285
WHY Whitehorse 55.15 37 P **P** 05 22 23.0 +0.1
baz=286
S31K Pelican 55.23 40 P **P** 05 22 23.7 +0.4
baz=286
SKAG Skagway 55.26 38 P **P** 05 22 23.8 +0.3
baz=286
CHGR Chuyangaron 55.59 295 *i* P **P** 05 22 25.8 -0.6
CHGR pmax pmax
comp=Z,179nm,0.8s
CHGR Chuyangaron 55.59 295 P **P** 05 22 26.6 +0.2
A36M Sachs Harbour 55.79 22 P **P** 05 22 27.7 +0.5
baz=286
N32M Quiet Lake 55.85 36 P **P** 05 22 28.4 +0.6
baz=287
SIT Sitka 55.96 41 P **P** 05 22 29.2 +0.7
baz=288
R32K Eaglecrest 56.00 39 P **P** 05 22 29.4 +0.5
baz=288
P32M Atlin 56.01 38 P **P** 05 22 29.0 0.0
baz=287
BHPL Bhopal 56.17 275 *eP* **P** 05 22 30.2 -0.5
BHPL IAmb IAmb 05 22 32.6
comp=Z,8.5nm,1.0s
ARTI Arti 56.22 318 LR LR 05 49 09.3
comp=Z,229nm,18.2s,baz=81,slow=39
ARTI Arti 56.22 318 *c i* P **P** 05 22 30.4 -0.1
ARTI *PP **pP** 05 22 42.9 -1.0
ARTI 05 23 26.8
ARTI S **S** 05 30 14.2 -2.1
ARTI SS **SS** 05 33 57.6 -5.2
ARTI pmax pmax
comp=Z,70nm,0.8s
ARTI Arti 56.22 318 P **P** 05 22 30.4 -0.1
S32K Killisnoo 56.22 40 P **P** 05 22 31.1 +0.7
baz=288
MMPY Sheldon Lake, 56.25 34 P **P** 05 22 31.1 +0.4
baz=287
P33M Teslin, Yukon 56.26 37 P **P** 05 22 31.2 +0.4
baz=288
SHAA Shahritus 56.78 294 **P** 05 22 35.2 +0.4
SHAA IAmb IAmb 05 22 36.4
comp=Z,142nm,0.7s
AJM Ajmer 56.81 280 *eP* **P** 05 22 34.7 -0.4
AJM IAmb IAmb 05 22 36.0
comp=Z,27nm,0.6s
Q32M Nakina River 56.91 38 P **P** 05 22 35.9 +0.4
baz=289
C36M Paulatuk 56.96 25 P **P** 05 22 35.3 -0.2
baz=289,SNR=5.4
FITZ Fitzroy Crossi 57.29 198 P **P** 05 22 39.0 +0.6
comp=Z,5.1nm,0.9s,baz=42,slow=7.5,SNR=4.7
FITZ LR LR 05 45 28.2
comp=Z,26nm,21.9s,baz=6.5,slow=34
comp=Z,5.1nm,0.9s
KBL Kabul 57.38 291 **P** 05 22 38.5 -0.8
KBL Kabul 57.38 291 P **P** 05 22 38.5 -0.8
KBL pmax pmax
comp=Z,26nm,0.9s
KBL Kabul 57.38 291 P **P** 05 22 37.6 -1.7
SNR=12
KBL Kabul 57.38 291 P **P** 05 22 38.9 -0.5
R33M Jennings River 57.40 37 P **P** 05 22 38.8 -0.1
baz=289
U33K Whale Pass 57.42 41 P **P** 05 22 38.5 -0.4
baz=290
WR8 Warramunga Arr 57.52 188 **P** 05 22 39.7 -0.3
WRA Warramunga Arr 57.52 188 P **P** 05 22 39.8 -0.2
comp=Z,5.9nm,0.6s,baz=5.9,slow=7.4,SNR=69
comp=Z,5.9nm,0.6s
WRA Warramunga Arr 57.52 188 **P** 05 22 39.2 -0.8
WRA Warramunga Arr 57.52 188 P **P** 05 22 39.2 -0.8
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRAK Wrangell Islan 57.72 41 P **P** 05 22 40.2 -0.8
baz=290
AB31 Akbulak array 57.75 310 *i* P **P** 05 22 40.5 -0.9
ABKAR Akbulak array 57.75 310 **P** 05 22 41.0 -0.4
QIS Mount Isa 57.76 182 P **P** 05 22 42.0 +0.3
comp=Z,8.6nm,0.9s
AKL Akola 57.81 272 *eP* **P** 05 22 42.2 -0.1
AKL IAmb IAmb 05 22 44.0
comp=Z,62nm,0.2s
AKL *i* pP **pP** 05 22 55.3 -0.4
S34M Telegraph Cree 57.82 39 P P 05 22 41.5 -0.3
baz=290
WTLY Watson Lake, Y 58.19 36 P **P** 05 22 44.3 0.0
baz=291
DLBC Dease Lake 58.19 38 LR LR 05 46 21.4
comp=Z,27nm,21.8s,baz=185,slow=35
DLBC Dease Lake 58.19 38 P **P** 05 22 44.2 -0.2
baz=291
HYB Hyderabad 58.35 268 *eP* **P** 05 22 45.7 -0.4
HYB IAmb IAmb 05 22 46.6
comp=Z,23nm,1.0s
AKTO Aktyubinsk 58.48 312 LR LR 05 49 07.5
comp=Z,183nm,19.0s,baz=211,slow=37
AKTO Aktyubinsk 58.48 312 P **P** 05 22 45.7 -0.8

V35K Ketchikan 58.49 42 P **P** 05 22 46.2 -0.3
baz=291
T35M Bob Quinn 58.60 40 P **P** 05 22 46.9 -0.4
baz=291
MDRS Chennai 59.47 263 *e*P **P** 05 22 53.1 -0.7
MDRS IAmb IAmb 05 22 56.5
comp=Z,16nm,1.0s
ALE Alert 59.65 4 P **P** 05 22 54.6 +0.4
ALE pP **pP** 05 23 08.4 +0.8
LIRD Liard River Hi 59.72 36 P **P** 05 22 55.2 +0.2
baz=293
KIRV Kirov 59.97 323 LR LR 05 49 50.4
comp=Z,92nm,21.3s,baz=59,slow=37
KIRV Kirov 59.97 323*ce*P **P** 05 22 56.8 +0.2
SPITS Spitsbergen Ar 60.11 349 P **P** 05 22 56.6 -0.7
comp=Z,2.4nm,0.6s,baz=72,slow=8.0,SNR=5.2
SPITS LR LR 05 50 11.3
comp=Z,99nm,21.4s,baz=39,slow=37
comp=Z,2.4nm,0.6s
KBS Kingsbay 60.24 350 P **P** 05 22 59.0 +0.8
KBS Kingsbay 60.24 350*ce*P **P** 05 23 00.6 +2.4
KBS pmax pmax
comp=Z,46nm,1.7s
KBS Kingsbay 60.24 350 *e*P **P** 05 22 59.3 +1.1
KBS IAmb IAmb 05 23 00.1
comp=Z,30nm,1.0s
KBS Kingsbay 60.24 350 *i* P **P** 05 22 58.1 -0.1
KOTAN Kotaneelee Air 60.38 35 P **P** 05 23 00.3 +0.9
baz=294
NOR Nord 60.61 356 P **P** 05 23 01.2 +0.5
NOR Nord 60.61 356 *i* P **P** 05 23 00.1 -0.6
NOR IAmb IAmb 05 23 01.9
comp=Z,8.3nm,0.7s
AS15 Alice Springs 61.22 188 P **P** 05 23 06.6 +1.1
comp=Z,9.7nm,0.7s
AS17 Alice Springs 61.24 188 P **P** 05 23 06.4 +0.7
comp=Z,10.0nm,1.1s
AS31 Alice Springs 61.25 188 **P** 05 23 06.0 +0.2
ASAR Alice Springs 61.25 188 P **P** 05 23 05.7 0.0
comp=Z,4.7nm,0.8s,baz=11,slow=6.9,SNR=40
ASAR LR LR 05 49 17.9
comp=Z,35nm,19.8s,baz=300,slow=36
comp=Z,4.7nm,0.8s
AS09 Alice Springs 61.28 188 P **P** 05 23 06.7 +0.8
comp=Z,13nm,0.8s
BBB Bella Bella 61.65 44 LR LR 05 53 31.9
comp=Z,31nm,18.0s,baz=248,slow=40
LVZ Lovozero 61.76 336 P **P** 05 23 08.8 +0.1
LVZ Lovozero 61.76 336 P **P** 05 23 08.8 +0.1
LVZ pmax pmax
comp=Z,29nm,1.1s
LVZ Lovozero 61.76 336 P **P** 05 23 08.8 +0.1
RES Resolute Bay 62.13 15 LR LR 05 52 02.6
comp=Z,36nm,19.6s,baz=346,slow=38
VADS Vadso 62.19 339 *e*P **P** 05 23 11.7 +0.2
VADS IAmb IAmb 05 23 12.4
comp=Z,71nm,1.1s
APA Apatity 62.33 336 *e*P **P** 05 23 10.2 -2.3
APA *e* 05 23 53.1
APA pmax pmax
comp=Z,4.0nm,1.0s
APA MLR MLR
comp=Z,145nm,19.7s
HRA Herat 62.46 294 **P** 05 23 14.5 +0.3
HRA IAmb IAmb 05 23 15.5
comp=Z,11nm,1.0s
PALK Pallekele 62.60 257 LR LR 05 52 17.7
comp=Z,78nm,19.5s,baz=50,slow=38
YKA Yellowknife Ar 63.35 30 P **P** 05 23 19.6 +0.3
comp=Z,2.7nm,0.7s,baz=303,slow=6.7,SNR=12
comp=Z,2.7nm,0.7s
WRKA Warakurna 63.43 193 P **P** 05 23 19.7 -0.6
comp=Z,10nm,0.9s
KLMR Klimovskoe 63.45 328 *e*P **P** 05 23 16.3 -3.7
KLMR *e**PP **pP** 05 23 34.3 +0.7
KLMR *e* 05 25 35.4
KLMR pmax pmax
comp=Z,28nm,0.8s
KLMR MLR MLR
comp=Z,174nm,17.0s
BELG Belogornoye 63.56 317 LR LR 05 52 59.0
comp=Z,261nm,19.3s,baz=117,slow=38
BELG Belogornoye 63.56 317 *c i*P **P** 05 23 20.4 -0.5
BELG pmax pmax
comp=Z,12nm,1.1s
ARA0 ARCESS Array S 63.62 339 *e*P **P** 05 23 21.3 +0.2
ARA0 IAmb IAmb 05 23 22.0
comp=Z,25nm,1.1s
ARCES ARCESS Array B 63.62 339 P **P** 05 23 21.2 +0.1
comp=Z,14nm,0.9s,baz=52,slow=7.9,SNR=14
ARCES LR LR 05 53 31.6
comp=Z,112nm,21.7s,baz=80,slow=38
comp=Z,14nm,0.9s
ARCES ARCESS Array B 63.62 339 P **P** 05 23 21.1 +0.1
ARCES IAmb IAmb 05 23 22.3
comp=Z,20nm,1.0s
ARCES ARCESS Array B 63.62 339 P **P** 05 23 21.1 +0.1
ARCES pmax pmax
comp=Z,20nm,1.0s
QLP Quilpie 63.78 177 P **P** 05 23 22.6 +0.1
KTK1 Kautokeino 64.58 339 *e*P **P** 05 23 27.6 +0.2
KTK1 IAmb IAmb 05 23 29.2
comp=Z,121nm,1.8s
NEEM North Greenlan 65.07 3 *i* P **P** 05 23 31.1 +0.3
NEEM IAmb IAmb 05 23 31.7
comp=Z,18nm,0.9s
DAG Danmarks Havn 65.34 355 P **P** 05 23 32.1 0.0
DAG Danmarks Havn 65.34 355 *i* P **P** 05 23 31.6 -0.5
DAG IAmb IAmb 05 23 32.7
comp=Z,16nm,0.8s
OUL Oulu 66.24 335 P **P** 05 23 36.9 -1.1
MOS Moscow 66.97 323 *e*P **P** 05 23 43.7 +0.8
MOS *e**PP **pP** 05 23 57.9 +1.3
MOS *e* 05 26 12.1
MOS pmax pmax
comp=Z,43nm,0.7s
AFI Afiamalu 67.32 130 LR LR 05 47 51.6
comp=Z,50nm,19.4s,baz=288,slow=31
VRH Novokhopyorsk 67.34 318 *e*P **P** 05 23 42.5 -2.8
VRH pmax pmax
comp=Z,20nm,0.9s
STEI Steigen 67.49 341 *e*P **P** 05 23 44.4 -1.6
STEI IAmb IAmb 05 23 44.8
comp=Z,38nm,1.5s
OBN Obninsk 67.82 323⇓*e*P **P** 05 23 48.5 +0.3
OBN *e**PP **pP** 05 24 02.1 +0.1
OBN *e**SP **sP** 05 24 07.7 +0.2
OBN *e* 05 24 15.5
OBN *e* 05 26 19.8
OBN *e*PPP PPP 05 27 57.0
OBN pmax pmax
comp=Z,40nm,1.7s
OBN MLR MLR
comp=Z,87nm,17.0s
DBG Daneborg 67.83 355 *i* P **P** 05 23 47.2 -0.8
DBG IAmb IAmb 05 23 48.4
comp=Z,7.2nm,1.2s
FAUS Fauske 67.87 340 *e*P **P** 05 23 48.6 +0.2
FAUS IAmb IAmb 05 23 51.9
comp=Z,25nm,1.1s
LPSR Galich'ya Gora 68.04 320 *e*P **P** 05 23 47.0 -2.7
LPSR pmax pmax
comp=Z,40nm,0.9s
VORR Voronezh 68.41 319 *e*P **P** 05 23 49.7 -2.3
VORR pmax pmax
comp=Z,30nm,1.0s
FINES FINESS Array B 68.48 332 P **P** 05 23 52.1 -0.2
comp=Z,28nm,0.8s,baz=35,slow=8.2,SNR=55
FINES LR LR 05 56 08.4
comp=Z,136nm,18.0s,baz=57,slow=38
comp=Z,28nm,0.8s
FINES FINESS Array B 68.48 332 P **P** 05 23 51.9 -0.4
FINES FINESS Array B 68.48 332 P **P** 05 23 51.9 -0.4
VSR Storozhevoye 68.68 319 *e*P **P** 05 23 50.8 -2.9
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 68.75 318 *e*P **P** 05 23 52.3 -1.9
VORD pmax pmax
comp=Z,20nm,1.0s
VAGH Vaagaholmen 68.89 340 *e*P **P** 05 23 54.5 -0.2
VAGH IAmb IAmb 05 23 55.2
comp=Z,14nm,0.8s
RAUS Rausandaksla 68.90 340 *e*P **P** 05 23 54.5 -0.4
AKT Akhty 68.92 307 *e*P **P** 05 23 55.0 -0.6
AKT pmax pmax
comp=Z,17nm,0.8s

BLKN Baker Lake 68.92 23 **P** 05 23 55.3 +0.3
BLKN IAmb IAmb 05 23 56.2
comp=Z,16nm,0.8s
MOR8 Moi Rana 68.99 340 *e*P **P** 05 23 54.2 -1.3
MOR8 IAmb IAmb 05 23 54.9
comp=Z,25nm,0.9s
STKA Stephens Creek 69.00 180 P **P** 05 23 56.2 +0.5
comp=Z,4.6nm,0.7s,baz=336,slow=7.0,SNR=7.1
STKA LR LR 05 55 50.2
comp=Z,60nm,18.5s,baz=23,slow=37
comp=Z,4.6nm,0.7s
FORT Forrest 69.08 192 P **P** 05 23 57.4 +1.1
comp=Z,52nm,0.8s
FORT Forrest 69.08 192 **P** 05 23 57.2 +1.0
STOK Stokkvaagen 69.25 340 *e*P **P** 05 23 57.1 +0.1
LEIR Leirfjorden 69.39 340 *e*P **P** 05 23 58.6 +0.7
NEW Newport 69.71 44 LR LR 05 53 40.0
comp=Z,20nm,20.1s,baz=278,slow=35
NEW Newport 69.71 44 P **P** 05 24 01.8 +1.5
NEW pP **pP** 05 24 15.2 +1.2
PINE Pine Mountain 69.94 50 P **P** 05 24 01.3 -0.7
PINE IAmb IAmb 05 24 18.5
comp=Z,17nm,0.9s
YBH Yreka Blue Hor 69.96 52 LR LR 05 49 17.6
comp=Z,35nm,21.8s,baz=229,slow=31
VSU Vasula 70.14 330*ce*P **P** 05 24 02.4 -0.2
VSU pmax pmax
comp=Z,29nm,1.3s
SUMG Summit 70.23 0 **P** 05 24 04.0 +0.5
SUMG IAmb IAmb 05 24 05.4
comp=Z,14nm,0.9s
SUMG Summit 70.23 0 P **P** 05 24 04.0 +0.5
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG Summit 70.23 0 P **P** 05 24 05.1 +1.6
SUMG pP **pP** 05 24 17.4 +0.1
SUMG Summit 70.23 0 *i* P **P** 05 24 04.1 +0.6
SUMG IAmb IAmb 05 24 05.5
comp=Z,12nm,0.8s
KBZ Khabaz 70.71 311 P **P** 05 24 06.6 +0.2
comp=Z,12nm,0.9s,baz=43,slow=4.1,SNR=24
KBZ LR LR 05 59 57.1
comp=Z,110nm,18.6s,baz=52,slow=40
comp=Z,12nm,0.9s
KBZ Khabaz 70.71 311*ce*P **P** 05 24 05.0 -1.4
KBZ pmax pmax
comp=Z,22nm,1.0s
KIV Kislovodsk 70.71 311 ⇓P **P** 05 24 07.0 +0.5
KIV Kislovodsk 70.71 311 *i* P **P** 05 24 06.9 +0.4
SNR=6.6
KIV Kislovodsk 70.71 311 P **P** 05 24 06.8 +0.2
KIV Kislovodsk 70.71 311 *e*P **P** 05 24 07.0 +0.4
KIV pmax pmax
comp=Z,33nm,1.0s
KIV MLR MLR
comp=Z,70nm,17.0s
KIV Kislovodsk 70.71 311 P **P** 05 24 06.8 +0.2
comp=Z,432nmcomp=Z,34nm,1.3s
KIV Kislovodsk 70.71 311 P **P** 05 24 07.4 +0.9
KIV Kislovodsk 70.71 311 P **P** 05 24 06.9 +0.4
KIV pP **pP** 05 24 20.2 -0.2
SHA1 Shidzhatmaz 70.85 311*ce*P **P** 05 24 08.2 +0.7
NSS Namsos 70.91 339 *e*P **P** 05 24 07.0 -0.2
NSS IAmb IAmb 05 24 08.2
comp=Z,12nm,0.9s
ERBR Yeremizino-Bor 71.03 313 *e*P **P** 05 24 08.2 -0.1
ERBR *e**PP **pP** 05 24 21.6 -0.5
ERBR *e*S **S** 05 33 20.8 +0.1
ERBR pmax pmax
comp=Z,34nm,0.8s
SHME Shamm 71.24 289 *i* P **P** 05 24 10.1 +0.2
SNR=17
SHME Shamm 71.24 289 P **P** 05 24 10.4 +0.5
SNR=5.4
LABN Labinsk 71.50 312 *e*P **P** 05 24 10.0 -1.1
LABN *e**PP **pP** 05 24 26.0 +1.0
LABN *e*S **S** 05 33 25.1 -1.1
LABN pmax pmax
comp=Z,28nm,0.8s
MDH Madha 71.53 288 P **P** 05 24 11.0 -0.7
GNI Garni 71.55 307 LR LR 05 58 24.4
comp=Z,105nm,18.1s,baz=58,slow=38
GNI Garni 71.55 307*ce*P **P** 05 24 14.1 +2.4
GNI pmax pmax
comp=Z,18nm,1.3s
GNI Garni 71.55 307 P **P** 05 24 13.1 +1.3
MASF Masafi 71.60 288 P **P** 05 24 11.8 -0.4
MSFE Esma-Masafi 71.61 288 P **P** 05 24 12.3 +0.1
SCO Scoresbysund 71.68 354 **P** 05 24 12.1 +0.4
SCO IAmb IAmb 05 24 13.6
comp=Z,11nm,1.0s
SCO Scoresbysund 71.68 354 P **P** 05 24 12.1 +0.4
SCO pmax pmax
comp=Z,11nm,1.0s
SCO Scoresbysund 71.68 354 P **P** 05 24 12.7 +0.9
SCO Scoresbysund 71.68 354 *i* P **P** 05 24 11.5 -0.2
SCO IAmb IAmb 05 24 12.9
comp=Z,7.9nm,0.8s
UOSS Minazif 71.80 288 P **P** 05 24 13.4 +0.1
UOSS Minazif 71.80 288 P **P** 05 24 13.1 -0.2
UOSS IAmb IAmb 05 24 14.3
comp=Z,16nm,0.8s
UOSS Minazif 71.80 288 P **P** 05 24 12.8 -0.5
UMQ Umm Al-Quwin 71.89 289 P **P** 05 24 15.1 +1.3
HATD Hatta, Dubai 71.92 288 *i* P **P** 05 24 14.5 +0.4
SNR=7.3
HATD Hatta, Dubai 71.92 288 P **P** 05 24 14.1 0.0
SNR=7.3
SOHO SOHO 72.00 287 *i* P **P** 05 24 14.2 -0.2
SNR=8.1
SOHO SOHO 72.00 287 P **P** 05 24 13.7 -0.7
ASHO Ashiyiah 72.05 288 *i* P **P** 05 24 15.0 +0.2
SNR=6.9
ASHO Ashiyiah 72.05 288 P **P** 05 24 14.6 -0.2
SNR=7.0
EPOS Posof 72.06 309 P **P** 05 24 16.1 +1.3
WVOR Wild Horse Val 72.10 50 P **P** 05 24 16.2 +1.2
WVOR pP **pP** 05 24 30.0 +1.2
NAZ Nazwa, Dubai 72.19 288 P **P** 05 24 16.1 +0.5
MNK Minsk 72.20 326 *i* P **P** 05 24 15.3 +0.2
comp=E,15nm,0.9s
MNK *i* P **P** 05 24 15.3 +0.2
comp=N,21nm,1.0s
MNK *i* P **P** 05 24 15.3 +0.2
comp=Z,36nm,1.0s,baz=50
MNK *i* pP **pP** 05 24 28.8 -0.3
MNK *i* PP **PP** 05 26 56.9 +1.4
MNK *i* PPP PPP 05 28 40.7
MNK *i* S **S** 05 33 35.6 +1.7
MNK *i* sS **sS** 05 33 59.8 +2.6
MNK *i* SS **SS** 05 38 15.0 +3.8
MNK *i* SSS SSS 05 41 35.5
MNK *i* LQ LQ 05 51 24.5
MNK *i* LR LR 05 57 00.9
MNK *i* LRM MLR 05 58 37.0
comp=N,55nm,16.4s
MNK *i* LRM MLR 05 59 25.2
comp=Z,97nm,15.5s
MNK *i* LRM MLR 05 59 32.8
comp=E,77nm,19.1s
MNK Minsk 72.20 326 *i* P **P** 05 24 15.3 +0.2
MNK *i* *PP **pP** 05 24 28.7 -0.3
MNK *i* 05 26 56.8
MNK *i* PPP PPP 05 28 40.6
MNK *i* S **S** 05 33 35.5 +1.7
MNK *i* *sS **sS** 05 33 59.7 +2.6
MNK *i* SS **SS** 05 38 14.9 +3.8
MNK pmax pmax
comp=E,15nm,0.9s
MNK pmax pmax
comp=Z,36nm,1.0s
MNK pmax pmax
comp=N,21nm,1.0s
MNK MLR MLR
comp=N,55nm,16.0s
MNK MLR MLR
comp=Z,97nm,16.0s
MNK MLR MLR
comp=E,77nm,19.0s
BSY Bisya 72.25 285 P **P** 05 24 13.4 -2.7
ARQ Araqi 72.44 286 P **P** 05 24 17.6 +0.4
SNR=6.3
VSLR Vesyoloye 72.58 312 *i* P **P** 05 24 15.5 -2.1
VSLR pmax pmax
comp=Z,30nm,1.1s

ALNE Al Ain 72.63 287 P **P** 05 24 18.5 +0.3
MHTO MHTO 72.64 283 P **P** 05 24 18.3 0.0
ASUD Al Ashush, Dub 72.64 288 P **P** 05 24 18.5 +0.3
SOC Sochi 72.70 312 *e*P **P** 05 24 16.0 -2.3
SOC *e* 05 26 58.5
SOC *e*PPP PPP 05 28 42.4
SOC *e*S **S** 05 33 36.4 -3.5
SOC *e*SS **SS** 05 38 22.8 +3.5
SOC *e*SSS SSS 05 41 24.6
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC MLR MLR
comp=Z,112nm,18.0s
PABE Paberze 73.23 328 P **P** 05 24 21.2 0.0
FFC Flin Flon 73.25 33 P **P** 05 24 21.7 +0.3
FFC IAmb IAmb 05 24 23.0
comp=Z,9.1nm,0.9s
FFC Flin Flon 73.25 33 P **P** 05 24 21.7 +0.3
FFC pmax pmax
comp=Z,9.0nm,0.9s
FFC Flin Flon 73.25 33 P **P** 05 24 21.3 -0.1
FFC Flin Flon 73.25 33 P **P** 05 24 21.8 +0.3
ANN Anapa 73.32 314 *e*P **P** 05 24 23.6 +1.7
ANN *e**PP **pP** 05 24 36.7 +0.9
ANN *e* 05 27 06.5
ANN *e*S **SKiKP** 05 33 51.6 +2.8
ANN pmax pmax
comp=Z,52nm,1.1s
NC303 NORSAR Array S 73.63 337 P **P** 05 24 23.6 +0.1
NC303 IAmb IAmb 05 24 24.7
comp=Z,21nm,1.1s
DOMB Dombas 73.67 339 *e*P **P** 05 24 24.1 +0.3
DOMB IAmb IAmb 05 24 24.6
comp=Z,18nm,0.7s
MOL Molde 73.68 340 *e*P **P** 05 24 24.3 +0.6
MOL IAmb IAmb 05 24 24.9
comp=Z,9.3nm,0.7s
HFS Hagfors 73.73 336 P **P** 05 24 24.1 0.0
comp=Z,21nm,1.0s,baz=46,slow=4.3,SNR=19
HFS LR LR 05 59 29.8
comp=Z,218nm,19.5s,baz=40,slow=38
comp=Z,21nm,1.0s
NB2 NORSAR Subarra 73.82 337 P **P** 05 24 24.4 -0.3
comp=Z,20nm,0.8s,baz=39,slow=6.2
NB2 NORSAR Subarra 73.82 337 P **P** 05 24 24.4 -0.3
NOA NORSAR Array B 73.82 337 P **P** 05 24 24.7 0.0
comp=Z,12nm,0.8s,baz=39,slow=5.8,SNR=42
NOA LR LR 06 00 22.7
comp=Z,140nm,19.3s,baz=40,slow=39
comp=Z,12nm,0.8s
EGMT Eagleton 73.84 41 **P** 05 24 25.8 +0.7
EGMT IAmb IAmb 05 24 43.1
comp=Z,14nm,0.9s
NC602 NORSAR Array S 73.96 337 *e*P **P** 05 24 25.1 -0.3
HLID Hailey 73.97 47 P **P** 05 24 27.7 +1.6
HLID pP **PcP** 05 24 41.5 +0.3
AKASG Malin Array Be 74.02 322 P **P** 05 24 25.6 -0.3
comp=Z,17nm,0.6s,baz=47,slow=6.2,SNR=70
AKASG LR LR 05 59 52.1
comp=Z,126nm,18.1s,baz=51,slow=38
comp=Z,17nm,0.6s
AKASG Malin Array Be 74.02 322 P **P** 05 24 25.7 -0.3
AKASG IAmb IAmb 05 24 27.0
comp=Z,19nm,1.4s
AKBB Malin Array Si 74.02 322*ce*P **P** 05 24 25.8 -0.2
AKBB pmax pmax
comp=Z,20nm,0.7s
AKBB Malin Array Si 74.02 322 P **P** 05 24 25.5 -0.5
AK01 Malin Array Si 74.04 322 P **P** 05 24 25.3 -0.8
KIEV Kiev 74.04 322 ⇑P **P** 05 24 25.7 -0.4
KIEV Kiev 74.04 322 *i* P **P** 05 24 25.4 -0.6
SNR=17
KIEV Kiev 74.04 322 P **P** 05 24 25.6 -0.4
KIEV Kiev 74.04 322 P **P** 05 24 25.5 -0.6
comp=Z,1μmcomp=Z,114nm,1.0s
KIEV Kiev 74.04 322 P **P** 05 24 25.8 -0.4
KIEV Kiev 74.04 322 P **P** 05 24 25.6 -0.4
KIEV sP **sP** 05 24 44.7 -0.7
AK04 Malin Array Si 74.04 322 P **P** 05 24 25.3 -0.8
AK09 Malin Array Si 74.05 322 P **P** 05 24 25.4 -0.7
AK08 Malin Array Si 74.05 322 P **P** 05 24 25.4 -0.7
AK02 Malin Array Si 74.06 322 P **P** 05 24 25.4 -0.8
AK21 Malin Array Si 74.06 322 P **P** 05 24 25.5 -0.7
AK11 Malin Array Si 74.07 322 P **P** 05 24 25.5 -0.7
AK10 Malin Array Si 74.08 322 P **P** 05 24 25.5 -0.8
AK15 Malin Array Si 74.08 322 P **P** 05 24 25.5 -0.8
NAO01 NORSAR Array S 74.08 337 P **P** 05 24 24.5 -1.7
AK05 Malin Array Si 74.09 322 P **P** 05 24 25.6 -0.8
AK18 Malin Array Si 74.09 322 P **P** 05 24 25.6 -0.7
AK12 Malin Array Si 74.09 322 P **P** 05 24 25.6 -0.8
AK20 Malin Array Si 74.10 322 P **P** 05 24 25.7 -0.7
AK16 Malin Array Si 74.10 322 P **P** 05 24 25.7 -0.7
AK06 Malin Array Si 74.11 322 P **P** 05 24 25.7 -0.8
AK19 Malin Array Si 74.11 322 P **P** 05 24 25.7 -0.8
AK17 Malin Array Si 74.12 322 P **P** 05 24 25.8 -0.7
AK14 Malin Array Si 74.13 322 P **P** 05 24 25.8 -0.8
NVAR Mina Array Bea 74.61 53 P **P** 05 24 30.8 +0.8
comp=Z,2.3nm,0.8s,baz=290,slow=6.0,SNR=13
NVAR LR LR 05 51 03.5
comp=Z,33nm,21.7s,baz=215,slow=31
comp=Z,2.3nm,0.8s
MI28 Mi28,Pidlybu 74.62 323 P **P** 05 24 28.6 -0.9
OSL Oslo 74.84 337 *e*P **P** 05 24 31.4 +0.9
MZR Muzera 74.95 288 *i* P **P** 05 24 31.4 -0.5
SNR=6.1
SKAR Skarsila 74.98 338 *e*P **P** 05 24 32.2 +0.8
KELT Kelkit 74.99 309 P **P** 05 24 33.0 +0.9
RNPP9 Sopachiv 75.14 324 P **P** 05 24 32.2 -0.2
HYA Hoyanger 75.20 339 *e*P **P** 05 24 33.2 +0.6
RNPP8 Varash 75.21 324 P **P** 05 24 32.5 -0.3
LUBAR Lubar, Ukraine 75.25 322 P **P** 05 24 32.3 -0.8
SFJD Kangerlussuaq 75.43 5 LR LR 05 58 24.9
comp=Z,48nm,20.7s,baz=344,slow=36
BER Bergen 76.08 339 *e*P **P** 05 24 38.2 +0.6
ODD1 Odda 76.10 338 *e*P **P** 05 24 38.6 +0.8
SORM Soroca 76.13 321 ⇓P **P** 05 24 37.7 -0.5
SORM Soroca 76.13 321 P **P** 05 24 37.6 -0.5
ARPR Arapgir-MALATY 76.19 309 P **P** 05 24 40.2 +1.3
ARPR pP **pP** 05 24 52.5 -0.4
FRB Frobisher Bay 76.31 13 LR LR 06 00 45.5
comp=Z,50nm,18.6s,baz=292,slow=38
KMPD K-Podol'skiy 76.79 322 P **P** 05 24 40.7 -1.2
HWUT Hardware Ranch 76.83 47 P **P** 05 24 44.1 +1.6
HWUT pP **pP** 05 24 58.0 +1.5
DUG Dugway, Tooele 76.96 49 P **P** 05 24 44.9 +1.7
DUG pP **pP** 05 24 58.3 +1.1
BORG Borgarnes 77.22 353 LR LR 06 00 54.1
comp=Z,31nm,18.7s,baz=10,slow=37
PDAR Pinedale Array 77.25 46 P **P** 05 24 45.5 +0.6
comp=Z,2.0nm,0.8s,baz=290,slow=3.2,SNR=16
comp=Z,2.0nm,0.8s
VLDR Vladesti 77.78 319 ⇑P **P** 05 24 47.7 +0.2
KWP Kalwaria Pacla 77.84 324 *e*P **P** 05 24 46.1 -1.7
BURAR Bucovina Array 78.04 322 ⇓P **P** 05 24 49.2 +0.2
BURAR Bucovina Array 78.04 322 P **P** 05 24 49.2 +0.2
TESR Tescani 78.08 320 ⇓P **P** 05 24 49.2 0.0
TESR Tescani 78.08 320 P **P** 05 24 49.0 -0.1
comp=Z,27nm,0.9s
TESR Tescani 78.08 320 P **P** 05 24 49.4 +0.2
NUUK Nuuk 78.12 6 *i* P **P** 05 24 48.9 -0.1
NUUK IAmb IAmb 05 24 50.7
comp=Z,30nm,1.2s
TPGR Topolog 78.26 318 ⇑P **P** 05 24 50.2 0.0
ONER Baraj Valea Uz 78.33 320 ⇑P **P** 05 24 51.4 +0.9
ANDN Andirin 78.35 308 P **P** 05 24 51.9 +0.9
VRI Vrincioaia 78.47 320 ⇓P **P** 05 24 52.2 +0.9
VRI Vrincioaia 78.47 320 P **P** 05 24 52.2 +0.9
VRI Vrincioaia 78.47 320 P **P** 05 24 51.4 0.0
comp=Z,16nm,1.3s
VRI Vrincioaia 78.47 320 P **P** 05 24 52.0 +0.7
PLOR Plostina 78.52 320 ⇑P **P** 05 24 52.1 +0.4
PLOR Plostina 78.52 320 P **P** 05 24 52.0 +0.4
KOLS Kolonicke sedl 78.54 324 *e*P **P** 05 24 52.0 +0.3
KOLS pmax pmax
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 78.54 324 *e*P **P** 05 24 52.0 +0.3
SAHR Sahastru 78.59 320 ⇑P **P** 05 24 52.8 +0.7
BRTR Keskin Array B 78.65 312 P **P** 05 24 53.0 +0.4
comp=Z,4.6nm,0.9s,baz=85,slow=5.2,SNR=9.1
BRTR LR LR 06 04 58.5
comp=Z,39nm,19.2s,baz=81,slow=40
comp=Z,4.6nm,0.9s
BRTR Keskin Array B 78.65 312 P **P** 05 24 52.6 -0.1

BR106	**Keskin Array S**	**78.66**	**312**	P		**P**	**05 24 53.0**	**+0.3**
	comp=Z,4.9nm,1.1s							
OJC	**Ojcow**	**78.74**	**326**	*e*P		**P**	**05 24 53.3**	**+0.6**
OJC	**Ojcow**	**78.74**	**326**	P		**P**	**05 24 53.0**	**+0.3**
	comp=Z,23nm,1.0s							
OJC	**Ojcow**	**78.74**	**326**	P		**P**	**05 24 53.4**	**+0.6**
COVR	**Voineasa-Covas**	**78.75**	**320**	⇑P		**P**	**05 24 53.7**	**+0.8**
OZUR		**78.80**	**320**	⇑P		**P**	**05 24 54.3**	**+1.1**
TRPA	**Tarpa**	**78.98**	**323**	P		**P**	**05 24 54.9**	**+0.8**
ULM	**Lac du Bonnet**	**79.05**	**33**	P		**P**	**05 24 54.3**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=315,slow=8.8,SNR=4.6							
	comp=Z,3.8nm,0.9s							
ISR	**Istrita**	**79.07**	**319**	⇓P		**P**	**05 24 54.5**	**-0.2**
ISR	**Istrita**	**79.07**	**319**	P		**P**	**05 24 54.5**	**-0.2**
ISR	**Istrita**	**79.07**	**319**	P		**P**	**05 24 55.1**	**+0.4**
	comp=Z,36nm,0.9s							
DOPR	**Dopca**	**79.09**	**320**	⇑P		**P**	**05 24 55.0**	**+0.3**
MLR	**Muntele Rosu**	**79.13**	**320**	LR		LR	06 03 17.2	
	comp=Z,207nm,18.0s,baz=44,slow=38							
MLR	**Muntele Rosu**	**79.13**	**320**	⇓P		**P**	**05 24 54.3**	**-0.8**
MLR	**Muntele Rosu**	**79.13**	**320**	P		**P**	**05 24 54.3**	**-0.8**
MLR	**Muntele Rosu**	**79.13**	**320**	P		**P**	**05 24 55.1**	**0.0**
	comp=Z,7.6nm,1.1s							
MLR	**Muntele Rosu**	**79.13**	**320**	P		**P**	**05 24 55.4**	**+0.3**
RSSD	**Black Hills**	**79.40**	**42**	P		**P**	**05 24 57.2**	**+0.4**
KKUL	**Konya-Kulu**	**79.44**	**311**	P		**P**	**05 24 57.5**	**+0.6**
VOIR		**79.62**	**320**	⇑P		**P**	**05 24 58.3**	**+0.6**
VOIR		**79.62**	**320**	P		**P**	**05 24 58.3**	**+0.6**
VOIR		**79.62**	**320**	P		**P**	**05 24 58.1**	**+0.3**
	comp=Z,8.0nm,0.9s							
VOIR		**79.62**	**320**	P		**P**	**05 24 58.2**	**+0.5**
LANS	**Liptovska Anna**	**79.67**	**326**	*e*P		**P**	**05 24 59.0**	**+1.1**
LANS				pmax		pmax		
	comp=Z,4.0nm,0.8s							
LANS	**Liptovska Anna**	**79.67**	**326**	*e*P		**P**	**05 24 59.0**	**+1.1**
BSEG	**Bad Segeberg**	**79.72**	**333**	*e*P		**P**	**05 24 58.8**	**+0.9**
	comp=Z,8.4nm,0.9s,baz=37,slow=5.2							
BSEG	**Bad Segeberg**	**79.72**	**333**	P		**P**	**05 24 58.2**	**+0.2**
OKC	**Ostrava-Krasne**	**79.75**	**327**	AMS		AMS	06 02 50.0	
	comp=Z,200nm,15.6s							
KSP	**Ksiaz**	**79.79**	**328**	*e*P		**P**	**05 24 59.2**	**+0.8**
KSP	**Ksiaz**	**79.79**	**328**	P		**P**	**05 24 58.8**	**+0.4**
	comp=Z,19nm,1.2s							
STEB	**Steborice**	**79.84**	**327**	*e*P		**P**	**05 24 59.3**	**+0.6**
ARR	**Arges**	**79.88**	**320**	⇑P		**P**	**05 24 59.6**	**+0.5**
ARR	**Arges**	**79.88**	**320**	P		**P**	**05 24 58.4**	**+1.3**
OSTC	**Ostas**	**80.04**	**328**	AMS		AMS	06 03 30.0	
	comp=Z,100nm,13.0s							
MORC	**Moravsky Berou**	**80.06**	**327**	⇑P		**P**	**05 25 00.1**	**+0.1**
MORC	**Moravsky Berou**	**80.06**	**327**	P		**P**	**05 25 00.1**	**+0.1**
MORC	**Moravsky Berou**	**80.06**	**327**	*e*P		**P**	**05 25 00.0**	**0.0**
MORC	**Moravsky Berou**	**80.06**	**327**	P		**P**	**05 25 00.5**	**+0.5**
GORT1	**Trebel**	**80.11**	**332**	*e*P		**P**	**05 25 00.7**	**+0.7**
	comp=Z,29nm,1.4s,baz=37,slow=5.2							
DPC	**Dobruska-Polom**	**80.15**	**328**	*e*P		**P**	**05 25 01.5**	**+1.0**
DPC				MLR		MLR		
	comp=Z,100nm,14.0s							
DPC	**Dobruska-Polom**	**80.15**	**328**	*e*P		**P**	**05 25 01.5**	**+1.0**
DPC				AMS		AMS	06 03 20.0	
	comp=Z,100nm,14.0s							
DPC	**Dobruska-Polom**	**80.15**	**328**	P		**P**	**05 25 00.8**	**+0.3**
	comp=Z,11nm,1.6s							
DPC	**Dobruska-Polom**	**80.15**	**328**	P		**P**	**05 25 01.4**	**+1.0**
KRLC	**Kraliky**	**80.16**	**328**	*e*P		**P**	**05 25 01.1**	**+0.6**
KRLC				MLR		MLR		
	comp=Z,200nm,19.8s							
KRLC	**Kraliky**	**80.16**	**328**	*e*P		**P**	**05 25 01.1**	**+0.6**
KRLC				AMS		AMS	06 03 30.0	
	comp=Z,200nm,19.8s							
KRLC	**Kraliky**	**80.16**	**328**	P		**P**	**05 25 01.2**	**+0.6**
UPC	**Upice**	**80.16**	**328**	AMS		AMS	06 03 50.0	
	comp=Z,200nm,22.1s							
UPC	**Upice**	**80.16**	**328**	P		**P**	**05 25 01.3**	**+0.8**
RAR	**Rarotonga**	**80.31**	**126**	LR		LR	05 56 50.4	
	comp=Z,91nm,18.7s,baz=306,slow=33							
PSZ	**Piszkesteto**	**80.37**	**325**	⇑P		**P**	**05 25 02.3**	**+0.6**
PSZ	**Piszkesteto**	**80.37**	**325**	P		**P**	**05 25 02.3**	**+0.6**
PSZ	**Piszkesteto**	**80.37**	**325**	P		**P**	**05 25 02.4**	**+0.7**
AGMN	**Agassiz Nation**	**80.49**	**35**	P		**P**	**05 25 02.6**	**+0.3**
AGMN				pP		**pP**	**05 25 15.8**	**-0.5**
RAYN	**Ar Rayn**	**80.61**	**292**	*i* P		**P**	**05 25 03.3**	**-0.1**
	SNR=7.0							
RAYN	**Ar Rayn**	**80.61**	**292**	P		**P**	**05 25 02.9**	**-0.5**
RAYN	**Ar Rayn**	**80.61**	**292**	P		**P**	**05 25 02.9**	**-0.5**
RAYN				pmax		pmax		
	comp=Z,9.0nm,0.9s							
RAYN	**Ar Rayn**	**80.61**	**292**	P		**P**	**05 25 02.9**	**-0.5**
RAYN				pP		**pP**	**05 25 16.3**	**-1.2**
FLTG	**Flechtingen**	**80.65**	**332**	*e*P		**P**	**05 25 03.0**	**0.0**
	comp=Z,14nm,0.7s,baz=37,slow=5.2							
JAVC	**Velka Javorina**	**80.68**	**326**	*e*P		**P**	**05 25 04.7**	**+1.3**
JAVC	**Velka Javorina**	**80.68**	**326**	P		**P**	**05 25 05.0**	**+1.7**
BRG	**Berggiesshubel**	**80.73**	**329**	*e*P		**P**	**05 25 04.0**	**+0.5**
	comp=Z,8.9nm,1.0s,baz=37,slow=5.2							
BRG	**Berggiesshubel**	**80.73**	**329**	P		**P**	**05 25 03.9**	**+0.3**
BRG	**Berggiesshubel**	**80.73**	**329**	*i* P		**P**	**05 25 03.4**	**-0.2**
BRG				Amp			05 25 04.5	
	comp=Z,7.7nm,0.8s							
PVCC	**Panska Ves**	**80.74**	**329**	P		**P**	**05 25 04.8**	**+1.2**
CLL	**Collm**	**80.77**	**330**	*i* P		**P**	**05 25 03.4**	**-0.3**
CLL				*i* *PP		**pP**	**05 25 18.4**	**+0.6**
CLL				pmax		pmax		
	comp=Z,17nm,0.9s							
CLL	**Collm**	**80.77**	**330**	*e*P		**P**	**05 25 03.8**	**+0.1**
	comp=Z,15nm,0.9s,baz=37,slow=5.2							
CLL	**Collm**	**80.77**	**330**	P		**P**	**05 25 03.7**	**0.0**
	comp=Z,19nm,1.0s							
CLL	**Collm**	**80.77**	**330**	*i* P		**P**	**05 25 03.4**	**-0.3**
	comp=Z,17nm,0.9s							
CLL				*i* pP		**pP**	**05 25 18.4**	**+0.6**
CLL	**Collm**	**80.77**	**330**	P		**P**	**05 25 03.7**	**0.0**
GZR	**Gura Zlata**	**80.80**	**321**	⇑P		**P**	**05 25 04.3**	**+0.3**
GZR	**Gura Zlata**	**80.80**	**321**	P		**P**	**05 25 04.3**	**+0.3**
VRAC	**Vranov**	**80.82**	**327**	LR		LR	06 04 38.8	
	comp=Z,92nm,19.2s,baz=37,slow=38							
VRAC	**Vranov**	**80.82**	**327**	⇑P		**P**	**05 25 04.2**	**+0.2**
VRAC	**Vranov**	**80.82**	**327**	P		**P**	**05 25 04.2**	**+0.2**
VRAC	**Vranov**	**80.82**	**327**	*e*P		**P**	**05 25 04.4**	**+0.4**
VRAC	**Vranov**	**80.82**	**327**	P		**P**	**05 25 04.8**	**+0.8**
RETH	**Rethem/Aller,**	**81.02**	**333**	*e*P		**P**	**05 25 05.6**	**+0.6**
	comp=Z,10nm,1.0s,baz=37,slow=5.2							
RETH	**Rethem/Aller,**	**81.02**	**333**	P		**P**	**05 25 05.4**	**+0.5**
SMOL	**Smolenice**	**81.05**	**326**	*e*P		**P**	**05 25 06.4**	**+1.2**
SMOL				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KRUC	**Moravsky**	**81.09**	**327**	*e*P		**P**	**05 25 05.6**	**+0.2**
KRUC	**Moravsky**	**81.09**	**327**	P		**P**	**05 25 05.8**	**+0.3**
AMBH	**Ambrzfalva**	**81.12**	**323**	P		**P**	**05 25 04.2**	**-1.4**
HSKC	**Hora Svate Kat**	**81.15**	**330**	*e*P		**P**	**05 25 06.4**	**+0.6**
HSKC				AMS		AMS	06 03 40.0	
	comp=Z,200nm,19.2s							
HSKC	**Hora Svate Kat**	**81.15**	**330**	P		**P**	**05 25 06.3**	**+0.6**
PRU	**Pruhonice**	**81.17**	**329**	AMS		AMS	06 04 00.0	
	comp=Z,200nm,16.0s							
PRU	**Pruhonice**	**81.17**	**329**	P		**P**	**05 25 06.5**	**+0.7**
BZS	**Buzias**	**81.21**	**322**	P		**P**	**05 25 06.3**	**+0.1**
MODS	**Modra-Piesok**	**81.22**	**326**	*e*P		**P**	**05 25 06.9**	**+0.7**
MODS				pmax		pmax		
	comp=Z,22nm,1.1s							
MODS	**Modra-Piesok**	**81.22**	**326**	*e*P		**P**	**05 25 06.9**	**+0.7**
TREC	**Trest**	**81.30**	**328**	P		**P**	**05 25 07.2**	**+0.5**
NEUB	**Neuenburg**	**81.33**	**331**	*e*P		**P**	**05 25 07.2**	**+0.6**
	comp=Z,24nm,0.9s,baz=37,slow=5.2							
NEUB				*e*pP		**pP**	**05 25 21.4**	**+0.7**
HERR	**Herculane**	**81.34**	**321**	⇑P		**P**	**05 25 06.7**	**-0.2**
CLZ	**Clausthal**	**81.37**	**332**	*e*P		**P**	**05 25 07.7**	**+0.7**
	comp=Z,18nm,1.1s,baz=37,slow=5.2							
CLZ	**Clausthal**	**81.37**	**332**	P		**P**	**05 25 07.5**	**+0.6**
ASF	**Jabal al Asfar**	**81.37**	**304**	LR		LR	06 04 44.5	
	comp=Z,75nm,19.9s,baz=27,slow=38							
MVCO	**Mesa Verde**	**81.46**	**49**	P		**P**	**05 25 08.9**	**+0.9**
CY604	**RAF Akrotiri,**	**81.55**	**307**	P		**P**	**05 25 07.9**	**+0.1**
ZVC	**Zvikov**	**81.74**	**328**	*e*P		**P**	**05 25 09.5**	**+0.6**
ZVC				AMS		AMS	06 04 40.0	
	comp=Z,200nm,14.9s							
PLN	**Plauen**	**81.75**	**330**	*e*P		**P**	**05 25 09.4**	**+0.4**
	comp=Z,2.5nm,1.1s,baz=37,slow=5.2							
GTTG	**Gottingen**	**81.76**	**332**	*e*P		**P**	**05 25 09.4**	**+0.5**
	comp=Z,16nm,1.0s,baz=37,slow=5.2							
MDVR	**Moldovita**	**81.76**	**321**	⇓P		**P**	**05 25 08.8**	**-0.4**
MMAI	**Mount Meron Ar**	**81.81**	**305**	P		**P**	**05 25 10.2**	**+0.5**
	comp=Z,8.8nm,0.8s,baz=39,slow=9.3,SNR=14							
MMAI				LR		LR	06 05 27.4	
	comp=Z,69nm,18.2s,baz=36,slow=39							
	comp=Z,8.8nm,0.8s							
MOX	**Moxa**	**81.84**	**330**	*e*P		**P**	**05 25 09.8**	**+0.4**
	comp=Z,16nm,1.5s,baz=37,slow=5.2							
MOX				*e*L		L	06 04 38.5	
	comp=Z,120nm,18.5s							
IBBN	**Ibbenburen**	**81.95**	**333**	*e*P		**P**	**05 25 10.4**	**+0.5**
	comp=Z,16nm,0.9s,baz=37,slow=5.2							
MPLH	**Magyarpolny**	**82.00**	**325**	P		**P**	**05 25 10.3**	**0.0**
	comp=Z,35nm,1.2s							
QRNJ	**Al-Qirein**	**82.13**	**305**	P		**P**	**05 25 10.1**	**-1.1**
	comp=Z,2µm,0.8s							
RONA	**Rosalia, Austr**	**82.16**	**326**	*i* P		**P**	**05 25 12.0**	**+0.8**
	comp=Z,12nm,0.8s,SNR=5.2							
CONA	**Conrad Observa**	**82.18**	**327**	*i* P		**P**	**05 25 12.3**	**+1.0**
	comp=Z,9.2nm,0.9s,SNR=7.8							
URZ	**Urewera**	**82.19**	**152**	LR		LR	05 56 57.5	
	comp=Z,117nm,19.7s,baz=342,slow=32							
MORH	**Mrgy, Hungar**	**82.20**	**324**	P		**P**	**05 25 11.0**	**-0.3**
	comp=Z,5.3nm,2.3s							
MORH	**Mrgy, Hungar**	**82.20**	**324**	P		**P**	**05 25 11.2**	**-0.2**
MORH				pP		**pP**	**05 25 25.0**	**-0.4**
KHC	**Kasperske Hory**	**82.23**	**329**	*ce*P		**P**	**05 25 12.3**	**+0.8**
KHC				pmax		pmax		
	comp=Z,18nm,1.3s							
KHC	**Kasperske Hory**	**82.23**	**329**	*e*P		**P**	**05 25 12.1**	**+0.6**
KHC				AMS		AMS	06 04 40.0	
	comp=Z,200nm,14.6s							
KHC	**Kasperske Hory**	**82.23**	**329**	P		**P**	**05 25 11.7**	**+0.2**
	comp=Z,16nm,1.1s							
KHC	**Kasperske Hory**	**82.23**	**329**	P		**P**	**05 25 12.1**	**+0.6**
ROTZ	**Rotzenmuhle**	**82.30**	**330**	*e*P		**P**	**05 25 12.7**	**+0.9**
	comp=Z,5.6nm,1.5s,baz=37,slow=5.2							
ROTZ				*e*pP		**pP**	**05 25 27.0**	**+1.1**
GEC2	**GERESS Array S**	**82.40**	**328**	*e*P		**P**	**05 25 12.7**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=37,slow=5.2							
GERES	**GERESS Array B**	**82.40**	**328**	P		**P**	**05 25 12.4**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=27,slow=4.5,SNR=24							
	comp=Z,2.7nm,0.6s							
GERES	**GERESS Array B**	**82.40**	**328**	P		**P**	**05 25 12.3**	**-0.2**
WET	**Wettzell**	**82.51**	**329**	*e*P		**P**	**05 25 13.7**	**+0.7**
	comp=Z,7.8nm,1.0s,baz=37,slow=5.2							
WET	**Wettzell**	**82.51**	**329**	P		**P**	**05 25 13.9**	**+0.9**
SALP	**Salfit**	**82.55**	**305**	P		**P**	**05 25 12.7**	**-0.8**
	comp=Z,30nm,1.0s							
BOVS	**Bovan**	**82.59**	**321**	⇑P		**P**	**05 25 12.7**	**-0.7**
EYMN	**Ely**	**82.69**	**33**	P		**P**	**05 25 14.1**	**+0.2**
EYMN				pP		**pP**	**05 25 27.8**	**-0.1**
GRF	**Grafenberg Arr**	**82.75**	**330**	*e*P		**P**	**05 25 15.1**	**+1.0**
	comp=Z,22nm,1.2s,baz=37,slow=5.2							
GRF				*e*L		L	06 05 08.6	
	comp=Z,96nm,18.2s							
EKA	**Eskdalemuir Ar**	**82.75**	**341**	P		**P**	**05 25 14.6**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=28,slow=5.3,SNR=5.0							
EKA				LR		LR	06 05 37.9	
	comp=Z,80nm,19.0s,baz=272,slow=38							
	comp=Z,1.1nm,0.6s							
ARSA	**Arzberg**	**82.84**	**326**	*e*P		**P**	**05 25 15.0**	**+0.3**
	comp=Z,5.0nm,0.8s							
GRC3	**Grafenberg Arr**	**83.24**	**329**	P		**P**	**05 25 17.1**	**+0.4**
BIOA	**Bad Ischl, Aus**	**83.32**	**328**	*e*P		**P**	**05 25 17.8**	**+0.6**
	comp=Z,13nm,1.0s							
SESA	**Seetaler Alpe,**	**83.37**	**327**	*i* P		**P**	**05 25 18.1**	**+0.4**
	SNR=12							
TNS	**Taunus Mts**	**83.39**	**332**	*e*P		**P**	**05 25 17.9**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=37,slow=5.2							
AYDN	**Tasoluk**	**83.40**	**313**	P		**P**	**05 25 18.9**	**+1.0**
ECSD	**EROS Data Cent**	**83.48**	**38**	P		**P**	**05 25 18.4**	**+0.3**
ECSD				pP		**pP**	**05 25 32.0**	**-0.2**
PERS	**Pernice**	**83.49**	**326**	*i* P		**P**	**05 25 18.1**	**0.0**
SOKA	**Soboth**	**83.50**	**326**	*i* P		**P**	**05 25 18.3**	**+0.2**
	comp=Z,14nm,0.9s,SNR=9.9							
GOLS	**Golise**	**83.74**	**325**	*i* P		**P**	**05 25 19.2**	**-0.2**
KNT	**Kendrikon**	**83.74**	**318**	P		**P**	**05 25 17.1**	**-2.3**
KNT				pP		**pP**	**05 25 31.9**	**-1.7**
KZIT	**Kziot**	**83.82**	**304**	P		**P**	**05 25 19.1**	**-0.9**
	comp=Z,40nm,0.9s							
KZIT	**Kziot**	**83.82**	**304**	P		**P**	**05 25 19.6**	**-0.4**
OBKA	**Obir**	**83.84**	**326**	*i* P		**P**	**05 25 19.5**	**-0.5**
	comp=Z,6.4nm,1.0s							
KBA	**Koelnbreinsper**	**83.92**	**327**	*e*PcP		**P**	**05 25 21.3**	**+0.8**
	comp=Z,5.9nm,0.7s							
KBA	**Koelnbreinsper**	**83.92**	**327**	P		**P**	**05 25 20.4**	**-0.1**
LESA	**Schwarzleotal**	**83.94**	**328**	*i* P		**P**	**05 25 20.7**	**+0.3**
	comp=Z,6.0nm,0.7s							
HRFI	**Mount Harif**	**83.95**	**303**	P		**P**	**05 25 20.5**	**-0.3**
	comp=Z,37nm,1.1s							
HRFI	**Mount Harif**	**83.95**	**303**	P		**P**	**05 25 21.2**	**+0.4**
MEM	**Membach**	**83.97**	**333**	*d*P		**P**	**05 25 20.0**	**-0.4**
	comp=Z,7.6nm,0.9s							
MYKA	**Terra Mystica**	**84.14**	**327**	*i* P		**P**	**05 25 20.9**	**-0.6**
	comp=Z,7.6nm,1.0s							
ANMO	**Albuquerque**	**84.19**	**50**	*i* P		**P**	**05 25 22.1**	**0.0**
ANMO				pmax		pmax		
	comp=Z,5.0nm,1.0s							
ANMO	**Albuquerque**	**84.19**	**50**	P		**P**	**05 25 24.1**	**+2.0**
ANMO	**Albuquerque**	**84.19**	**50**	P		**P**	**05 25 23.9**	**+1.8**
PMOR	**Pomariorio Ree**	**84.24**	**114**	*e*T		T	06 58 46.9	
	comp=Z,4.6nm,0.1s							
EIL	**Elat**	**84.25**	**303**	LR		LR	06 08 26.8	
	comp=Z,80nm,18.1s,baz=82,slow=40							
EIL	**Elat**	**84.25**	**303**	P		**P**	**05 25 22.3**	**+0.1**
	comp=Z,25nm,0.9s							
EIL	**Elat**	**84.25**	**303**	P		**P**	**05 25 22.4**	**+0.2**
ACOM	**Acomizza, Ital**	**84.26**	**327**	P		**P**	**05 25 21.9**	**-0.3**
STU	**Stuttgart**	**84.28**	**331**	*e*P		**P**	**05 25 22.4**	**+0.4**
	comp=Z,63nm,1.1s,baz=37,slow=5.2							
CEY	**Cerknica**	**84.49**	**326**	*i* P		**P**	**05 25 22.9**	**-0.3**
WTTA	**Wattenberg**	**84.50**	**328**	*e*P		**P**	**05 25 23.6**	**+0.2**
	comp=Z,4.8nm,0.6s							
ABTA	**Abfaltersbach**	**84.54**	**328**	*e*P		**P**	**05 25 22.8**	**-0.7**
	comp=Z,4.8nm,1.0s							
RCHB	**Reichefort**	**84.62**	**334**	*d*P		**P**	**05 25 23.6**	**-0.1**
PHP	**Peshkopia**	**84.64**	**320**	P		**P**	**05 25 24.0**	**-0.1**
MOTA	**Moosalm**	**84.66**	**329**	*i* PcP		**P**	**05 25 24.5**	**+0.3**
	comp=Z,6.3nm,0.8s							
BMRD	**Maredsous**	**84.66**	**334**	*d*P		**P**	**05 25 23.7**	**-0.2**
	comp=Z,11nm,1.0s							
RETA	**Reutte**	**84.69**	**329**	*i* P		**P**	**05 25 24.3**	**+0.1**
	comp=Z,13nm,0.9s,SNR=5.7							
PDG	**Podgorica**	**84.70**	**321**	P		**P**	**05 25 22.6**	**-1.6**
SQTA	**Sankt Quirin**	**84.71**	**329**	*e*P		**P**	**05 25 24.4**	**0.0**
	comp=Z,2.6nm,0.6s							
LIT	**Litokoron**	**84.72**	**318**	P		**P**	**05 25 24.1**	**-0.4**
PPT	**Papeete**	**84.72**	**117**	LR		LR	05 53 18.4	
	comp=Z,78nm,21.8s,baz=323,slow=29							
PPT2	**Papeete2**	**84.73**	**117**	*e*LR		LR	05 51 50.1	
	comp=Z,270nm,32.0s							
PPT2				*e*LR		LR	05 52 01.8	
	comp=Z,190nm,28.8s							
PPT2				*e*T		T	06 59 25.4	
	comp=Z,3.9nm,0.3s							
SCHQ	**Schefferville**	**84.87**	**16**	P		**P**	**05 25 25.1**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=12,slow=6.2,SNR=5.7							
SCHQ				LR		LR	06 06 33.5	
	comp=Z,40nm,19.0s,baz=326,slow=38							
	comp=Z,4.3nm,0.8s							
DOU	**Dourbes**	**84.90**	**334**	*d*P		**P**	**05 25 23.1**	**-2.0**
BFO	**Black Forest**	**84.98**	**331**	P		**P**	**05 25 26.0**	**+0.4**
BFO				lAmb		lAmb	05 25 26.5	
	comp=Z,20nm,1.0s							
BFO	**Black Forest**	**84.98**	**331**	P		**P**	**05 25 26.0**	**+0.4**
BFO				pmax		pmax		
	comp=Z,20nm,1.0s							
BFO	**Black Forest**	**84.98**	**331**	*e*P		**P**	**05 25 26.0**	**+0.4**
	comp=Z,20nm,1.0s,baz=37,slow=5.2							
BFO				*e*pP		**pP**	**05 25 40.1**	**+0.4**
FETA	**Feichten**	**85.07**	**329**	*i* PcP		**P**	**05 25 26.5**	**+0.2**
	comp=Z,7.8nm,1.0s							
RPZ	**Rata Peaks**	**85.13**	**159**	LR		LR	05 56 24.6	
	comp=Z,18nm,20.9s,baz=81,slow=31							
DAVA	**Damuels**	**85.20**	**329**	*i* PcP		**P**	**05 25 27.1**	**+0.2**
	comp=Z,20nm,1.0s,SNR=7.5							
DAVA	**Damuels**	**85.20**	**329**	P		**P**	**05 25 26.9**	**-0.1**
KBN	**Korca**	**85.24**	**319**	P		**P**	**05 25 27.0**	**-0.1**
KBN				pP		**pP**	**05 25 39.9**	**-1.4**
ECH	**Echery**	**85.52**	**331**	P		**P**	**05 25 28.1**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**85.58**	**329**	P		**P**	**05 25 29.2**	**+0.2**
DAVOX	**Davos/Dischmat**	**85.61**	**329**	LR		LR	06 07 12.7	
	comp=Z,155nm,19.4s,baz=81,slow=38							
TUE	**Stuetta**	**86.08**	**329**	P		**P**	**05 25 31.0**	**-0.3**
	comp=Z,37nm,1.4s							
TUE	**Stuetta**	**86.08**	**329**	P		**P**	**05 25 31.8**	**+0.5**
BNALP	**Bannalp**	**86.13**	**330**	P		**P**	**05 25 31.8**	**+0.3**
TAOE	**Nuku Hiva Isla**	**86.15**	**104**	*e*LR		LR	05 52 51.4	
	comp=Z,424nm,27.2s							
MNTX	**Cornudas Mount**	**87.05**	**52**	P		**P**	**05 25 37.2**	**+1.1**
MNTX				pP		**pP**	**05 25 50.9**	**+0.6**
ITM	**Ithomi**	**87.12**	**316**	P		**P**	**05 25 35.5**	**-0.8**
MATE	**Matera**	**87.30**	**321**	P		**P**	**05 25 36.7**	**-0.4**
TIP	**Timpagrande**	**88.39**	**320**	⇑P		**P**	**05 25 42.1**	**-0.3**
TIP	**Timpagrande**	**88.39**	**320**	P		**P**	**05 25 42.1**	**-0.3**
	comp=Z,5.6nm,1.2s							
TIP	**Timpagrande**	**88.39**	**320**	P		**P**	**05 25 42.4**	**0.0**
TBI	**Tubuai**	**88.64**	**121**	*e*LR		LR	05 53 44.5	
	comp=Z,805nm,27.2s							
TBI				*e*T		T	07 04 07.8	
	comp=Z,1.0nm,0.1s							
WMOK	**Wichita Mounta**	**88.87**	**46**	P		**P**	**05 25 45.8**	**+1.1**
CEL	**Celeste**	**89.52**	**320**	P		**P**	**05 25 46.9**	**-0.9**
	comp=Z,24nm,0.9s							
CEL	**Celeste**	**89.52**	**320**	P		**P**	**05 25 46.8**	**-0.9**
TXAR	**Lajitas Array**	**89.74**	**52**	P		**P**	**05 25 49.9**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=304,slow=3.2,SNR=44							
TXAR				LR		LR	06 00 32.7	
	comp=Z,32nm,21.9s,baz=242,slow=32							
	comp=Z,2.5nm,0.7s							
SADO	**Sadowa**	**90.24**	**28**	LR		LR	06 08 42.7	
	comp=Z,33nm,18.8s,baz=330,slow=37							
VAE	**Valguarnera**	**90.87**	**321**	LR		LR	06 10 53.6	
	comp=Z,116nm,18.4s,baz=108,slow=38							
MIAR	**Mount Ida**	**91.90**	**43**	P		**P**	**05 25 59.3**	**+0.5**
KEST	**Kesra**	**94.75**	**323**	LR		LR	06 13 52.9	
	comp=Z,95nm,19.2s,baz=311,slow=39							
TKL	**Tuckaleechee C**	**95.94**	**36**	LR		LR	06 14 36.2	
	comp=Z,26nm,18.6s,baz=333,slow=39							
ESDC	**Sonseca Array**	**96.95**	**334**	P		**P**	**05 26 21.5**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=46,slow=4.3,SNR=4.0							
ESDC				LR		LR	06 14 30.7	
	comp=Z,144nm,21.2s,baz=24,slow=38							
	comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**117.11**	**315**	PKP		**PKPdf**	**05 31 34.9**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=16,slow=1.6,SNR=3.7							
MAW	**Mawson**	**120.00**	**206**	PKP		**PKiKP**	**05 31 40.0**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=135,slow=2.9,SNR=6.6							
QSPA	**South Pole Qui**	**127.23**	**180**	PKP		**PKPdf**	**05 31 53.2**	**-0.4**
	comp=Z,7.3nm,1.1s,baz=294,slow=0.9,SNR=18							
SNAA	**Sanae**	**141.22**	**197**	PKhKP		PKPpre	05 32 11.9	
	comp=Z,2.8nm,1.0s,baz=155,slow=3.1,SNR=6.3						

HSN	**Hsinchu**	**0.97 279**	P		**Pn**	**05 13 18.4**	**-0.4**
HSN			*e*S		**Sn**	**05 13 31.4**	**-0.6**
OWD	**Renai**	**1.04 228**	*e*P		**Pn**	**05 13 19.6**	**-0.4**
OWD			S		**Sn**	**05 13 32.8**	**-1.1**
TEGC	**Jichi Village**	**1.04 205**	*e*P		**Pn**	**05 13 20.6**	**+0.7**
WHP	**Taichung City**	**1.05 249**	*e*P		**Pn**	**05 13 21.1**	**+1.0**
WHP			*i* S		**Sn**	**05 13 34.7**	**+0.6**
WUSB	**Renai**	**1.06 231**	*i* P		**Pn**	**05 13 20.2**	**0.0**
WUSB			S		**Sn**	**05 13 33.7**	**-0.6**
WCS	**Beigang Elemen**	**1.18 240**	*e*P		**Pn**	**05 13 22.5**	**+0.9**
WCS			*i* S		**Sn**	**05 13 38.2**	**+1.3**
TYC	**Yuchr**	**1.30 235**	P		**Pn**	**05 13 23.8**	**+0.6**
SSLB	**Suanglung**	**1.31 229**	P		**Pn**	**05 13 24.3**	**+0.9**
SSLB			*e*S		**Sn**	**05 13 40.4**	**+0.5**
EHY	**Hungye**	**1.31 209**	*e*P		**Pn**	**05 13 22.9**	**-0.5**
EHYH	**Wanrong**	**1.31 208**	*e*P		**Pn**	**05 13 23.4**	**0.0**
WHYT	**Xinyi Township**	**1.44 228**	*e*P		**Pn**	**05 13 26.1**	**+1.0**
WHYT			S		**Sn**	**05 13 44.5**	**+1.4**
TWF1	**Yuli**	**1.46 207**	*e*P		**Pn**	**05 13 25.6**	**+0.2**
CHKH	**Chenggong**	**1.57 202**	*e*P		**Pn**	**05 13 25.4**	**-1.4**
CHKH			*e*S		**Sn**	**05 13 45.6**	**-0.5**
IRIF	**Iriomote-Funau**	**1.59 101**	*e*P		**Pn**	**05 13 27.0**	**0.0**
IRIF			*e*S		**Sn**	**05 13 46.6**	**0.0**
CHN5	**Tsauling**	**1.62 230**	*e*P		**Pn**	**05 13 28.8**	**+1.2**
CHN5			*e*S		**Sn**	**05 13 48.4**	**+0.8**
WRL	**Guolierlin Hig**	**1.68 244**	*e*S		**Sn**	**05 13 48.3**	**-0.6**
ELDTW	**Lidau**	**1.73 212**	*e*P		**Pn**	**05 13 29.0**	**-0.1**
ELDTW			*e*S		**Sn**	**05 13 49.2**	**-1.0**
HATJ	**Hateruma jima**	**1.73 110**	*e*P		**Pn**	**05 13 29.7**	**+0.7**
WCKO	**Fanlu**	**1.78 227**	*e*S		**Sn**	**05 13 53.0**	**+1.8**
JIJ	**Ishigaki jima**	**1.95 98**	*e*P		**Pn**	**05 13 31.9**	**0.0**
JIJ			*e*S		**Sn**	**05 13 54.8**	**-0.7**
JISG	**Ishigakijimahi**	**2.08 91**	*e*P		**Pn**	**05 13 34.1**	**+0.4**
JISG			*e*S		**Sn**	**05 13 58.9**	**+0.3**
MATB	**Ma-tsu**	**2.40 309**	P		**Pn**	**05 13 37.7**	**-0.3**
MATB			*i* S		**Sn**	**05 14 04.8**	**-1.4**

TEH ***03*** *05:21:56.4,28˚.67N×52˚.01E,h10km±150km, ML2.8, Presumed earthquake*

ISC 03 05:21:56.9±1.0,28˚.49N±0˚.07×52˚.05E±0˚.07,h15km,n9, σ2s.34/10,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSBU	**Dashti - Bushe**	**0.70**	**260**	Pg	**Pn**	**05 22 12.6**	**+0.1**
DSBU				Sg	**Sn**	**05 22 25.3**	**+2.2**
QIR1	**Qir**	**0.88**	**91**	Pg	**Pn**	**05 22 17.3**	**+2.5**
KAZ2	**Kazeron-Fars-I**	**1.17**	**343**	Pg	**Pn**	**05 22 18.6**	**-0.3**
KAZ2				Sg	**Sb**	**05 22 35.3**	**+1.4**
HOQ	**Hoqain**	**6.80**	**135**	P	**Pg**	**05 24 07.6**	**+0.4**
BIDO	**Bidbid**	**7.37**	**131**	P	Pb	05 23 56.2	-8.5
WSAR	**Wadi Sarin**	**7.90**	**130**	P	**Pn**	**05 23 53.8**	**+2.4**
WBK	**Wadi Bani Khal**	**8.56**	**132**	P	**Pn**	**05 23 58.1**	**-2.4**
ASF	**Jabal al Asfar** 83nm,1.0s	**13.59**	**289**	P	**Pn**	**05 25 06.6**	**-2.7**
HSNJ	**Maan** 189nm,0.9s	**14.38**	**281**	P	**Pn**	**05 25 17.5**	**-2.6**

ASRS ***03*** *05:29:59.0±0.8,53˚.95N×86˚.61E,h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 03 05:30:01.7±2.9,53˚.96N×86˚.56E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=25.5km s-min=14.6km az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=88,slow=312,SNR=5.1	**1.03**	**270**	I	I	05 36 49.8	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=92,slow=16,SNR=7.4	**1.03**	**270**	Pg	Pg	05 30 20.7	-0.7
ZALV	0.7nm,0.3s,baz=90,slow=30,SNR=4.4			Lg	Lg	05 30 35.9	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=58,slow=14,SNR=4.8	**5.95**	**239**	Pn	Pn	05 31 31.9	+0.9
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=24,slow=13,SNR=7.8	**7.67**	**203**	Pn	Pn	05 31 55.7	+1.0

WEL 03 05:53:44.8±1.3,33˚S×31˚×18˚0W±3˚5,h346km±41km, M3.9/6,mB4.3/6,ML4.0/13,MLv4.1/6,Mw(mB)3.5/6,Error ellipse: s-maj=57.7km s-min=20.8km az=130.7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**4.87**	**196**	P	Pn	05 55 02.8	+0.2
WMGZ				S	S	05 56 06.8	+1.2
HAZ	**Te Kaha**	**4.98**	**202**	P	Pn	05 55 03.4	-0.4
HAZ				S	S	05 56 08.3	+0.5
PKGZ	**Pakihiroa**	**5.00**	**199**	P	Pn	05 55 04.7	+0.6
RUGZ	**Raukumara Rang**	**5.21**	**202**	P	Pn	05 55 05.9	-0.6
CNGZ	**Carnagh Statio**	**5.55**	**196**	P	Pn	05 55 11.0	+0.9
MWZ	**Matawai**	**5.59**	**201**	P	Pn	05 55 08.7	-2.0
MWZ				S	S	05 56 20.6	+0.2
URZ	**Urewera**	**5.66**	**205**	P	Pn	05 55 11.4	-0.1
URZ				S	S	05 56 21.6	-0.1
RAGZ	**Rawiri**	**5.77**	**202**	P	Pn	05 55 13.3	+0.4
MUGZ	**Murupara**	**5.98**	**206**	P	Pn	05 55 14.8	-0.3
MUGZ				S	S	05 56 30.6	+2.3
MHGZ	**Mahia Peninsul**	**6.26**	**196**	P	Pn	05 55 19.8	+1.6
RAHZ	**Arahi**	**6.26**	**202**	P	Pn	05 55 18.4	+0.1
RAHZ				S	S	05 56 35.1	+0.7
MTHZ	**Maungataniwha**	**6.29**	**204**	P	Pn	05 55 18.8	+0.1
MTHZ				S	S	05 56 34.0	-0.9
MRHZ	**Matea Rd**	**6.42**	**207**	P	Pn	05 55 19.6	-0.7
ARHZ	**Aropaoanui**	**6.61**	**202**	P	Pn	05 55 22.9	+0.6
BKZ	**Black Stump Fm**	**6.69**	**205**	P	Pn	05 55 22.6	-0.7
HIZ	**Hauiti**	**6.86**	**217**	P	Pn	05 55 27.3	+2.0
KWHZ	**Kaweka Forest**	**6.94**	**204**	P	Pn	05 55 26.1	-0.2
NTVZ	**North Tongarir**	**6.95**	**210**	P	Pn	05 55 26.4	0.0
ETVZ	**East Tongariro**	**6.96**	**210**	P	Pn	05 55 26.2	-0.4
OTVZ	**Oturere**	**7.00**	**210**	P	Pn	05 55 26.8	-0.3
SNVZ	**South Ngauruho**	**7.03**	**210**	P	Pn	05 55 27.2	-0.3
BHHZ	**Black Hill Sta**	**7.13**	**206**	P	Pn	05 55 27.1	-1.4
FWVZ	**Far West T-bar**	**7.13**	**210**	P	Pn	05 55 27.8	-0.8
KAHZ	**Kahuranaki**	**7.13**	**201**	P	Pn	05 55 28.4	-0.1
KRHZ	**Kereru**	**7.16**	**204**	P	Pn	05 55 27.7	-1.1
WNVZ	**Wahianoa**	**7.17**	**209**	P	Pn	05 55 27.9	-1.2
MOVZ	**Moawhango**	**7.18**	**208**	P	Pn	05 55 28.1	-1.0
PKVZ	**Pokaka**	**7.25**	**211**	P	Pn	05 55 29.1	-0.8
PXZ	**Pawanui**	**7.35**	**200**	P	Pn	05 55 31.1	+0.1
PNHZ	**Pukenui**	**7.46**	**204**	P	Pn	05 55 30.8	-1.6
PRHZ	**Porangahau**	**7.64**	**201**	P	Pn	05 55 34.6	+0.2
TSZ	**Takapari Road**	**7.67**	**205**	P	Pn	05 55 33.4	-1.4
WAZ	**Wanganui**	**7.79**	**211**	P	Pn	05 55 34.6	-1.6
DVHZ	**Dannevirke**	**7.81**	**203**	P	Pn	05 55 35.2	-1.3
BFZ	**Birch Farm**	**8.14**	**201**	P	Pn	05 55 39.5	-0.8
MRZ	**Mangatainoka R**	**8.34**	**205**	P	Pn	05 55 40.4	-2.3
TIWZ	**Tintock**	**8.34**	**203**	P	Pn	05 55 41.7	-1.0
HOWZ	**Holdsworth Sta**	**8.57**	**204**	P	Pn	05 55 43.3	-2.2
OGWZ	**Otaki Gorge**	**8.62**	**206**	P	Pn	05 55 43.7	-2.3
TMWZ	**Te Maipa**	**8.63**	**202**	P	Pn	05 55 45.2	-1.1
KIW	**Kapiti Island**	**8.76**	**207**	P	Pn	05 55 45.4	-2.3
CAW	**Cannon Point**	**8.91**	**205**	P	Pn	05 55 47.0	-2.5

ISK ***03*** *06:16:32.8,35˚.57N×26˚.68E,h5km, ML3.5/28*
IDC ***03*** *06:16:32.1±0.9,35˚.62N×26˚.68E,h0km,mb4.2/5, mbtmp3.9/9,ML3.4/4,MS2.5/1,Error ellipse: s-maj=29.2km s-min=14.2km az=164.0*
ATH ***03*** *06:16:33.9,35˚.48N×26˚.69E,h13km±3km,ML3.6/7, Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
NEIC ***03*** *06:16:33.8±1.8,35˚.39N±0˚.08×26˚.70E±0˚.04,h10km±1km, mb4.5/4,Error ellipse: s-maj=14.9km s-min=3.7km az=160.0*
AFAD ***03*** *06:16:33.1,35˚.53N×26˚.65E,h13km±1km,MW3.7*
THE ***03*** *06:16:34.2,36˚N×3˚×2˚7E±˚,h2km,4km,M3.5/8,MLh3.5/8*

ISC 03 06:16:34.2±0.9,35˚.49N±0˚.02×26˚.71E±0˚.02,h20km±4km, n113,σ1s43/155,mb4.2/6,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.38**	**82**		**Pg**	**06 16 42.0**	**-0.1**
KARP				Sg	**Sg**	**06 16 47.5**	**-0.1**
KARP	**Karpathos**	**0.38**	**82**	Pg	**Pg**	**06 16 41.7**	**-0.5**
KARP				Sg	**Sb**	**06 16 48.3**	**+0.6**
KARP	**Karpathos**	**0.38**	**82**	P	**Pg**	**06 16 41.9**	**-0.3**
KARP				S	**Sg**	**06 16 46.8**	**-0.8**
KARP	**Karpathos**	**0.38**	**82**	P	**Pg**	**06 16 41.9**	**-0.3**
KARP				S	**Sb**	**06 16 47.7**	**0.0**
ZKR	**Zakros**	**0.55**	**227**	Pg	**Pb**	**06 16 45.5**	**+0.4**
ZKR	**Zakros**	**0.55**	**227**	P	**Pg**	**06 16 44.7**	**-0.5**
ZKR	**Zakros**	**0.55**	**227**	P	**Pg**	**06 16 44.3**	**-0.9**
ZKR				S	**Sg**	**06 16 51.7**	**-0.9**
SIT2	**Siteia**	**0.57**	**240**	P	**Pg**	**06 16 45.5**	**-0.1**
SIT2				S	**Sg**	**06 16 52.7**	**-0.5**
AGNA	**Agios Nikolaos**	**0.86**	**250**	P	**Pg**	**06 16 50.5**	**-0.5**
AGNA				S	**Sg**	**06 17 01.8**	**-0.6**
NPS	**Neapolis**	**0.92**	**256**	P	**Pg**	**06 16 51.7**	**-0.5**
NPS				S	**Sb**	**06 17 04.7**	**+1.4**
NPS	**Neapolis**	**0.92**	**256**	P	**Pg**	**06 16 51.7**	**-0.5**
NPS				S	**Sg**	**06 17 03.7**	**-0.7**
THERA	**Ancient Thera,**	**1.32**	**312**	P	**Pn**	**06 16 58.1**	**+0.5**
THERA				S	**Sn**	**06 17 15.2**	**+0.5**
THERA	**Ancient Thera,**	**1.32**	**312**	P	**Pb**	**06 16 58.3**	**-0.1**
YAZI	**Mula-Dat§a-**	**1.33**	**27**	P	**Pn**	**06 16 57.7**	**0.0**
YAZI				S	**Sg**	**06 17 16.2**	**-1.2**
YAZI				IAML		06 17 20.0	
	comp=E,213nm,0.9s						
YAZI				IAML		06 17 21.0	
	comp=N,173nm,0.4s						
THR8	**Santorini-Mono**	**1.35**	**313**	P	**Pg**	**06 16 58.9**	**-1.3**
ARG	**Arkhangelos**	**1.36**	**58**		**Pb**	**06 16 59.3**	**+0.4**
ARG				Sn	**Sg**	**06 17 17.8**	**-0.6**
ARG	**Arkhangelos**	**1.36**	**58**	Pn	**Pg**	**06 16 59.6**	**-0.9**
ARG	**Arkhangelos**	**1.36**	**58**	P	**Pg**	**06 16 59.7**	**-0.9**
ARG				S	**Sg**	**06 17 17.5**	**-0.9**
ARG	**Arkhangelos**	**1.36**	**58**	P	**Pb**	**06 16 59.4**	**+0.4**
THR9	**Santorini-Faro**	**1.39**	**309**	P	**Pg**	**06 16 59.7**	**-1.4**
THR9	**Santorini-Faro**	**1.39**	**309**	P	**Pn**	**06 16 58.6**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.40**	**311**	P	**Pg**	**06 17 00.0**	**-1.2**
THR3	**Thira Island,**	**1.40**	**311**	P	**Pb**	**06 16 59.4**	**-0.2**
THR3	**Thira Island,**	**1.40**	**311**	P	**Pn**	**06 16 59.2**	**+0.6**
THR2	**Thira island,**	**1.40**	**313**	P	**Pb**	**06 16 59.5**	**-0.1**
DAT	**Datca**	**1.42**	**30**	Pn	**Pb**	**06 17 00.0**	**-0.1**
THR5	**Thira Island,**	**1.44**	**310**	P	**Pb**	**06 16 59.8**	**-0.4**
SAP3	**Santorini-Thir**	**1.45**	**311**	P	**Pb**	**06 17 00.6**	**+0.1**
IDI	**Anoyia** 21nm,0.3s,baz=83,slow=16,SNR=86	**1.50**	**263**	Pn	**Pn**	**06 17 01.2**	**+1.2**
IDI				Sn	**Sg**	**06 17 21.7**	**-1.0**
	156nm,0.3s,baz=357,slow=16,SNR=10						
IDI	**Anoyia**	**1.50**	**263**		**Pn**	**06 17 01.0**	**+1.0**
IDI	**Anoyia**	**1.50**	**263**	Pn	**Pb**	**06 17 01.7**	**+0.4**
IDI				Sn	**Sg**	**06 17 23.1**	**+0.5**
IDI	**Anoyia**	**1.50**	**263**	P	**Pb**	**06 17 01.8**	**+0.4**
IDI				S	**Sn**	**06 17 19.8**	**+0.8**
IDI	**Anoyia**	**1.50**	**263**	P	**Pn**	**06 17 00.6**	**+0.6**
SIVA	**Sivas**	**1.62**	**254**	P	**Pg**	**06 17 04.5**	**-1.0**
SIVA				S	**Sg**	**06 17 25.9**	**-0.7**
SIVA	**Sivas**	**1.62**	**254**	P	**Pb**	**06 17 03.4**	**0.0**
BODT	**Bodrum**	**1.64**	**17**	Pn	**Pn**	**06 17 02.9**	**+1.0**
BODT	**Bodrum**	**1.64**	**17**	P	**Pn**	**06 17 02.4**	**+0.5**
BODT				S	**Sg**	**06 17 27.1**	**-0.1**
BDRM	**Kayabasi**	**1.68**	**21**	P	**Pn**	**06 17 02.8**	**+0.4**
BDRM				S	**Sg**	**06 17 27.9**	**-0.5**
BDRM				IAML		06 17 31.0	
	comp=E,76nm,0.7s						
YKAV	**Yalikavak-Bodr**	**1.69**	**16**	Pn	**Pn**	**06 17 03.7**	**+1.1**
TURN	**Turunc**	**1.79**	**44**	Pn	**Pn**	**06 17 05.4**	**+1.5**
TURN	**Turunc**	**1.79**	**44**	P	**Pg**	**06 17 08.4**	**-0.1**
TURN				S	**Sb**	**06 17 28.0**	**-0.2**
TURN				IAML		06 17 34.0	
	comp=N,264nm,0.3s						
TURN				IAML		06 17 36.0	
	comp=E,241nm,0.4s						
MLSB	**Milas**	**2.00**	**25**	Pn	**Pn**	**06 17 08.2**	**+1.4**
DDIM	**Aydin, Didim**	**2.01**	**12**	P	**Pb**	**06 17 09.2**	**-0.8**
DDIM				S	**Sg**	**06 17 37.5**	**-1.4**
DDIM				IAML		06 17 53.0	
	comp=E,176nm,0.6s						
DDIM				IAML		06 18 05.0	
	comp=N,204nm,0.8s						
DALY	**Dalyan (Mula)**	**2.06**	**49**	Pn	**Pn**	**06 17 09.4**	**+1.8**
DALY	**Dalyan (Mula)**	**2.06**	**49**	P	**Pb**	**06 17 10.3**	**-0.6**
DALY				S	**Sb**	**06 17 36.6**	**+0.6**
DALY				IAML		06 17 45.0	
	comp=N,207nm,0.6s						
DALY				IAML		06 17 47.0	
	comp=E,261nm,0.6s						
YER	**Yerkesik**	**2.08**	**37**	Pn	**Pn**	**06 17 09.5**	**+1.5**
YER	**Yerkesik**	**2.08**	**37**	P	**Pn**	**06 17 09.8**	**+1.8**
YER				S	**Sn**	**06 17 33.7**	**+0.4**
MULA	**Mugla, Merkez-**	**2.19**	**36**	P	**Pg**	**06 17 15.5**	**-0.8**
MULA				S	**Sn**	**06 17 37.6**	**+1.5**
IMMV	**Iera Moni Meta**	**2.22**	**270**	Pn	**Pn**	**06 17 11.8**	**+1.9**
IMMV	**Iera Moni Meta**	**2.22**	**270**	P	**Pb**	**06 17 12.3**	**-1.4**
IMMV				S	**Sn**	**06 17 36.1**	**-0.7**
IMMV	**Iera Moni Meta**	**2.22**	**270**	P	**Pn**	**06 17 10.8**	**+0.9**
GVD	**Gavdhos**	**2.24**	**254**	Pn	**Pn**	**06 17 12.5**	**+2.3**
GVD	**Gavdhos**	**2.24**	**254**	S	**Sn**	**06 17 38.5**	**+1.2**
GCAM	**G?zelcaml?**	**2.24**	**11**	Pn	**Pn**	**06 17 11.5**	**+1.3**
GCAM	**G?zelcaml?**	**2.24**	**11**	P	**Pb**	**06 17 12.4**	**-1.6**
GCAM				S	**Sg**	**06 17 48.3**	**+1.9**
GCAM				IAML		06 17 54.0	
	comp=N,99nm,0.5s						
GCAM				IAML		06 18 03.0	
	comp=E,114nm,0.6s						
IZZE	**Mula-Seydike**	**2.25**	**65**	P	**Pb**	**06 17 13.7**	**-0.5**
IZZE				S	**Sn**	**06 17 40.2**	**+2.6**
IZZE				IAML		06 17 51.0	
	comp=N,408nm,0.4s						
IZZE				IAML		06 17 58.0	
	comp=E,179nm,0.4s						
SABU	**Mula-Dalaman**	**2.26**	**53**	P	**Pb**	**06 17 13.5**	**-0.9**
SABU				S	**Sb**	**06 17 40.9**	**-1.0**
SABU				IAML		06 17 51.0	
	comp=N,169nm,0.5s						
SABU				IAML		06 17 51.0	
	comp=E,229nm,0.7s						
AYDN	**Tasoluk**	**2.36**	**23**	P	**Pn**	**06 17 13.3**	**+1.5**
AYDN				S	**Sb**	**06 17 45.0**	**+0.2**
AYDN				IAML		06 17 48.0	
	comp=N,84nm,0.5s						
AYDN				IAML		06 17 49.0	
	comp=E,78nm,0.6s						
AKAS	**Kas**	**2.47**	**72**		**Pn**	**06 17 14.8**	**+1.4**
AKAS	**Kas**	**2.47**	**72**	Pn	**Pn**	**06 17 15.6**	**+2.2**
AKAS	**Kas**	**2.47**	**72**	P	**Pb**	**06 17 16.6**	**-1.3**
AKAS				S	**Sb**	**06 17 48.6**	**+0.6**
AKAS				IAML		06 17 49.0	
	comp=N,198nm,0.6s						
AKAS				IAML		06 17 51.0	
	comp=E,134nm,0.7s						
KNDR	**Palaiochora Ch**	**2.53**	**265**	Pn	**Pn**	**06 17 16.4**	**+2.3**
CAME	**Cameli-Denizli**	**2.55**	**55**	Pn	**Pn**	**06 17 16.5**	**+1.9**
DNZT	**Denizli-Tavas-**	**2.58**	**46**	P	**Pb**	**06 17 18.5**	**-1.4**
DNZT				S	**Sb**	**06 17 51.0**	**-0.3**
DNZT				IAML		06 17 52.0	
	comp=E,332nm,0.4s						
DNZT				IAML		06 17 53.0	
	comp=N,333nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**2.63**	**21**	Pn	**Pn**	**06 17 17.1**	**+1.5**
ESEN	**Aydn-Nazilli**	**2.65**	**29**	P	**Pn**	**06 17 17.8**	**+2.0**
ESEN				S	**Sb**	**06 17 50.9**	**-2.3**
ESEN				IAML		06 17 53.0	
	comp=E,44nm,0.3s						
ESEN				IAML		06 17 55.0	
	comp=N,46nm,0.3s						
TAVA	**DENIZLI_Tavas**	**2.65**	**41**	P	**Pn**	**06 17 18.6**	**+2.7**
TAVA				S	**Sb**	**06 17 52.8**	**-0.5**
TAVA				IAML		06 17 54.0	
	comp=E,206nm,0.4s						
TAVA				IAML		06 17 55.0	
	comp=N,156nm,0.5s						
CAEL	**Denizli, Camel**	**2.67**	**52**	P	**Pb**	**06 17 21.8**	**+0.5**
CAEL				S	**Sb**	**06 17 53.8**	**+0.1**
KNIK	**Mula-Seydike**	**2.68**	**59**	P	**Pb**	**06 17 19.5**	**-2.1**
KNIK				S	**Sb**	**06 17 53.7**	**-0.5**
KNIK				IAML		06 17 54.0	
	comp=N,56nm,0.5s						
KNIK				IAML		06 18 04.0	
	comp=E,60nm,0.4s						
NAZL	**Nazilli-Aydin**	**2.78**	**27**	Pn	**Pn**	**06 17 19.3**	**+1.7**
IZMR	**zmir-demi**	**2.82**	**20**	P	**Pn**	**06 17 20.4**	**+2.3**
IZMR				S	**Sb**	**06 17 56.6**	**-1.4**
IZMR				IAML		06 17 59.0	
	comp=E,37nm,0.6s						
IZMR				IAML		06 18 25.0	
	comp=N,25nm,1.0s						
DNIZ	**Denizli-Tavas-**	**2.84**	**41**	P	**Pb**	**06 17 25.3**	**+1.0**
DNIZ				S	**Sb**	**06 17 56.2**	**-2.4**
URLA	**Izmir**	**2.86**	**358**	Pn	**Pn**	**06 17 19.2**	**+0.4**
APMY	**Acipayam-Deniz**	**2.88**	**46**	Pn	**Pn**	**06 17 21.0**	**+2.0**
ELL	**Elmali**	**2.88**	**63**		**Pn**	**06 17 20.4**	**+1.3**
ELL	**Elmali**	**2.88**	**63**	Pn	**Pn**	**06 17 21.3**	**+2.2**
GOLH	**Golhisar**	**2.89**	**52**	P	**Pb**	**06 17 22.9**	**-2.2**
GOLH				S	**Sb**	**06 17 59.5**	**-0.6**
GOLH				IAML		06 18 02.0	
	comp=N,161nm,1.1s						
GOLH				IAML		06 18 04.0	
	comp=E,168nm,0.4s						
CHOS	**Chios island**	**2.94**	**350**	Pn	**Pn**	**06 17 20.3**	**+0.5**
ODEM	**Odemis-Izmir**	**2.99**	**21**	Pn	**Pn**	**06 17 22.2**	**+1.7**
KIRA	**zmir-Kiraz**	**3.02**	**26**	P	**Pn**	**06 17 22.0**	**+1.0**
KIRA				S	**Sn**	**06 18 00.2**	**+3.5**
KIRA				IAML		06 18 01.0	
	comp=E,26nm,0.3s						
KIRA				IAML		06 18 03.0	
	comp=N,35nm,0.5s						
KTHA	**Kythira Island**	**3.06**	**285**	Pn	**Pn**	**06 17 23.5**	**+2.1**
MANT	**Manisa**	**3.34**	**26**		**Pn**	**06 17 27.2**	**+1.8**
KULA	**Kula-Manisa**	**3.40**	**27**	Pn	**Pn**	**06 17 28.1**	**+1.9**
GORD	**Gordes-Manisa**	**3.61**	**19**	Pn	**Pn**	**06 17 30.7**	**+1.7**
SIMA	**Simav-Kutahya**	**4.02**	**26**	Pn	**Pn**	**06 17 37.4**	**+2.7**
ITM	**Ithomi**	**4.21**	**295**		**Pn**	**06 17 39.6**	**+2.4**
ALN	**Alexandroupoli**	**5.42**	**355**	Pn	**Pn**	**06 17 54.8**	**+0.9**
CSS	**Mathiatis**	**5.45**	**94**	Pn	**Pn**	**06 17 56.1**	**+1.8**
CY604	**RAF Akrotiri,**	**6.52**	**98**		**Pn**	**06 18 10.3**	**+1.6**
KEK	**Kerkira**	**6.91**	**310**	Pn	**Pn**	**06 18 17.7**	**+3.4**
BRTR	**Keskin Array B** 0.3nm,0.3s,baz=218,slow=14,SNR=1.8	**6.94**	**50**	Pn	**Pn**	**06 18 16.9**	**+2.1**
BRTR	0.2nm,0.3s,baz=232,slow=25,SNR=2.2 1.0nm,0.6s			Sn	**Sn**	**06 19 33.1**	**-0.1**
MMAI	**Mount Meron Ar** 1.6nm,0.3s,baz=292,slow=13,SNR=2.0	**7.61**	**106**	Pn	**Pn**	**06 18 25.8**	**+1.7**
MMAI	4.5nm,0.3s,baz=268,slow=39,SNR=6.5 0.7nm,0.3s			Sn	**Sn**	**06 19 50.4**	**+0.6**
GHAJ	**Ghor Haditha**	**8.51**	**117**		**Pn**	**06 18 36.8**	**+0.6**
GAZ	**Gaziantep**	**8.64**	**76**	Pn	**Pn**	**06 18 39.6**	**+1.4**
EIL	**Elat** 0.5nm,0.3s,baz=348,slow=3.9,SNR=8.5	**9.06**	**128**	Pn	**Pn**	**06 18 45.1**	**+1.3**
EIL	1.8nm,0.3s,baz=340,slow=16,SNR=8.9 3.0nm,0.7s			Sn	**Sn**	**06 20 18.8**	**-6.5**
ASF	**Jabal al Asfar** 0.3nm,0.3s,baz=253,slow=17,SNR=2.2	**9.10**	**108**	Pn	**Pn**	**06 18 45.6**	**+1.1**
ASF	0.2nm,0.3s,baz=292,slow=19,SNR=1.3 0.8nm,0.4s			Sn	**Sn**	**06 20 23.2**	**-3.3**
VAE	**Valguarnera** 0.3nm,0.3s,baz=72,slow=20,SNR=1.1	**10.10**	**285**	Sn	**Sn**	**06 20 48.4**	**-2.4**
AKASG	**Malin Array Be** 0.6nm,0.3s,baz=196,slow=11,SNR=4.1	**15.31**	**6**	Pn	**P**	**06 20 13.4**	**-0.3**
GEC2	**GERESS Array S**	**16.43**	**328**	Pn	**Pn**	**06 20 25.4**	**+1.9**
GERES	**GERESS Array B** baz=151,slow=12	**16.43**	**328**	Pn	**P**	**06 20 27.4**	**+1.2**
GERES	**GERESS Array B**	**16.43**	**328**	Pn	**Pn**	**06 20 24.9**	**+1.4**
KHC	**Kasperske Hory**	**16.70**	**329**	*e*P	**P**	**06 20 31.0**	**+1.9**
NOA	**NORSAR Array B** comp=Z,9.6nm,19.1s,baz=110,slow=38	**27.42**	**344**	LR	LR	06 33 53.4	
TORD	**Torodi Ar. Bea** 1.1nm,0.8s,baz=43,slow=9.8,SNR=6.1 1.1nm,0.8s	**31.68**	**232**	P	**P**	**06 22 57.9**	**+1.4**
MKAR	**Makanchi Array** 2.1nm,0.5s,baz=271,slow=8.4,SNR=10 2.1nm,0.5s	**42.54**	**57**	P	**P**	**06 24 30.0**	**+1.7**
MKAR	**Makanchi Array**	**42.54**	**57**	P	**P**	**06 24 28.6**	**+0.3**
ZAA0	**Zalesovo Array**	**43.86**	**46**	P	**P**	**06 24 39.1**	**+0.2**
ZAA0	comp=Z,1.9nm,0.9s			IAmb	IAmb	06 24 39.6	
ZALV	**Zalesovo Beam** comp=Z,1.1nm,0.4s,baz=263,slow=9.4,SNR=5.0 comp=Z,1.1nm,0.4s	**43.86**	**46**	P	**P**	**06 24 39.5**	**+0.6**
ZALV	**Zalesovo Beam**	**43.86**	**46**	P	**P**	**06 24 39.0**	**+0.1**
KAAM	**Kaadhehdhoo**	**55.33**	**118**	P	**P**	**06 26 05.1**	**-1.7**
SCHQ	**

comp=Z,72nm,18.0s,baz=118,slow=33
PMG Port Moresby 21.85 171 LR LR 06 56 42.6
comp=Z,94nm,18.1s,baz=95,slow=37
TGY Tagaytay City 22.18 277 LR LR 06 57 00.5
comp=Z,142nm,19.5s,baz=6.5,slow=37
H11N1 WAKE ISLAND Hy 23.51 69 T T 07 13 01.9
baz=255,slow=75,SNR=28
H11N2 WAKE ISLAND Hy 23.52 69 T T 07 13 05.8
baz=255,slow=75,SNR=38
H11N3 WAKE ISLAND Hy 23.52 69 T T 07 12 58.5
baz=255,slow=75,SNR=33
JNU Nakatsue 23.79 333 LR LR 06 56 31.7
comp=Z,54nm,19.2s,baz=182,slow=33
MJAR Matsushiro Arr 24.62 349 LR LR 06 57 35.1
comp=Z,160nm,18.7s,baz=174,slow=35
KSRS Korea Array 28.73 333 LR LR 07 00 30.7
comp=Z,46nm,18.1s,baz=145,slow=36
KAPI Kappang 29.33 235 LR LR 07 00 42.6
comp=Z,34nm,19.7s,baz=76,slow=36
CTA Charters Tower 32.30 175 LR LR 07 02 40.0
comp=Z,40nm,19.8s,baz=34,slow=36
USRK Ussuriysk Ar. 33.32 345 LR LR 07 01 13.8
comp=Z,71nm,21.4s,baz=171,slow=32
WRA Warramunga Arr 33.33 196 P **P 06 49 57.7 -0.4**
4.3nm,0.7s,baz=19,slow=9.7,SNR=38
4.3nm,0.7s
ASAR Alice Springs 37.00 195 P **P 06 50 29.6 -0.1**
1.2nm,0.7s,baz=17,slow=10,SNR=22
ASAR LR LR 07 05 00.9
comp=Z,63nm,19.8s,baz=318,slow=35
1.2nm,0.7s
KLR Kul'dur 38.11 347 LR LR 07 04 56.9
comp=Z,76nm,20.2s,baz=122,slow=34
CMAR Chiang Mai Arr 43.45 284 P **P 06 51 24.1 +0.9**
0.6nm,0.3s,baz=83,slow=5.5,SNR=4.8
CMAR LR LR 07 09 11.0
comp=Z,38nm,20.1s,baz=170,slow=36
0.6nm,0.3s
STKA Stephens Creek 43.98 188 P **P 06 51 26.8 -0.4**
3.9nm,0.8s,baz=353,slow=6.7,SNR=4.8
STKA LR LR 07 13 17.9
comp=Z,47nm,18.1s,baz=3.7,slow=41
3.9nm,0.8s
SONM Songino Array 47.10 326 LR LR 07 11 12.4
comp=Z,61nm,20.3s,baz=123,slow=36
YAK Yakutsk 50.66 352 LR LR 07 12 33.9
comp=Z,34nm,19.5s,baz=325,slow=35
MKAR Makanchi Array 61.59 317 P **P 06 53 36.6 -0.7**
0.3nm,0.5s,baz=90,slow=7.2,SNR=3.5
0.3nm,0.5s
ZALV Zalesovo Beam 61.97 325 P **P 06 53 39.0 -0.7**
0.4nm,0.4s,baz=115,slow=6.8,SNR=1.6
0.4nm,0.4s
PALK Pallekele 62.12 272 LR LR 07 18 30.0
comp=Z,176nm,21.9s,baz=199,slow=34
KURBB Kurchatov Arra 64.83 320 P **P 06 53 58.1 -0.6**
0.6nm,0.2s,baz=106,slow=6.9,SNR=7.1
0.6nm,0.2s
KDAK Kodiak Island 65.78 32 LR LR 07 23 44.7
comp=Z,31nm,18.0s,baz=207,slow=37
BVAR Borovoye Array 70.19 322 P **P 06 54 31.4 -1.2**
0.9nm,0.5s,baz=102,slow=8.2,SNR=4.5
0.9nm,0.5s
ILAR Eielson Array 70.23 25 P **P 06 54 32.0 -0.5**
0.5nm,0.5s,baz=262,slow=5.9,SNR=13
0.5nm,0.5s
PPT Papeete 72.30 113 LR LR 07 23 47.5
comp=Z,22nm,18.1s,baz=34,slow=34
BBB Bella Bella 79.32 39 LR LR 07 26 59.6
comp=Z,35nm,19.3s,baz=213,slow=33
YKA Yellowknife Ar 84.54 27 P **P 06 55 52.0 -0.7**
0.7nm,0.6s,baz=286,slow=4.8,SNR=6.2
0.7nm,0.6s
YBH Yreka Blue Hor 84.61 49 LR LR 07 26 06.1
comp=Z,47nm,21.3s,baz=282,slow=30
SPITS Spitsbergen Ar 85.11 354 LR LR 07 33 38.7
comp=Z,35nm,20.7s,baz=336,slow=36
ARCES ARCESS Array B 87.93 342 P **P 06 56 10.2 +1.0**
1.7nm,0.8s,baz=44,slow=3.7,SNR=4.9
ARCES LR LR 07 38 20.4
comp=Z,27nm,18.3s,baz=60,slow=38
1.7nm,0.8s
NVAR Mina Array Bea 88.65 51 P **P 06 56 15.4 +1.9**
0.6nm,0.7s,baz=254,slow=6.4,SNR=5.0
0.6nm,0.7s
GNI Garni 88.85 311 LR LR 07 39 52.3
comp=Z,15nm,20.0s,baz=144,slow=38
FINES FINESS Array B 91.81 335 P **P 06 56 28.2 +0.8**
1.2nm,0.4s,baz=107,slow=6.4,SNR=3.7
1.2nm,0.4s
PDAR Pinedale Array 93.71 45 P **P 06 56 38.5 +1.5**
0.3nm,0.9s,baz=281,slow=4.9,SNR=3.9
0.3nm,0.9s
AKASG Malin Array Be 95.36 324 LR LR 07 42 28.4
comp=Z,39nm,19.2s,baz=285,slow=37

*IDC **03** 06:57:34.0±1.6, 13.43S×67.16E, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=59.5km s-min=25.7km az=70.0*
ISC 03 06:57:36.1±1.6, 13.5S×0.2×67.2E×0.4, h10km, n18, d096/7, mb4.0/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
H08S1	**Diego Carcia H**	**7.78**	**42**	T		T	07	08	49.3	
	baz=224,slow=75,SNR=168									
H08S2	**Diego Garcia H**	**7.79**	**42**	T		T	07	08	50.1	
	baz=224,slow=75,SNR=178									
H08S3	**Diego Garcia H**	**7.80**	**42**	T		T	07	08	54.6	
	baz=224,slow=75,SNR=420									
H04N2	**CROZET ISLANDS**	**35.06**	**199**	T		T	07	40	19.9	
	baz=26,slow=76,SNR=5.1									
H04N1	**CROZET ISLANDS**	**35.07**	**199**	T		T	07	40	23.5	
	baz=26,slow=76,SNR=4.7									
H04N3	**CROZET ISLANDS**	**35.08**	**199**	T		T	07	40	22.0	
	baz=26,slow=76,SNR=4.4									
H01W3	**Cape Leeuwin H**	**47.28**	**125**	T		T	07	57	15.9	
	baz=283,slow=75,SNR=25									
H01W2	**Cape Leeuwin H**	**47.29**	**125**	T		T	07	57	16.1	
	baz=283,slow=75,SNR=28									
H01W1	**Cape Leeuwin H**	**47.30**	**125**	T		T	07	57	17.2	
	baz=283,slow=75,SNR=36									
ASAR	**Alice Springs**	**63.53**	**110**	P		**P**	**07**	**08**	**06.3**	**-0.9**
	0.8nm,0.9s,baz=278,slow=5.5,SNR=5.7									
	0.8nm,0.9s									
WRA	**Warramunga Arr**	**64.25**	**106**	P		**P**	**07**	**08**	**11.9**	**0.0**
	1.7nm,1.0s,baz=265,slow=5.8,SNR=5.0									
	1.7nm,1.0s									
KURBB	**Kurchatov Arra**	**64.61**	**8**	P		**P**	**07**	**08**	**12.4**	**-1.2**
	0.9nm,0.8s,baz=201,slow=6.8,SNR=4.5									
	0.9nm,0.8s									
BVAR	**Borovoye Array**	**66.31**	**2**	P		P	07	08	22.4	-2.1
	1.1nm,0.8s,baz=161,slow=6.3,SNR=5.6									
	1.1nm,0.8s									
ZALV	**Zalesovo Beam**	**68.84**	**11**	P		P	07	08	38.9	-1.6
	0.9nm,0.6s,baz=224,slow=6.0,SNR=3.7									
	0.9nm,0.6s									
SONM	**Songino Array**	**70.33**	**27**	P		**P**	**07**	**08**	**51.0**	**+1.0**
	0.3nm,0.4s,baz=220,slow=4.9,SNR=3.9									
	0.3nm,0.4s									
KSRS	**Korea Array**	**76.21**	**46**	P		**P**	**07**	**09**	**25.3**	**+0.5**
	0.4nm,0.3s,baz=230,slow=7.5,SNR=4.0									
	0.4nm,0.3s									
VNDA	**Vanda**	**77.92**	**167**	P		**P**	**07**	**09**	**34.0**	**+0.2**
	0.3nm,0.4s,baz=329,slow=5.9,SNR=2.3									
	0.3nm,0.4s									
PDAR	**Pinedale Array**	**150.71**	**355**	PKP		**PKPdf**	**07**	**17**	**23.9**	**+0.2**
	1.5nm,0.8s,baz=64,slow=3.4,SNR=11									

IDC 03 07:00:12.7±11.0, 11.26S×65.47E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=379.3km s-min=30.6km az=60.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
H01W3	**Cape Leeuwin H**	**49.98**	**126**	T		T	08	03	39.8	
	baz=283,slow=75,SNR=10									
H01W2	**Cape Leeuwin H**	**49.98**	**126**	T		T	08	03	39.8	
	baz=283,slow=75,SNR=9.4									
H01W1	**Cape Leeuwin H**	**49.99**	**126**	T		T	08	03	40.9	
	baz=283,slow=75,SNR=8.9									
MKAR	**Makanchi Array**	**59.72**	**13**	P		P	07	10	18.6	-0.6
	1.1nm,1.1s,baz=198,slow=6.3,SNR=4.3									
	1.1nm,1.1s									
BVAR	**Borovoye Array**	**64.17**	**3**	P		P	07	10	49.4	+0.5
	0.4nm,0.4s,baz=185,slow=6.6,SNR=4.0									
	0.4nm,0.4s									
ASAR	**Alice Springs**	**65.92**	**111**	P		P	07	11	00.4	-0.6
	0.2nm,0.6s,baz=266,slow=6.1,SNR=4.7									
	0.2nm,0.6s									
WRA	**Warramunga Arr**	**66.52**	**107**	P		P	07	11	05.6	+0.7
	0.8nm,1.0s,baz=268,slow=6.6,SNR=5.7									
	0.8nm,1.0s									
ZALV	**Zalesovo Beam**	**67.01**	**12**	P		P	07	11	07.1	-0.1
	0.2nm,0.3s,baz=212,slow=5.1,SNR=1.7									
	0.2nm,0.3s									

*ASRS **03** 07:05:22.0±0.7, 54.43N×86.82E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 03 07:05:27.4±3.4, 54.34N×86.61E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=27.9km s-min=16.3km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**250**	I		I	07	13	10.0	
	baz=67,slow=316,SNR=3.6									
ZALV	**Zalesovo Beam**	**1.12**	**250**	Pg		Pg	07	05	47.9	-0.9
	1.5nm,0.3s,baz=71,slow=17,SNR=10.0									
ZALV				Lg		Lg	07	06	04.5	
	1.0nm,0.3s,baz=71,slow=29,SNR=5.8									
KURBB	**Kurchatov Arra**	**6.18**	**236**	Pn		Pn	07	07	00.4	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=7.0									
	0.8nm,0.5s									
MKAR	**Makanchi Array**	**8.04**	**202**	Pn		Pn	07	07	26.4	+1.1
	0.1nm,0.3s,baz=20,slow=14,SNR=1.3									
	0.2nm,0.3s									

*SOME **03** 07:14:45.8, 39.77N×77.02E, h5km*
*IDC **03** 07:14:49.5±1.8, 39.80N×77.09E, h0km, mb3.6/2, mbtmp3.8/8, ML3.3/6, MS2.8/5, Error ellipse: s-maj=22.3km s-min=20.5km az=150.0*
*KRNET **03** 07:14:50.1±0.1, 39.89N×77.08E, mb4.4*
*NNC **03** 07:14:51.8±1.2, 40.01N×77.08E, h0km, mb4.7, mpv4.2, Error ellipse: s-maj=8.8km s-min=6.4km az=161.0*
ISC 03 07:14:51.8±0.7, 39.95N±0.03×77.07E±0.03, h10km, n98, d≥32/143, 33C-26D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
KSH2	**Kashi**	**1.42**	**236**	Pg		**Pb**	**07**	**15**	**17.8**	**-0.5**
KSH2				Sg		**Sg**	**07**	**15**	**38.2**	**+0.9**
KSH2				smax		smax				
	comp=N,3μm,0.5s									
KSH2				smax		smax				
	comp=E,2μm,0.6s									
NRN	**Naryn**	**1.69**	**332**	⇓*i*P		**Pb**	**07**	**15**	**22.8**	**-0.3**
NRN				⇓*i*S		**Sg**	**07**	**15**	**46.8**	**+0.7**
TARG	**Taragay, Kyrgy**	**1.86**	**17**	⇑*i*P		**Pb**	**07**	**15**	**25.9**	**-0.2**
TARG				⇑*i*S		**Sg**	**07**	**15**	**52.1**	**+0.5**
KDJ	**Kajisay**	**2.18**	**2**	⇓*e*P		**Pb**	**07**	**15**	**30.6**	**-0.7**
KDJ				⇓*i*S		**Sb**	**07**	**16**	**00.2**	**+1.8**
BOOM	**Boomskoye usch**	**2.67**	**342**	⇑*e*P		**Pn**	**07**	**15**	**37.9**	**-1.9**
BOOM				⇑*e*S		**Sb**	**07**	**16**	**12.4**	**-0.4**
PRZ	**Przheval'sk**	**2.72**	**21**	⇓*i*P		**Pb**	**07**	**15**	**38.2**	**-2.4**
PRZ				⇓*i*S		**Sb**	**07**	**16**	**13.5**	**-0.6**
SFK	**Sufi-Kurgan**	**2.74**	**272**	⇑*e*P		**Pn**	**07**	**15**	**37.6**	**+1.6**
SFK				⇑*e*S		**Sb**	**07**	**16**	**12.8**	**-1.9**
ANVS	**Anan'yevo**	**2.86**	**9**	⇓*e*P		**Pn**	**07**	**15**	**40.1**	**+2.4**
ANVS				⇓*i*S		**Sb**	**07**	**16**	**16.6**	**-1.6**
UCH	**Uchtor**	**2.98**	**320**	P		**Pb**	**07**	**15**	**44.1**	**-1.1**
	SNR=24									
UCH	**Uchtor**	**2.98**	**320**	⇓*e*P		**Pn**	**07**	**15**	**41.8**	**+2.3**
UCH				⇓*i*S		**Sn**	**07**	**16**	**19.6**	**+4.0**
TNSS	**Tian-Shan**	**3.08**	**358**	Pg		**Pb**	**07**	**15**	**46.1**	**-0.9**
	comp=E,33nm,0.4s									
TNSS				Lg		Lg	07	16	29.1	
	comp=E,243nm,0.5s									
TNSS	**Tian-Shan**	**3.08**	**358**	*e*P		**Pn**	**07**	**15**	**44.0**	**+3.1**
TNSS	**Tian-Shan**	**3.08**	**358**	*e*P		**Pb**	**07**	**15**	**46.1**	**-0.9**
	comp=E,33nm,0.4s									
TNSS				*e*S		**Sg**	**07**	**16**	**29.1**	**-1.7**
	comp=E,243nm,0.5s									
KBK	**Karagaybulak**	**3.14**	**330**	P		**Pb**	**07**	**15**	**50.0**	**+2.3**
	SNR=7.0									
KBK	**Karagaybulak**	**3.14**	**330**	⇓*e*P		**Pn**	**07**	**15**	**44.0**	**+2.6**
KBK				⇓*i*S		**Sn**	**07**	**16**	**23.2**	**+4.2**
TKM2	**Tokmak 2**	**3.17**	**340**	P		**Pb**	**07**	**15**	**46.2**	**-2.0**
	SNR=71									
TKM2	**Tokmak 2**	**3.17**	**340**	⇓*i*P		**Pn**	**07**	**15**	**44.3**	**+2.5**
TKM2				⇓*i*S		**Sn**	**07**	**16**	**23.9**	**+4.2**
KST	**Kastek**	**3.20**	**345**	Pg		**Pb**	**07**	**15**	**48.5**	**-0.2**
	comp=E,63nm,0.5s									
KST				Lg		Lg	07	16	33.2	
	comp=E,526nm,0.7s									
KST	**Kastek**	**3.20**	**345**	*e*P		**Pb**	**07**	**15**	**48.5**	**-0.2**
	comp=E,63nm,0.5s									
KST				*e*S		**Sg**	**07**	**16**	**33.2**	**-1.2**
	comp=E,526nm,0.7s									
MDOK	**Medeo**	**3.21**	**360**	Pg		**Pb**	**07**	**15**	**48.1**	**-0.8**
	comp=E,111nm,0.5s									
MDOK				Lg		Lg	07	16	32.9	
	comp=E,2μm,0.9s									
MDOK	**Medeo**	**3.21**	**360**	*e*P		**Pb**	**07**	**15**	**45.8**	**-3.1**
MTBS	**Maitube**	**3.21**	**352**	Pg		**Pb**	**07**	**15**	**48.7**	**-0.2**
	comp=E,15nm,0.1s									
MTBS				Lg		Lg	07	16	33.9	
	comp=E,368nm,0.3s									
MTBS	**Maitube**	**3.21**	**352**	*e*P		**Pb**	**07**	**15**	**48.7**	**-0.2**
	comp=E,15nm,0.1s									
MTBS				*e*S		**Sg**	**07**	**16**	**33.9**	**-1.0**
	comp=E,368nm,0.3s									
AAA	**Alma-Ata**	**3.25**	**358**	*e*P		**Pb**	**07**	**15**	**46.5**	**-3.2**
SATY	**Saty**	**3.26**	**17**	Pg		**Pb**	**07**	**15**	**49.7**	**-0.1**
	comp=E,218nm,0.3s									
SATY				Lg		Lg	07	16	35.6	
	comp=E,651nm,0.3s									
SATY	**Saty**	**3.26**	**17**	*e*P		**Pn**	**07**	**15**	**46.0**	**+2.9**
SATY				*e*S		**Sb**	**07**	**16**	**27.4**	**-2.2**
SATY	**Saty**	**3.26**	**17**	*e*P		**Pb**	**07**	**15**	**49.7**	**-0.1**
	comp=E,218nm,0.3s									
SATY				*e*S		**Sg**	**07**	**16**	**35.6**	**-0.8**
	comp=E,651nm,0.3s									
KNDC	**Almaty**	**3.26**	**359**	⇓Pg		**Pg**	**07**	**15**	**52.6**	**-1.7**
	comp=E,83nm,0.5s									
KNDC				⇑Lg		Lg	07	16	34.2	
	comp=E,5μm,0.7s									
KOTS	**Kotyrbulak**	**3.28**	**1**	Pg		**Pb**	**07**	**15**	**49.0**	**-1.1**
	comp=E,85nm,0.3s									
KOTS				Lg		Lg	07	16	34.4	
	comp=E,3μm,0.8s									
KOTS	**Kotyrbulak**	**3.28**	**1**	*e*P		**Pb**	**07**	**15**	**49.0**	**-1.1**
	comp=E,85nm,0.3s									
KOTS				*e*S		**Sg**	**07**	**16**	**34.4**	**-2.6**
	comp=E,3μm,0.8s									
AAK	**Ala-Archa**	**3.31**	**325**	Pn		**Pb**	**07**	**15**	**48.4**	**-2.3**
	comp=E,15nm,0.3s,baz=144,slow=8.0,SNR=49									
AAK				Lg		Lg	07	16	38.0	
	comp=E,35nm,0.3s,baz=331,slow=21,SNR=14									
AAK				LR		LR	07	16	40.8	
	comp=E,25nm,19.3s,baz=172,slow=32									
	comp=E,109nm,0.6s									
AAK	**Ala-Archa**	**3.31**	**325**	P		**Pb**	**07**	**15**	**48.9**	**-1.7**
	SNR=7.2									
AAK	**Ala-Archa**	**3.31**	**325**	⇑Pn		**Pn**	**07**	**15**	**46.4**	**+2.6**
	comp=E,32nm,0.5s									
AAK				⇑Lg		Lg	07	16	37.1	
	comp=E,258nm,0.8s									
AAK	**Ala-Archa**	**3.31**	**325**	⇑*i*P		**Pn**	**07**	**15**	**46.3**	**+2.5**
AAK				⇑*i*S		**Sn**	**07**	**16**	**27.2**	**+4.0**
OHH	**Osh**	**3.33**	**281**	⇑*i*P		**Pn**	**07**	**15**	**45.9**	**+1.9**
OHH				⇑*i*S		**Sn**	**07**	**16**	**26.7**	**+3.1**
FRU1	**Bishkek**	**3.39**	**328**	⇓*i*P		**Pn**	**07**	**15**	**47.8**	**+3.0**
FRU1				⇓*e*S		**Sn**	**07**	**16**	**29.8**	**+4.6**
ARSB	**Arslanbob**	**3.40**	**295**	⇑*i*P		**Pn**	**07**	**15**	**47.3**	**+2.3**
ARSB				⇑*i*S		**Sn**	**07**	**16**	**28.9**	**+3.5**
CHMS	**Chumysh**	**3.50**	**331**	P		**Pb**	**07**	**15**	**51.5**	**-2.4**
	SNR=11									
CHMS	**Chumysh**	**3.50**	**331**	⇑*i*P		**Pn**	**07**	**15**	**48.9**	**+2.6**
CHMS				⇑*i*S		**Sn**	**07**	**16**	**31.8**	**+3.9**
UZB	**Uzynbulak**	**3.51**	**24**	Pg		**Pb**	**07**	**15**	**53.7**	**-0.4**
	comp=E,78nm,0.5s									
UZB				Lg		Lg	07	16	42.5	
	comp=E,184nm,0.5s									
UZB	**Uzynbulak**	**3.51**	**24**	*e*P		**Pn**	**07**	**15**	**49.1**	**+2.5**
UZB				*e*S		**Sb**	**07**	**16**	**33.1**	**-3.7**
UZB	**Uzynbulak**	**3.51**	**24**	*e*P		**Pb**	**07**	**15**	**53.7**	**-0.4**
	comp=E,78nm,0.5s									
UZB				*e*S		**Sg**	**07**	**16**	**42.5**	**-2.0**
	comp=E,184nm,0.5s									
KURS	**Kuram**	**3.63**	**13**	Pg		**Pb**	**07**	**15**	**56.6**	**+0.6**
	comp=E,102nm,0.5s									
KURS				Lg		Lg	07	16	47.2	
	comp=E,242nm,0.6s									
KURS	**Kuram**	**3.63**	**13**	*e*P		**Pb**	**07**	**15**	**56.6**	**+0.6**
	comp=E,102nm,0.5s									
KURS				*e*S		**Sg**	**07**	**16**	**47.2**	**-1.0**
	comp=E,242nm,0.6s									
EKS2	**Erkin-Say**	**3.67**	**319**	P		**Pb**	**07**	**15**	**53.6**	**-3.2**
	SNR=109									
EKS2	**Erkin-Say**	**3.67**	**319**	⇓*i*P		**Pn**	**07**	**15**	**51.3**	**+2.6**
EKS2				⇓*i*S		**Sn**	**07**	**16**	**35.7**	**+3.6**
SHLS	**Shalkode**	**3.67**	**29**	Pg		**Pb**	**07**	**15**	**59.0**	**+2.3**
	comp=E,127nm,0.3s									
SHLS				Lg		Lg	07	16	51.5	
	comp=E,313nm,0.3s									
SHLS	**Shalkode**	**3.67**	**29**	*e*P		**Pb**	**07**	**15**	**53.4**	**-3.3**
SHLS				*e*S		**Sb**	**07**	**16**	**40.8**	**-0.6**
SHLS	**Shalkode**	**3.67**	**29**	*e*P		**Pb**	**07**	**15**	**59.0**	**+2.3**
	comp=E,127nm,0.3s									
SHLS				*e*S		**Sg**	**07**	**16**	**51.5**	**+1.9**
	comp=E,313nm,0.3s									
KPKS	**Kokpek**	**3.71**	**18**	Pg		**Pb**	**07**	**15**	**56.9**	**-0.6**
	comp=E,0.1nm,0.1s									
KPKS				Lg		Lg	07	16	47.9	
	comp=E,332nm,0.5s									
KPKS	**Kokpek**	**3.71**	**18**	*e*P		**Pn**	**07**	**15**	**51.8**	**+2.5**
KPKS	**Kokpek**	**3.71**	**18**	*e*P		**Pb**	**07**	**15**	**56.9**	**-0.6**
	comp=E,0.1nm,0.1s									
KPKS				*e*S		**Sg**	**07**	**16**	**47.9**	**-3.1**
	comp=E,332nm,0.5s									
KTBS	**Karatobe**	**3.77**	**356**	Pg		**Pb**	**07**	**15**	**57.8**	**-0.5**
	comp=E,0.7nm,0.1s									
KTBS				Lg		Lg	07	16	49.5	
	comp=E,881nm,0.6s									
KTBS	**Karatobe**	**3.77**	**356**	*e*P		**Pb**	**07**	**15**	**57.8**	**-0.5**
	comp=E,0.7nm,0.1s									
KTBS				*e*S		**Sg**	**07**	**16**	**49.5**	**-3.2**
	comp=E,881nm,0.6s									
PDGK	**Podgornoye**	**3.83**	**27**	⇑Pn		**Pn**	**07**	**15**	**52.8**	**+1.9**
	comp=E,19nm,0.5s									
PDGK				⇑Pg		**Pb**	**07**	**16**	**01.2**	**+1.7**
	comp=E,70nm,0.4s									
PDGK				⇑Lg		Lg	07	16	52.8	
	comp=E,366nm,0.8s									
USP	**Ospenovka**	**3.83**	**331**	P		**Pb**	**07**	**15**	**55.5**	**-3.9**
	SNR=25									
USP	**Ospenovka**	**3.83**	**331**	⇑*i*P		**Pn**	**07**	**15**	**53.5**	**+2.7**
USP				⇑*i*S		**Sn**	**07**	**16**	**39.5**	**+3.6**
KRBS	**Karabastau**	**3.88**	**345**	Pg		**Pb**	**07**	**15**	**59.9**	**-0.5**
	comp=E,73nm,0.6s									
KRBS				Lg		Lg	07	16	53.1	
	comp=E,1μm,0.8s									
KRBS	**Karabastau**	**3.88**	**345**	*e*P		**Pb**	**07**	**15**	**59.9**	**-0.5**
	comp=E,73nm,0.6s									
KRBS				*e*S		**Sg**	**07**	**16**	**53.1**	**-3.3**
	comp=E,1μm,0.8s									
SGDS	**Sogindy**	**3.94**	**333**	Pg		**Pb**	**07**	**16**	**01.1**	**-0.3**
	comp=E,18nm,0.6s									
SGDS				Lg		Lg	07	16	55.3	
	comp=E,129nm,0.5s									
SGDS	**Sogindy**	**3.94**	**333**	*e*P		**Pn**	**07**	**15**	**55.9**	**+3.5**
SGDS				*e*S		**Sb**	**07**	**16**	**45.2**	**-4.0**
MRKS	**Merke**	**4.02**	**315**	Pg		**Pb**	**07**	**16**	**02.0**	**-0.7**
	comp=E,58nm,0.6s									
MRKS				Lg		Lg	07	16	56.8	
	comp=E,150nm,0.4s									
MRKS	**Merke**	**4.02**	**315**	*e*P		**Pb**	**07**	**16**	**02.0**	**-0.7**
	comp=E,58nm,0.6s									
MRKS				*e*S		**Sb**	**07**	**16**	**56.8**	**+5.4**
	comp=E,150nm,0.4s									
MNAS	**Manas**	**4.27**	**308**	⇓*i*P		**Pn**	**07**	**15**	**59.6**	**+2.6**
MNAS				⇓*i*S		**Sn**	**07**	**16**	**50.2**	**+3.2**
ARK	**Arkit**	**4.29**	**297**	⇓*i*P		**Pn**	**07**	**15**	**59.6**	**+2.4**
ARK				⇓*i*S		**Sn**	**07**	**16**	**50.2**	**+2.9**
ARXS	**Arharly**	**4.29**	**7**	Pg		**Pb**	**07**	**16**	**08.0**	**+0.7**
	comp=E,38nm,0.4s									
ARXS				Lg		Lg	07	17	06.9	
	comp=E,420nm,0.6s									
ARXS	**Arharly**	**4.29**	**7**	*e*P		**Pb**	**07**	**16**	**08.0**	**+0.7**
	comp=E,38nm,0.4s									
ARXS				*e*S		**Sg**	**07**	**16**	**06.9**	**-2.7**
	comp=E,420nm,0.6s									
KNOS	**Konyrlen**	**4.67**	**19**	Pg		**Pb**	**07**	**16**	**15.5**	**+1.6**
	comp=E,71nm,0.4s									
KNOS				Lg		Lg	07	17	19.5	
	comp=E,65nm,0.5s									
TRKS	**Terek-Say**	**4.77**	**291**	⇑*e*P		**Pn**	**07**	**16**	**05.7**	**+1.8**
TRKS				⇑*i*S		**Sn**	**07**	**17**	**00.7**	**+1.4**
BTK	**Batken**	**4.80**	**273**	⇑*e*P		**Pn**	**07**	**16**	**06.3**	**+2.1**
BTK				⇑*i*S		**Sn**	**07**	**17**	**02.0**	**+2.1**
DJR	**Jarkent**	**4.82**	**24**	Pg		**Pb**	**07**	**16**	**17.7**	**+1.4**
	comp=E,46nm,0.4s									
DJR				Lg		Lg	07	17	23.6	
	comp=E,64nm,0.6s									
DJR	**Jarkent**	**4.82**	**24**	*e*P		**Pb**	**07**	**16**	**17.7**	**+1.4**
	comp=E,46nm,0.4s									
DJR				*e*S		**Sg**	**07**	**17**	**23.6**	**-2.9**
	comp=E,64nm,0.6s									

comp=E,24nm,21.8s,baz=302,slow=40
comp=E,1.1nm,0.5s

BHPL	**Bhopal**	**16.66**	**179**	*eP*	P	07 18 58.0	+10
AKTO	**Aktyubinsk**	**16.98**	**314**	P	**P**	**07 18 50.6**	**-0.6**
	comp=E,0.2nm,0.3s,baz=123,slow=10,SNR=6.8						
AKTO				LR	LR	07 26 33.7	
	comp=E,33nm,19.4s,baz=41,slow=41						
	comp=E,4.0nm,0.7s						
SONM	**Songino Array**	**22.45**	**60**	P	**P**	**07 19 52.1**	**+1.1**
	comp=E,0.9nm,0.7s,baz=262,slow=12,SNR=4.7						
	comp=E,0.9nm,0.7s						
BRTR	**Keskin Array B**	**33.10**	**284**	LR	LR	07 36 34.2	
	comp=E,32nm,20.4s,baz=92,slow=39						
JCJ	**Chichijima**	**54.68**	**82**	LR	LR	07 48 00.7	
	comp=E,34nm,20.9s,baz=125,slow=36						
TORD	**Torodi Ar. Bea**	**70.51**	**271**	P	**P**	**07 26 05.7**	**-1.3**
	comp=E,0.4nm,0.3s,baz=47,slow=5.3,SNR=7.7						
	comp=E,0.4nm,0.3s						

*IDC **03** 07:19:58.5±2.6, 45°.97N×83°.23E, h0km, mbtmp3.7/4, ML2.5/3, Error ellipse: s-maj=20.5km s-min=16.6km az=179.0*
*SOME **03** 07:19:58.6, 45°.92N×82°.97E, h10km*
*NNC **03** 07:19:59.7±1.3, 45°.87N×83°.01E, h9km±11km, mb4.2, mpv3.7, Error ellipse: s-maj=9.9km s-min=5.1km az=102.0*
*ASRS **03** 07:20:03.2±0.5, 46°.N±3°×8°.3E±°, h8km, MLh4.0/6, Error ellipse: s-maj=6.3km s-min=3.6km az=162.2, confirmed*

ISC 03 07:19:59.0±1.3, 46°.00N±0°.03×83°.19E±0°.04, h2km±11km, n45, σ2.9 11/79, 1C-6D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**1.00**	**322**	⇓P	**Pg**	**07 20 19.5**	**+1.3**
	20nm,0.2s,baz=142,slow=17,SNR=13						
MK31				⇑S	**Sb**	**07 20 34.0**	**+1.2**
	116nm,0.5s,baz=147,slow=23						
MKAR	**Makanchi Array**	**1.00**	**322**	Pg	**Pg**	**07 20 19.0**	**+0.8**
	67nm,0.3s,baz=144,slow=17,SNR=39						
MKAR				Lg	Lg	07 20 33.6	
	95nm,0.3s,baz=141,slow=30,SNR=18						
MAKZ	**Makanchi**	**1.16**	**314**	⇓P	**Pb**	**07 20 22.1**	**+0.3**
	31nm,0.3s						
MAKZ				⇓S	**Sn**	**07 20 38.5**	**-0.2**
	71nm,0.3s						
MAKZ	**Makanchi**	**1.16**	**314**	⇓Pg	**Pb**	**07 20 22.0**	**+0.3**
MAKZ				Sg	**Sb**	**07 20 37.9**	**+0.6**
ZSN	**Zaisan**	**1.85**	**38**	Pg	**Pg**	**07 20 35.1**	**+0.6**
	60nm,0.3s						
ZSN				Lg	Lg	07 21 01.7	
	264nm,0.3s						
ZSN	**Zaisan**	**1.85**	**38**	*eP*	**Pg**	**07 20 35.1**	**+0.6**
	60nm,0.3s						
ZSN				*eS*	**Sg**	**07 21 01.7**	**+3.2**
	264nm,0.3s						
KAPS	**Kapalarasan**	**2.78**	**256**	Pg	**Pn**	**07 20 46.0**	**+1.4**
	11nm,0.1s						
KAPS				Lg	Lg	07 21 20.4	
	123nm,0.1s						
DJR	**Jarkent**	**2.93**	**236**	Pg	**Pb**	**07 20 50.3**	**-1.6**
	9.3nm,0.2s						
DJR				Lg	Lg	07 21 27.5	
	31nm,0.2s						
DJR	**Jarkent**	**2.93**	**236**	*eP*	**Pb**	**07 20 50.3**	**-1.6**
	9.3nm,0.2s						
DJR				*eS*	**Sb**	**07 21 27.5**	**-0.6**
	31nm,0.2s						
KNOS	**Konyrlen**	**3.27**	**241**	Pg	**Pb**	**07 20 56.4**	**-1.5**
	5.9nm,0.2s						
KNOS				Lg	Lg	07 21 37.8	
	99nm,0.2s						
PDGK	**Podgornoye**	**3.75**	**226**	⇓Pn	**Pn**	**07 20 57.1**	**-1.0**
	5.7nm,0.5s						
PDGK				⇓Sn	**Sn**	**07 21 39.9**	**-3.0**
	14nm,0.5s						
SHLS	**Shalkode**	**3.90**	**224**	Pg	**Pn**	**07 21 03.2**	**+3.2**
	4.4nm,0.1s						
SHLS				Lg	Lg	07 21 49.6	
	75nm,0.3s						
SHLS	**Shalkode**	**3.90**	**224**	*eP*	**Pn**	**07 21 03.2**	**+3.2**
	4.4nm,0.1s						
SHLS				*eS*	**Sn**	**07 21 49.6**	**+3.3**
	75nm,0.3s						
KPKS	**Kokpek**	**4.09**	**233**	Pg	**Pb**	**07 21 10.6**	**-1.1**
	0.2nm,0.2s						
KPKS				Lg	Lg	07 22 02.6	
	98nm,0.4s						
KPKS	**Kokpek**	**4.09**	**233**	*eP*	**Pb**	**07 21 10.6**	**-1.1**
	0.2nm,0.2s						
KPKS				*eS*	**Sb**	**07 22 02.6**	**+1.0**
	98nm,0.4s						
UZB	**Uzynbulak**	**4.12**	**228**	Pg	**Pb**	**07 21 11.0**	**-1.3**
	4.7nm,0.2s						
UZB				Lg	Lg	07 22 03.4	
	24nm,0.3s						
UZB	**Uzynbulak**	**4.12**	**228**	*eP*	**Pb**	**07 21 11.0**	**-1.3**
	4.7nm,0.2s						
UZB				*eS*	**Sb**	**07 22 03.4**	**+0.8**
	24nm,0.3s						
ARXS	**Arharly**	**4.19**	**247**	Pg	**Pb**	**07 21 13.0**	**-0.5**
	5.4nm,0.3s						
ARXS				Lg	Lg	07 22 06.5	
	47nm,0.3s						
ARXS	**Arharly**	**4.19**	**247**	*eP*	**Pb**	**07 21 13.0**	**-0.5**
	5.4nm,0.3s						
ARXS				*eS*	**Sb**	**07 22 06.5**	**+1.9**
	47nm,0.3s						
SATY	**Saty**	**4.51**	**231**	Pg	**Pb**	**07 21 18.4**	**-0.5**
	4.3nm,0.1s						
SATY				Lg	Lg	07 22 15.4	
	67nm,0.2s						
SATY	**Saty**	**4.51**	**231**	*eP*	**Pb**	**07 21 18.4**	**-0.5**
	4.3nm,0.1s						
SATY				*eS*	**Sb**	**07 22 15.4**	**+1.6**
	67nm,0.2s						
TUNR	**Tungur**	**4.66**	**26**	Pn	**Pn**	**07 21 10.2**	**-0.2**
TUNR				Pg	**Pg**	**07 21 26.3**	**-2.0**
TUNR				Sg	**Sg**	**07 22 26.7**	**-2.0**
DGZ	**Jazzator, Alta**	**4.67**	**36**	Pn	**Pn**	**07 21 10.1**	**-0.6**
DGZ				Pg	**Pg**	**07 21 26.7**	**-1.8**
DGZ				Sg	**Sg**	**07 22 27.3**	**-1.8**
SEM	**Semipalatinsk**	**4.82**	**337**	Pg	**Pb**	**07 21 27.1**	**+2.8**
	3.4nm,0.1s						
SEM				Lg	Lg	07 22 29.1	
	23nm,0.3s						
SEM	**Semipalatinsk**	**4.82**	**337**	*eP*	**Pb**	**07 21 27.1**	**+2.8**
	3.4nm,0.1s						
SEM				*eS*	**Sg**	**07 22 30.8**	**-3.1**
	25nm,0.2s						
UKR	**Ust'-Kan**	**5.05**	**11**	Pn	Pn	07 21 11.1	-4.7
UKR				Pg	**Pb**	**07 21 30.8**	**+2.7**
UKR				Sg	**Sg**	**07 22 37.9**	**-3.1**
KTBS	**Karatobe**	**5.16**	**246**	Pg	**Pb**	**07 21 30.1**	**+0.1**
	0.4nm,0.1s						
KTBS				Lg	Lg	07 22 35.6	
	25nm,0.4s						
KTBS	**Karatobe**	**5.16**	**246**	*eP*	**Pb**	**07 21 30.1**	**+0.1**
	0.4nm,0.1s						
KTBS				*eS*	**Sb**	**07 22 35.6**	**+3.3**
	25nm,0.4s						
MDOK	**Medeo**	**5.22**	**239**	Pg	**Pb**	**07 21 31.4**	**+0.3**
	6.9nm,0.3s						
MDOK				Lg	Lg	07 22 38.7	
	31nm,0.6s						
AKAR	**Aktash**	**5.24**	**33**	Pn	**Pn**	**07 21 19.7**	**+1.3**
AKAR				Pg	**Pg**	**07 21 38.7**	**-0.6**
AKAR				Sg	**Sg**	**07 22 47.9**	**+0.7**
TNSS	**Tian-Shan**	**5.36**	**239**	Pg	**Pb**	**07 21 34.1**	**+0.6**
	1.2nm,0.4s						
TNSS				Lg	Lg	07 22 43.0	
	4.9nm,0.3s						
TNSS	**Tian-Shan**	**5.36**	**239**	*eP*	**Pb**	**07 21 34.1**	**+0.6**
	1.2nm,0.4s						
TNSS				*eS*	**Sb**	**07 22 43.0**	**+4.7**
	4.9nm,0.3s						
CUR	**Chagan-Uzun**	**5.37**	**38**	Pn	**Pn**	**07 21 20.0**	**-0.2**
CUR				Pg	**Pg**	**07 21 40.4**	**-1.3**
CUR				Sg	**Sg**	**07 22 52.5**	**+1.3**
ELDR	**Elanda**	**5.56**	**19**	Pn	Pn	07 21 18.0	-4.7
ELDR				Pg	**Pg**	**07 21 42.8**	**-2.7**
ELDR				Sg	**Sg**	**07 22 58.8**	**+1.3**
KURBB	**Kurchatov Arra**	**5.57**	**328**	Pn	**Pn**	**07 21 23.8**	**+1.0**
	0.3nm,0.3s,baz=148,slow=11,SNR=9.0						
KURBB				Sn	**Sn**	**07 22 21.8**	**-5.4**
	0.5nm,0.3s,baz=113,slow=21,SNR=4.2						
KURBB				Lg	Lg	07 22 55.4	
	1.8nm,0.3s,baz=96,slow=27,SNR=12						
	2.0nm,0.6s						
KURK	**Kurchatov**	**5.61**	**329**	Pn	**Pn**	**07 21 25.1**	**+1.8**
KURK				Sn	**Sn**	**07 22 21.3**	**-7.0**
KURK	**Kurchatov**	**5.61**	**329**	Pg	**Pb**	**07 21 41.5**	**+3.9**
KURK				Sg	**Sg**	**07 22 56.8**	**-2.2**
ULGR	**Ulagan, Altay**	**5.61**	**33**	Pn	**Pn**	**07 21 23.8**	**+0.3**
ULGR				Pg	**Pg**	**07 21 44.4**	**-2.1**
ULGR				Sg	**Sg**	**07 22 57.8**	**-1.4**
ARTR	**Artybash**	**6.40**	**23**	Pn	**Pn**	**07 21 35.5**	**+1.4**
ARTR				Sg	**Sg**	**07 23 22.2**	**-2.1**
YALR	**Yailyu, Altay**	**6.46**	**25**	Pn	**Pn**	**07 21 35.0**	**-0.1**
YALR				Sg	**Sg**	**07 23 25.1**	**-1.3**
TEL	**Teeli**	**6.85**	**40**	Pn	**Pn**	**07 21 40.0**	**-0.4**
TEL				Pg	**Pg**	**07 22 06.9**	**-3.2**
TEL				Sg	**Sg**	**07 23 40.8**	**+2.0**
AAK	**Ala-Archa**	**7.08**	**245**	Lg	Lg	07 23 36.6	
	0.4nm,0.3s,baz=359,slow=21,SNR=1.8						
ZALV	**Zalesovo Beam**	**8.02**	**7**	Pn	**Pn**	**07 21 56.7**	**+0.2**
	0.2nm,0.3s,baz=188,slow=15,SNR=2.4						
ZALV				Sn	**Sn**	**07 23 28.0**	**+0.3**
	0.6nm,0.3s,baz=191,slow=30,SNR=2.6						
ZALV				Lg	Lg	07 24 14.6	
	0.9nm,0.3s,baz=191,slow=28,SNR=4.2						
	1.0nm,0.5s						
BVAR	**Borovoye Array**	**10.88**	**315**	Pn	**Pn**	**07 22 35.3**	**-0.3**
	baz=129,slow=12,SNR=5.8						
BVAR				Sn	**Sn**	**07 24 34.1**	**-3.7**
	baz=124,slow=25,SNR=1.4						
BVAR				Lg	Lg	07 25 45.4	
	0.1nm,0.3s,baz=128,slow=24,SNR=2.1						
	3.8nm,0.7s						
SONM	**Songino Array**	**15.95**	**75**	Pn	**Pn**	**07 23 44.2**	**-0.4**
	1.2nm,0.3s,baz=273,slow=12,SNR=8.0						

*ASRS **03** 07:30:20.0±0.9, 53°.54N×87°.71E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 03 07:30:23.4±3.0, 53°.50N×87°.43E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.1km s-min=16.8km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**287**	I	I	07 41 15.0	
	0.2nm,1.1s,baz=101,slow=312,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.61**	**287**	Pg	Pn	07 30 52.7	-0.4
	1.2nm,0.3s,baz=101,slow=15,SNR=11						
ZALV				Lg	Lg	07 31 15.2	
	2.0nm,0.3s,baz=108,slow=23,SNR=13						
KURBB	**Kurchatov Arra**	**6.20**	**246**	Pn	Pn	07 31 56.5	+0.3
	0.1nm,0.3s,baz=65,slow=15,SNR=3.6						
KURBB				Sn	Sn	07 33 06.1	-1.5
	baz=60,slow=25,SNR=1.2						
KURBB				Lg	Lg	07 33 39.3	
	baz=64,slow=31,SNR=2.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.48**	**208**	Pn	Pn	07 32 15.4	+1.6
	0.1nm,0.3s,baz=27,slow=14,SNR=1.8						
	0.2nm,0.3s						

*IDC **03** 07:32:55.2±0.6, 56°.81N×33°.81W, h0km, mb3.9/21, mbtmp3.9/22, ML2.5/1, MS3.5/26, Error ellipse: s-maj=19.9km s-min=12.6km az=176.0*
*NEIC **03** 07:32:56.4±0.8, 56°.85N±0°.07×33°.8W±0°.1, h10km±1km, mb4.4/27, Error ellipse: s-maj=15.1km s-min=8.7km az=224.0*

ISC 03 07:32:56.8±0.5, 56°.83N±0°.09×33°.85W±0°.05, h13km, n115, σ0°.90/94, mb4.3/39, MS3.5/22, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVI	**Ivigtut**	**8.59**	**307**	Pn	**Pn**	**07 35 00.3**	**-0.3**
ANGG	**Ammassalik, Gr**	**9.01**	**350**	Pn	**Pn**	**07 35 06.2**	**-0.2**
BORG	**Borgarnes**	**10.01**	**32**	Pn	**Pn**	**07 35 22.6**	**+2.6**
	0.8nm,0.3s,baz=199,slow=8.0,SNR=6.7						
BORG	**Borgarnes**	**10.01**	**32**		**Pn**	**07 35 21.3**	**+1.2**
SFJD	**Kangerlussuaq**	**12.84**	**329**	LR	LR	07 40 04.2	
	comp=Z,302nm,18.4s,baz=140,slow=33						
ILULI	**Ilulissat**	**14.60**	**335**	Pn	**Pn**	**07 36 21.2**	**-1.5**
SUMG	**Summit**	**15.93**	**355**	Pn	**Pn**	**07 36 40.0**	**-0.6**
EKB	**Eskdalemuir**	**17.10**	**82**	Pn	**Pn**	**07 36 53.7**	**-1.6**
EKB				IAmb	IAmb	07 36 54.6	
	comp=Z,32nm,1.2s						
EKA	**Eskdalemuir Ar**	**17.12**	**82**	LR	LR	07 42 25.2	
	comp=Z,127nm,20.0s,baz=192,slow=33						
FRB	**Frobisher Bay**	**18.34**	**306**	LR	LR	07 43 01.9	
	comp=Z,99nm,18.9s,baz=131,slow=33						
SCHQ	**Schefferville**	**18.54**	**278**	P	**Pn**	**07 37 13.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=81,slow=3.9,SNR=4.0						
SCHQ				LR	LR	07 43 13.8	
	comp=Z,108nm,19.4s,baz=52,slow=33						
	comp=Z,3.9nm,1.0s						
SCHQ	**Schefferville**	**18.54**	**278**	P	**Pn**	**07 37 13.0**	**0.0**
GBN	**Guysborough**	**20.63**	**248**	P	**P**	**07 37 36.7**	**+1.0**
ICQ	**Pointe Anglais**	**21.16**	**264**		**P**	**07 37 41.2**	**-0.1**
ICQ				IAmb	IAmb	07 37 47.4	
	comp=Z,16nm,1.1s						
BATG	**Bathurst New B**	**21.80**	**258**	P	**P**	**07 37 47.4**	**-0.9**
BATG				IAmb	IAmb	07 37 52.0	
	comp=Z,30nm,1.5s						
LMN	**Caledonia Moun**	**22.04**	**253**	P	**P**	**07 37 49.6**	**-1.4**
NOA	**NORSAR Array B**	**23.26**	**61**	P	**P**	**07 38 03.8**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=278,slow=10,SNR=3.8						
	comp=Z,1.2nm,0.9s						
NC303	**NORSAR Array S**	**23.30**	**60**	P	**P**	**07 38 03.5**	**-0.5**
NC303				IAmb	IAmb	07 38 27.7	
	comp=Z,11nm,1.2s						
D62A	**Allapoint, All**	**23.54**	**261**	P	**P**	**07 38 06.9**	**+0.5**
D62A				IAmb	IAmb	07 38 14.2	
	comp=Z,23nm,1.4s						
HFS	**Hagfors**	**24.64**	**62**	P	**P**	**07 38 16.6**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=270,slow=12,SNR=2.3						
	comp=Z,1.6nm,0.7s						
PKME	**Peaks-Kenny Pk**	**24.81**	**257**	P	**P**	**07 38 19.0**	**+0.7**
ESDC	**Sonseca Array**	**25.97**	**119**	P	**P**	**07 38 28.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=314,slow=8.8,SNR=4.4						
ESDC				LR	LR	07 47 26.2	
	comp=Z,108nm,18.4s,baz=36,slow=34						
	comp=Z,0.6nm,0.6s						
ESDC	**Sonseca Array**	**25.97**	**119**	P	**P**	**07 38 28.6**	**-0.3**
ECH	**Echery**	**26.04**	**92**	P	**P**	**07 38 30.0**	**+0.5**
CLL	**Collm**	**27.59**	**81**	P	**P**	**07 38 42.7**	**-0.6**
CLL				IAmb	IAmb	07 38 46.1	
	comp=Z,9.4nm,1.5s						
TUE	**Stuetta**	**28.27**	**93**	P	**P**	**07 38 52.4**	**+2.7**
	comp=Z,14nm,0.8s						
DAVOX	**Davos/Dischmat**	**28.38**	**92**	LR	LR	07 49 38.8	
	comp=Z,142nm,18.8s,baz=261,slow=35						
RES	**Resolute Bay**	**28.84**	**331**	LR	LR	07 50 05.0	
	comp=Z,52nm,19.3s,baz=123,slow=36						
KSP	**Ksiaz**	**29.61**	**80**	P	P	07 38 54.7	-6.7
	comp=Z,4.1nm,0.8s						
DPC	**Dobruska-Polom**	**29.89**	**81**	P	P	07 38 58.5	-5.4
	comp=Z,4.5nm,1.2s						
FIA1	**FINESS Array S**	**30.12**	**56**	P	**P**	**07 39 05.6**	**-0.1**
FINES	**FINESS Array B**	**30.12**	**56**	P	**P**	**07 39 05.5**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=278,slow=13,SNR=4.9						
	comp=Z,2.3nm,0.8s						
FINES	**FINESS Array B**	**30.12**	**56**	P	**P**	**07 39 05.2**	**-0.5**
SADO	**Sadowa**	**30.49**	**266**	LR	LR	07 50 07.1	
	comp=Z,107nm,19.7s,baz=74,slow=34						
VRAC	**Vranov**	**30.60**	**82**	LR	LR	07 51 36.3	
	comp=Z,69nm,18.0s,baz=330,slow=37						
MDT	**Midelt**	**31.30**	**128**	LR	LR	07 50 06.4	
	comp=Z,74nm,19.9s,baz=42,slow=33						
OJC	**Ojcow**	**31.84**	**79**	P	**P**	**07 39 18.5**	**-2.5**
	comp=Z,8.0nm,1.0s						
RNPP8	**Varash**	**34.46**	**73**	P	**P**	**07 39 42.3**	**-1.5**
RNPP5	**Staryi Chortor**	**34.53**	**73**	P	**P**	**07 39 43.6**	**-0.9**
EPLO	**Experimental L**	**35.49**	**285**		**P**	**07 39 52.4**	**-0.4**
EPLO				IAmb	IAmb	07 39 59.5	
	comp=Z,4.3nm,1.0s						
MI28	**Mi28,Pidlybu**	**35.64**	**73**	P	**P**	**07 39 53.3**	**-0.7**
LUBAR	**Lubar, Ukraine**	**36.26**	**74**	P	**P**	**07 39 59.2**	**-0.1**
LUBAR				pP	**pP**	**07 40 01.3**	**-1.4**
ULM	**Lac du Bonnet**	**36.29**	**287**	P	**P**	**07 39 59.1**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=49,slow=6.8,SNR=2.1						
ULM				LR	LR	07 53 28.9	
	comp=Z,106nm,19.3s,baz=24,slow=34						
	comp=Z,1.7nm,0.6s						
ULM	**Lac du Bonnet**	**36.29**	**287**	P	**P**	**07 39 58.8**	**-0.8**
ULM				IAmb	IAmb	07 40 04.4	
	comp=Z,4.0nm,1.0s						
AK21	**Malin Array Si**	**36.44**	**72**	P	**P**	**07 40 00.5**	**-0.4**
AK20	**Malin Array Si**	**36.45**	**72**	P	**P**	**07 40 00.3**	**-0.6**
AK19	**Malin Array Si**	**36.46**	**72**	P	**P**	**07 40 00.4**	**-0.6**
AK22	**Malin Array Si**	**36.47**	**72**	P	**P**	**07 40 00.5**	**-0.6**
AK18	**Malin Array Si**	**36.49**	**72**	P	**P**	**07 40 00.7**	**-0.6**
AK17	**Malin Array Si**	**36.50**	**72**	P	**P**	**07 40 01.2**	**-0.2**
AK15	**Malin Array Si**	**36.53**	**72**	P	**P**	**07 40 01.0**	**-0.6**
AK16	**Malin Array Si**	**36.54**	**72**	P	**P**	**07 40 01.1**	**-0.6**
AK04	**Malin Array Si**	**36.54**	**72**	P	**P**	**07 40 01.0**	**-0.7**
AK13	**Malin Array Si**	**36.55**	**72**	P	**P**	**07 40 01.1**	**-0.7**
AK14	**Malin Array Si**	**36.56**	**72**	P	**P**	**07 40 01.3**	**-0.6**
AK03	**Malin Array Si**	**36.56**	**72**	P	**P**	**07 40 01.1**	**-0.8**
AK11	**Malin Array Si**	**36.56**	**72**	P	**P**	**07 40 01.4**	**-0.5**
KIEV	**Kiev**	**36.58**	**72**	P	**P**	**07 40 01.5**	**-0.5**
	comp=Z,33nm,0.9s						
AK12	**Malin Array Si**	**36.58**	**72**	P	**P**	**07 40 01.5**	**-0.5**
AK01	**Malin Array Si**	**36.58**	**72**	P	**P**	**07 40 01.5**	**-0.6**
AKASG	**Malin Array Be**	**36.58**	**72**	P	**P**	**07 40 01.7**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=307,slow=8.5,SNR=16						
AKASG				LR	LR	07 55 02.8	
	comp=Z,26nm,20.8s,baz=250,slow=36						
	comp=Z,4.2nm,0.7s						
AKBB	**Malin Array Si**	**36.58**	**72**		**P**	**07 40 01.7**	**-0.3**
AKBB				IAmb	IAmb	07 40 04.1	
	comp=Z,7.1nm,0.8s						
AKBB	**Malin Array Si**	**36.58**	**72**	P	**P**	**07 40 01.5**	**-0.6**
AK02	**Malin Array Si**	**36.60**	**72**	P	**P**	**07 40 01.7**	**-0.5**
AK05	**Malin Array Si**	**36.62**	**72**	P	**P**	**07 40 01.9**	**-0.5**
AK06	**Malin Array Si**	**36.63**	**72**	P	**P**	**07 40 02.0**	**-0.5**
AK08	**Malin Array Si**	**36.64**	**72**	P	**P**	**07 40 02.0**	**-0.5**
AK10	**Malin Array Si**	**36.65**	**72**	P	**P**	**07 40 02.2**	**-0.5**
AK07	**Malin Array Si**	**36.66**	**72**	P	**P**	**07 40 02.3**	**-0.4**
AK09	**Malin Array Si**	**36.66**	**72**	P	**P**	**07 40 02.3**	**-0.5**
VAE	**Valguarnera**	**37.13**	**100**	LR	LR	07 55 30.9	
	comp=Z,65nm,18.0s,baz=314,slow=37						
MLR	**Muntele Rosu**	**37.97**	**81**	LR	LR	07 55 14.3	
	comp=Z,58nm,20.7s,baz=352,slow=35						
YKA	**Yellowknife A**	**38.66**	**313**	P	**P**	**07 40 19.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=60,slow=8.5,SNR=2.4						
YKA				LR	LR	07 55 32.6	
	comp=Z,144nm,18.0s,baz=36,slow=35						
	comp=Z,0.5nm,0.8s						
TKL	**Tuckaleechee C**	**39.38**	**259**	LR	LR	07 55 35.8	
	comp=Z,78nm,19.6s,baz=32,slow=34						
X40A	**Basin Creek Fa**	**45.19**	**266**	P	**P**	**07 41 13.2**	**+0.1**
X40A				IAmb	IAmb	07 41 14.8	
	comp=Z,4.0nm,0.8s						
MIAR	**Mount Ida**	**45.55**	**267**	P	**P**	**07 41 17.0**	**+1.0**
MIAR				IAmb	IAmb	07 41 18.9	
	comp=Z,8.8nm,1.5s						
TUL3	**Leonard**	**45.76**	**270**		**P**	**07 41 17.8**	**+0.1**
BR106	**Keskin Array S**	**46.03**	**82**	P	P	07 41 27.3	+7.4
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**46.04**	**82**	P	**P**	**07 41 18.9**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=325,slow=6.0,SNR=4.5						
BRTR				LR	LR	08 00 25.8	
	comp=Z,18nm,22.0s,baz=280,slow=36						
	comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**46.04**	**82**	P	**P**	**07 41 18.6**	**-1.4**
YNE	**Yellowstone No**	**47.00**	**290**	P	**P**	**07 41 27.7**	**+0.1**
YNE				IAmb	IAmb	07 41 34.0	
	comp=Z,2.4nm,0.9s						
DLBC	**Dease Lake**	**47.21**	**315**	LR	LR	08 00 59.5	
	comp=Z,154nm,19.1s,baz=18,slow=36						
BOZ	**Bozeman (W)**	**47.43**	**291**	P	**P**	**07 41 30.8**	**0.0**
BOZ				IAmb	IAmb	07 41 37.6	
	comp=Z,5.1nm,1.3s						
KBZ	**Khabaz**	**48.18**	**71**	P	**P**	**07 41 37.8**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=305,slow=9.3,SNR=5.4						
	comp=Z,2.0nm,0.8s						
WMOK	**Wichita Mounta**	**48.27**	**272**	P	**P**	**07 41 37.6**	**+0.2**
WMOK				IAmb	IAmb	07 41 44.2	
	comp=Z,7.2nm,1.4s						
PDAR	**Pinedale Array**	**48.31**	**287**	P	**P**	**07 41 37.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=48,slow=8.1,SNR=2.6						
PDAR				LR	LR	08 00 55.6	
	comp=Z,59nm,18.9s,baz=70,slow=35						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**48.31**	**287**	P	**P**	**07 41 37.1**	**-0.7**
NEW	**Newport**	**48.36**	**297**	LR	LR	08 00 56.7	
	comp=Z,114nm,18.1s,baz=40,slow=35						
ILAR	**Eielson Array**	**48.51**	**328**	P	**P**	**07 41 38.4**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=42,slow=5.3,SNR=4.7						
ILAR				LR	LR	08 02 11.8	
	comp=Z,58nm,18.1s,baz=112,slow=36						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**	**48.51**	**328**	P	**P**	**07 41 38.9**	**+0.1**
BBB	**Bella Bella**	**50.73**	**308**	LR	LR	08 00 44.9	
	comp=Z,46nm,20.6s,baz=58,slow=33						
AKTO	**Aktyubinsk**	**50.89**	**55**	P	**P**	**07 41 57.5**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=322,slow=7.7,SNR=6.2						
	comp=Z,2.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.35**	**134**	P	**P**	**07 42 00.7**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=330,slow

baz=224,slow=75,SNR=62
DGAR Diego Garcia 8.79 43 Pn **Pn 07 41 05.3 +0.4**
KAAM Kaadhehdhoo 15.74 25 Pn **Pn 07 42 38.7 -1.0**
KAAM IAmb IAmb 07 43 22.7
comp=Z,57nm,1.1s
OPO Ambohidratompo 19.01 253 P **P 07 43 20.4 +0.4**
comp=Z,0.1nm,0.3s,baz=59,slow=12,SNR=5.4
comp=Z,4.2nm,0.8s
ABPO Ambohimpanom 19.07 252 P **P 07 43 19.8 -0.8**
ABPO IAmb IAmb 07 43 58.2
comp=Z,16nm,1.4s
PALK Pallekele 25.40 35 LR LR 07 52 02.7
comp=Z,95nm,19.5s,baz=210,slow=31
H04N2 CROZET ISLANDS 34.41 198 T T 08 21 40.1
baz=26,slow=75,SNR=21
H04N1 CROZET ISLANDS 34.41 198 T T 08 21 41.1
baz=26,slow=75,SNR=23
H04N3 CROZET ISLANDS 34.43 198 T T 08 21 39.0
baz=26,slow=75,SNR=19
MATP Matopo 36.72 254 LR LR 07 59 59.5
comp=Z,70nm,18.8s,baz=84,slow=34
LBTB Lobatse 39.88 248 LR LR 08 00 38.6
comp=Z,55nm,18.4s,baz=69,slow=33
LBTB Lobatse 39.88 248 P **P 07 46 32.4 +0.4**
LBTB IAmb IAmb 07 47 09.4
comp=Z,9.9nm,1.3s
CMAR Chiang Mai Arr 45.44 46 LR LR 08 05 37.7
comp=Z,41nm,19.4s,baz=235,slow=35
EVN Everest 46.10 25 P **P 07 47 22.9 0.0**
EVN IAmb IAmb 07 47 27.9
comp=Z,4.2nm,1.2s
H01W3 Cape Leeuwin H 47.70 125 T T 08 38 42.6
baz=283,slow=75,SNR=57
H01W2 Cape Leeuwin H 47.70 125 T T 08 38 43.2
baz=283,slow=75,SNR=47
H01W1 Cape Leeuwin H 47.72 125 T T 08 38 43.8
baz=283,slow=75,SNR=66
MBWA Marble Bar 51.17 106 P **P 07 48 01.2 -0.2**
SHAA Shahritus 51.24 2 P **P 07 48 02.3 +0.7**
SHAA IAmb IAmb 07 48 09.0
comp=Z,11nm,1.2s
EIL Elat 52.90 325 LR LR 08 06 18.5
comp=Z,32nm,21.8s,baz=83,slow=31
KAPI Kappang 53.26 86 LR LR 08 09 12.1
comp=Z,46nm,19.6s,baz=262,slow=34
MAW Mawson 53.68 182 P **P 07 48 19.4 +0.2**
FITZ Fitzroy Crossi 56.90 103 P **P 07 48 44.5 +1.3**
MKAR Makanchi Array 62.10 12 P **P 07 49 19.1 +0.4**
comp=Z,0.4nm,0.6s,baz=190,slow=5.6,SNR=3.7
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 62.10 12 P **P 07 49 18.6 -0.1**
AB31 Akbulak array 63.16 355 P **P 07 49 25.8 +0.1**
AB31 IAmb IAmb 07 49 27.1
comp=Z,2.9nm,1.4s
ABKAR Akbulak array 63.16 355 P **P 07 49 25.9 +0.3**
MDUB Mudurnu 63.21 330 P **P 07 49 26.3 0.0**
ASAR Alice Springs 64.15 110 P **P 07 49 33.0 +0.1**
comp=Z,1.7nm,1.0s,baz=269,slow=6.0,SNR=12
comp=Z,1.7nm,1.0s
ASAR Alice Springs 64.15 110 P **P 07 49 32.8 -0.1**
AS31 Alice Springs 64.15 110 P **P 07 49 32.0 -0.9**
AS31 IAmb IAmb 07 50 02.0
comp=Z,1.7nm,1.3s
WRA Warramunga Arr 64.90 106 P **P 07 49 38.4 +0.5**
comp=Z,2.0nm,0.9s,baz=269,slow=6.0,SNR=9.9
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 64.90 106 P **P 07 49 37.8 0.0**
WB0 Warramunga Arr 64.97 105 P **P 07 49 38.1 -0.2**
WB0 IAmb IAmb 07 49 52.0
comp=Z,13nm,1.4s
KURBB Kurchatov Arra 65.15 8 P **P 07 49 38.6 -0.1**
comp=Z,0.6nm,0.9s,baz=206,slow=7.0,SNR=3.8
comp=Z,0.6nm,0.9s
BVAR Borovoye Array 66.77 3 P **P 07 49 48.5 -0.6**
comp=Z,0.8nm,0.7s,baz=180,slow=6.0,SNR=2.2
comp=Z,0.8nm,0.7s
ZALV Zalesovo Beam 69.41 12 P **P 07 50 05.5 -0.1**
TAM Tamanrasset 69.88 301 P **P 07 50 09.2 -0.2**
DBIC Dimbokro 73.60 281 LR LR 08 23 31.4
comp=Z,38nm,18.0s,baz=134,slow=36
QSPA South Pole Qui 76.15 180 P **P 07 50 43.8 -2.0**
comp=Z,2.3nm,1.0s,baz=265,slow=5.1,SNR=4.4
comp=Z,2.3nm,1.0s
QSPA South Pole Qui 76.15 180 IAmb IAmb 07 50 44.5
comp=Z,5.1nm,1.2s
QSPA P **P 07 50 46.0 +0.2**
PDAR Pinedale Array 151.05 354 PKPbc **PKPbc 07 58 50.9 -0.6**
comp=Z,1.8nm,0.7s,baz=348,slow=2.4,SNR=18

*IDC **03** 07:50:20.6±3.4, 53.°55N×90.°62E, h0km, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=28.0km s-min=23.2km az=57.0*

ASRS 03 07:50:12.0±0.7, 53.°80N×91.°11E, h0km, M3.1(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.73**	**275**	I	I	08 11 39.4	
	0.1nm,1.0s,baz=91,slow=316,SNR=8.0						
ZALV	**Zalesovo Beam**	**3.73**	**275**	Pn	Pb	07 51 17.8	-0.9
	0.8nm,0.3s,baz=98,slow=16,SNR=6.6						
ZALV				Lg	Lg	07 52 10.0	
	1.7nm,0.3s,baz=94,slow=23,SNR=10						
	2.2nm,0.3s						
KURBB	**Kurchatov Arra**	**8.36**	**253**	Pn	Pn	07 52 17.5	+3.2
	0.1nm,0.3s,baz=65,slow=15,SNR=5.6						
KURBB				Sn	Sn	07 53 47.5	-1.7
	0.1nm,0.3s,baz=66,slow=26,SNR=6.3						
KURBB				Lg	Lg	07 54 34.6	
	0.1nm,0.3s,baz=68,slow=33,SNR=9.5						
	0.6nm,0.2s						
MKAR	**Makanchi Array**	**9.00**	**222**	Pn	Pn	07 52 27.1	+4.0
	0.1nm,0.3s,baz=42,slow=14,SNR=4.6						
MKAR				Sn	Sn	07 54 03.6	-1.5
	0.1nm,0.3s,baz=35,slow=25,SNR=1.9						
MKAR				Lg	Lg	07 54 56.0	
	0.1nm,0.3s,baz=34,slow=28,SNR=3.6						
	0.5nm,0.5s						

*IDC **03** 07:57:32.3±2.7, 14.°13S×66.°20E, h0km, mb3.8/6, mbtmp3.8/6, MS3.5/6, Error ellipse: s-maj=96.2km s-min=28.8km az=56.0*

ISC 03 07:57:33.5±3.2, 14.°3S±0.°5×66.°0E±0.°7, h13km, n22, σ0s96/7, mb4.0/6, MS3.5/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.14**	**45**	T	T	08 08 58.4	
	baz=224,slow=75,SNR=13						
H08S2	**Diego Garcia H**	**9.16**	**45**	T	T	08 09 00.9	
	baz=224,slow=75,SNR=32						
H08S3	**Diego Garcia H**	**9.16**	**45**	T	T	08 09 04.8	
	baz=224,slow=75,SNR=65						
PALK	**Pallekele**	**25.89**	**35**	LR	LR	08 10 17.4	
	comp=Z,138nm,19.5s,baz=208,slow=30						
H04N2	**CROZET ISLANDS**	**33.97**	**198**	T	T	08 40 24.5	
	baz=26,slow=75,SNR=8.4						
H04N1	**CROZET ISLANDS**	**33.98**	**198**	T	T	08 40 25.6	
	baz=26,slow=75,SNR=9.0						
H04N3	**CROZET ISLANDS**	**33.99**	**198**	T	T	08 40 25.2	
	baz=26,slow=75,SNR=8.2						
MATP	**Matopo**	**36.26**	**255**	LR	LR	08 17 58.6	
	comp=Z,90nm,18.2s,baz=66,slow=34						
LBTB	**Lobatse**	**39.39**	**248**	LR	LR	08 20 05.6	
	comp=Z,60nm,18.1s,baz=47,slow=34						
BRDH	**Bariadhala**	**44.48**	**35**	LR	LR	08 24 47.7	
	comp=Z,123nm,18.2s,baz=154,slow=37						
CMAR	**Chiang Mai Arr**	**45.95**	**46**	LR	LR	08 22 27.0	
	comp=Z,34nm,21.6s,baz=220,slow=33						
H01W3	**Cape Leeuwin H**	**47.83**	**124**	T	T	08 57 21.4	
	baz=283,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**47.83**	**124**	T	T	08 57 21.5	
	baz=283,slow=75,SNR=26						
H01W1	**Cape Leeuwin H**	**47.84**	**124**	T	T	08 57 22.6	
	baz=283,slow=75,SNR=27						
ASAR	**Alice Springs**	**64.40**	**110**	P	**P**	**08 08 09.8**	**-0.1**
	0.8nm,0.9s,baz=275,slow=6.0,SNR=6.0						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**65.18**	**106**	P	**P**	**08 08 14.8**	**-0.2**
	1.7nm,0.9s,baz=269,slow=5.8,SNR=7.4						
	1.7nm,0.9s						
KURBB	**Kurchatov Arra**	**65.53**	**9**	P	**P**	**08 08 14.9**	**-1.6**
	0.3nm,0.5s,baz=191,slow=6.5,SNR=4.6						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**67.12**	**3**	P	**P**	**08 08 26.5**	**-0.1**
	1.5nm,1.0s,baz=191,slow=4.4,SNR=3.8						
	1.5nm,1.0s						
ZALV	**Zalesovo Beam**	**69.82**	**12**	P	**P**	**08 08 44.3**	**+0.8**
	0.6nm,0.5s,baz=198,slow=6.6,SNR=1.1						
	0.6nm,0.5s						
SONM	**Songino Array**	**71.54**	**27**	P	**P**	**08 08 54.9**	**+0.6**
	0.3nm,0.5s,baz=232,slow=7.2,SNR=4.0						
	0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**84.64**	**50**	LR	LR	08 46 48.3	
	comp=Z,20nm,20.7s,baz=158,slow=35						
PDAR	**Pinedale Array**	**151.34**	**353**	PKPbc	**PKiKP**	**08 17 28.2**	**+0.2**
	1.5nm,0.8s,baz=73,slow=2.7,SNR=14						

*IDC **03** 07:59:54.0±3.8, 53.°48N×87.°98E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=38.8km s-min=19.7km az=52.0*

ASRS 03 07:59:55.0±1.0, 53.°55N×87.°65E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**284**	I	I	08 10 40.0	
	0.1nm,0.9s,baz=102,slow=318,SNR=5.3						
ZALV	**Zalesovo Beam**	**1.73**	**284**	Pn	Pg	08 00 27.9	-0.2
	0.7nm,0.3s,baz=108,slow=17,SNR=11						
ZALV				Lg	Lg	08 00 56.5	
	1.3nm,0.3s,baz=107,slow=33,SNR=7.6						
KURBB	**Kurchatov Arra**	**6.34**	**246**	Pn	Pn	08 01 30.0	+0.4
	baz=65,slow=14,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.59**	**209**	Pn	Pn	08 01 48.4	+1.6
	0.1nm,0.3s,baz=26,slow=11,SNR=2.4						
	0.2nm,0.4s						

*IDC **03** 08:12:40.1±6.4, 11.°16S×166.°33E, h87km±58km, mb3.7/6, mbtmp4.0/7, ML4.1/1, MS3.1/3, Error ellipse: s-maj=50.4km s-min=32.8km az=151.0*

*NEIC **03** 08:12:43.5±0.9, 11.°38S±0.°06×166.°5E±0.°1, h113km±10km, mb4.3/12, Error ellipse: s-maj=21.7km s-min=6.8km az=107.0*

ISC 03 08:12:46.5±0.9, 11.°46S±0.°08×166.°4E±0.°1, h150km, n30, σ1s42/22, mb4.2/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.65**	**287**	Pn	**Pn**	**08 14 20.7**	**-1.1**
KOUNC	**Koumac, New Ca**	**9.26**	**192**	Pn	**Pn**	**08 14 56.4**	**-0.2**
DZM	**Mont Dzumac**	**10.55**	**180**	P	**Pn**	**08 15 12.3**	**-1.5**
	1.3nm,0.3s,baz=354,slow=19,SNR=17						
DZM				S	**Sn**	**08 17 09.1**	**-1.5**
	4.8nm,0.7s,baz=24,slow=20,SNR=2.1						
DZM				LR	LR	08 18 48.1	
	comp=Z,79nm,20.4s,baz=301,slow=34						
	6.0nm,0.5s						
ONTNC	**Ouen Toro**	**10.78**	**180**	Pn	**Pn**	**08 15 14.3**	**-2.6**
MSVF	**Nonsavu**	**12.89**	**120**	LR	LR	08 19 20.0	
	comp=Z,106nm,18.3s,baz=171,slow=30						
PATS	**Pohnpei**	**19.88**	**336**	P	**P**	**08 17 04.5**	**-1.8**
EIDS	**Eidsvold**	**20.02**	**224**	P	Pn	08 17 09.5	-1.5
EIDS				IAmb	IAmb	08 17 11.3	
	comp=Z,22nm,0.9s						
ARMA	**Armidale**	**23.31**	**214**	P	**P**	**08 17 43.2**	**+2.0**
ARMA				IAmb	IAmb	08 17 44.9	
	comp=Z,25nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**29.77**	**1**	T	T	08 49 24.8	
	baz=182,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.77**	**1**	T	T	08 49 27.6	
	baz=182,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**29.78**	**1**	T	T	08 49 28.7	
	baz=182,slow=76,SNR=12						
STKA	**Stephens Creek**	**30.58**	**225**	P	**P**	**08 18 48.3**	**+2.1**
	comp=Z,1.6nm,0.6s,baz=45,slow=7.1,SNR=1.7						
	comp=Z,1.6nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.98**	**1**	T	T	08 50 57.2	
	baz=178						
H11N3	**WAKE ISLAND Hy**	**30.99**	**1**	T	T	08 51 13.5	
	baz=178						
H11N2	**WAKE ISLAND Hy**	**31.00**	**1**	T	T	08 51 03.0	
	baz=178						
WR8	**Warramunga Arr**	**31.79**	**251**	P	**P**	**08 18 57.2**	**+0.3**
WR8				IAmb	IAmb	08 19 06.1	
	comp=Z,5.2nm,1.0s						
WRA	**Warramunga Arr**	**31.93**	**251**	P	**P**	**08 18 58.4**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=83,slow=9.0,SNR=26						
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**31.93**	**251**	P	**P**	**08 18 57.9**	**-0.3**
AS31	**Alice Springs**	**33.17**	**244**	P	**P**	**08 19 09.3**	**+0.3**
ASAR	**Alice Springs**	**33.17**	**244**	P	**P**	**08 19 09.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=67,slow=10,SNR=32						
	comp=Z,1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.88**	**256**	P	**P**	**08 20 06.6**	**+0.7**
PPT	**Papeete**	**42.99**	**103**	LR	LR	08 34 24.1	
	comp=Z,24nm,19.7s,baz=2.0,slow=30						
SMRI	**Semarang**	**55.32**	**269**	P	**P**	**08 22 06.2**	**+1.1**
TWG	**Pinlang**	**55.95**	**308**	P	**P**	**08 22 08.3**	**-1.1**
O15K	**Ungalikthiuk R**	**75.51**	**17**	P	**P**	**08 24 14.7**	**+0.8**
O15K				IAmb	IAmb	08 24 23.7	
	comp=Z,13nm,1.3s						
L18K	**Granite Mounta**	**78.89**	**17**	P	**P**	**08 24 34.7**	**+1.9**
L18K				IAmb	IAmb	08 24 56.7	
	comp=Z,6.4nm,1.4s						
L22K	**Petersville**	**80.89**	**19**	P	**P**	**08 24 44.2**	**+0.6**
L22K				IAmb	IAmb	08 25 21.5	
	comp=Z,4.9nm,1.4s						
ILAR	**Eielson Array**	**83.71**	**18**	P	**P**	**08 24 58.3**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=232,slow=4.4,SNR=2.2						
	comp=Z,0.2nm,0.8s						
MKAR	**Makanchi Array**	**94.25**	**317**	P	**P**	**08 25 47.3**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=95,slow=7.0,SNR=1.9						
	comp=Z,0.2nm,0.4s						
SNAA	**Sanae**	**96.74**	**183**	P	**P**	**08 26 01.7**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=117,slow=2.3,SNR=4.0						
	comp=Z,0.8nm,0.6s						

*IDC **03** 08:21:12.2±5.9, 7.°01S×155.°66E, h116km±47km, mb3.6/9, mbtmp4.0/11, MS3.1/9, Error ellipse: s-maj=39.3km s-min=23.9km az=95.0*

ISC 03 08:21:10.0±1.0, 7.°0S±0.°2×155.°8E±0.°1, h100km, n18, σ0s77/14, mb3.8/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.62**	**305**	LR	LR	08 24 14.0	
	comp=Z,26nm,21.3s,baz=359,slow=40						
HNR	**Honiara**	**4.75**	**121**	LR	LR	08 24 16.2	
	comp=Z,7.4nm,18.1s,baz=22,slow=38						
PMG	**Port Moresby**	**8.90**	**254**	P	**Pn**	**08 23 16.5**	**+0.7**
	29nm,0.6s,baz=57,slow=7.2,SNR=11						
PMG				S	**Sn**	**08 24 54.5**	**+0.2**
	30nm,1.0s,baz=33,slow=12,SNR=3.1						
PMG				LR	LR	08 26 17.8	
	comp=Z,133nm,20.2s,baz=110,slow=35						
CTA	**Charters Tower**	**15.98**	**215**	P	**Pn**	**08 24 49.6**	**+0.5**
	4.6nm,0.9s,baz=31,slow=12,SNR=2.0						
CTA				LR	LR	08 29 53.7	
	comp=Z,96nm,21.5s,baz=40,slow=33						
GUMO	**Guam**	**23.16**	**332**	LR	LR	08 33 57.0	
	comp=Z,31nm,21.1s,baz=72,slow=33						
WRA	**Warramunga Arr**	**24.49**	**236**	P	**P**	**08 26 19.7**	**-0.4**
	0.8nm,0.5s,baz=61,slow=9.4,SNR=8.6						
WRA				PcP	**PcP**	**08 29 57.2**	**+0.8**
	0.5nm,0.7s,baz=54,slow=2.0,SNR=3.2						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.79**	**229**	P	**P**	**08 26 39.5**	**-1.4**
	0.4nm,0.5s,baz=60,slow=10,SNR=12						
ASAR				PcP	**PcP**	**08 30 02.0**	**+0.4**
	0.5nm,0.8s,baz=52,slow=2.2,SNR=4.2						
ASAR				LR	LR	08 36 07.2	
	comp=Z,70nm,18.7s,baz=226,slow=34						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**28.09**	**206**	LR	LR	08 37 34.7	
	comp=Z,107nm,18.7s,baz=19,slow=35						
FITZ	**Fitzroy Crossi**	**31.40**	**247**	P	**P**	**08 27 20.8**	**-1.1**
	5.0nm,0.6s,baz=80,slow=7.9,SNR=16						
	5.0nm,0.6s						
RPZ	**Rata Peaks**	**38.94**	**162**	LR	LR	08 42 59.2	
	comp=Z,19nm,18.1s,baz=39,slow=34						
PETK	**Petropavlovsk-**	**59.89**	**1**	LR	LR	08 55 03.9	
	comp=Z,13nm,20.3s,baz=172,slow=34						
QSPA	**South Pole Qui**	**82.98**	**180**	P	**P**	**08 33 24.2**	**+0.3**
	2.0nm,0.6s,baz=295,slow=0.6,SNR=20						
	2.0nm,0.6s						

ILAR Eielson Array 83.08 21 P **P 08 33 24.4 +0.2**
0.5nm,1.0s,baz=252,slow=4.9,SNR=4.2
0.5nm,1.0s
MKAR Makanchi Array 83.94 319 P **P 08 33 30.0 +0.9**
1.0nm,0.8s,baz=88,slow=5.5,SNR=5.5
1.0nm,0.8s
ZALV Zalesovo Beam 84.64 326 P **P 08 33 31.9 -0.4**
0.4nm,0.5s,baz=116,slow=3.4,SNR=1.4
0.4nm,0.5s
KURBB Kurchatov Arra 87.37 322 P **P 08 33 45.7 -0.2**
0.4nm,0.3s,baz=120,slow=4.6,SNR=1.6
0.4nm,0.3s
YBH Yreka Blue Hor 88.28 48 LR LR 09 08 05.5
comp=Z,24nm,19.9s,baz=210,slow=32
BVAR Borovoye Array 92.79 323 P **P 08 34 10.5 -0.7**
0.6nm,0.5s,baz=104,slow=6.1,SNR=2.3
0.6nm,0.5s

*IDC **03** 08:25:33.5±3.7, 53.°40N×87.°62E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=35.5km s-min=16.6km az=58.0*

ASRS 03 08:25:32.0±1.6, 53.°45N×87.°42E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**289**	I	I	08 35 40.0	
	baz=108,slow=310,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.63**	**289**	Pg	Pg	08 26 04.7	+1.5
	0.7nm,0.3s,baz=112,slow=14,SNR=15						
ZALV				Lg	Lg	08 26 29.6	
	1.2nm,0.3s,baz=115,slow=27,SNR=7.0						
KURBB	**Kurchatov Arra**	**6.17**	**246**	Pn	Pn	08 27 07.7	+3.3
	0.1nm,0.3s,baz=60,slow=14,SNR=2.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.43**	**208**	Pn	Pn	08 27 24.6	+3.0
	0.2nm,0.3s,baz=32,slow=14,SNR=3.5						
MKAR				Lg	Lg	08 29 30.2	
	0.1nm,0.3s,baz=28,slow=28,SNR=1.8						
	0.3nm,0.3s						

*IDC **03** 08:30:30.0±3.5, 53.°51N×87.°88E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=31.8km s-min=18.1km az=52.0*

ASRS 03 08:30:31.0±1.4, 53.°54N×87.°63E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**285**	I	I	08 41 35.0	
	baz=102,slow=314,SNR=5.4						
ZALV	**Zalesovo Beam**	**1.72**	**285**	Pg	Pg	08 31 03.9	0.0
	1.0nm,0.3s,baz=99,slow=18,SNR=18						
ZALV				Lg	Lg	08 31 29.4	
	1.9nm,0.3s,baz=106,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**6.32**	**246**	Pn	Pn	08 32 06.7	+1.3
	baz=62,slow=14,SNR=1.6						
KURBB				Lg	Lg	08 33 55.5	
	0.1nm,0.3s,baz=61,slow=30,SNR=5.7						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.57**	**209**	Pn	Pn	08 32 23.4	+0.8
	0.2nm,0.3s,baz=24,slow=16,SNR=2.6						
	0.2nm,0.4s						

*IDC **03** 08:40:09.4±3.8, 53.°67N×88.°08E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=36.7km s-min=19.4km az=50.0*

ASRS 03 08:40:09.0±2.3, 53.°67N×87.°96E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**280**	I	I	08 51 49.9	
	baz=97,slow=317,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.88**	**280**	Pg	Pg	08 40 45.0	-0.1
	1.8nm,0.3s,baz=100,slow=14,SNR=13						
ZALV				Lg	Lg	08 41 12.5	
	2.4nm,0.3s,baz=98,slow=24,SNR=9.9						
KURBB	**Kurchatov Arra**	**6.56**	**246**	Pn	Pn	08 41 47.2	+0.5
	0.3nm,0.3s,baz=65,slow=15,SNR=4.1						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**7.79**	**210**	Pn	Pn	08 42 06.5	+3.0
	0.1nm,0.3s,baz=30,slow=14,SNR=2.1						
	0.1nm,0.3s						

*IDC **03** 08:47:08.8±1.2, 3.°40S×100.°88E, h0km, mb4.1/13, mbtmp4.1/13, MS3.7/3, Error ellipse: s-maj=41.8km s-min=15.9km az=56.0*

*DJA **03** 08:47:12.1±0.8, 3.°5S±3.°×10.°1E±.°, h11km±6km, M4.2/25, MLv4.2/25*

*NEIC **03** 08:47:15.5±1.2, 3.°3S±0.°1×100.°9E±0.°1, h38km±9km, mb4.5/18, Error ellipse: s-maj=20.5km s-min=9.4km az=52.0*

ISC 03 08:47:13.5±0.7, 3.°42S±0.°08×100.°80E±0.°07, h32km, n69, σ0s91/55, mb4.4/22, MS3.9/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**1.02**	**309**	P	**Pn**	**08 47 31.9**	**+0.3**
MASI	**Maura Aman, Be**	**1.46**	**79**	P	**Pb**	**08 47 40.4**	**+0.3**
KSI	**Kapahiang**	**1.80**	**97**	P	Pb	08 47 49.8	+3.9
MNAI	**Manna**	**2.34**	**114**	Pn	**Pn**	**08 47 50.5**	**+0.6**
MNAI	**Manna**	**2.34**	**114**	P	**Pn**	**08 47 50.4**	**+0.6**
EGSI	**Enggano, Bengk**	**2.42**	**143**	P	**Pn**	**08 47 50.7**	**-0.1**
PDSI	**Padang**	**2.51**	**352**	P	**Pn**	**08 47 52.7**	**+0.6**
SISI	**Saibi**	**2.69**	**320**	P	**Pn**	**08 47 55.0**	**+0.4**
PPI	**Padang Panjang**	**2.97**	**352**	P	**Pn**	**08 48 00.1**	**+1.7**
LWLI	**Liwa**	**3.62**	**116**	P	**Pn**	**08 48 09.6**	**+2.2**
BKNI	**Bangkinang**	**3.73**	**4**	Pn	**Pn**	**08 48 09.3**	**+0.5**
KLSI		**4.12**	**108**	P	**Pn**	**08 48 16.8**	**+2.6**
KASI	**Kota Agung**	**4.24**	**120**	P	**Pn**	**08 48 17.0**	**+1.2**
MNSI	**Mandailing Nat**	**4.36**	**344**	P	**Pb**	**08 48 29.0**	**-0.4**
GSI	**Gunungsitoli**	**5.69**	**325**	Pn	**Pn**	**08 48 37.0**	**+1.1**
MYKOM	**Kota Tinggi**	**6.00**	**31**	Pn	**Pn**	**08 48 39.6**	**-0.5**
RPSI	**Rantau Prapat**	**6.36**	**343**	Pn	**Pn**	**08 48 45.5**	**+0.6**
BBJI	**Bungbulang**	**7.91**	**121**	Pn	**Pn**	**08 49 05.6**	**-0.8**
CM31	**Chiang Mai Arr**	**21.81**	**355**	P	**P**	**08 52 02.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.81**	**355**	P	**P**	**08 52 01.0**	**-2.2**
	0.9nm,0.4s,baz=174,slow=11,SNR=2.3						
	0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**21.81**	**355**	P	**P**	**08 52 01.5**	**-1.6**
H08S2	**Diego Garcia H**	**28.48**	**260**	T	T	09 22 36.8	
	baz=83,slow=75,SNR=22						
H08S3	**Diego Garcia H**	**28.49**	**260**	T	T	09 22 34.4	
	baz=83,slow=75,SNR=171						
H08S1	**Diego Garcia H**	**28.50**	**260**	T	T	09 22 33.2	
	baz=83,slow=75,SNR=120						
SHL	**Shillong**	**30.08**	**344**	P	**P**	**08 53 20.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**33.15**	**154**	LR	LR	09 05 13.8	
	comp=Z,59nm,21.8s,baz=244,slow=33						
H01W3	**Cape Leeuwin H**	**33.67**	**160**	T	T	09 29 41.7	
	baz=336,slow=75,SNR=9.7						
H01W2	**

comp=Z,1.5nm,0.8s
MANEM **Manem** **48.91 329** P **P** **08 55 58.1 +1.2**
MANEM IAmb IAmb 08 55 59.8
comp=Z,9.0nm,0.6s
NRN Naryn **50.03 336** P **P** **08 56 05.8 +0.4**
NRN IAmb IAmb 08 56 07.2
comp=Z,2.8nm,0.7s
KDJ Kajisay **50.15 337** P **P** **08 56 07.1 +0.9**
KDJ IAmb IAmb 08 56 08.4
comp=Z,7.7nm,0.8s
PDGK Podgornoye **50.35 340** P **P** **08 56 07.9 +0.3**
BOOM Boomskoye usch **50.94 336** P **P** **08 56 13.2 +1.0**
BOOM IAmb IAmb 08 56 15.5
comp=Z,6.2nm,1.1s
ARSB Arslanbob **51.24 333** P **P** **08 56 15.3 +0.9**
ARSB IAmb IAmb 08 56 16.9
comp=Z,5.7nm,1.1s
SONM Songino Array **51.27 5** P **P** **08 56 15.5 +1.0**
comp=Z,5.8nm,0.7s,baz=186,slow=8.9,SNR=30
comp=Z,5.8nm,0.7s
SONM Songino Array **51.27 5** P **P** **08 56 14.9 +0.5**
SONM IAmb IAmb 08 56 16.4
comp=Z,6.2nm,0.9s
ULN Ulaanbaatar **51.36 5** P **P** **08 56 15.6 +0.4**
AAK Ala-Archa **51.66 335** P **P** **08 56 18.7 +1.2**
MKAR Makanchi Array **52.60 344** P **P** **08 56 24.7 +0.4**
comp=Z,1.9nm,0.7s,baz=150,slow=8.5,SNR=20
comp=Z,1.9nm,0.7s
MKAR Makanchi Array **52.60 344** P **P** **08 56 24.3 0.0**
MJAR Matsushiro Arr **52.88 38** P **P** **08 56 25.2 -1.3**
comp=Z,1.2nm,0.6s,baz=218,slow=7.3,SNR=4.1
comp=Z,1.2nm,0.6s
USA0B Ussuriysk Arra **55.03 27** P **P** **08 56 40.9 -1.1**
USA0B IAmb IAmb 08 56 43.3
comp=Z,9.8nm,0.9s
USRK Ussuriysk Ar. **55.03 27** P **P** **08 56 41.9 -0.1**
comp=Z,7.6nm,0.8s,baz=224,slow=5.6,SNR=8.6
comp=Z,7.6nm,0.8s
KURBB Kurchatov Arra **57.13 343** P **P** **08 56 57.0 +0.1**
comp=Z,0.8nm,0.5s,baz=157,slow=6.7,SNR=4.6
KURBB LR LR 09 26 05.9
comp=Z,87nm,19.0s,baz=166,slow=41
comp=Z,0.8nm,0.5s
ZAA0 Zalesovo Array **58.70 349** P **P** **08 57 07.9 +0.1**
ZAA0 IAmb IAmb 08 57 23.0
comp=Z,3.9nm,0.9s
ZALV Zalesovo Beam **58.70 349** P **P** **08 57 07.6 -0.3**
comp=Z,3.4nm,0.8s,baz=178,slow=5.6,SNR=3.7
comp=Z,3.4nm,0.8s
ZALV Zalesovo Beam **58.70 349** P **P** **08 57 07.9 +0.1**
H04N2 CROZET ISLANDS **60.15 217** T T 10 02 15.7
baz=61,slow=75,SNR=775
H04N1 CROZET ISLANDS **60.16 217** T T 10 02 16.2
baz=61,slow=75,SNR=1001
H04N3 CROZET ISLANDS **60.17 217** T T 10 02 14.8
baz=61,slow=75,SNR=848
H04S1 CROZET ISLANDS **60.42 216** T T 10 02 35.8
baz=59,slow=75,SNR=72
H04S3 CROZET ISLANDS **60.43 217** T T 10 02 35.5
baz=59,slow=75,SNR=141
H04S2 CROZET ISLANDS **60.44 216** T T 10 02 40.0
baz=59,slow=75,SNR=69
BVAR Borovoye Array **61.78 340** P **P** **08 57 28.5 -0.5**
comp=Z,0.8nm,0.3s,baz=146,slow=7.2,SNR=7.8
comp=Z,0.8nm,0.3s
AB31 Akbulak array **63.26 331** P **P** **08 57 38.7 -0.2**
AB31 IAmb IAmb 08 57 39.5
comp=Z,2.6nm,0.8s
ABKAR Akbulak array **63.26 331** P **P** **08 57 38.6 -0.3**
KBZ Khabaz **69.90 319** P **P** **08 58 22.2 +0.8**
comp=Z,1.2nm,0.6s,baz=121,slow=5.9,SNR=3.6
comp=Z,1.2nm,0.6s
SPITS Spitsbergen Ar **92.18 348** LR LR 09 51 04.9
comp=Z,41nm,18.2s,baz=102,slow=42
TXAR Lajitas Array **145.31 39** PKPbc **PKPdf** **09 06 49.2 +0.3**
comp=Z,2.5nm,0.6s,baz=302,slow=1.2,SNR=36

*OSPL **03** 08:48:51.9±0.3, 17°.79N×66°.92W, h6km±7km, ML3.5, Presumed earthquake*
*NEIC **03** 08:48:51.2±1.8, 17°.84N±0°.03×66°.93W±0°.02, h10km±1km, ML3.6/37, Md3.6/23(RSPR), Error ellipse: s-maj=4.7km s-min=2.9km az=20.0*
*RSPR **03** 08:48:52.4, 17°.93N×66°.95W, h14km, MD3.6/23*
*PTWC **03** 08:48:52, 17°.90N×66°.90W, MI3.7/15*
*SDD **03** 08:48:53.3±2.5, 17°.95N×66°.94W, h0km±16km, MD3.0, ML3.5, MW3.3, Presumed earthquake*
ISC 03 08:48:52.1±1.0, 17°.93N±0°.04×66°.93W±0°.02, h17km±4km, n64, σ0°61/95, 18C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**43**		**Pg**	**08 48 55.2**	**-0.2**
GBPR					**Sg**	**08 48 57.6**	**0.0**
GBPR	**Guanica, Bosqu**	**0.07**	**43**	*eP*	**Pg**	**08 48 55.2**	**-0.2**
GBPR				*eS*	**Sg**	**08 48 57.6**	**0.0**
MLPR	**Magueyes Islan**	**0.12**	**292**		**Pg**	**08 48 55.5**	**-0.4**
MLPR					**Sg**	**08 48 57.8**	**-0.6**
MLPR				IAML		08 48 58.1	
	27μm,0.5s						
MLPR	**Magueyes Islan**	**0.12**	**292**	P	**Pg**	**08 48 55.3**	**-0.6**
MLPR				S	**Sg**	**08 48 57.8**	**-0.6**
MLPR	**Magueyes Islan**	**0.12**	**292**	*iP*	**Pg**	**08 48 55.4**	**-0.4**
MLPR				*iSg*	**Sg**	**08 48 58.1**	**-0.3**
MLPR				IAML		08 48 58.2	
	comp=N,13μm,0.2s						
MLPR	**Magueyes Islan**	**0.12**	**292**	*eP*	**Pg**	**08 48 55.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.19**	**295**		**Pg**	**08 48 56.3**	**-0.5**
CRPR					**Sg**	**08 48 59.4**	**-0.6**
CRPR				IAML		08 48 59.6	
	comp=N,15μm,0.6s						
CRPR				IAML		08 49 00.7	
	comp=N,9μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.19**	**295**	P	**Pg**	**08 48 56.3**	**-0.5**
CRPR				S	**Sg**	**08 48 59.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.19**	**295**	*eP*	**Pg**	**08 48 56.3**	**-0.5**
LSP	**Las Mesas**	**0.29**	**329**		**Pg**	**08 48 58.1**	**-0.3**
LSP	**Las Mesas**	**0.29**	**329**	*eP*	**Pg**	**08 48 58.1**	**-0.3**
OBIP	**Obispado Ponce**	**0.33**	**69**		**Pg**	**08 48 59.0**	**-0.1**
OBIP					**Sg**	**08 49 04.3**	**+0.5**
OBIP	**Obispado Ponce**	**0.33**	**69**	P	**Pg**	**08 48 58.5**	**-0.6**
OBIP	**Obispado Ponce**	**0.33**	**69**	*i* P	**Pg**	**08 48 59.0**	**-0.1**
OBIP				*eS*	**Sg**	**08 49 04.2**	**+0.5**
OBIP				IAML		08 49 04.8	
	comp=Z,26μm,0.2s						
OBIP	**Obispado Ponce**	**0.33**	**69**	*eP*	**Pg**	**08 48 59.0**	**-0.1**
OBIP				*eS*	**Sg**	**08 49 04.3**	**+0.5**
PRSN	**Puerto Rico Se**	**0.36**	**325**		**Pg**	**08 48 59.1**	**-0.4**
PRSN					**Sg**	**08 49 04.7**	**+0.1**
PRSN	**Puerto Rico Se**	**0.36**	**325**	P	**Pg**	**08 48 59.2**	**-0.4**
PRSN				S	**Sg**	**08 49 04.8**	**+0.1**
PRSN	**Puerto Rico Se**	**0.36**	**325**	*iP*	**Pg**	**08 48 59.3**	**-0.3**
PRSN				IAML		08 49 09.1	
	comp=N,12μm,0.3s						
PRSN	**Puerto Rico Se**	**0.36**	**325**	*eP*	**Pg**	**08 48 59.1**	**-0.4**
CELP	**Cerrillos**	**0.36**	**66**		**Pg**	**08 48 59.6**	**-0.1**
CELP					**Sg**	**08 49 05.4**	**+0.5**
CELP				IAML		08 49 05.6	
	comp=N,4μm,0.6s						
CELP				IAML		08 49 05.7	
	comp=N,4μm,0.4s						
CELP	**Cerrillos**	**0.36**	**66**	P	**Pg**	**08 48 59.7**	**-0.1**
CELP				S	**Sg**	**08 49 05.3**	**+0.5**
CELP	**Cerrillos**	**0.36**	**66**	*iP*	**Pg**	**08 48 59.8**	**+0.1**
CELP				*iSg*	**Sg**	**08 49 04.9**	**0.0**
CELP				IAML		08 49 05.5	
	comp=N,1μm,0.3s						
CELP	**Cerrillos**	**0.36**	**66**	*eP*	**Pg**	**08 48 59.6**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.38**	**31**		**Pg**	**08 48 59.8**	**-0.3**
UUPR					**Sg**	**08 49 05.2**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.38**	**31**	P	**Pg**	**08 48 59.6**	**-0.4**
UUPR				S	**Sg**	**08 49 05.1**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.38**	**31**	*eP*	**Pg**	**08 48 59.8**	**-0.3**
AOPR	**Arecibo Observ**	**0.45**	**22**		**Pg**	**08 49 01.0**	**-0.3**
AOPR					**Sg**	**08 49 07.2**	**-0.2**
AOPR	**Arecibo Observ**	**0.45**	**22**	P	**Pg**	**08 49 00.8**	**-0.5**
AOPR	**Arecibo Observ**	**0.45**	**22**	*iP*	**Pg**	**08 49 01.0**	**-0.3**
AOPR				*iSg*	**Sg**	**08 49 07.1**	**-0.3**
AOPR				IAML		08 49 07.3	
	comp=N,10μm,0.3s						
AOPR	**Arecibo Observ**	**0.45**	**22**	*eP*	**Pg**	**08 49 01.0**	**-0.3**
AGPR	**Aguadilla, PR**	**0.57**	**342**		**Pg**	**08 49 02.9**	**-0.5**
AGPR					**Sg**	**08 49 10.7**	**-0.3**
AGPR				IAML		08 49 10.9	
	comp=N,3μm,0.3s						
AGPR				IAML		08 49 10.9	
	comp=N,6μm,0.5s						
AGPR	**Aguadilla, PR**	**0.57**	**342**	P	**Pg**	**08 49 02.8**	**-0.5**
AGPR	**Aguadilla, PR**	**0.57**	**342**	*iP*	**Pg**	**08 49 03.0**	**-0.5**
AGPR				*iSg*	**Sg**	**08 49 10.8**	**-0.2**
AGPR				IAML		08 49 10.9	
	comp=N,4μm,0.3s						
AGPR	**Aguadilla, PR**	**0.57**	**342**	*eP*	**Pg**	**08 49 02.9**	**-0.5**
ECPR	**Experimental S**	**0.67**	**54**		**Pg**	**08 49 04.4**	**-0.8**
ECPR					**Sg**	**08 49 13.9**	**-0.2**
ECPR				IAML		08 49 14.4	
	comp=N,3μm,0.2s						
ECPR				IAML		08 49 15.2	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.67**	**54**	P	**Pg**	**08 49 04.5**	**-0.8**
ECPR	**Experimental S**	**0.67**	**54**	*eP*	**Pg**	**08 49 04.4**	**-0.8**
EMPR	**Esperanza - Ma**	**0.67**	**35**		**Pg**	**08 49 05.0**	**-0.2**
EMPR					**Sg**	**08 49 13.8**	**-0.4**
EMPR	**Esperanza - Ma**	**0.67**	**35**	P	**Pg**	**08 49 05.1**	**-0.2**
EMPR	**Esperanza - Ma**	**0.67**	**35**	*eP*	**Pg**	**08 49 05.0**	**-0.2**
EMPR				*eS*	**Sg**	**08 49 13.8**	**-0.4**
IDE	**Isla Desecheo**	**0.69**	**312**		**Pg**	**08 49 04.7**	**-1.1**
IDE					**Sg**	**08 49 14.4**	**-0.6**
IDE	**Isla Desecheo**	**0.69**	**312**	*eP*	**Pg**	**08 49 04.7**	**-1.1**
IDE				*eS*	**Sg**	**08 49 14.4**	**-0.6**
SJG	**San Juan**	**0.76**	**76**		**Pg**	**08 49 06.1**	**-0.9**
SJG				IAML		08 49 17.9	
	comp=N,2μm,0.4s						
SJG	**San Juan**	**0.76**	**76**	*iP*	**Pg**	**08 49 06.3**	**-0.7**
SJG	**San Juan**	**0.76**	**76**	*i* P	**Pg**	**08 49 06.3**	**-0.7**
SJG				*eS*	**Sg**	**08 49 17.0**	**-0.2**
SJG	**San Juan**	**0.76**	**76**	*eP*	**Pg**	**08 49 06.4**	**-0.7**
IGPR	**InterUniversit**	**0.78**	**87**		**Pg**	**08 49 07.0**	**-0.4**
IGPR					**Sg**	**08 49 17.9**	**+0.1**
IGPR	**InterUniversit**	**0.78**	**87**	*eP*	**Pg**	**08 49 07.0**	**-0.4**
PDPR	**Patillas Dam,**	**0.87**	**84**		**Pg**	**08 49 08.2**	**-0.8**
PDPR					**Sg**	**08 49 20.4**	**0.0**
PDPR	**Patillas Dam,**	**0.87**	**84**	*eP*	**Pg**	**08 49 08.2**	**-0.8**
HUMP	**Col San Antoni**	**1.05**	**78**		**Pg**	**08 49 11.1**	**-1.4**
HUMP					**Sg**	**08 49 24.9**	**-1.3**
HUMP	**Col San Antoni**	**1.05**	**78**	*eP*	**Pg**	**08 49 11.1**	**-1.4**
PCDR	**Punta Cana, DR**	**1.50**	**293**		**Pn**	**08 49 17.8**	**-0.4**
PCDR	**Punta Cana, DR**	**1.50**	**293**	*i* P	**Pn**	**08 49 18.4**	**+0.1**
PCDR				IAML		08 49 48.3	
	comp=Z,129nm,0.7s						
HIDR	**Higuey Centro**	**1.82**	**292**	*iP*	**Pn**	**08 49 23.0**	**+0.3**
HIDR				*iSg*	**Sn**	**08 49 47.0**	**+1.5**
HIDR				IAML		08 49 57.5	
	comp=N,351nm,0.2s						
DR12	**Loma Pena Alta**	**2.48**	**291**		**Pn**	**08 49 32.6**	**+0.7**
HATOM	**Hato Mayor del**	**2.48**	**291**	*iP*	**Pn**	**08 49 33.0**	**+1.2**
HATOM				IAML		08 50 12.7	
	comp=N,85nm,0.8s						
BANI	**BANI**	**3.29**	**279**	Pn	**Pn**	**08 49 43.4**	**+0.4**
BANI	**BANI**	**3.29**	**279**	*iP*	**Pn**	**08 49 45.0**	**+1.9**
BANI				IAML		08 50 45.8	
	comp=N,114nm,0.3s						
SABA	**Saba**	**3.52**	**94**	Pn	**Pn**	**08 49 46.2**	**+0.1**
SMRT	**St. Maarten**	**3.67**	**87**	Pn	**Pn**	**08 49 47.4**	**-0.8**
SC01	**Santiago de lo**	**3.90**	**293**	Pn	**Pn**	**08 49 51.8**	**+0.5**
SC01	**Santiago de lo**	**3.90**	**293**	*iP*	**Pn**	**08 49 52.6**	**+1.3**
SC01				IAML		08 51 00.9	
	comp=N,127nm,1.1s						
GRTK	**Grand Turk**	**5.33**	**313**	Pn	**Pn**	**08 50 10.8**	**-0.1**

*ASRS **03** 08:55:13.0±1.1, 54°.35N×86°.81E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 03 08:55:15.2±2.8, 54°.35N×86°.87E, h0km, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=23.3km s-min=16.3km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**252**	I	I	09 03 10.0	
	baz=69,slow=312,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.27**	**252**	Pg	Pg	08 55 37.8	-1.8
	2.4nm,0.3s,baz=70,slow=13,SNR=10						
ZALV				Lg	Lg	08 55 56.6	
	2.4nm,0.3s,baz=74,slow=27,SNR=6.5						
KURBB	**Kurchatov Arra**	**6.32**	**237**	Pn	Pn	08 56 50.5	+1.0
	0.2nm,0.3s,baz=54,slow=14,SNR=15						
KURBB				Sn	Sn	08 58 01.4	-0.9
	baz=51,slow=25,SNR=1.4						
KURBB				Lg	Lg	08 58 35.5	
	baz=54,slow=34,SNR=2.0						
	2.4nm,0.5s						
MKAR	**Makanchi Array**	**8.11**	**203**	Pn	Pn	08 57 15.2	+1.1
	0.2nm,0.3s,baz=25,slow=14,SNR=6.0						
MKAR				Sn	Sn	08 58 45.9	-0.5
	0.2nm,0.3s,baz=23,slow=26,SNR=3.0						
MKAR				Lg	Lg	08 59 31.9	
	baz=19,slow=35,SNR=1.7						
	0.4nm,0.4s						

*BJI **03** 09:05:41.1, 23°.14N×93°.22E, h8km, mB4.6/5, mb4.5/32, ML3.8/2, Ms4.2/20, Ms7 3.9/24*
*NDI **03** 09:05:42.9±1.9, 23°.07N×93°.42E, h10km, ML4.1, MW4.2, Presumed earthquake*
*NEIC **03** 09:05:43.6±1.6, 23°.28N±0°.05×93°.37E±0°.09, h10km±1km, mb4.6/89, Error ellipse: s-maj=14.2km s-min=6.7km az=245.0*
*GFZ **03** 09:05:44.2±0.2, 23°N±3°×9°3E±°, h10km, M4.6/21, mb4.6/21, confirmed*
*IDC **03** 09:05:48.1±2.0, 23°.05N×93°.30E, h54km±19km, mb3.9/21, mbtmp4.2/23, ML4.3/2, MS3.6/43, Error ellipse: s-maj=18.2km s-min=12.6km az=47.0*
ISC 03 09:05:42.9±0.8, 23°.19N±0°.03×93°.28E±0°.03, h10km±5km, n248, σ1°37/221, mb4.6/71, MS3.6/45, 1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.40**	**42**	Pn	**Pb**	**09 06 09.3**	**+0.1**
BRDH	**Bariadhala**	**1.59**	**252**	P	**Pb**	**09 06 12.8**	**+0.4**
	960nm,0.4s,baz=74,slow=12,SNR=54						
BRDH				S	**Sg**	**09 06 36.7**	**+2.6**
	2μm,0.4s,baz=241,slow=19,SNR=20						
BRDH				LR	LR	09 06 59.8	
	comp=Z,476nm,19.9s,baz=285,slow=46						
SILR	**SILCHAR**	**1.64**	**345**	*eP*	**Pg**	**09 06 14.1**	**-0.3**
SILR				*eS*	**Sg**	**09 06 37.2**	**+1.5**
SILR				IAML		09 06 50.5	
	comp=E,3μm,0.4s						
SILR				IAML		09 06 51.7	
	comp=N,2μm,0.2s						
BELO	**BELONIA**	**1.68**	**272**	*eP*	**Pg**	**09 06 14.7**	**-0.5**
BELO				*eS*	**Sg**	**09 06 37.5**	**+0.4**
BELO				IAML		09 06 43.2	
	comp=E,90μm,0.6s						
BELO				IAML		09 06 44.5	
	comp=N,132μm,0.8s						
IMP	**Imphal**	**1.74**	**20**	*eP*	**Pb**	**09 06 14.7**	**-0.3**
IMP				*eS*	**Sg**	**09 06 38.8**	**-0.2**
IMP				IAML		09 06 50.6	
	comp=E,677nm,1.3s						
IMP				IAML		09 06 58.4	
	comp=E,440nm,0.7s						
AGT	**Agartala**	**1.99**	**291**	*eP*	**Pb**	**09 06 19.9**	**+0.8**
AGT				*eS*	**Sg**	**09 06 45.6**	**-1.2**
AGT				IAML		09 06 59.7	
	comp=E,3μm,0.8s						
KOHI	**KOHIMA**	**2.63**	**17**	*eP*	**Pn**	**09 06 26.6**	**+1.0**
KOHI				*eS*	**Sn**	**09 06 59.4**	**+1.8**
KOHI				IAML		09 07 12.7	
	comp=N,511nm,0.9s						
KOHI				IAML		09 07 13.3	
	comp=E,1μm,0.9s						
SHL	**Shillong**	**2.68**	**332**		**Pn**	**09 06 25.8**	**-0.5**
SHL	**Shillong**	**2.68**	**332**	*ex*	**Pn**	**09 06 25.6**	**-0.8**
SHL				IAML		09 07 08.3	
	comp=E,256nm,0.7s						
SHL				IAML		09 07 08.5	
	comp=N,444nm,0.7s						
MOKO	**MOKOCHONG**	**3.31**	**20**	*eP*	**Pn**	**09 06 36.4**	**+1.4**
GUWA	**GUWAHATI**	**3.32**	**335**	*eP*	**Pn**	**09 06 36.5**	**+1.6**
GUWA				*ex*	**Sn**	**09 07 13.7**	**-0.6**
DHUB	**DHUBRI**	**4.10**	**314**	*ex*	**Pn**	**09 06 46.2**	**+0.5**
DHUB				*ex*	**Sn**	**09 07 27.3**	**-6.5**
NPW	**Naypyitaw**	**4.32**	**141**	P	**Pn**	**09 06 51.7**	**+3.1**

LKP Lekhapani **4.73 29** *ix* Pn 09 06 45.2 -9.2
LKP *ex* **Sn** **09 07 56.2 +6.9**
TNCH TengChong **5.13 68** Pn **Pn** **09 07 03.8 +3.8**
TNCH Pg **Pg** **09 07 18.2 -3.0**
TNCH Sg **Sg** **09 08 30.9 +3.3**
TNCH SMN
comp=N,160nm,0.9s
TNCH SME
comp=N,67nm,0.4s
LSA Lhasa **6.75 344** Pn **Pn** **09 07 20.9 -1.6**
BOK Bokaro **6.81 277** *eP* **Pn** **09 07 23.2 +0.3**
BOK *eS* **Sn** **09 08 39.6 -1.0**
BOK IAML 09 08 49.2
comp=E,61nm,0.8s
BOK IAML 09 08 50.2
comp=N,67nm,0.8s
CHTO Chiang Mai **6.86 128** **Pn** **09 07 23.5 0.0**
CHTO Chiang Mai **6.86 128** P **Pn** **09 07 26.3 +2.7**
comp=N,0.1nmcomp=N,27nm,0.8s
CHTO Chiang Mai **6.86 128** P **Pn** **09 07 26.4 +2.8**
CM31 Chiang Mai Arr **7.09 131** **Pn** **09 07 27.2 +0.5**
CMAR Chiang Mai Arr **7.09 131** P **Pn** **09 07 29.2 +2.4**
comp=N,0.6nm,0.3s,baz=306,slow=13,SNR=35
CMAR LR LR 09 10 29.9
comp=N,220nm,21.3s,baz=300,slow=40
comp=N,14nm,0.8s
CMAR Chiang Mai Arr **7.09 131** **Pn** **09 07 27.1 +0.4**
EVN Everest **7.52 310** **Pn** **09 07 33.9 +0.7**
EVN Everest **7.52 310** P **Pn** **09 07 33.8 +0.6**
BWNR Bhubaneshwar **7.52 249** *eP* **Pn** **09 07 32.3 -0.4**
BWNR *eS* **Sn** **09 08 55.9 -2.2**
KMI2 Kunming **8.87 75** P Pn 09 07 56.6 +5.3
KMI2 pmax pmax
comp=N,12nm,1.1s
KMI2 L L
comp=N,1μm,14.7s
KMI2 L L
comp=N,400nm,9.0s
KMI2 L L
comp=N,410nm,13.0s
GOMU GeErMu **13.03 6** P **Pn** **09 08 48.2 -0.3**
GOMU pmax pmax
comp=N,20nm,0.6s
PTH Pithoragarh **13.33 301** *ex* **Pn** **09 08 49.4 -3.0**
HYB Hyderabad **14.95 250** *eP* **P** **09 09 21.8 +1.7**
HYB *eS* **S** **09 12 21.7 +3.4**
LZDM Lanzhou Array **15.60 33** P **Pn** **09 09 24.5 +1.2**
baz=214,slow=10
LZDM LR LR 09 16 41.1
comp=N,526nm,20.5s,baz=190,slow=42
comp=N,2.0nm,0.2s
LZH Lanzhou **15.78 33** *eP* **P** **09 09 29.2 -0.1**
LZH pP sP 09 09 34.3 +0.3
LZH pmax pmax
comp=N,18nm,1.5s
LZH L L
comp=N,650nm,14.6s
LZH L L
comp=N,610nm,14.6s
LZH L L
comp=N,920nm,16.2s
QIZ Qiongzhong **16.00 102** P **Pn** **09 09 24.8 -3.4**
QIZ S **Sn** **09 12 25.6 -0.2**
QIZ pmax pmax
comp=N,17nm,1.3s
QIZ L L
comp=N,150nm,4.2s
QIZ L L
comp=N,280nm,7.2s
QIZ L L
comp=N,300nm,8.2s
ENH Enshi **16.10 61** P **P** **09 09 31.2 -1.6**
GTA2 Gaotai **17.15 17** *eP* **P** **09 09 46.4 +1.9**
GTA2 pP sP 09 09 50.6 +1.5
GTA2 pmax pmax
comp=N,4.0nm,1.2s
GTA2 L L
comp=N,430nm,17.2s
GTA2 L L
comp=N,300nm,15.1s
GTA2 L L
comp=N,480nm,18.5s
PALK Pallekele **19.92 219** LR LR 09 18 03.6
comp=N,112nm,21.1s,baz=38,slow=37
PALK Pallekele **19.92 219** P **Pn** **09 10 15.8 -0.7**
PALK IAmb IAmb 09 10 19.6
comp=Z,30nm,1.1s
KCSI Kotacane, Aceh **20.03 167** P **P** **09 10 16.4 +0.2**
WHN Wuhan **20.16 64** P Pn 09 10 19.7 +0.4
WHN L L
comp=Z,600nm,15.0s
NIL Nilore **20.43 305** P **P** **09 10 20.7 +0.3**
NIL IAmb IAmb 09 10 29.3
comp=Z,27nm,0.8s
NIL Nilore **20.43 305** P **P** **09 10 20.6 +0.2**
PSI Prapat **21.00 164** P Pn 09 10 30.0 +0.7
comp=Z,13nm,1.1s
WMQ Urumqi **21.08 349** *eP* **P** **09 10 29.4 +2.0**
WMQ pP sP 09 10 32.6 +0.5
WMQ S **S** **09 14 19.0 -3.1**
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,56nm,3.6s
WMQ L L
comp=Z,900nm,12.3s
WMQ L L
comp=Z,830nm,15.9s
WMQ L L
comp=Z,88nm,21.3s
RPSI Rantau Prapat **21.10 164** **P** **09 10 27.4 -0.3**
RPSI IAmb IAmb 09 10 31.7
comp=Z,24nm,1.3s
WUS Wushi **21.49 330** P **P** **09 10 32.2 +0.4**
KSH2 Kashi **21.90 321** P **P** **09 10 37.8 +1.4**
KSH2 sP sP 09 10 47.9 +6.9
KSH2 pmax pmax
comp=Z,10.0nm,0.7s
KSH2 L L
comp=Z,820nm,23.7s
KSH2 L L
comp=Z,380nm,23.7s
KSH2 L L
comp=Z,300nm,15.1s
TARG Taragay, Kyrgy **22.56 329** P **P** **09 10 44.1 +0.4**
TARG IAmb IAmb 09 10 55.2
comp=Z,43nm,1.4s
TARG Taragay, Kyrgy **22.56 329** P **P** **09 10 46.2 +2.5**
ASAI AK-SAY(Kyrgyzs **22.60 325** P **P** **09 10 46.5 +2.4**
PRZ Przheval'sk **22.88 331** P **P** **09 10 47.6 +0.9**
PRZ IAmb IAmb 09 10 51.9
comp=Z,27nm,0.9s
PDGK Podgornoye **23.10 334** P **P** **09 10 49.2 +0.2**
KDJ Kajisay **23.17 328** **P** **09 10 49.0 -0.8**
KDJ IAmb IAmb 09 10 59.1
comp=Z,11nm,0.8s
KDJ Kajisay **23.17 328** P **P** **09 10 52.2 +2.4**
NRN Naryn **23.25 326** P **P** **09 10 51.1 +0.4**
HHC Hu-ho-hao-te **23.38 37** *eP* **P** **09 10 52.1 +0.2**
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,64nm,4.8s
HHC L L
comp=Z,300nm,12.3s
HHC L L
comp=Z,200nm,12.6s
HHC L L
comp=Z,220nm,13.3s
MANEM Manem **23.41 313** **P** **09 10 53.0 +0.6**
MANEM IAmb IAmb 09 11 00.6
comp=Z,66nm,0.9s
KBL Kabul **23.98 304** **P** **09 10 57.7 -0.2**
KBL IAmb IAmb 09 11 07.1
comp=Z,14nm,0.8s
KBL Kabul **23.98 304** P **P** **09 11 00.8 +2.9**
BOOM Boomskoye usch **24.05 327** P **P** **09 10 58.3 -0.1**
BOOM IAmb IAmb 09 11 14.5
comp=Z,13nm,1.1s
BOOM Boomskoye usch **24.05 327** P **P** **09 11 00.7 +2.3**
NJ2 Nanjing **24.27 63** *eP* **P** **09 11 01.2 +0.8**
NJ2 pmax pmax
comp=Z,18nm,0.6s
ARSB Arslanbob **24.82 322** P **P** **09 11 06.0 +0.6**
AAK Ala-Archa **24.89 326** LR LR 09 22 46.5

comp=Z,107nm,19.0s,baz=160,slow=41
AAK Ala-Archa 24.89 326 P P 09 11 06.3 +0.3
AAK Ala-Archa 24.89 326 P P 09 11 08.0 +1.9
GAR Garm 25.09 314 P P 09 11 08.0 +0.1
GAR Garm 25.09 314 P P 09 11 08.4 +0.5
MKAR Makanchi Array 25.16 342 P P 09 11 09.6 +1.3
MKAR LR LR 09 23 11.5
comp=Z,87nm,21.4s,baz=154,slow=41
comp=Z,9.8nm,0.8s
MKAR Makanchi Array 25.16 342 P 09 11 08.5 +0.2
MAKZ Makanchi 25.26 342 P 09 11 09.1 -0.1
MAKZ Makanchi 25.26 342 P P 09 11 11.3 +2.1
BTK Batken 25.35 317 P P 09 11 11.0 +0.8
BTK IAmb IAmb 09 11 34.8
comp=Z,15nm,0.8s
BTK Batken 25.35 317 P P 09 11 11.4 +1.2
SSLB Suanglung 25.38 83 P P 09 11 09.7 -0.8
SSLB IAmb IAmb 09 11 29.8
comp=Z,17nm,1.3s
CHGR Chuyangaron 25.69 312 P P 09 11 13.6 +0.3
CHGR IAmb IAmb 09 11 15.2
comp=Z,16nm,0.8s
CHGR Chuyangaron 25.69 312 P P 09 11 13.8 +0.4
SHAA Shahritus 25.90 309 P P 09 11 15.0 -0.2
SHAA IAmb IAmb 09 11 24.7
comp=Z,30nm,0.8s
SONM Songino Array 26.73 20 P P 09 11 23.7 +1.1
comp=Z,1.4nm,0.6s,baz=199,slow=11,SNR=9.3
SONM LR LR 09 23 25.5
comp=Z,239nm,19.5s,baz=213,slow=39
comp=Z,1.4nm,0.6s
SONM Songino Array 26.73 20 P P 09 11 21.9 -0.8
ULN Ulaanbaatar 26.97 21 P P 09 11 27.9 +3.1
KK31 Karatay Array 27.37 322 P P 09 11 28.9 +0.6
KKAR Karatay Array 27.37 322 P P 09 11 28.7 +0.4
KKM Kota Kinabalu 27.91 124 P P 09 11 32.2 -1.2
KKM IAmb IAmb 09 11 34.0
comp=Z,11nm,0.8s
TLY Talaya 29.55 13 LR LR 09 25 11.0
comp=Z,319nm,18.1s,baz=187,slow=39
KURBB Kurchatov Arra 29.70 341 P P 09 11 50.6 +1.7
comp=Z,3.1nm,0.7s,baz=159,slow=8.1,SNR=20
KURBB PcP **PcP 09 14 51.1 -1.8**
comp=Z,0.4nm,0.7s,baz=159,slow=2.4,SNR=4.3
comp=Z,3.1nm,0.7s
KURK Kurchatov 29.75 341 P P 09 11 49.5 +0.2
KURK **PcP 09 14 50.4 -2.7**
KURK Kurchatov 29.75 341 P P 09 11 51.0 +1.6
ZAA0 Zalesovo Array 31.37 350 P P 09 12 02.3 -1.3
ZALV Zalesovo Beam 31.37 350 P P 09 12 05.5 +1.9
comp=Z,2.8nm,0.6s,baz=173,slow=8.7,SNR=6.4
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 31.37 350 P P 09 12 03.4 -0.2
JOW Kunigami 31.86 76 LR LR 09 27 38.2
comp=Z,106nm,20.3s,baz=338,slow=41
KSAR Wonju Array Be 32.88 56 P P 09 12 15.9 -1.2
KSRS Korea Array 32.91 56 LR LR 09 27 01.5
comp=Z,110nm,19.9s,baz=245,slow=39
HILR Hailar Array B 33.53 32 P P 09 12 23.1 +0.4
comp=Z,0.9nm,0.3s,baz=231,slow=9.1,SNR=2.0
comp=Z,0.9nm,0.3s
BVAR Borovoye Array 34.50 335 P P 09 12 32.2 +1.2
comp=Z,1.7nm,0.7s,baz=132,slow=8.8,SNR=7.8
comp=Z,1.7nm,0.7s
BORK Borovoye 34.54 335 P P 09 12 30.9 -0.5
UGM Wanagama 35.22 149 P P 09 12 39.5 +1.9
BNX BinXian 35.62 42 ||P P 09 12 49.0 +8.3
BNX pmax pmax
comp=Z,5.0nm,0.7s
AB31 Akbulak array 36.91 323 P P 09 12 51.8 0.0
ABKAR Akbulak array 36.91 323 P P 09 12 51.7 -0.1
HEH HeiHe 37.89 36 *eP* **P 09 13 01.7 +1.6**
HEH pmax pmax
comp=Z,9.0nm,0.9s
HEH L L
comp=Z,220nm,16.2s
HEH L L
comp=Z,470nm,15.5s
HEH L L
comp=Z,650nm,14.0s
KAPI Kappang 38.14 134 LR LR 09 33 30.8
comp=Z,86nm,18.1s,baz=269,slow=44
AKTO Aktyubinsk 38.60 324 LR LR 09 31 11.3
comp=Z,90nm,19.1s,baz=216,slow=39
KLR Kul'dur 39.83 40 LR LR 09 31 44.6
comp=Z,106nm,18.5s,baz=246,slow=39
MJAR Matsushiro Arr 40.82 60 P P 09 13 23.9 -0.9
comp=Z,1.3nm,0.7s,baz=249,slow=6.4,SNR=4.6
MJAR LR LR 09 31 52.0
comp=Z,71nm,19.9s,baz=256,slow=38
comp=Z,1.3nm,0.7s
MJAR Matsushiro Arr 40.82 60 P P 09 13 23.2 -1.6
ARTI Arti 41.83 332 LR LR 09 33 45.0
comp=Z,72nm,18.2s,baz=152,slow=40
ARTI Arti 41.83 332 P P 09 13 33.3 +0.6
JHJ Hachijo jima 2 41.89 66 LR LR 09 32 14.8
comp=Z,40nm,18.7s,baz=317,slow=38
JYT Yasato 42.39 61 P P 09 13 36.5 -1.1
RAYN Ar Rayn 43.70 280 P P 09 13 48.7 +0.3
JCJ Chichijima 44.23 74 LR LR 09 34 19.8
comp=Z,24nm,18.6s,baz=86,slow=39
KBZ Khabaz 45.96 309 P P 09 14 07.8 +1.7
comp=Z,0.5nm,0.4s,baz=357,slow=5.8,SNR=3.6
KBZ LR LR 09 36 07.1
comp=Z,43nm,21.0s,baz=89,slow=40
comp=Z,0.5nm,0.4s
YAK Yakutsk 46.01 23 LR LR 09 35 14.3
comp=Z,81nm,21.9s,baz=284,slow=38
KIV Kislovodsk 46.15 309 P P 09 14 08.4 +0.6
comp=Z,5.7nm,0.4s
NRIK Noril'sk 46.29 357 P P 09 14 10.6 +2.2
comp=Z,2.0nm,0.6s,baz=119,slow=3.9,SNR=4.3
comp=Z,2.0nm,0.6s
NRIK Noril'sk 46.29 357 P P 09 14 07.0 -1.4
NRIK IAmb IAmb 09 14 21.0
comp=Z,4.7nm,0.9s
ASF Jabal al Asfar 50.24 293 LR LR 09 41 19.2
comp=Z,40nm,18.0s,baz=40,slow=42
MBWA Marble Bar 51.07 148 P P 09 14 45.0 -0.7
MBWA IAmb IAmb 09 15 06.0
comp=Z,14nm,1.1s
MMAI Mount Meron Ar 51.43 294 LR LR 09 39 45.1
comp=Z,40nm,20.7s,baz=98,slow=40
FITZ Fitzroy Crossi 51.81 140 P P 09 14 50.7 -0.5
KNRA Kununurra 51.94 135 P P 09 14 51.3 -0.9
KNRA IAmb IAmb 09 14 52.1
comp=Z,11nm,1.1s
CY604 RAF Akrotiri, 52.07 296 P P 09 14 53.7 +0.9
CY604 IAmb IAmb 09 15 04.9
comp=Z,8.5nm,1.2s
EIL Elat 52.17 290 LR LR 09 40 15.5
comp=Z,33nm,20.7s,baz=331,slow=40
BZK Bozkurt 52.30 306 P P 09 14 55.0 +0.3
comp=Z,20nm,1.1s
BZK pP **pP 09 14 58.3 +0.1**
comp=Z,20nm,1.1s
TIXI Tiksi 52.52 13 P P 09 14 56.1 +0.3
BRTR Keskin Array B 52.56 303 LR LR 09 42 03.6
comp=Z,32nm,19.8s,baz=112,slow=41
BR106 Keskin Array S 52.57 303 P P 09 14 57.2 +0.2
comp=Z,2.6nm,0.7s
BR106 pP **pP 09 15 00.2 -0.3**
comp=Z,2.6nm,0.7s
MA2 Magadan 53.93 32 LR LR 09 40 25.5
comp=Z,189nm,19.6s,baz=258,slow=38
MEEK Meekatharra 55.27 152 P P 09 15 16.4 -0.1
ELL Elmali 55.63 300 P P 09 15 19.3 0.0
AK09 Malin Array Si 56.02 316 P P 09 15 21.8 +0.1
AK08 Malin Array Si 56.04 316 P P 09 15 22.0 +0.2
AKASG Malin Array Be 56.07 316 P P 09 15 21.5 -0.5
comp=Z,0.6nm,0.5s,baz=80,slow=6.9,SNR=5.5
AKASG LR LR 09 44 49.6
comp=Z,34nm,18.5s,baz=60,slow=42
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 56.07 316 P P 09 15 21.5 -0.5
AKBB Malin Array Si 56.07 316 P P 09 15 22.3 +0.3
AKBB IAmb IAmb 09 15 23.9
comp=Z,2.8nm,0.7s
AK03 Malin Array Si 56.07 316 P P 09 15 22.5 +0.5
AK01 Malin Array Si 56.07 316 P P 09 15 22.1 0.0
AK05 Malin Array Si 56.07 316 P P 09 15 22.1 0.0
AK02 Malin Array Si 56.07 316 P P 09 15 22.2 +0.1
AK06 Malin Array Si 56.07 316 P P 09 15 22.1 0.0
KIEV Kiev 56.08 316 P P 09 15 22.2 +0.1
KIEV IAmb IAmb 09 15 23.9
comp=Z,2.5nm,0.7s
KIEV Kiev 56.08 316 P P 09 15 22.1 0.0
comp=Z,22nm,1.9s
KIEV Kiev 56.08 316 P P 09 15 22.4 +0.3
AK11 Malin Array Si 56.10 316 P P 09 15 22.4 +0.1
AK04 Malin Array Si 56.10 316 P P 09 15 22.4 +0.1
AK12 Malin Array Si 56.11 316 P P 09 15 22.4 +0.1
AK16 Malin Array Si 56.14 316 P P 09 15 22.7 +0.2
PETK Petropavlovsk- 56.50 41 LR LR 09 40 54.8
comp=Z,42nm,19.1s,baz=218,slow=37
LUBAR Lubar, Ukraine 56.96 315 P P 09 15 28.7 +0.3
KMPD K-Podol'skiy 57.77 314 P P 09 15 34.4 +0.3
KARP Karpathos 57.96 298 P P 09 15 37.0 +1.2
MLR Muntele Rosu 58.14 310 LR LR 09 45 21.0
comp=Z,50nm,19.8s,baz=64,slow=41
MLR Muntele Rosu 58.14 310 P P 09 15 37.5 +0.5
MLR IAmb IAmb 09 15 40.2
comp=Z,5.3nm,0.7s
MLR Muntele Rosu 58.14 310 P P 09 15 37.1 +0.1
comp=Z,7.9nm,0.8s
MLR Muntele Rosu 58.14 310 P P 09 15 38.6 +1.6
RNPP8 Varash 58.23 317 P P 09 15 37.5 +0.2
RNPP1 Kostyukhnivka 58.28 317 P P 09 15 37.9 +0.2
MSF Maaselka 58.58 334 P P 09 15 40.4 +0.8
WB0 Warramunga Arr 58.59 133 P P 09 15 38.9 -1.3
BUR08 Bucovina Ar. S 58.61 313 P P 09 15 39.6 -0.7
WRA Warramunga Arr 58.67 134 P P 09 15 38.8 -2.0
comp=Z,5.1nm,0.5s,baz=322,slow=7.4,SNR=74
comp=Z,5.1nm,0.5s
WRA Warramunga Arr 58.67 134 P 09 15 39.7 -1.1
WRAB Tennant Creek 58.67 134 P P 09 15 39.7 -1.2
WRAB Tennant Creek 58.67 134 P P 09 15 39.6 -1.2
WR8 Warramunga Ar 58.79 134 P P 09 15 40.4 -1.2
FINES FINESS Array B 59.02 329 P P 09 15 42.9 +0.2
comp=Z,2.2nm,0.7s,baz=104,slow=8.0,SNR=9.7
FINES LR LR 09 44 50.6
comp=Z,32nm,18.1s,baz=352,slow=40
comp=Z,2.2nm,0.7s
FINES FINESS Array B 59.02 329 P P 09 15 42.6 0.0
SGF Sodankyl 59.91 336 P P 09 15 50.0 +1.3
KWP Kalwaria Pacla 60.23 315 P P 09 15 51.6 +0.4
comp=Z,1µmcomp=Z,37nm,0.7s
NWAO Narrogin (SRO) 60.31 157 LR LR 09 41 41.8
comp=Z,50nm,21.8s,baz=42,slow=36
ARCES ARCESS Array B 60.73 338 P P 09 15 55.6 +1.3
comp=Z,1.0nm,0.6s,baz=107,slow=6.0,SNR=4.9
ARCES LR LR 09 44 10.7
comp=Z,36nm,19.8s,baz=84,slow=38
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 60.73 338 P P 09 15 54.0 -0.3
AS31 Alice Springs 61.05 137 P P 09 15 56.3 -0.9
ASAR Alice Springs 61.05 137 P P 09 15 56.4 -0.8
comp=Z,9.6nm,0.5s,baz=318,slow=6.8,SNR=100
comp=Z,9.6nm,0.5s
ASAR Alice Springs 61.05 137 P 09 15 55.9 -1.3
LANS Liptovska Anna 62.37 315 *eP* **P 09 16 07.2 +1.4**
QIS Mount Isa 62.70 130 P P 09 16 09.0 +0.7
FORT Forrest 63.19 147 P P 09 16 11.3 0.0
MODS Modra-Piesok 63.88 314 *eP* **P 09 16 16.0 +0.2**
VRAC Vranov 64.23 315 LR LR 09 46 24.1
comp=Z,26nm,20.4s,baz=74,slow=38
HFS Hagfors 65.02 327 P P 09 16 22.2 -0.8
comp=Z,2.3nm,0.5s,baz=99,slow=8.9,SNR=9.3
HFS LR LR 09 47 02.6
comp=Z,51nm,18.6s,baz=120,slow=38
comp=Z,2.3nm,0.5s
SGRT San Giovanni R 65.89 307 P P 09 16 30.0 +0.9
SGRT IAmb IAmb 09 16 44.6
comp=Z,3.7nm,0.7s
NC405 NORSAR Array S 65.93 328 P P 09 16 30.4 +1.5
GEC2 GERESS Array S 66.17 315 P P 09 16 31.0 +0.2
GEC2 IAmb IAmb 09 16 44.7
comp=Z,2.6nm,0.9s
GERES GERESS Array B 66.17 315 P P 09 16 30.2 -0.7
comp=Z,1.1nm,0.6s,baz=64,slow=6.1,SNR=7.2
comp=Z,1.1nm,0.6s
NB2 NORSAR Subarra 66.18 328 P P 09 16 30.5 0.0
comp=Z,0.8nm,0.5s,baz=86,slow=6.5
NOA NORSAR Array B 66.18 328 P P 09 16 29.9 -0.6
comp=Z,1.0nm,0.7s,baz=86,slow=6.3,SNR=5.3
NOA LR LR 09 47 50.0
comp=Z,29nm,20.8s,baz=85,slow=38
comp=Z,1.0nm,0.7s
NC204 NORSAR Array S 66.37 328 P P 09 16 32.0 +0.2
NC204 IAmb IAmb 09 16 50.0
comp=Z,8.3nm,1.1s
SMY Shemya 66.42 41 P P 09 16 31.1 -1.0
CEL Celeste 66.44 303 P P 09 16 33.1 +0.4
CEL Celeste 66.44 303 P P 09 16 33.0 +0.4
comp=Z,7.3nm,1.1s
CTAO Charters Tower 67.23 126 P P 09 16 37.3 -0.5
INKA Innaminka 68.28 135 P P 09 16 43.7 -0.6
FUORN Ofenpass-Fuorn 68.85 313 P P 09 16 47.5 -0.5
FUORN IAmb IAmb 09 17 01.2
comp=Z,4.1nm,0.9s
BBOO Buckleboo 69.05 142 P P 09 16 48.3 -0.6
DAVOX Davos/Dischmat 69.07 313 LR LR 09 52 05.0
comp=Z,38nm,19.0s,baz=82,slow=40
ECH Echery 70.56 315 P P 09 16 56.3 -1.9
ECH IAmb IAmb 09 16 59.3
comp=Z,3.2nm,0.8s
SENIN Lac Senin/Sane 70.90 313 P P 09 16 59.4 -1.1
SENIN IAmb IAmb 09 17 09.4
comp=Z,3.5nm,0.8s
STKA Stephens Creek 71.65 138 LR LR 09 52 11.9
comp=Z,70nm,18.2s,baz=202,slow=39
LSZ Lusaka 74.24 245 LR LR 09 51 04.7
comp=Z,51nm,18.2s,baz=151,slow=37
C19K Lookout Ridge 74.44 21 P P 09 17 21.7 +0.7
C19K IAmb IAmb 09 17 48.2
comp=Z,7.6nm,1.2s
EKA Eskdalemuir Ar 74.78 324 LR LR 09 56 35.9
comp=Z,36nm,18.4s,baz=191,slow=41
F17K Baldwin Pennin 74.94 24 P P 09 17 23.5 -0.3
E19K Redstone River 75.94 22 IAmb IAmb 09 17 41.6
comp=Z,4.0nm,1.1s
E21K Killik River 76.56 21 IAmb IAmb 09 17 37.9
comp=Z,5.0nm,0.8s
MATP Matopo 76.59 241 LR LR 09 49 40.6
comp=Z,57nm,19.6s,baz=66,slow=34
D23K Nanushuk River 77.33 19 P 09 17 36.8 -0.6
D23K IAmb IAmb 09 17 42.5
comp=Z,5.8nm,0.8s
F21K Alatna River 77.33 22 IAmb IAmb 09 17 42.7
comp=Z,3.4nm,0.8s
E22K Anaktuvuk Pass 77.42 20 IAmb IAmb 09 17 45.8
comp=Z,3.3nm,0.9s
H21K Melozitna Rive 78.36 23 IAmb IAmb 09 17 51.2
comp=Z,3.6nm,0.8s
E24K Your Creek 78.50 20 IAmb IAmb 09 17 48.9
comp=Z,3.6nm,0.7s
BORG Borgarnes 79.08 337 LR LR 09 54 15.6
comp=Z,40nm,18.1s,baz=27,slow=37
MLY Manley 79.43 23 IAmb IAmb 09 18 01.8
comp=Z,3.6nm,0.8s
F25K Christian Rive 79.66 19 IAmb IAmb 09 18 09.2
comp=Z,4.7nm,1.1s
CAST Castle Rocks 79.80 25 P 09 17 51.4 +0.2
CAST IAmb IAmb 09 18 03.3
comp=Z,3.3nm,0.7s
BMAR Burnt Mountain 80.08 19 P P 09 17 53.4 +0.7
NEA2 Nenana 80.27 23 P P 09 17 54.0 +0.4
TRF Thorofare Moun 80.46 24 P P 09 17 54.9 0.0
G26K Porcupine Rive 80.62 20 P P 09 17 55.3 -0.2
G26K IAmb IAmb 09 18 03.9
comp=Z,11nm,1.4s
L22K Petersville 80.78 25 P P 09 17 56.4 -0.1
L22K IAmb IAmb 09 18 02.6
comp=Z,5.2nm,1.1s
ILAR Eielson Array 80.93 22 P P 09 17 57.3 0.0
comp=Z,1.3nm,1.0s,baz=308,slow=5.4,SNR=10
ILAR LR LR 09 57 36.0
comp=Z,49nm,21.7s,baz=274,slow=38
comp=Z,1.3nm,1.0s
ILAR Eielson Array 80.93 22 P P 09 17 57.0 -0.2
LBTB Lobatse 81.23 238 LR LR 09 54 26.3
comp=Z,40nm,18.4s,baz=84,slow=36
H27K Steamboat Moun 81.78 20 P P 09 18 02.5 +0.8
K24K Donnelly Dome 81.90 23 P P 09 18 01.7 -0.7
I27K Kandik River 82.16 20 IAmb IAmb 09 18 10.2
comp=Z,5.7nm,1.1s
SCRK Sand Creek 82.42 22 IAmb IAmb 09 18 19.0
comp=Z,7.3nm,1.4s
INK Inuvik 82.57 16 P P 09 18 04.3 -1.4
comp=Z,2.2nm,0.8s,baz=57,slow=7.6,SNR=1.5
comp=Z,2.2nm,0.8s
INK Inuvik 82.57 16 P P 09 18 05.1 -0.6
INK IAmb IAmb 09 18 17.0
comp=Z,4.8nm,1.1s
KDAK Kodiak Island 82.58 30 LR LR 09 56 37.4
comp=Z,83nm,19.1s,baz=258,slow=37
H29M Whitestone 82.74 19 P P 09 18 06.3 -0.4
H29M IAmb IAmb 09 18 16.8
comp=Z,7.3nm,1.2s
KLU Klutina 83.25 25 P P 09 18 09.5 0.0
KLU IAmb IAmb 09 18 15.3
comp=Z,5.2nm,0.9s
G31M Satah River 83.39 17 P P 09 18 09.5 -0.5
G31M IAmb IAmb 09 18 26.5
comp=Z,4.9nm,1.1s
FID Port Fidalgo 83.48 25 P P 09 18 10.1 -0.6
BCAR Beaver Creek A 83.76 22 P P 09 18 12.6 +0.5
SFJD Kangerlussuaq 86.11 347 LR LR 10 01 32.0
comp=Z,54nm,18.6s,baz=312,slow=39
TORD Torodi Ar. Bea 86.34 283 P P 09 18 26.0 +0.2
comp=Z,0.9nm,0.8s,baz=63,slow=4.4,SNR=3.7
comp=Z,0.9nm,0.8s
SUR Sutherland 88.52 234 LR LR 09 57 55.2
comp=Z,40nm,18.8s,baz=104,slow=35
YKA Yellowknife Ar 91.77 13 P P 09 18 50.5 -0.2
comp=Z,0.7nm,0.9s,baz=322,slow=5.6,SNR=2.3
comp=Z,0.7nm,0.9s
YKA Yellowknife Ar 91.77 13 P P 09 18 50.2 -0.4
BLKN Baker Lake 92.48 4 P P 09 18 52.9 -1.0
BLKN IAmb IAmb 09 19 13.7
comp=Z,6.7nm,1.5s
DBIC Dimbokro 94.83 279 P P 09 19 04.5 -1.2
KKH Kailua Kona 100.12 64 Pdif Pdif 09 19 28.9 -0.6
TXAR Lajitas Array 125.29 18 PKP PKPdf 09 24 44.6 -0.1
comp=Z,0.4nm,0.9s,baz=295,slow=0.7,SNR=4.5
EFI East Falkland 144.01 211 PKPdf PKPdf 09 25 18.4 0.0
SDV Santo Domingo 144.44 332 PKPdf PKPbc 09 25 19.7 +0.7
CPUP Villa Florida 153.15 257 PKPbc PKPbc 09 25 39.9 -1.6
comp=Z,0.5nm,0.4s,baz=213,slow=8.2,SNR=2.9

TAP ***03*** *09:07:22.8,24.˚04N×122.˚58E,h26km,ML2.5,D*
JMA ***03*** *09:07:22.6±0.2,24.˚N±2.˚×12.˚3E±.˚,h35km,MV1.7/8,NW OFF ISHIGAKIJIMA IS*

ISC 03 09:07:20.2±1.2,23.˚90N±0.˚04×122.˚58E±0.˚03,h11km±9km, n36,σ0$63/56,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.32**	**313**	P		**Pn**	**09 07 29.1**	**-1.4**
EOS3	**EOS3**	**0.45**	**328**	*i* P		**Pn**	**09 07 31.2**	**-1.3**
EOS3				*i* S		**Sb**	**09 07 38.1**	**+1.4**
EOS2	**EOS2**	**0.60**	**328**	‖ *i* P		**Pn**	**09 07 34.1**	**-0.5**
EOS2				S		**Sn**	**09 07 42.9**	**-1.4**
JYNG	**Yonagunijimaku**	**0.64**	**31**	*eP*		**Pb**	**09 07 33.6**	**+0.2**
JYNG				*eS*		**Sg**	**09 07 40.7**	**-0.4**
YOJ	**Yonaguni jima**	**0.68**	**35**	P		**Pb**	**09 07 34.5**	**+0.4**
YOJ				S		**Sg**	**09 07 42.5**	**0.0**
YOJ	**Yonaguni jima**	**0.68**	**35**	*eP*		**Pb**	**09 07 34.3**	**+0.1**
YOJ				*eS*		**Sg**	**09 07 42.2**	**-0.3**
EWUT	**Wuta**	**0.91**	**307**	*eP*		**Pn**	**09 07 38.5**	**-0.4**
ETL	**Fush Village**	**0.91**	**287**	*eP*		**Pn**	**09 07 40.3**	**+1.3**
SHUL	**Shoufeng**	**0.94**	**263**	*eP*		**Pn**	**09 07 39.5**	**+0.2**
SHUL				*eS*		**Sn**	**09 07 53.4**	**+0.8**
NACB	**Ninganchiao**	**0.94**	**287**	P		**Pn**	**09 07 39.1**	**-0.2**
NACB				S		**Sn**	**09 07 53.1**	**+0.4**
TWC	**Suao**	**0.97**	**317**	*i* P		**Pn**	**09 07 39.2**	**-0.6**
TWC				*i* S		**Sb**	**09 07 51.9**	**0.0**
ETM	**Tongmen**	**1.00**	**274**	*eP*		**Pn**	**09 07 40.8**	**+0.7**
ETM				*eS*		**Sn**	**09 07 53.3**	**-0.8**
ETLH	**Xiulin Townshi**	**1.05**	**287**	P		**Pn**	**09 07 40.6**	**-0.3**
ETLH				*eS*		**Sb**	**09 07 54.6**	**+0.4**
LXIB	**Xiulin Townshi**	**1.07**	**277**	P		**Pn**	**09 07 41.2**	**-0.1**
LXIB				*eS*		**Sn**	**09 07 55.9**	**-0.3**
NDS	**Dongshan**	**1.07**	**313**	*eP*		**Pn**	**09 07 41.7**	**+0.5**
NDS				*i* S		**Sn**	**09 07 55.7**	**-0.4**
WARBT	**Fenglin Townsh**	**1.11**	**261**	P		**Pn**	**09 07 41.8**	**+0.1**
WARBT				*eS*		**Sn**	**09 07 56.6**	**-0.3**
EGS		**1.11**	**328**	*i* P		**Pn**	**09 07 42.6**	**+0.9**
EGS				*i* S		**Sn**	**09 07 56.9**	**-0.1**
HATJ	**Hateruma jima**	**1.13**	**82**	*eS*		**Sn**	**09 07 57.7**	**+0.2**
LATG	**Datong**	**1.15**	**304**	*eP*		**Pn**	**09 07 42.8**	**+0.5**
LATG				*eS*		**Sn**	**09 07 58.2**	**+0.1**
TWE	**Neicheng**	**1.17**	**315**	S		**Sb**	**09 07 56.1**	**-1.4**
ENTT	**Nioudou**	**1.18**	**309**	*i* P		**Pg**	**09 07 43.4**	**+0.4**
ENTT				*eS*		**Sn**	**09 08 00.1**	**+1.4**
NDT	**Datong Townshi**	**1.20**	**306**	*eP*		**Pg**	**09 07 44.2**	**+0.9**
NNSB	**Datong**	**1.21**	**296**	*eP*		**Pg**	**09 07 43.6**	**0.0**
WHF	**Hehuan Shan**	**1.23**	**282**	P		**Pg**	**09 07 43.8**	**-0.1**
FUSS	**Fushou**	**1.27**	**286**	*eP*		**Pg**	**09 07 44.6**	**0.0**
TIPB	**Shuangxi**	**1.27**	**327**	*eP*		**Pg**	**09 07 45.1**	**+0.5**
YULB	**Yu-li**	**1.28**	**247**	*eP*		**Pb**	**09 07 44.5**	**+0.2**
YULB				*i* S		**Sn**	**09 08 01.3**	**+0.1**
OWD	**Renai**	**1.28**	**273**	*eP*		**Pg**	**09 07 44.8**	**-0.2**
OWD				*eS*		**Sg**	**09 08 01.2**	**-0.4**
CHKH	**Chenggong**	**1.29**	**237**	*eP*		**Pg**	**09 07 44.9**	**-0.2**
NWLT	**Wulai**	**1.31**	**312**	*eP*		**Pg**	**09 07 45.5**	**0.0**
YHNB	**Yeheng**	**1.34**	**305**	*eP*		**Pg**	**09 07 46.0**	**0.0**
YHNB				*eS*		**Sg**	**09 08 04.3**	**+0.9**
WUSB	**Renai**	**1.34**	**274**	*eP*		**Pb**	**09 07 45.3**	**-0.1**
SXI1	**Grass Mountain**	**1.35**	**332**	*eP*		**Pb**	**09 07 45.4**	**-0.1**
NSK	**Sanguang**	**1.35**	**305**	P		**Pg**	**09 07 46.0**	**-0.3**
JIJ	**Ishigaki jima**	**1.50**	**72**	*eP*		**Pb**	**09 07 47.9**	**-0.2**
JIJ				*eS*		**Sn**	**09 08 06.8**	**+0.2**
ALS	**Alishan**	**1.67**	**257**	P		**Pb**	**09 07 50.9**	**-0.3**

HEL 03 09:19:04.1±0.1,65.˚18N×25.˚83E,h0km,ML0.9, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OUL	**Oulu**	**0.10**	**164**	PG		**Pg**	**09 19 05.5**	**-0.5**
RANF	**Ranua** baz=203	**0.93**	**25**	PG		**Pg**	**09 19 20.6**	**-1.2**
RANF				SB		**Sg**	**09 19 33.3**	**-0.5**
OUF	**Merijarvi** baz=29	**0.94**	**210**	PB		**Pg**	**09 19 21.3**	**-0.9**
OUF				smax		smax	**09 19 33.1**	
	comp=Z,0.8nm,0.2s							
OBF0	**Syolatti, Pyha** baz=42	**0.97**	**225**	PG		**Pg**	**09 19 21.6**	**-1.0**
OBF0				smax		smax	**09 19 33.9**	
	comp=Z,1.0nm,0.2s							
TOF	**Tornio**	**1.10**	**326**	PG		**Pg**	**09 19 23.6**	**-1.4**
TOF				smax		smax	**09 19 37.3**	
	comp=Z,0.5nm,0.2s							
TOF				SB		**Sg**	**09 19 38.2**	**-1.0**
KU2	**Taivalkoski**	**1.13**	**61**	PG		**Pg**	**09 19 25.5**	**-0.3**
KALU	**Kalix**	**1.23**	**305**	PG		**Pg**	**09 19 26.5**	**-1.2**
KALU				SN		**Sn**	**09 19 47.6**	**+1.7**
RNF	**Rovaniemi**	**1.43**	**3**	PG		**Pn**	**09 19 30.2**	**-1.2**
RNF				SN		**Sb**	**09 19 50.6**	**+0.2**
KU1	**Kurvinen**	**1.61**	**75**	PN		**Pn**	**09 19 33.7**	**0.0**
KU6	**Riekki**	**1.89**	**62**	PG		**Pn**	**09 19 37.8**	**+0.3**
KU6				smax		smax	**09 20 00.3**	
	comp=Z,0.7nm,0.2s							
KU6				SG		**Sn**	**09 20 02.1**	**+0.1**
RMF	**Romuvaara**	**2.01**	**117**	PG		**Pn**	**09 19 40.3**	**+1.0**
RMF				smax		smax	**09 20 04.0**	
	comp=Z,0.6nm,0.2s							
ERTU	**Ertsjaerv**	**2.03**	**314**	SG		**Sb**	**09 20 07.8**	**+0.2**
KLF	**Kolari**	**2.19**	**341**	PB		**Pn**	**09 19 41.7**	**-0.1**
KLF				smax		smax	**09 20 09.2**	
	comp=Z,0.3nm,0.2s							
KLF				SN		**Sn**	**09 20 09.2**	**-0.4**
JOF	**Joensuu**	**3.31**	**131**	SN		**Sn**	**09 20 36.4**	**-0.7**
PVF	**Pernaja**	**4.66**	**180**	PN		**Pn**	**09 20 13.5**	**-2.1**

GFZ ***03*** *09:19:58.9±0.4,19˚N±5˚×15˚6W±˚,h10km,M4.4/9, mb4.4/9,confirmed*
HVO ***03*** *09:20:01.5,19.˚33N×155.˚12W,h7km*
NEIC ***03*** *09:20:01.3±0.7,19.˚29N±0.˚02×155.˚10W±0.˚02,h8km±4km, mb4.5/94,ML4.9/40,ML4.6/33(HVO),Error ellipse: s-maj=3.2km s-min=1.8km az=155.0*
IDC ***03*** *09:20:02.0±0.9,19.˚52N×155.˚14W,h0km,mb4.1/14, mbtmp4.1/14,MS3.1/4,Error ellipse: s-maj=26.4km s-min=9.4km az=173.0*

ISC 03 09:20:01.8±0.6,19.˚38N±0.˚03×155.˚15W±0.˚02,h13km±3km, n423,σ1$09/405,mb4.5/63,MS3.2/4,1D,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KNHH	**Kane Nui o Ham**	**0.02**	**260**		**Pg**	**09 20 03.8**	**-0.5**
STCH	**Steam Cracks**	**0.03**	**83**		**Pg**	**09 20 03.6**	**-0.6**
STCH				IAML		09 20 05.7	
	comp=E,541μm,0.3s						
STCH				IAML		09 20 06.1	
	comp=N,402μm,0.6s						
NPOC	**North of Pu'u**	**0.04**	**75**		**Pg**	**09 20 03.8**	**-0.6**
NPOC					Sg	09 20 05.6	-0.5
JCUZ	**Jacuzzi**	**0.05**	**88**		**Pg**	**09 20 03.7**	**-0.7**
JCUZ					Sg	09 20 05.2	-1.0
PUH	**Pauahi**	**0.06**	**262**		**Pg**	**09 20 04.3**	**-0.2**
PUH				Sg	Sg	09 20 06.4	0.0
PUH				IAML		09 20 06.6	
	comp=E,257μm,1.2s						
PUH				IAML		09 20 07.2	
	comp=N,321μm,0.6s						
KLCH	**Kalalua Cone**	**0.08**	**74**		**Pg**	**09 20 04.0**	**-0.7**
KLCH					Sg	09 20 06.0	-0.7
ESR	**Escape Road**	**0.09**	**289**		**Pg**	**09 20 05.0**	**+0.2**
ESR					Sg	09 20 07.6	+0.7
KAE	**Kaena**	**0.10**	**169**		**Pg**	**09 20 03.5**	**-1.2**
BYL	**Byron's Ledge**	**0.11**	**286**		**Pg**	**09 20 05.3**	**+0.3**
BYL				Sg	Sg	09 20 07.9	+0.6
BYL				IAML		09 20 08.5	
	comp=N,495μm,0.4s						
AHA	**Ahua**	**0.11**	**265**		**Pg**	**09 20 04.9**	**-0.1**
AHA					Sg	09 20 07.4	+0.1
AHA	**Ahua**	**0.11**	**265**		**Pg**	**09 20 05.1**	**0.0**
AHA					Sg	09 20 07.7	+0.4
KKO	**Keanakako'i**	**0.11**	**278**		**Pg**	**09 20 05.2**	**+0.1**
KKO					Sg	09 20 08.1	+0.7
HATHI	**Halema'uma'u T**	**0.11**	**291**		**Pg**	**09 20 05.5**	**+0.4**
HATHI				IAML		09 20 08.6	
	comp=E,230μm,1.0s						
HATHI				IAML		09 20 10.6	
	comp=N,255μm,0.8s						
RIM	**Rim**	**0.12**	**276**		**Pg**	**09 20 05.3**	**+0.1**
RIM					Sg	09 20 08.1	+0.6
SBLHI	**Steaming Bluff**	**0.12**	**292**		**Pg**	**09 20 05.3**	**+0.1**
SBLHI					Sg	09 20 08.2	+0.7
PWH	**Poliokeawe Pal**	**0.12**	**215**		**Pg**	**09 20 04.7**	**-0.4**
OUT	**Outlet**	**0.12**	**273**		**Pg**	**09 20 05.4**	**+0.1**
OUT					Sg	09 20 08.3	+0.6
UWB	**Uwekahuna Bluf**	**0.13**	**289**		**Pg**	**09 20 05.5**	**+0.2**
UWB					Sg	09 20 08.4	+0.7
OBL	**Observatory Le**	**0.13**	**286**		**Pg**	**09 20 05.6**	**+0.2**
OBL					Sb	09 20 08.8	-0.3
SDHHI	**Sand Hill**	**0.13**	**273**		**Pg**	**09 20 05.5**	**+0.1**
SDHHI					Sg	09 20 08.6	+0.7
KNH	**Kipuka Nene**	**0.14**	**250**		**Pg**	**09 20 05.4**	**0.0**
UWE	**Uwekahuna**	**0.14**	**286**		**Pg**	**09 20 05.8**	**+0.3**
WRMHI	**West Rim**	**0.14**	**280**		**Pg**	**09 20 05.6**	**+0.1**
WRMHI					Sg	09 20 08.9	+0.9
RSD	**Rainshed**	**0.14**	**304**		**Pg**	**09 20 06.1**	**+0.6**
RSD				IAML		09 20 09.9	
	comp=N,155μm,0.9s						
RSD				IAML		09 20 13.2	
	comp=E,163μm,0.7s						
JOKA	**Jonika Flow**	**0.15**	**70**		**Pg**	**09 20 05.0**	**-0.6**
JOKA				Sg	Sg	09 20 07.3	-0.8
JOKA				IAML		09 20 08.2	
	comp=N,195μm,0.8s						
CPK	**Cone Peak**	**0.17**	**274**		**Pg**	**09 20 06.1**	**+0.3**
HLP	**Hilina Pali**	**0.17**	**240**		**Pg**	**09 20 05.8**	**-0.1**
DES	**Desert**	**0.23**	**259**		**Pg**	**09 20 06.6**	**-0.2**
DES					Sg	09 20 10.7	+0.5
DES				IAML		09 20 12.7	
	comp=N,112μm,0.5s						
DES				IAML		09 20 14.1	
	comp=E,70μm,0.5s						
PKL	**Puu Kaliu**	**0.23**	**71**		**Pg**	**09 20 06.2**	**-0.6**
MLH	**Mauna Loa**	**0.25**	**297**		**Pg**	**09 20 07.8**	**+0.5**
MLH					Sb	09 20 13.1	+0.5
MLH				IAML		09 20 13.7	
	comp=N,98μm,0.5s						
HTC	**Hot Caves**	**0.27**	**238**		**Pg**	**09 20 07.7**	**+0.1**
PLL	**Puu Ulaula**	**0.33**	**297**		**Pg**	**09 20 08.8**	**+0.2**
WOH	**Wood Valley**	**0.36**	**249**		**Pg**	**09 20 09.0**	**-0.1**
PPL	**Puu Pili**	**0.37**	**233**		**Pg**	**09 20 08.6**	**-0.7**
TRH	**Trail**	**0.38**	**275**		**Pg**	**09 20 10.0**	**+0.4**
HMH	**Humu'ula Sheep**	**0.38**	**305**		**Pb**	**09 20 10.7**	**0.0**
HMH					Sb	09 20 17.2	+0.7
WIH	**Wilkes Camp**	**0.42**	**282**		**Pg**	**09 20 10.4**	**+0.1**
MLOA	**Mauna Loa Obse**	**0.43**	**291**		**Pg**	**09 20 10.7**	**+0.2**
MLOA					Sb	09 20 18.3	+0.3
MLOA	**Mauna Loa Obse**	**0.43**	**291**	P	**Pg**	**09 20 10.9**	**+0.4**
MWH	**Mokuaweoweo**	**0.43**	**284**		**Pg**	**09 20 10.7**	**+0.1**
MWH					Sg	09 20 17.6	+1.1
SWH	**Southwest Rift**	**0.43**	**280**		**Pg**	**09 20 10.4**	**-0.2**
RCO	**Red Cone**	**0.45**	**273**		**Pg**	**09 20 10.5**	**-0.4**
KHU	**Kahuku**	**0.46**	**253**		**Pg**	**09 20 10.6**	**-0.4**
KHU					Sg	09 20 17.7	+0.6
HPO	**Honuapo**	**0.48**	**233**		**Pg**	**09 20 10.6**	**-0.7**
HPO					Sg	09 20 17.7	0.0
DAH	**Dandelion**	**0.49**	**267**		**Pg**	**09 20 10.9**	**-0.6**
HPU	**Hale Pohaku**	**0.49**	**324**		**Pg**	**09 20 11.9**	**+0.3**
ALEP	**Alea Permanent**	**0.49**	**289**		**Pg**	**09 20 11.5**	**-0.1**
ALEP					Sb	09 20 20.0	+0.3
POHA	**Pohakuloa**	**0.52**	**316**		**Pg**	**09 20 12.3**	**+0.1**
POHA	**Pohakuloa**	**0.52**	**316**		**Sb**	**09 20 20.6**	**+0.2**
POHA				IAML		09 20 21.7	
	comp=N,113μm,0.5s						
POHA				IAML		09 20 21.7	
	comp=N,129μm,0.7s						
POHA	**Pohakuloa**	**0.52**	**316**	P	**Pg**	**09 20 12.2**	**+0.1**
KKU	**Keanakolu**	**0.54**	**340**		**Pb**	**09 20 13.1**	**-0.1**
OVEH	**Oceanview Est**	**0.62**	**249**		**Pg**	**09 20 12.4**	**-1.6**
OVEH					Sg	09 20 21.0	-1.3
OVEH				IAML		09 20 27.3	
	comp=N,44μm,0.8s						
OVEH				IAML		09 20 30.5	
	comp=E,58μm,0.8s						
SPT	**South Point**	**0.63**	**231**		**Pg**	**09 20 12.5**	**-1.7**
SPT					Sg	09 20 20.7	-1.8
SPT				IAML		09 20 26.8	
	comp=N,28μm,0.6s						
SPT				IAML		09 20 32.9	
	comp=E,27μm,0.7s						
KUH	**Kaapuna**	**0.69**	**260**		**Pg**	**09 20 13.6**	**-1.7**
I59US	**HAWAII INFRASO**	**0.73**	**287**	Pg	**Pg**	**09 20 15.4**	**-0.7**
	baz=119,slow=13						
I59US				Lg	Lg	09 20 26.6	
	baz=117,slow=19						
CPH	**Captain Cook**	**0.73**	**278**		**Pg**	**09 20 14.4**	**-1.6**
KKH	**Kailua Kona**	**0.86**	**289**		**Pg**	**09 20 16.5**	**-2.0**
KOH	**Kohala**	**0.95**	**322**		**Pb**	**09 20 17.8**	**-2.4**
KOH					Sg	09 20 30.7	-1.9
MHA	**Mahukona**	**1.07**	**319**		**Pb**	**09 20 19.8**	**-2.3**
MHA					Sb	09 20 33.9	-2.2
HLK	**Haleakala**	**1.71**	**323**		**Sn**	**09 20 49.4**	**-4.1**
HLK	**Haleakala**	**1.71**	**323**	P	**Pn**	**09 20 28.8**	**-2.8**
KHLH	**Kahului Airpor**	**1.93**	**322**		**Pn**	**09 20 32.2**	**-2.0**
KHLH					Sn	09 20 54.8	-3.5
KHLH				Lg	Lg	09 20 55.5	
KHLH	**Kahului Airpor**	**1.93**	**322**	P	**Pn**	**09 20 32.3**	**-2.0**
KPA	**Kalaupapa**	**2.49**	**317**		**Pn**	**09 20 38.9**	**-3.1**
KPA					Sn	09 21 08.3	-4.0
KPA				Lg	Lg	09 21 08.5	
WMR	**Waimanalo Ridg**	**3.06**	**310**		**Pn**	**09 20 46.5**	**-3.3**
WMR					Sn	09 21 21.7	-4.6
WMR				Lg	Lg	09 21 22.5	
HON	**Honolulu**	**3.30**	**306**		**Pn**	**09 20 49.7**	**-3.4**
HON					Sn	09 21 27.6	-4.6
KIP	**Kipapa**	**3.37**	**308**		**Pn**	**09 20 50.7**	**-3.4**
KIP					Sn	09 21 29.6	-4.3
KEKH	**Kekaha**	**4.99**	**302**		**Pn**	**09 21 12.4**	**-4.0**
KEKH					Sn	09 22 06.8	-7.2
KEKH	**Kekaha**	**4.99**	**302**	P	**Pn**	**09 21 12.8**	**-3.6**
TAOE	**Nuku Hiva Isla**	**31.72**	**151**	*e*T	T	09 59 35.5	
	comp=E,119nm,0.4s						
PMOR	**Pomariorio Ree**	**34.91**	**168**	*e*T	T	10 03 33.0	
	comp=E,55nm,0.1s						
VAH	**Vaihoa**	**35.19**	**167**	*e*T	T	10 04 00.9	
	comp=E,47nm,0.4s						
UNV	**Unalaska Valle**	**35.49**	**348**	P	**P**	**09 26 57.7**	**-0.3**
	baz=161						
CHNA	**Chernabura Isl**	**35.55**	**356**	P	**P**	**09 26 57.7**	**-0.7**
	baz=173						
H11N3	**WAKE ISLAND Hy**	**35.70**	**277**	T	T	10 04 05.5	
	baz=84,slow=75,SNR=231						
H11N2	**WAKE ISLAND Hy**	**35.72**	**277**	T	T	10 04 06.1	
	baz=84,slow=75,SNR=158						
H11N1	**WAKE ISLAND Hy**	**35.72**	**277**	T	T	10 04 06.7	
	baz=84,slow=75,SNR=182						
H11S2	**WAKE ISLAND Hy**	**36.04**	**275**	T	T	10 04 30.1	
	baz=82,slow=74,SNR=192						
H11S1	**WAKE ISLAND Hy**	**36.05**	**275**	T	T	10 04 30.4	
	baz=82,slow=74,SNR=131						
H11S3	**WAKE ISLAND Hy**	**36.06**	**275**	T	T	10 04 31.3	
	baz=82,slow=74,SNR=175						
SDPT	**Sand Point**	**36.13**	**355**	P	**P**	**09 27 03.0**	**-0.4**
	baz=171						
CHIR	**Chirikof Islan**	**36.38**	**360**	P	**P**	**09 27 05.7**	**+0.2**
	baz=179						
CHGN	**Chignik**	**36.94**	**357**	P	**P**	**09 27 10.5**	**+0.2**
	baz=175						
S14K	**Fog Glacier**	**36.99**	**356**	P	**P**	**09 27 10.9**	**0.0**
	baz=173						
NVAR	**Mina Array Bea**	**37.11**	**51**	P	**P**	**09 27 14.1**	**+1.8**
	comp=E,0.5nm,0.6s,baz=239,slow=11,SNR=4.6						
	comp=E,0.5nm,0.6s						
PPT	**Papeete**	**37.13**	**171**	LR	LR	09 41 06.5	
	comp=E,46nm,18.5s,baz=352,slow=34						
SII	**Sitkinak Islan**	**37.13**	**1**	P	**P**	**09 27 12.6**	**+0.7**
	baz=181						
PPT2	**Papeete2**	**37.15**	**171**	*e*LR	LR	09 37 11.4	
	comp=E,108nm,25.2s						
PPT2				*e*LR	LR	09 37 12.4	
	comp=E,128nm,26.2s						
PPT2				*e*T	T	10 06 20.1	
	comp=E,3.9nm,0.1s						
TIAR	**Tiarei**	**37.15**	**171**	*e*T	T	10 06 21.3	
	comp=E,164nm,0.1s						
PAE	**Paea**	**37.22**	**171**	*e*T	T	10 06 24.5	
	comp=E,4.4nm,0.1s						
TVO	**Taravao**	**37.38**	**171**	*e*T	T	10 06 37.9	
	comp=E,5.4nm,0.1s						
OHAK	**Old Harbor**	**37.81**	**2**	P	**P**	**09 27 18.4**	**+0.7**
	baz=183						
H02S2	**DAWSON INLET T**	**38.05**	**22**	T	T	10 07 26.9	
	SNR=639						
H02S1	**DAWSON INLET T**	**38.05**	**22**	T	T	10 07 26.9	
	SNR=634						
R17L	**Mt. Peulik Vol**	**38.20**	**359**	P	**P**	**09 27 22.1**	**+1.0**
	baz=178						
KDAK	**Kodiak Island**	**38.39**	**2**	P	**P**	**09 27 23.2**	**+0.6**
	baz=184						
KDAK	**Kodiak Island**	**38.39**	**2**	P	**P**	**09 27 24.7**	**+2.1**
WVOR	**Wild Horse Val**	**38.42**	**45**	P	**P**	**09 27 25.5**	**+2.3**
Q17K	**Contact Creek**	**38.83**	**359**	P	**P**	**09 27 26.7**	**+0.3**
	baz=179						
Q18K	**Katmai Hardscr**	**39.22**	**0**	P	**P**	**09 27 29.7**	**+0.1**
	baz=180						
Q16K	**King Salmon**	**39.26**	**359**	P	**P**	**09 27 30.8**	**+1.0**
	baz=178						
Q19K	**Cape Douglas,**	**39.51**	**1**	P	**P**	**09 27 32.7**	**+0.7**
	baz=182						
CRAG	**Craig**	**39.69**	**20**	P	**P**	**09 27 33.2**	**-0.3**
	baz=214						
P17K	**Kvichak River**	**39.77**	**359**	P	**P**	**09 27 34.5**	**+0.3**
	baz=178						
O15K	**Ungalikthiuk R**	**39.89**	**356**	P	**P**	**09 27 35.6**	**+0.5**
	baz=173						
V35K	**Ketchikan**	**40.07**	**21**	P	**P**	**09 27 36.7**	**+0.1**
	baz=216						
O14K	**Tigyukauivet M**	**40.07**	**355**	P	**P**	**09 27 36.8**	**+0.2**
	baz=171						
O16K	**Kokwok River B**	**40.22**	**358**	P	**P**	**09 27 38.1**	**+0.3**
	baz=176						
U33K	**Whale Pass**	**40.23**	**19**	P	**P**	**09 27 37.7**	**-0.3**
	baz=213						
P19K	**Oil Pt**	**40.25**	**2**	P	**P**	**09 27 37.5**	**-0.6**
	baz=183						
HOM	**Homer**	**40.31**	**3**	P	**P**	**09 27 38.3**	**-0.3**
	baz=185						
O17K	**Koliganek Bris**	**40.37**	**358**	P	**P**	**09 27 39.2**	**+0.2**
	baz=177						
SIT	**Sitka**	**40.40**	**17**	P	**P**	**09 27 39.7**	**+0.3**
	baz=210						
O18K	**Koktuh Hills**	**40.42**	**360**	P	**P**	**09 27 39.5**	**-0.1**
	baz=180						
BRSE	**Bradley Lake S**	**40.44**	**3**	P	**P**	**09 27 39.5**	**-0.1**
	baz=186						
O20K	**Slope Mountain**	**40.69**	**2**	P	**P**	**09 27 42.1**	**+0.3**
	baz=184						
WRAK	**Wrangell Islan**	**40.73**	**19**	P	**P**	**09 27 42.2**	**+0.1**
	baz=214						
N14K	**Kuskokwak Cree**	**40.77**	**355**	P	**P**	**09 27 42.7**	**+0.3**
	baz=170						
O19K	**Port Alsworth**	**40.77**	**1**	P	**P**	**09 27 42.0**	**-0.4**
	baz=181						
T33K	**Petersburg**	**40.87**	**19**	P	**P**	**09 27 42.9**	**-0.3**
	baz=213						
SEW	**Seward**	**40.88**	**4**	P	**P**	**09 27 42.9**	**-0.4**
	baz=188						
N15K	**Kwethluk River**	**40.89**	**356**	P	**P**	**09 27 43.6**	**+0.1**
	baz=173						
F10A	**Beach Ranch, E**	**40.91**	**41**		**P**	**09 27 45.1**	**+1.2**
SMY	**Shemya**	**40.95**	**332**	P	**P**	**09 27 43.2**	**-0.7**
S31K	**Pelican**	**40.96**	**15**	P	**P**	**09 27 43.5**	**-0.5**
	baz=208						
S32K	**Killisnoo**	**40.96**	**17**	P	**P**	**09 27 43.9**	**0.0**
	baz=210						
N17K	**Nushagak Hills**	**41.12**	**358**	P	**P**	**09 27 45.6**	**+0.3**
	baz=177						
N16K	**Nishlik Lake**	**41.13**	**357**	P	**P**	**09 27 45.8**	**+0.5**
	baz=175						
C09A	**Chrisman Ranch**	**41.17**	**38**	P	**P**	**09 27 46.3**	**+0.4**
KAIM	**Kayak Island**	**41.23**	**8**	P	**P**	**09 27 46.5**	**+0.3**
	baz=195						
O22K	**Cooper Landing**	**41.24**	**4**	P	**P**	**09 27 45.8**	**-0.4**
	baz=188						
N18K	**Kilae Creek**	**41.26**	**359**	IAmb	IAmb	09 27 49.9	
	comp=Z,9.4nm,1.0s						
N18K	**Kilae Creek**	**41.26**	**359**	P	**P**	**09 27 46.3**	**-0.1**
	baz=179,SNR=5.1						
PLID	**Pearl Lake**	**41.28**	**43**	P	**P**	**09 27 46.6**	**-0.5**
N19K	**Bonanza Creek**	**41.39**	**0**	P	**P**	**09 27 47.1**	**-0.6**
	baz=181,SNR=10						
M13K	**Dall Lake**	**41.40**	**354**	P	**P**	**09 27 47.1**	**-0.5**
	baz=168						
CAPN	**Captain Cook N**	**41.44**	**3**	P	**P**	**09 27 47.8**	**-0.1**
	baz=186						
M15K	**Kasigluk River**	**41.46**	**356**	P	**P**	**09 27 47.5**	**-0.5**
	baz=172						
M14K	**Bethel**	**41.61**	**355**	P	**P**	**09 27 48.4**	**-0.8**
	baz=170						
EYAK	**Cordova Ski Ar**	**41.66**	**7**	P	**P**	**09 27 49.1**	**-0.6**
	baz=193						
R32K	**Eaglecrest**	**41.68**	**16**	P	**P**	**09 27 48.7**	**-1.2**
	baz=210						
M16K	**Timber Creek**	**41.68**	**357**	P	**P**	**09 27 49.0**	**-0.9**
	baz=175						
M11K	**Mekoryuk**	**41.71**	**352**	P	**P**	**09 27 48.6**	**-1.5**
	baz=164						
HLID	**Hailey**	**41.71**	**45**	P	**P**	**09 27 53.2**	**+2.6**
SPU	**Mount Spurr**	**41.81**	**2**	P	**P**	**09 27 50.8**	**-0.2**
RC01	**Rabbit Creek A**	**41.84**	**4**	P	**P**	**09 27 50.4**	**-0.8**
	baz=188						
GLI	**Glacier Island**	**41.85**	**6**	P	**P**	**09 27 50.6**	**-0.7**
	baz=191						
M17K	**Holitna River**	**42.01**	**358**	P	**P**	**09 27 52.2**	**-0.3**
	baz=177						
PINM	**Pinnacle**	**42.05**	**11**	P	**P**	**09 27 52.8**	**-0.2**
	baz=201						
M18K	**Stony River**	**42.07**	**360**	P	**P**	**09 27 53.1**	**0.0**
	baz=179,SNR=6.2						
P29M	**Windy Craggy**	**42.11**	**13**	P	**P**	**09 27 53.5**	**0.0**
	baz=205						
DIV	**Divide**	**42.23**	**7**	P	**P**	**09 27 54.9**	**+0.4**
KNK	**Knik Glacier**	**42.25**	**5**	P	**P**	**09 27 54.5**	**-0.1**
	baz=189						
L14K	**Kuka Creek**	**42.25**	**355**	P	**P**	**09 27 54.6**	**+0.1**
	baz=169						
S34M	**Telegraph Cree**	**42.34**	**19**	P	**P**	**09 27 54.9**	**-0.4**
	baz=215						
PMR	**Palmer**	**42.38**	**4**	P	**P**	**09 27 55.9**	**+0.4**
	baz=188						
L16K	**Owhat River**	**42.40**	**357**	P	**P**	**09 27 56.1**	**+0.4**
	baz=174						
M22K	**Willow**	**42.48**	**4**	P	**P**	**09 27 56.7**	**+0.3**
M22K				IAmb	IAmb	09 28 02.4	
	comp=Z,17nm,1.1s						
M22K	**Willow**	**42.48**	**4**	P	**P**	**09 27 56.9**	**+0.6**
	baz=187						
M20K	**Styx River**	**42.48**	**1**	P	**P**	**09 27 56.4**	**-0.1**
	baz=183						
M19K	**Big River Lodg**	**42.48**	**1**	P	**P**	**09 27 56.5**	**+0.1**
	baz=181						
L15K	**Ungalak Mounta**	**42.49**	**356**	P	**P**	**09 27 56.8**	**+0.4**
	baz=171						
SKAG	**Skagway**	**42.51**	**15**	P	**P**	**09 27 56.6**	**-0.1**
	baz=208						
O29M	**Mount Kennedy**	**42.56**	**12**	P	**P**	**09 27 57.2**	**0.0**
	baz=203						
KLU	**Klutina**	**42.57**	**7**	P	**P**	**09 27 57.4**	**+0.2**
	baz=193						
CTU	**Camp Tracy**	**42.63**	**50**	P	**P**	**09 27 57.0**	**-1.2**
SKT	**Skwentna**	**42.63**	**3**	IAmb	IAmb	09 28 00.3	
	comp=Z,6.2nm,0.9s						
SKT	**Skwentna**	**42.63**	**3**	P	**P**	**09 27 58.1**	**+0.4**
	baz=185,SNR=6.1						
SML	**Sawmill**	**42.65**	**5**	P	**P**	**09 27 58.1**	**+0.2**
	baz=189						
HMU	**Henry Mountain**	**42.68**	**55**	P	**P**	**09 27 57.5**	**-1.2**
O28M	**Mount Upton**	**42.69**	**11**	P	**P**	**09 27 58.3**	**-0.1**
	baz=201						
BARN	**Barnard Glacie**	**42.72**	**10**	P	**P**	**09 27 57.1**	**-1.5**
BARN				IAmb	IAmb	09 27 57.3	
	comp=Z,8.3nm,0.9s						
L19K	**White Mountain**	**42.76**	**0**	P	**P**	**09 27 59.9**	**+1.2**
L19K				IAmb	IAmb	09 28 01.2	
	comp=Z,9.0nm,0.8s						
L19K	**White Mountain**	**42.76**	**0**	P	**P**	**09 27 59.5**	**+0.7**
	baz=180,SNR=8.2						
SCM	**Sheep Creek Mo**	**42.76**	**5**	P	**P**	**09 27 59.5**	**+0.7**
	baz=191						
L17K	**Donlin**	**42.77**	**358**	P	**P**	**09 27 59.3**	**+0.6**
	baz=176						
L18K	**Granite Mounta**	**42.81**	**359**	P	**P**	**09 28 00.9**	**+1.8**
L18K				IAmb	IAmb	09 28 02.0	
	comp=Z,6.5nm,0.9s						
L18K	**Granite Mounta**	**42.81**	**359**	P	**P**	**09 27 59.5**	**+0.5**
	baz=178,SNR=5.3						
MCARA	**McCarthy VSAT**	**42.82**	**9**	P	**P**	**09 27 58.9**	**-0.2**
	baz=197						
N25K	**Chitina, Valde**	**42.83**	**7**	P	**P**	**09 27 59.2**	**-0.2**
	baz=195						
TBI	**Tubuai**	**42.83**	**172**	*e*LR	LR	09 39 43.5	
	comp=Z,524nm,28.0s						
TBI				*e*T	T	10 13 27.9	
	comp=Z,16nm,0.1s						
Q32M	**Nakina River**	**42.88**	**17**	P	**P**	**09 27 59.3**	**-0.6**
	baz=212						
P32M	**Atlin**	**43.03**	**16**	P	**P**	**09 28 00.0**	**-0.9**
	baz=210						
K13K	**Kusilvak Mount**	**43.03**	**353**	P	**P**	**09 28 00.2**	**-0.7**
	baz=167						
K15K	**Wolf Creek Mou**	**43.10**	**356**	P	**P**	**09 28 01.3**	**-0.1**
	baz=171						
DLBC	**Dease Lake**	**43.10**	**19**	P	**P**	**09 28 00.6**	**-1.0**
	baz=216						
SRU	**San Rafael Swe**	**43.12**	**53**	P	**P**	**09 28 01.6**	**-0.5**
M24K	**Tolsona, Glenn**	**43.14**	**6**	P	**P**	**09 28 01.6**	**-0.3**
	baz=192						
YUK6	**Outpost Mounta**	**43.19**	**12**	P	**P**	**09 28 01.6**	**-0.8**
	baz=203						
L22K	**Petersville**	**43.21**	**3**	IAmb	IAmb	09 28 05.0	
	comp=Z,5.3nm,0.6s						
L22K	**Petersville**	**43.21**	**3**	P	**P**	**09 28 02.1**	**-0.3**
	baz=186,SNR=7.8						
YUK8	**Steele Glacier**	**43.24**	**11**	P	**P**	**09 28 02.5**	**-0.5**
	baz=201						
HYT	**Haines Junctio**	**43.25**	**13**	P	**P**	**09 28 02.5**	**-0.3**
	baz=205						
MSO	**Missoula**	**43.33**	**41**	P	**P**	**09 28 03.1**	**-0.6**
K17K	**Iditarod**	**43.35**	**358**	P	**P**	**09 28 03.4**	**0.0**
	baz=176						
BRWY	**Burwash Landin**	**43.46**	**11**	P	**P**	**09 28 04.0**	**-0.4**
	baz=202						
WAT6	**Susitna Watana**	**43.47**	**5**	P	**P**	**09 28 04.3**	**-0.3**
	baz=190,SNR=5.8						
O30N	**Mendenhall**	**43.50**	**13**	P	**P**	**09 28 04.4**	**-0.4**
	baz=206						
YUK4	**Talbot Arm**	**43.50**	**11**	P	**P**	**09 28 06.2**	**+1.2**
	baz=203						
PPLA	**Purkeypile**	**43.53**	**2**	P	**P**	**09 28 05.8**	**+0.8**
PPLA				IAmb	IAmb	09 28 18.0	
	comp=Z,8.6nm,1.1s						
PPLA	**Purkeypile**	**43.53**	**2**	P	**P**	**09 28 05.3**	**+0.2**
	baz=184						
YUK3	**Moose Creek**	**43.59**	**10**	P	**P**	**09 28 05.2**	**-0.4**
	baz=200						
R33M	**Jennings River**	**43.61**	**18**	P	**P**	**09 28 06.0**	**+0.2**
	baz=214						
WAT1	**Susitna Watana**	**43.65**	**4**	P	**P**	**09 28 06.4**	**+0.5**
	baz=189						
WHY	**Whitehorse**	**43.68**	**14**	P	**P**	**09 28 06.3**	**+0.1**
	baz=208						
P33M	**Teslin, Yukon**	**43.79**	**16**	P	**P**	**09 28 07.1**	**0.0**
	baz=211						
M26K	**Nabesna, AK**	**43.80**	**8**	P	**P**	**09 28 07.4**	**+0.3**
	baz=197						
N30M	**Aishikik Lake**	**43.91**	**12**	P	**P**	**09 28 08.4**	**+0.3**
	baz=205						
M27K	**Edge Creek, AK**	**43.92**	**9**	P	**P**	**09 28 08.7**	**+0.5**
	baz=198						
K20K	**Telida**	**43.95**	**1**	P	**P**	**09 28 08.6**	**+0.3**
K20K	**Telida**	**43.95**	**1**	P	**P**	**09 28 08.4**	**+0.2**
	baz=181						
DHY	**Denali Highway**	**43.98**	**5**	IAmb	IAmb	09 28 14.8	
	comp=Z,6.9nm,1.0s						
DHY	**Denali Highway**	**43.98**	**5**	P	**P**	**09 28 08.8**	**+0.1**
	baz=190						
J16K	**Anvik River**	**44.03**	**356**	P	**P**	**09 28 08.8**	**0.0**
	baz=173						
CAST	**Castle Rocks**	**44.05**	**2**	P	**P**	**09 28 09.9**	**+0.8**
CAST	**Castle Rocks**	**44.05**	**2**	P	**P**	**09 28 09.5**	**+0.4**
	baz=184,SNR=6.5						
PAX	**Paxson**	**44.06**	**6**	IAmb	IAmb	09 28 15.2	
	comp=Z,12nm,1.2s						
PAX	**Paxson**	**44.06**	**6**	P	**P**	**09 28 09.8**	**+0.6**
	baz=193,

SCRK	**Sand Creek**	45.20	7	P		P	09 28 17.8	-0.6	
	baz=195								
L29M	**L29M**	45.23	11	P		P	09 28 18.3	-0.2	
	baz=203								
HDA	**Harding Lake**	45.34	5	P		P	09 28 19.3	0.0	
	baz=191								
GCSA	**Galena City Sc**	45.35	359	P		P	09 28 19.2	-0.1	
	baz=178								
NEA2	**Nenana**	45.37	4	IAmb		IAmb	09 28 21.2		
	comp=Z,3.8nm,0.8s								
NEA2	**Nenana**	45.37	4	P		P	09 28 19.2	-0.3	
	baz=188								
I20K	**Naaghedeneel**	45.39	0	P		P	09 28 19.6	0.0	
	baz=181								
H16K	**Elim**	45.48	356	P		P	09 28 20.4	0.0	
	baz=171								
CCB	**Clear Creek Bu**	45.50	4	IAmb		IAmb	09 28 23.0		
	comp=Z,7.2nm,1.0s								
ANMO	**Albuquerque**	45.57	60	P		P	09 28 23.9	+2.0	
H17K	**Granite Mounta**	45.64	357	P		P	09 28 21.4	-0.3	
	baz=174								
J25K	**Salcha River,**	45.68	6	IAmb		IAmb	09 28 25.2		
	comp=Z,7.4nm,1.0s								
J25K	**Salcha River,**	45.68	6	P		P	09 28 21.2	-0.9	
	baz=193,SNR=8.1								
IL31		45.70	5	P		P	09 28 22.4	+0.3	
IL31				IAmb		IAmb	09 28 24.3		
	comp=Z,7.0nm,1.1s								
ILAR	**Eielson Array**	45.70	5	P		P	09 28 23.1	+1.0	
	comp=Z,2.9nm,0.9s,baz=198,slow=6.9,SNR=23								
ILAR				PcP		PcP	09 30 01.1	+1.1	
	comp=Z,0.4nm,0.6s,baz=201,slow=4.8,SNR=2.0								
	comp=Z,2.9nm,0.9s								
ILAR	**Eielson Array**	45.70	5	P		P	09 28 22.7	+0.6	
MLY	**Manley**	45.72	3	IAmb		IAmb	09 28 24.0		
	comp=Z,5.7nm,1.0s								
MLY	**Manley**	45.72	3	P		P	09 28 21.8	-0.6	
	baz=186,SNR=7.4								
COLA	**College**	45.73	4	P		P	09 28 23.0	+0.6	
COLA				IAmb		IAmb	09 28 48.6		
	comp=Z,4.1nm,0.8s								
COLA	**College**	45.73	4	P		P	09 28 23.4	+1.1	
H18K	**Honhosa River**	45.79	358	P		P	09 28 22.6	-0.3	
	baz=176								
I21K	**Tanana**	45.82	2	P		P	09 28 22.9	-0.2	
	baz=184								
I23K	**Minto, Yukon-K**	45.90	3	IAmb		IAmb	09 28 25.4		
	comp=Z,3.4nm,0.7s								
I23K	**Minto, Yukon-K**	45.90	3	P		P	09 28 23.5	-0.2	
	baz=188,SNR=5.6								
DAWY	**Dawson**	45.91	10	P		P	09 28 24.4	+0.5	
DAWY				IAmb		IAmb	09 28 27.5		
	comp=Z,4.8nm,0.9s								
DAWY	**Dawson**	45.91	10	P		P	09 28 23.2	-0.7	
	baz=201,SNR=5.3								
POKR	**Poker Plat Res**	46.00	5	P		P	09 28 24.5	0.0	
	baz=190								
K29M	**Barlow Dome**	46.02	11	P		P	09 28 25.2	+0.3	
	baz=203								
H20K	**Anotleneega Mo**	46.09	0	P		P	09 28 25.3	+0.1	
	baz=180,SNR=7.1								
H19K	**Roundabout Mou**	46.13	359	P		P	09 28 25.9	+0.4	
H19K				IAmb		IAmb	09 28 28.5		
	comp=Z,7.6nm,1.0s								
H19K	**Roundabout Mou**	46.13	359	P		P	09 28 25.2	-0.3	
	baz=178,SNR=6.5								
MNTX	**Cornudas Mount**	46.20	64	P		P	09 28 25.9	-0.8	
MNTX				IAmb		IAmb	09 28 32.6		
	comp=Z,5.6nm,1.1s								
MNTX	**Cornudas Mount**	46.20	64	P		P	09 28 26.9	+0.2	
G17K	**Kiwalik Mounta**	46.24	357	P		P	09 28 26.6	+0.2	
	baz=173								
H21K	**Melozitna Rive**	46.28	1	P		P	09 28 26.7	0.0	
	baz=183								
KOTAN	**Kotaneelee Air**	46.35	21	P		P	09 28 27.0	-0.4	
	baz=222								
G18K	**Tagagawik**	46.55	358	P		P	09 28 28.5	-0.3	
	baz=175								
PRP	**Porcupine Dome**	46.55	6	IAmb		IAmb	09 28 34.6		
	comp=Z,5.5nm,1.1s								
PRP	**Porcupine Dome**	46.55	6	P		P	09 28 29.3	+0.3	
	baz=192								
H22K	**Ishtalitna Cre**	46.55	2	P		P	09 28 28.9	0.0	
	baz=185								
H23K	**Yukon River**	46.57	3	IAmb		IAmb	09 28 31.1		
	comp=Z,5.7nm,1.1s								
H23K	**Yukon River**	46.57	3	P		P	09 28 29.1	+0.1	
	baz=187								
I26K	**Coal Creek Min**	46.59	7	IAmb		IAmb	09 28 32.4		
	comp=Z,9.7nm,1.2s								
I26K	**Coal Creek Min**	46.59	7	P		P	09 28 28.9	-0.3	
	baz=196								
F14K	**Arctic Creek**	46.66	354	P		P	09 28 29.7	0.0	
	baz=165								
H24K	**Noodor Dome**	46.68	4	IAmb		IAmb	09 28 32.1		
	comp=Z,4.3nm,0.9s								
H24K	**Noodor Dome**	46.68	4	P		P	09 28 30.0	0.0	
	baz=189,SNR=5.7								
F15K	**North Star Dit**	46.72	355	P		P	09 28 30.0	-0.2	
	baz=168								
G19K	**Purcell Mounta**	46.76	359	P		P	09 28 30.9	+0.5	
	baz=177								
J30M	**Hart River**	46.90	11	P		P	09 28 32.3	+0.5	
	baz=205								
TNA	**Tin City**	46.92	353	P		P	09 28 32.1	+0.4	
	baz=163								
I27K	**Kandik River**	47.05	8	IAmb		IAmb	09 28 38.8		
	comp=Z,4.4nm,1.0s								
I27K	**Kandik River**	47.05	8	P		P	09 28 33.1	+0.2	
	baz=198								
G21K	**Allakaket**	47.12	1	P		P	09 28 33.1	-0.3	
	baz=182								
I28M	**Miner Creek**	47.13	9	P		P	09 28 33.6	0.0	
	baz=200								
F17K	**Baldwin Pennin**	47.21	357	P		P	09 28 34.2	+0.3	
	baz=172								
F18K	**Selawik**	47.29	358	P		P	09 28 35.2	+0.6	
	baz=174								
G23K	**Bananza Creek**	47.42	3	P		P	09 28 36.4	+0.6	
	baz=186								
F19K	**Shaleruckik Mo**	47.46	359	IAmb		IAmb	09 28 38.8		
	comp=Z,5.5nm,0.8s								
F19K	**Shaleruckik Mo**	47.46	359	P		P	09 28 36.4	+0.5	
	baz=177,SNR=6.3								
I30M	**Mount Dempster**	47.48	11	IAmb		IAmb	09 28 39.6		
	comp=Z,4.9nm,0.9s								
I30M	**Mount Dempster**	47.48	11	P		P	09 28 36.3	0.0	
	baz=204,SNR=11								
G24K	**Hadweenzic Riv**	47.56	4	IAmb		IAmb	09 28 38.6		
	comp=Z,3.6nm,0.8s								
G24K	**Hadweenzic Riv**	47.56	4	P		P	09 28 37.7	+0.9	
	baz=190,SNR=5.3								
G22K	**Bettles**	47.58	2	P		P	09 28 37.5	+0.7	
	baz=185								
TXAR	**Lajitas Array**	47.62	68	P		P	09 28 40.2	+2.4	
	comp=Z,3.4nm,0.8s,baz=254,slow=8.2,SNR=23								
	comp=Z,3.4nm,0.8s								
TXAR	**Lajitas Array**	47.62	68			P	09 28 37.4	-0.5	
F20K	**Avaraart Lake**	47.65	360	IAmb		IAmb	09 28 43.4		
	comp=Z,3.7nm,1.1s								
F20K	**Avaraart Lake**	47.65	360	P		P	09 28 38.4	+1.0	
	baz=179								
H27K	**Steamboat Moun**	47.67	7	IAmb		IAmb	09 28 40.6		
	comp=Z,7.7nm,1.1s								
H27K	**Steamboat Moun**	47.67	7	P		P	09 28 38.3	+0.7	
	baz=197,SNR=6.5								
G25K	**Bearman Lake**	47.73	5	P		P	09 28 38.5	+0.6	
	baz=192								
F21K	**Alatna River**	47.83	1	P		P	09 28 40.0	+1.1	
	baz=182,SNR=9.2								
E17K	**Hotham Inlet**	47.88	356	P		P	09 28 40.1	+1.0	
	baz=172								
COLD	**Coldfoot**	47.93	3	P		P	09 28 40.5	+0.9	
	baz=186								
E19K	**Redstone River**	48.08	359	IAmb		IAmb	09 28 44.3		
	comp=Z,5.1nm,0.9s								
E19K	**Redstone River**	48.08	359	P		P	09 28 41.6	+0.9	
	baz=177								
H29M	**Whitestone**	48.08	9	P		P	09 28 41.6	+0.8	
	baz=201,SNR=5.9								
G26K	**Porcupine Rive**	48.11	6	IAmb		IAmb	09 28 44.1		
	comp=Z,8.2nm,1.1s								
G26K	**Porcupine Rive**	48.11	6	P		P	09 28 41.9	+0.9	
	baz=194								
F22K	**John River**	48.15	2	P		P	09 28 42.0	+0.7	
	baz=184								
E18K	**Tukpahlearik C**	48.15	357	P		P	09 28 42.0	+0.7	
	baz=173,SNR=5.8								
G27K	**Doyon Strip**	48.20	7	P		P	09 28 42.2	+0.4	
	baz=197								
F24K	**Squaw Lake**	48.34	4	P		P	09 28 43.3	+0.5	
	baz=189								
H31M	**Peel River**	48.38	11	P		P	09 28 42.9	-0.2	
	baz=207								
EPYK	**Eagle Plains**	48.48	10	P		P	09 28 43.9	+0.1	
	baz=203								
MSTX	**Muleshoe**	48.52	61	P		P	09 28 44.3	-0.5	
F25K	**Christian Rive**	48.58	5	P		P	09 28 44.5	-0.1	
	baz=192								
G29M	**Pine Creek**	48.78	9	P		P	09 28 46.6	+0.4	
	baz=202								
E22K	**Anaktuvuk Pass**	48.78	2	P		P	09 28 46.2	0.0	
	baz=184								
E23K	**Chandalar**	48.79	3	P		P	09 28 46.6	+0.3	
	baz=187								
F26K	**Sheenjek River**	48.80	6	P		P	09 28 46.3	-0.1	
	baz=194								
E24K	**Your Creek**	48.86	3	P		P	09 28 46.7	-0.1	
	baz=188								
E20K	**Nigu River**	48.87	359	P		P	09 28 47.0	+0.1	
	baz=179,SNR=5.9								
RSSD	**Black Hills**	49.03	48	P		P	09 28 49.8	+1.1	
E21K	**Killik River**	49.05	1	IAmb		IAmb	09 28 50.6		
	comp=Z,5.3nm,0.9s								
E21K	**Killik River**	49.05	1	P		P	09 28 48.2	-0.1	
	baz=181								
E25K	**Arctic Village**	49.10	5	P		P	09 28 48.1	-0.6	
	baz=192								
G30M	**tAoh Zraii Nji**	49.12	10	P		P	09 28 48.5	-0.3	
	baz=204								
D19K	**Kuna River**	49.14	359	P		P	09 28 49.1	+0.1	
	baz=176,SNR=5.1								
F28M	**Old Crow**	49.19	8	P		P	09 28 49.4	+0.1	
	baz=199								
C16K	**Lisburne Hills**	49.30	355	P		P	09 28 50.1	0.0	
	baz=167								
D20K	**Etivluk River**	49.33	359	IAmb		IAmb	09 28 53.5		
	comp=Z,6.2nm,0.9s								
D20K	**Etivluk River**	49.33	359	P		P	09 28 50.1	-0.3	
	baz=178								
C17K	**DeLong Mountai**	49.34	356	P		P	09 28 50.0	-0.4	
	baz=170								
TOLK	**Toolik Lake Re**	49.37	3	P		P	09 28 50.4	-0.4	
	baz=187								
G31M	**Satah River**	49.39	11	P		P	09 28 50.7	-0.1	
	baz=206								
C18K	**Utukok River**	49.40	357	P		P	09 28 50.7	-0.2	
	baz=172								
PETK	**Petropavlovsk-**	49.44	324	P		P	09 28 53.6	+2.2	
	comp=Z,3.7nm,0.8s,baz=110,slow=13,SNR=4.8								
	comp=Z,3.7nm,0.8s								
PETK	**Petropavlovsk-**	49.44	324	P		P	09 28 52.0	+0.6	
E27K	**Coleen River**	49.53	7	P		P	09 28 51.5	-0.5	
	baz=197								
POST	**Post**	49.53	63	P		P	09 28 52.6	0.0	
POST				IAmb		IAmb	09 28 57.6		
	comp=Z,4.5nm,0.9s								
D23K	**Nanushuk River**	49.65	2	IAmb		IAmb	09 28 56.2		
	comp=Z,7.3nm,0.8s								
D23K	**Nanushuk River**	49.65	2	P		P	09 28 53.2	+0.4	
	baz=186,SNR=5.5								
F30M	**Barrier River**	49.77	10	P		P	09 28 54.2	+0.5	
	baz=204								
C21K	**Knifeblade Rid**	49.77	0	P		P	09 28 53.7	0.0	
	baz=180								
C19K	**Lookout Ridge**	49.79	358	P		P	09 28 54.3	+0.3	
	baz=174								
D24K	**Happy Valley**	49.92	3	P		P	09 28 55.2	+0.4	
	baz=188								
F31M	**Tsiigehtchic**	49.95	11	P		P	09 28 54.8	-0.2	
	baz=207								
E28M	**Babbage River**	50.17	7	P		P	09 28 56.1	-0.6	
	baz=199								
E29M	**Blow River**	50.18	8	P		P	09 28 56.2	-0.6	
	baz=201								
D25K	**Kavik River**	50.23	4	IAmb		IAmb	09 29 03.1		
	comp=Z,8.2nm,1.1s								
D25K	**Kavik River**	50.23	4	P		P	09 28 56.7	-0.5	
	baz=191								
B21K	**Ikpikpuk River**	50.23	0	P		P	09 28 57.1	0.0	
	baz=181								
C24K	**Franklin Bluff**	50.49	3	P		P	09 28 59.2	+0.1	
	baz=188								
C23K	**Itkillik River**	50.52	2	P		P	09 28 59.2	-0.2	
	baz=186,SNR=5.0								
B20K	**Meade River**	50.64	359	P		P	09 29 00.6	+0.4	
	baz=178								
C27K	**Jago River**	50.73	5	P		P	09 29 00.9	0.0	
	baz=194								
INK	**Inuvik**	50.76	10	P		P	09 29 01.2	0.0	
	baz=207								
INK	**Inuvik**	50.76	10	P		P	09 29 01.9	+0.8	
C26K	**Camden Bay**	50.91	5	P		P	09 29 01.4	-0.9	
	baz=192								
A19K	**Wainwright**	50.95	357	P		P	09 29 02.3	-0.3	
	baz=173								
B22K	**Teshekpuk Lake**	50.97	1	P		P	09 29 01.9	-0.8	
	baz=182								
YKA	**Yellowknife Ar**	51.30	23	P		P	09 29 06.5	+1.2	
	comp=Z,2.2nm,0.8s,baz=233,slow=7.4,SNR=7.9								
	comp=Z,2.2nm,0.8s								
YKA	**Yellowknife Ar**	51.30	23	P		P	09 29 05.9	+0.6	
BRDY	**Brady**	51.64	65	P		P	09 29 08.8	+0.4	
BRDY				IAmb		IAmb	09 29 13.0		
	comp=Z,4.3nm,0.9s								
C36M	**Paulatuk**	53.47	13	P		P	09 29 20.5	-0.8	
	baz=217								
ECSD	**EROS Data Cent**	54.24	50	P		P	09 29 26.9	-0.5	
ECSD				IAmb		IAmb	09 29 31.8		
	comp=Z,6.3nm,0.9s								
ECSD	**EROS Data Cent**	54.24	50	P		P	09 29 28.3	+0.9	
TUL3	**Leonard**	54.32	59	P		P	09 29 29.0	+0.8	
TUL3				IAmb		IAmb	09 29 32.4		
	comp=Z,3.3nm,0.7s								
AGMN	**Agassiz Nation**	55.42	44	P		P	09 29 36.4	+0.5	
ULM	**Lac du Bonnet**	55.77	42	P		P	09 29 38.5	+0.1	
	comp=Z,4.4nm,1.0s,baz=243,slow=8.4,SNR=4.0								
	comp=Z,4.4nm,1.0s								
ULM	**Lac du Bonnet**	55.77	42	IAmb		IAmb	09 29 42.5		
	comp=Z,5.4nm,1.0s								
EPLO	**Experimental L**	57.03	43			P	09 29 47.7	+0.3	
EPLO				IAmb		IAmb	09 29 52.1		
	comp=Z,9.2nm,1.0s								
R40A	**Maddies Statio**	57.17	56	IAmb		IAmb	09 29 53.0		
	comp=Z,6.2nm,1.0s								
MJAR	**Matsushiro Arr**	60.20	302	P		P	09 30 11.6	+1.9	
	comp=Z,2.3nm,0.7s,baz=102,slow=4.5,SNR=7.6								
	comp=Z,2.3nm,0.7s								
MJAR	**Matsushiro Arr**	60.20	302			P	09 30 10.0	+0.3	
MJAR				IAmb		IAmb	09 30 15.2		
	comp=Z,4.9nm,1.1s								
H43A	**Windswept, Lux**	60.64	49	P		P	09 30 11.8	-0.7	
O48B	**Farmland**	62.65	54			P	09 30 26.6	+0.4	
E46A	**Sault Ste Mari**	63.10	47	P		P	09 30 29.4	+0.4	
RES	**Resolute Bay**	63.74	15	LR		LR	09 53 52.9		
	comp=Z,26nm,21.5s,baz=318,slow=32								
HIZ	**Hauiti**	64.10	206	P		P	09 30 28.9	-6.7	
KLR	**Kul'dur**	64.59	316	LR		LR	09 56 33.7		
	comp=Z,12nm,19.7s,baz=256,slow=34								
KSRS	**Korea Array**	68.30	303	P		P	09 31 04.8	+2.0	
	comp=Z,0.6nm,0.4s,baz=79,slow=6.6,SNR=4.8								
KSRS				LR		LR	09 59 39.4		
	comp=Z,7.4nm,18.9s,baz=115,slow=35								
	comp=Z,0.6nm,0.4s								
NJ2	**Nanjing**	76.69	299	*e*P		P	09 31 53.8	+0.9	
NJ2				pmax		pmax			
	comp=Z,26nm,0.5s								
STKA	**Stephens Creek**	79.16	231	P		P	09 32 10.3	+3.7	
	comp=Z,3.7nm,0.8s,baz=60,slow=5.6,SNR=4.2								
	comp=Z,3.7nm,0.8s								
SUMG	**Summit**	79.23	16	P		P	09 32 07.5	+0.7	
WRA	**Warramunga Arr**	79.37	244	P		P	09 32 10.4	+2.4	
	comp=Z,1.2nm,1.1s,baz=63,slow=6.2,SNR=3.0								
	comp=Z,1.2nm,1.1s								
WRA	**Warramunga Arr**	79.37	244	P		P	09 32 07.4	-0.6	
HHC	**Hu-ho-hao-te**	79.98	310	*e*P		P	09 32 10.9	-0.3	
HHC				pmax		pmax			
	comp=Z,7.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,61nm,3.9s								
BBSR	**BB Station**	80.25	59	P		P	09 32 11.3	-1.2	
AS31	**Alice Springs**	81.32	241	P		P	09 32 17.9	-0.6	
ASAR	**Alice Springs**	81.32	241	P		P	09 32 21.0	+2.5	
	comp=Z,1.6nm,0.8s,baz=62,slow=6.1,SNR=12								
	comp=Z,1.6nm,0.8s								
ASAR	**Alice Springs**	81.32	241	P		P	09 32 18.3	-0.1	
SONM	**Songino Array**	81.36	318	P		P	09 32 20.0	+1.6	
	comp=Z,2.8nm,1.0s,baz=71,slow=6.0,SNR=10								
	comp=Z,2.8nm,1.0s								
SONM	**Songino Array**	81.36	318	P		P	09 32 18.6	+0.2	
SONM				IAmb		IAmb	09 32 24.4		
	comp=Z,3.7nm,1.1s								
ANWB	**Willy Bob**	87.33	72	P		P	09 32 48.5	-0.5	
GYA	**Guiyang**	88.53	297	⇓P		P	09 32 56.4	+1.6	
GYA				pmax		pmax			
	comp=Z,20nm,0.6s								
FORT	**Forrest**	88.99	237	P		P	09 32 56.6	0.0	
H03N2	**Juan Fernandez**	89.59	126	T		T	11 11 57.4		
	baz=299,slow=76,SNR=133								
H03N3	**Juan Fernandez**	89.61	126	T		T	11 11 58.4		
	baz=299,slow=76,SNR=146								
H03N1	**Juan Fernandez**	89.61	126	T		T	11 11 56.9		
	baz=299,slow=76,SNR=135								
ZALV	**Zalesovo Beam**	90.75	329	P		P	09 33 06.5	+2.0	
	comp=Z,0.7nm,0.4s,baz=63,slow=7.0,SNR=1.7								
	comp=Z,0.7nm,0.4s								
ZALV	**Zalesovo Beam**	90.75	329	P		P	09 33 05.2	+0.7	
KMI2	**Kunming**	92.29	298	P		P	09 33 14.3	+1.8	
KMI2				pmax		pmax			
	comp=Z,12nm,0.8s								

IDC ***03*** *09:22:02.7±2.0,3°.34N×96°.10E, h0km, mb3.7/6, mbtmp3.7/7, ML4.3/1, MS3.2/2, Error ellipse: s-maj=78.5km s-min=21.3km az=60.0*

DJA ***03*** *09:22:08.5±0.3,3°.N±3°×9°.6E±°, h10km, M4.1/18, MLv4.1/18*

ISC 03 09:22:08.2±1.0, 3°.28N±0°.06×96°.09E±0°.08, h38km, n25, σ1s73/17, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	0.89	164	P	Pn	09 22 26.1	+1.8
MLSI	**Meulaboh, Aceh**	1.03	18	P	Pn	09 22 27.9	+1.7
TPTI		1.09	91	P	Pn	09 22 27.2	+0.3
TPTI				S	Sn	09 22 40.3	-0.5
KCSI	**Kotacane, Aceh**	1.70	82	P	Pn	09 22 37.2	+1.9
LHMI	**Lhok Sumawe**	2.12	24	P	Pn	09 22 44.1	+3.0
BSI	**Banda Aceh**	2.34	340	P	Pn	09 22 46.0	+1.8
GSI	**Gunungsitoli**	2.46	143	P	Pn	09 22 47.8	+2.0
PSI	**Prapat**	2.87	99	P	Pn	09 22 53.5	+1.9
CMAR	**Chiang Mai Arr**	15.35	10	Pn	Pn	09 25 39.1	-3.0
	0.4nm,0.3s,baz=191,slow=10,SNR=1.7						
CMAR				Sn	Sn	09 28 32.3	+1.3
	0.5nm,0.3s,baz=105,slow=35,SNR=4.1						
	0.6nm,0.3s						
H08S2	**Diego Garcia H**	25.92	245	T	T	09 54 04.1	
	baz=68						
H08S3	**Diego Garcia H**	25.92	245	T	T	09 54 12.9	
	baz=68,slow=74						
H08S1	**Diego Garcia H**	25.94	245	T	T	09 54 10.5	
	baz=68,slow=74						
WRA	**Warramunga Arr**	44.08	123	P	P	09 30 12.8	-0.2
	0.6nm,0.8s,baz=302,slow=9.2,SNR=4.7						
	0.6nm,0.8s						
JAY	**Jayapura**	44.97	97	LR	LR	09 53 33.6	
	comp=Z,22nm,18.4s,baz=8.5,slow=42						
MKAR	**Makanchi Array**	44.98	347	P	P	09 30 18.7	-1.0
	2.0nm,0.9s,baz=171,slow=8.5,SNR=8.2						
	2.0nm,0.9s						
SONM	**Songino Array**	45.27	10	P	P	09 30 22.1	-0.1
	0.3nm,0.4s,baz=188,slow=7.3,SNR=1.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	45.53	128	P	P	09 30 24.9	+0.3
	0.5nm,0.9s,baz=302,slow=7.8,SNR=4.4						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	49.45	345	P	P	09 30 54.2	-0.2
	0.4nm,0.4s,baz=169,slow=6.7,SNR=5.7						
KURBB				LR	LR	09 54 58.7	
	comp=Z,28nm,18.9s,baz=180,slow=40						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	53.94	341	P	P	09 31 27.5	-0.4
	1.0nm,0.5s,baz=142,slow=7.3,SNR=2.1						
	1.0nm,0.5s						
H04N2	**CROZET ISLANDS**	62.88	213	T	T	10 40 19.4	
	baz=52,slow=75,SNR=60						
H04N1	**CROZET ISLANDS**	62.88	213	T	T	10 40 20.0	
	baz=52,slow=75,SNR=67						
H04N3	**CROZET ISLANDS**	62.89	213	T	T	10 40 18.6	
	baz=52,slow=75,SNR=68						
H04S1	**CROZET ISLANDS**	63.24	212	T	T	10 40 40.8	
	baz=51,slow=76,SNR=18						
H04S3	**CROZET ISLANDS**	63.25	212	T	T	10 40 39.2	
	baz=51,slow=76,SNR=30						
H04S2	**CROZET ISLANDS**	63.26	212	T	T	10 40 38.2	
	baz=51,slow=76,SNR=24						

IDC ***03*** *09:23:38.8±3.1, 53°.55N×87°.85E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=27.0km s-min=19.1km az=47.0*

ASRS 03 09:23:36.0±1.0, 53°.62N×87°.87E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	1.84	282	I	I	09 35 20.0	
	baz=99,slow=317,SNR=4.2						
ZALV	**Zalesovo Beam**	1.84	281	Pn	Pg	09 24 11.8	+0.5
	1.1nm,0.3s,baz=105,slow=19,SNR=13						
ZALV				Lg	Lg	09 24 37.0	
	1.5nm,0.3s,baz=100,slow=24,SNR=8.4						
KURBB	**Kurchatov Arra**	6.49	246	Pn	Pn	09 25 16.1	+3.4
	0.1nm,0.3s,baz=64,slow=15,SNR=3.6						
KURBB				Sn	Sn	09 26 27.9	+0.6
	baz=60,slow=24

KURBB Sn Sn 09 43 06.4 -1.9
baz=53,slow=22,SNR=4.1
MKAR Makanchi Array 7.98 201 Pn Pn 09 42 25.2 +1.8
0.1nm,0.3s,baz=20,slow=14,SNR=0.7

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*IDC **03** 09:55:32.1±1.2,50°.96N×169°.95W,h0km,mb3.7/10, mbtmp3.8/12,ML4.0/2,Error ellipse: s-maj=32.8km s-min=21.0km az=177.0*
*NEIC **03** 09:55:34.9±1.3,50°.99N±0°.09×170°.41W±0°.08,h10km±1km, mb3.8/61,ML3.5/14,ML3.3(AEIC),Error ellipse: s-maj=16.0km s-min=8.1km az=165.0*
*AEIC **03** 09:55:38.3±1.1,50°.88N±0°.08×170°.37W±0°.09,h7km±4km, Error ellipse: s-maj=13.4km s-min=4.9km az=147.0*

ISC 03 09:55:33.9±0.8,**50°.93N**±0°.10×**170°.39W**±0°.04,**h10**km, **n136**,σ1**$13**/144,**mb3.8**/14,**South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**2.66**	**28**		**Pn**	**09 56 16.8**	**0.0**
OKSP					**Sn**	**09 56 47.5**	**-1.6**
KOFP	**Korovin Flat P**	**2.68**	**302**		**Pn**	**09 56 17.7**	**+0.6**
KOFP					**Sn**	**09 56 47.5**	**-2.0**
ATKA	**Atka Island**	**2.70**	**300**		**Pn**	**09 56 17.6**	**+0.3**
ATKA				Sn	**Sn**	**09 56 49.2**	**-0.7**
KONE	**Korovin Northe**	**2.75**	**304**		**Pn**	**09 56 18.9**	**+0.9**
KONE					**Sn**	**09 56 50.8**	**-0.3**
KOKL	**Mount Kliuchef**	**2.75**	**302**		**Pn**	**09 56 18.7**	**+0.6**
KOKL					**Sn**	**09 56 50.1**	**-1.4**
KOWE	**Korovin West**	**2.80**	**302**		**Pn**	**09 56 19.5**	**+0.7**
KOWE					**Sn**	**09 56 51.1**	**-1.5**
OKTU	**Okmok Mt. Tuli**	**2.85**	**30**		**Pn**	**09 56 19.9**	**+0.5**
OKTU					**Sn**	**09 56 52.4**	**-1.4**
OKNC	**Okmok New Cone**	**2.89**	**28**		**Pn**	**09 56 20.6**	**+0.7**
OKNC					**Sn**	**09 56 53.3**	**-1.4**
MAPS	**Pakushin South**	**3.58**	**35**		**Pn**	**09 56 29.9**	**+0.6**
MAPS					**Sn**	**09 57 10.0**	**-1.6**
GSIG	**Igitkin Island**	**3.62**	**289**		**Pn**	**09 56 29.6**	**-0.3**
GSMY	**Great Sitkin M**	**3.71**	**290**		**Pn**	**09 56 31.6**	**+0.3**
GSTR	**Great Sitkin T**	**3.73**	**290**	Pn	**Pn**	**09 56 32.7**	**+1.2**
GSTR				Sn	**Sn**	**09 57 15.2**	**-0.2**
MNAT	**Makushin Natee**	**3.73**	**36**		**Pn**	**09 56 32.0**	**+0.6**
UNV	**Unalaska Valle**	**3.77**	**38**		**Pn**	**09 56 32.8**	**+0.9**
UNV				IAML		09 57 19.4	
	comp=E,40nm,0.3s						
GSCK	**Great Sitkin C**	**3.77**	**289**		**Pn**	**09 56 32.5**	**+0.5**
ETKA	**Kagalaska Isla**	**3.88**	**286**		**Pn**	**09 56 33.5**	**0.0**
ADAG	**Mount Adagdak**	**4.03**	**288**		**Pn**	**09 56 36.5**	**+1.0**
ADK	**Adak**	**4.06**	**286**	Pn	**Pn**	**09 56 36.3**	**+0.4**
ADK				IAML		09 57 25.5	
	comp=E,72nm,0.3s						
ZRO	**Akutan Zero**	**4.16**	**39**		**Pn**	**09 56 38.7**	**+1.4**
LVA	**Lava Point**	**4.19**	**38**	Pn	**Pn**	**09 56 40.0**	**+2.3**
LVA				IAML		09 57 33.7	
	comp=E,65nm,1.2s						
LVA				IAML		09 58 47.5	
	comp=N,62nm,1.5s						
AKLV	**Akutan Long Va**	**4.22**	**38**		**Pn**	**09 56 39.6**	**+1.4**
AKUT	**Akutan**	**4.27**	**39**	P	**Pn**	**09 56 40.4**	**+1.5**
AKUT	**Akutan**	**4.27**	**39**	S	**Sn**	**09 57 28.0**	**-0.7**
AKUT	**Akutan**	**4.27**	**39**	Pn	**Pn**	**09 56 40.5**	**+1.7**
AKUT				IAML		09 57 29.4	
	comp=E,31nm,2.0s						
AKUT				IAML		09 58 14.4	
	comp=N,42nm,1.8s						
KIWB	**Kanaga Island**	**4.33**	**285**	Pn	**Pn**	**09 56 40.3**	**+0.6**
KIWB				IAML		09 57 31.5	
	comp=N,67nm,0.4s						
KIWB				IAML		09 57 38.6	
	comp=E,52nm,1.3s						
KIKV	**Kanaga Island**	**4.35**	**285**		**Pn**	**09 56 40.7**	**+0.7**
KIMD	**Kanaga Island**	**4.37**	**284**		**Pn**	**09 56 40.8**	**+0.6**
TASE	**Kanaga Southea**	**4.88**	**284**		**Pn**	**09 56 48.1**	**+0.9**
GAKI	**Gareloi-Kavalg**	**5.33**	**280**		**Pn**	**09 56 54.2**	**+0.8**
DT1	**Dutton Round H**	**6.44**	**46**		**Pn**	**09 57 10.1**	**+1.5**
DTNA	**Dutton South F**	**6.47**	**46**		**Pn**	**09 57 10.8**	**+1.7**
SDPT	**Sand Point**	**7.42**	**50**	P	**Pn**	**09 57 23.4**	**+1.3**
SDPT	**Sand Point**	**7.42**	**50**	S	**Sn**	**09 58 45.8**	**-0.5**
SDPT	**Sand Point**	**7.42**	**50**	Pn	**Pn**	**09 57 24.1**	**+2.0**
CNBA	**Chernabura Isl**	**7.61**	**55**	Pn	**Pn**	**09 57 25.8**	**+1.2**
CHNA	**Chernabura Isl**	**7.61**	**55**	P	**Pn**	**09 57 25.1**	**+0.4**
CHNA	**Chernabura Isl**	**7.61**	**55**	S	**Sn**	**09 58 50.4**	**-0.5**
VNKR	**Veniaminof 5**	**8.32**	**48**		**Pn**	**09 57 36.9**	**+2.4**
VNFG	**Fog Glacier, M**	**8.38**	**46**	Pn	**Pn**	**09 57 37.3**	**+2.0**
CHGN	**Chignik**	**8.92**	**48**		**Pn**	**09 57 44.1**	**+1.5**
ANPB	**Aniakchak Plen**	**9.25**	**46**		**Pn**	**09 57 49.3**	**+2.0**
M11K	**Mekoryuk**	**9.77**	**12**	Pn	**Pn**	**09 57 55.0**	**+0.8**
O14K	**Tigyukauivet M**	**9.84**	**28**	Pn	**Pn**	**09 57 57.4**	**+2.2**
CHIR	**Chirikof Islan**	**10.09**	**55**	P	**Pn**	**09 58 00.3**	**+1.7**
CHIR	**Chirikof Islan**	**10.09**	**55**	Pn	**Pn**	**09 58 00.1**	**+1.5**
N14K	**Kuskokwak Cree**	**10.27**	**25**	Pn	**Pn**	**09 58 02.8**	**+1.7**
M14K	**Bethel**	**10.91**	**22**	Pn	**Pn**	**09 58 11.2**	**+1.3**
N15K	**Kwethluk River**	**10.93**	**28**	Pn	**Pn**	**09 58 11.9**	**+1.8**
SII	**Sitkinak Islan**	**11.12**	**53**	P	**Pn**	**09 58 13.4**	**+0.7**
SII	**Sitkinak Islan**	**11.12**	**53**	Pn	**Pn**	**09 58 13.4**	**+0.7**
O16K	**Kokwok River B**	**11.14**	**34**	Pn	**Pn**	**09 58 15.4**	**+2.4**
ACHA	**Angle Creek He**	**11.37**	**44**	Pn	**Pn**	**09 58 17.9**	**+1.7**
OHAK	**Old Harbor**	**11.84**	**51**	P	**Pn**	**09 58 22.9**	**+0.4**
OHAK	**Old Harbor**	**11.84**	**51**	Pn	**Pn**	**09 58 22.6**	**+0.1**
N17K	**Nushagak Hills**	**12.13**	**33**	Pn	**Pn**	**09 58 29.2**	**+2.6**
L16K	**Owhat River**	**12.37**	**25**	Pn	**Pn**	**09 58 31.5**	**+1.8**
KDAK	**Kodiak Island**	**12.42**	**50**	Pn	**Pn**	**09 58 30.0**	**-0.5**
	comp=E,2.1nm,0.3s,baz=213,slow=3.2,SNR=50						
	comp=E,5.3nm,0.4s						
KDAK	**Kodiak Island**	**12.42**	**50**	Pn	**Pn**	**09 58 30.1**	**-0.5**
SEW	**Seward**	**14.94**	**44**	Pn	**Pn**	**09 59 03.8**	**-1.0**
PPLA	**Purkeypile**	**15.50**	**32**	Pn	**Pn**	**09 59 12.7**	**+0.4**
PPLA				IAmb	IAmb	09 59 39.4	
	comp=Z,10nm,1.3s						
H18K	**Honhosa River**	**15.57**	**19**	Pn	**Pn**	**09 59 12.7**	**-0.5**
H18K				IAmb	IAmb	09 59 20.8	
	comp=Z,3.1nm,0.7s						
L22K	**Petersville**	**15.75**	**35**	Pn	**Pn**	**09 59 16.0**	**+0.4**
PMR	**Palmer**	**15.84**	**39**	Pn	**Pn**	**09 59 17.2**	**+0.6**
PMR				IAmb	IAmb	09 59 24.5	
	comp=Z,7.7nm,1.5s						
CAST	**Castle Rocks**	**15.89**	**31**		**Pn**	**09 59 17.2**	**-0.1**
CAST				IAmb	IAmb	09 59 25.5	
	comp=Z,4.0nm,0.7s						
GHO	**Glory Hole Cre**	**16.02**	**39**	Pn	**Pn**	**09 59 19.7**	**+0.7**
GHO				IAmb	IAmb	09 59 24.9	
	comp=Z,7.7nm,1.2s						
H19K	**Roundabout Mou**	**16.31**	**21**	Pn	**Pn**	**09 59 23.7**	**+1.0**
KTH	**Kantishna Hill**	**16.36**	**32**		**Pn**	**09 59 24.1**	**+0.7**
KTH				IAmb	IAmb	09 59 26.4	
	comp=Z,6.5nm,1.1s						
TRF	**Thorofare Moun**	**16.51**	**33**	Pn	**Pn**	**09 59 25.8**	**+0.4**
RND	**Reindeer**	**16.99**	**34**	Pn	**Pn**	**09 59 31.7**	**+0.4**
KLU	**Klutina**	**17.12**	**42**		**Pn**	**09 59 31.3**	**-1.7**
KLU				IAmb	IAmb	09 59 32.4	
	comp=Z,4.3nm,0.6s						
I21K	**Tanana**	**17.18**	**27**		**Pn**	**09 59 34.5**	**+0.8**
I21K				IAmb	IAmb	09 59 40.0	
	comp=Z,7.9nm,1.0s						
M24K	**Tolsona, Glenn**	**17.30**	**40**	Pn	**Pn**	**09 59 34.2**	**-1.1**
H21K	**Melozitna Rive**	**17.31**	**25**	Pn	**Pn**	**09 59 34.7**	**-0.6**
BMRM	**Bremner River**	**17.47**	**45**	Pn	**Pn**	**09 59 37.6**	**+0.3**
BMRM				IAmb	IAmb	09 59 46.2	
	comp=Z,7.2nm,0.8s						
BERG	**Berg Lake**	**17.66**	**47**	Pn	**Pn**	**09 59 39.8**	**+0.1**
F20K	**Avaraart Lake**	**17.76**	**19**		**Pn**	**09 59 41.0**	**+0.2**
H22K	**Ishtalitna Cre**	**17.88**	**26**		**P**	**09 59 43.3**	**+0.3**
I23K	**Minto, Yukon-K**	**17.94**	**29**		**Pn**	**09 59 43.6**	**+0.5**
PAX	**Paxson**	**18.02**	**38**		**Pn**	**09 59 44.1**	**-0.1**
VRDI	**Verde Repeater**	**18.09**	**45**		**Pn**	**09 59 45.5**	**+0.4**
VRDI				IAmb	IAmb	09 59 51.9	
	comp=Z,5.9nm,1.1s						
HDA	**Harding Lake**	**18.27**	**33**		**Pn**	**09 59 47.4**	**+0.2**
MCARA	**McCarthy VSAT**	**18.34**	**45**		**Pn**	**09 59 47.6**	**-0.4**
MCARA				IAmb	IAmb	10 00 01.9	
	comp=Z,8.5nm,0.8s						
ILAR	**Eielson Array**	**18.51**	**33**	P	**P**	**09 59 47.8**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=233,slow=9.8,SNR=15						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**18.51**	**33**	P	**P**	**09 59 49.2**	**-0.7**
RIDG	**Independent Ri**	**18.66**	**37**	P	**P**	**09 59 51.1**	**-0.5**
GRNC	**Granite Creek**	**18.68**	**47**	P	**P**	**09 59 51.5**	**-0.6**
GRNC				IAmb	IAmb	09 59 58.6	
	comp=Z,5.0nm,0.9s						
M26K	**Nabesna, AK**	**18.76**	**42**	P	**P**	**09 59 53.1**	**+0.3**
M26K				IAmb	IAmb	09 59 57.6	
	comp=Z,11nm,1.2s						
G23K	**Bananza Creek**	**18.85**	**25**		**Pn**	**09 59 54.6**	**+0.3**
H24K	**Noodor Dome**	**18.86**	**29**	IAmb	IAmb	09 59 56.9	
	comp=Z,5.8nm,1.2s						
L26K	**Log Cabin Wild**	**18.89**	**40**	IAmb	IAmb	09 59 58.3	
	comp=Z,5.2nm,1.3s						
J25K	**Salcha River,**	**18.94**	**34**	P	**Pn**	**09 59 55.9**	**+0.6**
D20K	**Etivluk River**	**19.05**	**15**		**Pn**	**09 59 57.3**	**+0.7**
D20K				IAmb	IAmb	09 59 59.0	
	comp=Z,6.7nm,1.0s						
SCRK	**Sand Creek**	**19.11**	**37**		**P**	**09 59 57.5**	**+0.9**
PCA	**Pinnacle**	**19.21**	**50**	P	**P**	**09 59 58.6**	**+0.9**
M27K	**Edge Creek, AK**	**19.22**	**43**	P	**P**	**09 59 58.1**	**+0.2**
M27K				IAmb	IAmb	10 00 06.6	
	comp=Z,5.6nm,1.1s						
E21K	**Killik River**	**19.30**	**18**	P	**Pn**	**10 00 00.3**	**+0.7**
E21K				IAmb	IAmb	10 00 02.1	
	comp=Z,11nm,1.4s						
O28M	**Mount Upton**	**19.43**	**48**	P	**P**	**10 00 01.4**	**+1.0**
O28M				IAmb	IAmb	10 00 08.8	
	comp=Z,11nm,1.2s						
G24K	**Hadweenzic Riv**	**19.57**	**28**		**P**	**10 00 02.6**	**+1.1**
G24K				IAmb	IAmb	10 00 07.5	
	comp=Z,12nm,1.4s						
PETK	**Petropavlovsk-**	**19.68**	**289**	P	**P**	**10 00 02.6**	**-0.2**
E23K	**Chandalar**	**19.96**	**23**	P	**P**	**10 00 06.7**	**+0.8**
E23K				IAmb	IAmb	10 00 11.4	
	comp=Z,5.7nm,1.1s						
F24K	**Squaw Lake**	**20.02**	**25**		**Pn**	**10 00 08.1**	**-0.1**
F24K				IAmb	IAmb	10 00 12.6	
	comp=Z,4.3nm,1.0s						
I26K	**Coal Creek Min**	**20.11**	**34**	P	**P**	**10 00 07.9**	**+0.5**
I26K				IAmb	IAmb	10 00 10.9	
	comp=Z,4.2nm,0.8s						
D23K	**Nanushuk River**	**20.42**	**20**	P	**P**	**10 00 11.1**	**+0.3**
D23K				IAmb	IAmb	10 00 22.0	
	comp=Z,8.5nm,1.2s						
F25K	**Christian Rive**	**20.70**	**27**	P	**P**	**10 00 14.8**	**+1.0**
F25K				IAmb	IAmb	10 00 19.1	
	comp=Z,4.4nm,0.9s						
HYT	**Haines Junctio**	**20.71**	**49**		**P**	**10 00 15.5**	**+1.3**
M29M	**Somme Creek**	**20.73**	**44**		**P**	**10 00 14.7**	**+0.3**
M29M				IAmb	IAmb	10 00 20.7	
	comp=Z,3.9nm,0.9s						
G26K	**Porcupine Rive**	**20.85**	**30**	P	**P**	**10 00 16.2**	**+0.8**
G26K				IAmb	IAmb	10 00 17.5	
	comp=Z,5.3nm,1.4s						
BMAR	**Burnt Mountain**	**20.90**	**28**	P	**P**	**10 00 15.9**	**-0.2**
DAWY	**Dawson**	**20.94**	**39**	P	**P**	**10 00 17.6**	**+1.0**
E25K	**Arctic Village**	**21.07**	**26**	P	**P**	**10 00 18.7**	**+0.9**
E25K				IAmb	IAmb	10 00 25.5	
	comp=Z,2.9nm,0.9s						
C23K	**Itkillik River**	**21.13**	**19**	P	**P**	**10 00 19.2**	**+0.8**
H27K	**Steamboat Moun**	**21.18**	**33**	P	**P**	**10 00 19.7**	**+0.7**
H27K				IAmb	IAmb	10 00 23.8	
	comp=Z,6.5nm,1.0s						
I28M	**Miner Creek**	**21.35**	**36**	P	**P**	**10 00 22.5**	**+1.5**
I28M				IAmb	IAmb	10 00 25.8	
	comp=Z,2.9nm,0.7s						
K29M	**Barlow Dome**	**21.62**	**41**		**P**	**10 00 25.7**	**+1.8**
K29M				IAmb	IAmb	10 00 31.7	
	comp=Z,5.3nm,1.3s						
D25K	**Kavik River**	**21.70**	**23**	P	**P**	**10 00 25.9**	**+1.3**
H29M	**Whitestone**	**22.28**	**35**		**P**	**10 00 32.9**	**+2.1**
G30M	**tAoh Zraii Nji**	**23.39**	**34**		**P**	**10 00 43.4**	**+1.0**
H31M	**Peel River**	**23.60**	**37**		**P**	**10 00 44.8**	**+0.2**
C36M	**Paulatuk**	**28.48**	**33**	P	**P**	**10 01 29.2**	**+0.6**
YKAW3	**Yellowknife Wh**	**31.67**	**47**	P	**P**	**10 01 58.2**	**+1.3**
YKA	**Yellowknife Ar**	**31.68**	**47**	P	**P**	**10 01 54.1**	**-2.9**
	comp=Z,0.6nm,0.8s,baz=276,slow=7.6,SNR=7.2						
	comp=Z,0.6nm,0.8s						
YKA	**Yelloknife Ar**	**31.68**	**47**	P	**P**	**10 01 57.4**	**+0.4**
PDAR	**Pinedale Array**	**41.33**	**77**	P	**P**	**10 03 16.1**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=303,slow=10.0,SNR=2.7						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**41.33**	**77**	P	**P**	**10 03 20.2**	**+0.4**
TXAR	**Lajitas Array**	**53.43**	**87**	P	**P**	**10 04 52.8**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=296,slow=5.4,SNR=8.1						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**53.43**	**87**	P	**P**	**10 04 54.5**	**+0.5**
ARCES	**ARCESS Array B**	**59.28**	**354**	P	**P**	**10 05 34.6**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=4.4,slow=7.6,SNR=3.0						
	comp=Z,2.3nm,0.7s						
KURK	**Kurchatov**	**63.03**	**318**	P	**P**	**10 06 01.1**	**+0.5**
KURBB	**Kurchatov Arra**	**63.13**	**318**	P	**P**	**10 06 01.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=44,slow=7.3,SNR=3.1						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**64.33**	**313**	P	**P**	**10 06 09.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=60,slow=8.5,SNR=2.1						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**64.33**	**313**	P	**P**	**10 06 09.6**	**+0.2**
BVAR	**Borovoye Array**	**64.50**	**324**	P	**P**	**10 06 10.8**	**+0.5**
	comp=Z,1.9nm,0.5s,baz=53,slow=7.6,SNR=6.9						
	comp=Z,1.9nm,0.5s						
BORK	**Borovoye**	**64.51**	**324**	P	**P**	**10 06 11.1**	**+0.7**
NOA	**NORSAR Array B**	**68.38**	**359**	P	**P**	**10 06 36.4**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=342,slow=5.7,SNR=2.4						
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors**	**69.24**	**358**	P	**P**	**10 06 41.3**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=24,slow=4.0,SNR=8.5						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**88.98**	**229**	P	**P**	**10 08 29.2**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=41,slow=4.0,SNR=4.9						
	comp=Z,0.6nm,0.9s						

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*IDC **03** 09:58:28.6±0.7,7°.46N×78°.50W,h0km,mb3.9/13, mbtmp4.0/18,ML3.2/4,MS3.8/48,Error ellipse: s-maj=21.6km s-min=14.2km az=51.0*
*CATAC **03** 09:58:29.9±0.7,7°N±2°×7°W±°,h9km±4km,M4.7/17, mb4.9/10,mB5.1/6,MLv4.7/17,Mw(mB)4.4/6,Error ellipse: s-maj=4.5km s-min=2.3km az=37.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.49; Mθθ4.17; Mϕϕ-4.65; Mrθ-2.52; Mθϕ3.63; Mϕr-1.60; Fault plane solution: M₀6.45917×10¹⁵ NP1:φs298.12924°, δ67.86392°,λ13.52978°. NP2:φs202.94836°,δ77.48433°, λ157.29542°. Principal axes: T 6.8151, Plg24.8143°, Azm158.8926°; N -0.7833, Plg64.2351°, Azm355.5670°; P -6.0318, Plg6.5003°, Azm251.9125°; confirmed*
*UPA **03** 09:58:29.4±2.2,7°.35N×78°.60W,h6km,MW4.9,Presumed earthquake*
*RSNC **03** 09:58:29.7±0.0,7°N±2°×7°W±°,h17km±4km,M4.3,mB5.0, mb4.9,ML3.9,Mw4.7,Mw(mB)4.3*
*NEIC **03** 09:58:30.5±1.5,7°.49N±0°.07×78°.53W±0°.05,h10km±1km, mb4.4/80,Error ellipse: s-maj=11.4km s-min=8.6km az=197.0*
*GFZ **03** 09:58:30.4±0.2,7°N±4°×7°W±°,h10km,M4.5/13, mb4.5/13,confirmed*
*GCMT **03** 09:58:32.5±0.4,7°.41N±0°.02×78°.59W±0°.02,h12km, MW4.7/80,Moment Tensor Solution. s14,c16; s80,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.47±.06; Mθθ-0.01±.06; Mϕϕ-0.46±.07; Mrθ0.07±.18; Mθϕ1.22±.04; Mϕr-0.61±.16; Best double couple: M₀1.39900×10¹⁶ NP1:φs277.00000°,δ59.00000°,λ11.00000°. NP2: φs181.00000°,δ80.00000°,λ149.00000°. Principal axes: T 1.1900, Plg29.0000°, Azm134.0000°; N 0.4180, Plg57.0000°, Azm345.0000°; P -1.6080, Plg14.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 09:58:28.3±1.2,**7°33N**±0°.03×**78°61W**±0°.02,**h3**km±8km, **n303**,σ1**$40**/316,**mb4.4**/41,**MS3.8**/44,**11C-11D,Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.82**	**103**	P	**Pg**	**09 58 44.2**	**+0.2**
PTAC				S	**Sg**	**09 58 54.8**	**+0.1**
PTAC	**Punta Ardita,**	**0.82**	**103**	i	P	**Pg**	**09 58 44.2**	**+0.2**
PTAC				*i*	S	**Sb**	**09 58 57.9**	**+1.3**
PEDA3	**Pedasi**	**1.41**	**278**	e	P	**Pn**	**09 58 52.8**	**-2.1**
PEDA3				*i*	S	**Sb**	**09 59 14.2**	**+0.5**
ACHO3	**Achotines, Los**	**1.55**	**273**	e	P	**Pn**	**09 58 55.7**	**-1.1**
ACHO3				e	S	**Sb**	**09 59 18.3**	**+0.7**
TOTI	**Torti**	**1.62**	**11**	i	P	**Pn**	**09 58 57.0**	**-0.7**
TOTI				*i*	S	**Sn**	**09 59 18.2**	**-0.9**
SOLC	**Bahia Solano**	**1.62**	**132**		P	**Pn**	**09 58 55.2**	**-2.6**
SOLC					S	**Sn**	**09 59 14.9**	**-4.3**
AZU	**Azuero**	**1.71**	**286**		P	**Pn**	**09 58 57.1**	**-1.9**
AZU					S	**Sn**	**09 59 17.4**	**-3.9**
AZU	**Azuero**	**1.71**	**286**	i	P	**Pn**	**09 58 57.3**	**-1.7**
AZU				*i*	S	**Sn**	**09 59 21.9**	**+0.5**
TABO3	**Taboga, Panama**	**1.73**	**327**	e	P	**Pn**	**09 58 59.3**	**+0.1**
TABO3				*i*	S	**Sn**	**09 59 21.0**	**-0.7**
TOSI3	**Tonosi**	**1.81**	**272**	e	P	**Pn**	**09 59 00.8**	**+0.3**
TOSI3				*i*	S	**Sb**	**09 59 25.5**	**+0.2**
FLAM	**Flamenco Islan**	**1.82**	**330**	e	P	**Pn**	**09 59 00.3**	**-0.2**
FLAM				*i*	S	**Sn**	**09 59 23.7**	**-0.4**
UPA	**Univ. de Panam**	**1.88**	**331**		P	**Pn**	**09 59 00.4**	**-0.9**
UPA					S	**Sn**	**09 59 23.7**	**-1.7**
UPA	**Univ. de Panam**	**1.88**	**331**	i	P	**Pn**	**09 59 01.1**	**-0.2**
UPA				*i*	S	**Sb**	**09 59 25.9**	**-1.1**
CHIT3	**Chitre**	**1.89**	**289**	e	P	**Pn**	**09 59 00.2**	**-1.3**
CHIT3				*i*	S	**Sn**	**09 59 24.9**	**-1.0**
CHPO	**Chepo, Panama**	**1.89**	**345**	i	P	**Pn**	**09 59 01.1**	**-0.4**
CHPO				*i*	S	**Sg**	**09 59 28.7**	**-0.5**
CNTA3	**Canitas, Panam**	**1.90**	**352**	e	P	**Pn**	**09 59 00.9**	**-0.7**
ARRA3	**Arraijan, Pana**	**1.93**	**328**	e	P	**Pn**	**09 59 01.7**	**-0.2**
ARRA3				*i*	S	**Sn**	**09 59 25.2**	**-1.4**
CHOR3	**La Chorrera**	**1.93**	**324**	e	P	**Pn**	**09 59 01.4**	**-0.6**
CHOR3				*i*	S	**Sb**	**09 59 28.6**	**0.0**
ZANG	**Zanguenga, Cho**	**2.04**	**323**	e	P	**Pn**	**09 59 03.3**	**-0.1**
ZANG				*i*	S	**Sg**	**09 59 33.6**	**-0.2**
PNME	**Penonome**	**2.05**	**304**		P	**Pn**	**09 59 02.7**	**-1.0**
PNME					S	**Sn**	**09 59 28.7**	**-1.0**
PNME	**Penonome**	**2.05**	**304**	e	P	**Pn**	**09 59 03.0**	**-0.7**
PNME				*i*	S	**Sn**	**09 59 29.6**	**-0.1**
GAMB1	**Gamboa**	**2.08**	**329**	i	P	**Pn**	**09 59 04.2**	**0.0**
GAMB1				*i*	S	**Sn**	**09 59 28.0**	**-2.6**
APAC	**Apartado, Choc**	**2.09**	**74**		P	**Pn**	**09 59 05.1**	**+0.8**
APAC					S	**Sg**	**09 59 36.2**	**+0.6**
FRIJ	**El Hiral**	**2.18**	**330**	i	P	**Pn**	**09 59 04.3**	**-1.1**
FRIJ				*i*	S	**Sn**	**09 59 32.0**	**-0.9**
BCIP	**Isla Barro Col**	**2.19**	**326**			**Pn**	**09 59 05.3**	**-0.4**
BCIP	**Isla Barro Col**	**2.19**	**326**		P	**Pn**	**09 59 05.3**	**-0.4**
BCIP					S	**Sn**	**09 59 34.0**	**+0.8**
BCIP	**Isla Barro Col**	**2.19**	**326**		P	**Pn**	**09 59 05.2**	**-0.4**
BCIP					S	**Sn**	**09 59 32.9**	**-0.3**
BCIP	**Isla Barro Col**	**2.19**	**326**		P	**Pn**	**09 59 06.5**	**+0.9**
BCIP	**Isla Barro Col**	**2.19**	**326**	i	P	**Pn**	**09 59 04.6**	**-1.0**
BCIP				*i*	S	**Sn**	**09 59 32.4**	**-0.8**
CALO3	**Calobre, Verag**	**2.42**	**294**	e	P	**Pn**	**09 59 08.9**	**+0.1**
CALO3				*i*	S	**Sb**	**09 59 41.9**	**-0.8**
STIA3	**Santiago, Vera**	**2.46**	**288**	e	P	**Pn**	**09 59 09.2**	**-0.1**
RSUS3	**Rio de Jesus,**	**2.61**	**285**	e	P	**Pn**	**09 59 10.9**	**-0.4**
RSUS3				*i*	S	**Sb**	**09 59 50.5**	**+2.4**
GMAL	**Guarumal, Vera**	**2.63**	**280**		P	**Pn**	**09 59 10.9**	**-0.8**
GMAL					S	**Sn**	**09 59 44.5**	**+0.3**
GMAL	**Guarumal, Vera**	**2.63**	**280**	i	P	**Pn**	**09 59 11.0**	**-0.7**
GMAL				*i*	S	**Sb**	**09 59 47.1**	**-1.7**
PIZC	**Pizarro, Choco**	**2.66**	**152**		P	**Pn**	**09 59 10.2**	**-1.9**
PIZC					S	**Sn**	**09 59 42.3**	**-2.5**
LCBC	**Los crdobas,**	**2.69**	**56**		P	**Pb**	**09 59 15.9**	**-1.2**
LCBC					S	**Sb**	**09 59 48.9**	**-1.6**
CBOC	**Ciudad Bolivar**	**2.97**	**119**		P	**Pn**	**09 59 15.1**	**-1.4**
CBOC					S	**Sn**	**09 59 49.3**	**-3.4**
PVID3	**Puerto Vidal,**	**3.05**	**284**	e	P	**Pn**	**09 59 17.8**	**+0.3**
URCC	**San Jos de Ur**	**3.08**	**82**		P	**Pn**	**09 59 18.5**	**+0.6**
UREC					S	**Sn**	**09 59 54.1**	**-1.2**
URCC	**San Jos de Ur**	**3.08**	**82**	e	P	**Pn**	**09 59 18.6**	**+0.7**
UREC				*i*	S	**Sn**	**09 59 55.8**	**+0.5**
NANC3	**Nancito, Chiri**	**3.22**	**286**	e	P	**Pb**	**09 59 23.4**	**-2.

URIC Uribia, Colomb 7.84 56 P **Pn** **10 00 24.7 +1.4**
URIC S **Sn** **10 01 53.1 +0.5**
SLOR San Lorenzo - 8.01 179 **Pn** **10 00 28.0 +1.9**
SDV Santo Domingo 8.05 78 Pn **Pn** **10 00 27.1 +0.7**
3.5nm,0.3s,baz=254,slow=7.6,SNR=26
SDV Sn **Sn** **10 01 55.0 -3.1**
5.8nm,0.3s,baz=342,slow=17,SNR=1.6
SDV LR LR 10 04 08.3
comp=Z,805nm,22.0s,baz=255,slow=43
45nm,0.8s
SDV Santo Domingo 8.05 78 **Pn** **10 00 26.5 +0.1**
SDV Santo Domingo 8.05 78 *eP* **Pn** **10 00 28.3 +1.9**
BOAB BOACO BROADBAN 8.61 307 **Pn** **10 00 34.2 +0.3**
BOAB BOACO BROADBAN 8.61 307 P **Pn** **10 00 35.0 +1.1**
STH Stony Hill 10.82 9 *i* P **Pn** **10 01 05.3 +1.0**
STH *i* P 10 01 05.5
GWJ Greenwich 10.83 10 *i* P **Pn** **10 01 06.5 +2.0**
GWJ *i* P 10 01 06.7
MTDJ Mount Denham 10.88 5 Pn **Pn** **10 01 04.2 -0.9**
MTDJ Mount Denham 10.88 5 *i* P **Pn** **10 01 06.5 +1.4**
MTDJ IAmb IAmb 10 01 18.6
comp=Z,36nm,1.0s
CVJ Coleyville 10.88 5 *i* P **Pn** **10 01 05.7 +0.5**
BNJ Bonny Gate 11.04 8 *i* P **Pn** **10 01 09.0 +1.7**
LMGC Las Mercedes 12.75 7 *i* P Pn 10 01 23.4 -7.2
LMGC IAmb IAmb 10 01 45.3
comp=Z,10.0nm,1.2s
MARVS Santiago de Cu 12.87 12 *i* P **Pn** **10 01 29.1 -3.1**
MARVS IAmb IAmb 10 01 41.1
comp=Z,18nm,1.6s
MARVS IVmB_BB 10 02 19.5
comp=Z,970nm,1.0s
RCC Rio Carpintero 12.90 12 *i* P **Pn** **10 01 33.5 +0.8**
RCC IAmb IAmb 10 01 41.4
comp=Z,28nm,1.4s
GTBY Guantanamo Bay 12.97 15 *i* P **Pn** **10 01 31.4 -2.2**
GTBY IAmb IAmb 10 01 42.8
comp=Z,38nm,1.2s
YAR Yar 13.14 9 *i* P **Pn** **10 01 35.8 -0.2**
YAR IAmb IAmb 10 02 01.5
comp=Z,16nm,1.4s
QMBU Quimbuelo 13.31 16 *i* P **Pn** **10 01 39.5 +1.2**
QMBU IAmb IAmb 10 01 58.5
comp=Z,23nm,0.8s
MASC Masc 13.46 18 *i* P **Pn** **10 01 40.5 +0.3**
MASC IAmb IAmb 10 01 55.6
comp=Z,22nm,0.9s
MASC Masc 13.46 18 P **Pn** **10 01 41.3 +1.1**
SDDR Presa de Saban 13.60 31 Pn **Pn** **10 01 40.0 -2.2**
SDDR Presa de Saban 13.60 31 *i* P **Pn** **10 01 44.6 +2.4**
SDDR IAmb IAmb 10 01 50.6
comp=Z,53nm,0.8s
NMDO Nuevo Mundo 13.61 15 Pn **Pn** **10 01 41.2 -1.1**
NMDO Nuevo Mundo 13.61 15 *i* P **Pn** **10 01 42.8 +0.4**
NMDO IAmb IAmb 10 01 54.2
comp=Z,20nm,1.2s
BANI BANI 13.62 35 **Pn** **10 01 40.9 -1.7**
HLGC Holguin 13.70 10 *i* P **Pn** **10 01 43.3 -0.3**
HLGC IAmb IAmb 10 01 56.9
comp=Z,21nm,1.4s
CCCC Cccc 13.81 3 *i* P **Pn** **10 01 46.6 +1.5**
CCCC IAmb IAmb 10 01 54.6
comp=Z,8.3nm,1.2s
ATAH Atahualpa 14.37 179 Pn **Pn** **10 01 57.4 +4.2**
comp=Z,0.2nm,0.3s,baz=348,slow=5.6,SNR=6.9
Z,6.9nm,0.8s
DR12 Loma Pena Alta 14.50 37 **Pn** **10 01 53.4 -1.2**
CRPR Cabo Rojo, PR 15.43 45 Pn **Pn** **10 02 05.3 -1.8**
MLPR Magueyes Islan 15.46 46 Pn **Pn** **10 02 06.5 -0.9**
MLPR IAmb IAmb 10 02 09.7
comp=Z,42nm,1.3s
AOPR Arecibo Observ 15.91 45 **Pn** **10 02 11.9 -1.5**
SOR Soroa 15.94 345 Pn **Pn** **10 02 12.6 -1.1**
CZSB Cruzeiro do Su 16.08 158 Pn **Pn** **10 02 17.8 +2.2**
CZSB IAmb IAmb 10 02 21.4
comp=Z,32nm,0.9s
CZSB Cruzeiro do Su 16.08 158 *eP* **P** **10 02 19.0 0.0**
ECPR Experimental S 16.17 46 Pn **Pn** **10 02 15.4 -1.3**
ECPR IAmb IAmb 10 02 29.1
comp=Z,67nm,1.3s
SJG San Juan 16.19 47 Pn **Pn** **10 02 15.1 -1.8**
comp=Z,4.9nm,0.3s,baz=231,slow=13,SNR=2.3
SJG LR LR 10 08 51.4
comp=Z,306nm,21.0s,baz=257,slow=39
SJG San Juan 16.19 47 Pn **Pn** **10 02 15.7 -1.2**
SJG IAmb IAmb 10 02 34.6
comp=Z,38nm,1.3s
PDPR Patillas Dam, 16.23 48 Pn **Pn** **10 02 15.8 -1.6**
HUMP Col San Antoni 16.43 48 Pn **Pn** **10 02 18.4 -1.6**
HUMP IAmb IAmb 10 02 41.9
comp=Z,28nm,1.2s
SABA Saba 18.14 54 **Pn** **10 02 39.8 -1.7**
SEUS St. Eustatius 18.29 55 Pn **Pn** **10 02 40.3 -2.9**
CMIG Matias Romero 18.61 303 LR LR 10 10 57.6
comp=Z,354nm,20.1s,baz=129,slow=40
BOAV Boa Vista 18.68 104 P **P** **10 02 46.6 -1.2**
BOAV Boa Vista 18.68 104 *eP* **Pn** **10 02 49.7 +1.7**
MACA Manacapuru-AM 20.71 120 **P** **10 03 10.2 +0.3**
MACA Manacapuru-AM 20.71 120 *eP* **P** **10 03 09.6 -0.4**
250A Grady 25.54 345 P **P** **10 03 56.2 -2.1**
250A IAmb IAmb 10 04 21.2
comp=Z,14nm,1.1s
ITTB Itaituba 25.62 116 *eP* **P** **10 03 59.5 +0.3**
LPAZ La Paz 25.66 156 P **P** **10 04 01.1 +0.9**
comp=Z,1.1nm,0.6s,baz=328,slow=14,SNR=6.4
LPAZ LR LR 10 14 57.2
comp=Z,240nm,19.2s,baz=314,slow=38
comp=Z,1.1nm,0.6s
LPAZ La Paz 25.66 156 **P** **10 04 01.1 +0.9**
LPAZ IAmb IAmb 10 04 15.9
comp=Z,12nm,1.5s
LPAZ La Paz 25.66 156 *eP* **P** **10 03 58.3 -1.9**
LPAZ La Paz 25.66 156 P **P** **10 04 01.1 +0.9**
MDP Montagnes des 25.91 93 LR LR 10 14 33.0
comp=Z,258nm,19.5s,baz=277,slow=37
GOGA Godfrey 26.34 351 P **P** **10 04 04.7 -0.9**
GOGA IAmb IAmb 10 04 16.3
comp=Z,9.8nm,1.1s
LRAL Lakeview Retre 26.73 344 P **P** **10 04 08.5 -0.6**
PB16 IPOC Station P 27.04 161 **P** **10 04 13.8 +1.1**
PB16 IAmb IAmb 10 04 18.3
comp=Z,11nm,1.0s
PB16 IPOC Station P 27.04 161 P **P** **10 04 15.1 +2.4**
PB12 IPOC Station P 27.05 163 **P** **10 04 12.9 +0.8**
PB12 IPOC Station P 27.05 163 P **P** **10 04 13.9 +1.8**
VILB Vilhena 27.22 138 P **P** **10 04 13.8 +0.1**
VILB IAmb IAmb 10 04 53.0
comp=Z,10nm,0.9s
ZAIG Zacatecas 27.69 306 P **P** **10 04 18.4 +0.2**
GO01 Chusmiza 28.39 161 P **P** **10 04 26.1 +1.5**
GO01 IAmb IAmb 10 04 28.0
comp=Z,7.8nm,1.0s
GO01 Chusmiza 28.39 161 P **P** **10 04 27.1 +2.5**
TKL Tuckaleechee C 28.59 351 LR LR 10 16 08.9
comp=Z,108nm,19.1s,baz=132,slow=37
PB08 IPOC Station P 28.84 161 P **P** **10 04 29.5 +1.0**
PB08 IPOC Station P 28.84 161 P **P** **10 04 30.7 +2.1**
SIV San Ignacio 28.96 143 LR LR 10 16 36.1
comp=Z,273nm,18.1s,baz=314,slow=38
CLDB Colider 29.03 128 P **P** **10 04 29.0 -0.9**
V48A Smith Brothers 29.26 346 P **P** **10 04 31.5 -0.2**
V48A IAmb IAmb 10 04 42.5
comp=Z,7.5nm,1.0s
HNDO Hondo 29.42 321 P **P** **10 04 33.0 -0.3**
HNDO IAmb IAmb 10 04 33.2
comp=Z,5.1nm,1.1s
Z38A Mt. Pleasant 29.93 332 P **P** **10 04 37.8 +0.1**
HALT Halls 30.09 342 P **P** **10 04 38.5 -0.5**
PB07 IPOC Station P 30.12 164 P **P** **10 04 40.1 +0.4**
BBSD Serra de San D 30.17 144 *eP* **P** **10 04 38.6 -1.4**
BRDY Brady 30.51 324 **P** **10 04 43.3 +0.5**
T47A Sharon Grove 30.52 347 **P** **10 04 42.4 -0.4**
T47A IAmb IAmb 10 04 51.2
comp=Z,6.2nm,0.8s
WCI Wyandotte Cave 31.54 348 P **P** **10 04 52.6 +0.8**
WCI Wyandotte Cave 31.54 348 P **P** **10 04 52.9 +1.1**
USIN University of 31.58 346 P **P** **10 04 52.2 0.0**
T42A Van Buren 31.67 341 P **P** **10 04 51.7 -1.3**
T42A IAmb IAmb 10 05 05.7
comp=Z,4.1nm,1.0s
TX31 Lajitas Ar. Si 32.17 316 P **P** **10 04 55.5 -2.2**
TXAR Lajitas Array 32.17 316 PcP **PcP** **10 07 47.2 +0.5**
comp=Z,0.2nm,0.9s,baz=130,slow=1.9,SNR=1.9
TXAR Lajitas Array 32.17 316 P **P** **10 04 55.4 -2.3**
TXAR **PcP** **10 07 47.2 +0.5**
FVM French Village 32.34 342 IAmb IAmb 10 05 12.1
comp=Z,6.5nm,0.9s
BLO Bloomington 32.49 349 P **P** **10 05 00.4 +0.2**
COIM Forte Coimbra 33.95 143 *eP* **P** **10 05 12.7 -0.4**
MNTX Cornudas Mount 34.80 318 **P** **10 05 20.1 -0.3**
MNTX IAmb IAmb 10 05 33.0
comp=Z,4.8nm,0.9s
MNTX Cornudas Mount 34.80 318 P **P** **10 05 20.1 -0.3**
ARAG Araguaiana, MT 35.05 131 *eP* **P** **10 05 22.0 -0.8**
AQDB Aquidauana 35.65 141 P **P** **10 05 26.9 -0.9**
N38A Joes South For 35.78 341 P **P** **10 05 28.8 +0.1**
N38A IAmb IAmb 10 05 58.6
comp=Z,11nm,1.3s
121A Cookes Peak, D 36.92 317 P **P** **10 05 39.6 +0.8**
SADO Sadowa 37.30 359 LR LR 10 22 21.8
comp=Z,176nm,18.1s,baz=198,slow=39
319A Douglas 37.30 314 P **P** **10 05 42.1 +0.1**
319A IAmb IAmb 10 05 56.9
comp=Z,11nm,1.3s
I42A Draeger Farm, 37.52 348 P **P** **10 05 42.9 -0.6**
I42A IAmb IAmb 10 05 58.5
comp=Z,7.6nm,1.2s
ANMO Albuquerque 37.55 321 LR LR 10 25 16.4
comp=Z,72nm,19.2s,baz=120,slow=43
ANMO Albuquerque 37.55 321 **P** **10 05 44.2 +0.1**
ANMO Albuquerque 37.55 321 P **P** **10 05 45.2 +1.1**
T25A Trinidad 37.83 325 **P** **10 05 46.4 0.0**
T25A IAmb IAmb 10 05 50.7
comp=Z,10.0nm,1.4s
BDFB Brasilia 37.94 127 P **P** **10 05 47.9 +0.3**
comp=Z,2.2nm,0.4s,baz=296,slow=11,SNR=5.7
BDFB LR LR 10 22 16.8
comp=Z,454nm,20.0s,baz=315,slow=38
comp=Z,2.2nm,0.4s
BDFB Brasilia 37.94 127 P **P** **10 05 47.4 -0.2**
BDFB IAmb IAmb 10 05 48.5
comp=Z,8.3nm,1.0s
KSCO Kaye Shedlock' 38.24 329 P **P** **10 05 49.2 -0.7**
SDBA SAO DESIDERIO 38.83 120 *eP* **P** **10 05 54.7 -0.3**
IPMB Ipameri, GO 39.16 130 *eP* **P** **10 05 57.3 -0.5**
CPUP Villa Florida 39.33 149 P **P** **10 05 59.5 +0.6**
comp=Z,0.6nm,0.4s,baz=46,slow=18,SNR=1.7
CPUP LR LR 10 23 35.1
comp=Z,115nm,21.1s,baz=332,slow=38
comp=Z,0.6nm,0.4s
CPUP Villa Florida 39.33 149 P **P** **10 06 00.0 +1.1**
X18A Snowflake 39.55 318 P **P** **10 06 01.2 +0.2**
ISCO Idaho Springs 40.38 327 **P** **10 06 07.8 -0.2**
ISCO Idaho Springs 40.38 327 P **P** **10 06 09.2 +1.2**
PMNB Patos De Minas 40.84 129 P **P** **10 06 10.9 -0.8**
PV02 Paradox Valley 41.06 323 IAmb IAmb 10 06 23.2
comp=Z,14nm,1.2s
WUAZ Wupatki 41.08 318 P **P** **10 06 13.4 -0.2**
PV13 Radium Mtn., P 41.08 323 P **P** **10 06 13.6 -0.1**
PV13 IAmb IAmb 10 06 21.7
comp=Z,9.2nm,1.3s
PV03 Paradox Valley 41.16 323 IAmb IAmb 10 06 26.6
comp=Z,7.4nm,1.2s
PV18 Skein Mesa, Pa 41.19 323 P **P** **10 06 14.6 0.0**
PV18 IAmb IAmb 10 06 34.3
comp=Z,8.5nm,1.0s
PV19 Morning Glory 41.28 323 IAmb IAmb 10 06 27.4
comp=Z,6.8nm,1.1s
PV10 Paradox Valley 41.35 323 IAmb IAmb 10 06 24.8
comp=Z,14nm,1.3s
HMU Henry Mountain 42.12 321 IAmb IAmb 10 06 34.6
comp=Z,11nm,1.2s
U15A North Rim 42.21 318 P **P** **10 06 23.2 +0.1**
BELC Belle Mtn. Jos 43.50 313 P **P** **10 06 32.8 -0.6**
BELC IAmb IAmb 10 06 47.9
comp=Z,8.2nm,1.3s
PFO Pinyon Flats O 43.65 312 LR LR 10 26 53.1
comp=Z,162nm,18.3s,baz=182,slow=39
EPLO Experimental L 44.07 346 **P** **10 06 37.3 -0.2**
EPLO IAmb IAmb 10 07 05.2
comp=Z,8.5nm,1.2s
BW06 Boulder Array 44.58 327 P **P** **10 06 40.4 -1.6**
PD31 Pinedale Array 44.58 327 P **P** **10 06 39.8 -2.2**
PD31 IAmb IAmb 10 06 49.5
comp=Z,7.1nm,1.5s
PDAR Pinedale Array 44.58 327 P **P** **10 06 43.0 +0.9**
comp=Z,1.4nm,1.0s,baz=124,slow=9.7,SNR=9.1
comp=Z,1.4nm,1.0s
PDAR Pinedale Array 44.58 327 P **P** **10 06 40.9 -1.1**
ULM Lac du Bonnet 45.15 344 P **P** **10 06 46.1 +0.1**
comp=Z,2.1nm,0.6s,baz=156,slow=8.0,SNR=5.6
ULM LR LR 10 25 47.8
comp=Z,78nm,21.3s,baz=145,slow=36
comp=Z,2.1nm,0.6s
ULM Lac du Bonnet 45.15 344 P **P** **10 06 45.0 -1.1**
ULM IAmb IAmb 10 06 57.8
comp=Z,6.3nm,1.1s
RPN Rapa Nui 45.37 220 LR LR 10 20 57.0
comp=Z,239nm,19.2s,baz=268,slow=30
FXWY Fox Creek 45.96 327 P **P** **10 06 52.5 -0.4**
FXWY IAmb IAmb 10 06 58.4
comp=Z,5.1nm,1.4s
NVAR Mina Array Bea 47.31 317 P **P** **10 07 04.8 +1.1**
comp=Z,0.7nm,0.7s,baz=132,slow=7.9,SNR=5.0
NVAR LR LR 10 30 34.8
comp=Z,83nm,19.3s,baz=136,slow=41
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 47.31 317 P **P** **10 07 03.4 -0.2**
SCHQ Schefferville 48.30 9 P **P** **10 07 10.1 -0.6**
comp=Z,1.9nm,0.6s,baz=195,slow=7.9,SNR=7.8
SCHQ LR LR 10 28 40.7
comp=Z,96nm,19.2s,baz=204,slow=38
comp=Z,1.9nm,0.6s
SCHQ Schefferville 48.30 9 P **P** **10 07 10.1 -0.6**
PNTR Pine Nut 48.52 317 P **P** **10 07 11.9 -1.1**
PNTR IAmb IAmb 10 07 50.9
comp=Z,3.8nm,1.0s
WVOR Wild Horse Val 49.64 321 P **P** **10 07 21.4 0.0**
WVOR IAmb IAmb 10 07 35.4
comp=Z,7.0nm,1.2s
WVOR Wild Horse Val 49.64 321 P **P** **10 07 22.9 +1.5**
LL02 Futaleuf 50.66 174 P **P** **10 07 29.8 +0.9**
YBH Yreka Blue Hor 51.88 319 LR LR 10 33 32.9
comp=Z,119nm,19.3s,baz=150,slow=41
NEW Newport 52.20 328 LR LR 10 32 10.1
comp=Z,37nm,21.9s,baz=134,slow=39
FRB Frobisher Bay 56.78 5 LR LR 10 31 57.7
comp=Z,76nm,21.9s,baz=194,slow=36
BBB Bella Bella 60.23 327 LR LR 10 38 31.9
comp=Z,48nm,18.7s,baz=123,slow=40
YKA Yellowknife Ar 60.99 342 P **P** **10 08 41.7 -1.0**
comp=Z,1.1nm,0.6s,baz=135,slow=7.1,SNR=8.7
YKA LR LR 10 36 43.4
comp=Z,78nm,18.6s,baz=128,slow=38
comp=Z,1.1nm,0.6s
YKA Yellowknife Ar 60.99 342 P **P** **10 08 42.8 +0.1**
SFJD Kangerlussuaq 62.56 12 LR LR 10 36 05.4
comp=Z,38nm,18.9s,baz=197,slow=36
DLBC Dease Lake, 64.33 333 LR LR 10 39 25.4
comp=Z,53nm,21.7s,baz=84,slow=38
U33K Whale Pass 64.69 330 P **P** **10 09 08.3 +0.9**
BESE Bessie Mountai 66.62 332 P **P** **10 09 20.1 +0.1**
MMPY Sheldon Lake, 67.00 336 P **P** **10 09 23.5 +1.1**
MMPY IAmb IAmb 10 10 06.1
comp=Z,4.1nm,1.4s
RES Resolute Bay 67.96 355 LR LR 10 41 01.7
comp=Z,95nm,18.5s,baz=248,slow=38
BORG Borgarnes 69.85 23 LR LR 10 35 44.3
comp=Z,61nm,21.8s,baz=244,slow=32
INK Inuvik 70.75 341 LR LR 10 43 07.5
comp=Z,161nm,18.3s,baz=84,slow=38
DBIC Dimbokro 73.13 85 LR LR 10 39 48.1
comp=Z,73nm,20.3s,baz=328,slow=34
ESDC Sonseca Array 73.54 51 P **P** **10 10 03.8 +0.8**
comp=Z,1.1nm,0.8s,baz=272,slow=5.8,SNR=5.9
ESDC LR LR 10 40 16.7
comp=Z,15nm,20.2s,baz=279,slow=34
comp=Z,1.1nm,0.8s
ESDC Sonseca Array 73.54 51 P **P** **10 10 02.1 -0.8**
ESDC IAmb IAmb 10 10 17.2
comp=Z,8.8nm,1.4s
BMAR Burnt Mountain 74.16 339 P **P** **10 10 05.9 -0.1**
ILAR Eielson Array 74.22 336 P **P** **10 10 07.3 +1.0**
comp=Z,0.3nm,0.6s,baz=109,slow=5.6,SNR=2.9
ILAR LR LR 10 47 11.4
comp=Z,70nm,18.2s,baz=80,slow=39
comp=Z,0.3nm,0.6s
PPT Papeete 74.30 250 LR LR 10 36 38.4
comp=Z,92nm,21.0s,baz=89,slow=31
PPT2 Papeete2 74.31 249 *e*LR LR 10 32 56.9
comp=Z,113nm,23.5s
PPT2 *e*LR LR 10 32 59.8
comp=Z,166nm,23.0s
RND Reindeer 74.68 334 P **P** **10 10 09.2 +0.1**
RND IAmb IAmb 10 10 30.4
comp=Z,4.9nm,1.0s
KDAK Kodiak Island 75.30 328 LR LR 10 46 35.8
comp=Z,80nm,18.1s,baz=73,slow=38
TBI Tubuai 75.57 244 *e*LR LR 10 33 41.0
comp=Z,2µm,28.0s
EKA Eskdalemuir Ar 75.74 35 P **P** **10 10 16.9 +1.7**
comp=Z,1.2nm,0.6s,baz=245,slow=1.5,SNR=1.4
comp=Z,1.2nm,0.6s
JMIC Jan Mayen 76.68 18 LR LR 10 39 35.9
comp=Z,28nm,21.3s,baz=267,slow=32
TORD Torodi Ar. Bea 78.97 78 P **P** **10 10 34.7 +0.5**
comp=Z,0.4nm,0.8s,baz=289,slow=4.5,SNR=1.8
comp=Z,0.4nm,0.8s
TORD Torodi Ar. Bea 78.97 78 P **P** **10 10 33.9 -0.3**
NOA NORSAR Array B 83.56 29 P **P** **10 10 56.0 -1.7**
comp=Z,0.5nm,0.7s,baz=320,slow=9.3,SNR=4.6
NOA LR LR 10 45 26.7
comp=Z,24nm,19.9s,baz=285,slow=34
comp=Z,0.5nm,0.7s
DAVOX Davos/Dischmat 83.68 44 LR LR 10 47 02.4
comp=Z,34nm,18.1s,baz=263,slow=35
SPITS Spitsbergen Ar 83.90 12 LR LR 10 49 28.0
comp=Z,52nm,18.5s,baz=284,slow=36
RAR Rarotonga 84.45 248 LR LR 10 41 31.5
comp=Z,58nm,18.1s,baz=80,slow=30
HFS Hagfors 84.85 30 LR LR 10 44 01.7
comp=Z,38nm,20.8s,baz=266,slow=32
VRAC Vranov 87.88 41 LR LR 10 45 05.1
comp=Z,67nm,21.5s,baz=274,slow=32
VAE Valguarnera 87.98 53 LR LR 10 47 25.3
comp=Z,66nm,18.2s,baz=320,slow=34
ARCES ARCESS Array B 88.08 20 LR LR 10 46 49.8
comp=Z,33nm,20.6s,baz=292,slow=33
FINES FINESS Array B 90.56 28 LR LR 10 48 54.9
comp=Z,36nm,19.4s,baz=291,slow=34
RNPP9 Sopachiv 93.25 37 P **P** **10 11 45.4 +1.0**
TROLL Troll, Antarti 94.19 162 ⇑P **P** **10 11 48.8 +0.4**
comp=Z,100nm,0.7s
VOIR 94.30 43 P **P** **10 11 50.3 +0.9**
KMPD K-Podol'skiy 94.39 40 P **P** **10 11 50.3 +0.6**
SHEM Shemya Is, Ala 94.51 324 LR LR 10 59 21.3
comp=Z,31nm,18.0s,baz=122,slow=39
AFI Afiamalu 94.79 257 LR LR 10 46 11.4
comp=Z,46nm,19.3s,baz=146,slow=30
LUBAR Lubar, Ukraine 94.82 38 P **P** **10 11 52.9 +1.3**
MLR Muntele Rosu 94.89 43 LR LR 10 51 29.2
comp=Z,34nm,20.3s,baz=292,slow=34
AK19 Malin Array Si 95.34 37 P **P** **10 11 55.0 +1.1**
AK21 Malin Array Si 95.34 37 P **P** **10 11 55.0 +1.1**
AKASG Malin Array Be 95.47 37 LR LR 10 54 05.5
comp=Z,28nm,18.2s,baz=238,slow=35
TSUM Tsumeb 98.20 108 LR LR 10 55 38.1
comp=Z,70nm,18.6s,baz=165,slow=35
WMQ Urumqi 127.60 12 *e*PKP **PKPdf** **10 17 34.2 -1.2**
WMQ LR LR
comp=Z,45nm,23.8s
HHC Hu-ho-hao-te 131.15 350 *eP* **PKPdf** **10 17 39.2 -3.1**
AS31 Alice Springs 144.84 239 PKPbc **PKPab** **10 18 05.8 -0.8**
ASAR Alice Springs 144.84 239 PKPbc **PKPab** **10 18 05.7 -1.0**
comp=Z,1.7nm,1.0s,baz=111,slow=4.0,SNR=6.8
WRAB Tennant Creek 145.69 245 PKPdf **PKPdf** **10 18 08.6 -0.7**
WRA Warramunga Arr 145.69 245 PKPbc **PKPdf** **10 18 08.5 -0.7**
comp=Z,2.9nm,1.2s,baz=114,slow=2.9,SNR=6.5
PZH PanZhiHua 146.37 359 PKPbc **PKPdf** **10 18 10.6 +0.2**
CMAR Chiang Mai Arr 154.26 5 PKPbc **PKPbc** **10 18 30.6 -0.3**
comp=Z,1.0nm,0.4s,baz=343,slow=4.0,SNR=4.5

IDC 03 10:03:12.0±3.7, 18°48N×144°78E, h239km±31km, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=267.5km s-min=20.9km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.86**	**179**	P		Pn	10 04 24.9	-0.9
	29nm,0.9s,baz=0.0,slow=20,SNR=1.5							
GUMO				S		S	10 05 25.4	+1.0
	34nm,0.8s,baz=12,slow=20,SNR=2.3							
MJAR	**Matsushiro Arr**	**18.91**	**343**	P		P	10 07 15.1	0.0
	0.4nm,0.5s,baz=154,slow=12,SNR=1.4							
WRA	**Warramunga Arr**	**39.53**	**196**	P		P	10 10 20.1	0.0
	0.6nm,0.5s,baz=15,slow=8.1,SNR=16							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**43.21**	**195**	P		P	10 10 49.5	-0.4
	0.3nm,0.5s,baz=11,slow=6.5,SNR=6.5							
	0.3nm,0.5s							

*NEIC **03** 10:05:42.4±1.0, 52°.8N±0°.2×173°.3W±0°.1, h171km±7km, mb3.6/7, ML2.9/12, ML2.4(AEIC), Error ellipse: s-maj=30.2km s-min=9.3km az=164.0*
*AEIC **03** 10:05:42.0±4.2, 52°.4N±0°.2×173°.3W±0°.1, h173km±3km, Error ellipse: s-maj=27.4km s-min=9.4km az=160.0*

ISC 03 10:05:42.0±0.9, 52°.8N±0°.2×173°.26W±0°.09, h170km±11km, n30, σ0°68/38, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.64**	**229**			Pn	10 06 06.1	-0.2
KOSE						Sn	10 06 24.7	-0.3
KONE	**Korovin Northe**	**0.64**	**235**			Pn	10 06 06.7	+0.4
KOFP	**Korovin Flat P**	**0.71**	**227**			Pn	10 06 07.0	+0.2
KOFP						Sn	10 06 25.8	0.0
KOKL	**Mount Kliuchef**	**0.73**	**233**			Pn	10 06 07.2	+0.3
KOKL						Sn	10 06 26.4	+0.5
ATKA	**Atka Island**	**0.80**	**226**			Pn	10 06 07.2	0.0
ATKA						Sn	10 06 26.7	+0.1
GSIG	**Igitkin Island**	**1.81**	**246**			Pn	10 06 16.6	+0.4
GSIG						Sn	10 06 42.5	-0.3
GSTR	**Great Sitkin T**	**1.84**	**250**	Pn		Pn	10 06 16.9	+0.3
GSTR				IAML			10 06 48.5	
	comp=E,75nm,1.1s							
GSSP	**Great Sitkin S**	**1.91**	**251**			Pn	10 06 17.0	-0.3
GSSP						Sn	10 06 44.3	-0.3
GSCK	**Great Sitkin C**	**1.93**	**248**			Pn	10 06 17.4	-0.2
GSCK						Sn	10 06 45.0	-0.1
ETKA	**Kagalaska Isla**	**2.13**	**246**			Pn	10 06 20.3	+0.5
ETKA						Sn	10 06 48.8	-0.3
ADK	**Adak**	**2.28**	**249**			Sn	10 06 51.9	-0.2
ADK	**Adak**	**2.28**	**249**	Pn		Pn	10 06 22.2	+0.7
ADK				IAML			10 06 54.9	
	comp=E,58nm,0.2s							
ADK				IAML			10 06 55.4	
	comp=E,50nm,0.2s							
KIWB	**Kanaga Island**	**2.56**	**251**	Pn		Pn	10 06 25.9	+1.2
KIWB				IAML			10 07 03.3	
	comp=E,30nm,0.6s							
KIWB				IAML			10 07 06.3	
	comp=N,28nm,1.1s							
KIMD	**Kanaga Island**	**2.64**	**249**			Pn	10 06 27.0	+1.2
UNV	**Unalaska Valle**	**4.19**	**72**	Pn		Pn	10 06 45.8	+0.7
UNV				IAML			10 07 50.8	
	comp=E,6.4nm,1.2s							
LVA	**Lava Point**	**4.54**	**69**	Pn		Pn	10 06 51.0	+1.4
SDPT	**Sand Point**	**7.95**	**66**	Pn		Pn	10 07 33.5	-1.0
CNBA	**Chernabura Isl**	**8.35**	**70**	Pn		Pn	10 07 39.8	0.0
CHGN	**Chignik**	**9.32**	**62**	Pn		Pn	10 07 51.9	-0.6
KDAK	**Kodiak Island**	**12.79**	**59**	P		P	10 08 41.6	-0.4
F17K	**Baldwin Pennin**	**14.96**	**19**	P		Pn	10 09 05.0	+0.4
G19K	**Purcell Mounta**	**15.65**	**25**			Pn	10 09 11.9	-1.2
G19K				IAmb		IAmb	10 09 12.6	
	comp=Z,2.0nm,1.1s							
PETK	**Petropavlovsk-**	**17.46**	**283**	P		P	10 09 32.4	-1.2
HDA	**Harding Lake**	**17.83**	**39**	P		P	10 09 38.1	+0.5
HDA				IAmb		IAmb	10 09 39.8	
	comp=Z,1.6nm,0.6s							
K24K	**Donnelly Dome**	**18.02**	**41**	P		P	10 09 39.9	+0.2
K24K				IAmb		IAmb	10 09 42.1	
	comp=Z,3.0nm,1.1s							
J25K	**Salcha River,**	**18.53**	**39**	P		P	10 09 46.2	+0.9
SCRK	**Sand Creek**	**18.81**	**42**	P		P	10 09 49.3	+1.0
SCRK				IAmb		IAmb	10 09 50.0	
	comp=Z,1.6nm,0.7s							
HYT	**Haines Junctio**	**20.94**	**53**	P		P	10 10 11.0	-0.2
HYT				IAmb		IAmb	10 10 16.1	
	comp=Z,2.4nm,0.8s							
R32K	**Eaglecrest**	**22.37**	**60**	P		P	10 10 26.9	+1.1
PDAR	**Pinedale Array**	**42.64**	**77**	P		P	10 13 21.4	-0.2

IDC 03 10:42:45.5±1.3,5°72.S×146°53.E, h0km, mb3.6/4, mbtmp3.7/7, ML3.6/2, MS2.8/1, Error ellipse: s-maj=39.3km s-min=25.4km az=117.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.71**	**170**	Pn	Pn	10 43 44.6	+0.4
	8.4nm,0.3s,baz=318,slow=7.3,SNR=8.1						
PMG				Sn	Sn	10 44 25.1	-3.6
	4.9nm,0.3s,baz=284,slow=22,SNR=7.2						
JAY	**Jayapura**	**6.63**	**298**	LR	LR	10 47 31.4	
	comp=Z,76nm,18.8s,baz=16,slow=43						
SIJI	**Sorong**	**15.98**	**287**	Pn	Pn	10 46 30.6	-1.3
	0.5nm,0.3s,baz=126,slow=14,SNR=4.4 1.7nm,0.3s						
WRA	**Warramunga Arr**	**18.45**	**219**	P	Pn	10 47 02.0	-1.0
	0.1nm,0.3s,baz=42,slow=11,SNR=5.0 0.5nm,0.4s						
ASAR	**Alice Springs**	**21.59**	**213**	P	P	10 47 38.6	+1.5
	0.3nm,0.5s,baz=51,slow=8.8,SNR=9.4 0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.82**	**237**	P	P	10 48 00.1	-0.4
	3.2nm,0.7s,baz=52,slow=7.7,SNR=10.0 3.2nm,0.7s						
QSPA	**South Pole Qui**	**84.25**	**180**	P	P	10 55 18.1	-0.9
	0.3nm,0.5s,baz=290,slow=0.8,SNR=5.7 0.3nm,0.5s						
ILAR	**Eielson Array**	**85.41**	**23**	P	P	10 55 25.1	+0.5
	0.8nm,0.8s,baz=251,slow=5.2,SNR=9.8 0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**144.57**	**285**	PKP	PKPdf	11 02 25.2	-0.1
	0.6nm,0.8s,baz=84,slow=2.8,SNR=2.7						

DJA 03 10:43:05.4±0.4,5°N±5°×9°5E±°, h75km±6km, M3.4/11, mb4.1/3, MLv3.1/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.25**	**22**	P	Pn	10 43 18.5	+1.6
MLSI	**Meulaboh, Aceh**	**1.55**	**129**	P	Pn	10 43 31.0	-0.3
LHMI	**Lhok Sumawe**	**1.74**	**91**	P	Pn	10 43 32.8	-0.9
TPTI		**2.80**	**135**	P	Pn	10 43 46.9	-1.1
EGSI	**Enggano, Bengk**	**12.69**	**146**	P	Pn	10 46 03.4	+0.4
	80nm,1.2s						
CHTO	**Chiang Mai**	**13.96**	**15**	P	Pn	10 46 19.7	-0.1
	3.2nm,1.7s						
PALK	**Pallekele**	**14.55**	**279**	P	Pn	10 46 27.4	-0.2

IDC 03 11:33:13.2±2.3, 13°.73S×66°.63E, h0km, mb3.7/7, mbtmp3.7/7, MS3.5/3, Error ellipse: s-maj=73.8km s-min=29.6km az=56.0

ISC 03 11:33:18.7±2.4, 13°.4S±0°.3×67°.3E±0°.4, h10km, n20, σ0 87/8, mb3.9/7, MS3.4/3, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**7.62**	**42**	T	T	11 44 31.0	
	baz=224,slow=75,SNR=78						
H08S2	**Diego Garcia H**	**7.64**	**43**	T	T	11 44 34.0	
	baz=224,slow=53,SNR=53						
H08S3	**Diego Garcia H**	**7.64**	**42**	T	T	11 44 32.3	
	baz=224,slow=75,SNR=126						
PALK	**Pallekele**	**24.44**	**34**	LR	LR	11 45 10.6	
	comp=Z,59nm,18.1s,baz=222,slow=29						
H04N2	**CROZET ISLANDS**	**35.23**	**199**	T	T	12 16 02.0	
	baz=26,slow=75,SNR=14						
H04N1	**CROZET ISLANDS**	**35.23**	**199**	T	T	12 16 03.2	
	baz=26,slow=75,SNR=14						
H04N3	**CROZET ISLANDS**	**35.24**	**199**	T	T	12 16 01.8	
	baz=26,slow=75,SNR=10						
MATP	**Matopo**	**37.71**	**254**	LR	LR	11 54 04.6	
	comp=Z,52nm,18.2s,baz=123,slow=34						
BRDH	**Bariadhala**	**43.03**	**34**	LR	LR	12 02 04.2	
	comp=Z,105nm,18.1s,baz=293,slow=40						
CMAR	**Chiang Mai Arr**	**44.42**	**45**	P	**P**	**11 41 30.4**	**+0.4**
	0.3nm,0.3s,baz=236,slow=7.5,SNR=1.3 0.3nm,0.3s						
H01W3	**Cape Leeuwin H**	**47.31**	**125**	T	T	12 33 00.2	
	baz=283,slow=75,SNR=29						
H01W2	**Cape Leeuwin H**	**47.32**	**125**	T	T	12 32 57.8	
	baz=283,slow=75,SNR=27						
H01W1	**Cape Leeuwin H**	**47.33**	**125**	T	T	12 32 59.1	
	baz=283,slow=75,SNR=32						
ASAR	**Alice Springs**	**63.52**	**110**	P	**P**	**11 43 49.2**	**-0.6**
	0.6nm,0.9s,baz=278,slow=6.2,SNR=4.2 0.6nm,0.9s						
WRA	**Warramunga Arr**	**64.22**	**106**	P	**P**	**11 43 54.4**	**0.0**
	1.5nm,0.9s,baz=261,slow=5.5,SNR=5.9 1.5nm,0.9s						
KURBB	**Kurchatov Arra**	**64.46**	**8**	P	**P**	**11 43 54.7**	**-0.6**
	0.6nm,0.8s,baz=200,slow=7.0,SNR=5.5 0.6nm,0.8s						
BVAR	**Borovoye Array**	**66.16**	**2**	P	**P**	**11 44 05.3**	**-0.9**
	0.8nm,0.6s,baz=165,slow=6.0,SNR=5.0 0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**68.68**	**11**	P	**P**	**11 44 21.5**	**-0.7**
	0.3nm,0.3s,baz=193,slow=5.9,SNR=1.9 0.3nm,0.3s						
SONM	**Songino Array**	**70.17**	**27**	P	**P**	**11 44 32.2**	**+0.5**
	0.3nm,0.3s,baz=197,slow=4.5,SNR=2.2 0.3nm,0.3s						
PDAR	**Pinedale Array**	**150.57**	**355**	PKPbc	**PKPdf**	**11 53 07.2**	**+1.1**
	0.7nm,0.7s,baz=50,slow=1.3,SNR=8.2						

IGQ 03 11:37:32.0±0.7,3°S±2°,8°1W±°, h15km±5km, M3.8/19, Mjma3.8/19, MLv3.8/19, Ms(BB)3.8/12, 5C-19D, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISPG	**Isla Puna-Puer**	**0.90**	**70**	⇓P	Pn	11 37 49.8	-0.3
ISPG				S	Sn	11 38 02.6	-0.3
SALI	**Salinas**	**1.08**	**1**	⇑P	Pb	11 37 52.3	-0.1
SALI				S	Sb	11 38 05.8	-0.6
AMCR	**Ecuador-Macara**	**1.52**	**136**	P	Pn	11 37 57.5	-1.3
MCRA	**Macar, Loja**	**1.52**	**136**	P	Pn	11 37 57.4	-1.3
PPLP	**Puerto Lpez**	**1.73**	**8**	P	Pn	11 38 00.8	-0.8
PPLP				S	Sn	11 38 21.1	-2.4
JIPI	**JIPIJAPA**	**1.95**	**14**	P	Pn	11 38 04.3	-0.3
ISPT	**Isla de la Pla**	**2.00**	**358**	⇓P	Pn	11 38 05.2	-0.1
AZAM	**Ecuador-Zamora**	**2.20**	**111**	P	Pn	11 38 09.8	+1.6
AMNT	**Manta-Manabi**	**2.33**	**7**	P	Pn	11 38 10.8	+1.0
ZUMB	**Zumba**	**2.45**	**130**	⇑P	Pn	11 38 12.3	+0.7
BOSC	**San Juan Bosco**	**2.52**	**87**	⇑P	Pn	11 38 13.0	+0.4
JSCH	**Cashca Totoras**	**2.56**	**53**	P	Pn	11 38 11.2	-2.1
AGRD	**Ecuador-Guaran**	**2.62**	**50**	P	Pn	11 38 12.7	-1.5
PECV	**Mancha de Ca P**	**2.66**	**21**	P	Pn	11 38 12.4	-2.0
CHSH	**Refugio Sur-Vo**	**2.78**	**51**	P	Pn	11 38 16.0	-0.6
TAMH	**Tambohuasha Ch**	**2.82**	**52**	P	Pn	11 38 16.3	-0.7
PORT	**Chimborazo Vol**	**2.87**	**51**	⇓P	Pn	11 38 17.6	-0.2
IGUA	**Igualata**	**2.96**	**53**	⇓P	Pn	11 38 19.0	0.0
ARRY	**Arrayan**	**3.10**	**56**	P	Pn	11 38 21.0	+0.2
BPAT	**Tungurahua Vol**	**3.12**	**56**	P	Pn	11 38 21.1	0.0
JUI6	**Juive**	**3.14**	**54**	P	Pn	11 38 21.5	+0.2
PIS1	**Pisayambo**	**3.43**	**50**	P	Pn	11 38 26.3	+0.9
SLOR	**San Lorenzo -**	**3.57**	**45**	⇓P	Pn	11 38 28.0	+0.7
VCES	**Cotopaxi**	**3.59**	**47**	⇓P	Pn	11 38 28.3	+0.7
BNAS	**Cotopaxi Volca**	**3.62**	**44**	⇓P	Pn	11 38 28.2	+0.2
SUCR	**Mariscal Sucre**	**3.63**	**44**	⇓P	Pn	11 38 29.6	+1.4
NAS2	**Nasa**	**3.65**	**44**	⇓P	Pn	11 38 29.8	+1.4
BREF	**Cotopaxi Volca**	**3.65**	**45**	⇓P	Pn	11 38 30.0	+1.4
BTAM	**Cotopaxi Volca**	**3.67**	**45**	⇓P	Pn	11 38 29.6	+0.8
BVC2	**Cotopaxi Volca**	**3.68**	**45**	⇓P	Pn	11 38 29.9	+1.0
TAMB	**Tambo**	**3.68**	**46**	⇓P	Pn	11 38 29.9	+1.0
VC1	**Cotopaxi 1**	**3.69**	**45**	⇓P	Pn	11 38 30.3	+1.2
PITA	**Cotopaxi Volc**	**3.73**	**44**	⇓P	Pn	11 38 31.0	+1.5
JUA2	**San Juan 2**	**3.88**	**38**	⇓P	Pn	11 38 32.6	+1.0
TERV	**Terraza Guagua**	**3.91**	**38**	⇓P	Pn	11 38 32.7	+0.6
GGPC	**Guagua Pichinc**	**3.91**	**38**	⇑P	Pn	11 38 32.9	+0.8
ANTS	**Antisana-Sarah**	**3.96**	**46**	P	Pn	11 38 33.9	+1.1
YANA	**Yana**	**3.97**	**38**	P	Pn	11 38 33.3	+0.4
ANTI	**Antisana**	**4.00**	**46**	P	Pn	11 38 34.5	+1.2
PULU	**Pululahua**	**4.12**	**38**	P	Pn	11 38 35.6	+0.7
PAC1	**Pacto, Paraso**	**4.16**	**32**	P	Pn	11 38 33.9	-1.2
ATON	**Ecuador-Tonsup**	**4.30**	**16**	⇑P	Pn	11 38 37.1	+0.1
CUIC	**Cuicocha-Domo**	**4.43**	**37**	⇓P	Pn	11 38 39.5	+0.3
CAYR	**Refugio Cayamb**	**4.44**	**43**	⇓P	Pn	11 38 43.7	+4.2
IMBA	**Imbabura, San**	**4.51**	**39**	P	Pn	11 38 41.8	+1.6
CHL2	**Volcn Chiles**	**5.10**	**37**	P	Pn	11 38 50.5	+2.2

NEIC 03 11:40:22.5±1.1, 29°.86S±0°.07×177°.6W±0°.1, h23km±5km, mb4.9/63, Error ellipse: s-maj=16.7km s-min=8.3km az=69.0

IDC 03 11:40:25.0±1.0, 29°.60S×177°.68W, h42km±7km, mb4.3/14, mbtmp4.5/16, ML3.5/2, MS3.6/29, Error ellipse: s-maj=17.9km s-min=13.0km az=88.0

GFZ 03 11:40:26.2±0.3, 30°S±5°×17°8W±°, h50km, M5.1/24, mb5.1/24, confirmed

NOU 03 11:41:38.5, 35°.26S×179°.32W, h176km, mb4.0/9, East of North Island, N.Z.

ISC 03 11:40:20.8±0.9, 29°.81S±0°.04×177°.53W±0°.06, h16km±5km, n305, σ1 54/287, mb4.8/49, MS3.7/26, 4C-3D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.64**	**328**	P	**Pn**	**11 40 36.6**	**+1.3**
GLKZ				S	**Sn**	**11 40 44.4**	**-0.8**
RAO	**Raoul Island**	**0.65**	**328**	P	**Pn**	**11 40 36.7**	**+1.3**
	20µm,0.3s,baz=84,slow=19,SNR=509						
RAO				S	**Sb**	**11 40 43.9**	**+1.2**
	58µm,0.3s,baz=91,slow=16,SNR=32						
RAO	**Raoul Island**	**0.65**	**328**		**Pn**	**11 40 36.6**	**+1.3**
RAO				Sg	**Sn**	**11 40 44.4**	**-1.0**
RAO	**Raoul Island**	**0.65**	**328**	P	**Pn**	**11 40 36.8**	**+1.3**
RAO				S	**Sn**	**11 40 45.1**	**-0.3**
RAO	**Raoul Island**	**0.65**	**328**	P	**Pn**	**11 40 36.8**	**+1.3**
RAO				S	**Sn**	**11 40 45.0**	**-0.4**
RIZ	**Raoul Island**	**0.66**	**328**	P	**Pn**	**11 40 36.8**	**+1.2**
RIZ				S	**Sn**	**11 40 45.3**	**-0.3**
MXZ	**Matakaoa Point**	**8.47**	**203**	P	**Pn**	**11 42 27.0**	**+4.1**
MXZ	**Matakaoa Point**	**8.47**	**203**	P	**Pn**	**11 42 23.3**	**+0.4**
WMGZ	**Waiomatatini S**	**8.67**	**202**	P	**Pn**	**11 42 25.2**	**-0.4**
WMGZ				S	**Sn**	**11 44 06.0**	**+2.9**
PKGZ	**Pakihiroa**	**8.83**	**203**	P	**Pn**	**11 42 28.5**	**+0.7**
PKGZ				S	**Sn**	**11 44 08.9**	**+1.9**
HAZ	**Te Kaha**	**8.83**	**205**	P	**Pn**	**11 42 27.4**	**-0.4**
HAZ				S	**Sn**	**11 44 09.6**	**+2.6**
PUZ	**Puketiti**	**8.95**	**202**	P	**Pn**	**11 42 29.5**	**-0.1**
PUZ				S	**Sn**	**11 44 09.9**	**-0.2**
WCZ	**Waipu Caves**	**9.17**	**226**	P	Pn	11 42 42.3	+10
OUZ	**Omahuta**	**9.23**	**232**	P	Pn	11 42 42.9	+10
MWZ	**Matawai**	**9.44**	**204**	P	**Pn**	**11 42 35.6**	**-0.6**
MWZ				S	**Sn**	**11 44 21.9**	**-0.1**
URZ	**Urewera**	**9.53**	**206**	P	**Pn**	**11 42 37.3**	**0.0**
	3.4nm,0.3s,baz=17,slow=17,SNR=1.6						
URZ				S	**Sn**	**11 44 16.0**	**-8.1**
	28nm,0.3s,baz=201,slow=21,SNR=18						
MUGZ	**Murupara**	**9.85**	**207**	P	**Pn**	**11 42 39.9**	**-1.9**
MUGZ				S	**Sn**	**11 44 30.1**	**-2.0**
RTZ	**Ruatahuna**	**9.89**	**206**	P	**Pn**	**11 42 41.4**	**-1.0**
SNGZ	**Shannon Statio**	**9.90**	**204**	P	**Pn**	**11 42 41.4**	**-1.2**
SNGZ				S	**Sn**	**11 44 31.2**	**-2.2**
KNZ	**Kokohu**	**10.01**	**202**	P	**Pn**	**11 42 43.6**	**-0.3**
BKZ	**Black Stump Fm**	**10.55**	**206**	P	**Pn**	**11 42 54.1**	**+2.6**
HIZ	**Hauiti**	**10.73**	**214**	P	Pn	11 43 01.2	+7.4
TSZ	**Takapari Road**	**11.53**	**206**	P	**Pn**	**11 43 03.5**	**-1.3**
BFZ	**Birch Farm**	**11.98**	**203**	P	**Pn**	**11 43 11.1**	**+0.2**
BFZ	**Birch Farm**	**11.98**	**203**	P	**Pn**	**11 43 08.2**	**-2.7**
MSVF	**Nonsavu**	**12.68**	**340**	P	**Pn**	**11 43 23.3**	**+2.6**
	9.6nm,0.7s,baz=247,slow=20,SNR=7.0						
MSVF				LR	LR	11 47 20.9	
	comp=Z,410nm,21.6s,baz=162,slow=34						
MSVF	**Nonsavu**	**12.68**	**340**		**Pn**	**11 43 22.1**	**+1.4**
NIUE	**Niue**	**12.72**	**35**	P	**Pn**	**11 43 18.2**	**-3.0**
DUWZ	**D'Urville Isla**	**12.99**	**210**	P	**Pn**	**11 43 28.6**	**+3.8**
SNZO	**South Karori**	**13.09**	**207**	P	**Pn**	**11 43 27.1**	**+1.0**
TCW	**Tory Channel**	**13.18**	**208**	P	**Pn**	**11 43 23.7**	**-3.7**
TUWZ	**Tuamarina**	**13.50**	**209**	P	**Pn**	**11 43 28.5**	**-3.2**
NNZ	**Nelson**	**13.57**	**211**	P	**Pn**	**11 43 34.4**	**+1.8**
TKNZ	**Takaka Hill**	**13.61**	**212**	P	**Pn**	**11 43 30.7**	**-2.5**
QRZ	**Quartz Range**	**13.65**	**214**	P	**P**	**11 43 38.2**	**-4.4**
QRZ	**Quartz Range**	**13.65**	**214**	P	**Pn**	**11 43 37.1**	**+3.4**
BSWZ	**Blackbirch Sta**	**13.77**	**208**	P	**Pn**	**11 43 35.3**	**0.0**
CTZ	**Chatham Island**	**13.92**	**177**	P	**Pn**	**11 43 41.1**	**+3.7**
CTZ	**Chatham Island**	**13.92**	**177**	P	**Pn**	**11 43 39.7**	**+2.3**
MRNZ	**Matariki Terra**	**13.99**	**212**	P	**Pn**	**11 43 38.1**	**-0.3**
THZ	**Tophouse**	**14.22**	**210**	P	**Pn**	**11 43 38.2**	**-3.4**
GVZ	**Greta Valley S**	**15.16**	**207**	P	**Pn**	**11 43 53.1**	**-1.1**
LTZ	**Lake Taylor**	**15.32**	**210**	P	**Pn**	**11 43 54.1**	**-2.3**
INZ	**Inchbonnie**	**15.64**	**212**	P	**Pn**	**11 43 59.1**	**-1.4**
OXZ	**Oxford**	**15.86**	**209**	P	**P**	**11 44 06.2**	**-0.9**
MHCZ	**Mount Hutt**	**16.23**	**209**	P	**Pn**	**11 44 07.5**	**-0.7**
WVZ	**Waitaha Valley**	**16.24**	**212**	P	**Pn**	**11 44 09.6**	**+1.4**
DZM	**Mont Dzumac**	**16.34**	**294**	P	**P**	**11 44 15.5**	**+3.0**
	6.3nm,0.5s,baz=169,slow=14,SNR=10						
DZM				LR	LR	11 49 22.0	
	comp=Z,401nm,18.1s,baz=146,slow=33						
RPZ	**Rata Peaks**	**16.60**	**210**	P	**P**	**11 44 14.2**	**-1.1**
	0.3nm,0.3s,baz=45,slow=5.7,SNR=5.8						
RPZ				S	Sn	11 47 01.9	-15
	1.0nm,0.5s,baz=301,slow=23,SNR=7.7 2.2nm,0.7s						
RPZ	**Rata Peaks**	**16.60**	**210**	Pn	**Pn**	**11 44 12.1**	**-0.8**
RPZ	**Rata Peaks**	**16.60**	**210**	P	**Pn**	**11 44 13.9**	**+1.0**
GCSZ	**Gaunt Creek Bo**	**16.61**	**212**	P	**Pn**	**11 44 13.4**	**+0.4**
AFI	**Afiamalu**	**16.69**	**20**	P	**P**	**11 44 19.3**	**+2.8**
	12nm,0.5s,baz=344,slow=8.4,SNR=4.9						
AFI				S	Sn	11 47 08.7	-11
	10nm,0.5s,baz=9.8,slow=23,SNR=1.6						
AFI	**Afiamalu**	**16.69**	**20**		**P**	**11 44 16.2**	**-0.3**
ARCZ	**Arundel**	**16.73**	**209**	P	**Pn**	**11 44 13.0**	**-1.6**
TMZ	**Timaru**	**17.16**	**209**	P	**Pn**	**11 44 17.5**	**-2.4**
ODZ	**Otahua Downs**	**17.84**	**208**	P	**P**	**11 44 29.3**	**+0.3**
ODZ	**Otahua Downs**	**17.84**	**208**	P	**Pn**	**11 44 28.1**	**-0.3**
JCZ	**Jackson Bay**	**17.92**	**214**	P	**P**	**11 44 32.8**	**+2.8**
JCZ	**Jackson Bay**	**17.92**	**214**	P	**Pn**	**11 44 29.3**	**-0.2**
RAR	**Rarotonga**	**18.15**	**66**	P	**P**	**11 44 33.6**	**+1.0**
	0.9nm,0.3s,baz=236,slow=11,SNR=3.9						
RAR				LR	LR	11 51 47.5	
	comp=Z,42nm,19.1s,baz=265,slow=38 12nm,0.9s						
RAR	**Rarotonga**	**18.15**	**66**	P	**Pn**	**11 44 30.4**	**-2.0**
RAR				IAmb	IAmb	11 44 34.9	
	comp=Z,164nm,1.8s						
WHZ	**Wether Hill Ro**	**19.68**	**211**	P	**P**	**11 44 47.7**	**-1.5**
TBI	**Tubuai**	**25.87**	**82**	*e*S	**S**	**11 50 18.8**	**-2.5**
	comp=Z,789nm,35.8s						
TBI				*e*LR	LR	11 52 25.2	
	comp=Z,2µm,27.2s						
TBI				*e*T	T	12 13 05.0	
	comp=Z,41nm,0.3s						
ARMA	**Armidale**	**26.65**	**261**	P	**P**	**11 46 02.0**	**+2.9**
EIDS	**Eidsvold**	**28.12**	**271**	P	**P**	**11 46 13.5**	**+1.3**
PAE	**Paea**	**28.22**	**71**	*e*T	T	12 15 46.5	
	comp=Z,42nm,0.3s						
PPT2	**Papeete2**	**28.26**	**71**	*e*S	S	11 50 49.3	-10
	comp=Z,94nm,31.0s						
PPT2				*e*LR	LR	11 53 26.3	
	comp=Z,176nm,28.0s						
PPT2				*e*LR	LR	11 53 32.3	
	comp=Z,335nm,26.2s						
PPT2				*e*T	T	12 15 50.3	
	comp=Z,11nm,0.3s						
PPT	**Papeete**	**28.27**	**71**	LR	LR	11 54 36.4	
	comp=Z,79nm,20.8s,baz=238,slow=30						
TVO	**Taravao**	**28.43**	**71**	*e*T	T	12 16 02.2	
	comp=Z,11nm,0.3s						
MILA	**Mila**	**28.62**	**247**	P	**P**	**11 46 19.3**	**+2.7**
PMOR	**Pomariorio Ree**	**30.99**	**68**	*e*T	T	12 19 14.3	
	comp=Z,6.5nm,0.4s						
CMSA	**Cobar Meteorol**	**31.59**	**257**	P	**P**	**11 46 44.1**	**+1.2**
QLP	**Quilpie**	**33.75**	**266**	P	**P**	**11 47 03.2**	**+1.3**
CTA	**Charters Tower**	**34.11**	**278**	LR	LR	11 59 24.8	
	comp=Z,186nm,18.9s,baz=72,slow=34						
CTAO	**Charters Tower**	**34.11**	**278**		**P**	**11 47 05.7**	**+0.7**
CTAO				IAmb	IAmb	11 47 07.1	
	comp=Z,13nm,0.6s						
CTAO	**Charters Tower**	**34.11**	**278**	P	**P**	**11 47 05.8**	**+0.7**
STKA	**Stephens Creek**	**35.01**	**256**	P	**P**	**11 47 14.1**	**+1.4**
	comp=Z,14nm,0.6s,baz=89,slow=8.1,SNR=18						
STKA				LR	LR	12 00 07.6	
	comp=Z,147nm,18.8s,baz=45,slow=34 comp=Z,14nm,0.6s						
STKA	**Stephens Creek**	**35.01**	**256**	P	**P**	**11 47 14.8**	**+2.0**
MTSU	**Mount Surprise**	**36.59**	**280**	P	**P**	**11 47 27.4**	**+0.9**
PMG	**Port Moresby**	**38.73**	**294**	LR	LR	12 00 55.6	
	comp=Z,116nm,21.2s,baz=168,slow=32						
AS31	**Alice Springs**	**43.55**	**266**		**P**	**11 48 23.0**	**-1.2**
ASAR	**Alice Springs**	**43.55**	**266**	P	**P**	**11 48 23.1**	**-1.1**
	comp=Z,6.7nm,0.5s,baz=102,slow=7.2,SNR=124						
ASAR				PcP	**PcP**	**11 50 12.3**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=115,slow=4.0,SNR=6.3						
ASAR				ScP	**ScP**	**11 54 01.1**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=106,slow=3.5,SNR=4.5						
ASAR				LR	LR	12 06 05.2	
	comp=Z,180nm,18.6s,baz=118,slow=36 comp=Z,6.7nm,0.5s						
ASAR	**Alice Springs**	**43.55**	**266**		**P**	**11 48 23.2**	**-1.1**
ASAR				PcP	**PcP**	**11 50 09.7**	**-2.2**
WR0	**Warramunga Arr**	**44.31**	**271**	P	**P**	**11 48 28.9**	**-1.4**
WR8	**Warramunga Arr**	**44.34**	**271**		**P**	**11 48 29.8**	**-0.8**
WR8				IAmb	IAmb	11 48 31.2	
	comp=Z,22nm,0.8s						
WRAB	**Tennant Creek**	**44.48**	**271**	P	**P**	**11 48 30.9**	**-0.8**
WRAB	**Tennant Creek**	**44.48**	**271**	P	**P**	**11 48 30.7**	**-1.0**
WRA	**Warramunga Arr**	**44.49**	**271**	P	**P**	**11 48 30.6**	**-1.1**
	comp=Z,23nm,0.4s,baz=110,slow=7.7,SNR=184						
WRA				PcP	**PcP**	**11 50 15.2**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=114,slow=3.4,SNR=6.1						
WRA				ScP	**ScP**	**11 54 04.8**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=98,slow=4.1,SNR=5.1						
WRA	**Warramunga Arr**	**44.49**	**271**		**P**	**11 48 30.7**	**-1.1**
FORT	**Forrest**	**46.60**	**254**		**P**	**11 48 46.4**	**-1.9**
FORT				PcP	**PcP**	**11 50 21.1**	**-1.1**
FORT				IAmb	IAmb	11 50 23.2	
	comp=Z,9.4nm,0.8s						
JAY	**Jayapura**	**48.00**	**296**	LR	LR	12 06 36.4	
	comp=Z,87nm,21.8s,baz=188,slow=33						
SBA	**Scott Base**	**48.66**	**184**	P	**P**	**11 49 03.8**	**+0.2**
SBA				IAmb	IAmb	11 49 09.5	
	comp=Z,7.7nm,0.8s						
VNDA	**Vanda**	**48.72**	**186**	P	**P**	**11 49 07.3**	**+3.2**
	comp=Z,1.4nm,0.6s,baz=7.4,slow=4.9,SNR=6.2						
VNDA				LR	LR	12 06 40.3	
	comp=Z,27nm,19.6s,baz=330,slow=32 comp=Z,1.4nm,0.6s						
VNDA	**Vanda**	**48.72**	**186**	P	**P**	**11 49 04.3**	**+0.2**
MTN	**Manton Dam**	**50.30**	**278**	P	**P**	**11 49 15.4**	**-1.6**
MTN				IAmb	IAmb	11 49 19.2	
	comp=Z,8.0nm,0.7s						
KNRA	**Kununurra**	**51.07**	**274**		**P**	**11 49 22.0**	**-0.8**
KNRA				IAmb	IAmb	11 49 23.8	
	comp=Z,28nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.77**	**269**	LR	LR	12 11 17.6	
	comp=Z,75nm,18.4s,baz=175,slow=35						
FITZ	**Fitzroy Crossi**	**52.77**	**269**		**P**	**11 49 34.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.77**	**269**	P	**P**	**11 49 35.4**	**-0.1**
KLBR	**Kellerberrin**	**54.93**	**251**	P	**P**	**11 49 49.4**	**-1.7**
CASY	**Casey**	**55.85**	**208**	P	**P**	**11 49 57.0**	**-0.2**
CASY	**Casey**	**55.85**	**208**	P	**P**	**11 49 57.7**	**+0.5**
GUMO	**Guam**	**56.35**	**315**	LR	LR	12 11 01.2	
	comp=Z,26nm,21.0s,baz=138,slow=33						
SIJI	**Sorong**	**56.50**	**291**	LR	LR	12 13 03.5	
	comp=Z,33nm,19.5s,baz=108,slow=35						
SIJI	**Sorong**	**56.50**	**291**	P	**P**	**11 50 00.8**	**-1.8**
	comp=Z,25nm,0.7s						
SIJI	**Sorong**	**56.50**	**291**	P	**P**	**11 50 00.9**	**-1.7**
SWI	**Sorong**	**56.51**	**291**	P	**P**	**11 50 01.1**	**-1.5**
BATI	**Baumata**	**57.98**	**277**	LR	LR	12 15 02.2	
	comp=Z,286nm,18.2s,baz=130,slow=36						
QSPA	**South Pole Qui**	**60.30**	**180**	P	**P**	**11 50 31.2**	**+2.6**
	comp=Z,3.4nm,0.5s,baz=61,slow=0.7,SNR=27 comp=Z,3.4nm,0.5s						
TNTI	**Ternate**	**60.62**	**290**	P	**P**	**11 50 31.0**	**-0.3**
TNTI				IAmb	IAmb	11 50 52.4	
	comp=Z,11nm,0.8s						
LBFI	**Labuhan Bajo,**	**62.07**	**276**	P	**P**	**11 50 39.7**	**-1.5**
KAPI	**Kappang**	**63.91**	**280**	LR	LR	12 18 45.8	
	comp=Z,40nm,18.1s,baz=96,slow=36						
DAV	**Davao City (W)**	**65.75**	**294**	LR	LR	12 17 01.7	
	comp=Z,20nm,21.3s,baz=146,slow=34						
TOLI2	**Tolitoli**	**66.26**	**286**	P	**P**	**11 51 08.1**	**-0.6**
TOLI2				IAmb	IAmb	11 51 11.4

TPTI		**87.52**	**275**	P		**P**	**11 53 06.8**	**-1.6**
NVAR	**Mina Array Bea**	**87.53**	**42**	P		**P**	**11 53 09.2**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=219,slow=7.6,SNR=17							
NVAR				LR		LR	12 29 29.4	
	comp=Z,36nm,18.0s,baz=200,slow=34							
	comp=Z,2.7nm,0.8s							
TPNV	**Topopah Spring**	**87.79**	**45**	IAmb		IAmb	11 53 11.6	
	comp=Z,4.1nm,0.9s							
TPH	**Tonopah**	**87.93**	**43**	IAmb		IAmb	11 53 12.4	
	comp=Z,8.7nm,1.3s							
Y14A	**Wickenburg**	**87.94**	**49**	IAmb		IAmb	11 53 12.5	
	comp=Z,3.7nm,0.8s							
TUC	**Tucson**	**88.42**	**51**			**P**	**11 53 12.2**	**-0.3**
PRN	**Pahroc Range**	**88.82**	**45**			**P**	**11 53 16.1**	**+1.9**
PRN				IAmb		IAmb	11 53 17.4	
	comp=Z,7.7nm,1.3s							
X16A	**Lo Mia Camp, P**	**89.26**	**49**	IAmb		IAmb	11 53 19.8	
	comp=Z,4.8nm,0.8s							
LCMT	**Little Creek M**	**89.69**	**46**	IAmb		IAmb	11 53 21.2	
	comp=Z,7.7nm,1.6s							
U15A	**North Rim**	**89.93**	**47**	IAmb		IAmb	11 53 22.8	
	comp=Z,6.1nm,1.1s							
KNB	**Kanab**	**89.96**	**46**	IAmb		IAmb	11 53 22.6	
	comp=Z,12nm,1.5s							
BNX	**BinXian**	**90.26**	**325**	⇓P		**P**	**11 53 19.4**	**-1.2**
BNX				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KLR	**Kul'dur**	**90.73**	**330**	LR		LR	12 29 03.2	
	comp=Z,24nm,20.5s,baz=224,slow=32							
N15K	**Kwethluk River**	**90.79**	**9**	P		**P**	**11 53 23.3**	**+0.6**
TXAR	**Lajitas Array**	**91.73**	**57**	P		**P**	**11 53 28.5**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=220,slow=4.5,SNR=1.6							
	comp=Z,0.4nm,0.7s							
TXAR	**Lajitas Array**	**91.73**	**57**	P		**P**	**11 53 27.1**	**-0.8**
G08A	**Pilot Rock**	**91.74**	**37**			**P**	**11 53 28.1**	**+0.4**
G08A				IAmb		IAmb	11 53 29.6	
	comp=Z,4.9nm,1.0s							
CMIG	**Matias Romero**	**92.18**	**72**	LR		LR	12 28 20.0	
	comp=Z,66nm,18.4s,baz=167,slow=31							
TMUT	**Trail Mountain**	**92.36**	**45**	IAmb		IAmb	11 53 33.5	
	comp=Z,4.5nm,1.2s							
ANMO	**Albuquerque**	**92.89**	**51**	P		**P**	**11 53 34.5**	**+1.1**
HVU	**Hansel Valley**	**92.93**	**43**	IAmb		IAmb	11 53 35.3	
	comp=Z,5.0nm,1.2s							
HLID	**Hailey**	**93.09**	**40**	IAmb		IAmb	11 53 36.2	
	comp=Z,4.3nm,1.2s							
HLID	**Hailey**	**93.09**	**40**	P		**P**	**11 53 35.0**	**+1.0**
F10A	**Beach Ranch, E**	**93.10**	**37**	P		**P**	**11 53 33.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**93.59**	**289**	P		**P**	**11 53 35.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=118,slow=5.2,SNR=1.5							
CMAR				LR		LR	12 38 58.8	
	comp=Z,13nm,18.1s,baz=180,slow=38							
	comp=Z,0.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**93.59**	**289**	P		**P**	**11 53 36.2**	**-0.5**
NEW	**Newport**	**94.66**	**36**	LR		LR	12 28 08.2	
	comp=Z,40nm,21.2s,baz=213,slow=30							
CAST	**Castle Rocks**	**95.09**	**11**	P		**P**	**11 53 41.0**	**-1.5**
CAST				IAmb		IAmb	11 54 05.9	
	comp=Z,14nm,1.9s							
PZH	**PanZhiHua**	**95.40**	**297**	P		**P**	**11 53 46.3**	**+1.4**
PDAR	**Pinedale Array**	**95.43**	**43**	LR		LR	12 34 15.8	
	comp=Z,19nm,18.1s,baz=198,slow=34							
HHC	**Hu-ho-hao-te**	**96.12**	**314**	*e*P		**P**	**11 53 49.4**	**+1.5**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,38nm,4.8s							
DLBC	**Dease Lake**	**96.42**	**23**	LR		LR	12 36 17.8	
	comp=Z,21nm,18.1s,baz=171,slow=35							
ILAR	**Eielson Array**	**97.26**	**13**	P		**P**	**11 53 51.2**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=224,slow=5.4,SNR=6.8							
	comp=Z,0.6nm,0.8s							
MKAR	**Makanchi Array**	**117.71**	**310**	PKP		**PKPdf**	**11 59 04.6**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=90,slow=2.3,SNR=6.9							
ZALV	**Zalesovo Beam**	**117.86**	**318**	PKP		**PKPdf**	**11 59 05.0**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=113,slow=2.2,SNR=6.1							
KSH2	**Kashi**	**120.59**	**300**	PKP		**PKiKP**	**11 59 14.8**	**+2.8**
KURBB	**Kurchatov Arra**	**120.97**	**314**	PKP		**PKPdf**	**11 59 10.5**	**-1.7**
	comp=Z,3.6nm,0.7s,baz=102,slow=1.9,SNR=19							
BVAR	**Borovoye Array**	**126.27**	**316**	PKP		**PKPdf**	**11 59 20.9**	**-1.4**
	comp=Z,7.3nm,0.6s,baz=94,slow=2.0,SNR=21							
SPITS	**Spitsbergen Ar**	**131.14**	**356**	PKP		**PKPdf**	**11 59 30.4**	**-0.5**
	comp=Z,6.6nm,0.7s,baz=30,slow=2.3,SNR=7.5							
ARTI	**Arti**	**133.00**	**321**	PKP		**PKPdf**	**11 59 34.1**	**-0.8**
	comp=Z,5.4nm,0.5s,baz=80,slow=2.2,SNR=7.5							
AKTO	**Aktyubinsk**	**134.00**	**313**	PKP		**PKPdf**	**11 59 36.2**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=103,slow=3.3,SNR=9.0							
H10S3	**ASCENSION HYDR**	**138.08**	**154**	T		T	14 34 57.1	
	baz=204,slow=74,SNR=126							
H10S2	**ASCENSION HYDR**	**138.08**	**154**	T		T	14 35 04.2	
	baz=16,slow=74,SNR=138							
ARA0	**ARCESS Array S**	**138.10**	**348**	*e*P		**PKPdf**	**11 59 43.8**	**-0.3**
ARCES	**ARCESS Array B**	**138.10**	**348**	PKP		**PKPdf**	**11 59 43.4**	**-0.8**
	comp=Z,5.1nm,0.6s,baz=38,slow=1.5,SNR=15							
TRO	**Tromso**	**139.03**	**351**	*e*P		**PKPdf**	**11 59 45.1**	**-0.7**
H10N3	**ASCENSION HYDR**	**139.16**	**154**	T		T	14 36 35.7	
	baz=204,slow=74,SNR=133							
H10N1	**ASCENSION HYDR**	**139.17**	**154**	T		T	14 36 26.4	
	baz=204,slow=74,SNR=118							
H10N2	**ASCENSION HYDR**	**139.18**	**154**	T		T	14 36 27.2	
	baz=204,slow=74,SNR=130							
FINES	**FINESS Array B**	**144.73**	**341**	PKP		**PKPab**	**11 59 53.7**	**-1.3**
	comp=Z,12nm,0.5s,baz=62,slow=3.4,SNR=118							
NSS	**Namsos**	**144.75**	**353**	*e*P		**PKPab**	**11 59 54.1**	**-0.9**
NSS				IAmb		IAmb	11 59 57.5	
	comp=Z,22nm,0.6s							
KBZ	**Khabaz**	**145.12**	**305**	PKP		**PKPbc**	**11 59 55.9**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=121,slow=3.4,SNR=8.3							
GEVA	**Gevas**	**145.55**	**295**	PKPdf		**PKPdf**	**11 59 58.2**	**-0.4**
GURO	**Guroymak-BITLI**	**146.34**	**296**	PKPdf		**PKPbc**	**12 00 00.6**	**-0.6**
MOL	**Molde**	**147.06**	**356**	*e*P		**PKPbc**	**12 00 01.8**	**-0.4**
MOL				IAmb		IAmb	12 00 02.2	
	comp=Z,13nm,0.9s							
DOMB	**Dombas**	**147.47**	**354**	*e*P		**PKPbc**	**12 00 02.7**	**-0.8**
AKN	**Aaknes**	**147.49**	**356**	*e*P		**PKPbc**	**12 00 03.2**	**-0.2**
AKN				IAmb		IAmb	12 00 03.7	
	comp=Z,22nm,0.8s							
NB2	**NORSAR Subarra**	**148.23**	**352**	PKP		**PKPbc**	**12 00 04.3**	**-1.2**
	comp=Z,14nm,0.7s,baz=13,slow=2.9							
NOA	**NORSAR Array B**	**148.23**	**352**	PKPbc		**PKPbc**	**12 00 04.2**	**-1.3**
	comp=Z,11nm,0.7s,baz=15,slow=4.3,SNR=39							
NC602	**NORSAR Array S**	**148.48**	**351**	*e*P		**PKPbc**	**12 00 05.0**	**-1.1**
HFS	**Hagfors**	**148.75**	**349**	PKPbc		**PKPbc**	**12 00 05.6**	**-1.3**
	comp=Z,22nm,0.7s,baz=0.0,slow=0.6,SNR=36							
SKAR	**Skarslia**	**148.88**	**354**	*e*P		**PKPbc**	**12 00 07.0**	**-0.2**
ODD1	**Odda**	**149.77**	**356**	*e*P		**PKPbc**	**12 00 09.5**	**0.0**
KONO	**Kongsberg**	**149.77**	**353**	*e*P		**PKPbc**	**12 00 08.9**	**-0.5**
STRU	**Stroemstad**	**150.18**	**351**	*i* P		**PKPbc**	**12 00 09.4**	**-1.0**
AK03	**Malin Array Si**	**151.06**	**324**	PKP		**PKPbc**	**12 00 11.6**	**-1.1**
AK03	**Malin Array Si**	**151.06**	**324**	P		**PKPbc**	**12 00 11.6**	**-1.1**
AKASG	**Malin Array Be**	**151.07**	**324**	PKPbc		**PKPbc**	**12 00 11.7**	**-1.1**
	comp=Z,8.3nm,0.4s,baz=50,slow=2.9,SNR=42							
AKBB	**Malin Array Si**	**151.07**	**324**	PKP		**PKPdf**	**12 00 08.2**	**+1.3**
TJOU	**Tjoern**	**151.08**	**350**	*i* P		**PKPbc**	**12 00 11.2**	**-1.3**
AK01	**Malin Array Si**	**151.09**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
KIEV	**Kiev**	**151.09**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.3**
AK23	**Malin Array Si**	**151.09**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK04	**Malin Array Si**	**151.09**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK09	**Malin Array Si**	**151.09**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK08	**Malin Array Si**	**151.10**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK02	**Malin Array Si**	**151.11**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK11	**Malin Array Si**	**151.12**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.3**
AK22	**Malin Array Si**	**151.12**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.4**
AK10	**Malin Array Si**	**151.12**	**324**	PKP		**PKPdf**	**12 00 08.2**	**+1.2**
AK21	**Malin Array Si**	**151.12**	**324**	PKP		**PKPdf**	**12 00 08.2**	**+1.2**
AK15	**Malin Array Si**	**151.13**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.3**
AK05	**Malin Array Si**	**151.13**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.3**
AK05				PKP		**pPKPdf**	**12 00 10.5**	**-0.7**
AK18	**Malin Array Si**	**151.14**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.3**
AK18				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK12	**Malin Array Si**	**151.14**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.2**
AK12				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK16	**Malin Array Si**	**151.15**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.2**
AK16				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK06	**Malin Array Si**	**151.15**	**324**	PKP		**PKPdf**	**12 00 08.3**	**+1.2**
AK06				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK20	**Malin Array Si**	**151.16**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.3**
AK17	**Malin Array Si**	**151.17**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.3**
AK17				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK19	**Malin Array Si**	**151.17**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.3**
AK19				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK07	**Malin Array Si**	**151.17**	**323**	PKP		**PKPdf**	**12 00 08.4**	**+1.3**
AK07				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK14	**Malin Array Si**	**151.18**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.3**
AK14				PKP		**pPKPdf**	**12 00 10.7**	**-0.5**
AK13	**Malin Array Si**	**151.21**	**324**	PKP		**PKPdf**	**12 00 08.4**	**+1.2**
AK13				PKP		**pPKPdf**	**12 00 10.8**	**-0.5**
HOMB	**Homborsund**	**151.24**	**353**	*e*P		**PKPbc**	**12 00 12.9**	**0.0**
HOMB	**Homborsund**	**151.24**	**353**	*i* P		**PKPbc**	**12 00 12.5**	**-0.4**
SNART	**Snartemo**	**151.29**	**355**	*e*P		**PKPbc**	**12 00 12.9**	**-0.1**
SNART	**Snartemo**	**151.29**	**355**	*i* P		**PKPbc**	**12 00 12.5**	**-0.5**
ONAU	**Onsala**	**151.64**	**349**	*i* P		**PKPbc**	**12 00 12.5**	**-1.4**
MI28	**Mi28,Pidlybu**	**151.72**	**325**	PKP		**PKPdf**	**12 00 09.2**	**+1.3**
MMAI	**Mount Meron Ar**	**151.78**	**285**	PKPbc		**PKPbc**	**12 00 15.0**	**-0.1**
	comp=Z,6.7nm,0.5s,baz=51,slow=7.9,SNR=16							
FABU	**Falkenberg**	**151.88**	**348**	*i* P		**PKPbc**	**12 00 13.0**	**-1.4**
BLEU	**Blekinge**	**151.88**	**344**	*i* P		**PKPbc**	**12 00 12.8**	**-1.7**
DEL	**Delary**	**152.16**	**346**	*i* P		**PKPbc**	**12 00 14.1**	**-1.0**
LUBAR	**Lubar, Ukraine**	**152.29**	**324**	PKP		**PKPdf**	**12 00 10.1**	**+1.3**
RNPP8	**Varash**	**152.33**	**328**	PKP		**PKPdf**	**12 00 10.1**	**+1.3**
RNPP8				PKP		**pPKPdf**	**12 00 10.7**	**-2.2**
RNPP1	**Kostyukhnivka**	**152.36**	**328**	PKP		**PKPdf**	**12 00 10.2**	**+1.3**
RNPP5	**Staryi Chortor**	**152.38**	**327**	PKP		**PKPdf**	**12 00 10.5**	**+1.6**
RNPP5				PKP		**pPKPdf**	**12 00 10.8**	**-2.2**
BRTR	**Keskin Array B**	**152.67**	**300**	PKPbc		**PKPbc**	**12 00 15.8**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=73,slow=3.0,SNR=7.5							
BR104	**Keskin Array S**	**152.67**	**300**	PKP		**PKPdf**	**12 00 11.3**	**+1.4**
BR106	**Keskin Array S**	**152.69**	**300**	PKP		**PKPdf**	**12 00 11.3**	**+1.4**
BJUU	**Bjuv**	**152.70**	**347**	*i* P		**PKPbc**	**12 00 15.1**	**-1.2**
BSD	**Bornholm Skovb**	**153.18**	**344**	*i* P		**PKPbc**	**12 00 16.6**	**-0.8**
EKA	**Eskdalemuir Ar**	**154.17**	**7**	PKPab		**PKPab**	**12 00 32.2**	**-1.1**
	comp=Z,5.4nm,0.7s,baz=333,slow=2.9,SNR=8.2							
LANS	**Lipetska Anna**	**156.75**	**331**	*e*PKP		**PKPab**	**12 00 44.3**	**-0.3**
CHVC	**Chvalec**	**156.87**	**338**	*e*PKPAB		**PKPab**	**12 00 46.6**	**+1.6**
DPC	**Dobruska-Polom**	**156.98**	**337**	*e*PKPAB		**PKPab**	**12 00 46.7**	**+1.2**
MORC	**Moravsky Berou**	**157.02**	**334**	*e*PKP		**PKPab**	**12 00 46.3**	**+0.6**
CLL	**Collm**	**157.13**	**343**	*i* PKPab		**PKPab**	**12 00 46.7**	**+0.7**
	comp=Z,9.0nm,0.9s							
BRG	**Berggiesshubel**	**157.27**	**341**	*i* PKPab		**PKPab**	**12 00 48.2**	**+1.5**
BRG				Amp			12 00 48.4	
	comp=Z,8.1nm,0.7s							
JAVC	**Velka Javorina**	**157.71**	**333**	*e*PKP		**PKPab**	**12 00 50.0**	**+1.2**
VRAC	**Vranov**	**157.76**	**335**	*e*PKP		**PKPab**	**12 00 49.2**	**+0.3**
KRUC	**Moravsky**	**158.04**	**335**	*e*PKP		**PKPab**	**12 00 50.7**	**+0.6**
KHC	**Kasperske Hory**	**158.93**	**339**	*e*PKPAB		**PKPab**	**12 00 53.5**	**-0.5**
GERES	**GERESS Array B**	**159.14**	**339**	PKPab		**PKPab**	**12 00 55.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=20,slow=4.3,SNR=8.6							
CONA	**Conrad Observa**	**159.17**	**334**	*e*PKP		**PKPab**	**12 00 56.8**	**+1.6**
	comp=Z,3.8nm,0.9s							
LESA	**Schwarzleotal**	**160.72**	**339**	*e*PKP		**PKPab**	**12 01 02.7**	**+0.8**
	comp=Z,4.3nm,0.9s							
KBA	**Koelnbreinsper**	**160.80**	**337**	*e*PKP		**PKPab**	**12 01 03.0**	**+0.7**
	comp=Z,4.5nm,0.6s							
MYKA	**Terra Mystica**	**161.09**	**336**	*e*PKP		**PKPab**	**12 01 04.1**	**+0.7**
	comp=Z,4.1nm,0.6s							
WATA	**Walderalm**	**161.13**	**341**	*i* PKP		**PKPab**	**12 01 05.0**	**+1.3**
	comp=Z,5.6nm,0.6s							
WTTA	**Wattenberg**	**161.18**	**340**	*i* PKP		**PKPab**	**12 01 04.7**	**+0.7**
	comp=Z,8.1nm,0.8s							
RETA	**Reutte**	**161.22**	**342**	*i* PKP		**PKPab**	**12 01 05.5**	**+1.5**
	comp=Z,8.9nm,1.1s							
MOTA	**Moosalm**	**161.26**	**341**	*e*PKP		**PKPab**	**12 01 05.5**	**+1.2**
	comp=Z,13nm,1.2s							
SQTA	**Sankt Quirin**	**161.34**	**341**	*i* PKP		**PKPab**	**12 01 05.8**	**+1.2**
	comp=Z,7.4nm,1.0s							
ABTA	**Abfaltersbach**	**161.37**	**338**	*i* PKP		**PKPab**	**12 01 05.6**	**+0.8**
	comp=Z,2.6nm,0.5s							
DAVA	**Damuels**	**161.63**	**344**	*e*PKP		**PKPab**	**12 01 07.5**	**+1.6**
	comp=Z,7.7nm,0.9s							
FETA	**Feichten**	**161.66**	**342**	*i* PKP		**PKPab**	**12 01 07.6**	**+1.5**
	comp=Z,6.7nm,1.1s							
TORD	**Torodi Ar. Bea**	**163.40**	**177**	PKP		**PKPdf**	**12 00 23.6**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=166,slow=1.2,SNR=3.6							
TORD				PKPab		**PKPab**	**12 01 15.5**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=185,slow=3.7,SNR=9.1							

*PRE **03** 11:41:18.7±1.2,23.79S×27.58E,h0km,ML2.0,Suspected explosion*
*BGSI **03** 11:41:23.2±1.1,22.26S×25.01E,h0km±12km,ML2.0, Presumed earthquake*

ISC 03 11:41:17.8±1.0,23.74S±0.04×27.54E±0.04,h0km,n13,
σ1s71/21,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LEPH	**Lephalale, Lim**	**0.27**	**117**	*e*P		**Pg**	**11 41 23.6**	**-0.7**
LEPH				*e*S		**Sg**	**11 41 26.1**	**-0.4**
LEPH				IAML			11 41 34.1	
	comp=Z,161nm,1.1s							
LPHEP	**Lephephe**	**1.58**	**283**	*i* P		**Pn**	**11 41 47.6**	**+0.3**
LPHEP				*i* S		**Sn**	**11 42 05.1**	**-3.4**
LPHEP				IAML			11 42 11.5	
	comp=N,49nm,0.3s							
HRAO	**HartRAO**	**2.15**	**176**	*e*P		**Pb**	**11 41 56.5**	**-1.2**
HRAO				*e*S		**Sn**	**11 42 22.7**	**+0.1**
HRAO				IAML			11 42 29.2	
	comp=Z,16nm,0.6s							
LBTB	**Lobatse**	**2.18**	**234**	*e*P		**Pn**	**11 41 56.8**	**+1.4**
LBTB				*e*S		**Sn**	**11 42 25.5**	**+2.3**
LBTB				IAML			11 42 30.7	
	comp=Z,13nm,0.3s							
MUSN	**Musina, Limpop**	**2.58**	**57**	*e*P		**Pn**	**11 42 01.9**	**+1.0**
MUSN				*e*S		**Sn**	**11 42 34.2**	**+1.2**
MUSN				IAML			11 42 45.3	
	comp=Z,9.6nm,0.3s							
BROLN	**Tlhalogang**	**2.63**	**356**	*i* P		**Pn**	**11 42 02.8**	**+1.2**
BROLN				*i* S		**Sn**	**11 42 31.5**	**-2.9**
BROLN				IAML			11 42 40.1	
	comp=E,14nm,0.2s							
KDWAN	**Kaudwane**	**2.66**	**277**	*i* P		Pn	11 41 43.6	-18
PILG	**Pilgrimsrest,**	**3.13**	**113**	*e*P		**Pn**	**11 42 09.6**	**+1.0**
PILG				*e*S		**Sn**	**11 42 45.9**	**-0.9**
PILG				IAML			11 43 08.5	
	comp=Z,7.1nm,0.4s							
CRLN	**Carolina, Mapu**	**3.19**	**135**	*e*P		**Pn**	**11 42 10.7**	**+1.3**
CRLN				*e*S		**Sn**	**11 42 46.9**	**-1.4**
CRLN				IAML			11 42 58.4	
	comp=Z,2.9nm,0.1s							
MAKGR	**Makgori**	**3.23**	**230**	*i* P		**Pb**	**11 42 17.0**	**+0.8**
SKOMA	**Sekoma**	**3.38**	**256**	*i* P		Pn	11 42 03.3	-8.7
SNKL	**Senekal, Frees**	**4.53**	**177**	*e*P		**Pn**	**11 42 28.0**	**+0.2**
SNKL				*e*S		**Sn**	**11 43 20.2**	**-1.1**
SNKL				IAML			11 43 45.3	
	comp=Z,15nm,0.8s							
PMBG	**Pietermaritzbu**	**6.34**	**156**	*e*P		**Pn**	**11 42 53.1**	**+0.5**
PMBG				*e*S		**Sn**	**11 44 02.2**	**-3.5**
PMBG				IAML			11 44 28.2	
	comp=Z,3.3nm,0.9s							

*IDC **03** 11:51:40.0±2.1,38.03N×135.15E,h362km±73km,mb2.9/3, mbtmp3.5/4,Error ellipse: s-maj=214.8km s-min=26.0km az=60.0*
*JMA **03** 11:51:39.3±0.4,38°N±1.1×13.5°E±1.1°,h383km±3km,MV3.1/49, SEA OF JAPAN*

ISC 03 11:51:40.6±1.1,37.9N±0.1×135.6E±0.1,h400km,n16,
σ2s08/18,mb3.3/3,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHG	**Hegura jima**	**1.08**	**91**	P		**Pn**	**11 52 30.0**	**-1.9**
JJH	**Hakui**	**1.36**	**134**	*e*P		**Pn**	**11 52 31.9**	**-1.3**
JKG	**Kaga**	**1.71**	**159**	*e*P		**Pn**	**11 52 33.6**	**-1.4**
JTT	**Ttatey**	**1.90**	**131**	P		**Pn**	**11 52 35.1**	**-0.9**
JKY	**Yasaka**	**2.27**	**189**	P		**Pn**	**11 52 36.2**	**-2.2**
MAT	**Matsushiro**	**2.50**	**121**	*e*P		**Pn**	**11 52 39.2**	**-0.7**
MJAR	**Matsushiro Arr**	**2.50**	**121**	P		**Pn**	**11 52 39.4**	**-0.6**
	5.8nm,0.6s,baz=306,slow=8.4,SNR=21							
JNG	**Nsakai**	**2.50**	**125**	*e*P		**Pn**	**11 52 39.8**	**-0.3**
JWT	**Wachi**	**2.59**	**183**	P		**Pn**	**11 52 39.6**	**-1.1**
JWT				*e*S		**S**	**11 53 26.5**	**-2.7**
JMM	**Marumori**	**4.14**	**88**	P		**Pn**	**11 52 54.1**	**+0.1**
JHO	**Hitachi**	**4.19**	**106**	*i* P		**Pn**	**11 52 53.5**	**-1.0**
JHO				S		**S**	**11 53 51.0**	**-3.5**
JMK	**Ichinoseki**	**4.58**	**75**	P		**Pn**	**11 52 58.0**	**-0.2**
JKB	**Kayabe**	**5.81**	**45**	*e*P		**Pn**	**11 53 10.1**	**-0.9**
KURBB	**Kurchatov Arra**	**41.79**	**307**	P		**P**	**11 58 52.1**	**-0.6**
	0.5nm,0.3s,baz=94,slow=7.5,SNR=2.9							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**57.52**	**181**	P		**P**	**12 00 53.5**	**+3.5**
	0.5nm,0.4s,baz=357,slow=7.6,SNR=12							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**61.23**	**182**	P		**P**	**12 01 18.9**	**+3.9**
	0.2nm,0.6s,baz=0.9,slow=6.1,SNR=4.7							
	0.2nm,0.6s							

*IDC **03** 11:55:25.2±3.0,13.40S×66.94E,h0km,mb3.7/6, mbtmp3.7/6,MS3.5/3,Error ellipse: s-maj=103.3km s-min=30.1km az=58.0*

ISC 03 11:55:32.9±3.2,12.7S±0.4×68.2E±0.7,h10km,n18,
σ1s08/7,mb4.0/6,MS3.4/3,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H08S1	**Diego Carcia H**	**6.60**	**41**	T		T	12 06 42.3	
	baz=224,slow=75,SNR=43							
H08S2	**Diego Garcia H**	**6.61**	**41**	T		T	12 06 52.6	
	baz=224,slow=75,SNR=28							
H08S3	**Diego Garcia H**	**6.62**	**41**	T		T	12 06 57.0	
	baz=224,slow=75,SNR=54							
H04N2	**CROZET ISLANDS**	**36.10**	**199**	T		T	12 38 11.6	
	baz=27,slow=75,SNR=7.0							
H04N1	**CROZET ISLANDS**	**36.10**	**199**	T		T	12 38 15.1	
	baz=27,slow=75,SNR=6.3							
H04N3	**CROZET ISLANDS**	**36.11**	**199**	T		T	12 38 13.4	
	baz=27,slow=75,SNR=6.6							
LSZ	**Lusaka**	**38.82**	**261**	LR		LR	12 15 37.4	
	comp=Z,48nm,18.5s,baz=156,slow=32							
H01W3	**Cape Leeuwin H**	**47.01**	**126**	T		T	12 55 01.8	
	baz=283,slow=75,SNR=12							
H01W2	**Cape Leeuwin H**	**47.01**	**126**	T		T	12 55 02.4	
	baz=283,slow=75,SNR=15							
H01W1	**Cape Leeuwin H**	**47.03**	**126**	T		T	12 55 06.0	
	baz=283,slow=75,SNR=14							
FITZ	**Fitzroy Crossi**	**55.51**	**103**	LR		LR	12 26 53.7	
	comp=Z,30nm,19.2s,baz=312,slow=33							
MKAR	**Makanchi Array**	**60.58**	**11**	P		**P**	**12 05 41.8**	**-1.8**
	0.1nm,0.5s,baz=194,slow=5.3,SNR=1.7							
	0.1nm,0.5s							
ASAR	**Alice Springs**	**62.96**	**110**	P		**P**	**12 06 00.4**	**+0.1**
	1.3nm,1.1s,baz=270,slow=6.1,SNR=6.3							
	1.3nm,1.1s							
WRA	**Warramunga Arr**	**63.60**	**106**	P		**P**	**12 06 04.3**	**-0.2**
	1.2nm,0.9s,baz=258,slow=6.6,SNR=5.5							
	1.2nm,0.9s							
KURBB	**Kurchatov Arra**

KAPI	**Kappang**	**5.66**	**203**	P	**Pn**	**12 19 42.0**	**-0.1**
	11nm,0.4s,baz=28,slow=10,SNR=3.8						
FITZ	**Fitzroy Crossi**	**18.54**	**169**	P	**P**	**12 22 20.6**	**-0.2**
	2.8nm,0.5s,baz=0.5,slow=7.9,SNR=20						
WRA	**Warramunga Arr**	**23.39**	**150**	P	**P**	**12 23 10.2**	**+0.1**
	0.6nm,0.5s,baz=326,slow=11,SNR=22						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.40**	**155**	P	**P**	**12 23 37.5**	**+0.3**
	0.2nm,0.6s,baz=344,slow=15,SNR=8.1						
ASAR				PcP	**PcP**	**12 26 56.2**	**-1.2**
	0.2nm,0.4s,baz=344,slow=2.2,SNR=5.3						
	0.2nm,0.6s						
SONM	**Songino Array**	**49.34**	**346**	P	**P**	**12 26 48.1**	**+0.1**
	0.9nm,0.7s,baz=166,slow=7.3,SNR=4.7						
	0.9nm,0.7s						
KLR	**Kul'dur**	**49.55**	**8**	P	**P**	**12 26 51.0**	**+1.6**
	0.6nm,0.4s,baz=265,slow=12,SNR=2.2						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**57.91**	**329**	P	**P**	**12 27 49.8**	**-0.4**
	0.8nm,0.4s,baz=134,slow=7.8,SNR=9.8						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**62.28**	**330**	P	**P**	**12 28 18.8**	**-0.9**
	0.3nm,0.4s,baz=112,slow=5.9,SNR=4.4						
	0.3nm,0.4s						

*IDC **03** 12:25:16.3±1.0,25°.49N×141°.33E,h0km,mb3.7/6, mbtmp3.7/6,Error ellipse: s-maj=50.5km s-min=22.8km az=96.0*
*JMA **03** 12:25:24.9±0.3,25°.6N±1°.0×14°.1E±°,h8km±3km, MV3.9/5, IOTO ISLANDS REGION*
ISC 03 12:25:27.9±1.0,25°.6N±0°.1×141°.7E±0°.3,h98km,n8, σ1§81/10,mb3.5/6,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.12**	**22**	*eP*	**Pn**	**12 25 47.5**	**-2.1**
JHH2				eS	**Sn**	**12 26 03.7**	**-2.1**
CBIJ	**Chichi jima**	**1.56**	**16**	*eP*	**Pn**	**12 25 54.2**	**-0.7**
CBIJ				eS	**Sn**	**12 26 14.7**	**-0.5**
WRA	**Warramunga Arr**	**45.82**	**190**	P	**P**	**12 33 38.5**	**-1.7**
	1.6nm,0.4s,baz=8.3,slow=8.6,SNR=24						
	1.6nm,0.4s						
ASAR	**Alice Springs**	**49.55**	**189**	P	**P**	**12 34 08.3**	**-0.7**
	0.3nm,0.8s,baz=2.4,slow=7.4,SNR=1.8						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**53.79**	**315**	P	**P**	**12 34 39.7**	**-0.5**
	0.2nm,0.5s,baz=86,slow=8.3,SNR=1.4						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**59.23**	**28**	P	**P**	**12 35 21.2**	**+2.6**
	0.4nm,0.7s,baz=265,slow=6.0,SNR=4.9						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**73.67**	**28**	P	**P**	**12 36 52.3**	**+1.7**
	0.3nm,0.5s,baz=293,slow=6.3,SNR=2.2						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**79.10**	**334**	P	**P**	**12 37 21.9**	**+0.6**
	3.9nm,1.1s,baz=54,slow=6.4,SNR=8.1						
	3.9nm,1.1s						

*JMA **03** 12:30:08.1±0.3,25°.6N±0°.7×14°.1E±°,h9km±3km,MV4.1/5, IOTO ISLANDS REGION*
*IDC **03** 12:30:09.7±2.1,25°.40N×141°.34E,h76km±19km,mb3.6/9, mbtmp3.9/9,Error ellipse: s-maj=36.4km s-min=14.9km az=99.0*
ISC 03 12:30:05.3±0.8,25°.30N±0°.09×141°.5E±0°.2,h35km,n16, σ1§33/12,mb3.9/9,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.45**	**24**	*eP*	Pn	12 30 30.9	+1.8
JHH2				eS	**Sn**	**12 30 47.3**	**+0.3**
CBIJ	**Chichi jima**	**1.89**	**18**	*eP*	Pn	12 30 37.3	+2.2
CBIJ				eS	**Sn**	**12 30 58.1**	**+0.4**
JCJ	**Chichijima**	**1.89**	**18**	P	Pn	12 30 38.6	+3.5
	176nm,0.5s,baz=166,slow=4.7,SNR=29						
JCJ				S	Sn	12 31 02.8	+5.1
	325nm,0.3s,baz=156,slow=22,SNR=18						
JCJ				LR	LR	12 31 28.5	
	comp=Z,80nm,20.1s,baz=162,slow=42						
BSO3	**Boso 3**	**9.51**	**355**	*eS*	**Sn**	**12 34 07.8**	**+2.7**
H11S3	**WAKE ISLAND Hy**	**24.28**	**101**	T	T	13 00 55.2	
	baz=290						
H11S1	**WAKE ISLAND Hy**	**24.29**	**101**	T	T	13 00 58.2	
	baz=290						
H11S2	**WAKE ISLAND Hy**	**24.30**	**101**	T	T	13 00 57.0	
	baz=290						
WRA	**Warramunga Arr**	**45.51**	**189**	P	**P**	**12 38 22.2**	**+0.6**
	3.5nm,0.4s,baz=8.6,slow=8.6,SNR=48						
	3.5nm,0.4s						
ASAR	**Alice Springs**	**49.23**	**189**	P	**P**	**12 38 50.4**	**-0.1**
	0.2nm,0.5s,baz=356,slow=7.3,SNR=8.0						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**53.88**	**315**	P	**P**	**12 39 24.3**	**-0.7**
	0.3nm,0.5s,baz=91,slow=6.6,SNR=2.8						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**56.85**	**180**	P	**P**	**12 39 48.0**	**+1.5**
	2.3nm,0.9s,baz=3.6,slow=16,SNR=3.0						
	2.3nm,0.9s						
ILAR	**Eielson Array**	**59.57**	**28**	P	**P**	**12 40 04.3**	**-0.8**
	0.8nm,0.7s,baz=261,slow=5.6,SNR=10						
	0.8nm,0.7s						
YKA	**Yellowknife Ar**	**74.00**	**28**	P	**P**	**12 41 36.5**	**-0.5**
	0.7nm,0.7s,baz=288,slow=5.4,SNR=2.9						
	0.7nm,0.7s						
ARCES	**ARCESS Array B**	**75.04**	**341**	P	**P**	**12 41 42.6**	**-0.4**
	1.7nm,1.0s,baz=84,slow=8.4,SNR=1.4						
	1.7nm,1.0s						
FINES	**FINESS Array B**	**79.29**	**334**	P	**P**	**12 42 05.0**	**-2.0**
	0.9nm,0.4s,baz=58,slow=4.2,SNR=15						
	0.9nm,0.4s						
NVAR	**Mina Array Bea**	**82.10**	**51**	P	**P**	**12 42 23.3**	**+0.6**
	0.6nm,0.7s,baz=288,slow=4.7,SNR=4.7						
	0.6nm,0.7s						

*IDC **03** 12:38:28.7±2.0,4°.85S×153°.66E,h0km,mb3.9/6, mbtmp4.0/7,ML1.5/1,MS3.1/6,Error ellipse: s-maj=44.7km s-min=27.3km az=18.0*
ISC 03 12:38:37.0±1.5,5°.1S±0°.2×153°.5E±0°.1,h56km,n15, σ0§94/9,mb4.0/6,MS3.2/5,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.67**	**297**	LR	LR	12 39 11.8	
	comp=Z,6.4nm,19.6s,baz=3.1,slow=25						
PMG	**Port Moresby**	**7.64**	**235**	Pn	**Pn**	**12 40 24.4**	**-1.4**
	0.3nm,0.3s,baz=107,slow=23,SNR=3.8						
PMG				Sn	**Sn**	**12 41 51.3**	**+0.3**
	4.0nm,0.3s,baz=341,slow=21,SNR=6.8						
PMG				LR	LR	12 43 40.5	
	comp=Z,37nm,19.2s,baz=73,slow=40						
	7.6nm,0.8s						
DZM	**Mont Dzumac**	**21.03**	**145**	P	**P**	**12 43 15.9**	**-0.4**
	3.4nm,0.5s,baz=263,slow=6.8,SNR=8.3						
	3.4nm,0.5s						
SIJI	**Sorong**	**22.61**	**280**	P	**P**	**12 43 32.9**	**-0.4**
	5.5nm,0.7s,baz=111,slow=11,SNR=3.9						
SIJI				LR	LR	12 53 16.6	
	comp=Z,30nm,19.2s,baz=107,slow=39						
	5.5nm,0.7s						
WRA	**Warramunga Arr**	**23.81**	**230**	P	**P**	**12 43 46.2**	**+1.2**
	1.0nm,0.6s,baz=54,slow=9.9,SNR=11						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**26.45**	**224**	P	**P**	**12 44 09.7**	**+0.8**
	0.2nm,0.3s,baz=53,slow=9.1,SNR=7.2						
ASAR				LR	LR	12 54 13.2	
	comp=Z,63nm,20.0s,baz=340,slow=35						
	0.2nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**26.77**	**29**	T	T	13 12 18.5	
	baz=209,slow=76,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**26.78**	**29**	T	T	13 12 15.9	
	baz=209,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**26.79**	**29**	T	T	13 12 15.1	
	baz=209,slow=76,SNR=3.4						
BATI	**Baumata**	**30.02**	**258**	LR	LR	12 57 47.4	
	comp=Z,86nm,18.4s,baz=156,slow=38						
FITZ	**Fitzroy Crossi**	**30.16**	**242**	P	**P**	**12 44 43.0**	**+0.9**
	1.2nm,0.4s,baz=45,slow=8.2,SNR=13						
	1.2nm,0.4s						
LEM	**Lembang**	**45.68**	**265**	LR	LR	13 09 17.5	
	comp=Z,55nm,18.3s,baz=202,slow=40						
CMAR	**Chiang Mai Arr**	**58.64**	**295**	LR	LR	13 13 56.8	
	comp=Z,10nm,18.3s,baz=190,slow=36						
QSPA	**South Pole Qui**	**84.89**	**180**	P	**P**	**12 51 05.9**	**+0.1**
	1.4nm,0.6s,baz=286,slow=1.1,SNR=12						
	1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.07**	**288**	PKPbc	**PKPbc**	**12 58 24.6**	**-0.3**
	0.4nm,0.3s,baz=58,slow=2.6,SNR=3.0						

*IDC **03** 12:41:51.8±1.2,3°.13S×139°.23E,h0km,mb3.6/3, mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=29.9km s-min=13.2km az=152.0*
ISC 03 12:41:56.6±1.0,3°.4S±0°.1×139°.3E±0°.2,h37km,n6,σ3§64/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.64**	**56**	Pg	**Pn**	**12 42 22.7**	**-0.3**
	45nm,0.3s,baz=213,slow=11,SNR=245						
JAY				Lg	Lg	12 42 40.9	
	47nm,0.3s,baz=295,slow=23,SNR=12						
WRA	**Warramunga Arr**	**17.12**	**196**	P	**Pn**	**12 45 54.6**	**+1.5**
	0.3nm,0.3s,baz=18,slow=13,SNR=5.5						
WRA				S	**Sn**	**12 48 56.6**	**-5.9**
	0.9nm,0.8s,baz=6.3,slow=24,SNR=2.6						
	1.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.81**	**222**	P	**P**	**12 46 26.2**	**+2.1**
	2.2nm,1.1s,baz=37,slow=12,SNR=1.6						
ASAR	**Alice Springs**	**20.79**	**194**	P	**P**	**12 46 37.7**	**+3.0**
	1.4nm,0.8s,baz=23,slow=9.6,SNR=8.1						
	1.4nm,0.8s						
MKAR	**Makanchi Array**	**70.74**	**322**	P	**P**	**12 53 08.5**	**-0.6**
	0.4nm,0.6s,baz=112,slow=7.0,SNR=4.0						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**80.26**	**325**	P	**P**	**12 54 02.1**	**-1.4**
	0.3nm,0.4s,baz=117,slow=8.9,SNR=2.9						
	0.3nm,0.4s						

*IDC **03** 12:43:47.8±3.1,6°.87S×129°.54E,h53km±35km,mb3.5/2, mbtmp3.7/6,ML3.6/4,Error ellipse: s-maj=57.9km s-min=22.3km az=83.0*
ISC 03 12:43:46.7±0.9,6°.97S±0°.06×129°.8E±0°.2,h50km,n6, σ3§73/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.24**	**14**	P	**Pn**	**12 45 17.4**	**+1.0**
	1.0nm,0.3s,baz=312,slow=23,SNR=2.6						
SIJI				S	**Sn**	**12 46 22.9**	**-3.6**
	7.5nm,0.3s,baz=318,slow=23,SNR=8.6						
	3.1nm,0.2s						
FITZ	**Fitzroy Crossi**	**11.77**	**200**	P	**Pn**	**12 46 33.8**	**+1.8**
	0.3nm,0.3s,baz=28,slow=13,SNR=8.6						
FITZ				S	**Sn**	**12 48 38.7**	**-3.3**
	3.1nm,0.3s,baz=146,slow=22,SNR=8.6						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**13.64**	**161**	P	**Pn**	**12 46 59.5**	**+1.9**
	0.4nm,0.3s,baz=340,slow=13,SNR=5.2						
WRA				S	Sn	12 49 22.3	-5.4
	1.1nm,0.4s,baz=345,slow=21,SNR=8.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**17.07**	**167**	P	**Pn**	**12 47 45.0**	**+2.9**
	0.3nm,0.3s,baz=344,slow=10.0,SNR=7.8						
ASAR				S	**Sn**	**12 50 45.1**	**-6.0**
	0.4nm,0.4s,baz=346,slow=26,SNR=1.5						
	0.8nm,0.4s						
STKA	**Stephens Creek**	**27.13**	**158**	P	**P**	**12 49 27.9**	**+2.7**
	0.7nm,0.3s,baz=349,slow=10,SNR=4.4						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**68.07**	**327**	P	**P**	**12 54 40.6**	**-0.7**
	0.3nm,0.5s,baz=129,slow=5.9,SNR=3.1						
	0.3nm,0.5s						

*IDC **03** 12:44:02.4±2.4,37°.14N×139°.88E,h0km,mb3.4/3, mbtmp3.4/5,ML3.6/2,Error ellipse: s-maj=45.2km s-min=24.7km az=55.0*
*NIED **03** 12:44:07.2,36°.93N×139°.68E,h7km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.32; Mθθ-0.61; Mφφ0.28; Mrθ-1.13; Mθφ-2.48; Mφr-1.24; Fault plane solution: Ms2.91000×10¹⁴ NP1:φs98.00000°, δ67.00000°, λ-169.00000°. NP2:φs4.00000°, δ79.00000°, λ-23.00000°.*
*JMA **03** 12:44:07.2±0.0,36°.9N±0°.2×139°.7E±0°.2,h7km,MV3.7/20, NORTHERN TOCHIGI PREF*
JMA Felt II J1 at NORTHERN TOCHIGI PREF .
ISC 03 12:44:06.5±1.2,36°.95N±0°.04×139°.72E±0°.04,h18km±7km, n19,σ1§10/18,mb3.5/3,4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSB	**Shiboa**	**0.16**	**83**	P	**Pg**	**12 44 11.6**	**+0.7**
JKT	**Katashina**	**0.42**	**245**	P	**Pg**	**12 44 14.7**	**-0.5**
JAG	**Ashikaga**	**0.56**	**202**	*iP*	**Pg**	**12 44 17.3**	**-0.5**
JUON	**Uonuma**	**0.59**	**296**	||P	**Pg**	**12 44 18.2**	**0.0**
JUON				||S	**Sg**	**12 44 25.7**	**-0.5**
JOTO	**OTAMA OYAMA**	**0.78**	**39**	*iP*	**Pn**	**12 44 22.8**	**0.0**
JOTO				S	**Sn**	**12 44 33.6**	**-0.4**
JNS	**Sasagawa**	**0.93**	**340**	*i* P	**Pn**	**12 44 24.7**	**0.0**
JIZZ	**Izumozaki**	**0.99**	**306**	||P	**Pn**	**12 44 26.9**	**+1.3**
JIZZ				||S	**Sn**	**12 44 41.5**	**+2.3**
MJAR	**Matsushiro Arr**	**1.28**	**252**	Pn	**Pn**	**12 44 29.9**	**+0.4**
	11nm,0.3s,baz=69,slow=18,SNR=349						
MJAR				Sn	**Sn**	**12 44 47.8**	**+1.5**
	4.2nm,0.3s,baz=79,slow=32,SNR=5.9						
JHJ	**Hachijo jima 2**	**3.82**	**179**	Pn	**Pn**	**12 45 05.4**	**+0.9**
	16nm,0.3s,baz=85,slow=21,SNR=29						
JHJ				Sn	**Sn**	**12 45 49.2**	**+0.2**
	14nm,0.3s,baz=50,slow=23,SNR=6.9						
	35nm,0.3s						
KSRS	**Korea Array**	**9.43**	**277**	Pn	**Pn**	**12 46 22.0**	**+0.6**
	0.4nm,0.3s,baz=89,slow=14,SNR=4.7						
	0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.28**	**118**	T	T	13 20 06.6	
	baz=312,slow=74,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**29.29**	**118**	T	T	13 20 11.9	
	baz=312,slow=74,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**29.30**	**118**	T	T	13 20 07.8	
	baz=312,slow=74,SNR=3.7						
H11S1	**WAKE ISLAND Hy**	**29.97**	**120**	T	T	13 21 01.8	
	baz=314,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.97**	**121**	T	T	13 21 02.3	
	baz=314,slow=75,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**29.98**	**120**	T	T	13 21 01.3	
	baz=314,slow=75,SNR=7.7						
KURBB	**Kurchatov Arra**	**44.98**	**308**	P	**P**	**12 52 18.4**	**-2.2**
	0.3nm,0.5s,baz=83,slow=7.3,SNR=2.5						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**56.81**	**186**	P	**P**	**12 53 50.0**	**+0.2**
	0.2nm,0.5s,baz=2.5,slow=7.3,SNR=1.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**60.54**	**186**	P	**P**	**12 54 16.1**	**+0.3**
	0.5nm,0.9s,baz=356,slow=7.4,SNR=1.9						
	0.5nm,0.9s						

*SNET **03** 13:05:18.5±1.1,12°.60N×88°.25W,h45km,ML3.9, Presumed earthquake*
*CATAC **03** 13:05:18.3±0.2,13°.N±2°.×8°.8W±°,h32km,M4.0/34, MLv4.0/34,Error ellipse: s-maj=5.2km s-min=1.4km az=30.2,confirmed*
*GCG **03** 13:05:20.6±0.6,12°.73N×88°.51W,h18km±4km,MD4.3, Presumed earthquake*
ISC 03 13:05:17.7±1.5,12°.54N±0°.05×88°.28W±0°.03,h30km±12km, n68,σ0§58/104,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**0.69**	**19**	*eP*	**Pn**	**13 05 31.4**	**0.0**
INTP				eS	**Sn**	**13 05 41.1**	**-0.1**
CNCH	**Conchagua**	**0.85**	**31**	P	**Pn**	**13 05 33.4**	**-0.4**
CNCH				S	**Sb**	**13 05 45.8**	**+0.6**
CNCH	**Conchagua**	**0.85**	**31**	*eP*	**Pb**	**13 05 33.8**	**-0.2**
CNCH				eS	**Sb**	**13 05 46.0**	**+0.8**
LCND	**La Caada**	**0.85**	**27**	P	**Pn**	**13 05 33.5**	**-0.2**
LCND	**La Caada**	**0.85**	**27**	*eP*	**Pn**	**13 05 33.5**	**-0.2**
LCND				*eP*	**Pn**	**13 05 33.6**	**-0.2**
RANC	**El Ranchito**	**0.89**	**360**	P	**Pb**	**13 05 34.7**	**0.0**
RANC	**El Ranchito**	**0.89**	**360**	*eP*	**Pb**	**13 05 34.5**	**-0.2**
RANC				*eS*	**Sb**	**13 05 46.6**	**+0.3**
PACA	**Pacayal**	**0.92**	**358**	P	**Pb**	**13 05 35.0**	**-0.3**
PACA	**Pacayal**	**0.92**	**358**	*eP*	**Pb**	**13 05 35.0**	**-0.3**
PACA				*eS*	**Sb**	**13 05 47.4**	**+0.1**
TECA	**Tecapa**	**0.97**	**347**	*eP*	**Pn**	**13 05 35.6**	**+0.1**
TECO	**Alcaldia de Te**	**1.10**	**334**	P	**Pn**	**13 05 37.4**	**+0.3**
TECO	**Alcaldia de Te**	**1.10**	**334**	*eP*	**Pn**	**13 05 37.1**	**0.0**
TECO				*eS*	**Sn**	**13 05 50.8**	**-0.6**
PQSS	**Presa 15 de Se**	**1.11**	**346**	P	**Pb**	**13 05 38.0**	**-0.3**
PQSS				S	**Sb**	**13 05 52.4**	**0.0**

COEG	**Centro de Oper**	**1.22**	**332**	P	**Pn**	**13 05 39.1**	**+0.3**
COEG				S	**Sn**	**13 05 53.5**	**-0.8**
SJTE	**Alcalda de S**	**1.28**	**327**	*eP*	**Pn**	**13 05 39.9**	**+0.2**
SJTE				*eS*	**Sn**	**13 05 55.7**	**-0.1**
LFRS	**El Faro**	**1.32**	**325**	*eP*	**Pn**	**13 05 40.4**	**+0.2**
PAVA	**Las Pavas**	**1.33**	**331**	P	**Pn**	**13 05 40.7**	**+0.3**
PAVA	**Las Pavas**	**1.33**	**331**	*eP*	**Pn**	**13 05 41.0**	**+0.6**
PAVA				*eS*	**Sn**	**13 05 57.6**	**+0.5**
LALI	**Alcalda de L**	**1.38**	**313**	S	**Sn**	**13 05 58.1**	**-0.1**
LALI	**Alcalda de L**	**1.38**	**313**	*i* P	**Pn**	**13 05 39.8**	**-1.1**
LOMA	**Loma Larga**	**1.40**	**322**	P	**Pn**	**13 05 41.5**	**+0.2**
LOMA	**Loma Larga**	**1.40**	**322**	*eP*	**Pn**	**13 05 41.6**	**+0.2**
LOMA				*eS*	**Sn**	**13 05 58.8**	**0.0**
LBRS	**Las Brisas**	**1.40**	**328**	*eP*	**Pn**	**13 05 42.2**	**+0.8**
LFU	**La Fuente**	**1.45**	**326**	*eP*	**Pn**	**13 05 42.5**	**+0.6**
LFU				*eS*	**Sn**	**13 06 00.3**	**+0.3**
IGN	**Direccin Gen**	**1.45**	**324**	S	**Sn**	**13 05 59.9**	**-0.1**
SEMO	**Seminario San**	**1.48**	**322**	P	**Pn**	**13 05 42.8**	**+0.5**
SEMO				S	**Sn**	**13 06 01.2**	**+0.5**
PLRN	**Geotermica Pol**	**1.48**	**88**	P	**Pn**	**13 05 42.1**	**-0.2**
UEES	**Universidad Ev**	**1.49**	**322**	P	**Pn**	**13 05 43.6**	**+1.0**
UEES				S	**Sn**	**13 06 01.6**	**+0.4**
P5NO	**Presa 5 de nov**	**1.51**	**342**	P	**Pn**	**13 05 43.1**	**+0.4**
P5NO				S	**Sn**	**13 06 01.6**	**+0.2**
BOQS	**Boqueron**	**1.53**	**321**	*eP*	**Pn**	**13 05 44.1**	**+0.8**
BOQS				*eS*	**Sn**	**13 06 02.6**	**+0.3**
PMON	**Piamonte**	**1.54**	**319**	P	**Pn**	**13 05 43.8**	**+0.6**
PMON				S	**Sn**	**13 06 03.2**	**+1.0**
PMON	**Piamonte**	**1.54**	**319**	*eP*	**Pn**	**13 05 43.6**	**+0.4**
PMON				*eS*	**Sn**	**13 06 02.5**	**+0.2**
CNGN	**Cerro Negro**	**1.55**	**91**	P	**Pn**	**13 05 43.2**	**-0.1**
CNGN				S	**Sn**	**13 06 02.5**	**0.0**
MACN	**El Madrono**	**1.57**	**93**	P	**Pn**	**13 05 44.0**	**+0.4**
MACN				S	**Sn**	**13 06 02.9**	**-0.1**
JAYA	**Jayaque - finc**	**1.59**	**314**	P	**Pn**	**13 05 43.9**	**0.0**
JAYA	**Jayaque - finc**	**1.59**	**314**	*i* P	**Pn**	**13 05 43.6**	**-0.3**
JAYA				*i* S	**Sn**	**13 06 01.2**	**-2.4**
JAYA	**Jayaque - finc**	**1.59**	**314**	*eP*	**Pn**	**13 05 43.8**	**0.0**
JAYA				*eS*	**Sn**	**13 06 02.6**	**-0.9**
CEDA	**San Andres**	**1.66**	**319**	S	**Sn**	**13 06 05.7**	**+0.6**
MOMN	**Momotombo**	**1.71**	**94**	P	**Pn**	**13 05 45.5**	**0.0**
MOMN				S	**Sn**	**13 06 06.6**	**+0.2**
CEVE	**Cerro Verde**	**1.83**	**315**	P	**Pn**	**13 05 48.6**	**+1.3**
CEVE				S	**Sb**	**13 06 11.8**	**-1.5**
AMTN	**Mateare**	**1.83**	**99**	P	**Pn**	**13 05 47.8**	**+0.7**
AMTN				S	**Sn**	**13 06 09.7**	**+0.3**
SAPS	**Ciudad Sandino**	**1.87**	**101**	P	**Pn**	**13 05 48.2**	**+0.5**
SAPS				S	**Sn**	**13 06 10.4**	**0.0**
UNIC	**Universidad Ca**	**1.89**	**319**	S	**Sn**	**13 06 11.5**	**+0.6**
APYN	**Apoyeque**	**1.91**	**99**	P	**Pn**	**13 05 48.7**	**+0.4**
LIMN	**Finca el Limon**	**1.94**	**74**	P	**Pn**	**13 05 48.6**	**-0.1**
LIMN				S	**Sn**	**13 06 11.8**	**-0.4**
APQ2	**Apoyeque**	**1.94**	**100**	S	**Sn**	**13 06 12.1**	**0.0**
NUBE	**Las Nubes**	**1.99**	**313**	P	**Pn**	**13 05 50.3**	**+0.8**
NUBE	**Las Nubes**	**1.99**	**313**	*i* P	**Pn**	**13 05 49.9**	**+0.4**
NUBE				*i* S	**Sn**	**13 06 12.4**	**-1.1**
NUBE	**Las Nubes**	**1.99**	**313**	*eP*	**Pn**	**13 05 49.9**	**+0.4**
NUBE				*eS*	**Sn**	**13 06 13.2**	**-0.3**
ALLN	**Telcor Managua**	**2.00**	**101**	S	**Sn**	**13 06 13.7**	**+0.2**
TISN	**Laguna Tiscapa**	**2.01**	**101**	P	**Pn**	**13 05 48.7**	**-0.9**
UNAN	**Cigeo UNAN**	**2.01**	**102**	P	**Pn**	**13 05 49.9**	**+0.3**
UNAN				S	**Sn**	**13 06 13.7**	**-0.1**
MGAN	**Managua**	**2.03**	**101**	P	**Pn**	**13 05 49.2**	**-0.6**
MGAN				S	**Sn**	**13 06 14.3**	**+0.1**
OCON	**Estacion meteo**	**2.06**	**58**	P	**Pn**	**13 05 50.0**	**-0.4**
SLOZ	**Alcaldia de Sa**	**2.08**	**315**	P	**Pn**	**13 05 51.5**	**+0.9**
WILN	**Americas 2**	**2.08**	**100**	P	**Pn**	**13 05 50.8**	**+0.2**
WILN				S	**Sn**	**13 06 15.5**	**0.0**
MAS3	**Al N del Volca**	**2.12**	**104**	P	**Pn**	**13 05 51.0**	**-0.2**
MTO3	**Montecristo**	**2.12**	**331**	*i* P	**Pn**	**13 05 52.0**	**+0.6**
FAME	**Alcaldia de Sa**	**2.13**	**308**	P	**Pn**	**13 05 51.5**	**+0.2**
FAME				S	**Sn**	**13 06 16.7**	**0.0**
MASN	**Masaya**	**2.15**	**105**	P	**Pn**	**13 05 52.2**	**+0.5**
NANN	**Nandasmo**	**2.20**	**106**	S	**Sn**	**13 06 18.8**	**+0.4**
RCFN	**Al S de San Ju**	**2.25**	**64**	P	**Pn**	**13 05 51.9**	**-1.1**
RCFN				S	**Sn**	**13 06 19.2**	**-0.6**
ESQI	**Esquipulas**	**2.25**	**333**	P	**Pn**	**13 05 54.2**	**+1.1**
SARH	**Santa Rosa de**	**2.27**	**348**	*i* P	**Pn**	**13 05 54.5**	**+1.2**
RCON	**San Juan de Ri**	**2.27**	**65**	S	**Sn**	**13 06 20.5**	**0.0**
RCPN	**Sur Rio San Ju**	**2.35**	**65**	P	**Pn**	**13 05 54.5**	**+0.2**
BOAB	**BOACO BROADBAN**	**2.56**	**92**	P	**Pn**	**13 05 57.1**	**-0.1**
BOAB				S	**Sn**	**13 06 27.0**	**-0.3**
CARN	**Rivas**	**3.02**	**116**	S	**Sn**	**13 06 39.1**	**+0.5**

*IDC **03** 13:30:43.4±0.8,27°.94N×76°

HYB IAmb IAmb 13 33 22.0
comp=Z,9.7nm,0.5s
KAD Karad 10.85 192 *eP* **Pn 13 33 20.8 +0.4**
KAD *i* x x 13 33 27.9
KAD *eS* **Sn 13 35 16.6 -5.0**
KAD *i* x x 13 36 24.0
KAD IAML 13 36 31.0
comp=E,270nm,0.4s
KAD IAML 13 36 33.6
comp=N,128nm,1.6s
KSH2 Kashi 11.16 356 Pn **Pn 13 33 26.3 +1.7**
KSH2 Sn **Sn 13 35 26.8 -2.3**
KSH2 smax smax
comp=N,28nm,0.6s
KSH2 smax smax
comp=E,42nm,0.7s
BWNR Bhubaneshwar 11.46 130 *eP* **Pn 13 33 29.6 +0.9**
BWNR *eS* Sn 13 35 27.6 -8.8
BWNR *i* x Sg 13 36 46.5
VIS Vishakhapatnam 11.99 147 *eP* **Pn 13 33 38.3 +2.4**
VIS IAmb IAmb 13 33 40.8
comp=Z,24nm,1.0s
VIS *eS* Sn 13 35 40.1 -9.3
VIS *ex* **Sn 13 35 41.5 -7.8**
GAR Garm 12.14 336 Pn **Pn 13 33 36.7 -1.4**
GAR Garm 12.14 336 P **Pn 13 33 37.8 -0.2**
CHGR Chuyangaron 12.29 332 **Pn 13 33 39.1 -1.0**
CHGR Chuyangaron 12.29 332 P **Pn 13 33 39.9 -0.2**
OHH Osh 12.88 347 P **Pn 13 33 46.6 -1.6**
ASAI AK-SAY(Kyrgyzs 12.90 360 P **Pn 13 33 48.1 -0.5**
BTK Batken 12.93 340 **Pn 13 33 47.6 -1.3**
BTK Batken 12.93 340 P **Pn 13 33 47.5 -1.3**
LSA Lhasa 12.94 79 P **Pn 13 33 49.3 0.0**
WUS Wushi 13.36 9 P **Pn 13 33 54.2 -0.6**
NRN Naryn 13.42 358 **Pn 13 33 54.1 -1.6**
ARSB Arslanbob 13.62 349 **Pn 13 33 56.1 -2.1**
GUWA GUWAHATI 13.63 94 *ex* **Pn 13 33 56.6 -1.8**
TARG Taragay, Kyrgy 13.75 4 **Pn 13 33 59.1 -1.2**
TARG Taragay, Kyrgy 13.75 4 P **Pn 13 33 59.1 -1.2**
SHL Shillong 13.93 96 **Pn 13 34 00.5 -2.1**
SHL Shillong 13.93 96 *ex* **Pn 13 34 00.5 -2.1**
SHL *ex* Sn 13 36 27.6 -9.5
KDJ Kajisay 14.12 2 **Pn 13 34 04.8 -0.4**
KDJ Kajisay 14.12 2 P **Pn 13 34 04.2 -1.0**
ARK Arkit 14.27 346 P **Pn 13 34 05.4 -1.8**
BOOM Boomskoye usch 14.48 358 **Pn 13 34 07.1 -2.9**
PRZ Przheval'sk 14.54 6 P **Pn 13 34 10.4 -0.6**
AAK Ala-Archa 14.71 354 Pn **Pn 13 34 10.8 -2.4**
comp=Z,1.0nm,0.3s,baz=249,slow=7.1,SNR=7.4
AAK Sn **Sn 13 36 48.6 -7.3**
comp=Z,0.2nm,0.3s,baz=224,slow=21,SNR=1.7
AAK LR LR 13 40 29.8
comp=Z,126nm,18.2s,baz=188,slow=40
comp=Z,2.2nm,0.3s
AAK Ala-Archa 14.71 354 **Pn 13 34 12.7 -0.5**
AAK Ala-Archa 14.71 354 P **Pn 13 34 12.5 -0.7**
ANVS Anan'yevo 14.79 3 P **Pn 13 34 13.1 -1.2**
TNSS Tian-Shan 15.02 1 *eP* **Pn 13 34 16.1 -1.5**
IUG Iuzhnay 15.09 341 *eP* **Pn 13 34 16.6 -1.6**
SATY Saty 15.12 5 *eP* **Pn 13 34 17.7 -0.9**
MDOK Medeo 15.15 1 *eP* **Pn 13 34 17.8 -1.3**
UZB Uzynbulak 15.26 7 *eP* **Pn 13 34 19.2 -1.3**
SHLS Shalkode 15.32 8 *eP* **Pn 13 34 20.9 -0.5**
ZIRO ZIRO 15.35 88 *ex* **Pn 13 34 18.8 -3.0**
CHM Chimkent 15.37 340 *eP* **Pn 13 34 20.5 -1.3**
DZA Taraz 15.46 346 *eP* **Pn 13 34 21.6 -1.4**
PDGK Podgornoye 15.49 8 **Pn 13 34 21.7 -1.9**
SGDS Sogindy 15.51 355 *eP* **Pn 13 34 22.6 -1.1**
KPKS Kokpek 15.54 6 *eP* **Pn 13 34 22.7 -1.5**
KK31 Karatay Array 15.85 344 **Pn 13 34 25.4 -2.7**
KK31 IAmb IAmb 13 34 27.5
comp=Z,14nm,0.7s
KKAR Karatay Array 15.85 344 **Pn 13 34 24.4 -3.7**
KOHI KOHIMA 15.86 94 *ex* **Pn 13 34 25.9 -2.5**
TDK Taldyqorghan 17.05 5 *eP* **Pn 13 34 42.1 -1.2**
BTLS Baital 17.13 354 *eP* **Pn 13 34 43.5 -0.9**
WMQ Urumqi 18.18 27 *eP* **P 13 34 58.5 +0.9**
MAKZ Makanchi 19.27 11 P **P 13 35 09.1 -0.4**
MAKZ Makanchi 19.27 11 P **P 13 35 09.9 +0.3**
MKAR Makanchi Array 19.31 12 P **P 13 35 10.1 +0.1**
comp=Z,0.5nm,0.3s,baz=191,slow=12,SNR=20
MKAR S Sn 13 38 35.4 -12
comp=Z,2.6nm,0.9s,baz=194,slow=25,SNR=5.4
MKAR LR LR 13 42 27.4
comp=Z,24nm,18.3s,baz=205,slow=36
comp=Z,2.6nm,0.6s
MKAR Makanchi Array 19.31 12 **P 13 35 09.7 -0.3**
NPW Naypyitaw 19.69 110 P **Pn 13 35 15.8 0.0**
ZSN Zaisan 20.50 16 *eP* **P 13 35 22.3 -0.5**
PALK Pallekele 20.98 168 LR LR 13 43 28.3
comp=Z,96nm,20.6s,baz=356,slow=36
BRZS Berezniki 22.16 353 *eP* **P 13 35 40.0 -0.8**
GTA2 Gaotai 22.40 53 *eP* **P 13 35 46.9 +3.3**
GTA2 pP sP 13 35 54.9 +4.5
GTA2 pmax pmax
comp=Z,5.0nm,0.7s
GTA2 LR LR
comp=N,190nm,15.8s
GTA2 LR LR
comp=E,110nm,10.7s
GTA2 LR LR
comp=Z,100nm,15.5s
PZH PanZhiHua 22.46 88 P **P 13 35 44.3 0.0**
CHTO Chiang Mai 22.48 109 **P 13 35 43.0 -1.4**
CHTO IAmb IAmb 13 35 51.4
comp=Z,8.3nm,0.9s
CHTO Chiang Mai 22.48 109 P **P 13 35 46.3 +1.8**
CMAR Chiang Mai Arr 22.65 110 P **P 13 35 47.1 +0.9**
comp=Z,7.4nm,0.8s,baz=291,slow=9.6,SNR=33
CMAR LR LR 13 46 43.8
comp=Z,31nm,18.3s,baz=210,slow=42
comp=Z,7.4nm,0.8s
CMAR Chiang Mai Arr 22.65 110 P **P 13 35 46.0 -0.3**
KURBB Kurchatov Arra 22.66 3 P **P 13 35 46.7 +0.7**
comp=Z,12nm,0.8s,baz=193,slow=11,SNR=94
KURBB LR LR 13 45 36.6
comp=Z,71nm,18.7s,baz=168,slow=39
comp=Z,12nm,0.8s
KURK Kurchatov 22.75 3 P **P 13 35 46.1 -0.9**
KURK Kurchatov 22.75 3 P **P 13 35 47.8 +0.8**
KMI2 Kunming 23.61 91 P **P 13 35 56.5 +0.2**
KMI2 pmax pmax
comp=Z,6.0nm,0.9s
LZDM Lanzhou Array 24.32 64 P **P 13 36 03.4 +0.4**
comp=Z,4.9nm,0.3s,baz=272,slow=7.1,SNR=7.4
comp=Z,4.9nm,0.3s
AB31 Akbulak array 24.77 333 **P 13 36 06.3 -0.2**
ABKAR Akbulak array 24.77 333 P **P 13 36 06.5 0.0**
BVAR Borovoye Array 25.42 351 P **P 13 36 13.7 +1.3**
comp=Z,4.9nm,0.6s,baz=165,slow=12,SNR=16
comp=Z,4.9nm,0.6s
BORK Borovoye 25.45 351 **P 13 36 11.3 -1.3**
BORK IAmb IAmb 13 36 39.5
comp=Z,4.8nm,0.7s
ZAA0 Zalesovo Array 26.64 11 **P 13 36 23.7 +0.3**
ZAA0 IAmb IAmb 13 36 25.6
comp=Z,8.2nm,0.7s
ZALV Zalesovo Beam 26.64 11 P **P 13 36 24.3 +0.9**
comp=Z,12nm,0.7s,baz=207,slow=8.8,SNR=42
ZALV LR LR 13 48 00.3
comp=Z,34nm,19.3s,baz=216,slow=39
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 26.64 11 **P 13 36 23.6 +0.1**
SONM Songino Array 30.50 41 P **P 13 36 59.0 +1.0**
comp=Z,0.8nm,0.8s,baz=243,slow=9.8,SNR=4.6
comp=Z,0.8nm,0.8s
SONM Songino Array 30.50 41 P **P 13 36 58.4 +0.3**
KBZ Khabaz 31.20 309 P **P 13 37 04.5 +0.5**
comp=Z,0.7nm,0.4s,baz=144,slow=10,SNR=4.1
comp=Z,0.7nm,0.4s
ARTI Arti 31.20 340 LR LR 13 49 02.0
comp=Z,36nm,19.2s,baz=108,slow=35
HHC Hu-ho-hao-te 31.41 57 *eP* **P 13 37 07.2 +1.0**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,32nm,3.8s
AKASG Malin Array Be 42.13 316 P **P 13 38 37.4 +0.3**
comp=Z,0.3nm,0.3s,baz=90,slow=6.8,SNR=7.6
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 42.13 316 P **P 13 38 36.5 -0.5**
KSRS Korea Array 43.80 64 P **P 13 38 51.6 +0.8**
comp=Z,0.4nm,0.5s,baz=284,slow=7.2,SNR=2.3
KSRS LR LR 13 57 27.4
comp=Z,23nm,18.4s,baz=155,slow=37
comp=Z,0.4nm,0.5s
FINES FINESS Array B 47.16 330 P **P 13 39 17.4 +0.4**
comp=Z,1.3nm,0.7s,baz=75,slow=8.1,SNR=5.8
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 50.75 339 P **P 13 39 45.0 +0.5**
comp=Z,3.6nm,0.5s,baz=114,slow=8.3,SNR=27
comp=Z,3.6nm,0.5s
ARCES ARCESS Array B 50.75 339 P **P 13 39 45.5 +1.0**
GERES GERESS Array B 51.88 312 P **P 13 39 53.1 -0.2**
comp=Z,0.4nm,0.7s,baz=79,slow=8.7,SNR=2.3
comp=Z,0.4nm,0.7s
HFS Hagfors 52.68 326 P **P 13 39 58.7 -0.3**
comp=Z,2.7nm,0.7s,baz=116,slow=6.8,SNR=6.2
comp=Z,2.7nm,0.7s
NC405 NORSAR Array S 53.78 327 P **P 13 40 06.8 -0.3**
NB2 NORSAR Subarra 54.01 327 P **P 13 40 08.7 -0.2**
comp=Z,1.5nm,0.7s,baz=99,slow=7.4
NOA NORSAR Array B 54.01 327 P **P 13 40 08.6 -0.2**
comp=Z,0.9nm,0.7s,baz=101,slow=6.9,SNR=3.9
NOA LR LR 14 04 48.8
comp=Z,24nm,18.3s,baz=285,slow=38
comp=Z,0.9nm,0.7s
KEST Kesra 56.60 296 P **P 13 40 28.8 +0.8**
comp=Z,3.7nm,0.6s,baz=63,slow=5.9,SNR=4.8
comp=Z,3.7nm,0.6s
KEST Kesra 56.60 296 P **P 13 40 28.3 +0.3**
SPITS Spitsbergen Ar 56.80 348 P **P 13 40 29.2 +0.6**
comp=Z,15nm,1.2s,baz=138,slow=13,SNR=1.6
comp=Z,15nm,1.2s
ESDC Sonseca Array 65.82 303 P **P 13 41 30.5 +0.2**
comp=Z,0.5nm,0.6s,baz=84,slow=8.0,SNR=2.3
comp=Z,0.5nm,0.6s
TORD Torodi Ar. Bea 70.67 275 P **P 13 42 01.2 +0.1**
comp=Z,0.6nm,1.0s,baz=61,slow=4.1,SNR=1.9
comp=Z,0.6nm,1.0s
WB0 Warramunga Arr 73.38 124 P **P 13 42 17.4 +0.2**
WB0 IAmb IAmb 13 42 25.7
comp=Z,7.8nm,1.2s
WRA Warramunga Arr 73.45 124 P **P 13 42 18.0 +0.4**
comp=Z,0.8nm,0.6s,baz=321,slow=6.0,SNR=12
comp=Z,0.8nm,0.6s
WRA Warramunga Arr 73.45 124 P **P 13 42 18.2 +0.6**
WR8 Warramunga Arr 73.58 124 P **P 13 42 19.1 +0.8**
WR8 IAmb IAmb 13 42 43.6
comp=Z,8.3nm,1.2s
C19K Lookout Ridge 75.00 18 P **P 13 42 26.9 +0.9**
ASAR Alice Springs 75.48 127 P **P 13 42 29.9 +0.6**
comp=Z,0.4nm,0.5s,baz=311,slow=5.9,SNR=10
comp=Z,0.4nm,0.5s
ASAR Alice Springs 75.48 127 P **P 13 42 30.6 +1.3**
E19K Redstone River 76.75 19 P **P 13 42 36.4 +0.4**
E19K IAmb IAmb 13 43 06.0
comp=Z,4.6nm,1.2s
J19K Poorman 79.64 21 P **P 13 42 53.3 +1.3**
J19K IAmb IAmb 13 43 25.6
comp=Z,2.5nm,1.1s
J20K Nowinta River 79.97 20 P **P 13 42 55.4 +1.7**
J20K IAmb IAmb 13 43 19.1
comp=Z,3.7nm,1.4s
CAST Castle Rocks 81.15 20 P **P 13 43 01.4 +1.3**
CAST IAmb IAmb 13 43 13.8
comp=Z,2.8nm,1.1s
IL31 81.58 17 P **P 13 43 02.8 +0.5**
IL31 IAmb IAmb 13 43 14.3
comp=Z,2.7nm,1.1s
ILAR Eielson Array 81.58 17 P **P 13 43 02.9 +0.5**
comp=Z,0.6nm,0.8s,baz=325,slow=6.4,SNR=6.9
comp=Z,0.6nm,0.8s
ILAR Eielson Array 81.58 17 P **P 13 43 02.7 +0.3**
YKA Yellowknife Ar 89.39 5 P **P 13 43 41.5 +0.3**
comp=Z,0.5nm,0.6s,baz=352,slow=4.6,SNR=4.8
comp=Z,0.5nm,0.6s

*IDC **03** 13:32:57.6±4.7,34.7°N×140.9°E,h66km±33km,mb3.6/5, mbtmp4.0/8,ML3.2/2,MS2.4/2,Error ellipse: s-maj=78.1km s-min=24.1km az=65.0*
*NEIC **03** 13:33:00.2±0.9,34.64°N±0.05°×140.5°E±0.1,h68km±11km, mb4.1/4, Error ellipse: s-maj=14.7km s-min=2.6km az=62.0*
*JMA **03** 13:33:00.9±0.2,34.6°N±0.6°×140.2°E±0.8,h65km±2km, MD4.0/38,MV3.5/38,SE OFF BOSO PENINSULA*
JMA Felt I J1 at SE OFF BOSO PENINSULA .
*NIED **03** 13:33:00.9,34.63°N×140.21°E,h65km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.45; $M_{\theta\theta}$3.13; $M_{\phi\phi}$-2.68; $M_{r\theta}$-2.83; $M_{\theta\phi}$-0.22; $M_{\phi r}$-1.58; Fault plane solution: $M_0$4.32000×10^{14} NP1: ϕ_s319.00000°,δ41.00000°,λ-4.00000°. NP2:ϕ_s52.00000°, δ87.00000°,λ-131.00000°.*
ISC 03 13:33:00.5±0.8,34.63N±0.03×140.29E±0.05,h70km±7km, n50,σ1ᵠ43/55,mb3.9/7,5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.26**	**46**	⇓P	**Pn**	**13 33 11.8**	**+0.7**
BSO4	**Boso 4**	**0.37**	**7**	P	**Pn**	**13 33 12.7**	**+0.6**
TATJ	**Tateyama 2**	**0.52**	**321**	P	**Pn**	**13 33 14.0**	**+0.5**
TATJ				A	A	13 33 14.0	
	comp=N,43nm,0.6s,comp=E,35nm,0.4s						
TATJ				S	**Sn**	**13 33 23.6**	**+0.5**
KTR	**Katsuura**	**0.52**	**3**	*i* P	**Pn**	**13 33 13.8**	**+0.2**
KTR				S	**Sn**	**13 33 22.4**	**-0.8**
JKUC	**kamogawauchiur**	**0.54**	**353**	P	**Pn**	**13 33 13.7**	**0.0**
JKUC				A	A	13 33 13.7	
	comp=N,13nm,0.8s,comp=E,5.0nm,0.4s						
JKUC				S	**Sn**	**13 33 22.2**	**-1.2**
BSO1	**Boso 1**	**0.57**	**87**	⇓P	**Pn**	**13 33 14.5**	**+1.1**
JIM2	**Oshima 3**	**0.71**	**278**	*i* P	**Pn**	**13 33 14.9**	**-0.6**
JIM2				A	A	13 33 14.9	
	comp=N,15nm,0.4s,comp=E,9.0nm,0.4s						
JIM2				S	**Sn**	**13 33 25.2**	**-1.4**
JYO	**Yokosk**	**0.79**	**320**	A	A	13 33 16.1	
	comp=N,10.0nm,0.6s,comp=E,10.0nm,1.1s						
JTHY	**Toshimahigashi**	**0.83**	**263**	*i* P	**Pn**	**13 33 16.9**	**-0.1**
JTHY				S	**Sn**	**13 33 28.7**	**-0.4**
JMYK	**Miyake Tsubota**	**0.83**	**227**	*i* P	**Pn**	**13 33 17.2**	**+0.2**
JMYK				S	**Sn**	**13 33 29.3**	**+0.3**
JMKN	**Mikurajimanish**	**0.93**	**218**	*i* P	**Pn**	**13 33 18.2**	**0.0**
JMKN				S	**Sn**	**13 33 31.0**	**-0.3**
JKO	**Kozu shima**	**1.04**	**246**	P	**Pn**	**13 33 19.9**	**+0.3**
JKO				S	**Sn**	**13 33 33.9**	**+0.2**
KTJ3	**Kamata3**	**1.05**	**287**	⇓*i* P	**Pn**	**13 33 18.8**	**-0.8**
KTJ3				⇓S	**Sn**	**13 33 31.9**	**-1.9**
TOK	**Tokyo**	**1.14**	**338**	A	A	13 33 21.0	
	comp=N,11nm,0.4s,comp=E,16nm,0.5s						
JIZS	**Izushimoda**	**1.16**	**275**	⇓*i* P	**Pn**	**13 33 20.6**	**-0.5**
JOD2	**Odawara 2**	**1.17**	**303**	P	**Pn**	**13 33 20.6**	**-0.6**
JOD2				S	**Sn**	**13 33 35.2**	**-1.5**
JHJ	**Hachijo jima 2**	**1.56**	**196**	P	**Pn**	**13 33 27.0**	**+0.7**
	comp=E,518nm,0.3s,baz=105,slow=23,SNR=254						
JHJ				S	**Sn**	**13 33 44.0**	**-1.7**
	comp=E,308nm,0.4s,baz=52,slow=19,SNR=6.3						
JHJ2	**Mitsune**	**1.56**	**195**		**Pn**	**13 33 27.0**	**+0.7**
JHJ2				Sn	**Sn**	**13 33 46.1**	**+0.5**
JHJ2	**Mitsune**	**1.56**	**195**	*i* P	**Pn**	**13 33 27.0**	**+0.7**
JHJ2				*e*S	**Sn**	**13 33 45.8**	**+0.1**
JSG	**Sagara**	**1.73**	**272**	Pn	**Pn**	**13 33 31.3**	**+2.8**
MJAR	**Matsushiro Arr**	**2.55**	**319**	P	**Pn**	**13 33 40.4**	**+0.7**
	comp=E,5.8nm,0.3s,baz=151,slow=11,SNR=203						
MJAR				S	**Sn**	**13 34 09.6**	**-0.1**
	comp=E,60nm,0.5s,baz=130,slow=26,SNR=7.6						
	comp=E,35nm,0.4s						
MJAR	**Matsushiro Arr**	**2.55**	**319**		**Pn**	**13 33 40.8**	**+1.1**
MAJO	**Matsushiro**	**2.56**	**319**		**Pn**	**13 33 41.0**	**+1.3**
MJB9	**Matsu-Tunnel**	**2.56**	**319**		**Pn**	**13 33 41.0**	**+1.2**
JGF	**Kuroka**	**2.59**	**293**	Pn	**Pn**	**13 33 41.6**	**+1.4**
INU	**Inuyama**	**2.78**	**286**		**Pn**	**13 33 43.9**	**+1.2**
JTM	**Tenmabayashi**	**6.18**	**6**	Pn	**Pn**	**13 34 28.9**	**-0.2**
JCJ	**Chichijima**	**7.68**	**167**	P	Pn	13 34 46.5	-3.2
	comp=E,46nm,0.3s,baz=42,slow=9.6,SNR=13						
JCJ				S	**Sn**	**13 36 08.6**	**-6.6**
	comp=E,16nm,0.3s,baz=277,slow=22,SNR=1.5						
JCJ	**Chichijima**	**7.68**	**167**	Pn	**Pn**	**13 34 48.6**	**-1.1**
JKA	**Kamikawa-asahi**	**9.65**	**10**	Pn	**Pn**	**13 35 14.4**	**-2.0**
KSRS	**Korea Array**	**10.40**	**289**	P	**Pn**	**13 35 30.4**	**+3.7**
	comp=E,0.1nm,0.3s,baz=109,slow=14,SNR=7.3						
KSRS				LR	LR	13 38 57.1	
	comp=E,18nm,21.1s,baz=20,slow=33						
	comp=E,2.0nm,0.8s						
GUMO	**Guam**	**21.35**	**168**	LR	LR	13 45 49.3	
	comp=E,12nm,18.2s,baz=155,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.83**	**115**	T	T	14 07 57.8	
	baz=308,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**27.83**	**115**	T	T	14 07 57.3	
	baz=308,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy**	**27.84**	**115**	T	T	14 07 57.3	
	baz=308,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hy**	**28.44**	**118**	T	T	14 08 48.9	
	baz=311,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**28.44**	**118**	T	T	14 08 47.2	
	baz=311,slow=76,SNR=16						
SONM	**Songino Array**	**28.45**	**308**	P	**P**	**13 38 47.8**	**-1.0**
	comp=E,0.3nm,0.4s,baz=105,slow=11,SNR=2.0						
	comp=E,0.3nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**28.46**	**118**	T	T	14 08 49.5	
	baz=311,slow=76,SNR=19						
ZALV	**Zalesovo Beam**	**42.90**	**314**	P	**P**	**13 40 51.1**	**-0.8**
	comp=E,0.7nm,0.6s,baz=83,slow=12,SNR=2.5						
	comp=E,0.7nm,0.6s						
MKAR	**Makanchi Array**	**44.66**	**304**	P	**P**	**13 41 06.8**	**+0.6**
	comp=E,1.7nm,0.5s,baz=85,slow=9.2,SNR=10						
	comp=E,1.7nm,0.5s						
MAKZ	**Makanchi**	**44.87**	**304**	P	**P**	**13 41 09.0**	**+1.1**
KURK	**Kurchatov**	**46.73**	**310**	P	**P**	**13 41 21.9**	**-0.5**
KURK				IAmb	IAmb	13 41 44.5	
	comp=Z,1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**46.79**	**310**	P	**P**	**13 41 23.3**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=85,slow=7.5,SNR=9.4						
	comp=Z,0.7nm,0.4s						
KK31	**Karatay Array**	**53.56**	**301**	P	**P**	**13 42 14.9**	**+0.6**
KK31				IAmb	IAmb	13 42 27.6	
	comp=Z,1.9nm,1.0s						
KKAR	**Karatay Array**	**53.56**	**301**	P	**P**	**13 42 14.6**	**+0.3**
AB31	**Akbulak array**	**58.80**	**311**	P	**P**	**13 42 52.0**	**+0.6**
ABKAR	**Akbulak array**	**58.80**	**311**	P	**P**	**13 42 51.8**	**+0.4**
FINES	**FINESS Array B**	**70.52**	**332**	P	**P**	**13 44 08.0**	**+0.6**
AKASG	**Malin Array Be**	**75.64**	**322**	P	**P**	**13 44 36.9**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=43,slow=7.0,SNR=4.9						
	comp=Z,0.5nm,0.4s						

*TAP **03** 13:33:28.4,24.76°N×122.18°E,h89km,ML3.7,B*
*JMA **03** 13:33:28.5±0.3,25°N±1°×122.2E±0.5,h87km±3km, MV3.0/15,TAIWAN REGION*
ISC 03 13:33:28.6±1.3,24.75N±0.03×122.19E±0.02,h90km±6km, n123,σ0ᵠ90/228,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.25**	**292**	*e*P	**Pn**	**13 33 41.9**	**+0.2**
TWB1	**Santiao Chiao**	**0.32**	**325**	*e*P	**Pn**	**13 33 42.0**	**-0.1**
TWB1				*i* S	**Sn**	**13 33 51.4**	**-0.6**
EOS2	**EOS2**	**0.33**	**173**	*e*P	**Pn**	**13 33 42.7**	**+0.7**
EOS2				S	**Sn**	**13 33 53.1**	**+1.2**
TWC	**Suao**	**0.34**	**246**	*i* P	**Pn**	**13 33 41.9**	**-0.2**
TWC				*e*S	**Sn**	**13 33 51.6**	**-0.7**
ESAO	**Su ao**	**0.36**	**241**	*i* P	**Pn**	**13 33 42.2**	**0.0**
TIPB	**Shuangxi**	**0.40**	**304**	*i* P	**Pn**	**13 33 42.5**	**-0.1**
TIPB				S	**Sn**	**13 33 52.3**	**-0.7**
ILA	**Ilan**	**0.40**	**272**	*i* P	**Pn**	**13 33 42.6**	**+0.1**
ILA				*i* S	**Sn**	**13 33 52.7**	**-0.2**
NDS	**Dongshan**	**0.44**	**255**	*i* P	**Pn**	**13 33 42.9**	**+0.1**
NDS				*e*S	**Sn**	**13 33 53.7**	**+0.2**
SXI1	**Grass Mountain**	**0.45**	**321**	*i* P	**Pn**	**13 33 42.8**	**-0.1**
SXI1				S	**Sn**	**13 33 53.2**	**-0.5**
TWE	**Neicheng**	**0.47**	**267**	*i* P	**Pn**	**13 33 43.1**	**+0.1**
TWE				*e*S	**Sn**	**13 33 53.6**	**-0.2**
EOS3	**EOS3**	**0.47**	**166**	*e*P	**Pn**	**13 33 43.3**	**+1.0**
EOS3				*e*S	**Sn**	**13 33 55.4**	**+1.8**
EWUT	**Wuta**	**0.48**	**231**	*e*P	**Pn**	**13 33 43.4**	**+0.3**
EWUT				S	**Sn**	**13 33 54.1**	**+0.2**
NWF	**Wu-fen Shan**	**0.49**	**311**	P	**Pn**	**13 33 43.1**	**-0.2**
NWF				*i* S	**Sn**	**13 33 53.7**	**-0.5**
WFSB	**Wu-fen Shan**	**0.49**	**311**	P	**Pn**	**13 33 43.1**	**-0.1**
WFSB				S	**Sn**	**13 33 53.8**	**-0.3**
TNOU	**National Taiwa**	**0.55**	**317**	*e*P	**Pn**	**13 33 43.4**	**-0.2**
TNOU				S	**Sn**	**13 33 54.3**	**-0.6**
ENTT	**Nioudou**	**0.57**	**259**	*i* P	**Pn**	**13 33 44.2**	**+0.3**
ENTT				*i* S	**Sn**	**13 33 56.6**	**+1.2**
EAHA	**Aohua**	**0.58**	**224**	*e*P	**Pn**	**13 33 44.0**	**0.0**
EAHA				S	**Sn**	**13 33 56.4**	**+1.0**
TWA	**Mucha**	**0.59**	**293**	*i* P	**Pn**	**13 33 43.8**	**-0.2**
TWA				*i* S	**Sn**	**13 33 54.9**	**-0.7**
NWLT	**Wulai**	**0.62**	**273**	*i* P	**Pn**	**13 33 43.9**	**-0.4**
NDT	**Datong Townshi**	**0.63**	**257**	*i* P	**Pn**	**13 33 45.0**	**+0.6**
NDT				*e*S	**Sn**	**13 33 57.1**	**+0.9**
EOS4	**EOS4**	**0.64**	**169**	P	**Pn**	**13 33 44.3**	**+0.2**
EOS4				S	**Sn**	**13 33 55.9**	**+0.4**
LATG	**Datong**	**0.64**	**251**	P	**Pn**	**13 33 45.0**	**+0.5**
LATG				S	**Sn**	**13 33 56.8**	**+0.2**
NHDH	**Xindian Distri**	**0.64**	**290**	*i* P	**Pn**	**13 33 44.3**	**-0.1**
NHDH				S	**Sn**	**13 33 55.6**	**-0.7**
TAP	**Taipei**	**0.68**	**295**	P	**Pn**	**13 33 44.5**	**-0.3**
TAP				*e*S	**Sn**	**13 33 56.2**	**-0.8**
YM01	**YM01**	**0.69**	**305**	*i* P	**Pn**	**13 33 44.8**	**-0.2**
YM01				*i* S	**Sn**	**13 33 56.1**	**-1.1**
YM08	**YM08**	**0.70**	**309**	*i* P	**Pn**	**13 33 44.7**	**-0.3**
YM08				S	**Sn**	**13 33 56.0**	**-1.3**
ZUZH	**Zhuzihu**	**0.71**	**305**	*i* P	**Pn**	**13 33 45.0**	**-0.3**
ZUZH				*i* S	**Sn**	**13 33 56.1**	**-1.5**
YHNB	**Yeheng**	**0.74**	**264**	*i* P	**Pn**	**13 33 45.7**	**+0.2**
YHNB				S	**Sn**	**13 33 58.1**	**-0.1**
ANP	**Anpu**	**0.75**	**306**	*e*P	**Pn**	**13 33 45.4**	**-0.1**
ANP				*i* S	**Sn**	**13 33 57.3**	**-1.0**
TWY	**Chenhua**	**0.75**	**315**	P	**Pn**	**13 33 45.5**	**0.0**
TWY				S	**Sn**	**13 33 58.1**	**0.0**
JYNG	**Yonagunijimaku**	**0.75**	**113**	*i* P	**Pn**	**13 33 45.6**	**+0.1**
JYNG				S	**Sn**	**13 33 58.2**	**0.0**
NSK	**Sanguang**	**0.76**	**265**	*i* P	**Pn**	**13 33 45.7**	**0.0**
NSK				S	**Sn**	**13 33 58.4**	**-0.1**
ETL	**Fush Village**	**0.78**	**221**	*e*P	**Pn**	**13 33 45.6**	**-0.3**
ETL				*e*S	**Sn**	**13 33 58.4**	**-0.4**
TWS1	**Kuangyinshan**	**0.78**	**297**	*i* P	**Pn**	**13 33 45.8**	**0.0**
TWS1				*i* S	**Sn**	**13 33 58.4**	**-0.3**
NACB	**Ninganchiao**	**0.79**	**223**	*i* P	**Pn**	**13 33 45.6**	**-0.4**
NACB				*i* S	**Sn**	**13 33 58.6**	**-0.3**
NTST	**Danshui**	**0.79**	**302**	*i* P	**Pn**	**13 33 46.0**	**+0.1**
NTST				*i* S	**Sn**	**13 33 58.5**	**-0.4**
NNSB	**Datong**	**0.80**	**247**	*i* P	**Pn**	**13 33 46.5**	**+0.4**
NNSB				S	**Sn**	**13 33 59.8**	**+0.5**
NNS	**Nan Shan**	**0.80**	**248**	*i* P	**Pn**	**13 33 46.6**	**+0.4**
NNS				S	**Sn**	**13 33 59.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.80**	**111**	*i* P	**Pn**	**13 33 46.1**	**+0.1**
YOJ				S	**Sn**	**13 33 58.9**	**-0.2**
YOJ	**Yonaguni jima**	**0.80**	**111**	P	**Pn**	**13 33 46.1**	**+0.1**
YOJ				S	**Sn**	**13 33 59.4**	**+0.2**
ETLH	**Xiulin Townshi**	**0.84**	**230**	*i* P	**Pn**	**13 33 46.4**	**-0.1**
ETLH				*i* S	**Sn**	**13 33 59.6**	**-0.4**
TWD	**Chiawan**	**0.86**	**219**	*i* P	**Pn**	**13 33 46.

SHUL				*i* S		**Sn**	**13 34 05.5**	**+0.1**
ESL	**Shilin**	**1.16**	**217**	P		**Pn**	**13 33 49.1**	**-0.9**
ESL				*e*S		**Sn**	**13 34 04.5**	**-1.8**
TEGC	**Jichi Village**	**1.19**	**210**	*e*P		**Pn**	**13 33 51.0**	**+0.5**
OWD	**Renai**	**1.22**	**230**	*e*P		**Pn**	**13 33 51.2**	**+0.3**
OWD				S		**Sn**	**13 34 07.8**	**+0.1**
WHP	**Taichung City**	**1.22**	**248**	*i* P		**Pn**	**13 33 51.9**	**+1.0**
WHP				*e*S		**Sn**	**13 34 08.4**	**+0.5**
WUSB	**Renai**	**1.23**	**233**	*e*P		**Pn**	**13 33 51.6**	**+0.5**
WUSB				*e*S		**Sn**	**13 34 07.9**	**-0.2**
WARBT	**Fenglin Townsh**	**1.26**	**216**	P		**Pn**	**13 33 50.2**	**-1.1**
WARBT				S		**Sn**	**13 34 06.8**	**-1.7**
NMLH	**Miaoli**	**1.29**	**261**	P		**Pn**	**13 33 52.2**	**+0.5**
NMLH				*e*S		**Sn**	**13 34 09.3**	**+0.3**
WCS	**Beigang Elemen**	**1.35**	**240**	*e*P		**Pn**	**13 33 53.3**	**+0.9**
WCS				*e*S		**Sn**	**13 34 11.5**	**+1.1**
SMLT	**Sun Moon Lake**	**1.46**	**234**	P		**Pn**	**13 33 54.9**	**+1.1**
SMLT				*e*S		**Sn**	**13 34 14.4**	**+1.4**
IRIF	**Iriomote-Funau**	**1.46**	**106**	P		**Pn**	**13 33 53.6**	**-0.2**
IRIF				S		**Sn**	**13 34 13.0**	**+0.1**
WDJ	**Dajia District**	**1.46**	**254**	*e*P		**Pn**	**13 33 54.1**	**+0.3**
WDJ				*e*S		**Sn**	**13 34 13.0**	**0.0**
EHYH	**Wanrong**	**1.47**	**212**	*e*P		**Pn**	**13 33 54.8**	**+0.9**
EHYH				*e*S		**Sn**	**13 34 11.7**	**-1.3**
EHY	**Hungye**	**1.47**	**213**	*e*P		**Pn**	**13 33 53.1**	**-0.8**
EHY				*e*S		**Sn**	**13 34 10.9**	**-2.1**
TYC	**Yuchr**	**1.48**	**236**	*e*P		**Pn**	**13 33 55.2**	**+1.3**
TYC				*e*S		**Sn**	**13 34 14.7**	**+1.5**
SSLB	**Suanglung**	**1.48**	**230**	*e*P		**Pn**	**13 33 54.8**	**+0.8**
SSLB				*e*S		**Sn**	**13 34 14.4**	**+1.0**
TCU	**Taichung**	**1.50**	**247**	*e*P		**Pn**	**13 33 55.3**	**+1.0**
TCU				*e*S		**Sn**	**13 34 13.9**	**+0.1**
YULB	**Yu-li**	**1.58**	**211**	*e*P		**Pn**	**13 33 54.1**	**-1.1**
YULB				*e*S		**Sn**	**13 34 13.9**	**-1.6**
ECBN	**Changbin**	**1.58**	**205**	*e*P		**Pn**	**13 33 54.2**	**-1.0**
ECBN				*e*S		**Sn**	**13 34 14.3**	**-1.2**
EYUL	**Yuli**	**1.60**	**210**	*e*P		**Pn**	**13 33 55.6**	**0.0**
EYUL				*e*S		**Sn**	**13 34 15.8**	**-0.4**
WHYT	**Xinyi Township**	**1.61**	**230**	P		**Pn**	**13 33 57.1**	**+1.4**
WHYT				*e*S		**Sn**	**13 34 17.8**	**+1.5**
TWF1	**Yuli**	**1.61**	**211**	*e*P		**Pn**	**13 33 54.8**	**-1.0**
WNT	**Mingjian**	**1.62**	**238**	*e*P		**Pn**	**13 33 57.2**	**+1.4**
WNT				*e*S		**Sn**	**13 34 17.7**	**+1.2**
HATJ	**Hateruma jima**	**1.63**	**115**	*e*P		**Pn**	**13 33 56.5**	**+0.6**
WCHH	**Zhanghua**	**1.63**	**246**	*e*S		**Sn**	**13 34 17.0**	**+0.4**
CHKH	**Chenggong**	**1.71**	**205**	*e*P		**Pn**	**13 33 56.7**	**-0.2**
CHKH				*e*S		**Sn**	**13 34 17.3**	**-1.2**
JKRS	**Kuro-shima**	**1.74**	**107**	*e*P		**Pn**	**13 33 57.5**	**+0.2**
JKRS				*e*S		**Sn**	**13 34 20.0**	**+0.8**
FULB	**Fuli**	**1.75**	**208**	*e*P		**Pn**	**13 33 57.5**	**0.0**
FULB				*e*S		**Sn**	**13 34 19.2**	**-0.3**
ALS	**Alishan**	**1.77**	**226**	P		**Pn**	**13 33 59.3**	**+1.4**
ALS				S		**Sn**	**13 34 21.9**	**+1.7**
CHN5	**Tsauling**	**1.79**	**231**	*e*P		**Pn**	**13 33 59.5**	**+1.4**
CHN5				S		**Sn**	**13 34 21.8**	**+1.2**
CHKT	**Chengkung**	**1.81**	**205**	P		**Pn**	**13 33 57.4**	**-0.8**
CHKT				*e*S		**Sn**	**13 34 17.9**	**-2.9**
JIJ	**Ishigaki jima**	**1.82**	**102**	*i* P		**Pn**	**13 33 58.2**	**-0.2**
JIJ				S		**Sn**	**13 34 20.6**	**-0.6**
WGK	**Gukeng**	**1.82**	**235**	*e*P		**Pn**	**13 33 59.7**	**+1.3**
WGK				*e*S		**Sn**	**13 34 22.8**	**+1.6**
EHD	**Haiduan**	**1.83**	**210**	*e*P		**Pn**	**13 33 59.0**	**+0.5**
WDLH	**Douliu**	**1.84**	**235**	*e*P		**Pn**	**13 33 59.8**	**+1.2**
WDLH				*e*S		**Sn**	**13 34 22.6**	**+1.1**
RLNB	**Erlin**	**1.87**	**243**	*e*P		**Pn**	**13 33 59.2**	**+0.2**
RLNB				*e*S		**Sn**	**13 34 22.6**	**+0.3**
ELDTW	**Lidau**	**1.89**	**215**	*e*P		**Pn**	**13 33 59.2**	**-0.2**
ELDTW				*e*S		**Sn**	**13 34 21.4**	**-1.4**
JISG	**Ishigakijimahi**	**1.94**	**94**	P		**Pn**	**13 34 00.4**	**+0.5**
JISG				*e*S		**Sn**	**13 34 24.0**	**+0.2**
EDH	**Donghe**	**1.94**	**205**	*e*P		**Pn**	**13 33 59.2**	**-0.8**
EDH				*e*S		**Sn**	**13 34 21.8**	**-2.2**
WCKO	**Fanlu**	**1.95**	**228**	*e*P		**Pn**	**13 34 01.8**	**+1.8**
WCKO				S		**Sn**	**13 34 26.1**	**+2.0**
WTK	**Tuku**	**1.95**	**238**	*e*P		**Pn**	**13 34 00.1**	**0.0**
WTK				*e*S		**Sn**	**13 34 24.3**	**+0.1**
TPUB	**Ta-pu**	**2.03**	**225**	*e*P		**Pn**	**13 34 02.9**	**+1.7**
TPUB				S		**Sn**	**13 34 27.5**	**+1.5**
STYH	**Taoyuan**	**2.03**	**220**	*e*P		**Pn**	**13 34 02.6**	**+1.4**
STYH				S		**Sn**	**13 34 27.1**	**+1.0**
WTP	**Ta-pu**	**2.08**	**224**	*e*P		**Pn**	**13 34 03.9**	**+2.1**
WTP				*e*S		**Sn**	**13 34 28.7**	**+1.6**
WSF	**Szhu**	**2.11**	**239**	*e*P		**Pn**	**13 34 03.2**	**+1.0**
WSF				*e*S		**Sn**	**13 34 28.1**	**+0.3**
TWK	**Hsinying**	**2.14**	**227**	*e*P		**Pn**	**13 34 04.1**	**+1.4**
WSL	**Shuilin Townsh**	**2.17**	**236**	*e*P		**Pn**	**13 34 03.8**	**+0.9**
WSL				*e*S		**Sn**	**13 34 29.8**	**+0.6**
LDUT	**Ludao**	**2.17**	**198**	*e*P		**Pn**	**13 34 02.0**	**-0.9**
LDUT				*e*S		**Sn**	**13 34 26.0**	**-3.3**
CHN1	**Nanshi**	**2.17**	**225**	*e*P		**Pn**	**13 34 04.2**	**+1.2**
CHN1				*e*S		**Sn**	**13 34 30.8**	**+1.4**
TWG	**Pinlang**	**2.17**	**208**	*e*P		**Pn**	**13 34 02.9**	**-0.2**
TWG				S		**Sn**	**13 34 27.8**	**-1.6**
TWGBT	**Beinan**	**2.17**	**208**	*e*P		**Pn**	**13 34 02.4**	**-0.6**
TWGBT				*e*S		**Sn**	**13 34 27.9**	**-1.5**
SGST	**Jiashian**	**2.21**	**222**	*e*P		**Pn**	**13 34 04.5**	**+0.8**
SGST				*e*S		**Sn**	**13 34 31.2**	**+0.7**
ICHU	**Yijhu**	**2.23**	**232**	*e*P		**Pn**	**13 34 04.8**	**+1.1**
ICHU				*e*S		**Sn**	**13 34 31.1**	**+0.5**
JTJ	**Tarama**	**2.29**	**92**	P		**Pn**	**13 34 05.3**	**+0.7**
JTJ				*e*S		**Sn**	**13 34 33.1**	**+1.0**
SCST	**Cishan**	**2.42**	**220**	*e*P		**Pn**	**13 34 06.1**	**-0.2**
ECL	**Taimali**	**2.42**	**208**	*e*P		**Pn**	**13 33 55.8**	**-0.5**
SSD	**Sandimen**	**2.45**	**216**	*e*P		**Pn**	**13 34 08.3**	**+1.6**
VWUC	**VWUC**	**2.50**	**276**	P		**Pn**	**13 34 06.8**	**-0.5**
VWUC				S		**Sn**	**13 34 36.1**	**-1.0**
MASBT	**Mashibuluo**	**2.56**	**214**	*e*P		**Pn**	**13 34 09.7**	**+1.5**
MASBT				*e*S		**Sn**	**13 34 39.7**	**+1.1**
EAST	**Anshuo**	**2.66**	**208**	*e*P		**Pn**	**13 34 09.9**	**+0.4**
PNG	**Penghu**	**2.68**	**244**	*e*P		**Pn**	**13 34 08.5**	**-1.2**
LYUB	**Lan-yu**	**2.79**	**192**	*e*P		**Pn**	**13 34 09.5**	**-1.8**
PTMZ	**Houxiangcun**	**2.80**	**277**	*e*P		**Pn**	**13 34 10.8**	**-0.5**
SMST	**Manzhou Townsh**	**2.99**	**205**	*e*P		**Pn**	**13 34 14.8**	**+0.9**
KNMB	**Chin-men Tao**	**3.47**	**266**	*e*P		**Pn**	**13 34 19.0**	**-1.3**

*IDC **03** 13:34:23.8±3.0, 42°.33N×126°.02W, h0km, mb3.0/3, mbtmp3.1/7, ML3.4/4, MS2.8/4, Error ellipse: s-maj=42.1km s-min=21.6km az=50.0*

*NEIC **03** 13:34:25.5±1.3, 42°.03N±0°.06×126°.1W±0°.1, h10km±2km, ML3.2/92, Error ellipse: s-maj=18.1km s-min=10.0km az=262.0*

ISC 03 13:34:24.2±1.7, 42°.03N±0°.06×126°.2W±0°.1, h11km, n56, σ1§06/43, mb3.0/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRPM	**Rodgers**	**1.85**	**117**		**Pn**	**13 34 55.5**	**-0.4**
KRPM				IAML		13 35 18.1	
	comp=E,132nm,0.6s						
KRPM				IAML		13 35 18.3	
	comp=N,126nm,1.3s						
L02F	**Cave Junction**	**1.95**	**86**		**Pn**	**13 34 56.6**	**-0.6**
K02D	**Willamette Mer**	**1.99**	**70**		**Pn**	**13 34 57.2**	**-0.6**
J01E	**Myrtle Point**	**2.02**	**55**	Pn	**Pn**	**13 34 57.1**	**-1.0**
JCC	**Jacoby Creek,**	**2.03**	**126**		**Pn**	**13 34 57.9**	**-0.4**
KHMM	**Horse Mountain**	**2.18**	**121**		**Pn**	**13 35 00.5**	**0.0**
KHMM				IAML		13 35 26.9	
	comp=N,82nm,0.6s						
KMPM	**Mount Pierce**	**2.25**	**135**	Pn	**Pn**	**13 35 01.1**	**-0.2**
KMPM				IAML		13 35 28.6	
	comp=N,122nm,0.5s						
KMPM				IAML		13 35 32.6	
	comp=E,123nm,1.1s						
M02C	**Callahan**	**2.58**	**103**		**Pn**	**13 35 06.3**	**+0.3**
YBH	**Yreka Blue Hor**	**2.62**	**95**	Pn	**Pn**	**13 35 07.2**	**+0.7**
	comp=E,7.8nm,0.3s,baz=292,slow=14,SNR=109						
YBH				Sn	**Sn**	**13 35 38.8**	**+0.5**
	comp=E,3.2nm,0.3s,baz=239,slow=17,SNR=3.6						
YBH				LR	LR	13 35 49.2	
	comp=E,63nm,20.9s,baz=352,slow=34						
	comp=E,17nm,0.3s						
YBH	**Yreka Blue Hor**	**2.62**	**95**		**Pn**	**13 35 07.2**	**+0.7**
YBH				IAML		13 36 20.9	
	comp=N,57nm,0.4s						
KHBM	**Hayfork Bally**	**2.62**	**120**	Pn	**Pn**	**13 35 06.9**	**+0.2**
I03D	**Drain, OR**	**2.67**	**50**		**Pn**	**13 35 07.0**	**-0.1**
I03D				IAML		13 35 40.7	
	comp=E,50nm,0.4s						
I03D				IAML		13 35 41.4	
	comp=N,74nm,0.7s						
I02E	**Swisshome, OR**	**2.69**	**39**	Pn	**Pn**	**13 35 07.1**	**-0.3**
I02E				IAML		13 35 40.2	
	comp=E,149nm,0.6s						
I02E				IAML		13 35 40.5	
	comp=N,184nm,0.8s						
BBOR	**Butler Butte**	**2.74**	**71**	Pn	**Pn**	**13 35 08.6**	**+0.4**
BBOR				IAML		13 35 44.0	
	comp=N,56nm,0.7s						
BBOR				IAML		13 35 44.5	
	comp=E,56nm,1.0s						
N02D	**Trinity Center**	**2.82**	**111**	Pn	**Pn**	**13 35 09.7**	**+0.4**
L04D	**Klamath Falls**	**2.90**	**85**		**Pn**	**13 35 11.1**	**+0.7**
L04D				IAML		13 35 50.1	
	comp=E,46nm,0.7s						
KCPM	**Cahto Peak**	**3.07**	**139**	Pn	**Pn**	**13 35 13.4**	**+0.7**
KCPM				IAML		13 35 57.9	
	comp=N,79nm,1.1s						
O02D	**Mt. Diablo Mer**	**3.17**	**125**		**Pn**	**13 35 14.7**	**+0.6**
BUCK	**Buck Mountain**	**3.19**	**46**	Pn	**Pn**	**13 35 14.7**	**+0.3**
BUCK				IAML		13 36 01.8	
	comp=N,77nm,1.6s						
BUCK				IAML		13 36 01.9	
	comp=E,78nm,1.4s						
J04A	**Umpqua Nationa**	**3.25**	**67**		**Pn**	**13 35 16.3**	**+1.0**
I04A	**Tendick Farm,**	**3.29**	**56**	Pn	**Pn**	**13 35 16.1**	**+0.4**
I04A				IAML		13 35 57.1	
	comp=N,70nm,1.2s						
I04A				IAML		13 35 58.1	
	comp=E,76nm,0.8s						
COR	**Corvallis**	**3.31**	**39**	Pn	**Pn**	**13 35 16.5**	**+0.6**
K04D	**Chiloquin, OR**	**3.34**	**78**	IAML		13 36 38.4	
	comp=E,67nm,1.5s						
K04D				IAML		13 36 40.2	
	comp=N,81nm,1.5s						
J05D	**Fort Rock, OR**	**3.87**	**69**	Pn	**Pn**	**13 35 23.6**	**-0.1**
J05D				IAML		13 36 48.9	
	comp=N,17nm,2.3s						
H04A	**Detroit Lake**	**3.94**	**46**	Pn	**Pn**	**13 35 25.1**	**+0.4**
K05A	**Summer Lake**	**3.99**	**78**		**Pn**	**13 35 25.6**	**+0.2**
G04A	**Mulino**	**4.16**	**39**	Pn	**Pn**	**13 35 28.0**	**+0.4**
I05D	**Terrebonne, OR**	**4.23**	**55**	IAML		13 36 06.4	
	comp=N,22nm,3.8s						
I05D				IAML		13 36 44.8	
	comp=E,23nm,2.8s						
PINE	**Pine Mountain**	**4.24**	**64**		**Pn**	**13 35 29.6**	**+0.8**
PINE				IAML		13 36 20.5	
	comp=E,15nm,0.7s						
PINE				IAML		13 36 49.3	
	comp=N,14nm,3.6s						
ORV	**Oroville**	**4.34**	**123**	Pn	**Pn**	**13 35 30.6**	**+0.6**
ORV				IAML		13 36 23.6	
	comp=E,42nm,0.6s						
ORV				IAML		13 36 23.9	
	comp=N,42nm,0.6s						
F04D	**Rainier, OR**	**4.65**	**28**	Pn	**Pn**	**13 35 34.9**	**+0.6**
RADR	**Rader Ridge**	**4.71**	**21**	Pn	**Pn**	**13 35 36.3**	**+1.0**
RADR				IAML		13 36 50.7	
	comp=E,36nm,2.2s						
E03A	**Lebam**	**4.89**	**22**	Pn	**Pn**	**13 35 38.7**	**+1.1**
E03A				IAML		13 36 37.2	
	comp=E,29nm,0.7s						
AFDM	**Forest Hills D**	**5.03**	**126**	IAML		13 36 41.2	
	comp=N,13nm,0.9s						
I07A	**Izee**	**5.31**	**65**	IAML		13 38 24.5	
	comp=N,6.8nm,4.8s						
I07A				IAML		13 39 10.8	
	comp=E,6.0nm,4.7s						
MPK	**Martis Peak**	**5.42**	**118**	IAML		13 36 59.1	
	comp=E,14nm,0.7s						
MPK				IAML		13 37 03.4	
	comp=N,20nm,0.9s						
GNW	**Green Mountain**	**6.03**	**22**		**Pn**	**13 35 54.7**	**+1.4**
KVN	**Kaiserville**	**6.84**	**113**	Pn	**Pn**	**13 36 06.3**	**+1.6**
CLRS	**Cowichan Lake**	**6.94**	**11**	Pn	**Pn**	**13 36 07.7**	**+2.0**
NVAR	**Mina Array Bea**	**7.03**	**118**	Pn	**Pn**	**13 36 09.2**	**+2.1**
	comp=N,0.5nm,0.3s,baz=298,slow=14,SNR=4.3						
	comp=N,0.7nm,0.4s						
ELK	**Elko**	**8.34**	**95**	Pn	**Pn**	**13 36 26.6**	**+1.4**
	comp=N,0.1nm,0.3s,baz=281,slow=19,SNR=6.1						
	comp=N,1.0nm,0.7s						
BBB	**Bella Bella**	**10.24**	**353**	LR	LR	13 39 59.3	
	comp=N,75nm,20.2s,baz=222,slow=34						
PDAR	**Pinedale Array**	**12.32**	**81**	Pn	**Pn**	**13 37 21.7**	**+2.0**
	comp=N,0.1nm,0.3s,baz=268,slow=14,SNR=1.9						
	comp=N,0.3nm,0.7s						
DLBC	**Dease Lake**	**16.60**	**353**	LR	LR	13 42 57.8	
	comp=N,67nm,18.1s,baz=204,slow=32						
YKA	**Yellowknife Ar**	**21.62**	**15**	P	**P**	**13 39 13.1**	**-0.9**
	comp=N,0.5nm,0.8s,baz=207,slow=12,SNR=7.0						
YKA				LR	LR	13 46 54.5	
	comp=N,29nm,21.4s,baz=290,slow=35						
	comp=N,0.5nm,0.8s						
TXAR	**Lajitas Array**	**22.18**	**118**	P	**P**	**13 39 21.6**	**+1.3**
	comp=N,0.1nm,0.5s,baz=305,slow=9.3,SNR=4.2						
	comp=N,0.1nm,0.5s						
ULM	**Lac du Bonnet**	**22.43**	**58**	P	**P**	**13 39 19.4**	**-3.5**
	comp=N,1.0nm,0.5s,baz=253,slow=9.9,SNR=4.7						
	comp=N,1.0nm,0.5s						
H11N3	**WAKE ISLAND Hy**	**60.06**	**270**	T	T	14 49 43.4	
	baz=51,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**60.06**	**270**	T	T	14 49 43.1	
	baz=51,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**60.08**	**270**	T	T	14 49 40.2	
	baz=51,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy**	**60.96**	**269**	T	T	14 50 49.4	
	baz=52,slow=75,SNR=39						
H11S2	**WAKE ISLAND Hy**	**60.96**	**269**	T	T	14 50 51.8	
	baz=52,slow=75,SNR=37						
H11S3	**WAKE ISLAND Hy**	**60.97**	**269**	T	T	14 50 45.7	
	baz=52,slow=75,SNR=23						

*IDC **03** 13:42:24.6±0.6, 53°.01S×46°.75W, h0km, mb4.6/12, mbtmp4.6/13, ML4.2/1, MS4.1/18, Error ellipse: s-maj=25.0km s-min=13.8km az=72.0*

*NEIC **03** 13:42:25.9±2.0, 53°.08S±0°.09×46°.9W±0°.1, h10km±1km, mb5.2/56, Mww5.1/11, Error ellipse: s-maj=16.2km s-min=12.8km az=211.0*

*MOS **03** 13:42:25.0±1.8, 53°.01S×47°.02W, h10km, mb5.2/13, Error ellipse: s-maj=22.6km s-min=10.0km az=115.1*

*GFZ **03** 13:42:27.1±0.2, 53°.5±4°.4×7°.7W±°, h10km, Ms5.0/29, mb5.1/29*

*GCMT **03** 13:42:29.0±0.2, 53°.09S±0°.01×46°.74W±0°.02, h16km±1km, MW5.1/127, Moment Tensor Solution. s37,c42; s127,c188; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}0.15±.11; $M_{\theta\theta}$0.24±.10; $M_{\phi\phi}$-0.39±.10; $M_{r\theta}$0.92±.31; $M_{\theta\phi}$3.80±.09; $M_{\phi r}$4.32±.57; Best double couple: M_o5.80400×10^16^ NP1:ϕs96.00000°, δ41.00000°, λ3.00000°. NP2:ϕs4.00000°, δ88.00000°, λ131.00000°. Principal axes: T 6.1570, Plg34.0000°, Azm308.0000°; N -0.7070, Plg41.0000°, Azm182.0000°; P -5.4500, Plg31.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 13:42:26.0±0.3, 53°.04S±0°.05×46°.91W±0°.06, h10km, n228, σ1§38/186, mb5.1/39, MS4.2/20, 7C-6D, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.32**	**106**		**Pn**	**13 43 57.6**	**-1.5**
HOPE	**Hope Point**	**6.32**	**106**	P	**Pn**	**13 43 57.7**	**-1.5**
HOPE	**Hope Point**	**6.32**	**106**	P	**Pn**	**13 43 58.1**	**-1.1**
EFI	**East Falkland**	**6.97**	**277**		**Pn**	**13 44 06.8**	**-1.2**
EFI	**East Falkland**	**6.97**	**277**	*c* iP	**Pn**	**13 44 06.5**	**-1.5**
EFI	**East Falkland**	**6.97**	**277**	P	**Pn**	**13 44 08.3**	**+0.3**
ESPZ	**Base Esperanza**	**11.65**	**203**		**Pn**	**13 45 15.7**	**+3.6**
USHA	**Ushuaia**	**12.80**	**253**	Pn	Pn	13 45 18.9	-9.0
	1.0nm,0.3s,baz=76,slow=19,SNR=3.6						
USHA				Sn	Sn	13 47 40.7	-10
	4.1nm,0.3s,baz=13,slow=8.8,SNR=7.0						
MG02	**Cerro Sombrero**	**13.46**	**262**	Pn	Pn	13 45 28.6	-8.2
GO10	**Punta Arenas**	**14.49**	**260**	Pn	Pn	13 45 42.7	-8.2
PMSA	**Palmer Station**	**14.65**	**210**	Pn	**Pn**	**13 45 53.4**	**+0.3**
	1.0nm,0.3s,baz=24,slow=8.9,SNR=7.5						
PMSA				LR	LR	13 50 59.3	
	comp=Z,2μm,18.7s,baz=37,slow=35						
	4.9nm,0.9s						
PMSA	**Palmer Station**	**14.65**	**210**		**Pn**	**13 45 49.6**	**-3.5**
PMSA	**Palmer Station**	**14.65**	**210**	*e*P	**P**	**13 45 57.7**	**-1.7**
PMSA	**Palmer Station**	**14.65**	**210**	P	**P**	**13 45 58.2**	**-1.2**
MG05	**Puerto Natales**	**15.67**	**265**	P	**P**	**13 46 12.5**	**+1.7**
SMAI	**San Martin Ant**	**17.94**	**205**	P	**Pn**	**13 46 33.9**	**-1.4**
COYC	**Coyhaique**	**17.97**	**284**	P	**P**	**13 46 38.9**	**+2.6**
TRQA	**Tornquist**	**18.27**	**319**		**Pn**	**13 46 37.8**	**-1.7**
TRQA				IAmb	IAmb	13 46 43.5	
	comp=Z,186nm,0.7s						
TRQA	**Tornquist**	**18.27**	**319**	P	**Pn**	**13 46 37.8**	**-1.7**
TRQA				pmax	pmax		
	comp=Z,186nm,0.7s						
LL02	**Futaleuf**	**19.25**	**291**	P	**Pn**	**13 46 53.8**	**+2.4**
LPA	**La Plata**	**19.74**	**332**	*e*P	**P**	**13 46 49.1**	**-6.6**
LPA	**La Plata**	**19.74**	**332**	PN	**P**	**13 46 54.8**	**-0.9**
LPA				pP	**pwP**	**13 47 01.0**	**+0.1**
LPA				sP	sP	13 47 07.4	+8.5
LPA				PP	**PnPn**	**13 47 14.2**	**+3.4**
LPA				pPP		13 47 26.6	
LPA				PPP	PPP	13 48 16.2	
LPA				S	**Sn**	**13 50 41.6**	**+2.8**
LPA				sS	**pS**	**13 50 51.6**	**+1.1**
PLCA	**Paso Flores**	**20.20**	**298**	P	Pn	13 47 02.6	-0.1
	comp=Z,21nm,0.9s,baz=140,slow=9.8,SNR=39						
	comp=Z,21nm,0.9s						
PLCA	**Paso Flores**	**20.20**	**298**	P	**P**	**13 47 01.9**	**+1.1**
PLCA				IAmb	IAmb	13 47 04.0	
	comp=Z,89nm,1.4s						
PLCA	**Paso Flores**	**20.20**	**298**	P	**P**	**13 47 01.9**	**+1.1**
PLCA				pmax	pmax		
	comp=Z,89nm,1.4s						
PLCA	**Paso Flores**	**20.20**	**298**	*e*P	**P**	**13 46 59.9**	**-0.9**
LL03	**Petrohue**	**20.92**	**294**	P	**P**	**13 47 10.3**	**+1.8**
GO06	**Curarrehue**	**21.52**	**299**	P	**P**	**13 47 17.0**	**+1.9**
LR04	**Corral**	**22.35**	**295**	P	**P**	**13 47 23.0**	**-0.9**
CPSB	**Cacapava Do Su**	**23.11**	**346**	*e*P	**P**	**13 47 32.0**	**0.0**
CPSB	**Cacapava Do Su**	**23.11**	**346**	P	**P**	**13 47 33.0**	**+1.0**
PSAL	**Palomas, Salto**	**23.28**	**336**	*e*P	**P**	**13 47 33.8**	**+0.1**
BI02	**San Fabin de**	**23.62**	**304**	P	**P**	**13 47 36.5**	**-0.6**
CNLB	**Canela**	**23.88**	**351**	*e*P	**P**	**13 47 40.3**	**+0.6**
VNA1	**Neumayer--Stat**	**24.67**	**150**	⇑P	**P**	**13 47 47.9**	**+1.3**
	comp=Z,38nm,0.9s						
BO02	**Sierra Bellavi**	**24.87**	**308**	P	**P**	**13 47 48.6**	**-0.2**
VNA2	**Neumayer--Watz**	**25.05**	**150**	⇑P	**P**	**13 47 50.4**	**+0.4**
	comp=Z,38nm,1.1s,baz=295,slow=11						
VNA2	**Neumayer--Watz**	**25.05**	**150**	P	**P**	**13 47 50.9**	**+0.9**
BELA	**Belgrano 2**	**25.34**	**174**	P	**P**	**13 47 52.7**	**+0.2**
BELA				IAmb	IAmb	13 47 57.7	
	comp=Z,39nm,1.3s						
BO01	**Tunca**	**25.34**	**308**	P	**P**	**13 47 55.8**	**+2.9**
BO04	**La Punta**	**25.45**	**309**	P	**P**	**13 47 52.1**	**-1.8**
BO04				IAmb	IAmb	13 47 55.8	
	comp=Z,37nm,0.9s						
BO03	**Pichilemu**	**25.68**	**306**	P	**P**	**13 47 55.3**	**-0.7**
MT09	**Talagante**	**25.80**	**309**	P	**P**	**13 47 56.8**	**-0.5**
MT01	**Popeta**	**25.85**	**308**		**P**	**13 47 56.7**	**-0.8**
MT01				IAmb	IAmb	13 47 59.1	
	comp=Z,52nm,0.7s						
MT16	**CCHEN**	**25.87**	**310**	P	**P**	**13 47 57.5**	**-0.3**
MT16				IAmb	IAmb	13 48 00.7	
	comp=Z,36nm,0.7s						
ITAB	**Concordia**	**26.07**	**349**	*e*P	**P**	**13 48 00.5**	**+1.0**
ITAB	**Concordia**	**26.07**	**349**	P	**P**	**13 48 01.4**	**+1.9**
PEL	**Peldehue**	**26.18**	**310**	P	**P**	**13 48 00.3**	**-0.3**
PEL				IAmb	IAmb	13 48 01.9	
	comp=Z,83nm,1.2s						
PEL	**Peldehue**	**26.18**	**310**	P	**P**	**13 48 00.4**	**-0.3**
PEL				pmax	pmax		
	comp=Z,83nm,1.2s						
PEL	**Peldehue**	**26.18**	**310**	P	**P**	**13 48 00.5**	**-0.1**
MT02	**Curacav**	**26.30**	**309**	P	**P**	**13 48 00.9**	**-0.7**
MT02				IAmb	IAmb	13 48 03.2	
	comp=Z,70nm,0.8s						
VA03	**San Esteban**	**26.44**	**311**	P	**P**	**13 48 03.0**	**0.0**
VA03				IAmb	IAmb	13 48 05.4	
	comp=Z,38nm,0.8s						
VA03	**San Esteban**	**26.44**	**311**	P	**P**	**13 48 03.0**	**0.0**
ZON	**Zonda**	**26.64**	**315**		**P**	**13 48 02.9**	**-1.9**
ZON	**Zonda**	**26.64**	**315**	P	**P**	**13 48 02.9**	**-1.9**
ZON		

PSGCX	**Pisagua**	**37.91**	**323**		IAmb	IAmb	13 50 00.2		
	comp=Z,111nm,1.9s								
JANB	**Januaria**	**37.95**	**4**	*eP*	**P**		**13 49 43.4**	**-0.3**	
CMC01	**Camacan, BA**	**38.04**	**12**	*eP*	**P**		**13 49 44.3**	**-0.1**	
PTLB	**Pontes e Lacer**	**38.73**	**341**	P	**P**		**13 49 50.4**	**+0.2**	
PTLB	**Pontes e Lacer**	**38.73**	**341**	*eP*	**P**		**13 49 50.6**	**+0.4**	
LPAZ	**La Paz**	**40.29**	**327**	P	**P**		**13 50 04.6**	**+0.6**	
	comp=Z,13nm,0.7s,baz=152,slow=6.2,SNR=50								
LPAZ					LR	LR	14 08 16.8		
	comp=Z,293nm,20.9s,baz=88,slow=38								
	comp=Z,13nm,0.7s								
LPAZ	**La Paz**	**40.29**	**327**			**P**	**13 50 04.7**	**+0.7**	
LPAZ	**La Paz**	**40.29**	**327**	*eP*		**P**	**13 50 04.7**	**+0.7**	
LPAZ	**La Paz**	**40.29**	**327**	*eP*		**P**	**13 50 03.5**	**-0.5**	
LPAZ	**La Paz**	**40.29**	**327**	P		**P**	**13 50 05.2**	**+1.2**	
SDBA	**SAO DESIDERIO**	**40.56**	**3**	*eP*		**P**	**13 50 05.5**	**0.0**	
VILB	**Vilhena**	**41.37**	**340**	P		**P**	**13 50 11.0**	**-1.2**	
CLDB	**Colider**	**42.66**	**347**	*eP*		**P**	**13 50 22.7**	**0.0**	
CLDB	**Colider**	**42.66**	**347**	P		**P**	**13 50 23.0**	**+0.3**	
SMTB	**Santa Maria do**	**44.05**	**359**	*eP*		**P**	**13 50 34.1**	**+0.1**	
NNA	**Nana**	**47.42**	**318**	LR	LR		14 10 04.7		
	comp=Z,284nm,21.2s,baz=100,slow=35								
NNA	**Nana**	**47.42**	**318**	*eP*		**P**	**13 51 02.0**	**+1.3**	
NNA					pmax	pmax			
	comp=Z,53nm,1.5s								
SBA	**Scott Base**	**47.74**	**189**	P		**P**	**13 51 03.4**	**+1.0**	
SBA					IAmb	IAmb	13 51 14.2		
	comp=Z,23nm,1.7s								
SBA	**Scott Base**	**47.74**	**189**	P		**P**	**13 51 03.4**	**+1.0**	
SBA					pmax	pmax			
	comp=Z,23nm,1.7s								
VNDA	**Vanda**	**48.48**	**188**	P		**P**	**13 51 08.2**	**+0.1**	
	comp=Z,1.4nm,1.0s,baz=169,slow=6.5,SNR=3.7								
VNDA				PcP		**PcP**	**13 52 33.9**	**0.0**	
	comp=Z,1.2nm,0.9s,baz=153,slow=4.5,SNR=3.7								
VNDA					LR	LR	14 12 46.5		
	comp=Z,209nm,18.5s,baz=164,slow=38								
	comp=Z,1.4nm,1.0s								
VNDA	**Vanda**	**48.48**	**188**	P		**P**	**13 51 08.2**	**+0.1**	
VNDA						**PcP**	**13 52 33.8**	**-0.1**	
MAW	**Mawson**	**48.86**	**151**	P		**P**	**13 51 11.2**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=205,slow=10.0,SNR=2.1								
MAW					LR	LR	14 10 50.8		
	comp=Z,183nm,19.8s,baz=242,slow=35								
	comp=Z,1.3nm,0.8s								
MAW	**Mawson**	**48.86**	**151**	P		**P**	**13 51 09.9**	**-1.2**	
MAW	**Mawson**	**48.86**	**151**	P		**P**	**13 51 09.9**	**-1.2**	
MAW					pmax	pmax			
	comp=Z,3.0nm,1.8s								
ITTB	**Itaituba**	**49.06**	**348**	*eP*		**P**	**13 51 13.2**	**0.0**	
MACA	**Manacapuru-AM**	**51.00**	**342**	P		**P**	**13 51 27.5**	**-0.4**	
MACA					IAmb	IAmb	13 51 29.4		
	comp=Z,42nm,0.9s								
MACA	**Manacapuru-AM**	**51.00**	**342**	*eP*		**P**	**13 51 28.9**	**+0.9**	
H10S3	**ASCENSION HYDR**	**51.11**	**43**	T		T	14 46 53.0		
	baz=204,slow=74,SNR=106								
H10S2	**ASCENSION HYDR**	**51.11**	**43**	T		T	14 46 51.6		
	baz=16,slow=74,SNR=27								
SUR	**Sutherland**	**51.79**	**95**	LR		LR	14 09 43.0		
	comp=Z,328nm,20.4s,baz=218,slow=32								
H10N3	**ASCENSION HYDR**	**52.18**	**42**	T		T	14 48 13.5		
	baz=204,slow=74,SNR=104								
H10N1	**ASCENSION HYDR**	**52.19**	**42**	T		T	14 48 11.4		
	baz=204,slow=74,SNR=33								
H10N2	**ASCENSION HYDR**	**52.20**	**42**	T		T	14 48 12.0		
	baz=204,slow=74,SNR=88								
RPN	**Rapa Nui**	**52.36**	**274**	LR		LR	14 11 09.0		
	comp=Z,214nm,19.7s,baz=113,slow=33								
SGC2	**Sao Gabriel da**	**55.30**	**335**	*eP*		**P**	**13 51 58.8**	**-0.9**	
BOAV	**Boa Vista**	**56.41**	**344**			**P**	**13 52 07.1**	**-0.4**	
BOAV	**Boa Vista**	**56.41**	**344**	*eP*		**P**	**13 52 07.7**	**+0.1**	
KOOLE	**Kule**	**58.26**	**87**	P		**P**	**13 52 20.4**	**-0.5**	
H04S2	**CROZET ISLANDS**	**58.92**	**128**	T		T	14 57 04.0		
	baz=225,slow=75,SNR=60								
H04S3	**CROZET ISLANDS**	**58.93**	**128**	T		T	14 57 05.1		
	baz=225,slow=75,SNR=45								
H04S1	**CROZET ISLANDS**	**58.94**	**128**	T		T	14 57 03.3		
	baz=225,slow=75,SNR=42								
MAKGR	**Makgori**	**58.94**	**92**	P		**P**	**13 52 24.8**	**-0.7**	
OTAV	**Otavalo**	**59.24**	**323**	P		**P**	**13 52 27.7**	**-0.4**	
OTAV	**Otavalo**	**59.24**	**323**	P		**P**	**13 52 27.7**	**-0.4**	
OTAV					pmax	pmax			
	comp=Z,76nm,1.6s								
TSUM	**Tsumeb**	**59.58**	**82**	LR		LR	14 13 33.8		
	comp=Z,119nm,21.1s,baz=153,slow=31								
LBTB	**Lobatse**	**60.01**	**92**	LR		LR	14 15 42.7		
	comp=Z,203nm,18.0s,baz=224,slow=33								
LBTB	**Lobatse**	**60.01**	**92**			**P**	**13 52 31.6**	**-1.3**	
LBTB					IAmb	IAmb	13 52 34.7		
	comp=Z,13nm,0.8s								
LBTB	**Lobatse**	**60.01**	**92**	P		**P**	**13 52 31.6**	**-1.3**	
LBTB					pmax	pmax			
	comp=Z,13nm,0.8s								
LBTB	**Lobatse**	**60.01**	**92**	P		**P**	**13 52 32.6**	**-0.3**	
LBTB	**Lobatse**	**60.01**	**92**	P		**P**	**13 52 32.2**	**-0.7**	
GRTLG	**Ghanzi**	**60.11**	**86**	P		**P**	**13 52 33.5**	**-0.1**	
ROSC	**El Rosal**	**62.13**	**329**	P		**P**	**13 52 47.1**	**-0.5**	
	comp=Z,11nm,0.5s,baz=146,slow=1.5,SNR=5.2								
	comp=Z,11nm,0.5s								
KHWEE	**KHWEE**	**62.22**	**90**	P		**P**	**13 52 48.0**	**0.0**	
SDV	**Santo Domingo**	**64.91**	**334**	P		**P**	**13 53 05.3**	**-0.5**	
	comp=Z,6.9nm,0.4s,baz=284,slow=13,SNR=4.4								
	comp=Z,6.9nm,0.4s								
MATP	**Matopo**	**65.22**	**91**	LR		LR	14 19 26.8		
	comp=Z,226nm,18.3s,baz=199,slow=34								
LSZ	**Lusaka**	**68.99**	**88**	LR		LR	14 20 50.0		
	comp=Z,202nm,21.4s,baz=222,slow=34								
LSZ	**Lusaka**	**68.99**	**88**	P		**P**	**13 53 32.5**	**+0.8**	
DBIC	**Dimbokro**	**69.30**	**45**	P		**P**	**13 53 33.4**	**-0.1**	
	comp=Z,5.7nm,1.1s,baz=191,slow=17,SNR=3.0								
	comp=Z,5.7nm,1.1s								
DBIC	**Dimbokro**	**69.30**	**45**	P		**P**	**13 53 32.8**	**-0.6**	
DBIC					IAmb	IAmb	13 54 33.1		
	comp=Z,33nm,1.4s								
DBIC	**Dimbokro**	**69.30**	**45**	P		**P**	**13 53 32.8**	**-0.6**	
DBIC					pmax	pmax			
	comp=Z,33nm,1.5s								
JTS	**Las Juntas de**	**70.94**	**320**	P		**P**	**13 53 43.3**	**-0.2**	
JTS					IAmb	IAmb	13 53 45.6		
	comp=Z,19nm,0.8s								
JTS	**Las Juntas de**	**70.94**	**320**	*eP*		**P**	**13 53 44.5**	**+1.0**	
JTS					pmax	pmax			
	comp=Z,28nm,0.9s								
JTS	**Las Juntas de**	**70.94**	**320**	P		**P**	**13 53 44.5**	**+1.0**	
MTO3	**Montecristo**	**76.42**	**318**			**P**	**13 54 16.1**	**+0.3**	
MTO3					IAmb	IAmb	13 54 17.1		
	comp=Z,12nm,0.9s								
NMDO	**Nuevo Mundo**	**77.23**	**333**			**P**	**13 54 21.2**	**+1.2**	
TORD	**Torodi Ar. Bea**	**77.95**	**48**	P		**P**	**13 54 24.5**	**+0.3**	
	comp=Z,4.0nm,1.1s,baz=204,slow=5.8,SNR=9.2								
	comp=Z,4.0nm,1.1s								
TORD	**Torodi Ar. Bea**	**77.95**	**48**	P		**P**	**13 54 24.5**	**+0.3**	
RPZ	**Rata Peaks**	**78.25**	**207**	LR		LR	14 25 09.1		
	comp=Z,20nm,18.1s,baz=115,slow=33								
TBI	**Tubuai**	**78.84**	**246**	*eLR*		LR	14 19 01.3		
	comp=Z,4µm,34.5s								
CAIB	**Caibarien**	**80.36**	**330**		IAmb	IAmb	13 54 39.7		
	comp=Z,27nm,0.8s								
TEIG	**Tepich**	**81.28**	**321**			**P**	**13 54 42.2**	**+0.1**	
URZ	**Urewera**	**81.39**	**214**	LR		LR	14 24 55.0		
	comp=Z,112nm,18.1s,baz=144,slow=31								
SOR	**Soroa**	**81.76**	**327**		IAmb	IAmb	13 54 47.0		
	comp=Z,15nm,1.0s								
PPT2	**Papeete2**	**83.50**	**249**	*eP*		P	13 54 49.3	-4.9	
	comp=Z,36nm,26.0s								
PPT2				*eS*		**S**	**14 05 11.2**	**-4.8**	
	comp=Z,52nm,24.8s								
PPT2				*eLR*		LR	14 21 09.7		
	comp=Z,230nm,28.8s								
PPT2				*eLR*		LR	14 21 11.7		
	comp=Z,286nm,26.5s								
RAR	**Rarotonga**	**86.11**	**240**	LR		LR	14 25 30.8		
	comp=Z,78nm,19.0s,baz=125,slow=30								
X48A	**Hartselle**	**93.86**	**328**		IAmb	IAmb	13 55 44.1		
	comp=Z,8.5nm,0.9s								
BRDY	**Brady**	**95.41**	**317**	P		**P**	**13 55 50.2**	**-0.1**	
BRDY					IAmb	IAmb	13 55 51.6		
	comp=Z,5.1nm,1.0s								
ATD	**Arta Tunnel**	**98.96**	**83**	LR		LR	14 37 46.8		
	comp=Z,7.9nm,20.3s,baz=246,slow=34								
MSVF	**Nonsavu**	**99.55**	**223**	LR		LR	14 30 58.9		
	comp=Z,101nm,21.7s,baz=156,slow=29								
H08S1	**Diego Carcia H**	**100.86**	**118**	T		T	15 49 23.4		
	baz=220,slow=75,SNR=6.3								
H08S2	**Diego Garcia H**	**100.87**	**118**	T		T	15 49 21.3		
	baz=220,slow=75,SNR=5.3								
H08S3	**Diego Garcia H**	**100.88**	**118**	T		T	15 49 20.3		
	baz=220,slow=75,SNR=10								
ASAR	**Alice Springs**	**103.62**	**181**	Pdiff		**Pdif**	**13 56 26.2**	**-1.4**	
	comp=Z,1.0nm,1.1s,baz=186,slow=4.9,SNR=3.6								
YKA	**Yellowknife Ar**	**126.84**	**328**	PKP		**PKPdf**	**14 01 27.6**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=119,slow=1.9,SNR=2.3								
OBN	**Obninsk**	**127.81**	**46**	*e*PKIKP		**PKiKP**	**14 01 32.6**	**+1.5**	
OBN				*e*			14 03 34.2		
OBN				*e*PPP		PPP	14 06 17.1		
OBN				pmax		pmax			
	comp=Z,4.0nm,0.8s								
FINES	**FINESS Array B**	**127.89**	**36**	PKP		**PKPdf**	**14 01 29.8**	**-0.7**	
	comp=Z,5.1nm,1.0s,baz=224,slow=5.8,SNR=4.7								
AB31	**Akbulak array**	**135.80**	**64**			**PKPdf**	**14 01 45.5**	**-0.3**	
ABKAR	**Akbulak array**	**135.80**	**64**			**PKPdf**	**14 01 44.4**	**-1.4**	
H11S2	**WAKE ISLAND Hyd**	**136.76**	**230**	T		T	16 33 59.3		
	baz=147,slow=75,SNR=40								
H11S3	**WAKE ISLAND Hyd**	**136.77**	**230**	T		T	16 34 00.7		
	baz=147,slow=75,SNR=25								
H11S1	**WAKE ISLAND Hyd**	**136.78**	**230**	T		T	16 33 57.5		
	baz=147,slow=75,SNR=26								
K27K	**Chicken**	**137.70**	**319**			**PKiKP**	**14 01 50.8**	**-0.1**	
H11N3	**WAKE ISLAND Hyd**	**137.73**	**231**	T		T	16 35 06.1		
	baz=144,slow=76,SNR=11								
H11N1	**WAKE ISLAND Hyd**	**137.73**	**231**	T		T	16 35 11.2		
	baz=144,slow=76,SNR=10								
H11N2	**WAKE ISLAND Hyd**	**137.75**	**231**	T		T	16 35 09.8		
	baz=144,slow=76,SNR=8.8								
I27K	**Kandik River**	**138.21**	**322**			**PKiKP**	**14 01 51.6**	**-0.3**	
I26K	**Coal Creek Min**	**138.67**	**321**			**PKiKP**	**14 01 52.1**	**-0.7**	
ARTI	**Arti**	**138.68**	**54**	*i* PKIKP		**PKPdf**	**14 01 51.4**	**+0.5**	
ARTI							14 04 39.8		
ARTI				SS		SS	14 22 58.4	+0.9	
KSH2	**Kashi**	**138.88**	**86**	PKP		**PKiKP**	**14 01 53.7**	**-0.6**	
ILAR	**Eielson Array**	**139.91**	**319**	PKhKP		PKPpre	14 01 42.0		
	comp=Z,0.5nm,0.7s,baz=156,slow=1.9,SNR=7.5								
AAK	**Ala-Archa**	**140.37**	**81**	*e*PKIKP		**PKiKP**	**14 01 57.0**	**-0.2**	
BORK	**Borovoye**	**143.34**	**64**	*e*PKIKP		**PKiKP**	**14 02 00.8**	**-2.0**	
BVAR	**Borovoye Array**	**143.37**	**64**	PKP		PKPbc	14 01 57.2	+0.4	
	comp=Z,1.3nm,0.5s,baz=225,slow=4.0,SNR=5.9								
PDGK	**Podgornoye**	**143.76**	**83**			PKPbc	14 01 58.3	0.0	
PDGK	**Podgornoye**	**143.76**	**83**	PKIKP		PKPbc	14 01 58.3	0.0	
KMIZ	**Kunming**	**144.02**	**129**	PKP		PKPbc	14 01 59.4	-0.3	
L16K	**Owhat River**	**144.21**	**311**			**PKPdf**	**14 02 00.9**	**+0.2**	
PZH	**PanZhiHua**	**144.68**	**126**	PKP		**PKPdf**	**14 02 03.2**	**+0.4**	
E19K	**Redstone River**	**144.72**	**321**			**PKPdf**	**14 02 01.3**	**-0.1**	
D20K	**Etivluk River**	**144.72**	**323**			**PKPdf**	**14 02 01.8**	**+0.3**	
M14K	**Bethel**	**145.07**	**309**			**PKPdf**	**14 02 02.8**	**+0.7**	
J16K	**Anvik River**	**145.15**	**314**			**PKPdf**	**14 02 03.3**	**+1.0**	
D19K	**Kuna River**	**145.23**	**323**			**PKPdf**	**14 02 03.5**	**+1.1**	
L14K	**Kuka Creek**	**145.58**	**310**	PKPdf		**PKPab**	**14 02 03.9**	**+0.3**	
E18K	**Tukpahlearik C**	**145.99**	**321**	PKPdf		**PKPab**	**14 02 05.3**	**+0.3**	
C18K	**Utukok River**	**146.37**	**323**			**PKPab**	**14 02 06.7**	**+0.2**	
KURBB	**Kurchatov Arra**	**146.88**	**72**	PKPbc		**PKPbc**	**14 02 07.3**	**-0.2**	
	comp=Z,6.3nm,0.9s,baz=239,slow=3.5,SNR=31								
KURK	**Kurchatov**	**146.97**	**72**			**PKPab**	**14 02 08.1**	**-1.2**	
KURK	**Kurchatov**	**146.97**	**72**	*e*PKP2		**PKPbc**	**14 02 07.1**	**-0.7**	
MAKZ	**Makanchi**	**147.11**	**80**			**PKPbc**	**14 02 07.6**	**-0.8**	
MAKZ	**Makanchi**	**147.11**	**80**	PKP2		**PKPbc**	**14 02 07.6**	**-0.8**	
MK31	**Makanchi Array**	**147.29**	**80**	*e*PKP2		**PKPbc**	**14 02 08.3**	**-0.6**	
MKAR	**Makanchi Array**	**147.29**	**80**	PKPbc		**PKPbc**	**14 02 08.1**	**-0.8**	
	comp=Z,1.3nm,0.6s,baz=240,slow=1.9,SNR=15								
WMQ	**Urumqi**	**148.97**	**89**	*e*PKPbc		**PKPdf**	**14 02 10.1**	**+0.7**	
WMQ				L		L			
	comp=Z,85nm,19.1s								
ZALV	**Zalesovo Beam**	**151.71**	**69**	PKPbc		**PKPbc**	**14 02 18.0**	**-1.5**	
	comp=Z,1.4nm,0.5s,baz=251,slow=3.3,SNR=7.4								
NJ2	**Nanjing**	**156.64**	**148**	*e*PKP		**PKPdf**	**14 02 20.9**	**0.0**	
BTO2	**Baotou**	**160.04**	**119**	*e*PKP		**PKPdf**	**14 02 21.7**	**-3.2**	
HHC	**Hu-ho-hao-te**	**161.00**	**121**	*e*PKP		**PKPdf**	**14 02 24.2**	**-1.7**	
HHC				L		L			
	comp=Z,110nm,17.5s								
HHC				L		L			
	comp=Z,91nm,17.5s								
HHC				L		L			
	comp=Z,130nm,17.3s								
ULN	**Ulaanbaatar**	**162.68**	**97**	*e*PKIKP		**PKPdf**	**14 02 28.5**	**+1.0**	
PETK	**Petropavlovsk-**	**165.22**	**280**	PKPab		**PKPab**	**14 03 27.4**	**+0.4**	
	comp=Z,1.5nm,0.9s,baz=134,slow=6.4,SNR=4.2								

*IDC **03** 13:49:32.3±1.3,5°.27N×125°.84E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=93.3km s-min=18.5km az=74.0*

*MAN **03** 13:49:34.0,5°.71N×126°.82E,h6km,MS3.4*

ISC 03 13:49:32.2±2.0,5°.93N±0°.07×126°.99E±0°.07,h12km±12km, n13,σ1§23/22,mb3.5/4,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DDMP	**Don Marcelino,**	**1.29**	**278**	*i* P		**Pg**	**13 49 57.4**	**+0.4**
DDMP				*i* S		**Sb**	**13 50 13.0**	**+0.2**
DAV	**Davao City (W)**	**1.81**	**309**	Pn		**Pb**	**13 50 05.4**	**+0.2**
	baz=156,slow=3.8							
DAV				Sn		**Sg**	**13 50 29.9**	**-0.4**
	baz=62,slow=23							
DMPH	**Davao City--Mi**	**1.87**	**308**	*eP*		**Pg**	**13 50 08.0**	**-0.1**
DMPH				*i* S		**Sb**	**13 50 30.0**	**+0.3**
CDOP	**Cateel, Davao**	**1.93**	**343**	*i* P		**Pg**	**13 50 08.5**	**-0.7**
CDOP				*i* S		**Sg**	**13 50 33.0**	**-1.2**
GSPH	**General Santos**	**2.04**	**275**	*i* P		**Pn**	**13 50 05.8**	**-0.6**
GSPH				*i* S		**Sn**	**13 50 29.4**	**-2.5**
KCP	**Kidapawan**	**2.18**	**300**	*eP*		**Pb**	**13 50 11.1**	**-0.4**
KCP				*i* S		**Sb**	**13 50 38.9**	**+0.4**
BIPH	**Bislig**	**2.33**	**344**	*eP*		**Pg**	**13 50 16.4**	**-0.5**
BIPH				*eS*		**Sg**	**13 50 47.1**	**0.0**
BUKP	**Musuan**	**2.73**	**315**	*i* P		**Pb**	**13 50 21.0**	**+0.1**
BUKP				*i* S		**Sg**	**13 50 60.0**	**+0.1**
CTBH	**Cotabato--PC H**	**3.02**	**295**	*eP*		**Pn**	**13 50 23.1**	**+3.3**
CTBH				*i* S		**Sn**	**13 50 54.0**	**-1.9**
WRA	**Warramunga Arr**	**26.70**	**164**	P		**P**	**13 55 10.8**	**-0.6**
	0.9nm,0.8s,baz=343,slow=10,SNR=4.9							
	0.9nm,0.8s							
ASAR	**Alice Springs**	**30.18**	**167**	P		**P**	**13 55 41.7**	**-0.7**
	0.3nm,0.6s,baz=341,slow=7.4,SNR=4.3							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**55.92**	**324**	P		**P**	**13 59 11.2**	**+1.1**
	0.3nm,0.7s,baz=141,slow=9.0,SNR=2.5							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**60.05**	**327**	P		**P**	**13 59 39.8**	**+0.9**
	0.6nm,0.6s,baz=122,slow=6.2,SNR=3.2							
	0.6nm,0.6s							

*BUT **03** 13:49:38.4±1.7,44°.38N±0°.02×115°.19W±0°.01,h8km±5km, Error ellipse: s-maj=3.7km s-min=1.1km az=194.0*

NEIC 03 13:49:37.9±1.4,44°.39N±0°.02×115°.17W±0°.03,h10km±2km, ML3.9/100,ML3.4/14(BUT),Error ellipse: s-maj=4.4km s-min=3.1km az=223.0,Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PLID	**Pearl Lake**	**0.92**	**320**			Pg	13 49 55.7	+0.1
PLID				Sg		Sg	13 50 07.8	+0.3
HLID	**Hailey**	**0.99**	**146**			Pg	13 49 56.7	-0.2
HLID				Sg		Sg	13 50 09.6	-0.2
MFID	**Camas Ranch**	**1.08**	**206**			Pg	13 49 58.4	-0.3
MFID						Sb	13 50 12.9	-0.1
MFID				IAML			13 50 14.7	
	2µm,0.2s							
BCYI	**Bear Canyon**	**1.27**	**93**			Pg	13 50 02.3	0.0
CNCI	**Crows Nest Can**	**1.32**	**110**			Pb	13 50 02.8	-0.1
BMO	**Blue Mountains**	**1.59**	**288**			Pn	13 50 06.3	0.0
ICI	**Italian Canyon**	**1.60**	**91**			Pb	13 50 07.6	-0.1
MCMT	**McKenzie Canyo**	**1.71**	**74**			Pn	13 50 08.8	+0.8
MOMT	**Monida**	**2.00**	**83**			Pb	13 50 13.6	-0.9
DLMT	**Dillon**	**2.07**	**61**			Pn	13 50 13.8	+0.9
F10A	**Beach Ranch, E**	**2.15**	**318**			Pn	13 50 15.2	+1.2
VCMT	**Victor**	**2.17**	**18**			Pn	13 50 15.3	+1.1
HBMT	**Mount Humbug**	**2.29**	**51**			Pn	13 50 17.1	+1.0
BPMT	**Black Pine Rid**	**2.38**	**30**			Pn	13 50 17.8	+0.5
LRM	**Limekiln Ridge**	**2.40**	**52**			Pn	13 50 18.3	+0.8
MSO	**Missoula**	**2.59**	**19**			Pn	13 50 21.0	+1.0
MSO				IAML			13 51 56.2	
	561nm,0.8s							
MSO				IAML			13 51 59.7	
	521nm,0.8s							
LNOR	**Lincton Mounta**	**2.66**	**305**			Pn	13 50 22.2	+1.3
QLMT	**Earthquake Lak**	**2.71**	**79**	Pn		Pn	13 50 20.7	-1.0
LCCM	**Lewis and Clar**	**2.74**	**57**			Pn	13 50 23.0	+0.8
BOZ	**Bozeman (W)**	**2.79**	**63**			Pn	13 50 23.5	+0.8
G08A	**Pilot Rock**	**2.84**	**290**			Pn	13 50 23.9	+0.4
ELMT	**Elliston**	**2.84**	**40**			Pn	13 50 23.9	+0.4
YHB	**Horse Butte**	**2.86**	**81**			Pn	13 50 25.8	+2.0
YHB				IAML			13 52 05.3	
	comp=N,653nm,0.6s							
YHL	**Hebgen Lake**	**2.88**	**79**			Pn	13 50 26.1	+1.9
E09A	**Wood Farm, Sta**	**2.98**	**316**	IAML			13 52 05.9	
	comp=N,460nm,1.1s							
E09A				IAML			13 52 07.4	
	comp=E,258nm,1.0s							
FXWY	**Fox Creek**	**3.08**	**103**			Pn	13 50 29.8	+2.9
FXWY				IAML			13 52 08.3	
	comp=E,283nm,0.8s							
YPP	**Pitchstone Pla**	**3.13**	**91**	IAML			13 52 13.8	
	comp=E,384nm,0.6s							
YPP				IAML			13 52 17.3	
	comp=N,421nm,0.8s							
WVOR	**Wild Horse Val**	**3.19**	**233**	IAML			13 52 22.8	
	comp=N,206nm,1.1s							
FLWY	**Flagg Ranch**	**3.23**	**94**	IAML			13 52 12.4	
	comp=N,9.4nm,0.7s							
FLWY				IAML			13 52 19.2	
	comp=N,608nm,1.1s							
MOOW	**Moose Ponds**	**3.25**	**100**	IAML			13 52 10.9	
	comp=N,222nm,0.7s							
MOOW				IAML			13 52 13.1	
	comp=N,257nm,0.6s							
SNOW	**Snow King Moun**	**3.32**	**105**	IAML			13 52 19.0	
	comp=N,411nm,0.6s							
LOHW	**Long Hollow**	**3.38**	**102**	IAML			13 52 23.1	
	comp=N,301nm,0.8s							
LOHW				IAML			13 52 23.3	
	comp=N,293nm,0.9s							
E08A	**Dider Farm, El**	**3.45**	**309**	IAML			13 52 29.8	
	comp=N,169nm,0.8s							
SPUT	**South Promonto**	**3.67**	**146**	IAML			13 52 25.9	
	comp=E,202nm,0.6s							
SPUT				IAML			13 52 31.3	
	comp=N,316nm,0.7s							
YNE	**Yellowstone No**	**3.73**	**79**	IAML			13 52 31.6	
	comp=E,311nm,0.8s							
D08A	**Wollman Farm,**	**3.75**	**317**	IAML			13 52 30.8	
	comp=N,155nm,0.7s							
D08A				IAML			13 52 31.4	
	comp=E,128nm,0.6s							
BGU	**Big Grassy Mou**	**3.80**	**155**	IAML			13 52 32.5	
	comp=E,157nm,0.8s							
BGU				IAML			13 52 36.2	
	comp=N,151nm,1.1s							
HWUT	**Hardware Ranch**	**3.84**	**135**	IAML			13 52 34.2	
	comp=N,161nm,0.8s							
HWUT				IAML			13 52 35.9	
	comp=N,221nm,0.6s							
PINE	**Pine Mountain**	**4.20**	**264**	IAML			13 52 43.9	
	comp=N,101nm,0.9s							
PINE				IAML			13 52 54.7	
	comp=E,120nm,1.1s							
DUG	**Dugway, Tooele**	**4.54**	**157**	IAML			13 53 01.9	
	comp=E,107nm,0.8s							
DUG				IAML			13 53 07.3	
	comp=E,114nm,0.8s							
LTY	**Liberty**	**4.80**	**309**	IAML			13 53 12.8	
	comp=N,91nm,1.1s							
LTY				IAML			13 53 13.1	
	comp=E,77nm,1.1s							
BSUT	**Blindstream Ca**	**5.04**	**138**	IAML			13 53 26.5	
	comp=N,42nm,0.9s							
J04A	**Umpqua Nationa**	**5.15**	**260**	IAML			13 52 08.6	
	comp=N,121nm,0.6s							

*IDC **03** 13:50:26.0±0.7,44°.40N×115°.21W,h0km,mb3.0/1, mbtmp3.3/9,ML3.5/7,MS2.9/3,Error ellipse: s-maj=10.6km s-min=6.7km az=85.0*

*NEIC **03** 13:50:28.0±2.3,44°.39N±0°.02×115°.18W±0°.03,h10km±2km, mb3.8/9,ML3.9/92,Mwr3.8/85,ML4.4/26(BUT),Error ellipse: s-maj=4.5km s-min=3.0km az=34.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; M_{rr}-1.54; $M_{\theta\

	comp=N,2.2nm,0.3s,baz=170,slow=20,SNR=6.0						
NEW				Lg	Lg	13 52 34.6	
	comp=N,29nm,0.3s,baz=270,slow=23,SNR=18						
	comp=N,5.7nm,0.3s						
NEW	**Newport**	**4.08 341**	IAML			13 52 38.9	
	comp=N,256nm,0.8s						
NEW			IAML			13 52 41.5	
	comp=N,157nm,0.8s						
MXC	**Moxie City**	**4.20 303**	IAML			13 52 57.2	
	comp=E,99nm,1.1s						
EPH	**Ephrata**	**4.26 315**	IAML			13 52 48.0	
	comp=E,103nm,1.0s						
EPH			IAML			13 52 50.1	
	comp=N,85nm,0.7s						
PDAR	**Pinedale Array**	**4.40 110**	Pn	**Pn**		**13 51 36.9**	**+2.1**
	comp=N,0.9nm,0.3s,baz=284,slow=14,SNR=11						
PDAR				Lg	Lg	13 52 43.8	
	comp=N,3.9nm,0.3s,baz=335,slow=30,SNR=3.7						
	comp=N,2.5nm,0.5s						
G05A	**Wamic**	**4.44 283**	IAML			13 52 56.9	
	comp=N,194nm,1.1s						
J05D	**Fort Rock, OR**	**4.52 258**	IAML			13 52 53.1	
	comp=E,86nm,1.0s						
J05D			IAML			13 53 01.5	
	comp=N,71nm,1.1s						
WIFE	**Three Sisters-**	**4.78 268**	IAML			13 53 05.0	
	comp=E,102nm,0.8s						
WIFE			IAML			13 53 07.9	
	comp=N,97nm,0.8s						
B08A	**Colville Reser**	**4.88 325**	IAML			13 53 01.8	
	comp=N,459nm,1.1s						
B08A			IAML			13 53 07.2	
	comp=E,106nm,0.7s						
H04A	**Detroit Lake**	**5.01 276**	IAML			13 53 05.7	
	comp=N,117nm,1.1s						
H04A			IAML			13 53 06.5	
	comp=E,93nm,1.0s						
NLU	**North Lily Min**	**5.02 152**	IAML			13 53 10.4	
	comp=E,43nm,1.1s						
NLU			IAML			13 53 18.9	
	comp=N,37nm,0.7s						
BSUT	**Blindstream Ca**	**5.07 138**	IAML			13 53 13.9	
	comp=E,47nm,0.9s						
K04D	**Chiloquin, OR**	**5.10 252**	IAML			13 53 40.8	
	comp=E,110nm,1.1s						
J04A	**Umpqua Nationa**	**5.15 259**	IAML			13 53 25.8	
	comp=E,111nm,1.2s						
J04A			IAML			13 53 36.0	
	comp=N,110nm,1.1s						
YBH	**Yreka Blue Hor**	**6.13 247**	Pn	**Pn**		**13 52 00.2**	**+1.8**
	comp=N,0.3nm,0.3s,baz=273,slow=7.8,SNR=2.7						
	comp=N,2.4nm,0.7s						
NVAR	**Mina Array Bea**	**6.42 202**	Pn	**Pn**		**13 52 04.0**	**+1.4**
	comp=N,1.1nm,0.3s,baz=19,slow=13,SNR=5.1						
NVAR				Lg	Lg	13 53 45.4	
	comp=N,5.1nm,0.3s,baz=30,slow=38,SNR=6.1						
NVAR				LR	LR	13 55 01.3	
	comp=N,51nm,19.8s,baz=158,slow=43						
	comp=N,2.0nm,0.6s						
BBB	**Bella Bella**	**11.59 317**	LR		LR	13 57 24.0	
	comp=N,69nm,20.7s,baz=45,slow=36						
ULM	**Lac du Bonnet**	**14.32 59**	Pn	**Pn**		**13 53 47.8**	**-2.5**
	comp=N,0.7nm,0.5s,baz=272,slow=6.4,SNR=1.7						
ULM				Lg	Lg	13 57 46.6	
	comp=N,0.2nm,0.3s,baz=348,slow=23,SNR=3.7						
ULM				LR	LR	13 59 30.1	
	comp=N,62nm,18.0s,baz=168,slow=38						
DKNS	**Dickens**	**15.40 129**	IAmb	IAmb		13 54 13.7	
	comp=Z,3.8nm,0.7s						
T35A	**Sooner Cattle**	**16.00 111**	IAmb	IAmb		13 54 19.7	
	comp=Z,6.5nm,0.8s						
TXAR	**Lajitas Array**	**17.62 145**	P	**Pn**		**13 54 32.4**	**-0.9**
	baz=334,slow=11,SNR=9.1						
	comp=Z,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**18.12 1**	P	**Pn**		**13 54 38.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=183,slow=12,SNR=4.0						
YKA				Lg	Lg	13 59 47.9	
	baz=174,slow=27,SNR=2.6						
	comp=Z,0.4nm,0.6s						
R40A	**Maddies Statio**	**18.23 102**	P	**Pn**		**13 54 39.9**	**-0.8**
BRDY	**Brady**	**18.26 130**		**Pn**		**13 54 39.9**	**-1.2**
BRDY			IAmb	IAmb		13 54 44.8	
	comp=Z,6.1nm,0.8s						
FCAR	**Ozark Folk Cen**	**19.52 108**	P	**P**		**13 54 55.6**	**+0.5**
FCAR			IAmb	IAmb		13 54 59.2	
	comp=Z,4.1nm,0.7s						
T42A	**Van Buren**	**19.65 104**	P	**P**		**13 54 56.6**	**+0.1**
T42A			IAmb	IAmb		13 55 04.1	
	comp=Z,7.7nm,1.3s						
BUKO	**Buck Lake**	**25.23 75**	P	**P**		**13 55 52.7**	**-0.8**
ILAR	**Eielson Array**	**26.95 330**	P	**P**		**13 56 09.5**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=125,slow=9.3,SNR=1.8						
	comp=Z,0.2nm,0.7s						

IDC 03 13:53:31.1±4.8, 17.71S×178.47W, h598km±27km, mb3.4/4, mbtmp4.3/5, Error ellipse: s-maj=131.0km s-min=38.8km az=27.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.32**	**269**	P	P	13 54 52.0	0.0
	18nm,0.7s,baz=114,slow=16,SNR=8.7						
STKA	**Stephens Creek**	**38.68**	**241**	P	P	14 00 05.2	+0.1
	7.5nm,1.0s,baz=92,slow=8.1,SNR=6.6						
	7.5nm,1.0s						
WRA	**Warramunga Arr**	**44.61**	**259**	P	P	14 00 51.6	-0.3
	2.1nm,0.4s,baz=96,slow=7.0,SNR=45						
	2.1nm,0.4s						
ASAR	**Alice Springs**	**44.79**	**254**	P	P	14 00 53.2	-0.1
	16nm,0.6s,baz=87,slow=8.9,SNR=446						
	16nm,0.6s						
QSPA	**South Pole Qui**	**72.35**	**180**	P	P	14 03 57.3	0.0
	0.7nm,0.8s,baz=177,slow=5.7,SNR=1.8						
	0.7nm,0.8s						

*NEIC **03** 13:54:49.8, 17.88N×66.96W, h6km*

*NEIC **03** 13:54:49.8±1.6, 17.88N±0.04×66.96W±0.04, h6km±1km, mb5.2/398, ML5.1/41, Mwr5.0/42, Mww5.1/59, Error ellipse: s-maj=5.9km s-min=5.0km az=108.0, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=3.04; Mθθ=0.81; Mϕϕ=2.23; Mrθ=0.80; Mθϕ=2.51; Mϕr=-0.74; Fault plane solution: M0=3.86000×10^16 NP1:ϕs=15.09000°, δ=50.55000°, λ=-121.73000°. NP2:ϕs=239.31000°, δ=48.94000°, λ=-57.41000°. Principal axes: T 4.1298, Plg1.0000°, Azm127.0000°; N -0.6095, Plg24.0000°, Azm37.0000°; P -3.5203, Plg66.0000°, Azm219.0000°;*

*MOS **03** 13:54:49.6±1.0, 17.85N×67.15W, h10km, mb5.3/33, MS4.4/6 Error ellipse: s-maj=9.1km s-min=6.7km az=75.6*

*CATAC **03** 13:54:50.0±0.5, 18°N±3°×6°7W±°, h7km±3km, M5.2/11, mb5.2/11, mB5.5/10, MLv5.6/9, Mw(mB)5.0/10, MwMwp4.9/3, Mwp5.2/3, Error ellipse: s-maj=7.2km s-min=2.9km az=5.5, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=0.38; Mθθ=1.54; Mϕϕ=1.92; Mrθ=3.85; Mθϕ=2.23; Mϕr=1.12; Fault plane solution: M0=4.91325×10^16 NP1:ϕs=163.88680°, δ=35.25585°, λ=-175.31824°. NP2:ϕs=70.06092°, δ=87.29956°, λ=-54.83436°. Principal axes: T 4.8197, Plg32.9629°, Azm131.0229°; N 0.1821, Plg35.1208°, Azm248.1598°; P -5.0017, Plg37.6420°, Azm11.0123°; confirmed*

*IDC **03** 13:54:49.3±0.4, 17.89N×67.03W, h0km, mb4.6/28, mbtmp4.6/32, ML3.7/4, MS4.3/57 Error ellipse: s-maj=11.1km s-min=7.7km az=172.0*

*NEIC **03** 13:54:50.5, 18.58N×66.54W, h20km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^16 Nm; Mrr=2.36; Mθθ=1.01; Mϕϕ=1.35; Mrθ=-3.25; Mθϕ=2.26; Mϕr=-4.89; Fault plane solution: M0=6.62000×10^16 NP1: ϕs=239.28000°, δ=14.25000°, λ=-65.03000°. NP2:ϕs=33.63000°, δ=77.10000°, λ=-96.12000°. Principal axes: T 7.0565, Plg32.0000°, Azm129.0000°; N -0.9854, Plg6.0000°, Azm35.0000°; P -6.0710, Plg57.0000°, Azm296.0000°;*

*PTWC **03** 13:54:50, 17.90N×67.00W, Ml5.1/16*

*RSPR **03** 13:54:50.8, 17.94N×67.00W, h6km, MD3.8/15*

*NEIC **03** 13:54:50.1, 17.90N×66.96W, h9km*

*GFZ **03** 13:54:51.9±0.1, 18°N±2°×6°7W±°, h10km, M5.2/76, mb5.0/76*

*BGR **03** 13:54:52.2, 17.27N×66.77W, h18km, mb5.3, Ms4.4*

*INMG **03** 13:54:52.0±4.0, 17.85N×66.87W, h10km, mb4.9, Ms4.3, MW5.2, #DIST_RANGE: DISTANT*

*OSPL **03** 13:54:52.0±2.6, 17.91N×66.98W, h0km±34km, ML5.0, Presumed earthquake*

*GCMT **03** 13:54:52.8±0.2, 17.97N±0.02×67.06W±0.01, h12km, MW4.9/111, Moment Tensor Solution. s33,c42; s111,c175; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.33±.10; Mθθ0.50±.10; Mϕϕ 1.83±.09; Mrθ0.11±.28; Mθϕ2.96±.07; Mϕr0.19±.28; Best double couple: M0 3.27300×10^16 NP1:ϕs43.00000°, δ43.00000°, λ-84.00000°. NP2:ϕs215.00000°, δ47.00000°, λ-95.00000°. Principal axes: T 4.2060, Plg2.0000°, Azm309.0000°; N -1.8660, Plg4.0000°, Azm219.0000°; P -2.3390, Plg86.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **03** 13:54:52.0, 17.85N×67.00W, h11km, Mw5.0/44, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=2.89; Mθθ1.15; Mϕϕ 1.74; Mrθ-1.64; Mθϕ 1.97; Mϕr1.32; Fault plane solution: M0 3.82638×10^16 NP1: ϕs193.99578°, δ51.70319°, λ-130.18373°. NP2: ϕs67.72529°, δ53.16023°, λ-50.74740°. Principal axes: T 3.4330, Plg0.8166°, Azm131.1444°; N 0.6922, Plg30.4238°, Azm221.6240°; P -4.1252, Plg59.5629°, Azm39.7543°;*

ISC 03 13:54:50.9±0.5, 17.88N±0.03×67.02W±0.02, h11km±2km, n1066, σ1.48/915, mb5.1/286, MS4.4/71, 37C-27D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.09**	**344**	Pg	**Pg**	**13 54 51.9**	**-1.6**
MLPR	**Magueyes Islan**	**0.09**	**344**	P	**Pg**	**13 54 51.7**	**-1.8**
MLPR	**Magueyes Islan**	**0.09**	**344**	*ieP*	**Pg**	**13 54 51.8**	**-1.8**
CRPR	**Cabo Rojo, PR**	**0.15**	**325**	Pg	**Pg**	**13 54 52.9**	**-1.5**
CRPR				Sg	**Sg**	**13 54 56.1**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.15**	**325**	P	**Pg**	**13 54 53.1**	**-1.3**
CRPR	**Cabo Rojo, PR**	**0.15**	**325**	*ieP*	**Pg**	**13 54 53.3**	**-1.0**
GBPR	**Guanica, Bosqu**	**0.16**	**56**		**Pg**	**13 54 53.1**	**-1.4**
GBPR	**Guanica, Bosqu**	**0.16**	**56**	*ieP*	**Pg**	**13 54 53.1**	**-1.4**
LSP	**Las Mesas**	**0.30**	**348**		**Pg**	**13 54 55.9**	**-1.1**
LSP	**Las Mesas**	**0.30**	**348**	*ieP*	**Pg**	**13 54 55.9**	**-1.1**
PRSN	**Puerto Rico Se**	**0.35**	**340**		**Pg**	**13 54 56.7**	**-1.3**
PRSN					**Sg**	**13 55 02.4**	**-0.3**
PRSN				IAML		13 55 03.9	
	370μm,0.9s						
PRSN	**Puerto Rico Se**	**0.35**	**340**	P	**Pg**	**13 54 56.7**	**-1.3**
PRSN				S	**Sg**	**13 55 01.0**	**-1.7**
PRSN	**Puerto Rico Se**	**0.35**	**340**	*ieP*	**Pg**	**13 54 57.0**	**-1.0**
OBIP	**Obispado Ponce**	**0.42**	**68**		**Pg**	**13 54 57.9**	**-1.4**
OBIP					**Sg**	**13 55 04.5**	**-0.4**
OBIP	**Obispado Ponce**	**0.42**	**68**	P	**Pg**	**13 54 58.1**	**-1.2**
OBIP	**Obispado Ponce**	**0.42**	**68**	*i*P	**Pg**	**13 54 58.0**	**-1.4**
OBIP				*e*S	**Sg**	**13 55 04.9**	**-0.1**
OBIP				IAML		13 55 07.2	
	comp=Z,290μm,0.4s						
OBIP	**Obispado Ponce**	**0.42**	**68**	*ieP*	**Pg**	**13 54 58.5**	**-0.8**
OBIP				*e*S	**Sg**	**13 55 04.5**	**-0.4**
CELP	**Cerrillos**	**0.46**	**66**		**Pg**	**13 54 58.6**	**-1.4**
CELP					**Sg**	**13 55 05.7**	**-0.4**
CELP	**Cerrillos**	**0.46**	**66**	P	**Pg**	**13 54 58.7**	**-1.3**
CELP	**Cerrillos**	**0.46**	**66**	*ieP*	**Pg**	**13 54 59.4**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.46**	**38**		**Pg**	**13 54 58.3**	**-1.8**
UUPR					**Sg**	**13 55 04.7**	**-1.5**
UUPR	**Utuado, UPR, P**	**0.46**	**38**	P	**Pg**	**13 54 58.4**	**-1.6**
UUPR	**Utuado, UPR, P**	**0.46**	**38**	*ieP*	**Pg**	**13 54 59.4**	**-0.6**
AOPR	**Arecibo Observ**	**0.53**	**29**		**Pg**	**13 54 59.2**	**-2.0**
AOPR					**Sg**	**13 55 06.1**	**-2.0**
AOPR				IAML		13 55 08.6	
	comp=Z,162μm,0.6s						
AOPR	**Arecibo Observ**	**0.53**	**29**	P	**Pg**	**13 54 59.5**	**-1.7**
AOPR	**Arecibo Observ**	**0.53**	**29**	*ieP*	**Pg**	**13 54 59.8**	**-1.4**
AGPR	**Aguadilla, PR**	**0.59**	**351**		**Pg**	**13 55 00.6**	**-1.8**
AGPR					**Sg**	**13 55 09.1**	**-1.1**
AGPR				IAML		13 55 21.1	
	comp=Z,144μm,2.0s						
AGPR				IAML		13 55 21.3	
	comp=Z,112μm,1.6s						
AGPR	**Aguadilla, PR**	**0.59**	**351**	P	**Pg**	**13 55 00.9**	**-1.5**
AGPR	**Aguadilla, PR**	**0.59**	**351**	*ieP*	**Pg**	**13 55 01.1**	**-1.3**
IDE	**Isla Desecheo**	**0.66**	**319**		**Pg**	**13 55 02.4**	**-1.4**
IDE	**Isla Desecheo**	**0.66**	**319**	*ieP*	**Pg**	**13 55 02.4**	**-1.4**
EMPR	**Esperanza - Ma**	**0.75**	**38**		**Pg**	**13 55 04.3**	**-1.2**
EMPR					**Sg**	**13 55 14.4**	**-0.9**
EMPR	**Esperanza - Ma**	**0.75**	**38**	P	**Pg**	**13 55 04.1**	**-1.4**
EMPR	**Esperanza - Ma**	**0.75**	**38**	*ieP*	**Pg**	**13 55 04.3**	**-1.2**
EMPR				*e*S	**Sg**	**13 55 14.4**	**-0.9**
ECPR	**Experimental S**	**0.76**	**55**		**Pg**	**13 55 03.3**	**-2.3**
ECPR					**Sg**	**13 55 14.3**	**-1.2**
ECPR				IAML		13 55 15.8	
	comp=Z,90μm,0.4s						
ECPR	**Experimental S**	**0.76**	**55**	P	**Pg**	**13 55 03.7**	**-1.9**
ECPR	**Experimental S**	**0.76**	**55**	*ieP*	**Pg**	**13 55 04.1**	**-1.5**
SJG	**San Juan**	**0.86**	**75**	Pg	**Pg**	**13 55 05.9**	**-1.6**
	comp=Z,1μm,0.3s,baz=253,slow=15,SNR=293						
SJG				Lg	Lg	13 55 17.8	
	comp=Z,4μm,0.3s,baz=250,slow=17,SNR=18						
SJG	**San Juan**	**0.86**	**75**		**Pg**	**13 55 05.4**	**-2.1**
SJG				IAML		13 55 20.3	
	comp=Z,50μm,0.7s						
SJG	**San Juan**	**0.86**	**75**	P	**Pg**	**13 55 05.4**	**-2.1**
SJG				S	**Sg**	**13 55 18.3**	**-0.4**
SJG	**San Juan**	**0.86**	**75**	P	**Pg**	**13 55 05.6**	**-1.9**
SJG	**San Juan**	**0.86**	**75**	P	**Pg**	**13 55 05.4**	**-2.1**
SJG				S	**Sg**	**13 55 18.3**	**-0.4**
SJG	**San Juan**	**0.86**	**75**	*ieP*	**Pg**	**13 55 05.5**	**-1.9**
SJG	**San Juan**	**0.86**	**75**	*i*P	**Pg**	**13 55 05.7**	**-1.9**
SJG				*e*S	**Sg**	**13 55 17.9**	**-0.8**
SJG	**San Juan**	**0.86**	**75**	*ieP*	**Pg**	**13 55 06.2**	**-1.2**
SJG	**San Juan**	**0.86**	**75**	P	**Pg**	**13 55 05.6**	**-1.9**
IGPR	**InterUniversit**	**0.87**	**85**		**Pg**	**13 55 07.1**	**-0.7**
IGPR					**Sb**	**13 55 19.5**	**-0.2**
IGPR	**InterUniversit**	**0.87**	**85**	P	**Pg**	**13 55 06.2**	**-1.6**
IGPR	**InterUniversit**	**0.87**	**85**	*ieP*	**Pg**	**13 55 07.1**	**-0.7**
PDPR	**Patillas Dam,**	**0.96**	**82**		**Pg**	**13 55 07.3**	**-2.1**
PDPR					**Sb**	**13 55 22.7**	**+0.5**
PDPR	**Patillas Dam,**	**0.96**	**82**	*ieP*	**Pg**	**13 55 08.5**	**-0.9**
HUMP	**Col San Antoni**	**1.14**	**77**		**Pb**	**13 55 10.2**	**-2.5**
HUMP					**Sg**	**13 55 28.0**	**+0.2**
HUMP				IAML		13 55 31.1	
	comp=Z,29μm,1.7s						
HUMP	**Col San Antoni**	**1.14**	**77**		**Sb**	**13 55 26.9**	**-0.6**
HUMP	**Col San Antoni**	**1.14**	**77**	P	**Pb**	**13 55 10.2**	**-2.5**
HUMP	**Col San Antoni**	**1.14**	**77**	*ieP*	**Pb**	**13 55 11.4**	**-1.2**
HUMP				*ieP*	**Pb**	**13 55 11.5**	**-1.2**
HUMP				*e*S	**Sb**	**13 55 26.9**	**-0.6**
PCDR	**Punta Cana, DR**	**1.44**	**296**		**Pn**	**13 55 15.7**	**-1.2**
PCDR					**Sb**	**13 55 36.0**	**-0.1**
PCDR				IAML		13 55 41.8	
	comp=N,47μm,0.9s						
PCDR				IAML		13 55 47.5	
	comp=E,22μm,1.8s						
PCDR	**Punta Cana, DR**	**1.44**	**296**	P	**Pn**	**13 55 15.8**	**-1.1**
PCDR	**Punta Cana, DR**	**1.44**	**296**	*i*P	**Pn**	**13 55 16.1**	**-0.8**
PCDR				*e*S	**Sb**	**13 55 36.0**	**-0.1**
PCDR				IAML		13 55 44.7	
	comp=Z,10μm,0.8s						
PCDR	**Punta Cana, DR**	**1.44**	**296**	*ieP*	**Pn**	**13 55 16.2**	**-0.7**
PCDR				*e*S	**Sb**	**13 55 36.0**	**-0.1**
DR12	**Loma Pena Alta**	**2.42**	**292**		**Pn**	**13 55 29.8**	**-0.6**
SMDR	**Samana, DR**	**2.49**	**305**	P	**Pn**	**13 55 32.8**	**+1.5**
SDD	**Santo Domingo**	**2.81**	**282**		**Pn**	**13 55 35.9**	**+0.1**
SDD				IAML		13 56 41.3	
	comp=N,13μm,1.1s						
SDD	**Santo Domingo**	**2.81**	**282**	P	**Pn**	**13 55 36.2**	**+0.5**
SDD				S	**Sb**	**13 56 15.9**	**+0.3**
SDD	**Santo Domingo**	**2.81**	**282**	P	**Pn**	**13 55 36.6**	**+0.8**
SDD	**Santo Domingo**	**2.81**	**282**	*i*P	**Pn**	**13 55 37.0**	**+1.2**
BANI	**BANI**	**3.21**	**280**		**Pn**	**13 55 41.6**	**+0.1**
SABA	**Saba**	**3.61**	**94**		**Pn**	**13 55 45.9**	**-0.9**
SABA	**Saba**	**3.61**	**94**	P	**Pn**	**13 55 46.6**	**-0.3**
SABA				S	**Sn**	**13 56 28.9**	**-0.5**
SABA	**Saba**	**3.61**	**94**	P	**Pn**	**13 55 46.7**	**-0.1**
SABA	**Saba**	**3.61**	**94**	*ieP*	**Pn**	**13 55 46.5**	**-0.3**
SABA				*e*S	**Sn**	**13 56 25.3**	**-4.1**
SABA	**Saba**	**3.61**	**94**	P	**Pn**	**13 55 46.7**	**-0.1**
SMRT	**St. Maarten**	**3.76**	**87**		**Pn**	**13 55 48.3**	**-0.6**
SMRT	**St. Maarten**	**3.76**	**87**	*ieP*	**Pn**	**13 55 48.3**	**-0.6**
SMRT				*e*S	**Sn**	**13 56 27.9**	**-5.3**
SMRT	**St. Maarten**	**3.76**	**87**	P	**Pn**	**13 55 47.8**	**-1.0**
SC01	**Santiago de lo**	**3.84**	**294**	P	**Pn**	**13 55 53.9**	**+4.0**
SEUS	**St. Eustatius**	**3.87**	**95**		**Pn**	**13 55 48.0**	**-2.3**
SEUS	**St. Eustatius**	**3.87**	**95**	P	**Pn**	**13 55 49.6**	**-0.7**
SEUS				S	**Sn**	**13 56 36.1**	**+0.3**
SEUS	**St. Eustatius**	**3.87**	**95**	*ieP*	**Pn**	**13 55 49.9**	**-0.5**
SEUS	**St. Eustatius**	**3.87**	**95**	P	**Pn**	**13 55 50.0**	**-0.3**
SKI	**Saint Kitts**	**4.12**	**97**	*ieP*	**Pn**	**13 55 53.7**	**-0.1**
LOVI	**El Cajuil, Ovi**	**4.14**	**269**	*i*P	**Pn**	**13 55 54.0**	**-0.2**
LOVI				*e*S	**Sn**	**13 56 42.2**	**-0.3**
LOVI				IAML		13 56 45.8	
	comp=Z,593nm,1.1s						
SDDR	**Presa de Saban**	**4.20**	**286**		**Pn**	**13 55 57.9**	**+3.0**
SDDR	**Presa de Saban**	**4.20**	**286**	P	**Pn**	**13 55 58.3**	**+3.4**
SDDR				S	**Sb**	**13 56 56.4**	**+0.9**
SDDR	**Presa de Saban**	**4.20**	**286**	P	**Pn**	**13 55 58.2**	**+3.3**
SDDR				S	**Sb**	**13 56 51.1**	**-4.5**
SDDR	**Presa de Saban**	**4.20**	**286**	*i*P	**Pn**	**13 55 58.7**	**+3.8**
SDDR				*i*S	**Sb**	**13 56 50.3**	**-5.2**
SDDR				IVMs_BB	IVMs_BB	13 57 09.8	
	comp=Z,30μm,3.5s						
SDDR				IVMs_BB	IVMs_BB	13 57 14.2	
	comp=E,48μm,4.4s						
SDDR	**Presa de Saban**	**4.20**	**286**	P	**Pn**	**13 55 58.9**	**+4.0**
LODU1	**El Espartillar**	**4.26**	**277**	*i*P	**Pn**	**13 55 57.8**	**+2.0**
LODU1				IAML		13 57 17.0	
	comp=Z,3μm,3.1s						
LOBH	**Bahia de las A**	**4.40**	**270**	*i*P	**Pn**	**13 55 57.3**	**-0.3**
LOBH				*e*S	**Sn**	**13 56 49.4**	**+0.5**
LOBH				IAML		13 56 58.6	
	comp=Z,1μm,1.0s						
LOPP1	**Punta Rusia, P**	**4.42**	**297**	*i*P	**Pn**	**13 56 00.0**	**+2.1**
LOPP1				IAML		13 57 12.7	
	comp=Z,4μm,0.9s						
ANWB	**Willy Bob**	**4.99**	**92**		**Pn**	**13 56 04.2**	**-1.6**
ANWB	**Willy Bob**	**4.99**	**92**	P	**Pn**	**13 56 04.9**	**-0.8**
ANWB				S	**Sn**	**13 57 02.6**	**-1.0**
ANWB	**Willy Bob**	**4.99**	**92**	P	**Pn**	**13 56 04.5**	**-1.3**
ANWB				S	**Sn**	**13 57 02.5**	**-1.0**
ANWB	**Willy Bob**	**4.99**	**92**	*ieP*	**Pn**	**13 56 04.8**	**-1.0**
ANWB	**Willy Bob**	**4.99**	**92**	P	**Pn**	**13 56 05.4**	**-0.4**
DHSZ	**Broadband at M**	**5.27**	**107**	*ieP*	**Pn**	**13 56 08.0**	**-0.9**
DHSZ				*e*S	**Sn**	**13 57 08.1**	**-2.4**
GDHS	**Morne Mazeau,**	**5.27**	**107**	Pn	**Pn**	**13 56 07.7**	**-2.0**
GDHS				IAML		13 57 14.9	
	comp=E,2μm,0.5s						
GDHS				IAML		13 57 25.3	
	comp=N,1μm,0.5s						
GRTK	**Grand Turk**	**5.29**	**314**	P	**Pn**	**13 56 09.8**	**-0.2**
GRTK				S	**Sn**	**13 57 08.9**	**-2.1**
GRTK	**Grand Turk**	**5.29**	**314**	P	**Pn**	**13 56 09.7**	**-0.2**
	comp=N,20μmcomp=N,1μm,0.8s						
GRTK				S	**Sn**	**13 57 07.8**	**-3.2**
	comp=N,20μmcomp=N,1μm,0.8s						
GRTK	**Grand Turk**	**5.29**	**314**	*i*P	**Pn**	**13 56 10.0**	**+0.1**
GRTK				*e*S	**Sn**	**13 57 08.1**	**-2.9**
GRTK				IAML		13 57 21.0	
	comp=Z,782nm,0.9s						
GRTK	**Grand Turk**	**5.29**	**314**	*i*P	**Pn**	**13 56 09.9**	**-0.1**
GRTK	**Grand Turk**	**5.29**	**314**	P	**Pn**	**13 56 10.0**	**+0.1**
LGNH	**Logne**	**5.35**	**278**	P	**Pn**	**13 56 12.7**	**+2.0**
MMLZ	**Guadeloupe Bro**	**5.44**	**109**	*ieP*	**Pn**	**13 56 11.2**	**-0.7**
MMLZ				*e*S	**Sn**	**13 57 12.5**	**-2.0**
CBE	**Ff, Capester**	**5.48**	**108**	P	**Pn**	**13 56 11.6**	**-1.0**
TBG	**Guadaloupe-3**	**5.53**	**111**	*ieP*	**Pn**	**13 56 11.8**	**-1.4**
MAGL	**Barre de l'Ile**	**5.82**	**108**	*ieP*	**Pn**	**13 56 16.6**	**-0.6**
MAGL				*e*S	**Sn**	**13 57 23.2**	**-0.8**
DSLB	**Salisbury**	**5.89**	**114**	*ieP*	**Pn**	**13 56 16.9**	**-1.3**
DSLB				*e*S	**Sn**	**13 57 23.1**	**-2.6**
DWS	**Wesley**	**5.93**	**112**	*ieP*	**Pn**	**13 56 18.9**	**+0.1**
DWS				*e*S	**Sn**	**13 57 24.0**	**-2.7**
SVN	**Savane Anatole**	**6.38**	**117**	*ieP*	**Pn**	**13 56 25.3**	**+0.4**
SVN				*e*S	**Sn**	**13 57 35.2**	**-2.7**
BIM	**Bigot**	**6.62**	**120**		**Pn**	**13 56 26.8**	**-1.5**
BIM	**Bigot**	**6.62**	**120**	*ieP*	**Pn**	**13 56 28.0**	**-0.3**
BIM				*e*S	**Sn**	**13 57 39.5**	**-4.3**
BIM	**Bigot**	**6.62**	**120**	P	**Pn**	**13 56 28.9**	**+0.6**
ILAM	**Ilet Lapin Mar**	**6.66**	**117**	*ieP*	**Pn**	**13 56 27.9**	**-0.8**
ILAM				*e*S	**Sn**	**13 57 36.2**	**-8.5**
MPOM	**Morne Pois Mar**	**6.84**	**119**		**Pn**	**13 56 29.6**	**-1.5**
MPOM	**Morne Pois Mar**	**6.84**	**119**	P	**Pn**	**13 56 33.0**	**+1.8**
H05S1	**Guadeloupe/Mar**	**6.86**	**119**	T	T	14 03 22.9	
	SNR=9.6						
SLBI	**Saint Lucia, B**	**6.97**	**123**	*ieP*	**Pn**	**13 56 32.0**	**-1.0**
SLBI				*e*S	**Sn**	**13 57 46.0**	**-6.2**
MASC	**Masc**	**7.19**	**290**	P	**Pn**	**13 56 35.8**	**-0.3**
MASC				S	**Sn**	**13 57 58.1**	**+0.4**
MASC	**Masc**	**7.19**	**290**	*i*P	**Pn**	**13 56 35.3**	**-0.8**
MASC				IVMs_BB

SERC Banco Serrana, 13.31 256 P **Pn** **13 57 59.0 -1.0**
comp=E,174nm,1.0s
SERC S **Sn** **14 00 27.0 -1.1**
comp=E,174nm,1.0s
PTBC PUERTO BERRIO, 13.41 214 P **Pn** **13 57 59.0 -2.3**
comp=E,620nmcomp=E,31nm,0.8s
HELC Santa Helena 14.29 217 P **Pn** **13 58 14.4 +0.8**
HELC Santa Helena 14.29 217 P **Pn** **13 58 15.2 +1.6**
comp=E,647nmcomp=E,67nm,1.1s
CAMR Camarioca 14.40 293 Pn **Pn** **13 58 12.8 -2.0**
NORC Norcasia 14.45 213 P **Pn** **13 58 13.7 -1.9**
comp=E,962nmcomp=E,61nm,0.8s
PTGC Puerto Gaitan, 14.49 201 P **Pn** **13 58 15.0 -1.1**
comp=E,3µmcomp=E,140nm,1.4s
ROSC El Rosal 14.80 210 Pn **Pn** **13 58 19.7 -0.9**
comp=E,1.5nm,0.3s,baz=9.6,slow=13,SNR=5.0
ROSC LR LR 14 04 35.5
comp=E,926nm,19.7s,baz=273,slow=40
comp=E,6.2nm,0.3s
CBOC Ciudad Bolivar 14.83 217 P **Pn** **13 58 20.2 -0.6**
comp=E,802nmcomp=E,56nm,0.7s
CVER Cruz Verde, Cu 14.97 208 P Pn 13 58 14.8 -8.2
GUY2C Guyana, Caldas 15.00 214 P **Pn** **13 58 20.4 -3.0**
comp=E,566nmcomp=E,113nm,0.8s
BCIP Isla Barro Col 15.17 237 P **P** **13 58 30.8 +0.5**
060A Indiantown 15.32 309 **Pn** **13 58 26.0 -1.2**
060A IAmb IAmb 13 58 29.2
comp=Z,164nm,1.1s
PLMC San Jos del P 15.76 216 P **Pn** **13 58 27.1 -6.0**
SOR Soroa 15.77 291 Pn **Pn** **13 58 31.9 -1.2**
SOR Soroa 15.77 291 P **Pn** **13 58 31.9 -1.2**
SOR pmax pmax
comp=Z,71nm,1.2s
SOR Soroa 15.77 291 P **Pn** **13 58 34.2 +1.1**
PRAC Prado 16.05 210 P **Pn** **13 58 30.1 -6.7**
ORTC Ortega, Tolima 16.06 211 P **Pn** **13 58 37.5 +0.6**
comp=Z,2µmcomp=Z,121nm,1.0s
AZU Azuero 16.35 234 P **P** **13 58 43.1 -0.3**
comp=Z,2µmcomp=Z,69nm,2.4s
BOAV Boa Vista 16.66 157 P **Pn** **13 58 43.2 -1.3**
BOAV Boa Vista 16.66 157 *eP* **Pn** **13 58 44.1 -0.4**
DWPF Disney Wildern 16.71 310 P **Pn** **13 58 44.1 -1.0**
DWPF IAmb IAmb 13 58 47.7
comp=Z,198nm,1.4s
DWPF Disney Wildern 16.71 310 Pn **Pn** **13 58 42.1 -2.9**
DWPF IAmb IAmb 13 58 47.9
comp=Z,585nm,1.9s
DWPF Disney Wildern 16.71 310 P **Pn** **13 58 45.0 0.0**
JAMC Jamundi, Valle 17.38 214 P **P** **13 58 55.4 +0.3**
comp=Z,911nmcomp=Z,44nm,1.1s
SIUN Universidad Ur 17.58 259 **Pn** **13 58 54.6 -1.4**
GARC Garzon, Huila 17.68 209 P **P** **13 59 00.5 +2.1**
comp=Z,2µmcomp=Z,31nm,0.8s
BRU2 Volcan 17.71 241 P **P** **13 59 00.5 +1.8**
SGC2 Sao Gabriel da 17.92 180 P **P** **13 59 01.4 +0.5**
comp=Z,1µmcomp=Z,40nm,1.3s
SGC2 Sao Gabriel da 17.92 180 *eP* **P** **13 59 01.1 +0.3**
POPC Popayan, Colom 17.95 213 P **P** **13 59 01.7 +0.2**
comp=Z,834nmcomp=Z,33nm,1.1s
FLOC Florencia 18.29 209 P **P** **13 59 06.2 +1.3**
comp=Z,3µmcomp=Z,91nm,1.9s
HDC Heredia 18.34 247 *eP* **P** **13 59 06.7 +1.1**
HDC Heredia 18.34 247 P **P** **13 59 08.3 +2.7**
BOAB BOACO BROADBAN 18.79 256 P **Pn** **13 59 12.1 +1.3**
Y60A Bolivia 18.93 330 IAmb IAmb 13 59 21.1
comp=Z,213nm,1.1s
MDP Montagnes des 18.95 130 P **Pn** **13 59 13.4 +0.5**
comp=Z,0.5nm,0.3s,baz=318,slow=13,SNR=8.1
MDP LR LR 14 07 39.3
comp=Z,962nm,21.1s,baz=311,slow=41
comp=Z,30nm,1.0s
JTS Las Juntas de 18.95 249 P **Pn** **13 59 12.8 -0.1**
comp=Z,1.4nm,0.3s,baz=77,slow=9.7,SNR=24
JTS LR LR 14 06 46.1
comp=Z,549nm,18.1s,baz=49,slow=38
comp=Z,29nm,0.8s
JTS Las Juntas de 18.95 249 P **Pn** **13 59 13.2 +0.4**
JTS Las Juntas de 18.95 249 *diP* **Pn** **13 59 14.2 +1.3**
JTS Las Juntas de 18.95 249 P **Pn** **13 59 13.3 +0.4**
JTS Las Juntas de 18.95 249 P **Pn** **13 59 14.3 +1.5**
CSU Charleston Sou 19.08 324 P **P** **13 59 12.7 -0.8**
RGRS Roger Stewart 19.09 324 P **P** **13 59 11.2 -2.4**
RGRS IAmb IAmb 13 59 23.8
comp=Z,297nm,1.2s
PTLC Puerto Leguiza 19.19 204 P **Pn** **13 59 17.4 +1.6**
comp=Z,1µmcomp=Z,61nm,1.2s
NHSC New Hope 19.23 325 P **P** **13 59 15.1 0.0**
NHSC IAmb IAmb 13 59 24.9
comp=Z,155nm,1.1s
MGAN Managua 19.42 256 P **Pn** **13 59 20.4 +1.9**
comp=Z,10µmcomp=Z,107nm,1.2s
CNGN Cerro Negro 19.73 257 P **Pn** **13 59 22.6 +0.4**
comp=Z,37µmcomp=Z,1µm,1.6s
CNGN Cerro Negro 19.73 257 P **Pn** **13 59 23.6 +1.4**
CMBC Cumbal 19.91 213 P **Pn** **13 59 26.4 +1.6**
Y57A Sumter 20.03 326 IAmb IAmb 13 59 29.3
comp=Z,167nm,1.3s
TULM Tulcn-Chalpat 20.08 213 P Pn 13 59 28.2 +1.4
comp=Z,54nm,0.6s
TEIG Tepich 20.23 280 P **P** **13 59 25.2 -0.9**
TEIG Tepich 20.23 280 P Pn 13 59 27.1 -0.9
BIRD Birdtown, Kers 20.55 327 IAmb IAmb 13 59 40.5
comp=Z,66nm,0.8s
JSC Jenkinsville 20.70 325 IAmb IAmb 13 59 42.5
comp=Z,73nm,0.9s
CUSE Cuicocha Este 20.75 214 P Pn 13 59 35.3 +0.7
V58A Windy Hill, Pi 20.82 331 IAmb IAmb 13 59 47.8
comp=Z,246nm,1.7s
352A Blakely 21.12 313 IAmb IAmb 13 59 54.1
comp=Z,67nm,1.0s
T59A Double "B" Far 21.16 336 P **P** **13 59 36.5 +0.4**
HODGE Hodges 21.23 323 IAmb IAmb 13 59 44.2
comp=Z,163nm,1.3s
GOGA Godfrey 21.38 319 IAmb IAmb 13 59 50.1
comp=Z,75nm,1.1s
GOGA Godfrey 21.38 319 P **P** **13 59 40.0 +1.5**
SLOR San Lorenzo - 21.67 213 P **P** **13 59 44.4 +2.1**
ESQI Esquipulas 21.68 264 P **P** **13 59 42.9 +0.9**
ESQI IAmb IAmb 13 59 52.2
comp=Z,137nm,1.0s
MTO3 Montecristo 21.73 264 P **P** **13 59 42.2 -0.5**
MTO3 IAmb IAmb 13 59 56.5
comp=Z,94nm,1.6s
MACA Manacapuru-AM 21.83 163 *eP* **P** **13 59 45.2 +1.8**
V55A Taylorsville 21.88 328 IAmb IAmb 13 59 59.4
comp=Z,45nm,0.5s
Y52A Lilburn 22.05 319 P **P** **13 59 45.0 -0.7**
Y52A IAmb IAmb 13 59 53.7
comp=Z,137nm,1.4s
R58B Mineral 22.15 337 IAmb IAmb 14 00 05.3
comp=Z,55nm,0.6s
BLA Blacksburg 22.58 331 P **P** **13 59 50.8 -0.6**
BLA Blacksburg 22.58 331 P **P** **13 59 50.8 -0.6**
BLA pmax pmax
comp=Z,288nm,1.5s
APG El Apazote 22.66 266 LR LR 14 08 27.7
comp=Z,65nm,18.7s,baz=67,slow=36
X51A Calhoun 23.00 320 IAmb IAmb 14 00 15.7
comp=Z,72nm,1.3s
TKL Tuckaleechee C 23.11 323 LR LR 14 08 52.5
comp=Z,618nm,20.7s,baz=158,slow=36
TKL Tuckaleechee C 23.11 323 IAmb IAmb 14 00 06.4
comp=Z,89nm,1.3s
R55A Marlinton 23.33 333 IAmb IAmb 14 00 23.9
comp=Z,49nm,0.8s
CPCT Cooper Cave 23.40 322 IAmb IAmb 14 00 19.3
comp=Z,45nm,0.9s
FPAL Fort Paine 23.46 319 IAmb IAmb 14 00 05.5
comp=Z,157nm,2.0s
S54A Dingess, Beckl 23.47 331 IAmb IAmb 14 00 23.6
comp=Z,66nm,1.0s
P57A Homestead Farm 23.55 338 IAmb IAmb 14 00 25.9
comp=Z,165nm,1.9s
Y49A Blount Mountai 23.55 316 P **P** **14 00 00.9 -0.4**
Q56A Snyder Ridge, 23.59 336 IAmb IAmb 14 00 25.7
comp=Z,97nm,1.1s
CPNY Central Park 23.60 347 IAmb IAmb 14 00 24.7
comp=Z,56nm,0.7s
TZTN Tazewell 23.63 325 IAmb IAmb 14 00 23.0
comp=Z,114nm,1.6s
TZTN Tazewell 23.63 325 P **P** **14 00 03.0 +0.9**
W50A Signal Mountai 23.71 320 IAmb IAmb 14 00 08.2
comp=Z,48nm,1.1s
PAL Palisades 23.79 347 IAmb IAmb 14 00 27.3
comp=Z,38nm,0.7s
M65A Busby, Falmout 23.80 353 P **P** **14 00 04.5 +0.8**
baz=171
M63A Gales Ferry 23.84 351 IAmb IAmb 14 00 25.1
comp=Z,60nm,1.1s
Z47A Carrollton 24.29 313 IAmb IAmb 14 00 13.5
comp=Z,48nm,0.8s
X48A Hartselle 24.32 317 IAmb IAmb 14 00 24.0
comp=Z,158nm,2.0s
N58A Sunbury 24.35 342 IAmb IAmb 14 00 34.7
comp=Z,77nm,1.2s
KSCT Kent School, K 24.40 348 IAmb IAmb 14 00 29.6
comp=Z,91nm,1.8s
S51A Beattyville 24.47 327 IAmb IAmb 14 00 36.4
comp=Z,108nm,1.5s
T50A Nancy 24.69 324 IAmb IAmb 14 00 21.5
comp=Z,32nm,0.8s
ITTB Itaituba 24.75 152 *eP* **P** **14 00 13.5 +0.8**
KSPA Keystone Colle 24.76 344 IAmb IAmb 14 00 39.5
comp=Z,72nm,1.4s
HRV Adam Dziewonsk 24.85 352 P **P** **14 00 15.2 +1.9**
P53A Whipple 24.88 333 IAmb IAmb 14 00 32.0
comp=Z,37nm,1.1s
O54A Avella 25.04 335 IAmb IAmb 14 00 17.9
comp=Z,61nm,1.0s
R50A Paris 25.34 327 IAmb IAmb 14 00 47.8
comp=Z,84nm,1.2s
BINY Binghamton 25.42 344 P **P** **14 00 20.1 +1.6**
O53A New Philadelph 25.44 334 IAmb IAmb 14 00 43.8
comp=Z,22nm,1.2s
R49A Shelbyville 25.79 326 IAmb IAmb 14 00 54.1
comp=Z,123nm,1.8s
WVT Waverly 25.87 319 P **P** **14 00 22.2 -0.5**
WVT Waverly 25.87 319 P **P** **14 00 22.2 -0.5**
WVT pmax pmax
comp=Z,21nm,0.7s
WVT Waverly 25.87 319 P **P** **14 00 22.9 +0.2**
PAOC Oil Creek Stat 25.93 338 IAmb IAmb 14 00 35.4
comp=Z,61nm,1.5s
K57A Scipio Center 26.05 344 IAmb IAmb 14 00 58.3
comp=Z,26nm,0.8s
CZSB Cruzeiro do Su 26.06 193 *eP* **P** **14 00 26.1 +1.5**
ACSO Alum Creek Sta 26.20 332 IAmb IAmb 14 00 43.4
comp=Z,74nm,1.1s
WCI Wyandotte Cave 26.36 324 P **P** **14 00 26.5 -0.6**
WCI IAmb IAmb 14 00 40.3
comp=Z,31nm,0.9s
WCI Wyandotte Cave 26.36 324 P **P** **14 00 26.5 -0.6**
WCI pmax pmax
comp=Z,31nm,0.9s
WCI Wyandotte Cave 26.36 324 P **P** **14 00 27.9 +0.8**
MMNY Mt. Morris Dam 26.44 342 IAmb IAmb 14 00 33.5
comp=Z,40nm,1.0s
N51A Ashland 26.49 333 IAmb IAmb 14 00 45.8
comp=Z,70nm,1.4s
J57A Williamstown 26.56 345 IAmb IAmb 14 01 04.4
comp=Z,63nm,1.2s
P48A Milroy 26.79 327 IAmb IAmb 14 00 47.2
comp=Z,51nm,1.3s
O49A Covington 26.79 330 IAmb IAmb 14 00 47.8
comp=Z,47nm,1.2s
J55A Hilton 26.91 342 IAmb IAmb 14 01 07.2
comp=Z,124nm,1.9s
USIN University of 26.96 322 IAmb IAmb 14 00 46.8
comp=Z,58nm,1.1s
O48B Farmland 27.25 329 IAmb IAmb 14 00 51.7
comp=Z,57nm,1.3s
NPGB Novo Progresso 27.32 154 *eP* **P** **14 00 35.8 -0.1**
PARMO Parma 27.42 318 IAmb IAmb 14 00 43.8
comp=Z,61nm,1.0s
OLIL Olney 27.73 323 IAmb IAmb 14 00 49.4
comp=Z,47nm,0.9s
S44A Carbondale 27.74 320 IAmb IAmb 14 00 47.2
comp=Z,39nm,0.8s
N47A Urbana 27.99 329 IAmb IAmb 14 00 49.2
comp=Z,38nm,0.9s
DELO Deloro Mine 28.01 344 IAmb IAmb 14 00 44.1
comp=Z,79nm,1.8s
X40A Basin Creek Pa 28.34 311 IAmb IAmb 14 01 30.6
comp=Z,59nm,1.4s
WHAR Wooly Hollow 28.36 313 IAmb IAmb 14 01 40.6
comp=Z,37nm,1.1s
Q44A Meyer Farm, Va 28.38 322 IAmb IAmb 14 01 20.5
comp=Z,52nm,1.1s
FCAR Ozark Folk Cen 28.55 314 IAmb IAmb 14 01 24.5
comp=Z,92nm,1.6s
SADO Sadowa 28.67 342 LR LR 14 13 30.2
comp=Z,1µm,18.1s,baz=176,slow=39
HKT Hockley 28.86 300 P **P** **14 00 49.0 -0.5**
HKT IAmb IAmb 14 00 51.8
comp=Z,68nm,1.5s
HKT Hockley 28.86 300 *diP* **P** **14 00 50.7 +1.2**
HKT pmax pmax
comp=Z,45nm,1.5s
HKT Hockley 28.86 300 P **P** **14 00 50.5 +0.9**
MIAR Mount Ida 28.91 310 IAmb IAmb 14 01 39.4
comp=Z,57nm,1.6s
MIAR Mount Ida 28.91 310 P **P** **14 00 51.7 +1.7**
CCM Cathedral Cave 29.20 318 P **P** **14 00 52.2 -0.3**
CCM IAmb IAmb 14 00 58.9
comp=Z,50nm,1.4s
CCM Cathedral Cave 29.20 318 P **P** **14 00 52.2 -0.3**
CCM pmax pmax
comp=Z,50nm,1.4s
PRPB Parauapebas 29.32 143 *eP* **P** **14 00 55.5 +1.6**
R40A Maddies Statio 29.99 318 IAmb IAmb 14 01 02.3
comp=Z,59nm,1.7s
HHAR Hobbs 30.01 313 IAmb IAmb 14 01 18.1
comp=Z,58nm,1.8s
P40A Paris 30.59 320 IAmb IAmb 14 01 11.7
comp=Z,27nm,1.0s
N41A Harden Midland 30.63 323 IAmb IAmb 14 01 12.1
comp=Z,32nm,1.0s
CLDB Colider 30.65 158 *eP* **P** **14 01 04.7 -0.9**
CLDB Colider 30.65 158 P **P** **14 01 06.3 +0.7**
K43A Burlington 30.66 328 IAmb IAmb 14 02 02.2
comp=Z,30nm,0.9s
RLO Rose Lookout 30.72 312 IAmb IAmb 14 01 10.1
comp=Z,34nm,1.4s
WHTX Lake Whitney, 30.84 303 IAmb IAmb 14 01 09.4
comp=Z,37nm,0.9s
VILB Vilhena 31.37 167 *eP* **P** **14 01 14.0 +2.1**
P38A Dawn 31.57 319 IAmb IAmb 14 01 16.3
comp=Z,60nm,1.7s
W35A Tecumseh 31.60 309 IAmb IAmb 14 01 23.6
comp=Z,31nm,0.9s
H43A Windswept, Lux 31.72 331 IAmb IAmb 14 01 26.5
comp=Z,32nm,1.1s
L40A Anamosa 31.73 325 IAmb IAmb 14 02 24.8
comp=Z,26nm,1.0s
E46A Sault Ste Mari 31.80 337 IAmb IAmb 14 01 18.0
comp=Z,47nm,1.2s
OK048 Pawnee Station 32.21 311 IAmb IAmb 14 01 23.2
comp=Z,42nm,1.1s
WTFS Witchita Falls 32.26 305 IAmb IAmb 14 01 23.4
comp=Z,36nm,1.2s
SMTB Santa Maria do 32.78 143 *eP* **P** **14 01 24.7 +0.3**
WMOK Wichita Mounta 32.87 307 IAmb IAmb 14 01 26.5
comp=Z,27nm,0.8s
WMOK Wichita Mounta 32.87 307 P **P** **14 01 24.9 -0.1**
KAN01 Argonia South 33.12 312 IAmb IAmb 14 01 37.4
comp=Z,33nm,0.9s
APMT Aspermont 33.41 304 IAmb IAmb 14 01 31.4
comp=Z,28nm,0.9s
SNDB Serra Nova Dou 33.48 151 *eP* **P** **14 01 30.9 +0.4**
NBPS Pedro II - PI 33.56 129 *eP* **P** **14 01 30.6 -0.7**
ZAIG Zacatecas 33.63 284 IAmb IAmb 14 01 35.8
comp=Z,29nm,1.3s
ZAIG Zacatecas 33.63 284 P **P** **14 01 33.0 +0.9**
NOKA Waynoka 33.74 310 IAmb IAmb 14 01 36.9
comp=Z,33nm,0.9s
SGCY Sterling City 33.79 301 IAmb IAmb 14 01 34.6
comp=Z,48nm,1.1s
SN07 Snyder 07 33.94 303 IAmb IAmb 14 01 35.9
comp=Z,55nm,1.3s
LPAZ La Paz 33.97 182 P **P** **14 01 36.3 +1.0**
comp=Z,8.3nm,0.9s,baz=9.8,slow=2.4,SNR=21
LPAZ LR LR 14 17 16.3
comp=Z,438nm,18.2s,baz=360,slow=40
comp=Z,8.3nm,0.9s
LPAZ La Paz 33.97 182 P **P** **14 01 33.9 -1.4**
LPAZ IAmb IAmb 14 01 37.9
comp=Z,54nm,1.7s
LPAZ La Paz 33.97 182 P **P** **14 01 33.9 -1.4**
LPAZ pmax pmax
comp=Z,54nm,1.7s
LPAZ La Paz 33.97 182 *eP* **P** **14 01 34.7 -0.7**
LPAZ La Paz 33.97 182 P **P** **14 01 34.9 -0.5**
PTLB Pontes e Lacer 34.02 166 *eP* **P** **14 01 35.9 +0.8**
SAND Sanderson 34.13 297 IAmb IAmb 14 01 37.3
comp=Z,48nm,1.3s
DKNS Dickens 34.15 304 IAmb IAmb 14 01 37.7
comp=Z,18nm,0.9s
SIV San Ignacio 34.17 170 LR LR 14 16 13.0
comp=Z,2µm,18.4s,baz=350,slow=38
229A Bryant Ranch, 34.36 301 IAmb IAmb 14 01 39.5
comp=Z,46nm,1.2s
129A Stewart Farms, 34.59 302 IAmb IAmb 14 01 41.5
comp=Z,46nm,1.5s
128A Castleberry Fa 35.09 302 IAmb IAmb 14 02 57.0
comp=Z,20nm,1.4s
AMTX Amarillo 35.14 306 IAmb IAmb 14 01 46.2
comp=Z,36nm,1.1s
CBKS Cedar Bluff 35.27 313 IAmb IAmb 14 01 56.0
comp=Z,42nm,0.9s
TXAR Lajitas Array 35.32 296 P **P** **14 01 46.6 +0.1**
comp=Z,14nm,0.7s,baz=109,slow=9.1,SNR=160
TXAR PcP **PcP** **14 04 16.6 -0.2**
comp=Z,3.2nm,1.0s,baz=116,slow=5.7,SNR=3.5
TXAR ScP **ScP** **14 08 03.9 +1.2**
comp=Z,3.4nm,0.9s,baz=123,slow=4.6,SNR=18
TXAR LR LR 14 20 06.7
comp=Z,170nm,20.3s,baz=79,slow=43
comp=Z,14nm,0.7s
TXAR Lajitas Array 35.32 296 P **P** **14 01 45.7 -0.8**
TX31 Lajitas Ar. Sí 35.32 296 IAmb IAmb 14 01 48.5
comp=Z,24nm,0.8s
PB18 Visviri 35.33 184 P **P** **14 01 48.4 +1.3**
TPB05 Hovey Rd 35.35 298 IAmb IAmb 14 01 49.9
comp=Z,130nm,1.8s
SALV Santo Antonio 35.38 161 *eP* **P** **14 01 46.0 -0.8**
BBSD Serra de San D 35.42 169 *eP* **P** **14 01 46.6 -0.6**
TPB06 Permian Basin 35.44 300 IAmb IAmb 14 01 58.0
comp=Z,35nm,0.8s
TPB01 Permian Basin 35.74 298 IAmb IAmb 14 01 51.6
comp=Z,80nm,1.4s
ECSD EROS Data Cent 35.86 322 IAmb IAmb 14 01 57.4
comp=Z,47nm,1.4s
ECSD EROS Data Cent 35.86 322 P **P** **14 01 50.8 +0.1**
PECS Pecos 35.91 299 IAmb IAmb 14 01 52.8
comp=Z,26nm,1.1s
TPB13 Reeves - Culbe 35.93 299 IAmb IAmb 14 01 53.0
comp=Z,71nm,1.2s
EYMN Ely 36.04 332 IAmb IAmb 14 02 02.7
comp=Z,80nm,1.9s
EYMN Ely 36.04 332 P **P** **14 01 52.3 +0.1**
PB12 IPOC Station P 36.42 185 P **P** **14 01 53.1 -2.7**
PB12 IAmb IAmb 14 01 57.2
comp=Z,65nm,1.6s
PB12 IPOC Station P 36.42 185 P **P** **14 01 53.7 -2.1**
ARAG Araguaiana, MT 36.59 155 *eP* **P** **14 01 57.5 +0.3**
HPIG 36.73 291 IAmb IAmb 14 02 00.2
comp=Z,86nm,1.5s
HPIG 36.73 291 P **P** **14 01 59.0 +0.4**
SCHQ Schefferville 36.88 0 P **P** **14 02 00.1 +0.8**
comp=Z,10nm,0.6s,baz=182,slow=7.5,SNR=22
SCHQ LR LR 14 16 54.9
comp=Z,179nm,18.8s,baz=182,slow=36
comp=Z,10nm,0.6s
SDBA SAO DESIDERIO 37.18 143 *eP* **P** **14 02 03.6 +1.3**
PP1B Ponte de Pedra 37.23 161 *eP* **P** **14 02 04.0 +1.4**
MNTX Cornudas Mount 37.24 299 P **P** **14 02 03.0 +0.3**
PSGCX Pisagua 37.37 185 P **P** **14 02 02.4 -1.5**
GO01 Chusmiza 37.38 183 P **P** **14 02 03.9 -0.6**
PB11 IPOC Station P 37.50 184 P **P** **14 02 03.7 -1.4**
PB11 IPOC Station P 37.50 184 P **P** **14 02 04.1 -1.0**
NBMA Muriti-CE 37.52 130 *eP* **P** **14 02 06.4 +1.1**
PB08 IPOC Station P 37.85 183 P **P** **14 02 07.6 -0.6**
BDFB Brasilia 38.22 150 P **P** **14 02 12.7 +1.6**
comp=Z,2.2nm,0.4s,baz=339,slow=10,SNR=5.7
BDFB LR LR 14 17 54.1
comp=Z,2µm,21.8s,baz=331,slow=36
comp=Z,2.2nm,0.4s
AGMN Agassiz Nation 38.35 329 P **P** **14 02 11.6 -0.3**
COIM Forte Coimbra 38.64 166 *eP* **P** **14 02 16.0 +1.6**
RCBR Riachuelo 38.71 125 LR LR 14 20 13.7
comp=Z,204nm,18.8s,baz=308,slow=39
ANMO Albuquerque 38.90 304 P **P** **14 02 17.9 +0.9**
comp=Z,11nm,1.0s,baz=109,slow=8.6,SNR=19
ANMO LR LR 14 20 30.6
comp=Z,312nm,19.9s,baz=110,slow=40
comp=Z,11nm,1.0s
ANMO Albuquerque 38.90 304 P **P** **14 02 17.2 +0.3**
ANMO Albuquerque 38.90 304 *deP* **P** **14 02 17.5 +0.6**
ANMO pmax pmax
comp=Z,16nm,1.0s
ANMO Albuquerque 38.90 304 P **P** **14 02 18.5 +1.6**
C2SB Chapadao do Su 39.00 158 *eP* **P** **14 02 20.4 +2.9**
PB02 IPOC Station P 39.06 184 P **P** **14 02 22.6 +4.4**
BDQN Bodoquena, MS 39.41 165 *eP* **P** **14 02 22.3 +1.4**
PB07 IPOC Station P 39.47 184 P **P** **14 02 20.9 -0.7**
PB09 IPOC Station P 39.50 183 P **P** **14 02 25.8 +3.9**
JANB Januaria 39.66 144 *eP* **P** **14 02 23.5 +0.4**
ULM Lac du Bonnet 39.69 331 P **P** **14 02 22.1 -1.0**
comp=Z,5.4nm,0.6s,baz=132,slow=8.3,SNR=11
comp=Z,5.4nm,0.6s
ULM Lac du Bonnet 39.69 331 *eP* **P** **14 02 22.2 -0.9**
AQDB Aquidauana 39.71 163 *eP* **P** **14 02 24.2 +0.8**
PB03 IPOC Station P 39.78 184 P **P** **14 02 24.4 +0.2**
ISCO Idaho Springs 39.83 311 P **P** **14 02 25.4 +0.7**
IPMB Ipameri, GO 40.16 152 *eP* **P** **14 02 28.2 +0.9**
MURT Porto Murtinho 40.37 166 *eP* **P** **14 02 29.7 +0.8**
PB06 IPOC Station P 40.42 184 P **P** **14 02 28.4 -1.1**
PB06 IAmb IAmb 14 02 30.4
comp=Z,73nm,1.5s
PB06 IPOC Station P 40.42 184 P **P** **14 02 28.8 -0.7**
SLBS Sierra La Lagu 40.43 286 P **P** **14 02 31.6 +1.9**
PB05 IPOC Station P 40.61 185 P **P** **14 02 29.1 -2.0**
PB05 IPOC Station P 40.61 185 P **P** **14 02 31.3 +0.3**
LPIG La Paz 40.77 286 P **P** **14 02 33.1 +0.8**
comp=Z,33nm,0.3s,baz=167,slow=2.5,SNR=6.8
MVCO Mesa Verde 41.12 306 P **P** **14 02 36.5 +1.1**
PMNB Patos De Minas 41.47 150 *eP* **P** **14 02 39.3 +1.2**
HSIG 41.59 294 IAmb IAmb 14 02 42.1
comp=Z,100nm,1.9s
PV13 Radium Mtn., P 41.63 308 IAmb IAmb 14 02 42.3
comp=Z,50nm,1.0s
PV03 Paradox Valley 41.68 308 IAmb IAmb 14 02 42.5
comp=Z,37nm,1.0s
PV22 Blue Mesa, Par 41.72 308 P **P** **14 02 40.5 +0.3**
PV22 IAmb IAmb 14 02 42.6
comp=Z,28nm,0.9s
PV18 Skein Mesa, Pa 41.73 308 P **P** **14 02 39.5 -0.8**
PV04 Paradox Valley 41.77 308 IAmb IAmb 14 02 43.1
comp=Z,34nm,1.0s
PV20 West Nyswonger 41.80 308 P **P** **14 02 41.1 +0.3**
PV19 Morning Glory 41.80 308 IAmb IAmb 14 02 43.4
comp=Z,60nm,0.9s
SALTA 41.86 179 P **P** **14 02 42.3 +0.5**
PV10 Paradox Valley 41.86 308 IAmb IAmb 14 02 48.8
comp=Z,53nm,1.0s
TUC Tucson 41.87 299 P **P** **14 02 42.7 +1.3**
AMBA Amambai (Brazi 42.23 163 *eP* **P** **14 02 44.4 +0.1**
SRIG Santa Rosalia 42.60 291 P **P** **14 02 48.9 +1.6**
BB19B Bebedouro 42.74 154 *eP* **P** **14 02 49.4 +1.0**
PDAR Pinedale Array 43.68 314 P **P** **14 02 56.0 -0.2**
comp=Z,4.0nm,0.9s,baz=123,slow=7.7,SNR=25
PDAR PcP **PcP** **14 04 42.9 -0.4**
comp=Z,1.9nm,0.7s,baz=94,slow=6.2,SNR=4.7
PDAR ScP **ScP** **14 08 34.9 -0.1**
comp=Z,2.1nm,1.0s,baz=121,slow=5.5,SNR=6.6
PDAR LR LR 14 23 31.5
comp=Z,452nm,18.1s,baz=112,slow=39
comp=Z,4.0nm,0.9s
PDAR Pinedale Array 43.68 314 P **P** **14 02 55.0 -1.2**
U15A North Rim 43.87 304 IAmb IAmb 14 03 00.9
comp=Z,57nm,1.6s
RLMT Red Lodge 44.39 317 IAmb IAmb 14 03 05.0
comp=Z,77nm,1.8s
AC02 Maricunga 44.50 183 P **P** **14 03 03.1 +0.1**
HWUT Hardware Ranch 44.69 312 P **P** **14 03 04.5 +0.2**
AHID Auburn Hatcher 44.74 313 P **P** **14 03 04.6 0.0**
YNE Yellowstone No 44.82 317 IAmb IAmb 14 03 43.6
comp=Z,44nm,1.9s
CPUP Villa Florida 44.95 168 P **P** **14 03 05.4 -0.6**
comp=Z,22nm,1.0s,baz=352,slow=9.2,SNR=28
CPUP LR LR 14 22 37.2
comp=Z,670nm,18.4s,baz=353,slow=37
comp=Z,22nm,1.0s
CPUP Villa Florida 44.95 168 IAmb IAmb 14 03 06.8
comp=Z,23nm,1.0s
CPUP Villa Florida 44.95 168 P **P** **14 03 05.6 -0.4**
DUG Dugway, Tooele 45.19 309 P **P** **14 03 08.8 +0.7**
FCC Fort Churchill 45.38 341 IAmb IAmb 14 03 10.6
comp=Z,47nm,1.2s

FFC Flin Flon 45.46 332 P **P** **14 03 09.2 -0.7**
FFC Flin Flon 45.46 332 P **P** **14 03 09.2 -0.7**
FFC pmax pmax
comp=Z,11nm,0.8s
FFC Flin Flon 45.46 332 P **P** **14 03 09.7 -0.2**
BGU Big Grassy Mou 45.55 310 IAmb IAmb 14 03 13.1
comp=Z,23nm,1.0s
FRB Frobisher Bay 45.83 359 LR LR 14 22 18.5
comp=Z,206nm,20.0s,baz=182,slow=36
FRB Frobisher Bay 45.83 359 P **P** **14 03 13.7 +1.1**
DLMT Dillon 46.66 316 IAmb IAmb 14 03 27.4
comp=Z,18nm,1.0s
LCO Las Campanas 46.76 184 P **P** **14 03 20.6 -0.1**
LCO IAmb IAmb 14 03 23.7
comp=Z,29nm,1.1s
LCO Las Campanas 46.76 184 P **P** **14 03 20.6 -0.1**
LCO pmax pmax
comp=Z,29nm,1.1s
PFO Pinyon Flats O 46.77 300 LR LR 14 26 35.1
comp=Z,312nm,18.3s,baz=92,slow=41
PFO Pinyon Flats O 46.77 300 *d iP* **P** **14 03 22.1 +1.4**
PFO pmax pmax
comp=Z,67nm,2.0s
BCYI Bear Canyon 46.84 315 IAmb IAmb 14 03 52.4
comp=Z,26nm,1.2s
PMOZ Porto Moniz, M 47.00 62 *e*LR LR 14 17 06.1
PMOZ *i* IAMs_20 IAMs_20 14 18 32.5
comp=Z,274nm,22.0s
ELK Elko 47.12 309 LR LR 14 25 39.2
comp=Z,634nm,19.3s,baz=112,slow=39
ELK Elko 47.12 309 IAmb IAmb 14 03 25.6
comp=Z,17nm,1.1s
HLID Hailey 47.30 313 IAmb IAmb 14 03 27.4
comp=Z,25nm,1.2s
HLID Hailey 47.30 313 P **P** **14 03 25.6 +0.8**
CO01 Juntas del Tor 47.67 184 P **P** **14 03 28.9 +1.1**
MFID Camas Ranch 48.24 313 IAmb IAmb 14 03 34.1
comp=Z,20nm,1.0s
CO03 El Pedregal 48.57 184 P **P** **14 03 35.8 +1.3**
PLID Pearl Lake 48.84 315 IAmb IAmb 14 03 38.4
comp=Z,18nm,1.1s
NVAR Mina Array Bea 48.95 306 P **P** **14 03 38.2 +0.6**
comp=Z,22nm,1.1s,baz=102,slow=5.7,SNR=39
NVAR ScP **ScP** **14 08 59.1 +2.1**
comp=Z,7.9nm,1.1s,baz=117,slow=4.4,SNR=17
NVAR LR LR 14 26 14.8
comp=Z,846nm,20.4s,baz=104,slow=39
comp=Z,22nm,1.1s
NVAR Mina Array Bea 48.95 306 P **P** **14 03 38.4 +0.8**
ZON Zonda 49.17 182 P **P** **14 03 39.0 -0.1**
CPSB Cacapava Do Su 49.76 165 IAmb IAmb 14 03 45.0
comp=Z,26nm,1.1s
CPSB Cacapava Do Su 49.76 165 *e*P **P** **14 03 42.6 -0.9**
CPSB Cacapava Do Su 49.76 165 P **P** **14 03 43.7 +0.2**
CO04 Los Peladeros 49.79 184 P **P** **14 03 45.3 +1.3**
WVOR Wild Horse Val 49.99 311 IAmb IAmb 14 03 56.7
comp=Z,36nm,1.3s
WVOR Wild Horse Val 49.99 311 P **P** **14 03 46.3 +0.9**
PKD Bear Valley Ra 50.37 302 IAmb IAmb 14 03 49.7
comp=Z,27nm,1.3s
VA03 San Esteban 50.47 184 P **P** **14 03 49.8 +0.7**
NEW Newport 50.56 318 LR LR 14 26 43.5
comp=Z,830nm,18.4s,baz=107,slow=38
NEW Newport 50.56 318 P **P** **14 03 49.4 -0.2**
PMPB Monarch Peak 50.61 302 IAmb IAmb 14 03 52.1
comp=Z,46nm,1.3s
PEL Peldehue 50.86 184 P **P** **14 03 52.9 +1.0**
I07A Izee 50.98 313 IAmb IAmb 14 03 54.8
comp=Z,59nm,1.8s
MT02 Curacav 51.01 184 IAmb IAmb 14 03 56.5
comp=Z,18nm,0.9s
SAO San Andreas Ge 51.19 303 IAmb IAmb 14 03 56.7
comp=Z,35nm,1.3s
MT09 Talagante 51.51 184 IAmb IAmb 14 03 58.4
comp=Z,30nm,1.2s
ORV Oroville 51.59 307 IAmb IAmb 14 03 59.4
comp=Z,34nm,1.4s
EPH Ephrata 51.88 317 IAmb IAmb 14 04 01.2
comp=Z,21nm,1.4s
O03E Paynes Creek 51.93 307 IAmb IAmb 14 04 25.9
comp=Z,26nm,1.2s
B08A Colville Reser 52.00 318 IAmb IAmb 14 04 38.5
comp=Z,14nm,0.7s
BO02 Sierra Bellavi 52.51 184 IAmb IAmb 14 04 07.1
comp=Z,30nm,1.0s
BO02 Sierra Bellavi 52.51 184 P **P** **14 04 05.6 +1.5**
WIFE Three Sisters- 52.61 312 IAmb IAmb 14 04 15.9
comp=Z,26nm,0.8s
YBH Yreka Blue Hor 52.83 309 LR LR 14 30 26.4
comp=Z,428nm,18.7s,baz=112,slow=40
ML02 Panimavida 53.52 184 IAmb IAmb 14 04 49.7
comp=Z,36nm,1.1s
K02D Willamette Mer 53.69 310 IAmb IAmb 14 04 24.2
comp=Z,22nm,1.3s
MESJ Messejana 54.76 56 *e*P **P** **14 04 23.4 +2.7**
PMTG Montargil 54.85 55 *e*P **P** **14 04 22.1 +0.7**
PMTG *i* IAmb IAmb 14 04 25.8
comp=Z,40nm,2.2s
PARRA Arraiolos 54.98 55 *e*P **P** **14 04 23.0 +0.7**
PARRA *i* IAmb IAmb 14 04 26.7
comp=Z,29nm,2.3s
PGAV Gavieira, Arco 55.13 51 *e*PP PP 14 06 37.3 +11
PGAV *e*LR LR 14 20 36.1
PGAV *i* IAMs_20 IAMs_20 14 23 46.0
comp=Z,220nm,20.0s
PVAQ Vaqueiros 55.13 57 *e*LR LR 14 20 23.4
PVAQ *i* IAMs_20 IAMs_20 14 23 03.1
comp=Z,488nm,22.0s
YKA Yellowknife Ar 55.35 335 P **P** **14 04 23.8 -0.7**
comp=Z,5.5nm,0.6s,baz=115,slow=7.5,SNR=30
YKA LR LR 14 28 35.9
comp=Z,524nm,20.6s,baz=119,slow=37
comp=Z,5.5nm,0.6s
YKAW3 Yellowknife Wh 55.39 335 P **P** **14 04 24.3 -0.6**
POLO Lamas de Olo 55.41 52 *e*P **P** **14 04 27.7 +2.2**
POLO *i* IAmb IAmb 14 04 54.4
comp=Z,22nm,1.7s
MTE Manteigas 55.50 53 *e*LR LR 14 20 35.0
MTE *i* IAMs_20 IAMs_20 14 22 56.2
comp=Z,355nm,22.0s
PMRV Marv??o 55.53 54 *e*LR LR 14 20 42.4
PMRV *i* IAMs_20 IAMs_20 14 22 34.2
comp=Z,238nm,22.0s
BORG Borgarnes 55.87 22 LR LR 14 27 19.0
comp=Z,73nm,18.6s,baz=236,slow=35
MVO Moncorvo 55.96 52 *e*P **P** **14 04 31.7 +2.3**
MVO *i* IAmb IAmb 14 04 39.6
comp=Z,47nm,1.5s
MVO *e*LR LR 14 21 01.6
MVO *i* IAMs_20 IAMs_20 14 23 33.2
comp=Z,278nm,20.0s
SUMG Summit 57.11 10 P **P** **14 04 37.2 -0.3**
SUMG Summit 57.11 10 P **P** **14 04 37.2 -0.3**
SUMG pmax pmax
comp=Z,113nm,1.6s
SUMG Summit 57.11 10 P **P** **14 04 38.9 +1.5**
SUMG Summit 57.11 10 *i* P **P** **14 04 38.0 +0.5**
SUMG IAmb IAmb 14 04 39.7
comp=Z,127nm,1.6s
IFR Ifrane 57.14 61 P **P** **14 04 35.7 -2.4**
GO06 Curarrehue 57.32 184 P **P** **14 04 39.7 +0.7**
H10N3 ASCENSION HYDR 57.81 112 T T 15 07 11.0
baz=295,slow=75,SNR=7.2
H10N2 ASCENSION HYDR 57.81 112 T T 15 07 11.6
baz=295,slow=75,SNR=8.7
H10N1 ASCENSION HYDR 57.83 112 T T 15 07 12.6
baz=295,slow=75,SNR=7.2
H10S3 ASCENSION HYDR 58.17 113 T T 15 07 35.3
baz=295,slow=74,SNR=14
H10S2 ASCENSION HYDR 58.19 113 T T 15 07 36.8
baz=285,slow=74,SNR=11
ESDC Sonseca Array 58.19 54 P **P** **14 04 45.8 +0.6**
comp=Z,12nm,1.0s,baz=269,slow=6.8,SNR=42
ESDC LR LR 14 24 15.8
comp=Z,221nm,21.9s,baz=250,slow=30
comp=Z,12nm,1.0s
ESDC Sonseca Array 58.19 54 P **P** **14 04 46.6 +1.4**
ESBB Sonseca Array 58.19 54 P **P** **14 04 44.0 -1.2**
ESBB IAmb IAmb 14 04 48.3
comp=Z,29nm,1.2s
PLCA Paso Flores 58.41 183 P **P** **14 04 46.7 +0.1**
comp=Z,12nm,0.9s,baz=0.9,slow=7.5,SNR=17
PLCA LR LR 14 30 55.7
comp=Z,266nm,21.2s,baz=24,slow=37
comp=Z,12nm,0.9s
PLCA Paso Flores 58.41 183 P **P** **14 04 46.1 -0.4**
PLCA IAmb IAmb 14 04 48.1
comp=Z,28nm,1.1s
PLCA Paso Flores 58.41 183 P **P** **14 04 46.1 -0.4**
PLCA pmax pmax
comp=Z,28nm,1.2s
PLCA Paso Flores 58.41 183 *e*P **P** **14 04 46.6 +0.1**
PLCA Paso Flores 58.41 183 P **P** **14 04 47.6 +1.0**
KOTAN Kotaneelee Air 58.42 330 P **P** **14 04 46.8 +0.4**
baz=110
RES Resolute Bay 58.80 352 LR LR 14 31 18.8
comp=Z,338nm,18.8s,baz=146,slow=37
LIRD Liard River Hi 59.17 329 P **P** **14 04 51.9 +0.3**
baz=108
WRGLY Wrigley 59.30 334 P **P** **14 04 52.8 +0.4**
baz=113
NEEM North Greenlan 60.12 4 *i* P **P** **14 04 58.8 +0.5**
NEEM IAmb IAmb 14 04 59.8
comp=Z,72nm,1.8s
T35M Bob Quinn 60.64 326 P **P** **14 05 02.2 +0.4**
baz=103
EKA Eskdalemuir Ar 60.65 36 P **P** **14 05 03.0 +1.2**
comp=Z,8.6nm,1.0s,baz=285,slow=4.1,SNR=6.3
comp=Z,8.6nm,1.0s
EKA Eskdalemuir Ar 60.65 36 P **P** **14 05 03.0 +1.2**
DLBC Dease Lake 60.86 328 P **P** **14 05 03.8 +0.4**
comp=Z,9.7nm,1.0s,baz=90,slow=5.3,SNR=12
DLBC LR LR 14 33 04.0
comp=Z,365nm,18.1s,baz=85,slow=38
comp=Z,9.7nm,1.0s
DLBC Dease Lake 60.86 328 P **P** **14 05 03.9 +0.5**
baz=104
LL02 Futaleuf 60.93 184 P **P** **14 05 02.5 -1.4**
LL02 IAmb IAmb 14 05 05.2
comp=Z,30nm,1.2s
LL02 Futaleuf 60.93 184 P **P** **14 05 02.2 -1.6**
V35K Ketchikan 61.06 324 P **P** **14 05 04.5 -0.1**
baz=100
S34M Telegraph Cree 61.31 327 P **P** **14 05 06.7 +0.3**
baz=102
DBIC Dimbokro 61.52 92 P **P** **14 05 08.6 +0.2**
comp=Z,12nm,0.8s,baz=307,slow=6.2,SNR=8.0
DBIC LR LR 14 27 59.6
comp=Z,482nm,20.2s,baz=276,slow=32
comp=Z,12nm,0.8s
DBIC Dimbokro 61.52 92 P **P** **14 05 06.8 -1.6**
DBIC IAmb IAmb 14 05 10.8
comp=Z,17nm,0.9s
DBIC Dimbokro 61.52 92 P **P** **14 05 06.8 -1.6**
DBIC pmax pmax
comp=Z,17nm,0.9s
R33M Jennings River 61.56 328 IAmb IAmb 14 05 36.2
comp=Z,19nm,1.4s
R33M Jennings River 61.56 328 P **P** **14 05 08.4 +0.3**
baz=103
WRAK Wrangell Islan 61.66 325 P **P** **14 05 09.3 +0.7**
baz=100
DBG Daneborg 61.89 13 P **P** **14 05 11.8 +1.9**
DBG Daneborg 61.89 13 *i* P **P** **14 05 11.3 +1.3**
DBG IAmb IAmb 14 05 13.1
comp=Z,36nm,1.4s
CRAG Craig 61.93 324 P **P** **14 05 11.1 +0.6**
baz=99
C36M Paulatuk 62.02 340 P **P** **14 05 11.5 +0.6**
baz=115
U33K Whale Pass 62.03 325 P **P** **14 05 11.0 -0.1**
baz=100
Q32M Nakina River 62.12 328 P **P** **14 05 12.1 +0.1**
baz=102
MMPY Sheldon Lake, 62.49 332 P **P** **14 05 14.8 +0.6**
baz=105
P33M Teslin, Yukon 62.65 329 IAmb IAmb 14 05 33.7
comp=Z,14nm,1.2s
P33M Teslin, Yukon 62.65 329 P **P** **14 05 15.8 +0.4**
baz=102
P32M Atlin 62.97 328 P **P** **14 05 17.9 +0.4**
baz=101
N32M Quiet Lake 62.98 330 P **P** **14 05 17.8 +0.3**
baz=102
S32K Killisnoo 63.05 326 P **P** **14 05 18.1 +0.2**
baz=99
CLF Chambon-Foret 63.10 45 P **P** **14 05 20.8 +2.3**
R32K Eaglecrest 63.15 327 P **P** **14 05 18.7 0.0**
baz=100
JMIC Jan Mayen 63.17 18 LR LR 14 30 12.8
comp=Z,95nm,19.6s,baz=230,slow=34
SIT Sitka 63.39 325 P **P** **14 05 20.2 +0.1**
baz=98
A36M Sachs Harbour 63.51 343 P **P** **14 05 20.5 -0.3**
baz=115
DAG Danmarks Havn 63.72 11 *i* P **P** **14 05 21.9 -0.3**
DAG IAmb IAmb 14 05 24.0
comp=Z,38nm,1.5s
WHY Whitehorse 63.74 329 P **P** **14 05 22.9 +0.3**
baz=100
SKAG Skagway 63.76 328 P **P** **14 05 22.5 -0.1**
baz=99
M31M Drury Creek, Y 63.81 331 P **P** **14 05 23.1 +0.1**
baz=102
S31K Pelican 64.00 326 P **P** **14 05 24.4 +0.2**
baz=98
N31M Braeburn, Yuko 64.32 330 P **P** **14 05 26.0 -0.3**
baz=100
O30N Mendenhall 64.35 329 P **P** **14 05 26.6 +0.1**
baz=99
H31M Peel River 64.57 335 IAmb IAmb 14 05 32.0
comp=Z,32nm,1.6s
H31M Peel River 64.57 335 P **P** **14 05 28.0 0.0**
baz=103
UCC Uccle 64.61 42 *d*P **P** **14 05 30.1 +1.8**
P30M Million Dollar 64.67 329 P **P** **14 05 29.2 +0.5**
baz=98
F31M Tsiigehtchic 64.74 337 P **P** **14 05 28.6 -0.3**
baz=105
G31M Satah River 64.81 336 P **P** **14 05 28.9 -0.4**
baz=104
BMRD Maredsous 64.84 42 *d*P **P** **14 05 30.9 +1.0**
INK Inuvik 64.88 338 LR LR 14 35 49.5
comp=Z,319nm,18.1s,baz=102,slow=38
INK Inuvik 64.88 338 P **P** **14 05 29.2 -0.6**
baz=105
N30M Aishikik Lake 64.94 330 P **P** **14 05 30.0 -0.4**
baz=99
M30M Minto, Yukon 64.98 331 IAmb IAmb 14 05 41.0
comp=Z,16nm,1.4s
M30M Minto, Yukon 64.98 331 P **P** **14 05 29.6 -1.0**
baz=100
P29M Windy Craggy 65.00 328 P **P** **14 05 30.0 -0.9**
baz=97
HYT Haines Junctio 65.04 329 P **P** **14 05 30.9 -0.3**
baz=98
J30M Hart River 65.13 334 P **P** **14 05 31.2 -0.5**
baz=101
I30M Mount Dempster 65.27 334 IAmb IAmb 14 05 59.8
comp=Z,12nm,1.1s
I30M Mount Dempster 65.27 334 P **P** **14 05 32.4 -0.2**
baz=101
YUK6 Outpost Mounta 65.47 329 P **P** **14 05 33.9 -0.2**
baz=97
O29M Mount Kennedy 65.50 329 P **P** **14 05 34.0 -0.2**
baz=97
K29M Barlow Dome 65.51 333 IAmb IAmb 14 05 39.0
comp=Z,19nm,1.2s
K29M Barlow Dome 65.51 333 P **P** **14 05 33.5 -0.6**
baz=99
F30M Barrier River 65.54 337 P **P** **14 05 33.7 -0.4**
baz=103
G30M tAoh Zraii Nji 65.57 336 P **P** **14 05 33.4 -1.0**
baz=102
MEM Membach 65.65 42 *d*P **P** **14 05 36.4 +1.3**
comp=Z,12nm,1.0s
MEM Membach 65.65 42 P **P** **14 05 37.0 +1.8**
YUK4 Talbot Arm 65.66 330 P **P** **14 05 35.1 -0.2**
baz=97
L29M L29M 65.67 332 P **P** **14 05 35.0 -0.1**
baz=98
M29M Somme Creek 65.72 331 IAmb IAmb 14 05 42.5
comp=Z,38nm,1.9s
M29M Somme Creek 65.72 331 P **P** **14 05 35.5 -0.1**
baz=98
WLF Walferdange 65.72 43 *d*P **P** **14 05 35.7 0.0**
WLF Walferdange 65.72 43 *e*P **P** **14 05 38.2 +2.6**
comp=Z,25nm,1.3s,baz=272,slow=6.2
BRWY Burwash Landin 65.85 330 P **P** **14 05 36.2 -0.1**
baz=97
J29N Klondike Camp 65.91 333 P **P** **14 05 36.4 -0.3**
baz=99
TORD Torodi Ar. Bea 66.06 83 P **P** **14 05 38.1 -0.3**
comp=Z,7.7nm,0.9s,baz=289,slow=5.8,SNR=20
TORD LR LR 14 31 36.1
comp=Z,533nm,19.9s,baz=280,slow=33
comp=Z,7.7nm,0.9s
TORD Torodi Ar. Bea 66.06 83 P **P** **14 05 37.5 -0.9**
TORD IAmb IAmb 14 05 39.9
comp=Z,34nm,1.9s
BNI Bardonecchia 66.12 48 P **P** **14 05 41.3 +2.8**
YUK8 Steele Glacier 66.19 330 P **P** **14 05 37.6 -1.1**
baz=96
G29M Pine Creek 66.25 336 P **P** **14 05 38.0 -0.8**
baz=100
H29M Whitestone 66.27 335 P **P** **14 05 38.7 -0.2**
baz=100
PINM Pinnacle 66.31 328 P **P** **14 05 39.2 -0.1**
baz=95
O28M Mount Upton 66.34 329 P **P** **14 05 39.7 -0.1**
baz=96
DAWY Dawson 66.36 333 IAmb IAmb 14 06 04.6
comp=Z,12nm,1.0s
DAWY Dawson 66.36 333 P **P** **14 05 39.4 -0.2**
baz=98
ECH Echery 66.39 45 IAmb IAmb 14 05 42.3
comp=Z,22nm,1.3s
ECH Echery 66.39 45 P **P** **14 05 41.8 +1.8**
BUG Bochum--Univer 66.46 41 *e*P **P** **14 05 42.8 +2.5**
comp=Z,51nm,1.5s,baz=272,slow=6.2
E29M Blow River 66.48 338 P **P** **14 05 39.6 -0.5**
baz=101
YUK3 Moose Creek 66.57 330 P **P** **14 05 40.5 -0.7**
baz=96
IBBN Ibbenburen 66.77 40 *e*P **P** **14 05 44.8 +2.6**
comp=Z,938nm,3.4s,baz=272,slow=6.2
I28M Miner Creek 66.78 334 IAmb IAmb 14 06 07.0
comp=Z,18nm,1.2s
I28M Miner Creek 66.78 334 P **P** **14 05 42.0 -0.3**
baz=98
BVCY Beaver Creek 66.83 331 P **P** **14 05 42.0 -0.6**
baz=96
D28M Stokes Point 66.96 339 P **P** **14 05 43.1 -0.1**
baz=101
F28M Old Crow 67.08 337 IAmb IAmb 14 05 49.4
comp=Z,38nm,1.8s
F28M Old Crow 67.08 337 P **P** **14 05 42.7 -1.3**
baz=99
E28M Babbage River 67.11 338 P **P** **14 05 42.8 -1.4**
baz=100
BFO Black Forest 67.17 44 *e*P **P** **14 05 46.7 +1.7**
comp=Z,80nm,2.5s,baz=272,slow=6.2
KASTN Kahler Asten 67.17 41 *e*P **P** **14 05 47.2 +2.2**
comp=Z,16nm,1.2s,baz=272,slow=6.2
TNS Taunus Mts 67.20 42 *e*P **P** **14 05 47.6 +2.4**
comp=Z,40nm,1.5s,baz=272,slow=6.2
TNS Taunus Mts 67.20 42 P **P** **14 05 47.1 +1.9**
BNALP Bannalp 67.28 46 P **P** **14 05 48.0 +2.1**
M27K Edge Creek, AK 67.29 331 P **P** **14 05 45.6 0.0**
baz=95
BCAR Beaver Creek A 67.31 332 P **P** **14 05 45.2 -0.4**
I27K Kandik River 67.50 334 IAmb IAmb 14 06 07.7
comp=Z,15nm,0.9s
I27K Kandik River 67.50 334 P **P** **14 05 46.5 -0.3**
baz=96
H27K Steamboat Moun 67.53 335 IAmb IAmb 14 06 01.5
comp=Z,33nm,1.8s
H27K Steamboat Moun 67.53 335 P **P** **14 05 46.7 -0.3**
baz=97
TAM Tamanrasset 67.59 72 P **P** **14 05 50.4 +2.1**
G27K Doyon Strip 67.65 336 IAmb IAmb 14 06 08.1
comp=Z,24nm,1.8s
G27K Doyon Strip 67.65 336 P **P** **14 05 46.9 -0.8**
baz=97
D27M Malcolm River 67.72 338 P **P** **14 05 48.0 -0.2**
baz=98
RETH Rethem/Aller, 67.75 40 *e*P **P** **14 05 51.2 +2.8**
comp=Z,53nm,1.6s,baz=272,slow=6.2
RETH Rethem/Aller, 67.75 40 P **P** **14 05 50.4 +2.0**
CRQE Cirque 67.76 329 P **P** **14 05 48.8 +0.2**
baz=93
MCARA McCarthy VSAT 67.77 330 P **P** **14 05 48.9 +0.4**
baz=93
E27K Coleen River 67.80 337 P **P** **14 05 48.7 0.0**
baz=97
M26K Nabesna, AK 67.82 331 P **P** **14 05 49.0 +0.2**
baz=94
TUE Stuetta 67.93 46 P **P** **14 05 49.3 -0.7**
comp=Z,30nm,1.4s
TUE Stuetta 67.93 46 P **P** **14 05 52.3 +2.3**
L26K Log Cabin Wild 68.02 331 IAmb IAmb 14 05 54.1
comp=Z,23nm,1.4s
L26K Log Cabin Wild 68.02 331 P **P** **14 05 49.8 -0.3**
baz=94
I26K Coal Creek Min 68.11 334 P **P** **14 05 50.4 -0.1**
baz=95
UBBA Unterbreizbach 68.18 42 *e*P **P** **14 05 53.6 +2.4**
comp=Z,40nm,1.8s,baz=272,slow=6.2
MENT Mentata 68.18 331 IAmb IAmb 14 06 03.8
comp=Z,16nm,0.9s
DAVA Damuels 68.25 46 *i* pP **P** **14 05 52.9 +0.9**
comp=Z,21nm,1.1s,SNR=6.6
DAVA Damuels 68.25 46 P **P** **14 05 53.7 +1.7**
DAVOX Davos/Dischmat 68.28 46 LR LR 14 34 47.1
comp=Z,106nm,18.6s,baz=261,slow=35
SCRK Sand Creek 68.37 332 IAmb IAmb 14 06 03.0
comp=Z,13nm,1.0s
SCRK Sand Creek 68.37 332 P **P** **14 05 52.3 -0.1**
baz=94,SNR=19
CLZ Clausthal 68.39 41 *e*P **P** **14 05 55.2 +2.6**
comp=Z,34nm,1.5s,baz=272,slow=6.2
KAIM Kayak Island 68.39 328 P **P** **14 05 51.5 -0.9**
baz=92
G26K Porcupine Rive 68.50 336 P **P** **14 05 51.9 -1.1**
baz=95
BMRM Bremner River 68.51 329 IAmb IAmb 14 06 06.1
comp=Z,14nm,0.8s
BMRM Bremner River 68.51 329 P **P** **14 05 52.6 -0.7**
baz=92
N25K Chitina, Valde 68.53 330 P **P** **14 05 52.7 -0.7**
baz=92
FUORN Ofenpass-Fuorn 68.55 46 P **P** **14 05 55.1 +1.1**
ASSE Asse, Remlinge 68.56 40 *e*P **P** **14 05 56.4 +2.9**
comp=Z,90nm,1.8s,baz=272,slow=6.2
ASSE Asse, Remlinge 68.56 40 P **P** **14 05 55.8 +2.3**
F26K Sheenjek River 68.71 336 P **P** **14 05 53.8 -0.5**
baz=95
RIDG Independent Ri 68.73 332 IAmb IAmb 14 06 05.2
comp=Z,21nm,1.2s
RIDG Independent Ri 68.73 332 P **P** **14 05 54.1 -0.4**
baz=93,SNR=7.7
C27K Jago River 68.74 339 P **P** **14 05 54.3 -0.1**
baz=96
HARP HAARP 68.82 331 P **P** **14 05 54.5 -0.6**
baz=92
NB2 NORSAR Subarra 68.83 31 P **P** **14 05 56.7 +1.5**
comp=Z,42nm,1.7s,baz=267,slow=6.5
NB2 NORSAR Subarra 68.83 31 P **P** **14 05 56.7 +1.5**
NOA NORSAR Array B 68.83 31 P **P** **14 05 56.3 +1.1**
comp=Z,4.6nm,0.9s,baz=269,slow=6.4,SNR=8.7
NOA LR LR 14 35 17.4
comp=Z,74nm,18.3s,baz=260,slow=35
comp=Z,4.6nm,0.9s
RETA Reutte 68.84 45 *i* pP **P** **14 05 56.5 +1.0**
comp=Z,21nm,1.2s
FETA Feichten 68.85 46 *e*pP **P** **14 05 56.2 +0.5**
comp=Z,15nm,0.8s,SNR=6.4
KEST Kesra 68.89 58 P **P** **14 05 56.6 +0.5**
comp=Z,9.4nm,0.8s,baz=248,slow=4.9,SNR=9.7
comp=Z,9.4nm,0.8s
KEST Kesra 68.89 58 P **P** **14 05 55.9 -0.2**
KEST IAmb IAmb 14 06 00.1
comp=Z,18nm,1.1s
FLTG Flechtingen 68.90 40 *e*P **P** **14 05 57.9 +2.1**
comp=Z,69nm,1.9s,baz=272,slow=6.2
PAX Paxson 68.98 331 P **P** **14 05 55.9 -0.3**
baz=92
J25K Salcha River, 69.00 333 IAmb IAmb 14 06 06.9
comp=Z,18nm,1.5s
J25K Salcha River, 69.00 333 P **P** **14 05 55.5 -0.7**
baz=92,SNR=6.8
GRF Grafenberg Arr 69.01 43 *e*P **P** **14 05 58.9 +2.3**
comp=Z,39nm,1.8s,baz=272,slow=6.2
GRF *e*L L 14 34 36.0
comp=Z,223nm,19.3s
EYAK Cordova Ski Ar 69.06 329 P **P** **14 05 55.4 -1.1**
baz=91
MOTA Moosalm 69.08 45 *i* pP **P** **14 05 57.9 +0.8**
comp=Z,12nm,0.9s
PRP Porcupine Dome 69.11 334 IAmb IAmb 14 06 18.6
comp=Z,24nm,1.2s
PRP Porcupine Dome 69.11 334 P **P** **14 05 56.5 -0.5**

baz=93,SNR=14
K24K **Donnelly Dome** 69.15 332 IAmb IAmb 14 06 07.4
comp=Z,15nm,0.8s
K24K **Donnelly Dome** 69.15 332 P **P** **14 05 56.4 -0.7**
baz=92,SNR=5.7
SQTA **Sankt Quirin** 69.16 46 *i* pP **P** **14 05 58.2 +0.6**
comp=Z,12nm,0.9s
KLU **Klutina** 69.16 330 P **P** **14 05 55.8 -1.5**
baz=91
F25K **Christian Rive** 69.27 336 IAmb IAmb 14 06 08.5
comp=Z,12nm,1.1s
F25K **Christian Rive** 69.27 336 P **P** **14 05 56.7 -1.1**
baz=93
E25K **Arctic Village** 69.28 337 IAmb IAmb 14 07 28.7
comp=Z,33nm,1.9s
E25K **Arctic Village** 69.28 337 P **P** **14 05 57.0 -0.8**
baz=94
NEUB **Neuenburg** 69.29 41 *e*P **P** **14 06 00.6 +2.5**
comp=Z,22nm,1.1s,baz=272,slow=6.2
M24K **Tolsona, Glenn** 69.29 330 P **P** **14 05 57.1 -0.9**
baz=91
Q23K **Middleton Isla** 69.36 328 P **P** **14 05 57.0 -1.4**
baz=90
WATA **Walderalm** 69.40 45 *i* P **P** **14 05 59.6 +0.5**
comp=Z,10nm,1.0s
G25K **Bearman Lake** 69.41 335 P **P** **14 05 57.9 -0.7**
baz=93
WTTA **Wattenberg** 69.45 45 *i* pP **P** **14 06 00.3 +0.9**
comp=Z,4.4nm,0.7s
PLN **Plauen** 69.57 42 *e*P **P** **14 06 02.3 +2.3**
comp=Z,13nm,2.0s,baz=272,slow=6.2
D25K **Kavik River** 69.65 338 P **P** **14 05 59.3 -0.8**
baz=93
ROTZ **Rotzenmuhle** 69.65 43 *e*P **P** **14 06 02.9 +2.5**
comp=Z,6.8nm,1.5s,baz=272,slow=6.2
ROTZ epP **sP** **14 06 07.9 +2.9**
IL31 69.66 333 IAmb IAmb 14 06 21.2
comp=Z,29nm,1.6s
ILAR **Eielson Array** 69.66 333 P **P** **14 05 59.6 -0.6**
comp=Z,3.3nm,0.8s,baz=95,slow=4.4,SNR=30
ILAR LR LR 14 38 36.9
comp=Z,670nm,18.0s,baz=84,slow=38
comp=Z,3.3nm,0.8s
ILAR **Eielson Array** 69.66 333 P **P** **14 05 59.3 -0.9**
HDA **Harding Lake** 69.68 333 IAmb IAmb 14 06 01.4
comp=Z,40nm,2.0s
HDA **Harding Lake** 69.68 333 P **P** **14 05 59.2 -1.1**
baz=91
GLI **Glacier Island** 69.73 329 P **P** **14 05 59.5 -1.2**
baz=90
TANN **Tannenbergstha** 69.77 42 *e*P **P** **14 06 03.6 +2.3**
comp=Z,17nm,1.3s,baz=272,slow=6.2
TANN **Tannenbergstha** 69.77 42 P **P** **14 06 02.0 +0.8**
NKC **Novy Kostel** 69.77 42 AMS AMS 14 32 10.0
comp=Z,300nm,17.7s
SCM **Sheep Creek Mo** 69.83 330 P **P** **14 06 00.2 -1.3**
baz=90
DHY **Denali Highway** 69.86 331 P **P** **14 06 00.2 -1.5**
baz=90
P23K **Montague Islan** 69.89 328 P **P** **14 06 00.9 -0.8**
baz=89
POKR **Poker Plat Res** 69.90 334 P **P** **14 06 01.2 -0.5**
baz=91
G24K **Hadweenzic Riv** 69.95 335 P **P** **14 06 00.9 -1.1**
baz=91
M23K **Glacier View** 70.02 330 P **P** **14 06 01.3 -1.2**
baz=89
WAT6 **Susitna Watana** 70.02 331 P **P** **14 06 00.9 -1.8**
baz=90
CLL **Collm** 70.05 41 *i* P **P** **14 06 02.6 -0.3**
CLL pmax pmax
comp=Z,27nm,1.6s
CLL **Collm** 70.05 41 *e*P **P** **14 06 05.0 +2.2**
comp=Z,27nm,1.6s,baz=272,slow=6.2
CLL epP **sP** **14 06 10.3 +2.8**
CLL **Collm** 70.05 41 P **P** **14 06 02.4 -0.5**
comp=Z,6.6nm,1.2s
CLL **Collm** 70.05 41 *i* P **P** **14 06 02.6 -0.3**
comp=Z,27nm,1.6s
CLL *e*PP **PP** **14 08 42.0 +4.4**
CLL AMS AMS 14 38 00.0
comp=Z,200nm,20.0s
HFS **Hagfors** 70.05 32 LR LR 14 37 42.5
comp=Z,80nm,18.1s,baz=247,slow=37
CCB **Clear Creek Bu** 70.05 333 IAmb IAmb 14 06 03.5
comp=Z,26nm,2.0s
COLA **College** 70.08 333 *c i*P **P** **14 06 03.3 +0.6**
COLA pmax pmax
comp=Z,27nm,2.2s
COLA **College** 70.08 333 P **P** **14 06 02.0 -0.7**
baz=90
ABTA **Abfaltersbach** 70.09 46 *i* pP **P** **14 06 03.9 +0.6**
comp=Z,15nm,1.5s,SNR=5.9
H24K **Noodor Dome** 70.10 334 IAmb IAmb 14 06 13.3
comp=Z,13nm,1.0s
H24K **Noodor Dome** 70.10 334 P **P** **14 06 02.4 -0.5**
baz=91,SNR=13
F24K **Squaw Lake** 70.13 336 P **P** **14 06 02.3 -0.9**
baz=91
WET **Wettzell** 70.13 43 *e*P **P** **14 06 05.7 +2.3**
comp=Z,19nm,1.4s,baz=272,slow=6.2
WET **Wettzell** 70.13 43 P **P** **14 06 05.1 +1.7**
LESA **Schwarzleotal** 70.14 45 *e*P **P** **14 06 03.9 +0.3**
comp=Z,5.7nm,0.9s
SML **Sawmill** 70.31 330 P **P** **14 06 02.8 -1.5**
baz=89
E24K **Your Creek** 70.37 337 IAmb IAmb 14 06 15.1
comp=Z,13nm,1.0s
E24K **Your Creek** 70.37 337 P **P** **14 06 03.7 -0.9**
baz=91
HSKC **Hora Svate Kat** 70.37 42 AMS AMS 14 33 00.0
comp=Z,200nm,19.6s
HSKC **Hora Svate Kat** 70.37 42 P **P** **14 06 06.8 +1.9**
KNK **Knik Glacier** 70.38 330 P **P** **14 06 03.7 -1.0**
baz=89
WAT1 **Susitna Watana** 70.39 331 P **P** **14 06 03.7 -1.1**
baz=89
C24K **Franklin Bluff** 70.48 339 P **P** **14 06 04.2 -1.0**
baz=91
D24K **Happy Valley** 70.51 338 P **P** **14 06 04.6 -0.8**
baz=91
MCK **McKinley** 70.55 332 P **P** **14 06 04.8 -0.9**
baz=89
KHC **Kasperske Hory** 70.59 43 IAmb IAmb 14 06 08.9
comp=Z,20nm,1.3s
KHC **Kasperske Hory** 70.59 43 *c i*P **P** **14 06 07.3 +1.0**
KHC pmax pmax
comp=Z,22nm,1.5s
KHC **Kasperske Hory** 70.59 43 *e*P **P** **14 06 08.1 +1.8**
KHC AMS AMS 14 35 00.0
comp=Z,200nm,18.3s
KHC **Kasperske Hory** 70.59 43 P **P** **14 06 05.8 -0.5**
comp=Z,12nm,2.0s
GHO **Glory Hole Cre** 70.59 330 IAmb IAmb 14 06 20.3
comp=Z,18nm,1.0s
NEA2 **Nenana** 70.60 333 P **P** **14 06 04.8 -1.1**
baz=89
KBA **Koelnbreinsper** 70.62 46 *e*P **P** **14 06 07.0 +0.3**
comp=Z,12nm,1.2s
KBA **Koelnbreinsper** 70.62 46 P **P** **14 06 08.2 +1.5**
STEI **Steigen** 70.67 23 *e*P P 14 06 11.4 +5.1
BRG **Berggiesshubel** 70.67 42 *e*P **P** **14 06 09.1 +2.4**
comp=Z,15nm,1.2s,baz=272,slow=6.2
BRG **Berggiesshubel** 70.67 42 P **P** **14 06 07.7 +1.0**
BRG **Berggiesshubel** 70.67 42 *e*P **P** **14 06 07.4 +0.7**
BRG Amp 14 06 09.0
comp=Z,15nm,1.2s
BRG **Berggiesshubel** 70.67 42 P P 14 06 13.0 +6.3
BRG Amp 14 06 15.2
comp=Z,7.8nm,1.1s
GEC2 **GERESS Array S** 70.70 44 *e*P **P** **14 06 09.1 +2.1**
comp=Z,27nm,1.6s,baz=272,slow=6.2
GEC2 epP **sP** **14 06 14.0 +2.4**
GERES **GERESS Array B** 70.70 44 P **P** **14 06 07.5 +0.6**
comp=Z,0.7nm,0.6s,baz=255,slow=4.0,SNR=9.8
GERES LR LR 14 35 07.1
comp=Z,124nm,19.4s,baz=257,slow=34
comp=Z,0.7nm,0.6s
PMR **Palmer** 70.70 330 P **P** **14 06 05.2 -1.4**
baz=88
I23K **Minto, Yukon-K** 70.72 334 P **P** **14 06 06.5 -0.1**
baz=89,SNR=14
BIOA **Bad Ischl, Aus** 70.76 45 *e*pP **P** **14 06 07.1 -0.2**
comp=Z,8.6nm,1.0s
TOLK **Toolik Lake Re** 70.78 337 P **P** **14 06 07.0 -0.1**
baz=90
H23K **Yukon River** 70.78 334 IAmb IAmb 14 06 09.0
comp=Z,43nm,1.8s
baz=89
H23K **Yukon River** 70.78 334 P **P** **14 06 05.9 -1.2**
baz=89
E23K **Chandalar** 70.79 337 IAmb IAmb 14 06 15.0
comp=Z,32nm,1.8s
E23K **Chandalar** 70.79 337 P **P** **14 06 06.3 -1.0**
baz=90
SEW **Seward** 70.91 328 P **P** **14 06 06.5 -1.4**
baz=87
ZVC **Zvikov** 70.96 43 AMS AMS 14 35 20.0
comp=Z,300nm,21.0s
G23K **Bananza Creek** 70.96 335 IAmb IAmb 14 06 53.7
comp=Z,16nm,1.1s
G23K **Bananza Creek** 70.96 335 P **P** **14 06 07.0 -1.2**
baz=89
RC01 **Rabbit Creek A** 71.01 329 P **P** **14 06 07.6 -0.9**
baz=87
COLD **Coldfoot** 71.03 336 P **P** **14 06 07.7 -0.8**
baz=89
O22K **Cooper Landing** 71.03 329 P **P** **14 06 07.9 -0.8**
baz=87
PRU **Pruhonice** 71.14 42 AMS AMS 14 40 00.0
comp=Z,200nm,19.3s
PRU **Pruhonice** 71.14 42 P **P** **14 06 11.8 +2.2**
C23K **Itkillik River** 71.15 339 IAmb IAmb 14 06 19.6
comp=Z,38nm,1.4s
C23K **Itkillik River** 71.15 339 P **P** **14 06 09.0 -0.2**
baz=90
M22K **Willow** 71.16 330 P **P** **14 06 08.5 -0.9**
baz=87
TRF **Thorofare Moun** 71.17 332 IAmb IAmb 14 06 19.7
comp=Z,26nm,1.1s
TRF **Thorofare Moun** 71.17 332 P **P** **14 06 08.8 -0.9**
baz=88,SNR=15
MOA **Molln** 71.17 45 *i* P **P** **14 06 10.2 +0.4**
comp=Z,15nm,1.8s
MOA **Molln** 71.17 45 P **P** **14 06 11.0 +1.2**
D23K **Naushuk River** 71.18 338 P **P** **14 06 08.9 -0.5**
baz=89
AQU **L'Aquila** 71.19 51 P **P** **14 06 09.6 -0.5**
comp=Z,12nm,1.0s
CUT **Chulitna** 71.20 331 P **P** **14 06 09.0 -0.6**
baz=87
SPITS **Spitsbergen Ar** 71.26 12 P **P** **14 06 10.5 +0.7**
comp=Z,3.1nm,0.7s,baz=273,slow=4.8,SNR=1.1
comp=Z,3.1nm,0.7s
MLY **Manley** 71.30 334 P **P** **14 06 09.6 -0.7**
baz=88,SNR=8.6
L22K **Petersville** 71.43 331 P **P** **14 06 09.6 -1.5**
baz=87
SESA **Seetaler Alpe,** 71.45 45 *e*P **P** **14 06 11.9 +0.1**
comp=Z,31nm,1.4s,SNR=7.4
OBKA **Obir** 71.51 46 *i* pP **P** **14 06 12.5 +0.5**
comp=Z,18nm,1.4s
OBKA **Obir** 71.51 46 P **P** **14 06 13.5 +1.6**
H22K **Ishtalitna Cre** 71.53 334 P **P** **14 06 10.2 -1.4**
baz=88
G22K **Bettles** 71.54 336 P **P** **14 06 10.6 -1.0**
baz=88
BRSE **Bradley Lake S** 71.58 328 P **P** **14 06 11.1 -1.0**
baz=86
E22K **Anaktuvuk Pass** 71.62 337 IAmb IAmb 14 06 25.4
comp=Z,27nm,1.4s
E22K **Anaktuvuk Pass** 71.62 337 P **P** **14 06 11.3 -0.8**
baz=88
CAPN **Captain Cook N** 71.72 329 P **P** **14 06 11.9 -0.9**
baz=86
F22K **John River** 71.78 336 P **P** **14 06 12.9 -0.2**
baz=87
SKT **Skwentna** 71.82 330 P **P** **14 06 12.4 -1.1**
baz=86
TREC **Trest** 71.82 43 AMS AMS 14 35 50.0
comp=Z,200nm,15.6s
SOKA **Soboth** 71.82 46 *e*pP **P** **14 06 14.4 +0.6**
comp=Z,6.7nm,1.2s
I21K **Tanana** 71.82 334 IAmb IAmb 14 06 37.9
comp=Z,12nm,1.0s
I21K **Tanana** 71.82 334 P **P** **14 06 12.8 -0.6**
baz=87,SNR=14
CAST **Castle Rocks** 71.97 332 P **P** **14 06 13.8 -0.6**
baz=86,SNR=6.0
UPC **Upice** 72.02 42 AMS AMS 14 42 50.0
comp=Z,200nm,18.3s
CHVC **Chvalec** 72.04 42 *e*P **P** **14 06 16.6 +1.6**
CHVC MLR MLR
comp=Z,200nm,20.0s
CHVC **Chvalec** 72.04 42 *e*P **P** **14 06 16.6 +1.6**
CHVC AMS AMS 14 43 20.0
comp=Z,200nm,20.0s
CHUM **Lake Minchumin** 72.05 332 P **P** **14 06 14.3 -0.4**
baz=86,SNR=7.4
HOM **Homer** 72.05 328 P **P** **14 06 14.2 -0.6**
baz=85
PPLA **Purkypile** 72.06 331 IAmb IAmb 14 06 46.0
comp=Z,13nm,1.0s
PPLA **Purkeypile** 72.06 331 P **P** **14 06 14.2 -0.8**
baz=86
ARSA **Arzberg** 72.08 45 *i* pP **P** **14 06 16.0 +0.7**
comp=Z,13nm,1.5s
B22K **Teshekpuk Lake** 72.09 339 P **P** **14 06 13.8 -1.1**
baz=87
H21K **Melozitna Rive** 72.14 334 IAmb IAmb 14 06 25.8
comp=Z,20nm,1.2s
H21K **Melozitna Rive** 72.14 334 P **P** **14 06 14.6 -0.6**
baz=86,SNR=14
KSP **Ksiaz** 72.16 41 *e*P **P** **14 06 16.5 +0.8**
KSP **Ksiaz** 72.16 41 P **P** **14 06 15.2 -0.5**
comp=Z,7.0nm,1.8s
SPCR **Spurr Chakacha** 72.20 330 P **P** **14 06 15.3 -0.5**
baz=85
CONA **Conrad Observa** 72.23 44 *i* pP **P** **14 06 16.9 +0.7**
comp=Z,12nm,1.3s,SNR=6.8
DPC **Dobruska-Polom** 72.23 42 *e*P **P** **14 06 18.1 +1.9**
DPC MLR MLR
comp=Z,200nm,25.3s
DPC **Dobruska-Polom** 72.23 42 *e*P **P** **14 06 18.1 +1.9**
DPC AMS AMS 14 33 30.0
comp=Z,200nm,25.3s
DPC **Dobruska-Polom** 72.23 42 P **P** **14 06 15.7 -0.5**
comp=Z,11nm,2.0s
E21K **Killik River** 72.40 337 P **P** **14 06 16.3 -0.5**
baz=86
KRUC **Moravsky** 72.44 43 *e*P **P** **14 06 18.7 +1.3**
KRUC **Moravsky** 72.44 43 P **P** **14 06 19.2 +1.8**
JETT **Jettan, Norway** 72.50 22 *e*P **P** **14 06 19.6 +2.2**
O20K **Slope Mountain** 72.50 328 P **P** **14 06 16.6 -1.0**
baz=84
VRAC **Vranov** 72.54 43 LR LR 14 36 23.7
comp=Z,110nm,19.0s,baz=251,slow=34
VRAC **Vranov** 72.54 43 *e*P **P** **14 06 19.1 +1.1**
VRAC **Vranov** 72.54 43 P **P** **14 06 19.8 +1.9**
RONA **Rosalia, Austr** 72.55 45 *e*pP **P** **14 06 19.3 +1.2**
comp=Z,15nm,1.3s,SNR=5.1
B21K **Ikpikpuk River** 72.55 338 P **P** **14 06 17.1 -0.5**
baz=86
KRLC **Kraliky** 72.56 42 AMS AMS 14 41 20.0
comp=Z,200nm,22.0s
A22K **Sinclair Lake** 72.57 340 P **P** **14 06 16.4 -1.3**
baz=86
M20K **Styx River** 72.58 330 P **P** **14 06 16.7 -1.3**
baz=85
C21K **Knifeblade Rid** 72.64 338 P **P** **14 06 16.8 -1.4**
baz=86
KDAK **Kodiak Island** 72.71 326 LR LR 14 36 35.8
comp=Z,258nm,21.9s,baz=61,slow=34
KDAK **Kodiak Island** 72.71 326 P **P** **14 06 18.1 -0.7**
baz=84
J20K **Nowinta River** 72.83 333 IAmb IAmb 14 06 22.5
comp=Z,27nm,1.6s
J20K **Nowinta River** 72.83 333 P **P** **14 06 18.7 -0.7**
baz=84,SNR=12
P19K **Oil** 72.85 328 P **P** **14 06 18.8 -0.8**
baz=84
K20K **Telida** 72.87 332 IAmb IAmb 14 06 25.5
comp=Z,23nm,1.5s
K20K **Telida** 72.87 332 P **P** **14 06 18.5 -1.2**
baz=84
I20K **Naaghedeneel** 72.91 333 P **P** **14 06 18.4 -1.4**
baz=84
H20K **Anotleneega Mo** 73.01 334 P **P** **14 06 18.7 -1.8**
baz=84
MORC **Moravsky Berou** 73.09 42 ⇓P **P** **14 06 21.2 -0.1**
MORC **Moravsky Berou** 73.09 42 ⇓P **P** **14 06 21.2 -0.1**
MORC **Moravsky Berou** 73.09 42 *e*P **P** **14 06 22.4 +1.1**
MODS **Modra-Piesok** 73.11 44 *e*P **P** **14 06 23.8 +2.4**
MODS **Modra-Piesok** 73.11 44 P **P** **14 06 23.7 +2.4**
MODS **Modra-Piesok** 73.11 44 *e*P **P** **14 06 23.8 +2.4**
OHAK **Old Harbor** 73.15 325 P **P** **14 06 19.9 -1.5**
baz=83
M19K **Big River Lodg** 73.17 330 IAmb IAmb 14 06 31.1
comp=Z,12nm,1.0s
M19K **Big River Lodg** 73.17 330 P **P** **14 06 20.2 -1.3**
baz=84
F20K **Avaraart Lake** 73.19 336 IAmb IAmb 14 06 23.0
comp=Z,42nm,1.9s
F20K **Avaraart Lake** 73.19 336 P **P** **14 06 20.5 -1.0**
baz=84
STEB **Steborice** 73.21 42 *e*P **P** **14 06 22.8 +0.8**
E20K **Nigu River** 73.24 337 P **P** **14 06 20.6 -1.2**
baz=84
JAVC **Velka Javorina** 73.30 43 *e*P **P** **14 06 25.0 +2.4**
O19K **Port Alsworth** 73.33 329 P **P** **14 06 21.2 -1.2**
baz=83
N19K **Bonanza Creek** 73.34 329 P **P** **14 06 20.4 -2.2**
baz=83
D20K **Etivluk River** 73.34 338 P **P** **14 06 21.2 -1.2**
baz=84
L19K **White Mountain** 73.36 331 P **P** **14 06 21.3 -1.3**
baz=83
B20K **Meade River** 73.39 339 P **P** **14 06 21.8 -0.8**
baz=84
J19K **Poorman** 73.49 333 P **P** **14 06 22.4 -0.9**
baz=83
KTK1 **Kautokeino** 73.55 22 *e*P **P** **14 06 25.4 +1.8**
H19K **Roundabout Mou** 73.65 334 P **P** **14 06 23.3 -0.9**
baz=83
E19K **Redstone River** 73.72 336 P **P** **14 06 23.4 -1.2**
baz=83
SII **Sitkinak Islan** 73.72 325 P **P** **14 06 23.6 -1.2**
baz=82
O18K **Koktuh Hills** 73.82 328 P **P** **14 06 24.1 -1.2**
baz=82
G19K **Purcell Mounta** 73.84 335 P **P** **14 06 24.1 -1.2**
baz=82
Q18K **Katmai Hardscr** 73.88 327 P **P** **14 06 24.4 -1.4**
baz=82
P18K **Big Mountain,** 73.89 328 P **P** **14 06 24.8 -1.1**
baz=82
M18K **Stony River** 73.90 330 P **P** **14 06 24.2 -1.5**
baz=82
D19K **Kuna River** 73.92 337 P **P** **14 06 24.9 -0.9**
baz=82
GCSA **Galena City Sc** 73.94 333 P **P** **14 06 24.7 -1.2**
baz=82
F19K **Shaleruckik Mo** 74.02 336 P **P** **14 06 24.7 -1.6**
baz=82
N18K **Kilae Creek** 74.04 329 P **P** **14 06 25.4 -1.2**
baz=82
TIP **Timpagrande** 74.20 53 P **P** **14 06 27.5 -0.6**
ARA0 **ARCESS Array S** 74.28 21 *e*P **P** **14 06 28.4 +0.6**
ARCES **ARCESS Array B** 74.28 21 P **P** **14 06 28.5 +0.7**
comp=Z,6.0nm,0.8s,baz=283,slow=3.6,SNR=16
comp=Z,6.0nm,0.8s
Q17K **Contact Creek** 74.39 327 P **P** **14 06 27.9 -0.9**
baz=81
OJC **Ojcow** 74.46 42 *e*P **P** **14 06 31.2 +1.9**
OJC **Ojcow** 74.46 42 P **P** **14 06 28.9 -0.4**
comp=Z,11nm,2.1s
H18K **Honhosa River** 74.50 334 P **P** **14 06 27.9 -1.4**
baz=81
G18K **Tagagawik** 74.51 335 P **P** **14 06 28.0 -1.2**
baz=81
P17K **Kvichak River** 74.53 328 P **P** **14 06 28.5 -1.0**
baz=81
CHIR **Chirikof Islan** 74.63 324 P **P** **14 06 29.2 -0.9**
baz=81
M17K **Holitna River** 74.68 330 P **P** **14 06 29.0 -1.3**
baz=81
A19K **Wainwright** 74.69 339 P **P** **14 06 29.1 -1.1**
baz=80
N17K **Nushagak Hills** 74.70 329 P **P** **14 06 29.4 -1.0**
baz=81
Q16K **King Salmon** 74.73 327 P **P** **14 06 29.6 -1.0**
baz=81
R17L **Mt. Peulik Vol** 74.74 326 P **P** **14 06 29.7 -1.1**
baz=81
O17K **Koliganek Bris** 74.77 328 P **P** **14 06 29.6 -1.3**
baz=81
F18K **Selawik** 74.79 336 P **P** **14 06 29.4 -1.4**
baz=80
K17K **Iditarod** 74.87 331 P **P** **14 06 29.8 -1.5**
baz=80
NIE **Niedzica** 74.92 43 *e*P **P** **14 06 34.8 +2.8**
NIE **Niedzica** 74.92 43 P **P** **14 06 31.6 -0.4**
comp=Z,5.8nm,2.0s
L17K **Donlin** 74.96 331 P **P** **14 06 30.1 -1.8**
baz=80
C18K **Utukok River** 75.01 338 P **P** **14 06 30.1 -2.1**
baz=79
E18K **Tukpahlearik C** 75.02 336 P **P** **14 06 30.8 -1.3**
baz=80
J17K **VABM Dome** 75.10 332 P **P** **14 06 31.8 -0.9**
baz=80
H17K **Granite Mounta** 75.19 334 P **P** **14 06 32.4 -0.8**
baz=80
O16K **Kokwok River B** 75.30 328 P **P** **14 06 32.8 -1.1**
baz=80
P16K **Nushagak River** 75.35 328 P **P** **14 06 32.9 -1.3**
baz=80
G17K **Kiwalik Mounta** 75.39 335 P **P** **14 06 33.2 -1.1**
baz=79
F17K **Baldwin Pennin** 75.45 336 P **P** **14 06 33.6 -1.0**
baz=79
M16K **Timber Creek** 75.47 330 P **P** **14 06 33.5 -1.4**
baz=79
N16K **Nishlik Lake** 75.48 329 P **P** **14 06 33.6 -1.3**
baz=79
STHS **Stebnicka Huta** 75.52 42 *e*P **P** **14 06 36.9 +1.5**
STHS **Stebnicka Huta** 75.52 42 *e*P **P** **14 06 36.9 +1.5**
E17K **Hotham Inlet** 75.55 336 P **P** **14 06 34.2 -1.0**
baz=78
L16K **Owhat River** 75.59 331 P **P** **14 06 35.4 -0.1**
L16K **Owhat River** 75.59 331 P **P** **14 06 34.7 -0.8**
baz=79
I17K **Unalakleet** 75.72 333 P **P** **14 06 35.4 -0.8**
baz=79
RDOG **Red Dog Mine** 75.75 337 P **P** **14 06 35.2 -1.2**
baz=78
C17K **DeLong Mountai** 75.76 338 P **P** **14 06 35.2 -1.2**
baz=78
J16K **Anvik River** 75.80 332 P **P** **14 06 35.8 -0.9**
baz=79
SUW **Suwalki** 75.85 37 *e*P **P** **14 06 39.5 +2.4**
D17K **Noatak River** 75.89 337 P **P** **14 06 36.0 -1.1**
baz=78
FINES **FINESS Array B** 75.94 30 P **P** **14 06 38.9 +1.4**
comp=Z,6.3nm,0.8s,baz=274,slow=4.3,SNR=13
FINES LR LR 14 39 30.3
comp=Z,57nm,18.0s,baz=256,slow=35
comp=Z,6.3nm,0.8s
FINES **FINESS Array B** 75.94 30 P **P** **14 06 38.1 +0.6**
CHGN **Chignik** 76.08 325 P **P** **14 06 37.6 -0.8**
baz=79
N15K **Kwethluk River** 76.18 329 P **P** **14 06 38.1 -0.9**
baz=78
H16K **Elim** 76.22 334 P **P** **14 06 37.8 -1.2**
baz=78
O15K **Ungalikthiuk R** 76.25 328 P **P** **14 06 38.2 -1.2**
baz=78
KOLS **Kolonicke sedl** 76.28 43 *e*P **P** **14 06 43.6 +3.8**
KOLS **Kolonicke sedl** 76.28 43 *e*P **P** **14 06 43.6 +3.8**
UZHM **Uzhgorod** 76.35 43 P **P** **14 06 39.7 -0.4**
M15K **Kasiglua River** 76.36 330 P **P** **14 06 38.7 -1.3**
baz=78
SIRR **Siria** 76.40 46 ⇓P **P** **14 06 40.1 -0.5**
KWP **Kalwaria Pacla** 76.42 42 *e*P **P** **14 06 43.8 +3.3**
KWP **Kalwaria Pacla** 76.42 42 P **P** **14 06 40.1 -0.4**
comp=Z,22nm,1.1s
K15K **Wolf Creek Mou** 76.42 331 P **P** **14 06 39.8 -0.5**
baz=78
L15K **Ungalak Mounta** 76.53 331 P **P** **14 06 40.0 -0.9**
baz=77
C16K **Lisburne Hills** 76.59 338 P **P** **14 06 40.0 -1.1**
baz=76
S14K **Fog Glacier** 76.71 325 P **P** **14 06 40.4 -1.8**
baz=78
MDVR **Moldovita** 76.75 47 ⇓P **P** **14 06 44.0 +1.5**
VSU **Vasula** 76.89 33 *d i*P **P** **14 06 43.5 +0.6**
VSU pmax pmax
comp=Z,35nm,1.3s
G15K **Niukluk** 76.89 334 P **P** **14 06 41.9 -1.0**
baz=76
O14K **Tigyukauivet M** 76.96 328 P **P** **14 06 42.3 -1.1**
baz=77
M14K **Bethel** 76.96 330 P **P** **14 06 42.2 -1.2**
baz=77

F15K	**North Star Dit**	**76.96**	**335**	P		**P**	**14 06 41.7**	**-1.5**
	baz=76							
BOVS	**Bovan**	**76.98**	**48**	⇑P		**P**	**14 06 45.2**	**+1.4**
N14K	**Kuskokwak Cree**	**77.02**	**329**	P		**P**	**14 06 42.6**	**-1.0**
	baz=77							
CHNA	**Chernabura Isl**	**77.04**	**324**	P		**P**	**14 06 42.8**	**-1.1**
	baz=77							
L14K	**Kuka Creek**	**77.17**	**331**	P		**P**	**14 06 43.5**	**-1.0**
	baz=76							
HERR	**Herculane**	**77.21**	**47**	⇑P		**P**	**14 06 47.5**	**+2.5**
MARR	**Marisel-Cluj**	**77.31**	**45**	⇑P		**P**	**14 06 46.9**	**+1.2**
GZR	**Gura Zlata**	**77.35**	**46**	⇑P		**P**	**14 06 47.0**	**+1.1**
GZR	**Gura Zlata**	**77.35**	**46**	⇑P		**P**	**14 06 47.0**	**+1.1**
SDPT	**Sand Point**	**77.42**	**324**	P		**P**	**14 06 45.2**	**-0.8**
	baz=77							
APA	**Apatity**	**77.54**	**23**	*e*P		**P**	**14 06 47.5**	**+1.0**
APA				*e*			14 06 57.9	
APA				pmax	pmax			
	comp=Z,4.0nm,1.1s							
ANM	**Nome**	**77.55**	**334**	P		**P**	**14 06 45.9**	**-0.7**
	baz=75							
F14K	**Arctic Creek**	**77.70**	**335**	P		**P**	**14 06 46.2**	**-1.2**
	baz=74							
M13K	**Dall Lake**	**77.71**	**330**	P		**P**	**14 06 46.5**	**-1.0**
	baz=76							
LVZ	**Lovozero**	**77.90**	**22**	*ce*P		**P**	**14 06 50.1**	**+1.6**
LVZ				pmax	pmax			
	comp=Z,20nm,1.1s							
LVZ	**Lovozero**	**77.90**	**22**	P		**P**	**14 06 48.2**	**-0.3**
	comp=Z,19nm,1.5s							
K13K	**Kusilvak Mount**	**77.93**	**331**	P		**P**	**14 06 48.3**	**-0.5**
	baz=75							
RNPP8	**Varash**	**78.01**	**40**	P		**P**	**14 06 49.0**	**-0.4**
RNPP5	**Staryi Chortor**	**78.05**	**40**	P		**P**	**14 06 49.3**	**-0.3**
TNA	**Tin City**	**78.31**	**335**	P		**P**	**14 06 49.5**	**-1.2**
	baz=73							
MNK	**Minsk**	**78.44**	**36**	*i* P		**P**	**14 06 52.2**	**+0.5**
	comp=E,13nm,0.9s							
MNK				*i* P		**P**	**14 06 52.2**	**+0.5**
	comp=N,9.0nm,0.9s							
MNK				*i* P		**P**	**14 06 52.2**	**+0.5**
	comp=Z,18nm,0.9s,baz=284							
MNK				*i* PP		**PP**	**14 09 48.6**	**-0.1**
MNK				*i* PPP		PPP	14 11 36.6	
MNK				*i* S		**S**	**14 16 48.0**	**+0.5**
MNK				*i* SS		**SS**	**14 21 52.0**	**+2.0**
MNK				*i* SSS		SSS	14 25 16.8	
MNK				*i* LQ		LQ	14 36 46.3	
MNK				*i* LR		LR	14 42 18.5	
MNK				*i* LRM		MLR	14 43 46.8	
	comp=N,296nm,19.6s							
MNK				*i* LRM		MLR	14 43 47.8	
	comp=Z,248nm,17.9s							
MNK				*i* LRM		MLR	14 43 55.9	
	comp=E,286nm,22.1s							
MNK	**Minsk**	**78.44**	**36**	*i* P		**P**	**14 06 52.2**	**+0.5**
MNK				*i*			14 09 48.6	
MNK				*i* PPP		PPP	14 11 36.6	
MNK				*i* S		**S**	**14 16 48.0**	**+0.5**
MNK				*i* SS		**SS**	**14 21 51.9**	**+2.0**
MNK				*i* SSS		SSS	14 25 16.7	
MNK				pmax	pmax			
	comp=N,9.0nm,0.9s							
MNK				pmax	pmax			
	comp=Z,18nm,0.9s							
MNK				pmax	pmax			
	comp=E,13nm,0.9s							
MNK				MLR	MLR			
	comp=N,296nm,20.0s							
MNK				MLR	MLR			
	comp=Z,248nm,18.0s							
MNK				MLR	MLR			
	comp=E,286nm,22.0s							
BURAR	**Bucovina Array**	**78.48**	**44**	⇓P		**P**	**14 06 53.9**	**+1.6**
BURAR	**Bucovina Array**	**78.48**	**44**	P		**P**	**14 06 52.5**	**+0.3**
BURAR	**Bucovina Array**	**78.48**	**44**	⇓P		**P**	**14 06 53.9**	**+1.6**
ARR	**Arges**	**78.63**	**46**	⇓P		**P**	**14 06 55.2**	**+2.1**
VOIR		**78.90**	**46**	⇑P		**P**	**14 06 56.9**	**+2.3**
VOIR		**78.90**	**46**	P		**P**	**14 06 56.9**	**+2.3**
VOIR		**78.90**	**46**	P		**P**	**14 06 54.0**	**-0.6**
	comp=E,5.8nm,0.9s							
KMPD	**K-Podol'skiy**	**79.06**	**42**	P		**P**	**14 06 54.9**	**-0.3**
M11K	**Mekoryuk**	**79.08**	**330**	P		**P**	**14 06 53.7**	**-1.4**
	baz=73							
MI28	**MI28,Pidlybu**	**79.22**	**40**	P		**P**	**14 06 55.7**	**-0.4**
MI29	**MI29, Kamyanyy**	**79.46**	**40**	P		**P**	**14 06 57.7**	**+0.3**
	comp=E,118nm,1.0s							
MLR	**Muntele Rosu**	**79.50**	**46**	⇓P		**P**	**14 06 59.1**	**+1.2**
MLR	**Muntele Rosu**	**79.50**	**46**	⇓P		**P**	**14 06 59.1**	**+1.2**
LUBAR	**Lubar, Ukraine**	**79.53**	**41**	P		**P**	**14 06 57.4**	**-0.4**
COVR	**Voineasa-Covas**	**79.58**	**45**	⇑P		**P**	**14 07 01.4**	**+3.2**
ONER	**Baraj Valea Uz**	**79.58**	**45**	⇑P		**P**	**14 07 00.4**	**+2.2**
TESR	**Tescani**	**79.71**	**44**	P		**P**	**14 06 58.4**	**-0.5**
	comp=E,12nm,1.1s							
PLOR	**Plostina**	**79.88**	**45**	⇓P		**P**	**14 07 03.1**	**+3.2**
PLOR	**Plostina**	**79.88**	**45**	⇓P		**P**	**14 07 03.1**	**+3.2**
VRI	**Vrincioaia**	**79.93**	**45**	⇑P		**P**	**14 07 02.8**	**+2.7**
VRI	**Vrincioaia**	**79.93**	**45**	⇑P		**P**	**14 07 02.8**	**+2.7**
VRI	**Vrincioaia**	**79.93**	**45**	P		**P**	**14 06 59.6**	**-0.5**
	comp=E,8.0nm,1.5s							
ISR	**Istrita**	**80.00**	**46**	P		**P**	**14 07 00.0**	**-0.5**
	comp=E,19nm,0.7s							
AK20	**Malin Array Si**	**80.09**	**40**	P		**P**	**14 07 00.4**	**-0.4**
AK19	**Malin Array Si**	**80.09**	**40**	P		**P**	**14 07 00.5**	**-0.3**
AK21	**Malin Array Si**	**80.10**	**40**	P		**P**	**14 07 00.5**	**-0.3**
AK22	**Malin Array Si**	**80.12**	**40**	P		**P**	**14 07 00.6**	**-0.4**
AK18	**Malin Array Si**	**80.13**	**40**	P		**P**	**14 07 00.6**	**-0.4**
AK17	**Malin Array Si**	**80.13**	**40**	P		**P**	**14 07 00.7**	**-0.3**
AK23	**Malin Array Si**	**80.15**	**40**	P		**P**	**14 07 00.8**	**-0.3**
AK13	**Malin Array Si**	**80.15**	**40**	P		**P**	**14 07 00.8**	**-0.4**
AK16	**Malin Array Si**	**80.17**	**40**	P		**P**	**14 07 00.8**	**-0.4**
AK14	**Malin Array Si**	**80.18**	**40**	P		**P**	**14 07 00.9**	**-0.4**
AK04	**Malin Array Si**	**80.19**	**40**	P		**P**	**14 07 01.0**	**-0.3**
AK11	**Malin Array Si**	**80.20**	**40**	P		**P**	**14 07 01.0**	**-0.4**
AK12	**Malin Array Si**	**80.20**	**40**	P		**P**	**14 07 01.3**	**-0.1**
KIEV	**Kiev**	**80.22**	**40**	P		**P**	**14 07 01.4**	**-0.1**
	comp=E,41nm,1.7s							
AKASG	**Malin Array Be**	**80.23**	**40**	P		**P**	**14 07 02.3**	**+0.7**
	comp=E,0.3nm,0.2s,baz=276,slow=4.8,SNR=15							
AKASG				LR		LR	14 42 52.0	
	comp=E,129nm,18.7s,baz=248,slow=36							
	comp=E,0.3nm,0.2s							
AKASG	**Malin Array Be**	**80.23**	**40**	*i* P		**P**	**14 07 03.0**	**+1.4**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKBB	**Malin Array Si**	**80.23**	**40**	*c i* P		**P**	**14 07 02.3**	**+0.7**
AKBB				pmax	pmax			
	comp=Z,21nm,1.7s							
AKBB	**Malin Array Si**	**80.23**	**40**	P		**P**	**14 07 01.4**	**-0.2**
AK02	**Malin Array Si**	**80.23**	**40**	P		**P**	**14 07 01.4**	**-0.2**
AK05	**Malin Array Si**	**80.24**	**40**	P		**P**	**14 07 01.5**	**-0.1**
AK06	**Malin Array Si**	**80.25**	**40**	P		**P**	**14 07 01.5**	**-0.2**
AK07	**Malin Array Si**	**80.26**	**40**	P		**P**	**14 07 01.6**	**-0.1**
AK08	**Malin Array Si**	**80.27**	**40**	P		**P**	**14 07 01.6**	**-0.2**
AK10	**Malin Array Si**	**80.27**	**40**	P		**P**	**14 07 01.6**	**-0.2**
AK09	**Malin Array Si**	**80.29**	**40**	P		**P**	**14 07 01.7**	**-0.2**
SORM	**Soroca**	**80.39**	**43**	⇓P		**P**	**14 07 02.4**	**-0.1**
SORM	**Soroca**	**80.39**	**43**	⇓P		**P**	**14 07 02.4**	**-0.1**
UNV	**Unalaska Valle**	**81.21**	**324**	P		**P**	**14 07 04.1**	**-2.6**
	baz=72							
KLMR	**Klimovskoe**	**82.33**	**28**	*e*P		**P**	**14 07 11.7**	**-0.8**
KLMR				pmax	pmax			
	comp=Z,63nm,1.5s							
NE56	**Odesa**	**82.47**	**43**	P		**P**	**14 07 13.4**	**-0.1**
OBN	**Obninsk**	**83.03**	**34**	*ce*P		**P**	**14 07 17.1**	**+0.8**
OBN				*e*			14 10 27.5	
OBN				*e*PPP		PPP	14 12 18.0	
OBN				*e*S		**S**	**14 17 36.9**	**+1.4**
OBN				*e*SS		**SS**	**14 22 59.3**	**+0.9**
OBN				*e*SSS		SSS	14 26 28.4	
OBN				pmax	pmax			
	comp=Z,80nm,1.4s							
OBN				MLR	MLR			
	comp=Z,127nm,19.0s							
OBN	**Obninsk**	**83.03**	**34**	P		**P**	**14 07 16.2**	**-0.1**
	comp=Z,838nmcomp=Z,47nm,0.7s							
MOS	**Moscow**	**83.36**	**33**	*e*P		**P**	**14 07 20.2**	**+2.2**
MOS				pmax	pmax			
	comp=Z,37nm,1.0s							
SIM	**Simferopol'**	**85.16**	**44**	P		**P**	**14 07 24.2**	**-3.2**
SIM				pmax	pmax			
	comp=Z,31nm,0.6s							
SIM				MLR	MLR			
	comp=Z,100nm,17.5s							
LPSR	**Galich'ya Gora**	**85.28**	**36**	*e*P		**P**	**14 07 28.1**	**+0.3**
LPSR				pmax	pmax			
	comp=Z,20nm,0.8s							
VORR	**Voronezh**	**85.81**	**37**	P		**P**	**14 07 31.5**	**+1.1**
VORR				pmax	pmax			
	comp=Z,76nm,2.1s							
VSR	**Storozhevoye**	**85.97**	**37**	*e*P		**P**	**14 07 29.8**	**-1.4**
VSR				pmax	pmax			
	comp=Z,9.0nm,1.1s							
BILL	**Bilibino**	**86.06**	**342**	*d i*P		**P**	**14 07 31.5**	**+0.1**
BILL				pmax	pmax			
	comp=Z,30nm,1.8s							
VORD	**Divnogorie**	**86.14**	**37**	*e*P		**P**	**14 07 31.5**	**-0.6**
VORD				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BR106	**Keskin Array S**	**86.63**	**49**	P		**P**	**14 07 34.6**	**-0.3**
	comp=Z,72nmcomp=Z,7.0nm,0.9s							
BR105	**Keskin Array S**	**86.64**	**49**	P		**P**	**14 07 34.6**	**-0.4**
	comp=Z,78nmcomp=Z,10nm,0.9s							
BR131	**Keskin Array S**	**86.65**	**49**	⇓*e*P		**P**	**14 07 35.4**	**+0.3**
BRTR	**Keskin Array B**	**86.65**	**49**	P		**P**	**14 07 35.4**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=262,slow=4.4,SNR=12							
BRTR				LR		LR	14 42 13.2	
	comp=Z,49nm,22.0s,baz=274,slow=33							
	comp=Z,4.8nm,0.9s							
BRTR	**Keskin Array B**	**86.65**	**49**	P		**P**	**14 07 33.9**	**-1.2**
BRTR	**Keskin Array B**	**86.65**	**49**	*i* P		**P**	**14 07 37.2**	**+2.1**
BRTR				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BR104	**Keskin Array S**	**86.66**	**49**	P		**P**	**14 07 34.7**	**-0.4**
	comp=Z,68nmcomp=Z,8.6nm,0.9s							
ANN	**Anapa**	**87.41**	**44**	*e*P		**P**	**14 07 39.0**	**+0.6**
ANN				*e**PP		**pP**	**14 07 41.6**	**-0.2**
ANN				*e*S		**SKSac**	**14 18 05.7**	**-0.5**
ANN				pmax	pmax			
	comp=Z,23nm,1.1s							
VRH	**Novokhopyorsk**	**87.43**	**37**	*e*P		**P**	**14 07 38.6**	**+0.2**
VRH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
KIRV	**Kirov**	**87.83**	**28**	⇓*e*P		**P**	**14 07 39.4**	**-0.7**
PPT	**Papeete**	**88.50**	**251**	LR		LR	14 42 10.1	
	comp=Z,116nm,18.3s,baz=110,slow=32							
PPT2	**Papeete2**	**88.51**	**251**	*e*LR		LR	14 35 47.1	
	comp=Z,102nm,22.0s							
SOC	**Sochi**	**89.40**	**44**	*e*P		**P**	**14 07 49.8**	**+1.9**
SOC				*e*			14 11 18.9	
SOC				*e*PPP		PPP	14 13 14.2	
SOC				*e*S		**SKSac**	**14 18 19.6**	**+1.3**
SOC				*e*SS		**SS**	**14 24 36.9**	**+4.5**
SOC				*e*SSS		SSS	14 28 06.6	
BELG	**Belogornoye**	**90.12**	**34**	*de*P		**P**	**14 07 50.9**	**-0.1**
BELG				pmax	pmax			
	comp=Z,6.0nm,1.5s							
TBI	**Tubuai**	**90.30**	**246**	*e*LR		LR	14 36 42.9	
	comp=Z,795nm,23.8s							
TSUM	**Tsumeb**	**90.87**	**110**	LR		LR	14 42 12.8	
	comp=Z,281nm,19.9s,baz=333,slow=31							
NRIK	**Noril'sk**	**91.14**	**9**	P		**P**	**14 07 54.4**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=4.2,slow=2.3,SNR=4.3							
	comp=Z,1.8nm,0.5s							
KIV	**Kislovodsk**	**91.19**	**43**	*e*P		**P**	**14 07 55.8**	**-0.6**
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
SHA1	**Shidzhatmaz**	**91.27**	**43**	⇑*e*P		**P**	**14 07 58.3**	**+1.4**
KBZ	**Khabaz**	**91.43**	**43**	P		**P**	**14 07 56.1**	**-1.2**
	comp=Z,3.6nm,1.0s,baz=312,slow=1.1,SNR=7.4							
KBZ				LR		LR	14 50 34.8	
	comp=Z,68nm,18.7s,baz=304,slow=37							
	comp=Z,3.6nm,1.0s							
KBZ	**Khabaz**	**91.43**	**43**	⇑*e*P		**P**	**14 07 58.1**	**+0.8**
KBZ				pmax	pmax			
	comp=Z,8.0nm,1.3s							
SHEM	**Shemya Is, Ala**	**92.14**	**328**	LR		LR	14 50 38.7	
	comp=Z,154nm,19.5s,baz=108,slow=36							
ARTI	**Arti**	**93.05**	**27**	LR		LR	14 51 37.0	
	comp=Z,93nm,18.1s,baz=274,slow=37							
ARTI	**Arti**	**93.05**	**27**	P		**P**	**14 08 05.3**	**+0.7**
ARTI							14 11 46.8	
ARTI				S		**SKSac**	**14 18 38.6**	**+0.1**
SVE	**Sverdlovsk**	**93.72**	**26**	*e*P		**P**	**14 08 09.0**	**+1.4**
SEY	**Seymchan**	**93.74**	**343**	LR		LR	14 56 17.4	
	comp=Z,165nm,18.0s,baz=334,slow=39							
SEY	**Seymchan**	**93.74**	**343**	⇑*e*P		**P**	**14 08 07.5**	**-0.1**
SEY				pmax	pmax			
	comp=Z,9.0nm,1.0s							
GNI	**Garni**	**94.28**	**46**	LR		LR	14 54 35.4	
	comp=Z,82nm,18.2s,baz=247,slow=38							
MAK	**Makhachkala**	**94.75**	**42**	*e*P		**P**	**14 08 09.0**	**-3.7**
MAK				*e*			14 11 59.7	
MAK				*e*			14 18 41.5	
MAK				*e*SS		SS	14 25 51.5	+2.3
MAK				pmax	pmax			
	comp=Z,252nm,1.3s							
MAK				MLR	MLR			
	comp=Z,253nm,17.0s							
MA2	**Magadan**	**96.91**	**342**	LR		LR	14 57 03.7	
	comp=Z,123nm,18.1s,baz=54,slow=38							
MBAR	**Mbarara**	**97.57**	**88**	LR		LR	14 50 01.1	
	comp=Z,253nm,19.9s,baz=278,slow=34							
SUR	**Sutherland**	**97.60**	**121**	LR		LR	14 48 08.6	
	comp=Z,102nm,19.7s,baz=289,slow=33							
RAR	**Rarotonga**	**98.77**	**251**	LR		LR	14 47 25.2	
	comp=Z,121nm,18.1s,baz=110,slow=32							
SNAA	**Sanae**	**99.11**	**163**	P		**Pdif**	**14 08 30.6**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=197,slow=20,SNR=3.0							
SNAA				LR		LR	14 51 13.0	
	comp=Z,232nm,21.7s,baz=318,slow=34							
	comp=Z,1.2nm,0.9s							
YAK	**Yakutsk**	**99.26**	**352**	LR		LR	14 58 21.9	
	comp=Z,53nm,18.3s,baz=26,slow=38							
LSZ	**Lusaka**	**99.40**	**103**	LR		LR	14 47 09.7	
	comp=Z,115nm,20.3s,baz=310,slow=32							
PETK	**Petropavlovsk-**	**99.46**	**335**	LR		LR	14 59 07.9	
	comp=Z,109nm,18.1s,baz=58,slow=39							
LBTB	**Lobatse**	**99.66**	**113**	LR		LR	14 45 51.0	
	comp=Z,144nm,21.6s,baz=282,slow=31							
WMQ	**Urumqi**	**114.37**	**20**	*e*PKP		PKPdf	14 13 31.7	+0.6
WMQ				LR		LR		
	comp=Z,110nm,20.7s							
CN2	**Changchun**	**117.56**	**350**	PKP		**PKPdf**	**14 13 30.1**	**-7.1**
HHC	**Hu-ho-hao-te**	**121.55**	**1**	*e*P		**PKPdf**	**14 13 45.1**	**0.0**
HHC				LR		LR		
	comp=N,100nm,19.4s							
HHC				LR		LR		
	comp=E,160nm,19.2s							
HHC				LR		LR		
	comp=Z,160nm,19.4s							
BTO2	**Baotou**	**121.60**	**3**	*e*PKP		**PKPdf**	**14 13 40.6**	**-4.6**
BTO2				pmax	pmax			
	comp=Z,14nm,0.5s							
BTO2				pmax	pmax			
	comp=Z,160nm,4.9s							
KSRS	**Korea Array**	**123.19**	**346**	PKP		**PKPdf**	**14 13 46.7**	**-1.5**
	comp=Z,6nm,0.7s,baz=357,slow=1.5,SNR=2.1							
NJ2	**Nanjing**	**130.03**	**353**	*e*P		**PKPdf**	**14 14 01.0**	**-0.4**
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
PZH	**PanZhiHua**	**134.55**	**14**	PKP		**PKPdf**	**14 14 09.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**141.34**	**22**	PKhKP		PKPpre	14 14 18.5	
	comp=Z,1.5nm,0.9s,baz=310,slow=2.1,SNR=6.4							
STKA	**Stephens Creek**	**150.65**	**236**	PKP		**PKPdf**	**14 14 37.5**	**-0.7**
	comp=Z,20nm,1.4s,baz=79,slow=0.8,SNR=4.0							
ASAR	**Alice Springs**	**159.62**	**250**	PKP		**PKPdf**	**14 14 49.7**	**-0.9**
	comp=Z,4.2nm,1.2s,baz=164,slow=1.3,SNR=11							
ASAR				PKPab		**PKPab**	**14 15 27.9**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=108,slow=3.9,SNR=7.1							
ASAR	**Alice Springs**	**159.62**	**250**			**PKPdf**	**14 14 49.1**	**-1.4**
WRA	**Warramunga Arr**	**159.69**	**261**	PKP		**PKPdf**	**14 14 50.0**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=80,slow=0.7,SNR=12							
WRA				PKPab		**PKPab**	**14 15 28.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=88,slow=4.0,SNR=7.9							

WEL 03 14:10:48.8±1.4,35°S±9'×17°9'W±1'5,h12km,M3.8/4,
ML3.7/7,MLv3.8/4,Error ellipse: s-maj=20.6km
s-min=10.3km az=110.8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.39**	**220**	P	Pn	14 11 41.1	-0.5
MXZ				S	Sn	14 12 22.0	+0.3
WMGZ	**Waiomatatini S**	**3.54**	**216**	P	Pn	14 11 44.0	+0.5
WMGZ				S	Sn	14 12 27.0	+1.7
PKGZ	**Pakihiroa**	**3.74**	**219**	P	Pn	14 11 46.1	-0.3
PKGZ				S	Sn	14 12 30.3	-0.1
PUZ	**Puketiti**	**3.81**	**215**	P	Pn	14 11 47.3	-0.1
PUZ				S	Sn	14 12 32.6	+0.4
HAZ	**Te Kaha**	**3.82**	**223**	P	Pn	14 11 47.8	+0.4
HAZ				S	Sn	14 12 34.3	+2.0
RUGZ	**Raukumara Rang**	**4.03**	**222**	P	Pn	14 11 50.2	-0.2
RUGZ				S	Sn	14 12 39.1	+1.5
TWGZ	**Tauwhareparae**	**4.03**	**217**	P	Pn	14 11 50.5	+0.1
TWGZ				S	Sn	14 12 39.3	+1.8
CNGZ	**Carnagh Statio**	**4.17**	**212**	P	Pn	14 11 53.0	+0.8
TKGZ	**Te Karaka**	**4.30**	**216**	P	Pn	14 11 53.5	-0.5
MWZ	**Matawai**	**4.38**	**219**	P	Pn	14 11 54.5	-0.7
URZ	**Urewera**	**4.55**	**223**	P	Pn	14 11 56.5	-1.0
RIGZ	**Rimuhau**	**4.55**	**215**	P	Pn	14 11 56.7	-0.8
RAGZ	**Rawiri**	**4.56**	**219**	P	Pn	14 11 57.6	-0.1
SNGZ	**Shannon Statio**	**4.81**	**217**	P	Pn	14 12 01.2	+0.1
RTZ	**Ruatahuna**	**4.88**	**221**	P	Pn	14 12 01.3	-0.7
MUGZ	**Murupara**	**4.89**	**223**	P	Pn	14 12 01.7	-0.6
NGRZ	**Ngongotaha**	**5.00**	**230**	P	Pn	14 12 01.5	-2.2
RAHZ	**Arahi**	**5.04**	**218**	P	Pn	14 12 04.1	-0.2
MTHZ	**Maungataniwha**	**5.12**	**220**	P	Pn	14 12 05.6	+0.2
NMHZ	**Naumai**	**5.12**	**218**	P	Pn	14 12 06.9	-1.3
BKZ	**Black Stump Fm**	**5.54**	**220**	P	Pn	14 12 09.9	-1.2
WCZ	**Waipu Caves**	**5.56**	**258**	P	Pn	14 12 11.6	+0.2
TMVZ	**Te Maari**	**5.94**	**225**	P	Pn	14 12 15.4	-1.3
NTVZ	**North Tongarir**	**5.94**	**225**	P	Pn	14 12 15.9	-0.9
OUZ	**Omahuta**	**6.12**	**266**	P	Pn	14 12 18.9	-0.2
WNVZ	**Wahianoa**	**6.14**	**224**	P	Pn	14 12 17.9	-1.6
MRZ	**Mangatainoka R**	**7.13**	**216**	P	Pn	14 12 31.0	-1.8

IDC 03 14:19:33.2±1.8,1°54N×125°87E,h0km,mb3.6/4,
mbtmp3.6/4,Error ellipse: s-maj=189.2km
s-min=22.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**159**	P	P	14 24 38.8	-0.1
	0.2nm,0.3s,baz=336,slow=11,SNR=6.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**26.24**	**163**	P	P	14 25 10.5	+0.2
	0.4nm,0.6s,baz=357,slow=7.9,SNR=11						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**58.87**	**326**	P	P	14 29 34.2	+0.3
	0.2nm,0.4s,baz=123,slow=7.9,SNR=2.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.12**	**328**	P	P	14 30 02.2	-0.5
	0.9nm,0.2s,baz=122,slow=3.4,SNR=2.1						
	0.9nm,0.2s						

*SJA **03** 14:19:54.3±0.7,23°77S×68°88W,h98km±13km,ML3.4,*
MW3.5
*GUC **03** 14:19:58.3±0.8,23°55S×68°94W,h98km±4km,ML3.3*
ISC 03 14:19:56.0±1.7,23°64S±0°04×68°81W±0°05,
h110km±15km,n21,σ1$49/31,2C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.89**	**41**	*e*P	**Pn**	**14 20 16.5**	**+0.1**
AF01				*e*S	**Sn**	**14 20 32.5**	**+0.8**
AF01				IAML		14 20 47.9	
	comp=Z,1μm,0.5s						
AF01	**San Pedro de A**	**0.89**	**41**	⇑*e*P	**Pn**	**14 20 17.7**	**+1.3**
AF01				*e*S	**Sn**	**14 20 32.0**	**+0.3**
AF01				IAML		14 20 32.9	
	comp=E,3μm,0.3s						
PB06	**IPOC Station P**	**1.16**	**323**	*e*S	**Sn**	**14 20 35.4**	**-1.0**
PB06				IAML		14 20 35.6	
	comp=Z,488nm,0.2s						
PB06	**IPOC Station P**	**1.16**	**323**	⇓*e*P	**Pn**	**14 20 19.3**	**+0.3**
PB06				*e*S	**Sn**	**14 20 34.8**	**-1.7**
PB06				IAML		14 20 35.6	
	comp=E,716nm,0.1s						
PB05	**IPOC Station P**	**1.50**	**301**	*e*S	**Sn**	**14 20 42.8**	**-0.5**
PB05				IAML		14 20 47.2	
	comp=Z,194nm,0.3s						
PB05	**IPOC Station P**	**1.50**	**301**	⇓*i*P	**Pn**	**14 20 23.1**	**+0.2**
PB05				*i* S	**Sn**	**14 20 40.8**	**-2.5**
PB10	**IPOC Station P**	**1.61**	**274**	*e*P	**Pn**	**14 20 24.5**	**+0.5**
PB10				*e*S	**Sn**	**14 20 43.8**	**-1.6**
PB10				IAML		14 20 52.5	
	comp=E,271nm,0.3s						
PB14	**IPOC Station P**	**1.76**	**236**	*e*S	**Sn**	**14 20 45.0**	**-4.3**
PB14				IAML		14 20 58.0	
	comp=Z,147nm,0.2s						
PB14	**IPOC Station P**	**1.76**	**236**	*e*P	**Pn**	**14 20 27.9**	**+1.7**
PB14				*e*S	**Sn**	**14 20 49.9**	**+0.6**
PB14				IAML		14 20 56.6	
	comp=E,108nm,0.2s						
PB03	**IPOC Station P**	**1.80**	**331**

NIL	**Nilore**	**3.33**	**141**			**Pn**	14 30 36.8	**0.0**
BTK	**Batken**	**3.78**	**1**			**Pn**	14 30 43.6	**+0.9**
JMU	**Jammu**	**4.84**	**135**	*eP*		**Pn**	14 30 59.1	**+2.5**
JMU				*eS*		**Sn**	14 31 49.9	**-2.4**
JMU	530nm,0.8s			IAML			14 31 55.1	
JMU	comp=E,154nm,0.4s			IAML			14 31 55.1	
JMU	comp=E,423nm,0.5s			IAML			14 32 10.4	
JMU	comp=E,269nm,0.4s			IAML			14 32 11.2	
ARSB	**Arslanbob**	**5.33**	**18**			**Pn**	14 31 02.9	**-0.3**
DHRM	**DHARAMSHALA**	**6.10**	**130**	*eP*		**Pn**	14 31 14.1	**+0.6**
DHRM				*eS*		**Sn**	14 32 19.9	**-2.5**
DHRM	comp=E,479nm,0.3s			IAML			14 32 22.8	
DHRM	comp=E,282nm,0.2s			IAML			14 32 24.7	
NRN	**Naryn**	**6.58**	**37**	Pn		**Pn**	14 31 19.0	**-1.0**
UCH	**Uchtor**	**6.62**	**25**	P		**Pn**	14 31 20.9	**+0.3**
EKS2	**Erkin-Say**	**6.79**	**19**	P		**Pn**	14 31 23.1	**+0.5**
KK31	**Karatay Array**	**6.82**	**358**	Pn		**Pn**	14 31 22.1	**-0.8**
KK31	**Karatay Array**	**6.82**	**358**	P		**Pn**	14 31 19.8	**-3.1**
KK31	comp=E,8.5nm,0.3s,baz=192,slow=14,SNR=100			⇑S		**Sn**	14 32 32.5	**-7.0**
KKAR	**Karatay Array**	**6.82**	**358**	Pn		**Pn**	14 31 22.4	**-0.5**
AAK	**Ala-Archa**	**6.98**	**23**	Pn		**Pn**	14 31 25.8	**+0.6**
AAK	comp=E,9.3nm,0.3s,baz=207,slow=7.9,SNR=52			Sn		**Sn**	14 32 42.0	**-1.4**
AAK	comp=E,2.6nm,0.3s,baz=331,slow=21,SNR=7.1 comp=E,17nm,0.3s **Ala-Archa**	**6.98**	**23**	P		**Pn**	14 31 25.7	**+0.5**
AAK	SNR=27 **Ala-Archa**	**6.98**	**23**	⇑P		Pn	14 31 30.7	+5.5
AAK	comp=E,12nm,0.6s			⇓S		Sn	14 32 54.5	+11
KBK	comp=E,13nm,0.6s **Karagaybulak**	**7.15**	**26**	P		**Pn**	14 31 29.1	**+1.7**
FRU1	SNR=8.4 **Bishkek**	**7.18**	**23**	Pn		**Pn**	14 31 28.2	**+0.5**
CHMS	**Chumysh**	**7.39**	**23**	P		**Pn**	14 31 31.1	**+0.6**
BOOM	SNR=18 **Boomskoye usch**	**7.39**	**31**	Pn		**Pn**	14 31 30.2	**-0.4**
USP	**Ospenovka**	**7.55**	**21**	P		**Pn**	14 31 33.1	**+0.4**
TKM2	SNR=23 **Tokmak 2**	**7.62**	**28**	P		**Pn**	14 31 34.2	**+0.6**
TARG	SNR=23 **Taragay, Kyrgy**	**7.73**	**43**	Pn		**Pn**	14 31 36.5	**+1.1**
WUS	**Wushi**	**8.24**	**51**	Pn		**Pn**	14 31 43.7	**+1.8**
PRZ	**Przheval'sk**	**8.57**	**41**	Pn		**Pn**	14 31 48.1	**+1.8**
PDGK	**Podgornoye**	**9.73**	**41**	Pn		**Pn**	14 32 01.7	**-0.1**
AJM	**Ajmer**	**10.36**	**160**	*eP*		**Pn**	14 32 10.7	**+0.6**
AJM				*ex*		x	14 33 36.7	
AJM	comp=E,11nm,0.1s			IAML			14 34 18.7	
AJM	comp=N,26nm,0.8s			IAML			14 34 19.0	
PTH	**Pithoragarh**	**10.37**	**127**	*eP*		**Pn**	14 32 10.4	**+0.1**
PTH				*eS*		**Sn**	14 33 57.4	**-7.7**
MAKZ	**Makanchi**	**13.45**	**35**	Pn		**Pn**	14 32 51.2	**+1.1**
MK31	**Makanchi Array**	**13.59**	**36**	⇑P		P	14 33 04.5	+8.8
MKAR	comp=N,0.8nm,0.7s,baz=225,slow=15,SNR=9.7 **Makanchi Array**	**13.59**	**36**	Pn		**Pn**	14 32 52.1	**+0.3**
BHPL	comp=N,0.2nm,0.3s,baz=226,slow=16,SNR=11 comp=N,1.1nm,0.6s **Bhopal**	**14.21**	**154**	*eP*		**P**	14 33 03.7	**+0.8**
BHPL				*eS*		Sn	14 35 26.7	-11
AB31	**Akbulak array**	**15.19**	**332**			**P**	14 33 12.8	**-0.6**
AB31	comp=Z,6.7nm,0.6s			IAmb		IAmb	14 33 13.6	
AB31	**Akbulak array**	**15.19**	**332**	P		Pn	14 33 04.2	-7.6
ABKAR	comp=Z,2.3nm,0.3s,baz=145,slow=12,SNR=150 **Akbulak array**	**15.19**	**332**			**Pn**	14 33 11.7	**-0.1**
KURBB	**Kurchatov Arra**	**15.40**	**19**	Pn		**Pn**	14 33 13.4	**-1.0**
	comp=Z,0.2nm,0.3s,baz=210,slow=10,SNR=12 comp=Z,0.6nm,0.2s							
EVN	**Everest**	**15.92**	**117**			**Pn**	14 33 21.7	**0.0**
EVN	comp=Z,5.0nm,0.7s			IAmb		IAmb	14 33 45.9	
BVAR	**Borovoye Array**	**16.75**	**359**	P		**Pn**	14 33 31.8	**+0.9**
	comp=Z,0.1nm,0.3s,baz=161,slow=9.4,SNR=13 comp=Z,2.2nm,0.6s							
BORK	**Borovoye**	**16.77**	**359**	Pn		**Pn**	14 33 32.8	**+1.6**
AKTO	**Aktyubinsk**	**16.88**	**331**	P		**Pn**	14 33 31.7	**-0.8**
AKTO	comp=Z,0.7nm,0.3s,baz=146,slow=8.7,SNR=28			S		**S**	14 36 32.3	**-7.7**
	comp=Z,6.4nm,1.1s,baz=111,slow=22,SNR=4.5 comp=Z,8.8nm,0.7s							
ZAA0	**Zalesovo Array**	**20.20**	**25**	P		**P**	14 34 09.3	**+1.2**
ZALV	**Zalesovo Beam**	**20.20**	**25**	P		Pn	14 34 11.4	-0.2
	comp=Z,15nm,0.6s,baz=221,slow=11,SNR=51 comp=Z,15nm,0.6s							
ZALV	**Zalesovo Beam**	**20.20**	**25**	P		**P**	14 34 09.8	**+1.6**
ARTI	**Arti**	**21.79**	**341**	P		**P**	14 34 28.3	**+3.3**
	comp=Z,1.6nm,0.3s,baz=86,slow=1.8,SNR=3.2 comp=Z,1.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**30.52**	**118**	LR		LR	14 51 12.1	
FINES	comp=Z,47nm,19.1s,baz=230,slow=43 **FINESS Array B**	**37.56**	**326**	P		**P**	14 36 47.0	**+2.4**
	comp=Z,1.3nm,0.6s,baz=123,slow=9.4,SNR=4.6 comp=Z,1.3nm,0.6s							
ARCES	**ARCESS Array B**	**41.28**	**338**	P		**P**	14 37 18.9	**+3.5**
	comp=Z,1.6nm,0.9s,baz=107,slow=8.1,SNR=3.8 comp=Z,1.6nm,0.9s							
HFS	**Hagfors**	**43.12**	**322**	P		**P**	14 37 33.1	**+2.8**
	comp=Z,1.1nm,0.6s,baz=86,slow=8.8,SNR=1.9 comp=Z,1.1nm,0.6s							
NOA	**NORSAR Array B**	**44.44**	**323**	P		**P**	14 37 42.9	**+1.9**
	comp=Z,0.2nm,0.4s,baz=96,slow=8.0,SNR=2.7 comp=Z,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**65.51**	**269**	P		**P**	14 40 11.6	**-1.2**
	comp=Z,0.8nm,0.5s,baz=107,slow=8.1,SNR=3.8 comp=Z,0.8nm,0.5s							

WEL 03 14:34:34.0±4.2, 34°S±33″×17°8W±3°8, h12km, M4.4/10, mB5.1/7, ML4.5/11, MLv4.3/10, Mw(mB)4.5/7, Error ellipse: s-maj=49.0km s-min=42.8km az=94.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.00**	**212**	P	Pn	14 35 49.2	+0.4
PKGZ	**Pakihiroa**	**5.19**	**214**	P	Pn	14 35 51.8	+0.3
HAZ	**Te Kaha**	**5.25**	**217**	P	Pn	14 35 52.9	+0.7
PUZ	**Puketiti**	**5.28**	**212**	P	Pn	14 35 52.5	-0.2
RUGZ	**Raukumara Rang**	**5.46**	**216**	P	Pn	14 35 55.4	+0.1
TWGZ	**Tauwhareparae**	**5.49**	**213**	P	Pn	14 35 55.9	+0.3
CNGZ	**Carnagh Statio**	**5.64**	**210**	P	Pn	14 35 58.0	+0.2
MWZ	**Matawai**	**5.82**	**215**	P	Pn	14 36 00.0	-0.2
URZ	**Urewera**	**5.97**	**218**	P	Pn	14 36 01.8	-0.5
RIGZ	**Rimuhau**	**6.02**	**211**	P	Pn	14 36 02.1	-0.8
SNGZ	**Shannon Statio**	**6.27**	**214**	P	Pn	14 36 05.5	-0.8
MUGZ	**Murupara**	**6.31**	**218**	P	Pn	14 36 06.5	-0.4
MTHZ	**Maungataniwha**	**6.56**	**216**	P	Pn	14 36 10.7	+0.3
TLZ	**Tolley Road**	**6.90**	**225**	P	Pn	14 36 18.3	+3.3
BKZ	**Black Stump Fm**	**6.98**	**216**	P	Pn	14 36 15.5	-0.6
RATZ	**Rangitukua**	**7.13**	**221**	P	Pn	14 36 21.3	+3.1
TMVZ	**Te Maari**	**7.35**	**220**	P	Pn	14 36 21.1	-0.1
ETVZ	**East Tongariro**	**7.36**	**220**	P	Pn	14 36 21.6	+0.2
SNVZ	**South Ngauruho**	**7.43**	**220**	P	Pn	14 36 24.4	+2.0
WNVZ	**Wahianoa**	**7.56**	**219**	P	Pn	14 36 25.1	+0.9

MAN 03 14:42:38.0, 7°88N×124°61E, h5km, MS3.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.45**	**90**	*i* P	Pg	14 42 47.4	+0.7
BUKP				*i* S	Sb	14 42 54.7	-0.7
CTBH	**Cotabato--PC H**	**0.75**	**209**	*i* P	Pn	14 42 54.6	-0.6
CTBH				*i* S	Sn	14 43 07.2	+0.2
KCP	**Kidapawan**	**0.99**	**151**	*eP*	Pb	14 42 57.6	-0.1
KCP				*i* S	Sn	14 43 12.5	-0.5
DMPH	**Davao City--Mi**	**1.19**	**132**	*eP*	Pn	14 43 01.9	+0.5
DMPH				*i* S	Sn	14 43 20.9	+2.9
PAGZ	**Pagadian**	**1.22**	**269**	*i* P	Pg	14 43 01.4	0.0
PAGZ				*i* S	Sn	14 43 20.2	+1.6
DCPH	**Dipolog City**	**1.43**	**299**	*i* P	Pn	14 43 03.4	-1.2
DCPH				*i* S	Sb	14 43 21.3	-2.3
LSIP	**Lazi, Siquijor**	**1.58**	**322**	*i* P	Pn	14 43 05.8	-0.8
LSIP				*i* S	Sb	14 43 27.9	0.0
BIPH	**Bislig**	**1.76**	**80**	*eP*	Pb	14 43 11.0	+0.2
BIPH				*eS*	Sg	14 43 34.5	-0.2
GSPH	**General Santos**	**1.81**	**169**	*i* P	Pg	14 43 14.6	+1.8
GSPH				*i* S	Sg	14 43 42.2	+5.9
CDOP	**Cateel, Davao**	**1.81**	**93**	*i* P	Pb	14 43 11.0	-0.7
CDOP				*i* S	Sg	14 43 37.2	+0.9
TBP	**Tagbilaran**	**1.94**	**338**	*eP*	Pn	14 43 10.6	-1.1
TBP				*eS*	Sb	14 43 37.9	-0.7
DDMP	**Don Marcelino,**	**2.08**	**148**	*eP*	Pb	14 43 15.7	-0.5
DDMP				*eS*	Sg	14 43 44.7	0.0
MSLP	**Maasin**	**2.25**	**6**	*i* P	Pn	14 43 15.9	-0.1
MSLP				*i* S	Sb	14 43 45.9	-1.5
LLP	**Lapu-Lapu**	**2.50**	**345**	*eP*	Pn	14 43 18.8	-0.6
LLP				*i* S	Sn	14 43 51.2	+0.8
ZCP	**Zamboanga City**	**2.69**	**250**	*eP*	Pb	14 43 25.0	-1.6
PLP	**Palo**	**3.28**	**6**	*eP*	Pn	14 43 29.8	-0.4
PLP				*eS*	Sn	14 44 09.9	+0.2
RCP	**Roxas**	**4.09**	**333**	*i* P	Pn	14 43 41.9	+0.6

TAP 03 15:08:49.0, 23°06N×120°85E, h6km±1km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.13**	**330**	*i* P	Pg	15 08 52.1	+0.5
STYH				*i* S	Sg	15 08 54.1	+0.7
STYT	**Tauyuan**	**0.13**	**321**	*i* P	Pg	15 08 52.0	+0.3
STYT				*i* S	Sg	15 08 54.0	+0.4
SLGT	**Liugui**	**0.20**	**250**	*i* P	Pg	15 08 53.5	+0.6
SLGT				*i* S	Sg	15 08 57.0	+1.5
ELDTW	**Lidau**	**0.20**	**51**	*i* P	Pg	15 08 53.9	+0.8
ELDTW				*i* S	Sg	15 08 56.9	+1.1
SGST	**Jiashian**	**0.24**	**275**	S	Sg	15 08 57.9	+0.9
WTP	**Ta-pu**	**0.28**	**311**	P	Pb	15 08 55.6	-1.0
WTP				*i* S	Sb	15 09 00.1	-1.5
LONT	**Longtian**	**0.30**	**120**	P	Pg	15 08 55.7	+0.8
TPUB	**Ta-pu**	**0.31**	**320**	*i* P	Pb	15 08 56.2	-0.8
TPUB				S	Sb	15 09 01.0	-1.4
CHDI	**Nanshi**	**0.32**	**293**	S	Sb	15 09 01.6	-0.9
EHDI	**Haiduan**	**0.34**	**75**	P	Pb	15 08 56.9	-0.7
ECS	**Chishang**	**0.35**	**84**	*eP*	Pg	15 08 56.6	+0.8
SSD	**Sandimen**	**0.37**	**212**	*i* P	Pg	15 08 56.4	+0.2
FULB	**Fuli**	**0.43**	**72**	P	Pb	15 08 58.6	-0.5
ALS	**Alishan**	**0.45**	**355**	P	Pg	15 08 58.6	+0.8
ALS				*eS*	Sb	15 09 05.8	-0.8
MASBT	**Mashibuluo**	**0.49**	**204**	P	Pg	15 08 58.6	+0.2

*IDC **03** 15:21:03.8±0.7, 7°34N×78°65W, h0km, mb3.8/12, mbtmp3.9/15, ML2.8/3, MS3.5/26, Error ellipse: s-maj=26.5km s-min=14.6km az=49.0*
*UPA **03** 15:21:05.1±2.6, 7°27N×78°63W, h7km±8km, MD4.2, MW4.1, Presumed earthquake*
*RSNC **03** 15:21:05.9±0.0, 7°N±2°×7°9W±°, h16km±4km, M3.8, mB5.0, mb4.6, ML3.3, Mw4.4, Mw(mB)4.3*
*CATAC **03** 15:21:07.2±0.9, 7°N±3°×7°9W±°, h15km±6km, M4.4/12, mb4.4/2, mB4.7/2, MLv4.5/12, Mw(mB)3.9/2, Error ellipse: s-maj=7.1km s-min=3.6km az=39.9, confirmed*

ISC 03 15:21:03.9±1.2, 7°32N±0°03×78°65W±0°02, h2km±8km, n106, σ1°86/149, mb4.0/12, MS3.5/22, 1C, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.86**	**101**	P	**Pg**	**15 21 20.3**	**0.0**
PTAC				S	**Sg**	**15 21 31.7**	**+0.2**
PTAC	**Punta Ardita,**	**0.86**	**101**	*eP*	**Pg**	**15 21 20.4**	**0.0**
PTAC				*eS*	**Sb**	**15 21 32.9**	**-0.5**
PEDA3	**Pedasi**	**1.38**	**279**	*eP*	**Pn**	**15 21 28.9**	**-1.2**
PEDA3				*eS*	**Sg**	**15 21 46.5**	**-1.7**
ACHO3	**Achotines, Los**	**1.51**	**274**	*eP*	**Pn**	**15 21 31.2**	**-0.7**
ACHO3				*eS*	**Sn**	**15 21 50.1**	**-2.1**
TOTI	**Torti**	**1.64**	**12**	*eP*	**Pn**	**15 21 33.4**	**-0.3**
TOTI				*eS*	**Sn**	**15 21 53.7**	**-1.6**
SOLC	**Bahia Solano**	**1.65**	**131**	P	**Pn**	**15 21 31.3**	**-2.5**
SOLC				S	**Sn**	**15 21 51.9**	**-3.6**
AZU	**Azuero**	**1.67**	**286**	P	**Pn**	**15 21 33.4**	**-0.8**
AZU				S	**Sn**	**15 21 53.9**	**-2.4**
AZU	**Azuero**	**1.67**	**286**	*eP*	**Pn**	**15 21 33.6**	**-0.6**
AZU				*eS*	**Sg**	**15 21 58.2**	**+0.4**
TABO3	**Taboga, Panama**	**1.72**	**329**	*eP*	**Pb**	**15 21 35.5**	**-0.7**
TABO3				*eS*	**Sn**	**15 21 56.3**	**-1.0**
FLAM	**Flamenco Islan**	**1.81**	**331**	*eP*	**Pb**	**15 21 37.0**	**-0.8**
FLAM				*eS*	**Sn**	**15 21 59.5**	**-0.2**
CHIT3	**Chitre**	**1.86**	**290**	*eP*	**Pn**	**15 21 38.5**	**-0.3**
CHIT3				*eS*	**Sn**	**15 21 58.8**	**-2.1**
UPA	**Univ. de Panam**	**1.87**	**332**	P	**Pn**	**15 21 36.7**	**-0.2**
UPA				S	**Sn**	**15 22 00.0**	**-1.0**
UPA	**Univ. de Panam**	**1.87**	**332**	*eP*	**Pn**	**15 21 37.3**	**+0.4**
UPA				*eS*	**Sn**	**15 22 01.3**	**+0.3**
CHPO	**Chepo, Panama**	**1.90**	**346**	*eP*	**Pn**	**15 21 37.6**	**+0.4**
CHPO				*eS*	**Sb**	**15 22 03.0**	**-0.4**
CNTA3	**Canitas, Panam**	**1.90**	**353**	*eP*	**Pb**	**15 21 38.6**	**-0.8**
CNTA3				*eS*	**Sn**	**15 22 02.3**	**+0.4**
ARRA3	**Arraijan, Pana**	**1.92**	**329**	*eP*	**Pn**	**15 21 37.7**	**+0.2**
ARRA3				*eS*	**Sn**	**15 22 02.2**	**0.0**
CHOR3	**La Chorrera**	**1.92**	**325**	*eP*	**Pn**	**15 21 38.2**	**+0.6**
CHOR3				*eS*	**Sb**	**15 22 04.8**	**+0.8**
ZANG	**Zanguenga, Cho**	**2.02**	**324**	*eP*	**Pn**	**15 21 40.0**	**+0.9**
ZANG				*eS*	**Sb**	**15 22 07.5**	**+0.5**
PNME	**Penonome**	**2.02**	**305**	P	**Pn**	**15 21 38.7**	**-0.3**
PNME				S	**Sn**	**15 22 05.7**	**+0.8**
PNME	**Penonome**	**2.02**	**305**	*eP*	**Pn**	**15 21 39.1**	**0.0**
PNME				*eS*	**Sn**	**15 22 05.3**	**+0.4**
GAMB1	**Gamboa**	**2.07**	**330**	*eP*	**Pn**	**15 21 40.0**	**+0.2**
GAMB1				*eS*	**Sg**	**15 22 10.0**	**-0.6**
APAC	**Apartado, Choc**	**2.13**	**74**	P	**Pn**	**15 21 41.6**	**+1.0**
APAC				S	**Sg**	**15 22 12.7**	**+0.1**
FRIJ	**El Hiral**	**2.17**	**331**	*eP*	**Pn**	**15 21 40.8**	**-0.3**
FRIJ				*eS*	**Sb**	**15 22 11.7**	**+0.4**
BCIP	**Isla Barro Col**	**2.18**	**328**	P	**Pn**	**15 21 41.8**	**+0.6**
BCIP				S	**Sn**	**15 22 09.2**	**+0.5**
BCIP	**Isla Barro Col**	**2.18**	**328**	P	**Pn**	**15 21 40.9**	**-0.3**
BCIP				S	**Sn**	**15 22 08.6**	**-0.1**
BCIP	**Isla Barro Col**	**2.18**	**328**	*eP*	**Pn**	**15 21 41.4**	**+0.2**
BCIP				*eS*	**Sb**	**15 22 10.8**	**-0.8**
CALO3	**Calobre, Verag**	**2.38**	**295**	*eP*	**Pb**	**15 21 46.2**	**-1.4**
CALO3				*eS*	**Sb**	**15 22 18.3**	**+0.8**
STIA3	**Santiago, Vera**	**2.42**	**289**	*eP*	**Pn**	**15 21 45.4**	**+0.8**
STIA3				*eS*	**Sb**	**15 22 17.4**	**-1.2**
DBBC	**Dabeiba**	**2.44**	**97**	P	**Pn**	**15 21 43.5**	**+0.2**
DBBC				S	**Sn**	**15 22 13.9**	**-1.5**
GMAL	**Guarumal, Vera**	**2.59**	**280**	P	**Pn**	**15 21 47.0**	**+0.1**
GMAL	**Guarumal, Vera**	**2.59**	**280**	*eP*	**Pn**	**15 21 47.9**	**+0.9**
PIZC	**Pizarro, Choco**	**2.67**	**151**	P	**Pn**	**15 21 45.6**	**-2.3**
PIZC				S	**Sn**	**15 22 18.6**	**-2.2**
LCBC	**Los crdobas,**	**2.73**	**56**	P	**Pb**	**15 21 51.6**	**-1.9**
LCBC				S	**Sb**	**15 22 25.2**	**-2.2**
CBOC	**Ciudad Bolivar**	**3.00**	**119**	P	**Pn**	**15 21 51.4**	**-1.2**
CBOC				S	**Sb**	**15 22 37.1**	**+1.8**
PVID3	**Puerto Vidal,**	**3.02**	**284**	*eP*	**Pb**	**15 21 57.6**	**-0.8**
UREC	**San Jos de Ur**	**3.12**	**82**	P	**Pn**	**15 21 54.6**	**+0.4**
UREC				S	**Sn**	**15 22 32.0**	**-0.1**
UREC	**San Jos de Ur**	**3.12**	**82**	*eP*	**Pn**	**15 21 54.9**	**+0.7**
UREC				*eS*	**Sn**	**15 22 31.4**	**-0.7**
NANC3	**Nancito, Chiri**	**3.19**	**287**	*eP*	**Pb**	**15 21 59.3**	**-2.0**
HELC	**Santa Helena**	**3.30**	**110**	P	**Pn**	**15 21 57.1**	**+0.1**
HELC				S	**Sb**	**15 22 43.1**	**-1.0**
HELC	**Santa Helena**	**3.30**	**110**	⇑P	**Pn**	**15 21 57.1**	**+0.1**
HELC				S	**Sb**	**15 22 43.3**	**-0.9**
HELC	**Santa Helena**	**3.30**	**110**	*eP*	**Pn**	**15 21 57.2**	**+0.3**
PLMC	**San Jos del P**	**3.36**	**135**	P	**Pn**	**15 21 55.6**	**-1.9**
PLMC				S	**Sb**	**15 22 47.6**	**+1.9**
GUY2C	**Guyana, Caldas**	**3.88**	**122**	P	**Pn**	**15 22 05.1**	**+0.1**
GUY2C				S	**Sb**	**15 23 01.6**	**+0.7**
NORC	**Norcasia**	**4.14**	**115**	P	**Pn**	**15 22 09.1**	**+0.8**
NORC				S	**Sb**	**15 23 06.5**	**-1.8**
PTBC	**PUERTO BERRIO,**	**4.24**	**100**	P	**Pn**	**15 22 09.9**	**+0.3**
BRU2	**Volcan**	**4.26**	**290**	P	**Pn**	**15 22 12.3**	**+2.4**
SJCC	**San Jacinto, C**	**4.29**	**53**	P	**Pn**	**15 22 12.3**	**+2.1**
SJCC				S	**Sn**	**15 23 01.2**	**+0.4**
SJCC	**San Jacinto, C**	**4.29**	**53**	P	**Pn**	**15 22 11.9**	**+1.7**
SJCC				S	**Sn**	**15 22 59.5**	**-1.4**
SJCC	**San Jacinto, C**	**4.29**	**53**	*eP*	**Pn**	**15 22 12.4**	**+2.1**
SJCC				*eS*	**Sn**	**15 22 59.8**	**-1.0**
CDITO	**Canoas**	**4.36**	**287**	S	**Sg**	**15 23 29.7**	**+5.5**
JAMC	**Jamundi, Valle**	**4.53**	**154**	P	**Pn**	**15 22 12.8**	**-0.9**
ORTC	**Ortega, Tolima**	**4.79**	**135**	P	**Pn**	**15 22 19.3**	**+2.1**
ORTC				S	**Sb**	**15 23 29.4**	**+2.5**
DRK0	**Durika**	**4.94**	**293**	P	**Pn**	**15 22 20.9**	**+1.6**
DRK0				S	**Sn**	**15 23 17.7**	**+0.5**
DRK0	**Durika**	**4.94**	**293**	*eP*	**Pn**	**15 22 21.0**	**+1.7**
DRK0	**Durika**	**4.94**	**293**	P	**Sn**	**15 23 18.0**	**+0.9**
ROSC	**El Rosal**	**4.96**	**120**	Pn	**Pn**	**15 22 21.1**	**+1.2**
ROSC	2.3nm,0.3s,baz=334,slow=23,SNR=4.8			Lg	Lg	15 23 32.6	
ROSC	2.7nm,0.3s,baz=287,slow=7.5,SNR=3.5			LR	LR	15 24 32.7	
POPC	comp=Z,621nm,18.4s,baz=264,slow=42 10.0nm,0.5s **Popayan, Colom**	**5.14**	**157**	P	**Pn**	**15 22 22.1**	**0.0**
PRAC	24nm,0.8s **Prado**	**5.18**	**133**	P	**Pn**	**15 22 24.7**	**+2.1**
PRAC	36nm,0.6s			S	**Sb**	**15 23 39.6**	**+1.4**
OCAC	36nm,0.6s **Ocana**	**5.36**	**80**	P	**Pn**	**15 22 25.5**	**+0.3**
OCAC	1µm113nm,0.7s			S	**Sn**	**15 23 29.4**	**+1.8**
BBAC	1µm113nm,0.7s **Balboa, Cauca**	**5.45**	**165**	P	**Pn**	**15 22 27.7**	**+1.4**
BARC	21nm,0.8s **Barichara**	**5.48**	**97**	P	**Pn**	**15 22 28.3**	**+1.5**
BARC				S	**Sn**	**15 23 33.9**	**+3.3**
CHIC	**Chingaza**	**5.58**	**118**	P	**Pn**	**15 22 30.5**	**+2.2**
CHIC	34nm,0.7s			S	**Sn**	**15 23 33.6**	**+0.4**
BETC	34nm,0.7s **Betania**	**5.61**	**145**	P	**Pn**	**15 22 31.2**	**+2.8**
BETC				S	**Sn**	**15 23 36.5**	**+3.0**
RUSC	**La Rusia**	**5.71**	**104**	P	**Pn**	**15 22 32.2**	**+1.9**
RUSC				S	**Sn**	**15 23 44.8**	**+8.1**
RUSC	**La Rusia**	**5.71**	**104**	P	**Pn**	**15 22 31.7**	**+1.5**
RUSC	645nm27nm,1.1s			S	**Sn**	**15 23 43.9**	**+7.2**
SMRC	645nm27nm,1.1s **Santa Marta, M**	**5.81**	**49**	P	**Pn**	**15 22 31.7**	**+0.6**
SMRC	43nm,1.0s			S	**Sn**	**15 23 34.8**	**-3.5**
URMC	43nm,1.0s **La Uribe, Meta**	**5.87**	**133**	P	**Pn**	**15 22 33.3**	**+1.2**
URMC	27nm,0.6s			S	**Sn**	**15 23 34.0**	**-6.0**
VILC	27nm,0.6s **Villavicencio,**	**5.87**	**123**	P	**Pn**	**15 22 36.7**	**+4.5**
PAMC	**Pamplona, Colo**	**5.91**	**89**	P	**Pn**	**15 22 32.4**	**-0.5**
PAMC	4µm26nm,0.7s			S	**Sn**	**15 23 41.8**	**+0.4**
GARC	4µm26nm,0.7s **Garzon, Huila**	**5.99**	**148**	P	**Pn**	**15 22 35.9**	**+2.0**
GARC	2µm61nm,0.5s			S	**Sn**	**15 23 45.3**	**+2.1**
FLOC	2µm61nm,0.5s **Florencia**	**6.43**	**152**	P	**Pn**	**15 22 42.0**	**+2.1**
FLOC				S	**Sn**	**15 23 56.2**	**+2.3**
FLOC	**Florencia**	**6.43**	**152**	P	**Pn**	**15 22 41.9**	**+2.1**
FLOC				S	**Sn**	**15 23 55.6**	**+1.7**
PRVC	**Isla de Provid**	**6.58**	**336**	P	**Pn**	**15 22 40.5**	**-1.3**
PRVC				S	**Sn**	**15 23 51.8**	**-5.6**
JTS	**Las Juntas de**	**6.89**	**296**	Pn	**Pn**	**15 22 46.5**	**+0.5**
JTS	0.5nm,0.3s,baz=285,slow=22,SNR=1.3			LR	LR	15 25 40.2	
SDV	comp=Z,402nm,19.1s,baz=107,slow=40 2.0nm,0.3s **Santo Domingo**	**8.09**	**78**	Pn	**Pn**	**15 23 03.7**	**+1.0**
SDV	2.5nm,0.3s,baz=236,slow=8.8,SNR=11			Sn	**Sn**	**15 24 32.0**	**-2.9**
SDV	2.0nm,0.3s,baz=12,slow=19,SNR=6.9			LR	LR	15 26 32.8	
SJG	comp=Z,244nm,21.8s,baz=256,slow=41 27nm,0.8s **San Juan**	**16.23**	**47**	LR	LR	15 31 17.0	
LPAZ	comp=Z,156nm,21.8s,baz=268,slow=38 **La Paz**	**25.66**	**156**	P	**P**	**15 26 35.9**	**-0.1**
LPAZ	0.6nm,0.6s,baz=2.4,slow=10,SNR=8.2			LR	LR	15 36 59.6	
MDP	comp=Z,71nm,19.4s,baz=318,slow=37 0.6nm,0.6s **Montagnes des**	**25.95**	**93**	LR	LR	15 36 44.1	
TXAR	comp=Z,93nm,18.7s,baz=316,slow=36 **Lajitas Array**	**32.16**	**316**	P	**P**	**15 27 33.8**	**+0.5**
TXAR	0.4nm,0.8s,baz=133,slow=9.2,SNR=5.3			PcP	**PcP**	**15 30 25.0**

ISC 03 15:23:14.7±1.2, 8.58N±0.03×83.29W±0.03, h14km±9km, n23, σ0ₜ71/30, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITO	**Golfito**	**0.14**	**73**	*eP*	**Pg**	**15 23 18.6**	**+0.3**
PIRO	**Carate, Puerto**	**0.18**	**195**	P	**Pb**	**15 23 19.6**	**-0.3**
PIRO				S	**Sb**	**15 23 24.4**	**+1.1**
PIRO	**Carate, Puerto**	**0.18**	**195**	*eP*	**Pb**	**15 23 19.5**	**-0.3**
NELY	**Ciudad Neily**	**0.35**	**79**	*eP*	**Pb**	**15 23 22.4**	**-0.2**
VITO	**San Vito**	**0.39**	**53**	*eP*	**Pb**	**15 23 23.7**	**+0.2**
PANP	**Palmar Norte**	**0.41**	**336**	*eP*	**Pg**	**15 23 23.0**	**+0.1**
CDITO	**Canoas**	**0.41**	**91**	P	**Pg**	**15 23 23.1**	**+0.2**
CDITO				S	**Sb**	**15 23 30.2**	**+0.3**
EDP2	**Potrero Grande**	**0.44**	**15**	*eP*	**Pb**	**15 23 24.1**	**-0.2**
BURE	**Buenos Aires**	**0.59**	**355**	*eP*	**Pg**	**15 23 26.4**	**+0.1**
OCHAL	**Ojochal**	**0.62**	**325**	P	**Pg**	**15 23 26.9**	**0.0**
OCHAL				S	**Sb**	**15 23 37.2**	**+1.3**
BRU2	**Volcan**	**0.63**	**70**	P	**Pg**	**15 23 27.1**	**+0.1**
BRU2				S	**Sn**	**15 23 38.6**	**-0.6**
BRU2	**Volcan**	**0.63**	**70**	*eP*	**Pg**	**15 23 26.6**	**-0.5**
DRK0	**Durika**	**0.68**	**4**	S	**Pn**	**15 23 28.8**	**-1.2**
PIEC	**Cerro El Cedra**	**1.23**	**327**	*eP*	**Pn**	**15 23 37.0**	**-0.6**
ABE2	**San Pablo**	**1.35**	**326**	*eP*	**Pn**	**15 23 38.9**	**-0.3**
PICV	**PH. Pirrs**	**1.37**	**319**	*eP*	**Pn**	**15 23 38.5**	**-0.9**
VTCV	**VTCV, Calle Va**	**1.46**	**343**	*i* P	**Pn**	**15 23 40.8**	**+0.1**
VTCV				*eP*	**Pn**	**15 23 40.8**	**+0.1**
CVTR	**Volcan Turrial**	**1.50**	**342**	*eP*	**Pn**	**15 23 41.7**	**+0.1**
LCOCO	**El Coco**	**1.51**	**350**	*eP*	**Pn**	**15 23 42.0**	**+0.6**
BELE	**Belen**	**1.64**	**327**	*eP*	**Pb**	**15 23 44.7**	**-0.1**
TCS1	**Tacares**	**1.76**	**326**	P	**Pb**	**15 23 46.4**	**-0.5**
TRT2	**Tortugero**	**2.01**	**347**	P	**Pb**	**15 23 50.4**	**-0.6**
TRT2				S	**Sb**	**15 24 16.7**	**+0.8**
JTS	**Las Juntas de**	**2.36**	**316**	P	**Pb**	**15 23 55.3**	**-1.7**
JTS				S	**Sn**	**15 24 23.1**	**+1.3**

*HEL **03** 15:37:40.9±0.2, 67.58N×34.22E, h0km, ML1.7, Explosion*
*BER **03** 15:37:41.4±1.1, 67.57N×34.65E, h0km, Suspected explosion*
*KOLA **03** 15:37:42.0±0.3, 67.66N±0.02×34.17E±0.05, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **03** 15:37:46.4±2.6, 67.62N×33.26E, h0km, mbtmp2.8/2, ML1.9/2, Error ellipse: s-maj=28.4km s-min=10.1km az=77.0*

ISC 03 15:37:41.3±1.0, 67.63N±0.03×34.25E±0.04, h0km, n33, σ1ₜ33/52, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.31**	**29**	P	**Pg**	**15 37 47.3**	**0.0**
LVZ				S	**Sg**	**15 37 51.3**	**0.0**
LVZ	**Lovozero**	**0.31**	**29**	PG	**Pg**	**15 37 47.3**	**0.0**
LVZ				SG	**Sg**	**15 37 51.9**	**+0.6**
APA	**Apatity**	**0.33**	**260**	P	**Pg**	**15 37 47.4**	**-0.2**
APA				S	**Sg**	**15 37 51.6**	**-0.2**
APA0	**Apatity Array**	**0.48**	**268**	P	**Pg**	**15 37 49.8**	**-0.7**
APA0				S	**Sg**	**15 37 56.1**	**-0.6**
KVDA	**Kovda**	**1.08**	**210**	P	**Pg**	**15 38 01.7**	**-0.3**
KVDA				S	**Sg**	**15 38 16.5**	**+0.5**
TERR	**Teriberka**	**1.61**	**11**	P	**Pn**	**15 38 10.2**	**-0.8**
TERR				S	**Sn**	**15 38 30.9**	**-1.5**
VRF	**Varrio**	**1.77**	**276**	PG	**Pn**	**15 38 12.7**	**-0.5**
VRF				smax	smax	15 38 33.8	
	comp=Z,5.7nm,0.2s						
VRF				SG	**Sn**	**15 38 34.8**	**-1.7**
OLKF	**Oulanka, Finla**	**2.31**	**238**	PG	**Pn**	**15 38 21.6**	**+1.0**
OLKF				smax	smax	15 38 48.5	
	comp=Z,4.0nm,0.2s						
KU6	**Riekki**	**2.36**	**229**	PG	**Pn**	**15 38 21.9**	**+0.7**
KU6				smax	smax	15 38 49.6	
	comp=Z,2.9nm,0.2s						
RAJF	**Raja-Jooseppi**	**2.39**	**294**	PB	**Pn**	**15 38 21.6**	**0.0**
RAJF				SB	**Sn**	**15 38 52.2**	**+0.6**
KU1	**Kurvinen**	**2.79**	**224**	PB	**Pn**	**15 38 28.0**	**+0.9**
VADS	**Vadso**	**3.07**	**327**	*eP*	**Pn**	**15 38 30.8**	**-0.2**
VADS	**Vadso**	**3.07**	**327**	P	**Pn**	**15 38 31.4**	**+0.4**
VADS				S	**Sn**	**15 39 07.2**	**-1.0**
KU2	**Taivalkoski**	**3.07**	**234**	PB	**Pn**	**15 38 33.2**	**+2.2**
RANF	**Ranua**	**3.37**	**245**	PB	**Pn**	**15 38 36.0**	**+1.0**
RANF				SG	**Sb**	**15 39 23.4**	**+0.3**
RNF	**Rovaniemi**	**3.38**	**256**	PN	**Pn**	**15 38 35.4**	**+0.3**
	baz=70						
KEV	**Kevo**	**3.40**	**312**	*eP*	**Pn**	**15 38 36.0**	**+0.6**
KEV				*eS*	**Sn**	**15 39 16.4**	**-0.1**
KEV	**Kevo**	**3.40**	**312**	PN	**Pn**	**15 38 35.9**	**+0.5**
KEV				SN	**Sn**	**15 39 15.4**	**-1.0**
ARA0	**ARCESS Array S**	**3.73**	**305**	*eP*	**Pn**	**15 38 40.1**	**0.0**
ARA0	**ARCESS Array S**	**3.73**	**305**	PN	**Pn**	**15 38 40.0**	**0.0**
ARA0				SG	**Sb**	**15 39 34.0**	**+0.2**
ARCES	**ARCESS Array B**	**3.73**	**305**	Pn	**Pn**	**15 38 39.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=34						
ARCES				Pg	**Pb**	**15 38 48.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=117,slow=14,SNR=12						
ARCES				Sn	**Sn**	**15 39 21.1**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=117,slow=26,SNR=7.6						
ARCES				Lg	Lg	15 39 33.5	
	comp=Z,0.6nm,0.3s,baz=116,slow=33,SNR=10.0						
	comp=Z,0.6nm,0.2s						
ARCES	**ARCESS Array B**	**3.73**	**305**	P	**Pn**	**15 38 39.8**	**-0.3**
ARCES				S	**Sn**	**15 39 22.9**	**-1.9**
RMF	**Romuvaara**	**3.85**	**209**	PN	**Pn**	**15 38 41.9**	**+0.2**
KLF	**Kolari**	**3.98**	**269**	PG	**Pb**	**15 38 53.5**	**+1.2**
HEF	**Hetta**	**4.06**	**286**	*eP*	**Pn**	**15 38 44.3**	**-0.2**
HEF				*eS*	**Sn**	**15 39 31.8**	**-0.9**
HEF	**Hetta**	**4.06**	**286**	PN	**Pn**	**15 38 44.5**	**-0.1**
HEF				SG	**Sb**	**15 39 45.1**	**+2.1**
KTK1	**Kautokeino**	**4.32**	**294**	*eP*	**Pn**	**15 38 49.5**	**+1.4**
KTK1	**Kautokeino**	**4.32**	**294**	PG	**Pb**	**15 38 58.1**	**+0.2**
KTK1				SG	**Sb**	**15 39 53.5**	**+3.0**
LANU	**Lannavaara**	**4.66**	**281**	PN	**Pn**	**15 38 52.8**	**-0.1**
KOVU	**Salmi**	**5.35**	**283**	*eP*	**Pn**	**15 39 02.6**	**+0.4**
KOVU				*eS*	**Sn**	**15 40 02.2**	**-2.3**
I37NO	**I37NO**	**5.96**	**291**	I	I	16 13 10.0	
	baz=96,slow=319,SNR=2.1						
FINES	**FINESS Array B**	**7.13**	**213**	Pn	**Pn**	**15 39 27.9**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=26,slow=8.1,SNR=1.4						
FINES				Sn	**Sn**	**15 40 43.2**	**-5.1**
	baz=33,slow=23,SNR=0.8						
FINES				Lg	Lg	15 41 21.1	
	comp=Z,0.2nm,0.3s,baz=13,slow=27,SNR=2.3						
	comp=Z,1.2nm,0.9s						
HFS	**Hagfors**	**11.71**	**240**	Lg	Lg	15 43 42.4	
	comp=Z,0.1nm,0.3s,baz=51,slow=30,SNR=1.4						

*IPEC **03** 15:46:25.9±0.2, 51.51N×16.21E, h1km, ML2.0/8, Error ellipse: s-maj=1.9km s-min=1.1km az=66.0*
*IDC **03** 15:46:26.5±1.1, 51.45N×16.17E, h0km, mbtmp3.2/5, ML2.3/5, Error ellipse: s-maj=24.4km s-min=9.7km az=98.0*
*VIE **03** 15:46:27.9±1.1, 51.37N×16.14E, h0km, ml2.5/2, Error ellipse: s-maj=13.8km s-min=6.2km az=54.0 68 km WNW of Wroclaw Suspected Mining induced.*
*PRU **03** 15:46:28.4, 51.41N×16.14E, h0km*

ISC 03 15:46:24.7±0.8, 51.56N±0.04×16.13E±0.03, h0km, n37, σ1ₜ01/65, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**172**	*ePg*	**Pg**	**15 46 39.1**	**+0.5**
KSP				*eSg*	**Sg**	**15 46 47.7**	**-0.2**
CHVC	**Chvalec**	**0.97**	**183**	*ePG*	**Pg**	**15 46 43.9**	**+0.6**
CHVC				*eSG*	**Sg**	**15 46 55.4**	**-0.5**
OSTC	**Ostas**	**1.00**	**177**	*ePG*	**Pb**	**15 46 44.7**	**-0.3**
OSTC				*eSG*	**Sg**	**15 46 56.4**	**-0.5**
	comp=Z,26nm,0.4s						
UPC	**Upice**	**1.05**	**184**	*ePG*	**Pg**	**15 46 45.2**	**+0.3**
UPC				*eSG*	**Sg**	**15 46 58.2**	**-0.3**
	comp=Z,69nm,0.4s						
DPC	**Dobruska-Polom**	**1.22**	**174**	*ePG*	**Pg**	**15 46 47.6**	**-0.4**
DPC				*eSG*	**Sg**	**15 47 02.5**	**-1.2**
	comp=Z,11nm,0.5s						
PIVO	**Bartosovice**	**1.40**	**169**	*ePg*	**Pn**	**15 46 51.4**	**-0.1**
	baz=351						
PIVO				*eSg*	**Sg**	**15 47 08.1**	**-1.5**
	22nm,0.3s,baz=351						
PVCC	**Panska Ves**	**1.42**	**224**	*ePG*	**Pb**	**15 46 52.7**	**+0.6**
PVCC				*eSG*	**Sb**	**15 47 11.3**	**+0.5**
	comp=Z,74nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**244**	Pg	**Pg**	**15 46 54.7**	**+0.6**
BRG				Sg	**Sg**	**15 47 14.8**	**+0.8**
BRG				Amp		15 47 18.5	
	comp=Z,21nm,0.4s						
KRLC	**Kraliky**	**1.54**	**164**	*ePG*	**Pb**	**15 46 54.1**	**-0.1**
KRLC				*eSG*	**Sn**	**15 47 12.4**	**-1.8**
	comp=Z,23nm,0.5s						
ANAC	**Anensky vrch**	**1.68**	**151**	*ePn*	**Pn**	**15 46 55.5**	**0.0**
	baz=333						
ANAC				*eSg*	**Sn**	**15 47 16.5**	**-1.3**
	comp=Z,9.2nm,0.2s,baz=333						
RYBC	**Ceska Rybna**	**1.75**	**181**	*ePn*	**Pn**	**15 46 56.9**	**+0.5**
	baz=3.1						
RYBC				*eSg*	**Sn**	**15 47 19.4**	**0.0**
	comp=Z,15nm,0.2s,baz=3.1						
PRU	**Pruhonice**	**1.87**	**213**	*eSG*	**Sg**	**15 47 24.6**	**0.0**
	comp=Z,9.5nm,0.3s						
STEB	**Steborice**	**1.93**	**147**	*ePG*	**Pb**	**15 47 00.7**	**-0.1**
STEB				*eSG*	**Sb**	**15 47 25.3**	**-0.1**
	comp=Z,18nm,0.3s						
HSKC	**Hora Svate Kat**	**1.95**	**242**	*eSG*	**Sb**	**15 47 26.3**	**+0.4**
CLL	**Collm**	**1.97**	**264**	*ePn*	**Pn**	**15 47 00.0**	**+0.6**
CLL				*ePg*	**Pb**	**15 47 02.0**	**+0.5**
CLL				*i* x	x	15 47 06.6	
CLL				*eSg*	**Sg**	**15 47 29.0**	**+1.0**
	comp=Z,14nm,0.3s						
MORC	**Moravsky Berou**	**2.00**	**153**	*ePn*	**Pn**	**15 46 59.9**	**+0.2**
	baz=334						
MORC				*eSg*	**Sn**	**15 47 26.3**	**+0.8**
	comp=Z,13nm,0.5s,baz=334						
MORC	**Moravsky Berou**	**2.00**	**153**	*ePN*	**Pn**	**15 47 00.0**	**+0.2**
MORC				*eSG*	**Sn**	**15 47 26.4**	**+0.9**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*eSG*	**Sb**	**15 47 31.3**	**-0.3**
	comp=Z,14nm,0.5s						
VRAC	**Vranov**	**2.27**	**172**	Pn	**Pn**	**15 47 04.7**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=353,slow=16,SNR=5.6						
VRAC				Lg	Lg	15 47 33.1	
	comp=Z,2.8nm,0.3s,baz=72,slow=23,SNR=8.5						
	comp=Z,2.7nm,0.3s						
VRAC	**Vranov**	**2.27**	**172**	*ePn*	**Pn**	**15 47 03.8**	**+0.3**
	baz=354						
VRAC				*eSg*	**Sb**	**15 47 35.3**	**+0.1**
	comp=Z,8.0nm,0.3s,baz=354						
VRAC	**Vranov**	**2.27**	**172**	*ePN*	**Pn**	**15 47 03.9**	**+0.4**
VRAC				*eSG*	**Sb**	**15 47 35.4**	**+0.2**
TREC	**Trest**	**2.30**	**190**	*eSG*	**Sb**	**15 47 36.6**	**+0.5**
	comp=Z,12nm,0.5s						
ZVC	**Zvikov**	**2.45**	**211**	*ePN*	**Pn**	**15 47 06.4**	**+0.4**
ZVC				*ePG*	**Pg**	**15 47 11.1**	**-0.6**
KRUC	**Moravsky**	**2.50**	**176**	*ePn*	**Pn**	**15 47 07.3**	**+0.6**
	baz=357						
KRUC				*eSg*	**Sb**	**15 47 42.8**	**+0.9**
	comp=Z,4.9nm,0.3s,baz=357						
STAC	**Stalkov**	**2.59**	**192**	*ePn*	**Pn**	**15 47 08.6**	**+0.8**
	baz=13						
STAC				*eSg*	**Sb**	**15 47 45.7**	**+1.4**
	comp=Z,9.5nm,0.4s,baz=13						
NKC	**Novy Kostel**	**2.68**	**242**	*eSG*	**Sg**	**15 47 50.8**	**0.0**
	comp=Z,17nm,0.3s						
OJC	**Ojcow**	**2.68**	**119**	*ePg*	**Pg**	**15 47 18.5**	**+2.4**
OJC				*eSg*	**Sg**	**15 47 53.0**	**+2.1**
JAVC	**Velka Javorina**	**2.88**	**159**	*ePn*	**Pn**	**15 47 11.7**	**-0.1**
	baz=341						
JAVC	**Velka Javorina**	**2.88**	**159**	*ePN*	**Pn**	**15 47 11.8**	**-0.1**
KHC	**Kasperske Hory**	**2.93**	**215**	*ePN*	**Pn**	**15 47 13.4**	**+0.9**
KHC				*ePG*	**Pb**	**15 47 19.1**	**+1.3**
KHC				*eSN*	**Sn**	**15 47 47.8**	**-0.6**
KHC				*eSG*	**Sg**	**15 47 57.0**	**-1.7**
	comp=Z,5.5nm,0.6s						
GERES	**GERESS Array B**	**3.13**	**211**	Pn	**Pn**	**15 47 16.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=6.9						
GERES				Lg	Lg	15 48 01.9	
	comp=Z,0.3nm,0.3s,baz=35,slow=26,SNR=11						
	comp=Z,0.6nm,0.3s						
MODS	**Modra-Piesok**	**3.27**	**166**	*ePN*	**Pn**	**15 47 16.9**	**-0.4**
MODS				*ePG*	**Pg**	**15 47 30.5**	**+3.1**
MODS				*eSG*	**Sg**	**15 48 10.4**	**+0.6**
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn	**Pn**	**15 47 23.6**	**+1.2**
	comp=Z,0.5nm,0.2s						
CONA				*i* Sg	**Sg**	**15 48 20.7**	**-0.8**
	comp=Z,5.2nm,0.4s						
ARSA	**Arzberg**	**4.33**	**185**	*eSg*	**Sg**	**15 48 44.6**	**+0.8**
	comp=Z,2.3nm,0.3s						
HFS	**Hagfors**	**8.71**	**352**	Pn	**Pn**	**15 48 31.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=1.5						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**15 49 06.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=210,slow=13,SNR=2.6						
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**18.57**	**10**	Pn	**P**	**15 50 39.6**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=197,slow=15,SNR=1.5						
	comp=Z,0.8nm,0.9s						

*UPA **03** 15:48:21.8±2.7, 7.21N×78.64W, h2km±10km, MD4.0, MW4.1, Presumed earthquake*
*CATAC **03** 15:48:23.8±0.4, 7.1N±4.7°×7.9W±.°, h13km, M4.0/9, mb4.1/1, MLv3.9/9, Error ellipse: s-maj=10.3km s-min=3.6km az=41.2, confirmed*
*RSNC **03** 15:48:23.2±0.0, 7.1N±3.7°×7.9W±.°, h5km±6km, M3.3, mB4.7, mb4.3, ML3.0, Mw(mB)3.9*

ISC 03 15:48:21.5±1.2, 7.22N±0.03×78.72W±0.02, h3km±10km, n53, σ1ₜ71/92, 1D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.91**	**95**	P	**Pg**	**15 48 38.7**	**-0.2**
PTAC				S	**Sg**	**15 48 50.4**	**-0.3**
PTAC	**Punta Ardita,**	**0.91**	**95**	*eP*	**Pg**	**15 48 38.8**	**-0.2**
PTAC				*eS*	**Sg**	**15 48 50.6**	**-0.1**
PEDA3	**Pedasi**	**1.33**	**283**	*eP*	**Pg**	**15 48 47.3**	**+0.3**
ACHO3	**Achotines, Los**	**1.45**	**278**	*eP*	**Pg**	**15 48 49.7**	**+0.3**
ACHO3				*eS*	**Sg**	**15 49 10.3**	**+2.1**
SOLC	**Bahia Solano**	**1.64**	**127**	P	**Pn**	**15 48 49.6**	**-1.6**
SOLC				S	**Sn**	**15 49 09.3**	**-3.4**
AZU	**Azuero**	**1.64**	**290**	P	**Pb**	**15 48 51.7**	**-0.7**
AZU				S	**Sn**	**15 49 10.9**	**-2.0**
AZU	**Azuero**	**1.64**	**290**	*eP*	**Pb**	**15 48 51.8**	**-0.6**
AZU				*eS*	**Sg**	**15 49 15.7**	**+1.4**
TOTI	**Torti**	**1.75**	**13**	*eP*	**Pn**	**15 48 51.8**	**-0.9**
TABO3	**Taboga, Panama**	**1.77**	**332**	*eP*	**Pb**	**15 48 54.6**	**+0.1**
TABO3				*eS*	**Sn**	**15 49 15.8**	**-0.2**
CHIT3	**Chitre**	**1.83**	**294**	*eP*	**Pb**	**15 48 54.8**	**-0.9**
CHIT3				*eS*	**Sn**	**15 49 17.1**	**-0.5**
FLAM	**Flamenco Islan**	**1.86**	**334**	*eP*	**Pn**	**15 48 55.3**	**+1.0**
FLAM				*eS*	**Sn**	**15 49 19.2**	**+0.8**
UPA	**Univ. de Panam**	**1.93**	**335**	P	**Pn**	**15 48 55.6**	**+0.4**
UPA				S	**Sn**	**15 49 18.8**	**-1.1**
UPA	**Univ. de Panam**	**1.93**	**335**	*eP*	**Pn**	**15 48 55.9**	**+0.8**
UPA				*eS*	**Sb**	**15 49 22.9**	**+1.2**
CHOR3	**La Chorrera**	**1.96**	**328**	*eP*	**Pb**	**15 48 57.2**	**-0.7**
CHOR3				*eS*	**Sb**	**15 49 22.9**	**+0.1**
ARRA3	**Arraijan, Pana**	**1.97**	**332**	*eP*	**Pn**	**15 48 55.1**	**-0.7**
ARRA3				*eS*	**Sn**	**15 49 21.1**	**+0.2**
CHPO	**Chepo, Panama**	**1.98**	**349**	*eP*	**Pn**	**15 48 55.5**	**-0.3**
CHPO				*eS*	**Sn**	**15 49 21.2**	**+0.1**
CNTA3	**Canitas, Panam**	**1.99**	**355**	*eP*	**Pn**	**15 48 56.2**	**+0.1**
PNME	**Penonome**	**2.03**	**308**	P	**Pn**	**15 48 56.1**	**-0.5**
PNME				S	**Sn**	**15 49 22.3**	**-0.2**
PNME	**Penonome**	**2.03**	**308**	*eP*	**Pn**	**15 48 54.8**	**-1.8**
PNME				*eS*	**Sb**	**15 49 24.7**	**0.0**
ZANG	**Zanguenga, Cho**	**2.06**	**327**	*eP*	**Pn**	**15 48 57.0**	**-0.1**
ZANG				*eS*	**Sb**	**15 49 27.0**	**+1.3**
GAMB1	**Gamboa**	**2.13**	**333**	*eP*	**Pn**	**15 48 58.5**	**+0.6**
GAMB1				*eS*	**Sg**	**15 49 29.6**	**-0.2**
FRIJ	**El Hiral**	**2.22**	**333**	*eP*	**Pn**	**15 48 59.0**	**-0.3**
FRIJ				*eS*	**Sb**	**15 49 29.9**	**-0.3**
APAC	**Apartado, Choc**	**2.23**	**72**	P	**Pn**	**15 48 59.7**	**+0.4**
APAC				S	**Sb**	**15 49 30.5**	**+0.1**
BCIP	**Isla Barro Col**	**2.23**	**330**	P	**Pn**	**15 48 59.4**	**+0.1**
BCIP				S	**Sn**	**15 49 27.6**	**+0.3**
BCIP	**Isla Barro Col**	**2.23**	**330**	P	**Pn**	**15 48 58.8**	**-0.5**
BCIP				S	**Sn**	**15 49 28.3**	**+0.9**
BCIP	**Isla Barro Col**	**2.23**	**330**	*eP*	**Pn**	**15 48 59.0**	**-0.3**
BCIP				*eS*	**Sb**	**15 49 30.0**	**-0.4**
CALO3	**Calobre, Verag**	**2.37**	**298**	*eP*	**Pb**	**15 49 03.3**	**-1.5**
DBBC	**Dabeiba**	**2.50**	**94**	P	**Pn**	**15 49 03.0**	**-0.2**
DBBC				S	**Sn**	**15 49 33.2**	**-1.0**
GMAL	**Guarumal, Vera**	**2.55**	**282**	P	**Pb**	**15 49 05.6**	**-2.3**
GMAL				S	**Sn**	**15 49 37.1**	**+1.7**
GMAL	**Guarumal, Vera**	**2.55**	**282**	*eP*	**Pn**	**15 49 04.2**	**+0.4**
GMAL				*eS*	**Sb**	**15 49 38.7**	**-1.0**
LCBC	**Los crdobas,**	**2.84**	**55**	P	**Pn**	**15 49 09.8**	**+2.0**
LCBC				S	**Sn**	**15 49 44.8**	**+2.3**
CBOC	**Ciudad Bolivar**	**3.01**	**116**	P	**Pn**	**15 49 09.8**	**-0.5**
CBOC				S	**Sn**	**15 49 49.1**	**+2.1**
UREC	**San Jos de Ur**	**3.20**	**80**	P	**Pn**	**15 49 13.0**	**+0.2**
UREC				S	**Sn**	**15 49 49.9**	**-1.6**
UREC	**San Jos de Ur**	**3.20**	**80**	*eP*	**Pn**	**15 49 13.4**	**+0.6**
HELC	**Santa Helena**	**3.33**	**108**	P	**Pn**	**15 49 15.3**	**+0.4**
HELC				S	**Sn**	**15 49 53.5**	**-1.6**
HELC	**Santa Helena**	**3.33**	**108**	P	**Pn**	**15 49 15.5**	**+0.7**
HELC				S	**Sb**	**15 50 02.4**	**-0.2**
HELC	**Santa Helena**	**3.33**	**108**	*eP*	**Pn**	**15 49 15.7**	**+0.8**
PLMC	**San Jos del P**	**3.34**	**133**	P	**Pn**	**15 49 13.5**	**-1.2**
GUY2C	**Guyana, Caldas**	**3.88**	**121**	P	**Pn**	**15 49 24.0**	**+1.5**
GUY2C				S	**Sb**	**15 50 15.4**	**-3.1**
NORC	**Norcasia**	**4.17**	**113**	P	**Pn**	**15 49 27.6**	**+1.5**
NORC				S	**Sb**	**15 50 28.2**	**+1.9**
PTBC	**PUERTO BERRIO,**	**4.29**	**99**	P	**Pn**	**15 49 28.4**	**+0.7**
PTBC				S	**Sn**	**15 50 19.5**	**+1.2**
SJCC	**San Jacinto, C**	**4.40**	**53**	P	**Pn**	**15 49 29.6**	**+0.4**
SJCC				S	**Sn**	**15 50 19.5**	**-1.6**
SJCC	**San Jacinto, C**	**4.40**	**53**	P	**Pn**	**15 49 29.6**	**+0.4**
SJCC				S	**Sn**	**15 50 19.4**	**-1.6**
SJCC	**San Jacinto, C**	**4.40**	**53**	*eP*	**Pn**	**15 49 30.4**	**+1.2**
JAMC	**Jamundi, Valle**	**4.47**	**153**	P	**Pn**	**15 49 32.0**	**+1.6**
ORTC	**Ortega, Tolima**	**4.77**	**133**	P	**Pn**	**15 49 38.0**	**+3.6**
ORTC				S	**Sn**	**15 50 33.1**	**+2.8**
PRAC	**Prado**	**5.17**	**132**	P	**Pn**	**15 49 42.6**	**+2.8**
PRAC	**Prado**	**5.17**	**132**	P	**Pn**	**15 49 43.3**	**+3.5**
PRAC				S	**Sb**	**15 50 50.7**	**-4.5**
BARC	**Barichara**	**5.53**	**96**	P	**Pn**	**15 49 46.5**	**+1.5**
	720nm23nm,0.7s						
BARC				S	**Sn**	**15 50 49.1**	**-0.3**
	720nm23nm,0.7s						
RUSC	**La Rusia**	**5.75**	**103**	P	**Pn**	**15 49 50.4**	**+2.1**
	12nm,1.1s						
RUSC				S	**Sn**	**15 51 02.5**	**+7.4**
	12nm,1.1s						
VILC	**Villavicencio,**	**5.88**	**121**	P	Pn	15 49 55.5	+5.8
GARC	**Garzon, Huila**	**5.95**	**147**	P	**Pn**	**15 49 54.4**	**+3.7**
BLUN	**Bluefields**	**6.89**	**314**	P	**Pn**	**15 49 59.5**	**-3.9**

IDC 03 15:49:17.3±342.0, 54.55N×41.04E, h0km, Error ellipse: s-maj=141.0km s-min=73.4km az=138.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.07**	**317**	I	I	16 10 40.0	
	1.1nm,0.9s,baz=133,slow=314,SNR=15						
I31KZ	**AKTYUBINSK INF**	**11.16**	**105**	I	I	16 55 54.9	
	baz=299,slow=294,SNR=0.4						
I26DE	**FREYUNG INFRAS**	**17.80**	**263**	I	I	17 31 44.9	
	baz=60,slow=322,SNR=1.4						
I37NO	**I37NO**	**17.83**	**333**	I	I	17 33 10.0	
	baz=135,slow=325,SNR=1.6						

*IDC **03** 16:18:21.4±1.2, 23.87N×143.10E, h0km, mb3.6/5, mbtmp3.6/6, ML2.5/1, Error ellipse: s-maj=57.5km s-min=24.5km az=93.0*

ISC 03 16:18:25.8±1.2, 23.9N±0.1×143.0E±0.4, h29km, n6, σ1ₜ19/6, mb3.7/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**13.23**	**343**	Pn	**Pn**	**16 21 30.5**	**-1.2**
	baz=183,slow=17,SNR=2.2						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**44.42**	**192**	P	**P**	**16 26 33.5**	**-0.7**
	0.4nm,0.6s,baz=14,slow=7.5,SNR=2.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**48.13**	**191**	P	**P**	**16 27 02.9**	**-0.5**
	0.4nm,1.0s,baz=13,slow=9.4,SNR=2.3						
	0.4nm,1.0s						
ILAR	**Eielson Array**	**60.14**	**28**	P	**P**	**16 28 30.4

comp=Z,2.6nm,0.9s,baz=82,slow=4.0,SNR=5.0
comp=Z,2.6nm,0.9s

*IDC **03** 16:45:04.6±1.1, 32.38N×95.81E, h0km, mb3.5/5, mbtmp3.5/9, ML3.7/2, MS3.1/9, Error ellipse: s-maj=38.9km s-min=18.1km az=57.0*

ISC 03 16:45:08.8±1.0, 32°4N±0.1′×95°7E±0.2′, h35km, n16, σ0s84/9, mb3.6/5, MS3.0/8, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CMAR	**Chiang Mai Arr**	**14.14**	**167**	Pn	**Pn**		**16 48 25.9**	**-0.8**
	0.2nm,0.3s,baz=341,slow=12,SNR=4.8							
CMAR				LR	LR		16 54 15.5	
	comp=Z,52nm,21.1s,baz=330,slow=39							
SONM	**Songino Array**	**17.45**	**25**	P	**Pn**		**16 49 08.4**	**-1.0**
	1.0nm,0.7s,baz=213,slow=14,SNR=5.1							
MKAR	**Makanchi Array**	**17.71**	**328**	P	**P**		**16 49 13.4**	**+0.2**
	0.1nm,0.3s,baz=142,slow=14,SNR=9.1							
	1.1nm,0.9s							
AAK	**Ala-Archa**	**19.67**	**307**	P	**Pn**		**16 49 36.2**	**-0.2**
	0.4nm,0.3s,baz=136,slow=2.2,SNR=8.0							
	0.7nm,0.3s							
KURBB	**Kurchatov Arra**	**22.24**	**330**	P	**P**		**16 50 02.3**	**0.0**
	0.8nm,0.2s,baz=137,slow=11,SNR=8.5							
	0.8nm,0.2s							
ZALV	**Zalesovo Beam**	**22.95**	**343**	P	**P**		**16 50 10.5**	**+0.8**
	0.2nm,0.3s,baz=161,slow=9.2,SNR=1.4							
ZALV				LR	LR		17 00 07.4	
	comp=Z,10nm,21.9s,baz=174,slow=39							
	0.2nm,0.3s							
KSRS	**Korea Array**	**26.81**	**70**	P	**P**		**16 50 45.8**	**+0.1**
	0.4nm,0.6s,baz=264,slow=9.4,SNR=2.4							
	0.4nm,0.6s							
JOW	**Kunigami**	**28.77**	**93**	LR	LR		17 02 01.5	
	comp=Z,36nm,21.1s,baz=20,slow=35							
KLR	**Kul'dur**	**31.69**	**47**	LR	LR		17 04 43.4	
	comp=Z,38nm,18.6s,baz=251,slow=37							
JCJ	**Chichijima**	**40.44**	**85**	LR	LR		17 09 19.1	
	comp=Z,93nm,19.9s,baz=122,slow=36							
KBZ	**Khabaz**	**42.47**	**301**	LR	LR		17 14 12.7	
	comp=Z,20nm,20.7s,baz=150,slow=41							
MLR	**Muntele Rosu**	**54.24**	**306**	LR	LR		17 20 02.3	
	comp=Z,27nm,20.9s,baz=16,slow=39							
IDI	**Anoyia**	**57.75**	**294**	LR	LR		17 27 13.3	
	comp=Z,46nm,19.1s,baz=126,slow=44							
NOA	**NORSAR Array B**	**59.69**	**326**	LR	LR		17 22 29.0	
	comp=Z,9.3nm,18.8s,baz=175,slow=38							
WRA	**Warramunga Arr**	**63.80**	**139**	P	**P**		**16 55 38.2**	**+0.7**
	1.1nm,1.1s,baz=309,slow=12,SNR=2.2							
	1.1nm,1.1s							
ASAR	**Alice Springs**	**66.59**	**142**	P	**P**		**16 55 56.8**	**+1.2**
	0.3nm,0.5s,baz=324,slow=6.2,SNR=11							
	0.3nm,0.5s							

IDC 03 16:51:55.3±1.2, 14°93S×173°57W, h0km, mb3.8/4, mbtmp3.8/5, ML4.1/1, MS3.3/10, Error ellipse: s-maj=52.5km s-min=23.9km az=148.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AFI	**Afiamalu**	**2.01**	**60**	Pn	Pn		16 52 29.1	-1.5
	69nm,0.3s,baz=171,slow=2.4,SNR=74							
AFI				Sn	Sn		16 52 50.7	-5.9
	79nm,0.3s,baz=281,slow=18,SNR=10							
AFI				LR	LR		16 53 22.9	
	comp=Z,417nm,19.7s,baz=262,slow=44							
	169nm,0.4s							
MSVF	**Nonsavu**	**8.51**	**250**	LR	LR		16 56 45.7	
	comp=Z,160nm,19.2s,baz=11,slow=34							
RAR	**Rarotonga**	**14.53**	**117**	LR	LR		16 59 43.3	
	comp=Z,55nm,18.4s,baz=307,slow=32							
DZM	**Mont Dzumac**	**20.23**	**246**	LR	LR		17 02 60.0	
	comp=Z,42nm,18.9s,baz=10,slow=33							
H11S2	**WAKE ISLAND Hy**	**38.47**	**329**	T	T		17 39 59.9	
	baz=149,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**38.49**	**329**	T	T		17 40 01.0	
	baz=149,slow=76,SNR=13							
H11S1	**WAKE ISLAND Hy**	**38.49**	**329**	T	T		17 40 02.5	
	baz=149,slow=76,SNR=8.8							
H11N3	**WAKE ISLAND Hy**	**39.42**	**330**	T	T		17 41 10.6	
	baz=150,slow=76,SNR=11							
H11N1	**WAKE ISLAND Hy**	**39.42**	**330**	T	T		17 41 10.8	
	baz=150,slow=76,SNR=13							
H11N2	**WAKE ISLAND Hy**	**39.44**	**330**	T	T		17 41 11.9	
	baz=150,slow=76,SNR=15							
WRA	**Warramunga Arr**	**49.79**	**256**	P	P		17 00 49.5	-0.8
	0.6nm,0.8s,baz=90,slow=7.9,SNR=2.9							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**50.10**	**252**	P	P		17 00 52.1	-0.5
	1.6nm,0.7s,baz=91,slow=7.5,SNR=37							
	1.6nm,0.7s							
JCJ	**Chichijima**	**59.91**	**314**	LR	LR		17 22 37.7	
	comp=Z,18nm,21.7s,baz=118,slow=31							
MJAR	**Matsushiro Arr**	**68.47**	**320**	LR	LR		17 25 14.2	
	comp=Z,18nm,21.5s,baz=160,slow=29							
QSPA	**South Pole Qui**	**75.11**	**180**	P	P		17 03 39.8	+0.7
	0.8nm,0.8s,baz=60,slow=19,SNR=1.7							
	0.8nm,0.8s							
BBB	**Bella Bella**	**77.54**	**27**	LR	LR		17 32 55.3	
	comp=Z,22nm,18.1s,baz=220,slow=32							
ANMO	**Albuquerque**	**80.63**	**50**	LR	LR		17 35 20.9	
	comp=Z,42nm,18.9s,baz=254,slow=32							
DLBC	**Dease Lake**	**81.33**	**22**	LR	LR		17 38 17.8	
	comp=Z,33nm,18.2s,baz=172,slow=34							
ILAR	**Eielson Array**	**82.02**	**11**	P	P		17 04 17.9	+1.1
	0.6nm,0.9s,baz=202,slow=6.8,SNR=5.5							
	0.6nm,0.9s							
CMAR	**Chiang Mai Arr**	**92.31**	**288**	LR	LR		17 46 10.8	
	comp=Z,10nm,18.1s,baz=240,slow=35							

*IDC **03** 17:06:52.6±0.7, 23.97N×142.94E, h0km, mb3.9/16, mbtmp3.8/18, ML3.2/3, MS2.9/5, Error ellipse: s-maj=26.3km s-min=16.2km az=83.0*
*NEIC **03** 17:06:54.5±1.2, 23.98N±0.08×142.8E±0.1, h10km±1km, mb4.5/33, Error ellipse: s-maj=21.7km s-min=13.5km az=262.0*

ISC 03 17:06:56.7±0.6, 23.98N±0.07×142.8E±0.1, h29km, n65, σ0s96/64, mb4.3/29, MS2.8/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
JCJ	**Chichijima**	**3.15**	**350**	Pn	**Pn**		**17 07 44.4**	**0.0**
	4.2nm,0.3s,baz=100,slow=23,SNR=1.7							
JCJ				Sn	**Sn**		**17 08 22.0**	**+0.9**
	5.4nm,0.3s,baz=260,slow=22,SNR=3.6							
JCJ	**Chichijima**	**3.15**	**350**		**Pn**		**17 07 42.3**	**-2.1**
JCJ				Sn	**Sn**		**17 08 19.9**	**-1.2**
MJAR	**Matsushiro Arr**	**13.13**	**344**	Pn	**Pn**		**17 10 01.5**	**+0.2**
	baz=160,slow=12,SNR=5.9							
	1.4nm,0.7s							
MJAR	**Matsushiro Arr**	**13.13**	**344**		**Pn**		**17 10 00.0**	**-1.2**
MAJO	**Matsushiro**	**13.13**	**344**	Pn	**Pn**		**17 10 00.2**	**-1.0**
MJB9	**Matsu-Tunnel**	**13.14**	**344**	Pn	**Pn**		**17 10 00.1**	**-1.2**
KSRS	**Korea Array**	**18.51**	**320**	P	**Pn**		**17 11 12.2**	**+1.2**
	0.1nm,0.3s,baz=135,slow=12,SNR=6.2							
	0.7nm,0.7s							
SSLB	**Suanglung**	**19.97**	**274**	P	**P**		**17 11 24.1**	**-2.7**
DAV	**Davao City (W)**	**23.57**	**227**	LR	LR		17 19 25.2	
	comp=Z,35nm,21.0s,baz=99,slow=32							
PETK	**Petropavlovsk-**	**31.21**	**17**	P	**P**		**17 13 11.7**	**-1.6**
	0.9nm,0.7s,baz=203,slow=14,SNR=1.4							
PETK				LR	LR		17 24 09.0	
	comp=Z,14nm,20.9s,baz=212,slow=33							
	0.9nm,0.7s							
MA2	**Magadan**	**36.01**	**7**	LR	LR		17 26 34.9	
	comp=Z,11nm,21.8s,baz=186,slow=33							
SHEM	**Shemya Is, Ala**	**37.24**	**31**	LR	LR		17 26 56.6	
	comp=Z,25nm,19.9s,baz=296,slow=32							
MTN	**Manton Dam**	**38.33**	**199**	P	**P**		**17 14 14.9**	**-0.2**
MTN				IAmb	IAmb		17 14 20.7	
	comp=Z,17nm,1.4s							
WB0	**Warramunga Arr**	**44.24**	**191**	P	**P**		**17 15 03.7**	**+0.1**
WB0				IAmb	IAmb		17 15 14.5	
	comp=Z,13nm,1.5s							
WR8	**Warramunga Arr**	**44.41**	**191**	P	**P**		**17 15 03.6**	**-1.3**
WR8				IAmb	IAmb		17 15 21.8	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**44.42**	**191**	P	**P**		**17 15 04.9**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=10,slow=8.7,SNR=7.4							
WRA				PcP	**PP**		**17 16 49.4**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=5.4,slow=3.4,SNR=4.6							
	comp=Z,0.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**45.04**	**203**	P	**P**		**17 15 09.9**	**-0.1**
AS31	**Alice Springs**	**48.14**	**191**	P	**P**		**17 15 34.1**	**-0.2**
ASAR	**Alice Springs**	**48.14**	**191**	P	**P**		**17 15 34.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=10,slow=6.6,SNR=5.9							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**48.14**	**191**	P	**P**		**17 15 33.8**	**-0.5**
KOUNC	**Koumac, New Ca**	**48.96**	**153**	P	**P**		**17 15 39.6**	**-1.0**
SDPT	**Sand Point**	**51.81**	**37**	P	**P**		**17 16 00.8**	**-1.0**
ZALV	**Zalesovo Beam**	**52.22**	**321**	P	**P**		**17 16 05.5**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=113,slow=9.6,SNR=2.3							
	comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**52.22**	**321**	P	**P**		**17 16 04.6**	**-0.3**
N14K	**Kuskokwak Cree**	**52.42**	**32**	P	**P**		**17 16 06.4**	**+0.2**
O14K	**Tigyukauivet M**	**52.42**	**32**	P	**P**		**17 16 06.7**	**+0.5**
MKAR	**Makanchi Array**	**52.91**	**311**	P	**P**		**17 16 10.8**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=93,slow=9.0,SNR=4.3							
	comp=Z,0.3nm,0.5s							
MKAR	**Makanchi Array**	**52.91**	**311**	P	**P**		**17 16 09.8**	**-0.3**
O15K	**Ungalikthiuk R**	**53.11**	**33**	P	**P**		**17 16 11.1**	**-0.2**
O15K				IAmb	IAmb		17 16 25.5	
	comp=Z,9.7nm,1.4s							
N15K	**Kwethluk River**	**53.25**	**32**	P	**P**		**17 16 12.9**	**+0.4**
O18K	**Koktuh Hills**	**55.56**	**33**	P	**P**		**17 16 29.6**	**+0.4**
KURK	**Kurchatov**	**55.58**	**316**	P	**P**		**17 16 29.0**	**-0.5**
KURBB	**Kurchatov Arra**	**55.63**	**316**	P	**P**		**17 16 30.8**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=93,slow=7.8,SNR=15							
	comp=Z,1.2nm,0.7s							
NRIK	**Noril'sk**	**55.74**	**339**	P	**P**		**17 16 31.1**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=156,slow=2.7,SNR=4.6							
	comp=Z,1.8nm,0.5s							
NRIK	**Noril'sk**	**55.74**	**339**	P	**P**		**17 16 30.2**	**-0.2**
NRIK				IAmb	IAmb		17 16 33.4	
	comp=Z,5.5nm,1.1s							
J19K	**Poorman**	**56.32**	**28**	P	**P**		**17 16 35.0**	**+0.4**
J19K				IAmb	IAmb		17 16 52.6	
	comp=Z,4.7nm,1.4s							
KDAK	**Kodiak Island**	**56.55**	**35**	LR	LR		17 43 21.5	
	comp=Z,15nm,18.0s,baz=208,slow=39							
K20K	**Telida**	**56.84**	**29**	P	**P**		**17 16 39.5**	**+1.2**
K20K				IAmb	IAmb		17 16 43.5	
	comp=Z,6.8nm,1.5s							
J20K	**Nowinta River**	**56.99**	**28**	P	**P**		**17 16 39.6**	**+0.3**
J20K				IAmb	IAmb		17 16 50.2	
	comp=Z,3.3nm,0.8s							
D20K	**Etivluk River**	**57.30**	**22**	P	**P**		**17 16 42.6**	**+1.1**
D20K				IAmb	IAmb		17 16 51.3	
	comp=Z,9.3nm,1.4s							
CAST	**Castle Rocks**	**57.72**	**29**	P	**P**		**17 16 45.5**	**+0.9**
I21K	**Tanana**	**58.12**	**27**	P	**P**		**17 16 48.4**	**+1.1**
NEA2	**Nenana**	**59.24**	**28**	P	**P**		**17 16 55.6**	**+0.5**
NEA2				IAmb	IAmb		17 17 06.2	
	comp=Z,4.8nm,1.4s							
IL31		**60.19**	**28**	P	**P**		**17 17 00.9**	**-0.6**
IL31				IAmb	IAmb		17 17 10.5	
	comp=Z,2.4nm,0.7s							
ILAR	**Eielson Array**	**60.19**	**28**	P	**P**		**17 17 01.1**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=256,slow=5.5,SNR=14							
	comp=Z,1.1nm,0.7s							
BVAR	**Borovoye Array**	**60.72**	**319**	P	**P**		**17 17 06.0**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=88,slow=8.2,SNR=12							
	comp=Z,1.6nm,0.7s							
BORK	**Borovoye**	**60.76**	**319**	P	**P**		**17 17 06.0**	**+0.3**
D25K	**Kavik River**	**61.03**	**23**	P	**P**		**17 17 08.1**	**+0.8**
D25K				IAmb	IAmb		17 17 10.7	
	comp=Z,3.1nm,0.7s							
SCRK	**Sand Creek**	**61.37**	**29**	P	**P**		**17 17 09.9**	**+0.1**
H27K	**Steamboat Moun**	**62.54**	**26**	P	**P**		**17 17 18.3**	**+0.7**
G31M	**Satah River**	**65.44**	**25**	P	**P**		**17 17 36.8**	**+0.3**
YKA	**Yellowknife Ar**	**74.62**	**28**	P	**P**		**17 18 33.3**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=295,slow=5.6,SNR=4.0							
	comp=Z,0.7nm,0.7s							
ARCES	**ARCESS Array B**	**76.66**	**341**	P	**P**		**17 18 45.8**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=81,slow=8.7,SNR=3.8							
	comp=Z,1.9nm,0.8s							
ARCES	**ARCESS Array B**	**76.66**	**341**	P	**P**		**17 18 45.8**	**+1.3**
ARCES				IAmb	IAmb		17 18 53.6	
	comp=Z,7.4nm,1.5s							
PINE	**Pine Mountain**	**78.09**	**47**	P	**P**		**17 18 54.4**	**+1.2**
PINE				IAmb	IAmb		17 18 55.4	
	comp=Z,4.6nm,0.9s							
KBZ	**Khabaz**	**80.54**	**314**	P	**P**		**17 19 08.0**	**+1.7**
	comp=Z,2.4nm,0.9s,baz=12,slow=1.2,SNR=4.6							
	comp=Z,2.4nm,0.9s							
FIA1	**FINESS Array S**	**80.98**	**334**	P	**P**		**17 19 09.5**	**+1.2**
FINES	**FINESS Array B**	**80.98**	**334**	P	**P**		**17 19 09.8**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=77,slow=6.5,SNR=7.8							
	comp=Z,0.7nm,0.5s							
AKASG	**Malin Array Be**	**85.45**	**324**	P	**P**		**17 19 32.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=61,slow=2.4,SNR=4.9							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**85.45**	**324**	P	**P**		**17 19 32.6**	**+1.0**
AKASG				IAmb	IAmb		17 19 33.7	
	comp=Z,2.9nm,1.2s							
PDAR	**Pinedale Array**	**86.03**	**45**	P	**P**		**17 19 35.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=312,slow=6.7,SNR=1.6							
	comp=Z,0.1nm,0.3s							
KNB	**Kanab**	**86.54**	**51**	P	**P**		**17 19 37.2**	**-0.3**
KNB				IAmb	IAmb		17 19 47.9	
	comp=Z,3.2nm,0.8s							
NOA	**NORSAR Array B**	**86.70**	**339**	P	**P**		**17 19 38.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=48,slow=5.2,SNR=4.5							
	comp=Z,0.4nm,0.3s							
LPAZ	**La Paz**	**150.02**	**81**	PKPbc	**PKPbc**		**17 26 46.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=233,slow=4.6,SNR=6.1							
LPAZ	**La Paz**	**150.02**	**81**		**PKPdf**		**17 26 39.0**	**-2.1**

*UPA **03** 17:06:57.9±1.7, 7.26N×78.57W, h10km±8km, MD3.8, MW3.7, Presumed earthquake*
*RSNC **03** 17:06:58.5±0.0, 7°N±2°×7°W±°, h13km±4km, M2.9, mB4.3, mb3.5, ML2.5, Mw(mB)3.4*

ISC 03 17:06:57.2±1.4, 7°28N±0°03×78°61W±0°03, h6km±11km, n41, σ1s23/72, Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PTAC	**Punta Ardita,**	**0.81**	**99**	P	**Pg**		**17 07 13.0**	**+0.2**
PTAC				S	**Sg**		**17 07 23.3**	**0.0**
PTAC	**Punta Ardita,**	**0.81**	**99**	*eP*	**Pg**		**17 07 13.1**	**+0.4**
PTAC				*eS*	**Sg**		**17 07 23.6**	**+0.3**
PEDA3	**Pedasi**	**1.42**	**280**	*eP*	**Pn**		**17 07 23.1**	**-0.4**
PEDA3				*eS*	**Sn**		**17 07 43.1**	**+0.5**
ACHO3	**Achotines, Los**	**1.55**	**275**	*eP*	**Pn**		**17 07 25.3**	**-0.1**
ACHO3				*eS*	**Sn**		**17 07 45.5**	**-0.4**
SOLC	**Bahia Solano**	**1.59**	**131**	P	**Pn**		**17 07 24.4**	**-1.5**
SOLC				S	**Sn**		**17 07 45.2**	**-1.5**
TOTI	**Torti**	**1.67**	**10**	*eP*	**Pn**		**17 07 27.5**	**+0.5**
TOTI				*eS*	**Sn**		**17 07 47.2**	**-1.5**
AZU	**Azuero**	**1.72**	**287**	P	**Pn**		**17 07 26.3**	**-1.4**
AZU				S	**Sn**		**17 07 49.8**	**-0.3**
AZU	**Azuero**	**1.72**	**287**	*eP*	**Pn**		**17 07 26.5**	**-1.3**
AZU				*eS*	**Sn**		**17 07 50.9**	**+0.8**
FLAM	**Flamenco Islan**	**1.86**	**331**	*eP*	**Pn**		**17 07 30.0**	**+0.3**
FLAM				*eS*	**Sn**		**17 07 51.7**	**-1.9**
CHIT3	**Chitre**	**1.91**	**291**	*eP*	**Pn**		**17 07 29.5**	**-0.8**
CHIT3				*eS*	**Sn**		**17 07 52.6**	**-2.1**
UPA	**Univ. de Panam**	**1.92**	**332**	P	**Pn**		**17 07 30.2**	**-0.3**
UPA				S	**Sn**		**17 07 52.4**	**-2.5**
UPA	**Univ. de Panam**	**1.92**	**332**	*eP*	**Pn**		**17 07 30.4**	**-0.1**
UPA				*eS*	**Sn**		**17 07 55.5**	**+0.6**
CHPO	**Chepo, Panama**	**1.94**	**345**	*eP*	**Pn**		**17 07 30.0**	**-0.8**
CHPO				*eS*	**Sn**		**17 07 55.4**	**-0.1**
ARRA3	**Arraijan, Pana**	**1.97**	**328**	*eP*	**Pn**		**17 07 31.6**	**+0.5**
CHOR3	**La Chorrera**	**1.97**	**325**	*eP*	**Pn**		**17 07 30.9**	**-0.3**
CHOR3				*eS*	**Sn**		**17 07 56.5**	**+0.3**
ZANG	**Zanguenga, Cho**	**2.08**	**323**	*eP*	**Pn**		**17 07 33.5**	**+0.9**
ZANG				*eS*	**Sn**		**17 08 00.6**	**+1.7**
PNME	**Penonome**	**2.08**	**305**	P	**Pn**		**17 07 33.4**	**+0.8**
PNME				S	**Sn**		**17 07 59.4**	**+0.6**
PNME	**Penonome**	**2.08**	**305**	*eP*	**Pn**		**17 07 33.7**	**+1.1**
APAC	**Apartado, Choc**	**2.11**	**73**	P	**Pb**		**17 07 35.5**	**-0.3**
APAC				S	**Sg**		**17 08 04.1**	**-0.9**
GAMB1	**Gamboa**	**2.13**	**329**	*eP*	**Pn**		**17 07 33.1**	**-0.2**
GAMB1				*eS*	**Sn**		**17 08 00.6**	**+0.5**
FRIJ	**El Hiral**	**2.22**	**330**	*eP*	**Pn**		**17 07 33.4**	**-1.2**
FRIJ				*eS*	**Sn**		**17 08 04.0**	**+1.6**
BCIP	**Isla Barro Col**	**2.23**	**327**	P	**Pn**		**17 07 34.1**	**-0.7**
BCIP				S	**Sn**		**17 08 03.1**	**+0.4**
BCIP	**Isla Barro Col**	**2.23**	**327**	*eP*	**Pn**		**17 07 35.1**	**+0.4**
DBBC	**Dabeiba**	**2.40**	**96**	P	**Pn**		**17 07 36.3**	**-0.8**
DBBC				S	**Sn**		**17 08 06.0**	**-0.9**
GMAL	**Guarumal, Vera**	**2.64**	**281**	P	**Pn**		**17 07 39.9**	**-0.5**
GMAL	**Guarumal, Vera**	**2.64**	**281**	*eP*	**Pn**		**17 07 40.5**	**+0.1**
GMAL				*eS*	**Sn**		**17 08 15.3**	**+2.5**
LCBC	**Los crdobas,**	**2.72**	**55**	P	**Pb**		**17 07 45.1**	**-1.2**
CBOC	**Ciudad Bolivar**	**2.94**	**118**	P	**Pn**		**17 07 44.9**	**+0.2**
CBOC				S	**Sn**		**17 08 17.3**	**-3.1**
UREC	**San Jos de Ur**	**3.09**	**81**	P	**Pn**		**17 07 46.8**	**+0.2**
UREC				S	**Sn**		**17 08 25.5**	**+1.7**
URE2	**San Jos de Ur**	**3.09**	**81**	*eP*	**Pn**		**17 07 49.5**	**+2.9**
HELC	**Santa Helena**	**3.25**	**109**	P	**Pn**		**17 07 50.3**	**+1.3**
HELC				S	**Sn**		**17 08 27.9**	**-0.3**
HELC	**Santa Helena**	**3.25**	**109**	*eP*	**Pn**		**17 07 50.4**	**+1.3**
PLMC	**San Jos del P**	**3.31**	**135**	P	**Pn**		**17 07 48.0**	**-1.6**
PLMC				S	**Sn**		**17 08 27.3**	**-2.0**
GUY2C	**Guyana, Caldas**	**3.82**	**122**	P	**Pn**		**17 07 58.6**	**+1.6**
PTBC	**PUERTO BERRIO,**	**4.19**	**100**	P	**Pn**		**17 08 03.0**	**+1.3**
PTBC				S	**Sn**		**17 08 51.4**	**+0.3**
SJCC	**San Jacinto, C**	**4.28**	**52**	P	**Pn**		**17 08 04.1**	**+1.2**
SJCC				S	**Sn**		**17 08 53.3**	**+0.1**
BRU2	**Volcan**	**4.31**	**291**	*eP*	**Pb**		**17 08 13.5**	**-0.1**
ORTC	**Ortega, Tolima**	**4.74**	**135**	P	**Pn**		**17 08 12.5**	**+3.2**
ORTC				S	**Sn**		**17 09 05.4**	**+0.9**
POPC	**Popayan, Colom**	**5.09**	**158**	P	**Pn**		**17 08 15.5**	**+1.2**
	292nm4.1nm,0.9s							
POPC				S	**Sn**		**17 09 14.2**	**+0.7**
	292nm4.1nm,0.9s							
PRAC	**Prado**	**5.13**	**133**	P	**Pn**		**17 08 16.2**	**+1.6**
	6.7nm,1.4s							
RUSC	**La Rusia**	**5.66**	**104**	P	**Pn**		**17 08 21.5**	**-0.9**
RUSC				S	**Sn**		**17 09 28.4**	**+0.4**

DJA 03 17:08:04.4±0.2, 3°N±3°×9°8E±°, h93km±4km, M3.8/25, mB5.7/2, mb4.3/6, MLv3.5/25, Mw(mb)5.2/2, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TPTI		**0.48**	**265**	P	Pn		17 08 20.4	+1.1
TPTI				S	Sn		17 08 32.3	+1.9
PSI	**Prapat**	**1.36**	**111**	P	Pn		17 08 28.5	-0.1
MLSI	**Meulaboh, Aceh**	**1.58**	**308**	P	Pn		17 08 31.6	+0.3
SNSI	**Sinabang, Aceh**	**1.60**	**236**	P	Pn		17 08 32.1	+0.5
GSI	**Gunungsitoli**	**1.98**	**182**	P	Pn		17 08 36.5	-0.1
LHMI	**Lhok Sumawe**	**2.04**	**340**	P	Pn		17 08 37.4	+0.1
MNSI	**Mandailing Nat**	**3.14**	**142**	P	Pn		17 08 52.4	+0.5
BSI	**Banda Aceh**	**3.21**	**313**	P	Pn		17 08 52.3	-0.6
PBSI	**Pulau Batu**	**3.39**	**169**	P	Pn		17 08 55.2	-0.1
BTDF	**Bukit Timah Da**	**6.40**	**107**	P	Pn		17 09 34.2	-2.0
MASI	**Maura Aman, Be**	**7.87**	**144**	P	Pn		17 09 55.8	-0.4
	60nm,1.9s							

NOU 03 17:14:27.8, 21°35S×169°61E, h0km, MLv3.6/14, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MARNC	**Mare, Loyalty**	**1.48**	**265**	P	Pn		17 14 55.5	-0.2
MARNC	**Mare, Loyalty**	**1.48**	**265**	S	Sn		17 15 16.2	+0.5
YATNC	**Mamie plateau,**	**2.62**	**254**	P	Pn		17 15 11.3	-0.2
YATNC	**Mamie plateau,**	**2.62**	**254**	S	Sn		17 15 44.6	+0.5
OUENC	**Ouen Island, N**	**2.78**	**247**	P	Pn		17 15 14.1	+0.5
OUENC	**Ouen Island, N**	**2.78**	**247**	S	Sn		17 15 47.4	-0.5
ONTNC	**Ouen Toro**	**3.08**	**251**	P	Pn		17 15 17.6	-0.2
ONTNC	**Ouen Toro**	**3.08**	**251**	S	Sn		17 15 55.2	-0.2
NOUC	**Port Laguerre**	**3.16**	**256**	P	Pn		17 15 19.2	+0.3
NOUC	**Port Laguerre**	**3.16**	**256**	S	Sn		17 15 57.4	0.0
KOUNC	**Koumac, New Ca**	**5.04**	**278**	P	Pn		17 15 44.7	0.0

*IDC **03** 17:36:35.0±0.9, 14.05S×66.41E, h0km, mb

KSAR	**Wonju Array Be**	**77.13**	**46**	P	**P**	**17 48 29.7**	**-0.3**
KSRS	**Korea Array**	**77.17**	**46**	P	**P**	**17 48 30.9**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=241,slow=6.5,SNR=3.4						
	comp=Z,1.1nm,0.9s						
PDAR	**Pinedale Array**	**151.17**	**354**	PKPbc	**PKPbc**	**17 56 30.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=60,slow=2.3,SNR=9.0						
PDAR	**Pinedale Array**	**151.17**	**354**	PKPdf	**PKPdf**	**17 56 22.1**	**-2.2**
PDAR					**PKPbc**	**17 56 29.5**	**-0.7**

*IDC **03** 17:39:10.7±0.9, 13°.87S×66°.44E, h0km, mb3.9/11, mbtmp3.9/12, ML3.5/1, MS3.5/4, Error ellipse: s-maj=28.1km s-min=22.2km az=80.0*
*NEIC **03** 17:39:11.7±1.9, 13°.93S±0°.07×66°.2E±0°.1, h10km±1km, mb4.5/15, Error ellipse: s-maj=20.4km s-min=11.0km az=256.0*

ISC 03 17:39:11.3±0.6, 13°.88S±0°.10×66°.3E±0°.1, h10km, n48, σ1§16/38, mb4.2/18, MS3.5/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.67**	**45**	T	T	17 50 34.7	
	baz=224,slow=75,SNR=164						
H08S2	**Diego Garcia H**	**8.69**	**45**	T	T	17 50 32.9	
	baz=224,slow=75,SNR=148						
H08S3	**Diego Garcia H**	**8.69**	**45**	T	T	17 50 29.9	
	baz=224,slow=75,SNR=670						
MSEY	**Mahe Island**	**14.05**	**310**	Pn	**Pn**	**17 42 31.0**	**+0.3**
OPO	**Ambohidratompo**	**18.93**	**253**	P	**P**	**17 43 33.6**	**+0.8**
	baz=144,slow=20,SNR=1.9						
	2.7nm,0.8s						
PALK	**Pallekele**	**25.42**	**35**	LR	LR	17 52 47.8	
	comp=Z,96nm,19.2s,baz=222,slow=32						
H04N2	**CROZET ISLANDS**	**34.42**	**198**	T	T	18 22 04.4	
	baz=25,slow=76,SNR=22						
H04N1	**CROZET ISLANDS**	**34.42**	**198**	T	T	18 22 04.8	
	baz=25,slow=76,SNR=21						
H04N3	**CROZET ISLANDS**	**34.44**	**198**	T	T	18 22 06.5	
	baz=25,slow=76,SNR=19						
CRZF	**Crozet Islands**	**34.64**	**198**	P	**P**	**17 45 59.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**45.48**	**46**	P	**P**	**17 47 29.2**	**-1.9**
	0.2nm,0.4s,baz=226,slow=7.8,SNR=5.8						
CMAR				LR	LR	18 05 22.4	
	comp=Z,42nm,18.0s,baz=235,slow=35						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.48**	**46**	P	**P**	**17 47 31.7**	**+0.6**
SHL	**Shillong**	**46.46**	**33**	P	**P**	**17 47 40.4**	**+1.4**
SHL				IAmb	IAmb	17 47 43.9	
	comp=Z,11nm,1.1s						
H01W3	**Cape Leeuwin H**	**47.81**	**125**	T	T	18 38 54.7	
	baz=283,slow=75,SNR=51						
H01W2	**Cape Leeuwin H**	**47.81**	**125**	T	T	18 38 56.3	
	baz=283,slow=75,SNR=54						
H01W1	**Cape Leeuwin H**	**47.82**	**125**	T	T	18 38 53.5	
	baz=283,slow=75,SNR=50						
GAR	**Garm**	**52.74**	**4**	P	**P**	**17 48 24.1**	**-2.4**
GAR				IAmb	IAmb	17 48 29.6	
	comp=Z,5.5nm,1.0s						
MAW	**Mawson**	**53.72**	**182**	P	**P**	**17 48 33.0**	**-0.3**
AAK	**Ala-Archa**	**56.74**	**7**	LR	LR	18 09 18.1	
	comp=Z,40nm,18.7s,baz=204,slow=32						
ARG	**Arkhangelos**	**61.50**	**325**	P	**P**	**17 49 28.2**	**-0.2**
MKAR	**Makanchi Array**	**62.08**	**12**	P	**P**	**17 49 33.6**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=206,slow=8.1,SNR=8.1						
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**62.08**	**12**	P	**P**	**17 49 32.8**	**+0.5**
AB31	**Akbulak array**	**63.11**	**355**	P	**P**	**17 49 39.2**	**+0.3**
AB31				IAmb	IAmb	17 49 47.9	
	comp=Z,3.0nm,1.2s						
ABKAR	**Akbulak array**	**63.11**	**355**	P	**P**	**17 49 38.7**	**-0.3**
ASAR	**Alice Springs**	**64.25**	**110**	P	**P**	**17 49 47.8**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=268,slow=5.7,SNR=13						
ASAR				LR	LR	18 15 45.3	
	comp=Z,56nm,18.1s,baz=280,slow=34						
	comp=Z,1.1nm,0.9s						
ASAR	**Alice Springs**	**64.25**	**110**	P	**P**	**17 49 47.1**	**-0.1**
WRA	**Warramunga Arr**	**65.01**	**106**	P	**P**	**17 49 52.9**	**+0.7**
	comp=Z,2.7nm,1.0s,baz=269,slow=6.0,SNR=9.0						
	comp=Z,2.7nm,1.0s						
WRA	**Warramunga Arr**	**65.01**	**106**	P	**P**	**17 49 52.1**	**-0.1**
KURBB	**Kurchatov Arra**	**65.12**	**9**	P	**P**	**17 49 54.0**	**+1.9**
	comp=Z,1.0nm,1.0s,baz=202,slow=7.0,SNR=5.8						
	comp=Z,1.0nm,1.0s						
KURK	**Kurchatov**	**65.22**	**9**	P	**P**	**17 49 53.5**	**+0.7**
KURK				IAmb	IAmb	17 49 55.8	
	comp=Z,1.8nm,0.9s						
BVAR	**Borovoye Array**	**66.73**	**3**	P	**P**	**17 50 03.4**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=156,slow=7.5,SNR=5.2						
	comp=Z,0.9nm,0.7s						
BORK	**Borovoye**	**66.74**	**3**	P	**P**	**17 50 02.8**	**+0.2**
BORK				IAmb	IAmb	17 50 05.7	
	comp=Z,3.2nm,1.1s						
ZAA0	**Zalesovo Array**	**69.39**	**12**	P	**P**	**17 50 18.8**	**-0.4**
ZAA0				IAmb	IAmb	17 50 21.7	
	comp=Z,4.4nm,1.2s						
ZALV	**Zalesovo Beam**	**69.39**	**12**	P	**P**	**17 50 20.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=226,slow=3.9,SNR=5.7						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**69.39**	**12**	P	**P**	**17 50 18.7**	**-0.5**
SONM	**Songino Array**	**71.08**	**27**	P	**P**	**17 50 30.6**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=229,slow=6.2,SNR=6.9						
	comp=Z,1.5nm,0.9s						
SONM	**Songino Array**	**71.08**	**27**	P	**P**	**17 50 30.6**	**+0.8**
SONM				IAmb	IAmb	17 50 39.8	
	comp=Z,2.1nm,1.2s						
QSPA	**South Pole Qui**	**76.19**	**180**	P	**P**	**17 51 01.2**	**+1.5**
	comp=Z,2.3nm,1.1s,baz=307,slow=1.9,SNR=4.0						
	comp=Z,2.3nm,1.1s						
QSPA	**South Pole Qui**	**76.19**	**180**	P	**P**	**17 51 01.2**	**+1.5**
KSAR	**Wonju Array Be**	**77.09**	**46**	P	**P**	**17 51 03.4**	**-1.7**
KSRS	**Korea Array**	**77.12**	**46**	P	**P**	**17 51 03.6**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=237,slow=5.8,SNR=4.0						
	comp=Z,1.9nm,0.9s						
MDJ	**Mudanjiang**	**81.67**	**40**	P	**P**	**17 51 29.1**	**-0.8**
MDJ				IAmb	IAmb	17 51 35.3	
	comp=Z,9.9nm,1.3s						
MJAR	**Matsushiro Arr**	**84.17**	**50**	P	**P**	**17 51 44.0**	**+0.9**
	comp=Z,2.3nm,1.0s,baz=218,slow=6.2,SNR=5.5						
	comp=Z,2.3nm,1.0s						
MJAR	**Matsushiro Arr**	**84.17**	**50**	P	**P**	**17 51 43.4**	**+0.3**
MJAR				IAmb	IAmb	17 51 46.6	
	comp=Z,4.7nm,1.2s						
ILAR	**Eielson Array**	**124.32**	**16**	PKP	**PKPdf**	**17 58 09.8**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=340,slow=3.3,SNR=4.1						
ILAR	**Eielson Array**	**124.32**	**16**		**PKPdf**	**17 58 08.9**	**-1.2**
PDAR	**Pinedale Array**	**151.00**	**354**	PKPbc	**PKiKP**	**17 59 06.2**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=71,slow=2.5,SNR=15						
PDAR	**Pinedale Array**	**151.00**	**354**	PKPdf	**PKPdf**	**17 58 56.7**	**-2.6**
PDAR					**sPKPdf**	**17 59 03.7**	**+1.0**

*IDC **03** 17:44:58.5±1.6, 8°.53N×125°.90E, h0km, mb3.4/4, mbtmp3.4/4, MS2.8/3, Error ellipse: s-maj=58.2km s-min=13.2km az=89.0*
*MAN **03** 17:45:01.0, 8°.00N×124°.64E, h4km, MS3.8*
MAN INTENSITY III - KALILANGAN BUKIDNON; . INTENSITY II - PANGANTUCAN KADINGILAN & DAMULOG BUKIDNON; . INTENSITY I - DON CARLOS & KITAOTAO QUEZON; MARAMAG BUKIDNON.

ISC 03 17:45:01.0±1.2, 7°.98N±0°.03×124°.61E±0°.03, h3km±10km, n27, σ1§21/40, mb3.4/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.45**	**102**	*e*P	**Pb**	**17 45 10.8**	**-1.0**
BUKP				*i* S	**Sg**	**17 45 17.3**	**+1.6**
CTBH	**Cotabato--PC H**	**0.83**	**206**	*i* P	**Pb**	**17 45 18.2**	**0.0**
CTBH				*i* S	**Sn**	**17 45 31.9**	**-0.6**
KCP	**Kidapawan**	**1.07**	**154**	*i* P	**Pg**	**17 45 21.0**	**-0.6**
KCP				*i* S	**Sg**	**17 45 35.8**	**+0.3**
PAGZ	**Pagadian**	**1.23**	**264**	*i* P	**Pn**	**17 45 24.8**	**-0.3**
PAGZ				*i* S	**Sn**	**17 45 45.6**	**+3.4**
DMPH	**Davao City--Mi**	**1.25**	**135**	*i* P	**Pg**	**17 45 25.1**	**0.0**
DMPH				*i* S	**Sn**	**17 45 43.5**	**+0.6**
DAV	**Davao City (W)**	**1.31**	**133**	Pg	**Pg**	**17 45 26.8**	**+0.6**
	107nm,0.3s,baz=319,slow=8.3,SNR=10						
DAV				Lg	Lg	17 45 45.2	
	157nm,0.3s,baz=202,slow=17,SNR=14						
DCPH	**Dipolog City**	**1.39**	**296**	*i* P	**Pn**	**17 45 26.7**	**-0.6**
DCPH				*i* S	**Sn**	**17 45 48.1**	**+1.9**
LSIP	**Lazi, Siquijor**	**1.50**	**320**	*i* P	**Pb**	**17 45 29.2**	**-0.4**
LSIP				*i* S	**Sg**	**17 45 51.3**	**+1.9**
BIPH	**Bislig**	**1.74**	**83**	*e*P	**Pb**	**17 45 33.2**	**-0.5**
BIPH				*e*S	**Sg**	**17 45 57.9**	**+0.8**
CDOP	**Cateel, Davao**	**1.82**	**96**	*i* P	**Pb**	**17 45 34.5**	**-0.4**
CDOP				*i* S	**Sg**	**17 46 00.9**	**+1.5**
TBP	**Tagbilaran**	**1.86**	**337**	*e*P	**Pn**	**17 45 33.4**	**-0.4**
TBP				*i* S	**Sg**	**17 46 02.2**	**+1.4**
GSPH	**General Santos**	**1.91**	**170**	*i* P	**Pg**	**17 45 36.9**	**-0.7**
GSPH				*i* S	**Sg**	**17 46 01.7**	**-0.6**
SCPH	**Surigao**	**1.99**	**26**	*e*P	**Pn**	**17 45 35.6**	**-0.1**
SCPH				*i* S	Sn	17 45 48.1	-13
IPIL	**Ipil**	**2.03**	**265**	*i* P	**Pb**	**17 45 38.1**	**-0.5**
IPIL				*i* S	**Sg**	**17 46 05.4**	**-1.0**
DDMP	**Don Marcelino,**	**2.15**	**150**	*e*P	**Pb**	**17 45 39.9**	**-0.8**
DDMP				*e*S	**Sb**	**17 46 08.9**	**+1.0**
MSLP	**Maasin**	**2.16**	**6**	*i* P	**Pb**	**17 45 39.1**	**-1.7**
MSLP				*i* S	**Sg**	**17 46 09.3**	**-1.1**
LLP	**Lapu-Lapu**	**2.41**	**345**	*e*P	**Pn**	**17 45 42.2**	**+0.8**
LLP				*e*S	**Sb**	**17 46 13.8**	**-1.6**
ZCP	**Zamboanga City**	**2.72**	**248**	*e*P	**Pn**	**17 45 47.3**	**+1.6**
PLP	**Palo**	**3.19**	**6**	*e*P	**Pn**	**17 45 53.2**	**+1.1**
PLP				*e*S	**Sn**	**17 46 31.6**	**+0.8**
RCP	**Roxas**	**4.01**	**333**	*i* P	**Pn**	**17 46 05.7**	**+2.3**
TGY	**Tagaytay City**	**7.08**	**330**	LR	LR	17 50 21.9	
	comp=Z,42nm,18.7s,baz=80,slow=44						
GUMO	**Guam**	**20.66**	**73**	LR	LR	17 56 07.2	
	comp=Z,14nm,21.4s,baz=248,slow=35						
LEM	**Lembang**	**22.44**	**230**	LR	LR	18 00 26.4	
	comp=Z,62nm,19.4s,baz=246,slow=39						
ASAR	**Alice Springs**	**32.73**	**164**	P	**P**	**17 51 34.4**	**-0.9**
	0.4nm,0.6s,baz=338,slow=7.0,SNR=13						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**52.89**	**325**	P	**P**	**17 54 17.9**	**-0.6**
	0.2nm,0.6s,baz=127,slow=7.8,SNR=6.9						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**55.87**	**333**	P	**P**	**17 54 40.1**	**+0.2**
	0.2nm,0.3s,baz=135,slow=8.8,SNR=1.5						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**57.05**	**327**	P	**P**	**17 54 47.2**	**-1.2**
	0.2nm,0.6s,baz=128,slow=6.1,SNR=4.8						
	0.2nm,0.6s						

IDC 03 17:51:53.4±1.8, 7°.88S×130°.79E, h0km, mb3.8/1, mbtmp3.7/5, ML3.5/4, MS3.3/1, Error ellipse: s-maj=67.1km s-min=24.4km az=86.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.98**	**4**	Pn	Pn	17 53 36.9	-0.2
	1.1nm,0.3s,baz=287,slow=23,SNR=12						
SIJI				Sn	Sn	17 54 48.0	-9.3
	1.5nm,0.3s,baz=170,slow=22,SNR=8.3						
	3.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**11.32**	**206**	Pn	Pn	17 54 36.5	-0.1
	0.3nm,0.3s,baz=26,slow=11,SNR=28						
FITZ				Sn	Sn	17 56 34.6	-9.3
	0.7nm,0.3s,baz=166,slow=18,SNR=12						
	2.2nm,0.7s						
WRA	**Warramunga Arr**	**12.47**	**164**	Pn	Pn	17 54 52.4	0.0
	0.3nm,0.3s,baz=347,slow=13,SNR=11						
WRA				Sn	Sn	17 57 04.0	-8.2
	0.5nm,0.3s,baz=346,slow=24,SNR=7.1						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**15.98**	**170**	Pn	Pn	17 55 39.8	0.0
	0.2nm,0.3s,baz=353,slow=14,SNR=14						
ASAR				Sn	Sn	17 58 29.3	-8.4
	0.1nm,0.3s,baz=358,slow=28,SNR=5.1						
	0.6nm,0.7s						
PALK	**Pallekele**	**52.16**	**286**	LR	LR	18 23 48.7	
	comp=Z,32nm,19.8s,baz=188,slow=37						
MKAR	**Makanchi Array**	**69.39**	**327**	P	P	18 03 03.3	+0.1
	0.4nm,0.4s,baz=115,slow=8.0,SNR=10						
	0.4nm,0.4s						

*NEIC **03** 18:26:12.5±1.9, 24°.75S±0°.09×179°.9E±0°.1, h488km±7km, mb4.4/48, Error ellipse: s-maj=17.0km s-min=12.6km az=105.0*
*IDC **03** 18:26:13.7±1.6, 24°.68S×179°.88E, h499km±16km, mb3.7/13, mbtmp4.5/16, Error ellipse: s-maj=16.9km s-min=14.2km az=86.0*

ISC 03 18:26:14.8±0.5, 24°.66S±0°.06×179°.81E±0°.08, h517km, n105, σ1§44/117, mb4.3/35, 2C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.09**	**346**	P	**P**	**18 28 01.5**	**-1.1**
	12nm,0.6s,baz=226,slow=23,SNR=10						
MSVF	**Nonsavu**	**7.09**	**346**	P	**P**	**18 28 00.8**	**-1.8**
DZM	**Mont Dzumac**	**12.55**	**279**	P	**P**	**18 28 59.9**	**+0.7**
	7.7nm,0.6s,baz=218,slow=22,SNR=8.8						
HAZ	**Te Kaha**	**13.17**	**187**	P	**P**	**18 29 08.4**	**+3.0**
HAZ				S	**S**	**18 31 28.8**	**+2.8**
PUZ	**Puketiti**	**13.44**	**185**	S	**S**	**18 31 33.2**	**+2.0**
URZ	**Urewera**	**13.75**	**189**	P	**P**	**18 29 11.2**	**-0.3**
	4.6nm,0.7s,baz=47,slow=13,SNR=1.5						
URZ				S	**S**	**18 31 33.5**	**-3.6**
	6.0nm,0.8s,baz=38,slow=19,SNR=9.0						
URZ	**Urewera**	**13.75**	**189**	S	**S**	**18 31 36.3**	**-0.8**
MWZ	**Matawai**	**13.77**	**188**	P	**P**	**18 29 13.2**	**+1.5**
MWZ				S	**S**	**18 31 38.6**	**+0.9**
TLZ	**Tolley Road**	**14.10**	**194**	P	P	18 29 19.5	+4.2
BKZ	**Black Stump Fm**	**14.73**	**190**	P	**P**	**18 29 22.0**	**+0.1**
BKZ				S	**S**	**18 31 54.3**	**-1.8**
TMVZ	**Te Maari**	**14.82**	**193**	P	**P**	**18 29 24.5**	**+1.6**
ETVZ	**East Tongariro**	**14.84**	**193**	P	**P**	**18 29 23.5**	**+0.4**
NGZ	**Ngauruhoe**	**14.90**	**193**	P	**P**	**18 29 26.4**	**+2.6**
SANVU	**Saraoutou**	**14.97**	**305**	P	**P**	**18 29 24.0**	**-0.6**
VRZ	**Vera Road**	**15.04**	**195**	P	**P**	**18 29 27.6**	**+2.6**
WNVZ	**Wahianoa**	**15.05**	**193**	P	**P**	**18 29 25.2**	**-0.1**
WNVZ				S	**S**	**18 32 02.3**	**0.0**
KAHZ	**Kahuranaki**	**15.29**	**189**	P	**P**	**18 29 27.4**	**-0.2**
KAHZ				S	**S**	**18 32 03.6**	**-3.0**
PNHZ	**Pukenui**	**15.51**	**190**	P	**P**	**18 29 28.5**	**-1.4**
PNHZ				S	**S**	**18 32 08.1**	**-2.6**
TSZ	**Takapari Road**	**15.69**	**191**	P	**P**	**18 29 29.3**	**-2.5**
TSZ				S	**S**	**18 32 10.8**	**-3.2**
BFZ	**Birch Farm**	**16.25**	**190**	P	**P**	**18 29 34.8**	**-2.7**
BFZ				S	**S**	**18 32 21.1**	**-2.8**
MRZ	**Mangatainoka R**	**16.34**	**192**	P	**P**	**18 29 34.7**	**-3.7**
MRZ	**Mangatainoka R**	**16.34**	**192**	P	**P**	**18 29 35.7**	**-2.8**
MRZ				S	**S**	**18 32 22.0**	**-3.5**
MSWZ	**Moikau Station**	**17.14**	**192**	P	**P**	**18 29 43.9**	**-2.3**
QRZ	**Quartz Range**	**17.23**	**199**	P	**P**	**18 29 46.3**	**-0.8**
NNZ	**Nelson**	**17.36**	**196**	P	**P**	**18 29 46.8**	**-1.4**
NNZ				S	**S**	**18 32 40.7**	**-1.9**
MRNZ	**Matariki Terra**	**17.70**	**198**	P	**P**	**18 29 49.4**	**-2.0**
THZ	**Tophouse**	**18.00**	**197**	P	**P**	**18 29 53.0**	**-1.2**
THZ				S	**S**	**18 32 53.0**	**+0.1**
DSZ	**Denniston Nort**	**18.29**	**199**	P	**P**	**18 29 56.0**	**-0.9**
KHZ	**Kahutara**	**18.45**	**195**	P	**P**	**18 29 56.2**	**-2.0**
KHZ				S	**S**	**18 32 57.2**	**-3.0**
GVZ	**Greta Valley S**	**19.09**	**195**	P	**P**	**18 30 02.4**	**-1.7**
LTZ	**Lake Taylor**	**19.12**	**197**	P	**P**	**18 30 03.1**	**-1.3**
INZ	**Inchbonnie**	**19.30**	**199**	P	**P**	**18 30 04.0**	**-1.9**
INZ	**Inchbonnie**	**19.30**	**199**	P	**P**	**18 30 04.8**	**-1.1**
OXZ	**Oxford**	**19.68**	**197**	P	**P**	**18 30 09.0**	**-0.4**
WVZ	**Waitaha Valley**	**19.83**	**200**	P	**P**	**18 30 10.5**	**-0.3**
RPZ	**Rata Peaks**	**20.32**	**199**	P	**P**	**18 30 14.5**	**-0.7**
	1.6nm,0.8s,baz=26,slow=6.7,SNR=5.5						
WHZ	**Wether Hill Ro**	**23.24**	**201**	P	**P**	**18 30 40.0**	**-1.5**
CAN	**Canberra**	**28.62**	**241**	P	**P**	**18 31 29.4**	**+0.3**
CAN				IAmb	IAmb	18 31 54.5	
	comp=Z,15nm,1.1s						
CTA	**Charters Tower**	**31.32**	**272**	P	**P**	**18 31 53.8**	**+1.2**
	comp=Z,37nm,0.5s,baz=93,slow=10,SNR=90						
	comp=Z,37nm,0.5s						
CTAO	**Charters Tower**	**31.32**	**272**		**P**	**18 31 53.8**	**+1.2**
TOO	**Toolangi**	**31.90**	**238**	P	**P**	**18 31 58.0**	**+0.6**
TAU	**Tasmania Unive**	**32.29**	**228**	P	**P**	**18 32 01.6**	**+0.9**
RABL	**Rabaul**	**33.49**	**303**	P	**P**	**18 32 12.4**	**+1.2**
STKA	**Stephens Creek**	**34.29**	**249**	P	**P**	**18 32 18.6**	**+0.8**
	comp=Z,4.2nm,0.4s,baz=97,slow=11,SNR=14						
	comp=Z,4.2nm,0.4s						
PMG	**Port Moresby**	**34.59**	**290**	P	**P**	**18 32 20.3**	**-0.1**
	comp=Z,21nm,0.9s,baz=118,slow=4.9,SNR=3.9						
	comp=Z,21nm,0.9s						
PMG	**Port Moresby**	**34.59**	**290**	P	**P**	**18 32 19.6**	**-0.8**
INKA	**Innaminka**	**35.09**	**256**		**P**	**18 32 25.4**	**+1.0**
INKA				IAmb	IAmb	18 32 26.9	
	comp=Z,5.9nm,0.9s						
BBOO	**Buckleboo**	**38.99**	**248**	P	**P**	**18 32 56.1**	**-0.4**
BBOO				IAmb	IAmb	18 32 57.0	
	comp=Z,27nm,1.2s						
AS31	**Alice Springs**	**41.75**	**261**		**P**	**18 33 18.6**	**-0.1**
AS31				IAmb	IAmb	18 33 19.8	
	comp=Z,3.2nm,0.4s						
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**18 33 18.9**	**+0.1**
	comp=Z,6.1nm,0.6s,baz=92,slow=7.3,SNR=290						
ASAR				ScP	**ScP**	**18 38 06.2**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=107,slow=5.2,SNR=4.4						
	comp=Z,6.1nm,0.6s						
ASAR	**Alice Springs**	**41.75**	**261**		**P**	**18 33 17.8**	**-1.0**
ASAR					**ScP**	**18 38 06.2**	**+2.1**
WR8	**Warramunga Arr**	**42.04**	**267**	P	**P**	**18 33 20.6**	**-0.5**
WR8				IAmb	IAmb	18 33 21.6	
	comp=Z,14nm,0.8s						
WB0	**Warramunga Arr**	**42.19**	**267**	P	**P**	**18 33 21.3**	**-0.9**
WRA	**Warramunga Arr**	**42.19**	**267**	P	**P**	**18 33 21.9**	**-0.3**
	comp=Z,18nm,0.5s,baz=104,slow=7.8,SNR=14						
WRA				ScP	**ScP**	**18 38 08.6**	**+2.8**
	comp=Z,5.8nm,1.1s,baz=104,slow=4.0,SNR=12						
	comp=Z,18nm,0.5s						
FORT	**Forrest**	**45.89**	**250**		**P**	**18 33 49.9**	**-0.8**
FORT				IAmb	IAmb	18 33 50.8	
	comp=Z,14nm,0.6s						
MTN	**Manton Dam**	**47.35**	**275**	P	**P**	**18 34 01.6**	**-0.4**
MTN				IAmb	IAmb	18 34 08.0	
	comp=Z,33nm,1.5s						
KNRA	**Kununurra**	**48.52**	**271**		**P**	**18 34 10.4**	**-0.2**
KNRA				IAmb	IAmb	18 34 11.8	
	comp=Z,31nm,1.1s						
HMH	**Humu'ula Sheep**	**50.14**	**31**	P	**P**	**18 34 22.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**50.60**	**266**	P	**P**	**18 34 26.4**	**+0.4**
	comp=Z,16nm,0.6s,baz=116,slow=5.1,SNR=45						
	comp=Z,16nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.60**	**266**		**P**	**18 34 26.2**	**+0.2**
FAKI	**Fak Fak**	**50.64**	**288**	P	**P**	**18 34 25.9**	**-0.5**
SOEI	**Soe**	**54.74**	**275**	P	**P**	**18 34 56.5**	**+0.6**
NWAO	**Narrogin (SRO)**	**54.77**	**246**	P	**P**	**18 34 54.8**	**-0.9**
NWAO				IAmb	IAmb	18 34 58.3	
	comp=Z,28nm,1.4s						
MBWA	**Marble Bar**	**55.08**	**261**	P	**P**	**18 34 57.1**	**-0.9**
MBWA				IAmb	IAmb	18 35 05.2	
	comp=Z,36nm,1.4s						
MORW	**Morawa**	**56.46**	**250**	P	**P**	**18 35 07.2**	**-0.3**
MORW				IAmb	IAmb	18 35 40.9	
	comp=Z,18nm,1.2s						
MMRI	**Maumere**	**57.02**	**276**	P	**P**	**18 35 11.2**	**-0.4**
CASY	**Casey**	**59.35**	**206**	P	**P**	**18 35 26.0**	**-0.5**
GIRL	**Giralia**	**59.58**	**257**	P	**P**	**18 35 28.9**	**+0.2**
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**18 35 48.1**	**-0.6**
TOLI2				IAmb	IAmb	18 35 50.5	
	comp=Z,8.0nm,0.7s						
JAGI	**Jajag, Banyuwa**	**64.43**	**272**	P	**P**	**18 35 59.8**	**-0.7**
QSPA	**South Pole Qui**	**65.42**	**180**	P	**P**	**18 36 06.3**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=313,slow=1.1,SNR=13						
	comp=Z,1.8nm,0.7s						
QSPA	**South Pole Qui**	**65.42**	**180**	P	**P**	**18 36 06.7**	**+0.6**
KKM	**Kota Kinabalu**	**68.96**	**287**	P	**P**	**18 36 29.0**	**+0.4**
KKM				IAmb	IAmb	18 36 31.8	
	comp=Z,19nm,1.1s						
MJAR	**Matsushiro Arr**	**72.43**	**326**	P	**P**	**18 36 48.7**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=158,slow=5.7,SNR=5.5						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**72.43**	**326**	P	**P**	**18 36 48.0**	**-0.5**
JNU	**Nakatsue**	**73.98**	**319**	IAmb	IAmb	18 37 11.7	
	comp=Z,13nm,0.7s						
SSLB	**Suanglung**	**74.66**	**306**	P	**P**	**18 37 00.8**	**-0.6**
SSLB				IAmb	IAmb	18 37 02.3	
	comp=Z,6.7nm,0.8s						
YHNB	**Yeheng**	**74.87**	**307**	P	**P**	**18 37 02.6**	**-0.1**
BELA	**Belgrano 2**	**75.70**	**173**	P	**P**	**18 37 05.5**	**-1.0**
MAW	**Mawson**	**76.98**	**201**	P	**P**	**18 37 13.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=99,slow=5.6,SNR=3.2						
	comp=Z,1.5nm,0.7s						
MAW	**Mawson**	**76.98**	**201**	P	**P**	**18 37 13.4**	**-0.2**
KSRS	**Korea Array**	**76.72**	**320**	P	**P**	**18 37 24.4**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=136,slow=6.1,SNR=9.1						
	comp=Z,1.4nm,0.7s						

IAZR	**Azarshahr**	**2.66**	**13**	Pn		**Pb**	**18 35 05.5**	**-1.5**
HGHA	**Hamedan- Ghaye**	**3.00**	**81**	Pn		**Pb**	**18 35 10.0**	**-2.7**
ISHB	**Shabestar**	**3.21**	**6**	Pn		**Pb**	**18 35 13.6**	**-2.7**
ZNJK	**Zanjan**	**3.23**	**60**	Pn		**Pb**	**18 35 13.3**	**-3.4**
ISRB	**Sarab**	**3.37**	**35**	Pn		**Pb**	**18 35 15.3**	**+3.3**
RAFI	**Al-Rafai**	**3.43**	**167**	*e*Pn		**Pn**	**18 35 15.0**	**+2.4**
RAFI				*e*Sn		**Sn**	**18 35 53.0**	**-0.3**
RAFI				AML		AML	18 35 54.0	
	comp=N,124nm,0.4s							
RAFI				AML		AML	18 35 54.2	
	comp=E,288nm,0.4s							
GRMI	**Germi**	**4.29**	**29**	Pn		**Pn**	**18 35 28.0**	**+3.5**
AMIS	**Naft Sefid**	**4.82**	**134**	Pn		**Pn**	**18 35 34.6**	**+3.0**

NOU 03 19:44:13.2, 10°53S × 161°13E, h26km, mb4.7/11, Solomon Islands, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGOA	**Tingoa Renbel**	**1.46**	**226**	P	Pn	19 44 37.3	-0.6
NGOA	**Tingoa Renbel**	**1.46**	**226**	S	Sb	19 44 57.3	-0.6
HNR	**Honiara**	**1.60**	**313**	P	Pn	19 44 40.0	+0.2
HNR	**Honiara**	**1.60**	**313**	S	Sn	19 44 59.7	+0.1
SAVO	**Savo Central**	**1.89**	**316**	P	Pn	19 44 43.9	+0.1
TATA	**Tatamba Isabel**	**2.50**	**328**	P	Pn	19 44 52.5	+0.3
TATA	**Tatamba Isabel**	**2.50**	**328**	S	Sn	19 45 22.5	+0.6
SANVU	**Saraoutou**	**7.67**	**130**	P	Pn	19 46 03.7	+0.3
KOUNC	**Koumac, New Ca**	**10.42**	**163**	P	Pn	19 46 41.1	+0.1
NOUC	**Port Laguerre**	**12.53**	**157**	P	Pn	19 47 09.7	-0.2

*AFAD **03** 19:44:22.5, 34°.68N × 45°.89E, h7km ± 5km, MW4.0*
*IDC **03** 19:44:27.6 ± 1.1, 35°.10N × 45°.25E, h0km, mb3.8/9, mbtmp3.7/18, ML3.2/7, MS3.2/21, Error ellipse: s-maj=22.0km s-min=14.0km az=132.0*
*ISN **03** 19:44:27.8 ± 2.6, 35°.15N × 45°.31E, h21km ± 20km, ML3.7, Presumed earthquake*
*TEH **03** 19:44:28.1, 35°.11N × 45°.35E, h8km ± 37km, ML3.8, Presumed earthquake*
*NEIC **03** 19:44:28.5 ± 2.1, 35°.10N ± 0°.06 × 45°.33E ± 0°.07, h10km ± 1km, mb4.0/18, Error ellipse: s-maj=13.3km s-min=5.2km az=135.0*

ISC 03 19:44:28.2 ± 1.3, 35°.02N ± 0°.03 × 45°.33E ± 0°.03, h11km ± 9km, n122, σ1§84/117, mb4.0/13, MS3.1/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.92**	**110**	Pg	**Pn**	**19 44 47.0**	**-0.3**
IGHG	**Ghaleghazi**	**1.23**	**124**	Pg	**Pn**	**19 44 54.1**	**+2.7**
SNJK	**Sanadaj _Korde**	**1.49**	**73**	Pg	**Pg**	**19 44 56.6**	**-0.2**
ILBA	**Ilam Banvizeh**	**1.56**	**152**	Pg	**Pg**	**19 44 59.5**	**+1.3**
KCHF	**Cheshme Sefid,**	**1.59**	**117**	Pg	**Pg**	**19 44 59.8**	**+1.1**
MAHB	**Mahabad**	**1.77**	**10**	Pg	**Pb**	**19 44 59.9**	**-0.9**
SNQR	**Sonqor, Kerman**	**1.89**	**94**	Pn	**Pg**	**19 45 03.9**	**-0.6**
BHD	**Baghdad**	**1.91**	**205**	*e*Pg	**Pb**	**19 45 02.0**	**-1.1**
	baz=22						
BHD				*e*Sg	**Sg**	**19 45 31.5**	**+1.8**
BHD				AML	AML	19 45 38.2	
	comp=E,1μm,0.4s						
IBZA	**Bozab**	**2.15**	**104**	Pn	**Pg**	**19 45 07.9**	**-1.5**
IALM	**Almabolaq**	**2.33**	**93**	Pn	**Pb**	**19 45 10.1**	**-0.3**
CUKT	**Cukurca**	**2.63**	**328**	*e*P	**Pb**	**19 45 13.7**	**-1.7**
CUKT				*e*S	**Sn**	**19 45 45.5**	**+2.9**
CUKT	**Cukurca**	**2.63**	**328**	P	**Pb**	**19 45 13.0**	**-2.3**
CUKT				S	**Sb**	**19 45 49.1**	**+1.4**
CUKT				IAML		19 46 15.0	
	comp=E,556nm,1.1s						
YOVA	**Hakkari_Yksek**	**2.70**	**342**	P	**Pn**	**19 45 13.8**	**+2.0**
YOVA				S	**Sb**	**19 45 51.9**	**+2.0**
IHSH	**Hashtrud**	**2.77**	**34**	Pn	**Pn**	**19 45 14.4**	**+1.6**
HAKT	**HAKKARI**	**2.86**	**333**	P	**Pn**	**19 45 14.6**	**+0.7**
HAKT				S	**Sb**	**19 45 54.5**	**+0.1**
HAKT				IAML		19 46 22.0	
	comp=E,362nm,1.6s						
HGHA	**Hamedan- Ghaye**	**2.92**	**80**	Pn	**Pb**	**19 45 17.7**	**-2.7**
ZNJK	**Zanjan**	**3.18**	**58**	Pn	**Pn**	**19 45 20.9**	**+2.5**
ISHB	**Shabestar**	**3.27**	**4**	Pn	**Pn**	**19 45 21.5**	**+1.9**
RAFI	**Al-Rafai**	**3.35**	**169**	*e*Pn	**Pn**	**19 45 23.0**	**+2.6**
RAFI				*e*Sn	**Sn**	**19 46 03.0**	**+2.8**
RAFI				AML	AML	19 46 31.4	
	comp=E,192nm,0.5s						
ISRB	**Sarab**	**3.38**	**33**	Pn	**Pn**	**19 45 23.2**	**+2.2**
SIRN	**Sırnak**	**3.42**	**317**	P	**Pb**	**19 45 28.5**	**-0.4**
SIRN				S	**Sb**	**19 46 10.9**	**+0.5**
QABG	**Abgarm-Qazvin**	**3.54**	**78**	Pn	**Pn**	**19 45 26.1**	**+2.8**
PERV	**Siirt/Pervari-**	**3.69**	**323**	P	**Pb**	**19 45 33.0**	**-0.4**
IMRD	**Marand**	**3.70**	**4**	Pn	**Pn**	**19 45 28.0**	**+2.5**
GEVA	**Gevas**	**3.76**	**332**		**Pn**	**19 45 26.3**	**0.0**
GEVA	**Gevas**	**3.76**	**332**	P	**Pb**	**19 45 35.5**	**+0.8**
AKDM	**Akdamar-Van**	**3.81**	**331**	*e*P	**Pn**	**19 45 29.5**	**+2.5**
MIDY	**Mardin/Midyat-**	**3.98**	**308**	P	**Pn**	**19 45 29.8**	**+0.7**
MIDY				S	**Sb**	**19 46 24.7**	**-1.8**
SRTM	**Siirt_Merkez**	**4.05**	**318**	P	**Pn**	**19 45 32.4**	**+2.3**
SRTM				IAML		19 46 59.0	
	comp=E,201nm,1.4s						
SRTM				IAML		19 47 01.0	
	comp=E,182nm,1.0s						
CLDR	**Caldiran**	**4.27**	**345**	*e*P	**Pn**	**19 45 37.9**	**+4.5**
GAS1	**Astara - Iran**	**4.39**	**39**	Pn	**Pn**	**19 45 37.2**	**+2.5**
GURO	**Guroymak-BITLI**	**4.41**	**324**		**Pn**	**19 45 35.1**	**-0.1**
GURO	**Guroymak-BITLI**	**4.41**	**324**	P	**Pn**	**19 45 38.8**	**+3.6**
SVAN	**Silvan-Diyarba**	**4.57**	**314**	*e*P	**Pn**	**19 45 40.4**	**+3.1**
AMIS	**Naft Sefid**	**4.70**	**134**	Pn	**Pn**	**19 45 42.7**	**+3.6**
AGRB	**Hanur-Agry**	**4.92**	**338**	*e*P	**Pn**	**19 45 46.1**	**+3.9**
DYBB	**Diyarbakir**	**5.11**	**307**	*e*P	**Pn**	**19 45 47.5**	**+2.8**
GNI	**Garni**	**5.15**	**355**	Pg	**Pb**	**19 46 00.2**	**+1.9**
	comp=E,0.7nm,0.3s,baz=307,slow=10,SNR=4.3						
GNI				Lg	Lg	19 47 10.4	
	comp=E,0.6nm,0.3s,baz=166,slow=20,SNR=1.2						
GNI				LR	LR	19 48 04.9	
	comp=E,224nm,19.3s,baz=164,slow=43						
GNI	**Garni**	**5.15**	**355**	Pg	Pg	19 46 11.3	+4.5
GNI	**Garni**	**5.15**	**355**	Pn	**Pn**	**19 45 45.2**	**-0.1**
BNGB	**Bingl**	**5.44**	**318**	*e*P	**Pn**	**19 45 51.9**	**+2.6**
URFA	**Urfa**	**5.79**	**297**	*e*P	**Pn**	**19 45 56.5**	**+2.4**
SVRC	**Sivrice-ELAZID**	**5.89**	**306**	*e*P	**Pn**	**19 45 55.9**	**+0.3**
KOPT	**Kop Dagi**	**6.30**	**324**		**Pn**	**19 46 01.0**	**-0.3**
ARPR	**Arapgir-MALATY**	**6.92**	**308**		**Pn**	**19 46 08.0**	**-1.6**
GAZ	**Gaziantep**	**6.92**	**290**	Pn	**Pn**	**19 46 06.5**	**-3.1**
BEIL	**Beino**	**7.54**	**269**	*e*P	**Pn**	**19 46 19.5**	**+1.4**
ASF	**Jabal al Asfar**	**7.59**	**250**	Pn	**Pn**	**19 46 20.2**	**+1.4**
	comp=E,0.7nm,0.3s,baz=294,slow=23,SNR=3.4						
ASF				Pg	Pg	19 46 47.3	-6.2
	comp=E,0.3nm,0.3s,baz=107,slow=8.8,SNR=3.5						
ASF				Lg	Lg	19 48 23.5	
	comp=E,0.4nm,0.3s,baz=52,slow=22,SNR=3.3						
ASF				LR	LR	19 49 49.2	
	comp=E,226nm,20.8s,baz=29,slow=43 comp=E,1.6nm,0.3s						
HWQ	**Hawqa**	**7.77**	**267**	*e*P	**Pn**	**19 46 23.9**	**+2.6**
BHL	**Bhannes**	**8.07**	**265**	*e*P	**Pn**	**19 46 26.7**	**+1.2**
QRWL	**Qaraoun**	**8.12**	**262**	*e*P	**Pn**	**19 46 26.5**	**+0.4**
DQRL	**Deir Qamar**	**8.18**	**264**	*e*P	**Pn**	**19 46 26.5**	**-0.4**
MMAI	**Mount Meron Ar**	**8.48**	**259**	Pn	**Pn**	**19 46 32.8**	**+1.8**
	comp=E,0.3nm,0.3s,baz=74,slow=21,SNR=2.9						
MMAI				Lg	Lg	19 48 50.5	
	comp=E,0.5nm,0.3s,baz=86,slow=39,SNR=2.2						
MMAI				LR	LR	19 50 24.5	
	comp=E,158nm,18.9s,baz=64,slow=42 comp=E,1.1nm,0.7s						
BNN	**Bunyan**	**8.51**	**300**	Pn	**Pn**	**19 46 28.0**	**-3.4**
KBZ	**Khabaz**	**8.90**	**349**	Pn	**Pn**	**19 46 39.5**	**+2.8**
	comp=E,0.1nm,0.3s,baz=167,slow=11,SNR=2.0						
KBZ				LR	LR	19 50 34.3	
	comp=E,147nm,19.5s,baz=162,slow=42 comp=E,0.9nm,0.7s						
GHAJ	**Ghor Haditha**	**8.98**	**248**	Pn	**Pn**	**19 46 37.4**	**-0.5**
KVAR	**Kislovodsk Arr**	**9.16**	**348**	LR	LR	19 50 07.4	
	comp=E,194nm,19.3s,baz=212,slow=38						
KIV	**Kislovodsk**	**9.16**	**348**	Pn	**Pn**	**19 46 39.2**	**-1.1**
EIL	**Elat**	**10.27**	**242**	Pn	**Pn**	**19 46 56.5**	**+1.0**
	comp=E,0.2nm,0.3s,baz=52,slow=14,SNR=1.6						
EIL				Lg	Lg	19 49 50.6	
	comp=E,0.2nm,0.3s,baz=12,slow=15,SNR=2.5						
EIL				LR	LR	19 51 44.5	
	comp=E,227nm,19.1s,baz=68,slow=43 comp=E,2.9nm,0.8s						
BRTR	**Keskin Array B**	**10.42**	**300**	Pn	**Pn**	**19 46 59.5**	**+1.8**
	comp=E,0.1nm,0.3s,baz=106,slow=16,SNR=5.2						
BRTR				LR	LR	19 51 32.9	
	comp=E,69nm,19.0s,baz=112,slow=41 comp=E,0.7nm,0.6s						
RAYN	**Ar Rayn**	**11.45**	**179**	Pn	**Pn**	**19 47 10.3**	**-1.4**
RAYN	**Ar Rayn**	**11.45**	**179**	Pn	**Pn**	**19 47 09.2**	**-2.5**
SHME	**Shamm**	**12.90**	**131**	Pn	**Pn**	**19 47 31.0**	**-0.5**
BANOM	**Banah**	**13.09**	**131**	Pn	**Pn**	**19 47 33.4**	**-0.7**
MSFE	**Esma-Masafi**	**13.42**	**133**	Pn	**Pn**	**19 47 38.4**	**-0.2**
MDH	**Madha**	**13.54**	**133**	Pn	**Pn**	**19 47 39.8**	**-0.4**
UOSS	**Minazif**	**13.75**	**134**	Pn	**Pn**	**19 47 43.1**	**-0.1**
UOSS	**Minazif**	**13.75**	**134**		**Pn**	**19 47 42.1**	**-1.0**
HATD	**Hatta, Dubai**	**13.80**	**134**	Pn	**Pn**	**19 47 43.5**	**-0.4**
ASHO	**Ashiyiah**	**13.87**	**135**	Pn	**Pn**	**19 47 45.0**	**+0.2**
MZR	**Muzera**	**13.92**	**147**	Pn	**Pn**	**19 47 45.4**	**0.0**
HRA	**Herat**	**13.93**	**88**		**Pn**	**19 47 43.8**	**-1.9**
IDI	**Anoyia**	**16.73**	**277**	Pn	**Pn**	**19 48 23.7**	**+1.2**
	comp=E,12nm,1.1s,baz=103,slow=11,SNR=3.5						
IDI	**Anoyia**	**16.73**	**277**		**Pn**	**19 48 22.4**	**-0.2**
IDI				IAmb	IAmb	19 48 29.1	
	comp=Z,8.5nm,0.9s						
RDO	**Rodhopi**	**16.73**	**297**	P	**Pn**	**19 48 23.2**	**+0.7**
RDO				IAmb	IAmb	19 48 39.5	
	comp=Z,9.2nm,1.2s						
BELG	**Belogornoye**	**17.45**	**5**	P	**Pn**	**19 48 31.3**	**0.0**
	comp=Z,11nm,0.9s,baz=126,slow=1.4,SNR=7.9						
AKTO	**Aktyubinsk**	**17.97**	**27**	P	**P**	**19 48 38.6**	**+0.2**
	baz=206,slow=9.7,SNR=3.6 comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**19.56**	**328**	P	**P**	**19 48 55.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=137,slow=12,SNR=7.4 comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**19.56**	**328**	P	**P**	**19 48 55.6**	**-0.1**
AKBB	**Malin Array Si**	**19.56**	**328**	P	**P**	**19 48 54.5**	**-1.3**
AKBB				IAmb	IAmb	19 48 59.3	
	comp=Z,4.5nm,0.9s						
KIEV	**Kiev**	**19.56**	**328**	P	**P**	**19 48 54.6**	**-1.2**
BURAR	**Bucovina Array**	**19.60**	**316**	P	**P**	**19 48 54.9**	**-1.4**
BUR08	**Bucovina Ar. S**	**19.62**	**316**	P	**P**	**19 48 55.3**	**-1.3**
OBN	**Obninsk**	**21.00**	**346**	P	**P**	**19 49 10.8**	**-0.5**
	comp=Z,5.8nm,0.5s,baz=176,slow=16,SNR=3.4 comp=Z,5.8nm,0.5s						
OBN	**Obninsk**	**21.00**	**346**	P	**P**	**19 49 10.8**	**-0.5**
KKAR	**Karatay Array**	**21.10**	**60**	P	**P**	**19 49 13.0**	**+0.4**
MANEM	**Manem**	**21.37**	**76**	P	**P**	**19 49 16.1**	**+0.2**
MANEM				IAmb	IAmb	19 49 24.1	
	comp=Z,29nm,1.4s						
KOLS	**Kolonicke sedl**	**21.96**	**316**	*e*P	**P**	**19 49 25.8**	**+4.0**
ARTI	**Arti**	**23.16**	**19**	P	**P**	**19 49 35.2**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=233,slow=12,SNR=4.5						
ARTI				LR	LR	20 00 45.0	
	comp=Z,27nm,21.6s,baz=190,slow=42 comp=Z,2.5nm,0.8s						
ARTI	**Arti**	**23.16**	**19**	P	**P**	**19 49 35.0**	**+0.6**
ARTI				IAmb	IAmb	19 49 49.2	
	comp=Z,6.8nm,1.2s						
ATD	**Arta Tunnel**	**23.49**	**186**	LR	LR	19 59 28.1	
	comp=Z,4.4nm,18.7s,baz=14,slow=38						
NACGM	**Naroch**	**23.69**	**333**	*e*P	**P**	**19 49 45.6**	**+5.9**
	comp=Z,5.0nm,0.9s,baz=139						
KIRV	**Kirov**	**23.73**	**5**	LR	LR	20 00 47.2	
	comp=Z,62nm,19.3s,baz=202,slow=41						
AAK	**Ala-Archa**	**23.88**	**63**	LR	LR	20 00 39.4	
	comp=Z,44nm,18.3s,baz=236,slow=41						
KSH2	**Kashi**	**24.41**	**71**	P	**P**	**19 49 50.3**	**+3.5**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRN	**Naryn**	**24.84**	**66**	P	**P**	**19 49 51.8**	**+0.8**
NRN				IAmb	IAmb	19 49 55.0	
	comp=Z,4.6nm,0.9s						
BOOM	**Boomskoye usch**	**24.91**	**63**	P	**P**	**19 49 52.2**	**+0.9**
MORC	**Moravsky Berou**	**25.09**	**315**	P	**P**	**19 49 52.0**	**-0.7**
MORC				IAmb	IAmb	19 49 55.3	
	comp=Z,6.5nm,1.4s						
NRCA	**Norcia**	**26.14**	**297**	P	**P**	**19 50 02.4**	**+0.1**
KURBB	**Kurchatov Arra**	**28.62**	**47**	P	**P**	**19 50 26.3**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=257,slow=8.5,SNR=1.8						
KURBB				LR	LR	20 04 05.3	
	comp=Z,76nm,19.9s,baz=164,slow=41 comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**28.70**	**47**	P	**P**	**19 50 24.9**	**-0.2**
KURK				IAmb	IAmb	19 50 54.5	
	comp=Z,3.6nm,1.2s						
VSL	**Villasalto**	**28.84**	**290**	P	**P**	**19 50 23.8**	**-2.8**
FINES	**FINESS Array B**	**29.16**	**341**	P	**P**	**19 50 27.9**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=148,slow=11,SNR=3.8 comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	**30.04**	**56**	P	**P**	**19 50 38.7**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=266,slow=8.0,SNR=3.8						
MKAR				LR	LR	20 05 52.9	
	comp=Z,37nm,19.0s,baz=253,slow=43 comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**30.04**	**56**	P	**P**	**19 50 37.0**	**-0.1**
BNI	**Bardonecchia**	**30.99**	**301**	P	**P**	**19 50 44.6**	**-1.1**
HFS	**Hagfors**	**32.41**	**331**	P	**P**	**19 50 57.8**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=138,slow=5.4,SNR=5.4						
HFS				LR	LR	20 05 23.7	
	comp=Z,37nm,18.0s,baz=88,slow=39 comp=Z,1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**33.36**	**43**	LR	LR	20 05 31.8	
	comp=Z,24nm,20.5s,baz=289,slow=38						
NOA	**NORSAR Array B**	**33.93**	**331**	LR	LR	20 06 19.5	
	comp=Z,40nm,18.3s,baz=100,slow=39						
ARCES	**ARCESS Array B**	**36.27**	**348**	LR	LR	20 07 42.3	
	comp=Z,23nm,18.3s,baz=120,slow=39						
MBAR	**Mbarara**	**37.97**	**204**	LR	LR	20 10 36.8	
	comp=Z,42nm,18.1s,baz=88,slow=41						
NRIK	**Noril'sk**	**41.43**	**21**	LR	LR	20 12 32.2	
	comp=Z,42nm,18.4s,baz=206,slow=41						
TLY	**Talaya**	**44.32**	**49**	LR	LR	20 13 53.4	
	comp=Z,49nm,18.2s,baz=274,slow=40						
TORD	**Torodi Ar. Bea**	**44.95**	**252**	P	**P**	**19 52 44.2**	**+0.8**
	comp=Z,8.8nm,0.9s,baz=58,slow=11,SNR=3.5 comp=Z,0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**44.95**	**252**	P	**P**	**19 52 42.1**	**-1.3**
TORD				IAmb	IAmb	19 52 58.0	
	comp=Z,2.7nm,1.1s						
MA2	**Magadan**	**67.63**	**32**	LR	LR	20 29 00.1	
	comp=Z,29nm,19.4s,baz=304,slow=40						
PETK	**Petropavlovsk-**	**74.49**	**35**	LR	LR	20 32 52.2	
	comp=Z,35nm,18.9s,baz=333,slow=39						
ILAR	**Eielson Array**	**80.08**		P	**P**	**19 56 38.1**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=11,slow=5.4,SNR=2.8 comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**80.08**	**5**	P	**P**	**19 56 36.7**	**-0.9**
YKA	**Yellowknife Ar**	**81.49**	**351**	P	**P**	**19 56 44.0**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=28,slow=5.6,SNR=2.7 comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**124.85**	**180**	PKP	**PKiKP**	**20 03 28.8**	**+1.2**
	comp=Z,0.8nm,0.9s,baz=246,slow=9.3,SNR=1.8						
QSPA	**South Pole Qui**	**124.85**	**180**		**PKPdf**	**20 03 27.5**	**+0.3**

*KRNET **03** 19:45:13.7 ± 0.1, 39°.97N × 77°.59E, mb3.3*
*SOME **03** 19:45:13.8, 39°.97N × 77°.65E, h15km*
*NNC **03** 19:45:15.2 ± 1.0, 40°.06N × 77°.70E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=7.0km s-min=5.4km az=173.0*

ISC 03 19:45:16.4 ± 1.6, 40°.08N ± 0°.07 × 77°.62E ± 0°.04, h10km, n48, σ1§69/75, 15C-15D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.66**	**5**	⇑*i*P	**Pn**	**19 45 46.5**	**+0.6**
TARG				⇑*i*S	**Sg**	**19 46 10.6**	**+0.9**
NRN	**Naryn**	**1.83**	**318**	⇓*i*P	**Pn**	**19 45 48.7**	**+0.4**
NRN				⇓*i*S	**Sg**	**19 46 14.8**	**-0.5**
KDJ	**Kajisay**	**2.08**	**351**	⇑*i*P	**Pn**	**19 45 52.9**	**+1.4**
KDJ				⇑*i*S	**Sb**	**19 46 21.6**	**+1.3**
PRZ	**Przheval'sk**	**2.47**	**13**	⇑*e*P	**Pn**	**19 45 59.1**	**+2.1**
PRZ				⇑*e*S	**Sb**	**19 46 31.8**	**+0.1**
ANVS	**Anan'yevo**	**2.70**	**1**	⇑*i*P	**Pn**	**19 46 01.6**	**+1.5**
ANVS				⇑*i*S	**Sb**	**19 46 36.8**	**-1.5**
BOOM	**Boomskoye usch**	**2.72**	**333**	⇓*e*P	**Pn**	**19 46 01.4**	**+1.0**
BOOM				⇓*e*S	**Sb**	**19 46 36.7**	**-2.1**
TNSS	**Tian-Shan**	**3.00**	**351**	Pg	**Pb**	**19 46 10.7**	**+0.5**
	8.5nm,0.4s						
TNSS				Lg	Lg	19 46 51.7	
	9.2nm,0.6s						
TNSS	**Tian-Shan**	**3.00**	**351**	*e*P	**Pb**	**19 46 10.7**	**+0.5**
	8.5nm,0.4s						
TNSS				*e*S	**Sg**	**19 46 51.6**	**-1.1**
	9.2nm,0.6s						
SATY	**Saty**	**3.04**	**11**	Pg	**Pb**	**19 46 11.2**	**+0.6**
	21nm,0.5s						
SATY				Lg	Lg	19 46 52.5	
	34nm,0.5s						
SATY	**Saty**	**3.04**	**11**	*e*P	**Pb**	**19 46 11.2**	**+0.6**
	21nm,0.5s						
SATY				*e*S	**Sg**	**19 46 52.5**	**-1.4**
	34nm,0.5s						
IZV	**Izvestkoviy**	**3.05**	**346**	Pg	**Pb**	**19 46 11.5**	**+0.6**
	10nm,0.4s						
IZV				Lg	Lg	19 46 53.1	
	48nm,0.6s						
IZV	**Izvestkoviy**	**3.05**	**346**	*e*P	**Pb**	**19 46 11.5**	**+0.6**
	10nm,0.4s						
IZV				*e*S	**Sg**	**19 46 53.1**	**-1.3**
	48nm,0.6s						
MDOK	**Medeo**	**3.11**	**352**	Pg	**Pb**	**19 46 12.5**	**+0.5**
	22nm,0.5s						
MDOK				Lg	Lg	19 46 55.0	
	46nm,0.7s						
SFK	**Sufi-Kurgan**	**3.16**	**270**	⇓*e*P	**Pn**	**19 46 06.6**	**+0.1**
SFK				⇓*e*S	**Sn**	**19 46 45.0**	**+0.6**
KNDC	**Almaty**	**3.17**	**351**	⇓Pg	**Pb**	**19 46 12.9**	**-0.1**
	38nm,0.8s						
KNDC				⇑Lg	Lg	19 46 55.5	
	73nm,0.6s						
KOTS	**Kotyrbulak**	**3.18**	**353**	Pg	**Pb**	**19 46 15.1**	**+2.0**
	17nm,0.5s						
KOTS				Lg	Lg	19 46 59.0	
	52nm,0.6s						
KOTS	**Kotyrbulak**	**3.18**	**353**	*e*P	**Pb**	**19 46 15.1**	**+2.0**
	17nm,0.5s						
KOTS				*e*S	**Sg**	**19 46 59.0**	**+0.5**
	52nm,0.6s						
UCH	**Uchtor**	**3.18**	**313**	⇓*i*P	**Pn**	**19 46 07.8**	**+0.9**
UCH				⇓*i*S	**Sn**	**19 46 47.3**	**+2.2**
KST	**Kastek**	**3.21**	**338**	Pg	**Pb**	**19 46 15.4**	**+1.7**
	3.4nm,0.3s						
KST				Lg	Lg	19 46 59.7	
	26nm,0.7s						
KST	**Kastek**	**3.21**	**338**	*e*P	**Pb**	**19 46 15.4**	**+1.7**
	3.4nm,0.3s						
KST				*e*S	**Sg**	**19 46 59.6**	**0.0**
	26nm,0.7s						
TKM2	**Tokmak 2**	**3.22**	**332**	⇓*e*P	**Pn**	**19 46 08.6**	**+1.3**
TKM2				⇓*i*S	**Sn**	**19 46 48.6**	**+2.8**
UZB	**Uzynbulak**	**3.24**	**18**	Pg	**Pb**	**19 46 14.9**	**+0.8**
	2.7nm,0.2s						
UZB				Lg	Lg	19 46 59.0	
	14nm,0.7s						
UZB	**Uzynbulak**	**3.24**	**18**	*e*P	**Pb**	**19 46 14.9**	**+0.8**
	2.7nm,0.2s						
UZB				*e*S	**Sg**	**19 46 59.0**	**-1.6**
	14nm,0.7s						
KBK	**Karagaybulak**	**3.27**	**323**	⇓*i*P	**Pn**	**19 46 09.1**	**+1.2**
KBK				⇓*i*S	**Sn**	**19 46 49.5**	**+2.6**
SHLS	**Shalkode**	**3.37**	**24**	Pg	**Pg**	**19 46 19.1**	**-2.0**
	5.5nm,0.2s						
SHLS				Lg	Lg	19 47 05.9	
	36nm,0.6s						
SHLS	**Shalkode**	**3.37**	**24**	*e*P	**Pg**	**19 46 19.1**	**-2.0**
	5.5nm,0.2s						
SHLS				*e*S	**Sg**	**19 47 05.9**	**+1.2**
	36nm,0.6s						
KURS	**Kuram**	**3.43**	**7**	Pg	**Pb**	**19 46 18.6**	**+1.3**
	7.3nm,0.4s						
KURS				Lg	Lg	19 47 05.7	
	23nm,0.7s						
KURS	**Kuram**	**3.43**	**7**	*e*P	**Pb**	**19 46 18.6**	**+1.3**
	7.3nm,0.4s						
KURS				*e*S	**Sg**	**19 47 05.7**	**-1.0**
	23nm,0.7s						
AAK	**Ala-Archa**	**3.48**	**318**	⇓Pg	**Pb**	**19 46 19.4**	**+1.3**
	2.3nm,0.6s						
AAK				⇑Lg	Lg	19 47 07.0	
	8.2nm,0.8s						
KPKS	**Kokpek**	**3.48**	**13**	Pg	**Pb**	**19 46 19.2**	**+1.1**
	0.4nm,0.4s						
KPKS				Lg	Lg	19 47 06.5	
	19nm,0.4s						
KPKS	**Kokpek**	**3.48**	**13**	*e*P	**Pb**	**19 46 19.2**	**+1.1**
	0.4nm,0.4s						

KU6 smax smax 20 08 15.1
comp=Z,0.6nm,0.2s
RAJF Raja-Jooseppi 2.27 295 SN Sn 20 08 14.9 -1.5
MSF Maaselka 2.56 231 PG Pb 20 07 54.0 -1.6
MSF SG Sb 20 08 28.2 +0.6
KU2 Taivalkoski 2.94 233 SG Sb 20 08 40.5 +1.9
KEV Kevo 3.32 314 SG Sg 20 08 52.9 -2.5
ARCES ARCESS Array B 3.64 306 P Pn 20 08 04.5 -2.0
ARCES S Sn 20 08 46.5 -3.6
HEF Hetta 3.93 287 PB Pn 20 08 14.6 +4.1
TOF Tornio 4.07 253 PB Pb 20 08 19.4 -1.9

HEL 03 20:07:21.1±0.7, 67°14N×20°67E, h0km, ML1.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.84**	**134**	PG	Pg	20 07 36.4	-0.9
ERTU				SB	Sb	20 07 50.5	0.0
SALU	**Saltoluokta**	**0.87**	**287**	*e*P	Pg	20 07 37.9	+0.1
LANU	**Lannavaara**	**1.04**	**29**	*e*P	Pg	20 07 39.4	-1.6
LANU	**Lannavaara**	**1.04**	**29**	PG	Pg	20 07 39.8	-1.2
LANU				SB	Sb	20 07 55.6	-0.6
KLF	**Kolari** baz=267	**1.29**	**84**	PG	Pg	20 07 44.2	-1.6
KLF				smax	smax	20 07 60.0	
	comp=Z,0.9nm,0.2s						
KLF				SN	Sn	20 08 04.0	-0.2
HEF	**Hetta**	**1.71**	**40**	PG	Pn	20 07 52.0	-0.1
HEF				smax	smax	20 08 12.2	
	comp=Z,1.5nm,0.2s						
TOF	**Tornio**	**1.81**	**124**	PG	Pb	20 07 54.2	-0.8
TOF				smax	smax	20 08 15.0	
	comp=Z,1.3nm,0.2s						
KTK1	**Kautokeino**	**2.11**	**26**	PG	Pn	20 07 58.9	+1.3
KTK1				SG	Sb	20 08 26.7	-0.2
RNF	**Rovaniemi**	**2.18**	**102**	PN	Pn	20 07 59.4	+0.9
RNF	**Rovaniemi**	**2.18**	**102**	PG	Pn	20 07 59.4	+0.9
RNF				SG	Sb	20 08 29.4	+0.6
BURU	**Burvik**	**2.59**	**173**	PG	Pb	20 08 07.1	-1.1
RANF	**Ranua**	**2.69**	**112**	SN	Sn	20 08 37.4	-1.5
ARA0	**ARCESS Array S**	**3.00**	**35**	PB	Pn	20 08 10.8	+0.9
ARA0				SG	Sb	20 08 52.9	+0.4
RAJF	**Raja-Jooseppi**	**3.19**	**62**	PN	Pn	20 08 13.6	+1.1
OLKF	**Oulanka, Finla**	**3.56**	**99**	PN	Pn	20 08 18.1	+0.6
KU6	**Riekki**	**3.85**	**103**	PN	Pn	20 08 22.9	+1.4

*IDC **03** 20:13:02.7±1.4, 36°51N×51°99E, h0km, mb3.6/10, mbtmp3.7/15, ML3.4/5, MS3.1/11, Error ellipse: s-maj=29.0km s-min=13.7km az=14.0*
*TEH **03** 20:13:02.9, 36°45N×52°15E, h8km±25km, ML3.8, Presumed earthquake*
*DRS **03** 20:13:09.9, 36°33N×50°96E, h9km*

ISC 03 20:13:03.1±0.5, 36°47N±0°04×52°13E±0°03, h7km, n59, σ1§52/62, mb3.6/9, MS3.0/7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPRN	**Peran**	**0.28**	**143**	Pg	**Pg**	**20 13 07.6**	**-1.1**
MZPU	**Pul - Mazandar**	**0.45**	**266**	Pg	**Pg**	**20 13 12.6**	**+0.7**
IALA	**Alasht**	**0.67**	**125**	Pg	**Pg**	**20 13 15.4**	**-0.7**
IALA				Sg	**Sg**	**20 13 25.3**	**+0.4**
IDMV	**Damavand**	**0.89**	**185**	Pg	**Pg**	**20 13 19.7**	**-0.6**
TEH	**Tehran**	**0.95**	**220**	Pg	**Pg**	**20 13 21.1**	**-0.3**
IFIR	**Firoozkooh**	**0.97**	**148**	Pg	**Pg**	**20 13 20.6**	**-1.2**
IHSB	**Hasanabad**	**1.24**	**214**	Pg	**Pg**	**20 13 26.5**	**-0.4**
IHSB				Sg	**Sg**	**20 13 43.3**	**+0.3**
IGLO	**Ghaloghah**	**1.37**	**88**	Pg	**Pn**	**20 13 29.3**	**0.0**
IVRN	**Varamin**	**1.51**	**193**	Pg	**Pn**	**20 13 31.1**	**+0.5**
IGZV	**Ghazvin**	**1.54**	**267**	Pg	**Pg**	**20 13 32.8**	**+0.1**
GIDE	**GILAN DEYLAMAN**	**1.84**	**285**	Pn	**Pb**	**20 13 36.9**	**-0.3**
ISFB	**Sefidab**	**2.12**	**177**	Pn	**Pb**	**20 13 40.8**	**-1.0**
QABG	**Abgarm-Qazvin**	**2.20**	**251**	Pn	**Pb**	**20 13 42.7**	**-0.6**
KRSH	**Karshahi**	**2.50**	**180**	Pn	**Pn**	**20 13 46.1**	**+1.8**
CSN1	**Caspian**	**2.66**	**295**	Pn	**Pn**	**20 13 47.7**	**+1.3**
IMND	**Minoodasht**	**2.75**	**72**	Pn	**Pn**	**20 13 48.6**	**+1.0**
ZNJK	**Zanjan**	**2.78**	**275**	Pn	**Pn**	**20 13 50.2**	**+2.0**
HGHA	**Hamedan- Ghaye**	**2.83**	**251**	Pn	**Pn**	**20 13 50.5**	**+1.6**
HAGD	**Aghdareh**	**2.94**	**237**	Pn	**Pn**	**20 13 52.3**	**+1.9**
SBZV	**Sabzevar**	**4.42**	**89**	Pn	**Pn**	**20 14 12.2**	**+1.4**
IEMG	**Emamgholi**	**5.31**	**78**	Pn	**Pn**	**20 14 25.1**	**+2.0**
KSMR	**Kasumkent** 22nm,0.4s	**6.00**	**330**	*e*Pn	**Pn**	**20 14 33.7**	**+1.3**
KSMR				*e*Sn	**Sn**	**20 15 40.3**	**-0.9**
	320nm,0.4s						
AKT	**Akhty** 14nm,0.4s	**6.06**	**327**	*e*Pn	**Pn**	**20 14 34.0**	**+0.8**
AKT				*e*Sn	**Sn**	**20 15 41.3**	**-1.6**
	78nm,0.4s						
IMYA	**Miami**	**6.43**	**89**	Pn	**Pn**	**20 14 40.1**	**+1.7**
ITEG	**Tejag**	**6.51**	**121**	Pn	**Pn**	**20 14 41.6**	**+2.0**
URKR	**Urkarakh** 14nm,0.4s	**6.67**	**330**	*e*Pn	**Pn**	**20 14 41.9**	**+0.3**
URKR				*e*Sn	**Sn**	**20 15 55.7**	**-2.2**
	41nm,0.5s						
KMKR	**Kumukh** 28nm,0.4s	**6.87**	**327**	*e*Pn	**Pn**	**20 14 44.7**	**+0.3**
GNI	**Garni**	**6.87**	**305**	Pn	**Pn**	**20 14 45.3**	**+0.9**
	0.4nm,0.3s,baz=214,slow=18,SNR=1.2						
GNI				Sn	**Sn**	**20 15 58.7**	**-4.3**
	0.6nm,0.3s,baz=314,slow=20,SNR=1.4						
	2.6nm,0.5s						
GNBR	**Gunib** 20nm,0.6s	**7.13**	**328**	*e*Pn	**Pn**	**20 14 48.9**	**+0.9**
TLTR	**Tlyarata** 8.0nm,0.6s	**7.19**	**323**	*e*Pn	**Pn**	**20 14 47.8**	**-1.0**
DGRG	**David-gareji**	**7.24**	**315**	P	**Pn**	**20 14 51.4**	**+2.0**
ARKR	**Arakani** 15nm,0.6s	**7.30**	**329**	*e*Pn	**Pn**	**20 14 51.0**	**+0.9**
XNZR	**Khunzakh** 17nm,0.5s	**7.37**	**327**	*e*Pn	**Pn**	**20 14 51.6**	**+0.3**
UNCR	**Uncukul** 11nm,0.4s	**7.47**	**328**	*e*Pn	**Pn**	**20 14 52.8**	**+0.2**
KRNR	**Karanay** 13nm,0.5s	**7.52**	**329**	*e*Pn	**Pn**	**20 14 53.2**	**0.0**
DBC	**Dubki** 12nm,0.6s	**7.71**	**330**	*e*Pn	**Pn**	**20 14 56.4**	**+0.5**
DVE	**Vedeno** 11nm,0.4s	**7.96**	**326**	*e*Pn	**Pn**	**20 14 59.8**	**+0.6**
CHRG	**Chargali**	**8.08**	**319**	P	**Pn**	**20 15 01.5**	**+0.5**
CHRG				S	**Sn**	**20 15 29.7**	**-2.9**
SHTL	**Shatili**	**8.19**	**321**	P	**Pn**	**20 15 04.9**	**+2.4**
KBZ	**Khabaz** 0.1nm,0.3s,baz=121,slow=3.3,SNR=1.7	**10.12**	**319**	Pn	**Pn**	**20 15 30.5**	**+1.7**
KBZ				Sn	**Sn**	**20 17 20.1**	**-2.5**
	0.2nm,0.3s,baz=109,slow=10,SNR=1.5						
	0.8nm,0.7s						
KVAR	**Kislovodsk Arr** baz=112,slow=16	**10.38**	**319**	Pn	**Pn**	**20 15 34.1**	**+1.6**
KVAR				Sn	**Sn**	**20 17 25.4**	**-3.7**
	baz=107,slow=5.1						
	1.2nm,0.6s						
ASF	**Jabal al Asfar**	**13.30**	**256**	LR	LR	20 21 56.6	
	comp=Z,54nm,19.6s,baz=28,slow=40						
AKTO	**Aktyubinsk**	**14.59**	**15**	Pn	**Pn**	**20 16 27.0**	**-2.9**
	0.6nm,0.3s,baz=210,slow=13,SNR=8.8						
AKTO				LR	LR	20 23 56.3	
	comp=Z,121nm,18.3s,baz=82,slow=45						
	2.5nm,0.5s						
EIL	**Elat**	**15.90**	**250**	LR	LR	20 24 03.2	
	comp=Z,116nm,18.2s,baz=69,slow=42						
AAK	**Ala-Archa**	**18.29**	**63**	P	**Pn**	**20 17 17.1**	**-0.4**
	0.3nm,0.3s,baz=288,slow=13,SNR=1.4						
AAK				LR	LR	20 24 37.6	
	comp=Z,37nm,20.7s,baz=220,slow=38						
	0.7nm,0.3s						
ARTI	**Arti**	**20.37**	**10**	LR	LR	20 27 34.3	
	comp=Z,83nm,19.7s,baz=172,slow=43						
BVAR	**Borovoye Array**	**20.93**	**32**	P	**P**	**20 17 47.2**	**+1.0**
	2.5nm,0.6s,baz=220,slow=9.0,SNR=14						
	2.5nm,0.6s						
AKASG	**Malin Array Be**	**21.73**	**318**	P	**P**	**20 17 54.5**	**-0.3**
	0.6nm,0.4s,baz=122,slow=10,SNR=4.8						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**23.64**	**45**	P	**P**	**20 18 17.1**	**+2.4**
	1.0nm,0.7s,baz=247,slow=10,SNR=11						
KURBB				LR	LR	20 28 55.1	
	comp=Z,54nm,19.8s,baz=188,slow=40						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**24.65**	**56**	P	**P**	**20 18 26.3**	**+2.0**
	1.5nm,0.8s,baz=249,slow=6.4,SNR=12						
	1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**28.56**	**42**	P	**P**	**20 19 01.2**	**+1.8**
	0.5nm,0.5s,baz=248,slow=7.6,SNR=1.9						
ZALV				LR	LR	20 31 38.2	
	comp=Z,25nm,18.6s,baz=191,slow=39						
	0.5nm,0.5s						
VRAC	**Vranov**	**28.74**	**308**	LR	LR	20 33 29.4	
	comp=Z,28nm,20.3s,baz=62,slow=43						
GERES	**GERESS Array B**	**30.52**	**306**	P	**P**	**20 19 17.2**	**+0.3**
	0.3nm,0.7s,baz=110,slow=12,SNR=2.4						
	0.3nm,0.7s						
HFS	**Hagfors**	**34.07**	**326**	P	**P**	**20 19 48.1**	**+0.3**
	1.7nm,0.8s,baz=116,slow=10,SNR=1.9						
HFS				LR	LR	20 36 54.0	
	comp=Z,22nm,18.2s,baz=3.0,slow=42						
	1.7nm,0.8s						
NOA	**NORSAR Array B**	**35.56**	**327**	LR	LR	20 37 27.5	
	comp=Z,22nm,18.2s,baz=90,slow=41						
TLY	**Talaya**	**39.16**	**51**	LR	LR	20 38 10.6	
	comp=Z,40nm,19.5s,baz=270,slow=38						
ESDC	**Sonseca Array**	**43.66**	**292**	P	**P**	**20 21 08.9**	**+0.4**
	2.2nm,0.7s,baz=67,slow=8.0,SNR=21						
	2.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.78**	**101**	P	**P**	**20 21 18.1**	**+0.5**
	0.8nm,0.8s,baz=299,slow=8.4,SNR=5.5						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**77.99**	**8**	P	**P**	**20 25 00.9**	**-0.8**
	0.4nm,0.8s,baz=328,slow=4.8,SNR=4.2						
	0.4nm,0.8s						

*UPA **03** 20:49:43.6±3.0, 17°51N×66°21W, h24km±658km, MW4.9, Presumed earthquake*
*MOS **03** 20:49:44.2±1.3, 17°64N×67°30W, h10km, mb5.4/54, MS4.8/29, Error ellipse: s-maj=8.8km s-min=5.7km az=73.1*
*NEIC **03** 20:49:44, 17°92N×67°00W, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.71; Mθθ-1.98; Mφφ2.70; Mrθ1.58; Mθφ7.47; Mφr-1.85; Fault plane solution: M0 8.22000×10¹⁶ NP1:φs353.00000°, δ80.00000°, λ-165.00000°. NP2:φs260.00000°, δ75.00000°, λ-10.00000°. Principal axes: T 8.2219, Plg4.0000°, Azm126.0000°; N -0.0024, Plg72.0000°, Azm24.0000°; P -8.2195, Plg18.0000°, Azm217.0000°;*
*NEIC **03** 20:49:45.0±1.8, 17°80N±0°03×66°92W±0°03, h10km±1km, mb5.2/316, ML5.4/47, Ms_20 5.0/543, Mwb5.3/14, Mww5.5/45, Mwr5.2/17(SLM) Error ellipse: s-maj=6.2km s-min=4.3km az=53.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-0.14; Mθθ0.07; Mφφ0.07; Mrθ0.88; Mθφ9.89; Mφr0.52; Fault plane solution: M0 9.95000×10¹⁶ NP1:φs90.11000°, δ87.14000°, λ4.99000°. NP2:φs359.86000°, δ85.01000°, λ177.13000°. Principal axes: T 10.0591, Plg6.0000°, Azm315.0000°; N -0.2270, Plg84.0000°, Azm120.0000°; P -9.8322, Plg2.0000°, Azm225.0000°;*
*IDC **03** 20:49:45.1±0.4, 17°89N×67°01W, h0km, mb4.8/33, mbtmp4.8/37, ML3.7/4, MS4.7/72 Error ellipse: s-maj=10.8km s-min=7.5km az=173.0*
*RSPR **03** 20:49:45.1, 17°90N×67°01W, h4km, MD3.4/21*
*NEIC **03** 20:49:46, 17°91N×66°97W, h10km*
*BJI **03** 20:49:46.0, 17°90N×67°00W, h5km, mB5.7/3, Ms5.5/25, Ms7 5.1/23*
*GFZ **03** 20:49:47.7, 17°81N×66°99W, h10km, Mw5.3/82, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-4.13; Mθθ0.38; Mφφ3.75; Mrθ-0.20; Mθφ9.06; Mφr-0.46; Fault plane solution: M0 9.90083×10¹⁶ NP1: φs354.77659°, δ89.36436°, λ-176.81392°. NP2: φs264.74121°, δ86.81411°, λ-0.63662°. Principal axes: T 11.2991, Plg1.8024°, Azm129.7164°; N -4.1413, Plg86.7512°, Azm6.0476°; P -7.1578, Plg2.7021°, Azm219.8015°;*
*GFZ **03** 20:49:47.6±0.1, 18°N±2°×6°7W±°, h10km, M5.2/92, mb5.1/92*
*OSPL **03** 20:49:48.1±2.6, 17°90N×66°95W, h0km±62km, ML5.2, Presumed earthquake*
*CATAC **03** 20:49:48.5±0.7, 18°N±7°×6°7W±°, h19km±4km, M5.5/8, mb5.5/7, mB5.8/7, MLv5.8/8, Mw(mB)5.3/7, MwMwp5.2/5, Mwp5.4/5, Error ellipse: s-maj=16.6km s-min=2.7km az=14.2, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-3.14; Mθθ0.32; Mφφ2.82; Mrθ2.81; Mθφ6.80; Mφr-3.86; Fault plane solution: M0 8.82931×10¹⁶ NP1: φs1.39954°, δ68.89081°, λ-146.12681°. NP2:φs257.80829°, δ58.67072°, λ-24.93702°. Principal axes: T 8.6142, Plg6.4884°, Azm127.6188°; N 0.4155, Plg50.7650°, Azm29.6130°; P -9.0297, Plg38.4862°, Azm222.8066°; confirmed*
*GCMT **03** 20:49:49.0±0.1, 18°04N±0°01×66°99W±0°01, h12km, MW5.3/149, Moment Tensor Solution. s92,c138; s149,c283; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.37±.01; Mθθ-0.01±.02; Mφφ0.38±.01; Mrθ-0.06±.03; Mθφ1.00±.01; Mφr-0.19±.03; Best double couple: M0 1.03300×10¹⁷ NP1:φs265.00000°, δ79.00000°, λ-2.00000°. NP2:φs355.00000°, δ88.00000°, λ-169.00000°. Principal axes: T 1.2250, Plg7.0000°, Azm129.0000°; N -0.3820, Plg79.0000°, Azm4.0000°; P -0.8420, Plg9.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*INMG **03** 20:49:49.0±2.3, 17°86N×66°91W, h10km, mb5.0, Ms4.9, MW5.2, #DIST_RANGE: DISTANT*
*BGR **03** 20:49:54.4, 17°46N×66°08W, h33km, mb5.4, mB_BB5.7, Ms4.9*
*SSNC **03** 20:50:48.2±3.0, 20°59N×71°44W, h5km±154km, mb4.8, Presumed earthquake*

ISC 03 20:49:45.0±0.6, 17.79N±0°03×67°01W±0°02, h6km±3km, n1504, σ1§86/1222, mb5.2/309, MS5.0/363, 43C-41D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.18**	**348**		**Pg**	**20 49 47.0**	**-1.6**
MLPR				IAML		20 49 51.8	
	922µm,0.7s						
MLPR	**Magueyes Islan**	**0.18**	**348**	*e*P	**Pg**	**20 49 47.1**	**-1.6**
GBPR	**Guanica, Bosqu**	**0.22**	**33**		**Pg**	**20 49 47.8**	**-1.6**
GBPR					**Sg**	**20 49 56.3**	**+4.0**
GBPR	**Guanica, Bosqu**	**0.22**	**33**	*e*P	**Pg**	**20 49 47.8**	**-1.6**
GBPR				*e*S	**Sg**	**20 49 56.3**	**+4.0**
CRPR	**Cabo Rojo, PR**	**0.24**	**335**		**Pg**	**20 49 48.2**	**-1.5**
CRPR				IAML		20 49 52.6	
	791µm,1.2s						
CRPR				IAML		20 49 53.0	
	760µm,1.3s						
CRPR	**Cabo Rojo, PR**	**0.24**	**335**	*e*P	**Pg**	**20 49 48.5**	**-1.2**
LSP	**Las Mesas**	**0.39**	**349**		**Pg**	**20 49 50.9**	**-1.8**
LSP					**Sg**	**20 49 58.8**	**+1.0**
LSP	**Las Mesas**	**0.39**	**349**	*e*P	**Pg**	**20 49 50.9**	**-1.8**
LSP				*e*S	**Sg**	**20 49 58.8**	**+1.0**
PRSN	**Puerto Rico Se**	**0.44**	**343**		**Pg**	**20 49 51.7**	**-1.9**
PRSN					**Sg**	**20 49 58.2**	**-1.2**
PRSN				IAML		20 50 00.6	
	368µm,0.7s						
PRSN	**Puerto Rico Se**	**0.44**	**343**	*e*P	**Pg**	**20 49 51.9**	**-1.8**
OBIP	**Obispado Ponce**	**0.46**	**57**		**Pg**	**20 49 52.7**	**-1.1**
OBIP					**Sg**	**20 49 58.5**	**-1.3**
OBIP	**Obispado Ponce**	**0.46**	**57**	*i* P	**Pg**	**20 49 53.9**	**+0.1**
OBIP				*e*S	**Sg**	**20 50 00.2**	**+0.3**
OBIP				IAML		20 50 01.2	
	comp=Z,401µm,0.6s						
OBIP	**Obispado Ponce**	**0.46**	**57**	*e*P	**Pg**	**20 49 54.0**	**+0.1**
OBIP				*e*S	**Sg**	**20 49 59.2**	**-0.6**
CELP	**Cerrillos**	**0.49**	**55**		**Pg**	**20 49 53.4**	**-1.2**
CELP					**Sg**	**20 49 58.2**	**-2.8**
CELP	**Cerrillos**	**0.49**	**55**	*e*P	**Pg**	**20 49 53.9**	**-0.7**
UUPR	**Utuado, UPR, P**	**0.53**	**31**		**Pg**	**20 49 53.1**	**-2.3**
UUPR					**Sg**	**20 50 00.6**	**-1.7**
UUPR	**Utuado, UPR, P**	**0.53**	**31**	*e*P	**Pg**	**20 49 54.8**	**-0.5**
AOPR	**Arecibo Observ**	**0.60**	**23**		**Pg**	**20 49 54.2**	**-2.5**
AOPR					**Sg**	**20 50 02.0**	**-2.5**
AOPR				IAML		20 50 09.4	
	comp=Z,210µm,1.3s						
AOPR	**Arecibo Observ**	**0.60**	**23**	*e*P	**Pg**	**20 49 54.7**	**-1.9**
AGPR	**Aguadilla, PR**	**0.68**	**352**		**Pg**	**20 49 55.8**	**-2.4**
AGPR					**Sg**	**20 50 05.1**	**-1.9**
AGPR				IAML		20 50 05.8	
	comp=Z,224µm,0.6s						
AGPR				IAML		20 50 16.1	
	comp=Z,182µm,1.8s						
AGPR	**Aguadilla, PR**	**0.68**	**352**	*e*P	**Pg**	**20 49 56.5**	**-1.6**
IDE	**Isla Desecheo**	**0.74**	**323**		**Pg**	**20 49 58.0**	**-1.3**
IDE					**Sg**	**20 50 09.2**	**+0.3**
IDE	**Isla Desecheo**	**0.74**	**323**	*e*P	**Pg**	**20 49 58.0**	**-1.3**
IDE				*e*S	**Sg**	**20 50 09.2**	**+0.3**
ECPR	**Experimental S**	**0.81**	**49**		**Pg**	**20 49 58.2**	**-2.3**
ECPR					**Sg**	**20 50 09.5**	**-1.5**
ECPR				IAML		20 50 10.6	
	comp=Z,95µm,0.3s						
ECPR				IAML		20 50 10.9	
	comp=Z,147µm,0.3s						
ECPR	**Experimental S**	**0.81**	**49**	*e*P	**Pg**	**20 49 59.6**	**-0.9**
EMPR	**Esperanza - Ma**	**0.82**	**33**	Pg	**Pg**	**20 49 59.1**	**-1.6**
EMPR					**Pg**	**20 49 59.8**	**-1.0**
EMPR					**Sg**	**20 50 10.2**	**-1.2**
EMPR	**Esperanza - Ma**	**0.82**	**33**	*e*P	**Pg**	**20 49 59.8**	**-1.0**
EMPR				*e*S	**Sg**	**20 50 10.2**	**-1.2**
IGPR	**InterUniversit**	**0.87**	**78**		**Pg**	**20 50 02.0**	**+0.1**
IGPR					**Sb**	**20 50 15.1**	**+0.5**
IGPR	**InterUniversit**	**0.87**	**78**	*e*P	**Pg**	**20 50 02.0**	**+0.1**
SJG	**San Juan**	**0.88**	**68**	Pg	**Pg**	**20 50 00.2**	**-1.7**
	comp=Z,2µm,0.3s,baz=256,slow=14,SNR=381						
SJG				Lg	Lg	20 50 12.6	
	comp=Z,4µm,0.3s,baz=283,slow=4.8,SNR=17						
SJG	**San Juan**	**0.88**	**68**		**Pg**	**20 50 00.1**	**-1.7**
SJG	**San Juan**	**0.88**	**68**	P	**Pg**	**20 50 00.4**	**-1.5**
SJG				S	**Sg**	**20 50 13.4**	**+0.2**
SJG	**San Juan**	**0.88**	**68**	P	**Pg**	**20 50 00.1**	**-1.7**
SJG	**San Juan**	**0.88**	**68**	*e*P	**Pg**	**20 50 00.6**	**-1.3**
SJG				x	**Sg**	**20 50 12.7**	**-0.6**
SJG	**San Juan**	**0.88**	**68**	*e*	Pn	20 50 12.7	+8.8
SJG	**San Juan**	**0.88**	**68**	*i* P	**Pg**	**20 50 01.0**	**-0.8**
SJG				*e*S	**Sg**	**20 50 13.0**	**-0.2**
SJG				IAML		20 50 18.6	
	comp=Z,334µm,0.7s						
SJG	**San Juan**	**0.88**	**68**	*e*P	**Pg**	**20 50 00.5**	**-1.3**
SJG	**San Juan**	**0.88**	**68**	P	**Pg**	**20 50 00.2**	**-1.7**
PDPR	**Patillas Dam,**	**0.96**	**76**		**Pg**	**20 50 02.0**	**-1.6**
PDPR					**Sg**	**20 50 15.6**	**-0.5**
PDPR	**Patillas Dam,**	**0.96**	**76**	*e*P	**Pg**	**20 50 03.0**	**-0.6**
HUMP	**Col San Antoni**	**1.16**	**72**		**Pg**	**20 50 04.6**	**-2.6**
HUMP					**Sg**	**20 50 21.1**	**-1.1**
HUMP	**Col San Antoni**	**1.16**	**72**	*e*P	**Pg**	**20 50 07.1**	**-0.1**
PCDR	**Punta Cana, DR**	**1.49**	**299**		**Pn**	**20 50 10.5**	**-1.9**
PCDR					**Sg**	**20 50 33.0**	**-0.1**
PCDR				IAML		20 50 41.3	
	comp=N,37µm,1.4s						
PCDR	**Punta Cana, DR**	**1.49**	**299**	*i* P	**Pb**	**20 50 13.6**	**+0.4**
PCDR				IAML		20 50 39.1	
	comp=Z,10µm,1.8s						
PCDR	**Punta Cana, DR**	**1.49**	**299**	*e*P	**Pn**	**20 50 11.9**	**-0.5**
PCDR				*e*S	**Sg**	**20 50 33.0**	**-0.1**
DR12	**Loma Pena Alta**	**2.46**	**294**	Pn	**Pn**	**20 50 26.4**	**+0.5**
SDD	**Santo Domingo**	**2.84**	**284**	Pn	**Pn**	**20 50 32.1**	**+1.1**
SDD				IAML		20 51 25.0	
	comp=E,13µm,1.6s						
SDD				IAML		20 51 28.8	
	comp=N,14µm,2.3s						
SDD	**Santo Domingo**	**2.84**	**284**	P	**Pb**	**20 50 34.4**	**-1.8**
BANI	**BANI**	**3.24**	**281**		**Pn**	**20 50 36.5**	**-0.2**
SABA	**Saba**	**3.59**	**92**		**Pn**	**20 50 40.5**	**-0.8**
SABA				IAML		20 51 27.7	
	comp=N,5µm,0.8s						
SABA	**Saba**	**3.59**	**92**	P	**Pn**	**20 50 41.5**	**+0.1**
SABA				S	**Sn**	**20 51 25.3**	**+1.2**
SABA	**Saba**	**3.59**	**92**	*e*P	**Pn**	**20 50 40.8**	**-0.5**
SABA				x	**Sn**	**20 51 24.9**	**+0.7**
SABA	**Saba**	**3.59**	**92**	P	**Pn**	**20 50 41.4**	**+0.1**
SMRT	**St. Maarten**	**3.75**	**85**		**Pn**	**20 50 42.6**	**-1.0**
SMRT	**St. Maarten**	**3.75**	**85**	P	**Pn**	**20 50 42.7**	**-0.8**
SEUS	**St. Eustatius**	**3.85**	**94**	Pn	**Pn**	**20 50 43.2**	**-1.6**
SEUS	**St. Eustatius**	**3.85**	**94**	P	**Pn**	**20 50 46.2**	**+1.3**
SEUS				S	**Sn**	**20 51 31.9**	**+1.5**
SEUS	**St. Eustatius**	**3.85**	**94**	*e*P	**Pn**	**20 50 43.6**	**-1.3**
SEUS				x	**Sn**	**20 51 32.9**	**+2.5**
SEUS	**St. Eustatius**	**3.85**	**94**	P	**Pn**	**20 50 44.9**	**+0.1**
SC01	**Santiago de lo**	**3.89**	**295**	Pn	**Pn**	**20 50 46.4**	**+1.0**
PODR	**Polo**	**4.09**	**276**	*i* P	**Pn**	**20 50 51.0**	**+2.7**
PODR				IAML		20 52 13.6	
	comp=Z,9µm,1.2s						
SDDR	**Presa de Saban**	**4.24**	**287**	Pn	**Pn**	**20 50 51.5**	**+1.3**
SDDR	**Presa de Saban**	**4.24**	**287**	P	**Pn**	**20 50 54.9**	**+4.7**
SDDR	**Presa de Saban**	**4.24**	**287**	P	**Pn**	**20 50 53.9**	**+3.7**
SDDR	**Presa de Saban**	**4.24**	**287**	*e*P	**Pn**	**20 50 51.6**	**+1.4**
SDDR				*e*S	**Sn**	**20 51 45.4**	**+5.4**
SDDR				IVMs_BB	IVMs_BB	20 52 06.0	
	comp=Z,53µm,4.1s						
SDDR				IVMs_BB	IVMs_BB	20 52 10.2	
	comp=Z,91µm,4.7s						
SDDR	**Presa de Saban**	**4.24**	**287**	P	**Pn**	**20 50 54.3**	**+4.1**
LODU1	**El Espartillar**	**4.29**	**278**	*i* P	**Pn**	**20 50 54.6**	**+3.7**
LODU1				IAML		20 51 55.4	
	comp=Z,1µm,1.9s						
LOBH	**Bahia de las A**	**4.41**	**272**	*i* P	**Pn**	**20 50 54.4**	**+1.8**
LOBH				IAML		20 51 54.6	
	comp=Z,816nm,1.7s						
LOPP1	**Punta Rusia, P**	**4.47**	**298**	*i* P	**Pn**	**20 50 57.1**	**+3.7**
LOPP1				IAML		20 52 08.8	
	comp=Z,4µm,1.3s						
ANWB	**Willy Bob**	**4.98**	**91**		**Pn**	**20 50 59.0**	**-1.4**
ANWB	**Willy Bob**	**4.98**	**91**	P	**Pn**	**20 51 00.1**	**-0.3**
ANWB				S	**Sn**	**20 51 57.7**	**-0.5**
ANWB	**Willy Bob**	**4.98**	**91**	P	**Pn**	**20 50 59.2**	**-1.2**
	comp=Z,12µ

GRGR Grenville 7.64 137 *e*P Pn 20 51 27.2 -10
GRGR x **Sg** **20 53 46.7 -3.7**
URIC Uribia, Colomb 7.74 219 P **Pn** **20 51 38.8 +0.5**
comp=E,6µmcomp=E,1µmcomp=E,53nm,0.8s
URIC S **Sn** **20 53 01.7 -4.7**
comp=E,6µmcomp=E,1µmcomp=E,53nm,0.8s
QMBU Quimbuelo 7.76 289 P **Pn** **20 51 41.4 +2.7**
QMBU S **Sn** **20 53 08.2 +1.2**
QMBU Quimbuelo 7.76 289 *e*P **Pn** **20 51 35.9 -2.8**
GTBY Guantanamo Bay 7.96 287 Pn **Pn** **20 51 39.9 -1.5**
GTBY Guantanamo Bay 7.96 287 P **Pn** **20 51 44.6 +3.2**
GTBY S **Sn** **20 53 14.6 +2.8**
GTBY Guantanamo Bay 7.96 287 P **Pn** **20 51 40.5 -0.9**
comp=E,7µmcomp=E,3µmcomp=E,183nm,1.5s
GTBY Guantanamo Bay 7.96 287 *i*P **Pn** **20 51 42.3 +0.9**
GTBY Guantanamo Bay 7.96 287 *e*P **Pn** **20 51 40.3 -1.1**
GTBY Guantanamo Bay 7.96 287 P **Pn** **20 51 44.8 +3.5**
NMDO Nuevo Mundo 8.03 291 Pn **Pn** **20 51 39.5 -2.8**
NMDO Nuevo Mundo 8.03 291 P **Pn** **20 51 45.1 +2.8**
NMDO S **Sn** **20 53 13.4 0.0**
NMDO Nuevo Mundo 8.03 291 *e*P **Pn** **20 51 39.6 -2.6**
RCC Rio Carpintero 8.51 286 *e*P **Pn** **20 51 47.7 -1.2**
BBGH Gun Hill 8.54 122 Pn **Pn** **20 51 47.5 -1.8**
BBGH Gun Hill 8.54 122 P **Pn** **20 51 50.6 +1.3**
comp=E,15µmcomp=E,811nm,1.2s
MARVS Santiago de Cu 8.70 286 *e*Pn **Pn** **20 51 50.7 -0.8**
HLGC Holguin 9.09 291 *e*P **Pn** **20 51 56.3 -0.5**
CHIV Chivirico 9.17 285 Pn **Pn** **20 51 57.5 -0.5**
CHIV Chivirico 9.17 285 *i*P **Pn** **20 52 00.6 +2.6**
YAR Yar 9.21 288 *e*P **Pn** **20 51 58.6 +0.1**
STH Stony Hill 9.34 273 *i*P **Pn** **20 51 59.5 -0.8**
STH *i*P 20 51 59.7
BNJ Bonny Gate 9.47 275 *i*P **Pn** **20 52 01.7 -0.5**
SDV Santo Domingo 9.53 202 Pn **Pn** **20 52 04.5 +1.5**
comp=E,2.9nm,0.3s,baz=70,slow=11,SNR=15
SDV LR LR 20 56 00.3
comp=E,5µm,21.1s,baz=32,slow=39
comp=E,12nm,0.3s
SDV Santo Domingo 9.53 202 Pn **Pn** **20 52 02.7 -0.4**
SDV Santo Domingo 9.53 202 *e*P **Pn** **20 52 06.4 +3.3**
SMRC Santa Marta, M 9.60 228 P **Pn** **20 52 01.2 -2.7**
comp=E,4µmcomp=E,24nm,1.0s
SMRC S **Sn** **20 53 46.1 -6.2**
comp=E,4µmcomp=E,24nm,1.0s
PCJ Portland Cotta 9.67 271 *i*P **Pn** **20 52 05.8 +0.9**
CVJ Coleyville 10.03 274 *i*P **Pn** **20 52 11.3 +1.5**
MTDJ Mount Denham 10.03 274 Pn **Pn** **20 52 09.3 -0.6**
MTDJ Mount Denham 10.03 274 P **Pn** **20 52 10.1 +0.3**
comp=E,3µmcomp=E,3µmcomp=E,134nm,1.2s
MTDJ Mount Denham 10.03 274 *e*Pn **Pn** **20 52 11.0 +1.2**
MTDJ Mount Denham 10.03 274 P **Pn** **20 52 11.9 +2.1**
CCCC Cccc 10.70 290 *e*P Pn 20 52 12.2 -6.7
SJCC San Jacinto, C 11.16 226 P **Pn** **20 52 24.9 -0.4**
comp=E,4µmcomp=E,1µmcomp=E,80nm,1.4s
SJCC San Jacinto, C 11.16 226 *e*P **Pn** **20 52 27.5 +2.2**
SJCC *e*S **Sn** **20 54 27.9 -2.6**
OCAC Ocana 11.31 214 P **Pn** **20 52 26.4 -1.1**
comp=E,3µmcomp=E,270nm,0.6s
PAMC Pamplona, Colo 11.78 209 P **Pn** **20 52 34.8 +0.6**
comp=E,54nm,0.5s
BARC Barichara 12.66 209 P **Pn** **20 52 46.1 +0.1**
comp=E,2µmcomp=E,153nm,0.8s
UREC San Jos de Ur 12.98 221 P **Pn** **20 52 46.3 -3.9**
comp=E,3µmcomp=E,943nmcomp=E,59nm,0.8s
UREC San Jos de Ur 12.98 221 *e*P **Pn** **20 52 51.1 +0.9**
RUSC La Rusia 13.23 207 P **Pn** **20 52 55.7 +1.6**
comp=E,3µmcomp=E,2µmcomp=E,120nm,1.0s
PTBC PUERTO BERRIO, 13.34 214 P **Pn** **20 52 52.9 -2.2**
comp=E,821nmcomp=E,69nm,0.8s
APAC Apartado, Choc 13.55 225 P **Pn** **20 52 59.5 +1.6**
comp=E,2µmcomp=E,105nm,1.4s
SPBC San Pablo de B 13.90 211 P **Pn** **20 53 02.2 -0.6**
comp=E,3µmcomp=E,1µmcomp=E,94nm,0.9s
DBBC Dabeiba 13.97 221 P **Pn** **20 53 02.7 -1.1**
TOTI Torti 14.08 233 *e*P **Pn** **20 53 07.2 +1.9**
HELC Santa Helena 14.22 217 P **Pn** **20 53 08.1 +0.6**
comp=E,1µmcomp=E,53nm,1.1s
HELC Santa Helena 14.22 217 *e*P **Pn** **20 53 06.9 -0.5**
CNTA3 Canitas, Panam 14.35 235 *e*P P 20 53 20.9 +4.9
NORC Norcasia 14.38 213 P **Pn** **20 53 10.1 +0.7**
comp=E,1µmcomp=E,55nm,0.8s
PTGC Puerto Gaitan, 14.41 201 P **P** **20 53 15.2 -1.6**
comp=E,4µmcomp=E,210nm,1.5s
CAMR Camarioca 14.45 294 Pn **Pn** **20 53 09.3 -0.9**
CHPO Chepo, Panama 14.56 236 *e*P **P** **20 53 22.9 +4.5**
CHIC Chingaza 14.64 208 P **P** **20 53 17.8 -2.0**
comp=E,2µmcomp=E,80nm,1.4s
BBSR BB Station 14.67 8 Pn **Pn** **20 53 08.9 -4.3**
BBSR BB Station 14.67 8 P **Pn** **20 53 12.0 -1.1**
ROSC El Rosal 14.73 210 Pn **P** **20 53 18.1 -2.6**
comp=E,1.2nm,0.3s,baz=7.1,slow=17,SNR=5.6
ROSC LR LR 20 59 40.2
comp=E,4µm,18.4s,baz=4.1,slow=40
comp=E,13nm,0.6s
ROSC El Rosal 14.73 210 **Pn** **20 53 11.1 -3.3**
ROSC El Rosal 14.73 210 P **Pn** **20 53 11.1 -3.3**
ROSC El Rosal 14.73 210 P **Pn** **20 53 17.1 +2.7**
comp=E,3µmcomp=E,228nm,0.9s
CBOC Ciudad Bolivar 14.76 218 P **Pn** **20 53 15.9 +1.2**
comp=E,1µmcomp=E,99nm,0.9s
CVER Cruz Verde, Cu 14.89 209 P **P** **20 53 20.0 -2.6**
comp=E,3µmcomp=E,101nm,0.9s
GUY2C Guyana, Caldas 14.93 214 P **Pn** **20 53 18.5 +1.3**
comp=E,1µmcomp=E,127nm,0.7s
PTAC Punta Ardita, 14.93 226 *e*P Pn 20 53 12.1 -4.8
UPA Univ. de Panam 15.00 236 P **P** **20 53 22.6 -0.7**
comp=E,118µmcomp=E,7µm,0.9s
FRIJ El Hiral 15.01 237 *e*P **Pn** **20 53 20.6 +2.7**
GAMB1 Gamboa 15.06 237 *e*P **Pn** **20 53 19.7 +1.2**
VILC Villavicencio, 15.09 206 P **P** **20 53 22.0 -2.5**
BCIP Isla Barro Col 15.13 237 P **Pn** **20 53 22.2 +2.7**
comp=E,4µmcomp=E,225nm,1.4s
BCIP Isla Barro Col 15.13 237 *e*P **P** **20 53 22.4 -2.4**
CHOR3 La Chorrera 15.23 236 *e*P **Pn** **20 53 21.3 +0.5**
060A Indiantown 15.39 309 **Pn** **20 53 19.8 -3.0**
060A IAmb IAmb 20 53 30.8
comp=Z,156nm,1.0s
PLMC San Jos del P 15.70 216 P **Pn** **20 53 28.2 +1.2**
comp=Z,1µmcomp=Z,112nm,1.0s
PRAC Prado 15.98 210 P **Pn** **20 53 27.4 -3.3**
comp=Z,4µmcomp=Z,2µmcomp=Z,99nm,1.1s
ORTC Ortega, Tolima 15.98 211 P **Pn** **20 53 32.6 +1.9**
comp=Z,2µmcomp=Z,133nm,1.0s
URMC La Uribe, Meta 16.16 207 P **Pn** **20 53 33.2 +0.2**
comp=Z,2µmcomp=Z,101nm,0.9s
AZU Azuero 16.30 234 *e*P **P** **20 53 37.0 -0.8**
CHIT3 Chitre 16.31 235 *e*P **P** **20 53 36.9 -1.0**
BOAV Boa Vista 16.57 157 **Pn** **20 53 35.2 -3.0**
BOAV Boa Vista 16.57 157 *e*P **P** **20 53 39.9 -0.9**
DWPF Disney Wildern 16.78 310 **Pn** **20 53 38.5 -2.2**
DWPF **P** **20 53 39.0 -4.0**
DWPF IAmb IAmb 20 53 47.9
comp=Z,370nm,1.2s
DWPF Disney Wildern 16.78 310 P **P** **20 53 42.5 -0.5**
MACC Macarena, Meta 16.94 204 P **P** **20 53 46.2 +1.3**
comp=Z,3µmcomp=Z,49nm,0.8s
GMAL Guarumal, Vera 17.07 236 P **Pn** **20 53 44.6 +0.1**
comp=Z,5µmcomp=Z,246nm,1.5s
GMAL Guarumal, Vera 17.07 236 *e*P **P** **20 53 48.1 +1.8**
BETC Betania 17.14 210 P **P** **20 53 48.3 +1.1**
NANC3 Nancito, Chiri 17.19 238 *e*P **Pn** **20 53 46.6 +0.5**
RGM0 Gandoca 17.20 244 Pn **Pn** **20 53 43.5 -2.6**
JAMC Jamundi, Valle 17.31 214 P **P** **20 53 49.3 +0.1**
comp=Z,1µmcomp=Z,69nm,1.4s
SIUN Universidad Ur 17.57 259 Pn **Pn** **20 53 47.7 -3.1**
DVD David 17.67 240 *e*P **P** **20 53 55.6 +2.7**
BRU2 Volcan 17.68 242 **Pn** **20 53 52.3 +0.1**
BRU2 IAmb IAmb 20 53 58.8
comp=Z,400nm,1.3s
BRU2 Volcan 17.68 242 P **P** **20 53 57.2 +4.0**
BRU2 Volcan 17.68 242 ⇧*i*P **P** **20 53 55.9 +2.6**
SGC2 Sao Gabriel da 17.83 180 P **P** **20 53 59.4 +4.7**
comp=Z,1µmcomp=Z,41nm,1.0s
SGC2 Sao Gabriel da 17.83 180 *e*P **P** **20 53 57.2 +2.5**
POPC Popayan, Colom 17.88 213 P **P** **20 53 57.9 +2.4**
comp=Z,1µmcomp=Z,46nm,0.7s
PTPM Petroterminale 18.15 240 *e*P **P** **20 53 59.2 +1.0**
FLOC Florencia 18.21 209 P **P** **20 54 03.1 +4.1**
comp=Z,2µmcomp=Z,3µmcomp=Z,116nm,1.3s
656A Willston 18.29 312 **Pn** **20 53 58.4 -1.1**
HDC Heredia 18.31 247 P **P** **20 54 01.1 +0.8**
HDC IAmb IAmb 20 54 11.0
comp=Z,440nm,1.5s
HDC Heredia 18.31 247 *e*P **P** **20 54 03.5 +3.3**
HDC Heredia 18.31 247 P **P** **20 54 05.0 +4.8**
PIRO Carate, Puerto 18.43 242 P **P** **20 54 01.3 0.0**
PIRO IAmb IAmb 20 54 09.9
comp=Z,557nm,1.9s
BBAC Balboa, Cauca 18.62 214 P **Pn** **20 54 08.5 +4.6**
456A Hilliard 18.77 316 P **P** **20 54 03.1 -1.8**
BOAB BOACO BROADBAN 18.78 256 P **P** **20 54 03.9 -1.3**
BOAB BOACO BROADBAN 18.78 256 P **Pn** **20 54 08.4 +2.8**
MDP Montagnes des 18.88 130 P **Pn** **20 54 09.2 +2.3**
comp=Z,1.3nm,0.3s,baz=316,slow=11,SNR=13
MDP LR LR 21 02 35.3
comp=Z,2µm,21.4s,baz=298,slow=41
comp=Z,71nm,1.1s
JTS Las Juntas de 18.93 249 P **Pn** **20 54 09.8 +2.3**
comp=Z,1.5nm,0.3s,baz=60,slow=9.4,SNR=22
JTS LR LR 21 01 00.5
comp=Z,2µm,19.6s,baz=53,slow=36
comp=Z,63nm,0.8s
JTS Las Juntas de 18.93 249 P **P** **20 54 06.2 -0.7**
JTS Las Juntas de 18.93 249 *d*/*i*P **Pn** **20 54 09.3 +1.8**
JTS pmax pmax
comp=Z,221nm,1.4s
JTS Las Juntas de 18.93 249 P **Pn** **20 54 09.7 +2.3**
JTS Las Juntas de 18.93 249 P **Pn** **20 54 11.0 +3.5**
JTS Las Juntas de 18.93 249 ‖*e*P **Pn** **20 54 09.8 +2.3**
MGAN Managua 19.41 256 P **P** **20 54 11.6 -0.6**
JUD3 Juan Diaz 3 19.50 250 P **P** **20 54 12.3 -0.9**
CNGN Cerro Negro 19.72 257 P **Pn** **20 54 19.5 +2.6**
CRIN San Cristobal 19.98 258 P **P** **20 54 17.7 -0.8**
X58A Rowland 20.00 329 P **P** **20 54 17.2 -1.2**
X58A IAmb IAmb 20 54 23.7
comp=Z,230nm,1.6s
Y57A Sumter 20.12 326 P **P** **20 54 18.6 -1.1**
Y57A IAmb IAmb 20 54 33.9
comp=Z,116nm,1.0s
TEIG Tepich 20.26 280 P Pn 20 54 23.4 +0.2
comp=Z,0.1nm,0.9s,baz=79,slow=24,SNR=3.2
TEIG Tepich 20.26 280 P **P** **20 54 19.2 -2.1**
OTAV Otavalo 20.76 214 P **P** **20 54 25.1 -2.2**
OTAV Otavalo 20.76 214 P **P** **20 54 25.1 -2.2**
OTAV pmax pmax
comp=Z,331nm,1.5s
OTAV MLR MLR
comp=Z,3µm,22.0s
JSC Jenkinsville 20.79 325 P **P** **20 54 26.3 -0.7**
JSC IAmb IAmb 20 54 33.1
comp=Z,143nm,1.3s
JSC Jenkinsville 20.79 325 P **P** **20 54 26.3 -0.7**
JSC pmax pmax
comp=Z,143nm,1.3s
TEFE Tefe 21.29 173 *e*P **P** **20 54 35.3 +2.7**
451A Vernon 21.30 310 IAMs_20 IAMs_20 21 03 06.1
comp=Z,5µm,21.0s
HODGE Hodges 21.31 323 P **P** **20 54 31.4 -1.2**
GOGA Godfrey 21.45 320 IAMs_20 IAMs_20 21 03 31.1
comp=Z,4µm,18.0s
GOGA Godfrey 21.45 320 P **P** **20 54 35.8 +1.6**
KMSC Kings Mountain 21.48 326 IAmb IAmb 20 54 49.2
comp=Z,168nm,1.4s
SLOR San Lorenzo - 21.60 213 P **P** **20 54 35.0 -1.4**
ESQI Esquipulas 21.69 265 P **P** **20 54 36.8 -0.2**
MTO3 Montecristo 21.74 264 **P** **20 54 36.5 -1.2**
PETF Flores 21.84 271 P **P** **20 54 36.6 -1.8**
V55A Taylorsville 21.96 328 P **P** **20 54 39.1 -0.6**
V55A IAmb IAmb 20 54 58.6
comp=Z,249nm,1.8s
Y52A Lilburn 22.13 320 IAmb IAmb 20 54 48.0
comp=Z,198nm,1.3s
Y52A IAMs_20 IAMs_20 21 03 51.9
comp=Z,3µm,18.0s
250A Grady 22.42 313 P **P** **20 54 43.8 -0.8**
V53A Saluda 22.67 325 P **P** **20 54 46.6 -0.7**
APG El Apazote 22.67 266 LR LR 21 03 24.4
comp=Z,220nm,18.6s,baz=70,slow=36
SDMD Soldier's Deli 23.18 340 P **P** **20 54 52.1 -0.3**
SDMD IAmb IAmb 20 55 13.4
comp=Z,182nm,2.0s
TKL Tuckaleechee C 23.20 323 LR LR 21 03 39.4
comp=Z,µm,21.4s,baz=154,slow=36
TKL Tuckaleechee C 23.20 323 P **P** **20 54 53.2 +0.5**
TKL Tuckaleechee C 23.20 323 P **P** **20 54 53.2 +0.5**
TKL pmax pmax
comp=Z,242nm,1.8s
CPCT Cooper Cave 23.48 322 IAmb IAmb 20 55 19.9
comp=Z,49nm,0.7s
FPAL Fort Paine 23.54 319 IAmb IAmb 20 55 01.5
comp=Z,84nm,1.4s
MVL Millersville 23.56 342 **P** **20 54 55.7 -0.6**
MVL IAmb IAmb 20 55 10.9
comp=Z,64nm,1.3s
Q56A Snyder Ridge, 23.68 336 P **P** **20 54 56.7 -0.8**
Q56A IAmb IAmb 20 55 21.6
comp=Z,120nm,1.3s
TZTN Tazewell 23.71 325 P **P** **20 54 59.3 +1.4**
W50A Signal Mountai 23.79 320 IAmb IAmb 20 55 04.0
comp=Z,72nm,1.2s
W50A IAMs_20 IAMs_20 21 05 02.8
comp=Z,3µm,19.0s
PAL Palisades 23.89 347 **P** **20 54 57.0 -2.4**
PAL IAmb IAmb 20 55 24.4
comp=Z,128nm,1.5s
PAL Palisades 23.89 347 P **P** **20 54 57.0 -2.4**
PAL pmax pmax
comp=Z,128nm,1.5s
PAL MLR MLR
comp=Z,2µm,19.0s
M65A Busby, Falmout 23.90 353 P **P** **20 54 59.5 0.0**
baz=171
RTAL Retalhuleu 23.93 266 P **P** **20 54 58.1 -2.0**
Z47A Carrollton 24.36 313 P **P** **20 55 02.6 -1.3**
Z47A IAmb IAmb 20 55 28.8
comp=Z,72nm,0.9s
346A Big Creek Wild 24.44 308 IAMs_20 IAMs_20 21 05 22.4
comp=Z,4µm,20.0s
S51A Beattyville 24.56 327 P **P** **20 55 04.2 -1.5**
S51A IAmb IAmb 20 55 33.7
comp=Z,42nm,0.8s
ITTB Itaituba 24.67 152 *e*P **P** **20 55 08.5 +1.6**
146A Union 24.76 311 IAMs_20 IAMs_20 21 05 34.8
comp=Z,3µm,18.0s
T50A Nancy 24.77 324 P **P** **20 55 04.8 -2.9**
T50A IAmb IAmb 20 55 16.3
comp=Z,61nm,1.1s
KSPA Keystone Colle 24.85 344 P **P** **20 55 06.3 -2.0**
KSPA IAmb IAmb 20 55 32.1
comp=Z,72nm,1.3s
HRV Adam Dziewonsk 24.94 352 P **P** **20 55 11.8 +2.7**
U49A Red Boiling Sp 24.95 322 IAmb IAmb 20 55 35.5
comp=Z,70nm,1.1s
P53A Whipple 24.97 333 IAmb IAmb 20 55 36.5
comp=Z,51nm,1.1s
V48A Smith Brothers 25.07 319 IAmb IAmb 20 55 15.7
comp=Z,110nm,1.3s
O54A Avella 25.13 335 IAmb IAmb 20 55 14.2
comp=Z,55nm,1.0s
P52A Corning 25.42 332 IAmb IAmb 20 55 30.0
comp=Z,76nm,1.1s
BINY Binghamton 25.51 344 IAmb IAmb 20 55 37.4
comp=Z,79nm,1.3s
BINY Binghamton 25.51 344 P **P** **20 55 16.4 +2.1**
O53A New Philadelph 25.53 334 IAmb IAmb 20 55 40.5
comp=Z,57nm,1.1s
O52A Adamsville 25.68 333 IAmb IAmb 20 55 50.7
comp=Z,62nm,0.8s
O52A IAMs_20 IAMs_20 21 05 18.5
comp=Z,3µm,18.0s
J61A Chester 25.91 351 **P** **20 55 15.6 -2.3**
J61A IAmb IAmb 20 55 26.8
comp=Z,78nm,1.3s
WVT Waverly 25.95 319 P **P** **20 55 15.6 -2.7**
WVT IAmb IAmb 20 55 32.4
comp=Z,43nm,1.1s
WVT Waverly 25.95 319 P **P** **20 55 15.6 -2.7**
WVT pmax pmax
comp=Z,43nm,1.1s
WVT MLR MLR
comp=Z,3µm,19.0s
WVT Waverly 25.95 319 P **P** **20 55 19.1 +0.8**
CZSB Cruzeiro do Su 25.98 193 P **P** **20 55 16.9 -1.8**
CZSB Cruzeiro do Su 25.98 193 *e*P **P** **20 55 22.7 +4.0**
PAOC Oil Creek Stat 26.02 338 IAmb IAmb 20 55 43.8
comp=Z,44nm,1.2s
K57A Scipio Center 26.14 344 IAMs_20 IAMs_20 21 06 06.4
comp=Z,3µm,18.0s
WCI Wyandotte Cave 26.44 324 P **P** **20 55 21.1 -1.7**
WCI IAmb IAmb 20 55 46.0
comp=Z,45nm,0.9s
WCI Wyandotte Cave 26.44 324 P **P** **20 55 21.1 -1.7**
WCI pmax pmax
comp=Z,45nm,0.9s
WCI MLR MLR
comp=Z,2µm,18.0s
WCI Wyandotte Cave 26.44 324 P **P** **20 55 24.4 +1.6**
143A Socs Landing, 26.51 309 IAMs_20 IAMs_20 21 07 47.2
comp=Z,3µm,18.0s
MMNY Mt. Morris Dam 26.54 342 P **P** **20 55 22.3 -1.3**
MMNY IAmb IAmb 20 55 29.4
comp=Z,69nm,1.3s
J57A Williamstown 26.65 345 P **P** **20 55 23.5 -1.1**
J57A IAmb IAmb 20 56 02.3
comp=Z,48nm,1.1s
M52A Chesterland 26.68 336 P **P** **20 55 22.5 -2.4**
M52A IAmb IAmb 20 56 03.6
comp=Z,34nm,0.9s
UTMT University of 26.73 318 P **P** **20 55 25.2 -0.2**
NCB Newcomb 26.80 348 P **P** **20 55 25.1 -0.9**
P48A Milroy 26.87 327 P **P** **20 55 24.1 -2.6**
O49A Covington 26.88 330 P **P** **20 55 25.2 -1.5**
O49A IAmb IAmb 20 55 31.5
comp=Z,90nm,1.6s
H62A Milan 26.93 353 IAMs_20 IAMs_20 21 03 22.2
comp=Z,2µm,18.0s
T45A Paducah 27.02 319 IAMs_20 IAMs_20 21 06 53.2
comp=Z,3µm,19.0s
441A DeRidder 27.05 303 IAMs_20 IAMs_20 21 07 10.8
comp=Z,5µm,22.0s
HICK Hickman 27.08 318 P **P** **20 55 27.9 -0.7**
ATAH Atahualpa 27.20 205 LR LR 21 08 14.1
comp=Z,3µm,18.9s,baz=27,slow=41
NPGB Novo Progresso 27.23 154 *e*P **P** **20 55 33.0 +3.0**
GGN Saint George 27.25 0 P **P** **20 55 27.5 -2.4**
CCAR Cane Creek 27.36 311 P **P** **20 55 30.6 -0.6**
CCAR IAmb IAmb 20 55 50.2
comp=Z,60nm,0.9s
S44A Carbondale 27.82 320 IAMs_20 IAMs_20 21 07 17.7
comp=Z,3µm,18.0s
P46A Rosedale 27.93 325 IAMs_20 IAMs_20 21 08 35.4
comp=Z,3µm,18.0s
LMN Caledonia Moun 28.04 3 P **P** **20 55 36.1 -0.9**
LMN IAmb IAmb 20 55 46.0
comp=Z,41nm,1.3s
WLAR White Oak Lake 28.23 309 P **P** **20 55 38.0 -0.9**
WLAR IAmb IAmb 20 55 44.4
comp=Z,48nm,0.9s
AAM Ann Arbor 28.26 333 IAMs_20 IAMs_20 21 06 48.9
comp=Z,2µm,18.0s
Q44A Meyer Farm, Va 28.46 322 IAMs_20 IAMs_20 21 07 38.6
comp=Z,3µm,18.0s
T42A Van Buren 28.58 317 P **P** **20 55 40.8 -1.2**
T42A IAmb IAmb 20 56 29.6
comp=Z,41nm,1.2s
T42A IAMs_20 IAMs_20 21 07 43.9
comp=Z,3µm,19.0s
SADO Sadowa 28.76 342 LR LR 21 08 26.0
comp=Z,2µm,18.0s,baz=178,slow=39
HKT Hockley 28.92 300 P **P** **20 55 45.1 +0.1**
HKT IAmb IAmb 20 55 47.9
comp=Z,61nm,1.4s
HKT Hockley 28.92 300 IAMs_20 IAMs_20 21 09 19.9
comp=Z,3µm,22.0s
HKT Hockley 28.92 300 *d*/*i*P **P** **20 55 46.1 +1.1**
HKT pmax pmax
comp=Z,55nm,1.5s
HKT Hockley 28.92 300 P **P** **20 55 47.0 +2.0**
MIAR Mount Ida 28.98 310 IAMs_20 IAMs_20 21 08 44.0
comp=Z,3µm,18.0s
MIAR Mount Ida 28.98 310 P **P** **20 55 48.0 +2.4**
D62A Allapoint, All 29.26 357 **P** **20 55 48.8 +0.9**
BATG Bathurst New B 29.42 1 P **P** **20 55 49.2 -0.1**
Z38A Mt. Pleasant 29.45 307 IAMs_20 IAMs_20 21 08 49.7
comp=Z,3µm,21.0s
J47A Sunmer 29.52 333 IAMs_20 IAMs_20 21 07 38.3
comp=Z,3µm,18.0s
M44A Midewin, Midew 29.64 327 IAMs_20 IAMs_20 21 08 38.7
comp=Z,2µm,18.0s
KVTX Kingsville 30.04 294 IAMs_20 IAMs_20 21 05 27.5
comp=Z,2µm,20.0s
R40A Maddies Statio 30.07 318 IAMs_20 IAMs_20 21 08 29.4
comp=Z,3µm,20.0s
S39A Bolivar 30.41 316 IAMs_20 IAMs_20 21 09 00.6
comp=Z,2µm,19.0s
CLDB Colider 30.56 158 *e*P **P** **20 56 03.1 +3.4**
CLDB Colider 30.56 158 P **P** **20 56 03.5 +3.8**
HBVL Hebbronville 30.62 293 P **P** **20 55 59.6 -0.6**
HBVL IAmb IAmb 20 56 03.1
comp=Z,67nm,1.2s
P40A Paris 30.67 320 IAmb IAmb 20 56 07.7
comp=Z,38nm,1.0s
P40A IAMs_20 IAMs_20 21 09 17.3
comp=Z,3µm,19.0s
N41A Harden Midland 30.71 323 IAmb IAmb 20 56 08.1
comp=Z,54nm,1.2s
N41A IAMs_20 IAMs_20 21 09 08.2
comp=Z,2µm,18.0s
I45A Fountain 30.77 332 IAMs_20 IAMs_20 21 08 25.5
comp=Z,2µm,19.0s
WHTX Lake Whitney, 30.90 303 IAMs_20 IAMs_20 21 10 24.3
comp=Z,2µm,21.0s
L42A Oliver, Polo 30.93 326 IAMs_20 IAMs_20 21 09 38.0
comp=Z,2µm,18.0s
NNA Nana 31.14 199 LR LR 21 11 16.7
comp=Z,2µm,19.0s,baz=1.0,slow=41
NNA Nana 31.14 199 IAMs_20 IAMs_20 21 10 55.5
comp=Z,2µm,21.0s
NNA Nana 31.14 199 *c*/*i*P **P** **20 56 07.6 +2.7**
NNA pmax pmax
comp=Z,70nm,1.3s
TUL3 Leonard 31.22 311 IAMs_20 IAMs_20 21 09 44.3
comp=Z,2µm,20.0s
Z35A Perchaven, San 31.22 306 IAMs_20 IAMs_20 21 10 46.7
comp=Z,2µm,20.0s
VILB Vilhena 31.28 167 P **P** **20 56 04.5 -1.5**
VILB IAmb IAmb 20 56 13.3
comp=Z,28nm,0.9s
VILB Vilhena 31.28 167 *e*P **P** **20 56 09.9 +3.8**
P38A Dawn 31.65 319 IAMs_20 IAMs_20 21 09 19.1
comp=Z,2µm,19.0s
H43A Windswept, Lux 31.80 331 IAMs_20 IAMs_20 21 10 17.8
comp=Z,2µm,18.0s
JFWS Jewell Farm 31.88 327 IAMs_20 IAMs_20 21 10 05.9
comp=Z,2µm,18.0s
E46A Sault Ste Mari 31.90 337 IAMs_20 IAMs_20 21 08 38.0
comp=Z,2µm,18.0s
I42A Draeger Farm, 31.91 329 IAMs_20 IAMs_20 21 09 29.6
comp=Z,2µm,18.0s
BRDY Brady 31.93 301 IAmb IAmb 20 56 20.9
comp=Z,34nm,1.0s
OK052 Battle Ridge R 31.98 310 IAMs_20 IAMs_20 21 10 46.6
comp=Z,3µm,19.0s
N38A Joes South For 32.16 321 IAMs_20 IAMs_20 21 10 01.7
comp=Z,3µm,20.0s
T35A Sooner Cattle 32.20 312 IAMs_20 IAMs_20 21 09 43.0
comp=Z,2µm,20.0s
OK051 E0350 and S346 32.24 311 IAMs_20 IAMs_20 21 10 06.3
comp=Z,2µm,20.0s
OK029 Liberty Lake 32.37 310 IAMs_20 IAMs_20 21 11 19.9
comp=Z,3µm,19.0s
SMTB Santa Maria do 32.70 143 *e*P **P** **20 56 20.3 +1.8**
I40A Norwalk 32.76 328 IAmb IAmb 20 56 42.5
comp=Z,38nm,1.2s
SCIA State Center 32.84 323 IAMs_20 IAMs_20 21 10 23.6
comp=Z,3µm,19.0s
WMOK Wichita Mounta 32.93 307 IAmb IAmb 20 56 23.4
comp=Z,29nm,0.7s
WMOK Wichita Mounta 32.93 307 IAMs_20 IAMs_20 21 11 09.9
comp=Z,3µm,20.0s
WMOK Wichita Mounta 32.93 307 P **P** **20 56 20.7 +0.2**
F42A Maple Grove Fa 32.96 332 IAMs_20 IAMs_20 21 09 52.4
comp=Z,2µm,18.0s
SNDB Serra Nova Dou 33.40 151 *e*P **P** **20 56 27.3 +2.7**
NBPS Pedro II - PI 33.50 129 *e*P **P** **20 56 27.1 +1.5**
G40A Rib Lake 33.54 330 IAMs_20 IAMs_20 21 11 31.9
comp=Z,2µm,18.0s
OZNA Ozona 33.58 299 IAmb IAmb 20 56 34.3
comp=Z,63nm,1.2s
OK038 West end E0370 33.61 310 IAMs_20 IAMs_20 21 11 38.6
comp=Z,2µm,19.0s
ZAIG Zacatecas 33.67 284 P **P** **20 56 25.8 -1.6**
ZAIG IAmb IAmb 20 56 31.9
comp=Z,30nm,1.3s
ZAIG Zacatecas 33.67 284 P **P** **20 56 29.6 +2.3**

N35A Tabor 33.68 319 IAms_20 IAms_20 21 10 41.9
comp=Z,2µm,20.0s
SGCY Sterling City 33.84 301 IAmb IAmb 20 56 31.2
comp=Z,41nm,0.9s
LPAZ La Paz 33.88 182 P P **20 56 31.8 +2.3**
comp=Z,5.4nm,0.7s,baz=1.6,slow=9.4,SNR=16
comp=Z,5.4nm,0.7s
LPAZ La Paz 33.88 182 P P **20 56 28.6 -0.9**
LPAZ La Paz 33.88 182 *e*P P **20 56 31.0 +1.5**
LPAZ La Paz 33.88 182 P P **20 56 32.1 +2.6**
PTLB Pontes e Lacer 33.93 166 P P **20 56 27.3 -1.8**
PTLB Pontes e Lacer 33.93 166 *e*P P **20 56 31.1 +1.9**
SIV San Ignacio 34.07 170 LR LR 21 11 09.2
comp=Z,4µm,18.2s,baz=4.0,slow=38
SAND Sanderson 34.18 297 IAmb IAmb 20 56 33.3
comp=Z,38nm,1.2s
229A Bryant Ranch, 34.42 301 IAmb IAmb 20 56 41.4
comp=Z,42nm,1.0s
R32A Long Quarter, 34.45 313 IAMs_20 IAMs_20 21 10 52.5
comp=Z,2µm,20.0s
L34A Svendsen Farm, 34.76 320 IAMs_20 IAMs_20 21 11 16.5
comp=Z,2µm,19.0s
SPMN Marine on St. 34.81 327 IAmb IAmb 20 56 39.8
comp=Z,36nm,1.3s
SPMN IAMs_20 IAMs_20 21 11 21.4
comp=Z,2µm,18.0s
MNHN Monahans 35.04 299 IAmb IAmb 20 56 46.5
comp=Z,64nm,1.4s
128A Castleberry Fa 35.15 302 IAmb IAmb 20 56 47.8
comp=Z,36nm,1.5s
E38A The Farm, Brul 35.17 330 IAMs_20 IAMs_20 21 11 28.8
comp=Z,2µm,19.0s
AMTX Amarillo 35.21 306 IAmb IAmb 20 56 43.6
comp=Z,43nm,1.1s
AMTX IAMs_20 IAMs_20 21 13 20.2
comp=Z,2µm,18.0s
PB18 Visviri 35.24 184 P P **20 56 43.5 +2.4**
SALV Santo Antonio 35.29 161 *e*P P **20 56 43.2 +2.2**
BBSD Serra de San D 35.32 169 *e*P P **20 56 43.6 +2.3**
CBKS Cedar Bluff 35.34 313 IAMs_20 IAMs_20 21 11 29.1
comp=Z,2µm,20.0s
TX31 Lajitas Ar. Si 35.38 296 IAmb IAmb 20 56 50.8
TXAR Lajitas Array 35.38 296 P P **20 56 42.1 +0.3**
comp=Z,12nm,0.6s,baz=112,slow=8.6,SNR=110
TXAR PcP **PcP 20 59 11.3 -0.7**
comp=Z,4.7nm,0.9s,baz=121,slow=5.5,SNR=4.2
TXAR ScP **ScP 21 02 59.4 +0.8**
comp=Z,7.5nm,1.0s,baz=123,slow=4.6,SNR=21
TXAR LR LR 21 14 20.6
comp=Z,1µm,21.2s,baz=78,slow=42
comp=Z,12nm,0.6s
TPB06 Permian Basin 35.49 300 IAmb IAmb 20 56 50.4
comp=Z,46nm,0.8s
BGNE Belgrade 35.56 318 IAMs_20 IAMs_20 21 12 00.8
comp=Z,2µm,20.0s
MSTX Muleshoe 35.77 304 IAMs_20 IAMs_20 21 13 46.1
comp=Z,2µm,19.0s
ECSD EROS Data Cent 35.94 322 IAmb IAmb 20 56 54.0
comp=Z,38nm,1.1s
ECSD EROS Data Cent 35.94 322 IAMs_20 IAMs_20 21 12 19.5
comp=Z,3µm,19.0s
ECSD EROS Data Cent 35.94 322 P P **20 56 47.2 +0.8**
PECS Pecos 35.97 299 IAmb IAmb 20 56 54.7
comp=Z,83nm,1.5s
EYMN Ely 36.12 332 IAmb IAmb 20 56 52.3
comp=Z,76nm,1.9s
EYMN Ely 36.12 332 IAMs_20 IAMs_20 21 11 50.1
comp=Z,2µm,18.0s
EYMN Ely 36.12 332 P P **20 56 48.7 +0.8**
PB12 IPOC Station P 36.32 185 IAMs_20 IAMs_20 21 13 57.8
comp=Z,2µm,18.0s
ARAG Araguaiana, MT 36.50 155 *e*P P **20 56 52.6 +1.3**
RTBA Rita Blanca 36.56 308 IAmb IAmb 20 56 54.9
comp=Z,41nm,0.9s
HPIG 36.77 291 P P **20 56 52.4 -1.6**
HPIG IAmb IAmb 20 56 56.1
comp=Z,44nm,1.1s
HPIG 36.77 291 P P **20 56 54.5 +0.5**
VHRN Van Horn 36.78 298 IAmb IAmb 20 56 56.6
comp=Z,84nm,1.3s
SCHQ Schefferville 36.97 0 P P **20 56 55.8 +0.7**
comp=Z,12nm,0.6s,baz=182,slow=6.9,SNR=35
comp=Z,12nm,0.6s
SCHQ Schefferville 36.97 0 P P **20 56 54.1 -1.0**
F33A 5 Mile Ranch, 37.05 325 IAmb IAmb 20 56 59.0
comp=Z,61nm,1.5s
PP1B Ponte de Pedra 37.14 161 *e*P P **20 56 59.1 +2.3**
K30B Basset 37.16 319 IAMs_20 IAMs_20 21 13 10.9
comp=Z,3µm,19.0s
PSGCX Pisagua 37.28 185 IAmb IAmb 20 57 08.0
comp=Z,63nm,1.4s
GO01 Chusmiza 37.29 183 P P **20 56 57.8 -0.8**
GO01 IAmb IAmb 20 57 05.0
comp=Z,47nm,1.2s
GO01 Chusmiza 37.29 183 P P **20 56 59.8 +1.2**
MNTX Cornudas Mount 37.30 299 IAmb IAmb 20 57 00.6
comp=Z,74nm,1.4s
MNTX IAMs_20 IAMs_20 21 14 55.7
comp=Z,2µm,20.0s
MNTX Cornudas Mount 37.30 299 P P **20 56 59.3 +1.1**
PB11 IPOC Station P 37.41 184 IAmb IAmb 20 57 03.9
comp=Z,33nm,0.7s
PB11 IPOC Station P 37.41 184 P P **20 57 00.3 +1.0**
NBMA Muriti-CE 37.45 129 *e*P P **20 57 00.8 +1.2**
KSCO Kaye Shedlock' 37.46 312 IAMs_20 IAMs_20 21 13 26.5
comp=Z,2µm,20.0s
SUSD Miller 37.72 322 IAMs_20 IAMs_20 21 13 35.8
comp=Z,2µm,19.0s
PB08 IPOC Station P 37.76 183 P P **20 57 01.3 -1.1**
PB08 IAmb IAmb 20 57 18.3
comp=Z,36nm,1.0s
PB08 IPOC Station P 37.76 183 P P **20 57 03.7 +1.3**
OGNE Ogallala 37.88 315 IAMs_20 IAMs_20 21 13 51.3
comp=Z,3µm,18.0s
T25A Trinidad 38.06 308 IAMs_20 IAMs_20 21 13 40.6
comp=Z,2µm,21.0s
BDFB Brasilia 38.13 149 P P **20 57 07.7 +2.3**
comp=Z,7.0nm,0.9s,baz=330,slow=5.8,SNR=6.9
BDFB LR LR 21 13 00.5
comp=Z,4µm,20.5s,baz=326,slow=36
comp=Z,7.0nm,0.9s
BDFB Brasilia 38.13 149 P P **20 57 02.5 -2.9**
BDFB Brasilia 38.13 149 P P **20 57 02.5 -2.9**
BDFB pmax pmax
comp=Z,19nm,1.2s
EPLO Experimental L 38.40 332 IAmb IAmb 20 57 10.2
comp=Z,89nm,1.7s
AGMN Agassiz Nation 38.44 329 IAmb IAmb 20 57 10.5
comp=Z,106nm,1.9s
AGMN IAMs_20 IAMs_20 21 13 32.5
comp=Z,2µm,18.0s
AGMN Agassiz Nation 38.44 329 P P **20 57 07.6 +0.1**
COIM Forte Coimbra 38.54 166 *e*P P **20 57 11.1 +2.5**
RCBR Riachuelo 38.65 125 P P **20 57 07.6 -2.1**
RCBR Riachuelo 38.65 125 P P **20 57 07.6 -2.1**
RCBR pmax pmax
comp=Z,31nm,1.3s
RCBR MLR MLR
comp=Z,1µm,20.0s
ALQ Albuquerque 38.96 304 IAMs_20 IAMs_20 21 12 57.7
comp=Z,1µm,21.0s
ANMO Albuquerque 38.96 304 LR LR 21 17 00.4
comp=Z,589nm,18.2s,baz=109,slow=42
ANMO Albuquerque 38.96 304 P P **20 57 11.8 -0.6**
ANMO Albuquerque 38.96 304 || *i*P P **20 57 13.7 +1.3**
ANMO pmax pmax
comp=Z,20nm,1.0s
ANMO Albuquerque 38.96 304 P P **20 57 14.3 +1.9**
SDCO Great Sand Dun 39.08 308 P P **20 57 13.0 -0.5**
SDCO IAMs_20 IAMs_20 21 16 14.6
comp=Z,2µm,20.0s
PCED Cedros 39.25 50 *e*P P **20 57 17.7 +3.2**
PCED *i* IAmb IAmb 20 57 21.4
comp=Z,37nm,0.8s
PB07 IPOC Station P 39.38 184 IAmb IAmb 20 57 22.5
comp=Z,38nm,0.7s
PB07 IPOC Station P 39.38 184 P P **20 57 17.0 +1.2**
PB09 IPOC Station P 39.40 183 P P **20 57 15.0 -1.0**
PB09 IAmb IAmb 20 57 25.4
comp=Z,172nm,2.0s
PB09 IPOC Station P 39.40 183 P P **20 57 17.6 +1.5**
JANB Januaria 39.57 144 *e*P P **20 57 20.1 +2.7**
AQDB Aquidauana 39.61 163 P P **20 57 16.0 -1.6**
AQDB Aquidauana 39.61 163 *e*P P **20 57 19.8 +2.2**
AQDB Aquidauana 39.61 163 P P **20 57 21.5 +3.9**

ROSA Rosais 39.62 50 *e*P P **20 57 17.1 -0.4**
ROSA *i* IAmb IAmb 20 57 23.5
comp=Z,54nm,2.6s
PB03 IPOC Station P 39.69 184 P P **20 57 18.4 0.0**
PMAN Manadas 39.70 50 *e*P P **20 57 21.6 +3.4**
PMAN *i* IAmb IAmb 20 57 24.2
comp=Z,72nm,1.4s
ULM Lac du Bonnet 39.78 331 P P **20 57 18.6 -0.2**
comp=Z,7.4nm,0.6s,baz=123,slow=7.3,SNR=12
ULM LR LR 21 14 23.2
comp=Z,1µm,19.3s,baz=138,slow=37
comp=Z,7.4nm,0.6s
ULM Lac du Bonnet 39.78 331 IAmb IAmb 20 57 21.1
comp=Z,79nm,1.8s
ULM Lac du Bonnet 39.78 331 *de*P P **20 57 17.9 -0.8**
SRBC Serra Branca 39.88 50 *e*P P **20 57 23.1 +3.3**
SRBC *i* IAmb IAmb 20 57 26.5
comp=Z,190nm,1.7s
ISCO Idaho Springs 39.90 311 IAMs_20 IAMs_20 21 16 47.0
comp=Z,2µm,18.0s
ISCO Idaho Springs 39.90 311 P P **20 57 21.7 +1.4**
PGRA Graciosa 39.92 50 *e*P P **20 57 19.6 -0.4**
PGRA *i* IAmb IAmb 20 57 26.6
comp=Z,79nm,1.8s
E28A Huff 39.94 323 IAMs_20 IAMs_20 21 13 47.3
comp=Z,2µm,20.0s
S22A 4UR Ranch, Cre 40.08 308 IAMs_20 IAMs_20 21 16 59.0
comp=Z,2µm,21.0s
MURT Porto Murtinho 40.27 166 *e*P P **20 57 25.6 +2.5**
PSBA Serra de Santa 40.31 51 *e*P P **20 57 25.6 +2.3**
PSBA *i* IAmb IAmb 20 57 30.0
comp=Z,100nm,2.0s
PB06 IPOC Station P 40.33 184 P P **20 57 22.7 -1.0**
PB06 IPOC Station P 40.33 184 P P **20 57 24.7 +1.0**
ADH Angra Heroismo 40.33 51 *e*P P **20 57 26.7 +3.2**
ADH *i* IAmb IAmb 20 57 29.6
comp=Z,83nm,1.3s
PAGU Agualva, Azore 40.41 51 *e*P P **20 57 27.4 +3.2**
PAGU *i* IAmb IAmb 20 57 31.1
comp=Z,86nm,1.8s
PSCM Serra do Cume 40.44 51 *e*P P **20 57 27.7 +3.4**
PSCM *i* IAmb IAmb 20 57 30.9
comp=Z,48nm,2.2s
SLBS Sierra La Lagu 40.47 286 P P **20 57 22.8 -2.1**
SLBS IAmb IAmb 20 57 28.8
comp=Z,85nm,1.1s
SLBS Sierra La Lagu 40.47 286 P P **20 57 27.6 +2.7**
PB05 IPOC Station P 40.52 185 P P **20 57 26.1 +0.8**
RSSD Black Hills 40.67 318 IAMs_20 IAMs_20 21 15 03.9
comp=Z,2µm,20.0s
RSSD Black Hills 40.67 318 P P **20 57 28.0 +1.5**
MVCO Mesa Verde 41.18 307 P P **20 57 30.4 -0.5**
MVCO IAMs_20 IAMs_20 21 15 58.1
comp=Z,3µm,20.0s
MVCO Mesa Verde 41.18 307 P P **20 57 32.4 +1.6**
PB10 IPOC Station P 41.20 185 P P **20 57 29.6 -1.1**
PB10 IAmb IAmb 20 57 33.0
comp=Z,95nm,1.3s
PB10 IPOC Station P 41.20 185 P P **20 57 32.2 +1.5**
PSET Sete Cidades 41.20 52 *e*P P **20 57 33.1 +2.4**
PSET *i* IAmb IAmb 20 57 37.0
comp=Z,82nm,1.6s
PDA Ponta Delgada 41.22 53 *e*P P **20 57 33.1 +2.3**
PDA *i* IAmb IAmb 20 57 37.4
comp=Z,176nm,1.7s
POVGA Lagoa 41.28 53 *e*P P **20 57 33.9 +2.6**
CMLA Cha da Macela 41.33 53 *e*P P **20 57 31.5 -0.3**
CMLA *i* IAmb IAmb 20 57 36.5
comp=Z,70nm,1.5s
CMLA Cha da Macela 41.33 53 P P **20 57 35.6 +3.8**
PGRON Lagoa das Cont 41.45 53 *e*P P **20 57 35.3 +2.5**
PGRON *i* IAmb IAmb 20 57 38.3
comp=Z,76nm,1.4s
PSMN Pico do Norte, 41.47 54 *e*P P **20 57 32.8 -0.1**
PSMN *i* IAmb IAmb 20 57 37.6
comp=Z,46nm,1.3s
BART Pico Bartolome 41.60 53 *e*P P **20 57 36.7 +2.6**
BART *i* IAmb IAmb 20 57 39.4
comp=Z,54nm,1.4s
K22A Casper 41.65 315 IAMs_20 IAMs_20 21 16 10.9
comp=Z,2µm,19.0s
SACV Santiago Islan 41.66 87 P P **20 57 32.5 -2.3**
SACV IAmb IAmb 20 57 41.3
comp=Z,31nm,0.8s
SALTA 41.76 179 P P **20 57 37.6 +1.6**
PV22 Blue Mesa, Par 41.79 308 P P **20 57 36.0 +0.3**
O20A White River Ci 41.90 311 IAMs_20 IAMs_20 21 18 04.1
comp=Z,2µm,18.0s
TUC Tucson 41.92 299 IAMs_20 IAMs_20 21 17 33.1
comp=Z,1µm,21.0s
TUC Tucson 41.92 299 P P **20 57 38.5 +1.7**
AMBA Amambai (Brazi 42.14 163 *e*P P **20 57 40.9 +2.5**
PB14 IPOC Station P 42.29 185 P P **20 57 38.8 -1.2**
PB14 IAmb IAmb 20 57 45.8
comp=Z,31nm,0.9s
PB14 IPOC Station P 42.29 185 P P **20 57 41.9 +1.9**
SRIG Santa Rosalia 42.64 291 P P **20 57 40.6 -2.0**
SRIG IAmb IAmb 20 57 45.8
comp=Z,68nm,1.1s
SRIG Santa Rosalia 42.64 291 P P **20 57 44.4 +1.8**
CANS Sao Roque de M 42.91 151 *e*P P **20 57 46.9 +2.0**
DGMT Dagmar 42.96 324 IAMs_20 IAMs_20 21 16 30.2
comp=Z,2µm,19.0s
LAO LASA Array 43.24 321 P P **20 57 45.7 -1.6**
LAO IAmb IAmb 20 57 51.0
comp=Z,53nm,1.4s
LAO IAMs_20 IAMs_20 21 16 40.8
comp=Z,2µm,20.0s
BW06 Boulder Array 43.75 314 P P **20 57 49.9 -1.8**
BW06 IAMs_20 IAMs_20 21 18 16.9
comp=Z,2µm,19.0s
PDAR Pinedale Array 43.75 314 P P **20 57 52.4 +0.7**
comp=Z,5.8nm,0.9s,baz=120,slow=8.8,SNR=27
PDAR ScP **ScP 21 03 31.6 +0.7**
comp=Z,3.1nm,1.0s,baz=104,slow=6.3,SNR=8.7
PDAR LR LR 21 18 28.4
comp=Z,1µm,18.1s,baz=113,slow=39
comp=Z,5.8nm,0.9s
PDAR Pinedale Array 43.75 314 P P **20 57 52.1 +0.4**
PDAR ScP **21 03 31.0 0.0**
BSUT Blindstream Ca 43.85 310 IAmb IAmb 20 57 57.4
comp=Z,36nm,1.1s
PIX Pinacate 44.07 297 IAmb IAmb 20 57 57.3
comp=Z,58nm,1.0s
AC02 Maricunga 44.41 183 P P **20 57 55.2 -2.1**
RLMT Red Lodge 44.46 317 IAMs_20 IAMs_20 21 17 44.2
comp=Z,2µm,19.0s
HWUT Hardware Ranch 44.77 312 IAMs_20 IAMs_20 21 18 33.8
comp=Z,2µm,19.0s
HWUT Hardware Ranch 44.77 312 P P **20 58 00.9 +1.2**
LOHW Long Hollow 44.77 315 IAMs_20 IAMs_20 21 18 41.8
comp=Z,1µm,18.0s
AHID Auburn Hatcher 44.82 313 IAMs_20 IAMs_20 21 19 21.0
comp=Z,2µm,19.0s
AHID Auburn Hatcher 44.82 313 P P **20 58 01.0 +0.8**
SNOW Snow King Moun 44.82 314 IAMs_20 IAMs_20 21 18 53.1
comp=Z,1µm,21.0s
CPUP Villa Florida 44.85 168 P P **20 58 01.6 +1.4**
comp=Z,20nm,0.8s,baz=346,slow=8.9,SNR=42
CPUP LR LR 21 17 42.4
comp=Z,2µm,18.3s,baz=351,slow=37
comp=Z,20nm,0.8s
CPUP Villa Florida 44.85 168 P P **20 57 58.2 -2.1**
CPUP IAmb IAmb 20 58 04.2
comp=Z,25nm,0.8s
CPUP Villa Florida 44.85 168 P P **20 57 58.2 -2.1**
CPUP pmax pmax
comp=Z,25nm,0.9s
CPUP Villa Florida 44.85 168 P P **20 58 01.9 +1.6**
MOOW Moose Ponds 44.92 315 IAMs_20 IAMs_20 21 18 08.6
comp=Z,1µm,18.0s
VAO Valinhos 45.03 153 P P **20 58 00.1 -1.7**
VAO IAmb IAmb 20 58 29.4
comp=Z,43nm,1.4s
DUG Dugway, Tooele 45.26 309 IAMs_20 IAMs_20 21 18 54.9
comp=Z,2µm,20.0s
DUG Dugway, Tooele 45.26 309 P P **20 58 05.5 +1.9**
SPB Sao Paulo 45.36 154 P P **20 58 01.2 -3.1**
FCC Fort Churchill 45.47 341 IAmb IAmb 20 58 08.0
comp=Z,52nm,1.2s
FFC Flin Flon 45.55 332 P P **20 58 04.1 -1.5**
FFC Flin Flon 45.55 332 IAMs_20 IAMs_20 21 17 47.3
comp=Z,1µm,18.0s
FFC Flin Flon 45.55 332 P P **20 58 04.1 -1.5**
FFC pmax pmax
comp=Z,13nm,1.1s
FFC MLR MLR
comp=Z,2µm,18.0s
FFC Flin Flon 45.55 332 P P **20 58 05.7 +0.1**
BGU Big Grassy Mou 45.62 310 IAmb IAmb 20 58 10.5
comp=Z,37nm,1.2s
FRB Frobisher Bay 45.93 359 P P **20 58 09.9 +1.5**
NRS Narsarsuaq 45.96 14 P P **20 58 07.6 -1.0**
NRS IAMs_20 IAMs_20 21 19 07.6
comp=Z,2µm,20.0s
NRS Narsarsuaq 45.96 14 P P **20 58 07.6 -1.0**
NRS pmax pmax
comp=Z,128nm,1.4s
NRS MLR MLR
comp=Z,2µm,20.0s
NRS Narsarsuaq 45.96 14 P P **20 58 11.2 +2.6**
NRS Narsarsuaq 45.96 14 *i* P P 20 58 13.7 +5.0
NRS IAmb IAmb 20 58 22.9
comp=Z,170nm,1.6s
EGMT Eagleton 45.99 321 IAMs_20 IAMs_20 21 18 27.4
comp=Z,2µm,19.0s
BOZ Bozeman (W) 46.18 317 IAMs_20 IAMs_20 21 18 29.7
comp=Z,2µm,20.0s
DLMT Dillon 46.73 316 IAMs_20 IAMs_20 21 19 10.2
comp=Z,1µm,20.0s
PFO Pinyon Flats O 46.83 300 LR LR 21 21 23.0
comp=Z,802nm,18.2s,baz=94,slow=41
PFO Pinyon Flats O 46.83 300 *d* P P **20 58 17.7 +1.6**
PFO pmax pmax
comp=Z,74nm,2.3s
BAR Barrett 46.90 298 IAMs_20 IAMs_20 21 21 20.9
comp=Z,1µm,20.0s
ITAB Concordia 47.03 162 P P **20 58 14.7 -2.7**
PMOZ Porto Moniz, M 47.04 62 *e*LR LR 21 11 26.0
PMOZ *i* IAMs_20 IAMs_20 21 13 50.0
comp=Z,1µm,20.0s
TPNV Topopah Spring 47.15 304 IAMs_20 IAMs_20 21 20 40.4
comp=Z,1µm,19.0s
ELK Elko 47.18 309 LR LR 21 20 36.1
comp=Z,2µm,19.1s,baz=109,slow=39
ELK Elko 47.18 309 IAMs_20 IAMs_20 21 20 14.9
comp=Z,2µm,20.0s
HLID Hailey 47.37 313 IAMs_20 IAMs_20 21 19 10.6
comp=Z,2µm,20.0s
HLID Hailey 47.37 313 P P **20 58 21.9 +1.6**
FURC Furnace Creek, 47.56 303 IAMs_20 IAMs_20 21 20 21.2
comp=Z,2µm,20.0s
CO01 Juntas del Tor 47.58 184 P P **20 58 21.6 -0.4**
MFID Camas Ranch 48.31 313 IAMs_20 IAMs_20 21 19 50.5
comp=Z,2µm,20.0s
CO03 El Pedregal 48.48 184 P P **20 58 30.6 +1.8**
CWC Cottonwood Cre 48.52 303 IAMs_20 IAMs_20 21 21 11.8
comp=Z,2µm,19.0s
TIN Tinemaha, Big 48.73 304 IAMs_20 IAMs_20 21 20 58.3
comp=Z,2µm,19.0s
CO02 Combarbal 48.86 185 P P **20 58 30.8 -0.9**
PLID Pearl Lake 48.91 315 IAMs_20 IAMs_20 21 21 11.3
comp=Z,2µm,19.0s
NVAR Mina Array Bea 49.01 306 P P **20 58 34.5 +1.4**
comp=Z,22nm,1.1s,baz=108,slow=5.7,SNR=47
NVAR ScP **ScP 21 03 54.6 +1.7**
comp=Z,11nm,1.1s,baz=119,slow=5.1,SNR=20
NVAR LR LR 21 21 11.7
comp=Z,2µm,20.0s,baz=100,slow=39
comp=Z,22nm,1.1s
NVAR Mina Array Bea 49.01 306 P P **20 58 35.0 +1.9**
ZON Zonda 49.08 182 P P **20 58 32.4 -1.0**
ZON IAmb IAmb 20 58 45.0
comp=Z,24nm,1.1s
ZON Zonda 49.08 182 P P **20 58 32.4 -1.0**
ZON pmax pmax
comp=Z,24nm,1.1s
ZON Zonda 49.08 182 P P **20 58 33.8 +0.5**
CFA Coronel Fontan 49.13 181 LR LR 21 23 07.2
comp=Z,490nm,18.5s,baz=25,slow=41
VES Vestal, Richgr 49.25 302 IAMs_20 IAMs_20 21 22 12.0
comp=Z,1µm,18.0s
PSAL Palomas, Salto 49.42 169 *e*P P **20 58 38.7 +2.8**
CPSB Cacapava Do Su 49.67 165 P P **20 58 36.8 -0.9**
CPSB IAmb IAmb 20 58 41.5
comp=Z,24nm,0.9s
CPSB Cacapava Do Su 49.67 165 *e*P P **20 58 40.7 +3.0**
CPSB Cacapava Do Su 49.67 165 P P **20 58 41.0 +3.2**
CO04 Los Peladeros 49.70 184 P P **20 58 40.0 +1.7**
BMO Blue Mountains 49.73 314 IAMs_20 IAMs_20 21 20 36.1
comp=Z,2µm,20.0s
WVOR Wild Horse Val 50.06 311 IAMs_20 IAMs_20 21 21 59.0
comp=Z,2µm,20.0s
WVOR Wild Horse Val 50.06 311 P P **20 58 42.5 +1.6**
SFJD Kangerlussuaq 50.32 8 LR LR 21 17 11.8
comp=Z,661nm,21.8s,baz=199,slow=33
VA03 San Esteban 50.38 184 P P **20 58 42.1 -1.1**
VA03 IAmb IAmb 20 58 50.8
comp=Z,50nm,1.1s
VA03 San Esteban 50.38 184 P P **20 58 45.7 +2.4**
PKD Bear Valley Ra 50.43 302 IAmb IAmb 20 58 51.1
comp=Z,36nm,1.4s
CMB Columbia Colle 50.57 305 IAMs_20 IAMs_20 21 22 50.9
comp=Z,1µm,20.0s
NEW Newport 50.64 318 P P **20 58 45.7 +0.6**
comp=Z,7.7nm,0.6s,baz=123,slow=9.2,SNR=3.5
NEW LR LR 21 21 40.3
comp=Z,2µm,18.6s,baz=109,slow=38
comp=Z,7.7nm,0.6s
NEW Newport 50.64 318 IAmb IAmb 20 58 52.6
comp=Z,17nm,0.8s
NEW Newport 50.64 318 P P **20 58 45.8 +0.6**
PEL Peldehue 50.77 184 IAMs_20 IAMs_20 21 23 54.3
comp=Z,991nm,20.0s
PEL Peldehue 50.77 184 P P **20 58 47.8 +1.7**
WELL Weller Preserv 50.89 305 IAMs_20 IAMs_20 21 23 02.4
comp=Z,1µm,19.0s
HULI Fort Hunter Li 51.00 302 IAMs_20 IAMs_20 21 23 17.5
comp=Z,1µm,18.0s
MT08 Bocatoma Ro 51.03 183 P P **20 58 46.6 -1.7**
MT08 IAmb IAmb 20 58 56.7
comp=Z,25nm,0.9s
MT16 CCHEN 51.04 184 IAMs_20 IAMs_20 21 23 57.6
comp=Z,1µm,20.0s
MHC Mount Hamilton 51.47 304 IAMs_20 IAMs_20 21 22 43.8
comp=Z,2µm,20.0s
HAWA Hanford 51.66 316 IAMs_20 IAMs_20 21 22 14.8
comp=Z,1µm,20.0s
HATC Hat Creek Radi 51.82 308 IAMs_20 IAMs_20 21 22 53.7
comp=Z,1µm,20.0s
SUTB Sutter Butte 51.83 306 IAMs_20 IAMs_20 21 22 32.0
comp=Z,2µm,22.0s
JRSC Jasper Ridge 51.95 304 IAMs_20 IAMs_20 21 23 17.5
comp=Z,1µm,19.0s
O03E Paynes Creek 51.99 308 IAmb IAmb 20 59 11.8
comp=Z,36nm,1.2s
O03E IAMs_20 IAMs_20 21 25 06.4
comp=Z,1µm,20.0s
CVS Carmenet Viney 52.23 305 IAMs_20 IAMs_20 21 24 01.8
comp=Z,1µm,18.0s
ILULI Ilulissat 52.35 7 P P **20 58 56.2 -1.3**
ILULI Ilulissat 52.35 7 P P **20 58 56.2 -1.3**
ILULI pmax pmax
comp=Z,89nm,1.5s
VA04 Juan Fernndez 52.38 192 P P **20 58 56.9 -1.2**
BO02 Sierra Bellavi 52.41 184 IAMs_20 IAMs_20 21 23 08.9
comp=Z,1µm,22.0s
BO02 Sierra Bellavi 52.41 184 P P **20 59 00.1 +1.7**
MCCM Marconi Confer 52.54 305 IAMs_20 IAMs_20 21 23 08.0
comp=Z,2µm,20.0s
FARB Farallon Islan 52.58 304 IAMs_20 IAMs_20 21 23 09.2
comp=Z,1µm,20.0s
O02D Mt. Diablo Mer 52.72 307 IAMs_20 IAMs_20 21 23 14.7
comp=Z,1µm,20.0s
N02D Trinity Center 52.78 308 IAMs_20 IAMs_20 21 25 11.0
comp=Z,1µm,18.0s
HOPS Hopland Field 52.79 306 IAMs_20 IAMs_20 21 22 57.5
comp=Z,2µm,20.0s
YBH Yreka Blue Hor 52.90 309 P P **20 59 01.1 -1.0**
comp=Z,8.0nm,0.9s,baz=84,slow=2.2,SNR=17
YBH ScP **ScP 21 04 09.8 +0.3**
comp=Z,3.2nm,1.1s,baz=122,slow=4.1,SNR=4.3
YBH LR LR 21 25 23.3
comp=Z,1µm,18.6s,baz=107,slow=40
comp=Z,8.0nm,0.9s
M02C Callahan 52.95 309 IAMs_20 IAMs_20 21 23 31.6
comp=Z,1µm,21.0s
BBOR Butler Butte 53.07 311 IAmb IAmb 20 59 13.6
comp=Z,21nm,1.0s
KHBM Hayfork Bally 53.12 308 IAMs_20 IAMs_20 21 22 41.1
comp=Z,1µm,21.0s
KCPM Cahto Peak 53.26 307 IAMs_20 IAMs_20 21 21 43.0

comp=Z,2µm,22.0s
ML02 Panimavida 53.42 184 IAMs_20 IAMs_20 21 25 52.7
comp=Z,1µm,19.0s
ML02 Panimavida 53.42 184 P **P** **20 59 07.9 +2.2**
JCC Jacoby Creek, 53.75 308 IAMs_20 IAMs_20 21 26 00.8
comp=Z,1µm,18.0s
COR Corvallis 53.83 313 IAMs_20 IAMs_20 21 24 25.7
comp=Z,928nm,20.0s
COR Corvallis 53.83 313 P **P** **20 59 11.5 +2.7**
BI02 San Fabin de 54.31 184 IAMs_20 IAMs_20 21 26 48.1
comp=Z,1µm,18.0s
PSBE So Bento 54.50 54 *i* IAmb IAmb 20 59 18.8
comp=Z,81nm,1.6s
PLOUS Minas do Lousa 54.66 56 *i* IAmb IAmb 20 59 20.1
comp=Z,42nm,1.4s
MOE Montemor 54.75 55 *e*P **P** **20 59 18.4 +2.7**
MOE *i* IAmb IAmb 20 59 20.6
comp=Z,32nm,1.2s
NLWA Neilton Lookou 54.78 316 IAMs_20 IAMs_20 21 24 04.5
comp=Z,1µm,19.0s
PCAS Casmilo, Conde 54.78 53 *e*P **P** **20 59 18.7 +2.9**
MESJ Messejana 54.80 56 *e*P **P** **20 59 18.9 +2.9**
MESJ *i* IAmb IAmb 20 59 21.1
comp=Z,43nm,1.7s
PTO Porto 54.83 52 *e*P **P** **20 59 19.5 +3.4**
PMTG Montargil 54.90 54 *e*P **P** **20 59 18.8 +2.1**
PMTG *i* IAmb IAmb 20 59 21.7
comp=Z,38nm,1.7s
PCVE Castro Verde 54.93 56 *e*P **P** **20 59 19.4 +2.4**
PCVE *i* IAmb IAmb 20 59 22.6
comp=Z,31nm,2.5s
PBDV Barranco-do-Ve 54.99 57 *i* IAmb IAmb 20 59 23.1
comp=Z,69nm,2.0s
PSARD Sardoal 54.99 54 *e*P **P** **20 59 20.7 +3.3**
PSARD *i* IAmb IAmb 20 59 24.2
comp=Z,46nm,1.4s
EVO Evora 55.02 55 *i* IAmb IAmb 20 59 24.6
comp=Z,30nm,1.5s
PARRA Arraiolos 55.02 55 *e*P **P** **20 59 19.9 +2.3**
PARRA *i* IAmb IAmb 20 59 22.4
comp=Z,41nm,1.5s
PBEJ Beja 55.09 56 *e*P **P** **20 59 21.3 +3.2**
PBEJ *i* IAmb IAmb 20 59 23.2
comp=Z,38nm,1.6s
PVAQ Vaqueiros 55.17 57 *e*P **P** **20 59 21.5 +2.8**
PVAQ *i* IAmb IAmb 20 59 24.3
comp=Z,42nm,1.6s
PVAQ *e*S S 21 07 12.9 +11
PVAQ *e*LQ LQ 21 13 21.6
PVAQ *e*LR LR 21 15 19.0
PVAQ *i* IAMs_20 IAMs_20 21 17 48.7
comp=Z,2µm,22.0s
PGAV Gavieira, Arco 55.17 51 *e*P **P** **20 59 21.9 +3.1**
PGAV *e*S **S** **21 07 06.9 +4.3**
PGAV *e*LQ LQ 21 13 39.2
PGAV *e*LR LR 21 15 20.5
PGAV *i* IAMs_20 IAMs_20 21 18 40.4
comp=Z,942nm,20.0s
AVE Averroes 55.26 62 IAMs_20 IAMs_20 21 17 33.1
comp=Z,2µm,21.0s
PVIS Viseu 55.31 52 *e*P **P** **20 59 21.5 +1.8**
YKAW1 Yellowknife Wh 55.39 335 IAmb IAmb 20 59 40.5
comp=Z,23nm,1.4s
YKA Yellowknife Ar 55.44 335 P **P** **20 59 19.1 -1.1**
comp=Z,3.3nm,0.4s,baz=116,slow=7.2,SNR=22
YKA LR LR 21 23 32.5
comp=Z,1µm,20.7s,baz=118,slow=37
comp=Z,3.3nm,0.4s
YKA Yellowknife Ar 55.44 335 P **P** **20 59 19.7 -0.4**
YKA Yellowknife Ar 55.44 335 *i* P **P** **20 59 19.8 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.4s
POLO Lamas de Olo 55.46 52 *e*P **P** **20 59 22.4 +1.6**
PVRL Vila Real 55.51 52 *e*P **P** **20 59 24.3 +3.2**
PCBR Castelo Branco 55.54 54 *e*P **P** **20 59 24.2 +2.9**
PCBR *i* IAmb IAmb 20 59 26.1
comp=Z,38nm,1.7s
MTE Manteigas 55.54 53 IAMs_20 IAMs_20 21 18 02.2
comp=Z,2µm,21.0s
MTE Manteigas 55.54 53 *e*P **P** **20 59 24.8 +3.3**
MTE *e*S **S** **21 07 08.7 +1.2**
MTE *e*LQ LQ 21 13 15.3
MTE *e*LR LR 21 15 25.3
MTE *i* IAMs_20 IAMs_20 21 18 13.6
comp=Z,1µm,22.0s
MTE Manteigas 55.54 53 P **P** **20 59 24.8 +3.3**
PMRV Marv??o 55.57 54 *e*P **P** **20 59 24.1 +2.5**
PMRV *i* IAmb IAmb 20 59 26.1
comp=Z,30nm,1.9s
TRQA Tornquist 55.75 175 P **P** **20 59 21.2 -1.5**
TRQA IAMs_20 IAMs_20 21 26 04.1
comp=Z,1µm,18.0s
TRQA Tornquist 55.75 175 P **P** **20 59 21.2 -1.5**
TRQA pmax pmax
comp=Z,6.0nm,0.9s
TRQA MLR MLR
comp=Z,2µm,18.0s
PBAR Barrancos 55.75 56 *e*P **P** **20 59 25.7 +2.8**
PBAR *i* IAmb IAmb 20 59 29.5
comp=Z,36nm,2.7s
MVO Moncorvo 56.01 52 *e*P **P** **20 59 27.4 +2.7**
MVO *i* IAmb IAmb 20 59 29.5
comp=Z,44nm,1.3s
MVO *e*LR LR 21 15 48.5
MVO *i* IAMs_20 IAMs_20 21 18 27.8
comp=Z,1µm,22.0s
PBRG Braganca 56.29 51 *e*P **P** **20 59 29.4 +2.6**
PBRG *i* IAmb IAmb 20 59 32.9
comp=Z,32nm,2.5s
SUMG Summit 57.20 10 P **P** **20 59 32.8 -0.3**
SUMG IAMs_20 IAMs_20 21 21 02.5
comp=Z,1µm,21.0s
SUMG Summit 57.20 10 P **P** **20 59 32.8 -0.3**
SUMG pmax pmax
comp=Z,95nm,1.5s
SUMG MLR MLR
comp=Z,1µm,21.0s
SUMG Summit 57.20 10 P **P** **20 59 35.5 +2.4**
SUMG Summit 57.20 10 *i* P **P** **20 59 35.0 +1.9**
SUMG IAmb IAmb 20 59 40.5
comp=Z,228nm,2.0s
GO06 Curarrehue 57.23 184 IAMs_20 IAMs_20 21 28 34.3
comp=Z,904nm,19.0s
GO06 Curarrehue 57.23 184 P **P** **20 59 35.0 +1.7**
MDT Midelt 57.62 62 LR LR 21 19 09.5
comp=Z,2µm,21.7s,baz=291,slow=31
PAB San Pablo 57.93 54 IAMs_20 IAMs_20 21 18 50.4
comp=Z,861nm,21.0s
PAB San Pablo 57.93 54 P **P** **20 59 39.4 +1.0**
ESDC Sonseca Array 58.23 54 P **P** **20 59 42.1 +1.6**
comp=Z,19nm,0.8s,baz=268,slow=6.0,SNR=64
ESDC LR LR 21 19 01.1
comp=Z,955nm,21.8s,baz=257,slow=30
comp=Z,19nm,0.8s
PLCA Paso Flores 58.31 183 P **P** **20 59 42.6 +1.7**
comp=Z,10nm,0.8s,baz=357,slow=6.7,SNR=17
PLCA LR LR 21 25 52.6
comp=Z,585nm,21.9s,baz=25,slow=37
comp=Z,10nm,0.8s
PLCA Paso Flores 58.31 183 P **P** **20 59 40.8 -0.1**
PLCA Paso Flores 58.31 183 P **P** **20 59 40.8 -0.1**
PLCA pmax pmax
comp=Z,12nm,0.9s
PLCA Paso Flores 58.31 183 *e*P **P** **20 59 42.1 +1.2**
PLCA Paso Flores 58.31 183 P **P** **20 59 41.3 +0.4**
DSB Dublin 58.43 38 IAMs_20 IAMs_20 21 21 51.5
comp=Z,1µm,21.0s
KOTAN Kotaneelee Air 58.51 330 P **P** **20 59 41.7 -0.3**
baz=110
TULEG Thule 58.78 360 IAMs_20 IAMs_20 21 21 31.2
comp=Z,1µm,19.0s
UCM Universidad Co 58.81 53 P **P** **20 59 48.1 +3.6**
RES Resolute Bay 58.90 352 P **P** **20 59 45.5 +1.0**
comp=Z,3.1nm,0.6s,baz=165,slow=7.4,SNR=4.5
RES LR LR 21 26 05.7
comp=Z,953nm,19.0s,baz=147,slow=37
comp=Z,3.1nm,0.6s
RES Resolute Bay 58.90 352 IAmb IAmb 21 01 08.7
comp=Z,37nm,1.4s
SCO Scoresbysund 59.19 16 IAMs_20 IAMs_20 21 23 22.3
comp=Z,897nm,18.0s
SCO Scoresbysund 59.19 16 P **P** **20 59 48.8 +2.2**
LIRD Liard River Hi 59.25 329 P **P** **20 59 46.9 -0.3**
baz=108
WRGLY Wrigley 59.39 334 P **P** **20 59 48.0 -0.1**
baz=113

NEEM North Greenlan 60.22 4 *i* P **P** **20 59 51.4 -2.5**
NEEM IAmb IAmb 21 00 02.3
comp=Z,308nm,2.8s
RPN Rapa Nui 60.66 224 LR LR 21 22 14.8
comp=Z,451nm,19.9s,baz=79,slow=32
ESK Eskdalemuir 60.68 36 P **P** **20 59 54.7 -2.4**
ESK IAmb IAmb 21 00 08.1
comp=Z,32nm,1.1s
ESK Eskdalemuir 60.68 36 P **P** **20 59 54.7 -2.4**
ESK pmax pmax
comp=Z,33nm,1.2s
EKB Eskdalemuir 60.70 36 P **P** **20 59 55.0 -2.1**
EKA Eskdalemuir Ar 60.71 36 P **P** **20 59 58.3 +1.0**
comp=Z,7.4nm,0.7s,baz=280,slow=5.5,SNR=16
EKA LR LR 21 20 53.1
comp=Z,366nm,21.9s,baz=256,slow=31
comp=Z,7.4nm,0.7s
EKA Eskdalemuir Ar 60.71 36 P **P** **20 59 55.3 -2.0**
EKA pmax pmax
comp=Z,41nm,1.5s
T35M Bob Quinn 60.73 326 IAMs_20 IAMs_20 21 27 03.9
comp=Z,1µm,18.0s
T35M Bob Quinn 60.73 326 P **P** **20 59 57.1 -0.3**
baz=103
WTLY Watson Lake, Y 60.76 330 P **P** **20 59 57.8 +0.2**
baz=106
LL02 Futaleuf 60.84 184 P **P** **20 59 56.4 -1.8**
LL02 Futaleuf 60.84 184 P **P** **20 59 59.4 +1.2**
TGTN Hyland Airport 60.92 331 P **P** **20 59 59.1 +0.4**
baz=107
DLBC Dease Lake 60.95 328 P **P** **20 59 59.1 +0.2**
comp=Z,10.0nm,1.0s,baz=98,slow=7.8,SNR=9.6
DLBC LR LR 21 27 51.9
comp=Z,911nm,18.4s,baz=84,slow=38
comp=Z,10.0nm,1.0s
DLBC Dease Lake 60.95 328 P **P** **20 59 58.8 -0.1**
baz=104,SNR=8.7
V35K Ketchikan 61.14 324 IAMs_20 IAMs_20 21 24 21.9
comp=Z,1µm,21.0s
V35K Ketchikan 61.14 324 P **P** **20 59 60.0 -0.2**
baz=101
S34M Telegraph Cree 61.40 327 IAMs_20 IAMs_20 21 28 07.5
comp=Z,1µm,19.0s
S34M Telegraph Cree 61.40 327 P **P** **21 00 01.8 -0.1**
baz=102
DBIC Dimbokro 61.50 92 P **P** **21 00 03.1 -0.2**
comp=Z,28nm,1.0s,baz=296,slow=7.3,SNR=12
DBIC LR LR 21 22 54.8
comp=Z,1µm,20.2s,baz=282,slow=32
comp=Z,28nm,1.0s
DBIC Dimbokro 61.50 92 P **P** **21 00 01.1 -2.2**
DBIC IAmb IAmb 21 00 07.7
comp=Z,23nm,0.8s
DBIC Dimbokro 61.50 92 P **P** **21 00 01.1 -2.2**
DBIC pmax pmax
comp=Z,23nm,0.9s
R33M Jennings River 61.65 329 IAMs_20 IAMs_20 21 28 60.0
comp=Z,1µm,18.0s
R33M Jennings River 61.65 329 P **P** **21 00 03.7 0.0**
baz=103
WRAK Wrangell Islan 61.75 325 P **P** **21 00 03.8 -0.4**
baz=100
DBG Daneborg 61.98 13 *i* P **P** **21 00 04.3 -1.2**
DBG IAmb IAmb 21 00 08.8
comp=Z,24nm,1.2s
CRAG Craig 62.01 324 P **P** **21 00 05.4 -0.6**
baz=99
C36M Paulatuk 62.11 340 P **P** **21 00 06.7 +0.2**
baz=115
U33K Whale Pass 62.12 325 IAMs_20 IAMs_20 21 28 40.7
comp=Z,1µm,19.0s
U33K Whale Pass 62.12 325 P **P** **21 00 06.9 +0.2**
baz=100
T33K Petersburg 62.15 325 P **P** **21 00 07.2 +0.3**
baz=100
Q32M Nakina River 62.20 328 P **P** **21 00 07.2 -0.3**
baz=102
MMPY Sheldon Lake, 62.57 332 P **P** **21 00 09.8 0.0**
baz=105
P33M Teslin, Yukon 62.74 329 IAMs_20 IAMs_20 21 30 55.9
comp=Z,788nm,19.0s
P33M Teslin, Yukon 62.74 329 P **P** **21 00 10.9 -0.1**
baz=102
P32M Atlin 63.06 328 IAMs_20 IAMs_20 21 31 16.3
comp=Z,1µm,18.0s
P32M Atlin 63.06 328 P **P** **21 00 13.1 +0.1**
baz=101
N32M Quiet Lake 63.07 330 P **P** **21 00 13.2 +0.1**
baz=102
S32K Killisnoo 63.13 326 IAMs_20 IAMs_20 21 29 31.4
comp=Z,1µm,19.0s
S32K Killisnoo 63.13 326 P **P** **21 00 13.9 +0.4**
baz=99
CLF Chambon-Foret 63.16 45 P **P** **21 00 16.2 +2.3**
JMI Jan Mayen 63.16 18 *e*S **S** **21 08 43.9 -1.0**
COYC Coyhaique 63.23 184 P **P** **21 00 15.3 +1.2**
R32K Eaglecrest 63.23 327 P **P** **21 00 14.1 -0.1**
baz=100
JMIC Jan Mayen 63.25 18 LR LR 21 24 59.3
comp=Z,386nm,19.5s,baz=243,slow=34
JMIC Jan Mayen 63.25 18 *e*S **S** **21 08 45.5 -0.6**
JNW Jan Mayen West 63.29 18 *e*S **S** **21 08 47.9 +1.4**
JNE Jan Mayen East 63.32 18 *e*S **S** **21 08 46.6 -0.2**
EJON La Jonquera 63.47 51 P **P** **21 00 19.7 +3.6**
A36M Sachs Harbour 63.60 343 P **P** **21 00 16.2 -0.1**
baz=115
DAG Danmarks Havn 63.81 11 P **P** **21 00 19.0 +1.3**
DAG Danmarks Havn 63.81 11 *i* P **P** **21 00 18.0 +0.3**
DAG IAmb IAmb 21 00 24.5
comp=Z,19nm,1.1s
WHY Whitehorse 63.83 329 P **P** **21 00 18.2 -0.1**
baz=100
SKAG Skagway 63.84 328 P **P** **21 00 18.7 +0.6**
baz=99
M31M Drury Creek, Y 63.90 331 IAMs_20 IAMs_20 21 30 32.3
comp=Z,1µm,22.0s
M31M Drury Creek, Y 63.90 331 P **P** **21 00 18.6 0.0**
baz=102
S31K Pelican 64.08 326 P **P** **21 00 19.6 -0.1**
baz=98
N31M Braeburn, Yuko 64.41 330 IAMs_20 IAMs_20 21 29 28.9
comp=Z,1µm,20.0s
N31M Braeburn, Yuko 64.41 330 P **P** **21 00 21.8 -0.1**
baz=100
O30N Mendenhall 64.44 329 IAMs_20 IAMs_20 21 33 28.7
comp=Z,951nm,18.0s
O30N Mendenhall 64.44 329 P **P** **21 00 21.8 -0.3**
baz=99
H31M Peel River 64.66 335 IAmb IAmb 21 00 33.4
comp=Z,15nm,1.1s
H31M IAMs_20 IAMs_20 21 29 12.2
comp=Z,1µm,19.0s
H31M Peel River 64.66 335 P **P** **21 00 23.4 -0.1**
baz=103
UCC Uccle 64.67 42 *d*P **P** **21 00 25.1 +1.4**
UCC Uccle 64.67 42 P **P** **21 00 25.1 +1.4**
P30M Million Dollar 64.76 329 P **P** **21 00 23.8 -0.5**
baz=98
DOU Dourbes 64.79 42 *d*P **P** **21 00 24.7 +0.2**
comp=Z,9.1nm,1.2s
F31M Tsiigehtchic 64.83 337 IAMs_20 IAMs_20 21 28 24.5
comp=Z,1µm,20.0s
F31M Tsiigehtchic 64.83 337 P **P** **21 00 24.2 -0.3**
baz=105
G31M Satah River 64.90 336 IAmb IAmb 21 00 57.2
comp=Z,25nm,1.2s
G31M Satah River 64.90 336 P **P** **21 00 24.6 -0.3**
baz=104
BMRD Maredsous 64.91 42 *d*P **P** **21 00 26.4 +1.1**
comp=Z,9.4nm,1.1s
INK Inuvik 64.97 338 P **P** **21 00 24.0 -1.4**
comp=Z,8.7nm,0.8s,baz=93,slow=8.4,SNR=7.8
INK LR LR 21 30 27.1
comp=Z,641nm,18.2s,baz=108,slow=38
comp=Z,8.7nm,0.8s
INK Inuvik 64.97 338 IAmb IAmb 21 00 29.9
comp=Z,13nm,0.8s
INK Inuvik 64.97 338 P **P** **21 00 24.5 -0.8**
baz=105
N30M Aishikik Lake 65.02 330 P **P** **21 00 25.4 -0.6**
baz=99
M30M Minto, Yukon 65.06 331 P **P** **21 00 26.6 +0.4**
M30M IAmb IAmb 21 00 36.2
comp=Z,16nm,1.2s
M30M IAMs_20 IAMs_20 21 29 37.2
comp=Z,1µm,18.0s
M30M Minto, Yukon 65.06 331 P **P** **21 00 25.8 -0.4**
baz=100,SNR=12
P29M Windy Craggy 65.08 328 IAMs_20 IAMs_20 21 30 11.9
comp=Z,1µm,22.0s
P29M Windy Craggy 65.08 328 P **P** **21 00 26.2 -0.1**
baz=97
HYT Haines Junctio 65.13 329 P **P** **21 00 26.1 -0.7**
baz=98
RCHB Rochefort 65.20 42 P **P** **21 00 29.9 +2.7**
J30M Hart River 65.22 334 P **P** **21 00 26.7 -0.5**
baz=101,SNR=17
I30M Mount Dempster 65.36 334 P **P** **21 00 28.0 -0.2**
baz=101,SNR=10
BEBN Eben Emael 65.50 42 *d*P **P** **21 00 30.5 +1.4**
comp=Z,25nm,0.9s
YUK6 Outpost Mounta 65.56 329 P **P** **21 00 29.2 -0.5**
baz=97
O29M Mount Kennedy 65.58 329 IAMs_20 IAMs_20 21 32 46.1
comp=Z,1µm,19.0s
O29M Mount Kennedy 65.58 329 P **P** **21 00 29.6 -0.1**
baz=97
K29M Barlow Dome 65.60 333 P **P** **21 00 29.1 -0.7**
baz=99,SNR=15
F30M Barrier River 65.63 337 IAmb IAmb 21 01 03.2
comp=Z,20nm,1.1s
F30M Barrier River 65.63 337 P **P** **21 00 28.7 -1.0**
baz=103
G30M tAoh Zraii Nji 65.66 336 P **P** **21 00 29.9 -0.1**
baz=102
HGN Heimansgroeve 65.66 42 P **P** **21 00 30.1 -0.1**
MEM Membach 65.71 42 *d*P **P** **21 00 31.5 +1.0**
comp=Z,19nm,1.0s
MEM Membach 65.71 42 P **P** **21 00 31.4 +0.9**
EPYK Eagle Plains 65.73 335 IAMs_20 IAMs_20 21 29 27.4
comp=Z,915nm,19.0s
EPYK Eagle Plains 65.73 335 P **P** **21 00 29.4 -1.0**
baz=101
YUK4 Talbot Arm 65.75 330 P **P** **21 00 28.9 -2.0**
baz=97,SNR=9.8
L29M L29M 65.75 332 IAMs_20 IAMs_20 21 30 58.4
comp=Z,1µm,18.0s
L29M L29M 65.75 332 P **P** **21 00 30.1 -0.6**
baz=98
WLF Walferdange 65.78 43 IAMs_20 IAMs_20 21 25 27.3
comp=Z,916nm,19.0s
WLF Walferdange 65.78 43 *d*P **P** **21 00 33.3 +2.2**
comp=Z,13nm,1.2s
WLF Walferdange 65.78 43 *e*P **P** **21 00 33.8 +2.7**
comp=Z,42nm,1.3s,baz=272,slow=6.2
WLF Walferdange 65.78 43 P **P** **21 00 34.1 +3.1**
KMY Karmoy 65.81 32 *e*S **S** **21 09 17.5 -0.4**
M29M Somme Creek 65.81 331 P **P** **21 00 31.0 -0.1**
baz=98,SNR=7.6
ASK Askoy 65.92 31 *e*S **S** **21 09 16.7 -2.5**
BRWY Burwash Landin 65.94 330 P **P** **21 00 31.3 -0.6**
baz=97
BER Bergen 65.97 31 *e*S **S** **21 09 20.0 0.0**
FOO Floro 65.98 30 *e*S **S** **21 09 19.8 -0.1**
J29N Klondike Camp 66.00 333 P **P** **21 00 31.7 -0.6**
baz=99
TORD Torodi Ar. Bea 66.06 83 P **P** **21 00 33.0 -0.4**
comp=Z,16nm,1.0s,baz=288,slow=5.7,SNR=25
TORD LR LR 21 26 31.0
comp=Z,1µm,19.7s,baz=286,slow=33
comp=Z,16nm,1.0s
TORD Torodi Ar. Bea 66.06 83 P **P** **21 00 30.0 -3.4**
BNI Bardonecchia 66.18 48 IAMs_20 IAMs_20 21 31 22.3
comp=Z,608nm,18.0s
BNI Bardonecchia 66.18 48 P **P** **21 00 36.5 +2.7**
ACRG Accra 66.22 92 P **P** **21 00 32.2 -2.3**
ACRG Accra 66.22 92 P **P** **21 00 36.5 +2.0**
WTSB Winterswijk 66.23 40 P **P** **21 00 35.7 +1.9**
YUK8 Steele Glacier 66.28 330 P **P** **21 00 33.6 -0.8**
baz=96
G29M Pine Creek 66.34 336 P **P** **21 00 34.3 -0.1**
baz=100
H29M Whitestone 66.36 335 P **P** **21 00 35.4 +1.0**
H29M Whitestone 66.36 335 P **P** **21 00 33.7 -0.7**
baz=100,SNR=11
PINM Pinnacle 66.39 328 P **P** **21 00 33.9 -1.0**
baz=95
O28M Mount Upton 66.43 329 IAMs_20 IAMs_20 21 32 26.4
comp=Z,969nm,18.0s
O28M Mount Upton 66.43 329 P **P** **21 00 34.6 -0.8**
baz=96
ECH Echery 66.44 45 P **P** **21 00 34.7 -0.6**
ECH Echery 66.44 45 P **P** **21 00 34.7 -0.6**
ECH pmax pmax
comp=Z,47nm,1.5s
ECH MLR MLR
comp=Z,400nm,19.0s
ECH Echery 66.44 45 P **P** **21 00 37.5 +2.2**
BLS5 Blasjo 66.44 32 *e*P **P** **21 00 37.3 +2.2**
BLS5 IAmb IAmb 21 00 38.0
comp=Z,69nm,1.4s
BLS5 *e*S **S** **21 09 26.0 +0.2**
DAWY Dawson 66.45 333 P **P** **21 00 34.6 -0.6**
baz=98,SNR=6.0
HYA Hoyanger 66.47 30 *e*P **P** **21 00 37.4 +2.1**
HYA IAmb IAmb 21 00 38.7
comp=Z,58nm,1.5s
HYA *e*S **S** **21 09 26.9 +0.9**
BUG Bochum--Univer 66.52 41 *e*P **P** **21 00 38.4 +2.8**
comp=Z,45nm,1.4s,baz=272,slow=6.2
BUG Bochum--Univer 66.52 41 P **P** **21 00 37.0 +1.3**
E29M Blow River 66.57 338 IAMs_20 IAMs_20 21 28 11.6
comp=Z,1µm,22.0s
E29M Blow River 66.57 338 P **P** **21 00 35.6 -0.1**
baz=101
ODD1 Odda 66.57 32 *e*P **P** **21 00 37.4 +1.4**
SENIN Lac Senin/Sane 66.57 47 IAMs_20 IAMs_20 21 28 45.8
comp=Z,606nm,19.0s
YUK3 Moose Creek 66.66 330 P **P** **21 00 35.9 -0.8**
baz=96,SNR=6.7
IBBN Ibbenburen 66.83 40 *e*P **P** **21 00 40.5 +2.8**
comp=Z,89nm,1.7s,baz=272,slow=6.2
LOGN Logan Glacier 66.83 329 IAMs_20 IAMs_20 21 33 28.1
comp=Z,978nm,22.0s
I28M Miner Creek 66.87 334 IAMs_20 IAMs_20 21 31 57.8
comp=Z,1µm,20.0s
I28M Miner Creek 66.87 334 P **P** **21 00 36.9 -1.0**
baz=98,SNR=18
AKN Aaknes 66.96 29 *e*P **P** **21 00 39.4 +1.0**
AKN *e*S **S** **21 09 32.5 +0.5**
D28M Stokes Point 67.05 339 P **P** **21 00 37.7 -1.0**
baz=101
NOR Nord 67.06 7 *i* P **P** **21 00 40.5 +1.8**
NOR IAmb IAmb 21 00 44.7
comp=Z,42nm,1.7s
F28M Old Crow 67.17 337 P **P** **21 00 38.7 -0.9**
baz=99
BARN Barnard Glacie 67.17 329 IAMs_20 IAMs_20 21 33 31.0
comp=Z,967nm,20.0s
GRNC Granite Creek 67.19 329 IAMs_20 IAMs_20 21 32 58.6
comp=Z,953nm,18.0s
E28M Babbage River 67.20 338 IAMs_20 IAMs_20 21 29 52.3
comp=Z,783nm,21.0s
E28M Babbage River 67.20 338 P **P** **21 00 38.6 -1.2**
baz=100
KASTN Kahler Asten 67.24 41 *e*P **P** **21 00 42.9 +2.5**
comp=Z,29nm,1.5s,baz=272,slow=6.2
MOL Molde 67.25 29 *e*S **S** **21 09 35.2 -0.2**
TNS Taunus Mts 67.27 42 *e*P **P** **21 00 43.5 +2.9**
comp=Z,37nm,1.4s,baz=272,slow=6.2
TNS Taunus Mts 67.27 42 P **P** **21 00 43.0 +2.5**
BNALP Bannalp 67.33 46 P **P** **21 00 42.9 +1.7**
SLE Schleitheim 67.35 45 P **P** **21 00 43.3 +2.2**
M27K Edge Creek, AK 67.38 331 P **P** **21 00 40.5 -0.7**
baz=95,SNR=11
BCAR Beaver Creek A 67.40 332 P **P** **21 00 40.4 -0.8**
HOMB Homborsund 67.43 34 *e*S **S** **21 09 37.9 +0.2**
SKAR Skarsla 67.46 31 *e*P **P** **21 00 43.8 +2.2**
SKAR *e*S **S** **21 09 37.9 -0.3**
I27K Kandik River 67.59 334 IAmb IAmb 21 00 52.3
comp=Z,18nm,0.9s
I27K IAMs_20 IAMs_20 21 32 38.7
comp=Z,1µm,19.0s
I27K Kandik River 67.59 334 P **P** **21 00 41.3 -1.1**
baz=96
TAM Tamanrasset 67.61 72 P **P** **21 00 40.0 -3.4**
TAM IAMs_20 IAMs_20 21 25 55.8
comp=Z,862nm,21.0s
TAM Tamanrasset 67.61 72 P **P** **21 00 40.0 -3.4**
TAM pmax pmax
comp=Z,113nm,0.2s
TAM MLR MLR
comp=Z,900nm,21.0s

TAM Tamanrasset 67.61 72 P P 21 00 45.9 +2.5
K27K Chicken 67.62 333 IAMs_20 IAMs_20 21 28 16.7
comp=Z,1µm,19.0s
H27K Steamboat Moun 67.62 335 IAMs_20 IAMs_20 21 30 54.6
comp=Z,1µm,19.0s
H27K Steamboat Moun 67.62 335 P P 21 00 41.7 -0.8
baz=97,SNR=9.4
G27K Doyon Strip 67.74 336 IAmb IAmb 21 00 46.3
comp=Z,18nm,1.4s
G27K IAMs_20 IAMs_20 21 34 17.7
comp=Z,1µm,18.0s
G27K Doyon Strip 67.74 336 P P 21 00 42.3 -1.0
baz=97,SNR=6.8
STU Stuttgart 67.79 44 IAMs_20 IAMs_20 21 28 30.3
comp=Z,675nm,18.0s
STU Stuttgart 67.79 44 eP P 21 00 46.2 +2.4
comp=Z,126nm,1.6s,baz=272,slow=6.2
STU Stuttgart 67.79 44 P P 21 00 45.9 +2.1
RETH Rethem/Aller, 67.81 40 eP P 21 00 47.0 +3.2
comp=Z,80nm,1.6s,baz=272,slow=6.2
RETH Rethem/Aller, 67.81 40 P P 21 00 47.2 +3.4
D27M Malcolm River 67.82 338 IAMs_20 IAMs_20 21 28 55.4
comp=Z,1µm,22.0s
D27M Malcolm River 67.82 338 P P 21 00 42.9 -0.8
baz=98
CRQE Cirque 67.85 329 P P 21 00 42.9 -1.3
baz=93
MCARA McCarthy VSAT 67.85 330 P P 21 00 43.2 -0.8
baz=93,SNR=9.3
E27K Coleen River 67.89 337 IAMs_20 IAMs_20 21 30 53.6
comp=Z,981nm,18.0s
E27K Coleen River 67.89 337 P P 21 00 42.9 -1.3
baz=98
M26K Nabesna, AK 67.90 331 P P 21 00 43.6 -0.8
baz=94,SNR=6.8
TUE Stuetta 67.98 46 P P 21 00 46.3 +0.9
comp=Z,43nm,1.4s
TUE Stuetta 67.98 46 P P 21 00 48.7 +3.3
VRDI Verde Repeater 68.05 330 IAMs_20 IAMs_20 21 31 50.3
comp=Z,1µm,20.0s
KONO Kongsberg 68.06 32 IAMs_20 IAMs_20 21 31 40.8
comp=Z,803nm,19.0s
KONO Kongsberg 68.06 32‖ eP P 21 00 47.4 +2.1
KONO pmax pmax
comp=Z,23nm,1.1s
KONO Kongsberg 68.06 32 eS S 21 09 44.1 -1.0
L26K Log Cabin Wild 68.11 331 P P 21 00 45.0 -0.6
baz=94,SNR=7.2
BERG Berg Lake 68.13 329 IAMs_20 IAMs_20 21 29 24.5
comp=Z,1µm,20.0s
GTTG Gottingen 68.20 41 eP P 21 00 49.5 +3.1
comp=Z,32nm,1.5s,baz=272,slow=6.2
UBBA Unterbreizbach 68.24 42 eP P 21 00 49.4 +2.9
comp=Z,49nm,1.9s,baz=272,slow=6.2
UBBA Unterbreizbach 68.24 42 P P 21 00 49.2 +2.7
DAVA Damuels 68.31 46 i pP pP 21 00 48.7 0.0
comp=Z,30nm,1.3s,SNR=7.3
DAVOX Davos/Dischmat 68.33 46 LR LR 21 29 24.7
comp=Z,353nm,18.6s,baz=270,slow=35
BSEG Bad Segeberg 68.37 38 eP P 21 00 50.0 +2.6
comp=Z,36nm,1.8s,baz=272,slow=6.2
CLZ Clausthal 68.45 41 eP P 21 00 50.8 +2.8
comp=Z,48nm,1.6s,baz=272,slow=6.2
CLZ Clausthal 68.45 41 P P 21 00 50.5 +2.6
SCRK Sand Creek 68.45 332 IAMs_20 IAMs_20 21 32 39.8
comp=Z,987nm,19.0s
SCRK Sand Creek 68.45 332 P P 21 00 47.2 -0.7
baz=94,SNR=35
KAIM Kayak Island 68.47 328 P P 21 00 47.1 -0.8
baz=92
VSL Villasalto 68.53 54 IAMs_20 IAMs_20 21 28 38.1
comp=Z,937nm,20.0s
G26K Porcupine Rive 68.59 336 P P 21 00 47.9 -0.6
baz=95
BMRM Bremner River 68.60 329 P P 21 00 48.4 -0.3
baz=92
FUORN Ofenpass-Fuorn 68.61 46 P P 21 00 52.1 +2.7
N25K Chitina, Valde 68.62 330 P P 21 00 48.1 -0.8
baz=92
ASSE Asse, Remlinge 68.63 40 eP P 21 00 52.1 +3.2
comp=Z,66nm,1.4s,baz=272,slow=6.2
ASSE Asse, Remlinge 68.63 40 P P 21 00 51.3 +2.3
OSL Oslo 68.63 32 eS S 21 09 52.0 0.0
NC204 NORSAR Array S 68.69 30 P P 21 00 49.1 -0.3
F26K Sheenjek River 68.80 336 IAMs_20 IAMs_20 21 31 29.6
comp=Z,995nm,18.0s
F26K Sheenjek River 68.80 336 P P 21 00 49.2 -0.7
baz=95
RIDG Independent Ri 68.82 332 IAMs_20 IAMs_20 21 33 44.5
comp=Z,852nm,20.0s
RIDG Independent Ri 68.82 332 P P 21 00 48.9 -1.2
baz=93,SNR=16
C27K Jago River 68.83 339 IAMs_20 IAMs_20 21 35 11.2
comp=Z,778nm,20.0s
C27K Jago River 68.83 339 P P 21 00 48.8 -1.2
baz=96
RETA Reutte 68.89 45 epP P 21 00 51.5 +0.6
comp=Z,33nm,1.4s,SNR=8.4
FETA Feichten 68.90 46 i pP P 21 00 52.0 +0.9
comp=Z,17nm,0.7s,SNR=9.4
NB2 NORSAR Subarra 68.90 31 P P 21 00 52.2 +1.6
comp=Z,55nm,1.7s,baz=269,slow=6.5
NB2 NORSAR Subarra 68.90 31 P P 21 00 52.2 +1.6
NOA NORSAR Array B 68.90 31 P P 21 00 51.5 +0.9
comp=Z,9.1nm,1.0s,baz=269,slow=6.3,SNR=18
NOA LR LR 21 26 55.6
comp=Z,313nm,21.0s,baz=275,slow=32
comp=Z,9.1nm,1.0s
HARP HAARP 68.91 331 P P 21 00 49.8 -0.8
baz=92
KEST Kesra 68.93 58 P P 21 00 53.9 +2.5
comp=Z,18nm,0.8s,baz=323,slow=2.2,SNR=15
KEST LR LR 21 26 11.8
comp=Z,807nm,22.0s,baz=292,slow=32
comp=Z,18nm,0.8s
KEST Kesra 68.93 58 P P 21 00 48.5 -2.8
KEST IAmb IAmb 21 00 56.7
comp=Z,24nm,0.8s
NB201 NORSAR Array S 68.94 31 P P 21 00 49.5 -1.3
FLTG Flechtingen 68.97 40 eP P 21 00 53.5 +2.4
comp=Z,34nm,1.3s,baz=272,slow=6.2
NC303 NORSAR Array S 68.98 31 P P 21 00 49.9 -1.2
GORT1 Trebel 68.99 39 eP P 21 00 54.0 +2.8
comp=Z,31nm,1.4s,baz=272,slow=6.2
NC602 NORSAR Array S 69.06 31 eP P 21 00 53.9 +2.4
NC602 eS S 21 09 56.6 -0.4
GRFO Grafenberg 69.07 43 IAMs_20 IAMs_20 21 29 13.3
comp=Z,768nm,19.0s
GRA1 Grafenberg Arr 69.07 43 IAMs_20 IAMs_20 21 29 12.3
comp=Z,735nm,19.0s
GRA1 Grafenberg Arr 69.07 43 P P 21 00 53.7 +1.8
GRF Grafenberg Arr 69.07 43 eP P 21 00 54.6 +2.7
comp=Z,44nm,1.5s,baz=272,slow=6.2
GRF eL L 21 29 12.9
comp=Z,652nm,19.6s
J25K Salcha River, 69.09 333 P P 21 00 51.4 -0.4
baz=92,SNR=11
GRA3 Grafenberg Arr 69.13 43 P P 21 00 54.3 +2.0
MOTA Moosalm 69.14 45 i pP P 21 00 52.8 +0.2
comp=Z,17nm,1.0s,SNR=6.5
FYU Fort Yukon 69.14 335 IAMs_20 IAMs_20 21 31 50.7
comp=Z,1µm,19.0s
NC405 NORSAR Array S 69.15 31 P P 21 00 49.8 -2.3
NC405 IAmb IAmb 21 00 56.5
comp=Z,29nm,1.2s
EYAK Cordova Ski Ar 69.15 329 P P 21 00 51.0 -1.1
baz=91
DIV Divide 69.17 329 IAMs_20 IAMs_20 21 32 34.9
comp=Z,1µm,19.0s
PRP Porcupine Dome 69.20 334 IAmb IAmb 21 01 00.3
comp=Z,21nm,1.0s
PRP Porcupine Dome 69.20 334 P P 21 00 51.4 -1.2
baz=93,SNR=24
SQTA Sankt Quirin 69.22 46 i pP P 21 00 53.2 +0.2
comp=Z,14nm,0.7s,SNR=7.6
K24K Donnelly Dome 69.24 332 IAmb IAmb 21 01 21.3
comp=Z,25nm,0.9s
K24K IAMs_20 IAMs_20 21 31 26.5
comp=Z,1µm,20.0s
K24K Donnelly Dome 69.24 332 P P 21 00 50.8 -1.9
baz=92,SNR=9.2
KLU Klutina 69.25 330 P P 21 00 51.6 -1.3
baz=91
C26K Camden Bay 69.27 339 P P 21 00 51.4 -1.3
baz=95
MOX Moxa 69.28 42 eP P 21 00 55.7 +2.6
comp=Z,115nm,2.6s,baz=272,slow=6.2
MOX eL L 21 27 26.3
comp=Z,689nm,20.8s
MOX Moxa 69.28 42 P P 21 00 51.7 -1.4
GRC1 Grafenberg Arr 69.31 44 P P 21 00 54.3 +0.9
MG05 Puerto Natales 69.34 184 P P 21 00 52.2 -1.0
MG05 IAMs_20 IAMs_20 21 31 13.8
comp=Z,651nm,19.0s
NEUB Neuenburg 69.35 41 eP P 21 00 56.2 +2.7
comp=Z,92nm,1.8s,baz=272,slow=6.2
F25K Christian Rive 69.36 336 P P 21 00 52.2 -1.2
baz=93,SNR=9.3
E25K Arctic Village 69.37 337 IAMs_20 IAMs_20 21 31 50.6
comp=Z,1µm,18.0s
E25K Arctic Village 69.37 337 P P 21 00 52.1 -1.3
baz=94
M24K Tolsona, Glenn 69.38 330 IAMs_20 IAMs_20 21 34 19.3
comp=Z,979nm,20.0s
M24K Tolsona, Glenn 69.38 330 P P 21 00 51.7 -1.9
baz=91
Q23K Middleton Isla 69.45 328 P P 21 00 52.3 -1.6
baz=90
WATA Walderalm 69.46 45 i pP P 21 00 53.9 -0.6
comp=Z,8.0nm,0.8s
G25K Bearman Lake 69.50 335 P P 21 00 53.9 -0.3
baz=93,SNR=11
WTTA Wattenberg 69.50 45 epP P 21 00 55.5 +0.7
comp=Z,9.2nm,1.1s
WTTA Wattenberg 69.50 45 P P 21 00 56.9 +2.1
HIN Hinchinbrook I 69.52 329 IAMs_20 IAMs_20 21 30 04.2
comp=Z,1µm,22.0s
EFI East Falkland 69.61 174 P P 21 00 52.6 -2.3
EFI East Falkland 69.61 174 P P 21 00 52.6 -2.3
EFI pmax pmax
comp=Z,72nm,1.3s
PLN Plauen 69.63 42 eP P 21 00 58.0 +2.7
comp=Z,6.4nm,1.3s,baz=272,slow=6.2
ROTZ Rotzenmuhle 69.71 43 eP P 21 00 58.6 +2.8
comp=Z,5.6nm,1.3s,baz=272,slow=6.2
D25K Kavik River 69.74 338 IAmb IAmb 21 01 04.7
comp=Z,14nm,0.8s
D25K IAMs_20 IAMs_20 21 34 27.3
comp=Z,800nm,19.0s
D25K Kavik River 69.74 338 P P 21 00 55.1 -0.6
baz=93,SNR=14
ILAR Eielson Array 69.75 333 P P 21 00 56.0 +0.2
comp=Z,5.5nm,0.9s,baz=100,slow=3.8,SNR=34
ILAR LR LR 21 33 32.9
comp=Z,2µm,18.0s,baz=82,slow=38
comp=Z,5.5nm,0.9s
ILAR Eielson Array 69.75 333 P P 21 00 55.4 -0.4
ILAR Eielson Array 69.75 333 P P 21 00 55.4 -0.4
HDA Harding Lake 69.77 333 IAmb IAmb 21 00 59.9
comp=Z,52nm,2.0s
HDA Harding Lake 69.77 333 P P 21 00 55.1 -0.8
baz=91
GLI Glacier Island 69.81 329 P P 21 00 55.2 -1.1
baz=90
TANN Tannenbergstha 69.83 42 eP P 21 00 59.3 +2.7
comp=Z,26nm,1.5s,baz=272,slow=6.2
NKC Novy Kostel 69.83 42 AMS AMS 21 27 20.0
comp=Z,800nm,22.8s
STOK Stokkvaagen 69.85 25 eP P 21 00 56.2 -0.1
STOK eS S 21 10 06.1 0.0
LEIR Leirfjorden 69.88 25 eP P 21 00 58.8 +2.2
LEIR eS S 21 10 07.3 +0.8
KONS Konsvik 69.90 25 eP P 21 01 03.6 +7.0
SCM Sheep Creek Mo 69.92 330 IAMs_20 IAMs_20 21 34 25.7
comp=Z,1µm,21.0s
SCM Sheep Creek Mo 69.92 330 P P 21 00 56.4 -0.6
baz=90,SNR=7.7
DHY Denali Highway 69.94 331 IAmb IAmb 21 01 01.4
comp=Z,31nm,1.7s
DHY Denali Highway 69.94 331 P P 21 00 56.3 -0.9
baz=90
P23K Montague Islan 69.97 328 P P 21 00 56.3 -0.9
baz=89
POKR Poker Plat Res 69.99 334 P P 21 00 56.4 -0.8
baz=91
G24K Hadweenzic Riv 70.04 335 IAMs_20 IAMs_20 21 32 12.4
comp=Z,1µm,19.0s
G24K Hadweenzic Riv 70.04 335 P P 21 00 57.1 -0.5
baz=91,SNR=16
M23K Glacier View 70.11 330 P P 21 00 57.3 -0.7
baz=89
WAT6 Susitna Watana 70.11 331 P P 21 00 57.1 -1.1
baz=90,SNR=9.1
LOF Lofoten 70.11 23 eS S 21 10 11.0 +1.8
CLL Collm 70.11 41 P P 21 00 56.5 -1.8
CLL IAMs_20 IAMs_20 21 26 18.7
comp=Z,753nm,22.0s
CLL Collm 70.11 41 i P P 21 01 00.0 +1.7
CLL eS S 21 10 13.0 +3.2
CLL pmax pmax
comp=Z,20nm,1.3s
CLL MLR MLR
comp=Z,600nm,19.2s
CLL Collm 70.11 41 eP P 21 01 00.9 +2.6
comp=Z,16nm,1.2s,baz=272,slow=6.2
CLL Collm 70.11 41 P P 21 00 59.9 +1.7
comp=Z,11nm,1.1s
CLL Collm 70.11 41 i P P 21 01 00.0 +1.7
comp=Z,20nm,1.3s
CLL eS S 21 10 13.0 +3.2
CLL ePS PnS 21 10 39.0 +3.7
CLL eSS SS 21 14 30.0 -9.1
CLL eSSS SSS 21 18 00.0
CLL AMS AMS 21 33 00.0
comp=Z,600nm,19.2s
RGN Rugen 70.12 38 IAMs_20 IAMs_20 21 32 14.7
comp=Z,918nm,18.0s
HFS Hagfors 70.12 32 P P 21 00 59.3 +1.1
comp=Z,3.7nm,0.8s,baz=288,slow=5.8,SNR=9.2
HFS LR LR 21 27 34.5
comp=Z,407nm,21.8s,baz=270,slow=32
comp=Z,3.7nm,0.8s
ABTA Abfaltersbach 70.14 46 i pP P 21 00 57.5 -1.2
comp=Z,10nm,0.9s
COLA College 70.16 333‖ eP P 21 00 58.9 +0.6
COLA pmax pmax
comp=Z,19nm,1.3s
COLA College 70.16 333 P P 21 00 58.0 -0.3
baz=90
H24K Noodor Dome 70.19 334 IAMs_20 IAMs_20 21 32 31.3
comp=Z,1µm,18.0s
H24K Noodor Dome 70.19 334 P P 21 00 57.8 -0.7
baz=91,SNR=20
WET Wettzell 70.19 43 eP P 21 01 01.3 +2.5
comp=Z,36nm,1.8s,baz=272,slow=6.2
LESA Schwarzleotal 70.20 45 i pP P 21 00 58.2 -0.7
comp=Z,14nm,1.2s
F24K Squaw Lake 70.22 336 IAmb IAmb 21 01 03.7
comp=Z,58nm,1.9s
F24K IAMs_20 IAMs_20 21 34 22.1
comp=Z,975nm,18.0s
F24K Squaw Lake 70.22 336 P P 21 00 58.4 -0.3
baz=91,SNR=9.7
RAUS Rausandaksla 70.27 25 eP P 21 01 02.7 +3.8
RAUS eS S 21 10 11.0 -0.1
SML Sawmill 70.40 330 P P 21 00 59.1 -0.8
baz=89
MOR8 Moi Rana 70.42 25 eS S 21 10 14.6 +1.7
HSKC Hora Svate Kat 70.43 42 AMS AMS 21 27 50.0
comp=Z,800nm,20.3s
HSKC Hora Svate Kat 70.43 42 P P 21 01 02.2 +1.9
E24K Your Creek 70.46 337 IAmb IAmb 21 01 05.0
comp=Z,54nm,1.8s
E24K IAMs_20 IAMs_20 21 32 28.4
comp=Z,935nm,20.0s
E24K Your Creek 70.46 337 P P 21 00 59.8 -0.4
baz=91,SNR=16
KNK Knik Glacier 70.47 330 P P 21 00 59.7 -0.5
baz=89
WAT1 Susitna Watana 70.48 331 P P 21 00 59.7 -0.7
baz=89
KBS Kingsbay 70.53 12 IAMs_20 IAMs_20 21 31 21.9
comp=Z,696nm,19.0s
C24K Franklin Bluff 70.57 339 IAmb IAmb 21 01 13.2
comp=Z,37nm,1.3s
C24K IAMs_20 IAMs_20 21 32 14.3
comp=Z,773nm,20.0s
C24K Franklin Bluff 70.57 339 P P 21 01 00.1 -0.6
baz=91,SNR=8.2
D24K Happy Valley 70.60 338 IAMs_20 IAMs_20 21 36 02.1
comp=Z,902nm,21.0s
D24K Happy Valley 70.60 338 P P 21 01 00.4 -0.5
baz=91
RND Reindeer 70.61 332 IAMs_20 IAMs_20 21 36 40.8
comp=Z,1µm,19.0s
MCK McKinley 70.64 332 P P 21 01 00.8 -0.5
baz=89,SNR=6.0
KHC Kasperske Hory 70.65 43 P P 21 01 00.3 -1.3
KHC IAmb IAmb 21 01 05.5
comp=Z,23nm,1.4s
KHC IAMs_20 IAMs_20 21 30 27.0
comp=Z,649nm,19.0s
KHC Kasperske Hory 70.65 43 c i P P 21 01 03.0 +1.4
KHC pmax pmax
comp=Z,17nm,1.2s
KHC Kasperske Hory 70.65 43 eP P 21 01 02.4 +0.8
KHC eS S 21 10 14.9 -1.3
KHC AMS AMS 21 29 50.0
comp=Z,700nm,20.7s
KHC Kasperske Hory 70.65 43 P P 21 01 02.4 +0.8
comp=Z,11nm,1.2s
KHC Kasperske Hory 70.65 43 P P 21 01 04.0 +2.4
KBA Koelnbreinsper 70.68 46 i pP P 21 01 02.3 +0.3
comp=Z,15nm,0.9s,SNR=7.0
NEA2 Nenana 70.69 333 IAmb IAmb 21 01 05.6
comp=Z,48nm,1.6s
NEA2 Nenana 70.69 333 P P 21 01 01.4 -0.1
baz=89,SNR=20
BRG Berggiesshubel 70.74 42 eP P 21 01 04.8 +2.7
comp=Z,32nm,1.6s,baz=272,slow=6.2
BRG Berggiesshubel 70.74 42 eP P 21 01 04.2 +2.2
BRG Amp 21 01 07.1
comp=Z,9.0nm,0.8s
BRG Berggiesshubel 70.74 42 S S 21 10 22.0 +4.9
STEI Steigen 70.75 23 eP P 21 01 05.1 +3.4
GEC2 GERESS Array S 70.75 44 eP P 21 01 04.9 +2.6
comp=Z,28nm,1.5s,baz=272,slow=6.2
GERES GERESS Array B 70.75 44 P P 21 01 03.0 +0.7
comp=Z,4.0nm,1.1s,baz=254,slow=3.9,SNR=20
comp=Z,4.0nm,1.1s
GERES GERESS Array B 70.75 44 P P 21 01 03.7 +1.3
GERES GERESS Array B 70.75 44 P P 21 01 03.7 +1.3
FAUS Fauske 70.76 24 eS S 21 10 17.1 +0.3
PMR Palmer 70.78 330 P P 21 01 01.9 -0.2
baz=88
I23K Minto, Yukon-K 70.80 334 IAmb IAmb 21 01 06.7
comp=Z,35nm,1.3s
I23K Minto, Yukon-K 70.80 334 P P 21 01 02.4 +0.3
baz=89,SNR=21
BIOA Bad Ischl, Aus 70.82 45 epP P 21 01 03.2 +0.5
comp=Z,14nm,1.2s,SNR=5.7
TOLK Toolik Lake Re 70.87 337 P P 21 01 02.4 -0.3
baz=90
H23K Yukon River 70.87 334 P P 21 01 02.5 -0.2
baz=89,SNR=14
E23K Chandalar 70.88 337 IAMs_20 IAMs_20 21 32 20.6
comp=Z,903nm,19.0s
E23K Chandalar 70.88 337 P P 21 01 02.2 -0.5
baz=90
PRED Cave del Predi 70.89 46 P P 21 01 01.7 -1.5
MYKA Terra Mystica 70.93 46 epP P 21 01 03.4 0.0
comp=Z,11nm,0.8s
SEW Seward 71.00 328 P P 21 01 03.6 +0.1
baz=87
ZVC Zvikov 71.02 43 eP P 21 01 06.3 +2.5
ZVC AMS AMS 21 30 20.0
comp=Z,700nm,20.1s
CADS Cadrg 71.03 46 i P P 21 01 06.0 +2.0
G23K Bananza Creek 71.05 335 IAmb IAmb 21 01 06.0
comp=Z,47nm,1.7s
G23K IAMs_20 IAMs_20 21 33 01.2
comp=Z,1µm,19.0s
G23K Bananza Creek 71.05 335 P P 21 01 03.7 -0.1
baz=89,SNR=15
RC01 Rabbit Creek A 71.09 329 IAMs_20 IAMs_20 21 37 34.8
comp=Z,892nm,18.0s
RC01 Rabbit Creek A 71.09 329 P P 21 01 03.9 -0.1
baz=87
COLD Coldfoot 71.11 336 P P 21 01 03.7 -0.3
baz=89,SNR=11
PVCC Panska Ves 71.16 42 AMS AMS 21 25 30.0
comp=Z,800nm,22.1s
PRU Pruhonice 71.19 42 eP P 21 01 06.7 +1.8
PRU MLR MLR
comp=Z,1µm,21.8s
PRU Pruhonice 71.19 42 eP P 21 01 06.7 +1.8
PRU AMS AMS 21 24 40.0
comp=Z,1µm,21.8s
MOA Molln 71.22 45 epP pP 21 01 06.2 -0.3
comp=Z,18nm,1.3s,SNR=6.4
C23K Itkillik River 71.24 339 IAmb IAmb 21 01 15.3
comp=Z,54nm,1.6s
C23K IAMs_20 IAMs_20 21 32 34.9
comp=Z,806nm,20.0s
C23K Itkillik River 71.24 339 P P 21 01 04.7 -0.1
baz=90,SNR=8.2
M22K Willow 71.25 330 IAMs_20 IAMs_20 21 33 27.8
comp=Z,1µm,21.0s
M22K Willow 71.25 330 P P 21 01 04.8 -0.1
baz=87
TRF Thorofare Moun 71.25 332 IAmb IAmb 21 01 14.9
comp=Z,24nm,0.9s
TRF Thorofare Moun 71.25 332 P P 21 01 04.5 -0.7
baz=88,SNR=18
D23K Nanushuk River 71.27 338 IAMs_20 IAMs_20 21 29 50.8
comp=Z,769nm,21.0s
D23K Nanushuk River 71.27 338 P P 21 01 04.6 -0.4
baz=89,SNR=8.0
CUT Chulitna 71.29 331 P P 21 01 05.0 -0.1
baz=87
SPA0 Spitsbergen Ar 71.35 12 eS S 21 10 23.2 -0.2
SPITS Spitsbergen Ar 71.35 12 P P 21 01 07.0 +1.7
comp=Z,9.6nm,0.9s,baz=150,slow=3.5,SNR=4.4
SPITS LR LR 21 31 02.5
comp=Z,272nm,20.3s,baz=274,slow=35
comp=Z,9.6nm,0.9s
SPB2 Spitsbergen Ar 71.35 12 P P 21 01 05.4 0.0
SPB2 IAmb IAmb 21 01 57.0
comp=Z,36nm,1.3s
MLY Manley 71.39 334 IAmb IAmb 21 01 09.9
comp=Z,36nm,1.5s
MLY Manley 71.39 334 P P 21 01 05.3 -0.5
baz=88,SNR=25
SESA Seetaler Alpe, 71.51 45 i pP P 21 01 07.0 -0.1
comp=Z,31nm,1.3s,SNR=6.0
L22K Petersville 71.52 331 P P 21 01 06.2 -0.5
baz=87
OBKA Obir 71.56 46 epP P 21 01 06.2 -1.1
comp=Z,21nm,1.3s
CEY Cerknica 71.57 47 i P P 21 01 09.7 +2.4
H22K Ishtalitna Cre 71.62 334 IAMs_20 IAMs_20 21 30 52.3
comp=Z,927nm,19.0s
H22K Ishtalitna Cre 71.62 334 P P 21 01 06.8 -0.4
baz=88,SNR=10.0
G22K Bettles 71.63 336 P P 21 01 06.7 -0.5
baz=88
BRSE Bradley Lake S 71.67 328 P P 21 01 06.9 -0.7
baz=86
BRLK Bradley Lake 71.74 328 IAMs_20 IAMs_20 21 31 47.2
comp=Z,1µm,22.0s
F22K John River 71.87 336 P P 21 01 07.8 -0.8
baz=87,SNR=9.3
SOKA Soboth 71.88 46 i pP P 21 01 08.7 -0.5
comp=Z,10.0nm,1.4s
TREC Trest 71.88 43 AMS AMS 21 30 20.0
comp=Z,700nm,21.3s
SKT Skwentna 71.90 330 P P 21 01 08.1 -0.9
baz=86
I21K Tanana 71.91 334 IAmb IAmb 21 01 18.1
comp=Z,17nm,1.0s
I21K Tanana 71.91 334 P P 21 01 08.2 -0.7
baz=87,SNR=17
TRO Tromso 72.05 22 eP P 21 01 13.4 +3.8
TRO IAmb IAmb 21 01 13.5
comp=Z,24nm,1.2s
TRO eS S 21 10 32.9 +1.3
CAST Castle Rocks 72.06 332 P P 21 01 09.1 -0.7
baz=86,SNR=10
UPC Upice 72.08 42 eP P 21 01 12.6 +2.4
UPC MLR MLR
comp=Z,700nm,19.0s
UPC Upice 72.08 42 eP P 21 01 12.6 +2.4
UPC AMS AMS 21 28 20.0
comp=Z,700nm,19.0s
CHVC Chvalec 72.10 42 eP P 21 01 12.4 +2.0
CHVC MLR MLR
comp=Z,600nm,21.8s
CHVC Chvalec 72.10 42 eP P 21 01 12.4 +2.0
CHVC AMS AMS 21 28 30.0
comp=Z,600nm,21.8s
HOM Homer 72.13 328 IAMs_20 IAMs_20 21 31 59.4

comp=Z,972nm,21.0s
HOM Homer 72.13 328 P **P** 21 01 09.7 -0.6
baz=85
CHUM Lake Minchumin 72.13 332 P **P** 21 01 09.5 -0.7
baz=86,SNR=14
ARSA Arzberg 72.14 45 *e*pP pP 21 01 11.7 -0.3
comp=Z,17nm,1.3s,SNR=5.5
PPLA Purkeypile 72.15 331 IAmb IAmb 21 01 44.1
comp=Z,20nm,1.1s
PPLA IAMs_20 IAMs_20 21 38 58.4
comp=Z,879nm,18.0s
PPLA Purkeypile 72.15 331 P **P** 21 01 09.6 -0.9
baz=86
B22K Teshekpuk Lake 72.19 339 IAMs_20 IAMs_20 21 37 11.9
comp=Z,1µm,19.0s
B22K Teshekpuk Lake 72.19 339 P **P** 21 01 09.8 -0.6
baz=87
OSTC Ostas 72.20 42 *e*P **P** 21 01 12.0 +1.0
OSTC MLR MLR
comp=Z,800nm,22.5s
OSTC Ostas 72.20 42 *e*P **P** 21 01 12.0 +1.0
OSTC AMS AMS 21 26 40.0
comp=Z,800nm,22.5s
KSP Ksiaz 72.22 41 *e*P **P** 21 01 12.5 +1.5
KSP Ksiaz 72.22 41 P **P** 21 01 12.4 +1.4
comp=Z,11nm,1.4s
H21K Melozitna Rive 72.22 334 IAmb IAmb 21 01 14.9
comp=Z,51nm,1.6s
H21K Melozitna Rive 72.22 334 P **P** 21 01 10.0 -0.8
baz=86,SNR=23
CONA Conrad Observa 72.28 44 *e*pP pP 21 01 13.1 +0.1
comp=Z,14nm,1.4s,SNR=7.2
SPCR Spurr Chakacha 72.28 330 P **P** 21 01 10.1 -1.2
baz=85
DPC Dobruska-Polom 72.30 42 *e*P **P** 21 01 13.0 +1.4
DPC MLR MLR
comp=Z,800nm,22.3s
DPC Dobruska-Polom 72.30 42 *e*P **P** 21 01 13.0 +1.4
DPC AMS AMS 21 25 20.0
comp=Z,800nm,22.3s
DPC Dobruska-Polom 72.30 42 P **P** 21 01 12.8 +1.2
comp=Z,12nm,1.5s
F21K Alatna River 72.39 336 P **P** 21 01 10.6 -1.2
baz=86,SNR=5.9
G21K Allakaket 72.45 335 IAmb IAmb 21 01 17.7
comp=Z,39nm,1.4s
G21K IAMs_20 IAMs_20 21 37 32.1
comp=Z,786nm,19.0s
G21K Allakaket 72.45 335 P **P** 21 01 11.2 -0.9
baz=86
E21K Killik River 72.49 337 IAMs_20 IAMs_20 21 34 03.1
comp=Z,860nm,19.0s
E21K Killik River 72.49 337 P **P** 21 01 11.4 -1.0
baz=86
KRUC Moravsky 72.50 43 *e*P **P** 21 01 14.3 +1.6
GKP Gorka Klasztor 72.53 39 *e*P **P** 21 01 16.1 +3.3
JETT Jettan, Norway 72.58 22 *e*P **P** 21 01 15.1 +2.2
JETT IAmb IAmb 21 01 22.4
comp=Z,27nm,0.9s
O20K Slope Mountain 72.59 328 P **P** 21 01 11.9 -1.2
baz=84
VRAC Vranov 72.59 43 LR LR 21 31 19.7
comp=Z,416nm,19.0s,baz=270,slow=34
VRAC Vranov 72.59 43 ⇓P **P** 21 01 15.1 +1.8
VRAC Vranov 72.59 43 P **P** 21 01 15.6 +2.3
VRAC Vranov 72.59 43 *e*P **P** 21 01 14.2 +0.9
RONA Rosalia, Austr 72.60 45 *i* pP **P** 21 01 13.8 +0.4
comp=Z,19nm,1.4s,SNR=6.4
KRLC Kraliky 72.62 42 *e*P **P** 21 01 15.9 +2.4
KRLC MLR MLR
comp=Z,900nm,23.2s
KRLC Kraliky 72.62 42 *e*P **P** 21 01 15.9 +2.4
KRLC AMS AMS 21 25 40.0
comp=Z,900nm,23.2s
B21K Ikpikpuk River 72.64 338 IAMs_20 IAMs_20 21 38 34.9
comp=Z,648nm,18.0s
B21K Ikpikpuk River 72.64 338 P **P** 21 01 11.8 -1.3
baz=86
A22K Sinclair Lake 72.66 340 P **P** 21 01 12.4 -0.9
baz=86
M20K Styx River 72.67 330 IAmb IAmb 21 01 22.2
comp=Z,16nm,0.8s
M20K Styx River 72.67 330 P **P** 21 01 12.8 -0.8
baz=85
VAE Valguarnera 72.72 55 LR LR 21 29 11.1
comp=Z,480nm,21.2s,baz=272,slow=33
C21K Knifeblade Rid 72.73 338 P **P** 21 01 13.3 -0.5
baz=86,SNR=5.5
KDAK Kodiak Island 72.80 326 P **P** 21 01 15.1 +0.8
comp=Z,9.1nm,1.1s,baz=127,slow=4.9,SNR=6.3
comp=Z,9.1nm,1.1s
KDAK Kodiak Island 72.80 326 P **P** 21 01 15.1 +0.8
KDAK Kodiak Island 72.80 326 IAMs_20 IAMs_20 21 38 58.0
comp=Z,878nm,21.0s
KDAK Kodiak Island 72.80 326 P **P** 21 01 13.2 -1.1
baz=84
J20K Nowinta River 72.91 333 P **P** 21 01 14.3 -0.6
baz=84,SNR=14
P19K Oil Pt 72.93 328 P **P** 21 01 14.3 -0.8
baz=84
K20K Telida 72.96 332 IAmb IAmb 21 01 18.9
comp=Z,49nm,1.6s
K20K Telida 72.96 332 P **P** 21 01 14.6 -0.7
baz=84
I20K Naaghedeneel 73.00 333 P **P** 21 01 14.7 -0.7
baz=84
H20K Anotleneega Mo 73.10 334 P **P** 21 01 15.6 -0.4
baz=84,SNR=17
MORC Moravsky Berou 73.15 42 ⇑P **P** 21 01 18.4 +1.7
MORC Moravsky Berou 73.15 42 P **P** 21 01 20.4 +3.8
MORC Moravsky Berou 73.15 42 *e*P **P** 21 01 17.1 +0.5
MODS Modra-Piesok 73.17 44 *e*P **P** 21 01 19.1 +2.4
MODS pmax pmax
comp=Z,51nm,1.1s
MODS Modra-Piesok 73.17 44 *e*P **P** 21 01 19.1 +2.4
A21K Barrow 73.17 340 P **P** 21 01 15.3 -0.9
baz=84
Q19K Cape Douglas, 73.22 327 IAMs_20 IAMs_20 21 35 59.2
comp=Z,965nm,18.0s
Q19K Cape Douglas, 73.22 327 P **P** 21 01 15.6 -1.3
baz=83
OHAK Old Harbor 73.24 325 P **P** 21 01 16.5 -0.4
baz=83
SMOL Smolenice 73.25 44 *e*P **P** 21 01 19.8 +2.6
SMOL pmax pmax
comp=Z,13nm,1.7s
M19K Big River Lodg 73.26 330 IAmb IAmb 21 01 26.3
comp=Z,19nm,0.8s
M19K Big River Lodg 73.26 330 P **P** 21 01 16.1 -0.9
baz=84
STEB Steborice 73.27 42 *e*P **P** 21 01 19.3 +2.0
F20K Avaraart Lake 73.28 336 IAmb IAmb 21 01 21.5
comp=Z,57nm,1.9s
F20K IAMs_20 IAMs_20 21 32 19.0
comp=Z,807nm,19.0s
F20K Avaraart Lake 73.28 336 P **P** 21 01 16.2 -0.8
baz=84,SNR=17
E20K Nigu River 73.33 337 P **P** 21 01 16.6 -0.8
baz=84,SNR=12
JAVC Velka Javorina 73.36 43 *e*P **P** 21 01 20.2 +2.3
MAUC Maruska 73.39 43 *e*P **P** 21 01 19.9 +1.8
O19K Port Alsworth 73.42 329 IAMs_20 IAMs_20 21 33 25.2
comp=Z,986nm,20.0s
N19K Bonanza Creek 73.43 329 IAmb IAmb 21 01 23.2
comp=Z,36nm,1.8s
N19K Bonanza Creek 73.43 329 P **P** 21 01 16.8 -1.4
baz=83
D20K Etivluk River 73.44 338 IAMs_20 IAMs_20 21 34 38.0
comp=Z,1µm,20.0s
D20K Etivluk River 73.44 338 P **P** 21 01 16.8 -1.2
baz=84,SNR=6.5
L19K White Mountain 73.44 331 P **P** 21 01 17.2 -0.9
baz=83
B20K Meade River 73.48 339 P **P** 21 01 16.8 -1.3
baz=84
MPLH Magyarpolny 73.51 45 P **P** 21 01 20.0 +1.2
comp=Z,1µmcomp=Z,53nm,1.1s
OKC Ostrava-Krasne 73.53 42 AMS AMS 21 27 00.0
comp=Z,600nm,21.8s
J19K Poorman 73.58 333 P **P** 21 01 17.1 -1.8
baz=83
HAMF Hammerfest 73.59 20 *e*S **S** 21 10 48.9 -0.3
KTK1 Kautokeino 73.63 22 *e*P **P** 21 01 20.8 +1.7
KTK1 IAmb IAmb 21 01 24.3
comp=Z,18nm,0.7s
KTK1 *e*S **SKiKP** 21 10 50.9 +1.1
H19K Roundabout Mou 73.74 334 IAmb IAmb 21 01 24.0
comp=Z,54nm,1.6s
H19K Roundabout Mou 73.74 334 P **P** 21 01 19.1 -0.7
baz=83,SNR=20
SII Sitkinak Islan 73.81 325 P **P** 21 01 19.6 -0.7
baz=82
E19K Redstone River 73.81 336 P **P** 21 01 19.6 -0.6
baz=83,SNR=11
O18K Koktuh Hills 73.90 328 IAmb IAmb 21 01 27.6
comp=Z,46nm,1.8s
O18K IAMs_20 IAMs_20 21 32 54.1
comp=Z,882nm,21.0s
O18K Koktuh Hills 73.90 328 P **P** 21 01 19.4 -1.5
baz=82
G19K Purcell Mounta 73.93 335 IAMs_20 IAMs_20 21 40 05.2
comp=Z,575nm,18.0s
G19K Purcell Mounta 73.93 335 P **P** 21 01 20.2 -0.6
baz=82,SNR=12
Q18K Katmai Hardscr 73.97 327 P **P** 21 01 20.5 -0.8
baz=82
P18K Big Mountain, 73.98 328 P **P** 21 01 20.5 -0.8
baz=82
M18K Stony River 73.99 330 P **P** 21 01 20.5 -0.8
baz=82,SNR=16
D19K Kuna River 74.01 337 P **P** 21 01 20.6 -0.8
baz=82,SNR=8.8
GCSA Galena City Sc 74.02 333 P **P** 21 01 20.9 -0.5
baz=82
F19K Shaleruckik Mo 74.11 336 IAmb IAmb 21 01 25.9
comp=Z,33nm,1.6s
F19K Shaleruckik Mo 74.11 336 P **P** 21 01 21.2 -0.7
baz=82,SNR=11
N18K Kilae Creek 74.13 329 P **P** 21 01 21.3 -0.8
baz=82
TIP Timpagrande 74.25 53 ⇓P **P** 21 01 23.6 +0.2
TIP Timpagrande 74.25 53 P **P** 21 01 21.7 -1.6
TIP IAMs_20 IAMs_20 21 27 32.2
comp=Z,1µm,22.0s
TIP Timpagrande 74.25 53 P **P** 21 01 24.2 +0.9
comp=Z,11nm,1.7s
L18K Granite Mounta 74.29 331 P **P** 21 01 22.4 -0.6
baz=82
ARA0 ARCESS Array S 74.36 21 *e*P **P** 21 01 25.7 +2.3
ARA0 *e*S **S** 21 10 58.3 +0.4
ARCES ARCESS Array B 74.36 21 P **P** 21 01 25.3 +2.0
comp=Z,9.3nm,0.7s,baz=285,slow=2.4,SNR=27
ARCES LR LR 21 31 24.3
comp=Z,204nm,18.8s,baz=285,slow=34
comp=Z,9.3nm,0.7s
ARCES ARCESS Array B 74.36 21 P **P** 21 01 22.8 -0.5
ARCES IAmb IAmb 21 01 27.7
comp=Z,22nm,1.1s
ARCES ARCESS Array B 74.36 21 P **P** 21 01 22.8 -0.5
ARCES pmax pmax
comp=Z,22nm,1.1s
MORH Mrgy, Hungar 74.41 46 ⇑P **P** 21 01 24.7 +0.6
MORH Mrgy, Hungar 74.41 46 P **P** 21 01 25.3 +1.3
comp=Z,19nm,1.1s
C19K Lookout Ridge 74.45 338 P **P** 21 01 23.3 -0.7
baz=81
Q17K Contact Creek 74.48 327 P **P** 21 01 23.4 -0.9
baz=81
LANS Liptovska Anna 74.48 43 *e*P **P** 21 01 28.4 +3.9
LANS pmax pmax
comp=Z,7.0nm,1.2s
LANS Liptovska Anna 74.48 43 *e*P **P** 21 01 28.4 +3.9
OJC Ojcow 74.52 42 *e*P **P** 21 01 26.7 +2.1
OJC Ojcow 74.52 42 P **P** 21 01 25.8 +1.2
comp=Z,391nmcomp=Z,18nm,1.3s
H18K Honhosa River 74.59 334 IAmb IAmb 21 01 29.4
comp=Z,38nm,1.6s
H18K Honhosa River 74.59 334 P **P** 21 01 24.0 -0.8
baz=81
G18K Tagagawik 74.59 335 IAMs_20 IAMs_20 21 38 28.9
comp=Z,631nm,20.0s
G18K Tagagawik 74.59 335 P **P** 21 01 24.4 -0.4
baz=81,SNR=14
P17K Kvichak River 74.62 328 IAmb IAmb 21 01 35.7
comp=Z,28nm,0.9s
P17K IAMs_20 IAMs_20 21 37 24.1
comp=Z,940nm,18.0s
P17K Kvichak River 74.62 328 P **P** 21 01 23.9 -1.1
baz=81
CHIR Chirikof Islan 74.71 324 P **P** 21 01 24.8 -0.8
baz=81
M17K Holitna River 74.77 330 P **P** 21 01 24.4 -1.5
baz=81
A19K Wainwright 74.78 339 P **P** 21 01 24.2 -1.6
baz=80
N17K Nushagak Hills 74.78 329 P **P** 21 01 24.8 -1.1
baz=81
R17L Mt. Peulik Vol 74.82 326 P **P** 21 01 24.7 -1.5
baz=81
O17K Koliganek Bris 74.86 328 P **P** 21 01 24.9 -1.4
baz=81
F18K Selawik 74.88 336 P **P** 21 01 24.8 -1.5
baz=80
K17K Iditarod 74.95 332 IAmb IAmb 21 01 31.7
comp=Z,31nm,1.4s
K17K IAMs_20 IAMs_20 21 35 45.6
comp=Z,1µm,20.0s
K17K Iditarod 74.95 332 P **P** 21 01 25.2 -1.7
baz=80,SNR=11
PSZ Piszkesteto 74.97 44 ⇑P **P** 21 01 29.7 +2.3
PSZ Piszkesteto 74.97 44 P **P** 21 01 29.6 +2.3
NIE Niedzica 74.97 42 *e*P **P** 21 01 29.8 +2.5
L17K Donlin 75.05 331 P **P** 21 01 26.3 -1.1
baz=80
C18K Utukok River 75.10 338 P **P** 21 01 26.8 -0.9
baz=79
E18K Tukpahlearik C 75.11 336 P **P** 21 01 26.4 -1.3
baz=80
J17K VABM Dome 75.19 332 P **P** 21 01 26.9 -1.3
baz=80
H17K Granite Mounta 75.28 334 P **P** 21 01 27.7 -1.0
baz=80
O16K Kokwok River B 75.39 328 P **P** 21 01 28.5 -0.9
baz=80
P16K Nushagak River 75.44 328 IAMs_20 IAMs_20 21 35 51.6
comp=Z,924nm,18.0s
P16K Nushagak River 75.44 328 P **P** 21 01 29.5 -0.2
baz=80
G17K Kiwalik Mounta 75.48 335 P **P** 21 01 29.3 -0.5
baz=79,SNR=15
PDG Podgorica 75.51 50 ⇑P **P** 21 01 31.6 +1.1
PDG Podgorica 75.51 50 IAMs_20 IAMs_20 21 29 13.7
comp=Z,777nm,21.0s
F17K Baldwin Pennin 75.54 336 IAMs_20 IAMs_20 21 40 07.7
comp=Z,892nm,18.0s
F17K Baldwin Pennin 75.54 336 P **P** 21 01 29.3 -0.8
baz=79
M16K Timber Creek 75.56 330 P **P** 21 01 29.7 -0.7
baz=79
N16K Nishlik Lake 75.56 329 P **P** 21 01 30.0 -0.5
baz=79
VADS Vadso 75.57 21 *e*S **S** 21 11 12.1 +0.8
E17K Hotham Inlet 75.64 336 P **P** 21 01 30.3 -0.4
baz=78
L16K Owhat River 75.67 331 IAmb IAmb 21 01 39.3
comp=Z,18nm,1.1s
L16K IAMs_20 IAMs_20 21 35 29.7
comp=Z,946nm,19.0s
L16K Owhat River 75.67 331 P **P** 21 01 30.0 -1.0
baz=79,SNR=10
I17K Unalakleet 75.81 333 P **P** 21 01 30.6 -1.1
baz=79
RDOG Red Dog Mine 75.84 337 IAmb IAmb 21 01 35.8
comp=Z,41nm,1.6s
RDOG Red Dog Mine 75.84 337 P **P** 21 01 30.8 -1.1
baz=78
C17K DeLong Mountai 75.85 338 P **P** 21 01 31.3 -0.7
baz=78
J16K Anvik River 75.88 332 P **P** 21 01 30.8 -1.5
baz=79
SUW Suwalki 75.92 37 *e*P **P** 21 01 32.7 +0.2
SUW Suwalki 75.92 37 P **P** 21 01 30.3 -2.2
SUW IAMs_20 IAMs_20 21 36 29.0
comp=Z,776nm,19.0s
SUW Suwalki 75.92 37 P **P** 21 01 30.3 -2.2
SUW MLR MLR
comp=Z,800nm,19.0s
D17K Noatak River 75.98 337 P **P** 21 01 32.1 -0.6
baz=78
FINES FINESS Array B 76.01 30 P **P** 21 01 34.5 +1.5
comp=Z,18nm,0.9s,baz=280,slow=5.5,SNR=34
FINES LR LR 21 30 26.8
comp=Z,241nm,21.8s,baz=272,slow=32
comp=Z,18nm,0.9s
FINES FINESS Array B 76.01 30 P **P** 21 01 32.1 -0.8
FINES FINESS Array B 76.01 30 P **P** 21 01 32.1 -0.8
FIA1 FINESS Array S 76.01 30 P **P** 21 01 31.9 -1.1
PABE Paberze 76.08 36 P **P** 21 01 31.7 -1.8
PABE IAMs_20 IAMs_20 21 32 11.3
comp=Z,590nm,20.0s
CHGN Chignik 76.17 325 P **P** 21 01 32.7 -1.2
baz=79
G16K Koyuk River 76.20 335 P **P** 21 01 33.2 -0.7
baz=78
N15K Kwethluk River 76.27 329 P **P** 21 01 33.4 -1.0
baz=78
H16K Elim 76.31 334 P **P** 21 01 33.4 -1.2
baz=78
KOLS Kolonicke sedl 76.34 43 *e*P **P** 21 01 38.6 +3.5
KOLS pmax pmax
comp=Z,12nm,1.5s
KOLS Kolonicke sedl 76.34 43 *e*P **P** 21 01 38.6 +3.5
UZHM Uzhgorod 76.41 43 P **P** 21 01 37.4 +1.9
M15K Kasigluk River 76.45 330 P **P** 21 01 34.6 -0.9
baz=78
KEK Kerkira 76.45 52 P **P** 21 01 33.7 -2.2
KEK IAmb IAmb 21 01 44.4
comp=Z,47nm,1.3s
SIRR Siria 76.46 46 ⇓P **P** 21 01 37.0 +1.2
KWP Kalwaria Pacla 76.48 42 *e*P **P** 21 01 38.7 +2.8
KWP Kalwaria Pacla 76.48 42 P **P** 21 01 37.3 +1.4
comp=Z,746nmcomp=Z,42nm,1.2s
K15K Wolf Creek Mou 76.51 331 P **P** 21 01 34.4 -1.4
baz=78
BZS Buzias 76.56 46 ⇑P **P** 21 01 37.3 +0.9
BZS Buzias 76.56 46 P **P** 21 01 39.2 +2.8
L15K Ilngalak Mounta 76.62 331 P **P** 21 01 35.0 -1.4
baz=77
EDA Edea 76.63 90 P **P** 21 01 35.4 -2.0
EDA IAmb IAmb 21 01 41.7
comp=Z,50nm,1.8s
EDA IAMs_20 IAMs_20 21 30 40.9
comp=Z,682nm,22.0s
C16K Lisburne Hills 76.68 338 P **P** 21 01 35.2 -1.4
baz=76
S14K Fog Glacier 76.79 325 P **P** 21 01 35.2 -2.4
baz=78
MDVR Moldovita 76.80 47 ⇓P **P** 21 01 39.4 +1.6
TAOE Nuku Hiva Isla 76.90 256 *e*LR LR 21 25 20.2
comp=Z,484nm,29.2s
OHR Ohrid 76.91 51 *i* P **P** 21 01 41.9 +3.3
VSU Vasula 76.96 33 *d i*P **P** 21 01 39.3 +1.0
VSU pmax pmax
comp=Z,56nm,1.6s
G15K Niukluk 76.98 334 P **P** 21 01 36.6 -1.8
baz=76
BOVS Bovan 77.03 48 ⇓P **P** 21 01 40.9 +1.8
O14K Tigyukauivet M 77.05 328 P **P** 21 01 37.6 -1.2
baz=77
M14K Bethel 77.05 330 IAMs_20 IAMs_20 21 40 16.1
comp=Z,828nm,18.0s
M14K Bethel 77.05 330 P **P** 21 01 37.6 -1.2
baz=77
F15K North Star Dit 77.05 335 IAMs_20 IAMs_20 21 39 36.8
comp=Z,568nm,18.0s
F15K North Star Dit 77.05 335 P **P** 21 01 37.2 -1.6
baz=76
N14K Kuskokwak Cree 77.10 329 IAMs_20 IAMs_20 21 37 12.6
comp=Z,821nm,18.0s
N14K Kuskokwak Cree 77.10 329 P **P** 21 01 37.9 -1.2
baz=77
L14K Kuka Creek 77.25 331 P **P** 21 01 38.7 -1.2
baz=76
HERR Herculane 77.27 47 ⇑P **P** 21 01 42.0 +1.6
MARR Marisel-Cluj 77.36 45 ⇓P **P** 21 01 42.5 +1.5
BMR Baia Mare 77.40 44 ⇑P **P** 21 01 43.3 +2.2
BMR Baia Mare 77.40 44 P **P** 21 01 43.3 +2.2
GZR Gura Zlata 77.41 46 ⇓P **P** 21 01 43.1 +1.8
GZR Gura Zlata 77.41 46 P **P** 21 01 43.0 +1.8
SDPT Sand Point 77.51 324 P **P** 21 01 40.6 -0.9
baz=77
ANM Nome 77.64 334 P **P** 21 01 40.6 -1.5
baz=75
F14K Arctic Creek 77.79 335 P **P** 21 01 41.6 -1.3
baz=74
M13K Dall Lake 77.80 330 IAMs_20 IAMs_20 21 33 49.9
comp=Z,948nm,20.0s
M13K Dall Lake 77.80 330 P **P** 21 01 41.5 -1.5
baz=76
LVZ Lovozero 77.98 22 P **P** 21 01 42.8 -1.2
LVZ Lovozero 77.98 22 ⇓ *e*P **P** 21 01 45.5 +1.5
LVZ pmax pmax
comp=Z,40nm,1.4s
LVZ Lovozero 77.98 22 P **P** 21 01 45.3 +1.3
comp=Z,16nm,1.0s
K13K Kusilvak Mount 78.02 331 P **P** 21 01 43.2 -1.0
baz=75
RNPP8 Varash 78.07 40 P **P** 21 01 46.2 +1.4
LOT Lotru 78.08 46 ⇑P **P** 21 01 46.2 +1.1
RNPP9 Sopachiv 78.08 40 P **P** 21 01 46.2 +1.4
ARCR ARCALIA 78.10 44 ⇑P **P** 21 01 46.9 +1.9
VALD Valchedram 78.25 48 P **P** 21 01 47.5 +1.6
BLSH Balsha 78.33 49 P **P** 21 01 50.2 +3.8
VTS Vitosha 78.35 49 P **P** 21 01 50.4 +3.7
TNA Tin City 78.40 335 P **P** 21 01 44.9 -1.4
baz=73
KKB Krupnik 78.45 50 P **P** 21 01 51.2 +4.1
MNK Minsk 78.50 36 *i* P **P** 21 01 47.9 +0.8
comp=E,6.0nm,1.0s
MNK *i* P **P** 21 01 47.9 +0.8
comp=N,7.0nm,1.0s
MNK *i* P **P** 21 01 47.9 +0.8
comp=Z,15nm,1.0s,baz=284
MNK *i* PP **PP** 21 04 44.2 0.0
MNK *i* PPP PPP 21 06 31.8
MNK *i* S **S** 21 11 43.9 +0.1
MNK *i* SS **SS** 21 16 47.1 +0.7
MNK *i* SSS SSS 21 20 12.8
MNK *i* LQ LQ 21 31 25.0
MNK *i* LR LR 21 37 01.4
MNK *i* LRM MLR 21 38 38.7
comp=N,513nm,17.2s
MNK *i* LRM MLR 21 38 44.8
comp=Z,712nm,18.1s
MNK *i* LRM MLR 21 39 56.7
comp=E,235nm,17.6s
MNK Minsk 78.50 36 *i* P **P** 21 01 47.8 +0.8
MNK *i* 21 04 44.2
MNK *i* PPP PPP 21 06 31.7
MNK *i* S **S** 21 11 43.9 +0.1
MNK *i* SS **SS** 21 16 47.1 +0.7
MNK *i* SSS SSS 21 20 12.8
MNK pmax pmax
comp=E,6.0nm,1.0s
MNK pmax pmax
comp=Z,15nm,1.0s
MNK pmax pmax
comp=N,7.0nm,1.0s
MNK MLR MLR
comp=N,513nm,17.0s
MNK MLR MLR
comp=Z,712nm,18.0s
MNK MLR MLR
comp=E,235nm,18.0s
PLNA Plana 78.52 49 P **P** 21 01 51.7 +4.1
BUR08 Bucovina Ar. S 78.53 44 P **P** 21 01 46.8 -0.7
BUR08 IAmb IAmb 21 01 55.8
comp=Z,34nm,1.4s
MPEP Malo Peshtene 78.54 48 P **P** 21 01 51.0 +3.5
BURAR Bucovina Array 78.54 44 P **P** 21 01 50.0 +2.4
ARR Arges 78.69 46 ⇑P **P** 21 01 49.2 +0.8
VOIR 78.95 46 ⇑P **P** 21 01 51.1 +1.2
VOIR 78.95 46 P **P** 21 01 51.1 +1.2
MMB Musomishta 78.98 50 P **P** 21 01 53.8 +3.8
DOPR Dopca 79.06 45 ⇑P **P** 21 01 52.6 +2.2
KMPD K-Podol'skiy 79.12 42 P **P** 21 01 51.2 +0.6
M11K Mekoryuk 79.17 330 IAMs_20 IAMs_20 21 39 25.1
comp=Z,879nm,19.0s
M11K Mekoryuk 79.17 330 P **P** 21 01 49.5 -1.0
baz=73
MI28 MI28,Pidlybu 79.28 40 P **P** 21 01 52.8 +1.4
OZUR 79.29 45 ⇓P **P** 21 01 53.6 +1.9
TURR Turia 79.46 45 ⇑P **P** 21 01 55.2 +2.6
MI29 MI29, Kamyanyy 79.52 40 P **P** 21 01 54.8 +2.0
comp=Z,113nm,0.9s
MLR Muntele Rosu 79.55 46 LR LR 21 35 48.6
comp=Z,430nm,19.6s,baz=278,slow=35
MLR Muntele Rosu 79.55 46 ⇑P **P** 21 01 55.5 +2.3
MLR Muntele Rosu 79.55 46 IAMs_20 IAMs_20 21 32 40.1
comp=Z,521nm,21.0s

MLR	**Muntele Rosu**	**79.55**	**46**	P		**P**	**21 01 55.7 +2.5**	
MLR	**Muntele Rosu**	**79.55**	**46**	P		**P**	**21 01 54.9 +1.7**	
	comp=Z,755nmcomp=Z,50nm,1.3s							
PLD	**Plovdiv**	**79.55**	**49**	P		**P**	**21 01 56.6 +3.5**	
GIRR	**Girov**	**79.55**	**44**	⇓P		**P**	**21 01 55.1 +2.0**	
LUBAR	**Lubar, Ukraine**	**79.60**	**41**	P		**P**	**21 01 54.6 +1.4**	
COVR	**Voineasa-Covas**	**79.64**	**45**	⇓P		**P**	**21 01 55.3 +1.7**	
ONER	**Baraj Valea Uz**	**79.64**	**45**	⇓P		**P**	**21 01 55.5 +2.0**	
TESR	**Tescani**	**79.77**	**44**	⇑P		**P**	**21 01 55.9 +1.7**	
TESR	**Tescani**	**79.77**	**44**	P		**P**	**21 01 55.6 +1.4**	
	comp=Z,477nmcomp=Z,18nm,1.2s							
PLOR	**Plostina**	**79.94**	**45**	⇓P		**P**	**21 01 57.7 +2.5**	
PLOR	**Plostina**	**79.94**	**45**	P		**P**	**21 01 57.7 +2.5**	
VRI	**Vrincioaia**	**79.99**	**45**	⇓P		**P**	**21 01 57.2 +1.7**	
VRI	**Vrincioaia**	**79.99**	**45**	P		**P**	**21 01 57.1 +1.7**	
ISR	**Istrita**	**80.06**	**46**	P		**P**	**21 01 57.2 +1.4**	
	comp=Z,27nm,1.1s							
KDZ	**Kurdzhali**	**80.11**	**49**	P		**P**	**21 01 58.7 +2.5**	
SZH	**Strazhitsa**	**80.14**	**48**	P		**P**	**21 01 59.7 +3.4**	
AK20	**Malin Array Si**	**80.15**	**40**	P		**P**	**21 01 57.6 +1.5**	
AK19	**Malin Array Si**	**80.16**	**40**	P		**P**	**21 01 57.6 +1.4**	
AK21	**Malin Array Si**	**80.16**	**40**	P		**P**	**21 01 57.6 +1.4**	
AK22	**Malin Array Si**	**80.18**	**40**	P		**P**	**21 01 57.7 +1.4**	
AK18	**Malin Array Si**	**80.19**	**40**	P		**P**	**21 01 57.8 +1.4**	
AK17	**Malin Array Si**	**80.19**	**40**	P		**P**	**21 01 57.8 +1.4**	
AK13	**Malin Array Si**	**80.22**	**40**	P		**P**	**21 01 57.9 +1.4**	
AK15	**Malin Array Si**	**80.23**	**40**	P		**P**	**21 01 58.0 +1.4**	
AK14	**Malin Array Si**	**80.24**	**40**	P		**P**	**21 01 58.1 +1.5**	
AK04	**Malin Array Si**	**80.25**	**40**	P		**P**	**21 01 58.1 +1.4**	
AK11	**Malin Array Si**	**80.26**	**40**	P		**P**	**21 01 58.2 +1.4**	
AK12	**Malin Array Si**	**80.27**	**40**	P		**P**	**21 01 58.2 +1.4**	
KIEV	**Kiev**	**80.28**	**40**	⇑P		**P**	**21 01 58.2 +1.3**	
KIEV	**Kiev**	**80.28**	**40**	IAMs_20	IAMs_20		21 32 27.9	
	comp=Z,799nm,22.0s							
KIEV	**Kiev**	**80.28**	**40**	P		**P**	**21 01 58.2 +1.3**	
AK01	**Malin Array Si**	**80.29**	**40**	P		**P**	**21 01 58.3 +1.4**	
AKASG	**Malin Array Be**	**80.29**	**40**	P		**P**	**21 01 58.0 +1.1**	
	comp=Z,3.6nm,0.7s,baz=276,slow=4.8,SNR=15							
AKASG				LR		LR	21 33 12.8	
	comp=Z,716nm,21.9s,baz=276,slow=32							
	comp=Z,3.6nm,0.7s							
AKASG	**Malin Array Be**	**80.29**	**40**	P		**P**	**21 01 54.5 -2.4**	
AKASG	**Malin Array Be**	**80.29**	**40**	P		**P**	**21 01 54.5 -2.4**	
AKASG				pmax	pmax			
	comp=Z,11nm,1.4s							
AKBB	**Malin Array Si**	**80.29**	**40**	P		**P**	**21 01 54.8 -2.1**	
AKBB	**Malin Array Si**	**80.29**	**40**	*d* iP		**P**	**21 01 58.7 +1.8**	
AKBB				pmax	pmax			
	comp=Z,19nm,1.4s							
AKBB	**Malin Array Si**	**80.29**	**40**	P		**P**	**21 01 58.3 +1.4**	
AK05	**Malin Array Si**	**80.30**	**40**	P		**P**	**21 01 58.4 +1.4**	
AK07	**Malin Array Si**	**80.32**	**40**	P		**P**	**21 01 58.5 +1.4**	
AK10	**Malin Array Si**	**80.34**	**40**	P		**P**	**21 01 58.6 +1.4**	
AK09	**Malin Array Si**	**80.35**	**40**	P		**P**	**21 01 58.7 +1.5**	
RDO	**Rodhopi**	**80.38**	**50**	P		**P**	**21 01 54.8 -2.7**	
RDO				IAmb	IAmb		21 02 07.0	
	comp=Z,20nm,0.9s							
SORM	**Soroca**	**80.45**	**43**	⇑P		**P**	**21 01 58.5 +0.7**	
SORM	**Soroca**	**80.45**	**43**	P		**P**	**21 01 59.1 +1.3**	
GAMB	**Gambell**	**80.52**	**334**	P		**P**	**21 01 56.5 -1.4**	
	baz=69							
JMB	**Yambol**	**80.74**	**48**	P		**P**	**21 02 03.3 +3.8**	
CFR	**Carcaliu**	**81.12**	**45**	⇑P		**P**	**21 02 02.0 +0.5**	
CFR	**Carcaliu**	**81.12**	**45**	P		**P**	**21 02 01.9 +0.5**	
PRD	**Provadia**	**81.18**	**48**	P		**P**	**21 02 05.3 +3.5**	
TLBR	**Topalu**	**81.24**	**46**	⇓P		**P**	**21 02 04.0 +1.9**	
ESPZ	**Base Esperanza**	**81.30**	**175**	P		**P**	**21 02 00.3 -1.5**	
BAL3X	**Bal3x, Balta**	**81.31**	**43**	P		**P**	**21 02 04.5 +2.1**	
IDI	**Anoyia**	**81.44**	**56**	P		**P**	**21 02 01.2 -2.2**	
TIRR	**Tirgusor**	**81.52**	**46**	P		**P**	**21 02 05.0 +1.4**	
	comp=Z,332nmcomp=Z,17nm,1.1s							
PSN	**Preselentsi**	**81.56**	**47**	P		**P**	**21 02 07.4 +3.6**	
SPIA	**Saint Paul Isl**	**82.19**	**328**	P		**P**	**21 02 05.5 -1.3**	
	baz=69							
PMSA	**Palmer Station**	**82.34**	**179**	LR		LR	21 42 16.5	
	comp=Z,576nm,18.3s,baz=346,slow=38							
PMSA	**Palmer Station**	**82.34**	**179**	P		**P**	**21 02 05.7 -1.5**	
KLMR	**Klimovskoe**	**82.41**	**28**	*e*P		**P**	**21 02 07.5 -0.4**	
KLMR				pmax	pmax			
	comp=Z,48nm,1.4s							
KLMR				MLR	MLR			
	comp=Z,326nm,16.0s							
BALB	**Balikesir**	**82.51**	**51**	P		**P**	**21 02 06.6 -2.3**	
OBN	**Obninsk**	**83.10**	**34**	LR		LR	21 36 37.7	
	comp=Z,477nm,21.0s,baz=328,slow=34							
OBN	**Obninsk**	**83.10**	**34**	⇑P		**P**	**21 02 13.3 +1.7**	
OBN	**Obninsk**	**83.10**	**34**	P		**P**	**21 02 11.1 -0.5**	
OBN				IAMs_20	IAMs_20		21 36 14.8	
	comp=Z,496nm,19.0s							
OBN	**Obninsk**	**83.10**	**34**	P		**P**	**21 02 13.3 +1.7**	
OBN	**Obninsk**	**83.10**	**34**	P		**P**	**21 02 13.1 +1.5**	
	comp=Z,629nmcomp=Z,47nm,1.1s							
MOS	**Moscow**	**83.43**	**33**	*e*P		**P**	**21 02 16.0 +2.6**	
MOS				*e*S		**S**	**21 12 33.8 -1.3**	
MOS				pmax	pmax			
	comp=Z,38nm,1.1s							
MOS				smax	smax			
	comp=E,400nm,3.8s							
MOS				smax	smax			
	comp=N,500nm,3.8s							
MOS				MLR	MLR			
	comp=Z,700nm,18.0s							
SIM	**Simferopol'**	**85.22**	**44**	P		**P**	**21 02 26.7 +4.0**	
SIM				pmax	pmax			
	comp=Z,25nm,1.3s							
SIM				MLR	MLR			
	comp=Z,300nm,17.6s							
LPSR	**Galich'ya Gora**	**85.35**	**36**	*e*P		**P**	**21 02 24.4 +1.3**	
LPSR				pmax	pmax			
	comp=Z,95nm,1.2s							
VORR	**Voronezh**	**85.87**	**37**	*e*P		**P**	**21 02 28.2 +2.4**	
VORR				pmax	pmax			
	comp=Z,45nm,0.9s							
VSR	**Storozhevoye**	**86.03**	**37**	*e*P		**P**	**21 02 27.9 +1.3**	
VSR				pmax	pmax			
	comp=Z,74nm,2.6s							
BILL	**Bilibino**	**86.15**	**342**	IAMs_20	IAMs_20		21 44 37.9	
	comp=Z,576nm,18.0s							
BILL	**Bilibino**	**86.15**	**342**	P		**P**	**21 02 27.5 +0.6**	
VORD	**Divnogorie**	**86.20**	**37**	*e*P		**P**	**21 02 27.9 +0.5**	
VORD				pmax	pmax			
	comp=Z,30nm,1.2s							
BR131	**Keskin Array S**	**86.70**	**49**	*de*P		**P**	**21 02 32.3 +2.0**	
BRTR	**Keskin Array B**	**86.70**	**49**	P		**P**	**21 02 29.5 -0.8**	
	comp=Z,5.4nm,0.9s,baz=270,slow=4.6,SNR=14							
BRTR				LR	LR		21 37 20.7	
	comp=Z,145nm,22.0s,baz=322,slow=33							
	comp=Z,5.4nm,0.9s							
BRTR	**Keskin Array B**	**86.70**	**49**	P		**P**	**21 02 27.9 -2.4**	
BRTR	**Keskin Array B**	**86.70**	**49**	*i* P		**P**	**21 02 31.3 +1.0**	
BRTR				pmax	pmax			
	comp=Z,12nm,0.9s							
BR104	**Keskin Array S**	**86.71**	**49**	P		**P**	**21 02 31.6 +1.3**	
KIRS	**Kirsehir-Merke**	**87.11**	**50**	⇑P		**P**	**21 02 32.2 0.0**	
ANN	**Anapa**	**87.47**	**44**	*e*P		**P**	**21 02 34.6 +0.9**	
ANN				*e**PP		**pwP**	**21 02 38.2 +1.0**	
ANN				*e*			21 05 59.1	
ANN				*e*S		**SKSac**	**21 13 01.2 -1.1**	
ANN				pmax	pmax			
	comp=Z,23nm,1.4s							
ANN				MLR	MLR			
	comp=Z,206nm,15.0s							
ANN				MLR	MLR			
	comp=N,158nm,15.0s							
ANN				MLR	MLR			
	comp=E,455nm,16.0s							
VRH	**Novokhopyorsk**	**87.50**	**37**	*e*P		**P**	**21 02 34.6 +0.9**	
VRH				pmax	pmax			
	comp=Z,30nm,1.1s							
KIRV	**Kirov**	**87.90**	**28**	LR		LR	21 42 42.4	
	comp=Z,230nm,18.3s,baz=304,slow=36							
KIRV	**Kirov**	**87.90**	**28**	⇓*e*P		**P**	**21 02 35.0 -0.5**	
PPT	**Papeete**	**88.49**	**251**	LR		LR	21 37 07.7	
	comp=Z,314nm,18.8s,baz=24,slow=32							
PPT2	**Papeete2**	**88.49**	**251**	*e*SS		SS	21 19 11.0 -5.8	
	comp=Z,79nm,24.2s							
PPT2				*e*LR		LR	21 30 42.1	
	comp=Z,366nm,27.8s							
PPT2				*e*LR		LR	21 30 54.8	
	comp=Z,476nm,26.0s							
ERBR	**Yeremizino-Bor**	**89.08**	**42**	*e*P		**P**	**21 02 43.1 +1.7**	
ERBR				*e**PP		**pwP**	**21 02 46.5 +1.7**	
ERBR				*e*S		**SKSac**	**21 13 12.4 +0.5**	
ERBR				pmax	pmax			
	comp=Z,21nm,1.4s							
ERBR				MLR	MLR			
	comp=Z,390nm,19.0s							
ERBR				MLR	MLR			
	comp=E,946nm,21.0s							
ERBR				MLR	MLR			
	comp=N,737nm,20.0s							
SOC	**Sochi**	**89.46**	**44**	*e*P		**P**	**21 02 44.9 +1.7**	
SOC				*e*			21 06 15.2	
SOC				*e*S		**SKSac**	**21 13 14.2 -0.1**	
SOC				*e*SS		**SS**	**21 19 28.6 -0.2**	
SOC				*e*SSS		SSS	21 23 02.8	
SOC				pmax	pmax			
	comp=Z,13nm,0.8s							
SOC				MLR	MLR			
	comp=Z,269nm,18.0s							
LABN	**Labinsk**	**89.68**	**43**	*e*P		**P**	**21 02 45.4 +1.2**	
LABN				*e**PP		**pwP**	**21 02 48.7 +1.0**	
LABN				*e*S		**SKSac**	**21 13 15.2 -0.3**	
LABN				pmax	pmax			
	comp=Z,6.0nm,0.6s							
LABN				MLR	MLR			
	comp=Z,411nm,16.0s							
LABN				MLR	MLR			
	comp=N,287nm,16.0s							
LABN				MLR	MLR			
	comp=E,252nm,15.0s							
TIXI	**Tiksi**	**90.13**	**355**	IAMs_20	IAMs_20		21 45 53.5	
	comp=Z,639nm,19.0s							
BELG	**Belogornoye**	**90.19**	**34**	LR		LR	21 39 30.2	
	comp=Z,365nm,21.7s,baz=283,slow=33							
BELG	**Belogornoye**	**90.19**	**34**	*d* iP		**P**	**21 02 48.3 +1.9**	
BELG				pmax	pmax			
	comp=Z,8.0nm,1.1s							
TBI	**Tubuai**	**90.27**	**246**	*e*LR		LR	21 31 32.5	
	comp=Z,2µm,23.2s							
ARPR	**Arapgir-MALATY**	**90.31**	**49**	P		**P**	**21 02 46.6 -0.9**	
MMAI	**Mount Meron Ar**	**90.42**	**55**	P		**P**	**21 02 49.4 +1.3**	
	comp=Z,2.5nm,0.9s,baz=343,slow=3.9,SNR=6.7							
MMAI				LR		LR	21 40 45.3	
	comp=Z,127nm,20.6s,baz=303,slow=34							
	comp=Z,2.5nm,0.9s							
TSUM	**Tsumeb**	**90.82**	**110**	LR		LR	21 36 58.1	
	comp=Z,883nm,20.1s,baz=292,slow=31							
TSUM	**Tsumeb**	**90.82**	**110**	P		**P**	**21 02 47.9 -2.2**	
NRIK	**Noril'sk**	**91.23**	**9**	P		**P**	**21 02 51.8 +0.8**	
	comp=Z,4.2nm,0.6s,baz=342,slow=3.2,SNR=4.9							
NRIK				LR		LR	21 43 38.9	
	comp=Z,524nm,20.7s,baz=351,slow=36							
	comp=Z,4.2nm,0.6s							
NRIK	**Noril'sk**	**91.23**	**9**	*c* iP		**P**	**21 02 52.0 +1.1**	
NRIK				pmax	pmax			
	comp=Z,6.0nm,0.7s							
KIV	**Kislovodsk**	**91.25**	**43**	⇓P		**P**	**21 02 54.0 +2.3**	
KIV	**Kislovodsk**	**91.25**	**43**	IAMs_20	IAMs_20		21 50 50.1	
	comp=Z,366nm,18.0s							
KIV	**Kislovodsk**	**91.25**	**43**	*e*P		**P**	**21 02 54.0 +2.3**	
KIV				pmax	pmax			
	comp=Z,8.0nm,1.0s							
KVAR	**Kislovodsk Arr**	**91.26**	**43**	LR		LR	21 41 21.4	
	comp=Z,126nm,20.4s,baz=323,slow=34							
EIL	**Elat**	**91.27**	**58**	LR		LR	21 42 39.5	
	comp=Z,524nm,20.9s,baz=268,slow=35							
SHA1	**Shidzhatmaz**	**91.33**	**43**	*c* iP		**P**	**21 02 54.5 +2.3**	
KBZ	**Khabaz**	**91.49**	**43**	P		**P**	**21 02 54.8 +2.1**	
	comp=Z,4.9nm,1.1s,baz=352,slow=3.0,SNR=9.3							
KBZ				LR		LR	21 45 40.2	
	comp=Z,220nm,18.6s,baz=310,slow=37							
	comp=Z,4.9nm,1.1s							
KBZ	**Khabaz**	**91.49**	**43**	⇑*i*P		**P**	**21 02 55.0 +2.4**	
KBZ				pmax	pmax			
	comp=Z,7.0nm,1.0s							
NCK	**Nalchik**	**92.05**	**43**	⇑*e*P		**P**	**21 02 57.5 +2.2**	
NCK				pmax	pmax			
	comp=Z,13nm,0.9s							
SHEM	**Shemya Is, Ala**	**92.23**	**328**	LR		LR	21 45 25.9	
	comp=Z,434nm,19.6s,baz=98,slow=36							
ARTI	**Arti**	**93.12**	**27**	LR		LR	21 46 24.3	
	comp=Z,295nm,18.1s,baz=317,slow=36							
ARTI	**Arti**	**93.12**	**27**	P		**P**	**21 02 57.8 -2.2**	
ARTI				IAmb	IAmb		21 03 06.0	
	comp=Z,8.8nm,1.2s							
ARTI				IAMs_20	IAMs_20		21 47 06.1	
	comp=Z,472nm,18.0s							
ARTI	**Arti**	**93.12**	**27**	P		**P**	**21 03 01.2 +1.3**	
ARTI							21 06 43.8	
ARTI				S		**SKSac**	**21 13 34.9 +0.3**	
ARTI				SP		**SP**	**21 15 20.2 +1.9**	
ARTI				MLR	MLR			
	comp=Z,450nm,18.0s							
SVE	**Sverdlovsk**	**93.80**	**26**	*e*P		**P**	**21 03 04.4 +1.4**	
SVE				pmax	pmax			
	comp=Z,16nm,1.3s							
SEY	**Seymchan**	**93.83**	**343**	⇓*e*P		**P**	**21 03 04.1 +1.1**	
SEY				pmax	pmax			
	comp=Z,17nm,1.0s							
GNI	**Garni**	**94.33**	**46**	LR		LR	21 48 54.2	
	comp=Z,267nm,18.4s,baz=316,slow=38							
GNI	**Garni**	**94.33**	**46**	IAMs_20	IAMs_20		21 48 23.3	
	comp=Z,320nm,19.0s							
MAK	**Makhachkala**	**94.82**	**42**	*e*P		**P**	**21 03 03.2 -4.8**	
MAK				pmax	pmax			
	comp=Z,264nm,1.3s							
AKTO	**Aktyubinsk**	**96.67**	**32**	LR		LR	21 48 48.9	
	comp=Z,371nm,18.0s,baz=340,slow=37							
MA2	**Magadan**	**97.00**	**342**	LR		LR	21 51 50.9	
	comp=Z,247nm,18.6s,baz=52,slow=38							
MA2	**Magadan**	**97.00**	**342**	IAMs_20	IAMs_20		21 49 24.5	
	comp=Z,504nm,20.0s							
BELA	**Belgrano 2**	**97.28**	**173**	P		**P**	**21 03 16.4 -1.9**	
BELA				IAmb	IAmb		21 03 24.3	
	comp=Z,6.8nm,1.5s							
SUR	**Sutherland**	**97.54**	**121**	LR		LR	21 42 55.5	
	comp=Z,305nm,19.6s,baz=292,slow=33							
MBAR	**Mbarara**	**97.56**	**88**	LR		LR	21 44 56.5	
	comp=Z,660nm,19.9s,baz=298,slow=34							
RAR	**Rarotonga**	**98.75**	**251**	LR		LR	21 41 02.0	
	comp=Z,310nm,18.9s,baz=87,slow=31							
SNAA	**Sanae**	**99.02**	**163**	LR		LR	21 46 09.4	
	comp=Z,514nm,21.7s,baz=287,slow=34							
PET	**Petropavlovsk**	**99.22**	**334**	IAMs_20	IAMs_20		21 50 18.0	
	comp=Z,390nm,20.0s							
YAK	**Yakutsk**	**99.35**	**352**	LR		LR	21 52 31.3	
	comp=Z,170nm,18.6s,baz=24,slow=38							
YAK	**Yakutsk**	**99.35**	**352**	IAMs_20	IAMs_20		21 47 41.2	
	comp=Z,481nm,20.0s							
YAK	**Yakutsk**	**99.35**	**352**	⇑*e*P		**Pdif**	**21 03 30.7 +2.7**	
YAK				pmax	pmax			
	comp=Z,3.0nm,0.4s							
LSZ	**Lusaka**	**99.37**	**103**	LR		LR	21 40 27.6	
	comp=Z,263nm,20.8s,baz=298,slow=31							
LSZ	**Lusaka**	**99.37**	**103**	P		**Pdif**	**21 03 25.9 -3.3**	
LSZ	**Lusaka**	**99.37**	**103**	P		**Pdif**	**21 03 25.9 -3.3**	
LSZ				pmax	pmax			
	comp=Z,33nm,2.0s							
PETK	**Petropavlovsk-**	**99.55**	**335**	LR		LR	21 53 54.7	
	comp=Z,282nm,18.5s,baz=44,slow=39							
LBTB	**Lobatse**	**99.61**	**113**	LR		LR	21 40 46.5	
	comp=Z,395nm,21.3s,baz=286,slow=31							
BORK	**Borovoye**	**100.42**	**25**	IAMs_20	IAMs_20		21 50 07.9	
	comp=Z,375nm,21.0s							
BVAR	**Borovoye Array**	**100.46**	**25**	P		**Pdif**	**21 03 33.5 +0.3**	
	comp=Z,0.6nm,0.5s,baz=319,slow=4.2,SNR=4.5							
ZALV	**Zalesovo Beam**	**104.57**	**17**	PKiKP		**PKiKP**	**21 08 09.4 +2.1**	
	comp=Z,0.3nm,0.4s,baz=347,slow=4.6,SNR=3.6							
KURK	**Kurchatov**	**105.40**	**22**	IAMs_20	IAMs_20		21 56 59.4	
	comp=Z,340nm,19.0s							
QSPA	**South Pole Qui**	**107.74**	**180**	IAMs_20	IAMs_20		21 54 26.7	
	comp=Z,586nm,22.0s							
MAKZ	**Makanchi**	**109.89**	**22**	IAMs_20	IAMs_20		22 00 09.2	
	comp=Z,445nm,19.0s							
AAK	**Ala-Archa**	**110.20**	**29**	IAMs_20	IAMs_20		21 58 44.2	
	comp=Z,486nm,20.0s							
AAK	**Ala-Archa**	**110.20**	**29**	⇑*i*PKIKP		**PKiKP**	**21 08 20.5 +2.1**	
TLY	**Talaya**	**110.34**	**6**	⇓*i*PKIKP		**PKiKP**	**21 08 21.1 +2.9**	
HIA	**Hailar**	**112.97**	**355**	IAMs_20	IAMs_20		22 00 03.3	
	comp=Z,446nm,18.0s							
KSH2	**Kashi**	**113.42**	**31**	PKP		**PKiKP**	**21 08 29.4 +4.8**	
KSH2				L	L			
	comp=Z,480nm,19.6s							
KSH2				L	L			
	comp=Z,380nm,18.6s							
WUS	**Wushi**	**113.47**	**27**	IAMs_20	IAMs_20		21 54 10.4	
	comp=Z,332nm,21.0s							
ULN	**Ulaanbaatar**	**114.43**	**4**	IAMs_20	IAMs_20		21 59 16.0	
	comp=Z,476nm,20.0s							
WMQ	**Urumqi**	**114.45**	**20**	*e*PKP	PKPdf		21 08 26.4 +0.1	
WMQ				L	L			
	comp=Z,390nm,20.1s							
WMQ				L	L			
	comp=Z,270nm,20.1s							
WMQ				L	L			
	comp=Z,250nm,18.1s							
CN2	**Changchun**	**117.66**	**350**	PKP		**PKiKP**	**21 08 33.6 +1.2**	
CN2				PP		**PP**	**21 09 49.1 +5.5**	
CN2				PPMZ				
	comp=Z,80nm,4.0s							
CN2				L	L			
	comp=Z,340nm,18.0s							
CN2				L	L			
	comp=Z,430nm,18.0s							
CN2				L	L			
	comp=Z,460nm,18.0s							
ABPO	**Ambohimpanom**	**117.93**	**102**	PKPdf		**PKPdf**	**21 08 30.0 -3.7**	
ABPO	**Ambohimpanom**	**117.93**	**102**	PKiKP		**PKPdf**	**21 08 30.0 -3.7**	
MAJO	**Matsushiro**	**120.94**	**336**	IAMs_20	IAMs_20		22 03 42.4	
	comp=Z,307nm,20.0s							
MJAR	**Matsushiro Arr**	**120.94**	**336**	PKP		**PKPdf**	**21 08 38.9 -0.1**	
	comp=Z,1.2nm,0.7s,baz=102,slow=1.2,SNR=4.8							
MAW	**Mawson**	**120.97**	**160**	PKPdf		**PKPdf**	**21 08 35.6 -2.3**	
MAW	**Mawson**	**120.97**	**160**	PKiKP		**PKPdf**	**21 08 35.6 -2.3**	
HHC	**Hu-ho-hao-te**	**121.65**	**1**	*e*PKP		**PKiKP**	**21 08 40.8 +0.3**	
HHC				L	L			
	comp=Z,150nm,17.1s							
HHC				L	L			
	comp=Z,310nm,17.8s							
BTO2	**Baotou**	**121.69**	**3**	*e*PKP		**PKiKP**	**21 08 41.4 +0.8**	
BTO2				PP		**PP**	**21 10 16.3 +4.8**	
BTO2				SS		SS	21 26 52.8 +5.4	
BTO2				L	L			
	comp=Z,750nm,17.5s							
BTO2				L	L			
	comp=Z,660nm,21.7s							
GTA2	**Gaotai**	**121.69**	**12**	*e*PKP		**PKiKP**	**21 08 40.9 +0.3**	
BJT	**Baijiatuan**	**122.42**	**357**	IAMs_20	IAMs_20		22 06 02.2	
	comp=Z,456nm,20.0s							
KSRS	**Korea Array**	**123.28**	**346**	PKP		**PKPdf**	**21 08 43.4 0.0**	
	comp=Z,1.2nm,0.9s,baz=64,slow=2.9,SNR=5.1							
NJ2	**Nanjing**	**130.12**	**353**	*e*PKP		**PKPdf**	**21 08 56.1 -0.5**	
CD2	**Chengdu**	**130.77**	**10**	PKP		**PKPdf**	**21 08 56.5 -1.5**	
CD2				SKS		**SKSdf**	**21 16 09.0 -1.5**	
CD2				L	L			
	comp=Z,800nm,17.1s							
CD2				L	L			
	comp=Z,540nm,18.1s							
WHN	**Wuhan**	**131.93**	**358**	PKP		**PKPdf**	**21 08 55.5 -4.6**	
ENH	**Enshi**	**132.10**	**4**	IAMs_20	IAMs_20		22 10 55.5	
	comp=Z,349nm,21.0s							
PZH	**PanZhiHua**	**134.63**	**14**	PKP		**PKPdf**	**21 09 04.5 -1.0**	
YHNB	**Yehenig**	**137.01**	**349**	IAMs_20	IAMs_20		22 15 53.0	
	comp=Z,307nm,21.0s							
NACB	**Ninganchiao**	**137.46**	**348**	IAMs_20	IAMs_20		22 17 12.7	
	comp=Z,319nm,20.0s							
YULB	**Yu-li**	**138.27**	**349**	IAMs_20	IAMs_20		22 10 20.3	
	comp=Z,345nm,21.0s							
CHTO	**Chiang Mai**	**141.09**	**21**	IAMs_20	IAMs_20		22 22 43.4	
	comp=Z,300nm,19.0s							
CMAR	**Chiang Mai Arr**	**141.42**	**22**	PKP		**PKPdf**	**21 09 17.1 -0.8**	
	comp=Z,2.4nm,0.8s,baz=299,slow=2.7,SNR=11							
CMAR				SKPbc		**SKPbc**	**21 12 55.2 -0.5**	
	comp=Z,2.3nm,1.0s,baz=1.2,slow=2.4,SNR=6.5							
CMAR	**Chiang Mai Arr**	**141.42**	**22**	PKPdf		**PKPdf**	**21 09 14.7 -3.3**	
QIZ	**Qiongzhong**	**143.28**	**5**	PKP		**PKPdf**	**21 09 20.6 -0.6**	
QIZ				PP		**PP**	**21 12 30.0 0.0**	
QIZ				SS		SS	21 31 10.2 +0.4	
QIZ				L	L			
	comp=Z,330nm,18.5s							
QIZ				L	L			
	comp=Z,260nm,22.2s							
QIZ				L	L			
	comp=Z,370nm,17.7s							
EIDS	**Eidsvold**	**143.88**	**251**	P		PKPab	21 09 19.3 +0.2	
CTA	**Charters Tower**	**148.49**	**260**	P		**PKPbc**	**21 09 34.1 +0.5**	
CTAO	**Charters Tower**	**148.49**	**260**	PKPdf		**PKPdf**	**21 09 26.4 -3.7**	
CTAO	**Charters Tower**	**148.49**	**260**	PKHKP		PKPpre	21 09 26.4	
QLP	**Quilpie**	**149.84**	**248**	P		**PKiKP**	**21 09 38.3 +0.5**	
DLV	**Lat**	**150.12**	**9**	IAMs_20	IAMs_20		22 18 28.0	
	comp=Z,220nm,21.0s							
MTSU	**Mount Surprise**	**150.22**	**264**	P		**PKiKP**	**21 09 39.9 +1.1**	
STKA	**Stephens Creek**	**150.61**	**236**	P		**PKPdf**	**21 09 34.9 +1.8**	
STKA	**Stephens Creek**	**150.61**	**236**	PKP		**PKPdf**	**21 09 32.5 -0.6**	
	comp

IDE	**Isla Desecheo**	**0.65**	**320**			**Pb**	**20 54 31.3**	**+0.2**
IDE					*eS*	**Sg**	**20 54 40.0**	**+0.9**
IDE	**Isla Desecheo**	**0.65**	**320**	⇓	*eP*	**Pb**	**20 54 31.3**	**+0.2**
IDE					*eS*	**Sg**	**20 54 40.0**	**+0.9**
ECPR	**Experimental S**	**0.77**	**56**			**Pb**	**20 54 33.0**	**-0.2**
ECPR						**Sb**	**20 54 43.5**	**-0.2**
ECPR					IAML		20 54 45.5	
	3µm,0.2s							
ECPR					IAML		20 54 45.9	
	3µm,0.3s							
ECPR	**Experimental S**	**0.77**	**56**	⇑	*eP*	**Pb**	**20 54 33.1**	**-0.2**
SJG	**San Juan**	**0.87**	**75**			**Pb**	**20 54 34.8**	**-0.2**
SJG	**San Juan**	**0.87**	**75**	⇑	*eP*	**Pn**	**20 54 35.2**	**-0.7**
IGPR	**InterUniversit**	**0.89**	**85**			**Pn**	**20 54 35.9**	**-0.3**
IGPR						**Sn**	**20 54 49.1**	**+0.1**
IGPR	**InterUniversit**	**0.89**	**85**	⇑	*eP*	**Pn**	**20 54 35.9**	**-0.3**
PDPR	**Patillas Dam,**	**0.97**	**82**			**Pn**	**20 54 37.1**	**-0.3**
PDPR						**Sn**	**20 54 51.1**	**0.0**
PDPR	**Patillas Dam,**	**0.97**	**82**	⇑	*eP*	**Pn**	**20 54 37.2**	**-0.1**
HUMP	**Col San Antoni**	**1.16**	**77**			**Pg**	**20 54 39.9**	**-0.4**
HUMP						**Sn**	**20 54 56.6**	**+1.0**
HUMP	**Col San Antoni**	**1.16**	**77**	⇑	*eP*	**Pg**	**20 54 41.9**	**+1.6**
PCDR	**Punta Cana, DR**	**1.42**	**296**		Pn	**Pn**	**20 54 42.9**	**-0.6**
DR12	**Loma Pena Alta**	**2.40**	**292**		Pn	**Pn**	**20 54 56.2**	**-0.9**
BANI	**BANI**	**3.20**	**280**		Pn	**Pn**	**20 55 07.0**	**-1.0**
SABA	**Saba**	**3.63**	**94**		Pn	**Pn**	**20 55 13.4**	**-0.5**
SMRT	**St. Maarten**	**3.77**	**87**		Pn	**Pn**	**20 55 16.1**	**+0.2**
SC01	**Santiago de lo**	**3.82**	**294**		Pn	**Pn**	**20 55 16.6**	**+0.1**
SEUS	**St. Eustatius**	**3.89**	**95**		Pn	**Pn**	**20 55 19.4**	**+2.0**
SDDR	**Presa de Saban**	**4.18**	**286**		Pn	**Pn**	**20 55 20.7**	**-0.8**
GRTK	**Grand Turk**	**5.28**	**314**		Pn	**Pn**	**20 55 36.0**	**-0.5**
CBE	**Ff, Capester**	**5.50**	**108**		Pn	**Pn**	**20 55 38.3**	**-1.4**
TDBA	**Terre de Bas,**	**5.55**	**111**		Pn	**Pn**	**20 55 39.0**	**-1.4**

IDC ***03*** *20:58:16.8±0.9, 17°.74N×66°.95W, h0km, mb3.9/12, mbtmp3.9/12, Error ellipse: s-maj=23.0km s-min=10.2km az=165.0*
OSPL ***03*** *20:58:19.3±0.6, 17°.80N×66°.93W, h0km±14km, ML3.8, Presumed earthquake*
RSPR ***03*** *20:58:19.3, 17°.93N×66°.96W, h7km, MD3.3/17*
NEIC ***03*** *20:58:19.1±1.3, 17°.91N±0°.02×66°.96W±0°.01, h11km±2km, mb4.3/15, ML4.2/39, Md3.3/17(RSPR), Error ellipse: s-maj=2.8km s-min=1.6km az=157.0*

ISC 03 20:58:18.6±0.8, 17°.89N±0°.04×66°.95W±0°.02, h12km±4km, n82, σ1ᵍ15/105, mb4.1/16, 5C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**38**			**Pg**	**20 58 21.7**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.11**	**38**	⇑	*eP*	**Pg**	**20 58 21.7**	**+0.1**
MLPR	**Magueyes Islan**	**0.12**	**312**	Pg		**Pg**	**20 58 21.6**	**-0.2**
MLPR				Sg		**Sg**	**20 58 23.4**	**-0.6**
MLPR				IAML			20 58 24.9	
	81µm,0.3s							
MLPR	**Magueyes Islan**	**0.12**	**312**	⇓	*iP*	**Pg**	**20 58 21.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.19**	**308**	Pg		**Pg**	**20 58 22.8**	**-0.1**
CRPR				Sg		**Sg**	**20 58 25.5**	**-0.3**
CRPR				IAML			20 58 26.1	
	63µm,0.8s							
CRPR	**Cabo Rojo, PR**	**0.19**	**308**	⇑	*iP*	**Pg**	**20 58 22.9**	**+0.1**
CRPR					*eS*	**Sb**	**20 58 26.8**	**+1.0**
LSP	**Las Mesas**	**0.31**	**336**			**Pg**	**20 58 24.9**	**-0.1**
LSP	**Las Mesas**	**0.31**	**336**	⇓	*iP*	**Pg**	**20 58 24.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.36**	**65**			**Pb**	**20 58 26.2**	**-0.8**
OBIP				Sg		**Sb**	**20 58 31.5**	**-1.1**
OBIP	**Obispado Ponce**	**0.36**	**65**	*i*	*P*	**Pb**	**20 58 26.2**	**-0.8**
OBIP					*eS*	**Sb**	**20 58 31.8**	**-0.8**
OBIP				IAML			20 58 31.9	
	comp=Z,36µm,0.6s							
OBIP	**Obispado Ponce**	**0.36**	**65**	⇓	*eP*	**Pb**	**20 58 26.2**	**-0.8**
OBIP					*eS*	**Sb**	**20 58 31.8**	**-0.8**
PRSN	**Puerto Rico Se**	**0.38**	**330**			**Pg**	**20 58 25.9**	**-0.3**
PRSN				Sg		**Sb**	**20 58 31.6**	**-1.5**
PRSN				IAML			20 58 33.0	
	comp=Z,46µm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**330**	⇑	*eP*	**Pg**	**20 58 25.9**	**-0.3**
CELP	**Cerrillos**	**0.40**	**62**			**Pb**	**20 58 26.8**	**-0.9**
CELP				Sg		**Sb**	**20 58 32.4**	**-1.3**
CELP				IAML			20 58 33.2	
	comp=Z,9µm,0.8s							
CELP	**Cerrillos**	**0.40**	**62**	⇓	*eP*	**Pb**	**20 58 26.9**	**-0.7**
UUPR	**Utuado, UPR, P**	**0.42**	**31**	Pg		**Pg**	**20 58 26.6**	**-0.4**
UUPR				Sg		**Sg**	**20 58 32.3**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.42**	**31**	⇑	*eP*	**Pg**	**20 58 26.8**	**-0.2**
AOPR	**Arecibo Observ**	**0.49**	**22**	Pg		**Pg**	**20 58 27.9**	**-0.4**
AOPR				Sg		**Sg**	**20 58 34.1**	**-0.7**
AGPR	**Aguadilla, PR**	**0.60**	**345**			**Pg**	**20 58 29.8**	**-0.5**
AGPR				Sg		**Sg**	**20 58 37.6**	**-0.6**
AGPR				IAML			20 58 38.2	
	comp=Z,13µm,0.5s							
AGPR				IAML			20 58 38.3	
	comp=Z,10µm,0.5s							
AGPR	**Aguadilla, PR**	**0.60**	**345**	⇑	*iP*	**Pg**	**20 58 29.9**	**-0.3**
ECPR	**Experimental S**	**0.70**	**52**	Pg		**Pg**	**20 58 31.8**	**-0.5**
ECPR						**Sg**	**20 58 41.0**	**-0.6**
ECPR				IAML			20 58 42.9	
	comp=Z,10µm,0.2s							
ECPR				IAML			20 58 47.1	
	comp=Z,9µm,0.2s							
ECPR	**Experimental S**	**0.70**	**52**	⇑	*eP*	**Pg**	**20 58 32.0**	**-0.3**
IDE	**Isla Desecheo**	**0.70**	**315**			**Pg**	**20 58 31.7**	**-0.6**
IDE						**Sg**	**20 58 41.3**	**-0.2**
IDE	**Isla Desecheo**	**0.70**	**315**	⇓	*eP*	**Pg**	**20 58 31.7**	**-0.6**
IDE					*eS*	**Sg**	**20 58 41.3**	**-0.2**
EMPR	**Esperanza - Ma**	**0.71**	**34**			**Pb**	**20 58 32.5**	**-0.4**
EMPR						**Sb**	**20 58 41.1**	**-0.8**
EMPR	**Esperanza - Ma**	**0.71**	**34**	⇑	*iP*	**Pb**	**20 58 32.5**	**-0.4**
EMPR					*eS*	**Sb**	**20 58 41.8**	**-0.8**
SJG	**San Juan**	**0.79**	**74**	Pg		**Pg**	**20 58 33.6**	**-0.4**
	comp=Z,345nm,0.3s,baz=265,slow=14,SNR=77							
SJG				Lg		Lg	20 58 45.0	
	comp=Z,469nm,0.3s,baz=346,slow=19,SNR=19							
SJG	**San Juan**	**0.79**	**74**	Pg		**Pg**	**20 58 33.5**	**-0.4**
SJG				IAML			20 58 46.5	
	comp=Z,4µm,0.6s							
SJG	**San Juan**	**0.79**	**74**	*i*	*P*	**Pg**	**20 58 33.7**	**-0.2**
SJG					*eS*	**Sb**	**20 58 44.3**	**-0.7**
IGPR	**InterUniversit**	**0.81**	**84**			**Pg**	**20 58 34.3**	**-0.3**
IGPR						**Sg**	**20 58 44.6**	**-0.1**
IGPR	**InterUniversit**	**0.81**	**84**	⇓	*eP*	**Pb**	**20 58 34.3**	**-0.3**
PDPR	**Patillas Dam,**	**0.89**	**82**	Pg		**Pb**	**20 58 36.0**	**0.0**
PDPR						**Sb**	**20 58 47.9**	**0.0**
PDPR	**Patillas Dam,**	**0.89**	**82**	⇓	*eP*	**Pb**	**20 58 35.6**	**-0.4**
HUMP	**Col San Antoni**	**1.08**	**76**			**Pb**	**20 58 38.3**	**-0.9**
HUMP	**Col San Antoni**	**1.08**	**76**	⇑	*eP*	**Pb**	**20 58 38.3**	**-0.9**
PCDR	**Punta Cana, DR**	**1.50**	**295**			**Pn**	**20 58 45.1**	**-0.2**
PCDR						**Sn**	**20 59 02.7**	**-2.0**
PCDR				IAML			20 59 19.4	
	comp=N,2µm,0.8s							
PCDR	**Punta Cana, DR**	**1.50**	**295**	*i*	*P*	**Pb**	**20 58 45.9**	**-0.5**
PCDR					*eS*	**Sg**	**20 59 06.2**	**-0.7**
PCDR				IAML			20 59 12.8	
	comp=Z,400nm,0.5s							
PCDR	**Punta Cana, DR**	**1.50**	**295**	⇓	*eP*	**Pn**	**20 58 44.9**	**-0.4**
PCDR					*eS*	**Sn**	**20 59 02.7**	**-2.0**
DR12	**Loma Pena Alta**	**2.48**	**292**			**Pn**	**20 58 59.9**	**+1.0**
SDD	**Santo Domingo**	**2.87**	**282**	Pn		**Pn**	**20 59 05.1**	**+0.8**
SDD				IAML			21 00 07.3	
	comp=N,711nm,1.9s							
SDD				IAML			21 00 14.2	
	comp=E,748nm,1.0s							
BANI	**BANI**	**3.28**	**279**			**Pn**	**20 59 11.3**	**+1.3**
SABA	**Saba**	**3.54**	**94**			**Pn**	**20 59 14.5**	**+1.0**
SMRT	**St. Maarten**	**3.69**	**87**			**Pn**	**20 59 16.3**	**+0.7**
SC01	**Santiago de lo**	**3.90**	**294**			**Pn**	**20 59 20.3**	**+2.0**
LOVI	**El Cajuil, Ovi**	**4.21**	**269**	*i*	*P*	**Pn**	**20 59 23.4**	**+0.8**
LOVI				IAML			21 00 16.2	
	comp=Z,115nm,3.5s							
SDDR	**Presa de Saban**	**4.26**	**285**			Pb	20 59 28.2	-5.3
SDDR	**Presa de Saban**	**4.26**	**285**	*eP*		**Pb**	**20 59 31.1**	**-2.4**
SDDR				*eS*		**Sb**	**21 00 24.6**	**-0.3**
GRTK	**Grand Turk**	**5.34**	**313**	*eP*		**Pn**	**20 59 39.5**	**+1.4**
ABD	**La Joyeuse, An**	**5.41**	**104**	Pn		**Pn**	**20 59 39.8**	**+0.6**
CBE	**Ff, Capester**	**5.42**	**109**	Pn		**Pn**	**20 59 40.7**	**+1.4**
MASC	**Masc**	**7.25**	**289**	*eP*		**Pn**	**21 00 07.6**	**+3.1**
QMBU	**Quimbuelo**	**7.78**	**288**	*eP*		**Pn**	**21 00 15.7**	**+3.9**
QMBU				*eS*		**Sn**	**21 01 42.7**	**+2.8**
BBSR	**BB Station**	**14.56**	**8**	Pn		**Pn**	**21 01 44.6**	**0.0**
Y58A	**Scranton**	**19.60**	**327**	P		**Pn**	**21 02 49.4**	**+1.3**
Y58A				IAmb		IAmb	21 03 07.6	
	comp=Z,16nm,0.7s							
V61A	**Roper**	**19.77**	**336**	P		**Pn**	**21 02 50.8**	**+0.7**
V61A				IAmb		IAmb	21 03 15.4	
	comp=Z,37nm,1.1s							
CRIN	**San Cristobal**	**20.06**	**258**	P		**P**	**21 02 48.0**	**-4.0**
JSC	**Jenkinsville**	**20.74**	**325**	P		**P**	**21 02 59.4**	**+0.2**
HODGE	**Hodges**	**21.26**	**323**			**P**	**21 03 06.0**	**+1.2**
HODGE				IAmb		IAmb	21 03 11.0	
	comp=Z,12nm,1.1s							
V55A	**Taylorsville**	**21.91**	**328**	P		**P**	**21 03 12.2**	**+0.5**
V55A				IAmb		IAmb	21 03 18.2	
	comp=Z,7.4nm,0.8s							
S57A	**Dark Hollow, R**	**22.42**	**334**	P		**P**	**21 03 18.2**	**+0.9**
BLA	**Blacksburg**	**22.61**	**331**	P		**P**	**21 03 22.0**	**+2.7**
BLA				IAmb		IAmb	21 03 27.8	
	comp=Z,18nm,1.0s							
V53A	**Saluda**	**22.62**	**325**	P		**P**	**21 03 21.3**	**+1.8**
V53A				IAmb		IAmb	21 03 26.5	
	comp=Z,12nm,1.2s							
TZTN	**Tazewell**	**23.67**	**325**	P		**P**	**21 03 32.0**	**+2.0**
TZTN				IAmb		IAmb	21 03 54.7	
	comp=Z,11nm,1.1s							
TXAR	**Lajitas Array**	**35.38**	**296**	P		**P**	**21 05 16.7**	**+2.2**
	comp=Z,0.8nm,0.6s,baz=103,slow=9.8,SNR=8.5							
	comp=Z,0.8nm,0.6s							
TXAR	**Lajitas Array**	**35.38**	**296**	P		**P**	**21 05 14.1**	**-0.5**
SCHQ	**Schefferville**	**36.87**	**0**	P		**P**	**21 05 27.1**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=195,slow=5.9,SNR=4.6							
	comp=Z,1.9nm,0.5s							
SCHQ	**Schefferville**	**36.87**	**0**	P		**P**	**21 05 26.4**	**-0.4**
SCHQ				IAmb		IAmb	21 05 32.2	
	comp=Z,4.2nm,0.8s							
PDAR	**Pinedale Array**	**43.73**	**314**	P		**P**	**21 06 24.9**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=94,slow=4.9,SNR=1.8							
	comp=Z,0.2nm,0.4s							
PDAR	**Pinedale Array**	**43.73**	**314**	P		**P**	**21 06 22.3**	**-1.8**
CPUP	**Villa Florida**	**44.94**	**168**	P		**P**	**21 06 32.5**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=342,slow=10,SNR=4.5							
	comp=Z,1.4nm,0.6s							
CPUP	**Villa Florida**	**44.94**	**168**	P		**P**	**21 06 32.5**	**-1.1**
YKA	**Yellowknife Ar**	**55.37**	**335**	P		**P**	**21 07 53.2**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=115,slow=7.6,SNR=5.6							
	comp=Z,0.9nm,0.6s							
ESDC	**Sonseca Array**	**58.13**	**54**	P		**P**	**21 08 13.9**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=266,slow=8.5,SNR=10							
	comp=Z,1.6nm,0.8s							
ESDC	**Sonseca Array**	**58.13**	**54**	P		**P**	**21 08 12.3**	**-0.1**
DBIC	**Dimbokro**	**61.45**	**92**	P		**P**	**21 08 34.8**	**-0.8**
	comp=Z,5.8nm,0.8s,baz=278,slow=7.1,SNR=3.6							
	comp=Z,5.8nm,0.8s							
DBIC	**Dimbokro**	**61.45**	**92**	P		**P**	**21 08 34.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**66.00**	**83**	P		**P**	**21 09 05.5**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=293,slow=8.0,SNR=4.5							
	comp=Z,1.2nm,0.8s							
NOA	**NORSAR Array B**	**68.79**	**31**	P		**P**	**21 09 23.0**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=284,slow=5.7,SNR=1.3							
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**69.69**	**333**	P		**P**	**21 09 27.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=84,slow=4.3,SNR=4.4							
	comp=Z,0.5nm,0.8s							
ARCES	**ARCESS Array B**	**74.25**	**21**	P		**P**	**21 09 56.4**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=337,slow=2.8,SNR=4.5							
	comp=Z,1.6nm,0.7s							
ARCES	**ARCESS Array B**	**74.25**	**21**	P		**P**	**21 09 55.8**	**+0.6**
ARCES				IAmb		IAmb	21 09 59.6	
	comp=Z,2.2nm,0.8s							
FINES	**FINESS Array B**	**75.90**	**30**	P		**P**	**21 10 05.4**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=258,slow=4.1,SNR=4.2							
	comp=Z,1.4nm,0.9s							

IDC ***03*** *21:00:06.6±0.6, 17°.84N×67°.02W, h0km, mb4.1/22, mbtmp4.1/22, Error ellipse: s-maj=15.8km s-min=9.1km az=170.0*
PTWC ***03*** *21:00:07, 17°.90N×67°.00W, h10km, Ml4.6/16*
RSPR ***03*** *21:00:08.6, 17°.95N×67°.02W, h6km, MD4.1/12*
NEIC ***03*** *21:00:08, 17°.95N×67°.02W, h7km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.12; Mθθ0.12; Mφφ0.00; Mrθ-0.33; Mrφ1.98; Mθφ0.35; Fault plane solution: M₀2.04000×10¹⁵ NP1:φs182.00000°, δ80.00000°, λ-170.00000°. NP2:φs90.00000°, δ80.00000°, λ-10.00000°. Principal axes: T 2.0414, Plg0.0000°, Azm316.0000°; N 0.0001, Plg76.0000°, Azm225.0000°; P -2.0416, Plg14.0000°, Azm46.0000°;*
NEIC ***03*** *21:00:08.0±2.0, 17°.88N±0°.03×67°.02W±0°.02, h10km±1km, mb4.5/16, ML4.6/39, Md4.1/12(RSPR), Mwr4.1/8(SLM) Error ellipse: s-maj=5.6km s-min=2.7km az=25.0*
OSPL ***03*** *21:00:09.1±0.9, 17°.81N×66°.96W, h12km±7km, ML4.0, Presumed earthquake*

ISC 03 21:00:07.4±1.0, 17°.87N±0°.04×67°.02W±0°.02, h6km±6km, n110, σ1ᵍ01/135, mb4.3/25, 4C-13D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.10**	**349**	Pg		**Pg**	**21 00 09.9**	**+0.3**
MLPR				Sg		**Sg**	**21 00 11.0**	**-0.2**
MLPR				IAML			21 00 11.8	
	214µm,0.9s							
MLPR				IAML			21 00 11.9	
	133µm,0.5s							
MLPR	**Magueyes Islan**	**0.10**	**349**	P		**Pg**	**21 00 09.9**	**+0.3**
MLPR	**Magueyes Islan**	**0.10**	**349**	⇑	*eP*	**Pg**	**21 00 09.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.16**	**329**			**Pg**	**21 00 11.1**	**+0.5**
CRPR				Sg		**Sg**	**21 00 13.2**	**+0.4**
CRPR				IAML			21 00 13.4	
	159µm,0.7s							
CRPR				IAML			21 00 13.7	
	194µm,0.8s							
CRPR	**Cabo Rojo, PR**	**0.16**	**329**	P		**Pg**	**21 00 11.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.16**	**329**	⇑	*iP*	**Pg**	**21 00 11.1**	**+0.5**
GBPR	**Guanica, Bosqu**	**0.17**	**53**			**Pg**	**21 00 11.7**	**+0.8**
GBPR	**Guanica, Bosqu**	**0.17**	**53**	⇑	*eP*	**Pg**	**21 00 11.7**	**+0.8**
LSP	**Las Mesas**	**0.31**	**349**			**Pg**	**21 00 13.6**	**+0.1**
LSP	**Las Mesas**	**0.31**	**349**	⇓	*iP*	**Pg**	**21 00 13.6**	**+0.1**
PRSN	**Puerto Rico Se**	**0.36**	**342**			**Pg**	**21 00 14.7**	**+0.2**
PRSN				Sg		**Sg**	**21 00 19.8**	**+0.5**
PRSN	**Puerto Rico Se**	**0.36**	**342**	P		**Pg**	**21 00 14.6**	**+0.2**
PRSN	**Puerto Rico Se**	**0.36**	**342**	⇑	*iP*	**Pg**	**21 00 14.7**	**+0.2**
OBIP	**Obispado Ponce**	**0.43**	**67**			**Pg**	**21 00 16.3**	**+0.5**
OBIP						**Sg**	**21 00 22.1**	**+0.6**
OBIP	**Obispado Ponce**	**0.43**	**67**	P		**Pg**	**21 00 16.3**	**+0.5**
OBIP	**Obispado Ponce**	**0.43**	**67**	*i*	*P*	**Pg**	**21 00 16.3**	**+0.5**
OBIP					*eS*	**Sb**	**21 00 22.8**	**-1.5**
OBIP				IAML			21 00 27.0	
	comp=Z,59µm,0.4s							
OBIP	**Obispado Ponce**	**0.43**	**67**	⇓	*iP*	**Pg**	**21 00 16.4**	**+0.5**
OBIP					*eS*	**Sg**	**21 00 22.1**	**+0.6**
CELP	**Cerrillos**	**0.47**	**64**			**Pg**	**21 00 16.9**	**+0.4**
CELP				Sg		**Sg**	**21 00 22.6**	**0.0**
CELP	**Cerrillos**	**0.47**	**64**	P		**Pg**	**21 00 16.9**	**+0.4**
CELP	**Cerrillos**	**0.47**	**64**	⇓	*iP*	**Pg**	**21 00 17.1**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.48**	**37**			**Pg**	**21 00 16.5**	**-0.2**
UUPR						**Sg**	**21 00 22.9**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.48**	**37**	P		**Pg**	**21 00 16.5**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.48**	**37**	⇓	*iP*	**Pg**	**21 00 16.6**	**0.0**
AOPR	**Arecibo Observ**	**0.54**	**28**			**Pg**	**21 00 17.5**	**-0.3**
AOPR						**Sg**	**21 00 24.3**	**-0.6**
AOPR				IAML			21 00 24.6	
	comp=Z,62µm,0.4s							
AOPR	**Arecibo Observ**	**0.54**	**28**	P		**Pg**	**21 00 17.5**	**-0.3**
AOPR	**Arecibo Observ**	**0.54**	**28**	⇓	*iP*	**Pg**	**21 00 17.6**	**-0.3**
AGPR	**Aguadilla, PR**	**0.60**	**352**			**Pg**	**21 00 18.8**	**-0.1**
AGPR						**Sg**	**21 00 26.0**	**-0.8**
AGPR				IAML			21 00 26.8	
	comp=Z,39µm,0.4s							
AGPR				IAML			21 00 26.9	
	comp=Z,50µm,0.5s							
AGPR	**Aguadilla, PR**	**0.60**	**352**	P		**Pg**	**21 00 18.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.60**	**352**	⇑	*eP*	**Pg**	**21 00 18.9**	**-0.1**
IDE	**Isla Desecheo**	**0.67**	**320**			**Pg**	**21 00 20.0**	**-0.3**
IDE						**Sg**	**21 00 28.5**	**-0.5**
IDE	**Isla Desecheo**	**0.67**	**320**	⇓	*eP*	**Pg**	**21 00 20.0**	**-0.3**
IDE					*eS*	**Sg**	**21 00 28.5**	**-0.5**
EMPR	**Esperanza - Ma**	**0.77**	**38**			**Pb**	**21 00 22.4**	**-0.8**
EMPR						**Sb**	**21 00 32.4**	**-1.4**
EMPR	**Esperanza - Ma**	**0.77**	**38**	⇓	*iP*	**Pb**	**21 00 22.4**	**-0.8**
EMPR					*eS*	**Sb**	**21 00 32.4**	**-1.4**
ECPR	**Experimental S**	**0.77**	**55**			**Pg**	**21 00 21.9**	**-0.4**
ECPR						**Sg**	**21 00 31.5**	**-0.8**
ECPR				IAML			21 00 33.1	
	comp=Z,25µm,0.2s							
ECPR				IAML			21 00 33.7	
	comp=Z,23µm,0.2s							
ECPR	**Experimental S**	**0.77**	**55**	P		**Pg**	**21 00 21.8**	**-0.4**
ECPR	**Experimental S**	**0.77**	**55**	⇓	*iP*	**Pg**	**21 00 21.9**	**-0.4**
SJG	**San Juan**	**0.87**	**74**	Pg		**Pg**	**21 00 23.7**	**-0.4**
	comp=Z,808nm,0.3s,baz=267,slow=14,SNR=19							
SJG				Lg		Lg	21 00 35.3	
	comp=Z,2µm,0.3s,baz=29,slow=16,SNR=14							
SJG	**San Juan**	**0.87**	**74**	P		**Pg**	**21 00 23.7**	**-0.4**
SJG	**San Juan**	**0.87**	**74**	*i*	*P*	**Pg**	**21 00 23.6**	**-0.4**
SJG					*eS*	**Sg**	**21 00 34.6**	**-0.7**
SJG	**San Juan**	**0.87**	**74**	⇓	*eP*	**Pg**	**21 00 23.9**	**-0.2**
IGPR	**InterUniversit**	**0.88**	**84**			**Pg**	**21 00 24.5**	**+0.2**
IGPR						**Sb**	**21 00 36.9**	**-0.2**
IGPR	**InterUniversit**	**0.88**	**84**	P		**Pg**	**21 00 24.4**	**+0.2**
IGPR	**InterUniversit**	**0.88**	**84**	⇓	*eP*	**Pg**	**21 00 24.5**	**+0.2**
PDPR	**Patillas Dam,**	**0.96**	**81**			**Pg**	**21 00 25.6**	**-0.3**
PDPR						**Sg**	**21 00 38.4**	**-0.1**
PDPR				IAML			21 00 44.6	
	comp=Z,10µm,0.8s							
PDPR	**Patillas Dam,**	**0.96**	**81**	P		**Pg**	**21 00 25.6**	**-0.3**
PDPR	**Patillas Dam,**	**0.96**	**81**	⇓	*eP*	**Pg**	**21 00 25.7**	**-0.2**
HUMP	**Col San Antoni**	**1.15**	**76**			**Pg**	**21 00 28.6**	**-0.9**
HUMP						**Sg**	**21 00 42.6**	**-1.8**
HUMP				IAML			21 00 47.8	
	comp=Z,9µm,0.4s							
HUMP				IAML			21 00 47.8	
	comp=Z,13µm,0.8s							
HUMP	**Col San Antoni**	**1.15**	**76**	P		**Pg**	**21 00 28.6**	**-0.9**
HUMP	**Col San Antoni**	**1.15**	**76**	⇑	*eP*	**Pg**	**21 00 28.6**	**-0.9**
PCDR	**Punta Cana, DR**	**1.44**	**297**			**Pn**	**21 00 33.6**	**-0.4**
PCDR						**Sn**	**21 00 50.4**	**-2.8**
PCDR	**Punta Cana, DR**	**1.44**	**297**	*i*	*P*	**Pn**	**21 00 33.9**	**-0.1**
PCDR				IAML			21 01 04.7	
	comp=Z,2µm,0.6s							
PCDR	**Punta Cana, DR**	**1.44**	**297**	⇓	*eP*	**Pn**	**21 00 32.2**	**-1.8**
PCDR					*eS*	**Sn**	**21 00 50.4**	**-2.8**
HIDR	**Higuey Centro**	**1.76**	**294**	⇑	*eP*	**Pn**	**21 00 36.6**	**-1.8**
DR12	**Loma Pena Alta**	**2.42**	**293**	Pn		**Pn**	**21 00 47.4**	**-0.2**
DR12						**Sb**	**21 01 20.2**	**-1.3**
SMDR	**Samana, DR**	**2.49**	**305**			**Pb**	**21 00 50.7**	**-1.9**
SMDR						**Sb**	**21 01 22.8**	**-0.7**
SABA	**Saba**	**3.61**	**93**			**Pn**	**21 01 04.9**	**+0.9**
SMRT	**St. Maarten**	**3.76**	**87**	Pn		**Pn**	**21 01 05.9**	**-0.2**
LOVI	**El Cajuil, Ovi**	**4.14**	**270**	*i*	*P*	**Pn**	**21 01 11.6**	**+0.5**
LOVI				IAML			21 02 00.9	
	comp=Z,132nm,1.5s							
SDDR	**Presa de Saban**	**4.20**	**286**	*eP*		**Pb**	**21 01 18.6**	**-3.1**
SDDR				*eS*		**Sb**	**21 02 15.2**	**+2.5**
ANWB	**Willy Bob**	**5.00**	**91**			**Pn**	**21 01 22.

comp=E,320nm,19.5s
WMQ LR LR
comp=Z,190nm,17.5s
HHC Hu-ho-hao-te 121.57 1 *eP* **PKiKP 21 19 03.1 +0.5**
ASAR Alice Springs 159.61 250 PKP **PKPdf 21 20 08.4 +0.5**
comp=Z,0.2nm,0.7s,baz=122,slow=1.3,SNR=1.2

MAN ***03*** *21:17:16.0,9.25N×121.23E,h32km,MS4.3*
NEIC ***03*** *21:17:18.0±2.4,9.40N±0.06×121.07E±0.08,h10km±1km, mb4.4/19, Error ellipse: s-maj=16.5km s-min=3.3km az=54.0*
IDC ***03*** *21:17:22.2±3.4,9.49N×121.13E,h41km±33km,mb3.5/11, mbtmp3.7/11,ML5.0/1,MS3.3/4,Error ellipse: s-maj=36.1km s-min=13.6km az=68.0*
ISC 03 21:17:16.2±0.5,9.37N±0.04×121.26E±0.03,h10km,n63, σ2.923/77,mb4.2/24,1D,Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**1.81**	**46**	*i* P	**Pb**	**21 17 47.5**	**-1.9**
GUIM				*i* S	**Sb**	**21 18 09.5**	**-2.7**
IPIL	**Ipil**	**2.03**	**140**	*i* P	**Pn**	**21 17 48.0**	**-2.5**
IPIL				*i* S	**Sn**	**21 18 09.7**	**-6.3**
DCPH	**Dipolog City**	**2.21**	**110**	*i* P	**Pn**	**21 17 50.6**	**-2.3**
DCPH				*i* S	**Sn**	**21 18 17.4**	**-2.9**
LSIP	**Lazi, Siquijor**	**2.35**	**95**	*i* P	**Pn**	**21 17 54.2**	**-0.7**
LSIP				*i* S	**Sn**	**21 18 22.2**	**-1.7**
PPR	**Puerto Princes**	**2.53**	**280**	*eP*	**Pn**	**21 17 55.9**	**-1.4**
PPR				*eS*	**Sn**	**21 18 29.3**	**+1.1**
ZCP	**Zamboanga City**	**2.55**	**161**	*i* P	**Pn**	**21 17 54.9**	**-2.7**
ZCP				*i* S	**Sn**	**21 18 19.7**	**-9.0**
PAGZ	**Pagadian**	**2.58**	**126**	*eP*	**Pn**	**21 17 56.9**	**-1.1**
PAGZ				*i* S	**Sn**	**21 18 27.4**	**-2.1**
TBP	**Tagbilaran**	**2.59**	**83**	*eP*	**Pn**	**21 17 58.1**	**0.0**
TBP				*i* S	**Sn**	**21 18 28.5**	**-1.2**
IBAJ	**Ibajay, Aklan**	**2.60**	**20**	*eP*	**Pn**	**21 17 56.6**	**-1.7**
RCP	**Roxas**	**2.62**	**34**	*i* P	**Pb**	**21 18 00.6**	**-2.7**
RCP				*i* S	**Sg**	**21 18 36.1**	**-4.5**
LLP	**Lapu-Lapu**	**2.83**	**70**	*eP*	**Pn**	**21 18 02.1**	**+0.7**
LLP				*eS*	**Sn**	**21 18 35.4**	**-0.3**
CGP	**Cagayan de Oro**	**3.51**	**105**	*i* P	**Pn**	**21 18 08.2**	**-2.6**
CGP				*i* S	**Sn**	**21 18 48.1**	**-4.4**
MSLP	**Maasin**	**3.63**	**78**	*i* P	**Pn**	**21 18 14.1**	**+1.7**
MSLP				*i* S	**Sn**	**21 18 56.4**	**+1.0**
CTBH	**Cotabato--PC H**	**3.64**	**126**	*eP*	**Pn**	**21 18 11.4**	**-1.3**
CTBH				*i* S	**Sn**	**21 18 53.9**	**-1.8**
BUKP	**Musuan**	**4.04**	**111**	*eP*	**Pn**	**21 18 19.9**	**+1.8**
BUKP				*eS*	**Sn**	**21 19 07.2**	**+1.6**
PLP	**Palo**	**4.07**	**64**	*eP*	**Pn**	**21 18 19.1**	**+0.6**
PLP				*eS*	**Sn**	**21 19 06.7**	**+0.3**
TGY	**Tagaytay City**	**4.72**	**356**	P	**Pn**	**21 18 29.4**	**+1.9**
	65nm,0.3s,baz=180,slow=11,SNR=8.2						
TGY				S	**Sn**	**21 19 21.4**	**-1.0**
	100nm,0.3s,baz=158,slow=4.7,SNR=1.5						
LQP	**Lukban**	**4.73**	**3**	*eP*	**Pn**	**21 18 23.4**	**-4.3**
DAV	**Davao City (W)**	**4.84**	**118**	LR	LR	21 20 42.9	
	comp=Z,421nm,18.8s,baz=302,slow=40						
BIPH	**Bislig**	**5.18**	**103**	*eP*	**Pn**	**21 18 37.0**	**+3.2**
BIPH				*eS*	**Sn**	**21 19 33.2**	**-0.4**
KKM	**Kota Kinabalu**	**5.99**	**237**	Pn	**Pn**	**21 18 44.2**	**-0.8**
TOLI2	**Tolitoli**	**8.21**	**183**	Pn	**Pn**	**21 19 13.1**	**-2.4**
LUWI	**Luwuk**	**10.45**	**172**	Pn	**Pn**	**21 19 48.4**	**+2.2**
KAPI	**Kappang**	**14.36**	**186**	LR	LR	21 25 51.9	
	comp=Z,78nm,20.2s,baz=292,slow=35						
CMAR	**Chiang Mai Arr**	**23.45**	**295**	P	**P**	**21 22 26.2**	**+0.3**
	1.3nm,0.9s,baz=122,slow=8.5,SNR=6.5						
CMAR				LR	LR	21 31 32.1	
	comp=Z,69nm,19.1s,baz=115,slow=36						
	1.3nm,0.9s						
MJAR	**Matsushiro Arr**	**31.12**	**27**	P	**P**	**21 23 37.1**	**+2.0**
	0.7nm,0.4s,baz=159,slow=7.6,SNR=4.3						
	0.7nm,0.4s						
WB0	**Warramunga Arr**	**31.71**	**156**	P	**P**	**21 23 43.0**	**+2.7**
WB0				IAmb	IAmb	21 24 03.2	
	comp=Z,7.2nm,1.1s						
COEN	**Coen**	**31.78**	**137**	P	**P**	**21 23 43.3**	**+2.3**
WRA	**Warramunga Arr**	**31.84**	**156**	P	**P**	**21 23 44.6**	**+3.1**
	comp=Z,0.7nm,0.8s,baz=337,slow=9.6,SNR=9.7						
	comp=Z,0.7nm,0.8s						
WB2	**Warramunga Arr**	**31.85**	**156**	P	**P**	**21 23 42.5**	**+0.9**
WB2				IAmb	IAmb	21 23 52.9	
	comp=Z,3.1nm,0.9s						
WR8	**Warramunga Arr**	**31.92**	**156**	P	**P**	**21 23 45.5**	**+3.3**
WR8				IAmb	IAmb	21 24 01.8	
	comp=Z,5.7nm,1.1s						
ASAR	**Alice Springs**	**35.08**	**160**	P	**P**	**21 24 13.2**	**+3.4**
	comp=Z,0.5nm,0.8s,baz=339,slow=6.6,SNR=10						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**35.08**	**160**	P	**P**	**21 24 11.7**	**+2.0**
BNX	**BinXian**	**36.63**	**7**	⇓P	**P**	**21 24 23.2**	**+0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EVN	**Everest**	**37.31**	**304**	P	**P**	**21 24 28.6**	**-1.0**
EVN				IAmb	IAmb	21 24 30.8	
	comp=Z,3.7nm,0.6s						
PALK	**Pallekele**	**40.17**	**270**	LR	LR	21 44 30.4	
	comp=Z,32nm,18.6s,baz=239,slow=41						
SONM	**Songino Array**	**40.35**	**345**	P	**P**	**21 24 53.8**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=169,slow=8.9,SNR=4.2						
	comp=Z,0.6nm,0.6s						
FORT	**Forrest**	**40.44**	**171**	P	**P**	**21 24 54.6**	**-0.3**
FORT				IAmb	IAmb	21 25 05.8	
	comp=Z,5.3nm,0.8s						
STKA	**Stephens Creek**	**45.39**	**155**	P	**P**	**21 25 37.9**	**+2.9**
	comp=Z,2.2nm,1.0s,baz=315,slow=10.0,SNR=3.2						
	comp=Z,2.2nm,1.0s						
MKAR	**Makanchi Array**	**49.86**	**326**	P	**P**	**21 26 10.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=132,slow=8.9,SNR=8.9						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**49.86**	**326**	P	**P**	**21 26 10.3**	**+0.6**
MAKZ	**Makanchi**	**50.05**	**325**	P	**P**	**21 26 11.2**	**+0.1**
KSH2	**Kashi**	**50.38**	**314**	P	**P**	**21 26 15.4**	**+1.5**
KSH2				pP	pwP	21 26 23.8	+3.0
KSH2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOOM	**Boomskoye usch**	**51.53**	**318**	P	**P**	**21 26 24.1**	**+1.5**
BOOM				IAmb	IAmb	21 26 41.8	
	comp=Z,2.9nm,1.0s						
ARSB	**Arslanbob**	**53.06**	**315**	P	**P**	**21 26 34.6**	**+0.7**
ARSB				IAmb	IAmb	21 26 36.1	
	comp=Z,3.6nm,0.7s						
ZALV	**Zalesovo Beam**	**53.15**	**334**	P	**P**	**21 26 34.8**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=129,slow=5.9,SNR=5.9						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**53.15**	**334**	P	**P**	**21 26 34.1**	**-0.1**
KURBB	**Kurchatov Arra**	**54.10**	**328**	P	**P**	**21 26 42.1**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=130,slow=6.6,SNR=10						
	comp=Z,1.1nm,0.7s						
KURK	**Kurchatov**	**54.11**	**328**	P	**P**	**21 26 42.0**	**+0.8**
KURK				IAmb	IAmb	21 26 53.7	
	comp=Z,3.5nm,0.8s						
BTK	**Batken**	**54.13**	**313**	P	**P**	**21 26 42.4**	**+0.7**
BTK				IAmb	IAmb	21 26 44.0	
	comp=Z,5.2nm,1.2s						
GAR	**Garm**	**54.14**	**312**	P	**P**	**21 26 42.1**	**+0.2**
KK31	**Karatay Array**	**55.43**	**316**	P	**P**	**21 26 51.4**	**+0.4**
KK31				IAmb	IAmb	21 26 53.4	
	comp=Z,4.3nm,1.1s						
KKAR	**Karatay Array**	**55.43**	**316**	P	**P**	**21 26 51.1**	**+0.1**
BVAR	**Borovoye Array**	**59.67**	**327**	P	**P**	**21 27 21.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=118,slow=8.3,SNR=3.7						
	comp=Z,0.6nm,0.8s						
ABKAR	**Akbulak array**	**64.38**	**320**	P	**P**	**21 27 51.0**	**-1.4**
C16K	**Lisburne Hills**	**75.22**	**22**	P	**P**	**21 28 59.6**	**+0.8**
C16K				IAmb	IAmb	21 29 06.0	
	comp=Z,6.4nm,1.1s						
FINES	**FINESS Array B**	**84.32**	**331**	P	**P**	**21 29 47.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=28,slow=8.6,SNR=9.0						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**84.32**	**331**	P	**P**	**21 29 47.6**	**-0.6**
I27K	**Kandik River**	**84.48**	**24**	P	**P**	**21 29 49.1**	**0.0**
G29M	**Pine Creek**	**85.63**	**23**	P	**P**	**21 29 56.3**	**+1.5**
G29M				IAmb	IAmb	21 30 06.8	
	comp=Z,3.9nm,0.8s						
MAW	**Mawson**	**87.20**	**199**	P	**P**	**21 30 01.7**	**-0.5**
BURAR	**Bucovina Array**	**87.21**	**318**	P	**P**	**21 30 03.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**87.21**	**318**	P	**P**	**21 30 03.0**	**0.0**

OSPL ***03*** *21:17:38.7±0.4, 17.76N×66.95W, h7km±9km, ML3.7, Presumed earthquake*
NEIC ***03*** *21:17:38.7±1.1, 17.90N±0.03×66.99W±0.02, h12km, mb4.1/16, ML4.1/39, Md3.6/14(RSPR), Error ellipse: s-maj=4.3km s-min=1.7km az=200.0*
RSPR ***03*** *21:17:39.6, 17.96N×66.98W, h6km, MD3.6/14*
IDC ***03*** *21:17:40.5±2.2, 18.13N×66.92W, h0km, mb3.8/9, mbtmp3.8/9, MS3.5/1, Error ellipse: s-maj=72.7km s-min=8.6km az=10.0*
ISC 03 21:17:38.5±1.1,17.89N±0.05×66.98W±0.02,h6km±6km, n89,σ1.920/107,mb4.1/16,11C-5D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.10**	**320**		**Pg**	**21 17 41.2**	**+0.6**
MLPR				Sg	**Sg**	**21 17 42.8**	**+0.6**
MLPR	**Magueyes Islan**	**0.10**	**320**	*eP*	**Pg**	**21 17 41.4**	**+0.7**
GBPR	**Guanica, Bosqu**	**0.12**	**49**		**Pg**	**21 17 41.9**	**+0.9**
GBPR	**Guanica, Bosqu**	**0.12**	**49**	*eP*	**Pg**	**21 17 41.9**	**+0.9**
CRPR	**Cabo Rojo, PR**	**0.17**	**312**		**Pg**	**21 17 42.4**	**+0.5**
CRPR				Sg	**Sg**	**21 17 44.4**	**+0.2**
CRPR				IAML		21 17 46.1	
	45μm,0.5s						
CRPR				IAML		21 17 46.6	
	50μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.17**	**312**	*i* P	**Pg**	**21 17 42.6**	**+0.7**
LSP	**Las Mesas**	**0.30**	**340**		**Pg**	**21 17 44.9**	**+0.6**
LSP	**Las Mesas**	**0.30**	**340**	*eP*	**Pg**	**21 17 44.9**	**+0.6**
PRSN	**Puerto Rico Se**	**0.36**	**334**		**Pg**	**21 17 45.7**	**+0.2**
PRSN				Sg	**Sg**	**21 17 50.7**	**+0.5**
PRSN	**Puerto Rico Se**	**0.36**	**334**	*eP*	**Pg**	**21 17 46.0**	**+0.5**
OBIP	**Obispado Ponce**	**0.38**	**67**		**Pg**	**21 17 46.5**	**+0.6**
OBIP				Sg	**Sg**	**21 17 51.4**	**+0.4**
OBIP	**Obispado Ponce**	**0.38**	**67**	*i* P	**Pg**	**21 17 46.5**	**+0.6**
OBIP				*eS*	**Sb**	**21 17 52.4**	**-1.4**
OBIP				IAML		21 17 53.5	
	comp=Z,36μm,0.2s						
OBIP	**Obispado Ponce**	**0.38**	**67**	*eP*	**Pg**	**21 17 46.7**	**+0.8**
OBIP				*eS*	**Sb**	**21 17 52.3**	**-1.5**
CELP	**Cerrillos**	**0.42**	**64**		**Pg**	**21 17 47.2**	**+0.6**
CELP				Sg	**Sg**	**21 17 52.9**	**+0.8**
CELP	**Cerrillos**	**0.42**	**64**	*eP*	**Pg**	**21 17 47.5**	**+0.9**
UUPR	**Utuado, UPR, P**	**0.43**	**34**		**Pg**	**21 17 46.9**	**0.0**
UUPR					**Sg**	**21 17 52.9**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.43**	**34**	*eP*	**Pg**	**21 17 47.0**	**+0.2**
AOPR	**Arecibo Observ**	**0.50**	**25**		**Pg**	**21 17 48.0**	**-0.1**
AOPR				Sg	**Sg**	**21 17 54.6**	**0.0**
AOPR				IAML		21 17 55.9	
	comp=Z,11μm,0.4s						
AOPR	**Arecibo Observ**	**0.50**	**25**	*iP*	**Pg**	**21 17 48.0**	**-0.1**
AGPR	**Aguadilla, PR**	**0.58**	**347**		**Pg**	**21 17 49.7**	**0.0**
AGPR				Sg	**Sg**	**21 17 57.3**	**-0.1**
AGPR				IAML		21 17 58.2	
	comp=Z,9μm,0.5s						
AGPR				IAML		21 17 58.3	
	comp=Z,15μm,0.5s						
AGPR	**Aguadilla, PR**	**0.58**	**347**	*iP*	**Pg**	**21 17 49.7**	**0.0**
IDE	**Isla Desecheo**	**0.68**	**316**		**Pg**	**21 17 51.6**	**0.0**
IDE					**Sg**	**21 18 00.5**	**0.0**
IDE	**Isla Desecheo**	**0.68**	**316**	*eP*	**Pg**	**21 17 51.6**	**0.0**
IDE				*eS*	**Sg**	**21 18 00.5**	**0.0**
EMPR	**Esperanza - Ma**	**0.72**	**36**		**Pb**	**21 17 52.8**	**-0.6**
EMPR					**Sb**	**21 18 02.7**	**-0.9**
EMPR	**Esperanza - Ma**	**0.72**	**36**	*iP*	**Pb**	**21 17 52.8**	**-0.6**
EMPR				*eS*	**Sb**	**21 18 02.7**	**-0.9**
ECPR	**Experimental S**	**0.72**	**54**		**Pg**	**21 17 52.2**	**-0.2**
ECPR				Sg	**Sb**	**21 18 02.2**	**-1.4**
ECPR				IAML		21 18 02.6	
	comp=Z,11μm,0.2s						
ECPR				IAML		21 18 03.2	
	comp=Z,6μm,0.2s						
ECPR	**Experimental S**	**0.72**	**54**	*eP*	**Pg**	**21 17 52.2**	**-0.2**
SJG	**San Juan**	**0.82**	**74**	Pg	**Pg**	**21 17 54.0**	**-0.2**
	comp=Z,250nm,0.3s,baz=271,slow=14,SNR=76						
SJG				Lg	Lg	21 18 05.0	
	comp=Z,465nm,0.3s,baz=53,slow=22,SNR=17						
SJG	**San Juan**	**0.82**	**74**		**Pg**	**21 17 53.9**	**-0.2**
SJG				Sg	**Sb**	**21 18 05.6**	**-0.7**
SJG	**San Juan**	**0.82**	**74**	*i* P	**Pg**	**21 17 54.0**	**-0.2**
SJG				*eS*	**Sg**	**21 18 05.0**	**+0.3**
SJG	**San Juan**	**0.82**	**74**	*eP*	**Pg**	**21 17 54.3**	**+0.1**
IGPR	**InterUniversit**	**0.83**	**85**		**Pg**	**21 17 55.0**	**+0.5**
IGPR				Sg	**Sg**	**21 18 06.2**	**+1.0**
IGPR	**InterUniversit**	**0.83**	**85**	*eP*	**Pg**	**21 17 55.0**	**+0.5**
PDPR	**Patillas Dam,**	**0.92**	**82**		**Pg**	**21 17 55.9**	**-0.2**
PDPR				Sg	**Sg**	**21 18 08.6**	**+0.6**
PDPR	**Patillas Dam,**	**0.92**	**82**	*eP*	**Pg**	**21 17 56.2**	**+0.2**
HUMP	**Col San Antoni**	**1.10**	**77**		**Pg**	**21 17 58.6**	**-1.0**
HUMP				IAML		21 18 18.6	
	comp=Z,2μm,0.2s						
HUMP	**Col San Antoni**	**1.10**	**77**		**Sg**	**21 18 12.7**	**-1.2**
HUMP	**Col San Antoni**	**1.10**	**77**	*eP*	**Pg**	**21 17 59.3**	**-0.3**
HUMP				*eS*	**Sg**	**21 18 12.7**	**-1.2**
PCDR	**Punta Cana, DR**	**1.47**	**295**		**Pn**	**21 18 04.2**	**-1.3**
PCDR				IAML		21 18 37.9	
	comp=N,3μm,1.2s						
PCDR	**Punta Cana, DR**	**1.47**	**295**	*i* P	**Pn**	**21 18 05.1**	**-0.4**
PCDR				IAML		21 18 35.9	
	comp=Z,603nm,0.6s						
DR12	**Loma Pena Alta**	**2.45**	**292**		**Pn**	**21 18 18.2**	**-0.9**
BANI	**BANI**	**3.25**	**279**		**Pn**	**21 18 28.1**	**-2.1**
SABA	**Saba**	**3.57**	**94**		**Pn**	**21 18 32.3**	**-2.1**
SMRT	**St. Maarten**	**3.72**	**87**		**Pn**	**21 18 35.9**	**-0.5**
SEUS	**St. Eustatius**	**3.83**	**95**	Pn	**Pn**	**21 18 36.7**	**-1.3**
SC01	**Santiago de lo**	**3.87**	**294**		**Pn**	**21 18 38.3**	**-0.3**
LOVI	**El Cajuil, Ovi**	**4.18**	**269**	*i* P	**Pn**	**21 18 41.4**	**-1.5**
LOVI				IAML		21 19 33.4	
	comp=Z,92nm,2.6s						
SDDR	**Presa de Saban**	**4.23**	**285**		**Pn**	**21 18 43.6**	**0.0**
SDDR	**Presa de Saban**	**4.23**	**285**	*eP*	**Pb**	**21 18 50.2**	**-3.1**
GDHS	**Morne Mazeau,**	**5.24**	**107**	Pn	**Pn**	**21 18 56.1**	**-1.3**
GRTK	**Grand Turk**	**5.32**	**313**	Pn	**Pn**	**21 18 57.4**	**-1.0**
GRTK	**Grand Turk**	**5.32**	**313**	*eP*	**Pn**	**21 18 58.6**	**+0.2**
ABD	**La Joyeuse, An**	**5.43**	**104**	Pn	**Pn**	**21 18 58.8**	**-1.1**
CBE	**Ff, Capester**	**5.45**	**109**	Pn	**Pn**	**21 18 59.2**	**-1.1**
MASC	**Masc**	**7.23**	**289**	*eP*	**Pn**	**21 19 28.4**	**+3.7**
QMBU	**Quimbuelo**	**7.76**	**288**	*eP*	**Pn**	**21 19 31.8**	**-0.2**
GTBY	**Guantanamo Bay**	**7.96**	**286**	*eP*	Pn	21 19 46.1	+11
RCC	**Rio Carpintero**	**8.51**	**286**	*eP*	**Pn**	**21 19 44.2**	**+1.9**
SDV	**Santo Domingo**	**9.63**	**202**	LR	LR	21 24 33.4	
	comp=Z,272nm,18.4s,baz=22,slow=42						
BBSR	**BB Station**	**14.56**	**8**	Pn	**Pn**	**21 21 03.4**	**-1.7**
T59A	**Double "B" Far**	**21.17**	**336**	P	**P**	**21 22 21.2**	**-3.2**
T59A				IAmb	IAmb	21 22 32.9	
	comp=Z,13nm,1.3s						
HODGE	**Hodges**	**21.24**	**323**	P	**P**	**21 22 24.1**	**-1.2**
HODGE				IAmb	IAmb	21 22 32.8	
	comp=Z,13nm,1.2s						
V55A	**Taylorsville**	**21.89**	**328**	P	**P**	**21 22 31.4**	**-0.9**
V55A				IAmb	IAmb	21 22 50.0	
	comp=Z,6.4nm,1.0s						
R58B	**Mineral**	**22.16**	**337**	P	**P**	**21 22 34.8**	**-0.3**
V53A	**Saluda**	**22.60**	**325**	P	**P**	**21 22 39.3**	**-0.6**
V53A				IAmb	IAmb	21 22 44.7	
	comp=Z,10nm,1.4s						
TKL	**Tuckaleechee C**	**23.13**	**323**	P	**P**	**21 22 45.5**	**+0.1**
TKL				IAmb	IAmb	21 22 53.4	
	comp=Z,9.2nm,1.4s						
CPCT	**Cooper Cave**	**23.42**	**322**	P	**P**	**21 22 48.5**	**+0.2**
CPCT				IAmb	IAmb	21 23 09.9	
	comp=Z,7.7nm,1.0s						
W50A	**Signal Mountai**	**23.72**	**320**	P	**P**	**21 22 50.6**	**-0.8**
TXAR	**Lajitas Array**	**35.35**	**296**	P	**P**	**21 24 37.0**	**+1.9**
	comp=Z,1.8nm,0.5s,baz=110,slow=9.2,SNR=30						
	comp=Z,1.8nm,0.5s						
TXAR	**Lajitas Array**	**35.35**	**296**	P	**P**	**21 24 33.4**	**-1.7**
TX31	**Lajitas Ar. Si**	**35.36**	**296**	P	**P**	**21 24 33.2**	**-1.9**
PD31	**Pinedale Array**	**43.70**	**314**	P	**P**	**21 25 43.1**	**-1.5**
PDAR	**Pinedale Array**	**43.70**	**314**	P	**P**	**21 25 44.8**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=118,slow=4.5,SNR=1.7						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**43.70**	**314**	P	**P**	**21 25 43.4**	**-1.3**
TMUT	**Trail Mountain**	**43.77**	**309**	P	**P**	**21 25 44.3**	**-1.1**
RLMT	**Red Lodge**	**44.41**	**317**	P	**P**	**21 25 50.4**	**+0.1**
LOHW	**Long Hollow**	**44.72**	**315**	P	**P**	**21 25 51.3**	**-1.5**
LOHW				IAmb	IAmb	21 26 15.7	
	comp=Z,4.0nm,1.4s						
W13A	**Hualapai Mount**	**44.91**	**302**	P	**P**	**21 25 53.5**	**-0.9**
W13A				IAmb	IAmb	21 26 00.5	
	comp=Z,3.7nm,1.4s						
NVAR	**Mina Array Bea**	**48.98**	**306**	P	**P**	**21 26 28.8**	**+2.6**
	comp=Z,0.5nm,0.6s,baz=75,slow=8.6,SNR=2.7						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**48.98**	**306**	P	**P**	**21 26 24.4**	**-1.8**
YKA	**Yellowknife Ar**	**55.36**	**335**	P	**P**	**21 27 13.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=116,slow=7.7,SNR=5.4						
	comp=Z,0.7nm,0.6s						
ESDC	**Sonseca Array**	**58.15**	**54**	P	**P**	**21 27 35.1**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=267,slow=6.9,SNR=9.5						
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.02**	**83**	P	**P**	**21 28 29.9**	**+3.3**
	comp=Z,1.0nm,1.0s,baz=267,slow=4.7,SNR=4.5						
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**69.67**	**333**	P	**P**	**21 28 51.5**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=98,slow=4.3,SNR=8.6						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**69.67**	**333**	P	**P**	**21 28 49.3**	**+0.6**
ARCES	**ARCESS Array B**	**74.25**	**21**	P	**P**	**21 29 18.6**	**+2.5**
	comp=Z,1.3nm,0.8s,baz=268,slow=4.5,SNR=2.0						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**75.91**	**30**	P	**P**	**21 29 27.4**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=278,slow=5.3,SNR=4.6						
	comp=Z,1.9nm,0.9s						
FINES	**FINESS Array B**	**75.91**	**30**	P	**P**	**21 29 26.2**	**+0.4**
FIA1	**FINESS Array S**	**75.91**	**30**	P	**P**	**21 29 25.8**	**+0.1**

SOF ***03*** *21:19:26.4, 37.29N±0.06×28.4E±0.1, h10km±2km, MD4.1/4*
IDC ***03*** *21:19:44.8±1.0, 38.45N×27.67E, h0km, mb3.5/4, mbtmp3.5/11, ML3.4/5, Error ellipse: s-maj=14.9km s-min=12.8km az=111.0*
ISK ***03*** *21:19:45.4, 38.52N×27.52E, h10km, ML3.6/24*
AFAD ***03*** *21:19:45.9, 38.52N×27.53E, h7km±2km, MW3.7*
GII ***03*** *21:19:46.3±0.0, 38.41N±0.04×27.47E±0.01, h0km, Mws3.8, confirmed*
ISC 03 21:19:45.9±1.0,38.47N±0.02×27.54E±0.02,h10km±7km, n85,σ1.944/120,mb3.4/3,2C-5D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUVT	**Torbali**	**0.26**	**197**	P	**Pg**	**21 19 52.5**	**+1.3**
CAMT	**Merkez**	**0.33**	**327**	P	**Pg**	**21 19 51.9**	**-0.6**
CAMT				S	**Sg**	**21 19 55.9**	**-1.1**
GOMA	**Golmarmara-Man**	**0.38**	**51**	Pg	**Pg**	**21 19 53.2**	**-0.2**
GOMA				Sg	**Sg**	**21 19 58.5**	**+0.1**
BLCB	**Balcova**	**0.40**	**258**	Pg	**Pg**	**21 19 53.7**	**-0.1**
BLCB				Sg	**Sb**	**21 20 00.2**	**-1.1**
AKHS	**Akhisar**	**0.46**	**27**	P	**Pg**	**21 19 53.7**	**-1.2**
AKHS				S	**Sg**	**21 19 59.9**	**-1.1**
AKS	**Akhisar**	**0.46**	**27**	Pg	**Pg**	**21 19 54.5**	**-0.4**
AKS				Sg	**Sg**	**21 20 00.8**	**-0.2**
ODEM	**Odemis-Izmir**	**0.46**	**115**	Pg	**Pb**	**21 19 55.8**	**-0.3**
IZMR	**zmir-demi**	**0.46**	**136**	P	**Pb**	**21 19 56.3**	**+0.1**
KTTT	**Salihli**	**0.48**	**63**	P	**Pg**	**21 19 55.2**	**-0.1**
KTTT				S	**Sg**	**21 20 01.9**	**+0.2**
BAGT	**Foa**	**0.57**	**289**	P	**Pg**	**21 19 56.8**	**-0.2**
BAGT				S	**Sg**	**21 20 04.6**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.59**	**152**	Pg	**Pb**	**21 19 58.7**	**+0.3**
ZEDA	**zmir-Bergama**	**0.62**	**324**	P	**Pg**	**21 19 57.2**	**-0.6**
ZEDA				S	**Sg**	**21 20 05.1**	**-0.8**
GMLD	**Gumuldur**	**0.63**	**232**	Pg	**Pb**	**21 19 58.4**	**-0.6**
KUSD	**Kusadasi-Aydin**	**0.64**	**198**	Pg	**Pb**	**21 19 59.0**	**-0.2**
GORD	**Gordes-Manisa**	**0.66**	**48**	Pg	**Pg**	**21 19 57.7**	**-1.0**
DGB	**zmir**	**0.67**	**232**	P	**Pb**	**21 19 59.3**	**-0.3**
DGB				S	**Sn**	**21 20 10.0**	**-1.8**
FOCM	**Foa**	**0.68**	**291**	Pg	**Pg**	**21 19 57.8**	**-1.3**
SOMA	**Soma-Manisa**	**0.69**	**359**	Pg	**Pg**	**21 19 58.8**	**-0.4**
IZMD	**zmir-Dikili-**	**0.70**	**317**	P	**Pg**	**21 19 59.3**	**-0.3**
IZMD				S	**Sg**	**21 20 08.5**	**-0.2**
KIRA	**zm

HRFI	**Mount Harif**	**10.45**	**141**	P	**Pn**	**21 22 15.6**	**-0.1**
HRFI				S	**Sn**	**21 24 10.8**	**-2.0**
EIL	**Elat**	**10.71**	**143**	Pn	**Pn**	**21 22 19.5**	**+0.2**
	0.4nm,0.3s,baz=294,slow=7.3,SNR=8.0						
EIL				Sn	**Sn**	**21 24 12.7**	**-6.5**
	0.4nm,0.3s,baz=34,slow=12,SNR=4.5 1.0nm,0.3s						
EIL	**Elat**	**10.71**	**143**	P	**Pn**	**21 22 19.4**	**+0.1**
EIL				S	**Sn**	**21 24 18.6**	**-0.7**
BELG	**Belogornoye**	**19.72**	**39**	P	**P**	**21 24 14.3**	**-1.0**
	0.3nm,0.3s,baz=256,slow=4.2,SNR=2.7 4.4nm,0.7s						
ESDC	**Sonseca Array**	**24.43**	**283**	P	**P**	**21 25 06.0**	**+1.3**
	0.8nm,0.8s,baz=77,slow=10,SNR=5.5 0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**34.09**	**229**	P	**P**	**21 26 31.2**	**+0.6**
	0.3nm,0.6s,baz=35,slow=8.8,SNR=2.0 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**37.59**	**54**	P	**P**	**21 27 01.3**	**+0.9**
	0.5nm,0.4s,baz=278,slow=8.8,SNR=6.2 0.5nm,0.4s						
MKAR	**Makanchi Array**	**40.41**	**60**	P	**P**	**21 27 23.4**	**-0.7**
	0.6nm,0.8s,baz=284,slow=6.9,SNR=4.4 0.6nm,0.8s						

KRNET ***03*** *21:47:53.6±0.1,39.°22N×71.°55E,h18km,mb3.1*
NNC ***03*** *21:47:54.2±5.0,39.°11N×71.°27E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=38.0km s-min=24.7km az=22.0*
ISC 03 21:47:54.8±1.0,**39.°35N**±0.°05×**71.°45E**±0.°04,**h10km**,**n15,** σ1°**82**/28,**18C-7D**,**Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.86**	**326**	⇑*i*P	**Pn**	**21 48 12.8**	**-0.3**
BTK				⇑*i*S	**Sn**	**21 48 26.7**	**+0.9**
GAR	**Garm**	**0.95**	**249**	⇑*i*P	**Pb**	**21 48 12.5**	**-1.0**
GAR				⇑*i*S	**Sb**	**21 48 25.7**	**-0.4**
OHH	**Osh**	**1.56**	**41**	⇑*i*P	**Pb**	**21 48 23.4**	**-0.4**
OHH				⇑*i*S	**Sg**	**21 48 45.2**	**+0.3**
SFK	**Sufi-Kurgan**	**1.72**	**67**	⇑*i*P	**Pb**	**21 48 25.3**	**-1.3**
SFK				⇑*i*S	**Sb**	**21 48 48.3**	**0.0**
CHGR	**Chuyangaron**	**1.92**	**250**	⇓*i*P	**Pb**	**21 48 29.4**	**-0.5**
CHGR				⇓*i*S	**Sg**	**21 48 55.3**	**-1.1**
TRKS	**Terek-Say**	**2.19**	**354**	⇑*i*P	**Pb**	**21 48 33.9**	**-0.8**
TRKS				⇑*i*S	**Sg**	**21 49 03.2**	**-2.1**
ARSB	**Arslanbob**	**2.29**	**30**	⇓*i*P	**Pb**	**21 48 35.3**	**-1.1**
ARSB				⇓*i*S	**Sb**	**21 49 05.8**	**+1.0**
ARK	**Arkit**	**2.48**	**9**	⇑*i*P	**Pb**	**21 48 38.6**	**-0.9**
ARK				⇑*i*S	**Sb**	**21 49 11.2**	**+1.1**
IUG	**Iuzhnay**	**3.00**	**339**	Pg	**Pb**	**21 48 49.6**	**+1.3**
	31nm,0.5s						
IUG				Lg	Lg	21 49 31.8	
	53nm,0.6s						
MRKS	**Merke**	**3.65**	**21**	Pg	**Pb**	**21 48 57.4**	**-2.1**
	3.0nm,0.4s						
MRKS				Lg	Lg	21 49 44.6	
	7.5nm,0.6s						
KK31	**Karatay Array**	**3.82**	**350**	Pn	**Pb**	**21 48 58.7**	**-3.6**
	2.5nm,0.4s,baz=170,slow=13,SNR=84						
KK31				⇑Pg	**Pg**	**21 49 08.2**	**+0.2**
	1.4nm,0.3s						
KK31				⇓Sn	**Sb**	**21 49 48.5**	**-0.1**
	3.4nm,0.5s,baz=175,slow=20						
KK31				⇑Lg	Lg	21 50 03.0	
	7.7nm,0.6s						
BRLS	**Borolday**	**3.87**	**342**	Pg	**Pb**	**21 49 03.5**	**+0.2**
	2.2nm,0.5s						
BRLS				Lg	Lg	21 49 55.3	
	1.8nm,0.3s						
AAK	**Ala-Archa**	**4.01**	**34**	⇑Pn	**Pb**	**21 49 01.0**	**-4.7**
	2.9nm,0.8s						
AAK				⇑Sn	**Sb**	**21 49 51.5**	**-2.8**
	5.1nm,0.7s						
NRN	**Naryn**	**4.05**	**58**	⇑*e*P	**Pn**	**21 48 58.5**	**+1.3**
NRN				⇑*e*S	**Sn**	**21 49 45.5**	**+0.7**
FRU1	**Bishkek**	**4.21**	**34**	⇓*e*P	**Pn**	**21 49 01.9**	**+2.8**
FRU1				⇓*e*S	**Sn**	**21 49 51.5**	**+3.1**

IPEC ***03*** *21:50:03.4±0.2,51.°51N×16.°27E,h1km,ML2.2/8, Error ellipse: s-maj=1.8km s-min=1.1km az=67.0*
VIE ***03*** *21:50:04.8±1.2,51.°37N×16.°41E,h0km,mb2.3/3,ml2.6/7, Error ellipse: s-maj=12.8km s-min=7.0km az=71.0 52 km NW of Wroclaw Suspected Mining induced.*
PRU ***03*** *21:50:06.6,51.°36N×16.°14E,h0km*
ISC 03 21:50:03.6±1.1,**51.°47N**±0.°05×**16.°16E**±0.°02,**h0km**,**n38,** σ0°**83**/67,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.63**	**172**	*e*Pg	**Pg**	**21 50 16.5**	**+0.8**
KSP				*e*Sg	**Sb**	**21 50 25.5**	**-1.3**
CHVC	**Chvalec**	**0.88**	**184**	*e*PG	**Pb**	**21 50 21.3**	**-0.5**
CHVC				*e*SG	**Sb**	**21 50 32.8**	**-1.3**
OSTC	**Ostas**	**0.91**	**178**	*e*PG	**Pb**	**21 50 22.0**	**-0.3**
OSTC				*e*SG	**Sb**	**21 50 34.0**	**-0.9**
	comp=Z,19nm,0.4s						
UPC	**Upice**	**0.96**	**186**	*e*PG	**Pb**	**21 50 22.8**	**-0.4**
UPC				*e*SG	**Sg**	**21 50 34.9**	**+0.4**
	comp=Z,65nm,0.5s						
DPC	**Dobruska-Polom**	**1.12**	**175**	*e*PG	**Pb**	**21 50 25.6**	**-0.3**
DPC				*e*SG	**Sb**	**21 50 40.1**	**-0.9**
	comp=Z,26nm,0.4s						
PIVO	**Bartosovice**	**1.30**	**169**	*e*Pg	**Pg**	**21 50 28.7**	**+0.1**
	baz=353						
PIVO				*e*Sg	**Sg**	**21 50 45.3**	**-0.1**
	24nm,0.2s,baz=353						
PVCC	**Panska Ves**	**1.37**	**228**	*e*PG	**Pb**	**21 50 30.4**	**+0.2**
PVCC				*e*SG	**Sb**	**21 50 48.5**	**+0.3**
	comp=Z,118nm,0.2s						
KRLC	**Kraliky**	**1.45**	**164**	*e*PG	**Pg**	**21 50 31.3**	**0.0**
KRLC				*e*SG	**Sg**	**21 50 49.8**	**-0.2**
	comp=Z,24nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**248**	Pg	**Pn**	**21 50 32.2**	**+0.2**
BRG				Sg	**Sn**	**21 50 52.9**	**+0.5**
BRG				Amp		21 50 56.1	
	comp=Z,37nm,0.4s						
ANAC	**Anensky vrch**	**1.59**	**150**	*e*Pn	**Pn**	**21 50 32.6**	**-0.5**
	baz=334						
ANAC				*e*Sg	**Sn**	**21 50 53.5**	**-0.9**
	comp=Z,17nm,0.4s,baz=334						
RYBC	**Ceska Rybna**	**1.66**	**182**	*e*Pn	**Pn**	**21 50 34.2**	**+0.2**
	baz=4.3						
RYBC				*e*Sg	**Sg**	**21 50 56.9**	**0.0**
	comp=Z,18nm,0.3s,baz=4.3						
PRU	**Pruhonice**	**1.80**	**215**	*e*PG	**Pb**	**21 50 37.1**	**-0.3**
PRU				*e*SG	**Sb**	**21 51 00.5**	**0.0**
	comp=Z,34nm,0.5s						
STEB	**Steborice**	**1.84**	**146**	*e*PG	**Pb**	**21 50 38.2**	**0.0**
STEB				*e*SG	**Sg**	**21 51 02.5**	**-0.3**
	comp=Z,31nm,0.4s						
MORC	**Moravsky Berou**	**1.91**	**152**	*e*Pn	**Pn**	**21 50 37.1**	**-0.3**
	baz=336						
MORC				*e*Sg	**Sb**	**21 51 03.1**	**-0.5**
	comp=Z,13nm,0.3s,baz=336						
MORC	**Moravsky Berou**	**1.91**	**152**	*e*PN	**Pn**	**21 50 37.2**	**-0.2**
MORC				*e*SG	**Sb**	**21 51 03.2**	**-0.4**
HSKC	**Hora Svate Kat**	**1.92**	**245**	*e*SG	**Sb**	**21 51 04.3**	**+0.2**
	comp=Z,30nm,0.3s						
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**21 50 37.0**	**-1.4**
	comp=Z,13nm,0.5s						
CLL				*e*Pg	**Pb**	**21 50 40.0**	**-0.5**
CLL				*e*Sg	**Sg**	**21 51 07.0**	**-0.3**
	comp=Z,15nm,0.6s						
OKC	**Ostrava-Krasne**	**2.06**	**141**	*e*SG	**Sg**	**21 51 09.1**	**-0.8**
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**21 50 41.2**	**+0.1**
	baz=355						
VRAC				*e*Sg	**Sg**	**21 51 12.9**	**-0.6**
	comp=Z,10.0nm,0.4s,baz=355						
TREC	**Trest**	**2.21**	**191**	*e*SG	**Sg**	**21 51 13.9**	**-0.8**
ZVC	**Zvikov**	**2.39**	**213**	*e*PN	**Pn**	**21 50 44.2**	**+0.3**
ZVC				*e*SG	**Sg**	**21 51 19.9**	**-0.3**
KRUC	**Moravsky**	**2.41**	**176**	*e*Pn	**Pn**	**21 50 44.5**	**+0.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**21 51 20.1**	**-0.9**
	comp=Z,7.9nm,0.5s,baz=358						
STAC	**Stalkov**	**2.50**	**193**	*e*Pn	**Pn**	**21 50 45.9**	**+0.4**
	baz=14						
STAC				*e*Sg	**Sg**	**21 51 23.2**	**-0.7**
	comp=Z,14nm,0.5s,baz=14						
OJC	**Ojcow**	**2.62**	**117**	*e*Pg	**Pg**	**21 50 54.1**	**+0.2**
OJC				*e*Sg	**Sg**	**21 51 28.9**	**+1.1**
NKC	**Novy Kostel**	**2.66**	**244**	*e*SG	**Sg**	**21 51 28.2**	**-0.7**
	comp=Z,28nm,0.3s						
JAVC	**Velka Javorina**	**2.78**	**159**	*e*Pn	**Pn**	**21 50 49.0**	**-0.4**
	baz=342						
JAVC	**Velka Javorina**	**2.78**	**159**	*e*PN	**Pn**	**21 50 49.1**	**-0.4**
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**21 50 50.9**	**+0.4**
KHC				*e*PG	**Pb**	**21 50 56.6**	**+1.0**
KHC				*e*SN	**Sn**	**21 51 25.2**	**-0.5**
KHC				*e*SG	**Sg**	**21 51 34.1**	**-1.4**
	comp=Z,11nm,0.6s						
LANS	**Liptovska Anna**	**3.14**	**136**	*e*PG	**Pg**	**21 51 04.7**	**+0.9**
LANS				*e*SG	**Sg**	**21 51 45.3**	**+0.8**
MODS	**Modra-Piesok**	**3.18**	**166**	*e*PG	**Pg**	**21 51 05.3**	**+0.8**
MODS				*e*SG	**Sg**	**21 51 45.0**	**-0.7**
NIE	**Niedzica**	**3.35**	**126**	*e*Pg	**Pg**	**21 51 08.4**	**+0.7**
NIE				*e*Sg	**Sg**	**21 51 52.7**	**+1.6**
CONA	**Conrad Observa**	**3.54**	**183**	*i* Pn	**Pn**	**21 50 59.9**	**-0.1**
	comp=Z,0.7nm,0.3s						
CONA				*e*Sg	**Sg**	**21 51 57.3**	**-0.2**
	comp=Z,6.1nm,0.3s						
MOA	**Molln**	**3.82**	**199**	*e*Sg	**Sg**	**21 52 07.3**	**+1.0**
	comp=Z,5.1nm,0.4s						
STHS	**Stebnicka Huta**	**3.84**	**120**	*e*SG	**Sg**	**21 52 08.0**	**+1.0**
BIOA	**Bad Ischl, Aus**	**4.12**	**204**	Sg	**Sg**	**21 52 15.6**	**-0.2**
	comp=Z,4.3nm,0.3s						
ARSA	**Arzberg**	**4.24**	**186**	Sg	**Sg**	**21 52 21.8**	**+2.1**
	comp=Z,3.5nm,0.3s						
MYKA	**Terra Mystica**	**5.11**	**200**	*i* Sg	**Sg**	**21 52 50.7**	**+2.9**
	comp=Z,1.2nm,0.3s						
MOTA	**Moosalm**	**5.28**	**221**	*e*Sg	**Sg**	**21 52 55.2**	**+2.0**
	comp=Z,1.5nm,0.3s						

NEIC ***03*** *22:02:18.4±1.5, 17.°88N±0.°02×67.°01W±0.°01,h11km±3km, ML3.7/39,Md3.4/14(RSPR),Error ellipse: s-maj=2.8km s-min=1.4km az=171.0*
OSPL ***03*** *22:02:19.0±0.5, 17.°80N×66.°99W,h0km±14km,ML3.5, Presumed earthquake*
RSPR ***03*** *22:02:19.2, 17.°95N×67.°00W,h6km,MD3.4/14*
ISC 03 22:02:19.1±1.1,**17.°92N**±0.°05×**67.°00W**±0.°02,**h6km**±6km, **n50,** σ0°**72**/77,**11C-7D**,**Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.07**	**321**		**Pg**	**22 02 20.5**	**-0.3**
MLPR				Sg	**Sg**	**22 02 21.5**	**-0.5**
MLPR				IAML		22 02 21.8	
	53µm,0.6s						
MLPR				IAML		22 02 21.8	
	53µm,0.4s						
MLPR	**Magueyes Islan**	**0.07**	**321**⇑	*e*P	**Pg**	**22 02 20.5**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.13**	**62**		**Pg**	**22 02 22.1**	**+0.4**
GBPR					**Sg**	**22 02 24.2**	**+0.7**
GBPR	**Guanica, Bosqu**	**0.13**	**62**⇓	*e*P	**Pg**	**22 02 22.1**	**+0.4**
GBPR				*e*S	**Sg**	**22 02 24.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.14**	**311**		**Pg**	**22 02 21.9**	**-0.1**
CRPR				Sg	**Sg**	**22 02 23.9**	**0.0**
CRPR				IAML		22 02 24.3	
	19µm,0.3s						
CRPR				IAML		22 02 25.2	
	13µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.14**	**311**⇑	*e*P	**Pg**	**22 02 21.9**	**-0.1**
LSP	**Las Mesas**	**0.27**	**342**		**Pg**	**22 02 24.5**	**0.0**
LSP					**Sg**	**22 02 28.1**	**0.0**
LSP	**Las Mesas**	**0.27**	**342**⇑	*e*P	**Pg**	**22 02 24.5**	**0.0**
LSP				*e*S	**Sg**	**22 02 28.1**	**0.0**
PRSN	**Puerto Rico Se**	**0.33**	**335**		**Pg**	**22 02 25.3**	**-0.2**
PRSN				Sg	**Sg**	**22 02 30.3**	**+0.3**
PRSN	**Puerto Rico Se**	**0.33**	**335**⇑	*e*P	**Pg**	**22 02 25.6**	**0.0**
OBIP	**Obispado Ponce**	**0.39**	**71**		**Pg**	**22 02 26.8**	**+0.1**
OBIP				Sg	**Sg**	**22 02 32.7**	**+0.8**
OBIP	**Obispado Ponce**	**0.39**	**71**	*i* P	**Pg**	**22 02 26.9**	**+0.1**
OBIP				*e*S	**Sg**	**22 02 32.9**	**+1.0**
OBIP				IAML		22 02 33.5	
	comp=Z,12µm,0.8s						
OBIP	**Obispado Ponce**	**0.39**	**71**⇑	*e*P	**Pg**	**22 02 26.9**	**+0.1**
OBIP				*e*S	**Sg**	**22 02 33.0**	**+1.0**
UUPR	**Utuado, UPR, P**	**0.43**	**38**		**Pg**	**22 02 27.0**	**-0.4**
UUPR				Sg	**Sg**	**22 02 32.8**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.43**	**38**⇓	*e*P	**Pg**	**22 02 27.2**	**-0.1**
CELP	**Cerrillos**	**0.43**	**68**		**Pg**	**22 02 27.4**	**+0.1**
CELP				Sg	**Sg**	**22 02 33.9**	**+0.9**
CELP				IAML		22 02 34.5	
	comp=Z,4µm,0.3s						
CELP	**Cerrillos**	**0.43**	**68**⇑	*e*P	**Pg**	**22 02 27.5**	**+0.1**
AOPR	**Arecibo Observ**	**0.49**	**28**		**Pg**	**22 02 28.1**	**-0.5**
AOPR				Sg	**Sg**	**22 02 34.7**	**-0.2**
AOPR				IAML		22 02 38.2	
	comp=Z,4µm,0.4s						
AOPR	**Arecibo Observ**	**0.49**	**28**⇓	*e*P	**Pg**	**22 02 28.4**	**-0.1**
AGPR	**Aguadilla, PR**	**0.56**	**349**		**Pg**	**22 02 29.5**	**-0.3**
AGPR				Sg	**Sg**	**22 02 37.1**	**-0.1**
AGPR				IAML		22 02 38.0	
	comp=Z,3µm,0.5s						
AGPR	**Aguadilla, PR**	**0.56**	**349**⇑	*e*P	**Pg**	**22 02 29.6**	**-0.3**
IDE	**Isla Desecheo**	**0.65**	**316**		**Pg**	**22 02 31.0**	**-0.6**
IDE					**Sg**	**22 02 39.2**	**-1.0**
IDE	**Isla Desecheo**	**0.65**	**316**⇓	*e*P	**Pg**	**22 02 31.0**	**-0.6**
IDE				*e*S	**Sg**	**22 02 39.2**	**-1.0**
EMPR	**Esperanza - Ma**	**0.71**	**38**		**Pg**	**22 02 32.8**	**0.0**
EMPR					**Sg**	**22 02 43.1**	**+1.0**
EMPR	**Esperanza - Ma**	**0.71**	**38**⇓	*e*P	**Pg**	**22 02 32.8**	**0.0**
EMPR				*e*S	**Sg**	**22 02 43.1**	**+1.0**
ECPR	**Experimental S**	**0.72**	**56**		**Pg**	**22 02 32.2**	**-0.8**
ECPR				Sg	**Sg**	**22 02 42.3**	**-0.2**
ECPR				IAML		22 02 43.4	
	comp=Z,6µm,0.2s						
ECPR				IAML		22 02 43.9	
	comp=Z,3µm,0.3s						
ECPR	**Experimental S**	**0.72**	**56**⇑	*e*P	**Pg**	**22 02 32.5**	**-0.5**
SJG	**San Juan**	**0.83**	**76**		**Pg**	**22 02 34.1**	**-0.9**
SJG				Sg	**Sg**	**22 02 45.6**	**-0.2**
SJG	**San Juan**	**0.83**	**76**	*i* P	**Pg**	**22 02 34.3**	**-0.7**
SJG				*e*S	**Sg**	**22 02 46.0**	**+0.2**
SJG	**San Juan**	**0.83**	**76**⇑	*e*P	**Pg**	**22 02 34.4**	**-0.6**
IGPR	**InterUniversit**	**0.85**	**86**		**Pg**	**22 02 35.2**	**-0.2**
IGPR					**Sb**	**22 02 48.0**	**+0.1**
IGPR	**InterUniversit**	**0.85**	**86**⇓	*e*P	**Pg**	**22 02 35.2**	**-0.2**
PDPR	**Patillas Dam,**	**0.93**	**84**		**Pg**	**22 02 36.1**	**-0.9**
PDPR				Sg	**Sg**	**22 02 49.3**	**+0.2**
PDPR	**Patillas Dam,**	**0.93**	**84**⇓	*e*P	**Pg**	**22 02 36.3**	**-0.8**
HUMP	**Col San Antoni**	**1.11**	**78**		**Pg**	**22 02 39.3**	**-1.2**
HUMP				Sg	**Sg**	**22 02 54.5**	**-0.4**
HUMP				IAML		22 02 58.6	
	comp=Z,1µm,0.3s						
HUMP				IAML		22 02 58.9	
	comp=Z,905nm,0.2s						
HUMP	**Col San Antoni**	**1.11**	**78**⇑	*e*P	**Pg**	**22 02 39.3**	**-1.2**
PCDR	**Punta Cana, DR**	**1.44**	**295**		**Pn**	**22 02 44.8**	**-1.0**
PCDR					**Sg**	**22 03 08.0**	**+2.4**
PCDR	**Punta Cana, DR**	**1.44**	**295**	*i* P	**Pn**	**22 02 45.0**	**-0.8**
PCDR				IAML		22 03 12.4	
	comp=Z,163nm,0.5s						
PCDR	**Punta Cana, DR**	**1.44**	**295**⇑	*e*P	**Pn**	**22 02 44.6**	**-1.2**
DR12	**Loma Pena Alta**	**2.42**	**291**		**Pn**	**22 02 59.8**	**+0.4**
DR12					**Sn**	**22 03 31.2**	**+1.8**
SMDR	**Samana, DR**	**2.49**	**304**		**Pg**	**22 03 06.3**	**-0.5**
SMDR					**Sb**	**22 03 35.4**	**+0.3**
BANI	**BANI**	**3.23**	**279**	Pn	**Pn**	**22 03 11.1**	**+0.6**
SABA	**Saba**	**3.59**	**94**	Pn	**Pn**	**22 03 14.7**	**-0.7**
SMRT	**St. Maarten**	**3.74**	**87**		**Pn**	**22 03 16.6**	**-0.8**
LOVI	**El Cajuil, Ovi**	**4.16**	**269**	*i* P	**Pn**	**22 03 22.2**	**-1.0**
LOVI				IAML		22 04 10.9	
	comp=Z,62nm,1.3s						
SDDR	**Presa de Saban**	**4.21**	**285**		**Pn**	**22 03 25.0**	**+1.1**
GDHS	**Morne Mazeau,**	**5.26**	**107**	Pn	**Pn**	**22 03 37.1**	**-1.3**
GRTK	**Grand Turk**	**5.29**	**313**	Pn	**Pn**	**22 03 38.1**	**-0.6**
ABD	**La Joyeuse, An**	**5.46**	**104**	Pn	**Pn**	**22 03 40.1**	**-0.8**
CBE	**Ff, Capester**	**5.47**	**109**	Pn	**Pn**	**22 03 40.6**	**-0.6**

MDD ***03*** *22:03:32.5±1.0, 32.°58N×4.°50W, h1km, Mb4.0/6, M_mb3.3/6, Error ellipse: s-maj=9.1km s-min=5.8km az=110.0*
CNRM ***03*** *22:03:33.0, 32.°54N×4.°66W, h2km, ML3.1*
INMG ***03*** *22:03:34.9±1.8, 32.°60N×4.°65W, h18km±7km, ML2.4, Error ellipse: s-maj=7.6km s-min=5.5km az=84.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*
IGIL ***03*** *22:03:36.4, 32.°61N×4.°76W, h19km*
ISC 03 22:03:34.2±0.9,**32.°64N**±0.°03×**4.°70W**±0.°04,**h10km**,**n50,** σ2°**06**/86,**6C**,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**0.19**	**24**	P	**Pg**	**22 03 42.5**	**+4.2**
MDT				S	**Sg**	**22 03 42.7**	**+1.5**
MD31	**MD31**	**0.23**	**347**	P	**Pg**	**22 03 39.3**	**+0.2**
MD31				S	**Sg**	**22 03 43.9**	**+1.6**
CZD	**Col de Zad**	**0.48**	**324**	P	**Pg**	**22 03 44.5**	**+0.7**
CZD				S	**Sg**	**22 03 52.8**	**+2.6**
GOLM	**Goulmima**	**0.96**	**193**	P	**Pg**	**22 03 50.3**	**-2.4**
LCRM	**LCR**	**1.05**	**353**	P	**Pn**	**22 03 55.6**	**+0.5**
LCRM				S	**Sg**	**22 04 08.9**	**+0.7**
SICH	**Sidi Chahed**	**1.55**	**341**	P	**Pb**	**22 04 03.9**	**+0.9**
SICH				S	**Sg**	**22 04 25.4**	**+1.4**
TISM	**Timmit**	**1.74**	**239**	P	**Pn**	**22 04 05.0**	**+0.5**
TISM				S	**Sn**	**22 04 27.4**	**+0.7**
ZHG	**ZHG**	**1.82**	**297**	P	**Pn**	**22 04 07.3**	**+1.7**
ZHG				S	**Sb**	**22 04 32.8**	**+2.2**
AKLM	**AKL**	**1.99**	**20**	P	**Pb**	**22 04 10.1**	**-0.5**
AKLM				S	**Sg**	**22 04 39.1**	**+0.9**
TZRR	**Tazzarine**	**1.99**	**202**	P	**Pn**	**22 04 07.8**	**-0.3**
TZRR				S	**Sn**	**22 04 33.2**	**0.0**
AVE	**Averroes**	**2.38**	**287**	P	**Pn**	**22 04 13.0**	**-0.2**
RSA	**Sarsar**	**2.42**	**338**	P	**Pn**	**22 04 16.0**	**+2.0**
RSA				S	**Sb**	**22 04 49.1**	**+1.1**
OUZM	**OUZ**	**2.46**	**226**	P	**Pn**	**22 04 13.9**	**-0.7**
OUZM				S	**Sb**	**22 04 49.5**	**+0.4**
ZGR	**Zagora**	**2.63**	**198**	P	**Pn**	**22 04 17.5**	**+0.5**
ZGR				S	**Sn**	**22 04 48.9**	**-0.1**
PALE	**Palemas**	**2.65**	**14**	P	**Pn**	**22 04 16.9**	**-0.1**
PALE				S	**Sb**	**22 04 52.4**	**-1.9**
SRHM	**Skhour des Reh**	**2.71**	**267**	P	**Pn**	**22 04 17.2**	**-0.7**
TIO	**Tiouine**	**2.77**	**233**	P	**Pn**	**22 04 18.1**	**-0.8**
TIO				S	**Sn**	**22 04 53.7**	**+1.2**
TAF	**Taforalt**	**2.88**	**41**	P	**Pn**	**22 04 20.1**	**-0.2**
TAF				S	**Sn**	**22 04 57.1**	**+2.0**
FIGM	**Figuig**	**2.95**	**99**	P	**Pn**	**22 04 21.1**	**-0.2**
OUK	**Oukaimeden**	**3.05**	**243**	P	**Pn**	**22 04 22.5**	**-0.4**
OUK				S	**Sn**	**22 05 00.6**	**+1.1**
SMIR	**Smir Dam**	**3.09**	**350**	P	**Pn**	**22 04 24.2**	**+1.2**
SMIR				S	**Sn**	**22 05 02.9**	**+2.9**
EMIJ	**Mijas**	**3.91**	**359**	S	**Sn**	**22 05 17.9**	**-2.5**
EAH	**EAH**	**4.26**	**258**	P	**Pn**	**22 04 38.8**	**-0.4**
ESPR	**Espera**	**4.32**	**348**	P	**Pn**	**22 04 40.0**	**0.0**
ESPR				⇑*i*Vmb_VC		22 04 48.2	
	64nm,SNR=1.1						
ESPR				S	**Sn**	**22 05 29.1**	**-1.4**
PBDV	**Barranco-do-Ve**	**5.30**	**331**	*e*Pn	**Pn**	**22 04 52.6**	**-0.9**
PBDV				*e*Sn	**Sn**	**22 05 51.1**	**-3.6**
PBDV				*i* IAML		22 05 56.8	
PBDV				*i* IAML		22 05 57.4	
PBDV				*i* IAML		22 05 58.1	
PVAQ	**Vaqueiros**	**5.36**	**333**	*e*Pn	**Pn**	**22 04 53.4**	**-0.8**
PVAQ				*e*Sn	**Sn**	**22 05 51.3**	**-4.7**
PVAQ				*i* IAML		22 05 53.2	
PVAQ				*i* IAML		22 05 53.6	
PVAQ				*i* IAML		22 06 00.2	
PVAQ	**Vaqueiros**	**5.36**	**333**	P	**Pn**	**22 04 53.7**	**-0.5**
EMIN	**Mina Concepcio**	**5.36**	**343**	S	**Sn**	**22 05 54.9**	**-1.2**
EGRO	**El Granado**	**5.39**	**336**	P	**Pn**	**22 04 54.1**	**-0.6**
EGRO				⇑*i*Vmb_VC		22 05 03.7	
	158nm,SNR=2.0						
EGRO				S	**Sn**	**22 05 53.9**	**-2.9**
ECAB	**El Cabril**	**5.45**	**354**	P	**Pn**	**22 04 54.5**	**-1.1**
ECAB				⇑*i*Vmb_VC		22 05 00.3	
	52nm,SNR=1.1						
ECAB				S	**Sn**	**22 05 55.2**	**-3.3**
EADA	**Adamuz**	**5.51**	**1**	P	**Pn**	**22 04 56.2**	**-0.3**
EADA				⇑*i*Vmb_VC		22 05 01.1	
	72nm,SNR=1.5						
EADA				S	**Sn**	**22 05 57.8**	**-2.2**
PFVI	**Vila Bisbo**	**5.62**	**324**	*e*Sn	**Sn**	**22 06 01.0**	**-1.5**
MORF	**Marmelete**	**5.67**	**326**	*e*P	**Pn**	**22 04 57.6**	**-1.0**
MORF	**Marmelete**	**5.67**	**326**	*e*Pn	**Pn**	**22 04 58.5**	**-0.1**
MORF				*e*Sn	**Sn**	**22 06 02.1**	**-1.7**
PCVE	**Castro Verde**	**5.68**	**332**	*e*Pn	**Pn**	**22 04 59.5**	**+0.8**
PCVE				*e*Sn	**Sn**	**22 06 01.0**	**-3.0**
PCVE				*i* IAML		22 06 02

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.03**	**22**	Pn	**Pg**	**22 10 11.5**	**+2.5**
ZKR				Sn	**Sn**	**22 10 29.8**	**+4.0**
ZKR	**Zakros**	**1.03**	**22**	P	**Pg**	**22 10 11.3**	**+2.3**
ZKR	**Zakros**	**1.03**	**22**	P	**Pg**	**22 10 11.0**	**+1.9**
ZKR				S	**Sg**	**22 10 21.3**	**-1.1**
KSTL	**Kastelli Herak**	**1.10**	**342**	P	**Pg**	**22 10 11.5**	**+1.1**
NPS	**Neapolis**	**1.11**	**354**	P	**Pg**	**22 10 11.3**	**+0.8**
NPS	**Neapolis**	**1.11**	**354**	P	**Pg**	**22 10 11.4**	**+0.8**
NPS				S	**Sg**	**22 10 21.4**	**-3.4**
SIVA	**Sivas**	**1.16**	**318**	P	**Pg**	**22 10 12.5**	**+1.1**
IDI	**Anoyia**	**1.33**	**328**	Pg	**Pg**	**22 10 14.7**	**-0.1**
	2.0nm,0.3s,baz=148,slow=17,SNR=22						
IDI				Lg	Lg	22 10 26.1	
	7.4nm,0.3s,baz=318,slow=19,SNR=11						
IDI	**Anoyia**	**1.33**	**328**	Pn	**Pb**	**22 10 16.2**	**+1.1**
IDI				Sn	**Sn**	**22 10 39.9**	**+6.6**
IDI	**Anoyia**	**1.33**	**328**	P	**Pg**	**22 10 14.9**	**+0.1**
IDI	**Anoyia**	**1.33**	**328**	P	**Pg**	**22 10 15.3**	**+0.5**
IDI				S	**Sg**	**22 10 28.9**	**-3.2**
GVD	**Gavdhos**	**1.53**	**297**	Pn	**Pn**	**22 10 18.9**	**+1.2**
GVD	**Gavdhos**	**1.53**	**297**	P	**Pn**	**22 10 18.4**	**+0.7**
VAM	**Vamos**	**1.78**	**315**	P	**Pn**	**22 10 22.8**	**+1.7**
VAM	**Vamos**	**1.78**	**315**	P	**Pn**	**22 10 23.3**	**+2.1**
IMMV	**Iera Moni Meta**	**1.95**	**312**	Pn	**Pn**	**22 10 25.3**	**+1.8**
IMMV	**Iera Moni Meta**	**1.95**	**312**	P	**Pn**	**22 10 25.0**	**+1.5**
IMMV	**Iera Moni Meta**	**1.95**	**312**	P	**Pn**	**22 10 25.2**	**+1.7**
KNDR	**Palaiochora Ch**	**2.05**	**302**	Pn	**Pn**	**22 10 26.7**	**+1.8**
KNDR	**Palaiochora Ch**	**2.05**	**302**	P	**Pn**	**22 10 27.9**	**+3.1**
THERA	**Ancient Thera,**	**2.21**	**354**	P	**Pn**	**22 10 28.2**	**+1.1**
THERA	**Ancient Thera,**	**2.21**	**354**	P	**Pn**	**22 10 28.1**	**+1.0**
ANKY	**Antikythira Is**	**2.63**	**311**	P	**Pn**	**22 10 36.1**	**+3.2**
ARG	**Arkhangelos**	**2.83**	**43**	Pn	**Pn**	**22 10 36.1**	**+0.6**
DAT	**Datca**	**2.97**	**30**	Pn	**Pn**	**22 10 39.0**	**+1.5**
KTHA	**Kythira Island**	**3.04**	**314**	P	**Pn**	**22 10 39.7**	**+1.2**
VLI	**Veliai**	**3.43**	**319**	P	**Pn**	**22 10 44.5**	**+0.6**
IZZE	**Mula-Seydike**	**3.64**	**50**	P	**Pn**	**22 10 48.6**	**+1.9**
IZZE				S	**Sn**	**22 11 30.0**	**-0.2**
IZZE				IAML		22 11 40.0	
	comp=E,10nm,0.4s						
IZZE				IAML		22 11 41.0	
	comp=N,18nm,0.5s						
SABU	**Mula-Dalaman**	**3.73**	**44**	P	**Pn**	**22 10 49.7**	**+1.7**
SABU				IAML		22 11 37.0	
	comp=E,8.1nm,1.0s						
SABU				IAML		22 12 12.0	
	comp=N,11nm,1.1s						
AKAS	**Kas**	**3.77**	**56**	P	**Pn**	**22 10 51.4**	**+2.7**
AKAS				S	**Sn**	**22 11 31.3**	**-2.4**
AKAS				IAML		22 12 10.0	
	comp=E,20nm,1.1s						
DNZT	**Denizli-Tavas-**	**4.10**	**40**	P	**Pn**	**22 10 54.1**	**+1.1**
DNZT				S	**Sn**	**22 11 38.4**	**-3.3**
KNIK	**Mula-Seydike**	**4.11**	**48**	P	**Pn**	**22 10 54.9**	**+1.6**
KNIK				IAML		22 11 46.0	
	comp=N,5.0nm,1.1s						
KNIK				IAML		22 11 48.0	
	comp=E,8.6nm,0.7s						
DION	**Dionisos Attik**	**4.18**	**340**	P	**Pn**	**22 10 55.4**	**+1.3**
TAVA	**DENIZLI_Tavas**	**4.18**	**37**	P	**Pn**	**22 10 58.1**	**+3.9**
TAVA				S	**Sn**	**22 11 41.4**	**-2.3**
AKUM	**Antalya-Kumluc**	**4.33**	**59**	P	**Pn**	**22 10 57.7**	**+1.5**
GOLH	**Golhisar**	**4.36**	**44**	P	**Pn**	**22 11 01.3**	**+4.5**
GOLH				S	**Sn**	**22 11 50.7**	**+2.4**
MMAI	**Mount Meron Ar**	**8.13**	**95**	Pn	Pn	22 11 46.7	-1.9
	0.5nm,0.3s,baz=272,slow=12,SNR=4.9						
MMAI				Sn	Sn	22 13 13.1	-8.0
	1.0nm,0.3s,baz=272,slow=28,SNR=5.3 0.3nm,0.3s						
EIL	**Elat**	**9.01**	**117**	Pn	Pn	22 11 58.0	-2.4
	0.6nm,0.3s,baz=175,slow=12,SNR=4.4						
EIL				Sn	Sn	22 13 31.6	-11
	0.4nm,0.3s,baz=269,slow=21,SNR=1.5 1.4nm,0.4s						
VAE	**Valguarnera**	**9.78**	**293**	Pn	Pn	22 12 08.8	-2.4
	6.9nm,0.8s,baz=102,slow=13,SNR=2.6						
AKASG	**Malin Array Be**	**16.73**	**8**	Pn	**Pn**	**22 13 43.0**	**-1.7**
	0.6nm,0.3s,baz=201,slow=11,SNR=4.4 0.4nm,0.4s						
GERES	**GERESS Array B**	**17.19**	**332**	P	**Pn**	**22 13 49.4**	**-1.3**
	baz=153,slow=11,SNR=7.9 0.7nm,0.6s						
ESDC	**Sonseca Array**	**24.32**	**292**	P	**P**	**22 15 07.8**	**-0.7**
	0.3nm,0.5s,baz=79,slow=8.8,SNR=5.9 0.3nm,0.5s						
HFS	**Hagfors**	**27.16**	**347**	P	**P**	**22 15 31.7**	**-2.1**
	3.6nm,1.0s,baz=158,slow=12,SNR=2.3 3.6nm,1.0s						
FINES	**FINESS Array B**	**27.30**	**0**	P	**P**	**22 15 32.4**	**-2.6**
	1.0nm,0.5s,baz=158,slow=13,SNR=7.8 1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**30.24**	**232**	P	P	22 15 59.3	-2.3
	0.4nm,0.5s,baz=36,slow=8.9,SNR=3.0 0.4nm,0.5s						
ARCES	**ARCESS Array B**	**35.43**	**360**	P	P	22 16 44.2	-2.2
	0.6nm,0.5s,baz=169,slow=8.3,SNR=8.2 0.6nm,0.5s						
BVAR	**Borovoye Array**	**36.69**	**45**	P	P	22 16 55.8	-1.7
	0.2nm,0.4s,baz=258,slow=7.2,SNR=2.4 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**41.38**	**50**	P	P	22 17 36.2	-0.5
	0.6nm,0.6s,baz=279,slow=9.0,SNR=8.2 0.6nm,0.6s						
MKAR	**Makanchi Array**	**43.93**	**56**	P	P	22 17 57.1	-0.4
	0.4nm,0.7s,baz=264,slow=8.4,SNR=4.7 0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**45.35**	**45**	P	P	22 18 07.7	-1.0
	1.1nm,0.4s,baz=261,slow=9.4,SNR=7.3 1.1nm,0.4s						
SCHQ	**Schefferville**	**64.26**	**320**	P	P	22 20 22.7	-3.1
	1.5nm,0.4s,baz=75,slow=12,SNR=3.9 1.5nm,0.4s						

NOU ***03*** *22:58:10.2, 18°.55S×120°.60E, h0km, mb4.2/8, Western Australia*
AUST 03 22:58:11.0±0.6, 18°S±5°×12°1E±°, h10km, ML3.3/5, ML3.5/2, MLv3.7/2, Error ellipse: s-maj=11.9km s-min=5.5km az=150.1, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUBRM	**Broome Senior**	**1.68**	**72**	P	Pb	22 58 41.9	-0.1
MBWA	**Marble Bar**	**2.77**	**196**	P	Pn	22 58 57.9	+2.4
FITZ	**Fitzroy Crossi**	**4.85**	**86**	P	Pn	22 59 24.2	+0.1
FITZ				S	Sn	23 00 20.5	+0.3
FITZ	**Fitzroy Crossi**	**4.85**	**86**	P	Pn	22 59 24.1	+0.1
GIRL	**Giralia**	**7.22**	**234**	P	Pn	22 59 55.6	-1.1
	comp=Z,34nm,1.7s,comp=Z,0.1nm						
GIRL				S	Sn	23 01 12.4	-6.4
MEEK	**Meekatharra**	**8.31**	**192**	P	Pn	23 00 12.8	+1.2
	comp=Z,13nm,0.6s,comp=Z,0.0nm						
MEEK				S	Sn	23 01 44.4	-1.2
MEEK	**Meekatharra**	**8.31**	**192**	P	Pn	23 00 12.8	+1.2
KNRA	**Kununurra**	**8.33**	**72**	P	Pn	23 00 10.4	-1.5
	comp=Z,7.6nm,1.8s,comp=Z,0.0nm						
KNRA				S	Sn	23 01 42.9	-3.2
CVQOZ	**Cooralya Stati**	**8.46**	**224**	S	Sn	23 01 42.1	-7.0
WRKA	**Warakurna**	**9.71**	**134**	P	Pn	23 00 32.4	+1.6
	comp=Z,3.4nm,1.3s,comp=Z,0.0nm						
WRKA				S	Sn	23 02 20.2	+0.2
MORW	**Morawa**	**11.31**	**201**	P	Pn	23 00 52.0	-0.7
MORW				S	Sn	23 02 50.3	-9.1
MORW	**Morawa**	**11.31**	**201**	P	Pn	23 00 52.1	-0.7
BLDU	**Ballidu**	**12.57**	**195**	P	Pn	23 01 09.4	-0.6
	comp=Z,27nm,2.8s						
BLDU	**Ballidu**	**12.57**	**195**	P	Pn	23 01 10.1	+0.1
KMBL	**Kambalda**	**12.88**	**175**	P	Pn	23 01 13.9	-0.4
	comp=Z,8.9nm,2.6s						
WRAB	**Tennant Creek**	**13.11**	**99**	P	Pn	23 01 16.9	-0.5
KLBR	**Kellerberrin**	**13.29**	**190**	P	Pn	23 01 19.0	-0.9
	comp=Z,26nm,1.1s						
KLBR	**Kellerberrin**	**13.29**	**190**	P	Pn	23 01 19.3	-0.5
MUN	**Mundaring**	**14.00**	**195**	P	Pn	23 01 28.6	-0.9
	comp=Z,27nm,2.4s						
MUN	**Mundaring**	**14.00**	**195**	P	Pn	23 01 28.6	-0.8
FORT	**Forrest**	**14.01**	**152**	P	Pn	23 01 29.6	0.0
	comp=Z,4.8nm,1.0s						
NWAO	**Narrogin (SRO)**	**14.69**	**191**	P	Pn	23 01 37.5	-1.4

IDC ***03*** *23:09:31.9±6.3, 15°.49S×167°.64E, h117km±49km, mb3.9/4, mbtmp4.3/5, MS2.7/1, Error ellipse: s-maj=45.3km s-min=30.4km az=26.0*
NEIC ***03*** *23:09:33.0±1.6, 15°.51S±0°.04×167°.8E±0°.1, h128km±7km, mb4.2/3, Error ellipse: s-maj=19.5km s-min=4.7km az=98.0*
ISC 03 23:09:32.8±1.3, 15°.54S±0°.09×167°.8E±0°.2, h128km, n17, σ0s91/18, mb4.1/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.53**	**280**	P	**Pn**	**23 09 51.6**	**-0.3**
SANVU				Sn	**Sn**	**23 10 07.0**	**+0.9**
MARNC	**Mare, Loyalty**	**5.92**	**177**	Pn	**Pn**	**23 10 57.6**	**-0.5**
KOUNC	**Koumac, New Ca**	**5.97**	**213**		**Pn**	**23 10 59.5**	**+0.5**
DZM	**Mont Dzumac**	**6.61**	**191**	P	**Pn**	**23 11 08.2**	**+0.6**
	7.9nm,0.3s,baz=12,slow=5.3,SNR=63						
DZM				S	**Sn**	**23 12 20.1**	**-1.7**
	15nm,0.5s,baz=160,slow=22,SNR=6.2						
ONTNC	**Ouen Toro**	**6.84**	**190**		**Pn**	**23 11 11.3**	**+0.7**
OUENC	**Ouen Island, N**	**6.89**	**187**	Pn	**Pn**	**23 11 12.7**	**+1.3**
KRVT	**Keravat (AS076**	**19.07**	**304**	LR	LR	23 20 46.2	
	comp=Z,25nm,20.9s,baz=74,slow=36						
STKA	**Stephens Creek**	**28.83**	**231**	P	**P**	**23 15 19.8**	**+0.7**
	3.8nm,0.7s,baz=41,slow=11,SNR=7.0 3.8nm,0.7s						
WRA	**Warramunga Arr**	**32.09**	**257**	P	**P**	**23 15 46.5**	**-1.4**
	1.7nm,0.7s,baz=85,slow=8.0,SNR=9.4 1.7nm,0.7s						
AS31	**Alice Springs**	**32.83**	**250**	P	**P**	**23 15 53.7**	**-0.7**
AS31				IAmb	IAmb	23 15 54.5	
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**32.83**	**250**	P	**P**	**23 15 53.9**	**-0.6**
	comp=Z,3.2nm,0.4s,baz=81,slow=8.7,SNR=24 comp=Z,3.2nm,0.4s						
ASAR	**Alice Springs**	**32.83**	**250**	P	**P**	**23 15 53.7**	**-0.7**
BBOO	**Buckleboo**	**33.46**	**233**	P	**P**	**23 16 00.2**	**+0.4**
BBOO				IAmb	IAmb	23 16 03.7	
	comp=Z,22nm,1.3s						
QSPA	**South Pole Qui**	**74.49**	**180**	P	**P**	**23 20 57.9**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=344,slow=4.3,SNR=7.6 comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**74.49**	**180**	P	**P**	**23 20 57.8**	**+0.7**
QSPA				IAmb	IAmb	23 21 04.5	
	comp=Z,6.1nm,1.4s						
ARCES	**ARCESS Array B**	**121.15**	**345**	PKP	**PKPdf**	**23 28 09.2**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=64,slow=1.9,SNR=8.1						
FINES	**FINESS Array B**	**126.64**	**338**	PKP	**PKiKP**	**23 28 21.0**	**0.0**
	comp=Z,1.3nm,1.0s,baz=64,slow=3.2,SNR=1.3						

MEX ***03*** *23:10:05.9±0.7, 14°.10N×94°.20W, h10km, MD4.1*
GCG ***03*** *23:10:10.1±1.3, 14°.34N×93°.83W, h20km±324km, MD4.4, Presumed earthquake*
ISC 03 23:09:58.1±3.1, 13°.9N±0°.1×94°.25W±0°.04, h15km±23km, n19, σ2s57/32, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**2.18**	**62**	*i* P	**Pb**	**23 10 37.0**	**-0.3**
THIG				*i* S	**Sn**	**23 11 01.8**	**+1.2**
PATR	**El Naranjo**	**2.31**	**57**	*e*P	**Pb**	**23 10 39.0**	**-0.6**
PATR				*e*S	**Sn**	**23 11 03.9**	**-0.3**
PAVE	**Pavencul**	**2.40**	**57**	*e*P	**Pb**	**23 10 40.4**	**-0.7**
PAVE				*e*S	**Sn**	**23 11 06.2**	**-0.1**
CHUJ	**Union Juarez**	**2.40**	**59**	*e*P	**Pb**	**23 10 40.4**	**-0.8**
CHUJ				*e*S	**Sn**	**23 11 06.4**	**0.0**
HUIG	**Huatulco**	**2.60**	**317**	*i* P	**Pn**	**23 10 43.4**	**+3.7**
HUIG				*i* S	**Sn**	**23 11 08.0**	**-3.1**
STG5	**El Palmar, Qui**	**2.86**	**79**	*i* P	**Pn**	**23 10 45.4**	**+2.1**
STG5				*i* S	**Sn**	**23 11 13.2**	**-4.4**
STG8	**El Palmar, Qui**	**2.87**	**78**	*i* P	**Pn**	**23 10 45.8**	**+2.2**
STG8				*i* S	**Sn**	**23 11 15.2**	**-2.7**
TGIG		**3.08**	**20**	*e*P	**Pb**	**23 10 50.3**	**-2.5**
TGIG				*e*S	**Sn**	**23 11 23.4**	**+0.3**
TGIG		**3.08**	**20**	*i* P	**Pb**	**23 10 50.1**	**-2.6**
CMIG	**Matias Romero**	**3.26**	**349**	*e*P	**Pn**	**23 10 51.6**	**+3.0**
CMIG				*e*S	**Sn**	**23 11 24.4**	**-2.9**
PEIG	**Puerto Escondi**	**3.51**	**307**	*e*P	**Pn**	**23 10 56.0**	**+3.8**
PEIG				*e*S	**Sn**	**23 11 30.9**	**-2.6**
APG	**El Apazote**	**3.83**	**72**	*i* P	**Pb**	**23 11 02.6**	**-3.0**
VHO	**Vista Hermosa**	**3.98**	**323**	*e*P	**Pn**	**23 11 03.0**	**+4.2**
VHO				*e*S	**Sn**	**23 11 43.8**	**-1.6**
NEUV	**Arroyo Zacate**	**4.10**	**339**	*e*P	**Pn**	**23 11 04.2**	**+3.9**
NEUV				*e*S	**Sn**	**23 11 44.4**	**-3.6**
YOIG	**Yosondua**	**4.35**	**313**	*e*P	**Pb**	**23 11 11.3**	**-3.2**
YOIG				*e*S	**Sn**	**23 11 54.7**	**+0.1**
TXIG	**Tlaxiaco**	**4.77**	**315**	*e*S	**Sn**	**23 12 05.3**	**+0.2**
TOIG	**Toxpalan**	**5.00**	**328**	*e*P	Pn	23 11 19.2	+6.5
TOIG				*e*S	**Sn**	**23 12 09.7**	**-0.6**
HLIG	**Huajuapan de L**	**5.21**	**319**	*e*P	Pn	23 11 21.5	+5.7
HLIG				*e*S	**Sn**	**23 12 16.3**	**+0.5**
FTIG	**Fresnillo de T**	**5.48**	**318**	*e*P	Pn	23 11 25.6	+6.2
FTIG				*e*S	**Sn**	**23 12 20.4**	**-1.9**

WEL ***03*** *23:21:30.9±1.1, 33°.5S×17°.8W±2°.4, h12km, M4.5/13, mB4.8/6, ML4.5/13, MLv4.8/13, Mw(mB)4.0/6, Error ellipse: s-maj=33.9km s-min=4.4km az=110.0*
IDC ***03*** *23:21:31.0±1.6, 33°.32S×177°.81W, h0km, mb4.4/3, mbtmp4.4/5, ML4.2/2, MS3.5/12, Error ellipse: s-maj=39.2km s-min=28.2km az=89.0*
NEIC ***03*** *23:21:32.9±2.3, 33°.32S±0°.07×177°.8W±0°.2, h10km±2km, mb4.5/6, Error ellipse: s-maj=28.4km s-min=10.3km az=105.0*
ISC 03 23:21:31.2±1.2, 33°.30S±0°.08×177°.9W±0°.2, h10km, n49, σ1s70/48, mb4.4/6, MS3.5/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.03**	**360**	P	**Pn**	**23 22 31.9**	**-1.1**
GLKZ				S	**Sn**	**23 23 17.7**	**-2.5**
RAO	**Raoul Island**	**4.04**	**360**	Pn	**Pn**	**23 22 32.4**	**-0.7**
	90nm,0.3s,baz=102,slow=20,SNR=1.7						
RAO				Sn	**Sn**	**23 23 17.2**	**-3.3**
	140nm,0.3s,baz=96,slow=18,SNR=2.5 204nm,0.4s						
RAO	**Raoul Island**	**4.04**	**360**	Pn	**Pn**	**23 22 32.5**	**-0.7**
RAO				Sn	**Sn**	**23 23 19.9**	**-0.5**
MXZ	**Matakaoa Point**	**5.25**	**215**	Pn	**Pn**	**23 22 50.0**	**+0.2**
WMGZ	**Waiomatatini S**	**5.41**	**213**	P	**Pn**	**23 22 51.2**	**-0.8**
PKGZ	**Pakihiroa**	**5.60**	**214**	P	**Pn**	**23 22 54.0**	**-0.7**
PKGZ				S	**Sn**	**23 23 57.4**	**-1.6**
HAZ	**Te Kaha**	**5.66**	**217**	P	**Pn**	**23 22 56.4**	**+1.0**
HAZ				S	**Sn**	**23 24 01.0**	**+0.5**
PUZ	**Puketiti**	**5.69**	**212**	P	**Pn**	**23 22 54.1**	**-1.7**
PUZ				S	**Sn**	**23 23 59.5**	**-1.7**
RUGZ	**Raukumara Rang**	**5.88**	**216**	P	**Pn**	**23 22 57.2**	**-1.2**
RUGZ				S	**Sn**	**23 24 05.9**	**-0.1**
TWGZ	**Tauwhareparae**	**5.90**	**213**	P	**Pn**	**23 22 59.0**	**+0.3**
TWGZ				S	**Sn**	**23 24 06.4**	**0.0**
CNGZ	**Carnagh Statio**	**6.05**	**210**	P	**Pn**	**23 22 58.9**	**-1.8**
MWZ	**Matawai**	**6.24**	**215**	P	**Pn**	**23 23 01.8**	**-1.5**
URZ	**Urewera**	**6.39**	**218**	Pn	**Pn**	**23 23 04.9**	**-0.5**
	1.0nm,0.3s,baz=270,slow=6.1,SNR=8.5						
URZ				Sn	**Sn**	**23 24 14.6**	**-3.7**
	21nm,0.3s,baz=139,slow=20,SNR=23						
URZ				LR	LR	23 26 06.8	
	comp=Z,186nm,19.3s,baz=16,slow=43 2.1nm,0.3s						
URZ	**Urewera**	**6.39**	**218**	P	**Pn**	**23 23 04.3**	**-1.1**
URZ				S	**Sn**	**23 24 15.5**	**-2.9**
RAGZ	**Rawiri**	**6.42**	**215**	P	**Pn**	**23 23 04.2**	**-1.7**
RIGZ	**Rimuhau**	**6.43**	**212**	P	**Pn**	**23 23 03.7**	**-2.3**
RIGZ				S	**Sn**	**23 24 16.9**	**-2.6**
SNGZ	**Shannon Statio**	**6.68**	**214**	P	**Pn**	**23 23 07.8**	**-1.7**
SNGZ				S	**Sn**	**23 24 23.9**	**-1.8**
MUGZ	**Murupara**	**6.73**	**218**	P	**Pn**	**23 23 09.3**	**-0.8**
MHGZ	**Mahia Peninsul**	**6.74**	**209**	P	**Pn**	**23 23 07.8**	**-2.5**
MTHZ	**Maungataniwha**	**6.98**	**216**	P	**Pn**	**23 23 11.7**	**-1.8**
BKZ	**Black Stump Fm**	**7.39**	**216**	P	Pn	23 23 16.4	-2.9
OTVZ	**Oturere**	**7.82**	**220**	P	**Pn**	**23 23 25.4**	**+0.3**
WNVZ	**Wahianoa**	**7.97**	**219**	P	**Pn**	**23 23 26.7**	**-0.6**
TKNZ	**Takaka Hill**	**10.60**	**221**	P	**Pn**	**23 24 01.8**	**-1.4**
THZ	**Tophouse**	**11.15**	**218**	P	**Pn**	**23 24 11.1**	**+0.4**
LTZ	**Lake Taylor**	**12.21**	**216**	P	**Pn**	**23 24 23.1**	**-2.1**
MSVF	**Nonsavu**	**15.92**	**346**	LR	LR	23 30 09.5	
	comp=Z,92nm,21.8s,baz=176,slow=32						
DZM	**Mont Dzumac**	**17.78**	**305**	LR	LR	23 31 06.4	
	comp=Z,146nm,20.0s,baz=158,slow=32						
RAR	**Rarotonga**	**20.09**	**58**	LR	LR	23 31 34.5	
	comp=Z,71nm,21.2s,baz=268,slow=30						
TBI	**Tubuai**	**26.86**	**76**	eLR	LR	23 33 18.2	
	916nm,28.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT2	**Papeete2**	**29.86**	**65**	*e*LR	LR	23 34 31.8	
	198nm,26.5s						
PPT2				*e*LR	LR	23 34 51.8	
	162nm,29.0s						
PPT	**Papeete**	**29.88**	**65**	LR	LR	23 36 19.0	
	comp=Z,56nm,21.4s,baz=192,slow=30						
STKA	**Stephens Creek**	**34.00**	**261**	LR	LR	23 40 57.8	
	comp=Z,94nm,19.4s,baz=31,slow=34						
CTA	**Charters Tower**	**34.44**	**283**	LR	LR	23 40 25.2	
	comp=Z,65nm,20.2s,baz=54,slow=33						
AS31	**Alice Springs**	**43.10**	**270**	P	**P**	**23 29 33.5**	**+1.6**
ASAR	**Alice Springs**	**43.10**	**270**	P	**P**	**23 29 34.0**	**+2.2**
	3.5nm,0.7s,baz=109,slow=7.5,SNR=25						
ASAR				LR	LR	23 47 24.9	
	comp=Z,45nm,18.1s,baz=127,slow=36 3.5nm,0.7s						
ASAR	**Alice Springs**	**43.10**	**270**	P	**P**	**23 29 33.1**	**+1.3**
WR8	**Warramunga Arr**	**44.21**	**275**	P	**P**	**23 29 42.1**	**+1.3**
WR8				IAmb	IAmb	23 30 20.0	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**44.35**	**275**	P	**P**	**23 29 44.0**	**+2.1**
	comp=Z,2.7nm,0.5s,baz=116,slow=7.7,SNR=14 comp=Z,2.7nm,0.5s						
WB0	**Warramunga Arr**	**44.39**	**275**	P	**P**	**23 29 44.4**	**+2.2**
FORT	**Forrest**	**45.44**	**258**	P	**P**	**23 29 52.2**	**+1.7**
FORT				IAmb	IAmb	23 29 59.5	
	comp=Z,5.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.48**	**272**	LR	LR	23 52 39.2	
	comp=Z,65nm,18.6s,baz=164,slow=36						
FITZ	**Fitzroy Crossi**	**52.48**	**272**	P	**P**	**23 30 46.1**	**+1.5**
FITZ				IAmb	IAmb	23 30 47.5	
	comp=Z,5.7nm,1.5s						
QSPA	**South Pole Qui**	**56.82**	**180**	P	**P**	**23 31 16.9**	**+1.3**
	comp=Z,4.3nm,1.0s,baz=21,slow=3.7,SNR=7.5 comp=Z,4.3nm,1.0s						
QSPA	**South Pole Qui**	**56.82**	**180**	P	**P**	**23 31 17.1**	**+1.5**
QSPA				IAmb	IAmb	23 31 19.8	
	comp=Z,8.3nm,1.1s						
BATI	**Baumata**	**58.14**	**279**	LR	LR	23 55 37.0	
	comp=Z,121nm,21.1s,baz=133,slow=35						
TXAR	**Lajitas Array**	**93.89**	**57**	LR	LR	00 09 57.1	
	comp=Z,18nm,19.9s,baz=336,slow=31						
ANMO	**Albuquerque**	**95.33**	**51**	LR	LR	00 10 48.1	
	comp=Z,30nm,19.1s,baz=268,slow=31						
FINES	**FINESS Array B**	**147.88**	**338**	PKPbc	**PKPbc**	**23 41 17.0**	**+1.3**
	comp=Z,1.6nm,0.5s,baz=48,slow=2.1,SNR=14						

CATAC ***03*** *23:25:09.7±0.6, 7°.N±2°×7°.3W±°, h155km±5km, M3.7/8, mb3.4/1, MLv3.9/8, Error ellipse: s-maj=10.0km s-min=5.3km az=94.5, confirmed*
RSNC ***03*** *23:25:11.2±0.0, 7°.N±1°×7°.3W±°, h144km±2km, M3.4, mB4.9, mb3.8, ML3.0, Mw(mB)4.2*
FUNV ***03*** *23:25:12.4, 7°.14N×73°.18W, h5km, MW3.5, Presumed earthquake*
ISC 03 23:25:08.9±1.3, 6°.88N±0°.03×73°.12W±0°.04, h156km±8km, n42, σ1s42/82, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**192**	P	**Pn**	**23 25 30.9**	**+0.5**
BARC				S	**Sn**	**23 25 46.0**	**-0.8**
PAMC	**Pamplona, Colo**	**0.62**	**43**	P	**Pn**	**23 25 33.6**	**+1.5**
PAMC				S	**Sn**	**23 25 50.3**	**+0.5**
BRJC	**Barrancabermej**	**0.62**	**278**	P	**Pn**	**23 25 32.5**	**+1.0**
BRJC				S	**Sn**	**23 25 49.6**	**+0.9**
RUSC	**La Rusia**	**0.98**	**178**	P	**Pn**	**23 25 34.9**	**+0.3**
RUSC				S	**Sn**	**23 25 54.2**	**-0.1**
RUSC	**La Rusia**	**0.98**	**178**	P	**Pn**	**23 25 34.8**	**+0.2**
RUSC				S	**Sn**	**23 25 52.7**	**-1.6**
RUSC	**La Rusia**	**0.98**	**178**	*e*P	**Pn**	**23 25 34.8**	**+0.2**
RUSC				*e*S	**Sn**	**23 25 52.1**	**-2.2**
OCAC	**Ocana**	**1.36**	**352**	P	**Pn**	**23 25 38.9**	**+1.2**
OCAC				S	**Sn**	**23 26 00.2**	**+0.4**
PTBC	**PUERTO BERRIO,**	**1.37**	**256**	P	**Pn**	**23 25 37.3**	**-0.2**
PTBC				S	**Sn**	**23 25 57.8**	**-1.7**
SPBC	**San Pablo de B**	**1.54**	**218**	P	**Pn**	**23 25 39.7**	**+0.3**
SPBC				S	**Sn**	**23 26 01.5**	**-1.4**
NORC	**Norcasia**	**2.17**	**233**	P	**Pn**	**23 25 46.9**	**+0.5**
NORC				S	**Sn**	**23 26 14.7**	**-0.7**
ROSC	**El Rosal**	**2.35**	**210**	P	**Pn**	**23

LR02	Universidad Au	0.94	191	eP		Pn	23 36 06.1	+2.0
LR04	Corral	1.04	197			Pn	23 36 05.7	+0.2
LR04					Sn	Sn	23 36 18.9	0.0
LR04	Corral	1.04	197	eP		Pn	23 36 05.2	-0.3
LR04				IAML			23 36 20.0	
	comp=Z,1μm,0.3s							
LR04	Corral	1.04	197	eP		Pn	23 36 05.7	+0.2
LR04				eS		Sn	23 36 18.9	0.0
LR04				IAML			23 36 19.8	
	comp=E,4μm,0.2s							
GO06	Curarrehue	1.40	120			Pn	23 36 10.8	+0.3
GO06					Sn	Sn	23 36 27.1	-0.6
GO06	Curarrehue	1.40	120	eP		Pn	23 36 11.0	+0.5
GO06	Curarrehue	1.40	120	eP		Pn	23 36 11.0	+0.5
LR05	Currie	1.56	150			Pn	23 36 13.7	+1.1
LR05					Sn	Sn	23 36 32.4	+0.8
LR05	Currie	1.56	150	eP		Pn	23 36 13.8	+1.3
LR05				IAML			23 36 33.6	
	comp=N,875nm,0.2s							
BI05	Punta Hualpn	2.14	356	Pn		Pn	23 36 20.4	-0.1
BI05	Punta Hualpn	2.14	356	eP		Pn	23 36 22.7	+2.2
BI05				IAML			23 37 00.7	
	comp=Z,165nm,0.5s							
BI05	Punta Hualpn	2.14	356	eP		Pn	23 36 22.6	+2.1
BI05				IAML			23 36 50.1	
	comp=N,229nm,0.2s							
LL03	Petrohue	2.30	168			Pn	23 36 23.9	+1.2
LL03	Petrohue	2.30	168	eP		Pn	23 36 31.4	+8.7
LL03				eS		Sn	23 36 31.9	-18
LL03				IAML			23 37 07.2	
	comp=Z,271nm,0.8s							
BI02	San Fabin de	2.62	33			Pn	23 36 26.9	-0.3
BI02	San Fabin de	2.62	33	eP		Pn	23 36 29.2	+2.0
BI02				IAML			23 37 17.0	
	comp=Z,81nm,0.9s							
BI02	San Fabin de	2.62	33	eP		Pn	23 36 28.8	+1.6
PLCA	Paso Flores	2.65	135			Pn	23 36 27.8	+0.2
PLCA	Paso Flores	2.65	135	eP		Pn	23 36 28.2	+0.5
PLCA				eS		Sn	23 37 00.7	+2.1
ML02	Panimavida	3.37	23			Pn	23 36 36.9	-0.6
ML02	Panimavida	3.37	23	eP		Pn	23 36 39.2	+1.8
ML02				IAML			23 37 39.1	
	comp=Z,128nm,0.5s							
GO05	Hualane	3.97	13			Pn	23 36 46.5	+0.9
GO05	Hualane	3.97	13	eP		Pn	23 36 46.6	+0.9
GO05				eS		Sn	23 37 33.1	+2.2
GO05				IAML			23 37 58.9	
	comp=Z,55nm,1.1s							
LL02	Futaleuf	4.39	169	Pn		Pn	23 36 52.7	+1.2
BO02	Sierra Bellavi	4.46	24			Pn	23 36 53.3	+0.8
BO02	Sierra Bellavi	4.46	24	eP		Pn	23 36 54.6	+2.0
BO02				eS		Sn	23 37 45.7	+2.5
BO02				IAML			23 38 05.9	
	comp=Z,48nm,0.6s							
BO01	Tunca	4.75	20	Pn		Pn	23 36 56.0	-0.4
BO01	Tunca	4.75	20	eP		Pn	23 36 56.3	-0.1
BO01				IAML			23 37 51.5	
	comp=Z,23nm,0.5s							
MT01	Popeta	5.21	16			Pn	23 37 02.6	-0.1
MT01	Popeta	5.21	16	eP		Pn	23 37 02.7	0.0
MT01				eS		Sn	23 38 01.0	-0.5
MT01				IAML			23 38 02.5	
	comp=Z,29nm,0.2s							
BO04	La Punta	5.26	22			Pn	23 37 03.0	-0.4
MT09	Talagante	5.36	18			Pn	23 37 04.1	-0.8
MT03	Universidad Ad	5.75	21			Pn	23 37 09.2	-1.1
MT05	Renca	5.79	19	Pn		Pn	23 37 08.4	-2.2
MT16	CCHEN	5.81	21	Pn		Pn	23 37 11.5	+0.5
MT02	Curacav	5.82	16			Pn	23 37 10.2	-0.9
MT08	Bocatoma Ro	5.95	25			Pn	23 37 13.4	+0.3
PEL	Peldehue	6.04	19			Pn	23 37 13.4	-0.7
VA03	San Esteban	6.43	19			Pn	23 37 18.6	-0.9
CO04	Los Peladeros	7.03	14			Pn	23 37 27.1	-0.8
ZON	Zonda	8.14	27	Pn		Pn	23 37 42.4	-0.6
CO03	El Pedregal	8.25	14	Pn		Pn	23 37 43.6	-1.0
TRQA	Tornquist	8.71	88	Pn		Pn	23 37 50.2	-0.4
CO01	Juntas del Tor	9.21	16	Pn		Pn	23 37 57.1	-0.6
LCO	Las Campanas	10.04	12	Pn		Pn	23 38 08.1	-1.0
AC02	Maricunga	12.45	16	Pn		Pn	23 38 40.5	-1.9
PB05	IPOC Station P	16.16	9	Pn		Pn	23 39 27.8	-3.5
PB03	IPOC Station P	17.02	10	Pn		Pn	23 39 41.7	-0.4
PB03				IAmb		IAmb	23 39 50.0	
	comp=Z,17nm,1.4s							
PB07	IPOC Station P	17.31	10	Pn		Pn	23 39 44.4	-1.4
PB07				IAmb		IAmb	23 39 52.7	
	comp=Z,29nm,1.5s							
PB11	IPOC Station P	19.28	10	P		P	23 40 07.5	-0.8
PB11				IAmb		IAmb	23 40 49.7	
	comp=Z,12nm,1.1s							
GO01	Chusmiza	19.44	11	P		P	23 40 08.8	-1.6
QSPA	South Pole Qui	51.36	180	P		P	23 44 48.1	+1.2
QSPA				IAmb		IAmb	23 45 06.3	
	comp=Z,3.2nm,1.2s							

*SJA **03** 23:46:49.9±0.6, 22°.97S×66°.65W, h241km±3km, ML4.3, MW4.3*
*IDC **03** 23:46:50.8±1.4, 22°.95S×66°.54W, h208km±13km, mb3.8/11, mbtmp4.3/19, Error ellipse: s-maj=14.8km s-min=9.8km az=73.0*
*NEIC **03** 23:46:50.3±2.5, 23°.02S±0°.06×66°.55W±0°.08, h208km±6km, mb4.5/68, Mwr4.4(GUC), Error ellipse: s-maj=10.5km s-min=8.9km az=84.0*
*GUC **03** 23:46:52.7±0.7, 22°.97S×66°.74W, h219km±10km, ML4.6*
*VAO **03** 23:46:52.3±0.9, 22°.87S×66°.48W, h226km±6km, mb4.2, Presumed earthquake*
*GFZ **03** 23:46:52.1±0.2, 23°.S±2°.×6°.7W±°, h223km±3km, M4.3/13, mb4.3/13*

ISC 03 23:46:50.8±0.5, 23°.02S±0°.04×66°.69W±0°.04, h221km±5km, n226, σ1°.44/238, mb4.4/37, 16C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.19	99	eP		Pn	23 47 26.1	+1.6
HJA				IAML			23 47 58.1	
	comp=Z,109nm,0.8s							
SALTA		1.24	165	eP		Pn	23 47 26.6	+1.6
SALTA				eS		S	23 47 54.0	+2.5
SALTA				IAML			23 47 54.7	
	comp=Z,481nm,1.2s							
SALTA		1.24	165	P		Pn	23 47 26.9	+2.0
YJA	Yavi	1.37	52	eP		Pn	23 47 27.3	+1.4
YJA				eS		S	23 47 54.5	+1.5
YJA				IAML			23 48 00.8	
	comp=Z,45nm,1.3s							
YJA	Yavi	1.37	52	eP		Pn	23 47 27.3	+1.4
AF01	San Pedro de A	1.38	273			Pn	23 47 28.1	+2.3
AF01						S	23 47 54.9	+2.0
AF01	San Pedro de A	1.38	273	eP		Pn	23 47 27.3	+1.5
AF01				IAML			23 48 02.3	
	comp=Z,1μm,0.8s							
AF01	San Pedro de A	1.38	273	eP		Pn	23 47 28.2	+2.5
AF01				IAML			23 48 09.8	
	comp=E,2μm,0.6s							
SLA	San Lorenzo	2.01	148	eP		Pn	23 47 32.8	+1.6
SLA				eS		S	23 48 04.2	+1.6
SLA				IAML			23 48 08.3	
	comp=Z,46nm,2.5s							
SLA	San Lorenzo	2.01	148	eP		Pn	23 47 33.1	+1.9
PB09	IPOC Station P	2.66	297			Pn	23 47 39.8	+1.8
PB09					Sn	S	23 48 15.3	+0.6
PB09	IPOC Station P	2.66	297	eP		Pn	23 47 39.1	+1.1
PB09				eS		S	23 48 15.2	+0.6
PB09				IAML			23 48 18.9	
	comp=Z,1μm,0.2s							
PB09	IPOC Station P	2.66	297	eP		Pn	23 47 40.0	+2.0
PB09				eS		S	23 48 14.4	-0.2
PB09	IPOC Station P	2.66	297	P		Pn	23 47 40.1	+2.1
PB06	IPOC Station P	2.68	276			Pn	23 47 39.5	+1.2
PB06					Sn	S	23 48 15.1	+0.1
PB06	IPOC Station P	2.68	276	eP		Pn	23 47 39.4	+1.2
PB06				eS		S	23 48 16.1	+1.1
PB06				IAML			23 48 20.1	
	comp=Z,2μm,0.3s							
PB06	IPOC Station P	2.68	276	eP		Pn	23 47 39.6	+1.4
PB06				eS		S	23 48 14.7	-0.3
PB06				IAML			23 48 20.1	
	comp=N,3μm,0.3s							
PB06	IPOC Station P	2.68	276	P		Pn	23 47 39.4	+1.2
PB03	IPOC Station P	3.00	288			Pn	23 47 42.7	+1.0
PB03					Sn	S	23 48 20.3	-1.1
PB03	IPOC Station P	3.00	288	*i* P		Pn	23 47 42.1	+0.4
PB03				eS		S	23 48 21.5	+0.1
PB03				IAML			23 48 26.4	
	comp=Z,2μm,0.2s							
PB03	IPOC Station P	3.00	288	eP		Pn	23 47 42.8	+1.1
PB03				eS		S	23 48 21.1	-0.3
PB03	IPOC Station P	3.00	288	P		Pn	23 47 43.0	+1.2
FSA	Cafayete	3.14	168	eP		Pn	23 47 44.9	+1.5
PB07	IPOC Station P	3.23	293			Pn	23 47 45.0	+0.6
PB07					Sn	S	23 48 24.8	-1.4
PB07	IPOC Station P	3.23	293	eP		Pn	23 47 45.6	+1.1
PB07				eS		S	23 48 26.3	0.0
PB07				IAML			23 48 27.2	
	comp=Z,3μm,0.3s							
PB07	IPOC Station P	3.23	293	eP		Pn	23 47 45.6	+1.1
PB07	IPOC Station P	3.23	293	P		Pn	23 47 45.6	+1.1
PB05	IPOC Station P	3.25	272			Pn	23 47 45.5	+1.0
PB05					Sn	S	23 48 25.2	-1.2
PB05	IPOC Station P	3.25	272	eP		Pn	23 47 45.6	+1.2
PB05				IAML			23 48 29.4	
	comp=Z,945nm,0.2s							
PB05	IPOC Station P	3.25	272	eP		Pn	23 47 45.7	+1.2
PB05				eS		S	23 48 24.6	-1.8
PB05	IPOC Station P	3.25	272	P		Pn	23 47 45.8	+1.2
PB02	IPOC Station P	3.42	299			Pn	23 47 46.9	+0.2
PB02					Sn	S	23 48 28.2	-2.1
PB02	IPOC Station P	3.42	299	eP		Pn	23 47 47.3	+0.7
PB02				eS		S	23 48 29.8	-0.4
PB02				IAML			23 48 32.6	
	comp=Z,4μm,0.3s							
PB02	IPOC Station P	3.42	299	eP		Pn	23 47 47.4	+0.7
PB02	IPOC Station P	3.42	299	P		Pn	23 47 47.5	+0.9
PB10	IPOC Station P	3.59	261			Pn	23 47 49.5	+1.1
PB10					Sn	S	23 48 32.5	-1.1
PB10	IPOC Station P	3.59	261	eP		Pn	23 47 49.6	+1.1
PB10				eS		S	23 48 33.5	-0.1
PB10				IAML			23 48 39.5	
	comp=Z,762nm,0.5s							
PB10	IPOC Station P	3.59	261	eP		Pn	23 47 49.6	+1.1
PB10	IPOC Station P	3.59	261	P		Pn	23 47 49.8	+1.3
PB08	IPOC Station P	3.67	321			Pn	23 47 51.5	+1.6
PB08					Sn	S	23 48 36.3	+0.2
PB08	IPOC Station P	3.67	321	eP		Pn	23 47 50.5	+0.6
PB08				IAML			23 48 39.2	
	comp=Z,868nm,0.5s							
PB08	IPOC Station P	3.67	321	eP		Pn	23 47 51.7	+1.8
PB08				eS		S	23 48 36.6	+0.5
PB08	IPOC Station P	3.67	321	P		Pn	23 47 51.7	+1.8
PB14	IPOC Station P	3.76	244			Pn	23 47 51.7	+0.9
PB14	IPOC Station P	3.76	244	eP		Pn	23 47 51.7	+0.9
PB14				eS		S	23 48 37.6	-0.2
PB14				IAML			23 48 40.6	
	comp=Z,2μm,0.3s							
PB14	IPOC Station P	3.76	244	eP		Pn	23 47 51.8	+1.0
PB14				eS		S	23 48 37.2	-0.6
PB14	IPOC Station P	3.76	244	P		Pn	23 47 51.9	+1.0
AHML	Horco Molle	3.94	162	eP		Pn	23 47 53.4	+0.7
AHML				IAML			23 49 22.7	
	comp=Z,51nm,0.4s							
GO01	Chusmiza	4.07	325			Pn	23 47 55.9	+1.0
GO01					Sn	S	23 48 45.6	+0.6
GO01	Chusmiza	4.07	325	P		Pn	23 47 56.1	+1.3
TA02	Huaiquique	4.21	310	eP		Pn	23 47 56.6	+0.6
TA02				eS		S	23 48 44.6	-2.6
TA02	Huaiquique	4.21	310	P		Pn	23 47 55.7	-0.4
PB11	IPOC Station P	4.26	319			Pn	23 47 56.6	-0.3
PB11					Sn	S	23 48 46.3	-2.4
PB11	IPOC Station P	4.26	319	eP		Pn	23 47 56.7	-0.1
PB11				eS		S	23 48 47.3	-1.4
PB11	IPOC Station P	4.26	319	P		Pn	23 47 56.9	+0.1
AC02	Maricunga	4.40	210			Pn	23 48 00.0	+1.3
AC02	Maricunga	4.40	210	P		Pn	23 48 00.2	+1.5
AC01	Pan de Azucar	4.73	228			Pn	23 48 02.2	-0.2
AC01	Pan de Azucar	4.73	228	eP		Pn	23 48 02.2	-0.2
AC01				eS		S	23 48 56.5	-2.4
AC01	Pan de Azucar	4.73	228	P		Pn	23 48 02.4	0.0
PB12	IPOC Station P	5.55	321			Pn	23 48 11.4	-1.5
PB12	IPOC Station P	5.55	321	P		Pn	23 48 11.3	-1.5
GO03	Copiapo	5.57	214			Pn	23 48 12.4	-0.5
GO03	Copiapo	5.57	214	P		Pn	23 48 12.5	-0.5
AP01	Chacalluta	5.75	323	Pn		Pn	23 48 14.8	-0.6
PB18	Visviri	6.01	334			Pn	23 48 20.2	+1.1
PB18	Visviri	6.01	334	P		Pn	23 48 21.5	+2.4
AC04	Llanos de Chal	6.50	217			Pn	23 48 23.8	-1.0
AC05	El Transito	6.63	208			Pn	23 48 26.0	-0.6
AC05	El Transito	6.63	208	P		Pn	23 48 26.0	-0.6
LPAZ	La Paz	6.84	348	P		Pn	23 48 31.0	+1.2
	comp=Z,9.8nm,0.3s,baz=143,slow=4.4,SNR=81							
LPAZ					S	S	23 49 47.8	-0.7
	comp=Z,22nm,0.9s,baz=81,slow=25,SNR=8.3							
LPAZ	La Paz	6.84	348			Pn	23 48 30.8	+1.0
LPAZ	La Paz	6.84	348	eP		Pn	23 48 30.6	+0.8
LPAZ	La Paz	6.84	348	P		Pn	23 48 31.0	+1.2
LCO	Las Campanas	6.97	210			Pn	23 48 29.9	-1.2
CO01	Juntas del Tor	7.57	203			Pn	23 48 39.5	+0.8
GO04	Tololo Observa	8.02	206	Pn		Pn	23 48 43.5	-1.0
BBSD	Serra de San D	8.14	46	eP		Pn	23 48 44.5	-1.5
MURT	Porto Murtinho	8.51	83	eP		Pn	23 48 48.9	-1.7
CO03	El Pedregal	8.56	204			Pn	23 48 50.6	-0.8
CFA	Coronel Fontan	8.66	189	P		Pn	23 48 51.9	-0.7
	comp=Z,2.4nm,0.3s,baz=334,slow=10,SNR=43							
CFA					S	S	23 50 23.1	-7.2
	comp=Z,15nm,0.6s,baz=254,slow=20,SNR=14							
ZON	Zonda	8.67	191	Pn		Pn	23 48 51.5	-1.3
SIV	San Ignacio	8.77	38	P		Pn	23 48 52.2	-1.9
	comp=Z,21nm,0.6s,baz=214,slow=13,SNR=81							
COIM	Forte Coimbra	8.84	71	eP		Pn	23 48 52.6	-2.4
CO02	Combarbal	9.01	204	Pn		Pn	23 48 56.0	-1.1
CPUP	Villa Florida	9.12	113	P		Pn	23 48 56.4	-2.1
	comp=Z,2.0nm,0.8s,baz=6.1,slow=19,SNR=4.8							
CPUP	Villa Florida	9.12	113	Pn		Pn	23 48 53.5	-5.0
VA03	San Esteban	10.29	199			Pn	23 49 13.7	+0.2
VA03	San Esteban	10.29	199	P		Pn	23 49 12.1	-1.4
PTLB	Pontes e Lacer	10.37	45			Pn	23 49 13.2	-1.4
PTLB	Pontes e Lacer	10.37	45	eP		Pn	23 49 12.3	-2.2
AQDB	Aquidauana	10.52	78			Pn	23 49 12.4	-4.1
MT08	Bocatoma Ro	10.79	195			Pn	23 49 19.4	-0.7
MT16	CCHEN	10.90	197	Pn		Pn	23 49 20.3	-1.0
MT02	Curacav	10.93	200			Pn	23 49 20.1	-1.4
MT09	Talagante	11.36	198			Pn	23 49 26.7	-0.5
BO04	La Punta	11.46	197			Pn	23 49 27.7	-0.6
MT01	Popeta	11.52	199			Pn	23 49 28.0	-1.1
VILB	Vilhena	11.76	33			Pn	23 49 32.0	-0.3
VILB	Vilhena	11.76	33	eP		Pn	23 49 30.7	-1.6
BO01	Tunca	11.97	198			Pn	23 49 33.6	-1.1
PP1B	Ponte de Pedra	12.32	66	eP		Pn	23 49 37.6	-1.6
SALV	Santo Antonio	12.55	58	eP		Pn	23 49 40.9	-1.3
TRCB	Terra Rica	12.95	92	P		P	23 49 48.6	-1.3
TRCB	Terra Rica	12.95	92	eP		P	23 49 47.2	-2.6
TRCB	Terra Rica	12.95	92	P		P	23 49 51.4	+1.6
ML02	Panimavida	13.35	197			Pn	23 49 51.8	-0.1
ML02	Panimavida	13.35	197	P		P	23 49 56.0	+1.9
PTGB	Pitanga	13.48	100	eP		P	23 49 53.9	-1.8
ITAB	Concordia	13.83	111	P		P	23 49 58.3	-1.2
ITAB	Concordia	13.83	111	eP		P	23 49 57.4	-2.1
CPSB	Cacapava Do Su	13.93	125			P	23 49 58.6	-1.9
CPSB	Cacapava Do Su	13.93	125	eP		P	23 49 58.6	-1.9
CPSB	Cacapava Do Su	13.93	125	P		P	23 49 58.8	-1.7
BI02	San Fabin de	14.16	195			P	23 50 02.2	-1.0
BI02	San Fabin de	14.16	195	P		Pn	23 50 01.8	-0.2
NNA	Nana	14.63	317	P		Pn	23 50 08.9	+1.1
	comp=Z,18nm,0.7s,baz=162,slow=12,SNR=9.3							
NNA	Nana	14.63	317			Pn	23 50 06.8	-1.0
TRQA	Tornquist	15.52	166	P		P	23 50 16.7	-1.4
ARAG	Araguaiana, MT	15.80	65	eP		P	23 50 20.0	-1.4
CLDB	Colider	15.94	43	eP		P	23 50 22.5	-0.4
CLDB	Colider	15.94	43	P		Pn	23 50 22.8	-0.8
CZSB	Cruzeiro do Su	16.27	338			P	23 50 24.5	-2.0
CZSB					IAmb	IAmb	23 50 31.6	
	comp=Z,13nm,0.6s							
CZSB	Cruzeiro do Su	16.27	338	eP		P	23 50 26.9	+0.3
BB19B	Bebedouro	16.95	87	eP		P	23 50 32.9	-1.1
GO06	Curarrehue	17.00	193			P	23 50 34.0	-0.5
GO06					IAmb	IAmb	23 50 37.8	
	comp=Z,15nm,0.9s							
GO06	Curarrehue	17.00	193	P		Pn	23 50 36.5	+0.4
SPB	Sao Paulo	17.70	96	P		P	23 50 40.7	-1.3
SPB					IAmb	IAmb	23 50 44.1	
	comp=Z,14nm,0.9s							
LR05	Currie	17.74	193			P	23 50 42.6	+0.3
PET01	Itanhaem-SP	17.83	98	eP		Pn	23 50 43.5	-2.3
PLCA	Paso Flores	17.96	190	P		Pn	23 50 46.5	-0.7
	comp=Z,6.9nm,0.8s,baz=7.9,slow=12,SNR=13							
PLCA	Paso Flores	17.96	190			P	23 50 45.3	+0.5
IPMB	Ipameri, GO	18.01	77	eP		P	23 50 43.9	-1.8
VAO	Valinhos	18.16	94			P	23 50 46.4	-0.7
VAO	Valinhos	18.16	94	eP		P	23 50 46.4	-0.7
SNDB	Serra Nova Dou	18.32	56	eP		P	23 50 48.0	-0.9
LL03	Petrohue	18.69	194	P		P	23 50 52.7	0.0
LL03	Petrohue	18.69	194	P		Pn	23 50 53.9	-1.9
CANS	Sao Roque de M	19.06	86	eP		P	23 50 56.8	-0.2
BDFB	Brasilia	19.08	71	P		P	23 50 56.7	-0.5
	comp=Z,40nm,1.1s,baz=249,slow=10,SNR=27							
BDFB	Brasilia	19.08	71			P	23 50 56.0	-1.2
NPGB	Novo Progresso	19.27	36	eP		P	23 50 57.2	-1.9
ATAH	Atahualpa	19.40	323	P		P	23 51 02.4	+1.4
	comp=Z,3.7nm,0.6s,baz=120,slow=5.5,SNR=4.2							
PMNB	Patos De Minas	19.45	80	eP		P	23 51 00.8	-0.3
PMNB	Patos De Minas	19.45	80	P		P	23 51 01.0	-0.1
LL02	Futaleuf	20.57	191			P	23 51 12.1	-0.7
LL02				IAmb		IAmb	23 51 15.7	
	comp=Z,14nm,1.1s							
LL02	Futaleuf	20.57	191	P		P	23 51 14.0	+1.3
MACA	Manacapuru-AM	20.58	17	P		P	23 51 11.5	-1.7
MACA	Manacapuru-AM	20.58	17	eP		P	23 51 11.2	-1.9
ITTB	Itauba	21.36	31	eP		P	23 51 19.1	-2.1
DIAM	Diamantina, MG	22.03	82	eP		P	23 51 27.2	-0.7
JANB	Januaria	22.56	73	eP		P	23 51 31.5	-1.2
SMTB	Santa Maria do	23.10	56	eP		P	23 51 36.4	-1.0
SDBA	SAO DESIDERIO	23.25	67	eP		P	23 51 37.7	-1.2
PRPB	Parauapebas	23.34	47	eP		P	23 51 39.0	-0.7
ARCA	Araşuai, MG	24.02	80	eP		P	23 51 44.8	-1.1
BOAV	Boa Vista	25.97	14	P		P	23 52 02.1	-1.3
BOAV				IAmb		IAmb	23 52 05.0	
	comp=Z,12nm,1.4s							
GUA01	Guaratinga, BA	26.06	81	eP		P	23 52 03.4	-0.8
RCBR	Riachuelo	34.24	65	P		P	23 53 15.7	-0.5
RCBR				IAmb		IAmb	23 53 49.2	
	comp=Z,17nm,1.1s							
NBPV	Pedro Velho	34.44	66	eP		P	23 53 16.2	-1.6
MTO3	Montecristo	43.31	327	P		P	23 54 32.4	+0.9
MTO3				IAmb		IAmb	23 54 34.3	
	comp=Z,23nm,1.4s							
TEIG	Tepich	47.87	332			P	23 55 07.7	+0.9
TEIG				IAmb		IAmb	23 55 08.2	
	comp=Z,13nm,0.8s							
ZAIG	Zacatecas	57.36	320	P		P	23 56 19.3	+2.7
VNA2	Neumayer--Watz	58.54	161	P		P	23 56 28.0	+4.1
	comp=Z,3.8nm,0.7s							
LRAL	Lakeview Retre	59.02	340	P		P	23 56 26.9	-0.6
LRAL				IAmb		IAmb	23 56 28.5	
	comp=Z,7.2nm,1.2s							
W57A	Gilead	59.22	347	IAmb		IAmb	23 56 30.4	
	comp=Z,8.5nm,0.9s							
KMSC	Kings Mountain	59.49	346	IAmb		IAmb	23 56 32.5	
	comp=Z,11nm,1.0s							
735A	Kenedy	59.66	328	P		P	23 56 31.7	-0.3
BG3	Lake Jocassee	59.72	345	IAmb		IAmb	23 56 34.1	
	comp=Z,9.1nm,0.9s							
X51A	Calhoun	59.82	343	P		P	23 56 32.8	-0.2
V55A	Taylorsville	60.15	346	P		P	23 56 35.7	+0.5
SNAA	Sanae	60.17	161	P		P	23 56 35.6	+0.6
	comp=Z,46nm,1.0s							
SNAA	Sanae	60.17	161	P		P	23 56 36.7	+1.7
	comp=Z,1.3nm,0.7s,baz=271,slow=7.0,SNR=4.1							
	comp=Z,1.3nm,0.7s							
SNAA	Sanae	60.17	161	P		P	23 56 36.7	+1.7
X48A	Hartselle	60.34	341	IAmb		IAmb	23 56 37.8	
	comp=Z,9.9nm,0.7s							
W50A	Signal Mountai	60.54	343	IAmb		IAmb	23 56 39.1	
	comp=Z,9.2nm,0.9s							
HNDO	Hondo	60.94	328	IAmb		IAmb	23 56 42.8	
	comp=Z,7.1nm,0.7s							
V48A	Smith Brothers	61.47	341	IAmb		IAmb	23 56 45.2	
	comp=Z,5.6nm,0.8s							
TROLL	Troll, Antarti	61.89	161	P		P	23 56 48.2	+1.6
	comp=Z,53nm,0.5s							
JCT	Junction City	61.97	328	IAmb		IAmb	23 56 49.5	
	comp=Z,8.9nm,0.8s							
WVT	Waverly	62.14	341	P		P	23 56 48.0	-0.5
WVT				IAmb		IAmb	23 56 49.2	
	comp=Z,10.0nm,0.8s							
WVT	Waverly	62.14	341	P		P	23 56 48.6	+0.1
BRDY

MKAR	Makanchi Array	145.59	39			PKPbc	00 06 04.1	+0.7
HHC	Hu-ho-hao-te	162.16	4	eP		PKPdf	00 06 24.2	-1.9
PZH	PanZhiHua	168.93	69	PKP		PKPdf	00 06 30.4	-1.7
NJ2	Nanjing	169.75	333	eP		PKPdf	00 06 32.3	+0.1
NJ2				pmax		pmax		
	comp=Z,17nm,0.5s							

IDC 04 00:02:49.5±1.4, 6°94S×129°33E, h0km, mb3.7/3, mbtmp3.7/5, ML4.0/2, Error ellipse: s-maj=111.1km s-min=23.6km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.81	160	Pn	Pn	00 06 07.1	+0.4
	0.8nm,0.3s,baz=338,slow=11,SNR=10						
WRA				Sn	Sn	00 08 29.5	-11
	0.6nm,0.3s,baz=344,slow=23,SNR=7.4						
	1.0nm,0.3s						
ASAR	Alice Springs	17.20	166	P	P	00 06 52.8	-0.3
	0.3nm,0.3s,baz=349,slow=14,SNR=18						
ASAR				S	Sn	00 09 52.9	-11
	0.3nm,0.5s,baz=333,slow=15,SNR=4.9						
	0.6nm,0.5s						
STKA	Stephens Creek	27.33	157	P	P	00 08 35.4	-0.8
	1.2nm,0.6s,baz=332,slow=18,SNR=2.1						
	1.2nm,0.6s						
MKAR	Makanchi Array	67.81	327	P	P	00 13 49.9	+0.5
	0.2nm,0.4s,baz=124,slow=7.3,SNR=5.9						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	72.11	329	P	P	00 14 15.3	-0.4
	0.2nm,0.4s,baz=129,slow=4.9,SNR=5.1						
	0.2nm,0.4s						

IDC 04 00:11:58.4±1.5, 33°54N×141°74E, h0km, mb3.7/8, mbtmp3.7/10, ML3.2/2, MS3.0/7, Error ellipse: s-maj=32.5km s-min=18.1km az=69.0

ISC 04 00:12:02.5±1.0, 33°47N±0°08×141°8E±0°1, h35km, n15, σ1°36/14, mb3.7/8, MS3.1/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.73	259	Pn	Pn	00 12 29.7	-0.4
	28nm,0.3s,baz=45,slow=20,SNR=8.1						
JHJ				Sn	Sn	00 12 51.2	+0.3
	44nm,0.3s,baz=72,slow=16,SNR=4.6						
MJAR	Matsushiro Arr	4.25	317	Pn	Pn	00 13 04.1	-0.7
	0.2nm,0.3s,baz=150,slow=13,SNR=5.9						
MJAR				Sn	Sn	00 13 51.8	-1.4
	0.2nm,0.3s,baz=130,slow=14,SNR=2.1						
MJAR				LR	LR	00 14 54.1	
	comp=Z,72nm,20.8s,baz=143,slow=42						
	2.0nm,0.5s						
JCJ	Chichijima	6.37	177	Pn	Pn	00 13 34.1	+0.3
	3.6nm,0.3s,baz=309,slow=18,SNR=1.5						
JCJ				Sn	Sn	00 14 42.5	-2.8
	4.7nm,0.3s,baz=287,slow=19,SNR=2.1						
	12nm,0.4s						
KSRS	Korea Array	11.99	293	LR	LR	00 19 16.9	
	comp=Z,56nm,18.2s,baz=110,slow=37						
KLR	Kul'dur	17.43	338	LR	LR	00 23 08.4	
	comp=Z,26nm,19.1s,baz=156,slow=39						
HILR	Hailar Array B	22.91	321	P	P	00 17 02.5	-0.8
	1.0nm,0.4s,baz=133,slow=10.0,SNR=2.1						
	1.0nm,0.4s						
SONM	Songino Array	30.16	309	P	P	00 18 10.8	+1.5
	1.1nm,0.9s,baz=94,slow=7.6,SNR=6.8						
SONM				LR	LR	00 31 26.6	
	comp=Z,39nm,18.3s,baz=259,slow=39						
	1.1nm,0.9s						
TLY	Talaya	32.99	315	LR	LR	00 33 54.2	
	comp=Z,24nm,18.2s,baz=220,slow=40						
CMAR	Chiang Mai Arr	41.03	260	P	P	00 19 42.1	-0.6
	0.6nm,0.5s,baz=54,slow=8.1,SNR=4.1						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	44.60	315	P	P	00 20 11.1	0.0
	0.3nm,0.4s,baz=92,slow=16,SNR=1.8						
ZALV				LR	LR	00 38 39.8	
	comp=Z,25nm,20.4s,baz=97,slow=36						
	0.3nm,0.4s						
MKAR	Makanchi Array	46.35	305	P	P	00 20 25.2	+0.1
	1.1nm,0.7s,baz=88,slow=10,SNR=13						
	1.1nm,0.7s						
KURBB	Kurchatov Arra	48.50	311	P	P	00 20 41.5	-0.2
	1.7nm,0.8s,baz=85,slow=7.8,SNR=14						
	1.7nm,0.8s						
WRA	Warramunga Arr	53.59	189	P	P	00 21 20.9	+0.7
	0.9nm,0.8s,baz=7.5,slow=7.3,SNR=2.4						
	0.9nm,0.8s						
ASAR	Alice Springs	57.32	189	P	P	00 21 49.4	+2.4
	0.2nm,0.5s,baz=7.3,slow=6.6,SNR=4.3						
	0.2nm,0.5s						
AKTO	Aktyubinsk	61.32	314	LR	LR	00 49 23.2	
	comp=Z,33nm,18.3s,baz=42,slow=37						

IDC 04 00:18:48.6±1.3, 19°32N×155°20W, h0km, mb4.1/14, mbtmp4.0/14, MS3.0/5, Error ellipse: s-maj=41.5km s-min=20.9km az=165.0

NEIC 04 00:18:49.5±0.4, 19°29N±0°02×155°12W±0°01, h10km±1km, mb4.5/53, ML4.5/40, ML4.3/36(HVO), Error ellipse: s-maj=3.5km s-min=2.3km az=334.0

PMR 04 00:18:50.0, 19°34N×155°12W, h7km

HVO 04 00:18:50.1±0.7, 19°34N±0°02×155°123W±0°009, h7km±3km, Error ellipse: s-maj=2.5km s-min=1.1km az=164.0

ISC 04 00:18:49.8±0.6, 19°36N±0°03×155°15W±0°02, h12km±3km, n320, σ1°92/302, mb4.4/39, MS3.1/5, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHH	Kane Nui o Ham	0.03	313		Pg	00 18 52.3	+0.2
STCH	Steam Cracks	0.03	41		Pg	00 18 52.1	0.0
STCH				Sg	Sg	00 18 53.5	-0.2
NPOC	North of Pu'u	0.05	48		Pg	00 18 52.2	0.0
NPOC					Sg	00 18 53.9	0.0
JCUZ	Jacuzzi	0.05	62		Pg	00 18 52.1	-0.1
JCUZ					Sg	00 18 53.7	-0.2
PUH	Pauahi	0.07	282		Pg	00 18 52.7	+0.3
PUH				Sg	Sg	00 18 54.6	+0.3
PUH				IAML		00 18 55.0	
	comp=E,153μm,0.5s						
KAE	Kaena	0.07	168		Pg	00 18 52.1	-0.1
KLCH	Kalalua Cone	0.09	59		Pg	00 18 52.4	-0.2
ESR	Escape Road	0.10	300		Pg	00 18 53.4	+0.6
ESR					Sg	00 18 55.9	+0.9
PWH	Poliokeawe Pal	0.11	224		Pg	00 18 53.2	+0.5
AHA	Ahua	0.11	277		Pg	00 18 53.5	+0.5
AHA					Sg	00 18 55.9	+0.7
AHA	Ahua	0.11	277		Pg	00 18 53.4	+0.5
AHA					Sg	00 18 55.6	+0.4
BYL	Byron's Ledge	0.12	296		Pg	00 18 53.6	+0.6
BYL				IAML		00 18 56.8	
	comp=E,159μm,0.9s						
BYL				IAML		00 18 56.8	
	comp=N,118μm,0.9s						
KKO	Keanakako'i	0.12	288		Pg	00 18 53.5	+0.6
KKO					Sg	00 18 56.2	+0.9
HATHI	Halema'uma'u T	0.12	300		Pg	00 18 53.6	+0.6
HATHI				IAML		00 18 58.6	
	comp=E,103μm,1.0s						
HATHI				IAML		00 18 58.9	
	comp=N,81μm,1.0s						
RIM	Rim	0.12	286		Pg	00 18 53.7	+0.6
RIM					Sg	00 18 56.3	+0.9
OUT	Outlet	0.13	283		Pg	00 18 53.7	+0.6
SBLHI	Steaming Bluff	0.13	300		Pg	00 18 53.7	+0.5
SBLHI					Sg	00 18 56.5	+0.9
KNH	Kipuka Nene	0.14	259		Pg	00 18 53.8	+0.6
UWB	Uwekahuna Bluf	0.14	297		Pg	00 18 53.8	+0.5
UWB					Sg	00 18 56.6	+0.9
OBL	Observatory Le	0.14	294		Pg	00 18 54.0	+0.6
SDHHI	Sand Hill	0.14	282		Pg	00 18 53.9	+0.6
SDHHI					Sg	00 18 56.9	+1.0
UWE	Uwekahuna	0.15	294		Pg	00 18 54.1	+0.6
UWE				IAML		00 19 00.2	
	comp=N,98μm,0.8s						
UWE				IAML		00 19 02.4	
	comp=E,101μm,0.6s						
WRMHI	West Rim	0.15	288		Pg	00 18 54.0	+0.5
WRMHI					Sg	00 18 57.2	+1.1
JOKA	Jonika Flow	0.15	62		Pg	00 18 53.4	-0.1
JOKA				Sg	Sg	00 18 56.0	0.0
JOKA				IAML		00 18 56.6	
	comp=N,111μm,0.8s						
RSD	Rainshed	0.16	310		Pg	00 18 54.3	+0.7
HLP	Hilina Pali	0.16	247		Pg	00 18 54.3	+0.7
HLP				IAML		00 18 58.0	
	comp=N,70μm,0.8s						
CPK	Cone Peak	0.17	281		Pg	00 18 54.3	+0.5
DES	Desert	0.23	264		Pg	00 18 55.0	+0.3
DES				IAML		00 19 00.6	
	comp=N,33μm,0.1s						
DES				IAML		00 19 00.8	
	comp=E,41μm,0.3s						
PKL	Puu Kaliu	0.23	66		Pg	00 18 54.6	-0.1
MLH	Mauna Loa	0.26	301		Pg	00 18 56.1	+0.7
MLH					Sg	00 19 01.1	+2.0
MLH				IAML		00 19 02.5	
	comp=N,42μm,0.2s						
HTC	Hot Caves	0.27	243		Pb	00 18 56.1	-0.5
PLL	Puu Ulaula	0.34	300		Pg	00 18 57.3	+0.4
WOH	Wood Valley	0.35	252		Pg	00 18 57.4	+0.5
PPL	Puu Pili	0.36	236		Pg	00 18 57.5	+0.5
TRH	Trail	0.38	278		Pg	00 18 58.1	+0.5
HMH	Humu'ula Sheep	0.40	307		Pg	00 18 58.5	+0.6
HMH					Sg	00 18 58.8	+2.3
WIH	Wilkes Camp	0.43	285		Pg	00 18 58.8	+0.3
WIH					Sg	00 19 05.2	+1.0
MLOA	Mauna Loa Obse	0.44	293		Pg	00 18 59.0	+0.4
MLOA					Sb	00 19 06.6	+0.1
MLOA				IAML		00 19 07.3	
	comp=N,45μm,0.6s						
MWH	Mokuaweoweo	0.44	286		Pg	00 18 58.9	+0.2
MWH					Sg	00 19 05.8	+1.2
SWH	Southwest Rift	0.44	282		Pg	00 18 58.8	+0.1
KHU	Kahuku	0.46	256		Pg	00 18 59.0	+0.2
KHU					Sb	00 19 06.1	-0.7
RCO	Red Cone	0.46	276		Pg	00 18 58.9	0.0
HPO	Honuapo	0.47	235		Pg	00 18 59.0	-0.1
HPO					Sb	00 19 06.0	-0.9
DAH	Dandelion	0.49	270		Pg	00 18 59.3	-0.2
ALEP	Alea Permanent	0.50	291		Pg	00 18 59.9	+0.2
ALEP					Sb	00 19 08.3	+0.1
HPU	Hale Pohaku	0.51	325		Pg	00 19 00.3	+0.4
POHA	Pohakuloa	0.54	317		Pg	00 19 00.4	0.0
POHA	Pohakuloa	0.54	317		Sg	00 19 08.3	+0.7
KKU	Keanakolu	0.56	341		Pg	00 19 01.4	+0.6
OVEH	Oceanview Est	0.62	251		Pg	00 19 00.7	-1.2
OVEH					Sg	00 19 09.4	-0.7
OVEH				IAML		00 19 15.9	
	comp=N,14μm,0.6s						
OVEH				IAML		00 19 18.4	
	comp=E,25μm,0.9s						
SPT	South Point	0.62	233		Pg	00 19 00.9	-1.0
SPT					Sg	00 19 09.0	-1.1
SPT				IAML		00 19 15.1	
	comp=N,15μm,0.6s						
SPT				IAML		00 19 20.8	
	comp=E,12μm,0.7s						
KUH	Kaapuna	0.69	262		Pg	00 19 02.0	-1.2
CPH	Captain Cook	0.74	280		Pg	00 19 02.9	-1.3
I59US	HAWAII INFRASO	0.74	288	Pn	Pn	00 19 15.0	+8.8
	baz=122,slow=25						
KKH	Kailua Kona	0.87	290		Pb	00 19 04.8	-2.2
KOH	Kohala	0.97	322		Pb	00 19 06.2	-2.4
KOH					Sb	00 19 18.7	-2.8
MHA	Mahukona	1.09	319		Pb	00 19 08.2	-2.4
MHA					Sb	00 19 21.8	-2.9
HLK	Haleakala	1.73	324		Pn	00 19 16.9	-3.1
KHLH	Kahului Airpor	1.94	322		Pn	00 19 20.3	-2.4
KHLH					Sn	00 19 43.2	-3.9
KPA	Kalaupapa	2.51	317		Pn	00 19 27.1	-3.4
HON	Honolulu	3.31	307	Pn	Pn	00 19 38.3	-3.3
KIP	Kipapa	3.38	308		Pn	00 19 39.0	-3.5
KIP				IAML		00 20 21.3	
	comp=E,725nm,0.8s						
KIP				IAML		00 20 21.0	
	comp=E,964nm,0.7s						
KEKH	Kekaha	5.01	302	Pn	Pn	00 20 01.2	-3.6
TAOE	Nuku Hiva Isla	31.70	151	eT	T	00 58 19.5	
	comp=E,80nm,0.2s						
PMOR	Pomariorio Ree	34.88	168	eT	T	01 02 22.0	
	comp=E,135nm,0.2s						
H11N3	WAKE ISLAND Hy	35.71	277	T	T	01 03 04.7	
	baz=84,slow=74,SNR=132						
H11N2	WAKE ISLAND Hy	35.72	277	T	T	01 03 05.4	
	baz=84,slow=74,SNR=142						
H11N1	WAKE ISLAND Hy	35.73	277	T	T	01 03 05.7	
	baz=84,slow=74,SNR=156						
H11S2	WAKE ISLAND Hy	36.05	275	T	T	01 03 28.8	
	baz=83,slow=75,SNR=173						
H11S1	WAKE ISLAND Hy	36.05	275	T	T	01 03 29.2	
	baz=83,slow=75,SNR=334						
H11S3	WAKE ISLAND Hy	36.06	275	T	T	01 03 30.1	
	baz=83,slow=75,SNR=262						
CHIR	Chirikof Islan	36.40	360	P	P	00 25 55.7	+1.7
	baz=179						
PAHR	Pah Rah Range	36.80	49	P	P	00 25 58.8	+0.9
PPT	Papeete	37.10	171	LR	LR	00 39 43.1	
	comp=E,10nm,18.5s,baz=359,slow=34						
PPT2	Papeete2	37.12	171	eLR	LR	00 35 58.8	
	comp=E,79nm,25.8s						
PPT2				eT	T	01 05 08.3	
	comp=E,16nm,0.2s						
TIAR	Tiarei	37.13	171	eT	T	01 05 09.7	
	comp=E,778nm,0.2s						
PAE	Paea	37.20	171	eT	T	01 05 10.5	
	comp=E,18nm,0.3s						
TVO	Taravao	37.36	171	eT	T	01 05 28.1	
	comp=E,29nm,0.3s						
OHAK	Old Harbor	37.83	2	P	P	00 26 07.5	+1.5
	baz=183						
H02S1	DAWSON INLET T	38.06	22	T	T	01 06 18.6	
	SNR=347						
H02S2	DAWSON INLET T	38.06	22	T	T	01 06 18.6	
	SNR=349						
R17L	Mt. Peulik Vol	38.23	359	P	P	00 26 11.4	+2.0
	baz=178						
KDAK	Kodiak Island	38.41	2	P	P	00 26 12.8	+1.8
	baz=184						
Q17K	Contact Creek	38.85	359	P	P	00 26 16.5	+1.6
	baz=179						
Q18K	Katmai Hardscr	39.24	0	P	P	00 26 19.6	+1.6
	baz=180						
Q19K	Cape Douglas,	39.53	1	P	P	00 26 22.4	+2.0
	baz=182						
CRAG	Craig	39.71	20	P	P	00 26 23.6	+1.7
	baz=214						
O15K	Ungalikthiuk R	39.91	356	P	P	00 26 25.4	+1.8
	baz=173						
P18K	Big Mountain,	39.98	360	P	P	00 26 25.9	+1.8
	baz=180						
O14K	Tigyukauivet M	40.09	355	P	P	00 26 26.9	+2.0
	baz=171						
O16K	Kokwok River B	40.24	358	P	P	00 26 28.0	+1.7
	baz=176						
U33K	Whale Pass	40.25	19	P	P	00 26 28.1	+1.7
	baz=213						
P19K	Oil Pt	40.27	2	P	P	00 26 27.8	+1.3
	baz=183						
O17K	Koliganek Bris	40.39	358	P	P	00 26 29.2	+1.7
	baz=177						
O18K	Koktuh Hills	40.45	360	P	P	00 26 29.4	+1.5
	baz=180						
BRSE	Bradley Lake S	40.46	3	P	P	00 26 29.9	+1.8
	baz=186						
Q23K	Middleton Isla	40.52	7	P	P	00 26 30.0	+1.5
	baz=193						
O20K	Slope Mountain	40.72	2	P	P	00 26 31.5	+1.3
	baz=184						
WRAK	Wrangell Islan	40.74	19	P	P	00 26 31.8	+1.4
	baz=214						
N14K	Kuskokwak Cree	40.79	355	P	P	00 26 32.1	+1.4
	baz=170						
SEW	Seward	40.90	4	P	P	00 26 33.2	+1.5
	baz=188						
N15K	Kwethluk River	40.92	356	P	P	00 26 33.8	+1.9
	baz=173						
P23K	Montague Islan	40.97	6	P	P	00 26 33.7	+1.4
	baz=191						
S31K	Pelican	40.98	15	P	P	00 26 33.9	+1.6
	baz=208						
S32K	Killisnoo	40.98	17	P	P	00 26 33.7	+1.3
	baz=210						
N17K	Nushagak Hills	41.15	358	P	P	00 26 35.1	+1.4
	baz=177						
N16K	Nishlik Lake	41.15	357	P	P	00 26 35.2	+1.4
	baz=175						
KAIM	Kayak Island	41.25	8	P	P	00 26 35.8	+1.3
	baz=195						
SLKM	Skilak Lake	41.25	4	P	P	00 26 34.5	-0.2
SLKM				IAmb	IAmb	00 26 38.0	
	comp=Z,7.1nm,1.0s						
O22K	Cooper Landing	41.26	4	P	P	00 26 35.9	+1.2
	baz=188						
N18K	Kilae Creek	41.28	359	P	P	00 26 35.6	+0.7
	baz=179						
N19K	Bonanza Creek	41.41	0	P	P	00 26 36.8	+0.8
	baz=181,SNR=11						
M15K	Kasigluk River	41.48	356	P	P	00 26 36.3	-0.1
	baz=172						
M14K	Bethel	41.63	355	P	P	00 26 36.0	-1.6
M14K	Bethel	41.63	355	P	P	00 26 38.2	+0.6
	baz=170						
M16K	Timber Creek	41.71	357	P	P	00 26 37.8	-0.5
M16K				IAmb	IAmb	00 26 41.5	
	comp=Z,8.1nm,1.1s						
M16K	Timber Creek	41.71	357	P	P	00 26 38.1	-0.3
	baz=175						
RC01	Rabbit Creek A	41.86	4	P	P	00 26 40.4	+0.8
	baz=188						
M17K	Holitna River	42.03	358	P	P	00 26 40.5	-0.5
M17K	Holitna River	42.03	358	P	P	00 26 41.3	+0.3
	baz=177						
M18K	Stony River	42.09	360	P	P	00 26 41.6	+0.2
	baz=179,SNR=8.2						
BMRM	Bremner River	42.23	8	P	P	00 26 42.8	+0.2
	baz=195						
KNK	Knik Glacier	42.27	5	P	P	00 26 42.8	-0.2
	baz=189						
L14K	Kuka Creek	42.27	355	P	P	00 26 42.5	-0.4
	baz=169						
PMR	Palmer	42.40	4	P	P	00 26 42.8	-1.2
	baz=188						
L16K	Owhat River	42.42	357	P	P	00 26 43.9	-0.2
L16K	Owhat River	42.42	357	P	P	00 26 44.2	+0.1
	baz=174,SNR=5.3						
M20K	Styx River	42.51	1	P	P	00 26 45.0	+0.1
	baz=183						
M19K	Big River Lodg	42.51	1	P	P	00 26 45.0	+0.2
	baz=181						
L15K	Ungalak Mounta	42.51	356	P	P	00 26 45.1	+0.2
	baz=171						
O29M	Mount Kennedy	42.58	12	P	P	00 26 45.9	+0.4
	baz=203						
KLU	Klutina	42.59	7	P	P	00 26 46.0	+0.4
	baz=193						
SKT	Skwentna	42.66	3	P	P	00 26 46.2	+0.1
	baz=185						
SML	Sawmill	42.67	5	P	P	00 26 46.2	0.0
	baz=190						
M23K	Glacier View	42.71	5	P	P	00 26 47.4	+0.9
	baz=190						
O28M	Mount Upton	42.71	11	P	P	00 26 46.6	-0.3
	baz=201						
P30M	Million Dollar	42.75	13	P	P	00 26 47.4	+0.5
	baz=206						
L19K	White Mountain	42.78	0	IAmb	IAmb	00 26 49.5	
	comp=Z,6.1nm,0.8s						
L19K	White Mountain	42.78	0	P	P	00 26 47.1	0.0
	baz=180,SNR=7.3						
SCM	Sheep Creek Mo	42.78	5	P	P	00 26 47.3	+0.1
	baz=191						
L17K	Donlin	42.79	358	P	P	00 26 47.4	+0.3
	baz=176						
TBI	Tubuai	42.81	172	eLR	LR	00 38 35.9	
	comp=Z,407nm,29.0s						
TBI				eT	T	01 12 17.9	
	comp=Z,163nm,0.3s						
L18K	Granite Mounta	42.83	359	P	P	00 26 47.4	0.0
	baz=178,SNR=5.0						
MCARA	McCarthy VSAT	42.84	9	P	P	00 26 47.6	0.0
	baz=197						
N25K	Chitina, Valde	42.85	7	P	P	00 26 47.6	-0.1
	baz=195						
Q32M	Nakina River	42.90	17	P	P	00 26 48.0	-0.3
	baz=212						
P32M	Atlin	43.05	16	P	P	00 26 49.1	-0.2
	baz=210						
K13K	Kusilvak Mount	43.05	353	P	P	00 26 48.4	-0.8
	baz=167						
DLBC	Dease Lake	43.12	19	P	P	00 26 50.0	+0.1
	baz=216						
K15K	Wolf Creek Mou	43.12	356	P	P	00 26 50.7	+0.9
	baz=171						
M24K	Tolsona, Glenn	43.16	6	P	P	00 26 50.9	+0.6
	baz=192						
YUK6	Outpost Mounta	43.21	12	P	P	00 26 50.6	-0.2
	baz=203						
L22K	Petersville	43.23	3	IAmb	IAmb	00 26 53.0	
	comp=Z,4.5nm,0.6s						
L22K	Petersville	43.23	3	P	P	00 26 51.4	+0.7
	baz=186,SNR=5.5						
YUK8	Steele Glacier	43.27	11	P	P	00 26 50.8	-0.5
	baz=201						
K17K	Iditarod	43.37	358	P	P	00 26 52.8	+1.0
	baz=176						
WAT6	Susitna Watana	43.49	5	P	P	00 26 53.2	+0.3
	baz=190,SNR=6.4						
O30N	Mendenhall	43.52	13	P	P	00 26 54.1	+1.0
	baz=206						
YUK4	Talbot Arm	43.52	11	P	P	00 26 53.7	+0.4
	baz=203						
PPLA	Purkeypile	43.55	2	P	P	00 26 54.0	+0.5
	baz=184						
HARP	HAARP	43.56	7	P	P	00 26 54.0	+0.6
	baz=194						
YUK3	Moose Creek	43.61	10	P	P	00 26 53.9	-0.1
	baz=200						
R33M	Jennings River	43.63	18	P	P	00 26 54.2	+0.1
	baz=214						
WAT1	Susitna Watana	43.67	4	P	P	00 26 55.1	+0.8
	baz=189						
WHY	Whitehorse	43.70	14	P	P	00 26 54.9	+0.3
	baz=208						
P33M	Teslin, Yukon	43.81	16	P	P	00 26 54.8	-0.7
	baz=211						
M26K	Nabesna, AK	43.82	8	P	P	00 26 55.3	-0.2
	baz=197,SNR=5.1						
N30M	Aishikik Lake	43.93	12	P	P	00 26 55.6	-0.9
	baz=205						
M27K	Edge Creek, AK	43.94	9	P	P	00 26 55.8	-0.8
	baz=198						
K20K	Telida	43.97	1	P	P	00 26 56.8	+0.1
	baz=181						
DHY	Denali Highway	44.01	5	P	P	00 26 56.6	-0.5
	baz=190						
J16K	Anvik River	44.05	356	P	P	00 26 56.9	-0.4
	baz=173						
CAST	Castle Rocks	44.07	2	P	P	00 26 58.0	+0.5
	baz=184						
J17K	VABM Dome	44.08	357	P	P	00 26 57.6	+0.1
	baz=175						
TRF	Thorofare Moun	44.18	3	IAmb	IAmb	00 27 02.2	
	comp=Z,4.3nm,0.7s						
TRF	Thorofare Moun	44.18	3	P	P	00 26 57.9	-0.6
	baz=186						
RND	Reindeer	44.22	4		P	00 27 00.2	+1.5
RND				IAmb	IAmb	00 27 06.8	
	comp=Z,5.9nm,0.8s						
N31M	Braeburn, Yuko	44.23	13	P	P	00 26 58.5	-0.3
	baz=207						
L26K	Log Cabin Wild	44.38	8	P	P	00 26 59.7	-0.3
	baz=196						
CHUM	Lake Minchumin	44.53	2	P	P	00 27 01.0	-0.1
	baz=184						
MCK	McKinley	44.54	4	IAmb	IAmb	00 27 03.9	
	comp=Z,6.8nm,1.0s						
MCK	McKinley	44.54	4	P	P	00 26 60.0	-1.3
	baz=188						
N32M	Quiet Lake	44.56	15	P	P	00 27 01.1	-0.3
	baz=210						
M29M	Somme Creek	44.58	11	P	P	00 27 00.9	-0.8
	baz=203,SNR=6.3						
J19K	Poorman	44.60	360	P	P	00 27 00.9	-0.8
	baz=179,SNR=5.8						
I17K	Unalakleet	44.65	357	P	P	00 27 01.7	-0.4
	baz=172						
J20K	Nowinta River	44.79	1

baz=194
M30M Minto, Yukon 45.01 12 P P 00 27 04.1 -1.0
baz=205
SCRK Sand Creek 45.22 7 P P 00 27 05.7 -1.1
baz=195
L29M L29M 45.25 11 P P 00 27 05.3 -1.6
baz=203
GCSA Galena City Sc 45.37 359 P P 00 27 06.8 -1.0
baz=178
NEA2 Nenana 45.39 4 IAmb IAmb 00 27 10.0
comp=Z,7.4nm,1.2s
NEA2 Nenana 45.39 4 P P 00 27 06.6 -1.4
baz=188,SNR=5.6
I20K Naaghedeneel 45.41 0 P P 00 27 06.9 -1.2
baz=181
H16K Elim 45.50 356 P P 00 27 07.7 -1.1
baz=171
CCB Clear Creek Bu 45.52 4 IAmb IAmb 00 27 11.2
comp=Z,4.7nm,1.0s
H17K Granite Mounta 45.66 357 P P 00 27 09.3 -0.8
baz=174
J25K Salcha River, 45.70 6 IAmb IAmb 00 27 13.0
comp=Z,6.4nm,1.0s
J25K Salcha River, 45.70 6 P P 00 27 10.1 -0.4
baz=193,SNR=9.7
IL31 45.72 5 IAmb IAmb 00 27 12.6
comp=Z,7.4nm,1.2s
ILAR Eielson Array 45.72 5 P P 00 27 11.3 +0.8
comp=Z,2.2nm,0.8s,baz=190,slow=8.0,SNR=23
ILAR PcP **PcP** 00 28 49.2 +1.0
comp=Z,0.7nm,0.8s,baz=201,slow=4.8,SNR=4.2
comp=Z,2.2nm,0.8s
ILAR Eielson Array 45.72 5 P P 00 27 10.6 0.0
MLY Manley 45.74 3 IAmb IAmb 00 27 12.3
comp=Z,3.9nm,0.8s
MLY Manley 45.74 3 P P 00 27 09.7 -1.1
baz=186,SNR=8.5
GAMB Gambell 45.79 350 P P 00 27 10.1 -1.0
baz=158
H18K Honhosa River 45.81 358 P P 00 27 09.8 -1.5
baz=176
I21K Tanana 45.84 2 P P 00 27 10.0 -1.5
baz=184
I23K Minto, Yukon-K 45.92 3 IAmb IAmb 00 27 13.8
comp=Z,2.8nm,0.6s
I23K Minto, Yukon-K 45.92 3 P P 00 27 11.9 -0.2
baz=188
DAWY Dawson 45.93 10 P P 00 27 11.7 -0.6
baz=201
G15K Niukluk 45.99 355 P P 00 27 12.0 -0.7
baz=168
POKR Poker Plat Res 46.02 5 P P 00 27 12.0 -1.0
baz=190
K29M Barlow Dome 46.04 11 P P 00 27 12.9 -0.4
baz=203
H20K Anotleneega Mo 46.11 0 P P 00 27 13.7 +0.1
baz=180,SNR=5.9
H19K Roundabout Mou 46.15 359 P P 00 27 14.2 +0.3
baz=178,SNR=6.0
G17K Kiwalik Mounta 46.26 357 P P 00 27 14.8 0.0
baz=173
MMPY Sheldon Lake, 46.26 15 P P 00 27 15.6 +0.6
baz=212
H21K Melozitna Rive 46.30 1 P P 00 27 15.5 +0.4
baz=183
KOTAN Kotaneelee Air 46.37 21 P P 00 27 15.6 -0.2
baz=222
J29N Klondike Camp 46.48 10 P P 00 27 16.3 -0.3
baz=202
G18K Tagagawik 46.57 358 IAmb IAmb 00 27 20.1
comp=Z,3.1nm,0.9s
G18K Tagagawik 46.57 358 P P 00 27 17.3 +0.1
baz=175
PRP Porcupine Dome 46.57 6 IAmb IAmb 00 27 19.9
comp=Z,6.1nm,1.1s
PRP Porcupine Dome 46.57 6 P P 00 27 18.0 +0.6
baz=192
H22K Ishtalitna Cre 46.58 2 P P 00 27 17.1 -0.2
baz=185
H23K Yukon River 46.59 3 IAmb IAmb 00 27 19.4
comp=Z,6.0nm,1.2s
H23K Yukon River 46.59 3 P P 00 27 17.7 +0.3
baz=187
F14K Arctic Creek 46.68 354 P P 00 27 18.7 +0.6
baz=165
H24K Noodor Dome 46.70 4 IAmb IAmb 00 27 20.4
comp=Z,4.4nm,1.0s
H24K Noodor Dome 46.70 4 P P 00 27 18.7 +0.3
baz=189
G19K Purcell Mounta 46.78 359 P P 00 27 19.1 +0.2
baz=178,SNR=6.2
J30M Hart River 46.92 11 P P 00 27 19.9 -0.3
baz=205
I27K Kandik River 47.08 8 P P 00 27 21.7 +0.4
baz=198
I28M Miner Creek 47.15 9 P P 00 27 22.0 +0.1
baz=200
F17K Baldwin Pennin 47.23 357 P P 00 27 23.4 +1.1
baz=172
F18K Selawik 47.31 358 P P 00 27 23.4 +0.5
baz=174
G23K Bananza Creek 47.45 3 P P 00 27 23.9 -0.3
G23K IAmb IAmb 00 27 26.0
comp=Z,6.8nm,1.4s
G23K Bananza Creek 47.45 3 P P 00 27 24.3 +0.1
baz=186
F19K Shaleruckik Mo 47.48 359 IAmb IAmb 00 27 27.1
comp=Z,4.2nm,0.8s
F19K Shaleruckik Mo 47.48 359 P P 00 27 24.7 +0.3
baz=177,SNR=8.1
I30M Mount Dempster 47.50 11 IAmb IAmb 00 27 27.9
comp=Z,4.4nm,0.9s
I30M Mount Dempster 47.50 11 P P 00 27 24.6 -0.1
baz=204,SNR=5.9
G24K Hadweenzic Riv 47.58 4 IAmb IAmb 00 27 26.8
comp=Z,2.5nm,0.8s
G24K Hadweenzic Riv 47.58 4 P P 00 27 25.4 +0.3
baz=190
G22K Bettles 47.60 2 P P 00 27 25.6 +0.3
baz=185
TXAR Lajitas Array 47.62 68 P P 00 27 28.2 +2.0
comp=Z,1.6nm,0.6s,baz=272,slow=8.6,SNR=33
comp=Z,1.6nm,0.6s
F20K Avaraart Lake 47.67 360 P P 00 27 26.6 +0.8
baz=179
H27K Steamboat Moun 47.69 7 P P 00 27 26.4 +0.4
baz=197,SNR=6.2
G25K Bearman Lake 47.75 5 P P 00 27 27.0 +0.6
baz=192
F21K Alatna River 47.86 1 P P 00 27 28.3 +1.1
baz=182,SNR=8.4
E17K Hotham Inlet 47.90 356 P P 00 27 28.2 +0.7
baz=172
COLD Coldfoot 47.95 3 P P 00 27 28.9 +0.8
baz=186
E19K Redstone River 48.10 359 P P 00 27 29.7 +0.5
baz=177
H29M Whitestone 48.10 9 P P 00 27 29.6 +0.4
baz=201,SNR=5.1
G26K Porcupine Rive 48.13 6 P P 00 27 30.2 +0.9
baz=194,SNR=5.1
F22K John River 48.17 2 P P 00 27 30.5 +0.8
baz=184
E18K Tukpahlearik C 48.17 357 P 00 27 30.8 +1.1
E18K Tukpahlearik C 48.17 357 P P 00 27 30.4 +0.8
baz=173,SNR=6.1
G27K Doyon Strip 48.23 7 P P 00 27 30.8 +0.6
baz=197
F24K Squaw Lake 48.37 4 P P 00 27 32.4 +1.1
baz=189
H31M Peel River 48.40 11 P P 00 27 32.2 +0.7
baz=207
D17K Noatak River 48.59 356 P P 00 27 34.3 +1.5
baz=170
G29M Pine Creek 48.80 9 P P 00 27 35.0 +0.4
baz=202
E22K Anaktuvuk Pass 48.81 2 P P 00 27 34.8 +0.2
baz=184
F26K Sheenjek River 48.83 6 P P 00 27 35.0 +0.2
baz=194
E24K Your Creek 48.88 3 P P 00 27 35.2 0.0
baz=188
E20K Nigu River 48.89 359 P P 00 27 35.4 +0.1
baz=179,SNR=8.0
RDOG Red Dog Mine 48.93 356 P P 00 27 36.0 +0.5
baz=170
E21K Killik River 49.08 1 P P 00 27 37.0 +0.3
baz=181
E25K Arctic Village 49.12 5 P P 00 27 36.9 -0.1
baz=192
D19K Kuna River 49.16 359 P P 00 27 37.4 +0.1
baz=176,SNR=5.2
F28M Old Crow 49.21 8 P P 00 27 37.4 -0.3
baz=199
C16K Lisburne Hills 49.32 355 P P 00 27 38.6 +0.1
baz=167
D20K Etivluk River 49.35 359 P P 00 27 39.6 +0.8
baz=178
C17K DeLong Mountai 49.36 356 P P 00 27 39.4 +0.6
baz=170
TOLK Toolik Lake Re 49.39 3 P P 00 27 39.3 +0.2
baz=187
G31M Satah River 49.41 11 P P 00 27 39.3 +0.1
baz=206
C18K Utukok River 49.42 357 P P 00 27 40.4 +1.0
baz=172
PETK Petropavlovsk- 49.46 324 P P 00 27 41.6 +1.8
comp=Z,2.7nm,0.8s,baz=104,slow=12,SNR=3.1
PETK LR LR 00 45 49.3
comp=Z,20nm,21.0s,baz=124,slow=33
comp=Z,2.7nm,0.8s
E27K Coleen River 49.56 7 P P 00 27 40.3 -0.1
baz=197
D23K Nanushuk River 49.67 2 P P 00 27 41.9 +0.7
baz=186,SNR=5.7
F30M Barrier River 49.79 10 P P 00 27 41.8 -0.3
baz=204
C21K Knifeblade Rid 49.79 0 P P 00 27 42.1 0.0
baz=180,SNR=5.2
C19K Lookout Ridge 49.81 358 P P 00 27 42.5 +0.2
baz=174
D24K Happy Valley 49.94 3 P P 00 27 43.0 -0.2
baz=188
F31M Tsiigehtchic 49.97 11 IAmb IAmb 00 27 45.8
comp=Z,7.1nm,0.9s
F31M Tsiigehtchic 49.97 11 P P 00 27 43.8 +0.3
baz=207
D25K Kavik River 50.25 4 IAmb IAmb 00 27 48.3
comp=Z,6.7nm,1.2s
B21K Ikpikpuk River 50.26 0 P P 00 27 45.4 -0.2
baz=181
C24K Franklin Bluff 50.51 3 P P 00 27 47.9 +0.4
baz=188
C23K Itkillik River 50.55 2 P P 00 27 47.9 +0.1
baz=186
B20K Meade River 50.66 359 P P 00 27 48.8 +0.2
baz=178
C27K Jago River 50.75 5 P P 00 27 49.6 +0.3
baz=194
INK Inuvik 50.78 10 P P 00 27 49.2 -0.4
baz=207
YKA Yellowknife Ar 51.32 23 P P 00 27 54.9 +1.2
comp=Z,1.2nm,0.7s,baz=232,slow=7.6,SNR=6.4
comp=Z,1.2nm,0.7s
YKAW1 Yellowknife Wh 51.36 23 IAmb IAmb 00 27 56.1
comp=Z,3.8nm,0.8s
C36M Paulatuk 53.49 13 P P 00 28 09.1 -0.6
baz=217
ECSD EROS Data Cent 54.25 50 P P 00 28 16.0 +0.3
ECSD IAmb IAmb 00 28 17.2
comp=Z,4.0nm,0.8s
MA2 Magadan 55.56 330 LR LR 00 48 11.2
comp=Z,15nm,21.0s,baz=332,slow=32
ULM Lac du Bonnet 55.78 42 P P 00 28 27.4 +0.7
comp=Z,4.0nm,0.9s,baz=236,slow=7.3,SNR=6.3
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 55.78 42 IAmb IAmb 00 28 27.8
comp=Z,4.0nm,0.8s
EPLO Experimental L 57.05 43 P P 00 28 35.6 -0.1
MJAR Matsushiro Arr 60.21 302 P P 00 28 59.3 +1.3
comp=Z,0.9nm,0.3s,baz=79,slow=6.5,SNR=4.3
comp=Z,0.9nm,0.3s
MJAR Matsushiro Arr 60.21 302 IAmb IAmb 00 29 23.1
comp=Z,4.1nm,1.2s
KLR Kul'dur 64.61 316 LR LR 00 55 13.5
comp=Z,9.4nm,20.7s,baz=142,slow=34
YAK Yakutsk 66.14 330 LR LR 00 56 21.9
comp=Z,18nm,20.5s,baz=60,slow=34
KSRS Korea Array 68.32 303 P P 00 29 52.5 +1.4
comp=Z,0.4nm,0.3s,baz=68,slow=8.0,SNR=2.5
comp=Z,0.4nm,0.3s
HHC Hu-ho-hao-te 80.00 310 *e*P P 00 31 00.6 +1.1
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,81nm,4.3s
ASAR Alice Springs 81.31 241 P P 00 31 07.0 +0.4
comp=Z,0.9nm,0.7s,baz=64,slow=6.3,SNR=5.0
comp=Z,0.9nm,0.7s
SONM Songino Array 81.38 318 P P 00 31 07.7 +1.0
comp=Z,2.0nm,0.8s,baz=79,slow=7.5,SNR=9.4
comp=Z,2.0nm,0.8s
H03N2 Juan Fernandez 89.58 126 T T 02 10 46.5
baz=298,slow=76,SNR=262
H03N3 Juan Fernandez 89.59 126 T T 02 10 47.5
baz=298,slow=76,SNR=203
H03N1 Juan Fernandez 89.59 126 T T 02 10 47.8
baz=298,slow=76,SNR=194
ZALV Zalesovo Beam 90.78 329 P P 00 31 52.4 -0.4
comp=Z,0.3nm,0.3s,baz=58,slow=5.4,SNR=1.2
comp=Z,0.3nm,0.3s
KURBB Kurchatov Arra 95.86 329 P P 00 32 15.9 -0.5
comp=Z,0.3nm,0.7s,baz=60,slow=2.4,SNR=4.9
comp=Z,0.3nm,0.7s
MKAR Makanchi Array 96.30 324 P P 00 32 17.4 -1.1
comp=Z,0.1nm,0.5s,baz=51,slow=3.0,SNR=2.2
comp=Z,0.1nm,0.5s
BVAR Borovoye Array 97.87 334 P Pdif 00 32 26.7 +1.2
comp=Z,0.4nm,0.5s,baz=46,slow=4.2,SNR=2.8
comp=Z,0.4nm,0.5s

*IDC **04** 00:52:41.3±2.4,5°.61S×146°.34E,h95km±20km,mb3.5/5, mbtmp4.0/9,MS2.6/2,Error ellipse: s-maj=31.7km s-min=12.0km az=57.0*

ISC 04 00:52:42.0±1.2,5°.6S±0°.1×146°.3E±0°.2,h100km,n11, σ1s18/11,mb3.7/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.86**	**168**	P		P	**Pn**	**00 53 40.4**	**+1.1**
	15nm,0.3s,baz=333,slow=9.0,SNR=8.7								
PMG				S			**Sn**	**00 54 22.4**	**-1.3**
	92nm,0.4s,baz=288,slow=19,SNR=29								
KRVT	**Keravat (AS076**	**5.82**	**77**	LR		LR		00 56 42.3	
	comp=Z,13nm,21.6s,baz=38,slow=42								
JAY	**Jayapura**	**6.39**	**299**	P		P	**Pn**	**00 54 15.0**	**+1.2**
	8.0nm,0.4s,baz=117,slow=6.8,SNR=9.1								
JAY				S			**Sn**	**00 55 24.7**	**-0.7**
	3.0nm,0.3s,baz=90,slow=20,SNR=1.3								
SIJI	**Sorong**	**15.75**	**287**	P		P	**Pn**	**00 56 18.6**	**+0.3**
	27nm,0.7s,baz=106,slow=18,SNR=4.9								
WRA	**Warramunga Arr**	**18.41**	**218**	P		P		**00 56 47.7**	**-1.8**
	1.4nm,0.8s,baz=40,slow=11,SNR=10								
ASAR	**Alice Springs**	**21.57**	**212**	P		P		**00 57 23.2**	**-0.5**
	0.7nm,0.3s,baz=32,slow=11,SNR=22								
	0.7nm,0.3s								
STKA	**Stephens Creek**	**26.50**	**189**	P		P		**00 58 11.2**	**+1.0**
	1.3nm,0.3s,baz=9.3,slow=12,SNR=6.2								
	1.3nm,0.3s								
TGY	**Tagaytay City**	**31.91**	**308**	LR		LR		01 12 14.0	
	comp=Z,53nm,21.9s,baz=338,slow=37								
CMAR	**Chiang Mai Arr**	**52.48**	**298**	P		P		**01 01 44.4**	**-0.7**
	0.9nm,0.3s,baz=114,slow=7.1,SNR=4.1								
	0.9nm,0.3s								
QSPA	**South Pole Qui**	**84.36**	**180**	P		P		**01 05 03.5**	**+0.6**
	0.7nm,0.8s,baz=6.3,slow=18,SNR=5.5								
	0.7nm,0.8s								
ILAR	**Eielson Array**	**85.39**	**23**	P		P		**01 05 07.0**	**-0.9**
	0.3nm,0.7s,baz=257,slow=5.8,SNR=5.8								
	0.3nm,0.7s								

GUC 04 01:03:04.1±0.6,22°.09S×68°.69W,h126km±5km,ML2.7,3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.59**	**299**	⇑*i*	P		Pn	01 03 23.3	-0.2
PB09				*i*	S		Sn	01 03 37.6	-0.5
PB09					IAML			01 03 39.0	
	comp=N,119nm,0.4s								
PB09	**IPOC Station P**	**0.59**	**299**	*e*	P		Pn	01 03 23.4	-0.1
PB03	**IPOC Station P**	**0.99**	**272**	*e*	P		Pn	01 03 26.4	-0.3
PB06	**IPOC Station P**	**1.02**	**233**	⇑*i*	P		Pn	01 03 26.7	-0.4
PB06				*e*	S		Sn	01 03 43.6	-0.8
PB06					IAML			01 03 45.3	
	comp=N,182nm,0.2s								
PB07	**IPOC Station P**	**1.17**	**288**	⇑*i*	P		Pn	01 03 28.4	-0.1
PB07				*i*	S		Sn	01 03 46.4	-0.6
PB07					IAML			01 03 47.7	
	comp=E,164nm,0.2s								
PB02	**IPOC Station P**	**1.36**	**304**	*e*	P		Pn	01 03 30.2	-0.3
PB02				*i*	S		Sn	01 03 49.5	-0.9
PB02					IAML			01 03 52.4	
	comp=E,168nm,0.3s								
PB02	**IPOC Station P**	**1.36**	**304**	*e*	P		Pn	01 03 30.3	-0.2
PB05	**IPOC Station P**	**1.59**	**241**	*e*	P		Pn	01 03 33.0	-0.1

*GUC **04** 01:03:05.6±0.6,18°.31S×69°.68W,h102km±3km,ML3.1*
*IDC **04** 01:03:09.1±6.8,18°.20S×69°.36W,h147km±42km,mb3.5/3, mbtmp3.8/4,Error ellipse: s-maj=79.5km s-min=61.5km az=2.0*

ISC 04 01:03:04.7±0.9,18°.32S±0°.05×69°.79W±0°.08,h117km±7km, n19,σ1s04/19,1C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.27**	**93**	⇑*i*	P		Pn	**01 03 21.4**	**-0.5**
PB16				*e*	S		Sn	**01 03 33.1**	**-1.6**
AP01	**Chacalluta**	**0.53**	**265**	*i*	P		Pn	**01 03 23.3**	**+0.7**
AP01				*e*	S		Sn	**01 03 36.0**	**+0.2**
PB12	**IPOC Station P**	**0.59**	**240**	*i*	P		Pn	**01 03 23.3**	**+0.3**
PB12				*e*	S		Sn	**01 03 37.2**	**+0.4**
PB12					IAML			01 03 37.8	
	comp=N,640nm,0.1s								
PB18	**Visviri**	**0.79**	**22**	*e*	P		Pn	**01 03 26.1**	**+1.1**
PB11	**IPOC Station P**	**1.44**	**175**	*e*	P		Pn	**01 03 31.9**	**+0.5**
PB11				*e*	S		Sn	**01 03 51.9**	**+0.2**
PB11					IAML			01 03 52.5	
	comp=N,531nm,0.1s								
GO01	**Chusmiza**	**1.45**	**157**	*e*	P		Pn	**01 03 32.6**	**+0.7**
GO01				*e*	S		Sn	**01 03 53.7**	**+1.2**
GO01					IAML			01 04 00.1	
	comp=E,389nm,0.2s								
PB08	**IPOC Station P**	**1.91**	**162**	*e*	P		Pn	**01 03 38.0**	**+0.8**
PB08	**IPOC Station P**	**1.91**	**162**	*e*	P		Pn	**01 03 38.2**	**+1.0**
PB08					IAML			01 04 05.2	
	comp=N,154nm,0.3s								
TA02	**Huaiquique**	**1.96**	**189**	*e*	P		Pn	**01 03 37.6**	**+0.1**
LPAZ	**La Paz**	**2.57**	**38**	P		P	Pn	**01 03 47.3**	**+1.4**
	comp=N,15nm,0.4s,baz=218,slow=10.0,SNR=119								
LPAZ				S			**Sn**	**01 04 17.5**	**+0.1**
	comp=N,5.3nm,0.6s,baz=180,slow=20,SNR=6.6								
H03N1	**Juan Fernandez**	**17.13**	**207**	T		T		01 24 43.8	
	baz=29,slow=73,SNR=2.8								
H03N2	**Juan Fernandez**	**17.14**	**207**	T		T		01 24 38.9	
	baz=29,slow=73,SNR=3.4								
H03N3	**Juan Fernandez**	**17.15**	**207**	T		T		01 24 17.3	
	baz=29,slow=73,SNR=2.7								
TORD	**Torodi Ar. Bea**	**77.10**	**71**	P		P		**01 14 45.1**	**-0.8**
	comp=N,0.4nm,0.4s,baz=246,slow=6.6,SNR=2.9								
	comp=N,0.4nm,0.4s								
ESDC	**Sonseca Array**	**84.17**	**45**	P		P		**01 15 21.3**	**-1.8**
	comp=N,0.9nm,1.0s,baz=247,slow=5.9,SNR=3.1								
	comp=N,0.9nm,1.0s								
YKA	**Yellowknife Ar**	**87.93**	**341**	P		P		**01 15 42.2**	**+1.3**
	comp=N,0.6nm,0.6s,baz=139,slow=4.6,SNR=2.8								
	comp=N,0.6nm,0.6s								
H11S2	**WAKE ISLAND Hyl**	**26.59**	**280**	T		T		03 41 18.4	
	baz=100,SNR=2.9								
H11S1	**WAKE ISLAND Hyl**	**26.60**	**280**	T		T		03 41 18.9	
	baz=100								
H11S3	**WAKE ISLAND Hyl**	**26.61**	**280**	T		T		03 41 19.3	
	baz=100								

*IDC **04** 01:07:24.0±0.8,9°.70S×154°.66E,h0km,mb4.1/14, mbtmp4.1/14,Error ellipse: s-maj=33.3km s-min=17.0km az=103.0*
*NEIC **04** 01:07:26.5±2.1,9°.8S±0°.1×154°.72E±0°.09,h10km±1km, mb4.4/11,Error ellipse: s-maj=26.1km s-min=7.1km az=146.0*

ISC 04 01:07:25.7±0.7,9°.7S±0°.1×154°.7E±0°.2,h10km,n36, σ1s15/37,mb4.3/21,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WR8	**Warramunga Arr**	**22.02**	**240**	P		P		**01 12 20.6**	**+0.1**
WR8					IAmb		IAmb	01 12 34.8	
	comp=Z,14nm,1.1s								
WB0	**Warramunga Arr**	**22.04**	**241**	P		P		**01 12 20.1**	**-0.6**
WB0					IAmb		IAmb	01 12 32.1	
	comp=Z,28nm,1.4s								
WRA	**Warramunga Arr**	**22.15**	**240**	P		P		**01 12 20.3**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=63,slow=9.7,SNR=6.2								
	comp=Z,2.4nm,0.8s								
INKA	**Innaminka**	**22.25**	**214**	P		P		**01 12 23.3**	**+0.4**
INKA					IAmb		IAmb	01 12 32.9	
	comp=Z,27nm,1.4s								
AS31	**Alice Springs**	**24.25**	**233**	P		P		**01 12 44.3**	**+1.2**
ASAR	**Alice Springs**	**24.25**	**233**	P		P		**01 12 42.8**	**-0.4**
	comp=Z,5.1nm,0.8s,baz=56,slow=9.3,SNR=36								
	comp=Z,5.1nm,0.8s								
ASAR	**Alice Springs**	**24.25**	**233**	P		P		**01 12 42.1**	**-1.1**
STKA	**Stephens Creek**	**25.19**	**207**	P		P		**01 12 51.3**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=24,slow=12,SNR=5.6								
	comp=Z,5.0nm,0.9s								
KNRA	**Kununurra**	**26.00**	**254**	P		P		**01 13 00.6**	**+1.5**
FITZ	**Fitzroy Crossi**	**29.41**	**250**	P		P		**01 13 29.9**	**+0.3**
FITZ					IAmb		IAmb	01 14 03.3	
	comp=Z,2.7nm,1.2s								
MJAR	**Matsushiro Arr**	**48.56**	**342**	P		P		**01 16 07.5**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=170,slow=8.6,SNR=4.7								
	comp=Z,0.5nm,0.3s								
KSRS	**Korea Array**	**53.22**	**333**	P		P		**01 16 44.1**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=161,slow=7.7,SNR=2.1								
	comp=Z,0.8nm,0.7s								
PETK	**Petropavlovsk-**	**62.63**	**2**	P		P		**01 17 49.2**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=198,slow=9.1,SNR=3.6								
	comp=Z,2.3nm,0.8s								
PETK	**Petropavlovsk-**	**62.63**	**2**	P		P		**01 17 52.2**	**+2.1**
SONM	**Songino Array**	**71.48**	**328**	P		P		**01 18 47.8**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=134,slow=6.2,SNR=12								
	comp=Z,3.1nm,0.9s								
SONM	**Songino Array**	**71.48**	**328**	P		P		**01 18 48.3**	**+1.6**
SONM					IAmb		IAmb	01 18 56.0	
	comp=Z,4.6nm,1.1s								
QSPA	**South Pole Qui**	**80.28**	**180**	P		P		**01 19 36.9**	**+0.1**
	comp=Z,7.1nm,1.0s,baz=359,slow=1.8,SNR=30								
	comp=Z,7.1nm,1.0s								
QSPA	**South Pole Qui**	**80.28**	**180**	P		P		**01 19 36.9**	**+0.1**
MAW	**Mawson**	**81.80**	**203**	P		P		**01 19 44.4**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=98,slow=7.1,SNR=5.1								
	comp=Z,2.2nm,0.8s								
MAW	**Mawson**	**81.80**	**203**	P		P		**01 19 44.8**	**+0.2**
CAST	**Castle Rocks**	**83.34**	**21**	P		P		**01 19 53.3**	**+0.6**
CAST					IAmb		IAmb	01 20 01.5	
	comp=Z,1.8nm,0.8s								
MKAR	**Makanchi Array**	**85.26**	**319**	P		P		**01 20 02.9**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=102,slow=6.1,SNR=10								
	comp=Z,1.7nm,0.9s								
MKAR	**Makanchi Array**	**85.26**	**319**	P		P		**01 20 03.4**	**+0.5**
MAKZ	**Makanchi**	**85.47**	**319**	P		P		**01 20 05.2**	**+1.3**
MAKZ					IAmb		IAmb	01 20 07.0	
	comp=Z,5.1nm,1.1s								
ILAR	**Eielson Array**	**85.98**	**21**	P		P		**01 20 05.4**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=259,slow=5.6,SNR=6.1								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**85.98**	**21**	P		P		**01 20 05.9**	**-0.1**
ZALV	**Zalesovo Beam**	**86.28**	**326**	P		P		**01 20 05.8**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=116,slow=6.6,SNR=5.3								
	comp=Z,0.8nm,0.6s								
ZALV	**Zalesovo Beam**	**86.28**	**326**	P		P		**01 20 05.6**	**-2.1**
KURBB	**Kurchatov Arra**	**88.82**	**322**	P		P		**01 20 19.8**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=108,slow=4.1,SNR=1.7								
	comp=Z,0.1nm,0.4s								
NVAR	**Mina Array Bea**	**93.60**	**52**	P		P		**01 20 43.1**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=276,slow=6.1,SNR=5.5								
	comp=Z,1.3nm,0.9s								
NVAR	**Mina Array Bea**	**93.60**	**52**	P		P		**01 20 42.9**	**+0.1**
BVAR	**Borovoye Array**	**94.29**	**323**	P		P		**01 20 42.6**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=100,slow=5.0,SNR=2.3								
AKASG	**Malin Array Be**	**119.57**	**323**	PKP			**PKPdf**	**01 26 16.5**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=72,slow=1.4,SNR=2.0								
GERES	**GERESS Array B**	**129.21**	**328**	PKP			**PKPdf**	**01 26 35.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=27,slow=0.4,SNR=3.6								
ESDC	**Sonseca Array**	**144.63**	**331**	PKP			**PKPab**	**01 27 02.6**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=35,slow=2.1,SNR=6.3								
TORD	**Torodi Ar. Bea**	**153.36**	**280**	PKP			**PKPdf**	**01 27 16.4**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=101,slow=3.2,SNR=0.9								
TORD				PKPbc			**PKPbc**	**01 27 24.0**	**-1.4**

comp=Z,0.9nm,0.9s,baz=101,slow=0.8,SNR=1.8

*IDC **04** 01:09:17.6±0.8,9.°62S×154.°58E,h0km,mb4.2/17, mbtmp4.1/17,MS4.1/13,Error ellipse: s-maj=31.4km s-min=16.5km az=102.0*

*NEIC **04** 01:09:20.7±2.2,9.°6S±0.°1×154.°6E±0.°2,h10km±1km, mb4.6/15,Error ellipse: s-maj=30.5km s-min=19.1km az=81.0*

*GCMT **04** 01:09:21.7±0.2,9.°75S±0.°01×154.°78E±0.°02,h12km, MW5.1/127,Moment Tensor Solution. s76,c103; s127,c207; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-4.96±.09; Mθθ4.88±.09; Mϕϕ0.07±.09; Mrθ0.72±.26; Mθϕ0.24±.08; Mϕr-0.61±.31; Best double couple: M₀5.01400×10¹⁶ NP1:ϕs80.00000°,δ41.00000°, λ-101.00000°. NP2:ϕs274.00000°,δ49.00000°, λ-81.00000°. Principal axes: T 4.9400, Plg4.0000°, Azm358.0000°; N 0.1440, Plg7.0000°, Azm88.0000°; P -5.0880, Plg82.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:09:19.3±0.6,9.°61S±0.°09×154.°7E±0.°1,h10km,n54, σ1ᵍ35/41,mb4.3/23,MS4.1/13,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.75**	**139**	Pn	**P**	**01 13 19.5**	**+2.9**
	1.1nm,0.3s,baz=303,slow=17,SNR=8.2						
ARMA	**Armidale**	**20.91**	**187**	P	**P**	**01 14 02.7**	**+0.5**
WR8	**Warramunga Arr**	**22.06**	**240**	P	**P**	**01 14 14.4**	**-0.2**
WB0	**Warramunga Arr**	**22.07**	**240**	P	**P**	**01 14 14.4**	**-0.3**
WB0				IAmb	IAmb	01 14 54.7	
	comp=Z,18nm,1.2s						
WRA	**Warramunga Arr**	**22.19**	**240**	P	**P**	**01 14 13.7**	**-2.3**
	comp=Z,2.2nm,0.8s,baz=64,slow=11,SNR=6.0						
WRA				LR	LR	01 22 15.7	
	comp=Z,855nm,21.7s,baz=72,slow=35						
	comp=Z,2.2nm,0.8s						
INKA	**Innaminka**	**22.33**	**214**	P	**P**	**01 14 17.9**	**+0.6**
INKA				IAmb	IAmb	01 14 28.3	
	comp=Z,18nm,1.0s						
AS31	**Alice Springs**	**24.30**	**232**	P	**P**	**01 14 35.9**	**-1.4**
ASAR	**Alice Springs**	**24.30**	**232**	P	**P**	**01 14 36.1**	**-1.2**
	comp=Z,6.8nm,0.8s,baz=58,slow=9.3,SNR=20						
	comp=Z,6.8nm,0.8s						
ASAR	**Alice Springs**	**24.30**	**232**	P	**P**	**01 14 37.0**	**-0.2**
GUMO	**Guam**	**25.03**	**337**	LR	LR	01 23 15.7	
	comp=Z,336nm,22.0s,baz=132,slow=34						
GUMO	**Guam**	**25.03**	**337**	P	**P**	**01 14 43.5**	**-0.4**
STKA	**Stephens Creek**	**25.28**	**207**	P	**P**	**01 14 45.6**	**-0.4**
	comp=Z,7.3nm,0.8s,baz=29,slow=14,SNR=6.4						
	comp=Z,7.3nm,0.8s						
KNRA	**Kununurra**	**26.01**	**254**	P	**P**	**01 14 53.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**29.42**	**250**	LR	LR	01 26 26.8	
	comp=Z,450nm,20.6s,baz=72,slow=35						
BATI	**Baumata**	**30.58**	**266**	LR	LR	01 29 30.2	
	comp=Z,534nm,18.0s,baz=124,slow=40						
RAO	**Raoul Island**	**32.23**	**131**	LR	LR	01 26 19.9	
	comp=Z,620nm,21.4s,baz=262,slow=32						
AFI	**Afiamalu**	**33.07**	**101**	LR	LR	01 26 51.0	
	comp=Z,148nm,20.5s,baz=309,slow=32						
DAV	**Davao City (W)**	**33.42**	**299**	LR	LR	01 29 24.9	
	comp=Z,136nm,19.3s,baz=144,slow=36						
URZ	**Urewera**	**34.91**	**148**	LR	LR	01 29 30.6	
	comp=Z,843nm,18.1s,baz=330,slow=35						
KAPI	**Kappang**	**34.96**	**275**	LR	LR	01 32 03.9	
	comp=Z,160nm,20.2s,baz=112,slow=39						
RPZ	**Rata Peaks**	**36.84**	**160**	LR	LR	01 30 50.2	
	comp=Z,285nm,18.8s,baz=274,slow=35						
TGY	**Tagaytay City**	**40.96**	**305**	LR	LR	01 33 43.9	
	comp=Z,131nm,20.1s,baz=44,slow=36						
NWAO	**Narrogin (SRO)**	**41.59**	**230**	LR	LR	01 33 58.4	
	comp=Z,413nm,20.0s,baz=110,slow=36						
MJAR	**Matsushiro Arr**	**48.46**	**342**	P	**P**	**01 18 00.1**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=166,slow=8.4,SNR=1.9						
MJAR				LR	LR	01 37 59.0	
	comp=Z,82nm,18.5s,baz=140,slow=36						
	comp=Z,0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**48.46**	**342**	P	**P**	**01 18 02.5**	**+0.4**
MJAR				IAmb	IAmb	01 18 13.7	
	comp=Z,7.7nm,1.4s						
JTM	**Tenmabayashi**	**51.70**	**347**	P	**P**	**01 18 27.2**	**+0.6**
KSRS	**Korea Array**	**53.12**	**333**	P	**P**	**01 18 38.1**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=153,slow=11,SNR=4.9						
	comp=Z,0.7nm,0.3s						
PPT2	**Papeete2**	**54.57**	**105**	*eS*	**S**	**01 26 24.7**	**-3.6**
	comp=Z,105nm,31.5s						
PPT2				*eLR*	LR	01 34 27.9	
	comp=Z,415nm,35.5s						
PPT2				eLR	LR	01 34 35.3	
	comp=Z,226nm,35.0s						
TBI	**Tubuai**	**54.94**	**112**	eLR	LR	01 34 45.0	
	comp=Z,2μm,31.0s						
USRK	**Ussuriysk Ar.**	**57.38**	**341**	P	**P**	**01 19 06.6**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=129,slow=11,SNR=1.9						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.68**	**297**	P	**P**	**01 19 36.5**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=114,slow=7.1,SNR=1.4						
	comp=Z,0.9nm,0.3s						
PETK	**Petropavlovsk-**	**62.52**	**2**	P	**P**	**01 19 42.7**	**-0.4**
	comp=Z,4.9nm,1.0s,baz=179,slow=6.0,SNR=4.2						
	comp=Z,4.9nm,1.0s						
PETK	**Petropavlovsk-**	**62.52**	**2**	P	**P**	**01 19 44.8**	**+1.7**
SONM	**Songino Array**	**71.38**	**328**	P	**P**	**01 20 41.0**	**+1.3**
	comp=Z,4.5nm,1.0s,baz=131,slow=5.5,SNR=11						
	comp=Z,4.5nm,1.0s						
SONM	**Songino Array**	**71.38**	**328**		**P**	**01 20 41.7**	**+1.9**
SONM				IAmb	IAmb	01 20 44.3	
	comp=Z,3.7nm,1.0s						
QSPA	**South Pole Qui**	**80.38**	**180**	P	**P**	**01 21 30.4**	**-0.5**
	comp=Z,3.7nm,0.7s,baz=33,slow=3.0,SNR=16						
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**80.38**	**180**	P	**P**	**01 21 30.4**	**-0.5**
MAW	**Mawson**	**81.89**	**203**	P	**P**	**01 21 38.0**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=88,slow=11,SNR=3.6						
	comp=Z,2.0nm,0.8s						
CAST	**Castle Rocks**	**83.24**	**21**	P	**P**	**01 21 45.5**	**-0.4**
CAST				IAmb	IAmb	01 21 55.6	
	comp=Z,2.2nm,0.6s						
E19K	**Redstone River**	**84.19**	**17**	P	**P**	**01 21 53.0**	**+2.5**
E19K				IAmb	IAmb	01 21 54.3	
	comp=Z,6.0nm,1.1s						
MCK	**McKinley**	**84.57**	**22**	IAmb	IAmb	01 22 01.1	
	comp=Z,4.8nm,0.9s						
MKAR	**Makanchi Array**	**85.17**	**319**	P	**P**	**01 21 54.9**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=102,slow=6.1,SNR=7.9						
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**85.17**	**319**	P	**P**	**01 21 56.3**	**+0.3**
MAKZ	**Makanchi**	**85.38**	**319**		**P**	**01 21 58.5**	**+1.5**
MAKZ				IAmb	IAmb	01 22 13.6	
	comp=Z,4.9nm,1.1s						
ILAR	**Eielson Array**	**85.89**	**21**	P	**P**	**01 21 59.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=255,slow=4.6,SNR=7.0						
	comp=Z,0.9nm,0.9s						
ILAR	**Eielson Array**	**85.89**	**21**	P	**P**	**01 21 58.4**	**-0.7**
ZALV	**Zalesovo Beam**	**86.18**	**326**	P	**P**	**01 21 59.1**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=98,slow=5.0,SNR=4.0						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**86.18**	**326**	P	**P**	**01 22 00.2**	**-0.5**
KURBB	**Kurchatov Arra**	**88.73**	**322**	P	**P**	**01 22 12.8**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=110,slow=3.7,SNR=4.2						
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**93.55**	**52**	P	**P**	**01 22 36.0**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=259,slow=5.5,SNR=4.0						
	comp=Z,1.0nm,0.9s						
BVAR	**Borovoye Array**	**94.20**	**323**	P	**P**	**01 22 37.2**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=96,slow=4.3,SNR=2.2						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**129.11**	**328**	PKP	**PKPdf**	**01 28 28.7**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=27,slow=0.4,SNR=5.0						
ESDC	**Sonseca Array**	**144.53**	**331**	PKP	PKPbc	01 28 56.7	+1.6
	comp=Z,0.9nm,1.0s,baz=39,slow=3.2,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.32**	**280**	PKP	**PKPdf**	**01 29 12.0**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=64,slow=2.9,SNR=1.1						
TORD				PKPbc	**PKiKP**	**01 29 20.2**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=75,slow=1.9,SNR=2.7						

*IDC **04** 01:13:08.0±1.4,35.°44N×22.°68E,h0km,mb3.4/8, mbtmp3.3/10,ML2.9/2,Error ellipse: s-maj=28.2km s-min=23.0km az=170.0*

*ATH **04** 01:13:10.0,34.°93N×22.°27E,h35km±16km,ML3.4/7, Latitude uncertainty: 5 km; Longitude uncertainty: 4 km*

*THE **04** 01:13:12.5,35.°N±3.°×2.°3E±.°,h69km±9km,M3.5/52, mb4.0/5,MLh3.0/52*

ISC 04 01:13:11.6±1.4,35.°19N±0.°05×22.°49E±0.°04,h32km±10km, n90,σ1ᵍ14/119,mb3.4/7,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.93**	**87**	P	**Pn**	**01 13 29.4**	**+1.0**
ANKY	**Antikythira Is**	**0.94**	**44**	P	**Pn**	**01 13 29.1**	**+0.5**
ANKY				S	**Sn**	**01 13 43.0**	**+1.9**
KTHA	**Kythira Island**	**1.16**	**23**	P	**Pb**	**01 13 32.8**	**-0.3**
IMMV	**Iera Moni Meta**	**1.25**	**77**	P	**Pb**	**01 13 33.9**	**-0.6**
IMMV				S	**Sb**	**01 13 51.7**	**+1.5**
IMMV	**Iera Moni Meta**	**1.25**	**77**	P	**Pb**	**01 13 34.3**	**-0.2**
IMMV				S	**Sb**	**01 13 51.9**	**+1.7**
CHAN	**Chania**	**1.31**	**75**	P	**Pb**	**01 13 35.1**	**-0.5**
GVD	**Gavdhos**	**1.35**	**105**	P	**Pn**	**01 13 34.7**	**+0.4**
GVD				S	**Sb**	**01 13 53.0**	**-0.4**
GVD	**Gavdhos**	**1.35**	**105**	P	**Pn**	**01 13 34.9**	**+0.6**
GVD				S	**Sb**	**01 13 52.6**	**-0.7**
VAM	**Vamos**	**1.41**	**81**	P	**Pb**	**01 13 36.6**	**-0.7**
VAM				S	**Sb**	**01 13 54.2**	**-0.8**
VAM	**Vamos**	**1.41**	**81**	P	**Pn**	**01 13 36.8**	**-0.6**
VAM				S	**Sb**	**01 13 56.6**	**+1.6**
VLI	**Veliai**	**1.57**	**13**	P	**Pb**	**01 13 39.0**	**-0.9**
VLI				S	**Sb**	**01 13 58.3**	**-1.1**
VLI	**Veliai**	**1.57**	**13**	P	**Pb**	**01 13 40.1**	**+0.1**
VLI				S	**Sb**	**01 14 02.9**	**+3.5**
PYL	**PYLOS**	**1.81**	**341**	P	**Pn**	**01 13 40.3**	**-0.3**
PYL				S	**Sn**	**01 14 03.3**	**+0.9**
PYL	**PYLOS**	**1.81**	**341**	P	**Pn**	**01 13 41.3**	**+0.8**
SIVA	**Sivas**	**1.91**	**95**	P	**Pn**	**01 13 42.6**	**+0.7**
SIVA				S	**Sn**	**01 14 05.4**	**+0.6**
IDI	**Anoyia**	**1.96**	**86**	P	**Pn**	**01 13 43.7**	**+1.0**
IDI	**Anoyia**	**1.96**	**86**	P	**Pn**	**01 13 43.9**	**+1.2**
ITM	**Ithomi**	**2.04**	**347**	P	**Pn**	**01 13 44.9**	**+1.2**
ITM	**Ithomi**	**2.04**	**347**	P	**Pn**	**01 13 45.0**	**+1.2**
MHLO	**Agia Marina, M**	**2.15**	**45**	S	**Sn**	**01 14 11.0**	**+0.1**
MHLO	**Agia Marina, M**	**2.15**	**45**	P	**Pb**	**01 13 48.1**	**-1.8**
AMT	**Artemida-Makis**	**2.42**	**345**	P	**Pn**	**01 13 50.2**	**+1.2**
NPS	**Neapolis**	**2.55**	**87**	P	**Pn**	**01 13 51.6**	**+0.8**
NPS				S	**Sn**	**01 14 20.6**	**-0.2**
THR5	**Thira Island,**	**2.62**	**61**	P	**Pn**	**01 13 52.0**	**+0.3**
SAP3	**Santorini-Thir**	**2.63**	**61**	P	**Pn**	**01 13 52.3**	**+0.5**
SAP3				S	**Sn**	**01 14 23.4**	**+0.7**
THR6	**Thira Island,**	**2.63**	**63**	P	**Pn**	**01 13 52.3**	**+0.5**
SNT5	**Nea Kammeni, S**	**2.65**	**62**	P	**Pn**	**01 13 53.5**	**+1.4**
SNT5				S	**Sn**	**01 14 24.2**	**+1.0**
THR3	**Thira Island,**	**2.66**	**62**	P	**Pn**	**01 13 52.6**	**+0.4**
THERA	**Ancient Thera,**	**2.69**	**63**	P	**Pn**	**01 13 53.1**	**+0.3**
THERA				S	**Sn**	**01 14 24.2**	**0.0**
THR8	**Santorini-Mono**	**2.71**	**63**	P	**Pn**	**01 13 53.3**	**+0.3**
GUR	**Goura**	**2.74**	**357**	P	**Pn**	**01 13 54.6**	**+1.1**
DRO	**Drossia**	**2.83**	**347**	P	**Pn**	**01 13 56.0**	**+1.4**
LTHK	**Lithakia**	**2.85**	**333**	P	**Pn**	**01 13 54.8**	**0.0**
LTHK				S	**Sn**	**01 14 27.9**	**-0.1**
LTK	**Loutraki**	**2.85**	**8**	P	**Pn**	**01 13 56.1**	**+1.2**
VLY	**Voula,Athens**	**2.86**	**21**	P	**Pn**	**01 13 55.4**	**+0.4**
KLV	**Kalivaryta, Ach**	**2.86**	**355**	P	**Pn**	**01 13 57.0**	**+1.9**
ATHU	**Athens Univers**	**2.96**	**20**	P	**Pn**	**01 13 57.1**	**+0.7**
RLS	**Riolos of Patr**	**2.98**	**344**	P	**Pn**	**01 13 58.3**	**+1.6**
RLS				S	**Sn**	**01 14 32.6**	**+1.3**
ORTH	**Orthonies,Zaky**	**3.02**	**332**	P	**Pn**	**01 13 56.9**	**-0.4**
ORTH				S	**Sn**	**01 14 31.6**	**-0.8**
VILL	**Villia**	**3.04**	**12**	P	**Pn**	**01 13 58.0**	**+0.4**
VILL				S	**Sn**	**01 14 33.6**	**+0.7**
PTL	**Penteli**	**3.06**	**21**	P	**Pn**	**01 13 58.3**	**+0.5**
DION	**Dionisos Attik**	**3.11**	**21**	P	**Pn**	**01 13 59.2**	**+0.8**
DION				S	**Sn**	**01 14 34.8**	**+0.3**
AXS	**Araxos**	**3.13**	**344**	P	**Pn**	**01 14 00.4**	**+1.6**
AXS				S	**Sn**	**01 14 37.1**	**+2.0**
RTZL	**Ratzakli, Kefa**	**3.20**	**335**	P	**Pn**	**01 13 59.8**	**+0.2**
RTZL				S	**Sn**	**01 14 37.0**	**+0.4**
KALE	**Kalithea**	**3.21**	**355**	P	**Pn**	**01 14 00.7**	**+0.8**
SERG	**Sergoula**	**3.24**	**354**	P	**Pn**	**01 14 01.2**	**+0.9**
SERG				S	**Sn**	**01 14 38.7**	**+1.0**
KARY	**Karystos**	**3.24**	**28**	P	**Pn**	**01 14 00.9**	**+0.7**
KARY				S	**Sn**	**01 14 37.5**	**-0.2**
EFP	**Efpalio**	**3.27**	**352**	P	**Pn**	**01 14 02.0**	**+1.5**
PLEV	**Plevrona-Mesol**	**3.33**	**345**	P	**Pn**	**01 14 03.2**	**+1.7**
PLEV				S	**Sn**	**01 14 40.3**	**+0.3**
VLS	**Valsamata**	**3.35**	**333**	P	**Pn**	**01 14 01.4**	**-0.3**
VLS				S	**Sn**	**01 14 39.7**	**-0.7**
ANX	**Ano Chora**	**3.43**	**352**	P	**Pn**	**01 14 04.9**	**+2.0**
LKR	**Lokris**	**3.48**	**7**	P	**Pn**	**01 14 04.2**	**+0.7**
DMLN	**Damoulianata-K**	**3.49**	**331**	P	**Pn**	**01 14 03.3**	**-0.4**
DMLN				S	**Sn**	**01 14 42.9**	**-1.0**
PVO	**Paravola**	**3.51**	**348**	P	**Pn**	**01 14 05.9**	**+2.0**
PVO				S	**Sn**	**01 14 45.5**	**+1.2**
ATAL	**Atalanti**	**3.52**	**7**	P	**Pn**	**01 14 04.7**	**+0.6**
ATAL				S	**Sn**	**01 14 43.9**	**-0.8**
AXAR	**Agios Charalam**	**3.57**	**2**	P	**Pn**	**01 14 05.2**	**+0.3**
KYMI	**Kymi, Euboea I**	**3.67**	**20**	P	**Pn**	**01 14 06.5**	**+0.3**
EVGI	**Lefkada island**	**3.73**	**337**	P	**Pn**	**01 14 07.7**	**+0.7**
EVR	**Evrytania**	**3.76**	**352**	P	**Pn**	**01 14 09.8**	**+2.3**
NYDR	**Nydri-Lefkada**	**3.80**	**338**	P	**Pn**	**01 14 08.2**	**+0.3**
DRAG	**Dragano-Lefkad**	**3.81**	**337**	P	**Pn**	**01 14 08.1**	**0.0**
AGG	**Agios Georgios**	**3.83**	**358**	P	**Pn**	**01 14 09.4**	**+1.0**
AMPL	**Ampelaki**	**3.86**	**345**	P	**Pn**	**01 14 10.0**	**+1.2**
LKD2	**Lefkada island**	**3.88**	**338**	P	**Pn**	**01 14 09.6**	**+0.5**
TSLK	**Tsoukalades, L**	**3.92**	**338**	P	**Pn**	**01 14 10.2**	**+0.7**
AOS	**Alonnisos**	**4.12**	**15**	P	**Pn**	**01 14 12.6**	**+0.2**
TETR	**Tetrakomo, Epi**	**4.26**	**347**	P	**Pn**	**01 14 15.5**	**+1.2**
CHOS	**Chios island**	**4.28**	**41**	P	**Pn**	**01 14 15.5**	**+0.9**
THL	**Klokotos Trika**	**4.38**	**355**	P	**Pn**	**01 14 16.4**	**+0.5**
PRMD	**Pramanda**	**4.47**	**346**	P	**Pn**	**01 14 18.3**	**+1.1**
TYRN	**Tyrnavos**	**4.52**	**357**	P	**Pn**	**01 14 18.1**	**+0.4**
JAN	**Janina**	**4.65**	**344**	P	**Pn**	**01 14 20.1**	**+0.5**
IGT	**Igoumenitsa**	**4.66**	**339**	P	**Pn**	**01 14 19.3**	**-0.5**
PAIG	**Paliouri**	**4.82**	**11**	P	**Pn**	**01 14 22.2**	**+0.3**
SRN	**Sarande**	**5.08**	**338**	P	**Pn**	**01 14 25.3**	**-0.2**
PENT	**Pentalofos**	**5.11**	**348**	P	**Pn**	**01 14 27.2**	**+1.2**
KZN	**Kozani**	**5.14**	**354**	P	**Pn**	**01 14 27.0**	**+0.5**
	12nm,0.5s						
LIA	**Limnos Island**	**5.16**	**24**	P	**Pn**	**01 14 27.0**	**+0.3**
	15nm,1.0s						
OUR	**Ouranopolis**	**5.27**	**12**	P	**Pn**	**01 14 28.4**	**+0.3**
NEST	**Nestorio**	**5.34**	**348**	P	**Pn**	**01 14 30.5**	**+1.3**
MMAI	**Mount Meron Ar**	**10.92**	**98**	Pn	**Pn**	**01 15 43.4**	**-2.4**
	0.3nm,0.3s,baz=283,slow=11,SNR=7.0						
MMAI				Sn	Sn	01 17 37.5	-9.4
	0.6nm,0.3s,baz=289,slow=27,SNR=1.9						
	0.1nm,0.3s						
GERES	**GERESS Array B**	**15.11**	**337**	Pn	**Pn**	**01 16 40.1**	**-2.7**
	baz=150,slow=12,SNR=1.8						
	0.3nm,0.7s						
ESDC	**Sonseca Array**	**21.45**	**290**	P	**P**	**01 18 00.2**	**+2.9**
	0.4nm,0.8s,baz=90,slow=8.3,SNR=4.2						
	0.4nm,0.8s						
HFS	**Hagfors**	**25.61**	**350**	P	**P**	**01 18 37.1**	**-0.6**
	0.5nm,0.4s,baz=163,slow=10,SNR=7.3						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**26.37**	**4**	P	**P**	**01 18 42.7**	**-1.9**
	1.9nm,0.8s,baz=189,slow=9.1,SNR=2.2						
	1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**28.89**	**226**	P	**P**	**01 19 10.4**	**+2.8**
	0.2nm,0.6s,baz=34,slow=9.4,SNR=1.2						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**34.44**	**2**	P	**P**	**01 19 53.6**	**-2.3**
	0.2nm,0.4s,baz=185,slow=8.8,SNR=1.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**42.80**	**51**	P	**P**	**01 21 04.9**	**-1.3**
	0.2nm,0.5s,baz=272,slow=8.6,SNR=4.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**45.58**	**56**	P	**P**	**01 21 28.3**	**-0.2**
	0.1nm,0.4s,baz=274,slow=7.8,SNR=1.9						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**46.56**	**46**	P	**P**	**01 21 35.7**	**-0.4**
	0.3nm,0.4s,baz=272,slow=6.8,SNR=1.8						
	0.3nm,0.4s						

*IDC **04** 01:15:29.0±1.5,9.°75S×154.°85E,h0km,mb3.7/7, mbtmp3.7/7,Error ellipse: s-maj=50.6km s-min=26.9km az=98.0*

ISC 04 01:15:32.4±1.5,9.°8S±0.°2×154.°6E±0.°4,h10km,n8,σ2ᵍ59/8, mb3.8/7,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.00**	**240**	P	**P**	**01 20 26.7**	**-0.4**
	0.6nm,0.7s,baz=64,slow=9.3,SNR=2.0						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**24.11**	**232**	P	**P**	**01 20 48.7**	**+0.1**
	1.2nm,0.7s,baz=59,slow=9.0,SNR=9.4						
	1.2nm,0.7s						
STKA	**Stephens Creek**	**25.08**	**207**	P	**P**	**01 20 57.8**	**+0.5**
	1.1nm,0.5s,baz=37,slow=20,SNR=1.6						
	1.1nm,0.5s						
SONM	**Songino Array**	**71.44**	**328**	P	**P**	**01 26 52.6**	**-0.6**
	0.5nm,0.5s,baz=131,slow=7.7,SNR=3.6						
	0.5nm,0.5s						
QSPA	**South Pole Qui**	**80.23**	**180**	P	**P**	**01 27 41.4**	**-1.8**
	1.2nm,0.7s,baz=14,slow=0.7,SNR=8.9						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**85.21**	**319**	P	**P**	**01 28 09.4**	**+0.1**
	0.3nm,0.8s,baz=102,slow=6.1,SNR=2.0						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**86.24**	**326**	P	**P**	**01 28 12.5**	**-1.7**
	0.3nm,0.3s,baz=97,slow=5.8,SNR=2.0						
	0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**153.22**	**280**	PKPbc	**PKPdf**	**01 35 29.5**	**+5.2**
	0.4nm,0.5s,baz=113,slow=1.4,SNR=3.1						

*IDC **04** 01:17:22.0±0.7,9.°63S×154.°78E,h0km,mb4.1/18, mbtmp4.1/18,MS3.7/1,Error ellipse: s-maj=28.0km s-min=15.9km az=97.0*

*NEIC **04** 01:17:24.5±1.2,9.°7S±0.°1×154.°7E±0.°1,h10km±1km, mb4.7/20,Error ellipse: s-maj=24.7km s-min=20.9km az=66.0*

*GCMT **04** 01:17:27.5±0.3,9.°79S±0.°02×154.°73E±0.°03,h12km, MW5.0/101,Moment Tensor Solution. s52,c60; s101,c145; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.39±.10; Mθθ3.11±.09; Mϕϕ0.27±.10; Mrθ0.53±.32; Mθϕ0.13±.10; Mϕr0.91±.40; Best double couple: M₀3.40300×10¹⁶ NP1:ϕs99.00000°,δ41.00000°, λ-71.00000°. NP2:ϕs254.00000°,δ51.00000°, λ-106.00000°. Principal axes: T 3.1670, Plg5.0000°, Azm356.0000°; N 0.4710, Plg13.0000°, Azm265.0000°; P -3.6390, Plg76.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:17:23.7±0.5,9.°62S±0.°10×154.°7E±0.°1,h10km,n49, σ0ᵍ97/43,mb4.3/25,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.75**	**139**	Pn	**P**	**01 21 21.1**	**+0.2**
	0.1nm,0.3s,baz=302,slow=19,SNR=1.5						
WR8	**Warramunga Arr**	**22.04**	**240**	P	**P**	**01 22 16.6**	**-2.2**
WB0	**Warramunga Arr**	**22.05**	**241**	P	**P**	**01 22 17.5**	**-1.4**
WB0				IAmb	IAmb	01 22 34.8	
	comp=Z,25nm,1.2s						
WRA	**Warramunga Arr**	**22.17**	**240**	P	**P**	**01 22 21.0**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=65,slow=9.4,SNR=11						
	comp=Z,4.1nm,0.9s						
AS31	**Alice Springs**	**24.28**	**232**		**P**	**01 22 40.6**	**-0.9**
ASAR	**Alice Springs**	**24.28**	**232**	P	**P**	**01 22 41.6**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=57,slow=9.0,SNR=32						
	comp=Z,3.5nm,0.7s						
ASAR	**Alice Springs**	**24.28**	**232**	P	**P**	**01 22 40.5**	**-1.0**
GUMO	**Guam**	**25.04**	**337**	LR	LR	01 33 00.3	
	comp=Z,158nm,19.1s,baz=140,slow=37						
STKA	**Stephens Creek**	**25.26**	**207**	P	**P**	**01 22 49.5**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=25,slow=14,SNR=7.3						
	comp=Z,5.7nm,0.8s						
KNRA	**Kununurra**	**26.00**	**254**	P	**P**	**01 22 55.6**	**-1.4**
FITZ	**Fitzroy Crossi**	**29.41**	**250**	P	**P**	**01 23 28.3**	**+0.7**
FORT	**Forrest**	**32.52**	**226**	P	**P**	**01 23 54.7**	**-0.2**
FORT				IAmb	IAmb	01 24 31.0	
	comp=Z,14nm,1.4s						
MJAR	**Matsushiro Arr**	**48.47**	**342**	P	**P**	**01 26 05.6**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=160,slow=9.6,SNR=2.7						
	comp=Z,1.8nm,0.7s						
KSRS	**Korea

*NEIC **04** 01:29:20.7±2.1, 15°.66N±0°.03×96°.21W±0°.06, h10km±1km, mb4.5/225, Md4.9/129(MEX), Error ellipse: s-maj=10.9km s-min=3.3km az=244.0*

ISC 04 01:29:19.8±1.1, **15°.57N**±0°.04×**96°.25W**±0°.03, **h11**km±6km, **n271**,σ2°.04/291, **mb4.4**/77, **MS3.2**/3, **1D**, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
HUIG	**Huatulco**	**0.24**	**34**				**Pg**	**01 29 24.9**	**+0.1**
HUIG							**Sg**	**01 29 28.5**	**+0.3**
HUIG	**Huatulco**	**0.24**	**34**	⇓	*i*	P	**Pg**	**01 29 24.9**	**+0.1**
	baz=212,slow=16								
HUIG				*i*		S	**Sg**	**01 29 28.5**	**+0.3**
PEIG	**Puerto Escondi**	**0.96**	**296**				**Pb**	**01 29 36.4**	**-2.2**
PEIG							**Sb**	**01 29 50.0**	**-1.4**
PEIG	**Puerto Escondi**	**0.96**	**296**	*e*		P	**Pb**	**01 29 36.4**	**-2.2**
PEIG				*i*		S	**Sb**	**01 29 50.0**	**-1.4**
OXLC	**Oaxaca**	**1.55**	**344**				**Pn**	**01 29 46.5**	**-1.1**
OXLC							**Sn**	**01 30 06.4**	**-1.5**
OXLC	**Oaxaca**	**1.55**	**344**	*i*		P	**Pn**	**01 29 46.5**	**-1.1**
OXLC				*i*		S	**Sn**	**01 30 06.4**	**-1.5**
OXBJ	**Oaxaca**	**1.56**	**343**				**Pn**	**01 29 46.8**	**-1.0**
OXBJ							**Sn**	**01 30 07.0**	**-1.1**
OXBJ	**Oaxaca**	**1.56**	**343**	*i*		P	**Pn**	**01 29 46.8**	**-1.0**
OXBJ				*i*		S	**Sn**	**01 30 07.0**	**-1.1**
OXIG	**Oaxaca**	**1.57**	**343**				**Pn**	**01 29 47.2**	**-0.7**
OXIG							**Sn**	**01 30 06.7**	**-1.6**
VHO	**Vista Hermosa**	**1.57**	**343**	*i*		P	**Pn**	**01 29 47.2**	**-0.7**
VHO						eS	**Sn**	**01 30 06.7**	**-1.5**
YOIG	**Yosondua**	**1.79**	**316**				**Pn**	**01 29 50.8**	**-0.2**
YOIG							**Sn**	**01 30 13.0**	**-0.8**
YOIG	**Yosondua**	**1.79**	**316**	*e*		P	**Pn**	**01 29 50.8**	**-0.2**
YOIG						eS	**Sn**	**01 30 13.0**	**-0.8**
CMIG	**Matias Romero**	**2.00**	**41**	Pn			**Pn**	**01 29 51.6**	**-2.1**
	35nm,0.3s,baz=224,slow=10,SNR=294								
CMIG				Lg			Lg	01 30 21.5	
	262nm,0.3s,baz=270,slow=17,SNR=6.3								
CMIG	**Matias Romero**	**2.00**	**41**				**Pn**	**01 29 51.6**	**-2.1**
CMIG							**Sb**	**01 30 21.9**	**+0.6**
CMIG	**Matias Romero**	**2.00**	**41**	*e*		P	**Pn**	**01 29 51.6**	**-2.1**
CMIG						eS	**Sb**	**01 30 21.9**	**+0.6**
NEUV	**Arroyo Zacate**	**2.18**	**11**				**Pn**	**01 29 55.8**	**-0.2**
NEUV							**Sn**	**01 30 24.3**	**+1.2**
NEUV	**Arroyo Zacate**	**2.18**	**11**	*e*		P	**Pn**	**01 29 55.8**	**-0.2**
NEUV						eS	**Sn**	**01 30 24.3**	**+1.2**
TXIG	**Tlaxiaco**	**2.22**	**319**				**Pn**	**01 29 57.1**	**+0.2**
TXIG							**Sn**	**01 30 26.7**	**+2.2**
TXIG	**Tlaxiaco**	**2.22**	**319**	*e*		P	**Pn**	**01 29 57.1**	**+0.2**
TXIG						eS	**Sn**	**01 30 26.7**	**+2.2**
CARR	**Arriaga**	**2.35**	**73**	*i*		P	**Pn**	**01 29 55.2**	**-3.2**
CARR				*i*		S	**Sn**	**01 30 20.9**	**-6.3**
TOIG	**Toxpalan**	**2.63**	**343**				**Pn**	**01 30 04.9**	**+2.4**
TOIG							**Sn**	**01 30 35.3**	**+0.9**
TOIG	**Toxpalan**	**2.63**	**343**	*e*		P	**Pn**	**01 30 04.9**	**+2.4**
TOIG						eS	**Sn**	**01 30 35.3**	**+0.9**
HLIG	**Huajuapan de L**	**2.70**	**327**				**Pn**	**01 30 04.2**	**+0.8**
HLIG							**Sb**	**01 30 41.9**	**+0.4**
HLIG	**Huajuapan de L**	**2.70**	**327**	*e*		P	**Pn**	**01 30 04.2**	**+0.8**
HLIG						eS	**Sb**	**01 30 41.9**	**+0.4**
MGIG	**Malinaltepec**	**2.82**	**306**				**Pn**	**01 30 06.9**	**+1.8**
MGIG							**Sn**	**01 30 40.5**	**+1.2**
MGIG	**Malinaltepec**	**2.82**	**306**	*e*		P	**Pn**	**01 30 06.9**	**+1.8**
MGIG						eS	**Sn**	**01 30 40.5**	**+1.2**
FTIG	**Fresnillo de T**	**2.94**	**323**				**Pn**	**01 30 07.6**	**+0.8**
FTIG							**Sn**	**01 30 43.0**	**+0.8**
FTIG	**Fresnillo de T**	**2.94**	**323**	*e*		P	**Pn**	**01 30 07.6**	**+0.8**
FTIG						eS	**Sn**	**01 30 43.0**	**+0.8**
TLIG	**Tlapa**	**2.98**	**312**				**Pn**	**01 30 08.1**	**+0.9**
CRIG	**Cruz Grande**	**3.00**	**293**				**Pn**	**01 30 06.4**	**-1.0**
CRIG							**Sn**	**01 30 43.5**	**+0.1**
CRIG	**Cruz Grande**	**3.00**	**293**	*e*		P	**Pn**	**01 30 06.4**	**-1.0**
CRIG						eS	**Sn**	**01 30 43.5**	**+0.1**
TPIG	**Tehuac#an**	**3.03**	**340**				**Pn**	**01 30 10.8**	**+2.8**
TPIG							**Sn**	**01 30 46.2**	**+1.9**
TPIG	**Tehuac#an**	**3.03**	**340**	*e*		P	**Pn**	**01 30 10.8**	**+2.8**
TPIG						eS	**Sn**	**01 30 46.2**	**+1.9**
HMTT	**Tlapaneco**	**3.13**	**315**				**Pn**	**01 30 11.6**	**+2.3**
HMTT							**Sn**	**01 30 47.6**	**+0.8**
HMTT	**Tlapaneco**	**3.13**	**315**	*e*		P	**Pn**	**01 30 11.6**	**+2.3**
HMTT						eS	**Sn**	**01 30 47.6**	**+0.8**
TGIG		**3.24**	**68**				**Pn**	**01 30 09.7**	**-1.0**
TGIG							**Sn**	**01 30 49.6**	**+0.2**
TGIG		**3.24**	**68**	*e*		P	**Pn**	**01 30 09.7**	**-1.0**
TGIG						eS	**Sn**	**01 30 49.6**	**+0.2**
DAIG	**Los Arroyos**	**3.57**	**294**				**Pn**	**01 30 14.8**	**-0.5**
DAIG							**Sn**	**01 30 55.5**	**-2.0**
DAIG	**Los Arroyos**	**3.57**	**294**	*e*		P	**Pn**	**01 30 14.8**	**-0.5**
DAIG						eS	**Sn**	**01 30 55.5**	**-2.0**
JAUV	**Jalcomulco**	**3.81**	**352**				**Pn**	**01 30 19.5**	**+0.9**
JAUV							**Sn**	**01 31 04.7**	**+1.1**
JAUV	**Jalcomulco**	**3.81**	**352**	*e*		P	**Pn**	**01 30 19.5**	**+0.9**
JAUV						eS	**Sn**	**01 31 04.7**	**+1.1**
THIG		**3.90**	**99**				**Pn**	**01 30 23.2**	**+3.5**
THIG							**Sn**	**01 31 03.3**	**-2.4**
THIG		**3.90**	**99**	*e*		P	**Pn**	**01 30 23.2**	**+3.5**
THIG						eS	**Sn**	**01 31 03.3**	**-2.4**
PPAX	**Atlixo**	**3.93**	**328**	*e*		P	Pn	01 30 25.8	+5.5
PPAX						eS	**Sn**	**01 31 04.9**	**-1.7**
MEIG	**Mezcala**	**3.99**	**306**				**Pn**	**01 30 25.2**	**+4.2**
MEIG							**Sn**	**01 31 07.7**	**-0.2**
MEIG	**Mezcala**	**3.99**	**306**	*e*		P	**Pn**	**01 30 25.2**	**+4.2**
MEIG						eS	**Sn**	**01 31 07.7**	**-0.2**
PBCV	**Popocatepetl**	**4.05**	**327**	*e*		P	**Pn**	**01 30 25.8**	**+3.7**
PBCV						eS	**Sn**	**01 31 13.8**	**+4.0**
PPCU	**Popocatapetl**	**4.10**	**327**	*e*		P	Pn	01 30 28.0	+5.0
PPCU						eS	**Sn**	**01 31 09.9**	**-1.3**
PPSX	**Xalitzintla**	**4.11**	**329**	*e*		P	**Pn**	**01 30 25.8**	**+2.9**
PPSX						eS	**Sn**	**01 31 12.1**	**+0.8**
PBXN	**Popocatepetl**	**4.12**	**326**	*e*		P	**Pn**	**01 30 26.7**	**+3.4**
PBXN						eS	**Sn**	**01 31 11.8**	**0.0**
CAIG	**El Cayaco**	**4.13**	**291**				**Pn**	**01 30 24.1**	**+1.2**
CAIG							**Sn**	**01 31 12.3**	**+1.1**
CAIG	**El Cayaco**	**4.13**	**291**	*e*		P	**Pn**	**01 30 24.1**	**+1.2**
CAIG						eS	**Sn**	**01 31 12.3**	**+1.1**
PBPN	**Popocatepetl**	**4.13**	**327**	*e*		P	**Pn**	**01 30 27.1**	**+3.6**
PBPN						eS	**Sn**	**01 31 14.4**	**+2.3**
LVIG	**Laguna Verde**	**4.14**	**358**				**Pn**	**01 30 23.8**	**+0.8**
LVIG							**Sn**	**01 31 13.1**	**+1.6**
LVIG	**Laguna Verde**	**4.14**	**358**	*e*		P	**Pn**	**01 30 23.8**	**+0.8**
LVIG						eS	**Sn**	**01 31 13.1**	**+1.6**
PLIG	**Platanillo**	**4.19**	**313**				**Pn**	**01 30 25.7**	**+1.8**
PLIG							**Sn**	**01 31 11.3**	**-1.7**
PLIG	**Platanillo**	**4.19**	**313**	*e*		P	**Pn**	**01 30 25.7**	**+1.8**
PLIG						eS	**Sn**	**01 31 11.3**	**-1.7**
YAIG	**Yautepec**	**4.24**	**321**				**Pn**	**01 30 25.0**	**+0.4**
YAIG							**Sn**	**01 31 11.7**	**-2.6**
YAIG	**Yautepec**	**4.24**	**321**	*e*		P	**Pn**	**01 30 25.0**	**+0.4**
YAIG						eS	**Sn**	**01 31 11.7**	**-2.6**
AMVM	**AMECAMECA**	**4.29**	**326**				Pn	01 30 31.3	+5.8
AMVM							**Sb**	**01 31 23.5**	**-4.0**
AMVM	**AMECAMECA**	**4.29**	**326**	*e*		P	Pn	01 30 31.3	+5.8
AMVM						eS	**Sb**	**01 31 23.5**	**-4.0**
MPVM	**San Francisco**	**4.47**	**324**				**Pn**	**01 30 31.2**	**+3.3**
MPVM							**Sn**	**01 31 19.9**	**-0.2**
MPVM	**San Francisco**	**4.47**	**324**	*e*		P	**Pn**	**01 30 31.2**	**+3.3**
MPVM						eS	**Sn**	**01 31 19.9**	**-0.2**
RTAL	**Retalhuleu**	**4.52**	**103**	Pn			**Pn**	**01 30 27.0**	**-1.3**
RTAL	**Retalhuleu**	**4.52**	**103**	*e*		P	**Pn**	**01 30 26.4**	**-2.0**
RTAL						eS	**Sn**	**01 31 17.1**	**-3.9**
THVM	**De Xico**	**4.54**	**325**				**Pn**	**01 30 31.9**	**+3.0**
THVM							**Sn**	**01 31 22.5**	**+0.7**
THVM	**De Xico**	**4.54**	**325**	*e*		P	**Pn**	**01 30 31.9**	**+3.0**
THVM						eS	**Sn**	**01 31 22.5**	**+0.7**
TLVM	**San Miguel Top**	**4.56**	**323**				**Pn**	**01 30 32.1**	**+2.9**
TLVM							**Sn**	**01 31 23.5**	**+1.1**
TLVM	**San Miguel Top**	**4.56**	**323**	*e*		P	**Pn**	**01 30 32.1**	**+2.9**
TLVM						eS	**Sn**	**01 31 23.5**	**+1.1**
XCVM	**Xochimilco**	**4.57**	**324**				**Pn**	**01 30 32.2**	**+2.9**
XCVM							**Sn**	**01 31 24.0**	**+1.4**
XCVM	**Xochimilco**	**4.57**	**324**	*e*		P	**Pn**	**01 30 32.2**	**+2.9**
XCVM						eS	**Sn**	**01 31 24.0**	**+1.4**
MAVM	**Malinalco, Edo**	**4.58**	**318**				Pb	01 30 36.9	-3.5
MAVM							**Sn**	**01 31 23.7**	**+1.0**
MAVM	**Malinalco, Edo**	**4.58**	**318**	*e*		P	Pb	01 30 36.9	-3.5
MAVM						eS	**Sn**	**01 31 23.7**	**+1.0**
HUEH	**Huehuetenango**	**4.59**	**92**				**Pn**	**01 30 30.2**	**+0.8**
HUEH							**Sn**	**01 31 20.3**	**-2.5**
HUEH	**Huehuetenango**	**4.59**	**92**	*e*		P	**Pn**	**01 30 29.2**	**-0.2**
HUEH						eS	**Sn**	**01 31 20.3**	**-2.5**
MZVM		**4.59**	**322**				**Pn**	**01 30 33.4**	**+4.2**
MZVM							**Sn**	**01 31 24.1**	**+1.5**
MZVM		**4.59**	**322**	*e*		P	**Pn**	**01 30 33.4**	**+4.2**
MZVM						eS	**Sn**	**01 31 24.1**	**+1.5**
CNCY	**Coyoacan**	**4.66**	**324**	*e*		P	**Pn**	**01 30 31.9**	**+1.5**
CNCY						eS	**Sn**	**01 31 21.4**	**-3.3**
UNM	**Universidad Na**	**4.67**	**324**				Pb	01 30 38.2	-3.7
COVM	**Coyoacan**	**4.67**	**324**	*e*		P	**Pn**	**01 30 33.0**	**+2.3**
COVM						eS	**Sn**	**01 31 25.4**	**+0.3**
VRVM	**Mexico City**	**4.70**	**325**				**Pn**	**01 30 30.9**	**-0.1**
VRVM							**Sn**	**01 31 26.7**	**+0.9**
VRVM	**Mexico City**	**4.70**	**325**	*e*		P	**Pn**	**01 30 30.9**	**-0.1**
VRVM						eS	**Sn**	**01 31 26.7**	**+0.9**
AOVM	**Tlapan**	**4.71**	**322**				**Pn**	**01 30 33.0**	**+1.7**
AOVM							**Sn**	**01 31 25.9**	**-0.2**
AOVM	**Tlapan**	**4.71**	**322**	*e*		P	**Pn**	**01 30 33.0**	**+1.7**
AOVM						eS	**Sn**	**01 31 25.9**	**-0.2**
PBVM	**Pinon**	**4.71**	**325**				Pn	01 30 35.8	+4.9
PBVM							**Sn**	**01 31 27.4**	**+1.9**
PBVM	**Pinon**	**4.71**	**325**	*e*		P	Pn	01 30 35.8	+4.9
PBVM						eS	**Sn**	**01 31 27.4**	**+1.9**
CXUV	**Coxquihui**	**4.75**	**345**				**Pn**	**01 30 35.2**	**+3.7**
CXUV							**Sn**	**01 31 28.8**	**+2.1**
CXUV	**Coxquihui**	**4.75**	**345**	*e*		P	**Pn**	**01 30 35.2**	**+3.7**
CXUV						eS	**Sn**	**01 31 28.8**	**+2.1**
INVM	**La Marquesa**	**4.76**	**322**				**Pn**	**01 30 36.6**	**+4.7**
INVM							**Sn**	**01 31 25.1**	**-2.2**
INVM	**La Marquesa**	**4.76**	**322**	*e*		P	**Pn**	**01 30 36.6**	**+4.7**
INVM						eS	**Sn**	**01 31 25.1**	**-2.2**
ARIG	**Puente Sto Nin**	**4.76**	**305**				**Pn**	**01 30 33.6**	**+2.0**
ARIG							**Sn**	**01 31 25.9**	**-0.9**
ARIG	**Puente Sto Nin**	**4.76**	**305**	*e*		P	**Pn**	**01 30 33.6**	**+2.0**
ARIG						eS	**Sn**	**01 31 25.9**	**-0.9**
VTVM	**Tizayuca**	**4.82**	**330**				**Pn**	**01 30 34.1**	**+1.4**
VTVM							**Sn**	**01 31 29.0**	**+0.2**
VTVM	**Tizayuca**	**4.82**	**330**	*e*		P	**Pn**	**01 30 34.1**	**+1.4**
VTVM						eS	**Sn**	**01 31 29.0**	**+0.2**
PTVM	**Pico Tres Padr**	**4.85**	**326**				**Pn**	**01 30 37.0**	**+4.0**
PTVM							**Sn**	**01 31 29.0**	**-0.3**
PTVM	**Pico Tres Padr**	**4.85**	**326**	*e*		P	**Pn**	**01 30 37.0**	**+4.0**
PTVM						eS	**Sn**	**01 31 29.0**	**-0.3**
AZVM	**Cuida Lopez Ma**	**4.93**	**325**				**Pn**	**01 30 38.6**	**+4.3**
AZVM							**Sn**	**01 31 28.8**	**-2.7**
AZVM	**Cuida Lopez Ma**	**4.93**	**325**	*e*		P	**Pn**	**01 30 38.6**	**+4.3**
AZVM						eS	**Sn**	**01 31 28.8**	**-2.7**
TOVM	**TOLUCA**	**4.94**	**319**				Pn	01 30 39.2	+4.9
TOVM							**Sn**	**01 31 32.5**	**+0.9**
TOVM	**TOLUCA**	**4.94**	**319**	*e*		P	Pn	01 30 39.2	+4.9
TOVM						eS	**Sn**	**01 31 32.5**	**+0.9**
ZUVM	**ZUMPANGO**	**5.02**	**328**				Pn	01 30 40.1	+4.7
ZUVM							**Sn**	**01 31 34.8**	**+1.2**
ZUVM	**ZUMPANGO**	**5.02**	**328**	*e*		P	Pn	01 30 40.1	+4.7
ZUVM						eS	**Sn**	**01 31 34.8**	**+1.2**
ZIIG	**Zihuatanejo**	**5.39**	**293**				**Pn**	**01 30 40.1**	**-0.3**
ZIIG							**Sn**	**01 31 42.9**	**+0.4**
ZIIG	**Zihuatanejo**	**5.39**	**293**	*e*		P	**Pn**	**01 30 40.1**	**-0.3**
ZIIG						eS	**Sn**	**01 31 42.9**	**+0.4**
ATVM	**ATLACOMULCO**	**5.40**	**321**				**Pn**	**01 30 44.4**	**+3.8**
ATVM	**ATLACOMULCO**	**5.40**	**321**	*e*		P	**Pn**	**01 30 44.4**	**+3.8**
DHIG	**Demacu**	**5.40**	**331**				**Pn**	**01 30 44.8**	**+4.2**
DHIG							**Sn**	**01 31 43.2**	**+0.2**
DEIG	**Demacu**	**5.40**	**331**	*e*		P	**Pn**	**01 30 44.8**	**+4.2**
DEIG						eS	**Sn**	**01 31 43.2**	**+0.2**
APG	**El Apazote**	**5.61**	**95**	Pn			**Pn**	**01 30 43.4**	**-0.1**
	0.3nm,0.3s,baz=223,slow=18,SNR=16								
APG				Sn			**Sn**	**01 31 41.7**	**-6.5**
	0.3nm,0.3s,baz=233,slow=20,SNR=3.8								
SCIG	**Sabancuy**	**5.90**	**54**				Pn	01 30 42.6	-4.7
SCIG							**Sn**	**01 31 51.3**	**-3.7**
SCIG	**Sabancuy**	**5.90**	**54**	*e*		P	Pn	01 30 42.6	-4.7
SCIG						eS	**Sn**	**01 31 51.3**	**-3.7**
CTUV	**Llano Grande**	**6.20**	**342**				Pn	01 30 57.8	+6.3
CTUV							**Sn**	**01 32 06.4**	**+4.0**
CTUV	**Llano Grande**	**6.20**	**342**	*e*		P	Pn	01 30 57.8	+6.3
CTUV						eS	**Sn**	**01 32 06.4**	**+4.0**
MOIG	**Morelia**	**6.24**	**312**				Pn	01 30 57.5	+5.4
MOIG							**Sn**	**01 32 04.2**	**+0.6**
MOIG	**Morelia**	**6.24**	**312**	*e*		P	**Pn**	**01 30 55.3**	**+3.2**
MOIG						eS	**Sn**	**01 32 04.2**	**+0.6**
PETF	**Flores**	**6.28**	**77**				**Pn**	**01 30 50.9**	**-1.6**
PETF							**Sn**	**01 31 58.9**	**-5.4**
PETF	**Flores**	**6.28**	**77**	*e*		P	**Pn**	**01 30 50.7**	**-1.8**
PETF						eS	**Sn**	**01 31 58.9**	**-5.4**
MTO3	**Montecristo**	**6.76**	**99**				**Pn**	**01 30 59.9**	**+0.6**
IGIG	**Irapuato, Guan**	**7.06**	**318**				**Sn**	**01 32 22.1**	**-1.8**
IGIG	**Irapuato, Guan**	**7.06**	**318**	*e*		S	**Sn**	**01 32 22.1**	**-1.8**
RPIG	**Rio Verde**	**7.21**	**331**				**Sn**	**01 32 24.2**	**-3.2**
RPIG	**Rio Verde**	**7.21**	**331**	*e*		S	**Sn**	**01 32 24.2**	**-3.2**
MMIG	**Aquila**	**7.31**	**293**				**Pn**	**01 31 03.6**	**-3.0**
MMIG							**Sn**	**01 32 27.1**	**-2.5**
MMIG	**Aquila**	**7.31**	**293**	*e*		P	**Pn**	**01 31 03.6**	**-3.0**
MMIG						eS	**Sn**	**01 32 27.1**	**-2.5**
GTIG	**Gomez Farias**	**7.95**	**340**				**Pn**	**01 31 16.5**	**+1.0**
GTIG							**Sn**	**01 32 43.9**	**-1.7**
GTIG	**Gomez Farias**	**7.95**	**340**	*e*		P	**Pn**	**01 31 16.5**	**+1.0**
GTIG						eS	**Sn**	**01 32 43.9**	**-1.7**
TEIG	**Tepich**	**8.89**	**57**				**Pn**	**01 31 25.4**	**-3.0**
JUD3	**Juan Diaz 3**	**11.74**	**116**				**Pn**	**01 32 11.0**	**+3.5**
JTS	**Las Juntas de**	**12.20**	**114**	Pn			**Pn**	**01 32 14.6**	**+0.9**
	0.8nm,0.3s,baz=307,slow=20,SNR=4.0								
	4.6nm,0.7s								
JTS	**Las Juntas de**	**12.20**	**114**				**Pn**	**01 32 15.8**	**+2.1**
833A	**Chaparral WMA,**	**13.02**	**348**				**Pn**	**01 32 26.2**	**+1.3**
RAFA	**San Farael, Vo**	**13.35**	**113**				**Pn**	**01 32 31.4**	**+1.6**
HNDO	**Hondo**	**14.17**	**349**				**Pn**	**01 32 39.3**	**-1.4**
HPIG		**14.31**	**324**	P			**P**	**01 32 49.5**	**-0.4**
435B	**Jarrell**	**15.20**	**356**				**Pn**	**01 32 56.4**	**+1.9**
435B						IAmb	IAmb	01 33 37.5	
	comp=Z,22nm,0.8s								
JCT	**Junction City**	**15.20**	**348**				**Pn**	**01 32 54.8**	**+0.2**
JCT						IAmb	IAmb	01 33 14.3	
	comp=Z,12nm,0.7s								
SAND	**Sanderson**	**15.30**	**340**				**Pn**	**01 32 57.3**	**+1.3**
TXAR	**Lajitas Array**	**15.31**	**335**	Pn			**Pn**	**01 32 58.1**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=147,slow=13,SNR=22								
TXAR				Lg			Lg	01 37 25.2	
	baz=153,slow=31,SNR=1.1								
	comp=Z,1.0nm,0.7s								
TXAR	**Lajitas Array**	**15.31**	**335**				**Pn**	**01 32 56.6**	**+0.4**
TX31	**Lajitas Ar. Si**	**15.31**	**335**				**Pn**	**01 32 57.6**	**+1.4**
LPIG	**La Paz**	**15.71**	**305**	LR			LR	01 38 56.7	
	comp=Z,119nm,20.4s,baz=54,slow=37								
BRDY	**Brady**	**15.85**	**351**				**P**	**01 33 06.2**	**-0.6**
ALPN	**Alpine**	**16.22**	**337**				**Pn**	**01 33 09.7**	**+1.7**
WHTX	**Lake Whitney,**	**16.39**	**356**				**Pn**	**01 33 10.1**	**+0.2**
WHTX						IAmb	IAmb	01 33 27.0	
	comp=Z,39nm,1.2s								
MNHN	**Monahans**	**16.79**	**340**				**Pn**	**01 33 15.1**	**0.0**
SGCY	**Sterling City**	**16.87**	**346**				**Pn**	**01 33 15.6**	**-0.5**
SGCY						IAmb	IAmb	01 33 39.1	
	comp=Z,27nm,0.9s								
VHRN	**Van Horn**	**17.13**	**334**				**Pn**	**01 33 20.7**	**+1.1**
TPB06	**Permian Basin**	**17.22**	**340**			IAmb	IAmb	01 33 49.3	
	comp=Z,6.3nm,0.7s								
ABTX	**Abilene, Hawle**	**17.26**	**350**				**Pn**	**01 33 20.5**	**-0.5**
ODSA	**Odessa**	**17.45**	**342**				**P**	**01 33 25.6**	**+1.0**
ODSA						IAmb	IAmb	01 33 42.2	
	comp=Z,38nm,1.0s								
Z38A	**Mt. Pleasant**	**17.65**	**3**				**Pn**	**01 33 25.4**	**-0.4**
Z38A						IAmb	IAmb	01 33 36.4	
	comp=Z,34nm,0.9s								
129A	**Stewart Farms,**	**17.74**	**344**			IAmb	IAmb	01 33 41.7	
	comp=Z,14nm,0.7s								
Z41A	**Richland Creek**	**17.89**	**9**	P			**Pn**	**01 33 27.5**	**-1.2**
128A	**Castleberry Fa**	**17.90**	**343**			IAmb	IAmb	01 33 45.7	
	comp=Z,9.6nm,0.8s								
POST	**Post**	**18.06**	**346**				**Pn**	**01 33 30.3**	**-0.6**
WLAR	**White Oak Lake**	**18.26**	**8**			IAmb	IAmb	01 33 41.2	
	comp=Z,34nm,1.0s								
LOOK	**Love County**	**18.36**	**358**			IAmb	IAmb	01 33 45.0	
	comp=Z,42nm,1.0s								
DKNS	**Dickens**	**18.51**	**348**			IAmb	IAmb	01 33 58.7	
	comp=Z,19nm,0.9s								
X34A	**Smith Ranch, M**	**19.01**	**356**			IAmb	IAmb	01 33 54.9	
	comp=Z,24nm,0.7s								
MIAR	**Mount Ida**	**19.05**	**7**				**P**	**01 33 40.8**	**-1.3**
MIAR						IAmb	IAmb	01 33 58.3	
	comp=Z,17nm,0.8s								
MSTX	**Muleshoe**	**19.25**	**343**			IAmb	IAmb	01 33 49.4	
	comp=Z,24nm,1.0s								
UALR	**University of**	**19.45**	**10**			IAmb	IAmb	01 33 50.1	
	comp=Z,30nm,0.9s								
W35A	**Tecumseh**	**19.51**	**358**			IAmb	IAmb	01 34 15.1	
	comp=Z,32nm,1.1s								
FNO	**Franklin**	**19.64**	**357**			IAmb	IAmb	01 33 59.4	
	comp=Z,14nm,0.8s								
AMTX	**Amarillo**	**19.84**	**347**			IAmb	IAmb	01 34 11.9	
	comp=Z,13nm,0.8s								
121A	**Cookes Peak, D**	**19.88**	**330**			IAmb	IAmb	01 34 00.2	
	comp=Z,15nm,0.8s								
WHAR	**Wooly Hollow**	**19.96**	**10**				**P**	**01 33 51.5**	**-0.6**
WHAR						IAmb	IAmb	01 34 07.5	
	comp=Z,14nm,0.9s								
OK029	**Liberty Lake**	**20.18**	**357**			IAmb	IAmb	01 34 03.5	
	comp=Z,15nm,0.7s								
DEOK	**Depew**	**20.19**	**359**			IAmb	IAmb	01 34 18.0	
	comp=Z,17nm,0.7s								
TUL3	**Leonard**	**20.26**	**1**				**P**	**01 33 56.3**	**+0.9**
TUL3						IAmb	IAmb	01 34 00.8	
	comp=Z,20nm,0.8s								
OK052	**Battle Ridge R**	**20.35**	**359**			IAmb	IAmb	01 34 05.8	
	comp=Z,26nm,1.0s								
PH02	**Texas Public H**	**20.39**	**347**			IAmb	IAmb	01 33 59.7	
	comp=Z,11nm,0.8s								
DUN6	**Lazy B Ranch**	**20.54**	**328**			IAmb	IAmb	01 34 21.1	
	comp=Z,35nm,1.1s								
FCAR	**Ozark Folk Cen**	**20.57**	**10**	P			**P**	**01 33 58.3**	**-0.4**
CRNM	**Carthage**	**20.61**	**335**	P			**P**	**01 34 00.2**	**+0.8**
OK048	**Pawnee Station**	**20.77**	**358**			IAmb	IAmb	01 34 27.1	
	comp=Z,21nm,0.8s								
U38A	**Gravette**	**20.85**	**4**	P			**P**	**01 34 00.5**	**-1.3**
OK051	**E0350 and S346**	**20.86**	**359**			IAmb	IAmb	01 34 07.7	
	comp=Z,26nm,0.8s								
TUC	**Tucson**	**21.27**	**324**				**P**	**01 34 06.1**	**-0.4**
Y52A	**Lilburn**	**21.28**	**29**			IAmb	IAmb	01 34 25.1	
	comp=Z,25nm,0.9s								
ANMO	**Albuquerque**	**21.36**	**336**	P			**P**	**01 34 09.1**	**+1.6**

TRQ	**Mont Tremblant** comp=Z,5.2nm,1.0s	**35.54**	**26**	IAmb	IAmb	01 36 21.7
LDM	**Libby Dam** comp=Z,6.4nm,0.9s	**36.35**	**338**	IAmb	IAmb	01 36 42.3
FFC	**Flin Flon**	**39.33**	**355**	P	**P**	**01 36 49.5 +0.6**
EDM	**Edmonton** comp=Z,14nm,1.1s	**39.91**	**344**	IAmb	IAmb	01 36 58.7
LPAZ	**La Paz** comp=Z,2.3nm,0.9s,baz=316,slow=7.4,SNR=11 comp=Z,2.3nm,0.9s	**42.10**	**138**	P	**P**	**01 37 13.7 +0.7**
LPAZ	**La Paz**	**42.10**	**138**	P	**P**	**01 37 13.6 +0.6**
SCHQ	**Schefferville** comp=Z,2.0nm,0.7s,baz=225,slow=14,SNR=3.6 comp=Z,2.0nm,0.7s	**45.31**	**24**	P	**P**	**01 37 37.5 -0.2**
SCHQ	**Schefferville**	**45.31**	**24**	P	**P**	**01 37 38.3 +0.6**
SCHQ	comp=Z,4.4nm,0.9s			IAmb	IAmb	01 37 48.3
YKA	**Yellowknife Ar** comp=Z,1.9nm,0.8s,baz=156,slow=8.1,SNR=4.4 comp=Z,1.9nm,0.8s	**48.63**	**349**	P	**P**	**01 38 03.2 -0.3**
AC02	**Maricunga**	**49.71**	**148**	P	**P**	**01 38 13.6 +0.8**
M29M	**Somme Creek**	**55.38**	**338**	P	**P**	**01 38 53.7 -0.2**
M29M	comp=Z,3.2nm,0.9s			IAmb	IAmb	01 38 56.4
L29M	**L29M**	**55.68**	**338**	P	**P**	**01 38 57.4 +1.4**
L29M	comp=Z,8.0nm,1.4s			IAmb	IAmb	01 39 17.3
CPUP	**Villa Florida** comp=Z,0.4nm,0.4s,baz=284,slow=4.2,SNR=2.2 comp=Z,0.4nm,0.4s	**56.27**	**137**	P	**P**	**01 39 00.3 -0.4**
ILAR	**Eielson Array** comp=Z,1.7nm,1.0s,baz=119,slow=6.4,SNR=15 comp=Z,1.7nm,1.0s	**59.80**	**337**	P	**P**	**01 39 25.2 +0.3**
TRF	**Thorofare Moun** comp=Z,3.9nm,0.9s	**60.49**	**335**	IAmb	IAmb	01 39 35.9
PLCA	**Paso Flores** comp=Z,2.4nm,0.8s,baz=332,slow=8.7,SNR=4.3 comp=Z,2.4nm,0.8s	**60.88**	**158**	P	**P**	**01 39 32.3 -0.3**
I23K	**Minto, Yukon-K** comp=Z,4.3nm,0.9s	**60.91**	**337**	IAmb	IAmb	01 39 37.2
CAST	**Castle Rocks** comp=Z,5.9nm,1.5s	**61.20**	**335**	IAmb	IAmb	01 40 13.1
MLY	**Manley** comp=Z,2.3nm,0.8s	**61.37**	**337**	IAmb	IAmb	01 39 47.5
D25K	**Kavik River**	**62.05**	**342**	P	**P**	**01 39 40.1 0.0**
D25K	comp=Z,2.7nm,1.0s			IAmb	IAmb	01 40 18.1
J19K	**Poorman** comp=Z,4.1nm,1.0s	**62.88**	**335**	IAmb	IAmb	01 40 14.3
F21K	**Alatna River**	**63.34**	**339**	P	**P**	**01 39 49.2 +0.4**
M14K	**Bethel**	**64.72**	**330**	P	**P**	**01 39 58.5 +0.6**
EKA	**Eskdalemuir Ar** comp=Z,0.5nm,0.5s,baz=279,slow=4.8,SNR=2.1 comp=Z,0.5nm,0.5s	**79.09**	**36**	P	**P**	**01 41 22.4 -1.9**
ESDC	**Sonseca Array** comp=Z,2.7nm,1.2s,baz=287,slow=5.7,SNR=7.3 comp=Z,2.7nm,1.2s	**81.96**	**51**	P	**P**	**01 41 38.6 -1.5**
ESDC	**Sonseca Array**	**81.96**	**51**		**P**	**01 41 40.0 -0.1**
ESDC	comp=Z,6.9nm,1.4s			IAmb	IAmb	01 42 04.8
NOA	**NORSAR Array B** comp=Z,2.0nm,0.9s,baz=289,slow=4.7,SNR=4.3 comp=Z,2.0nm,0.9s	**84.71**	**28**	P	**P**	**01 41 53.9 +0.1**
PETK	**Petropavlovsk-** comp=Z,4.7nm,1.1s,baz=80,slow=1.6,SNR=3.5 comp=Z,4.7nm,1.1s	**87.01**	**325**	P	**P**	**01 42 06.6 +1.2**
HHC	**Hu-ho-hao-te**	**118.22**	**336**	*e*P	**PKiKP**	**01 48 10.1 +2.4**
PZH	**PanZhiHua**	**134.67**	**337**	PKP	**PKPdf**	**01 48 38.6 -0.9**

IDC ***04*** *01:34:42.7±0.4,9.79S×154.82E,h0km,mb4.7/26, mbtmp4.6/30,ML3.4/4,MS4.8/61,Error ellipse: s-maj=12.0km s-min=8.2km az=103.0*

BJI ***04*** *01:34:43.1,9.50S×155.11E,h10km,mB5.5/56,mb4.9/68, Ms5.2/73,Ms7 5.1/71*

NEIC ***04*** *01:34:44.6,9.64S×154.99E,h10km*

MOS ***04*** *01:34:44.8±1.1,9.71S×154.76E,h16km,mb5.4/51, MS5.1/10,Error ellipse: s-maj=8.1km s-min=6.1km az=120.5*

NEIC ***04*** *01:34:45.2±2.6,9.68S±0.07×154.90E±0.07,h10km±1km, mb5.3/206,Ms_20 5.3/559,Www5.5/45,Error ellipse: s-maj=12.4km s-min=11.8km az=33.0*

ISC-PP ***04*** *01:34:45,9.68S×154.90E,h17km*

GFZ ***04*** *01:34:46.6,9.65S×154.68E,h11km,Mw5.5/58,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr=2.23; Mθθ1.89; Mφφ0.34; Mrθ0.51; Mθφ-0.12; Mφr1.04; Fault plane solution: M0 2.38639×1017 NP1: φs110.46300°,δ41.60417°,λ-60.48997°. NP2: φs253.33935°,δ54.70109°,λ-113.62426°. Principal axes: T 1.9542, Plg6.9003°, Azm359.9240°; N 0.7053, Plg19.0905°, Azm267.5235°; P -2.6596, Plg69.6087°, Azm108.9237°;*

GFZ ***04*** *01:34:46.6±0.2,10°S-2°×15°5E±°,h10km,M5.3/42, mb5.0/42*

DJA ***04*** *01:34:46.3±0.3,10°S-2°×15°5E±°,h18km±2km,M5.5/69, mB6.0/56,mb5.2/69,MLv4.6/2,Mw(mB)5.6/56, MwMwp5.4/12,Mwp5.6/12*

GCMT ***04*** *01:34:47.2±0.1,9.79S×154.76E,h12km,MW5.5/166, Moment Tensor Solution. s139,c267; s166,c361; Duration: 1s4 Moment tensor: Scale 1017Nm; Mrr=2.56±.02; Mθθ2.39±.02; Mφφ0.16±.02; Mrθ0.12±.06; Mθφ0.10±.02; Mφr0.24±.07; Best double couple: M0 2.49100×1017 NP1:φs92.00000°,δ44.00000°, λ-83.00000°. NP2:φs263.00000°,δ47.00000°, λ-97.00000°. Principal axes: T 2.3980, Plg2.0000°, Azm357.0000°; N 0.1850, Plg5.0000°, Azm267.0000°; P -2.5840, Plg85.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *01:34:50.1,9.74S×154.78E,h12km, Moment Tensor Solution. Duration: 3s2 Moment tensor: Scale 1017Nm; Mrr=2.74; Mθθ2.48; Mφφ0.26; Mrθ-0.34; Mθφ-0.05; Mφr0.10; Fault plane solution: M0 2.64000×1017 NP1: φs269.55000°,δ41.26000°,λ-92.66000°. NP2:φs93.09000°, δ48.79000°,λ-87.67000°. Principal axes: T 2.5041, Plg4.0000°, Azm181.0000°; N 0.2592, Plg2.0000°, Azm272.0000°; P -2.7632, Plg86.0000°, Azm26.0000°;*

ISC 04 01:34:45.9±0.2,9.74S±0.03×154.92E±0.04,h17km, h17km:pP-P,n1075,σ1s36/771,mb5.2/211,MS5.3/377, 32C-30D,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.96**	**87**	Pn	**Pn**	**01 36 01.5**	**+1.8**
	0.4nm,0.3s,baz=270,slow=4.0,SNR=1.4						
HNR				LR	LR	01 37 39.2	
	comp=Z,468nm,21.8s,baz=354,slow=35						
HNR	**Honiara**	**4.96**	**87**		**Pn**	**01 35 57.8**	**-2.0**
HNR	**Honiara**	**4.96**	**87**	P	**Pb**	**01 36 08.6**	**-3.8**
TATA	**Tatamba Isabel**	**5.01**	**75**	P	**Pn**	**01 36 03.7**	**+3.4**
NGOA	**Tingoa Renbel**	**5.36**	**110**	P	**Pn**	**01 36 07.9**	**+2.7**
KRVT	**Keravat (AS076** comp=Z,2μm,18.1s,baz=67,slow=40	**6.12**	**332**	LR	LR	01 38 49.9	
RABL	**Rabaul**	**6.16**	**333**	P	**Pn**	**01 36 13.9**	**-2.3**
HURO	**Huro Makira**	**6.91**	**97**	P	**Pn**	**01 36 30.1**	**+3.6**
PMG	**Port Moresby** 15nm,0.8s,baz=90,slow=7.1,SNR=4.8	**7.66**	**272**	Pn	**Pn**	**01 36 35.1**	**-1.7**
PMG	0.7nm,0.3s,baz=66,slow=18,SNR=0.7			Sn	**Sn**	**01 38 06.0**	**+2.6**
PMG	comp=Z,14μm,19.6s,baz=182,slow=39			LR	LR	01 39 39.0	
PMG	**Port Moresby**	**7.66**	**272**		**Pn**	**01 36 35.8**	**-1.0**
PMG	**Port Moresby**	**7.66**	**272**	*c* *i*P	**Pn**	**01 36 38.8**	**+1.9**
PMG	**Port Moresby** 0.6nm3μm134nm,1.5s	**7.66**	**272**	P	**Pn**	**01 36 38.0**	**+1.1**
PMG	**Port Moresby**	**7.66**	**272**	P	**Pn**	**01 36 38.5**	**+1.6**
MANU	**Manus Island**	**10.72**	**315**	Pn	**Pn**	**01 37 17.9**	**-0.9**
CTA	**Charters Tower** 0.1nm,0.3s,baz=41,slow=20,SNR=3.4	**13.26**	**218**	Pn	**Pn**	**01 37 52.2**	**-1.3**
CTA	0.2nm,0.3s,baz=20,slow=9.9,SNR=1.7			Sn	**Sn**	**01 40 23.3**	**+2.6**
CTA	comp=Z,10μm,21.0s,baz=37,slow=35 4.0nm,0.9s			LR	LR	01 42 20.6	
CTAO	**Charters Tower**	**13.26**	**218**	P	**Pn**	**01 37 54.3**	**+0.8**
KOUNC	**Koumac, New Ca**	**14.03**	**141**	Pn	**Pn**	**01 38 07.0**	**+2.9**
JAY	**Jayapura** 0.3nm,0.3s,baz=121,slow=14,SNR=1.9 5.6nm,0.9s	**15.85**	**296**	Pn	**Pn**	**01 38 27.1**	**-1.3**
JAY	**Jayapura**	**15.85**	**296**	P	**P**	**01 38 30.4**	**-1.8**
EIDS	**Eidsvold** comp=Z,40nm,1.5s,comp=Z,0.0nmcomp=Z,0.0nm,16.1s, comp=Z,0.0nm	**15.96**	**193**	P	**Pn**	**01 38 27.5**	**-2.3**
EIDS	**Eidsvold**	**15.96**	**193**		**P**	**01 38 33.1**	**-0.2**
EIDS	**Eidsvold**	**15.96**	**193**	P	**P**	**01 38 33.8**	**+0.5**
GENI	**Genyem** comp=Z,6μmcomp=Z,145nm,2.4s	**16.29**	**295**	P	**Pn**	**01 38 33.3**	**-0.8**
GENI	**Genyem**	**16.29**	**295**	P	**Pn**	**01 38 34.2**	**+0.1**
DZM	**Mont Dzumac** comp=Z,0.4nm,0.3s,baz=315,slow=20,SNR=4.8	**16.51**	**139**	Pn	**Pn**	**01 38 37.3**	**+0.4**
DZM	comp=Z,19μm,21.6s,baz=307,slow=34 comp=Z,6.1nm,0.9s			LR	LR	01 44 00.8	
ONTNC	**Ouen Toro**	**16.68**	**140**	Pn	**Pn**	**01 38 37.9**	**-1.1**
PATS	**Pohnpei** comp=Z,241nm,2.0s,comp=Z,0.0nm,6.6s,comp=Z,0.0nm	**16.81**	**12**	P	**P**	**01 38 42.3**	**-0.5**
PATS	**Pohnpei**	**16.81**	**12**		**Pn**	**01 38 40.1**	**-0.7**
PATS	**Pohnpei**	**16.81**	**12**	P	**Pn**	**01 38 40.7**	**0.0**
OUENC	**Ouen Island, N**	**17.01**	**139**		**Pn**	**01 38 43.2**	**+0.1**
MARNC	**Mare, Loyalty**	**17.18**	**134**	P	**P**	**01 38 48.2**	**+1.4**
RMQ	**Roma**	**17.64**	**199**	P	**P**	**01 38 55.8**	**+3.8**
SMPI	**Sarmi** comp=Z,7μmcomp=Z,190nm,2.0s	**17.86**	**295**	P	**P**	**01 38 55.5**	**+1.1**
QIS	**Mount Isa** comp=Z,0.0nmcomp=Z,0.0nm,5.0s,comp=Z,0.0nm	**18.26**	**232**	P	**P**	**01 38 59.1**	**+0.3**
QIS	**Mount Isa**	**18.26**	**232**		**P**	**01 39 00.2**	**+1.4**
QIS	**Mount Isa**	**18.26**	**232**	P	**P**	**01 39 00.6**	**+1.8**
QLP	**Quilpie** comp=Z,230nm,1.7s,comp=Z,0.0nmcomp=Z,0.0nm,5.4s	**19.57**	**210**	P	**Pn**	**01 39 14.2**	**-0.2**
QLP	**Quilpie**	**19.57**	**210**	P	**Pn**	**01 39 14.8**	**+0.4**
SRPI	**Serui, Papua**	**20.15**	**292**	P	Pn	01 39 20.2	-1.3
BAKI	**Biak** comp=Z,7μmcomp=Z,8μmcomp=Z,231nm,1.9s	**20.55**	**293**	P	Pn	01 39 26.4	+0.2
ARMA	**Armidale** comp=Z,53nm,1.3s,comp=Z,0.0nmcomp=Z,0.0nm,16.1s, comp=Z,0.0nm	**20.80**	**188**	P	Pn	01 39 27.2	-1.8
ARMA	**Armidale**	**20.80**	**188**		Pn	01 39 27.7	-1.3
ARMA	**Armidale**	**20.80**	**188**	P	Pn	01 39 28.0	-1.0
TARA	**Tarawa**	**21.04**	**59**	P	**P**	**01 39 31.7**	**+2.5**
KMPI	**Kaimana, Papua**	**21.91**	**285**	P	**P**	**01 39 38.3**	**-0.3**
RKPI	**Ransiki, Papua**	**22.19**	**290**	P	**P**	**01 39 42.8**	**+1.2**
KDU	**Kakadu** comp=Z,27nm,2.0s,comp=Z,0.0nmcomp=Z,0.0nm,1.2s	**22.21**	**260**	P	**P**	**01 39 40.3**	**-1.5**
WRAB	**Tennant Creek**	**22.29**	**241**	P	**P**	**01 39 42.1**	**-0.6**
WRAB	**Tennant Creek** comp=Z,224nm,1.9s	**22.29**	**241**	P	**P**	**01 39 42.0**	**-0.6**
WRAB				IAmb	IAmb	01 39 45.8	
WRAB	**Tennant Creek**	**22.29**	**241**	*c* *i*P	**P**	**01 39 42.1**	**-0.6**
WRAB	comp=Z,129nm,1.9s			pmax	pmax		
WRAB	**Tennant Creek**	**22.29**	**241**	P	**P**	**01 39 42.4**	**-0.3**
WRA	**Warramunga Arr** comp=Z,8.2nm,0.7s,baz=65,slow=10.0,SNR=23	**22.30**	**241**	P	**P**	**01 39 40.5**	**-2.3**
WRA				PcP	**PcP**	**01 43 38.0**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=76,slow=2.1,SNR=3.3						
WRA				S	**S**	**01 43 46.4**	**-1.3**
	comp=Z,6.8nm,1.3s,baz=61,slow=16,SNR=4.8						
WRA	comp=Z,4μm,18.2s,baz=76,slow=37 comp=Z,8.2nm,0.7s			LR	LR	01 48 21.2	
INKA	**Innaminka**	**22.34**	**215**		**P**	**01 39 42.8**	**-0.2**
INKA	comp=Z,143nm,1.3s			IAmb	IAmb	01 40 03.6	
MWPI	**Manokwari, Pap**	**22.54**	**292**	P	**P**	**01 39 49.3**	**+3.9**
CMSA	**Cobar Meteorol** comp=Z,80nm,1.1s,comp=Z,0.0nmcomp=Z,0.0nm,16.8s, comp=Z,0.0nm	**23.32**	**200**	P	**P**	**01 39 53.4**	**+0.2**
CMSA	**Cobar Meteorol**	**23.32**	**200**	P	**P**	**01 39 54.0**	**+0.8**
CMSA	**Cobar Meteorol**	**23.32**	**200**	P	**P**	**01 39 52.1**	**-1.1**
FAKI	**Fak Fak**	**23.52**	**285**	P	**P**	**01 39 55.9**	**+0.5**
FAKI	**Fak Fak**	**23.52**	**285**	P	**P**	**01 39 53.4**	**-2.1**
FAKI	**Fak Fak** comp=Z,3μmcomp=Z,5μmcomp=Z,163nm,1.8s	**23.52**	**285**	P	**P**	**01 39 53.2**	**-2.2**
FAKI	**Fak Fak**	**23.52**	**285**	P	**P**	**01 39 54.8**	**-0.6**
MTN	**Manton Dam**	**23.53**	**260**	P	**P**	**01 39 55.3**	**-0.2**
MTN	comp=Z,128nm,1.5s			IAmb	IAmb	01 40 16.6	
MSVF	**Nonsavu** comp=Z,3μm,18.6s,baz=269,slow=33	**23.81**	**112**	LR	LR	01 47 57.7	
MSVF	**Nonsavu**	**23.81**	**112**		**P**	**01 39 54.7**	**-3.5**
MSVF	comp=Z,200nm,1.8s			IAmb	IAmb	01 40 22.1	
MSVF	**Nonsavu**	**23.81**	**112**	*ce*P	**P**	**01 39 59.4**	**+1.1**
MSVF	comp=Z,135nm,2.1s			pmax	pmax		
MSVF	**Nonsavu**	**23.81**	**112**	P	**P**	**01 40 00.4**	**+2.2**
AS17	**Alice Springs** comp=Z,51nm,0.8s,comp=Z,0.0nm,0.8s	**24.31**	**233**	P	**P**	**01 40 01.8**	**-1.1**
AS01	**Alice Springs**	**24.34**	**233**	P	**P**	**01 40 03.3**	**+0.1**
AS31	**Alice Springs** comp=Z,12nm,0.7s,comp=Z,0.0nmcomp=Z,0.0nm,2.1s	**24.38**	**233**	P	**P**	**01 40 02.4**	**-1.1**
AS31	**Alice Springs**	**24.38**	**233**		**P**	**01 40 02.2**	**-1.4**
ASAR	**Alice Springs** comp=Z,14nm,0.7s,baz=59,slow=8.9,SNR=60	**24.38**	**233**	P	**P**	**01 40 01.2**	**-2.3**
ASAR	comp=Z,0.9nm,0.9s,baz=53,slow=3.2,SNR=2.6			PcP	**PcP**	**01 43 42.6**	**-0.2**
ASAR	comp=Z,0.4nm,0.8s,baz=45,slow=20,SNR=1.8			S	**S**	**01 44 23.2**	**+0.6**
ASAR	comp=Z,4μm,20.7s,baz=73,slow=35 comp=Z,14nm,0.7s			LR	LR	01 48 55.6	
ASAR	**Alice Springs**	**24.38**	**233**	P	**P**	**01 40 02.0**	**-1.5**
ASAR					**PcP**	**01 43 42.6**	**-0.2**
ASAR					**S**	**01 44 23.2**	**+0.6**
SIJI	**Sorong** comp=Z,2μm,20.1s,baz=80,slow=41	**25.13**	**289**	LR	LR	01 51 57.2	
SIJI	**Sorong** comp=Z,2μmcomp=Z,54nm,1.7s	**25.13**	**289**	P	**P**	**01 40 09.9**	**-0.4**
GUMO	**Guam** comp=Z,2μm,21.5s,baz=152,slow=34	**25.24**	**337**	LR	LR	01 48 51.9	
STKA	**Stephens Creek** comp=Z,26nm,0.8s,baz=31,slow=12,SNR=16	**25.25**	**207**	P	**P**	**01 40 10.4**	**-0.9**
STKA	comp=Z,5.1nm,1.0s,baz=17,slow=20,SNR=2.6			S	**S**	**01 44 36.1**	**-0.2**
STKA	comp=Z,10μm,18.9s,baz=24,slow=37 comp=Z,26nm,0.8s			LR	LR	01 50 10.2	
STKA	**Stephens Creek**	**25.25**	**207**	*de*P	**P**	**01 40 10.9**	**-0.4**
STKA	**Stephens Creek**	**25.25**	**207**	P	**P**	**01 40 11.9**	**+0.6**
CAN	**Canberra**	**26.03**	**191**	P	**P**	**01 40 19.9**	**+1.6**
CAN	comp=Z,47nm,1.0s			IAmb	IAmb	01 40 27.5	
CAN	**Canberra**	**26.03**	**191**	P	**P**	**01 40 19.9**	**+1.6**
CAN	comp=Z,47nm,1.0s			pmax	pmax		
CAN	comp=Z,10μm,18.0s			MLR	MLR		
CAN	**Canberra**	**26.03**	**191**	P	**P**	**01 40 23.9**	**+5.5**
KNRA	**Kununurra** comp=Z,70nm,1.6s,comp=Z,0.0nmcomp=Z,0.0nm,10.9s	**26.18**	**254**	P	**P**	**01 40 18.6**	**-1.2**
KNRA	**Kununurra**	**26.18**	**254**		**P**	**01 40 19.3**	**-0.5**
KRAI	**Karang Ratu** comp=Z,71nm,1.8s	**27.10**	**282**	P	**P**	**01 40 27.7**	**-0.5**
HTT	**Hallett** comp=Z,17nm,1.6s,comp=Z,0.0nmcomp=Z,0.0nm,14.9s	**27.80**	**210**	P	**P**	**01 40 34.0**	**-0.2**
HTT	**Hallett**	**27.80**	**210**	P	**P**	**01 40 34.3**	**0.0**
NLAI	**Namlea** comp=Z,2μmcomp=Z,73nm,2.1s	**28.37**	**281**	P	**P**	**01 40 40.1**	**+0.5**
BBOO	**Buckleboo** comp=Z,92nm,1.6s,comp=Z,0.0nm,12.7s	**28.81**	**214**	P	**P**	**01 40 43.7**	**+0.5**
BBOO	**Buckleboo**	**28.81**	**214**	P	**P**	**01 40 43.9**	**+0.6**
BBOO	**Buckleboo**	**28.81**	**214**	P	**P**	**01 40 43.1**	**-0.2**
TNTI	**Ternate** comp=Z,1μmcomp=Z,47nm,1.2s	**29.35**	**289**	P	**P**	**01 40 48.6**	**+0.3**
GAMI	**Galela, Maluku**	**29.37**	**292**	P	**P**	**01 40 49.8**	**+1.4**
ARPS	**Mount Arapiles** comp=Z,26nm,1.5s,comp=Z,0.0nm,2.6s	**29.40**	**202**	P	**P**	**01 40 47.7**	**-0.7**
WRKA	**Warakurna** comp=Z,11nm,1.0s,comp=Z,0.0nm,11.2s	**29.52**	**236**	P	**P**	**01 40 48.0**	**-1.7**
FITZ	**Fitzroy Crossi** comp=Z,4.5nm,0.8s	**29.58**	**250**	P	**P**	**01 40 48.7**	**-1.5**
FITZ	**Fitzroy Crossi** comp=Z,3μm,19.4s,baz=74,slow=36	**29.58**	**250**	LR	LR	01 52 36.3	
FITZ	**Fitzroy Crossi**	**29.58**	**250**	P	**P**	**01 40 50.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**29.58**	**250**	P	**P**	**01 40 48.7**	**-1.5**
SANI	**Sanana** comp=Z,3μmcomp=Z,3μmcomp=Z,79nm,0.9s	**29.76**	**283**	P	**P**	**01 40 52.6**	**+0.7**
OUZ	**Omahuta** comp=Z,5μm,19.0s	**30.55**	**149**	IAMs_20	IAMs_20	01 51 48.0	
BATI	**Baumata** comp=Z,4μm,18.4s,baz=100,slow=40	**30.79**	**266**	LR	LR	01 55 05.1	
WAKE	**Wake Island** comp=Z,5μm,20.0s	**31.07**	**22**	IAMs_20	IAMs_20	01 52 03.3	
RAO	**Raoul Island** comp=Z,4μm,21.4s,baz=318,slow=32	**31.98**	**131**	LR	LR	01 51 45.0	
RAO	**Raoul Island** comp=Z,5μm,19.0s	**31.98**	**131**	IAMs_20	IAMs_20	01 51 44.8	
SGSI	**Sangihe**	**32.18**	**293**	P	**P**	**01 41 12.9**	**-0.4**
BBSI	**Bau Bau** comp=Z,3μmcomp=Z,82nm,1.5s	**32.33**	**275**	P	**P**	**01 41 12.9**	**-1.7**
KDI	**Kendari**	**32.57**	**278**	P	**P**	**01 41 17.9**	**+1.2**
FORT	**Forrest** comp=Z,25nm,1.3s,comp=Z,0.0nm,9.3s	**32.60**	**226**	P	**P**	**01 41 15.6**	**-1.2**
AFI	**Afiamalu** comp=Z,1μm,20.6s,baz=276,slow=32	**32.84**	**101**	LR	LR	01 52 15.9	
LUWI	**Luwuk** comp=Z,3μmcomp=Z,121nm,2.0s	**33.12**	**283**	P	**P**	**01 41 19.5**	**-2.0**
GTOI	**Gorontalo** comp=Z,1μmcomp=Z,56nm,1.3s	**33.40**	**286**	P	**P**	**01 41 24.6**	**+0.7**
KKSI	**Kolaka, Sulawe**	**33.47**	**277**	P	**P**	**01 41 22.0**	**-2.6**
DAV	**Davao City (W)** comp=Z,902nm,19.4s,baz=130,slow=36	**33.67**	**299**	LR	LR	01 54 49.7	
QRZ	**Quartz Range** comp=Z,6μm,20.0s	**34.66**	**156**	IAMs_20	IAMs_20	01 53 59.0	
URZ	**Urewera** comp=Z,5μm,18.2s,baz=330,slow=35	**34.69**	**149**	LR	LR	01 54 55.8	
MXZ	**Matakaoa Point** comp=Z,6μm,21.0s	**34.81**	**146**	IAMs_20	IAMs_20	01 53 26.5	
RTZ	**Ruatahuna** comp=Z,4μm,20.0s	**34.89**	**149**	IAMs_20	IAMs_20	01 54 15.9	
DSZ	**Denniston Nort** comp=Z,5μm,22.0s	**35.17**	**158**	IAMs_20	IAMs_20	01 53 44.6	
KAPI	**Kappang** comp=Z,793nm,18.0s,baz=107,slow=41	**35.18**	**275**	LR	LR	01 58 52.1	
KAPI	**Kappang**	**35.18**	**275**	P	**P**	**01 41 37.3**	**-2.0**
KAPI	comp=Z,87nm,1.3s			IAmb	IAmb	01 41 51.3	
KAPI	**Kappang**	**35.18**	**275**	*e*P	**P**	**01 41 38.6**	**-0.8**
KAPI	comp=Z,87nm,1.3s			pmax	pmax		
KAPI	**Kappang** comp=Z,617nmcomp=Z,29nm,1.6s	**35.18**	**275**	P	**P**	**01 41 37.5**	**-1.9**
KAPI	**Kappang**	**35.18**	**275**	P	**P**	**01 41 39.3**	**-0.1**
NNZ	**Nelson** comp=Z,6μm,20.0s	**35.34**	**156**	IAMs_20	IAMs_20	01 54 28.8	
TTSI	**Tana Toraja** comp=Z,2μmcomp=Z,43nm,2.1s	**35.49**	**278**	P	**P**	**01 41 42.8**	**+0.7**
THZ	**Tophouse** comp=Z,5μm,18.0s	**35.61**	**157**	IAMs_20	IAMs_20	01 55 50.1	
TOLI2	**Tolitoli**	**35.66**	**286**	P	**P**	**01 41 40.5**	**-3.1**
TOLI2	comp=Z,112nm,1.8s			IAmb	IAmb	01 41 54.2	
TOLI2	**Tolitoli**	**35.66**	**286**	P	**P**	**01 41 41.6**	**-1.9**
INZ	**Inchbonnie** comp=Z,4μm,20.0s	**35.90**	**159**	IAMs_20	IAMs_20	01 54 36.8	
SNZO	**South Karori** comp=Z,7μm,22.0s	**35.97**	**154**	IAMs_20	IAMs_20	01 54 09.4	
PCI	**Palu** comp=Z,3μmcomp=Z,35nm,0.4s	**35.98**	**282**	P	**P**	**01 41 46.4**	**+0.1**
OXZ	**Oxford** comp=Z,5μm,21.0s	**36.63**	**159**	IAMs_20	IAMs_20	01 54 27.3	
RPZ	**Rata Peaks** comp=Z,2μm,19.1s,baz=318,slow=35	**36.64**	**160**	LR	LR	01 56 06.1	
PLAI	**Plampang**	**36.66**	**268**	P	**P**	**01 41 51.2**	**-0.9**
PLAI	**Plampang** comp=Z,2μmcomp=Z,82nm,1.4s	**36.66**	**268**	P	**P**	**01 41 48.7**	**-3.4**
GVZ	**Greta Valley S** comp=Z,5μm,21.0s	**36.69**	**158**	IAMs_20	IAMs_20	01 55 15.7	
DCZ	**Deep Cove** comp=Z,4μm,20.0s	**37.11**	**166**	IAMs_20	IAMs_20	01 55 30.3	
MLZ	**Mavora Lakes** comp=Z,5μm,19.0s	**37.27**	**165**	IAMs_20	IAMs_20	01 56 23.3	
KMBL	**Kambalda** comp=Z,15nm,1.2s,comp=Z,0.0nmcomp=Z,0.0nm,11.5s	**37.44**	**230**	P	**P**	**01 41 58.0**	**-0.6**
WHZ	**Wether Hill Ro** comp=Z,4μm,21.0s	**37.71**	**165**	IAMs_20	IAMs_20	01 54 12.1	
MEEK	**Meekatharra** comp=Z,42nm,1.9s,comp=Z,0.0nm,6.8s	**38.19**	**239**	P	**P**	**01 42 04.3**	**-0.6**
MEEK	**Meekatharra**	**38.19**	**239**	P	**P**	**01 42 04.4**	**-0.6**
JCJ	**Chichijima** comp=Z,2μm,22.0s,baz=183,slow=34	**38.65**	**342**	LR	LR	01 56 16.8	
TGY	**Tagaytay City** comp=Z,1μm,21.3s,baz=113,slow=34	**41.21**	**305**	LR	LR	01 57 56.9	
NWAO	**Narrogin (SRO)** comp=Z,2μm,19.9s,baz=75,slow=36	**41.67**	**231**	LR	LR	01 59 24.7	
SNJI	**Sawahan-Nganju** comp=Z,61nm,1.7s	**42.69**	**269**	P	**P**	**01 42 42.5**	**0.0**
JOW	**Kunigami** comp=Z,1μm,20.1s,baz=150,slow=32	**44.62**	**325**	LR	LR	01 58 51.8	
RAR	**Rarotonga** comp=Z,371nm,21.9s,baz=272,slow=32	**44.98**	**110**	LR	LR	01 58 27.5	
JHJ	**Hachijo jima 2** comp=Z,820nm,21.0s,baz=94,slow=33	**45.00**	**342**	LR	LR	01 59 09.9	
TWG	**Pinlang** comp=Z,3μm,20.0s	**46.33**	**315**	IAMs_20	IAMs_20	01 58 58.5	
YULB	**Yu-li** comp=Z,4μm,20.0s	**46.55**	**316**	IAMs_20	IAMs_20	01 58 54.4	
YULB	**Yu-li**	**46.55**	**316**	P	**P**	**01 43 14.8**	**+1.8**
NACB	**Ninganchiao**	**46.86**	**317**	P	**P**	**01 43 14.0**	**-1.4**
NACB	**Ninganchiao**	**46.86**	**317**	P	**P**	**01 43 15.0**	**-0.4**
LEM	**Lembang** comp=Z,556nm,18.4s,baz=129,slow=41	**46.87**	**270**	LR	LR	02 06 55.7	
TPUB	**Ta-pu** comp=Z,3μm,22.0s	**46.95**	**315**	IAMs_20	IAMs_20	01 58 27.1	
SSLB	**Suanglung**	**47.04**	**316**	P	**P**	**01 43 15.9**	**-1.0**
SSLB	comp=Z,48nm,1.3s			IAmb	IAmb	01 43 23.6	
SSLB	**Suanglung**	**47.04**	**316**	P	**P**	**01 43 17.7**	**+0.8**
YHNB	**Yeheng**	**47.34**	**317**	P	**P**	**01 43 17.9**	**-1.3**
YHNB	comp=Z,3μm,22.0s			IAMs_20	IAMs_20	01 58 52.4	
YHNB	**Yeheng**	**47.34**	**317**	P	P

NJ2 S **S** **01 51 46.6 +2.0**
NJ2 pmax pmax
comp=Z,33nm,0.7s
NJ2 L L
comp=Z,2µm,18.9s
NJ2 L L
comp=Z,3µm,18.9s
NJ2 L L
comp=Z,10µm,19.9s
PPT **Papeete** **54.33 105** LR LR 02 02 26.2
comp=Z,494nm,21.8s,baz=277,slow=31
PPT2 **Papeete2** **54.33 105** *e*S **S** **01 51 51.2 +1.3**
comp=Z,646nm,30.8s
PPT2 *e*LQ LQ 01 57 31.4
comp=Z,2µm,47.5s
PPT2 *e*LR LR 01 59 52.1
comp=Z,3µm,33.5s
PPT2 *e*LR LR 02 00 01.2
comp=Z,1µm,35.0s
TBI **Tubuai** **54.70 112** *e*S **S** **01 51 58.8 +4.3**
comp=Z,4µm,31.2s
TBI *e*LQ LQ 01 57 41.3
TBI *e*LR LR 02 00 02.8
comp=Z,13µm,31.2s
TBI *e*LR LR 02 00 05.9
comp=Z,3µm,34.2s
JKA **Kamikawa-asahi** **54.76 349** IAmb IAmb 01 44 22.9
comp=Z,53nm,1.2s
JKA **Kamikawa-asahi** **54.76 349** P **P** **01 44 16.4 +1.9**
KUR **Kuril'sk** **55.09 354** P **P** **01 44 18.9 +2.0**
KUR S **S** **01 51 52.9 -5.9**
CNSH **ChangSha** **55.41 314** P **P** **01 44 20.9 +1.3**
CNSH S **S** **01 52 07.0 +3.3**
CNSH pmax pmax
comp=Z,21nm,1.4s
CNSH L L
comp=Z,430nm,15.8s
CNSH L L
comp=Z,610nm,11.1s
CNSH L L
comp=Z,2µm,22.8s
WHN **Wuhan** **55.88 317** P **P** **01 44 24.3 +1.4**
WHN pP **sP** **01 44 29.1 +0.2**
WHN S **S** **01 52 12.3 +2.4**
WHN pmax pmax
comp=Z,1µm,7.1s
WHN L L
comp=Z,5µm,21.2s
WHN L L
comp=Z,4µm,18.2s
WHN L L
comp=Z,7µm,20.9s
RPSI **Rantau Prapat** **57.13 280** P **P** **01 44 30.3 -1.8**
RPSI IAmb IAmb 01 44 43.2
comp=Z,73nm,1.9s
PSI **Prapat** **57.15 280** P **P** **01 44 30.3 -2.2**
PSI pmax pmax
comp=Z,73nm,1.9s
PSI **Prapat** **57.15 280** P **P** **01 44 30.3 -2.2**
comp=Z,656nmcomp=Z,17nm,2.1s
DL2 **Dalian** **57.47 329** P **P** **01 44 30.5 -3.6**
DL2 S **S** **01 52 27.0 -3.7**
DL2 pmax pmax
comp=Z,10.0nm,0.9s
DL2 pmax pmax
comp=Z,470nm,8.6s
DL2 L L
comp=Z,1µm,20.5s
DL2 L L
comp=Z,880nm,24.5s
DL2 L L
comp=Z,2µm,23.5s
YSS **Yuzhno-Sakhali** **57.48 350** *e*P **P** **01 44 35.0 +1.0**
YSS *e* 01 46 41.5
YSS *e*S **S** **01 52 25.8 -4.7**
YSS *e*PS PKiKP 01 52 45.8 +52
YSS *e* 01 54 20.5
YSS pmax pmax
comp=Z,30nm,1.3s
YSS pmax pmax
comp=Z,300nm,8.1s
YSS pmax pmax
comp=Z,400nm,8.4s
YSS pmax pmax
comp=N,200nm,9.1s
USRK **Ussuriysk Ar.** **57.58 341** P **P** **01 44 35.1 +0.4**
comp=N,11nm,1.1s,baz=162,slow=6.6,SNR=16
USRK S **S** **01 52 33.5 +1.6**
comp=N,2.0nm,0.6s,baz=122,slow=11,SNR=1.3
USRK LR LR 02 05 14.9
comp=N,568nm,22.0s,baz=150,slow=32
comp=N,11nm,1.1s
GSI **Gunungsitoli** **58.13 278** P **P** **01 44 37.5 -1.8**
GSI **Gunungsitoli** **58.13 278** P **P** **01 44 37.8 -1.5**
comp=N,41nm,1.8s
GSI **Gunungsitoli** **58.13 278** P **P** **01 44 38.1 -1.2**
MDJ **Mudanjiang** **58.76 339** P **P** **01 44 43.7 +0.7**
MDJ S **S** **01 52 50.3 +2.9**
MDJ SS **SS** **01 56 42.6 +1.6**
MDJ pmax pmax
comp=N,22nm,2.2s
MDJ pmax pmax
comp=N,480nm,5.3s
MDJ L L
comp=N,580nm,22.0s
MDJ L L
comp=N,360nm,19.9s
MDJ L L
comp=N,1µm,22.1s
MDJ **Mudanjiang** **58.76 339** P **P** **01 44 44.9 +1.9**
ENH **Enshi** **59.06 314** IAMs_20 IAMs_20 02 06 48.8
comp=Z,2µm,21.0s
ENH **Enshi** **59.06 314** P **P** **01 44 46.1 +0.6**
CN2 **Changchun** **59.64 336** *e*P **P** **01 44 51.8 +2.7**
CN2 *es*P pwP 01 44 58.0 -0.3
CN2 *e*S **S** **01 53 01.0 +2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 L L
comp=Z,400nm,21.0s
CN2 L L
comp=Z,700nm,21.0s
CN2 L L
comp=Z,500nm,21.0s
LYN **LuoYang** **59.64 320** P **P** **01 44 49.6 +0.3**
LYN PP **PP** **01 47 04.1 +2.9**
LYN S **S** **01 52 57.7 -1.5**
LYN SS **SS** **01 56 57.5 +2.2**
LYN pmax pmax
comp=Z,35nm,1.0s
LYN pmax pmax
comp=Z,460nm,3.8s
LYN L L
comp=Z,2µm,17.9s
LYN L L
comp=Z,1µm,19.2s
LYN L L
comp=Z,2µm,21.0s
HNS **HongShan** **60.15 324** ⇓P **P** **01 44 53.9 +1.2**
HNS S **S** **01 53 04.8 -0.7**
HNS pmax pmax
comp=Z,30nm,1.8s
HNS L L
comp=Z,830nm,18.4s
HNS L L
comp=Z,630nm,20.8s
HNS L L
comp=Z,1µm,20.6s
SKR **Severo-Kuril's** **60.18 1** *e*P **P** **01 44 55.3 +2.6**
SKR *e* 01 47 09.3
SKR *e*S **S** **01 53 05.7 +0.2**
SKR pmax pmax
comp=Z,300nm,8.8s
BNX **BinXian** **60.51 338** ⇓P **P** **01 44 55.6 +0.5**
BNX pP **pP** **01 44 58.8 -0.6**
BNX PP **PP** **01 47 06.8 -1.9**
BNX S **S** **01 53 11.1 +1.1**
BNX sS **sS** **01 53 17.6 +0.6**
BNX pmax pmax
comp=Z,23nm,2.3s
BNX pmax pmax
comp=Z,310nm,4.3s
BNX L L
comp=Z,430nm,20.1s
BNX L L
comp=Z,310nm,13.0s
BNX L L
comp=Z,1µm,33.1s
BJI2 **Beijing** **61.14 327** P **P** **01 45 00.0 +0.5**
BJI2 S **S** **01 53 21.0 +2.8**
BJI2 pmax pmax
comp=Z,130nm,5.0s
BJI2 L L
comp=Z,350nm,19.8s
BJI2 L L
comp=Z,260nm,19.6s
BJI2 L L
comp=Z,750nm,25.0s
TYV **Tymovskoe** **61.29 351** *e*P **P** **01 45 02.2 +2.0**
TYV *e*S **S** **01 53 20.6 +0.9**
TYV pmax pmax
comp=Z,500nm,4.5s
TYV pmax pmax
comp=Z,25nm,1.5s
TYV smax smax
comp=N,900nm,6.4s
KMI2 **Kunming** **61.52 305** ⇑P **P** **01 45 03.7 +1.1**
KMI2 S **S** **01 53 24.5 +0.4**
KMI2 pmax pmax
comp=N,13nm,2.4s
KMI2 pmax pmax
comp=N,390nm,7.4s
KMI2 L L
comp=N,440nm,27.3s
KMI2 L L
comp=N,510nm,20.9s
KMI2 L L
comp=N,990nm,23.1s
XAN **Xi'an** **61.65 317** P **P** **01 45 03.7 +0.6**
XAN pP sP 01 45 08.4 -0.7
XAN pmax pmax
comp=Z,27nm,1.8s
XAN **Xi'an** **61.65 317** ⇓P **P** **01 45 03.6 +0.5**
XAN pP sP 01 45 08.3 -0.8
XAN S **S** **01 53 19.7 -5.3**
XAN SS **SS** **01 57 31.1 +4.3**
XAN pmax pmax
comp=Z,27nm,1.5s
XAN L L
comp=Z,2µm,20.6s
XAN L L
comp=Z,1µm,19.8s
XAN L L
comp=Z,3µm,20.6s
CMAR **Chiang Mai Arr** **61.93 297** P **P** **01 45 05.4 +0.2**
comp=Z,1.0nm,0.4s,baz=110,slow=5.8,SNR=13
CMAR S **S** **01 53 32.4 +3.4**
comp=Z,0.9nm,0.3s,baz=97,slow=22,SNR=1.9
CMAR LR LR 02 11 30.6
comp=Z,223nm,20.6s,baz=185,slow=36
comp=Z,1.0nm,0.4s
CMAR **Chiang Mai Arr** **61.93 297** P **P** **01 45 04.9 -0.4**
CMAR **S** **01 53 32.4 +3.4**
CMAR **Chiang Mai Arr** **61.93 297** *ce*P **P** **01 45 05.6 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.2s
CHTO **Chiang Mai** **62.06 297** P **P** **01 45 06.2 +0.1**
CHTO IAmb IAmb 01 45 08.5
comp=Z,54nm,1.6s
CHTO **Chiang Mai** **62.06 297** P **P** **01 45 06.2 +0.1**
CHTO pmax pmax
comp=Z,54nm,1.7s
CHTO **Chiang Mai** **62.06 297** P **P** **01 45 06.8 +0.7**
comp=Z,606nmcomp=Z,20nm,2.1s
CHTO **Chiang Mai** **62.06 297** P **P** **01 45 06.4 +0.3**
KLR **Kul'dur** **62.15 343** LR LR 02 11 16.5
comp=Z,578nm,20.1s,baz=172,slow=35
KLR **Kul'dur** **62.15 343** *d*P **P** **01 45 06.4 +0.3**
KLR pmax pmax
comp=Z,43nm,1.5s
GRNR **Gornyy** **62.37 347** ⇓*i*P **P** **01 45 10.2 +2.6**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
PET **Petropavlovsk** **62.60 3** *e*P **P** **01 45 08.6 -0.4**
PET *e*S **S** **01 53 36.5 +0.4**
PET *e*SS **SS** **01 57 43.2 +2.3**
PET MLR MLR
comp=Z,500nm,14.0s
PET MLR MLR
comp=Z,500nm,15.0s
PEA0B **Petropavlovsk-** **62.65 2** P **P** **01 45 07.8 -1.5**
PEA0B **Petropavlovsk-** **62.65 2** *c*P **P** **01 45 11.4 +2.1**
PETK **Petropavlovsk-** **62.65 2** P **P** **01 45 09.2 -0.2**
comp=Z,25nm,1.0s,baz=183,slow=6.4,SNR=13
PETK S **S** **01 53 40.1 +3.3**
comp=Z,1.7nm,0.9s,baz=156,slow=14,SNR=1.8
PETK LR LR 02 08 57.5
comp=Z,972nm,21.6s,baz=177,slow=33
comp=Z,25nm,1.0s
PETK **Petropavlovsk-** **62.65 2** P **P** **01 45 07.7 -1.6**
PETK **S** **01 53 40.1 +3.3**
CD2 **Chengdu** **63.55 312** P **P** **01 45 16.2 +0.3**
CD2 S **S** **01 53 47.7 -1.4**
CD2 SKS **ScS** **01 55 10.2 +1.2**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,430nm,4.7s
CD2 L L
comp=Z,1µm,19.7s
CD2 L L
comp=Z,2µm,20.9s
CD2 L L
comp=Z,3µm,21.0s
XLT **XiLinHaoTe** **63.97 330** *e*P **P** **01 45 18.3 -0.1**
XLT pP pP 01 45 20.1 -2.7
XLT sP sP 01 45 24.8 +0.4
XLT PP **PP** **01 47 35.8 -3.6**
XLT S **S** **01 53 54.1 +0.2**
XLT SS **SS** **01 57 56.9 -6.0**
XLT pmax pmax
comp=Z,9.0nm,0.9s
XLT pmax pmax
comp=Z,240nm,5.4s
XLT L L
comp=Z,660nm,18.4s
XLT L L
comp=Z,930nm,20.7s
CASY **Casey** **63.98 198** P **P** **01 45 17.6 -0.5**
CASY **Casey** **63.98 198** IAMs_20 IAMs_20 02 10 08.8
comp=Z,2µm,20.0s
CASY **Casey** **63.98 198** P **P** **01 45 17.9 -0.1**
TAOE **Nuku Hiva Isla** **63.99 95** *e*LR LR 02 04 23.2
comp=Z,1µm,31.0s
HHC **Hu-ho-hao-te** **64.27 325** *e*P **P** **01 45 21.6 +1.1**
HHC sP pwP 01 45 28.0 -1.6
HHC S **S** **01 53 58.2 +0.5**
HHC SS **SS** **01 58 11.0 +3.2**
HHC pmax pmax
comp=Z,11nm,0.5s
HHC pmax pmax
comp=Z,280nm,5.7s
HHC L L
comp=Z,570nm,18.3s
HHC L L
comp=Z,460nm,19.1s
HHC L L
comp=Z,780nm,19.1s
SHEM **Shemya Is, Ala** **64.36 13** LR LR 02 08 37.9
comp=Z,3µm,21.9s,baz=181,slow=32
HEH **HeiHe** **64.39 341** *e*P **P** **01 45 22.1 +1.2**
HEH pP **pwP** **01 45 32.6 +2.6**
HEH S **S** **01 53 59.8 +1.3**
HEH pmax pmax
comp=Z,20nm,1.5s
HEH pmax pmax
comp=Z,470nm,7.6s
HEH L L
comp=Z,450nm,23.3s
HEH L L
comp=Z,480nm,23.3s
HEH L L
comp=Z,1µm,23.5s
TNCH **TengChong** **64.91 303** P **P** **01 45 25.6 +0.5**
TNCH PP **PP** **01 47 45.4 -2.7**
TNCH S **S** **01 54 09.4 +3.1**
TNCH pmax pmax
comp=Z,29nm,0.9s
TNCH L L
comp=Z,240nm,16.6s
TNCH L L
comp=Z,400nm,23.9s
TNCH L L
comp=Z,470nm,19.2s
BTO2 **Baotou** **65.17 324** *e*P **P** **01 45 27.5 +1.1**
BTO2 sP **pwP** **01 45 34.3 -1.2**
BTO2 S **S** **01 54 12.6 +3.7**
BTO2 pmax pmax
comp=Z,28nm,0.6s
BTO2 pmax pmax
comp=Z,590nm,6.2s
BTO2 L L
comp=Z,1µm,18.1s
BTO2 L L
comp=Z,2µm,20.1s
BTO2 L L
comp=Z,2µm,17.5s
LZH **Lanzhou** **66.23 316** P **P** **01 45 34.6 +1.2**
LZH pP sP 01 45 40.2 +0.8
LZH S **S** **01 54 23.8 +1.7**
LZH SS **SS** **01 58 38.4 -0.2**
LZH pmax pmax
comp=Z,36nm,1.4s
LZH pmax pmax
comp=Z,370nm,4.4s
LZH L L
comp=Z,610nm,18.4s
LZH L L
comp=Z,950nm,17.8s
LZH L L
comp=Z,1µm,17.8s
LZDM **Lanzhou Array** **66.26 316** P **P** **01 45 32.8 -0.9**
comp=Z,1.5nm,0.3s,baz=138,slow=13,SNR=4.3
LZDM S **S** **01 54 26.4 +3.5**
comp=Z,1.4nm,0.3s,baz=129,slow=25,SNR=1.5
LZDM LR LR 02 13 36.4
comp=Z,421nm,19.3s,baz=325,slow=35
comp=Z,1.5nm,0.3s
HILR **Hailar Array B** **66.60 336** P **P** **01 45 35.8 +0.5**
comp=Z,4.5nm,0.5s,baz=150,slow=15,SNR=6.7
HILR S **S** **01 54 29.4 +3.6**
comp=Z,0.7nm,0.3s,baz=187,slow=19,SNR=0.9
HILR LR LR 02 13 51.8
comp=Z,619nm,18.9s,baz=75,slow=35
comp=Z,4.5nm,0.5s
ZEA **Zeya** **67.46 343** *e*P **P** **01 45 41.7 +1.1**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=Z,200nm,3.4s
VNDA **Vanda** **67.85 178** P **P** **01 45 42.9 +0.1**
comp=Z,5.4nm,1.0s,baz=340,slow=8.8,SNR=16
VNDA LR LR 02 12 14.9
comp=Z,677nm,18.2s,baz=4.5,slow=33
comp=Z,5.4nm,1.0s
VNDA **Vanda** **67.85 178** P **P** **01 45 43.8 +1.0**
VNDA **Vanda** **67.85 178** P **P** **01 45 43.8 +1.0**
VNDA pmax pmax
comp=Z,17nm,1.4s
MORE **Moreh** **68.11 301** IAMs_20 IAMs_20 02 14 58.1
comp=Z,690nm,20.0s
SBA **Scott Base** **68.36 177** P **P** **01 45 48.1 +2.1**
SBA IAmb IAmb 01 45 48.6
comp=Z,33nm,1.7s
SBA **Scott Base** **68.36 177** P **P** **01 45 48.1 +2.1**
SBA pmax pmax
comp=Z,33nm,1.7s
IMP **Imphal** **68.63 301** *e*P **P** **01 45 47.9 -0.9**
MOKO **MOKOCHONG** **68.73 303** *e*P **P** **01 45 48.9 -0.5**
KOHI **KOHIMA** **68.84 302** *e*P **P** **01 45 48.6 -1.4**
MA2 **Magadan** **69.17 358** LR LR 02 15 26.2
comp=Z,337nm,19.6s,baz=195,slow=35
MA2 **Magadan** **69.17 358** *de*P **P** **01 45 50.2 -1.0**
MA2 pmax pmax
comp=Z,56nm,1.8s
MA2 **Magadan** **69.17 358** P **P** **01 45 49.7 -1.5**
comp=Z,850nmcomp=Z,25nm,1.4s
ZIRO **ZIRO** **69.75 304** *e*P **P** **01 45 56.2 +0.5**
BRDH **Bariadhala** **69.82 298** LR LR 02 19 52.2
comp=Z,108nm,18.1s,baz=154,slow=39
SHL **Shillong** **70.64 301** P **P** **01 46 00.0 -1.2**
SHL **Shillong** **70.64 301** P **P** **01 46 00.0 -1.2**
SHL pmax pmax
comp=Z,121nm,1.9s
SHL **Shillong** **70.64 301** *e*P **P** **01 46 00.2 -1.0**
GTA2 **Gaotai** **70.78 318** *e*P **P** **01 46 01.5 -0.2**
GTA2 sP sP 01 46 07.6 -0.2
GTA2 S **S** **01 55 15.2 -0.8**
GTA2 SS **SS** **01 59 50.1 +1.4**
GTA2 pmax pmax
comp=Z,18nm,2.0s
GTA2 pmax pmax
comp=Z,390nm,5.5s
GTA2 L L
comp=Z,490nm,19.2s
GTA2 L L
comp=Z,680nm,19.2s
GTA2 L L
comp=Z,1µm,19.2s
GUWA **GUWAHATI** **71.03 302** *e*P **P** **01 46 02.6 -0.7**
GUWA IAmb IAmb 01 46 04.4
comp=Z,46nm,2.0s
CIT **Chita** **71.04 334** *e*P **P** **01 46 04.2 +1.3**
CIT *e* 01 46 10.8
CIT *e* 01 46 20.8
CIT *e* 01 50 28.2
CIT pmax pmax
comp=Z,128nm,2.6s
UNV **Unalaska Valle** **71.26 23** P **P** **01 46 03.9 -0.2**
baz=220
ULN **Ulaanbaatar** **71.28 328** P **P** **01 46 04.8 +0.2**
ULN **Ulaanbaatar** **71.28 328** *ce*P **P** **01 46 05.5 +0.9**
ULN pmax pmax
comp=Z,54nm,1.7s
ULN **Ulaanbaatar** **71.28 328** P **P** **01 46 05.2 +0.6**
comp=Z,2µmcomp=Z,96nm,1.8s
ULN **Ulaanbaatar** **71.28 328** P **P** **01 46 05.6 +0.9**
SONM **Songino Array** **71.60 328** P **P** **01 46 06.4 -0.1**
comp=Z,12nm,1.0s,baz=137,slow=4.2,SNR=40
comp=Z,12nm,1.0s
SONM **Songino Array** **71.60 328** P **P** **01 46 06.7 +0.2**
SONM IAmb IAmb 01 46 09.6
comp=Z,32nm,1.2s
SONM **Songino Array** **71.60 328** P **P** **01 46 06.7 +0.2**
SONM pmax pmax
comp=Z,32nm,1.2s
SEY **Seymchan** **72.48 359** LR LR 02 12 52.4
comp=Z,838nm,21.7s,baz=148,slow=32
SEY **Seymchan** **72.48 359** ⇓*e*P **P** **01 46 11.5 +0.2**
SEY pmax pmax
comp=Z,22nm,1.1s
SPIA **Saint Paul Isl** **72.56 19** P **P** **01 46 12.0 +0.1**
baz=216
GOMU **GeErMu** **72.63 313** P **P** **01 46 13.4 +0.1**
GOMU S **S** **01 55 36.5 -1.6**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
GOMU L L
comp=Z,600nm,19.6s
GOMU L L
comp=Z,1µm,20.2s
BWNR **Bhubaneshwar** **74.20 294** *e*P **P** **01 46 20.8 -1.5**
YAK **Yakutsk** **74.21 348** LR LR 02 17 11.0
comp=Z,760nm,21.6s,baz=158,slow=34
YAK **Yakutsk** **74.21 348** *e*P **P** **01 46 23.1 +1.6**
YAK *e**PP **sP** **01 46 27.8 +0.3**
YAK *e* 01 46 37.7
YAK *e* 01 49 06.8
YAK *e*PPP PPP 01 50 53.9
YAK *e*S **S** **01 55 57.8 +3.7**
YAK *e* 01 56 34.7
YAK *e*SS **SS** **02 00 43.8 +3.8**
YAK pmax pmax
comp=Z,50nm,1.3s
YAK pmax pmax
comp=N,15nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK pmax pmax
comp=Z,163nm,3.9s
YAK pmax pmax
comp=N,91nm,4.6s
YAK pmax pmax
comp=E,75nm,4.7s
YAK smax smax
comp=N,419nm,8.4s

YAK smax smax
comp=E,170nm,6.2s
SDPT Sand Point 74.76 25 P P 01 46 24.5 -0.3
baz=226
CNBA Chernabura Isl 74.76 25 IAMs_20 IAMs_20 02 15 39.1
comp=Z,2µm,20.0s
CHNA Chernabura Isl 74.77 25 P P 01 46 25.3 +0.4
baz=227
BOD Bodaibo 75.13 339 *e*P P 01 46 27.6 +0.7
BOD pmax pmax
comp=Z,41nm,2.1s
TLY Talaya 75.38 330 LR LR 02 21 10.1
comp=Z,438nm,18.5s,baz=124,slow=37
TLY Talaya 75.38 330 *de*P P 01 46 28.5 -0.1
TLY pmax pmax
comp=Z,33nm,1.9s
IRK Irkutsk 75.42 331 *e*P P 01 46 27.5 -1.3
IRK pmax pmax
comp=Z,615nm,3.6s
EVN Everest 75.72 302 IAmb IAmb 01 46 56.9
comp=Z,41nm,1.4s
EVN Everest 75.72 302 P P 01 46 31.9 +0.1
S14K Fog Glacier 75.78 24 P P 01 46 31.4 +0.6
baz=226
PALK Pallekele 75.83 280 LR LR 02 21 00.9
comp=Z,287nm,21.7s,baz=106,slow=37
GAYA Gaya 76.07 299 *e*P P 01 46 32.5 -0.5
GAYA IAmb IAmb 01 46 34.4
comp=Z,244nm,2.8s
CHGN Chignik 76.26 25 P P 01 46 33.5 +0.1
baz=228
M11K Mekoryuk 76.39 19 P P 01 46 34.5 +0.5
baz=220
MOY Mondy 76.71 329 *e*P P 01 46 36.5 +0.3
MOY pmax pmax
comp=Z,75nm,3.5s
CHIR Chirikof Islan 77.12 26 P P 01 46 38.4 +0.1
baz=230
O14K Tigyukauivet M 77.22 21 IAmb IAmb 01 46 55.3
comp=Z,54nm,1.5s
O14K Tigyukauivet M 77.22 21 P P 01 46 39.5 +0.7
baz=224
M13K Dall Lake 77.34 20 P P 01 46 39.6 +0.2
baz=222
N14K Kuskokwak Cree 77.55 21 IAmb IAmb 01 46 43.5
comp=Z,38nm,1.4s
N14K Kuskokwak Cree 77.55 21 P P 01 46 40.7 +0.2
baz=224
GAMB Gambell 77.58 14 P P 01 46 41.2 +0.5
baz=214
O15K Ungalikthiuk R 77.69 22 IAmb IAmb 01 46 44.1
comp=Z,61nm,1.9s
O15K IAMs_20 IAMs_20 02 15 43.9
comp=Z,2µm,21.0s
O15K Ungalikthiuk R 77.69 22 P P 01 46 42.1 +0.6
baz=226
KNGR Kungurtug, Tuv 77.95 327⇑ *i*P P 01 46 44.1 +0.9
KNGR pmax pmax
comp=Z,95nm,2.2s
BLSP Bilaspur 77.98 295 *e*P P 01 46 42.5 -1.3
BLSP IAmb IAmb 01 46 44.9
comp=Z,32nm,1.6s
R17L Mt. Peulik Vol 77.99 24 P P 01 46 43.7 +0.5
baz=229
BILL Bilibino 78.01 4⇓ *e*P P 01 46 43.6 +0.6
BILL pmax pmax
comp=Z,32nm,1.1s
M14K Bethel 78.06 20 IAmb IAmb 01 46 46.6
comp=Z,28nm,1.1s
M14K Bethel 78.06 20 P P 01 46 44.1 +0.7
baz=224
K13K Kusilvak Mount 78.07 18 P P 01 46 44.3 +0.9
baz=221
SII Sitkinak Islan 78.22 26 IAMs_20 IAMs_20 02 19 37.0
comp=Z,1µm,20.0s
SII Sitkinak Islan 78.22 26 P P 01 46 44.8 +0.4
baz=231
L14K Kuka Creek 78.25 19 IAmb IAmb 01 46 47.7
comp=Z,31nm,1.3s
L14K Kuka Creek 78.25 19 P P 01 46 45.0 +0.5
baz=223
P16K Nushagak River 78.28 23 P P 01 46 44.8 +0.2
baz=227
N15K Kwethluk River 78.29 21 P P 01 46 45.0 +0.3
baz=225
M15K Kasigluk River 78.45 21 P P 01 46 45.6 0.0
baz=225,SNR=5.9
Q16K King Salmon 78.56 23 P P 01 46 46.3 +0.1
baz=229
Q17K Contact Creek 78.59 24 P P 01 46 46.3 -0.2
baz=230
O16K Kokwok River B 78.62 22 P P 01 46 46.6 +0.1
baz=227
L15K Ungalak Mounta 78.89 20 P P 01 46 47.8 -0.2
baz=224
N16K Nishlik Lake 78.98 21 P P 01 46 48.6 0.0
baz=226,SNR=6.4
P17K Kvichak River 78.98 23 IAMs_20 IAMs_20 02 18 08.4
comp=Z,1µm,20.0s
P17K Kvichak River 78.98 23 P P 01 46 48.5 -0.1
baz=229
OHAK Old Harbor 79.01 26 P P 01 46 48.4 -0.4
baz=232
O17K Koliganek Bris 79.12 23 P P 01 46 49.6 +0.3
baz=228
Q18K Katmai Hardscr 79.19 24 P P 01 46 49.4 -0.5
baz=230,SNR=6.4
M16K Timber Creek 79.29 21 IAmb IAmb 01 46 53.6
comp=Z,30nm,1.2s
M16K Timber Creek 79.29 21 P P 01 46 50.0 -0.2
baz=226,SNR=10
K15K Wolf Creek Mou 79.32 19 IAmb IAmb 01 46 53.7
comp=Z,30nm,1.1s
K15K Wolf Creek Mou 79.32 19 P P 01 46 50.5 +0.1
baz=224,SNR=11
P18K Big Mountain, 79.58 23 P P 01 46 51.4 -0.5
baz=230
N17K Nushagak Hills 79.59 22 IAmb IAmb 01 46 56.5
comp=Z,73nm,1.9s
N17K IAMs_20 IAMs_20 02 17 14.1
comp=Z,2µm,22.0s
N17K Nushagak Hills 79.59 22 P P 01 46 51.9 0.0
baz=226
L16K Owhat River 79.59 20 IAmb IAmb 01 46 54.8
comp=Z,41nm,1.7s
L16K Owhat River 79.59 20 P P 01 46 52.3 +0.4
baz=226,SNR=5.2
KDAK Kodiak Island 79.66 26 P P 01 46 52.7 +0.4
comp=Z,5.4nm,1.0s,baz=236,slow=3.6,SNR=2.7
KDAK LR LR 02 18 06.2
comp=Z,844nm,20.4s,baz=235,slow=33
comp=Z,5.4nm,1.0s
KDAK Kodiak Island 79.66 26 P P 01 46 52.6 +0.4
KDAK IAmb IAmb 01 48 52.9
comp=Z,35nm,1.5s
KDAK Kodiak Island 79.66 26 P P 01 46 51.9 -0.4
baz=233
ANM Nome 79.87 16 P P 01 46 53.4 +0.1
baz=220
O18K Koktuh Hills 79.89 23 IAMs_20 IAMs_20 02 18 55.4
comp=Z,1µm,20.0s
O18K Koktuh Hills 79.89 23 P P 01 46 53.1 -0.5
baz=230
Q19K Cape Douglas, 79.92 24 P P 01 46 53.4 -0.3
baz=232
TNA Tin City 79.98 15 P P 01 46 54.3 +0.5
baz=217
M17K Holitna River 80.08 21 IAmb IAmb 01 46 58.2
comp=Z,47nm,1.7s
M17K Holitna River 80.08 21 P P 01 46 55.4 +0.8
baz=228
HYB Hyderabad 80.11 290 *e*P P 01 46 54.4 -1.3
HYB *e*PP PP 01 49 56.0 -2.1
HYB *e*S S 01 56 59.6 -0.5
N18K Kilae Creek 80.17 22 P P 01 46 55.8 +0.8
baz=229,SNR=9.6
QSPA South Pole Qui 80.25 180 P P 01 46 55.6 0.0
comp=Z,33nm,0.8s,baz=12,slow=2.4,SNR=67
QSPA LR LR 02 20 57.5
comp=Z,626nm,18.1s,baz=18,slow=35
comp=Z,33nm,0.8s
QSPA South Pole Qui 80.25 180 P P 01 46 55.3 -0.3
QSPA IAmb IAmb 01 46 58.0
comp=Z,37nm,0.9s
QSPA South Pole Qui 80.25 180 P P 01 46 56.0 +0.4
L17K Donlin 80.28 20 P P 01 46 56.3 +0.8
baz=227
F14K Arctic Creek 80.32 15 P P 01 46 56.6 +0.9
baz=219
J16K Anvik River 80.33 19 IAmb IAmb 01 46 59.4
comp=Z,35nm,1.3s
J16K Anvik River 80.33 19 P P 01 46 56.3 +0.4
baz=224,SNR=10
O19K Port Alsworth 80.45 23 IAMs_20 IAMs_20 02 18 42.2
comp=Z,1µm,20.0s
O19K Port Alsworth 80.45 23 P P 01 46 56.2 -0.3
baz=231
P19K Oil Pt 80.54 24 P P 01 46 57.5 +0.5
baz=232
G15K Niukluk 80.57 16 P P 01 46 57.9 +0.8
baz=221
K17K Iditarod 80.68 20 P P 01 46 58.7 +1.0
baz=227
M18K Stony River 80.72 22 P P 01 46 58.9 +0.9
baz=229
I17K Unalakleet 80.74 18 P P 01 46 58.6 +0.7
baz=224
N19K Bonanza Creek 80.78 23 P P 01 46 59.1 +0.7
baz=230
WMQ Urumqi 80.78 317 *e*P P 01 47 00.3 +1.5
WMQ sP pwP 01 47 06.1 -1.8
WMQ S S 01 57 07.7 +1.4
WMQ pmax pmax
comp=Z,38nm,1.5s
WMQ pmax pmax
comp=Z,550nm,3.7s
WMQ L L
comp=Z,350nm,24.5s
WMQ L L
comp=Z,530nm,22.9s
WMQ L L
comp=Z,550nm,22.9s
H16K Elim 80.82 17 P P 01 46 59.0 +0.6
baz=223
L18K Granite Mounta 80.90 21 P P 01 46 59.6 +0.7
baz=228,SNR=8.9
J17K VABM Dome 80.90 19 IAmb IAmb 01 47 02.3
comp=Z,28nm,1.3s
J17K VABM Dome 80.90 19 P P 01 46 59.6 +0.8
baz=226
F15K North Star Dit 80.95 16 IAmb IAmb 01 47 13.3
comp=Z,35nm,1.6s
F15K IAMs_20 IAMs_20 02 18 20.8
comp=Z,2µm,21.0s
F15K North Star Dit 80.95 16 P P 01 46 59.5 +0.4
baz=220
O20K Slope Mountain 81.05 24 P P 01 47 00.1 +0.3
baz=232
HOM Homer 81.18 24 P P 01 47 00.8 +0.4
baz=233
CNPM China Poot 81.27 25 IAMs_20 IAMs_20 02 19 41.9
comp=Z,2µm,20.0s
M19K Big River Lodg 81.51 22 IAMs_20 IAMs_20 02 17 30.0
comp=Z,2µm,22.0s
M19K Big River Lodg 81.51 22 P P 01 47 02.8 +0.7
baz=230
L19K White Mountain 81.53 21 P P 01 47 03.0 +0.8
baz=230,SNR=8.6
BRLK Bradley Lake 81.56 25 IAMs_20 IAMs_20 02 19 50.0
comp=Z,1µm,19.0s
BRSE Bradley Lake S 81.60 25 P P 01 47 03.3 +0.6
baz=234
H17K Granite Mounta 81.72 18 IAMs_20 IAMs_20 02 19 53.6
comp=Z,1µm,20.0s
H17K Granite Mounta 81.72 18 P P 01 47 04.1 +0.9
baz=225
MAW Mawson 81.85 203 P P 01 47 03.6 -0.2
comp=Z,8.0nm,2.3s,comp=Z,0.0nm
MAW Mawson 81.85 203 P P 01 47 03.8 -0.1
comp=Z,11nm,0.7s,baz=96,slow=10.0,SNR=29
MAW LR LR 02 21 51.1
comp=Z,628nm,18.6s,baz=95,slow=35
comp=Z,11nm,0.7s
MAW Mawson 81.85 203 P P 01 47 03.7 -0.2
MAW Mawson 81.85 203 P P 01 47 03.7 -0.2
MAW pmax pmax
comp=Z,31nm,2.0s
MAW Mawson 81.85 203 P P 01 47 04.0 +0.1
SPCR Spurr Chakacha 81.89 23 P P 01 47 04.5 +0.2
baz=232
G17K Kiwalik Mounta 81.91 17 P P 01 47 05.2 +1.0
baz=224
M20K Styx River 81.96 22 IAmb IAmb 01 47 09.9
comp=Z,55nm,1.9s
M20K Styx River 81.96 22 P P 01 47 05.4 +0.8
baz=232
CAPN Captain Cook N 82.04 24 P P 01 47 05.3 +0.3
baz=234
SEW Seward 82.34 25 P P 01 47 07.4 +0.9
baz=235
H18K Honosa River 82.35 18 P P 01 47 07.1 +0.6
baz=226
F17K Baldwin Pennin 82.42 16 IAMs_20 IAMs_20 02 22 13.8
comp=Z,1µm,20.0s
F17K Baldwin Pennin 82.42 16 P P 01 47 08.0 +1.2
baz=224
J19K Poorman 82.44 20 IAmb IAmb 01 47 10.2
comp=Z,37nm,1.8s
J19K Poorman 82.44 20 P P 01 47 07.6 +0.6
baz=229,SNR=7.7
O22K Cooper Landing 82.45 24 IAMs_20 IAMs_20 02 22 26.0
comp=Z,1µm,19.0s
O22K Cooper Landing 82.45 24 P P 01 47 08.0 +1.0
baz=235
GCSA Galena City Sc 82.53 19 P P 01 47 08.4 +1.0
baz=228
JOSI Joshimath 82.54 303 *e*P P 01 47 06.7 -1.8
K20K Telida 82.56 21 IAmb IAmb 01 47 11.9
comp=Z,59nm,2.0s
K20K Telida 82.56 21 P P 01 47 08.2 +0.5
baz=230,SNR=7.2
SKT Skwentna 82.62 23 IAMs_20 IAMs_20 02 20 30.6
comp=Z,1µm,20.0s
SKT Skwentna 82.62 23 P P 01 47 07.9 -0.1
baz=233
E17K Hotham Inlet 82.73 16 P P 01 47 08.3 -0.1
baz=223
C16K Lisburne Hills 82.75 14 P P 01 47 08.3 -0.2
baz=219
G18K Tagagawik 82.78 17 IAMs_20 IAMs_20 02 18 32.4
comp=Z,2µm,22.0s
G18K Tagagawik 82.78 17 P P 01 47 08.9 +0.2
baz=226
RC01 Rabbit Creek A 82.79 24 P P 01 47 08.9 0.0
baz=235
D17K Noatak River 82.86 15 P P 01 47 09.4 +0.3
baz=222
GUNA GUNA 82.93 296 *e*P P 01 47 09.7 -0.8
GUNA IAmb IAmb 01 47 11.3
comp=Z,137nm,1.6s
PPLA Purkeypile 82.94 22 IAmb IAmb 01 47 12.7
comp=Z,59nm,1.9s
PPLA Purkeypile 82.94 22 P P 01 47 09.2 -0.6
baz=232
F18K Selawik 82.98 17 P P 01 47 09.8 +0.1
baz=225
M22K Willow 83.03 23 P P 01 47 10.4 +0.3
baz=234
J20K Nowinta River 83.05 20 IAmb IAmb 01 47 14.3
comp=Z,60nm,1.9s
J20K Nowinta River 83.05 20 P P 01 47 10.6 +0.5
baz=230,SNR=11
P23K Montague Islan 83.14 25 IAMs_20 IAMs_20 02 21 12.2
comp=Z,1µm,20.0s
P23K Montague Islan 83.14 25 P P 01 47 10.7 0.0
baz=237
RDOG Red Dog Mine 83.18 15 IAmb IAmb 01 47 13.6
comp=Z,25nm,1.2s
RDOG Red Dog Mine 83.18 15 P P 01 47 11.1 +0.3
baz=222
H19K Roundabout Mou 83.19 18 IAmb IAmb 01 47 13.8
comp=Z,24nm,1.2s
H19K IAMs_20 IAMs_20 02 20 50.2
comp=Z,2µm,20.0s
H19K Roundabout Mou 83.19 18 P P 01 47 11.0 +0.2
baz=228,SNR=11
L22K Petersville 83.24 22 P P 01 47 11.2 0.0
baz=234
DGZ Jazzator, Alta 83.27 323 *de*P P 01 47 11.4 -0.4
DGZ pmax pmax
comp=Z,44nm,1.7s
Q23K Middleton Isla 83.28 26 P P 01 47 11.3 -0.1
baz=238
CAST Castle Rocks 83.30 21 IAmb IAmb 01 47 13.3
comp=Z,28nm,1.4s
CAST Castle Rocks 83.30 21 P P 01 47 11.0 -0.5
baz=232,SNR=14
E18K Tukpahlearik C 83.31 16 P P 01 47 11.9 +0.4
baz=224
PMR Palmer 83.32 24 IAmb IAmb 01 47 24.0
comp=Z,22nm,1.2s
PMR Palmer 83.32 24 P P 01 47 11.9 +0.3
baz=235
I20K Naaghedeneel 83.34 19 P P 01 47 11.8 +0.2
baz=230
CUT Chulitna 83.35 23 P P 01 47 11.8 +0.1
baz=234
G19K Purcell Mounta 83.41 18 IAmb IAmb 01 47 15.0
comp=Z,23nm,1.2s
G19K IAMs_20 IAMs_20 02 19 03.0
comp=Z,2µm,22.0s
G19K Purcell Mounta 83.41 18 P P 01 47 12.6 +0.6
baz=227,SNR=9.9
C17K DeLong Mountai 83.42 14 P P 01 47 12.6 +0.5
baz=221
KNK Knik Glacier 83.49 24 P P 01 47 13.0 +0.5
baz=236
CHUM Lake Minchumin 83.50 21 P P 01 47 12.9 +0.5
baz=232,SNR=11
HNLY HANLEY 83.63 305 *e*P P 01 47 14.6 0.0
HNLY IAmb IAmb 01 47 21.7
comp=Z,40nm,1.2s
H20K Anotleneega Mo 83.66 19 P P 01 47 13.6 +0.3
baz=230
F19K Shaleruckik Mo 83.68 17 IAMs_20 IAMs_20 02 19 31.1
comp=Z,1µm,22.0s
F19K Shaleruckik Mo 83.68 17 P P 01 47 13.9 +0.5
baz=227,SNR=9.5
HIN Hinchinbrook I 83.73 25 IAMs_20 IAMs_20 02 22 00.9
comp=Z,1µm,20.0s
GLI Glacier Island 83.74 25 IAMs_20 IAMs_20 02 21 18.3
comp=Z,1µm,21.0s
GLI Glacier Island 83.74 25 P P 01 47 14.0 +0.2
baz=237
SML Sawmill 83.76 24 IAMs_20 IAMs_20 02 20 49.6
comp=Z,1µm,21.0s
SML Sawmill 83.76 24 P P 01 47 14.0 +0.1
baz=236
TRF Thorofare Moun 83.96 22 P P 01 47 14.9 -0.2
baz=234
M23K Glacier View 83.99 24 P P 01 47 15.8 +0.8
baz=236
ZSN Zaisan 83.99 320 *c i*P P 01 47 16.1 +0.7
ZSN pmax pmax
comp=Z,41nm,1.6s
ZSN Zaisan 83.99 320⇑ *i*P P 01 47 16.2 +0.7
comp=Z,41nm,1.6s
C18K Utukok River 84.05 15 IAmb IAmb 01 47 17.8
comp=Z,16nm,1.1s
C18K Utukok River 84.05 15 P P 01 47 15.9 +0.6
baz=223
EYAK Cordova Ski Ar 84.13 25 P P 01 47 16.1 +0.3
baz=238
SCM Sheep Creek Mo 84.17 24 P P 01 47 15.8 -0.2
baz=237
WAT1 Susitna Watana 84.25 23 P P 01 47 16.5 +0.1
baz=236
E19K Redstone River 84.26 17 IAmb IAmb 01 47 19.4
comp=Z,26nm,1.1s
E19K IAMs_20 IAMs_20 02 19 07.5
comp=Z,2µm,22.0s
E19K Redstone River 84.26 17 P P 01 47 16.8 +0.5
baz=227,SNR=22
KAIM Kayak Island 84.38 26 P P 01 47 17.5 +0.5
baz=240
I21K Tanana 84.41 20 IAmb IAmb 01 47 20.0
comp=Z,22nm,1.2s
I21K Tanana 84.41 20 P P 01 47 17.6 +0.6
baz=232,SNR=10
WAT6 Susitna Watana 84.42 23 P P 01 47 17.3 -0.1
baz=236
DIV Divide 84.42 25 IAMs_20 IAMs_20 02 23 20.2
comp=Z,996nm,19.0s
F20K Avaraart Lake 84.42 17 IAmb IAmb 01 47 38.8
comp=Z,33nm,1.8s
F20K IAMs_20 IAMs_20 02 21 09.7
comp=Z,2µm,20.0s
F20K Avaraart Lake 84.42 17 P P 01 47 18.0 +0.9
baz=229,SNR=5.5
H21K Melozitna River 84.43 19 P P 01 47 17.7 +0.4
baz=232,SNR=6.6
RND Reindeer 84.46 22 IAmb IAmb 01 47 30.6
comp=Z,61nm,2.0s
RND IAMs_20 IAMs_20 02 19 47.9
comp=Z,1µm,22.0s
RAGM Ragged Mountai 84.50 26 IAMs_20 IAMs_20 02 24 37.3
comp=Z,1µm,20.0s
KLU Klutina 84.55 24 IAmb IAmb 01 47 23.6
comp=Z,32nm,1.3s
KLU IAMs_20 IAMs_20 02 21 30.7
comp=Z,1µm,20.0s
KLU Klutina 84.55 24 P P 01 47 18.1 +0.1
baz=238
MCK McKinley 84.62 22 IAmb IAmb 01 47 20.1
comp=Z,31nm,1.1s
MCK IAMs_20 IAMs_20 02 19 39.0
comp=Z,2µm,22.0s
MCK McKinley 84.62 22 P P 01 47 18.1 -0.1
baz=235
BWN Browne 84.68 21 IAMs_20 IAMs_20 02 19 42.2
comp=Z,2µm,21.0s
D19K Kuna River 84.73 16 P P 01 47 19.5 +0.8
baz=226
MLY Manley 84.74 20 P P 01 47 18.8 0.0
baz=234,SNR=8.6
G21K Allakaket 84.75 18 IAmb IAmb 01 47 26.8
comp=Z,27nm,1.7s
G21K Allakaket 84.75 18 P P 01 47 18.8 0.0
baz=231,SNR=7.3
M24K Tolsona, Glenn 84.78 24 IAMs_20 IAMs_20 02 24 15.6
comp=Z,957nm,19.0s
M24K Tolsona, Glenn 84.78 24 P P 01 47 19.3 +0.2
baz=238
C19K Lookout Ridge 84.78 15 IAmb IAmb 01 47 46.2
comp=Z,23nm,1.4s
C19K Lookout Ridge 84.78 15 P P 01 47 18.4 -0.6
baz=225
BMRM Bremner River 84.83 25 IAmb IAmb 01 47 32.2
comp=Z,47nm,1.6s
BMRM IAMs_20 IAMs_20 02 22 05.9
comp=Z,1µm,20.0s
BMRM Bremner River 84.83 25 P P 01 47 18.9 -0.5
baz=239
DHY Denali Highway 84.83 23 P P 01 47 19.2 -0.3
baz=237
BERG Berg Lake 84.92 26 IAMs_20 IAMs_20 02 22 54.3
comp=Z,981nm,19.0s
H22K Ishtalitna Cre 85.04 19 P P 01 47 20.6 +0.3
baz=233,SNR=5.9
NEA2 Nenana 85.06 21 IAmb IAmb 01 47 22.0
comp=Z,22nm,1.3s
NEA2 IAMs_20 IAMs_20 02 20 23.8
comp=Z,1µm,21.0s
NEA2 Nenana 85.06 21 P P 01 47 20.2 -0.3
baz=235,SNR=9.2
E20K Nigu River 85.10 16 P P 01 47 20.7 +0.1
baz=228,SNR=9.7
N25K Chitina, Valde 85.15 25 P P 01 47 21.1 +0.1
baz=239
F21K Alatna River 85.21 18 P P 01 47 21.0 -0.2
baz=231,SNR=5.6
A19K Wainwright 85.21 14 P P 01 47 21.4 +0.4
baz=223
I23K Minto, Yukon-K 85.28 21 P P 01 47 21.8 +0.3
baz=235
D20K Etivluk River 85.29 16 IAmb IAmb 01 47 24.3
comp=Z,29nm,1.5s
D20K IAMs_20 IAMs_20 02 21 01.5
comp=Z,2µm,21.0s
D20K Etivluk River 85.29 16 P P 01 47 21.9 +0.5
baz=228
HARP HAARP 85.33 24 P P 01 47 21.9 0.0
baz=239
WRH Wood River Hil 85.34 21 IAMs_20 IAMs_20 02 19 50.2
comp=Z,2µm,22.0s
CRQE Cirque 85.36 26 P P 01 47 21.5 -0.6
baz=241
GLB Gilahina Butte 85.40 25 IAmb IAmb 01 47 26.1
comp=Z,39nm,1.5s
GLB IAMs_20 IAMs_20 02 22 43.0
comp=Z,958nm,20.0s
MK31 Makanchi Array 85.41 319 *d i*P P 01 47 22.1 -0.5
MKAR Makanchi Array 85.41 319 P P 01 47 21.7 -0.9
comp=Z,7.2nm,0.9s,baz=108,slow=5.8,SNR=26

MKAR S **SKSac** **01 57 48.1 +1.0**
comp=Z,0.2nm,0.4s,baz=74,slow=13,SNR=2.0
MKAR LR LR 02 23 38.0
comp=Z,821nm,21.3s,baz=80,slow=34
comp=Z,7.2nm,0.9s
MKAR Makanchi Array 85.41 319 P **P** **01 47 21.8 -0.8**
VRDI Verde Repeater 85.44 25 IAmb IAmb 01 47 27.9
comp=Z,33nm,1.5s
VRDI IAMs_20 IAMs_20 02 22 36.2
comp=Z,1µm,21.0s
CCB Clear Creek Bu 85.54 21 IAmb IAmb 01 47 24.3
comp=Z,20nm,1.4s
CCB IAMs_20 IAMs_20 02 20 06.5
comp=Z,2µm,22.0s
H23K Yukon River 85.61 20 P **P** **01 47 23.0 -0.2**
baz=235
MAKZ Makanchi 85.62 319 P **P** **01 47 23.0 -0.6**
MAKZ IAmb IAmb 01 47 37.4
comp=Z,21nm,1.1s
MAKZ Makanchi 85.62 319 P **P** **01 47 23.0 -0.6**
MAKZ pmax pmax
comp=Z,21nm,1.1s
MAKZ Makanchi 85.62 319 P **P** **01 47 23.2 -0.4**
G22K Bettles 85.63 19 P **P** **01 47 22.9 -0.2**
baz=233
COLA College 85.65 21 *c* eP **P** **01 47 23.3 0.0**
COLA pmax pmax
comp=Z,25nm,1.4s
COLA College 85.65 21 P **P** **01 47 23.4 0.0**
baz=236
COLA College 85.65 21 P **P** **01 47 23.0 -0.3**
MCARA McCarthy VSAT 85.70 25 IAmb IAmb 01 47 32.9
comp=Z,20nm,1.1s
MCARA IAMs_20 IAMs_20 02 22 54.0
comp=Z,1µm,21.0s
MCARA McCarthy VSAT 85.70 25 P **P** **01 47 23.3 -0.3**
baz=241
AJM Ajmer 85.72 298 *e* P **P** **01 47 22.4 -2.3**
AJM IAmb IAmb 01 47 25.2
comp=Z,16nm,0.7s
HDA Harding Lake 85.72 22 IAMs_20 IAMs_20 02 20 24.2
comp=Z,1µm,22.0s
HDA Harding Lake 85.72 22 P **P** **01 47 23.6 -0.1**
baz=237
F22K John River 85.78 18 P **P** **01 47 23.9 -0.1**
baz=232
WUS Wushi 85.79 313 P **P** **01 47 25.6 +0.8**
K24K Donnelly Dome 85.83 22 IAMs_20 IAMs_20 02 20 43.4
comp=Z,1µm,22.0s
K24K Donnelly Dome 85.83 22 P **P** **01 47 24.7 +0.4**
baz=238
E21K Killik River 85.84 17 IAMs_20 IAMs_20 02 20 41.4
comp=Z,1µm,21.0s
E21K Killik River 85.84 17 P **P** **01 47 24.6 +0.3**
baz=230
POKR Poker Plat Res 85.94 21 P **P** **01 47 24.7 -0.1**
baz=236
ILAR Eielson Array 85.94 21 P **P** **01 47 23.5 -1.3**
comp=Z,3.5nm,0.9s,baz=249,slow=5.7,SNR=21
ILAR S **SKSac** **01 57 53.1 +3.4**
comp=Z,0.1nm,0.6s,baz=276,slow=7.2,SNR=1.3
ILAR LR LR 02 21 02.5
comp=Z,1µm,21.9s,baz=244,slow=32
comp=Z,3.5nm,0.9s
ILAR Eielson Array 85.94 21 P **P** **01 47 23.2 -1.6**
G23K Bananza Creek 85.97 19 P **P** **01 47 25.0 0.0**
baz=234,SNR=6.8
B20K Meade River 86.03 15 P **P** **01 47 25.5 +0.4**
baz=227
C21K Knifeblade Rid 86.08 16 P **P** **01 47 25.8 +0.5**
baz=229
BARN Barnard Glacie 86.12 26 IAmb IAmb 01 47 39.4
comp=Z,22nm,1.2s
RIDG Independent Ri 86.15 23 P **P** **01 47 26.5 +0.6**
baz=239,SNR=7.6
MENT Mentasta 86.18 24 IAmb IAmb 01 47 29.3
comp=Z,54nm,1.9s
H24K Noodor Dome 86.18 20 P **P** **01 47 26.4 +0.4**
baz=236
SHLS Shalkode 86.19 315 *e* P **P** **01 47 25.6 -1.0**
SHLS pmax pmax
comp=Z,25nm,1.4s
SHLS Shalkode 86.19 315 *e* P **P** **01 47 25.7 -1.0**
comp=Z,25nm,1.4s
M26K Nabesna, AK 86.21 24 IAmb IAmb 01 47 29.4
comp=Z,50nm,1.9s
M26K IAMs_20 IAMs_20 02 21 40.4
comp=Z,1µm,20.0s
M26K Nabesna, AK 86.21 24 P **P** **01 47 26.8 +0.5**
baz=241,SNR=6.3
COLD Coldfoot 86.22 19 IAmb IAmb 01 47 29.4
comp=Z,26nm,1.6s
E22K Anaktuvuk Pass 86.28 18 IAMs_20 IAMs_20 02 23 30.9
comp=Z,1µm,20.0s
E22K Anaktuvuk Pass 86.28 18 P **P** **01 47 27.1 +0.7**
baz=232
PCA Pinnacle 86.29 27 IAMs_20 IAMs_20 02 21 34.7
comp=Z,1µm,20.0s
PINM Pinnacle 86.30 27 P **P** **01 47 26.8 +0.1**
baz=243
L26K Log Cabin Wild 86.37 24 IAmb IAmb 01 47 31.2
comp=Z,41nm,1.7s
L26K IAMs_20 IAMs_20 02 22 05.8
comp=Z,954nm,20.0s
L26K Log Cabin Wild 86.37 24 P **P** **01 47 27.2 +0.2**
baz=240,SNR=6.4
ZALV Zalesovo Beam 86.41 326 P **P** **01 47 25.3 -2.0**
comp=Z,3.7nm,0.7s,baz=113,slow=5.5,SNR=14
ZALV S **SKSac** **01 57 55.3 +2.4**
comp=Z,0.2nm,0.3s,baz=128,slow=17,SNR=1.4
ZALV LR LR 02 24 19.4
comp=Z,683nm,21.5s,baz=110,slow=34
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 86.41 326 *i* P **P** **01 47 25.7 -1.6**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
J25K Salcha River, 86.41 22 IAMs_20 IAMs_20 02 20 34.4
comp=Z,1µm,22.0s
J25K Salcha River, 86.41 22 P **P** **01 47 27.4 +0.2**
baz=238,SNR=16
B21K Ikpikpuk River 86.43 16 P **P** **01 47 27.3 +0.3**
baz=230
UZB Uzynbulak 86.49 315 *c i* P **P** **01 47 28.5 +0.3**
UZB pmax pmax
comp=Z,26nm,1.4s
UZB Uzynbulak 86.49 315 ⇑ *i* P **P** **01 47 28.6 +0.3**
comp=Z,26nm,1.4s
SCRK Sand Creek 86.60 23 IAmb IAmb 01 47 31.1
comp=Z,61nm,1.9s
SCRK Sand Creek 86.60 23 P **P** **01 47 28.7 +0.5**
baz=240,SNR=9.5
O28M Mount Upton 86.63 26 IAmb IAmb 01 47 31.9
comp=Z,30nm,1.4s
O28M Mount Upton 86.63 26 P **P** **01 47 28.6 -0.1**
baz=243
M27K Edge Creek, AK 86.64 25 P **P** **01 47 28.2 -0.3**
baz=242,SNR=24
G24K Hadweenzic Riv 86.80 20 IAmb IAmb 01 47 35.7
comp=Z,52nm,1.9s
G24K Hadweenzic Riv 86.80 20 P **P** **01 47 29.9 +0.9**
baz=236,SNR=6.8
KPKS Kokpek 86.82 315 *e* P **P** **01 47 30.0 +0.3**
KPKS Kokpek 86.82 315 *e* P **P** **01 47 30.1 +0.3**
PRP Porcupine Dome 86.83 21 IAMs_20 IAMs_20 02 20 55.4
comp=Z,2µm,22.0s
PRP Porcupine Dome 86.83 21 P **P** **01 47 28.7 -0.6**
baz=238
E23K Chandalar 86.89 18 IAmb IAmb 01 47 51.3
comp=Z,30nm,1.6s
E23K Chandalar 86.89 18 P **P** **01 47 29.6 +0.1**
baz=234,SNR=5.3
TARG Taragay, Kyrgy 86.96 313 IAmb IAmb 01 47 43.1
comp=Z,39nm,1.3s
TARG Taragay, Kyrgy 86.96 313 P **P** **01 47 31.1 +0.3**
YUK3 Moose Creek 86.97 25 P **P** **01 47 30.1 -0.1**
baz=243,SNR=7.0
JMU Jammu 87.00 304 *e* P **P** **01 47 30.2 -0.6**
JMU IAmb IAmb 01 47 32.2
comp=Z,129nm,1.7s
BCAR Beaver Creek A 87.02 24 P **P** **01 47 31.3 +1.1**
YUK8 Steele Glacier 87.04 26 P **P** **01 47 30.0 -0.6**
baz=244,SNR=7.3
A21K Barrow 87.05 14 P **P** **01 47 30.5 +0.4**
baz=228
BVCY Beaver Creek 87.09 25 P **P** **01 47 30.7 +0.2**
baz=243
D23K Nanushuk River 87.11 17 IAmb IAmb 01 47 33.9
comp=Z,21nm,1.2s
D23K IAMs_20 IAMs_20 02 22 58.7
comp=Z,1µm,20.0s
D23K Nanushuk River 87.11 17 P **P** **01 47 30.3 -0.2**
baz=233,SNR=8.8
F24K Squaw Lake 87.12 19 P **P** **01 47 30.6 0.0**
baz=236,SNR=9.8
O29M Mount Kennedy 87.14 27 IAMs_20 IAMs_20 02 22 02.0
comp=Z,1µm,21.0s
O29M Mount Kennedy 87.14 27 P **P** **01 47 30.5 -0.5**
baz=245
B22K Teshekpuk Lake 87.21 15 P **P** **01 47 30.8 -0.1**
baz=231
A22K Sinclair Lake 87.24 15 P **P** **01 47 30.9 -0.1**
baz=229
P29M Windy Craggy 87.24 28 IAmb IAmb 01 47 59.5
comp=Z,33nm,1.4s
P29M Windy Craggy 87.24 28 P **P** **01 47 31.3 0.0**
baz=246
TOLK Toolik Lake Re 87.25 18 P **P** **01 47 31.2 0.0**
baz=234
E24K Your Creek 87.25 18 P **P** **01 47 31.1 -0.1**
baz=235
S31K Pelican 87.28 30 P **P** **01 47 31.6 +0.2**
baz=247
G25K Bearman Lake 87.29 20 P **P** **01 47 31.9 +0.6**
baz=238,SNR=7.7
K27K Chicken 87.36 23 IAMs_20 IAMs_20 02 22 48.8
comp=Z,1µm,20.0s
SIT Sitka 87.39 31 P **P** **01 47 31.4 -0.6**
baz=248
BRWY Burwash Landin 87.40 26 P **P** **01 47 31.8 -0.2**
baz=244,SNR=6.7
TDK Taldyqorghan 87.45 316 *e* P **P** **01 47 33.0 +0.4**
TDK pmax pmax
comp=Z,22nm,1.3s
TDK Taldyqorghan 87.45 316 *e* P **P** **01 47 33.0 +0.4**
comp=Z,22nm,1.3s
YUK6 Outpost Mounta 87.51 27 P **P** **01 47 32.2 -0.6**
baz=245
YUK4 Talbot Arm 87.55 26 P **P** **01 47 33.1 +0.1**
baz=245,SNR=12
C23K Itkillik River 87.65 16 IAMs_20 IAMs_20 02 22 14.0
comp=Z,1µm,21.0s
C23K Itkillik River 87.65 16 P **P** **01 47 33.3 +0.3**
baz=233
ASAI AK-SAY(Kyrgyzs 87.68 312 P **P** **01 47 35.0 +0.8**
R31K City Hall, Gus 87.70 30 P **P** **01 47 33.5 0.0**
baz=247
D24K Happy Valley 87.76 17 IAmb IAmb 01 47 38.3
comp=Z,31nm,1.6s
D24K Happy Valley 87.76 17 P **P** **01 47 33.9 +0.3**
baz=235
P30M Million Dollar 87.80 28 P **P** **01 47 33.6 -0.4**
baz=246
HYT Haines Junctio 87.84 27 P **P** **01 47 33.5 -0.8**
baz=246,SNR=12
F25K Christian Rive 87.89 19 IAmb IAmb 01 47 39.1
comp=Z,31nm,1.7s
F25K Christian Rive 87.89 19 P **P** **01 47 34.4 +0.1**
baz=238
MDOK Medeo 87.89 314 *e* P **P** **01 47 35.4 +0.5**
MDOK Medeo 87.89 314 *e* P **P** **01 47 35.4 +0.5**
S32K Killisnoo 87.92 31 IAMs_20 IAMs_20 02 19 38.8
comp=Z,1µm,21.0s
S32K Killisnoo 87.92 31 P **P** **01 47 34.3 -0.2**
baz=249
TNSS Tian-Shan 87.92 314 *e* P **P** **01 47 35.6 +0.2**
TNSS Tian-Shan 87.92 314 *e* P **P** **01 47 35.7 +0.2**
KSH2 Kashi 87.94 310 P **P** **01 47 35.4 +0.1**
KSH2 pP sP 01 47 41.3 -0.2
KSH2 S **S** **01 58 10.5 -7.8**
KSH2 pmax pmax
comp=Z,11nm,2.1s
KSH2 pmax pmax
comp=Z,310nm,7.2s
KSH2 L L
comp=Z,620nm,23.0s
KSH2 L L
comp=Z,490nm,19.9s
KSH2 L L
comp=Z,580nm,23.4s
CRAG Craig 87.96 33 P **P** **01 47 34.3 -0.4**
baz=250
AAA Alma-Ata 87.99 314 *e* P **P** **01 47 35.9 +0.5**
AAA pmax pmax
comp=Z,7.0nm,0.5s
AAA Alma-Ata 87.99 314 *e* P **P** **01 47 35.1 -0.3**
comp=Z,7.4nm,0.5s
M29M Somme Creek 88.10 25 IAmb IAmb 01 47 39.0
comp=Z,18nm,1.3s
M29M IAMs_20 IAMs_20 02 24 30.6
comp=Z,1µm,20.0s
M29M Somme Creek 88.10 25 P **P** **01 47 35.2 -0.3**
baz=245,SNR=9.5
C24K Franklin Bluff 88.12 17 IAmb IAmb 01 47 38.4
comp=Z,34nm,1.4s
C24K IAMs_20 IAMs_20 02 22 40.5
comp=Z,1µm,21.0s
C24K Franklin Bluff 88.12 17 P **P** **01 47 35.2 0.0**
baz=235
G26K Porcupine Rive 88.17 20 P **P** **01 47 35.7 +0.1**
baz=240,SNR=17
U33K Whale Pass 88.18 32 IAMs_20 IAMs_20 02 21 15.8
comp=Z,1µm,20.0s
U33K Whale Pass 88.18 32 P **P** **01 47 35.7 -0.1**
baz=250
E25K Arctic Village 88.19 19 IAmb IAmb 01 47 39.0
comp=Z,18nm,1.4s
E25K IAMs_20 IAMs_20 02 25 16.3
comp=Z,1µm,20.0s
E25K Arctic Village 88.19 19 P **P** **01 47 35.7 +0.1**
baz=238
R32K Eaglecrest 88.25 30 P **P** **01 47 35.7 -0.4**
baz=248
I27K Kandik River 88.28 22 IAMs_20 IAMs_20 02 22 15.9
comp=Z,1µm,22.0s
I27K Kandik River 88.28 22 P **P** **01 47 36.4 +0.2**
baz=242
N30M Aishikik Lake 88.28 26 IAmb IAmb 01 47 39.8
comp=Z,42nm,1.6s
N30M Aishikik Lake 88.28 26 P **P** **01 47 36.3 -0.1**
baz=246,SNR=7.6
SKAG Skagway 88.30 29 P **P** **01 47 36.4 +0.1**
baz=248
DAWY Dawson 88.43 24 P **P** **01 47 36.8 -0.1**
baz=244,SNR=21
F26K Sheenjek River 88.43 19 IAmb IAmb 01 48 14.4
comp=Z,50nm,2.0s
F26K Sheenjek River 88.43 19 P **P** **01 47 37.0 +0.1**
baz=240
O30N Mendenhall 88.45 27 IAmb IAmb 01 47 41.3
comp=Z,36nm,1.4s
O30N Mendenhall 88.45 27 P **P** **01 47 36.7 -0.4**
baz=247,SNR=6.1
NIL Nilore 88.49 304 P **P** **01 47 36.6 -1.3**
NIL Nilore 88.49 304 P **P** **01 47 36.6 -1.3**
NIL pmax pmax
comp=Z,55nm,1.6s
NIL MLR MLR
comp=Z,700nm,22.0s
NIL Nilore 88.49 304 P **P** **01 47 37.2 -0.7**
T33K Petersburg 88.51 32 P **P** **01 47 37.1 -0.3**
baz=250
L29M L29M 88.52 25 IAmb IAmb 01 47 41.1
comp=Z,30nm,1.4s
L29M L29M 88.52 25 P **P** **01 47 36.9 -0.5**
baz=245,SNR=11
D25K Kavik River 88.58 18 P **P** **01 47 37.9 +0.4**
baz=237,SNR=5.8
H27K Steamboat Moun 88.61 21 IAMs_20 IAMs_20 02 21 51.5
comp=Z,1µm,22.0s
H27K Steamboat Moun 88.61 21 P **P** **01 47 37.4 -0.4**
baz=242,SNR=13
WRAK Wrangell Islan 88.69 32 IAMs_20 IAMs_20 02 21 21.3
comp=Z,1µm,20.0s
WRAK Wrangell Islan 88.69 32 P **P** **01 47 38.4 +0.2**
baz=250
V35K Ketchikan 88.72 33 IAMs_20 IAMs_20 02 21 14.1
comp=Z,1µm,20.0s
V35K Ketchikan 88.72 33 P **P** **01 47 38.4 0.0**
baz=251
I28M Miner Creek 88.83 22 P **P** **01 47 38.6 -0.2**
baz=243,SNR=11
G27K Doyon Strip 88.84 21 IAmb IAmb 01 47 42.4
comp=Z,21nm,1.4s
G27K Doyon Strip 88.84 21 P **P** **01 47 39.2 +0.5**
baz=242,SNR=9.7
M30M Minto, Yukon 88.86 25 IAmb IAmb 01 47 43.4
comp=Z,31nm,1.6s
M30M IAMs_20 IAMs_20 02 24 34.7
comp=Z,1µm,20.0s
M30M Minto, Yukon 88.86 25 P **P** **01 47 39.1 +0.1**
baz=246,SNR=9.1
N31M Braeburn, Yuko 88.87 27 IAMs_20 IAMs_20 02 23 37.8
comp=Z,1µm,19.0s
N31M Braeburn, Yuko 88.87 27 P **P** **01 47 38.5 -0.5**
baz=247,SNR=7.2
KURK Kurchatov 88.93 322 P **P** **01 47 38.9 -0.6**
KURK Kurchatov 88.93 322 *c i* P **P** **01 47 39.3 -0.2**
KURK pmax pmax
comp=Z,29nm,2.3s
KURK Kurchatov 88.93 322 P **P** **01 47 39.1 -0.4**
WHY Whitehorse 88.96 28 P **P** **01 47 39.5 0.0**
baz=248
KURBB Kurchatov Arra 88.96 322 P **P** **01 47 38.6 -1.0**
comp=Z,0.9nm,0.8s,baz=109,slow=3.9,SNR=17
KURBB LR LR 02 26 41.5
comp=Z,449nm,21.5s,baz=124,slow=35
comp=Z,0.9nm,0.8s
J29N Klondike Camp 89.06 24 IAMs_20 IAMs_20 02 21 51.7
comp=Z,960nm,22.0s
J29N Klondike Camp 89.06 24 P **P** **01 47 39.3 -0.6**
baz=245
K29M Barlow Dome 89.08 24 IAmb IAmb 01 47 43.7
comp=Z,31nm,1.3s
K29M Barlow Dome 89.08 24 P **P** **01 47 40.2 +0.1**
baz=246,SNR=14
P32M Atlin 89.11 29 P **P** **01 47 40.2 0.0**
baz=249
C26K Camden Bay 89.33 17 P **P** **01 47 41.2 +0.3**
baz=239
E27K Coleen River 89.51 20 P **P** **01 47 41.7 -0.2**
baz=242
C27K Jago River 89.55 18 IAmb IAmb 01 47 45.5
comp=Z,28nm,1.3s
C27K Jago River 89.55 18 P **P** **01 47 42.0 0.0**
baz=240
AAK Ala-Archa 89.57 313 LR LR 02 27 38.4
comp=Z,1µm,20.8s,baz=107,slow=36
AAK Ala-Archa 89.57 313 P **P** **01 47 43.2 +0.3**
AAK Ala-Archa 89.57 313 IAMs_20 IAMs_20 02 27 26.5
comp=Z,1µm,20.0s
AAK Ala-Archa 89.57 313 *c e* P **P** **01 47 43.4 +0.5**
AAK pmax pmax
comp=Z,34nm,1.9s
AAK Ala-Archa 89.57 313 P **P** **01 47 42.9 -0.1**
Q32M Nakina River 89.59 30 P **P** **01 47 42.3 -0.3**
baz=250
SGDS Sogindy 89.67 314 ⇑ *i* P **P** **01 47 43.5 +0.3**
comp=Z,20nm,1.5s
SYO Syowa Base 89.72 199 ‖ *e* P **P** **01 47 42.2 -0.7**
SYO Syowa Base 89.72 199 ‖ *e* P P 01 47 54.3 +11
H29M Whitestone 89.75 22 IAMs_20 IAMs_20 02 24 32.7
comp=Z,1µm,20.0s
H29M Whitestone 89.75 22 P **P** **01 47 42.7 -0.4**
baz=245
M31M Drury Creek, Y 89.75 26 IAMs_20 IAMs_20 02 23 52.0
comp=Z,1µm,21.0s
M31M Drury Creek, Y 89.75 26 P **P** **01 47 42.2 -0.9**
baz=248
P33M Teslin, Yukon 89.75 28 P **P** **01 47 42.9 -0.4**
baz=250
S34M Telegraph Cree 89.81 31 IAMs_20 IAMs_20 02 20 56.8
comp=Z,1µm,21.0s
S34M Telegraph Cree 89.81 31 P **P** **01 47 43.1 -0.3**
baz=251
F28M Old Crow 89.83 20 P **P** **01 47 43.2 -0.2**
baz=243
J30M Hart River 89.85 24 IAmb IAmb 01 47 52.5
comp=Z,26nm,1.5s
J30M IAMs_20 IAMs_20 02 25 08.7
comp=Z,848nm,19.0s
J30M Hart River 89.85 24 P **P** **01 47 43.0 -0.7**
baz=247,SNR=8.7
N32M Quiet Lake 89.96 27 IAmb IAmb 01 47 53.5
comp=Z,53nm,1.8s
N32M Quiet Lake 89.96 27 P **P** **01 47 43.3 -0.9**
baz=250
T35M Bob Quinn 89.97 32 IAMs_20 IAMs_20 02 22 01.1
comp=Z,1µm,20.0s
T35M Bob Quinn 89.97 32 P **P** **01 47 43.1 -1.2**
baz=252
I30M Mount Dempster 90.09 23 IAmb IAmb 01 47 47.9
comp=Z,18nm,1.4s
I30M IAMs_20 IAMs_20 02 23 05.0
comp=Z,2µm,22.0s
I30M Mount Dempster 90.09 23 P **P** **01 47 44.2 -0.5**
baz=247,SNR=7.4
KHBM Hayfork Bally 90.17 49 IAMs_20 IAMs_20 02 23 02.5
comp=Z,957nm,20.0s
G29M Pine Creek 90.17 21 P **P** **01 47 44.5 -0.5**
baz=245
D27M Malcolm River 90.21 19 P **P** **01 47 44.9 -0.3**
baz=242
R33M Jennings River 90.36 29 IAmb IAmb 01 47 49.7
comp=Z,28nm,1.8s
R33M Jennings River 90.36 29 P **P** **01 47 45.5 -0.7**
baz=251
E28M Babbage River 90.38 20 P **P** **01 47 44.9 -1.0**
baz=244
O02D Mt. Diablo Mer 90.38 49 IAMs_20 IAMs_20 02 23 11.3
comp=Z,988nm,19.0s
EPYK Eagle Plains 90.42 22 IAMs_20 IAMs_20 02 23 10.4
comp=Z,1µm,21.0s
EPYK Eagle Plains 90.42 22 P **P** **01 47 45.3 -0.9**
baz=246,SNR=5.6
BTLS Baital 90.44 316 *e* P **P** **01 47 47.2 +0.5**
BTLS pmax pmax
comp=Z,9.0nm,1.2s
BTLS Baital 90.44 316 *e* P **P** **01 47 47.3 +0.5**
comp=Z,9.4nm,1.2s
DLBC Dease Lake 90.53 31 P **P** **01 47 45.3 -1.6**
comp=Z,0.6nm,0.3s,baz=263,slow=12,SNR=3.2
DLBC LR LR 02 22 02.2
comp=Z,820nm,20.8s,baz=248,slow=31
comp=Z,0.6nm,0.3s
DLBC Dease Lake 90.53 31 P **P** **01 47 46.2 -0.7**
baz=252
M02C Callahan 90.60 48 IAMs_20 IAMs_20 02 21 14.8
comp=Z,1µm,22.0s
RPN Rapa Nui 90.67 118 LR LR 02 23 13.6
comp=Z,137nm,18.3s,baz=260,slow=32
MHC Mount Hamilton 90.67 52 IAMs_20 IAMs_20 02 27 21.2
comp=Z,904nm,18.0s
YBH Yreka Blue Hor 90.77 48 LR LR 02 21 28.6
comp=Z,1µm,21.6s,baz=271,slow=31
E29M Blow River 90.83 20 P **P** **01 47 46.9 -1.1**
baz=245
G30M tAoh Zraii Nji 90.84 22 IAMs_20 IAMs_20 02 23 34.6
comp=Z,1µm,22.0s
G30M tAoh Zraii Nji 90.84 22 P **P** **01 47 47.2 -1.0**
baz=247
D28M Stokes Point 90.96 19 P **P** **01 47 48.3 -0.3**
baz=244
COR Corvallis 90.97 45 IAMs_20 IAMs_20 02 25 35.3
comp=Z,1µm,19.0s
H31M Peel River 91.10 23 IAmb IAmb 01 47 54.6
comp=Z,41nm,1.9s
H31M IAMs_20 IAMs_20 02 24 17.6
comp=Z,1µm,21.0s
H31M Peel River 91.10 23 P **P** **01 47 49.6 +0.2**
baz=248
O03E Paynes Creek 91.15 49 IAmb IAmb 01 47 54.4
comp=Z,34nm,1.4s
NLWA Neilton Lookou 91.20 42 IAMs_20 IAMs_20 02 20 04.5
comp=Z,1µm,22.0s
ORV Oroville 91.23 50 P **P** **01 47 51.9 +1.4**
ORV IAmb IAmb 01 47 54.9
comp=Z,26nm,1.6s
ORV Oroville 91.23 50 P **P** **01 47 51.9 +1.4**
ORV pmax pmax
comp=Z,26nm,1.7s
F30M Barrier River 91.25 21 P **P** **01 47 50.5 +0.5**
baz=247
MMPY Sheldon Lake, 91.26 26 P **P** **01 47 49.9 -0.3**
baz=251
NRIK Noril'sk 91.29 341 P **P** **01 47 48.4 -1.7**
comp=Z,5.2nm,1.0s,baz=118,slow=5.8,SNR=10
comp=Z,5.2nm,1.0s
NRIK Noril'sk 91.29 341 IAmb IAmb 01 47 51.5
comp=Z,25nm,1.4s
NRIK Noril'sk 91.29 341 *c i* P **P** **01 47 49.2 -0.9**
NRIK pmax pmax
comp=Z,21nm,1.5s
AFDM Forest Hills D 91.51 51 IAmb IAmb 01 47 56.3
comp=Z,21nm,1.2s

G31M	**Satah River**	**91.53**	**22**	IAMs_20	IAMs_20	02 23 43.9		
	comp=Z,960nm,22.0s							
G31M	**Satah River**	**91.53**	**22**	P	**P**	**01 47 50.9**	**-0.3**	
	baz=249							
WTLY	**Watson Lake, Y**	**91.63**	**29**	P	**P**	**01 47 51.8**	**-0.2**	
	baz=253							
DZA	**Taraz**	**91.90**	**313**	*e*P	**P**	**01 47 53.9**	**+0.3**	
DZA				pmax	pmax			
	comp=Z,111nm,1.3s							
DZA	**Taraz**	**91.90**	**313**	*e*P	**P**	**01 47 54.0**	**+0.3**	
	comp=Z,111nm,1.3s							
GAR	**Garm**	**91.90**	**309**	P	**P**	**01 47 50.9**	**-2.9**	
F31M	**Tsiigehtchic**	**91.91**	**21**	P	**P**	**01 47 52.7**	**-0.3**	
	baz=249							
BEKR	**Beckworth**	**92.15**	**50**		**P**	**01 47 56.3**	**+1.3**	
TGTN	**Hyland Airport**	**92.28**	**28**	P	**P**	**01 47 54.5**	**-0.4**	
	baz=254							
K05A	**Summer Lake**	**92.30**	**47**	IAmb	IAmb	01 47 59.9		
	comp=Z,15nm,1.3s							
INK	**Inuvik**	**92.30**	**21**	P	**P**	**01 47 53.2**	**-1.6**	
	comp=Z,3.8nm,1.0s,baz=227,slow=7.5,SNR=4.4							
INK				LR	LR	02 25 12.2		
	comp=Z,1μm,22.0s,baz=256,slow=33							
	comp=Z,3.8nm,1.0s							
INK	**Inuvik**	**92.30**	**21**	IAmb	IAmb	01 47 59.5		
	comp=Z,23nm,1.6s							
INK	**Inuvik**	**92.30**	**21**	P	**P**	**01 47 54.5**	**-0.2**	
	baz=249							
BRZS	**Berezniki**	**92.44**	**320**	*e*P	**P**	**01 47 56.4**	**+0.5**	
BRZS	**Berezniki**	**92.44**	**320**	*e*P	**P**	**01 47 56.4**	**+0.5**	
KKAR	**Karatay Array**	**92.53**	**313**	P	**P**	**01 47 54.8**	**-1.7**	
KKAR	**Karatay Array**	**92.53**	**313**	P	**P**	**01 47 54.8**	**-1.7**	
ELIB	**Princess Elisa**	**92.53**	**194**	*d*P	**P**	**01 47 55.3**	**-0.8**	
	comp=Z,5.3nm,1.1s							
IUG	**Iuzhnay**	**92.70**	**312**	*e*P	**P**	**01 47 57.7**	**+0.3**	
IUG				pmax	pmax			
	comp=Z,23nm,1.7s							
IUG	**Iuzhnay**	**92.70**	**312**	*e*P	**P**	**01 47 57.8**	**+0.3**	
	comp=Z,23nm,1.7s							
CHGR	**Chuyangaron**	**92.73**	**309**	*de*P	**P**	**01 47 56.0**	**-1.6**	
CHGR				pmax	pmax			
	comp=Z,33nm,1.7s							
MDPB	**Devils Postpil**	**92.73**	**52**	IAmb	IAmb	01 48 02.3		
	comp=Z,12nm,1.2s							
LIRD	**Liard River Hi**	**92.76**	**30**	P	**P**	**01 47 57.1**	**-0.1**	
	baz=256							
BRLS	**Borolday**	**93.00**	**313**	*e*P	**P**	**01 47 58.9**	**+0.2**	
BRLS				pmax	pmax			
	comp=Z,11nm,1.5s							
BRLS	**Borolday**	**93.00**	**313**	*e*P	**P**	**01 47 58.9**	**+0.2**	
	comp=Z,11nm,1.5s							
CHM	**Chimkent**	**93.05**	**312**	*e*P	**P**	**01 47 59.1**	**+0.2**	
CHM	**Chimkent**	**93.05**	**312**	*e*P	**P**	**01 47 59.1**	**+0.2**	
LHV	**Little Huntoon**	**93.28**	**52**	IAmb	IAmb	01 48 05.0		
	comp=Z,19nm,1.1s							
TIN	**Tinemaha, Big**	**93.30**	**53**	IAMs_20	IAMs_20	02 27 24.7		
	comp=Z,791nm,19.0s							
NVAR	**Mina Array Bea**	**93.47**	**52**	P	**P**	**01 48 02.5**	**+1.3**	
	comp=Z,8.5nm,1.0s,baz=268,slow=4.4,SNR=27							
NVAR				LR	LR	02 23 25.5		
	comp=Z,397nm,21.8s,baz=272,slow=31							
	comp=Z,8.5nm,1.0s							
NVAR	**Mina Array Bea**	**93.47**	**52**	P	**P**	**01 48 02.9**	**+1.7**	
DSP	**Deep Springs**	**93.55**	**53**	IAmb	IAmb	01 48 06.2		
	comp=Z,13nm,1.2s							
BAR	**Barrett**	**93.85**	**58**	IAMs_20	IAMs_20	02 19 39.8		
	comp=Z,1μm,21.0s							
WVOR	**Wild Horse Val**	**93.88**	**48**	P	**P**	**01 48 06.3**	**+3.5**	
HAWA	**Hanford**	**93.92**	**44**	IAMs_20	IAMs_20	02 24 50.4		
	comp=Z,1μm,20.0s							
KOTAN	**Kotaneelee Air**	**93.93**	**30**	P	**P**	**01 48 02.0**	**-0.5**	
	baz=257							
EPH	**Ephrata**	**94.04**	**43**	IAmb	IAmb	01 48 06.3		
	comp=Z,18nm,1.4s							
PFO	**Pinyon Flats O**	**94.17**	**57**	LR	LR	02 25 17.1		
	comp=Z,481nm,19.4s,baz=261,slow=32							
PFO	**Pinyon Flats O**	**94.17**	**57**	IAMs_20	IAMs_20	02 25 08.3		
	comp=Z,843nm,18.0s							
BVAR	**Borovoye Array**	**94.43**	**323**	P	**P**	**01 48 03.2**	**-1.8**	
	comp=Z,1.7nm,0.9s,baz=95,slow=3.5,SNR=6.8							
	comp=Z,1.7nm,0.9s							
BORK	**Borovoye**	**94.48**	**323**	*c i*P	**P**	**01 48 03.9**	**-1.3**	
BORK				pmax	pmax			
	comp=Z,12nm,2.1s							
WRGLY	**Wrigley**	**94.87**	**27**	P	**P**	**01 48 06.7**	**0.0**	
	baz=258							
BMO	**Blue Mountains**	**95.22**	**46**	P	**P**	**01 48 09.8**	**+0.9**	
BMO				IAMs_20	IAMs_20	02 29 41.9		
	comp=Z,890nm,19.0s							
BMO	**Blue Mountains**	**95.22**	**46**	P	**P**	**01 48 09.8**	**+0.9**	
BMO				pmax	pmax			
	comp=Z,7.0nm,1.5s							
BMO				MLR	MLR			
	comp=Z,900nm,19.0s							
F10A	**Beach Ranch, E**	**95.44**	**44**	P	**P**	**01 48 10.0**	**+0.1**	
GLA	**Glamis**	**95.44**	**58**	IAMs_20	IAMs_20	02 23 09.9		
	comp=Z,1μm,20.0s							
NEW	**Newport**	**95.83**	**42**	LR	LR	02 29 47.9		
	comp=Z,611nm,18.0s,baz=261,slow=34							
NEW	**Newport**	**95.83**	**42**	IAMs_20	IAMs_20	02 29 53.9		
	comp=Z,786nm,18.0s							
C36M	**Paulatuk**	**95.89**	**21**	IAMs_20	IAMs_20	02 26 56.8		
	comp=Z,1μm,22.0s							
C36M	**Paulatuk**	**95.89**	**21**	P	**P**	**01 48 11.4**	**+0.2**	
	baz=258							
NVL	**N'lazarevskaya**	**95.89**	**192**	*e*P	**P**	**01 48 11.6**	**+0.3**	
NVL				*e*S	**SKSac**	**01 58 46.3**	**-0.4**	
NVL				pmax	pmax			
	comp=Z,3.0nm,0.7s							
NVL				MLR	MLR			
	comp=Z,914nm,15.0s							
A36M	**Sachs Harbour**	**96.06**	**18**	IAMs_20	IAMs_20	02 28 15.4		
	comp=Z,1μm,21.0s							
A36M	**Sachs Harbour**	**96.06**	**18**	P	**P**	**01 48 12.1**	**+0.1**	
	baz=257							
PLID	**Pearl Lake**	**96.17**	**45**	IAMs_20	IAMs_20	02 31 47.0		
	comp=Z,825nm,18.0s							
TROLL	**Troll, Antarti**	**96.41**	**188**	⇓P	**P**	**01 48 13.3**	**-0.7**	
	comp=Z,193nm,0.8s							
HLID	**Hailey**	**97.11**	**47**	IAmb	IAmb	01 48 26.2		
	comp=Z,13nm,1.8s							
HLID				IAMs_20	IAMs_20	02 28 34.1		
	comp=Z,727nm,19.0s							
HLID	**Hailey**	**97.11**	**47**	P	Pdif	01 48 22.4	+4.7	
SNAA	**Sanae**	**97.42**	**187**	⇓P	Pdif	01 48 19.6	+1.2	
	comp=Z,38nm,0.7s							
SNAA	**Sanae**	**97.42**	**187**	P	**P**	**01 48 15.8**	**-2.6**	
	comp=Z,0.8nm,0.6s,baz=164,slow=8.4,SNR=5.3							
SNAA				LR	LR	02 30 06.9		
	comp=Z,1μm,21.2s,baz=162,slow=34							
	comp=Z,0.8nm,0.6s							
SNAA	**Sanae**	**97.42**	**187**	IAmb	IAmb	01 48 30.4		
	comp=Z,13nm,1.6s							
MSO	**Missoula**	**97.80**	**44**	IAMs_20	IAMs_20	02 26 58.0		
	comp=Z,924nm,19.0s							
LPIG	**La Paz**	**98.23**	**67**	LR	LR	02 27 57.7		
	comp=Z,269nm,18.2s,baz=260,slow=32							
SLBS	**Sierra La Lagu**	**98.51**	**67**	IAMs_20	IAMs_20	02 30 00.9		
	comp=Z,1μm,20.0s							
DLMT	**Dillon**	**98.59**	**45**	IAMs_20	IAMs_20	02 26 11.1		
	comp=Z,841nm,21.0s							
TUC	**Tucson**	**98.74**	**59**	IAMs_20	IAMs_20	02 24 16.2		
	comp=Z,1μm,21.0s							
EDM	**Edmonton**	**98.75**	**37**	IAmb	IAmb	01 48 27.4		
	comp=Z,11nm,1.0s							
YKA	**Yellowknife Ar**	**98.78**	**28**	P	Pdif	01 48 24.6	+0.1	
	comp=Z,1.3nm,0.9s,baz=260,slow=4.4,SNR=4.5							
YKA				LR	LR	02 27 45.3		
	comp=Z,325nm,21.6s,baz=304,slow=32							
	comp=Z,1.3nm,0.9s							
YKA	**Yellowknife Ar**	**98.78**	**28**	P	**P**	**01 48 22.6**	**-1.9**	
YKA	**Yellowknife Ar**	**98.78**	**28**	*ce*P	Pdif	01 48 27.0	+2.5	
YKA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
BOZ	**Bozeman (W)**	**99.28**	**45**	IAMs_20	IAMs_20	02 27 23.5		
	comp=Z,809nm,21.0s							
AHID	**Auburn Hatcher**	**99.44**	**48**	IAMs_20	IAMs_20	02 29 03.0		
	comp=Z,822nm,19.0s							
FXWY	**Fox Creek**	**99.57**	**47**	IAMs_20	IAMs_20	02 31 48.1		
	comp=Z,806nm,18.0s							
FLWY	**Flagg Ranch**	**99.83**	**47**	IAMs_20	IAMs_20	02 31 33.2		
	comp=Z,846nm,18.0s							
BW06	**Boulder Array**	**100.58**	**48**	IAMs_20	IAMs_20	02 29 49.0		
	comp=Z,1μm,19.0s							
PDAR	**Pinedale Array**	**100.58**	**48**	P	**Pdif**	**01 48 31.2**	**-2.1**	
	comp=Z,0.5nm,0.6s,baz=277,slow=5.0,SNR=4.0							
RLMT	**Red Lodge**	**100.92**	**46**	IAMs_20	IAMs_20	02 26 38.8		
	comp=Z,771nm,21.0s							
MVCO	**Mesa Verde**	**101.03**	**54**	IAMs_20	IAMs_20	02 32 06.7		
	comp=Z,880nm,18.0s							
ARTI	**Arti**	**101.66**	**326**	IAMs_20	IAMs_20	02 33 59.4		
	comp=Z,1μm,21.0s							
ARTI	**Arti**	**101.66**	**326**	P	**Pdif**	**01 48 36.4**	**-1.0**	
ARTI						01 52 45.2		
ARTI				S	**SKSac**	**01 59 15.7**	**-0.4**	
ARTI				SP	SP	02 01 52.4	+2.9	
ARTI				PS	PS	02 02 42.5	+50	
ARTI				SS	**SS**	**02 07 22.8**	**+2.6**	
ARTI				SSS	SSS	02 11 15.9		
ARTI				MLR	MLR			
	comp=Z,976nm,21.0s							
EPT	**El Paso**	**102.31**	**60**	IAMs_20	IAMs_20	02 26 19.9		
	comp=Z,989nm,20.0s							
S22A	**4UR Ranch, Cre**	**102.39**	**53**	IAMs_20	IAMs_20	02 28 59.5		
	comp=Z,928nm,19.0s							
LAO	**LASA Array**	**103.09**	**44**	IAMs_20	IAMs_20	02 31 18.0		
	comp=Z,766nm,20.0s							
MNTX	**Cornudas Mount**	**103.26**	**60**	IAMs_20	IAMs_20	02 26 27.1		
	comp=Z,906nm,21.0s							
SDCO	**Great Sand Dun**	**103.44**	**53**	IAMs_20	IAMs_20	02 30 09.3		
	comp=Z,777nm,20.0s							
T25A	**Trinidad**	**104.29**	**54**	IAMs_20	IAMs_20	02 29 28.9		
	comp=Z,664nm,18.0s							
TXAR	**Lajitas Array**	**104.61**	**62**	Pdiff	**Pdif**	**01 48 52.5**	**+1.1**	
	comp=Z,0.2nm,0.7s,baz=274,slow=5.8,SNR=2.2							
MSTX	**Muleshoe**	**105.55**	**57**	IAMs_20	IAMs_20	02 29 30.5		
	comp=Z,926nm,20.0s							
OGNE	**Ogallala**	**106.16**	**50**	IAMs_20	IAMs_20	02 31 13.9		
	comp=Z,755nm,20.0s							
AMTX	**Amarillo**	**106.47**	**57**	IAMs_20	IAMs_20	02 30 30.7		
	comp=Z,930nm,21.0s							
E28A	**Huff**	**106.90**	**44**	IAMs_20	IAMs_20	02 33 18.8		
	comp=Z,706nm,19.0s							
CBKS	**Cedar Bluff**	**107.98**	**52**	IAMs_20	IAMs_20	02 36 22.3		
	comp=Z,800nm,19.0s							
JCT	**Junction City**	**108.00**	**61**	IAMs_20	IAMs_20	02 31 20.7		
	comp=Z,852nm,20.0s							
WMOK	**Wichita Mounta**	**108.86**	**57**	IAMs_20	IAMs_20	02 34 49.9		
	comp=Z,788nm,19.0s							
BGNE	**Belgrade**	**109.07**	**50**	IAMs_20	IAMs_20	02 34 13.8		
	comp=Z,836nm,20.0s							
TULEG	**Thule**	**109.29**	**10**	IAMs_20	IAMs_20	02 37 33.4		
	comp=Z,797nm,20.0s							
MAK	**Makhachkala**	**109.32**	**312**	*e*P	**Pdif**	**01 49 08.2**	**-3.6**	
MAK				*e*PPP	PPP	01 55 58.4		
MAK				*e*		01 59 45.3		
MAK				*e*SS	SS	02 09 01.8	-3.6	
MAK				pmax	pmax			
	comp=Z,150nm,0.9s							
MAK				MLR	MLR			
	comp=Z,832nm,19.0s							
AGMN	**Agassiz Nation**	**109.99**	**42**	IAMs_20	IAMs_20	02 37 59.4		
	comp=Z,858nm,19.0s							
F33A	**5 Mile Ranch,**	**110.01**	**45**	IAMs_20	IAMs_20	02 35 03.2		
	comp=Z,683nm,22.0s							
WHTX	**Lake Whitney,**	**110.01**	**60**	IAMs_20	IAMs_20	02 33 34.8		
	comp=Z,835nm,19.0s							
Z35A	**Perchaven, San**	**110.16**	**58**	IAMs_20	IAMs_20	02 31 42.5		
	comp=Z,1μm,21.0s							
OK051	**E0350 and S346**	**110.38**	**55**	IAMs_20	IAMs_20	02 40 26.0		
	comp=Z,734nm,20.0s							
OK052	**Battle Ridge R**	**110.43**	**55**	IAMs_20	IAMs_20	02 34 08.4		
	comp=Z,815nm,20.0s							
T35A	**Sooner Cattle**	**110.61**	**54**	IAMs_20	IAMs_20	02 32 53.3		
	comp=Z,729nm,22.0s							
COYC	**Coyhaique**	**110.64**	**147**	IAMs_20	IAMs_20	02 38 16.2		
	comp=Z,626nm,19.0s							
N35A	**Tabor**	**111.00**	**50**	IAMs_20	IAMs_20	02 34 22.0		
	comp=Z,793nm,19.0s							
HKT	**Hockley**	**111.44**	**62**	IAMs_20	IAMs_20	02 33 54.7		
	comp=Z,722nm,19.0s							
Z38A	**Mt. Pleasant**	**112.06**	**58**	IAMs_20	IAMs_20	02 35 29.8		
	comp=Z,798nm,20.0s							
U38A	**Gravette**	**112.35**	**55**	IAMs_20	IAMs_20	02 32 51.3		
	comp=Z,673nm,20.0s							
SPMN	**Marine on St.**	**112.52**	**45**	IAMs_20	IAMs_20	02 34 28.7		
	comp=Z,745nm,21.0s							
EFI	**East Falkland**	**112.54**	**158**	IAMs_20	IAMs_20	02 31 31.5		
	comp=Z,917nm,21.0s							
KIV	**Kislovodsk**	**112.69**	**314**	*i* PKIKP	**PKiKP**	**01 53 22.0**	**0.0**	
KIV				*e*		01 54 09.0		
KIV				*e*PS	PKKPbc	02 03 44.3	-27	
KIV				*e*SS	SS	02 09 52.3	+1.7	
KIV				pmax	pmax			
	comp=Z,2.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,458nm,21.0s							
P38A	**Dawn**	**112.73**	**51**	IAMs_20	IAMs_20	02 39 20.9		
	comp=Z,774nm,19.0s							
N38A	**Joes South For**	**112.82**	**50**	IAMs_20	IAMs_20	02 46 10.2		
	comp=Z,619nm,19.0s							
S39A	**Bolivar**	**113.09**	**53**	IAMs_20	IAMs_20	02 35 27.7		
	comp=Z,595nm,19.0s							
E38A	**The Farm, Brul**	**113.14**	**43**	IAMs_20	IAMs_20	02 37 33.0		
	comp=Z,736nm,21.0s							
MIAR	**Mount Ida**	**113.15**	**57**	IAMs_20	IAMs_20	02 34 24.6		
	comp=Z,952nm,22.0s							
R40A	**Maddies Statio**	**113.86**	**52**	IAMs_20	IAMs_20	02 41 20.9		
	comp=Z,839nm,18.0s							
P40A	**Paris**	**113.88**	**51**	IAMs_20	IAMs_20	02 39 36.4		
	comp=Z,785nm,19.0s							
OBN	**Obninsk**	**113.99**	**326**	IAMs_20	IAMs_20	02 41 35.3		
	comp=Z,738nm,21.0s							
L40A	**Anamosa**	**114.15**	**48**	IAMs_20	IAMs_20	02 48 47.1		
	comp=Z,601nm,19.0s							
I40A	**Norwalk**	**114.28**	**46**	IAMs_20	IAMs_20	02 40 31.5		
	comp=Z,774nm,19.0s							
G40A	**Rib Lake**	**114.32**	**45**	IAMs_20	IAMs_20	02 37 57.4		
	comp=Z,710nm,19.0s							
VSLR	**Vesyoloye**	**114.67**	**313**	⇓*i* PKIKP	PKPdf	01 53 24.0	-1.6	
CCM	**Cathedral Cave**	**114.69**	**53**	IAMs_20	IAMs_20	02 41 17.9		
	comp=Z,684nm,19.0s							
JFWS	**Jewell Farm**	**114.72**	**47**	IAMs_20	IAMs_20	02 42 11.1		
	comp=Z,717nm,19.0s							
SOC	**Sochi**	**114.87**	**314**	*i* PKIKP	PKPdf	01 53 26.0	0.0	
SOC				*e*		01 54 24.8		
SOC				*e*PPP	PPP	01 56 53.8		
SOC				*e*SS	SS	02 10 17.7	-1.5	
SOC				*e*SSS	SSS	02 14 35.5		
SOC				MLR	MLR			
	comp=Z,378nm,20.0s							
T42A	**Van Buren**	**114.93**	**54**	IAMs_20	IAMs_20	02 47 39.4		
	comp=Z,549nm,19.0s							
143A	**Socs Landing,**	**115.10**	**59**	IAMs_20	IAMs_20	02 36 49.3		
	comp=Z,846nm,20.0s							
L42A	**Oliver, Polo**	**115.30**	**48**	IAMs_20	IAMs_20	02 47 16.6		
	comp=Z,654nm,20.0s							
I42A	**Draeger Farm,**	**115.49**	**46**	IAMs_20	IAMs_20	02 37 38.5		
	comp=Z,869nm,20.0s							
F42A	**Maple Grove Fa**	**115.64**	**44**	IAMs_20	IAMs_20	02 39 40.2		
	comp=Z,708nm,20.0s							
P43A	**Skaggs, Pawnee**	**115.80**	**51**	IAMs_20	IAMs_20	02 35 48.1		
	comp=Z,663nm,21.0s							
HDIL	**Hopedale**	**115.82**	**50**	IAMs_20	IAMs_20	02 43 31.6		
	comp=Z,598nm,21.0s							
VBMS	**Vicksburg**	**115.88**	**59**	IAMs_20	IAMs_20	02 38 20.2		
	comp=Z,796nm,20.0s							
K43A	**Burlington**	**116.14**	**47**	IAMs_20	IAMs_20	02 44 22.8		
	comp=Z,703nm,19.0s							
H43A	**Windswept, Lux**	**116.18**	**45**	IAMs_20	IAMs_20	02 38 46.5		
	comp=Z,859nm,20.0s							
S44A	**Carbondale**	**116.30**	**53**	IAMs_20	IAMs_20	02 36 31.4		
	comp=Z,723nm,21.0s							
FINES	**FINESS Array B**	**116.39**	**335**	PKP	**PKPdf**	**01 53 27.3**	**-1.1**	
	comp=Z,1.9nm,0.8s,baz=68,slow=5.9,SNR=3.7							
FINES	**FINESS Array B**	**116.39**	**335**	*c i*PKIKP	**PKiKP**	**01 53 29.2**	**+0.8**	
FINES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
Y45A	**Yeager Farm, C**	**116.54**	**57**	IAMs_20	IAMs_20	02 36 38.4		
	comp=Z,648nm,22.0s							
M44A	**Midewin, Midew**	**116.61**	**49**	IAMs_20	IAMs_20	02 39 04.3		
	comp=Z,740nm,20.0s							
346A	**Big Creek Wild**	**116.84**	**60**	IAMs_20	IAMs_20	02 38 20.8		
	comp=Z,684nm,20.0s							
T45A	**Paducah**	**116.87**	**53**	IAMs_20	IAMs_20	02 36 14.8		
	comp=Z,841nm,22.0s							
146A	**Union**	**117.07**	**58**	IAMs_20	IAMs_20	02 35 57.6		
	comp=Z,920nm,22.0s							
P46A	**Rosedale**	**117.56**	**50**	IAMs_20	IAMs_20	02 48 56.8		
	comp=Z,568nm,20.0s							
VSU	**Vasula**	**117.61**	**332**	*c i*PKIKP	**PKPdf**	**01 53 29.8**	**-1.0**	
Z47A	**Carrollton**	**117.84**	**58**	IAMs_20	IAMs_20	02 36 55.8		
	comp=Z,751nm,19.0s							
E46A	**Sault Ste Mari**	**118.07**	**42**	IAMs_20	IAMs_20	02 49 45.2		
	comp=Z,726nm,20.0s							
T47A	**Sharon Grove**	**118.09**	**53**	IAMs_20	IAMs_20	02 44 47.2		
	comp=Z,811nm,19.0s							
N47A	**Urbana**	**118.45**	**49**	IAMs_20	IAMs_20	02 40 09.0		
	comp=Z,609nm,21.0s							
WCI	**Wyandotte Cave**	**118.52**	**52**	IAMs_20	IAMs_20	02 42 28.2		
	comp=Z,809nm,19.0s							
X48A	**Hartselle**	**118.52**	**56**	IAMs_20	IAMs_20	02 37 58.8		
	comp=Z,728nm,22.0s							
LRAL	**Lakeview Retre**	**118.75**	**58**	IAMs_20	IAMs_20	02 37 46.0		
	comp=Z,757nm,20.0s							
MNK	**Minsk**	**118.88**	**328**	*i* P	**Pdif**	**01 49 54.3**	**+0.3**	
	comp=E,6.0nm,1.2s							
MNK				*i* P	**Pdif**	**01 49 54.3**	**+0.3**	
	comp=N,4.0nm,0.7s							
MNK				*i* P	**Pdif**	**01 49 54.3**	**+0.3**	
	comp=Z,4.0nm,0.7s,baz=64							
MNK				*j* PKP	**PKiKP**	**01 53 33.5**	**+0.1**	
MNK				*j* PP	**PP**	**01 54 53.1**	**+1.1**	
MNK				*j* PPP	PPP	01 57 24.2		
MNK				*i* SKS	**SKSdf**	**02 00 45.6**	**+0.9**	
MNK				*j* PS	**PS**	**02 04 41.0**	**+1.2**	
MNK				*j* SS	**SS**	**02 11 15.1**	**+4.6**	
MNK				*i* SSS	SSS	02 15 39.2		
MNK				*i* LQ	LQ	02 37 46.6		
MNK	**Minsk**	**118.88**	**328**	*i* P	**Pdif**	**01 49 54.3**	**+0.3**	
MNK				*i*		01 53 33.5		
MNK				*i*		01 54 53.0		
MNK				*i* PPP	PPP	01 57 24.2		
MNK				*i*		02 00 45.5		
MNK				*j* PS	**PS**	**02 04 41.0**	**+1.2**	
MNK				*j* SS	SS	02 11 15.0	+4.5	
MNK				*i* SSS	SSS	02 15 39.1		
MNK				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MNK				pmax	pmax			
	comp=N,4.0nm,0.7s							
MNK				pmax	pmax			
	comp=E,6.0nm,1.2s							
MNK				MLR	MLR			
	comp=Z,686nm,21.0s							
MNK				MLR	MLR			
	comp=N,495nm,19.0s							
MNK				MLR	MLR			
	comp=E,236nm,20.0s							
P48A	**Milroy**	**118.94**	**50**	IAMs_20	IAMs_20	02 39 24.3		
	comp=Z,812nm,21.0s							
MT05	**Renca**	**118.97**	**137**	IAMs_20	IAMs_20	02 35 59.5		
	comp=Z,829nm,22.0s							
O48B	**Farmland**	**118.98**	**49**	IAMs_20	IAMs_20	02 40 09.2		
	comp=Z,547nm,20.0s							
Y49A	**Blount Mountai**	**119.13**	**57**	IAMs_20	IAMs_20	02 41 58.8		
	comp=Z,714nm,19.0s							
U49A	**Red Boiling Sp**	**119.22**	**54**	IAMs_20	IAMs_20	02 44 28.1		
	comp=Z,701nm,19.0s							
SCO	**Scoresbysund**	**119.29**	**359**	IAMs_20	IAMs_20	02 40 31.4		
	comp=Z,824nm,21.0s							
R49A	**Shelbyville**	**119.37**	**52**	IAMs_20	IAMs_20	02 43 30.8		
	comp=Z,711nm,19.0s							
250A	**Grady**	**119.49**	**59**	IAMs_20	IAMs_20	02 41 12.8		
	comp=Z,738nm,20.0s							
AAM	**Ann Arbor**	**119.60**	**47**	IAMs_20	IAMs_20	02 43 53.3		
	comp=Z,908nm,21.0s							
O49A	**Covington**	**119.61**	**49**	IAMs_20	IAMs_20	02 41 57.8		
	comp=Z,588nm,19.0s							
AKASG	**Malin Array Be**	**119.71**	**324**	PKP	**PKPdf**	**01 53 34.2**	**-0.9**	
	comp=Z,3.6nm,0.8s,baz=66,slow=1.9,SNR=13							
AKASG	**Malin Array Be**	**119.71**	**324**		**PKPdf**	**01 53 32.7**	**-2.4**	
AKASG	**Malin Array Be**	**119.71**	**324**	*c i*PKIKP	**PKiKP**	**01 53 34.5**	**-0.6**	
AKASG				pmax	pmax			
	comp=Z,4.0nm,0.8s							
AKBB	**Malin Array Si**	**119.71**	**324**	*d i*PKIKP	**PKPdf**	**01 53 33.7**	**-1.4**	
KIEV	**Kiev**	**119.72**	**324**	IAMs_20	IAMs_20	02 48 42.8		
	comp=Z,571nm,20.0s							
I49A	**Point Hope**	**119.75**	**45**	IAMs_20	IAMs_20	02 44 44.1		
	comp=Z,862nm,20.0s							
W50A	**Signal Mountai**	**119.82**	**55**	IAMs_20	IAMs_20	02 40 48.0		
	comp=Z,760nm,20.0s							
T50A	**Nancy**	**119.88**	**53**	IAMs_20	IAMs_20	02 49 42.3		
	comp=Z,515nm,19.0s							
R50A	**Paris**	**120.03**	**51**

comp=Z,601nm,21.0s
P57A Homestead Farm 124.49 49 IAMs_20 IAMs_20 02 47 57.9
comp=Z,818nm,20.0s
K57A Scipio Center 124.50 44 IAMs_20 IAMs_20 02 42 39.7
comp=Z,762nm,21.0s
KOLS Kolonicke sedl 124.53 324 *e*PKIKP **PKiKP 01 53 46.8 +2.0**
KOLS Kolonicke sedl 124.53 324 *e*PKP **PKiKP 01 53 46.8 +2.0**
Y58A Scranton 124.64 55 IAMs_20 IAMs_20 02 41 39.7
comp=Z,684nm,22.0s
V58A Windy Hill, Pi 124.65 53 IAMs_20 IAMs_20 02 47 32.6
comp=Z,598nm,19.0s
ARR Arges 124.65 319 ⇑P **PKiKP 01 53 45.0 -0.2**
N58A Sunbury 125.01 47 IAMs_20 IAMs_20 02 44 58.4
comp=Z,763nm,20.0s
R58B Mineral 125.03 50 IAMs_20 IAMs_20 02 48 04.5
comp=Z,786nm,20.0s
MARR Marisel-Cluj 125.06 321 ⇓P **PKiKP 01 53 47.0 +1.0**
LONY Lake Ozonia 125.09 42 IAMs_20 IAMs_20 02 40 37.8
comp=Z,757nm,20.0s
T59A Double "B" Far 125.56 51 IAMs_20 IAMs_20 02 47 30.5
comp=Z,627nm,21.0s
J59A Piesco 125.60 43 IAMs_20 IAMs_20 02 47 24.5
comp=Z,674nm,18.0s
RGN Rugen 125.93 333 IAMs_20 IAMs_20 02 52 26.2
comp=Z,736nm,21.0s
LANS Liptovska Anna 126.02 325 *e*PKIKP **PKiKP 01 53 49.2 +1.4**
LANS Liptovska Anna 126.02 325 *e*PKP **PKiKP 01 53 49.2 +1.4**
SIRR Siria 126.14 321 ⇓P **PKiKP 01 53 48.3 +0.3**
OKC Ostrava-Krasne 126.39 327 AMS AMS 02 48 50.0
comp=Z,800nm,23.0s
BZS Buzias 126.46 321 ⇓P **PKPdf 01 53 47.2 -1.0**
BZS Buzias 126.46 321 ⇓PKIKP **PKPdf 01 53 47.2 -1.0**
STEB Steborice 126.54 327 *e*PKPDF **PKiKP 01 53 48.8 +0.1**
V61A Roper 126.64 52 IAMs_20 IAMs_20 02 42 54.3
comp=Z,558nm,21.0s
MORC Moravsky Berou 126.75 327 **PKiKP 01 53 49.3 +0.1**
MORC Moravsky Berou 126.75 327 PKIKP **PKiKP 01 53 49.3 +0.1**
MORC Moravsky Berou 126.75 327 *e*PKIKP **PKiKP 01 53 49.2 0.0**
MDVR Moldovita 126.78 320 ⇑P **PKPdf 01 53 47.9 -1.1**
P61A Hammonton 126.79 47 IAMs_20 IAMs_20 02 49 32.5
comp=Z,731nm,19.0s
PAL Palisades 126.94 45 IAMs_20 IAMs_20 02 57 44.4
comp=Z,698nm,20.0s
J61A Chester 126.95 42 IAMs_20 IAMs_20 02 53 53.1
comp=Z,829nm,21.0s
KRLC Kraliky 126.99 327 *e*PKIKP **PKPdf 01 53 48.6 -0.6**
KRLC Kraliky 126.99 327 *e*PKPDF **PKPdf 01 53 48.6 -0.6**
OSTC Ostas 127.01 328 AMS AMS 02 47 30.0
comp=Z,1μm,23.0s
DPC Dobruska-Polom 127.07 328 AMS AMS 02 47 40.0
comp=Z,800nm,21.8s
CHVC Chvalec 127.07 328 AMS AMS 02 47 50.0
comp=Z,1μm,22.7s
UPC Upice 127.14 328 AMS AMS 02 47 50.0
comp=Z,1μm,22.3s
JAVC Velka Javorina 127.18 326 *e*PKIKP **PKiKP 01 53 51.0 +0.9**
N62A Caumsett State 127.28 45 IAMs_20 IAMs_20 02 57 51.3
comp=Z,728nm,20.0s
WSPT Westport, CT 127.28 45 IAMs_20 IAMs_20 02 45 25.5
comp=Z,756nm,21.0s
D62A Allapoint, All 127.41 37 IAMs_20 IAMs_20 02 43 47.8
comp=Z,692nm,21.0s
VRAC Vranov 127.52 327 *e*PKIKP **PKiKP 01 53 50.5 -0.2**
MODS Modra-Piesok 127.66 325 *e*PKIKP **PKiKP 01 53 53.0 +2.0**
MODS Modra-Piesok 127.66 325 *e*PKP **PKiKP 01 53 53.0 +2.0**
KRUC Moravsky 127.77 327 *e*PKIKP **PKiKP 01 53 50.9 -0.3**
PVCC Panska Ves 127.87 329 AMS AMS 02 49 50.0
comp=Z,800nm,22.8s
BRG Berggiesshubel 127.98 330 ⇓*e*PKPf 01 53 51.0
BRG Amp 01 53 54.4
comp=Z,16nm,1.2s
BRG Berggiesshubel 127.98 330 P **PKiKP 01 53 57.4 +5.9**
BRG Amp 01 53 59.0
comp=Z,8.1nm,1.1s
MORH Mrgy, Hungar 128.00 322 ⇑P **PKPdf 01 53 50.6 -0.5**
TREC Trest 128.12 327 AMS AMS 02 50 30.0
comp=Z,800nm,22.4s
CLL Collm 128.17 331 ⇓*i*PKIKP **PKiKP 01 53 52.8 +0.9**
CLL *i* 01 53 58.1
CLL pmax pmax
comp=Z,13nm,1.1s
CLL MLR MLR
comp=Z,400nm,20.4s
CLL Collm 128.17 331 ⇓*i*PKPdf **PKiKP 01 53 52.8 +0.9**
comp=Z,13nm,1.1s
CLL ⇓*i*x x 01 53 58.1
comp=Z,22nm,1.7s
CLL *e*PP **PP 01 55 54.0 -0.5**
CLL *e*PS **PS 02 05 57.0 -5.0**
CLL *e*PPS PPS 02 07 34.0
CLL *e*SS SS 02 13 00.0 -7.9
CLL *e*SSS SSS 02 17 54.0
CLL *e*(SSSS) 02 20 54.0
CLL AMS AMS 02 55 00.0
comp=Z,400nm,20.4s
PRU Pruhonice 128.21 328 AMS AMS 02 49 40.0
comp=Z,900nm,21.6s
HSKC Hora Svate Kat 128.40 330 AMS AMS 02 53 20.0
comp=Z,600nm,21.9s
RONA Rosalia, Austr 128.58 325 *e*PKiKP **PKiKP 01 53 52.0 -0.9**
comp=Z,2.5nm,1.0s
CONA Conrad Observa 128.70 326 *e*PKiKP **PKiKP 01 53 52.3 -0.9**
comp=Z,7.3nm,1.1s
ZVC Zvikov 128.72 328 AMS AMS 02 49 00.0
comp=Z,1μm,22.8s
M65A Busby, Falmout 128.98 44 P **PKPdf 01 53 51.8 -1.3**
baz=295
NKC Novy Kostel 129.12 330 AMS AMS 02 53 20.0
comp=Z,700nm,22.1s
KHC Kasperske Hory 129.23 328 *i*PKIKP **PKiKP 01 53 53.8 -0.4**
KHC pmax pmax
comp=Z,24nm,2.5s
KHC Kasperske Hory 129.23 328 *e*PKPDF **PKPdf 01 53 52.8 -0.7**
KHC *ex* x 01 56 13.0
KHC AMS AMS 02 50 20.0
comp=Z,900nm,22.1s
ARSA Arzberg 129.27 325 *e*PKP **PKPdf 01 53 52.8 -0.8**
comp=Z,9.5nm,2.3s
GERES GERESS Array B 129.34 328 PKP **PKPdf 01 53 53.3 -0.5**
comp=Z,2.1nm,0.7s,baz=41,slow=3.1,SNR=15
MOA Molin 129.63 326 *e*PKP **PKPdf 01 53 53.7 -0.5**
comp=Z,4.1nm,1.1s
BLY Banja Luka 129.63 322 IAMs_20 IAMs_20 02 54 48.5
comp=Z,674nm,21.0s
SOKA Soboth 129.87 325 *e*PKP **PKPdf 01 53 53.8 -1.0**
comp=Z,4.1nm,1.2s
BIOA Bad Ischl, Aus 130.06 326 *e*PKP **PKPdf 01 53 54.5 -0.6**
comp=Z,9.7nm,1.4s
GRA1 Grafenberg Arr 130.08 330 IAMs_20 IAMs_20 02 55 14.4
comp=Z,491nm,20.0s
GRF Grafenberg Arr 130.08 330 *e*PKPdf **PKiKP 01 53 55.8 0.0**
baz=50,slow=1.4
GRFO Grafenberg 130.08 330 IAMs_20 IAMs_20 02 54 54.4
comp=Z,494nm,20.0s
LPAZ La Paz 130.16 121 PKP **PKiKP 01 53 57.2 -0.5**
comp=Z,1.4nm,0.9s,baz=244,slow=2.9,SNR=4.6
LPAZ SKPab **SKPbc 01 57 20.8 +1.5**
comp=Z,1.0nm,0.9s,baz=256,slow=8.3,SNR=2.7
KBA Koelnbreinsper 130.59 326 *e*PKP **PKPdf 01 53 54.2 -2.1**
comp=Z,4.2nm,1.2s
LESA Schwarzleotal 130.74 327 *e*PKP **PKPdf 01 53 55.4 -1.0**
comp=Z,8.2nm,1.3s
ABTA Abfaltersbach 131.24 326 *e*PKP **PKPdf 01 53 56.8 -0.7**
comp=Z,1.7nm,0.7s
EKA Eskdalemuir Ar 131.34 343 PKP **PKiKP 01 53 57.5 -0.7**
comp=Z,2.8nm,1.0s,baz=24,slow=2.5,SNR=2.7
WATA Walderalm 131.39 327 *e*PKiKP **PKiKP 01 53 58.1 -0.6**
comp=Z,7.7nm,1.9s
WTTA Wattenberg 131.40 327 *e*PKP **PKPdf 01 53 57.0 -0.8**
comp=Z,22nm,1.9s
MOTA Moosalm 131.63 328 *e*PKiKP **PKPdf 01 53 58.0 -0.2**
comp=Z,1.0nm,0.7s
SQTA Sankt Quirin 131.66 327 *e*PKiKP **PKiKP 01 53 58.2 -1.0**
comp=Z,2.3nm,0.7s
DAVA Damuels 132.31 328 *e*PKiKP **PKPdf 01 53 59.4 -0.2**
comp=Z,7.4nm,1.1s
BFO Black Forest 132.41 330 IAMs_20 IAMs_20 02 57 06.9
comp=Z,637nm,22.0s
WLF Walferdange 132.50 333 IAMs_20 IAMs_20 02 55 00.0
comp=Z,734nm,21.0s
TIP Timpagrande 132.58 315 IAMs_20 IAMs_20 02 56 43.5
comp=Z,568nm,22.0s
ECH Echery 133.05 331 IAMs_20 IAMs_20 02 56 28.0
comp=Z,596nm,21.0s
SENIN Lac Senin/Sane 134.25 329 IAMs_20 IAMs_20 02 54 20.0
comp=Z,586nm,20.0s

GRTK Grand Turk 134.29 69 IAMs_20 IAMs_20 02 57 36.0
comp=Z,474nm,20.0s
SSB Saint Sauveur 136.40 330 IAMs_20 IAMs_20 02 56 14.6
comp=Z,760nm,22.0s
SJG San Juan 139.35 74 IAMs_20 IAMs_20 03 01 31.4
comp=Z,471nm,21.0s
BOAV Boa Vista 144.03 99 PKPbc 01 54 19.9 +0.2
PBRG Braganca 144.22 336 *e*PKP PKPbc 01 54 19.7 +0.2
PGAV Gavieira, Arco 144.66 338 *e*PKP **PKPdf 01 54 21.9 -0.3**
PGAV eLR LR 02 45 12.7
PGAV *i* IAMs_20 IAMs_20 03 02 42.2
comp=Z,437nm,20.0s
ESBB Sonseca Array 144.75 331 **PKPdf 01 54 21.2 -1.2**
ESDC Sonseca Array 144.75 331 PKP **PKPab 01 54 20.3 -0.8**
comp=Z,7.1nm,1.0s,baz=38,slow=2.2,SNR=25
ESDC Sonseca Array 144.75 331 PKPbc 01 54 20.8 -0.4
CART Cartagena 144.79 326 IAMs_20 IAMs_20 03 01 30.2
comp=Z,520nm,21.0s
PCAB Cabril 144.79 338 *e*PKP **PKPdf 01 54 23.1 +0.8**
MVO Moncorvo 144.88 336 *e*PKP **PKPdf 01 54 22.4 -0.2**
MVO eLR LR 02 48 36.9
MVO *i* IAMs_20 IAMs_20 03 00 59.8
comp=Z,425nm,22.0s
POLO Lamas de Olo 145.00 337 *e*PKP **PKPdf 01 54 23.1 +0.3**
PVRL Vila Real 145.05 337 *e*PKP **PKPdf 01 54 22.3 -0.6**
PTO Porto 145.50 338 *e*PKP **PKPab 01 54 24.6 +0.9**
PVIS Viseu 145.60 337 *e*PKP **PKPab 01 54 24.7 +0.5**
MTE Manteigas 145.73 336 IAMs_20 IAMs_20 03 00 37.6
comp=Z,527nm,22.0s
MTE Manteigas 145.73 336 *e*PKP **PKPab 01 54 25.0 +0.2**
MTE eLR LR 02 46 24.6
MTE *i* IAMs_20 IAMs_20 03 03 50.5
comp=Z,382nm,20.0s
BDFB Brasilia 146.06 138 PKPbc **PKPab 01 54 26.1 -0.5**
comp=Z,8.6nm,0.8s,baz=200,slow=3.3,SNR=15
BDFB Brasilia 146.06 138 **PKPdf 01 54 24.6 -0.7**
PCBR Castelo Branco 146.18 335 *e*PKP **PKPab 01 54 26.4 +0.1**
PCAS Casmilo, Conde 146.41 337 *e*PKP **PKiKP 01 54 27.8 -1.6**
PMRV Marv??o 146.49 335 *e*PKP **PKPab 01 54 27.6 +0.1**
PMRV eLR LR 02 48 21.2
PMRV *i* IAMs_20 IAMs_20 03 02 01.3
comp=Z,430nm,22.0s
PSARD Sardoal 146.66 336 *e*PKP **PKiKP 01 54 28.6 -1.4**
PSBE So Bento 146.98 337 *e*PKP **PKPdf 01 54 26.0 -0.1**
PESTR Estremoz 147.04 334 *e*PKP **PKPab 01 54 29.3 -0.4**
PMTG Montargil 147.14 335 *e*PKP **PKPbc 01 54 27.9 -0.6**
PARRA Arraiolos 147.27 335 *e*PKP **PKPbc 01 54 28.5 -0.4**
PBAR Barrancos 147.38 333 *e*PKP **PKPbc 01 54 28.8 -0.4**
EVO Evora 147.50 335 *e*PKP **PKiKP 01 54 33.2 +1.5**
MOE Montemor 147.65 335 *e*PKP **PKPab 01 54 33.1 +1.0**
PMAFR Mafra 147.66 337 *e*PKP **PKPab 01 54 33.6 +1.5**
LIS Lisbon 147.81 336 *e*PKP **PKiKP 01 54 31.7 -0.6**
LIS Lisbon 147.81 336 *e*PKP **PKPab 01 54 35.9 +3.2**
PBEJ Beja 147.86 334 *e*PKP **PKiKP 01 54 31.1 -1.3**
TAM Tamanrasset 147.97 298 **PKPbc 01 54 29.3 -2.2**
TAM IAMs_20 IAMs_20 03 15 47.2
comp=Z,474nm,21.0s
TAM Tamanrasset 147.97 298 PKIKP **PKPbc 01 54 29.3 -2.2**
PLOUS Minas do Lousa 148.10 335 *e*PKP **PKPab 01 54 35.1 +1.3**
MESJ Messejana 148.17 334 *e*PKP **PKPab 01 54 33.1 -1.1**
MESJ IAMs_20 IAMs_20 02 56 43.0
comp=Z,556nm,26.1s
MESJ Messejana 148.17 334 **PKPbc 01 54 29.9 -1.4**
MESJ Messejana 148.17 334 *e*PKP **PKiKP 01 54 32.5 -0.7**
MESJ Messejana 148.17 334 PKP2 **PKPbc 01 54 29.9 -1.4**
PCVE Castro Verde 148.27 334 *e*PKP **PKiKP 01 54 33.1 -0.2**
PVAQ Vaqueiros 148.31 333 *e*PKP **PKiKP 01 54 33.0 -0.4**
PVAQ eLR LR 02 47 25.4
PVAQ *i* IAMs_20 IAMs_20 03 05 44.9
comp=Z,352nm,18.0s
PBDV Barranco-do-Ve 148.54 333 *e*PKP **PKPbc 01 54 31.3 -1.1**
PTEO Sao Teotonio 148.63 335 *e*PKP **PKPab 01 54 34.4 -1.6**
MORF Marmelete 148.81 334 *e*PKP **PKPab 01 54 35.7 -1.1**
MORF Marmelete 148.81 334 *e*PKP **PKPdf 01 54 30.4 +1.2**
PFVI Vila Bisbo 149.03 334 *e*PKP **PKiKP 01 54 35.3 +0.4**
TORD Torodi Ar. Bea 153.55 280 PKP **PKPdf 01 54 36.0 -1.0**
comp=Z,1.5nm,1.0s,baz=85,slow=2.6,SNR=6.9
TORD PKPbc **PKPbc 01 54 43.4 -1.4**
comp=Z,2.1nm,0.7s,baz=80,slow=2.2,SNR=8.7
TORD Torodi Ar. Bea 153.55 280 **PKPdf 01 54 34.0 -3.0**
DBIC Dimbokro 159.76 263 PKPab **PKPab 01 55 22.7 -1.2**
comp=Z,7.7nm,1.0s,baz=112,slow=5.4,SNR=3.9

*IDC **04** 01:49:56.1±0.5, 9.˚80S×154.˚79E, h0km, mb4.5/22, mbtmp4.4/25, ML2.7/3, MS4.4/32, Error ellipse: s-maj=18.1km s-min=12.9km az=93.0*
*BJI **04** 01:49:58.6, 9.˚40S×154.˚88E, h10km, mB5.3/11, mb4.8/42, Ms4.9/11, Ms7 4.7/13*
*NEIC **04** 01:49:58.9, 9.˚85S×154.˚88E, h10km*
*MOS **04** 01:49:58.1±1.1, 9.˚76S×154.˚75E, h13km, mb5.1/39, Error ellipse: s-maj=11.5km s-min=7.2km az=109.7*
*GFZ **04** 01:49:58.8±0.2, 10.˚S±3.˚×15.˚5E±.˚, h10km, M5.2/24, mb4.8/24, Error ellipse: s-maj=9.4km s-min=6.4km az=84.5, confirmed*
*NEIC **04** 01:49:58.9±2.0, 9.˚85S±0.˚05×154.˚88E±0.˚10, h10km±1km, mb5.2/152, Mww5.2/25, Error ellipse: s-maj=16.8km s-min=6.4km az=110.0*
*DJA **04** 01:49:59.5±0.2, 10.˚S±3.˚×15.˚5E±.˚, h10km, M5.3/30, mb5.0/30, mB6.3/10, MLv4.4/2, Mw(mB)6.1/10*
*GCMT **04** 01:49:59.9±0.1, 9.˚73S±0.˚01×154.˚87E±0.˚02, h12km, MW5.2/141, Moment Tensor Solution. s55, c70; s141, c259; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.77±.01; Mθθ=0.67±.01; Mϕϕ=0.09±.01; Mrθ=0.23±.04; Mrϕ=-0.01±.01; Mθϕ=-0.15±.06; Best double couple: M0=0.76500×10^17 NP1:ϕs=83.00000°, δ37.00000°, λ=-104.00000°. NP2:ϕs=281.00000°, δ55.00000°, λ=-80.00000°. Principal axes: T 0.7060, Plg9.0000°, Azm3.0000°; N 0.1170, Plg8.0000°, Azm95.0000°; P -0.8230, Plg78.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GFZ **04** 01:50:00.2, 9.˚84S×155.˚00E, h11km, Mw5.2/55, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=6.85; Mθθ=5.49; Mϕϕ=1.36; Mrθ=0.66; Mθϕ=0.33; Mϕr=2.62; Fault plane solution: M0=6.84287×10^16 NP1:ϕs=68.51015°, δ51.49040°, λ=-110.18881°. NP2:ϕs=279.07435°, δ42.74117°, λ=-66.55267°. Principal axes: T 5.5818, Plg4.5335°, Azm172.6801°; N 2.0524, Plg15.6675°, Azm81.4058°; P -7.6342, Plg73.6572°, Azm278.3681°;*
*NEIC **04** 01:50:03.9, 9.˚85S×154.˚88E, h12km, Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10^16 Nm; Mrr=6.55; Mθθ=5.63; Mϕϕ=0.91; Mrθ=-4.96; Mθϕ=-0.25; Mϕr=0.88; Fault plane solution: M0=7.95000×10^16 NP1: ϕs=270.14000°, δ25.37000°, λ=-96.46000°. NP2:ϕs=97.29000°, δ64.80000°, λ=-86.95000°. Principal axes: T 7.4421, Plg20.0000°, Azm185.0000°; N 0.9303, Plg3.0000°, Azm276.0000°; P -8.3725, Plg70.0000°, Azm14.0000°;*
ISC 04 01:49:58.4±0.3, 9.˚87S±0.˚05×154.˚90E±0.˚06, h10km, n602, σ1s00/529, mb5.1/139, MS4.5/36, 14C-16D, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**85**	Pn	**Pn**	**Pn**	**01 51 13.3**	**-0.2**
	0.2nm,0.3s,baz=266,slow=13,SNR=5.0							
HNR					LR	LR	01 52 51.3	
	comp=Z,158nm,20.5s,baz=356,slow=34							
HNR	**Honiara**	**4.99**	**85**	Pn	**Pn**		**01 51 12.8**	**-0.7**
HNR	**Honiara**	**4.99**	**85**	P	**Pn**		**01 51 12.8**	**-0.7**
KRVT	**Keravat (AS076**	**6.22**	**332**	LR	LR		01 53 45.3	
	comp=Z,720nm,21.3s,baz=61,slow=38							
PMG	**Port Moresby**	**7.65**	**273**	Pn	**Pn**		**01 51 46.0**	**-4.0**
	1.1nm,0.3s,baz=82,slow=14,SNR=1.5							
PMG					LR	LR	01 54 42.5	
	comp=Z,4μm,20.0s,baz=116,slow=38							
	5.9nm,0.4s							
PMG	**Port Moresby**	**7.65**	**273**	P	**Pn**		**01 51 51.1**	**+1.1**
	0.5nm58nm,1.0s							
PMG	**Port Moresby**	**7.65**	**273**	P	**Pn**		**01 51 52.2**	**+2.2**
CTA	**Charters Tower**	**13.15**	**218**	Pn	**Pn**		**01 53 02.4**	**-3.0**
	0.2nm,0.3s,baz=36,slow=8.7,SNR=2.2							
CTA					LR	LR	01 57 45.0	
	comp=Z,2μm,20.0s,baz=36,slow=36							
	3.7nm,0.9s							
SANVU	**Saraoutou**	**13.22**	**116**	P	**Pn**		**01 53 05.2**	**-1.1**
KOUNC	**Koumac, New Ca**	**13.95**	**141**		**Pn**		**01 53 15.4**	**-0.8**
EIDS	**Eidsvold**	**15.84**	**193**		**P**		**01 53 45.8**	**+0.4**

EIDS Eidsvold 15.84 193 P **Pn 01 53 43.5 +1.9**
GENI Genyem 16.33 295 P **Pn 01 53 48.1 +0.1**
4μm33nm,0.4s
GENI Genyem 16.33 295 P **Pn 01 53 49.4 +1.4**
DZM Mont Dzumac 16.43 139 Pn **Pn 01 53 49.5 +0.2**
6.7nm,0.7s,baz=318,slow=15,SNR=9.3
DZM LR LR 01 59 13.6
comp=Z,5μm,21.9s,baz=316,slow=34
ONTNC Ouen Toro 16.60 140 P **P 01 53 53.8 -0.1**
OUENC Ouen Island, N 16.93 139 **Pn 01 53 56.6 +1.0**
PATS Pohnpei 16.94 12 **Pn 01 53 49.8 -5.9**
PATS IAmb IAmb 01 54 00.8
comp=Z,203nm,1.4s
PATS Pohnpei 16.94 12 P **Pn 01 53 56.0 +0.2**
MARNC Mare, Loyalty 17.10 134 **P 01 54 01.8 +2.4**
SMPI Sarmi 17.90 295 P **P 01 54 10.4 +2.1**
comp=Z,42nm,0.5s
QIS Mount Isa 18.17 232 P **Pn 01 54 11.6 +0.5**
QLP Quilpie 19.45 210 P **Pn 01 54 26.5 0.0**
SRPI Serui, Papua 20.18 292 P **P 01 54 33.0 -0.4**
BAKI Biak 20.59 294 P Pn 01 54 39.7 -0.3
comp=Z,49nm,1.0s
ARMA Armidale 20.67 188 Pn 01 54 40.9 -0.2
ARMA Armidale 20.67 188 P **P 01 54 39.7 +1.0**
WRAB Tennant Creek 22.21 241 P **P 01 54 54.4 -1.0**
WRAB Tennant Creek 22.21 241 ⇑*e*P **P 01 54 56.7 +1.4**
WRAB pmax pmax
comp=Z,55nm,1.8s
RKPI Ransiki, Papua 22.22 291 P **P 01 54 56.7 +1.3**
comp=Z,214nm,1.5s
INKA Innaminka 22.22 215 **P 01 54 56.6 +1.3**
WRA Warramunga Arr 22.23 241 P **P 01 54 54.0 -1.5**
comp=Z,3.8nm,0.7s,baz=66,slow=9.4,SNR=14
WRA PcP **PcP 01 58 50.4 -1.7**
comp=Z,0.9nm,0.8s,baz=58,slow=2.0,SNR=2.8
comp=Z,3.8nm,0.7s
MWPI Manokwari, Pap 22.57 292 P **P 01 55 00.5 +1.3**
comp=Z,4μmcomp=Z,168nm,1.3s
CMSA Cobar Meteorol 23.19 200 P **P 01 55 06.4 +0.9**
MSVF Nonsavu 23.78 112 LR LR 02 02 50.8
comp=Z,870nm,21.5s,baz=254,slow=32
AS31 Alice Springs 24.29 233 **P 01 55 15.0 -1.3**
ASAR Alice Springs 24.29 233 P **P 01 55 15.3 -1.0**
comp=Z,16nm,0.8s,baz=58,slow=9.5,SNR=76
ASAR PcP **PcP 01 58 55.4 -1.0**
comp=Z,0.4nm,0.7s,baz=67,slow=3.0,SNR=1.9
ASAR LR LR 02 04 09.0
comp=Z,1μm,19.3s,baz=48,slow=35
comp=Z,16nm,0.8s
ASAR Alice Springs 24.29 233 **P 01 55 15.7 -0.6**
STKA Stephens Creek 25.13 207 P **P 01 55 24.1 +0.3**
comp=Z,20nm,0.8s,baz=32,slow=12,SNR=17
STKA LR LR 02 05 24.2
comp=Z,3μm,19.1s,baz=25,slow=37
comp=Z,20nm,0.8s
STKA Stephens Creek 25.13 207 ⇑*e*P **P 01 55 24.4 +0.6**
STKA Stephens Creek 25.13 207 P **P 01 55 24.6 +0.8**
SIJI Sorong 25.15 289 LR LR 02 06 48.1
comp=Z,611nm,18.2s,baz=98,slow=40
GUMO Guam 25.35 337 LR LR 02 03 42.3
comp=Z,616nm,21.8s,baz=154,slow=33
CAN Canberra 25.90 191 P **P 01 55 32.5 +1.7**
CAN IAmb IAmb 01 55 36.2
comp=Z,110nm,1.7s
CAN Canberra 25.90 191 P **P 01 55 32.5 +1.7**
CAN pmax pmax
comp=Z,110nm,1.7s
CAN Canberra 25.90 191 P **P 01 55 32.2 +1.5**
KNRA Kununurra 26.12 255 P **P 01 55 32.3 -0.6**
KRAI Karang Ratu 27.11 282 P **P 01 55 41.2 -0.7**
comp=Z,23μmcomp=Z,28nm,0.7s
BBOO Buckleboo 28.70 215 **P 01 55 56.9 +1.0**
BBOO IAmb IAmb 01 56 03.6
comp=Z,77nm,1.4s
BBOO Buckleboo 28.70 215 P **P 01 55 57.9 +2.1**
FITZ Fitzroy Crossi 29.52 251 LR LR 02 07 40.3
comp=Z,1μm,19.6s,baz=70,slow=36
FITZ Fitzroy Crossi 29.52 251 P **P 01 56 01.5 -1.8**
BATI Baumata 30.76 267 LR LR 02 09 34.2
comp=Z,860nm,18.3s,baz=98,slow=38
RAO Raoul Island 31.91 131 LR LR 02 07 08.6
comp=Z,1μm,21.1s,baz=286,slow=32
SGSI Sangihe 32.21 293 P **P 01 56 27.6 +0.4**
FORT Forrest 32.50 226 P **P 01 56 28.5 -1.0**
URZ Urewera 34.59 148 LR LR 02 10 08.4
comp=Z,1μm,18.1s,baz=332,slow=35
KAPI Kappang 35.17 275 LR LR 02 12 53.8
comp=Z,328nm,20.2s,baz=96,slow=39
KAPI Kappang 35.17 275 ⇓*i*P **P 01 56 53.1 +0.2**
DBNI Kabupaten Domp 36.14 269 P **P 01 56 59.8 -1.4**
comp=Z,20nm,0.9s
RPZ Rata Peaks 36.52 160 LR LR 02 11 19.2
comp=Z,511nm,19.1s,baz=312,slow=35
JCJ Chichijima 38.76 342 LR LR 02 11 40.5
comp=Z,47nm,20.7s,baz=194,slow=34
TGY Tagaytay City 41.26 305 LR LR 02 14 12.6
comp=Z,292nm,19.5s,baz=106,slow=35
NWAO Narrogin (SRO) 41.57 231 LR LR 02 14 27.7
comp=Z,804nm,18.4s,baz=75,slow=35
JOW Kunigami 44.71 325 LR LR 02 12 54.7
comp=Z,481nm,21.8s,baz=236,slow=31
RAR Rarotonga 44.95 110 LR LR 02 13 28.4
comp=Z,109nm,21.4s,baz=276,slow=31
NACB Ninganchiao 46.84 317 P **P 01 58 29.7 +0.1**
SSLB Suanglung 47.12 316 P **P 01 58 31.2 +0.1**
YHNB Yeheng 47.42 317 P **P 01 58 34.9 +1.4**
JNU Nakatsue 48.50 333 LR LR 02 17 10.6
comp=Z,166nm,20.2s,baz=136,slow=34
MJAR Matsushiro Arr 48.77 342 P **P 01 58 41.8 -1.9**
comp=Z,1.8nm,0.3s,baz=171,slow=8.3,SNR=6.0
MJAR LR LR 02 16 35.2
comp=Z,465nm,21.8s,baz=162,slow=33
comp=Z,1.8nm,0.3s
MAJO Matsushiro 48.77 342 P **P 01 58 42.8 -0.8**
MAJO Matsushiro 48.77 342 *i* P **P 01 58 42.9 -0.8**
MAJO pmax pmax
comp=Z,28nm,1.7s
KSRS Korea Array 53.44 333 P **P 01 59 17.9 -0.8**
comp=Z,2.3nm,1.0s,baz=151,slow=8.3,SNR=7.8
comp=Z,2.3nm,1.0s
NJ2 Nanjing 54.09 322 *e*P **P 01 59 24.9 +1.3**
NJ2 pmax pmax
comp=Z,37nm,0.5s
PPT Papeete 54.32 105 LR LR 02 17 48.0
comp=Z,161nm,21.6s,baz=282,slow=31
PPT2 Papeete2 54.32 105 *e*LR LR 02 15 05.4
comp=Z,681nm,31.0s
PPT2 *e*LR LR 02 15 11.1
comp=Z,387nm,33.5s
TBI Tubuai 54.67 112 *e*LR LR 02 15 15.7
comp=Z,4μm,31.2s
TBI *e*LR LR 02 15 21.9
comp=Z,1μm,29.5s
JKA Kamikawa-asahi 54.88 349 P **P 01 59 30.3 +1.2**
PSTR Posyet 56.73 339 ⇓*e*P **P 01 59 44.6 +2.2**
YSS Yuzhno-Sakhali 57.60 350 *e*P **P 01 59 47.2 -1.3**
USA0B Ussuriysk Arra 57.69 341 *ce*P **P 01 59 49.8 +0.6**
USRK Ussuriysk Ar. 57.69 341 P **P 01 59 49.4 +0.2**
comp=Z,3.7nm,0.8s,baz=138,slow=6.9,SNR=11
USRK LR LR 02 24 53.7
comp=Z,140nm,18.1s,baz=162,slow=36
comp=Z,3.7nm,0.8s
USRK Ussuriysk Ar. 57.69 341 **P 01 59 49.0 -0.2**
CN2 Changchun 59.75 336 *e*P **P 02 00 05.5 +2.0**
CN2 *es*P pwP 02 00 12.0 +1.9
CN2 *e*S **S 02 08 14.7 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 L L
comp=Z,300nm,18.0s
CN2 L L
comp=Z,200nm,18.0s
CN2 L L
comp=Z,300nm,19.0s
HNS HongShan 60.24 324 ⇑P **P 02 00 06.9 -0.1**
HNS pmax pmax
comp=Z,18nm,1.2s
BNX BinXian 60.62 338 ⇑P **P 02 00 09.3 -0.2**
BNX pmax pmax
comp=Z,9.0nm,1.4s
CMAR Chiang Mai Arr 61.97 297 P **P 02 00 18.2 -1.0**
comp=Z,0.9nm,0.3s,baz=109,slow=5.6,SNR=8.5
comp=Z,0.9nm,0.3s
CMAR Chiang Mai Arr 61.97 297 **P 02 00 18.7 -0.5**

CMAR	**Chiang Mai Arr**	**61.97**	**297**	*ce*	P		**P**	**02 00 20.5**	**+1.3**
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.4s								
CHTO	**Chiang Mai**	**62.10**	**297**		P		**P**	**02 00 20.5**	**+0.4**
CHTO					IAmb		IAmb	02 00 22.0	
	comp=Z,27nm,1.6s								
CHTO	**Chiang Mai**	**62.10**	**297**		P		**P**	**02 00 20.5**	**+0.4**
CHTO					pmax		pmax		
	comp=Z,27nm,1.6s								
CHTO	**Chiang Mai**	**62.10**	**297**		P		**P**	**02 00 20.9**	**+0.8**
	comp=Z,12nm,1.7s								
CHTO	**Chiang Mai**	**62.10**	**297**		P		**P**	**02 00 21.3**	**+1.2**
KLR	**Kul'dur**	**62.27**	**343**		LR		LR	02 24 43.2	
	comp=Z,237nm,21.8s,baz=184,slow=34								
KLR	**Kul'dur**	**62.27**	**343**	*c i*	P		**P**	**02 00 20.6**	**0.0**
KLR					pmax		pmax		
	comp=Z,24nm,1.6s								
GRNR	**Gornyy**	**62.49**	**347**	⇓ *i*	P		**P**	**02 00 23.7**	**+1.7**
GRNR					pmax		pmax		
	comp=Z,7.0nm,1.1s								
PET	**Petropavlovsk**	**62.73**	**3**	⇓ *e*	P		**P**	**02 00 25.4**	**+1.9**
PET					pmax		pmax		
	comp=Z,54nm,1.1s								
PET	**Petropavlovsk**	**62.73**	**3**		P		**P**	**02 00 24.8**	**+1.3**
	comp=Z,48nm,1.1s								
PEA0B	**Petropavlovsk-**	**62.77**	**2**				**P**	**02 00 24.5**	**+0.7**
PEA0B	**Petropavlovsk-**	**62.77**	**2**		P		**P**	**02 00 24.5**	**+0.7**
PEA0B					pmax		pmax		
	comp=Z,83nm,1.5s								
PETK	**Petropavlovsk-**	**62.77**	**2**		P		**P**	**02 00 23.1**	**-0.8**
	comp=Z,4.1nm,0.6s,baz=192,slow=5.7,SNR=8.9								
PETK					LR		LR	02 23 58.3	
	comp=Z,254nm,21.5s,baz=179,slow=33								
	comp=Z,4.1nm,0.6s								
PETK	**Petropavlovsk-**	**62.77**	**2**				**P**	**02 00 24.8**	**+0.9**
CD2	**Chengdu**	**63.62**	**312**		P		**P**	**02 00 30.0**	**0.0**
CASY	**Casey**	**63.85**	**198**		P		**P**	**02 00 30.9**	**0.0**
CASY					IAmb		IAmb	02 00 34.0	
	comp=Z,30nm,1.6s								
CASY	**Casey**	**63.85**	**198**		P		**P**	**02 00 31.4**	**+0.6**
TAOE	**Nuku Hiva Isla**	**64.00**	**95**	*e*	LR		LR	02 19 35.7	
	comp=Z,296nm,24.0s								
XLT	**XiLinHaoTe**	**64.07**	**330**	*eP*			**P**	**02 00 33.7**	**+0.9**
XLT					pP		pwP	02 00 38.2	-1.1
XLT					sP		sP	02 00 43.4	+7.7
XLT					pmax		pmax		
	comp=Z,16nm,0.8s								
XLT					pmax		pmax		
	comp=Z,120nm,4.2s								
HHC	**Hu-ho-hao-te**	**64.36**	**325**	*eP*			**P**	**02 00 36.3**	**+1.5**
HHC					pmax		pmax		
	comp=Z,9.0nm,0.5s								
HHC					pmax		pmax		
	comp=Z,190nm,5.7s								
SHEM	**Shemya Is, Ala**	**64.48**	**13**		LR		LR	02 25 14.6	
	comp=Z,619nm,20.0s,baz=228,slow=33								
HEH	**HeiHe**	**64.50**	**341**	*eP*			**P**	**02 00 35.5**	**+0.2**
HEH					pmax		pmax		
	comp=Z,8.0nm,1.0s								
BTO2	**Baotou**	**65.26**	**324**	*eP*			**P**	**02 00 42.8**	**+2.1**
BTO2					pmax		pmax		
	comp=Z,11nm,0.5s								
BTO2					pmax		pmax		
	comp=Z,260nm,5.5s								
BTO2					L		L		
	comp=Z,270nm,11.4s								
BTO2					L		L		
	comp=Z,640nm,19.0s								
BTO2					L		L		
	comp=Z,800nm,18.4s								
LZH	**Lanzhou**	**66.31**	**317**	*eP*			**P**	**02 00 48.3**	**+0.7**
LZH					pP		pwP	02 00 53.4	-0.8
LZH					pmax		pmax		
	comp=Z,25nm,1.5s								
LZH					L		L		
	comp=Z,260nm,15.2s								
LZH					L		L		
	comp=Z,300nm,15.6s								
LZH					L		L		
	comp=Z,380nm,17.8s								
LZDM	**Lanzhou Array**	**66.34**	**316**		P		**P**	**02 00 47.9**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=120,slow=8.5,SNR=1.4								
	comp=Z,1.1nm,0.3s								
HILR	**Hailar Array B**	**66.71**	**336**		P		**P**	**02 00 49.3**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=138,slow=13,SNR=1.6								
	comp=Z,0.9nm,0.3s								
ZEA	**Zeya**	**67.57**	**343**	*eP*			**P**	**02 00 55.2**	**+0.2**
ZEA					pmax		pmax		
	comp=N,10.0nm,0.5s								
ZEA					pmax		pmax		
	comp=Z,10.0nm,1.3s								
VNDA	**Vanda**	**67.73**	**178**		P		**P**	**02 00 55.5**	**-0.2**
	comp=Z,3.8nm,1.0s,baz=338,slow=4.9,SNR=10.0								
	comp=Z,3.8nm,1.0s								
VNDA	**Vanda**	**67.73**	**178**				**P**	**02 00 55.4**	**-0.2**
VNDA	**Vanda**	**67.73**	**178**		P		**P**	**02 00 55.4**	**-0.3**
VNDA					pmax		pmax		
	comp=Z,15nm,1.4s								
SBA	**Scott Base**	**68.24**	**177**		P		**P**	**02 01 01.2**	**+2.3**
SBA	**Scott Base**	**68.24**	**177**		P		**P**	**02 01 01.2**	**+2.3**
SBA					pmax		pmax		
	comp=Z,80nm,2.0s								
SHL	**Shillong**	**70.69**	**301**				**P**	**02 01 13.5**	**-1.7**
SHL					IAmb		IAmb	02 01 16.5	
	comp=Z,30nm,1.5s								
SHL	**Shillong**	**70.69**	**301**		P		**P**	**02 01 13.5**	**-1.7**
SHL					pmax		pmax		
	comp=Z,30nm,1.5s								
GTA2	**Gaotai**	**70.86**	**318**	*eP*			**P**	**02 01 17.2**	**+1.3**
GTA2					pP		pwP	02 01 22.0	-0.5
GTA2					pmax		pmax		
	comp=Z,14nm,1.5s								
ULN	**Ulaanbaatar**	**71.38**	**328**		P		**P**	**02 01 19.2**	**+0.3**
ULN	**Ulaanbaatar**	**71.38**	**328**	⇑ *i*	P		**P**	**02 01 20.1**	**+1.2**
ULN					pmax		pmax		
	comp=Z,35nm,1.8s								
ULN	**Ulaanbaatar**	**71.38**	**328**		P		**P**	**02 01 19.5**	**+0.6**
	comp=Z,2µmcomp=Z,67nm,1.7s								
ULN	**Ulaanbaatar**	**71.38**	**328**		P		**P**	**02 01 19.8**	**+0.9**
UNV	**Unalaska Valle**	**71.39**	**23**		P		**P**	**02 01 18.9**	**+0.3**
	baz=220								
SONM	**Songino Array**	**71.70**	**328**		P		**P**	**02 01 19.8**	**-0.9**
	comp=Z,8.4nm,1.1s,baz=133,slow=4.8,SNR=31								
	comp=Z,8.4nm,1.1s								
SONM	**Songino Array**	**71.70**	**328**				**P**	**02 01 19.9**	**-0.9**
SONM					IAmb		IAmb	02 01 23.1	
	comp=Z,20nm,1.2s								
SONM	**Songino Array**	**71.70**	**328**		P		**P**	**02 01 19.9**	**-0.9**
SONM					pmax		pmax		
	comp=Z,20nm,1.2s								
SEY	**Seymchan**	**72.61**	**359**	*ce*	P		**P**	**02 01 26.2**	**+0.5**
SEY					pmax		pmax		
	comp=Z,20nm,1.4s								
SPIA	**Saint Paul Isl**	**72.69**	**19**		P		**P**	**02 01 26.8**	**+0.5**
	baz=216								
GOMU	**GeErMu**	**72.70**	**313**		P		**P**	**02 01 28.0**	**+0.6**
GOMU					pmax		pmax		
	comp=Z,7.0nm,0.6s								
YAK	**Yakutsk**	**74.33**	**348**	*eP*			**P**	**02 01 37.5**	**+1.6**
YAK				*e*	*PP		**sP**	**02 01 40.9**	**+2.1**
YAK				*e*				02 01 52.2	
YAK				*e*				02 04 22.2	
YAK				*e*	PPP		PPP	02 06 07.3	
YAK				*e*	S		**S**	**02 11 12.7**	**+2.9**
YAK				*e*				02 11 47.7	
YAK				*e*	SS		**SS**	**02 15 57.9**	**+1.7**
YAK					pmax		pmax		
	comp=Z,33nm,1.2s								
YAK					pmax		pmax		
	comp=N,11nm,2.0s								
YAK					pmax		pmax		
	comp=E,7.0nm,1.5s								
YAK					pmax		pmax		
	comp=Z,319nm,7.0s								
YAK					pmax		pmax		
	comp=N,47nm,4.2s								
YAK					pmax		pmax		
	comp=E,129nm,7.2s								
YAK					smax		smax		
	comp=E,110nm,5.7s								
YAK					smax		smax		
	comp=N,51nm,3.8s								
YAK					MLR		MLR		
	comp=Z,174nm,23.0s								
YAK					MLR		MLR		
	comp=N,300nm,26.0s								
YAK					MLR		MLR		
	comp=E,159nm,23.0s								
SDPT	**Sand Point**	**74.88**	**25**		P		**P**	**02 01 39.2**	**0.0**
	baz=226								
CHNA	**Chernabura Isl**	**74.89**	**25**		P		**P**	**02 01 38.9**	**-0.4**
	baz=227								
TLY	**Talaya**	**75.48**	**330**		P		**P**	**02 01 41.4**	**-1.4**
TLY	**Talaya**	**75.48**	**330**	*ce*	P		**P**	**02 01 43.5**	**+0.7**
TLY					pmax		pmax		
	comp=Z,18nm,1.5s								
EVN	**Everest**	**75.77**	**302**		P		P	02 01 39.5	-6.3
EVN					IAmb		IAmb	02 02 10.3	
	comp=Z,39nm,1.7s								
EVN	**Everest**	**75.77**	**302**		P		**P**	**02 01 45.7**	**0.0**
S14K	**Fog Glacier**	**75.91**	**24**		P		**P**	**02 01 45.0**	**-0.3**
	baz=226								
M11K	**Mekoryuk**	**76.52**	**19**		P		**P**	**02 01 48.7**	**+0.3**
	baz=220								
MOY	**Mondy**	**76.81**	**329**	*eP*			**P**	**02 01 51.2**	**+0.7**
MOY					pmax		pmax		
	comp=Z,39nm,3.1s								
CHIR	**Chirikof Islan**	**77.25**	**26**		P		**P**	**02 01 52.6**	**-0.1**
	baz=230								
O14K	**Tigyukauivet M**	**77.34**	**21**		P		**P**	**02 01 53.4**	**+0.3**
	baz=224								
M13K	**Dall Lake**	**77.47**	**20**		P		**P**	**02 01 54.1**	**+0.3**
	baz=222								
N14K	**Kuskokwak Cree**	**77.68**	**21**		P		**P**	**02 01 54.7**	**-0.3**
	baz=224								
GAMB	**Gambell**	**77.71**	**14**		P		**P**	**02 01 55.0**	**0.0**
	baz=214								
O15K	**Ungalikthiuk R**	**77.81**	**22**		P		**P**	**02 01 55.7**	**-0.1**
	baz=226								
KNGR	**Kungurtug, Tuv**	**78.04**	**327**	⇓ *i*	P		**P**	**02 01 58.5**	**+1.1**
KNGR					pmax		pmax		
	comp=Z,36nm,1.8s								
R17L	**Mt. Peulik Vol**	**78.11**	**24**		P		**P**	**02 01 57.5**	**0.0**
	baz=229								
BILL	**Bilibino**	**78.14**	**4**		P		**P**	**02 01 58.1**	**+0.7**
BILL					IAmb		IAmb	02 01 59.9	
	comp=Z,26nm,1.2s								
BILL	**Bilibino**	**78.14**	**4**	*c i*	P		**P**	**02 01 58.3**	**+0.9**
BILL					pmax		pmax		
	comp=Z,27nm,1.3s								
M14K	**Bethel**	**78.18**	**20**		P		**P**	**02 01 57.7**	**0.0**
M14K					IAmb		IAmb	02 02 01.7	
	comp=Z,39nm,1.6s								
M14K	**Bethel**	**78.18**	**20**		P		**P**	**02 01 58.2**	**+0.4**
	baz=224								
K13K	**Kusilvak Mount**	**78.19**	**18**		IAmb		IAmb	02 02 00.4	
	comp=Z,28nm,1.6s								
K13K	**Kusilvak Mount**	**78.19**	**18**		P		**P**	**02 01 58.0**	**+0.2**
	baz=221								
SII	**Sitkinak Islan**	**78.34**	**26**		P		**P**	**02 01 58.7**	**-0.1**
	baz=231								
L14K	**Kuka Creek**	**78.38**	**19**		IAmb		IAmb	02 02 02.0	
	comp=Z,45nm,1.6s								
L14K	**Kuka Creek**	**78.38**	**19**		P		**P**	**02 01 58.8**	**0.0**
	baz=223								
N15K	**Kwethluk River**	**78.41**	**21**				**P**	**02 01 59.4**	**+0.3**
N15K					IAmb		IAmb	02 02 03.1	
	comp=Z,29nm,1.6s								
N15K	**Kwethluk River**	**78.41**	**21**		P		**P**	**02 01 59.4**	**+0.3**
	baz=225								
M15K	**Kasigluk River**	**78.58**	**21**		P		**P**	**02 01 59.5**	**-0.4**
	baz=225								
Q17K	**Contact Creek**	**78.72**	**24**		P		**P**	**02 02 00.5**	**-0.5**
	baz=230								
O16K	**Kokwok River B**	**78.75**	**22**		P		**P**	**02 02 00.7**	**-0.3**
	baz=227								
L15K	**Ungalak Mounta**	**79.02**	**20**		P		**P**	**02 02 02.8**	**+0.5**
	baz=224								
N16K	**Nishlik Lake**	**79.10**	**21**		P		**P**	**02 02 03.1**	**+0.1**
	baz=226								
P17K	**Kvichak River**	**79.11**	**23**		P		**P**	**02 02 03.2**	**+0.3**
	baz=229								
OHAK	**Old Harbor**	**79.14**	**26**		P		**P**	**02 02 03.3**	**+0.2**
	baz=232								
O17K	**Koliganek Bris**	**79.24**	**23**		P		**P**	**02 02 03.5**	**-0.2**
	baz=228								
Q18K	**Katmai Hardscr**	**79.32**	**24**		P		**P**	**02 02 04.0**	**-0.3**
	baz=230								
M16K	**Timber Creek**	**79.41**	**21**		P		**P**	**02 02 05.0**	**+0.4**
	baz=226								
K15K	**Wolf Creek Mou**	**79.45**	**19**		IAmb		IAmb	02 02 08.1	
	comp=Z,39nm,1.6s								
K15K	**Wolf Creek Mou**	**79.45**	**19**		P		**P**	**02 02 05.2**	**+0.5**
	baz=224,SNR=7.6								
P18K	**Big Mountain,**	**79.71**	**23**		P		**P**	**02 02 06.7**	**+0.4**
	baz=230								
N17K	**Nushagak Hills**	**79.71**	**22**		P		**P**	**02 02 07.3**	**+1.1**
N17K					IAmb		IAmb	02 02 09.9	
	comp=Z,37nm,1.6s								
N17K	**Nushagak Hills**	**79.71**	**22**		P		**P**	**02 02 06.5**	**+0.3**
	baz=228								
L16K	**Owhat River**	**79.71**	**20**		P		**P**	**02 02 06.0**	**-0.1**
	baz=226								
KDAK	**Kodiak Island**	**79.78**	**26**		LR		LR	02 33 29.2	
	comp=Z,304nm,19.5s,baz=253,slow=33								
KDAK	**Kodiak Island**	**79.78**	**26**		P		**P**	**02 02 06.0**	**-0.6**
	baz=233								
ANM	**Nome**	**80.00**	**16**		P		**P**	**02 02 07.0**	**-0.6**
	baz=220								
O18K	**Koktuh Hills**	**80.01**	**23**		P		**P**	**02 02 07.6**	**-0.3**
	baz=230								
Q19K	**Cape Douglas,**	**80.05**	**24**		P		**P**	**02 02 07.9**	**-0.2**
	baz=232								
TNA	**Tin City**	**80.11**	**15**		P		**P**	**02 02 08.5**	**+0.3**
	baz=217								
QSPA	**South Pole Qui**	**80.12**	**180**		P		**P**	**02 02 09.1**	**+0.5**
	comp=Z,18nm,1.0s,baz=358,slow=2.3,SNR=41								
	comp=Z,18nm,1.0s								
QSPA	**South Pole Qui**	**80.12**	**180**				**P**	**02 02 09.0**	**+0.4**
QSPA	**South Pole Qui**	**80.12**	**180**		P		**P**	**02 02 09.1**	**+0.5**
M17K	**Holitna River**	**80.21**	**21**		P		**P**	**02 02 09.2**	**+0.3**
	baz=228								
N18K	**Kilae Creek**	**80.29**	**22**		IAmb		IAmb	02 02 12.9	
	comp=Z,67nm,1.9s								
N18K	**Kilae Creek**	**80.29**	**22**		P		**P**	**02 02 09.8**	**+0.4**
	baz=229								
L17K	**Donlin**	**80.41**	**20**		P		**P**	**02 02 10.6**	**+0.6**
	baz=227								
F14K	**Arctic Creek**	**80.45**	**15**		P		**P**	**02 02 10.3**	**+0.2**
	baz=219								
J16K	**Anvik River**	**80.46**	**19**		IAmb		IAmb	02 02 23.8	
	comp=Z,37nm,1.6s								
J16K	**Anvik River**	**80.46**	**19**		P		**P**	**02 02 10.6**	**+0.4**
	baz=224,SNR=8.1								
O19K	**Port Alsworth**	**80.58**	**23**		P		**P**	**02 02 11.4**	**+0.6**
	baz=231								
P19K	**Oil Pt**	**80.66**	**24**		P		**P**	**02 02 11.0**	**-0.4**
	baz=232								
G15K	**Niukluk**	**80.70**	**16**		P		**P**	**02 02 11.2**	**-0.2**
	baz=221								
K17K	**Iditarod**	**80.81**	**20**		IAmb		IAmb	02 02 25.5	
	comp=Z,38nm,1.9s								
K17K	**Iditarod**	**80.81**	**20**		P		**P**	**02 02 12.2**	**+0.2**
	baz=227								
M18K	**Stony River**	**80.85**	**22**		P		**P**	**02 02 12.6**	**+0.2**
	baz=229								
I17K	**Unalakleet**	**80.86**	**18**		P		**P**	**02 02 12.7**	**+0.4**
	baz=224								
WMQ	**Urumqi**	**80.86**	**317**	*e*	P		**P**	**02 02 14.6**	**+1.7**
WMQ					pP		pwP	02 02 19.2	-0.4
WMQ					S		**S**	**02 12 20.3**	**-1.3**
WMQ					pmax		pmax		
	comp=Z,28nm,1.7s								
WMQ					pmax		pmax		
	comp=Z,170nm,3.6s								
WMQ					L		L		
	comp=Z,240nm,18.9s								
N19K	**Bonanza Creek**	**80.91**	**23**		P		**P**	**02 02 13.1**	**+0.3**
	baz=230								
H16K	**Elim**	**80.94**	**17**		P		**P**	**02 02 13.1**	**+0.4**
	baz=223								
L18K	**Granite Mounta**	**81.02**	**21**		P		**P**	**02 02 13.0**	**-0.2**
	baz=228								
J17K	**VABM Dome**	**81.03**	**19**		IAmb		IAmb	02 02 15.7	
	comp=Z,39nm,1.9s								
J17K	**VABM Dome**	**81.03**	**19**		P		**P**	**02 02 12.7**	**-0.5**
	baz=226								
F15K	**North Star Dit**	**81.07**	**16**		P		**P**	**02 02 13.7**	**+0.2**
	baz=220								
O20K	**Slope Mountain**	**81.17**	**24**		P		**P**	**02 02 14.1**	**0.0**
	baz=232								
M19K	**Big River Lodg**	**81.64**	**22**		IAmb		IAmb	02 02 20.0	
	comp=Z,24nm,1.5s								
M19K	**Big River Lodg**	**81.64**	**22**		P		**P**	**02 02 16.5**	**0.0**
	baz=230								
L19K	**White Mountain**	**81.65**	**21**		IAmb		IAmb	02 02 18.9	
	comp=Z,29nm,1.8s								
L19K	**White Mountain**	**81.65**	**21**		P		**P**	**02 02 16.4**	**-0.2**
	baz=230								
BRSE	**Bradley Lake S**	**81.72**	**25**		P		**P**	**02 02 16.8**	**-0.2**
	baz=234								
MAW	**Mawson**	**81.72**	**203**		P		**P**	**02 02 16.7**	**-0.3**
	comp=Z,9.3nm,1.0s,baz=93,slow=8.6,SNR=9.9								
	comp=Z,9.3nm,1.0s								
MAW	**Mawson**	**81.72**	**203**		P		**P**	**02 02 17.2**	**+0.2**
MAW	**Mawson**	**81.72**	**203**		P		**P**	**02 02 17.2**	**+0.2**
MAW					pmax		pmax		
	comp=Z,6.0nm,1.4s								
MAW	**Mawson**	**81.72**	**203**		P		**P**	**02 02 17.6**	**+0.6**
H17K	**Granite Mounta**	**81.85**	**18**		IAmb		IAmb	02 02 20.8	
	comp=Z,33nm,2.0s								
H17K	**Granite Mounta**	**81.85**	**18**		P		**P**	**02 02 17.8**	**+0.2**
	baz=225								
SPCR	**Spurr Chakacha**	**82.02**	**23**		P		**P**	**02 02 18.7**	**+0.1**
	baz=232								
G17K	**Kiwalik Mounta**	**82.04**	**17**		P		**P**	**02 02 18.9**	**+0.4**
	baz=224								
M20K	**Styx River**	**82.09**	**22**		IAmb		IAmb	02 02 31.8	
	comp=Z,36nm,1.9s								
M20K	**Styx River**	**82.09**	**22**		P		**P**	**02 02 19.2**	**+0.2**
	baz=232								
CAPN	**Captain Cook N**	**82.17**	**24**		P		**P**	**02 02 19.5**	**+0.2**
	baz=234								
SEW	**Seward**	**82.46**	**25**		P		**P**	**02 02 21.0**	**+0.1**
	baz=235								
H18K	**Honhosa River**	**82.47**	**18**		P		**P**	**02 02 21.1**	**+0.2**
	baz=226								
F17K	**Baldwin Pennin**	**82.55**	**16**		P		**P**	**02 02 21.5**	**+0.3**
	baz=224								
J19K	**Poorman**	**82.57**	**20**		IAmb		IAmb	02 02 24.5	
	comp=Z,27nm,1.8s								
J19K	**Poorman**	**82.57**	**20**		P		**P**	**02 02 22.1**	**+0.8**
	baz=229,SNR=6.7								
GCSA	**Galena City Sc**	**82.66**	**19**		P		**P**	**02 02 22.0**	**+0.3**
	baz=228								
K20K	**Telida**	**82.68**	**21**		IAmb		IAmb	02 02 25.1	
	comp=Z,36nm,1.8s								
K20K	**Telida**	**82.68**	**21**		P		**P**	**02 02 21.7**	**-0.3**
	baz=231,SNR=5.8								
SKT	**Skwentna**	**82.75**	**23**		P		**P**	**02 02 22.7**	**+0.3**
	baz=233								
E17K	**Hotham Inlet**	**82.86**	**16**		P		**P**	**02 02 22.4**	**-0.4**
	baz=223								
C16K	**Lisburne Hills**	**82.88**	**14**		P		**P**	**02 02 22.6**	**-0.2**
	baz=219								
G18K	**Tagagawik**	**82.90**	**17**		IAmb		IAmb	02 02 24.7	
	comp=Z,24nm,1.7s								
G18K	**Tagagawik**	**82.90**	**17**		P		**P**	**02 02 22.6**	**-0.4**
	baz=226								
RC01	**Rabbit Creek A**	**82.92**	**24**		P		**P**	**02 02 22.8**	**-0.5**
	baz=235								
D17K	**Noatak River**	**82.99**	**15**		P		**P**	**02 02 23.9**	**+0.4**
	baz=222								
PPLA	**Purkeypile**	**83.06**	**22**		P		**P**	**02 02 24.3**	**+0.2**
	baz=232								
F18K	**Selawik**	**83.11**	**17**		P		**P**	**02 02 24.3**	**+0.2**
	baz=225								
J20K	**Nowinta River**	**83.18**	**20**		IAmb		IAmb	02 02 27.8	
	comp=Z,31nm,1.8s								
J20K	**Nowinta River**	**83.18**	**20**		P		**P**	**02 02 24.6**	**+0.1**
	baz=230,SNR=8.3								
P23K	**Montague Islan**	**83.26**	**25**		P		**P**	**02 02 24.6**	**-0.4**
	baz=237								
RDOG	**Red Dog Mine**	**83.30**	**15**		P		**P**	**02 02 24.8**	**-0.3**
	baz=222								
H19K	**Roundabout Mou**	**83.32**	**18**		P		**P**	**02 02 25.3**	**+0.2**
	baz=228,SNR=7.3								
L22K	**Petersville**	**83.36**	**22**		IAmb		IAmb	02 02 27.0	
	comp=Z,19nm,1.6s								
L22K	**Petersville**	**83.36**	**22**		P		**P**	**02 02 25.5**	**-0.1**
	baz=234								
DGZ	**Jazzator, Alta**	**83.36**	**323**	⇓ *e*	P		**P**	**02 02 25.1**	**-0.9**
DGZ					pmax		pmax		
	comp=Z,21nm,1.6s								
Q23K	**Middleton Isla**	**83.40**	**26**		P		**P**	**02 02 25.6**	**-0.1**
	baz=238								
CAST	**Castle Rocks**	**83.42**	**21**		P		**P**	**02 02 25.7**	**-0.1**
	baz=232,SNR=11								
E18K	**Tukpahlearik C**	**83.44**	**16**		P		**P**	**02 02 25.9**	**+0.2**
	baz=224								
PMR	**Palmer**	**83.44**	**24**		P		**P**	**02 02 26.7**	**+0.8**
	baz=235								
I20K	**Naaghedeneel**	**83.47**	**19**		P		**P**	**02 02 26.2**	**+0.2**
	baz=230								
CUT	**Chulitna**	**83.48**	**23**		P		**P**	**02 02 26.1**	**+0.1**
	baz=234								
G19K	**Purcell Mounta**	**83.54**	**18**		P		**P**	**02 02 26.8**	**+0.5**
	baz=228,SNR=8.6								
C17K	**DeLong Mountai**	**83.55**	**14**		P		**P**	**02 02 26.4**	**0.0**
	baz=222								
KNK	**Knik Glacier**	**83.61**	**24**		IAmb		IAmb	02 02 29.7	
	comp=Z,28nm,1.4s								
KNK	**Knik Glacier**	**83.61**	**24**		P		**P**	**02 02 26.3**	**-0.5**
	baz=236								
CHUM	**Lake Minchumin**	**83.62**	**21**		P		**P**	**02 02 26.1**	**-0.7**
	baz=232								
H20K	**Anotleneega Mo**	**83.79**	**19**		P		**P**	**02 02 26.8**	**-0.9**
	baz=230								
F19K	**Shaleruckik Mo**	**83.81**	**17**		P		**P**	**02 02 27.4**	**-0.3**
	baz=227								
GLI	**Glacier Island**	**83.86**	**25**		P		**P**	**02 02 27.5**	**-0.6**
	baz=237								
SML	**Sawmill**	**83.88**	**24**		P		**P**	**02 02 27.9**	**-0.3**
	baz=236,SNR=6.3								
ZSN	**Zaisan**	**84.08**	**320**	*eP*			**P**	**02 02 29.9**	**+0.4**
ZSN	**Zaisan**	**84.08**	**320**	*eP*			**P**	**02 02 30.0**	**+0.4**
TRF	**Thorofare Moun**	**84.08**	**22**		P		**P**	**02 02 28.6**	**-0.8**
	baz=234								
M23K	**Glacier View**	**84.11**	**24**		P		**P**	**02 02 29.2**	**-0.2**
	baz=236								
C18K	**Utukok River

H22K Ishtalitna Cre 85.17 19 P P 02 02 33.4 -1.3
baz=233
NEA2 Nenana 85.19 21 IAmb IAmb 02 02 35.4
comp=Z,27nm,1.8s
NEA2 Nenana 85.19 21 P P 02 02 33.8 -0.9
baz=235,SNR=6.4
E20K Nigu River 85.22 16 P P 02 02 34.0 -0.9
baz=228
N25K Chitina, Valde 85.28 25 P P 02 02 34.2 -1.1
baz=239
F21K Alatna River 85.33 18 P P 02 02 34.3 -1.1
baz=231
A19K Wainwright 85.34 14 P P 02 02 34.5 -0.8
baz=223
I23K Minto, Yukon-K 85.41 21 P P 02 02 34.9 -0.9
baz=235
D20K Etivluk River 85.42 16 P P 02 02 34.5 -1.3
baz=228
HARP HAARP 85.46 24 P P 02 02 34.8 -1.4
baz=239
WRH Wood River Hil 85.47 21 IAmb IAmb 02 02 37.0
comp=Z,24nm,1.7s
CRQE Cirque 85.48 26 P P 02 02 35.3 -1.1
baz=241
MK31 Makanchi Array 85.50 319 *de*P P 02 02 36.5 -0.2
MKAR Makanchi Array 85.50 319 P P 02 02 34.9 -1.9
comp=Z,5.7nm,1.0s,baz=105,slow=5.2,SNR=16
comp=Z,5.7nm,1.0s
MKAR Makanchi Array 85.50 319 P 02 02 35.0 -1.7
MKAR Makanchi Array 85.50 319 P P 02 02 35.0 -1.7
VRDI Verde Repeater 85.56 25 IAmb IAmb 02 02 44.4
comp=Z,15nm,1.3s
CCB Clear Creek Bu 85.67 21 IAmb IAmb 02 02 37.9
comp=Z,22nm,1.8s
MAKZ Makanchi 85.70 319 P P 02 02 36.7 -1.1
MAKZ IAmb IAmb 02 02 38.8
comp=Z,17nm,1.2s
MAKZ Makanchi 85.70 319 P P 02 02 36.7 -1.1
MAKZ pmax pmax
comp=Z,17nm,1.2s
MAKZ Makanchi 85.70 319 P P 02 02 37.1 -0.6
H23K Yukon River 85.74 20 IAmb IAmb 02 02 40.3
comp=Z,42nm,2.0s
H23K Yukon River 85.74 20 P P 02 02 36.9 -0.6
baz=235
G22K Bettles 85.75 19 P P 02 02 36.5 -1.0
baz=233
COLA College 85.78 21 *d*P P 02 02 36.8 -0.8
COLA pmax pmax
comp=Z,21nm,1.9s
COLA College 85.78 21 P P 02 02 36.4 -1.3
baz=236
COLA College 85.78 21 P P 02 02 36.5 -1.1
MCARA McCarthy VSAT 85.82 25 IAmb IAmb 02 02 41.1
comp=Z,11nm,0.9s
MCARA McCarthy VSAT 85.82 25 P P 02 02 36.4 -1.5
baz=241
HDA Harding Lake 85.85 22 P P 02 02 36.9 -1.1
baz=237
WUS Wushi 85.87 313 P P 02 02 39.6 +0.8
F22K John River 85.91 18 P P 02 02 37.0 -1.3
baz=232
E21K Killik River 85.97 17 P P 02 02 37.8 -0.8
baz=230
POKR Poker Plat Res 86.06 21 P P 02 02 38.1 -1.0
baz=237
ILAR Eielson Array 86.07 21 P P 02 02 37.0 -2.1
comp=Z,1.2nm,0.7s,baz=248,slow=5.1,SNR=13
comp=Z,1.2nm,0.7s
ILAR Eielson Array 86.07 21 P P 02 02 38.2 -0.8
ILAR Eielson Array 86.07 21 P P 02 02 38.3 -0.8
G23K Bananza Creek 86.10 19 P P 02 02 38.2 -1.1
baz=234
B20K Meade River 86.15 15 P P 02 02 38.0 -1.4
baz=227
C21K Knifeblade Rid 86.20 16 P P 02 02 38.5 -1.2
baz=230
SHLS Shalkode 86.26 315 *e*P P 02 02 39.5 -1.2
SHLS pmax pmax
comp=Z,21nm,1.6s
SHLS Shalkode 86.26 315 *e*P P 02 02 39.6 -1.2
comp=Z,21nm,1.6s
RIDG Independent Ri 86.28 23 P P 02 02 38.5 -1.8
baz=239,SNR=8.2
MENT Mentasta 86.31 24 IAmb IAmb 02 02 58.6
comp=Z,22nm,1.7s
H24K Noodor Dome 86.31 20 P P 02 02 38.9 -1.5
baz=236
M26K Nabesna, AK 86.33 24 IAmb IAmb 02 02 43.8
comp=Z,19nm,1.4s
M26K Nabesna, AK 86.33 24 P P 02 02 39.7 -0.8
baz=241
COLD Coldfoot 86.35 19 P P 02 02 39.7 -0.7
baz=234
E22K Anaktuvuk Pass 86.40 18 P P 02 02 40.0 -0.7
baz=232
PINM Pinnacle 86.42 27 P P 02 02 39.9 -1.1
baz=243
L26K Log Cabin Wild 86.50 24 IAmb IAmb 02 02 44.6
comp=Z,28nm,1.6s
L26K Log Cabin Wild 86.50 24 P P 02 02 40.4 -0.9
baz=240,SNR=6.4
ZAA0 Zalesovo Array 86.50 326 P 02 02 39.6 -1.9
ZAA0 IAmb IAmb 02 02 41.3
comp=Z,19nm,1.6s
ZALV Zalesovo Beam 86.50 326 P P 02 02 38.9 -2.6
comp=Z,2.8nm,0.7s,baz=112,slow=5.3,SNR=12
comp=Z,2.8nm,0.7s
ZALV Zalesovo Beam 86.50 326 P 02 02 39.0 -2.5
ZALV Zalesovo Beam 86.50 326 *i* P P 02 02 39.9 -1.6
ZALV pmax pmax
comp=Z,3.0nm,0.7s
J25K Salcha River, 86.53 22 P P 02 02 40.6 -0.9
baz=238,SNR=12
B21K Ikpikpuk River 86.55 16 P P 02 02 40.9 -0.5
baz=230
UZB Uzunbulak 86.57 315 *e*P P 02 02 42.5 +0.3
UZB pmax pmax
comp=Z,14nm,2.0s
UZB Uzunbulak 86.57 315 *e*P P 02 02 42.6 +0.3
comp=Z,14nm,2.0s
SCRK Sand Creek 86.72 23 P P 02 02 42.1 -0.4
baz=240,SNR=7.8
O28M Mount Upton 86.75 26 P P 02 02 42.2 -0.7
baz=243
M27K Edge Creek, AK 86.77 25 P P 02 02 42.1 -0.7
baz=242,SNR=18
KPKS Kokpek 86.90 315 *e*P P 02 02 44.5 +0.7
KPKS Kokpek 86.90 315 *e*P P 02 02 44.5 +0.7
G24K Hadweenzic Riv 86.92 20 P P 02 02 42.8 -0.5
baz=236
PRP Porcupine Dome 86.95 21 P P 02 02 42.7 -1.0
baz=238
E23K Chandalar 87.02 18 P P 02 02 43.0 -0.8
baz=234
YUK3 Moose Creek 87.09 25 P P 02 02 43.6 -0.8
baz=243
BCAR Beaver Creek A 87.14 24 P 02 02 46.0 +1.5
YUK8 Steele Glacier 87.16 26 P P 02 02 43.8 -1.1
baz=244
A21K Barrow 87.18 14 P P 02 02 44.3 -0.1
baz=228
BVCY Beaver Creek 87.21 25 P P 02 02 43.8 -1.0
baz=243
D23K Nanushuk River 87.24 17 IAmb IAmb 02 02 53.7
comp=Z,32nm,1.8s
D23K Nanushuk River 87.24 17 P P 02 02 44.9 +0.1
baz=233
F24K Squaw Lake 87.25 19 IAmb IAmb 02 02 47.5
comp=Z,18nm,1.7s
F24K Squaw Lake 87.25 19 P P 02 02 44.7 -0.2
baz=236,SNR=5.4
O29M Mount Kennedy 87.26 27 P P 02 02 44.1 -1.1
baz=245
B22K Teshekpuk Lake 87.33 15 P P 02 02 44.9 -0.3
baz=231
P29M Windy Craggy 87.36 28 P P 02 02 44.9 -0.7
baz=246
A22K Sinclair Lake 87.37 15 P P 02 02 45.1 -0.1
baz=229
TOLK Toolik Lake Re 87.37 18 P P 02 02 45.0 -0.4
baz=234
E24K Your Creek 87.37 18 P P 02 02 45.3 -0.2
baz=236
S31K Pelican 87.40 30 P P 02 02 45.5 -0.3
baz=247
G25K Bearman Lake 87.42 20 P P 02 02 45.5 -0.2
baz=238

SIT Sitka 87.51 31 P P 02 02 46.2 -0.1
baz=248
BRWY Burwash Landin 87.52 26 P P 02 02 46.1 -0.2
baz=244
TDK Taldyqorghan 87.53 316 *e*P P 02 02 47.1 +0.4
TDK pmax pmax
comp=Z,11nm,1.3s
TDK Taldyqorghan 87.53 316 *e*P P 02 02 47.1 +0.4
comp=Z,10nm,1.3s
YUK6 Outpost Mounta 87.63 27 P P 02 02 46.6 -0.6
baz=245
YUK4 Talbot Arm 87.68 26 P P 02 02 46.8 -0.5
baz=245,SNR=5.6
I26K Coal Creek Min 87.70 22 P P 02 02 46.2 -0.8
baz=240
C23K Itkillik River 87.78 16 P P 02 02 47.3 0.0
baz=233
D24K Happy Valley 87.89 17 P P 02 02 47.8 0.0
baz=235
P30M Million Dollar 87.92 28 P P 02 02 48.1 -0.2
baz=246
HYT Haines Junctio 87.96 27 P P 02 02 48.6 0.0
baz=246,SNR=7.9
MDOK Medeo 87.96 314 *e*P P 02 02 48.9 -0.1
MDOK Medeo 87.96 314 *e*P P 02 02 48.9 -0.1
TNSS Tian-Shan 88.00 314 *e*P P 02 02 48.9 -0.6
TNSS Tian-Shan 88.00 314 *e*P P 02 02 48.9 -0.6
F25K Christian Rive 88.01 19 P P 02 02 48.7 +0.2
baz=238
KSH2 Kashi 88.01 310 P P 02 02 50.4 +1.0
KSH2 pmax pmax
comp=Z,7.0nm,1.0s
KSH2 L L
comp=Z,590nm,21.6s
KSH2 L L
comp=Z,500nm,20.3s
KSH2 L L
comp=Z,570nm,23.4s
S32K Killisnoo 88.04 31 P P 02 02 48.9 +0.1
baz=248
AAA Alma-Ata 88.07 314 *e*P P 02 02 49.9 +0.5
AAA Alma-Ata 88.07 314 *e*P P 02 02 50.0 +0.5
CRAG Craig 88.07 33 P P 02 02 48.8 -0.2
baz=250
M29M Somme Creek 88.22 25 IAmb IAmb 02 02 53.2
comp=Z,17nm,1.5s
M29M Somme Creek 88.22 25 P P 02 02 49.8 +0.1
baz=245,SNR=5.5
C24K Franklin Bluff 88.25 17 P P 02 02 49.4 -0.1
baz=235
NRN Naryn 88.26 312 IAmb IAmb 02 02 52.7
comp=Z,19nm,1.5s
G26K Porcupine Rive 88.30 20 P P 02 02 50.2 +0.4
baz=240,SNR=10
U33K Whale Pass 88.30 32 P P 02 02 49.6 -0.5
baz=250
E25K Arctic Village 88.32 19 P P 02 02 49.6 -0.4
baz=238
R32K Eaglecrest 88.36 30 P P 02 02 50.0 -0.4
baz=248
N30M Aishikik Lake 88.41 26 IAmb IAmb 02 02 54.2
comp=Z,17nm,1.4s
N30M Aishikik Lake 88.41 26 P P 02 02 50.1 -0.5
baz=246
I27K Kandik River 88.41 22 P P 02 02 50.2 -0.3
baz=242
SKAG Skagway 88.42 29 P P 02 02 50.0 -0.5
baz=248
NIL Nilore 88.55 304 P P 02 02 50.4 -1.5
DAWY Dawson 88.55 24 P P 02 02 51.1 -0.1
baz=244,SNR=15
F26K Sheenjek River 88.56 20 P P 02 02 50.3 -0.9
baz=240
O30N Mendenhall 88.57 27 P P 02 02 50.2 -1.2
baz=247
L29M L29M 88.65 25 IAmb IAmb 02 02 55.3
comp=Z,18nm,1.3s
L29M L29M 88.65 25 P P 02 02 51.5 -0.2
baz=245,SNR=8.7
D25K Kavik River 88.71 18 P P 02 02 51.7 -0.2
baz=237
H27K Steamboat Moun 88.73 21 P P 02 02 52.4 +0.3
baz=242,SNR=10
WRAK Wrangell Islan 88.81 32 P P 02 02 52.3 -0.2
baz=250
V35K Kachikan 88.83 33 P P 02 02 52.5 -0.1
baz=251
I28M Miner Creek 88.96 22 P P 02 02 53.3 +0.1
baz=243,SNR=10
G27K Doyon Strip 88.96 21 IAmb IAmb 02 03 05.6
comp=Z,27nm,1.9s
G27K Doyon Strip 88.96 21 P P 02 02 53.6 +0.6
baz=242
M30M Minto, Yukon 88.98 25 IAmb IAmb 02 03 09.9
comp=Z,14nm,1.4s
M30M Minto, Yukon 88.98 25 P P 02 02 53.7 +0.5
baz=246,SNR=5.6
KURK Kurchatov 89.02 322 P P 02 02 51.6 -2.0
KURK Kurchatov 89.02 322 ‖ *e*P P 02 02 53.6 0.0
KURK pmax pmax
comp=Z,9.0nm,2.1s
KURBB Kurchatov Arra 89.05 322 P P 02 02 51.1 -2.7
comp=Z,0.5nm,0.9s,baz=107,slow=4.1,SNR=7.9
comp=Z,0.5nm,0.9s
WHY Whitehorse 89.08 28 P P 02 02 53.5 -0.4
baz=248
J29N Klondike Camp 89.18 24 P P 02 02 54.2 0.0
baz=245
K29M Barlow Dome 89.20 24 IAmb IAmb 02 02 58.0
comp=Z,24nm,1.4s
K29M Barlow Dome 89.20 24 P P 02 02 55.2 +0.8
baz=246,SNR=12
P32M Atlin 89.23 29 P P 02 02 54.4 -0.1
baz=249
C26K Camden Bay 89.46 17 P P 02 02 55.5 +0.3
baz=239
E27K Coleen River 89.64 20 P P 02 02 56.3 +0.1
baz=242
AAK Ala-Archa 89.64 313 P P 02 02 56.9 -0.1
AAK IAmb IAmb 02 02 58.2
comp=Z,26nm,1.8s
AAK Ala-Archa 89.64 313 ‖ *e*P P 02 02 56.7 -0.3
AAK pmax pmax
comp=Z,12nm,1.5s
AAK Ala-Archa 89.64 313 P P 02 02 57.2 +0.2
C27K Jago River 89.67 18 P P 02 02 56.5 +0.2
baz=240
Q32M Nakina River 89.71 30 P P 02 02 55.8 -1.1
baz=250
SGDS Sogindy 89.74 314 *e*P P 02 02 57.3 0.0
comp=Z,13nm,1.9s
H29M Whitestone 89.87 22 P P 02 02 56.9 -0.5
baz=245
M31M Drury Creek, Y 89.87 26 P P 02 02 56.9 -0.5
baz=248
P33M Teslin, Yukon 89.87 28 P P 02 02 57.0 -0.5
baz=250
F28M Old Crow 89.95 20 P P 02 02 57.3 -0.3
baz=244
J30M Hart River 89.97 24 IAmb IAmb 02 03 06.0
comp=Z,19nm,1.6s
J30M Hart River 89.97 24 P P 02 02 57.8 -0.2
baz=247,SNR=6.5
N32M Quiet Lake 90.08 27 IAmb IAmb 02 03 00.9
comp=Z,22nm,1.4s
N32M Quiet Lake 90.08 27 P P 02 02 57.8 -0.7
baz=250
T35M Bob Quinn 90.09 32 P P 02 02 57.9 -0.6
baz=252
I30M Mount Dempster 90.22 23 IAmb IAmb 02 03 12.1
comp=Z,16nm,1.5s
I30M Mount Dempster 90.22 23 P P 02 02 58.4 -0.6
baz=247
G29M Pine Creek 90.29 21 P P 02 02 58.3 -0.9
baz=245
D27M Malcolm River 90.34 19 P P 02 02 58.7 -0.8
baz=242
R33M Jennings River 90.48 29 P P 02 03 00.1 -0.4
baz=251
E28M Babbage River 90.51 20 P P 02 03 00.0 -0.2
baz=244
BTLS Baital 90.52 316 *e*P P 02 03 01.2 +0.4
BTLS pmax pmax
comp=Z,8.0nm,1.7s
BTLS Baital 90.52 316 *e*P P 02 03 01.2 +0.4
comp=Z,8.4nm,1.7s
EPYK Eagle Plains 90.55 22 IAmb IAmb 02 03 06.9
comp=Z,27nm,1.6s

EPYK Eagle Plains 90.55 22 P P 02 03 00.3 -0.2
baz=246
DLBC Dease Lake 90.65 31 LR LR 02 36 53.9
comp=Z,325nm,20.8s,baz=268,slow=31
DLBC Dease Lake 90.65 31 P P 02 03 00.7 -0.4
baz=252
E29M Blow River 90.96 20 P P 02 03 02.7 +0.4
baz=245
G30M tAoh Zraii Nji 90.97 22 P P 02 03 02.9 +0.5
baz=247
D28M Stokes Point 91.08 19 P P 02 03 03.0 +0.2
baz=245
H31M Peel River 91.22 23 P P 02 03 03.8 +0.1
baz=248
ARK Arkit 91.29 312 P P 02 03 04.9 +0.3
ORV Oroville 91.32 50 P 02 03 06.4 +1.7
ORV Oroville 91.32 50 P P 02 03 06.4 +1.7
ORV pmax pmax
comp=Z,7.0nm,1.2s
F30M Barrier River 91.37 21 P P 02 03 03.9 -0.4
baz=247
MMPY Sheldon Lake, 91.39 26 P P 02 03 04.4 -0.1
baz=251
NRIK Noril'sk 91.41 341 P P 02 03 03.3 -1.1
comp=Z,2.2nm,0.5s,baz=126,slow=5.7,SNR=5.9
comp=Z,2.2nm,0.5s
NRIK Noril'sk 91.41 341 *d*P P 02 03 03.1 -1.2
NRIK pmax pmax
comp=Z,6.0nm,0.9s
AFDM Forest Hills D 91.60 51 P 02 03 06.9 +0.9
AFDM IAmb IAmb 02 03 09.8
comp=Z,17nm,1.3s
G31M Satah River 91.66 22 IAmb IAmb 02 03 09.4
comp=Z,21nm,1.6s
G31M Satah River 91.66 22 P P 02 03 05.1 -0.4
baz=249
CMB Columbia Colle 91.88 52 P P 02 03 07.8 +0.5
CMB Columbia Colle 91.88 52 P P 02 03 07.8 +0.5
CMB pmax pmax
comp=Z,12nm,1.6s
DZA Taraz 91.97 313 *e*P P 02 03 08.0 +0.4
DZA pmax pmax
comp=Z,4.0nm,0.6s
DZA Taraz 91.97 313 *e*P P 02 03 08.1 +0.4
comp=Z,4.0nm,0.6s
F31M Tsiigehtchic 92.04 21 P P 02 03 07.2 -0.1
baz=249
BEKR Beckworth 92.25 50 P 02 03 11.0 +1.9
BEKR IAmb IAmb 02 03 12.8
comp=Z,15nm,1.4s
K05A Summer Lake 92.40 47 IAmb IAmb 02 03 12.6
comp=Z,18nm,1.5s
TGTN Hyland Airport 92.40 28 P P 02 03 09.1 -0.1
baz=254
ELIB Princess Elisa 92.41 194 *d*P P 02 03 08.8 -0.5
comp=Z,3.5nm,1.2s
INK Inuvik 92.42 21 P P 02 03 09.5 +0.5
baz=249
BRZS Berezniki 92.52 320 *e*P P 02 03 10.3 +0.3
BRZS Berezniki 92.52 320 *e*P P 02 03 10.3 +0.3
KK31 Karatay Array 92.61 313 P 02 03 07.5 -3.1
KK31 IAmb IAmb 02 03 11.8
comp=Z,13nm,1.3s
KK31 Karatay Array 92.61 313 P P 02 03 07.5 -3.1
KK31 pmax pmax
comp=Z,13nm,1.3s
KKAR Karatay Array 92.61 313 P 02 03 07.5 -3.0
KKAR Karatay Array 92.61 313 P P 02 03 07.5 -3.0
IUG Iuzhnay 92.77 312 *e*P P 02 03 11.6 +0.1
IUG pmax pmax
comp=Z,5.0nm,1.1s
IUG Iuzhnay 92.77 312 *e*P P 02 03 11.6 +0.1
comp=Z,4.6nm,1.1s
CHGR Chuyangaron 92.79 309 ‖ *e*P P 02 03 12.7 +1.1
CHGR pmax pmax
comp=Z,13nm,0.9s
MDPB Devils Postpil 92.82 52 IAmb IAmb 02 03 15.7
comp=Z,12nm,1.3s
LIRD Liard River Hi 92.88 30 P P 02 03 11.5 +0.2
baz=256
PAHR Pah Rah Range 92.95 50 IAmb IAmb 02 03 16.2
comp=Z,15nm,1.4s
CHM Chimkent 93.12 312 *e*P P 02 03 13.1 +0.2
CHM Chimkent 93.12 312 *e*P P 02 03 13.1 +0.2
LHV Little Huntoon 93.38 52 IAmb IAmb 02 03 18.4
comp=Z,14nm,1.3s
NVAR Mina Array Bea 93.56 52 P P 02 03 15.7 +0.4
comp=Z,5.3nm,1.1s,baz=269,slow=4.0,SNR=21
comp=Z,5.3nm,1.1s
NVAR Mina Array Bea 93.56 52 P P 02 03 15.6 +0.2
WVOR Wild Horse Val 93.98 48 IAmb IAmb 02 03 21.7
comp=Z,19nm,1.6s
WVOR Wild Horse Val 93.98 48 P P 02 03 17.4 +0.3
PFO Pinyon Flats O 94.26 57 LR LR 02 40 51.7
comp=Z,249nm,19.6s,baz=254,slow=32
TPH Tonopah 94.34 52 IAmb IAmb 02 03 22.6
comp=Z,10nm,1.3s
FURC Furnace Creek, 94.38 54 IAmb IAmb 02 03 23.0
comp=Z,9.8nm,1.1s
BVAR Borovoye Array 94.52 323 P P 02 03 15.9 -3.2
comp=Z,1.1nm,0.9s,baz=111,slow=7.9,SNR=4.9
comp=Z,1.1nm,0.9s
BORK Borovoye 94.57 323 ⇑ *e*P P 02 03 18.0 -1.3
BORK pmax pmax
comp=Z,5.0nm,1.5s
TPNV Topopah Spring 94.94 54 IAmb IAmb 02 03 30.0
comp=Z,22nm,1.8s
WRGLY Wrigley 94.99 27 P P 02 03 21.2 +0.2
baz=258
NVL N'lazarevskaya 95.76 192 *e*P P 02 03 14.1 -10
NVL pmax pmax
comp=Z,5.0nm,0.9s
NVL MLR MLR
comp=Z,320nm,15.0s
NEW Newport 95.94 42 LR LR 02 38 35.4
comp=Z,312nm,22.0s,baz=290,slow=30
C36M Paulatuk 96.01 21 P P 02 03 24.9 -0.6
baz=258
A36M Sachs Harbour 96.19 18 P P 02 03 26.2 -0.1
baz=257
SNAA Sanae 97.29 187 ‖ P Pdif 02 03 33.9 +2.3
comp=Z,25nm,1.0s
SNAA Sanae 97.29 187 ‖ *e*P P 02 03 32.0 +0.5
LPIG La Paz 98.30 67 LR LR 02 38 30.6
comp=Z,148nm,21.5s,baz=263,slow=30
YKA Yellowknife Ar 98.90 28 P P 02 03 39.0 +0.3
comp=Z,0.6nm,0.8s,baz=266,slow=4.3,SNR=2.5
comp=Z,0.6nm,0.8s
YKA Yellowknife Ar 98.90 28 P P 02 03 38.6 -0.1
PDAR Pinedale Array 100.68 48 P Pdif 02 03 46.3 -1.1
comp=Z,0.1nm,0.3s,baz=273,slow=2.5,SNR=1.8
OBN Obninsk 114.09 326 *i* PKIKP PKiKP 02 08 42.8 +5.0
OBN pmax pmax
comp=Z,5.0nm,1.7s
CLTN Cedars of Leba 118.94 54 PKPdf 02 08 45.6 -2.2
MNK Minsk 118.97 328 *i* P Pdif 02 05 08.2 +0.1
comp=E,7.0nm,0.9s
MNK *i* P Pdif 02 05 08.2 +0.1
comp=N,3.0nm,0.8s
MNK *i* P Pdif 02 05 08.2 +0.1
comp=Z,4.0nm,0.7s,baz=64
MNK *i* PKP PKPdf 02 08 47.2 0.0
MNK *i* PP PP 02 10 07.1 +0.8
MNK *i* PPP PPP 02 12 38.3
MNK *i* SKS SKSdf 02 15 59.3 -0.1
MNK *i* PS PS 02 19 55.1 +0.8
MNK *i* SS SS 02 26 29.5 +3.4
MNK *i* SSS SSS 02 30 53.6
MNK *i* LQ LQ 02 53 02.0
MNK Minsk 118.97 328 *i* P Pdif 02 05 08.2 +0.1
MNK *i* 02 08 47.2
MNK *i* 02 10 07.1
MNK *i* PPP PPP 02 12 38.3
MNK *i* 02 15 59.3
MNK *i* PS PS 02 19 55.1 +0.8
MNK *i* SS SS 02 26 29.4 +3.3
MNK *i* SSS SSS 02 30 53.6
MNK pmax pmax
comp=N,3.0nm,0.8s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=Z,4.0nm,0.7s
MNK MLR MLR
comp=N,121nm,20.0s
MNK MLR MLR

comp=E,93nm,18.0s
AKASG **Malin Array Be** 119.80 323 PKP **PKPdf** 02 08 47.1 -1.8
comp=E,1.2nm,0.7s,baz=63,slow=2.1,SNR=8.8
AKASG **Malin Array Be** 119.80 323 *c i* PKIKP **PKPdf** 02 08 48.7 -0.3
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKBB **Malin Array Si** 119.80 323 ⇑ *i* PKIKP **PKPdf** 02 08 48.6 -0.4
MMAI **Mount Meron Ar** 120.00 302 PKP **PKPdf** 02 08 49.5 -0.6
comp=Z,0.3nm,0.5s,baz=112,slow=1.6,SNR=1.8
S51A **Beattyville** 120.82 52 **PKPdf** 02 08 49.9 -1.5
LUBAR **Lubar, Ukraine** 120.97 323 PKP **PKPdf** 02 08 50.7 -0.6
TKL **Tuckaleechee C** 121.06 54 **PKPdf** 02 08 50.9 -1.1
TKL **Tuckaleechee C** 121.06 54 PKIKP **PKPdf** 02 08 50.9 -1.1
KMPD **K-Podol'skiy** 122.30 322 PKP **PKPdf** 02 08 52.9 -1.0
NOA **NORSAR Array B** 122.36 340 PKP **PKPdf** 02 08 51.9 -1.8
comp=Z,0.5nm,0.6s,baz=43,slow=1.8,SNR=3.3
MLR **Muntele Rosu** 123.84 319 PKP **PKPdf** 02 08 56.8 -0.3
KWP **Kalwaria Pacla** 124.04 324 PKP **PKPdf** 02 08 56.3 -0.9
KOLS **Kolonicke sedl** 124.62 324 *e* PKIKP **PKiKP** 02 08 59.3 +0.6
KOLS **Kolonicke sedl** 124.62 324 *e*PKIKP **PKiKP** 02 08 59.3 +0.6
NIE **Niedzica** 125.51 325 PKP **PKPdf** 02 08 59.2 -0.9
MORC **Moravsky Berou** 126.84 327 *e*PKIKP **PKPdf** 02 09 02.9 +0.3
JAVC **Velka Javorina** 127.28 326 *e*PKIKP **PKPdf** 02 09 03.6 +0.1
VRAC **Vranov** 127.62 327 *e*PKIKP **PKPdf** 02 09 04.7 +0.6
MODS **Modra-Piesok** 127.76 325 *e*PKIKP **PKiKP** 02 09 05.5 +0.5
MODS **Modra-Piesok** 127.76 325 *e*PKP **PKiKP** 02 09 05.5 +0.5
KRUC **Moravsky** 127.86 326 *e*PKIKP **PKPdf** 02 09 04.7 +0.2
MORH **Mrgy, Hungar** 128.09 322 PKP **PKPdf** 02 09 04.9 -0.1
MPLH **Magyarpolny** 128.25 324 PKP **PKPdf** 02 09 04.7 -0.6
CLL **Collm** 128.27 330 *i* PKIKP **PKiKP** 02 09 05.9 +0.1
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL **Collm** 128.27 330 *i* PKPdf **PKiKP** 02 09 05.9 +0.1
comp=Z,6.0nm,1.1s
WINA **Alland / Wiene** 128.58 326 *i* PKP **PKPdf** 02 09 06.2 +0.3
comp=Z,10nm,1.6s
RONA **Rosalia, Austr** 128.68 325 *e*PKP **PKPdf** 02 09 06.3 +0.1
comp=Z,5.1nm,1.1s
CONA **Conrad Observa** 128.79 326 *i* PKiKP **PKiKP** 02 09 08.0 +0.9
comp=Z,7.9nm,1.7s
M65A **Busby, Falmout** 129.08 44 P **PKPdf** 02 09 05.6 -1.4
baz=295
KHC **Kasperske Hory** 129.33 328 ⇓ *i* PKIKP **PKiKP** 02 09 08.7 +0.6
KHC **Kasperske Hory** 129.33 328 *e*PKP **PKiKP** 02 09 09.0 +0.9
GERES **GERESS Array B** 129.43 328 PKP **PKPdf** 02 09 06.3 -1.3
comp=Z,1.3nm,0.7s,baz=52,slow=1.6,SNR=13
SOKA **Soboth** 129.96 325 *i* PKiKP **PKiKP** 02 09 10.0 +0.5
comp=Z,4.5nm,1.2s
LPAZ **La Paz** 130.11 121 PKP **PKPdf** 02 09 11.3 +0.7
comp=Z,1.9nm,1.1s,baz=243,slow=6.8,SNR=5.4
OBKA **Obir** 130.33 325 *i* PKiKP **PKiKP** 02 09 10.6 +0.3
comp=Z,13nm,1.2s
MYKA **Terra Mystica** 130.78 325 *e*PKiKP **PKiKP** 02 09 11.2 0.0
comp=Z,6.5nm,1.2s
LESA **Schwarzleotal** 130.84 327 *i* PKP **PKPdf** 02 09 10.1 -0.3
comp=Z,5.1nm,1.2s
EKA **Eskdalemuir Ar** 131.46 343 PKP **PKPdf** 02 09 10.8 -0.4
comp=Z,2.4nm,0.9s,baz=54,slow=3.6,SNR=2.5
WATA **Walderalm** 131.48 327 *i* PKiKP **PKiKP** 02 09 12.8 +0.2
comp=Z,9.0nm,1.7s
WTTA **Wattenberg** 131.50 327 *i* PKiKP **PKiKP** 02 09 13.3 +0.6
comp=Z,8.1nm,1.3s
MOTA **Moosalm** 131.73 327 *i* PKP **PKPdf** 02 09 11.6 -0.6
comp=Z,11nm,1.5s
RETA **Reutte** 131.82 328 *i* PKiKP **PKiKP** 02 09 13.8 +0.6
comp=Z,8.1nm,1.5s
FETA **Feichten** 132.13 327 *i* PKP **PKPdf** 02 09 13.0 0.0
comp=Z,5.6nm,1.4s
DAVA **Damuels** 132.41 328 *e*PKiKP **PKiKP** 02 09 14.7 +0.1
comp=Z,6.6nm,1.3s
PBRG **Braganca** 144.33 336 *e*PKP PKPbc 02 09 34.1 +0.5
ESBB **Sonseca Array** 144.85 331 **PKPab** 02 09 34.1 -1.1
ESDC **Sonseca Array** 144.85 331 PKP **PKPab** 02 09 33.7 -1.5
comp=Z,5.0nm,1.0s,baz=39,slow=3.0,SNR=20
PCAB **Cabril** 144.91 338 *e*PKP **PKPab** 02 09 34.9 -0.4
MVO **Moncorvo** 144.98 336 *e*PKP PKPbc 02 09 36.3 +0.6
POLO **Lamas de Olo** 145.11 337 *e*PKP **PKPdf** 02 09 37.2 +0.5
PVRL **Vila Real** 145.16 337 *e*PKP **PKPdf** 02 09 37.7 +0.9
PTO **Porto** 145.62 338 *e*PKP **PKPab** 02 09 39.2 +1.3
PVIS **Viseu** 145.71 336 *e*PKP **PKPab** 02 09 39.6 +1.2
MTE **Manteigas** 145.84 336 *e*PKP **PKPdf** 02 09 37.1 -0.9
BDFB **Brasilia** 145.97 138 PKPbc **PKPdf** 02 09 38.1 -0.8
comp=Z,2.6nm,0.5s,baz=204,slow=3.8,SNR=7.5
BDFB **Brasilia** 145.97 138 **PKPdf** 02 09 38.9 0.0
BDFB **Brasilia** 145.97 138 PKP2 **PKPdf** 02 09 38.9 0.0
PCBR **Castelo Branco** 146.28 335 *e*PKP **PKPbc** 02 09 39.8 0.0
PMRV **Marv??o** 146.59 335 *e*PKP **PKPab** 02 09 41.7 0.0
PSARD **Sardoal** 146.77 336 *e*PKP **PKPbc** 02 09 41.6 +0.4
PMTG **Montargil** 147.24 335 *e*PKP **PKPbc** 02 09 42.9 +0.4
PBAR **Barrancos** 147.48 333 *e*PKP **PKPbc** 02 09 44.5 +1.3
EVO **Evora** 147.61 335 *e*PKP **PKPbc** 02 09 44.4 +0.9
MOE **Montemor** 147.76 335 *e*PKP **PKiKP** 02 09 45.8 -0.2
PMAFR **Mafra** 147.77 337 *e*PKP **PKPab** 02 09 48.3 +2.0
PBEJ **Beja** 147.97 334 *e*PKP **PKPbc** 02 09 45.4 +0.9
MESJ **Messejana** 148.28 334 *e*PKP **PKPbc** 02 09 45.6 +0.3
PCVE **Castro Verde** 148.37 334 *e*PKP **PKPbc** 02 09 45.6 0.0
MD01 **Midelt array s** 150.41 324 **PKPbc** 02 09 50.4 -0.7
TORD **Torodi Ar. Bea** 153.55 280 PKP **PKPdf** 02 09 49.2 -1.6
comp=Z,1.9nm,1.1s,baz=85,slow=2.1,SNR=4.9
TORD PKPbc **sPKPdf** 02 09 55.8 +2.0
comp=Z,1.4nm,0.8s,baz=72,slow=2.5,SNR=6.4
DBIC **Dimbokro** 159.72 263 PKPab **PKPab** 02 10 35.8 -1.6
comp=Z,3.0nm,0.7s,baz=104,slow=8.3,SNR=3.8

*IDC **04** 01:54:52.6±1.3, 9.46S×154.57E, h0km, mb3.8/7, mbtmp3.8/8, ML1.9/1, Error ellipse: s-maj=39.5km s-min=25.7km az=114.0*

ISC 04 01:54:55.3±1.1, 9.5S±0.2×154.4E±0.2, h10km, n9, σ2≥78/9, mb3.8/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.18**	**270**		Pn	**Pn**	**01 56 40.5**	**0.0**
	1.0nm,0.3s,baz=34,slow=3.6,SNR=1.6							
	3.6nm,0.3s							
WRA	**Warramunga Arr**	**22.03**	**240**	P	P	**P**	**01 59 50.1**	**-0.2**
	1.9nm,1.0s,baz=63,slow=9.7,SNR=3.7							
	1.9nm,1.0s							
ASAR	**Alice Springs**	**24.18**	**232**	P	P	**P**	**02 00 12.4**	**+0.3**
	2.2nm,0.9s,baz=61,slow=8.8,SNR=8.6							
	2.2nm,0.9s							
STKA	**Stephens Creek**	**25.29**	**206**	P	P	**P**	**02 00 21.4**	**-0.7**
	2.0nm,0.7s,baz=34,slow=15,SNR=3.1							
	2.0nm,0.7s							
SONM	**Songino Array**	**71.12**	**328**	P	P	**P**	**02 06 12.5**	**-1.7**
	0.2nm,0.4s,baz=134,slow=4.2,SNR=2.4							
	0.2nm,0.4s							
QSPA	**South Pole Qui**	**80.53**	**180**	P	P	**P**	**02 07 06.4**	**-1.3**
	2.6nm,1.0s,baz=1.1,slow=2.9,SNR=5.5							
	2.6nm,1.0s							
MKAR	**Makanchi Array**	**84.89**	**319**	P	P	**P**	**02 07 30.7**	**+0.1**
	0.3nm,0.4s,baz=116,slow=5.3,SNR=1.9							
	0.3nm,0.4s							
ILAR	**Eielson Array**	**85.86**	**22**	P	P	**P**	**02 07 34.3**	**-0.7**
	0.2nm,0.6s,baz=238,slow=3.1,SNR=1.6							
	0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**153.03**	**280**	PKPbc	**PKPdf**	**02 14 53.3**	**+6.4**	
	0.6nm,1.0s,baz=70,slow=3.6,SNR=2.2							

*IDC **04** 01:57:06.6±1.0, 9.56S×154.76E, h0km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=39.3km s-min=22.4km az=113.0*

ISC 04 01:57:11.7±0.9, 9.6S±0.2×154.8E±0.2, h33km, n10, σ1≥19/10, mb3.9/9, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.25**	**240**	P	P	**P**	**02 02 05.6**	**-0.4**
	1.8nm,0.8s,baz=67,slow=10,SNR=5.2							
	1.8nm,0.8s							
ASAR	**Alice Springs**	**24.36**	**232**	P	P	**P**	**02 02 25.7**	**-1.2**
	3.4nm,0.8s,baz=57,slow=9.2,SNR=22							
	3.4nm,0.8s							
STKA	**Stephens Creek**	**25.32**	**207**	P	P	**P**	**02 02 35.7**	**+0.2**
	4.9nm,0.8s,baz=25,slow=13,SNR=6.6							
	4.9nm,0.8s							
SONM	**Songino Array**	**71.39**	**328**	P	P	**P**	**02 08 30.4**	**+1.7**
	0.4nm,0.6s,baz=132,slow=6.4,SNR=2.9							
	0.4nm,0.6s							
QSPA	**South Pole Qui**	**80.40**	**180**	P	P	**P**	**02 09 20.5**	**+0.7**
	3.2nm,0.7s,baz=0.0,slow=1.0,SNR=18							
	3.2nm,0.7s							
MKAR	**Makanchi Array**	**85.19**	**319**	P	P	**P**	**02 09 45.4**	**+0.5**
	0.2nm,0.4s,baz=104,slow=6.1,SNR=1.4							
	0.2nm,0.4s							
ILAR	**Eielson Array**	**85.85**	**21**	P	P	**P**	**02 09 46.0**	**-1.7**
	0.3nm,0.8s,baz=243,slow=4.0,SNR=2.1							
	0.3nm,0.8s							
ZALV	**Zalesovo Beam**	**86.19**	**326**	P	P	**P**	**02 09 48.4**	**-1.2**
	0.4nm,0.3s,baz=92,slow=3.3,SNR=2.2							
	0.4nm,0.3s							
NVAR	**Mina Array Bea**	**93.49**	**52**	P	P	**P**	**02 10 25.4**	**+0.7**
	0.2nm,0.4s,baz=290,slow=7.6,SNR=2.1							
	0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**153.37**	**280**	PKPbc	**PKPbc**	**02 17 07.4**	**-0.3**	
	0.3nm,0.7s,baz=146,slow=0.5,SNR=1.8							

*CATAC **04** 02:03:42.6±0.4, 12.9°N±2.2°×8.9°W±2.2°, h11km±2km, M4.1/35, MLv4.1/35, Error ellipse: s-maj=5.2km s-min=2.3km az=38.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.01; $M_{\theta\theta}$-1.36; $M_{\phi\phi}$-0.65; $M_{r\theta}$1.67; $M_{r\phi}$1.10; $M_{\theta\phi}$0.34; Fault plane solution: M_o2.69684×10^{15} NP1: ϕ_s100.65257°, δ64.59278°, λ66.14883°. NP2: ϕ_s326.51216°, δ34.29576°, λ130.40801°. Principal axes: T 2.8583, Plg62.5673°, Azm332.2906°; N -0.3589, Plg21.4231°, Azm111.3935°; P -2.4994, Plg16.3071°, Azm207.9848°; confirmed*

*IDC **04** 02:03:42.2±1.0, 12.91N×88.61W, h0km, mb4.0/9, mbtmp4.0/12, ML3.1/3, MS4.2/2 Error ellipse: s-maj=34.9km s-min=17.0km az=51.0*

*SNET **04** 02:03:42.8±1.0, 12.38N×89.09W, h8km, ML3.9, Presumed earthquake*

*GCG **04** 02:03:45.1±0.8, 12.44N×89.30W, h23km±8km, MD4.5, ML4.3, Presumed earthquake*

*NEIC **04** 02:03:46.7±1.9, 12.51N±0.08×88.95W±0.08, h35km±2km, mb4.5/162, Error ellipse: s-maj=16.1km s-min=9.3km az=222.0*

*UCR **04** 02:03:51.6±0.7, 12.17N×88.78W, h35km±999km, MW3.8, Presumed earthquake*

ISC 04 02:03:43.7±1.5, 12.46N±0.05×88.97W±0.04, h17km±9km, n202, σ1≥42/179, mb4.5/71, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.08**	**342**	P	P	**Pb**	**02 04 03.3**	**-0.6**
LALI	**Alcalda de L**	**1.08**	**342**	*i* P	P	**Pb**	**02 04 03.7**	**-0.3**
LALI	**Alcalda de L**	**1.08**	**342**	*e*P	P	**Pb**	**02 04 03.8**	**-0.1**
TECO	**Alcaldia de Te**	**1.09**	**10**	P	P	**Pb**	**02 04 04.1**	**-0.1**
TECO				S		**Sn**	**02 04 20.7**	**+1.7**
INTP	**Intipuca**	**1.16**	**50**	*e*P	P	**Pg**	**02 04 06.0**	**-0.2**
COEG	**Centro de Oper**	**1.16**	**4**	P	P	**Pb**	**02 04 05.1**	**-0.3**
COEG				S		**Sn**	**02 04 22.3**	**+1.5**
RANC	**El Ranchito**	**1.18**	**34**	P	P	**Pg**	**02 04 06.3**	**-0.2**
RANC				S		**Sn**	**02 04 24.5**	**+3.2**
PACA	**Pacayal**	**1.19**	**32**	P	P	**Pg**	**02 04 06.3**	**-0.4**
PACA				S		**Sn**	**02 04 24.2**	**+2.7**
LOMA	**Loma Larga**	**1.20**	**351**	P	P	**Pn**	**02 04 05.5**	**-0.3**
LOMA				S		**Sn**	**02 04 23.3**	**+1.5**
LOMA	**Loma Larga**	**1.20**	**351**	*e*P	P	**Pn**	**02 04 05.7**	**-0.2**
LOMA				*e*S		**Sn**	**02 04 24.2**	**+2.5**
PQSS	**Presa 15 de Se**	**1.23**	**19**	P	P	**Pg**	**02 04 07.1**	**-0.3**
PAVA	**Las Pavas**	**1.25**	**1**	P	P	**Pn**	**02 04 06.5**	**0.0**
PAVA				S		**Sg**	**02 04 25.1**	**+0.8**
SEMO	**Seminario San**	**1.26**	**349**	P	P	**Pb**	**02 04 07.4**	**+0.2**
IGN	**Direccin Gen**	**1.27**	**351**	P	P	**Pb**	**02 04 07.4**	**+0.2**
JAYA	**Jayaque - finc**	**1.28**	**339**	P	P	**Pn**	**02 04 06.4**	**-0.6**
JAYA	**Jayaque - finc**	**1.28**	**339**	*i* P	P	**Pn**	**02 04 06.4**	**-0.6**
JAYA				*i* S		**Sb**	**02 04 23.2**	**-0.5**
JAYA				IAML			02 04 28.2	
	comp=E,5μm,0.3s							
JAYA	**Jayaque - finc**	**1.28**	**339**	*e*P	P	**Pn**	**02 04 06.5**	**-0.4**
JAYA				*e*S		**Sb**	**02 04 24.0**	**+0.3**
UEES	**Universidad Ev**	**1.28**	**348**	P	P	**Pn**	**02 04 06.6**	**-0.3**
UEES				S		**Sn**	**02 04 24.9**	**+1.2**
LFU	**La Fuente**	**1.29**	**354**	*e*P	P	**Pn**	**02 04 07.4**	**+0.4**
PMON	**Piamonte**	**1.29**	**345**	P	P	**Pn**	**02 04 06.9**	**-0.2**
PMON				S		**Sn**	**02 04 25.2**	**+1.1**
BOQS	**Boqueron**	**1.31**	**347**	*e*P	P	**Pn**	**02 04 07.6**	**+0.2**
LCND	**La Caada**	**1.35**	**51**	P	P	**Pb**	**02 04 08.4**	**-0.2**
LCND	**La Caada**	**1.35**	**51**	*e*P	P	**Pb**	**02 04 08.6**	**0.0**
CNCH	**Conchagua**	**1.38**	**54**	P	P	**Pb**	**02 04 08.7**	**-0.4**
CNCH				S		**Sg**	**02 04 28.1**	**-0.1**
CNCH	**Conchagua**	**1.38**	**54**	*e*P	P	**Pg**	**02 04 09.2**	**-1.1**
CEDA	**San Andres**	**1.40**	**343**	P	P	**Pn**	**02 04 08.6**	**+0.1**
CSGN	**Cosiguina Volc**	**1.47**	**69**	P	P	**Pb**	**02 04 10.0**	**-0.6**
CSGN				S		**Sg**	**02 04 30.6**	**-0.7**
CEVE	**Cerro Verde**	**1.50**	**335**	P	P	**Pn**	**02 04 09.8**	**-0.3**
CEVE				S		**Sb**	**02 04 31.1**	**+0.8**
CEVE	**Cerro Verde**	**1.50**	**335**	*e*P	P	**Pn**	**02 04 10.1**	**0.0**
P5NO	**Presa 5 de nov**	**1.53**	**8**	P	P	**Pn**	**02 04 11.1**	**+0.8**
P5NO				S		**Sg**	**02 04 33.0**	**-0.3**
UNIC	**Universidad Ca**	**1.62**	**340**	P	P	**Pn**	**02 04 11.6**	**0.0**
UNIC				S		**Sb**	**02 04 34.9**	**+1.5**
NUBE	**Las Nubes**	**1.64**	**331**	P	P	**Pn**	**02 04 11.2**	**-0.8**
NUBE				S		**Sn**	**02 04 33.5**	**+0.8**
NUBE	**Las Nubes**	**1.64**	**331**	*i* P	P	**Pn**	**02 04 11.1**	**-0.8**
NUBE	**Las Nubes**	**1.64**	**331**	*e*P	P	**Pn**	**02 04 11.6**	**-0.3**
NUBE				*e*S		**Sn**	**02 04 34.4**	**+1.7**
LLGN	**La Laguna**	**1.70**	**1**	P	P	**Pb**	**02 04 13.9**	**-0.6**
FAME	**Alcaldia de Sa**	**1.71**	**324**	P	P	**Pn**	**02 04 12.0**	**-0.8**
FAME				S		**Sn**	**02 04 34.9**	**+0.5**
LOAL	**Lomas de Alarc**	**1.72**	**333**	P	P	**Pn**	**02 04 13.7**	**+0.8**
SLOZ	**Alcaldia de Sa**	**1.75**	**333**	P	P	**Pn**	**02 04 13.7**	**+0.4**
SLOZ				S		**Sn**	**02 04 36.5**	**+1.2**
RBDL	**Robledal**	**1.79**	**337**	*e*P	P	**Pn**	**02 04 14.4**	**+0.4**
CRIN	**San Cristobal**	**1.89**	**82**		P	**Pb**	**02 04 16.4**	**-1.4**
CRIN	**San Cristobal**	**1.89**	**82**	P	P	**Pb**	**02 04 16.6**	**-1.2**
CRIN				S		**Sg**	**02 04 42.6**	**-2.1**
MTO3	**Montecristo**	**1.97**	**349**		P	**Pn**	**02 04 17.1**	**+0.7**
MTO3	**Montecristo**	**1.97**	**349**	P	P	**Pn**	**02 04 17.2**	**+0.7**
MTO3				S		**Sb**	**02 04 43.9**	**+0.4**
MTO3	**Montecristo**	**1.97**	**349**	*i* P	P	**Pn**	**02 04 17.2**	**+0.7**
JUAM	**Asuncion Mita**	**2.00**	**339**	*i* P	P	**Pn**	**02 04 17.2**	**+0.4**
JUAM				IAML			02 04 50.4	
	comp=E,3μm,0.5s							
QUEN	**Al S del Volca**	**2.07**	**86**	P	P	**Pn**	**02 04 18.5**	**+0.7**
ESQI	**Esquipulas**	**2.12**	**350**		P	**Pn**	**02 04 19.7**	**+1.2**
ESQI	**Esquipulas**	**2.12**	**350**	P	P	**Pn**	**02 04 19.7**	**+1.2**
ZAFR2	**Estanzuela, Za**	**2.14**	**350**	*i* P	P	**Pn**	**02 04 25.6**	**+0.8**
PLRN	**Geotermica Pol**	**2.15**	**86**	P	P	**Pn**	**02 04 19.3**	**+0.5**
PLRN				S		**Sb**	**02 04 48.3**	**-0.5**
ROCN	**Rota Cerro Neg**	**2.17**	**88**	P	P	**Pn**	**02 04 19.6**	**+0.4**
ROCN				S		**Sb**	**02 04 49.1**	**-0.3**
CNGA	**Al SSO del Vol**	**2.22**	**89**	P	P	**Pn**	**02 04 20.2**	**+0.5**
CNGN	**Cerro Negro**	**2.22**	**89**	P	P	**Pn**	**02 04 20.3**	**+0.5**
MACN	**El Madrono**	**2.24**	**90**	P	P	**Pn**	**02 04 20.8**	**+0.7**
MACN				S		**Sb**	**02 04 50.2**	**-1.1**
SARH	**Santa Rosa de**	**2.31**	**5**	P	P	**Pn**	**02 04 23.0**	**+1.9**
SARH	**Santa Rosa de**	**2.31**	**5**	*e*P	P	**Pn**	**02 04 23.1**	**+1.9**
MOMN	**Momotombo**	**2.38**	**91**	P	P	**Pn**	**02 04 22.6**	**+0.6**
MOMN				S		**Sb**	**02 04 52.5**	**-2.6**
MOM2	**El Cardon**	**2.43**	**90**	P	P	**Pn**	**02 04 23.4**	**+0.7**
MOM2				S		**Sb**	**02 04 54.1**	**-2.5**
SAPS	**Ciudad Sandino**	**2.52**	**96**	P	P	**Pn**	**02 04 24.6**	**+0.7**
SAPS				S		**Sn**	**02 04 55.8**	**+1.5**
APQ3	**Volcan Apoyequ**	**2.55**	**94**	P	P	**Pn**	**02 04 24.4**	**+0.2**
APQ3				S		**Sn**	**02 04 57.0**	**+2.1**
APYN	**Apoyeque**	**2.57**	**95**	P	P	**Pn**	**02 04 25.7**	**+1.1**
APYN				S		**Sn**	**02 04 57.1**	**+1.6**
MGAN	**Managua**	**2.68**	**96**			**Pn**	**02 04 26.6**	**+0.5**
APG	**El Apazote**	**2.92**	**330**	Pn	Pn	**Pn**	**02 04 29.7**	**+0.1**
	comp=E,0.4nm,0.3s,baz=87,slow=15,SNR=13							
APG				Sn	Sn		02 04 56.1	-8.3
	comp=E,0.6nm,0.3s,baz=223,slow=18,SNR=6.2							
BOAB	**BOACO BROADBAN**	**3.23**	**90**			**Pn**	**02 04 33.6**	**0.0**
LCRUZ	**La Cruz**	**3.55**	**112**	*e*P		**Pn**	**02 04 40.7**	**+2.7**
LCRUZ				*e*S		**Sn**	**02 05 19.1**	**-0.5**
ALIBA	**Liberia Airpor**	**3.83**	**119**	*e*P		**Pn**	**02 04 44.4**	**+2.4**
LAPC	**Finca la Perla**	**3.85**	**115**	*e*P		**Pn**	**02 04 44.0**	**+1.8**
JUD3	**Juan Diaz 3**	**4.06**	**124**			**Pn**	**02 04 46.6**	**+1.4**
JUD3	**Juan Diaz 3**	**4.06**	**124**	*e*P		**Pn**	**02 04 46.9**	**+1.7**
CLARA	**Aguas Claras**	**4.07**	**114**	*e*P		**Pn**	**02 04 48.3**	**+3.0**
HORNC	**Hornillas**	**4.10**	**115**	*e*P		**Pn**	**02 04 48.2**	**+2.5**
SIUN	**Universidad Ur**	**4.28**	**73**			**Pn**	**02 04 49.6**	**+1.5**
JTS	**Las Juntas de**	**4.49**	**118**	Pn	Pn	**Pn**	**02 04 52.4**	**+1.4**
	comp=E,5.6nm,0.3s,baz=310,slow=16,SNR=19							
JTS				Sn	Sn		02 05 41.7	-1.2
	comp=E,3.9nm,0.3s,baz=274,slow=22,SNR=2.0							
	comp=E,17nm,0.4s							
JTS	**Las Juntas de**	**4.49**	**118**	*e*P		**Pn**	**02 04 53.6**	**+2.6**
PETF	**Flores**	**4.52**	**349**			**Pn**	**02 04 54.0**	**+2.6**
ARE1	**Arenal 1**	**4.62**	**115**	*e*P		**Pn**	**02 04 55.5**	**+2.7**
CEDE	**Laguna Cedeo**	**4.62**	**115**	*e*P		**Pn**	**02 04 55.9**	**+3.1**
ACOS	**Acosta**	**5.41**	**119**	*e*P		**Pn**	**02 05 07.5**	**+3.7**
ABE2	**San Pablo**	**5.55**	**119**	*e*P		**Pn**	**02 05 08.9**	**+3.2**
ABRB	**Las Abras (San**	**5.70**	**115**	*e*P		**Pn**	**02 05 11.3**	**+3.4**
PIRO	**Carate, Puerto**	**6.85**	**125**			**Pn**	**02 05 27.2**	**+3.7**
BRU2	**Volcan**	**7.17**	**120**			**Pn**	**02 05 31.3**	**+3.3**
CMIG	**Matias Romero**	**7.34**	**310**	Pn	Pn	**Pn**	**02 05 31.2**	**+1.0**
	comp=E,0.5nm,0.3s,baz=125,slow=7.2,SNR=7.5							
CMIG				Sn	Sn		02 06 51.6	-1.7
	comp=E,0.5nm,0.3s,baz=155,slow=15,SNR=1.4							
	comp=E,2.1nm,0.4s							
TEIG	**Tepich**	**7.75**	**5**			**Pn**	**02 05 36.0**	**+0.2**
SOR	**Soroa**	**11.74**	**28**			**Pn**	**02 06 33.0**	**+2.5**
ROSC	**El Rosal**	**16.33**	**116**	Pn	Pn	**Pn**	**02 07 32.5**	**-0.3**
	comp=E,1.8nm,0.3s,baz=288,slow=19,SNR=0.9							
ZAIG	**Zacatecas**	**16.51**	**310**			**P**	**02 07 39.0**	**+1.5**
HKT	**Hockley**	**18.54**	**341**	P		**Pn**	**02 08 00.5**	**+0.8**
833A	**Chaparral WMA,**	**18.55**	**330**			**Pn**	**02 08 00.8**	**+0.9**
352A	**Blakely**	**19.30**	**11**	P		**P**	**02 08 08.5**	**+0.7**
352A				IAmb		IAmb	02 08 10.5	
	comp=Z,29nm,0.7s							
HNDO	**Hondo**	**19.50**	**332**	P		**P**	**02 08 10.2**	**0.0**
HNDO				IAmb		IAmb	02 08 11.2	
	comp=Z,18nm,0.8s							
TIGA	**Tifton**	**19.53**	**14**	P		**Pn**	**02 08 12.5**	**+0.8**
TIGA				IAmb		IAmb	02 08 12.8	
	comp=Z,22nm,0.6s							
435B	**Jarrell**	**19.90**	**338**	P		**P**	**02 08 14.3**	**-0.2**
152A	**Waverly Hall**	**20.49**	**10**	P		**P**	**02 08 21.4**	**+0.5**
JCT	**Junction City**	**20.55**	**332**	P		**P**	**02 08 21.1**	**-0.4**
JCT				IAmb		IAmb	02 08 21.9	
	comp=Z,15nm,0.6s							
LRAL	**Lakeview Retre**	**20.56**	**5**			**P**	**02 08 22.5**	**+0.9**
Z47A	**Carrollton**	**20.66**	**2**	P		**P**	**02 08 24.1**	**+1.3**
Z47A				IAmb		IAmb	02 08 24.7	
	comp=Z,19nm,0.7s							
154A	**Montrose**	**20.77**	**14**	P		**P**	**02 08 24.1**	**+0.2**
154A				IAmb		IAmb	02 08 27.9	
	comp=Z,22nm,0.8s							
BRDY	**Brady**	**20.90**	**335**	P		**P**	**02 08 24.8**	**-0.5**
WHTX	**Lake Whitney,**	**20.95**	**339**			**P**	**02 08 25.1**	**-0.8**
Z41A	**Richland Creek**	**21.00**	**351**	IAmb		IAmb	02 08 29.8	
	comp=Z,9.2nm,0.7s							
SAND	**Sanderson**	**21.26**	**327**	P		**P**	**02 08 29.0**	**-0.3**
FW13	**Cleburne**	**21.27**	**340**	P		**P**	**02 08 27.4**	**-1.9**
FW13				IAmb		IAmb	02 08 30.3	
	comp=Z,22nm,0.8s							
HPIG		**21.28**	**315**	P		**P**	**02 08 29.6**	**-0.2**
Y49A	**Blount Mountai**	**21.43**	**6**	P		**P**	**02 08 30.6**	**-0.4**
GOGA	**Godfrey**	**21.46**	**13**	P		**P**	**02 08 31.7**	**+0.5**
WLAR	**White Oak Lake**	**21.47**	**351**	IAmb		IAmb	02 08 41.9	
	comp=Z,20nm,0.9s							
OZNA	**Ozona**	**21.54**	**330**	P		**P**	**02 08 31.9**	**-0.4**
OZNA				IAmb		IAmb	02 08 33.8	
	comp=Z,13nm,0.8s							
TXAR	**Lajitas Array**	**21.65**	**323**	P		**P**	**02 08 34.7**	**+1.2**
	comp=Z,10nm,0.7s,baz=146,slow=11,SNR=137							
TXAR				PcP	PcP	**PcP**	**02 12 34.7**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=132,slow=2.2,SNR=2.3							
	comp=Z,10nm,0.7s							
TXAR	**Lajitas Array**	**21.65**	**323**	P		**P**	**02 08 34.5**	**+1.0**
TX31	**Lajitas Ar. Si**	**21.

PV18	**Skein Mesa, Pa**	**31.23 329**	IAmb	IAmb	02 10 02.9		
	comp=Z,4.4nm,0.9s						
PV12	**Saucer Basin,**	**31.23 329**	IAmb	IAmb	02 10 03.6		
	comp=Z,6.6nm,0.7s						
PV19	**Morning Glory**	**31.32 329**	IAmb	IAmb	02 10 10.3		
	comp=Z,3.7nm,0.7s						
I42A	**Draeger Farm,**	**31.32 0**	IAmb	IAmb	02 10 03.0		
	comp=Z,9.7nm,1.0s						
I40A	**Norwalk**	**31.36 358**	IAmb	IAmb	02 10 02.4		
	comp=Z,8.7nm,0.9s						
PV23	**Carpenter Ridg**	**31.44 329**	IAmb	IAmb	02 10 18.0		
	comp=Z,5.7nm,0.8s						
ECSD	**EROS Data Cent**	**31.86 349**	IAmb	IAmb	02 10 07.2		
	comp=Z,7.6nm,1.4s						
RSSD	**Black Hills**	**34.11 340**	P	**P**	**02 10 28.0**	**+0.2**	
RSSD			IAmb	IAmb	02 10 36.2		
	comp=Z,4.0nm,0.9s						
PDAR	**Pinedale Array**	**35.08 333**	P	**P**	**02 10 35.2**	**-1.0**	
	comp=Z,0.2nm,0.5s,baz=135,slow=8.0,SNR=2.0						
PDAR			PcP	**PcP**	**02 13 07.1**	**-0.7**	
	comp=Z,0.2nm,0.5s,baz=139,slow=4.7,SNR=2.1						
PDAR			LR	LR	02 27 58.2		
	comp=Z,347nm,21.4s,baz=264,slow=42						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**35.22 144**	P	**P**	**02 10 42.0**	**+3.9**	
	comp=Z,0.2nm,0.4s,baz=332,slow=23,SNR=1.5						
	comp=Z,0.2nm,0.4s						
SNOW	**Snow King Moun**	**36.16 333**	IAmb	IAmb	02 10 47.5		
	comp=Z,8.6nm,0.9s						
NVAR	**Mina Array Bea**	**36.73 320**	P	**P**	**02 10 51.8**	**+1.3**	
	comp=Z,1.3nm,0.8s,baz=134,slow=7.4,SNR=8.4						
NVAR			PcP	**PcP**	**02 13 12.8**	**-0.1**	
	comp=Z,0.1nm,0.3s,baz=113,slow=2.9,SNR=3.5						
	comp=Z,1.3nm,0.8s						
NVAR	**Mina Array Bea**	**36.73 320**	P	**P**	**02 10 50.5**	**+0.1**	
YNE	**Yellowstone No**	**37.08 335**	IAmb	IAmb	02 10 59.5		
	comp=Z,4.3nm,0.9s						
ULM	**Lac du Bonnet**	**38.11 353**	P	**P**	**02 10 58.9**	**-2.8**	
	comp=Z,6.4nm,0.6s,baz=166,slow=7.2,SNR=8.2						
	comp=Z,6.4nm,0.6s						
ULM	**Lac du Bonnet**	**38.11 353**	IAmb	IAmb	02 10 59.9		
	comp=Z,7.1nm,0.7s						
D62A	**Allapoint, All**	**38.37 22**	IAmb	IAmb	02 11 35.0		
	comp=Z,16nm,1.5s						
FFC	**Flin Flon**	**43.39 349**	P	**P**	**02 11 44.2**	**-1.0**	
SCHQ	**Schefferville**	**45.71 18**	P	**P**	**02 12 00.6**	**-3.2**	
	comp=Z,4.2nm,0.6s,baz=216,slow=7.9,SNR=10						
	comp=Z,4.2nm,0.6s						
SCHQ	**Schefferville**	**45.71 18**	P	**P**	**02 12 01.2**	**-2.6**	
SCHQ			IAmb	IAmb	02 12 01.9		
	comp=Z,6.5nm,0.9s						
H03N2	**Juan Fernandez**	**46.63 168**	T	T	03 02 14.8		
	baz=347,slow=74						
H03N1	**Juan Fernandez**	**46.64 168**	T	T	03 02 13.8		
	baz=347						
H03N3	**Juan Fernandez**	**46.65 168**	T	T	03 02 12.3		
	baz=347,slow=74						
YKA	**Yellowknife Ar**	**53.22 345**	P	**P**	**02 12 58.8**	**-2.2**	
	comp=Z,1.8nm,0.8s,baz=145,slow=6.9,SNR=6.3						
	comp=Z,1.8nm,0.8s						
YKA	**Yellowknife Ar**	**53.22 345**	P	**P**	**02 13 00.7**	**-0.2**	
PLCA	**Paso Flores**	**55.60 163**	LR	LR	02 33 22.0		
	comp=Z,314nm,20.6s,baz=206,slow=32						
ILON	**Igloolik, Nuna**	**57.05 3**	P	**P**	**02 13 26.4**	**-2.0**	
F28M	**Old Crow**	**64.28 341**	P	**P**	**02 14 17.3**	**-0.6**	
F28M			IAmb	IAmb	02 14 27.8		
	comp=Z,9.5nm,1.4s						
ILAR	**Eielson Array**	**65.42 336**	P	**P**	**02 14 23.6**	**-1.6**	
	comp=Z,0.9nm,1.0s,baz=111,slow=4.0,SNR=7.5						
	comp=Z,0.9nm,1.0s						
RND	**Reindeer**	**65.67 335**	P	**P**	**02 14 26.8**	**-0.3**	
RND			IAmb	IAmb	02 14 36.4		
	comp=Z,5.5nm,1.2s						
WRH	**Wood River Hil**	**65.77 336**	P	**P**	**02 14 27.4**	**-0.1**	
D25K	**Kavik River**	**67.22 341**	P	**P**	**02 14 36.2**	**-0.6**	
D25K			IAmb	IAmb	02 14 58.3		
	comp=Z,2.5nm,1.0s						
HHC	**Hu-ho-hao-te**	**123.66 341**	*eP*	**PKPdf**	**02 22 40.6**	**-0.4**	
NJ2	**Nanjing**	**128.34 330**	*eP*	**PKPdf**	**02 22 50.6**	**+0.6**	
NJ2			pmax	pmax			
	comp=Z,42nm,0.5s						
WRA	**Warramunga Arr**	**137.84 254**	PKP	**PKiKP**	**02 23 10.0**	**-0.2**	
	comp=Z,0.9nm,0.8s,baz=80,slow=2.0,SNR=2.8						
ASAR	**Alice Springs**	**137.89 248**	PKP	**PKPdf**	**02 23 08.4**	**+0.1**	
	comp=Z,0.4nm,0.7s,baz=90,slow=1.9,SNR=4.4						
PZH	**PanZhiHua**	**139.90 345**	PKP	**PKPdf**	**02 23 11.2**	**-0.8**	
CMAR	**Chiang Mai Arr**	**148.31 346**	PKPbc	**PKPdf**	**02 23 28.8**	**+2.1**	
	comp=Z,1.4nm,0.3s,baz=8.6,slow=2.5,SNR=8.8						
CMAR	**Chiang Mai Arr**	**148.31 346**		**PKPbc**	**02 23 29.7**	**-0.3**	

*IDC **04** 02:07:44.5±0.9, 9.°78S×154.°81E, h0km, mb4.1/10, mbtmp4.1/11, ML3.7/1, MS4.0/11, Error ellipse: s-maj=35.0km s-min=18.8km az=95.0*
*NEIC **04** 02:07:47±2.0, 9.°7S±0.°1×154.°7E±0.°1, h10km±1km, mb4.4/9, Error ellipse: s-maj=26.1km s-min=19.0km az=32.0*

ISC 04 02:07:46.0±0.7, 9.°8S±0.°1×154.°7E±0.°1, h10km, n33, σ0^{s}93/26, mb4.2/14, MS3.9/10, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**6.05**	**333**		LR		LR	02 11 06.8	
	comp=Z,78nm,21.8s,baz=50,slow=33								
PMG	**Port Moresby**	**7.49**	**272**		Pn		**Pn**	**02 09 34.2**	**-1.2**
DZM	**Mont Dzumac**	**16.61**	**139**		Pn		**Pn**	**02 11 39.9**	**+0.7**
	0.3nm,0.3s,baz=303,slow=13,SNR=4.6								
DZM					LR		LR	02 17 09.8	
	comp=Z,762nm,20.1s,baz=309,slow=34								
	5.2nm,0.9s								
WR8	**Warramunga Arr**	**22.01**	**240**		P		**P**	**02 12 41.5**	**+0.7**
WB0	**Warramunga Arr**	**22.02**	**241**		P		**P**	**02 12 41.4**	**+0.5**
WB0					IAmb		IAmb	02 12 43.4	
	comp=Z,15nm,1.4s								
WRA	**Warramunga Arr**	**22.14**	**240**		P		**P**	**02 12 42.7**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=63,slow=8.9,SNR=3.0								
	comp=Z,2.3nm,0.9s								
INKA	**Innaminka**	**22.22**	**215**		P		**P**	**02 12 44.7**	**+1.8**
INKA					IAmb		IAmb	02 12 52.7	
	comp=Z,12nm,1.1s								
AS31	**Alice Springs**	**24.23**	**233**		P		**P**	**02 13 03.3**	**0.0**
ASAR	**Alice Springs**	**24.23**	**233**		P		**P**	**02 13 03.4**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=62,slow=9.5,SNR=35								
ASAR					LR		LR	02 21 19.3	
	comp=Z,264nm,20.3s,baz=50,slow=34								
	comp=Z,5.0nm,0.8s								
ASAR	**Alice Springs**	**24.23**	**233**		P		**P**	**02 13 02.8**	**-0.5**
STKA	**Stephens Creek**	**25.15**	**207**		P		**P**	**02 13 12.2**	**+0.7**
	comp=Z,4.0nm,0.6s,baz=48,slow=12,SNR=7.7								
STKA					LR		LR	02 23 37.8	
	comp=Z,307nm,19.1s,baz=26,slow=38								
	comp=Z,4.0nm,0.6s								
FITZ	**Fitzroy Crossi**	**29.40**	**250**		LR		LR	02 25 27.8	
	comp=Z,295nm,18.9s,baz=122,slow=36								
BATI	**Baumata**	**30.61**	**266**		LR		LR	02 28 03.2	
	comp=Z,882nm,19.1s,baz=139,slow=40								
TGY	**Tagaytay City**	**41.07**	**305**		LR		LR	02 32 08.8	
	comp=Z,132nm,20.4s,baz=140,slow=36								
JNU	**Nakatsue**	**48.33**	**333**		LR		LR	02 35 45.3	
	comp=Z,131nm,18.5s,baz=58,slow=35								
MJAR	**Matsushiro Arr**	**48.61**	**342**		P		**P**	**02 16 30.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=164,slow=8.6,SNR=2.7								
MJAR					LR		LR	02 36 23.2	
	comp=Z,78nm,18.8s,baz=114,slow=35								
	comp=Z,0.6nm,0.3s								
USRK	**Ussuriysk Ar.**	**57.54**	**341**		P		**P**	**02 17 36.9**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=67,slow=12,SNR=4.0								
	comp=Z,2.8nm,0.8s								
USRK	**Ussuriysk Ar.**	**57.54**	**341**		P		**P**	**02 17 35.9**	**+0.2**
PETK	**Petropavlovsk-**	**62.67**	**2**		LR		LR	02 42 20.0	
	comp=Z,63nm,19.5s,baz=163,slow=33								
SHEM	**Shemya Is, Ala**	**64.42**	**13**		LR		LR	02 41 37.6	
	comp=Z,131nm,20.7s,baz=271,slow=32								
ULN	**Ulaanbaatar**	**71.20**	**328**		P		**P**	**02 19 06.9**	**+1.5**
ULN					IAmb		IAmb	02 19 08.0	
	comp=Z,2.4nm,0.7s								
SONM	**Songino Array**	**71.53**	**328**		P		**P**	**02 19 08.6**	**+1.3**
	comp=Z,2.4nm,1.0s,baz=131,slow=5.2,SNR=10								
	comp=Z,2.4nm,1.0s								
SONM	**Songino Array**	**71.53**	**328**		P		**P**	**02 19 08.7**	**+1.3**
SONM					IAmb		IAmb	02 19 09.7	
	comp=Z,5.0nm,1.2s								
QSPA	**South Pole Qui**	**80.23**	**180**		P		**P**	**02 19 56.7**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=346,slow=1.7,SNR=16								
	comp=Z,5.4nm,0.9s								
QSPA	**South Pole Qui**	**80.23**	**180**		P		**P**	**02 19 56.1**	**-0.7**
MKAR	**Makanchi Array**	**85.31**	**319**		P		**P**	**02 20 23.6**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=104,slow=5.1,SNR=9.3								
	comp=Z,1.7nm,0.9s								
MKAR	**Makanchi Array**	**85.31**	**319**				**P**	**02 20 23.0**	**-0.4**
MAKZ	**Makanchi**	**85.52**	**319**		P		**P**	**02 20 23.0**	**-1.4**
MAKZ					IAmb		IAmb	02 20 26.2	
	comp=Z,4.6nm,1.1s								
ILAR	**Eielson Array**	**86.03**	**21**		P		**P**	**02 20 26.0**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=268,slow=8.1,SNR=2.6								
ILAR					LR		LR	02 55 15.7	
	comp=Z,61nm,19.4s,baz=274,slow=33								
	comp=Z,0.4nm,0.9s								
ZALV	**Zalesovo Beam**	**86.32**	**326**		P		**P**	**02 20 27.5**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=90,slow=4.3,SNR=3.8								
	comp=Z,0.7nm,0.6s								
BELA	**Belgrano 2**	**92.35**	**178**		P		**P**	**02 20 54.7**	**-1.6**
ESDC	**Sonseca Array**	**144.68**	**331**		PKP		**PKPab**	**02 27 22.6**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=45,slow=4.0,SNR=6.5								
TORD	**Torodi Ar. Bea**	**153.38**	**280**		PKPbc		**PKPbc**	**02 27 45.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=76,slow=2.4,SNR=2.4								

TRN 04 02:15:14.4, 16.°26N×60.°69W, h25km, MD3.8, East of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	**0.65**	**242**		*eP*		Pn	02 15 29.9	+1.9
MAGL					*eS*		Sn	02 15 39.2	+1.7
DWS	**Wesley**	**0.91**	**221**		*eP*		Pn	02 15 32.7	+1.1
DWS					*eS*		Sn	02 15 46.8	+2.9
MMLZ	**Guadeloupe Bro**	**0.97**	**258**		*eP*		Pb	02 15 34.8	+2.2
MMLZ					*eS*		Sn	02 15 48.5	+3.2
TBG	**Guadaloupe-3**	**1.01**	**247**		*eP*		Pb	02 15 35.0	+1.7
TBG					*eS*		Sn	02 15 48.9	+2.6
DHSZ	**Broadband at M**	**1.04**	**271**		*eP*		Pb	02 15 35.5	+1.7
DHSZ					*eS*		Sn	02 15 49.9	+2.9
DSLB	**Salisbury**	**1.08**	**221**		*eP*		Pb	02 15 35.2	+0.7
DSLB					*eS*		Sb	02 15 50.0	+1.9
MBWH	**Windy Hill**	**1.52**	**289**		*eP*		Pb	02 15 42.0	0.0
MBWH					*eS*		Sb	02 16 01.8	+0.9
ANWB	**Willy Bob**	**1.76**	**323**		*eP*		Pn	02 15 43.6	+0.4
ANWB					*eS*		Sb	02 16 06.2	-1.4
BIM	**Bigot**	**1.77**	**192**		*eP*		Pb	02 15 45.5	-0.8
BIM					*eS*		Sb	02 16 07.7	-0.3
SLBI	**Saint Lucia, B**	**2.24**	**187**		*eP*		Pn	02 15 51.8	+1.9
SLBI					*eS*		Sn	02 16 18.6	+1.9
SKI	**Saint Kitts**	**2.24**	**299**		*eP*		Pb	02 15 52.1	-2.1
SKI					*eS*		Sb	02 16 19.8	-1.8
SLCP	**Castries, St.**	**2.25**	**188**		x		x	02 16 04.5	
SLCP					x		x	02 16 42.4	
SLAC	**Saint Lucia, A**	**2.35**	**185**		*eP*		Pn	02 15 53.0	+1.5
SLAC					*eS*		Sb	02 16 22.2	-2.6

*IDC **04** 02:20:54.6±1.3, 37.°22N×20.°65E, h0km, mb3.4/7, mbtmp3.4/9, ML3.4/2, Error ellipse: s-maj=27.9km s-min=24.1km az=125.0*
*THE **04** 02:20:56.9, 37.°N±1.°×20.°0E±.°, h0km, M3.1/38, MLh3.1/38*
*ATH **04** 02:20:57.4±0.3, 37.°30N×20.°43E, h10km, ML3.2/24, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 04 02:20:55.9±1.4, 37.°26N±0.°03×20.°39E±0.°04, h7km±9km, n128, σ0^{s}91/158, mb3.7/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.57**	**38**		P		**Pg**	**02 21 07.3**	**+0.4**
LTHK					S		**Sg**	**02 21 14.7**	**+0.2**
LTHK	**Lithakia**	**0.57**	**38**		P		**Pg**	**02 21 07.4**	**+0.4**
LTHK					S		**Sb**	**02 21 15.6**	**-1.1**
ORTH	**Orthonies,Zaky**	**0.64**	**22**		P		**Pg**	**02 21 08.5**	**+0.3**
ORTH					S		**Sg**	**02 21 16.7**	**+0.2**
ORTH	**Orthonies,Zaky**	**0.64**	**22**		P		**Pg**	**02 21 08.5**	**+0.3**
KYPS	**Kipseli, Zakin**	**0.65**	**32**		P		**Pg**	**02 21 09.1**	**+0.6**
KYPS					S		**Sb**	**02 21 18.7**	**-0.4**
CLEM	**Kyllini,Ilia,G**	**0.86**	**43**		P		**Pb**	**02 21 13.2**	**-0.1**
RTZL	**Ratzakli, Kefa**	**0.87**	**20**		P		**Pg**	**02 21 12.4**	**-0.2**
RTZL					S		**Sb**	**02 21 25.6**	**+0.4**
RTZL	**Ratzakli, Kefa**	**0.87**	**20**		P		**Pg**	**02 21 12.5**	**-0.2**
RTZL					S		**Sb**	**02 21 25.3**	**+0.1**
KFL1	**Kefalonia,Entr**	**0.91**	**5**		P		**Pg**	**02 21 13.0**	**-0.4**
KFL1					S		**Sg**	**02 21 25.9**	**+0.7**
ARG2	**Argostoli**	**0.92**	**5**		P		**Pg**	**02 21 12.3**	**-1.3**
ARG2					S		**Sg**	**02 21 25.7**	**+0.2**
ARG2	**Argostoli**	**0.92**	**5**		P		**Pg**	**02 21 12.8**	**-0.8**
VLS	**Valsamata**	**0.93**	**10**		P		**Pg**	**02 21 13.4**	**-0.4**
VLS					S		**Sb**	**02 21 26.6**	**-0.4**
VLS	**Valsamata**	**0.93**	**10**		P		**Pg**	**02 21 13.6**	**-0.2**
VLS					S		**Sg**	**02 21 26.3**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.94**	**2**		P		**Pb**	**02 21 15.1**	**+0.5**
LXR1					S		**Sb**	**02 21 28.5**	**+1.3**
LCHA	**Lechaina**	**0.97**	**45**		P		**Pg**	**02 21 14.6**	**+0.1**
DMLN	**Damoulianata-K**	**0.98**	**359**		P		**Pg**	**02 21 14.5**	**-0.2**
DMLN					S		**Sb**	**02 21 29.8**	**+1.4**
DMLN	**Damoulianata-K**	**0.98**	**359**		P		**Pg**	**02 21 14.2**	**-0.5**
DMLN					S		**Sb**	**02 21 28.6**	**+0.2**
ZARO	**Zacharo**	**1.03**	**77**		P		**Pb**	**02 21 16.6**	**+0.5**
ZARO					S		**Sb**	**02 21 30.6**	**+0.8**
AMT	**Artemida-Makis**	**1.08**	**75**		P		**Pg**	**02 21 16.7**	**0.0**
AMT	**Artemida-Makis**	**1.08**	**75**		P		**Pg**	**02 21 16.7**	**0.0**
PYL1	**Pylos**	**1.10**	**108**		P		**Pg**	**02 21 17.1**	**+0.1**
MTHA	**Methoni**	**1.14**	**112**		P		**Pg**	**02 21 18.1**	**+0.3**
PYL	**PYLOS**	**1.14**	**108**		P		**Pg**	**02 21 17.3**	**-0.5**
PYL					S		**Sb**	**02 21 33.6**	**+0.6**
PYL	**PYLOS**	**1.14**	**108**		P		**Pg**	**02 21 17.5**	**-0.3**
PYL					S		**Sb**	**02 21 33.6**	**+0.6**
VSK1	**VASILIKIADES**	**1.15**	**7**		P		**Pg**	**02 21 17.1**	**-1.0**
RLS	**Riolos of Patr**	**1.17**	**47**		P		**Pg**	**02 21 17.5**	**-0.8**
RLS					S		**Sb**	**02 21 34.3**	**+0.5**
RLS	**Riolos of Patr**	**1.17**	**47**		P		**Pg**	**02 21 17.7**	**-0.6**
FSK	**Fiskardo**	**1.20**	**6**		P		**Pg**	**02 21 18.2**	**-0.9**
FSK					S		**Sb**	**02 21 35.9**	**+1.1**
FSK	**Fiskardo**	**1.20**	**6**		P		**Pg**	**02 21 18.4**	**-0.7**
FSK					S		**Sg**	**02 21 34.6**	**0.0**
AXS	**Araxos**	**1.22**	**40**		P		**Pg**	**02 21 18.4**	**-0.9**
AXS					S		**Sb**	**02 21 36.3**	**+1.1**
AXS	**Araxos**	**1.22**	**40**		P		**Pg**	**02 21 18.7**	**-0.6**
ITM	**Ithomi**	**1.23**	**93**		P		**Pg**	**02 21 19.1**	**-0.4**
ITM					S		**Sg**	**02 21 35.4**	**0.0**
ITM	**Ithomi**	**1.23**	**93**		P		**Pg**	**02 21 19.4**	**-0.1**
ITM					S		**Sb**	**02 21 36.1**	**+0.5**
DRO	**Drossia**	**1.25**	**56**		P		**Pg**	**02 21 19.5**	**-0.5**
DRO					S		**Sn**	**02 21 38.1**	**+1.0**
VALY	**Valyra**	**1.27**	**94**		P		**Pg**	**02 21 19.5**	**-0.9**
VALY					S		**Sn**	**02 21 39.1**	**+1.5**
EVGI	**Lefkada island**	**1.37**	**9**		P		**Pg**	**02 21 21.3**	**-1.0**
EVGI					S		**Sn**	**02 21 41.7**	**+1.6**
EVGI	**Lefkada island**	**1.37**	**9**		P		**Pg**	**02 21 21.1**	**-1.2**
EVGI					S		**Sg**	**02 21 39.8**	**-0.3**
MSL1	**Messolongi**	**1.38**	**36**		P		**Pg**	**02 21 22.1**	**-0.3**
PLEV	**Plevrona-Mesol**	**1.40**	**35**		P		**Pg**	**02 21 22.1**	**-0.8**
DRAG	**Dragano-Lefkad**	**1.43**	**6**		P		**Pg**	**02 21 22.2**	**-1.1**
DRAG	**Dragano-Lefkad**	**1.43**	**6**		P		**Pg**	**02 21 22.5**	**-0.9**
NYDR	**Nydri-Lefkada**	**1.47**	**9**		P		**Pn**	**02 21 22.7**	**-0.2**
NYDR	**Nydri-Lefkada**	**1.47**	**9**		P		**Pn**	**02 21 23.2**	**+0.3**
UPR	**University Cam**	**1.50**	**47**		P		**Pb**	**02 21 25.1**	**+0.9**
UPR	**University Cam**	**1.50**	**47**		P		**Pn**	**02 21 23.7**	**+0.3**
LKD2	**Lefkada island**	**1.54**	**8**		P		**Pn**	**02 21 24.2**	**+0.3**
LKD2					S		**Sn**	**02 21 46.1**	**+1.9**
LKD2	**Lefkada island**	**1.54**	**8**		P		**Pn**	**02 21 24.9**	**+1.0**
AGRP	**Agrapidokambos**	**1.55**	**43**		P		**Pn**	**02 21 24.8**	**+0.8**
KLV1	**Kalavrita**	**1.56**	**60**		P		**Pn**	**02 21 24.6**	**+0.3**
TSLK	**Tsoukalades, L**	**1.57**	**8**		P		**Pn**	**02 21 25.4**	**+1.0**
TSLK					S		**Sg**	**02 21 47.1**	**+0.5**
TSLK	**Tsoukalades, L**	**1.57**	**8**		P		**Pn**	**02 21 25.3**	**+0.9**
VLX	**Vlachokerasia**	**1.59**	**85**		P		**Pn**	**02 21 25.2**	**+0.6**
VLX					S		**Sb**	**02 21 46.7**	**+0.7**
VLX	**Vlachokerasia**	**1.59**	**85**		P		**Pn**	**02 21 23.3**	**+0.6**
KLV	**Kalavryta, Ach**	**1.60**	**60**		P		**Pn**	**02 21 25.6**	**+0.8**
KLV	**Kalavryta, Ach**	**1.60**	**60**		P		**Pn**	**02 21 25.4**	**+0.6**
AIOA	**Agios Ioannis,**	**1.62**	**54**		P		**Pn**	**02 21 25.7**	**+0.8**
PVO	**Paravola**	**1.62**	**33**		P		**Pn**	**02 21 25.9**	**+0.8**
PVO					S		**Sg**	**02 21 48.4**	**+0.3**
AGEO	**AgiosGiorgios,**	**1.66**	**52**		P		**Pn**	**02 21 26.6**	**+1.1**
EFP	**Efpalio**	**1.67**	**45**		P		**Pn**	**02 21 26.8**	**+1.1**
EFP	**Efpalio**	**1.67**	**45**		P		**Pn**	**02 21 26.5**	**+0.9**
MG00	**Magoula, Dorid**	**1.69**	**46**		P		**Pn**	**02 21 26.9**	**+1.0**
GUR	**Goura**	**1.69**	**66**		P		**Pn**	**02 21 26.2**	**+0.2**
GUR	**Goura**	**1.69**	**66**		P		**Pn**	**02 21 26.7**	**+0.7**
PYRG	**Pyrgos, Dorida**	**1.72**	**48**		P		**Pn**	**02 21 27.4**	**+1.0**
SERG	**Sergoula**	**1.75**	**48**		P		**Pn**	**02 21 27.6**	**+0.8**
AMPL	**Ampelaki**	**1.78**	**21**		P		**Pn**	**02 21 28.4**	**+1.2**
AMPL	**Ampelaki**	**1.78**	**21**		P		**Pn**	**02 21 28.0**	**+0.9**
KALE	**Kalithea**	**1.79**	**50**		P		**Pn**	**02 21 28.4**	**+1.1**
KALE	**Kalithea**	**1.79**	**50**		P		**Pn**	**02 21 28.4**	**+1.1**
ANX	**Ano Chora**	**1.80**	**42**		P		**Pn**	**02 21 29.0**	**+1.5**
ANX	**Ano Chora**	**1.80**	**42**		P		**Pn**	**02 21 28.7**	**+1.2**
PANR	**Panormos, Dori**	**1.84**	**52**		P		**Pn**	**02 21 29.4**	**+1.4**
EVR	**Evrytania**	**2.00**	**34**		P		**Pn**	**02 21 31.7**	**+1.5**
EVR	**Evrytania**	**2.00**	**34**		P		**Pn**	**02 21 31.4**	**+1.2**
VLI	**Veliai**	**2.11**	**104**		P		**Pn**	**02 21 33.3**	**+1.7**
VLI	**Veliai**	**2.11**	**104**		P		**Pn**	**02 21 33.4**	**+1.7**
LTK	**Loutraki**	**2.18**	**69**		P		**Pn**	**02 21 33.3**	**+0.6**
TETR	**Tetrakomo, Epi**	**2.19**	**18**		P		**Pn**	**02 21 34.0**	**+1.1**
TETR	**Tetrakomo, Epi**	**2.19**	**18**		P		**Pn**	**02 21 34.0**	**+1.1**
IGT	**Igoumenitsa**	**2.27**	**359**		P		**Pn**	**02 21 34.9**	**+1.0**
IGT	**Igoumenitsa**	**2.27**	**359**		P		**Pn**	**02 21 35.0**	**+1.1**
AGG	**Agios Georgios**	**2.33**	**40**		P		**Pn**	**02 21 36.3**	**+1.5**
AGG	**Agios Georgios**	**2.33**	**40**		P		**Pn**	**02 21 35.4**	**+0.7**
PRMD	**Pramanda**	**2.33**	**14**		P		**Pn**	**02 21 36.2**	**+1.4**
PRMD	**Pramanda**	**2.33**	**14**		P		**Pn**	**02 21 35.8**	**+1.0**
AXAR	**Agios Charalam**	**2.34**	**49**		P		**Pn**	**02 21 36.5**	**+1.6**
AXAR	**Agios Charalam**	**2.34**	**49**		P		**Pn**	**02 21 35.8**	**+1.0**
MET2	**Kameni Chora,**	**2.37**	**81**		P		**Pn**	**02 21 34.9**	**-0.3**
KTHA	**Kythira Island**	**2.37**	**114**		P		**Pn**	**02 21 36.8**	**+1.5**
KTHA	**Kythira Island**	**2.37**	**114**		P		**Pn**	**02 21 36.7**	**+1.5**
MET6	**Megalochori,Me**	**2.38**	**81**		P		**Pn**	**02 21 35.4**	**0.0**
MET5	**Makryloggos,Me**	**2.39**	**80**		P		**Pn**	**02 21 35.9**	**+0.4**
JAN	**Janina**	**2.42**	**8**		P		**Pn**	**02 21 37.3**	**+1.3**
MET4	**Agioi Theodoro**	**2.42**	**81**		P		**Pn**	**02 21 36.2**	**+0.3**
VIL2	**Platees**	**2.47**	**67**		P		**Pn**	**02 21 36.7**	**0.0**
LKR	**Lokris**	**2.48**	**55**		P		**Pn**	**02 21 37.6**	**+0.7**
VILL	**Villia**	**2.48**	**68**		P		**Pn**	**02 21 36.7**	**-0.2**
KEK	**Kerkira**	**2.49**	**349**		P		**Pn**	**02 21 37.3**	**+0.3**
KEK	**Kerkira**	**2.49**	**349**		P		**Pn**	**02 21 37.1**	**+0.1**
ATAL	**Atalanti**	**2.52**	**55**		P		**Pn**	**02 21 38.0**	**+0.6**
ATAL	**Atalanti**	**2.52**	**55**		P		**Pn**	**02 21 38.3**	**+0.9**
THL	**Klokotos Trika**	**2.63**	**28**		P		**Pn**	**02 21 40.2**	**+1.4**
THL	**Klokotos Trika**	**2.63**	**28**		P		**Pn**	**02 21 40.1**	**+

SNVZ **South Ngauruho** 7.95 219 P **Pn** 02 24 40.0 +0.4
BHHZ **Black Hill Sta** 7.96 216 P **Pn** 02 24 38.9 -0.8
WNVZ **Wahianoa** 8.08 218 P **Pn** 02 24 39.6 -1.8
OGWZ **Otaki Gorge** 9.43 214 P **Pn** 02 24 57.2 -2.6
THZ **Tophouse** 11.26 218 P **Pn** 02 25 21.8 -3.0
KHZ **Kahutara** 11.44 214 P **Pn** 02 25 25.7 -1.6
LTZ **Lake Taylor** 12.32 216 P **Pn** 02 25 36.7 -2.7
MQZ **McQueen's Vall** 12.85 212 P Pn 02 25 42.6 -4.0
RPZ **Rata Peaks** 13.61 216 Pn Pn 02 25 52.5 -4.5
0.3nm,0.3s,baz=216,slow=24,SNR=1.6
RPZ Sn Sn 02 28 13.0 -15
0.4nm,0.3s,baz=127,slow=22,SNR=8.2
JCZ **Jackson Bay** 15.03 220 P **Pn** 02 26 13.1 -3.4
MSVF **Nonsavu** 15.77 346 Pn **Pn** 02 26 24.7 -1.5
0.6nm,0.3s,baz=140,slow=16,SNR=4.2
16nm,1.0s
MSVF **Nonsavu** 15.77 346 **Pn** 02 26 24.4 -1.8
OUENC **Ouen Island, N** 17.17 305 P **P** 02 26 46.1 +0.6
OUENC IAmb IAmb 02 26 51.6
comp=Z,58nm,1.2s
ONTNC **Ouen Toro** 17.51 304 P **Pn** 02 26 48.5 +0.3
ONTNC IAmb IAmb 02 26 54.5
comp=Z,51nm,1.0s
DZM **Mont Dzumac** 17.67 305 P **P** 02 26 54.0 +2.8
comp=Z,51nm,1.0s,baz=119,slow=14,SNR=16
DZM LR LR 02 32 46.6
comp=Z,278nm,18.2s,baz=172,slow=34
AFI **Afiamalu** 19.96 18 P **P** 02 27 16.5 +0.1
comp=Z,2.9nm,0.3s,baz=234,slow=13,SNR=3.9
comp=Z,43nm,0.8s
KOUNC **Koumac, New Ca** 20.18 304 Pn 02 27 21.5 +1.0
KOUNC IAmb IAmb 02 27 23.2
comp=Z,40nm,0.9s
EIDS **Eidsvold** 28.04 278 P **P** 02 28 36.9 +1.6
STKA **Stephens Creek** 34.00 261 P **P** 02 29 28.9 +1.1
comp=Z,1.9nm,0.7s,baz=131,slow=6.8,SNR=2.9
STKA LR LR 02 43 17.8
comp=Z,174nm,18.1s,baz=28,slow=36
comp=Z,1.9nm,0.7s
INKA **Innaminka** 35.85 267 **P** 02 29 45.0 +1.2
INKA IAmb IAmb 02 29 46.8
comp=Z,9.3nm,0.9s
BBOO **Buckleboo** 38.34 258 P **P** 02 30 04.3 -0.7
BBOO IAmb IAmb 02 30 22.8
comp=Z,53nm,1.6s
AS31 **Alice Springs** 43.08 270 **P** 02 30 44.8 +0.5
ASAR **Alice Springs** 43.08 270 P **P** 02 30 44.5 +0.2
comp=Z,21nm,0.8s,baz=108,slow=7.6,SNR=162
ASAR S **S** 02 37 06.8 -3.7
comp=Z,0.7nm,0.8s,baz=117,slow=16,SNR=5.0
comp=Z,21nm,0.8s
ASAR **Alice Springs** 43.08 270 **P** 02 30 44.7 +0.4
WRA **Warramunga Arr** 44.31 275 P **P** 02 30 54.1 -0.2
comp=Z,21nm,0.6s,baz=116,slow=7.6,SNR=49
WB0 **Warramunga Arr** 44.35 275 P **P** 02 30 54.7 +0.1
VNDA **Vanda** 45.38 186 P **P** 02 31 01.1 -0.8
comp=Z,0.4nm,0.5s,baz=346,slow=17,SNR=1.8
comp=Z,0.4nm,0.5s
FORT **Forrest** 45.45 258 **P** 02 31 03.1 0.0
FORT IAmb IAmb 02 31 04.3
comp=Z,26nm,1.4s
MTN **Manton Dam** 50.51 281 P **P** 02 31 42.2 -0.3
MTN IAmb IAmb 02 31 45.3
comp=Z,54nm,1.5s
KNRA **Kununurra** 51.01 277 P **P** 02 31 46.6 +0.3
FITZ **Fitzroy Crossi** 52.45 272 P **P** 02 31 57.0 0.0
comp=Z,5.0nm,0.8s,baz=143,slow=8.9,SNR=8.7
FITZ LR LR 02 53 33.3
comp=Z,119nm,18.5s,baz=34,slow=35
comp=Z,5.0nm,0.8s
FITZ **Fitzroy Crossi** 52.45 272 P **P** 02 31 57.4 +0.4
CASY **Casey** 52.75 209 P **P** 02 31 58.5 -0.1
CASY IAmb IAmb 02 32 02.5
comp=Z,10.0nm,0.7s
NWAO **Narrogin (SRO)** 53.52 251 P **P** 02 32 03.7 -1.0
MORW **Morawa** 55.83 255 P **P** 02 32 20.3 -1.3
QSPA **South Pole Qui** 56.97 180 P **P** 02 32 31.0 +1.6
comp=Z,5.1nm,1.0s,baz=355,slow=1.1,SNR=13
comp=Z,5.1nm,1.0s
QSPA **South Pole Qui** 56.97 180 **P** 02 32 30.9 +1.6
QSPA IAmb IAmb 02 32 48.8
comp=Z,18nm,0.8s
KAPI **Kappang** 64.17 281 LR LR 03 02 15.3
comp=Z,34nm,21.4s,baz=36,slow=37
BELA **Belgrano 2** 67.07 172 **P** 02 33 36.8 -0.1
BELA IAmb IAmb 02 33 37.5
comp=Z,4.6nm,0.9s
MAW **Mawson** 69.76 201 P **P** 02 33 54.1 +0.4
comp=Z,1.7nm,0.9s,baz=150,slow=14,SNR=2.9
comp=Z,1.7nm,0.9s
TROLL **Troll, Antarti** 75.14 180 ⇓P **P** 02 34 26.2 +0.2
comp=Z,248nm,0.8s
TROLL ⇑PcP **pwP** 02 34 38.3 +1.7
comp=Z,107nm,0.6s
SNAA **Sanae** 75.42 178 ⇓P **P** 02 34 27.5 0.0
comp=Z,148nm,0.8s
SNAA ⇑PcP **pwP** 02 34 39.5 +1.3
comp=Z,148nm,0.8s
SNAA **Sanae** 75.42 178 P **P** 02 34 27.7 +0.2
comp=Z,3.2nm,1.0s,baz=165,slow=6.2,SNR=7.6
comp=Z,3.2nm,1.0s
SNAA **Sanae** 75.42 178 **P** 02 34 27.7 +0.2
SNAA IAmb IAmb 02 34 45.5
comp=Z,9.8nm,1.0s
VNA2 **Neumayer--Watz** 76.00 177 ⇓P **P** 02 34 30.9 +0.2
comp=Z,9.6nm,0.5s,baz=172,slow=4.8
VNA2 ⇑PcP **pwP** 02 34 43.1 +1.6
comp=Z,9.6nm,0.5s,baz=169,slow=5.5
VNA1 **Neumayer--Stat** 76.23 176 ⇓P **P** 02 34 31.7 -0.3
comp=Z,13nm,1.0s
VNA1 ⇑PcP **pwP** 02 34 44.6 +1.8
comp=Z,5.8nm,0.7s
H03S2 **Juan Fernandez** 78.92 123 T T 04 03 54.3
baz=236,slow=74,SNR=7.5
H03S1 **Juan Fernandez** 78.93 123 T T 04 03 55.4
baz=236,slow=74,SNR=9.0
H03S3 **Juan Fernandez** 78.94 123 T T 04 03 54.5
baz=236,slow=74,SNR=9.3
H03N3 **Juan Fernandez** 79.13 123 T T 04 04 09.5
baz=240,slow=74
H03N2 **Juan Fernandez** 79.13 123 T T 04 04 03.2
baz=240
H03N1 **Juan Fernandez** 79.14 123 T T 04 04 08.8
baz=240,slow=74
PLCA **Paso Flores** 80.61 133 P **P** 02 34 57.7 +0.8
comp=Z,1.8nm,0.9s,baz=264,slow=6.0,SNR=3.5
comp=Z,1.8nm,0.9s
KSRS **Korea Arrays** 86.47 320 P **P** 02 35 27.1 +0.5
comp=Z,1.2nm,0.6s,baz=140,slow=5.5,SNR=5.4
KSRS LR LR 03 13 35.1
comp=Z,17nm,18.0s,baz=315,slow=35
comp=Z,1.2nm,0.6s
NJ2 **Nanjing** 88.06 311 *eP* **P** 02 35 35.3 +0.8
NJ2 pmax pmax
comp=Z,37nm,0.6s
PETK **Petropavlovsk-** 88.48 346 P **P** 02 35 36.3 +0.4
comp=Z,1.4nm,0.5s,baz=124,slow=5.4,SNR=6.3
comp=Z,1.4nm,0.5s
PETK **Petropavlovsk-** 88.48 346 P **P** 02 35 37.6 +1.6
USRK **Ussuriysk Ar.** 89.47 327 P **P** 02 35 41.8 +0.9
comp=Z,8.2nm,0.7s,baz=138,slow=6.0,SNR=12
comp=Z,8.2nm,0.7s
USRK **Ussuriysk Ar.** 89.47 327 **P** 02 35 42.4 +1.6
NVAR **Mina Array Bea** 90.22 43 P **P** 02 35 44.9 +0.1
comp=Z,0.4nm,0.2s,baz=241,slow=7.3,SNR=5.2
comp=Z,0.4nm,0.2s
MDJ **Mudanjiang** 90.91 326 P **P** 02 35 49.2 +1.6
MDJ pmax pmax
comp=Z,12nm,1.1s
BNX **BinXian** 92.78 325 ⇓P **P** 02 35 56.9 +0.7
BNX pmax pmax
comp=Z,9.0nm,0.9s
TXAR **Lajitas Array** 93.83 57 P **P** 02 36 01.6 +0.1
comp=Z,0.2nm,0.7s,baz=227,slow=11,SNR=1.8
comp=Z,0.2nm,0.7s
PZH **PanZhiHua** 96.61 297 P **P** 02 36 15.2 +0.8
HHC **Hu-ho-hao-te** 98.17 314 *eP* **P** 02 36 19.8 -1.3
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,150nm,6.7s
MKAR **Makanchi Array** 119.55 309 PKP **PKPdf** 02 41 33.1 -0.4
comp=Z,1.2nm,0.7s,baz=52,slow=2.4,SNR=8.5
KURBB **Kurchatov Arra** 122.99 312 PKP **PKPdf** 02 41 39.8 -0.2
comp=Z,3.1nm,0.3s,baz=110,slow=1.9,SNR=12
BVAR **Borovoye Array** 128.37 314 PKP **PKPdf** 02 41 50.6 +0.3
comp=Z,2.4nm,0.7s,baz=132,slow=2.1,SNR=12

ARCES **ARCESS Array B** 141.27 347 PKhKP PKPpre 02 42 09.3
comp=Z,1.4nm,0.7s,baz=60,slow=2.2,SNR=7.1
FAUS **Fauske** 144.86 351 *eP* **PKPab** 02 42 19.3 +0.1
FAUS IAmb IAmb 02 42 20.0
comp=Z,12nm,0.9s
GNI **Garni** 145.31 294 PKPbc **PKPbc** 02 42 21.4 -0.5
comp=Z,2.8nm,0.5s,baz=204,slow=5.6,SNR=4.3
VAGH **Vaagaholmen** 145.73 352 *eP* **PKPdf** 02 42 22.3 +0.6
VAGH IAmb IAmb 02 42 22.8
comp=Z,23nm,0.8s
RAUS **Rausandaksla** 145.91 351 *eP* **PKPdf** 02 42 23.1 +1.1
KONS **Konsvik** 145.97 352 *eP* **PKPdf** 02 42 22.6 +0.6
MOR8 **Moi Rana** 146.12 351 *eP* **PKPbc** 02 42 24.4 +1.0
STOK **Stokkvaagen** 146.14 352 *eP* **PKPab** 02 42 25.6 +1.7
LEIR **Leirfjorden** 146.34 352 *eP* **PKPdf** 02 42 24.5 +1.7
GEVA **Gevas** 146.52 291 **PKPdf** 02 42 24.9 +0.7
KBZ **Khabaz** 146.61 301 PKPbc **PKPdf** 02 42 25.9 +2.0
comp=Z,6.0nm,0.9s,baz=146,slow=4.6,SNR=8.0
KVAR **Kislovodsk Arr** 146.74 301 PKPbc **PKPdf** 02 42 24.0 -0.3
comp=Z,1.9nm,0.7s,baz=0.0,slow=8.1,SNR=1.9
KIV **Kislovodsk** 146.74 301 PKPdf **PKPdf** 02 42 25.0 +0.7
GURO **Guroymak-BITLI** 147.34 291 **PKPdf** 02 42 25.9 +0.4
OBN **Obninsk** 147.41 323 PKPbc **PKPbc** 02 42 28.0 +0.7
comp=Z,13nm,0.5s,baz=132,slow=16,SNR=5.1
FIA1 **FINESS Array S** 147.72 339 **PKPbc** 02 42 28.2 +0.2
FINES **FINESS Array B** 147.72 339 PKPbc **PKPbc** 02 42 28.0 0.0
comp=Z,13nm,0.7s,baz=39,slow=2.5,SNR=37
NSS **Namsos** 148.00 352 *eP* **PKPbc** 02 42 28.8 +0.1
ASF **Jabal al Asfar** 150.73 278 PKPbc **PKPbc** 02 42 38.1 +1.5
comp=Z,5.1nm,0.8s,baz=180,slow=2.0,SNR=8.2
AKN **Aaknes** 150.78 355 *eP* **PKPbc** 02 42 35.7 0.0
NC303 **NORSAR Array S** 151.26 351 PKPbc **PKPbc** 02 42 37.2 +0.4
NB2 **NORSAR Subarra** 151.46 351 PKP **PKPbc** 02 42 37.6 +0.2
comp=Z,2.1nm,0.6s,baz=17,slow=2.6
NOA **NORSAR Array B** 151.46 351 PKPbc **PKPbc** 02 42 37.4 0.0
comp=Z,2.7nm,0.6s,baz=13,slow=4.1,SNR=16
FOO **Floro** 151.47 357 *eP* **PKPbc** 02 42 38.0 +0.8
NC602 **NORSAR Array S** 151.71 350 *eP* **PKPbc** 02 42 37.8 -0.1
EIL **Elat** 151.77 272 PKPbc **PKPbc** 02 42 39.6 +0.6
comp=Z,5.7nm,0.8s,baz=94,slow=1.1,SNR=4.1
HFS **Hagfors** 151.93 348 PKPbc **PKPbc** 02 42 38.2 -0.2
comp=Z,4.1nm,0.6s,baz=70,slow=1.7,SNR=11
HFS PKPab **PKPab** 02 42 47.7 0.0
comp=Z,2.2nm,0.4s,baz=63,slow=0.7,SNR=11
MMAI **Mount Meron Ar** 152.12 279 PKPbc **PKPbc** 02 42 40.5 +0.7
comp=Z,6.9nm,0.9s,baz=15,slow=3.5,SNR=10.0
MMAI PKPab **PKPab** 02 42 49.7 +0.3
comp=Z,3.1nm,0.6s,baz=56,slow=5.2,SNR=8.7
SKAR **Skarslia** 152.15 353 *eP* **PKPbc** 02 42 39.9 +0.9
AKASG **Malin Array Be** 153.46 319 PKPbc **PKPbc** 02 42 42.1 0.0
comp=Z,1.7nm,0.7s,baz=60,slow=1.9,SNR=7.0
AKASG PKPab **PKPab** 02 42 54.2 -0.2
comp=Z,5.2nm,0.7s,baz=53,slow=4.2,SNR=19
AKBB **Malin Array Si** 153.46 319 PKP **PKPbc** 02 42 41.8 -0.3
AK09 **Malin Array Si** 153.47 319 PKP **PKPbc** 02 42 41.8 -0.3
KIEV **Kiev** 153.47 319 PKP **PKPbc** 02 42 41.8 -0.3
AK08 **Malin Array Si** 153.48 319 PKP **PKPbc** 02 42 42.2 +0.1
AK02 **Malin Array Si** 153.49 319 PKP **PKPbc** 02 42 42.2 0.0
AK10 **Malin Array Si** 153.50 319 PKP **PKPbc** 02 42 42.2 0.0
AK05 **Malin Array Si** 153.51 319 PKP **PKPbc** 02 42 42.3 +0.1
AK12 **Malin Array Si** 153.53 319 PKP **PKPbc** 02 42 42.3 +0.1
AK06 **Malin Array Si** 153.53 319 PKP **PKPbc** 02 42 42.3 +0.1
AK16 **Malin Array Si** 153.54 319 PKP **PKPbc** 02 42 42.3 0.0
AK07 **Malin Array Si** 153.55 319 PKP **PKPbc** 02 42 42.3 0.0
AK19 **Malin Array Si** 153.56 320 PKP **PKPbc** 02 42 42.4 +0.1
AK13 **Malin Array Si** 153.60 319 PKP **PKPbc** 02 42 42.5 +0.1
BRTR **Keskin Array B** 153.84 294 PKPbc **PKPbc** 02 42 44.1 +0.6
comp=Z,0.8nm,0.5s,baz=92,slow=4.8,SNR=2.3
LUBAR **Lubar, Ukraine** 154.67 319 PKP **PKPbc** 02 42 44.0 -0.7
TESR **Tescani** 156.99 313 ⇓P **PKPab** 02 43 10.2 +0.5
BURAR **Bucovina Array** 157.31 316 ⇑P **PKPab** 02 43 11.9 +0.8
KWP **Kalwaria Pacla** 157.50 323 *e*PKP **PKPab** 02 43 12.1 +0.3
TURR **Turia** 157.58 312 ⇓P **PKPab** 02 43 13.8 +1.5
MLR **Muntele Rosu** 157.88 311 PKPab **PKPab** 02 43 13.1 -0.6
comp=Z,0.9nm,0.7s,baz=63,slow=4.5,SNR=3.3
OJC **Ojcow** 158.49 328 *e*PKP **PKPab** 02 43 15.9 -0.1
ARR **Arges** 158.76 312 ⇓P **PKPab** 02 43 18.9 +1.5
NIE **Niedzica** 158.82 326 *e*PKP **PKPab** 02 43 18.7 +1.2
MARR **Marisel-Cluj** 159.02 316 ⇑P **PKPab** 02 43 19.4 +0.8
DRGR 159.19 317 ⇑P **PKPab** 02 43 20.1 +0.8
LANS **Liptovska Anna** 159.40 326 *e*PKP **PKPab** 02 43 21.2 +1.2
KSP **Ksiaz** 159.46 334 *e*PKP **PKPab** 02 43 21.0 +0.9
STEB **Steborice** 159.58 330 *e*PKPAB **PKPab** 02 43 21.3 +0.6
CHVC **Chvalec** 159.75 334 *e*PKPAB **PKPab** 02 43 22.9 +1.5
MORC **Moravsky Berou** 159.80 330 *e*PKP **PKPab** 02 43 22.2 +0.5
DPC **Dobruska-Polom** 159.84 333 *e*PKPAB **PKPab** 02 43 23.2 +1.3
KRLC **Kraliky** 159.88 332 *e*PKPAB **PKPab** 02 43 23.1 +1.0
TORD **Torodi Ar. Bea** 160.09 179 PKPab **PKPab** 02 43 24.0 +0.4
comp=Z,2.0nm,0.9s,baz=176,slow=3.3,SNR=5.7
CLL **Collm** 160.16 339 *e*PKPab **PKPab** 02 43 25.0 +1.9
comp=Z,5.0nm,0.8s
JAVC **Velka Javorina** 160.43 328 *e*PKP **PKPab** 02 43 26.2 +1.7
VRAC **Vranov** 160.56 330 PKPab **PKPab** 02 43 25.7 +0.7
comp=Z,2.4nm,0.5s,baz=11,slow=4.4,SNR=4.3
VRAC **Vranov** 160.56 330 *e*PKP **PKPab** 02 43 25.6 +0.7
KRUC **Moravsky** 160.83 330 *e*PKP **PKPab** 02 43 26.6 +0.4
MODS **Modra-Piesok** 160.97 328 *e*PKP **PKPab** 02 43 28.5 +1.7
ZVC **Zvikov** 161.38 335 *e*PKPAB **PKPab** 02 43 30.1 +1.6
KHC **Kasperske Hory** 161.86 335 **PKPab** 02 43 31.7 +1.0
KHC **Kasperske Hory** 161.86 335 *e*PKPAB **PKPab** 02 43 31.6 +0.9
RONA **Rosalia, Austr** 161.91 328 *e*PKP **PKPab** 02 43 29.7 -1.3
comp=Z,9.7nm,1.4s
CONA **Conrad Observa** 161.93 329 *e*PKP **PKPab** 02 43 29.5 -1.6
comp=Z,4.5nm,1.0s
GERES **GERESS Array B** 162.06 334 PKPab **PKPab** 02 43 31.7 0.0
comp=Z,2.0nm,0.9s,baz=34,slow=3.7,SNR=12
ARSA **Arzberg** 162.59 328 *e*pPKP **PKPab** 02 43 34.6 +0.7
comp=Z,5.7nm,1.2s
MOA **Molln** 162.66 331 *e*pPKP **PKPab** 02 43 35.2 +0.9
comp=Z,5.0nm,1.3s
BIOA **Bad Ischl, Aus** 163.03 332 *e*pPKP **PKPab** 02 43 36.4 +0.5
comp=Z,6.6nm,1.0s
SESA **Seetaler Alpe,** 163.12 329 *e*pPKP **PKPab** 02 43 37.1 +0.6
comp=Z,9.3nm,0.7s
SOKA **Soboth** 163.25 328 *e*pPKP **PKPab** 02 43 38.1 +1.2
comp=Z,7.8nm,1.1s
LESA **Schwarzeotal** 163.62 334 *e*pPKP **PKPab** 02 43 38.9 +0.4
comp=Z,3.0nm,1.0s
WTTA **Wattenberg** 164.13 336 *e*PKP **PKPab** 02 43 39.5 -1.4
comp=Z,8.0nm,1.3s
MOTA **Moosalm** 164.24 337 *e*pPKP **PKPab** 02 43 42.0 +0.7
comp=Z,8.6nm,1.1s
ABTA **Abfaltersbach** 164.25 333 *e*PKP **PKPab** 02 43 39.8 -1.5
comp=Z,1.2nm,1.1s
SQTA **Sankt Quirin** 164.31 336 *e*PKP **PKPab** 02 43 40.2 -1.4
comp=Z,6.4nm,1.1s
DAVOX **Davos/Dischmat** 165.13 339 PKPab **PKPab** 02 43 45.6 +0.3
comp=Z,1.1nm,0.5s,baz=13,slow=11,SNR=2.2

*CATAC **04** 02:32:53.8±0.7, 12°N±4°×8°9W±°, h9km±5km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=9.0km s-min=4.2km az=37.9, confirmed*
*GCG **04** 02:33:15.4±0.4, 13°67N×89°49W, h14km, MD4.0, Presumed earthquake*
ISC 04 02:32:54.4±3.5, **12.4N**±0.1°×**89.08W**±0.08, **h9**km±18km, **n17**, σ°**80**/27, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
COEG	**Centro de Oper**	**1.25**	**9**	P		**Pn**	**02 33 17.5**	**-0.6**
LOMA	**Loma Larga**	**1.27**	**356**	P		**Pn**	**02 33 18.2**	**-0.2**
LOMA				S		**Sb**	**02 33 35.0**	**0.0**
PACA	**Pacayal**	**1.31**	**34**	P		**Pn**	**02 33 18.2**	**-0.8**
PACA				S		**Sn**	**02 33 37.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.32**	**344**	P		**Pn**	**02 33 18.7**	**-0.5**
JAYA				S		**Sb**	**02 33 36.3**	**-0.4**
JAYA	**Jayaque - finc**	**1.32**	**344**	*i* P		**Pn**	**02 33 18.2**	**-1.1**
PAVA	**Las Pavas**	**1.34**	**6**	P		**Pn**	**02 33 17.8**	**-1.6**
UEES	**Universidad Ev**	**1.34**	**353**	P		**Pn**	**02 33 18.1**	**-1.3**
PMON	**Piamonte**	**1.35**	**350**	P		**Pn**	**02 33 18.0**	**-1.6**
PMON				S		**Sg**	**02 33 38.4**	**+0.6**
LCND	**La Caada**	**1.48**	**51**	P		**Pn**	**02 33 20.2**	**-1.1**
LCND				S		**Sn**	**02 33 41.1**	**+0.2**
CNCH	**Conchagua**	**1.51**	**53**	P		**Pn**	**02 33 21.6**	**-0.1**
CNCH				S		**Sn**	**02 33 41.8**	**+0.1**
P5NO	**Presa 5 de nov**	**1.63**	**11**	P		**Pn**	**02 33 23.5**	**+0.1**
P5NO				S		**Sn**	**02 33 44.9**	**+0.5**
NUBE	**Las Nubes**	**1.66**	**336**	P		**Pn**	**02 33 23.8**	**-0.1**
NUBE				S		**Sn**	**02 33 46.0**	**+0.4**
NUBE	**Las Nubes**	**1.66**	**336**	*i* P		**Pn**	**02 33 23.5**	**-0.4**
MTO3	**Montecristo**	**2.03**	**352**	P		**Pn**	**02 33 29.1**	**0.0**
MTO3				S		**Sn**	**02 33 55.8**	**+1.1**
MTO3	**Montecristo**	**2.03**	**352**	*e*P		**Pn**	**02 33 29.1**	**0.0**
ROCN	**Rota Cerro Neg**	**2.29**	**86**	P		**Pn**	**02 33 31.5**	**-0.9**
ROCN				S		**Sn**	**02 34 01.3**	**+0.6**
MACN	**El Madrono**	**2.35**	**88**	P		**Pn**	**02 33 33.6**	**+0.4**

*ATH **04** 02:36:11.3, 36°20N×29°03E, h20km±3km, ML3.1/10, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*ISK **04** 02:36:11.9, 36°23N×28°93E, h14km, ML3.4/16*
*AFAD **04** 02:36:11.7, 36°21N×28°88E, h30km±4km, MW3.5*
*NIC **04** 02:36:12.2, 36°13N×29°04E, h21km±2km, Ml2.8/12*
*IDC **04** 02:36:13.0-1.3, 35°39N×28°88E, h0km, mb3.8/2, mbtmp3.6/8, ML3.4/5, Error ellipse: s-maj=22.7km s-min=21.0km az=30.0*
*GII **04** 02:36:14.4±0.0, 35°869N±0°004×29°002E±0°001, h0km, Mws3.3, confirmed*
*THE **04** 02:36:14.2, 36°N±4°×2°9E±°, h48km±13km, M3.2/9, MLh3.2/9*
ISC 04 02:36:11.0±1.0, **36°18N**±0°03×**29°01E**±0°02, **h18**km±2km, **n114**, σ1°**21**/165, **3C, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IZZE	**Mula-Seydike**	**0.31**	**34**	P		**Pb**	**02 36 19.3**	**+1.2**
IZZE				S		**Sb**	**02 36 24.3**	**+1.5**
AKAS	**Kas**	**0.48**	**83**	Pg		**Pn**	**02 36 23.3**	**+0.1**
AKAS	**Kas**	**0.48**	**83**	P		**Pn**	**02 36 23.6**	**+0.4**
AKAS				S		**Sn**	**02 36 34.0**	**+2.8**
SABU	**Mula-Dalaman**	**0.64**	**357**	P		**Pg**	**02 36 23.7**	**-0.1**
SABU				S		**Sn**	**02 36 33.7**	**-1.3**
RDI1	**Rhodes Town Ha**	**0.69**	**293**	P		**Pg**	**02 36 24.8**	**+0.1**
RDI1				S		**Sg**	**02 36 34.3**	**+0.5**
DALY	**Dalyan (Mula)**	**0.70**	**336**	Pg		**Pg**	**02 36 24.2**	**-0.6**
DALY				Sg		**Sb**	**02 36 34.2**	**+0.3**
DALY	**Dalyan (Mula)**	**0.70**	**336**	P		**Pg**	**02 36 24.4**	**-0.3**
DALY				S		**Sg**	**02 36 33.5**	**-0.6**
ARG	**Arkhangelos**	**0.72**	**273**	Pg		**Pg**	**02 36 25.1**	**+0.1**
ARG	**Arkhangelos**	**0.72**	**273**	P		**Pg**	**02 36 25.4**	**+0.3**
ARG				S		**Sb**	**02 36 36.2**	**+1.8**
ARG	**Arkhangelos**	**0.72**	**273**	P		**Pg**	**02 36 25.2**	**+0.1**
ARG				S		**Sn**	**02 36 37.3**	**+0.5**
ARG				AML		AML	02 36 38.7	
	5.2nm,0.6s							
ARG				AML		AML	02 36 41.2	
	2.7nm,0.4s							
ARG	**Arkhangelos**	**0.72**	**273**	P		**Pg**	**02 36 25.3**	**+0.3**
ARG				S		**Sg**	**02 36 35.6**	**+0.9**
DEMR	**Demre-Antalya**	**0.73**	**85**	Pg		**Pn**	**02 36 27.7**	**+1.3**
CAME	**Cameli-Denizli**	**0.80**	**17**	Pg		**Pn**	**02 36 27.2**	**-0.3**
CAME				Sg		**Sn**	**02 36 38.7**	**-0.3**
KNIK	**Mula-Seydike**	**0.81**	**34**	P		**Pn**	**02 36 27.5**	**0.0**
KNIK				S		**Sn**	**02 36 41.4**	**+2.2**
TURN	**Turunc**	**0.86**	**314**	Pg		**Pb**	**02 36 27.3**	**-0.1**
TURN	**Turunc**	**0.86**	**314**	P		**Pb**	**02 36 27.4**	**+0.1**
TURN				S		**Sb**	**02 36 38.8**	**+0.3**
ELL	**Elmali**	**0.92**	**52**	Pg		**Pn**	**02 36 30.1**	**+0.9**
ELL	**Elmali**	**0.92**	**52**	P		**Pn**	**02 36 30.0**	**+0.8**
ELL				S		**Sn**	**02 36 43.3**	**+1.3**
ELL				AML		AML	02 36 49.1	
	3.1nm,1.0s							
ELL				AML		AML	02 36 49.9	
	3.1nm,0.6s							
ELL	**Elmali**	**0.92**	**52**	P		**Pn**	**02 36 29.2**	**0.0**
DNZT	**Denizli-Tavas-**	**1.10**	**1**	P		**Pb**	**02 36 31.6**	**+0.1**
DNZT				S		**Sn**	**02 36 47.2**	**+0.9**
YER	**Yerkesik**	**1.12**	**329**	Pg		**Pb**	**02 36 31.9**	**0.0**
YER	**Yerkesik**	**1.12**	**329**	P		**Pb**	**02 36 31.9**	**0.0**
YER				S		**Sb**	**02 36 46.5**	**+0.3**
MULA	**Mugla, Merkez-**	**1.21**	**333**	P		**Pn**	**02 36 33.5**	**+0.4**
MULA				S		**Sn**	**02 36 49.4**	**+0.3**
DAT	**Datca**	**1.28**	**296**	Pn		**Pb**	**02 36 35.4**	**+0.8**
DAT	**Datca**	**1.28**	**296**	P		**Pn**	**02 36 34.9**	**+0.8**
DAT				S		**Sb**	**02 36 49.8**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.29**	**357**	P		**Pg**	**02 36 35.4**	**-0.5**
TAVA				S		**Sg**	**02 36 52.3**	**-0.5**
APMY	**Acipayam-Deniz**	**1.31**	**10**	Pn		**Pg**	**02 36 35.8**	**-0.6**
YAZI	**Mula-Dat§a-**	**1.35**	**292**	P		**Pn**	**02 36 35.3**	**+0.4**
YAZI				S		**Sn**	**02 36 52.4**	**0.0**
KORT	**Korkueli**	**1.35**	**52**	Pn		**Pg**	**02 36 36.9**	**-0.3**
BDRM	**Kayabasi**	**1.54**	**306**	P		**Pn**	**02 36 38.5**	**+1.0**
BDRM				S		**Sg**	**02 37 00.5**	**-0.2**
BODT	**Bodrum**	**1.63**	**303**	Pn		**Pn**	**02 36 39.1**	**+0.3**
BODT	**Bodrum**	**1.63**	**303**	P		**Pn**	**02 36 38.7**	**0.0**
BODT				S		**Sn**	**02 36 57.8**	**-1.5**
ESEN	**Aydn-Nazilli**	**1.70**	**342**	P		**Pb**	**02 36 41.7**	**0.0**
ESEN				S		**Sb**	**02 37 03.6**	**+0.8**
AYDN	**Tasoluk**	**1.73**	**329**	P		**Pb**	**02 36 42.2**	**-0.1**
AYDN				S		**Sn**	**02 37 03.2**	**+1.2**
KLNA	**Kalymnos**	**1.81**	**296**	P		**Pn**	**02 36 41.3**	**0.0**
NAZL	**Nazilli-Aydin**	**1.87**	**342**	Pn		**Pn**	**02 36 43.5**	**+1.3**
DDIM	**Aydin, Didim**	**1.91**	**312**	P		**Pn**	**02 36 44.4**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**1.98**	**333**	Pn		**Pn**	**02 36 44.8**	**+1.1**
GCAM	**G?zelcaml?**	**2.08**	**317**	Pn		**Pn**	**02 36 46.4**	**+1.4**
GCAM	**G?zelcaml?**	**2.08**	**317**	P		**Pn**	**02 36 45.8**	**+0.8**
GCAM				S		**Sn**	**02 37 09.6**	**-0.9**
ODEM	**Odemis-Izmir**	**2.22**	**341**	Pn		**Pn**	**02 36 48.2**	**+1.2**
ZKR	**Zakros**	**2.51**	**246**	Pn		**Pn**	**02 36 53.0**	**+2.1**
ZKR	**Zakros**	**2.51**	**246**	P		**Pn**	**02 36 52.7**	**+1.8**
ZKR	**Zakros**	**2.51**	**246**	P		**Pn**	**02 36 52.3**	**+1.4**
ZKR				S		**Sn**	**02 37 23.2**	**+2.2**
ZKR				AML		AML	02 37 31.6	
	0.1nm,0.4s							
ZKR				AML		AML	02 37 38.6	
	0.1nm,0.5s							
ZKR	**Zakros**	**2.51**	**246**	P		**Pn**	**02 36 52.2**	**+1.3**
DGB	**zmir**	**2.53**	**318**	P		**Pn**	**02 36 51.3**	**+0.2**
DGB				S		**Sn**	**02 37 20.0**	**-1.4**
BLCB	**Balcova**	**2.70**	**325**	P		**Pn**	**02 36 53.2**	**-0.4**
THERA	**Ancient Thera,**	**2.86**	**275**	P		**Pn**	**02 36 56.2**	**+0.4**
THERA				S		**Sn**	**02 37 28.0**	**-1.7**
THERA	**Ancient Thera,**	**2.86**	**275**	P		**Pn**	**02 36 56.1**	**+0.3**
THR8	**Santorini-Mono**	**2.86**	**276**	P		**Pn**	**02 36 55.7**	**0.0**
THR8	**Santorini-Mono**	**2.86**	**276**	P		**Pn**	**02 36 56.1**	**+0.3**
THR2	**Thira island,**	**2.90**	**276**	P		**Pn**	**02 36 56.9**	**+0.6**
NPS	**Neapolis**	**2.91**	**253**	P		**Pn**	**

	0.1nm,0.5s						
TROD				AML	AML	02 37 50.8	
	0.1nm,0.4s						
IDI	**Anoyia**	**3.47**	**256**	Pn	**Pn**	**02 37 04.4**	**+0.2**
	6.2nm,0.4s,baz=59,slow=17,SNR=29						
IDI	**Anoyia**	**3.47**	**256**	P	**Pn**	**02 37 04.6**	**+0.5**
IDI	**Anoyia**	**3.47**	**256**	P	**Pn**	**02 37 04.6**	**+0.5**
XYLS	**Xyliatos**	**3.49**	**108**	P	**Pn**	**02 37 05.4**	**+1.0**
XYLS				S	**Sn**	**02 37 46.5**	**+1.2**
XYLS				AML	AML	02 37 49.0	
	0.1nm,0.4s						
XYLS				AML	AML	02 37 54.1	
	0.1nm,0.3s						
XYLS	**Xyliatos**	**3.49**	**108**	P	**Pn**	**02 37 05.0**	**+0.5**
SIVA	**Sivas**	**3.61**	**253**	P	**Pn**	**02 37 05.8**	**-0.3**
CSS	**Mathiatis**	**3.73**	**108**	P	**Pn**	**02 37 08.6**	**+1.0**
CSS	**Mathiatis**	**3.73**	**108**	P	**Pn**	**02 37 07.0**	**-0.6**
ASGA	**Asgata**	**3.73**	**111**	P	**Pn**	**02 37 08.3**	**+0.6**
ASGA				S	**Sn**	**02 37 51.7**	**+0.6**
ASGA				AML	AML	02 37 53.7	
	0.1nm,0.6s						
ASGA				AML	AML	02 37 57.1	
ASGA	**Asgata**	**3.73**	**111**	P	**Pn**	**02 37 08.0**	**+0.4**
PRK	**Paraskevi**	**3.75**	**325**	P	**Pn**	**02 37 09.5**	**+1.5**
PRK	**Paraskevi**	**3.75**	**325**	P	**Pn**	**02 37 08.2**	**+0.2**
MVOU	**Mavrovouni**	**3.94**	**106**	P	**Pn**	**02 37 12.1**	**+1.6**
MVOU				S	**Sn**	**02 37 58.2**	**+1.9**
MVOU				AML	AML	02 37 59.4	
MVOU				AML	AML	02 38 03.5	
MVOU	**Mavrovouni**	**3.94**	**106**	P	**Pn**	**02 37 10.3**	**-0.3**
VAM	**Vamos**	**3.98**	**260**	P	**Pn**	**02 37 12.4**	**+1.2**
VAM	**Vamos**	**3.98**	**260**	P	**Pn**	**02 37 12.3**	**+1.2**
KARY	**Karystos**	**4.10**	**298**	P	**Pn**	**02 37 11.4**	**-1.3**
KARY				S	**Sn**	**02 37 59.5**	**-0.7**
OSC2	**CSNet OBS 4**	**4.10**	**138**	P	**Pn**	**02 37 13.5**	**+0.7**
OSC2				S	**Sn**	**02 38 01.2**	**+1.0**
OSC2				AML	AML	02 38 03.3	
	0.1nm,0.8s						
OSC2				AML	AML	02 38 06.5	
	0.1nm,0.3s						
IMMV	**Iera Moni Meta**	**4.15**	**262**	P	**Pn**	**02 37 13.9**	**+0.5**
GVD	**Gavdhos**	**4.23**	**253**	P	**Pn**	**02 37 15.7**	**+1.1**
GVD	**Gavdhos**	**4.23**	**253**	P	**Pn**	**02 37 15.7**	**+1.1**
BRTR	**Keskin Array B**	**5.09**	**45**	Pn	**Pb**	**02 37 40.5**	**+0.9**
	0.2nm,0.3s,baz=223,slow=13,SNR=2.9						
	1.1nm,0.6s						
MMA0B	**Mount Meron ar**	**6.14**	**119**	P	**Pn**	**02 37 41.3**	**+0.4**
MMA0B				S	**Sn**	**02 38 49.7**	**-1.0**
MMAI	**Mount Meron Ar**	**6.14**	**119**	Pn	**Pn**	**02 37 41.2**	**+0.2**
	2.4nm,0.3s,baz=295,slow=14,SNR=14						
MMAI				Sn	**Sn**	**02 38 47.4**	**-3.4**
	4.3nm,0.3s,baz=304,slow=29,SNR=10						
	1.8nm,0.4s						
GEM	**Giv'at Ha'Em**	**6.23**	**116**	P	**Pn**	**02 37 42.7**	**+0.6**
GEM				S	**Sn**	**02 38 51.4**	**-1.4**
MMLI	**Mount Malkishu**	**6.49**	**123**	P	**Pn**	**02 37 45.8**	**+0.2**
MMLI				S	**Sn**	**02 38 57.9**	**-1.3**
AMAZ	**Amatzia**	**6.75**	**132**	P	**Pn**	**02 37 48.8**	**-0.4**
AMAZ				S	**Sn**	**02 39 03.9**	**-1.8**
KZIT	**Kziot**	**6.92**	**138**	P	**Pn**	**02 37 51.6**	**+0.1**
KZIT				S	**Sn**	**02 39 05.7**	**-4.1**
MSBI	**Mazada**	**7.18**	**131**	P	**Pn**	**02 37 54.8**	**-0.1**
MSBI				S	**Sn**	**02 39 13.4**	**-2.6**
GHAJ	**Ghor Haditha**	**7.31**	**130**	P	**Pn**	**02 37 57.4**	**+0.5**
GHAJ				S	**Sn**	**02 39 17.7**	**-1.7**
RMNI	**Mount Ramon**	**7.36**	**138**	P	**Pn**	**02 37 57.4**	**-0.2**
RMNI				S	**Sn**	**02 39 16.7**	**-4.0**
SHAB	**Shabla**	**7.36**	**358**	⇑P	**Pn**	**02 37 59.9**	**+2.4**
ASF	**Jabal al Asfar**	**7.66**	**119**	Pn	**Pn**	**02 38 01.7**	**-0.1**
	0.3nm,0.3s,baz=300,slow=19,SNR=4.5						
ASF				Sn	**Sn**	**02 39 25.6**	**-2.6**
	0.2nm,0.3s,baz=288,slow=20,SNR=1.1						
	1.0nm,0.5s						
HRFI	**Mount Harif**	**7.94**	**139**	P	**Pn**	**02 38 05.3**	**-0.3**
HRFI				S	**Sn**	**02 39 31.2**	**-3.8**
PLVB	**Pleven**	**7.95**	**336**	⇑P	**Pn**	**02 38 08.0**	**+2.3**
CICN	**Ciocanesti**	**8.15**	**350**	⇑P	**Pn**	**02 38 11.3**	**+2.9**
EIL	**Elat**	**8.19**	**141**	Pn	**Pn**	**02 38 07.1**	**-1.8**
	2.1nm,0.3s,baz=337,slow=7.7,SNR=28						
	4.8nm,0.3s						
EIL	**Elat**	**8.19**	**141**	P	**Pn**	**02 38 08.6**	**-0.3**
EIL				S	**Sn**	**02 39 37.2**	**-3.8**
MLR	**Muntele Rosu**	**9.59**	**347**	Pn	Pn	02 38 43.3	+15
	0.1nm,0.3s,baz=90,slow=20,SNR=4.9						
	1.6nm,0.8s						
FINES	**FINESS Array B**	**25.35**	**357**	P	P	02 41 50.0	+13
	2.2nm,0.9s,baz=178,slow=9.6,SNR=3.8						
	2.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**33.58**	**234**	P	**P**	**02 42 50.2**	**0.0**
	0.3nm,0.4s,baz=32,slow=8.9,SNR=8.8						
	0.3nm,0.4s						

*IDC **04** 02:37:10.1±1.2,34˚.31N×24˚.44E,h0km,mb3.8/5, mbtmp3.7/11,ML3.4/5,MS3.8/1,Error ellipse: s-maj=22.4km s-min=17.7km az=130.0*
*THE **04** 02:37:16.6,34˚.48N±6˚×2˚.4E±˚,h23km±8km,M3.3/9, MLh3.3/9*
*ATH **04** 02:37:16.3±1.0,34˚.48N×24˚.39E,h24km±4km,ML3.3/12, Latitude uncertainty: 7 km; Longitude uncertainty: 2 km*

ISC 04 02:37:13.7±1.5,34°29N±0°07×24°47E±0°04,h30km±11km, n52,σ1°04/63,mb3.9/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.63**	**330**	P	**Pb**	**02 37 25.9**	**-0.4**
GVD				S	**Sb**	**02 37 34.4**	**-0.5**
GVD	**Gavdhos**	**0.63**	**330**	P	**Pb**	**02 37 25.9**	**-0.4**
GVD				S	**Sb**	**02 37 34.2**	**-0.7**
SIVA	**Sivas**	**0.78**	**21**	P	**Pb**	**02 37 28.9**	**+0.1**
SIVA				S	**Sb**	**02 37 38.9**	**-0.1**
IDI	**Anoyia**	**1.05**	**19**	Pn	**Pb**	**02 37 33.5**	**0.0**
	18nm,0.3s,baz=198,slow=16,SNR=15						
IDI				Sn	**Sb**	**02 37 48.1**	**+1.1**
	44nm,0.3s,baz=288,slow=19,SNR=12						
IDI	**Anoyia**	**1.05**	**19**	P	**Pb**	**02 37 33.6**	**+0.2**
IDI	**Anoyia**	**1.05**	**19**	P	**Pb**	**02 37 33.9**	**+0.5**
IDI				S	**Sb**	**02 37 46.6**	**-0.4**
VAM	**Vamos**	**1.14**	**349**	P	**Pb**	**02 37 34.3**	**-0.4**
VAM				S	**Sn**	**02 37 47.7**	**-0.5**
VAM	**Vamos**	**1.14**	**349**	P	**Pb**	**02 37 34.6**	**-0.2**
KNDR	**Palaiochora Ch**	**1.17**	**324**	P	**Pb**	**02 37 35.4**	**0.0**
KNDR				S	**Sb**	**02 37 50.0**	**-0.2**
KNDR	**Palaiochora Ch**	**1.17**	**324**	P	**Pb**	**02 37 35.1**	**-0.3**
IMMV	**Iera Moni Meta**	**1.23**	**341**	P	**Pn**	**02 37 35.3**	**+0.3**
IMMV	**Iera Moni Meta**	**1.23**	**341**	P	**Pb**	**02 37 35.8**	**-0.7**
CHNB	**Souda**	**1.24**	**345**	P	**Pb**	**02 37 36.1**	**-0.4**
CHAN	**Chania**	**1.27**	**344**	P	**Pb**	**02 37 36.5**	**-0.6**
CH01	**Chania**	**1.28**	**343**	P	**Pb**	**02 37 36.7**	**-0.5**
NPS	**Neapolis**	**1.35**	**44**	P	**Pb**	**02 37 39.0**	**+0.5**
NPS				S	**Sb**	**02 37 55.2**	**-0.2**
ZKR	**Zakros**	**1.66**	**60**	P	**Pb**	**02 37 43.7**	**+0.1**
ANKY	**Antikythira Is**	**1.84**	**329**	P	**Pn**	**02 37 44.5**	**+1.3**
ANKY	**Antikythira Is**	**1.84**	**329**	P	**Pn**	**02 37 44.3**	**+1.0**
THR6	**Thira Island,**	**2.20**	**20**	P	**Pn**	**02 37 49.1**	**+1.0**
THERA	**Ancient Thera,**	**2.23**	**21**	P	**Pn**	**02 37 49.1**	**+0.5**
SNT5	**Nea Kammeni, S**	**2.24**	**20**	P	**Pn**	**02 37 50.4**	**+1.7**
THR5	**Thira Island,**	**2.24**	**18**	P	**Pn**	**02 37 49.5**	**+0.8**
THR3	**Thira Island,**	**2.25**	**20**	P	**Pn**	**02 37 49.7**	**+0.8**
SAP3	**Santorini-Thir**	**2.26**	**18**	P	**Pn**	**02 37 49.6**	**+0.6**
THR8	**Santorini-Mono**	**2.27**	**21**	P	**Pn**	**02 37 49.4**	**+0.3**
KTHA	**Kythira Island**	**2.27**	**330**	P	**Pn**	**02 37 50.5**	**+1.2**
KTHA	**Kythira Island**	**2.27**	**330**	P	**Pn**	**02 37 50.3**	**+1.0**
THR2	**Thira island,**	**2.29**	**20**	P	**Pn**	**02 37 50.2**	**+0.7**
MHLO	**Agia Marina, M**	**2.40**	**359**	P	**Pn**	**02 37 50.8**	**0.0**
MHLO				S	**Sn**	**02 38 17.8**	**-1.5**
MHLO	**Agia Marina, M**	**2.40**	**359**	P	**Pn**	**02 37 50.9**	**0.0**
PYL	**PYLOS**	**3.42**	**320**	P	**Pn**	**02 38 05.2**	**+0.2**
ITM	**Ithomi**	**3.55**	**325**	P	**Pn**	**02 38 07.4**	**+0.6**
ARG	**Arkhangelos**	**3.56**	**56**	P	**Pn**	**02 38 09.4**	**+2.5**
ARG				S	**Sn**	**02 38 49.1**	**+1.2**
ARG	**Arkhangelos**	**3.56**	**56**	P	**Pn**	**02 38 09.2**	**+2.3**
VLY	**Voula,Athens**	**3.60**	**351**	P	**Pn**	**02 38 07.8**	**+0.4**
DION	**Dionisos Attik**	**3.80**	**354**	P	**Pn**	**02 38 10.1**	**-0.2**
LTK	**Loutraki**	**3.92**	**342**	P	**Pn**	**02 38 11.8**	**0.0**
VIL2	**Platees**	**4.03**	**346**	P	**Pn**	**02 38 12.2**	**-1.3**
MMAI	**Mount Meron Ar**	**9.21**	**95**	Pn	**Pn**	**02 39 24.3**	**-0.2**
	1.4nm,0.3s,baz=283,slow=15,SNR=2.4						
MMAI				Sn	**Sn**	**02 41 05.0**	**-2.1**
	2.1nm,0.3s,baz=275,slow=23,SNR=5.1						
	0.6nm,0.3s						
EIL	**Elat**	**10.02**	**114**	Pn	**Pn**	**02 39 35.4**	**-0.3**
	2.3nm,0.3s,baz=297,slow=14,SNR=11						
EIL				Sn	**Sn**	**02 41 23.9**	**-3.2**
	0.9nm,0.3s,baz=360,slow=21,SNR=3.5						
	5.0nm,0.4s						
ASF	**Jabal al Asfar**	**10.62**	**98**	Sn	**Sn**	**02 41 38.5**	**-3.5**
	0.3nm,0.3s,baz=296,slow=23,SNR=1.9						
MLR	**Muntele Rosu**	**11.24**	**5**	Pn	**Pn**	**02 39 52.5**	**+0.1**
	0.4nm,0.4s,baz=195,slow=19						
GERES	**GERESS Array B**	**16.60**	**334**	Pn	**Pn**	**02 41 04.7**	**+0.5**
	baz=142,slow=15,SNR=2.0						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**16.77**	**11**	Pn	**Pn**	**02 41 06.3**	**+0.2**
	1.2nm,0.3s,baz=199,slow=11,SNR=4.5						
	0.4nm,0.3s						
KBZ	**Khabaz**	**17.11**	**51**	P	**P**	**02 41 11.7**	**-0.3**
	0.1nm,0.3s,baz=258,slow=8.4,SNR=3.6						
	0.9nm,0.6s						
ESDC	**Sonseca Array**	**23.29**	**292**	P	**P**	**02 42 18.6**	**-0.4**
	0.7nm,0.9s,baz=92,slow=12,SNR=4.1						
	0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.49**	**230**	P	**P**	**02 43 16.9**	**+1.5**
	0.7nm,0.5s,baz=36,slow=8.8,SNR=5.3						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**42.11**	**50**	P	**P**	**02 45 03.3**	**+0.3**
	1.6nm,0.2s,baz=272,slow=8.8,SNR=1.7						
	1.6nm,0.2s						
MKAR	**Makanchi Array**	**44.73**	**56**	P	**P**	**02 45 24.9**	**+0.7**
	1.2nm,0.5s,baz=276,slow=6.7,SNR=8.1						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**46.02**	**46**	P	**P**	**02 45 34.2**	**0.0**
	0.4nm,0.4s,baz=257,slow=9.1,SNR=2.6						
	0.4nm,0.4s						
BRDH	**Bariadhala**	**59.23**	**82**	LR	LR	03 16 10.4	
	comp=Z,86nm,21.1s,baz=140,slow=40						

*RSNC **04** 02:39:55.2±0.7,1˚.3×3˚.1W±˚,h48km±29km,M3.7,mB4.8, mb4.4,ML3.2,Mw(mB)4.0*
*IGQ **04** 02:39:57.0±0.8,1˚.4×3˚.1W±˚,h5km±2km,M3.9/16, Mjma4.0/16,MLv3.9/15,Ms(BB)3.9/12*

ISC 04 02:39:56.0±1.5,0°61S±0°04×81°00W±0°06,h4km±11km, n72,σ1°80/83,22C-5D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMNT	**Manta-Manabi**	**0.42**	**141**	P	**Pb**	**02 40 06.3**	**+0.3**
AMNT				S	**Sb**	**02 40 13.5**	**+0.7**
ABH3	**Manabi, Bahia**	**0.58**	**89**	P	**Pn**	**02 40 10.4**	**-0.6**
ABH2	**Ecuador-Univer**	**0.60**	**95**	⇑P	**Pn**	**02 40 11.3**	**-0.2**
ABH2				S	**Sn**	**02 40 24.4**	**+2.8**
ISPT	**Isla de la Pla**	**0.65**	**187**	⇑P	**Pg**	**02 40 09.1**	**+0.5**
ISPT				S	**Sg**	**02 40 18.2**	**+1.2**
JIPI	**JIPIJAPA**	**0.87**	**149**	⇑P	**Pb**	**02 40 13.8**	**+0.1**
PPLP	**Puerto Lpez**	**0.95**	**166**	P	**Pg**	**02 40 14.4**	**+0.1**
PPLP				⇑P	**Pb**	**02 40 14.2**	**-0.9**
PPLP				S	**Sg**	**02 40 26.7**	**0.0**
PPLP				S	**Sb**	**02 40 27.6**	**-0.6**
PPLP	**Puerto Lpez**	**0.95**	**166**	P	**Pb**	**02 40 14.3**	**-0.9**
PPLP				S	**Sg**	**02 40 27.1**	**+0.4**
PECV	**Mancha de Ca P**	**0.96**	**100**	⇓P	**Pb**	**02 40 10.9**	**-4.4**
SALI	**Salinas**	**1.56**	**180**	P	**Pb**	**02 40 24.5**	**-1.1**
SALI				S	**Sb**	**02 40 45.5**	**-0.3**
AV18	**Acelerografo,**	**1.78**	**59**	P	**Pg**	**02 40 29.5**	**-0.6**
AATC	**Ecuador-Atacam**	**1.85**	**38**	P	**Pb**	**02 40 30.0**	**-0.5**
ABAB	**Ecuador-Univer**	**1.90**	**129**	P	**Pb**	**02 40 30.6**	**-0.6**
BV15	**Puerto Quito-O**	**1.93**	**67**	P	**Pg**	**02 40 36.0**	**+2.9**
ILLI	**Illinizas Sur**	**2.27**	**93**	⇑P	**Pb**	**02 40 35.9**	**-2.0**
JSCH	**Cashca Tororas**	**2.30**	**119**	⇑P	**Pn**	**02 40 36.0**	**+0.9**
CHSH	**Refugio Sur-Vo**	**2.30**	**112**	⇑P	**Pb**	**02 40 37.3**	**-1.3**
PAC1	**Pacto, Paraso**	**2.37**	**68**	P	**Pn**	**02 40 36.2**	**+0.3**
PAC1	**Pacto, Paraso**	**2.37**	**68**	P	**Pn**	**02 40 35.5**	**-0.4**
PAC1				S	**Sg**	**02 41 12.6**	**+0.3**
PORT	**Chimborazo Vol**	**2.38**	**111**	⇑P	**Pb**	**02 40 38.0**	**-1.9**
TAMH	**Tambohuasha Ch**	**2.40**	**113**	P	**Pb**	**02 40 38.9**	**-1.3**
GGPT	**Toaza - Volcan**	**2.41**	**81**	P	**Pn**	**02 40 37.5**	**+0.9**
JUA2	**San Juan 2**	**2.43**	**81**	⇓P	**Pb**	**02 40 38.4**	**-2.2**
TERV	**Terraza Guagua**	**2.43**	**80**	⇑P	**Pn**	**02 40 37.9**	**+0.8**
SRAM	**San Ramn-Vol**	**2.44**	**93**	⇑P	**Pb**	**02 40 38.9**	**-1.8**
GGPC	**Guagua Pichinc**	**2.44**	**80**	P	**Pb**	**02 40 39.8**	**-1.1**
YANA	**Yana**	**2.48**	**79**	P	**Pb**	**02 40 38.8**	**-2.6**
ISPG	**Isla Puna-Puer**	**2.48**	**161**	P	**Pb**	**02 40 39.2**	**-2.1**
SUCR	**Mariscal Sucre**	**2.50**	**91**	⇑P	**Pb**	**02 40 40.5**	**-1.4**
SLOR	**San Lorenzo -**	**2.50**	**93**	⇑P	**Pb**	**02 40 40.5**	**-1.4**
IGUA	**Igualata**	**2.52**	**110**	P	**Pb**	**02 40 40.3**	**-1.9**
BNAS	**Cotopaxi Volca**	**2.52**	**91**	⇑P	**Pb**	**02 40 40.1**	**-2.0**
BRRN	**Barrancas-Volc**	**2.53**	**94**	⇑P	**Pb**	**02 40 40.6**	**-1.8**
NAS2	**Nasa**	**2.53**	**91**	P	**Pb**	**02 40 41.4**	**-1.0**
BMOR	**Cotopaxi Volca**	**2.54**	**93**	P	**Pb**	**02 40 41.1**	**-1.5**
BREF	**Cotopaxi Volca**	**2.56**	**91**	⇑P	**Pb**	**02 40 41.8**	**-1.1**
TOMA	**Boca Toma-Volc**	**2.57**	**88**	P	**Pb**	**02 40 41.2**	**-1.7**
PITA	**Cotopaxi Volc**	**2.57**	**89**	P	**Pb**	**02 40 41.2**	**-1.7**
PULU	**Pululahua**	**2.57**	**76**	P	**Pb**	**02 40 40.5**	**-2.6**
BVC2	**Cotopaxi Volca**	**2.59**	**91**	⇑P	**Pb**	**02 40 42.0**	**-1.4**
VC1	**Cotopaxi 1**	**2.60**	**91**	⇓P	**Pb**	**02 40 42.1**	**-1.4**
BTAM	**Cotopaxi Volca**	**2.60**	**91**	⇑P	**Pb**	**02 40 42.1**	**-1.5**
VCES	**Cotopaxi**	**2.61**	**94**	⇑P	**Pb**	**02 40 41.8**	**-1.9**
TAMB	**Tambo**	**2.63**	**92**	⇓P	**Pb**	**02 40 42.9**	**-1.2**
BBIL	**Ulba Tungurahu**	**2.65**	**108**	P	**Pb**	**02 40 42.5**	**-1.7**
PIS1	**Pisayambo**	**2.65**	**100**	P	**Pb**	**02 40 44.3**	**-0.1**
JUI6	**Juive**	**2.66**	**108**	P	**Pb**	**02 40 42.8**	**-1.6**
ARRY	**Arrayan**	**2.69**	**109**	⇑P	**Pb**	**02 40 43.1**	**-2.0**
BPAT	**Tungurahua Vol**	**2.71**	**109**	P	**Pb**	**02 40 43.9**	**-1.5**
ANTG	**Antisana-Guama**	**2.75**	**88**	⇑P	**Pb**	**02 40 43.9**	**-2.2**
CUSE	**Cuicocha Este**	**2.75**	**71**	P	**Pb**	**02 40 44.7**	**-1.4**
CUSE	**Cuicocha Este**	**2.75**	**71**	P	**Pb**	**02 40 43.3**	**-2.8**
CUSE				S	**Sg**	**02 41 24.4**	**-0.2**
PIAT	**Ana Tenorio**	**2.76**	**98**	⇓P	**Pb**	**02 40 45.2**	**-1.0**
PIAT	**Ana Tenorio**	**2.76**	**98**	P	**Pb**	**02 40 44.7**	**-1.6**
PIAT				S	**Sb**	**02 41 21.7**	**+1.0**
CUIC	**Cuicocha-Domo**	**2.79**	**71**	P	**Pb**	**02 40 44.4**	**-2.3**
ANTS	**Antisana-Sarah**	**2.83**	**88**	⇑P	**Pb**	**02 40 45.3**	**-2.2**
ANTI	**Antisana**	**2.84**	**87**	⇑P	**Pb**	**02 40 45.5**	**-2.2**
URCU	**Urcuqui**	**2.93**	**69**	P	**Pb**	**02 40 46.4**	**-2.8**
IMBA	**Imbabura, San**	**2.94**	**73**	P	**Pb**	**02 40 47.1**	**-2.1**
SANGA	**Volcan Sangay**	**2.99**	**119**	P	**Pb**	**02 40 47.6**	**-2.6**
CAYR	**Refugio Cayamb**	**3.06**	**78**	P	**Pb**	**02 40 49.1**	**-2.3**
CHMA	**Chilma**	**3.28**	**64**	P	**Pb**	**02 40 51.8**	**-3.3**
ECEN	**Cerro Negro**	**3.35**	**65**	P	**Pb**	**02 40 53.2**	**-3.1**
CHL1	**Volcn Chiles**	**3.36**	**65**	P	**Pn**	**02 40 51.7**	**+1.9**
CMBC	**Cumbal**	**3.53**	**64**	P	**Pb**	**02 40 59.1**	**-0.2**
CMBC	**Cumbal**	**3.53**	**64**	P	**Pb**	**02 40 56.9**	**-2.5**
BOSC	**San Juan Bosco**	**3.55**	**135**	P	**Pb**	**02 40 56.4**	**-3.2**
CASC	**Dorado de Casc**	**3.73**	**79**	P	**Pb**	**02 40 59.8**	**-2.9**
MCRA	**Macar, Loja**	**3.88**	**164**	P	Pn	02 40 49.8	-6.7
MCRA				S	**Sn**	**02 41 39.6**	**-3.0**
BBAC	**Balboa, Cauca**	**4.57**	**55**	P	**Pn**	**02 41 05.4**	**-0.9**
	530nm32nm,0.9s						
POPC	**Popayan, Colom**	**5.34**	**54**	P	**Pn**	**02 41 17.7**	**+0.9**
	14nm,0.7s						
POPC				S	**Sn**	**02 42 21.1**	**+2.2**
	14nm,0.7s						
JAMC	**Jamundi, Valle**	**5.76**	**49**	P	Pb	02 41 29.7	-7.5
	15nm,0.7s						
PTLC	**Puerto Leguiza**	**6.25**	**83**	P	**Pn**	**02 41 30.6**	**+1.4**

*IDC **04** 02:57:22.5±0.7,44˚.14N×115˚.31W,h0km,mb3.0/1, mbtmp3.2/7,ML3.3/6,Error ellipse: s-maj=11.0km s-min=6.1km az=87.0*
*NEIC **04** 02:57:23.1±2.3,44˚.22N±0˚.03×115˚.10W±0˚.03,h10km±2km, ML3.3/112,ML3.7/31(BUT),Error ellipse: s-maj=4.5km s-min=3.2km az=207.0*
*BUT **04** 02:57:23.1±2.4,44˚.21N±0˚.02×115˚.11W±0˚.03,h8km±1km, Error ellipse: s-maj=3.9km s-min=2.4km az=218.0*

ISC 04 02:57:23.4±0.7,44°23N±0°03×115°16W±0°03,h10km,n59, σ1°54/56,Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLID	**Hailey**	**0.86**	**140**	Pg	**Pg**	**02 57 38.5**	**-1.3**
HLID				Sg	**Sg**	**02 57 49.2**	**-1.9**
HLID				IAML		02 57 55.5	
	768nm,0.5s						
MFID	**Camas Ranch**	**0.94**	**211**	Pg	**Pg**	**02 57 41.0**	**-0.5**
MFID					**Sg**	**02 57 54.0**	**+0.2**
PLID	**Pearl Lake**	**1.05**	**326**		**Pb**	**02 57 43.4**	**-0.4**
PLID					**Sb**	**02 57 57.6**	**-0.1**
PLID				IAML		02 58 01.1	
	762nm,0.8s						
PLID				IAML		02 58 01.2	
	1µm,0.8s						
BCYI	**Bear Canyon**	**1.27**	**86**		**Pn**	**02 57 46.0**	**-1.4**

CNCI	**Crows Nest Can**	**1.27**	**103**		**Pn**	**02 57 45.7**	**-1.7**
ICI	**Italian Canyon**	**1.60**	**85**		**Pn**	**02 57 51.6**	**-0.4**
BMO	**Blue Mountains**	**1.66**	**293**		**Pn**	**02 57 52.7**	**+0.1**
MCMT	**McKenzie Canyo**	**1.76**	**69**	Pn	**Pb**	**02 57 55.2**	**-0.7**
MOMT	**Monida**	**2.02**	**79**		**Pb**	**02 57 59.4**	**-0.9**
DLMT	**Dillon**	**2.15**	**57**		**Pn**	**02 57 59.2**	**-0.3**
F10A	**Beach Ranch, E**	**2.28**	**321**	Pn	**Pn**	**02 58 02.1**	**+0.9**
F10A				IAML		02 58 39.2	
	comp=E,268nm,0.8s						
VCMT	**Victor**	**2.32**	**17**		**Pn**	**02 58 02.1**	**+0.4**
HBMT	**Mount Humbug**	**2.40**	**48**		**Pn**	**02 58 02.5**	**-0.4**
LRM	**Limekiln Ridge**	**2.50**	**49**		**Pn**	**02 58 03.8**	**-0.5**
BPMT	**Black Pine Rid**	**2.52**	**28**		**Pn**	**02 58 04.4**	**-0.3**
BUT	**Butte**	**2.57**	**45**	Pn	**Pn**	**02 58 04.0**	**-1.2**
MSO	**Missoula**	**2.74**	**18**	Pn	**Pn**	**02 58 07.8**	**+0.3**
MSO				IAML		02 59 00.1	
	comp=E,184nm,0.8s						
MSO				IAML		02 59 03.7	
	comp=E,182nm,0.9s						
LNOR	**Lincton Mounta**	**2.76**	**308**		**Pn**	**02 58 08.2**	**+0.5**
LNOR				IAML		02 59 02.3	
	comp=N,97nm,1.2s						
BOZ	**Bozeman (W)**	**2.86**	**60**	Pn	**Pn**	**02 58 10.6**	**+1.3**
YHB	**Horse Butte**	**2.89**	**78**	Pn	**Pn**	**02 58 10.6**	**+0.9**
YHB				IAML		02 58 52.0	
	comp=E,148nm,1.1s						
YHB				IAML		02 59 07.1	
	comp=N,127nm,0.9s						
G08A	**Pilot Rock**	**2.91**	**293**	Pn	**Pn**	**02 58 10.2**	**+0.4**
YHL	**Hebgen Lake**	**2.91**	**76**	Pn	**Pn**	**02 58 11.5**	**+1.4**
HVU	**Hansel Valley**	**3.01**	**144**		**Pn**	**02 58 14.0**	**+2.8**
FXWY	**Fox Creek**	**3.04**	**100**		**Pn**	**02 58 13.7**	**+1.9**
WVOR	**Wild Horse Val**	**3.10**	**236**	Pn	**Pn**	**02 58 13.1**	**+0.6**
WVOR				IAML		02 59 03.7	
	comp=N,108nm,1.1s						
WVOR				IAML		02 59 11.1	
	comp=N,118nm,0.8s						
E09A	**Wood Farm, Sta**	**3.11**	**318**	IAML		02 59 05.8	
	comp=N,75nm,0.9s						
E09A				IAML		02 59 12.7	
	comp=E,77nm,1.0s						
I07A	**Izee**	**3.13**	**269**	Pn	**Pn**	**02 58 13.9**	**+1.0**
YPP	**Pitchstone Pla**	**3.13**	**88**		**Pn**	**02 58 14.8**	**+1.7**
YPP				IAML		02 59 02.8	
	comp=N,70nm,1.2s						
YPP				IAML		02 59 08.2	
	comp=E,65nm,0.9s						
YNR	**Norris Junctio**	**3.25**	**80**		**Pn**	**02 58 16.8**	**+2.2**
YNR				IAML		02 59 06.1	
	comp=N,99nm,0.9s						
YNR				IAML		02 59 07.2	
	comp=E,110nm,0.8s						
SNOW	**Snow King Moun**	**3.28**	**102**		**Pn**	**02 58 15.9**	**+0.8**
SNOW				IAML		02 59 14.4	
	comp=E,96nm,0.8s

comp=E,0.2nm,0.9s,baz=115,slow=7.8,SNR=2.3
comp=E,0.2nm,0.9s

*ISK **04** 02:58:35.8, 38.°02N × 43.°04E, h9km, ML3.1/12*
*AFAD **04** 02:58:36.6, 38.°05N × 43.°00E, h7km ± 3km, MW3.3*
*TEH **04** 02:58:38.5, 37.°94N × 43.°21E, h6km, ML2.8, Presumed earthquake*
ISC 04 02:58:36.8±1.0, **38.°05N**±0.°02 × **43.°01E**±0.°03, **h9**km±9km, **n30**, σ1§**06**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.27**	**8**	P	**Pg**	**02 58 41.8**	**-0.4**
GEVA				S	**Sg**	**02 58 45.9**	**+0.1**
AKDM	**Akdamar-Van**	**0.28**	**355**	Pg	**Pg**	**02 58 42.2**	**-0.3**
AKDM				Sg	**Sg**	**02 58 47.4**	**+1.1**
AKDM	**Akdamar-Van**	**0.28**	**355**	Pg	**Pn**	**02 58 47.7**	**+0.3**
PERV	**Siirt/Pervari-**	**0.38**	**255**	P	**Pg**	**02 58 44.2**	**-0.2**
PERV				S	**Sg**	**02 58 50.7**	**+1.3**
TVAN	**Van**	**0.57**	**33**	P	**Pg**	**02 58 47.8**	**-0.1**
TVAN				S	**Sb**	**02 58 57.8**	**+0.2**
HAKT	**HAKKARI**	**0.74**	**131**	P	**Pg**	**02 58 50.7**	**-0.3**
HAKT				S	**Sn**	**02 59 02.9**	**-2.2**
ADCV	**BITLIS_Adilcev**	**0.79**	**344**	P	**Pg**	**02 58 51.9**	**-0.2**
ADCV				S	**Sg**	**02 59 03.8**	**+1.3**
BLIS	**Bitlis-Merkez**	**0.80**	**298**	P	**Pg**	**02 58 53.3**	**-0.8**
BLIS				S	**Sg**	**02 59 03.0**	**+0.5**
GURO	**Guroymak-BITLI**	**0.92**	**304**	Pg	**Pg**	**02 58 53.2**	**-1.3**
CUKT	**Cukurca**	**0.93**	**149**	Pg	**Pg**	**02 58 53.5**	**-1.1**
CUKT				Sg	**Sb**	**02 59 06.5**	**-1.1**
CUKT	**Cukurca**	**0.93**	**149**	Pg	**Pg**	**02 58 53.9**	**-0.7**
OZAP	**Van, Ozalp-Mer**	**0.99**	**51**	P	**Pg**	**02 58 55.1**	**-0.7**
OZAP				S	**Sn**	**02 59 12.1**	**+0.8**
VMUR	**Van-Muradiye**	**1.04**	**25**	P	**Pg**	**02 58 56.2**	**-0.6**
VMUR				S	**Sn**	**02 59 13.6**	**+1.1**
YOVA	**Hakkari_Yksek**	**1.11**	**114**	P	**Pb**	**02 58 57.7**	**-0.7**
MLAZ	**Malazgirt-MUS**	**1.15**	**342**	Pn	**Pg**	**02 58 58.8**	**-0.1**
MLAZ				Sn	**Sn**	**02 59 15.6**	**+0.3**
CLDR	**Caldiran**	**1.30**	**33**	Pn	**Pn**	**02 59 00.1**	**-1.4**
CLDR				Sn	**Sn**	**02 59 19.4**	**+0.2**
CLDR	**Caldiran**	**1.30**	**33**	P	**Pn**	**02 58 59.9**	**-1.6**
CLDR				S	**Sb**	**02 59 18.9**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.43**	**275**	Pn	**Pn**	**02 59 02.8**	**-0.3**
SVAN				Sn	**Sn**	**02 59 22.7**	**+0.6**
AGRB	**Hanur-Agry**	**1.53**	**359**	Pn	**Pn**	**02 59 04.2**	**-0.3**
VRTB	**Varto-Mus**	**1.65**	**313**	Pn	**Pn**	**02 59 06.4**	**+0.3**
KARO	**Karliova-Bingo**	**1.99**	**310**	Pn	**Pn**	**02 59 11.2**	**+0.4**
BNGB	**Bingl**	**2.06**	**298**	Pn	**Pn**	**02 59 12.3**	**+0.6**
ISHB	**Shabestar**	**2.07**	**83**	Pn	**Pb**	**02 59 14.0**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**2.14**	**335**	Pn	**Pn**	**02 59 13.3**	**+0.4**
IMRD	**Marand**	**2.22**	**72**	Pn	**Pb**	**02 59 16.2**	**-1.0**
YEDI	**Yedisu-Bingol**	**2.38**	**307**	Pn	**Pn**	**02 59 16.4**	**+0.3**
IAZR	**Azarshahr**	**2.38**	**98**	Pn	**Pb**	**02 59 18.6**	**-1.4**
IHSH	**Hashtrud**	**3.45**	**101**	Pn	**Pn**	**02 59 34.2**	**+3.1**
SNJK	**Sanadaj _Korde**	**4.18**	**127**	Pn	**Pn**	**02 59 43.3**	**+2.2**
IDHR	**Dehrash**	**4.31**	**140**	Pn	**Pn**	**02 59 44.5**	**+1.8**

*PRE **04** 03:10:52.4±0.5, 19.°35S × 23.°49E, h5km, ML2.5, Presumed earthquake*
*BGSI **04** 03:10:54.8±2.0, 18.°98S × 23.°43E, h15km ± 38km, ML3.3, Presumed earthquake*
*NAM **04** 03:11:05.3±28.0, 17.°12S × 23.°50E, h5km ± 999km, ML2.7, Presumed earthquake*
ISC 04 03:10:50.4±0.9, **19.°20S**±0.°04 × **23.°55E**±0.°05, **h10**km, **n17**, σ3§**30**/25, **Botswana**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATM	**Katima Mulilo**	**1.84**	**23**	*i* P	**Pn**	**03 11 22.2**	**0.0**
KATM				*i* S	**Sb**	**03 11 46.6**	**-0.8**
KATM				IAML		03 11 51.1	
	comp=Z,125nm,0.3s						
KSANE	**Kasane**	**2.06**	**48**	*i* P	**Pb**	**03 11 26.9**	**-1.1**
SOOWA	**Sowa**	**2.85**	**119**	*i* P	**Pb**	**03 11 41.5**	**0.0**
SOOWA				*i* S	**Sb**	**03 12 14.8**	**-1.7**
SOOWA				IAML		03 12 28.1	
	comp=N,204nm,0.3s						
KHWEE	**KHWEE**	**3.26**	**147**	*i* P	**Pb**	**03 11 48.7**	**+0.3**
KHWEE				*i* S	**Sb**	**03 12 27.1**	**-1.2**
KHWEE				IAML		03 12 38.6	
	comp=E,449nm,0.4s						
KGCAE	**Kacgae**	**3.85**	**199**	*i* P	**Pn**	**03 11 54.5**	**+4.6**
RUDU	**RUNDU**	**3.85**	**289**	*i* P	**Pn**	**03 11 52.1**	**+2.2**
RUDU				*i* S	**Sn**	**03 12 35.3**	**0.0**
RUDU				IAML		03 12 52.0	
	comp=Z,53nm,0.5s						
BROLN	**Tlhalogang**	**4.03**	**119**	*i* P	**Pb**	**03 11 57.5**	**-4.0**
BROLN				*i* S	**Sn**	**03 12 43.4**	**+3.9**
BROLN				IAML		03 12 59.3	
	comp=N,85nm,0.5s						
KDWAN	**Kaudwane**	**4.29**	**166**	*i* P	Pn	03 12 01.2	+5.3
LPHEP	**Lephephe**	**4.67**	**153**	*i* P	**Pn**	**03 12 05.5**	**+4.4**
KOOLE	**Kule**	**4.91**	**219**	*i* P	**Pn**	**03 12 08.2**	**+3.8**
SKOMA	**Sekoma**	**5.30**	**176**	*i* P	**Pn**	**03 12 13.9**	**+4.1**
TSUM	**Tsumeb**	**5.64**	**269**	*e*P	**Pn**	**03 12 16.8**	**+2.3**
TSUM				*e*S	**Sn**	**03 13 19.3**	**-0.1**
TSUM				IAML		03 13 54.3	
	comp=Z,19nm,0.5s						
LBTB	**Lobatse**	**6.09**	**162**	*e*P	**Pn**	**03 12 22.6**	**+2.0**
LBTB				*e*S	**Sn**	**03 13 28.2**	**-2.3**
LBTB				IAML		03 14 11.4	
	comp=Z,5.7nm,0.4s						
LEPH	**Lephalale, Lim**	**6.09**	**140**	*e*P	**Pn**	**03 12 23.6**	**+3.0**
LEPH				*e*S	**Sn**	**03 13 29.2**	**-1.3**
LEPH				IAML		03 14 02.0	
	comp=Z,15nm,0.5s						
MAKGR	**Makgori**	**6.68**	**170**	*i* P	**Pn**	**03 12 31.6**	**+2.8**
WIN	**Windhoek**	**6.90**	**240**	*i* P	**Sn**	**03 13 42.9**	**-7.7**
WIN				*i* S	Sg	03 14 23.8	-8.2
UPI	**Upington**	**9.36**	**193**	*e*P	**Pn**	**03 13 07.8**	**+2.3**
UPI				*e*S	**Sn**	**03 14 45.7**	**-5.2**
UPI				IAML		03 14 56.5	
	comp=Z,1.3nm,0.4s						

*GCG **04** 03:10:55.5±1.6, 15.°72N × 88.°65W, h6km ± 11km, MD4.2, Presumed earthquake*
*CATAC **04** 03:10:56.1±0.4, 16.°N ± 2.°× 8.°9W ± .°, h1km, M3.3/8, MLv3.3/8, Error ellipse: s-maj=4.8km s-min=4.3km az=146.8, confirmed*
ISC 04 03:10:53.8±1.1, **15.°78N**±0.°04 × **88.°59W**±0.°06, **h16**km ± 6km, **n18**, σ1§**47**/34, **Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**0.05**	**169**	P	**Pg**	**03 10 56.2**	**-0.5**
IZABA				S	**Sg**	**03 10 58.4**	**-0.1**
SARH	**Santa Rosa de**	**1.01**	**189**	P	**Pb**	**03 11 13.5**	**+0.5**
SARH				S	**Sb**	**03 11 26.7**	**+0.6**
SARH	**Santa Rosa de**	**1.01**	**189**	*i* P	**Pb**	**03 11 13.5**	**+0.5**
SARH				*i* S	**Sb**	**03 11 23.9**	**-2.1**
ZAFR2	**Estanzuela, Za**	**1.40**	**212**	*i* P	**Pn**	**03 11 17.6**	**-1.2**
ZAFR2				*i* S	**Sn**	**03 11 31.5**	**-5.4**
ESQI	**Esquipulas**	**1.41**	**211**	P	**Pb**	**03 11 20.9**	**+1.1**
ESQI				S	**Sg**	**03 11 39.1**	**-0.2**
MTO3	**Montecristo**	**1.56**	**209**	P	**Pb**	**03 11 22.5**	**+0.1**
MTO3				S	**Sb**	**03 11 43.1**	**+1.1**
MTO3	**Montecristo**	**1.56**	**209**	*i* P	**Pn**	**03 11 21.9**	**+0.8**
PETF	**Flores**	**1.67**	**313**	P	**Pb**	**03 11 24.9**	**+0.7**
PETF				S	**Sg**	**03 11 47.6**	**0.0**
PETF	**Flores**	**1.67**	**313**	*i* P	**Pb**	**03 11 24.5**	**+0.3**
PETF				*i* S	**Sn**	**03 11 41.6**	**-1.9**
MARCA	**Marcala la Paz**	**1.70**	**161**	P	**Pb**	**03 11 25.5**	**+0.8**
MARCA				S	**Sb**	**03 11 47.0**	**+1.1**
MARCA	**Marcala la Paz**	**1.70**	**161**	*i* P	**Pb**	**03 11 25.5**	**+0.8**
MARCA				*i* S	**Sn**	**03 11 43.6**	**-0.8**
P5NO	**Presa 5 de nov**	**1.79**	**185**	P	**Pb**	**03 11 26.2**	**0.0**
P5NO				S	**Sb**	**03 11 48.8**	**+0.4**
JUAM	**Asuncion Mita**	**1.79**	**217**	*i* S	**Sn**	**03 11 47.4**	**+0.8**
APG	**El Apazote**	**1.96**	**247**	*i* P	**Pn**	**03 11 28.4**	**+1.5**
APG				*i* S	**Sb**	**03 11 54.0**	**+0.4**
PAVA	**Las Pavas**	**2.08**	**189**	P	**Pb**	**03 11 31.5**	**+0.2**
PAVA				S	**Sb**	**03 11 58.8**	**+1.9**
COEG	**Centro de Oper**	**2.16**	**187**	P	**Pb**	**03 11 32.6**	**-0.1**
COEG				S	**Sb**	**03 12 01.7**	**+2.4**
NUBE	**Las Nubes**	**2.19**	**212**	P	**Pb**	**03 11 34.2**	**+1.0**
NUBE				S	**Sb**	**03 12 01.8**	**+1.7**
JAYA	**Jayaque - finc**	**2.27**	**202**	P	**Pb**	**03 11 34.7**	**+0.2**
JAYA				S	**Sb**	**03 12 03.4**	**+1.1**

*SNET **04** 03:19:12.1±1.6, 13.°13N × 89.°59W, h47km, ML3.4, Presumed earthquake*
*CATAC **04** 03:19:12.4±0.4, 13.°N ± 2.°× 9.°0W ± .°, h30km ± 2km, M3.5/22, MLv3.5/22, Error ellipse: s-maj=5.4km s-min=3.4km az=33.3, confirmed*
*GCG **04** 03:19:13.2±0.6, 13.°24N × 89.°53W, h56km ± 5km, MD4.1, ML4.1, Presumed earthquake*
ISC 04 03:19:12.6±1.5, **13.°17N**±0.°05 × **89.°55W**±0.°04, **h25**km ± 13km, **n57**, σ0§**61**/89, **1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.39**	**35**	P	**Pn**	**03 19 22.7**	**+0.1**
LALI				S	**Sn**	**03 19 30.2**	**+1.0**
LALI	**Alcalda de L**	**0.39**	**35**	*i* P	**Pn**	**03 19 23.0**	**+0.4**
LALI	**Alcalda de L**	**0.39**	**35**	*i* P	**Pn**	**03 19 23.1**	**+0.4**
LALI				*e*S	**Sn**	**03 19 31.2**	**+2.0**
JAYA	**Jayaque - finc**	**0.49**	**11**	P	**Pn**	**03 19 23.8**	**-0.5**
JAYA	**Jayaque - finc**	**0.49**	**11**	*i* P	**Pn**	**03 19 24.2**	**-0.1**
JAYA				*i* S	**Sn**	**03 19 32.1**	**0.0**
JAYA				IAML		03 19 34.2	
	comp=N,9μm,0.2s						
JAYA	**Jayaque - finc**	**0.49**	**11**	↓*i* P	**Pn**	**03 19 24.2**	**-0.1**
JAYA				*e*S	**Sn**	**03 19 32.6**	**+0.5**
PANCS	**Alcalda de**	**0.57**	**39**	P	**Pb**	**03 19 24.3**	**+0.3**
PANCS				S	**Sn**	**03 19 33.8**	**-0.1**
PMON	**Piamonte**	**0.58**	**23**	P	**Pn**	**03 19 25.3**	**-0.2**
PMON	**Piamonte**	**0.58**	**23**	*e*P	**Pn**	**03 19 25.4**	**-0.2**
PMON				*e*S	**Sn**	**03 19 34.8**	**+0.4**
LOMA	**Loma Larga**	**0.60**	**38**	P	**Pn**	**03 19 25.4**	**-0.3**
LOMA	**Loma Larga**	**0.60**	**38**	*e*P	**Pn**	**03 19 25.6**	**-0.1**
LOMA				*e*S	**Sn**	**03 19 35.5**	**+0.9**
SEMO	**Seminario San**	**0.62**	**31**	P	**Pb**	**03 19 25.3**	**+0.4**
SEMO				S	**Sn**	**03 19 35.8**	**+0.7**
BOQS	**Boqueron**	**0.62**	**25**	*e*P	**Pn**	**03 19 26.0**	**0.0**
BOQS				*e*S	**Sn**	**03 19 36.0**	**+0.7**
UEES	**Universidad Ev**	**0.62**	**29**	P	**Pn**	**03 19 25.7**	**-0.3**
UEES				S	**Sn**	**03 19 35.5**	**+0.3**
CEDA	**San Andres**	**0.65**	**13**	P	**Pb**	**03 19 25.6**	**+0.2**
CEDA	**San Andres**	**0.65**	**13**	*e*P	**Pn**	**03 19 26.2**	**0.0**
CEDA				*e*S	**Sn**	**03 19 36.7**	**+0.9**
LFRS	**El Faro**	**0.65**	**46**	*e*P	**Pn**	**03 19 26.4**	**0.0**
CEVE	**Cerro Verde**	**0.66**	**354**	P	**Pn**	**03 19 26.7**	**0.0**
CEVE	**Cerro Verde**	**0.66**	**354**	*e*P	**Pn**	**03 19 26.7**	**0.0**
CEVE				*e*S	**Sn**	**03 19 37.6**	**+1.2**
SBLS	**San Blas**	**0.67**	**354**	*e*P	**Pb**	**03 19 26.6**	**+0.7**
SBLS				*e*S	**Sn**	**03 19 36.7**	**+0.1**
SJTE	**Alcalda de S**	**0.69**	**50**	*i* P	**Pn**	**03 19 26.7**	**-0.2**
SJTE				*e*S	**Sn**	**03 19 37.3**	**+0.5**
SNJE	**San Jose**	**0.69**	**355**	*e*P	**Pb**	**03 19 27.0**	**+0.7**
SNJE				*e*S	**Sn**	**03 19 38.0**	**+0.8**
LFU	**La Fuente**	**0.71**	**36**	*e*P	**Pn**	**03 19 27.4**	**+0.1**
LBRS	**Las Brisas**	**0.75**	**41**	*e*P	**Pn**	**03 19 27.9**	**+0.1**
NUBE	**Las Nubes**	**0.76**	**343**	P	**Pb**	**03 19 27.2**	**-0.2**
NUBE	**Las Nubes**	**0.76**	**343**	*i* P	**Pb**	**03 19 27.4**	**+0.1**
NUBE	**Las Nubes**	**0.76**	**343**	*e*P	**Pb**	**03 19 27.6**	**+0.2**
NUBE				*e*S	**Sn**	**03 19 38.6**	**-0.1**
COEG	**Centro de Oper**	**0.79**	**55**	P	**Pb**	**03 19 27.6**	**-0.1**
COEG				S	**Sn**	**03 19 39.2**	**-0.1**
PAVA	**Las Pavas**	**0.80**	**48**	P	**Pb**	**03 19 28.3**	**+0.3**
PAVA	**Las Pavas**	**0.80**	**48**	*e*P	**Pn**	**03 19 28.7**	**+0.2**
PAVA				*e*S	**Sn**	**03 19 40.8**	**+1.1**
UNIC	**Universidad Ca**	**0.81**	**360**	P	**Pb**	**03 19 27.6**	**-0.5**
UNIC				S	**Sn**	**03 19 40.6**	**+0.8**
FAME	**Alcaldia de Sa**	**0.81**	**326**	P	**Pb**	**03 19 27.6**	**-0.5**
FAME				S	**Sb**	**03 19 38.9**	**+0.3**
TECO	**Alcaldia de Te**	**0.83**	**64**	P	**Pb**	**03 19 28.4**	**0.0**
TECO				S	**Sb**	**03 19 39.7**	**+0.5**
LOAL	**Lomas de Alarc**	**0.85**	**345**	S	**Sn**	**03 19 41.7**	**+0.8**
SLOZ	**Alcaldia de Sa**	**0.88**	**345**	P	**Pb**	**03 19 29.4**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.96**	**56**	S	**Sb**	**03 19 43.2**	**+0.3**
P5NO	**Presa 5 de nov**	**1.12**	**43**	P	**Pn**	**03 19 31.6**	**-1.2**
P5NO				S	**Sb**	**03 19 46.6**	**-0.9**
P5NO	**Presa 5 de nov**	**1.12**	**43**	*e*P	**Pn**	**03 19 31.9**	**-0.8**
LLGN	**La Laguna**	**1.15**	**31**	S	**Sb**	**03 19 47.8**	**-0.6**
JUAM	**Asuncion Mita**	**1.17**	**352**	*i* P	**Pn**	**03 19 32.8**	**-0.6**
JUAM				*i* S	**Sb**	**03 19 47.6**	**-1.3**
PACA	**Pacayal**	**1.23**	**76**	P	**Pn**	**03 19 34.8**	**+0.5**
PACA	**Pacayal**	**1.23**	**76**	*e*P	**Pn**	**03 19 34.6**	**+0.3**
PACA				*e*S	**Sb**	**03 19 51.0**	**+0.2**
MTO3	**Montecristo**	**1.23**	**8**	P	**Pn**	**03 19 33.5**	**-1.1**
MTO3	**Montecristo**	**1.23**	**8**	*i* P	**Pn**	**03 19 33.8**	**-0.7**
MTO3	**Montecristo**	**1.23**	**8**	*e*P	**Pn**	**03 19 33.9**	**-0.7**
MTO3				*e*S	**Sn**	**03 19 49.2**	**-1.4**
LCY	**Lacayo**	**1.25**	**78**	*e*P	**Pn**	**03 19 34.8**	**+0.2**
LCY				*e*S	**Sb**	**03 19 51.7**	**+0.4**
ESQI	**Esquipulas**	**1.40**	**8**	P	**Pn**	**03 19 35.8**	**-0.9**
ESQI				S	**Sn**	**03 19 54.2**	**-0.2**
INTP	**Intipuca**	**1.46**	**89**	*e*P	**Pn**	**03 19 37.1**	**-0.2**
INTP				*e*S	**Sn**	**03 19 55.4**	**-0.3**
LCND	**La Caada**	**1.62**	**85**	P	**Pn**	**03 19 39.5**	**-0.2**
LCND	**La Caada**	**1.62**	**85**	*e*P	**Pn**	**03 19 39.4**	**-0.3**
CNCH	**Conchagua**	**1.67**	**86**	P	**Pn**	**03 19 39.5**	**-1.0**
CNCH				S	**Sn**	**03 20 01.7**	**+0.5**
MARCA	**Marcala la Paz**	**1.77**	**56**	P	**Pn**	**03 19 41.0**	**-0.8**
MARCA				S	**Sn**	**03 20 03.5**	**-0.1**
MARCA	**Marcala la Paz**	**1.77**	**56**	*i* P	**Pn**	**03 19 41.0**	**-0.8**
SARH	**Santa Rosa de**	**1.77**	**26**	P	**Pn**	**03 19 41.5**	**-0.3**
SARH				S	**Sn**	**03 20 03.3**	**-0.2**
STG8	**El Palmar, Qui**	**2.17**	**306**	*i* P	**Pn**	**03 19 52.4**	**+1.1**
QUEN	**Al S del Volca**	**2.69**	**102**	P	**Pn**	**03 19 53.8**	**-0.7**
ROCN	**Rota Cerro Neg**	**2.81**	**103**	P	**Pn**	**03 19 55.8**	**-0.2**
ROCN				S	**Sn**	**03 20 28.4**	**-0.8**

*SJA **04** 03:20:10.8±0.9, 28.°40S × 70.°76W, h80km ± 6km, ML4.1, MW4.0*
*GFZ **04** 03:20:10.6±0.2, 28.°S ± 2.°× 7.°1W ± .°, h91km, M4.7/12, mb4.8/12*
*IDC **04** 03:20:12.6±0.8, 28.°39S × 70.°47W, h78km ± 5km, mb3.6/5, mbtmp3.8/9, MS3.1/1, Error ellipse: s-maj=25.8km s-min=11.2km az=74.0*
*NEIC **04** 03:20:12.7±1.3, 28.°43S ± 0.°03 × 70.°57W ± 0.°05, h78km ± 5km, mb4.5/17, ML4.3(GUC), Error ellipse: s-maj=6.7km s-min=4.3km az=77.0*
*GUC **04** 03:20:12.8±0.7, 28.°43S × 70.°59W, h82km ± 3km, ML4.3*
ISC 04 03:20:11.3±0.5, **28.°44S**±0.°03 × **70.°74W**±0.°04, **h75**km ± 4km, **n115**, σ1§**79**/147, **mb4.5**/11, **2C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.38**	**308**		**Pn**	**03 20 26.4**	**+2.8**
AC04				Sn	**Sn**	**03 20 36.5**	**+3.9**
AC04	**Llanos de Chal**	**0.38**	**308**	*e*P	**Pn**	**03 20 26.4**	**+2.8**
AC04				*i* S	**Sn**	**03 20 36.5**	**+3.9**
AC04				IAML		03 20 37.5	
	comp=E,17μm,0.2s						
AC04	**Llanos de Chal**	**0.38**	**308**	P	**Pn**	**03 20 26.5**	**+2.9**
AC05	**El Transito**	**0.57**	**135**		**Pn**	**03 20 26.1**	**+0.7**
AC05				Sn	**Sn**	**03 20 36.3**	**+0.5**
AC05	**El Transito**	**0.57**	**135**	*e*P	**Pn**	**03 20 26.1**	**+0.7**
AC05				IAML		03 20 39.9	
	comp=Z,2μm,0.3s						
AC05	**El Transito**	**0.57**	**135**	↓*i* P	**Pn**	**03 20 26.1**	**+0.7**
AC05				*i* S	**Sn**	**03 20 36.6**	**+0.8**
AC05	**El Transito**	**0.57**	**135**	P	**Pn**	**03 20 26.2**	**+0.7**
LCO	**Las Campanas**	**0.57**	**177**		**Pn**	**03 20 27.4**	**+1.8**
LCO				Sn	**Sn**	**03 20 38.5**	**+2.4**
LCO	**Las Campanas**	**0.57**	**177**	*e*P	**Pn**	**03 20 27.4**	**+1.8**
LCO				*e*S	**Sn**	**03 20 38.3**	**+2.2**
LCO				IAML		03 20 40.7	
	comp=Z,13μm,0.4s						
LCO	**Las Campanas**	**0.57**	**177**	*e*P	**Pn**	**03 20 26.8**	**+1.2**
LCO				*i* S	**Sn**	**03 20 38.5**	**+2.4**
GO03	**Copiapo**	**0.95**	**28**		**Pn**	**03 20 30.1**	**+0.6**
GO03				Sn	**Sn**	**03 20 43.3**	**+0.2**
GO03	**Copiapo**	**0.95**	**28**	*e*P	**Pn**	**03 20 30.1**	**+0.6**
GO03				*e*S	**Sn**	**03 20 44.7**	**+1.6**
GO03				IAML		03 20 45.2	
	comp=Z,9μm,0.1s						
GO03	**Copiapo**	**0.95**	**28**	*e*P	**Pn**	**03 20 30.0**	**+0.4**
GO03				*i* S	**Sn**	**03 20 43.7**	**+0.6**
GO03				IAML		03 20 45.4	
	comp=E,12μm,0.2s						
GO03	**Copiapo**	**0.95**	**28**	P	**Pn**	**03 20 30.2**	**+0.6**
GO03				S	**Sn**	**03 20 43.4**	**+0.2**

CO01	**Juntas del Tor**	**1.63**	**160**		**Pn**	**03 20 39.8**	**+1.3**
CO01	**Juntas del Tor**	**1.63**	**160**	*e*P	**Pn**	**03 20 39.8**	**+1.3**
CO01				*e*S	**Sn**	**03 21 01.9**	**+3.0**
CO01				IAML		03 21 02.5	
	comp=Z,1μm,0.3s						
CO01	**Juntas del Tor**	**1.63**	**160**	*e*P	**Pn**	**03 20 39.8**	**+1.3**
CO01				*i* S	**Sn**	**03 21 00.5**	**+1.6**
CO01				IAML		03 21 03.9	
	comp=E,3μm,0.4s						
CO01	**Juntas del Tor**	**1.63**	**160**	P	**Pn**	**03 20 40.0**	**+1.5**
CO01				S	**Sn**	**03 20 60.0**	**+1.0**
GO04	**Tololo Observa**	**1.73**	**182**		**Pn**	**03 20 41.6**	**+1.8**
GO04	**Tololo Observa**	**1.73**	**182**	*e*P	**Pn**	**03 20 41.4**	**+1.7**
GO04				*e*S	**Sn**	**03 21 03.7**	**+2.5**
GO04				IAML		03 21 07.0	
	comp=Z,3μm,0.7s						
GO04	**Tololo Observa**	**1.73**	**182**	*e*P	**Pn**	**03 20 41.4**	**+1.7**
GO04				*i* S	**Sn**	**03 21 03.9**	**+2.7**
GO04	**Tololo Observa**	**1.73**	**182**	P	**Pn**	**03 20 41.7**	**+2.0**
AROD	**Rodeo**	**2.05**	**148**	*e*P	**Pn**	**03 20 46.9**	**+2.9**
AROD				*e*S	**Sn**	**03 21 12.5**	**+3.7**
AC02	**Maricunga**	**2.14**	**42**		**Pn**	**03 20 46.2**	**+0.8**
AC02	**Maricunga**	**2.14**	**42**	*e*P	**Pn**	**03 20 46.2**	**+0.8**
AC02				*e*S	**Sn**	**03 21 12.3**	**+1.0**
AC02				IAML		03 21 12.6	
	comp=Z,2μm,0.6s						
AC02	**Maricunga**	**2.14**	**42**	↑*i* P	**Pn**	**03 20 46.2**	**+0.8**
AC02				*i* S	**Sn**	**03 21 11.4**	**0.0**
AC02				IAML		03 21 12.1	
	comp=E,6μm,0.3s						
AC02	**Maricunga**	**2.14**	**42**	P	**Pn**	**03 20 46.3**	**+0.8**
VCA	**Vinchina**	**2.25**	**98**	*e*P	**Pn**	**03 20 48.3**	**+1.8**
VCA				*e*S	**Sn**	**03 21 15.6**	**+2.2**
VCA				IAML		03 21 21.6	
	comp=Z,818nm,0.3s						
VCA	**Vinchina**	**2.25**	**98**	↓*e*P	**Pn**	**03 20 48.5**	**+2.0**
AC01	**Pan de Azucar**	**2.28**	**3**	P	**Pn**	**03 20 47.5**	**+0.6**
AC01	**Pan de Azucar**	**2.28**	**3**	*e*P	**Pn**	**03 20 47.5**	**+0.6**
AC01				IAML		03 21 21.7	
	comp=E,2μm,0.1s						
AC01	**Pan de Azucar**	**2.28**	**3**	P	**Pn**	**03 20 47.2**	**+0.3**
ACCO	**Cerro Coronel**	**2.59**	**146**	*e*P	**Pn**	**03 20 53.7**	**+2.4**
ACCO				*e*S	**Sn**	**03 21 25.7**	**+3.7**
ACCO				IAML		03 21 29.0	
	comp=Z,319nm,0.3s						
CO02	**Combarbal**	**2.77**	**185**		**Pn**	**03 20 54.9**	**+1.4**
CO02	**Combarbal**	**2.77**	**185**	*e*P	**Pn**	**03 20 54.9**	**+1.4**
CO02				IAML		03 21 44.7	
	comp=E,3μm,0.5s						
CO02	**Combarbal**	**2.77**	**185**	P	**Pn**	**03 20 55.1**	**+1.5**
ZON	**Zonda**	**3.58**	**151**		**Pn**	**03 21 06.6**	**+2.2**
CO04	**Los Peladeros**	**3.60**	**183**		**Pn**	**03 21 06.4**	**+1.3**
CO04	**Los Peladeros**	**3.60**	**183**	*e*P	**Pn**	**03 21 06.1**	**+1.1**
CO04	**Los Peladeros**	**3.60**	**183**	P	**Pn**	**03 21 06.3**	**+1.3**
PB14	**IPOC Station P**	**3.81**	**5**		**Pn**	**03 21 07.0**	**-0.8**
PB14	**IPOC Station P**	**3.81**	**5**	*e*P	**Pn**	**03 21 07.1**	**-0.8**
PB14	**IPOC Station P**	**3.81**	**5**	P	**Pn**	**03 21 07.4**	**-0.4**
CFA	**Coronel Fontan**	**3.83**	**146**	P	**Pn**	**03 21 09.4**	**+1.5**
	comp=E,71nm,0.3s,baz=325,slow=12,SNR=397						
CFA				S	**Sn**	**03 21 51.6**	**-0.1**
	comp=E,88nm,0.4s,baz=246,slow=20,SNR=18						
VA03	**San Esteban**	**4.32**	**178**		**Pn**	**03 21 16.4**	**+1.8**
VA03	**San Esteban**	**4.32**	**178**	↓*e*P	**Pn**	**03 21 16.0**	**+1.4**
VA03	**San Esteban**	**4.32**	**178**	P	**Pn**	**03 21 16.2**	**+1.6**
VA01	**Torpederas**	**4.64**	**190**		**Pn**	**03 21 18.5**	**-0.3**
VA01	**Torpederas**	**4.64**	**190**	P	**Pn**	**03 21 18.1**	**-0.7**

	comp=Z,3.9nm,0.6s								
DBIC	**Dimbokro**	**72.37**	**72**	P		**P**	**03 31 28.7**	**-0.9**	
	comp=Z,2.8nm,0.9s,baz=260,slow=14,SNR=1.0								
DBIC				pP		**pP**	**03 31 50.0**	**+0.1**	
	comp=Z,1.7nm,0.6s,baz=277,slow=8.9,SNR=1.2								
	comp=Z,2.8nm,0.9s								
DBIC	**Dimbokro**	**72.37**	**72**	P		**P**	**03 31 28.9**	**-0.7**	
F64A	**Sherman**	**73.98**	**2**	P		**P**	**03 31 39.6**	**+1.3**	
F64A				IAmb		IAmb	03 32 03.4		
	comp=Z,13nm,1.4s								
ECSD	**EROS Data Cent**	**75.64**	**341**	P		**P**	**03 31 49.3**	**+1.3**	
PDAR	**Pinedale Array**	**79.35**	**332**	P		**P**	**03 32 09.6**	**+0.6**	
	comp=Z,0.3nm,0.8s,baz=113,slow=8.4,SNR=2.9								
	comp=Z,0.3nm,0.8s								
PDAR	**Pinedale Array**	**79.35**	**332**	P		**P**	**03 32 09.0**	**0.0**	
TORD	**Torodi Ar. Bea**	**81.26**	**70**	P		**P**	**03 32 18.1**	**-1.5**	
	comp=Z,0.6nm,0.6s,baz=263,slow=6.0,SNR=8.1								
TORD				pP		**pP**	**03 32 40.5**	**+0.2**	
	comp=Z,0.6nm,0.6s,baz=266,slow=3.0,SNR=2.7								
	comp=Z,0.6nm,0.6s								
H11S2	**WAKE ISLAND Hyl**	**26.81**	**273**	T		T	05 58 55.8		
	baz=111								
H11S1	**WAKE ISLAND Hyl**	**26.82**	**273**	T		T	05 59 01.0		
	baz=111								
H11S3	**WAKE ISLAND Hyl**	**26.83**	**273**	T		T	05 58 56.8		
	baz=111								
KURBB	**Kurchatov Arra**	**147.93**	**38**	PKPbc		**PKPbc**	**03 39 48.7**	**+1.1**	
	comp=Z,1.2nm,0.6s,baz=305,slow=3.1,SNR=16								
KURBB				pPKPbc		**pPKPbc**	**03 40 09.6**	**+0.5**	
	comp=Z,0.4nm,0.4s,baz=300,slow=3.3,SNR=2.5								
ZALV	**Zalesovo Beam**	**148.87**	**28**	PKPbc		**PKPbc**	**03 39 51.0**	**+1.1**	
	comp=Z,2.5nm,0.4s,baz=302,slow=3.5,SNR=15								
ZALV				pPKPbc		**pPKPbc**	**03 40 12.7**	**+1.3**	
	comp=Z,1.5nm,0.4s,baz=303,slow=4.3,SNR=4.2								
MKAR	**Makanchi Array**	**152.06**	**42**	PKPbc		**PKPbc**	**03 39 58.3**	**+0.5**	
	comp=Z,1.2nm,0.6s,baz=299,slow=2.1,SNR=10								
MKAR				pPKPbc		**pPKPbc**	**03 40 19.8**	**+0.3**	
	comp=Z,0.5nm,0.4s,baz=357,slow=2.4,SNR=4.2								
MKAR	**Makanchi Array**	**152.06**	**42**			**PKPbc**	**03 39 58.4**	**+0.7**	
PZH	**PanZhiHua**	**173.05**	**104**	PKP		**PKPdf**	**03 40 11.7**	**-0.6**	

*NEIC **04** 03:27:30.2±0.7,52.0°N±0.3×173.0°W±0.1, h170km±12km, ML3.1/12, ML2.6(AEIC), Error ellipse: s-maj=38.8km s-min=8.9km az=168.0*

AEIC 04 03:27:30.4±1.4, 52.3°N±0.3×173.2°W±0.2, h170km±5km, Error ellipse: s-maj=39.2km s-min=10.1km az=161.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.56**	**269**		Pn	03 27 55.3	+1.0
KOFP					Sn	03 28 14.5	+1.8
KONE	**Korovin Northe**	**0.58**	**281**		Pn	03 27 54.9	+0.5
KONE					Sn	03 28 15.2	+2.5
ATKA	**Atka Island**	**0.62**	**262**		Pn	03 27 55.3	+0.7
ATKA					Sn	03 28 14.6	+1.5
KOWE	**Korovin West**	**0.65**	**277**		Pn	03 27 55.5	+0.7
KOWE					Sn	03 28 15.6	+2.1
GSIG	**Igitkin Island**	**1.71**	**261**		Pn	03 28 04.4	+0.8
GSIG					Sn	03 28 30.3	+1.0
GSMY	**Great Sitkin M**	**1.78**	**263**		Pn	03 28 05.3	+0.9
ETKA	**Kagalaska Isla**	**2.03**	**259**		Pn	03 28 08.3	+1.3
ADK	**Adak**	**2.19**	**261**		Pn	03 28 10.3	+1.4
ADK				Sn	Sn	03 28 40.2	+1.6
ADK	**Adak**	**2.19**	**261**	IAML		03 28 43.2	
	112nm,0.3s						
ADK				IAML		03 28 43.7	
	102nm,0.3s						
KIWB	**Kanaga Island**	**2.48**	**261**	Pn	Pn	03 28 14.0	+1.7
KIWB				IAML		03 28 50.6	
	comp=N,51nm,0.9s						
KIWB				IAML		03 28 51.6	
	comp=E,44nm,0.6s						
UNV	**Unalaska Valle**	**4.33**	**66**	Pn	Pn	03 28 34.9	-0.4
UNV				IAML		03 29 37.0	
	comp=N,11nm,1.1s						
LVA	**Lava Point**	**4.69**	**64**	Pn	Pn	03 28 39.6	-0.5
AMKA	**Amchitka**	**4.74**	**262**	Pn	Pn	03 28 41.9	+1.1
AMKA				IAML		03 29 49.0	
	comp=E,15nm,1.1s						
CNBA	**Chernabura Isl**	**8.49**	**67**	Pn	Pn	03 29 26.0	-4.0
N31M	**Braeburn, Yuko**	**22.11**	**51**		pP	03 32 42.5	+1.4

*KRSC **04** 03:29:02.8±1.6, 53.15N×157.09E, h296km±16km, Ml3.8*
*IDC **04** 03:29:05.5±1.1, 52.27N×158.17E, h266km±8km, mb2.9/4, mbtmp3.5/4, Error ellipse: s-maj=45.2km s-min=20.0km az=153.0*

ISC 04 03:29:05.9±1.0, 53.14N±0.08×157.4E±0.1, h285km±7km, n35, σ1§22/48, mb3.2/4, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**0.20**	**98**	P	**Pn**	**03 29 41.7**	**-0.5**
	7.8nm,0.5s,baz=85,slow=5.5,SNR=35						
PETK				S	**S**	**03 30 10.5**	**-0.5**
	3.4nm,0.7s,baz=183,slow=7.5,SNR=4.3						
APC	**Apacha**	**0.24**	**211**	*eP*	**Pn**	**03 29 41.4**	**-0.9**
KRMR	**Karymshinskiy**	**0.55**	**123**	*eP*	**Pn**	**03 29 42.6**	**-0.3**
KRMR				*eS*	**S**	**03 30 11.7**	**-0.5**
GNL	**Ganaly**	**0.66**	**31**	*eP*	**Pn**	**03 29 43.1**	**-0.2**
GNL				*eS*	**S**	**03 30 13.1**	**+0.1**
GRL	**Gorelyy**	**0.72**	**143**	*eP*	**Pn**	**03 29 45.1**	**+1.4**
KOK	**Koryaka**	**0.78**	**78**	*eP*	**Pn**	**03 29 44.3**	**+0.6**
KOK				*eS*	**S**	**03 30 15.7**	**+2.0**
PET	**Petropavlovsk**	**0.78**	**98**	*eP*	**Pn**	**03 29 43.6**	**0.0**
KRX	**Arik**	**0.80**	**73**	*eP*	**Pn**	**03 29 44.3**	**+0.4**
ASAK	**Asacha**	**0.82**	**156**	*eP*	**Pn**	**03 29 43.5**	**-0.4**
MTVR	**Mutnovka**	**0.82**	**142**	*eP*	**Pn**	**03 29 45.0**	**+0.9**
AVH	**Avacha**	**0.84**	**80**	*eP*	**Pn**	**03 29 44.6**	**+0.7**
KRER	**Koryakskii**	**0.85**	**78**	*eP*	**Pn**	**03 29 44.4**	**+0.2**
KRER				*eS*	**S**	**03 30 15.7**	**+1.3**
SMAR	**Somma**	**0.87**	**81**	*eP*	**Pn**	**03 29 44.9**	**+0.6**
SMAR				*eS*	**S**	**03 30 15.6**	**+0.9**
UGLR	**Uglovaya**	**0.88**	**85**	*eP*	**Pn**	**03 29 45.1**	**+0.9**
UGLR				*eS*	**S**	**03 30 15.4**	**+0.9**
SDLR	**Sedlovina**	**0.92**	**80**	*eP*	**Pn**	**03 29 44.7**	**+0.4**
SDLR				*eS*	**S**	**03 30 15.8**	**+0.9**
MIPR	**Malaya Ipel'ka**	**0.94**	**204**	*eP*	**Pn**	**03 29 43.8**	**-0.6**
RUS	**Russkaya**	**0.99**	**135**	*eP*	**Pn**	**03 29 44.3**	**-0.3**
RUS				*eS*	**S**	**03 30 13.8**	**-1.4**
NLC	**Nalytchevo**	**1.19**	**87**	*eP*	**Pn**	**03 29 45.4**	**-0.2**
NLC				*eS*	**S**	**03 30 16.1**	**-0.9**
KDTR	**Khodutka, Kamc**	**1.40**	**162**	*eP*	**Pn**	**03 29 45.9**	**-0.9**
KDTR				*eS*	**S**	**03 30 17.0**	**-2.4**
SPN	**Mys Shipunski**	**1.60**	**90**	*eP*	**Pn**	**03 29 48.7**	**+0.5**
SPN				*eS*	**S**	**03 30 20.8**	**-1.0**
TUMR	**Tumrok**	**2.70**	**36**	*eP*	**Pn**	**03 29 58.5**	**+0.9**
MKZ	**Mys Kozlova**	**2.95**	**59**	*eP*	**Pn**	**03 29 59.7**	**-0.2**
MKZ				*eS*	**S**	**03 30 40.1**	**-2.9**
KMNR	**Kamenistaya**	**3.12**	**31**	*eP*	**Pn**	**03 30 02.3**	**+0.6**
KOZ	**Kozyrevsk**	**3.27**	**25**	*eP*	**Pn**	**03 30 04.0**	**+0.7**
KPT	**Kopyto**	**3.29**	**29**	*eP*	**Pn**	**03 30 01.6**	**-1.9**
SRDR	**Sredinnyy**	**3.47**	**22**	*eP*	**Pn**	**03 30 05.2**	**-0.1**
KLY	**Klyuchi**	**3.71**	**30**	*eP*	**Pn**	**03 30 08.7**	**+0.8**
SMKR	**Semkarok**	**4.19**	**33**	*eP*	**Pn**	**03 30 14.1**	**+0.8**
KBG	**Krutoberegovo**	**4.40**	**43**	*eP*	**Pn**	**03 30 14.8**	**-0.8**
KBTR	**Krutoberegovo**	**4.42**	**44**	*eP*	**Pn**	**03 30 14.8**	**-1.1**
KBTR				*eS*	**S**	**03 31 07.6**	**-4.3**
BKI	**Bering**	**5.46**	**64**	*eP*	**Pn**	**03 30 29.1**	**+0.9**
MJAR	**Matsushiro Arr**	**21.33**	**227**	P	**P**	**03 33 29.8**	**-1.1**
	1.5nm,0.6s,baz=31,slow=9.3,SNR=4.5						
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**46.40**	**300**	P	P	03 37 11.9	+7.9
	0.1nm,0.3s,baz=60,slow=8.1,SNR=1.7						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**58.92**	**59**	P	**P**	**03 38 36.1**	**+0.5**
	0.3nm,0.5s,baz=0.0,slow=0.0,SNR=4.3						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**72.12**	**65**	P	**P**	**03 40 01.2**	**+1.6**
	0.3nm,0.4s,baz=295,slow=5.3,SNR=14						
	0.3nm,0.4s						

JMA 04 03:31:32.3±0.1, 24.3N±0.2×123.8E±0.4, h17km±1km, MV0.7/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.09**	**335**	P	Pg	03 31 35.6	0.0
IRIF				S	Sg	03 31 38.0	+0.1
HATJ	**Hateruma jima**	**0.20**	**171**	P	Pg	03 31 37.0	-0.1
HATJ				S	Sg	03 31 40.4	0.0
JKRS	**Kuro-shima**	**0.22**	**95**	P	Pg	03 31 37.3	-0.1
JKRS				S	Sg	03 31 41.0	+0.2
JIJ	**Ishigaki jima**	**0.36**	**73**	P	Pg	03 31 39.5	-0.2
JISG	**Ishigakijimahi**	**0.59**	**56**	P	Pg	03 31 44.0	0.0

IDC 04 03:31:51.4±2.3, 31.63S×178.60W, h0km, mb3.8/3, mbtmp3.8/3, MS3.5/2, Error ellipse: s-maj=66.5km s-min=37.7km az=44.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**38.72**	**309**	LR	LR	03 51 54.1	
	comp=Z,26nm,21.1s,baz=66,slow=31						
ASAR	**Alice Springs**	**42.55**	**269**	P	P	03 39 48.6	-0.4
	0.7nm,0.6s,baz=113,slow=7.8,SNR=6.5						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**43.65**	**274**	P	P	03 39 58.2	+0.2
	0.7nm,0.4s,baz=110,slow=8.2,SNR=6.2						
	0.7nm,0.4s						
QSPA	**South Pole Qui**	**58.48**	**180**	P	P	03 41 49.0	-0.1
	0.7nm,0.7s,baz=96,slow=1.0,SNR=6.2						
	0.7nm,0.7s						
PETK	**Petropavlovsk-**	**86.87**	**346**	LR	LR	04 21 11.4	
	comp=Z,57nm,18.5s,baz=37,slow=34						
FINES	**FINESS Array B**	**146.11**	**339**	PKPbc	PKPdf	03 51 31.9	+0.2
	2.2nm,1.0s,baz=46,slow=4.0,SNR=3.6						

TAP 04 03:32:07.6, 24.15N×121.63E, h2km±1km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.01**	**339**	*eP*	Pg	03 32 08.0	-0.1
ETL				*eS*	Sg	03 32 08.6	0.0
NACB	**Ninganchiao**	**0.04**	**311**	*i* P	Pg	03 32 08.4	0.0
NACB				S	Sg	03 32 09.2	+0.1
ETLH	**Xiulin Townshi**	**0.15**	**294**	*eP*	Pg	03 32 10.9	+0.4
ETLH				*eS*	Sg	03 32 13.3	+0.9
LXIB	**Xiulin Townshi**	**0.23**	**237**	*eP*	Pg	03 32 12.8	+0.7
LXIB				*eS*	Sg	03 32 16.1	+1.0

*SNET **04** 04:01:13.9±1.4, 12.56N×87.64W, h59km, ML3.6, Presumed earthquake*
*CATAC **04** 04:01:13.7±0.2, 12°N±2°×87°8W±°, h39km±3km, M3.8/36, MLv3.8/36, Error ellipse: s-maj=4.5km s-min=1.4km az=27.9, confirmed*

ISC 04 04:01:13.5±1.3, 12.46N±0.06×87.70W±0.03, h64km±12km, n58, σ0§40/93, 3C-7D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.54**	**15**	P	**Pn**	**04 01 25.9**	**-0.5**
CSGN				S	**Sn**	**04 01 35.8**	**+0.2**
CRIN	**San Cristobal**	**0.68**	**69**	P	**Pn**	**04 01 28.3**	**+0.4**
CRIN				S	**Sn**	**04 01 39.7**	**+1.2**
INTP	**Intipuca**	**0.81**	**335**	*eP*	**Pn**	**04 01 28.9**	**-0.5**
INTP				*eS*	**Sn**	**04 01 40.6**	**-0.5**
CNCH	**Conchagua**	**0.82**	**351**	P	**Pn**	**04 01 29.4**	**-0.3**
CNCH	**Conchagua**	**0.82**	**351**	*eP*	**Pn**	**04 01 29.4**	**-0.3**
CNCH				*eS*	**Sn**	**04 01 41.9**	**+0.3**
QUEN	**Al S del Volca**	**0.84**	**81**	P	**Pn**	**04 01 29.6**	**-0.2**
LCND	**La Caada**	**0.87**	**348**	P	**Pn**	**04 01 29.9**	**-0.2**
LCND	**La Caada**	**0.87**	**348**	*eP*	**Pn**	**04 01 29.6**	**-0.5**
PLRN	**Geotermica Pol**	**0.92**	**82**	P	**Pn**	**04 01 30.2**	**-0.5**
PLRN				S	**Sn**	**04 01 43.6**	**+0.1**
RANC	**El Ranchito**	**1.13**	**330**	P	**Pn**	**04 01 33.5**	**-0.1**
RANC	**El Ranchito**	**1.13**	**330**	*eP*	**Pn**	**04 01 33.5**	**-0.1**
RANC				*eS*	**Sn**	**04 01 49.0**	**+0.5**
MOMN	**Momotombo**	**1.14**	**92**	P	**Pn**	**04 01 33.3**	**-0.2**
MOMN				S	**Sn**	**04 01 48.3**	**-0.2**
PACA	**Pacayal**	**1.17**	**329**	P	**Pn**	**04 01 33.8**	**-0.4**
PACA				S	**Sn**	**04 01 49.6**	**+0.1**
PACA	**Pacayal**	**1.17**	**329**	*eP*	**Pn**	**04 01 34.0**	**-0.1**
PACA				*eS*	**Sn**	**04 01 50.0**	**+0.5**
AMTN	**Mateare**	**1.26**	**100**	P	**Pn**	**04 01 34.8**	**-0.3**
SAPS	**Ciudad Sandino**	**1.30**	**103**	P	**Pn**	**04 01 34.8**	**-0.3**
SAPS				S	**Sn**	**04 01 52.3**	**0.0**
APQ3	**Volcan Apoyequ**	**1.32**	**98**	P	**Pn**	**04 01 35.7**	**-0.2**
APQ3				S	**Sn**	**04 01 53.1**	**+0.5**
APYN	**Apoyeque**	**1.34**	**99**	P	**Pn**	**04 01 35.9**	**-0.3**
APYN				S	**Sn**	**04 01 53.2**	**0.0**
APQ2	**Apoyeque**	**1.37**	**101**	P	**Pn**	**04 01 36.3**	**-0.3**
APQ2				S	**Sn**	**04 01 54.2**	**+0.2**
ABCN	**Banco Central**	**1.40**	**104**	S	**Sn**	**04 01 54.8**	**+0.1**
ALLN	**Telcor Managua**	**1.43**	**102**	S	**Sn**	**04 01 55.3**	**0.0**
TISN	**Laguna Tiscapa**	**1.44**	**102**	P	**Pn**	**04 01 37.2**	**-0.3**
LIMN	**Finca el Limon**	**1.44**	**65**	P	**Pn**	**04 01 37.1**	**-0.5**
LIMN				S	**Sn**	**04 01 55.4**	**-0.3**
UNAN	**Cigeo UNAN**	**1.44**	**104**	P	**Pn**	**04 01 37.3**	**-0.2**
UNAN				S	**Sn**	**04 01 55.8**	**+0.2**
MGAN	**Managua**	**1.46**	**102**	P	**Pn**	**04 01 37.7**	**-0.1**
MGAN				S	**Sn**	**04 01 56.2**	**+0.3**
TECO	**Alcaldia de Te**	**1.50**	**316**	P	**Pn**	**04 01 38.0**	**-0.4**
TECO				S	**Sn**	**04 01 56.5**	**+0.6**
WILN	**Americas 2**	**1.51**	**101**	P	**Pn**	**04 01 38.4**	**0.0**
WILN				S	**Sn**	**04 01 57.6**	**+0.4**
MAS3	**Al N del Volca**	**1.55**	**106**	⇓P	**Pn**	**04 01 38.7**	**-0.4**
MAS3				S	**Sn**	**04 01 58.1**	**-0.2**
SABN	**Sabanita**	**1.59**	**108**	⇓P	**Pn**	**04 01 39.2**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.59**	**321**	S	**Sn**	**04 01 59.6**	**+0.3**
COEG	**Centro de Oper**	**1.63**	**315**	P	**Pn**	**04 01 40.0**	**-0.2**
COEG				S	**Sn**	**04 02 00.2**	**0.0**
NANN	**Nandasmo**	**1.63**	**108**	⇓P	**Pn**	**04 01 40.8**	**+0.7**
NANN				S	**Sn**	**04 02 01.3**	**+1.2**
OCON	**Estacion meteo**	**1.67**	**46**	⇑P	**Pn**	**04 01 40.3**	**-0.4**
OCON				S	**Sn**	**04 02 01.3**	**+0.1**
SJTE	**Alcalda de S**	**1.71**	**312**	*eP*	**Pn**	**04 01 41.1**	**-0.2**
SJTE				*eS*	**Sn**	**04 02 01.9**	**-0.4**
MARCA	**Marcala la Paz**	**1.72**	**349**	P	**Pn**	**04 01 41.3**	**-0.1**
MARCA				S	**Sn**	**04 02 03.0**	**+0.5**
PAVA	**Las Pavas**	**1.73**	**316**	P	**Pn**	**04 01 41.7**	**+0.1**
PAVA				S	**Sn**	**04 02 03.4**	**+0.5**
MATN	**Matagalpa**	**1.80**	**75**	⇓P	**Pn**	**04 01 41.8**	**-0.6**
MATN				S	**Sn**	**04 02 04.3**	**-0.1**
RCFN	**Al S de San Ju**	**1.81**	**54**	⇓P	**Pn**	**04 01 42.4**	**-0.2**
RCFN				S	**Sn**	**04 02 04.5**	**-0.1**
RCON	**San Juan de Ri**	**1.82**	**56**	⇓P	**Pn**	**04 01 42.5**	**-0.3**
RCON				S	**Sn**	**04 02 05.3**	**+0.3**
P5NO	**Presa 5 de nov**	**1.83**	**326**	S	**Sn**	**04 02 05.2**	**+0.1**
RCVN	**Varillal2**	**1.85**	**53**	⇑P	**Pn**	**04 01 43.0**	**-0.1**
LOMA	**Loma Larga**	**1.85**	**310**	P	**Pn**	**04 01 43.5**	**+0.2**
LOMA				S	**Sn**	**04 02 05.4**	**-0.4**
LALI	**Alcalda de L**	**1.88**	**303**	S	**Sn**	**04 02 05.9**	**-0.3**
RCPN	**Sur Rio San Ju**	**1.90**	**56**	⇑P	**Pn**	**04 01 43.7**	**-0.1**
UEES	**Universidad Ev**	**1.95**	**310**	S	**Sn**	**04 02 08.3**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.99**	**90**	⇓P	**Pn**	**04 01 44.3**	**-0.7**
PMON	**Piamonte**	**2.01**	**309**	P	**Pn**	**04 01 45.4**	**+0.2**
PMON				S	**Sn**	**04 02 09.6**	**+0.2**
JAYA	**Jayaque - finc**	**2.08**	**305**	P	**Pn**	**04 01 46.0**	**-0.3**
JAYA				S	**Sn**	**04 02 11.0**	**-0.2**
JAYA	**Jayaque - finc**	**2.08**	**305**	*eP*	**Pn**	**04 01 46.0**	**-0.3**
JAYA				*eS*	**Sn**	**04 02 11.0**	**-0.2**
UNIC	**Universidad Ca**	**2.35**	**310**	S	**Sn**	**04 02 18.4**	**+0.6**
NUBE	**Las Nubes**	**2.48**	**306**	S	**Sn**	**04 02 21.3**	**+0.2**
SARH	**Santa Rosa de**	**2.52**	**336**	P	**Pn**	**04 01 52.6**	**+0.3**
SARH				S	**Sn**	**04 02 22.6**	**+0.6**
ESQI	**Esquipulas**	**2.63**	**323**	S	**Sn**	**04 02 25.6**	**+1.0**

KOLA 04 04:05:50.1, 67.67N×33.71E, h0km, ML1.4, Error ellipse: s-maj=2.8km s-min=1.7km az=110.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.16**	**228**	P	Pg	04 05 52.4	-0.7
APA				S	Sg	04 05 55.2	+0.1
APA0	**Apatity Array**	**0.28**	**256**	P	Pg	04 05 55.1	-0.3
APA0				S	Sg	04 05 59.1	0.0
LVZ	**Lovozero**	**0.42**	**57**	S	Sg	04 06 03.6	0.0
KVDA	**Kovda**	**1.04**	**199**	S	Sg	04 06 22.4	-1.0
TERR	**Teriberka**	**1.62**	**18**	S	Sn	04 06 39.8	-1.5
ARCES	**ARCESS Array B**	**3.54**	**306**	P	Pn	04 06 45.4	-0.9
ARCES				S	Sn	04 07 27.2	-1.5

*MOS **04** 04:05:58.9±0.9, 41.33N×140.43E, h143km, mb4.3/22, Error ellipse: s-maj=7.2km s-min=5.7km az=97.0*
*NEIC **04** 04:05:59.8±1.6, 41.38N±0.07×140.3E±0.1, h128km±5km, mb4.5/137, Error ellipse: s-maj=12.3km s-min=10.2km az=113.0*
*GFZ **04** 04:05:59.8±0.3, 41°N±4°×14°0E±°, h131km, M4.6/18, mb4.6/18*
*IDC **04** 04:06:00.5±1.3, 41.31N×140.40E, h146km±11km, mb3.8/24, mbtmp4.2/31, Error ellipse: s-maj=12.0km s-min=10.7km az=160.0*
*JMA **04** 04:06:00.1±0.1, 41.3N±0.3×140.5E±0.6, h135km, MV3.3/39, TSUGARU STRAIT REGION*

ISC 04 04:05:59.5±0.5, 41.27N±0.04×140.53E±0.04, h135km±4km, n488, σ1§04/466, mb4.4/113, 10C-14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSI2	**Shiura 2**	**0.23**	**203**	*i* P	**Pn**	**04 06 18.8**	**+0.8**
JSI2				S	**Sn**	**04 06 32.9**	**+0.8**
JSR	**Shiriuchi**	**0.27**	**341**	*i* P	**Pn**	**04 06 18.5**	**+0.4**
JSR				S	**Sn**	**04 06 32.2**	**-0.2**
JOT	**Ohata**	**0.40**	**74**	*i* P	**Pn**	**04 06 19.4**	**+0.7**
JOT				S	**Sn**	**04 06 34.1**	**+0.9**
JOMM	**Oshimamatsumae**	**0.47**	**303**	*i* P	**Pn**	**04 06 19.3**	**+0.4**
JOMM				S	**Sn**	**04 06 33.8**	**+0.1**
JTM	**Tenmabayashi**	**0.63**	**140**		**Pn**	**04 06 20.8**	**+0.8**
JTM	**Tenmabayashi**	**0.63**	**140**	P	**Pn**	**04 06 20.9**	**+0.9**
JTM	**Tenmabayashi**	**0.63**	**140**	*i* P	**Pn**	**04 06 20.8**	**+0.8**
JTM				S	**Sn**	**04 06 36.5**	**+1.1**
JKB	**Kayabe**	**0.72**	**31**	*i* P	**Pn**	**04 06 21.2**	**+0.7**
JKB				S	**Sn**	**04 06 37.4**	**+0.9**
JIW	**Iwasaki**	**0.79**	**211**	*i* P	**Pn**	**04 06 21.8**	**+0.7**
JIW				S	**Sn**	**04 06 38.0**	**+0.6**
JYM2	**Yakumo 2**	**0.85**	**352**	P	**Pn**	**04 06 22.0**	**+0.5**
JYM2				S	**Sn**	**04 06 38.6**	**+0.2**
JAH	**Hinai**	**1.09**	**176**	P	**Pn**	**04 06 24.6**	**+0.9**
JAH				S	**Sn**	**04 06 43.9**	**+1.8**
JOSM	**Okushiri--Mats**	**1.13**	**316**	P	**Pn**	**04 06 24.1**	**+0.1**
JOSM				S	**Sn**	**04 06 42.2**	**-0.6**
JANG	**Nango**	**1.17**	**140**	*i* P	**Pn**	**04 06 24.8**	**+0.4**
JANG				S	**Sn**	**04 06 43.8**	**+0.4**
JHST	**Hiyamasetana**	**1.25**	**337**	*eS*	**Sn**	**04 06 45.2**	**+0.3**
JNB	**Noboribetsu**	**1.25**	**17**	P	**Pn**	**04 06 25.9**	**+0.6**
JNB				*eS*	**Sn**	**04 06 45.3**	**+0.3**
JSH	**Shimam**	**1.42**	**345**	P	**Pn**	**04 06 27.5**	**+0.5**
JEW	**Eniwo**	**1.71**	**23**	P	**Pn**	**04 06 31.7**	**+1.4**
JOM	**Ohasama**	**1.89**	**162**	*i* P	**Pn**	**04 06 33.0**	**+0.5**
JOM				S	**Sn**	**04 06 58.4**	**+0.7**
JNBK	**Urakawa-nobuka**	**1.94**	**58**	P	**Pn**	**04 06 34.1**	**+1.1**
ASAJ	**Asahikawa**	**3.22**	**27**	P	**Pn**	**04 06 49.6**	**+0.5**
JKA	**Kamikawa-asahi**	**3.22**	**28**		**Pn**	**04 06 49.6**	**+0.5**
JKA	**Kamikawa-asahi**	**3.22**	**28**	P	**Pn**	**04 06 49.6**	**+0.5**
NMR	**Nemuro--Hokkai**	**4.38**	**60**	*eP*	**Pn**	**04 07 02.9**	**-1.5**
NMR				*i* S	**Sn**	**04 07 48.7**	**-6.1**
RUSJ	**Misakicho**	**4.48**	**49**	P	**Pn**	**04 07 06.9**	**+1.3**
RUSJ				*i* S	**Sn**	**04 07 56.9**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**4.80**	**53**	*eP*	**Pn**	**04 07 09.1**	**-0.8**
YUK				*i* S	**Sn**	**04 08 00.8**	**-3.9**
YUK				pmax	pmax		
	comp=Z,198nm,0.5s						
YUK				pmax	pmax		
	comp=N,58nm,0.6s						
YUK				pmax	pmax		
	comp=E,50nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				smax	smax		
	comp=N,918nm,0.4s						
MJB9	**Matsu-Tunnel**	**5.06**	**202**		**Pn**	**04 07 14.8**	**+1.4**
MAJO	**Matsushiro**	**5.06**	**202**		**Pn**	**04 07 14.4**	**+0.9**
MAJO	**Matsushiro**	**5.06**	**202**	*ce*P	**Pn**	**04 07 14.5**	**+1.0**
MAJO	**Matsushiro**	**5.06**	**202**	P	**Pn**	**04 07 14.2**	**+0.8**
MJAR	**Matsushiro Arr**	**5.06**	**202**	P	**Pn**	**04 07 15.3**	**+1.8**
	comp=N,5.9nm,0.7s,baz=6.7,slow=15,SNR=19						
MJAR	**Matsushiro Arr**	**5.06**	**202**		**Pn**	**04 07 15.6**	**+2.1**
**M

MA2 pmax pmax
comp=Z,38nm,2.0s
MA2 Magadan 19.41 16 P P 04 10 13.6 -1.2
HHC Hu-ho-hao-te 21.81 279 *e*P P 04 10 39.3 -1.5
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,79nm,4.6s
HHC LR LR
comp=N,130nm,17.9s
HHC LR LR
comp=E,94nm,17.9s
HHC LR LR
comp=Z,140nm,17.9s
SEY Seymchan 22.81 14 P P 04 10 48.8 -1.5
comp=Z,5.8nm,0.7s,baz=204,slow=6.2,SNR=9.6
comp=Z,5.8nm,0.7s
SEY Seymchan 22.81 14⇓ *i*P P 04 10 50.1 -0.2
SEY pmax pmax
comp=Z,8.0nm,0.9s
BTO2 Baotou 23.09 279 *e*P P 04 10 52.1 -1.3
BTO2 S S 04 14 54.5 +0.4
BTO2 pmax pmax
comp=Z,9.0nm,0.5s
BTO2 pmax pmax
comp=Z,230nm,5.2s
BTO2 LR LR
comp=N,170nm,4.1s
BTO2 LR LR
comp=E,100nm,5.7s
BTO2 LR LR
comp=Z,180nm,8.9s
ULN Ulaanbaatar 24.61 297 P P 04 11 05.3 -1.9
ULN Ulaanbaatar 24.61 297 *ce*P P 04 11 05.7 -1.5
ULN pmax pmax
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 24.61 297 P P 04 11 06.3 -0.9
SONM Songino Array 25.05 297 P P 04 11 10.0 -1.1
comp=Z,1.6nm,0.5s,baz=94,slow=8.7,SNR=9.6
SONM ScP ScP 04 18 07.3 -1.1
comp=Z,0.9nm,0.9s,baz=202,slow=3.2,SNR=4.9
comp=Z,1.6nm,0.5s
SONM Songino Array 25.05 297 P P 04 11 10.1 -1.1
SONM Songino Array 25.05 297 P P 04 11 10.1 -1.1
SONM pmax pmax
comp=Z,4.0nm,1.2s
TLY Talaya 27.18 305⇓ *e*P P 04 11 29.4 -0.7
TLY pmax pmax
comp=Z,4.0nm,0.7s
TLY Talaya 27.18 305 P P 04 11 29.3 -0.7
BILL Bilibino 30.20 19⇑ *e*P P 04 11 58.9 +2.3
BILL pmax pmax
comp=Z,9.0nm,1.4s
H11N2 WAKE ISLAND Hy 31.05 126 T T 04 44 34.3
baz=322
H11N1 WAKE ISLAND Hy 31.06 126 T T 04 44 29.9
baz=322
H11N3 WAKE ISLAND Hy 31.07 126 T T 04 44 16.2
baz=322,slow=74
H11S1 WAKE ISLAND Hy 31.86 128 T T 04 45 41.0
baz=329,slow=76,SNR=59
H11S3 WAKE ISLAND Hy 31.87 128 T T 04 45 41.9
baz=329,slow=76,SNR=43
H11S2 WAKE ISLAND Hy 31.88 128 T T 04 45 42.3
baz=329,slow=76,SNR=44
SPIA Saint Paul Isl 34.99 46 P P 04 12 38.8 +0.4
baz=265
PZH PanZhiHua 35.10 258 P P 04 12 40.5 +0.6
GAMB Gambell 35.53 34 P P 04 12 43.4 +0.5
baz=254
UNV Unalaska Valle 37.02 52 P P 04 12 56.4 +0.7
baz=273
M11K Mekoryuk 37.41 41 P P 04 12 59.3 +0.3
baz=264
DGZ Jazzator, Alta 37.47 301 *d i*P P 04 13 00.1 +0.2
DGZ pmax pmax
comp=Z,20nm,0.7s
TNA Tin City 37.57 32 P P 04 13 00.4 +0.2
baz=256
F14K Arctic Creek 38.20 33 P P 04 13 05.2 -0.3
baz=258
K13K Kusilvak Mount 38.33 39 P P 04 13 07.8 +1.1
K13K IAmb IAmb 04 13 09.1
comp=Z,11nm,1.2s
K13K Kusilvak Mount 38.33 39 P P 04 13 06.4 -0.3
baz=264
ANM Nome 38.41 34 P P 04 13 07.1 -0.2
baz=260
WMQ Urumqi 38.46 292 *e*P P 04 13 09.0 +0.9
WMQ pmax pmax
comp=Z,16nm,0.9s
ZAA0 Zalesovo Array 38.64 309 P 04 13 08.7 -0.7
ZAA0 IAmb IAmb 04 13 10.1
comp=Z,7.8nm,0.7s
ZALV Zalesovo Beam 38.64 309 P P 04 13 08.8 -0.5
comp=Z,10nm,0.7s,baz=84,slow=8.1,SNR=40
ZALV PcP PcP 04 15 18.4 -0.3
comp=Z,1.4nm,0.5s,baz=70,slow=2.2,SNR=5.8
ZALV ScP ScP 04 18 52.0 -2.0
comp=Z,1.4nm,0.6s,baz=108,slow=3.9,SNR=7.0
comp=Z,10nm,0.7s
M13K Dall Lake 38.83 41 P P 04 13 11.0 +0.3
baz=267
F15K North Star Dit 38.93 33 P P 04 13 12.8 +1.1
F15K North Star Dit 38.93 33 P P 04 13 11.4 -0.2
baz=259
G15K Niukluk 39.05 34 P P 04 13 12.6 -0.1
baz=260
L14K Kuka Creek 39.21 40 P 04 13 15.4 +1.4
L14K IAmb IAmb 04 13 16.8
comp=Z,10.0nm,1.1s
L14K Kuka Creek 39.21 40 P P 04 13 14.0 0.0
baz=266
C16K Lisburne Hills 39.25 28 P P 04 13 13.6 -0.6
baz=255
M14K Bethel 39.53 41 P P 04 13 18.5 +1.8
M14K IAmb IAmb 04 13 19.2
comp=Z,12nm,0.9s
M14K Bethel 39.53 41 P P 04 13 16.5 -0.1
baz=268
N14K Kuskokwak Cree 39.64 42 P P 04 13 17.7 +0.1
baz=269
H16K Elim 39.75 34 P P 04 13 18.3 -0.2
baz=263
L15K Ungalak Mounta 39.81 39 P P 04 13 19.2 +0.3
baz=267
K15K Wolf Creek Mou 39.83 38 P P 04 13 21.0 +1.9
K15K IAmb IAmb 04 13 21.9
comp=Z,8.5nm,1.1s
K15K Wolf Creek Mou 39.83 38 P P 04 13 19.1 0.0
baz=266
O14K Tigyukauivet M 39.84 43 P P 04 13 19.6 +0.4
baz=270
D17K Noatak River 39.95 30 P P 04 13 19.8 -0.2
baz=258
C17K DeLong Mountai 40.08 28 P P 04 13 21.1 0.0
baz=257
RDOG Red Dog Mine 40.09 29 P P 04 13 21.1 -0.1
baz=258
M15K Kasigluk River 40.15 41 P P 04 13 22.0 +0.2
baz=269,SNR=6.5
E17K Hotham Inlet 40.30 31 P P 04 13 23.0 +0.1
baz=260
J16K Anvik River 40.33 37 P P 04 13 23.3 +0.1
baz=266
I17K Unalakleet 40.34 36 P P 04 13 23.2 0.0
baz=265
F17K Baldwin Pennin 40.42 32 P P 04 13 24.0 +0.1
baz=262
N15K Kwethluk River 40.44 42 P P 04 13 25.9 +1.7
N15K IAmb IAmb 04 13 32.9
comp=Z,12nm,0.9s
N15K Kwethluk River 40.44 42 P P 04 13 24.2 0.0
baz=270
G17K Kiwalik Mounta 40.53 33 P P 04 13 25.1 +0.2
baz=263,SNR=6.6
O15K Ungalikthiuk R 40.58 43 P P 04 13 25.5 +0.1
baz=271
L16K Owhat River 40.77 39 P 04 13 27.5 +0.7
L16K Owhat River 40.77 39 P P 04 13 26.9 0.0
baz=269
H17K Granite Mounta 40.78 34 IAmb IAmb 04 13 33.4
comp=Z,10.0nm,1.2s
H17K Granite Mounta 40.78 34 P P 04 13 26.5 -0.5
baz=264
E18K Tukpahlearik C 40.83 30 P P 04 13 28.0 +0.7
E18K Tukpahlearik C 40.83 30 P P 04 13 27.7 +0.4
baz=261
C18K Utukok River 40.83 28 P P 04 13 27.5 +0.1
baz=259
S14K Fog Glacier 40.87 48 P P 04 13 28.0 +0.1
baz=275
CHNA Chernabura Isl 40.99 50 P P 04 13 29.1 +0.4
baz=277
M16K Timber Creek 41.00 40 P P 04 13 28.7 -0.1
baz=270
J17K VABM Dome 41.02 37 P P 04 13 28.7 -0.2
baz=267,SNR=7.1
F18K Selawik 41.08 32 P P 04 13 29.1 -0.2
baz=263
N16K Nishlik Lake 41.10 41 P P 04 13 29.2 -0.5
baz=271
A19K Wainwright 41.20 26 P P 04 13 29.6 -0.7
baz=257
L17K Donlin 41.33 39 P P 04 13 30.9 -0.6
baz=269
K17K Iditarod 41.35 38 IAmb IAmb 04 13 34.4
comp=Z,7.8nm,0.9s
K17K Iditarod 41.35 38 P P 04 13 31.3 -0.3
baz=269
G18K Tagagawik 41.40 33 P P 04 13 31.6 -0.4
baz=265
MK31 Makanchi Array 41.41 298 *d i*P P 04 13 31.5 -0.8
MKAR Makanchi Array 41.41 298 P P 04 13 31.7 -0.6
comp=Z,15nm,0.8s,baz=83,slow=9.6,SNR=100
MKAR ScP ScP 04 19 01.8 -3.2
comp=Z,0.7nm,0.7s,baz=70,slow=5.3,SNR=6.4
comp=Z,15nm,0.8s
MKAR Makanchi Array 41.41 298 P P 04 13 31.9 -0.4
H18K Honhosa River 41.45 34 IAmb IAmb 04 13 38.5
comp=Z,14nm,1.2s
H18K Honhosa River 41.45 34 P P 04 13 32.5 +0.1
baz=266
O16K Kokwok River B 41.46 42 P P 04 13 32.9 +0.4
baz=272
C19K Lookout Ridge 41.49 28 P P 04 13 32.2 -0.6
baz=260
CHGN Chignik 41.50 47 P P 04 13 33.3 +0.4
baz=276
P16K Nushagak River 41.53 43 P P 04 13 33.1 0.0
baz=273
MAKZ Makanchi 41.61 298 P P 04 13 33.7 -0.3
MAKZ Makanchi 41.61 298 P P 04 13 33.7 -0.3
MAKZ pmax pmax
comp=Z,16nm,0.8s
MAKZ Makanchi 41.61 298 P P 04 13 33.6 -0.3
M17K Holitna River 41.74 40 P P 04 13 36.8 +2.0
M17K IAmb IAmb 04 13 43.3
comp=Z,7.6nm,0.7s
M17K Holitna River 41.74 40 P P 04 13 34.6 -0.2
baz=271
F19K Shaleruckik Mo 41.85 31 P P 04 13 34.9 -0.6
baz=264,SNR=8.6
N17K Nushagak Hills 41.88 41 P P 04 13 35.4 -0.6
baz=272
D19K Kuna River 41.92 29 IAmb IAmb 04 13 41.0
comp=Z,12nm,0.9s
D19K Kuna River 41.92 29 P P 04 13 36.0 -0.2
baz=262,SNR=5.6
O17K Koliganek Bris 41.95 42 P P 04 13 37.3 +0.7
baz=273
GCSA Galena City Sc 42.06 35 P P 04 13 37.5 +0.3
baz=268
G19K Purcell Mounta 42.06 33 IAmb IAmb 04 13 42.7
comp=Z,6.8nm,0.7s
G19K Purcell Mounta 42.06 33 P P 04 13 36.8 -0.5
baz=266,SNR=7.1
L18K Granite Mounta 42.09 38 P P 04 13 37.9 +0.3
baz=271
CMAR Chiang Mai Arr 42.11 250 P P 04 13 36.0 -2.3
comp=Z,0.9nm,0.3s,baz=46,slow=6.5,SNR=6.2
comp=Z,0.9nm,0.3s
CMAR Chiang Mai Arr 42.11 250 *i*P P 04 13 39.7 +1.4
CMAR pmax pmax
comp=Z,1.0nm,0.3s
E19K Redstone River 42.12 31 P P 04 13 38.5 +0.7
E19K IAmb IAmb 04 13 43.3
comp=Z,7.6nm,0.8s
E19K Redstone River 42.12 31 P P 04 13 37.8 0.0
baz=264,SNR=13
H19K Roundabout Mou 42.28 33 P P 04 13 39.4 +0.3
baz=267,SNR=24
P17K Kvichak River 42.32 43 P P 04 13 39.8 +0.3
baz=274
B20K Meade River 42.48 27 P P 04 13 40.7 +0.1
baz=262
R17L Mt. Peulik Vol 42.49 45 P P 04 13 41.4 +0.4
baz=276
D20K Etivluk River 42.49 29 IAmb IAmb 04 13 45.9
comp=Z,1.1nm,0.8s
D20K Etivluk River 42.49 29 P P 04 13 40.9 0.0
baz=263
M18K Stony River 42.51 40 P P 04 13 41.2 +0.2
baz=272
N18K Kilae Creek 42.51 41 P P 04 13 43.0 +1.9
N18K IAmb IAmb 04 13 43.9
comp=Z,6.3nm,0.9s
N18K Kilae Creek 42.51 41 P P 04 13 41.4 +0.3
baz=273
J19K Poorman 42.58 36 P P 04 13 42.0 +0.4
baz=270,SNR=7.4
E20K Nigu River 42.60 29 P P 04 13 41.4 -0.3
baz=264,SNR=13
F20K Avaraart Lake 42.67 31 P P 04 13 41.6 -0.6
baz=266
Q17K Contact Creek 42.68 44 P P 04 13 42.4 -0.2
baz=276
A21K Barrow 42.87 25 P P 04 13 43.6 -0.2
baz=261
KURK Kurchatov 42.87 304 P 04 13 43.4 -0.7
KURK Kurchatov 42.87 304 *d i*P P 04 13 43.2 -0.9
KURK pmax pmax
comp=Z,14nm,0.6s
KURK Kurchatov 42.87 304 P P 04 13 43.5 -0.7
O18K Koktuh Hills 42.90 42 P P 04 13 44.2 0.0
baz=274
P18K Big Mountain, 42.93 43 P P 04 13 44.9 +0.4
baz=275
H20K Anotelleega Mo 42.93 34 P P 04 13 44.4 0.0
baz=269,SNR=7.5
KURBB Kurchatov Arra 42.95 304 P P 04 13 44.0 -0.7
comp=Z,16nm,0.6s,baz=80,slow=8.9,SNR=132
comp=Z,16nm,0.6s
L19K White Mountain 42.95 38 P P 04 13 43.8 -0.8
baz=272
I20K Naaghedeneel 43.09 35 P P 04 13 45.6 0.0
baz=270
Q18K Katmai Hardscr 43.11 44 P P 04 13 46.1 +0.1
baz=276
CHIR Chirikof Islan 43.11 48 P P 04 13 47.1 +1.2
baz=278
M19K Big River Lodg 43.18 39 P P 04 13 46.7 +0.2
baz=273
N19K Bonanza Creek 43.20 40 P P 04 13 46.8 +0.1
baz=274
C21K Knifeblade Rid 43.20 28 P P 04 13 47.4 +0.9
baz=265
J20K Nowinta River 43.23 36 IAmb IAmb 04 13 49.0
comp=Z,8.9nm,0.9s
J20K Nowinta River 43.23 36 P P 04 13 47.3 +0.5
baz=271,SNR=9.9
K20K Telida 43.28 37 P P 04 13 48.0 +0.8
baz=272,SNR=6.5
B21K Ikpikpuk River 43.31 28 P P 04 13 47.9 +0.6
baz=264
O19K Port Alsworth 43.32 41 P P 04 13 48.2 +0.7
baz=275
A22K Sinclair Lake 43.35 26 P P 04 13 48.0 +0.4
baz=263
E21K Killik River 43.44 29 P P 04 13 48.7 +0.2
baz=266
G21K Allakaket 43.52 32 IAmb IAmb 04 13 55.4
comp=Z,12nm,0.8s
G21K Allakaket 43.52 32 P P 04 13 48.9 -0.2
baz=269,SNR=16
F21K Alatna River 43.55 31 P P 04 13 49.4 +0.1
baz=268
M20K Styx River 43.78 39 IAmb IAmb 04 14 00.1
comp=Z,6.0nm,0.8s
M20K Styx River 43.78 39 P P 04 13 51.7 +0.4
baz=274
Q19K Cape Douglas, 43.78 43 P P 04 13 52.1 +0.8
baz=277
B22K Teshekpuk Lake 43.79 27 P P 04 13 51.7 +0.6
baz=265
H21K Melozitna Rive 43.80 33 P P 04 13 51.5 +0.1
baz=270,SNR=6.2
SII Sitkinak Islan 43.80 47 P P 04 13 52.4 +0.9
baz=279
P19K Oil Pt 43.92 42 P P 04 13 53.1 +0.7
baz=276
CHUM Lake Minchumin 44.04 36 P P 04 13 54.1 +0.8
baz=273,SNR=6.2
F22K John River 44.07 31 P P 04 13 53.9 +0.4
baz=269
I21K Tanana 44.15 34 P P 04 13 54.0 -0.1
baz=272
PPLA Purkeypile 44.15 37 IAmb IAmb 04 13 58.0
comp=Z,11nm,1.3s
PPLA Purkeypile 44.15 37 P P 04 13 54.6 +0.3
baz=274
CAST Castle Rocks 44.17 37 IAmb IAmb 04 14 02.1
comp=Z,8.2nm,0.7s
CAST Castle Rocks 44.17 37 P P 04 13 54.4 0.0
baz=273,SNR=14
O20K Slope Mountain 44.18 41 P P 04 13 54.5 0.0
baz=276
OHAK Old Harbor 44.19 46 P P 04 13 55.0 +0.4
baz=279
E22K Anaktuvuk Pass 44.22 30 IAmb IAmb 04 14 00.3
comp=Z,9.3nm,0.7s
E22K Anaktuvuk Pass 44.22 30 P P 04 13 54.5 -0.2
baz=269
G22K Bettles 44.32 32 P P 04 13 55.2 -0.2
baz=270
H22K Ishtalitna Cre 44.38 33 IAmb IAmb 04 14 02.7
comp=Z,4.7nm,0.6s
H22K Ishtalitna Cre 44.38 33 P P 04 13 55.8 -0.3
baz=271
KDAK Kodiak Island 44.49 45 P P 04 13 57.8 +1.0
baz=278
SKT Skwentna 44.52 39 P P 04 13 57.4 +0.2
baz=275
D23K Nanushuk River 44.66 29 P P 04 13 58.0 -0.1
baz=269
MLY Manley 44.68 34 P P 04 13 58.2 -0.2
baz=273,SNR=6.2
KTH Kantishna Hill 44.68 36 IAmb IAmb 04 14 01.4
comp=Z,14nm,1.0s
C23K Itkillik River 44.71 27 IAmb IAmb 04 14 03.9
comp=Z,6.7nm,0.8s
C23K Itkillik River 44.71 27 P P 04 13 59.0 +0.5
baz=268
HOM Homer 44.72 42 P P 04 13 58.8 +0.1
baz=278
CAPN Captain Cook N 44.83 40 P P 04 13 59.7 +0.2
baz=277
L22K Petersville 44.83 38 IAmb IAmb 04 14 07.1
comp=Z,4.8nm,0.6s
L22K Petersville 44.83 38 P P 04 13 59.3 -0.3
baz=275
COLD Coldfoot 44.83 31 P P 04 13 58.9 -0.6
baz=271
G23K Bananza Creek 44.91 32 IAmb IAmb 04 14 06.2
comp=Z,6.7nm,0.8s
G23K Bananza Creek 44.91 32 P P 04 14 00.1 -0.1
baz=272,SNR=9.7
TRF Thorofare Moun 44.97 36 P P 04 14 00.7 -0.1
baz=275
E23K Chandalar 45.05 30 IAmb IAmb 04 14 06.9
comp=Z,5.3nm,0.8s
E23K Chandalar 45.05 30 P P 04 14 01.5 +0.2
baz=271
TOLK Toolik Lake Re 45.06 29 P P 04 14 01.5 +0.2
baz=270
CUT Chulitna 45.07 38 P P 04 14 01.0 -0.4
baz=276
H23K Yukon River 45.14 33 IAmb IAmb 04 14 09.2
comp=Z,6.2nm,0.7s
H23K Yukon River 45.14 33 P P 04 14 01.2 -0.8
baz=273
BRSE Bradley Lake S 45.16 42 P P 04 14 01.2 -1.0
baz=278
WUS Wushi 45.23 291 P P 04 14 03.6 +0.4
I23K Minto, Yukon-K 45.25 34 IAmb IAmb 04 14 09.6
comp=Z,5.5nm,0.7s
I23K Minto, Yukon-K 45.25 34 P P 04 14 02.2 -0.6
baz=274
D24K Happy Valley 45.33 28 P P 04 14 02.7 -0.7
baz=270
C24K Franklin Bluff 45.37 28 IAmb IAmb 04 14 09.1
comp=Z,10nm,0.8s
C24K Franklin Bluff 45.37 28 P P 04 14 03.6 -0.1
baz=270
NEA2 Nenana 45.42 35 P P 04 14 04.0 -0.2
baz=275,SNR=18
E24K Your Creek 45.47 30 P P 04 14 03.7 -1.0
baz=272
RC01 Rabbit Creek A 45.47 40 IAmb IAmb 04 14 05.9
comp=Z,12nm,1.2s
RC01 Rabbit Creek A 45.47 40 P P 04 14 03.5 -1.1
baz=278
EVN Everest 45.49 271 P 04 14 06.7 +0.7
EVN Everest 45.49 271 P P 04 14 05.9 -0.1
MCK McKinley 45.55 36 P P 04 14 04.5 -0.8
baz=276
PMR Palmer 45.70 39 IAmb IAmb 04 14 08.1
comp=Z,6.9nm,1.0s
PMR Palmer 45.70 39 P P 04 14 05.6 -0.8
baz=278
F24K Squaw Lake 45.72 31 IAmb IAmb 04 14 12.5
comp=Z,3.9nm,0.6s
F24K Squaw Lake 45.72 31 P P 04 14 05.7 -0.8
baz=273
SEW Seward 45.75 41 P P 04 14 05.9 -0.9
baz=279
WAT1 Susitna Watana 45.82 37 P P 04 14 07.2 -0.2
baz=277
H24K Noodor Dome 45.82 33 IAmb IAmb 04 14 09.8
comp=Z,5.9nm,0.8s
H24K Noodor Dome 45.82 33 P P 04 14 06.5 -0.9
baz=275,SNR=8.3
WRH Wood River Hil 45.85 35 IAmb IAmb 04 14 15.7
comp=Z,7.3nm,0.8s
COLA College 45.91 34 P P 04 14 09.3 +1.3
COLA College 45.91 34*c i*P P 04 14 09.1 +1.1
COLA pmax pmax
comp=Z,12nm,0.8s
COLA College 45.91 34 P P 04 14 09.3 +1.3
G24K Hadweenzic Riv 45.92 32 P P 04 14 08.0 -0.2
baz=274
TARG Taragay, Kyrgy 46.03 292 P P 04 14 09.6 -0.2
KNK Knik Glacier 46.04 39 P P 04 14 09.5 +0.3
baz=278
SML Sawmill 46.05 39 IAmb IAmb 04 14 17.6
comp=Z,12nm,1.1s
SML Sawmill 46.05 39 P P 04 14 09.3 0.0
baz=278
POKR Poker Plat Res 46.07 34 P P 04 14 09.4 +0.1
baz=276
D25K Kavik River 46.20 28 IAmb IAmb 04 14 15.8
comp=Z,6.4nm,0.7s
D25K Kavik River 46.20 28 P P 04 14 09.9 -0.4
baz=272
WAT6 Susitna Watana 46.22 38 P P 04 14 10.9 +0.2
baz=278
DHY Denali Highway 46.32 37 P P 04 14 11.2 -0.3
baz=278,SNR=16
IL31 46.34 34 IAmb IAmb 04 14 19.0
comp=Z,8.8nm,0.7s
ILAR Eielson Array 46.34 34 P P 04 14 11.6 +0.2
comp=Z,6.3nm,1.0s,baz=267,slow=5.5,SNR=35
comp=Z,6.3nm,1.0s
ILAR Eielson Array 46.34 34 P P 04 14 12.0 +0.6
ILAR Eielson Array 46.34 34 P P 04 14 12.0 +0.6
M23K Glacier View 46.34 39 P P 04 14 11.3 -0.2
baz=279
HDA Harding Lake 46.35 35 P P 04 14 11.6 +0.1
baz=277
G25K Bearman Lake 46.46 32 P P 04 14 11.7 -0.6
baz=275
SCM Sheep Creek Mo 46.52 38 IAmb IAmb 04 14 15.2
comp=Z,8.3nm,1.0s
SCM Sheep Creek Mo 46.52 38 P P 04 14 12.6 -0.4
baz=279
E25K Arctic Village 46.56 30 P P 04 14 12.7 -0.4
baz=274
F25K Christian Rive 46.57 30 P P 04 14 12.9 -0.4
baz=275
C26K Camden Bay 46.68 27 P P 04 14 13.6 -0.4
baz=273
GLI Glacier Island 46.78 40 P P 04 14 14.2 -0.7
baz=280

P23K	**Montague Islan**	**46.78**	**41**	P		**P**	04 14 14.9	**0.0**
	baz=280								
PRP	**Porcupine Dome**	**46.82**	**33**	P		**P**	04 14 15.2	**-0.1**
	baz=277,SNR=27								
K24K	**Donnelly Dome**	**46.94**	**36**	IAmb		IAmb	04 14 23.0		
	comp=Z,9.7nm,0.7s								
K24K	**Donnelly Dome**	**46.94**	**36**	P		**P**	04 14 16.5	**+0.4**
	baz=278								
J25K	**Salcha River,**	**47.00**	**35**	P		**P**	04 14 16.8	**+0.1**
	baz=278								
M24K	**Tolsona, Glenn**	**47.01**	**38**	P		**P**	04 14 16.7	**0.0**
	baz=280								
C27K	**Jago River**	**47.12**	**28**	P		**P**	04 14 16.7	**-0.7**
	baz=275								
F26K	**Sheenjek River**	**47.13**	**30**	IAmb		IAmb	04 14 20.1		
	comp=Z,6.6nm,0.8s								
F26K	**Sheenjek River**	**47.13**	**30**	P		**P**	04 14 18.0	**+0.4**
	baz=276,SNR=5.9								
ASAI	**AK-SAY(Kyrgyzs**	**47.23**	**292**	P		**P**	04 14 18.9	**-0.2**
ASAI				pP		**pP**	04 14 48.1	**-1.4**
KLU	**Klutina**	**47.23**	**39**	IAmb		IAmb	04 14 27.1		
	comp=Z,6.9nm,0.7s								
KLU	**Klutina**	**47.23**	**39**	P		**P**	04 14 18.7	**+0.2**
	baz=280								
BVAR	**Borovoye Array**	**47.28**	**309**	P		**P**	04 14 17.9	**-1.0**
	comp=Z,4.3nm,0.5s,baz=68,slow=7.9,SNR=23								
BVAR				PcP		**PcP**	04 15 47.5	**-0.2**
	comp=Z,1.1nm,0.5s,baz=64,slow=3.4,SNR=4.3								
	comp=Z,4.3nm,0.5s								
BORK	**Borovoye**	**47.32**	**309**	P		**P**	04 14 17.9	**-1.3**
BORK	**Borovoye**	**47.32**	**309**	‖ *e*P		**P**	04 14 18.8	**-0.4**
BORK				pmax		pmax			
	comp=Z,3.0nm,0.6s								
RIDG	**Independent Ri**	**47.35**	**36**	IAmb		IAmb	04 14 26.9		
	comp=Z,6.3nm,0.8s								
RIDG	**Independent Ri**	**47.35**	**36**	P		**P**	04 14 18.8	**-0.5**
	baz=279								
G26K	**Porcupine Rive**	**47.35**	**31**	IAmb		IAmb	04 14 21.8		
	comp=Z,8.6nm,0.8s								
G26K	**Porcupine Rive**	**47.35**	**31**	P		**P**	04 14 20.0	**+0.7**
	baz=277,SNR=8.5								
HARP	**HAARP**	**47.43**	**38**	P		**P**	04 14 19.6	**-0.3**
	baz=280								
EYAK	**Cordova Ski Ar**	**47.49**	**40**	P		**P**	04 14 21.6	**+1.2**
EYAK				IAmb		IAmb	04 14 22.5		
	comp=Z,8.2nm,0.9s								
EYAK	**Cordova Ski Ar**	**47.49**	**40**	P		**P**	04 14 20.2	**-0.1**
	baz=281								
SCRK	**Sand Creek**	**47.69**	**35**	P		**P**	04 14 21.6	**-0.4**
	baz=280,SNR=20								
N25K	**Chitina, Valde**	**47.84**	**39**	P		**P**	04 14 23.1	**-0.1**
	baz=281								
BMRM	**Bremner River**	**47.96**	**39**	P		**P**	04 14 24.3	**+0.2**
	baz=282								
AAK	**Ala-Archa**	**47.98**	**295**	P		**P**	04 14 22.7	**-1.9**
	comp=Z,1.6nm,0.4s,baz=158,slow=11,SNR=2.4								
	comp=Z,1.6nm,0.4s								
E27K	**Coleen River**	**48.03**	**29**	P		**P**	04 14 24.5	**0.0**
	baz=278								
D27M	**Malcolm River**	**48.12**	**28**	P		**P**	04 14 24.7	**-0.5**
	baz=278								
L26K	**Log Cabin Wild**	**48.14**	**36**	IAmb		IAmb	04 14 28.2		
	comp=Z,6.9nm,1.1s								
L26K	**Log Cabin Wild**	**48.14**	**36**	P		**P**	04 14 25.6	**+0.2**
	baz=281								
G27K	**Doyon Strip**	**48.21**	**31**	P		**P**	04 14 25.4	**-0.5**
	baz=279								
KAIM	**Kayak Island**	**48.27**	**41**	P		**P**	04 14 26.7	**+0.3**
	baz=283								
H27K	**Steamboat Moun**	**48.35**	**32**	IAmb		IAmb	04 14 30.3		
	comp=Z,6.1nm,0.9s								
H27K	**Steamboat Moun**	**48.35**	**32**	P		**P**	04 14 26.5	**-0.5**
	baz=280,SNR=7.4								
I27K	**Kandik River**	**48.42**	**33**	IAmb		IAmb	04 14 30.7		
	comp=Z,9.4nm,1.2s								
I27K	**Kandik River**	**48.42**	**33**	P		**P**	04 14 26.6	**-1.0**
	baz=280,SNR=7.7								
M26K	**Nabesna, AK**	**48.42**	**37**	IAmb		IAmb	04 14 36.9		
	comp=Z,5.1nm,0.9s								
M26K	**Nabesna, AK**	**48.42**	**37**	P		**P**	04 14 27.9	**+0.3**
	baz=282								
K27K	**Chicken**	**48.51**	**35**	IAmb		IAmb	04 14 35.9		
	comp=Z,7.4nm,0.7s								
KSH2	**Kashi**	**48.61**	**290**	P		**P**	04 14 28.9	**-0.6**
KSH2				pmax		pmax			
	comp=Z,5.0nm,0.7s								
MCARA	**McCarthy VSAT**	**48.62**	**39**	P		**P**	04 14 28.8	**-0.3**
	baz=283								
CRQE	**Cirque**	**48.73**	**39**	P		**P**	04 14 29.8	**-0.2**
	baz=283								
E28M	**Babbage River**	**48.73**	**29**	P		**P**	04 14 29.4	**-0.4**
	baz=279								
F28M	**Old Crow**	**48.76**	**30**	IAmb		IAmb	04 14 32.5		
	comp=Z,5.0nm,0.9s								
F28M	**Old Crow**	**48.76**	**30**	P		**P**	04 14 29.6	**-0.5**
	baz=280								
BCAR	**Beaver Creek A**	**48.83**	**36**			**P**	04 14 32.4	**+1.7**
D28M	**Stokes Point**	**48.90**	**28**	P		**P**	04 14 30.5	**-0.5**
	baz=279								
M27K	**Edge Creek, AK**	**48.94**	**37**	IAmb		IAmb	04 14 40.9		
	comp=Z,4.8nm,0.8s								
M27K	**Edge Creek, AK**	**48.94**	**37**	P		**P**	04 14 31.3	**-0.4**
	baz=283								
I28M	**Miner Creek**	**49.14**	**33**	IAmb		IAmb	04 14 41.3		
	comp=Z,8.4nm,0.8s								
I28M	**Miner Creek**	**49.14**	**33**	P		**P**	04 14 32.7	**-0.3**
	baz=282,SNR=11								
BVCY	**Beaver Creek**	**49.39**	**37**	P		**P**	04 14 35.0	**+0.1**
	baz=284								
ARSB	**Arslanbob**	**49.53**	**294**	IAmb		IAmb	04 14 38.3		
	comp=Z,13nm,1.4s								
G29M	**Pine Creek**	**49.60**	**31**	P		**P**	04 14 36.4	**-0.1**
	baz=282								
H29M	**Whitestone**	**49.61**	**32**	P		**P**	04 14 36.5	**0.0**
	baz=282								
DAWY	**Dawson**	**49.66**	**35**	P		**P**	04 14 37.1	**+0.1**
	baz=283								
YUK3	**Moose Creek**	**49.73**	**38**	P		**P**	04 14 37.6	**-0.1**
	baz=284								
O28M	**Mount Upton**	**50.10**	**39**	P		**P**	04 14 40.2	**-0.4**
	baz=285								
YUK8	**Steele Glacier**	**50.17**	**38**	P		**P**	04 14 40.7	**-0.4**
	baz=285								
EPYK	**Eagle Plains**	**50.23**	**31**	P		**P**	04 14 41.1	**-0.1**
	baz=284,SNR=6.7								
PINM	**Pinnacle**	**50.26**	**40**	P		**P**	04 14 42.0	**+0.4**
	baz=286								
G30M	**tAoh Zraii Nji**	**50.28**	**31**	IAmb		IAmb	04 14 44.1		
	comp=Z,11nm,1.1s								
G30M	**tAoh Zraii Nji**	**50.28**	**31**	P		**P**	04 14 41.8	**+0.2**
	baz=284								
F30M	**Barrier River**	**50.30**	**30**	P		**P**	04 14 41.6	**-0.1**
	baz=283								
L29M	**L29M**	**50.44**	**36**	IAmb		IAmb	04 14 52.7		
	comp=Z,9.8nm,1.0s								
L29M	**L29M**	**50.44**	**36**	P		**P**	04 14 42.6	**-0.2**
	baz=285								
M29M	**Somme Creek**	**50.46**	**37**	P		**P**	04 14 43.0	**-0.2**
	baz=285								
BRWY	**Burwash Landin**	**50.49**	**38**	P		**P**	04 14 43.8	**+0.5**
	baz=286								
KK31	**Karatay Array**	**50.50**	**297**	IAmb		IAmb	04 14 43.7		
	comp=Z,6.2nm,0.7s								
KKAR	**Karatay Array**	**50.50**	**297**			**P**	04 14 42.5	**-1.0**
KKAR	**Karatay Array**	**50.50**	**297**	P		**P**	04 14 42.6	**-1.0**
K29M	**Barlow Dome**	**50.52**	**35**	IAmb		IAmb	04 14 46.0		
	comp=Z,6.7nm,0.8s								
K29M	**Barlow Dome**	**50.52**	**35**	P		**P**	04 14 43.6	**+0.1**
	baz=285,SNR=8.4								
I30M	**Mount Dempster**	**50.64**	**33**	P		**P**	04 14 44.8	**+0.3**
	baz=285,SNR=20								
YUK4	**Talbot Arm**	**50.67**	**38**	P		**P**	04 14 44.9	**0.0**
	baz=286								
J30M	**Hart River**	**50.83**	**34**	P		**P**	04 14 46.1	**+0.2**
	baz=285								
YUK6	**Outpost Mounta**	**50.92**	**38**	P		**P**	04 14 46.9	**+0.2**
	baz=287								
INK	**Inuvik**	**50.96**	**29**	P		**P**	04 14 46.9	**+0.3**
	baz=285								
O29M	**Mount Kennedy**	**51.00**	**39**	P		**P**	04 14 47.6	**+0.4**
	baz=287								
G31M	**Satah River**	**51.04**	**30**	P		**P**	04 14 47.6	**+0.4**
	baz=285								
F31M	**Tsiigehtchic**	**51.10**	**30**	P		**P**	04 14 48.1	**+0.4**
	baz=285								
M30M	**Minto, Yukon**	**51.17**	**36**	P		**P**	04 14 48.6	**+0.2**
	baz=287								
H31M	**Peel River**	**51.31**	**32**	P		**P**	04 14 49.6	**+0.3**
	baz=286,SNR=11								
HYT	**Haines Junctio**	**51.35**	**38**	P		**P**	04 14 50.6	**+0.7**
	baz=287,SNR=8.9								
N30M	**Aishikik Lake**	**51.36**	**38**	P		**P**	04 14 50.4	**+0.6**
	baz=287								
SVE	**Sverdlovsk**	**51.56**	**316**	*e*P		**P**	04 14 51.7	**+0.4**
P29M	**Windy Craggy**	**51.60**	**40**	P		**P**	04 14 52.3	**+0.7**
	baz=288								
P30M	**Million Dollar**	**51.83**	**39**	P		**P**	04 14 53.0	**-0.3**
	baz=288								
N31M	**Braeburn, Yuko**	**51.95**	**37**	P		**P**	04 14 54.3	**+0.1**
	baz=288								
O30N	**Mendenhall**	**52.03**	**38**	P		**P**	04 14 54.6	**-0.2**
	baz=288								
MANEM	**Manem**	**52.06**	**290**	IAmb		IAmb	04 14 58.1		
	comp=Z,16nm,0.7s								
M31M	**Drury Creek, Y**	**52.35**	**36**	P		**P**	04 14 57.1	**0.0**
	baz=289								
WHY	**Whitehorse**	**52.63**	**38**	P		**P**	04 14 59.1	**-0.2**
	baz=290								
NIL	**Nilore**	**52.75**	**285**	P		**P**	04 15 00.7	**+0.2**
NIL	**Nilore**	**52.75**	**285**	P		**P**	04 15 00.7	**+0.2**
NIL				pmax		pmax			
	comp=Z,15nm,1.0s								
NIL	**Nilore**	**52.75**	**285**	P		**P**	04 15 00.9	**+0.5**
SKAG	**Skagway**	**52.82**	**40**	P		**P**	04 15 00.7	**+0.2**
	baz=290								
ARTI	**Arti**	**52.89**	**316**			**P**	04 15 00.5	**-0.6**
ARTI	**Arti**	**52.89**	**316**	*c*	*i*P	**P**	04 15 00.4	**-0.6**
ARTI							04 16 03.9		
ARTI					S	**S**	04 22 19.1	**-0.2**
ARTI					SS	**SS**	04 25 52.8	**-6.5**
ARTI					pmax	pmax			
	comp=Z,11nm,0.7s								
S31K	**Pelican**	**52.89**	**42**	P		**P**	04 15 01.6	**+0.6**
	baz=290								
CHGR	**Chuyangaron**	**53.32**	**292**	‖ *i*P		**P**	04 15 03.8	**-0.9**
CHGR				pmax		pmax			
	comp=Z,17nm,0.7s								
CHGR	**Chuyangaron**	**53.32**	**292**	P		**P**	04 15 04.0	**-0.7**
P32M	**Atlin**	**53.55**	**39**	P		**P**	04 15 06.2	**+0.3**
	baz=291								
MMPY	**Sheldon Lake,**	**53.59**	**35**	P		**P**	04 15 06.1	**-0.1**
	baz=291								
R32K	**Eaglecrest**	**53.63**	**41**	P		**P**	04 15 06.7	**+0.2**
	baz=291								
SIT	**Sitka**	**53.67**	**42**	P		**P**	04 15 06.9	**+0.1**
	baz=292								
P33M	**Teslin, Yukon**	**53.75**	**38**	P		**P**	04 15 07.1	**-0.3**
	baz=291								
C36M	**Paulatuk**	**53.90**	**26**	P		**P**	04 15 07.7	**-0.5**
	baz=292								
S32K	**Killisnoo**	**53.90**	**42**	P		**P**	04 15 08.7	**+0.3**
	baz=292								
Q32M	**Nakina River**	**54.47**	**39**	P		**P**	04 15 13.3	**+0.5**
	baz=293								
SHAA	**Shahritus**	**54.55**	**292**	IAmb		IAmb	04 15 19.8		
	comp=Z,11nm,0.6s								
ABKAR	**Akbulak array**	**54.75**	**308**			**P**	04 15 14.4	**-0.3**
R33M	**Jennings River**	**54.92**	**39**	P		**P**	04 15 16.5	**+0.6**
	baz=293								
U33K	**Whale Pass**	**55.16**	**43**	P		**P**	04 15 18.5	**+1.0**
	baz=294								
WRAK	**Wrangell Islan**	**55.43**	**42**	P		**P**	04 15 20.5	**+1.0**
	baz=294								
DLBC	**Dease Lake**	**55.75**	**40**	P		**P**	04 15 22.3	**+0.4**
	baz=294								
T35M	**Bob Quinn**	**56.25**	**41**	P		**P**	04 15 25.7	**+0.3**
	baz=295								
V35K	**Ketchikan**	**56.26**	**43**	P		**P**	04 15 25.4	**0.0**
	baz=295								
KIRV	**Kirov**	**56.49**	**321**	*c*	*i*P	**P**	04 15 26.7	**-0.2**
WRGLY	**Wrigley**	**56.62**	**33**	P		**P**	04 15 28.3	**+0.5**
	baz=296								
LIRD	**Liard River Hi**	**57.18**	**37**	P		**P**	04 15 32.7	**+0.9**
	baz=297								
KOTAN	**Kotaneelee Air**	**57.77**	**36**	P		**P**	04 15 37.2	**+1.2**
	baz=298								
BELG	**Belogornoye**	**60.27**	**315**	*c*	*i*P	**P**	04 15 53.0	**-0.3**
BELG				pmax		pmax			
	comp=Z,2.0nm,0.9s								
YKAW3	**Yellowknife Wh**	**60.47**	**31**	P		**P**	04 15 54.9	**+0.4**
YKAW3				IAmb		IAmb	04 15 56.8		
	comp=Z,4.2nm,1.1s								
YKA	**Yellowknife Ar**	**60.51**	**31**	P		**P**	04 15 55.2	**+0.4**
	comp=Z,1.2nm,0.6s,baz=300,slow=7.1,SNR=11								
YKA				PcP		**PcP**	04 16 38.2	**+0.2**
	comp=Z,0.7nm,0.7s,baz=312,slow=3.5,SNR=4.9								
	comp=Z,1.2nm,0.6s								
YKA	**Yellowknife Ar**	**60.51**	**31**	P		**P**	04 15 54.5	**-0.2**
YKAW1	**Yellowknife Wh**	**60.56**	**31**	P		**P**	04 15 55.6	**+0.5**
YKAW1				IAmb		IAmb	04 15 56.2		
	comp=Z,7.0nm,1.5s								
WR8	**Warramunga Arr**	**61.17**	**186**	P		**P**	04 15 59.1	**-0.6**
WRA	**Warramunga Arr**	**61.17**	**187**	P		**P**	04 15 58.9	**-0.8**
	comp=Z,0.5nm,0.5s,baz=3.9,slow=6.9,SNR=7.5								
	comp=Z,0.5nm,0.5s								
MOS	**Moscow**	**63.47**	**322**	*e*P		**P**	04 16 18.3	**+3.7**
OBN	**Obninsk**	**64.32**	**322**	*i*P		**P**	04 16 18.5	**-1.6**
OBN				pmax		pmax			
	comp=Z,5.0nm,0.9s								
FINES	**FINESS Array B**	**64.76**	**331**	P		**P**	04 16 22.4	**-0.6**
	comp=Z,3.4nm,0.7s,baz=43,slow=7.8,SNR=17								
	comp=Z,3.4nm,0.7s								
ASAR	**Alice Springs**	**64.90**	**187**	P		**P**	04 16 24.4	**+0.1**
	comp=Z,0.3nm,0.7s,baz=352,slow=8.0,SNR=1.9								
	comp=Z,0.3nm,0.7s								
EDM	**Edmonton**	**66.47**	**39**	IAmb		IAmb	04 16 35.3		
	comp=Z,5.1nm,0.8s								
WIFE	**Three Sisters-**	**67.48**	**51**	IAmb		IAmb	04 16 47.5		
	comp=Z,4.5nm,0.8s								
KIV	**Kislovodsk**	**67.65**	**309**	*e*P		**P**	04 16 42.5	**+0.7**
KIV				pmax		pmax			
	comp=Z,15nm,1.1s								
KBZ	**Khabaz**	**67.66**	**309**	P		**P**	04 16 42.0	**+0.3**
	comp=Z,3.8nm,0.7s,baz=37,slow=6.6,SNR=14								
	comp=Z,3.8nm,0.7s								
KBZ	**Khabaz**	**67.66**	**309**	*c*	*i*P	**P**	04 16 41.9	**+0.2**
KBZ				pmax		pmax			
	comp=Z,4.0nm,0.8s								
SHA1	**Shidzhatmaz**	**67.80**	**309**	‖ *e*P		**P**	04 16 42.9	**0.0**
E09A	**Wood Farm, Sta**	**68.09**	**47**	IAmb		IAmb	04 16 46.4		
	comp=Z,8.0nm,0.9s								
PINE	**Pine Mountain**	**68.15**	**50**			**P**	04 16 46.9	**+1.8**
MNK	**Minsk**	**68.62**	**325**	*i*	P	**P**	04 16 48.4	**+0.8**
	comp=E,8.0nm,0.8s								
MNK				*i*	P	**P**	04 16 48.4	**+0.8**
	comp=N,4.0nm,0.8s								
MNK				*i*	P	**P**	04 16 48.4	**+0.8**
	comp=Z,4.0nm,0.8s,baz=48								
MNK				*i*	pP	**pP**	04 17 20.2	**-0.1**
MNK				*i*	PP	**PP**	04 19 21.4	**+1.3**
MNK				*i*	PPP	PPP	04 21 02.5		
MNK				*i*	S	**S**	04 25 41.4	**+2.4**
MNK				*i*	sS	**ScS**	04 26 36.9	**+2.4**
MNK				*i*	SS	**SS**	04 30 09.4	**+4.4**
MNK				*i*	SSS	SSS	04 33 27.0		
MNK				*i*	LQ	LQ	04 37 50.8		
MNK				*i*	LR	LR	04 47 00.2		
MNK				*i*	LRM	MLR	04 49 59.4		
	comp=Z,18nm,19.2s								
MNK				*i*	LRM	MLR	04 51 10.9		
	comp=E,101nm,21.1s								
MNK				*i*	LRM	MLR	04 51 12.2		
	comp=N,82nm,17.8s								
MNK	**Minsk**	**68.62**	**325**	*i*	P	**P**	04 16 48.3	**+0.8**
MNK				*i*	*PP	**pP**	04 17 20.1	**-0.1**
MNK				*i*			04 19 21.4		
MNK				*i*	PPP	PPP	04 21 02.5		
MNK				*i*	S	**S**	04 25 41.4	**+2.4**
MNK				*i*	*SS	**ScS**	04 26 36.8	**+2.4**
MNK				*i*	SS	**SS**	04 30 09.4	**+4.4**
MNK					pmax	pmax			
	comp=E,8.0nm,0.8s								
MNK					pmax	pmax			
	comp=N,4.0nm,0.8s								
MNK					pmax	pmax			
	comp=Z,4.0nm,0.8s								
MNK					MLR	MLR			
	comp=Z,18nm,19.0s								
MNK					MLR	MLR			
	comp=E,101nm,21.0s								
MNK					MLR	MLR			
	comp=N,82nm,18.0s								
VSLR	**Vesyoloye**	**69.49**	**310**	‖ *e*P		**P**	04 16 52.7	**-0.4**
VSLR				pmax		pmax			
	comp=Z,7.0nm,0.7s								
BMO	**Blue Mountains**	**69.58**	**48**	IAmb		IAmb	04 16 55.5		
	comp=Z,5.2nm,0.9s								
HFS	**Hagfors**	**69.96**	**335**	P		**P**	04 16 54.9	**-0.8**
	comp=Z,2.3nm,0.7s,baz=37,slow=6.7,SNR=16								
	comp=Z,2.3nm,0.7s								
NB2	**NORSAR Suburra**	**70.03**	**336**	P		**P**	04 16 55.4	**-0.7**
	comp=Z,0.9nm,0.6s,baz=39,slow=6.5								
NOA	**NORSAR Array B**	**70.03**	**336**	P		**P**	04 16 55.0	**-1.2**
	comp=Z,1.0nm,0.7s,baz=39,slow=6.2,SNR=6.7								
	comp=Z,1.0nm,0.7s								
NOA	**NORSAR Array B**	**70.03**	**336**	P		**P**	04 16 55.0	**-1.2**
FFC	**Flin Flon**	**70.52**	**33**			**P**	04 16 59.8	**+0.6**
FFC				IAmb		IAmb	04 17 00.3		
	comp=Z,5.5nm,0.8s								
FFC	**Flin Flon**	**70.52**	**33**	P		**P**	04 16 59.8	**+0.6**
FFC				pmax		pmax			
	comp=Z,6.0nm,0.8s								
FFC	**Flin Flon**	**70.52**	**33**	P		**P**	04 16 59.9	**+0.6**
AKASG	**Malin Array Be**	**70.55**	**321**	P		**P**	04 16 58.4	**-1.1**
	comp=Z,1.1nm,0.6s,baz=46,slow=7.1,SNR=7.3								
	comp=Z,1.1nm,0.6s								
AKASG	**Malin Array Be**	**70.55**	**321**	*i*	P	**P**	04 16 58.7	**-0.7**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.5s								
AKBB	**Malin Array Si**	**70.55**	**321**	P		**P**	04 16 58.8	**-0.6**
AKBB				IAmb		IAmb	04 16 59.4		
	comp=Z,3.6nm,0.7s								
AKBB	**Malin Array Si**	**70.55**	**321**	⇑ *i*P		**P**	04 16 58.6	**-0.8**
AKBB				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KIEV	**Kiev**	**70.56**	**321**	P		**P**	04 16 58.8	**-0.7**
KIEV				IAmb		IAmb	04 16 59.5		
	comp=Z,3.4nm,0.6s								
KIEV	**Kiev**	**70.56**	**321**	P		**P**	04 16 58.8	**-0.7**
KIEV				pmax		pmax			
	comp=Z,3.0nm,0.6s								
PAHR	**Pah Rah Range**	**71.56**	**53**			**P**	04 17 07.0	**+1.0**
BOZ	**Bozeman (W)**	**72.19**	**45**	IAmb		IAmb	04 17 11.3		
	comp=Z,5.2nm,0.7s								
NVAR	**Mina Array Bea**	**73.01**	**54**	P		**P**	04 17 15.4	**+0.7**
	comp=Z,2.4nm,0.7s,baz=290,slow=6.3,SNR=16								
	comp=Z,2.4nm,0.7s								
NVAR	**Mina Array Bea**	**73.01**	**54**	P		**P**	04 17 15.7	**+1.0**
ARPR	**Arapgir-MALATY**	**73.22**	**307**	P		**P**	04 17 16.7	**+0.9**
BUR08	**Bucovina Ar. S**	**74.57**	**321**	P		**P**	04 17 23.4	**-0.1**
BURAR	**Bucovina Array**	**74.58**	**321**	P		**P**	04 17 23.3	**-0.2**
BNN	**Bunyan**	**74.85**	**309**	P		**P**	04 17 24.2	**-1.0**
PDAR	**Pinedale Array**	**75.19**	**46**	P		**P**	04 17 27.8	**+0.5**
	comp=Z,2.3nm,0.5s,baz=34,slow=0.5,SNR=40								
	comp=Z,2.3nm,0.5s								
PDAR	**Pinedale Array**	**75.19**	**46**	P		**P**	04 17 28.0	**+0.7**
BR131	**Keskin Array S**	**75.56**	**310**	‖ *e*P		**P**	04 17 29.5	**+0.2**
BRTR	**Keskin Array B**	**75.56**	**310**	P		**P**	04 17 28.1	**-1.2**
	comp=Z,1.1nm,0.5s,baz=66,slow=3.5,SNR=2.6								
	comp=Z,1.1nm,0.5s								
BRTR	**Keskin Array B**	**75.56**	**310**	P		**P**	04 17 28.4	**-0.9**
BRTR	**Keskin Array B**	**75.56**	**310**	P		**P**	04 17 28.4	**-0.9**
ULM	**Lac du Bonnet**	**76.34**	**33**	P		**P**	04 17 32.8	**-0.5**
	comp=Z,2.9nm,0.6s,baz=330,slow=7.2,SNR=6.0								
	comp=Z,2.9nm,0.6s								
ARR	**Arges**	**76.47**	**319**	P		**P**	04 17 34.8	**+0.5**
CLL	**Collm**	**77.09**	**329**	*e*P		**P**	04 17 37.0	**-0.5**
CLL	**Collm**	**77.09**	**329**	*e*P		**P**	04 17 37.0	**-0.5**
RSSD	**Black Hills**	**77.13**	**42**	P		**P**	04 17 38.7	**+0.5**
RSSD	**Black Hills**	**77.13**	**42**	P		**P**	04 17 38.7	**+0.5**
RSSD				pmax		pmax			
	comp=Z,5.0nm,1.2s								
MODS	**Modra-Piesok**	**77.64**	**325**	*e*P		**P**	04 17 41.6	**+1.0**
MODS	**Modra-Piesok**	**77.64**	**325**	*e*P		**P**	04 17 41.6	**+1.0**
GERES	**GERESS Array B**	**78.76**	**327**	P		**P**	04 17 45.5	**-1.4**
	comp=Z,0.3nm,0.4s,baz=39,slow=6.8,SNR=4.5								
	comp=Z,0.3nm,0.4s								
EKA	**Eskdalemuir Ar**	**78.92**	**340**	P		**P**	04 17 47.2	**-0.4**
	comp=Z,0.3nm,0.5s,baz=25,slow=6.3,SNR=1.3								
	comp=Z,0.3nm,0.5s								
ECSD	**EROS Data Cent**	**81.01**	**38**	P		**P**	04 17 59.2	**+0.2**
ANMO	**Albuquerque**	**82.38**	**50**	‖ *e*P		**P**	04 18 08.1	**+1.5**
ANMO				pmax		pmax			
	comp=Z,7.0nm,2.8s								
ITM	**Ithomi**	**83.85**	**315**	P		**P**	04 18 12.6	**-1.2**
TXAR	**Lajitas Array**	**88.06**	**52**	P		**P**	04 18 35.1	**+0.3**
	comp=Z,0.7nm,0.6s,baz=299,slow=2.7,SNR=18								
	comp=Z,0.7nm,0.6s								
TXAR	**Lajitas Array**	**88.06**	**52**	P		**P**	04 18 34.8	**0.0**
TXAR	**Lajitas Array**

PRAC	**Prado**	**3.96 173**	P	**Pn**	**04 21 47.6**	**+0.7**
PRAC			S	**Sb**	**04 22 48.4**	**+3.6**
BCIP	**Isla Barro Col**	**4.68 289**	P	**Pn**	**04 21 54.5**	**-2.3**
AZU	**Azuero**	**4.88 272**	P	**Pn**	**04 21 58.1**	**-1.5**
URIC	**Uribia, Colomb** 23nm,1.4s	**5.19 39**	P	**Pn**	**04 22 07.9**	**+4.1**
POPC	**Popayan, Colom** 0.0nm4.8nm,1.3s	**5.27 195**	P	**Pn**	**04 22 05.4**	**+0.3**
MACC	**Macarena, Meta**	**5.69 165**	P	**Pn**	**04 22 09.8**	**-0.9**
MACC			S	**Sn**	**04 23 16.3**	**+1.3**
ASAR	**Alice Springs** 0.4nm,0.4s,baz=124,slow=3.5,SNR=5.7	**147.76 237**	PKPbc	**PKPdf**	**04 40 27.4**	**-0.6**
WRA	**Warramunga Arr** 0.7nm,0.9s,baz=102,slow=2.5,SNR=2.2	**148.76 244**	PKPbc	**PKPdf**	**04 40 29.9**	**+0.1**

*UPA **04** 04:34:52.7±1.8,7°.11N×78°.09W, h10km, MD4.1, MW4.2, Presumed earthquake*
*RSNC **04** 04:34:54.1±0.0,7°.N±2°×7°.8W±°, h14km±3km, M3.1, mb4.3, ML2.8*
ISC 04 04:34:53.0±1.0,**7°.20N**±0°.03×**78°.05W**±0°.03,**h17**km±7km, **n32**,σ1ᵎ**33**/59,**2C, Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.24**	**102**	P	**Pg**	**04 34 58.8**	**+0.3**
PTAC				S	**Sg**	**04 35 01.8**	**-0.5**
SOLC	**Bahia Solano**	**1.16**	**147**	P	**Pn**	**04 35 14.2**	**-0.3**
SOLC				S	**Sg**	**04 35 31.6**	**+1.1**
APAC	**Apartado, Choc**	**1.61**	**64**	P	**Pn**	**04 35 20.7**	**-0.1**
APAC				S	**Sn**	**04 35 42.1**	**+0.9**
TOTI	**Torti**	**1.74**	**351**	*e*P	**Pb**	**04 35 24.0**	**-0.6**
TOTI				*i* S	**Sb**	**04 35 46.5**	**+0.3**
CNTA3	**Canitas, Panam**	**2.17**	**338**	*e*P	**Pg**	**04 35 36.2**	**+1.4**
CHPO	**Chepo, Panama**	**2.23**	**332**	⇑*i*P	**Pn**	**04 35 28.9**	**-0.3**
CHPO				*i* S	**Sb**	**04 35 59.2**	**-0.9**
AZU	**Azuero**	**2.29**	**285**	P	**Pn**	**04 35 30.9**	**+0.9**
AZU				S	**Sn**	**04 35 56.9**	**-0.9**
AZU	**Azuero**	**2.29**	**285**	*i* P	**Pn**	**04 35 31.0**	**+0.9**
AZU				*i* S	**Sn**	**04 35 56.0**	**-1.9**
UPA	**Univ. de Panam**	**2.30**	**320**	*e*P	**Pn**	**04 35 30.8**	**+0.6**
UPA				*e*S	**Sn**	**04 35 59.4**	**+1.1**
PIZC	**Pizarro, Choco**	**2.32**	**163**	P	**Pn**	**04 35 31.8**	**+1.3**
PIZC				S	**Sn**	**04 35 59.5**	**+0.8**
LCBC	**Los crdobas,**	**2.34**	**45**	P	**Pn**	**04 35 32.2**	**+1.4**
LCBC				S	**Sb**	**04 36 03.7**	**+0.2**
ARRA3	**Arraijan, Pana**	**2.37**	**318**	*e*P	**Pb**	**04 35 33.4**	**-2.0**
TOSI3	**Tonosi**	**2.38**	**275**	*e*P	**Pn**	**04 35 31.8**	**+0.4**
TOSI3				*e*S	**Sn**	**04 35 59.0**	**-1.2**
CHOR3	**La Chorrera**	**2.40**	**315**	*e*P	**Pn**	**04 35 32.4**	**+0.8**
CHOR3				*i* S	**Sn**	**04 36 01.4**	**+0.8**
CBOC	**Ciudad Bolivar**	**2.42**	**123**	P	**Pn**	**04 35 31.2**	**-0.8**
CBOC				S	**Sn**	**04 36 03.2**	**+1.9**
CHIT3	**Chitre**	**2.47**	**288**	⇑*i*P	**Pn**	**04 35 33.6**	**+1.1**
CHIT3				*i* S	**Sn**	**04 36 01.7**	**-0.6**
ZANG	**Zanguenga, Cho**	**2.51**	**314**	*e*P	**Pn**	**04 35 33.4**	**+0.3**
ZANG				*i* S	**Sn**	**04 36 05.4**	**+2.0**
GAMB1	**Gamboa**	**2.52**	**319**	*e*P	**Pn**	**04 35 32.9**	**-0.4**
GAMB1				*e*S	**Sn**	**04 36 04.5**	**+0.8**
UREC	**San Jos de Ur**	**2.55**	**77**	P	**Pn**	**04 35 34.0**	**+0.3**
UREC				S	**Sn**	**04 36 05.2**	**+0.7**
UREC	**San Jos de Ur**	**2.55**	**77**	*i* P	**Pn**	**04 35 34.3**	**+0.6**
UREC				*i* S	**Sn**	**04 36 00.9**	**-3.6**
FRIJ	**El Hiral**	**2.61**	**321**	*e*P	**Pn**	**04 35 34.1**	**-0.4**
BCIP	**Isla Barro Col**	**2.64**	**318**	P	**Pn**	**04 35 34.5**	**-0.4**
BCIP				S	**Sn**	**04 36 07.2**	**+0.6**
BCIP	**Isla Barro Col**	**2.64**	**318**	*e*P	**Pn**	**04 35 34.9**	**0.0**
PLMC	**San Jos del P**	**2.88**	**142**	P	**Pn**	**04 35 37.4**	**-0.8**
PLMC				S	**Sb**	**04 36 16.4**	**-2.6**
GUY2C	**Guyana, Caldas**	**3.31**	**126**	P	**Pn**	**04 35 45.5**	**+0.9**
GUY2C				S	**Sb**	**04 36 28.7**	**-3.2**
PTBC	**PUERTO BERRIO,**	**3.62**	**100**	P	**Pn**	**04 35 49.2**	**+0.7**
PTBC				S	**Sn**	**04 36 33.2**	**+2.3**
SJCC	**San Jacinto, C**	**3.90**	**46**	P	**Pn**	**04 35 54.7**	**+2.4**
SJCC				S	**Sn**	**04 36 37.6**	**-0.3**
SJCC	**San Jacinto, C**	**3.90**	**46**	*e*P	**Pn**	**04 35 52.8**	**+0.4**
SJCC				*e*S	**Sn**	**04 36 36.1**	**-1.8**
OCAC	**Ocana**	**4.80**	**77**	P	**Pn**	**04 36 05.2**	**+0.4**
OCAC				S	**Sn**	**04 36 59.6**	**-0.5**
POPC	**Popayan, Colom**	**4.83**	**163**	P	**Pn**	**04 36 07.0**	**+1.8**
POPC				S	**Sn**	**04 37 02.0**	**+1.1**
BARC	**Barichara**	**4.87**	**97**	P	**Pn**	**04 36 07.3**	**+1.5**
BARC				S	**Sn**	**04 37 03.2**	**+1.3**
BBAC	**Balboa, Cauca**	**5.21**	**171**	P	**Pn**	**04 36 13.0**	**+2.6**

*CATAC **04** 05:33:10.2±0.8,0°.N±5°×8°.0W±°, h1km, M3.5/6, MLv3.5/6, Error ellipse: s-maj=11.8km s-min=9.7km az=6.0, confirmed*
*RSNC **04** 05:33:10.3±0.6,0°.N±3°×8°.0W±°, h0km, M3.1, ML2.7*
ISC 04 05:33:10.1±2.6,**0°.22N**±0°.05×**79°.92W**±0°.09,**h6**km±13km, **n19**,σ1ᵎ**51**/33,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAC1	**Pacto, Paraso**	**1.13**	**88**	P	**Pn**	**05 33 30.8**	**-1.8**
PAC1				S	**Sb**	**05 33 47.0**	**-0.2**
GGPC	**Guagua Pichinc**	**1.38**	**107**	P	**Pn**	**05 33 34.9**	**-1.6**
GGPC				S	**Sg**	**05 33 55.3**	**+0.6**
PULU	**Pululahua**	**1.43**	**98**	P	**Pn**	**05 33 35.9**	**-1.2**
PULU				S	**Sb**	**05 33 55.8**	**-0.3**
CUSE	**Cuicocha Este**	**1.52**	**87**	P	**Pn**	**05 33 37.6**	**-0.7**
CUSE				S	**Sg**	**05 34 00.8**	**+1.6**
SLOR	**San Lorenzo -**	**1.71**	**124**	P	**Pb**	**05 33 41.2**	**-1.0**
SLOR				S	**Sg**	**05 34 04.8**	**-0.4**
IMBA	**Imbabura, San**	**1.72**	**88**	P	**Pg**	**05 33 43.0**	**-0.1**
IMBA				S	**Sg**	**05 34 08.9**	**+3.4**
VCES	**Cotopaxi**	**1.83**	**124**	P	**Pb**	**05 33 43.3**	**-1.0**
VCES				S	**Sb**	**05 33 46.7**	**-1.1**
ANTS	**Antisana-Sarah**	**1.89**	**112**	P	**Pb**	**05 33 44.1**	**-1.3**
ANTS				S	**Sg**	**05 34 11.6**	**+0.6**
CHSH	**Refugio Sur-Vo**	**2.00**	**148**	P	**Pb**	**05 33 45.9**	**-1.4**
PIAT	**Ana Tenorio**	**2.05**	**126**	P	**Pb**	**05 33 47.2**	**-0.9**
PIAT				S	**Sb**	**05 34 12.7**	**-1.4**
TULM	**Tulcn-Chalpat**	**2.19**	**77**	P	**Pb**	**05 33 49.3**	**-1.1**
TULM	**Tulcn-Chalpat**	**2.19**	**77**	P	**Pb**	**05 33 49.2**	**-1.2**
CMBC	**Cumbal**	**2.21**	**71**	P	**Pn**	**05 33 48.0**	**+0.2**
CASC	**Dorado de Casc**	**2.58**	**92**	P	**Pb**	**05 33 56.6**	**-0.3**
CASC				S	**Sb**	**05 34 31.3**	**+2.3**
BBAC	**Balboa, Cauca**	**3.22**	**56**	P	**Pn**	**05 34 00.5**	**-0.9**
BBAC				S	**Sn**	**05 34 41.7**	**+1.5**
CRUC	**La Cruz**	**3.26**	**66**	P	**Pn**	**05 34 04.5**	**+2.4**
POPC	**Popayan, Colom**	**3.98**	**55**	P	**Pn**	**05 34 10.9**	**-1.0**
POPC				S	**Sn**	**05 35 01.2**	**+2.2**
JAMC	**Jamundi, Valle**	**4.40**	**47**	P	**Pn**	**05 34 15.9**	**-1.8**
JAMC				S	**Sn**	**05 35 08.1**	**-1.4**
MCRA	**Macar, Loja**	**4.56**	**180**	P	**Pn**	**05 34 20.9**	**+1.1**
MCRA				S	**Sn**	**05 35 15.4**	**+2.2**

*IDC **04** 05:50:53.6±1.8,2°.05N×126°.19E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=178.0km s-min=21.5km az=66.0*
*DJA **04** 05:50:57.7±0.3,3°.N±3°×12°.7E±°, h10km, M3.6/11, MLv3.6/11*
ISC 04 05:50:59.0±1.1,**2°.50N**±0°.08×**126°.96E**±0°.07,**h35**km,**n9**, σ1ᵎ**82**/11,**mb3.7/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.05**	**128**	P	**Pn**	**05 51 18.5**	**+1.2**
TNTI	**Ternate**	**1.76**	**167**	P	**Pn**	**05 51 29.6**	**+2.6**
SGSI	**Sangihe**	**1.85**	**310**	P	**Pn**	**05 51 30.0**	**+1.7**
SGSI				S	**Sn**	**05 51 51.4**	**+0.8**
MNI	**Manado**	**2.37**	**244**	P	**Pn**	**05 51 35.5**	**+0.1**
MNI				S	**Sn**	**05 52 04.5**	**+1.3**
GTOI	**Gorontalo**	**4.36**	**245**	P	**Pn**	**05 52 03.6**	**+0.8**
WRA	**Warramunga Arr** 2.0nm,0.6s,baz=339,slow=11,SNR=13 2.0nm,0.6s	**23.45**	**162**	P	**P**	**05 56 03.1**	**-2.2**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=339,slow=6.5,SNR=7.6 0.3nm,0.5s	**26.87**	**166**	P	**P**	**05 56 34.3**	**-2.4**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=125,slow=7.6,SNR=4.9 0.2nm,0.4s	**58.70**	**326**	P	**P**	**06 00 53.6**	**+0.4**
KURBB	**Kurchatov Arra** 0.6nm,0.6s,baz=129,slow=6.5,SNR=5.3 0.6nm,0.6s	**62.90**	**328**	P	**P**	**06 01 20.3**	**-1.3**

IDC 04 05:55:36.6±0.0,**25°.16S×179°.10E, h640**km±437km, **mb2.9/4, mbtmp4.0/4, Error ellipse: s-maj=284.9km s-min=84.4km az=77.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek** 0.6nm,0.4s,baz=94,slow=14,SNR=3.1 0.6nm,0.4s	**33.51**	**250**	P	P	06 01 25.4	-0.5
ASAR	**Alice Springs** 0.9nm,0.4s,baz=98,slow=7.0,SNR=13 0.9nm,0.4s	**41.04**	**262**	P	P	06 02 27.2	+0.2
WRA	**Warramunga Arr** 2.7nm,0.5s,baz=99,slow=7.0,SNR=18 2.7nm,0.5s	**41.52**	**268**	P	P	06 02 30.8	0.0
KSRS	**Korea Array** 0.6nm,0.5s,baz=143,slow=6.1,SNR=4.2 0.6nm,0.5s	**78.69**	**321**	P	P	06 06 35.1	+0.8
HFS	**Hagfors** 1.5nm,0.3s,baz=14,slow=1.8,SNR=15	**143.60**	**348**	PKP	PKPbc	06 13 58.6	-0.2

*SNET **04** 05:56:27.8±4.6, 14°.21N×91°.84W, h25km, ML3.6, Presumed earthquake*
*CATAC **04** 05:56:28.7±0.5, 14°.N±4°×92W±°, h35km±4km, M3.7/13, MLv3.7/13, Error ellipse: s-maj=8.5km s-min=3.4km az=30.7, confirmed*
*GCG **04** 05:56:29.3±1.4, 14°.34N×91°.74W, h48km±12km, MD4.2, ML4.0, Presumed earthquake*
ISC 04 05:56:29.1±2.0,**14°.27N**±0°.08×**91°.82W**±0°.09,**h51**km±11km, **n31**,σ0ᵎ**78**/41,**Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.28**	**26**	P	**Pn**	**05 56 38.0**	**-0.2**
RTAL				S	**Sn**	**05 56 45.4**	**+0.7**
RTAL	**Retalhuleu**	**0.28**	**26**	*e*P	**Pn**	**05 56 38.1**	**-0.2**
RTAL				*e*S	**Sn**	**05 56 45.7**	**+1.0**
STG5	**El Palmar, Qui**	**0.48**	**74**	*i* P	**Pn**	**05 56 39.3**	**-1.0**
STG8	**El Palmar, Qui**	**0.49**	**69**	*i* P	**Pn**	**05 56 40.0**	**-0.6**
STG8				IAML		05 56 50.3	
	comp=N,13μm,0.2s						
QUEO	**Labor Ovalle**	**0.67**	**26**	*i* P	**Pn**	**05 56 42.5**	**-0.3**
QUEO				*i* S	**Sn**	**05 56 51.8**	**-0.9**
QUEO				IAML		05 56 54.1	
	comp=N,6μm,0.4s						
THIG		**0.77**	**326**	*i* P	**Pn**	**05 56 42.9**	**-0.9**
ESSG	**Sabana Grande**	**0.97**	**83**	*e*P	**Pn**	**05 56 45.7**	**-0.9**
ESSG				*i* S	**Sn**	**05 56 58.4**	**-0.9**
HUEH	**Huehuetenango**	**1.09**	**16**	P	**Pn**	**05 56 48.1**	**-0.2**
HUEH	**Huehuetenango**	**1.09**	**16**	*i* P	**Pn**	**05 56 47.8**	**-0.4**
HUEH				*i* S	**Sn**	**05 57 02.9**	**+0.5**
HUEH	**Huehuetenango**	**1.09**	**16**	*e*P	**Pn**	**05 56 48.1**	**-0.2**
HUEH				*e*S	**Sn**	**05 57 04.0**	**+1.6**
FG8	**Yepocapa, Chim**	**1.22**	**90**	*i* P	Pn	05 56 45.1	-4.9
FG8				*i* S	Sn	05 56 56.2	-9.3
FG16	**Alotenango, Sa**	**1.27**	**90**	*i* P	Pn	05 56 45.9	-4.9
GCG4	**OSOP**	**1.29**	**76**	*e*P	**Pn**	**05 56 51.3**	**+0.4**
PCG5	**San Vicente Pa**	**1.40**	**92**	*i* P	Pn	05 56 48.8	-3.7
PCG5				IAML		05 57 04.9	
	comp=E,3μm,0.5s						
APG	**El Apazote**	**1.50**	**61**	*i* P	**Pn**	**05 56 53.3**	**-0.6**
FAME	**Alcaldia de Sa**	**1.80**	**103**	P	**Pn**	**05 56 56.7**	**-1.1**
SLOZ	**Alcaldia de Sa**	**1.99**	**97**	S	**Sn**	**05 57 24.9**	**+0.7**
LOAL	**Lomas de Alarc**	**2.00**	**98**	S	**Sn**	**05 57 24.8**	**+0.3**
NUBE	**Las Nubes**	**2.02**	**100**	P	**Pn**	**05 57 00.3**	**-0.5**
NUBE				S	**Sn**	**05 57 24.6**	**-0.3**
NUBE	**Las Nubes**	**2.02**	**100**	*i* P	**Pn**	**05 57 00.5**	**-0.4**
NUBE	**Las Nubes**	**2.02**	**100**	*e*P	**Pn**	**05 57 01.0**	**+0.1**
NUBE				*e*S	**Sn**	**05 57 23.7**	**-1.2**
CEVE	**Cerro Verde**	**2.18**	**101**	S	**Sn**	**05 57 29.6**	**+0.5**
JAVA	**Jayaque - finc**	**2.38**	**105**	P	**Pn**	**05 57 05.8**	**-0.1**
JAVA	**Jayaque - finc**	**2.38**	**105**	*i* P	**Pn**	**05 57 05.4**	**-0.6**
JAVA	**Jayaque - finc**	**2.38**	**105**	*e*P	**Pn**	**05 57 06.0**	**+0.1**
JAVA				*e*S	**Sn**	**05 57 33.3**	**-0.8**
MTO3	**Montecristo**	**2.39**	**87**	*i* P	**Pn**	**05 57 05.0**	**-1.1**
PMON	**Piamonte**	**2.50**	**103**	P	**Pn**	**05 57 07.8**	**+0.3**
PMON				S	**Sn**	**05 57 37.2**	**+0.5**
UEES	**Universidad Ev**	**2.57**	**102**	S	**Sn**	**05 57 38.9**	**+0.5**
LOMA	**Loma Larga**	**2.65**	**103**	P	**Pn**	**05 57 10.7**	**+1.1**
LOMA				S	**Sn**	**05 57 41.0**	**+0.5**
COEG	**Centro de Oper**	**2.93**	**102**	P	**Pn**	**05 57 14.1**	**+0.8**
COEG				S	**Sn**	**05 57 48.6**	**+1.3**
TECO	**Alcaldia de Te**	**3.04**	**104**	P	**Pn**	**05 57 14.4**	**-0.4**
TECO				S	**Sn**	**05 57 51.4**	**+1.4**

WEL 04 05:56:42.5±0.9,**39°S**±4°×**17°6E**±°, **h4**km±3km, **M0.2/2, ML0.3/6, MLv0.2/2, Error ellipse: s-maj=5.2km s-min=3.6km az=7.8, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTVZ	**Oturere**	**0.03**	**164**	P	Pg	05 56 43.7	+0.1
OTVZ	**Oturere**	**0.03**	**164**	P	Pg	05 56 43.6	+0.1
OTVZ				S	Sg	05 56 44.6	+0.2
NTVZ	**North Tongarir**	**0.04**	**27**	P	Pg	05 56 43.9	+0.4
NTVZ				S	Sg	05 56 44.7	+0.4
NTVZ	**North Tongarir**	**0.04**	**27**	P	Pg	05 56 43.8	+0.2
KRVZ	**Karewarewa**	**0.04**	**345**	P	Pg	05 56 43.9	+0.3
KRVZ				S	Sg	05 56 44.6	+0.3
KRVZ	**Karewarewa**	**0.04**	**345**	P	Pg	05 56 43.8	+0.2
KRVZ				S	Sg	05 56 44.8	+0.4
TMVZ	**Te Maari**	**0.04**	**67**	P	Pg	05 56 44.0	+0.4
TMVZ				S	Sg	05 56 44.7	+0.3
TMVZ	**Te Maari**	**0.04**	**67**	P	Pg	05 56 43.9	+0.3
TMVZ				S	Sg	05 56 44.8	+0.3
ETVZ	**East Tongariro**	**0.04**	**95**	P	Pg	05 56 44.0	+0.3
ETVZ				S	Sg	05 56 44.8	+0.3
ETVZ	**East Tongariro**	**0.04**	**95**	P	Pg	05 56 44.0	+0.3
ETVZ				S	Sg	05 56 45.0	+0.5
WTVZ	**West Tongariro**	**0.05**	**289**	P	Pg	05 56 44.0	+0.3
WTVZ	**West Tongariro**	**0.05**	**289**	P	Pg	05 56 43.9	+0.1
WTVZ				S	Sg	05 56 45.1	+0.4
SNVZ	**South Ngauruho**	**0.06**	**191**	P	Pg	05 56 44.2	+0.4
SNVZ	**South Ngauruho**	**0.06**	**191**	P	Pg	05 56 44.2	+0.3
NGZ	**Ngauruhoe**	**0.06**	**223**	P	Pg	05 56 44.2	+0.3

*BJI **04** 06:19:07.8, 47°.08N×116°.41E, h9km, mB5.0/27, mb4.5/53, ML5.5/11, Ms5.3/65, Ms7 5.0/60*
*IDC **04** 06:19:08.1±0.4, 46°.90N×116°.41E, h0km, mb4.4/28, mbtmp4.4/37, ML4.5/7, MS4.3/69, Error ellipse: s-maj=10.5km s-min=8.8km az=8.0*
*GCMT **04** 06:19:09.9±0.2, 46°.98N±0°.01×116°.28E±0°.02, h12km, MW4.8/94, Moment Tensor Solution. s25,c28; s94,c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.11±.06; Mθθ 1.35±.06; Mϕϕ -2.46±.05; Mrθ -0.42±.19; Mϕθ 1.17±.05; Mϕr -0.17±.16; Best double couple: Mo 2.35900×10¹⁶ NP1 :ϕ303.00000°, δ70.00000°, λ21.00000°. NP2: ϕ205.00000°, δ71.00000°, λ158.00000°. Principal axes: T 1.9270, Plg29.0000°, Azm164.0000°; N 0.8650, Plg61.0000°, Azm346.0000°; P -2.7910, Plg1.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **04** 06:19:09.0±1.3, 46°.96N×116°.45E, h12km, mb5.0/50, MS4.7/18 Error ellipse: s-maj=6.0km s-min=4.8km az=132.9*
*NEIC **04** 06:19:10.9±1.2, 47°.02N±0°.07×116°.31E±0°.09, h10km±1km, mb4.8/76, Error ellipse: s-maj=11.9km s-min=10.0km az=157.0*
*GFZ **04** 06:19:11.8±0.2, 47°.N±4°×11°.6E±°, h10km, M4.8/10, mb4.8/10*
ISC 04 06:19:10.6±0.3,**46°.98N**±0°.03×**116°.42E**±0°.03,**h10**km,**n676**, σ1ᵎ**42**/655,**mb4.8**/112,**MS4.5**/98,**19C-15D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XLT	**XiLinHaoTe**	**3.09**	**185**	*e*Pn	**Pn**	**06 19 59.0**	**-0.4**
XLT				Pg	**Pb**	**06 20 04.8**	**-0.8**
XLT				Sg	**Sb**	**06 20 44.6**	**+1.3**
XLT				SME			
	5μm,0.6s						
HIA	**Hailar**	**3.20**	**43**	Pn	**Pn**	**06 19 59.8**	**-1.1**
HIA	**Hailar**	**3.20**	**43**	P	**Pn**	**06 19 59.8**	**-1.1**
HIA	**Hailar**	**3.20**	**43**	P	**Pn**	**06 20 00.5**	**-0.4**
HILR	**Hailar Array B**	**3.41**	**40**	Pn	**Pn**	**06 20 03.3**	**-0.5**
	369nm,0.3s,baz=153,slow=12,SNR=927						
HILR				Pg	**Pb**	**06 20 11.3**	**+0.3**
	baz=226,slow=13						
HILR				Sn	**Sn**	**06 20 45.2**	**+0.9**
	baz=238,slow=17						
HILR				Lg	Lg	06 20 57.2	
	baz=224,slow=12						
ULN	**Ulaanbaatar**	**6.42**	**281**	Pn	**Pn**	**06 20 42.8**	**-2.4**
ULN	**Ulaanbaatar**	**6.42**	**281**	*e*P	**Pn**	**06 20 43.2**	**-2.0**
ULN	**Ulaanbaatar**	**6.42**	**281**	P	**Pn**	**06 20 42.6**	**-2.6**
SONM	**Songino Array** 6.7nm,0.3s,baz=99,slow=13,SNR=57	**6.86**	**281**	Pn	**Pn**	**06 20 48.7**	**-2.5**
SONM				Pg	**Pb**	**06 21 13.5**	**+3.7**
	27nm,0.3s,baz=96,slow=15,SNR=10						
SONM				Sn	**Sn**	**06 22 06.2**	**-3.2**
	23nm,0.3s,baz=95,slow=21,SNR=5.4						
SONM				Lg	Lg	06 22 41.5	
	145nm,0.3s,baz=79,slow=31,SNR=16						
SONM				LR	LR	06 23 51.4	
	comp=Z,5μm,21.8s,baz=99,slow=41 10nm,0.3s						
SONM	**Songino Array**	**6.86**	**281**	Pn	**Pn**	**06 20 48.5**	**-2.8**
BJI2	**Beijing**	**6.96**	**182**	Pn	**Pn**	**06 20 51.5**	**-1.0**
BJT	**Baijiatuau**	**6.96**	**182**	Pn	**Pn**	**06 20 51.8**	**-0.7**
BJT	**Baijiatuau**	**6.96**	**182**	P	**Pn**	**06 20 51.8**	**-0.7**
HHC	**Hu-ho-hao-te**	**7.05**	**212**	*e*Pn	**Pn**	**06 20 53.4**	**-0.6**
HHC				L	L		
	comp=N,9μm,6.7s						
HHC				L	L		
	comp=E,7μm,5.9s						
HHC				L	L		
	comp=Z,7μm,7.3s						
CN2	**Changchun**	**7.11**	**113**	Pn	**Pn**	**06 20 54.3**	**-0.2**
CN2				SMN			
	3μm,1.2s						
CN2				SME			
	2μm,1.2s						
SNY	**Shenyang**	**7.26**	**133**	Pn	**Pn**	**06 20 58.9**	**+2.2**
SNY				Sn	**Sn**	**06 22 27.0**	**+7.9**
SNY				L	L		
	comp=N,19μm,8.7s						
SNY				L	L		
	comp=E,20μm,9.3s						
SNY				L	L		
	comp=Z,7μm,6.5s						
BNX	**BinXian**	**7.70**	**95**	⇑Pn	**Pn**	**06 21 03.8**	**+1.1**
BNX				SMN			
	2μm,1.0s						
BNX				SME			
	2μm,1.0s						
BTO2	**Baotou**	**7.82**	**220**	*e*P	**Pn**	**06 21 03.6**	**-0.8**
BTO2				S	**Sn**	**06 22 33.8**	**+0.8**
BTO2				pmax	pmax		
	comp=Z,43nm,0.7s						
BTO2				L	L		
	comp=N,32μm,7.7s						
BTO2				L	L		
	comp=E,50μm,9.0s						
BTO2				L	L		
	comp=Z,23μm,12.2s						
HEH	**HeiHe**	**7.99**	**62**	*e*P	**Pn**	**06 21 05.0**	**-1.6**
HEH				S	**Sn**	**06 22 35.1**	**-1.9**
HEH				SMN			
	2μm,1.1s						
HEH				SME			
	2μm,0.9s						
DL2	**Dalian**	**8.92**	**153**	P	**Pn**	**06 21 17.2**	**-2.2**
DL2				S	**Sn**	**06 22 55.0**	**-5.0**
DL2				pmax	pmax		
	comp=Z,25nm,1.0s						
DL2				pmax	pmax		
	comp=Z,180nm,7.9s						
DL2				SMN			
	580nm,0.8s						
DL2				SME			
	680nm,0.9s						
DL2				L	L		
	comp=N,8μm,10.0s						
DL2				L	L		
	comp=E,5μm,5.8s						
DL2				L	L		
	comp=Z,4μm,7.2s						
IRK	**Irkutsk**	**9.48**	**308**	*e*P	**Pn**	**06 21 23.6**	**-3.5**
IRK				pmax	pmax		
	comp=Z,106nm,0.4s						
MDJ	**Mudanjiang**	**9.50**	**100**	Pn	**Pn**	**06 21 29.4**	**+2.0**
MDJ	**Mudanjiang**	**9.50**	**100**	P	**Pn**	**06 21 30.9**	**+3.5**
MDJ				S	**Sn**	**06 23 20.3**	**+6.1**
MDJ				pmax	pmax		
	comp=Z,180nm,6.5s						
MDJ				L	L		
	comp=Z,21μm,11.0s						
MDJ				L	L		
	comp=Z,8μm,10.7s						
MDJ				L	L		
	comp=Z,10μm,11.2s						
MDJ	**Mudanjiang**	**9.50**	**100**	P	**Pn**	**06 21 29.6**	**+2.2**
TLY	**Talaya**	**9.57**	**304**	Pn	**Pn**	**06 21 27.6**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=144,slow=3.0,SNR=3.7						
TLY				Pg		06 21 57.9	
	comp=Z,2.1nm,0.3s,baz=91,slow=13,SNR=4.4						
TLY				Lg	Lg	06 24 07.3	
	comp=Z,6.3nm,0.3s,baz=9.1,slow=16,SNR=7.3						
TLY				LR	LR	06 24 54.9	
	comp=Z,4.5nm,0.5s						
TLY	**Talaya**	**9.57**	**304**	Pn	**Pn**	**06 21 27.1**	**-1.3**
TLY	**Talaya**	**9.57**	**304**	⇑*e*P	**Pn**	**06 21 27.9**	**-0.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY	**Talaya**	**9.57**	**304**	P	**Pn**	**06 21 28.0**	**-0.4**
HNS	**HongShan**	**9.65**	**188**	⇑Pn	Pn	06 21 38.3	+8.8
HNS				P*		06 22 14.4	
HNS				Sn	Sn	06 24 10.9	+53
HNS				smax	smax		
	comp=N,210nm,0.9s						
HNS				smax	smax		
	comp=E,410nm,1.1s						
ZEA	**Zeya**	**9.67**	**42**	*e*P	**

KSRS Korea Array 12.76 134 Pn **Pn 06 22 11.2 -0.8**
comp=Z,0.4nm,0.3s,baz=321,slow=12,SNR=14
KSRS Sn **Sn 06 24 32.8 -1.3**
comp=Z,0.3nm,0.3s,baz=326,slow=17,SNR=4.1
KSRS Lg Lg 06 25 52.1
comp=Z,1.2nm,0.3s,baz=319,slow=27,SNR=4.6
comp=Z,3.3nm,0.7s
LYN LuoYang 12.77 195 P Pn 06 22 17.1 +5.0
LYN S Sn 06 24 46.8 +13
LYN ScS **ScS 06 34 59.7 +2.3**
LYN pmax pmax
comp=Z,12nm,0.8s
LYN L L
comp=Z,11μm,9.6s
LYN L L
comp=Z,19μm,8.9s
LYN L L
comp=Z,6μm,10.0s
KNGR Kungurtug, Tuv 12.98 293‖ *e*P **Pn 06 22 16.1 +1.1**
TJN Taejon 13.37 138⇑ *e*P **Pn 06 22 23.0 +2.8**
GRNR Gornyy 13.69 67 *e*P **Pn 06 22 27.3 +2.6**
GRNR MLR MLR
comp=E,4μm,14.0s
GRNR MLR MLR
comp=N,7μm,17.0s
GRNR MLR MLR
comp=Z,5μm,10.0s
XAN Xi'an 14.11 206⇑ P **P 06 22 35.2 -3.1**
XAN S **Sn 06 25 16.1 +8.9**
XAN pmax pmax
comp=Z,12nm,0.4s
XAN pmax pmax
comp=Z,170nm,5.7s
XAN L L
comp=Z,10μm,11.0s
XAN L L
comp=Z,10μm,9.7s
XAN L L
comp=Z,5μm,8.3s
GTA2 Gaotai 14.25 244 *e*P **Pn 06 22 31.6 -0.8**
GTA2 pP P 06 22 35.8 -4.0
GTA2 S **Sn 06 25 12.3 +1.7**
GTA2 pmax pmax
comp=Z,18nm,1.0s
GTA2 L L
comp=Z,6μm,12.0s
GTA2 L L
comp=Z,9μm,11.0s
GTA2 L L
comp=Z,11μm,12.7s
LZH Lanzhou 14.37 225 *e*P **Pn 06 22 32.1 -2.0**
LZH sP P 06 22 40.1 -1.1
LZH S **Sn 06 25 20.3 +6.8**
LZH pmax pmax
comp=Z,32nm,1.2s
LZH L L
comp=Z,6μm,11.1s
LZH L L
comp=Z,7μm,14.3s
LZH L L
comp=Z,8μm,13.6s
LZDM Lanzhou Array 14.54 225 Pn **Pn 06 22 36.6 -0.1**
baz=24,slow=8.1
LZDM Lg Lg 06 26 47.4
baz=35,slow=18
comp=Z,4.3nm,0.4s
NJ2 Nanjing 15.02 172 *e*P **P 06 22 46.7 -1.6**
NJ2 pP **pP 06 22 50.7 -0.5**
NJ2 pmax pmax
comp=Z,28nm,0.6s
NJ2 L L
comp=Z,7μm,12.8s
NJ2 L L
comp=Z,4μm,9.0s
NJ2 L L
comp=Z,12μm,10.3s
SSE Sheshan 16.28 165 P **Pn 06 22 59.5 +0.3**
SSE pmax pmax
comp=Z,190nm,3.6s
SSE L L
comp=Z,2μm,12.7s
SSE L L
comp=Z,660nm,12.2s
WHN Wuhan 16.49 186 P **P 06 23 04.6 +0.1**
WHN pmax pmax
comp=Z,760nm,5.5s
WHN L L
comp=Z,7μm,7.7s
WHN L L
comp=Z,3μm,5.9s
WHN L L
comp=Z,8μm,7.5s
YAK Yakutsk 16.88 22 Pn **Pn 06 23 03.9 -2.7**
comp=Z,6.9nm,0.3s,baz=219,slow=13,SNR=7.7
YAK Lg Lg 06 27 53.8
comp=Z,5.5nm,0.3s,baz=109,slow=18,SNR=5.3
YAK LR LR 06 28 52.2
comp=Z,449nm,18.7s,baz=213,slow=34
comp=Z,18nm,0.5s
YAK Yakutsk 16.88 22 Pn **Pn 06 23 05.8 -0.8**
YAK IAmb IAmb 06 23 11.1
comp=Z,80nm,1.1s
YAK Yakutsk 16.88 22 *e*P **Pn 06 23 06.9 +0.3**
YAK *e*S **Sn 06 26 14.0 0.0**
YAK pmax pmax
comp=Z,30nm,1.5s
YAK pmax pmax
comp=N,18nm,1.5s
YAK pmax pmax
comp=E,19nm,1.3s
YAK pmax pmax
comp=Z,171nm,3.0s
YAK pmax pmax
comp=E,196nm,3.3s
YAK pmax pmax
comp=N,125nm,2.5s
YAK smax smax
comp=E,134nm,3.3s
YAK smax smax
comp=N,81nm,1.8s
YAK MLR MLR
comp=Z,701nm,12.0s
YAK MLR MLR
comp=N,452nm,13.0s
YAK MLR MLR
comp=E,375nm,16.0s
YAK Yakutsk 16.88 22 P **Pn 06 23 06.2 -0.5**
UGL Uglegorsk 17.26 74 *e*P **P 06 23 15.3 +2.3**
UGL MLR MLR
comp=N,4μm,11.0s
UGL MLR MLR
comp=E,6μm,11.0s
UGL MLR MLR
comp=Z,7μm,11.0s
ENH Enshi 17.52 200 **Pn 06 23 14.5 -0.5**
ENH Enshi 17.52 200 P **P 06 23 18.0 +1.9**
YSS Yuzhno-Sakhali 17.95 80 *e*P **Pn 06 23 20.1 0.0**
YSS *e*S **Sn 06 26 38.0 -2.2**
YSS pmax pmax
comp=Z,400nm,7.7s
YSS pmax pmax
comp=N,500nm,5.8s
YSS pmax pmax
comp=Z,30nm,1.1s
YSS smax smax
comp=N,600nm,6.5s
YSS smax smax
comp=E,900nm,8.0s
YSS MLR MLR
comp=Z,3μm,14.0s
YSS MLR MLR
comp=N,2μm,12.0s
YSS MLR MLR
comp=E,4μm,11.0s
OKH Okha 18.11 59 *de*P **Pn 06 23 19.5 -2.5**
OKH MLR MLR
comp=E,900nm,17.0s
OKH MLR MLR
comp=N,900nm,7.0s
OKH MLR MLR
comp=Z,500nm,10.0s
ASAJ Asahikawa 18.53 89 P **P 06 23 26.8 -0.2**
ASAJ pmax pmax
comp=Z,30nm,1.0s
JKA Kamikawa-asahi 18.53 89 P **P 06 23 26.8 -0.3**
JKA Kamikawa-asahi 18.53 89 P **P 06 23 27.9 +0.8**
CD2 Chengdu 18.78 216 P **P 06 23 29.4 -0.6**
CD2 pP pP 06 23 33.6 +0.6
CD2 sP sP 06 23 36.9 +2.5
CD2 S **S 06 27 02.9 -0.8**
CD2 sS sS 06 27 08.6 +0.1
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 pmax pmax
comp=Z,370nm,3.6s
CD2 L L
comp=Z,6μm,8.3s
CD2 L L
comp=Z,6μm,8.2s
CD2 L L
comp=Z,5μm,8.9s
CNSH ChangSha 18.96 190 P **P 06 23 32.2 +0.4**
CNSH S **Sn 06 27 05.3 +0.6**
CNSH pmax pmax
comp=Z,35nm,1.8s
CNSH L L
comp=Z,500nm,6.1s
CNSH L L
comp=Z,650nm,5.5s
CNSH L L
comp=Z,3μm,10.9s
MJB9 Matsu-Tunnel 19.25 115 P **P 06 23 35.5 +0.5**
MAJO Matsushiro 19.25 115 P **P 06 23 35.6 +0.6**
MAJO Matsushiro 19.25 115*c i*P **P 06 23 35.6 +0.6**
MAJO pmax pmax
comp=Z,27nm,1.1s
MJAR Matsushiro Arr 19.25 115 P **P 06 23 35.3 +0.3**
comp=Z,12nm,0.9s,baz=312,slow=9.3,SNR=14
MJAR LR LR 06 30 38.5
comp=Z,838nm,19.1s,baz=316,slow=36
MJAR Matsushiro Arr 19.25 115 **P 06 23 35.4 +0.3**
MJAR Matsushiro Arr 19.25 115 P **P 06 23 35.4 +0.3**
MJAR pmax pmax
comp=Z,29nm,1.6s
GOMU GeErMu 19.36 244 P **P 06 23 35.6 -1.0**
GOMU pP pP 06 23 39.8 +0.2
GOMU S **Sn 06 27 12.8 -2.0**
GOMU pmax pmax
comp=Z,17nm,0.9s
GOMU L L
comp=Z,1μm,7.3s
GOMU L L
comp=Z,1μm,6.3s
DGZ Jazzator, Alta 19.41 289*ce*P **Pn 06 23 38.3 +0.3**
DGZ pmax pmax
comp=Z,18nm,0.9s
WMQ Urumqi 20.36 272 *e*P Pn 06 23 48.4 -0.8
WMQ pP sP 06 23 53.9 +2.3
WMQ S **S 06 27 34.5 -0.8**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ L L
comp=Z,8μm,14.1s
WMQ L L
comp=Z,4μm,11.9s
WMQ L L
comp=Z,2μm,17.7s
ZAA0 Zalesovo Array 21.16 301 **P 06 23 55.2 -0.4**
ZALV Zalesovo Beam 21.16 301 P **P 06 23 54.8 -0.8**
comp=Z,4.4nm,0.7s,baz=100,slow=9.5,SNR=21
ZALV Lg Lg 06 30 09.0
comp=Z,0.2nm,0.3s,baz=90,slow=22,SNR=8.8
ZALV LR LR 06 31 35.5
comp=Z,964nm,18.4s,baz=98,slow=35
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 21.16 301 **P 06 23 55.2 -0.4**
ZALV Zalesovo Beam 21.16 301 *i* P **P 06 23 56.2 +0.6**
ZALV pmax pmax
comp=Z,10.0nm,0.5s
ZSN Zaisan 21.37 283 *e*P **P 06 23 59.4 +1.5**
ZSN *e*S **S 06 27 56.6 +1.6**
ZSN Zaisan 21.37 283 *e*P **P 06 23 59.5 +1.5**
ZSN *e*S **S 06 27 56.7 +1.6**
GYA Guiyang 21.89 204‖ P **P 06 24 04.4 +0.7**
GYA pmax pmax
comp=Z,15nm,0.7s
QZH2 Quanzhou 22.05 175 P **P 06 24 03.6 -1.8**
QZH2 S **S 06 28 08.7 +0.2**
QZH2 L L
comp=Z,2μm,8.1s
QZH2 L L
comp=Z,2μm,8.4s
QZH2 L L
comp=Z,2μm,12.7s
GULI GuiLin 22.17 195 P **P 06 24 12.8 +6.1**
GULI S Sn 06 28 22.2 +0.2
GULI pmax pmax
comp=Z,23nm,1.2s
GULI LR LR
comp=N,2μm,14.1s
GULI LR LR
comp=E,4μm,13.6s
GULI LR LR
comp=Z,2μm,8.7s
MK31 Makanchi Array 23.22 282*c i*P **P 06 24 17.5 -0.2**
MKAR Makanchi Array 23.22 282 P **P 06 24 16.3 -1.3**
comp=Z,3.3nm,0.6s,baz=84,slow=12,SNR=24
MKAR Lg Lg 06 31 21.9
comp=Z,0.1nm,0.3s,baz=87,slow=30,SNR=11
MKAR LR LR 06 33 59.6
comp=Z,1μm,20.2s,baz=82,slow=38
comp=Z,3.3nm,0.6s
MKAR Makanchi Array 23.22 282 **P 06 24 16.9 -0.8**
MKAR Makanchi Array 23.22 282 P **P 06 24 16.9 -0.8**
MAKZ Makanchi 23.43 282 **P 06 24 19.2 -0.5**
MAKZ Makanchi 23.43 282 P **P 06 24 19.2 -0.5**
MAKZ pmax pmax
comp=Z,107nm,2.0s
MAKZ Makanchi 23.43 282 P **P 06 24 20.4 +0.7**
PZH PanZhiHua 23.50 215 P **P 06 24 20.5 -0.2**
PZH S **S 06 28 29.4 -5.1**
PZH sS **pS 06 28 39.1 +0.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,220nm,4.1s
PZH L L
comp=Z,2μm,12.3s
PZH L L
comp=Z,5μm,13.1s
PZH L L
comp=Z,2μm,12.3s
MA2 Magadan 23.79 45 P **P 06 24 22.6 -0.5**
MA2 IAmb IAmb 06 24 25.6
comp=Z,42nm,1.2s
MA2 Magadan 23.79 45*ce*P **P 06 24 23.8 +0.7**
MA2 pmax pmax
comp=Z,38nm,1.3s
MA2 Magadan 23.79 45 P **P 06 24 23.3 +0.2**
comp=Z,35nm,1.1s
MA2 Magadan 23.79 45 P **P 06 24 24.1 +1.0**
KMI2 Kunming 24.36 211⇑ P **P 06 24 28.4 -0.5**
KMI2 S **S 06 28 43.2 -5.1**
KMI2 pmax pmax
comp=Z,22nm,1.2s
KMI2 pmax pmax
comp=Z,230nm,4.0s
KMI2 L L
comp=Z,3μm,10.2s
KMI2 L L
comp=Z,5μm,15.7s
KMI2 L L
comp=Z,1μm,12.7s
KURK Kurchatov 24.97 293 **P 06 24 33.1 -0.9**
KURK IAmb IAmb 06 24 36.5
comp=Z,29nm,1.1s
KURK Kurchatov 24.97 293*d i*P **P 06 24 34.5 +0.5**
KURK pmax pmax
comp=Z,25nm,1.0s
KURK Kurchatov 24.97 293 P **P 06 24 34.7 +0.7**
KURBB Kurchatov Arra 25.04 292 P **P 06 24 34.0 -0.6**
comp=Z,14nm,1.0s,baz=83,slow=9.9,SNR=74
KURBB LR LR 06 34 43.2
comp=Z,1μm,20.1s,baz=96,slow=37
comp=Z,14nm,1.0s
LKP Lekhapani 25.42 227 IAMs_20 IAMs_20 06 35 04.2
comp=Z,6μm,11.3s
TIXI Tiksi 25.44 9 P **P 06 24 37.7 -0.3**
TIXI Tiksi 25.44 9 P **P 06 24 37.7 -0.3**
TIXI pmax pmax
comp=Z,105nm,1.0s
SEY Seymchan 25.63 38 LR LR 06 35 43.4
comp=Z,2μm,19.4s,baz=258,slow=39
SEY Seymchan 25.63 38⇑ *e*P **P 06 24 42.3 +2.4**
SEY pmax pmax
comp=Z,37nm,0.9s
LSA Lhasa 26.10 238 *e*P P 06 24 31.6 -13
LSA S S 06 29 01.5 -15
LSA LR LR
comp=N,2μm,11.0s
LSA LR LR
comp=E,1μm,12.4s
LSA LR LR
comp=Z,3μm,11.4s
LSA Lhasa 26.10 238 P **P 06 24 46.0 +1.0**
TNCH TengChong 26.14 219 P **P 06 24 44.8 -0.2**
TNCH pmax pmax
comp=Z,23nm,0.5s
TNCH L L
comp=Z,2μm,8.7s
TNCH L L
comp=Z,2μm,7.4s
TNCH L L
comp=Z,2μm,10.5s
PDGK Podgornoye 26.14 276 **P 06 24 44.0 -0.8**
PDGK Podgornoye 26.14 276 P **P 06 24 44.0 -0.8**
SHLS Shalkode 26.22 275 *e*P **P 06 24 44.5 -1.1**
SHLS Shalkode 26.22 275 *e*P **P 06 24 44.6 -1.1**
ZIRO ZIRO 26.29 230 *e*P **P 06 24 46.1 -0.3**
TDK Taldyqorghan 26.32 280 *e*P **P 06 24 47.9 +1.6**
TDK Taldyqorghan 26.32 280 *e*P **P 06 24 48.0 +1.6**
UZB Uzynbulak 26.52 276 *e*P **P 06 24 49.7 +1.4**
UZB *e*S **S 06 29 24.5 +2.0**
UZB pmax pmax
comp=Z,10.0nm,1.0s
UZB Uzynbulak 26.52 276 *e*P **P 06 24 49.8 +1.4**
comp=Z,10nm,1.0s
UZB *e*S **S 06 29 24.6 +2.0**
NRIK Noril'sk 26.60 338 P **P 06 24 48.5 0.0**
comp=Z,9.8nm,0.7s,baz=128,slow=8.9,SNR=20
NRIK LR LR 06 36 17.3
comp=Z,2μm,20.4s,baz=140,slow=39
comp=Z,9.8nm,0.7s
NRIK Noril'sk 26.60 338 **P 06 24 48.6 0.0**
NRIK IAmb IAmb 06 24 55.9
comp=Z,15nm,0.8s
NRIK Noril'sk 26.60 338*d i*P **P 06 24 48.4 -0.2**
NRIK pmax pmax
comp=Z,41nm,1.9s
KPKS Kokpek 26.64 276 *e*P **P 06 24 51.0 +1.7**
KPKS *e*S **S 06 29 26.6 +2.4**
KPKS Kokpek 26.64 276 *e*P **P 06 24 51.1 +1.7**
KPKS *e*S **S 06 29 26.7 +2.4**
PEA0B Petropavlovsk- 26.92 61 P **P 06 24 51.7 +0.1**
PEA0B IAmb IAmb 06 25 26.2
comp=Z,34nm,0.9s
PEA0B Petropavlovsk- 26.92 61 P **P 06 24 51.7 +0.1**
PEA0B pmax pmax
comp=Z,34nm,1.0s
PETK Petropavlovsk- 26.92 61 P **P 06 24 51.5 -0.1**
comp=Z,2.8nm,0.5s,baz=263,slow=5.6,SNR=11
PETK LR LR 06 37 04.1
comp=Z,1μm,18.1s,baz=277,slow=40
comp=Z,2.8nm,0.5s
PETK Petropavlovsk- 26.92 61 **P 06 24 51.9 +0.3**
SATY Saty 26.98 276 *e*P **P 06 24 53.7 +1.3**
SATY Saty 26.98 276 *e*P **P 06 24 53.8 +1.3**
WUS Wushi 27.15 271 P **P 06 24 53.4 -0.6**
WUS IAmb IAmb 06 24 57.8
comp=Z,43nm,1.7s
WUS Wushi 27.15 271 P **P 06 24 55.5 +1.5**
TAWA Tawang 27.30 234 *ex* x 06 25 03.7
TAWA *i* x x 06 35 51.4
TAWA *i* x x 06 35 58.0
TAWA IAMs_20 IAMs_20 06 36 03.1
comp=Z,1μm,12.1s
PET Petropavlovsk 27.50 62 *e*P **P 06 24 59.9 +3.1**
PET *e*S **S 06 29 41.4 +4.1**
PET pmax pmax
comp=Z,100nm,9.4s
PET MLR MLR
comp=Z,2μm,13.0s
PET MLR MLR
comp=Z,3μm,12.0s
SLVN Son La 27.52 206 P **P 06 24 57.0 -0.4**
TEZP TEZPUR 27.57 231 *e*P **P 06 25 01.1 +3.4**
TEZP *i* x x 06 35 56.9
TEZP *i* Rg Rg 06 36 10.0
KOHI KOHIMA 27.62 228 *ex* x 06 25 06.4
KOHI *i* x x 06 35 05.8
KOHI IAMs_20 IAMs_20 06 37 03.6
comp=Z,3μm,12.1s
MDOK Medeo 27.86 277 *e*P **P 06 25 02.0 +1.6**
MDOK *e*S **S 06 29 45.6 +1.9**
MDOK Medeo 27.86 277 *e*P **P 06 25 02.0 +1.6**
MDOK *e*S **S 06 29 45.7 +2.0**
TARG Taragay, Kyrgy 27.90 273 P **P 06 24 58.4 -2.7**
TARG IAmb IAmb 06 25 40.2
comp=Z,23nm,1.6s
TARG Taragay, Kyrgy 27.90 273 P **P 06 24 58.4 -2.7**
TARG pmax pmax
comp=Z,23nm,1.6s
AAA Alma-Ata 27.93 277 *e*P **P 06 25 02.6 +1.7**
AAA pmax pmax
comp=Z,9.0nm,0.4s
AAA Alma-Ata 27.93 277 *e*P **P 06 25 02.7 +1.7**
comp=Z,8.8nm,0.4s
TNSS Tian-Shan 27.98 277 *e*P **P 06 25 03.0 +1.3**
TNSS Tian-Shan 27.98 277 *e*P **P 06 25 03.0 +1.3**
QIZ Qiongzhong 28.39 193 P **P 06 25 05.8 +0.7**
QIZ S **S 06 29 53.1 +1.2**
QIZ L L
comp=Z,920nm,8.9s
QIZ L L
comp=Z,1μm,6.2s
QIZ L L
comp=Z,1μm,8.9s
IMP Imphal 28.44 227 *e*P **P 06 25 09.0 +3.4**
IMP *i* x x 06 35 14.3
GUWA GUWAHATI 28.50 232 *e*P **P 06 25 08.1 +2.1**
GUWA *i* Rg Rg 06 36 42.7
SHL Shillong 28.91 231 **P 06 25 09.0 -0.8**
SHL IAmb IAmb 06 26 05.9
comp=Z,21nm,1.3s
SHL Shillong 28.91 231 P **P 06 25 09.0 -0.8**
SHL pmax pmax
comp=Z,21nm,1.3s
SHL Shillong 28.91 231 *e*P **P 06 25 08.1 -1.7**
SHL *i* x x 06 36 08.5
SHL IAMs_20 IAMs_20 06 37 10.8
comp=Z,1μm,12.8s
ASAI AK-SAY(Kyrgyzs 29.12 273 P **P 06 25 13.1 +1.2**
BTLS Baital 29.24 282 *e*P **P 06 25 14.2 +1.8**
BTLS Baital 29.24 282 *e*P **P 06 25 14.3 +1.8**
SGDS Sogindy 29.39 279 *e*P **P 06 25 15.7 +1.7**
DHUB DHUBRI 29.57 234 *i* x x 06 37 06.9
BVAR Borovoye Array 29.78 299 P **P 06 25 16.5 -0.7**
comp=Z,1.6nm,0.6s,baz=74,slow=11,SNR=5.7
comp=Z,1.6nm,0.6s
AAK Ala-Archa 29.80 277 LR LR 06 36 55.3
comp=Z,1μm,18.6s,baz=72,slow=36
AAK Ala-Archa 29.80 277 **P 06 25 17.1 -0.5**
AAK Ala-Archa 29.80 277*de*P **P 06 25 17.7 +0.1**
AAK pmax pmax
comp=Z,14nm,1.2s
AAK Ala-Archa 29.80 277 P **P 06 25 18.2 +0.6**
BORK Borovoye 29.82 299⇑ *i*P **P 06 25 18.4 +0.9**
BORK pmax pmax
comp=Z,12nm,2.3s
EVN Everest 29.94 241 P **P 06 25 18.0 -1.5**
EVN Everest 29.94 241 P **P 06 25 20.9 +1.4**
KSH2 Kashi 30.57 270 P **P 06 25 26.0 +1.5**
KSH2 S **S 06 30 30.1 +3.8**
KSH2 pmax pmax
comp=Z,4.0nm,1.4s
KSH2 L L
comp=Z,2μm,16.5s
KSH2 L L
comp=Z,2μm,10.3s
KSH2 L L
comp=Z,2μm,14.8s
BRDH Bariadhala 31.39 228 LR LR 06 40 38.8
comp=Z,2μm,18.4s,baz=39,slow=41
CHTO Chiang Mai 31.54 213 **P 06 25 32.6 -0.3**
CHTO IAmb IAmb 06 25 37.5
comp=Z,8.1nm,0.7s
CHTO Chiang Mai 31.54 213 P **P 06 25 32.6 -0.3**

CHTO pmax pmax
comp=Z,8.0nm,0.7s
CHTO Chiang Mai 31.54 213 P **P** **06 25 32.4 -0.5**
DZA Taraz 31.84 279 *e*P **P** **06 25 37.0 +1.6**
DZA pmax pmax
comp=Z,12nm,1.1s
DZA Taraz 31.84 279 *e*P **P** **06 25 37.0 +1.6**
comp=Z,12nm,1.1s
ARK Arkit 31.86 277 P **P** **06 25 37.5 +1.8**
CM31 Chiang Mai Arr 31.86 213 P **P** **06 25 35.6 -0.1**
CM31 IAmb IAmb 06 25 40.0
comp=Z,9.0nm,0.7s
CMAR Chiang Mai Arr 31.86 213 P **P** **06 25 34.2 -1.6**
comp=Z,4.8nm,0.7s,baz=17,slow=8.3,SNR=18
comp=Z,4.8nm,0.7s
CMAR Chiang Mai Arr 31.86 213 P **P** **06 25 35.6 -0.2**
CMAR Chiang Mai Arr 31.86 213 *i* P **P** **06 25 38.7 +2.9**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 32.31 280 P **P** **06 25 37.0 -2.6**
KK31 Karatay Array 32.31 280 P **P** **06 25 37.0 -2.6**
KK31 pmax pmax
comp=Z,16nm,2.0s
KKAR Karatay Array 32.31 280 **P** **06 25 37.5 -2.1**
KKAR Karatay Array 32.31 280 P **P** **06 25 37.5 -2.1**
BILL Bilibino 32.72 32 P **P** **06 25 43.2 +0.3**
BILL IAmb IAmb 06 26 14.4
comp=Z,19nm,1.2s
BILL Bilibino 32.72 32⇑ *i*P **P** **06 25 44.3 +1.4**
BILL pmax pmax
comp=Z,13nm,1.1s
BILL MLR MLR
comp=Z,942nm,17.0s
BRLS Borolday 32.79 280 *e*P **P** **06 25 47.1 +3.3**
BRLS pmax pmax
comp=Z,9.0nm,1.6s
BRLS Borolday 32.79 280 *e*P **P** **06 25 47.1 +3.3**
comp=Z,9.0nm,1.6s
TGY Tagaytay City 32.99 172 LR LR 06 40 38.5
comp=Z,458nm,18.9s,baz=50,slow=39
IUG Iuzhnay 33.02 279 *e*P **P** **06 25 47.3 +1.4**
IUG pmax pmax
comp=Z,22nm,1.4s
IUG Iuzhnay 33.02 279 *e*P **P** **06 25 47.3 +1.4**
comp=Z,22nm,1.4s
CHM Chimkent 33.24 279 *e*P **P** **06 25 49.3 +1.6**
CHM pmax pmax
comp=Z,5.0nm,0.4s
CHM Chimkent 33.24 279 *e*P **P** **06 25 49.4 +1.6**
comp=Z,5.0nm,0.4s
BTK Batken 33.40 275 **P** **06 25 48.0 -1.2**
BTK IAmb IAmb 06 25 55.5
comp=Z,32nm,1.5s
BTK Batken 33.40 275 P **P** **06 25 48.0 -1.2**
BTK pmax pmax
comp=Z,32nm,1.5s
BTK Batken 33.40 275 P **P** **06 25 50.3 +1.1**
GAR Garm 34.23 274 P **P** **06 25 55.2 -1.3**
GAR Garm 34.23 274 P **P** **06 25 56.6 +0.1**
SVE Sverdlovsk 34.87 307 *e*P **P** **06 26 03.3 +1.7**
SVE pmax pmax
comp=Z,15nm,0.9s
SVE MLR MLR
comp=Z,575nm,11.0s
CHGR Chuyangaron 35.19 274 **P** **06 26 02.9 -1.9**
CHGR Chuyangaron 35.19 274⇑ *i*P **P** **06 26 06.3 +1.5**
CHGR pmax pmax
comp=Z,35nm,0.9s
CHGR Chuyangaron 35.19 274 P **P** **06 26 05.2 +0.4**
ARTI Arti 36.17 307 LR LR 06 41 19.4
comp=Z,462nm,18.6s,baz=90,slow=37
ARTI Arti 36.17 307 *d* *i*P **P** **06 26 13.6 +0.8**
ARTI 06 27 33.8
ARTI S **S** **06 31 54.3 +1.9**
ARTI SS **SnSn** **06 34 17.2 -0.5**
ARTI pmax pmax
comp=Z,9.0nm,0.8s
ARTI MLR MLR
comp=Z,635nm,15.0s
SHAA Shahritus 36.45 273 **P** **06 26 14.4 -1.1**
SHAA IAmb IAmb 06 26 27.7
comp=Z,29nm,0.9s
SHEM Shemya Is, Ala 36.76 59 LR LR 06 42 04.9
comp=Z,637nm,20.2s,baz=289,slow=37
AB31 Akbulak array 37.03 295 **P** **06 26 19.5 -0.7**
AB31 Akbulak array 37.03 295 *i* P **P** **06 26 19.2 -1.0**
ABKAR Akbulak array 37.03 295 P **P** **06 26 18.0 -2.2**
AKTO Aktyubinsk 37.84 297 LR LR 06 41 51.2
comp=Z,498nm,21.2s,baz=86,slow=36
KIRV Kirov 40.45 312 LR LR 06 44 10.3
comp=Z,316nm,18.9s,baz=77,slow=37
KIRV Kirov 40.45 312‖ *e*P **P** **06 26 50.6 +1.8**
DAV Davao City (W) 40.53 166 LR LR 06 46 15.3
comp=Z,238nm,19.5s,baz=353,slow=40
GUMO Guam 40.92 135 LR LR 06 42 00.9
comp=Z,197nm,20.4s,baz=34,slow=34
GAMB Gambell 41.62 39 P **P** **06 26 58.2 -0.2**
baz=282
TNA Tin City 42.84 36 P **P** **06 27 07.5 -0.7**
baz=283
C16K Lisburne Hills 43.25 32 **P** **06 27 12.0 +0.4**
C16K IAmb IAmb 06 27 14.8
comp=Z,26nm,0.8s
C16K Lisburne Hills 43.25 32 P **P** **06 27 10.4 -1.2**
baz=282,SNR=8.9
BELG Belogornoye 43.31 304 LR LR 06 46 38.4
comp=Z,484nm,18.9s,baz=61,slow=38
BELG Belogornoye 43.31 304 *c* *i*P **P** **06 27 13.5 +1.3**
BELG pmax pmax
comp=Z,3.0nm,1.1s
F14K Arctic Creek 43.51 36 P **P** **06 27 13.3 -0.4**
baz=284
C17K DeLong Mountai 43.99 32 P **P** **06 27 17.0 -0.6**
baz=284,SNR=6.3
SPIA Saint Paul Isl 44.10 49 P **P** **06 27 18.9 +0.4**
baz=290
F15K North Star Dit 44.12 36 P **P** **06 27 18.7 0.0**
F15K North Star Dit 44.12 36 P **P** **06 27 18.5 -0.1**
baz=285,SNR=7.2
ANM Nome 44.13 37 P **P** **06 27 18.6 -0.1**
baz=286
D17K Noatak River 44.21 33 P **P** **06 27 19.3 0.0**
baz=285,SNR=23
A19K Wainwright 44.31 29 P **P** **06 27 20.0 0.0**
baz=284
G15K Niukluk 44.56 37 P **P** **06 27 22.5 +0.4**
baz=287,SNR=14
KLMR Klimovskoe 44.65 317 *e*P **P** **06 27 22.0 -0.9**
KLMR *e* 06 29 03.8
KLMR pmax pmax
comp=Z,28nm,1.3s
KLMR MLR MLR
comp=Z,498nm,13.0s
C18K Utukok River 44.65 31 **P** **06 27 23.8 +0.9**
C18K IAmb IAmb 06 27 26.4
comp=Z,17nm,0.9s
C18K Utukok River 44.65 31 P **P** **06 27 23.0 0.0**
baz=285,SNR=12
E17K Hotham Inlet 44.84 33 P **P** **06 27 24.9 +0.5**
baz=286,SNR=7.9
M11K Mekoryuk 45.02 43 P **P** **06 27 25.9 +0.1**
baz=289
C19K Lookout Ridge 45.09 30 P **P** **06 27 26.7 +0.3**
baz=286,SNR=6.6
E18K Tukpahlearik C 45.20 33 **P** **06 27 27.2 -0.1**
E18K Tukpahlearik C 45.20 33 P **P** **06 27 27.3 0.0**
baz=287,SNR=5.2
K13K Kusilvak Mount 45.23 41 P **P** **06 27 27.6 +0.1**
baz=289
F17K Baldwin Pennin 45.25 34 **P** **06 27 27.9 +0.3**
F17K Baldwin Pennin 45.25 34 P **P** **06 27 27.0 -0.6**
baz=287,SNR=13
H16K Elim 45.40 37 P **P** **06 27 28.8 -0.1**
baz=288
B20K Meade River 45.65 29 P **P** **06 27 30.5 -0.2**
baz=287
G17K Kiwalik Mounta 45.77 35 P **P** **06 27 31.9 +0.1**
baz=289,SNR=27
D19K Kuna River 45.78 31 **P** **06 27 32.6 +0.7**
D19K Kuna River 45.78 31 P **P** **06 27 31.7 -0.2**
baz=288,SNR=29
F18K Selawik 45.81 34 P **P** **06 27 32.0 0.0**
baz=288,SNR=8.6
VADS Vadso 45.83 332 *e*P **P** **06 27 34.0 +1.9**
A22K Sinclair Lake 46.05 27 P **P** **06 27 33.8 0.0**
baz=288
D20K Etivluk River 46.24 30 **P** **06 27 36.0 +0.6**
D20K Etivluk River 46.24 30 P **P** **06 27 35.2 -0.2**
baz=289,SNR=22
H17K Granite Mounta 46.25 36 **P** **06 27 36.3 +0.7**
H17K IAmb IAmb 06 27 39.1
comp=Z,15nm,1.0s
H17K Granite Mounta 46.25 36 P **P** **06 27 35.5 0.0**
baz=290,SNR=11
I17K Unalakleet 46.29 37 **P** **06 27 36.7 +0.9**
I17K IAmb IAmb 06 27 39.2
comp=Z,12nm,1.1s
I17K Unalakleet 46.29 37 P **P** **06 27 35.1 -0.7**
baz=290
L14K Kuka Creek 46.31 41 P **P** **06 27 36.2 +0.2**
baz=291
M13K Dall Lake 46.34 43 P **P** **06 27 36.6 +0.3**
baz=291
G18K Tagagawik 46.42 34 **P** **06 27 37.6 +0.7**
G18K IAmb IAmb 06 27 39.9
comp=Z,10nm,0.9s
G18K Tagagawik 46.42 34 P **P** **06 27 36.7 -0.2**
baz=290,SNR=18
E19K Redstone River 46.43 32 P **P** **06 27 37.6 +0.7**
E19K Redstone River 46.43 32 P **P** **06 27 36.3 -0.6**
baz=290,SNR=38
F19K Shaleruckik Mo 46.44 33 **P** **06 27 37.5 +0.5**
F19K Shaleruckik Mo 46.44 33 P **P** **06 27 37.0 0.0**
baz=290,SNR=33
SPB2 Spitsbergen Ar 46.49 344 **P** **06 27 37.0 -0.2**
SPA0 Spitsbergen Ar 46.49 344 *e*P **P** **06 27 39.7 +2.4**
SPITS Spitsbergen Ar 46.49 344 P **P** **06 27 37.0 -0.3**
comp=Z,21nm,0.8s,baz=71,slow=14,SNR=11
SPITS LR LR 06 50 09.0
comp=Z,178nm,20.0s,baz=49,slow=40
comp=Z,21nm,0.8s
SPITS Spitsbergen Ar 46.49 344 P **P** **06 27 36.9 -0.4**
SPITS pmax pmax
comp=Z,39nm,1.0s
E20K Nigu River 46.53 31 P **P** **06 27 37.3 -0.5**
baz=290,SNR=33
J16K Anvik River 46.53 38 P **P** **06 27 37.8 0.0**
baz=291
B21K Ikpikpuk River 46.61 29 P **P** **06 27 38.1 -0.2**
baz=290
C21K Knifeblade Rid 46.71 29 P **P** **06 27 39.1 -0.1**
baz=290,SNR=15
L15K Ungalak Mounta 46.73 40 P **P** **06 27 38.8 -0.5**
baz=292
B22K Teshekpuk Lake 46.76 28 P **P** **06 27 38.9 -0.5**
baz=290
H18K Honhosa River 46.79 35 **P** **06 27 40.3 +0.5**
H18K IAmb IAmb 06 27 43.0
comp=Z,12nm,1.1s
H18K Honhosa River 46.79 35 P **P** **06 27 39.4 -0.4**
baz=291,SNR=8.6
M14K Bethel 46.86 42 P **P** **06 27 40.2 -0.1**
baz=292
G19K Purcell Mounta 46.94 34 **P** **06 27 41.4 +0.5**
G19K IAmb IAmb 06 27 44.0
comp=Z,12nm,1.0s
G19K Purcell Mounta 46.94 34 P **P** **06 27 40.6 -0.3**
baz=291,SNR=17
F20K Avaraart Lake 47.12 32 P **P** **06 27 42.1 -0.2**
baz=291
J17K VABM Dome 47.14 38 P **P** **06 27 42.3 -0.2**
baz=292,SNR=7.2
E21K Killik River 47.24 30 P **P** **06 27 43.0 -0.3**
baz=291
ARA0 ARCESS Array S 47.28 331 *e*P **P** **06 27 45.3 +1.8**
ARCES ARCESS Array B 47.28 331 P **P** **06 27 43.1 -0.5**
comp=Z,4.9nm,0.8s,baz=61,slow=9.9,SNR=9.9
ARCES LR LR 06 52 51.2
comp=Z,168nm,21.7s,baz=76,slow=43
comp=Z,4.9nm,0.8s
N14K Kuskokwak Cree 47.30 43 P **P** **06 27 43.4 -0.3**
baz=293
UNV Unalaska Valle 47.33 52 P **P** **06 27 44.2 +0.1**
baz=295
H19K Roundabout Mou 47.41 34 **P** **06 27 45.3 +0.8**
H19K Roundabout Mou 47.41 34 P **P** **06 27 44.4 -0.1**
baz=292,SNR=33
MOS Moscow 47.45 311 *e*P **P** **06 27 46.7 +1.7**
MOS *e* 06 29 38.5
MOS pmax pmax
comp=Z,26nm,0.7s
MOS MLR MLR
comp=Z,600nm,15.0s
M15K Kasigluk River 47.46 42 P **P** **06 27 44.6 -0.4**
baz=293
MAK Makhachkala 47.49 292 *c* *i*P **P** **06 27 41.8 -3.7**
MAK *e* 06 29 38.3
MAK *e*S **S** **06 34 34.0 -6.0**
MAK *e*SS **SS** **06 37 59.3 -8.0**
MAK pmax pmax
comp=Z,197nm,1.5s
MAK MLR MLR
comp=Z,878nm,12.0s
GCSA Galena City Sc 47.53 35 P **P** **06 27 45.8 +0.3**
baz=292
L16K Owhat River 47.60 40 P **P** **06 27 46.3 +0.1**
baz=293
K17K Iditarod 47.72 38 P **P** **06 27 47.1 +0.1**
baz=293,SNR=11
O14K Tigyukauivet M 47.76 43 P **P** **06 27 47.8 +0.5**
baz=294
C23K Itkillik River 47.84 28 P **P** **06 27 47.9 +0.1**
baz=293,SNR=15
F21K Alatna River 47.87 32 P **P** **06 27 49.2 +1.0**
baz=293
N15K Kwethluk River 47.94 42 P **P** **06 27 48.6 -0.1**
baz=294
L17K Donlin 47.95 39 P **P** **06 27 49.4 +0.5**
baz=294
H20K Anotleneega Mo 48.02 34 P **P** **06 27 49.3 0.0**
baz=293,SNR=31
LPSR Galich'ya Gora 48.09 307 *e*P **P** **06 27 50.3 +0.3**
LPSR pmax pmax
comp=Z,9.0nm,1.2s
AKT Akhty 48.10 290 *e*P **P** **06 27 50.0 -0.4**
AKT *e* 06 29 17.6
AKT pmax pmax
comp=Z,15nm,1.3s
AKT MLR MLR
comp=Z,1μm,14.0s
E22K Anaktuvuk Pass 48.10 30 P **P** **06 27 50.3 +0.3**
baz=293
M16K Timber Creek 48.10 41 **P** **06 27 51.2 +1.1**
M16K IAmb IAmb 06 28 16.8
comp=Z,10nm,1.1s
M16K Timber Creek 48.10 41 P **P** **06 27 50.1 0.0**
baz=294
G21K Allakaket 48.14 33 P **P** **06 27 49.6 -0.7**
baz=293,SNR=33
D23K Nanushuk River 48.16 29 P **P** **06 27 50.2 -0.1**
baz=294,SNR=20
F22K John River 48.22 31 P **P** **06 27 50.8 -0.1**
baz=294
KTK1 Kautokeino 48.23 331 *e*P **P** **06 27 51.6 +0.7**
OBN Obninsk 48.25 311 LR LR 06 48 49.9
comp=Z,272nm,20.7s,baz=4.0,slow=37
OBN Obninsk 48.25 311 *i* P **P** **06 27 51.9 +0.7**
OBN *i* 06 28 01.7
OBN pmax pmax
comp=Z,23nm,1.2s
OBN MLR MLR
comp=Z,457nm,16.0s
J19K Poorman 48.33 36 P **P** **06 27 51.3 -0.4**
baz=294,SNR=28
VORR Voronezh 48.35 306 P **P** **06 27 52.3 +0.3**
VORR pmax pmax
comp=Z,7.0nm,0.6s
N16K Nishlik Lake 48.41 41 P **P** **06 27 52.1 -0.4**
baz=294
I20K Naaghedeneel 48.46 35 P **P** **06 27 51.9 -0.7**
baz=294
O15K Ungalikthiuk R 48.47 43 P **P** **06 27 52.3 -0.5**
baz=295
C24K Franklin Bluff 48.49 28 P **P** **06 27 52.1 -0.8**
baz=295
VSR Storozhevoye 48.58 305 *e*P **P** **06 27 54.1 +0.3**
VSR pmax pmax
comp=Z,7.0nm,1.0s
L18K Granite Mounta 48.61 39 P **P** **06 27 53.5 -0.4**
baz=294
M17K Holitna River 48.62 40 P **P** **06 27 54.4 +0.3**
baz=295,SNR=8.6
TOLK Toolik Lake Re 48.66 29 P **P** **06 27 53.1 -1.1**
baz=295,SNR=7.9
D24K Happy Valley 48.69 28 P **P** **06 27 54.2 -0.3**
baz=295
G22K Bettles 48.70 32 P **P** **06 27 54.2 -0.3**
baz=295
H21K Melozitna Rive 48.75 33 P **P** **06 27 54.9 -0.1**
baz=295,SNR=30
J20K Nowinta River 48.84 36 P **P** **06 27 55.7 0.0**
baz=295,SNR=14
E23K Chandalar 48.89 30 P **P** **06 27 56.1 0.0**
baz=295,SNR=19
JETT Jettan, Norway 48.92 332 *e*P **P** **06 27 57.7 +1.5**
COLD Coldfoot 49.04 31 P **P** **06 27 57.0 -0.2**
baz=295
O16K Kokwok River B 49.09 42 P **P** **06 27 57.3 -0.4**
baz=296
N17K Nushagak Hills 49.10 41 P **P** **06 27 57.5 -0.3**
baz=296
H22K Ishtalitna Cre 49.18 33 P **P** **06 27 58.4 +0.1**
baz=296,SNR=8.1
K20K Telida 49.22 37 P **P** **06 27 58.9 +0.3**
baz=296,SNR=13
I21K Tanana 49.26 34 P **P** **06 27 58.8 0.0**
baz=296
E24K Your Creek 49.26 30 P **P** **06 27 58.7 -0.2**
baz=296
M18K Stony River 49.29 39 P **P** **06 27 59.3 +0.1**
baz=296
G23K Bananza Creek 49.32 32 P **P** **06 27 59.2 -0.2**
baz=296,SNR=15
P16K Nushagak River 49.38 43 P **P** **06 28 00.3 +0.4**
baz=296
SIJI Sorong 49.40 160 LR LR 06 47 20.9
comp=Z,108nm,22.0s,baz=342,slow=34
D25K Kavik River 49.40 28 P **P** **06 27 59.5 -0.5**
baz=297
L19K White Mountain 49.40 38 P **P** **06 27 59.9 -0.2**
baz=296,SNR=5.6
O17K Koliganek Bris 49.47 42 P **P** **06 28 00.7 +0.2**
baz=296,SNR=6.9
C26K Camden Bay 49.59 27 P **P** **06 28 00.7 -0.6**
baz=298
N18K Kilae Creek 49.61 40 P **P** **06 28 01.4 -0.2**
baz=296
CHUM Lake Minchumin 49.70 35 P **P** **06 28 02.5 +0.3**
baz=296
F24K Squaw Lake 49.72 30 P **P** **06 28 02.9 +0.5**
baz=297,SNR=12
M19K Big River Lodg 49.72 38 P **P** **06 28 02.2 -0.3**
baz=296
MLY Manley 49.80 34 P **P** **06 28 03.3 +0.2**
baz=297,SNR=26
SDPT Sand Point 49.82 48 P **P** **06 28 03.5 +0.3**
baz=296
S14K Fog Glacier 49.86 47 P **P** **06 28 04.1 +0.4**
baz=297
H23K Yukon River 49.89 32 P **P** **06 28 03.8 +0.1**
baz=297
CAST Castle Rocks 50.00 36 P **P** **06 28 04.8 +0.3**
baz=297,SNR=14
KBZ Khabaz 50.00 295 P **P** **06 28 04.4 -0.4**
comp=Z,1.1nm,0.7s,baz=48,slow=12,SNR=1.7
KBZ LR LR 06 49 43.8
comp=Z,911nm,18.1s,baz=86,slow=37
comp=Z,1.1nm,0.7s
KVAR Kislovodsk Arr 50.01 295 LR LR 06 51 00.9
comp=Z,835nm,18.3s,baz=70,slow=38
KIV Kislovodsk 50.01 295 *e*P **P** **06 28 07.1 +2.1**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,420nm,17.0s
KIV Kislovodsk 50.01 295 P **P** **06 28 06.4 +1.3**
P17K Kvichak River 50.03 42 P **P** **06 28 05.1 +0.3**
baz=297
C27K Jago River 50.09 27 P **P** **06 28 05.6 +0.4**
baz=299,SNR=5.9
Q16K King Salmon 50.16 43 P **P** **06 28 06.6 +0.8**
baz=297
N19K Bonanza Creek 50.17 40 P **P** **06 28 06.8 +0.8**
baz=297,SNR=6.9
PPLA Purkeypile 50.19 37 P **P** **06 28 06.9 +0.7**
baz=297
E25K Arctic Village 50.22 29 P **P** **06 28 06.3 +0.1**
baz=298,SNR=6.7
G24K Hadweenzic Riv 50.23 31 P **P** **06 28 06.5 +0.2**
baz=298,SNR=15
M20K Styx River 50.26 38 P **P** **06 28 06.7 +0.1**
baz=297
I23K Minto, Yukon-K 50.27 33 P **P** **06 28 06.4 -0.1**
baz=298,SNR=10
O18K Koktuh Hills 50.29 41 P **P** **06 28 07.3 +0.5**
baz=297
FINES FINESS Array B 50.42 321 P **P** **06 28 06.8 -0.9**
comp=Z,4.5nm,0.6s,baz=76,slow=7.8,SNR=27
FINES LR LR 06 51 35.1
comp=Z,731nm,18.0s,baz=71,slow=39
comp=Z,4.5nm,0.6s
FINES FINESS Array B 50.42 321 *i* P **P** **06 28 07.1 -0.6**
FINES pmax pmax
comp=Z,5.0nm,0.6s
F25K Christian Rive 50.44 30 P **P** **06 28 07.9 0.0**
baz=299,SNR=12
ERBR Yeremizino-Bor 50.46 298 *e*P **P** **06 28 06.4 -1.9**
ERBR pmax pmax
comp=Z,16nm,0.5s
ERBR MLR MLR
comp=Z,562nm,16.0s
P18K Big Mountain, 50.49 42 P **P** **06 28 08.2 -0.1**
baz=298
H24K Noodor Dome 50.49 32 P **P** **06 28 08.5 +0.2**
baz=298,SNR=20
CHNA Chernabura Isl 50.52 48 P **P** **06 28 08.8 +0.3**
baz=298
O19K Port Alsworth 50.53 40 P **P** **06 28 08.8 +0.3**
baz=298
NEA2 Nenana 50.64 34 P **P** **06 28 09.5 +0.2**
baz=298,SNR=14
G25K Bearman Lake 50.68 31 P **P** **06 28 09.4 -0.3**
baz=295,SNR=9.4
TRF Thorofare Moun 50.70 35 P **P** **06 28 10.1 +0.1**
baz=298,SNR=5.9
Q17K Contact Creek 50.71 43 P **P** **06 28 10.4 +0.3**
baz=298
GNI Garni 50.72 290 LR LR 06 51 15.6
comp=Z,297nm,20.2s,baz=74,slow=38
GNI Garni 50.72 290‖ *e*P **P** **06 28 11.4 +0.9**
GNI pmax pmax
comp=Z,25nm,1.7s
R17L Mt. Peulik Vol 50.79 44 P **P** **06 28 11.0 +0.4**
baz=298
LABN Labinsk 50.87 297 *e*P **P** **06 28 12.5 +1.2**
LABN *e* 06 30 07.1
LABN pmax pmax
comp=Z,26nm,0.6s
LABN MLR MLR
comp=Z,482nm,13.0s
SKT Skwentna 50.89 37 P **P** **06 28 11.6 +0.3**
baz=298
F26K Sheenjek River 50.90 29 P **P** **06 28 11.3 0.0**
baz=300,SNR=9.9
Q18K Katmai Hardscr 50.94 42 P **P** **06 28 12.0 +0.1**
baz=298
L22K Petersville 50.94 37 P **P** **06 28 12.0 +0.2**
baz=298
COLA College 50.96 33 P **P** **06 28 13.2 +1.5**
COLA IAmb IAmb 06 28 17.6
comp=Z,15nm,0.9s
COLA College 50.96 33 *d* *i*P **P** **06 28 12.9 +1.1**
COLA pmax pmax
comp=Z,24nm,0.9s
COLA College 50.96 33 P **P** **06 28 12.3 +0.6**
baz=299
COLA College 50.96 33 P **P** **06 28 12.8 +1.1**
SPCR Spurr Chakacha 50.97 39 P **P** **06 28 12.6 +0.6**
baz=298
POKR Poker Plat Res 51.00 33 P **P** **06 28 12.7 +0.6**
baz=299
MCK McKinley 51.10 35 P **P** **06 28 13.2 +0.3**
baz=299
D27M Malcolm River 51.13 27 P **P** **06 28 13.2 +0.1**
baz=301
CUT Chulitna 51.21 37 P **P** **06 28 14.1 +0.4**
baz=299
O20K Slope Mountain 51.33 40 P **P** **06 28 14.5 -0.1**
baz=299
STEI Steigen 51.35 332 *e*P **P** **06 28 15.0 +0.4**
ILAR Eielson Array 51.37 33 P **P** **06 28 14.5 -0.4**

comp=Z,10nm,0.8s,baz=287,slow=4.9,SNR=72
comp=Z,10nm,0.8s
ILAR Eielson Array 51.37 33 P **P** **06 28 14.2 -0.7**
G26K Porcupine Rive 51.39 30 P **P** **06 28 14.5 -0.5**
baz=300,SNR=12
Q19K Cape Douglas, 51.43 42 P **P** **06 28 15.3 -0.2**
baz=299
E27K Coleen River 51.48 28 P **P** **06 28 15.2 -0.4**
baz=301,SNR=7.1
PRP Porcupine Dome 51.50 32 P **P** **06 28 15.4 -0.6**
baz=300,SNR=21
HDA Harding Lake 51.53 33 P **P** **06 28 16.0 0.0**
baz=300,SNR=16
M22K Willow 51.59 37 P **P** **06 28 16.9 +0.5**
baz=300
FAUS Fauske 51.62 331 *e*P **P** **06 28 18.2 +1.6**
CAPN Captain Cook N 51.63 39 P **P** **06 28 16.9 +0.1**
baz=300
WAT1 Susitna Watana 51.69 36 P **P** **06 28 17.4 +0.1**
baz=300
D28M Stokes Point 51.76 26 P **P** **06 28 17.4 -0.2**
baz=303
KAPI Kappang 51.85 176 LR LR 06 50 34.5
comp=Z,78nm,21.5s,baz=338,slow=36
E28M Babbage River 51.91 27 P **P** **06 28 19.0 +0.2**
baz=303
VSLR Vesyoloye 51.91 296⇓ *e*P **P** **06 28 21.1 +1.9**
VSLR pmax pmax
comp=Z,8.0nm,0.8s
HOM Homer 51.97 40 P **P** **06 28 19.4 0.0**
baz=300
J25K Salcha River, 52.02 33 P **P** **06 28 20.1 +0.3**
baz=301
CHIR Chirikof Islan 52.02 46 P **P** **06 28 20.0 +0.2**
baz=300
DHY Denali Highway 52.03 35 P **P** **06 28 19.9 -0.1**
baz=300,SNR=12
SOC Sochi 52.04 296 *e*P P 06 28 15.0 -5.1
SOC *e* 06 30 20.0
SOC *e*PPP PPP 06 31 21.5
SOC *e*S S 06 35 32.9 -11
SOC *e*SS **SS** **06 39 20.0 -0.2**
SOC *e*SSS SSS 06 41 03.4
SOC MLR MLR
comp=Z,660nm,16.0s
PMR Palmer 52.08 37 P **P** **06 28 20.2 +0.1**
baz=300,SNR=12
RC01 Rabbit Creek A 52.08 38 P **P** **06 28 20.1 0.0**
baz=300
WAT6 Susitna Watana 52.14 36 P **P** **06 28 20.6 -0.2**
baz=301,SNR=11
G27K Doyon Strip 52.18 29 P **P** **06 28 20.3 -0.7**
baz=302,SNR=23
K24K Donnelly Dome 52.28 34 P **P** **06 28 21.5 -0.2**
baz=301
SML Sawmill 52.30 37 P **P** **06 28 21.1 -0.7**
baz=301,SNR=7.0
BRSE Bradley Lake S 52.32 40 P **P** **06 28 22.3 +0.3**
baz=300
F28M Old Crow 52.34 28 P **P** **06 28 21.6 -0.4**
baz=303,SNR=8.4
SII Sitkinak Islan 52.35 44 P **P** **06 28 22.8 +0.5**
baz=300
O22K Cooper Landing 52.39 39 P **P** **06 28 22.9 +0.5**
baz=301
OHAK Old Harbor 52.44 43 P **P** **06 28 23.2 +0.3**
baz=300
KNK Knik Glacier 52.44 37 P **P** **06 28 23.1 +0.1**
baz=301
KDAK Kodiak Island 52.48 42 LR LR 06 51 22.4
comp=Z,411nm,19.4s,baz=305,slow=37
KDAK Kodiak Island 52.48 42 P **P** **06 28 23.0 -0.2**
baz=301
E29M Blow River 52.53 27 P **P** **06 28 23.6 +0.2**
baz=304
RAUS Rausandaksla 52.53 330 *e*P **P** **06 28 23.2 -0.3**
H27K Steamboat Moun 52.54 30 P **P** **06 28 23.9 +0.3**
baz=303,SNR=21
MOR8 Moi Rana 52.54 330 *e*P **P** **06 28 22.1 -1.4**
M23K Glacier View 52.55 37 P **P** **06 28 23.9 +0.2**
baz=301
VAGH Vaagaholmen 52.63 331 *e*P **P** **06 28 25.6 +1.4**
RIDG Independent Ri 52.67 34 P **P** **06 28 24.1 -0.5**
baz=302,SNR=9.4
SCM Sheep Creek Mo 52.69 36 P **P** **06 28 25.2 +0.3**
baz=301,SNR=12
SEW Seward 52.70 39 P **P** **06 28 24.7 0.0**
baz=301
I27K Kandik River 52.84 31 P **P** **06 28 25.8 -0.1**
baz=303,SNR=17
SCRK Sand Creek 52.87 33 P **P** **06 28 25.9 -0.2**
baz=302,SNR=12
MNK Minsk 52.97 313 *i* P **P** **06 28 28.1 +1.2**
comp=E,15nm,0.8s
MNK *i* P **P** **06 28 28.1 +1.2**
comp=N,14nm,0.8s
MNK *i* P **P** **06 28 28.1 +1.2**
comp=Z,10.0nm,0.8s,baz=59
MNK *i* PcP **PcP** **06 29 36.8 +1.3**
MNK *i* PP **PP** **06 30 27.7 +1.6**
MNK *i* PPP PPP 06 31 32.1
MNK *i* S **S** **06 35 58.1 +2.1**
MNK *i* ScS **ScS** **06 38 17.9 +1.6**
MNK *i* SS **SS** **06 39 38.6 +4.1**
MNK *i* SSS SSS 06 41 26.3
MNK *i* LQ LQ 06 47 13.5
MNK *i* LR LR 06 51 53.3
MNK *i* LRM MLR 06 53 08.6
comp=E,453nm,15.8s
MNK *i* LRM MLR 06 53 36.2
comp=N,181nm,14.3s
MNK *i* LRM MLR 06 54 01.8
comp=Z,165nm,12.6s
MNK Minsk 52.97 313 *i* P **P** **06 28 28.0 +1.2**
MNK *i* 06 29 36.7
MNK *i* 06 30 27.7
MNK *i* PPP PPP 06 31 32.1
MNK *i* S **S** **06 35 58.1 +2.1**
MNK *i* 06 38 17.8
MNK *i* SS **SS** **06 39 38.5 +4.1**
MNK *i* SSS SSS 06 41 26.3
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK pmax pmax
comp=E,15nm,0.8s
MNK pmax pmax
comp=N,14nm,0.8s
MNK MLR MLR
comp=E,453nm,16.0s
MNK MLR MLR
comp=N,181nm,14.0s
MNK MLR MLR
comp=Z,165nm,13.0s
M24K Tolsona, Glenn 53.01 36 P **P** **06 28 27.3 +0.1**
baz=302,SNR=18
HARP HAARP 53.26 35 P **P** **06 28 29.0 +0.1**
baz=302
GLI Glacier Island 53.29 37 P **P** **06 28 29.3 +0.1**
baz=302
G29M Pine Creek 53.33 28 P **P** **06 28 29.4 +0.1**
baz=305,SNR=9.1
KLU Klutina 53.44 36 P **P** **06 28 30.4 0.0**
baz=303
I28M Miner Creek 53.52 30 P **P** **06 28 30.6 -0.2**
baz=304,SNR=14
MENT Mentasta 53.53 34 P **P** **06 28 31.4 +0.5**
MENT IAmb IAmb 06 28 33.9
comp=Z,9.2nm,1.0s
H29M Whitestone 53.61 29 P **P** **06 28 31.8 +0.4**
baz=305,SNR=6.0
L26K Log Cabin Wild 53.62 34 P **P** **06 28 31.8 +0.2**
baz=303
P23K Montague Islan 53.63 38 P **P** **06 28 32.4 +0.7**
baz=302
F30M Barrier River 53.63 27 P **P** **06 28 31.7 +0.2**
baz=306,SNR=9.7
A36M Sachs Harbour 53.74 20 P **P** **06 28 32.6 +0.3**
baz=312
G30M tAoh Zraii Nji 53.86 28 P **P** **06 28 33.4 0.0**
baz=306,SNR=7.9
INK Inuvik 53.90 26 P **P** **06 28 33.8 +0.3**
baz=308
INK Inuvik 53.90 26 P **P** **06 28 34.9 +1.4**
N25K Chitina, Valde 53.91 36 P **P** **06 28 33.9 +0.1**
baz=303,SNR=9.7
EYAK Cordova Ski Ar 54.02 37 P **P** **06 28 34.7 +0.2**
baz=303,SNR=5.3
EPYK Eagle Plains 54.06 28 P **P** **06 28 34.8 0.0**
baz=306,SNR=5.3
M26K Nabesna, AK 54.10 34 P **P** **06 28 35.2 0.0**
baz=304,SNR=11
BCAR Beaver Creek A 54.19 33 P **P** **06 28 35.8 0.0**
KELT Kelkit 54.22 293 P **P** **06 28 37.4 +0.9**
BMRM Bremner River 54.26 36 P **P** **06 28 36.5 +0.2**
baz=304,SNR=8.0
AK03 Malin Array Si 54.27 309 P **P** **06 28 35.6 -0.9**
AKASG Malin Array Be 54.28 309 P **P** **06 28 35.6 -0.9**
comp=Z,2.8nm,0.6s,baz=53,slow=8.4,SNR=20
AKASG LR LR 06 52 35.7
comp=Z,396nm,19.1s,baz=82,slow=37
comp=Z,2.8nm,0.6s
AKASG Malin Array Be 54.28 309 *i* P **P** **06 28 36.7 +0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 54.28 309 P **P** **06 28 36.2 -0.3**
AKBB Malin Array Si 54.28 309↑ *i* P **P** **06 28 36.1 -0.4**
AKBB pmax pmax
comp=Z,22nm,2.7s
AKBB Malin Array Si 54.28 309 P **P** **06 28 35.7 -0.8**
AK01 Malin Array Si 54.30 309 P **P** **06 28 35.4 -1.2**
KIEV Kiev 54.30 309 P **P** **06 28 35.7 -0.9**
comp=Z,27nm,1.4s
KIEV Kiev 54.30 309 P **P** **06 28 36.6 -0.1**
AK09 Malin Array Si 54.30 308 P **P** **06 28 35.5 -1.2**
AK04 Malin Array Si 54.30 309 P **P** **06 28 35.7 -1.0**
AK08 Malin Array Si 54.30 308 P **P** **06 28 35.7 -1.0**
AK02 Malin Array Si 54.32 308 P **P** **06 28 36.3 -0.5**
AK10 Malin Array Si 54.33 308 P **P** **06 28 36.0 -0.8**
AK11 Malin Array Si 54.33 309 P **P** **06 28 36.0 -0.9**
AK05 Malin Array Si 54.34 308 P **P** **06 28 36.2 -0.8**
AK21 Malin Array Si 54.34 309 P **P** **06 28 36.3 -0.7**
F31M Tsiigehtchic 54.36 27 P **P** **06 28 37.2 +0.4**
baz=308,SNR=7.9
DAWY Dawson 54.50 32 P **P** **06 28 38.7 +0.7**
baz=306,SNR=7.0
G31M Satah River 54.52 27 P **P** **06 28 38.2 +0.2**
baz=308,SNR=6.0
M27K Edge Creek, AK 54.56 34 P **P** **06 28 38.6 0.0**
baz=305,SNR=11
MCARA McCarthy VSAT 54.66 35 P **P** **06 28 39.6 +0.4**
baz=305
J29N Klondike Camp 54.69 31 P **P** **06 28 39.8 +0.4**
baz=306
I30M Mount Dempster 54.86 29 P **P** **06 28 40.1 -0.7**
baz=307,SNR=16
BVCY Beaver Creek 54.91 34 P **P** **06 28 40.9 -0.1**
baz=306,SNR=25
KAIM Kayak Island 54.92 37 P **P** **06 28 41.6 +0.6**
baz=305
MI28 Mi28,Pidlybu 54.99 309 P **P** **06 28 40.3 -1.3**
CRQE Cirque 55.00 36 P **P** **06 28 41.7 -0.1**
baz=305
H31M Peel River 55.18 28 P **P** **06 28 42.8 0.0**
baz=308,SNR=13
J30M Hart River 55.27 30 P **P** **06 28 43.4 -0.3**
baz=308,SNR=18
K29M Barlow Dome 55.30 31 P **P** **06 28 43.8 -0.1**
baz=307,SNR=41
BARN Barnard Glacie 55.39 35 P **P** **06 28 45.9 +1.2**
BARN IAmb IAmb 06 28 48.1
comp=Z,14nm,1.0s
ARPR Arapgir-MALATY 55.41 292 P **P** **06 28 44.5 -0.5**
ARPR IAmb IAmb 06 29 30.1
comp=Z,9.0nm,1.0s
ARPR Arapgir-MALATY 55.41 292 P **P** **06 28 46.1 +1.1**
YUK3 Moose Creek 55.44 34 P **P** **06 28 44.5 -0.5**
baz=306,SNR=6.6
LUBAR Lubar, Ukraine 55.50 308 P **P** **06 28 44.7 -0.7**
L29M L29M 55.52 32 P **P** **06 28 44.6 -0.8**
baz=307,SNR=20
NEEM North Greenlan 55.61 357 *i* P **P** **06 28 43.5 -2.6**
RNPP9 Sopachiv 55.65 311 P **P** **06 28 45.7 -0.7**
RNPP8 Varash 55.71 311 P **P** **06 28 46.0 -0.9**
RNPP5 Staryi Chortor 55.76 310 P **P** **06 28 46.0 -1.2**
M29M Somme Creek 55.80 33 P **P** **06 28 46.6 -0.9**
baz=307,SNR=17
C36M Paulatuk 55.83 22 P **P** **06 28 46.5 -0.9**
baz=314
JMIC Jan Mayen 55.94 341 LR LR 06 54 06.5
comp=Z,197nm,19.2s,baz=63,slow=38
YUK8 Steele Glacier 56.00 34 P **P** **06 28 49.0 -0.1**
baz=307
O28M Mount Upton 56.14 35 P **P** **06 28 49.3 -0.9**
baz=307
BRWY Burwash Landin 56.23 34 P **P** **06 28 50.5 -0.1**
baz=307,SNR=6.3
HFS Hagfors 56.26 324 P **P** **06 28 50.2 -0.5**
comp=Z,3.0nm,0.7s,baz=49,slow=4.5,SNR=5.4
HFS LR LR 06 54 32.5
comp=Z,266nm,18.3s,baz=53,slow=38
comp=Z,3.0nm,0.7s
M30M Minto, Yukon 56.33 32 P **P** **06 28 51.0 -0.2**
baz=308,SNR=17
YUK4 Talbot Arm 56.40 34 P **P** **06 28 51.3 -0.6**
baz=308
PINM Pinnacle 56.52 36 P **P** **06 28 52.7 0.0**
baz=307
NB2 NORSAR Subarra 56.69 326 P **P** **06 28 54.3 +0.6**
comp=Z,10nm,1.0s,baz=54,slow=7.4
NB2 NORSAR Subarra 56.69 326 P **P** **06 28 54.3 +0.6**
NOA NORSAR Array B 56.69 326 P **P** **06 28 54.5 +0.7**
comp=Z,3.7nm,0.9s,baz=55,slow=7.3,SNR=7.9
NOA LR LR 06 54 55.5
comp=Z,296nm,18.8s,baz=45,slow=38
comp=Z,3.7nm,0.9s
YUK6 Outpost Mounta 56.75 34 P **P** **06 28 54.5 0.0**
baz=308
N30M Aishikik Lake 56.92 33 P **P** **06 28 56.0 +0.6**
baz=309,SNR=12
KMPD K-Podol'skiy 56.97 308 P **P** **06 28 54.8 -1.1**
O29M Mount Kennedy 57.06 35 P **P** **06 28 56.3 -0.2**
baz=308,SNR=7.9
HYT Haines Junctio 57.15 34 P **P** **06 28 57.5 +0.3**
baz=309,SNR=12
M31M Drury Creek, Y 57.44 32 P **P** **06 28 59.3 +0.2**
baz=310,SNR=7.7
ANDN Andirin 57.56 292 P **P** **06 29 01.1 +0.8**
O30N Mendenhall 57.73 34 P **P** **06 29 01.1 0.0**
baz=310,SNR=16
P30M Million Dollar 57.81 35 P **P** **06 29 01.4 -0.3**
baz=309
P29M Windy Craggy 57.81 35 P **P** **06 29 01.9 +0.2**
baz=309
BR131 Keskin Array S 57.98 296 P **P** **06 29 03.4 +0.1**
BR131 IAmb IAmb 06 29 06.3
comp=Z,6.2nm,0.7s
BR131 Keskin Array S 57.98 296 P **P** **06 29 03.4 +0.1**
BR131 pmax pmax
comp=Z,6.0nm,0.7s
BRTR Keskin Array B 57.98 296 P **P** **06 29 02.9 -0.5**
comp=Z,4.6nm,0.8s,baz=74,slow=6.8,SNR=9.9
BRTR LR LR 06 54 49.6
comp=Z,217nm,19.1s,baz=35,slow=37
comp=Z,4.6nm,0.8s
BRTR Keskin Array B 57.98 296 P **P** **06 29 03.0 -0.3**
BRTR Keskin Array B 57.98 296 *i* P **P** **06 29 04.5 +1.2**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BUR08 Bucovina Ar. S 58.19 307 **P** **06 29 03.8 -0.9**
BURAR Bucovina Array 58.20 307 P **P** **06 29 04.2 -0.5**
WHY Whitehorse 58.26 33 P **P** **06 29 05.0 +0.1**
baz=310
MMPY Sheldon Lake, 58.27 30 P **P** **06 29 04.8 -0.1**
baz=312,SNR=13
KWP Kalwaria Pacla 58.34 310 P **P** **06 29 04.7 -0.8**
comp=Z,13nm,1.1s
N32M Quiet Lake 58.60 32 P **P** **06 29 07.5 +0.2**
baz=312
KKUL Konya-Kulu 58.75 295 P **P** **06 29 09.2 +0.5**
SKAG Skagway 58.87 35 P **P** **06 29 09.4 +0.4**
baz=311
KOLS Kolonicke sedl 58.99 310 *e*P **P** **06 29 12.4 +2.3**
KOLS Kolonicke sedl 58.99 310 *e*P **P** **06 29 12.4 +2.3**
P33M Teslin, Yukon 59.32 33 P **P** **06 29 12.0 -0.2**
baz=312,SNR=18
TRPA Tarpa 59.33 309 P **P** **06 29 14.2 +1.8**
P32M Atlin 59.40 34 **P** **06 29 13.1 +0.3**
P32M IAmb IAmb 06 29 16.8
comp=Z,8.1nm,1.0s
P32M Atlin 59.40 34 P **P** **06 29 12.9 +0.2**
baz=312
SUMG Summit 59.46 351 P **P** **06 29 12.4 -1.0**
SUMG Summit 59.46 351 P **P** **06 29 12.4 -1.0**
SUMG pmax pmax
comp=Z,26nm,1.1s
SUMG Summit 59.46 351 P **P** **06 29 13.9 +0.5**
SUMG Summit 59.46 351 *i* P **P** **06 29 14.0 +0.5**
OJC Ojcow 59.48 312 P **P** **06 29 12.6 -0.8**
comp=Z,7.8nm,0.7s
OJC Ojcow 59.48 312 P **P** **06 29 13.5 +0.1**
S31K Pelican 59.48 36 P **P** **06 29 13.4 +0.1**
baz=311
NIE Niedzica 59.72 311 P **P** **06 29 14.7 -0.4**
comp=Z,2.8nm,1.2s
ARR Arges 59.88 305 P **P** **06 29 17.9 +1.5**
KRVT Keravat (AS076 59.95 138 LR LR 06 52 00.3
comp=Z,8.2nm,21.2s,baz=94,slow=33
R32K Eaglecrest 59.96 35 P **P** **06 29 17.1 +0.5**
baz=312
Q32M Nakina River 60.37 34 P **P** **06 29 19.0 -0.7**
baz=313
WRGLY Wrigley 60.39 27 P **P** **06 29 19.3 -0.1**
baz=317
SIT Sitka 60.45 37 P **P** **06 29 19.7 -0.3**
baz=312
S32K Killisnoo 60.48 36 P **P** **06 29 19.7 -0.5**
baz=312
ASF Jabal al Asfar 60.54 287 LR LR 06 56 29.9
comp=Z,277nm,21.2s,baz=19,slow=37
OKC Ostrava-Krasne 60.55 313 AMS AMS 06 55 50.0
comp=Z,500nm,11.9s
R33M Jennings River 60.56 33 P **P** **06 29 20.1 -0.8**
baz=314,SNR=9.7
CY604 RAF Akrotiri, 60.73 290 P **P** **06 29 20.7 -1.2**
CY604 IAmb IAmb 06 29 25.9
comp=Z,7.4nm,0.9s
WTLY Watson Lake, Y 60.85 31 P **P** **06 29 22.3 -0.4**
baz=315
MORC Moravsky Berou 60.90 313 *e*P **P** **06 29 24.9 +1.7**
MMAI Mount Meron Ar 60.98 288 LR LR 06 58 29.9
comp=Z,453nm,18.9s,baz=47,slow=39
OSTC Ostas 61.06 314 AMS AMS 06 56 20.0
comp=Z,600nm,18.0s
KRLC Kraliky 61.09 313 AMS AMS 06 58 30.0
comp=Z,600nm,15.3s
KRLC Kraliky 61.09 313 P **P** **06 29 25.5 +1.0**
CHVC Chvalec 61.12 314 AMS AMS 06 56 20.0
comp=Z,700nm,9.7s
DPC Dobruska-Polom 61.14 314 AMS AMS 06 56 10.0
comp=Z,600nm,14.6s
DPC Dobruska-Polom 61.14 314 P **P** **06 29 25.0 +0.2**
comp=Z,7.7nm,1.4s
DPC Dobruska-Polom 61.14 314 P **P** **06 29 26.6 +1.7**
UPC Upice 61.19 314 AMS AMS 06 56 20.0
comp=Z,700nm,17.8s
JAVC Velka Javorina 61.41 312 *e*P **P** **06 29 29.8 +3.1**
S34M Telegraph Cree 61.53 34 P **P** **06 29 27.0 -0.3**
baz=314
DLBC Dease Lake 61.58 33 LR LR 06 59 25.2
comp=Z,534nm,18.5s,baz=280,slow=39
DLBC Dease Lake 61.58 33 P **P** **06 29 26.9 -0.8**
baz=315,SNR=6.9
VRAC Vranov 61.67 313 LR LR 06 58 48.5
comp=Z,156nm,19.8s,baz=56,slow=39
VRAC Vranov 61.67 313 *e*P **P** **06 29 30.6 +2.2**
PVCC Panska Ves 61.88 315 AMS AMS 06 55 40.0
comp=Z,500nm,14.3s
KRUC Moravsky 61.93 313 *e*P **P** **06 29 32.3 +2.2**
U33K Whale Pass 61.99 36 P **P** **06 29 29.9 -0.4**
baz=314
WRAK Wrangell Islan 62.09 36 P **P** **06 29 30.6 -0.5**
baz=314
CLL Collm 62.12 316 *i* P **P** **06 29 32.1 +0.7**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 62.12 316 *i* P **P** **06 29 32.1 +0.7**
comp=Z,5.0nm,0.8s
PRU Pruhonice 62.25 314 AMS AMS 06 57 00.0
comp=Z,600nm,16.2s
LIRD Liard River Hi 62.31 31 P **P** **06 29 32.0 -0.5**
baz=317
HSKC Hora Svate Kat 62.38 316 AMS AMS 07 00 10.0
comp=Z,800nm,9.6s
CRAG Craig 62.43 37 P **P** **06 29 32.8 -0.5**
baz=314
PMG Port Moresby 62.46 145 LR LR 06 55 13.9
comp=Z,149nm,21.0s,baz=294,slow=35
KOTAN Kotaneelee Air 62.48 29 P **P** **06 29 33.0 -0.7**
baz=318
T35M Bob Quinn 62.52 35 P **P** **06 29 33.8 -0.2**
baz=315
ZVC Zvikov 62.78 314 AMS AMS 06 59 00.0
comp=Z,500nm,9.0s
RONA Rosalia, Austr 62.87 312 *e*pP pP 06 29 39.4 -0.5
comp=Z,6.2nm,0.8s
CONA Conrad Observa 62.94 312 *e*pP pP 06 29 39.5 -0.9
comp=Z,3.3nm,0.8s
NKC Novy Kostel 63.10 316 AMS AMS 06 59 40.0
comp=Z,900nm,12.0s
V35K Ketchikan 63.15 36 P **P** **06 29 37.9 -0.2**
baz=315
KHC Kasperske Hory 63.28 314⇓ *i* P **P** **06 29 39.5 +0.3**
KHC pmax pmax
comp=Z,6.0nm,1.0s
KHC Kasperske Hory 63.28 314 AMS AMS 06 57 40.0
comp=Z,600nm,19.1s
KHC Kasperske Hory 63.28 314 P **P** **06 29 38.5 -0.7**
comp=Z,6.6nm,0.8s
KHC Kasperske Hory 63.28 314 P **P** **06 29 39.9 +0.7**
GERES GERESS Array B 63.41 314 P **P** **06 29 40.0 -0.1**
comp=Z,1.3nm,0.7s,baz=59,slow=6.4,SNR=11
GERES LR LR 06 57 35.8
comp=Z,174nm,19.5s,baz=49,slow=36
comp=Z,1.3nm,0.7s
EIL Elat 63.43 286 LR LR 06 59 15.0
comp=Z,224nm,19.5s,baz=40,slow=38
YKA Yellowknife Ar 63.55 24 P **P** **06 29 40.2 -0.5**
comp=Z,4.6nm,0.8s,baz=326,slow=6.0,SNR=22
comp=Z,4.6nm,0.8s
BORG Borgarnes 63.84 341 LR LR 06 59 18.4
comp=Z,266nm,19.2s,baz=34,slow=38
SESA Seetaler Alpe, 64.13 312 *e*pP pP 06 29 47.6 -0.9
comp=Z,6.1nm,0.8s
KBA Koelnbreinsper 64.78 313 *e*pP pP 06 29 51.3 -1.4
comp=Z,3.8nm,1.0s
KBA Koelnbreinsper 64.78 313 P **P** **06 29 50.3 +1.0**
LESA Schwarzleotal 64.88 313 *e*pP pP 06 29 52.8 -0.5
comp=Z,3.2nm,1.3s
WATA Walderalm 65.48 314 *e*pP pP 06 29 55.9 -1.4
comp=Z,0.1nm,0.3s
SQTA Sankt Quirin 65.75 314 *e*pP **P** **06 29 56.9 +1.5**
comp=Z,0.2nm,0.3s
RETA Reutte 65.78 314 *e*pP pP 06 29 58.1 -1.0
comp=Z,7.9nm,1.1s
SFJD Kangerlussuaq 65.93 354 LR LR 07 00 27.2
comp=Z,185nm,18.3s,baz=5.0,slow=38
EKA Eskdalemuir Ar 66.11 327 P **P** **06 29 57.4 -0.1**
comp=Z,9.0nm,0.9s,baz=39,slow=6.4,SNR=14
EKA LR LR 07 01 07.0
comp=Z,239nm,19.8s,baz=44,slow=38
comp=Z,9.0nm,0.9s
IDI Anoyia 66.16 297 LR LR 07 02 00.1
comp=Z,164nm,18.5s,baz=82,slow=39
DAVA Damuels 66.35 315 *e*pP pP 06 30 01.2 -1.7
comp=Z,12nm,1.2s
DAVA Damuels 66.35 315 P **P** **06 30 01.3 +1.9**
DAVOX Davos/Dischmat 66.71 314 LR LR 07 02 08.8
comp=Z,270nm,18.6s,baz=60,slow=39
WRA Warramunga Arr 68.54 162 P **P** **06 30 11.4 -1.8**
comp=Z,2.7nm,0.8s,baz=350,slow=6.8,SNR=20
comp=Z,2.7nm,0.8s
FRB Frobisher Bay 69.55 2 LR LR 07 01 21.8
comp=Z,102nm,18.2s,baz=322,slow=36
ATD Ata Tunnel 70.45 266 LR LR 07 05 56.2
comp=Z,9.2nm,18.0s,baz=354,slow=40
CTA Charters Tower 71.97 151 LR LR 07 01 04.1
comp=Z,89nm,21.9s,baz=16,slow=35
ASAR Alice Springs 72.06 163 P **P** **06 30 33.6 -1.2**
comp=Z,1.4nm,0.6s,baz=349,slow=6.1,SNR=22
ASAR LR LR 07 04 53.8
comp=Z,54nm,21.7s,baz=300,slow=38
comp=Z,1.4nm,0.6s
FFC Flin Flon 73.60 22 **P** **06 30 43.0 -0.6**
FFC IAmb IAmb 06 30 45.5
comp=Z,7.2nm,0.9s
FFC Flin Flon 73.60 22 P **P** **06 30 43.0 -0.6**
FFC pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 74.32 34 LR LR 07 04 00.1
comp=Z,416nm,18.3s,baz=324,slow=36
NEW Newport 74.32 34 P **P** **06 30 49.2 +1.2**

COR	**Corvallis**	**74.74**	**40**	P	**P**		**06 30 52.2**	**+1.8**
COR	**Corvallis**	**74.74**	**40**	P	**P**		**06 30 52.2**	**+1.8**
COR				pmax	pmax			
	comp=Z,27nm,1.0s							
HOOD	**Mount Hood Mea**	**74.87**	**38**	P	**P**		**06 30 52.2**	**+0.9**
YBH	**Yreka Blue Hor**	**77.27**	**41**	LR	LR		07 03 28.1	
	comp=Z,214nm,21.0s,baz=318,slow=34							
M02C	**Callahan**	**77.48**	**41**	P	**P**		**06 31 06.1**	**-0.1**
M02C				IAmb	IAmb		06 31 11.0	
	comp=Z,8.0nm,0.9s							
SCHQ	**Schefferville**	**78.53**	**2**	P	**P**		**06 31 10.3**	**-1.4**
	comp=Z,11nm,0.8s,baz=15,slow=4.5,SNR=11							
SCHQ				LR	LR		07 08 16.7	
	comp=Z,137nm,18.7s,baz=340,slow=38							
	comp=Z,11nm,0.8s							
BOZ	**Bozeman (W)**	**78.61**	**32**	P	**P**		**06 31 12.8**	**+0.3**
BOZ	**Bozeman (W)**	**78.61**	**32**	P	**P**		**06 31 12.8**	**+0.3**
BOZ				pmax	pmax			
	comp=Z,6.0nm,1.0s							
ESDC	**Sonseca Array**	**78.69**	**317**	P	**P**		**06 31 12.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=37,slow=4.8,SNR=11							
	comp=Z,1.5nm,0.6s							
ESDC	**Sonseca Array**	**78.69**	**317**	P	**P**		**06 31 11.2**	**-1.7**
MCMT	**McKenzie Canyo**	**78.81**	**33**	P	**P**		**06 31 13.8**	**+0.1**
ULM	**Lac du Bonnet**	**79.21**	**20**	P	**P**		**06 31 14.6**	**-0.9**
	comp=Z,5.9nm,0.8s,baz=325,slow=5.1,SNR=11							
	comp=Z,5.9nm,0.8s							
HLID	**Hailey**	**79.28**	**35**	P	**P**		**06 31 17.1**	**+0.9**
STKA	**Stephens Creek**	**81.71**	**159**	P	**P**		**06 31 27.7**	**-1.2**
	comp=Z,4.3nm,0.6s,baz=334,slow=7.4,SNR=9.6							
STKA				LR	LR		07 07 55.2	
	comp=Z,59nm,21.1s,baz=13,slow=36							
	comp=Z,4.3nm,0.6s							
BW06	**Boulder Array**	**81.80**	**32**	P	**P**		**06 31 29.1**	**-0.8**
PDAR	**Pinedale Array**	**81.80**	**32**	P	**P**		**06 31 29.3**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=6.7,slow=1.3,SNR=24							
PDAR				LR	LR		07 08 37.4	
	comp=Z,178nm,19.2s,baz=326,slow=36							
	comp=Z,1.7nm,0.7s							
PDAR	**Pinedale Array**	**81.80**	**32**	P	**P**		**06 31 29.5**	**-0.4**
NVAR	**Mina Array Bea**	**81.92**	**40**	P	**P**		**06 31 31.1**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=324,slow=4.5,SNR=30							
NVAR				LR	LR		07 07 12.7	
	comp=Z,141nm,19.3s,baz=346,slow=35							
	comp=Z,3.8nm,0.7s							
HWUT	**Hardware Ranch**	**82.05**	**34**	P	**P**		**06 31 31.4**	**+0.3**
DZM	**Mont Dzumac**	**82.19**	**134**	LR	LR		07 04 35.6	
	comp=Z,705nm,20.9s,baz=104,slow=33							
RSSD	**Black Hills**	**82.51**	**28**	P	**P**		**06 31 33.6**	**+0.1**
RSSD				IAmb	IAmb		06 31 35.9	
	comp=Z,8.9nm,0.9s							
RSSD	**Black Hills**	**82.51**	**28**	P	**P**		**06 31 33.6**	**+0.1**
RSSD				pmax	pmax			
	comp=Z,9.0nm,0.9s							
Q16A	**Castle Valley**	**84.51**	**35**	P	**P**		**06 31 42.7**	**-1.1**
MSVF	**Nonsavu**	**84.87**	**123**	LR	LR		07 07 02.1	
	comp=Z,68nm,18.4s,baz=107,slow=34							
PFO	**Pinyon Flats O**	**86.75**	**42**	LR	LR		07 10 01.6	
	comp=Z,150nm,18.2s,baz=334,slow=35							
PFO	**Pinyon Flats O**	**86.75**	**42**	P	**P**		**06 31 55.2**	**+0.2**
PFO				IAmb	IAmb		06 31 58.7	
	comp=Z,5.7nm,1.1s							
PFO	**Pinyon Flats O**	**86.75**	**42**	P	**P**		**06 31 55.2**	**+0.2**
PFO				pmax	pmax			
	comp=Z,6.0nm,1.1s							
I42A	**Draeger Farm,**	**86.79**	**18**		**P**		**06 31 54.3**	**-0.5**
I42A				IAmb	IAmb		06 31 57.0	
	comp=Z,7.3nm,1.1s							
F64A	**Sherman**	**87.45**	**3**	P	**P**		**06 31 58.6**	**+0.6**
MBAR	**Mbarara**	**87.48**	**266**	LR	LR		07 15 32.8	
	comp=Z,192nm,19.0s,baz=142,slow=39							
SADO	**Sadowa**	**87.61**	**11**	LR	LR		07 13 17.0	
	comp=Z,162nm,18.0s,baz=9.5,slow=37							
AFI	**Afiamalu**	**88.08**	**113**	LR	LR		07 07 43.2	
	comp=Z,57nm,19.7s,baz=130,slow=33							
ANMO	**Albuquerque**	**89.81**	**34**	LR	LR		07 14 05.2	
	comp=Z,115nm,21.4s,baz=337,slow=37							
O52A	**Adamsville**	**91.77**	**14**		**P**		**06 32 18.7**	**+0.3**
BLO	**Bloomington**	**91.82**	**18**	P	**P**		**06 32 18.0**	**-0.6**
BLO				IAmb	IAmb		06 32 20.9	
	comp=Z,8.5nm,1.1s							
BLO	**Bloomington**	**91.82**	**18**	P	**P**		**06 32 18.0**	**-0.6**
BLO				pmax	pmax			
	comp=Z,8.0nm,1.1s							
TKL	**Tuckaleechee C**	**95.76**	**16**	LR	LR		07 18 43.3	
	comp=Z,137nm,18.1s,baz=342,slow=37							
TXAR	**Lajitas Array**	**95.87**	**34**	P	**P**		**06 32 37.1**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=326,slow=2.6,SNR=3.5							
TXAR			PP		**PP**		**06 36 29.9**	**+1.2**
	comp=Z,0.6nm,1.1s,baz=191,slow=2.6,SNR=3.5							
TXAR				LR	LR		07 19 32.9	
	comp=Z,187nm,20.6s,baz=328,slow=38							
	comp=Z,0.3nm,0.7s							
LPIG	**La Paz**	**97.64**	**42**	LR	LR		07 16 40.2	
	comp=Z,51nm,19.8s,baz=359,slow=35							
LSZ	**Lusaka**	**99.81**	**258**	LR	LR		07 19 44.6	
	comp=Z,107nm,19.0s,baz=76,slow=36							
PPT2	**Papeete2**	**105.34**	**99**	eLR	LR		07 07 56.2	
PPT2	comp=Z,171nm,23.0s			*e*LR	LR		07 08 00.5	
	comp=Z,156nm,26.5s							
TAOE	**Nuku Hiva Isla**	**105.58**	**86**	*e*LR	LR		07 08 10.7	
	comp=Z,230nm,28.2s							
VNDA	**Vanda**	**127.36**	**169**	PKP	**PKPdf**		**06 38 12.4**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=292,slow=3.8,SNR=8.3							
ROSC	**El Rosal**	**127.54**	**14**	PKP	**PKPdf**		**06 38 16.1**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=102,slow=18,SNR=4.3							
QSPA	**South Pole Qui**	**136.72**	**180**	PKhKP	PKPpre		06 38 21.9	
	comp=Z,1.4nm,0.8s,baz=11,slow=1.0,SNR=7.7							
TROLL	**Troll, Antarti**	**141.16**	**207**	⫝PKPdf	**PKPdf**		**06 38 34.9**	**-5.0**
	comp=Z,119nm,0.8s							
SNAA	**Sanae**	**142.87**	**207**	PKP	**PKPdf**		**06 38 39.2**	**-3.7**
	comp=Z,1.4nm,1.0s,baz=124,slow=3.6,SNR=2.4							
VNA2	**Neumayer--Watz**	**144.44**	**208**	⫝PKPdf	**PKPab**		**06 38 43.2**	**-0.7**
	comp=Z,9.5nm,0.6s,baz=90,slow=3.4							
VNA1	**Neumayer--Stat**	**144.78**	**208**	⫝PKPdf	**PKPab**		**06 38 44.5**	**-0.7**
	comp=Z,25nm,0.7s							
BDFB	**Brasilia**	**146.18**	**332**	PKPbc	**PKPbc**		**06 38 51.1**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=127,slow=5.9,SNR=5.8							
LPAZ	**La Paz**	**149.17**	**9**	PKPbc	**PKPdf**		**06 38 57.3**	**+1.4**
	comp=Z,4.9nm,0.8s,baz=4.2,slow=3.8,SNR=25							

*IDC **04** 06:19:50.6±2.4, 36.°98N×141.°88E, h0km, mb3.6/3, mbtmp3.4/4, ML2.0/1, Error ellipse: s-maj=46.5km s-min=33.5km az=56.0*
*JMA **04** 06:19:57.3±0.1, 37.°4N±0.°3×141.°3E±0.°7, h32km, MV3.5/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 04 06:19:53.8±1.8, 37.°31N±0.°05×141.°56E±0.°08, h16km±9km, n20, σ1°61/25, mb3.6/3, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.55**	**276**	⫝P	**Pg**	**06 20 05.7**	**+1.0**
JFK				⫝S	**Sg**	**06 20 11.4**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.64**	**251**	⫝*i*P	**Pb**	**06 20 07.4**	**+0.7**
ONAJ				⫝S	**Sg**	**06 20 14.4**	**-0.6**
JMM	**Marumori**	**0.83**	**313**	*i* P	**Pb**	**06 20 09.9**	**+0.1**
JMM				S	**Sb**	**06 20 18.9**	**-1.8**
JFFD	**Fukushimafurud**	**0.83**	**255**	*i* P	**Pb**	**06 20 10.1**	**+0.2**
JFFD				S	**Sb**	**06 20 18.9**	**-1.9**
JOTO	**OTAMA OYAMA**	**1.01**	**285**	*i* P	**Pb**	**06 20 13.1**	**+0.2**
JOTO				S	**Sb**	**06 20 24.3**	**-1.7**
JHO	**Hitachi**	**1.06**	**229**	*i* P	**Pg**	**06 20 13.6**	**-0.6**
JHO				S	**Sb**	**06 20 25.8**	**-1.6**
JIO	**Ouri**	**1.16**	**352**	*i* P	**Pn**	**06 20 15.9**	**+0.6**
JIO				S	**Sb**	**06 20 29.4**	**-0.8**
JOU	**Okura**	**1.27**	**326**	*i* P	**Pn**	**06 20 17.6**	**+0.6**
JOU				S	**Sn**	**06 20 32.9**	**-0.8**
JFY	**Yanaizu**	**1.48**	**274**	P	**Pn**	**06 20 20.2**	**+0.3**
JFY				S	**Sn**	**06 20 37.8**	**-1.2**
JYS	**Shirataka**	**1.50**	**308**	*i* P	**Pn**	**06 20 20.8**	**+0.7**
JYS				S	**Sn**	**06 20 38.4**	**-0.9**
MJAR	**Matsushiro Arr**	**2.79**	**255**	Pn	**Pn**	**06 20 39.8**	**+1.9**
	0.2nm,0.3s,baz=84,slow=16,SNR=6.0						
MJAR				Sn	**Sn**	**06 21 14.4**	**+3.0**
	0.3nm,0.3s,baz=82,slow=19,SNR=4.3						
	1.5nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.19**	**121**	T	T	06 55 24.4	
	baz=315,slow=75,SNR=42						
H11N1	**WAKE ISLAND Hy**	**28.20**	**121**	T	T	06 55 35.8	
	baz=315,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**28.21**	**121**	T	T	06 55 27.6	
	baz=315,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	06 56 27.2	
	baz=316,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	06 56 20.7	
	baz=316,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**28.93**	**124**	T	T	06 56 20.7	
	baz=316,slow=76,SNR=39						
MKAR	**Makanchi Array**	**44.07**	**302**	P	**P**	**06 28 04.8**	**+3.8**
	0.9nm,0.7s,baz=76,slow=6.1,SNR=2.0						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**45.93**	**308**	P	**P**	**06 28 16.3**	**+0.7**
	0.3nm,0.4s,baz=80,slow=7.4,SNR=1.1						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**57.35**	**188**	P	**P**	**06 29 38.6**	**-2.7**
	0.1nm,0.3s,baz=7.2,slow=7.3,SNR=1.7						
	0.1nm,0.3s						

*NEIC **04** 06:24:21.9±1.2, 17.°843N×0.°010×67.°01W±0.°01, h10km±1km, ML3.8/37, Md3.6/8(RSPR), Error ellipse: s-maj=3.0km s-min=2.1km az=338.0*
*RSPR **04** 06:24:23.2, 17.°96N×66.°99W, h6km, MD3.5/8*
*OSPL **04** 06:24:24.1±2.3, 17.°82N×66.°94W, h0km±49km, ML3.5, Presumed earthquake*

ISC 04 06:24:22.1±1.0, 17.°91N±0.°06×66.°96W±0.°02, h12km±6km, n45, σ0°92/63, 11D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.10**	**308**	Pg	**Pg**	**06 24 24.8**	**0.0**
MLPR				Sg	**Sg**	**06 24 26.3**	**-0.6**
MLPR				IAML		06 24 26.5	
	56μm,0.2s						
MLPR	**Magueyes Islan**	**0.10**	**308**	⫝*i*P	**Pg**	**06 24 24.9**	**0.0**
GBPR	**Guanica, Bosqu**	**0.10**	**50**		**Pb**	**06 24 25.9**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.10**	**50**	⫝*i*P	**Pb**	**06 24 25.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**305**		**Pb**	**06 24 26.2**	**-1.1**
CRPR				Sg	**Sg**	**06 24 28.7**	**+0.1**
CRPR				IAML		06 24 29.1	
	24μm,0.4s						
CRPR				IAML		06 24 29.3	
	27μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.17**	**305**	⫝*i*P	**Pb**	**06 24 26.2**	**-1.1**
LSP	**Las Mesas**	**0.29**	**336**		**Pb**	**06 24 28.4**	**-0.9**
LSP	**Las Mesas**	**0.29**	**336**	⫝*i*P	**Pb**	**06 24 28.4**	**-0.9**
PRSN	**Puerto Rico Se**	**0.35**	**330**		**Pb**	**06 24 29.4**	**-0.9**
PRSN					**Sg**	**06 24 34.5**	**+0.6**
PRSN	**Puerto Rico Se**	**0.35**	**330**	⫝*i*P	**Pb**	**06 24 29.4**	**-0.9**
OBIP	**Obispado Ponce**	**0.36**	**68**		**Pb**	**06 24 30.5**	**+0.1**
OBIP					**Sb**	**06 24 36.7**	**+0.5**
OBIP	**Obispado Ponce**	**0.36**	**68**	*i* P	**Pb**	**06 24 30.6**	**+0.1**
OBIP				*e*S	**Sb**	**06 24 36.0**	**-0.2**
OBIP				IAML		06 24 37.2	
	comp=Z,8μm,0.3s						
OBIP	**Obispado Ponce**	**0.36**	**68**	⫝*i*P	**Pb**	**06 24 30.6**	**+0.1**
OBIP				*e*S	**Sb**	**06 24 36.7**	**+0.5**
CELP	**Cerrillos**	**0.40**	**65**		**Pb**	**06 24 31.2**	**+0.1**
CELP					**Sb**	**06 24 37.8**	**+0.5**
CELP	**Cerrillos**	**0.40**	**65**	⫝*i*P	**Pb**	**06 24 31.3**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.41**	**34**		**Pb**	**06 24 30.9**	**-0.5**
UUPR					**Sb**	**06 24 38.1**	**+0.5**
UUPR				IAML		06 24 41.7	
	comp=Z,14μm,0.4s						
UUPR	**Utuado, UPR, P**	**0.41**	**34**	⫝*i*P	**Pb**	**06 24 30.9**	**-0.5**
AOPR	**Arecibo Observ**	**0.48**	**24**		**Pb**	**06 24 31.9**	**-0.5**
AOPR					**Sg**	**06 24 38.7**	**+0.8**
AOPR				IAML		06 24 40.0	
	comp=Z,6μm,0.6s						
AOPR	**Arecibo Observ**	**0.48**	**24**	⫝*i*P	**Pb**	**06 24 32.1**	**-0.4**
AGPR	**Aguadilla, PR**	**0.57**	**346**		**Pb**	**06 24 33.5**	**-0.6**
AGPR					**Sg**	**06 24 41.4**	**+0.5**
AGPR				IAML		06 24 41.7	
	comp=Z,4μm,0.7s						
AGPR	**Aguadilla, PR**	**0.57**	**346**	⫝*i*P	**Pb**	**06 24 33.6**	**-0.5**
IDE	**Isla Desecheo**	**0.68**	**314**		**Pg**	**06 24 35.1**	**-0.2**
IDE					**Sg**	**06 24 44.4**	**+0.1**
IDE	**Isla Desecheo**	**0.68**	**314**	⫝*i*P	**Pg**	**06 24 35.1**	**-0.2**
IDE				*e*S	**Sg**	**06 24 44.4**	**+0.1**
ECPR	**Experimental S**	**0.70**	**54**		**Pb**	**06 24 36.1**	**-0.1**
ECPR					**Sn**	**06 24 46.9**	**-1.8**
ECPR				IAML		06 24 48.1	
	comp=Z,4μm,0.2s						
ECPR				IAML		06 24 49.5	
	comp=Z,4μm,0.2s						
ECPR	**Experimental S**	**0.70**	**54**	⫝*i*P	**Pb**	**06 24 36.1**	**-0.1**
SJG	**San Juan**	**0.80**	**75**		**Pn**	**06 24 38.2**	**-1.0**
SJG				IAML		06 24 52.6	
	comp=Z,2μm,0.5s						
SJG	**San Juan**	**0.80**	**75**	*i* P	**Pn**	**06 24 38.0**	**-1.1**
SJG				*e*S	**Sn**	**06 24 50.0**	**-1.1**
SJG	**San Juan**	**0.80**	**75**	⫝*i*P	**Pn**	**06 24 38.2**	**-1.0**
IGPR	**InterUniversit**	**0.81**	**86**		**Pn**	**06 24 38.7**	**-0.7**
IGPR					**Sn**	**06 24 50.2**	**-1.3**
IGPR	**InterUniversit**	**0.81**	**86**	⫝*i*P	**Pn**	**06 24 38.7**	**-0.7**
PDPR	**Patillas Dam,**	**0.90**	**83**		**Pn**	**06 24 39.9**	**-0.7**
PDPR					**Sn**	**06 24 53.0**	**-0.6**
PDPR	**Patillas Dam,**	**0.90**	**83**	⫝*e*P	**Pn**	**06 24 39.9**	**-0.7**
HUMP	**Col San Antoni**	**1.08**	**77**		**Pg**	**06 24 42.7**	**-0.2**
HUMP					**Sn**	**06 24 57.2**	**-0.9**
HUMP	**Col San Antoni**	**1.08**	**77**	⫝*e*P	**Pg**	**06 24 42.7**	**-0.2**
PCDR	**Punta Cana, DR**	**1.48**	**294**	Pn	**Pb**	**06 24 48.3**	**-1.2**
PCDR				IAML		06 25 21.2	
	comp=N,926nm,0.8s						
PCDR	**Punta Cana, DR**	**1.48**	**294**	*i* P	**Pb**	**06 24 49.2**	**-0.3**
PCDR				*e*S	**Sg**	**06 25 10.7**	**+1.0**
PCDR				IAML		06 25 19.6	
	comp=Z,276nm,0.5s						
DR12	**Loma Pena Alta**	**2.46**	**291**	Pn	**Pn**	**06 25 02.8**	**+0.7**
BANI	**BANI**	**3.27**	**279**	Pn	**Pn**	**06 25 13.0**	**-0.2**
SMRT	**St. Maarten**	**3.70**	**87**	Pn	**Pn**	**06 25 20.6**	**+1.4**
LOVI	**El Cajuil, Ovi**	**4.20**	**269**	*i* P	**Pn**	**06 25 27.0**	**+1.0**
LOVI				IAML		06 26 27.1	
	comp=Z,60nm,1.5s						
LODU1	**El Espartillar**	**4.31**	**277**	*i* P	**Pn**	**06 25 29.7**	**+2.1**
LODU1				IAML		06 26 44.6	
	comp=Z,46nm,2.4s						
LONE3	**El Aguacate, B**	**4.33**	**280**	*i* P	Pn	06 25 31.5	+3.6
LONE3				IAML		06 26 46.1	
	comp=Z,28nm,0.8s						
LOPP1	**Punta Rusia, P**	**4.46**	**296**	*i* P	**Pn**	**06 25 33.1**	**+3.6**
LOPP1				IAML		06 26 43.1	
	comp=Z,88nm,0.8s						
GRTK	**Grand Turk**	**5.32**	**313**	*i* P	**Pn**	**06 25 43.0**	**+1.6**
GRTK				*e*S	**Sn**	**06 26 42.8**	**+0.2**
GRTK				IAML		06 26 50.2	
	comp=Z,38nm,1.1s						
CBE	**Ff, Capester**	**5.44**	**109**	Pn	**Pn**	**06 25 44.4**	**+1.3**

*SDD **04** 06:29:03.7±2.9, 19.°26N×69.°83W, h0km±10km, MD2.9, ML2.0, MW2.1, Presumed earthquake*
*OSPL **04** 06:29:03.7±1.4, 19.°17N×69.°91W, h4km±10km, ML2.3, Presumed earthquake*

ISC 04 06:29:03.5±1.0, 19.°23N±0.°04×69.°78W±0.°03, h28km±9km, n19, σ1°89/27, 18C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONA1	**Toro Cenizo, N**	**0.17**	**331**	*i* P	**Pn**	**06 29 12.6**	**+2.4**
LONA1				*e*S	**Sb**	**06 29 16.0**	**+3.0**
CADR	**Cabrera**	**0.46**	**341**	⫝*i*S	**Sb**	**06 29 15.7**	**-4.0**
CADR				IAML		06 29 16.1	
	comp=N,112nm,0.2s						
SMDR	**Samana, DR**	**0.56**	**84**	⫝*i*P	**Pb**	**06 29 13.3**	**-1.6**
SMDR				⫝*i*S	**Sn**	**06 29 23.6**	**-0.3**
HATOM	**Hato Mayor del**	**0.58**	**140**	⫝*i*P	**Pb**	**06 29 14.0**	**-1.2**
HATOM				⫝*i*S	**Sn**	**06 29 23.9**	**-0.6**
HATOM				IAML		06 29 24.6	
	comp=N,17nm,0.7s						
SDD	**Santo Domingo**	**0.78**	**189**	⫝*i*S	**Sb**	**06 29 28.4**	**-0.4**
SDD				IAML		06 29 28.6	
	comp=N,29nm,0.2s						
SODR	**Sosua Marina B**	**0.91**	**305**	⫝*i*S	**Sn**	**06 29 32.3**	**-0.2**
SODR				IAML		06 29 39.7	
	comp=N,58nm,1.1s						
SC01	**Santiago de lo**	**0.92**	**282**	IAML		06 29 31.7	
	comp=N,40nm,1.0s						
SC01				⫝*i*S	**Sb**	**06 29 32.3**	**-0.3**
SC01	**Santiago de lo**	**0.92**	**282**	*i* P	**Pn**	**06 29 18.7**	**-1.8**
BANI	**BANI**	**1.00**	**213**	⫝*i*P	**Pn**	**06 29 21.7**	**0.0**
BANI				⫝*i*S	**Sb**	**06 29 34.0**	**-1.1**
BANI				IAML		06 29 34.8	
	comp=N,53nm,0.2s						
HIDR	**Higuey Centro**	**1.19**	**122**	⫝*i*P	**Pb**	**06 29 24.9**	**-0.6**
HIDR				⫝*i*S	**Sb**	**06 29 42.4**	**+1.9**
HIDR				IAML		06 29 44.7	
	comp=N,26nm,0.3s						
LUDR	**Luperon**	**1.29**	**301**	⫝*i*S	**Sn**	**06 29 41.5**	**-0.4**
MADR	**Mao Valverde**	**1.29**	**285**	IAML		06 29 38.4	
	comp=N,38nm,1.2s						
MADR				⫝*i*S	**Sb**	**06 29 43.2**	**-0.1**
SDDR	**Presa de Saban**	**1.45**	**260**	*i* P	**Pn**	**06 29 27.0**	**-0.8**
SDDR				IAML		06 29 51.9	
	comp=Z,159nm,0.3s						
LOPP1	**Punta Rusia, P**	**1.47**	**295**	*i* P	**Pn**	**06 29 26.8**	**-1.3**
LOPP1				*e*S	**Sn**	**06 29 46.4**	**-0.1**
LOPP1				IAML		06 29 50.4	
	comp=Z,36nm,2.6s						
PCDR	**Punta Cana, DR**	**1.50**	**118**	⫝*i*P	**Pb**	**06 29 30.8**	**0.0**
PCDR				⫝*i*S	**Sb**	**06 29 52.6**	**+3.2**
PCDR				IAML		06 29 55.0	
	comp=N,49nm,1.9s						
PCDR	**Punta Cana, DR**	**1.50**	**118**	*i* P	**Pb**	**06 29 30.7**	**-0.1**
PCDR				IAML		06 30 00.1	
	comp=Z,42nm,1.1s						
REDR	**Restauracion**	**1.53**	**268**	⫝*i*P	**Pb**	**06 29 31.9**	**+0.7**
REDR				⫝*i*S	**Sb**	**06 29 55.0**	**+4.9**
REDR				IAML		06 29 56.1	
	comp=N,34nm,0.2s						
LONE3	**El Aguacate, B**	**1.71**	**249**	*i* P	**Pn**	**06 29 31.0**	**-0.5**
LONE3				IAML		06 29 59.7	
	comp=Z,15nm,4.4s						
MCDR	**Montecristi**	**1.89**	**291**	⫝*i*S	**Sn**	**06 29 57.7**	**+1.0**
MCDR				IAML		06 30 08.0	
	comp=N,36nm,3.8s						

IDC 04 06:32:52.5±9.0, 46.°94N×152.°48E, h100km±64km, mb3.3/4, mbtmp3.6/5, ML1.9/1, Error ellipse: s-maj=72.0km s-min=37.8km az=0.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.03**	**27**	P	Pn	06 34 31.5	-1.1
	0.1nm,0.3s,baz=213,slow=10,SNR=2.2						
PETK				S	Sn	06 35 52.7	+1.8
	0.7nm,0.7s,baz=233,slow=21,SNR=1.1						
	2.5nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**29.59**	**152**	T	T	07 10 36.3	
	baz=341,slow=76,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**29.61**	**152**	T	T	07 10 57.2	
	baz=341,slow=76,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**29.61**	**152**	T	T	07 11 07.4	
	baz=341,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**30.67**	**153**	T	T	07 12 15.9	
	baz=342,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**30.68**	**153**	T	T	07 12 21.1	
	baz=342,slow=76,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**30.69**	**153**	T	T	07 12 16.4	
	baz=342,slow=76,SNR=7.0						
KURBB	**Kurchatov Arra**	**46.99**	**303**	P	P	06 41 14.3	+1.1
	0.2nm,0.2s,baz=64,slow=8.5,SNR=2.1						
	0.2nm,0.2s						
FINES	**FINESS Array B**	**63.68**	**334**	P	P	06 43 12.2	-0.5
	0.4nm,0.3s,baz=34,slow=7.4,SNR=5.9						
	0.4nm,0.3s						
HFS	**Hagfors**	**68.12**	**339**	P	P	06 43 40.7	-0.6
	0.6nm,0.4s,baz=46,slow=6.2,SNR=4.7						
	0.6nm,0.4s						
TXAR	**Lajitas Array**	**77.78**	**60**	P	P	06 44 39.2	+0.4
	0.1nm,0.5s,baz=334,slow=6.5,SNR=1.6						
	0.1nm,0.5s						

*NOU **04** 06:38:22.2, 11.°46S×167.°69E, h193km, mb4.0/16, Santa Cruz Islands*
*NEIC **04** 06:38:34.3±0.5, 12.°6S±0.°1×166.°9E±0.°2, h197km±9km, mb4.2/14, Error ellipse: s-maj=29.4km s-min=15.8km az=102.0*
*IDC **04** 06:38:37.6±5.6, 12.°65S×166.°84E, h236km±59km, mb3.7/7, mbtmp4.3/8, Error ellipse: s-maj=53.2km s-min=24.9km az=153.0*

ISC 04 06:38:35.8±1.0, 12.°72S±0.°09×166.°9E±0.°1, h220km, n41, σ1°62/42, mb4.2/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.73**	**175**	P	**Pn**	**06 39 22.2**	**-1.3**
SANVU	**Saraoutou**	**2.73**	**175**		**Pn**	**06 39 22.2**	**-1.3**
SANVU				Sn	**S**	**06 39 57.8**	**-3.0**
KOUNC	**

ISC 04 06:39:07.7±0.5, 17°11S±0.1′×175°9W±0.1′, h200km, n21, σ1§43/25, mb3.9/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
AFI	**Afiamalu**	**5.06**	**52**	P **Pn**	**06 40 26.8**	**+3.9**
	35nm,0.4s,baz=178,slow=1.9,SNR=7.6					
AFI				S **Sn**	**06 41 19.7**	**-2.6**
	67nm,0.3s,baz=52,slow=21,SNR=14					
DZM	**Mont Dzumac**	**17.38**	**251**	P **P**	**06 42 57.1**	**+0.2**
	4.3nm,0.9s,baz=135,slow=11,SNR=1.3					
CTA	**Charters Tower**	**35.97**	**259**	P **P**	**06 45 49.4**	**-0.2**
	1.8nm,0.4s,baz=70,slow=12,SNR=1.8					
	1.8nm,0.4s					
STKA	**Stephens Creek**	**41.14**	**241**	P **P**	**06 46 31.8**	**-0.7**
	2.5nm,0.5s,baz=84,slow=10,SNR=9.1					
	2.5nm,0.5s					
WRA	**Warramunga Arr**	**47.16**	**258**	P **P**	**06 47 19.4**	**-1.1**
	1.8nm,0.5s,baz=94,slow=7.2,SNR=25					
WRA				PcP **PcP**	**06 48 49.7**	**+0.9**
	1.3nm,1.0s,baz=95,slow=6.9,SNR=2.4					
	1.8nm,0.5s					
ASAR	**Alice Springs**	**47.34**	**253**	P **P**	**06 47 20.6**	**-1.2**
	14nm,0.6s,baz=88,slow=8.4,SNR=185					
ASAR				PcP **PcP**	**06 48 51.4**	**+1.9**
	0.5nm,0.4s,baz=98,slow=3.4,SNR=2.1					
ASAR				S **S**	**06 54 01.7**	**+1.3**
	0.2nm,0.7s,baz=94,slow=14,SNR=2.3					
	14nm,0.6s					
FITZ	**Fitzroy Crossi**	**55.55**	**260**	P **P**	**06 48 22.4**	**-0.2**
	4.6nm,1.0s,baz=112,slow=11,SNR=2.0					
	4.6nm,1.0s					
VNDA	**Vanda**	**61.48**	**185**	P **P**	**06 49 04.0**	**+1.3**
	1.4nm,1.0s,baz=14,slow=9.4,SNR=4.4					
	1.4nm,1.0s					
QSPA	**South Pole Qui**	**72.97**	**180**	P **P**	**06 50 15.1**	**-0.1**
	2.8nm,0.7s,baz=341,slow=0.9,SNR=21					
	2.8nm,0.7s					
PETK	**Petropavlovsk-**	**73.53**	**344**	P **P**	**06 50 18.0**	**-0.3**
	0.8nm,0.5s,baz=159,slow=5.1,SNR=4.2					
	0.8nm,0.5s					
NVAR	**Mina Array Bea**	**77.17**	**43**	P **P**	**06 50 38.4**	**-1.3**
	1.3nm,0.7s,baz=224,slow=9.6,SNR=11					
	1.3nm,0.7s					
TXAR	**Lajitas Array**	**83.52**	**57**	P **P**	**06 51 12.5**	**-1.1**
	0.5nm,0.7s,baz=224,slow=5.2,SNR=7.3					
	0.5nm,0.7s					
ILAR	**Eielson Array**	**84.56**	**12**	P **P**	**06 51 18.0**	**+0.1**
	1.1nm,0.5s,baz=224,slow=5.2,SNR=14					
	1.1nm,0.5s					
PDAR	**Pinedale Array**	**85.11**	**43**	P **P**	**06 51 19.8**	**-1.6**
	0.7nm,0.6s,baz=213,slow=4.1,SNR=8.9					
	0.7nm,0.6s					
MAW	**Mawson**	**85.44**	**199**	P **P**	**06 51 23.1**	**+0.7**
	1.9nm,0.6s,baz=137,slow=8.7,SNR=6.6					
	1.9nm,0.6s					
SNAA	**Sanae**	**91.34**	**178**	P **P**	**06 51 49.2**	**-1.2**
	1.0nm,0.8s,baz=244,slow=4.0,SNR=2.8					
	1.0nm,0.8s					
MKAR	**Makanchi Array**	**110.30**	**314**	PKiKP **PKiKP**	**06 57 16.4**	**+0.5**
	0.3nm,0.6s,baz=64,slow=3.4,SNR=2.3					
ARCES	**ARCESS Array B**	**125.91**	**351**	PKP **PKPdf**	**06 57 45.5**	**+0.3**
	1.5nm,0.7s,baz=354,slow=1.2,SNR=5.2					
BRTR	**Keskin Array B**	**145.87**	**317**	PKPbc **PKPdf**	**06 58 24.3**	**+1.3**
	1.3nm,0.5s,baz=102,slow=4.9,SNR=2.4					
GERES	**GERESS Array B**	**147.37**	**348**	PKPbc **PKPbc**	**06 58 28.4**	**+0.5**
	1.0nm,0.6s,baz=346,slow=2.8,SNR=7.8					
TORD	**Torodi Ar. Bea**	**175.44**	**149**	PKPab **PKPab**	**07 00 30.9**	**-1.6**
	1.0nm,1.0s,baz=243,slow=9.0,SNR=2.7					

*IDC **04** 06:40:06.8±2.9, 18°91S×178°33W, h571km±23km, mb3.2/5, mbtmp4.2/6, Error ellipse: s-maj=87.9km s-min=23.3km az=151.0*

ISC 04 06:40:04.0±1.5, 19°4S±0.4′×178°0W±0.2′, h550km, n8, σ1§79/8, mb4.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MSVF	**Nonsavu**	**4.14**	**293**	P **P**	**06 41 28.3**	**+1.2**
	24nm,0.4s,baz=127,slow=5.1,SNR=16					
CTA	**Charters Tower**	**33.66**	**263**	P **P**	**06 45 57.7**	**-2.2**
	2.9nm,0.5s,baz=98,slow=15,SNR=3.3					
	2.9nm,0.5s					
STKA	**Stephens Creek**	**38.32**	**243**	P **P**	**06 46 39.5**	**+1.3**
	3.1nm,0.6s,baz=60,slow=10,SNR=6.3					
	3.1nm,0.6s					
WRA	**Warramunga Arr**	**44.81**	**261**	P **P**	**06 47 27.2**	**-2.4**
	3.5nm,0.6s,baz=95,slow=7.2,SNR=33					
	3.5nm,0.6s					
ASAR	**Alice Springs**	**44.83**	**256**	P **P**	**06 47 28.9**	**-0.8**
	39nm,0.6s,baz=88,slow=8.6,SNR=106					
FITZ	**Fitzroy Crossi**	**53.23**	**262**	P **P**	**06 48 32.8**	**+1.0**
	2.1nm,0.5s,baz=90,slow=6.1,SNR=5.8					
	2.1nm,0.5s					
TXAR	**Lajitas Array**	**86.42**	**57**	P **P**	**06 51 48.3**	**-0.6**
	0.4nm,0.7s,baz=216,slow=6.2,SNR=4.0					
	0.4nm,0.7s					
GERES	**GERESS Array B**	**149.15**	**345**	PKPbc **PKPbc**	**06 58 51.2**	**+0.5**
	0.6nm,0.5s,baz=33,slow=3.2,SNR=4.7					

*SJA **04** 07:14:06.9±0.8, 18°83S×69°56W, h115km±5km, ML4.1, MW3.9*
*IDC **04** 07:14:07.8±0.7, 18°62S×69°34W, h113km±5km, mb3.4/8, mbtmp3.9/11, MS2.7/1, Error ellipse: s-maj=23.9km s-min=15.7km az=28.0*
*NEIC **04** 07:14:08±1.2, 18°82S±0°04×69°56W±0°04, h116km±6km, mb4.2/8, ML4.2, Error ellipse: s-maj=7.6km s-min=2.4km az=51.0*
*GUC **04** 07:14:08.2±0.8, 18°82S×69°51W, h114km±3km, ML4.2*
*VAO **04** 07:14:11.4±0.5, 18°71S×68°99W, h117km, mb4.1, Presumed earthquake*

ISC 04 07:14:06.9±0.4, 18°79S±0°03×69°38W±0°05, h110km±4km, n121, σ1§91/156, mb3.9/8, 8C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PB16	**IPOC Station P**	**0.47**	**344**	**Pn**	**07 14 26.0**	**+1.7**
PB16				Sn **Sn**	**07 14 39.1**	**+1.9**
PB16	**IPOC Station P**	**0.47**	**344**	*eP* **Pn**	**07 14 26.0**	**+1.7**
PB16				*eS* **Sn**	**07 14 38.9**	**+1.7**
PB16				IAML	07 14 40.8	
	comp=Z,10μm,0.5s					
PB16	**IPOC Station P**	**0.47**	**344**	⇓*iP* **Pn**	**07 14 25.8**	**+1.5**
PB16				*i* S **Sn**	**07 14 39.1**	**+1.9**
PB16				IAML	07 14 40.6	
	comp=E,21μm,0.3s					
GO01	**Chusmiza**	**0.90**	**169**	**Pn**	**07 14 29.5**	**+1.9**
GO01				Sn **Sn**	**07 14 45.7**	**+2.6**
GO01	**Chusmiza**	**0.90**	**169**	*eP* **Pn**	**07 14 29.4**	**+1.8**
GO01				*eS* **Sn**	**07 14 45.4**	**+2.2**
GO01				IAML	07 14 47.0	
	comp=Z,2μm,0.1s					
GO01	**Chusmiza**	**0.90**	**169**	⇑*iP* **Pn**	**07 14 29.2**	**+1.6**
GO01				*i* S **Sn**	**07 14 45.4**	**+2.2**
GO01				IAML	07 14 47.2	
	comp=N,5μm,0.2s					
PB12	**IPOC Station P**	**0.92**	**281**	**Pn**	**07 14 27.3**	**-0.1**
PB12				Sn **Sn**	**07 14 41.9**	**-0.9**
PB12	**IPOC Station P**	**0.92**	**281**	*eP* **Pn**	**07 14 27.2**	**-0.1**
PB12				*eS* **Sn**	**07 14 42.1**	**-0.7**
PB12				IAML	07 14 42.7	
	comp=Z,7μm,0.5s					
PB12	**IPOC Station P**	**0.92**	**281**	⇑*iP* **Pn**	**07 14 27.2**	**-0.1**
PB12				*i* S **Sn**	**07 14 41.9**	**-0.9**
PB12				IAML	07 14 43.1	
	comp=E,17μm,0.3s					
AP01	**Chacalluta**	**1.00**	**294**	**Pn**	**07 14 28.4**	**+0.2**
AP01				Sn **Sn**	**07 14 43.8**	**-0.3**
AP01	**Chacalluta**	**1.00**	**294**	*eP* **Pn**	**07 14 28.0**	**-0.2**
AP01				*eS* **Sn**	**07 14 43.5**	**-0.6**
AP01				IAML	07 14 46.2	
	comp=Z,5μm,0.1s					
AP01	**Chacalluta**	**1.00**	**294**	⇑*iP* **Pn**	**07 14 28.2**	**+0.1**
AP01				*i* S **Sn**	**07 14 43.9**	**-0.3**
AP01				IAML	07 14 45.5	
	comp=N,14μm,0.3s					
PB11	**IPOC Station P**	**1.00**	**195**	**Pn**	**07 14 29.1**	**+0.7**
PB11				Sn **Sn**	**07 14 45.1**	**+0.5**
PB11	**IPOC Station P**	**1.00**	**195**	*eP* **Pn**	**07 14 29.1**	**+0.7**
PB11				*eS* **Sn**	**07 14 45.2**	**+0.6**
PB11				IAML	07 14 47.0	
	comp=Z,2μm,0.1s					
PB11	**IPOC Station P**	**1.00**	**195**	⇑*iP* **Pn**	**07 14 29.1**	**+0.7**
PB11				*eS* **Sn**	**07 14 44.9**	**+0.4**
PB11				IAML	07 14 46.5	
	comp=E,5μm,0.2s					
PSGCX	**Pisagua**	**1.07**	**221**	**Pn**	**07 14 28.9**	**-0.1**
PSGCX				Sn **Sn**	**07 14 45.1**	**-0.6**
PSGCX	**Pisagua**	**1.07**	**221**	*eP* **Pn**	**07 14 28.8**	**-0.1**
PSGCX				*eS* **Sn**	**07 14 44.9**	**-0.7**
PSGCX				IAML	07 14 45.4	
	comp=Z,3μm,0.2s					
PSGCX	**Pisagua**	**1.07**	**221**	*eP* **Pn**	**07 14 28.7**	**-0.3**
PSGCX				*eS* **Sn**	**07 14 44.5**	**-1.2**
PB18	**Visviri**	**1.19**	**355**	**Pn**	**07 14 33.9**	**+3.2**
PB18	**Visviri**	**1.19**	**355**	⇓*iP* **Pn**	**07 14 34.0**	**+3.2**
PB18				*i* S **Sn**	**07 14 51.3**	**+2.6**
PB08	**IPOC Station P**	**1.36**	**171**	**Pn**	**07 14 34.4**	**+1.8**
PB08				Sn **Sn**	**07 14 53.7**	**+1.8**
PB08	**IPOC Station P**	**1.36**	**171**	*eP* **Pn**	**07 14 33.4**	**+0.8**
PB08				*eS* **Sn**	**07 14 53.8**	**+1.8**
PB08				IAML	07 14 54.9	
	comp=Z,2μm,0.3s					
PB08	**IPOC Station P**	**1.36**	**171**	⇑*iP* **Pn**	**07 14 34.3**	**+1.8**
PB08				*eS* **Sn**	**07 14 53.8**	**+1.8**
PB08				IAML	07 14 55.3	
	comp=E,4μm,0.5s					
TA02	**Huaiquique**	**1.64**	**206**	*eP* **Pn**	**07 14 35.0**	**-0.4**
TA02				*eS* **Sn**	**07 14 55.9**	**-1.2**
TA02				IAML	07 15 01.4	
	comp=Z,999nm,0.1s					
TA02	**Huaiquique**	**1.64**	**206**	*eP* **Pn**	**07 14 35.2**	**-0.2**
TA02				*i* S **Sn**	**07 14 55.7**	**-1.4**
TA02				IAML	07 15 02.2	
	comp=E,3μm,0.1s					
PB02	**IPOC Station P**	**2.57**	**191**	**Pn**	**07 14 48.1**	**+0.8**
PB02	**IPOC Station P**	**2.57**	**191**	*eP* **Pn**	**07 14 47.7**	**+0.4**
PB02				*eS* **Sn**	**07 15 13.8**	**-4.6**
PB02				IAML	07 15 23.6	
	comp=E,793nm,0.3s					
LPAZ	**La Paz**	**2.75**	**26**	P **Pn**	**07 14 53.4**	**+3.2**
	comp=E,52nm,0.5s,baz=214,slow=6.9,SNR=434					
LPAZ				S **Sn**	**07 15 18.9**	**-4.6**
	comp=E,34nm,0.6s,baz=321,slow=7.5,SNR=6.5					
LPAZ	**La Paz**	**2.75**	**26**	**Pn**	**07 14 54.2**	**+3.9**
LPAZ	**La Paz**	**2.75**	**26**	*eP* **Pn**	**07 14 53.6**	**+3.4**
PB07	**IPOC Station P**	**2.96**	**189**	**Pn**	**07 14 53.6**	**+0.9**
PB07	**IPOC Station P**	**2.96**	**189**	⇑*iP* **Pn**	**07 14 52.7**	**0.0**
PB07				*i* S **Sn**	**07 15 25.3**	**-2.6**
PB07				IAML	07 15 34.1	
	comp=E,408nm,0.4s					
PB09	**IPOC Station P**	**3.00**	**178**	**Pn**	**07 14 54.4**	**+1.3**
PB09	**IPOC Station P**	**3.00**	**178**	⇓*iP* **Pn**	**07 14 54.0**	**+1.0**
PB09				*i* S **Sn**	**07 15 23.6**	**-5.0**
PB09				IAML	07 15 30.0	
	comp=E,348nm,0.4s					
PB03	**IPOC Station P**	**3.27**	**186**	**Pn**	**07 14 57.2**	**+0.6**
PB03	**IPOC Station P**	**3.27**	**186**	⇑*iP* **Pn**	**07 14 56.5**	**-0.1**
PB03				*eS* **Sn**	**07 15 31.3**	**-3.7**
PB03				IAML	07 15 38.1	
	comp=E,346nm,0.2s					
PB06	**IPOC Station P**	**3.91**	**183**	**Pn**	**07 15 05.5**	**+0.4**
PB06	**IPOC Station P**	**3.91**	**183**	⇓*iP* **Pn**	**07 15 05.3**	**+0.1**
PB06				*i* S **Sn**	**07 15 46.3**	**-3.9**
PB05	**IPOC Station P**	**4.12**	**191**	**Pn**	**07 15 07.7**	**-0.3**
AF01	**San Pedro de A**	**4.29**	**165**	Pn **Pn**	**07 15 12.9**	**+2.4**
YJA	**Yavi**	**4.95**	**134**	*eP* **Pn**	**07 15 23.4**	**+4.0**
PB14	**IPOC Station P**	**5.89**	**189**	**Pn**	**07 15 30.1**	**-2.0**
AC01	**Pan de Azucar**	**7.41**	**189**	Pn **Pn**	**07 15 49.2**	**-3.3**
AC02	**Maricunga**	**8.02**	**178**	**Pn**	**07 16 00.0**	**-1.0**
SIV	**San Ignacio**	**8.40**	**72**	P **Pn**	**07 16 06.6**	**+0.7**
	comp=E,7.0nm,0.5s,baz=256,slow=13,SNR=39					
SIV				S **Sn**	**07 17 31.4**	**-7.7**
	comp=E,3.4nm,0.8s,baz=258,slow=16,SNR=4.4					
BBSD	**Serra de San D**	**8.49**	**81**	*eP* **Pn**	**07 16 06.8**	**-0.3**
BBSD				*eS* **Sn**	**07 17 37.3**	**-4.0**
NNA	**Nana**	**9.87**	**312**	P **Pn**	**07 16 24.1**	**-1.8**
	comp=E,6.3nm,0.3s,baz=120,slow=16,SNR=6.5					
NNA				S **Sn**	**07 18 07.4**	**-7.5**
	comp=E,5.6nm,0.4s,baz=209,slow=10.0,SNR=2.3					
AC05	**El Transito**	**10.04**	**185**	Pn **Pn**	**07 16 24.7**	**-3.4**
LCO	**Las Campanas**	**10.25**	**187**	Pn Pn	07 16 26.7	-4.5
PTLB	**Pontes e Lacer**	**10.34**	**73**	**Pn**	**07 16 33.3**	**+1.2**
PTLB	**Pontes e Lacer**	**10.34**	**73**	*eP* **Pn**	**07 16 31.9**	**-0.2**
VILB	**Vilhena**	**10.56**	**58**	**Pn**	**07 16 36.3**	**+1.0**
VILB	**Vilhena**	**10.56**	**58**	*eP* **Pn**	**07 16 36.2**	**+1.0**
VILB				*eS* **Sn**	**07 18 27.4**	**-4.2**
COIM	**Forte Coimbra**	**10.99**	**98**	*eP* **Pn**	**07 16 39.5**	**-1.5**
CO01	**Juntas del Tor**	**11.16**	**183**	Pn **Pn**	**07 16 40.9**	**-2.6**
MURT	**Porto Murtinho**	**11.41**	**106**	*eP* **Pn**	**07 16 46.4**	**-0.2**
GO04	**Tololo Observa**	**11.41**	**186**	Pn Pn	07 16 42.2	-4.5
BDQN	**Bodoquena, MS**	**12.01**	**100**	*eP* **Pn**	**07 16 53.0**	**-1.6**
CFA	**Coronel Fontan**	**12.81**	**176**	P **Pn**	**07 17 01.8**	**-3.2**
	comp=E,1.0nm,0.3s,baz=358,slow=13,SNR=13					
CFA				S Sn	07 19 15.2	-11
	comp=E,0.5nm,0.3s,baz=260,slow=14,SNR=2.7					
AQDB	**Aquidauana**	**13.00**	**100**	**Pn**	**07 17 07.7**	**+0.2**
AQDB	**Aquidauana**	**13.00**	**100**	*eP* **Pn**	**07 17 07.3**	**-0.2**
SALV	**Santo Antonio**	**13.38**	**80**	*eP* **Pn**	**07 17 11.7**	**-0.7**
CPUP	**Villa Florida**	**13.42**	**126**	P **Pn**	**07 17 13.9**	**+1.0**
	comp=E,1.2nm,0.6s,baz=307,slow=13,SNR=9.8					
CPUP				LR LR	07 22 19.1	
	comp=E,36nm,20.8s,baz=59,slow=36					
CPUP	**Villa Florida**	**13.42**	**126**	Pn **Pn**	**07 17 14.3**	**+1.3**
CPUP	**Villa Florida**	**13.42**	**126**	*eP* **Pn**	**07 17 14.5**	**+1.6**
AMBA	**Amambai (Brazi**	**14.06**	**109**	*eP* **Pn**	**07 17 22.1**	**+0.8**
MT09	**Talagante**	**15.00**	**185**	Pn **Pn**	**07 17 32.8**	**-0.5**
MT01	**Popeta**	**15.11**	**186**	Pn **Pn**	**07 17 34.6**	**+0.1**
CLDB	**Colider**	**15.30**	**61**	*eP* **Pn**	**07 17 36.0**	**-1.0**
TRCB	**Terra Rica**	**16.15**	**107**	P **P**	**07 17 49.8**	**+0.9**
TRCB	**Terra Rica**	**16.15**	**107**	*eP* **P**	**07 17 49.4**	**+0.6**
PSAL	**Palomas, Salto**	**16.23**	**141**	*eP* **P**	**07 17 49.8**	**+0.3**
H03N1	**Juan Fernandez**	**16.91**	**208**	P **P**	**07 18 00.2**	**+3.5**
	baz=103					
H03N1				T T	07 35 30.8	
	baz=29,slow=72,SNR=32					
H03N2	**Juan Fernandez**	**16.91**	**208**	P **P**	**07 18 00.2**	**+3.4**
	baz=103					
H03N2				T T	07 35 54.2	
	baz=29,slow=72,SNR=49					
H03N3	**Juan Fernandez**	**16.92**	**208**	P **P**	**07 17 59.8**	**+2.8**
	baz=103					
H03N3				T T	07 35 29.8	
	baz=29,slow=72,SNR=46					
ARAG	**Araguaiana, MT**	**17.05**	**82**	*eP* **P**	**07 17 58.2**	**-0.6**
PTGB	**Pitanga**	**17.12**	**113**	*eP* **P**	**07 17 59.3**	**-0.3**
H03S3	**Juan Fernandez**	**17.23**	**208**	P **Pn**	**07 18 02.5**	**+2.0**
	baz=82					
H03S1	**Juan Fernandez**	**17.24**	**208**	P **Pn**	**07 18 02.3**	**+1.8**
	baz=82					
H03S2	**Juan Fernandez**	**17.25**	**208**	P **Pn**	**07 18 02.3**	**+1.7**
	baz=82					
ITAB	**Concordia**	**17.95**	**121**	*eP* **P**	**07 18 08.5**	**0.0**
CPSB	**Cacapava Do Su**	**18.52**	**132**	P **P**	**07 18 15.5**	**+0.7**
CPSB				IAmb IAmb	07 18 17.3	
	comp=Z,9.0nm,0.8s					
CPSB	**Cacapava Do Su**	**18.52**	**132**	*eP* **P**	**07 18 15.9**	**+1.2**
SNDB	**Serra Nova Dou**	**18.69**	**71**	*eP* **P**	**07 18 16.3**	**-0.5**
FRTB	**Fartura**	**19.03**	**107**	*eP* **P**	**07 18 21.2**	**+0.7**
ITTB	**Itaituba**	**19.57**	**45**	*eP* **P**	**07 18 26.0**	**-0.3**
BB19B	**Bebedouro**	**19.73**	**100**	*eP* **P**	**07 18 28.6**	**+0.5**
IPMB	**Ipameri, GO**	**20.10**	**91**	*eP* **P**	**07 18 32.4**	**+0.2**
TRQA	**Tornquist**	**20.26**	**163**	P **P**	**07 18 34.6**	**+1.1**
TRQA				IAmb IAmb	07 18 35.3	
	comp=Z,14nm,0.8s					
BDFB	**Brasilia**	**20.64**	**85**	P **P**	**07 18 38.1**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=254,slow=7.9,SNR=9.9					
	comp=Z,2.8nm,0.4s					
BDFB	**Brasilia**	**20.64**	**85**	P **P**	**07 18 38.4**	**+0.4**
VAO	**Valinhos**	**21.35**	**105**	P **P**	**07 18 45.6**	**+0.1**
VAO				IAmb IAmb	07 19 06.8	
	comp=Z,13nm,1.1s					
CANS	**Sao Roque de M**	**21.71**	**98**	*eP* **P**	**07 18 49.0**	**-0.5**
PMNB	**Patos De Minas**	**21.73**	**93**	*eP* **P**	**07 18 49.3**	**-0.4**
BOAV	**Boa Vista**	**22.78**	**23**	*eP* **P**	**07 19 01.8**	**+1.5**
BSCB	**Bom Sucesso**	**23.23**	**100**	*eP* **P**	**07 19 05.9**	**+1.1**
SMTB	**Santa Maria do**	**23.32**	**68**	*eP* **P**	**07 19 06.2**	**+0.8**
JANB	**Januaria**	**24.26**	**85**	*eP* **P**	**07 19 14.8**	**+0.8**
DIAM	**Diamantina, MG**	**24.37**	**93**	*eP* **P**	**07 19 16.2**	**+1.1**
SDBA	**SAO DESIDERIO**	**24.39**	**78**	*eP* **P**	**07 19 16.6**	**+1.3**
CRIN	**San Cristobal**	**35.81**	**330**	P **P**	**07 20 54.5**	**-1.5**
TXAR	**Lajitas Array**	**58.17**	**325**	P **P**	**07 23 49.5**	**0.0**
	comp=Z,0.2nm,0.7s,baz=116,slow=8.0,SNR=2.7					
TXAR				pP **pP**	**07 24 16.0**	**-1.3**
	comp=Z,0.2nm,0.8s,baz=155,slow=5.6,SNR=2.0					
	comp=Z,0.2nm,0.7s					
SNAA	**Sanae**	**64.98**	**161**	P **P**	**07 24 35.6**	**+0.9**
SNAA				IAmb IAmb	07 24 43.5	
	comp=Z,5.8nm,1.5s					
TROLL	**Troll, Antarti**	**66.69**	**161**	⇑P **P**	**07 24 46.3**	**+0.5**
	comp=Z,42nm,0.6s					
DBIC	**Dimbokro**	**68.41**	**75**	P **P**	**07 24 57.2**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=203,slow=3.8,SNR=1.9					
	comp=Z,4.7nm,0.9s					
QSPA	**South Pole Qui**	**71.39**	**180**	P **P**	**07 25 16.5**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=99,slow=1.7,SNR=12					
	comp=Z,0.6nm,0.4s					
PDAR	**Pinedale Array**	**71.55**	**330**	P **P**	**07 25 16.8**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=194,slow=5.9,SNR=1.6					
PDAR				pP **pP**	**07 25 42.8**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=171,slow=3.6,SNR=2.2					
	comp=Z,0.1nm,0.4s					
NVAR	**Mina Array Bea**	**73.10**	**322**	P **P**	**07 25 25.8**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=114,slow=2.9,SNR=1.8					
NVAR				pP **pP**	**07 25 54.2**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=109,slow=3.8,SNR=3.0					
	comp=Z,0.1nm,0.5s					
TORD	**Torodi Ar. Bea**	**76.88**	**71**	P **P**	**07 25 46.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=244,slow=5.5,SNR=8.4					
TORD				pP **pP**	**07 26 16.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=261,slow=6.1,SNR=1.6					
	comp=Z,0.8nm,0.4s					
YKA	**Yellowknife Ar**	**88.49**	**341**	P **P**	**07 26 47.1**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=138,slow=4.7,SNR=5.3					
YKA				pP **pP**	**07 27 16.6**	**0.0**
	comp=Z,1.2nm,0.6s,baz=135,slow=4.6,SNR=4.9					
YKA				sP **sP**	**07 27 28.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=140,slow=4.8,SNR=3.4					
	comp=Z,0.5nm,0.6s					
H11S2	**WAKE ISLAND Hy**	**127.06**	**279**	T T	09 52 34.8	
	baz=101,slow=75,SNR=32					
H11S1	**WAKE ISLAND Hy**	**127.06**	**279**	T T	09 52 31.6	
	baz=101,slow=75,SNR=27					
H11N3	**WAKE ISLAND Hy**	**127.07**	**281**	T T	09 52 37.1	
	baz=100,slow=75,SNR=11					
H11S3	**WAKE ISLAND Hy**	**127.08**	**279**	T T	09 52 32.6	
	baz=101,slow=75,SNR=6.7					
H11N2	**WAKE ISLAND Hy**	**127.08**	**281**	T T	09 52 38.2	
	baz=100,slow=75,SNR=12					
H11N1	**WAKE ISLAND Hy**	**127.08**	**281**	T T	09 52 38.6	
	baz=100,slow=75,SNR=8.0					
ASAR	**Alice Springs**	**132.08**	**209**	PKP **PKPdf**	**07 33 08.6**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=144,slow=1.5,SNR=1.5					
ASAR				pPKP **pPKPdf**	**07 33 40.6**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=162,slow=0.3,SNR=2.6					
WRA	**Warramunga Arr**	**135.03**	**212**	PKP **PKPdf**	**07 33 14.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=137,slow=2.1,SNR=1.9					
SONM	**Songino Array**	**150.82**	**6**	PKPbc **PKPbc**	**07 33 46.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=17,slow=1.5,SNR=1.8					
SONM				PKPab **PKPab**	**07 33 53.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=315,slow=0.2,SNR=2.2					
SONM				pPKPbc **pPKPbc**	**07 34 17.0**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=8.5,slow=2.9,SNR=2.9					
HHC	**Hu-ho-hao-te**	**158.00**	**358**	*eP* **PKPdf**	**07 33 52.5**	**+1.4**
PZH	**PanZhiHua**	**168.77**	**45**	PKP **PKPdf**	**07 33 59.7**	**-2.0**

*NEIC **04** 07:40:18.8±0.9, 35°1S±0°1×107°4W±0°2, h10km±1km, mb5.2/51, Mww5.3/13, Error ellipse: s-maj=23.2km s-min=20.0km az=234.0*
*IDC **04** 07:40:20.6±0.5, 35°21S×106°74W, h0km, mb4.6/16, mbtmp4.6/16, MS4.3/36, Error ellipse: s-maj=18.6km s-min=15.1km az=98.0*
*GFZ **04** 07:40:23.0±0.4, 35°S±6°×10°7W±°, h10km, M5.0/24, mb5.0/24*
*GCMT **04** 07:40:25.8±0.1, 35°27S±0°01×106°62W±0°01, h16km, MW5.2/132, Moment Tensor Solution. s91,c140; s132,c220; Duration: 1§0 Moment tensor: Scale 10^{16} Nm; M_{rr}=1.03±.14; $M_{\theta\theta}$=-1.57±.13; $M_{\phi\phi}$2.59±.15; $M_{r\theta}$=0.50±.33; $M_{r\phi}$=-7.28±.12; $M_{\theta\phi}$=-2.25±.39; Best double couple: $M_0$7.93400×10^{16} NP1:ϕ_{s}98.00000°, δ72.00000°, λ-176.00000°. NP2:ϕ_{s}7.00000°, δ86.00000°, λ-18.00000°. Principal axes: T 8.3260, Plg9.0000°, Azm54.0000°; N -0.7940, Plg72.0000°, Azm174.0000°; P -7.5430, Plg15.0000°, Azm321.0000°; nsta1

NNA	**Nana**	**35.59**	**57**	LR	LR	07 58 06.6	
	comp=Z,1μm,19.1s,baz=240,slow=30						
TRQA	**Tornquist**	**35.81**	**108**		**P**	**07 47 21.8**	**+0.8**
PB11	**IPOC Station P**	**36.09**	**75**	P	**P**	**07 47 25.0**	**+1.4**
PB12	**IPOC Station P**	**36.19**	**73**	P	**P**	**07 47 24.9**	**+0.5**
PB12				IAmb	IAmb	07 47 28.0	
	comp=Z,42nm,1.2s						
PB12	**IPOC Station P**	**36.19**	**73**	P	**P**	**07 47 25.8**	**+1.3**
PB08	**IPOC Station P**	**36.28**	**76**	P	**P**	**07 47 26.2**	**+0.7**
PB08	**IPOC Station P**	**36.28**	**76**	P	**P**	**07 47 27.3**	**+1.7**
GO01	**Chusmiza**	**36.50**	**75**	P	**P**	**07 47 28.2**	**+0.7**
GO01	**Chusmiza**	**36.50**	**75**	P	**P**	**07 47 29.0**	**+1.5**
SALTA		**36.55**	**84**	P	**P**	**07 47 30.4**	**+2.4**
PB18	**Visviri**	**37.44**	**72**	P	P	07 47 40.9	+5.3
ATAH	**Atahualpa**	**38.16**	**50**	P	**P**	**07 47 42.0**	**+0.5**
	comp=Z,13nm,0.8s,baz=226,slow=5.5,SNR=11						
ATAH				LR	LR	07 59 23.1	
	comp=Z,947nm,18.9s,baz=242,slow=30						
	comp=Z,13nm,0.8s						
TBI	**Tubuai**	**38.79**	**276**	eLQ	LQ	07 56 26.6	
	comp=Z,9μm,30.8s						
TBI				eLR	LR	07 57 57.4	
	comp=Z,3μm,29.2s						
PMSA	**Palmer Station**	**39.12**	**153**	LR	LR	07 59 21.0	
	comp=Z,522nm,20.1s,baz=296,slow=29						
LPAZ	**La Paz**	**39.24**	**71**	P	**P**	**07 47 52.3**	**+1.5**
	comp=Z,8.7nm,0.8s,baz=222,slow=2.8,SNR=15						
LPAZ				LR	LR	08 00 50.7	
	comp=Z,206nm,21.3s,baz=236,slow=31						
	comp=Z,8.7nm,0.8s						
LPAZ	**La Paz**	**39.24**	**71**	P	**P**	**07 47 51.2**	**+0.4**
LPAZ				IAmb	IAmb	07 47 56.5	
	comp=Z,78nm,1.9s						
LPAZ	**La Paz**	**39.24**	**71**	*e*P	**P**	**07 47 50.3**	**-0.5**
LPAZ	**La Paz**	**39.24**	**71**	P	**P**	**07 47 52.6**	**+1.8**
TAOE	**Nuku Hiva Isla**	**40.19**	**303**	eLR	LR	07 58 35.7	
	comp=Z,616nm,28.8s						
ESPZ	**Base Esperanza**	**41.41**	**149**	P	**P**	**07 48 07.1**	**-0.5**
ESPZ				IAmb	IAmb	07 48 08.8	
	comp=Z,42nm,1.4s						
CZSB	**Cruzeiro do Su**	**41.46**	**57**	P	**P**	**07 48 08.3**	**-0.3**
CZSB				IAmb	IAmb	07 48 12.4	
	comp=Z,33nm,1.1s						
CZSB	**Cruzeiro do Su**	**41.46**	**57**	*e*P	**P**	**07 48 08.0**	**-0.6**
CZSB				*ep*P	**pP**	**07 48 11.0**	**-1.0**
PPT2	**Papeete2**	**41.79**	**283**	*e*P	P	07 48 00.8	-11
	comp=Z,43nm,26.0s						
PPT2				*e*S	S	07 54 17.2	-11
	comp=Z,104nm,25.2s						
PPT2				eLQ	LQ	07 57 35.0	
	comp=Z,2μm,28.2s						
PPT2				eLR	LR	07 59 12.7	
	comp=Z,182nm,26.2s						
PPT2				eLR	LR	07 59 16.3	
	comp=Z,175nm,24.2s						
CPUP	**Villa Florida**	**43.02**	**92**	P	**P**	**07 48 20.7**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=266,slow=7.7,SNR=5.2						
CPUP				LR	LR	08 03 52.9	
	comp=Z,292nm,18.1s,baz=254,slow=33						
	comp=Z,2.2nm,0.8s						
CPUP	**Villa Florida**	**43.02**	**92**	P	**P**	**07 48 20.9**	**-0.4**
SLOR	**San Lorenzo -**	**43.20**	**44**	P	**P**	**07 48 23.9**	**+0.6**
SLOR				IAmb	IAmb	07 48 28.6	
	comp=Z,30nm,1.2s						
CPSB	**Cacapava Do Su**	**44.65**	**100**	P	**P**	**07 48 33.6**	**-0.6**
CPSB	**Cacapava Do Su**	**44.65**	**100**	*e*P	**P**	**07 48 33.6**	**-0.6**
BBSD	**Serra de San D**	**44.69**	**79**	*e*P	**P**	**07 48 34.9**	**+0.2**
BBSD				*ep*P	**pP**	**07 48 38.2**	**0.0**
MURT	**Porto Murtinho**	**44.86**	**86**	*e*P	**P**	**07 48 35.8**	**-0.2**
SIV	**San Ignacio**	**44.97**	**77**	P	**P**	**07 48 37.8**	**+0.8**
	comp=Z,11nm,0.6s,baz=240,slow=9.0,SNR=18						
SIV				LR	LR	08 04 43.6	
	comp=Z,109nm,18.8s,baz=271,slow=32						
	comp=Z,11nm,0.6s						
COIM	**Forte Coimbra**	**45.56**	**84**	*e*P	**P**	**07 48 41.2**	**-0.3**
AMBA	**Amambai (Brazi**	**46.41**	**89**	*e*P	**P**	**07 48 47.5**	**-0.8**
AMBA				*ep*P	**pP**	**07 48 51.4**	**-0.4**
PTLB	**Pontes e Lacer**	**46.82**	**78**	P	**P**	**07 48 51.5**	**0.0**
PTLB				IAmb	IAmb	07 48 56.3	
	comp=Z,15nm,1.0s						
PTLB	**Pontes e Lacer**	**46.82**	**78**	*e*P	**P**	**07 48 51.5**	**0.0**
ITAB	**Concordia**	**46.91**	**96**	P	**P**	**07 48 51.8**	**-0.3**
AQDB	**Aquidauana**	**46.99**	**86**	P	**P**	**07 48 52.7**	**-0.1**
AQDB	**Aquidauana**	**46.99**	**86**	*e*P	**P**	**07 48 53.2**	**+0.4**
AQDB				*ep*P	**pP**	**07 48 56.1**	**-0.1**
AQDB	**Aquidauana**	**46.99**	**86**	P	**P**	**07 48 53.6**	**+0.7**
VILB	**Vilhena**	**47.40**	**74**	P	**P**	**07 48 56.1**	**0.0**
VILB				IAmb	IAmb	07 49 01.1	
	comp=Z,37nm,1.2s						
VILB	**Vilhena**	**47.40**	**74**	*e*P	**P**	**07 48 55.5**	**-0.5**
RAR	**Rarotonga**	**48.22**	**272**	LR	LR	08 03 54.7	
	comp=Z,70nm,19.4s,baz=110,slow=29						
TRCB	**Terra Rica**	**48.41**	**90**	P	**P**	**07 49 04.2**	**+0.4**
TRCB	**Terra Rica**	**48.41**	**90**	*e*P	**P**	**07 49 04.5**	**+0.7**
TRCB	**Terra Rica**	**48.41**	**90**	P	**P**	**07 49 04.5**	**+0.7**
BRU2	**Volcan**	**49.27**	**32**	P	**P**	**07 49 08.5**	**-2.1**
BRU2	**Volcan**	**49.27**	**32**	P	**P**	**07 49 10.9**	**+0.4**
SALV	**Santo Antonio**	**49.34**	**81**	*e*P	**P**	**07 49 10.9**	**-0.2**
SALV				*ep*P	**pP**	**07 49 13.6**	**-1.0**
JTS	**Las Juntas de**	**49.68**	**29**	LR	LR	08 05 00.4	
	comp=Z,1μm,19.9s,baz=202,slow=30						
TEFE	**Tefe**	**50.10**	**61**	*e*P	**P**	**07 49 16.1**	**-0.7**
ROSC	**El Rosal**	**50.12**	**44**	P	**P**	**07 49 18.6**	**+1.3**
	comp=Z,44nm,0.8s,baz=227,slow=11,SNR=22						
ROSC				LR	LR	08 06 29.6	
	comp=Z,821nm,21.4s,baz=239,slow=31						
	comp=Z,44nm,0.8s						
ROSC	**El Rosal**	**50.12**	**44**	P	**P**	**07 49 16.5**	**-0.9**
HOPE	**Hope Point**	**51.22**	**135**	P	**P**	**07 49 24.6**	**-0.2**
CLDB	**Colider**	**52.10**	**75**	*e*P	**P**	**07 49 31.2**	**-0.6**
CLDB	**Colider**	**52.10**	**75**	P	**P**	**07 49 32.1**	**+0.2**
PET01	**Itanhaem-SP**	**52.12**	**95**	*e*P	**P**	**07 49 31.7**	**-0.2**
BELA	**Belgrano 2**	**52.18**	**165**	P	**P**	**07 49 31.3**	**-0.3**
BELA				IAmb	IAmb	07 49 36.5	
	comp=Z,54nm,1.7s						
APG	**El Apazote**	**52.22**	**20**	LR	LR	08 06 12.7	
	comp=Z,44nm,21.1s,baz=261,slow=30						
ARAG	**Araguaiana, MT**	**52.60**	**83**	*e*P	**P**	**07 49 34.2**	**-1.4**
ARAG				*ep*P	**pP**	**07 49 38.5**	**-0.5**
VAO	**Valinhos**	**52.95**	**94**	P	**P**	**07 49 38.2**	**0.0**
VAO				IAmb	IAmb	07 49 48.1	
	comp=Z,22nm,0.6s						
VAO	**Valinhos**	**52.95**	**94**	*e*P	**P**	**07 49 38.4**	**+0.2**
CMIG	**Matias Romero**	**53.16**	**14**	LR	LR	08 06 57.2	
	comp=Z,250nm,18.6s,baz=186,slow=30						
MACA	**Manacapuru-AM**	**53.20**	**64**	P	**P**	**07 49 39.5**	**-0.5**
MACA	**Manacapuru-AM**	**53.20**	**64**	*e*P	**P**	**07 49 39.6**	**-0.5**
IPMB	**Ipameri, GO**	**54.36**	**88**	*e*P	**P**	**07 49 48.0**	**-0.5**
CANS	**Sao Roque de M**	**54.70**	**91**	*e*P	**P**	**07 49 50.8**	**-0.3**
QSPA	**South Pole Qui**	**55.06**	**180**	P	**P**	**07 49 54.8**	**+1.8**
	comp=Z,9.2nm,0.8s,baz=134,slow=2.6,SNR=26						
QSPA				LR	LR	08 10 20.2	
	comp=Z,251nm,18.7s,baz=114,slow=33						
	comp=Z,9.2nm,0.8s						
SNDB	**Serra Nova Dou**	**55.06**	**80**	*e*P	**P**	**07 49 53.1**	**-0.6**
SNDB				*ep*P	**pP**	**07 49 56.2**	**-0.9**
SDV	**Santo Domingo**	**55.52**	**45**	*e*P	**P**	**07 49 54.6**	**-2.4**
PMNB	**Patos De Minas**	**55.53**	**89**	*e*P	**P**	**07 49 57.0**	**-0.1**
PMNB	**Patos De Minas**	**55.53**	**89**	P	**P**	**07 49 58.5**	**+1.5**
BSCB	**Bom Sucesso**	**55.69**	**93**	*e*P	**P**	**07 49 57.8**	**-0.3**
BDFB	**Brasilia**	**55.73**	**85**	P	**P**	**07 49 59.1**	**+0.6**
BDFB				LR	LR	08 12 00.1	
	comp=Z,7.1nm,0.7s,baz=240,slow=7.9,SNR=3.8						
	comp=Z,297nm,18.1s,baz=190,slow=34						
	comp=Z,7.1nm,0.7s						
BDFB	**Brasilia**	**55.73**	**85**		**P**	**07 49 57.4**	**-1.1**
BDFB				IAmb	IAmb	07 50 09.6	
	comp=Z,45nm,1.4s						
ITTB	**Itaituba**	**56.13**	**69**	*e*P	**P**	**07 50 00.8**	**-0.5**
VNDA	**Vanda**	**56.29**	**195**	P	**P**	**07 50 02.8**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=113,slow=7.7,SNR=4.1						
VNDA				LR	LR	08 09 26.1	
	comp=Z,290nm,18.3s,baz=96,slow=31						
	comp=Z,0.8nm,0.6s						
BOAV	**Boa Vista**	**57.15**	**59**	P	**P**	**07 50 07.9**	**-0.6**
BOAV	**Boa Vista**	**57.15**	**59**	*e*P	**P**	**07 50 07.1**	**-1.4**
ZAIG	**Zacatecas**	**57.73**	**5**	P	P	07 50 08.4	-4.3
CAM01	**Campos-RJ**	**57.84**	**95**	*e*P	**P**	**07 50 12.9**	**-0.4**
DIAM	**Diamantina, MG**	**57.92**	**91**	*e*P	**P**	**07 50 13.4**	**-0.7**
JANB	**Januaria**	**59.06**	**87**	*e*P	**P**	**07 50 21.4**	**-0.6**
RAO	**Raoul Island**	**59.34**	**254**	LR	LR	08 08 53.3	
	comp=Z,210nm,21.9s,baz=89,slow=29						
SJMB	**Sao Joao De Ma**	**59.75**	**92**	*e*P	**P**	**07 50 25.9**	**-0.8**
SMTB	**Santa Maria do**	**59.82**	**79**	*e*P	**P**	**07 50 26.4**	**-0.9**
BSFB	**Barra de Sao F**	**59.96**	**93**	*e*P	**P**	**07 50 27.4**	**-0.8**
BSFB	**Barra de Sao F**	**59.96**	**93**	P	**P**	**07 50 29.1**	**+0.9**
SDBA	**SAO DESIDERIO**	**60.01**	**84**	*e*P	**P**	**07 50 27.8**	**-0.8**
VNA1	**Neumayer--Stat**	**60.01**	**158**	⇓P	**P**	**07 50 27.8**	**+0.2**
	comp=Z,15nm,1.1s						
RIB01	**Linhares ES**	**60.09**	**93**	*e*P	**P**	**07 50 28.2**	**-0.8**
VNA2	**Neumayer--Watz**	**60.18**	**158**	⇓P	**P**	**07 50 28.9**	**0.0**
	comp=Z,13nm,0.7s,baz=266,slow=5.6						
VNA2	**Neumayer--Watz**	**60.18**	**158**	P	**P**	**07 50 29.1**	**+0.2**
SNAA	**Sanae**	**61.24**	**159**	⇓P	**P**	**07 50 35.7**	**-0.4**
	comp=Z,149nm,0.9s						
SNAA	**Sanae**	**61.24**	**159**	P	**P**	**07 50 36.0**	**-0.2**
	comp=Z,7.0nm,0.9s,baz=250,slow=5.6,SNR=11						
SNAA				LR	LR	08 13 16.1	
	comp=Z,154nm,19.4s,baz=14,slow=32						
	comp=Z,7.0nm,0.9s						
SNAA	**Sanae**	**61.24**	**159**	P	**P**	**07 50 34.7**	**-1.5**
SNAA				IAmb	IAmb	07 50 39.6	
	comp=Z,46nm,1.8s						
SNAA	**Sanae**	**61.24**	**159**	P	**P**	**07 50 36.4**	**+0.3**
RPZ	**Rata Peaks**	**61.61**	**235**	LR	LR	08 11 20.3	
	comp=Z,118nm,19.6s,baz=101,slow=30						
AFI	**Afiamalu**	**61.77**	**273**	LR	LR	08 10 31.8	
	comp=Z,262nm,20.2s,baz=138,slow=29						
SOR	**Soroa**	**61.87**	**25**	P	**P**	**07 50 43.4**	**+2.6**
GUA01	**Guaratinga, BA**	**61.96**	**91**	*e*P	**P**	**07 50 41.0**	**-0.7**
TROLL	**Troll, Antarti**	**62.58**	**161**	⇓P	**P**	**07 50 45.4**	**+0.2**
	comp=Z,275nm,0.7s						
TXAR	**Lajitas Array**	**64.20**	**3**	P	**P**	**07 50 58.3**	**+2.0**
	comp=Z,2.1nm,0.9s,baz=182,slow=9.2,SNR=26						
	comp=Z,2.1nm,0.9s						
MDP	**Montagnes des**	**64.67**	**63**	LR	LR	08 16 16.7	
	comp=Z,1μm,18.4s,baz=230,slow=33						
SJG	**San Juan**	**65.51**	**43**	LR	LR	08 17 24.9	
	comp=Z,161nm,18.2s,baz=232,slow=34						
MNTX	**Cornudas Mount**	**66.50**	**1**	P	**P**	**07 51 12.3**	**+1.3**
ELIB	**Princess Elisa**	**67.68**	**165**	*d*P	**P**	**07 51 18.7**	**+0.4**
	comp=Z,3.8nm,1.1s						
MSVF	**Nonsavu**	**68.09**	**263**	LR	LR	08 13 33.6	
	comp=Z,164nm,21.6s,baz=143,slow=29						
PFO	**Pinyon Flats O**	**69.00**	**351**	LR	LR	08 15 51.8	
	comp=Z,71nm,18.7s,baz=157,slow=31						
ANMO	**Albuquerque**	**69.73**	**0**	LR	LR	08 16 13.7	
	comp=Z,114nm,18.4s,baz=175,slow=31						
RCBR	**Riachuelo**	**71.03**	**84**	LR	LR	08 21 34.5	
	comp=Z,63nm,18.4s,baz=254,slow=35						
SYO	**Syowa Base**	**73.22**	**168**	⇓*e*P	**P**	**07 51 52.2**	**+0.2**
SYO	**Syowa Base**	**73.22**	**168**	⇓*i*P	P	07 52 01.0	+9.0
TKL	**Tuckaleechee C**	**73.63**	**19**	LR	LR	08 20 40.2	
	comp=Z,165nm,19.6s,baz=197,slow=33						
NVAR	**Mina Array Bea**	**73.98**	**351**	P	**P**	**07 52 00.0**	**+3.0**
	comp=Z,5.3nm,0.8s,baz=178,slow=7.4,SNR=18						
	comp=Z,5.3nm,0.8s						
MAW	**Mawson**	**77.27**	**176**	P	**P**	**07 52 15.8**	**+0.5**
	comp=Z,5.3nm,1.1s,baz=211,slow=9.1,SNR=9.0						
MAW				LR	LR	08 24 16.5	
	comp=Z,151nm,19.0s,baz=193,slow=34						
	comp=Z,5.3nm,1.1s						
PDAR	**Pinedale Array**	**77.58**	**358**	P	**P**	**07 52 18.9**	**+1.3**
	comp=Z,7.3nm,0.9s,baz=162,slow=6.2,SNR=28						
	comp=Z,7.3nm,0.9s						
YBH	**Yreka Blue Hor**	**77.89**	**348**	LR	LR	08 19 44.9	
	comp=Z,75nm,20.2s,baz=169,slow=30						
SADO	**Sadowa**	**83.40**	**19**	LR	LR	08 27 31.3	
	comp=Z,190nm,18.4s,baz=209,slow=34						
ULM	**Lac du Bonnet**	**85.57**	**7**	P	**P**	**07 53 00.2**	**+0.9**
	comp=Z,4.3nm,0.8s,baz=185,slow=5.0,SNR=6.5						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**87.47**	**232**	LR	LR	08 25 31.8	
	comp=Z,451nm,19.7s,baz=189,slow=31						
H02S1	**DAWSON INLET T**	**90.78**	**345**	T	T	09 34 05.3	
	SNR=9.6						
H02S2	**DAWSON INLET T**	**90.78**	**345**	T	T	09 34 04.7	
	SNR=12						
CTA	**Charters Tower**	**91.68**	**244**	LR	LR	08 30 26.7	
	comp=Z,229nm,18.4s,baz=57,slow=33						
SCHQ	**Schefferville**	**95.96**	**22**	LR	LR	08 35 09.3	
	comp=Z,102nm,18.0s,baz=210,slow=34						
KRVT	**Keravat (AS076**	**96.67**	**260**	LR	LR	08 27 25.4	
	comp=Z,7.7nm,21.9s,baz=45,slow=29						
SUR	**Sutherland**	**96.75**	**138**	LR	LR	08 31 07.2	
	comp=Z,102nm,18.3s,baz=188,slow=32						
YKA	**Yellowknife Ar**	**97.50**	**356**	P	Pdif	07 53 55.4	+0.7
	comp=Z,0.6nm,0.9s,baz=176,slow=5.0,SNR=4.3						
	comp=Z,0.6nm,0.9s						
PMG	**Port Moresby**	**97.52**	**253**	LR	LR	08 36 03.9	
	comp=Z,65nm,18.0s,baz=128,slow=34						
ASAR	**Alice Springs**	**98.01**	**234**	LR	LR	08 34 07.1	
	comp=Z,453nm,18.2s,baz=129,slow=33						
H01W1	**Cape Leeuwin H**	**100.53**	**213**	T	T	09 47 19.4	
	baz=146,slow=76,SNR=6.2						
H01W2	**Cape Leeuwin H**	**100.53**	**213**	T	T	09 47 02.4	
	baz=146,slow=76,SNR=8.9						
H01W3	**Cape Leeuwin H**	**100.54**	**213**	T	T	09 46 58.7	
	baz=146,slow=76,SNR=5.5						
TORD	**Torodi Ar. Bea**	**112.48**	**89**	PP	**PP**	**07 59 43.8**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=234,slow=6.5,SNR=3.6						
ESDC	**Sonseca Array**	**120.30**	**61**	PKP	**PKiKP**	**07 59 14.8**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=290,slow=2.1,SNR=4.5						
PETK	**Petropavlovsk-**	**120.32**	**316**	PKP	**PKiKP**	**07 59 13.8**	**+1.6**
	comp=Z,3.4nm,0.9s,baz=217,slow=7.0,SNR=3.0						
DAVOX	**Davos/Dischmat**	**131.98**	**56**	PKP	**PKiKP**	**07 59 36.4**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=322,slow=11,SNR=4.3						
NOA	**NORSAR Array B**	**133.45**	**36**	PKP	**PKPdf**	**07 59 37.4**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=282,slow=1.9,SNR=4.6						
CLL	**Collm**	**134.55**	**50**	*e*PKPdf	**PKPdf**	**07 59 39.0**	**-0.3**
CLL				*i* PKPmax		07 59 43.3	
	comp=Z,6.0nm,0.8s						
GERES	**GERESS Array B**	**134.81**	**53**	PKP	**PKPdf**	**07 59 39.8**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=233,slow=4.8,SNR=5.4						
CN2	**Changchun**	**139.36**	**299**	*e*P	**PKiKP**	**07 59 50.3**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FINES	**FINESS Array B**	**140.38**	**34**	PKP	**PKPdf**	**07 59 50.2**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=215,slow=1.7,SNR=4.1						
NJ2	**Nanjing**	**142.13**	**279**	*e*P	**PKPdf**	**07 59 48.4**	**-5.4**
NJ2				pmax	pmax		
	comp=Z,31nm,0.5s						
RNPP8	**Varash**	**142.60**	**49**	PKP	**PKPdf**	**07 59 50.5**	**-3.5**
RNPP5	**Staryi Chortor**	**142.63**	**50**	PKP	**PKPdf**	**07 59 50.4**	**-3.7**
MI28	**Mi28,Pidlybu**	**143.78**	**50**	PKP	PKPab	07 59 52.0	-1.1
LUBAR	**Lubar, Ukraine**	**143.97**	**52**	PKP	PKPab	07 59 53.0	-0.8
AK20	**Malin Array Si**	**144.65**	**50**	PKP	**PKPab**	**07 59 53.2**	**-3.1**
AK19	**Malin Array Si**	**144.66**	**50**	PKP	**PKPab**	**07 59 53.2**	**-3.1**
AK21	**Malin Array Si**	**144.67**	**50**	PKP	**PKPab**	**07 59 53.2**	**-3.2**
AK22	**Malin Array Si**	**144.69**	**50**	PKP	**PKPab**	**07 59 53.3**	**-3.2**
AK17	**Malin Array Si**	**144.69**	**50**	PKP	**PKPab**	**07 59 53.3**	**-3.2**
AKASG	**Malin Array Be**	**144.79**	**50**	PKP	**PKPab**	**07 59 56.6**	**-0.2**
	comp=Z,8.0nm,0.9s,baz=290,slow=3.4,SNR=23						
NRIK	**Noril'sk**	**144.84**	**351**	PKP	**PKPdf**	**07 59 58.0**	**+0.6**
	comp=Z,5.1nm,0.8s,baz=70,slow=2.0,SNR=5.7						
BRTR	**Keskin Array B**	**148.41**	**70**	PKPbc	**PKPbc**	**08 00 09.0**	**+0.9**
	comp=Z,5.7nm,1.0s,baz=225,slow=5.9,SNR=6.2						
MMAI	**Mount Meron Ar**	**148.72**	**83**	PKPbc	**PKPbc**	**08 00 09.7**	**+0.8**
	comp=Z,5.1nm,0.7s,baz=332,slow=2.8,SNR=6.6						
HHC	**Hu-ho-hao-te**	**149.44**	**292**	*e*P	PKPdf	07 59 57.0	-9.1
BTO2	**Baotou**	**150.71**	**292**	*e*PKPbc	**PKPdf**	**08 00 09.2**	**+1.0**
BTO2				pmax	pmax		
	comp=Z,19nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,140nm,5.2s						
CMAR	**Chiang Mai Arr**	**151.79**	**241**	PKPbc	**PKPbc**	**08 00 16.9**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=103,slow=2.5,SNR=5.7						
SONM	**Songino Array**	**152.34**	**307**	PKP	**PKPdf**	**08 00 10.1**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=27,slow=0.3,SNR=2.2						
SONM				PKPbc	**sPKPdf**	**08 00 16.5**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=133,slow=1.9,SNR=9.4						
PZH	**PanZhiHua**	**154.12**	**258**	PKPbc	**PKPdf**	**08 00 07.7**	**-6.0**
KBZ	**Khabaz**	**155.16**	**61**	PKP	**PKPdf**	**08 00 15.0**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=108,slow=6.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**159.52**	**340**	PKP	**PKPdf**	**08 00 18.7**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=90,slow=1.5,SNR=5.1						
BVAR	**Borovoye Array**	**162.01**	**6**	PKPab	**PKPab**	**08 01 09.9**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=9.5,slow=4.4,SNR=6.8						
WMQ	**Urumqi**	**165.88**	**312**	*e*PKP	PKPdf	08 00 18.2	-8.0
WMQ				PKS	PKSdf	08 03 38.0	-21
WMQ				SKS	**SKSdf**	**08 07 26.6**	**-3.2**
WMQ				LR	LR		
	comp=Z,120nm,23.8s						
MKAR	**Makanchi Array**	**166.51**	**332**	PKP	**PKPdf**	**08 00 27.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=48,slow=4.3,SNR=1.5						
MKAR				PKPab	**PKPab**	**08 01 27.4**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=45,slow=4.3,SNR=2.4						

*IDC **04** 07:42:05.5±0.9,3°.60S×140°.75E, h0km, mb3.9/7, mbtmp4.0/8, ML4.3/1, MS3.2/6, Error ellipse: s-maj=40.5km s-min=9.0km az=95.0*

*DJA **04** 07:42:11.0±0.5,3°.S×7°×14°.0E±°, h46km±10km, M4.6/6, mB5.2/1, mb5.0/2, MLv4.3/6, Mw(mB)4.6/1*

ISC 04 07:42:10.7±0.8,**3°.55S**±0°.10×**140°.5E**±0°.1, **h39**km, **n17**, σ**2s 11**/13, **mb3.8/5, MS3.2**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.00**	**342**	P	**Pn**	**07 42 26.7**	**-1.6**
JAY	**Jayapura**	**1.06**	**12**	Pg	**Pn**	**07 42 26.8**	**-2.4**
	27nm,0.3s,baz=198,slow=11,SNR=85						
JAY				Lg	Lg	07 42 40.2	
	75nm,0.3s,baz=178,slow=22,SNR=8.6						
JAY	**Jayapura**	**1.06**	**12**	P	**Pn**	**07 42 26.7**	**-2.4**
WAMI	**Wamena**	**1.79**	**259**	P	**Pn**	**07 42 36.8**	**-2.4**
SIJI	**Sorong**	**9.58**	**286**	LR	LR	07 48 28.9	
	comp=Z,77nm,20.3s,baz=170,slow=39						
WRA	**Warramunga Arr**	**17.36**	**200**	P	**Pn**	**07 46 09.2**	**-0.9**
	1.0nm,0.3s,baz=27,slow=12,SNR=16						
WRA				Sn	Sn	07 49 09.7	-13
	0.1nm,0.3s,baz=13,slow=24,SNR=1.9						
	11nm,1.1s						
CTA	**Charters Tower**	**17.37**	**162**	LR	LR	07 52 03.2	
	comp=Z,49nm,19.4s,baz=4.5,slow=35						
GUMO	**Guam**	**17.54**	**14**	LR	LR	07 52 45.5	
	comp=Z,34nm,20.1s,baz=77,slow=36						
FITZ	**Fitzroy Crossi**	**20.50**	**224**	P	**P**	**07 46 45.1**	**-0.5**
	3.5nm,0.6s,baz=47,slow=10.0,SNR=8.0						
FITZ				S	S	07 50 19.0	-14
	2.5nm,0.6s,baz=179,slow=16,SNR=2.3						
FITZ				LR	LR	07 55 47.1	
	comp=Z,85nm,19.6s,baz=9.0,slow=40						
	3.5nm,0.6s						
ASAR	**Alice Springs**	**20.98**	**197**	P	**P**	**07 46 50.6**	**-0.2**
	14nm,0.8s,baz=25,slow=9.1,SNR=58						
ASAR				S	Sn	07 50 47.3	-2.6
	1.8nm,1.1s,baz=20,slow=23,SNR=5.4						
ASAR				LR	LR	07 55 25.4	
	comp=Z,97nm,18.9s,baz=99,slow=38						
	14nm,0.8s						
STKA	**Stephens Creek**	**28.19**	**178**	LR	LR	08 00 48.1	
	comp=Z,111nm,18.1s,baz=34,slow=40						
MKAR	**Makanchi Array**	**71.53**	**322**	P	**P**	**07 53 30.6**	**+2.8**
	0.2nm,0.4s,baz=98,slow=10,SNR=3.0						
	0.2nm,0.4s						
VNDA	**Vanda**	**74.79**	**175**	P	**P**	**07 53 46.9**	**+0.5**
	0.7nm,0.6s,baz=0.5,slow=7.3,SNR=2.7						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**75.43**	**324**	P	**P**	**07 53 54.3**	**+3.7**
	0.1nm,0.3s,baz=120,slow=6.9,SNR=1.7						
	0.1nm,0.3s		

ZKR	**Zakros**	**0.54**	**227**	P		**Pg**	07 51 23.7	**-0.1**
ZKR	**Zakros**	**0.54**	**227**	P		**Pg**	07 51 23.7	**-0.1**
ZKR				S		**Sb**	07 51 32.0	**-0.3**
SIT2	**Siteia**	**0.56**	**240**	P		**Pg**	07 51 24.1	**0.0**
SIT2				S		**Sb**	07 51 32.7	**0.0**
NPS	**Neapolis**	**0.92**	**256**	P		**Pg**	07 51 30.9	**+0.1**
NPS				S		**Sg**	07 51 43.0	**+0.1**
NPS	**Neapolis**	**0.92**	**256**	P		**Pg**	07 51 31.0	**+0.1**
NPS				S		**Sg**	07 51 43.0	**+0.1**
THERA	**Ancient Thera,**	**1.33**	**312**	P		**Pn**	07 51 36.7	**-0.8**
THERA				S		**Sb**	07 51 53.8	**-1.1**
THERA	**Ancient Thera,**	**1.33**	**312**	P		**Pn**	07 51 36.9	**-0.6**
THERA				S		**Sb**	07 51 54.3	**-0.6**
YAZI	**Mula-Dat§a-**	**1.34**	**27**	P		**Pn**	07 51 36.4	**-1.1**
YAZI				S		**Sg**	07 51 58.0	**+1.7**
YAZI				IAML			07 52 02.0	
	comp=N,154nm,0.4s							
YAZI				IAML			07 52 03.0	
	comp=E,155nm,0.6s							
THR8	**Santorini-Mono**	**1.35**	**313**	P		**Pn**	07 51 37.4	**-0.3**
THR8	**Santorini-Mono**	**1.35**	**313**	P		**Pn**	07 51 37.5	**-0.3**
ARG	**Arkhangelos**	**1.37**	**57**	Pn		**Pn**	07 51 37.8	**-0.1**
ARG				Sn		**Sg**	07 51 56.5	**-0.7**
ARG	**Arkhangelos**	**1.37**	**57**	P		**Pn**	07 51 37.5	**-0.4**
ARG				S		**Sn**	07 51 55.5	**-0.4**
ARG	**Arkhangelos**	**1.37**	**57**	P		**Pn**	07 51 37.9	**-0.1**
ARG				S		**Sn**	07 51 54.6	**-1.3**
THR6	**Thira Island,**	**1.37**	**310**	P		**Pn**	07 51 37.5	**-0.4**
THR6	**Thira Island,**	**1.37**	**310**	P		**Pn**	07 51 37.8	**-0.2**
THRA	**Thira**	**1.39**	**312**	P		**Pn**	07 51 38.2	**0.0**
SFIR	**Foira Santorin**	**1.39**	**312**	P		**Pn**	07 51 38.0	**-0.3**
SFIR				S		**Sg**	07 51 57.8	**-0.3**
THR9	**Santorini-Faro**	**1.40**	**309**	P		**Pn**	07 51 38.1	**-0.2**
THR9	**Santorini-Faro**	**1.40**	**309**	P		**Pn**	07 51 38.1	**-0.2**
SNT5	**Nea Kammeni, S**	**1.40**	**311**	P		**Pb**	07 51 39.1	**-0.1**
SNT5				S		**Sb**	07 51 57.6	**+0.6**
SNT5	**Nea Kammeni, S**	**1.40**	**311**	P		**Pb**	07 51 39.2	**+0.1**
THR3	**Thira Island,**	**1.40**	**311**	P		**Pn**	07 51 37.8	**-0.6**
THR3	**Thira Island,**	**1.40**	**311**	P		**Pn**	07 51 38.0	**-0.4**
THR2	**Thira island,**	**1.41**	**313**	P		**Pn**	07 51 38.2	**-0.2**
THR2	**Thira island,**	**1.41**	**313**	P		**Pn**	07 51 38.2	**-0.2**
DAT	**Datca**	**1.43**	**29**	Pn		**Pn**	07 51 37.6	**-1.3**
THR5	**Thira Island,**	**1.44**	**311**	P		**Pn**	07 51 38.6	**-0.3**
THR5	**Thira Island,**	**1.44**	**311**	P		**Pn**	07 51 38.6	**-0.3**
SAP3	**Santorini-Thir**	**1.45**	**311**	P		**Pn**	07 51 38.7	**-0.4**
SAP3				S		**Sn**	07 51 57.2	**-0.8**
SAP3	**Santorini-Thir**	**1.45**	**311**	P		**Pn**	07 51 38.8	**-0.4**
KLNA	**Kalymnos**	**1.48**	**8**	P		**Pn**	07 51 40.0	**+0.5**
IDI	**Anoyia**	**1.50**	**263**	Pn		**Pn**	07 51 39.7	**0.0**
IDI	**Anoyia**	**1.50**	**263**	P		**Pn**	07 51 39.5	**-0.3**
IDI				S		**Sn**	07 51 58.2	**-1.0**
IDI	**Anoyia**	**1.50**	**263**	P		**Pn**	07 51 39.5	**-0.3**
IDI				S		**Sb**	07 52 00.1	**+0.4**
BODT	**Bodrum**	**1.65**	**17**	Pn		**Pn**	07 51 40.6	**-1.2**
BODT	**Bodrum**	**1.65**	**17**	P		**Pn**	07 51 40.5	**-1.3**
BDRM	**Kayabasi**	**1.69**	**21**	P		**Pn**	07 51 41.4	**-0.9**
BDRM				S		**Sb**	07 52 05.5	**+0.3**
BDRM				IAML			07 52 15.0	
	comp=E,119nm,0.8s							
TURN	**Turunc**	**1.79**	**44**	Pn		**Pn**	07 51 43.0	**-0.8**
TURN	**Turunc**	**1.79**	**44**	P		**Pn**	07 51 43.5	**-0.2**
TURN				S		**Sn**	07 52 06.5	**+0.2**
TURN				IAML			07 52 10.0	
	comp=E,108nm,0.4s							
TURN				IAML			07 52 25.0	
	comp=N,121nm,0.7s							
NAX1	**Naxos Island**	**1.94**	**327**	P		**Pn**	07 51 45.7	**-0.1**
MLSB	**Milas**	**2.00**	**25**	Pn		**Pn**	07 51 45.7	**-1.0**
DDIM	**Aydin, Didim**	**2.02**	**12**	P		**Pb**	07 51 48.3	**-1.3**
DDIM				S		**Sg**	07 52 20.3	**+2.3**
DDIM				IAML			07 52 33.0	
	comp=E,262nm,0.8s							
DDIM				IAML			07 52 33.0	
	comp=N,213nm,0.6s							
VAM	**Vamos**	**2.05**	**269**	P		**Pn**	07 51 46.7	**-0.5**
VAM				S		**Sn**	07 52 12.8	**+0.1**
VAM	**Vamos**	**2.05**	**269**	P		**Pn**	07 51 48.2	**+1.0**
DALY	**Dalyan (Mula)**	**2.06**	**49**	Pn		**Pn**	07 51 47.6	**+0.1**
DALY	**Dalyan (Mula)**	**2.06**	**49**	P		**Pn**	07 51 48.1	**+0.6**
DALY				S		**Sb**	07 52 17.4	**+1.4**
DALY				IAML			07 52 24.0	
	comp=E,94nm,0.8s							
DALY				IAML			07 52 24.0	
	comp=N,90nm,0.6s							
YER	**Yerkesik**	**2.08**	**37**	Pn		**Pn**	07 51 47.5	**-0.3**
YER	**Yerkesik**	**2.08**	**37**	P		**Pn**	07 51 47.0	**-0.8**
CHNB	**Souda**	**2.15**	**271**	P		**Pn**	07 51 49.3	**+0.6**
CHAN	**Chania**	**2.17**	**272**	P		**Pn**	07 51 49.7	**+0.8**
CH01	**Chania**	**2.19**	**272**	P		**Pn**	07 51 49.4	**+0.2**
MHLO	**Agia Marina, M**	**2.22**	**303**	P		**Pn**	07 51 50.4	**+0.8**
IMMV	**Iera Moni Meta**	**2.22**	**270**	Pn		**Pn**	07 51 49.7	**0.0**
IMMV	**Iera Moni Meta**	**2.22**	**270**	P		**Pn**	07 51 48.9	**-0.8**
IMMV				S		**Sn**	07 52 15.9	**-1.1**
IMMV	**Iera Moni Meta**	**2.22**	**270**	P		**Pn**	07 51 49.5	**-0.2**
GVD	**Gavdhos**	**2.24**	**254**	P		**Pn**	07 51 50.5	**+0.6**
IZZE	**Mula-Seydike**	**2.26**	**64**	P		**Pn**	07 51 51.1	**+1.0**
IZZE				S		**Sg**	07 52 23.9	**-1.7**
IZZE				IAML			07 52 34.0	
	comp=N,233nm,0.5s							
SABU	**Mula-Dalaman**	**2.27**	**53**	P		**Pb**	07 51 52.1	**-1.8**
SABU				S		**Sb**	07 52 22.2	**+0.3**
SABU				IAML			07 52 29.0	
	comp=N,99nm,0.5s							
SABU				IAML			07 52 42.0	
	comp=E,88nm,0.7s							
AYDN	**Tasoluk**	**2.37**	**23**	P		**Pn**	07 51 53.1	**+1.3**
AYDN				S		**Sb**	07 52 24.7	**-0.1**
AYDN				IAML			07 52 37.0	
	comp=N,69nm,0.6s							
AYDN				IAML			07 52 42.0	
	comp=E,63nm,0.5s							
AKAS	**Kas**	**2.47**	**72**	Pn		**Pn**	07 51 54.2	**+1.0**
KNDR	**Palaiochora Ch**	**2.53**	**265**	Pn		**Pn**	07 51 54.4	**+0.5**
KNDR	**Palaiochora Ch**	**2.53**	**265**	P		**Pn**	07 51 54.6	**+0.8**
CAME	**Cameli-Denizli**	**2.56**	**55**	Pn		**Pn**	07 51 54.6	**+0.2**
DGB	**zmir**	**2.57**	**3**	P		**Pn**	07 51 55.6	**+1.2**
DGB				S		**Sg**	07 52 37.6	**+2.0**
DGB				IAML			07 52 44.0	
	comp=N,82nm,0.7s							
DGB				IAML			07 52 44.0	
	comp=E,82nm,0.7s							
DNZT	**Denizli-Tavas-**	**2.59**	**46**	P		**Pn**	07 51 56.7	**+1.8**
DNZT				S		**Sn**	07 52 25.9	**-0.4**
DNZT				IAML			07 52 33.0	
	comp=N,46nm,0.9s							
DNZT				IAML			07 52 37.0	
	comp=E,68nm,0.4s							
AYDB	**Zeytinkoy-Aydi**	**2.63**	**21**	Pn		**Pn**	07 51 55.2	**-0.3**
ESEN	**Aydn-Nazilli**	**2.66**	**29**	P		**Pn**	07 51 55.8	**+0.1**
ESEN				S		**Sn**	07 52 28.0	**+0.2**
ESEN				IAML			07 52 38.0	
	comp=E,31nm,0.5s							
ESEN				IAML			07 53 04.0	
	comp=N,25nm,0.6s							
TAVA	**DENIZLI_Tavas**	**2.66**	**41**	P		**Pn**	07 51 57.2	**+1.4**
TAVA				S		**Sn**	07 52 29.9	**+1.9**
TAVA				IAML			07 52 37.0	
	comp=E,62nm,0.4s							
TAVA				IAML			07 52 52.0	
	comp=N,50nm,1.1s							
CAEL	**Denizli, Camel**	**2.67**	**52**	P		**Pn**	07 51 58.3	**+2.3**
CAEL				S		**Sb**	07 52 35.6	**+2.0**
CAEL				IAML			07 52 48.0	
	comp=E,251nm,0.6s							
CAEL				IAML			07 53 05.0	
	comp=N,184nm,0.7s							
NAZL	**Nazilli-Aydin**	**2.78**	**27**	Pn		**Pn**	07 51 56.8	**-0.6**
ANKY	**Antikythira Is**	**2.80**	**279**	P		**Pn**	07 51 56.9	**-0.7**
ANKY				S		**Sn**	07 52 29.6	**-1.6**
ANKY	**Antikythira Is**	**2.80**	**279**	P		**Pn**	07 51 57.0	**-0.5**
DNIZ	**Denizli-Tavas-**	**2.84**	**41**	P		**Pn**	07 51 59.4	**+1.1**
DNIZ				S		**Sb**	07 52 36.3	**-2.3**
DNIZ				IAML			07 52 53.0	
	comp=N,116nm,0.5s							
URLA	**Izmir**	**2.87**	**358**	Pn		**Pn**	07 51 57.7	**-0.9**
APMY	**Acipayam-Deniz**	**2.88**	**46**	Pn		**Pn**	07 51 59.0	**+0.1**
ELL	**Elmali**	**2.88**	**63**	Pn		**Pn**	07 51 59.1	**+0.2**
ELL	**Elmali**	**2.88**	**63**	P		**Pn**	07 51 59.2	**+0.3**
CHOS	**Chios island**	**2.94**	**350**	Pn		**Pn**	07 51 58.9	**-0.7**
CHOS	**Chios island**	**2.94**	**350**	P		**Pn**	07 51 59.0	**-0.7**
CHOS	**Chios island**	**2.94**	**350**	P		**Pn**	07 51 59.2	**-0.5**
ODEM	**Odemis-Izmir**	**2.99**	**21**	Pn		**Pn**	07 51 59.2	**-1.2**
KIRA	**zmir-Kiraz**	**3.03**	**26**	P		**Pn**	07 52 02.8	**+1.9**
KIRA				S		**Sn**	07 52 35.0	**-2.1**
KIRA				IAML			07 52 59.0	
	comp=E,17nm,0.7s							
KTHA	**Kythira Island**	**3.06**	**286**	Pn		**Pn**	07 52 00.9	**-0.3**
KTHA	**Kythira Island**	**3.06**	**286**	P		**Pn**	07 51 60.0	**-1.2**
KARY	**Karystos**	**3.13**	**325**	P		**Pn**	07 52 00.7	**-1.4**
KARY	**Karystos**	**3.13**	**325**	P		**Pn**	07 52 02.5	**+0.4**
VLI	**Veliai**	**3.29**	**293**	P		**Pn**	07 52 03.6	**-0.8**
VLI	**Veliai**	**3.29**	**293**	P		**Pn**	07 52 04.3	**0.0**
KULA	**Kula-Manisa**	**3.41**	**27**	Pn		**Pn**	07 52 06.0	**0.0**
MET4	**Agioi Theodoro**	**3.41**	**310**	P		**Pn**	07 52 06.8	**+0.8**
ATHU	**Athens Univers**	**3.41**	**317**	P		**Pn**	07 52 06.0	**0.0**
ATHU	**Athens Univers**	**3.41**	**317**	P		**Pn**	07 52 06.2	**+0.1**
DION	**Dionisos Attik**	**3.41**	**320**	P		**Pn**	07 52 06.7	**+0.6**
DION	**Dionisos Attik**	**3.41**	**320**	P		**Pn**	07 52 06.9	**+0.8**
MET6	**Megalochori,Me**	**3.42**	**309**	P		**Pn**	07 52 06.8	**+0.7**
MET5	**Makryloggos,Me**	**3.44**	**309**	P		**Pn**	07 52 07.3	**+0.9**
MET2	**Kameni Chora,**	**3.45**	**309**	P		**Pn**	07 52 07.2	**+0.7**
GORD	**Gordes-Manisa**	**3.61**	**19**	Pn		**Pn**	07 52 08.9	**0.0**
BRTR	**Keskin Array B**	**6.94**	**50**	Pn		**Pn**	07 52 54.8	**+0.1**
	0.2nm,0.3s,baz=243,slow=13,SNR=2.2							
	0.7nm,0.4s							
MMAI	**Mount Meron Ar**	**7.61**	**106**	Pn		**Pn**	07 53 02.2	**-1.7**
	1.8nm,0.3s,baz=273,slow=16,SNR=2.3							
	0.3nm,0.2s							
AKASG	**Malin Array Be**	**15.32**	**6**	Pn		**P**	07 54 51.9	**-1.7**
	0.2nm,0.3s,baz=195,slow=10,SNR=1.7							
	0.3nm,0.5s							
GERES	**GERESS Array B**	**16.43**	**328**	Pn		**P**	07 55 05.8	**-0.4**
	baz=150,slow=14,SNR=3.6							
	0.5nm,0.5s							
ESDC	**Sonseca Array**	**24.60**	**289**	P		**P**	07 56 36.2	**+3.2**
	0.4nm,0.6s,baz=89,slow=9.9,SNR=4.3							
	0.4nm,0.6s							
FINES	**FINESS Array B**	**25.98**	**359**	P		**P**	07 56 47.8	**+2.6**
	1.4nm,0.9s,baz=164,slow=16,SNR=1.3							
	1.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**31.67**	**232**	P		**P**	07 57 36.3	**-0.1**
	0.3nm,0.4s,baz=55,slow=10,SNR=2.4							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**39.93**	**51**	P		**P**	07 58 46.3	**-0.5**
	0.4nm,0.5s,baz=277,slow=8.7,SNR=6.1							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**42.54**	**57**	P		**P**	07 59 07.8	**-0.6**
	0.4nm,0.5s,baz=278,slow=6.8,SNR=4.1							
	0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**43.87**	**46**	P		**P**	07 59 18.0	**-0.9**
	0.8nm,0.6s,baz=270,slow=9.9,SNR=2.3							
	0.8nm,0.6s							

*CRAAG **04** 07:59:37.1, 35˚.76N×6˚.26E, Ml4.3, Algrie 10km SE Lazrou*
*MOS **04** 07:59:37.9±0.9, 35˚.66N×6˚.26E, h15km, mb4.6/30, Error ellipse: s-maj=10.2km s-min=4.9km az=61.0*
*NEIC **04** 07:59:39.4±1.0, 35˚.71N±0˚.07×6˚.25E±0˚.07, h10km±1km, mb4.5/35, Error ellipse: s-maj=11.3km s-min=10.0km az=201.0*
*GFZ **04** 07:59:40.4±0.3, 36˚N±3˚×˚±˚, h10km, M4.2/29, mb4.3/29*
*NAO **04** 07:59:41.8, 36˚.09N×5˚.35E, h10km, MB4.2*
*IDC **04** 07:59:43.3±1.2, 35˚.70N×6˚.18E, h47km±11km, mb3.9/29, mbtmp4.2/38, ML4.0/7, MS3.5/17, Error ellipse: s-maj=10.7km s-min=8.8km az=165.0*
*MDD **04** 07:59:43.1±0.8, 35˚.85N×6˚.05E, h0km, mb4.7/52, Error ellipse: s-maj=8.3km s-min=5.4km az=121.0*
*CNRM **04** 07:59:45.8, 35˚.82N×5˚.79E, h19km*

ISC 04 07:59:39.2±0.3, 35˚.75N±0˚.03×6˚.21E±0˚.03, h12km, n378, σ1§72/411, mb4.4/66, MS3.4/15, 20C-23D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CJSR	**Ain Djasser**	**0.24**	**299**	P		**Pg**		07 59 43.7	**-0.6**
CTGD	**Timgad**	**0.34**	**129**	P		**Pg**		07 59 45.4	**-0.8**
CTEI	**Djebel Teioual**	**0.35**	**27**	P		**Pg**		07 59 44.0	**-2.4**
COAT	**Oued Athmania**	**0.49**	**7**	P		**Pg**		07 59 47.8	**-1.1**
CASM	**Ain Smara**	**0.56**	**24**	P		**Pg**		07 59 49.1	**-1.1**
CSGS	**Sigus**	**0.56**	**47**	P		**Pg**		07 59 49.5	**-0.7**
CKTS	**El Kantara**	**0.67**	**219**	P		**Pg**		07 59 52.4	**+0.2**
CBHR	**Beni Haroun da**	**0.82**	**4**	P		**Pg**		07 59 54.7	**-0.4**
CBST	**Bordj Sabath**	**0.98**	**47**	P		**Pg**		07 59 58.0	**-0.1**
CBBAR	**Babar**	**1.00**	**126**	P		**Pg**		07 59 58.4	**-0.2**
CBOS	**Bilal Ibnou Ra**	**1.05**	**5**	P		**Pb**		07 59 59.0	**-0.3**
CTCHA	**Tamokra**	**1.43**	**299**	P		**Pn**		08 00 05.4	**+0.4**
CNGR	**Negrine**	**1.66**	**140**	P		**Pb**		08 00 10.1	**+0.4**
ABSD	**Ouled Sidi Bra**	**1.67**	**260**	P		**Pb**		08 00 10.2	**+0.4**
ATKJ	**Tikjda**	**1.82**	**293**	P		**Pn**		08 00 11.4	**+0.8**
AKET	**Djebel Ketaf**	**1.91**	**280**	P		**Pb**		08 00 14.3	**+0.2**
ADCK	**Dar Chioukh**	**2.40**	**251**	P		**Pb**		08 00 20.8	**-1.7**
ABRIN	**Birine**	**2.51**	**268**	P		**Pn**		08 00 21.4	**+1.5**
KEST	**Kesra**	**2.56**	**89**	P		**Pn**		08 00 21.0	**+0.5**
	8.4nm,0.3s,baz=305,slow=1.6,SNR=65								
KEST				S		**Sb**		08 00 54.8	**-1.6**
	202nm,0.7s,baz=258,slow=7.7,SNR=4.5								
KEST				LR		LR		08 01 48.2	
	comp=Z,820nm,21.6s,baz=246,slow=48								
	268nm,0.8s								
KEST	**Kesra**	**2.56**	**89**			**Pn**		08 00 21.2	**+0.7**
ABA	**Alger-Bouzarea**	**2.77**	**293**	P		**Pn**		08 00 24.4	**+1.0**
AFDJ	**Sidi Ladjel**	**2.98**	**264**	P		**Pn**		08 00 28.2	**+1.8**
ABKD	**Sidi Amar**	**3.25**	**285**	P		**Pn**		08 00 31.5	**+1.5**
EDDR	**Deurdeur**	**3.25**	**276**	P		**Pn**		08 00 31.1	**+1.0**
EHRZ	**Djelida**	**3.35**	**279**	P		**Pn**		08 00 32.9	**+1.4**
EARB	**Arib**	**3.45**	**280**	P		**Pn**		08 00 33.6	**+0.8**
EBNR	**Beni Rached**	**3.83**	**280**	P		**Pn**		08 00 41.3	**+3.3**
EBNH	**Beni Haoua**	**3.84**	**283**	P		**Pn**		08 00 39.0	**+0.9**
EASA	**Ain Sidi Ali**	**4.15**	**249**	P		**Pn**		08 00 44.9	**+2.4**
EANR	**`Ain N'Sour**	**4.15**	**274**	P		**Pn**		08 00 44.0	**+1.5**
MAHO	**Mahon**	**4.42**	**340**	P		**Pn**		08 00 46.3	**+0.2**
MAHO				S		**Sn**		08 01 34.5	**-2.8**
MAHO	**Mahon**	**4.42**	**340**			**Pn**		08 00 46.6	**+0.6**
VSL	**Villasalto**	**4.51**	**33**			**Pn**		08 00 46.4	**-1.0**
ESMB	**Sidi M'hamed B**	**4.58**	**269**	P		**Pn**		08 00 50.7	**+2.4**
ETOS	**Mallorca**	**4.83**	**327**	P		**Pn**		08 00 52.7	**+0.9**
ETOS				S		**Sn**		08 01 47.0	**-0.6**
ETOS	**Mallorca**	**4.83**	**327**	P		**Pn**		08 00 52.7	**+0.9**
ETOS				S		**Sn**		08 01 46.2	**-1.4**
OFRG	**Douar Fergoug**	**5.03**	**269**	P		**Pn**		08 00 56.8	**+2.4**
EIBI	**Ibiza**	**5.07**	**312**	P		**Pn**		08 00 56.6	**+1.6**
EIBI	**Ibiza**	**5.07**	**312**	P		**Pn**		08 00 57.0	**+2.0**
EIBI				S		**Sn**		08 01 52.5	**-1.0**
ODJA	**Bouhanifia**	**5.20**	**267**	P		**Pn**		08 00 58.9	**+2.0**
EBEN2	**Beniarda presa**	**5.88**	**302**	P		**Pn**		08 01 07.5	**+1.3**
EBEN2				*i*	IAmb	IAmb		08 01 18.9	
	189nm,0.7s,SNR=9.6								
CLTB	**Caltabellotta**	**5.92**	**70**	P		**Pn**		08 01 08.3	**+1.5**
ECOL	**Islas Columbre**	**6.02**	**315**	P		**Pn**		08 01 09.0	**+0.9**
CART	**Cartagena**	**6.08**	**290**	P		**Pn**		08 01 09.3	**+0.5**
CART				S		**Sn**		08 02 17.8	**-0.5**
CART	**Cartagena**	**6.08**	**290**			**Pn**		08 01 09.7	**+0.8**
CART	**Cartagena**	**6.08**	**290**	P		**Pn**		08 01 09.4	**+0.5**
CART				S		**Sn**		08 02 16.5	**-1.7**
CART	**Cartagena**	**6.08**	**290**	P		**Pn**		08 01 09.4	**+0.5**
AFON	**Font Roja**	**6.12**	**300**	P		**Pn**		08 01 12.4	**+2.8**
AFON				*i*	IAmb	IAmb		08 01 23.6	
	161nm,0.7s,SNR=17								
OLHC	**Oulhaca**	**6.24**	**268**	P		**Pn**		08 01 13.8	**+2.6**
EMUR	**La Murta**	**6.33**	**291**	P		**Pn**		08 01 13.4	**+1.0**
EMUR	**La Murta**	**6.33**	**291**	P		**Pn**		08 01 13.5	**+1.0**
EMUR				*i*	IAmb	IAmb		08 01 17.0	
	100nm,1.1s,SNR=15								
EMUR	**La Murta**	**6.33**	**291**	P		**Pn**		08 01 13.1	**+0.7**
OBBL	**Beni Bahdel**	**6.39**	**263**	P		**Pn**		08 01 14.9	**+1.6**
TLOR	**Lorca, Murcia**	**6.62**	**289**	P		**Pn**		08 01 17.0	**+0.6**
ELOR	**Lorca, Murcia**	**6.66**	**289**	P		**Pn**		08 01 19.4	**+2.5**
ELOR				*i*	IAmb	IAmb		08 01 22.9	
	112nm,0.5s,SNR=12								
EZAR	**Zarzadilla de**	**6.68**	**291**	P		**Pn**		08 01 19.0	**+1.7**
EZAR				*i*	IAmb	IAmb		08 01 22.3	
	246nm,1.0s,SNR=34								
RAFF	**Raffo Rosso**	**6.73**	**75**			**Pn**		08 01 16.9	**-1.0**
SMPL	**Sampolo**	**6.78**	**20**	P		**Pn**		08 01 21.6	**+3.2**
EVIV	**Cofrentes, Val**	**6.80**	**303**	P		**Pn**		08 01 20.6	**+1.8**
EVIV				*i*	IAmb	IAmb		08 01 36.0	
	82nm,1.1s,SNR=8.6								
VAE	**Valguarnera**	**6.82**	**73**	P		**Pn**		08 01 20.0	**+0.9**
	3.4nm,0.3s,baz=179,slow=18,SNR=1.8								
ETOB	**Tobarra**	**6.83**	**297**	P		**Pn**		08 01 21.6	**+2.3**
ETOB				S		**Sn**		08 02 36.5	**-0.5**
ETOB	**Tobarra**	**6.83**	**297**	P		**Pn**		08 01 21.9	**+2.6**
ETOB				*i*	IAmb	IAmb		08 01 31.9	
	108nm,0.9s,SNR=14								
ETOB				S		**Sn**		08 02 31.2	**-5.7**
ECHE	**Chera**	**6.86**	**306**	P		**Pn**		08 01 22.2	**+2.5**
ECHE				S		**Sn**		08 02 37.5	**-0.2**
ECHE	**Chera**	**6.86**	**306**	P		**Pn**		08 01 21.7	**+2.1**
ECHE				*i*	IAmb	IAmb		08 01 31.9	
	44nm,0.7s,SNR=3.4								
EPOB	**Poblet**	**6.89**	**326**	P		**Pn**		08 01 21.2	**+1.1**
EPOB				*i*	IAmb	IAmb		08 01 35.5	
	39nm,0.8s,SNR=2.3								
EPOB				S		**Sn**		08 02 34.1	**-4.3**
ENIJ	**Nijar**	**6.90**	**283**	P		**Pn**		08 01 20.5	**+0.3**
ENIJ				S		**Sn**		08 02 38.6	**0.0**
ENIJ	**Nijar**	**6.90**	**283**	P		**Pn**		08 01 20.6	**+0.5**
ENIJ				*i*	IAmb	IAmb		08 01 26.0	
	61nm,1.1s,SNR=6.0								
ENIJ				S		**Sn**		08 02 34.6	**-3.9**
EMOS	**Mosqueruela**	**7.00**	**313**	P		**Pn**		08 01 23.8	**+2.1**
EMOS				*i*	IAmb	IAmb		08 01 39.0	
	53nm,0.7s,SNR=3.2								
EMOS				S		**Sn**		08 02 37.3	**-3.9**
CORI	**Orista**	**7.01**	**334**	Pn		**Pn**		08 01 22.9	**+1.3**
EMIR	**Miracle**	**7.16**	**331**	P		**Pn**		08 01 26.7	**+3.0**
EJON	**La Jonquera**	**7.17**	**340**	P		**Pn**		08 01 22.4	**-1.5**
EJON				S		**Sn**		08 02 43.8	**-1.5**
EJON	**La Jonquera**	**7.17**	**340**	P		**Pn**		08 01 25.9	**+2.0**
FIGM	**Figuig**	**7.17**	**242**	P		**Pn**		08 01 25.4	**+1.3**
FIGM				S		**Sn**		08 02 44.8	**-0.8**
SJAF	**Saint Jean de**	**7.21**	**340**	P		**Pn**		08 01 26.4	**+2.0**
JBK	**JBK**	**7.33**	**261**	P		**Pn**		08 01 27.3	**+1.0**
JBK				S		**Sn**		08 02 50.0	**+0.4**
EBER	**Berja**	**7.43**	**282**	P		**Pn**		08 01 28.6	**+1.0**
EBER				S		**Sn**		08 02 50.8	**-1.2**
EBER	**Berja**	**7.43**	**282**	P		**Pn**		08 01 28.6	**+1.0**
EBER				*i*	IAmb	IAmb		08 01 39.6	
	49nm,0.8s,SNR=5.4								
WMELI	**Melilla**	**7.48**	**269**	P		**Pn**		08 01 28.6	**+0.5**
WMELI	**Melilla**	**7.48**	**269**	P		**Pn**		08 01 28.9	**+0.8**
EALB	**Alboran**	**7.51**	**274**	P		**Pn**		08 01 27.9	**-0.6**
EALB				S		**Sn**		08 02 52.4	**-1.1**
EQES	**Quesada**	**7.72**	**288**	P		**Pn**		08 01 34.1	**+2.5**
EQES				*i*	IAmb	IAmb		08 01 45.9	
	100nm,0.9s,SNR=20								
EQES				S		**Sn**		08 02 59.0	**0.0**
CEST	**Esterri de Car**	**7.85**	**332**	Pn		**Pn

OUZM S Sn 08 04 43.8 +3.0
MOE Montemor 11.94 288 *e*P Pn 08 02 30.8 +1.5
SQTA Sankt Quirin 12.06 17 *e*Pn Pn 08 02 31.8 +0.9
0.2nm,0.3s
MOTA Moosalm 12.15 16 *e*Pn Pn 08 02 33.6 +1.3
2.1nm,0.9s
PFVI Vila Bisbo 12.19 281 P Pn 08 02 33.5 +0.9
TIO Tiouine 12.24 251 P Pn 08 02 33.0 -0.5
POLO Lamas de Olo 12.31 301 *e*P Pn 08 02 37.3 +3.0
PCAS Casmilo, Conde 12.38 295 *e*P Pn 08 02 38.4 +3.2
KBA Koelnbreinsper 12.52 23 *e*Pn Pn 08 02 38.5 +1.2
5.0nm,1.2s
OUK Oukaimeden 12.59 253 P Pn 08 02 39.4 +0.9
OUK S Sn 08 04 56.1 -2.7
SOKA Soboth 12.77 29 *i* Pn Pn 08 02 41.3 +0.7
0.6nm,0.4s
PGAV Gavieira, Arco 12.87 303 *e*P Pn 08 02 44.0 +2.0
PGAV *i* lAmb lAmb 08 02 48.9
45nm,1.4s
TAM Tamanrasset 12.92 183 Pn 08 02 41.9 -1.0
TAM Tamanrasset 12.92 183 P Pn 08 02 41.9 -1.0
TAM Tamanrasset 12.92 183 P Pn 08 02 42.2 -0.7
SESA Seetaler Alpe, 12.96 26 *e*Pn Pn 08 02 42.6 -0.8
BIOA Bad Ischl, Aus 13.15 23 *e*Pn Pn 08 02 47.1 +1.3
0.4nm,0.3s
MOA Molln 13.49 24 *e*Pn Pn 08 02 51.1 +0.6
11nm,0.9s
MORH Mrgy, Hungar 14.04 38 ⇑P P 08 03 03.4 -2.4
CONA Conrad Observa 14.12 28 *e*Pn Pn 08 02 59.9 +0.8
3.7nm,1.1s
GERES GERESS Array B 14.21 21 P Pn 08 03 02.2 +2.0
0.1nm,0.3s,baz=200,slow=14,SNR=27
0.3nm,0.5s
GERES GERESS Array B 14.21 21 Pn Pn 08 03 01.0 +0.8
BOVS Bovan 14.29 52 ⇓P P 08 03 07.6 -0.9
KHC Kasperske Hory 14.43 20 Pn 08 03 04.3 +1.1
KHC Kasperske Hory 14.43 20 *e*P Pn 08 03 04.5 +1.3
KHC MLR MLR
comp=Z,300nm,14.5s
KHC Kasperske Hory 14.43 20 *e*P Pn 08 03 04.5 +1.3
KHC *ex* x 08 03 10.5
KHC AMS AMS 08 09 50.0
comp=Z,300nm,14.5s
KHC Kasperske Hory 14.43 20 P Pn 08 03 04.0 +0.8
comp=Z,10nm,0.8s
MODS Modra-Piesok 15.04 30 *e*P P 08 03 18.7 +1.9
MODS Modra-Piesok 15.04 30 *e*P P 08 03 18.7 +1.9
NKC Novy Kostel 15.17 15 AMS AMS 08 10 00.0
comp=Z,200nm,12.1s
IDI Anoyia 15.23 86 P Pn 08 03 14.9 +0.8
comp=Z,4.7nm,0.8s,baz=271,slow=13,SNR=8.2
IDI Anoyia 15.23 86 Pn 08 03 14.4 +0.4
IDI lAmb lAmb 08 03 26.8
comp=Z,15nm,0.9s
KRUC Moravsky 15.27 26 *e*P P 08 03 20.8 +1.5
BZS Buzias 15.27 45 ⇑P P 08 03 20.6 +1.2
BZS Buzias 15.27 45 ⇑P P 08 03 20.6 +1.2
HERR Herculane 15.34 49 ⇑P P 08 03 20.8 +0.6
PRU Pruhonice 15.47 21 AMS AMS 08 10 30.0
comp=Z,200nm,13.6s
VRAC Vranov 15.54 26 P Pn 08 03 18.7 +0.6
comp=Z,0.2nm,0.3s,baz=214,slow=8.8,SNR=6.9
VRAC LR LR 08 09 58.7
comp=Z,144nm,19.1s,baz=213,slow=40
comp=Z,1.1nm,0.4s
VRAC Vranov 15.54 26 ⇑P Pn 08 03 19.8 +1.7
VRAC Vranov 15.54 26 ⇑P Pn 08 03 19.8 +1.7
VRAC Vranov 15.54 26 *e*P P 08 03 24.0 +1.6
SIRR Siria 15.67 43 ⇓P P 08 03 24.2 +0.3
HSKC Hora Svate Kat 15.75 17 AMS AMS 08 10 20.0
comp=Z,300nm,9.8s
PSZ Piszkesteto 15.84 36 Pn Pn 08 03 21.9 -0.2
PSZ Piszkesteto 15.84 36 P Pn 08 03 21.9 -0.2
PSZ pmax pmax
comp=Z,13nm,1.5s
KRLC Kraliky 16.26 25 P P 08 03 29.5 -0.8
MORC Moravsky Berou 16.28 27 ⇑P P 08 03 29.3 -1.3
MORC Moravsky Berou 16.28 27 Pn 08 03 28.1 +0.5
MORC Moravsky Berou 16.28 27 P Pn 08 03 28.1 +0.5
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 16.28 27 *e*P P 08 03 30.9 +0.3
MORC Moravsky Berou 16.28 27 P P 08 03 30.8 +0.2
DPC Dobruska-Polom 16.34 24 P P 08 03 33.4 +2.1
UPC Upice 16.37 23 AMS AMS 08 10 50.0
comp=Z,200nm,12.8s
UPC Upice 16.37 23 P P 08 03 31.5 -0.2
LOT Lotru 16.46 49 ⇑P P 08 03 35.5 +2.8
OSTC Ostas 16.48 23 AMS AMS 08 11 00.0
comp=Z,200nm,10.1s
DRGR 16.57 43 ⇓P P 08 03 35.5 +1.6
DRGR 16.57 43 P P 08 03 35.5 +1.6
MARR Marisel-Cluj 16.73 44 ⇓P P 08 03 37.3 +1.6
KSP Ksiaz 16.75 23 *e*PKP P 08 03 38.0 +2.2
ARR Arges 16.95 50 ⇓P P 08 03 40.5 +2.4
ARR Arges 16.95 50 P P 08 03 40.6 +2.4
NIE Niedzica 17.12 33 *e*PKP P 08 03 42.4 +2.5
NIE Niedzica 17.12 33 P Pn 08 03 39.0 +0.8
comp=Z,3.5nm,1.1s
VOIR 17.24 50 ⇑P P 08 03 44.7 +3.3
VOIR 17.24 50 ⇑P P 08 03 44.7 +3.3
VOIR 17.24 50 P P 08 03 41.5 +0.1
comp=Z,8.8nm,1.6s
VOIR 17.24 50 P P 08 03 43.7 +2.3
KOLS Kolonicke sedl 17.69 37 *e*P P 08 03 50.4 +4.2
KOLS Kolonicke sedl 17.69 37 *e*P P 08 03 50.4 +4.2
MLR Muntele Rosu 17.83 51 P P 08 03 49.4 +1.5
comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=8.3
comp=Z,1.5nm,0.4s
MLR Muntele Rosu 17.83 51 ⇓P P 08 03 50.8 +2.9
MLR Muntele Rosu 17.83 51 ⇓P P 08 03 50.8 +2.9
ISR Istrita 18.05 53 P P 08 03 50.6 +0.3
comp=Z,18nm,1.0s
PLOR Plostina 18.43 51 ⇓P Pn 08 03 58.0 +3.5
PLOR Plostina 18.43 51 ⇓P Pn 08 03 58.0 +3.5
BURAR Bucovina Array 18.44 44 ⇑P Pn 08 03 57.7 +3.0
BURAR Bucovina Array 18.44 44 P Pn 08 03 55.0 +0.3
BURAR Bucovina Array 18.44 44 ⇑P Pn 08 03 57.7 +3.0
BUR08 Bucovina Ar. S 18.45 44 P Pn 08 03 54.7 0.0
VRI Vrincioaia 18.48 51 ⇓P Pn 08 03 58.2 +3.0
VRI Vrincioaia 18.48 51 ⇓P Pn 08 03 58.2 +3.0
VRI Vrincioaia 18.48 51 P Pn 08 04 00.8 +5.7
TESR Tescani 18.73 49 ⇓P Pn 08 03 59.8 +1.8
TESR Tescani 18.73 49 P Pn 08 03 58.5 +0.4
comp=Z,10nm,1.2s
TIRR Tirgusor 19.04 56 ⇑P Pn 08 04 04.3 +2.4
TIRR Tirgusor 19.04 56 P P 08 04 01.0 -0.1
TIRR Tirgusor 19.04 56 P P 08 04 01.0 -0.1
TIRR pmax pmax
comp=Z,13nm,1.3s
TIRR Tirgusor 19.04 56 P Pn 08 04 02.4 +0.6
comp=Z,10nm,1.1s
CFR Carcaliu 19.11 54 ⇑P Pn 08 04 03.9 +1.2
CFR Carcaliu 19.11 54 ⇑P Pn 08 04 03.9 +1.2
TPGR Topolog 19.18 55 ⇑P Pn 08 04 05.0 +1.4
KMPD K-Podol'skiy 19.66 43 P Pn 08 04 08.8 -0.4
MDUB Mudurnu 20.20 69 P P 08 04 13.6 -0.3
MDUB lAmb lAmb 08 04 28.3
comp=Z,19nm,0.9s
EKA Eskdalemuir Ar 20.62 345 P P 08 04 19.4 +1.2
comp=Z,6.6nm,0.8s,baz=157,slow=9.4,SNR=12
comp=Z,6.6nm,0.8s
RNPP5 Staryi Chortor 20.95 36 P P 08 04 22.9 +1.0
RNPP8 Varash 21.01 36 P P 08 04 22.7 +0.3
RNPP9 Sopachiv 21.07 36 P P 08 04 22.9 -0.2
LUBAR Lubar, Ukraine 21.12 41 P P 08 04 23.7 0.0
MI28 Mi28,Pidlybu 21.66 39 P P 08 04 29.4 0.0
BR105 Keskin Array S 22.00 71 P P 08 04 34.3 +0.9
BR106 Keskin Array S 22.00 71 P P 08 04 34.3 +0.9
comp=Z,59nmcomp=Z,8.5nm,1.0s
BR131 Keskin Array S 22.02 71 *e*P P 08 04 33.3 -0.3
BRTR Keskin Array B 22.02 71 P P 08 04 33.9 +0.3
comp=Z,5.7nm,0.8s,baz=258,slow=10,SNR=10
comp=Z,5.7nm,0.8s
BRTR Keskin Array B 22.02 71 P P 08 04 33.6 0.0
BR104 Keskin Array S 22.02 71 P P 08 04 34.4 +0.8
comp=Z,89nmcomp=Z,11nm,1.0s
CSS Mathiatis 22.12 84 P P 08 04 35.2 +0.7
comp=Z,17nm,1.1s
AK13 Malin Array Si 22.20 41 P P 08 04 35.6 +0.4
AK14 Malin Array Si 22.23 41 P P 08 04 35.9 +0.3
AK07 Malin Array Si 22.24 41 P P 08 04 36.0 +0.3
AK20 Malin Array Si 22.25 41 P P 08 04 35.4 -0.3
AK16 Malin Array Si 22.25 41 P P 08 04 35.5 -0.3

KIEV Kiev 22.32 41 ⇓P P 08 04 37.4 +0.8
KIEV Kiev 22.32 41 ⇓P P 08 04 37.4 +0.8
AKASG Malin Array Be 22.34 41 P P 08 04 35.6 -1.1
comp=Z,3.4nm,0.6s,baz=240,slow=9.1,SNR=7.8
AKASG LR LR 08 13 52.7
comp=Z,43nm,18.6s,baz=224,slow=38
comp=Z,3.4nm,0.6s
AKBB Malin Array Si 22.34 41 P P 08 04 36.2 -0.5
AKBB lAmb lAmb 08 04 41.2
comp=Z,8.8nm,0.8s
AKBB Malin Array Si 22.34 41 *i* P P 08 04 37.6 +0.9
AKBB pmax pmax
comp=Z,10.0nm,1.0s
TORD Torodi Ar. Bea 22.87 191 P P 08 04 41.0 -1.6
comp=Z,20nm,0.7s,baz=5.6,slow=10,SNR=45
TORD S S 08 08 47.6 -4.4
comp=Z,4.0nm,1.1s,baz=19,slow=14,SNR=3.9
comp=Z,20nm,0.7s
TORD Torodi Ar. Bea 22.87 191 P P 08 04 41.0 -1.6
TORD lAmb lAmb 08 04 43.7
comp=Z,18nm,1.1s
PABE Paberze 23.21 26 P P 08 04 45.0 -0.8
PABE lAmb lAmb 08 04 59.3
comp=Z,19nm,0.8s
NACGM Naroch 23.84 30 *e*P P 08 04 50.9 -1.1
comp=E,10.0nm,0.7s
MNK Minsk 24.03 32 *i* P P 08 04 54.7 +0.9
comp=E,15nm,0.7s
MNK *i* P P 08 04 54.7 +0.9
comp=N,12nm,0.7s
MNK *i* P P 08 04 54.7 +0.9
comp=Z,13nm,0.9s,baz=227
MNK *i* PP sP 08 05 23.3 +24
MNK *i* PPP PPP 08 05 31.2
MNK *i* S S 08 09 12.8 +2.3
MNK *i* SS SnSn 08 09 54.4 +3.5
MNK *i* SSS SSS 08 10 07.9
MNK *i* LQ LQ 08 12 14.0
MNK *i* LR LR 08 13 48.4
MNK *i* LRM MLR 08 15 29.1
comp=N,39nm,14.5s
MNK *i* LRM MLR 08 15 41.7
comp=E,113nm,16.8s
MNK *i* LRM MLR 08 15 50.0
comp=Z,84nm,16.6s
MNK Minsk 24.03 32 *i* P P 08 04 54.7 +0.9
MNK *i* PPP PPP 08 05 31.2
MNK *i* S S 08 09 12.8 +2.3
MNK *i* SS SnSn 08 09 54.4 +3.5
MNK *i* SSS SSS 08 10 07.8
MNK pmax pmax
comp=E,15nm,0.7s
MNK pmax pmax
comp=N,12nm,0.7s
MNK pmax pmax
comp=Z,13nm,0.9s
MNK MLR MLR
comp=N,39nm,15.0s
MNK MLR MLR
comp=E,113nm,17.0s
MNK MLR MLR
comp=Z,84nm,17.0s
HFS Hagfors 24.88 9 P P 08 05 01.0 -0.5
comp=Z,2.5nm,0.8s,baz=200,slow=7.7,SNR=6.6
HFS LR LR 08 15 32.9
comp=Z,104nm,18.1s,baz=210,slow=38
comp=Z,2.5nm,0.8s
HFS Hagfors 24.88 9 P P 08 05 01.0 -0.5
EIL Elat 24.88 96 LR LR 08 17 27.3
comp=Z,64nm,18.4s,baz=276,slow=43
GAZ Gaziantep 24.93 78 P 08 05 02.5 +0.2
GAZ lAmb lAmb 08 05 14.6
comp=Z,15nm,1.0s
NC602 NORSAR Array S 25.24 6 P P 08 05 04.4 -0.4
NB2 NORSAR Subarra 25.51 6 P P 08 05 07.0 -0.3
comp=Z,5.4nm,1.0s,baz=191,slow=9.3
NOA NORSAR Array B 25.51 6 P P 08 05 06.9 -0.4
comp=Z,1.5nm,1.0s,baz=189,slow=11,SNR=5.6
NOA LR LR 08 15 53.0
comp=Z,106nm,18.0s,baz=190,slow=38
comp=Z,1.5nm,1.0s
OBN Obninsk 28.44 38 ⇓*i*P P 08 05 35.8 +2.2
OBN pmax pmax
comp=Z,8.0nm,1.1s
FINES FINESS Array B 28.64 20 P P 08 05 34.7 -0.6
comp=Z,2.1nm,0.9s,baz=212,slow=4.9,SNR=3.6
FINES LR LR 08 15 52.8
comp=Z,45nm,21.6s,baz=200,slow=34
comp=Z,2.1nm,0.9s
KIV Kislovodsk 29.00 62 *e*P P 08 05 39.4 +0.6
KIV pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 29.13 63 P P 08 05 39.5 -0.4
comp=Z,1.4nm,0.7s,baz=271,slow=5.3,SNR=4.1
comp=Z,1.4nm,0.7s
KBZ Khabaz 29.13 63 *e*P P 08 05 41.2 +1.3
KBZ pmax pmax
comp=Z,2.0nm,0.9s
MOS Moscow 29.28 37 *e*P P 08 05 41.4 +0.4
GNI Garni 30.54 70 *i* P P 08 05 51.5 -1.2
GNI pmax pmax
comp=Z,5.0nm,0.8s
DBIC Dimbokro 30.67 202 P P 08 05 53.9 +0.2
comp=Z,5.1nm,0.6s,baz=23,slow=11,SNR=4.8
comp=Z,5.1nm,0.6s
AKT Akhty 32.71 67 *e*P P 08 06 11.1 -0.6
AKT *e* 08 08 56.4
AKT pmax pmax
comp=Z,13nm,1.1s
KLMR Klimovskoe 32.87 30 *e*P P 08 06 11.2 -1.4
KLMR pmax pmax
comp=Z,11nm,0.8s
BORG Borgarnes 33.40 339 LR LR 08 18 33.0
comp=Z,48nm,20.3s,baz=133,slow=34
BELG Belogornoye 33.55 47 *e*P P 08 06 20.3 +1.7
BELG pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 35.46 12 P P 08 06 34.6 -0.5
comp=Z,0.6nm,0.6s,baz=203,slow=8.7,SNR=4.5
comp=Z,0.6nm,0.6s
JMIC Jan Mayen 36.16 352 LR LR 08 22 10.5
comp=Z,45nm,18.2s,baz=100,slow=37
KIRV Kirov 36.29 37 ⇓*i*P P 08 06 43.2 +0.9
KIRV *i* *PP pP 08 06 46.4 +0.2
ARTI Arti 40.47 43 P 08 07 17.4 0.0
ARTI lAmb lAmb 08 07 19.0
comp=Z,6.3nm,0.8s
ARTI Arti 40.47 43*c* *i*P P 08 07 17.5 0.0
ARTI 08 09 17.0
ARTI S S 08 13 26.5 +0.8
ARTI SS SS 08 16 16.9 -7.8
ARTI pmax pmax
comp=Z,4.0nm,0.7s
AB31 Akbulak array 41.01 54 P 08 07 21.7 -0.2
ABKAR Akbulak array 41.01 54 P P 08 07 21.7 -0.2
IVI Ivigtut 42.41 324 P P 08 07 33.9 +0.6
IVI lAmb lAmb 08 07 34.7
comp=Z,15nm,1.0s
SPITS Spitsbergen Ar 42.76 3 P P 08 07 36.1 +0.2
comp=Z,6.2nm,0.9s,baz=144,slow=17,SNR=2.7
comp=Z,6.2nm,0.9s
MBAR Mbarara 42.78 142 LR LR 08 25 06.5
comp=Z,96nm,20.5s,baz=144,slow=36
SUMG Summit 43.20 342 P P 08 07 41.1 +1.0
SUMG Summit 43.20 342 P P 08 07 41.1 +1.0
SUMG pmax pmax
comp=Z,5.0nm,1.1s
BORK Borovoye 47.31 48 P P 08 08 13.0 +0.6
BORK lAmb lAmb 08 08 15.3
comp=Z,3.1nm,0.6s
BORK Borovoye 47.31 48 *e*P P 08 08 13.0 +0.6
BORK *i* *PP pP 08 08 14.8 -1.7
BORK pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 47.35 48 P P 08 08 12.7 -0.1
comp=Z,2.3nm,0.7s,baz=278,slow=4.3,SNR=11
comp=Z,2.3nm,0.7s
KK31 Karatay Array 49.13 61 P 08 08 26.2 -0.5
KK31 lAmb lAmb 08 08 28.7
comp=Z,4.4nm,0.8s
KK31 Karatay Array 49.13 61 P P 08 08 26.2 -0.5
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 49.13 61 P 08 08 26.2 -0.5
KKAR Karatay Array 49.13 61 P P 08 08 26.2 -0.5
CHGR Chuyangaron 49.35 67 ⇓*i*P P 08 08 29.8 +1.3

CHGR *i* *PP pP 08 08 32.5 -0.1
CHGR pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 52.08 60 P 08 08 48.9 -0.2
AAK lAmb lAmb 08 08 51.8
comp=Z,3.8nm,0.9s
AAK Ala-Archa 52.08 60 ⇓*i*P P 08 08 49.6 +0.4
AAK pmax pmax
comp=Z,4.0nm,0.9s
SCHQ Schefferville 52.29 316 P P 08 08 49.8 -0.5
comp=Z,4.0nm,0.5s,baz=65,slow=5.6,SNR=14
comp=Z,4.0nm,0.5s
SCHQ Schefferville 52.29 316 P 08 08 49.9 -0.4
SCHQ lAmb lAmb 08 08 56.7
comp=Z,6.6nm,0.7s
KURBB Kurchatov Arra 52.72 50 P P 08 08 53.3 -0.3
comp=Z,3.1nm,0.7s,baz=288,slow=8.4,SNR=24
comp=Z,3.1nm,0.7s
KURK Kurchatov 52.76 50 P 08 08 53.4 -0.4
KURK lAmb lAmb 08 08 55.0
comp=Z,4.7nm,0.8s
KURK Kurchatov 52.76 50 ⇓*i*P P 08 08 53.5 -0.4
KURK pmax pmax
comp=Z,4.0nm,0.8s
KSH2 Kashi 53.94 64 P P 08 09 04.0 +1.1
KSH2 sP sP 08 09 11.6 +3.0
KSH2 pmax pmax
comp=Z,7.0nm,1.1s
NRIK Noril'sk 54.04 26 P P 08 09 03.0 +0.1
comp=Z,1.0nm,0.3s,baz=320,slow=5.4,SNR=3.8
comp=Z,1.0nm,0.3s
NRIK Noril'sk 54.04 26 ⇓*i*P P 08 09 04.1 +1.1
NRIK pmax pmax
comp=Z,2.0nm,0.9s
KDJ Kajisay 54.13 60 P P 08 09 04.1 -0.2
KDJ Kajisay 54.13 60 P P 08 09 04.1 -0.2
KDJ pmax pmax
comp=Z,9.0nm,0.9s
NIL Nilore 54.17 71 P P 08 09 04.5 0.0
NIL Nilore 54.17 71 P P 08 09 04.5 0.0
NIL pmax pmax
comp=Z,10.0nm,1.0s
TARG Taragay, Kyrgy 54.70 60 P 08 09 08.8 +0.1
TARG Taragay, Kyrgy 54.70 60 P P 08 09 08.8 +0.1
TARG pmax pmax
comp=Z,8.0nm,0.9s
PDGK Podgornoye 55.36 58 P 08 09 12.6 -0.5
PDGK Podgornoye 55.36 58 P P 08 09 12.6 -0.5
ZALV Zalesovo Beam 55.66 45 P P 08 09 13.4 -1.5
comp=Z,1.5nm,0.6s,baz=286,slow=9.6,SNR=6.3
comp=Z,1.5nm,0.6s
ZALV Zalesovo Beam 55.66 45 P P 08 09 14.3 -0.6
ZALV Zalesovo Beam 55.66 45 *i* P P 08 09 14.6 -0.4
ZALV pmax pmax
comp=Z,1.0nm,0.5s
TSUM Tsumeb 55.70 167 LR LR 08 34 04.8
comp=Z,180nm,22.0s,baz=151,slow=37
MAKZ Makanchi 55.94 53 P P 08 09 17.3 +0.2
MAKZ lAmb lAmb 08 09 28.8
comp=Z,3.4nm,0.7s
MAKZ Makanchi 55.94 53 P P 08 09 17.3 +0.2
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 56.15 53 P P 08 09 18.1 -0.5
MK31 lAmb lAmb 08 09 20.9
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 56.15 53 P P 08 09 18.2 -0.5
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 56.15 53 P P 08 09 18.2 -0.4
comp=Z,4.0nm,0.7s,baz=284,slow=6.2,SNR=24
comp=Z,4.0nm,0.7s
DGZ Jazzator, Alta 58.47 49 *e*P P 08 09 33.9 -1.2
DGZ pmax pmax
comp=Z,1.0nm,0.8s
MATP Matopo 59.73 156 LR LR 08 38 28.7
comp=Z,237nm,20.8s,baz=242,slow=39
KGCAE Kacgae 60.22 163 P P 08 09 47.2 -0.1
LBTB Lobatse 63.16 160 P P 08 10 07.1 0.0
LBTB Lobatse 63.16 160 P P 08 10 07.1 0.0
LBTB pmax pmax
comp=Z,9.0nm,0.7s
MAKGR Makgori 63.70 161 P P 08 10 10.6 -0.1
TLY Talaya 67.07 42 ⇑*i*P P 08 10 33.2 +0.9
TLY pmax pmax
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 70.33 318 P P 08 10 51.5 -1.0
comp=Z,4.2nm,0.7s,baz=63,slow=6.3,SNR=7.8
comp=Z,4.2nm,0.7s
ULM Lac du Bonnet 70.33 318 ⇓*i*P P 08 10 54.1 +1.6
SONM Songino Array 70.56 45 P P 08 10 54.3 +0.1
comp=Z,2.1nm,0.8s,baz=303,slow=7.6,SNR=8.6
comp=Z,2.1nm,0.8s
GTA2 Gaotai 70.77 55 *e*P P 08 10 56.3 +0.7
GTA2 pP sP 08 11 00.7 -0.7
GTA2 pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 70.92 44 ⇑*i*P P 08 10 56.9 +0.5
ULN pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 71.23 335 P P 08 10 57.5 -0.3
comp=Z,1.5nm,0.6s,baz=52,slow=5.8,SNR=10
comp=Z,1.5nm,0.6s
YKA Yellowknife Ar 71.23 335*c* *e*P P 08 11 00.1 +2.3
YKA pmax pmax
comp=Z,2.0nm,0.6s
F24K Squaw Lake 75.20 350 P 08 11 21.4 +0.2
LZDM Lanzhou Array 75.29 56 P P 08 11 23.3 +0.6
comp=Z,1.7nm,0.3s,baz=328,slow=5.2,SNR=1.5
comp=Z,1.7nm,0.3s
LZH Lanzhou 75.32 56 *e*P P 08 11 23.6 +1.0
LZH sP sP 08 11 31.9 +3.5
LZH pmax pmax
comp=Z,28nm,1.2s
I27K Kandik River 75.93 347 P 08 11 25.8 +0.4
I27K lAmb lAmb 08 11 28.8
comp=Z,8.2nm,1.4s
F21K Alatna River 76.19 352 P P 08 11 27.7 +0.8
F21K lAmb lAmb 08 11 29.9
comp=Z,4.9nm,0.9s
F19K Shaleruckik Mo 77.01 354 P 08 11 31.9 +0.5
F19K lAmb lAmb 08 11 33.0
comp=Z,4.0nm,1.1s
HHC Hu-ho-hao-te 77.55 49 *e*P P 08 11 34.6 -0.6
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,69nm,5.1s
ILAR Eielson Array 77.61 349 P P 08 11 35.1 +0.2
comp=Z,0.6nm,0.8s,baz=346,slow=2.9,SNR=8.4
comp=Z,0.6nm,0.8s
COLA College 77.66 349 ⇓*i*P P 08 11 37.0 +1.9
COLA pmax pmax
comp=Z,2.0nm,0.9s
PZH PanZhiHua 79.17 65 P P 08 11 44.8 +0.4
DHY Denali Highway 79.27 348 P P 08 11 44.7 +0.4
DLBC Dease Lake 79.30 338 LR LR 08 47 24.1
comp=Z,44nm,19.7s,baz=122,slow=36
K20K Telida 79.98 351 P 08 11 48.9 +1.0
K20K lAmb lAmb 08 11 50.0
comp=Z,4.3nm,1.0s
CMAR Chiang Mai Arr 81.60 73 P P 08 11 55.4 -2.0
comp=Z,1.2nm,0.3s,baz=310,slow=8.4,SNR=5.9
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 81.60 73 *i* P P 08 11 57.9 +0.5
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SIV San Ignacio 81.78 244 P P 08 11 58.1 -0.2
comp=Z,0.9nm,0.5s,baz=97,slow=5.5,SNR=2.8
comp=Z,0.9nm,0.5s
NEW Newport 82.29 326 LR LR 08 46 27.1
comp=Z,56nm,20.0s,baz=69,slow=34
PDAR Pinedale Array 82.35 318 P P 08 12 01.1 -0.2
comp=Z,1.4nm,0.8s,baz=66,slow=6.0,SNR=12
PDAR LR LR 08 47 03.8
comp=Z,28nm,19.2s,baz=47,slow=34
comp=Z,1.4nm,0.8s
PDAR Pinedale Array 82.35 318 P P 08 12 00.6 -0.7
ANMO Albuquerque 85.75 311 ⇓*i*P P 08 12 19.6 +0.9
ANMO pmax pmax
comp=Z,1.0nm,0.9s
CPUP Villa Florida 86.06 234 P P 08 12 19.8 -0.1
comp=Z,2.4nm,1.1s,baz=71,slow=19,SNR=3.1
comp=Z,2.4nm,1.1s
LPAZ La Paz 87.20 248 P P 08 12 25.1 -1.3
comp=Z,0.7nm,0.6s,baz=28,slow=3.6,SNR=7.2
comp=Z,0.7nm,0.6s

TXAR	**Lajitas Array**	**87.59**	**305**	P	**P**	**08 12 28.4**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=86,slow=3.7,SNR=5.4						
	comp=Z,0.3nm,0.7s						
NJ2	**Nanjing**	**87.64**	**52**	*eP*	**P**	**08 12 26.7**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,39nm,0.6s						
KSRS	**Korea Array**	**89.32**	**43**	P	**P**	**08 12 35.2**	**-0.4**
	comp=Z,1.3nm,1.0s,baz=289,slow=3.7,SNR=2.5						
	comp=Z,1.3nm,1.0s						
LPIG	**La Paz**	**95.49**	**305**	LR	LR	08 54 18.3	
	comp=Z,29nm,19.2s,baz=346,slow=34						
MT02	**Curacav**	**99.68**	**236**	*eP*	**PKiKP**	**08 17 51.8**	**+0.2**
MT09	**Talagante**	**99.89**	**236**	*eP*	**PKiKP**	**08 17 48.4**	**-3.8**
QSPA	**South Pole Qui**	**125.62**	**180**	PKP	**PKPdf**	**08 18 38.3**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=187,slow=0.7,SNR=2.4						
WRA	**Warramunga Arr**	**132.05**	**85**	PKP	**PKPdf**	**08 18 52.4**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=310,slow=2.6,SNR=2.0						
ASAR	**Alice Springs**	**133.49**	**90**	PKP	**PKPdf**	**08 18 54.3**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=298,slow=1.3,SNR=9.2						

WEL 04 08:10:36.3±1.1, 35°S±20°×17°8E±2°, 1, h239km±28km, M3.2/7, ML3.1/7, MLv3.2/7, Error ellipse: s-maj=34.0km s-min=15.8km az=134.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**2.71**	**185**	P	Pn	08 11 25.3	+0.5
HAZ				S	S	08 12 03.5	+0.4
WMGZ	**Waiomatatini S**	**2.77**	**175**	P	Pn	08 11 25.7	+0.2
WMGZ				S	S	08 12 06.6	+2.2
PKGZ	**Pakihiroa**	**2.81**	**180**	S	S	08 12 04.4	-0.8
RUGZ	**Raukumara Rang**	**2.92**	**186**	P	Pn	08 11 27.0	-0.3
RUGZ				S	S	08 12 06.9	-0.7
TWGZ	**Tauwhareparae**	**3.12**	**182**	P	Pn	08 11 29.9	+0.5
TWGZ				S	S	08 12 11.8	+0.5
URZ	**Urewera**	**3.29**	**194**	P	Pn	08 11 31.8	+0.5
URZ	**Urewera**	**3.29**	**194**	P	Pn	08 11 31.4	+0.1
URZ				S	S	08 12 15.3	+0.5
MWZ	**Matawai**	**3.31**	**188**	P	Pn	08 11 32.1	+0.6
MWZ				S	S	08 12 14.5	-0.6
TKGZ	**Te Karaka**	**3.38**	**183**	P	Pn	08 11 30.9	-1.4
TKGZ				S	S	08 12 16.3	-0.4
RAGZ	**Rawiri**	**3.48**	**189**	P	Pn	08 11 33.7	+0.2
RAGZ				S	S	08 12 20.7	+1.9
MUGZ	**Murupara**	**3.58**	**197**	S	S	08 12 22.4	+1.7
RTZ	**Ruatahuna**	**3.66**	**194**	P	Pn	08 11 35.8	+0.2
RTZ				S	S	08 12 23.2	+0.5
SNGZ	**Shannon Statio**	**3.77**	**189**	P	Pn	08 11 36.4	-0.4
SNGZ				S	S	08 12 24.6	-0.1
PRGZ	**Paritu Road**	**3.87**	**182**	S	S	08 12 27.9	+1.1
MTHZ	**Maungataniwha**	**3.92**	**194**	P	Pn	08 11 39.1	+0.5
MTHZ				S	S	08 12 28.8	+0.7
MRHZ	**Matea Rd**	**4.00**	**199**	P	Pn	08 11 39.6	0.0
MRHZ				S	S	08 12 29.0	-0.8
MHGZ	**Mahia Peninsul**	**4.09**	**182**	P	Pn	08 11 40.0	-0.6
BKZ	**Black Stump Fm**	**4.30**	**197**	P	Pn	08 11 43.2	+0.1
HIZ	**Hauiti**	**4.32**	**216**	P	Pn	08 11 47.3	+4.0
NGZ	**Ngauruhoe**	**4.57**	**205**	P	Pn	08 11 46.6	+0.1
BFZ	**Birch Farm**	**5.80**	**194**	P	Pn	08 11 59.6	-2.0
KHZ	**Kahutara**	**8.16**	**204**	P	Pn	08 12 28.6	-2.9

*SOME **04** 08:11:10.2, 40°.40N×83°.82E, h5km*
*NNC **04** 08:11:12.1±2.2, 40°.53N×83°.88E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=20.8km s-min=13.8km az=33.0*
ISC 04 08:11:11.8±3.6, 40°.3N±0°.2×83°.5E±0°.1, h10km, n13, σ2°68/19, 2C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.91**	**324**	Pg	**Pg**	**08 12 25.2**	**-1.5**
	0.6nm,0.2s						
KTMS				Lg	Lg	08 13 19.0	
	11nm,0.4s						
KTMS	**Ketmen**	**3.91**	**324**	*eP*	**Pg**	**08 12 25.2**	**-1.5**
	0.6nm,0.2s						
KTMS				*eS*	**Sg**	**08 13 19.0**	**+1.5**
	11nm,0.4s						
SHLS	**Shalkode**	**4.15**	**314**	Pg	**Pb**	**08 12 24.3**	**-0.7**
	2.3nm,0.1s						
SHLS				Lg	Lg	08 13 18.3	
	67nm,0.4s						
SHLS	**Shalkode**	**4.15**	**314**	*eP*	**Pb**	**08 12 24.3**	**-0.7**
	2.2nm,0.2s						
SHLS				*eS*	**Sb**	**08 13 17.3**	**+2.0**
	67nm,0.4s						
PDGK	**Podgornoye**	**4.25**	**316**	⇑Pg	**Pg**	**08 12 30.4**	**-2.8**
	4.1nm,0.5s						
PDGK				⇑Lg	Lg	08 13 29.2	
	34nm,0.7s						
UZB	**Uzynbulak**	**4.39**	**311**	Pg	**Pg**	**08 12 33.8**	**-2.1**
	1.2nm,0.2s						
UZB				Lg	Lg	08 13 34.2	
	23nm,0.3s						
UZB	**Uzynbulak**	**4.39**	**311**	*eP*	**Pg**	**08 12 33.8**	**-2.1**
	1.2nm,0.2s						
UZB				*eS*	**Sg**	**08 13 34.2**	**+1.4**
	23nm,0.3s						
SATY	**Saty**	**4.71**	**307**	*eP*	**Pg**	**08 12 39.3**	**-2.7**
	1.2nm,0.1s						
SATY				*eS*	**Sg**	**08 13 43.3**	**+0.4**
	22nm,0.4s						
KPKS	**Kokpek**	**4.79**	**312**	Pg	**Pb**	**08 12 39.9**	**+4.1**
	0.3nm,0.2s						
KPKS				Lg	Lg	08 13 44.2	
	22nm,0.4s						
KPKS	**Kokpek**	**4.79**	**312**	*eP*	**Pb**	**08 12 39.9**	**+4.1**
	0.3nm,0.2s						
KPKS				*eS*	**Sg**	**08 13 44.2**	**-1.2**
	33nm,0.5s						
DJR	**Jarkent**	**4.86**	**326**	Pg	**Pg**	**08 12 40.9**	**-4.0**
	0.8nm,0.2s						
DJR				Lg	Lg	08 13 46.4	
	6.1nm,0.5s						
DJR	**Jarkent**	**4.86**	**326**	*eP*	**Pg**	**08 12 40.9**	**-4.0**
	0.8nm,0.2s						
DJR				*eS*	**Sg**	**08 13 46.4**	**-1.5**
	6.1nm,0.5s						
MK31	**Makanchi Array**	**6.52**	**352**	Pg	**Pb**	**08 13 07.9**	**+2.6**
	1.2nm,0.6s,baz=187,slow=13,SNR=3.5						
MK31				Lg	Lg	08 14 33.2	
	4.0nm,0.8s,baz=163,slow=29,SNR=4.0						

*SOME **04** 08:36:33.8, 45°.57N×84°.70E, h0km*
*NNC **04** 08:36:38.0±2.9, 45°.77N×85°.12E, h0km, mb2.6, mpv2.1, Error ellipse: s-maj=20.6km s-min=14.7km az=117.0*
ISC 04 08:36:38.8±3.0, 45°.6N±0°.1×85°.0E±0°.1, h10km, n5, σ1°86/7, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**1.81**	**358**	*eP*	**Pg**	**08 37 11.6**	**-1.9**
	8.0nm,0.3s						
ZSN				*eS*	**Sg**	**08 37 39.7**	**+2.7**
	13nm,0.3s						
MK31	**Makanchi Array**	**2.19**	**303**	⇓Pn	**Pn**	**08 37 15.6**	**+0.5**
	0.2nm,0.2s,baz=125,slow=14,SNR=45						
MK31				⇑Sn	**Sb**	**08 37 44.7**	**-0.9**
	4.7nm,0.3s,baz=116,slow=24,SNR=29						
MAKZ	**Makanchi**	**2.38**	**300**	⇓Pn	**Pn**	**08 37 18.9**	**+1.0**
	0.8nm,0.3s						
MAKZ				⇑Sn	**Sb**	**08 37 50.2**	**-0.9**
	8.2nm,0.5s						
KPKS	**Kokpek**	**4.99**	**246**	*eP*	Pb	08 38 02.9	-3.3
	1.1nm,0.1s						
KPKS				*eS*	**Sb**	**08 39 06.5**	**+0.2**
	2.8nm,0.2s						
KURK	**Kurchatov**	**6.62**	**322**	⇑Lg	Lg	08 40 05.4	
	1.2nm,0.8s						

SCB 04 08:53:14.3±1.3, 21°.45S×67°.24W, h191km±10km, MB5.7, ML3.4/3, Error ellipse: s-maj=5.5km s-min=3.5km az=0.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.51**	**83**	P	Pn	08 53 48.8	+1.0
MOCB				S	Sn	08 54 13.7	0.0
MOCB				IAML		08 54 21.8	
	185nm,0.4s						
PB09	**IPOC Station P**	**1.89**	**259**	P	Pn	08 53 52.3	+1.0
PB08	**IPOC Station P**	**2.21**	**306**	P	Pn	08 53 55.8	+0.9
PB02	**IPOC Station P**	**2.48**	**272**	P	Pn	08 53 58.1	+0.6
PB02				S	Sn	08 54 30.6	-0.5
PB02				IAML		08 54 37.7	
	152nm,0.2s						
PB06	**IPOC Station P**	**2.50**	**239**	P	Pn	08 53 58.7	+0.9
GO01	**Chusmiza**	**2.54**	**314**	P	Pn	08 53 59.4	+0.7
PB11	**IPOC Station P**	**2.81**	**306**	P	Pn	08 54 01.7	+0.2
PB11				S	Sn	08 54 37.3	-1.0
PB11				IAML		08 54 39.1	
	104nm,0.2s						
AOEA	**Aiguile**	**3.76**	**31**	P	Pn	08 54 13.3	+0.2
PB16	**IPOC Station P**	**3.76**	**325**	P	Pn	08 54 14.1	+0.7
PB14	**IPOC Station P**	**4.30**	**222**	P	Pn	08 54 20.2	+0.3
BBOJ	**La Paz, Jacaqu**	**4.54**	**348**	P	Pn	08 54 24.2	+1.1
BBOD	**La Paz, Gloria**	**4.95**	**345**	P	Pn	08 54 29.1	+0.6
LPAZ	**La Paz**	**5.20**	**351**	P	Pn	08 54 32.3	+0.6
BBOB	**La Paz, Bander**	**5.34**	**351**	P	Pn	08 54 34.0	+0.5
BBSD	**Serra de San D**	**7.56**	**57**	P	Pn	08 54 59.7	-2.2

*SNET **04** 08:56:40.7±1.4, 13°.49N×90°.37W, h46km, ML4.1, Presumed earthquake*
*CATAC **04** 08:56:40.1±0.4, 14°.N±2°×9°.0W±°, h25km±2km, M4.3/44, mb4.5/3, MLv4.2/44, Error ellipse: s-maj=4.3km s-min=2.6km az=21.3, confirmed*
*GCG **04** 08:56:41.8±2.0, 13°.66N×90°.39W, h35km±6km, MD4.6, ML4.5, Presumed earthquake*
ISC 04 08:56:41.9±1.3, 13°.53N±0°.06×90°.36W±0°.04, h47km±18km, n87, σ1°01/113, 2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.46**	**46**	P	**Pn**	**08 59 01.4**	**-1.1**
NUBE	**Las Nubes**	**0.67**	**56**	P	**Pn**	**08 56 54.4**	**-1.0**
NUBE	**Las Nubes**	**0.67**	**56**	*i* P	**Pn**	**08 56 54.4**	**-1.0**
NUBE				*i* S	**Sn**	**08 57 03.5**	**-1.6**
NUBE	**Las Nubes**	**0.67**	**56**	⇓*i*P	**Pn**	**08 56 54.4**	**-1.0**
NUBE				*eS*	**Sn**	**08 57 04.7**	**-0.4**
PCG5	**San Vicente Pa**	**0.69**	**358**	*i* P	**Pn**	**08 56 56.6**	**+1.0**
PCG5				*i* S	**Sn**	**08 57 07.2**	**+1.8**
PCG5				IAML		08 57 10.2	
	comp=E,20μm,0.2s						
LOAL	**Lomas de Alarc**	**0.73**	**50**	P	**Pn**	**08 56 55.6**	**-0.5**
LOAL				S	**Sn**	**08 57 07.0**	**+0.7**
SLOZ	**Alcaldia de Sa**	**0.75**	**48**	P	**Pn**	**08 56 55.5**	**-0.8**
SLOZ				S	**Sn**	**08 57 07.0**	**+0.4**
FG8	**Yepocapa, Chim**	**0.76**	**345**	*i* P	**Pn**	**08 56 59.0**	**+2.5**
FG16	**Alotenango, Sa**	**0.76**	**349**	*i* P	**Pn**	**08 56 58.6**	**+2.0**
CEVE	**Cerro Verde**	**0.77**	**67**	P	**Pn**	**08 56 56.0**	**-0.8**
CEVE	**Cerro Verde**	**0.77**	**67**	*i* P	**Pn**	**08 56 56.0**	**-0.8**
CEVE				*eS*	**Sn**	**08 57 08.2**	**+0.7**
SBLS	**San Blas**	**0.78**	**66**	*i* P	**Pn**	**08 56 56.0**	**-0.9**
SBLS				*eS*	**Sn**	**08 57 07.9**	**+0.3**
RTR	**El Retiro**	**0.78**	**62**	⇓*i*P	**Pn**	**08 56 56.3**	**-0.6**
RBDL	**Robledal**	**0.87**	**48**	*i* P	**Pn**	**08 56 57.5**	**-0.6**
RBDL				*eS*	**Sn**	**08 57 10.5**	**+0.6**
JAYA	**Jayaque - finc**	**0.89**	**82**	P	**Pn**	**08 56 57.4**	**-1.0**
JAYA	**Jayaque - finc**	**0.89**	**82**	*i* P	**Pn**	**08 56 57.3**	**-1.0**
JAYA				IAML		08 57 12.1	
	comp=N,24μm,0.3s						
JAYA	**Jayaque - finc**	**0.89**	**82**	*eP*	**Pn**	**08 56 57.3**	**-1.0**
JAYA				*eS*	**Sn**	**08 57 10.4**	**+0.2**
UNIC	**Universidad Ca**	**0.91**	**60**	P	**Pn**	**08 56 57.6**	**-0.8**
UNIC	**Universidad Ca**	**0.91**	**60**	*i* P	**Pn**	**08 56 57.6**	**-0.8**
UNIC				*eS*	**Sn**	**08 57 10.8**	**+0.4**
CEDA	**San Andres**	**0.97**	**73**	P	**Pn**	**08 56 58.7**	**-0.6**
CEDA	**San Andres**	**0.97**	**73**	*i* P	**Pn**	**08 56 58.6**	**-0.7**
CEDA				*eS*	**Sn**	**08 57 12.6**	**+0.6**
LALI	**Alcalda de L**	**1.01**	**92**	P	**Pn**	**08 56 58.8**	**-0.9**
LALI	**Alcalda de L**	**1.01**	**92**	*i* P	**Pn**	**08 56 58.7**	**-0.9**
LALI	**Alcalda de L**	**1.01**	**92**	*eP*	**Pn**	**08 56 58.7**	**-0.9**
LALI				*eS*	**Sn**	**08 57 12.9**	**+0.1**
JUAM	**Asuncion Mita**	**1.02**	**38**	*i* P	**Pn**	**08 56 59.0**	**-0.9**
JUAM				*i* S	**Sn**	**08 57 11.7**	**-1.6**
JUAM				IAML		08 57 16.1	
	comp=N,8μm,0.3s						
PMON	**Piamonte**	**1.03**	**79**	P	**Pn**	**08 56 59.6**	**-0.5**
PMON	**Piamonte**	**1.03**	**79**	*eP*	**Pn**	**08 56 59.4**	**-0.7**
PMON				*eS*	**Sn**	**08 57 14.4**	**+0.9**
BOQS	**Boqueron**	**1.07**	**79**	*eP*	**Pn**	**08 57 03.3**	**-0.4**
GCG4	**OSOP**	**1.07**	**351**	*i* P	**Pn**	**08 56 59.6**	**-1.1**
UEES	**Universidad Ev**	**1.10**	**80**	P	**Pn**	**08 57 00.4**	**-0.7**
UEES	**Universidad Ev**	**1.10**	**80**	*eP*	**Pn**	**08 57 00.4**	**-0.7**
UEES				*eS*	**Sn**	**08 57 15.9**	**+0.6**
SEMO	**Seminario San**	**1.11**	**81**	P	**Pn**	**08 57 00.8**	**-0.4**
SEMO				S	**Sn**	**08 57 16.3**	**+0.7**
PANCS	**Alcalda de**	**1.15**	**86**	P	**Pn**	**08 57 00.8**	**-0.8**
PANCS				S	**Sn**	**08 57 16.7**	**+0.4**
LOMA	**Loma Larga**	**1.16**	**84**	P	**Pn**	**08 57 01.2**	**-0.7**
LOMA	**Loma Larga**	**1.16**	**84**	*eP*	**Pn**	**08 57 01.3**	**-0.7**
LOMA				*eS*	**Sn**	**08 57 17.5**	**+0.8**
IGN	**Direccin Gen**	**1.17**	**81**	S	**Sn**	**08 57 17.9**	**+1.1**
LFRS	**El Faro**	**1.26**	**85**	*eP*	**Pn**	**08 57 03.1**	**-0.2**
LBRS	**Las Brisas**	**1.29**	**80**	*eP*	**Pn**	**08 57 03.4**	**-0.3**
MTO3	**Montecristo**	**1.30**	**48**	P	**Pn**	**08 57 02.9**	**-1.0**
MTO3				S	**Sn**	**08 57 21.1**	**+0.8**
MTO3	**Montecristo**	**1.30**	**48**	*i* P	**Pn**	**08 57 03.0**	**-1.0**
STG5	**El Palmar, Qui**	**1.30**	**312**	*i* P	**Pn**	**08 57 06.6**	**+2.8**
STG8	**El Palmar, Qui**	**1.33**	**314**	*i* P	**Pn**	**08 57 07.6**	**+3.2**
STG8				IAML		08 57 30.5	
	comp=E,5μm,0.2s						
PAVA	**Las Pavas**	**1.39**	**82**	P	**Pn**	**08 57 04.6**	**-0.4**
PAVA	**Las Pavas**	**1.39**	**82**	*eP*	**Pn**	**08 57 04.6**	**-0.4**
ESQI	**Esquipulas**	**1.42**	**44**	P	**Pn**	**08 57 04.9**	**-0.6**
ESQI				S	**Sn**	**08 57 24.2**	**+1.1**
ZAFR2	**Estanzuela, Za**	**1.43**	**43**	*i* P	**Pn**	**08 57 07.4**	**+1.9**
COEG	**Centro de Oper**	**1.44**	**86**	P	**Pn**	**08 57 05.2**	**-0.5**
COEG				S	**Sn**	**08 57 24.7**	**+1.3**
APG	**El Apazote**	**1.47**	**356**	*i* P	**Pn**	**08 57 05.6**	**-0.7**
LLGN	**La Laguna**	**1.51**	**65**	P	**Pn**	**08 57 05.7**	**-1.0**
TECO	**Alcaldia de Te**	**1.53**	**89**	P	**Pn**	**08 57 06.4**	**-0.6**
TECO	**Alcaldia de Te**	**1.53**	**89**	*eP*	**Pn**	**08 57 06.3**	**-0.6**
TECO				*eS*	**Sn**	**08 57 26.1**	**+0.5**
P5NO	**Presa 5 de nov**	**1.62**	**73**	P	**Pn**	**08 57 07.0**	**-1.0**
RTAL	**Retalhuleu**	**1.64**	**308**	P	**Pn**	**08 57 06.4**	**-1.9**
RTAL	**Retalhuleu**	**1.64**	**308**	*eP*	**Pn**	**08 57 06.6**	**-1.7**
RTAL				*eS*	**Sn**	**08 57 25.5**	**-2.7**
QUEO	**Labor Ovalle**	**1.75**	**320**	*i* P	**Pn**	**08 57 09.9**	**-0.2**
QUEO				*i* S	**Sn**	**08 57 29.5**	**-1.8**
AVCB	**Coban**	**1.93**	**359**	*i* P	**Pn**	**08 57 12.5**	**0.0**
AVCB				IAML		08 57 51.0	
	comp=E,3μm,0.3s						
PACA	**Pacayal**	**1.98**	**91**	P	**Pn**	**08 57 13.0**	**0.0**
SARH	**Santa Rosa de**	**1.98**	**51**	P	**Pn**	**08 57 12.9**	**-0.3**
SARH	**Santa Rosa de**	**1.98**	**51**	*i* P	**Pn**	**08 57 12.9**	**-0.3**
RANC	**El Ranchito**	**2.01**	**92**	P	**Pn**	**08 57 13.7**	**+0.1**
HUEH	**Huehuetenango**	**2.10**	**328**	P	**Pn**	**08 57 14.7**	**-0.2**
HUEH	**Huehuetenango**	**2.10**	**328**	*i* P	**Pn**	**08 57 14.9**	**0.0**
THIG		**2.31**	**307**	*i* P	**Pn**	**08 57 15.8**	**-1.7**
CNCH	**Conchagua**	**2.47**	**95**	P	**Pn**	**08 57 19.4**	**-0.4**
CNCH				S	**Sn**	**08 57 50.5**	**+1.8**
CSGN	**Cosiguina Volc**	**2.78**	**101**	P	**Pn**	**08 57 23.8**	**-0.2**
IZABA	**Izabal, Puerto**	**2.78**	**38**	P	**Pn**	**08 57 23.6**	**-0.4**
CRIN	**San Cristobal**	**3.32**	**104**	P	**Pn**	**08 57 31.8**	**+0.3**
PETF	**Flores**	**3.40**	**8**	P	**Pn**	**08 57 32.5**	**0.0**
QUEN	**Al S del Volca**	**3.54**	**105**	P	**Pn**	**08 57 33.9**	**-0.6**
PLRN	**Geotermica Pol**	**3.62**	**105**	P	**Pn**	**08 57 34.4**	**-1.1**
ROCN	**Rota Cerro Neg**	**3.66**	**105**	P	**Pn**	**08 57 35.1**	**-1.0**
CNGA	**Al SSO del Vol**	**3.71**	**106**	P	**Pn**	**08 57 36.3**	**-0.4**
CNGN	**Cerro Negro**	**3.71**	**106**	P	**Pn**	**08 57 36.5**	**-0.2**
CNGN				S	**Sn**	**08 58 20.7**	**+1.5**
MACN	**El Madrono**	**3.74**	**106**	P	**Pn**	**08 57 36.7**	**-0.5**
OCON	**Estacion meteo**	**3.77**	**88**	P	**Pn**	**08 57 37.0**	**-0.7**
LIMN	**Finca el Limon**	**3.91**	**96**	P	**Pn**	**08 57 38.8**	**-0.8**
RCVN	**Varillal2**	**4.05**	**89**	P	**Pn**	**08 57 40.7**	**-0.8**
SAPS	**Ciudad Sandino**	**4.08**	**109**	P	**Pn**	**08 57 41.6**	**-0.3**
RCON	**San Juan de Ri**	**4.08**	**90**	P	**Pn**	**08 57 41.3**	**-0.7**
APQ2	**Apoyeque**	**4.15**	**108**	P	**Pn**	**08 57 42.9**	**+0.2**
TISN	**Laguna Tiscapa**	**4.22**	**109**	P	**Pn**	**08 57 43.5**	**-0.2**
UNAN	**Cigeo UNAN**	**4.22**	**109**	P	**Pn**	**08 57 43.9**	**0.0**
MATN	**Matagalpa**	**4.36**	**97**	P	**Pn**	**08 57 45.0**	**-0.7**
NADN	**Granada**	**4.57**	**112**	P	**Pn**	**08 57 48.9**	**+0.2**
BOAB	**BOACO BROADBAN**	**4.69**	**103**	P	**Pn**	**08 57 48.9**	**-1.3**
CMARA	**Lajas Hojancha**	**5.96**	**125**	P	**Pn**	**08 58 08.0**	**+0.3**
JTS	**Las Juntas de**	**6.19**	**121**	P	**Pn**	**08 58 11.3**	**+0.4**

*IDC **04** 09:04:22.1±2.5, 27°.26N×53°.62E, h0km, mb3.9/11, mbtmp3.9/14, ML3.7/3, MS3.5/1, Error ellipse:*
s-maj=46.5km s-min=24.2km az=164.0
*NEIC **04** 09:04:28.4±1.8, 27°.67N±0°.09×53°.33E±0°.04, h10km±2km, mb4.0/19, Error ellipse: s-maj=15.4km s-min=5.6km az=182.0*
*TEH **04** 09:04:29.0, 27°.56N×53°.55E, h18km±24km, ML3.6, Presumed earthquake*
*DSN **04** 09:04:36.0±1.1, 27°.24N×53°.52E, h15km, ML3.0/6, Error ellipse: s-maj=14.2km s-min=10.9km az=46.0*
ISC 04 09:04:30.1±0.8, 27°.62N±0°.04×53°.34E±0°.06, h32km±7km, n58, σ1°51/60, mb3.9/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.04**	**297**	Pg	**Pb**	**09 04 34.6**	**-0.9**
LMD1	**Lamerd**	**0.32**	**208**	Pg	**Pb**	**09 04 37.2**	**-0.8**
LMD1				Sg	**Sb**	**09 04 43.8**	**+0.5**
QIR1	**Qir**	**0.89**	**343**	Pg	**Pb**	**09 04 47.7**	**+0.6**
JHRM	**Jahrom**	**0.91**	**14**	Pg	**Pb**	**09 04 46.9**	**-0.6**
SHI	**Shiraz**	**2.14**	**340**	Pn	**Pb**	**09 05 07.6**	**-0.7**
GENO	**Geno**	**2.53**	**94**	Pn	**Pn**	**09 05 07.8**	**-1.4**
SHME	**Shamm**	**2.96**	**121**	P	**Pn**	**09 05 17.3**	**+2.4**
MDH	**Madha**	**3.52**	**130**	P	**Pn**	**09 05 25.9**	**+3.2**
UOSS	**Minazif**	**3.71**	**135**	Pn	**Pn**	**09 05 27.2**	**+2.0**
UOSS				Sn	**Sn**	**09 06 09.2**	**+1.3**
UOSS	**Minazif**	**3.71**	**135**	Pn	**Pn**	**09 05 24.5**	**-0.7**
HATD	**Hatta, Dubai**	**3.75**	**137**	P	**Pn**	**09 05 28.7**	**+2.8**
ASHO	**Ashiyiah**	**3.81**	**139**	P	**Pn**	**09 05 28.2**	**+1.4**
ASHO				S	**Sn**	**09 06 10.1**	**-0.5**
KRBR	**Kerman**	**3.82**	**51**	Pn	**Pn**	**09 05 28.3**	**+1.2**
KHGB	**Koh Gabri**	**3.88**	**44**	Pn	**Pn**	**09 05 28.4**	**+0.5**
IMEH	**Mehriz**	**3.92**	**16**	Pn	**Pn**	**09 05 31.1**	**+2.8**
TAFT	**Taft - Yazd**	**4.15**	**10**	Pn	**Pn**	**09 05 34.2**	**+2.7**
ALNE	**Al Ain**	**4.17**	**148**	P	**Pn**	**09 05 33.6**	**+2.1**
WBK	**Wadi Bani Khal**	**7.14**	**133**	Pn	**Pn**	**09 06 12.2**	**-0.3**
RAYN	**Ar Rayn**	**8.16**	**242**	Pn	**Pn**	**09 06 27.0**	**+0.4**
GNI	**Garni**	**14.38**	**333**	Pn	**Pn**	**09 07 54.2**	**+2.6**
	0.4nm,0.3s,baz=134,slow=12,SNR=1.1						
	2.4nm,0.3s						
ASF	**Jabal al Asfar**	**14.96**	**292**	Pn	**Pn**	**09 07 58.1**	**-1.3**
	0.4nm,0.3s,baz=182,slow=5.3,SNR=1.6						
	1.3nm,0.3s						
KBL	**Kabul**	**15.11**	**59**	Pn	**Pn**	**09 08 02.8**	**+1.2**
GHAJ	**Ghor Haditha**	**15.90**	**288**	Pn	**Pn**	**09 08 11.5**	**-0.2**
GHAJ				IAmb	IAmb	09 08 26.1	
	comp=Z,14nm,1.3s						
SHAA	**Shahritus**	**15.90**	**48**	Pn	**Pn**	**09 08 11.6**	**-0.1**
SHAA				IAmb	IAmb	09 08 36.8	
	comp=Z,13nm,1.0s						
GAZ	**Gaziantep**	**16.60**	**309**	Pn	**Pn**	**09 08 20.4**	**-0.1**
ARPR	**Arapgir-MALATY**	**16.94**	**316**	Pn	**P**	**09 08 25.4**	**-1.3**
GAR	**Garm**	**18.14**	**47**	P	**P**	**09 08 40.2**	**+0.4**
GAR				IAmb	IAmb	09 08 40.8	
	comp=Z,7.2nm,0.8s						
KBZ	**Khabaz**	**18.15**	**335**	P	**P**	**09 08 41.6**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=162,slow=7.0,SNR=7.4						
	comp=Z,3.3nm,0.9s						
NIL	**Nilore**	**18.15**	**66**	P	**P**	**09 08 40.7**	**+0.8**
NIL				IAmb	IAmb	09 08 47.6	
	comp=Z,11nm,0.9s						
MANEM	**Manem**	**18.32**	**53**	P	**Pn**	**09 08 42.0**	**-0.1**
MANEM				IAmb	IAmb	09 08 53.6	
	comp=Z,26nm,1.4s						
KIV	**Kislovodsk**	**18.42**	**335**	P	**Pn**	**09 08 43.6**	**+0.5**
KK31	**Karatay Array**	**20.79**	**38**		**P**	**09 09 09.1**	**+0.4**
KK31				IAmb	IAmb	09 09 15.4	
	comp=Z,7.4nm,1.0s						
KKAR	**Karatay Array**	**20.79**	**38**		**P**	**09 09 08.2**	**-0.4**
ARSB	**Arslanbob**	**21.13**	**45**	P	**P**	**09 09 12.7**	**+0.2**
ARSB				IAmb	IAmb	09 09 23.1	
	comp=Z,9.7nm,1.2s						
ELL	**Elmali**	**21.77**	**301**	P	**P**	**09 09 16.7**	**-2.7**
AB31	**Akbulak array**	**22.19**	**12**

USRK LR LR 09 49 39.2
comp=Z,62nm,18.5s,baz=309,slow=40
KSRS Korea Array 12.86 134 Pn **Pn 09 45 04.1 +0.5**
0.1nm,0.3s,baz=324,slow=12,SNR=1.6
KSRS Lg Lg 09 48 41.9
0.4nm,0.3s,baz=317,slow=28,SNR=8.9
KSRS LR LR 09 50 31.2
comp=Z,53nm,20.1s,baz=320,slow=40
0.4nm,0.5s
MJAR Matsushiro Arr 19.36 115 P **P 09 46 25.0 -0.9**
baz=309,slow=9.1,SNR=4.9
MJAR LR LR 09 53 50.5
comp=Z,37nm,18.5s,baz=5.0,slow=37
1.6nm,0.9s
ZALV Zalesovo Beam 21.05 301 P **P 09 46 41.9 -2.3**
0.3nm,0.3s,baz=99,slow=8.9,SNR=6.2
0.3nm,0.3s
MKAR Makanchi Array 23.12 282 P **P 09 47 05.4 -0.8**
1.1nm,0.9s,baz=80,slow=10,SNR=7.4
MKAR Lg Lg 09 54 12.9
0.1nm,0.3s,baz=72,slow=34,SNR=5.6
1.1nm,0.9s
MA2 Magadan 23.84 46 LR LR 09 57 35.3
comp=Z,46nm,18.2s,baz=260,slow=39
KURBB Kurchatov Arra 24.93 292 P **P 09 47 24.1 +1.0**
2.8nm,1.0s,baz=84,slow=9.7,SNR=14
2.8nm,1.0s
ARCES ARCESS Array B 47.20 331 P **P 09 50 32.0 -0.2**
2.0nm,0.9s,baz=54,slow=11,SNR=1.9
2.0nm,0.9s
FINES FINESS Array B 50.33 321 P **P 09 50 57.4 +1.2**
1.7nm,0.8s,baz=68,slow=6.5,SNR=6.4
1.7nm,0.8s
ILAR Eielson Array 51.40 33 P **P 09 51 05.7 +1.4**
1.2nm,0.7s,baz=298,slow=8.6,SNR=13
1.2nm,0.7s
YKA Yellowknife Ar 63.55 24 P **P 09 52 29.6 -0.2**
0.6nm,0.8s,baz=311,slow=6.1,SNR=2.6
0.6nm,0.8s
WRA Warramunga Arr 68.61 162 P **P 09 53 02.9 +0.2**
0.8nm,0.8s,baz=350,slow=6.8,SNR=5.0
0.8nm,0.8s
ASAR Alice Springs 72.13 163 P **P 09 53 25.1 +0.8**
0.5nm,0.9s,baz=349,slow=6.0,SNR=4.8
0.5nm,0.9s
STKA Stephens Creek 81.78 158 P **P 09 54 19.6 +1.3**
1.0nm,0.6s,baz=18,slow=3.1,SNR=4.2
1.0nm,0.6s
NVAR Mina Array Bea 81.96 40 P **P 09 54 20.9 +1.1**
0.3nm,0.5s,baz=336,slow=6.6,SNR=4.2
0.3nm,0.5s

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*NNC **04** 09:52:49.9±5.2, 37.82N×70.74E, h95km±64km, mb5.2, mpv6.4, Error ellipse: s-maj=39.7km s-min=28.3km az=15.0*
*KRNET **04** 09:52:57.1±0.1, 39.03N×71.02E, h12km, mb6.1*
*MOS **04** 09:52:58.9±1.1, 39.05N×71.01E, h14km, mb5.7/72, MS5.3/65, Error ellipse: s-maj=3.5km s-min=2.8km az=85.4 Broadband fault plane solution: P waves. NP1: φs187.00000°, δ55.00000°, λ26.00000°. NP2: φs81.00000°, δ69.00000°, λ142.00000°. Principal axes: T Plg41.0000°, Azm39.0000°; N Plg47.0000°, Azm236.0000°; P Plg9.0000°, Azm137.0000°;*
MOS Fault plane solution: P-wave C45, D13 . Felt (IV) at Ferghana; (III) at Andizhan, Gulistan, Dzhizak, Namangan, Samarkand, Tashkent, Termez; (II) at Bukhara, Karshi, Navoi.
*BJI **04** 09:52:59.2, 39.15N×70.95E, h10km, mB5.6/57, mb5.2/75, ML5.6/3, Ms5.7/89, Ms7 5.5/87*
*GCMT **04** 09:53:00.2±0.1, 39.04N±0.01×70.86E±0.01, h13km, MW5.4/150, Moment Tensor Solution. s115,c187; s150,c305; Duration: 1*3 Moment tensor: Scale 10^17 Nm; Mrr0.96±.03; Mθθ0.02±.02; Mφφ-0.97±.02; Mrθ-0.07±.05; Mθφ-1.52±.02; Mφr-0.59±.06; Best double couple: M0 1.77200×10^17 NP1:φs76.00000°, δ55.00000°, λ155.00000°. NP2:φs181.00000°, δ70.00000°, λ38.00000°. Principal axes: T 1.3760, Plg41.0000°, Azm43.0000°; N 0.7910, Plg48.0000°, Azm204.0000°; P -2.1680, Plg10.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **04** 09:53:00.2, 39.04N×70.92E, h10km*
*NEIC **04** 09:53:00.2±1.3, 39.03N±0.04×70.92E±0.04, h10km±1km, mb5.6/549, Ms_20 5.3/578, Mwr5.5/14, Mww5.4/15, Error ellipse: s-maj=7.3km s-min=4.9km az=16.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.23; Mθθ-0.11; Mφφ-1.12; Mrθ1.07; Mθφ-1.55; Mφr-1.06; Fault plane solution: M0 2.47000×10^17 NP1:φs69.71000°, δ54.84000°, λ145.70000°. NP2:φs181.16000°, δ62.57000°, λ40.45000°. Principal axes: T 2.6235, Plg47.0000°, Azm39.0000°; N -0.3520, Plg42.0000°, Azm210.0000°; P -2.2715, Plg5.0000°, Azm304.0000°;*
*GFZ **04** 09:53:01.2±0.1, 39.2°N±2.7°×71.1°E±1.1°, h10km, M5.2/169, mB5.7/109, mb5.4/169, Mw(mB)5.2/109*
*GFZ **04** 09:53:01.1, 39.05N×70.99E, h20km, Mw5.4/146, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.82; Mθθ0.06; Mφφ-0.88; Mrθ0.63; Mθφ-1.14; Mφr0.22; Fault plane solution: M0 1.57013×10^17 NP1: φs177.35411°, δ47.80341°, λ30.80276°. NP2:φs65.53080°, δ67.70504°, λ133.45240°. Principal axes: T 1.2726, Plg48.0052°, Azm22.1544°; N 0.4820, Plg39.5193°, Azm225.7616°; P -1.7546, Plg11.9284°, Azm125.7260°;*
*IDC **04** 09:53:03.1±1.7, 39.13N×71.01E, h33km±12km, mb5.0/41, mbtmp5.2/47, ML4.8/7, MS5.0/82 Error ellipse: s-maj=8.7km s-min=6.1km az=20.0*
*BGR **04** 09:53:08.4, 39.49N×70.81E, h33km, mb5.1, mB_BB5.5, Ms5.4*

ISC 04 09:53:00.2±0.4, 39.06N±0.02×70.97E±0.02, h11km±2km, h10km:pP-P, n2000, σ1 59/1852, mb5.5/544, MS5.2/440, 97C-67D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.51**	**263**		**Pg**	**09 53 07.9**	**-2.4**
GAR				Sg	**Sg**	**09 53 15.9**	**-1.2**
GAR	**Garm**	**0.51**	**263**	*i* Pg	**Pg**	**09 53 07.6**	**-2.7**
GAR				S	**Sg**	**09 53 15.3**	**-1.8**
GAR	**Garm**	**0.51**	**263**	⇑*i* P	**Pg**	**09 53 07.6**	**-2.7**
GAR				⇑*i* S	**Sg**	**09 53 15.3**	**-1.8**
GAR	**Garm**	**0.51**	**263**	P	**Pg**	**09 53 07.7**	**-2.6**
BTK	**Batken**	**1.00**	**353**		**Pg**	**09 53 17.4**	**-2.1**
BTK	**Batken**	**1.00**	**353**	*e*PG	**Pg**	**09 53 16.9**	**-2.6**
BTK				S	**Sg**	**09 53 31.2**	**-1.4**
BTK	**Batken**	**1.00**	**353**	⇑*e*P	**Pg**	**09 53 16.9**	**-2.6**
BTK				⇑*i* S	**Sg**	**09 53 31.2**	**-1.4**
CHGR	**Chuyangaron**	**1.47**	**255**		**Pn**	**09 53 26.2**	**-0.6**
CHGR	**Chuyangaron**	**1.47**	**255**	*i* PG	**Pn**	**09 53 25.2**	**-1.6**
CHGR				S	**Sn**	**09 53 45.5**	**-0.6**
CHGR	**Chuyangaron**	**1.47**	**255**	⇑*i* P	**Pn**	**09 53 25.2**	**-1.6**
CHGR				⇑*i* S	**Sn**	**09 53 45.5**	**-0.6**
CHGR	**Chuyangaron**	**1.47**	**255**	P	**Pn**	**09 53 25.6**	**-1.3**
MANEM	**Manem**	**1.62**	**160**		**Pn**	**09 53 27.6**	**-1.4**
OHH	**Osh**	**2.02**	**43**	*i* PN	**Pn**	**09 53 33.7**	**-0.7**
OHH				S	**Sn**	**09 54 00.5**	**+0.8**
OHH	**Osh**	**2.02**	**43**	⇑*i* P	**Pn**	**09 53 33.7**	**-0.7**
OHH				⇑*i* S	**Sn**	**09 54 00.9**	**+1.2**
OHH	**Osh**	**2.02**	**43**	P	**Pn**	**09 53 34.4**	**+0.1**
SFK	**Sufi-Kurgan**	**2.18**	**63**	*i* PN	**Pn**	**09 53 35.8**	**-0.8**
SFK				S	**Sn**	**09 54 04.1**	**+0.4**
SFK	**Sufi-Kurgan**	**2.18**	**63**	⇑*e*P	**Pn**	**09 53 35.8**	**-0.8**
SFK				⇑*i* S	**Sn**	**09 54 04.1**	**+0.4**
TRKS	**Terek-Say**	**2.47**	**3**	*i* PN	**Pn**	**09 53 39.8**	**-0.8**
TRKS				S	**Sn**	**09 54 10.9**	**+0.1**
TRKS	**Terek-Say**	**2.47**	**3**	⇓*e*P	**Pn**	**09 53 39.8**	**-0.8**
TRKS				⇓*i* S	**Sn**	**09 54 10.9**	**+0.1**
SHAA	**Shahritus**	**2.69**	**237**		**Pn**	**09 53 44.7**	**+1.1**
ARSB	**Arslanbob**	**2.73**	**34**		**Pn**	**09 53 46.3**	**+2.1**
ARSB	**Arslanbob**	**2.73**	**34**	*e*PN	**Pn**	**09 53 44.1**	**-0.1**
ARSB				S	**Sn**	**09 54 18.3**	**+0.9**
ARSB	**Arslanbob**	**2.73**	**34**	⇓*i* P	**Pn**	**09 53 44.1**	**-0.1**
ARSB				⇓*i* S	**Sn**	**09 54 18.3**	**+0.9**
ARK	**Arkit**	**2.84**	**15**	*i* PN	**Pn**	**09 53 45.5**	**-0.1**
ARK				S	**Sn**	**09 54 21.2**	**+1.4**
ARK	**Arkit**	**2.84**	**15**	⇓*e*P	**Pn**	**09 53 45.5**	**-0.1**
ARK				⇓*i* S	**Sn**	**09 54 21.2**	**+1.4**
ARK	**Arkit**	**2.84**	**15**	P	**Pn**	**09 53 47.0**	**+1.4**
IUG	**Iuzhnay**	**3.16**	**347**	*e*PN	**Pn**	**09 53 51.4**	**+1.3**
IUG				*e*S	**Sn**	**09 54 30.6**	**+2.7**
IUG	**Iuzhnay**	**3.16**	**347**	*e*P	**Pn**	**09 53 51.5**	**+1.3**
IUG				*e*S	**Sn**	**09 54 30.6**	**+2.7**
CHM	**Chimkent**	**3.42**	**343**	*e*PN	**Pn**	**09 53 55.4**	**+1.9**
CHM				*e*S	**Sn**	**09 54 37.3**	**+3.3**
CHM	**Chimkent**	**3.42**	**343**	*e*P	**Pn**	**09 53 55.4**	**+1.9**
CHM				*e*S	**Sn**	**09 54 37.3**	**+3.3**
KSH2	**Kashi**	**3.58**	**87**	Pn	**Pn**	**09 53 57.8**	**+2.0**
KSH2				Sg	**Sg**	**09 54 57.2**	**+2.1**
KSH2				SMN			
	16μm,0.8s						
KSH2				SME			
	11μm,0.9s						
MNAS	**Manas**	**3.61**	**18**	*i* PN	**Pn**	**09 53 56.5**	**+0.2**
MNAS				S	**Sn**	**09 54 39.6**	**+0.5**
MNAS	**Manas**	**3.61**	**18**	⇓*i* P	**Pn**	**09 53 56.5**	**+0.2**
MNAS				⇓*i* S	**Sn**	**09 54 39.6**	**+0.5**
DZA	**Taraz**	**3.84**	**4**	*e*PN	**Pn**	**09 54 00.9**	**+1.6**
DZA	**Taraz**	**3.84**	**4**	*e*P	**Pn**	**09 54 00.9**	**+1.6**
KK31	**Karatay Array**	**4.05**	**355**		**Pn**	**09 54 05.6**	**+3.3**
KK31	**Karatay Array**	**4.05**	**355**	⇓Pn	**Pn**	**09 54 05.6**	**+3.3**
	2μm,0.6s,baz=178,slow=12,SNR=8132						
KK31				Sn	**Sg**	**09 55 07.8**	**-2.6**
	6μm,0.8s,baz=170,slow=26,SNR=8.0						
KK31	**Karatay Array**	**4.05**	**355**	*i* PN	**Pn**	**09 54 05.5**	**+3.3**
KK31				*e*		09 55 07.7	
KKAR	**Karatay Array**	**4.05**	**355**		**Pn**	**09 54 05.7**	**+3.5**
KKAR	**Karatay Array**	**4.05**	**355**	PN	**Pn**	**09 54 05.7**	**+3.5**
BRLS	**Boroldav**	**4.06**	**348**	*e*PN	**Pn**	**09 54 01.0**	**-1.3**
BRLS				*e*S	**Sn**	**09 54 47.6**	**-2.2**
BRLS	**Boroldav**	**4.06**	**348**	*e*P	**Pn**	**09 54 01.0**	**-1.3**
BRLS				*e*S	**Sn**	**09 54 47.7**	**-2.2**
JNKS	**Jany-Kuch**	**4.09**	**59**	⇓*e*P	**Pn**	**09 54 02.7**	**-0.2**
JNKS				⇓*i* S	**Sn**	**09 54 50.7**	**-0.2**
UCH	**Uchtor**	**4.15**	**39**	P	**Pn**	**09 54 07.5**	**+3.5**
	SNR=383						
UCH	**Uchtor**	**4.15**	**39**	*i* PN	**Pn**	**09 54 03.7**	**-0.3**
UCH				S	**Sn**	**09 54 52.5**	**-0.3**
UCH	**Uchtor**	**4.15**	**39**	⇑*i* P	**Pn**	**09 54 03.7**	**-0.3**
UCH				⇑*i* S	**Sn**	**09 54 52.5**	**-0.3**
EKS2	**Erkin-Say**	**4.18**	**30**	P	**Pn**	**09 54 06.4**	**+2.4**
	SNR=1462						
EKS2	**Erkin-Say**	**4.18**	**30**	*i* PN	**Pn**	**09 54 04.2**	**+0.2**
EKS2				S	**Sn**	**09 54 53.0**	**+0.1**
EKS2	**Erkin-Say**	**4.18**	**30**	⇑*i* P	**Pn**	**09 54 04.2**	**+0.2**
EKS2				⇑*i* S	**Sn**	**09 54 53.0**	**+0.1**
AAK	**Ala-Archa**	**4.46**	**36**	Pn	**Pn**	**09 54 10.6**	**+2.7**
	419nm,0.3s,baz=211,slow=10.0,SNR=322						
AAK				Sn	**Sn**	**09 55 01.2**	**+1.3**
	81nm,0.3s,baz=353,slow=15,SNR=4.0						
AAK	**Ala-Archa**	**4.46**	**36**	P	**Pn**	**09 54 10.5**	**+2.5**
	SNR=1764						
AAK	**Ala-Archa**	**4.46**	**36**	*i* P	**Pn**	**09 54 10.8**	**+2.9**
	SNR=374						
AAK	**Ala-Archa**	**4.46**	**36**				
AAK	**Ala-Archa**	**4.46**	**36**	⇑Pn	**Pn**	**09 54 11.4**	**+3.4**
	8μm,0.5s						
AAK				⇑Sn	**Sb**	**09 55 12.2**	**-0.3**
	18μm,0.8s						
AAK	**Ala-Archa**	**4.46**	**36**	*i* PN	**Pn**	**09 54 10.0**	**+2.0**
AAK				MLR	MLR		
	comp=Z,14μm,2.0s						
AAK	**Ala-Archa**	**4.46**	**36**	P	**Pn**	**09 54 10.2**	**+2.2**
AAK				S	**Sn**	**09 55 05.0**	**+5.0**
AAK	**Ala-Archa**	**4.46**	**36**	⇓*i* P	**Pn**	**09 54 08.0**	**0.0**
AAK				⇓*i* S	**Sn**	**09 54 59.6**	**-0.3**
AAK	**Ala-Archa**	**4.46**	**36**	P	**Pn**	**09 54 10.6**	**+2.7**
NRN	**Naryn**	**4.52**	**57**		**Pn**	**09 54 10.9**	**+2.0**
NRN	**Naryn**	**4.52**	**57**	*i* PN	**Pn**	**09 54 08.1**	**-0.8**
NRN				S	**Sn**	**09 55 00.0**	**-1.6**
NRN	**Naryn**	**4.52**	**57**	⇓*i* P	**Pn**	**09 54 08.1**	**-0.8**
NRN				⇓*i* S	**Sn**	**09 55 00.0**	**-1.6**
ASAI	**AK-SAY(Kyrgyzs**	**4.65**	**65**	P	**Pn**	**09 54 13.0**	**+2.3**
FRU1	**Bishkek**	**4.66**	**35**		**Pn**	**09 54 14.5**	**+4.0**
FRU1	**Bishkek**	**4.66**	**35**	*i* PN	**Pn**	**09 54 10.8**	**+0.2**
FRU1				S	**Sn**	**09 55 04.5**	**-0.2**
FRU1	**Bishkek**	**4.66**	**35**	⇑*i* P	**Pn**	**09 54 10.8**	**+0.2**
FRU1				⇑*i* S	**Sn**	**09 55 04.5**	**-0.2**
KBK	**Karagaybulak**	**4.69**	**39**	P	**Pn**	**09 54 14.9**	**+3.8**
	SNR=2155						
KBK	**Karagaybulak**	**4.69**	**39**	*e*PN	**Pn**	**09 54 11.1**	**0.0**
KBK				S	**Sn**	**09 55 05.1**	**-0.5**
KBK	**Karagaybulak**	**4.69**	**39**	⇑*i* P	**Pn**	**09 54 11.1**	**0.0**
KBK				⇑*i* S	**Sn**	**09 55 05.1**	**-0.5**
KBL	**Kabul**	**4.77**	**200**		**Pn**	**09 54 15.7**	**+3.4**
KBL	**Kabul**	**4.77**	**200**	PN	**Pn**	**09 54 15.7**	**+3.4**
KBL	**Kabul**	**4.77**	**200**	P	**Pn**	**09 54 16.3**	**+4.1**
	SNR=605						
KBL				S	**Sn**	**09 55 10.8**	**+3.1**
KBL	**Kabul**	**4.77**	**200**	P	**Pn**	**09 54 15.9**	**+3.6**
CHMS	**Chumysh**	**4.86**	**35**	P	**Pn**	**09 54 16.4**	**+3.1**
	SNR=249						
CHMS	**Chumysh**	**4.86**	**35**	*i* PN	**Pn**	**09 54 13.4**	**0.0**
CHMS				S	**Sb**	**09 55 29.0**	**+5.1**
CHMS	**Chumysh**	**4.86**	**35**	⇑*i* P	**Pn**	**09 54 13.4**	**0.0**
CHMS				⇑*i* S	**Sn**	**09 55 09.0**	**-0.7**
USP	**Ospenovka**	**4.97**	**31**	P	**Pn**	**09 54 17.2**	**+2.3**
	SNR=122						
USP	**Ospenovka**	**4.97**	**31**	*i* PN	**Pn**	**09 54 14.9**	**0.0**
USP				S	**Sn**	**09 55 11.7**	**-0.7**
USP	**Ospenovka**	**4.97**	**31**	⇓*i* P	**Pn**	**09 54 14.9**	**0.0**
USP				⇓*i* S	**Sn**	**09 55 11.7**	**-0.7**
BOOM	**Boomskoye usch**	**5.09**	**46**	Pn	**Pn**	**09 54 19.2**	**+2.5**
BOOM	**Boomskoye usch**	**5.09**	**46**	*i* PN	**Pn**	**09 54 16.6**	**-0.1**
BOOM				S	**Sn**	**09 55 14.6**	**-1.0**
BOOM	**Boomskoye usch**	**5.09**	**46**	⇑*i* P	**Pn**	**09 54 16.6**	**-0.1**
BOOM				⇑*i* S	**Sn**	**09 55 14.6**	**-1.0**
SGDS	**Sogindy**	**5.18**	**31**	*e*P	**Pn**	**09 54 19.2**	**+1.4**
SGDS				*e*S	**Sn**	**09 55 20.3**	**+2.8**
TKM2	**Tokmak 2**	**5.21**	**41**	P	**Pn**	**09 54 21.9**	**+3.6**
	SNR=92						
TKM2	**Tokmak 2**	**5.21**	**41**	*e*PN	**Pn**	**09 54 18.2**	**0.0**
TKM2				S	**Sb**	**09 55 37.4**	**+3.4**
TKM2	**Tokmak 2**	**5.21**	**41**	⇓*i* P	**Pn**	**09 54 18.2**	**0.0**
TKM2				⇓*i* S	**Sn**	**09 55 17.4**	**-1.0**
KDJ	**Kajisay**	**5.63**	**55**		**Pn**	**09 54 26.1**	**+2.1**
KDJ	**Kajisay**	**5.63**	**55**	*i* PN	**Pn**	**09 54 23.9**	**-0.2**
KDJ				S	**Sn**	**09 55 27.1**	**-1.8**
KDJ	**Kajisay**	**5.63**	**55**	⇑*i* P	**Pn**	**09 54 23.9**	**-0.2**
KDJ				⇑*i* S	**Sn**	**09 55 27.1**	**-1.8**
KDJ	**Kajisay**	**5.63**	**55**	P	**Pn**	**09 54 27.3**	**+3.2**
NIL	**Nilore**	**5.71**	**160**		**Pn**	**09 54 28.1**	**+3.1**
NIL	**Nilore**	**5.71**	**160**	PN	**Pn**	**09 54 28.1**	**+3.1**
NIL	**Nilore**	**5.71**	**160**	P	**Pn**	**09 54 27.4**	**+2.5**
NIL	**Nilore**	**5.71**	**160**	P	**Pn**	**09 54 28.1**	**+3.1**
TARG	**Taragay, Kyrgy**	**5.86**	**61**		**Pn**	**09 54 29.3**	**+1.9**
TARG	**Taragay, Kyrgy**	**5.86**	**61**	*i* PN	**Pn**	**09 54 26.9**	**-0.5**
TARG				S	**Sn**	**09 55 32.5**	**-2.2**
TARG	**Taragay, Kyrgy**	**5.86**	**61**	⇓*i* P	**Pn**	**09 54 26.9**	**-0.5**
TARG				⇓*i* S	**Sn**	**09 55 32.5**	**-2.2**
TARG	**Taragay, Kyrgy**	**5.86**	**61**	P	**Pn**	**09 54 29.2**	**+1.9**
SRNI	**Srinagar**	**5.88**	**147**	*e*P	**Pn**	**09 54 28.0**	**+0.6**
TNSS	**Tian-Shan**	**6.01**	**47**	*e*PN	**Pn**	**09 54 30.8**	**+1.3**
TNSS	**Tian-Shan**	**6.01**	**47**	*e*P	**Pn**	**09 54 30.8**	**+1.3**
KNDC	**Almaty**	**6.14**	**46**	⇓P	**Pn**	**09 54 35.0**	**+4.0**
	comp=Z,1μm,0.8s						
KNDC				⇑S	**Sb**	**09 55 56.8**	**-3.9**
	comp=Z,4μm,0.9s						
KNDC	**Almaty**	**6.14**	**46**	PN	**Pn**	**09 54 34.9**	**+4.0**
KNDC				S	**Sb**	**09 55 56.8**	**-3.9**
MDOK	**Medeo**	**6.15**	**46**	*e*PN	**Pn**	**09 54 32.7**	**+1.5**
MDOK				*e*S	**Sn**	**09 55 44.3**	**+2.7**
MDOK	**Medeo**	**6.15**	**46**	*e*P	**Pn**	**09 54 32.7**	**+1.5**
MDOK				*e*S	**Sn**	**09 55 44.3**	**+2.7**
ANVS	**Anan'yevo**	**6.29**	**52**	*i* PN	**Pn**	**09 54 32.8**	**-0.3**
ANVS	**Anan'yevo**	**6.29**	**52**	⇓*i* P	**Pn**	**09 54 32.8**	**-0.3**
ANVS				⇓*i* S	**Sn**	**09 55 42.6**	**-2.4**
BTLS	**Baital**	**6.40**	**20**	*e*PN	**Pn**	**09 54 35.7**	**+1.3**
BTLS	**Baital**	**6.40**	**20**	*e*P	**Pn**	**09 54 35.8**	**+1.3**
PRZ	**Przheval'sk**	**6.59**	**56**		**Pn**	**09 54 39.8**	**+2.5**
PRZ	**Przheval'sk**	**6.59**	**56**	*i* PN	**Pn**	**09 54 37.1**	**-0.2**
PRZ	**Przheval'sk**	**6.59**	**56**	⇑*i* P	**Pn**	**09 54 37.1**	**-0.2**
PRZ				⇑*i* S	**Sn**	**09 55 50.1**	**-2.4**
PRZ	**Przheval'sk**	**6.59**	**56**	P	**Pn**	**09 54 40.2**	**+3.0**
WUS	**Wushi**	**6.67**	**69**	Pn	**Pn**	**09 54 40.0**	**+1.7**
SATY	**Saty**	**6.89**	**52**	*e*PN	**Pn**	**09 54 42.5**	**+1.2**
SATY	**Saty**	**6.89**	**52**	*e*P	**Pn**	**09 54 42.6**	**+1.2**
ALCI	**Alchi Leh**	**6.95**	**132**	*e*P	**Pn**	**09 54 45.3**	**+2.9**
ALCI				*e*S	**Sn**	**09 56 05.3**	**+3.6**
JMU	**Jammu**	**7.00**	**152**	*e*P	**Pn**	**09 54 45.9**	**+3.1**
KPKS	**Kokpek**	**7.29**	**50**	*e*P	**Pn**	**09 54 47.7**	**+1.0**
KPKS	**Kokpek**	**7.29**	**50**	*e*P	**Pn**	**09 54 47.8**	**+1.0**
UZB	**Uzynbulak**	**7.32**	**54**	*e*P	**Pn**	**09 54 48.6**	**+1.4**
UZB	**Uzynbulak**	**7.32**	**54**	*e*P	**Pn**	**09 54 48.6**	**+1.4**
TSSA	**Tissa**	**7.50**	**144**	*e*P	**Pn**	**09 54 51.0**	**+1.3**
TSSA				*e*S	**Sn**	**09 56 15.3**	**+0.5**
SHLS	**Shalkode**	**7.60**	**55**	*e*P	Pn	09 54 56.3	+5.2
SHLS	**Shalkode**	**7.60**	**55**	*e*P	Pn	09 54 56.3	+5.2
THN	**Thein Dam**	**7.67**	**148**	*e*P	**Pn**	**09 54 53.4**	**+1.6**
THN				*e*S	**Sn**	**09 56 20.7**	**+1.9**
PDGK	**Podgornoye**	**7.71**	**54**		**Pn**	**09 54 53.9**	**+1.4**
PDGK	**Podgornoye**	**7.71**	**54**	P	**Pn**	**09 54 53.9**	**+1.4**
DHRM	**DHARAMSHALA**	**8.06**	**146**	*e*P	**Pn**	**09 54 58.4**	**+0.9**
TDK	**Taldyqorghan**	**8.11**	**41**	*e*P	**Pn**	**09 54 59.4**	**+1.5**
TDK	**Taldyqorghan**	**8.11**	**41**	*e*P	**Pn**	**09 54 59.5**	**+1.5**
TLWR	**Talawar**	**8.17**	**149**	*e*P	**Pn**	**09 55 00.7**	**+1.9**
HRA	**Herat**	**8.42**	**239**		**Pn**	**09 55 01.7**	**-0.7**
BHK	**Bhakra**	**8.83**	**148**	*e*P	**Pn**	**09 55 12.4**	**+4.5**
HNLY	**HANLEY**	**9.02**	**132**	*e*P	**Pn**	**09 55 10.8**	**-0.1**
KLP	**Kalpa**	**9.58**	**139**	*e*P	**Pn**	**09 55 18.8**	**+0.4**
KLP				IAmb	IAmb	09 55 23.8	
	comp=Z,364nm,0.8s						
KKR	**Kurukshetra**	**10.28**	**150**	*e*P	**Pn**	**09 55 30.0**	**+2.3**
KKR				IAmb	IAmb	09 55 33.3	
	comp=Z,899nm,0.6s						
UTK	**UTTARKASHI**	**10.33**	**141**	*e*P	**Pn**	**09 55 28.9**	**+0.5**
BRZS	**Berezniki**	**10.99**	**6**	*e*P	**Pn**	**09 55 39.0**	**+1.7**
BRZS	**Berezniki**	**10.99**	**6**	*e*P	**Pn**	**09 55 39.0**	**+1.7**
JOSI	**Joshimath**	**11.03**	**138**	*e*P	**Pn**	**09 55 38.7**	**+0.6**
JOSI				IAmb	IAmb	09 55 43.3	
	comp=Z,234nm,0.7s						
MAKZ	**Makanchi**	**11.17**	**43**		**Pn**	**09 55 40.6**	**+0.7**
MAKZ	**Makanchi**	**11.17**	**43**	⇓P	**Pn**	**09 55 41.4**	**+1.5**
	comp=Z,205nm,1.1s						
MAKZ				⇑S	Sn	09 58 02.2	+17
	comp=Z,478nm,1.4s						
MAKZ	**Makanchi**	**11.17**	**43**	P	**Pn**	**09 55 40.6**	**+0.7**
MAKZ	**Makanchi**	**11.17**	**43**	P	**Pn**	**09 55 42.1**	**+2.3**
BKNR	**BIKANER**	**11.18**	**169**	*ex*	x	09 55 40.5	
BKNR				IAmb	IAmb	09 55 43.0	
	comp=Z,370nm,0.6s						
MK31	**Makanchi Array**	**11.33**	**43**	P	**Pn**	**09 55 43.8**	**+1.8**
	comp=Z,99nm,0.8s,baz=229,slow=12,SNR=959						
MK31				⇓S	Sn	09 58 03.1	+15
	comp=Z,132nm,1.0s,baz=233,slow=24,SNR=3.9						
MK31	**Makanchi Array**	**11.33**	**43**	*c* iP	**Pn**	**09 55 43.0**	**+1.0**
MKAR	**Makanchi Array**	**11.33**	**43**	Pn	**Pn**	**09 55 43.6**	**+1.6**
	comp=Z,4.6nm,0.3s,baz=231,slow=13,SNR=234						
MKAR				Lg	Lg	09 58 56.1	
	comp=Z,1.7nm,0.3s,baz=227,slow=27,SNR=2.0						
MKAR				LR	LR	09 59 48.6	
	comp=Z,2μm,19.5s,baz=228,slow=36						
	comp=Z,168nm,0.8s						
MKAR	**Makanchi Array**	**11.33**	**43**		**Pn**	**09 55 42.9**	**+0.9**
MKAR	**Makanchi Array**	**11.33**	**43**	P	**Pn**	**09 55 42.9**	**+0.9**
NDI	**New Delhi**	**11.57**	**152**	*e*P	**Pn**	**09 55 44.1**	**-1.3**
NPLP	**NPLP New Delhi**	**11.60**	**152**	*e*P	**Pn**	**09 55 44.6**	**-1.2**
LDR	**Lodi Road**	**11.66**	**152**	*e*P	**Pn**	**09 55 47.0**	**+0.4**
JMIU	**JAMIA UNIVERSI**	**11.71**	**151**	*e*P	**Pn**	**09 55 48.6**	**+1.4**
AYAN	**Aya Nagar**	**11.72**	**152**	*e*P	**Pn**	**09 55 47.0**	**-0.5**
KUDL	**Kundal**	**11.82**	**156**	*e*P	**Pn**	**09 55 46.6**	**-2.1**
SONA	**Sohna**	**11.92**	**153**	*e*P	**Pn**	**09 55 49.2**	**-0.9**
PTH	**Pithoragarh**	**12.14**	**138**	*e*P	**Pn**	**09 55 52.0**	**-1.0**
PTH				*e*S	**Sn**	**09 58 04.9**	**-3.9**
LGTI	**Lohaghat**	**12.23**	**139**	*e*P	**Pn**	**09 55 52.4**	**-2.2**
LGTI				IAmb	IAmb	09 55 55.2	
	comp=Z,41nm,0.6s						
KURBB	**Kurchatov Arra**	**12.73**	**22**	Pn	**Pn**	**09 55 58.6**	**-2.5**
	comp=Z,1.9nm,0.3s,baz=213,slow=12,SNR=100						
KURBB				Sn	**Sn**	**09 58 14.3**	**-8.6**
	comp=Z,0.4nm,0.3s,baz=200,slow=27,SNR=2.1						
KURBB				Lg	Lg	09 59 42.6	
	comp=Z,1.5nm,0.3s,baz=197,slow=29,SNR=4.2		

ZAA0 Zalesovo Array 17.63 28 ⇑P **Pn 09 57 03.7 -2.0**
comp=Z,291nm,1.2s
ZAA0 ⇑S **S 10 00 38.1 +8.6**
comp=Z,309nm,1.4s
ZALV Zalesovo Beam 17.63 28 P **Pn 09 57 04.2 -1.5**
comp=Z,7.1nm,0.3s,baz=228,slow=9.0,SNR=145
ZALV S **Sn 10 00 20.1 -1.7**
comp=Z,45nm,1.0s,baz=223,slow=21,SNR=2.8
ZALV Lg Lg 10 02 23.8
comp=Z,0.4nm,0.3s,baz=222,slow=27,SNR=3.9
comp=Z,177nm,0.6s
ZALV Zalesovo Beam 17.63 28 Pn 09 57 04.8 -0.8
ZALV Zalesovo Beam 17.63 28 *i* P **Pn 09 57 04.1 -1.6**
ZALV pmax pmax
comp=Z,172nm,0.6s
AKT Akhty 17.89 285 ⇓ *i* P **Pn 09 57 08.6 -0.5**
AKT *e*S **Sn 10 00 30.0 +1.4**
AKT pmax pmax
comp=Z,94nm,0.7s
AKT smax smax
comp=E,84nm,0.5s
AKT smax smax
comp=N,81nm,0.6s
AKT MLR MLR
comp=Z,7µm,14.0s
SHME Shamm 17.98 228 *i* P **Pn 09 57 09.4 -0.9**
SNR=14
SHME Shamm 17.98 228 P **Pn 09 57 08.7 -1.6**
SNR=14
SHME S **S 10 00 34.2 -2.9**
BANOM Banah 17.99 228 P **P 09 57 10.9 +0.1**
MAK Makhachkala 18.12 290 *e*P **Pn 09 57 09.6 -2.2**
MAK *e*S **Sn 10 00 30.2 -3.6**
MAK pmax pmax
comp=Z,375nm,1.6s
MAK MLR MLR
comp=Z,26µm,16.0s
MDH Madha 18.47 226 P **P 09 57 14.4 -1.7**
MDH P **P 09 57 14.4 -1.7**
MDH S **S 10 00 47.0 0.0**
MDH S **S 10 00 47.0 0.0**
MASF Masafi 18.50 227 P **P 09 57 16.2 -0.2**
SNR=9.0
MASF P **P 09 57 16.2 -0.2**
SNR=9.0
MASF S **S 10 00 45.9 -1.6**
MASF S **S 10 00 45.9 -1.6**
MSFE Esma-Masafi 18.50 227 *i* P **P 09 57 16.5 -0.1**
SNR=14
GAYA Gaya 18.64 136 *ex* x 09 57 14.4
UMQ Umm Al-Quwin 18.66 228 *i* P **P 09 57 18.1 -0.1**
SNR=8.9
UMQ Umm Al-Quwin 18.66 228 P **Pn 09 57 19.7 +1.1**
SNR=8.0
UMQ S **S 10 00 51.4 +0.7**
UOSS Minazif 18.80 226 *i* P **P 09 57 18.4 -1.4**
SNR=7.4
UOSS Minazif 18.80 226 P 09 57 18.4 -1.4
UOSS Minazif 18.80 226 P **P 09 57 20.0 +0.2**
UOSS P **P 09 57 20.0 +0.2**
UOSS Minazif 18.80 226 P **Pn 09 57 20.6 +0.3**
HATD Hatta, Dubai 18.94 226 P **P 09 57 20.1 -1.1**
HATD Hatta, Dubai 18.94 226 P **Pn 09 57 22.0 +0.2**
SNR=8.5
HATD S **Sn 10 00 53.1 -0.8**
WSAR Wadi Sarin 18.95 217 LR LR 10 06 19.1
comp=Z,15nm,18.8s,baz=70,slow=42
WSAR Wadi Sarin 18.95 217 P **P 09 57 21.3 -0.1**
SNR=14
WSAR S **Sn 10 00 52.0 -2.2**
BIDO Bidbid 18.95 219 P **P 09 57 21.0 -0.4**
SNR=12
BIDO P **P 09 57 21.0 -0.4**
SNR=12
BIDO S **Sn 10 00 52.6 -1.7**
BIDO S **Sn 10 00 52.6 -1.7**
BIDO S **Sn 10 00 52.6 -1.7**
BIDO S **Sn 10 00 52.6 -1.7**
AKL Akola 19.02 162 *e*P **P 09 57 21.9 -0.3**
AKL IAmb IAmb 09 57 26.9
comp=Z,80nm,0.8s
SVE Sverdlovsk 19.04 342 *de*P **P 09 57 21.8 -0.3**
SVE *e*S **Sn 10 00 47.7 -8.2**
SVE pmax pmax
comp=Z,290nm,1.2s
SVE MLR MLR
comp=Z,13µm,12.0s
LSA Lhasa 19.06 113 P **P 09 57 23.3 +0.1**
LSA Lhasa 19.06 113 P **P 09 57 23.1 +0.1**
LSA Lhasa 19.06 113 P **P 09 57 23.2 +0.1**
LSA pmax pmax
comp=Z,154nm,1.2s
NAZ Nazwa, Dubai 19.08 227 *i* P **P 09 57 22.7 0.0**
SNR=16
NAZ Nazwa, Dubai 19.08 227 P **Pn 09 57 23.5 0.0**
SNR=14
NAZ S **S 10 00 59.7 +0.6**
GOMU GeErMu 19.09 91 P **P 09 57 23.3 0.0**
GOMU pmax pmax
comp=Z,30nm,0.7s
GOMU L L
comp=Z,4µm,7.5s
GOMU L L
comp=Z,5µm,8.7s
ASHO Ashiyiah 19.09 226 *i* P **P 09 57 23.3 +0.3**
SNR=28
ASHO Ashiyiah 19.09 226 P **Pn 09 57 24.1 +0.4**
SNR=24
ASHO S **S 10 01 00.2 +0.7**
NGP Nagpur 19.14 156 *e*P **P 09 57 22.9 -0.6**
NGP IAmb IAmb 09 57 27.8
comp=Z,70nm,0.7s
ARTI Arti 19.24 338 P **P 09 57 24.5 +0.2**
comp=Z,7.2nm,0.3s,baz=163,slow=7.2,SNR=137
ARTI S **Sn 10 00 56.7 -4.0**
comp=Z,40nm,0.7s,baz=329,slow=21,SNR=4.7
ARTI Lg Lg 10 03 01.6
baz=121,slow=20
ARTI LR LR 10 05 44.3
comp=Z,12µm,19.2s,baz=148,slow=40
comp=Z,106nm,0.6s
ARTI Arti 19.24 338 P 09 57 24.1 -0.1
ARTI IAmb IAmb 09 57 30.1
comp=Z,197nm,0.5s
ARTI Arti 19.24 338 *c* *i* P **P 09 57 24.2 -0.1**
ARTI S **S 10 01 02.7 +0.7**
ARTI pmax pmax
comp=Z,130nm,0.8s
ARTI MLR MLR
comp=Z,10µm,12.0s
SOHO SOHO 19.27 224 P **P 09 57 23.7 -1.2**
SOHO SOHO 19.27 224 P **P 09 57 24.1 -0.7**
FAQ Al Faqa, Dubai 19.30 227 *i* P **P 09 57 25.0 -0.2**
SNR=9.4
FAQ Al Faqa, Dubai 19.30 227 P **Pn 09 57 26.3 0.0**
SNR=11
FAQ S **S 10 01 04.9 +1.2**
HOQ Hoqain 19.31 221 P **P 09 57 25.3 -0.1**
SNR=8.1
HOQ P **P 09 57 25.3 -0.1**
SNR=8.1
HOQ S **Sn 10 01 02.4 -0.5**
HOQ S **Sn 10 01 02.4 -0.5**
WBK Wadi Bani Khal 19.34 215 P **P 09 57 25.9 +0.2**
SNR=35
WBK S **S 10 01 04.7 +0.3**
SMDO Samad 19.38 218 P **P 09 57 26.3 0.0**
SNR=17
SMDO P **P 09 57 26.3 0.0**
SNR=17
BLSP Bilaspur 19.44 147 *e*P **P 09 57 25.7 -1.1**
BLSP IAmb IAmb 09 57 34.1
comp=Z,139nm,0.6s
JLN Jalan Bani Buh 19.54 214 P **Pn 09 57 28.6 -0.5**
SNR=21
JLN S **S 10 01 08.9 +0.4**
ASUD Al Ashush, Dub 19.55 227 *i* P **Pn 09 57 28.8 -0.4**
SNR=11
ASUD Al Ashush, Dub 19.55 227 P **Pn 09 57 28.8 -0.4**
SNR=8.5
SHBG Sahibganj 19.68 130 *e*P **P 09 57 27.8 -1.5**
SHBG IAmb IAmb 09 57 30.4
comp=Z,91nm,0.9s
ALNE Al Ain 19.76 225 *i* P **Pn 09 57 31.0 -0.8**
SNR=23
ALNE Al Ain 19.76 225 P **Pn 09 57 30.9 -0.8**
SNR=24
AJN Ajban 19.79 228 *i* P **Pn 09 57 31.7 -0.5**
SNR=15
AJN Ajban 19.79 228 P **Pn 09 57 31.6 -0.5**
SNR=29
AJN P **Pn 09 57 31.6 -0.5**
SNR=29
AJN S **Sn 10 01 15.4 +0.9**
AJN S **Sn 10 01 15.4 +0.9**
BOK Bokaro 19.80 136 *e*P **P 09 57 29.5 -1.2**
ARQ Araqi 19.92 222 P **Pn 09 57 33.2 -0.5**
SNR=27
ARQ P **Pn 09 57 33.2 -0.5**
SNR=27
ARQ S **Sn 10 01 18.0 +0.3**
ARQ S **Sn 10 01 18.0 +0.3**
JMDO Jabal Madar 19.94 217 P **Pn 09 57 33.6 -0.3**
SNR=15
JMDO P **Pn 09 57 33.6 -0.3**
SNR=15
JMDO S **S 10 01 16.4 -0.2**
JMDO S **S 10 01 16.4 -0.2**
BSY Bisya 20.06 220 P Pn 09 57 34.8 -0.6
SNR=19
BSY P Pn 09 57 34.8 -0.6
SNR=19
BSY S **S 10 01 19.3 +0.3**
BSY S **S 10 01 19.3 +0.3**
TBLG Delisi 20.13 286 P Pn 09 57 35.7 -0.4
GNI Garni 20.22 281 P Pn 09 57 37.3 0.0
comp=Z,96nm,0.8s,baz=155,slow=0.9,SNR=20
GNI LR LR 10 06 51.5
comp=Z,6µm,18.8s,baz=92,slow=41
comp=Z,96nm,0.8s
GNI Garni 20.22 281 Pn 09 57 38.1 +0.9
GNI Garni 20.22 281 *i* P Pn 09 57 37.5 +0.2
GNI MLR MLR
comp=Z,5µm,16.0s
GNI Garni 20.22 281 P Pn 09 57 36.6 -0.7
GNI P Pn 09 57 36.6 -0.7
GNI S Sn 10 01 26.5 +1.6
GNI S Sn 10 01 26.5 +1.6
GNI Garni 20.22 281 P Pn 09 57 38.3 +1.0
JHSG JHARSUGUGA 20.44 144 *ex* x 09 57 41.1
DHUB DHUBRI 20.59 124 *e*P **P 09 57 37.4 -1.9**
DHUB *i* x x 10 05 20.9
POO Poona 20.61 172 *e*P **P 09 57 39.4 -0.2**
POO IAmb IAmb 09 57 41.9
comp=Z,661nm,1.7s
TRLG Trialeti 20.61 285 P Pn 09 57 41.1 -0.8
JRN Qarnain Island 20.79 233 P **P 09 57 41.4 0.0**
SNR=8.0
JRN S **S 10 01 33.8 +0.5**
TAWA Tawang 20.82 117 *e*P **P 09 57 43.1 +1.0**
BELG Belogornoye 20.94 317 P **P 09 57 42.6 -0.2**
comp=Z,784nm,0.9s,baz=107,slow=0.6,SNR=68
BELG S **S 10 01 29.3 -6.5**
comp=Z,202nm,1.0s,baz=152,slow=22,SNR=4.3
BELG LR LR 10 06 26.4
comp=Z,5µm,20.6s,baz=115,slow=38
comp=Z,784nm,0.9s
BELG Belogornoye 20.94 317 *i* P **P 09 57 41.7 -1.1**
NCK Nalchik 21.00 291 ⇓ *i* P **P 09 57 44.1 +0.4**
NCK pmax pmax
comp=Z,233nm,0.8s
NCK MLR MLR
comp=Z,11µm,16.0s
MZWR Madinat Zayed 21.05 229 P **P 09 57 43.9 -0.3**
MZWR S **S 10 01 37.7 -0.8**
UMZA Um Al Zommool 21.15 224 P **P 09 57 44.8 -0.5**
UMZA S Sn 10 01 44.5 -2.7
MHTO MHTO 21.20 216 P **P 09 57 45.8 -0.1**
SNR=17
MHTO S **S 10 01 42.9 +1.3**
MHTO S Sn 10 01 43.4 -5.0
GHWR Ruwais 21.49 231 P **P 09 57 48.4 -0.6**
GHWR S **S 10 01 46.3 -1.0**
KBZ Khabaz 21.52 292 P **P 09 57 47.9 -1.3**
comp=Z,94nm,0.7s,baz=113,slow=7.0,SNR=122
KBZ Lg Lg 10 04 10.7
comp=Z,0.2nm,0.3s,baz=92,slow=22,SNR=1.6
KBZ LR LR 10 08 07.2
comp=Z,10µm,18.7s,baz=91,slow=42
comp=Z,94nm,0.7s
KBZ Khabaz 21.52 292 *e*P **P 09 57 47.8 -1.3**
KBZ pmax pmax
comp=Z,96nm,0.9s
KBZ MLR MLR
comp=Z,11µm,19.0s
SAKB Bahrain 21.55 239 P **P 09 57 49.8 +0.2**
SAKB S **S 10 01 49.9 +1.5**
KBD Kabd 21.60 250 P **P 09 57 50.4 +0.3**
KBD S **S 10 01 47.9 -1.4**
GUWA GUWAHATI 21.60 120 *e*P **P 09 57 50.1 0.0**
GUWA *i* x x 10 05 51.4
GUWA IAMs_20 IAMs_20 10 09 05.2
comp=Z,4µm,12.5s
KVAR Kislovodsk Arr 21.68 292 PcP **PcP 10 01 50.1 -1.8**
baz=90,slow=2.0
KIV Kislovodsk 21.69 292 *i* P **P 09 57 50.8 -0.3**
SNR=44
KIV Kislovodsk 21.69 292 P 09 57 50.6 -0.5
KIV Kislovodsk 21.69 292 *e*P **P 09 57 50.4 -0.7**
KIV *e*S **S 10 01 51.7 +0.7**
KIV pmax pmax
comp=Z,29nm,3.7s
KIV pmax pmax
comp=Z,253nm,1.0s
KIV MLR MLR
comp=Z,5µm,14.0s
KIV Kislovodsk 21.69 292 P **P 09 57 50.5 -0.5**
KIV P **P 09 57 50.5 -0.5**
KIV S **S 10 01 50.3 -0.7**
KIV S **S 10 01 50.3 -0.7**
KIV Kislovodsk 21.69 292 P **P 09 57 50.9 -0.2**
KAD Karad 21.86 172 *e*P **P 09 57 53.2 +0.2**
KAD IAmb IAmb 09 57 55.0
comp=Z,263nm,1.4s
MZR Muzera 21.87 228 *i* P **P 09 57 52.6 -0.5**
SNR=19
MZR Muzera 21.87 228 P **P 09 57 52.3 -0.7**
SNR=49
KNGR Kungurtug, Tuv 21.95 50 *c* *i* P **P 09 57 53.9 0.0**
KNGR pmax pmax
comp=Z,357nm,0.9s
KNGR MLR MLR
comp=Z,4µm,9.0s
TEZP TEZPUR 22.08 118 *e*P **P 09 57 55.3 0.0**
SLWR Sila 22.14 233 P **P 09 57 55.4 -0.6**
SLWR S **S 10 01 58.8 -1.1**
SHL Shillong 22.14 121 P 09 57 56.1 -0.1
SHL IAmb IAmb 09 58 04.7
comp=Z,191nm,1.0s
SHL Shillong 22.14 121 P **P 09 57 56.2 -0.1**
SHL pmax pmax
comp=Z,191nm,1.0s
SHL Shillong 22.14 121 P **P 09 57 56.0 -0.2**
SNR=74
SHL Shillong 22.14 121 *e*P **P 09 57 56.0 -0.2**
SHL *ex* x 10 02 00.5
SHL *i* x x 10 06 11.4
SHL IAMs_20 IAMs_20 10 09 23.6
comp=Z,11µm,10.6s
GTA2 Gaotai 22.25 80 P **P 09 57 56.9 -0.4**
GTA2 sP sP 09 58 04.6 +1.5
GTA2 S **S 10 01 59.9 -2.2**
GTA2 pmax pmax
comp=Z,24nm,1.0s
GTA2 pmax pmax
comp=Z,1µm,5.2s
GTA2 L L
comp=Z,12µm,15.5s
GTA2 L L
comp=Z,10µm,15.8s
GTA2 L L
comp=Z,13µm,15.8s
DQM DQM 22.32 215 P **P 09 57 57.6 -0.3**
SNR=7.5
RAGD RAYAGADA 22.51 148 *e*P **P 09 58 00.0 0.0**
GURO Guroymak-BITLI 22.52 278 P **P 09 58 02.9 +2.7**
HYB Hyderabad 22.56 161 *e*P **P 09 58 00.3 -0.2**
HYB IAmb IAmb 09 58 02.9
comp=Z,312nm,1.5s
HYB Hyderabad 22.56 161 *e*P **P 09 57 59.7 -0.8**
HYB *e*S **S 10 02 10.5 +2.7**
BWNR Bhubaneshwar 22.70 141 *e*P **P 09 58 01.4 -0.5**
BWNR IAmb IAmb 09 58 03.8
comp=Z,67nm,0.7s
AGT Agartala 22.90 125 *e*P **P 09 58 03.7 -0.3**
AGT *i* x x 10 08 07.7
LABN Labinsk 23.13 294 *e*P **P 09 58 07.7 +1.4**
LABN *e* 09 58 30.8
LABN *e*S **S 10 02 22.2 +4.6**
LABN *e*SS **SnSn 10 02 58.9 +8.6**
LABN pmax pmax
comp=Z,347nm,0.9s
LABN MLR MLR
comp=Z,5µm,12.0s
ERBR Yeremizino-Bor 23.39 296 *e*P **P 09 58 09.3 +0.4**
ERBR *e*PPP PPP 09 58 41.8
ERBR *e*S **S 10 02 23.6 +1.9**
ERBR *e*SS **SnSn 10 03 00.6 +4.1**
ERBR pmax pmax
comp=Z,785nm,1.4s
ERBR MLR MLR
comp=Z,6µm,15.0s
RPOR Krasnaya Polya 23.43 291 *e*P **P 09 58 10.6 +1.2**
GUZR Guzeripl' 23.54 292 *d* *i* P **P 09 58 11.6 +1.1**
GUZR pmax pmax
comp=Z,42nm,0.8s
KOHI KOHIMA 23.55 118 *e*P **P 09 58 11.8 +0.9**
VSLR Vesyoloye 23.59 291 *d* *i* P **P 09 58 12.0 +1.0**
VSLR pmax pmax
comp=Z,60nm,0.9s
VSLR MLR MLR
comp=Z,193nm,4.0s
VRH Novokhopyorsk 23.77 310 *e*P **P 09 58 11.1 -1.4**
VRH *e*S **S 10 02 23.9 -3.8**
VRH pmax pmax
comp=Z,300nm,0.8s
VRH smax smax
comp=N,1µm,1.4s
VRH MLR MLR
comp=Z,12µm,20.0s
LKP Lekhapani 23.80 112 *i* x x 10 07 29.0
SOC Sochi 23.82 291 *c* *i* P **P 09 58 12.9 -0.3**
SOC *e*PPP PPP 09 58 48.4
SOC *e*S **S 10 02 30.0 +1.2**
SOC *e*SS **SnSn 10 03 07.9 +0.6**
SOC *e*SSS SSS 10 03 24.1
SOC pmax pmax
comp=Z,72nm,0.7s
SOC MLR MLR
comp=Z,4µm,17.0s
VIS Vishakhapatnam 23.83 150 *e*P **P 09 58 12.9 -0.5**
VIS *e*S **S 10 02 33.9 +4.7**
VIS *i* x x 10 07 20.1
KIRV Kirov 23.95 332 P **P 09 58 14.2 0.0**
comp=Z,308nm,0.7s,baz=116,slow=6.8,SNR=103
KIRV S **S 10 02 32.9 +2.4**
comp=Z,31nm,1.1s,baz=311,slow=21,SNR=1.2
KIRV LR LR 10 07 42.1
comp=Z,5µm,19.9s,baz=134,slow=37
comp=Z,308nm,0.7s
VJD Vijayawada 24.00 157 *ex* x 09 58 19.3
IMP Imphal 24.02 119 *e*P **P 09 58 14.4 -0.9**
BRDH Bariadhala 24.03 127 LR LR 10 09 22.7
comp=Z,5µm,18.4s,baz=328,slow=41
GOYR Goytkh 24.08 293 *d* *i* P **P 09 58 17.2 +1.6**
GOYR pmax pmax
comp=Z,108nm,0.8s
SHAO Shalim 24.85 217 P **P 09 58 24.1 +1.3**
VORD Divnogorie 25.16 309 *e*P **P 09 58 24.5 -0.8**
VORD pmax pmax
comp=Z,200nm,1.0s
VORD MLR MLR
comp=Z,5µm,13.0s
ARPR Arapgir-MALATY 25.27 280 IAmb IAmb 09 58 42.5
comp=Z,184nm,1.1s
VSR Storozhevoye 25.30 309 *e*P **P 09 58 25.8 -0.8**
VSR *e*S **S 10 02 57.0 +4.7**
VSR pmax pmax
comp=Z,210nm,1.0s
VSR smax smax
comp=N,6µm,4.8s
VSR MLR MLR
comp=Z,16µm,15.0s
VORR Voronezh 25.41 310 *e*P **P 09 58 26.9 -0.7**
VORR *e*S **S 10 03 00.2 +6.2**
VORR pmax pmax
comp=Z,60nm,0.4s
DMTO DMTO 25.44 218 P **P 09 58 27.6 -0.5**
ANN Anapa 25.48 294 *e*P **P 09 58 28.1 -0.2**
ANN *e* 09 58 35.1
ANN *e*S **S 10 02 55.8 +0.5**
ANN pmax pmax
comp=Z,177nm,1.0s
ANN MLR MLR
comp=Z,4µm,17.0s
WHFO Wadi Hawf 25.84 220 P **P 09 58 32.2 +0.4**
LPSR Galich'ya Gora 25.86 312 *e*P **P 09 58 30.3 -1.4**
LPSR *e*S **S 10 03 07.4 +6.3**
LPSR pmax pmax
comp=Z,140nm,0.8s
LPSR smax smax
comp=N,3µm,2.7s
LPSR MLR MLR
comp=Z,9µm,15.0s
TLY Talaya 25.95 50 LR LR 10 08 04.3
comp=Z,573nm,20.4s,baz=248,slow=35
TLY Talaya 25.95 50 P 09 58 33.4 +0.8
TLY IAmb IAmb 09 58 35.1
comp=Z,71nm,0.7s
TLY Talaya 25.95 50 *c* *i* P **P 09 58 33.2 +0.6**
TLY pmax pmax
comp=Z,67nm,0.9s
TLY MLR MLR
comp=Z,3µm,9.0s
TLY Talaya 25.95 50 P **P 09 58 33.4 +0.8**
TLY Talaya 25.95 50 P **P 09 58 33.5 +0.9**
RBK Rabkut 25.98 219 P **P 09 58 34.6 +1.5**
RBK P **P 09 58 34.6 +1.5**
LZDM Lanzhou Array 26.07 87 P **P 09 58 34.8 +0.7**
comp=Z,2.7nm,0.3s,baz=281,slow=11,SNR=8.8
LZDM LR LR 10 09 49.7
comp=Z,4µm,18.6s,baz=310,slow=39
comp=Z,2.7nm,0.3s
LZH Lanzhou 26.14 86 *e*P **P 09 58 34.8 +0.2**
LZH pP pP 09 58 39.1 +0.2
LZH S **S 10 03 08.3 +2.0**
LZH SS **SnSn 10 04 11.1 +6.7**
LZH pmax pmax
comp=Z,940nm,4.5s
LZH L L
comp=Z,17µm,15.6s
LZH L L
comp=Z,7µm,16.8s
LZH L L
comp=Z,12µm,14.6s
IRK Irkutsk 26.48 49 *e*P **P 09 58 37.2 -0.2**
IRK pmax pmax
comp=Z,244nm,1.6s
GAZ Gaziantep 26.54 277 P **P 09 58 37.8 -0.4**
GAZ IAmb IAmb 09 58 46.1
comp=Z,143nm,1.3s
RAYN Ar Rayn 26.59 242 P **P 09 58 38.9 +0.3**
RAYN Ar Rayn 26.59 242 P 09 58 38.9 +0.3
RAYN IAmb IAmb 09 58 44.8
comp=Z,176nm,1.4s
RAYN Ar Rayn 26.59 242 P **P 09 58 38.9 +0.3**
RAYN pmax pmax
comp=Z,176nm,1.4s
RAYN MLR MLR
comp=Z,5µm,19.0s
RAYN Ar Rayn 26.59 242 P **P 09 58 39.1 +0.5**
RAYN Ar Rayn 26.59 242 P **P 09 58 39.6 +1.0**
SONM Songino Array 26.97 59 P **P 09 58 41.2 -0.8**
comp=Z,27nm,0.7s,baz=270,slow=9.3,SNR=58
SONM PcP **PcP 10 02 01.2 -2.2**
comp=Z,7.8nm,0.9s,baz=270,slow=3.7,SNR=3.5
SONM Lg Lg 10 07 16.1
comp=Z,0.2nm,0.3s,baz=318,slow=21,SNR=0.9
SONM LR LR 10 10 26.7
comp=Z,6µm,19.1s,baz=262,slow=39
comp=Z,27nm,0.7s
SONM Songino Array 26.97 59 P **P 09 58 42.0 0.0**
SONM IAmb IAmb 09 58 54.6
comp=Z,138nm,1.5s
SONM Songino Array 26.97 59 P **P 09 58 42.0 0.0**
SONM pmax pmax

comp=Z,138nm,1.5s
TNCH TengChong 27.09 113 P **P** **09 58 45.3 +2.0**
TNCH S **S** **10 03 26.7 +5.2**
TNCH pmax pmax
comp=Z,200nm,1.9s
TNCH L L
comp=Z,5µm,11.0s
TNCH L L
comp=Z,3µm,9.2s
TNCH L L
comp=Z,5µm,13.0s
BNN Bunyan 27.22 281 P **P** **09 58 45.2 +1.0**
SNOP Sinop 27.22 288 P **P** **09 58 44.3 +0.3**
ULN Ulaanbaatar 27.42 59 P **P** **09 58 46.2 +0.3**
ULN Ulaanbaatar 27.42 59 IAMs_20 IAMs_20 10 10 04.4
comp=Z,6µm,21.0s
ULN Ulaanbaatar 27.42 59⇑ *i*P **P** **09 58 45.7 -0.3**
ULN pmax pmax
comp=Z,40nm,1.0s
ULN MLR MLR
comp=Z,5µm,11.0s
ULN Ulaanbaatar 27.42 59 P **P** **09 58 45.6 -0.3**
ULN Ulaanbaatar 27.42 59 P **P** **09 58 45.5 -0.5**
comp=Z,5µmcomp=Z,328nm,1.3s
ULN Ulaanbaatar 27.42 59 P **P** **09 58 45.9 -0.1**
MOS Moscow 27.70 318 *e*P **P** **09 58 49.0 +0.8**
MOS *e* 09 59 37.5
MOS *e*S **S** **10 03 32.7 +2.6**
MOS pmax pmax
comp=Z,700nm,2.1s
MOS pmax pmax
comp=Z,258nm,1.7s
MOS smax smax
comp=E,5µm,5.7s
MOS smax smax
comp=N,4µm,3.9s
MOS MLR MLR
comp=E,8µm,13.0s
MOS MLR MLR
comp=Z,9µm,13.0s
SIM Simferopol' 27.84 294 *e*P **P** **09 58 50.3 +0.7**
SIM *e*S **S** **10 03 34.0 +1.4**
SIM SS **SnSn** **10 04 53.0 +7.6**
SIM pmax pmax
comp=Z,122nm,1.0s
SIM smax smax
comp=N,330nm,3.4s
CD2 Chengdu 27.95 97 P **P** **09 58 50.8 0.0**
CD2 pP pP 09 58 53.4 -1.6
CD2 S **S** **10 03 36.0 +1.3**
CD2 sS sS 10 03 43.0 +1.2
CD2 pmax pmax
comp=N,40nm,0.6s
CD2 pmax pmax
comp=N,400nm,4.6s
CD2 L L
comp=N,10µm,10.5s
CD2 L L
comp=N,8µm,11.8s
CD2 L L
comp=N,8µm,11.3s
OBN Obninsk 28.03 316 P **P** **09 58 49.9 -1.2**
comp=N,52nm,0.4s,baz=95,slow=4.6,SNR=18
OBN LR LR 10 12 46.3
comp=N,2µm,18.2s,baz=127,slow=42
comp=N,52nm,0.4s
OBN Obninsk 28.03 316 P **P** **09 58 50.6 -0.5**
OBN IAMs_20 IAMs_20 10 10 16.2
comp=Z,8µm,21.0s
OBN Obninsk 28.03 316*c i*P **P** **09 58 51.4 +0.3**
OBN *i* 09 59 41.4
OBN *i* S **S** **10 03 33.8 -1.4**
OBN pmax pmax
comp=Z,60nm,0.9s
OBN MLR MLR
comp=Z,5µm,14.0s
OBN Obninsk 28.03 316 P **P** **09 58 51.6 +0.5**
comp=Z,3µmcomp=Z,174nm,0.8s
OBN Obninsk 28.03 316 P **P** **09 58 51.8 +0.7**
BZK Bozkurt 28.12 288⇑P **P** **09 58 53.9 +1.9**
BZK Bozkurt 28.12 288 P **P** **09 58 52.9 +0.8**
comp=Z,2µmcomp=Z,135nm,1.0s
ASF Jabal al Asfar 28.42 267 P **P** **09 58 56.4 +1.4**
comp=Z,5.1nm,1.0s,baz=67,slow=2.8,SNR=12
ASF LR LR 10 12 35.6
comp=Z,2µm,18.5s,baz=53,slow=41
comp=Z,5.1nm,1.0s
PZH PanZhiHua 28.60 107 P **P** **09 58 56.3 -0.4**
PZH S **S** **10 03 40.3 -4.7**
PZH SS **SnSn** **10 05 14.2 +10**
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,390nm,4.8s
PZH L L
comp=Z,4µm,13.7s
PZH L L
comp=Z,4µm,21.6s
PZH L L
comp=Z,5µm,16.3s
BR131 Keskin Array S 28.73 283 P **P** **09 58 58.1 +0.4**
BR131 IAmb IAmb 09 59 16.1
comp=Z,160nm,1.8s
BR131 Keskin Array S 28.73 283 P **P** **09 58 58.1 +0.4**
BR131 pmax pmax
comp=Z,160nm,1.8s
BR131 Keskin Array S 28.73 283 P **P** **09 58 59.1 +1.4**
SNR=18
BRTR Keskin Array B 28.73 283 P **P** **09 58 58.4 +0.6**
comp=Z,21nm,0.7s,baz=94,slow=7.4,SNR=35
BRTR LR LR 10 12 21.4
comp=Z,3µm,19.4s,baz=82,slow=40
comp=Z,21nm,0.7s
BRTR Keskin Array B 28.73 283 P **P** **09 58 56.3 -1.4**
BRTR Keskin Array B 28.73 283 *i*P **P** **09 58 58.9 +1.2**
BRTR pmax pmax
comp=Z,21nm,0.7s
BR104 Keskin Array S 28.73 283 P **P** **09 58 58.3 +0.6**
comp=Z,250nmcomp=Z,31nm,0.9s
BR106 Keskin Array S 28.74 283 P **P** **09 58 58.4 +0.6**
comp=Z,315nmcomp=Z,34nm,0.8s
BR105 Keskin Array S 28.75 283 P **P** **09 58 58.5 +0.6**
comp=Z,322nmcomp=Z,32nm,0.8s
NPW Naypyitaw 28.99 124 P **P** **09 58 59.6 -0.5**
MMAI Mount Meron Ar 29.26 269 P **P** **09 59 04.3 +1.9**
comp=Z,1.0nm,0.2s,baz=55,slow=8.0,SNR=5.2
MMAI PcP **PcP** **10 02 09.5 +0.3**
comp=Z,4.7nm,0.7s,baz=64,slow=5.0,SNR=4.6
MMAI LR LR 10 13 11.4
comp=Z,4µm,18.3s,baz=58,slow=41
comp=Z,1.0nm,0.2s
KLMR Klimovskoe 29.26 328 *e*P **P** **09 59 01.4 -0.7**
KLMR *e* 09 59 55.2
KLMR *e* 10 02 06.5
KLMR S **S** **10 03 54.2 -0.4**
KLMR pmax pmax
comp=Z,100nm,1.0s
KLMR MLR MLR
comp=Z,5µm,10.0s
KOD Kodaikanal 29.29 167 *e*P **P** **09 59 01.5 -1.5**
KOD IAmb IAmb 09 59 04.6
comp=Z,86nm,1.3s
MMLI Mount Malkishu 29.47 268 P **P** **09 59 06.7 +2.5**
BTO2 Baotou 29.73 74 *e*P **P** **09 59 07.4 +0.8**
BTO2 sP **sP** **09 59 14.5 +1.8**
BTO2 PP **PnPn** **10 00 02.9 +1.1**
BTO2 S **S** **10 04 04.6 +1.9**
BTO2 pmax pmax
comp=Z,27nm,0.6s
BTO2 pmax pmax
comp=Z,850nm,4.3s
BTO2 L L
comp=Z,19µm,15.7s
BTO2 L L
comp=Z,21µm,13.6s
BTO2 L L
comp=Z,27µm,14.1s
GHAJ Ghor Haditha 29.81 266 P **P** **09 59 09.5 +2.3**
MSBI Mazada 29.97 266 P **P** **09 59 11.7 +3.1**
KMI2 Kunming 30.11 108⇑P **P** **09 59 09.6 -0.6**
KMI2 S **S** **10 04 10.2 +1.2**
KMI2 SS **SnSn** **10 05 42.0 +0.5**
KMI2 pmax pmax
comp=Z,36nm,1.9s
KMI2 pmax pmax
comp=Z,370nm,3.9s
KMI2 L L
comp=Z,5µm,17.4s
KMI2 L L
comp=Z,3µm,25.6s
KMI2 L L
comp=Z,3µm,17.5s
CSS Mathiatis 30.19 274 P **P** **09 59 09.9 -0.7**
MDUB Mudurnu 30.43 286 P **P** **09 59 12.4 -0.3**
XAN Xi'an 30.74 87⇓P **P** **09 59 15.8 +0.3**
XAN pP sP 09 59 21.1 -0.4
XAN S **S** **10 04 18.7 +0.2**
XAN sS sS 10 04 34.3 +8.7
XAN pmax pmax
comp=Z,20nm,1.0s
XAN pmax pmax
comp=Z,560nm,4.6s
XAN L L
comp=Z,16µm,15.8s
XAN L L
comp=Z,11µm,15.3s
XAN L L
comp=Z,16µm,15.1s
HRFI Mount Harif 30.77 264 P **P** **09 59 18.1 +2.3**
KZIT Kziot 30.89 266 P **P** **09 59 19.2 +2.4**
BAL3X Bal3x, Balta 30.98 300 P **P** **09 59 17.1 -0.2**
HHC Hu-ho-hao-te 30.98 74 *e*P **P** **09 59 17.8 +0.2**
HHC sP sP 09 59 25.4 +1.8
HHC S **S** **10 04 19.7 -2.4**
HHC ScS **ScS** **10 09 48.9 -4.3**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,270nm,4.5s
HHC L L
comp=Z,6µm,14.5s
HHC L L
comp=Z,5µm,15.3s
HHC L L
comp=Z,6µm,14.1s
EIL Elat 31.01 263 LR LR 10 14 27.0
comp=Z,5µm,18.4s,baz=70,slow=41
EIL Elat 31.01 263 P **P** **09 59 19.9 +2.1**
AK10 Malin Array Si 31.35 305 P **P** **09 59 21.1 +0.5**
AK08 Malin Array Si 31.36 305 P **P** **09 59 21.2 +0.6**
AK07 Malin Array Si 31.38 305 P **P** **09 59 20.9 0.0**
AKASG Malin Array Be 31.38 306 P **P** **09 59 19.9 -1.0**
comp=Z,11nm,0.6s,baz=83,slow=7.4,SNR=71
AKASG S **S** **10 04 27.1 -0.9**
comp=Z,0.4nm,0.4s,baz=66,slow=12,SNR=1.4
AKASG LR LR 10 14 28.6
comp=Z,7µm,19.2s,baz=91,slow=41
comp=Z,11nm,0.6s
AKASG Malin Array Be 31.38 306 P **P** **09 59 21.0 +0.2**
AKASG IAmb IAmb 10 00 27.5
comp=Z,74nm,1.0s
AKASG Malin Array Be 31.38 306 *i*P **P** **09 59 20.7 -0.2**
AKASG pmax pmax
comp=Z,23nm,0.5s
AKBB Malin Array Si 31.38 306 P **P** **09 59 20.4 -0.5**
AKBB IAmb IAmb 10 00 23.4
comp=Z,72nm,0.9s
AKBB Malin Array Si 31.38 306*c i*P **P** **09 59 20.5 -0.4**
AKBB pmax pmax
comp=Z,41nm,0.9s
AKBB MLR MLR
comp=Z,8µm,14.0s
AKBB Malin Array Si 31.38 306 P **P** **09 59 21.2 +0.3**
AK03 Malin Array Si 31.38 306 P **P** **09 59 20.8 -0.1**
AK01 Malin Array Si 31.39 306 P **P** **09 59 21.0 +0.1**
AK05 Malin Array Si 31.39 305 P **P** **09 59 20.9 0.0**
AK06 Malin Array Si 31.39 305 P **P** **09 59 20.9 0.0**
AK02 Malin Array Si 31.39 306 P **P** **09 59 20.6 -0.3**
KIEV Kiev 31.39 306⇑P **P** **09 59 21.0 0.0**
KIEV Kiev 31.39 306 P **P** **09 59 20.0 -0.9**
KIEV Kiev 31.39 306 P **P** **09 59 20.4 -0.6**
KIEV IAmb IAmb 10 00 23.4
comp=Z,64nm,0.9s
KIEV Kiev 31.39 306 IAMs_20 IAMs_20 10 13 55.9
comp=Z,7µm,21.0s
KIEV Kiev 31.39 306 P **P** **09 59 20.4 -0.6**
KIEV pmax pmax
comp=Z,64nm,0.9s
KIEV MLR MLR
comp=Z,7µm,21.0s
KIEV Kiev 31.39 306 P **P** **09 59 20.8 -0.1**
comp=Z,4µmcomp=Z,240nm,0.8s
KIEV Kiev 31.39 306 P **P** **09 59 20.9 -0.1**
AK11 Malin Array Si 31.41 306 P **P** **09 59 21.0 -0.2**
AK04 Malin Array Si 31.42 306 P **P** **09 59 21.0 -0.2**
AK12 Malin Array Si 31.42 305 P **P** **09 59 21.0 -0.2**
ADZR Andozero 31.51 333 *e*P **P** **09 59 21.4 -0.5**
ADZR S **S** **10 04 27.7 -2.0**
ADZR pmax pmax
comp=Z,41nm,0.5s
ADZR MLR MLR
comp=Z,5µm,10.0s
CHTO Chiang Mai 31.52 122 P **P** **09 59 22.4 0.0**
CHTO Chiang Mai 31.52 122 P **P** **09 59 21.5 -0.9**
CHTO Chiang Mai 31.52 122 P **P** **09 59 21.5 -0.9**
CHTO pmax pmax
comp=Z,19nm,1.0s
CHTO Chiang Mai 31.52 122 P **P** **09 59 23.2 +0.8**
CHTO P **P** **09 59 23.2 +0.8**
CHTO Chiang Mai 31.52 122 P **P** **09 59 20.4 -2.0**
CHTO Chiang Mai 31.52 122 P **P** **09 59 22.6 +0.2**
JURR Jurilovca 31.57 294⇓P **P** **09 59 24.4 +1.8**
TLCR 31.58 295⇑P **P** **09 59 24.0 +1.3**
TLCR 31.58 295 P **P** **09 59 24.0 +1.3**
NRIK Noril'sk 31.62 11 P **P** **09 59 23.2 +0.4**
comp=Z,80nm,0.8s,baz=202,slow=6.5,SNR=68
NRIK LR LR 10 12 06.2
comp=Z,4µm,20.8s,baz=202,slow=36
comp=Z,80nm,0.8s
NRIK Noril'sk 31.62 11 P **P** **09 59 23.3 +0.6**
NRIK IAmb IAmb 09 59 25.0
comp=Z,103nm,0.9s
NRIK Noril'sk 31.62 11*c i*P **P** **09 59 22.9 +0.1**
NRIK pmax pmax
comp=Z,91nm,0.9s
NRIK MLR MLR
comp=Z,7µm,11.0s
CM31 Chiang Mai Arr 31.77 122 P **P** **09 59 24.3 -0.3**
CM31 IAmb IAmb 10 00 10.7
comp=Z,168nm,2.0s
CMAR Chiang Mai Arr 31.77 122 P **P** **09 59 23.1 -1.6**
comp=Z,8.0nm,0.9s,baz=317,slow=8.5,SNR=26
CMAR PcP **PcP** **10 02 15.6 -0.2**
comp=Z,5.5nm,0.8s,baz=340,slow=3.4,SNR=4.2
CMAR S **S** **10 04 35.0 +0.3**
comp=Z,0.6nm,0.3s,baz=313,slow=16,SNR=1.4
CMAR LR LR 10 15 03.7
comp=Z,3µm,18.9s,baz=305,slow=42
comp=Z,8.0nm,0.9s
CMAR Chiang Mai Arr 31.77 122 P **P** **09 59 24.1 -0.5**
CMAR Chiang Mai Arr 31.77 122 *i*P **P** **09 59 25.1 +0.5**
CMAR pmax pmax
comp=Z,9.0nm,0.9s
SORM Soroca 31.82 301⇑P **P** **09 59 24.8 +0.1**
SORM Soroca 31.82 301 P **P** **09 59 24.8 +0.1**
TPGR Topolog 31.89 294⇑P **P** **09 59 26.5 +1.0**
TIRR Tirgusor 31.93 294 P **P** **09 59 25.2 -0.6**
TIRR Tirgusor 31.93 294 P **P** **09 59 25.2 -0.6**
TIRR pmax pmax
comp=Z,21nm,0.9s
TIRR MLR MLR
comp=Z,2µm,20.0s
TIRR Tirgusor 31.93 294 P **P** **09 59 26.9 +1.2**
CIT Chita 32.04 52 *e*P **P** **09 59 22.9 -3.9**
CIT *e* 10 00 33.0
CIT *e* 10 02 16.2
CIT *e* 10 04 41.3
CIT *e* 10 06 24.1
CIT pmax pmax
comp=Z,366nm,2.3s
VLDR Vladesti 32.06 296⇑P **P** **09 59 28.2 +1.3**
CFR Carcaliu 32.06 295⇑P **P** **09 59 28.0 +1.0**
CFR Carcaliu 32.06 295 P **P** **09 59 27.9 +1.0**
SCTR Scanteiesti 32.13 296⇓P **P** **09 59 29.4 +1.9**
PSN Preselentsi 32.21 292 P **P** **09 59 30.8 +2.5**
LUBAR Lubar, Ukraine 32.26 304 P **P** **09 59 27.7 -0.9**
ELL Elmali 32.29 279 P **P** **09 59 28.8 -0.4**
ELL Elmali 32.29 279 P **P** **09 59 28.8 -0.4**
ELL pmax pmax
comp=Z,39nm,1.0s
TIY Taiyuan 32.33 79 *e*P **P** **09 59 30.3 +0.8**
TIY S **S** **10 04 47.0 +3.8**
TIY SS **SnSn** **10 06 32.8 -2.2**
TIY pmax pmax
comp=Z,380nm,3.9s
TIY L L
comp=Z,6µm,14.4s
TIY L L
comp=Z,3µm,11.7s
TIY L L
comp=Z,5µm,18.5s
GYA Guiyang 32.33 102⇑P **P** **09 59 30.4 +0.7**
GYA pmax pmax
comp=Z,29nm,0.9s
MI28 Mi28,Pidlybu 32.38 306 P **P** **09 59 29.0 -0.7**
NDNU Novodnistrovsk 32.48 301 P **P** **09 59 30.4 -0.2**
GHRR 32.51 297 P **P** **09 59 32.0 +1.1**
GHRR 32.51 297 P **P** **09 59 33.2 +2.3**
ENH Enshi 32.67 94 P **P** **09 59 33.6 +1.1**
ENH Enshi 32.67 94 P **P** **09 59 32.2 -0.3**
ENH IAmb IAmb 09 59 37.8
comp=Z,73nm,0.9s
ENH IAMs_20 IAMs_20 10 14 33.3
comp=Z,5µm,18.0s
PANC Panciu 32.71 296⇑P **P** **09 59 34.2 +1.6**
MNK Minsk 32.71 312 *i*P **P** **09 59 32.6 +0.1**
comp=E,11nm,0.7s
MNK *i* P **P** **09 59 32.6 +0.1**
comp=N,53nm,1.0s
MNK *i* P **P** **09 59 32.6 +0.1**
comp=Z,67nm,1.0s,baz=100
MNK *i* PP **PP** **10 00 40.9 -5.4**
MNK *i* PPP PPP 10 00 51.0
MNK *i* PcP **PcP** **10 02 17.5 -0.4**
MNK *i* S **S** **10 04 50.4 +1.7**
MNK *i* SS **SnSn** **10 06 47.4 +3.7**
MNK *i* SSS SSS 10 07 02.9
MNK *i* ScS **ScS** **10 10 01.4 +0.3**
MNK *i* LQ LQ 10 10 45.5
MNK *i* LR LR 10 12 50.3
MNK *i* LRM MLR 10 15 26.7
comp=N,9µm,17.2s
MNK *i* LRM MLR 10 15 29.9
comp=E,3µm,15.7s
MNK *i* LRM MLR 10 15 31.1
comp=Z,14µm,17.6s
MNK Minsk 32.71 312 *i*P **P** **09 59 32.6 +0.1**
MNK *i* 10 00 40.8
MNK *i* 10 02 17.4
MNK *i* S **S** **10 04 50.3 +1.7**
MNK *i* SS **SnSn** **10 06 47.4 +3.7**
MNK *i* SSS SSS 10 07 02.9
MNK *i* 10 10 01.4
MNK pmax pmax
comp=Z,67nm,1.0s
MNK pmax pmax
comp=N,53nm,1.0s
MNK pmax pmax
comp=E,11nm,0.7s
MNK MLR MLR
comp=N,9µm,17.0s
MNK MLR MLR
comp=E,3µm,16.0s
MNK MLR MLR
comp=Z,14µm,18.0s
ODBI Odobesti 32.78 296⇓P **P** **09 59 35.5 +2.3**
PRD Provadia 32.80 291 P **P** **09 59 35.4 +2.0**
PALK Pallekele 32.84 162 LR LR 10 12 04.5
comp=Z,2µm,19.5s,baz=350,slow=35
PALK Pallekele 32.84 162 P **P** **09 59 33.5 -0.5**
PALK Pallekele 32.84 162 P **P** **09 59 33.5 -0.5**
PALK pmax pmax
comp=Z,44nm,1.2s
PALK MLR MLR
comp=Z,3µm,21.0s
PALK Pallekele 32.84 162 P **P** **09 59 35.3 +1.3**
PALK Pallekele 32.84 162 P **P** **09 59 34.2 +0.2**
PALK Pallekele 32.84 162 P **P** **09 59 35.4 +1.3**
VRI Vrincioaia 33.00 296⇑P **P** **09 59 37.0 +1.8**
VRI Vrincioaia 33.00 296 P **P** **09 59 37.0 +1.8**
VRI Vrincioaia 33.00 296 P **P** **09 59 36.9 +1.8**
TESR Tescani 33.01 298 P **P** **09 59 36.2 +0.9**
comp=Z,1µmcomp=Z,115nm,0.8s
TESR Tescani 33.01 298 P **P** **09 59 35.9 +0.6**
SAHR Sahastru 33.04 296⇓P **P** **09 59 37.2 +1.6**
PLOR Plostina 33.05 296⇓P **P** **09 59 37.3 +1.6**
PLOR Plostina 33.05 296 P **P** **09 59 37.3 +1.6**
BALB Balikesir 33.09 285 P **P** **09 59 35.4 -0.6**
BALB IAmb IAmb 09 59 47.3
comp=Z,78nm,1.3s
GIRR Girov 33.09 298⇑P **P** **09 59 37.3 +1.3**
HORU Horodok 33.10 303 P **P** **09 59 36.0 -0.1**
ISR Istrita 33.19 295⇑P **P** **09 59 39.0 +2.0**
ISR Istrita 33.19 295 P **P** **09 59 38.9 +2.0**
ONER Baraj Valea Uz 33.20 297⇑P **P** **09 59 38.8 +1.8**
SLVN Son La 33.26 112 P **P** **09 59 38.8 +1.1**
SLVN Son La 33.26 112 P **P** **09 59 37.7 0.0**
SLVN IAMs_20 IAMs_20 10 15 27.9
comp=Z,4µm,21.0s
LYN LuoYang 33.32 85 P **P** **09 59 39.4 +1.3**
LYN S **S** **10 04 59.1 +0.6**
LYN pmax pmax
comp=Z,44nm,0.8s
LYN pmax pmax
comp=Z,730nm,4.5s
LYN L L
comp=Z,6µm,11.0s
LYN L L
comp=Z,4µm,12.4s
LYN L L
comp=Z,3µm,9.6s
COVR Voineasa-Covas 33.37 296⇑P **P** **09 59 39.7 +1.2**
RAZG Razgrad 33.40 292⇑P **P** **09 59 40.2 +1.5**
NACGM Naroch 33.41 313 *e*P **P** **09 59 39.1 +0.5**
comp=Z,135nm,0.9s,baz=100
BOD Bodaibo 33.41 42 *e*P **P** **09 59 37.7 -0.9**
BOD pmax pmax
comp=Z,182nm,1.1s
PBA Port Blair 33.46 139 P **P** **09 59 41.7 +2.3**
TURR Turia 33.48 297⇑P **P** **09 59 40.6 +1.2**
RNPP5 Staryi Chortor 33.53 306 P **P** **09 59 40.3 +0.6**
RNPP9 Sopachiv 33.53 307 P **P** **09 59 40.4 +0.7**
JMB Yambol 33.54 290 P **P** **09 59 42.0 +2.1**
RNPP8 Varash 33.55 306 P **P** **09 59 40.5 +0.6**
MLR Muntele Rosu 33.58 296 P **P** **09 59 39.2 -1.2**
comp=Z,63nm,0.8s,baz=81,slow=5.8,SNR=93
MLR S **S** **10 05 02.8 +0.2**
comp=Z,19nm,1.1s,baz=69,slow=9.1,SNR=2.1
MLR LR LR 10 16 01.1
comp=Z,5µm,20.6s,baz=84,slow=41
comp=Z,63nm,0.8s
MLR Muntele Rosu 33.58 296⇓P **P** **09 59 42.5 +2.1**
MLR Muntele Rosu 33.58 296 IAMs_20 IAMs_20 10 15 29.1
comp=Z,5µm,20.0s
MLR Muntele Rosu 33.58 296 P **P** **09 59 42.3 +1.9**
RNPP1 Kostyukhnivka 33.61 306 P **P** **09 59 41.7 +1.3**
OZUR 33.64 297⇑P **P** **09 59 42.1 +1.3**
JOF Joensuu 33.66 328 *e*P **P** **09 59 40.8 +0.1**
BOSR Bodos 33.73 297⇓P **P** **09 59 43.4 +1.9**
XLT XiLinHaoTe 33.81 67 *e*P **P** **09 59 43.3 +0.9**
XLT pP sP 09 59 48.5 0.0
XLT S **S** **10 05 07.4 +1.2**
XLT pmax pmax
comp=Z,16nm,0.8s
XLT pmax pmax
comp=Z,310nm,4.2s
XLT L L
comp=Z,600nm,15.0s
XLT L L
comp=Z,6µm,12.6s
XLT L L
comp=Z,7µm,12.5s
ARG Arkhangelos 33.82 279 P **P** **09 59 41.9 -0.5**
ARG IAmb IAmb 10 00 06.2
comp=Z,156nm,1.5s
ARG Arkhangelos 33.82 279 P **P** **09 59 41.9 -0.5**
ARG pmax pmax
comp=Z,156nm,1.5s
ARG Arkhangelos 33.82 279 P **P** **09 59 42.8 +0.4**
SZH Strazhitsa 33.82 292 P **P** **09 59 44.6 +2.2**
ISAL Salakas 33.90 314 *e*P **P** **09 59 44.5 +1.7**
DOPR Dopca 33.92 297⇑P **P** **09 59 44.3 +1.1**
BURAR Bucovina Array 33.94 300⇑P **P** **09 59 44.4 +1.0**
BURAR Bucovina Array 33.94 300 P **P** **09 59 43.4 0.0**

BURAR **Bucovina Array** 33.94 300 P **P** 09 59 44.4 +1.0
HNS **HongShan** 34.15 79 ⇓P **P** 09 59 45.5 +0.2
HNS PP **PP** 10 01 05.7 +3.2
HNS S **S** 10 05 15.6 +4.3
HNS pmax pmax
comp=Z,24nm,1.3s
HNS L L
comp=Z,4μm,14.2s
HNS L L
comp=Z,7μm,15.2s
HNS L L
comp=Z,10μm,15.1s
ALN **Alexandroupoli** 34.19 288 P **P** 09 59 47.0 +1.4
VSU **Vasula** 34.20 319 *c iP* **P** 09 59 44.5 -0.9
VSU pmax pmax
comp=Z,58nm,0.8s
VSU MLR MLR
comp=Z,11μm,15.0s
VSU **Vasula** 34.20 319 *eP* **P** 09 59 44.5 -0.9
VSU **Vasula** 34.20 319 ⇑P **P** 09 59 45.0 -0.4
VOIR 34.21 296 ⇑P **P** 09 59 47.1 +1.2
VOIR 34.21 296 P **P** 09 59 47.0 +1.2
VOIR 34.21 296 P **P** 09 59 46.6 +0.7
comp=Z,524nmcomp=Z,39nm,0.8s
VOIR 34.21 296 P **P** 09 59 46.5 +0.7
HUMR **Humele** 34.36 294 P **P** 09 59 49.0 +1.9
PVL **Pavlikeni** 34.42 292 P **P** 09 59 50.2 +2.6
ARR **Arges** 34.51 296 ⇑P **P** 09 59 50.1 +1.7
ARR **Arges** 34.51 296 P **P** 09 59 49.9 +1.5
RDO **Rodhopi** 34.52 288 P **P** 09 59 47.7 -0.7
RDO **Rodhopi** 34.52 288 P **P** 09 59 49.8 +1.4
ARCR **ARCALIA** 34.55 299 ⇑P **P** 09 59 50.3 +1.6
KDZ **Kurdzhali** 34.57 289 P **P** 09 59 50.1 +1.3
BJT **Baijiatuau** 34.58 74 P **P** 09 59 50.2 +1.2
BJT **Baijiatuau** 34.58 74 P **P** 09 59 48.8 -0.2
BJT **Baijiatuau** 34.58 74 IAMs_20 IAMs_20 10 14 51.5
comp=Z,4μm,18.0s
BJT **Baijiatuau** 34.58 74 P **P** 09 59 48.8 -0.2
BJT pmax pmax
comp=Z,24nm,0.7s
BJT MLR MLR
comp=Z,4μm,18.0s
BJI2 **Beijing** 34.59 74 P **P** 09 59 49.9 +0.9
BJI2 S **S** 10 05 18.8 +0.8
BJI2 pmax pmax
comp=Z,16nm,0.7s
BJI2 pmax pmax
comp=Z,120nm,4.3s
BJI2 L L
comp=Z,4μm,16.5s
BJI2 L L
comp=Z,2μm,16.3s
BJI2 L L
comp=Z,3μm,14.5s
MDB **Medias** 34.61 297 ⇓P **P** 09 59 51.0 +1.8
MDB **Medias** 34.61 297 P **P** 09 59 50.9 +1.8
LVV **L'vov** 34.67 304 P **P** 09 59 50.6 +1.0
TNR **Turnu Rosu** 34.73 296 ⇑P **P** 09 59 52.2 +1.9
TNR **Turnu Rosu** 34.73 296 P **P** 09 59 52.1 +1.9
KARP **Karpathos** 34.77 278 *eP* **P** 09 59 51.0 +0.3
KARP **Karpathos** 34.77 278 P **P** 09 59 51.3 +0.5
comp=Z,1μmcomp=Z,162nm,0.8s
KARP **Karpathos** 34.77 278 P **P** 09 59 51.8 +1.0
CHOS **Chios island** 34.78 283 P **P** 09 59 53.4 +2.5
ARBE **Arbavere** 34.83 321 *eP* **P** 09 59 51.1 +0.3
ARBE **Arbavere** 34.83 321 P **P** 09 59 51.4 +0.5
PLD **Plovdiv** 34.90 290 P **P** 09 59 54.3 +2.6
LVZ **Lovozero** 35.08 337 P **P** 09 59 52.6 -0.5
LVZ **Lovozero** 35.08 337 ⇓*iP* **P** 09 59 53.0 0.0
LVZ pmax pmax
comp=Z,38nm,1.0s
LVZ MLR MLR
comp=Z,19μm,14.0s
LVZ **Lovozero** 35.08 337 P **P** 09 59 53.2 +0.1
BMR **Baia Mare** 35.09 300 ⇓P **P** 09 59 55.3 +2.0
BMR **Baia Mare** 35.09 300 P **P** 09 59 55.3 +2.0
BMR **Baia Mare** 35.09 300 P **P** 09 59 55.2 +1.8
CJR **Cluj-Napoca** 35.10 298 ⇑P **P** 09 59 55.5 +2.1
CJR **Cluj-Napoca** 35.10 298 P **P** 09 59 55.5 +2.1
PABE **Paberze** 35.10 314 *eP* **P** 09 59 53.7 +0.5
PABE **Paberze** 35.10 314 P **P** 09 59 54.0 +0.8
LOT **Lotru** 35.10 296 ⇑P **P** 09 59 55.3 +1.7
LOT **Lotru** 35.10 296 P **P** 09 59 55.1 +1.5
VSVD **Vaisvydziai** 35.19 314 *eP* **P** 09 59 54.5 +0.6
PGB **Panagyurishte** 35.25 291 P **P** 09 59 57.1 +2.3
APA **Apatity** 35.28 336 ⇓*iP* **P** 09 59 53.6 -1.0
APA *i* 10 01 13.4
APA *i* 10 02 25.6
APA *i* S **S** 10 05 26.0 -2.0
APA *i* SS **SnSn** 10 07 48.1 +2.5
APA pmax pmax
comp=Z,15nm,1.0s
APA MLR MLR
comp=Z,20μm,19.4s
FIA1 **FINESS Array S** 35.37 324 P **P** 09 59 55.1 -0.4
FINES **FINESS Array B** 35.37 324 P **P** 09 59 55.1 -0.4
comp=Z,38nm,0.8s,baz=106,slow=10,SNR=61
FINES S S 10 05 14.1 -16
comp=Z,5.1nm,0.9s,baz=98,slow=20,SNR=1.3
FINES LR LR 10 15 14.9
comp=Z,16μm,18.0s,baz=104,slow=38
comp=Z,38nm,0.8s
SUW **Suwalki** 35.38 311 *eP* **P** 09 59 56.8 +1.1
SUW *eL* L 10 15 34.9
comp=Z,7μm,26.7s
MPEP **Malo Peshtene** 35.42 292 P **P** 09 59 58.7 +2.5
MARR **Marisel-Cluj** 35.43 298 ⇑P **P** 09 59 57.4 +1.1
TRSU **Trosnyk** 35.43 301 P **P** 09 59 57.8 +1.6
KWP **Kalwaria Pacla** 35.53 303 *eP* **P** 09 59 58.2 +1.1
KWP *eL* L 10 16 36.8
comp=Z,4μm,20.9s
VALD **Valchedram** 35.58 293 P **P** 09 59 59.3 +1.7
ZKR **Zakros** 35.65 278 P **P** 10 00 01.1 +2.9
DEV **Deva** 35.66 297 ⇑P **P** 10 00 00.2 +1.9
DEV **Deva** 35.66 297 P **P** 10 00 00.1 +1.9
DEV **Deva** 35.66 297 P **P** 10 00 00.6 +2.4
DRGR 35.70 299 ⇑P **P** 10 00 00.2 +1.6
DRGR 35.70 299 P **P** 10 00 00.2 +1.6
DRGR 35.70 299 P **P** 10 00 00.7 +2.0
TRPA **Tarpa** 35.71 301 P **P** 10 00 00.0 +1.5
MTSE **Matsula** 35.74 319 *eP* **P** 09 59 59.0 +0.3
MTSE **Matsula** 35.74 319 P **P** 09 59 59.3 +0.6
MMB **Musomishta** 35.75 289 P **P** 10 00 01.5 +2.4
SUF **Sumiainen** 35.76 326 *eP* **P** 09 59 59.0 +0.2
GULI **GuiLin** 35.78 101 ⇑P **P** 09 59 59.1 -0.3
GULI pP **sP** 10 00 10.5 +5.0
GULI S **S** 10 05 34.6 -2.0
GULI pmax pmax
comp=Z,45nm,1.0s
GULI L L
comp=Z,4μm,19.9s
GULI L L
comp=Z,6μm,17.9s
GULI L L
comp=Z,5μm,19.6s
GZR **Gura Zlata** 35.80 296 ⇑P **P** 10 00 00.5 +1.0
GZR **Gura Zlata** 35.80 296 P **P** 10 00 00.5 +1.0
MEF **Metsahovi** 35.81 322 *eP* **P** 09 59 59.6 +0.3
BLSH **Balsha** 35.84 292 P **P** 10 00 02.8 +2.9
KOLS **Kolonicke sedl** 35.84 302 *eP* **P** 10 00 00.5 +0.8
KOLS **Kolonicke sedl** 35.84 302 P **P** 10 00 01.2 +1.4
KOLS **Kolonicke sedl** 35.84 302 *eP* **P** 10 00 00.5 +0.8
UZHM **Uzhgorod** 35.84 302 P **P** 10 00 00.5 +0.8
HILR **Hailar Array B** 35.87 57 P **P** 09 59 59.7 -0.3
comp=Z,8.7nm,0.6s,baz=290,slow=8.8,SNR=9.5
HILR PcP **PcP** 10 02 26.0 -1.1
comp=Z,9.3nm,0.8s,baz=251,slow=4.4,SNR=3.5
HILR LR LR 10 14 56.1
comp=Z,2μm,22.0s,baz=115,slow=37
comp=Z,8.7nm,0.6s
HIA **Hailar** 35.87 57 P **P** 10 00 01.2 +1.2
MSF **Maaselka** 35.90 332 P **P** 09 59 59.1 -0.9
VTS **Vitosha** 35.91 291 P **P** 10 00 03.5 +2.9
SRS **Serrai** 35.96 289 P **P** 10 00 02.1 +1.3
HERR **Herculane** 36.13 295 ⇓P **P** 10 00 03.7 +1.4
KEF **Keuruu** 36.14 325 *eP* **P** 10 00 01.4 -0.7
KKB **Krupnik** 36.15 290 P **P** 10 00 04.1 +1.7
PAIG **Paliouri** 36.17 287 P **P** 10 00 03.9 +1.3
SOH **Sokhos** 36.20 288 P **P** 10 00 04.3 +1.3
CNSH **ChangSha** 36.30 94 P **P** 10 00 04.6 +0.7
CNSH S **S** 10 05 45.0 +0.4
CNSH pmax pmax
comp=Z,23nm,1.0s
CNSH L L
comp=Z,6μm,22.7s
CNSH L L
comp=Z,6μm,21.0s
CNSH L L
comp=Z,6μm,12.2s
PBUR **Paburge** 36.31 314 *eP* **P** 10 00 04.0 +0.5
PBUR **Paburge** 36.31 314 P **P** 10 00 04.7 +1.2
WHN **Wuhan** 36.34 90 P **P** 10 00 05.0 +0.8
WHN sP **sP** 10 00 11.1 +0.9
WHN S **S** 10 05 45.9 +0.8
WHN pmax pmax
comp=Z,71nm,0.8s
WHN pmax pmax
comp=Z,2μm,4.0s
WHN L L
comp=Z,12μm,15.9s
WHN L L
comp=Z,14μm,15.1s
WHN L L
comp=Z,20μm,16.4s
TIA **Tai'an** 36.36 80 P **P** 10 00 05.2 +0.9
TIA pmax pmax
comp=Z,12nm,0.9s
TIA pmax pmax
comp=Z,450nm,4.4s
TIA L L
comp=Z,7μm,21.3s
TIA L L
comp=Z,3μm,15.7s
TIA L L
comp=Z,5μm,23.4s
HORT **Hortiatis** 36.44 288 P **P** 10 00 06.0 +0.9
KNT **Kendrikon** 36.46 289 P **P** 10 00 05.4 +0.3
SIRR **Siria** 36.47 298 ⇓P **P** 10 00 07.0 +1.8
STHS **Stebnicka Huta** 36.49 303 *eP* **P** 10 00 04.4 -0.9
STHS *e* 10 01 32.9
STHS **Stebnicka Huta** 36.49 303 *eP* **P** 10 00 04.4 -0.9
STHS *ePP* **PP** 10 01 32.9 +4.7
R9F13 **Warsaw-Wawer** 36.51 308 *eP* **P** 10 00 06.4 +1.0
R9F13 *eS* **S** 10 05 49.5 +2.2
R9F13 *e* 10 07 33.0
THE **Thessaloniki** 36.53 288 P **P** 10 00 06.3 +0.6
ABAH **Abaujker** 36.56 301 P **P** 10 00 07.6 +1.7
BZS **Buzias** 36.59 297 ⇑P **P** 10 00 07.8 +1.7
BZS **Buzias** 36.59 297 P **P** 10 00 07.8 +1.7
BZS **Buzias** 36.59 297 P **P** 10 00 07.2 +1.1
IDI **Anoyia** 36.61 279 LR LR 10 19 38.8
comp=Z,1μm,18.8s,baz=73,slow=44
MDVR **Moldovita** 36.64 295 ⇑P **P** 10 00 08.1 +1.5
BEL **Belsk** 36.73 307 *eP* **P** 10 00 08.7 +1.5
BEL *eL* L 10 17 53.6
comp=Z,8μm,16.0s
BEL **Belsk** 36.73 307 P **P** 10 00 08.0 +0.8
OUL **Oulu** 36.74 330 P **P** 10 00 07.0 -0.1
BOVS **Bovan** 36.83 293 ⇑P **P** 10 00 09.7 +1.4
ATD **Arta Tunnel** 37.10 230 LR LR 10 17 09.7
comp=Z,98nm,19.0s,baz=38,slow=39
ATD **Arta Tunnel** 37.10 230 P **P** 10 00 13.4 +2.6
NIE **Niedzica** 37.11 303 *eP* **P** 10 00 11.6 +1.0
NIE *eL* L 10 18 16.2
comp=Z,3μm,19.8s
NIE **Niedzica** 37.11 303 P **P** 10 00 11.2 +0.6
comp=Z,439nmcomp=Z,31nm,1.1s
IMMV **Iera Moni Meta** 37.25 280 P **P** 10 00 13.1 +1.2
RAF **Rauma** 37.27 322 *eP* **P** 10 00 10.8 -0.8
BSZH **Besenyszg** 37.31 300 P **P** 10 00 15.1 +2.8
VAF **Ylistaro** 37.38 326 *eP* **P** 10 00 12.7 +0.1
GVD **Gavdhos** 37.38 279 P **P** 10 00 13.3 +0.3
OJC **Ojcow** 37.39 304 *eP* **P** 10 00 13.0 +0.1
OJC *eL* L 10 17 55.4
comp=Z,5μm,19.9s
OJC **Ojcow** 37.39 304 P **P** 10 00 13.6 +0.7
comp=Z,873nmcomp=Z,74nm,0.8s
OJC **Ojcow** 37.39 304 P **P** 10 00 13.0 +0.1
AGG **Agios Georgios** 37.41 286 P **P** 10 00 13.7 +0.4
SGF **Sodankyl** 37.49 334 P **P** 10 00 14.6 +1.1
PSZ **Piszkesteto** 37.49 301 *eP* **P** 10 00 14.4 +0.5
PSZ **Piszkesteto** 37.49 301 P **P** 10 00 15.6 +1.7
LANS **Liptovska Anna** 37.67 303 *eP* **P** 10 00 17.2 +1.8
LANS **Liptovska Anna** 37.67 303 *eP* **P** 10 00 17.2 +1.8
KTHA **Kythira Island** 37.69 281 P **P** 10 00 15.0 -0.6
VADS **Vadso** 37.92 338 *eP* **P** 10 00 17.9 +0.7
VADS IAmb IAmb 10 00 18.6
comp=Z,102nm,1.2s
VADS *ePP* **PP** 10 01 44.9 +1.3
VADS *eS* **S** 10 06 10.3 +2.0
VADS *eSS* **SS** 10 08 56.0 +1.4
AAL **Aland** 37.95 321 *eP* **P** 10 00 16.7 -0.8
BUD **Budapest** 38.13 300 P **P** 10 00 20.7 +1.5
PHP **Peshkopia** 38.14 291 P **P** 10 00 22.2 +2.8
ITM **Ithomi** 38.26 283 P **P** 10 00 20.5 +0.1
KEV **Kevo** 38.43 337 P **P** 10 00 21.4 0.0
KEV **Kevo** 38.43 337 P **P** 10 00 21.4 0.0
KEV pmax pmax
comp=Z,53nm,1.2s
KEV MLR MLR
comp=Z,14μm,18.0s
OKC **Ostrava-Krasne** 38.48 304 AMS AMS 10 18 20.0
comp=Z,3μm,14.9s
OKC **Ostrava-Krasne** 38.48 304 P **P** 10 00 23.4 +1.3
MORH **Mrgy, Hungar** 38.55 298 P **P** 10 00 23.5 +0.7
comp=Z,582nmcomp=Z,46nm,1.0s
MORH pP **pP** 10 00 26.6 -0.2
comp=Z,582nmcomp=Z,46nm,1.0s
MORH **Mrgy, Hungar** 38.55 298 P **P** 10 00 23.5 +0.7
STEB **Steborice** 38.71 304 *eP* **P** 10 00 24.6 +0.5
MAUC **Maruska** 38.72 303 *eP* **P** 10 00 25.6 +1.4
LKD2 **Lefkada island** 38.73 286 P **P** 10 00 24.7 +0.3
ARA0 **ARCESS Array S** 38.78 336 *eP* **P** 10 00 25.1 +0.7
ARA0 IAmb IAmb 10 00 25.8
comp=Z,176nm,1.6s
ARA0 *eS* **S** 10 06 23.3 +1.9
ARCES **ARCESS Array B** 38.78 336 P **P** 10 00 24.5 0.0
comp=Z,28nm,0.7s,baz=110,slow=8.1,SNR=50
ARCES LR LR 10 17 11.9
comp=Z,10μm,18.6s,baz=118,slow=37
comp=Z,28nm,0.7s
ARCES **ARCESS Array B** 38.78 336 P **P** 10 00 24.4 0.0
ARCES **ARCESS Array B** 38.78 336 P **P** 10 00 24.4 0.0
ARCES pmax pmax
comp=Z,49nm,1.0s
PDG **Podgorica** 38.83 292 ⇓P **P** 10 00 26.8 +1.6
PDG **Podgorica** 38.83 292 P **P** 10 00 26.1 +1.0
MORC **Moravsky Berou** 38.87 304 ⇑P **P** 10 00 26.5 +1.0
MORC **Moravsky Berou** 38.87 304 P **P** 10 00 26.5 +1.0
MORC **Moravsky Berou** 38.87 304 *eP* **P** 10 00 25.7 +0.2
MORC *e* 10 01 55.2
MORC *eS* **S** 10 06 25.0 +1.7
MORC **Moravsky Berou** 38.87 304 P **P** 10 00 26.9 +1.5
JAVC **Velka Javorina** 38.87 302 *eP* **P** 10 00 26.7 +1.2
JAVC *eS* **S** 10 06 26.8 +3.4
JAVC **Velka Javorina** 38.87 302 P **P** 10 00 27.1 +1.5
GKP **Gorka Klasztor** 38.89 310 *eP* **P** 10 00 26.7 +1.2
GKP *eL* L 10 18 18.8
comp=Z,8μm,23.1s
SRN **Sarande** 38.92 288 P **P** 10 00 25.6 -0.3
DL2 **Dalian** 38.95 74 P **P** 10 00 26.4 +0.2
DL2 S **S** 10 06 22.6 -2.0
DL2 pmax pmax
comp=Z,31nm,1.0s
DL2 pmax pmax
comp=Z,180nm,7.2s
DL2 L L
comp=Z,5μm,22.6s
DL2 L L
comp=Z,3μm,17.3s
DL2 L L
comp=Z,5μm,20.6s
QIZ **Qiongzhong** 39.03 109 P **P** 10 00 28.8 +1.7
QIZ **Qiongzhong** 39.03 109 P **P** 10 00 26.4 -0.7
QIZ S **S** 10 06 25.1 -1.0
QIZ pmax pmax
comp=Z,41nm,1.2s
QIZ pmax pmax
comp=Z,410nm,4.8s
QIZ L L
comp=Z,4μm,14.4s
QIZ L L
comp=Z,3μm,11.3s
QIZ L L
comp=Z,7μm,12.4s
SMOL **Smolenice** 39.07 302 *eP* **P** 10 00 28.6 +1.5
UPP **Uppsala** 39.07 320 *eP* **P** 10 00 26.7 -0.2
KEK **Kerkira** 39.11 288 P **P** 10 00 26.7 -0.8
MPLH **Magyarpolny** 39.17 300 P **P** 10 00 28.6 +0.7
comp=Z,1μmcomp=Z,86nm,1.2s
MPLH pP **pP** 10 00 31.8 -0.2
comp=Z,1μmcomp=Z,86nm,1.2s
MPLH **Magyarpolny** 39.17 300 P **P** 10 00 29.4 +1.4
MODS **Modra-Piesok** 39.19 302 *eP* **P** 10 00 29.5 +1.4
MODS **Modra-Piesok** 39.19 302 P **P** 10 00 29.8 +1.7
MODS **Modra-Piesok** 39.19 302 *eP* **P** 10 00 29.5 +1.4
MODS *ePP* PnPn 10 02 12.7 +12
NJ2 **Nanjing** 39.21 85 *eP* **P** 10 00 31.0 +2.6
NJ2 S **S** 10 06 35.6 +7.0
NJ2 pmax pmax
comp=Z,47nm,0.8s
NJ2 L L
comp=Z,14μm,14.2s
NJ2 L L
comp=Z,11μm,18.0s
NJ2 L L
comp=Z,16μm,13.2s
KTK1 **Kautokeino** 39.28 335 *eP* **P** 10 00 28.2 -0.4
KTK1 IAmb IAmb 10 00 29.4
comp=Z,30nm,0.8s
KTK1 *eS* **S** 10 06 30.9 +2.0
LANU **Lannavaara** 39.31 333 *eP* **P** 10 00 29.4 +0.5
KRLC **Kraliky** 39.33 304 *eP* **P** 10 00 30.1 +0.8
KRLC MLR MLR
comp=Z,6μm,14.1s
KRLC **Kraliky** 39.33 304 *eP* **P** 10 00 30.1 +0.8
KRLC AMS AMS 10 19 10.0
comp=Z,6μm,14.1s
KRLC **Kraliky** 39.33 304 P **P** 10 00 30.2 +0.9
VRAC **Vranov** 39.53 303 P **P** 10 00 31.8 +0.8
comp=Z,28nm,0.8s,baz=83,slow=9.7,SNR=35
VRAC PP **PP** 10 02 02.8 +1.2
comp=Z,12nm,0.9s,baz=81,slow=11,SNR=3.4
VRAC S **S** 10 06 25.8 -7.3
comp=Z,1.2nm,0.3s,baz=70,slow=10,SNR=1.3
VRAC LR LR 10 20 19.6
comp=Z,3μm,19.3s,baz=80,slow=41
comp=Z,28nm,0.8s
VRAC **Vranov** 39.53 303 *eP* **P** 10 00 31.5 +0.5
VRAC *e* 10 02 01.0
VRAC *eS* **S** 10 06 32.4 -0.8
VRAC **Vranov** 39.53 303 P **P** 10 00 32.3 +1.4
KSP **Ksiaz** 39.58 306 *eP* **P** 10 00 32.2 +0.8
KSP *eL* L 10 18 53.2
comp=Z,6μm,18.3s
KSP **Ksiaz** 39.58 306 P **P** 10 00 32.1 +0.8
comp=Z,430nmcomp=Z,36nm,1.0s
DPC **Dobruska-Polom** 39.60 305 *eP* **P** 10 00 32.0 +0.4
DPC MLR MLR
comp=Z,6μm,14.5s
DPC **Dobruska-Polom** 39.60 305 *eP* **P** 10 00 32.0 +0.4
DPC AMS AMS 10 18 50.0
comp=Z,6μm,14.5s
DPC **Dobruska-Polom** 39.60 305 P **P** 10 00 32.2 +0.6
comp=Z,505nmcomp=Z,35nm,1.0s
DPC **Dobruska-Polom** 39.60 305 P **P** 10 00 32.4 +0.8
SNY **Shenyang** 39.62 69 P **P** 10 00 31.0 -0.7
SNY S **S** 10 06 34.6 +0.1
SNY pmax pmax
comp=Z,10.0nm,0.6s
SNY pmax pmax
comp=Z,320nm,2.7s
SNY L L
comp=Z,4μm,17.4s
SNY L L
comp=Z,5μm,12.0s
SNY L L
comp=Z,7μm,14.1s
OSTC **Ostas** 39.65 305 *eP* **P** 10 00 33.0 +1.0
OSTC MLR MLR
comp=Z,7μm,13.4s
OSTC **Ostas** 39.65 305 *eP* **P** 10 00 33.0 +1.0
OSTC AMS AMS 10 18 50.0
comp=Z,7μm,13.4s
KRUC **Moravsky** 39.69 303 *eP* **P** 10 00 32.8 +0.6
KRUC *e* 10 02 02.5
KRUC *eS* **S** 10 06 38.5 +3.0
KRUC **Moravsky** 39.69 303 P **P** 10 00 33.6 +1.3
CHVC **Chvalec** 39.75 305 *eP* **P** 10 00 34.9 +2.1
CHVC MLR MLR
comp=Z,7μm,13.5s
CHVC **Chvalec** 39.75 305 *eP* **P** 10 00 34.9 +2.1
CHVC AMS AMS 10 18 50.0
comp=Z,7μm,13.5s
SOP **Sopron** 39.76 301 P **P** 10 00 34.5 +1.6
UPC **Upice** 39.79 305 *eP* **P** 10 00 33.6 +0.5
UPC *e* 10 02 06.5
UPC *eS* **S** 10 06 43.4 +6.4
UPC **Upice** 39.79 305 *eP* **P** 10 00 33.6 +0.5
UPC *ePP* **PP** 10 02 06.5 +2.2
UPC *eS* **S** 10 06 43.4 +6.4
UPC **Upice** 39.79 305 P **P** 10 00 33.8 +0.7
BEHE **Becsehely** 39.79 299 P **P** 10 00 34.9 +1.7
BLY **Banja Luka** 39.82 296 ⇑P **P** 10 00 35.3 +2.0
BLY **Banja Luka** 39.82 296 P **P** 10 00 35.0 +1.6
HAMF **Hammerfest** 39.85 338 *eP* **P** 10 00 33.5 +0.3
HAMF IAmb IAmb 10 00 34.9
comp=Z,338nm,1.7s
HAMF *eS* **S** 10 06 39.2 +2.0
RONA **Rosalia, Austr** 39.93 301 *i* P **P** 10 00 34.7 +0.4
comp=Z,78nm,1.4s,SNR=12
RONA *ePP* **PP** 10 02 04.4 -1.6
comp=Z,1μm,6.0s
BSI **Banda Aceh** 40.01 140 P **P** 10 00 32.1 -3.1
comp=Z,84nm,0.9s
WINA **Alland / Wiene** 40.02 301 *i* pP **P** 10 00 36.5 +1.4
SNR=7.8
CONA **Conrad Observa** 40.19 301 *i* P **P** 10 00 37.0 +0.5
comp=Z,26nm,1.9s,SNR=40
CONA *ePP* **PP** 10 02 07.6 -1.2
comp=Z,1μm,6.2s
BSD **Bornholm Skovb** 40.23 312 *i* P **P** 10 00 34.2 -2.4
BSD IAmb IAmb 10 00 36.9
comp=Z,94nm,1.2s
TREC **Trest** 40.25 303 AMS AMS 10 20 30.0
comp=Z,4μm,15.7s
TREC **Trest** 40.25 303 P **P** 10 00 38.7 +1.7
HKPS **Hong Kong Po S** 40.32 102 IAMs_20 IAMs_20 10 20 06.5
comp=Z,4μm,21.0s
ZEA **Zeya** 40.39 50 *eP* **P** 10 00 38.5 +0.5
ZEA pmax pmax
comp=E,100nm,2.8s
ZEA pmax pmax
comp=Z,300nm,3.1s
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA MLR MLR
comp=E,2μm,14.0s
ZEA MLR MLR
comp=N,900nm,9.0s
ZEA MLR MLR
comp=Z,2μm,14.0s
JETT **Jettan, Norway** 40.42 335 *eP* **P** 10 00 38.4 +0.4
JETT IAmb IAmb 10 00 41.5
comp=Z,74nm,1.1s
CN2 **Changchun** 40.50 65 ⇓P **P** 10 00 39.1 +0.1
CN2 *es*P sP 10 00 45.7 +0.6
CN2 *eS* **S** 10 06 46.7 -1.0
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 L L
comp=Z,5μm,15.0s
CN2 L L
comp=Z,4μm,15.0s
CN2 L L
comp=Z,5μm,16.0s
ARSA **Arzberg** 40.52 300 *i* pP **P** 10 00 40.0 +0.8
comp=Z,39nm,1.3s,SNR=11
ARSA *ePP* **PP** 10 02 11.2 -1.1
comp=Z,888nm,4.3s
ARSA **Arzberg** 40.52 300 P **P** 10 00 39.4 +0.2
GROS **Grobnik** 40.66 299 *i* PP **P** 10 00 40.3 -0.2
GCIS **Gornji Cirnik** 40.69 298 *i* P **P** 10 00 41.3 +0.7
GCIS *ePP* **PnPn** 10 02 20.6 +2.4
GCIS *eS* **S** 10 06 54.2 +3.8
LNIZ **Loecknitz** 40.69 310 P **P** 10 00 40.2 -0.3

PVCC	**Panska Ves**	**40.70**	**305**	*e*P		**P**	**10 00 41.7**	**+1.1**
	comp=Z,180nm,0.9s								
PVCC	**Panska Ves**	**40.70**	**305**	*e*P		**P**	**10 00 41.7**	**+1.1**
	comp=Z,630nm,4.1s								
PVCC	**Panska Ves**	**40.70**	**305**	P		**P**	**10 00 42.0**	**+1.4**
	comp=Z,2µm,9.9s								
HEH	**HeiHe**	**40.76**	**55**	*e*P		**P**	**10 00 40.1**	**-1.0**
	comp=Z,2µm,10.2s								
HEH				pP		**pP**	**10 00 44.0**	**-1.1**
	comp=Z,5µm,11.2s								
HEH				S		**S**	**10 06 50.4**	**-1.0**
	comp=Z,6µm,13.6s								
HEH				pmax		pmax			
	comp=Z,6µm,13.6s								
PRU	**Pruhonice**	**40.78**	**305**	*e*P		**P**	**10 00 41.9**	**+0.6**
	comp=Z,6µm,13.6s								
PRU				*e*			10 02 17.5		
PRU				*e*S		**S**	**10 06 53.2**	**+1.4**
	comp=Z,6µm,13.6s								
PRU				MLR		MLR			
	comp=Z,6µm,13.6s								
PRU	**Pruhonice**	**40.78**	**305**	*e*P		**P**	**10 00 41.9**	**+0.6**
	comp=Z,6µm,13.6s								
PRU				*e*PP		**PP**	**10 02 17.5**	**+2.4**
	comp=Z,6µm,13.6s								
PRU				*e*S		**S**	**10 06 53.2**	**+1.4**
	comp=Z,6µm,13.6s								
PRU				AMS		AMS	10 19 40.0		
	comp=Z,6µm,13.6s								
PRU	**Pruhonice**	**40.78**	**305**	P		**P**	**10 00 42.0**	**+0.8**
DEL	**Delary**	**40.82**	**315**	*i* P		**P**	**10 00 41.4**	**-0.1**
LEGS	**Legarje**	**40.88**	**298**	*e*P		**P**	**10 00 43.1**	**+0.9**
TRO	**Tromso**	**40.93**	**335**	*e*P		**P**	**10 00 42.7**	**+0.5**
TRO				IAmb		IAmb	10 00 49.8		
	comp=Z,33nm,0.8s								
TRO				*e*PP		**PP**	**10 02 17.4**	**+1.1**
TRO				*e*S		**S**	**10 06 55.1**	**+1.7**
SOKA	**Soboth**	**40.94**	**299**	*i* P		**P**	**10 00 43.2**	**+0.4**
	comp=Z,112nm,1.5s,SNR=16								
SOKA				*e*PP		**PP**	**10 02 16.8**	**-0.2**
	comp=Z,189nm,2.5s								
RICC	**Richard**	**41.00**	**305**	*e*P		**P**	**10 00 44.1**	**+1.0**
RUE	**Ruedersdorf**	**41.02**	**308**	*e*P		**P**	**10 00 44.3**	**+1.2**
	comp=Z,52nm,1.0s,baz=82,slow=8.1								
BRG	**Berggiesshubel**	**41.06**	**306**	*e*P		**P**	**10 00 45.4**	**+1.8**
	comp=Z,49nm,1.0s,baz=82,slow=8.1								
BRG	**Berggiesshubel**	**41.06**	**306**	P		**P**	**10 00 44.2**	**+0.6**
BRG	**Berggiesshubel**	**41.06**	**306**	*e*P		**P**	**10 00 44.4**	**+0.8**
BRG				Amp			10 00 45.8		
	comp=Z,49nm,1.0s								
BRG	**Berggiesshubel**	**41.06**	**306**	S		**S**	**10 06 59.0**	**+3.1**
BRG	**Berggiesshubel**	**41.06**	**306**	SS		SS	10 09 56.0	-1.9
HFS	**Hagfors**	**41.06**	**320**	P		**P**	**10 00 42.9**	**-0.6**
	comp=Z,81nm,0.5s,baz=99,slow=9.3,SNR=192								
HFS				S		S	10 06 46.4	-9.3	
	comp=Z,3.4nm,0.9s,baz=101,slow=23,SNR=1.0								
HFS				LR		LR	10 18 06.6		
	comp=Z,2µm,20.8s,baz=92,slow=37								
	comp=Z,81nm,0.5s								
LUNU	**Lund**	**41.06**	**313**	*i* P		**P**	**10 00 44.0**	**+0.5**
ZVC	**Zvikov**	**41.07**	**304**	*e*P		**P**	**10 00 45.0**	**+1.3**
ZVC				AMS		AMS	10 19 50.0		
	comp=Z,5µm,13.5s								
MATE	**Matera**	**41.13**	**290**	*e*P		**P**	**10 00 41.1**	**-3.2**
RGN	**Rugen**	**41.17**	**312**	*e*P		**P**	**10 00 46.3**	**+2.0**
	comp=Z,296nm,0.9s,baz=82,slow=8.1								
SESA	**Seetaler Alpe,**	**41.18**	**300**	*i* Pn		**P**	**10 00 45.3**	**+0.4**
	comp=Z,124nm,1.4s,SNR=16								
MOA	**Molln**	**41.26**	**301**	*i* P		**P**	**10 00 45.3**	**0.0**
	comp=Z,94nm,1.7s,SNR=12								
MOA				*e*PP		**PnPn**	**10 02 26.3**	**+1.4**
	comp=Z,291nm,3.8s								
MOA	**Molln**	**41.26**	**301**	P		**P**	**10 00 45.9**	**+0.6**
BJUU	**Bjuv**	**41.30**	**314**	*i* P		**P**	**10 00 45.6**	**+0.2**
OBKA	**Obir**	**41.30**	**299**	*e*pP		**P**	**10 00 46.4**	**+0.6**
	comp=Z,132nm,1.9s								
OBKA				*e*PP		**PnPn**	**10 02 27.8**	**+2.4**
	comp=Z,744nm,6.0s								
OBKA	**Obir**	**41.30**	**299**	P		**P**	**10 00 47.4**	**+1.6**
LJU	**Ljubljana**	**41.40**	**299**	*e*S		**S**	**10 07 06.8**	**+5.6**
HSKC	**Hora Svate Kat**	**41.41**	**306**	*e*S		**S**	**10 07 02.9**	**+1.6**
HSKC				AMS		AMS	10 19 40.0		
	comp=Z,6µm,13.8s								
HSKC	**Hora Svate Kat**	**41.41**	**306**	P		**P**	**10 00 48.1**	**+1.5**
SSE	**Sheshan**	**41.42**	**85**	P		**P**	**10 00 46.2**	**-0.5**
SSE				S		**S**	**10 07 00.6**	**-1.0**
SSE				pmax		pmax			
	comp=Z,25nm,1.2s								
SSE				pmax		pmax			
	comp=Z,230nm,4.3s								
SSE				L		L			
	comp=Z,3µm,16.8s								
SSE				L		L			
	comp=Z,2µm,15.1s								
BNX	**BinXian**	**41.46**	**62**	⇑P		**P**	**10 00 46.2**	**-0.7**
BNX				pP		**pP**	**10 00 49.4**	**-1.9**
BNX				S		**S**	**10 07 01.0**	**-0.9**
BNX				SS		**SS**	**10 10 04.3**	**-1.6**
BNX				pmax		pmax			
	comp=Z,38nm,1.1s								
BNX				pmax		pmax			
	comp=Z,360nm,4.4s								
BNX				L		L			
	comp=Z,4µm,14.6s								
BNX				L		L			
	comp=Z,4µm,14.1s								
BNX				L		L			
	comp=Z,6µm,14.7s								
FABU	**Falkenberg**	**41.46**	**315**	*i* P		**P**	**10 00 46.7**	**0.0**
GEC2	**GERESS Array S**	**41.48**	**303**	*e*P		**P**	**10 00 49.0**	**+1.8**
	comp=Z,28nm,1.1s,baz=82,slow=8.1								
GERES	**GERESS Array B**	**41.48**	**303**	P		**P**	**10 00 47.2**	**0.0**
	comp=Z,9.7nm,0.7s,baz=66,slow=7.5,SNR=69								
GERES				PP		**PP**	**10 02 21.3**	**-1.5**
	comp=Z,16nm,1.0s,baz=86,slow=7.8,SNR=4.6								
GERES				LR		LR	10 20 38.7		
	comp=Z,3µm,18.3s,baz=68,slow=40								
	comp=Z,9.7nm,0.7s								
KHC	**Kasperske Hory**	**41.51**	**303**	IAMs_20		IAMs_20	10 20 35.9		
	comp=Z,4µm,18.0s								
KHC	**Kasperske Hory**	**41.51**	**303***c*	*i* P		**P**	**10 00 47.8**	**+0.4**
KHC				pmax		pmax			
	comp=Z,33nm,0.9s								
KHC	**Kasperske Hory**	**41.51**	**303**	*e*P		**P**	**10 00 48.0**	**+0.6**
KHC				*e*PP		**PnPn**	**10 02 27.8**	**-0.1**
KHC				*e*S		**S**	**10 07 05.0**	**+2.2**
KHC				AMS		AMS	10 20 10.0		
	comp=Z,4µm,14.0s								
KHC	**Kasperske Hory**	**41.51**	**303**	P		**P**	**10 00 48.0**	**+0.6**
	comp=Z,51nm,0.8s								
KHC	**Kasperske Hory**	**41.51**	**303**	P		**P**	**10 00 48.1**	**+0.6**
TIP	**Timpagrande**	**41.52**	**288**	P		**P**	**10 00 48.1**	**+0.5**
	comp=Z,291nmcomp=Z,19nm,1.4s								
TIP	**Timpagrande**	**41.52**	**288**	P		**P**	**10 00 47.8**	**+0.2**
FAUS	**Fauske**	**41.54**	**331**	*e*P		**P**	**10 00 47.5**	**+0.2**
FAUS				IAmb		IAmb	10 00 48.4		
	comp=Z,52nm,0.8s								
FAUS				*e*PP		**PP**	**10 02 23.6**	**+0.6**
FAUS				*e*S		**S**	**10 07 04.4**	**+1.8**
MOR8	**Moi Rana**	**41.59**	**329**	*e*P		**P**	**10 00 46.7**	**-1.1**
MOR8				IAmb		IAmb	10 00 50.5		
	comp=Z,61nm,0.8s								
MOR8				*e*PP		**PP**	**10 02 23.3**	**-0.3**
MOR8				*e*S		**S**	**10 07 03.9**	**+0.5**
CLL	**Collm**	**41.60**	**307**	IAMs_20		IAMs_20	10 21 06.3		
	comp=Z,4µm,18.0s								
CLL	**Collm**	**41.60**	**307**	*i* P		**P**	**10 00 48.7**	**+0.7**
CLL				*e*S		**S**	**10 07 08.0**	**+4.0**
CLL				pmax		pmax			
	comp=Z,45nm,1.1s								
CLL	**Collm**	**41.60**	**307**	*e*P		**P**	**10 00 49.3**	**+1.2**
	comp=Z,38nm,1.0s,baz=82,slow=8.1								
CLL	**Collm**	**41.60**	**307**	P		**P**	**10 00 48.8**	**+0.7**
	comp=Z,515nmcomp=Z,37nm,1.0s								
CLL	**Collm**	**41.60**	**307**	*i* P		**P**	**10 00 48.7**	**+0.7**
	comp=Z,45nm,1.1s								
CLL				*ex*		x	10 02 19.0		
CLL				*i* PP		**PP**	**10 02 24.0**	**0.0**
CLL				*e*PPP		PPP	10 02 53.0		
CLL				*e*S		**S**	**10 07 08.0**	**+4.0**
CLL				*e*SS		**SS**	**10 10 06.0**	**-2.7**
CLL				AMS		AMS	10 21 00.0		
CLL	**Collm**	**41.60**	**307**	P		**P**	**10 00 48.5**	**+0.5**
COP	**Copenhagen**	**41.64**	**313**	P		**P**	**10 00 49.7**	**+1.5**
COP	**Copenhagen**	**41.64**	**313**	*i* P		**P**	**10 00 49.6**	**+1.5**
COP				IAmb		IAmb	10 00 52.3		
	comp=Z,163nm,0.7s								
STEI	**Steigen**	**41.69**	**332**	*e*P		**P**	**10 00 48.5**	**+0.1**
STEI				IAmb		IAmb	10 00 49.6		
	comp=Z,508nm,2.5s								
STEI				*e*PP		**PP**	**10 02 24.6**	**-0.1**
STEI				*e*S		**S**	**10 07 06.1**	**+1.3**
BIOA	**Bad Ischl, Aus**	**41.70**	**301**	*i* P		**P**	**10 00 48.9**	**-0.1**
	comp=Z,66nm,1.5s,SNR=9.3								
BIOA				*e*P		**PP**	**10 02 26.8**	**+1.6**
	comp=Z,289nm,3.3s								
RAUS	**Rausandaksla**	**41.80**	**330**	*e*P		**P**	**10 00 49.9**	**+0.4**
RAUS				IAmb		IAmb	10 00 53.5		
	comp=Z,67nm,0.9s								
RAUS				*e*PP		**PP**	**10 02 25.2**	**-0.7**
RAUS				*e*S		**S**	**10 07 08.0**	**+1.4**
MARCO	**Tramutola**	**41.89**	**290**	P		**P**	**10 00 52.1**	**+1.5**
ONAU	**Onsala**	**41.89**	**316**	*i* P		**P**	**10 00 50.2**	**-0.1**
MYKA	**Terra Mystica**	**41.89**	**300**	*i* P		**P**	**10 00 50.4**	**-0.2**
	comp=Z,35nm,2.2s,SNR=13								
MYKA				*e*P		**PP**	**10 02 29.2**	**+1.9**
	comp=Z,32nm,1.2s								
YAK	**Yakutsk**	**41.92**	**37**	LR		LR	10 19 25.7		
	comp=Z,3µm,18.3s,baz=258,slow=38								
YAK	**Yakutsk**	**41.92**	**37**	P		**P**	**10 00 49.7**	**-0.7**
YAK	**Yakutsk**	**41.92**	**37**	IAMs_20		IAMs_20	10 19 09.8		
	comp=Z,3µm,20.0s								
YAK	**Yakutsk**	**41.92**	**37**	*e*P		**P**	**10 00 49.3**	**-1.1**
YAK				*e**PP		**sP**	**10 00 58.9**	**+2.9**
YAK				*e*			10 02 26.3		
YAK				*e*			10 02 44.8		
YAK				*e*PPP		PPP	10 02 56.4		
YAK				*e*S		**S**	**10 07 05.6**	**-2.7**
YAK				*e*SS		**SS**	**10 10 12.6**	**-1.9**
YAK				*e*			10 10 51.1		
YAK				pmax		pmax			
	comp=Z,338nm,1.4s								
YAK				pmax		pmax			
	comp=N,23nm,1.3s								
YAK				pmax		pmax			
	comp=E,113nm,1.8s								
YAK				pmax		pmax			
	comp=Z,85nm,2.0s								
YAK				pmax		pmax			
	comp=N,45nm,2.0s								
YAK				pmax		pmax			
	comp=E,98nm,1.4s								
YAK				smax		smax			
	comp=E,529nm,5.3s								
YAK				smax		smax			
	comp=N,481nm,5.1s								
YAK				MLR		MLR			
	comp=Z,2µm,24.0s								
YAK				MLR		MLR			
	comp=N,829nm,21.0s								
YAK				MLR		MLR			
	comp=E,1µm,16.0s								
YAK	**Yakutsk**	**41.92**	**37**	P		**P**	**10 00 49.7**	**-0.7**
WET	**Wettzell**	**41.97**	**304**	*e*P		**P**	**10 00 52.8**	**+1.7**
	comp=E,31nm,1.1s,baz=82,slow=8.1								
WET	**Wettzell**	**41.97**	**304**	P		**P**	**10 00 52.5**	**+1.4**
DRE	**Drenchia**	**41.98**	**299**	P		**P**	**10 00 51.7**	**+0.4**
PRED	**Cave del Predi**	**41.98**	**299**	P		**P**	**10 00 51.1**	**-0.2**
ACOM	**Acomizza, Ital**	**42.00**	**300**	P		**P**	**10 00 52.8**	**+1.2**
KBA	**Koelnbreinsper**	**42.01**	**300**	*i* P		**P**	**10 00 51.6**	**-0.1**
	comp=E,119nm,2.1s,SNR=19								
KBA				*e*P		**PP**	**10 02 31.5**	**+2.8**
	comp=E,512nm,3.1s								
KBA	**Koelnbreinsper**	**42.01**	**300**	P		**P**	**10 00 52.5**	**+0.8**
TJOU	**Tjoern**	**42.05**	**317**	*i* P		**P**	**10 00 51.4**	**-0.2**
SABO	**M.te Sabotino**	**42.05**	**299**	P		**P**	**10 00 50.8**	**-1.0**
SABO				IAmb		IAmb	10 00 59.0		
	comp=Z,166nm,0.9s								
TANN	**Tannenbergstha**	**42.05**	**305**	*e*P		**P**	**10 00 53.5**	**+1.7**
	comp=Z,21nm,1.0s,baz=82,slow=8.1								
TANN	**Tannenbergstha**	**42.05**	**305**	P		**P**	**10 00 53.2**	**+1.4**
NKC	**Novy Kostel**	**42.09**	**305**	*e*P		**P**	**10 00 54.5**	**+2.5**
NKC				MLR		MLR			
	comp=Z,7µm,12.0s								
NKC	**Novy Kostel**	**42.09**	**305**	*e*P		**P**	**10 00 54.5**	**+2.5**
NKC				AMS		AMS	10 20 20.0		
	comp=Z,7µm,12.0s								
NKC	**Novy Kostel**	**42.09**	**305**	P		**P**	**10 00 53.5**	**+1.5**
NC405	**NORSAR Array S**	**42.11**	**322**	P		**P**	**10 00 51.8**	**-0.3**
LEIR	**Leirfjorden**	**42.11**	**329**	*e*P		**P**	**10 00 52.4**	**+0.4**
LEIR				IAmb		IAmb	10 00 55.4		
	comp=Z,49nm,0.9s								
LEIR				*e*PP		**PP**	**10 02 29.2**	**+0.1**
LEIR				*e*S		**S**	**10 07 12.7**	**+1.7**
VAGH	**Vaagaholmen**	**42.16**	**330**	*e*P		**P**	**10 00 53.2**	**+0.8**
VAGH				IAmb		IAmb	10 00 56.6		
	comp=Z,58nm,0.8s								
VAGH				*e*PP		**PP**	**10 02 29.4**	**-0.4**
VAGH				*e*S		**S**	**10 07 14.6**	**+2.8**
NC602	**NORSAR Array S**	**42.17**	**321**	*e*P		**P**	**10 00 52.5**	**0.0**
NC602				IAmb		IAmb	10 00 53.1		
	comp=Z,54nm,1.1s								
NC602				*e*PP		**PP**	**10 02 29.4**	**-0.6**
NC602				*e*S		**S**	**10 07 14.6**	**+2.5**
NORES	**NORESS Array B**	**42.17**	**321**	*e*P		**P**	**10 00 55.7**	**+3.2**
KONS	**Konsvik**	**42.18**	**330**	*e*P		**P**	**10 00 52.7**	**+0.2**
KONS				IAmb		IAmb	10 00 55.9		
	comp=Z,40nm,0.6s								
KONS				*e*PP		**PP**	**10 02 29.4**	**-0.6**
STOK	**Stokkvaagen**	**42.19**	**329**	*e*P		**P**	**10 00 52.9**	**+0.3**
STOK				*e*PP		**PP**	**10 02 31.2**	**+1.2**
STOK				*e*S		**S**	**10 07 13.0**	**+0.8**
PLN	**Plauen**	**42.24**	**306**	*e*P		**P**	**10 00 54.9**	**+1.7**
	comp=Z,7.6nm,1.0s,baz=82,slow=8.1								
NC303	**NORSAR Array S**	**42.28**	**322**	IAmb		IAmb	10 00 54.6		
	comp=Z,81nm,0.8s								
STRU	**Stroemstad**	**42.29**	**318**	*e*P		**P**	**10 00 53.6**	**+0.1**
STRU	**Stroemstad**	**42.29**	**318**	*i* P		**P**	**10 00 53.2**	**-0.3**
QZH2	**Quanzhou**	**42.31**	**95**	P		**P**	**10 00 55.3**	**+1.2**
QZH2				S		**S**	**10 07 16.9**	**+2.0**
QZH2				pmax		pmax			
	comp=Z,330nm,5.4s								
QZH2				L		L			
	comp=Z,6µm,20.7s								
QZH2				L		L			
	comp=Z,6µm,19.8s								
QZH2				L		L			
	comp=Z,4µm,12.5s								
ROTZ	**Rotzenmuhle**	**42.31**	**305**	*e*P		**P**	**10 00 56.0**	**+2.1**
	comp=Z,13nm,1.6s,baz=82,slow=8.1								
NB201	**NORSAR Array S**	**42.31**	**321**	IAmb		IAmb	10 00 58.5		
	comp=Z,108nm,1.3s								
NSS	**Namsos**	**42.33**	**327**	*e*P		**P**	**10 00 54.0**	**+0.3**
NSS				IAmb		IAmb	10 00 57.1		
	comp=Z,21nm,0.8s								
NSS				*e*PP		**PP**	**10 02 31.7**	**+0.1**
NB2	**NORSAR Subarra**	**42.34**	**321**	P		**P**	**10 00 53.1**	**-0.9**
	comp=Z,62nm,0.9s,baz=91,slow=7.9								
NB2	**NORSAR Subarra**	**42.34**	**321**	P		**P**	**10 00 53.1**	**-0.9**
NOA	**NORSAR Array B**	**42.34**	**321**	P		**P**	**10 00 52.8**	**-1.2**
	comp=Z,32nm,0.7s,baz=93,slow=8.0,SNR=129								
NOA				PP		**PP**	**10 02 29.2**	**-2.7**
	comp=Z,11nm,0.8s,baz=95,slow=11,SNR=4.6								
NOA				LR		LR	10 18 31.9		
	comp=Z,2µm,20.0s,baz=90,slow=36								
	comp=Z,32nm,0.7s								
LOF	**Lofoten**	**42.36**	**332**	*e*P		**P**	**10 00 53.6**	**-0.3**
LOF				IAmb		IAmb	10 00 56.7		
	comp=Z,64nm,1.3s								
LOF				*e*PP		**PP**	**10 02 31.6**	**-0.2**
LOF				*e*S		**S**	**10 07 17.0**	**+2.3**
LOF				*e*SS		**SS**	**10 10 26.0**	**+2.9**
FUSE	**Fusea**	**42.37**	**299**	P		**P**	**10 00 54.9**	**+0.5**
NEUB	**Neuenburg**	**42.38**	**307**	*e*P		**P**	**10 00 55.9**	**+1.5**
	comp=Z,59nm,1.0s,baz=82,slow=8.1								
NEUB	**Neuenburg**	**42.38**	**307**	P		**P**	**10 00 55.6**	**+1.3**
LESA	**Schwarzleotal**	**42.39**	**301**	*i* P		**P**	**10 00 54.4**	**-0.3**
	comp=Z,124nm,1.6s,SNR=22								
LESA				*e*P		**PP**	**10 02 37.2**	**+4.6**
	comp=Z,142nm,3.4s								
KNMB	**Chin-men Tao**	**42.40**	**96**	IAMs_20		IAMs_20	10 20 33.4		
	comp=Z,4µm,20.0s								
CEL	**Celeste**	**42.45**	**287**	P		**P**	**10 00 55.1**	**-0.1**
	comp=Z,798nmcomp=Z,49nm,1.9s								
CEL	**Celeste**	**42.45**	**287**	P		**P**	**10 00 56.0**	**+0.8**
GORT1	**Trebel**	**42.47**	**309**	*e*P		**P**	**10 00 57.0**	**+2.0**
	comp=Z,79nm,1.2s,baz=82,slow=8.1								
NAO01	**NORSAR Array S**	**42.49**	**321**	P		**P**	**10 00 55.1**	**-0.1**
WIMM	**Wimmelburg**	**42.51**	**307**	P		**P**	**10 00 56.1**	**+0.7**
HOPEN	**Hopen**	**42.51**	**346**	*e*P		**P**	**10 00 55.6**	**+0.5**
HOPEN				*e*PP		**PP**	**10 02 34.8**	**+1.3**
HOPEN				*e*S		**S**	**10 07 19.1**	**+2.2**
HOPEN				*e*SS		**SS**	**10 10 29.6**	**+3.7**
OSL	**Oslo**	**42.54**	**320**	*e*P		**P**	**10 00 55.7**	**+0.2**
OSL				IAmb		IAmb	10 00 56.8		
	comp=Z,45nm,0.8s								
MOX	**Moxa**	**42.56**	**306**	*e*P		**P**	**10 00 57.6**	**+1.7**
	comp=Z,30nm,1.0s,baz=82,slow=8.1								
MOX				*e*L		L	10 21 22.9		
	comp=Z,4µm,18.1s								
MOX	**Moxa**	**42.56**	**306**	P		**P**	**10 00 57.2**	**+1.4**
NC204	**NORSAR Array S**	**42.58**	**322**	P		**P**	**10 00 55.3**	**-0.6**
FLTG	**Flechtingen**	**42.58**	**308**	*e*P		**P**	**10 00 57.1**	**+1.1**
	comp=Z,75nm,0.9s,baz=82,slow=8.1								
GRB3	**Grafenberg Arr**	**42.63**	**304**	P		**P**	**10 00 57.8**	**+1.3**
ABTA	**Abfaltersbach**	**42.63**	**300**	*e*P		**P**	**10 00 55.9**	**-0.7**
	comp=Z,46nm,1.6s								
ABTA				*e*P		**PP**	**10 02 38.2**	**+2.9**
	comp=Z,153nm,3.0s								
GRB1	**Grafenberg Arr**	**42.72**	**304**	P		**P**	**10 00 58.9**	**+1.7**
GRB2	**Grafenberg Arr**	**42.73**	**304**	P		**P**	**10 00 59.1**	**+1.9**
GRB5	**Grafenberg Arr**	**42.75**	**304**	P		**P**	**10 00 58.8**	**+1.3**
GRB4	**Grafenberg Arr**	**42.77**	**304**	P		**P**	**10 00 58.7**	**+1.1**
BJO1	**Bjornoya**	**42.82**	**342**	*e*P		**P**	**10 00 58.4**	**+0.7**
BJO1				IAmb		IAmb	10 00 58.9		
	comp=Z,142nm,0.9s								
BJO1				*e*PP		**PP**	**10 02 38.1**	**+1.4**
DLV	**Lat**	**42.83**	**119**	P		**P**	**10 00 59.2**	**+0.6**
DLV	**Lat**	**42.83**	**119**	IAmb		IAmb	10 01 02.9		
	comp=Z,80nm,1.0s								
DLV	**Lat**	**42.83**	**119**	P		**P**	**10 00 59.6**	**+1.0**
GRC3	**Grafenberg Arr**	**42.85**	**303**	P		**P**	**10 00 58.8**	**+0.6**
GRC4	**Grafenberg Arr**	**42.85**	**304**	P		**P**	**10 00 59.5**	**+1.2**
GRA2	**Grafenberg Arr**	**42.87**	**305**	P		**P**	**10 00 59.5**	**+1.1**
GRC1	**Grafenberg Arr**	**42.87**	**304**	P		**P**	**10 00 59.0**	**+0.6**
TPTI		**42.88**	**140**	P		**P**	**10 00 57.1**	**-1.6**
	comp=Z,31nm,0.6s								
GRA3	**Grafenberg Arr**	**42.88**	**305**	P		**P**	**10 00 59.7**	**+1.2**
GUMA	**Gualdo di Mace**	**42.91**	**295**	IAmb		IAmb	10 01 14.5		
	comp=Z,73nm,0.9s								
ASSE	**Asse, Remlinge**	**42.95**	**308**	*e*P		**P**	**10 01 00.3**	**+1.4**
	comp=Z,34nm,1.3s,baz=82,slow=8.1								
GRA1	**Grafenberg Arr**	**42.95**	**305**	IAmb		IAmb	10 01 07.3		
	comp=Z,73nm,0.9s								
GRA1	**Grafenberg Arr**	**42.95**	**305**	P		**P**	**10 01 01.3**	**+2.2**
GRF	**Grafenberg Arr**	**42.95**	**305**	*e*P		**P**	**10 01 01.6**	**+2.5**
	comp=Z,63nm,1.0s,baz=82,slow=8.1								
GRF				*e*L		L	10 21 05.6		
	comp=Z,5µm,19.0s								
GRFO	**Grafenberg**	**42.95**	**305**	P		**P**	**10 01 01.2**	**+2.2**
GRFO	**Grafenberg**	**42.95**	**305**	P		**P**	**10 01 01.2**	**+2.2**
GRFO				MLR		MLR			
	comp=Z,6µm,18.0s								
GRFO	**Grafenberg**	**42.95**	**305**	P		**P**	**10 01 01.3**	**+2.2**
BSEG	**Bad Segeberg**	**42.97**	**311**	*e*P		**P**	**10 01 01.1**	**+2.0**
	comp=Z,42nm,0.9s,baz=82,slow=8.1								
BSEG	**Bad Segeberg**	**42.97**	**311**	P		**P**	**10 01 00.3**	**+1.3**
GRC2	**Grafenberg Arr**	**42.99**	**303**	P		**P**	**10 01 00.3**	**+0.9**
KULM	**Kulim**	**43.03**	**134**	P		**P**	**10 01 00.4**	**+0.4**
KULM	**Kulim**	**43.03**	**134**	P		**P**	**10 00 59.9**	**-0.1**
KULM	**Kulim**	**43.03**	**134**	P		**P**	**10 00 58.7**	**-1.3**
	comp=Z,29nm,1.6s								
KULM	**Kulim**	**43.03**	**134**	P		**P**	**10 01 00.7**	**+0.7**
AQU	**L'Aquila**	**43.05**	**294**	P		**P**	**10 01 02.2**	**+2.1**
KONO	**Kongsberg**	**43.11**	**319**	P		**P**	**10 01 00.1**	**0.0**
KONO	**Kongsberg**	**43.11**	**319**	IAMs_20		IAMs_20	10 19 18.9		
	comp=Z,3µm,19.0s								
KONO	**Kongsberg**	**43.11**	**319**⇑	*i* P		**P**	**10 01 00.5**	**+0.4**
KONO				pmax		pmax			
	comp=Z,37nm,0.8s								
KONO	**Kongsberg**	**43.11**	**319**	*e*P		**P**	**10 01 00.1**	**0.0**
KONO				IAmb		IAmb	10 01 01.0		
	comp=Z,45nm,0.8s								
KONO				*e*PP		**PP**	**10 02 41.2**	**+1.1**
KONO				*e*S		**S**	**10 07 27.8**	**+1.9**
KONO	**Kongsberg**	**43.11**	**319**	P		**P**	**10 01 00.6**	**+0.4**
WTTA	**Wattenberg**	**43.12**	**301**	*i* P		**P**	**10 01 00.1**	**-0.5**
	comp=Z,18nm,1.9s,SNR=20								
WTTA				*e*PP		**PP**	**10 02 40.9**	**+0.3**
	comp=Z,3.2nm,0.6s								
WTTA

KLR Kul'dur 43.69 56 *c i*P P **10 01 04.3 -0.7**
KLR pmax pmax
comp=Z,50nm,1.4s
KLR MLR MLR
comp=Z,3µm,11.0s
HOMB Homborsund 43.70 317 *e*P P **10 01 05.3 +0.4**
HOMB IAmb IAmb 10 01 09.1
comp=Z,55nm,0.8s
HOMB *e*PP **PP** **10 02 47.0 +0.7**
HOMB Homborsund 43.70 317 *i*P P **10 01 05.0 +0.1**
SKAR Skarslia 43.76 321 IAmb IAmb 10 01 06.1
comp=Z,158nm,2.0s
SKAR *e*P P **10 01 06.3 +0.9**
SKAR *e*PP **PP** **10 02 47.3 +0.2**
SKAR *e*S S **10 07 36.2 +0.6**
SKAR *e*SS SS **10 10 54.6 +3.9**
FETA Feichten 43.77 301 *i*P P **10 01 05.2 -0.7**
comp=Z,14nm,1.0s,SNR=15
FETA *e*PP **PcP** **10 02 51.3 -1.2**
comp=Z,140nm,3.5s
VAE Valguarnera 43.82 286 LR LR 10 23 42.8
comp=Z,852nm,20.5s,baz=84,slow=42
RAFF Raffo Rosso 43.94 286 IAmb IAmb 10 01 17.6
comp=Z,63nm,0.8s
TJN Taejon 44.08 75 P P **10 01 08.9 +0.6**
KSAR Wonju Array Be 44.09 73 P P **10 01 07.9 -0.5**
KSAR Wonju Array Be 44.09 73 P P **10 01 07.9 -0.5**
KSRS Korea Array 44.12 73 P P **10 01 07.4 -1.2**
comp=Z,20nm,1.1s,baz=280,slow=6.8,SNR=44
KSRS PcP **PcP** **10 02 52.8 -0.8**
comp=Z,7.1nm,0.9s,baz=290,slow=3.3,SNR=4.5
comp=Z,20nm,1.1s
PSI Prapat 44.16 138 P P **10 01 10.8 +1.5**
PSI Prapat 44.16 138 P P **10 01 08.4 -0.9**
PSI Prapat 44.16 138 P P **10 01 08.2 -1.1**
FUORN Ofenpass-Fuorn 44.17 300 IAMs_20 IAMs_20 10 23 03.3
comp=Z,3µm,19.0s
FUORN Ofenpass-Fuorn 44.17 300 P P **10 01 09.7 +0.4**
SALO Salr 44.23 299 P P **10 01 08.9 -0.6**
SALO IAmb IAmb 10 01 14.8
comp=Z,71nm,0.9s
RPSI Rantau Prapat 44.25 138 P P **10 01 08.4 -1.4**
DAVA Damuels 44.28 301 *i*P P **10 01 09.5 -0.5**
comp=Z,13nm,0.5s,SNR=22
DAVA Damuels 44.28 301 P P **10 01 09.7 -0.3**
SNART Snartemo 44.38 317 *e*P P **10 01 11.0 +0.7**
SNART IAmb IAmb 10 01 15.0
comp=Z,100nm,0.7s
SNART *e*S S **10 07 46.4 +2.0**
SNART Snartemo 44.38 317 *i*P P **10 01 11.1 +0.8**
DAVOX Davos/Dischmat 44.39 301 P P **10 01 09.8 -1.1**
comp=Z,24nm,0.5s,baz=103,slow=5.3,SNR=47
DAVOX LR LR 10 22 53.2
comp=Z,4µm,18.7s,baz=80,slow=40
comp=Z,24nm,0.5s
AKN Aaknes 44.40 323 *e*P P **10 01 11.0 +0.5**
AKN IAmb IAmb 10 01 11.7
comp=Z,16nm,0.9s
AKN *e*PP **PP** **10 02 55.0 +1.1**
STU Stuttgart 44.42 304 *e*P P **10 01 12.5 +1.6**
comp=Z,76nm,1.0s,baz=82,slow=8.1
STU Stuttgart 44.42 304 P P **10 01 11.8 +0.9**
KASTN Kahler Asten 44.47 307 *e*P P **10 01 12.8 +1.5**
comp=Z,19nm,1.2s,baz=82,slow=8.1
TATO Taipei 44.54 93 IAMs_20 IAMs_20 10 22 03.3
comp=Z,3µm,19.0s
TATO Taipei 44.54 93 P P **10 01 12.4 +0.4**
ODD1 Odda 44.61 320 *e*P P **10 01 13.1 +0.8**
ODD1 IAmb IAmb 10 01 17.6
comp=Z,64nm,1.1s
ODD1 *e*PP **PP** **10 02 57.5 +1.3**
YHNB Yeheng 44.61 93 P P **10 01 14.6 +1.9**
YHNB Yeheng 44.61 93 IAMs_20 IAMs_20 10 22 15.0
comp=Z,3µm,18.0s
TNS Taunus Mts 44.62 306 *e*P P **10 01 14.2 +1.7**
comp=Z,18nm,1.1s,baz=82,slow=8.1
TNS Taunus Mts 44.62 306 P P **10 01 13.1 +0.5**
HSPB Hornsund (broa 44.66 345 *e*P P **10 01 14.2 +1.8**
HSPB *e*L L 10 21 40.9
comp=Z,5µm,16.1s
VLC Villacollemand 44.69 297 P P **10 01 15.0 +1.9**
IBBN Ibbenburen 44.70 309 *e*P P **10 01 14.8 +1.7**
comp=Z,72nm,1.0s,baz=82,slow=8.1
IBBN Ibbenburen 44.70 309 P P **10 01 14.0 +0.9**
BLS5 Blasjo 44.71 319 *e*P P **10 01 13.8 +0.7**
BLS5 IAmb IAmb 10 01 22.4
comp=Z,79nm,1.1s
BLS5 *e*PP **PP** **10 02 57.7 +0.5**
BLS5 *e*S S **10 07 49.6 +0.1**
SSLB Suanglung 44.74 95 P P **10 01 14.5 +0.7**
SSLB Suanglung 44.74 95 P P **10 01 13.9 +0.1**
SSLB IAmb IAmb 10 01 22.6
comp=Z,102nm,1.2s
SSLB IAMs_20 IAMs_20 10 22 56.5
comp=Z,3µm,19.0s
SSLB Suanglung 44.74 95 P P **10 01 16.0 +2.2**
TPUB Ta-pu 44.75 95 IAMs_20 IAMs_20 10 23 29.8
comp=Z,2µm,20.0s
GSI Gunungsitoli 44.76 141 P P **10 01 14.3 +0.4**
GSI Gunungsitoli 44.76 141 P P **10 01 13.8 -0.1**
GSI IAmb IAmb 10 01 18.2
comp=Z,105nm,1.1s
GSI Gunungsitoli 44.76 141 P P **10 01 13.2 -0.7**
comp=Z,3µmcomp=Z,93nm,1.2s
GSI Gunungsitoli 44.76 141 P P **10 01 14.5 +0.6**
HYA Hoyanger 44.79 321 *e*PP **PP** **10 02 58.7 +0.8**
HYA *e*S S **10 07 48.7 -1.6**
HYA *e*SS SS **10 11 13.4 +2.6**
TUE Stuetta 44.82 300 IAMs_20 IAMs_20 10 22 59.5
comp=Z,3µm,19.0s
TUE Stuetta 44.82 300 P P **10 01 14.3 0.0**
MSHR Mys Shultsa 44.85 65 *e*P P **10 01 15.0 +0.7**
MSHR pmax pmax
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 44.98 63 P P **10 01 15.0 -0.4**
comp=Z,11nm,0.7s,baz=278,slow=8.4,SNR=11
USRK LR LR 10 22 07.8
comp=Z,2µm,19.4s,baz=282,slow=39
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 44.98 63 P P **10 01 15.2 -0.2**
USRK Ussuriysk Ar. 44.98 63 P P **10 01 15.2 -0.2**
SPB2 Spitsbergen Ar 45.00 346 P P **10 01 15.0 -0.1**
SPB2 IAmb IAmb 10 01 28.6
comp=Z,62nm,0.9s
SPA0 Spitsbergen Ar 45.00 346 *e*P P **10 01 15.5 +0.4**
SPA0 IAmb IAmb 10 01 17.8
comp=Z,79nm,1.1s
SPA0 *e*PP **PP** **10 03 00.8 +0.8**
SPA0 *e*S S **10 07 55.8 +2.7**
SPA0 *e*ScS ScS **10 11 12.1 +0.4**
SPITS Spitsbergen Ar 45.00 346 P P **10 01 15.0 -0.1**
comp=Z,11nm,0.5s,baz=120,slow=14,SNR=23
SPITS PcP **PcP** **10 02 55.9 -0.1**
comp=Z,8.4nm,0.7s,baz=87,slow=9.1,SNR=1.7
SPITS LR LR 10 23 47.3
comp=Z,2µm,18.4s,baz=110,slow=41
comp=Z,11nm,0.5s
NACB Ninganchiao 45.03 94 P P **10 01 16.6 +0.5**
NACB Ninganchiao 45.03 94 IAMs_20 IAMs_20 10 23 40.3
comp=Z,4µm,21.0s
NACB Ninganchiao 45.03 94 P P 10 01 21.4 +5.3
BFO Black Forest 45.08 303 P P **10 01 15.7 -0.5**
BFO IAMs_20 IAMs_20 10 22 48.2
comp=Z,3µm,20.0s
BFO Black Forest 45.08 303 P P **10 01 15.7 -0.5**
BFO pmax pmax
comp=Z,36nm,0.9s
BFO MLR MLR
comp=Z,3µm,20.0s
BFO Black Forest 45.08 303 *e*P P **10 01 17.4 +1.3**
comp=Z,28nm,1.0s,baz=82,slow=8.1
SLE Schleitheim 45.09 302 P P **10 01 16.8 +0.5**
BUG Bochum--Univer 45.14 308 *e*P P **10 01 18.3 +1.8**
comp=Z,36nm,1.0s,baz=82,slow=8.1
BUG Bochum--Univer 45.14 308 P P **10 01 18.0 +1.5**
YULB Yu-li 45.22 95 P P **10 01 19.3 +1.8**
YULB Yu-li 45.22 95 P P **10 01 20.7 +3.2**
BER Bergen 45.23 320 *e*P P **10 01 17.7 +0.6**
BER IAmb IAmb 10 01 18.8
comp=Z,30nm,0.8s
BER *e*PP **PP** **10 03 03.8 +1.1**
BER *e*S S **10 07 56.0 -0.8**
BER *e*SS SS **10 11 22.9 +3.8**
ASK Askoy 45.30 321 *e*P P **10 01 18.4 +0.7**
ASK IAmb IAmb 10 01 21.7
comp=Z,176nm,1.6s
ASK *e*PP **PP** **10 03 04.2 +0.9**
ASK *e*SS SS 10 11 24.9 +4.8
FOO Floro 45.33 322 *e*P P **10 01 18.0 +0.1**
FOO IAmb IAmb 10 01 21.8
comp=Z,204nm,1.9s
FOO *e*PP **PP** **10 03 03.4 -0.2**
FOO *e*S S **10 07 58.1 0.0**
FOO *e*SS SS **10 11 24.8 +4.1**
BNALP Bannalp 45.34 301 P P **10 01 18.0 -0.5**
KMY Karmoy 45.34 319 *e*P P **10 01 19.0 +1.0**
KMY IAmb IAmb 10 01 19.4
comp=Z,61nm,1.0s
KMY *e*PP **PP** **10 03 04.5 +0.6**
KMY *e*S S **10 08 00.1 +1.6**
KMY *e*SS SS **10 11 24.4 +3.3**
TWG Pinlang 45.35 96 P P **10 01 19.6 +1.0**
TWG IAMs_20 IAMs_20 10 23 06.9
comp=Z,3µm,18.0s
TWG Pinlang 45.35 96 P P **10 01 22.5 +3.9**
TWGBT Beinan 45.36 96 P P **10 01 20.4 +1.8**
SUE Sulen 45.48 321 *e*P P **10 01 19.8 +0.7**
SUE *e*PP **PP** **10 03 06.3 +1.0**
SUE *e*SS SS 10 11 27.6 +4.2
ECH Echery 45.87 303 IAMs_20 IAMs_20 10 23 06.0
comp=Z,3µm,18.0s
ECH Echery 45.87 303 P P **10 01 23.1 +0.7**
BOURR Bourrignon 46.01 302 P P **10 01 24.1 +0.5**
MEM Membach 46.08 307 *d*P P **10 01 24.4 +0.4**
comp=Z,34nm,1.1s
MEM Membach 46.08 307 P P **10 01 24.8 +0.8**
KBS Kingsbay 46.12 347 P P **10 01 23.8 -0.1**
KBS Kingsbay 46.12 347 P P **10 01 23.8 -0.1**
KBS pmax pmax
comp=Z,159nm,1.1s
KBS MLR MLR
comp=Z,2µm,20.0s
KBS Kingsbay 46.12 347 *e*P P **10 01 24.9 +1.0**
KBS IAmb IAmb 10 01 28.5
comp=Z,164nm,1.1s
KBS *e*PP **PP** **10 03 13.8 +2.0**
KBS *e*SS SS 10 11 39.3 +5.5
KBS Kingsbay 46.12 347 P P **10 01 24.5 +0.6**
KBS Kingsbay 46.12 347 *i*P P **10 01 23.8 -0.1**
WLF Walferdange 46.19 305 IAmb IAmb 10 01 32.8
comp=Z,64nm,0.9s
WLF Walferdange 46.19 305 *d*P P **10 01 26.3 +1.4**
comp=Z,50nm,0.9s
WLF Walferdange 46.19 305 *e*P P **10 01 26.9 +2.0**
comp=Z,52nm,0.9s,baz=82,slow=8.1
WLF Walferdange 46.19 305 P P **10 01 26.7 +1.8**
MNSI Mandailing Nat 46.20 138 P P **10 01 24.6 -0.7**
comp=Z,54nm,0.9s
SENIN Lac Senin/Sane 46.22 301 IAmb IAmb 10 01 29.9
comp=Z,48nm,0.8s
SENIN IAMs_20 IAMs_20 10 23 56.5
comp=Z,4µm,19.0s
PBSI Pulau Batu 46.28 141 P P **10 01 26.5 +0.6**
comp=Z,157nm,1.5s
GRNR Gornyy 46.35 53 *e*P P **10 01 25.1 -1.1**
GRNR MLR MLR
comp=E,2µm,13.0s
GRNR MLR MLR
comp=N,1µm,17.0s
BCLA Clavier 46.56 307 *d*P P **10 01 29.2 +1.4**
comp=Z,11nm,0.9s
RCHB Rochefort 46.66 306 *d*P P **10 01 29.6 +1.0**
comp=Z,15nm,1.0s
RCHB *d*PP **PP** **10 03 19.6 +1.5**
RCHB Rochefort 46.66 306 P P **10 01 29.9 +1.3**
GIMEL St. Georges / 46.87 301 P P **10 01 31.3 +0.9**
ESCA l'Escarene 46.87 297 P P **10 01 31.0 +0.7**
BMRD Maredsous 46.92 307 *d*P P **10 01 31.6 +1.0**
comp=Z,31nm,1.1s
BMRD *d*PcP **PcP** **10 03 03.7 +0.6**
BMRD *d*PP **PP** **10 03 22.8 +2.0**
ISO Isola 46.99 298 P P **10 01 32.0 +0.6**
BNI Bardonecchia 46.99 299 IAmb IAmb 10 01 41.7
comp=Z,62nm,1.1s
BNI Bardonecchia 46.99 299 P P **10 01 32.3 +0.8**
UCC Uccle 47.07 307 *d*P P **10 01 30.7 -1.0**
DOU Dourbes 47.08 306 *d*P P **10 01 33.1 +1.3**
comp=Z,24nm,1.1s
DOU *d*PP **PP** **10 03 26.7 +4.4**
CALF Calern 47.21 297 P P **10 01 34.4 +1.3**
PPI Padang Panjang 47.69 138 P P **10 01 35.6 -1.4**
comp=Z,2µmcomp=Z,31nm,0.8s
MYKOM Kota Tinggi 47.70 133 P P **10 01 36.4 -0.7**
MYKOM Kota Tinggi 47.70 133 IAmb IAmb 10 01 41.1
comp=Z,55nm,1.0s
MYKOM Kota Tinggi 47.70 133 P P **10 01 35.3 -1.8**
comp=Z,1µmcomp=Z,69nm,1.1s
LODK Lodwar 48.01 231 P P **10 01 41.2 +1.7**
LODK Lodwar 48.01 231 P P **10 01 41.5 +2.0**
SNR=12
LODK Lodwar 48.01 231 P P **10 01 41.4 +1.9**
BTDF Bukit Timah Da 48.01 133 P P **10 01 40.2 +0.8**
BTDF Bukit Timah Da 48.01 133 P P **10 01 39.7 +0.3**
comp=Z,3µmcomp=Z,28nm,1.1s
PDSI Padang 48.11 139 P P **10 01 39.2 -1.1**
comp=Z,4µmcomp=Z,61nm,0.9s
KEST Kesra 48.25 286 P P **10 01 42.0 +0.8**
comp=Z,21nm,0.7s,baz=14,slow=5.2,SNR=10
KEST LR LR 10 25 56.1
comp=Z,809nm,21.0s,baz=62,slow=41
comp=Z,21nm,0.7s
KEST Kesra 48.25 286 IAmb IAmb 10 01 46.9
comp=Z,59nm,1.2s
KEST Kesra 48.25 286 P P **10 01 42.2 +0.9**
SNR=5.5
SSB Saint Sauveur 48.38 300 IAmb IAmb 10 01 47.4
comp=Z,40nm,1.1s
SSB Saint Sauveur 48.38 300 P P **10 01 43.1 +1.0**
ARBF Arbois 48.38 298 P P **10 01 46.3 +4.2**
LRW Lerwick 48.49 320 *e*P P **10 01 42.5 -0.1**
LRW IAmb IAmb 10 01 44.5
comp=Z,36nm,0.9s
ELMS Elmsett, Ipswi 48.83 310 *e*P P **10 01 45.2 -0.1**
ELMS IAmb IAmb 10 01 47.1
comp=Z,123nm,0.7s
WACR West Acre 48.90 311 *e*P P **10 01 46.1 +0.3**
WACR IAmb IAmb 10 01 47.8
comp=Z,149nm,0.8s
CLF Chambon-Foret 49.09 304 IAmb IAmb 10 01 52.3
comp=Z,52nm,0.9s
CLF IAMs_20 IAMs_20 10 24 30.2
comp=Z,2µm,19.0s
CLF Chambon-Foret 49.09 304 P P **10 01 47.1 -0.2**
DRUM Mains of Drumt 49.73 316 P P **10 01 52.5 +0.3**
DRUM Mains of Drumt 49.73 316 *e*P P **10 01 51.5 -0.7**
DRUM IAmb IAmb 10 01 53.5
comp=Z,30nm,0.7s
EDMD Edmundbyers 49.90 314 P P **10 01 54.2 +0.6**
EDMD Edmundbyers 49.90 314 *e*P P **10 01 52.9 -0.7**
EDMD IAmb IAmb 10 01 56.4
comp=Z,41nm,0.9s
HPK Haverah Park 49.92 313 *e*P P **10 01 53.5 -0.1**
HPK IAmb IAmb 10 01 54.4
comp=Z,51nm,0.5s
MCD Coleburn Disti 50.00 317 *e*P P **10 01 53.8 -0.5**
MCD IAmb IAmb 10 01 55.7
comp=Z,58nm,0.7s
LBWR Ladybower, Pea 50.11 312 *e*P P **10 01 55.0 -0.1**
LBWR IAmb IAmb 10 01 56.5
comp=Z,23nm,0.7s
TYV Tymovskoe 50.17 52 *e*P P **10 01 56.5 +0.9**
TYV *e*S S **10 09 12.0 +4.9**
TYV pmax pmax
comp=Z,19nm,1.5s
TYV pmax pmax
comp=Z,700nm,4.9s
TYV smax smax
comp=N,500nm,5.1s
TYV smax smax
comp=E,500nm,5.1s
TYV MLR MLR
comp=Z,2µm,18.0s
JNE Jan Mayen East 50.17 335 *e*PP **PP** **10 03 52.0 +1.8**
JNW Jan Mayen West 50.21 335 *e*PP **PP** **10 03 51.3 +0.7**
JNW *e*S S **10 09 09.1 +1.9**
JMIC Jan Mayen 50.24 335 LR LR 10 23 33.1
comp=Z,3µm,19.5s,baz=74,slow=36
JMIC Jan Mayen 50.24 335 *e*PP **PP** **10 03 51.2 +0.3**
TGY Tagaytay City 50.37 105 LR LR 10 24 49.9
comp=Z,2µm,21.1s,baz=30,slow=38
SJAF Saint Jean de 50.41 297 P P **10 01 58.2 +0.6**
EKA Eskdalemuir Ar 50.45 315 P P **10 01 56.9 -0.8**
comp=Z,29nm,0.8s,baz=91,slow=9.2,SNR=71
EKA LR LR 10 23 54.3
comp=Z,3µm,20.9s,baz=72,slow=37
comp=Z,29nm,0.8s
EKA Eskdalemuir Ar 50.45 315 P P **10 01 56.6 -1.1**
EKA pmax pmax
comp=Z,44nm,0.9s
EKB Eskdalemuir 50.47 315 P P **10 01 57.2 -0.6**
EKB IAmb IAmb 10 01 58.8
comp=Z,46nm,0.9s
ESK Eskdalemuir 50.48 315 P P **10 01 57.4 -0.5**
ESK Eskdalemuir 50.48 315 P P **10 01 57.4 -0.5**
ESK pmax pmax
comp=Z,43nm,1.0s
ESK MLR MLR
comp=Z,4µm,20.0s
ESK Eskdalemuir 50.48 315 P P **10 01 57.8 -0.1**
ESK Eskdalemuir 50.48 315 *e*P P **10 01 57.1 -0.8**
ESK IAmb IAmb 10 02 00.7
comp=Z,19nm,0.8s
KESW Keswick, Cumbr 50.60 314 P P **10 01 59.8 +0.9**
KESW Keswick, Cumbr 50.60 314 *e*P P **10 01 58.2 -0.7**
KESW IAmb IAmb 10 02 01.6
comp=Z,36nm,0.8s
INVG Invergeldie, C 50.68 316 *e*P P **10 01 59.0 -0.4**
INVG IAmb IAmb 10 02 01.0
comp=Z,23nm,0.9s
EAB Aberfoyle 50.90 316 *e*P P **10 02 00.2 -0.8**
EAB IAmb IAmb 10 02 02.2
comp=Z,24nm,0.9s
HLM1 Long Mynd 51.02 311 *e*P P **10 02 01.4 -0.6**
HLM1 IAmb IAmb 10 02 02.9
comp=Z,13nm,0.9s
PGBU Glenifferbraes 51.07 315 *e*P P **10 02 02.2 -0.1**
PGBU IAmb IAmb 10 02 03.8
comp=Z,107nm,0.7s
NEWG New Galloway 51.10 314 *e*P P **10 02 02.2 -0.3**
NEWG IAmb IAmb 10 02 04.2
comp=Z,39nm,0.8s
KIBK Kibwezi 51.13 224 P P **10 02 02.5 -0.9**
KIBK Kibwezi 51.13 224 P P **10 02 04.9 +1.5**
MONM Monmouth 51.16 310 *e*P P **10 02 02.7 -0.3**
MONM IAmb IAmb 10 02 04.1
comp=Z,33nm,0.9s
MCH1 Michaelchurch 51.23 310 *e*P P **10 02 03.4 -0.2**
MCH1 IAmb IAmb 10 02 04.8
comp=Z,38nm,0.9s
NOR Nord 51.28 349 *i*P P **10 02 03.4 -0.3**
NOR IAmb IAmb 10 02 07.3
comp=Z,81nm,1.4s
KPL Plockton 51.32 317 *e*P P **10 02 03.3 -0.8**
KPL IAmb IAmb 10 02 05.4
comp=Z,32nm,0.9s
YSS Yuzhno-Sakhali 51.40 56 P P **10 02 04.7 -0.2**
YSS Yuzhno-Sakhali 51.40 56 P P **10 02 04.8 -0.1**
YSS IAmb IAmb 10 02 06.7
comp=Z,103nm,1.2s
YSS Yuzhno-Sakhali 51.40 56 *αe*P P **10 02 04.1 -0.8**
YSS *e**PP **sP** **10 02 12.3 +1.2**
YSS *e* 10 04 06.7
YSS *e*S S **10 09 22.0 -2.2**
YSS pmax pmax
comp=Z,50nm,0.8s
YSS pmax pmax
comp=Z,300nm,3.9s
YSS pmax pmax
comp=E,200nm,5.6s
YSS smax smax
comp=N,100nm,6.9s
YSS smax smax
comp=E,400nm,5.2s
YSS MLR MLR
comp=Z,2µm,15.0s
YSS MLR MLR
comp=N,700nm,17.0s
YSS MLR MLR
comp=E,2µm,12.0s
YSS Yuzhno-Sakhali 51.40 56 P P **10 02 06.0 +1.1**
LAWE Loch Awe, Argy 51.45 316 *e*P P **10 02 05.3 +0.1**
LAWE IAmb IAmb 10 02 06.7
comp=Z,29nm,0.9s
CEST Esterni de Car 51.50 298 P P **10 02 05.3 -0.7**
IOMK Kirk Michael 51.52 313 P P **10 02 05.6 -0.1**
INU Inuyama 51.69 72 P P **10 02 07.0 -0.3**
INU Inuyama 51.69 72 IAmb IAmb 10 02 09.9
comp=Z,43nm,0.8s
INU IAMs_20 IAMs_20 10 26 12.1
comp=Z,2µm,19.0s
INU Inuyama 51.69 72 P P **10 02 07.5 +0.2**
JGF Kuroka 51.84 72 P P **10 02 08.1 -0.4**
JGF Kuroka 51.84 72 P P **10 02 08.0 -0.5**
MAJO Matsushiro 52.07 70 P P **10 02 08.2 -2.0**
MAJO Matsushiro 52.07 70 P P **10 02 08.9 -1.3**
MAJO Matsushiro 52.07 70 *c i*P P **10 02 08.4 -1.8**
MAJO pmax pmax
comp=Z,31nm,0.9s
MAJO Matsushiro 52.07 70 P P **10 02 09.1 -1.1**
MJAR Matsushiro Arr 52.07 70 P P **10 02 08.2 -2.0**
comp=Z,24nm,0.9s,baz=292,slow=9.4,SNR=41
comp=Z,24nm,0.9s
MJAR Matsushiro Arr 52.07 70 P P **10 02 08.9 -1.3**
MJAR Matsushiro Arr 52.07 70 P P **10 02 08.9 -1.3**
MJAR pmax pmax
comp=Z,33nm,0.9s
CLGH Cloghs, Cushen 52.15 315 *e*P P **10 02 10.4 0.0**
CLGH IAmb IAmb 10 02 12.9
comp=Z,18nm,0.9s
JKA Kamikawa-asahi 52.26 60 IAmb IAmb 10 02 20.0
comp=Z,76nm,1.4s
JKA Kamikawa-asahi 52.26 60 P P **10 02 11.4 0.0**
DAG Danmarks Havn 52.27 343 P P **10 02 11.1 +0.1**
DAG Danmarks Havn 52.27 343 *i*P P **10 02 10.4 -0.6**
SEY Seymchan 52.32 35 LR LR 10 25 59.6
comp=Z,2µm,18.2s,baz=286,slow=38
SEY Seymchan 52.32 35 *i*P P **10 02 11.3 -0.3**
SEY pmax pmax
comp=Z,15nm,0.9s
SEY MLR MLR
comp=Z,4µm,12.0s
KKM Kota Kinabalu 52.35 117 P P **10 02 13.6 +1.1**
KKM Kota Kinabalu 52.35 117 P P **10 02 12.9 +0.4**
KKM IAmb IAmb 10 02 23.2
comp=Z,109nm,1.2s
KKM IAMs_20 IAMs_20 10 27 50.8
comp=Z,3µm,19.0s
KKM Kota Kinabalu 52.35 117 P P **10 02 11.9 -0.6**
comp=Z,1µmcomp=Z,77nm,1.5s
KKM Kota Kinabalu 52.38 117 P P **10 02 14.0 +1.5**
MA2 Magadan 52.38 39 LR LR 10 25 24.8
comp=Z,2µm,19.4s,baz=280,slow=37
MA2 Magadan 52.38 39 P P **10 02 12.4 +0.3**
MA2 Magadan 52.38 39 P P **10 02 11.5 -0.6**
MA2 IAmb IAmb 10 02 18.2
comp=Z,100nm,1.1s
MA2 IAMs_20 IAMs_20 10 25 24.5
comp=Z,3µm,18.0s
MA2 Magadan 52.38 39 *c i*P P **10 02 12.3 +0.2**
MA2 pmax pmax
comp=Z,46nm,1.0s
MA2 MLR MLR
comp=Z,2µm,12.0s
MA2 Magadan 52.38 39 P P **10 02 12.9 +0.8**
JTM Tenmabayashi 52.44 64 P P **10 02 11.5 -1.3**
JTM Tenmabayashi 52.44 64 P P **10 02 12.9 +0.1**
ILTH Belurgan, Co L 52.58 314 P P **10 02 12.9 -0.7**
ATE Arette 52.66 299 P P **10 02 16.3 +1.8**
DSB Dublin 52.84 313 P P **10 02 15.5 0.0**
DSB Dublin 52.84 313 IAMs_20 IAMs_20 10 28 46.2
comp=Z,3µm,19.0s
IDGL Inch Island, C 52.93 315 P P **10 02 16.9 +0.7**
IDGL Inch Island, C 52.93 315 P P **10 02 17.1 +1.0**
IDGL Inch Island, C 52.93 315 *e*P P **10 02 16.8 +0.6**
IDGL IAmb IAmb 10 02 18.4
comp=Z,40nm,1.1s
DBG Daneborg 53.17 340 *i*P P **10 02 18.1 +0.5**
DBG IAmb IAmb 10 02 20.5
comp=Z,14nm,0.9s
IWEX Carrickbyrne, 53.34 312 P P **10 02 19.0 -0.2**
MBAR Mbarara 54.00 233 LR LR 10 26 02.7
comp=Z,2µm,21.5s,baz=36,slow=37
MBAR Mbarara 54.00 233 P P **10 02 24.2 -0.6**
MBAR Mbarara 54.00 233 IAMs_20 IAMs_20 10 25 51.2
comp=Z,2µm,22.0s

MBAR Mbarara 54.00 233 P **P** **10 02 24.2 -0.6**
MBAR pmax pmax
comp=Z,26nm,1.1s
MBAR MLR MLR
comp=Z,2µm,22.0s
MBAR Mbarara 54.00 233 P **P** **10 02 25.4 +0.7**
MBAR Mbarara 54.00 233 P **P** **10 02 25.6 +0.8**
IGLA Glengowla, Co 54.49 314 P **P** **10 02 27.1 -0.5**
SCO Scoresbysund 54.71 336 *i* P **P** **10 02 29.5 +0.6**
SCO IAmb IAmb 10 02 34.0
comp=Z,10nm,1.1s
JHJ Hachijo jima 2 54.73 73 LR LR 10 27 05.7
comp=Z,2µm,20.8s,baz=89,slow=37
CART Cartagena 55.07 293 IAmb IAmb 10 02 38.4
comp=Z,47nm,0.8s
CART Cartagena 55.07 293 P **P** **10 02 32.8 +0.7**
EMUR La Murta 55.13 293 P **P** **10 02 33.0 +0.3**
KUR Kuril'sk 55.33 57 *eP* **P** **10 02 32.7 -1.1**
KUR *e*PPP PPP 10 05 47.9
KUR *e*S **S** **10 10 17.6 -0.2**
KUR *e*SS **SS** **10 14 02.4 +0.7**
KUR MLR MLR
comp=Z,2µm,13.0s
KUR MLR MLR
comp=N,1µm,12.0s
KUR MLR MLR
comp=E,700nm,11.0s
VAL Valentia 55.49 312 P **P** **10 02 34.6 -0.3**
UCM Universidad Co 55.50 297 P **P** **10 02 34.2 -1.0**
ESDC Sonseca Array 56.27 296 P **P** **10 02 40.4 -0.4**
comp=E,9.7nm,0.6s,baz=57,slow=7.5,SNR=41
ESDC LR LR 10 31 53.0
comp=E,1µm,18.3s,baz=48,slow=41
comp=E,9.7nm,0.6s
ESDC Sonseca Array 56.27 296 P **P** **10 02 40.2 -0.6**
BILL Bilibino 56.33 27 P **P** **10 02 40.9 +0.2**
BILL IAmb IAmb 10 02 46.5
comp=Z,40nm,0.8s
BILL Bilibino 56.33 27 *c i*P **P** **10 02 40.5 -0.2**
BILL pmax pmax
comp=Z,37nm,1.0s
BILL MLR MLR
comp=Z,4µm,16.0s
BORG Borgarnes 56.39 329 LR LR 10 27 04.2
comp=Z,2µm,19.4s,baz=76,slow=36
PAB San Pablo 56.60 296 P **P** **10 02 41.8 -1.3**
PAB San Pablo 56.60 296 P **P** **10 02 41.8 -1.3**
PAB pmax pmax
comp=Z,17nm,1.0s
PAB MLR MLR
comp=Z,1µm,19.0s
LEM Lembang 56.90 135 LR LR 10 28 09.8
comp=Z,984nm,21.6s,baz=334,slow=37
ECAL Calabor 57.21 300 P **P** **10 02 48.3 +0.9**
PBRG Braganca 57.27 300 *eP* **P** **10 02 48.4 +0.5**
PBRG *i* IAmb IAmb 10 02 53.0
comp=Z,47nm,1.8s
TAM Tamanrasset 57.30 274 P **P** **10 02 47.5 -0.9**
TAM IAmb IAmb 10 02 52.3
comp=Z,35nm,0.6s
TAM Tamanrasset 57.30 274 P **P** **10 02 47.5 -0.9**
TAM pmax pmax
comp=Z,35nm,0.6s
TAM MLR MLR
comp=Z,300nm,18.0s
TAM Tamanrasset 57.30 274 P **P** **10 02 49.4 +0.9**
MVO Moncorvo 57.74 299 *eP* **P** **10 02 55.1 +3.9**
MVO *i* IAmb IAmb 10 02 59.5
comp=Z,34nm,1.9s
MVO *e*S S 10 10 06.8 -43
MVO *i* IAMs_20 IAMs_20 10 33 43.4
comp=Z,993nm,18.0s
BKB Balikpapan 58.15 122 IAMs_20 IAMs_20 10 31 54.6
comp=Z,3µm,19.0s
PVRL Vila Real 58.16 300 *eP* **P** **10 02 54.7 +0.6**
PVRL *i* IAmb IAmb 10 03 00.2
comp=Z,35nm,1.5s
PEA0B Petropavlovsk- 58.16 45 P **P** **10 02 54.0 +0.1**
PEA0B IAmb IAmb 10 02 56.7
comp=Z,62nm,1.1s
PEA0B Petropavlovsk- 58.16 45 P **P** **10 02 54.0 +0.1**
PEA0B pmax pmax
comp=Z,63nm,1.2s
PETK Petropavlovsk- 58.16 45 P **P** **10 02 53.0 -0.9**
comp=Z,31nm,1.0s,baz=316,slow=4.1,SNR=17
PETK LR LR 10 30 57.6
comp=Z,1µm,18.4s,baz=294,slow=39
comp=Z,31nm,1.0s
PETK Petropavlovsk- 58.16 45 P **P** **10 02 53.3 -0.6**
PETK Petropavlovsk- 58.16 45 P **P** **10 02 53.3 -0.6**
POLO Lamas de Olo 58.17 300 *eP* **P** **10 02 58.0 +3.8**
POLO *i* IAmb IAmb 10 02 59.3
comp=Z,20nm,2.0s
PCAB Cabril 58.18 300 *eP* **P** **10 02 54.8 +0.6**
PCAB *i* IAmb IAmb 10 03 01.4
comp=Z,85nm,1.7s
PGAV Gavieira, Arco 58.23 300 *eP* **P** **10 02 55.0 +0.3**
PGAV *i* IAmb IAmb 10 03 01.0
comp=Z,81nm,1.8s
PGAV *e*S **S** **10 11 00.6 +4.1**
PGAV *i* IAMs_20 IAMs_20 10 31 23.0
comp=Z,1µm,18.0s
SKR Severo-Kuril's 58.26 48 *eP* P 10 02 43.2 -11
SKR *e*S **S** **10 10 53.8 -2.4**
SKR pmax pmax
comp=Z,100nm,6.4s
SKR MLR MLR
comp=Z,2µm,17.0s
DAV Davao City (W) 58.38 108 LR LR 10 31 45.9
comp=Z,2µm,19.5s,baz=347,slow=40
DAV Davao City (W) 58.38 108 IAMs_20 IAMs_20 10 31 53.5
comp=Z,3µm,19.0s
MTE Manteigas 58.43 299 *eP* **P** **10 02 57.1 +1.1**
MTE *i* IAmb IAmb 10 03 03.3
comp=Z,51nm,1.7s
MTE *e*S **S** **10 10 59.6 +0.6**
MTE *i* IAMs_20 IAMs_20 10 32 19.0
comp=Z,800nm,18.0s
MTE Manteigas 58.43 299 P **P** **10 02 57.3 +1.3**
PVIS Viseu 58.53 299 *eP* **P** **10 02 57.3 +0.6**
NEEM North Greenlan 58.53 347 *i* P **P** **10 02 56.0 -0.4**
NEEM IAmb IAmb 10 03 00.2
comp=Z,107nm,0.9s
SUMG Summit 58.64 341 IAMs_20 IAMs_20 10 28 27.6
comp=Z,2µm,19.0s
SUMG Summit 58.64 341 P **P** **10 02 58.7 +1.4**
SUMG Summit 58.64 341 *i* P **P** **10 02 58.1 +0.7**
SUMG IAmb IAmb 10 03 01.8
comp=Z,131nm,0.8s
SOEG Soedalen 58.67 335 *i* P **P** **10 02 57.7 +0.6**
PET Petropavlovsk 58.72 45 P **P** **10 02 55.5 -2.3**
PET Petropavlovsk 58.72 45 P **P** **10 02 56.1 -1.7**
PET IAmb IAmb 10 02 57.8
comp=Z,60nm,1.0s
PET Petropavlovsk 58.72 45 *eP* **P** **10 02 55.4 -2.3**
PET *e*S **S** **10 10 56.2 -6.0**
PET *e*PS **PnS** **10 11 18.1 +4.5**
PET *e*SS **SS** **10 14 59.5 +4.8**
PET pmax pmax
comp=Z,400nm,3.4s
PET pmax pmax
comp=Z,100nm,5.5s
PET pmax pmax
comp=Z,65nm,1.0s
PET MLR MLR
comp=Z,2µm,15.0s
PET MLR MLR
comp=Z,2µm,14.0s
PET Petropavlovsk 58.72 45 P **P** **10 02 55.9 -1.8**
PMRV Marv??o 58.76 297 *eP* **P** **10 02 59.3 +1.0**
PMRV *i* IAmb IAmb 10 03 04.2
comp=Z,51nm,1.9s
PMRV *e*S **S** **10 11 05.4 +2.1**
PMRV *i* IAMs_20 IAMs_20 10 33 07.8
comp=Z,1µm,18.0s
PBAR Barrancos 59.09 296 *eP* **P** **10 03 01.4 +0.9**
PBAR *i* IAmb IAmb 10 03 06.8
comp=Z,80nm,1.7s
SFS San Fernando 59.29 294 IAMs_20 IAMs_20 10 30 01.6
comp=Z,2µm,22.0s
JCJ Chichijima 59.48 78 LR LR 10 32 02.8
comp=Z,1µm,19.8s,baz=324,slow=39
PMTG Montargil 59.50 297 *eP* **P** **10 03 06.5 +3.1**
PMTG *i* IAmb IAmb 10 03 07.8
comp=Z,39nm,1.4s

PBEJ Beja 59.73 296 *eP* **P** **10 03 06.0 +0.9**
PBEJ *i* IAmb IAmb 10 03 10.4
comp=Z,53nm,1.9s
PVAQ Vaqueiros 59.92 296 IAmb IAmb 10 03 14.9
comp=Z,33nm,1.0s
PVAQ Vaqueiros 59.92 296 *eP* **P** **10 03 07.3 +1.0**
PVAQ *i* IAmb IAmb 10 03 39.4
comp=Z,67nm,1.4s
PVAQ *e*S **S** **10 11 16.9 -1.3**
PVAQ *i* IAMs_20 IAMs_20 10 34 19.6
comp=Z,2µm,18.0s
MD01 Midelt array s 59.97 290 P **P** **10 03 06.1 -0.8**
PCVE Castro Verde 60.04 296 *eP* **P** **10 03 08.8 +1.7**
MESJ Messejana 60.07 296 *eP* **P** **10 03 07.2 -0.2**
MESJ *e*S **S** **10 11 20.6 +0.5**
MESJ IAMs_20 IAMs_20 10 32 52.5
comp=Z,2µm,26.0s
MESJ Messejana 60.07 296 *eP* **P** **10 03 08.8 +1.4**
PLOUS Minas do Lousa 60.12 296 *eP* **P** **10 03 09.0 +1.4**
PMAFR Mafra 60.28 298 *eP* **P** **10 03 11.0 +2.2**
PTEO Sao Teotonio 60.56 296 *eP* **P** **10 03 11.8 +1.2**
MORF Marmelete 60.62 296 *eP* **P** **10 03 11.0 -0.2**
MORF *e*S **S** **10 11 28.0 +0.6**
MORF IAMs_20 IAMs_20 10 34 35.7
comp=Z,2µm,14.4s
PFVI Vila Bisbo 60.83 296 *eP* **P** **10 03 14.5 +1.9**
OPO Ambohidratompo 61.50 206 LR LR 10 27 33.3
comp=Z,412nm,21.1s,baz=38,slow=34
KULLO Kullorsuaq 61.58 346 *i* P **P** **10 03 16.2 -0.8**
KULLO IAmb IAmb 10 03 18.1
comp=Z,61nm,0.9s
ABPO Ambohimpanom 61.91 206 P **P** **10 03 21.2 +1.2**
TULEG Thule 61.91 350 P **P** **10 03 19.5 +0.3**
TULEG IAMs_20 IAMs_20 10 31 00.1
comp=Z,2µm,19.0s
TULEG Thule 61.91 350 *i* P **P** **10 03 18.9 -0.4**
TULEG IAmb IAmb 10 03 20.5
comp=Z,65nm,1.1s
ANGG Ammassalik, Gr 62.11 334 IAmb IAmb 10 03 22.4
comp=Z,52nm,0.8s
ANGG Ammassalik, Gr 62.11 334 *i* P **P** **10 03 20.2 -0.5**
UPNV Upernavik 62.66 344 P **P** **10 03 25.4 +1.2**
UPNV Upernavik 62.66 344 *i* P **P** **10 03 23.9 -0.4**
UPNV IAmb IAmb 10 03 28.0
comp=Z,56nm,0.8s
KAPI Kappang 62.83 123 LR LR 10 34 09.9
comp=Z,788nm,20.5s,baz=280,slow=39
NUUG Nuugaatsiaq 62.90 343 *i* P **P** **10 03 26.2 +0.4**
NUUG IAmb IAmb 10 03 30.1
comp=Z,122nm,1.8s
SAATT Saattut 63.03 342 *i* P **P** **10 03 25.9 -0.8**
SAATT IAmb IAmb 10 03 36.9
comp=Z,40nm,1.1s
TNTI Ternate 63.94 112 P **P** **10 03 35.3 +1.7**
TNTI Ternate 63.94 112 P **P** **10 03 34.8 +1.1**
ILULI Ilulissat 63.98 340 IAMs_20 IAMs_20 10 31 18.7
comp=Z,2µm,19.0s
ILULI Ilulissat 63.98 340 *i* P **P** **10 03 33.0 -0.1**
ILULI IAmb IAmb 10 03 34.3
comp=Z,112nm,0.9s
A19K Wainwright 64.73 17 P **P** **10 03 37.9 0.0**
baz=317
VOI Vohitsoka 64.74 205 P **P** **10 03 39.0 +0.3**
SNR=5.7
VOI Vohitsoka 64.74 205 P **P** **10 03 38.7 0.0**
VOI Vohitsoka 64.74 205 P **P** **10 03 39.0 +0.3**
A21K Barrow 64.85 15 P **P** **10 03 38.3 -0.4**
baz=321
C16K Lisburne Hills 65.06 20 IAMs_20 IAMs_20 10 35 51.0
comp=Z,2µm,22.0s
C16K Lisburne Hills 65.06 20 P **P** **10 03 39.7 -0.4**
baz=314
EDA Edea 65.17 254 P **P** **10 03 40.8 -0.9**
EDA IAMs_20 IAMs_20 10 33 28.7
comp=Z,1µm,21.0s
SFJD Kangerlussuaq 65.37 338 LR LR 10 31 55.1
comp=Z,2µm,21.3s,baz=41,slow=36
SFJD Kangerlussuaq 65.37 338 P **P** **10 03 41.7 -0.5**
SFJD Kangerlussuaq 65.37 338 IAMs_20 IAMs_20 10 31 43.3
comp=Z,2µm,21.0s
SFJD Kangerlussuaq 65.37 338 P **P** **10 03 41.7 -0.5**
SFJD pmax pmax
comp=Z,62nm,0.9s
SFJD MLR MLR
comp=Z,2µm,21.0s
SFJD Kangerlussuaq 65.37 338 *i* P **P** **10 03 41.7 -0.5**
SFJD IAmb IAmb 10 03 43.1
comp=Z,70nm,0.9s
A22K Sinclair Lake 65.44 15 P **P** **10 03 42.3 -0.2**
baz=322
C17K DeLong Mountai 65.48 19 P **P** **10 03 42.7 -0.3**
baz=316,SNR=40
B20K Meade River 65.76 16 IAMs_20 IAMs_20 10 36 18.4
comp=Z,1µm,18.0s
B20K Meade River 65.76 16 P **P** **10 03 44.3 -0.3**
baz=321
TORD Torodi Ar. Bea 65.78 267 P **P** **10 03 44.4 -1.3**
comp=Z,18nm,0.6s,baz=49,slow=5.7,SNR=66
TORD S S 10 12 22.0 -10
comp=Z,0.4nm,0.9s,baz=40,slow=5.5,SNR=1.3
TORD LR LR 10 35 27.5
comp=Z,443nm,21.0s,baz=61,slow=39
comp=Z,18nm,0.6s
TORD Torodi Ar. Bea 65.78 267 P **P** **10 03 44.3 -1.3**
TORD IAmb IAmb 10 03 49.6
comp=Z,71nm,1.4s
TORD S 10 12 22.0 -10
C18K Utukok River 65.85 18 IAMs_20 IAMs_20 10 36 27.0
comp=Z,2µm,19.0s
C18K Utukok River 65.85 18 P **P** **10 03 44.8 -0.6**
baz=318,SNR=46
RDOG Red Dog Mine 65.85 19 IAMs_20 IAMs_20 10 34 30.1
comp=Z,1µm,20.0s
RDOG Red Dog Mine 65.85 19 P **P** **10 03 44.6 -0.7**
baz=316
C19K Lookout Ridge 65.90 18 IAMs_20 IAMs_20 10 37 58.2
comp=Z,1µm,20.0s
C19K Lookout Ridge 65.90 18 P **P** **10 03 45.4 -0.2**
baz=319,SNR=28
D17K Noatak River 66.07 20 P **P** **10 03 46.0 -0.6**
baz=316,SNR=81
RES Resolute Bay 66.15 356 LR LR 10 33 12.6
comp=Z,1µm,21.9s,baz=26,slow=36
RES Resolute Bay 66.15 356 P **P** **10 03 47.4 +0.3**
RES Resolute Bay 66.15 356 P **P** **10 03 47.4 +0.3**
RES pmax pmax
comp=Z,29nm,1.2s
RES Resolute Bay 66.15 356 P **P** **10 03 47.4 +0.3**
GAMB Gambell 66.20 26 IAMs_20 IAMs_20 10 35 05.7
comp=Z,2µm,19.0s
GAMB Gambell 66.20 26 P **P** **10 03 47.0 -0.5**
baz=311
TNA Tin City 66.21 23 P **P** **10 03 47.7 +0.1**
TNA IAmb IAmb 10 03 49.4
comp=Z,39nm,1.1s
TNA IAMs_20 IAMs_20 10 35 14.7
comp=Z,2µm,18.0s
TNA Tin City 66.21 23 P **P** **10 03 47.2 -0.4**
baz=313
B22K Teshekpuk Lake 66.28 15 P **P** **10 03 47.8 -0.2**
baz=324,SNR=13
POIN Pond Inlet 66.46 350 IAmb IAmb 10 03 51.0
comp=Z,41nm,1.1s
B21K Ikpikpuk River 66.61 16 P **P** **10 03 50.0 -0.1**
baz=323
D19K Kuna River 66.71 18 IAMs_20 IAMs_20 10 37 46.7
comp=Z,2µm,18.0s
D19K Kuna River 66.71 18 P **P** **10 03 50.3 -0.5**
baz=320,SNR=74
F14K Arctic Creek 66.75 22 P **P** **10 03 50.4 -0.7**
baz=315,SNR=13
E17K Hotham Inlet 66.85 20 P **P** **10 03 51.2 -0.4**
baz=318,SNR=27
D20K Etivluk River 66.89 17 IAMs_20 IAMs_20 10 36 54.4
comp=Z,1µm,20.0s
D20K Etivluk River 66.89 17 P **P** **10 03 51.6 -0.4**
baz=321,SNR=50
E18K Tukpahlearik C 66.92 19 IAMs_20 IAMs_20 10 37 24.2
comp=Z,2µm,21.0s
E18K Tukpahlearik C 66.92 19 P **P** **10 03 51.8 -0.3**
baz=318,SNR=82
C21K Knifeblade Rid 66.94 16 P **P** **10 03 52.1 -0.2**
baz=329,SNR=33
SHEM Shemya Is, Ala 67.00 40 LR LR 10 34 25.4
comp=Z,1µm,20.8s,baz=292,slow=37
F15K North Star Dit 67.08 22 IAMs_20 IAMs_20 10 36 13.5
comp=Z,2µm,18.0s
F15K North Star Dit 67.08 22 P **P** **10 03 53.0 -0.2**
baz=316,SNR=52
LSZ Lusaka 67.22 225 LR LR 10 35 08.4
comp=Z,1µm,20.7s,baz=37,slow=38
LSZ Lusaka 67.22 225 P **P** **10 03 54.3 -0.5**
LSZ IAmb IAmb 10 03 57.9
comp=Z,89nm,1.9s
LSZ Lusaka 67.22 225 P **P** **10 03 54.3 -0.5**
LSZ pmax pmax
comp=Z,89nm,1.9s
LSZ Lusaka 67.22 225 P **P** **10 03 54.8 -0.1**
LSZ Lusaka 67.22 225 P **P** **10 03 55.3 +0.4**
C23K Itkillik River 67.25 14 IAMs_20 IAMs_20 10 33 40.7
comp=Z,2µm,20.0s
C23K Itkillik River 67.25 14 P **P** **10 03 54.3 +0.1**
baz=326,SNR=69
E20K Nigu River 67.34 17 P **P** **10 03 54.3 -0.7**
baz=322,SNR=97
F17K Baldwin Pennin 67.48 20 P **P** **10 03 55.6 -0.1**
baz=318,SNR=29
NRS Narsarsuaq 67.60 332 IAMs_20 IAMs_20 10 32 32.3
comp=Z,2µm,21.0s
NRS Narsarsuaq 67.60 332 *i* P **P** **10 03 56.0 -0.5**
NRS IAmb IAmb 10 04 00.7
comp=Z,56nm,0.8s
ANM Nome 67.68 23 IAmb IAmb 10 03 59.2
comp=Z,49nm,1.0s
ANM Nome 67.68 23 P **P** **10 03 57.0 0.0**
baz=316,SNR=9.6
E21K Killik River 67.70 16 P **P** **10 03 56.3 -0.8**
baz=324
C24K Franklin Bluff 67.71 14 IAMs_20 IAMs_20 10 33 47.9
comp=Z,1µm,21.0s
C24K Franklin Bluff 67.71 14 P **P** **10 03 57.0 -0.1**
baz=328
E19K Redstone River 67.73 18 P **P** **10 03 56.4 -0.9**
baz=320,SNR=12
G15K Niukluk 67.77 22 P **P** **10 03 57.0 -0.5**
baz=316,SNR=29
F18K Selawik 67.78 19 P **P** **10 03 56.9 -0.6**
baz=320,SNR=53
D23K Nanushuk River 67.96 15 IAmb IAmb 10 04 00.6
comp=Z,58nm,1.0s
D23K IAMs_20 IAMs_20 10 35 22.6
comp=Z,2µm,20.0s
D23K Nanushuk River 67.96 15 P **P** **10 03 58.4 -0.3**
baz=326,SNR=45
F19K Shaleruckik Mo 68.08 19 IAmb IAmb 10 04 08.3
comp=Z,34nm,1.2s
F19K IAMs_20 IAMs_20 10 38 11.0
comp=Z,1µm,19.0s
F19K Shaleruckik Mo 68.08 19 P **P** **10 03 58.2 -1.2**
baz=321,SNR=22
D24K Happy Valley 68.17 14 IAmb IAmb 10 04 05.5
comp=Z,89nm,1.4s
D24K IAMs_20 IAMs_20 10 34 06.0
comp=Z,1µm,21.0s
D24K Happy Valley 68.17 14 P **P** **10 03 59.5 -0.5**
baz=328,SNR=18
C26K Camden Bay 68.22 13 P **P** **10 03 59.8 -0.5**
baz=331
G17K Kiwalik Mounta 68.35 21 P **P** **10 04 00.6 -0.6**
baz=319,SNR=35
F20K Avaraart Lake 68.41 18 IAmb IAmb 10 04 06.3
comp=Z,45nm,1.4s
F20K IAMs_20 IAMs_20 10 39 21.7
comp=Z,2µm,19.0s
F20K Avaraart Lake 68.41 18 P **P** **10 04 00.9 -0.6**
baz=322
E22K Anaktuvuk Pass 68.42 16 IAMs_20 IAMs_20 10 37 53.6
comp=Z,1µm,19.0s
E22K Anaktuvuk Pass 68.42 16 P **P** **10 04 01.3 -0.4**
baz=325
TOLK Toolik Lake Re 68.45 15 P **P** **10 04 01.2 -0.7**
baz=327
D25K Kavik River 68.48 13 IAMs_20 IAMs_20 10 34 08.2
comp=Z,2µm,22.0s
D25K Kavik River 68.48 13 P **P** **10 04 01.9 -0.2**
baz=330
H16K Elim 68.56 22 P **P** **10 04 01.2 -1.2**
baz=318,SNR=42
IVI Ivigtut 68.56 333 IAMs_20 IAMs_20 10 33 13.7
comp=Z,1µm,18.0s
IVI Ivigtut 68.56 333 P **P** **10 04 03.2 +0.7**
IVI Ivigtut 68.56 333 *i* P **P** **10 04 02.2 -0.3**
IVI IAmb IAmb 10 04 15.0
comp=Z,89nm,1.4s
G18K Tagagawik 68.59 20 IAmb IAmb 10 04 11.9
comp=Z,53nm,1.2s
G18K IAMs_20 IAMs_20 10 38 26.3
comp=Z,1µm,18.0s
G18K Tagagawik 68.59 20 P **P** **10 04 01.7 -0.9**
baz=321,SNR=37
A36M Sachs Harbour 68.66 5 P **P** **10 04 02.3 -0.7**
baz=347,SNR=12
C27K Jago River 68.67 12 P **P** **10 04 03.6 +0.4**
baz=332,SNR=14
G19K Purcell Mounta 68.80 19 IAMs_20 IAMs_20 10 36 58.8
comp=Z,1µm,20.0s
G19K Purcell Mounta 68.80 19 P **P** **10 04 03.1 -0.8**
baz=322,SNR=89
F21K Alatna River 68.80 17 P **P** **10 04 03.6 -0.4**
baz=324,SNR=86
F22K John River 68.85 16 P **P** **10 04 04.1 -0.3**
baz=325
PMOZ Porto Moniz, M 68.93 296 *i* IAMs_20 IAMs_20 10 41 17.1
comp=Z,580nm,18.0s
E23K Chandalar 68.94 15 IAMs_20 IAMs_20 10 35 02.4
comp=Z,1µm,21.0s
E23K Chandalar 68.94 15 P **P** **10 04 04.8 -0.1**
baz=327,SNR=80
H17K Granite Mounta 68.99 21 IAmb IAmb 10 04 06.8
comp=Z,56nm,1.0s
H17K Granite Mounta 68.99 21 P **P** **10 04 04.7 -0.5**
baz=320,SNR=63
GUMO Guam 69.11 89 LR LR 10 36 56.5
comp=Z,556nm,18.5s,baz=302,slow=38
E24K Your Creek 69.15 15 IAmb IAmb 10 04 07.9
comp=Z,44nm,0.8s
E24K IAMs_20 IAMs_20 10 34 53.0
comp=Z,1µm,22.0s
E24K Your Creek 69.15 15 P **P** **10 04 05.8 -0.4**
baz=328
H18K Honhosa River 69.24 20 IAmb IAmb 10 04 11.9
comp=Z,35nm,0.9s
H18K IAMs_20 IAMs_20 10 40 04.6
comp=Z,1µm,20.0s
H18K Honhosa River 69.24 20 P **P** **10 04 06.3 -0.5**
baz=321,SNR=27
BATI Baumata 69.27 123 LR LR 10 38 22.4
comp=Z,1µm,21.6s,baz=302,slow=39
SOEI Soe 69.33 122 P **P** **10 04 09.4 +1.3**
G21K Allakaket 69.37 17 IAmb IAmb 10 04 12.2
comp=Z,73nm,1.4s
G21K Allakaket 69.37 17 P **P** **10 04 06.5 -1.0**
baz=324,SNR=40
H19K Roundabout Mou 69.44 19 IAmb IAmb 10 04 13.3
comp=Z,44nm,0.8s
H19K IAMs_20 IAMs_20 10 39 05.0
comp=Z,2µm,18.0s
H19K Roundabout Mou 69.44 19 P **P** **10 04 07.5 -0.5**
baz=322,SNR=52
D27M Malcolm River 69.46 12 P **P** **10 04 08.5 +0.3**
baz=334
G22K Bettles 69.49 17 P **P** **10 04 07.9 -0.3**
baz=326
COLD Coldfoot 69.52 16 IAMs_20 IAMs_20 10 38 35.7
comp=Z,2µm,18.0s
COLD Coldfoot 69.52 16 P **P** **10 04 08.0 -0.4**
baz=327,SNR=119
I17K Unalakleet 69.57 22 IAmb IAmb 10 04 10.8
comp=Z,69nm,1.1s
I17K Unalakleet 69.57 22 P **P** **10 04 08.5 -0.2**
baz=319,SNR=27
E25K Arctic Village 69.67 14 IAmb IAmb 10 04 11.0
comp=Z,39nm,1.0s
E25K IAMs_20 IAMs_20 10 35 08.8
comp=Z,2µm,21.0s
E25K Arctic Village 69.67 14 P **P** **10 04 09.2 -0.2**
baz=330,SNR=28
D28M Stokes Point 69.72 11 P **P** **10 04 09.2 -0.5**
baz=336
F24K Squaw Lake 69.75 15 P **P** **10 04 09.6 -0.3**
baz=329,SNR=41
K13K Kusilvak Mount 69.81 25 IAmb IAmb 10 04 12.0
comp=Z,40nm,1.1s
K13K Kusilvak Mount 69.81 25 P **P** **10 04 09.9 -0.5**

baz=317,SNR=13
H20K Anotleneega Mo 69.87 19 P P 10 04 09.8 -0.8
baz=324,SNR=132
GCSA Galena City Sc 69.95 20 P P 10 04 10.7 -0.4
baz=322,SNR=46
G23K Bananza Creek 69.99 16 IAmb IAmb 10 04 16.8
comp=Z,52nm,1.2s
G23K IAMs_20 IAMs_20 10 39 10.2
comp=Z,1µm,18.0s
G23K Bananza Creek 69.99 16 P P 10 04 11.0 -0.4
baz=327,SNR=43
FAKI Fak Fak 70.01 111 P P 10 04 12.1 -0.1
ILON Igloolik, Nuna 70.03 350 IAmb IAmb 10 04 12.4
comp=Z,42nm,1.2s
J16K Anvik River 70.05 22 IAMs_20 IAMs_20 10 37 57.3
comp=Z,2µm,18.0s
J16K Anvik River 70.05 22 P P 10 04 11.6 -0.1
baz=320,SNR=68
F25K Christian Rive 70.12 14 IAmb IAmb 10 04 14.4
comp=Z,52nm,0.9s
F25K Christian Rive 70.12 14 P P 10 04 12.1 -0.1
baz=330,SNR=52
H21K Melozitna Rive 70.24 18 P P 10 04 12.4 -0.5
baz=325,SNR=66
E28M Babbage River 70.26 11 IAmb IAmb 10 04 15.1
comp=Z,38nm,0.9s
E28M Babbage River 70.26 11 P P 10 04 12.6 -0.4
baz=335,SNR=12
F26K Sheenjek River 70.31 13 IAMs_20 IAMs_20 10 35 38.5
comp=Z,1µm,20.0s
F26K Sheenjek River 70.31 13 P P 10 04 13.5 +0.1
baz=332,SNR=23
E27K Coleen River 70.31 12 IAmb IAmb 10 04 15.3
comp=Z,75nm,1.1s
E27K Coleen River 70.31 12 P P 10 04 13.2 -0.1
baz=334,SNR=21
H22K Ishtalitna Cre 70.37 17 IAmb IAmb 10 04 23.6
comp=Z,78nm,1.4s
H22K IAMs_20 IAMs_20 10 37 40.4
comp=Z,1µm,19.0s
H22K Ishtalitna Cre 70.37 17 P P 10 04 13.2 -0.5
baz=326,SNR=42
J17K VABM Dome 70.41 21 IAmb IAmb 10 04 20.3
comp=Z,64nm,1.2s
J17K IAMs_20 IAMs_20 10 38 21.6
comp=Z,1µm,18.0s
J17K VABM Dome 70.41 21 P P 10 04 13.7 -0.3
baz=321,SNR=33
M11K Mekoryuk 70.42 26 IAMs_20 IAMs_20 10 39 41.2
comp=Z,1µm,21.0s
M11K Mekoryuk 70.42 26 P P 10 04 14.0 -0.1
baz=316
I20K Naaghedeneel 70.53 19 IAMs_20 IAMs_20 10 38 00.7
comp=Z,1µm,20.0s
I20K Naaghedeneel 70.53 19 P P 10 04 14.4 -0.2
baz=324,SNR=17
G24K Hadweenzic Riv 70.53 15 IAmb IAmb 10 04 20.4
comp=Z,53nm,0.8s
G24K Hadweenzic Riv 70.53 15 P P 10 04 14.3 -0.4
baz=329,SNR=76
E29M Blow River 70.71 11 P P 10 04 16.0 +0.3
baz=337,SNR=19
G25K Bearman Lake 70.75 15 P P 10 04 16.3 +0.3
baz=330,SNR=35
I21K Tanana 70.83 18 IAmb IAmb 10 04 18.0
comp=Z,41nm,1.0s
I21K IAMs_20 IAMs_20 10 37 35.5
comp=Z,1µm,19.0s
I21K Tanana 70.83 18 P P 10 04 16.1 -0.4
baz=326,SNR=8.0
H23K Yukon River 70.84 16 IAmb IAmb 10 04 18.7
comp=Z,61nm,1.1s
H23K Yukon River 70.84 16 P P 10 04 16.4 -0.2
baz=328
J19K Poorman 70.89 20 IAMs_20 IAMs_20 10 40 22.1
comp=Z,1µm,18.0s
J19K Poorman 70.89 20 P P 10 04 17.2 +0.3
baz=323,SNR=41
L14K Kuka Creek 70.89 24 IAmb IAmb 10 04 19.0
comp=Z,52nm,1.1s
L14K IAMs_20 IAMs_20 10 38 46.4
comp=Z,1µm,21.0s
L14K Kuka Creek 70.89 24 P P 10 04 17.2 +0.4
baz=318,SNR=22
KSANE Kasane 70.95 226 IAmb IAmb 10 04 20.6
comp=Z,68nm,1.6s
L15K Ungalak Mounta 71.01 24 P P 10 04 17.6 0.0
baz=319
G26K Porcupine Rive 71.03 14 P P 10 04 17.7 0.0
baz=332
F28M Old Crow 71.11 12 IAmb IAmb 10 04 20.2
comp=Z,56nm,1.2s
F28M Old Crow 71.11 12 P P 10 04 18.4 +0.2
baz=335,SNR=22
J20K Nowinta River 71.12 19 IAmb IAmb 10 04 19.9
comp=Z,56nm,0.9s
J20K IAMs_20 IAMs_20 10 38 20.3
comp=Z,1µm,20.0s
J20K Nowinta River 71.12 19 P P 10 04 18.2 0.0
baz=324,SNR=58
K17K Iditarod 71.16 22 IAMs_20 IAMs_20 10 38 44.5
comp=Z,2µm,19.0s
K17K Iditarod 71.16 22 P P 10 04 18.6 +0.1
baz=322,SNR=60
H24K Noodor Dome 71.19 16 IAmb IAmb 10 04 20.6
comp=Z,37nm,1.0s
H24K Noodor Dome 71.19 16 P P 10 04 19.2 +0.4
baz=329,SNR=48
SPIA Saint Paul Isl 71.20 30 P P 10 04 19.0 +0.2
baz=314
MLY Manley 71.24 17 IAmb IAmb 10 04 24.4
comp=Z,33nm,0.8s
MLY Manley 71.24 17 P P 10 04 18.7 -0.4
baz=327,SNR=43
MATP Matopo 71.29 222 LR LR 10 37 19.4
comp=Z,855nm,18.4s,baz=22,slow=37
C36M Paulatuk 71.33 6 P P 10 04 18.4 -1.1
baz=348,SNR=81
M13K Dall Lake 71.36 25 P P 10 04 19.4 -0.3
baz=318,SNR=15
INK Inuvik 71.38 9 LR LR 10 37 26.2
comp=Z,506nm,21.3s,baz=4.5,slow=37
INK Inuvik 71.38 9 P P 10 04 19.8 0.0
baz=340,SNR=33
I23K Minto, Yukon-K 71.46 17 IAMs_20 IAMs_20 10 39 30.1
comp=Z,1µm,19.0s
I23K Minto, Yukon-K 71.46 17 P P 10 04 20.3 0.0
baz=328,SNR=54
G27K Doyon Strip 71.54 13 IAmb IAmb 10 04 23.0
comp=Z,46nm,1.0s
G27K Doyon Strip 71.54 13 P P 10 04 21.2 +0.4
baz=334,SNR=46
M14K Bethel 71.56 24 IAMs_20 IAMs_20 10 38 54.3
comp=Z,1µm,20.0s
M14K Bethel 71.56 24 P P 10 04 21.4 +0.4
baz=319,SNR=32
L16K Owhat River 71.60 23 IAmb IAmb 10 04 23.3
comp=Z,76nm,1.1s
L16K Owhat River 71.60 23 P P 10 04 21.3 +0.1
baz=321,SNR=47
L17K Donlin 71.62 22 P P 10 04 21.3 -0.1
baz=322,SNR=34
F30M Barrier River 71.73 10 IAmb IAmb 10 04 23.7
comp=Z,72nm,1.1s
F30M Barrier River 71.73 10 P P 10 04 21.2 -0.8
baz=338,SNR=24
CMLA Cha da Macela 71.76 304 IAMs_20 IAMs_20 10 38 06.4
comp=Z,2µm,21.0s
K20K Telida 71.81 20 IAmb IAmb 10 04 24.2
comp=Z,66nm,1.1s
K20K IAMs_20 IAMs_20 10 40 26.5
comp=Z,1µm,20.0s
K20K Telida 71.81 20 P P 10 04 22.2 -0.3
baz=325,SNR=65
CHUM Lake Minchumin 71.82 19 P P 10 04 21.9 -0.6
baz=326,SNR=22
POKR Poker Plat Res 71.91 16 P P 10 04 22.8 -0.2
baz=330
PRP Porcupine Dome 71.96 15 P P 10 04 23.6 +0.1
baz=331,SNR=43
NEA2 Nenana 72.00 17 IAmb IAmb 10 04 28.6
comp=Z,63nm,0.9s
NEA2 Nenana 72.00 17 P P 10 04 23.0 -0.6
baz=328,SNR=67
M15K Kasigluk River 72.01 24 P P 10 04 23.9 +0.2
baz=320,SNR=23
L18K Granite Mounta 72.02 21 IAmb IAmb 10 04 25.4
comp=Z,54nm,1.2s
L18K Granite Mounta 72.02 21 P P 10 04 23.4 -0.3
baz=323,SNR=38
COLA College 72.03 16 P P 10 04 23.0 -0.7
COLA College 72.03 16 P P 10 04 23.4 -0.3
COLA College 72.03 16 IAMs_20 IAMs_20 10 37 25.1
comp=Z,1µm,21.0s
COLA College 72.03 16 *c i* P P 10 04 23.2 -0.5
COLA pmax pmax
comp=Z,86nm,0.9s
COLA College 72.03 16 P P 10 04 23.2 -0.5
baz=329
G29M Pine Creek 72.05 12 IAmb IAmb 10 04 33.8
comp=Z,52nm,1.1s
G29M Pine Creek 72.05 12 P P 10 04 23.8 -0.1
baz=337,SNR=21
H27K Steamboat Moun 72.09 13 IAmb IAmb 10 04 26.1
comp=Z,47nm,0.9s
H27K Steamboat Moun 72.09 13 P P 10 04 24.1 0.0
baz=334,SNR=52
F31M Tsiigehtchic 72.17 10 P P 10 04 24.3 -0.2
baz=340,SNR=44
CCB Clear Creek Bu 72.23 16 IAmb IAmb 10 04 29.8
comp=Z,55nm,1.2s
G30M tAoh Zraii Nji 72.26 11 P P 10 04 24.7 -0.5
baz=338,SNR=40
CAST Castle Rocks 72.27 19 P P 10 04 24.9 -0.3
baz=326,SNR=72
N14K Kuskokwak Cree 72.28 25 IAmb IAmb 10 04 27.4
comp=Z,85nm,1.1s
N14K IAMs_20 IAMs_20 10 39 20.4
comp=Z,2µm,20.0s
N14K Kuskokwak Cree 72.28 25 P P 10 04 25.1 -0.2
baz=320,SNR=15
M16K Timber Creek 72.30 23 P P 10 04 25.5 0.0
baz=321,SNR=17
WRH Wood River Hil 72.32 17 IAMs_20 IAMs_20 10 39 43.9
comp=Z,1µm,19.0s
IL31 72.33 16 IAmb IAmb 10 04 26.3
comp=Z,41nm,1.0s
ILAR Eielson Array 72.33 16 P P 10 04 24.0 -1.5
comp=Z,24nm,0.8s,baz=328,slow=4.5,SNR=140
ILAR PP PP 10 07 03.7 -1.9
comp=Z,14nm,1.1s,baz=317,slow=8.1,SNR=5.3
ILAR LR LR 10 41 55.4
comp=Z,968nm,18.1s,baz=317,slow=41
comp=Z,24nm,0.8s
ILAR Eielson Array 72.33 16 P P 10 04 24.6 -1.0
KTH Kantishna Hill 72.44 18 IAMs_20 IAMs_20 10 39 14.2
comp=Z,1µm,21.0s
M17K Holitna River 72.45 22 IAmb IAmb 10 04 28.7
comp=Z,71nm,0.9s
M17K IAMs_20 IAMs_20 10 39 07.7
comp=Z,1µm,18.0s
M17K Holitna River 72.45 22 P P 10 04 26.6 +0.3
baz=322,SNR=42
L19K White Mountain 72.56 21 IAmb IAmb 10 04 28.8
comp=Z,53nm,1.1s
L19K IAMs_20 IAMs_20 10 38 34.4
comp=Z,965nm,18.0s
L19K White Mountain 72.56 21 P P 10 04 26.8 -0.2
baz=324,SNR=38
G31M Satah River 72.59 10 IAmb IAmb 10 04 28.3
comp=Z,69nm,1.1s
G31M Satah River 72.59 10 P P 10 04 26.6 -0.5
baz=340,SNR=33
N15K Kwethluk River 72.61 24 IAmb IAmb 10 04 34.6
comp=Z,85nm,1.1s
N15K Kwethluk River 72.61 24 P P 10 04 27.6 +0.3
baz=321,SNR=28
I26K Coal Creek Min 72.61 14 IAmb IAmb 10 04 28.8
comp=Z,37nm,1.0s
I26K Coal Creek Min 72.61 14 P P 10 04 27.1 -0.2
baz=333
FRB Frobisher Bay 72.62 342 LR LR 10 40 15.5
comp=Z,591nm,18.0s,baz=34,slow=39
HDA Harding Lake 72.63 16 IAMs_20 IAMs_20 10 37 10.0
comp=Z,1µm,22.0s
HDA Harding Lake 72.63 16 P P 10 04 25.7 -1.6
baz=330,SNR=21
H29M Whitestone 72.63 12 IAmb IAmb 10 04 29.2
comp=Z,84nm,1.1s
H29M Whitestone 72.63 12 P P 10 04 27.1 -0.2
baz=336,SNR=37
I27K Kandik River 72.64 14 IAmb IAmb 10 04 29.1
comp=Z,38nm,0.9s
I27K Kandik River 72.64 14 P P 10 04 27.0 -0.4
baz=334,SNR=47
PPLA Purkeypile 72.67 19 IAMs_20 IAMs_20 10 38 46.4
comp=Z,1µm,20.0s
PPLA Purkeypile 72.67 19 P P 10 04 27.0 -0.8
baz=326,SNR=35
TRF Thorofare Moun 72.68 18 IAMs_20 IAMs_20 10 41 28.5
comp=Z,1µm,19.0s
TRF Thorofare Moun 72.68 18 P P 10 04 26.0 -1.9
baz=328,SNR=23
EPYK Eagle Plains 72.75 11 IAmb IAmb 10 04 37.4
comp=Z,54nm,1.2s
EPYK Eagle Plains 72.75 11 P P 10 04 26.5 -1.6
baz=338,SNR=19
MCK McKinley 72.76 17 P P 10 04 26.5 -1.7
baz=340,SNR=14
N16K Nishlik Lake 72.78 23 P P 10 04 29.1 +0.8
baz=322,SNR=31
J25K Salcha River, 72.78 16 IAmb IAmb 10 04 29.1
comp=Z,33nm,1.0s
J25K Salcha River, 72.78 16 P P 10 04 26.7 -1.7
baz=331,SNR=52
M18K Stony River 72.85 21 P P 10 04 28.7 0.0
baz=324,SNR=19
M19K Big River Lodg 72.91 21 P P 10 04 28.8 -0.3
baz=325
O14K Tigyukauivet M 72.93 25 IAmb IAmb 10 04 31.2
comp=Z,46nm,1.0s
O14K IAMs_20 IAMs_20 10 39 08.6
comp=Z,2µm,20.0s
O14K Tigyukauivet M 72.93 25 P P 10 04 28.7 -0.5
baz=320,SNR=15
RND Reindeer 73.06 18 IAmb IAmb 10 04 48.5
comp=Z,46nm,1.1s
RND IAMs_20 IAMs_20 10 37 31.5
comp=Z,1µm,19.0s
I28M Miner Creek 73.08 13 IAmb IAmb 10 04 31.3
comp=Z,44nm,0.9s
I28M Miner Creek 73.08 13 P P 10 04 29.3 -0.8
baz=335,SNR=54
N17K Nushagak Hills 73.22 23 IAmb IAmb 10 04 37.4
comp=Z,68nm,1.4s
N17K IAMs_20 IAMs_20 10 38 43.1
comp=Z,1µm,21.0s
N17K Nushagak Hills 73.22 23 P P 10 04 31.4 +0.5
baz=323,SNR=20
M20K Styx River 73.27 20 IAMs_20 IAMs_20 10 39 53.2
comp=Z,1µm,18.0s
M20K Styx River 73.27 20 P P 10 04 30.2 -1.1
baz=326
L22K Petersville 73.34 19 IAmb IAmb 10 04 36.3
comp=Z,52nm,0.7s
L22K Petersville 73.34 19 P P 10 04 30.6 -1.0
baz=327,SNR=67
K24K Donnelly Dome 73.41 16 IAMs_20 IAMs_20 10 42 23.7
comp=Z,1µm,19.0s
K24K Donnelly Dome 73.41 16 P P 10 04 31.2 -0.8
baz=331,SNR=70
O15K Ungalikthiuk R 73.47 25 P P 10 04 32.5 +0.1
O15K IAmb IAmb 10 04 34.3
comp=Z,60nm,0.9s
O15K IAMs_20 IAMs_20 10 39 37.6
comp=Z,2µm,19.0s
O15K Ungalikthiuk R 73.47 25 P P 10 04 32.1 -0.3
baz=321,SNR=22
N18K Kilae Creek 73.48 22 IAMs_20 IAMs_20 10 39 58.9
comp=Z,1µm,20.0s
N18K Kilae Creek 73.48 22 P P 10 04 32.3 -0.2
baz=324,SNR=12
GIRL Giralia 73.53 139 P P 10 04 36.4 +3.2
comp=Z,78nm,1.1s
GIRL Giralia 73.53 139 P P 10 04 33.5 +0.4
GIRL IAmb IAmb 10 04 38.0
comp=Z,71nm,1.1s
CUT Chulitna 73.57 19 P P 10 04 31.3 -1.6
baz=328,SNR=14
SKT Skwentna 73.61 19 P P 10 04 31.7 -1.5
baz=327,SNR=82
WAT1 Susitna Watana 73.63 18 P P 10 04 31.8 -1.5
baz=329
H31M Peel River 73.63 11 P P 10 04 32.8 -0.5
baz=340,SNR=44
SCRK Sand Creek 73.63 15 IAmb IAmb 10 04 34.9
comp=Z,51nm,0.9s
SCRK Sand Creek 73.63 15 P P 10 04 32.8 -0.7
baz=332,SNR=108
RIDG Independent Ri 73.67 16 IAmb IAmb 10 04 43.1
comp=Z,46nm,0.9s
RIDG Independent Ri 73.67 16 P P 10 04 32.5 -1.0
baz=332,SNR=39
O16K Kokwok River B 73.69 24 IAMs_20 IAMs_20 10 39 09.4
comp=Z,1µm,18.0s
O16K Kokwok River B 73.69 24 P P 10 04 33.8 +0.2
baz=322,SNR=38
DHY Denali Highway 73.69 17 IAmb IAmb 10 04 43.4
comp=Z,53nm,0.8s
DHY Denali Highway 73.69 17 P P 10 04 32.7 -1.1
baz=330,SNR=70
N19K Bonanza Creek 73.78 21 IAmb IAmb 10 04 42.7
comp=Z,52nm,1.1s
N19K Bonanza Creek 73.78 21 P P 10 04 33.6 -0.7
baz=325,SNR=14
O17K Koliganek Bris 73.85 23 P P 10 04 34.9 +0.2
baz=323,SNR=14
I30M Mount Dempster 73.88 12 IAmb IAmb 10 04 36.1
comp=Z,47nm,0.9s
I30M Mount Dempster 73.88 12 P P 10 04 34.3 -0.5
baz=338,SNR=73
STLK Strandline Lak 73.94 20 IAmb IAmb 10 04 40.7
comp=Z,50nm,1.1s
K27K Chicken 73.97 14 IAMs_20 IAMs_20 10 37 37.3
comp=Z,1µm,21.0s
WAT6 Susitna Watana 74.03 18 P P 10 04 34.4 -1.5
baz=330,SNR=43
SPCR Spurr Chakacha 74.08 20 P P 10 04 34.5 -1.6
baz=326
KHWEE KHWEE 74.15 224 P P 10 04 36.5 -0.5
M22K Willow 74.16 19 IAMs_20 IAMs_20 10 39 30.8
comp=Z,1µm,21.0s
M22K Willow 74.16 19 P P 10 04 34.6 -1.8
baz=328,SNR=19
P16K Nushagak River 74.17 24 P P 10 04 36.3 -0.2
baz=322,SNR=5.6
J29N Klondike Camp 74.29 13 IAmb IAmb 10 04 42.8
comp=Z,130nm,1.4s
J29N Klondike Camp 74.29 13 P P 10 04 36.8 -0.4
baz=337
O19K Port Alsworth 74.33 22 IAmb IAmb 10 04 43.1
comp=Z,40nm,1.0s
O19K IAMs_20 IAMs_20 10 40 37.3
comp=Z,1µm,19.0s
O19K Port Alsworth 74.33 22 P P 10 04 36.9 -0.5
baz=325
O18K Koktuh Hills 74.35 22 P P 10 04 37.5 -0.1
baz=324,SNR=16
DAWY Dawson 74.44 13 P P 10 04 37.3 -0.8
baz=336,SNR=49
GHO Glory Hole Cre 74.45 18 IAMs_20 IAMs_20 10 40 26.2
comp=Z,1µm,19.0s
J30M Hart River 74.49 12 P P 10 04 38.0 -0.4
baz=338,SNR=61
P17K Kvichak River 74.52 23 P P 10 04 38.9 +0.4
baz=324,SNR=10
PMR Palmer 74.55 19 P P 10 04 37.4 -1.2
PMR Palmer 74.55 19 IAmb IAmb 10 04 39.5
comp=Z,47nm,0.9s
PMR Palmer 74.55 19 P P 10 04 37.7 -0.9
baz=329,SNR=39
SML Sawmill 74.56 18 P P 10 04 38.1 -0.7
baz=329,SNR=83
L26K Log Cabin Wild 74.61 15 IAmb IAmb 10 04 44.5
comp=Z,52nm,1.2s
L26K Log Cabin Wild 74.61 15 P P 10 04 38.3 -0.7
baz=333,SNR=42
MENT Mentasta 74.61 16 P P 10 04 39.5 +0.4
M23K Glacier View 74.72 18 P P 10 04 38.4 -1.3
baz=330,SNR=59
P18K Big Mountain, 74.72 23 P P 10 04 39.5 -0.3
baz=324,SNR=7.9
CAPN Captain Cook N 74.73 20 P P 10 04 38.8 -0.9
baz=327
SCM Sheep Creek Mo 74.78 18 IAMs_20 IAMs_20 10 41 54.0
comp=Z,994nm,18.0s
SCM Sheep Creek Mo 74.78 18 P P 10 04 39.5 -0.6
baz=330,SNR=42
HARP HAARP 74.78 17 IAMs_20 IAMs_20 10 38 40.0
comp=Z,1µm,21.0s
HARP HAARP 74.78 17 P P 10 04 39.6 -0.5
baz=332,SNR=41
M24K Tolsona, Glenn 74.81 17 P P 10 04 40.2 -0.1
baz=331,SNR=46
DBIC Dimbokro 74.83 266 P P 10 04 39.9 -1.1
comp=Z,19nm,1.0s,baz=52,slow=6.4,SNR=8.7
DBIC LR LR 10 41 55.9
comp=Z,913nm,18.8s,baz=49,slow=39
comp=Z,19nm,1.0s
DBIC Dimbokro 74.83 266 P P 10 04 39.9 -1.1
RC01 Rabbit Creek A 74.83 19 IAMs_20 IAMs_20 10 39 39.3
comp=Z,1µm,22.0s
RC01 Rabbit Creek A 74.83 19 P P 10 04 39.3 -1.0
baz=328,SNR=39
Q16K King Salmon 74.87 24 P P 10 04 40.1 -0.4
baz=324,SNR=11
KNK Knik Glacier 74.87 18 IAMs_20 IAMs_20 10 40 09.4
comp=Z,1µm,20.0s
KNK Knik Glacier 74.87 18 P P 10 04 40.0 -0.6
baz=329,SNR=30
BCAR Beaver Creek A 74.89 15 P P 10 04 40.3 -0.4
O20K Slope Mountain 74.91 21 P P 10 04 39.1 -1.8
baz=326
K29M Barlow Dome 74.97 13 IAmb IAmb 10 04 46.9
comp=Z,54nm,1.0s
K29M Barlow Dome 74.97 13 P P 10 04 41.2 0.0
baz=338,SNR=66
UNV Unalaska Valle 75.08 31 IAMs_20 IAMs_20 10 40 13.6
comp=Z,1µm,19.0s
UNV Unalaska Valle 75.08 31 P P 10 04 40.8 -1.0
baz=317
P19K Oil Pt 75.09 21 P P 10 04 41.2 -0.7
baz=326
SLKM Skilak Lake 75.20 20 IAmb IAmb 10 04 42.9
comp=Z,56nm,0.8s
SLKM IAMs_20 IAMs_20 10 40 30.0
comp=Z,1µm,19.0s
M26K Nabesna, AK 75.25 16 P P 10 04 42.4 -0.3
baz=333,SNR=21
MBWA Marble Bar 75.30 133 P P 10 04 45.3 +1.9
comp=Z,56nm,1.1s
MBWA Marble Bar 75.30 133 P P 10 04 43.5 +0.1
MBWA Marble Bar 75.30 133 P P 10 04 42.9 -0.6
MBWA IAmb IAmb 10 04 47.1
comp=Z,58nm,1.1s
MBWA Marble Bar 75.30 133 P P 10 04 42.5 -1.0
O22K Cooper Landing 75.35 19 IAMs_20 IAMs_20 10 40 09.1
comp=Z,2µm,22.0s
O22K Cooper Landing 75.35 19 P P 10 04 42.1 -1.2
baz=328,SNR=8.5
Q18K Katmai Hardscr 75.40 23 P P 10 04 42.0 -1.8
baz=325
KLU Klutina 75.41 17 IAmb IAmb 10 04 45.4
comp=Z,60nm,1.0s
KLU IAMs_20 IAMs_20 10 39 08.5
comp=Z,1µm,20.0s
KLU Klutina 75.41 17 P P 10 04 43.7 0.0
baz=331,SNR=31
Q17K Contact Creek 75.44 23 P P 10 04 42.9 -1.1
baz=324
M27K Edge Creek, AK 75.52 15 IAmb IAmb 10 04 50.4
comp=Z,64nm,1.0s
M27K Edge Creek, AK 75.52 15 P P 10 04 44.4 0.0
baz=334,SNR=50
HOM Homer 75.53 21 IAMs_20 IAMs_20 10 41 33.0
comp=Z,1µm,18.0s
HOM Homer 75.53 21 P P 10 04 42.6 -1.8
baz=327
L29M L29M 75.54 13 P P 10 04 44.2 -0.3
baz=337,SNR=64
POGA Pongola 75.56 216 IAmb IAmb 10 04 47.8
comp=Z,75nm,1.2s
POGA Pongola 75.56 216 P P 10 04 45.1 +0.3
Q19K Cape Douglas, 75.57 22 IAMs_20 IAMs_20 10 41 53.2
comp=Z,1µm,19.0s
Q19K Cape Douglas, 75.57 22 P P 10 04 43.0 -1.7
baz=326
N25K Chitina, Valde 75.61 17 P P 10 04 44.7 -0.2
baz=332,SNR=22
GENI Genyem 75.64 105 P P 10 04 46.0 +0.3
BRLK Bradley Lake 75.65 20 IAMs_20 IAMs_20 10 41 20.3
comp=Z,2µm,18.0s
GLI Glacier Island 75.67 18 IAmb IAmb 10 04 46.1
comp=Z,70nm,0.8s

GLI IAMs_20 IAMs_20 10 42 23.4
comp=Z,1μm,18.0s
GLI Glacier Island 75.67 18 P P 10 04 44.5 -0.6
baz=330,SNR=30
BVCY Beaver Creek 75.67 15 P P 10 04 45.2 0.0
baz=335,SNR=20
BRSE Bradley Lake S 75.71 20 P P 10 04 44.1 -1.3
baz=326,SNR=6.0
SEW Seward 75.74 20 IAMs_20 IAMs_20 10 40 32.5
comp=Z,1μm,22.0s
SEW Seward 75.74 20 P P 10 04 44.5 -1.0
baz=329,SNR=10
CNPM China Poot 75.76 21 IAmb IAmb 10 05 14.9
comp=Z,51nm,1.2s
CNPM IAMs_20 IAMs_20 10 41 40.0
comp=Z,1μm,20.0s
DIV Divide 75.76 17 IAmb IAmb 10 04 47.1
comp=Z,41nm,0.8s
DIV IAMs_20 IAMs_20 10 39 18.9
comp=Z,1μm,20.0s
R17L Mt. Peulik Vol 75.81 24 P P 10 04 45.2 -0.8
baz=324
S14K Fog Glacier 75.82 26 P P 10 04 44.6 -1.6
baz=322
VNFG Fog Glacier, M 75.82 26 IAmb IAmb 10 04 51.7
comp=Z,29nm,0.7s
FID Port Fidalgo 75.93 18 IAmb IAmb 10 04 52.0
comp=Z,38nm,0.7s
FID IAMs_20 IAMs_20 10 39 49.1
comp=Z,960nm,19.0s
GLB Gilahina Butte 75.93 16 IAMs_20 IAMs_20 10 39 25.3
comp=Z,1μm,20.0s
JAY Jayapura 75.99 105 P P **10 04 47.4 -0.4**
comp=Z,12nm,0.8s,baz=331,slow=10,SNR=4.5
JAY LR LR 10 40 21.2
comp=Z,499nm,20.6s,baz=326,slow=37
comp=Z,12nm,0.8s
M29M Somme Creek 76.10 14 IAmb IAmb 10 04 49.7
comp=Z,43nm,1.1s
M29M Somme Creek 76.10 14 P P **10 04 47.4 -0.3**
baz=337,SNR=41
MCARA McCarthy VSAT 76.15 16 IAmb IAmb 10 04 49.5
comp=Z,31nm,0.9s
MCARA McCarthy VSAT 76.15 16 P P **10 04 47.5 -0.4**
baz=333,SNR=12
BMRM Bremner River 76.17 17 IAmb IAmb 10 04 49.7
comp=Z,82nm,1.2s
BMRM IAMs_20 IAMs_20 10 39 48.8
comp=Z,1μm,21.0s
BMRM Bremner River 76.17 17 P P **10 04 47.7 -0.4**
baz=332,SNR=22
CHGN Chignik 76.20 26 P P **10 04 47.9 -0.2**
baz=323
VRDI Verde Repeater 76.20 16 IAMs_20 IAMs_20 10 39 34.4
comp=Z,1μm,21.0s
SDPT Sand Point 76.23 27 P P **10 04 48.0 -0.4**
baz=321
M30M Minto, Yukon 76.27 13 P P **10 04 47.7 -0.9**
baz=338,SNR=27
EYAK Cordova Ski Ar 76.28 18 P P **10 04 48.8 +0.2**
EYAK Cordova Ski Ar 76.28 18 IAmb IAmb 10 04 50.4
comp=Z,50nm,1.0s
EYAK IAMs_20 IAMs_20 10 39 27.6
comp=Z,2μm,21.0s
EYAK Cordova Ski Ar 76.28 18 P P **10 04 48.5 -0.1**
baz=331,SNR=15
YUK3 Moose Creek 76.33 15 P P **10 04 48.7 -0.4**
baz=335,SNR=54
P23K Montague Islan 76.36 19 IAmb IAmb 10 04 50.6
comp=Z,59nm,1.0s
P23K IAMs_20 IAMs_20 10 41 12.7
comp=Z,1μm,19.0s
P23K Montague Islan 76.36 19 P P **10 04 48.5 -0.6**
baz=330
FITZ Fitzroy Crossi 76.44 127 P P **10 04 53.2 +3.2**
comp=Z,7.0nm,1.7s
FITZ Fitzroy Crossi 76.44 127 LR LR 10 41 48.0
comp=Z,847nm,21.4s,baz=314,slow=38
FITZ Fitzroy Crossi 76.44 127 P P **10 04 50.0 0.0**
BLKN Baker Lake 76.44 354 P P **10 04 48.7 -0.7**
BLKN IAmb IAmb 10 04 50.5
comp=Z,48nm,0.8s
TSUM Tsumeb 76.49 231 LR LR 10 42 26.6
comp=Z,1μm,18.5s,baz=338,slow=39
TSUM Tsumeb 76.49 231 P P **10 04 49.9 -0.6**
TSUM IAmb IAmb 10 04 53.8
comp=Z,68nm,1.5s
TSUM Tsumeb 76.49 231 IAMs_20 IAMs_20 10 39 50.2
comp=Z,1μm,19.0s
TSUM Tsumeb 76.49 231 P P **10 04 50.2 -0.3**
LBTB Lobatse 76.57 222 LR LR 10 38 52.9
comp=Z,901nm,21.6s,baz=24,slow=36
LBTB Lobatse 76.57 222 IAmb IAmb 10 04 55.1
comp=Z,126nm,1.7s
LBTB Lobatse 76.57 222 P P **10 04 50.9 +0.1**
KNRA Kununurra 76.63 123 P P **10 04 50.7 -0.5**
comp=Z,47nm,0.7s
KNRA Kununurra 76.63 123 P P **10 04 50.0 -1.2**
KNRA IAmb IAmb 10 04 56.3
comp=Z,34nm,0.8s
KGCAE Kacgae 76.64 225 IAmb IAmb 10 04 54.7
comp=Z,53nm,1.1s
KGCAE Kacgae 76.64 225 P P **10 04 51.6 +0.4**
RAGM Ragged Mountai 76.67 17 IAMs_20 IAMs_20 10 40 07.0
comp=Z,1μm,18.0s
CRQM Cirque 76.69 16 IAmb IAmb 10 05 04.8
CRQM IAMs_20 IAMs_20 10 39 49.8
comp=Z,1μm,20.0s
CRQE Cirque 76.70 16 P P **10 04 50.9 -0.3**
baz=334,SNR=8.6
BARN Barnard Glacie 76.73 16 IAmb IAmb 10 04 57.9
comp=Z,63nm,1.2s
TGL Tana Glacier 76.76 16 IAmb IAmb 10 04 57.0
comp=Z,38nm,0.9s
TGL IAMs_20 IAMs_20 10 39 51.2
comp=Z,1μm,20.0s
KDAK Kodiak Island 76.84 22 IAMs_20 IAMs_20 10 42 41.6
comp=Z,1μm,20.0s
BERG Berg Lake 76.89 17 IAMs_20 IAMs_20 10 40 19.7
comp=Z,994nm,18.0s
YUK8 Steele Glacier 76.92 15 P P **10 04 52.4 -0.1**
baz=336,SNR=16
CHNA Chernabura Isl 76.95 27 P P **10 04 52.3 -0.2**
CHNA Chernabura Isl 76.95 27 P P **10 04 51.5 -1.0**
baz=322,SNR=6.2
CNBA Chernabura Isl 76.96 27 IAmb IAmb 10 04 56.7
comp=Z,33nm,0.8s
KDU Kakadu 76.96 118 P P **10 04 56.0 +2.9**
comp=Z,11nm,0.8s
BRWY Burwash Landin 76.98 14 P P **10 04 52.0 -0.7**
baz=336,SNR=11
GRNC Granite Creek 77.01 16 IAmb IAmb 10 05 01.1
comp=Z,32nm,0.8s
M31M Drury Creek, Y 77.02 12 P P **10 04 52.5 -0.3**
baz=340,SNR=78
SKOMA Sekoma 77.04 223 P P **10 04 53.4 0.0**
YUK4 Talbot Arm 77.08 14 P P **10 04 52.8 -0.6**
baz=337,SNR=30
LOGN Logan Glacier 77.08 15 IAmb IAmb 10 04 55.1
comp=Z,60nm,1.1s
LOGN IAMs_20 IAMs_20 10 42 00.8
comp=Z,1μm,18.0s
OHAK Old Harbor 77.09 23 P P **10 04 53.2 -0.1**
OHAK IAmb IAmb 10 04 54.6
comp=Z,69nm,1.0s
OHAK Old Harbor 77.09 23 P P **10 04 52.7 -0.5**
baz=326,SNR=6.9
MMPY Sheldon Lake, 77.10 10 IAmb IAmb 10 04 59.3
comp=Z,130nm,1.7s
MMPY Sheldon Lake, 77.10 10 P P **10 04 53.5 +0.2**
baz=342,SNR=40
Q23K Middleton Isla 77.12 19 P P **10 04 53.6 +0.3**
baz=331
KAIM Kayak Island 77.14 17 IAMs_20 IAMs_20 10 40 22.4
comp=Z,1μm,20.0s
KAIM Kayak Island 77.14 17 P P **10 04 53.5 0.0**
baz=332
N30M Aishikik Lake 77.26 13 IAmb IAmb 10 04 56.2
comp=Z,38nm,1.1s
N30M Aishikik Lake 77.26 13 P P **10 04 54.4 +0.2**
baz=338,SNR=28
O28M Mount Upton 77.30 15 IAMs_20 IAMs_20 10 44 28.4
comp=Z,870nm,18.0s
O28M Mount Upton 77.30 15 P P **10 04 54.9 +0.2**
baz=336,SNR=17
SII Sitkinak Islan 77.37 24 P P **10 04 55.3 +0.5**
baz=326

WRGLY Wrigley 77.40 7 P P **10 04 55.4 +0.6**
baz=349,SNR=24
N31M Braeburn, Yuko 77.47 13 IAmb IAmb 10 04 57.0
comp=Z,86nm,1.1s
N31M Braeburn, Yuko 77.47 13 P P **10 04 55.2 -0.2**
baz=339,SNR=40
YUK6 Outpost Mounta 77.50 14 P P **10 04 55.0 -0.8**
baz=337,SNR=24
MAKGR Makgori 77.63 222 IAmb IAmb 10 05 03.6
comp=Z,44nm,1.1s
MAKGR Makgori 77.63 222 P P **10 04 56.9 +0.2**
HYT Haines Junctio 77.77 14 IAmb IAmb 10 04 59.3
comp=Z,64nm,0.9s
HYT Haines Junctio 77.77 14 P P **10 04 57.1 -0.1**
baz=338,SNR=58
PCA Pinnacle 77.90 15 IAmb IAmb 10 04 59.7
comp=Z,65nm,0.8s
PCA IAMs_20 IAMs_20 10 42 24.5
comp=Z,1μm,19.0s
PINM Pinnacle 77.91 15 P P **10 04 57.7 -0.1**
baz=336,SNR=12
O29M Mount Kennedy 78.05 15 P P **10 04 58.6 -0.2**
baz=337
O30N Mendenhall 78.08 13 IAmb IAmb 10 05 00.4
comp=Z,59nm,1.1s
O30N Mendenhall 78.08 13 P P **10 04 58.7 -0.1**
baz=339,SNR=33
N32M Quiet Lake 78.23 12 P P **10 04 59.0 -0.6**
baz=341
WHY Whitehorse 78.40 13 IAmb IAmb 10 05 01.4
comp=Z,88nm,1.2s
WHY Whitehorse 78.40 13 P P **10 04 59.4 -1.2**
baz=340,SNR=26
P30M Million Dollar 78.53 14 P P **10 05 01.6 +0.3**
baz=338
YKAW3 Yellowknife Wh 78.62 3 IAmb IAmb 10 05 03.0
comp=Z,56nm,0.9s
YKA Yellowknife Ar 78.69 3 P P **10 05 00.8 -1.3**
comp=Z,40nm,0.8s,baz=352,slow=5.6,SNR=156
YKA LR LR 10 41 15.5
comp=Z,707nm,21.9s,baz=353,slow=37
comp=Z,40nm,0.8s
YKA Yellowknife Ar 78.69 3 P P **10 05 01.6 -0.5**
YKAW1 Yellowknife Wh 78.71 3 IAmb IAmb 10 05 03.5
comp=Z,79nm,0.9s
P29M Windy Craggy 78.84 14 P P **10 05 01.6 -1.4**
baz=338,SNR=8.4
MEEK Meekatharra 79.07 138 P P **10 05 03.8 -0.8**
comp=Z,48nm,1.9s
MEEK Meekatharra 79.07 138 P P **10 05 04.4 -0.2**
P33M Teslin, Yukon 79.16 12 P P **10 05 04.1 -0.7**
baz=341,SNR=59
SKAG Skagway 79.44 13 P P **10 05 06.1 -0.1**
SKAG Skagway 79.44 13 P P **10 05 06.4 +0.2**
baz=340,SNR=8.2
P32M Atlin 79.60 12 P P **10 05 06.9 -0.3**
baz=341,SNR=12
SCHQ Schefferville 79.74 337 P P **10 05 06.8 -1.1**
comp=Z,31nm,0.8s,baz=41,slow=5.5,SNR=36
SCHQ LR LR 10 40 02.9
comp=Z,2μm,21.0s,baz=36,slow=35
comp=Z,31nm,0.8s
SCHQ Schefferville 79.74 337 IAmb IAmb 10 05 09.1
comp=Z,41nm,0.9s
MORW Morawa 79.75 141 P P **10 05 08.1 0.0**
comp=Z,34nm,1.0s
MORW Morawa 79.75 141 P P **10 05 08.4 +0.2**
WTLY Watson Lake, Y 79.84 10 IAmb IAmb 10 05 13.9
comp=Z,42nm,0.9s
WTLY Watson Lake, Y 79.84 10 P P **10 05 08.2 -0.3**
baz=345,SNR=6.5
R33M Jennings River 80.23 11 IAMs_20 IAMs_20 10 44 55.7
comp=Z,884nm,18.0s
R33M Jennings River 80.23 11 P P **10 05 10.6 -0.1**
baz=343,SNR=29
KOTAN Kotaneelee Air 80.39 8 P P **10 05 11.2 -0.1**
baz=348
Q32M Nakina River 80.44 12 P P **10 05 11.7 -0.2**
baz=342,SNR=20
R32K Eaglecrest 80.71 13 P P **10 05 13.2 +0.1**
baz=340
JIS Juneau Island 80.73 13 P P **10 05 13.9 +0.7**
LIRD Liard River Hi 80.87 9 P P **10 05 13.7 -0.2**
baz=347,SNR=8.6
DRLN Deer Lake 80.98 329 IAmb IAmb 10 05 20.0
comp=Z,61nm,1.4s
DLBC Dease Lake 81.29 11 P P **10 05 16.0 -0.3**
baz=344,SNR=21
BLDU Ballidu 81.35 141 P P **10 05 15.0 -1.8**
comp=Z,29nm,1.9s
BLDU Ballidu 81.35 141 P P **10 05 15.5 -1.2**
S32K Killisnoo 81.46 14 P P **10 05 17.3 +0.3**
baz=340
S34M Telegraph Cree 81.62 12 IAmb IAmb 10 05 24.3
comp=Z,54nm,0.9s
S34M Telegraph Cree 81.62 12 P P **10 05 18.5 +0.6**
baz=343,SNR=20
SIT Sitka 81.70 14 IAmb IAmb 10 05 20.7
comp=Z,52nm,1.2s
SIT Sitka 81.70 14 P P **10 05 18.9 +0.5**
baz=340
FCC Fort Churchill 81.74 352 IAmb IAmb 10 05 24.0
comp=Z,96nm,1.2s
MUN Mundaring 82.23 142 P P **10 05 22.9 +1.6**
comp=Z,38nm,1.9s
MUN Mundaring 82.23 142 P P **10 05 22.6 +1.2**
T33K Petersburg 82.37 13 P P **10 05 22.1 +0.3**
baz=342
T35M Bob Quinn 82.66 12 IAmb IAmb 10 05 25.9
comp=Z,38nm,1.1s
T35M Bob Quinn 82.66 12 P P **10 05 23.6 +0.2**
baz=344,SNR=9.5
KLBR Kellerberrin 82.66 141 P P **10 05 24.7 +1.1**
comp=Z,48nm,0.9s
KLBR Kellerberrin 82.66 141 P P **10 05 21.6 -2.0**
WRAK Wrangell Islan 82.85 13 IAmb IAmb 10 05 26.6
comp=Z,46nm,1.0s
WRAK Wrangell Islan 82.85 13 P P **10 05 25.1 +0.7**
baz=342,SNR=12
U33K Whale Pass 83.00 13 IAmb IAmb 10 05 39.4
comp=Z,56nm,1.3s
U33K Whale Pass 83.00 13 P P **10 05 25.7 +0.5**
baz=341
WRKA Warakurna 83.27 130 P P **10 05 26.9 -0.2**
comp=Z,6.9nm,0.9s
WRA Warramunga Arr 83.37 122 P P **10 05 25.7 -1.8**
comp=Z,25nm,0.8s,baz=325,slow=4.9,SNR=143
WRA PKKPbc **PKKPbc 10 23 43.2 -3.3**
comp=Z,1.1nm,0.9s,baz=132,slow=2.2,SNR=4.8
comp=Z,25nm,0.8s
WRAB Tennant Creek 83.37 122 P P **10 05 26.3 -1.2**
WRAB Tennant Creek 83.37 122 P P **10 05 26.3 -1.2**
WRAB IAmb IAmb 10 05 30.6
comp=Z,27nm,0.8s
WRAB Tennant Creek 83.37 122 iP P **10 05 26.0 -1.6**
WRAB pmax pmax
comp=Z,24nm,0.8s
WRAB MLR MLR
comp=Z,1μm,21.0s
NWAO Narrogin (SRO) 83.50 142 P P **10 05 27.2 -0.7**
comp=Z,93nm,0.5s
NWAO Narogin (SRO) 83.50 142 P P **10 05 27.2 -0.7**
comp=Z,56nm,1.8s
NWAO Narrogin (SRO) 83.50 142 LR LR 10 41 01.6
comp=Z,581nm,21.8s,baz=320,slow=34
NWAO Narrogin (SRO) 83.50 142 P P **10 05 27.3 -0.7**
NWAO Narrogin (SRO) 83.50 142 P P **10 05 27.3 -0.7**
NWAO pmax pmax
comp=Z,141nm,1.6s
NWAO Narrogin (SRO) 83.50 142 P P **10 05 28.3 +0.4**
WR0 Warramunga Arr 83.51 122 P P **10 05 27.6 -0.7**
WR0 IAmb IAmb 10 05 36.2
comp=Z,27nm,0.9s
CRAG Craig 83.61 14 P P **10 05 28.4 0.0**
baz=341
PATS Pohnpei 83.68 86 P P **10 05 30.3 +0.9**
U35K Hyder 83.72 12 IAMs_20 IAMs_20 10 47 44.9
comp=Z,770nm,18.0s
U35K Hyder 83.72 12 P P **10 05 28.9 0.0**
baz=344
AUKUL Kulin High Sch 83.73 142 P P **10 05 30.2 +1.1**
V35K Ketchikan 84.02 13 P P **10 05 30.2 -0.2**
baz=343
KMBL Kambalda 84.56 138 P P **10 05 34.9 +1.5**
comp=Z,11nm,1.1s
RKGY Rocky Gully 84.77 143 P P **10 05 34.1 -0.2**
comp=Z,146nm,1.8s
SUR Sutherland 84.98 221 LR LR 10 47 45.8
comp=Z,742nm,18.9s,baz=36,slow=39
SUR Sutherland 84.98 221 P P **10 05 37.9 +2.2**
RUBB Prince Rupert 85.21 12 IAmb IAmb 10 05 50.8
comp=Z,32nm,1.2s
PMG Port Moresby 85.33 106 P P **10 05 37.1 -0.6**
comp=Z,18nm,0.8s,baz=326,slow=11,SNR=3.8
PMG LR LR 10 46 31.3
comp=Z,166nm,19.7s,baz=295,slow=38
comp=Z,18nm,0.8s
PMG Port Moresby 85.33 106 P P **10 05 37.6 0.0**
PMG IAmb IAmb 10 08 52.0
comp=Z,34nm,0.9s
PMG Port Moresby 85.33 106 P P **10 05 37.6 0.0**
PMG pmax pmax
comp=Z,34nm,0.9s
COEN Coen 85.38 112 P P **10 05 38.0 +0.2**
comp=Z,60nm,1.6s
COEN Coen 85.38 112 P P **10 05 38.3 +0.4**
COEN Coen 85.38 112 IAmb IAmb 10 05 41.5
comp=Z,36nm,0.9s
AS15 Alice Springs 85.72 125 P P **10 05 38.2 -1.3**
comp=Z,24nm,0.9s
AS31 Alice Springs 85.74 125 P P **10 05 38.6 -0.9**
comp=Z,6.8nm,0.9s
AS31 Alice Springs 85.74 125 P P **10 05 39.1 -0.4**
ASAR Alice Springs 85.74 125 P P **10 05 37.6 -1.9**
comp=Z,18nm,0.8s,baz=308,slow=4.9,SNR=131
ASAR PKKPbc **PKKPbc 10 23 41.6 +0.6**
comp=Z,1.0nm,0.8s,baz=138,slow=2.9,SNR=5.7
ASAR LR LR 10 47 45.0
comp=Z,385nm,20.3s,baz=306,slow=38
comp=Z,18nm,0.8s
ASAR Alice Springs 85.74 125 P P **10 05 38.5 -1.0**
ASAR Alice Springs 85.74 125 P P **10 05 38.5 -1.0**
AUALC St Philip's Co 85.74 125 P P **10 05 38.7 -0.8**
KRVT Keravat (AS076 85.76 99 LR LR 10 41 38.4
comp=Z,34nm,21.8s,baz=185,slow=34
AS01 Alice Springs 85.77 125 P P **10 05 38.2 -1.5**
AS09 Alice Springs 85.78 125 P P **10 05 38.6 -1.1**
comp=Z,29nm,0.9s
AS17 Alice Springs 85.79 125 P P **10 05 38.6 -1.1**
comp=Z,30nm,0.9s
DIB Dawson Inlet, 85.89 14 P P **10 05 40.7 +0.8**
DIB IAmb IAmb 10 05 43.9
comp=Z,42nm,1.4s
MOBC Moresby Island 86.04 14 P P **10 05 41.0 +0.2**
MOBC IAmb IAmb 10 05 44.8
comp=Z,101nm,1.8s
FFC Flin Flon 86.39 356 P P **10 05 42.1 -0.2**
FFC Flin Flon 86.39 356 IAMs_20 IAMs_20 10 47 45.1
comp=Z,1μm,19.0s
FFC Flin Flon 86.39 356 P P **10 05 42.1 -0.2**
FFC pmax pmax
comp=Z,97nm,1.1s
FFC MLR MLR
comp=Z,1μm,19.0s
LMN Caledonia Moun 86.62 331 IAmb IAmb 10 05 50.0
comp=Z,30nm,1.0s
LDAQ Lac Daran 87.07 336 IAmb IAmb 10 05 52.4
comp=Z,57nm,1.1s
D62A Allapoint, All 87.11 334 IAmb IAmb 10 05 51.9
comp=Z,89nm,1.5s
D62A IAMs_20 IAMs_20 10 44 16.2
comp=Z,1μm,22.0s
QIS Mount Isa 87.32 119 P P **10 05 46.3 -1.1**
comp=Z,30nm,0.9s
QIS Mount Isa 87.32 119 P P **10 05 46.5 -0.8**
FORT Forrest 87.45 134 P P **10 05 48.0 +0.4**
comp=Z,31nm,0.8s
FORT Forrest 87.45 134 P P **10 05 47.0 -0.7**
FORT IAmb IAmb 10 05 58.0
comp=Z,20nm,0.8s
F64A Sherman 87.92 333 IAmb IAmb 10 06 42.3
comp=Z,58nm,1.9s
F64A IAMs_20 IAMs_20 10 45 26.6
comp=Z,1μm,18.0s
G65A Princeton 88.20 332 IAMs_20 IAMs_20 10 44 44.3
comp=Z,1μm,21.0s
EMMW East Machias 88.59 332 IAMs_20 IAMs_20 10 45 12.4
comp=Z,1μm,19.0s
PKME Peaks-Kenny Pk 88.77 333 IAMs_20 IAMs_20 10 47 24.1
comp=Z,832nm,20.0s
MTSU Mount Surprise 88.97 114 P P **10 05 53.3 -1.9**
comp=Z,16nm,1.0s
MTSU Mount Surprise 88.97 114 P P **10 05 55.5 +0.3**
WVL Waterville 89.50 333 IAMs_20 IAMs_20 10 47 46.7
comp=Z,963nm,19.0s
H62A Milan 90.02 334 IAMs_20 IAMs_20 10 46 03.2
comp=Z,1μm,21.0s
CBB Campbell River 90.12 10 IAmb IAmb 10 06 06.4
comp=Z,64nm,1.3s
I63A Otisfield 90.28 333 IAMs_20 IAMs_20 10 46 51.1
comp=Z,1μm,19.0s
ULM Lac du Bonnet 90.31 352 P P **10 05 59.5 -1.6**
comp=Z,17nm,0.9s,baz=15,slow=4.3,SNR=32
ULM LR LR 10 48 42.9
comp=Z,778nm,19.3s,baz=7.5,slow=37
comp=Z,17nm,0.9s
ULM Lac du Bonnet 90.31 352 P P **10 06 00.7 -0.4**
ULM IAmb IAmb 10 06 05.7
comp=Z,68nm,1.3s
ULM Lac du Bonnet 90.31 352 P P **10 06 00.7 -0.4**
ULM pmax pmax
comp=Z,69nm,1.3s
LBNH Lisbon 90.57 334 IAMs_20 IAMs_20 10 46 41.0
comp=Z,1μm,18.0s
EPLO Experimental L 90.61 350 IAmb IAmb 10 06 07.9
comp=Z,59nm,1.2s
TBO Thunder Bay 90.95 347 IAmb IAmb 10 06 09.3
comp=Z,45nm,1.4s
WBO Williamsburg 90.97 337 IAmb IAmb 10 06 09.8
comp=Z,46nm,1.4s
LONY Lake Ozonia 91.10 336 IAmb IAmb 10 06 11.1
comp=Z,25nm,0.9s
HNH Hanover 91.16 334 IAMs_20 IAMs_20 10 50 27.6
comp=Z,993nm,20.0s
CLRS Cowichan Lake 91.48 10 IAmb IAmb 10 06 25.8
comp=Z,44nm,1.3s
A05A Maple Falls 91.56 9 IAmb IAmb 10 06 23.5
comp=Z,25nm,1.0s
J61A Chester 91.57 334 IAMs_20 IAMs_20 10 50 54.4
comp=Z,888nm,20.0s
CTA Charters Tower 91.63 115 P P **10 06 08.2 +0.6**
comp=Z,18nm,1.7s
CTA Charters Tower 91.63 115 LR LR 10 52 15.0
comp=Z,334nm,20.4s,baz=305,slow=39
CTA Charters Tower 91.63 115 P P **10 06 07.8 +0.2**
CTAO Charters Tower 91.63 115 P P **10 06 07.4 -0.1**
CTAO Charters Tower 91.63 115 P P **10 06 07.5 -0.1**
CTAO IAmb IAmb 10 06 11.5
comp=Z,49nm,1.1s
CTAO Charters Tower 91.63 115 P P **10 06 07.5 -0.1**
CTAO pmax pmax
comp=Z,49nm,1.2s
PGC Sidney 91.73 10 IAmb IAmb 10 06 14.6
comp=Z,36nm,1.0s
BUKO Buck Lake 91.76 340 IAmb IAmb 10 06 13.4
comp=Z,29nm,1.3s
BCX Boston College 91.99 333 IAMs_20 IAMs_20 10 47 40.4
comp=Z,888nm,19.0s
WES Weston 92.00 333 IAMs_20 IAMs_20 10 47 41.6
comp=Z,1μm,18.0s
DELO Deloro Mine 92.11 338 IAmb IAmb 10 06 15.7
comp=Z,40nm,1.1s
J59A Piesco 92.11 336 IAMs_20 IAMs_20 10 47 02.6
comp=Z,963nm,20.0s
L64A Middleborough 92.22 333 IAMs_20 IAMs_20 10 47 23.5
comp=Z,1μm,18.0s
AGMN Agassiz Nation 92.24 351 IAMs_20 IAMs_20 10 48 06.7
comp=Z,1μm,21.0s
B04A Port Angeles 92.31 10 IAmb IAmb 10 06 12.9
comp=Z,33nm,1.0s
SADO Sadowa 92.31 339 LR LR 10 48 04.7
comp=Z,914nm,18.4s,baz=26,slow=36
SADO Sadowa 92.31 339 IAmb IAmb 10 06 15.8
comp=Z,27nm,1.4s
L61B Northampton 92.41 334 IAMs_20 IAMs_20 10 52 00.5
comp=Z,787nm,19.0s
PECO Prince Edward 92.46 337 IAmb IAmb 10 06 17.2
comp=Z,24nm,1.0s
M65A Busby, Falmout 92.47 332 IAMs_20 IAMs_20 10 49 04.3
comp=Z,1μm,19.0s
J57A Williamstown 92.63 337 IAmb IAmb 10 06 17.9
comp=Z,16nm,0.8s
J57A IAMs_20 IAMs_20 10 46 26.3
comp=Z,1μm,22.0s
LDM Libby Dam 92.69 4 IAmb IAmb 10 06 13.8

	comp=Z,29nm,1.1s							
DGMT	**Dagmar**	**92.74**	**357**	IAMs_20	IAMs_20	10 50 36.2		
	comp=Z,1µm,20.0s							
NEW	**Newport**	**92.76**	**5**	LR	LR	10 50 11.4		
	comp=Z,902nm,20.9s,baz=2.5,slow=37							
NEW	**Newport**	**92.76**	**5**	IAMs_20	IAMs_20	10 49 38.8		
	comp=Z,1µm,20.0s							
NEW	**Newport**	**92.76**	**5**	IAmb	IAmb	10 06 14.3		
	comp=Z,30nm,0.8s							
GNW	**Green Mountain**	**92.88**	**9**	IAmb	IAmb	10 06 15.6		
	comp=Z,30nm,1.0s							
NLWA	**Neilton Lookou**	**92.91**	**10**	IAMs_20	IAMs_20	10 50 43.1		
	comp=Z,978nm,20.0s							
MDND	**Maddock**	**93.06**	**354**	IAMs_20	IAMs_20	10 50 17.6		
	comp=Z,1µm,21.0s							
M63A	**Gales Ferry**	**93.11**	**333**	IAMs_20	IAMs_20	10 48 00.2		
	comp=Z,1µm,18.0s							
C09A	**Chrisman Ranch**	**93.13**	**6**	IAmb	IAmb	10 06 16.0		
	comp=Z,41nm,1.1s							
E38A	**The Farm, Brul**	**93.29**	**348**	IAmb	IAmb	10 06 20.4		
	comp=Z,31nm,1.1s							
E38A				IAMs_20	IAMs_20	10 49 31.6		
	comp=Z,878nm,18.0s							
EGMT	**Eagleton**	**93.29**	**0**	IAMs_20	IAMs_20	10 49 56.8		
	comp=Z,1µm,20.0s							
J55A	**Hilton**	**93.31**	**338**	IAmb	IAmb	10 06 21.0		
	comp=Z,38nm,1.1s							
K57A	**Scipio Center**	**93.41**	**337**	IAmb	IAmb	10 06 21.5		
	comp=Z,59nm,1.5s							
K57A				IAMs_20	IAMs_20	10 47 00.8		
	comp=Z,953nm,22.0s							
L59A	**Walton**	**93.43**	**335**	IAMs_20	IAMs_20	10 47 32.5		
	comp=Z,1µm,21.0s							
EPH	**Ephrata**	**93.45**	**7**	IAmb	IAmb	10 06 25.2		
	comp=Z,37nm,1.5s							
F42A	**Maple Grove Fa**	**93.50**	**346**	IAmb	IAmb	10 06 16.9		
	comp=Z,16nm,0.7s							
F42A				IAMs_20	IAMs_20	10 51 04.2		
	comp=Z,859nm,19.0s							
BINY	**Binghamton**	**93.72**	**336**	IAmb	IAmb	10 06 51.6		
	comp=Z,47nm,1.8s							
BINY				IAMs_20	IAMs_20	10 48 21.2		
	comp=Z,1µm,19.0s							
WSPT	**Westport, CT**	**93.77**	**334**	IAMs_20	IAMs_20	10 48 37.5		
	comp=Z,902nm,20.0s							
E03A	**Lebam**	**93.78**	**10**	IAmb	IAmb	10 06 19.4		
	comp=Z,21nm,0.8s							
D08A	**Wollman Farm,**	**93.81**	**7**	IAmb	IAmb	10 06 19.1		
	comp=Z,32nm,1.2s							
LON	**Longmire**	**93.81**	**9**	IAmb	IAmb	10 06 19.0		
	comp=Z,21nm,0.8s							
MMNY	**Mt. Morris Dam**	**93.83**	**338**	IAmb	IAmb	10 06 23.2		
	comp=Z,49nm,1.2s							
N62A	**Caumsett State**	**94.03**	**334**	IAMs_20	IAMs_20	10 49 10.4		
	comp=Z,1µm,18.0s							
WAH2	**Wahluke Slope**	**94.05**	**7**	IAmb	IAmb	10 06 20.0		
	comp=Z,52nm,1.5s							
PAL	**Palisades**	**94.11**	**334**	IAMs_20	IAMs_20	10 48 47.6		
	comp=Z,1µm,21.0s							
MXC	**Moxie City**	**94.15**	**8**	IAmb	IAmb	10 06 20.7		
	comp=Z,29nm,0.9s							
L56A	**Greenwood**	**94.27**	**337**	IAmb	IAmb	10 06 24.6		
	comp=Z,40nm,1.4s							
E08A	**Dider Farm, El**	**94.36**	**7**	IAmb	IAmb	10 06 21.7		
	comp=Z,36nm,1.3s							
G40A	**Rib Lake**	**94.36**	**347**	IAmb	IAmb	10 06 25.6		
	comp=Z,35nm,1.1s							
G40A				IAMs_20	IAMs_20	10 50 37.9		
	comp=Z,1µm,20.0s							
HAWA	**Hanford**	**94.41**	**7**	IAmb	IAmb	10 06 25.9		
	comp=Z,47nm,2.0s							
E09A	**Wood Farm, Sta**	**94.42**	**6**	IAmb	IAmb	10 06 21.9		
	comp=Z,26nm,1.0s							
E28A	**Huff**	**94.42**	**354**	IAMs_20	IAMs_20	10 51 01.5		
	comp=Z,1µm,21.0s							
QLP	**Quilpie**	**94.51**	**121**	P	**P**	**10 06 20.8**	**+0.1**	
	comp=Z,26nm,1.5s							
QLP	**Quilpie**	**94.51**	**121**	P	**P**	**10 06 22.1**	**+1.4**	
H43A	**Windswept, Lux**	**94.67**	**345**	IAmb	IAmb	10 06 27.0		
	comp=Z,42nm,1.3s							
F33A	**5 Mile Ranch,**	**94.71**	**351**	IAmb	IAmb	10 06 27.3		
	comp=Z,37nm,1.2s							
SPMN	**Marine on St.**	**94.83**	**349**	IAmb	IAmb	10 06 27.0		
	comp=Z,15nm,0.9s							
SPMN				IAMs_20	IAMs_20	10 50 44.4		
	comp=Z,1µm,21.0s							
F07A	**Phinny Hill Vi**	**94.86**	**8**	IAmb	IAmb	10 06 26.6		
	comp=Z,16nm,0.8s							
M57A	**Sunshine Farm,**	**94.86**	**336**	IAmb	IAmb	10 06 32.7		
	comp=Z,20nm,1.2s							
M57A				IAMs_20	IAMs_20	10 49 07.4		
	comp=Z,1µm,19.0s							
ERPA	**Erie**	**95.00**	**339**	IAMs_20	IAMs_20	10 48 58.8		
	comp=Z,976nm,20.0s							
F10A	**Beach Ranch, E**	**95.03**	**6**	IAmb	IAmb	10 06 28.8		
	comp=Z,39nm,1.5s							
HNR	**Honiara**	**95.07**	**98**	LR	LR	10 49 56.9		
	comp=Z,13nm,21.6s,baz=26,slow=36							
K50A	**Casco**	**95.09**	**341**	IAmb	IAmb	10 06 29.1		
	comp=Z,31nm,1.0s							
N58A	**Sunbury**	**95.19**	**336**	IAMs_20	IAMs_20	10 48 47.9		
	comp=Z,1µm,22.0s							
HOOD	**Mount Hood Mea**	**95.23**	**9**	IAmb	IAmb	10 06 30.4		
	comp=Z,20nm,0.8s							
I42A	**Draeger Farm,**	**95.45**	**346**	IAmb	IAmb	10 06 26.1		
	comp=Z,19nm,1.1s							
I42A				IAMs_20	IAMs_20	10 51 55.7		
	comp=Z,974nm,20.0s							
PAOC	**Oil Creek Stat**	**95.46**	**338**	IAmb	IAmb	10 06 31.8		
	comp=Z,27nm,1.3s							
P61A	**Hammonton**	**95.61**	**334**	IAMs_20	IAMs_20	10 54 18.1		
	comp=Z,959nm,19.0s							
BOZ	**Bozeman (W)**	**95.69**	**2**	IAmb	IAmb	10 06 27.9		
	comp=Z,17nm,0.9s							
BOZ				IAMs_20	IAMs_20	10 51 31.3		
	comp=Z,1µm,21.0s							
I40A	**Norwalk**	**95.77**	**347**	IAmb	IAmb	10 06 32.2		
	comp=Z,33nm,1.0s							
I40A				IAMs_20	IAMs_20	10 50 48.1		
	comp=Z,1µm,20.0s							
H04A	**Detroit Lake**	**95.80**	**9**	IAmb	IAmb	10 06 31.9		
	comp=Z,37nm,1.7s							
DLMT	**Dillon**	**95.89**	**3**	IAMs_20	IAMs_20	10 50 32.7		
	comp=Z,873nm,21.0s							
M52A	**Chesterland**	**95.91**	**339**	IAMs_20	IAMs_20	10 49 40.0		
	comp=Z,1µm,20.0s							
PLID	**Pearl Lake**	**96.00**	**5**	IAMs_20	IAMs_20	10 57 06.5		
	comp=Z,821nm,19.0s							
I37A	**Lemond, Waseca**	**96.11**	**349**	IAMs_20	IAMs_20	10 55 02.1		
	comp=Z,1µm,20.0s							
BMO	**Blue Mountains**	**96.13**	**6**	IAMs_20	IAMs_20	10 51 35.2		
	comp=Z,1µm,22.0s							
RLMT	**Red Lodge**	**96.20**	**0**	IAmb	IAmb	10 06 35.2		
	comp=Z,34nm,1.1s							
I05D	**Terrebonne, OR**	**96.24**	**9**	IAmb	IAmb	10 06 35.2		
	comp=Z,17nm,1.3s							
YNE	**Yellowstone No**	**96.31**	**1**	IAmb	IAmb	10 06 33.4		
	comp=Z,22nm,0.9s							
STKA	**Stephens Creek**	**96.32**	**126**	P	**P**	**10 06 24.6**	**-4.3**	
	comp=Z,0.8nm,0.5s,baz=304,slow=7.3,SNR=4.2							
STKA				PP	**PP**	**10 10 22.2**	**-0.6**	
	comp=Z,4.2nm,1.0s,baz=318,slow=12,SNR=3.4							
STKA				LR	LR	10 58 27.0		
	comp=Z,386nm,18.1s,baz=301,slow=41							
SUSD	**Miller**	**96.38**	**353**	IAMs_20	IAMs_20	10 52 06.4		
	comp=Z,922nm,19.0s							
YHL	**Hebgen Lake**	**96.45**	**2**	IAmb	IAmb	10 06 39.2		
	comp=Z,16nm,1.1s							
WIFE	**Three Sisters-**	**96.46**	**9**	IAmb	IAmb	10 06 36.4		
	comp=Z,24nm,1.1s							
I04A	**Tendick Farm,**	**96.64**	**10**	IAmb	IAmb	10 06 31.7		
	comp=Z,12nm,0.9s							
JFWS	**Jewell Farm**	**96.64**	**346**	IAMs_20	IAMs_20	10 51 37.4		
	comp=Z,924nm,20.0s							
JFWS	**Jewell Farm**	**96.64**	**346**	IAmb	IAmb	10 06 35.6		
	comp=Z,24nm,0.9s							
I07A	**Izee**	**96.70**	**8**	IAmb	IAmb	10 06 33.1		
	comp=Z,13nm,1.0s							
LKWY	**Lake**	**96.75**	**1**	IAmb	IAmb	10 06 34.4		
	comp=Z,15nm,0.8s							
N51A	**Ashland**	**96.77**	**340**	IAMs_20	IAMs_20	10 48 28.6		
	comp=Z,1µm,22.0s							
PINE	**Pine Mountain**	**96.83**	**9**	IAmb	IAmb	10 06 33.8		
	comp=Z,14nm,1.1s							
L44A	**Lake County Fo**	**96.89**	**344**	IAMs_20	IAMs_20	10 53 00.9		
	comp=Z,1µm,20.0s							
O54A	**Avella**	**96.90**	**338**	IAmb	IAmb	10 06 35.0		
	comp=Z,24nm,1.5s							
H17A	**Grant Village**	**96.91**	**1**	IAmb	IAmb	10 06 36.0		
	comp=Z,17nm,1.1s							
O53A	**New Philadelph**	**97.07**	**339**	IAmb	IAmb	10 06 37.4		
	comp=Z,31nm,1.5s							
RSSD	**Black Hills**	**97.08**	**356**	P	**P**	**10 06 32.4**	**-0.2**	
RSSD	**Black Hills**	**97.08**	**356**	P	**P**	**10 06 32.4**	**-0.2**	
RSSD				pmax	pmax			
	comp=Z,42nm,1.5s							
RSSD				MLR	MLR			
	comp=Z,2µm,21.0s							
FLWY	**Flagg Ranch**	**97.22**	**1**	IAmb	IAmb	10 06 36.1		
	comp=Z,17nm,1.0s							
FLWY				IAMs_20	IAMs_20	10 52 31.8		
	comp=Z,1µm,21.0s							
J04A	**Umpqua Nationa**	**97.22**	**10**	IAmb	IAmb	10 06 43.0		
	comp=Z,26nm,1.1s							
MCWV	**Mont Chateau**	**97.23**	**338**	IAmb	IAmb	10 06 38.9		
	comp=Z,23nm,1.2s							
L42A	**Oliver, Polo**	**97.41**	**346**	IAMs_20	IAMs_20	10 53 00.7		
	comp=Z,945nm,20.0s							
MOOW	**Moose Ponds**	**97.56**	**1**	IAmb	IAmb	10 06 41.2		
	comp=Z,31nm,1.9s							
MOOW				IAMs_20	IAMs_20	10 52 34.6		
	comp=Z,1µm,20.0s							
ACSO	**Alum Creek Sta**	**97.57**	**340**	IAMs_20	IAMs_20	10 49 03.9		
	comp=Z,1µm,21.0s							
Q56A	**Snyder Ridge,**	**97.60**	**337**	IAMs_20	IAMs_20	10 53 38.7		
	comp=Z,805nm,20.0s							
HLID	**Hailey**	**97.61**	**4**	IAmb	IAmb	10 06 40.6		
	comp=Z,20nm,1.7s							
HLID				IAMs_20	IAMs_20	10 52 44.2		
	comp=Z,861nm,19.0s							
N47A	**Urbana**	**97.64**	**342**	IAmb	IAmb	10 06 39.3		
	comp=Z,24nm,1.2s							
L40A	**Anamosa**	**97.65**	**347**	IAmb	IAmb	10 06 40.0		
	comp=Z,14nm,1.1s							
L40A				IAMs_20	IAMs_20	10 53 44.9		
	comp=Z,1µm,18.0s							
FXWY	**Fox Creek**	**97.66**	**1**	IAMs_20	IAMs_20	10 52 13.4		
	comp=Z,827nm,21.0s							
MFID	**Camas Ranch**	**97.67**	**5**	IAmb	IAmb	10 06 41.2		
	comp=Z,9.5nm,0.9s							
MFID				IAMs_20	IAMs_20	10 55 21.8		
	comp=Z,914nm,18.0s							
M44A	**Midewin, Midew**	**97.68**	**344**	IAMs_20	IAMs_20	10 53 56.7		
	comp=Z,900nm,20.0s							
LOHW	**Long Hollow**	**97.69**	**1**	IAMs_20	IAMs_20	10 52 49.3		
	comp=Z,1µm,21.0s							
CBN	**Corbin Frederi**	**97.79**	**335**	IAMs_20	IAMs_20	10 52 58.9		
	comp=Z,929nm,20.0s							
SNOW	**Snow King Moun**	**97.84**	**1**	IAMs_20	IAMs_20	10 52 44.3		
	comp=Z,1µm,21.0s							
K05A	**Summer Lake**	**97.88**	**9**	IAmb	IAmb	10 06 43.2		
	comp=Z,23nm,1.4s							
P52A	**Corning**	**97.90**	**339**	IAmb	IAmb	10 06 41.1		
	comp=Z,111nm,1.0s							
O48B	**Farmland**	**98.10**	**342**	IAmb	IAmb	10 06 42.1		
	comp=Z,26nm,1.3s							
R58B	**Mineral**	**98.17**	**336**	IAMs_20	IAMs_20	10 50 14.0		
	comp=Z,1µm,22.0s							
L04D	**Klamath Falls**	**98.20**	**10**	IAmb	IAmb	10 06 43.5		
	comp=Z,26nm,1.5s							
WVOR	**Wild Horse Val**	**98.42**	**7**	IAmb	IAmb	10 06 45.1		
	comp=Z,13nm,1.2s							
WVOR				IAMs_20	IAMs_20	10 56 16.6		
	comp=Z,1µm,19.0s							
SFIN	**Lafayette**	**98.44**	**343**	IAmb	IAmb	10 06 43.2		
	comp=Z,14nm,1.3s							
AHID	**Auburn Hatcher**	**98.53**	**2**	IAmb	IAmb	10 06 49.0		
	comp=Z,12nm,1.3s							
AHID				IAMs_20	IAMs_20	10 53 16.4		
	comp=Z,928nm,22.0s							
L34A	**Svendsen Farm,**	**98.53**	**350**	IAmb	IAmb	10 06 43.5		
	comp=Z,7.4nm,0.8s							
L34A				IAMs_20	IAMs_20	10 53 05.3		
	comp=Z,919nm,20.0s							
BW06	**Boulder Array**	**98.55**	**0**	IAMs_20	IAMs_20	10 52 52.9		
	comp=Z,1µm,22.0s							
PDAR	**Pinedale Array**	**98.55**	**0**	P	**P**	**10 06 38.5**	**-0.8**	
	comp=Z,1.6nm,0.6s,baz=354,slow=4.2,SNR=17							
PDAR				PP	**PP**	**10 10 31.6**	**-7.0**	
	comp=Z,0.9nm,0.8s,baz=357,slow=4.2,SNR=3.7							
PDAR				LR	LR	10 53 27.5		
	comp=Z,582nm,21.7s,baz=0.0,slow=37							
	comp=Z,1.6nm,0.6s							
PDAR	**Pinedale Array**	**98.55**	**0**	P	**P**	**10 06 38.8**	**-0.5**	
R55A	**Marlinton**	**98.58**	**337**	IAMs_20	IAMs_20	10 50 35.7		
	comp=Z,960nm,20.0s							
YBH	**Yreka Blue Hor**	**98.63**	**10**	LR	LR	10 58 41.0		
	comp=Z,430nm,18.1s,baz=355,slow=40							
K22A	**Casper**	**98.64**	**358**	IAmb	IAmb	10 06 44.3		
	comp=Z,30nm,1.8s							
K22A				IAMs_20	IAMs_20	10 55 22.1		
	comp=Z,1µm,19.0s							
HDIL	**Hopedale**	**98.73**	**345**	IAmb	IAmb	10 06 45.5		
	comp=Z,12nm,0.9s							
HDIL				IAMs_20	IAMs_20	10 54 06.7		
	comp=Z,1µm,19.0s							
Q51A	**Peebles**	**98.80**	**340**	IAMs_20	IAMs_20	10 51 46.4		
	comp=Z,883nm,19.0s							
N41A	**Harden Midland**	**98.89**	**346**	IAmb	IAmb	10 06 45.7		
	comp=Z,16nm,1.2s							
N41A				IAMs_20	IAMs_20	10 52 45.9		
	comp=Z,1µm,20.0s							
P48A	**Milroy**	**98.92**	**342**	IAmb	IAmb	10 06 45.6		
	comp=Z,17nm,1.2s							
T59A	**Double "B" Far**	**98.97**	**335**	IAMs_20	IAMs_20	10 56 03.2		
	comp=Z,910nm,18.0s							
P46A	**Rosedale**	**99.19**	**343**	IAmb	IAmb	10 06 47.4		
	comp=Z,17nm,1.1s							
KHMM	**Horse Mountain**	**99.32**	**11**	IAMs_20	IAMs_20	10 54 42.7		
	comp=Z,792nm,19.0s							
N35A	**Tabor**	**99.52**	**350**	IAmb	IAmb	10 06 53.0		
	comp=Z,13nm,1.0s							
N35A				IAMs_20	IAMs_20	10 56 25.5		
	comp=Z,958nm,19.0s							
KHBM	**Hayfork Bally**	**99.61**	**11**	IAMs_20	IAMs_20	10 52 06.2		
	comp=Z,840nm,20.0s							
BLA	**Blacksburg**	**99.66**	**337**	IAMs_20	IAMs_20	10 56 27.3		
	comp=Z,1µm,19.0s							
HWUT	**Hardware Ranch**	**99.68**	**2**	IAMs_20	IAMs_20	10 54 52.8		
	comp=Z,783nm,19.0s							
V61A	**Roper**	**99.71**	**334**	IAMs_20	IAMs_20	10 52 13.8		
	comp=Z,1µm,18.0s							
OGNE	**Ogallala**	**100.12**	**355**	IAMs_20	IAMs_20	10 53 31.3		
	comp=Z,791nm,20.0s							
S51A	**Beattyville**	**100.17**	**340**	IAMs_20	IAMs_20	10 52 09.6		
	comp=Z,1µm,20.0s							
Q44A	**Mer Farm, Va**	**100.27**	**344**	IAMs_20	IAMs_20	10 55 26.3		
	comp=Z,1µm,20.0s							
KCPM	**Cahto Peak**	**100.50**	**11**	IAMs_20	IAMs_20	10 59 37.1		
	comp=Z,672nm,18.0s							
V58A	**Windy Hill, Pi**	**100.56**	**336**	IAMs_20	IAMs_20	10 52 39.1		
	comp=Z,926nm,20.0s							
DUG	**Dugway, Tooele**	**101.05**	**3**	IAMs_20	IAMs_20	10 54 00.0		
	comp=Z,728nm,21.0s							
V55A	**Taylorsville**	**101.15**	**337**	IAMs_20	IAMs_20	10 53 10.9		
	comp=Z,779nm,19.0s							
KSU1	**Kansas State U**	**101.38**	**350**	IAMs_20	IAMs_20	10 54 53.8		
	comp=Z,918nm,18.0s							
CCM	**Cathedral Cave**	**101.53**	**346**	IAMs_20	IAMs_20	10 54 52.9		
	comp=Z,812nm,20.0s							
X58A	**Rowland**	**101.76**	**335**	IAMs_20	IAMs_20	10 52 22.1		
	comp=Z,1µm,21.0s							
Y60A	**Bolivia**	**101.89**	**334**	IAMs_20	IAMs_20	10 52 52.6		
	comp=Z,1µm,20.0s							
CVS	**Carmenet Viney**	**101.99**	**11**	IAMs_20	IAMs_20	10 56 18.3		
	comp=Z,637nm,20.0s							
KSCO	**Kaye Shedlock'**	**102.08**	**355**	IAMs_20	IAMs_20	10 55 43.3		
	comp=Z,1µm,21.0s							
WELL	**Weller Preserv**	**102.13**	**9**	IAMs_20	IAMs_20	10 59 05.0		
	comp=Z,721nm,19.0s							
R32A	**Long Quarter,**	**102.31**	**352**	IAMs_20	IAMs_20	10 55 35.3		
	comp=Z,980nm,18.0s							
NVAR	**Mina Array Bea**	**102.42**	**7**	P	**Pdif**	**10 06 57.2**	**+0.6**	
	comp=Z,1.6nm,0.8s,baz=357,slow=3.8,SNR=12							
T42A	**Van Buren**	**102.50**	**345**	IAMs_20	IAMs_20	10 54 24.3		
	comp=Z,1µm,21.0s							
CMB	**Columbia Colle**	**102.57**	**9**	IAMs_20	IAMs_20	10 57 32.7		
	comp=Z,770nm,19.0s							
Y57A	**Sumter**	**102.60**	**336**	IAMs_20	IAMs_20	10 53 50.1		
	comp=Z,1µm,19.0s							
V48A	**Smith Brothers**	**102.79**	**342**	IAMs_20	IAMs_20	10 54 14.2		
	comp=Z,1µm,20.0s							
W50A	**Signal Mountai**	**102.92**	**340**	IAMs_20	IAMs_20	10 56 56.6		
	comp=Z,776nm,20.0s							
NHSC	**New Hope**	**103.37**	**335**	IAMs_20	IAMs_20	10 56 18.5		
	comp=Z,1µm,20.0s							
TIN	**Tinemaha, Big**	**103.78**	**8**	IAMs_20	IAMs_20	10 58 14.7		
	comp=Z,787nm,20.0s							
T25A	**Trinidad**	**104.05**	**356**	IAMs_20	IAMs_20	10 56 06.5		
	comp=Z,966nm,18.0s							
TPNV	**Topopah Spring**	**104.07**	**6**	IAMs_20	IAMs_20	10 54 45.2		
	comp=Z,893nm,20.0s							
TUL3	**Leonard**	**104.40**	**349**	IAMs_20	IAMs_20	10 55 33.7		
	comp=Z,1µm,22.0s							
CWC	**Cottonwood Cre**	**104.41**	**8**	IAMs_20	IAMs_20	11 00 39.2		
	comp=Z,997nm,18.0s							
OK052	**Battle Ridge R**	**104.47**	**350**	IAMs_20	IAMs_20	10 56 04.4		
	comp=Z,1µm,22.0s							
Y49A	**Blount Mountai**	**104.48**	**341**	IAMs_20	IAMs_20	10 55 21.8		
	comp=Z,944nm,19.0s							
FURC	**Furnace Creek,**	**104.50**	**7**	IAMs_20	IAMs_20	10 59 49.5		
	comp=Z,915nm,18.0s							
257A	**Skidaway Islan**	**104.68**	**336**	IAMs_20	IAMs_20	10 55 38.4		
	comp=Z,939nm,19.0s							
154A	**Montrose**	**104.73**	**338**	IAMs_20	IAMs_20	10 55 01.6		
	comp=Z,1µm,21.0s							
VES	**Vestal, Richgr**	**104.89**	**8**	IAMs_20	IAMs_20	10 59 47.1		
	comp=Z,565nm,19.0s							
ISA	**Isabella, Lake**	**105.14**	**8**	IAMs_20	IAMs_20	10 55 29.5		
	comp=Z,602nm,20.0s							
MIAR	**Mount Ida**	**105.38**	**347**	IAMs_20	IAMs_20	11 01 32.5		
	comp=Z,848nm,18.0s							
LRMC	**Laurel Mtn Rad**	**105.40**	**7**	IAMs_20	IAMs_20	11 00 51.4		
	comp=Z,731nm,18.0s							
LRAL	**Lakeview Retre**	**105.41**	**341**	IAMs_20	IAMs_20	10 55 24.3		
	comp=Z,1µm,20.0s							
OSI	**Osito Audit: C**	**106.14**	**8**	IAMs_20	IAMs_20	11 01 38.2		
	comp=Z,928nm,18.0s							
456A	**Hilliard**	**106.16**	**336**	IAMs_20	IAMs_20	11 01 03.4		
	comp=Z,885nm,19.0s							
ALQ	**Albuquerque**	**106.33**	**358**	IAMs_20	IAMs_20	10 54 50.7		
	comp=Z,1µm,20.0s							
MWC	**Mount Wilson**	**106.60**	**8**	IAMs_20	IAMs_20	11 00 32.3		
	comp=Z,985nm,21.0s							
BFSC	**Mount Baldy Ra**	**106.63**	**7**	IAMs_20	IAMs_20	10 58 04.0		
	comp=Z,940nm,19.0s							
RCBR	**Riachuelo**	**106.75**	**276**	IAMs_20	IAMs_20	10 41 29.7		
	comp=Z,748nm,19.0s							
BELC	**Belle Mtn. Jos**	**107.02**	**6**	IAMs_20	IAMs_20	11 01 01.2		
	comp=Z,911nm,18.0s							
Z35A	**Perchaven, San**	**107.15**	**350**	IAMs_20	IAMs_20	10 57 01.4		
	comp=Z,1µm,22.0s							
656A	**Willston**	**107.58**	**336**	IAMs_20	IAMs_20	10 56 20.0		
	comp=Z,973nm,22.0s							
ANWB	**Willy Bob**	**108.34**	**312**	IAMs_20	IAMs_20	10 54 19.4		
	comp=Z,740nm,21.0s							
DWPF	**Disney Wildern**	**108.38**	**334**	IAMs_20	IAMs_20	11 02 41.3		
	comp=Z,714nm,18.0s							
SMRT	**St. Maarten**	**108.76**	**314**	IAMs_20	IAMs_20	11 03 30.7		
	comp=Z,659nm,20.0s							
SEUS	**St. Eustatius**	**109.16**	**313**	IAMs_20	IAMs_20	10 55 07.2		
	comp=Z,1µm,21.0s							
SABA	**Saba**	**109.20**	**314**	IAMs_20	IAMs_20	10 54 57.3		
	comp=Z,871nm,20.0s							
EPT	**El Paso**	**109.49**	**358**	IAMs_20	IAMs_20	11 02 10.4		
	comp=Z,958nm,22.0s							
MNTX	**Cornudas Mount**	**109.52**	**357**	IAMs_20	IAMs_20	11 04 37.2		
	comp=Z,725nm,18.0s							
GRTK	**Grand Turk**	**110.08**	**322**	IAMs_20	IAMs_20	10 57 35.9		
	comp=Z,738nm,19.0s							
SJG	**San Juan**	**110.41**	**316**	IAMs_20	IAMs_20	10 56 37.1		
	comp=Z,1µm,22.0s							
TXAR	**Lajitas Array**	**111.77**	**355**	Pdiff	**Pdif**	**10 07 38.9**	**+0.7**	
	comp=Z,0.6nm,0.7s,baz=9.3,slow=4.0,SNR=7.7							
TXAR				PKKPbc	**PKKPbc**	**10 22 27.2**	**-0.6**	
	comp=Z,0.8nm,1.0s,baz=192,slow=3.9,SNR=6.8							
SDDR	**Presa de Saban**	**112.31**	**321**	IAMs_20	IAMs_20	10 58 27.2		
	comp=Z,960nm,21.0s							
GTBY	**Guantanamo Bay**	**113.28**	**325**	IAMs_20	IAMs_20	10 56 18.6		
	comp=Z,995nm,21.0s							
MTDJ	**Mount Denham**	**115.84**	**327**	IAMs_20	IAMs_20	10 57 14.3		
	comp=Z,604nm,22.0s							
TROLL	**Troll, Antarti**	**120.51**	**200**	⇓PKPdf	**PKiKP**	**10 11 51.3**	**+0.4**	
	comp=Z,207nm,0.5s							
SNAA	**Sanae**	**121.78**	**201**	⇓PKPdf	**PKPdf**	**10 11 52.2**	**-0.9**	
	comp=Z,83nm,0.9s							
SNAA	**Sanae**	**121.78**	**201**	PKP	**PKPdf**	**10 11 51.1**	**-2.1**	
	comp=Z,1.9nm,0.9s,baz=74,slow=2.2,SNR=4.3							
VNA2	**Neumayer--Watz**	**122.76**	**203**	⇓PKPdf	**PKiKP**	**10 11 55.2**	**0.0**	
	comp=Z,4.6nm,0.8s,baz=38,slow=3.3							
VNA1	**Neumayer--Stat**	**122.90**	**203**	PKPdf	**PKiKP**	**10 11 56.1

SLCP	**Castries, St.**	**0.81**	**334**	*e*P		**Pb**	**10 45 11.6**	**-0.6**
SLCP				e	S	**Sb**	**10 45 22.6**	**-0.1**
SLBI	**Saint Lucia, B**	**0.82**	**335**	*e*P		**Pb**	**10 45 11.2**	**-1.1**
SLBI				e	S	**Sn**	**10 45 23.0**	**+0.2**
GCMP	**Grenada, Carri**	**1.11**	**225**	*e*P		**Pn**	**10 45 15.2**	**-0.6**
GCMP				e	S	**Sn**	**10 45 28.4**	**-1.6**
GCMP	**Grenada, Carri**	**1.11**	**225**	*e*P		**Pn**	**10 45 15.9**	**+0.1**
GCMP				x	x		10 45 30.3	
GCMP				e	S	**Sb**	**10 45 33.1**	**+1.9**
GCMP	**Grenada, Carri**	**1.11**	**225**	*e*		**Sn**	**10 45 30.3**	**+0.3**
GCMP				e	S	**Sb**	**10 45 33.1**	**+1.9**
BIM	**Bigot**	**1.31**	**341**	*e*P		**Pn**	**10 45 18.6**	**0.0**
BIM				e	S	**Sn**	**10 45 35.1**	**+0.1**
GRGR	**Grenville**	**1.52**	**222**	*e*P		**Pb**	**10 45 23.1**	**-0.9**
GRGR				e	S	**Sn**	**10 45 40.5**	**+0.4**
GRGR	**Grenville**	**1.52**	**222**	*e*P		**Pb**	**10 45 22.9**	**-1.1**
GRGR				e	S	**Sb**	**10 45 43.6**	**+0.8**
GRFF	**Grenada Fort F**	**1.63**	**222**	*e*P		**Pb**	**10 45 24.6**	**-1.4**
GRFF				e	S	**Sb**	**10 45 46.7**	**+0.5**
SVN	**Savane Anatole**	**1.65**	**341**	*e*P		**Pn**	**10 45 23.8**	**+0.5**
SVN				e	S	**Sn**	**10 45 43.6**	**+0.2**
DSLB	**Salisbury**	**2.29**	**340**	*e*P		**Pn**	**10 45 33.2**	**+1.2**
DSLB				e	S	**Sn**	**10 45 58.4**	**-0.7**
DWS	**Wesley**	**2.38**	**344**	*e*P		**Pn**	**10 45 34.2**	**+1.0**
DWS				e	S	**Sn**	**10 46 02.1**	**+0.8**
DMDM	**Guralp CMG5TDE**	**2.72**	**200**	*e*P		**Pn**	**10 45 39.1**	**+1.1**
DMDM				e	S	**Sn**	**10 46 09.4**	**-0.3**
TRN	**Trinidad (W)**	**2.72**	**196**	*e*P		**Pn**	**10 45 39.5**	**+1.5**
TRN				e	S	**Sn**	**10 46 07.1**	**-2.7**
TRN	**Trinidad (W)**	**2.72**	**196**	*e*P		**Pn**	**10 45 39.0**	**+1.0**
TRN				e	S	**Sn**	**10 46 09.3**	**-0.5**
MAGL	**Barre de l'ile**	**2.73**	**347**	*e*P		**Pn**	**10 45 38.8**	**+0.6**
MAGL				e	S	**Sn**	**10 46 09.5**	**-0.7**
TBG	**Guadaloupe-3**	**2.75**	**339**	*e*P		**Pn**	**10 45 38.4**	**0.0**
TBG				e	S	**Sn**	**10 46 10.8**	**+0.3**
MMLZ	**Guadeloupe Bro**	**2.93**	**340**	*e*P		**Pn**	**10 45 41.8**	**+0.9**
MMLZ				e	S	**Sn**	**10 46 14.2**	**-0.8**
DHSZ	**Broadband at M**	**3.18**	**340**	*e*P		**Pn**	**10 45 45.2**	**+1.0**
DHSZ				e	S	**Sn**	**10 46 20.5**	**-0.7**
DHSZ				x	x		10 46 22.1	
DHSZ	**Broadband at M**	**3.18**	**340**	*e*		**Sn**	**10 46 22.1**	**+0.9**
ANWB	**Willy Bob**	**4.51**	**346**	*e*P		**Pn**	**10 46 03.4**	**+0.8**
ANWB				e	S	**Sn**	**10 46 52.2**	**-1.8**

DJA ***04*** *10:47:07.9±0.6, 3˚N±6˚×12˚2E±˚, h526km±6km, M4.1/15, mB4.7/4, mb4.1/9, MLv4.1/15, Mw(mB)3.9/4*
IDC ***04*** *10:47:10.9±8.4, 2˚.82N×122˚.84E, h599km±146km, mb2.7/5, mbtmp3.8/6, Error ellipse: s-maj=186.2km s-min=19.4km az=73.0*

ISC 04 10:47:07.6±0.9, 2˚.7N±0˚.1×122˚.5E±0˚.2, h550km, n11, σ0§93/11, mb3.4/5, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**3.68**	**193**	P	**P**	**10 48 26.0**	**-1.2**
LUWI	**Luwuk**	**3.73**	**176**	P	**P**	**10 48 26.9**	**-0.6**
DAV	**Davao City (W)**	**5.33**	**35**	P	**P**	**10 48 39.4**	**-0.9**
SANI	**Sanana**	**5.88**	**143**	P	**P**	**10 48 43.8**	**-1.3**
	0.1nm760nm24nm,1.5s						
MMSI	**Mamuju**	**6.44**	**214**	P	**P**	**10 48 50.3**	**0.0**
	0.2nm640nm51nm,0.5s						
SIJI	**Sorong**	**9.47**	**112**	P	**P**	**10 49 21.4**	**+1.2**
	2.3nm,0.3s,baz=254,slow=22,SNR=2.2						
WRA	**Warramunga Arr**	**25.33**	**153**	P	**P**	**10 51 51.5**	**+0.1**
	0.6nm,0.4s,baz=336,slow=9.6,SNR=8.1						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**28.47**	**158**	P	**P**	**10 52 19.7**	**+0.8**
	0.3nm,0.6s,baz=331,slow=7.3,SNR=6.6						
	0.3nm,0.6s						
SONM	**Songino Array**	**47.06**	**345**	P	**P**	**10 54 50.4**	**+0.5**
	0.4nm,0.5s,baz=161,slow=9.2,SNR=2.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**56.07**	**328**	P	**P**	**10 55 55.0**	**+0.2**
	0.9nm,0.4s,baz=126,slow=8.2,SNR=12						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**60.39**	**329**	P	**P**	**10 56 23.4**	**-0.4**
	0.6nm,0.3s,baz=126,slow=6.1,SNR=7.6						
	0.6nm,0.3s						

NEIC ***04*** *11:22:11.4±0.7, 17˚.90N×0˚.02×66˚.96W±0˚.01, h10km±1km, ML3.8/37, Md3.4/25(RSPR), Error ellipse: s-maj=3.6km s-min=2.4km az=30.0*
OSPL ***04*** *11:22:11.7±1.0, 17˚.74N×66˚.93W, h0km±26km, ML3.5, Presumed earthquake*
RSPR ***04*** *11:22:11.6, 17˚.91N×66˚.96W, h5km, MD3.4/25*

ISC 04 11:22:11.5±1.2, 17˚.87N±0˚.05×66˚.96W±0˚.02, h8km±7km, n45, σ0§60/69, 5C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.13**	**321**		**Pg**	**11 22 13.9**	**-0.4**
MLPR				Sg	**Sg**	**11 22 16.0**	**-0.3**
MLPR				IAML		11 22 16.7	
	35µm,0.9s						
MLPR	**Magueyes Islan**	**0.13**	**321**	*i*P	**Pg**	**11 22 14.1**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.13**	**36**		**Pg**	**11 22 13.8**	**-0.6**
GBPR					**Sg**	**11 22 17.2**	**+0.9**
GBPR	**Guanica, Bosqu**	**0.13**	**36**	*i*P	**Pg**	**11 22 13.8**	**-0.6**
GBPR				e	**Sg**	**11 22 17.2**	**+0.9**
CRPR	**Cabo Rojo, PR**	**0.20**	**314**	Pg	**Pg**	**11 22 15.3**	**-0.2**
CRPR				Sg	**Sg**	**11 22 18.2**	**-0.1**
CRPR				IAML		11 22 19.9	
	27µm,1.3s						
CRPR				IAML		11 22 20.6	
	22µm,0.8s						
CRPR	**Cabo Rojo, PR**	**0.20**	**314**	*i*P	**Pg**	**11 22 15.6**	**0.0**
LSP	**Las Mesas**	**0.33**	**339**		**Pg**	**11 22 18.0**	**-0.1**
LSP					**Sg**	**11 22 22.9**	**+0.5**
LSP	**Las Mesas**	**0.33**	**339**	*e*P	**Pg**	**11 22 18.0**	**-0.1**
LSP				e	**Sg**	**11 22 22.9**	**+0.5**
OBIP	**Obispado Ponce**	**0.38**	**63**		**Pg**	**11 22 18.9**	**0.0**
OBIP					**Sg**	**11 22 24.9**	**+1.0**
OBIP	**Obispado Ponce**	**0.38**	**63**	*i* P	**Pg**	**11 22 18.9**	**0.0**
OBIP				e	**Sg**	**11 22 24.9**	**+1.0**
OBIP				IAML		11 22 25.3	
	comp=Z,22µm,0.6s						
OBIP	**Obispado Ponce**	**0.38**	**63**	*i*P	**Pg**	**11 22 18.9**	**0.0**
OBIP				e	**Sg**	**11 22 24.9**	**+1.0**
PRSN	**Puerto Rico Se**	**0.39**	**333**		**Pg**	**11 22 18.8**	**-0.3**
PRSN					**Sg**	**11 22 24.8**	**+0.5**
PRSN				IAML		11 22 26.0	
	comp=Z,13µm,0.4s						
PRSN	**Puerto Rico Se**	**0.39**	**333**	*i*P	**Pg**	**11 22 18.9**	**-0.3**
CELP	**Cerrillos**	**0.42**	**60**		**Pg**	**11 22 19.5**	**-0.1**
CELP					**Sg**	**11 22 25.6**	**+0.4**
CELP				IAML		11 22 27.8	
	comp=Z,6µm,0.8s						
CELP	**Cerrillos**	**0.42**	**60**	*i*P	**Pg**	**11 22 19.5**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.45**	**31**		**Pg**	**11 22 19.6**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.45**	**31**	*i*P	**Pg**	**11 22 19.6**	**-0.6**
AOPR	**Arecibo Observ**	**0.51**	**22**		**Pg**	**11 22 20.7**	**-0.8**
AOPR					**Sg**	**11 22 28.7**	**+0.5**
AOPR				IAML		11 22 34.2	
	comp=Z,7µm,1.2s						
AOPR	**Arecibo Observ**	**0.51**	**22**	*i*P	**Pg**	**11 22 20.9**	**-0.6**
AGPR	**Aguadilla, PR**	**0.61**	**346**		**Pg**	**11 22 22.7**	**-0.7**
AGPR					**Sg**	**11 22 31.3**	**-0.1**
AGPR				IAML		11 22 32.6	
	comp=Z,4µm,0.6s						
AGPR	**Aguadilla, PR**	**0.61**	**346**	*i*P	**Pg**	**11 22 22.9**	**-0.5**
IDE	**Isla Desecheo**	**0.71**	**317**		**Pg**	**11 22 24.9**	**-0.3**
IDE					**Sg**	**11 22 33.8**	**-0.7**
IDE	**Isla Desecheo**	**0.71**	**317**	*i*P	**Pg**	**11 22 24.9**	**-0.3**
IDE				e	**Sg**	**11 22 33.8**	**-0.7**
ECPR	**Experimental S**	**0.72**	**52**		**Pg**	**11 22 24.9**	**-0.6**
ECPR				Sg	**Sg**	**11 22 34.2**	**-0.7**
ECPR				IAML		11 22 36.5	
	comp=Z,6µm,0.6s						
ECPR				IAML		11 22 36.5	
	comp=Z,5µm,0.6s						
ECPR	**Experimental S**	**0.72**	**52**	*e*P	**Pg**	**11 22 24.9**	**-0.6**
EMPR	**Esperanza - Ma**	**0.73**	**34**		**Pg**	**11 22 25.5**	**-0.1**
EMPR					**Sb**	**11 22 36.4**	**-0.2**
EMPR	**Esperanza - Ma**	**0.73**	**34**	*e*P	**Pg**	**11 22 25.5**	**-0.1**
EMPR				e	**Sb**	**11 22 36.4**	**-0.2**
SJG	**San Juan**	**0.81**	**72**	Pg	**Pg**	**11 22 26.6**	**-0.4**
SJG				IAML		11 22 41.2	
	comp=Z,2µm,0.5s						
SJG	**San Juan**	**0.81**	**72**	*i* P	**Pg**	**11 22 26.7**	**-0.4**
SJG				e	**Sg**	**11 22 37.8**	**+0.2**
SJG	**San Juan**	**0.81**	**72**	*e*P	**Pg**	**11 22 26.8**	**-0.3**
IGPR	**InterUniversit**	**0.82**	**83**		**Pg**	**11 22 27.2**	**-0.1**
IGPR					**Sg**	**11 22 38.1**	**+0.2**
IGPR	**InterUniversit**	**0.82**	**83**	*e*P	**Pg**	**11 22 27.2**	**-0.1**
PDPR	**Patillas Dam,**	**0.91**	**80**	Pg	**Pg**	**11 22 28.4**	**-0.5**
PDPR					**Sg**	**11 22 41.1**	**+0.4**
PDPR	**Patillas Dam,**	**0.91**	**80**	*i*P	**Pg**	**11 22 28.5**	**-0.4**
HUMP	**Col San Antoni**	**1.09**	**75**		**Pg**	**11 22 31.2**	**-1.3**
HUMP					**Sg**	**11 22 45.9**	**-0.8**
HUMP	**Col San Antoni**	**1.09**	**75**	*e*P	**Pg**	**11 22 31.2**	**-1.3**
PCDR	**Punta Cana, DR**	**1.50**	**296**	Pn	**Pn**	**11 22 38.3**	**-0.3**
PCDR					**Sg**	**11 23 01.5**	**+1.8**
PCDR				IAML		11 23 18.0	
	comp=N,865nm,0.8s						
PCDR	**Punta Cana, DR**	**1.50**	**296**	*i* P	**Pn**	**11 22 38.8**	**+0.1**
PCDR				IAML		11 23 07.1	
	comp=Z,271nm,0.7s						
DR12	**Loma Pena Alta**	**2.48**	**292**	Pn	**Pn**	**11 22 52.7**	**+0.5**
DR12					**Sn**	**11 23 23.3**	**+0.7**
BANI	**BANI**	**3.27**	**280**	Pn	**Pn**	**11 23 02.5**	**-0.8**
SABA	**Saba**	**3.55**	**93**		**Pn**	**11 23 07.1**	**+0.2**
SMRT	**St. Maarten**	**3.70**	**87**	Pn	**Pn**	**11 23 09.2**	**+0.2**
SC01	**Santiago de lo**	**3.90**	**294**	Pn	**Pn**	**11 23 10.9**	**-0.8**
LOBH	**Bahia de las A**	**4.46**	**271**	*i* P	**Pn**	**11 23 18.8**	**-0.6**
LOBH				IAML		11 24 24.4	
	comp=Z,31nm,2.6s						
GRTK	**Grand Turk**	**5.35**	**313**	*i* P	**Pn**	**11 23 32.7**	**+1.1**
GRTK				IAML		11 24 13.9	
	comp=Z,33nm,0.3s						

IDC ***04*** *11:55:50.3±0.6, 9˚.73N×39˚.99W, h0km, mb4.0/20, mbtmp4.0/21, ML3.4/1, MS3.5/10, Error ellipse: s-maj=18.8km s-min=15.2km az=154.0*
NEIC ***04*** *11:55:52.0±1.7, 9˚.7N±0˚.1×39˚.9W±0˚.1, h10km±1km, mb4.6/41, Error ellipse: s-maj=19.4km s-min=17.4km az=73.0*

ISC 04 11:55:51.6±0.5, 9˚.69N±0˚.09×40˚.01W±0˚.07, h10km, n81, σ1§05/67, mb4.3/41, MS3.5/10, 1D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**13.33**	**251**	Pn	**Pn**	**11 59 01.2**	**+0.1**
	0.2nm,0.3s,baz=63,slow=14,SNR=1.7						
	7.8nm,1.0s						
RCBR	**Riachuelo**	**15.95**	**165**		**P**	**11 59 39.3**	**-0.6**
SACV	**Santiago Islan**	**16.85**	**70**	P	**Pn**	**11 59 48.1**	**+0.3**
BBGH	**Gun Hill**	**19.47**	**282**	P	**P**	**12 00 19.4**	**+0.5**
H05S1	**Guadeloupe/Mar**	**20.90**	**285**	T	T	12 22 01.6	
	SNR=14						
H05N1	**Guadeloupe/Mar**	**21.53**	**290**	T	T	12 22 40.4	
	SNR=12						
BOAV	**Boa Vista**	**21.64**	**252**		**P**	**12 00 43.1**	**+0.8**
BOAV				IAmb	IAmb	12 00 47.5	
	comp=Z,21nm,1.2s						
BDFB	**Brasilia**	**26.39**	**198**	P	**P**	**12 01 29.0**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=3.7,slow=11,SNR=3.2						
BDFB				LR	LR	12 11 31.9	
	comp=Z,113nm,19.8s,baz=41,slow=36						
	comp=Z,3.2nm,0.7s						
SJG	**San Juan**	**26.70**	**291**	LR	LR	12 11 30.2	
	comp=Z,63nm,19.4s,baz=113,slow=35						
H10N3	**ASCENSION HYDR**	**30.80**	**124**	T	T	12 34 29.0	
	baz=303,slow=75,SNR=161						
H10N2	**ASCENSION HYDR**	**30.80**	**124**	T	T	12 34 29.4	
	baz=303,slow=75,SNR=131						
H10N1	**ASCENSION HYDR**	**30.82**	**124**	T	T	12 34 30.5	
	baz=303,slow=75,SNR=138						
H10S3	**ASCENSION HYDR**	**31.30**	**126**	T	T	12 35 04.6	
	baz=300,slow=74,SNR=143						
H10S2	**ASCENSION HYDR**	**31.32**	**126**	T	T	12 35 05.9	
	baz=280,slow=74,SNR=122						
DBIC	**Dimbokro**	**34.91**	**92**	P	**P**	**12 02 42.8**	**-1.0**
	comp=Z,4.6nm,0.6s,baz=292,slow=7.2,SNR=7.1						
	comp=Z,4.6nm,0.6s						
DBIC	**Dimbokro**	**34.91**	**92**	P	**P**	**12 02 42.5**	**-1.4**
CZSB	**Cruzeiro do Su**	**36.88**	**243**	P	**P**	**12 03 01.1**	**+0.3**
CZSB				IAmb	IAmb	12 03 02.3	
	comp=Z,11nm,0.9s						
LPAZ	**La Paz**	**37.96**	**227**	P	**P**	**12 03 11.8**	**+1.3**
	comp=Z,5.0nm,0.8s,baz=28,slow=5.7,SNR=22						
	comp=Z,5.0nm,0.8s						
LPAZ	**La Paz**	**37.96**	**227**		**P**	**12 03 11.6**	**+1.1**
LPAZ				IAmb	IAmb	12 03 13.4	
	comp=Z,8.3nm,1.1s						
CPUP	**Villa Florida**	**39.57**	**205**	LR	LR	12 19 30.7	
	comp=Z,52nm,19.0s,baz=69,slow=36						
TORD	**Torodi Ar. Bea**	**40.98**	**81**	P	**P**	**12 03 35.2**	**0.0**
	comp=Z,5.1nm,0.8s,baz=275,slow=9.0,SNR=13						
	comp=Z,5.1nm,0.8s						
PSGCX	**Pisagua**	**41.56**	**225**	P	**P**	**12 03 38.7**	**-1.2**
PB02	**IPOC Station P**	**42.57**	**223**	P	**P**	**12 03 48.1**	**0.0**
PB02				IAmb	IAmb	12 03 54.9	
	comp=Z,18nm,1.3s						
ESDC	**Sonseca Array**	**43.81**	**41**	P	**P**	**12 03 56.8**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=247,slow=8.2,SNR=2.1						
	comp=Z,0.4nm,0.7s						
TKL	**Tuckaleechee C**	**47.40**	**310**	LR	LR	12 21 55.7	
	comp=Z,37nm,19.1s,baz=138,slow=33						
SCHQ	**Schefferville**	**49.80**	**340**	P	**P**	**12 04 43.4**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=160,slow=13,SNR=4.1						
SCHQ				LR	LR	12 23 47.9	
	comp=Z,43nm,18.9s,baz=112,slow=34						
	comp=Z,1.8nm,0.8s						
SCHQ	**Schefferville**	**49.80**	**340**	P	**P**	**12 04 44.5**	**-0.1**
SCHQ				IAmb	IAmb	12 04 49.5	
	comp=Z,4.9nm,0.9s						
EKA	**Eskdalemuir Ar**	**53.98**	**25**	P	**P**	**12 05 15.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=192,slow=6.2,SNR=1.6						
	comp=Z,0.3nm,0.4s						
BMRD	**Maredsous**	**54.75**	**34**	*d*P	**P**	**12 05 20.8**	**-0.5**
G40A	**Rib Lake**	**55.66**	**319**	P	**P**	**12 05 26.6**	**-1.5**
DAVA	**Damuels**	**56.29**	**39**	*e*P	**P**	**12 05 33.2**	**+0.4**
	comp=Z,1.3nm,0.6s						
FETA	**Feichten**	**56.71**	**39**	*e*P	**P**	**12 05 37.5**	**+1.9**
	comp=Z,4.8nm,1.5s						
RETA	**Reutte**	**56.92**	**39**	*e*P	**P**	**12 05 38.0**	**+0.9**
	comp=Z,1.8nm,0.7s						
SQTA	**Sankt Quirin**	**57.09**	**39**	*e*P	**P**	**12 05 40.2**	**+1.9**
	comp=Z,3.8nm,0.5s						
ABTA	**Abfaltersbach**	**57.72**	**40**	*e*P	**P**	**12 05 44.8**	**+2.0**
	comp=Z,1.4nm,0.5s						
LESA	**Schwarzleotal**	**58.09**	**40**	*e*P	**P**	**12 05 46.4**	**+1.1**
	comp=Z,1.0nm,0.5s						
MYKA	**Terra Mystica**	**58.40**	**41**	*e*P	**P**	**12 05 48.8**	**+1.3**
	comp=Z,0.5nm,0.4s						
BRDY	**Brady**	**58.59**	**301**	P	**P**	**12 05 47.6**	**-1.5**
BRDY				IAmb	IAmb	12 05 50.1	
	comp=Z,3.8nm,1.1s						
WMOK	**Wichita Mounta**	**58.95**	**305**	P	**P**	**12 05 51.6**	**+0.1**
JCT	**Junction City**	**59.16**	**300**	P	**P**	**12 05 50.7**	**-2.4**
GERES	**GERESS Array B**	**59.26**	**38**	P	**P**	**12 05 53.7**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=266,slow=7.6,SNR=4.4						
	comp=Z,0.5nm,0.6s						
EPLO	**Experimental L**	**59.59**	**323**	P	**P**	**12 05 55.6**	**0.0**
EPLO				IAmb	IAmb	12 05 59.3	
	comp=Z,5.0nm,0.9s						
CONA	**Conrad Observa**	**60.27**	**40**	*e*P	**P**	**12 06 01.7**	**+1.2**
	comp=Z,3.6nm,1.3s						
ULM	**Lac du Bonnet**	**61.09**	**323**	P	**P**	**12 06 05.6**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=103,slow=7.8,SNR=9.8						
	comp=Z,4.9nm,0.8s						
ULM	**Lac du Bonnet**	**61.09**	**323**	P	**P**	**12 06 05.7**	**-0.2**
ULM				IAmb	IAmb	12 06 09.4	
	comp=Z,4.3nm,0.8s						
SAND	**Sanderson**	**61.10**	**299**	P	**P**	**12 06 07.2**	**+0.8**
SAND				IAmb	IAmb	12 06 11.1	
	comp=Z,7.1nm,1.4s						
TX31	**Lajitas Ar. Si**	**62.39**	**298**		**P**	**12 06 15.7**	**+0.5**
TX31				IAmb	IAmb	12 06 53.4	
	comp=Z,4.1nm,1.4s						
TXAR	**Lajitas Array**	**62.39**	**298**	P	**P**	**12 06 15.9**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=114,slow=6.8,SNR=16						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**62.39**	**298**	P	**P**	**12 06 16.5**	**+1.3**
TXAR				PcP	**PcP**	**12 06 52.1**	**-2.7**
ALPN	**Alpine**	**62.45**	**299**		**P**	**12 06 16.3**	**+0.7**
ALPN				IAmb	IAmb	12 06 20.0	
	comp=Z,3.9nm,1.0s						
SUMG	**Summit**	**62.84**	**1**	*i* P	**P**	**12 06 19.0**	**+1.2**
NOA	**NORSAR Array B**	**63.47**	**25**	P	**P**	**12 06 23.0**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=296,slow=4.1,SNR=1.6						
	comp=Z,0.5nm,0.9s						
FCC	**Fort Churchill**	**63.63**	**332**	P	**P**	**12 06 23.2**	**+0.5**
VHRN	**Van Horn**	**63.64**	**300**		**P**	**12 06 24.9**	**+1.4**
HFS	**Hagfors**	**64.09**	**27**	P	**P**	**12 06 25.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=250,slow=4.3,SNR=1.8						
	comp=Z,1.8nm,0.8s						
ISCO	**Idaho Springs**	**65.14**	**309**		**P**	**12 06 32.1**	**-1.3**
ANMO	**Albuquerque**	**65.23**	**304**	LR	LR	12 34 02.6	
	comp=Z,42nm,18.7s,baz=108,slow=35						
FFC	**Flin Flon**	**66.11**	**326**		**P**	**12 06 37.3**	**-1.7**
MLR	**Muntele Rosu**	**66.33**	**45**		**P**	**12 06 40.5**	**-0.2**
MLR				IAmb	IAmb	12 06 42.6	
	comp=Z,5.6nm,1.1s						
BLKN	**Baker Lake**	**67.00**	**337**		**P**	**12 06 44.1**	**-0.3**
BLKN				IAmb	IAmb	12 06 48.5	
	comp=Z,6.0nm,0.9s						
PDAR	**Pinedale Array**	**68.48**	**312**	P	**P**	**12 06 54.4**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=132,slow=3.2,SNR=2.0						
PDAR				LR	LR	12 35 30.9	
	comp=Z,24nm,19.2s,baz=100,slow=35						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**68.48**	**312**	P	**P**	**12 06 52.4**	**-2.2**
WUAZ	**Wupatki**	**69.29**	**304**		**P**	**12 07 00.1**	**+0.5**
WUAZ				IAmb	IAmb	12 07 05.4	
	comp=Z,6.6nm,1.1s						
AKASG	**Malin Array Be**	**69.42**	**39**	P	**P**	**12 07 00.5**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=258,slow=6.6,SNR=4.2						
	comp=Z,1.2nm,0.7s						
BRTR	**Keskin Array B**	**71.30**	**51**	P	**P**	**12 07 12.9**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=259,slow=6.9,SNR=2.7						
	comp=Z,1.4nm,0.6s						
BRTR	**Keskin Array B**	**71.30**	**51**	P	**P**	**12 07 10.9**	**-0.9**
ELK	**Elko**	**72.56**	**310**	LR	LR	12 37 31.5	
	comp=Z,34nm,19.7s,baz=94,slow=34						
NEW	**Newport**	**74.26**	**317**	LR	LR	12 36 00.5	
	comp=Z,34nm,21.3s,baz=284,slow=32						
YKA	**Yellowknife Ar**	**74.35**	**332**	P	**P**	**12 07 29.2**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=104,slow=6.4,SNR=7.0						
	comp=Z,1.4nm,0.8s						
NVAR	**Mina Array Bea**	**74.89**	**307**	P	**P**	**12 07 33.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=70,slow=6.6,SNR=1.0						
	comp=Z,0.2nm,0.5s						
KBZ	**Khabaz**	**78.26**	**47**	P	**P**	**12 07 52.7**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=277,slow=3.7,SNR=2.5						
	comp=Z,1.1nm,0.8s						
INK	**Inuvik**	**82.37**	**338**	LR	LR	12 41 56.2	
	comp=Z,52nm,20.8s,baz=234,slow=34						
H29M	**Whitestone**	**84.56**	**336**	P	**P**	**12 08 24.6**	**-0.3**
H29M				IAmb	IAmb	12 08 30.4	
	comp=Z,7.7nm,1.3s						
SNAA	**Sanae**	**84.84**	**169**	P	**P**	**12 08 26.2**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=333,slow=6.8,SNR=18						
	comp=Z,2.2nm,0.7s						
SNAA	**Sanae**	**84.84**	**169**	P	**P**	**12 08 26.3**	**+0.2**
SNAA				IAmb	IAmb	12 08 43.5	
	comp=Z,4.7nm,1.3s						
E27K	**Coleen River**	**85.35**	**338**	P	**P**	**12 08 30.0**	**+1.2**
H27K	**Steamboat Moun**	**85.81**	**337**	P	**P**	**12 08 31.8**	**+0.7**
H27K				IAmb	IAmb	12 08 35.7	
	comp=Z,4.9nm,1.1s						
I26K	**Coal Creek Min**	**86.70**	**336**	IAmb	IAmb	12 08 46.4	
	comp=Z,4.4nm,1.1s						
BCAR	**Beaver Creek A**	**86.72**	**333**	P	**P**	**12 08 36.8**	**+1.1**
ILAR	**Eielson Array**	**88.37**	**336**	P	**P**	**12 08 44.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=70,slow=4.7,SNR=5.3						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**88.37**	**336**	P	**P**	**12 08 44.5**	**+0.9**

TEH ***04*** *12:06:37.6, 33˚.52N×46˚.03E, h7km±28km, ML3.1, Presumed earthquake*
ISN ***04*** *12:06:38.8±1.2, 33˚.51N×46˚.07E, h20km±17km, ML3.1, Presumed earthquake*

ISC 04 12:06:39.0±1.1, 33˚.55N±0˚.05×46˚.02E±0˚.04, h19km, n13, σ1§29/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.18**	**65**	Pg	**Pb**	**12 06 41.6**	**-1.1**
ILBA				Sg	**Sb**	**12 06 44.4**	**-0.7**
IGHG	**Ghaleghazi**	**0.90**	**30**	Pg

NIL	**Nilore**	**7.78**	**258**		P		**Pn**	**12 14 06.6**	**+2.8**
NIL	**Nilore**	**7.78**	**258**		P		**Pn**	**12 14 05.2**	**+1.4**
SHLS	**Shalkode**	**7.92**	**344**	*eP*			**Pn**	**12 14 05.7**	**0.0**
SHLS				*eS*			**Sn**	**12 15 34.2**	**-1.2**
SHLS	**Shalkode**	**7.92**	**344**	*eP*			**Pn**	**12 14 05.7**	**0.0**
SHLS				*eS*			**Sn**	**12 15 34.3**	**-1.2**
UZB	**Uzynbulak**	**8.01**	**342**	*eP*			**Pn**	**12 14 08.4**	**+1.4**
UZB				*eS*			**Sn**	**12 15 39.0**	**+1.2**
UZB	**Uzynbulak**	**8.01**	**342**	*eP*			**Pn**	**12 14 08.5**	**+1.4**
UZB				*eS*			**Sn**	**12 15 39.0**	**+1.2**
PDGK	**Podgornoye**	**8.08**	**345**				**Pn**	**12 14 08.5**	**+0.6**
PDGK	**Podgornoye**	**8.08**	**345**		P		**Pn**	**12 14 08.2**	**+0.3**
ANVS	**Anan'yevo**	**8.09**	**334**		P		**Pn**	**12 14 08.3**	**+0.1**
SATY	**Saty**	**8.10**	**339**	*eP*			**Pn**	**12 14 09.4**	**+1.2**
SATY				*eS*			**Sn**	**12 15 40.9**	**+1.0**
SATY	**Saty**	**8.10**	**339**	*eP*			**Pn**	**12 14 09.4**	**+1.2**
SATY				*eS*			**Sn**	**12 15 41.0**	**+1.0**
KPKS	**Kokpek**	**8.40**	**341**	*eP*			**Pn**	**12 14 13.3**	**+1.0**
KPKS	**Kokpek**	**8.40**	**341**	*eP*			**Pn**	**12 14 13.4**	**+1.1**
EVN	**Everest**	**8.46**	**152**				**Pn**	**12 14 16.0**	**+2.3**
EVN	**Everest**	**8.46**	**152**		P		**Pn**	**12 14 14.4**	**+0.7**
BOOM	**Boomskoye usch**	**8.55**	**326**		P		**Pn**	**12 14 15.1**	**+0.7**
TNSS	**Tian-Shan**	**8.58**	**332**	*eP*			**Pn**	**12 14 15.8**	**+0.8**
TNSS	**Tian-Shan**	**8.58**	**332**	*eP*			**Pn**	**12 14 15.9**	**+0.8**
MDOK	**Medeo**	**8.65**	**333**	*eP*			**Pn**	**12 14 17.4**	**+1.6**
MDOK	**Medeo**	**8.65**	**333**	*eP*			**Pn**	**12 14 17.4**	**+1.6**
AAA	**Alma-Ata**	**8.74**	**333**	*eP*			**Pn**	**12 14 18.3**	**+1.4**
AAA	**Alma-Ata**	**8.74**	**333**	*eP*			**Pn**	**12 14 18.4**	**+1.4**
MANEM	**Manem**	**8.85**	**286**				**Pn**	**12 14 18.5**	**-0.2**
OHH	**Osh**	**9.06**	**306**		P		**Pn**	**12 14 21.3**	**0.0**
WMQ	**Urumqi**	**9.20**	**25**		P		**Pn**	**12 14 24.0**	**+0.8**
WMQ					S		**Sn**	**12 16 07.8**	**+1.0**
WMQ					SMN				
	comp=E,46nm,1.3s								
WMQ					SME				
	comp=E,46nm,1.3s								
AAK	**Ala-Archa**	**9.36**	**321**		Pn		**Pn**	**12 14 26.7**	**+1.1**
	comp=E,0.5nm,0.3s,baz=158,slow=12,SNR=8.8								
AAK					Pg			12 14 59.8	
	comp=E,3.2nm,0.3s,baz=164,slow=14,SNR=12								
AAK					Lg		Lg	12 16 57.3	
	comp=E,0.9nm,0.3s,baz=240,slow=20,SNR=2.0								
AAK					LR		LR	12 18 31.3	
	comp=E,368nm,19.3s,baz=139,slow=41 comp=E,3.8nm,0.6s								
AAK	**Ala-Archa**	**9.36**	**321**		Pn		**Pn**	**12 14 25.8**	**+0.3**
AAK	**Ala-Archa**	**9.36**	**321**	*i*	P		**Pn**	**12 14 25.4**	**-0.1**
AAK	**Ala-Archa**	**9.36**	**321**		P		**Pn**	**12 14 25.5**	**0.0**
ARSB	**Arslanbob**	**9.36**	**311**				**Pn**	**12 14 26.9**	**+1.3**
ARSB	**Arslanbob**	**9.36**	**311**		P		**Pn**	**12 14 26.9**	**+1.3**
LSA	**Lhasa**	**9.41**	**126**		P		Pn	12 14 20.0	-6.5
LSA					S		Sn	12 15 44.5	-28
LSA					LR		LR		
	comp=N,390nm,7.5s								
LSA					LR		LR		
	comp=E,300nm,18.6s								
LSA					LR		LR		
	comp=Z,450nm,22.0s								
SGDS	**Sogindy**	**9.90**	**325**	*eP*			**Pn**	**12 14 34.8**	**+1.9**
SGDS				*eS*			**Sn**	**12 16 26.0**	**+1.9**
TDK	**Taldyqorghan**	**9.91**	**343**	*eP*			**Pn**	**12 14 34.3**	**+1.4**
TDK	**Taldyqorghan**	**9.91**	**343**	*eP*			**Pn**	**12 14 34.4**	**+1.4**
GOMU	**GeErMu**	**10.09**	**83**		P		**Pn**	**12 14 36.3**	**+0.5**
GOMU					S		**Sn**	**12 16 31.2**	**+2.0**
GOMU					pmax		pmax		
	comp=Z,5.0nm,0.4s								
GOMU					L		L		
	comp=Z,320nm,5.5s								
BTK	**Batken**	**10.20**	**300**				**Pn**	**12 14 37.9**	**+0.9**
BTK	**Batken**	**10.20**	**300**		P		**Pn**	**12 14 37.9**	**+0.9**
BTK	**Batken**	**10.20**	**300**		P		**Pn**	**12 14 37.6**	**+0.6**
GAR	**Garm**	**10.22**	**293**				**Pn**	**12 14 38.2**	**+0.8**
GAR	**Garm**	**10.22**	**293**		P		**Pn**	**12 14 38.3**	**+0.9**
ARK	**Arkit**	**10.26**	**310**		P		**Pn**	**12 14 38.3**	**+0.4**
KBL	**Kabul**	**11.00**	**269**				**Pn**	**12 14 49.0**	**+0.9**
KBL	**Kabul**	**11.00**	**269**		P		**Pn**	**12 14 49.0**	**+0.9**
KBL	**Kabul**	**11.00**	**269**		P		**Pn**	**12 14 49.0**	**+0.9**
CHGR	**Chuyangaron**	**11.02**	**290**				**Pn**	**12 14 49.0**	**+0.8**
CHGR	**Chuyangaron**	**11.02**	**290**	⇑	*i*	P	**Pn**	**12 14 49.9**	**+1.7**
CHGR					pmax		pmax		
	comp=Z,12nm,0.9s								
CHGR	**Chuyangaron**	**11.02**	**290**		P		**Pn**	**12 14 49.6**	**+1.4**
MK31	**Makanchi Array**	**11.22**	**360**	*i*	P		**Pn**	**12 14 49.9**	**-1.0**
MK31					pmax		pmax		
	comp=Z,17nm,0.8s								
MKAR	**Makanchi Array**	**11.22**	**360**		Pn		**Pn**	**12 14 49.5**	**-1.4**
	comp=Z,2.6nm,0.3s,baz=183,slow=12,SNR=43								
MKAR					Sn		**Sn**	**12 16 49.0**	**-7.4**
	comp=Z,0.4nm,0.3s,baz=186,slow=24,SNR=1.9								
MKAR					Lg		Lg	12 18 03.2	
	baz=193,slow=25								
MKAR					LR		LR	12 19 54.0	
	comp=Z,146nm,20.1s,baz=174,slow=42 comp=Z,20nm,0.6s								
MKAR	**Makanchi Array**	**11.22**	**360**				**Pn**	**12 14 49.7**	**-1.2**
MKAR	**Makanchi Array**	**11.22**	**360**	*i*	P		**Pn**	**12 14 49.9**	**-1.0**
MKAR					pmax		pmax		
	comp=Z,20nm,0.6s								
MAKZ	**Makanchi**	**11.24**	**358**				**Pn**	**12 14 50.3**	**-0.8**
MAKZ	**Makanchi**	**11.24**	**358**		P		**Pn**	**12 14 50.3**	**-0.8**
MAKZ	**Makanchi**	**11.24**	**358**		P		**Pn**	**12 14 50.5**	**-0.6**
BTLS	**Baital**	**11.41**	**329**	*eP*			**Pn**	**12 14 54.1**	**+0.7**
SHAA	**Shahritus**	**11.66**	**284**				**Pn**	**12 14 56.5**	**-0.4**
IUG	**Iuzhnay**	**11.67**	**308**	*eP*			**Pn**	**12 14 58.8**	**+1.8**
IUG	**Iuzhnay**	**11.67**	**308**	*eP*			**Pn**	**12 14 58.9**	**+1.8**
KK31	**Karatay Array**	**11.89**	**313**		Pn		**Pn**	**12 14 58.7**	**-1.3**
KK31	**Karatay Array**	**11.89**	**313**		P		**Pn**	**12 14 59.0**	**-1.0**
ZSN	**Zaisan**	**12.02**	**8**	*eP*			**Pn**	**12 15 02.7**	**+0.9**
ZSN				*eS*			**Sn**	**12 17 17.1**	**+1.2**
ZSN	**Zaisan**	**12.02**	**8**	*eP*			**Pn**	**12 15 02.7**	**+0.9**
ZSN				*eS*			**Sn**	**12 17 17.1**	**+1.2**
CHM	**Chimkent**	**12.03**	**308**	*eP*			**Pn**	**12 15 03.5**	**+1.6**
CHM	**Chimkent**	**12.03**	**308**	*eP*			**Pn**	**12 15 03.6**	**+1.6**
BOK	**Bokaro**	**12.11**	**165**	*ex*			x	12 15 02.4	
GTA2	**Gaotai**	**14.32**	**69**	*eP*			**P**	**12 15 41.8**	**+1.2**
GTA2					pP		Pn	12 15 46.1	+13
GTA2					pmax		pmax		
	comp=Z,5.0nm,1.2s								
GTA2					LR		LR		
	comp=N,350nm,16.1s								
GTA2					LR		LR		
	comp=E,190nm,13.1s								
GTA2					LR		LR		
	comp=Z,240nm,10.7s								
DGZ	**Jazzator, Alta**	**14.60**	**13**	*i*	P		**Pn**	**12 15 36.4**	**-0.8**
BRDH	**Bariadhala**	**15.15**	**145**		LR		LR	12 22 43.5	
	comp=Z,296nm,20.0s,baz=337,slow=42								
KURBB	**Kurchatov Arra**	**15.31**	**351**		Pn		**Pn**	**12 15 42.2**	**-4.3**
	baz=172,slow=12,SNR=27								
KURBB					Lg		Lg	12 20 15.5	
	baz=183,slow=31,SNR=1.2								
KURBB					LR		LR	12 22 35.2	
	comp=Z,193nm,20.1s,baz=178,slow=41 comp=Z,4.1nm,0.9s								
KURK	**Kurchatov**	**15.39**	**351**				**Pn**	**12 15 44.5**	**-3.1**
KURK	**Kurchatov**	**15.39**	**351**		P		**Pn**	**12 15 44.5**	**-3.1**
KURK					pmax		pmax		
	comp=Z,7.0nm,0.9s								
KURK	**Kurchatov**	**15.39**	**351**		P		**Pn**	**12 15 44.5**	**-3.1**
HRA	**Herat**	**16.57**	**272**		Pn		**Pn**	**12 16 03.5**	**+0.4**
LZDM	**Lanzhou Array**	**17.29**	**82**		P		**Pn**	**12 16 12.0**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=269,slow=9.4,SNR=1.3								
LZH	**Lanzhou**	**17.40**	**82**	*eP*			**Pn**	**12 16 11.0**	**-2.5**
LZH					pP		P	12 16 16.2	+1.4
LZH					pmax		pmax		
	comp=Z,21nm,1.4s								
LZH					L		L		
	comp=Z,260nm,17.1s								
LZH					L		L		
	comp=Z,240nm,15.5s								
TNCH	**TengChong**	**17.41**	**123**		P		**P**	**12 16 15.9**	**+0.9**
TNCH					S		**Sn**	**12 19 29.4**	**+1.8**
TNCH					pmax		pmax		
	comp=Z,25nm,0.4s								
TNCH					L		L		
	comp=Z,280nm,8.2s								
TNCH					L		L		
	comp=Z,350nm,9.4s								
TNCH					L		L		
	comp=Z,340nm,12.5s								
CD2	**Chengdu**	**18.45**	**98**		P		**P**	**12 16 25.8**	**-0.5**
CD2					S		**S**	**12 20 00.5**	**+3.5**
CD2					L		L		
	comp=Z,380nm,9.9s								
CD2					L		L		
	comp=Z,610nm,7.5s								
CD2					L		L		
	comp=Z,430nm,8.0s								
ZAA0	**Zalesovo Array**	**18.46**	**5**		P		**Pn**	**12 16 24.7**	**-1.5**
ZALV	**Zalesovo Beam**	**18.46**	**5**		P		**Pn**	**12 16 23.9**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=190,slow=10,SNR=16								
ZALV					LR		LR	12 24 25.4	
	comp=Z,76nm,18.2s,baz=182,slow=40 comp=Z,3.6nm,0.6s								
ZALV	**Zalesovo Beam**	**18.46**	**5**		P		**Pn**	**12 16 24.3**	**-2.0**
ZALV	**Zalesovo Beam**	**18.46**	**5**	*i*	P		**P**	**12 16 27.2**	**+1.0**
ZALV					pmax		pmax		
	comp=Z,6.0nm,0.7s								
KNGR	**Kungurtug, Tuv**	**18.60**	**31**	*eP*			**Pn**	**12 16 29.4**	**+1.4**
KNGR					pmax		pmax		
	comp=Z,6.0nm,1.2s								
PZH	**PanZhiHua**	**18.85**	**113**		P		**Pn**	**12 16 33.7**	**+2.4**
BVAR	**Borovoye Array**	**19.41**	**338**		P		**P**	**12 16 36.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=147,slow=13,SNR=26 comp=Z,10nm,0.9s								
BORK	**Borovoye**	**19.45**	**338**		P		**Pn**	**12 16 37.7**	**-0.5**
BORK	**Borovoye**	**19.45**	**338**	‖	*i*	P	**Pn**	**12 16 38.8**	**+0.5**
BORK					pmax		pmax		
	comp=Z,17nm,0.9s								
NPW	**Naypyitaw**	**19.84**	**139**		P		**P**	**12 16 42.7**	**+1.2**
KMI2	**Kunming**	**20.36**	**115**		P		Pn	12 16 52.3	+2.9
KMI2					S		**S**	**12 20 35.9**	**+0.2**
KMI2					pmax		pmax		
	comp=Z,12nm,1.1s								
KMI2					L		L		
	comp=Z,140nm,15.2s								
KMI2					L		L		
	comp=Z,190nm,11.2s								
KMI2					L		L		
	comp=Z,230nm,15.2s								
MOY	**Mondy**	**20.89**	**34**	*eP*			Pn	12 16 53.9	-1.4
MOY					pmax		pmax		
	comp=Z,16nm,1.5s								
AB31	**Akbulak array**	**21.39**	**317**				**P**	**12 16 57.8**	**-0.4**
AB31	**Akbulak array**	**21.39**	**317**	*i*	P		**P**	**12 16 57.4**	**-0.7**
ABKAR	**Akbulak array**	**21.39**	**317**				**P**	**12 16 57.3**	**-0.8**
SONM	**Songino Array**	**21.61**	**48**		P		**P**	**12 17 00.5**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=238,slow=10,SNR=9.5								
SONM					LR		LR	12 26 05.5	
	comp=Z,101nm,19.2s,baz=232,slow=39 comp=Z,3.3nm,0.9s								
SONM	**Songino Array**	**21.61**	**48**		P		**P**	**12 17 01.1**	**+0.5**
SONM	**Songino Array**	**21.61**	**48**		P		**P**	**12 17 01.1**	**+0.5**
SONM					pmax		pmax		
	comp=Z,8.0nm,1.3s								
ULN	**Ulaanbaatar**	**22.02**	**49**	⇑	*i*	P	**P**	**12 17 06.0**	**+0.9**
ULN					pmax		pmax		
	comp=Z,4.0nm,1.1s								
ULN	**Ulaanbaatar**	**22.02**	**49**		P		**P**	**12 17 04.5**	**-0.6**
TLY	**Talaya**	**22.15**	**37**		LR		LR	12 25 58.3	
	comp=Z,58nm,18.5s,baz=241,slow=38								
CHTO	**Chiang Mai**	**22.19**	**134**		P		**P**	**12 17 07.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.47**	**135**		P		**P**	**12 17 11.1**	**+1.1**
	comp=Z,4.5nm,1.1s,baz=315,slow=11,SNR=13 comp=Z,4.5nm,1.1s								
CMAR	**Chiang Mai Arr**	**22.47**	**135**		P		**P**	**12 17 09.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**22.47**	**135**	*i*	P		**P**	**12 17 12.1**	**+2.2**
CMAR					pmax		pmax		
	comp=Z,2.0nm,0.7s								
AKTO	**Aktyubinsk**	**23.07**	**318**		LR		LR	12 27 13.5	
	comp=Z,232nm,19.3s,baz=118,slow=39								
HHC	**Hu-ho-hao-te**	**23.46**	**68**	*eP*			**P**	**12 17 19.9**	**-0.2**
HHC					S		**S**	**12 21 38.5**	**+4.8**
HHC					pmax		pmax		
	comp=Z,13nm,0.6s								
HHC					pmax		pmax		
	comp=Z,51nm,4.1s								
HHC					L		L		
	comp=Z,110nm,11.5s								
HHC					L		L		
	comp=Z,100nm,13.0s								
HHC					L		L		
	comp=Z,180nm,12.6s								
SVE	**Sverdlovsk**	**25.85**	**332**	*eP*			**P**	**12 17 45.0**	**+3.1**
SVE					pmax		pmax		
	comp=Z,22nm,1.0s								
HNS	**HongShan**	**25.98**	**76**	⇑	P		**P**	**12 17 46.7**	**+3.5**
HNS					pmax		pmax		
	comp=Z,20nm,0.9s								
HNS					L		L		
	comp=Z,500nm,17.7s								
HNS					L		L		
	comp=Z,280nm,11.8s								
HNS					L		L		
	comp=Z,300nm,14.9s								
ARTI	**Arti**	**26.44**	**329**		P		**P**	**12 17 46.1**	**-1.2**
ARTI					IAmb		IAmb	12 17 51.2	
	comp=Z,11nm,0.7s								
ARTI	**Arti**	**26.44**	**329**	*d*	*i*	P	**P**	**12 17 49.3**	**+2.0**
ARTI								12 18 26.6	
ARTI								12 21 09.4	
ARTI					S		**S**	**12 22 23.9**	**+3.1**
ARTI					SS		**SnSn**	**12 23 21.9**	**+0.3**
ARTI					pmax		pmax		
	comp=Z,16nm,1.0s								
BJT	**Baijiatuan**	**26.95**	**70**		P		**P**	**12 17 52.2**	**+0.2**
HALK	**Hakmana**	**29.37**	**183**		P		**P**	**12 18 13.8**	**0.0**
GNI	**Garni**	**29.93**	**290**		LR		LR	12 32 41.4	
	comp=Z,43nm,19.8s,baz=92,slow=41								
GNI	**Garni**	**29.93**	**290**	*eP*			**P**	**12 18 20.8**	**+2.0**
GNI					pmax		pmax		
	comp=Z,6.0nm,1.0s								
NJ2	**Nanjing**	**30.38**	**86**	*eP*			**P**	**12 18 23.4**	**+0.8**
NJ2					pmax		pmax		
	comp=Z,20nm,0.5s								
HILR	**Hailar Array B**	**30.52**	**51**		P		**P**	**12 18 22.7**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=190,slow=22,SNR=1.8 comp=Z,0.9nm,0.4s								
KIV	**Kislovodsk**	**31.41**	**298**	*eP*			**P**	**12 18 32.9**	**+1.1**
KIV					pmax		pmax		
	comp=Z,5.0nm,1.1s								
KIV					MLR		MLR		
	comp=Z,25nm,15.0s								
KIRV	**Kirov**	**31.63**	**327**		LR		LR	12 32 52.1	
	comp=Z,60nm,21.1s,baz=144,slow=39								
KIRV	**Kirov**	**31.63**	**327**	*eP*			**P**	**12 18 35.4**	**+2.0**
DLV	**Lat**	**33.31**	**128**		P		**P**	**12 18 46.8**	**-1.9**
SOC	**Sochi**	**33.56**	**297**	*eP*			**P**	**12 18 52.3**	**+1.8**
SOC				*eS*			**S**	**12 24 15.9**	**+3.3**
SOC				*eSS*			**SnSn**	**12 26 16.5**	**+1.4**
SOC				*eSSS*			SSS	12 26 32.7	
SOC					MLR		MLR		
	comp=Z,83nm,16.0s								
NRIK	**Noril'sk**	**33.95**	**3**		P		**P**	**12 18 53.1**	**-0.5**
	comp=Z,7.1nm,0.9s,baz=188,slow=6.0,SNR=9.5								
NRIK					LR		LR	12 34 47.5	
	comp=Z,48nm,18.1s,baz=262,slow=40 comp=Z,7.1nm,0.9s								
NRIK	**Noril'sk**	**33.95**	**3**		P		**P**	**12 18 52.8**	**-0.8**
NRIK					IAmb		IAmb	12 18 57.7	
	comp=Z,11nm,1.1s								
NRIK	**Noril'sk**	**33.95**	**3**	*d*	*i*	P	**P**	**12 18 53.8**	**+0.2**
NRIK					pmax		pmax		
	comp=Z,9.0nm,1.1s								
RAYN	**Ar Rayn**	**34.08**	**260**		P		**P**	**12 18 54.6**	**-0.6**
RAYN	**Ar Rayn**	**34.08**	**260**		P		**P**	**12 18 54.6**	**-0.6**
RAYN					pmax		pmax		
	comp=Z,5.0nm,1.0s								
RAYN	**Ar Rayn**	**34.08**	**260**		P		**P**	**12 18 54.7**	**-0.6**
KELT	**Kelkit**	**34.12**	**291**		P		**P**	**12 18 57.1**	**+1.4**
KS19	**Wonju Array Si**	**36.31**	**73**		P		**P**	**12 19 13.6**	**-0.7**
KS19					IAmb		IAmb	12 19 51.7	
	comp=Z,18nm,1.5s								
KSAR	**Wonju Array Be**	**36.34**	**73**		P		**P**	**12 19 14.0**	**-0.5**
KSAR	**Wonju Array Be**	**36.34**	**73**		P		**P**	**12 19 14.0**	**-0.5**
KSRS	**Korea Array**	**36.37**	**73**		P		**P**	**12 19 13.8**	**-0.9**
	comp=Z,3.3nm,1.1s,baz=276,slow=8.3,SNR=12								
KSRS					LR		LR	12 36 02.9	
	comp=Z,36nm,20.5s,baz=265,slow=40 comp=Z,3.3nm,1.1s								
MDJ	**Mudanjiang**	**36.78**	**61**		P		**P**	**12 19 17.5**	**-0.6**
OBN	**Obninsk**	**36.84**	**317**	*eP*			**P**	**12 19 20.2**	**+1.6**
OBN					pmax		pmax		
	comp=Z,4.0nm,0.7s								
OBN					MLR		MLR		
	comp=Z,83nm,21.0s								
KLMR	**Klimovskoe**	**37.12**	**326**	*eP*			**P**	**12 19 20.1**	**-0.8**
KLMR					pmax		pmax		
	comp=Z,17nm,1.5s								
BZK	**Bozkurt**	**37.87**	**295**		P		**P**	**12 19 27.7**	**+0.3**
	comp=Z,15nm,0.9s								
KLR	**Kul'dur**	**38.24**	**53**		LR		LR	12 35 59.7	
	comp=Z,58nm,19.4s,baz=246,slow=38								
KLR	**Kul'dur**	**38.24**	**53**	*i*	P		**P**	**12 19 30.4**	**-0.1**
BR131	**Keskin Array S**	**38.46**	**291**		P		**P**	**12 19 32.3**	**-0.3**
BR131	**Keskin Array S**	**38.46**	**291**		P		**P**	**12 19 32.3**	**-0.3**
BR131					pmax		pmax		
	comp=Z,10.0nm,1.2s								
BRTR	**Keskin Array B**	**38.46**	**291**		P		**P**	**12 19 33.4**	**+0.7**
	comp=Z,4.6nm,0.9s,baz=81,slow=7.6,SNR=9.1 comp=Z,4.6nm,0.9s								
BRTR	**Keskin Array B**	**38.46**	**291**				**P**	**12 19 32.3**	**-0.3**
BRTR	**Keskin Array B**	**38.46**	**291**		P		**P**	**12 19 32.3**	**-0.3**
BR104	**Keskin Array S**	**38.46**	**291**		P		**P**	**12 19 32.7**	**0.0**
	comp=Z,6.0nm,1.1s								
BR106	**Keskin Array S**	**38.47**	**291**		P		**P**	**12 19 32.9**	**+0.1**
	comp=Z,6.5nm,1.0s								
BR105	**Keskin Array S**	**38.48**	**291**		P		**P**	**12 19 32.9**	**+0.1**
	comp=Z,6.8nm,1.0s								
USRK	**Ussuriysk Ar.**	**38.52**	**62**		LR		LR	12 37 02.4	
	comp=Z,90nm,18.5s,baz=166,slow=39								
KKUL	**Konya-Kulu**	**39.11**	**290**		P		**P**	**12 19 38.8**	**+0.8**
YAK	**Yakutsk**	**39.52**	**33**	⇑	*eP*		**P**	**12 19 43.1**	**+2.1**
YAK					pmax		pmax		
	comp=Z,13nm,0.8s								
JNU	**Nakatsue**	**39.78**	**79**		LR		LR	12 37 24.2	
	comp=Z,105nm,19.7s,baz=300,slow=38								
JOW	**Kunigami**	**39.90**	**89**		P		**P**	**12 19 42.1**	**-2.5**
EIL	**Eilat**	**40.09**	**275**		LR		LR	12 39 59.5	
	comp=Z,77nm,18.6s,baz=94,slow=42								
AK09	**Malin Array Si**	**40.71**	**309**		P		**P**	**12 19 51.0**	**-0.1**
AK08	**Malin Array Si**	**40.73**	**309**		P		**P**	**12 19 51.2**	**0.0**
AK10	**Malin Array Si**	**40.73**	**309**		P		**P**	**12 19 51.2**	**0.0**
AKASG	**Malin Array Be**	**40.75**	**309**		P		**P**	**12 19 49.7**	**-1.7**
	comp=Z,1.2nm,0.6s,baz=78,slow=7.4,SNR=4.2								
AKASG					LR		LR	12 39 47.6	
	comp=Z,134nm,20.5s,baz=65,slow=41 comp=Z,1.2nm,0.6s								
AKASG	**Malin Array Be**	**40.75**	**309**	*i*	P		**P**	**12 19 53.0**	**+1.6**
AKASG					pmax		pmax		
	comp=Z,3.0nm,0.9s								
AKBB	**Malin Array Si**	**40.75**	**309**				**P**	**12 19 50.4**	**-0.9**
AKBB					IAmb		IAmb	12 19 54.4	
	comp=Z,13nm,1.2s								
AKBB	**Malin Array Si**	**40.75**	**309**	‖	*eP**		**P**	**12 19 51.0**	**-0.4**
AKBB					pmax		pmax		
	comp=Z,8.0nm,1.0s								
AKBB	**Malin Array Si**	**40.75**	**309**		P		**P**	**12 19 51.4**	**0.0**
AK03	**Malin Array Si**	**40.75**	**309**		P		**P**	**12 19 51.4**	**0.0**
AK01	**Malin Array Si**	**40.76**	**309**		P		**P**	**12 19 50.8**	**-0.6**
AK07	**Malin Array Si**	**40.76**	**309**		P		**P**	**12 19 50.8**	**-0.7**
KIEV	**Kiev**	**40.76**	**309**				**P**	**12 19 52.8**	**+1.3**
KIEV	**Kiev**	**40.76**	**309**		P		**P**	**12 19 52.8**	**+1.3**
KIEV	**Kiev**	**40.76**	**309**		P		**P**	**12 19 51.4**	**-0.1**
	comp=Z,32nm,1.0s								
KIEV	**Kiev**	**40.76**	**309**		P		**P**	**12 19 50.9**	**-0.6**
AK02	**Malin Array Si**	**40.76**	**309**		P		**P**	**12 19 50.8**	**-0.7**
AK06	**Malin Array Si**	**40.76**	**309**		P		**P**	**12 19 51.3**	**-0.2**
LUBAR	**Lubar, Ukraine**	**41.69**	**308**		P		**P**	**12 19 58.6**	**-0.6**
MNK	**Minsk**	**41.73**	**314**	*i*	P		**P**	**12 20 01.0**	**+1.6**
	comp=E,19nm,0.9s								
MNK				*i*	P		**P**	**12 20 01.0**	**+1.6**
	comp=N,7.0nm,0.7s								
MNK				*i*	P		**P**	**12 20 01.0**	**+1.6**
	comp=Z,13nm,0.8s,baz=94								
MNK				*i*	PP		**PP**	**12 21 37.5**	**+1.8**
MNK				*i*	PcP		**PcP**	**12 21 57.4**	**+1.7**
MNK				*i*	PPP		PPP	12 22 05.7	
MNK				*i*	S		**S**	**12 26 18.6**	**+2.4**
MNK				*i*	SS		**SS**	**12 29 25.4**	**+3.9**
MNK				*i*	SSS		SSS	12 29 53.8	
MNK				*i*	ScS		**ScS**	**12 30 04.4**	**+2.0**
MNK				*i*	LQ		LQ	12 34 25.6	
MNK				*i*	LR		LR	12 37 47.6	
MNK				*i*	LRM		MLR	12 38 33.8	
	comp=N,357nm,21.7s								
MNK				*i*	LRM		MLR	12 38 37.6	
	comp=E,256nm,21.2s								
MNK		

MA2 pmax pmax
comp=Z,13nm,1.2s
HFS Hagfors 49.50 322 P **P** **12 21 00.3 -0.5**
comp=Z,3.2nm,0.7s,baz=104,slow=11,SNR=6.7
HFS LR LR 12 42 53.4
comp=Z,71nm,18.1s,baz=100,slow=37
comp=Z,3.2nm,0.7s
SEY Seymchan 50.02 34*c i*P **P** **12 21 05.2 +0.5**
SEY pmax pmax
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 50.39 310 *e*P **P** **12 21 08.1 +0.5**
BRG Amp 12 21 09.0
comp=Z,3.4nm,0.8s
NB2 NORSAR Subarra 50.67 323 P **P** **12 21 08.7 -1.0**
comp=Z,1.1nm,0.6s,baz=86,slow=7.4
NOA NORSAR Array B 50.67 323 P **P** **12 21 09.1 -0.7**
comp=Z,3.3nm,0.9s,baz=86,slow=7.4,SNR=11
NOA LR LR 12 43 59.6
comp=Z,30nm,18.3s,baz=85,slow=38
comp=Z,3.3nm,0.9s
GERES GERESS Array B 50.93 308 P **P** **12 21 11.6 -0.3**
comp=Z,2.5nm,0.9s,baz=86,slow=4.1,SNR=12
comp=Z,2.5nm,0.9s
GERES GERESS Array B 50.93 308 P **P** **12 21 12.0 +0.1**
GERES GERESS Array B 50.93 308 P **P** **12 21 12.0 +0.1**
KHC Kasperske Hory 50.95 308 *e*P **P** **12 21 14.3 +2.3**
KHC pmax pmax
comp=Z,2.0nm,1.2s
JCJ Chichijima 51.09 82 LR LR 12 42 28.5
comp=Z,44nm,21.2s,baz=142,slow=36
BILL Bilibino 55.30 27 *i*P **P** **12 21 44.8 +1.1**
BILL pmax pmax
comp=Z,6.0nm,1.0s
BMRD Maredsous 56.20 311 *d*P **P** **12 21 51.5 +1.0**
SIJI Sorong 58.16 118 LR LR 12 48 53.0
comp=Z,31nm,18.2s,baz=236,slow=38
EKA Eskdalemuir Ar 59.26 318 P **P** **12 22 10.1 -1.8**
comp=Z,2.6nm,0.9s,baz=101,slow=6.9,SNR=4.4
EKA LR LR 12 49 16.5
comp=Z,52nm,19.6s,baz=202,slow=38
comp=Z,2.6nm,0.9s
BORG Borgarnes 63.90 332 LR LR 12 51 01.1
comp=Z,29nm,18.3s,baz=28,slow=36
SUMG Summit 64.78 343 **P** **12 22 49.2 0.0**
SUMG Summit 64.78 343 P **P** **12 22 49.2 0.0**
SUMG pmax pmax
comp=Z,13nm,1.2s
SUMG Summit 64.78 343 **P** **12 22 47.8 -1.4**
SUMG Summit 64.78 343 *i* P **P** **12 22 49.0 -0.2**
C16K Lisburne Hills 65.01 22 P **P** **12 22 47.9 -2.3**
baz=304
A19K Wainwright 65.15 20 P **P** **12 22 48.3 -2.7**
baz=306
GAMB Gambell 65.20 28 P **P** **12 22 49.1 -2.4**
baz=300
C17K DeLong Mountai 65.56 22 P **P** **12 22 51.7 -2.1**
baz=305
A21K Barrow 65.61 18 P **P** **12 22 51.8 -2.3**
baz=310
TNA Tin City 65.65 25 P **P** **12 22 52.3 -2.1**
baz=303
RDOG Red Dog Mine 65.89 22 P **P** **12 22 53.8 -2.1**
baz=306
ESDC Sonseca Array 65.92 302 P **P** **12 22 57.6 +1.0**
comp=Z,0.6nm,0.8s,baz=89,slow=8.0,SNR=5.5
ESDC LR LR 12 57 01.7
comp=Z,64nm,18.8s,baz=50,slow=41
comp=Z,0.6nm,0.8s
D17K Noatak River 66.04 22 P **P** **12 22 54.7 -2.2**
baz=306,SNR=5.6
C18K Utukok River 66.05 21 P **P** **12 22 54.7 -2.3**
baz=307
A22K Sinclair Lake 66.23 18 P **P** **12 22 55.2 -2.8**
baz=311
C19K Lookout Ridge 66.23 20 P **P** **12 22 54.6 -3.5**
baz=308
F14K Arctic Creek 66.25 25 P **P** **12 22 55.9 -2.5**
baz=304
B20K Meade River 66.32 19 P **P** **12 22 55.7 -3.0**
baz=310
F15K North Star Dit 66.70 25 P **P** **12 22 58.2 -2.9**
baz=305
E17K Hotham Inlet 66.80 23 P **P** **12 22 59.0 -2.8**
baz=307
E18K Tukpahlearik C 66.97 22 **P** **12 23 03.2 +0.4**
E18K Tukpahlearik C 66.97 22 P **P** **12 22 59.9 -3.0**
baz=308,SNR=6.4
D19K Kuna River 67.03 20 P **P** **12 23 00.8 -2.5**
baz=310
B22K Teshekpuk Lake 67.06 18 P **P** **12 23 00.5 -2.9**
baz=313
ANM Nome 67.11 26 P **P** **12 23 01.0 -2.8**
baz=305
B21K Ikpikpuk River 67.24 19 P **P** **12 23 02.6 -2.0**
baz=312
D20K Etivluk River 67.31 20 P **P** **12 23 02.1 -3.0**
baz=311
G15K Niukluk 67.32 25 P **P** **12 23 01.9 -3.3**
baz=306
F17K Baldwin Pennin 67.37 23 P **P** **12 23 02.4 -3.0**
baz=308
C21K Knifeblade Rid 67.51 19 P **P** **12 23 03.5 -2.8**
baz=312
E20K Nigu River 67.73 20 P **P** **12 23 05.3 -2.4**
baz=311
F18K Selawik 67.78 22 P **P** **12 23 05.2 -2.8**
baz=309
E19K Redstone River 67.96 21 P **P** **12 23 09.5 +0.4**
E19K IAmb IAmb 12 23 10.2
comp=Z,9.2nm,1.4s
E19K Redstone River 67.96 21 P **P** **12 23 06.3 -2.8**
baz=311
C23K Itkillik River 68.10 17 P **P** **12 23 07.6 -2.3**
baz=315
G17K Kiwalik Mounta 68.15 24 P **P** **12 23 07.6 -2.7**
baz=308
H16K Elim 68.15 25 P **P** **12 23 07.2 -3.1**
baz=308
F19K Shaleruckik Mo 68.20 22 IAmb IAmb 12 23 11.3
comp=Z,4.2nm,1.1s
F19K Shaleruckik Mo 68.20 22 P **P** **12 23 07.5 -3.1**
baz=310
E21K Killik River 68.22 19 P **P** **12 23 08.4 -2.4**
baz=313
G18K Tagagawik 68.54 23 P **P** **12 23 10.1 -2.7**
baz=310
C24K Franklin Bluff 68.64 17 P **P** **12 23 11.3 -2.1**
baz=317
F20K Avaraart Lake 68.67 21 IAmb IAmb 12 23 14.9
comp=Z,6.0nm,1.4s
F20K Avaraart Lake 68.67 21 P **P** **12 23 11.4 -2.1**
baz=312,SNR=5.5
D23K Nanushuk River 68.71 18 P **P** **12 23 11.4 -2.4**
baz=316
H17K Granite Mounta 68.75 24 IAmb IAmb 12 23 15.8
comp=Z,7.7nm,1.2s
H17K Granite Mounta 68.75 24 P **P** **12 23 12.3 -1.8**
baz=309
G19K Purcell Mounta 68.86 22 P **P** **12 23 13.3 -1.5**
baz=311,SNR=5.4
K13K Kusilvak Mount 68.91 28 P **P** **12 23 13.1 -2.0**
baz=306
D24K Happy Valley 69.03 17 P **P** **12 23 14.5 -1.3**
baz=317
H18K Honhosa River 69.11 23 P **P** **12 23 14.7 -1.7**
baz=310
I17K Unalakleet 69.15 25 P **P** **12 23 14.7 -1.9**
baz=309
F21K Alatna River 69.19 20 P **P** **12 23 14.6 -2.3**
baz=314,SNR=9.3
M11K Mekoryuk 69.22 30 P **P** **12 23 14.3 -2.8**
baz=306
TOLK Toolik Lake Re 69.22 18 P **P** **12 23 14.4 -2.7**
baz=317,SNR=7.5
SPIA Saint Paul Isl 69.32 34 P **P** **12 23 14.9 -2.8**
baz=304
F22K John River 69.35 20 P **P** **12 23 15.5 -2.4**
baz=315
C26K Camden Bay 69.36 16 P **P** **12 23 15.4 -2.4**
baz=320
H19K Roundabout Mou 69.47 22 P **P** **12 23 15.9 -2.7**
baz=312,SNR=6.3
D25K Kavik River 69.49 17 P **P** **12 23 16.7 -2.0**
baz=319
J16K Anvik River 69.56 25 P **P** **12 23 16.3 -2.8**
baz=309
E23K Chandalar 69.64 18 IAmb IAmb 12 23 21.3
comp=Z,4.0nm,1.0s
E23K Chandalar 69.64 18 P **P** **12 23 17.9 -1.8**
baz=317
G21K Allakaket 69.68 21 P **P** **12 23 19.9 +0.1**
G21K IAmb IAmb 12 23 20.4
comp=Z,4.3nm,0.8s
G21K Allakaket 69.68 21 P **P** **12 23 18.0 -1.8**
baz=314
C27K Jago River 69.86 16 P **P** **12 23 18.2 -2.7**
baz=321
GCSA Galena City Sc 69.86 23 P **P** **12 23 18.9 -2.0**
baz=312
E24K Your Creek 69.91 18 P **P** **12 23 19.0 -2.3**
baz=318
H20K Anotleneega Mo 69.98 22 P **P** **12 23 19.0 -2.7**
baz=313,SNR=9.8
RES Resolute Bay 70.02 359 LR LR 12 55 42.8
comp=Z,42nm,20.2s,baz=43,slow=37
J17K VABM Dome 70.02 25 P **P** **12 23 21.9 -0.1**
J17K IAmb IAmb 12 23 42.5
comp=Z,9.1nm,1.4s
J17K VABM Dome 70.02 25 P **P** **12 23 20.1 -1.9**
baz=310
L14K Kuka Creek 70.02 28 P **P** **12 23 19.9 -2.1**
baz=308
COLD Coldfoot 70.09 19 P **P** **12 23 22.5 +0.1**
COLD IAmb IAmb 12 23 23.5
comp=Z,5.6nm,1.0s
COLD Coldfoot 70.09 19 P **P** **12 23 20.4 -1.9**
baz=316,SNR=5.6
L15K Ungalak Mounta 70.26 27 P **P** **12 23 21.1 -2.4**
baz=309
M13K Dall Lake 70.34 29 P **P** **12 23 22.0 -1.9**
baz=308
F24K Squaw Lake 70.48 18 P **P** **12 23 22.5 -2.3**
baz=318
H21K Melozitna Rive 70.48 21 P **P** **12 23 21.7 -3.1**
baz=315,SNR=10
G23K Bananza Creek 70.51 20 IAmb IAmb 12 23 26.8
comp=Z,7.1nm,1.4s
G23K Bananza Creek 70.51 20 P **P** **12 23 22.3 -2.8**
baz=317
I20K Naaghedeneel 70.58 22 P **P** **12 23 23.4 -2.0**
baz=314
E25K Arctic Village 70.60 17 P **P** **12 23 22.4 -3.1**
baz=320
M14K Bethel 70.66 28 P **P** **12 23 26.3 +0.4**
M14K Bethel 70.66 28 P **P** **12 23 23.8 -2.1**
baz=309
H22K Ishtalitna Cre 70.73 21 P **P** **12 23 24.6 -1.7**
baz=316
K17K Iditarod 70.73 25 P **P** **12 23 24.8 -1.6**
baz=311
D27M Malcolm River 70.75 15 P **P** **12 23 24.4 -2.1**
baz=324
J19K Poorman 70.77 23 P **P** **12 23 24.1 -2.5**
baz=313,SNR=7.1
L16K Owhat River 70.97 26 **P** **12 23 28.7 +0.9**
L16K Owhat River 70.97 26 P **P** **12 23 26.6 -1.2**
baz=311
F25K Christian Rive 70.99 18 IAmb IAmb 12 23 29.5
comp=Z,8.6nm,1.3s
F25K Christian Rive 70.99 18 P **P** **12 23 26.5 -1.4**
baz=320
A36M Sachs Harbour 71.00 9 P **P** **12 23 25.8 -2.0**
baz=336
I21K Tanana 71.07 21 P **P** **12 23 26.5 -1.8**
baz=316
J20K Nowinta River 71.11 23 P **P** **12 23 27.2 -1.5**
baz=314,SNR=7.4
L17K Donlin 71.12 26 P **P** **12 23 26.2 -2.5**
baz=311,SNR=5.9
D28M Stokes Point 71.14 14 P **P** **12 23 26.0 -2.7**
baz=326
M15K Kasigluk River 71.18 28 P **P** **12 23 26.7 -2.4**
baz=310
G24K Hadweenzic Riv 71.20 19 IAmb IAmb 12 23 30.4
comp=Z,7.3nm,1.1s
G24K Hadweenzic Riv 71.20 19 P **P** **12 23 26.8 -2.4**
baz=319
F26K Sheenjek River 71.27 17 P **P** **12 23 27.2 -2.4**
baz=321
N14K Kuskokwak Cree 71.29 29 P **P** **12 23 27.2 -2.6**
baz=309
H23K Yukon River 71.30 20 P **P** **12 23 27.0 -2.8**
baz=317
E27K Coleen River 71.47 16 P **P** **12 23 27.8 -3.0**
baz=323
G25K Bearman Lake 71.51 18 P **P** **12 23 27.9 -3.0**
baz=320
MLY Manley 71.54 21 P **P** **12 23 28.0 -3.3**
baz=317,SNR=7.0
M16K Timber Creek 71.61 27 P **P** **12 23 29.7 -2.1**
baz=311
L18K Granite Mounta 71.62 25 P **P** **12 23 29.0 -2.7**
baz=313
K20K Telida 71.71 23 P **P** **12 23 29.8 -2.5**
baz=314
SFJD Kangerlussuaq 71.71 342 LR LR 12 58 42.7
comp=Z,28nm,20.3s,baz=1.0,slow=39
H24K Noodor Dome 71.75 19 P **P** **12 23 29.8 -2.7**
baz=319
N15K Kwethluk River 71.75 28 P **P** **12 23 29.5 -3.1**
baz=310
I23K Minto, Yukon-K 71.85 20 P **P** **12 23 30.4 -2.7**
baz=318,SNR=5.4
O14K Tigyukauivet M 71.89 29 P **P** **12 23 30.2 -3.2**
baz=310
CHUM Lake Minchumin 71.89 22 P **P** **12 23 30.3 -3.0**
baz=316
M17K Holitna River 71.91 26 P **P** **12 23 30.4 -3.1**
baz=312
G26K Porcupine Rive 71.94 17 P **P** **12 23 31.0 -2.6**
baz=322
N16K Nishlik Lake 72.05 27 P **P** **12 23 31.7 -2.7**
baz=311
E29M Blow River 72.09 15 P **P** **12 23 32.7 -1.8**
baz=326
L19K White Mountain 72.28 24 P **P** **12 23 33.4 -2.3**
baz=314,SNR=5.4
CAST Castle Rocks 72.30 23 P **P** **12 23 32.8 -3.0**
baz=316,SNR=9.2
F28M Old Crow 72.32 16 P **P** **12 23 33.2 -2.6**
baz=325
NEA2 Nenana 72.35 21 P **P** **12 23 32.8 -3.3**
baz=318,SNR=12
POKR Poker Plat Res 72.42 20 P **P** **12 23 33.8 -2.6**
baz=319
M18K Stony River 72.42 25 P **P** **12 23 34.4 -2.2**
baz=313
COLA College 72.48 20 P **P** **12 23 36.8 0.0**
COLA College 72.48 20 P **P** **12 23 36.8 0.0**
COLA pmax pmax
comp=Z,10.0nm,1.0s
COLA College 72.48 20 P **P** **12 23 34.5 -2.4**
baz=319
COLA College 72.48 20 P **P** **12 23 36.9 0.0**
O15K Ungalikthiuk R 72.50 29 P **P** **12 23 34.8 -2.3**
baz=311
KTH Kantishna Hill 72.56 22 IAmb IAmb 12 23 38.4
comp=Z,7.1nm,1.0s
G27K Doyon Strip 72.57 17 P **P** **12 23 35.1 -2.3**
baz=324
N17K Nushagak Hills 72.59 27 P **P** **12 23 35.3 -2.3**
baz=313
PRP Porcupine Dome 72.62 19 P **P** **12 23 35.8 -2.1**
baz=321
M19K Big River Lodg 72.63 25 P **P** **12 23 35.0 -2.8**
baz=314
PPLA Purkeypile 72.64 23 P **P** **12 23 34.8 -3.3**
baz=316
CCB Clear Creek Bu 72.67 20 IAmb IAmb 12 23 38.3
comp=Z,4.2nm,1.0s
IL31 72.83 20 IAmb IAmb 12 23 39.5
comp=Z,6.7nm,1.1s
ILAR Eielson Array 72.83 20 P **P** **12 23 37.9 -1.0**
comp=Z,3.6nm,0.9s,baz=313,slow=5.2,SNR=30
ILAR LR LR 13 00 15.1
comp=Z,41nm,19.6s,baz=232,slow=40
comp=Z,3.6nm,0.9s
ILAR Eielson Array 72.83 20 P **P** **12 23 37.5 -1.4**
TRF Thorofare Moun 72.83 22 P **P** **12 23 36.4 -2.8**
baz=317
O16K Kokwok River B 72.89 28 IAmb IAmb 12 23 41.3
comp=Z,6.6nm,1.1s
O16K Kokwok River B 72.89 28 P **P** **12 23 37.1 -2.3**
baz=312
N18K Kilae Creek 72.96 26 P **P** **12 23 37.8 -2.0**
baz=314
UNV Unalaska Valle 72.99 35 P **P** **12 23 36.7 -3.4**
baz=307
INK Inuvik 73.02 13 P **P** **12 23 38.2 -1.8**
baz=330
MCK McKinley 73.03 21 P **P** **12 23 36.7 -3.5**
baz=318
M20K Styx River 73.06 24 P **P** **12 23 36.4 -4.1**
baz=315
H27K Steamboat Moun 73.06 17 P **P** **12 23 36.7 -3.7**
baz=324
HDA Harding Lake 73.09 20 P **P** **12 23 37.2 -3.3**
baz=320
O17K Koliganek Bris 73.14 27 P **P** **12 23 38.8 -2.0**
baz=313
F30M Barrier River 73.18 14 P **P** **12 23 37.3 -3.6**
baz=328
G29M Pine Creek 73.31 15 P **P** **12 23 38.4 -3.3**
baz=326
P16K Nushagak River 73.31 28 P **P** **12 23 38.5 -3.3**
baz=312
N19K Bonanza Creek 73.36 25 P **P** **12 23 38.7 -3.6**
baz=315
L22K Petersville 73.36 23 P **P** **12 23 38.6 -3.6**
baz=317
J25K Salcha River, 73.37 19 P **P** **12 23 38.9 -3.3**
baz=321
I26K Coal Creek Min 73.41 18 P **P** **12 23 38.9 -3.4**
baz=323
SKT Skwentna 73.52 23 P **P** **12 23 39.6 -3.5**
baz=317,SNR=5.2
I27K Kandik River 73.55 18 P **P** **12 23 39.9 -3.4**
baz=324
C36M Paulatuk 73.60 9 P **P** **12 23 40.3 -3.0**
baz=338
CUT Chulitna 73.61 23 P **P** **12 23 40.6 -2.9**
baz=318
G30M tAoh Zraii Nji 73.63 15 P **P** **12 23 40.8 -2.9**
baz=328
F31M Tsiigehtchic 73.73 14 P **P** **12 23 41.4 -2.8**
baz=330
STLK Strandline Lak 73.77 24 IAmb IAmb 12 23 45.3
comp=Z,3.7nm,0.9s
O18K Koktuh Hills 73.78 26 P **P** **12 23 42.3 -2.3**
baz=314
P17K Kvichak River 73.78 27 P **P** **12 23 42.4 -2.2**
baz=314
H29M Whitestone 73.81 16 P **P** **12 23 41.7 -3.0**
baz=326
WAT1 Susitna Watana 73.82 22 P **P** **12 23 42.3 -2.6**
baz=319
O19K Port Alsworth 73.85 26 P **P** **12 23 42.4 -2.6**
baz=315
K24K Donnelly Dome 73.89 20 P **P** **12 23 42.8 -2.5**
baz=321,SNR=12
WRA Warramunga Arr 73.94 130 P **P** **12 23 45.6 -0.5**
comp=Z,3.2nm,1.0s,baz=324,slow=5.7,SNR=7.9
comp=Z,3.2nm,1.0s
DHY Denali Highway 73.99 21 P **P** **12 23 43.4 -2.6**
baz=320
Q16K King Salmon 74.06 28 P **P** **12 23 43.5 -2.7**
baz=313
G31M Satah River 74.08 14 P **P** **12 23 43.1 -3.1**
baz=330
I28M Miner Creek 74.08 17 IAmb IAmb 12 23 46.9
comp=Z,5.0nm,1.0s
I28M Miner Creek 74.08 17 P **P** **12 23 43.8 -2.6**
baz=325
P18K Big Mountain, 74.09 27 P **P** **12 23 43.4 -3.1**
baz=314
RIDG Independent Ri 74.20 20 P **P** **12 23 44.8 -2.3**
baz=322
SCRK Sand Creek 74.24 19 P **P** **12 23 45.0 -2.5**
baz=322
WAT6 Susitna Watana 74.26 22 P **P** **12 23 45.2 -2.4**
baz=320
S14K Fog Glacier 74.52 31 P **P** **12 23 46.7 -2.4**
baz=312
CAPN Captain Cook N 74.53 24 P **P** **12 23 46.7 -2.2**
baz=317
O20K Slope Mountain 74.53 25 P **P** **12 23 46.8 -2.3**
baz=316
PMR Palmer 74.58 23 P **P** **12 23 47.1 -2.1**
baz=319
P19K Oil Pt 74.63 26 P **P** **12 23 47.4 -2.2**
baz=316
Q17K Contact Creek 74.64 28 P **P** **12 23 46.3 -3.4**
baz=314
SML Sawmill 74.67 22 P **P** **12 23 47.0 -2.8**
baz=319,SNR=6.3
SDPT Sand Point 74.75 32 P **P** **12 23 47.3 -3.0**
baz=311
RC01 Rabbit Creek A 74.76 23 P **P** **12 23 47.2 -3.1**
baz=318
M23K Glacier View 74.86 22 P **P** **12 23 47.9 -3.0**
baz=320
R17L Mt. Peulik Vol 74.89 28 P **P** **12 23 48.4 -2.8**
baz=314
KNK Knik Glacier 74.92 23 P **P** **12 23 48.5 -2.8**
baz=319
SCM Sheep Creek Mo 74.95 22 P **P** **12 23 48.0 -3.5**
baz=320
CHGN Chignik 74.98 30 P **P** **12 23 48.8 -2.8**
baz=313
TORD Torodi Ar. Bea 74.98 276 P **P** **12 23 50.9 -1.4**
comp=Z,2.6nm,0.7s,baz=49,slow=5.5,SNR=12
comp=Z,2.6nm,0.7s
Q19K Cape Douglas, 75.00 26 P **P** **12 23 48.3 -3.5**
baz=316
H31M Peel River 75.03 15 P **P** **12 23 48.4 -3.5**
baz=330
M24K Tolsona, Glenn 75.09 21 P **P** **12 23 48.7 -3.6**
baz=321
I30M Mount Dempster 75.09 16 IAmb IAmb 12 23 52.7
comp=Z,5.4nm,0.9s
I30M Mount Dempster 75.09 16 P **P** **12 23 49.0 -3.4**
baz=328
L26K Log Cabin Wild 75.18 20 P **P** **12 23 49.5 -3.2**
baz=323
HOM Homer 75.18 25 P **P** **12 23 49.5 -3.2**
baz=317
O22K Cooper Landing 75.22 24 P **P** **12 23 49.4 -3.5**
baz=318
J29N Klondike Camp 75.32 17 P **P** **12 23 50.3 -3.3**
baz=327
DAWY Dawson 75.36 18 IAmb IAmb 12 23 54.3
comp=Z,7.0nm,1.1s
DAWY Dawson 75.36 18 P **P** **12 23 50.2 -3.6**
baz=326,SNR=7.3
BRSE Bradley Lake S 75.43 25 P **P** **12 23 50.4 -3.8**
baz=318
BCAR Beaver Creek A 75.57 19 **P** **12 23 55.3 +0.3**
SEW Seward 75.59 24 P **P** **12 23 51.8 -3.3**
baz=319
KLU Klutina 75.64 22 P **P** **12 23 51.9 -3.7**
baz=321
J30M Hart River 75.66 16 IAmb IAmb 12 23 56.3
comp=Z,4.2nm,1.1s
J30M Hart River 75.66 16 P **P** **12 23 52.2 -3.4**
baz=328
GLI Glacier Island 75.76 23 P **P** **12 23 53.0 -3.1**
baz=320
N25K Chitina, Valde 75.95 21 P **P** **12 23 53.5 -3.8**
baz=322
K29M Barlow Dome 76.00 17 P **P** **12 23 53.1 -4.5**
baz=327
M27K Edge Creek, AK 76.12 20 P **P** **12 23 54.2 -4.1**
baz=324
KDAK Kodiak Island 76.21 27 P **P** **12 23 54.4 -4.3**
baz=317
P23K Montague Islan 76.34 23 P P 12 23 54.6 -4.8
baz=320
BVCY Beaver Creek 76.35 19 P **P** **12 23 55.7 -3.7**
baz=325
OHAK Old Harbor 76.36 28 P **P** **12 23 55.0 -4.5**
baz=316
EYAK Cordova Ski Ar 76.44 22 P **P** **12 23 56.0 -3.9**
baz=321
AS31 Alice Springs 76.45 132 P **P** **12 23 59.5 -1.0**
ASAR Alice Springs 76.45 132 P **P** **12 23 59.9 -0.6**
comp=Z,1.4nm,0.7s,baz=320,slow=5.5,SNR=16
comp=Z,1.4nm,0.7s
ASAR Alice Springs 76.45 132 P **P** **12 24 00.0 -0.5**
ASAR Alice Springs 76.45 132 P **P** **12 24 00.0 -0.5**
BMRM Bremner River 76.45 22 P **P** **12 23 56.1 -4.0**
baz=322
L29M L29M 76.47 18 IAmb IAmb 12 24 01.9
comp=Z,8.5nm,1.2s
L29M L29M 76.47 18 P **P** **12 23 55.9 -4.3**

baz=327,SNR=6.1
MCARA **McCarthy VSAT** 76.58 21 P P 12 23 57.8 -3.0
baz=323
M29M **Somme Creek** 76.95 18 IAmb IAmb 12 24 04.3
comp=Z,4.3nm,1.0s
M29M **Somme Creek** 76.95 18 P P 12 23 59.8 -3.1
baz=327,SNR=5.4
YUK3 **Moose Creek** 76.98 19 P P 12 23 59.8 -3.5
baz=325
CRQE **Cirque** 77.07 21 P P 12 23 59.9 -3.8
baz=323
Q23K **Middleton Isla** 77.12 23 P P 12 23 59.6 -4.2
baz=321
M30M **Minto, Yukon** 77.25 17 P P 12 24 01.0 -3.6
baz=328
KAIM **Kayak Island** 77.34 22 P P 12 24 01.5 -3.5
baz=322
YUK8 **Steele Glacier** 77.58 19 P P 12 24 02.6 -4.1
baz=326
BRWY **Burwash Landin** 77.70 19 P P 12 24 04.2 -2.9
baz=326
YUK4 **Talbot Arm** 77.83 19 P P 12 24 04.9 -3.1
baz=327
O28M **Mount Upton** 77.89 20 P P 12 24 05.4 -3.0
baz=326
N30M **Aishikik Lake** 78.13 18 P P 12 24 06.5 -3.0
baz=328
M31M **Drury Creek, Y** 78.15 17 IAmb IAmb 12 24 10.4
comp=Z,4.8nm,0.9s
M31M **Drury Creek, Y** 78.15 17 P P 12 24 06.4 -3.1
baz=330,SNR=5.2
YUK6 **Outpost Mounta** 78.24 19 P P 12 24 07.0 -3.3
baz=327
PINM **Pinnacle** 78.43 20 P P 12 24 08.8 -2.4
baz=326
N31M **Braeburn, Yuko** 78.44 18 P P 12 24 08.5 -2.7
baz=329,SNR=7.9
MMPY **Sheldon Lake,** 78.48 15 P P 12 24 09.2 -2.3
baz=333
HYT **Haines Junctio** 78.56 19 IAmb IAmb 12 24 13.2
comp=Z,5.7nm,0.9s
HYT **Haines Junctio** 78.56 19 P P 12 24 09.7 -2.3
baz=328,SNR=5.3
O30N **Mendenhall** 78.97 18 P P 12 24 12.6 -1.6
baz=329
P30M **Million Dollar** 79.31 19 P P 12 24 13.9 -2.1
baz=328
WHY **Whitehorse** 79.37 18 P P 12 24 13.7 -2.7
baz=330
N32M **Quiet Lake** 79.38 17 P P 12 24 14.3 -2.0
baz=331
WRGLY **Wrigley** 79.40 12 P P 12 24 14.3 -2.0
baz=339
P29M **Windy Craggy** 79.52 19 P P 12 24 14.3 -2.8
baz=328
P33M **Teslin, Yukon** 80.27 17 IAmb IAmb 12 24 21.9
comp=Z,6.6nm,1.0s
P33M **Teslin, Yukon** 80.27 17 P P 12 24 18.5 -2.8
baz=332
SKAG **Skagway** 80.30 18 P P 12 24 18.3 -3.0
baz=330
P32M **Atlin** 80.59 18 P P 12 24 20.8 -2.2
baz=331
WTLY **Watson Lake, Y** 81.26 15 P P 12 24 23.6 -3.0
baz=335
YKA **Yellowknife Ar** 81.33 8 P P 12 24 25.1 -1.6
comp=Z,2.1nm,0.7s,baz=341,slow=4.8,SNR=12
comp=Z,2.1nm,0.7s
S31K **Pelican** 81.35 20 P P 12 24 24.2 -2.7
baz=329
YKAW1 **Yellowknife Wh** 81.35 8 IAmb IAmb 12 24 26.7
comp=Z,6.2nm,1.2s
R33M **Jennings River** 81.43 17 IAmb IAmb 12 24 27.9
comp=Z,6.9nm,1.1s
R33M **Jennings River** 81.43 17 P P 12 24 24.9 -2.6
baz=333
Q32M **Nakina River** 81.50 17 P P 12 24 25.3 -2.7
baz=332
R32K **Eaglecrest** 81.54 19 P P 12 24 26.0 -2.0
baz=330
KOTAN **Kotaneelee Air** 82.19 13 P P 12 24 28.8 -2.6
baz=338
S32K **Killisnoo** 82.23 19 P P 12 24 28.2 -3.3
baz=330
SIT **Sitka** 82.38 20 P P 12 24 28.7 -3.6
baz=330
DLBC **Dease Lake** 82.50 17 P P 12 24 29.3 -3.8
baz=334
S34M **Telegraph Cree** 82.71 17 P P 12 24 30.5 -3.6
baz=333
WRAK **Wrangell Islan** 83.74 19 P P 12 24 35.7 -3.7
baz=332
U33K **Whale Pass** 83.80 19 P P 12 24 36.8 -2.9
baz=332
DBIC **Dimbokro** 83.94 274 P P 12 24 39.7 -1.4
comp=Z,7.7nm,0.9s,baz=82,slow=8.7,SNR=4.1
DBIC LR LR 13 05 01.9
comp=Z,71nm,19.1s,baz=120,slow=38
comp=Z,7.7nm,0.9s
DBIC **Dimbokro** 83.94 274 P P 12 24 39.3 -1.9
DBIC **Dimbokro** 83.94 274 P P 12 24 39.3 -1.9
DBIC pmax pmax
comp=Z,21nm,1.3s
CRAG **Craig** 84.37 19 P P 12 24 39.9 -2.8
baz=332
V35K **Ketchikan** 84.90 19 P P 12 24 42.3 -3.0
baz=333
STKA **Stephens Creek** 87.08 133 LR LR 13 12 20.0
comp=Z,19nm,20.8s,baz=206,slow=42
FFC **Flin Flon** 90.00 3 P 12 25 09.1 -0.9
FFC IAmb IAmb 12 25 10.2
comp=Z,6.7nm,1.3s
FFC **Flin Flon** 90.00 3 P P 12 25 09.1 -0.9
FFC pmax pmax
comp=Z,7.0nm,1.3s
ULM **Lac du Bonnet** 94.55 359 LR LR 13 10 43.1
comp=Z,28nm,19.8s,baz=3.5,slow=37
CPUP **Villa Florida** 144.46 274 PKP PKPab 12 31 43.7 -1.8
comp=Z,5.8nm,0.9s,baz=77,slow=6.1,SNR=10
LPAZ **La Paz** 147.47 299 PKPbc PKPdf 12 31 52.6 -0.8
comp=Z,1.3nm,0.9s,baz=92,slow=5.7,SNR=4.9

IDC 04 12:15:09.8±2.1, 8°61'S×126°06'E, h0km, mb3.3/1, mbtmp3.4/4, ML3.1/3, Error ellipse: s-maj=107.3km s-min=29.8km az=69.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	9.44	182	Pn	Pn	12 17 27.4	+0.2
	0.3nm,0.3s,baz=7.3,slow=12,SNR=6.3						
FITZ				Sn	Sn	12 18 59.3	-15
	0.2nm,0.3s,baz=97,slow=21,SNR=2.3						
	3.5nm,0.9s						
WRA	**Warramunga Arr**	13.82	145	Pn	Pn	12 18 26.4	-0.8
	0.1nm,0.3s,baz=323,slow=14,SNR=2.1						
WRA				Sn	Sn	12 20 48.6	-13
	baz=316,slow=18,SNR=1.6						
	1.2nm,1.1s						
ASAR	**Alice Springs**	16.75	154	Pn	Pn	12 19 06.5	+0.4
	baz=325,slow=13,SNR=5.7						
ASAR				Sn	Sn	12 22 02.5	-10
	baz=336,slow=29,SNR=2.1						
	0.5nm,1.1s						
MKAR	**Makanchi Array**	67.51	329	P	P	12 26 07.8	0.0
	0.2nm,0.5s,baz=119,slow=7.4,SNR=1.9						
	0.2nm,0.5s						

*IDC **04** 12:19:26.2±1.3,6.7°S×155.3°E,h0km, mb3.7/6, mbtmp3.8/7, ML1.9/1, MS2.4/2, Error ellipse: s-maj=37.6km s-min=26.1km az=132.0*

ISC 04 12:19:31.5±1.2, 6°8'S±0.2°×155°3'E±0.2°, h35km, n9, σ0.960/8, mb3.5/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	4.09	307	LR	LR	12 21 46.4	
	comp=Z,7.6nm,19.9s,baz=349,slow=34						
PMG	**Port Moresby**	8.47	252	Pn	Pn	12 21 31.8	0.0
	0.8nm,0.3s,baz=45,slow=8.6,SNR=1.9						
PMG				Sn	Sn	12 23 06.3	-0.1
	0.6nm,0.3s,baz=238,slow=11,SNR=3.3						
	11nm,0.8s						
WRA	**Warramunga Arr**	24.19	235	P	P	12 24 44.9	0.0
	0.5nm,0.4s,baz=58,slow=9.7,SNR=2.0						
	0.5nm,0.4s						
ASAR	**Alice Springs**	26.54	228	P	P	12 25 05.5	-0.8
	0.5nm,0.7s,baz=59,slow=9.2,SNR=5.2						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	60.98	295	P	P	12 29 42.6	+0.8
	1.6nm,0.6s,baz=112,slow=6.2,SNR=9.1						
	1.6nm,0.6s						
MA2	**Magadan**	66.25	357	LR	LR	12 55 23.1	
	comp=Z,17nm,20.6s,baz=300,slow=33						
ILAR	**Eielson Array**	83.07	21	P	P	12 31 52.9	-0.3
	0.2nm,0.3s,baz=256,slow=5.6,SNR=5.8						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	83.19	180	P	P	12 31 54.5	+0.5
	1.1nm,0.7s,baz=321,slow=0.5,SNR=7.6						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	83.45	319	P	P	12 31 55.2	-0.4
	0.1nm,0.3s,baz=98,slow=8.9,SNR=2.2						
	0.1nm,0.3s						

*MCSM **04** 13:00:21.4±0.8, 52°N±6°×1°6E±°, h10km, MLv3.2*
*IPEC **04** 13:00:21.0±0.2, 51°62'N×16°19'E, h1km, ML2.8/8, Error ellipse: s-maj=1.9km s-min=1.1km az=67.0*
*IDC **04** 13:00:22.1±0.9, 51°53'N×16°16'E, h0km, mbtmp3.3/5, ML2.6/5, Error ellipse: s-maj=14.8km s-min=8.7km az=113.0*
*VIE **04** 13:00:22.4±0.6, 51°49'N×16°09'E, h0km, mb2.9/15, ml2.9/16, ms3.5/1, Error ellipse: s-maj=5.7km s-min=4.9km az=21.0 78 km NW of Wroclaw Suspected Mining induced.*
*PRU **04** 13:00:22.9, 51°55'N×16°07'E, h0km*

ISC 04 13:00:20.0±0.8, 51°61'N±0°04'×16°08'E±0°02, h0km, n60, σ1.935/106, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.78	170	*e*Pg	Pb	13 00 36.5	+0.1
KSP				*e*Sg	Sb	13 00 47.0	-0.5
KSP	**Ksiaz**	0.78	170	P	Pb	13 00 36.1	-0.3
CHVC	**Chvalec**	1.02	181	*e*PG	Pn	13 00 42.2	+0.6
OSTC	**Ostas**	1.06	175	*e*PG	Pb	13 00 41.8	+0.7
OSTC				*e*SG	Sb	13 00 55.3	-0.2
UPC	**Upice**	1.10	182	*e*PG	Pb	13 00 42.4	+0.5
UPC				*e*SG	Sg	13 00 56.6	+1.2
	comp=Z,168nm,0.4s						
DPC	**Dobruska-Polom**	1.27	173	*e*PG	Pb	13 00 45.1	+0.3
DPC				*e*SG	Sg	13 01 01.4	+0.7
	comp=Z,94nm,0.7s						
DPC	**Dobruska-Polom**	1.27	173	P	Pb	13 00 44.9	+0.1
DPC				S	Sg	13 01 01.7	+1.0
PVCC	**Panska Ves**	1.44	222	*e*PG	Pb	13 00 48.8	+1.1
PVCC				*e*SG	Sn	13 01 08.1	+1.1
	comp=Z,181nm,0.5s						
PIVO	**Bartosovice**	1.45	168	*e*Pg	Pg	13 00 48.1	+0.3
	baz=351						
PIVO				*e*Sg	Sg	13 01 06.6	-0.1
	102nm,0.3s,baz=351						
BRG	**Berggiesshubel**	1.53	242	Pn	Pb	13 00 49.2	-0.1
BRG				Pg	Pg	13 00 50.7	+1.4
BRG				Sg	Sg	13 01 11.0	+1.8
BRG				Amp		13 01 11.8	
	comp=Z,132nm,0.4s						
KRLC	**Kraliky**	1.60	164	*e*PG	Pb	13 00 50.4	0.0
KRLC				*e*SG	Sb	13 01 11.6	+0.5
ANAC	**Anensky vrch**	1.74	151	*e*Pn	Pn	13 00 51.9	+0.4
	baz=334						
ANAC				*e*Sg	Sn	13 01 15.1	+0.6
	comp=Z,52nm,0.4s,baz=334						
RYBC	**Ceska Rybna**	1.80	180	*e*Pn	Pn	13 00 53.3	+1.0
	baz=2.5						
RYBC				*e*Sg	Sb	13 01 17.9	+0.9
	comp=Z,73nm,0.5s,baz=2.5						
PRU	**Pruhonice**	1.89	212	*e*SG	Sg	13 01 20.9	+0.1
	comp=Z,62nm,0.6s						
HSKC	**Hora Svate Kat**	1.95	240	*e*PG	Pg	13 00 57.4	+0.1
HSKC				*e*SG	Sg	13 01 22.9	+0.4
	comp=Z,123nm,0.5s						
CLL	**Collm**	1.95	262	Sg	Sg	13 01 23.6	+1.0
CLL	**Collm**	1.95	262	*i* Pn	Pn	13 00 54.6	+0.3
	comp=Z,14nm,0.6s						
CLL				*i* Pg	Pg	13 00 57.8	+0.5
CLL				*i* x	x	13 01 01.7	
CLL				*e*Sg	Sg	13 01 24.0	+1.4
	comp=Z,44nm,0.8s						
STEB	**Steborice**	1.99	147	*e*PN	Pn	13 00 55.4	+0.5
STEB				*e*PG	Pg	13 00 58.3	+0.2
STEB				*e*SG	Sg	13 01 24.0	+0.1
	comp=Z,94nm,0.6s						
MORC	**Moravsky Berou**	2.06	153	*e*Pn	Pn	13 00 56.2	+0.4
	baz=336						
MORC				*e*Sg	Sb	13 01 24.5	+0.2
	comp=Z,43nm,0.5s,baz=336						
OKC	**Ostrava-Krasne**	2.21	143	*e*PG	Pg	13 01 02.6	+0.4
OKC				*e*SG	Sg	13 01 30.6	-0.2
	comp=Z,84nm,0.6s						
VRAC	**Vranov**	2.33	172	Pn	Pn	13 00 59.6	+0.1
	comp=Z,3.7nm,0.3s,baz=346,slow=13,SNR=24						
VRAC				Lg	Lg	13 01 34.9	
	comp=Z,4.2nm,0.3s,baz=84,slow=22,SNR=7.9						
	comp=Z,8.2nm,0.4s						
VRAC	**Vranov**	2.33	172	*e*Pn	Pn	13 01 00.3	+0.8
	baz=354						
VRAC				*e*Sg	Sg	13 01 34.1	-0.6
	comp=Z,26nm,0.5s,baz=354						
TREC	**Trest**	2.35	190	*e*SG	Sg	13 01 35.2	-0.2
	comp=Z,49nm,0.5s						
KRUC	**Moravsky**	2.56	175	*e*Pn	Pn	13 01 03.6	+0.9
	baz=357						
KRUC				*e*Sg	Sg	13 01 41.0	-1.0
	comp=Z,46nm,0.8s,baz=357						
KRUC	**Moravsky**	2.56	175	*e*PN	Pn	13 01 03.7	+1.0
KRUC				*e*SG	Sg	13 01 41.1	-1.0
STAC	**Stalkov**	2.63	191	*e*Pn	Pn	13 01 04.9	+1.2
	baz=12						
STAC				*e*Sg	Sg	13 01 44.1	-0.3
	comp=Z,74nm,0.6s,baz=12						
OJC	**Ojcow**	2.73	119	*e*Pg	Pg	13 01 12.0	-0.3
OJC				*e*Sg	Sg	13 01 48.3	+0.6
OJC	**Ojcow**	2.73	119	P	Pn	13 01 05.9	+0.8
JAVC	**Velka Javorina**	2.94	159	*e*Pn	Pn	13 01 08.6	+0.7
	baz=342						
JAVC	**Velka Javorina**	2.94	159	*e*PN	Pn	13 01 08.7	+0.8
KHC	**Kasperske Hory**	2.95	214	*e*PN	Pn	13 01 09.0	+0.8
KHC				*e*PG	Pg	13 01 15.4	-1.2
KHC				*e*SN	Sn	13 01 43.5	-0.8
KHC				*e*SG	Sg	13 01 53.8	-1.0
	comp=Z,21nm,0.4s						
KHC	**Kasperske Hory**	2.95	214	P	Pn	13 01 08.9	+0.8
GERES	**GERESS Array B**	3.16	210	Pn	Pn	13 01 13.0	+2.0
	comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=29						
GERES				Pg	Pb	13 01 18.9	+1.8
	comp=Z,0.7nm,0.3s,baz=27,slow=16,SNR=38						
GERES				Lg	Lg	13 02 00.7	
	comp=Z,0.9nm,0.3s,baz=34,slow=27,SNR=6.1						
	comp=Z,2.9nm,0.3s						
LANS	**Liptovska Anna**	3.28	137	*e*PN	Pn	13 01 15.4	+2.8
LANS				*e*PG	Pg	13 01 23.2	+0.4
LANS				*e*SG	Sg	13 02 06.8	+1.5
MODS	**Modra-Piesok**	3.33	166	*e*PN	Pn	13 01 14.9	+1.6
MODS				*e*PG	Pg	13 01 24.9	+1.1
MODS				*e*SG	Sg	13 02 08.6	+1.7
NIE	**Niedzica**	3.47	128	*e*Pg	Pg	13 01 27.1	+0.6
NIE				*e*SG	Sg	13 02 13.0	+1.6
NIE	**Niedzica**	3.47	128	P	Pn	13 01 15.8	+0.5
WINA	**Alland / Wiene**	3.50	180	Pn	Pn	13 01 16.1	+0.4
	SNR=5.0						
CONA	**Conrad Observa**	3.69	182	Pn	Pn	13 01 19.6	+1.4
	comp=Z,2.3nm,0.4s,SNR=9.1						
CONA				*e*Sn	Sn	13 02 00.3	-2.1
	comp=Z,6.9nm,0.5s						
RONA	**Rosalia, Austr**	3.92	178	*e*Pn	Pn	13 01 22.0	+0.6
	comp=Z,1.3nm,0.5s						
RONA				*e*Sn	Sn	13 02 04.1	-4.0
	comp=Z,3.7nm,0.4s						
MOA	**Molln**	3.94	198	Pn	Pn	13 01 23.1	+1.4
	comp=Z,5.8nm,0.4s,SNR=10						
MOA				*e*Sn	Sn	13 02 06.7	-2.0
	comp=Z,3.9nm,0.5s						
STHS	**Stebnicka Huta**	3.96	122	*e*PG	Pg	13 01 36.3	+0.5
STHS				*e*SG	Sg	13 02 30.7	+3.6
KECS	**Kecovo**	4.22	136	*e*PN	Pn	13 01 26.0	+0.4
KECS				*e*PG	Pg	13 01 42.2	+1.3
KECS				*e*SG	Sg	13 02 35.9	+0.3
BIOA	**Bad Ischl, Aus**	4.23	203	*e*Pn	Pn	13 01 27.0	+1.3
	comp=Z,2.7nm,0.3s						
BIOA				*e*Sn	Sn	13 02 15.0	-0.8
	comp=Z,7.3nm,0.6s						
ARSA	**Arzberg**	4.38	185	*e*Pn	Pn	13 01 28.0	+0.3
	comp=Z,0.7nm,0.3s						
ARSA				*e*Sn	Sn	13 02 18.0	-1.4
	comp=Z,2.3nm,0.6s						
SESA	**Seetaler Alpe,**	4.61	193	Pn	Pn	13 01 32.4	+1.4
	comp=Z,4.0nm,0.3s,SNR=5.5						
LESA	**Schwarzleotal**	4.74	209	*e*Pn	Pn	13 01 33.8	+1.0
	comp=Z,3.1nm,0.5s						
LESA				*e*Sn	Sn	13 02 27.3	-1.1
	comp=Z,0.6nm,0.3s						
KOLS	**Kolonicke sedl**	4.79	122	*e*PG	Pg	13 01 55.5	+3.8
KBA	**Koelnbreinsper**	4.87	203	*e*Pn	Pn	13 01 36.4	+1.7
	comp=Z,0.6nm,0.1s						
KBA				*e*Sg	Sg	13 02 59.5	+3.0
	comp=Z,0.2nm,0.1s						
WATA	**Walderalm**	5.19	216	*e*Sg	Sg	13 03 10.2	+3.7
	comp=Z,4.0nm,0.3s						
OBKA	**Obir**	5.20	192	*e*Pg	Pg	13 02 00.1	+0.4
	comp=Z,0.1nm,0.2s						
OBKA				*e*Sn	Sn	13 02 37.9	-2.0
	comp=Z,1.9nm,0.2s						
WTTA	**Wattenberg**	5.23	215	*i* Pn	Pn	13 01 40.9	+1.3
	comp=Z,0.1nm,0.1s						
WTTA				*e*Sg	Sg	13 03 08.3	+0.5
	comp=Z,4.8nm,0.5s						
RETA	**Reutte**	5.38	222	Sg	Sg	13 03 16.8	+3.9
	comp=Z,3.0nm,0.3s						
ABTA	**Abfaltersbach**	5.40	207	*e*Pn	Pn	13 01 42.1	+0.3
	comp=Z,4.8nm,1.0s						
SQTA	**Sankt Quirin**	5.42	218	*i* Pn	Pn	13 01 43.2	+1.0
	comp=Z,0.9nm,0.2s						
SQTA				*e*Sn	Sn	13 02 44.5	-0.8
	comp=Z,7.8nm,1.1s						
DAVA	**Damuels**	5.92	225	*e*Sn	Sn	13 02 56.8	-0.8
	comp=Z,0.1nm,0.1s						
AKASG	**Malin Array Be**	8.31	91	Pn	Pn	13 02 19.4	-2.3
	comp=Z,0.6nm,0.3s,baz=281,slow=12,SNR=4.1						
	comp=Z,0.9nm,0.5s						
HFS	**Hagfors**	8.65	352	Pn	Pn	13 02 26.1	-0.2
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=1.4						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	11.28	25	Pn	Pn	13 03 01.4	-0.9
	comp=Z,0.1nm,0.3s,baz=213,slow=18,SNR=3.8						
	comp=Z,0.9nm,0.5s						
EKA	**Eskdalemuir Ar**	12.05	296	Pn	Pn	13 03 09.9	-2.9
	baz=101,slow=14						

DJA 04 13:20:58.6±0.5, 5°N±4°×11°9E±°, h10km, M4.7/11, mB5.2/7, mb5.0/8, MLv4.6/11, Mw(mB)4.6/7, Borneo

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARAI	**Tarakan**	2.26	219	P	Pn	13 21 36.2	+0.2
TARAI				S	Sn	13 22 04.9	+0.9
KKM	**Kota Kinabalu**	2.93	289	P	Pn	13 21 44.8	-0.6
KKM				S	Sn	13 22 22.3	+1.6
GTOI	**Gorontalo**	5.97	138	P	Pn	13 22 24.4	-2.7
	0.2nm882nm47nm,0.6s						
PCI	**Palu**	6.01	172	P	Pn	13 22 26.6	-1.1
	0.3nm3µm58nm,0.6s						
LUWI	**Luwuk**	7.16	148	P	Pn	13 22 46.6	+3.1
	2µm127nm,0.5s						

*TAP **04** 13:31:32.3,23°87'N×121°11'E, h29km, ML4.1, B*
*NIED **04** 13:31:33.1,23°86'N×121°16'E, h25km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^14 Nm; Mrr2.69; Mθθ-1.41; Mφφ-1.28; Mrθ-6.58; Mθφ1.74; Mφr-3.51; Fault plane solution: M0 7.68000×10^14 NP1: φs130.00000°, δ12.00000°, λ151.00000°. NP2: φs248.00000°, δ84.00000°, λ80.00000°.*
*JMA **04** 13:31:33.1±0.2,23.9°N±0.6×12°1'E±°, h25km±3km, MV3.5/18, TAIWAN REGION*

ISC 04 13:31:32.7±0.8, 23°87'N±0°01×121°12'E±0°01, h19km±1km, n178, σ0.977/307, 11C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OWD	**Renai**	0.10	33	⇑*i*P	Pg	13 31 38.1	+1.5
OWD				S	Sg	13 31 41.7	+2.4
WUSB	**Renai**	0.12	1	⇑*i*P	Pg	13 31 38.2	+1.3
WUSB				*i* S	Sg	13 31 41.9	+2.2
SSLB	**Suanglung**	0.17	241	*i* S	Sb	13 31 38.3	-0.3
SSLB	**Suanglung**	0.17	241	⇑*i*P	Sb	13 31 38.4	-0.3
SSLB				*i* S	Sg	13 31 42.4	+1.9
SMLT	**Sun Moon Lake**	0.20	274	⇑*i*P	Pg	13 31 38.8	+1.1
SMLT				S	Sg	13 31 43.3	+2.1
TYC	**Yuchr**	0.24	278	⇑*i*P	Pg	13 31 39.1	+0.8
TYC				*i* S	Sg	13 31 44.0	+1.8
WCS	**Beigang Elemen**	0.26	315	⇑*i*P	Pb	13 31 39.6	+0.8
WCS				*i* S	Sg	13 31 44.5	+1.7
WARBT	**Fenglin Townsh**	0.29	121	*i* P	Pb	13 31 39.9	+0.6
WARBT				*i* S	Sb	13 31 45.0	+1.3
ESL	**Shilin**	0.30	101	*i* P	Pb	13 31 40.1	+0.7
ESL				*i* S	Sb	13 31 45.4	+1.5
WHYT	**Xinyi Township**	0.30	234	⇓*e*P	Pb	13 31 40.3	+0.9
WHYT				*i* S	Sb	13 31 46.0	+2.1
WHF	**Hehuan Shan**	0.31	26	⇓*i*P	Pg	13 31 40.6	+0.9
WHF				S	Sb	13 31 45.8	+1.3
LXIB	**Xiulin Townshi**	0.31	61	⇓*i*P	Pb	13 31 40.7	+0.4
LXIB				S	Sb	13 31 45.6	+1.1
ETM	**Tongmen**	0.36	74	⇓*i*P	Pb	13 31 40.8	+0.2
ETM				S	Sb	13 31 46.5	+0.6
TDCB	**Techi**	0.38	6	⇓*i*P	Pb	13 31 41.2	0.0
TDCB				S	Sb	13 31 46.8	0.0
TWT	**Tachien**	0.39	8	*i* P	Pg	13 31 41.2	+0.3
TWT				S	Sb	13 31 47.0	+0.1
FUSS	**Fushou**	0.39	17	⇓*i*P	Pb	13 31 41.5	+0.1
FUSS				S	Sb	13 31 48.3	+1.1
WNT	**Mingjian**	0.40	271	⇑*i*P	Pb	13 31 41.8	+0.5
WNT				*i* S	Sb	13 31 48.3	+1.3
EHY	**Hungye**	0.41	152	*i* P	Pb	13 31 41.8	+0.4
EHY				*i* S	Sb	13 31 48.0	+0.6
SHUL	**Shoufeng**	0.42	101	P	Pb	13 31 42.1	+0.6
SHUL				S	Sb	13 31 49.0	+1.4
TEGC	**Jichi Village**	0.42	112	*e*P	Pb	13 31 42.5	+0.9
TEGC				*e*S	Sn	13 31 49.7	-1.3
EHYH	**Wanrong**	0.43	151	P	Pb	13 31 41.9	+0.1
EHYH				*i* S	Sb	13 31 48.3	+0.4
WHP	**Taichung City**	0.43	339	*i* P	Pb	13 31 42.2	+0.3
WHP				S	Sb	13 31 49.4	+1.2
TEYL	**Yanliau Villag**	0.44	90	P	Pb	13 31 42.7	+0.8
TEYL				*e*S	Sn	13 31 50.4	-1.2
ALS	**Alishan**	0.46	219	⇓*i*P	Pb	13 31 42.7	+0.3
ALS				S	Sb	13 31 49.9	+0.9
HWA	**Hwalien**	0.46	76	P	Pb	13 31 42.9	+0.6
HWA				*e*S	Sb	13 31 49.3	+0.5
ETLH	**Xiulin Townshi**	0.47	45	P	Pg	13 31 42.5	+0.1
ETLH				S	Sb	13 31 49.9	+0.6
CHN5	**Tsauling**	0.48	236	⇓*i*P	Pb	13 31 42.8	+0.1
CHN5				*i* S	Sb	13 31 50.5	+1.0
TWD	**Chiawan**	0.49	64	⇑*i*P	Pb	13 31 43.0	+0.3
TWD				*i* S	Sb	13 31 49.8	+0.3
TCU	**Taichung**	0.49	305	*i* P	Pb	13 31 43.3	+0.6
TCU				S	Sn	13 31 51.3	-1.4
YULB	**Yu-li**	0.50	161	P	Pb	13 31 43.3	+0.3
YULB	**Yu-li**	0.50	161	*i* P	Pb	13 31 43.2	+0.2
YULB				S	Sb	13 31 50.2	+0.3
NACB	**Ninganchiao**	0.53	55	P	Pb	13 31 41.8	-1.6
NACB	**Ninganchiao**	0.53	55	S	Sb	13 31 51.2	+0.5
NACB	**Ninganchiao**	0.53	55	⇓P	Pb	13 31 43.1	-0.3
NACB				S	Sb	13 31 50.9	+0.2
WGK	**Gukeng**	0.54	250	*i* P	Pg	13 31 43.9	+0.4
WGK				S	Sn	13 31 52.6	-1.4
TWF1	**Yuli**	0.54	162	⇑*i*P	Pg	13 31 43.9	+0.3
TWF1				*e*S	Sb	13 31 51.4	+0.5
ETL	**Fush Village**	0.55	58	P	Pb	13 31 43.6	-0.1
ETL				S	Sg	13 31 51.2	+0.1
WDL	**Douliou City**	0.55	254	*i* P	Pg	13 31 44.2	+0.5

NNS	**Nan Shan**	0.61	22	*i* P	**Pb**	13 31 44.9	0.0	**WSSB**	**Gushan**	1.45 213	*e*P	**Pn**	13 31 57.8	-0.3
NNS				*e*S	**Sg**	13 31 53.8	+0.5	**PHUB**	**P'eng-hu**	1.46 256	*e*P	**Pn**	13 31 57.0	-1.1
ECBN	**Changbin**	0.63	151	P	**Pg**	13 31 45.8	+0.6	PHUB			*e*S	**Sn**	13 32 15.7	-0.9
ECBN				S	**Sn**	13 31 55.8	-0.4	**PNG**	**Penghu**	1.46 258	P	**Pn**	13 31 56.9	-1.2
WCKO	**Fanlu**	0.64	228	*i* P	**Pb**	13 31 45.0	-0.1	PNG			*e*S	**Sn**	13 32 15.2	-1.5
WCKO				S	**Sg**	13 31 54.8	+1.0	**WDGT**	**Dungji**	1.47 246	*e*P	**Pn**	13 31 57.2	-1.0
WDJ	**Dajia District**	0.65	318	*i* P	**Pg**	13 31 46.0	+0.5	WDGT			*e*S	**Sn**	13 32 16.5	-0.4
WDJ				S	**Sn**	13 31 56.3	-0.3	**SSPT**	**Xinbi**	1.47 200	*e*P	**Pn**	13 31 58.8	+0.6
CHN2	**Minshiung**	0.68	240	P	**Pg**	13 31 46.2	+0.2	SSPT			*e*S	**Sg**	13 32 20.3	+0.1
CHN2				S	**Sn**	13 31 56.6	-0.8	**TWY**	**Chenhua**	1.47 17	*e*P	**Pn**	13 31 58.5	+0.2
WRL	**Guolierlin Hig**	0.68	273	*i* P	**Pb**	13 31 45.7	-0.2	**EAST**	**Anshuo**	1.50 190	*e*P	**Pn**	13 31 58.6	-0.1
WRL				S	**Sn**	13 31 56.7	-0.7	EAST			S	**Sg**	13 32 20.2	-1.0
ELDTW	**Lidau**	0.68	188	↓*i*P	**Pb**	13 31 46.0	-0.1	**TAW**	**Tawu**	1.52 188	*e*P	**Pb**	13 32 00.2	-0.1
ELDTW				*i* S	**Sg**	13 31 55.7	+0.3	TAW			*e*S	**Sb**	13 32 20.2	+1.1
FULB	**Fuli**	0.69	166	*i* P	**Pg**	13 31 46.9	+0.6	**SCZT**	**Fangliau**	1.56 197	*e*P	**Pn**	13 31 59.5	0.0
FULB				S	**Sn**	13 31 57.8	+0.1	SCZT			*e*S	**Sn**	13 32 19.6	+0.5
WTK	**Tuku**	0.69	255	*e*P	**Pb**	13 31 46.1	0.0	**SLIU**	**Shizi**	1.67 190	*e*P	**Pn**	13 32 01.3	+0.3
WTK				S	**Sn**	13 31 56.9	-0.9	SLIU			*e*S	**Sg**	13 32 25.5	-1.1
RLNB	**Erlin**	0.69	272	P	**Pb**	13 31 46.2	0.0	**VCHM**	**Qimei**	1.68 247	P	**Pn**	13 32 00.1	-1.1
RLNB				*i* S	**Sg**	13 31 56.8	+1.1	VCHM			S	**Sn**	13 32 21.6	-0.6
EHP	**Heping Village**	0.72	52	*e*S	**Sg**	13 31 57.3	+0.8	**JYNG**	**Yonagunijimaku**	1.77 71	*e*P	**Pn**	13 32 02.6	+0.3
TPUB	**Ta-pu**	0.72	218	P	**Pb**	13 31 46.5	-0.2	JYNG			*e*S	**Sn**	13 32 23.0	-1.4
TPUB	**Ta-pu**	0.72	218	*i* P	**Pb**	13 31 46.4	-0.2	**YOJ**	**Yonaguni jima**	1.83 71	P	**Pn**	13 32 02.8	-0.4
TPUB				S	**Sg**	13 31 56.9	+0.4	**YOJ**	**Yonaguni jima**	1.83 71	*e*P	**Pn**	13 32 03.0	-0.2
CHKH	**Chenggong**	0.72	159	*e*P	**Pb**	13 31 46.9	+0.3	YOJ			*e*S	**Sn**	13 32 25.9	0.0
CHKH				S	**Sn**	13 31 57.9	-0.6	**YOJ**	**Yonaguni jima**	1.83 71	*e*P	**Pn**	13 32 02.7	-0.4
EHD	**Haiduan**	0.72	173	*i* P	**Pb**	13 31 46.8	0.0	YOJ			*e*S	**Sn**	13 32 25.4	-0.5
EHD				S	**Sb**	13 31 56.3	+0.1	**SMST**	**Manzhou Townsh**	1.86 188	*i* P	**Pn**	13 32 03.4	-0.2
NMLH	**Miaoli**	0.73	336	*e*P	**Pg**	13 31 47.4	+0.4	SMST			S	**Sn**	13 32 26.3	-0.2
NMLH				S	**Sn**	13 31 58.8	+0.1	**LAY**	**Lan-yu**	1.87 167	*e*P	**Pn**	13 32 02.3	-1.4
EAHA	**Aohua**	0.73	51	P	**Pb**	13 31 46.9	0.0	LAY			*e*S	**Sn**	13 32 27.3	+0.5
EAHA				S	**Sg**	13 31 57.1	+0.3	**VWUC**	**VWUC**	1.89 307	*e*P	**Pn**	13 32 02.6	-1.4
CHY	**Chiayi**	0.73	240	*e*P	**Pb**	13 31 47.0	-0.1	**HEN**	**Hengchun**	1.89 191	*e*P	**Pn**	13 32 03.9	-0.1
CHY				*e*S	**Sn**	13 31 58.6	-0.2	**LYUB**	**Lan-yu**	1.91 167	*e*P	**Pn**	13 32 03.7	-0.6
NFF	**Wufeng Townshi**	0.76	0	P	**Pb**	13 31 47.5	+0.1	LYUB			*e*S	**Sn**	13 32 26.8	-1.0
NFF				*i* S	**Sg**	13 31 58.4	+0.6	**TWK1**	**Hengchun**	1.94 189	*e*P	**Pn**	13 32 04.9	+0.2
LATG	**Datong**	0.76	29	*i* P	**Pb**	13 31 47.3	-0.2	**TWKBT**	**Hengchun**	1.94 188	*e*P	**Pn**	13 32 04.9	+0.2
LATG				S	**Sb**	13 31 57.8	+0.2	**PCYT**	**Pengchaiyu**	1.96 26	*e*P	**Pn**	13 32 04.9	0.0
STYH	**Taoyuan**	0.76	204	*i* P	**Pb**	13 31 47.2	-0.2	**TSEB**	**Hengchuen, Pin**	1.97 186	*e*P	**Pb**	13 32 07.5	-0.5
STYH				*i* S	**Sg**	13 31 57.9	+0.1	**PTMZ**	**Houxiangcun**	2.16 303	*e*P	**Pn**	13 32 06.8	-0.9
WTCT	**Ta-ch'eng**	0.76	270	*e*P	**Pb**	13 31 47.3	-0.1	**IRIF**	**Iriomote-Funau**	2.43 78	*e*P	**Pn**	13 32 11.1	-0.4
WTCT				*i* S	**Sg**	13 31 58.5	+0.7	IRIF			*e*S	**Sn**	13 32 40.1	-0.7
NSTT	**Nanjuang**	0.77	352	*i* P	**Pg**	13 31 47.8	0.0	**HATJ**	**Hateruma jima**	2.47 85	*e*P	**Pn**	13 32 11.7	-0.3
NSTT				*e*S	**Sg**	13 31 58.1	+0.2	HATJ			*e*S	**Sn**	13 32 40.6	-1.0
WTP	**Ta-pu**	0.77	217	P	**Pb**	13 31 47.5	-0.1	**MATB**	**Ma-tsu**	2.51 335	*e*P	**Pn**	13 32 10.5	-2.0
WTP				S	**Sg**	13 31 58.6	+0.5	**KNM**	**Kinmen**	2.51 283	*e*P	**Pn**	13 32 12.8	+0.3
ECS	**Chishang**	0.78	173	P	**Pg**	13 31 48.1	+0.2	**KNMB**	**Chin-men Tao**	2.56 284	*e*P	**Pn**	13 32 11.6	-1.6
ECS				S	**Sn**	13 31 59.9	0.0	**JKRS**	**Kuro-shima**	2.67 82	*e*P	**Pn**	13 32 14.9	+0.2
LIOB	**Emei**	0.78	353	*i* P	**Pg**	13 31 48.1	+0.1	JKRS			*e*S	**Sn**	13 32 45.5	-1.1
LIOB				*e*S	**Sn**	13 31 59.4	-0.6	**JIJ**	**Ishigaki jima**	2.81 79	P	**Pn**	13 32 16.1	-0.6
CHKT	**Chengkung**	0.80	163	P	**Pb**	13 31 48.1	-0.1	JIJ			*e*S	**Sn**	13 32 48.0	-2.1
CHKT				*i* S	**Sn**	13 32 00.4	-0.1	**MHZQ**	**Yeshan**	2.92 320	*e*P	**Pn**	13 32 16.8	-1.3
NDT	**Datong Townshi**	0.81	26	*e*P	**Pb**	13 31 48.4	+0.1	**LYJJ**	**Jianjiangzhen**	2.94 336	*e*P	**Pn**	13 32 16.6	-1.8
TWK	**Hsinying**	0.83	224	*i* P	**Pb**	13 31 48.1	-0.5	**JISG**	**Ishigakijimahi**	3.00 76	P	**Pn**	13 32 18.8	-0.5
TWK				S	**Sg**	13 32 00.7	+0.7	JISG			*e*S	**Sn**	13 32 52.3	-2.5
YHNB	**Yeheng**	0.83	17	P	**Pb**	13 31 48.6	0.0	**AXDP**	**Jialang**	3.05 290	*e*P	**Pn**	13 32 18.2	-1.7
YHNB	**Yeheng**	0.83	17	*e*P	**Pb**	13 31 48.6	0.0	**ZPLA**	**Ao Xicun**	3.08 272	*e*P	**Pn**	13 32 19.1	-1.2
YHNB				S	**Sb**	13 31 59.2	-0.2	**XPSS**	**Dashiqiu**	3.16 345	*e*P	**Pn**	13 32 19.3	-2.2
NSK	**Sanguang**	0.83	15	*i* P	**Pb**	13 31 48.6	0.0	**JTJ**	**Tarama**	3.36 76	*e*P	**Pn**	13 32 24.0	-0.2
NSK				S	**Sb**	13 31 59.7	+0.2	**DSXP**	**Dongshan**	3.38 268	*e*P	**Pn**	13 32 22.4	-2.2
EWUT	**Wuta**	0.83	46	*e*P	**Pb**	13 31 48.2	-0.4	**JIRJ**	**Irabujima**	3.84 75	*e*P	**Pn**	13 32 30.7	-0.2
WSF	**Szhu**	0.85	254	*i* P	**Pb**	13 31 48.6	-0.3	JIRJ			*e*S	**Sn**	13 33 14.7	-0.9
WSF				*i* S	**Sg**	13 32 00.7	+0.1	**JIKM**	**Ikemajima**	3.91 74	S	**Sn**	13 33 16.4	-0.8
CHN1	**Nanshi**	0.87	218	P	**Pb**	13 31 48.7	-0.6	**JMJ2**	**Miyako jima3**	3.94 76	*e*P	**Pn**	13 32 32.9	+0.7
CHN1				*e*S	**Sg**	13 32 01.5	+0.3	JMJ2			*e*S	**Sn**	13 33 17.4	-0.6
ENTT	**Nioudou**	0.87	28	*e*P	**Pb**	13 31 49.2	0.0	**SXFK**	**Yanhouchang**	4.03 309	*e*P	**Pn**	13 32 31.5	-2.0
WSL	**Shuilin Townsh**	0.88	247	*e*P	**Pb**	13 31 49.4	0.0							
WSL				S	**Sn**	13 32 02.4	-0.1							
KSHI	**Guanxi Townshi**	0.91	3	*e*P	**Pg**	13 31 50.4	0.0							
KSHI				S	**Sn**	13 32 04.1	+1.1							
EDH	**Donghe**	0.91	169	*i* P	**Pb**	13 31 49.5	-0.3							
EDH				S	**Sg**	13 32 02.6	+0.2							
ICHU	**Yijhu**	0.92	237	*e*P	**Pb**	13 31 50.1	+0.1							
ICHU				*e*S	**Sn**	13 32 03.7	+0.4							
SGST	**Jiashian**	0.92	212	*e*P	**Pb**	13 31 49.1	-1.0							
SGST				*e*S	**Sg**	13 32 03.2	+0.3							
SBCB	**Hsinchu**	0.93	353	P	**Pb**	13 31 49.9	-0.3							
SBCB				*e*S	**Sn**	13 32 03.6	0.0							
HSN	**Hsinchu**	0.94	352	*i* P	**Pb**	13 31 50.5	+0.1							
HSN				*i* S	**Sn**	13 32 03.8	0.0							
NDS	**Dongshan**	0.94	36	*e*P	**Pn**	13 31 51.0	+0.1							
NDS				*i* S	**Sn**	13 32 03.8	0.0							
LONT	**Longtian**	0.96	179	*e*P	**Pb**	13 31 51.0	+0.2							
LONT				*e*S	**Sb**	13 32 03.7	+0.6							
ESAO	**Su ao**	0.97	43	*e*P	**Pb**	13 31 51.0	+0.1							
ESAO				S	**Sb**	13 32 04.0	+0.6							
NWLT	**Wulai**	0.97	21	P	**Pb**	13 31 51.2	+0.3							
SLGT	**Liugui**	0.97	206	*e*P	**Pb**	13 31 50.8	-0.2							
SLGT				S	**Sn**	13 32 05.6	+0.9							
CHN8	**Yiju**	0.98	238	*e*P	**Pb**	13 31 50.6	-0.5							
CHN8				*i* S	**Sn**	13 32 04.9	+0.1							
FUSB	**Fushanzhiwuyua**	0.99	26	P	**Pb**	13 31 51.3	+0.1							
FUSB				*e*S	**Sn**	13 32 06.5	+1.4							
TWC	**Suao**	0.99	42	P	**Pb**	13 31 51.1	-0.2							
TWC				S	**Sg**	13 32 05.0	-0.2							
TWG	**Pinlang**	1.04	182	*i* P	**Pb**	13 31 51.8	-0.4							
TWG				S	**Sn**	13 32 06.1	-0.3							
TWGBT	**Beinan**	1.05	182	P	**Pb**	13 31 51.9	-0.4							
TWGBT	**Beinan**	1.05	182	S	**Sb**	13 32 06.1	+0.5							
TWGBT	**Beinan**	1.05	182	*e*P	**Pb**	13 31 51.9	-0.4							
TWGBT				S	**Sb**	13 32 05.9	+0.3							
CHN3	**Shinhua**	1.05	221	*e*P	**Pn**	13 31 52.6	+0.2							
CHN3				*i* S	**Sg**	13 32 08.4	+1.7							
SSHA	**Shanhua**	1.05	226	*e*P	**Pb**	13 31 52.5	+0.2							
ILA	**Ilan**	1.06	33	*e*P	**Pg**	13 31 53.4	+0.1							
ILA				S	**Sg**	13 32 07.8	+0.4							
SCLT	**Jiali**	1.09	231	*e*P	**Pb**	13 31 52.5	-0.5							
SCLT				*e*S	**Sg**	13 32 08.5	+0.3							
NCUH	**Zhongli**	1.10	3	*e*P	**Pn**	13 31 52.2	-0.9							
NCUH				*e*S	**Sg**	13 32 09.5	+1.1							
TTN	**Taitung**	1.11	179	*e*P	**Pn**	13 31 53.1	-0.2							
TTN				*e*S	**Sg**	13 32 10.0	+1.2							
EOS4	**EOS4**	1.13	77	*e*P	**Pn**	13 31 52.5	-0.7							
EOS4				*e*S	**Sb**	13 32 07.1	-0.5							
SCST	**Cishan**	1.13	210	P	**Pn**	13 31 53.7	+0.1							
SCST				*e*S	**Sg**	13 32 11.3	+1.7							
NHDH	**Xindian Distri**	1.15	19	*e*P	**Pb**	13 31 54.5	+0.5							
TATO	**Taipei**	1.15	17	P	**Pb**	13 31 54.2	+0.1							
TATO	**Taipei**	1.15	17	S	**Sb**	13 32 08.7	0.0							
EOS2	**EOS2**	1.16	62	*e*P	**Pg**	13 31 54.8	-0.3							
TAI1	**Yung-k'ang**	1.16	225	*e*P	**Pn**	13 31 54.1	+0.2							
EOS3	**EOS3**	1.17	69	*e*P	**Pn**	13 31 54.2	+0.2							
TWA	**Mucha**	1.19	21	*e*P	**Pb**	13 31 55.0	+0.4							
TWA				S	**Sg**	13 32 11.8	+0.6							
TSCK	**Chigu Township**	1.19	233	*e*P	**Pn**	13 31 53.6	-0.7							
TSCK				*e*S	**Sn**	13 32 10.1	+0.1							
SSD	**Sandimen**	1.20	202	P	**Pn**	13 31 54.4	-0.2							
SSD				S	**Sg**	13 32 11.4	-0.4							
TAP	**Taipei**	1.22	17	*e*P	**Pb**	13 31 55.6	+0.4							
TAP				*e*S	**Sg**	13 32 13.2	+1.0							
TWM1	**Shoushan**	1.22	212	*e*P	**Pg**	13 31 56.7	+0.4							
EGS		1.22	37	*e*P	**Pb**	13 31 55.7	+0.4							
LDUT	**Ludao**	1.23	165	*e*P	**Pn**	13 31 53.6	-1.3							
LDUT				*e*S	**Sb**	13 32 10.0	-1.0							
TSMG	**Majia**	1.24	201	*e*P	**Pn**	13 31 54.9	-0.1							
TWS1	**Kuangyinshan**	1.26	13	*e*P	**Pn**	13 31 55.0	-0.3							
TWS1				*e*S	**Sn**	13 32 12.3	+0.5							
TIPB	**Shuangxi**	1.27	30	P	**Pb**	13 31 56.2	0.0							
TIPB				*e*S	**Sb**	13 32 13.2	+1.0							
ECL	**Taimali**	1.27	187	*e*P	**Pb**	13 31 56.0	-0.1							
ECL				*e*S	**Sn**	13 32 12.1	0.0							
NTST	**Danshui**	1.32	13	*e*P	**Pn**	13 31 56.6	+0.4							
MASBT	**Mashibuluo**	1.33	200	*e*P	**Pn**	13 31 56.3	0.0							
MASBT				*e*S	**Sn**	13 32 13.3	-0.2							
YM01	**YM01**	1.34	18	*e*P	**Pn**	13 31 56.2	-0.3							
NWF	**Wu-fen Shan**	1.34	27	*e*P	**Pb**	13 31 57.3	0.0							
NWF				*e*S	**Sg**	13 32 16.5	+0.3							
WFSB	**Wu-fen Shan**	1.34	27	P	**Pb**	13 31 57.5	+0.3							
WFSB				*e*S	**Sg**	13 32 16.5	+0.3							
ZUZH	**Zhuzihu**	1.34	17	*e*P	**Pn**	13 31 56.0	-0.6							
ZUZH				*e*S	**Sb**	13 32 14.4	+0.1							
ANP	**Anpu**	1.36	16	*e*P	**Pn**	13 31 56.6	-0.2							
YM08	**YM08**	1.38	18	*e*P	**Pn**	13 31 56.6	-0.4							
TWB1	**Santiao Chiao**	1.39	35	*e*P	**Pb**	13 31 58.1	+0.1							
TWB1				S	**Sg**	13 32 17.0	-0.6							
SXI1	**Grass Mountain**	1.40	29	*e*P	**Pb**	13 31 59.1	+0.7							
SXI1				*e*S	**Sg**	13 32 18.1	-0.1							
TNOU	**National Taiwa**	1.41	25	*e*P	**Pb**	13 31 58.8	+0.4							
TNOU				*e*S	**Sg**	13 32 17.6	-0.7							

*IDC **04** 14:13:14.5±1.8, 17°.88S×178°.64W, h590km±20km, mb3.3/7, mbtmp4.2/9, Error ellipse: s-maj=36.1km s-min=18.2km az=148.0*

ISC 04 14:13:13.7±0.9, 17°.9S±0°.3×178°.6W±0°.2, h579km, n9, σ1°.04/9, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.25**	**273**	P	**P**	**14 14 33.6**	**+0.8**
	37nm,0.6s,baz=236,slow=23,SNR=40						
DZM	**Mont Dzumac**	**14.70**	**251**	P	**P**	**14 16 20.3**	**+0.5**
	4.3nm,0.6s,baz=152,slow=23,SNR=8.5						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**14 19 47.9**	**+0.3**
	5.2nm,0.5s,baz=90,slow=6.6,SNR=18						
	5.2nm,0.5s						
WRA	**Warramunga Arr**	**44.50**	**260**	P	**P**	**14 20 34.0**	**-1.0**
	2.2nm,0.5s,baz=94,slow=7.1,SNR=33						
	2.2nm,0.5s						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**14 20 35.6**	**-0.6**
	20nm,0.6s,baz=88,slow=8.2,SNR=619						
	20nm,0.6s						
QSPA	**South Pole Qui**	**72.15**	**180**	P	**P**	**14 23 39.6**	**-0.6**
	0.9nm,0.8s,baz=9.1,slow=1.3,SNR=5.2						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**14 24 51.2**	**-1.4**
	0.2nm,0.4s,baz=220,slow=5.2,SNR=5.6						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**14 24 55.8**	**+1.3**
	0.6nm,0.7s,baz=217,slow=5.9,SNR=9.8						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**14 25 00.7**	**+0.1**
	0.4nm,0.5s,baz=249,slow=5.1,SNR=1.9						
	0.4nm,0.5s						

IDC 04 14:31:19.0±1.2, 14°.17S×179°.21E, h0km, mb3.9/4, mbtmp3.9/5, ML5.1/1, MS3.2/11, Error ellipse: s-maj=47.0km s-min=23.0km az=130.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.71**	**197**	Pn	Pn	14 32 17.7	+0.1
	5.6nm,0.3s,baz=220,slow=20,SNR=29						
MSVF				Sn	Sn	14 33 02.7	+0.6
	5.4nm,0.3s,baz=80,slow=18,SNR=3.6						
MSVF				LR	LR	14 33 49.4	
	comp=Z,534nm,19.6s,baz=36,slow=40						
	22nm,0.6s						
HNR	**Honiara**	**19.43**	**282**	LR	LR	14 42 01.0	
	comp=Z,7.7nm,21.4s,baz=176,slow=33						
RAR	**Rarotonga**	**21.20**	**112**	LR	LR	14 42 25.4	
	comp=Z,38nm,20.7s,baz=290,slow=31						
KRVT	**Keravat (AS076**	**28.53**	**287**	LR	LR	14 47 17.8	
	comp=Z,14nm,20.6s,baz=94,slow=34						
WRA	**Warramunga Arr**	**43.18**	**256**	P	P	14 39 21.6	-0.4
	2.4nm,0.7s,baz=90,slow=8.5,SNR=15						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**43.73**	**251**	P	P	14 39 26.4	0.0
	2.0nm,0.8s,baz=89,slow=7.8,SNR=17						
ASAR				PcP	PcP	14 41 14.3	+0.7
	0.6nm,0.9s,baz=83,slow=4.8,SNR=3.1						
	2.0nm,0.8s						
GUMO	**Guam**	**43.79**	**308**	LR	LR	14 52 58.8	
	comp=Z,16nm,21.0s,baz=114,slow=30						
MJAR	**Matsushiro Arr**	**63.56**	**324**	LR	LR	15 04 42.4	
	comp=Z,26nm,21.5s,baz=158,slow=32						
SHEM	**Shemya Is, Ala**	**66.77**	**357**	LR	LR	15 04 03.2	
	comp=Z,27nm,21.5s,baz=272,slow=29						
YBH	**Yreka Blue Hor**	**77.14**	**41**	LR	LR	15 09 26.5	
	comp=Z,42nm,20.0s,baz=319,slow=30						
ILAR	**Eielson Array**	**82.81**	**14**	P	P	14 43 44.0	-0.7
	1.3nm,0.9s,baz=231,slow=5.9,SNR=14						
ILAR				LR	LR	15 13 11.9	
	comp=Z,26nm,20.8s,baz=186,slow=30						
	1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**85.47**	**290**	LR	LR	15 20 30.5	
	comp=Z,13nm,20.8s,baz=205,slow=34						
TXAR	**Lajitas Array**	**85.98**	**59**	P	P	14 44 02.3	+0.6
	0.3nm,0.9s,baz=231,slow=4.3,SNR=3.6						
	0.3nm,0.9s						
TIXI	**Tiksi**	**91.99**	**346**	LR	LR	15 23 50.2	
	comp=Z,23nm,19.6s,baz=181,slow=34						

*TAP **04** 14:32:13.5, 24°.92N×122°.23E, h118km±1km, ML2.9, D*
*JMA **04** 14:32:13.9±0.2, 25°.1N±1°.1×122°.2E±0°.4, h115km±2km, MV1.9/12, TAIWAN REGION*

ISC 04 14:32:13.9±1.8, 24°.90N±0°.06×122°.24E±0°.03, h116km±10km, n62, σ0°.70/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.25**	**295**	*i* P	**Pn**	**14 32 29.9**	**-0.2**
TWB1				S	**Sn**	**14 32 41.9**	**-0.5**
EGS		**0.28**	**259**	*i* P	**Pn**	**14 32 30.4**	**+0.2**
SXI1	**Grass Mountain**	**0.38**	**300**	P	**Pn**	**14 32 30.5**	**-0.4**
SXI1				S	**Sn**	**14 32 43.1**	**-0.5**
TIPB	**Shuangxi**	**0.38**	**281**	*i* P	**Pn**	**14 32 30.7**	**-0.1**
TIPB				*i* S	**Sn**	**14 32 42.9**	**-0.5**
TWC	**Suao**	**0.46**	**231**	*i* P	**Pn**	**14 32 30.8**	**-0.4**
TWC				*i* S	**Sn**	**14 32 43.8**	**-0.3**
TNOU	**National Taiwa**	**0.49**	**300**	*e*S	**Sn**	**14 32 44.7**	**+0.2**
NDS	**Dongshan**	**0.55**	**241**	*e*P	**Pn**	**14 32 32.5**	**+0.8**
NDS				*e*S	**Sn**	**14 32 46.1**	**+1.0**
TWE	**Neicheng**	**0.55**	**251**	*i* P	**Pn**	**14 32 31.6**	**-0.1**
TWE				S	**Sn**	**14 32 46.4**	**+1.2**
FUSB	**Fushanzhiwuyua**	**0.61**	**257**	*e*P	**Pn**	**14 32 31.8**	**-0.4**
FUSB				S	**Sn**	**14 32 46.6**	**+0.6**
EOS3	**EOS3**	**0.62**	**173**	P	**Pn**	**14 32 32.6**	**+0.6**
EWUT	**Wuta**	**0.62**	**223**	*e*S	**Sn**	**14 32 46.0**	**0.0**
YM01	**YM01**	**0.65**	**292**	*e*P	**Pn**	**14 32 31.2**	**-1.3**
YM01				*e*S	**Sn**	**14 32 46.0**	**-0.5**
ENTT	**Nioudou**	**0.67**	**247**	*i* P	**Pn**	**14 32 33.3**	**+0.7**
ENTT				S	**Sn**	**14 32 47.4**	**+0.7**
NWLT	**Wulai**	**0.68**	**260**	*e*S	**Sn**	**14 32 47.3**	**+0.4**
NDT	**Datong Townshi**	**0.72**	**246**	*e*P	**Pn**	**14 32 33.3**	**+0.3**
NDT				S	**Sn**	**14 32 48.1**	**+0.6**
EAHA	**Aohua**	**0.73**	**219**	*e*S	**Sn**	**14 32 48.1**	**+0.6**
LATG	**Datong**	**0.74**	**241**	*e*P	**Pn**	**14 32 34.0**	**+0.6**
LATG				*e*S	**Sn**	**14 32 48.8**	**+0.8**
NTST	**Danshui**	**0.76**	**290**	*e*S	**Sn**	**14 32 49.8**	**+1.8**
EOS4	**EOS4**	**0.78**	**175**	*e*P	**Pn**	**14 32 32.7**	**-0.4**
EOS4				*e*S	**Sn**	**14 32 48.9**	**+1.3**
JYNG	**Yonagunijimaku**	**0.78**	**125**	P	**Pn**	**14 32 33.4**	**-0.2**
YHNB	**Yeheng**	**0.82**	**254**	*e*P	**Pn**	**14 32 34.1**	**+0.1**
YHNB				*i* S	**Sn**	**14 32 48.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.83**	**122**	*e*P	**Pn**	**14 32 33.9**	**-0.1**
YOJ				*i* S	**Sn**	**14 32 49.5**	**+0.5**
NSK	**Sanguang**	**0.83**	**255**	*i* P	**Pn**	**14 32 34.0**	**-0.1**
NSK				S	**Sn**	**14 32 48.0**	**-1.2**
NNSB	**Datong**	**0.91**	**239**	P	**Pn**	**14 32 35.3**	**+0.5**
NNSB				*i* S	**Sn**	**14 32 50.8**	**+0.2**

TORD	**Torodi Ar. Bea**	**32.48**	**29**	P	P	15 04 53.4	+0.1	
	2.2nm,1.1s,baz=213,slow=8.8,SNR=3.6							
TORD				LR	LR	15 15 25.6		
	comp=Z,370nm,18.8s,baz=174,slow=32							
	2.2nm,1.1s							
BDFB	**Brasilia**	**33.14**	**265**	LR	LR	15 15 35.3		
	comp=Z,357nm,21.9s,baz=123,slow=31							
SUR	**Sutherland**	**35.26**	**124**	LR	LR	15 16 09.2		
	comp=Z,232nm,22.0s,baz=324,slow=30							
LBTB	**Lobatse**	**37.72**	**111**	LR	LR	15 18 39.6		
	comp=Z,150nm,18.3s,baz=282,slow=32							
MATP	**Matopo**	**40.16**	**103**	LR	LR	15 20 09.7		
	comp=Z,246nm,20.4s,baz=319,slow=33							
LSZ	**Lusaka**	**40.18**	**95**	LR	LR	15 20 18.9		
	comp=Z,313nm,20.1s,baz=289,slow=33							
CPUP	**Villa Florida**	**41.99**	**248**	LR	LR	15 20 54.3		
	comp=Z,189nm,20.6s,baz=74,slow=32							
MDP	**Montagnes des**	**43.90**	**295**	LR	LR	15 22 39.9		
	comp=Z,49nm,20.6s,baz=106,slow=33							
SIV	**San Ignacio**	**45.61**	**263**	LR	LR	15 24 18.6		
	comp=Z,158nm,19.1s,baz=111,slow=34							
MBAR	**Mbarara**	**46.23**	**75**	LR	LR	15 23 18.8		
	comp=Z,134nm,21.4s,baz=198,slow=32							
MDT	**Midelt**	**49.09**	**10**	LR	LR	15 25 21.3		
	comp=Z,118nm,21.3s,baz=46,slow=33							
KMBO	**Kilima Mbogo**	**52.16**	**79**	LR	LR	15 26 37.9		
	comp=Z,120nm,22.0s,baz=354,slow=32							
LPAZ	**La Paz**	**52.31**	**261**	LR	LR	15 28 01.0		
	comp=Z,113nm,20.7s,baz=74,slow=34							
PLCA	**Paso Flores**	**54.94**	**231**	LR	LR	15 28 28.2		
	comp=Z,160nm,19.7s,baz=80,slow=33							
KEST	**Kesra**	**55.66**	**23**	LR	LR	15 29 45.2		
	comp=Z,80nm,20.9s,baz=16,slow=34							
ESDC	**Sonseca Array**	**55.91**	**9**	LR	LR	15 31 18.0		
	comp=Z,53nm,19.2s,baz=184,slow=35							
SNAA	**Sanae**	**56.23**	**176**	LR	LR	15 28 36.3		
	comp=Z,31nm,18.6s,baz=218,slow=32							
USHA	**Ushuaia**	**57.23**	**214**	LR	LR	15 31 31.9		
	comp=Z,40nm,19.8s,baz=174,slow=35							
VAE	**Valguarnera**	**59.17**	**26**	LR	LR	15 32 29.0		
	comp=Z,196nm,19.4s,baz=150,slow=35							
PMSA	**Palmer Station**	**59.54**	**203**	LR	LR	15 28 06.5		
	comp=Z,58nm,21.8s,baz=70,slow=30							
NNA	**Nana**	**61.35**	**265**	LR	LR	15 33 15.1		
	comp=Z,154nm,20.8s,baz=136,slow=34							
SDV	**Santo Domingo**	**61.60**	**289**	LR	LR	15 33 38.7		
	comp=Z,60nm,19.9s,baz=80,slow=34							
SJG	**San Juan**	**61.79**	**301**	LR	LR	15 33 03.0		
	comp=Z,16nm,18.5s,baz=104,slow=34							
ROSC	**El Rosal**	**63.51**	**284**	LR	LR	15 34 49.7		
	comp=Z,435nm,20.7s,baz=118,slow=34							
ATAH	**Atahualpa**	**63.92**	**270**	LR	LR	15 36 27.1		
	comp=Z,93nm,20.0s,baz=134,slow=36							
EIL	**Elat**	**65.05**	**46**	LR	LR	15 35 29.6		
	comp=Z,64nm,19.9s,baz=262,slow=34							
DAVOX	**Davos/Dischmat**	**65.77**	**17**	LR	LR	15 36 03.5		
	comp=Z,77nm,20.9s,baz=263,slow=34							
ASF	**Jabal al Asfar**	**67.89**	**45**	LR	LR	15 36 45.7		
	comp=Z,68nm,19.9s,baz=206,slow=34							
GERES	**GERESS Array B**	**68.77**	**19**	LR	LR	15 39 25.1		
	comp=Z,64nm,19.1s,baz=270,slow=36							
VRAC	**Vranov**	**70.11**	**20**	LR	LR	15 38 55.5		
	comp=Z,81nm,20.9s,baz=210,slow=35							
MAW	**Mawson**	**70.34**	**157**	LR	LR	15 34 41.9		
	comp=Z,78nm,20.5s,baz=272,slow=31							
BRTR	**Keskin Array B**	**70.60**	**37**	P	P	15 09 37.6	-0.6	
	0.9nm,0.6s,baz=235,slow=5.1,SNR=2.1							
BRTR				LR	LR	15 40 02.4		
	comp=Z,17nm,21.5s,baz=230,slow=35							
	0.9nm,0.6s							
MLR	**Muntele Rosu**	**70.72**	**28**	LR	LR	15 41 16.9		
	comp=Z,66nm,19.6s,baz=186,slow=36							
EKA	**Eskdalemuir Ar**	**71.40**	**6**	LR	LR	15 41 01.1		
	comp=Z,35nm,18.2s,baz=170,slow=36							
QSPA	**South Pole Qui**	**74.37**	**180**	LR	LR	15 38 44.5		
	comp=Z,49nm,19.6s,baz=231,slow=33							
JTS	**Las Juntas de**	**75.27**	**285**	LR	LR	15 42 12.5		
	comp=Z,218nm,20.6s,baz=118,slow=35							
AKASG	**Malin Array Be**	**76.09**	**26**	P	P	15 10 11.6	+1.4	
	0.3nm,0.2s,baz=224,slow=5.4,SNR=4.1							
AKASG				LR	LR	15 42 31.1		
	comp=Z,31nm,21.5s,baz=204,slow=35							
	0.3nm,0.2s							
GNI	**Garni**	**77.65**	**42**	LR	LR	15 43 49.7		
	comp=Z,25nm,20.9s,baz=248,slow=35							
KBZ	**Khabaz**	**78.51**	**38**	LR	LR	15 46 45.8		
	comp=Z,27nm,20.1s,baz=206,slow=37							
HFS	**Hagfors**	**78.81**	**14**	LR	LR	15 46 25.1		
	comp=Z,37nm,18.6s,baz=203,slow=37							
NOA	**NORSAR Array B**	**79.10**	**12**	LR	LR	15 47 04.7		
	comp=Z,25nm,18.4s,baz=205,slow=37							
FINES	**FINESS Array B**	**83.17**	**18**	P	P	15 10 47.6	-0.8	
	3.7nm,0.9s,baz=203,slow=10,SNR=3.8							
FINES				LR	LR	15 48 40.7		
	comp=Z,32nm,19.3s,baz=34,slow=36							
	3.7nm,0.9s							
SCHQ	**Schefferville**	**83.55**	**332**	LR	LR	15 41 04.7		
	comp=Z,50nm,19.6s,baz=90,slow=31							
TKL	**Tuckaleechee C**	**83.78**	**310**	LR	LR	15 41 05.4		
	comp=Z,45nm,20.0s,baz=180,slow=31							
SADO	**Sadowa**	**84.63**	**319**	LR	LR	15 43 42.7		
	comp=Z,20nm,18.1s,baz=7.0,slow=32							
CMIG	**Matias Romero**	**86.56**	**289**	LR	LR	15 49 45.6		
	comp=Z,62nm,21.1s,baz=124,slow=36							
VNDA	**Vanda**	**86.83**	**179**	LR	LR	15 44 35.2		
	comp=Z,52nm,21.1s,baz=194,slow=32							
RPN	**Rapa Nui**	**87.91**	**243**	LR	LR	15 42 56.7		
	comp=Z,30nm,19.1s,baz=112,slow=30							
ARCES	**ARCESS Array B**	**89.45**	**13**	LR	LR	15 52 37.8		
	comp=Z,38nm,19.2s,baz=241,slow=36							
AKTO	**Aktyubinsk**	**90.77**	**37**	LR	LR	15 53 55.3		
	comp=Z,23nm,20.4s,baz=234,slow=37							
ULM	**Lac du Bonnet**	**97.17**	**320**	LR	LR	15 48 43.8		
	comp=Z,52nm,18.2s,baz=21,slow=31							
AAK	**Ala-Archa**	**99.12**	**48**	LR	LR	15 57 08.8		
	comp=Z,37nm,19.4s,baz=236,slow=36							

TAP 04 14:59:47.4,24°.09N×121°.63E,h32km,ML1.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.03**	**245**	*i* P	Pb	14 59 52.6	0.0
TWD				*i* S	Sb	14 59 56.4	+0.1
ETL	**Fush Village**	**0.07**	**358**	P	Pb	14 59 52.8	0.0
ETL				S	Sb	14 59 56.8	+0.3
NACB	**Ninganchiao**	**0.09**	**340**	*i* P	Pb	14 59 52.7	-0.2
NACB				*i* S	Sb	14 59 56.6	-0.1
HWA	**Hwalien**	**0.12**	**189**	P	Pn	14 59 53.5	+0.5
HWA				S	Sb	14 59 58.2	+1.3
ETLH	**Xiulin Townshi**	**0.17**	**311**	*i* P	Pb	14 59 53.5	-0.2
ETLH				*i* S	Sb	14 59 57.8	-0.2
ETM	**Tongmen**	**0.18**	**224**	*i* P	Pb	14 59 53.4	-0.2
ETM				S	Sb	14 59 57.6	-0.1
LXIB	**Xiulin Townshi**	**0.21**	**250**	*i* P	Pb	14 59 53.7	-0.3
LXIB				S	Sb	14 59 58.3	-0.3
TEYL	**Yanliau Villag**	**0.23**	**187**	P	Pn	14 59 54.4	-0.2
TEYL				S	Sn	15 00 00.4	+1.3
EAHA	**Aohua**	**0.26**	**24**	*eS*	Sb	14 59 59.5	+0.2
SHUL	**Shoufeng**	**0.31**	**191**	P	Pn	14 59 55.5	-0.2
SHUL				S	Sn	15 00 01.8	+0.6
ESL	**Shilin**	**0.33**	**212**	P	Pb	14 59 54.7	-0.7
ESL				*eS*	Sb	15 00 00.4	-0.4
WHF	**Hehuan Shan**	**0.33**	**279**	P	Pb	14 59 55.8	0.0
WHF				S	Sb	15 00 01.9	+0.3
ENA	**Nanau**	**0.35**	**17**	P	Pb	14 59 54.1	-1.6
ENA				S	Sb	14 59 60.0	-1.4
EWUT	**Wuta**	**0.38**	**22**	S	Sb	15 00 02.0	0.0
FUSS	**Fushou**	**0.38**	**294**	P	Pb	14 59 56.5	+0.2
FUSS				S	Sb	15 00 02.5	+0.1
NNSB	**Datong**	**0.40**	**326**	P	Pb	14 59 56.5	0.0
NNSB				S	Sb	15 00 02.7	0.0
NNSH	**Datong**	**0.40**	**326**	P	Pb	14 59 56.4	-0.1
NNSH				S	Sb	15 00 02.9	+0.1
NNS	**Nan Shan**	**0.42**	**326**	*eP*	Pb	14 59 56.2	-0.5
NNS				S	Sb	15 00 03.4	+0.3
WARBT	**Fenglin Townsh**	**0.43**	**210**	P	Pb	14 59 56.0	-0.9
WARBT				S	Sb	15 00 02.5	-0.9
OWD	**Renai**	**0.43**	**252**	P	Pb	14 59 57.0	0.0
OWD				S	Sb	15 00 03.4	-0.2
TWT	**Tachien**	**0.44**	**291**	P	Pb	14 59 57.4	+0.2
TWT				*eS*	Sn	15 00 04.7	0.0
LATG	**Datong**	**0.45**	**348**	P	Pb	14 59 56.8	-0.4
TDCB	**Techi**	**0.46**	**291**	*i* P	Pb	14 59 57.2	-0.1
TDCB				S	Sn	15 00 04.7	-0.3
TDCB	**Techi**	**0.46**	**291**	*i* P	Pb	14 59 57.1	-0.2
EGFH	**Guangfu**	**0.46**	**203**	P	Pb	14 59 57.5	+0.2
WUSB	**Renai**	**0.48**	**258**	P	Pb	14 59 57.7	+0.1
WUSB				S	Sb	15 00 04.9	+0.3
NDT	**Datong Townshi**	**0.52**	**349**	*eP*	Pn	14 59 58.5	-0.1
NDT				S	Sn	15 00 06.5	+0.1
ESAO	**Su ao**	**0.52**	**22**	*eS*	Sb	15 00 05.6	-0.1
NDS	**Dongshan**	**0.54**	**9**	*eP*	Pb	14 59 58.8	+0.2
NDS				*eS*	Sb	15 00 06.6	+0.3
ENTT	**Nioudou**	**0.55**	**354**	P	Pb	14 59 58.5	-0.2
ENTT				*eS*	Sb	15 00 05.9	-0.5
TWC	**Suao**	**0.55**	**22**	P	Pn	14 59 58.9	-0.1
TWC				S	Sn	15 00 06.9	-0.3
YHNB	**Yeheng**	**0.62**	**338**	P	Pb	14 59 59.6	-0.3
YHNB				S	Sb	15 00 08.2	-0.2
TWE	**Neicheng**	**0.63**	**3**	*eP*	Pb	15 00 00.0	0.0
TWE				*eS*	Sn	15 00 09.8	+0.8
NSK	**Sanguang**	**0.63**	**337**	P	Pb	14 59 59.5	-0.5
NSK				*eS*	Sb	15 00 08.5	-0.2
DPDB	**Guoxing**	**0.64**	**265**	P	Pn	15 00 00.5	+0.2
DPDB				*eS*	Sn	15 00 09.9	+0.4
EHY	**Hungye**	**0.65**	**206**	*eS*	Sb	15 00 07.4	-1.7
EHYH	**Wanrong**	**0.65**	**203**	*eS*	Sb	15 00 07.6	-1.5
WCS	**Beigang Elemen**	**0.65**	**267**	P	Pb	14 59 60.0	-0.4
EOS3	**EOS3**	**0.66**	**73**	*eP*	Pn	15 00 00.3	-0.1
FUSB	**Fushanzhiwuyua**	**0.67**	**357**	*eP*	Pb	15 00 00.0	-0.6
FUSB				*eS*	Sb	15 00 09.8	+0.1
SSLB	**Suanglung**	**0.69**	**244**	P	Pn	15 00 00.9	0.0
SSLB				*eS*	Sn	15 00 10.4	-0.1
NWLT	**Wulai**	**0.69**	**351**	*eS*	Sb	15 00 09.9	-0.5
WHYT	**Xinyi Township**	**0.81**	**241**	*eP*	Pb	15 00 03.2	+0.1
WHYT				S	Sb	15 00 14.2	+0.5
TIPB	**Shuangxi**	**0.89**	**12**	*eP*	Pb	15 00 04.5	+0.1
TIPB				*eS*	Sn	15 00 15.5	-0.2
CHKH	**Chenggong**	**0.92**	**193**	*eS*	Sn	15 00 16.4	+0.1
SXI1	**Grass Mountain**	**1.02**	**13**	*eP*	Pn	15 00 06.0	+0.4
SXI1				*eS*	Sb	15 00 20.6	+0.9

TAP 04 14:59:50.5,24°.45N×120°.99E,h4km,ML1.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHP	**Taichung City**	**0.18**	**194**	*i* P	Pg	14 59 55.7	+1.7
WHP				*i* S	Sg	14 59 58.6	+2.2
NSTT	**Nanjuang**	**0.18**	**2**	*i* P	Pg	14 59 55.2	+1.2
NSTT				*i* S	Sg	14 59 58.0	+1.6
LIOB	**Emei**	**0.20**	**6**	*i* P	Pg	14 59 55.6	+1.3
LIOB				*i* S	Sg	14 59 58.7	+1.8
NMLH	**Miaoli**	**0.20**	**295**	P	Pg	14 59 55.7	+1.2
NMLH				S	Sg	14 59 58.9	+1.7
NFF	**Wufeng Townshi**	**0.21**	**32**	*i* P	Pg	14 59 56.0	+1.3
NFF				*i* S	Sg	14 59 59.1	+1.6
TWQ1	**Liyutan**	**0.23**	**243**	*i* P	Pg	14 59 56.5	+1.6
TWQ1				*i* S	Sg	15 00 00.3	+2.4

IDC 04 15:02:22.6±1.9,8°.30S×130°.20E,h0km,mb3.5/2,
mbtmp3.3/4,ML3.1/2,Error ellipse: s-maj=136.5km
s-min=27.1km az=69.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.24**	**161**	Pn	Pn	15 05 18.9	+0.5
	0.1nm,0.3s,baz=344,slow=13,SNR=2.7						
WRA				Sn	Sn	15 07 34.5	-1.3
	0.2nm,0.3s,baz=352,slow=23,SNR=5.4						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**15.68**	**167**	Pn	Pn	15 06 06.0	+0.8
	0.1nm,0.3s,baz=341,slow=8.3,SNR=12						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**69.42**	**327**	P	P	15 13 32.9	+0.3
	0.4nm,0.6s,baz=120,slow=7.2,SNR=4.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**73.72**	**329**	P	P	15 13 58.0	-0.4
	0.1nm,0.4s,baz=120,slow=5.5,SNR=1.7						
	0.1nm,0.4s						

IDC 04 15:12:52.8±2.2,8°.70S×129°.17E,h0km,mb3.5/2,
mbtmp3.3/4,ML3.2/2,Error ellipse: s-maj=269.6km
s-min=30.8km az=66.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.25**	**156**	Pn	Pn	15 15 48.2	-0.5
	0.2nm,0.3s,baz=335,slow=13,SNR=5.4						
WRA				Sn	Sn	15 18 00.1	-6.0
	0.3nm,0.3s,baz=336,slow=21,SNR=5.7						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**15.56**	**164**	Pn	Pn	15 16 34.3	+0.6
	0.1nm,0.3s,baz=339,slow=8.3,SNR=12						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**69.20**	**328**	P	P	15 24 01.4	+0.1
	0.7nm,0.8s,baz=119,slow=7.1,SNR=5.1						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**73.53**	**329**	P	P	15 24 27.3	0.0
	0.1nm,0.4s,baz=130,slow=4.2,SNR=2.3						
	0.1nm,0.4s						

*SDD **04** 15:40:43.6±2.4, 18°.24N×71°.90W, h0km±12km, MD2.9,*
ML2.2,MW2.9, Presumed earthquake
*OSPL **04** 15:40:48.0±1.4, 18°.38N×71°.68W, h4km±90km, ML2.0,*
Presumed earthquake
ISC 04 15:40:44.6±2.2,18°.33N±0°.04×71°.8W±0°.1,h8km±11km,n11,
σ0°.96/19,8C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODU1	**El Espartillar**	**0.31**	**86**	*i* P	**Pg**	**15 40 50.4**	**-0.3**
LODU1				*eS*	**Sg**	**15 40 53.9**	**-0.9**
LODU1				IAML		15 40 57.1	
	comp=Z,578nm,0.7s						
LONE3	**El Aguacate, B**	**0.42**	**50**	*i* P	**Pg**	**15 40 53.5**	**+0.7**
LONE3				*eS*	**Sg**	**15 40 58.5**	**+0.1**
LONE3				IAML		15 41 00.9	
	comp=Z,139nm,0.3s						
LOBH	**Bahia de las A**	**0.49**	**162**	*i* P	**Pn**	**15 40 57.3**	**-0.6**
LOBH				*eS*	**Sb**	**15 41 04.2**	**+1.3**
LOBH				IAML		15 41 12.5	
	comp=Z,57nm,0.7s						
PODR	**Polo**	**0.52**	**109**	⇑*i* P	**Pg**	**15 40 53.2**	**-1.5**
PODR				⇑*i* S	**Sg**	**15 41 02.2**	**+0.7**
PODR				IAML		15 41 06.6	
	comp=N,163nm,0.3s						
PODR				IAML		15 41 06.7	
	comp=N,163nm,0.3s						
PODR	**Polo**	**0.52**	**109**	*eS*	**Sg**	**15 41 02.2**	**+0.7**
PODR				IAML		15 41 06.9	
	comp=Z,1μm,0.2s						
LOVI	**El Cajuil, Ovi**	**0.67**	**142**	*i* P	**Pb**	**15 40 59.6**	**+1.0**
LOVI				*eS*	**Sb**	**15 41 08.4**	**+0.4**
LOVI				*eS*	**Sn**	**15 41 09.5**	**-1.5**
SDDR	**Presa de Saban**	**0.81**	**37**	⇑*i* P	**Pg**	**15 40 59.5**	**-0.6**
SDDR				⇑*i* S	**Sb**	**15 41 11.8**	**-0.2**
SDDR				IAML		15 41 17.2	
	comp=N,32nm,0.5s						
SDDR				IAML		15 41 17.2	
	comp=N,32nm,0.5s						
REDR	**Restauracion**	**0.91**	**25**	⇓*i* P	**Pn**	**15 41 03.5**	**-0.2**
REDR				⇑*i* S	**Sn**	**15 41 16.8**	**-0.3**
REDR				IAML		15 41 20.2	
	comp=N,43nm,0.2s						
REDR				IAML		15 41 20.2	
	comp=N,43nm,0.2s						
BANI	**BANI**	**1.37**	**87**	IAML		15 42 11.9	
	comp=N,71nm,3.0s						
SC01	**Santiago de lo**	**1.49**	**43**	⇑*i* P	**Pn**	**15 41 10.4**	**-1.2**
SC01				IAML		15 41 29.4	
	comp=N,49nm,0.3s						
SC01				IAML		15 41 31.4	
	comp=N,62nm,0.2s						
HATOM	**Hato Mayor del**	**2.34**	**78**	⇑*i* P	**Pn**	**15 41 23.1**	**-0.2**
HATOM				⇑*i* S	**Sn**	**15 41 53.5**	**+1.2**
HATOM				IAML		15 41 59.5	
	comp=N,9.6nm,2.8s						
HATOM				IAML		15 42 34.0	
	comp=N,12nm,2.9s						

*PRU **04** 15:55:36.8,44°.88N×10°.46E,h10km*
ROM 04 15:55:37.2±0.2,44°.39N±0°.01×11°.94E±0°.03,h27km±2km,
ML2.0/49,1D,Error ellipse: s-maj=2.2km s-min=1.4km
az=260.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOL	**Imola, Italy**	**0.14**	**257**	⇓P	Pb	15 55 42.3	-0.2
IMOL				S	Sb	15 55 46.9	+0.9
IMOL				AML	AML		
	comp=E,2415μm,0.5s						
IMOL				AML	AML		
	comp=N,1670μm,1.3s						
IMOL				AML	AML		
	comp=N,1665μm,1.3s						
IMOL				AML	AML		
	comp=N,1665μm,0.7s						
IMOL				AML	AML		
	comp=E,2415μm,0.5s						
IMOL				AML	AML		
	comp=N,1395μm,0.3s						
IMOL				AML	AML		
	comp=E,2190μm,0.4s						
BRSN	**Barisano**	**0.15**	**137**	P	Pb	15 55 42.3	-0.2
BRSN				S	Sb	15 55 47.7	+1.6
BRSN				AML	AML		
	comp=E,2195μm,0.7s						
BRSN				AML	AML		
	comp=E,2195μm,0.7s						
BRSN				AML	AML		
	comp=N,2565μm,0.5s						
BRSN				AML	AML		
	comp=E,2200μm,0.7s						
BRSN				AML	AML		
	comp=E,2165μm,0.7s						
BRSN				AML	AML		
	comp=N,2640μm,0.5s						
BRSN				AML	AML		
	comp=E,2166μm,0.6s						
BRSN				AML	AML		
	comp=E,2039μm,0.5s						
BRSN				AML	AML		
	comp=N,2638μm,0.5s						
BRSN				AML	AML		
	comp=N,2564μm,0.6s						
CMPO	**Campotto Po**	**0.21**	**334**	P	Pb	15 55 42.5	-0.7
LMD	**Lutirano**	**0.36**	**208**	P	Pb	15 55 44.7	-0.6
LMD				S	Sb	15 55 51.6	+0.9
LMD				AML	AML		
	comp=N,304μm,0.2s						
LMD				AML	AML		
	comp=E,331μm,0.2s						
LMD				AML	AML		
	comp=N,305μm,0.2s						
LMD				AML	AML		
	comp=E,331μm,0.2s						
BRIS	**BRISIGHELLA**	**0.39**	**232**	P	Pb	15 55 42.9	-2.9
BRIS				S	Sb	15 55 48.2	-3.3
BRIS				AML	AML		
	comp=E,462μm,0.5s						
BRIS				AML	AML		
	comp=N,681μm,0.2s						
BRIS				AML	AML		
	comp=E,646μm,0.4s						
BRIS				AML	AML		
	comp=N,141μm,0.6s						
BRIS				AML	AML		
	comp=N,681μm,0.2s						
BRIS				AML	AML		
	comp=E,646μm,0.4s						
BRIS				AML	AML		
	comp=E,90μm,0.6s						
VISG	**Visignano**	**0.41**	**241**	P	Pb	15 55 45.7	-0.5
VISG				AML	AML		
	comp=N,133μm,0.4s						
VISG				AML	AML		
	comp=N,134μm,0.4s						
VISG				AML	AML		
	comp=E,178μm,0.9s						
VISG				AML	AML		
	comp=E,145μm,0.2s						
VISG				AML	AML		
	comp=N,128μm,0.3s						
SFI	**Santa Sofia**	**0.49**	**188**	P	Pb	15 55 47.2	-0.2
SFI				S	Sn	15 55 56.3	+0.1
SFI				AML	AML		
	comp=E,130μm,0.8s						
SFI				AML	AML		
	comp=N,130μm,0.3s						
SFI				AML	AML		
	comp=E,130μm,0.8s						
SFI				AML	AML		
	comp=N,130μm,0.3s						
SFI				AML	AML		
	comp=E,130μm,1.2s						
SFI				AML	AML		
	comp=E,147μm,0.2s						
SFI				AML	AML		
	comp=N,104μm,0.2s						
SFI				AML	AML		
	comp=N,144μm,0.5s						
SFI				AML	AML		
	comp=E,126μm,0.2s						
ASQU	**Asqua**	**0.60**	**190**	P	Pb	15 55 49.1	-0.2
ASQU				AML	AML		
	comp=E,98μm,0.8s						
ASQU				AML	AML		
	comp=N,74μm,1.3s						
ASQU				AML	AML		
	comp=E,98μm,1.2s						
ASQU				AML	AML		
	comp=N,74μm,0.7s						
ASQU				AML	AML		
	comp=E,79μm,0.2s						
ASQU				AML	AML		
	comp=N,68μm,0.3s						
FNVD	**Fontana Vidola**	**0.63**	**249**	P	Pb	15 55 49.7	0.0
FNVD				AML	AML		
	comp=N,78μm,0.3s						
FNVD				AML	AML		
	comp=N,78μm,0.3s						
FNVD				AML	AML		
	comp=E,71μm,0.4s						
FNVD				AML	AML		
	comp=N,79μm,0.3s						
FNVD				AML	AML		
	comp=E,71μm,0.4s						
RUFI	**Rufina**	**0.63**	**209**	P	Pb	15 55 49.6	-0.1
RUFI				AML	AML		
	comp=E,69μm,0.4s						
RUFI				AML	AML		
	comp=N,67μm,0.4s						
RUFI				AML	AML		
	comp=N,67μm,1.6s						
RUFI				AML	AML		
	comp=E,69μm,0.4s						
RUFI				AML	AML		
	comp=N,67μm,0.4s						
ZCCA	**Zocca**	**0.69**	**267**	AML	AML		
	comp=N,180μm,0.6s						
ZCCA				AML	AML		
	comp=E,107μm,0.8s						
TEOL	**Teolo**	**0.99**	**349**	P	Pb	15 55 56.1	+0.4
TEOL				AML	AML		
	comp=E,190μm,0.8s						
TEOL				AML	AML		
	comp=N,194μm,1.2s						
TEOL				AML	AML		
	comp=E,190μm,1.2s						
TEOL				AML	AML		
	comp=N,194μm,0.8s						
TEOL				AML	AML		
	comp=E,29μm,0.6s						
TEOL				AML	AML		
	comp=N,20μm,0.4s						
ZOVE	**Zovencedo**	**1.11**	**343**	P	Pb	15 55 58.1	+0.4
ZOVE				AML	AML		
	comp=N,156μm,0.3s						
ZOVE				AML	AML		
	comp=E,121μm,0.3s						
ZOVE				AML	A

DUGI	**Dugi Otok**	**2.28**	**99**	Sn		Sn	15 56 40.0	-0.3
ABTA	**Abfaltersbach**	**2.39**	**10**	*e*Pn		Pn	15 56 12.0	-2.7
	comp=E,0.1nm,0.2s							
ABTA				*e*Sn		Sn	15 56 40.0	-3.2
	comp=E,0.2nm,0.2s							
MYKA	**Terra Mystica**	**2.54**	**28**	*e*Pn		Pn	15 56 12.9	-3.8
	comp=E,0.2nm,0.2s							
MYKA				*e*Sn		Sn	15 56 43.2	-3.6
	comp=E,0.4nm,0.2s							
FETA	**Feichten**	**2.76**	**343**	*e*Pn		Pn	15 56 18.0	-1.9
	comp=E,0.2nm,0.2s							
FETA				*e*Sn		Sn	15 56 48.4	-4.1
	comp=E,0.3nm,0.2s							
MORI	**Morici**	**2.77**	**100**	*e*Pn		Pn	15 56 21.4	+1.6
MORI				Sn		Sn	15 56 53.1	+0.8
OBKA	**Obir**	**2.80**	**40**	*e*Pn		Pn	15 56 15.9	-4.5
	comp=E,0.3nm,0.2s							
OBKA				*e*Sn		Sn	15 56 50.1	-3.2
	comp=E,0.6nm,0.2s							
KBA	**Koelnbreinsper**	**2.86**	**20**	*e*Pn		Pn	15 56 17.9	-3.4
	comp=E,0.1nm,0.1s							
KBA				*e*Sn		Sn	15 56 51.2	-3.7
	comp=E,0.2nm,0.2s							
SQTA	**Sankt Quirin**	**2.87**	**350**	*e*Sn		Sn	15 56 52.0	-3.1
	comp=E,0.6nm,0.2s							
WTTA	**Wattenberg**	**2.88**	**356**	*e*Pn		Pn	15 56 18.6	-2.9
	comp=E,0.6nm,0.3s							
WTTA				*e*Sn		Sn	15 56 52.9	-2.5
	comp=E,0.2nm,0.1s							
WATA	**Walderalm**	**2.95**	**355**	*e*Pn		Pn	15 56 18.7	-3.8
	comp=E,0.5nm,0.2s							
WATA				*e*Sn		Sn	15 56 53.6	-3.6
	comp=E,1.5nm,0.2s							
MOTA	**Moosalm**	**3.01**	**349**	*e*Pn		Pn	15 56 20.4	-2.9
	comp=E,0.1nm,0.1s							
MOTA				*e*Sn		Sn	15 56 55.1	-3.4
	comp=E,0.2nm,0.2s							
LESA	**Schwarzleotal**	**3.08**	**9**	*e*Pn		Pn	15 56 21.1	-3.0
	comp=E,0.5nm,0.2s							
LESA				*i* Sn		Sn	15 56 54.8	-5.3
	comp=E,0.2nm,0.2s							
SOKA	**Soboth**	**3.15**	**43**	*i* Pn		Pn	15 56 22.3	-2.9
	comp=E,0.1nm,0.2s							
SOKA				*i* Sn		Sb	15 57 09.3	-1.4
	comp=E,0.1nm,0.2s							
KHC	**Kasperske Hory**	**4.87**	**13**	*e*SN		Sn	15 57 43.1	-1.2

*IDC **04** 15:55:40.3±1.2,51°.42N×178°.32W,h0km, mb3.7/10, mbtmp3.7/11, ML4.1/1, Error ellipse: s-maj=33.5km s-min=22.7km az=174.0*
*NEIC **04** 15:55:46.9±1.6,51°.30N±0°.08×178°.14W±0°.02, h45km±9km, ML4.0/10, ML3.7(AEIC), Error ellipse: s-maj=12.2km s-min=1.2km az=172.0*
*AEIC **04** 15:55:46.1±1.6,51°.25N±0°.06×178°.08W±0°.05, h26km±6km, Error ellipse: s-maj=9.6km s-min=4.5km az=171.0*

ISC 04 15:55:46.8±1.4,51°.4N±0°.1×178°.12W±0°.03,h48km±10km, n51,σ0§87/50,mb3.7/10,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAFL	**Tanaga Flats**	**0.43**	**19**		**Pn**	**15 55 56.8**	**-0.2**
TAFL					**Sn**	**15 56 05.0**	**+0.6**
GAKI	**Gareloi-Kavalg**	**0.48**	**296**		**Pn**	**15 55 57.3**	**-0.3**
GAKI					**Sn**	**15 56 05.2**	**-0.2**
TASE	**Tanaga Southea**	**0.49**	**6**		**Pn**	**15 55 58.0**	**+0.2**
TASE					**Sn**	**15 56 06.8**	**+1.1**
TAPA	**Tanaga Point A**	**0.50**	**22**		**Pn**	**15 55 57.9**	**0.0**
TAPA					**Sn**	**15 56 06.4**	**+0.4**
TANO	**Tanaga North**	**0.57**	**360**		**Pn**	**15 55 59.1**	**+0.4**
GALAA	**Gareloi Lava P**	**0.58**	**316**		**Pn**	**15 55 59.5**	**+0.6**
GALAA					**Sn**	**15 56 09.1**	**+1.5**
GAEA	**Gareloi East**	**0.58**	**318**		**Pn**	**15 55 59.5**	**+0.5**
GANE	**Gareloi Northe**	**0.62**	**319**		**Pn**	**15 55 59.9**	**+0.4**
GANE					**Sn**	**15 56 10.0**	**+1.5**
KIMD	**Kanaga Island**	**0.69**	**53**		**Pn**	**15 55 59.9**	**-0.4**
KIMD					**Sn**	**15 56 09.8**	**-0.2**
KIWB	**Kanaga Island**	**0.79**	**50**		**Pn**	**15 56 01.3**	**-0.2**
KIWB					**Sn**	**15 56 12.3**	**0.0**
KIWB				IAML		15 56 12.7	
	comp=N,4μm,0.6s						
KIWB				IAML		15 56 12.9	
	comp=E,7μm,0.5s						
KIKV	**Kanaga Island**	**0.79**	**48**		**Sn**	**15 56 12.8**	**+0.3**
ADK	**Adak**	**1.04**	**59**		**Pn**	**15 56 04.6**	**-0.3**
ADK				IAML		15 56 23.3	
	comp=E,3μm,0.3s						
ADK				IAML		15 56 23.4	
	comp=E,3μm,0.3s						
ADK	**Adak**	**1.04**	**59**		**Sn**	**15 56 18.5**	**+0.1**
ETKA	**Kagalaska Isla**	**1.19**	**64**		**Sn**	**15 56 22.4**	**+0.5**
GSTD	**Great Sitkin T**	**1.42**	**59**		**Pn**	**15 56 10.1**	**0.0**
GSSP	**Great Sitkin S**	**1.42**	**58**		**Pn**	**15 56 10.6**	**+0.5**
GSMY	**Great Sitkin M**	**1.46**	**61**		**Sn**	**15 56 30.1**	**+1.4**
GSTR	**Great Sitkin T**	**1.48**	**59**		**Pn**	**15 56 12.2**	**+1.2**
CERB	**Semis' Cerberu**	**1.52**	**293**		**Pn**	**15 56 12.9**	**+1.4**
CEPE	**Semis' Perret**	**1.52**	**295**		**Pn**	**15 56 12.3**	**+0.7**
AMKA	**Amchitka**	**1.62**	**272**		**Pn**	**15 56 12.6**	**-0.2**
LSSE	**Little Sitkin**	**2.15**	**287**		**Pn**	**15 56 21.5**	**+1.5**
LSPA	**Little Sitkin**	**2.15**	**288**		**Pn**	**15 56 21.3**	**+1.2**
LSNW	**Little Sitkin**	**2.19**	**288**		**Pn**	**15 56 21.8**	**+1.2**
ATKA	**Atka Island**	**2.58**	**69**		**Pn**	**15 56 27.3**	**+1.3**
ATKA				IAML		15 57 03.5	
	comp=E,329nm,0.4s						
ATKA				IAML		15 57 04.3	
	comp=N,506nm,0.6s						
KOWE	**Korovin West**	**2.60**	**66**		**Pn**	**15 56 27.6**	**+1.2**
KOKL	**Mount Kliuchef**	**2.62**	**67**		**Pn**	**15 56 27.7**	**+1.1**
KOFP	**Korovin Flat P**	**2.66**	**68**		**Pn**	**15 56 28.5**	**+1.3**
KOSE	**Korovin Southe**	**2.71**	**67**		**Pn**	**15 56 29.5**	**+1.7**
SHEM	**Shemya Is, Ala**	**5.00**	**289**	Pn	**Pn**	**15 56 57.8**	**-1.3**
	comp=N,2.4nm,0.3s,baz=307,slow=17,SNR=1.5						
KDAK	**Kodiak Island**	**16.08**	**56**	Pn	**Pn**	**15 59 28.4**	**-0.9**
	comp=N,0.7nm,0.3s,baz=203,slow=3.2,SNR=20						
	comp=N,2.4nm,0.4s						
ILAR	**Eielson Array**	**21.00**	**38**	P	**P**	**16 00 24.9**	**-0.9**
	comp=N,0.2nm,0.4s,baz=242,slow=9.9,SNR=6.7						
	comp=N,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**33.69**	**206**	T	T	16 38 14.5	
	baz=17,slow=76,SNR=395						
H11N3	**WAKE ISLAND Hy**	**33.70**	**206**	T	T	16 38 15.1	
	baz=17,slow=76,SNR=566						
H11N1	**WAKE ISLAND Hy**	**33.71**	**206**	T	T	16 38 15.7	
	baz=17,slow=76,SNR=498						
H11S1	**WAKE ISLAND Hy**	**34.91**	**206**	T	T	16 39 44.2	
	baz=17,slow=76,SNR=1044						
H11S2	**WAKE ISLAND Hy**	**34.92**	**206**	T	T	16 39 46.8	
	baz=17,slow=76,SNR=329						
H11S3	**WAKE ISLAND Hy**	**34.92**	**206**	T	T	16 39 49.6	
	baz=17,slow=76,SNR=461						
PDAR	**Pinedale Array**	**45.91**	**73**	P	**P**	**16 04 05.5**	**+0.9**
	comp=N,0.8nm,0.3s,baz=316,slow=6.6,SNR=4.4						
	comp=N,0.8nm,0.3s						
ARCES	**ARCESS Array B**	**58.19**	**350**	P	**P**	**16 05 34.3**	**-0.9**
	comp=N,1.9nm,0.9s,baz=11,slow=10,SNR=3.9						
	comp=N,1.9nm,0.9s						
TXAR	**Lajitas Array**	**58.23**	**82**	P	**P**	**16 05 36.6**	**+0.4**
	comp=N,0.2nm,0.6s,baz=303,slow=5.7,SNR=4.1						
	comp=N,0.2nm,0.6s						
MKAR	**Makanchi Array**	**60.38**	**309**	P	**P**	**16 05 50.0**	**-0.8**
	comp=N,0.2nm,0.6s,baz=48,slow=6.7,SNR=2.1						
	comp=N,0.2nm,0.6s						
BVAR	**Borovoye Array**	**61.19**	**320**	P	**P**	**16 05 56.2**	**+0.1**
	comp=N,0.7nm,0.5s,baz=48,slow=8.7,SNR=2.9						
	comp=N,0.7nm,0.5s						
FINES	**FINESS Array B**	**65.91**	**348**	P	**P**	**16 06 26.1**	**-0.9**
	comp=N,0.4nm,0.5s,baz=0.0,slow=6.1,SNR=5.1						
	comp=N,0.4nm,0.5s						
HFS	**Hagfors**	**68.46**	**354**	P	**P**	**16 06 43.2**	**-0.1**
	comp=N,2.9nm,1.0s,baz=40,slow=10.0,SNR=2.3						
	comp=N,2.9nm,1.0s						
AKASG	**Malin Array Be**	**75.71**	**342**	P	**P**	**16 07 26.5**	**-0.2**
	comp=N,0.2nm,0.3s,baz=20,slow=6.5,SNR=2.8						
	comp=N,0.2nm,0.3s						
ASAR	**Alice Springs**	**85.76**	**223**	P	**P**	**16 08 20.9**	**+0.3**
	comp=N,0.5nm,0.8s,baz=20,slow=5.9,SNR=5.0						
	comp=N,0.5nm,0.8s						
H03N2	**Juan Fernandez**	**120.73**	**106**	T	T	18 27 15.9	
	baz=317,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**120.74**	**106**	T	T	18 27 14.6	
	baz=317,slow=77,SNR=24						
H03N3	**Juan Fernandez**	**120.74**	**106**	T	T	18 27 16.6	
	baz=317,slow=77,SNR=21						
LBTB	**Lobatse**	**148.05**	**316**	PKPbc	**PKPbc**	**16 15 27.1**	**+0.2**
	comp=N,4.1nm,0.6s,baz=340,slow=0.8,SNR=8.5						

*IDC **04** 16:00:29.3±0.9,12°.17S×41°.19E,h0km,mb3.8/9, mbtmp4.0/13, ML4.6/4, MS3.5/6, Error ellipse: s-maj=27.0km s-min=22.2km az=123.0*
*NEIC **04** 16:00:31.8±1.6,12°.06S±0°.08×41°.2E±0°.1,h10km±1km, mb4.3/9, Error ellipse: s-maj=19.2km s-min=11.0km az=121.0*

ISC 04 16:00:30.7±0.6,12°.19S±0°.07×41°.18E±0°.08,h10km,n39, σ1§52/36,mb4.1/11,Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**8.59**	**138**	Pn	**Pn**	**16 02 37.3**	**+2.0**
	0.9nm,0.3s,baz=300,slow=14,SNR=80						
OPO				Sn	**Sn**	**16 04 11.5**	**-0.9**
	0.9nm,0.3s,baz=196,slow=22,SNR=14						
	21nm,0.4s						
ABPO	**Ambohimpanom**	**8.94**	**140**		**Pn**	**16 02 43.4**	**+3.2**
VOI	**Vohitsoka**	**11.05**	**152**	Pn	**Pn**	**16 03 11.7**	**+2.7**
KMBO	**Kilima Mbogo**	**11.66**	**340**	LR	LR	16 07 52.8	
	comp=Z,127nm,18.1s,baz=102,slow=38						
LSZ	**Lusaka**	**12.99**	**255**	Pn	**Pn**	**16 03 33.6**	**-2.0**
	2.1nm,0.3s,baz=78,slow=11,SNR=33						
LSZ				Sn	Sn	16 05 49.6	-11
	1.0nm,0.3s,baz=173,slow=23,SNR=4.5						
LSZ				Lg	Lg	16 07 11.9	
	1.3nm,0.3s,baz=177,slow=19,SNR=3.6						
LSZ				LR	LR	16 09 01.4	
	comp=Z,192nm,18.0s,baz=98,slow=39						
	14nm,0.6s						
LSZ	**Lusaka**	**12.99**	**255**		**Pn**	**16 03 33.7**	**-1.9**
FOMA	**Nahampoana Res**	**13.85**	**157**	Pn	**P**	**16 03 52.1**	**-3.5**
MATP	**Matopo**	**14.67**	**234**	Pn	**Pn**	**16 03 57.4**	**-1.1**
	0.7nm,0.3s,baz=54,slow=14,SNR=26						
MATP				Lg	Lg	16 08 05.7	
	1.3nm,0.3s,baz=314,slow=22,SNR=8.8						
MATP				LR	LR	16 09 32.6	
	comp=Z,280nm,18.6s,baz=30,slow=37						
	26nm,1.0s						
MBAR	**Mbarara**	**15.49**	**317**	LR	LR	16 10 10.8	
	comp=Z,142nm,19.7s,baz=81,slow=38						
BROLN	**Tlhalogang**	**15.95**	**234**	*i* P	**Pn**	**16 04 13.7**	**-1.8**
BROLN				*i* S	Sn	16 06 59.4	-13
BROLN				IAML		16 09 14.6	
	comp=N,22nm,0.9s						
MSEY	**Mahe Island**	**15.98**	**63**	Pn	**Pn**	**16 04 13.9**	**-2.0**
KSANE	**Kasane**	**16.45**	**248**	Pn	**Pn**	**16 04 20.0**	**-1.8**
SOOWA	**Sowa**	**16.59**	**238**	*i* P	**Pn**	**16 04 23.5**	**-0.1**
SOOWA				*i* S	Sn	16 07 17.9	-10
SOOWA				IAML		16 09 31.8	
	comp=N,41nm,0.7s						
POGA	**Pongola**	**17.50**	**209**		**P**	**16 04 37.8**	**+1.6**
POGA				IAmb	IAmb	16 04 56.0	
	comp=Z,26nm,1.4s						
LPHEP	**Lephephe**	**18.32**	**231**	*i* P	**Pn**	**16 04 42.9**	**-2.4**
LPHEP				*i* S	Sn	16 07 55.8	-14
LPHEP				IAML		16 10 15.4	
	comp=N,8.3nm,0.9s						
KDWAN	**Kaudwane**	**19.25**	**232**	*i* P	**P**	**16 04 55.7**	**+0.1**
LBTB	**Lobatse**	**19.49**	**227**	P	**P**	**16 04 58.3**	**+0.1**
	comp=N,1.0nm,0.3s,baz=49,slow=11,SNR=20						
LBTB				Lg	Lg	16 10 44.4	
	comp=N,0.3nm,0.3s,baz=139,slow=23,SNR=4.8						
	comp=N,9.3nm,0.7s						
LBTB	**Lobatse**	**19.49**	**227**	P	**Pn**	**16 04 59.6**	**+0.2**
LBTB				IAmb	IAmb	16 05 04.4	
	comp=Z,11nm,0.8s						
SKOMA	**Sekoma**	**20.43**	**231**	*i* P	Pn	16 05 09.6	-0.8
MAKGR	**Makgori**	**20.55**	**226**	*i* P	**P**	**16 05 09.8**	**+0.1**
KGCAE	**Kacgae**	**20.95**	**237**		**P**	**16 05 15.1**	**+1.0**
KGCAE				IAmb	IAmb	16 05 39.2	
	comp=Z,19nm,0.9s						
GRTLG	**Ghanzi**	**21.16**	**242**	P	**P**	**16 05 17.8**	**+1.4**
KOOLE	**Kule**	**22.68**	**239**		**P**	**16 05 33.0**	**+0.3**
TSUM	**Tsumeb**	**23.75**	**250**	P	**P**	**16 05 44.3**	**+0.8**
TSUM				IAmb	IAmb	16 05 53.7	
	comp=Z,5.9nm,0.9s						
BRTR	**Keskin Array B**	**52.12**	**353**	P	**P**	**16 09 42.6**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=210,slow=7.1,SNR=5.0						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**52.12**	**353**	P	**P**	**16 09 42.2**	**+0.9**
KK31	**Karatay Array**	**61.22**	**24**	P	**P**	**16 10 45.7**	**-0.1**
KK31				IAmb	IAmb	16 10 47.2	
	comp=Z,3.1nm,0.8s						
KKAR	**Karatay Array**	**61.22**	**24**	P	**P**	**16 10 45.6**	**-0.3**
AKTO	**Aktyubinsk**	**64.08**	**12**	LR	LR	16 41 34.0	
	comp=Z,8.9nm,19.6s,baz=69,slow=38						
GERES	**GERESS Array B**	**65.45**	**340**	P	**P**	**16 11 15.8**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=142,slow=5.0,SNR=4.6						
	comp=Z,0.1nm,0.3s						
ESDC	**Sonseca Array**	**66.50**	**323**	P	**P**	**16 11 21.5**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=123,slow=5.4,SNR=6.8						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**69.28**	**29**	P	**P**	**16 11 37.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=221,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**69.28**	**29**	P	**P**	**16 11 38.0**	**-0.1**
BVAR	**Borovoye Array**	**69.61**	**18**	P	**P**	**16 11 39.7**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=211,slow=4.9,SNR=4.8						
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**70.53**	**24**	P	**P**	**16 11 45.3**	**-0.3**
	comp=Z,0.7nm,0.2s,baz=223,slow=7.1,SNR=9.0						
	comp=Z,0.7nm,0.2s						
ZALV	**Zalesovo Beam**	**75.58**	**25**	P	**P**	**16 12 14.7**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=255,slow=5.7,SNR=6.9						
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**75.58**	**25**	P	**P**	**16 12 14.8**	**-0.6**
ARCES	**ARCESS Array B**	**82.26**	**354**	P	**P**	**16 12 50.3**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=174,slow=9.1,SNR=2.1						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**87.64**	**114**	P	**P**	**16 13 20.6**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=267,slow=5.8,SNR=4.1						
ASAR				LR	LR	16 47 31.4	
	comp=Z,68nm,18.6s,baz=290,slow=32						
	comp=Z,0.6nm,1.0s						

IDC 04 16:00:56.2±8.1,9.79S×14°.30W,h0km,mb4.1/4, mbtmp4.1/4,MS3.7/15,Error ellipse: s-maj=313.4km s-min=116.8km az=147.0,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**18.87**	**30**	LR	LR	16 11 24.0	
	comp=Z,68nm,19.2s,baz=210,slow=33						
TORD	**Torodi Ar. Bea**	**27.78**	**35**	P	P	16 06 47.1	+0.1
	6.8nm,1.1s,baz=218,slow=9.1,SNR=12						
	6.8nm,1.1s						
TSUM	**Tsumeb**	**32.20**	**110**	LR	LR	16 16 43.5	
	comp=Z,267nm,21.4s,baz=332,slow=29						
BDFB	**Brasilia**	**33.37**	**256**	LR	LR	16 18 56.5	
	comp=Z,117nm,20.4s,baz=100,slow=32						
SUR	**Sutherland**	**39.44**	**130**	LR	LR	16 20 06.1	
	comp=Z,336nm,19.8s,baz=312,slow=29						
LBTB	**Lobatse**	**40.79**	**117**	LR	LR	16 21 32.0	
	comp=Z,148nm,21.0s,baz=267,slow=30						
MDP	**Montagnes des**	**40.96**	**290**	LR	LR	16 23 29.9	
	comp=Z,67nm,20.8s,baz=126,slow=33						
LSZ	**Lusaka**	**41.78**	**102**	LR	LR	16 22 12.7	
	comp=Z,192nm,19.6s,baz=288,slow=31						
MATP	**Matopo**	**42.53**	**109**	LR	LR	16 23 34.8	
	comp=Z,171nm,19.9s,baz=334,slow=32						
MDT	**Midelt**	**43.37**	**12**	LR	LR	16 26 54.5	
	comp=Z,58nm,18.8s,baz=211,slow=36						
CPUP	**Villa Florida**	**43.85**	**242**	LR	LR	16 24 41.5	
	comp=Z,40nm,20.5s,baz=77,slow=32						
MBAR	**Mbarara**	**45.72**	**81**	LR	LR	16 26 49.9	
	comp=Z,38nm,19.8s,baz=195,slow=34						
ESDC	**Sonseca Array**	**50.14**	**10**	LR	LR	16 30 36.5	
	comp=Z,30nm,19.9s,baz=227,slow=36						
KMBO	**Kilima Mbogo**	**51.98**	**84**	LR	LR	16 30 16.6	
	comp=Z,83nm,19.3s,baz=98,slow=34						
VAE	**Valguarnera**	**54.18**	**28**	LR	LR	16 34 38.6	
	comp=Z,79nm,18.1s,baz=154,slow=37						
BRTR	**Keskin Array B**	**66.32**	**39**	P	P	16 11 47.1	+0.2
	0.2nm,0.4s,baz=224,slow=8.1,SNR=1.7						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**71.09**	**28**	P	P	16 12 15.9	-0.3
	1.5nm,0.8s,baz=225,slow=6.8,SNR=13						
	1.5nm,0.8s						
FINES	**FINESS Array B**	**77.73**	**19**	P	P	16 12 55.0	+0.4
	5.4nm,1.1s,baz=224,slow=8.0,SNR=3.5						
	5.4nm,1.1s						
ANMO	**Albuquerque**	**97.29**	**304**	LR	LR	16 54 31.8	
	comp=Z,49nm,18.0s,baz=96,slow=33						

*IDC **04** 16:02:02.0±11.0,34°.86N×72°.27E,h0km,mb3.8/2, mbtmp3.7/5,ML3.0/2,MS3.4/2,Error ellipse: s-maj=181.5km s-min=50.1km az=155.0*

ISC 04 16:02:08.8±7.4,35°.4N±0°.8×71°.9E±0°.3,h10km,n9,σ2§11/5, 1C-2D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.48**	**15**	⇑P	Pn	16 04 06.4	+8.3
	1.8nm,0.7s						
AAK				⇓S	Sn	16 05 06.0	-17
	0.6nm,0.5s						
KK31	**Karatay Array**	**7.74**	**353**	P	Pn	16 04 11.0	+10
	3.4nm,0.7s,baz=146,slow=14,SNR=20						
KK31				⇓S	Sn	16 05 16.3	-13
	4.5nm,0.5s,baz=149,slow=24,SNR=16						
MKAR	**Makanchi Array**	**13.78**	**31**	Pn	**Pn**	**16 05 25.7**	**+1.4**
	0.4nm,1.0s,baz=211,slow=13,SNR=1.6						
KURBB	**Kurchatov Arra**	**15.93**	**16**	Pn	**Pn**	**16 05 52.6**	**-0.4**
	0.1nm,0.3s,baz=205,slow=12,SNR=2.9						
	0.5nm,0.2s						
BVAR	**Borovoye Array**	**17.62**	**357**	P	**Pn**	**16 06 14.5**	**+0.1**
	0.1nm,0.3s,baz=171,slow=12,SNR=5.9						
	1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**20.61**	**22**	P	**P**	**16 06 45.5**	**-2.6**
	1.0nm,0.5s,baz=217,slow=12,SNR=5.6						
	1.0nm,0.5s						
BELG	**Belogornoye**	**24.17**	**322**	LR	LR	16 19 54.7	
	comp=Z,144nm,21.4s,baz=93,slow=43						
FINES	**FINESS Array B**	**38.77**	**327**	P	**P**	**16 09 33.6**	**+0.5**
	3.4nm,1.0s,baz=112,slow=8.1,SNR=3.9						
	3.4nm,1.0s						
JCJ	**Chichijima**	**59.55**	**77**	LR	LR	16 39 00.0	
	comp=Z,19nm,20.0s,baz=168,slow=37						

*IDC **04** 16:23:03.7±0.7,18°.10S×72°.95W,h0km,mb4.1/7, mbtmp4.1/9,ML3.9/2,MS3.2/2,Error ellipse: s-maj=26.9km s-min=20.1km az=81.0*

ISC 04 16:23:09.0±0.7,18°.19S±0°.10×72°.82W±0°.08,h35km,n21, σ1§17/23,mb4.1/6,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**2.40**	**100**	*e*P	**Pn**	**16 23 44.0**	**-2.0**
PB12				*e*S	**Sn**	**16 24 12.4**	**-1.8**
PB12				IAML		16 24 16.4	
	comp=E,265nm,0.3s						
PSGCX	**Pisagua**	**2.91**	**119**	*e*P	**Pn**	**16 23 51.4**	**-1.6**
PB16	**IPOC Station P**	**3.15**	**93**	*e*P	**Pn**	**16 23 56.3**	**-0.4**
PB16				*e*S	**Sn**	**16 24 34.1**	**+0.8**
PB16				IAML		16 24 41.3	
	comp=N,158nm,0.5s						
PB11	**IPOC Station P**	**3.38**	**118**	*e*P	**Pn**	**16 23 58.7**	**-0.7**
PB11				IAML		16 24 41.4	
	comp=N,530nm,0.5s						
GO01	**Chusmiza**	**3.73**	**114**	*i* P	**Pn**	**16 24 04.9**	**+0.3**
GO01				*e*S	**Sn**	**16 24 48.1**	**+0.5**
GO01				IAML		16 24 55.3	
	comp=N,237nm,0.2s						
PB08	**IPOC Station P**	**3.97**	**120**	*e*P	**Pn**	**16 24 08.0**	**+0.3**
PB08				IAML		16 24 57.9	
	comp=E,103nm,0.5s						
LPAZ	**La Paz**	**4.86**	**68**	Pn	**Pn**	**16 24 21.9**	**+1.6**
	comp=E,3.3nm,0.3s,baz=252,slow=8.6,SNR=92						
LPAZ				LR	LR	16 26 40.8	
	comp=E,236nm,19.5s,baz=269,slow=44						
	comp=E,11nm,0.4s						
SIV	**San Ignacio**	**11.44**	**81**	Pn	**Pn**	**16 25 48.6**	**-1.5**
	comp=E,0.1nm,0.3s,baz=264,slow=12,SNR=8.8						
	comp=E,1.6nm,0.5s						
PLCA	**Paso Flores**	**22.55**	**176**	P	**P**	**16 28 07.1**	**+0.9**
	comp=E,4.6nm,0.8s,baz=343,slow=13,SNR=6.3						
	comp=E,4.6nm,0.8s						
RPN	**Rapa Nui**	**34.75**	**249**	LR	LR	16 39 31.4	
	comp=E,44nm,21.5s,baz=56,slow=28						
TXAR	**Lajitas Array**	**55.85**	**327**	P	**P**	**16 32 41.6**	**-1.7**
	comp=E,0.6nm,0.7s,baz=151,slow=9.2,SNR=9.0						
	comp=E,0.6nm,0.7s						
SNAA	**Sanae**	**66.59**	**161**	P	**P**	**16 33 55.9**	**+0.5**
	comp=E,1.4nm,0.7s,baz=270,slow=7.7,SNR=6.3						
	comp=E,1.4nm,0.7s						
QSPA	**South Pole Qui**	**71.98**	**180**	P	**P**	**16 34 29.8**	**+0.8**
	comp=E,1.9nm,0.5s,baz=204,slow=0.5,SNR=30						
	comp=E,1.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**79.80**	**73**	P	**P**	**16 35 13.7**	**-0.6**
	comp=E,2.0nm,0.7s,baz=256,slow=4.6,SNR=6.7						
	comp=E,2.0nm,0.7s						
ESDC	**Sonseca Array**	**86.14**	**46**	P	**P**	**16 35 48.9**	**+2.2**
	comp=E

LPAZ	**La Paz**	**52.83**	**261**	LR	LR	16 55 45.1	
	comp=Z,283nm,20.8s,baz=94,slow=34						
KEST	**Kesra**	**54.99**	**22**	LR	LR	16 59 01.1	
	comp=Z,294nm,18.5s,baz=238,slow=36						
ESDC	**Sonseca Array**	**55.31**	**9**	P	**P**	**16 35 35.4**	**+1.0**
	0.4nm,0.7s,baz=156,slow=4.7,SNR=4.5						
ESDC				LR	LR	16 59 01.0	
	comp=Z,85nm,20.5s,baz=185,slow=36 0.4nm,0.7s						
PLCA	**Paso Flores**	**55.62**	**231**	LR	LR	16 56 22.6	
	comp=Z,322nm,19.8s,baz=80,slow=33						
SNAA	**Sanae**	**56.73**	**176**	LR	LR	16 54 32.5	
	comp=Z,48nm,19.9s,baz=266,slow=30						
VAE	**Valguarnera**	**58.50**	**26**	LR	LR	17 00 03.2	
	comp=Z,394nm,19.5s,baz=156,slow=35						
PMSA	**Palmer Station**	**60.21**	**203**	LR	LR	16 56 02.4	
	comp=Z,108nm,18.6s,baz=58,slow=30						
ATD	**Arta Tunnel**	**61.47**	**68**	LR	LR	17 02 00.1	
	comp=Z,12nm,18.3s,baz=299,slow=35						
SDV	**Santo Domingo**	**61.84**	**289**	LR	LR	17 01 02.3	
	comp=Z,219nm,20.7s,baz=80,slow=34						
NNA	**Nana**	**61.84**	**264**	LR	LR	17 01 38.8	
	comp=Z,364nm,18.9s,baz=132,slow=35						
IDI	**Anoyia**	**61.84**	**35**	LR	LR	17 02 39.7	
	comp=Z,64nm,20.5s,baz=254,slow=36						
SJG	**San Juan**	**61.89**	**301**	LR	LR	16 56 58.6	
	comp=Z,32nm,20.0s,baz=96,slow=30						
ROSC	**El Rosal**	**63.82**	**283**	LR	LR	17 03 51.7	
	comp=Z,1μm,18.2s,baz=114,slow=36						
ATAH	**Atahualpa**	**64.36**	**269**	LR	LR	17 04 41.8	
	comp=Z,225nm,19.7s,baz=119,slow=36						
EIL	**Elat**	**64.36**	**46**	LR	LR	17 03 03.5	
	comp=Z,166nm,19.8s,baz=264,slow=34						
DAVOX	**Davos/Dischmat**	**65.12**	**17**	LR	LR	17 04 08.2	
	comp=Z,151nm,19.6s,baz=260,slow=35						
MMAI	**Mount Meron Ar**	**66.71**	**43**	LR	LR	17 06 31.9	
	comp=Z,109nm,18.6s,baz=243,slow=36						
ASF	**Jabal al Asfar**	**67.20**	**45**	LR	LR	17 04 58.5	
	comp=Z,134nm,18.9s,baz=207,slow=35						
GERES	**GERESS Array B**	**68.11**	**19**	P	**P**	**16 37 00.8**	**+0.1**
	0.5nm,0.7s,baz=193,slow=5.5,SNR=5.0 0.5nm,0.7s						
VRAC	**Vranov**	**69.45**	**20**	LR	LR	17 06 39.8	
	comp=Z,189nm,20.9s,baz=212,slow=35						
BRTR	**Keskin Array B**	**69.90**	**37**	P	**P**	**16 37 13.2**	**+1.1**
	1.3nm,0.7s,baz=208,slow=7.2,SNR=8.4						
BRTR				LR	LR	17 08 18.2	
	comp=Z,32nm,19.7s,baz=224,slow=36 1.3nm,0.7s						
MLR	**Muntele Rosu**	**70.04**	**28**	LR	LR	17 08 51.0	
	comp=Z,158nm,19.4s,baz=204,slow=37						
MAW	**Mawson**	**70.66**	**157**	LR	LR	17 01 55.2	
	comp=Z,127nm,19.0s,baz=282,slow=30						
EKA	**Eskdalemuir Ar**	**70.81**	**6**	P	**P**	**16 37 16.4**	**-0.6**
	2.9nm,0.9s,baz=169,slow=4.9,SNR=5.5						
EKA				LR	LR	17 08 53.1	
	comp=Z,87nm,18.5s,baz=6.0,slow=36 2.9nm,0.9s						
QSPA	**South Pole Qui**	**74.91**	**180**	P	**P**	**16 37 41.5**	**0.0**
	2.2nm,0.6s,baz=200,slow=2.2,SNR=18						
QSPA				LR	LR	17 05 47.9	
	comp=Z,96nm,21.0s,baz=212,slow=32 2.2nm,0.6s						
AKASG	**Malin Array Be**	**75.41**	**26**	P	**P**	**16 37 43.5**	**-0.8**
	2.9nm,0.7s,baz=224,slow=5.7,SNR=12						
AKASG				LR	LR	17 12 35.5	
	comp=Z,44nm,19.9s,baz=228,slow=37 2.9nm,0.7s						
JTS	**Las Juntas de**	**75.55**	**285**	LR	LR	17 10 07.3	
	comp=Z,506nm,20.3s,baz=115,slow=35						
KBZ	**Khabaz**	**77.81**	**38**	P	**P**	**16 38 00.3**	**+2.3**
	3.3nm,0.8s,baz=243,slow=4.4,SNR=8.1 3.3nm,0.8s						
HFS	**Hagfors**	**78.18**	**13**	P	**P**	**16 38 00.8**	**+1.0**
	3.4nm,0.8s,baz=191,slow=6.9,SNR=4.7						
HFS				LR	LR	17 13 59.1	
	comp=Z,74nm,19.4s,baz=207,slow=37 3.4nm,0.8s						
NOA	**NORSAR Array B**	**78.48**	**12**	LR	LR	17 14 19.8	
	comp=Z,70nm,18.0s,baz=220,slow=37						
APG	**El Apazote**	**82.13**	**288**	LR	LR	17 14 07.7	
	comp=Z,11nm,21.6s,baz=149,slow=35						
FINES	**FINESS Array B**	**82.52**	**18**	P	**P**	**16 38 22.1**	**-1.1**
	4.0nm,0.7s,baz=214,slow=9.8,SNR=12						
FINES				LR	LR	17 16 16.3	
	comp=Z,93nm,19.1s,baz=211,slow=37 4.0nm,0.7s						
TKL	**Tuckaleechee C**	**83.77**	**309**	LR	LR	17 08 39.1	
	comp=Z,89nm,20.4s,baz=148,slow=31						
SADO	**Sadowa**	**84.51**	**319**	LR	LR	17 08 55.1	
	comp=Z,38nm,18.4s,baz=156,slow=31						
SFJD	**Kangerlussuaq**	**86.53**	**346**	LR	LR	17 10 18.2	
	comp=Z,73nm,20.2s,baz=162,slow=31						
CMIG	**Matias Romero**	**86.81**	**289**	LR	LR	17 17 07.6	
	comp=Z,156nm,21.4s,baz=148,slow=36						
VNDA	**Vanda**	**87.36**	**179**	LR	LR	17 13 39.2	
	comp=Z,98nm,18.6s,baz=185,slow=33						
RPN	**Rapa Nui**	**88.55**	**242**	LR	LR	17 15 38.0	
	comp=Z,93nm,18.5s,baz=64,slow=34						
ARCES	**ARCESS Array B**	**88.83**	**13**	LR	LR	17 21 21.1	
	comp=Z,86nm,19.2s,baz=236,slow=37						
SPITS	**Spitsbergen Ar**	**94.74**	**6**	LR	LR	17 21 28.2	
	comp=Z,36nm,18.2s,baz=206,slow=35						
ULM	**Lac du Bonnet**	**97.03**	**320**	LR	LR	17 19 39.9	
	comp=Z,43nm,18.8s,baz=92,slow=37						
TXAR	**Lajitas Array**	**97.80**	**298**	LR	LR	17 20 27.8	
	comp=Z,30nm,21.3s,baz=65,slow=34						
AAK	**Ala-Archa**	**98.43**	**48**	LR	LR	17 25 34.0	
	comp=Z,69nm,18.4s,baz=258,slow=36						
MJAR	**Matsushiro Arr**	**146.82**	**45**	PKPbc	**PKPbc**	**16 45 42.2**	**-1.2**
	2.0nm,0.8s,baz=352,slow=2.5,SNR=6.0						

*IDC **04** 16:34:57.6±2.2, 3°.69N×124°.02E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=334.4km s-min=22.2km az=64.0*
*DJA **04** 16:35:28.4±0.6, 4°N±6°×12°.5E±°, h326km±10km, M3.5/8, mb2.8/2, MLv3.8/8*

ISC 04 16:35:28.9±1.2, 3.69N±0.08×124.7E±0.2, h300km, n9, σ2$25/9, mb3.2/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.86**	**90**	P	**Pn**	**16 36 10.7**	**+2.0**
DAV	**Davao City (W)**	**3.48**	**15**	P	**Pn**	**16 36 33.1**	**+3.5**
TNTI	**Ternate**	**3.96**	**137**	P	**Pn**	**16 36 36.2**	**+1.5**
CDOP	**Cateel, Davao**	**4.43**	**23**	*i* P	**Pn**	**16 36 41.3**	**+1.3**
CDOP				*eS*	**S**	**16 37 34.4**	**-2.6**
KSM	**Kuching**	**14.51**	**262**	P	P	16 38 36.5	-4.3
WRA	**Warramunga Arr**	**25.33**	**158**	P	**P**	**16 40 28.2**	**-1.0**
	0.5nm,0.5s,baz=335,slow=9.9,SNR=5.4 0.5nm,0.5s						
ASAR	**Alice Springs**	**28.64**	**162**	P	**P**	**16 40 58.4**	**-0.2**
	0.3nm,0.6s,baz=343,slow=8.2,SNR=12 0.3nm,0.6s						
MKAR	**Makanchi Array**	**56.43**	**326**	P	**P**	**16 44 38.6**	**-1.3**
	0.4nm,0.4s,baz=120,slow=8.1,SNR=6.8 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**60.68**	**328**	P	**P**	**16 45 08.1**	**-0.8**
	0.5nm,0.3s,baz=134,slow=6.6,SNR=1.0 0.5nm,0.3s						

NOU 04 16:36:06.1, 18.89S×169.43E, h194km, MLv4.0/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.65**	**314**	P	Pn	16 36 41.5	+0.8
DVP	**Devils Point**	**1.65**	**314**	P	Sn	16 37 09.2	+1.6
MARNC	**Mare, Loyalty**	**2.89**	**207**	P	Pn	16 36 54.6	+0.5
MARNC	**Mare, Loyalty**	**2.89**	**207**	S	Sn	16 37 31.8	0.0
YATNC	**Mamie plateau,**	**3.95**	**217**	P	Pn	16 37 06.6	-0.5
OUENC	**Ouen Island, N**	**4.27**	**214**	P	Pn	16 37 11.9	+0.9
NOUC	**Port Laguerre**	**4.34**	**222**	P	Pn	16 37 11.7	-0.2
ONTNC	**Ouen Toro**	**4.40**	**219**	P	Pn	16 37 12.8	+0.1
KOUNC	**Koumac, New Ca**	**5.12**	**250**	P	Pn	16 37 21.7	-0.2

*IDC **04** 16:58:00.7±1.4, 6°.74N×72°.93W, h161km±18km, mbtmp4.2/2, Error ellipse: s-maj=193.8km s-min=8.4km az=132.0*
*CATAC **04** 16:58:01.0, 7°N±1°×7°3W±°, h141km±2km, M3.9/7, MLv3.9/7, confirmed*
*RSNC **04** 16:58:01.5±0.0, 7°N±1°×7°3W±°, h145km±2km, M3.6, mB4.5, mb3.9, ML3.1, Mw(mB)3.6*

*FUNV **04** 16:58:01.6, 7°.19N×73°.28W, h6km, MW3.6, Presumed earthquake*

ISC 04 16:58:01.0±1.1, 6°.82N±0°.03×73°.12W±0°.04, h145km±7km, n44, σ1$44/82, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**196**	P	**Pn**	**16 58 21.2**	**+0.1**
BARC				S	**Sn**	**16 58 36.0**	**-0.4**
BRJC	**Barrancabermej**	**0.64**	**283**	P	**Pn**	**16 58 22.9**	**+0.3**
BRJC				S	**Sn**	**16 58 39.8**	**+0.8**
PAMC	**Pamplona, Colo**	**0.66**	**39**	P	**Pn**	**16 58 24.1**	**+0.8**
PAMC				S	**Sn**	**16 58 40.9**	**+0.7**
RUSC	**La Rusia**	**0.93**	**178**	P	**Pn**	**16 58 25.4**	**+0.1**
RUSC				S	**Sn**	**16 58 43.0**	**-0.7**
RUSC	**La Rusia**	**0.93**	**178**	P	**Pn**	**16 58 25.1**	**-0.2**
RUSC				S	**Sn**	**16 58 42.9**	**-0.9**
RUSC	**La Rusia**	**0.93**	**178**	*e*P	**Pn**	**16 58 25.0**	**-0.2**
RUSC				*e*S	**Sn**	**16 58 42.8**	**-0.9**
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	**Pn**	**16 58 27.9**	**-0.9**
PTBC				S	**Sn**	**16 58 48.3**	**-1.6**
OCAC	**Ocana**	**1.42**	**352**	P	**Pn**	**16 58 29.6**	**0.0**
OCAC				S	**Sn**	**16 58 51.2**	**-0.2**
SPBC	**San Pablo de B**	**1.50**	**219**	P	**Pn**	**16 58 30.0**	**-0.3**
SPBC				S	**Sn**	**16 58 52.6**	**-0.2**
NORC	**Norcasia**	**2.15**	**234**	P	**Pn**	**16 58 37.2**	**-0.5**
NORC				S	**Sn**	**16 59 05.0**	**-0.8**
CHIC	**Chingaza**	**2.26**	**196**	P	**Pn**	**16 58 39.6**	**+0.2**
CHIC				S	**Sn**	**16 59 08.3**	**-0.6**
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**16 58 42.0**	**+2.0**
	46nm,0.3s,baz=271,slow=22,SNR=28						
ROSC				S	**Sn**	**16 59 11.8**	**+2.0**
	76nm,0.4s,baz=110,slow=21,SNR=4.4						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**16 58 41.0**	**+1.1**
ROSC				S	**Sn**	**16 59 09.9**	**+0.1**
CVER	**Cruz Verde, Cu**	**2.48**	**203**	P	**Pn**	**16 58 42.8**	**+0.7**
CVER				S	**Sn**	**16 59 17.5**	**+3.8**
HELC	**Santa Helena**	**2.48**	**255**	P	**Pn**	**16 58 41.6**	**-0.4**
HELC				S	**Sn**	**16 59 11.9**	**-1.6**
HELC	**Santa Helena**	**2.48**	**255**	P	**Pn**	**16 58 41.6**	**-0.4**
HELC				S	**Sn**	**16 59 11.9**	**-1.6**
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**16 58 40.8**	**-1.2**
HELC				*e*S	**Sn**	**16 59 11.5**	**-2.0**
URECC	**San Jos de Ur**	**2.57**	**291**	P	**Pn**	**16 58 41.5**	**-1.3**
URECC				S	**Sn**	**16 59 13.8**	**-1.2**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	P	**Pn**	**16 58 46.0**	**+0.6**
GUY2C				S	**Sn**	**16 59 20.3**	**+0.7**
VILC	**Villavicencio,**	**2.75**	**192**	P	**Pn**	**16 58 44.9**	**-0.3**
VILC				S	**Sn**	**16 59 18.4**	**-1.0**
PTGC	**Puerto Gaitan,**	**2.78**	**159**	P	**Pn**	**16 58 44.2**	**-1.3**
PTGC				S	**Sn**	**16 59 17.0**	**-2.8**
NIZA	**Niza - Manizal**	**2.93**	**233**	P	**Pn**	**16 58 50.1**	**+2.6**
NIZA				S	**Sn**	**16 59 25.6**	**+2.2**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	**Pn**	**16 58 48.0**	**-0.8**
CBOC				S	**Sn**	**16 59 25.3**	**-0.3**
DBBC	**Dabeiba**	**3.08**	**274**	P	**Pn**	**16 58 49.2**	**-0.1**
DBBC				S	**Sn**	**16 59 25.5**	**-1.0**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**16 58 51.0**	**+0.1**
	57nm,0.3s,baz=231,slow=10,SNR=28						
SDV				S	**Sn**	**16 59 28.6**	**-1.0**
	141nm,0.4s,baz=281,slow=17,SNR=25						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**16 58 50.2**	**-0.8**
SDV				*e*S	**Sn**	**16 59 26.6**	**-3.0**
PRAC	**Prado**	**3.56**	**210**	P	**Pn**	**16 58 55.4**	**0.0**
PRAC				S	**Sn**	**16 59 37.7**	**+0.1**
PRAC	**Prado**	**3.56**	**210**	P	**Pn**	**16 58 54.9**	**-0.5**
PRAC				S	**Sn**	**16 59 36.7**	**-0.9**
ORTC	**Ortega, Tolima**	**3.59**	**216**	P	**Pn**	**16 58 55.6**	**-0.2**
ORTC				S	**Sn**	**16 59 37.6**	**-0.7**
APAC	**Apartado, Choc**	**3.60**	**288**	P	**Pn**	**16 58 55.5**	**-0.4**
APAC				S	**Sn**	**16 59 37.4**	**-1.1**
PLMC	**San Jos del P**	**3.68**	**239**	P	**Pn**	**16 58 57.2**	**+0.1**
PLMC				S	**Sn**	**16 59 39.6**	**-0.9**
LCBC	**Los crdobas,**	**3.80**	**302**	P	**Pn**	**16 58 57.8**	**-0.8**
LCBC				S	**Sn**	**16 59 44.5**	**+1.2**
GUVC	**San Jose del G**	**4.28**	**173**	P	**Pn**	**16 59 03.7**	**-1.2**
GUVC				S	**Sn**	**16 59 53.3**	**-1.2**
SMRC	**Santa Marta, M**	**4.45**	**346**	P	**Pn**	**16 59 07.9**	**+0.8**
SMRC				S	**Sn**	**16 59 55.7**	**-2.8**
MACC	**Macarena, Meta**	**4.70**	**189**	P	**Pn**	**16 59 08.6**	**-1.9**
MACC				S	**Sn**	**17 00 00.3**	**-4.3**
URIC	**Uribia, Colomb**	**4.97**	**13**	P	**Pn**	**16 59 12.6**	**-1.4**
	27nm,1.5s						
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	**Pn**	**16 59 12.0**	**-2.0**
URIC				*e*S	Sn	17 00 01.8	-9.2
GARC	**Garzon, Huila**	**5.18**	**207**	P	**Pn**	**16 59 15.5**	**-1.5**
GARC				S	**Sn**	**17 00 13.7**	**-2.5**
POPC	**Popayan, Colom**	**5.54**	**220**	P	**Pn**	**16 59 20.7**	**-1.1**
	6.0nm,1.0s						
POPC				S	**Sn**	**17 00 24.6**	**-0.2**
	6.0nm,1.0s						
FLOC	**Florencia**	**5.79**	**206**	P	**Pn**	**16 59 23.8**	**-1.1**
	9.1nm,0.7s						
BBAC	**Balboa, Cauca**	**6.30**	**221**	P	**Pn**	**16 59 32.2**	**+0.2**
	523nm13nm,0.6s						
BBAC				S	**Sn**	**17 00 40.6**	**-2.5**
	523nm13nm,0.6s						
BCIP	**Isla Barro Col**	**7.05**	**290**	P	**Pn**	**16 59 39.6**	**-2.2**
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**17 17 30.6**	**+1.8**
	0.6nm,0.5s,baz=120,slow=3.6,SNR=18						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPdf**	**17 17 33.9**	**+3.0**
	0.6nm,0.4s,baz=111,slow=2.0,SNR=10						

*IDC **04** 17:01:58.8±2.1, 15°.22S×13°.53W, h0km, mb4.1/8, mbtmp4.0/8, MS3.6/8, Error ellipse: s-maj=169.8km s-min=32.5km az=105.0*

ISC 04 17:02:00.5±1.9, 15°.2S±0°.4×1°3W±°, h10km, n17, σ0$70/9, mb4.1/7, MS3.6/8, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**6.34**	**349**	T	T	17 10 20.0	
	baz=53,slow=74,SNR=326						
H10S3	**ASCENSION HYDR**	**6.35**	**349**	T	T	17 10 15.2	
	baz=167,slow=74,SNR=232						
DBIC	**Dimbokro**	**23.37**	**22**	LR	LR	17 13 50.6	
	comp=Z,83nm,21.7s,baz=172,slow=30						
TORD	**Torodi Ar. Bea**	**31.94**	**29**	P	**P**	**17 08 26.0**	**-0.6**
	1.4nm,0.8s,baz=208,slow=8.7,SNR=4.6 1.4nm,0.8s						
LBTB	**Lobatse**	**37.83**	**111**	LR	LR	17 22 55.7	
	comp=Z,23nm,20.3s,baz=210,slow=33						
MBAR	**Mbarara**	**45.99**	**76**	LR	LR	17 28 48.2	
	comp=Z,81nm,18.2s,baz=190,slow=35						
MDT	**Midelt**	**48.52**	**10**	LR	LR	17 28 39.7	
	comp=Z,39nm,18.6s,baz=242,slow=33						
PLCA	**Paso Flores**	**55.37**	**231**	LR	LR	17 33 28.4	
	comp=Z,35nm,18.5s,baz=102,slow=34						
GERES	**GERESS Array B**	**68.20**	**19**	P	**P**	**17 13 01.3**	**+0.2**
	0.2nm,0.5s,baz=210,slow=5.7,SNR=2.8 0.2nm,0.5s						
BRTR	**Keskin Array B**	**70.09**	**37**	P	**P**	**17 13 14.0**	**+0.9**
	0.6nm,0.6s,baz=214,slow=7.0,SNR=2.3						
BRTR				LR	LR	17 42 09.8	
	comp=Z,46nm,21.3s,baz=184,slow=34 0.6nm,0.6s						
QSPA	**South Pole Qui**	**74.93**	**180**	P	**P**	**17 13 41.6**	**-0.1**
	1.3nm,0.9s,baz=82,slow=7.8,SNR=3.0 1.3nm,0.9s						
AKASG	**Malin Array Be**	**75.54**	**26**	P	**P**	**17 13 44.3**	**-0.7**
	1.1nm,0.6s,baz=222,slow=6.0,SNR=4.1 1.1nm,0.6s						
KBZ	**Khabaz**	**78.00**	**38**	P	**P**	**17 13 59.5**	**+0.4**
	2.0nm,0.8s,baz=225,slow=4.9,SNR=5.0 2.0nm,0.8s						
FINES	**FINESS Array B**	**82.60**	**18**	P	**P**	**17 14 23.8**	**+0.3**
	2.2nm,0.7s,baz=198,slow=8.7,SNR=6.3						
FINES				LR	LR	17 52 57.0	
	comp=Z,60nm,18.1s,baz=344,slow=37 2.2nm,0.7s						
ARCES	**ARCESS Array B**	**88.88**	**13**	LR	LR	17 55 38.5	
	comp=Z,81nm,19.1s,baz=108,slow=36						
ARTI	**Arti**	**92.85**	**32**	P	**P**	**17 15 13.9**	**+0.6**
	1.1nm,0.4s,baz=240,slow=9.9,SNR=3.3 1.1nm,0.4s						
MJAR	**Matsushiro Arr**	**147.04**	**45**	PKPbc	**PKPbc**	**17 21 43.3**	**-0.7**
	1.2nm,0.8s,baz=290,slow=3.9,SNR=5.1						

*NAO **04** 17:29:54.8, 32°.34N×47°.28E, h33km, MB3.8*
*TEH **04** 17:30:05.9, 37°.62N×53°.42E, h10km±53km, ML4.5, Presumed earthquake*
*IDC **04** 17:30:05.8±0.9, 37°.53N×53°.27E, h0km, mb4.1/20, mbtmp4.1/27, ML4.0/7, MS3.4/11, Error ellipse: s-maj=19.1km s-min=10.7km az=5.0*
*THR **04** 17:30:05.8±0.0, 37°.72N×53°.42E, h10km±9km, ML4.5, Presumed earthquake*
*MOS **04** 17:30:06.6±1.1, 37°.64N×53°.39E, h11km, mb4.4/17, Error ellipse: s-maj=5.5km s-min=4.4km az=134.3*
*NEIC **04** 17:30:07.6±1.9, 37°.72N±0°.08×53°.58E±0°.08, h10km±1km, mb4.3/32, Error ellipse: s-maj=14.6km s-min=10.4km az=196.0*
*GFZ **04** 17:30:09.7±0.3, 38°N±5°×5°.3E±°, h10km, M4.2/25, mb4.4/25*

ISC 04 17:30:07.3±0.4, 37°.69N±0°.04×53°.41E±0°.03, h10km, n315, σ2$17/308, mb4.2/48, MS3.4/9, 28C-12D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**1.23**	**164**	Pg	**Pn**	**17 30 29.0**	**-1.8**
IMND	**Minoodasht**	**1.64**	**105**	Pg	**Pb**	**17 30 35.5**	**-2.2**
IALA	**Alasht**	**1.67**	**197**	Pg	**Pb**	**17 30 36.3**	**-2.2**
IPRN	**Peran**	**1.68**	**211**	Pg	**Pb**	**17 30 35.8**	**-2.7**
MZPU	**Pul - Mazandar**	**1.93**	**230**	Pn	**Pn**	**17 30 39.6**	**-0.9**
IFIR	**Firoozkooh**	**2.11**	**195**	Pn	**Pb**	**17 30 42.9**	**-3.0**
MRVT	**Maraveh tapeh**	**2.12**	**90**	*e*Pn	**Pb**	**17 30 43.2**	**-2.7**
MRVT				IAML		17 31 37.1	
	comp=Z,350nm,1.0s						
MRVT	**Maraveh tapeh**	**2.12**	**90**	Pn	**Pb**	**17 30 43.3**	**-2.7**
DAMV	**Damavand**	**2.36**	**210**	*e*Pn	**Pb**	**17 30 47.1**	**-3.0**
DAMV				IAML		17 31 59.9	
	comp=Z,4.9nm,1.0s						
CHTH	**Charan**	**2.56**	**227**	*e*Pn	**Pb**	**17 30 49.5**	**-3.9**
CHTH				IAML		17 31 29.2	
	comp=Z,280nm,1.0s						
SHRO	**Shahrood**	**2.69**	**128**	*e*Pn	**Pb**	**17 30 51.3**	**-4.3**
SHRO				IAML		17 31 21.8	
	comp=Z,2.3nm,1.0s						
THKV	**Tehran--Karaj**	**2.70**	**230**	*e*Pn	**Pb**	**17 30 51.7**	**-4.1**
THKV				IAML		17 31 41.8	
	comp=Z,2μm,1.0s						
IGZV	**Ghazvin**	**2.87**	**244**	Pn	**Pn**	**17 30 53.0**	**-0.4**
GIDE	**GILAN DEYLAMAN**	**2.90**	**256**	*e*Pn	**Pn**	**17 30 52.9**	**-0.8**
GIDE				IAML		17 31 47.9	
	comp=Z,1μm,1.0s						
BJRD	**Bojnurd**	**3.17**	**89**	*e*Pn	**Pn**	**17 30 57.6**	**+0.2**
BJRD				IAML		17 32 12.9	
	comp=Z,72nm,1.0s						
CSN1	**Caspian**	**3.43**	**269**	Pn	**Pn**	**17 31 01.5**	**+0.7**
SBZV	**Sabzevar**	**3.60**	**110**	*e*Pn	**Pn**	**17 31 04.5**	**+1.1**
SBZV				IAML		17 32 24.7	
	comp=Z,110nm,1.0s						
SBZV	**Sabzevar**	**3.60**	**110**	Pn	**Pn**	**17 31 03.8**	**+0.4**
GHVR	**GHOM**	**3.63**	**209**	*e*Pn	Pb	17 31 06.0	-5.7
GHVR				IAML		17 32 51.7	
	comp=Z,880nm,1.0s						
QABG	**Abgarm-Qazvin**	**3.66**	**238**	Pn	**Pn**	**17 31 04.9**	**+0.7**
GAS1	**Astara - Iran**	**3.68**	**282**	Pn	**Pn**	**17 31 04.5**	**+0.3**
ISFR	**Sfrayin**	**3.71**	**98**	Pn	**Pn**	**17 31 04.9**	**0.0**
ZNJK	**Zanjan**	**3.91**	**256**	*e*Pn	**Pn**	**17 31 08.2**	**+0.5**
ZNJK				IAML		17 32 26.7	
	comp=Z,150nm,1.0s						
ASAO	**Ashtian**	**4.17**	**222**	*e*Pn	**Pn**	**17 31 12.6**	**+1.4**
ASAO				IAML		17 32 25.6	
	comp=Z,170nm,1.0s						
GRMI	**Germi**	**4.49**	**286**	*e*Pn	**Pn**	**17 31 16.0**	**+0.5**
GRMI				IAML		17 32 09.6	
	comp=Z,390nm,1.0s						
GRMI	**Germi**	**4.49**	**286**	Pn	**Pn**	**17 31 16.5**	**+1.0**
IPAY	**Payeh**	**4.63**	**104**	Pn	**Pn**	**17 31 18.0**	**+0.4**
NASN	**Na'in**	**4.90**	**186**	*e*Pn	**Pn**	**17 31 21.7**	**+0.3**
NASN				IAML		17 32 56.9	
	comp=Z,76nm,1.0s						
TABS	**Tabas**	**5.03**	**142**	*e*Pn	**Pn**	**17 31 24.5**	**+1.5**
TABS				IAML		17 33 12.6	
	comp=Z,100nm,1.0s						
IHRS	**Heris**	**5.07**	**279**	Pn	**Pn**	**17 31 24.5**	**+0.9**
XNQ	**Khinaliq**	**5.36**	**312**	Pn	**Pn**	**17 31 29.5**	**+1.9**
YZKH	**Yazd**	**5.37**	**169**	*e*Pn	**Pn**	**17 31 28.2**	**+0.5**
YZKH				IAML		17 32 59.3	
	comp=Z,68nm,1.0s						
BRDA	**Brd**	**5.50**	**300**	Pn	**Pn**	**17 31 31.4**	**+2.2**
SNGE	**Sanandaj**	**5.54**	**244**	*e*Pn	**Pn**	**17 31 30.5**	**+0.5**
SNGE				IAML		17 33 21.3	
	comp=Z,36nm,1.0s						
AKT	**Akhty**	**5.80**	**313**	*e*P	**Pn**	**17 31 36.0**	**+2.5**
AKT				*e*S	**Sn**	**17 32 40.0**	**-0.1**
AKT				pmax	pmax		
	comp=Z,68nm,0.2s						
AKT				smax	smax		
	comp=N,272nm,0.5s						
AKT				smax	smax		
	comp=E,396nm,0.4s						
AKT				smax	smax		
	comp=E,357nm,0.3s						
DRN	**Derbent**	**5.84**	**320**	*e*P	**Pn**	**17 31 36.6**	**+2.7**
VSHL	**Vashlovani**	**6.48**	**305**	P	**Pn**	**17 31 45.1**	**+2.4**
VSHL				S	**Sn**	**17 32 55.5**	**-1.2**
SHRT	**Shahrakht**	**6.90**	**124**

AKTO Aktyubinsk 13.16 13 Pn **Pn 17 33 13.3 -0.9**
comp=Z,0.9nm,0.3s,baz=219,slow=7.3,SNR=12
AKTO Sn Sn 17 35 31.6 -9.0
comp=Z,3.1nm,0.3s,baz=234,slow=24,SNR=10
comp=Z,2.7nm,0.4s
CHM Chimkent 13.24 65 *e*P **Pn 17 33 17.8 +2.4**
CHM Chimkent 13.24 65 *e*P **Pn 17 33 17.8 +2.4**
IUG Iuzhnay 13.51 66 *e*P **Pn 17 33 21.4 +2.3**
IUG Iuzhnay 13.51 66 *e*P **Pn 17 33 21.4 +2.3**
BRLS Borolday 13.61 62 *e*P **Pn 17 33 20.7 +0.4**
BRLS Borolday 13.61 62 *e*P **Pn 17 33 20.7 +0.4**
BNN Bunyan 13.86 280 Pn **Pn 17 33 26.4 +2.6**
KK31 Karatay Array 14.10 62 Pn 17 33 24.4 -2.7
KK31 Karatay Array 14.10 62 P **Pn 17 33 24.4 -2.7**
KKAR Karatay Array 14.10 62 Pn 17 33 24.2 -2.9
KKAR Karatay Array 14.10 62 P **Pn 17 33 24.2 -2.9**
MANEM Manem 14.48 85 Pn 17 33 29.9 -2.7
DZA Taraz 14.62 64 *e*P **P 17 33 36.6 -4.0**
DZA Taraz 14.62 64 *e*P **P 17 33 36.7 -4.0**
BELG Belogornoye 15.25 346 Pn **Pn 17 33 40.3 -2.3**
comp=Z,1.7nm,0.3s,baz=81,slow=2.4,SNR=8.3
BELG Sn **Sn 17 36 21.5 -10**
comp=Z,2.6nm,0.3s,baz=115,slow=20,SNR=13
MMAI Mount Meron Ar 15.41 258 Pn **Pn 17 33 42.4 -2.5**
comp=Z,0.4nm,0.3s,baz=129,slow=11,SNR=5.0
comp=Z,0.3nm,0.4s
BR131 Keskin Array S 15.57 284 P 17 33 48.1 -3.3
BR131 Keskin Array S 15.57 284 P **Pn 17 33 48.1 +1.0**
BR131 pmax pmax
comp=Z,6.0nm,1.2s
BRTR Keskin Array B 15.57 284 Pn **P 17 33 48.6 -2.8**
comp=Z,0.4nm,0.3s,baz=94,slow=10.0,SNR=16
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 15.57 284 Pn 17 33 48.0 +1.0
BRTR Keskin Array B 15.57 284 *i* P **P 17 33 50.0 -1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
CY604 RAF Akrotiri, 15.66 263 P 17 33 50.5 -1.4
CY604 IAmb IAmb 17 33 58.3
comp=Z,16nm,0.7s
RAYN Ar Rayn 15.66 208 P 17 33 48.3 -4.1
RAYN Ar Rayn 15.66 208 P **P 17 33 48.3 -4.1**
RAYN pmax pmax
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 15.66 208 P **P 17 33 50.9 -1.5**
VRH Novokhopyorsk 15.85 332 *e*P **P 17 33 51.7 -2.5**
VRH pmax pmax
comp=Z,10.0nm,0.8s
KKUL Konya-Kulu 16.13 282 P P 17 33 59.6 +2.1
EKS2 Erkin-Say 16.33 66 P **P 17 34 02.5 +2.8**
SNR=7.0
NIL Nilore 16.61 98 P 17 34 00.4 -2.4
NIL IAmb IAmb 17 34 14.3
comp=Z,17nm,0.8s
NIL Nilore 16.61 98 P **P 17 34 00.4 -2.4**
NIL pmax pmax
comp=Z,17nm,0.9s
NIL Nilore 16.61 98 P P 17 34 05.0 +2.2
UCH Uchtor 16.79 68 P **P 17 34 07.4 +2.2**
SNR=5.8
AAK Ala-Archa 16.84 66 Pn **P 17 34 05.7 +0.3**
comp=Z,0.5nm,0.3s,baz=256,slow=4.2,SNR=7.8
AAK LR LR 17 42 32.7
comp=Z,143nm,19.9s,baz=259,slow=44
comp=Z,5.6nm,0.7s
AAK Ala-Archa 16.84 66 Pn 17 34 01.3 -2.0
AAK Ala-Archa 16.84 66 P **Pn 17 34 01.3 -2.0**
AAK pmax pmax
comp=Z,5.0nm,0.6s
AAK Ala-Archa 16.84 66 P **P 17 34 08.2 +2.7**
VSR Storozhevoye 16.88 328 P **P 17 34 06.3 +0.7**
VSR pmax pmax
comp=Z,16nm,1.4s
USP Ospenovka 16.97 64 P **P 17 34 09.0 +2.3**
SNR=8.2
HRFI Mount Harif 17.05 249 P P 17 34 07.7 +0.1
CHMS Chumysh 17.09 65 P **P 17 34 10.4 +2.3**
SNR=7.1
SGDS Sogindy 17.10 64 *e*P **P 17 34 09.4 +1.2**
BTLS Baital 17.11 58 *e*P **P 17 34 08.9 +0.7**
BTLS Baital 17.11 58 *e*P **P 17 34 09.0 +0.7**
KBK Karagaybulak 17.18 66 P **P 17 34 11.8 +2.6**
SNR=5.2
VORR Voronezh 17.20 329 P **P 17 34 09.8 +0.6**
VORR pmax pmax
comp=Z,19nm,1.3s
EIL Elat 17.30 248 LR LR 17 42 36.6
comp=Z,71nm,20.7s,baz=87,slow=44
KSH2 Kashi 17.42 78 P **P 17 34 15.1 +3.2**
KSH2 pmax pmax
comp=Z,6.0nm,0.7s
MDUB Mudurnu 17.47 286 Pn **P 17 34 11.4 -0.9**
SAHE Sakarya_HENDEK 17.74 287 ⇓P **P 17 34 17.7 +2.5**
NRN Naryn 17.80 71 Pn 17 34 13.9 -1.6
NRN Naryn 17.80 71 P **Pn 17 34 13.9 -1.6**
NRN pmax pmax
comp=Z,9.0nm,1.1s
BOOM Boomskoye usch 17.88 67 Pn 17 34 14.2 -2.0
BOOM Boomskoye usch 17.88 67 P **Pn 17 34 14.2 -2.0**
BOOM pmax pmax
comp=Z,15nm,1.2s
LPSR Galich'ya Gora 18.02 330 *e*P **P 17 34 19.3 +1.1**
LPSR pmax pmax
comp=Z,34nm,1.4s
BRZS Berezniki 18.48 42 *e*P **Pn 17 34 25.8 +2.3**
BRZS Berezniki 18.48 42 *e*P **Pn 17 34 25.8 +2.3**
TNSS Tian-Shan 18.69 66 *e*P **Pn 17 34 28.4 +2.0**
TNSS Tian-Shan 18.69 66 *e*P **Pn 17 34 28.4 +2.0**
AAA Alma-Ata 18.69 65 *e*P **Pn 17 34 28.6 +2.5**
AAA Alma-Ata 18.69 65 *e*P **Pn 17 34 28.6 +2.5**
MDOK Medeo 18.78 66 *e*P **Pn 17 34 29.2 +1.9**
MDOK Medeo 18.78 66 *e*P **Pn 17 34 29.2 +1.9**
ARTI Arti 19.00 9 P **Pn 17 34 30.2 +0.6**
comp=Z,4.0nm,0.3s,baz=200,slow=5.9,SNR=42
comp=Z,14nm,0.4s
ARTI Arti 19.00 9 P 17 34 27.9 -1.1
ARTI Arti 19.00 9*d* *i*P **Pn 17 34 30.6 +0.9**
ARTI S **Sn 17 37 54.0 -8.3**
ARTI pmax pmax
comp=Z,26nm,0.7s
BORK Borovoye 19.34 32 P 17 34 31.9 -0.8
BORK Borovoye 19.34 32 *e*P **Pn 17 34 34.7 +1.0**
BORK pmax pmax
comp=Z,8.0nm,1.0s
SVE Sverdlovsk 19.74 12 *e*P **Pn 17 34 44.0 +5.5**
SVE *e*S **S 17 38 10.9 -8.5**
SATY Saty 19.75 66 *e*P **Pn 17 34 40.0 +1.1**
SATY Saty 19.75 66 *e*P **Pn 17 34 40.1 +1.1**
TIRR Tirgusor 19.98 298 P Pn 17 34 40.8 -0.6
TIRR IAmb IAmb 17 34 42.4
comp=Z,7.7nm,0.9s
TIRR Tirgusor 19.98 298 P Pn 17 34 40.8 -0.6
TIRR pmax pmax
comp=Z,8.0nm,0.9s
KPKS Kokpek 20.01 65 *e*P Pn 17 34 42.8 +0.9
KPKS Kokpek 20.01 65 *e*P Pn 17 34 42.8 +0.9
TPGR Topolog 20.06 299 ⇓P Pn 17 34 42.5 +0.1
TDK Taldyqorghan 20.09 61 *e*P Pn 17 34 43.3 +0.6
TDK pmax pmax
comp=Z,15nm,0.5s
TDK Taldyqorghan 20.09 61 *e*P Pn 17 34 43.4 +0.6
comp=Z,15nm,0.5s
UZB Uzynbulak 20.21 66 *e*P Pn 17 34 44.8 +0.4
UZB Uzynbulak 20.21 66 *e*P Pn 17 34 44.9 +0.5
TLBR Topalu 20.25 298 ⇑P Pn 17 34 44.9 +0.2
CFR Carcaliu 20.32 300 ⇑P Pn 17 34 44.7 -0.8
CFR Carcaliu 20.32 300 P Pn 17 34 44.6 -0.9
SHLS Shalkode 20.53 66 *e*P Pn 17 34 51.7 +3.6
SHLS pmax pmax
comp=Z,11nm,1.0s
SHLS Shalkode 20.53 66 *e*P Pn 17 34 51.7 +3.6
comp=Z,11nm,1.0s
PDGK Podgornoye 20.57 66 P 17 34 44.6 -1.7
PDGK Podgornoye 20.57 66 P **P 17 34 44.6 -1.7**
OBN Obninsk 20.85 332 P Pn 17 34 49.9 -1.6
comp=Z,21nm,0.4s,baz=139,slow=17,SNR=7.9
comp=Z,21nm,0.4s
OBN Obninsk 20.85 332 P Pn 17 34 49.8 -1.7
OBN Obninsk 20.85 332*d* *i*P Pn 17 34 51.1 -0.4
OBN *i* 17 35 11.3
OBN pmax pmax
comp=Z,26nm,0.6s
MOS Moscow 20.96 335 *e*P **P 17 34 48.3 -2.0**
MOS *e* 17 35 08.9
MOS *e*S **S 17 38 39.5 -4.1**
MOS *e*SS Sn 17 38 52.6 +3.1
MOS pmax pmax
comp=Z,25nm,0.6s
GHRR 21.02 302 ⇑P **P 17 34 51.8 +0.7**
GHRR 21.02 302 P **P 17 34 53.1 +2.0**
SORM Soroca 21.03 308 ⇑P **P 17 34 51.2 +0.1**
SORM Soroca 21.03 308 P **P 17 34 51.2 +0.1**
KIRV Kirov 21.07 354 P **P 17 34 52.9 +1.4**
comp=Z,33nm,0.5s,baz=168,slow=5.1,SNR=9.6
comp=Z,33nm,0.5s
KIRV Kirov 21.07 354*c* *i*P **P 17 34 52.6 +1.2**
KIRV *i* *PP **sP 17 34 56.1 +0.5**
ALN Alexandroupoli 21.39 287 P 17 34 56.0 +1.0
ALN IAmb IAmb 17 34 57.9
comp=Z,14nm,0.9s
ALN Alexandroupoli 21.39 287 P **P 17 34 56.0 +1.0**
ALN pmax pmax
comp=Z,14nm,0.9s
ALN Alexandroupoli 21.39 287 P P 17 34 57.4 +2.4
ISR Istrita 21.41 299 ⇑P **P 17 34 57.9 +2.5**
ISR Istrita 21.41 299 P P 17 34 57.8 +2.5
SAHR Sahastru 21.44 300 ⇑P **P 17 34 58.2 +2.6**
VRI Vrincioaia 21.44 301 ⇓P **P 17 34 57.5 +1.9**
VRI Vrincioaia 21.44 301 P P 17 34 57.4 +1.9
VRI Vrincioaia 21.44 301 P P 17 34 57.7 +2.2
PLOR Plostina 21.49 301 ⇑P **P 17 34 58.0 +1.8**
PLOR Plostina 21.49 301 P P 17 34 57.9 +1.8
AKASG Malin Array Be 21.56 315 P P 17 34 57.2 +0.4
comp=Z,4.6nm,0.6s,baz=124,slow=9.6,SNR=27
comp=Z,4.6nm,0.6s
AKASG Malin Array Be 21.56 315 P P 17 34 56.4 -0.4
AKASG Malin Array Be 21.56 315 P **P 17 34 56.4 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,1.2s
AKBB Malin Array Si 21.56 315 P 17 34 56.9 +0.1
AKBB IAmb IAmb 17 35 01.3
comp=Z,18nm,0.8s
AKBB Malin Array Si 21.56 315*c* *i*P **P 17 34 57.1 +0.3**
AKBB pmax pmax
comp=Z,16nm,0.6s
KIEV Kiev 21.57 315 ⇑P **P 17 34 57.3 +0.5**
KIEV Kiev 21.57 315 P P 17 34 57.3 +0.5
KIEV Kiev 21.57 315 P P 17 34 57.5 +0.6
TESR Tescani 21.65 303 ⇑P **P 17 34 58.8 +1.1**
TESR Tescani 21.65 303 P P 17 34 58.9 +1.1
RDO Rodhopi 21.77 288 P P 17 34 59.4 +0.3
RDO IAmb IAmb 17 35 06.6
comp=Z,25nm,1.2s
RDO Rodhopi 21.77 288 P P 17 35 01.5 +2.3
ONER Baraj Valea Uz 21.77 302 ⇑P **P 17 35 00.9 +1.8**
COVR Voineasa-Covas 21.79 301 ⇑P **P 17 35 01.0 +1.6**
GIRR Girov 21.86 304 ⇑P **P 17 35 01.0 +0.9**
MLR Muntele Rosu 21.90 300 P P 17 35 01.9 +1.3
comp=Z,7.9nm,0.8s,baz=72,slow=1.4,SNR=21
comp=Z,7.9nm,0.8s
MLR Muntele Rosu 21.90 300 ⇓P **P 17 35 03.0 +2.4**
MLR Muntele Rosu 21.90 300 P 17 35 01.4 +0.8
MLR Muntele Rosu 21.90 300 P P 17 35 01.5 +0.8
MLR pmax pmax
comp=Z,24nm,1.1s
MLR Muntele Rosu 21.90 300 P P 17 35 03.2 +2.6
TURR Turia 21.97 301 ⇓P **P 17 35 03.4 +2.1**
KURBB Kurchatov Arra 22.05 46 P P 17 35 04.0 +1.9
comp=Z,7.4nm,1.0s,baz=247,slow=11,SNR=30
comp=Z,7.4nm,1.0s
KURK Kurchatov 22.14 46 P 17 35 01.6 -1.5
KURK IAmb IAmb 17 35 08.0
comp=Z,13nm,0.9s
KURK Kurchatov 22.14 46*c* *i*P **P 17 35 04.9 +1.9**
KURK pmax pmax
comp=Z,16nm,0.9s
KURK Kurchatov 22.14 46 P P 17 35 05.2 +2.2
DOPR Dopca 22.38 301 ⇑P **P 17 35 07.3 +1.7**
VOIR 22.51 299 ⇓P **P 17 35 09.2 +2.1**
VOIR 22.51 299 P P 17 35 09.2 +2.1
VOIR 22.51 299 P P 17 35 09.3 +2.2
PLVB Pleven 22.55 294 ⇓P **P 17 35 09.2 +1.8**
ARR Arges 22.79 299 ⇑P **P 17 35 11.8 +1.7**
ARR Arges 22.79 299 P P 17 35 11.7 +1.7
BURAR Bucovina Array 22.88 305 ⇓P **P 17 35 12.1 +1.0**
BURAR Bucovina Array 22.88 305 P 17 35 10.7 -0.3
BURAR IAmb IAmb 17 35 24.9
comp=Z,7.5nm,0.7s
BURAR Bucovina Array 22.88 305 P P 17 35 12.0 +1.0
BUR08 Bucovina Ar. S 22.89 305 P P 17 35 10.6 -0.6
BUR08 IAmb IAmb 17 35 25.2
comp=Z,6.6nm,0.8s
MAKZ Makanchi 22.92 57 P 17 35 09.7 -1.7
MAKZ IAmb IAmb 17 35 14.0
comp=Z,7.4nm,0.9s
MAKZ Makanchi 22.92 57 P P 17 35 09.7 -1.7
MAKZ pmax pmax
comp=Z,7.0nm,0.9s
MAKZ Makanchi 22.92 57 P P 17 35 13.5 +2.1
SEM Semipalatinsk 22.96 48 *e*P **P 17 35 14.3 +2.4**
SEM Semipalatinsk 22.96 48 *e*P **P 17 35 14.4 +2.4**
MK31 Makanchi Array 23.13 58*c* *i*P **P 17 35 14.7 +1.2**
MKAR Makanchi Array 23.13 58 P P 17 35 15.3 +1.8
comp=Z,3.1nm,0.8s,baz=254,slow=9.0,SNR=19
MKAR LR LR 17 46 00.0
comp=Z,73nm,21.0s,baz=240,slow=41
comp=Z,3.1nm,0.8s
MKAR Makanchi Array 23.13 58 P 17 35 10.7 -2.9
ARCR ARCALIA 23.31 303 ⇑P **P 17 35 17.1 +1.8**
LOT Lotru 23.40 299 P P 17 35 16.8 +0.4
IMMV Iera Moni Meta 23.70 274 P P 17 35 19.3 0.0
CJR Cluj-Napoca 23.74 302 ⇓P **P 17 35 20.9 +1.2**
CJR Cluj-Napoca 23.74 302 P P 17 35 20.9 +1.2
BMR Baia Mare 24.02 304 P P 17 35 24.4 +2.1
MARR Marisel-Cluj 24.06 302 ⇑P **P 17 35 23.9 +1.2**
GZR Gura Zlata 24.08 298 ⇑P **P 17 35 23.3 +0.3**
GZR Gura Zlata 24.08 298 P P 17 35 23.2 +0.3
MNK Minsk 24.21 322 P P 17 35 26.7 +2.7
comp=E,7.0nm,0.6s
MNK *i* P **P 17 35 26.7 +2.7**
comp=N,10.0nm,0.6s
MNK *i* P **P 17 35 26.7 +2.7**
comp=Z,9.0nm,0.6s,baz=123
MNK *i* PP **PnPn 17 35 56.0 +2.7**
MNK *i* PPP PPP 17 36 03.9
MNK *i* S **S 17 39 45.9 +3.8**
MNK *i* SS **SnSn 17 40 28.9 +5.0**
MNK *i* SSS SSS 17 40 42.4
MNK *i* LQ LQ 17 43 39.3
MNK *i* LR LR 17 45 39.3
MNK Minsk 24.21 322 *i* P **P 17 35 26.6 +2.7**
MNK *i* 17 35 56.0
MNK *i* PPP PPP 17 36 03.9
MNK *i* S **S 17 39 45.8 +3.8**
MNK *i* SS **SnSn 17 40 28.8 +5.0**
MNK *i* SSS SSS 17 40 42.4
MNK pmax pmax
comp=E,7.0nm,0.6s
MNK pmax pmax
comp=Z,9.0nm,0.6s
MNK pmax pmax
comp=N,10.0nm,0.6s
MNK MLR MLR
comp=E,58nm,21.0s
MNK MLR MLR
comp=Z,55nm,19.0s
MNK MLR MLR
comp=N,44nm,22.0s
DRGR 24.35 302 ⇑P **P 17 35 27.3 +1.8**
DRGR 24.35 302 P P 17 35 27.2 +1.8
DRGR 24.35 302 P P 17 35 27.4 +2.0
TRPA Tarpa 24.75 305 P P 17 35 31.2 +2.3
MDVR Moldovita 24.76 297 ⇑P **P 17 35 30.1 +0.9**
KLMR Klimovskoe 24.79 344 *e*P **P 17 35 32.8 +3.7**
KLMR S **S 17 39 55.1 +3.8**
KLMR pmax pmax
comp=Z,12nm,0.9s
BZS Buzias 24.92 299 ⇑P **P 17 35 32.1 +1.6**
BZS Buzias 24.92 299 P P 17 35 32.0 +1.6
BZS Buzias 24.92 299 P P 17 35 32.6 +2.1
ITM Ithomi 24.95 279 P P 17 35 30.3 -0.6
NACGM Naroch 24.96 322 *e*P **P 17 35 32.3 +1.6**
comp=Z,17nm,1.0s,baz=123
SIRR Siria 24.98 300 ⇑P **P 17 35 32.8 +1.7**
ZSN Zaisan 24.98 57 *e*P **P 17 35 34.2 +3.2**
ZSN pmax pmax
comp=Z,5.0nm,1.2s
ZSN Zaisan 24.98 57 *e*P **P 17 35 34.2 +3.2**
comp=Z,5.3nm,1.2s
KOLS Kolonicke sedl 25.12 307 *e*P **P 17 35 36.0 +3.7**
KOLS Kolonicke sedl 25.12 307 P P 17 35 35.2 +2.9
KOLS Kolonicke sedl 25.12 307 *e*P **P 17 35 36.0 +3.7**
ABAH Abaujker 25.63 305 P P 17 35 39.6 +2.7
PSZ Piszkesteto 26.44 303 P P 17 35 45.5 +1.1
PSZ IAmb IAmb 17 36 13.5
comp=Z,6.1nm,0.9s
PSZ Piszkesteto 26.44 303 P P 17 35 45.5 +1.1
PSZ pmax pmax
comp=Z,6.0nm,0.9s
PSZ Piszkesteto 26.44 303 P P 17 35 47.2 +2.9
WMQ Urumqi 26.55 66 *e*P **P 17 35 50.3 +4.9**
ZAA0 Zalesovo Array 26.96 43 P 17 35 47.4 -1.5
ZAA0 IAmb IAmb 17 35 54.3
comp=Z,3.3nm,0.8s
ZALV Zalesovo Beam 26.96 43 P P 17 35 50.0 +1.1
comp=Z,2.2nm,0.5s,baz=270,slow=10,SNR=13
ZALV LR LR 17 48 43.0
comp=Z,76nm,18.2s,baz=242,slow=41
comp=Z,2.2nm,0.5s
ZALV Zalesovo Beam 26.96 43 P 17 35 47.6 -1.2
ZALV Zalesovo Beam 26.96 43 *i* P **P 17 35 50.0 +1.1**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
OJC Ojcow 27.00 308 P P 17 35 50.6 +1.4
OJC Ojcow 27.00 308 P P 17 35 50.7 +1.4
OJC Ojcow 27.00 308 P P 17 35 51.6 +2.3
DGZ Jazzator, Alta 27.13 53 ⇑*i*P **P 17 35 52.9 +2.3**
DGZ pmax pmax
comp=Z,3.0nm,0.5s
MODS Modra-Piesok 28.25 304 *e*P P 17 36 06.0 +5.5
MODS Modra-Piesok 28.25 304 *e*P P 17 36 06.0 +5.5
RONA Rosalia, Austr 28.81 302 *e*P **P 17 36 07.5 +2.0**
comp=Z,1.7nm,0.6s
FIA1 FINESS Array S 29.25 333 P P 17 36 09.9 +0.7
FINES FINESS Array B 29.25 333 P P 17 36 10.6 +1.4
comp=Z,2.7nm,0.7s,baz=142,slow=8.9,SNR=15
comp=Z,2.7nm,0.7s
FINES FINESS Array B 29.25 333 P P 17 36 10.1 +0.9
ARSA Arzberg 29.29 301 P P 17 36 10.5 +0.8
ARSA IAmb IAmb 17 36 31.9
comp=Z,3.2nm,1.0s
ARSA Arzberg 29.29 301 *e*P **P 17 36 11.6 +1.8**
comp=Z,2.0nm,0.6s
SOKA Soboth 29.58 300 *i* P **P 17 36 13.3 +0.9**
comp=Z,6.3nm,1.5s
SESA Seetaler Alpe, 29.93 301 *e*Pg **P 17 36 17.6 +2.0**
comp=Z,3.7nm,0.6s,SNR=5.8
GERES GERESS Array B 30.66 304 P P 17 36 23.0 +1.1
comp=Z,0.4nm,0.5s,baz=101,slow=7.2,SNR=5.0
comp=Z,0.4nm,0.5s
LESA Schwarzlsotal 31.23 301 *i* P **P 17 36 28.3 +1.3**
comp=Z,3.0nm,0.5s,SNR=6.4
WTTA Wattenberg 31.93 301 *i* P **P 17 36 33.9 +0.7**
comp=Z,4.1nm,0.7s,SNR=7.7
WATA Walderalm 31.97 301 *i* P **P 17 36 34.8 +1.2**
comp=Z,2.0nm,0.6s
SQTA Sankt Quirin 32.22 301 *e*P **P 17 36 36.6 +0.9**
comp=Z,1.5nm,0.6s
RETA Reutte 32.53 301 *i* P **P 17 36 39.5 +1.1**
comp=Z,1.4nm,0.7s
FETA Feichten 32.54 300 *i* P **P 17 36 39.2 +0.6**
comp=Z,1.3nm,0.6s,SNR=4.1
FUORN Ofenpass-Fuorn 32.86 300 P 17 36 42.5 +1.0
FUORN IAmb IAmb 17 37 13.5
comp=Z,4.4nm,1.1s
HFS Hagfors 33.65 325 P **P 17 36 49.3 +1.4**
comp=Z,2.3nm,0.6s,baz=99,slow=9.3,SNR=18
comp=Z,2.3nm,0.6s
KNGR Kungurtug, Tuv 33.67 53 *e*P **P 17 36 50.5 +2.1**
KNGR pmax pmax
comp=Z,3.0nm,0.8s
NORES NORESS Array B 34.87 325 *e*P **P 17 37 00.2 +1.8**
SENIN Lac Senin/Sane 34.91 299 P 17 36 59.4 +0.1
SENIN IAmb IAmb 17 37 01.1
comp=Z,4.2nm,0.6s
NC405 NORSAR Array S 34.93 326 P P 17 36 59.4 +0.4
KEV Kevo 35.11 344 P P 17 37 01.0 +0.6
KEV Kevo 35.11 344 P P 17 37 01.0 +0.6
KEV pmax pmax
comp=Z,25nm,1.4s
NB2 NORSAR Subarra 35.13 325 P **P 17 37 01.2 +0.4**
comp=Z,0.8nm,0.5s,baz=124,slow=8.6
NOA NORSAR Array B 35.13 325 P **P 17 37 01.6 +0.9**
comp=Z,0.8nm,0.6s,baz=124,slow=8.6,SNR=7.4
comp=Z,0.8nm,0.6s
ARCES ARCESS Array B 35.27 343 P **P 17 37 02.9 +1.1**
comp=Z,0.6nm,0.5s,baz=138,slow=7.4,SNR=7.3
comp=Z,0.6nm,0.5s
ARCES ARCESS Array B 35.27 343 P P 17 37 02.9 +1.1
ARCES ARCESS Array B 35.27 343 *e*P **P 17 37 03.2 +1.4**
TLY Talaya 37.59 52 LR LR 17 54 42.4
comp=Z,59nm,18.6s,baz=253,slow=39
ULN Ulaanbaatar 39.93 58 ⇓*i*P **P 17 37 43.7 +1.9**
ULN pmax pmax
comp=Z,3.0nm,1.3s
EKA Eskdalemuir Ar 41.47 314 P **P 17 37 55.4 +1.3**
comp=Z,1.6nm,0.5s,baz=101,slow=7.9,SNR=14
comp=Z,1.6nm,0.5s
PZH PanZhiHua 42.02 91 P P 17 37 58.5 -0.7
CMAR Chiang Mai Arr 44.02 103 P P 17 38 15.6 +0.3
comp=Z,1.6nm,0.8s,baz=301,slow=8.7,SNR=11
comp=Z,1.6nm,0.8s
ESDC Sonseca Array 44.18 291 P **P 17 38 16.9 +0.5**
comp=Z,1.0nm,0.5s,baz=66,slow=8.5,SNR=13
comp=Z,1.0nm,0.5s
ESDC Sonseca Array 44.18 291 P P 17 38 16.9 +0.5
ESDC IAmb IAmb 17 38 34.1
comp=Z,6.1nm,1.4s
TORD Torodi Ar. Bea 51.95 256 P **P 17 39 16.0 -0.7**
comp=Z,1.1nm,0.7s,baz=47,slow=8.5,SNR=6.1
comp=Z,1.1nm,0.7s
HEH HeiHe 52.61 51 *e*P **P 17 39 23.0 +1.8**
HEH pmax pmax
comp=Z,11nm,0.8s
KSRS Korea Array 57.50 65 P **P 17 39 57.2 +0.5**
comp=Z,1.3nm,0.7s,baz=288,slow=6.5,SNR=6.7
comp=Z,1.3nm,0.7s
SFJD Kangerlussuaq 61.04 334 LR LR 18 09 42.6
comp=Z,30nm,19.8s,baz=70,slow=39
RES Resolute Bay 65.95 351 LR LR 18 14 59.0
comp=Z,26nm,18.1s,baz=6.5,slow=41
LBTB Lobatse 67.63 207 LR LR 18 13 11.4
comp=Z,88nm,18.9s,baz=80,slow=38
FRB Frobisher Bay 68.99 336 LR LR 18 14 31.3
comp=Z,36nm,18.7s,baz=50,slow=39
DAV Davao City (W) 71.60 95 LR LR 18 16 23.1
comp=Z,27nm,2.0s,baz=163,slow=39
ILAR Eielson Array 76.63 9 P **P 17 41 58.6 +0.7**
comp=Z,0.6nm,0.7s,baz=320,slow=5.1,SNR=2.0
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 79.69 354 P **P 17 42 15.7 +0.9**
comp=Z,1.2nm,0.6s,baz=14,slow=5.3,SNR=6.8
comp=Z,1.2nm,0.6s
YKA Yellowknife Ar 79.69 354 *i* P **P 17 42 15.6 +0.8**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 97.06 114 P **P 17 43 38.1 -1.6**
comp=Z,0.3nm,0.9s,baz=312,slow=5.0,SNR=5.8
comp=Z,0.3nm,0.9s

*SDD **04** 17:31:38.7±1.3, 19°.62N×72°.41W, h4km±6km, MD3.0, ML2.4, MW2.3, Presumed earthquake*
*SSNC **04** 17:31:38.9±0.8, 19°.70N×72°.38W, h0km±5km, MD3.1, ML2.0, Presumed earthquake*

ISC 04 17:31:37.4±1.0, **19°.66N**±0°.07×**72°.40W**±0°.04, **h10**km, **n21**, σ**1s02**/19, **14C-1D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
MCDR	**Montecristi**	**0.74**	**71**	⇑*i*P	**Pg**	**17 31 52.0**	**+0.3**
MCDR				⇑*i*S	**Sg**	**17 32 02.7**	**+1.3**
MCDR				IAML		17 32 02.9	
	comp=N,272nm,0.2s						
REDR	**Restauracion**	**1.07**	**117**	⇑*i*P	Pg	17 31 53.0	-4.9
REDR				⇑*i*S	Sg	17 32 01.0	-11
REDR				IAML		17 32 04.4	
	comp=N,329nm,0.1s						
MADR	**Mao Valverde**	**1.23**	**94**	⇑*i*S	**Sb**	**17 32 17.0**	**+0.4**
MADR				IAML		17 32 25.1	
	comp=N,59nm,0.5s						
SDDR	**Presa de Saban**	**1.24**	**122**	⇑*i*P	**Pn**	**17 32 00.6**	**-0.4**
SDDR				⇑*i*S	**Sb**	**17 32 17.1**	**0.0**

SDDR				IAML			17 32 23.1	
	comp=N,18nm,0.3s							
SDDR	**Presa de Saban**	**1.24**	**122**	*eP*	**Pn**	**17 32 01.0**	**0.0**	
SDDR				*eS*	**Sb**	**17 32 16.7**	**-0.5**	
SDDR				IAML		17 32 20.2		
	comp=N,20nm,0.3s							
SDDR				IAML		17 32 23.1		
	comp=N,18nm,0.3s							
LUDR	**Luperon**	**1.38**	**80**	⇑*iS*	**Sn**	**17 32 21.0**	**-0.1**	
LUDR				IAML		17 32 30.0		
	comp=E,113nm,0.3s							
MASC	**Masc**	**1.80**	**287**	*eP*	**Pn**	**17 32 09.2**	**+0.7**	
MASC				*eS*	**Sn**	**17 32 31.0**	**-0.4**	
MASC				IAML		17 32 36.2		
	comp=N,24nm,0.3s							
MASC				IAML		17 32 36.9		
	comp=E,17nm,0.3s							
GRTK	**Grand Turk**	**2.19**	**32**	⇑*iS*	**Sn**	**17 32 40.7**	**-0.5**	
GRTK				IAML		17 32 49.0		
	comp=E,19nm,1.2s							
GRTK	**Grand Turk**	**2.19**	**32**	*eP*	**Pn**	**17 32 13.4**	**-0.6**	
QMBU	**Quimbuelo**	**2.33**	**284**	*eP*	**Pn**	**17 32 16.4**	**+0.5**	
GTBY	**Guantanamo Bay**	**2.57**	**277**	*eP*	**Pn**	**17 32 19.4**	**+0.3**	
HATOM	**Hato Mayor del**	**2.98**	**106**	⇑*iP*	**Pn**	**17 32 24.5**	**-0.3**	
HATOM				IAML		17 33 09.1		
	comp=N,12nm,3.1s							
HATOM	**Hato Mayor del**	**2.98**	**106**	IAML		17 33 09.1		
	comp=N,12nm,3.1s							
HATOM	**Hato Mayor del**	**2.98**	**106**	⇑*iS*	**Sn**	**17 33 02.9**	**+2.3**	
SMDR	**Samana, DR**	**3.05**	**96**	⇑*iS*	**Sb**	**17 33 11.0**	**+1.9**	
RCC	**Rio Carpintero**	**3.12**	**277**	*eP*	**Pn**	**17 32 26.9**	**+0.2**	
PRSN	**Puerto Rico Se**	**5.17**	**105**	⇑*iS*	Sn	17 33 24.8	-30	
PRSN	**Puerto Rico Se**	**5.17**	**105**	⇑*iP*	**Pb**	**17 33 06.1**	**-2.0**	
PRSN	**Puerto Rico Se**	**5.17**	**105**	IAML		17 33 24.7		
	comp=N,54nm,0.2s							
CELP	**Cerrillos**	**5.73**	**105**	IAML		17 33 16.3		
	comp=N,93nm,0.3s							
CELP	**Cerrillos**	**5.73**	**105**	⇓*iP*	Pb	17 33 12.9	-4.7	

ATH 04 17:32:47.5,38˚45N×21˚90E,h8km,ML1.5/7,Latitude uncertainty: 0 km; Longitude uncertainty: 0 km,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.03**	**169**	P	Pg	17 32 49.2	+0.2
EFP				S	Sg	17 32 50.2	+0.3
MG00	**Magoula, Dorid**	**0.05**	**135**	P	Pg	17 32 49.3	+0.1
MG00				S	Sg	17 32 50.5	+0.1
PYRG	**Pyrgos, Dorida**	**0.10**	**114**	P	Pg	17 32 50.0	+0.1
PYRG				S	Sg	17 32 51.7	+0.2
ANX	**Ano Chora**	**0.14**	**7**	P	Pg	17 32 50.9	+0.3
ANX				S	Sg	17 32 53.5	+0.8
AGRP	**Agrapidokambos**	**0.15**	**248**	P	Pg	17 32 50.6	-0.1
AGRP				S	Sg	17 32 52.5	-0.3
KALE	**Kalithea**	**0.20**	**108**	P	Pg	17 32 51.5	0.0
KALE				S	Sg	17 32 54.6	+0.3
AGEO	**AgiosGiorgios,**	**0.23**	**145**	P	Pg	17 32 51.8	-0.2
PANR	**Panormos, Dori**	**0.29**	**106**	P	Pg	17 32 53.2	+0.1
PANR				S	Sg	17 32 57.5	+0.5
KLV	**Kalavryta, Ach**	**0.45**	**154**	P	Pg	17 32 55.5	-0.8
EVR	**Evrytania**	**0.47**	**351**	P	Pg	17 32 57.0	+0.3
EVR				S	Sg	17 33 03.1	+0.3

DJA 04 18:20:22.6±0.3,3˚S±3˚×13˚7E±˚,h55km±13km,M3.8/14, mB4.8/1,mb4.0/4,MLv3.7/14,Mw(mB)4.1/1,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.14**	**335**	P	Pn	18 20 41.5	-0.9
SRPI				S	Sn	18 20 56.9	-0.2
BAKI	**Biak**	**1.82**	**340**	P	Pn	18 20 52.4	+0.9
RKPI	**Ransiki, Papua**	**2.91**	**299**	P	Pn	18 21 06.6	+0.2
MWPI	**Manokwari, Pap**	**3.33**	**306**	P	Pn	18 21 12.8	+0.6
GENI	**Genyem**	**3.45**	**85**	P	Pn	18 21 14.0	+0.2
JAY	**Jayapura**	**3.99**	**84**	P	Pn	18 21 19.9	-1.4
FAKI	**Fak Fak**	**4.47**	**270**	P	Pn	18 21 26.5	-1.4
SIJI	**Sorong**	**5.83**	**290**	P	Pn	18 21 46.1	-0.4
	0.1nm888nm16nm,0.4s						

*IDC **04** 18:36:33.2±1.7,59˚98N×153˚08W,h82km±21km,mb3.6/9, mbtmp3.9/13,MS2.8/1,Error ellipse: s-maj=17.2km s-min=15.3km az=109.0*

*NEIC **04** 18:36:34.8±1.0,59˚95N±0˚02×152˚86W±0˚06, h106km±3km,mb3.8/10,ML3.4/170,ML3.2(AEIC),Error ellipse: s-maj=4.6km s-min=3.3km az=97.0*

*AEIC **04** 18:36:36.1±1.1,59˚95N±0˚03×152˚83W±0˚06,h99km±3km, Error ellipse: s-maj=4.7km s-min=4.5km az=200.0*

ISC 04 18:36:35.4±0.6,59˚95N±0˚03×152˚85W±0˚03, h105km±5km,n191,σ0996/209,mb3.9/12,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.11**	**307**		**Pn**	**18 36 49.5**	**-0.7**
IVE					**Sn**	**18 37 00.9**	**-0.3**
ILS	**Iliamna Low So**	**0.11**	**272**		**Pn**	**18 36 49.5**	**-0.6**
ILS					**Sn**	**18 37 00.8**	**-0.4**
ILSW	**Iliamna Southw**	**0.15**	**282**		**Pn**	**18 36 49.3**	**-1.0**
ILSW				Sn	**Sn**	**18 36 59.8**	**-1.6**
ILSW				IAML		18 37 01.9	
	comp=N,2μm,0.7s						
ILSW				IAML		18 37 03.4	
	comp=E,2μm,0.4s						
O20K	**Slope Mountain**	**0.17**	**41**		**Pn**	**18 36 49.9**	**-0.3**
O20K					**Sn**	**18 37 01.5**	**+0.2**
P19K	**Oil Pt**	**0.36**	**213**		**Pn**	**18 36 50.5**	**-0.5**
P19K					**Sn**	**18 37 01.9**	**-0.6**
RED	**Redoubt Volcan**	**0.47**	**5**		**Pn**	**18 36 51.2**	**-0.5**
RED				Sn	**Sn**	**18 37 02.8**	**-1.0**
RED				IAML		18 37 04.9	
	comp=N,2μm,0.5s						
RDSO	**Redoubt South**	**0.51**	**6**		**Pn**	**18 36 51.4**	**-0.5**
RDSO					**Sn**	**18 37 03.6**	**-0.7**
NCT	**North Crescent**	**0.61**	**356**		**Pn**	**18 36 52.2**	**-0.5**
NCT					**Sn**	**18 37 04.9**	**-0.7**
AU22	**Augustine Moun**	**0.64**	**204**		**Pn**	**18 36 52.3**	**-0.5**
RDJH	**Redoubt Jeurge**	**0.64**	**2**		**Pn**	**18 36 52.4**	**-0.5**
RDJH					**Sn**	**18 37 05.4**	**-0.7**
AGU	**Augustine-Summ**	**0.67**	**207**		**Pn**	**18 36 52.6**	**-0.5**
AUCH	**Augustine Cone**	**0.67**	**207**		**Pn**	**18 36 52.6**	**-0.5**
HOM	**Homer**	**0.68**	**115**		**Pn**	**18 36 52.9**	**-0.2**
HOM				Sn	**Sn**	**18 37 06.2**	**-0.1**
O19K	**Port Alsworth**	**0.78**	**289**		**Pn**	**18 36 53.4**	**-0.5**
O19K				Sn	**Sn**	**18 37 07.0**	**-0.9**
CNPM	**China Poot**	**0.92**	**117**		**Pn**	**18 36 55.0**	**-0.3**
CNPM				Sn	**Sn**	**18 37 09.6**	**-0.9**
BRLK	**Bradley Lake**	**1.01**	**100**		**Pn**	**18 36 55.8**	**-0.5**
BRSE	**Bradley Lake S**	**1.08**	**100**		**Pn**	**18 36 56.6**	**-0.5**
BRSE					**Sn**	**18 37 12.9**	**-0.6**
Q19K	**Cape Douglas,**	**1.11**	**202**		**Pn**	**18 36 56.4**	**-0.9**
Q19K					**Sn**	**18 37 12.9**	**-1.0**
Q19K				IAML		18 37 15.0	
	comp=E,961nm,0.6s						
Q19K				IAML		18 37 19.0	
	comp=N,897nm,0.6s						
CAPN	**Captain Cook N**	**1.17**	**45**		**Pn**	**18 36 59.5**	**+1.5**
N19K	**Bonanza Creek**	**1.19**	**317**		**Pn**	**18 36 57.9**	**-0.4**
N19K				IAML		18 37 15.1	
	comp=E,585nm,0.9s						
N19K				IAML		18 37 16.1	
	comp=N,686nm,0.7s						
O18K	**Koktuh Hills**	**1.19**	**266**		**Pn**	**18 36 57.8**	**-0.5**
O18K					**Sn**	**18 37 14.5**	**-1.2**
O18K				IAML		18 37 15.2	
	comp=N,746nm,0.8s						
O18K				IAML		18 37 15.7	
	comp=E,476nm,0.5s						
CKL	**Chakachamna La**	**1.27**	**11**		**Pn**	**18 36 58.9**	**-0.5**
SPCR	**Spurr Chakacha**	**1.29**	**14**		**Pn**	**18 36 59.1**	**-0.4**
SPU	**Mount Spurr**	**1.29**	**17**		**Pn**	**18 36 59.0**	**-0.5**
SPBG	**Spurr Blockage**	**1.33**	**10**		**Pn**	**18 36 59.9**	**0.0**
P18K	**Big Mountain,**	**1.33**	**246**		**Pn**	**18 36 59.1**	**-0.8**
P18K					**Sn**	**18 37 16.9**	**-1.6**
SLKM	**Skilak Lake**	**1.42**	**66**		**Pn**	**18 37 00.4**	**-0.6**
SLKM					**Sn**	**18 37 19.0**	**-1.4**
STLK	**Strandline Lak**	**1.63**	**17**		**Pn**	**18 37 03.2**	**-0.3**
O22K	**Cooper Landing**	**1.65**	**70**		**Pn**	**18 37 03.2**	**-0.4**
N18K	**Kilae Creek**	**1.68**	**297**		**Pn**	**18 37 03.5**	**-0.6**
N18K					**Sn**	**18 37 24.4**	**-1.6**
N18K				IAML		18 37 25.4	
	comp=E,391nm,1.0s						
N18K				IAML		18 37 27.1	
	comp=N,192nm,0.6s						
KAHG	**Katmai Hook Gl**	**1.71**	**212**		**Pn**	**18 37 04.3**	**-0.2**
SEW	**Seward**	**1.71**	**83**		**Pn**	**18 37 03.7**	**-0.7**
SEW				IAML		18 37 26.6	
	comp=N,418nm,0.6s						
SEW				IAML		18 37 31.2	
	comp=E,342nm,0.5s						
Q18K	**Katmai Hardscr**	**1.71**	**221**		**Pn**	**18 37 04.2**	**-0.5**
Q18K					**Sn**	**18 37 25.5**	**-1.4**
KARR	**Katmai Rainbow**	**1.74**	**214**		**Pn**	**18 37 04.9**	**0.0**
KAWH	**Katmai**	**1.87**	**213**		**Pn**	**18 37 06.1**	**-0.4**
KAWH					**Sn**	**18 37 28.2**	**-2.0**
RC01	**Rabbit Creek A**	**1.92**	**52**		**Pn**	**18 37 06.6**	**-0.4**
M20K	**Styx River**	**1.94**	**356**		**Pn**	**18 37 07.3**	**-0.1**
P17K	**Kvichak River**	**1.98**	**249**		**Pn**	**18 37 07.3**	**-0.5**
P17K				IAML		18 37 56.3	
	comp=E,414nm,0.9s						
P17K				IAML		18 38 22.1	
	comp=N,332nm,1.0s						
KAKN	**Katmai Knife C**	**2.02**	**215**		**Pn**	**18 37 08.2**	**-0.2**
M19K	**Big River Lodg**	**2.10**	**340**		**Pn**	**18 37 09.0**	**-0.4**
M19K				IAML		18 37 35.7	
	comp=E,108nm,0.8s						
M18K	**Stony River**	**2.13**	**318**		**Pn**	**18 37 09.1**	**-0.6**
SKT	**Skwentna**	**2.13**	**17**		**Pn**	**18 37 09.2**	**-0.6**
O17K	**Koliganek Bris**	**2.15**	**267**		**Pn**	**18 37 09.6**	**-0.5**
ACHA	**Angle Creek He**	**2.17**	**217**		**Pn**	**18 37 10.2**	**-0.2**
KDAK	**Kodiak Island**	**2.18**	**176**	P	**Pn**	**18 37 08.8**	**-1.6**
	comp=E,60nm,0.3s,baz=38,slow=4.9,SNR=197						
KDAK				S	**Sn**	**18 37 34.8**	**-2.5**
	comp=E,86nm,0.3s,baz=26,slow=9.7,SNR=23						
KDAK	**Kodiak Island**	**2.18**	**176**		**Pn**	**18 37 08.8**	**-1.6**
KDAK					**Sn**	**18 37 34.8**	**-2.5**
KDAK				IAML		18 37 36.6	
	comp=E,312nm,0.3s						
ANCK	**Angle Creek**	**2.23**	**219**		**Pn**	**18 37 10.8**	**-0.3**
N17K	**Nushagak Hills**	**2.24**	**287**		**Pn**	**18 37 10.7**	**-0.5**
N17K				IAML		18 37 37.5	
	comp=E,120nm,0.5s						
N17K				IAML		18 37 37.5	
	comp=N,204nm,0.6s						
M22K	**Willow**	**2.25**	**35**		**Pn**	**18 37 11.0**	**-0.3**
CAHL	**Cahill**	**2.29**	**215**		**Pn**	**18 37 12.2**	**+0.2**
Q17K	**Contact Creek**	**2.31**	**224**		**Pn**	**18 37 11.9**	**-0.3**
Q16K	**King Salmon**	**2.33**	**238**		**Pn**	**18 37 12.3**	**-0.1**
L19K	**White Mountain**	**2.44**	**337**		**Pn**	**18 37 13.4**	**-0.4**
L19K				IAML		18 37 44.5	
	comp=E,197nm,0.9s						
L19K				IAML		18 37 45.1	
	comp=N,117nm,1.1s						
PMR	**Palmer**	**2.46**	**46**	P	**Pn**	**18 37 13.7**	**-0.2**
PMR	**Palmer**	**2.46**	**46**		**Pn**	**18 37 13.0**	**-0.9**
PMR				IAML		18 37 44.5	
	comp=N,96nm,0.5s						
PMR				IAML		18 37 48.5	
	comp=E,102nm,0.8s						
KNK	**Knik Glacier**	**2.61**	**54**		**Pn**	**18 37 15.2**	**-0.9**
KNK				IAML		18 37 50.2	
	comp=N,234nm,0.6s						
GHO	**Glory Hole Cre**	**2.65**	**45**		**Pn**	**18 37 15.7**	**-0.9**
GHO				IAML		18 37 49.1	
	comp=N,162nm,0.6s						
GHO				IAML		18 37 49.5	
	comp=E,258nm,0.6s						
O16K	**Kokwok River B**	**2.68**	**265**		**Pn**	**18 37 16.5**	**-0.4**
M17K	**Holitna River**	**2.69**	**305**		**Pn**	**18 37 16.4**	**-0.6**
M17K				IAML		18 38 06.6	
	comp=N,167nm,0.6s						
M17K				IAML		18 38 17.2	
	comp=E,137nm,1.0s						
P23K	**Montague Islan**	**2.74**	**87**		**Pn**	**18 37 17.1**	**-0.5**
OHAK	**Old Harbor**	**2.75**	**185**	P	**Pn**	**18 37 16.8**	**-1.0**
OHAK	**Old Harbor**	**2.75**	**185**		**Pn**	**18 37 16.1**	**-1.7**
OHAK				IAML		18 37 48.6	
	comp=N,163nm,0.6s						
OHAK				IAML		18 37 49.3	
	comp=E,164nm,0.6s						
CUT	**Chulitna**	**2.76**	**26**		**Pn**	**18 37 18.2**	**+0.2**
CUT				IAML		18 37 55.1	
	comp=N,148nm,0.5s						
CUT				IAML		18 37 55.3	
	comp=E,185nm,0.6s						
L22K	**Petersville**	**2.77**	**20**		**Pn**	**18 37 18.3**	**+0.2**
L22K				IAML		18 37 55.5	
	comp=E,75nm,0.4s						
P16K	**Nushagak River**	**2.78**	**253**		**Pn**	**18 37 18.3**	**0.0**
P16K				IAML		18 37 53.9	
	comp=N,154nm,0.9s						
P16K				IAML		18 37 54.0	
	comp=E,137nm,0.8s						
PLK5	**Peulik 5**	**2.86**	**229**		**Pn**	**18 37 19.6**	**+0.2**
SML	**Sawmill**	**2.89**	**48**		**Pn**	**18 37 18.4**	**-1.3**
SML				IAML		18 37 54.1	
	comp=E,104nm,0.7s						
SML				IAML		18 38 03.3	
	comp=N,152nm,0.7s						
PLK1	**Peulik 1**	**2.91**	**224**		**Pn**	**18 37 19.8**	**-0.1**
L18K	**Granite Mounta**	**2.94**	**322**		**Pn**	**18 37 19.8**	**-0.6**
L18K				IAML		18 37 55.1	
	comp=N,62nm,0.8s						
R17L	**Mt. Peulik Vol**	**2.96**	**220**		**Pn**	**18 37 20.9**	**+0.3**
PPLA	**Purkeypile**	**2.97**	**6**		**Pn**	**18 37 21.9**	**+1.0**
GLI	**Glacier Island**	**3.00**	**69**		**Pn**	**18 37 19.6**	**-1.6**
GLI				IAML		18 37 59.6	
	comp=N,171nm,0.6s						
N16K	**Nishlik Lake**	**3.00**	**283**		**Pn**	**18 37 20.9**	**-0.3**
PLBL	**Peulik Blue Cr**	**3.06**	**224**		**Pn**	**18 37 22.2**	**+0.2**
M23K	**Glacier View**	**3.11**	**51**		**Pn**	**18 37 21.8**	**-0.9**
HIN	**Hinchinbrook I**	**3.20**	**79**		**Pn**	**18 37 22.4**	**-1.4**
M16K	**Timber Creek**	**3.21**	**292**		**Pn**	**18 37 23.8**	**-0.1**
FID	**Port Fidalgo**	**3.26**	**73**		**Pn**	**18 37 22.4**	**-2.3**
SCM	**Sheep Creek Mo**	**3.29**	**53**		**Pn**	**18 37 24.2**	**-0.9**
SCM				IAML		18 38 08.3	
	comp=E,117nm,0.9s						
SCM				IAML		18 38 13.6	
	comp=N,135nm,0.8s						
MID	**Middleton Isla**	**3.34**	**96**		**Pn**	**18 37 24.9**	**-0.7**
MID				IAML		18 38 07.7	
	comp=N,119nm,0.8s						
MID				IAML		18 38 10.5	
	comp=E,107nm,1.0s						
L17K	**Donlin**	**3.44**	**312**		**Pn**	**18 37 26.3**	**-0.7**
K20K	**Telida**	**3.46**	**351**		**Pn**	**18 37 27.4**	**0.0**
WAT7	**Susitna Watana**	**3.47**	**32**		**Pn**	**18 37 27.3**	**-0.3**
SII	**Sitkinak Islan**	**3.48**	**192**	P	**Pn**	**18 37 26.7**	**-0.9**
SII	**Sitkinak Islan**	**3.48**	**192**		**Pn**	**18 37 25.7**	**-1.9**
CAST	**Castle Rocks**	**3.50**	**6**		**Pn**	**18 37 27.7**	**-0.1**
WAT1	**Susitna Watana**	**3.55**	**34**		**Pn**	**18 37 28.2**	**-0.4**
EYAK	**Cordova Ski Ar**	**3.59**	**77**	P	**Pn**	**18 37 28.9**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.59**	**77**		**Pn**	**18 37 27.9**	**-1.0**
EYAK				IAML		18 38 09.3	
	comp=E,61nm,0.4s						
EYAK				IAML		18 38 12.0	
	comp=N,67nm,0.5s						
WAT6	**Susitna Watana**	**3.61**	**41**		**Pn**	**18 37 28.8**	**-0.7**
O15K	**Ungalikthiuk R**	**3.63**	**261**		**Pn**	**18 37 29.9**	**+0.3**
N15K	**Kwethluk River**	**3.64**	**277**		**Pn**	**18 37 30.0**	**+0.3**
N15K				IAML		18 38 11.8	
	comp=N,52nm,0.9s						
N15K				IAML		18 38 50.1	
	comp=E,57nm,0.6s						
DIV	**Divide**	**3.69**	**68**		**Pn**	**18 37 29.4**	**-1.0**
DIV				IAML		18 38 13.7	
	comp=N,92nm,0.3s						
DIV				IAML		18 38 28.0	
	comp=E,46nm,0.7s						
L16K	**Owhat River**	**3.69**	**301**		**Pn**	**18 37 29.6**	**-0.8**
TRF	**Thorofare Moun**	**3.71**	**18**		**Pn**	**18 37 31.1**	**+0.3**
TRF				IAML		18 38 16.4	
	comp=N,50nm,0.7s						
TRF				IAML		18 38 17.1	
	comp=E,34nm,0.6s						
KTH	**Kantishna Hill**	**3.73**	**13**		**Pn**	**18 37 30.4**	**-0.6**
KTH				IAML		18 38 14.0	
	comp=E,32nm,0.9s						
KTH				IAML		18 39 03.9	
	comp=N,33nm,1.1s						
KLU	**Klutina**	**3.73**	**63**		**Pn**	**18 37 29.8**	**-1.3**
K17K	**Iditarod**	**3.82**	**319**		**Pn**	**18 37 31.6**	**-0.5**
K17K				IAML		18 38 38.9	
	comp=N,33nm,0.9s						
K17K				IAML		18 38 41.0	
	comp=E,59nm,1.1s						
M24K	**Tolsona, Glenn**	**3.90**	**53**		**Pn**	**18 37 32.8**	**-0.4**
M24K				IAML		18 38 33.4	
	comp=E,98nm,0.8s						
CHUM	**Lake Minchumin**	**3.95**	**3**		**Pn**	**18 37 33.8**	**-0.1**
RND	**Reindeer**	**3.95**	**27**		**Pn**	**18 37 33.5**	**-0.5**
M15K	**Kasigluk River**	**3.97**	**284**		**Pn**	**18 37 34.1**	**0.0**
DHY	**Denali Highway**	**4.08**	**38**	IAML		18 38 25.3	
	comp=N,32nm,0.5s						
DHY				IAML		18 38 26.7	
	comp=E,30nm,0.3s						
GOAT	**Goat Mountain**	**4.09**	**78**		**Pn**	**18 37 34.5**	**-1.4**
RAGM	**Ragged Mountai**	**4.11**	**80**		**Pn**	**18 37 34.6**	**-1.4**
BMRM	**Bremner River**	**4.21**	**72**		**Pn**	**18 37 36.1**	**-1.3**
BMRM				IAML		18 38 44.1	
	comp=N,77nm,0.7s						
BMRM				IAML		18 38 46.1	
	comp=E,60nm,0.8s						
MCK	**McKinley**	**4.22**	**24**		**Pn**	**18 37 37.3**	**-0.2**
MCK				IAML		18 39 00.9	
	comp=N,23nm,1.1s						
KAIM	**Kayak Island**	**4.24**	**87**		**Pn**	**18 37 37.0**	**-0.8**
O14K	**Tigyukauivet M**	**4.33**	**264**		**Pn**	**18 37 38.9**	**-0.1**
O14K				IAML		18 39 09.0	
	comp=N,20nm,0.8s						
N25K	**Chitina, Valde**	**4.37**	**64**		**Pn**	**18 37 38.3**	**-1.3**
CHIR	**Chirikof Islan**	**4.40**	**201**	P	**Pn**	**18 37 41.0**	**+1.1**
CHIR	**Chirikof Islan**	**4.40**	**201**		**Pn**	**18 37 38.7**	**-1.3**
CHIR				IAML		18 38 27.1	
	comp=N,45nm,0.8s						
CHIR				IAML		18 38 46.4	
	comp=E,32nm,1.2s						
N14K	**Kuskokwak Cree**	**4.45**	**273**		**Pn**	**18 37 40.5**	**0.0**
N14K				IAML		18 39 10.4	
	comp=N,34nm,0.8s						
N14K				IAML		18 39 15.7	
	comp=E,38nm,0.8s						
J17K	**VABM Dome**	**4.55**	**322**		**Pn**	**18 37 40.5**	**-1.5**
BERG	**Berg Lake**	**4.59**	**81**		**Pn**	**18 37 41.5**	**-1.0**
M14K	**Bethel**	**4.60**	**284**		**Pn**	**18 37 41.8**	**-0.7**
M14K				IAML		18 39 08.2	
	comp=E,18nm,1.1s						
M14K				IAML		18 39 28.8	
	comp=N,23nm,1.1s						
GLB	**Gilahina Butte**	**4.69**	**68**		**Pn**	**18 37 42.4**	**-1.4**
GLB				IAML		18 38 36.8	
	comp=N,52nm,0.7s						
GLB				IAML		18 38 37.1	
	comp=E,34nm,0.8s						
VRDI	**Verde Repeater**	**4.80**	**71**		**Pn**	**18 37 44.2**	**-1.4**
VRDI				IAML		18 38 39.9	
	comp=E,19nm,0.8s						
VRDI				IAML		18 38 51.0	
	comp=N,24nm,0.7s						
CRQM	**Cirque**	**4.89**	**76**		**Pn**	**18 37 45.9**	**-0.8**
I20K	**Naaghedeneel**	**4.92**	**352**		**Pn**	**18 37 46.7**	**-0.2**
I20K				IAML		18 39 08.4	
	comp=N,44nm,1.1s						
I20K				IAML		18 39 33.2	
	comp=E,48nm,1.2s						
NEA2	**Nenana**	**4.98**	**19**		**Pn**	**18 37 46.9**	**-0.9**
J16K	**Anvik River**	**4.99**	**315**	IAML		18 39 10.6	
	comp=N,14nm,0.8s						
L14K	**Kuka Creek**	**5.04**	**290**		**Pn**	**18 37 48.5**	**+0.1**
L14K				IAML		18 39 14.5	
	comp=N,18nm,1.1s						
L14K				IAML		18 39 19.6	
	comp=E,27nm,1.1s						
WRH	**Wood River Hil**	**5.05**	**24**		**Pn**	**18 37 47.7**	**-0.9**
WRH				IAML		18 38 45.0	
	comp=N,12nm,1.0s						
K24K	**Donnelly Dome**	**5.11**	**38**	IAML		18 39 04.4	
	comp=N,42nm,0.4s						
BARK	**Barkley Ridge**	**5.19**	**81**		**Pn**	**18 37 50.3**	**-0.3**
HDA	**Harding Lake**	**5.25**	**29**	IAML		18 38 49.8	
	comp=E,35nm,0.5s						
HDA				IAML		18 38 49.9	
	comp=N,33nm,0.5s						
I21K	**Tanana**	**5.26**	**4**		**Pn**	**18 37 50.8**	**-0.8**
I21K				IAML		18 39 43.3	
	comp=E,11nm,1.2s						
PTPK	**Patty Peak**	**5.27**	**72**		**Pn**	**18 37 50.9**	**-0.9**
KIAG	**Kiagna River**	**5.29**	**75**		**Pn**	**18 37 51.2**	**-0.9**
BALM	**Baldy**	**5.30**	**74**		**Pn**	**18 37 51.3**	**-0.9**
M26K	**Nabesna, AK**	**5.36**	**59**	IAML		18 38 53.7	
	comp=E,14nm,0.5s						
M26K				IAML		18 38 54.9	
	comp=N,17nm,0.6s						
RIDG	**Independent Ri**	**5.36**	**41**	IAML		18 39 09.6	
	comp=E,24nm,0.9s						
RIDG				IAML		18 39 11.2	
	comp=N,22nm,1.0s						
I17K	**Unalakleet**	**5.41**	**320**		**Pn**	**18 37 52.2**	**-1.3**
COLA	**College**	**5.46**	**23**	P	**Pn**	**18 37 53.5**	**-0.6**
COLA	**College**	**5.46**	**23**		**Pn**	**18 37 53.5**	**-0.9**
I23K	**Minto, Yukon-K**	**5.46**	**16**		**Pn**	**18 37 53.7**	**-0.4**
GRNC	**Granite Creek**	**5.56**	**77**		**Pn**	**18 37 55.3**	**-0.5**
IL31		**5.57**	**27**		**Pn**	**18 37 54.7**	**-1.0**
ILAR	**Eielson Array**	**5.57**	**27**	P	**Pn**	**18 37 54.8**	**-1.0**
	comp=N,2.4nm,0.4s,baz=217,slow=14,SNR=30						
ILAR				S	**Sn**	**18 38 54.1**	**-4.3**
	comp=N,3.0nm,0.6s,baz=208,slow=15,SNR=6.8						
H20K	**Anotleneega Mo**	**5.64**	**351**		**Pn**	**18 37 56.2**	**-0.4**
BARN	**Barnard Glacie**	**5.64**	**74**		**Pn**	**18 37 56.5**	**-0.3**
H21K	**Melozitna Rive**	**5.73**	**0**		**Pn**	**18 37 57.5**	**-0.3**
H18K	**Honhosa River**	**5.81**	**336**		**Pn**	**18 37 58.5**	**-0.4**
SCRK	**Sand Creek**	**5.81**	**42**		**Pn**	**18 37 57.4**	**-1.6**
LOGN	**Logan Glacier**	**5.94**	**76**		**P

comp=Z,1.7nm,0.7s
SONM Songino Array 54.88 306 P P 18 45 55.0 +0.3
ZAA0 Zalesovo Array 57.46 324 P P 18 46 12.0 -0.7
ZALV Zalesovo Beam 57.46 324 P P 18 46 12.4 -0.3
comp=Z,1.9nm,0.5s,baz=29,slow=7.1,SNR=12
comp=Z,1.9nm,0.5s
ZALV Zalesovo Beam 57.46 324 P P 18 46 12.2 -0.5
KURK Kurchatov 62.11 326 P P 18 46 43.9 -0.6
KURK IAmb IAmb 18 47 23.5
comp=Z,1.0nm,0.9s
BVAR Borovoye Array 62.15 332 P P 18 46 44.0 -0.8
comp=Z,2.4nm,0.5s,baz=31,slow=6.2,SNR=16
comp=Z,2.4nm,0.5s
KURBB Kurchatov Arra 62.22 326 P P 18 46 44.5 -0.8
comp=Z,1.0nm,0.6s,baz=27,slow=6.3,SNR=8.1
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 64.52 321 P P 18 46 59.0 -1.5
comp=Z,0.4nm,0.6s,baz=25,slow=4.0,SNR=4.4
comp=Z,0.4nm,0.6s

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*IDC **04** 19:09:21.7±1.8,8˚93S×112˚34E,h88km±15km,mb4.9/30, mbtmp5.2/33,MS3.5/23,Error ellipse: s-maj=13.8km s-min=8.9km az=71.0*

*BJI **04** 19:09:22.0,9˚00S×112˚30E,h100km,mB5.1/19,mb5.4/71*

*NEIC **04** 19:09:22.6±2.1,8˚93S±0˚08×112˚38E±0˚05,h94km±4km, mb5.3/126,Mww4.8/10,Error ellipse: s-maj=11.2km s-min=7.5km az=196.0*

*DJA **04** 19:09:22.1±0.1,9˚S±2˚×11˚2E±˚,h91km±2km,M5.0/94, mB5.5/56,mb5.2/94,MLv5.6/41,Mw4.9/43,Mw(mB)5.0/56, MwMwp4.9/5,Mwp5.2/5*

*MOS **04** 19:09:22.2±0.9,8˚85S×112˚36E,h110km,mb5.3/75,Error ellipse: s-maj=8.2km s-min=4.3km az=113.9*

*GFZ **04** 19:09:23.2,9˚02S×112˚29E,h94km,Mw4.8/48,Moment Tension Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.76; Mθθ=0.34; Mϕϕ1.10; Mrθ=1.17; Mθϕ=0.44; Mϕr0.79; Fault plane solution: M₀1.77022×10¹⁶ NP1: ϕs132.23275°,δ75.79068°,λ-116.41839°. NP2: ϕs15.93932°,δ29.75339°,λ-29.64484°. Principal axes: T 1.7593, Plg26.1242°, Azm242.7448°; N 0.0216, Plg25.5508°, Azm139.1855°; P -1.7809, Plg51.9486°, Azm11.5408°;*

*GFZ **04** 19:09:23.1±0.3,9˚S±3˚×11˚2E±˚,h104km±3km,M5.0/31, mb5.3/31*

*GCMT **04** 19:09:23.6±0.3,9˚18S±0˚02×112˚31E±0˚02,h104km±3km, MW4.9/97,Moment Tension Solution. s39,c41; s97,c141; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.17±.08; Mθθ-0.21±.09; Mϕϕ2.38±.09; Mrθ-0.69±.06; Mθϕ-0.87±.08; Mϕr0.88±.07; Best double couple: M₀2.66200×10¹⁶ NP1:ϕs355.00000°,δ34.00000°,λ-71.00000°. NP2: ϕs153.00000°,δ58.00000°,λ-103.00000°. Principal axes: T 2.8620, Plg12.0000°, Azm252.0000°; N -0.3980, Plg11.0000°, Azm159.0000°; P -2.4630, Plg74.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 19:09:21.9±0.3,9˚02S±0˚04×112˚29E±0˚03,h96km±2km, h96km:pP-P,n958,σ1§11/1008,mb5.3/201,32C-49D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJI	**Sawahan-Nganju**	**1.34**	**337**	P	**Pn**	**19 09 48.4**	**+2.2**
SNJI				S	**Sn**	**19 10 07.5**	**+3.0**
JAGI	**Jajag, Banyuwa**	**1.92**	**73**	P	**Pn**	**19 09 54.4**	**+1.2**
JAGI	**Jajag, Banyuwa**	**1.92**	**73**	S	**Sn**	**19 10 18.2**	**+1.0**
JAGI	**Jajag, Banyuwa**	**1.92**	**73**		**Pn**	**19 09 54.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**1.92**	**73**	P	**Pn**	**19 09 54.1**	**+0.8**
JAGI	**Jajag, Banyuwa**	**1.92**	**73**	P	**Pn**	**19 09 54.5**	**+1.2**
UGM	**Wanagama**	**2.07**	**302**	P	**Pn**	**19 09 56.6**	**+1.3**
UGM	**Wanagama**	**2.07**	**302**	S	**Sn**	**19 10 21.7**	**+0.9**
UGM	**Wanagama**	**2.07**	**302**		**Pn**	**19 09 57.0**	**+1.8**
UGM				Sn	**Sn**	**19 10 21.7**	**+0.9**
UGM	**Wanagama**	**2.07**	**302**	P	**Pn**	**19 09 57.4**	**+2.1**
UGM	**Wanagama**	**2.07**	**302**	P	**Pn**	**19 09 57.7**	**+2.4**
YOGI	**Yogyakarta**	**2.31**	**301**	P	**Pn**	**19 09 59.9**	**+1.5**
SMRI	**Semarang**	**2.69**	**317**	P	**Pn**	**19 10 06.0**	**+2.6**
SMRI	**Semarang**	**2.69**	**317**		**Pn**	**19 10 05.9**	**+2.4**
SMRI				Sn	**Sn**	**19 10 35.1**	**-0.2**
SMRI	**Semarang**	**2.69**	**317**	P	**Pn**	**19 10 05.8**	**+2.4**
SMRI	**Semarang**	**2.69**	**317**	P	**Pn**	**19 10 06.6**	**+3.1**
KHKI	**Kahang-Kahang**	**3.34**	**79**	P	**Pn**	**19 10 13.8**	**+1.6**
TWSI	**Taliwang, Sumb**	**4.54**	**87**	P	**Pn**	**19 10 29.6**	**+1.2**
BBJI	**Bungbulang**	**4.85**	**288**	P	**Pn**	**19 10 33.4**	**+0.7**
BBJI	**Bungbulang**	**4.85**	**288**		**Pn**	**19 10 33.1**	**+0.4**
BBJI	**Bungbulang**	**4.85**	**288**	P	**Pn**	**19 10 33.3**	**+0.7**
LEM	**Lembang**	**5.12**	**295**	P	**Pn**	**19 10 38.1**	**+1.7**
	146nm,0.6s,baz=23,slow=14,SNR=39						
LEM				S	**Sn**	**19 11 36.3**	**+1.9**
	285nm,0.4s,baz=228,slow=22,SNR=6.9						
PLAI	**Plampang**	**5.42**	**88**	P	**Pn**	**19 10 41.5**	**+1.2**
PLAI	**Plampang**	**5.42**	**88**	P	**Pn**	**19 10 41.2**	**+0.9**
PLAI	**Plampang**	**5.42**	**88**	P	**Pn**	**19 10 41.4**	**+1.0**
DBNI	**Kabupaten Domp**	**5.97**	**85**	P	**Pn**	**19 10 48.3**	**+0.5**
DBJI	**Dramaga**	**6.02**	**294**	P	**Pn**	**19 10 50.3**	**+1.8**
	2.1nm3μm5μm281nm,1.0s						
XMI	**Christmas Isla**	**6.66**	**257**	P	**Pn**	**19 10 55.8**	**-1.5**
SBJI	**Serang**	**6.76**	**295**	P	**Pn**	**19 11 00.6**	**+2.1**
	2.7nm11μm541nm,0.9s						
WBSI	**Waikabubak, Su**	**7.03**	**96**	P	**Pn**	**19 10 58.3**	**-4.0**
	4μm652nm,0.7s						
LBFI	**Labuhan Bajo,**	**7.53**	**86**	P	**Pn**	**19 11 08.0**	**-1.0**
TPI	**Tanjungpandan**	**7.75**	**323**	P	**Pn**	**19 11 14.5**	**+2.4**
WSI	**Waingapu**	**7.92**	**95**	P	**Pn**	**19 11 12.0**	**-2.4**
KAPI	**Kapang**	**8.40**	**62**	P	**Pn**	**19 11 21.5**	**+0.5**
	75nm,0.4s,baz=224,slow=6.9,SNR=56						
KAPI				LR	LR	19 14 55.9	
	comp=Z,242nm,21.0s,baz=252,slow=40						
KAPI	**Kapang**	**8.40**	**62**	P	**Pn**	**19 11 22.9**	**+1.9**
KAPI	**Kapang**	**8.40**	**62**		**Pn**	**19 11 22.6**	**+1.7**
KAPI	**Kapang**	**8.40**	**62**	P	**Pn**	**19 11 22.7**	**+1.7**
KAPI	**Kapang**	**8.40**	**62**	P	**Pn**	**19 11 22.9**	**+1.9**
KAPI	**Kapang**	**8.40**	**62**	P	**Pn**	**19 11 22.6**	**+1.7**
	1μm121nm,0.9s						
KAPI	**Kappang**	**8.40**	**62**	P	**Pn**	**19 11 22.8**	**+1.9**
KLI	**Kotabumi**	**8.46**	**299**	P	**Pn**	**19 11 24.1**	**+2.4**
	3μm193nm,0.8s						
KASI	**Kota Agung**	**8.48**	**294**	P	**Pn**	**19 11 22.9**	**+0.9**
BSSI	**Bau Bau, Buton**	**8.62**	**71**	P	**Pn**	**19 11 25.4**	**+1.5**
	6μm343nm,0.6s						
MMSI	**Mamuju**	**9.10**	**47**	P	**Pn**	**19 11 33.1**	**+2.6**
	1μm131nm,1.0s						
PPBI	**Pangkal Pinang**	**9.16**	**318**	P	**Pn**	**19 11 35.3**	**+4.0**
PMBI	**Palembang**	**9.62**	**309**	Pn	**Pn**	**19 11 38.8**	**+1.2**
MMRI	**Maumere**	**9.84**	**89**		**Pn**	**19 11 37.4**	**-3.1**
MMRI	**Maumere**	**9.84**	**89**	P	**Pn**	**19 11 37.7**	**-2.8**
	3μm260nm,0.7s						
MMRI	**Maumere**	**9.84**	**89**	P	**Pn**	**19 11 38.1**	**-2.4**
MNAI	**Manna**	**10.37**	**296**	P	**Pn**	**19 11 47.7**	**0.0**
MNAI	**Manna**	**10.37**	**296**		**Pn**	**19 11 47.5**	**-0.2**
MNAI	**Manna**	**10.37**	**296**	P	**Pn**	**19 11 47.5**	**-0.2**
MNAI	**Manna**	**10.37**	**296**	P	**Pn**	**19 11 48.0**	**+0.3**
KKSI	**Kolaka, Sulawe**	**10.47**	**63**	P	**Pn**	**19 11 52.9**	**+3.8**
	2μm118nm,0.5s						
KSI	**Kapahiang**	**11.02**	**298**	P	**Pn**	**19 11 57.5**	**+0.9**
PCI	**Palu**	**11.02**	**43**	P	**Pn**	**19 12 00.0**	**+3.4**
	2μm144nm,0.8s						
BATI	**Baumata**	**11.27**	**97**	P	Pn	19 11 53.3	-6.7
	164nm,0.3s,baz=310,slow=2.4,SNR=48						
BATI				S	Sn	19 13 52.9	-11
	188nm,0.4s,baz=12,slow=21,SNR=9.9						
DSRI	**Dabo**	**11.45**	**317**	P	**Pn**	**19 12 06.9**	**+4.5**
SOEI	**Soe**	**11.84**	**94**	P	**Pn**	**19 12 07.0**	**-0.7**
SOEI	**Soe**	**11.84**	**94**		**Pn**	**19 12 04.7**	**-3.0**
SOEI	**Soe**	**11.84**	**94**	P	**Pn**	**19 12 06.7**	**-1.0**
	3μm287nm,0.9s						
SOEI	**Soe**	**11.84**	**94**	P	**Pn**	**19 12 08.2**	**+0.5**
LUWI	**Luwuk**	**13.10**	**53**		**Pn**	**19 12 24.0**	**-0.4**
LUWI	**Luwuk**	**13.10**	**53**	P	**Pn**	**19 12 27.4**	**+3.0**
	1μm93nm,1.0s						
LUWI	**Luwuk**	**13.10**	**53**	P	**P**	**19 12 28.4**	**-2.6**
TOLI2	**Tolitoli**	**13.15**	**40**	P	**Pn**	**19 12 28.2**	**+3.2**
TOLI2	**Tolitoli**	**13.15**	**40**		**Pn**	**19 12 25.5**	**+0.5**
TOLI2	**Tolitoli**	**13.15**	**40**	P	**P**	**19 12 29.5**	**-2.0**
MYKOM	**Kota Tinggi**	**13.65**	**322**		**Pn**	**19 12 31.4**	**-0.1**
MYKOM	**Kota Tinggi**	**13.65**	**322**	P	**P**	**19 12 34.8**	**-2.2**
GIRL	**Giralia**	**13.67**	**172**	P	**Pn**	**19 12 29.1**	**-2.6**
	comp=Z,40nm,1.9s						
GIRL	**Giralia**	**13.67**	**172**	Pn	**Pn**	**19 12 28.8**	**-3.0**
MBWA	**Marble Bar**	**14.03**	**150**	P	Pn	19 12 32.3	-4.3
	comp=Z,48nm,0.8s						
MBWA	**Marble Bar**	**14.03**	**150**		Pn	19 12 32.3	-4.2
MBWA	**Marble Bar**	**14.03**	**150**	P	**Pn**	**19 12 33.0**	**-3.5**
MBWA				S	Sn	19 14 57.2	-14
MBWA	**Marble Bar**	**14.03**	**150**	P	**Pn**	**19 12 34.7**	**-1.8**
GTOI	**Gorontalo**	**14.36**	**49**	P	**P**	**19 12 43.9**	**-1.0**
	comp=Z,106nm,0.7s						
KKM	**Kota Kinabalu**	**15.47**	**15**	P	**P**	**19 12 56.8**	**-0.6**
KKM	**Kota Kinabalu**	**15.47**	**15**		**Pn**	**19 12 54.0**	**-1.0**
KKM	**Kota Kinabalu**	**15.47**	**15**	P	**P**	**19 12 58.3**	**+0.9**
COCO	**West Island**	**15.52**	**257**	P	**P**	**19 12 57.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**15.79**	**126**	P	**Pn**	**19 12 58.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**15.79**	**126**	P	**Pn**	**19 12 57.8**	**-1.2**
	comp=Z,30nm,0.8s,baz=308,slow=8.4,SNR=47						
FITZ				S	Sn	19 15 38.3	-15
	comp=Z,46nm,0.8s,baz=42,slow=9.7,SNR=5.6						
FITZ				LR	LR	19 19 05.1	
	comp=Z,121nm,20.9s,baz=317,slow=37						
FITZ	**Fitzroy Crossi**	**15.79**	**126**	Pn	**Pn**	**19 12 57.2**	**-1.7**
NLAI	**Namlea**	**15.80**	**70**	P	**Pn**	**19 12 59.9**	**+0.9**
	comp=Z,89nm,0.7s						
KNRA	**Kununurra**	**17.39**	**114**	P	**Pn**	**19 13 19.4**	**+0.8**
	comp=Z,92nm,1.1s						
KNRA	**Kununurra**	**17.39**	**114**		**Pn**	**19 13 18.9**	**+0.3**
TNTI	**Ternate**	**17.89**	**58**	P	**Pn**	**19 13 26.4**	**+1.6**
TNTI	**Ternate**	**17.89**	**58**	P	**P**	**19 13 23.5**	**-0.6**
TNTI	**Ternate**	**17.89**	**58**	P	**Pn**	**19 13 26.2**	**+1.4**
	comp=Z,67nm,1.0s						
TNTI	**Ternate**	**17.89**	**58**	P	**Pn**	**19 13 25.1**	**+0.3**
BNDI	**Bandanaira**	**18.05**	**77**	P	**Pn**	**19 13 27.6**	**+1.0**
SGSI	**Sangihe**	**18.26**	**47**	P	**Pn**	**19 13 30.6**	**+1.4**
	comp=Z,1μmcomp=Z,124nm,0.7s						
KULM	**Kulim**	**18.36**	**320**	P	**Pn**	**19 13 30.4**	**+0.1**
KULM	**Kulim**	**18.36**	**320**		**P**	**19 13 27.5**	**-1.7**
KULM	**Kulim**	**18.36**	**320**	P	**Pn**	**19 13 30.9**	**+0.6**
KULM	**Kulim**	**18.36**	**320**	P	**P**	**19 13 30.0**	**+0.8**
MEEK	**Meekatharra**	**18.52**	**162**	P	**P**	**19 13 31.7**	**+0.8**
	comp=Z,78nm,0.6s						
MEEK	**Meekatharra**	**18.52**	**162**	P	**P**	**19 13 31.9**	**+1.0**
MEEK	**Meekatharra**	**18.52**	**162**	P	**Pn**	**19 13 32.5**	**+0.3**
DRS	**Darwin Rock St**	**18.59**	**102**	P	**Pn**	**19 13 33.2**	**+0.1**
SAUI	**Saumlaki**	**18.83**	**88**	P	**P**	**19 13 34.0**	**-0.3**
MTN	**Manton Dam**	**18.88**	**103**	P	**P**	**19 13 35.7**	**+0.8**
	comp=Z,267nm,0.9s						
MTN	**Manton Dam**	**18.88**	**103**		**P**	**19 13 33.6**	**-1.3**
KDU	**Kakadu**	**20.15**	**102**	P	**P**	**19 13 48.4**	**-0.3**
	comp=Z,34nm,0.9s						
MORW	**Morawa**	**20.25**	**170**	P	**P**	**19 13 43.9**	**-5.8**
	comp=Z,15nm,2.2s						
SIJI	**Sorong**	**20.55**	**68**	P	**P**	**19 13 51.2**	**-1.8**
	comp=Z,43nm,0.9s,baz=292,slow=7.2,SNR=23						
	comp=Z,43nm,0.9s						
SIJI	**Sorong**	**20.55**	**68**	P	**P**	**19 13 53.1**	**0.0**
	comp=Z,101nm,0.9s						
FAKI	**Fak Fak**	**20.74**	**74**	P	**P**	**19 13 54.5**	**-0.6**
FAKI	**Fak Fak**	**20.74**	**74**	P	**P**	**19 13 52.5**	**-2.6**
DAV	**Davao City (W)**	**20.76**	**40**	LR	LR	19 22 26.2	
	comp=Z,184nm,19.8s,baz=216,slow=38						
BLDU	**Ballidu**	**21.87**	**170**	P	**P**	**19 14 07.5**	**+0.4**
	comp=Z,12nm,0.5s						
BLDU	**Ballidu**	**21.87**	**170**	P	**P**	**19 14 07.6**	**+0.6**
WRKA	**Warakurna**	**22.04**	**138**	P	**P**	**19 14 08.8**	**-0.1**
	comp=Z,27nm,0.8s						
BSI	**Banda Aceh**	**22.25**	**310**	P	**P**	**19 14 12.1**	**+0.9**
	comp=Z,46nm,1.1s						
RKPI	**Ransiki, Papua**	**23.02**	**72**	P	**P**	**19 14 19.7**	**+0.7**
	comp=Z,69nm,0.7s						
KLBR	**Kellerberrin**	**23.02**	**168**	P	**P**	**19 14 18.9**	**0.0**
MWPI	**Manokwari, Pap**	**23.09**	**71**	P	**P**	**19 14 21.0**	**+1.3**
	comp=Z,1μmcomp=Z,117nm,1.0s						
WB0	**Warramunga Arr**	**23.89**	**119**	P	**P**	**19 14 27.2**	**+0.2**
WRA	**Warramunga Arr**	**23.91**	**119**	P	**P**	**19 14 27.3**	**+0.1**
	comp=Z,32nm,0.7s,baz=292,slow=12,SNR=223						
WRA				PcP	**PcP**	**19 18 08.4**	**+0.8**
	comp=Z,6.9nm,0.9s,baz=302,slow=1.7,SNR=4.8						
WRA				S	S	19 18 49.2	+12
	comp=Z,12nm,1.0s,baz=291,slow=24,SNR=7.7						
	comp=Z,32nm,0.7s						
WRAB	**Tennant Creek**	**23.92**	**119**	P	**P**	**19 14 27.5**	**+0.3**
WRAB	**Tennant Creek**	**23.92**	**119**	*i* P	**P**	**19 14 27.2**	**0.0**
WRAB				*i* *PP	**pP**	**19 14 47.9**	**+0.9**
WRAB	**Tennant Creek**	**23.92**	**119**	P	**P**	**19 14 27.8**	**+0.6**
KMBL	**Kambalda**	**23.96**	**159**	P	**P**	**19 14 27.5**	**+0.1**
	comp=Z,17nm,1.1s						
NWAO	**Narrogin (SRO)**	**24.22**	**170**	LR	LR	19 23 22.5	
	comp=Z,103nm,20.3s,baz=302,slow=35						
SRPI	**Serui, Papua**	**24.86**	**75**	P	**P**	**19 14 36.2**	**+0.4**
BAKI	**Biak**	**24.95**	**73**	P	**P**	**19 14 37.0**	**+0.4**
	comp=Z,61nm,0.9s						
AS14	**Alice Springs**	**25.28**	**128**	P	**P**	**19 14 39.9**	**+0.3**
	comp=Z,37nm,0.8s						
ASAR	**Alice Springs**	**25.28**	**128**	P	**P**	**19 14 40.0**	**+0.3**
	comp=Z,22nm,0.7s,baz=305,slow=7.8,SNR=166						
ASAR				PcP	**PcP**	**19 18 11.7**	**+1.1**
	comp=Z,9.8nm,0.8s,baz=329,slow=1.7,SNR=15						
ASAR				S	S	19 19 18.9	+20
	comp=Z,22nm,1.2s,baz=305,slow=25,SNR=10						
ASAR				LR	LR	19 24 43.0	
	comp=Z,45nm,21.8s,baz=292,slow=36						
	comp=Z,22nm,0.7s						
ASAR	**Alice Springs**	**25.28**	**128**	P	**P**	**19 14 39.7**	**+0.1**
ASAR					**PcP**	**19 18 11.2**	**+0.6**
AS31	**Alice Springs**	**25.28**	**128**	P	**P**	**19 14 40.1**	**+0.5**
	comp=Z,13nm,0.8s						
AS31	**Alice Springs**	**25.28**	**128**	P	**P**	**19 14 39.7**	**+0.1**
AS01	**Alice Springs**	**25.32**	**128**	P	**P**	**19 14 40.3**	**+0.4**
AS09	**Alice Springs**	**25.33**	**128**	P	**P**	**19 14 40.9**	**+0.8**
	comp=Z,49nm,0.8s						
AS17	**Alice Springs**	**25.35**	**128**	P	**P**	**19 14 40.8**	**+0.6**
	comp=Z,44nm,0.8s						
FORT	**Forrest**	**26.17**	**148**	P	**P**	**19 14 48.4**	**+0.9**
	comp=Z,54nm,0.7s						
FORT	**Forrest**	**26.17**	**148**	P	**P**	**19 14 47.5**	**0.0**
QIZ	**Qiongzhong**	**27.98**	**355**	P	**P**	**19 15 03.7**	**-0.1**
QIZ				S	**S**	**19 19 42.8**	**+1.7**
QIZ				L	L		
	comp=Z,250nm,12.4s						
QIZ				L	L		
	comp=Z,220nm,8.2s						
QIZ				L	L		
	comp=Z,170nm,13.1s						
GENI	**Genyem**	**28.44**	**79**	P	**P**	**19 15 07.3**	**-0.7**
QIS	**Mount Isa**	**28.73**	**117**	P	**P**	**19 15 11.3**	**+0.7**
	comp=Z,36nm,0.9s						
QIS	**Mount Isa**	**28.73**	**117**	P	**P**	**19 15 11.1**	**+0.5**
QIS	**Mount Isa**	**28.73**	**117**	P	**P**	**19 15 10.9**	**+0.3**
CM31	**Chiang Mai Arr**	**30.32**	**334**	P	**P**	**19 15 25.6**	**+1.1**
CM31				IAmb	IAmb	19 15 27.0	
	comp=Z,63nm,1.1s						
CM31	**Chiang Mai Arr**	**30.32**	**334**	P	**P**	**19 15 25.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**30.32**	**334**	P	**P**	**19 15 25.1**	**+0.5**
	comp=Z,37nm,0.9s,baz=169,slow=8.0,SNR=175						
CMAR				PcP	**PcP**	**19 18 24.6**	**+1.8**
	comp=Z,5.1nm,0.8s,baz=194,slow=3.2,SNR=10						
	comp=Z,37nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.32**	**334**		**P**	**19 15 25.6**	**+1.0**
CMAR					**PcP**	**19 18 24.4**	**+1.5**
CMAR	**Chiang Mai Arr**	**30.32**	**334**	*i* P	**P**	**19 15 25.7**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,33nm,0.8s						
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.6**	**+1.3**
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 27.9**	**+0.7**
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.2**	**+0.9**
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.6**	**+1.3**
	comp=Z,32nm,1.8s						
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.9**	**+1.6**
CHTO	**Chiang Mai**	**30.64**	**335**	P	**P**	**19 15 28.8**	**+1.5**
CHTO				pP	**pP**	**19 15 50.3**	**+1.4**
CHTO				PcP	**PcP**	**19 18 24.9**	**+1.2**
COEN	**Coen**	**30.64**	**102**	P	**P**	**19 15 28.2**	**+0.7**
	comp=Z,64nm,1.0s						
COEN	**Coen**	**30.64**	**102**	P	**P**	**19 15 27.5**	**0.0**
COEN				IAmb	IAmb	19 15 29.6	
	comp=Z,51nm,0.9s						
COEN	**Coen**	**30.64**	**102**	P	**P**	**19 15 28.4**	**+0.9**
SLVN	**Son La**	**31.27**	**345**	P	**P**	**19 15 34.4**	**+1.4**
BBOO	**Buckleboo**	**32.29**	**141**	P	**P**	**19 15 41.9**	**+0.1**
	comp=Z,23nm,1.0s						
BBOO	**Buckleboo**	**32.29**	**141**	P	**P**	**19 15 42.1**	**+0.3**
BBOO	**Buckleboo**	**32.29**	**141**	P	**P**	**19 15 41.9**	**+0.1**
BBOO				IAmb	IAmb	19 15 54.9	
	comp=Z,80nm,1.9s						
BBOO				PcP	**PcP**	**19 18 28.8**	**+0.8**
MTSU	**Mount Surprise**	**32.37**	**110**	P	**P**	**19 15 44.4**	**+1.7**
	comp=Z,23nm,0.9s						
MTSU	**Mount Surprise**	**32.37**	**110**	P	**P**	**19 15 44.6**	**+1.9**
MTSU	**Mount Surprise**	**32.37**	**110**	P	**P**	**19 15 44.5**	**+1.9**
INKA	**Innaminka**	**32.66**	**129**		**P**	**19 15 45.9**	**+0.9**
NPW	**Naypyitaw**	**32.75**	**331**	P	**P**	**19 15 47.0**	**+1.1**
SSLB	**Suanglung**	**33.69**	**14**	P	**P**	**19 15 54.3**	**+0.3**
SSLB				IAmb	IAmb	19 15 59.8	
	comp=Z,20nm,0.7s						
NACB	**Ninganchiao**	**34.22**	**15**	P	**P**	**19 15 57.7**	**-0.9**
PMG	**Port Moresby**	**34.41**	**93**	P	**P**	**19 16 01.9**	**+1.5**
PMG	**Port Moresby**	**34.41**	**93**	P	**P**	**19 16 01.7**	**+1.3**
	comp=Z,28nm,1.2s						
HTT	**Hallett**	**34.53**	**139**	P	**P**	**19 16 02.0**	**+0.7**
	comp=Z,5.2nm,0.9s						
HTT	**Hallett**	**34.53**	**139**	P	**P**	**19 16 02.0**	**+0.7**
CTA	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 03.5**	**+1.6**
	comp=Z,15nm,1.5s						
CTA	**Charters Tower**	**34.59**	**112**	LR	LR	19 30 06.9	
	comp=Z,65nm,20.6s,baz=246,slow=36						
CTA	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 03.4**	**+1.5**
CTAO	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 03.4**	**+1.5**
CTAO	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 01.1**	**-0.8**
CTAO				IAmb	IAmb	19 16 04.3	
	comp=Z,35nm,1.1s						
CTAO	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 01.1**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,35nm,1.1s						
CTAO	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 01.8**	**-0.2**
CTAO	**Charters Tower**	**34.59**	**112**	P	**P**	**19 16 03.0**	**+1.1**
CTAO				PcP	**PcP**	**19 18 35.6**	**+1.0**
YHNB	**Yeheng**	**34.64**	**15**	P	**P**	**19 16 02.5**	**+0.2**
YOJ	**Yonaguni jima**	**34.89**	**17**	P	**P**	**19 16 04.4**	**+0.1**
YOJ	**Yonaguni jima**	**34.89**	**17**	P	**P**	**19 16 04.4**	**+0.1**
YOJ				pmax	pmax		
	comp=Z,134nm,1.2s						
QLP	**Quilpie**	**34.92**	**124**	P	**P**	**19 16 06.3**	**+1.6**
	comp=Z,70nm,1.6s,comp=Z,0.0nm						
QLP	**Quilpie**	**34.92**	**124**	P	**P**	**19 16 06.5**	**+1.8**
QLP	**Quilpie**	**34.92**	**124**	P	**P**	**19 16 06.4**	**+1.8**
KMI	**Kunming**	**35.19**	**345**	P	**P**	**19 16 09.5**	**+2.2**
KMI				PcP	**PcP**	**19 18 35.6**	**-0.9**
KMI2	**Kunming**	**35.22**	**345**	⇓P	**P**	**19 16 09.6**	**+2.2**
KMI2				pmax	pmax		
	comp=Z,21nm,1.4s						
KMI2				L	L		
	comp=Z,550nm,19.3s						
KMI2				L	L		
	comp=Z,330nm,21.7s						
KMI2				L	L		
	comp=Z,340nm,25.0s						
PALK	**Pallekele**	**35.40**	**296**	LR	LR	19 30 19.6	
	comp=Z,56nm,20.6s,baz=110,slow=36						
PALK	**Pallekele**	**35.40**	**296**	P	**P**	**19 16 09.1**	**+0.1**
PALK				IAmb	IAmb	19 16 11.1	
	comp=Z,30nm,1.1s						
PALK	**Pallekele**	**35.40**	**296**	P	**P**	**19 16 09.1**	**+0.1**
PALK				pmax	pmax		
	comp=Z,30nm,1.1s						
PALK	**Pallekele**	**35.40**	**296**	P	**P**	**19 16 09.7**	**+0.7**
PALK	**Pallekele**	**35.40**	**296**	P	**P**	**19 16 09.8**	**+0.8**
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**35.44**	**134**	P	**P**	**19 16 10.0**	**+0.9**
	comp=Z,339nm,0.7s						
STKA	**Stephens Creek**	**35.44**	**134**	P	**P**	**19 16 10.2**	**+1.2**
	comp=Z,54nm,0.6s,baz=312,slow=8.2,SNR=111						
STKA				PcP	**PcP**	**19 18 37.9**	**+1.0**
	comp=Z,25nm,0.7s,baz=316,slow=4.2,SNR=9.1						
STKA				LR	LR	19 30 08.7	
	comp=Z,59nm,21.2s,baz=312,slow=35						
	comp=Z,54nm,0.6s						
STKA	**Stephens Creek**	**35.44**	**

XAN	**Xi'an**	**42.95**	**356**	⇓P		**P**		**19 17 11.0**	**-0.5**	
XAN				pmax		pmax				
	comp=Z,38nm,1.0s									
XAN				pmax		pmax				
	comp=Z,130nm,4.2s									
XAN				L		L				
	comp=Z,960nm,16.5s									
XAN				L		L				
	comp=Z,480nm,18.3s									
XAN				L		L				
	comp=Z,560nm,22.0s									
LYN	**LuoYang**	**43.34**	**0**	P		**P**		**19 17 15.2**	**+0.6**	
LYN				pmax		pmax				
	comp=Z,70nm,0.8s									
LSA	**Lhasa**	**43.55**	**333**	*i* P		**P**		**19 17 18.1**	**+1.2**	
	SNR=8.3									
LSA	**Lhasa**	**43.55**	**333**	P		**P**		**19 17 17.5**	**+0.6**	
LSA				IAmb		IAmb		19 17 19.2		
	comp=Z,39nm,0.8s									
LSA	**Lhasa**	**43.55**	**333**	⇓*i* P		P		19 17 02.6	-14	
LSA				pmax		pmax				
	comp=Z,50nm,0.8s									
LSA	**Lhasa**	**43.55**	**333**	P		**P**		**19 17 17.5**	**+0.6**	
LSA				pmax		pmax				
	comp=Z,39nm,0.8s									
EVN	**Everest**	**44.26**	**327**			**P**		**19 17 23.1**	**+0.2**	
EVN				IAmb		IAmb		19 17 24.2		
	comp=Z,38nm,0.7s									
EVN	**Everest**	**44.26**	**327**	P		**P**		**19 17 23.4**	**+0.5**	
MOO	**Moorlands**	**45.21**	**143**	P		**P**		**19 17 28.6**	**-0.9**	
	comp=Z,68nm,1.3s									
LZDM	**Lanzhou Array**	**45.47**	**350**	P		**P**		**19 17 32.9**	**+0.9**	
	comp=Z,22nm,0.6s,baz=184,slow=12,SNR=20									
LZDM				PcP		**PcP**		**19 19 10.9**	**+1.4**	
	comp=Z,6.6nm,0.6s,baz=134,slow=4.2,SNR=4.1									
	comp=Z,22nm,0.6s									
JNU	**Nakatsue**	**45.49**	**22**	LR		LR		19 39 38.8		
	comp=Z,36nm,18.0s,baz=219,slow=40									
LZH	**Lanzhou**	**45.57**	**350**	*eP*		**P**		**19 17 33.8**	**+1.2**	
LZH				pP		pP		19 17 56.3	+1.1	
LZH				sP		sP		19 18 09.1	+3.1	
LZH				pmax		pmax				
	comp=Z,80nm,1.6s									
LZH				pmax		pmax				
	comp=Z,150nm,4.4s									
LZH				L		L				
	comp=Z,670nm,14.6s									
LZH				L		L				
	comp=Z,450nm,16.2s									
LZH				L		L				
	comp=Z,560nm,15.2s									
JCJ	**Chichijima**	**46.14**	**38**	P		**P**		**19 17 37.9**	**+0.9**	
	comp=Z,61nm,0.7s,baz=27,slow=3.1,SNR=7.8									
	comp=Z,61nm,0.7s									
JCJ	**Chichijima**	**46.14**	**38**			**P**		**19 17 35.0**	**-2.1**	
JCJ	**Chichijima**	**46.14**	**38**	P		**P**		**19 17 35.9**	**-1.1**	
HNS	**HongShan**	**46.23**	**3**	⇓P		**P**		**19 17 37.3**	**-0.2**	
HNS				pmax		pmax				
	comp=Z,33nm,1.1s									
JTU	**Tsushima**	**46.24**	**20**	P		**P**		**19 17 37.6**	**-0.1**	
NRDN	**NARMADA NAGAR**	**46.68**	**313**	*ex*		x		19 17 41.9		
NRDN				IAmb		IAmb		19 17 43.4		
	comp=Z,27nm,1.0s									
POO	**Poona**	**46.78**	**306**	*eP*		**P**		**19 17 41.8**	**-0.4**	
BHPL	**Bhopal**	**46.82**	**314**	*eP*		**P**		**19 17 41.2**	**-1.2**	
SAVO	**Savo Central**	**46.90**	**94**	P		**P**		**19 17 43.3**	**+0.1**	
TATA	**Tatamba Isabel**	**46.94**	**93**	P		**P**		**19 17 43.5**	**0.0**	
HNR	**Honiara**	**47.01**	**94**	P		**P**		**19 17 43.3**	**-0.7**	
HNR	**Honiara**	**47.01**	**94**	P		**P**		**19 17 43.3**	**-0.7**	
HNR				pmax		pmax				
	comp=Z,181nm,0.8s									
NGOA	**Tingoa Renbel**	**47.03**	**97**	P		**P**		**19 17 45.1**	**+0.9**	
JMN	**Monobe**	**47.21**	**25**	P		**P**		**19 17 44.4**	**-0.9**	
JMN				IAmb		IAmb		19 19 17.6		
	comp=Z,39nm,1.1s									
TJN	**Taejon**	**47.33**	**17**			**P**		**19 17 46.1**	**0.0**	
TJN	**Taejon**	**47.33**	**17**	P		**P**		**19 17 46.1**	**0.0**	
TJN				pmax		pmax				
	comp=Z,105nm,0.9s									
JHNI	**Jhansi**	**47.43**	**317**	*eP*		**P**		**19 17 45.8**	**-1.3**	
JHNI				IAmb		IAmb		19 17 47.7		
	comp=Z,50nm,0.7s									
GUNA	**GUNA**	**47.78**	**315**	*eP*		**P**		**19 17 49.3**	**-0.6**	
GUNA				IAmb		IAmb		19 17 51.9		
	comp=Z,149nm,0.2s									
INCN	**Inchon**	**48.17**	**15**	P		**P**		**19 17 51.8**	**-0.8**	
INCN				IAmb		IAmb		19 17 53.5		
	comp=Z,19nm,0.7s									
INCN	**Inchon**	**48.17**	**15**	P		**P**		**19 17 51.8**	**-0.8**	
INCN				pmax		pmax				
	comp=Z,19nm,0.7s									
INCN	**Inchon**	**48.17**	**15**	P		**P**		**19 17 53.2**	**+0.6**	
DL2	**Dalian**	**48.47**	**10**	P		**P**		**19 17 51.6**	**-3.2**	
DL2				pmax		pmax				
	comp=Z,67nm,0.8s									
KSAR	**Wonju Array Be**	**48.48**	**17**			**P**		**19 17 55.0**	**+0.1**	
KSAR				PcP		**PcP**		**19 19 20.5**	**+0.8**	
KSAR	**Wonju Array Be**	**48.48**	**17**	P		**P**		**19 17 55.0**	**+0.1**	
KSAR								19 19 20.5		
KSRS	**Korea Array**	**48.50**	**17**	P		**P**		**19 17 55.3**	**+0.2**	
	comp=Z,25nm,0.9s,baz=204,slow=8.0,SNR=96									
KSRS				PcP		**PcP**		**19 19 20.6**	**+0.9**	
	comp=Z,6.3nm,0.8s,baz=197,slow=3.5,SNR=13									
	comp=Z,25nm,0.9s									
KS19	**Wonju Array Si**	**48.53**	**17**	P		**P**		**19 17 55.4**	**0.0**	
KS19				IAmb		IAmb		19 17 56.6		
	comp=Z,23nm,0.9s									
KS19				PcP		**PcP**		**19 19 20.5**	**+0.6**	
BJT	**Baijiatuau**	**48.92**	**4**	P		**P**		**19 18 00.1**	**+1.8**	
BJT	**Baijiatuau**	**48.92**	**4**	P		**P**		**19 17 57.9**	**-0.4**	
BJT				IAmb		IAmb		19 17 59.4		
	comp=Z,33nm,0.9s									
BJT						**PcP**		**19 19 22.0**	**+0.8**	
BJT	**Baijiatuau**	**48.92**	**4**	P		**P**		**19 17 57.9**	**-0.4**	
BJT								19 19 22.0		
BJT				pmax		pmax				
	comp=Z,33nm,0.9s									
BJT	**Baijiatuau**	**48.92**	**4**	P		**P**		**19 17 58.4**	**0.0**	
BJT				pP		**pP**		**19 18 21.5**	**+0.3**	
BJT				PcP		**PcP**		**19 19 22.1**	**+0.8**	
BJI2	**Beijing**	**48.93**	**4**	P		**P**		**19 17 58.5**	**+0.2**	
BJI2				PcP		**PcP**		**19 19 22.1**	**+0.9**	
BJI2				pmax		pmax				
	comp=Z,20nm,0.8s									
BJI2				pmax		pmax				
	comp=Z,44nm,3.8s									
LGTI	**Lohaghat**	**49.21**	**322**	⇑*i* P		**P**		**19 17 59.7**	**-1.2**	
PTH	**Pithoragarh**	**49.28**	**322**	*eP*		**P**		**19 18 00.1**	**-1.3**	
PTH				IAmb		IAmb		19 18 02.3		
	comp=Z,35nm,0.8s									
HHC	**Hu-ho-hao-te**	**49.63**	**359**	*eP*		**P**		**19 18 04.5**	**+0.7**	
HHC				pmax		pmax				
	comp=Z,24nm,0.9s									
HHC				pmax		pmax				
	comp=Z,97nm,4.7s									
GTA2	**Gaotai**	**49.65**	**347**	P		**P**		**19 18 05.2**	**+1.2**	
GTA2				pP		pP		19 18 30.5	+3.7	
GTA2				PcP		**PcP**		**19 19 25.1**	**+1.0**	
GTA2				ScS		ScS		19 27 44.2	-2.2	
GTA2				pmax		pmax				
	comp=Z,25nm,0.8s									
INU	**Inuyama**	**49.93**	**27**	P		**P**		**19 18 05.1**	**-1.0**	
INU				IAmb		IAmb		19 18 05.8		
	comp=Z,33nm,1.0s									
JGF	**Kuroka**	**50.29**	**27**			**P**		**19 18 07.1**	**-1.8**	
JGF				IAmb		IAmb		19 18 09.5		
	comp=Z,23nm,0.8s									
UDPR	**Udaipur**	**50.31**	**312**	*eP*		**P**		**19 18 08.7**	**-0.6**	
SONA	**Sohna**	**50.32**	**319**	*eP*		**P**		**19 18 07.8**	**-1.3**	
NPLP	**NPLP New Delhi**	**50.52**	**319**	*eP*		**P**		**19 18 09.0**	**-1.6**	
NDI	**New Delhi**	**50.52**	**319**	*eP*		**P**		**19 18 08.8**	**-1.8**	
NDI				IAmb		IAmb		19 18 09.6		
	comp=Z,30nm,0.9s									
KUDL	**Kundal**	**50.63**	**318**	*eP*		**P**		**19 18 09.8**	**-1.7**	
KUDL				IAmb		IAmb		19 18 11.5		
	comp=Z,22nm,0.6s									
AJM	**Ajmer**	**50.79**	**315**	*eP*		**P**		**19 18 11.7**	**-1.1**	
AJM				IAmb		IAmb		19 18 12.7		
	comp=Z,19nm,0.6s									
KOUNC	**Koumac, New Ca**	**51.36**	**109**	P		**P**		**19 18 19.9**	**+2.7**	
KOUNC	**Koumac, New Ca**	**51.36**	**109**	P		**P**		**19 18 17.6**	**+0.4**	
KOUNC				IAmb		IAmb		19 18 20.5		
	comp=Z,55nm,1.3s									
MAJO	**Matsushiro**	**51.45**	**27**	P		**P**		**19 18 16.3**	**-1.2**	
MAJO	**Matsushiro**	**51.45**	**27**	P		**P**		**19 18 16.3**	**-1.2**	
MAJO				pmax		pmax				
	comp=Z,136nm,1.9s									
MJAR	**Matsushiro Arr**	**51.45**	**27**	P		**P**		**19 18 16.0**	**-1.5**	
	comp=Z,22nm,0.8s,baz=197,slow=7.8,SNR=37									
MJAR				PcP		**PcP**		**19 19 31.8**	**+1.1**	
	comp=Z,9.8nm,0.8s,baz=190,slow=4.1,SNR=7.8									
MJAR				LR		LR		19 41 34.7		
	comp=Z,22nm,18.8s,baz=196,slow=38									
	comp=Z,22nm,0.8s									
MJAR	**Matsushiro Arr**	**51.45**	**27**	P		**P**		**19 18 15.6**	**-2.0**	
MJAR						**PcP**		**19 19 31.0**	**+0.3**	
XLT	**XiLinHaoTe**	**52.78**	**3**	*eP*		**P**		**19 18 27.4**	**+0.1**	
XLT				pmax		pmax				
	comp=Z,44nm,1.0s									
DHRM	**DHARAMSHALA**	**53.53**	**322**	*eP*		**P**		**19 18 31.4**	**-1.8**	
DHRM				*eS*		**S**		**19 25 53.4**	**-5.8**	
OUENC	**Ouen Island, N**	**53.90**	**111**	P		**P**		**19 18 38.7**	**+2.9**	
OUENC	**Ouen Island, N**	**53.90**	**111**	P		**P**		**19 18 37.1**	**+1.2**	
YATNC	**Mamie plateau,**	**53.91**	**111**	P		**P**		**19 18 38.3**	**+2.3**	
CN2	**Changchun**	**53.92**	**12**	⇓P		**P**		**19 18 34.4**	**-1.1**	
CN2				*eS*P		*s*P		19 19 13.0	+3.8	
CN2				*eS*		**S**		**19 26 00.5**	**-3.1**	
CN2				pmax		pmax				
	comp=Z,40nm,1.0s									
CN2				pmax		pmax				
	comp=Z,100nm,4.0s									
SANVU	**Saraoutou**	**53.92**	**103**	P		**P**		**19 18 38.1**	**+2.0**	
SANVU	**Saraoutou**	**53.92**	**103**	P		**P**		**19 18 36.3**	**+0.2**	
SANVU				IAmb		IAmb		19 18 38.9		
	comp=Z,31nm,0.7s									
THN	**Thein Dam**	**53.99**	**322**	*eP*		**P**		**19 18 35.4**	**-0.9**	
THN				IAmb		IAmb		19 18 37.5		
	comp=Z,124nm,0.7s									
TSSA	**Tissa**	**54.02**	**322**	*eP*		**P**		**19 18 35.2**	**-1.6**	
TSSA				IAmb		IAmb		19 18 39.9		
	comp=Z,100nm,1.2s									
PSTR	**Posyet**	**54.14**	**17**	⇓*i* P		**P**		**19 18 37.5**	**+0.4**	
PSTR				pmax		pmax				
	comp=Z,5.0nm,0.9s									
MSHR	**Mys Shultsa**	**54.17**	**17**	*i* P		**P**		**19 18 36.9**	**-0.5**	
MSHR				pmax		pmax				
	comp=Z,19nm,0.9s									
JMU	**Jammu**	**54.79**	**321**	*eP*		**P**		**19 18 41.5**	**-0.6**	
VLA	**Vladivostok**	**54.88**	**17**	⇓*i* P		**P**		**19 18 42.8**	**+0.3**	
VLA				pmax		pmax				
	comp=Z,40nm,0.9s									
MDJ	**Mudanjiang**	**55.63**	**15**	P		**P**		**19 18 47.8**	**-0.1**	
MDJ	**Mudanjiang**	**55.63**	**15**	P		**P**		**19 18 47.5**	**-0.3**	
MDJ	**Mudanjiang**	**55.63**	**15**	P		**P**		**19 18 47.4**	**-0.5**	
MDJ				pmax		pmax				
	comp=Z,77nm,0.8s									
MDJ	**Mudanjiang**	**55.63**	**15**	P		**P**		**19 18 47.1**	**-0.8**	
USA0B	**Ussuriysk Arra**	**55.90**	**17**	P		**P**		**19 18 49.3**	**-0.5**	
USA0B	**Ussuriysk Arra**	**55.90**	**17**	*d* P		**P**		**19 18 49.3**	**-0.5**	
USRK	**Ussuriysk Ar.**	**55.90**	**17**	P		**P**		**19 18 49.4**	**-0.4**	
	comp=Z,71nm,0.8s,baz=200,slow=5.5,SNR=86									
USRK				LR		LR		19 43 48.8		
	comp=Z,38nm,20.5s,baz=182,slow=37									
	comp=Z,71nm,0.8s									
BNX	**BinXian**	**56.18**	**13**	⇓P		**P**		**19 18 51.0**	**-0.7**	
BNX				pmax		pmax				
	comp=Z,77nm,0.8s									
JTM	**Tenmabayashi**	**56.22**	**26**	P		**P**		**19 18 51.4**	**-0.7**	
JTM	**Tenmabayashi**	**56.22**	**26**	P		**P**		**19 18 50.9**	**-1.2**	
NIL	**Nilore**	**56.36**	**321**	P		**P**		**19 18 51.7**	**-1.6**	
NIL	**Nilore**	**56.36**	**321**	P		**P**		**19 18 51.7**	**-1.6**	
NIL				pmax		pmax				
	comp=Z,55nm,0.8s									
NIL	**Nilore**	**56.36**	**321**	P		**P**		**19 18 52.3**	**-1.0**	
NIL	**Nilore**	**56.36**	**321**	P		**P**		**19 18 52.1**	**-1.2**	
ULN	**Ulaanbaatar**	**56.83**	**356**	P		**P**		**19 18 56.1**	**-0.4**	
ULN				IAmb		IAmb		19 18 57.7		
	comp=Z,30nm,0.9s									
ULN	**Ulaanbaatar**	**56.83**	**356**	*d* P		**P**		**19 18 56.6**	**0.0**	
ULN				pmax		pmax				
	comp=Z,35nm,1.0s									
ULN	**Ulaanbaatar**	**56.83**	**356**	P		**P**		**19 18 56.5**	**0.0**	
ULN	**Ulaanbaatar**	**56.83**	**356**	P		**P**		**19 18 56.6**	**0.0**	
ULN				pP		**pP**		**19 19 20.2**	**+0.3**	
ULN				PcP		**PcP**		**19 19 51.1**	**-0.1**	
SONM	**Songino Array**	**56.85**	**355**	P		**P**		**19 18 56.7**	**0.0**	
	comp=Z,14nm,0.7s,baz=172,slow=8.3,SNR=94									
SONM				PcP		**PcP**		**19 19 51.6**	**+0.3**	
	comp=Z,12nm,0.8s,baz=171,slow=4.5,SNR=14									
SONM				LR		LR		19 45 51.1		
	comp=Z,72nm,19.2s,baz=91,slow=39									
	comp=Z,14nm,0.7s									
SONM	**Songino Array**	**56.85**	**355**			**P**		**19 18 56.5**	**-0.2**	
SONM				IAmb		IAmb		19 18 57.8		
	comp=Z,35nm,1.0s									
SONM						**PcP**		**19 19 51.8**	**+0.5**	
WMQ	**Urumqi**	**57.14**	**339**	*eP*		**P**		**19 18 59.3**	**+0.6**	
WMQ				pmax		pmax				
	comp=Z,41nm,0.7s									
WMQ				pmax		pmax				
	comp=Z,61nm,3.8s									
WMQ				L		L				
	comp=Z,86nm,23.9s									
CASY	**Casey**	**57.19**	**181**	P		**P**		**19 18 58.5**	**-0.1**	
HIA	**Hailar**	**58.41**	**6**	P		**P**		**19 19 06.4**	**-1.0**	
HIA	**Hailar**	**58.41**	**6**	P		**P**		**19 19 06.4**	**-1.0**	
HIA				pmax		pmax				
	comp=Z,11nm,0.8s									
WUS	**Wushi**	**58.51**	**331**	P		**P**		**19 19 08.1**	**-0.4**	
WUS	**Wushi**	**58.51**	**331**	P		**P**		**19 19 08.4**	**0.0**	
HILR	**Hailar Array B**	**58.70**	**6**	P		**P**		**19 19 08.7**	**-0.7**	
	comp=Z,33nm,0.8s,baz=192,slow=9.5,SNR=17									
HILR				PcP		**PcP**		**19 19 58.6**	**+0.2**	
	comp=Z,6.1nm,0.6s,baz=177,slow=5.8,SNR=4.0									
	comp=Z,33nm,0.8s									
ASAJ	**Asahikawa**	**59.59**	**25**	P		**P**		**19 19 14.6**	**-1.1**	
ASAJ				pmax		pmax				
	comp=Z,64nm,1.6s									
JKA	**Kamikawa-asahi**	**59.59**	**25**	P		**P**		**19 19 14.6**	**-1.1**	
TARG	**Taragay, Kyrgy**	**59.60**	**331**			**P**		**19 19 15.9**	**-0.4**	
TARG				IAmb		IAmb		19 19 17.9		
	comp=Z,54nm,1.4s									
TARG	**Taragay, Kyrgy**	**59.60**	**331**	P		**P**		**19 19 15.9**	**-0.4**	
TARG				pmax		pmax				
	comp=Z,54nm,1.4s									
KBL	**Kabul**	**59.60**	**319**	P		**P**		**19 19 14.7**	**-1.5**	
KBL				IAmb		IAmb		19 19 17.1		
	comp=Z,23nm,0.9s									
KBL	**Kabul**	**59.60**	**319**	P		**P**		**19 19 14.7**	**-1.5**	
KBL				pmax		pmax				
	comp=Z,23nm,1.0s									
KBL	**Kabul**	**59.60**	**319**	P		**P**		**19 19 15.3**	**-0.9**	
	SNR=6.6									
KBL	**Kabul**	**59.60**	**319**	P		**P**		**19 19 14.9**	**-1.4**	
PRZ	**Przheval'sk**	**59.89**	**332**	P		**P**		**19 19 18.1**	**+0.1**	
PRZ	**Przheval'sk**	**59.89**	**332**	P		**P**		**19 19 18.1**	**+0.1**	
PRZ				pmax		pmax				
	comp=Z,391nm,1.4s									
MANEM	**Manem**	**59.90**	**323**	P		**P**		**19 19 17.6**	**-0.7**	
MANEM				IAmb		IAmb		19 19 18.8		
	comp=Z,133nm,1.0s									
SHLS	**Shalkode**	**59.92**	**333**	*eP*		**P**		**19 19 17.1**	**-1.0**	
SHLS				pmax		pmax				
	comp=Z,23nm,0.7s									
SHLS	**Shalkode**	**59.92**	**333**	*eP*		**P**		**19 19 17.1**	**-1.0**	
	comp=Z,23nm,0.7s									
PDGK	**Podgornoye**	**60.05**	**333**	P		**P**		**19 19 19.0**	**0.0**	
PDGK	**Podgornoye**	**60.05**	**333**	P		**P**		**19 19 19.0**	**0.0**	
UZB	**Uzynbulak**	**60.12**	**332**	*eP*		**P**		**19 19 19.4**	**-0.1**	
UZB				pmax		pmax				
	comp=Z,20nm,0.8s									
UZB	**Uzynbulak**	**60.12**	**332**	*eP*		**P**		**19 19 19.5**	**-0.1**	
	comp=Z,20nm,0.8s									
KDJ	**Kajisay**	**60.20**	**330**	P		**P**		**19 19 20.7**	**+0.6**	
KDJ	**Kajisay**	**60.20**	**330**	P		**P**		**19 19 20.7**	**+0.6**	
KDJ				pmax		pmax				
	comp=Z,91nm,1.0s									
NRN	**Naryn**	**60.27**	**329**			**P**		**19 19 20.5**	**-0.3**	
NRN	**Naryn**	**60.27**	**329**	P		**P**		**19 19 20.5**	**-0.3**	
NRN				pmax		pmax				
	comp=Z,39nm,0.9s									
SATY	**Saty**	**60.33**	**332**	*d* P		**P**		**19 19 20.7**	**-0.2**	
SATY				pmax		pmax				
	comp=Z,29nm,1.2s									
SATY	**Saty**	**60.33**	**332**	⇓*i* P		**P**		**19 19 20.7**	**-0.2**	
	comp=Z,29nm,1.2s									
HEH	**HeiHe**	**60.48**	**11**	*eP*		**P**		**19 19 21.2**	**-0.4**	
HEH				pmax		pmax				
	comp=Z,75nm,1.0s									
KPKS	**Kokpek**	**60.52**	**332**	*eP*		**P**		**19 19 21.6**	**-0.5**	
KPKS	**Kokpek**	**60.52**	**332**	*eP*		**P**		**19 19 21.7**	**-0.5**	
KNGR	**Kungurtug, Tuv**	**60.76**	**349**	*eP*		**P**		**19 19 23.9**	**+0.3**	
KNGR				*i* *PP		**pP**		**19 19 46.3**	**-1.0**	
KNGR				pmax		pmax				
	comp=Z,10.0nm,0.9s									
CIT	**Chita**	**60.81**	**1**	*eP*		**P**		**19 19 24.1**	**+0.2**	
CIT				*e*				19 19 48.1		
CIT				*e*				19 20 00.3		
CIT				*e*				19 21 35.9		
CIT				pmax		pmax				
	comp=Z,97nm,1.5s									
TLY	**Talaya**	**60.92**	**354**	LR		LR		19 47 03.8		
	comp=Z,29nm,18.6s,baz=182,slow=37									
TLY	**Talaya**	**60.92**	**354**	P		**P**		**19 19 24.4**	**-0.1**	
TLY				IAmb		IAmb		19 19 26.7		
	comp=Z,16nm,1.0s									
TLY	**Talaya**	**60.92**	**354**	*d* P		**P**		**19 19 25.0**	**+0.4**	
TLY				pmax		pmax				
	comp=Z,19nm,1.1s									
TLY	**Talaya**	**60.92**	**354**	P		**P**		**19 19 24.8**	**+0.2**	
TLY	**Talaya**	**60.92**	**354**	P		**P**		**19 19 25.2**	**+0.6**	
TLY	**Talaya**	**60.92**	**354**	P		**P**		**19 19 24.9**	**+0.4**	
TLY				x		x		19 20 03.7		
TLY				PcP		**PcP**		**19 20 08.4**	**+1.3**	
TNSS	**Tian-Shan**	**61.00**	**331**	*eP*		**P**		**19 19 25.1**	**-0.7**	
TNSS	**Tian-Shan**	**61.00**	**331**	*eP*		**P**		**19 19 25.2**	**-0.7**	
MDOK	**Medeo**	**61.05**	**331**	*eP*		**P**		**19 19 25.4**	**-0.4**	
MDOK	**Medeo**	**61.05**	**331**	*eP*		**P**		**19 19 25.4**	**-0.4**	
BOOM	**Boomskoye usch**	**61.08**	**330**	P		**P**		**19 19 25.9**	**-0.2**	
BOOM				IAmb		IAmb		19 19 27.6		
	comp=Z,38nm,1.0s									
BOOM	**Boomskoye usch**	**61.08**	**330**	P		**P**		**19 19 25.9**	**-0.2**	
BOOM				pmax		pmax				
	comp=Z,38nm,1.0s									
MHTO	**MHTO**	**61.13**	**300**	P		**P**		**19 19 26.4**	**-0.2**	
	SNR=7.3									
AAA	**Alma-Ata**	**61.15**	**331**	*eP*		**P**		**19 19 26.0**	**-0.3**	
AAA				pmax		pmax				
	comp=Z,20nm,0.6s									
AAA	**Alma-Ata**	**61.15**	**331**	*eP*		**P**		**19 19 26.1**	**-0.3**	
	comp=Z,20nm,0.6s									
MOY	**Mondy**	**61.23**	**352**	*eP*		**P**		**19 19 26.6**	**-0.2**	
MOY				pmax		pmax				
	comp=Z,46nm,1.7s									
ZSN	**Zaisan**	**61.27**	**339**	*d* P		**P**		**19 19 27.0**	**-0.1**	
ZSN	**Zaisan**	**61.27**	**339**	⇓*i* P		**P**		**19 19 27.0**	**-0.1**	
IRK	**Irkutsk**	**61.41**	**354**	*eP*		**P**		**19 19 25.9**	**-2.0**	
IRK				pmax		pmax				
	comp=Z,41nm,1.9s									
WSAR	**Wadi Sarin**	**61.49**	**303**	P		**P**		**19 19 29.1**	**+0.1**	
TKM2	**Tokmak 2**	**61.57**	**330**	P		**P**		**19 19 29.6**	**+0.2**	
	SNR=38									
JMDO	**Jabal Madar**	**61.58**	**301**	P		**P**		**19 19 29.5**	**-0.2**	
UCH	**Uchtor**	**61.61**	**329**	P		**P**		**19 19 30.1**	**+0.1**	
	SNR=18									
GAR	**Garm**	**61.67**	**324**	P		**P**		**19 19 28.5**	**-1.6**	
GAR				IAmb		IAmb		19 19 30.6		
	comp=Z,57nm,1.2s									
GAR	**Garm**	**61.67**	**324**	P		**P**		**19 19 28.7**	**-1.4**	
MK31	**Makanchi Array**	**61.67**	**337**	*d* P		**P**		**19 19 29.5**	**-0.3**	
MKAR	**Makanchi Array**	**61.67**	**337**	P		**P**		**19 19 29.6**	**-0.2**	
	comp=Z,30nm,0.6s,baz=147,slow=7.5,SNR=293									
	comp=Z,30nm,0.6s									
MKAR	**Makanchi Array**	**61.67**	**337**	P		**P**		**19 19 29.7**	**-0.1**	
MKAR	**Makanchi Array**	**61.67**	**337**	P		**P**		**19 19 29.7**	**-0.1**	
KBK	**Karagaybulak**	**61.70**	**329**	P		**P**		**19 19 30.8**	**+0.6**	
	SNR=71									
QRZ	**Quartz Range**	**61.73**	**132**	P		**P**		**19 19 32.8**	**+2.4**	
MAKZ	**Makanchi**	**61.81**	**337**			**P**		**19 19 30.1**	**-0.6**	
MAKZ				IAmb		IAmb		19 19 31.3		
	comp=Z,16nm,0.8s									
MAKZ	**Makanchi**	**61.81**	**337**	P		**P**		**19 19 30.1**	**-0.6**	
MAKZ				pmax		pmax				
	comp=Z,16nm,0.8s									
TDK	**Taldyqorghan**	**61.84**	**333**	*d* P		**P**		**19 19 30.8**	**-0.1**	
TDK				pmax		pmax				
	comp=Z,21nm,0.7s							

UOSS Minazif 64.22 303 P **P** **19 19 45.4 -1.7**
UOSS Minazif 64.22 303 P **P** **19 19 47.1 0.0**
HATD Hatta, Dubai 64.23 303 *i* P **P** **19 19 47.3 +0.1**
SNR=7.6
HATD Hatta, Dubai 64.23 303 P **P** **19 19 44.3 -2.9**
ASHO Ashiyiah 64.23 303 *i* P **P** **19 19 47.2 0.0**
SNR=8.4
ASHO Ashiyiah 64.23 303 P **P** **19 19 47.4 +0.1**
ALNE Al Ain 64.24 302 P **P** **19 19 47.6 +0.3**
CHM Chimkent 64.28 326 *e*P **P** **19 19 46.8 -0.3**
CHM pmax pmax
comp=Z,20nm,0.6s
CHM Chimkent 64.28 326 *e*P **P** **19 19 46.9 -0.3**
comp=Z,20nm,0.6s
MDH Madha 64.29 304 P **P** **19 19 46.1 -1.4**
MSVF Nonsavu 64.30 105 P **P** **19 19 49.8 +2.0**
comp=Z,21nm,1.1s
MSVF Nonsavu 64.30 105 P **P** **19 19 47.2 -0.6**
MSVF lAmb lAmb 19 20 25.3
comp=Z,30nm,1.1s
MSVF Nonsavu 64.30 105 *e*P **P** **19 19 48.0 +0.2**
MSVF pmax pmax
comp=Z,16nm,1.0s
KK31 Karatay Array 64.32 327 **P** **19 19 46.2 -1.2**
KK31 lAmb lAmb 19 19 48.7
comp=Z,16nm,0.7s
KK31 Karatay Array 64.32 327 P **P** **19 19 46.2 -1.2**
KK31 pmax pmax
comp=Z,16nm,0.7s
KKAR Karatay Array 64.32 327 **P** **19 19 46.7 -0.7**
KKAR Karatay Array 64.32 327 P **P** **19 19 46.7 -0.7**
BKZ Black Stump Fm 64.39 129 P **P** **19 19 49.1 +1.0**
MSFE Esma-Masafi 64.43 304 P **P** **19 19 48.1 -0.4**
MASF Masafi 64.43 304 P **P** **19 19 47.7 -0.8**
BFZ Birch Farm 64.47 131 P **P** **19 19 50.2 +1.7**
BRLS Borolday 64.63 327 *d* /P **P** **19 19 48.4 -1.0**
BRLS Borolday 64.63 327 ⇓/P **P** **19 19 48.4 -1.0**
FAQ Al Faqa, Dubai 64.65 303 *i* P **P** **19 19 50.0 +0.1**
SNR=18
FAQ Al Faqa, Dubai 64.65 303 P **P** **19 19 49.3 -0.5**
SNR=7.6
NAZ Nazwa, Dubai 64.69 303 *i* P **P** **19 19 49.9 -0.2**
SNR=7.1
NAZ Nazwa, Dubai 64.69 303 P **P** **19 19 49.5 -0.6**
SNR=7.0
URZ Urewera 64.72 128 LR LR 19 50 34.0
comp=Z,50nm,18.5s,baz=292,slow=38
SHME Shamm 64.73 304 P **P** **19 19 50.7 +0.4**
SHME Shamm 64.73 304 P **P** **19 19 50.6 +0.2**
ASUD Al Ashush, Dub 64.82 303 *i* P **P** **19 19 51.3 +0.3**
SNR=5.8
ASUD Al Ashush, Dub 64.82 303 P **P** **19 19 51.3 +0.3**
SNR=5.7
AJN Ajban 65.08 302 P **P** **19 19 52.9 +0.2**
SEM Semipalatinsk 65.42 338 *e*P **P** **19 19 53.9 -0.7**
SEM pmax pmax
comp=Z,18nm,0.8s
SEM Semipalatinsk 65.42 338 *e*P **P** **19 19 53.9 -0.7**
comp=Z,18nm,0.8s
MZWR Madinat Zayed 65.69 301 P **P** **19 19 56.5 -0.1**
MZR Muzera 65.75 300 P **P** **19 19 57.5 +0.4**
KURBB Kurchatov Arra 66.24 337 P **P** **19 19 59.1 -0.5**
comp=Z,11nm,0.8s,baz=151,slow=5.0,SNR=89
KURBB PcP **PcP** **19 20 29.3 +0.3**
comp=Z,7.7nm,0.7s,baz=148,slow=3.8,SNR=13
comp=Z,11nm,0.8s
KURK Kurchatov 66.28 337 **P** **19 19 59.4 -0.4**
KURK lAmb lAmb 19 20 00.3
comp=Z,23nm,0.9s
KURK **PcP** **19 20 29.1 0.0**
KURK Kurchatov 66.28 337 P **P** **19 19 59.1 -0.7**
KURK 19 20 29.3
KURK Kurchatov 66.28 337 P **P** **19 19 59.6 -0.2**
KURK Kurchatov 66.28 337 P **P** **19 19 59.5 -0.4**
KURK Kurchatov 66.28 337 P **P** **19 19 59.2 -0.7**
KURK PcP **PcP** **19 20 29.1 0.0**
GHWR Ruwais 66.62 301 P **P** **19 20 01.2 -1.3**
BOD Bodaibo 66.62 1 *e*P **P** **19 20 01.2 -0.7**
BOD pmax pmax
comp=Z,46nm,1.1s
ZAA0 Zalesovo Array 66.90 343 **P** **19 20 02.8 -0.9**
ZAA0 lAmb lAmb 19 20 03.9
comp=Z,35nm,0.8s
ZALV Zalesovo Beam 66.90 343 P **P** **19 20 02.9 -0.8**
comp=Z,35nm,0.7s,baz=147,slow=4.6,SNR=145
comp=Z,35nm,0.7s
ZALV Zalesovo Beam 66.90 343 *i* P **P** **19 20 02.9 -0.8**
ZALV pmax pmax
comp=Z,36nm,0.7s
MAW Mawson 67.04 198 P **P** **19 20 05.4 +1.0**
comp=Z,2.8nm,0.8s,baz=78,slow=7.9,SNR=5.5
MAW LR LR 19 42 30.9
comp=Z,44nm,20.4s,baz=16,slow=30
comp=Z,2.8nm,0.8s
MAW Mawson 67.04 198 P **P** **19 20 05.0 +0.7**
MAW Mawson 67.04 198 P **P** **19 20 05.1 +0.7**
MAW pmax pmax
comp=Z,1.0nm,0.9s
BRZS Berezniki 68.15 334 *e*P **P** **19 20 11.4 -0.3**
BRZS Berezniki 68.15 334 *e*P **P** **19 20 11.5 -0.3**
SAKB Bahrain 69.34 302 P **P** **19 20 19.3 -0.3**
BVAR Borovoye Array 71.34 335 P **P** **19 20 30.7 -0.6**
comp=Z,6.9nm,0.6s,baz=141,slow=8.4,SNR=52
comp=Z,6.9nm,0.6s
BORK Borovoye 71.39 335 **P** **19 20 31.0 -0.5**
BORK Borovoye 71.39 335 *d* /P **P** **19 20 30.8 -0.7**
BORK pmax pmax
comp=Z,8.0nm,1.0s
YAK Yakutsk 72.12 9 **P** **19 20 34.8 -0.9**
YAK Yakutsk 72.12 9 *e*P **P** **19 20 35.0 -0.7**
YAK *e* 19 20 52.5
YAK *e**PP **sP** **19 21 07.0 -3.1**
YAK *e* 19 23 15.0
YAK *e*PPP PPP 19 25 00.6
YAK *e*S **S** **19 29 46.6 -3.4**
YAK *e* 19 30 14.2
YAK *e*SS **SS** **19 34 26.4 -3.0**
YAK pmax pmax
comp=Z,135nm,1.1s
YAK pmax pmax
comp=E,27nm,1.9s
YAK pmax pmax
comp=N,45nm,1.4s
YAK pmax pmax
comp=Z,80nm,4.1s
YAK pmax pmax
comp=N,37nm,3.2s
YAK pmax pmax
comp=E,705nm,23.0s
YAK smax smax
comp=N,41nm,4.1s
YAK smax smax
comp=E,30nm,2.7s
YAK Yakutsk 72.12 9 P **P** **19 20 34.7 -1.0**
YAK PcP **PcP** **19 20 52.7 -0.8**
RAYN Ar Rayn 72.81 298 *i* P **P** **19 20 40.6 -0.1**
SNR=13
RAYN Ar Rayn 72.81 298 **P** **19 20 40.4 -0.3**
RAYN Ar Rayn 72.81 298 P **P** **19 20 40.4 -0.3**
RAYN pmax pmax
comp=Z,20nm,1.1s
RAYN Ar Rayn 72.81 298 P **P** **19 20 39.3 -1.4**
PEA0B Petropavlovsk- 72.92 27 P **P** **19 20 40.0 -0.6**
PEA0B lAmb lAmb 19 20 43.0
comp=Z,46nm,1.2s
PEA0B Petropavlovsk- 72.92 27 P **P** **19 20 40.0 -0.6**
PEA0B pmax pmax
comp=Z,46nm,1.2s
PETK Petropavlovsk- 72.92 27 P **P** **19 20 40.5 -0.1**
comp=Z,12nm,0.7s,baz=253,slow=1.6,SNR=22
PETK LR LR 19 56 07.8
comp=Z,21nm,18.1s,baz=220,slow=38
comp=Z,12nm,0.7s
PETK Petropavlovsk- 72.92 27 P **P** **19 20 40.1 -0.5**
VNDA Vanda 73.05 170 P **P** **19 20 41.3 +0.2**
comp=Z,3.7nm,0.9s,baz=316,slow=5.2,SNR=16
VNDA LR LR 19 52 31.4
comp=Z,29nm,18.1s,baz=308,slow=35
comp=Z,3.7nm,0.9s
VNDA Vanda 73.05 170 **P** **19 20 40.8 -0.3**
VNDA Vanda 73.05 170 P **P** **19 20 40.8 -0.3**
VNDA pmax pmax
comp=Z,5.0nm,0.9s
PET Petropavlovsk 73.28 27 P **P** **19 20 41.8 -1.0**
PET lAmb lAmb 19 20 43.4
comp=Z,113nm,1.8s
PET Petropavlovsk 73.28 27 *e*P **P** **19 20 42.5 -0.3**
PET pmax pmax
comp=Z,30nm,1.8s
AB31 Akbulak array 73.88 327 **P** **19 20 46.1 -0.2**
ABKAR Akbulak array 73.88 327 **P** **19 20 46.4 0.0**
KIBK Kibwezi 74.08 270 P **P** **19 20 49.5 +1.0**
SBA Scott Base 74.10 170 P **P** **19 20 48.5 +1.3**
SBA Scott Base 74.10 170 P **P** **19 20 48.5 +1.3**
SBA pmax pmax
comp=Z,7.0nm,1.1s
MA2 Magadan 74.96 19 P **P** **19 20 51.7 -0.7**
MA2 lAmb lAmb 19 20 53.3
comp=Z,35nm,0.9s
MA2 Magadan 74.96 19 *e*P **P** **19 20 52.6 +0.2**
MA2 pmax pmax
comp=Z,26nm,0.9s
AKT Akhty 77.53 316 *e*P **P** **19 21 07.8 +0.3**
AKT *e* 19 21 16.9
AKT *e**SP **sP** **19 21 40.7 -1.4**
AKT *e* 19 23 57.8
AKT pmax pmax
comp=Z,42nm,1.0s
POGA Pongola 77.59 244 P **P** **19 21 09.4 +1.3**
LODK Lodwar 77.66 276 P **P** **19 21 08.8 0.0**
SEY Seymchan 78.05 18 *d* /P **P** **19 21 09.5 -0.2**
SEY pmax pmax
comp=Z,20nm,1.0s
SVE Sverdlovsk 78.07 334 *e*P **P** **19 21 10.2 +0.2**
SVE pmax pmax
comp=Z,60nm,0.9s
MAK Makhachkala 78.28 317 *e*P **P** **19 21 10.9 -0.6**
MAK *e**PP **pP** **19 21 35.8 -0.1**
MAK *e**SP **sP** **19 21 46.9 +0.9**
MAK *e*PPP PPP 19 25 59.8
MAK *e*S **sS** **19 30 58.1 -0.9**
MAK *e**SS **sS** **19 31 41.8 0.0**
MAK *e*SS **SS** **19 36 02.5 -1.2**
MAK *e*SSS SSS 19 39 25.4
MAK pmax pmax
comp=Z,172nm,1.3s
ARTI Arti 78.81 333 **P** **19 21 13.7 -0.4**
ARTI Arti 78.81 333 *d* /P **P** **19 21 13.8 -0.3**
ARTI S **S** **19 31 04.0 -0.1**
ARTI SS **SS** **19 36 06.4 -4.6**
ARTI pmax pmax
comp=Z,63nm,0.9s
ARTI Arti 78.81 333 P **P** **19 21 13.7 -0.4**
GNI Garni 79.10 314 P **P** **19 21 16.2 -0.1**
GNI Garni 79.10 314 *d* /P **P** **19 21 16.8 +0.5**
GNI pmax pmax
comp=Z,24nm,1.2s
GNI Garni 79.10 314 P **P** **19 21 15.8 -0.5**
comp=Z,20nm,1.0s
GEVA Gevas 79.67 312 **P** **19 21 19.3 -0.2**
GEVA lAmb lAmb 19 21 21.0
comp=Z,39nm,1.3s
NRIK Noril'sk 80.05 351 P **P** **19 21 20.1 -0.4**
comp=Z,13nm,0.8s,baz=148,slow=4.5,SNR=22
comp=Z,13nm,0.8s
NRIK Noril'sk 80.05 351 **P** **19 21 19.9 -0.6**
NRIK Noril'sk 80.05 351 *d* /P **P** **19 21 19.9 -0.6**
NRIK pmax pmax
comp=Z,26nm,1.0s
GURO Guroymak-BITLI 80.51 312 P **P** **19 21 24.0 +0.1**
GURO lAmb lAmb 19 21 25.8
comp=Z,82nm,1.7s
QSPA South Pole Qui 80.97 180 P **P** **19 21 26.8 +0.9**
comp=Z,15nm,1.0s,baz=311,slow=1.6,SNR=39
comp=Z,15nm,1.0s
QSPA South Pole Qui 80.97 180 P **P** **19 21 26.5 +0.6**
MATP Matopo 81.13 251 LR LR 19 50 49.1
comp=Z,32nm,21.6s,baz=81,slow=31
TIXI Tiksi 81.25 5 LR LR 20 02 18.5
comp=Z,26nm,18.6s,baz=178,slow=39
TIXI Tiksi 81.25 5 P **P** **19 21 25.7 -1.2**
TIXI lAmb lAmb 19 21 26.9
comp=Z,46nm,0.8s
TIXI Tiksi 81.25 5 P **P** **19 21 25.7 -1.2**
TIXI pmax pmax
comp=Z,46nm,0.8s
MBAR Mbarara 81.57 271 LR LR 19 53 47.2
comp=Z,33nm,21.1s,baz=100,slow=33
MBAR Mbarara 81.57 271 P **P** **19 21 30.4 +0.3**
MBAR Mbarara 81.57 271 *ce*P **P** **19 21 32.2 +2.1**
MBAR pmax pmax
comp=Z,17nm,0.8s
MBAR Mbarara 81.57 271 P **P** **19 21 32.0 +2.0**
KBZ Khabaz 81.68 317 P **P** **19 21 30.6 +0.8**
comp=Z,38nm,1.0s,baz=113,slow=4.4,SNR=53
comp=Z,38nm,1.0s
KBZ Khabaz 81.68 317 *d* /P **P** **19 21 30.4 +0.6**
KBZ pmax pmax
comp=Z,49nm,1.0s
GRHM Grahamstown, E 81.72 238 P **P** **19 21 31.2 +0.8**
BATM Batumi 81.78 314 ⇑P **P** **19 21 30.0 -0.4**
BATM Batumi 81.78 314 ⇑P **P** **19 21 30.0 -0.4**
KIV Kislovodsk 81.91 317 ⇑P **P** **19 21 32.0 +0.9**
KIV Kislovodsk 81.91 317 *i* P **P** **19 21 31.8 +0.7**
SNR=7.3
KIV Kislovodsk 81.91 317 **P** **19 21 30.9 -0.2**
KIV lAmb lAmb 19 21 33.4
comp=Z,29nm,0.9s
KIV Kislovodsk 81.91 317 *e*P **P** **19 21 31.5 +0.4**
KIV pmax pmax
comp=Z,28nm,1.1s
KIV Kislovodsk 81.91 317 P **P** **19 21 31.6 +0.4**
comp=Z,25nm,1.2s
KIV Kislovodsk 81.91 317 P **P** **19 21 31.5 +0.4**
KIV pP **pP** **19 21 57.0 +1.3**
LSZ Lusaka 82.03 256 LR LR 19 53 10.6
comp=Z,77nm,18.2s,baz=136,slow=32
LSZ Lusaka 82.03 256 **P** **19 21 32.8 +0.4**
LSZ Lusaka 82.03 256 P **P** **19 21 32.8 +0.4**
LSZ pmax pmax
comp=Z,9.0nm,0.7s
LSZ Lusaka 82.03 256 P **P** **19 21 34.0 +1.6**
GOF Gofitskoye 82.06 318 *ce*P **P** **19 21 32.5 +0.7**
KOPT Kop Dagi 82.12 313 **P** **19 21 33.2 +0.7**
KOPT lAmb lAmb 19 21 40.9
comp=Z,26nm,0.8s
BELG Belogornoye 82.19 326 *d* /P **P** **19 21 31.9 -0.3**
BELG pmax pmax
comp=Z,13nm,1.0s
LBTB Lobatse 83.27 246 P **P** **19 21 39.6 +0.9**
LBTB Lobatse 83.27 246 P **P** **19 21 39.6 +0.9**
LBTB pmax pmax
comp=Z,12nm,1.0s
LBTB Lobatse 83.27 246 P **P** **19 21 40.7 +2.0**
GHAJ Ghor Haditha 83.48 303 **P** **19 21 40.3 +0.9**
GHAJ lAmb lAmb 19 21 41.7
comp=Z,48nm,0.9s
KHWEE KHWEE 83.78 249 P **P** **19 21 42.9 +1.6**
SOC Sochi 83.81 316 *d* /P **P** **19 21 40.3 -0.5**
SOC *e* 19 24 50.5
SOC *e*PPP PPP 19 26 44.1
SOC *e*S **SKSac** **19 31 53.6 -1.5**
SOC pmax pmax
comp=Z,34nm,0.9s
SOC MLR MLR
comp=Z,85nm,19.0s
MAKGR Makgori 83.89 245 P **P** **19 21 43.9 +2.0**
MMAI Mount Meron Ar 84.05 305 P **P** **19 21 43.9 +1.5**
comp=Z,19nm,0.9s,baz=57,slow=9.2,SNR=28
comp=Z,19nm,0.9s
KIRV Kirov 84.08 332 *d* /P **P** **19 21 41.8 0.0**
KIRV *i* *PP **pP** **19 22 06.4 -0.2**
KSANE Kasane 84.58 253 P **P** **19 21 46.9 +1.4**
KSANE lAmb lAmb 19 21 48.2
comp=Z,24nm,1.0s
KSANE Kasane 84.58 253 P **P** **19 21 47.4 +1.9**
SKOMA Sekoma 84.83 246 P **P** **19 21 48.6 +2.0**
VRH Novokhopyorsk 85.09 323 *e*P **P** **19 21 45.4 -1.7**
VRH pmax pmax
comp=Z,30nm,0.9s
CY604 RAF Akrotiri, 85.10 306 P **P** **19 21 48.2 +1.0**
CY604 lAmb lAmb 19 21 49.9
comp=Z,49nm,1.1s
ADK Adak 85.59 36 P **P** **19 21 48.9 -0.7**
ADK Adak 85.59 36 P **P** **19 21 48.9 -0.7**
ADK pmax pmax
comp=Z,122nm,1.7s
ANN Anapa 85.74 316 *e*P **P** **19 21 49.7 -0.8**
ANN pmax pmax
comp=Z,23nm,1.0s
BILL Bilibino 85.75 18 *d* /P **P** **19 21 49.0 -1.0**
BILL pmax pmax
comp=Z,4.0nm,0.9s
CSS Mathiatis 86.19 306 **P** **19 21 53.2 +0.2**
CSS lAmb lAmb 19 21 55.0
comp=Z,26nm,1.1s
VORD Divnogorie 86.45 323 *e*P **P** **19 21 51.9 -1.9**
VORD pmax pmax
comp=Z,30nm,1.0s
SUR Sutherland 86.48 238 LR LR 19 55 59.8
comp=Z,75nm,18.9s,baz=127,slow=32
VSR Storozhevoye 86.61 323 ⇓/*i* P **P** **19 21 54.4 -0.2**
VSR pmax pmax
comp=Z,75nm,1.0s
KGCAE Kacgae 86.63 248 P **P** **19 21 57.2 +1.7**
KGCAE lAmb lAmb 19 21 58.1
comp=Z,13nm,0.7s
KGCAE Kacgae 86.63 248 P **P** **19 21 57.8 +2.2**
VORR Voronezh 86.73 323 *e*P **P** **19 21 53.6 -1.6**
VORR pmax pmax
comp=Z,40nm,0.9s
KIRS Kirsehir-Merke 86.74 310 ⇑P **P** **19 21 56.2 +0.6**
BR131 Keskin Array S 87.09 311 ⇓/P **P** **19 21 57.4 0.0**
BRTR Keskin Array B 87.09 311 P **P** **19 21 57.5 0.0**
comp=Z,18nm,0.9s,baz=126,slow=6.3,SNR=88
BRTR PKKPbc **PKKPbc** **19 39 50.0 -0.6**
comp=Z,0.6nm,0.8s,baz=276,slow=4.5,SNR=3.9
comp=Z,18nm,0.9s
LPSR Galich'ya Gora 87.19 324 *e*P **P** **19 21 55.8 -1.6**
LPSR pmax pmax
comp=Z,80nm,0.9s
BZK Bozkurt 87.38 313 ⇑P **P** **19 21 59.4 +0.8**
BZK Bozkurt 87.38 313 **P** **19 21 58.9 +0.3**
TROLL Troll, Antarti 87.46 197 ⇓P **P** **19 21 59.8 +1.2**
comp=Z,228nm,0.7s
GRTLG Ghanzi 87.76 249 **P** **19 22 02.6 +1.6**
GRTLG Ghanzi 87.76 249 P **P** **19 22 03.0 +1.9**
KOOLE Kule 88.44 247 P **P** **19 22 06.1 +1.9**
KOOLE lAmb lAmb 19 22 07.3
comp=Z,27nm,0.7s
KOOLE Kule 88.44 247 P **P** **19 22 06.5 +2.2**
MOS Moscow 88.90 327 *e*P **P** **19 22 05.8 +0.4**
MOS pmax pmax
comp=Z,52nm,0.7s
SNAA Sanae 89.14 197 ⇓P **P** **19 22 08.2 +1.7**
comp=Z,296nm,0.5s
SNAA Sanae 89.14 197 P **P** **19 22 08.2 +1.7**
comp=Z,20nm,0.8s,baz=165,slow=4.4,SNR=68
comp=Z,20nm,0.8s
SNAA Sanae 89.14 197 **P** **19 22 08.0 +1.6**
SNAA lAmb lAmb 19 22 09.1
comp=Z,17nm,0.7s
SNAA Sanae 89.14 197 *de*P **P** **19 22 08.1 +1.7**
SNAA pmax pmax
comp=Z,15nm,0.9s
OBN Obninsk 89.29 326 ⇓P **P** **19 22 07.4 +0.1**
OBN Obninsk 89.29 326 **P** **19 22 07.6 +0.4**
OBN Obninsk 89.29 326 *d* /P **P** **19 22 07.3 +0.1**
OBN *i* 19 25 38.9
OBN pmax pmax
comp=Z,60nm,0.8s
OBN Obninsk 89.29 326 P **P** **19 22 07.0 -0.2**
OBN pP **pP** **19 22 31.9 -0.4**
SAHE Sakarya_HENDEK 89.43 311 ⇑P **P** **19 22 08.7 +0.4**
KLMR Klimovskoe 89.58 332 *e*P **P** **19 22 06.2 -2.3**
KLMR *e**PP **pP** **19 22 32.3 -1.2**
KLMR pmax pmax
comp=Z,39nm,1.0s
MANT Manisa 90.69 309 P **P** **19 22 14.4 -0.1**
VNA2 Neumayer--Watz 90.78 197 ⇓P **P** **19 22 15.7 +1.7**
comp=Z,14nm,0.6s,baz=103,slow=4.5
SPIA Saint Paul Isl 90.80 32 P **P** **19 22 14.9 +0.7**
baz=255
ADZR Andozero 91.12 335 *e*P **P** **19 22 13.5 -2.1**
ADZR pmax pmax
comp=Z,26nm,0.8s
VNA1 Neumayer--Stat 91.17 197 P **P** **19 22 17.7 +1.9**
comp=Z,8.2nm,0.7s
BELA Belgrano 2 91.30 187 **P** **19 22 17.1 +0.7**
BELA lAmb lAmb 19 22 18.4
comp=Z,13nm,0.9s
BALB Balikesir 91.42 310 P **P** **19 22 17.4 -0.1**
BALB lAmb lAmb 19 22 18.6
comp=Z,9.4nm,0.9s
TSUM Tsumeb 91.47 250 LR LR 19 57 29.2
comp=Z,31nm,21.3s,baz=146,slow=32
GAMB Gambell 91.92 26 P **P** **19 22 19.8 +0.5**
baz=254
UNV Unalaska Valle 92.06 36 P **P** **19 22 19.9 -0.3**
baz=258
CFR Carcaliu 92.24 315 ⇑P **P** **19 22 20.4 -0.8**
CFR Carcaliu 92.24 315 ⇑P **P** **19 22 20.4 -0.8**
AK09 Malin Array Si 92.49 321 P **P** **19 22 21.1 -1.1**
AK10 Malin Array Si 92.51 321 P **P** **19 22 21.2 -1.1**
AK08 Malin Array Si 92.52 321 P **P** **19 22 21.2 -1.1**
AK06 Malin Array Si 92.54 321 P **P** **19 22 21.3 -1.2**
AK05 Malin Array Si 92.55 321 P **P** **19 22 21.3 -1.2**
AKASG Malin Array Be 92.55 321 P **P** **19 22 21.5 -1.0**
comp=Z,5.6nm,0.8s,baz=86,slow=4.6,SNR=17
comp=Z,5.6nm,0.8s
AKASG Malin Array Be 92.55 321 P **P** **19 22 21.6 -0.9**
AKASG Malin Array Be 92.55 321 *i* P **P** **19 22 21.8 -0.7**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 92.55 321 **P** **19 22 21.5 -1.0**
AKBB lAmb lAmb 19 22 22.6
comp=Z,10.0nm,0.8s
AKBB Malin Array Si 92.55 321 *d* /P **P** **19 22 21.6 -0.9**
AKBB pmax pmax
comp=Z,10.0nm,0.9s
KIEV Kiev 92.56 321 ⇑P **P** **19 22 21.1 -1.4**
KIEV Kiev 92.56 321 *i* P **P** **19 22 21.7 -0.9**
SNR=6.7
KIEV Kiev 92.56 321 ⇑P **P** **19 22 21.1 -1.4**
KIEV Kiev 92.56 321 P **P** **19 22 21.3 -1.2**
comp=Z,49nm,0.9s
SORM Soroca 92.63 318 ⇑P **P** **19 22 22.1 -0.8**
SORM Soroca 92.63 318 ⇑P **P** **19 22 22.1 -0.8**
GHRR 92.90 316 ⇑P **P** **19 22 24.7 +0.5**
LUBAR Lubar, Ukraine 93.33 320 P **P** **19 22 24.5 -1.6**
VRI Vrincioaia 93.33 316 ⇑P **P** **19 22 26.7 +0.4**
VRI Vrincioaia 93.33 316 ⇑P **P** **19 22 26.7 +0.4**
SAHR Sahastru 93.34 316 ⇓P **P** **19 22 27.4 +1.0**
PLOR Plostina 93.38 316 ⇑P **P** **19 22 26.9 +0.3**
PLOR Plostina 93.38 316 ⇑P **P** **19 22 26.9 +0.3**
TESR Tescani 93.49 316 ⇑P **P** **19 22 27.0 +0.1**
MI28 Mi28,Pidlybu 93.56 321 P **P** **19 22 25.1 -2.1**
M11K Mekoryuk 93.60 29 P **P** **19 22 27.2 +0.1**
baz=258
ONER Baraj Valea Uz 93.64 316 ⇓P **P** **19 22 27.9 +0.3**
GIRR Girov 93.66 317 ⇑P **P** **19 22 27.5 -0.3**
COVR Voineasa-Covas 93.69 316 ⇑P **P** **19 22 27.4 -0.6**
MLR Muntele Rosu 93.81 315 ⇑P **P** **19 22 28.8 +0.2**
MLR Muntele Rosu 93.81 315 **P** **19 22 28.2 -0.4**
MLR lAmb lAmb 19 22 29.6
comp=Z,9.1nm,1.1s
MLR Muntele Rosu 93.81 315 P **P** **19 22 28.3 -0.4**
MLR pmax pmax
comp=Z,9.0nm,1.1s
KMPD K-Podol'skiy 93.94 318 P **P** **19 22 26.9 -2.1**
TNA Tin City 93.94 24 P **P** **19 22 27.9 -0.6**
baz=257
MNK Minsk 94.04 324 *i* P **P** **19 22 30.0 +0.7**
comp=E,8.0nm,0.9s
MNK *i* P **P** **19 22 30.0 +0.7**
comp=N,13nm,1.0s
MNK *i* P **P** **19 22 30.0 +0.7**
comp=Z,13nm,1.1s,baz=100
MNK *i* pP **pP** **19 22 54.1 -0.3**
MNK *i* PP **PP** **19 26 17.1 +0.4**
MNK *i* PPP PPP 19 28 18.3
MNK *i* S **SKSac** **19 32 56.2 +0.8**
MNK *i* sS **ScS** **19 33 39.7 +6.8**
MNK *i* PS **PS** **19 35 00.1 +1.1**
MNK *i* SS **SS** **19 39 56.2 +2.3**
MNK *i* SSS SSS 19 43 38.1
MNK Minsk 94.04 324 *i* P **P** **19 22 30.0 +0.7**
MNK *i* 19 26 17.1
MNK *i* PPP PPP 19 28 18.3
MNK *i* S **SKSac** **19 32 56.2 +0.8**
MNK *i* PS **PS** **19 35 00.0 +1.1**
MNK *i* SS **SS** **19 39 56.2 +2.3**
MNK *i* SSS SSS 19 43 38.0

MNK pmax pmax
comp=E,8.0nm,0.9s
MNK pmax pmax
comp=Z,13nm,1.1s
MNK pmax pmax
comp=N,13nm,1.0s
APA Apatity 94.06 338 *e*P P 19 22 40.7 +12
APA pmax pmax
comp=Z,5.0nm,1.3s
APA MLR MLR
comp=Z,96nm,3.6s
F14K Arctic Creek 94.58 24 P **P 19 22 30.6 -0.9**
baz=258
BURAR Bucovina Array 94.63 317 ⇑P **P 19 22 32.8 +0.5**
BURAR Bucovina Array 94.63 317 P **P 19 22 32.5 +0.2**
BURAR Bucovina Array 94.63 317 ⇑P **P 19 22 32.8 +0.5**
K13K Kusilvak Mount 94.63 28 P **P 19 22 31.2 -0.7**
baz=260
ARR Arges 94.71 315 ⇑P **P 19 22 31.9 -0.8**
RNPP5 Staryi Chortor 94.72 321 P **P 19 22 31.5 -1.0**
RNPP8 Varash 94.75 321 P **P 19 22 31.6 -1.0**
PPT2 Papeete2 94.96 109 *e*LR LR 19 53 19.3
comp=Z,76nm,26.2s
M13K Dall Lake 95.00 30 P **P 19 22 32.6 -0.9**
baz=261
VSU Vasula 95.30 328 ⇑*i*P **P 19 22 34.0 -0.9**
VSU pmax pmax
comp=Z,26nm,0.9s
F15K North Star Dit 95.31 24 P **P 19 22 34.5 -0.4**
baz=260
LOT Lotru 95.32 315 ⇑P **P 19 22 35.0 -0.6**
G15K Niukluk 95.44 25 P **P 19 22 34.8 -0.6**
baz=260
L14K Kuka Creek 95.46 29 P **P 19 22 35.0 -0.6**
baz=261
C16K Lisburne Hills 95.49 22 P **P 19 22 36.2 +0.6**
C16K IAmb IAmb 19 22 37.2
comp=Z,12nm,0.8s
C16K Lisburne Hills 95.49 22 P **P 19 22 35.2 -0.4**
baz=260
M14K Bethel 95.72 29 P **P 19 22 36.3 -0.5**
baz=262
N14K Kuskokwak Cree 95.74 30 P **P 19 22 36.3 -0.6**
baz=262
SDPT Sand Point 95.78 35 P **P 19 22 36.2 -1.0**
baz=263
O14K Tigyukauivet M 95.86 31 P **P 19 22 36.4 -1.1**
baz=262
FIA1 FINESS Array S 96.05 331 P **P 19 22 38.0 -0.3**
FINES FINESS Array B 96.05 331 P **P 19 22 38.1 -0.1**
comp=Z,3.5nm,0.7s,baz=114,slow=6.9,SNR=11
comp=Z,3.5nm,0.7s
L15K Ungalak Mounta 96.08 29 P **P 19 22 37.8 -0.6**
baz=262
H16K Elim 96.14 26 P **P 19 22 38.7 0.0**
baz=262
G16K Koyuk River 96.20 25 P **P 19 22 38.8 -0.1**
baz=262
CHNA Chernabura Isl 96.22 36 P **P 19 22 38.5 -0.7**
baz=263
D17K Noatak River 96.24 22 P **P 19 22 38.9 -0.2**
baz=262,SNR=16
C17K DeLong Mountai 96.32 22 P **P 19 22 39.0 -0.4**
baz=262,SNR=7.5
M15K Kasigluk River 96.34 30 P **P 19 22 39.7 0.0**
baz=263
RDOG Red Dog Mine 96.36 22 P **P 19 22 39.9 +0.3**
baz=262
S14K Fog Glacier 96.41 34 P **P 19 22 40.1 -0.1**
baz=263
N15K Kwethluk River 96.57 30 P **P 19 22 40.3 -0.4**
baz=263
BOVS Bovan 96.58 313 ⇑P **P 19 22 40.1 -1.0**
O15K Ungalikthiuk R 96.59 31 P **P 19 22 40.5 -0.4**
baz=264
E17K Hotham Inlet 96.64 23 P **P 19 22 39.9 -1.0**
baz=263
J16K Anvik River 96.69 27 **P 19 22 41.4 +0.3**
J16K IAmb IAmb 19 22 43.3
comp=Z,14nm,0.9s
J16K Anvik River 96.69 27 P **P 19 22 40.6 -0.5**
baz=263
MDVR Moldovita 96.69 314 ⇓P **P 19 22 41.9 +0.2**
I17K Unalakleet 96.72 26 P **P 19 22 40.3 -0.9**
baz=263
KOLS Kolonicke sedl 96.74 318 *e*P **P 19 22 42.9 +1.1**
KOLS Kolonicke sedl 96.74 318 *e*PDIFF **P 19 22 42.9 +1.1**
F17K Baldwin Pennin 96.78 24 P **P 19 22 40.2 -1.3**
baz=263
SIRR Siria 96.88 316 ⇑P **P 19 22 41.8 -0.7**
G17K Kiwalik Mounta 96.92 25 P **P 19 22 41.6 -0.6**
baz=264,SNR=6.9
L16K Owhat River 97.03 29 P **P 19 22 41.7 -1.0**
baz=264
CHGN Chignik 97.04 34 P **P 19 22 42.0 -0.9**
baz=264
C18K Utukok River 97.06 22 P **P 19 22 42.6 -0.3**
baz=263,SNR=5.5
E18K Tukpahlearik C 97.15 23 Pdif 19 22 43.6 +0.4
E18K IAmb IAmb 19 22 44.9
comp=Z,6.2nm,0.9s
E18K Tukpahlearik C 97.15 23 P **P 19 22 42.6 -0.6**
baz=264
H17K Granite Mounta 97.17 25 P **P 19 22 43.0 -0.3**
baz=264,SNR=6.7
M16K Timber Creek 97.21 29 P **P 19 22 43.6 0.0**
M16K IAmb IAmb 19 24 58.8
comp=Z,19nm,1.6s
M16K Timber Creek 97.21 29 P **P 19 22 42.6 -1.0**
baz=264
N16K Nishlik Lake 97.25 30 P **P 19 22 43.2 -0.7**
baz=265
ARCES ARCESS Array B 97.26 339 P **P 19 22 43.2 -0.4**
comp=Z,4.9nm,0.9s,baz=26,slow=5.8,SNR=4.9
comp=Z,4.9nm,0.9s
ARCES ARCESS Array B 97.26 339 P **P 19 22 42.4 -1.3**
A19K Wainwright 97.28 20 P **P 19 22 43.3 -0.4**
baz=264
J17K VABM Dome 97.38 27 P **P 19 22 44.3 0.0**
J17K VABM Dome 97.38 27 P **P 19 22 43.8 -0.5**
baz=265
F18K Selawik 97.44 24 P **P 19 22 44.1 -0.3**
baz=265
O16K Kokwok River B 97.51 31 P **P 19 22 44.2 -0.8**
baz=265
P16K Nushagak River 97.52 31 P **P 19 22 44.4 -0.5**
baz=265
L17K Donlin 97.63 28 P **P 19 22 45.0 -0.4**
baz=265
K17K Iditarod 97.68 28 P **P 19 22 45.3 -0.4**
baz=265
C19K Lookout Ridge 97.69 21 P **P 19 22 45.6 -0.1**
baz=265,SNR=6.9
G18K Tagagawik 97.78 24 P **P 19 22 45.8 -0.2**
baz=265
H18K Honhosa River 97.84 25 P **P 19 22 45.8 -0.6**
baz=266
M17K Holitna River 97.98 29 Pdif 19 22 47.1 +0.1
M17K IAmb IAmb 19 22 49.5
comp=Z,10nm,1.3s
M17K Holitna River 97.98 29 P **P 19 22 46.6 -0.5**
baz=266
O17K Koliganek Bris 98.03 31 P **P 19 22 47.3 0.0**
baz=266
N17K Nushagak Hills 98.04 30 P **P 19 22 47.2 -0.1**
baz=266
D19K Kuna River 98.18 22 P **P 19 22 47.6 -0.2**
baz=266
F19K Shaleruckik Mo 98.20 24 P **P 19 22 47.6 -0.3**
baz=266
R17L Mt. Peulik Vol 98.27 33 P **P 19 22 47.5 -0.9**
baz=266
P17K Kvichak River 98.33 31 P **P 19 22 47.3 -1.3**
baz=266
L18K Granite Mounta 98.39 28 P **P 19 22 48.1 -0.8**
baz=267
G19K Purcell Mounta 98.44 24 P **P 19 22 48.5 -0.5**
baz=267
GCSA Galena City Sc 98.45 26 P **P 19 22 49.0 0.0**
baz=267
E19K Redstone River 98.45 23 P **P 19 22 48.2 -0.8**
baz=267
Q17K Contact Creek 98.56 32 P **P 19 22 48.7 -1.1**
baz=267
CHIR Chirikof Islan 98.56 35 P **P 19 22 49.3 -0.5**
baz=267
B20K Meade River 98.60 20 P **P 19 22 48.9 -0.7**
baz=267
H19K Roundabout Mou 98.67 25 P **P 19 22 49.5 -0.5**
baz=267,SNR=9.4
N18K Kilae Creek 98.69 30 P **P 19 22 49.5 -0.8**
baz=267
D20K Etivluk River 98.74 22 P **P 19 22 49.9 -0.5**
baz=268
M18K Stony River 98.76 29 P **P 19 22 49.8 -0.7**
baz=267
A21K Barrow 98.83 19 P **P 19 22 49.9 -0.7**
baz=268
E20K Nigu River 98.88 22 P **P 19 22 50.2 -0.8**
baz=268,SNR=7.2
J19K Poorman 98.96 26 P **P 19 22 50.5 -0.9**
baz=268
P18K Big Mountain, 98.96 31 P **P 19 22 50.0 -1.5**
baz=268
O18K Koktuh Hills 98.99 31 P **P 19 22 50.7 -0.9**
baz=268
F20K Avaraart Lake 99.02 23 P 19 22 51.0
baz=268,SNR=5.2
Q18K Katmai Hardscr 99.04 32 P Pdif 19 22 50.5 -1.5
baz=268
L19K White Mountain 99.25 28 P Pdif 19 22 51.7 -1.0
baz=268
H20K Anoltkeneega Mo 99.32 25 P Pdif 19 22 52.3 -0.7
baz=269
A22K Sinclair Lake 99.36 19 P Pdif 19 22 52.1 -0.8
baz=270
N19K Bonanza Creek 99.38 30 P Pdif 19 22 53.5 0.0
N19K IAmb IAmb 19 22 54.6
comp=Z,6.7nm,0.9s
N19K Bonanza Creek 99.38 30 P Pdif 19 22 52.3 -1.1
baz=268
SII Sitkinak Islan 99.40 34 P Pdif 19 22 52.5 -1.0
baz=268
C21K Knifeblade Rid 99.41 21 P Pdif 19 22 53.1 -0.3
baz=270
M19K Big River Lodg 99.46 29 P Pdif 19 22 53.1 -0.5
baz=269
B21K Ikpikpuk River 99.47 21 P Pdif 19 22 53.4 -0.1
baz=270
I20K Naaghedeneel 99.48 26 P Pdif 19 22 53.0 -0.6
baz=269
J20K Nowinta River 99.61 26 P Pdif 19 22 54.3 0.0
baz=269
K20K Telida 99.63 27 P Pdif 19 22 54.4 -0.1
baz=269
E21K Killik River 99.70 22 P Pdif 19 22 54.6 -0.1
baz=270,SNR=6.7
B22K Teshekpuk Lake 99.88 20 P Pdif 19 22 55.0 -0.3
baz=271
G21K Allakaket 99.89 24 P Pdif 19 22 55.4 -0.1
baz=270
F21K Alatna River 99.89 23 P Pdif 19 22 55.4 -0.1
baz=270
OHAK Old Harbor 99.91 33 P Pdif 19 22 55.0 -0.7
baz=269
P19K Oil Pt 99.98 31 P Pdif 19 22 55.2 -0.9
baz=269
SPITS Spitsbergen Ar 99.99 348 P Pdif 19 22 55.2 -0.5
comp=Z,5.3nm,0.6s,baz=100,slow=9.4,SNR=9.2
comp=Z,5.3nm,0.6s
M20K Styx River 100.05 29 P Pdif 19 22 55.9 -0.6
baz=270
H21K Melozitna Rive 100.18 25 P Pdif 19 22 55.7 -1.2
baz=271
O20K Slope Mountain 100.29 30 P Pdif 19 22 56.2 -1.3
baz=270
KDAK Kodiak Island 100.30 33 P Pdif 19 22 57.0 -0.5
baz=270
F22K John River 100.39 23 P Pdif 19 22 57.5 -0.2
baz=272
CHUM Lake Minchumin 100.42 27 P Pdif 19 22 57.5 -0.4
baz=271
PPLA Purkeypile 100.49 28 P Pdif 19 22 57.9 -0.5
baz=271
SPCR Spurr Chakacha 100.50 29 P Pdif 19 22 57.7 -0.7
baz=270
E22K Anaktuvuk Pass 100.51 22 P Pdif 19 22 57.3 -0.9
baz=272
CAST Castle Rocks 100.53 27 P Pdif 19 22 57.1 -1.4
baz=271
G22K Bettles 100.68 24 P Pdif 19 22 58.5 -0.4
baz=272
H22K Ishtalitna Cre 100.77 25 P Pdif 19 22 58.7 -0.7
baz=272
HOM Homer 100.79 31 P Pdif 19 22 59.2 -0.4
baz=271
SKT Skwentna 100.81 29 P Pdif 19 22 58.9 -0.8
baz=271
C23K Itkillik River 100.86 21 P Pdif 19 22 59.9 +0.2
baz=274
D23K Nanushuk River 100.89 21 P Pdif 19 23 00.3 +0.4
baz=273
CAPN Captain Cook N 101.02 30 P Pdif 19 23 00.6 0.0
baz=271
MLY Manley 101.07 25 P Pdif 19 23 01.2 +0.4
baz=272
L22K Peersville 101.15 28 P Pdif 19 23 01.7 +0.4
baz=272
COLD Coldfoot 101.17 23 P Pdif 19 23 00.9 -0.2
baz=273
BRSE Bradley Lake S 101.25 31 P Pdif 19 23 01.6 -0.1
baz=271
G23K Bananza Creek 101.27 24 P Pdif 19 23 01.7 0.0
baz=273
TOLK Toolik Lake Re 101.31 22 P Pdif 19 23 01.8 -0.1
baz=274
TRF Thorofare Moun 101.33 27 P Pdif 19 23 02.5 +0.4
baz=273
E23K Chandalar 101.34 22 P Pdif 19 23 02.4 +0.3
baz=274
CUT Chulitna 101.39 28 P Pdif 19 23 02.6 +0.4
baz=272
H23K Yukon River 101.52 25 P Pdif 19 23 01.6 -1.2
baz=274
C24K Frankfort Bluff 101.53 21 P Pdif 19 23 02.1 -0.6
baz=275
D24K Happy Valley 101.54 21 P Pdif 19 23 02.0 -0.8
baz=275
I23K Minto, Yukon-K 101.64 25 P Pdif 19 23 02.2 -1.1
baz=274
RC01 Rabbit Creek A 101.70 29 P Pdif 19 23 02.0 -1.6
baz=273
O22K Cooper Landing 101.73 30 P Pdif 19 23 02.9 -0.8
baz=272
E24K Your Creek 101.76 22 P Pdif 19 23 03.4 -0.4
baz=275
NEA2 Nenana 101.80 26 P Pdif 19 23 03.0 -1.0
baz=274
SEW Seward 101.88 30 P Pdif 19 23 03.9 -0.5
baz=273
MCK McKinley 101.92 27 P Pdif 19 23 04.2 -0.5
baz=274
PMR Palmer 101.96 29 P Pdif 19 23 04.2 -0.6
baz=273
F24K Squaw Lake 102.04 23 P Pdif 19 23 04.8 -0.3
baz=276
HFS Hagfors 102.05 330 P Pdif 19 23 05.2 0.0
comp=Z,5.2nm,0.8s,baz=222,slow=2.0,SNR=7.8
WAT1 Susitna Watana 102.16 28 P Pdif 19 23 05.4 -0.3
baz=274
H24K Noodor Dome 102.20 25 P Pdif 19 23 05.8 0.0
baz=275
G24K Hadweenzic Riv 102.28 24 P Pdif 19 23 05.5 -0.6
baz=276
KNK Knik Glacier 102.30 29 P Pdif 19 23 05.2 -1.1
baz=274
SML Sawmill 102.33 29 P Pdif 19 23 06.0 -0.5
baz=274
GERES GERESS Array B 102.38 318 PP **PP 19 27 18.0 -2.8**
comp=Z,1.3nm,0.9s,baz=98,slow=6.9,SNR=4.4
D25K Kavik River 102.39 21 P Pdif 19 23 05.7 -0.9
baz=277
POKR Poker Plat Res 102.46 25 P Pdif 19 23 06.5 -0.4
baz=276
WAT6 Susitna Watana 102.55 28 P Pdif 19 23 06.9 -0.7
baz=275
M23K Glacier View 102.62 29 P Pdif 19 23 07.3 -0.4
baz=274
DHY Denali Highway 102.67 27 P Pdif 19 23 07.4 -0.8
baz=275
CLL Collm 102.79 321 *i* P Pdif 19 23 10.3 +1.6
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 102.79 321 *i* Pdif **Pdif 19 23 10.3 +1.6**
comp=Z,6.0nm,1.1s
SCM Sheep Creek Mo 102.80 29 P **Pdif 19 23 08.3 -0.4**
baz=275
C26K Camden Bay 102.81 20 P **Pdif 19 23 08.2 -0.2**
baz=279
G25K Bearman Lake 102.82 23 P **Pdif 19 23 09.3 +0.8**
baz=277
E25K Arctic Village 102.84 22 P **Pdif 19 23 09.3 +0.6**
baz=278
F25K Christian Rive 102.89 23 P **Pdif 19 23 09.5 +0.6**
baz=278
P23K Montague Islan 102.92 30 P **Pdif 19 23 09.6 +0.5**
baz=274
GLI Glacier Island 103.00 30 P **Pdif 19 23 09.8 +0.4**
baz=275
NOA NORSAR Array B 103.21 331 Pdiff **Pdif 19 23 10.3 -0.1**
comp=Z,1.2nm,0.8s,baz=81,slow=4.4,SNR=3.3
NOA PP **PP 19 27 25.1 -1.4**
comp=Z,0.8nm,0.8s,baz=92,slow=7.7,SNR=4.6
PRP Porcupine Dome 103.21 25 P **Pdif 19 23 10.9 +0.4**
baz=277
C27K Jago River 103.27 20 P **Pdif 19 23 11.3 +0.8**
baz=280
M24K Tolsona, Glenn 103.32 28 P **Pdif 19 23 11.2 +0.3**
baz=276
J25K Salcha River, 103.39 26 P **Pdif 19 23 10.9 -0.2**
baz=277
F26K Sheenjek River 103.44 22 P **Pdif 19 23 11.1 -0.2**
baz=279
Q23K Middleton Isla 103.49 31 P **Pdif 19 23 11.8 +0.2**
baz=275
KLU Klutina 103.50 29 P **Pdif 19 23 12.0 +0.2**
baz=276
EYAK Cordova Ski Ar 103.69 30 P **Pdif 19 23 12.6 +0.1**
baz=276
G26K Porcupine Rive 103.70 23 P **Pdif 19 23 11.5 -0.9**
baz=279
HARP HAARP 103.76 28 P **Pdif 19 23 13.3 +0.5**
baz=277
SCRK Sand Creek 104.08 26 P **Pdif 19 23 14.8 +0.5**
baz=278
N25K Chitina, Valde 104.12 29 P **Pdif 19 23 13.9 -0.6**
baz=277
BMRM Bremner River 104.20 29 P **Pdif 19 23 14.3 -0.5**
baz=277
E27K Coleen River 104.30 22 P **Pdif 19 23 15.0 -0.1**
baz=282
D27M Malcolm River 104.30 21 P **Pdif 19 23 15.2 +0.1**
baz=282
KAIM Kayak Island 104.42 30 P **Pdif 19 23 15.5 -0.3**
baz=277
G27K Doyon Strip 104.55 23 P **Pdif 19 23 16.0 -0.3**
baz=281
H27K Steamboat Moun 104.72 24 P **Pdif 19 23 16.5 -0.6**
baz=281
M26K Nabesna, AK 104.76 28 P **Pdif 19 23 16.5 -0.8**
baz=279
I27K Kandik River 104.80 24 P **Pdif 19 23 16.9 -0.5**
baz=281
MCARA McCarthy VSAT 104.90 29 P **Pdif 19 23 17.3 -0.6**
baz=279
E28M Babbage River 104.95 21 P **Pdif 19 23 16.8 -1.2**
baz=284
CRQE Cirque 104.96 29 P **Pdif 19 23 16.7 -1.6**
baz=278
D28M Stokes Point 105.05 20 P **PKiKP 19 27 31.9 -0.5**
baz=285
F28M Old Crow 105.06 22 P **PKiKP 19 27 31.8 -0.8**
baz=283
M27K Edge Creek, AK 105.28 28 P **PKiKP 19 27 32.3 -1.0**
baz=280
I28M Miner Creek 105.52 24 P **PKiKP 19 27 33.1 -0.5**
baz=282
E29M Blow River 105.59 21 P **PKiKP 19 27 32.8 -0.7**
baz=285
BVCY Beaver Creek 105.73 28 P **PKiKP 19 27 33.5 -0.5**
baz=281
G29M Pine Creek 105.93 23 P **PKiKP 19 27 34.4 +0.2**
baz=285
H29M Whitestone 105.97 23 P **PKiKP 19 27 34.2 -0.1**
baz=284
YUK3 Moose Creek 106.04 28 P **PKiKP 19 27 34.0 -0.8**
baz=281
O28M Mount Upton 106.36 29 P **PKiKP 19 27 34.0 -1.6**
baz=283
PINM Pinnacle 106.46 30 P **PKiKP 19 27 34.5 -1.0**
baz=281
J29N Klondike Camp 106.46 25 P **PKiKP 19 27 34.5 -0.8**
baz=284
YUK8 Steele Glacier 106.46 29 P **PKiKP 19 27 34.6 -1.1**
baz=282
EPYK Eagle Plains 106.57 23 P **PKiKP 19 27 35.3 -0.2**
baz=286
F30M Barrier River 106.57 22 P **PKiKP 19 27 35.0 -0.3**
baz=287
G30M tAoh Zraii Nji 106.59 22 P **PKiKP 19 27 34.4 -1.1**
baz=286
BRWY Burwash Landin 106.79 28 P **PKiKP 19 27 35.1 -0.9**
baz=282
L29M L29M 106.81 27 P **PKiKP 19 27 35.4 -0.6**
baz=284
M29M Somme Creek 106.82 27 P **PKiKP 19 27 35.4 -0.7**
baz=283
K29M Barlow Dome 106.90 26 P **PKiKP 19 27 35.6 -0.6**
baz=284
YUK4 Talbot Arm 106.98 28 P **PKiKP 19 27 36.2 -0.4**
baz=283
I30M Mount Dempster 107.02 24 P **PKiKP 19 27 35.4 -1.0**
baz=286
INK Inuvik 107.16 21 P **PKiKP 19 27 35.9 -0.5**
baz=289
YUK6 Outpost Mounta 107.20 29 P **PKiKP 19 27 36.4 -0.6**
baz=283
J30M Hart River 107.22 25 P **PKiKP 19 27 35.2 -1.6**
baz=286
O29M Mount Kennedy 107.24 30 P **PKiKP 19 27 36.3 -0.7**
baz=282
G31M Satah River 107.34 22 P **PKiKP 19 27 37.0 +0.3**
baz=288
F31M Tsiigehtchic 107.37 22 P **PKiKP 19 27 36.6 -0.2**
baz=289
M30M Minto, Yukon 107.54 27 P **PKiKP 19 27 37.3 -0.1**
baz=285
HYT Haines Junctio 107.64 29 P **PKiKP 19 27 36.7 -1.0**
baz=283
H31M Peel River 107.66 23 P **PKiKP 19 27 37.0 -0.4**
baz=288
N30M Aishikik Lake 107.68 28 P **PKiKP 19 27 38.1 +0.5**
baz=284
P29M Windy Craggy 107.80 30 P **PKiKP 19 27 38.0 +0.1**
baz=283
P30M Million Dollar 108.06 30 P **PKiKP 19 27 39.1 +0.7**
baz=284
A36M Sachs Harbour 108.24 16 P **PKiKP 19 27 38.5 +0.2**
baz=299
N31M Braeburn, Yuko 108.28 28 P **PKiKP 19 27 39.1 +0.4**
baz=285
O30N Mendenhall 108.32 29 P **PKiKP 19 27 38.6 -0.2**
baz=285
M31M Drury Creek, Y 108.72 27 P **PKiKP 19 27 38.7 -0.9**
baz=287
WHY Whitehorse 108.92 29 P **PKiKP 19 27 39.7 -0.3**
baz=286
S31K Pelican 108.94 32 P **PKiKP 19 27 39.4 -0.5**
baz=284
SKAG Skagway 109.03 30 P **PKiKP 19 27 39.7 -0.4**
baz=285
R31K City Hall, Gus 109.08 31 P **PKiKP 19 27 39.6 -0.6**
baz=284
N32M Quiet Lake 109.63 28 P **PKiKP 19 27 40.5 -0.8**
baz=288
R32K Eaglecrest 109.74 31 P **PKiKP 19 27 40.6 -0.9**
baz=285
P32M Atlin 109.78 30 P **PKiKP 19 27 40.9 -0.7**
baz=286
C36M Paulatuk 109.86 18 P **PKiKP 19 27 41.0 -0.4**
baz=299
S32K Killisnoo 109.92 32 P **PKiKP 19 27 40.8 -1.0**
baz=285
MMPY Sheldon Lake, 109.97 26 P **PKiKP 19 27 41.6 -0.3**
baz=290
P33M Teslin, Yukon 110.03 29 P **PKiKP 19 27 41.4 -0.8**
baz=288
Q32M Nakina River 110.68 30 P **PKiKP 19 27 42.6 -1.0**
baz=288
U33K Whale Pass 111.06 33 P **PKiKP 19 27 43.2 -0.8**
baz=286
R33M Jennings River 111.18 29 P **PKiKP 19 27 44.2 -0.2**
baz=289

CRAG	**Craig**	**111.23**	**34**	P	**PKiKP**	**19 27 43.7**	**-0.6**
	baz=286							
WRAK	**Wrangell Islan**	**111.39**	**33**	P	**PKiKP**	**19 27 44.4**	**-0.3**
	baz=287							
TGTN	**Hyland Airport**	**111.68**	**27**	P	**PKiKP**	**19 27 45.4**	**+0.2**
	baz=292							
TORD	**Torodi Ar. Bea**	**111.95**	**281**	PKiKP	**PKiKP**	**19 27 47.0**	**0.0**
	comp=Z,1.4nm,0.6s,baz=100,slow=1.5,SNR=9.8							
TORD				PKKPbc	**PKKPbc**	**19 38 39.7**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=290,slow=3.6,SNR=4.0							
TORD	**Torodi Ar. Bea**	**111.95**	**281**		**PKiKP**	**19 27 46.3**	**-0.6**
DLBC	**Dease Lake**	**111.95**	**30**	P	**PKiKP**	**19 27 46.0**	**+0.2**
	baz=289							
V35K	**Ketchikan**	**112.09**	**34**	P	**PKiKP**	**19 27 45.9**	**-0.1**
	baz=287							
T35M	**Bob Quinn**	**112.32**	**32**	P	**PKiKP**	**19 27 47.3**	**+0.8**
	baz=289							
U35K	**Hyder**	**112.78**	**33**	P	**PKiKP**	**19 27 47.3**	**+0.1**
	baz=288							
WRGLY	**Wrigley**	**113.00**	**24**	P	**PKiKP**	**19 27 48.1**	**+0.6**
	baz=298							
KOTAN	**Kotaneelee Air**	**114.14**	**27**	P	**PKiKP**	**19 27 51.1**	**+1.3**
	baz=296							
ESDC	**Sonseca Array**	**115.87**	**310**	PKP	**PKiKP**	**19 27 54.0**	**+0.2**
	comp=Z,1.5nm,1.0s,baz=50,slow=1.8,SNR=6.8							
YKA	**Yellowknife Ar**	**116.83**	**22**	PKP	**PKiKP**	**19 27 55.1**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=314,slow=1.5,SNR=10.0							
YKA	**Yellowknife Ar**	**116.83**	**22**		**PKPdf**	**19 27 54.3**	**-0.6**
DBIC	**Dimbokro**	**117.76**	**273**	PKP	**PKiKP**	**19 27 58.4**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=158,slow=5.5,SNR=4.5							
DBIC	**Dimbokro**	**117.76**	**273**		**PKPdf**	**19 27 57.8**	**-0.3**
PDAR	**Pinedale Array**	**130.33**	**40**	PKP	**PKiKP**	**19 28 22.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=25,slow=1.3,SNR=9.1							
PDAR	**Pinedale Array**	**130.33**	**40**		**PKPdf**	**19 28 22.1**	**+0.4**
PLCA	**Paso Flores**	**130.42**	**177**	PKPdf	**PKPdf**	**19 28 21.5**	**-0.3**
PLCA	**Paso Flores**	**130.42**	**177**	PKIKP	**PKPdf**	**19 28 21.5**	**-0.3**
ULM	**Lac du Bonnet**	**132.73**	**24**	PKP	**PKiKP**	**19 28 26.8**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=328,slow=4.1,SNR=7.2							
ULM				SKPbc	**SKPab**	**19 31 45.0**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=22,slow=3.7,SNR=4.3							
ULM	**Lac du Bonnet**	**132.73**	**24**		**PKPdf**	**19 28 25.8**	**+0.1**
SCHQ	**Schefferville**	**134.31**	**359**	PKP	**PKPdf**	**19 28 29.1**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=13,slow=3.7,SNR=7.2							
SCHQ				PP	**PP**	**19 31 00.1**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=321,slow=4.9,SNR=3.6							
SCHQ	**Schefferville**	**134.31**	**359**		**PKPdf**	**19 28 28.5**	**-0.1**
TXAR	**Lajitas Array**	**140.72**	**54**	PKhKP	PKPpre	19 28 35.9		
	comp=Z,1.7nm,0.6s,baz=256,slow=3.1,SNR=24							
TXAR				PKP	**PKiKP**	**19 28 42.8**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=190,slow=1.7,SNR=12							
CPUP	**Villa Florida**	**143.44**	**196**	PKP	**PKPdf**	**19 28 45.2**	**-0.9**
	comp=Z,3.4nm,0.7s,baz=170,slow=3.1,SNR=9.7							
CPUP	**Villa Florida**	**143.44**	**196**		PKPbc	19 28 44.6	+1.1	
DIAM	**Diamantina, MG**	**143.95**	**221**	*eP*	**PKPdf**	**19 28 47.9**	**+0.5**
NBPV	**Pedro Velho**	**144.23**	**246**	*eP*	**PKPdf**	**19 28 47.6**	**-0.2**
RCBR	**Riachuelo**	**145.03**	**246**	*eP*	**PKPdf**	**19 28 49.9**	**+0.7**
PMNB	**Patos De Minas**	**145.50**	**217**	*eP*	**PKPdf**	**19 28 49.0**	**-1.0**
AMBA	**Amambai (Brazi**	**145.89**	**201**	*eP*	**PKPdf**	**19 28 49.8**	**-0.7**
JANB	**Januaria**	**146.68**	**224**	*eP*	**PKPdf**	**19 28 52.8**	**+0.8**
NBMA	**Muriti-CE**	**146.88**	**241**	*eP*	**PKPdf**	**19 28 52.3**	**-0.1**
BDFB	**Brasilia**	**148.68**	**219**	PKPbc	**PKiKP**	**19 29 00.7**	**+0.1**
	comp=Z,6.7nm,0.7s,baz=122,slow=3.2,SNR=12							
BDFB	**Brasilia**	**148.68**	**219**		**PKPbc**	**19 28 59.0**	**-0.2**
BDFB	**Brasilia**	**148.68**	**219**	PKP2	**PKPbc**	**19 28 59.0**	**-0.2**
SDBA	**SAO DESIDERIO**	**148.91**	**227**	*eP*	**PKPdf**	**19 28 56.1**	**+0.4**
COIM	**Forte Coimbra**	**149.64**	**199**	*eP*	**PKPdf**	**19 28 57.5**	**+0.8**
NBPS	**Pedro II - PI**	**150.62**	**244**	*eP*	**PKPdf**	**19 28 58.3**	**-0.2**
PP1B	**Ponte de Pedra**	**150.67**	**206**	*eP*	**PKPdf**	**19 28 57.7**	**-0.7**
ARAG	**Araguaiana, MT**	**150.82**	**213**	*eP*	**PKPdf**	**19 28 58.1**	**-0.5**
BBSD	**Serra de San D**	**153.03**	**195**	*eP*	**PKPdf**	**19 29 01.8**	**-0.1**
SNDB	**Serra Nova Dou**	**153.52**	**218**	*eP*	**PKPdf**	**19 29 02.1**	**-0.5**
PTLB	**Pontes e Lacer**	**154.25**	**199**	*eP*	**PKPdf**	**19 29 03.4**	**-0.3**
LPAZ	**La Paz**	**154.85**	**179**	PKP	**PKPdf**	**19 29 06.5**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=58,slow=1.4,SNR=7.6							
LPAZ				PKPab	**PKPab**	**19 29 30.3**	**+1.1**
	comp=Z,4.9nm,0.9s,baz=158,slow=5.3,SNR=11							

NIED ***04*** *19:10:01.7, 36˚.2Nx 137˚.62E, h4km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=1.05; Mθθ=1.53; Mφφ=0.48; Mrθ=2.79; Mθφ=-5.32; Mφr=-1.28; Fault plane solution: M₀6.29000×10¹⁵ NP1: φs189.00000°, δ62.00000°, λ13.00000°. NP2:φs92.00000°, δ79.00000°, λ151.00000°.*

NEIC ***04*** *19:10:01.3, 36˚.35Nx 137˚.54E, h1km*

JMA ***04*** *19:10:01.7±0.0, 36˚.3N±0˚.2× 137˚.6E±0˚.1, h4km±1km, MD4.4/19, MV3.9/19, HIDA MOUNTAINS REGION*

JMA Felt III J1 at HIDA MOUNTAINS REGION .

NEIC ***04*** *19:10:01.7±1.8, 36˚.34N±0˚.02× 137˚.54E±0˚.02, h4km±2km, mb4.4/12, Mwr4.4/20, Error ellipse: s-maj=3.2km s-min=2.2km az=141.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.13; Mθθ=0.07; Mφφ=0.21; Mrθ=1.26; Mθφ=-4.80; Mφr=0.83; Fault plane solution: M₀5.03000×10¹⁵ NP1:φs89.96000°, δ82.31000°, λ166.06000°. NP2:φs181.87000°, δ76.19000°, λ7.93000°. Principal axes: T 5.2714, Plg15.0000°, Azm45.0000°; N -0.5122, Plg74.0000°, Azm242.0000°; P -4.7593, Plg4.0000°, Azm136.0000°;*

IDC ***04*** *19:10:02.9±1.1, 36˚.61Nx 137˚.62E, h0km, mb3.5/7, mbtmp3.6/9, ML3.5/2, MS3.8/47 Error ellipse: s-maj=29.2km s-min=7.8km az=17.0*

ISC 04 19:10:01.0±1.3, 36˚.32N±0˚.04× 137˚.56E±0˚.04, h2km±9km, n117, σt1$33/49, mb4.0/13, MS3.8/43, 3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MJB9	**Matsu-Tunnel**	**0.57**	**66**			**Pg**	**19 10 13.0**	**+1.1**
MJB9						**Sg**	**19 10 19.9**	**+0.6**
MAJO	**Matsushiro**	**0.57**	**66**			**Pg**	**19 10 12.0**	**+0.1**
MAJO						**Sg**	**19 10 19.4**	**+0.1**
MAT	**Matsushiro**	**0.57**	**66**	*eP*		**Pg**	**19 10 12.1**	**+0.2**
MAT				*eS*		**Sg**	**19 10 19.4**	**+0.1**
MJAR	**Matsushiro Arr**	**0.57**	**66**	Pg		**Pg**	**19 10 12.4**	**+0.5**
	87nm,0.3s,baz=245,slow=19,SNR=1000							
MJAR				Lg		Lg	19 10 20.1	
	128nm,0.3s,baz=244,slow=31,SNR=46							
MJAR	**Matsushiro Arr**	**0.57**	**66**			**Pg**	**19 10 11.9**	**-0.1**
JNT	**Takato**	**0.64**	**133**	*eP*		**Pg**	**19 10 13.0**	**-0.3**
JNT				A		A	19 10 13.0	
	comp=N,23nm,3.4s,comp=E,11nm,2.5s							
JNT				*eS*		**Sg**	**19 10 20.9**	**-0.8**
JGF	**Kuroka**	**0.73**	**193**	Pg		**Pg**	**19 10 15.2**	**+0.1**
JGF	**Kuroka**	**0.73**	**193**	A		A	19 10 15.6	
	comp=N,11nm,3.4s,comp=E,24nm,3.2s							
JJH	**Hakui**	**0.87**	**314**	A		A	19 10 19.6	
	comp=N,10.0nm,4.6s,comp=E,11nm,4.8s							
JGK	**Kuni**	**0.91**	**74**	A		A	19 10 18.4	
	comp=N,16nm,3.6s,comp=E,18nm,2.9s							
JJN	**Nakama**	**0.92**	**32**	A		A	19 10 19.5	
	comp=N,12nm,3.0s,comp=E,16nm,2.6s							
JYTA	**Yamagatataniai**	**0.98**	**223**	A		A	19 10 20.8	
	comp=N,9.0nm,3.0s,comp=E,13nm,4.1s							
JNY	**Yasuok**	**0.99**	**165**	A		A	19 10 19.8	
	comp=N,14nm,2.6s,comp=E,20nm,6.0s							
JKG	**Kaga**	**0.99**	**268**	A		A	19 10 21.7	
	comp=N,24nm,3.7s,comp=E,8.0nm,2.4s							
INU	**Inuyama**	**1.06**	**205**			**Pg**	**19 10 21.2**	**-0.1**
INU				Sg		**Sg**	**19 10 36.8**	**+1.8**
JAO	**Obara**	**1.07**	**193**	A		A	19 10 21.9	
	comp=N,11nm,4.7s,comp=E,28nm,4.7s							
JYN	**Shimob**	**1.14**	**135**	A		A	19 10 22.4	
	comp=N,17nm,4.6s,comp=E,9.0nm,1.3s							
JICN	**Ichinomiyachia**	**1.17**	**210**	A		A	19 10 23.9	
	comp=N,19nm,2.4s,comp=E,22nm,2.2s							
SHZ3	**Shizuoka 3**	**1.35**	**157**	A		A	19 10 26.2	
	comp=N,15nm,1.9s,comp=E,21nm,4.2s							
JSSY	**Shinshiroyabe**	**1.40**	**182**	A		A	19 10 27.3	
	comp=N,6.0nm,4.9s,comp=E,18nm,5.8s							
JKT	**Katashina**	**1.43**	**71**	A		A	19 10 27.7	
	comp=N,12nm,1.1s,comp=E,5.0nm,6.3s							
JFNN	**Fujinakano**	**1.45**	**140**	A		A	19 10 27.6	
	comp=N,18nm,5.1s,comp=E,13nm,4.7s							
HMMJ	**Hamamatsu 2**	**1.46**	**175**	A		A	19 10 28.2	
	comp=N,7.0nm,0.7s,comp=E,11nm,2.2s							
JFM	**Mihama**	**1.50**	**239**	A		A	19 10 29.8	
	comp=N,11nm,4.3s,comp=E,9.0nm,5.7s							
JEG	**Eigenji**	**1.51**	**219**	A		A	19 10 29.7	
	comp=N,4.0nm,9.5s,comp=E,8.0nm,4.3s							
JSGW	**Sagamiharawaka**	**1.52**	**118**	A		A	19 10 28.7	
	comp=N,4.0nm,3.4s,comp=E,7.0nm,8.1s							
JIZZ	**Izumozaki**	**1.52**	**37**	A		A	19 10 29.7	
	comp=N,23nm,0.8s,comp=E,31nm,0.7s							
JAG	**Ashikaga**	**1.53**	**85**	A		A	19 10 29.1	
	comp=N,7.0nm,5.4s,comp=E,4.0nm,5.0s							
JKKS	**Kakegawashinom**	**1.60**	**167**	A		A	19 10 30.3	
	comp=N,21nm,1.1s,comp=E,32nm,5.3s							
JHG	**Hegura jima**	**1.61**	**342**	A		A	19 10 31.8	
	comp=N,6.0nm,7.5s,comp=E,4.0nm,2.2s							
JOD2	**Odawara 2**	**1.63**	**130**	A		A	19 10 30.4	
	comp=N,11nm,0.6s,comp=E,11nm,4.3s							
JAA	**Atsumi**	**1.71**	**192**	A		A	19 10 32.4	
	comp=N,8.0nm,6.3s,comp=E,14nm,5.2s							
JSG	**Sagara**	**1.71**	**162**	Pn		**Pn**	**19 10 32.8**	**+0.8**
JSG				Sn		**Sn**	**19 10 54.6**	**+0.2**
JSG	**Sagara**	**1.71**	**162**	A		A	19 10 32.0	
	comp=N,29nm,7.8s,comp=E,31nm,5.3s							
JHTM	**Izuhatsuma**	**1.80**	**138**	A		A	19 10 33.1	
	comp=N,22nm,1.0s,comp=E,28nm,1.2s							
TOK	**Tokyo**	**1.89**	**109**	A		A	19 10 34.4	
	comp=N,41nm,5.0s,comp=E,28nm,4.9s							
JIZS	**Izushimoda**	**1.92**	**146**	A		A	19 10 34.9	
	comp=N,8.0nm,4.4s,comp=E,10.0nm,6.4s							
JSB	**Shiboa**	**2.01**	**70**	A		A	19 10 36.4	
	comp=N,7.0nm,2.7s,comp=E,8.0nm,2.9s							
JFY	**Yanaizu**	**2.04**	**57**	A		A	19 10 37.1	
	comp=N,3.0nm,2.5s,comp=E,4.0nm,3.2s							
JIE	**Ise**	**2.04**	**200**	A		A	19 10 37.4	
	comp=N,5.0nm,5.3s,comp=E,8.0nm,12.8s							
JNS	**Sasagawa**	**2.06**	**43**	A		A	19 10 37.6	
	comp=N,3.0nm,0.8s,comp=E,2.0nm,2.4s							
TTO5	**TONANKAI O.B.S**	**2.06**	**176**	A		A	19 10 37.4	
	comp=N,22nm,3.4s,comp=E,22nm,3.6s							
JHJ	**Hachijo jima 2**	**3.68**	**149**	Pn		**Pb**	**19 11 05.2**	**-1.5**
	comp=E,18nm,0.3s,baz=160,slow=3.0,SNR=5.5							
JHJ				Sn		**Sb**	**19 11 53.9**	**+2.1**
	comp=E,16nm,0.3s,baz=347,slow=18,SNR=3.9							
	comp=E,216nm,0.8s							
JHJ2	**Mitsune**	**3.70**	**149**	Pn		**Pn**	**19 10 59.3**	**+0.1**
JMN	**Monobe**	**3.97**	**231**			**Pn**	**19 11 03.5**	**+0.5**
JTM	**Tenmabayashi**	**5.24**	**31**			**Pn**	**19 11 20.5**	**+0.1**
JNU	**Nakatsue**	**6.36**	**242**	LR		LR	19 14 09.3	
	comp=E,614nm,18.7s,baz=66,slow=38							
KSRS	**Korea Array**	**7.80**	**281**	Pn		**Pn**	**19 11 58.9**	**+3.3**
	comp=E,0.3nm,0.3s,baz=95,slow=14,SNR=7.2							
KSRS				LR		LR	19 14 44.6	
	comp=E,729nm,20.1s,baz=95,slow=36							
	comp=E,1.2nm,0.5s							
KSAR	**Wonju Array Be**	**7.83**	**281**	Pn		**Pn**	**19 11 56.9**	**+0.8**
JKA	**Kamikawa-asahi**	**8.69**	**25**	Pn		**Pn**	**19 12 09.8**	**+2.0**
USRK	**Ussuriysk Ar.**	**8.95**	**333**	LR		LR	19 15 24.9	
	comp=E,587nm,18.6s,baz=138,slow=37							
USRK	**Ussuriysk Ar.**	**8.95**	**333**	Pn		**Pn**	**19 12 12.6**	**+1.3**
JCJ	**Chichijima**	**10.00**	**156**	LR		LR	19 16 02.0	
	comp=E,333nm,20.0s,baz=344,slow=35							
MDJ	**Mudanjiang**	**10.27**	**326**	Pn		**Pn**	**19 12 29.8**	**+0.4**
BNX	**BinXian**	**12.13**	**324**	⇓P		Pn	19 13 01.2	+6.4
BNX				pmax		pmax		
	comp=Z,8.0nm,0.9s							
BJT	**Baijiatuau**	**17.22**	**289**	Pn		**Pn**	**19 13 57.5**	**-5.1**
HILR	**Hailar Array B**	**18.52**	**321**	LR		LR	19 21 32.6	
	comp=Z,223nm,18.1s,baz=145,slow=38							
PETK	**Petropavlovsk-**	**21.94**	**34**	P		**P**	**19 14 56.3**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=224,slow=12,SNR=1.7							
PETK				LR		LR	19 24 14.2	
	comp=Z,204nm,18.1s,baz=223,slow=39							
	comp=Z,2.0nm,0.8s							
PETK	**Petropavlovsk-**	**21.94**	**34**	P		**P**	**19 14 53.0**	**-2.7**
GUMO	**Guam**	**23.56**	**162**	LR		LR	19 23 48.5	
	comp=Z,124nm,18.7s,baz=341,slow=35							
MA2	**Madan**	**24.80**	**16**	LR		LR	19 25 36.9	
	comp=Z,125nm,18.5s,baz=216,slow=38							
SONM	**Songino Array**	**25.66**	**306**	P		**P**	**19 15 34.0**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=108,slow=9.5,SNR=6.1							
SONM				LR		LR	19 25 59.4	
	comp=Z,465nm,20.1s,baz=114,slow=38							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**25.66**	**306**	P		**P**	**19 15 30.4**	**-1.9**
YAK	**Yakutsk**	**26.21**	**352**	LR		LR	19 25 55.0	
	comp=Z,350nm,18.7s,baz=162,slow=37							
YAK	**Yakutsk**	**26.21**	**352**	P		**P**	**19 15 35.5**	**-1.4**
YAK				IAmb		IAmb	19 15 39.0	
	comp=Z,14nm,1.1s							
LZDM	**Lanzhou Array**	**27.27**	**279**	LR		LR	19 26 33.7	
	comp=Z,324nm,19.2s,baz=190,slow=36							
TLY	**Talaya**	**28.51**	**313**	LR		LR	19 27 48.1	
	comp=Z,173nm,18.1s,baz=103,slow=38							
SHEM	**Shemya Is, Ala**	**30.38**	**46**	LR		LR	19 27 11.1	
	comp=Z,51nm,21.9s,baz=310,slow=34							
PZH	**PanZhiHua**	**31.94**	**262**	P		**P**	**19 16 28.6**	**+0.2**
TIXI	**Tiksi**	**35.69**	**355**	LR		LR	19 30 36.2	
	comp=Z,73nm,18.8s,baz=181,slow=35							
SIJI	**Sorong**	**37.46**	**190**	LR		LR	19 30 32.3	
	comp=Z,72nm,21.3s,baz=255,slow=33							
ZALV	**Zalesovo Beam**	**40.12**	**313**	LR		LR	19 34 40.3	
	comp=Z,71nm,18.2s,baz=90,slow=37							
MKAR	**Makanchi Array**	**41.88**	**302**	P		**P**	**19 17 53.3**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=96,slow=7.4,SNR=1.9							
MKAR				LR		LR	19 35 51.5	
	comp=Z,212nm,18.5s,baz=96,slow=37							
	comp=Z,0.3nm,0.8s							
MKAR	**Makanchi Array**	**41.88**	**302**	P		**P**	**19 17 52.1**	**-0.5**
MAKZ	**Makanchi**	**42.09**	**302**	P		**P**	**19 17 55.3**	**+1.0**
NRIK	**Noril'sk**	**42.65**	**336**	LR		LR	19 36 44.7	
	comp=Z,410nm,18.1s,baz=116,slow=38							
KURBB	**Kurchatov Arra**	**44.00**	**308**	P		**P**	**19 18 09.2**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=85,slow=8.6,SNR=8.0							
KURBB				LR		LR	19 37 06.7	
	comp=Z,302nm,19.4s,baz=165,slow=37							
	comp=Z,1.2nm,0.9s							
C18K	**Utukok River**	**46.29**	**26**	P		**P**	**19 18 27.7**	**-0.1**
G18K	**Tagagawik**	**46.83**	**30**	P		**P**	**19 18 31.3**	**-0.7**
G18K				IAmb		IAmb	19 18 48.7	
	comp=Z,3.4nm,1.1s							
D19K	**Kuna River**	**47.38**	**27**	P		**P**	**19 18 35.8**	**-0.5**
H19K	**Roundabout Mou**	**47.71**	**31**	P		**P**	**19 18 38.5**	**-0.3**
H19K				IAmb		IAmb	19 19 04.2	
	comp=Z,4.7nm,1.2s							
D20K	**Etivluk River**	**47.96**	**27**	P		**P**	**19 18 40.8**	**+0.1**
BATI	**Baumata**	**48.09**	**199**	LR		LR	19 39 33.6	
	comp=Z,113nm,20.1s,baz=123,slow=37							
AAK	**Ala-Archa**	**48.09**	**298**	LR		LR	19 39 37.2	
	comp=Z,100nm,18.3s,baz=110,slow=37							
KDAK	**Kodiak Island**	**49.69**	**41**	LR		LR	19 40 04.6	
	comp=Z,57nm,20.3s,baz=233,slow=36							
ILAR	**Eielson Array**	**51.75**	**32**	P		**P**	**19 19 09.4**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=264,slow=6.9,SNR=4.4							
ILAR				LR		LR	19 43 16.3	
	comp=Z,43nm,18.6s,baz=275,slow=39							
	comp=Z,0.4nm,0.9s							
ILAR	**Eielson Array**	**51.75**	**32**	P		**P**	**19 19 08.5**	**-1.1**
M27K	**Edge Creek, AK**	**54.31**	**35**	P		**P**	**19 19 29.3**	**+0.6**
M27K				IAmb		IAmb	19 19 31.6	
	comp=Z,4.8nm,1.1s							
ARTI	**Arti**	**54.94**	**318**	LR		LR	19 44 29.3	
	comp=Z,45nm,18.4s,baz=112,slow=38							
AB31	**Akbulak array**	**56.02**	**309**	P		**P**	**19 19 41.0**	**-0.1**
AB31				IAmb		IAmb	19 19 42.6	
	comp=Z,2.9nm,1.2s							
ABKAR	**Akbulak array**	**56.02**	**309**	P		**P**	**19 19 41.3**	**+0.2**
I30M	**Mount Dempster**	**56.08**	**30**			**P**	**19 19 41.4**	**+0.1**
I30M				IAmb		IAmb	19 19 46.0	
	comp=Z,3.4nm,0.8s							
INK	**Inuvik**	**56.42**	**26**	LR		LR	19 46 26.0	
	comp=Z,74nm,18.7s,baz=258,slow=39							
CTA	**Charters Tower**	**56.70**	**170**	LR		LR	19 41 19.1	
	comp=Z,32nm,21.6s,baz=304,slow=33							
AKTO	**Aktyubinsk**	**56.83**	**311**	LR		LR	19 45 30.6	
	comp=Z,173nm,18.2s,baz=330,slow=38							
KIRV	**Kirov**	**58.94**	**322**	LR		LR	19 47 46.9	
	comp=Z,125nm,18.2s,baz=73,slow=38							
PALK	**Pallekele**	**59.19**	**255**	LR		LR	19 46 15.8	
	comp=Z,54nm,21.2s,baz=67,slow=37							
ASAR	**Alice Springs**	**59.76**	**184**	LR		LR	19 45 48.4	
	comp=Z,37nm,19.3s,baz=306,slow=36							
SPITS	**Spitsbergen Ar**	**60.61**	**348**	LR		LR	19 48 14.3	
	comp=Z,78nm,18.9s,baz=44,slow=38							
ARCES	**ARCESS Array B**	**62.56**	**339**	LR		LR	19 52 15.7	
	comp=Z,157nm,18.3s,baz=80,slow=40							
RES	**Resolute Bay**	**64.05**	**14**	LR		LR	19 49 32.3	
	comp=Z,27nm,20.6s,baz=15,slow=37							
BBB	**Bella Bella**	**64.72**	**43**	LR		LR	19 47 16.1	
	comp=Z,44nm,20.5s,baz=210,slow=35							
YKA	**Yellowknife Ar**	**65.96**	**29**	P		**P**	**19 20 49.1**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=298,slow=6.7,SNR=3.6							
YKA				LR		LR	19 53 37.1	
	comp=Z,52nm,18.1s,baz=272,slow=40							
	comp=Z,0.7nm,0.7s							
MSVF	**Nonsavu**	**65.99**	**137**	LR		LR	19 50 59.5	
	comp=Z,5.7nm,18.3s,baz=112,slow=37							
OBN	**Obninsk**	**66.79**	**322**	LR		LR	19 52 33.0	
	comp=Z,159nm,18.2s,baz=263,slow=38							
FINES	**FINESS Array B**	**67.98**	**331**	LR		LR	19 52 42.8	
	comp=Z,62nm,19.0s,baz=56,slow=38							
KBZ	**Khabaz**	**68.99**	**309**	LR		LR	19 55 08.5	
	comp=Z,86nm,20.0s,baz=79,slow=39							
GNI	**Garni**	**69.62**	**305**	LR		LR	19 54 17.4	
	comp=Z,137nm,18.1s,baz=80,slow=38							
AKASG	**Malin Array Be**	**72.93**	**321**	LR		LR	19 55 47.6	
	comp=Z,130nm,19.7s,baz=44,slow=38							
HFS	**Hagfors**	**73.43**	**334**	LR		LR	19 57 54.4	
	comp=Z,89nm,18.1s,baz=44,slow=39							
NOA	**NORSAR Array B**	**73.61**	**336**	LR		LR	19 57 16.7	
	comp=Z,70nm,19.6s,baz=50,slow=39							
BRTR	**Keskin Array B**	**76.97**	**310**	LR		LR	19 59 33.2	
	comp=Z,37nm,19.3s,baz=88,slow=39							
MLR	**Muntele Rosu**	**77.89**	**318**	LR		LR	19 59 30.3	
	comp=Z,38nm,20.1s,baz=71,slow=38							
VRAC	**Vranov**	**79.99**	**325**	LR		LR	20 00 24.2	
	comp=Z,82nm,18.9s,baz=50,slow=38							
PFO	**Pinyon Flats O**	**81.99**	**54**	LR		LR	19 52 11.0	
	comp=Z,34nm,21.2s,baz=188,slow=31							
EKA	**Eskdalemuir Ar**	**82.72**	**339**	LR		LR	20 04 09.4	
	comp=Z,71nm,18.1s,baz=8.0,slow=39							
TXAR	**Lajitas Array**	**92.98**	**50**	P		**P**	**19 23 17.9**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=268,slow=4.9,SNR=4.4							
	comp=Z,0.2nm,0.7s							

JMA 04 19:10:01.5±0.0, 36˚.3N±0˚.1× 137˚.6E±0˚.1, h4km, 2D, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JGN	**Niukaw**	**0.25**	**256**	P		**Pg** 19 10 06.6	**+0.2**
JGN				*eS*		**Sg** 19 10 10.2	**+0.5**
JGN	**Niukaw**	**0.25**	**256**	S		**Sg** 19 10 10.7	**+1.0**
JGN	**Niukaw**	**0.25**	**256**	*eP*		**Pg** 19 10 07.0	**+0.6**
JGN	**Niukaw**	**0.25**	**256**	A		A 19 10 07.0	
	comp=N,75nm,3.5s,comp=E,19nm,1.9s						
JTT	**Ttatey**	**0.39**	**324**	P		**Pg** 19 10 09.6	**+0.5**
JTT	**Ttatey**	**0.39**	**324**	⇓*eS*		**Sg** 19 10 15.8	**+1.6**
JTT	**Ttatey**	**0.39**	**324**	⇓*eP*		**Pg** 19 10 09.9	**+0.9**
JTT	**Ttatey**	**0.39**	**324**	A		A 19 10 09.9	
	comp=N,86nm,1.9s,comp=E,69nm,2.0s						
JNG	**Nsakai**	**0.41**	**73**	P		**Pg** 19 10 09.7	**+0.3**
JNG	**Nsakai**	**0.41**	**73**	*eS*		**Sg** 19 10 15.4	**+0.8**
JNG	**Nsakai**	**0.41**	**73**	*eP*		**Pg** 19 10 09

ADK	**Adak**	**62.39**	**20**	P	**P**	**20 10 38.6**	**+0.8**
LZDM	**Lanzhou Array**	**63.09**	**315**	P	**P**	**20 10 43.7**	**+0.5**
	comp=Z,2.9nm,0.4s,baz=116,slow=6.8,SNR=4.6						
	comp=Z,2.9nm,0.4s						
ULN	**Ulaanbaatar**	**67.65**	**328**	P	**P**	**20 11 12.2**	**+0.1**
ULN				IAmb	IAmb	20 11 15.5	
	comp=Z,3.6nm,0.9s						
SONM	**Songino Array**	**67.98**	**327**	P	**P**	**20 11 15.4**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=139,slow=6.1,SNR=19						
	comp=Z,2.4nm,0.7s						
SONM	**Songino Array**	**67.98**	**327**	P	**P**	**20 11 14.2**	**0.0**
SHL	**Shillong**	**68.23**	**300**	P	**P**	**20 11 15.6**	**-0.6**
SHL				IAmb	IAmb	20 11 17.4	
	comp=Z,9.6nm,0.9s						
SDPT	**Sand Point**	**71.26**	**25**	P	**P**	**20 11 34.2**	**+0.3**
VNDA	**Vanda**	**71.90**	**178**	P	**P**	**20 11 38.5**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=330,slow=6.5,SNR=15						
	comp=Z,3.1nm,0.8s						
VNDA	**Vanda**	**71.90**	**178**	P	**P**	**20 11 38.0**	**+0.5**
SBA	**Scott Base**	**72.42**	**177**	P	**P**	**20 11 41.1**	**+0.5**
SBA				IAmb	IAmb	20 11 43.7	
	comp=Z,6.8nm,1.2s						
O14K	**Tigyukauivet M**	**73.61**	**22**	P	**P**	**20 11 48.9**	**+1.1**
O14K				IAmb	IAmb	20 11 52.4	
	comp=Z,8.3nm,0.9s						
O15K	**Ungalikthiuk R**	**74.10**	**23**	P	**P**	**20 11 51.8**	**+1.2**
O15K				IAmb	IAmb	20 12 23.9	
	comp=Z,7.3nm,1.1s						
OHAK	**Old Harbor**	**75.56**	**26**	P	**P**	**20 12 00.0**	**+0.9**
OHAK				IAmb	IAmb	20 12 02.7	
	comp=Z,6.3nm,0.8s						
M16K	**Timber Creek**	**75.66**	**21**	P	**P**	**20 12 01.2**	**+1.5**
M16K				IAmb	IAmb	20 12 04.4	
	comp=Z,6.6nm,1.1s						
KDAK	**Kodiak Island**	**76.19**	**26**	P	**P**	**20 12 03.5**	**+0.8**
N18K	**Kilae Creek**	**76.59**	**23**	P	**P**	**20 12 06.3**	**+1.4**
N18K				IAmb	IAmb	20 12 08.9	
	comp=Z,4.3nm,0.8s						
L18K	**Granite Mounta**	**77.27**	**21**	P	**P**	**20 12 09.7**	**+1.0**
SLKM	**Skilak Lake**	**78.74**	**24**	P	**P**	**20 12 17.3**	**+0.4**
SLKM				IAmb	IAmb	20 12 20.1	
	comp=Z,7.6nm,0.6s						
CAST	**Castle Rocks**	**79.68**	**22**	P	**P**	**20 12 22.5**	**+0.6**
E19K	**Redstone River**	**80.51**	**17**	P	**P**	**20 12 27.7**	**+1.4**
E19K				IAmb	IAmb	20 12 30.3	
	comp=Z,3.2nm,0.7s						
I21K	**Tanana**	**80.75**	**20**	P	**P**	**20 12 28.5**	**+0.9**
MLY	**Manley**	**81.09**	**21**	P	**P**	**20 12 29.7**	**+0.2**
CCB	**Clear Creek Bu**	**81.93**	**22**	P	**P**	**20 12 33.9**	**+0.1**
MKAR	**Makanchi Array**	**82.11**	**319**	P	**P**	**20 12 35.6**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=93,slow=8.0,SNR=18						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**82.11**	**319**	P	**P**	**20 12 35.0**	**-0.3**
ILAR	**Eielson Array**	**82.33**	**22**	P	**P**	**20 12 35.9**	**0.0**
	comp=Z,1.7nm,0.6s,baz=243,slow=4.3,SNR=18						
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**82.83**	**326**	P	**P**	**20 12 38.2**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=123,slow=5.3,SNR=4.9						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**82.83**	**326**	P	**P**	**20 12 37.7**	**-1.0**
QSPA	**South Pole Qui**	**84.29**	**180**	P	**P**	**20 12 46.7**	**+0.6**
	comp=Z,6.6nm,0.8s,baz=188,slow=0.9,SNR=24						
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**84.29**	**180**	P	**P**	**20 12 46.3**	**+0.2**
QSPA				IAmb	IAmb	20 12 47.8	
	comp=Z,8.3nm,0.9s						
HYT	**Haines Junctio**	**84.42**	**27**		**P**	**20 12 48.0**	**+1.1**
HYT				IAmb	IAmb	20 12 51.1	
	comp=Z,4.1nm,0.7s						
MAW	**Mawson**	**85.42**	**203**	P	**P**	**20 12 52.0**	**+0.4**
	comp=Z,8.1nm,0.7s,baz=98,slow=7.6,SNR=18						
	comp=Z,8.1nm,0.7s						
MAW	**Mawson**	**85.42**	**203**	P	**P**	**20 12 51.7**	**+0.1**
KURK	**Kurchatov**	**85.51**	**322**	P	**P**	**20 12 51.4**	**-1.0**
BVAR	**Borovoye Array**	**90.97**	**323**	P	**P**	**20 13 17.2**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=102,slow=5.7,SNR=6.6						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**152.21**	**287**	PKPbc	**PKPbc**	**20 20 10.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=87,slow=1.9,SNR=13						

*NCEDC **04** 20:09:38.0±0.7, 38.054N±0.010×118.73W±0.01, h7km, Error ellipse: s-maj=1.6km s-min=1.2km az=125.0*
*REN **04** 20:09:38.1±0.8, 38.047N±0.008×118.73W±0.01, h11km±7km, Error ellipse: s-maj=1.5km s-min=1.1km az=57.0*

NEIC 04 20:09:37.6±0.7, 38.048N±0.010×118.74W±0.01, h5km±4km, ML3.2/118, ML3.5/13(REN), ML3.2/18(NCEDC), Error ellipse: s-maj=1.7km s-min=1.2km az=131.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.28**	**42**		Pg	20 09 43.7	+0.7
LHV					Sg	20 09 47.6	+1.1
LHV				IAML		20 09 48.8	
	comp=N,6µm,0.6s						
MLHM	**Little Hot Cre**	**0.37**	**189**		Pb	20 09 45.9	-1.0
MEMM	**East Mammoth H**	**0.41**	**203**		Pg	20 09 46.5	+0.9
MCSM	**Casa Diablo Ho**	**0.41**	**199**		Pg	20 09 46.4	+0.8
MDCM	**Deadman Creek**	**0.41**	**216**		Pg	20 09 46.2	+0.6
MDRNC	**Doe Ridge**	**0.42**	**191**		Pg	20 09 46.5	+0.9
MRCM	**Red Rock Canyo**	**0.42**	**154**		Pg	20 09 46.3	+0.6
MCBM	**Casa Benchmark**	**0.42**	**197**		Pg	20 09 46.2	+0.5
MCBM					Sg	20 09 52.8	+1.4
MLAC	**Mammoth, Mammo**	**0.42**	**191**		Pg	20 09 46.6	+0.8
MMLB	**Mammoth Lakes**	**0.43**	**206**		Pg	20 09 46.8	+0.9
MMLB					Sb	20 09 53.5	-1.3
MGPM	**Gravel Pit**	**0.44**	**197**		Pg	20 09 47.0	+0.9
MDYM	**Dry Creek**	**0.45**	**209**		Pg	20 09 47.1	+0.9
MDYM					Sb	20 09 54.0	-1.3
MCMM	**Convict Lake**	**0.45**	**194**		Pg	20 09 47.0	+0.7
MLCM	**Laurel Creek C**	**0.46**	**198**		Pg	20 09 47.2	+0.7
MCVM	**Convict Lake**	**0.46**	**189**		Pg	20 09 47.2	+0.7
MLIM	**Lincoln Peak**	**0.47**	**208**		Pg	20 09 47.5	+0.9
MLIM	**Lincoln Peak**	**0.47**	**208**		Pb	20 09 47.6	-0.9
MINS	**Minaret Summit**	**0.47**	**213**		Pg	20 09 47.2	+0.6
MINS					Sg	20 09 53.9	+1.1
NV08	**Mina Array Sit**	**0.49**	**43**		Pg	20 09 47.5	+0.5
NV08					Sg	20 09 54.4	+1.0
MMPM	**Mammoth Pass**	**0.49**	**208**		Pg	20 09 47.8	+0.7
MDPB	**Devils Postpil**	**0.49**	**213**		Pg	20 09 47.7	+0.5
MDPB					Sg	20 09 54.4	+0.9
MDPB				IAML		20 09 54.9	
	comp=E,2µm,0.7s						
MDPB				IAML		20 09 55.3	
	comp=N,1µm,0.5s						
NV09	**Mina Array Sit**	**0.50**	**39**		Pg	20 09 47.8	+0.5
NV09					Sg	20 09 54.9	+1.1
NV07	**Mina Array Sit**	**0.50**	**44**		Pg	20 09 47.8	+0.5
NV04	**Mina Array Sit**	**0.51**	**42**		Pg	20 09 47.9	+0.6
NV04					Sg	20 09 55.0	+1.1
NV01	**Mina Array Sit**	**0.51**	**42**		Pg	20 09 48.0	+0.5
NV01					Sg	20 09 55.3	+1.2
NVAR	**Mina Array Bea**	**0.51**	**42**		Pg	20 09 47.7	+0.2
NV03	**Mina Array Sit**	**0.52**	**43**		Pg	20 09 48.1	+0.5
NV03					Sg	20 09 55.5	+1.2
NV02	**Mina Array Sit**	**0.52**	**41**		Pg	20 09 48.1	+0.6
NV02					Sg	20 09 55.6	+1.2
NV06	**Mina Array Sit**	**0.52**	**44**		Pg	20 09 48.3	+0.6
NV06					Sg	20 09 55.6	+1.1
COLR	**Columbus**	**0.55**	**80**		Pg	20 09 48.8	+0.6
COLR					Sg	20 09 56.6	+1.3
MCDM	**Chidago Canyon**	**0.55**	**155**		Pg	20 09 49.0	+0.8
NV11	**Mina Array Sit**	**0.60**	**50**		Pg	20 09 49.4	+0.3
NV11					Sg	20 09 57.4	+0.5
NV11				IAML		20 09 58.1	
	comp=E,1µm,0.8s						
MFBM	**Five Bridges**	**0.66**	**158**		Pb	20 09 51.1	-0.7
MTUM	**Tungsten Hills**	**0.71**	**169**		Pg	20 09 51.6	+0.4
WAKR	**Walker**	**0.71**	**310**		Pg	20 09 51.7	+0.4
WAKR					Sg	20 10 01.2	+0.6
KCC	**Kaiser Creek**	**0.86**	**213**		Pg	20 09 54.2	+0.2
KCC					Sg	20 10 05.4	+0.3
DSP	**Deep Springs**	**0.91**	**138**		Pg	20 09 55.2	+0.2
DSP				Sg	Sg	20 10 07.3	+0.4
MMIM	**Miami Mountain**	**1.01**	**232**		Pg	20 09 57.0	-0.1
TIN	**Tinemaha, Big**	**1.07**	**158**		Pg	20 09 58.4	+0.2
TIN				IAML		20 10 20.1	
	comp=N,688nm,0.8s						
KVN	**Kaiserville**	**1.12**	**26**		Pg	20 09 58.7	-0.4
KVN				IAML		20 10 18.2	
	comp=N,389nm,0.6s						
BUCR	**Buckhorn Ranch**	**1.18**	**252**		Pg	20 09 59.5	-0.6
TPH	**Tonopah**	**1.20**	**88**		Pg	20 10 00.4	-0.2
TPH				IAML		20 10 21.0	
	comp=N,768nm,0.4s						
TPH				IAML		20 10 21.8	
	comp=E,538nm,0.5s						
PNTR	**Pine Nut**	**1.24**	**327**		Pg	20 10 01.1	-0.2
CMB	**Columbia Colle**	**1.30**	**270**	Pg	Pn	20 10 01.6	-1.0
FRI	**Friant**	**1.31**	**216**		Pn	20 10 02.2	-0.3
MHDM	**Hidden Dam**	**1.31**	**225**		Pn	20 10 02.4	-0.1
GMN	**Gold Mountain**	**1.39**	**122**		Pn	20 10 03.8	-0.1
GMN				IAML		20 10 28.0	
	comp=N,420nm,0.5s						
LEGD	**La Grand CA**	**1.40**	**234**		Pn	20 10 01.5	-2.2
Q09A	**Carvers**	**1.45**	**57**		Pb	20 10 05.1	-0.1
KARE	**Kearney REC, C**	**1.57**	**203**		Pb	20 10 07.2	+0.1
MPK	**Martis Peak**	**1.60**	**321**		Pb	20 10 07.7	-0.2
WELL	**Weller Preserv**	**1.61**	**285**		Pb	20 10 07.4	-0.5
WELL				IAML		20 10 31.2	
	comp=E,386nm,0.3s						
WELL				IAML		20 10 31.4	
	comp=N,215nm,0.2s						
CGO	**Cerro Gordo**	**1.67**	**153**		Pb	20 10 08.9	-0.2
CWC	**Cottonwood Cre**	**1.69**	**162**		Pn	20 10 08.3	+0.4
PAHR	**Pah Rah Range**	**1.73**	**343**		Pn	20 10 08.8	+0.3
PAHR					Pb	20 10 09.0	-1.0
PAHR				IAML		20 10 35.7	
	comp=N,197nm,0.8s						
DONR	**Donner Summit**	**1.80**	**317**		Pb	20 10 10.7	-0.5
DONR					Pg	20 10 11.7	-0.4
PEAR	**Peavine Mounta**	**1.83**	**329**		Pn	20 10 10.5	+0.6
PEAR					Pb	20 10 12.1	+0.4
SPG2	**Springville 2**	**1.84**	**181**		Pb	20 10 11.4	-0.4
SPG2					Pg	20 10 11.6	-1.4
YUBA	**Cisco Grove, Y**	**1.91**	**313**		Pb	20 10 12.8	-0.3
AFDM	**Forest Hills D**	**1.97**	**298**		Pn	20 10 12.2	+0.5
AFDM				IAML		20 10 41.3	
	comp=E,169nm,0.7s						
AFDM				IAML		20 10 42.5	
	comp=N,273nm,0.6s						
WCT	**Wildcat Mounta**	**2.10**	**126**		Pn	20 10 13.8	+0.3
WCT				IAML		20 10 47.2	
	comp=E,221nm,0.5s						
BMSM	**Mercy Hot Spri**	**2.15**	**230**		Pb	20 10 16.8	-0.2
BEKR	**Beckworth**	**2.21**	**326**		Pn	20 10 16.2	+1.0
BEKR				IAML		20 10 49.7	
	comp=E,142nm,0.6s						
BEKR				IAML		20 10 49.9	
	comp=N,134nm,0.6s						
TPNV	**Topopah Spring**	**2.26**	**118**		Pn	20 10 16.9	+1.0
TPNV				IAML		20 11 00.9	
	comp=N,198nm,1.1s						
BBGB	**Big Mountain B**	**2.35**	**232**		Pn	20 10 18.4	+1.4
SDH	**Striped Hills**	**2.37**	**125**		Pg	20 10 22.1	-0.9
ISA	**Isabella, Lake**	**2.39**	**175**		Pb	20 10 21.4	+0.2
ISA				IAML		20 10 54.0	
	comp=N,133nm,0.3s						
S11A	**Rachel**	**2.40**	**99**		Pn	20 10 18.2	+0.5
CLC	**China Lake**	**2.41**	**157**		Pn	20 10 18.8	+1.1
MHC	**Mount Hamilton**	**2.41**	**254**		Pn	20 10 18.4	+0.5
MHC				IAML		20 10 53.3	
	comp=E,187nm,0.6s						
PMPB	**Monarch Peak**	**2.46**	**223**		Pn	20 10 19.7	+1.3
SAO	**San Andreas Ge**	**2.51**	**240**	Pn	Pn	20 10 19.5	+0.5
SAO					Pb	20 10 22.3	-0.9
AMDNV	**Amargosa**	**2.53**	**128**		Pg	20 10 24.7	-1.2
PKD	**Bear Valley Ra**	**2.55**	**215**		Pn	20 10 19.6	0.0
PKD				IAML		20 11 06.6	
	comp=E,136nm,1.0s						
PKD				IAML		20 11 12.1	
	comp=N,81nm,1.1s						
QSM	**Queen of Sheba**	**2.56**	**144**		Pn	20 10 20.7	+0.9
QSM				IAML		20 11 04.4	
	comp=E,108nm,1.2s						
ORV	**Oroville**	**2.63**	**306**		Pn	20 10 21.9	+1.2
ORV				IAML		20 11 02.5	
	comp=E,79nm,0.5s						
SUTB	**Sutter Butte**	**2.66**	**297**		Pn	20 10 22.5	+1.3
CCCA	**Chr Cany lake**	**2.75**	**156**		Pn	20 10 23.6	+1.1
CCCA				IAML		20 11 17.4	
	comp=N,80nm,1.4s						
CCCA				IAML		20 11 19.3	
	comp=E,70nm,1.0s						
HULI	**Fort Hunter Li**	**2.84**	**225**		Pn	20 10 24.9	+1.2
HULI				IAML		20 11 10.9	
	comp=E,129nm,1.4s						
CVS	**Carmenet Viney**	**2.95**	**277**		Pn	20 10 26.9	+1.9
PRN	**Pahroc Range**	**2.99**	**101**		Pn	20 10 26.3	+0.5
PRN				IAML		20 10 47.1	
	comp=E,94nm,0.7s						
PRN				IAML		20 11 31.8	
	comp=N,78nm,0.9s						
GSC	**Goldstone, Bar**	**3.15**	**150**		Pn	20 10 28.4	+0.5
GSC				IAML		20 11 25.7	
	comp=E,51nm,1.4s						
TPO	**Tropico Hills**	**3.19**	**172**		Pn	20 10 29.5	+1.0
TPO				IAML		20 11 23.3	
	comp=E,92nm,0.8s						
TPO				IAML		20 11 29.9	
	comp=N,66nm,1.0s						
O03E	**Paynes Creek**	**3.27**	**314**		Pn	20 10 30.6	+0.9
O03E				IAML		20 11 34.1	
	comp=N,73nm,1.1s						
GDXM	**Geysers**	**3.27**	**285**	Pn	Pn	20 10 30.4	+0.8
HATC	**Hat Creek Radi**	**3.48**	**324**		Pn	20 10 33.6	+1.2
HATC				IAML		20 11 49.1	
	comp=N,65nm,1.6s						
HATC				IAML		20 11 55.5	
	comp=E,70nm,2.1s						
ELK	**Elko**	**3.82**	**44**		Pn	20 10 37.1	-0.2
ELK				IAML		20 11 39.1	
	comp=E,30nm,0.5s						
ELK				IAML		20 11 39.1	
	comp=E,28nm,0.6s						
M03C	**McCloud**	**4.15**	**322**		Pn	20 10 43.3	+1.6
M03C				IAML		20 12 02.6	
	comp=N,38nm,1.6s						
M03C				IAML		20 12 08.1	
	comp=E,47nm,1.2s						
N02D	**Trinity Center**	**4.24**	**315**	Pn	Pn	20 10 43.7	+0.8
N02D				IAML		20 11 55.1	
	comp=E,26nm,1.0s						
N02D				IAML		20 11 56.2	
	comp=N,22nm,0.8s						
CCUT	**Cedar City**	**4.29**	**95**		Pn	20 10 43.6	-0.1
CCUT				IAML		20 12 00.3	
	comp=N,26nm,0.7s						
KHBM	**Hayfork Bally**	**4.34**	**308**		Pn	20 10 45.6	+1.1
KHBM				IAML		20 12 00.1	
	comp=N,28nm,1.5s						
LCMT	**Little Creek M**	**4.49**	**102**	Pn	Pn	20 10 46.4	0.0
M02C	**Callahan**	**4.61**	**318**	Pn	Pn	20 10 49.2	+1.2
M02C				IAML		20 12 09.2	
	comp=E,16nm,2.0s						
KNB	**Kanab**	**4.81**	**101**		Pn	20 10 50.9	0.0
K05A	**Summer Lake**	**4.95**	**341**		Pn	20 10 54.1	+1.3
PKCU	**Pink Cliffs**	**5.13**	**95**		Pn	20 10 56.5	+1.1
MTPU	**Mount Pierson**	**5.17**	**88**		Pn	20 10 56.9	+0.9
U15A	**North Rim**	**5.39**	**105**		Pn	20 10 59.7	+0.7
PINE	**Pine Mountain**	**5.98**	**344**	Pn	Pn	20 11 08.6	+1.7
WUAZ	**Wupatki**	**6.43**	**111**	Pn	Pn	20 11 13.7	+0.6

*ISK **04** 20:12:39.7, 39.35N×40.71E, h5km, ML3.4/21*
*AFAD **04** 20:12:39.9, 39.38N×40.68E, h15km±3km, MW3.5*
*IDC **04** 20:12:42.3±1.8, 39.67N×40.40E, h0km, mb3.6/3, mbtmp3.3/7, ML2.8/4, MS2.7/3, Error ellipse: s-maj=37.5km s-min=15.6km az=151.0*

ISC 04 20:12:40.6±1.0, 39.38N±0.02×40.69E±0.02, h6km±8km, n63, σ1s10/75, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YEDI	**Yedisu-Bingol**	**0.13**	**299**	Pg	**Pg**	**20 12 43.2**	**-0.1**
YEDI				Sg	**Sg**	**20 12 45.7**	**+0.5**
KARO	**Karliova-Bingo**	**0.29**	**103**	Pg	**Pg**	**20 12 46.1**	**-0.1**
KARO				Sg	**Sg**	**20 12 51.2**	**+1.1**
ECAT	**Cat-ERZURUM**	**0.32**	**44**	P	**Pg**	**20 12 46.4**	**-0.5**
BNGB	**Bingl**	**0.38**	**181**	Pg	**Pg**	**20 12 47.8**	**-0.2**
BNGB				Sg	**Sg**	**20 12 53.8**	**+0.7**
SLHN	**Bingol, Solhan**	**0.49**	**148**	P	**Pg**	**20 12 50.2**	**+0.2**
SLHN				S	**Sb**	**20 12 58.0**	**-1.3**
SLHN				IAML		20 12 58.0	
	comp=N,5µm,0.4s						
VRTB	**Varto-Mus**	**0.63**	**110**	Pg	**Pg**	**20 12 52.5**	**-0.3**
VRTB	**Varto-Mus**	**0.63**	**110**	P	**Pg**	**20 12 52.7**	**0.0**
KOPT	**Kop Dagi**	**0.66**	**347**	P	**Pb**	**20 12 53.8**	**-0.9**
MAYK		**0.69**	**202**	P	**Pb**	**20 12 53.8**	**-1.3**
MAYK				S	**Sg**	**20 13 02.4**	**-0.4**
MAYK				IAML		20 13 08.0	
	comp=N,1µm,0.5s						
ERZM	**Erzurum**	**0.74**	**44**	P	**Pg**	**20 12 54.1**	**-0.8**
ERZN	**Erzincan**	**0.78**	**286**	Pg	**Pb**	**20 12 55.3**	**-1.3**
ERZN				Sg	**Sn**	**20 13 08.2**	**-2.2**
EUZM	**Uzumlu**	**0.84**	**294**	P	**Pg**	**20 12 55.5**	**-1.2**
MUSM	**Mu-Merkez**	**0.91**	**135**	P	**Pg**	**20 12 56.6**	**-1.5**
MUSM				S	**Sg**	**20 13 07.9**	**-2.0**
MUSM				IAML		20 13 12.0	
	comp=N,524nm,0.4s						
TNCL	**Tunceli-Merkez**	**0.93**	**254**	P	**Pg**	**20 12 58.0**	**-0.4**
KOVA	**Elazig, Kovanc**	**0.96**	**226**	P	**Pg**	**20 12 58.0**	**-1.0**
KRIK	**Erzurum-spir**	**0.98**	**11**	P	**Pb**	**20 12 59.1**	**-1.0**
KOPR	**Koprukoy-ERZUR**	**1.09**	**55**	Pn	**Pg**	**20 13 01.0**	**-0.5**
KOPR				Sn	**Sn**	**20 13 18.0**	**-0.1**
HOMI	**Horasan**	**1.15**	**54**	P	**Pg**	**20 13 01.6**	**-1.1**
MDNT	**Maden**	**1.26**	**219**	P	**Pn**	**20 13 06.8**	**+2.0**
SVAN	**Silvan-Diyarba**	**1.28**	**162**	Pn	**Pb**	**20 13 05.1**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.28**	**162**	P	**Pb**	**20 13 05.2**	**-0.1**
SVAN				S	**Sn**	**20 13 22.5**	**-0.2**
SVAN				IAML		20 13 31.0	
	comp=N,230nm,0.6s						
GURO	**Guroymak-BITLI**	**1.33**	**128**	Pn	**Pn**	**20 13 04.7**	**-1.2**
ELZ	**Elazig**	**1.34**	**240**	P	**Pg**	**20 13 05.7**	**-0.6**
MCKZ	**Bingol**	**1.36**	**260**	P	**Pg**	**20 13 06.3**	**-0.3**
MCKZ				S	**Sn**	**20 13 23.9**	**-0.7**
MCKZ				IAML		20 13 27.0	
	comp=N,288nm,0.5s						
ESIJ	**Sivrice-Elazig**	**1.42**	**230**	Pn	**Pg**	**20 13 08.0**	**+0.2**
GUMT	**Gumushane**	**1.43**	**320**	Pn	**Pg**	**20 13 08.5**	**+0.5**
MLAZ	**Malazgirt-MUS**	**1.46**	**99**	Pn	**Pb**	**20 13 07.9**	**-0.4**
BLIS	**Bitlis-Merkez**	**1.47**	**130**	P	**Pn**	**20 13 06.5**	**-1.3**
SVRC	**Sivrice-ELAZID**	**1.47**	**228**	Pn	**Pg**	**20 13 08.5**	**-0.2**
DYKB	**Diyarbakir**	**1.48**	**197**	Pn	**Pg**	**20 13 09.0**	**0.0**
DIYA	**Diyarbakir**	**1.52**	**197**	P	**Pg**	**20 13 09.3**	**-0.4**
DIYA				S	**Sn**	**20 13 27.0**	**-1.5**
DIYA				IAML		20 13 35.0	
	comp=N,266nm,0.4s						
BTMN	**Batman**	**1.55**	**163**	P	**Pg**	**20 13 09.8**	**-0.4**
BTMN				S	**Sg**	**20 13 31.9**	**+1.6**
BTMN				IAML		20 13 38.0	
	comp=N,402nm,0.6s						
DORK	**Agr/Tutak/Do**	**1.62**	**89**	P	**Pb**	**20 13 10.1**	**-0.9**
DORK				S	**Sg**	**20 13 32.8**	**+0.1**
DORK				IAML		20 13 37.0	
	comp=N,425nm,0.8s						
ILIC	**ilic-Erzincan**	**1.65**	**273**	Pn	**Pg**	**20 13 11.9**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.68**	**109**	P	**Pn**	**20 13 10.1**	**-0.6**
SRTM	**Siirt_Merkez**	**1.69**	**145**	P	**Pb**	**20 13 11.8**	**-0.3**
SRTM				S	**Sg**	**20 13 35.8**	**+1.1**
SRTM				IAML		20 13 42.0	
	comp=N,387nm,0.5s						
CHOM	**Cayeli-Rize**	**1.72**	**2**	Pn	**Pg**	**20 13 12.9**	**-0.7**
SENK	**Senkaya-Erzuru**	**1.74**	**47**	Pn	**Pb**	**20 13 12.5**	**-0.6**
KTUT	**Trabzon**	**1.76**	**337**	Pn	**Pg**	**20 13 13.0**	**-1.3**
AGRB	**Hanur-Agry**	**1.79**	**83**	Pn	**Pb**	**20 13 13.0**	**-1.0**
ARPR	**Arapgir-MALATY**	**1.85**	**262**	Pn	**Pb**	**20 13 14.4**	**-0.5**
PERV	**Siirt/Pervari-**	**2.03**	**134**	P	**Pb**	**20 13 17.3**	**-0.7**
PERV				S	**Sb**	**20 13 43.8**	**+0.2**
PERV				IAML		20 13 52.0	
	comp=N,574nm,0.6s						
MIDY	**Mardin/Midyat-**	**2.04**	**164**	P	**Pb**	**20 13 17.3**	**-0.9**
AKDM	**Akdamar-Van**	**2.07**	**120**	Pn	**Pb**	**20 13 17.1**	**-1.6**
HOPA	**Hopa-Artvin**	**2.09**	**16**	Pn	**Pb**	**20 13 18.2**	**-0.7**
KARS	**Kars**	**2.22**	**55**	Pn	**Pn**	**20 13 19.1**	**+1.0**
BATM	**Batumi**	**2.35**	**19**	P	**Pb**	**20 13 21.2**	**-2.2**
BATM				S	**Sg**	**20 13 55.4**	**-0.8**
CLDR	**Caldiran**	**2.52**	**94**	Pn	**Pn**	**20 13 23.1**	**+0.8**
AKH	**Akhalkalaki**	**2.95**	**46**	P	**Pn**	**20 13 29.9**	**+1.7**
TRLG	**Trialeti**	**3.38**	**49**	P	**Pn**	**20 13 35.9**	**+1.8**
TKB	**Tkibuli**	**3.45**	**30**	P	**Pn**	**20 13 36.7**	**+1.8**
DGRG	**David-gareji**	**4.13**	**58**	P	**Pn**	**20 13 46.8**	**+2.4**
CHRG	**Chargali**	**4.36**	**46**	P	**Pn**	**20 13 49.5**	**+2.0**
KBZ	**Khabaz**	**4.65**	**20**	Pn	**Pn**	**20 13 52.6**	**+1.2**
	0.1nm,0.3s,baz=216,slow=8.7,SNR=2.4						
	0.8nm,0.7s						
SHTL	**Shatili**	**4.71**	**44**	P	**Pn**	**20 13 54.7**	**+2.4**
BRTR	**Keskin Array B**	**5.46**	**276**	Pn	**Pn**	**20 14 03.2**	**+0.5**
	0.2nm,0.3s,baz=94,slow=13,SNR=5.5						
BRTR				LR	LR	20 15 33.5	
	comp

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.19**	**286**	*i* P	**Pn**	**20 21 52.7**	**-1.5**
GSPH				*i* S	Sn	20 22 21.8	+9.0
DAV	**Davao City (W)**	**1.39**	**338**	P	**Pn**	**20 21 56.0**	**-0.3**
	511nm,0.3s,baz=145,slow=1.0,SNR=33						
DAV				S	**Sn**	**20 22 17.3**	**+0.7**
	612nm,0.3s,baz=253,slow=5.1,SNR=11						
DAV	**Davao City (W)**	**1.39**	**338**	Pn	**Pn**	**20 21 56.0**	**-0.3**
DAV				Sn	**Sn**	**20 22 16.5**	**-0.1**
DAV	**Davao City (W)**	**1.39**	**338**	P	**Pn**	**20 21 56.1**	**-0.3**
DAV				S	**Sn**	**20 22 17.7**	**+1.1**
DAV	**Davao City (W)**	**1.39**	**338**	P	**Pn**	**20 21 56.3**	**0.0**
DMPH	**Davao City--Mi**	**1.43**	**336**	*i* P	**Pn**	**20 21 56.7**	**0.0**
DMPH				*i* S	**Sn**	**20 22 16.7**	**-0.6**
KCP	**Kidapawan**	**1.59**	**321**	*i* P	**Pn**	**20 21 58.5**	**-0.1**
KCP				*i* S	**Sn**	**20 22 20.7**	**+0.1**
CDOP	**Cateel, Davao**	**2.03**	**10**	*e*P	**Pn**	**20 22 02.8**	**-1.1**
CDOP				*i* S	**Sn**	**20 22 29.6**	**-0.4**
SGSI	**Sangihe**	**2.15**	**195**	P	**Pn**	**20 22 06.7**	**+1.4**
SGSI	**Sangihe**	**2.15**	**195**	P	**Pn**	**20 22 06.6**	**+1.4**
BUKP	**Musuan**	**2.34**	**334**	*i* P	**Pn**	**20 22 08.3**	**+0.6**
BUKP				*i* S	**Sn**	**20 22 38.1**	**+1.2**
CTBH	**Cotabato--PC H**	**2.34**	**308**	*e*P	**Pn**	**20 22 07.3**	**-0.4**
CTBH				*i* S	**Sn**	**20 22 37.2**	**+0.4**
BIPH	**Bislig**	**2.41**	**6**	*e*P	**Pn**	**20 22 09.8**	**+1.1**
BIPH				*e*S	**Sn**	**20 22 41.2**	**+2.6**
CGP	**Cagayan de Oro**	**3.01**	**332**	*i* P	**Pn**	**20 22 18.1**	**+1.8**
CGP				*i* S	**Sn**	**20 22 57.4**	**+5.0**
TSSP	**Tandag City**	**3.26**	**2**	*e*P	**Pn**	**20 22 19.5**	**-0.1**
TSSP				*e*S	**Sn**	**20 22 55.2**	**-2.9**
PAGZ	**Pagadian**	**3.40**	**308**	*i* P	**Pn**	**20 22 22.0**	**+0.6**
SCPH	**Surigao**	**4.03**	**351**	*e*P	**Pn**	**20 22 30.6**	**+0.8**
SCPH				*e*S	**Sn**	**20 23 18.4**	**+1.9**
IPIL	**Ipil**	**4.04**	**300**	*i* P	**Pn**	**20 22 31.5**	**+1.6**
IPIL				*i* S	**Sn**	**20 23 18.7**	**+2.2**
LSIP	**Lazi, Siquijor**	**4.14**	**324**	*i* P	**Pn**	**20 22 32.5**	**+1.2**
TBP	**Tagbilaran**	**4.48**	**331**	*e*P	**Pn**	**20 22 36.0**	**+0.1**
MSLP	**Maasin**	**4.51**	**344**	*i* P	**Pn**	**20 22 37.1**	**+0.9**
MSLP				*i* S	**Sn**	**20 23 30.0**	**+2.1**
LLP	**Lapu-Lapu**	**4.99**	**335**	*e*P	**Pn**	**20 22 43.8**	**+1.2**
LLP				*e*S	**Sn**	**20 23 39.7**	**+0.3**
TNTI	**Ternate**	**5.12**	**166**	Pn	**Pn**	**20 22 44.3**	**-0.1**
TNTI	**Ternate**	**5.12**	**166**	P	**Pn**	**20 22 44.4**	**0.0**
	0.4nm997nm124nm,1.0s						
TNTI	**Ternate**	**5.12**	**166**	P	**Pn**	**20 22 44.4**	**0.0**
PLP	**Palo**	**5.48**	**348**	*e*P	**Pn**	**20 22 50.7**	**+1.5**
GTOI	**Gorontalo**	**5.96**	**211**	P	**Pn**	**20 22 56.9**	**+1.2**
	0.4nm884nm105nm,0.7s						
RCP	**Roxas**	**6.64**	**330**	*i* P	**Pn**	**20 23 07.5**	**+2.7**
TOLI2	**Tolitoli**	**7.04**	**229**	Pn	**Pn**	**20 23 10.5**	**+0.3**
LUWI	**Luwuk**	**7.54**	**206**		**Pn**	**20 23 18.3**	**+1.3**
LUWI	**Luwuk**	**7.54**	**206**	P	**Pn**	**20 23 21.0**	**+4.0**
	0.2nm1µm52nm,1.0s						
SANI	**Sanana**	**7.77**	**181**	P	**Pn**	**20 23 18.4**	**-1.7**
SWI	**Sorong**	**8.36**	**142**	P	**Pn**	**20 23 28.3**	**+0.2**
SIJI	**Sorong**	**8.37**	**142**	P	**Pn**	**20 23 28.4**	**+0.1**
	7.8nm,0.4s,baz=340,slow=20,SNR=11						
SIJI	**Sorong**	**8.37**	**142**	P	**Pn**	**20 23 27.4**	**-0.9**
SIJI	**Sorong**	**8.37**	**142**	P	**Pn**	**20 23 28.0**	**-0.2**
NLAI	**Namlea**	**9.00**	**174**	P	**Pn**	**20 23 35.1**	**-1.7**
MWPI	**Manokwari, Pap**	**10.35**	**130**	P	**Pn**	**20 23 54.9**	**-0.1**
FAKI	**Fak Fak**	**10.59**	**144**		**Pn**	**20 23 57.4**	**-0.8**
SOEI	**Soe**	**15.53**	**187**		**P**	**20 25 03.5**	**-0.3**
TPUB	**Ta-pu**	**18.21**	**344**	P	**P**	**20 25 31.4**	**-1.7**
TPUB				IAmb	IAmb	20 25 40.7	
	comp=Z,31nm,1.5s						
SSLB	**Suanglung**	**18.59**	**345**	P	**P**	**20 25 36.0**	**-1.3**
SSLB				IAmb	IAmb	20 26 10.1	
	comp=Z,19nm,1.5s						
MTN	**Manton Dam**	**19.16**	**165**	P	**Pn**	**20 25 44.6**	**-1.1**
MTN				IAmb	IAmb	20 25 55.2	
	comp=Z,37nm,1.3s						
KNRA	**Kununurra**	**21.47**	**173**	P	**P**	**20 26 08.9**	**+0.6**
KNRA				IAmb	IAmb	20 26 20.7	
	comp=Z,39nm,1.4s						
FITZ	**Fitzroy Crossi**	**23.72**	**181**	P	**P**	**20 26 29.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.72**	**181**	P	**P**	**20 26 30.1**	**-0.3**
CGJI	**Cibinong**	**23.79**	**239**	P	**P**	**20 26 29.5**	**-1.6**
MNAI	**Manna**	**25.21**	**247**	P	**P**	**20 26 43.2**	**-0.8**
KULM	**Kulim**	**25.34**	**270**	P	**P**	**20 26 43.8**	**-1.4**
PMG	**Port Moresby**	**25.84**	**126**	P	**P**	**20 26 50.8**	**+1.1**
WB0	**Warramunga Arr**	**26.66**	**162**	P	**P**	**20 26 58.3**	**+1.3**
WB0				IAmb	IAmb	20 27 08.0	
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**26.80**	**163**	P	**P**	**20 26 59.4**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=343,slow=9.3,SNR=10						
	comp=Z,0.7nm,0.8s						
AS31	**Alice Springs**	**30.23**	**166**	P	**P**	**20 27 29.6**	**+0.9**
ASAR	**Alice Springs**	**30.23**	**166**	P	**P**	**20 27 29.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=340,slow=7.6,SNR=13						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**30.23**	**166**	P	**P**	**20 27 29.9**	**+1.1**
JSG	**Sagara**	**30.86**	**20**	P	**P**	**20 27 35.4**	**+1.2**
PZH	**PanZhiHua**	**31.07**	**314**	P	**P**	**20 27 38.2**	**+2.0**
KSRS	**Korea Array**	**31.58**	**3**	P	**P**	**20 27 41.8**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=183,slow=9.1,SNR=6.9						
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**32.58**	**18**	P	**P**	**20 27 49.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=171,slow=9.9,SNR=2.4						
	comp=Z,0.9nm,0.8s						
HHC	**Hu-ho-hao-te**	**37.28**	**342**	*e*P	**P**	**20 28 32.4**	**+2.8**
HHC				pmax	pmax		
	comp=Z,21nm,0.5s						
HHC				pmax	pmax		
	comp=Z,70nm,3.8s						
SHL	**Shillong**	**38.19**	**305**	P	**P**	**20 28 37.0**	**-0.6**
SHL				IAmb	IAmb	20 28 39.1	
	comp=Z,5.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**38.63**	**7**	P	**P**	**20 28 42.8**	**+2.0**
	comp=Z,3.1nm,0.7s,baz=160,slow=4.0,SNR=4.3						
	comp=Z,3.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.63**	**7**	P	**P**	**20 28 41.0**	**+0.2**
MDJ	**Mudanjiang**	**38.81**	**4**	P	**P**	**20 28 43.0**	**+0.6**
MDJ				IAmb	IAmb	20 28 45.1	
	comp=Z,7.3nm,0.9s						
BBOO	**Buckleboo**	**39.52**	**167**	P	**P**	**20 28 50.0**	**+1.6**
BBOO				IAmb	IAmb	20 28 57.1	
	comp=Z,23nm,1.5s						
STKA	**Stephens Creek**	**40.25**	**159**	P	**P**	**20 28 57.4**	**+3.1**
	comp=Z,2.1nm,0.5s,baz=342,slow=5.4,SNR=6.9						
	comp=Z,2.1nm,0.5s						
JKA	**Kamikawa-asahi**	**40.85**	**18**	P	**P**	**20 28 59.4**	**+0.2**
EVN	**Everest**	**43.29**	**305**		**P**	**20 29 19.4**	**-0.7**
EVN				IAmb	IAmb	20 29 22.3	
	comp=Z,4.4nm,0.6s						
HILR	**Hailar Array B**	**43.97**	**354**	P	**P**	**20 29 25.8**	**+1.5**
	comp=Z,2.2nm,0.5s,baz=180,slow=16,SNR=2.5						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**45.18**	**341**	P	**P**	**20 29 34.2**	**0.0**
	comp=Z,0.4nm,0.6s,baz=163,slow=10,SNR=3.4						
SONM				PcP	**PcP**	**20 31 12.5**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=146,slow=3.1,SNR=4.0						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**45.18**	**341**	P	**P**	**20 29 33.7**	**-0.4**
WMQ	**Urumqi**	**50.71**	**324**	*e*P	**P**	**20 30 13.7**	**-3.0**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
PEA0B	**Petropavlovsk-**	**53.80**	**23**	P	**P**	**20 30 38.8**	**-0.5**
PDGK	**Podgornoye**	**55.45**	**320**	P	**P**	**20 30 50.6**	**-1.0**
MKAR	**Makanchi Array**	**55.54**	**325**	P	**P**	**20 30 51.7**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=120,slow=7.8,SNR=24						
MKAR				PcP	**PcP**	**20 31 49.8**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=107,slow=4.1,SNR=7.0						
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**55.54**	**325**	P	**P**	**20 30 51.4**	**-0.6**
MKAR					**PcP**	**20 31 49.7**	**-0.7**
MAKZ	**Makanchi**	**55.72**	**325**	P	**P**	**20 30 52.6**	**-0.7**
MAKZ				IAmb	IAmb	20 30 53.8	
	comp=Z,2.3nm,0.8s						
NIL	**Nilore**	**56.20**	**307**	P	**P**	**20 30 55.8**	**-1.1**
YAK	**Yakutsk**	**56.20**	**2**		**P**	**20 30 57.0**	**+0.6**
ZAA0	**Zalesovo Array**	**58.50**	**333**	P	**P**	**20 31 11.3**	**-1.3**
ZALV	**Zalesovo Beam**	**58.50**	**333**	P	**P**	**20 31 11.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=140,slow=6.4,SNR=6.3						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**58.50**	**333**	P	**P**	**20 31 11.6**	**-1.1**
ARSB	**Arslanbob**	**58.97**	**315**	P	**P**	**20 31 15.5**	**-0.9**
KURBB	**Kurchatov Arra**	**59.70**	**327**	P	**P**	**20 31 20.5**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=127,slow=6.4,SNR=47						
	comp=Z,3.6nm,0.6s						
KURK	**Kurchatov**	**59.70**	**327**		**P**	**20 31 20.4**	**-0.5**
KK31	**Karatay Array**	**61.33**	**316**		**P**	**20 31 31.4**	**-0.9**
KK31				IAmb	IAmb	20 31 32.5	
	comp=Z,3.3nm,0.8s						
KKAR	**Karatay Array**	**61.33**	**316**	P	**P**	**20 31 31.4**	**-0.9**
HRA	**Herat**	**65.25**	**305**	P	**P**	**20 31 56.8**	**-1.7**
BVAR	**Borovoye Array**	**65.28**	**327**	P	**P**	**20 31 57.4**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=139,slow=8.8,SNR=24						
	comp=Z,3.0nm,0.6s						
BORK	**Borovoye**	**65.33**	**327**		**P**	**20 31 57.8**	**-0.6**
BORK				IAmb	IAmb	20 31 58.6	
	comp=Z,4.0nm,0.7s						
NRIK	**Noril'sk**	**68.31**	**346**	P	**P**	**20 32 17.4**	**+0.5**
	comp=Z,5.7nm,0.6s,baz=137,slow=4.7,SNR=6.1						
	comp=Z,5.7nm,0.6s						
NRIK	**Noril'sk**	**68.31**	**346**	P	**P**	**20 32 16.7**	**-0.3**
NRIK				IAmb	IAmb	20 32 18.2	
	comp=Z,6.1nm,0.7s						
AB31	**Akbulak array**	**70.19**	**320**	P	**P**	**20 32 28.0**	**-0.9**
ABKAR	**Akbulak array**	**70.19**	**320**	P	**P**	**20 32 28.0**	**-0.9**
CASY	**Casey**	**72.75**	**187**	P	**P**	**20 32 44.7**	**+0.8**
CASY				IAmb	IAmb	20 32 56.4	
	comp=Z,6.2nm,1.1s						
ARTI	**Arti**	**72.97**	**327**	P	**P**	**20 32 44.4**	**-1.1**
ARTI				IAmb	IAmb	20 32 46.6	
	comp=Z,4.5nm,0.5s						
O15K	**Ungalikthiuk R**	**76.93**	**31**	P	**P**	**20 33 08.9**	**+0.7**
O15K				IAmb	IAmb	20 33 40.1	
	comp=Z,5.5nm,1.1s						
J16K	**Anvik River**	**77.39**	**26**	P	**P**	**20 33 11.8**	**+1.2**
J16K				IAmb	IAmb	20 33 30.9	
	comp=Z,5.4nm,1.2s						
L16K	**Owhat River**	**77.58**	**28**	P	**P**	**20 33 12.1**	**+0.4**
D23K	**Nanushuk River**	**82.21**	**21**		**P**	**20 33 38.6**	**+2.0**
D23K				IAmb	IAmb	20 33 40.1	
	comp=Z,3.8nm,0.8s						
ILAR	**Eielson Array**	**83.55**	**26**	P	**P**	**20 33 43.8**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=245,slow=5.4,SNR=17						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**83.55**	**26**	P	**P**	**20 33 43.3**	**-0.2**
E25K	**Arctic Village**	**84.06**	**22**	P	**P**	**20 33 48.3**	**+2.2**
E25K				IAmb	IAmb	20 33 49.8	
	comp=Z,4.7nm,0.9s						
I28M	**Miner Creek**	**86.45**	**25**		**P**	**20 33 59.7**	**+1.6**
I28M				IAmb	IAmb	20 34 01.9	
	comp=Z,4.7nm,0.9s						
BRTR	**Keskin Array B**	**88.25**	**310**	P	**P**	**20 34 05.4**	**-2.0**
	comp=Z,0.6nm,0.7s,baz=123,slow=3.7,SNR=4.9						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**88.33**	**340**	P	**P**	**20 34 05.9**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=60,slow=4.9,SNR=6.2						
	comp=Z,1.3nm,0.7s						
ARCES	**ARCESS Array B**	**88.33**	**340**	P	**P**	**20 34 05.5**	**-1.5**
FINES	**FINESS Array B**	**89.75**	**332**	P	**P**	**20 34 12.5**	**-1.2**
	comp=Z,3.1nm,0.8s,baz=90,slow=1.9,SNR=5.2						
	comp=Z,3.1nm,0.8s						
FINES	**FINESS Array B**	**89.75**	**332**	P	**P**	**20 34 13.3**	**-0.4**
TXAR	**Lajitas Array**	**120.83**	**51**	PKP	**PKiKP**	**20 40 09.7**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=305,slow=2.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**121.67**	**289**	PKP	**PKiKP**	**20 40 10.1**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=57,slow=1.5,SNR=6.8						

*SJA **04** 20:41:38.3±0.7, 23°.25S×68°.80W, h104km±5km, ML3.2, MW3.6*
*GUC **04** 20:41:40.1±0.6, 23°.20S×68°.84W, h105km±4km, ML3.4*
ISC 04 20:41:37.8±1.5, 23°.26S±0°.04×68°.77W±0°.04, h118km±11km, n28, σ0.94/41, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.62**	**61**	*e*P	**Pn**	**20 41 57.4**	**+0.8**
AF01				*e*S	**Sn**	**20 42 10.2**	**-0.7**
AF01				IAML		20 42 13.8	
	comp=Z,2µm,0.1s						
AF01	**San Pedro de A**	**0.62**	**61**	⇓*i*P	**Pn**	**20 41 57.4**	**+0.8**
AF01				*e*S	**Sn**	**20 42 10.4**	**-0.4**
AF01				IAML		20 42 11.3	
	comp=N,6µm,0.2s						
PB06	**IPOC Station P**	**0.92**	**306**	*e*P	**Pn**	**20 41 59.1**	**+0.1**
PB06				IAML		20 42 16.2	
	comp=Z,816nm,0.2s						
PB06	**IPOC Station P**	**0.92**	**306**	*e*P	**Pn**	**20 41 59.2**	**+0.1**
PB06				*e*S	**Sn**	**20 42 13.6**	**-1.5**
PB06				IAML		20 42 15.2	
	comp=E,2µm,0.1s						
PB05	**IPOC Station P**	**1.38**	**287**	*e*P	**Pn**	**20 42 04.0**	**+0.2**
PB05				*e*S	**Sn**	**20 42 25.3**	**+1.7**
PB05				IAML		20 42 27.9	
	comp=Z,200nm,0.4s						
PB05	**IPOC Station P**	**1.38**	**287**	*e*P	**Pn**	**20 42 03.9**	**+0.1**
PB05				*e*S	**Sn**	**20 42 22.3**	**-1.3**
PB05				IAML		20 42 27.3	
	comp=E,341nm,0.4s						
PB03	**IPOC Station P**	**1.51**	**323**	*e*P	**Pn**	**20 42 06.0**	**+0.6**
PB03				*e*S	**Sn**	**20 42 25.9**	**-0.4**
PB03				IAML		20 42 26.8	
	comp=Z,532nm,0.2s						
PB03	**IPOC Station P**	**1.51**	**323**	*e*P	**Pn**	**20 42 05.9**	**+0.6**
PB03				*e*S	**Sn**	**20 42 25.4**	**-0.8**
PB03				IAML		20 42 27.5	
	comp=E,389nm,0.3s						
PB09	**IPOC Station P**	**1.52**	**343**	*e*P	**Pn**	**20 42 06.9**	**+1.4**
PB09				*e*S	**Sn**	**20 42 26.3**	**-0.2**
PB09				IAML		20 42 30.4	
	comp=Z,206nm,0.3s						
PB09	**IPOC Station P**	**1.52**	**343**	⇑*i*P	**Pn**	**20 42 06.8**	**+1.4**
PB09				*e*S	**Sn**	**20 42 26.0**	**-0.5**
PB10	**IPOC Station P**	**1.66**	**261**	*e*P	**Pn**	**20 42 07.8**	**+0.8**
PB10				*e*S	**Sn**	**20 42 28.7**	**-0.6**
PB10				IAML		20 42 34.1	
	comp=Z,124nm,0.5s						
PB10	**IPOC Station P**	**1.66**	**261**	*e*P	**Pn**	**20 42 07.7**	**+0.8**
PB10				IAML		20 42 36.0	
	comp=E,232nm,0.3s						
PB07	**IPOC Station P**	**1.84**	**326**	*e*P	**Pn**	**20 42 09.9**	**+0.5**
PB07				*e*S	**Sn**	**20 42 32.4**	**-1.0**
PB07				IAML		20 42 39.4	
	comp=Z,177nm,0.1s						
PB07	**IPOC Station P**	**1.84**	**326**	*e*P	**Pn**	**20 42 09.9**	**+0.5**
PB07				IAML		20 42 35.2	
	comp=E,224nm,0.2s						
PB14	**IPOC Station P**	**2.03**	**227**	*e*P	**Pn**	**20 42 12.8**	**+1.0**
PB14				*e*S	**Sn**	**20 42 36.1**	**-1.7**
PB14				IAML		20 42 44.0	
	comp=Z,92nm,0.3s						
PB14	**IPOC Station P**	**2.03**	**227**	*e*P	**Pn**	**20 42 12.6**	**+0.8**
PB02	**IPOC Station P**	**2.19**	**331**	*e*P	**Pn**	**20 42 14.3**	**+0.6**
PB02				*e*S	**Sn**	**20 42 41.8**	**+0.6**
PB02				IAML		20 42 47.5	
	comp=Z,266nm,0.2s						
PB02	**IPOC Station P**	**2.19**	**331**	*e*P	**Pn**	**20 42 14.3**	**+0.6**
PB02				IAML		20 42 48.2	
	comp=E,339nm,0.3s						
SALTA		**2.42**	**114**	*e*P	Pn	20 42 00.2	-17
SALTA				*e*P		20 42 02.5	
SALTA				*e*S	**Sn**	**20 42 46.5**	**-0.5**
HJA	**Humahuaca**	**3.09**	**90**	*e*P	**Pn**	**20 42 25.0**	**-0.6**
PB08	**IPOC Station P**	**3.12**	**353**	*e*P	**Pn**	**20 42 27.1**	**+1.1**
PB08				*e*S	Sn	20 42 50.4	-13
PB08				IAML		20 42 56.9	
	comp=Z,41nm,1.3s						
TA02	**Huaiquique**	**3.23**	**337**	*e*S	Sn	20 42 51.3	-14
TA02				IAML		20 42 57.4	
	comp=Z,74nm,0.1s						
AC01	**Pan de Azucar**	**3.33**	**210**	*e*P	**Pn**	**20 42 28.8**	**+0.4**
AC01				IAML		20 43 16.7	
	comp=Z,35nm,1.0s						
AC01	**Pan de Azucar**	**3.33**	**210**	*e*P	**Pn**	**20 42 28.6**	**+0.3**
AC01				IAML		20 43 21.6	
	comp=E,57nm,0.4s						
PB11	**IPOC Station P**	**3.57**	**346**	*e*P	**Pn**	**20 42 31.1**	**-0.8**
AC02	**Maricunga**	**3.58**	**185**	*e*P	**Pn**	**20 42 34.2**	**+2.0**
AC02				*e*S	**Sn**	**20 43 14.4**	**+0.3**
AC02				IAML		20 43 49.2	
	comp=Z,24nm,0.6s						
GO03	**Copiapo**	**4.52**	**197**	*e*P	**Pn**	**20 42 45.2**	**+0.9**
GO03				IAML		20 44 11.4	
	comp=Z,19nm,0.6s						
AC04	**Llanos de Chal**	**5.35**	**202**	*e*P	**Pn**	**20 42 54.1**	**-1.3**
AC04				IAML		20 44 37.9	
	comp=Z,12nm,2.5s						

*NEIC **04** 20:42:24.5±1.8, 18°.92S±0°.06×167°.6E±0°.1, h10km±2km, mb4.1/3, Error ellipse: s-maj=16.8km s-min=10.0km az=87.0*

*IDC **04** 20:42:25.1±1.4, 19°.01S×167°.46E, h0km, mb3.9/5, mbtmp3.9/6, ML3.4/1, MS2.9/3, Error ellipse: s-maj=43.2km s-min=24.1km az=126.0*
*NOU **04** 20:42:27.5, 18°.89S×167°.55E, h34km, MLv4.1/13, Vanuatu Islands*
ISC 04 20:42:27.4±0.7, 18°.94S±0°.04×167°.54E±0°.08, h28km, n36, σ1.9/43/36, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.35**	**27**	P	**Pn**	**20 42 50.3**	**-0.1**
RTV	**Rentapao**	**1.41**	**36**	P	**Pn**	**20 42 51.3**	**0.0**
RTV	**Rentapao**	**1.41**	**36**	S	**Sn**	**20 43 08.7**	**-0.3**
MARNC	**Mare, Loyalty**	**2.57**	**170**	P	**Pn**	**20 43 07.4**	**+0.2**
MARNC	**Mare, Loyalty**	**2.57**	**170**	Pn	**Pn**	**20 43 06.2**	**-1.0**
MARNC				Sn	**Sn**	**20 43 33.8**	**-3.8**
YATNC	**Mamie plateau,**	**3.16**	**191**	P	**Pn**	**20 43 14.9**	**-0.5**
DZM	**Mont Dzumac**	**3.28**	**198**	Pn	**Pn**	**20 43 17.4**	**+0.3**
	4.1nm,0.3s,baz=309,slow=23,SNR=115						
DZM				LR	LR	20 43 45.6	
	comp=Z,57nm,20.3s,baz=286,slow=25						
DZM				Sn	**Sn**	**20 43 55.1**	**-0.2**
	11nm,0.3s,baz=132,slow=21,SNR=11						
	12nm,0.4s						
NOUC	**Port Laguerre**	**3.35**	**200**	P	**Pn**	**20 43 18.7**	**+0.7**
KOUNC	**Koumac, New Ca**	**3.46**	**242**	P	**Pn**	**20 43 19.9**	**+0.4**
KOUNC	**Koumac, New Ca**	**3.46**	**242**		**Pn**	**20 43 18.6**	**-0.8**
SANVU	**Saraoutou**	**3.49**	**355**	P	**Pn**	**20 43 18.4**	**-1.4**
SANVU	**Saraoutou**	**3.49**	**355**		**Pn**	**20 43 18.4**	**-1.4**
ONTNC	**Ouen Toro**	**3.50**	**197**	P	**Pn**	**20 43 21.0**	**+1.0**
ONTNC	**Ouen Toro**	**3.50**	**197**		**Pn**	**20 43 20.6**	**+0.6**
OUENC	**Ouen Island, N**	**3.52**	**191**	P	**Pn**	**20 43 21.6**	**+1.3**
OUENC	**Ouen Island, N**	**3.52**	**191**		**Pn**	**20 43 20.2**	**-0.2**
MSVF	**Nonsavu**	**10.05**	**85**	LR	LR	20 48 20.6	
	comp=Z,142nm,21.3s,baz=319,slow=35						
CTA	**Charters Tower**	**20.10**	**263**	LR	LR	20 53 34.1	
	comp=Z,7nm,18.8s,baz=146,slow=33						
CTAO	**Charters Tower**	**20.10**	**263**	P	**P**	**20 46 57.3**	**-1.8**
CTAO				IAmb	IAmb	20 47 12.4	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**31.26**	**263**	P	**P**	**20 48 44.8**	**-0.3**
WB0				IAmb	IAmb	20 48 54.4	
	comp=Z,8.4nm,1.1s						
WRA	**Warramunga Arr**	**31.30**	**263**	P	**P**	**20 48 45.5**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=89,slow=5.7,SNR=1.4						
	comp=Z,0.6nm,0.9s						
AS31	**Alice Springs**	**31.65**	**255**	P	**P**	**20 48 48.0**	**-0.5**
AS31				IAmb	IAmb	20 49 02.5	
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**31.65**	**255**	P	**P**	**20 48 49.7**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=85,slow=8.8,SNR=20						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**31.65**	**255**	P	**P**	**20 48 47.3**	**-1.2**
SONM	**Songino Array**	**86.03**	**324**	P	**P**	**20 55 08.4**	**+3.0**
	comp=Z,0.5nm,0.6s,baz=134,slow=6.2,SNR=3.5						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**89.81**	**49**	P	**P**	**20 55 27.0**	**+3.1**
	comp=Z,1.1nm,0.9s,baz=239,slow=5.1,SNR=4.4						
	comp=Z,1.1nm,0.9s						
NVAR	**Mina Array Bea**	**89.81**	**49**	P	**P**	**20 55 21.4**	**-2.5**
ILAR	**Eielson Array**	**90.43**	**18**	P	**P**	**20 55 27.4**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=234,slow=4.9,SNR=5.7						
	comp=Z,0.4nm,0.7s						
KBA	**Koelnbreinsper**	**144.88**	**329**	*e*PKP	**PKiKP**	**21 02 04.4**	**-1.5**
	comp=Z,2.0nm,0.6s						
LESA	**Schwarzleotal**	**144.96**	**330**	*e*PKP	**PKiKP**	**21 02 04.8**	**-1.1**
	comp=Z,3.9nm,1.0s						
ABTA	**Abfaltersbach**	**145.52**	**329**	*e*PKP	**PKiKP**	**21 02 05.6**	**-1.4**
	comp=Z,5.0nm,0.8s						
WTTA	**Wattenberg**	**145.56**	**331**	*e*PKP	**P

GNL	**Ganaly**	**4.36**	**9**	*e*P	Pn	21 34 39.0	+4.3
MKZ	**Mys Kozlova**	**6.00**	**29**	*e*P	Pn	21 34 59.7	+2.6

IDC 04 21:58:33.3±22.0, 38°03'N×71°59'E, h322km±245km, mb3.1/1, mbtmp3.5/4, MS3.4/1, Error ellipse: s-maj=310.6km s-min=131.5km az=158.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**11.79**	**39**	P		Pn	22 01 12.7	-0.1
	0.2nm,0.4s,baz=222,slow=12,SNR=5.6							
KURBB	**Kurchatov Arra**	**13.53**	**19**	P		P	22 01 32.5	-0.4
	0.3nm,0.5s,baz=210,slow=10,SNR=4.2							
ZALV	**Zalesovo Beam**	**18.33**	**25**	P		P	22 02 25.1	+0.1
	1.1nm,0.3s,baz=211,slow=9.2,SNR=7.0							
SONM	**Songino Array**	**27.10**	**58**	LR		LR	22 16 55.4	
	comp=Z,84nm,19.9s,baz=107,slow=41							
FINES	**FINESS Array B**	**36.49**	**325**	P		P	22 05 08.2	-0.1
	1.6nm,0.9s,baz=101,slow=9.9,SNR=3.9							
	1.6nm,0.9s							

*NIED **04** 22:01:19.2, 36°.28N×137°.62E, h4km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.03; Mθθ-0.74; Mφφ0.71; Mrθ0.47; Mθφ-1.56; Mφr0.07; Fault plane solution: M0 1.78000×10^15 NP1: φs192.00000°, δ76.00000°, λ-5.00000°. NP2: φs283.00000°, δ85.00000°, λ-166.00000°.*

JMA 04 22:01:19.2±0.0, 36°.3N±0°.2×137°.6E±0°.1, h4km, MD4.0/20, MV3.7/20, 3D, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.25**	**257**	*i* P		Pg	22 01 24.2	+0.2
JGN				A		A	22 01 24.2	
	comp=N,29nm,3.9s,comp=E,9.0nm,2.2s							
JGN				S		Sg	22 01 27.8	+0.4
JTT	**Ttatey**	**0.40**	**325**	⇓*i* P		Pg	22 01 27.4	+0.5
JTT				A		A	22 01 27.4	
	comp=N,30nm,2.8s,comp=E,30nm,1.9s							
JTT				⇓*e*S		Sg	22 01 33.5	+1.4
JNG	**Nsakai**	**0.41**	**72**	*i* P		Pg	22 01 27.3	+0.2
JNG				S		Sg	22 01 33.1	+0.6
MAT	**Matsushiro**	**0.54**	**61**	*i* P		Pg	22 01 29.6	0.0
MAT				S		Sg	22 01 37.0	+0.3
JNT	**Takato**	**0.58**	**134**	⇓*i* P		Pg	22 01 30.4	0.0
JGK	**Kuni**	**0.87**	**71**	A		A	22 01 36.0	
	comp=N,5.0nm,2.8s,comp=E,6.0nm,3.0s							
JJH	**Hakui**	**0.93**	**314**	A		A	22 01 37.1	
	comp=N,4.0nm,4.2s,comp=E,5.0nm,5.0s							
JJN	**Nakama**	**0.93**	**28**	A		A	22 01 37.1	
	comp=N,4.0nm,1.1s,comp=E,6.0nm,2.0s							
JYTA	**Yamagatataniai**	**0.99**	**226**	*i* P		Pg	22 01 38.1	-0.1
JYTA				A		A	22 01 38.1	
	comp=N,4.0nm,2.8s,comp=E,6.0nm,3.5s							
JAO	**Obara**	**1.05**	**196**	A		A	22 01 39.3	
	comp=N,5.0nm,4.8s,comp=E,9.0nm,4.6s							
JICN	**Ichinomiyachia**	**1.16**	**213**	A		A	22 01 41.2	
	comp=N,8.0nm,6.0s,comp=E,8.0nm,3.3s							

*MOS **04** 22:07:29.8±0.9, 38°.21N×74°.23E, h161km, mb4.5/21, Error ellipse: s-maj=6.0km s-min=3.8km az=94.2*
*IDC **04** 22:07:29.7±2.3, 38°.10N×74°.24E, h149km±21km, mb3.8/24, mbtmp4.2/28, MS3.5/3, Error ellipse: s-maj=15.3km s-min=9.4km az=23.0*
*BJI **04** 22:07:30.3, 38°.28N×74°.22E, h154km, mB4.2/3, mb4.3/22*
*SOME **04** 22:07:30.6, 39°.08N×73°.15E, h0km*
*GFZ **04** 22:07:30.4±0.2, 38°N±3°×7°4E±°, h140km, M4.2/20, mb4.3/20*
*NEIC **04** 22:07:31.0±1.5, 38°.22N±0°.06×74°.12E±0°.08, h159km±5km, mb4.5/44, Error ellipse: s-maj=9.4km s-min=7.9km az=134.0*

ISC 04 22:07:29.6±0.3, 38°.18N±0°.03×74°.16E±0°.04, h152km, n350, σ1s82/372, mb4.3/76, 27C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH2	**Kashi**	**1.46**	**48**	P		**Pn**	**22 08 00.8**	**+1.8**
KSH2				S		**Sn**	**22 08 19.8**	**-1.9**
KSH2				SMN				
	2μm,0.3s							
KSH2				SME				
	4μm,0.7s							
MANEM	**Manem**	**2.06**	**253**			**Pn**	**22 08 08.4**	**+2.6**
MANEM					Sn	**Sn**	**22 08 35.7**	**+2.1**
OHH	**Osh**	**2.57**	**336**	P		**Pn**	**22 08 11.2**	**-0.5**
GAR	**Garm**	**3.12**	**286**			**Pn**	**22 08 18.9**	**+0.3**
GAR	**Garm**	**3.12**	**286**	P		**Pn**	**22 08 19.0**	**+0.3**
BTK	**Batken**	**3.20**	**307**			**Pn**	**22 08 21.1**	**+1.5**
BTK	**Batken**	**3.20**	**307**	PN		**Pn**	**22 08 21.1**	**+1.5**
BTK	**Batken**	**3.20**	**307**	P		**Pn**	**22 08 20.4**	**+0.8**
ARSB	**Arslanbob**	**3.27**	**344**			**Pn**	**22 08 21.2**	**+0.7**
ARSB	**Arslanbob**	**3.27**	**344**	PN		**Pn**	**22 08 21.2**	**+0.7**
ASAI	**AK-SAY(Kyrgyzs**	**3.29**	**33**	P		**Pn**	**22 08 19.4**	**-1.6**
NRN	**Naryn**	**3.54**	**23**			**Pn**	**22 08 24.4**	**+0.2**
NRN	**Naryn**	**3.54**	**23**	PN		**Pn**	**22 08 24.4**	**+0.2**
CHGR	**Chuyangaron**	**3.96**	**278**			**Pn**	**22 08 29.2**	**-0.2**
CHGR	**Chuyangaron**	**3.96**	**278**	*d* PN		**Pn**	**22 08 29.3**	**0.0**
CHGR	**Chuyangaron**	**3.96**	**278**	P		**Pn**	**22 08 28.7**	**-0.6**
ARK	**Arkit**	**3.99**	**336**	P		**Pn**	**22 08 30.4**	**+0.6**
UCH	**Uchtor**	**4.05**	**4**	P		**Pn**	**22 08 31.9**	**+1.0**
	SNR=49							
ULHL	**Ulahol**	**4.36**	**21**	P		**Pn**	**22 08 35.6**	**+0.9**
	SNR=14							
AAK	**Ala-Archa**	**4.46**	**3**	P		**Pn**	**22 08 37.1**	**+1.2**
	17nm,0.4s,baz=179,slow=7.8,SNR=30							
AAK				S		Sn	22 09 17.1	-11
	41nm,0.5s,baz=204,slow=18,SNR=6.2							
AAK	**Ala-Archa**	**4.46**	**3**	P		**Pn**	**22 08 37.3**	**+1.3**
	SNR=19							
AAK	**Ala-Archa**	**4.46**	**3**			**Pn**	**22 08 37.3**	**+1.3**
AAK	**Ala-Archa**	**4.46**	**3**	*i* PN		**Pn**	**22 08 36.7**	**+0.7**
AAK				pmax		pmax		
	comp=Z,58nm,0.4s							
AAK	**Ala-Archa**	**4.46**	**3**	P		**Pn**	**22 08 36.8**	**+0.9**
EKS2	**Erkin-Say**	**4.49**	**356**	P		**Pn**	**22 08 38.1**	**+1.8**
	SNR=13							
KBK	**Karagaybulak**	**4.51**	**7**	P		**Pn**	**22 08 38.1**	**+1.4**
	SNR=59							
BOOM	**Boomskoye usch**	**4.51**	**17**			**Pn**	**22 08 38.0**	**+1.3**
BOOM	**Boomskoye usch**	**4.51**	**17**	PN		**Pn**	**22 08 38.0**	**+1.3**
BOOM	**Boomskoye usch**	**4.51**	**17**	P		**Pn**	**22 08 37.9**	**+1.2**
TARG	**Taragay, Kyrgy**	**4.52**	**37**			**Pn**	**22 08 37.6**	**+0.7**
TARG	**Taragay, Kyrgy**	**4.52**	**37**	PN		**Pn**	**22 08 37.6**	**+0.7**
TARG	**Taragay, Kyrgy**	**4.52**	**37**	P		**Pn**	**22 08 36.4**	**-0.6**
KDJ	**Kajisay**	**4.57**	**29**	Pn		**Pn**	**22 08 38.4**	**+0.9**
KDJ	**Kajisay**	**4.57**	**29**	PN		**Pn**	**22 08 38.4**	**+0.9**
NIL	**Nilore**	**4.58**	**190**			**Pn**	**22 08 40.3**	**+2.8**
NIL	**Nilore**	**4.58**	**190**	PN		**Pn**	**22 08 40.3**	**+2.8**
NIL	**Nilore**	**4.58**	**190**	P		**Pn**	**22 08 39.5**	**+2.0**
MRKS	**Merke**	**4.61**	**351**	*e*P		**Pn**	**22 08 38.9**	**+0.9**
	comp=Z,115nm,0.2s							
MRKS				*e*S		**Sn**	**22 09 28.2**	**-3.1**
	comp=Z,445nm,0.3s							
FRU1	**Bishkek**	**4.64**	**4**			**Pn**	**22 08 39.8**	**+1.6**
FRU1	**Bishkek**	**4.64**	**4**	PN		**Pn**	**22 08 39.8**	**+1.6**
FRU1	**Bishkek**	**4.64**	**4**	P		**Pn**	**22 08 39.5**	**+1.3**
ALCI	**Alchi Leh**	**4.65**	**147**	*e*P		**Pn**	**22 08 40.8**	**+2.0**
ALCI				*e*S		**Sn**	**22 09 32.2**	**-0.5**
ALCI				IAML			22 09 35.5	
	comp=N,1μm,0.2s							
ALCI				IAML			22 09 35.8	
	comp=E,1μm,0.3s							
SHAA	**Shahritus**	**4.81**	**264**			**Pn**	**22 08 40.5**	**0.0**
CHMS	**Chumysh**	**4.83**	**5**	P		**Pn**	**22 08 41.8**	**+1.1**
	SNR=44							
TKM2	**Tokmak 2**	**4.86**	**13**	P		**Pn**	**22 08 42.6**	**+1.3**
	SNR=18							
WUS	**Wushi**	**4.93**	**51**	Pn		**Pn**	**22 08 44.1**	**+2.0**
WUS	**Wushi**	**4.93**	**51**	P		**Pn**	**22 08 41.6**	**-0.5**
IUG	**luzhnay**	**5.07**	**323**	*e*PN		**Pn**	**22 08 44.7**	**+0.8**
IUG	**luzhnay**	**5.07**	**323**	*e*P		**Pn**	**22 08 44.8**	**+0.8**
IUG				*e*S		**Sn**	**22 09 41.9**	**-0.1**
IUG	**luzhnay**	**5.07**	**323**	*e*P		**Pn**	**22 08 44.0**	**+0.1**
	comp=E,183nm,0.1s							
IUG				*e*S		**Sn**	**22 09 37.0**	**-5.0**
	comp=E,1μm,0.3s							
USP	**Ospenovka**	**5.09**	**3**	P		**Pn**	**22 08 45.0**	**+0.9**
	SNR=12							
DZA	**Taraz**	**5.17**	**336**	*e*PN		**Pn**	**22 08 45.9**	**+0.7**
DZA	**Taraz**	**5.17**	**336**	*e*P		**Pn**	**22 08 46.0**	**+0.7**
DZA				*e*S		**Sn**	**22 09 44.1**	**-0.3**
DZA	**Taraz**	**5.17**	**336**	*e*P		**Pn**	**22 08 46.3**	**+1.1**
	comp=E,192nm,0.2s							
DZA				*e*S		**Sn**	**22 09 40.4**	**-4.0**
	comp=E,2μm,0.3s							
SGDS	**Sogindy**	**5.28**	**4**	*e*P		**Pn**	**22 08 47.3**	**+0.7**
TNSS	**Tian-Shan**	**5.29**	**23**	*e*PN		**Pn**	**22 08 47.9**	**+0.7**
TNSS	**Tian-Shan**	**5.29**	**23**	*e*P		**Pn**	**22 08 48.0**	**+0.7**
PRZ	**Przheval'sk**	**5.38**	**36**	Pn		**Pn**	**22 08 49.1**	**+0.9**
PRZ	**Przheval'sk**	**5.38**	**36**	PN		**Pn**	**22 08 49.1**	**+0.9**
CHM	**Chimkent**	**5.41**	**321**	*e*PN		**Pn**	**22 08 49.3**	**+1.0**
CHM	**Chimkent**	**5.41**	**321**	*e*P		**Pn**	**22 08 49.4**	**+1.0**
CHM	**Chimkent**	**5.41**	**321**	*e*P		**Pn**	**22 08 49.1**	**+0.8**
	comp=E,787nm,0.2s							
CHM				*e*S		**Sn**	**22 09 45.7**	**-4.2**
	comp=E,1μm,0.3s							
JMU	**Jammu**	**5.42**	**174**	*e*P		**Pn**	**22 08 50.8**	**+2.2**
JMU				*e*S		**Sn**	**22 09 50.3**	**0.0**
MDOK	**Medeo**	**5.44**	**23**	*e*PN		**Pn**	**22 08 49.7**	**+0.8**
MDOK				*e*S		**Sn**	**22 09 50.7**	**-0.2**
MDOK	**Medeo**	**5.44**	**23**	*e*P		**Pn**	**22 08 49.7**	**+0.8**
MDOK				*e*S		**Sn**	**22 09 50.8**	**-0.2**
AAA	**Alma-Ata**	**5.44**	**22**	*e*PN		**Pn**	**22 08 49.8**	**+1.0**
AAA	**Alma-Ata**	**5.44**	**22**	*e*P		**Pn**	**22 08 49.9**	**+1.0**
KBL	**Kabul**	**5.50**	**230**			**Pn**	**22 08 51.7**	**+1.9**
KBL	**Kabul**	**5.50**	**230**	PN		**Pn**	**22 08 51.7**	**+1.9**
KBL	**Kabul**	**5.50**	**230**	P		**Pn**	**22 08 51.3**	**+1.5**
TSSA	**Tissa**	**5.58**	**162**	*e*P		**Pn**	**22 08 52.0**	**+1.2**
TSSA				*e*S		**Sn**	**22 09 50.7**	**-3.6**
TSSA				IAML			22 09 57.2	
	comp=E,2μm,0.4s							
TSSA				IAML			22 10 08.1	
	comp=E,2μm,0.6s							
KK31	**Karatay Array**	**5.64**	**332**			**Pn**	**22 08 51.8**	**+0.3**
KK31	**Karatay Array**	**5.64**	**332**	P		**Pn**	**22 08 51.8**	**+0.3**
	comp=E,8.2nm,0.2s,baz=140,slow=13,SNR=217							
KK31				⇑S		**Sn**	**22 09 51.4**	**-4.1**
	comp=E,86nm,0.3s,baz=144,slow=24							
KK31	**Karatay Array**	**5.64**	**332**	PN		**Pn**	**22 08 51.8**	**+0.3**
KKAR	**Karatay Array**	**5.64**	**332**			**Pn**	**22 08 51.9**	**+0.4**
KKAR	**Karatay Array**	**5.64**	**332**	PN		**Pn**	**22 08 51.9**	**+0.4**
SATY	**Saty**	**5.85**	**32**	*e*PN		**Pn**	**22 08 55.2**	**+0.9**
SATY	**Saty**	**5.85**	**32**	*e*P		**Pn**	**22 08 55.2**	**+0.9**
THN	**Thein Dam**	**5.88**	**167**	*e*P		**Pn**	**22 08 58.1**	**+3.5**
THN				*e*S		**Sn**	**22 09 58.1**	**-3.1**
THN				IAML			22 10 04.0	
	comp=E,525nm,0.4s							
THN				IAML			22 10 05.1	
	comp=N,488nm,0.4s							
DHRM	**DHARAMSHALA**	**6.17**	**163**	*e*P		**Pn**	**22 08 59.5**	**+0.7**
DHRM				IAML			22 10 10.8	
	comp=E,921nm,0.2s							
DHRM				IAML			22 10 13.3	
	comp=E,658nm,0.4s							
DHRM				IAML			22 10 25.6	
	comp=E,1μm,0.3s							
UZB	**Uzynbulak**	**6.19**	**35**	*e*PN		**Pn**	**22 08 59.8**	**+1.0**
UZB	**Uzynbulak**	**6.19**	**35**	*e*P		**Pn**	**22 08 59.9**	**+1.0**
KPKS	**Kokpek**	**6.30**	**32**	*e*PN		**Pn**	**22 09 00.9**	**+0.7**
KPKS	**Kokpek**	**6.30**	**32**	*e*P		**Pn**	**22 09 01.0**	**+0.7**
PDGK	**Podgornoye**	**6.54**	**37**			**Pn**	**22 09 04.0**	**+0.4**
PDGK	**Podgornoye**	**6.54**	**37**	PN		**Pn**	**22 09 04.0**	**+0.4**
BHK	**Bhakra**	**7.01**	**164**	*e*P		**Pn**	**22 09 13.2**	**+3.3**
BHK				*ex*		x	22 10 24.5	
BHK				IAML			22 10 30.1	
	comp=E,495nm,0.5s							
BHK				IAML			22 10 30.8	
	comp=N,405nm,0.4s							
KLP	**Kalpa**	**7.43**	**152**	*e*P		**Pn**	**22 09 16.0**	**+0.3**
KLP				*e*S		**Sn**	**22 10 33.3**	**-5.7**
KLP				IAML			22 10 38.7	
	comp=E,486nm,0.7s							
KLP				IAML			22 10 39.1	
	comp=N,264nm,0.0s							
UTK	**UTTARKASHI**	**8.23**	**153**	*e*P		**Pn**	**22 09 27.8**	**+1.6**
UTK				*e*S		**Sn**	**22 10 51.2**	**-6.7**
UTK				IAML			22 10 58.4	
	comp=N,480nm,0.2s							
UTK				IAML			22 10 58.4	
	comp=E,813nm,0.7s							
JOSI	**Joshimath**	**8.82**	**148**	*e*S		**Sn**	**22 11 03.7**	**-8.5**
NDI	**New Delhi**	**9.81**	**164**	*e*P		**Pn**	**22 09 46.0**	**-1.0**
NDI				*e*S		**Sn**	**22 11 27.9**	**-7.9**
HRA	**Herat**	**10.33**	**252**	Pn		**Pn**	**22 09 54.5**	**+0.3**
MAKZ	**Makanchi**	**10.37**	**31**			**Pn**	**22 09 54.1**	**-0.2**
MAKZ	**Makanchi**	**10.37**	**31**	P		**Pn**	**22 09 54.1**	**-0.2**
MAKZ	**Makanchi**	**10.37**	**31**	P		**Pn**	**22 09 54.0**	**-0.3**
MK31	**Makanchi Array**	**10.49**	**32**	*ce*P		**Pn**	**22 09 56.7**	**+0.8**
MKAR	**Makanchi Array**	**10.49**	**32**	P		**Pn**	**22 09 55.6**	**-0.2**
	comp=E,3.0nm,0.7s,baz=200,slow=9.8,SNR=26							
MKAR	**Makanchi Array**	**10.49**	**32**			**Pn**	**22 09 54.7**	**-1.2**
MKAR	**Makanchi Array**	**10.49**	**32**	*ce*P		**Pn**	**22 09 55.0**	**-0.9**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
WMQ	**Urumqi**	**11.67**	**57**	*e*P		**Pn**	**22 10 12.5**	**+1.0**
AJM	**Ajmer**	**11.73**	**178**	*e*P		**Pn**	**22 10 10.4**	**-1.9**
AJM				*e*S		Sn	22 12 11.0	-11
BRZS	**Berezniki**	**11.85**	**355**	*e*P		**Pn**	**22 10 13.9**	**+0.3**
BRZS	**Berezniki**	**11.85**	**355**	*e*P		**Pn**	**22 10 13.9**	**+0.3**
ZSN	**Zaisan**	**12.14**	**37**	*e*P		**Pn**	**22 10 18.5**	**+1.1**
ZSN	**Zaisan**	**12.14**	**37**	*e*P		**Pn**	**22 10 18.5**	**+1.1**
KURBB	**Kurchatov Arra**	**12.82**	**13**	P		**Pn**	**22 10 24.7**	**-1.5**
	comp=Z,3.9nm,0.7s,baz=201,slow=11,SNR=26							
KURK	**Kurchatov**	**12.93**	**13**			**Pn**	**22 10 25.8**	**-1.7**
KURK	**Kurchatov**	**12.93**	**13**	*ce*P		**Pn**	**22 10 25.5**	**-2.0**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**12.93**	**13**	P		**Pn**	**22 10 25.2**	**-2.3**
EVN	**Everest**	**14.70**	**130**			**Pn**	**22 10 49.5**	**-1.3**
EVN	**Everest**	**14.70**	**130**	P		**Pn**	**22 10 49.2**	**-1.6**
DGZ	**Jazzator, Alta**	**14.94**	**35**	*i* P		**Pn**	**22 10 53.8**	**+0.7**
DGZ				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BVAR	**Borovoye Array**	**15.07**	**351**	P		**Pn**	**22 10 53.5**	**-1.1**
	comp=Z,23nm,0.7s,baz=154,slow=10,SNR=26							
AB31	**Akbulak array**	**15.08**	**322**			**Pn**	**22 10 52.8**	**-1.8**
AB31				IAmb		IAmb	22 10 57.9	
	comp=Z,13nm,0.7s							
ABKAR	**Akbulak array**	**15.08**	**322**			**Pn**	**22 10 53.2**	**-1.4**
BORK	**Borovoye**	**15.10**	**351**			**Pn**	**22 10 53.8**	**-1.1**
BORK				IAmb		IAmb	22 11 00.2	
	comp=Z,25nm,0.7s							
BORK	**Borovoye**	**15.10**	**351**	*i* P		**Pn**	**22 10 53.9**	**-1.1**
BORK				pmax		pmax		
	comp=Z,25nm,1.3s							
LSA	**Lhasa**	**16.43**	**116**	P		**P**	**22 11 12.2**	**+0.3**
LSA	**Lhasa**	**16.43**	**116**	P		**P**	**22 11 12.2**	**+0.3**
LSA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
LSA	**Lhasa**	**16.43**	**116**	P		**P**	**22 11 12.3**	**+0.5**
AKTO	**Aktyubinsk**	**16.79**	**322**	P		**P**	**22 11 15.3**	**+0.1**
	comp=Z,11nm,0.5s,baz=117,slow=13,SNR=33							
AKTO				S		**S**	**22 14 12.4**	**-10**
	comp=Z,6.2nm,0.8s,baz=196,slow=16,SNR=4.5							
ZAA0	**Zalesovo Array**	**17.39**	**21**	P		**P**	**22 11 21.0**	**-0.7**
ZALV	**Zalesovo Beam**	**17.39**	**21**	P		**Pn**	**22 11 22.5**	**-0.2**
	comp=Z,30nm,0.6s,baz=213,slow=11,SNR=138							
ZALV				S		**S**	**22 14 30.3**	**-4.5**
	comp=Z,1.6nm,0.8s,baz=219,slow=11,SNR=2.7							
ZALV	**Zalesovo Beam**	**17.39**	**21**	P		**P**	**22 11 21.2**	**-0.4**
SHL	**Shillong**	**19.57**	**125**	P		**P**	**22 11 45.8**	**-0.2**
SHL				IAmb		IAmb	22 11 48.7	
	comp=Z,25nm,1.0s							
SHL	**Shillong**	**19.57**	**125**	P		**P**	**22 11 45.8**	**-0.2**
SHL				pmax		pmax		
	comp=Z,25nm,1.0s							
GTA2	**Gaotai**	**19.97**	**78**	P		**Pn**	**22 11 52.1**	**-1.3**
GTA2				pmax		pmax		
	comp=Z,14nm,0.8s							
AKT	**Akhty**	**20.53**	**288**	*e*P		**P**	**22 11 57.4**	**+1.3**
AKT				*e*			22 15 57.5	
AKT				*e**SS		**sS**	**22 16 18.7**	**-5.2**
AKT				pmax		pmax		
	comp=Z,12nm,0.9s							
SVE	**Sverdlovsk**	**20.70**	**339**	*e*P		**P**	**22 11 58.6**	**+1.1**
SVE				pmax		pmax		
	comp=Z,27nm,0.7s							
KNGR	**Kungurtug, Tuv**	**20.70**	**46**	*i* P		**P**	**22 11 59.0**	**+1.2**
KNGR				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ARTI	**Arti**	**21.03**	**335**	P		**P**	**22 12 01.9**	**+0.8**
	comp=Z,16nm,0.7s,baz=144,slow=5.8,SNR=28							
ARTI				S		**S**	**22 15 50.2**	**+3.7**
	comp=Z,2.0nm,0.8s,baz=180,slow=20,SNR=3.2							
	comp=Z,16nm,0.7s							
ARTI	**Arti**	**21.03**	**335**	P		**P**	**22 12 01.2**	**+0.1**
ARTI	**Arti**	**21.03**	**335**	*d* P		**P**	**22 12 02.0**	**+0.9**
ARTI				*PP		**pP**	**22 12 28.2**	**-0.7**
ARTI				S		**S**	**22 15 44.1**	**-2.3**
ARTI				pmax		pmax		
	comp=Z,20nm,0.8s							
HYB	**Hyderabad**	**21.04**	**168**	*e*P		**P**	**22 12 02.8**	**+1.2**
HYB				*e*S		**S**	**22 15 48.5**	**+1.2**
GNI	**Garni**	**22.85**	**284**	P		**P**	**22 12 18.3**	**-1.5**
GNI				IAmb		IAmb	22 12 34.8	
	comp=Z,12nm,0.9s							
GNI	**Garni**	**22.85**	**284**	*i* P		**P**	**22 12 22.1**	**+2.3**
GNI				pmax		pmax		
	comp=Z,11nm,1.0s							
GNI	**Garni**	**22.85**	**284**	P		**P**	**22 12 22.1**	**+2.3**
	comp=Z,11nm,0.8s							
GNI	**Garni**	**22.85**	**284**	P		**P**	**22 12 22.5**	**+2.7**
BELG	**Belogornoye**	**23.29**	**316**	*d* P		**P**	**22 12 24.2**	**+0.8**
BELG				pmax		pmax		
	comp=Z,4.0nm,1.0s							
LZDM	**Lanzhou Array**	**23.63**	**86**	P		**P**	**22 12 27.6**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=261,slow=14,SNR=1.6							
	comp=Z,1.0nm,0.3s							
LZH	**Lanzhou**	**23.72**	**86**	*e*P		**P**	**22 12 22.7**	**-5.1**
LZH				pmax		pmax		
	comp=Z,15nm,1.3s							
HAKT	**HAKKARI**	**24.00**	**278**	P		**P**	**22 12 33.1**	**+2.7**
GOF	**Gofitskoye**	**24.15**	**296**	*ce*P		**P**	**22 12 34.6**	**+3.2**
KBZ	**Khabaz**	**24.16**	**293**	P		**P**	**22 12 33.7**	**+2.2**
	comp=Z,1.5nm,0.6s,baz=109,slow=9.1,SNR=5.1							
	comp=Z,1.5nm,0.6s							
KBZ	**Khabaz**	**24.16**	**293**	*i* P		**P**	**22 12 33.5**	**+2.0**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.9s							
EPOS	**Posof**	**24.29**	**288**	P		**P**	**22 12 35.6**	**+2.7**
KIV	**Kislovodsk**	**24.33**	**294**	P		**P**	**22 12 32.1**	**-1.0**
KIV				IAmb		IAmb	22 13 02.0	
	comp=Z,8.6nm,0.5s							
KIV	**Kislovodsk**	**24.33**	**294**	*e*P		**P**	**22 12 35.4**	**+2.3**
KIV				*e*S		**S**	**22 16 43.0**	**+1.8**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KIV	**Kislovodsk**	**24.33**	**294**	P		**P**	**22 12 34.9**	**+1.8**
	comp=Z,5.6nm,0.8s							
KIV	**Kislovodsk**	**24.33**	**294**	P		**P**	**22 12 35.2**	**+2.1**
SHA1	**Shidzhatmaz**	**24.34**	**293**	*ce*P		**P**	**22 12 34.5**	**+1.1**
TNCH	**TengChong**	**24.46**	**115**	P		**P**	**22 12 35.5**	**+0.9**
TNCH				pmax		pmax		
	comp=Z,15nm,0.8s							
SONM	**Songino Array**	**25.31**	**57**	P		**P**	**22 12 42.8**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=254,slow=10,SNR=17							
	comp=Z,2.5nm,0.8s							
SONM	**Songino Array**	**25.31**	**57**	P		**P**	**22 12 42.3**	**+0.2**
SONM	**Songino Array**	**25.31**	**57**	P		**P**	**22 12 42.3**	**+0.2**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ULN	**Ulaanbaatar**	**25.75**	**57**	*ce*P		**P**	**22 12 47.5**	**+1.4**
ULN				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ULN	**Ulaanbaatar**	**25.75**	**57**	P		**P**	**22 12 47.0**	**+1.0**
KIRV	**Kirov**	**25.94**	**330**	*ce*P		**P**	**22 12 48.5**	**+1.1**
PZH	**PanZhiHua**	**25.95**	**109**	P		**P**	**22 12 50.6**	**+2.5**
KELT	**Kelkit**	**27.03**	**285**	P		**P**	**22 12 59.5**	**+1.9**
HHC	**Hu-ho-hao-te**	**28.84**	**73**	*e*P		**P**	**22 13 15.4**	**+1.8**
CHTO	**Chiang Mai**	**28.95**	**125**	P		**P**	**22 13 15.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**29.21**	**125**	P		**P**	**22 13 17.3**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=323,slow=9.0,SNR=3.0							
	comp=Z,0.4nm,0.4s							
ANDN	**And

BURAR	**Bucovina Array**	**36.53 301**	P		**P**	**22 14 21.1 +0.8**
BURAR	**Bucovina Array**	**36.53 301**	⇑P		**P**	**22 14 22.4 +2.0**
BUR08	**Bucovina Ar. S**	**36.54 301**	P		**P**	**22 14 20.7 +0.3**
NJ2	**Nanjing**	**36.79 86**	*e*P		**P**	**22 14 22.7 +0.1**
NJ2			pmax	pmax		
	comp=Z,20nm,0.5s					
VOIR		**36.83 297**	⇑P		**P**	**22 14 25.4 +2.5**
VOIR		**36.83 297**	⇑P		**P**	**22 14 25.4 +2.5**
VOIR		**36.83 297**	P		**P**	**22 14 24.6 +1.7**
	comp=Z,5.3nm,0.8s					
VOIR		**36.83 297**	P		**P**	**22 14 25.4 +2.5**
LVZ	**Lovozero**	**36.88 336**	P		**P**	**22 14 23.3 +0.4**
LVZ	**Lovozero**	**36.88 336**	*ce*P		**P**	**22 14 22.1 -0.9**
LVZ			pmax	pmax		
	comp=Z,27nm,1.7s					
ARBE	**Arbavere**	**37.09 321**	*e*P		**P**	**22 14 26.1 +1.3**
ARR	**Arges**	**37.13 297**	⇑P		**P**	**22 14 28.2 +2.8**
ARR	**Arges**	**37.13 297**	P		**P**	**22 14 28.2 +2.8**
PABE	**Paberze**	**37.50 314**	P		**P**	**22 14 28.1 -0.2**
FIA1	**FINESS Array S**	**37.55 324**	P		**P**	**22 14 29.3 +0.7**
FINES	**FINESS Array B**	**37.55 324**	P		**P**	**22 14 29.9 +1.3**
	comp=Z,5.2nm,0.4s,baz=110,slow=9.6,SNR=91					
	comp=Z,5.2nm,0.4s					
FINES	**FINESS Array B**	**37.55 324**	P		**P**	**22 14 29.6 +1.0**
FINES	**FINESS Array B**	**37.55 324**	*ce*P		**P**	**22 14 29.8 +1.2**
FINES			pmax	pmax		
	comp=Z,5.0nm,0.4s					
LOT	**Lotru**	**37.73 298**	⇓P		**P**	**22 14 33.6 +3.1**
LOT	**Lotru**	**37.73 298**	P		**P**	**22 14 32.6 +2.1**
SUF	**Sumiainen**	**37.88 326**	*e*P		**P**	**22 14 32.8 +1.4**
MARR	**Marisel-Cluj**	**38.04 300**	⇓P		**P**	**22 14 35.6 +2.6**
MTSE	**Matsula**	**38.04 319**	*e*P		**P**	**22 14 33.9 +1.1**
KWP	**Kalwaria Pacla**	**38.09 304**	P		**P**	**22 14 34.8 +1.4**
	comp=Z,8.3nm,0.6s					
KEF	**Keuruu**	**38.30 325**	*e*P		**P**	**22 14 36.4 +1.5**
TRPA	**Tarpa**	**38.30 302**	P		**P**	**22 14 37.6 +2.6**
KOLS	**Kolonicke sedl**	**38.41 303**	*e*P		**P**	**22 14 38.9 +2.8**
KOLS	**Kolonicke sedl**	**38.41 303**	*e*P		**P**	**22 14 38.9 +2.8**
GZR	**Gura Zlata**	**38.43 298**	⇑P		**P**	**22 14 38.5 +2.2**
GZR	**Gura Zlata**	**38.43 298**	⇑P		**P**	**22 14 38.5 +2.2**
SRS	**Serrai**	**38.60 291**	P		**P**	**22 14 39.8 +2.1**
IDI	**Anoyia**	**39.22 281**	LR		LR	22 33 17.9
	comp=Z,106nm,21.0s,baz=119,slow=39					
IDI	**Anoyia**	**39.22 281**	P		P	**22 14 43.4 +0.4**
IDI			IAmb	IAmb		22 14 53.2
	comp=Z,10nm,1.3s					
HEH	**HeiHe**	**39.23 54**	*e*P		**P**	**22 14 44.7 +1.9**
RAF	**Rauma**	**39.48 323**	*e*P		**P**	**22 14 45.5 +0.8**
VAF	**Ylistaro**	**39.50 326**	*e*P		**P**	**22 14 46.6 +1.7**
VADS	**Vadso**	**39.67 338**	*e*P		**P**	**22 14 47.9 +1.7**
NIE	**Niedzica**	**39.67 304**	*e*P		**P**	**22 14 48.9 +2.4**
NIE	**Niedzica**	**39.67 304**	P		**P**	**22 14 48.5 +2.0**
	comp=Z,5.5nm,0.8s					
OJC	**Ojcow**	**39.94 306**	*e*P		**P**	**22 14 47.9 -0.8**
OJC	**Ojcow**	**39.94 306**	P		**P**	**22 14 49.0 +0.3**
OJC	**Ojcow**	**39.94 306**	P		**P**	**22 14 49.0 +0.3**
AAL	**Aland**	**40.20 321**	*e*P		**P**	**22 14 51.1 +0.4**
KEV	**Kevo**	**40.21 337**	P		**P**	**22 14 51.2 +0.6**
KEV	**Kevo**	**40.21 337**	P		**P**	**22 14 51.2 +0.6**
KEV			pmax	pmax		
	comp=Z,23nm,1.3s					
LANS	**Liptovska Anna**	**40.24 304**	*e*P		**P**	**22 14 54.2 +3.0**
LANS	**Liptovska Anna**	**40.24 304**	*e*P		**P**	**22 14 54.2 +3.0**
ARA0	**ARCESS Array S**	**40.59 336**	*e*P		**P**	**22 14 55.5 +1.7**
ARA0			IAmb	IAmb		22 14 56.0
	comp=Z,29nm,1.2s					
ARCES	**ARCESS Array B**	**40.59 336**	P		**P**	**22 14 55.4 +1.6**
	comp=Z,9.4nm,0.6s,baz=110,slow=8.5,SNR=80					
	comp=Z,9.4nm,0.6s					
ITM	**Ithomi**	**40.89 285**	P		**P**	**22 14 56.1 -0.6**
ITM			IAmb	IAmb		22 14 56.4
	comp=Z,19nm,1.5s					
KTK1	**Kautokeino**	**41.13 335**	*e*P		**P**	**22 14 59.3 +1.1**
YAK	**Yakutsk**	**41.13 36**	*i*P		**P**	**22 14 58.1 -0.2**
YAK			pmax	pmax		
	comp=Z,3.0nm,0.8s					
MORH	**Mrgy, Hungar**	**41.16 300**	P		**P**	**22 14 59.8 +1.0**
	comp=Z,3.6nm,1.8s					
LANU	**Lannavaara**	**41.22 333**	*e*P		**P**	**22 14 60.0 +1.0**
STEB	**Steborice**	**41.26 305**	*e*P		**P**	**22 15 01.2 +1.7**
MORC	**Moravsky Berou**	**41.42 305**	P		**P**	**22 15 01.0 +0.1**
MORC	**Moravsky Berou**	**41.42 305**	P		**P**	**22 15 01.0 +0.1**
MORC			pmax	pmax		
	comp=Z,6.0nm,1.5s					
HAMF	**Hammerfest**	**41.62 337**	*e*P		**P**	**22 15 03.9 +1.7**
KSRS	**Korea Array**	**41.97 74**	P		**P**	**22 15 05.4 0.0**
	comp=Z,0.5nm,0.4s,baz=288,slow=6.1,SNR=2.7					
	comp=Z,0.5nm,0.4s					
DPC	**Dobruska-Polom**	**42.15 306**	*e*P		**P**	**22 15 08.6 +1.8**
DPC	**Dobruska-Polom**	**42.15 306**	*e*P		**P**	**22 15 08.6 +1.8**
JETT	**Jettan, Norway**	**42.26 335**	*e*P		**P**	**22 15 09.1 +1.6**
RONA	**Rosalia, Austr**	**42.52 302**	*e*P		**P**	**22 15 11.8 +2.0**
	comp=Z,1.0nm,0.6s					
CONA	**Conrad Observa**	**42.77 303**	*i*P		**P**	**22 15 13.8 +2.0**
	comp=Z,3.3nm,1.3s,SNR=5.8					
TRO	**Tromso**	**42.78 335**	*e*P		**P**	**22 15 12.8 +1.3**
TREC	**Trest**	**42.81 305**	*e*P		P	22 15 27.3 +15
TREC	**Trest**	**42.81 305**	*e*P		P	22 15 27.3 +15
ARSA	**Arzberg**	**43.11 302**	*e*P		**P**	**22 15 16.2 +1.7**
	comp=Z,2.1nm,0.8s					
TIXI	**Tiksi**	**43.27 22**	P		**P**	**22 15 15.7 +0.3**
TIXI			IAmb	IAmb		22 15 22.0
	comp=Z,19nm,1.2s					
TIXI	**Tiksi**	**43.27 22**	P		**P**	**22 15 15.7 +0.3**
TIXI			pmax	pmax		
	comp=Z,19nm,1.2s					
PRU	**Pruhonice**	**43.33 306**	*e*P		**P**	**22 15 18.4 +2.2**
PRU	**Pruhonice**	**43.33 306**	*e*P		**P**	**22 15 18.4 +2.2**
HFS	**Hagfors**	**43.33 321**	P		**P**	**22 15 17.3 +1.2**
	comp=Z,10nm,0.5s,baz=99,slow=9.2,SNR=73					
	comp=Z,10nm,0.5s					
FAUS	**Fauske**	**43.51 331**	*e*P		**P**	**22 15 18.9 +1.5**
FAUS			IAmb	IAmb		22 15 19.4
	comp=Z,14nm,0.9s					
SOKA	**Soboth**	**43.54 301**	*i*P		**P**	**22 15 19.9 +1.8**
	comp=Z,5.1nm,0.9s,SNR=5.2					
MOR8	**Moi Rana**	**43.62 329**	*e*P		**P**	**22 15 18.9 +0.6**
MOR8			IAmb	IAmb		22 15 19.4
	comp=Z,20nm,0.8s					
RAUS	**Rausandaksla**	**43.82 330**	*e*P		**P**	**22 15 21.5 +1.5**
MOA	**Molln**	**43.84 303**	*e*P		**P**	**22 15 22.0 +1.6**
	comp=Z,2.1nm,0.7s					
GERES	**GERESS Array B**	**44.04 304**	P		**P**	**22 15 23.4 +1.3**
	comp=Z,0.9nm,0.8s,baz=74,slow=5.7,SNR=9.8					
	comp=Z,0.9nm,0.8s					
GERES	**GERESS Array B**	**44.04 304**	P		**P**	**22 15 22.3 +0.2**
GERES	**GERESS Array B**	**44.04 304**	P		**P**	**22 15 22.3 +0.2**
KHC	**Kasperske Hory**	**44.07 305**	*ce*P		**P**	**22 15 24.2 +1.9**
KHC			pmax	pmax		
	comp=Z,6.0nm,2.5s					
KHC	**Kasperske Hory**	**44.07 305**	*e*P		**P**	**22 15 23.8 +1.5**
CLL	**Collm**	**44.12 308**	*i*P		**P**	**22 15 24.1 +1.6**
CLL	**Collm**	**44.12 308**	*i*P		**P**	**22 15 24.1 +1.6**
LEIR	**Leirfjorden**	**44.14 329**	*e*P		**P**	**22 15 23.5 +1.0**
VAGH	**Vaagaholmen**	**44.17 330**	*e*P		**P**	**22 15 24.6 +1.9**
VAGH			IAML			22 15 25.3
	comp=Z,6.0nm,0.6s					
KONS	**Konsvik**	**44.20 330**	*e*P		**P**	**22 15 23.6 +0.8**
KONS			IAmb	IAmb		22 15 26.5
	comp=Z,34nm,1.7s					
STOK	**Stokkvaagen**	**44.21 330**	*e*P		**P**	**22 15 24.2 +1.2**
NC602	**NORSAR Array S**	**44.42 321**	*e*P		**P**	**22 15 25.7 +1.0**
NC303	**NORSAR Array S**	**44.51 322**	P		**P**	**22 15 26.5 +1.0**
NC303			IAmb	IAmb		22 15 27.4
	comp=Z,10nm,0.7s					
NB2	**NORSAR Subarra**	**44.58 322**	P		**P**	**22 15 27.0 +0.8**
	comp=Z,2.5nm,0.5s,baz=91,slow=7.9					
NB2	**NORSAR Subarra**	**44.58 322**	P		**P**	**22 15 27.0 +0.8**
NOA	**NORSAR Array B**	**44.58 322**	P		**P**	**22 15 26.9 +0.8**
	comp=Z,3.8nm,0.6s,baz=91,slow=7.8,SNR=30					
	comp=Z,3.8nm,0.6s					
LESA	**Schwarzleotal**	**44.98 302**	*e*P		**P**	**22 15 30.6 +1.2**
	comp=Z,2.8nm,0.5s					
MYKOM	**Kota Tinggi**	**45.30 136**	P		**P**	**22 15 33.2 +0.9**
MYKOM			IAmb	IAmb		22 15 51.1
	comp=Z,16nm,1.4s					
KONO	**Kongsberg**	**45.40 320**	P		**P**	**22 15 32.8 +0.3**
KONO	**Kongsberg**	**45.40 320**	P		**P**	**22 15 32.8 +0.3**
KONO			pmax	pmax		
	comp=Z,33nm,1.5s					
DOMB	**Dombas**	**45.62 323**	*e*P		**P**	**22 15 35.4 +1.0**
FETA	**Feichten**	**46.36 302**	*e*P		**P**	**22 15 41.0 +0.6**
	comp=Z,3.5nm,1.2s					
SPITS	**Spitsbergen Ar**	**46.45 346**	P		**P**	**22 15 41.9 +1.4**
	comp=Z,6.8nm,0.9s,baz=119,slow=8.7,SNR=4.6					
	comp=Z,6.8nm,0.9s					
SPITS	**Spitsbergen Ar**	**46.45 346**	P		**P**	**22 15 40.9 +0.3**
SPITS			pmax	pmax		
	comp=Z,28nm,1.3s					
DAVA	**Damuels**	**46.86 303**	*i*P		**P**	**22 15 45.7 +1.3**
	comp=Z,7.3nm,0.6s					
KBS	**Kingsbay**	**47.55 347**	P		**P**	**22 15 50.2 +1.2**
KBS			IAmb	IAmb		22 16 15.3
	comp=Z,23nm,1.5s					
KBS	**Kingsbay**	**47.55 347**	P		**P**	**22 15 50.2 +1.2**
KBS			pmax	pmax		
	comp=Z,23nm,1.5s					
ASK	**Askoy**	**47.55 321**	*e*P		**P**	**22 15 50.5 +1.2**
SENIN	**Lac Senin/Sane**	**48.81 302**	P		**P**	**22 15 58.2 -1.2**
KKM	**Kota Kinabalu**	**49.74 119**	P		**P**	**22 16 06.3 -0.3**
KKM			IAmb	IAmb		22 16 09.1
	comp=Z,7.0nm,0.5s					
MJAR	**Matsushiro Arr**	**50.01 71**	P		**P**	**22 16 08.6 +0.2**
	comp=Z,1.4nm,0.6s,baz=293,slow=9.2,SNR=7.0					
	comp=Z,1.4nm,0.6s					
EKA	**Eskdalemuir Ar**	**52.84 316**	P		**P**	**22 16 29.9 +0.8**
	comp=Z,2.5nm,0.6s,baz=97,slow=6.9,SNR=6.7					
	comp=Z,2.5nm,0.6s					
BILL	**Bilibino**	**55.98 27**	*i*P		**P**	**22 16 53.7 +2.1**
BILL			pmax	pmax		
	comp=Z,1.0nm,1.0s					
BORG	**Borgarnes**	**58.41 330**	LR		LR	22 42 55.6
	comp=Z,21nm,18.8s,baz=312,slow=36					
ESDC	**Sonseca Array**	**58.89 298**	P		**P**	**22 17 13.5 +1.0**
	comp=Z,1.0nm,0.7s,baz=54,slow=7.4,SNR=13					
	comp=Z,1.0nm,0.7s					
JAGI	**Jajag, Banyuwa**	**59.52 132**	P		**P**	**22 17 17.3 +0.3**
C16K	**Lisburne Hills**	**65.01 21**	P		**P**	**22 17 53.1 +0.4**
C16K			IAmb	IAmb		22 18 16.0
	comp=Z,8.3nm,1.4s					
C19K	**Lookout Ridge**	**65.96 18**	P		**P**	**22 17 59.8 +0.9**
C19K			IAmb	IAmb		22 18 23.4
	comp=Z,8.7nm,1.4s					
D19K	**Kuna River**	**66.77 19**	P		**P**	**22 18 04.9 +0.9**
TORD	**Torodi Ar. Bea**	**68.26 270**	P		**P**	**22 18 14.4 +0.2**
	comp=Z,1.5nm,0.3s,baz=47,slow=5.8,SNR=25					
	comp=Z,1.5nm,0.3s					
A36M	**Sachs Harbour**	**69.28 6**	P		**P**	**22 18 20.0 +0.4**
A36M			IAmb	IAmb		22 18 21.9
	comp=Z,5.5nm,0.8s					
C36M	**Paulatuk**	**71.94 7**	P		**P**	**22 18 35.9 +0.2**
C36M			IAmb	IAmb		22 18 37.0
	comp=Z,7.1nm,0.5s					
M17K	**Holitna River**	**72.30 23**	P		**P**	**22 18 39.0 +1.0**
ILAR	**Eielson Array**	**72.45 17**	P		**P**	**22 18 38.2 -0.7**
	comp=Z,0.7nm,0.9s,baz=313,slow=5.9,SNR=5.6					
	comp=Z,0.7nm,0.9s					
DBIC	**Dimbokro**	**77.28 268**	P		**P**	**22 19 07.9 +0.5**
	comp=Z,2.0nm,0.6s,baz=36,slow=4.7,SNR=1.6					
	comp=Z,2.0nm,0.6s					
DBIC	**Dimbokro**	**77.28 268**	P		**P**	**22 19 07.1 -0.3**
DBIC	**Dimbokro**	**77.28 268**	P		**P**	**22 19 07.1 -0.3**
DBIC			pmax	pmax		
	comp=Z,29nm,1.5s					
MORW	**Morawa**	**77.52 143**	P		**P**	**22 19 08.7 +0.3**
MORW			IAmb	IAmb		22 19 10.6
	comp=Z,13nm,1.2s					
BLKN	**Baker Lake**	**77.54 356**	P		**P**	**22 19 08.0 0.0**
LBTB	**Lobatse**	**77.62 224**	P		**P**	**22 19 08.5 -0.6**
LBTB			IAmb	IAmb		22 19 16.7
	comp=Z,15nm,1.5s					
LBTB	**Lobatse**	**77.62 224**	P		**P**	**22 19 08.5 -0.6**
LBTB			pmax	pmax		
	comp=Z,15nm,1.5s					
YKA	**Yellowknife Ar**	**79.42 4**	P		**P**	**22 19 19.1 +0.8**
	comp=Z,1.0nm,0.6s,baz=350,slow=5.5,SNR=4.8					
	comp=Z,1.0nm,0.6s					
WRA	**Warramunga Arr**	**80.80 124**	P		**P**	**22 19 26.3 -0.1**
	comp=Z,2.5nm,0.8s,baz=326,slow=5.3,SNR=7.4					
	comp=Z,2.5nm,0.8s					
ASAR	**Alice Springs**	**83.20 127**	P		**P**	**22 19 38.4 -0.5**
	comp=Z,0.7nm,0.7s,baz=321,slow=6.0,SNR=5.3					
	comp=Z,0.7nm,0.7s					
QSPA	**South Pole Qui**	**127.97 180**	PKP		**PKiKP**	**22 26 17.1 +0.2**
	comp=Z,0.9nm,1.1s,baz=225,slow=1.4,SNR=3.1					

IDC 04 22:28:09.9±31.0, 18.89S×177.84W, h526km±38km, mb2.8/3, mbtmp3.7/4, Error ellipse: s-maj=557.4km s-min=120.8km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.07**	**286**	P	P	22 29 30.8	0.0
	4.5nm,0.5s,baz=102,slow=18,SNR=5.3						
STKA	**Stephens Creek**	**38.64**	**242**	P	P	22 34 47.8	-0.4
	2.1nm,0.9s,baz=85,slow=11,SNR=3.6						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**44.99**	**260**	P	P	22 35 38.7	+0.1
	0.9nm,0.9s,baz=96,slow=8.4,SNR=2.2						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**45.05**	**255**	P	P	22 35 38.9	-0.2
	0.7nm,0.8s,baz=86,slow=7.7,SNR=6.3						
	0.7nm,0.8s						

*OSPL **04** 22:31:25.9±0.4, 17.80N×66.96W, h10km±3km, ML3.3, Presumed earthquake*
*NEIC **04** 22:31:25.3±1.1, 17.88N±0.01×67.00W±0.01, h10km±1km, ML3.4/37, Md3.5/20(RSPR), Error ellipse: s-maj=3.4km s-min=2.1km az=6.0*
*RSPR **04** 22:31:26.3, 17.96N×66.98W, h7km, MD3.5/20*
ISC 04 22:31:25.0±1.0, 17.90N±0.05×66.98W±0.02, h16km±5km, n43, σ0849/62, 1C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.09**	**318**		**Pg**	**22 31 28.2**	**0.0**
MLPR					**Sg**	**22 31 29.6**	**-0.7**
MLPR	**Magueyes Islan**	**0.09**	**318**	⇑*i*P	**Pg**	**22 31 28.2**	**0.0**
GBPR	**Guanica, Bosqu**	**0.12**	**52**		**Pg**	**22 31 29.0**	**+0.4**
GBPR					**Sg**	**22 31 31.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.12**	**52**	⇓*i*P	**Pg**	**22 31 29.0**	**+0.4**
GBPR				*e*S	**Sg**	**22 31 31.1**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.16**	**311**		**Pb**	**22 31 29.3**	**-0.3**
CRPR					**Sb**	**22 31 31.4**	**-1.4**
CRPR				IAML		22 31 32.7	
	10μm,0.3s						
CRPR				IAML		22 31 32.9	
	8μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.16**	**311**	⇑*i*P	**Pb**	**22 31 29.4**	**-0.2**
LSP	**Las Mesas**	**0.29**	**340**		**Pg**	**22 31 31.4**	**+0.2**
LSP	**Las Mesas**	**0.29**	**340**	⇓*i*P	**Pg**	**22 31 31.4**	**+0.2**
PRSN	**Puerto Rico Se**	**0.35**	**334**		**Pg**	**22 31 32.5**	**+0.2**
PRSN					**Sg**	**22 31 37.1**	**-0.1**
PRSN	**Puerto Rico Se**	**0.35**	**334**	⇑*i*P	**Pg**	**22 31 32.5**	**+0.2**
OBIP	**Obispado Ponce**	**0.38**	**68**		**Pb**	**22 31 33.3**	**-0.1**
OBIP					**Sb**	**22 31 39.1**	**0.0**
OBIP	**Obispado Ponce**	**0.38**	**68**	*i*P	**Pb**	**22 31 33.4**	**0.0**
OBIP				*e*S	**Sb**	**22 31 39.2**	**+0.1**
OBIP				IAML		22 31 39.9	
	comp=Z,20μm,0.1s						
OBIP	**Obispado Ponce**	**0.38**	**68**	⇓*i*P	**Pb**	**22 31 33.5**	**0.0**
OBIP				*e*S	**Sb**	**22 31 39.3**	**+0.1**
CELP	**Cerrillos**	**0.42**	**65**		**Pb**	**22 31 34.0**	**0.0**
CELP					**Sb**	**22 31 40.1**	**-0.1**
CELP				IAML		22 31 40.9	
	comp=Z,4μm,0.4s						
CELP	**Cerrillos**	**0.42**	**65**	⇓*i*P	**Pb**	**22 31 34.2**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.43**	**35**		**Pg**	**22 31 33.7**	**+0.1**
UUPR					**Sg**	**22 31 39.7**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.43**	**35**	⇓*i*P	**Pb**	**22 31 33.9**	**-0.3**
AOPR	**Arecibo Observ**	**0.49**	**26**		**Pg**	**22 31 34.8**	**-0.1**
AOPR					**Sg**	**22 31 40.9**	**-0.6**
AOPR				IAML		22 31 41.5	
	comp=Z,4μm,0.2s						
AOPR				IAML		22 31 42.7	
	comp=Z,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.49**	**26**	⇓*i*P	**Pg**	**22 31 35.0**	**+0.1**
AGPR	**Aguadilla, PR**	**0.58**	**347**		**Pg**	**22 31 36.4**	**0.0**
AGPR					**Sg**	**22 31 43.7**	**-0.4**
AGPR				IAML		22 31 44.6	
	comp=Z,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.58**	**347**	⇓*i*P	**Pg**	**22 31 36.5**	**0.0**
IDE	**Isla Desecheo**	**0.68**	**316**		**Pb**	**22 31 37.9**	**-0.5**
IDE					**Sg**	**22 31 47.8**	**+0.6**
IDE	**Isla Desecheo**	**0.68**	**316**	⇓*e*P	**Pb**	**22 31 37.9**	**-0.5**
IDE				*e*S	**Sg**	**22 31 47.8**	**+0.6**
EMPR	**Esperanza - Ma**	**0.72**	**37**		**Pg**	**22 31 39.6**	**+0.6**
EMPR					**Sg**	**22 31 49.1**	**+0.6**
EMPR	**Esperanza - Ma**	**0.72**	**37**	⇓*i*P	**Pg**	**22 31 39.6**	**+0.6**
EMPR				*e*S	**Sg**	**22 31 49.1**	**+0.6**
ECPR	**Experimental S**	**0.72**	**55**		**Pb**	**22 31 38.9**	**-0.2**
ECPR					**Sg**	**22 31 48.7**	**+0.2**
ECPR				IAML		22 31 51.4	
	comp=Z,2μm,0.2s						
ECPR	**Experimental S**	**0.72**	**55**	⇓*i*P	**Pb**	**22 31 39.0**	**-0.2**
SJG	**San Juan**	**0.82**	**75**		**Pg**	**22 31 40.7**	**-0.1**
SJG				IAML		22 31 53.9	
	comp=Z,1μm,0.3s						
SJG	**San Juan**	**0.82**	**75**	*i*P	**Pg**	**22 31 40.8**	**-0.1**
SJG				*e*S	**Sg**	**22 31 51.6**	**-0.1**
SJG	**San Juan**	**0.82**	**75**	⇓*i*P	**Pg**	**22 31 41.0**	**+0.1**
IGPR	**InterUniversit**	**0.83**	**85**		**Pn**	**22 31 41.7**	**-0.4**
IGPR					**Sn**	**22 31 53.3**	**-0.8**
IGPR	**InterUniversit**	**0.83**	**85**	⇓*e*P	**Pn**	**22 31 41.7**	**-0.4**
PDPR	**Patillas Dam,**	**0.92**	**82**		**Pb**	**22 31 42.5**	**0.0**
PDPR	**Patillas Dam,**	**0.92**	**82**	⇓*e*P	**Pg**	**22 31 42.8**	**0.0**
HUMP	**Col San Antoni**	**1.10**	**77**		**Pb**	**22 31 45.5**	**-0.3**
HUMP				IAML		22 32 04.3	
	comp=Z,564nm,0.4s						
HUMP				IAML		22 32 04.9	
	comp=Z,660nm,0.3s						
HUMP	**Col San Antoni**	**1.10**	**77**	⇑*e*P	**Pb**	**22 31 45.4**	**-0.3**
PCDR	**Punta Cana, DR**	**1.47**	**295**		**Pn**	**22 31 50.8**	**0.0**
PCDR	**Punta Cana, DR**	**1.47**	**295**	*i*P	**Pn**	**22 31 51.4**	**+0.6**
PCDR				IAML		22 32 19.9	
	comp=Z,44nm,0.6s						
PCDR	**Punta Cana, DR**	**1.47**	**295**	⇓*e*P	**Pb**	**22 31 51.7**	**-0.2**
DR12	**Loma Pena Alta**	**2.45**	**292**		**Pn**	**22 32 06.0**	**+1.7**
BANI	**BANI**	**3.25**	**279**	Pn	**Pn**	**22 32 16.9**	**+1.4**
SDDR	**Presa de Saban**	**4.23**	**285**		**Pn**	**22 32 28.9**	**0.0**
GRTK	**Grand Turk**	**5.31**	**313**	Pn	**Pn**	**22 32 44.4**	**+0.7**

*JMA **04** 22:41:31.2±0.5, 44.7N±2.7×14.8E±, h0km, MV4.0/24, SE OFF ETOROFU*
*SKHL **04** 22:41:32.4±0.9, 44.40N×148.30E, h37km±7km, mb4.7/4*
ISC 04 22:41:27.8±4.0, 44.5N±0.2×148.7E±0.2, h87km±33km, n16, σ2894/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**0.91**	**331**	*e*P	Pn	22 41 47.0	+0.7
REI				AMB	AMB	22 41 47.6	
	200nm,0.2s						
REI				*e*S	**Sn**	**22 41 58.0**	**-2.0**
REI				A	A	22 41 58.3	
	580nm,0.2s						
REI				A	A	22 41 58.3	
	750nm,0.2s						
KUR	**Kuril'sk**	**0.94**	**324**	*i*P	Pn	22 41 46.7	+0.1
KUR				AMB	AMB	22 41 47.6	
	290nm,0.2s						
KUR				*i*S	**Sn**	**22 41 58.1**	**-2.5**
KUR				A	A	22 42 00.1	
	940nm,0.2s						
KUR				A	A	22 42 00.1	
	1μm,0.2s						
SHO	**Shikotan**	**1.44**	**246**	*e*P	Pn	22 42 04.1	+11
SHO				AMB	AMB	22 42 05.0	
	200nm,0.3s						
SHO				*e*S	**Sn**	**22 42 17.4**	**+6.0**
SHO				A	A	22 42 20.7	
	320nm,0.2s						
SHO				A	A	22 42 20.7	
	550nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.05**	**259**	*i*P	Pn	22 42 00.7	+0.2
YUK				AMB	AMB	22 42 02.8	
	210nm,0.2s						
YUK				*i*S	Sn	22 42 21.3	-4.2
YUK				A	A	22 42 25.1	
	370nm,0.2s						
YUK				A	A	22 42 25.1	
	340nm,0.2s						
NEM2	**Nemuro 2**	**2.37**	**243**	P	Pn	22 42 04.4	-0.4
NEM2				*e*S	**Sn**	**22 42 28.9**	**-4.2**
NMR	**Nemuro--Hokkai**	**2.38**	**243**	*e*P	Pn	22 42 04.4	-0.5
NMR				*e*S	**Sn**	**22 42 29.1**	**-4.2**
JRA	**Rausu**	**2.59**	**259**	*i*P	**Pn**	**22 42 09.0**	**+1.3**
JRA				*e*S	**Sn**	**22 42 36.9**	**-1.5**
JNSB	**Nemuroshibetsu**	**2.71**	**256**	P	**Pn**	**22 42 10.9**	**+1.5**
JKHN	**Kushirohamanak**	**2.88**	**242**	P	**Pn**	**22 42 11.9**	**+0.2**
JKHN				*e*S	**Sn**	**22 42 41.7**	**-3.7**
JNK	**Nakash**	**2.97**	**254**	*i*P	**Pn**	**22 42 14.0**	**+1.1**
JNK				*e*S	**Sn**	**22 42 45.2**	**-2.3**
AKK	**Akkeshi**	**3.12**	**243**	*i*P	**Pn**	**22 42 15.2**	**+0.4**
JAK	**Akkeshi**	**3.22**	**244**	P	**Pn**	**22 42 16.6**	**+0.4**
JAK				*e*S	Sn	22 42 49.2	-4.3
JTKR	**Abashiri--Toko**	**3.44**	**263**	*e*P	**Pn**	**22 42 22.6**	**+3.4**
JAR	**Ashorobuto**	**3.72**	**253**	P	**Pn**	**22 42 25.1**	**+2.1**
JAR				*e*S	**Sn**	**22 43 05.3**	**-0.3**
JCH	**Churui**	**4.27**	**246**	*e*P	**Pn**	**22 42 31.5**	**+1.1**
JNBK	**Urakawa-nobuka**	**4.82**	**245**	*e*P	**Pn**	**22 42 39.4**	**+1.5**

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JRY				eS	S	23 09 54.5	-2.8
JWT	**Wachi**	**3.03**	**309**	*eP*	**Pn**	23 09 12.2	-2.8
MJAR	**Matsushiro Arr**	**3.15**	**359**	P	**Pn**	23 09 14.0	-2.1
	11nm,0.6s,baz=176,slow=10,SNR=37						
MJAR				S	S	23 10 02.5	-2.4
	1.5nm,0.6s,baz=274,slow=15,SNR=4.3						
MAT	**Matsushiro**	**3.15**	**359**	P	**Pn**	23 09 14.4	-1.6
MAT				eS	S	23 10 00.8	-4.1
JAG	**Ashikaga**	**3.19**	**18**	*eP*	**Pn**	23 09 14.1	-2.2
JAG				eS	S	23 10 00.8	-4.7
JAI	**Aioi**	**3.20**	**278**	P	**Pn**	23 09 12.8	-3.8
JKG	**Kaga**	**3.29**	**332**	*eP*	**Pn**	23 09 15.5	-1.8
JCJ	**Chichijima**	**7.13**	**151**	S	S	23 11 10.6	-13
	20nm,0.3s,baz=299,slow=21,SNR=9.6						
KSRS	**Korea Array**	**9.36**	**299**	P	**Pn**	23 10 24.9	-0.7
	1.5nm,0.6s,baz=113,slow=12,SNR=12						
USRK	**Ussuriysk Ar.**	**11.85**	**338**	P	**Pn**	23 10 56.6	+1.5
	2.0nm,0.6s,baz=138,slow=14,SNR=4.9						
SONM	**Songino Array**	**27.93**	**311**	P	**P**	23 13 35.8	+1.1
	0.4nm,0.4s,baz=116,slow=8.9,SNR=4.5						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**42.58**	**315**	P	**P**	23 15 39.4	+1.5
	0.4nm,0.4s,baz=87,slow=13,SNR=2.4						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**43.97**	**305**	P	**P**	23 15 50.3	+1.2
	0.2nm,0.3s,baz=84,slow=9.4,SNR=5.5						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**46.30**	**310**	P	**P**	23 16 08.3	+1.2
	0.4nm,0.6s,baz=87,slow=6.5,SNR=6.2						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**51.18**	**314**	P	**P**	23 16 45.7	+1.9
	0.2nm,0.3s,baz=71,slow=5.0,SNR=2.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**53.16**	**185**	P	**P**	23 16 59.0	+0.4
	0.7nm,0.3s,baz=359,slow=7.4,SNR=12						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**56.89**	**185**	P	**P**	23 17 26.9	+1.9
	0.3nm,0.5s,baz=18,slow=11,SNR=9.0						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**70.82**	**332**	P	**P**	23 18 56.7	+2.3
	3.1nm,1.0s,baz=55,slow=6.2,SNR=3.6						
	3.1nm,1.0s						

*IDC **04** 23:12:04.3±1.4,37°.42N×20°.61E,h0km,mb3.5/7,*
mbtmp3.4/10,ML3.0/3,MS2.6/1,Error ellipse:
s-maj=28.5km s-min=21.6km az=146.0
*ATH **04** 23:12:04.5,37°.25N×20°.32E,h11km±3km,ML3.3/14,*
Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
*THE **04** 23:12:06.7,37°№±1°×2°.0E±°,h0km,M3.1/44,MLh3.1/44*
*NAO **04** 23:12:42.3,40°.71N×18°.91E,h10km,MB3.3*

ISC 04 23:12:04.8±1.5,37°.28N±0°.03×20°.41E±0°.04,h3km±10km,
n104,σ1°20/139,mb3.5/6,7C,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.55**	**38**	P	**Pb**	**23 12 16.6**	**-0.5**
LTHK				S	**Sb**	23 12 24.5	-0.8
ORTH	**Orthonies,Zaky**	**0.62**	**21**	P	**Pb**	23 12 17.9	-0.4
ORTH				S	**Sb**	23 12 26.6	-0.7
KYPS	**Kipseli, Zakin**	**0.63**	**31**	P	**Pb**	23 12 18.5	0.0
KYPS				S	**Sb**	23 12 27.4	-0.3
CLEM	**Kyllini,Ilia,G**	**0.84**	**43**	P	**Pb**	23 12 22.0	0.0
CLEM				S	**Sn**	23 12 34.6	-1.8
RTZL	**Ratzakli, Kefa**	**0.85**	**19**	P	**Pb**	23 12 22.2	0.0
RTZL				S	**Sn**	23 12 34.7	-1.9
RTZL	**Ratzakli, Kefa**	**0.85**	**19**	P	**Pb**	23 12 21.9	-0.3
RTZL				S	**Sb**	23 12 34.1	+0.2
KFL1	**Kefalonia,Entr**	**0.89**	**4**	P	**Pb**	23 12 22.5	-0.4
ARG2	**Argostoli**	**0.90**	**4**	P	**Pb**	23 12 22.2	-0.9
ARG2				S	**Sb**	23 12 34.5	-1.0
ARG2	**Argostoli**	**0.90**	**4**	P	**Pb**	23 12 22.6	-0.5
VLS	**Valsamata**	**0.91**	**9**	P	**Pb**	23 12 22.9	-0.3
VLS				S	**Sb**	23 12 35.9	+0.1
VLS	**Valsamata**	**0.91**	**9**	P	**Pb**	23 12 23.1	-0.2
LXR1	**Lixouri, Cepha**	**0.92**	**1**	P	**Pn**	23 12 24.7	0.0
LXR1				S	**Sb**	23 12 36.5	+0.4
DMLN	**Damoulianata-K**	**0.96**	**358**	P	**Pn**	23 12 24.3	-0.9
DMLN				S	**Sn**	23 12 38.1	-1.3
DMLN	**Damoulianata-K**	**0.96**	**358**	P	**Pb**	23 12 24.1	0.0
SMHA	**Samh**	**0.99**	**11**	P	**Pg**	23 12 23.3	-0.5
ZARO	**Zacharo**	**1.01**	**78**	P	**Pn**	23 12 25.8	0.0
AMT	**Artemida-Makis**	**1.06**	**76**	P	**Pn**	23 12 26.3	-0.4
AMT	**Artemida-Makis**	**1.06**	**76**	P	**Pn**	23 12 26.4	-0.3
AMT				S	**Sn**	23 12 41.9	-0.1
PYL1	**Pylos**	**1.09**	**109**	P	**Pb**	23 12 26.2	+0.1
PYL1				S	**Sn**	23 12 42.4	0.0
PYL	**PYLOS**	**1.13**	**109**	P	**Pn**	23 12 26.9	-0.5
PYL				S	**Sn**	23 12 42.9	-0.6
PYL	**PYLOS**	**1.13**	**109**	P	**Pn**	23 12 27.3	-0.2
PYL				S	**Sn**	23 12 42.6	-0.9
VSK1	**VASILIKIADES**	**1.14**	**6**	P	**Pn**	23 12 27.3	-0.3
VSK1				S	**Sn**	23 12 42.8	-0.9
RLS	**Riolos of Patr**	**1.14**	**47**	P	**Pn**	23 12 27.3	-0.4
RLS	**Riolos of Patr**	**1.14**	**47**	P	**Pn**	23 12 27.3	-0.4
RLS				S	**Sn**	23 12 45.0	+1.2
FSK	**Fiskardo**	**1.19**	**6**	P	**Pn**	23 12 28.5	+0.2
FSK				S	**Sn**	23 12 45.8	+0.8
FSK	**Fiskardo**	**1.19**	**6**	P	**Pn**	23 12 28.4	+0.1
FSK				S	**Sb**	23 12 43.6	-0.1
AXS	**Araxos**	**1.19**	**39**	P	**Pn**	23 12 28.2	-0.2
AXS	**Araxos**	**1.19**	**39**	P	**Pn**	23 12 27.3	-0.7
AXS				S	**Sn**	23 12 46.5	+1.4
ITM	**Ithomi**	**1.21**	**94**	P	**Pn**	23 12 29.1	+0.4
ITM	**Ithomi**	**1.21**	**94**	P	**Pn**	23 12 29.4	+0.7
ITM				S	**Sn**	23 12 44.7	-0.9
DRO	**Drossia**	**1.23**	**56**	P	**Pn**	23 12 29.1	+0.1
DRO				S	**Sn**	23 12 46.7	+0.6
DRO	**Drossia**	**1.23**	**56**	P	**Pn**	23 12 28.8	-0.2
DRO				S	**Sn**	23 12 46.1	0.0
VALY	**Valyra**	**1.26**	**95**	P	**Pn**	23 12 29.5	+0.2
VALY				S	**Sn**	23 12 48.2	+1.5
VALY	**Valyra**	**1.26**	**95**	P	**Pb**	23 12 28.7	-0.5
EVGI	**Lefkada island**	**1.36**	**8**	P	**Pn**	23 12 30.9	+0.2
EVGI				S	**Sn**	23 12 49.6	+0.4
EVGI	**Lefkada island**	**1.36**	**8**	P	**Pn**	23 12 30.6	0.0
EVGI				S	**Sn**	23 12 48.4	-0.7
PLEV	**Plevrona-Mesol**	**1.38**	**34**	P	**Pb**	23 12 32.2	+1.0
PLEV	**Plevrona-Mesol**	**1.38**	**34**	P	**Pb**	23 12 32.5	+1.2
DRAG	**Dragano-Lefkad**	**1.41**	**5**	P	**Pb**	23 12 32.2	+0.5
DRAG	**Dragano-Lefkad**	**1.41**	**5**	P	**Pb**	23 12 32.3	+0.5
NYDR	**Nydri-Lefkada**	**1.45**	**9**	P	**Pb**	23 12 32.8	+0.3
NYDR				S	**Sn**	23 12 55.1	+3.6
NYDR	**Nydri-Lefkada**	**1.45**	**9**	P	**Pb**	23 12 32.6	+0.1
UPR	**University Cam**	**1.48**	**47**	P	**Pb**	23 12 34.1	+1.2
UPR	**University Cam**	**1.48**	**47**	P	**Pb**	23 12 34.6	+1.6
LKD2	**Lefkada island**	**1.52**	**7**	P	**Pb**	23 12 34.2	+0.5
LKD2				S	**Sn**	23 12 54.9	+1.6
LKD2	**Lefkada island**	**1.52**	**7**	P	**Pb**	23 12 34.6	+0.9
AGRP	**Agrapidokambos**	**1.52**	**42**	P	**Pb**	23 12 34.2	+0.5
TSLK	**Tsoukalades, L**	**1.56**	**7**	P	**Pg**	23 12 34.3	-0.4
TSLK				S	**Sn**	23 12 57.6	+3.5
TSLK	**Tsoukalades, L**	**1.56**	**7**	P	**Pg**	23 12 35.4	+0.8
VLX	**Vlachokerasia**	**1.57**	**86**	P	**Pg**	23 12 34.5	-0.4
VLX				S	**Sn**	23 12 56.9	+2.3
KLV	**Kalavryta, Ach**	**1.58**	**60**	P	**Pg**	23 12 34.9	-0.1
KLV				S	**Sn**	23 12 57.6	+3.0
KLV	**Kalavryta, Ach**	**1.58**	**60**	P	**Pg**	23 12 34.4	-0.6
PVO	**Paravola**	**1.60**	**33**	P	**Pg**	23 12 36.4	+0.9
PVO				S	**Sg**	23 12 57.5	+1.3
PVO	**Paravola**	**1.60**	**33**	P	**Pg**	23 12 35.4	-0.1
EFP	**Efpalio**	**1.65**	**45**	P	**Pg**	23 12 36.6	+0.2
EFP				S	**Sg**	23 12 58.1	+0.3
GUR	**Goura**	**1.67**	**66**	P	**Pg**	23 12 36.1	-0.7
SERG	**Sergoula**	**1.73**	**48**	P	**Pg**	23 12 37.2	-0.7
AMPL	**Ampelaki**	**1.76**	**21**	P	**Pg**	23 12 38.3	-0.3
KALE	**Kalithea**	**1.76**	**50**	P	**Pg**	23 12 38.5	-0.1
ANX	**Ano Chora**	**1.77**	**42**	P	**Pg**	23 12 38.8	0.0
EVR	**Evrytania**	**1.97**	**33**	P	**Pg**	23 12 42.1	-0.5
VLI	**Velíai**	**2.10**	**105**	P	**Pb**	23 12 42.6	-0.9
VLI				S	**Sb**	23 13 08.9	-1.0
LTK	**Loutraki**	**2.16**	**69**	P	**Pn**	23 12 42.3	+0.6
TETR	**Tetrakomo, Epi**	**2.17**	**18**	P	**Pb**	23 12 43.8	-1.0
IGT	**Igoumenitsa**	**2.25**	**358**	P	**Pb**	23 12 44.9	-1.2
AGG	**Agios Georgios**	**2.31**	**40**	P	**Pb**	23 12 45.8	-1.3
PRMD	**Pramanda**	**2.31**	**13**	P	**Pb**	23 12 45.8	-1.4
AXAR	**Agios Charalam**	**2.31**	**49**	P	**Pn**	23 12 44.7	+0.9
KTHA	**Kythira Island**	**2.36**	**115**	P	**Pn**	23 12 45.3	+0.9
LKR	**Lokris**	**2.46**	**55**	P	**Pn**	23 12 46.8	+0.9
VILL	**Villia**	**2.46**	**68**	P	**Pn**	23 12 46.8	+0.9
KEK	**Kerkira**	**2.48**	**349**	P	**Pn**	23 12 47.2	+1.1
KEK				S	**Sn**	23 13 17.6	+0.7
THL	**Klokotos Trika**	**2.61**	**28**	P	**Pb**	23 12 49.6	-2.6
SRN	**Sarande**	**2.62**	**353**	P	**Pn**	23 12 49.6	+1.6
SRN				S	**Sn**	23 13 20.5	+0.1
VLY	**Voula,Athens**	**2.75**	**77**	P	**Pn**	23 12 50.2	+0.4
TYRN	**Tyrnavos**	**2.82**	**30**	P	**Pn**	23 12 52.1	+1.3
PTL	**Penteli**	**2.84**	**73**	P	**Pn**	23 12 51.8	+0.6
DION	**Dionisos Attik**	**2.91**	**73**	P	**Pn**	23 12 53.0	+1.0
DION				S	**Sn**	23 13 29.0	+1.6
PENT	**Pentalofos**	**2.97**	**11**	P	**Pb**	23 12 55.6	-2.8
NEO	**Neokhori**	**3.00**	**47**	P	**Pn**	23 12 54.9	+1.6
NEST	**Nestorio**	**3.17**	**9**	P	**Pb**	23 12 58.3	-3.5
KZN	**Kozani**	**3.21**	**19**	P	**Pn**	23 12 58.0	+1.8
MHLO	**Agia Marina, M**	**3.25**	**99**	P	**Pn**	23 12 57.0	+0.3
LIT	**Litokhoron**	**3.25**	**29**	P	**Pn**	23 12 58.1	+1.4
BOVS	**Bovan**	**6.43**	**8**	⇑P	**Pn**	23 13 40.1	-0.2
VOIR		**8.87**	**22**	⇑P	**Pn**	23 14 15.2	+1.4
KEST	**Kesra**	**9.04**	**264**	Pn	**Pn**	23 14 18.2	+1.8
	0.2nm,0.3s,baz=350,slow=7.2,SNR=2.7						
	3.2nm,1.0s						
MLR	**Muntele Rosu**	**9.20**	**25**	LR	LR	23 18 58.9	
	comp=Z,38nn,18.4s,baz=208,slow=46						
MLR	**Muntele Rosu**	**9.20**	**25**	⇑P	**Pn**	23 14 21.0	+2.6
DOPR	**Dopca**	**9.45**	**22**	⇑P	**Pn**	23 14 22.9	+1.1
PLOR	**Plostina**	**9.76**	**27**	⇑P	**Pn**	23 14 29.0	+3.0
VRI	**Vrincioaia**	**9.80**	**27**	⇑P	**Pn**	23 14 29.7	+3.1
BURAR	**Bucovina Array**	**10.92**	**17**	⇑P	**Pn**	23 14 40.7	-1.3
GERES	**GERESS Array B**	**12.55**	**339**	Pn	**Pn**	23 15 02.6	-1.7
	baz=165,slow=12,SNR=2.3						
	0.2nm,0.7s						
AKASG	**Malin Array Be**	**14.83**	**22**	Pn	**Pn**	23 15 35.7	+0.5
	0.4nm,0.3s,baz=211,slow=9.5,SNR=1.8						
ESDC	**Sonseca Array**	**19.22**	**285**	P	**Pn**	23 16 32.9	+1.9
	baz=88,slow=13,SNR=4.5						
	0.7nm,0.9s						
HFS	**Hagfors**	**23.28**	**351**	P	**P**	23 17 12.3	-1.1
	1.2nm,0.7s,baz=148,slow=8.5,SNR=3.7						
	1.2nm,0.7s						
FINES	**FINESS Array B**	**24.45**	**7**	P	**P**	23 17 23.5	-1.1
	2.9nm,0.9s,baz=212,slow=14,SNR=3.4						
	2.9nm,0.9s						
NB2	**NORSAR Subarra**	**24.48**	**349**	P	**P**	23 17 24.3	-0.7
	comp=Z,1.3nm,0.8s,baz=163,slow=11						
NOA	**NORSAR Array B**	**24.48**	**349**	P	**P**	23 17 24.2	-0.8
	comp=Z,0.8nm,0.9s,baz=161,slow=8.8,SNR=4.5						
	comp=Z,0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.28**	**220**	P	**P**	23 18 09.8	+1.4
	comp=Z,0.7nm,0.8s,baz=34,slow=7.6,SNR=3.5						
	comp=Z,0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**42.84**	**53**	P	**P**	23 20 01.9	-2.1
	comp=Z,0.2nm,0.5s,baz=279,slow=8.6,SNR=1.7						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**45.85**	**58**	P	**P**	23 20 26.2	-2.0
	comp=Z,0.3nm,0.6s,baz=282,slow=6.8,SNR=2.8						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**46.36**	**47**	P	**P**	23 20 30.5	-1.5
	comp=Z,0.5nm,0.4s,baz=264,slow=8.4,SNR=2.3						
	comp=Z,0.5nm,0.4s						

*ASIES **04** 23:28:15.5,24°.24N×121°.65E,h16km,Mw3.6,Fault plane*
solution: NP1:φs207.00000°,δ35.00000°,λ72.00000°.
NP2:φs48.00000°,δ57.00000°,λ102.00000°.
*TAP **04** 23:28:15.6,24°.24N×121°.65E,h17km,ML4.0,B*
*JMA **04** 23:28:15.2±0.1,24°.2N±0°.4×121°.6E±0°.8,h17km,MV3.2/13,*
TAIWAN REGION

ISC 04 23:28:15.6±0.8,24°.23N±0°.01×121°.66E±0°.01,h17km±4km,
n158,σ0s64/266,16C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**207**	⇑*iP*	**Pg**	**23 28 19.2**	**+0.2**
ETL				S	**Sg**	23 28 21.6	+0.3
NACB	**Ninganchiao**	**0.09**	**227**	⇑*iP*	**Pg**	23 28 19.2	+0.2
NACB				S	**Sg**	23 28 21.4	+0.2
EHP	**Heping Village**	**0.10**	**43**	⇑*iP*	**Pb**	23 28 19.5	+0.3
EHP				*iS*	**Sb**	23 28 22.1	+0.5
EAHA	**Aohua**	**0.12**	**36**	⇑*iP*	**Pb**	23 28 19.6	+0.1
EAHA				S	**Sb**	23 28 22.1	+0.1
TWD	**Chiawan**	**0.17**	**202**	⇑*iP*	**Pb**	23 28 20.0	-0.2
TWD				S	**Sb**	23 28 23.4	+0.1
ETLH	**Xiulin Townshi**	**0.17**	**261**	⇑*iP*	**Pb**	23 28 20.3	0.0
ETLH				S	**Sb**	23 28 23.1	-0.3
EWUT	**Wuta**	**0.23**	**26**	⇑*iP*	**Pg**	23 28 21.1	+0.1
EWUT				*eS*	**Sg**	23 28 24.5	-0.1
HWA	**Hwalien**	**0.26**	**192**	⇑*iP*	**Pb**	23 28 22.0	+0.1
HWA				S	**Sb**	23 28 26.6	+0.6
ETM	**Tongmen**	**0.31**	**210**	⇑P	**Pg**	23 28 22.1	-0.1
ETM				*eS*	**Sg**	23 28 26.4	-0.3
LXIB	**Xiulin Townshi**	**0.31**	**227**	⇑P	**Pg**	23 28 22.2	-0.2
LXIB				*eS*	**Sg**	23 28 26.6	-0.3
NNSB	**Datong**	**0.32**	**307**	⇓*iP*	**Pb**	23 28 22.7	-0.3
NNSB				S	**Sb**	23 28 27.3	-0.7
LATG	**Datong**	**0.33**	**337**	⇓*iP*	**Pb**	23 28 22.7	-0.4
LATG				S	**Sg**	23 28 26.9	-0.4
NNS	**Nan Shan**	**0.34**	**308**	⇓P	**Pb**	23 28 22.9	-0.3
NNS				S	**Sb**	23 28 27.6	-0.7
TEYL	**Yanliau Villag**	**0.37**	**189**	⇑P	**Pg**	23 28 23.1	-0.1
WHF	**Hehuan Shan**	**0.38**	**257**	⇓P	**Pb**	23 28 23.7	-0.4
WHF				S	**Sg**	23 28 28.4	-0.5
ESAO	**Su ao**	**0.38**	**26**	P	**Pb**	23 28 23.6	-0.3
ESAO				*eS*	**Sg**	23 28 28.4	-0.3
FUSS	**Fushou**	**0.38**	**272**	P	**Pb**	23 28 24.1	0.0
FUSS				S	**Sb**	23 28 29.2	-0.6
NDT	**Datong Townshi**	**0.39**	**339**	⇓P	**Pb**	23 28 23.9	-0.2
NDT				S	**Sb**	23 28 29.5	-0.4
NDS	**Dongshan**	**0.40**	**7**	⇓P	**Pb**	23 28 24.2	-0.1
NDS				S	**Sb**	23 28 29.6	-0.5
TWC	**Suao**	**0.41**	**24**	⇓P	**Pg**	23 28 24.1	+0.1
TWC				*eS*	**Sg**	23 28 29.8	+0.1
ENTT	**Nioudou**	**0.41**	**348**	⇓P	**Pb**	23 28 24.3	-0.2
ENTT				S	**Sb**	23 28 30.0	-0.5
TWT	**Tachien**	**0.45**	**273**	⇓P	**Pb**	23 28 25.3	+0.2
TWT				S	**Sb**	23 28 31.1	-0.4
SHUL	**Shoufeng**	**0.45**	**192**	P	**Pb**	23 28 25.3	+0.1
SHUL				S	**Sb**	23 28 32.4	+0.8
TDCB	**Techi**	**0.46**	**273**	⇓P	**Pb**	23 28 25.4	+0.1
TDCB				*eS*	**Sg**	23 28 30.8	-0.5
ESL	**Shilin**	**0.47**	**207**	⇑P	**Pg**	23 28 24.6	-0.4
ESL				S	**Sg**	23 28 31.0	-0.4
TWE	**Neicheng**	**0.49**	**0**	⇓P	**Pb**	23 28 25.4	-0.3
TWE				S	**Sb**	23 28 32.2	-0.3
YHNB	**Yeheng**	**0.51**	**329**	⇓P	**Pb**	23 28 25.9	-0.2
YHNB				S	**Sg**	23 28 31.9	-0.8
NSK	**Sanguang**	**0.52**	**328**	⇓P	**Pb**	23 28 26.1	-0.3
NSK				S	**Sg**	23 28 32.8	-0.3
OWD	**Renai**	**0.53**	**238**	⇑P	**Pg**	23 28 26.0	-0.1
OWD				S	**Sg**	23 28 32.9	-0.3
FUSB	**Fushanzhiwuyua**	**0.53**	**352**	⇓P	**Pb**	23 28 26.2	-0.2
FUSB				S	**Sb**	23 28 33.4	-0.5
TEGC	**Jichi Village**	**0.53**	**192**	P	**Pb**	23 28 27.0	+0.5
ILA	**Ilan**	**0.54**	**8**	P	**Pb**	23 28 26.7	+0.1
EOS2	**EOS2**	**0.55**	**70**	*eP*	**Pb**	23 28 27.4	+0.7
WUSB	**Renai**	**0.55**	**244**	⇑P	**Pb**	23 28 26.8	-0.1
WUSB				S	**Sb**	23 28 34.1	-0.5
NWLT	**Wulai**	**0.56**	**345**	⇓P	**Pb**	23 28 26.7	-0.3
NWLT				*eS*	**Sg**	23 28 33.9	-0.4
WARBT	**Fenglin Townsh**	**0.57**	**206**	⇑P	**Pg**	23 28 26.3	-0.7
WARBT				*eS*	**Sg**	23 28 34.2	-0.4
EOS3	**EOS3**	**0.60**	**85**	*eP*	**Pn**	23 28 28.7	-0.5
EOS4	**EOS4**	**0.61**	**100**	P	**Pn**	23 28 28.6	-0.5
NTC	**Toucheng**	**0.64**	**14**	P	**Pb**	23 28 28.3	+0.1
NTC				S	**Sb**	23 28 37.5	+0.6
NFF	**Wufeng Townshi**	**0.64**	**309**	⇓P	**Pb**	23 28 28.2	-0.1
NFF				S	**Sb**	23 28 36.7	-0.3
EGS		**0.66**	**22**	⇓P	**Pb**	23 28 28.6	0.0
EGS				*eS*	**Sb**	23 28 37.4	0.0
WHP	**Taichung City**	**0.66**	**274**	P	**Pb**	23 28 28.8	+0.1
WHP				S	**Sb**	23 28 37.3	-0.3
KSH	**Guanxi Townshi**	**0.70**	**321**	P	**Pn**	23 28 29.9	-0.8
WCS	**Beigang Elemen**	**0.71**	**256**	*eP*	**Pb**	23 28 29.5	0.0
WCS				*eS*	**Sb**	23 28 38.6	-0.4
LIOB	**Emei**	**0.72**	**305**	⇓P	**Pb**	23 28 30.0	+0.3
LIOB				S	**Sn**	23 28 40.1	-1.6
NSTT	**Nanjuang**	**0.72**	**303**	⇓P	**Pb**	23 28 29.9	+0.1
NSTT				S	**Sb**	23 28 39.1	-0.3
NHDH	**Xindian Distri**	**0.74**	**350**	P	**Pg**	23 28 30.2	+0.2
NHDH				S	**Sb**	23 28 39.8	-0.1
TWA	**Mucha**	**0.75**	**354**	P	**Pg**	23 28 30.2	-0.1
TWA				S	**Sb**	23 28 39.8	-0.3
TIPB	**Shuangxi**	**0.75**	**11**	⇓P	**Pb**	23 28 29.9	-0.3
TIPB				S	**Sb**	23 28 40.7	+0.5
SMLT	**Sun Moon Lake**	**0.78**	**244**	⇓P	**Pg**	23 28 30.7	-0.2
SMLT				eS	**Sb**	23 28 40.2	-0.9
SSLB	**Suanglung**	**0.79**	**236**	P	**Pg**	23 28 30.7	-0.3
SSLB				eS	**Sb**	23 28 40.4	-0.9
EHY	**Hungye**	**0.79**	**203**	*eP*	**Pb**	23 28 30.4	-0.5
EHY				eS	**Sb**	23 28 41.3	0.0
EHYH	**Wanrong**	**0.79**	**202**	*eP*	**Pb**	23 28 30.2	-0.7
EHYH				eS	**Sg**	23 28 42.0	+0.4
NHY	**Taipei**	**0.81**	**354**	P	**Pn**	23 28 31.9	-0.3
NHY				S	**Sn**	23 28 42.9	-0.9
TYC	**Yuchr**	**0.81**	**246**	*eP*	**Pg**	23 28 31.1	-0.2
TYC				eS	**Sb**	23 28 40.8	-1.0
TAP	**Taipei**	**0.81**	**350**	P	**Pn**	23 28 32.1	-0.3
TAP				S	**Sg**	23 28 42.4	+0.1
TWB1	**Santiao Chiao**	**0.83**	**21**	*eP*	**Pg**	23 28 31.6	-0.1
TWB1				eS	**Sb**	23 28 41.7	-0.6
SBCB	**Hsinchu**	**0.83**	**312**	*eP*	**Sn**	23 28 32.8	+0.3
SBCB				eS	**Sn**	23 28 46.2	+1.8
NWF	**Wu-fen Shan**	**0.84**	**7**	*eP*	**Pg**	23 28 32.0	0.0
NWF				eS	**Sg**	23 28 42.9	-0.2
WFSB	**Wu-fen Shan**	**0.84**	**7**	P	**Pg**	23 28 32.0	0.0
WFSB				S	**Sb**	23 28 42.6	-0.1
HSN	**Hsinchu**	**0.85**	**312**	*eP*	**Pn**	23 28 32.9	+0.1
HSN				eS	**Sn**	23 28 45.1	+0.3
NCUH	**Zhongli**	**0.85**	**329**	*eP*	**Pn**	23 28 32.9	+0.1
NCUH				eS	**Sn**	23 28 44.9	-0.1
NMLH	**Miaoli**	**0.85**	**291**	*eP*	**Pn**	23 28 33.3	+0.5
SXI1	**Grass Mountain**	**0.88**	**13**	*eP*	**Pg**	23 28 32.6	-0.2
TWS1	**Kuangyinshan**	**0.89**	**345**	⇓P	**Pn**	23 28 33.5	+0.1
TWS1				eS	**Sn**	23 28 46.1	+0.2
YULB	**Yu-li**	**0.90**	**202**	*eP*	**Pb**	23 28 31.4	-1.4
YULB				eS	**Sg**	23 28 46.4	-0.3
TCU	**Taichung**	**0.91**	**265**	*eP*	**Pn**	23 28 34.4	+0.8
TCU				eS	**Sn**	23 28 47.3	+1.0
YM01	**YM01**	**0.91**	**355**	*eP*	**Pn**	23 28 33.5	-0.2
YM01				eS	**Sb**	23 28 44.7	-0.2
WHYT	**Xinyi Township**	**0.92**	**234**	*eP*	**Pn**	23 28 33.4	-0.3
WHYT				eS	**Sg**	23 28 45.3	-0.2
TNOU	**National Taiwa**	**0.92**	**6**	*eP*	**Pn**	23 28 33.6	-0.2
TNOU				eS	**Sn**	23 28 46.0	-0.6
ZUZH	**Zhuzihu**	**0.93**	**353**	*eP*	**Pn**	23 28 33.8	-0.1
ZUZH				eS	**Sg**	23 28 46.1	+0.2
ECBN	**Changbin**	**0.93**	**192**	*eP*	**Pb**	23 28 33.1	-0.2
EYUL	**Yuli**	**0.94**	**200**	*eP*	**P

PTMZ	**Houxiangcun**	**2.45**	**290**	*e*P	**Pn**	**23 28 54.7**	**-0.1**
PTMZ				*e*S	**Sn**	**23 29 23.3**	**-1.1**
MATB	**Ma-tsu**	**2.46**	**321**	*e*P	**Pn**	**23 28 54.7**	**-0.3**
LYJJ	**Jianjiangzhen**	**2.88**	**324**	*e*P	**Pn**	**23 29 00.5**	**-0.2**
KNM	**Kinmen**	**2.95**	**274**	*e*P	**Pn**	**23 29 03.4**	**+1.7**
KNM				*e*S	**Sn**	**23 29 38.6**	**+1.8**
KNMB	**Chin-men Tao**	**3.00**	**275**	*e*P	**Pn**	**23 29 02.3**	**0.0**
XPSS	**Dashiqiu**	**3.00**	**334**	*e*P	**Pn**	**23 29 01.7**	**-0.7**
MHZQ	**Yeshan**	**3.02**	**308**	*e*P	**Pn**	**23 29 02.4**	**-0.3**
JMJ	**Miyako jima 2**	**3.36**	**79**	*e*P	**Pn**	**23 29 09.4**	**+2.1**
JMJ				*e*S	**Sn**	**23 29 46.7**	**0.0**
AXDP	**Jialang**	**3.43**	**282**	*e*P	**Pn**	**23 29 08.4**	**+0.1**
AXDP				*e*S	**Sn**	**23 29 48.2**	**-0.3**
ZPLA	**Ao Xicun**	**3.59**	**266**	*e*P	**Pn**	**23 29 10.6**	**+0.1**
DSXP	**Dongshan**	**3.91**	**263**	*e*P	**Pn**	**23 29 15.1**	**+0.1**
SXFK	**Yanhouchang**	**4.23**	**302**	*e*P	**Pn**	**23 29 19.4**	**+0.1**

MDD ***04*** *23:28:25.6±0.5, 34˚.24N×5˚.19W, h0km, mb_Lg2.8/26, Error ellipse: s-maj=4.2km s-min=3.0km az=179.0*
IGIL ***04*** *23:28:26.3, 34˚.24N×5˚.19W, h2km, ML2.3*
SFS ***04*** *23:28:27.6, 34˚.43N×5˚.01W, h0km, ML3.6/18, ML3.6/18, MLv3.5/18*
CNRM ***04*** *23:28:27.3, 34˚.35N×4˚.89W, h6km, ML3.4*
INMG ***04*** *23:28:28.0±1.6, 34˚.34N×5˚.01W, h19km±8km, ML2.6, Error ellipse: s-maj=5.0km s-min=4.7km az=138.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Fez (Marr)*

ISC 04 23:28:27.3±1.1**, 34˚42N**±0˚.02×**5˚01W**±0˚.02**, h13**km±9km, **n108,** σ1**s49**/185**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.41**	**219**	P	**Pg**	**23 28 35.6**	**+0.1**
SICH				S	**Sb**	**23 28 42.7**	**0.0**
CHEFC	**Chefchaouen**	**0.74**	**338**	P	**Pb**	**23 28 43.0**	**+0.9**
CHEFC				S	**Sn**	**23 28 55.1**	**+0.4**
LCRM	**LCR**	**0.74**	**170**	P	**Pg**	**23 28 41.1**	**-0.6**
LCRM				S	**Sb**	**23 28 53.6**	**+1.2**
RSA	**Sarsar**	**0.81**	**305**	P	**Pn**	**23 28 45.0**	**+0.3**
RSA				S	**Sn**	**23 28 58.8**	**+2.2**
IFR	**Ifrane**	**0.91**	**186**	Pg	**Pg**	**23 28 43.4**	**-1.5**
IFR				Sg	**Sg**	**23 28 56.6**	**-0.2**
AKLM	**AKL**	**0.95**	**84**	P	**Pg**	**23 28 45.0**	**-0.6**
PALE	**Palemas**	**1.18**	**48**	P	**Pn**	**23 28 49.9**	**+0.2**
PALE				S	**Sn**	**23 29 05.7**	**0.0**
SMIR	**Smir Dam**	**1.29**	**346**	P	**Pg**	**23 28 53.1**	**+0.9**
SMIR				S	**Sn**	**23 29 12.8**	**+4.4**
CZD	**Col de Zad**	**1.39**	**181**	P	**Pn**	**23 28 52.3**	**-0.4**
CZD				S	**Sg**	**23 29 11.4**	**-0.7**
MD31	**MD31**	**1.56**	**172**	P	**Pn**	**23 28 54.1**	**-0.9**
MD31				S	**Sn**	**23 29 15.0**	**-0.2**
RTC	**Rabat Centre**	**1.59**	**255**	Pn	**Pn**	**23 28 56.4**	**+1.1**
RTC				Sn	**Sg**	**23 29 18.7**	**+0.1**
RTC	**Rabat Centre**	**1.59**	**255**	P	**Pb**	**23 28 57.5**	**+0.8**
RTC				S	**Sg**	**23 29 20.1**	**+1.4**
MDT	**Midelt**	**1.64**	**168**	P	**Pn**	**23 28 54.5**	**-1.4**
MDT				S	**Sn**	**23 29 16.8**	**-0.2**
ZHG	**ZHG**	**1.67**	**235**		**Sg**	**23 29 24.3**	**+3.2**
EMLI	**Melilla**	**1.90**	**62**	Pn	**Pn**	**23 28 58.0**	**-1.5**
WMELI	**Melilla**	**1.91**	**62**	Pn	**Pn**	**23 29 00.0**	**+0.4**
JBK	**JBK**	**2.02**	**92**	P	**Pn**	**23 28 59.3**	**-2.0**
JBK				S	**Sn**	**23 29 23.8**	**-2.7**
EMIJ	**Mijas**	**2.15**	**5**	Pn	**Pn**	**23 29 01.8**	**-1.1**
EMIJ				Sn	**Sn**	**23 29 29.1**	**-0.4**
EMIJ	**Mijas**	**2.15**	**5**	Pn	**Pn**	**23 29 01.9**	**-1.0**
EMIJ				*i* lVmb_Lg		23 29 23.4	
TAF	**Taforalt**	**2.17**	**79**	P	**Pn**	**23 29 02.8**	**-0.5**
TAF				S	**Sn**	**23 29 30.6**	**+0.4**
EALB	**Alboran**	**2.21**	**46**	*i* lVmb_Lg		23 29 36.2	
EALB				Sn	**Sg**	**23 29 36.5**	**-2.0**
AVE	**Averroes**	**2.29**	**241**	Pn	**Pn**	**23 29 07.2**	**+2.2**
AVE	**Averroes**	**2.29**	**241**	P	**Pg**	**23 29 10.4**	**-0.9**
AVE				S	**Sb**	**23 29 36.5**	**-0.5**
ESPR	**Espera**	**2.54**	**344**	Pn	**Pn**	**23 29 08.9**	**+0.7**
ESPR				Sn	**Sn**	**23 29 38.7**	**-0.3**
ESPR	**Espera**	**2.54**	**344**	Pn	**Pn**	**23 29 09.0**	**+0.7**
ESPR				Sn	**Sn**	**23 29 42.2**	**+3.2**
ESPR				*i* lVmb_Lg		23 29 43.1	
ELGU	**Los Guajares,**	**2.69**	**24**	Pn	**Pn**	**23 29 10.3**	**-0.1**
ELGU				Sn	**Sn**	**23 29 43.7**	**+0.8**
ELGU	**Los Guajares,**	**2.69**	**24**	Pn	**Pn**	**23 29 10.2**	**-0.1**
ELGU				Sn	**Sn**	**23 29 45.1**	**+2.2**
ELGU				*i* lVmb_Lg		23 29 47.2	
EGOR	**Sierra Gorda,**	**2.78**	**15**	Pn	**Pn**	**23 29 12.1**	**+0.3**
EGOR	**Sierra Gorda,**	**2.78**	**15**	Pn	**Pn**	**23 29 12.3**	**+0.5**
EGOR				Sn	**Sb**	**23 29 50.1**	**-1.0**
EGOR				*i* lVmb_Lg		23 29 50.5	
TISM	**Timmit**	**2.95**	**204**	P	**Pn**	**23 29 14.0**	**+0.1**
TISM				S	**Sn**	**23 29 50.8**	**+1.6**
EBER	**Berja**	**3.01**	**34**	Pn	**Pn**	**23 29 14.8**	**-0.2**
EBER	**Berja**	**3.01**	**34**	Pn	**Pn**	**23 29 15.4**	**+0.5**
EBER				Sn	**Sb**	**23 29 55.6**	**-2.2**
EBER				*i* lVmb_Lg		23 30 00.1	
EQUE	**Quentar**	**3.06**	**24**	Pn	**Pn**	**23 29 16.8**	**+1.4**
EQUE				Sn	**Sn**	**23 29 55.8**	**+3.8**
EQUE				*i* lVmb_Lg		23 30 00.3	
SRHM	**Skhour des Reh**	**3.10**	**232**	P	**Pb**	**23 29 21.1**	**-1.4**
SRHM				S	**Sb**	**23 30 02.7**	**+2.4**
EXHU	**Huelva**	**3.25**	**332**	Sn	**Sn**	**23 29 56.5**	**-0.1**
EXAYA	**Ayamonte**	**3.41**	**326**	Pn	**Pn**	**23 29 19.8**	**-0.4**
EXAYA				Sn	**Sn**	**23 29 59.9**	**-0.6**
ENIJ	**Nijar**	**3.42**	**41**	Pn	**Pn**	**23 29 22.6**	**+2.3**
ENIJ				Sn	**Sn**	**23 30 02.4**	**+1.6**
ENIJ				*i* lVmb_Lg		23 30 03.4	
EMIN	**Mina Concepcio**	**3.60**	**338**	Pn	**Pn**	**23 29 22.4**	**-0.5**
EMIN	**Mina Concepcio**	**3.60**	**338**	Pn	**Pn**	**23 29 22.4**	**-0.5**
EMIN				Sn	**Sn**	**23 30 04.8**	**-0.5**
EMIN				*i* lVmb_Lg		23 30 08.6	
ECAB	**El Cabril**	**3.66**	**355**	Pn	**Pn**	**23 29 24.8**	**+1.1**
ECAB				Sn	**Sn**	**23 30 06.5**	**-0.3**
ECAB	**El Cabril**	**3.66**	**355**	Pn	**Pn**	**23 29 24.5**	**+0.8**
ECAB				Sn	**Sn**	**23 30 06.6**	**-0.2**
ECAB				*i* lVmb_Lg		23 30 13.8	
PBDV	**Barranco-do-Ve**	**3.68**	**321**	Pn	**Pn**	**23 29 23.1**	**-1.0**
PBDV				Sn	**Sn**	**23 30 05.6**	**-1.8**
PBDV	**Barranco-do-Ve**	**3.68**	**321**	*e*P	**Pn**	**23 29 23.3**	**-0.8**
PBDV				*e*S	**Sn**	**23 30 06.1**	**-1.3**
PBDV				*i* IAML		23 30 10.0	
PBDV				*i* IAML		23 30 10.8	
PBDV				*i* IAML		23 30 12.9	
EGRO	**El Granado**	**3.70**	**328**	Pn	**Pn**	**23 29 23.5**	**-0.7**
EGRO				Sn	**Sn**	**23 30 06.1**	**-1.6**
EGRO	**El Granado**	**3.70**	**328**	Pn	**Pn**	**23 29 23.7**	**-0.6**
EGRO				Sn	**Sn**	**23 30 06.1**	**-1.6**
EGRO				*i* lVmb_Lg		23 30 11.0	
PVAQ	**Vaqueiros**	**3.70**	**324**	*e*P	**Pn**	**23 29 23.6**	**-0.7**
PVAQ				*e*S	**Sn**	**23 30 06.2**	**-1.6**
PVAQ				*i* IAML		23 30 07.8	
PVAQ				*i* IAML		23 30 08.4	
PVAQ				*i* IAML		23 30 10.2	
PVAQ	**Vaqueiros**	**3.70**	**324**	P	**Pn**	**23 29 23.4**	**-0.8**
EQES	**Quesada**	**3.72**	**24**	Pn	**Pn**	**23 29 27.1**	**+2.5**
EQES				Sn	**Sn**	**23 30 11.0**	**+2.6**
EQES				*i* lVmb_Lg		23 30 17.6	
EADA	**Adamuz**	**3.75**	**5**	Pn	**Pn**	**23 29 26.2**	**+1.2**
EADA				Sn	**Sn**	**23 30 09.9**	**+0.7**
EADA	**Adamuz**	**3.75**	**5**	Pn	**Pn**	**23 29 25.5**	**+0.5**
EADA				Sn	**Sn**	**23 30 11.3**	**+2.2**
EADA				*i* lVmb_Lg		23 30 16.1	
FIGM	**Figuig**	**3.88**	**125**	P	**Pn**	**23 29 25.9**	**-1.0**
TIO	**Tiouine**	**3.97**	**209**	P	**Pn**	**23 29 28.5**	**+0.4**
OUK	**Oukaimeden**	**4.01**	**218**	P	**Pn**	**23 29 29.0**	**+0.1**
OUK				S	**Sn**	**23 30 18.1**	**+2.3**
PCVE	**Castro Verde**	**4.04**	**323**	Pn	**Pn**	**23 29 28.0**	**-0.9**
PCVE	**Castro Verde**	**4.04**	**323**	*e*P	**Pn**	**23 29 28.3**	**-0.6**
PCVE				*e*S	**Sn**	**23 30 15.2**	**-0.9**
PCVE				*i* IAML		23 30 17.0	
PCVE				*i* IAML		23 30 18.8	
PCVE				*i* IAML		23 30 19.3	
PBAR	**Barrancos**	**4.09**	**337**	Pn	**Pn**	**23 29 28.9**	**-0.7**
PBAR				Sn	**Sn**	**23 30 15.2**	**-2.1**
PBAR	**Barrancos**	**4.09**	**337**	*e*P	**Pn**	**23 29 29.8**	**+0.2**
PBAR				*e*S	**Sn**	**23 30 16.1**	**-1.3**
PBAR				*i* IAML		23 30 17.3	
PBAR				*i* IAML		23 30 19.9	
PBAR				*i* IAML		23 30 20.9	
PFVI	**Vila Bisbo**	**4.12**	**312**	*e*P	**Pn**	**23 29 30.7**	**+0.7**
MORF	**Marmelete**	**4.13**	**315**	*e*P	**Pn**	**23 29 31.3**	**+1.1**
MORF				*e*S	**Sn**	**23 30 17.1**	**-1.3**
MORF				*i* IAML		23 30 19.0	
MORF				*i* IAML		23 30 19.6	
MORF				*i* IAML		23 30 23.8	
ELOR	**Lorca, Murcia**	**4.16**	**39**	Pn	**Pn**	**23 29 30.7**	**+0.1**
PBEJ	**Beja**	**4.28**	**328**	*e*P	**Pn**	**23 29 32.3**	**+0.1**
PBEJ				*e*S	**Sn**	**23 30 19.6**	**-2.3**
MESJ	**Messejana**	**4.29**	**324**	*e*P	**Pn**	**23 29 31.7**	**-0.6**
MESJ				*e*S	**Sn**	**23 30 19.1**	**-3.2**
MESJ				IAML		23 30 22.2	
	comp=E,5.9nm,0.3s						
MESJ	**Messejana**	**4.29**	**324**	*e*P	**Pn**	**23 29 31.7**	**-0.6**
MESJ				*e*S	**Sn**	**23 30 21.2**	**-1.0**
MESJ				*i* IAML		23 30 22.9	
MESJ				*i* IAML		23 30 24.8	
MESJ				*i* IAML		23 30 25.1	
ZGR	**Zagora**	**4.32**	**187**	P	**Pn**	**23 29 33.1**	**+0.2**
ZGR				S	**Sn**	**23 30 26.1**	**+2.9**
PTEO	**Sao Teotonio**	**4.34**	**317**	*e*P	**Pn**	**23 29 32.5**	**-0.5**
PTEO				*e*S	**Sn**	**23 30 22.1**	**-1.3**
PTEO				*i* IAML		23 30 24.1	
PTEO				*i* IAML		23 30 25.8	
PTEO				*i* IAML		23 30 27.3	
EZAR	**Zarzadilla de**	**4.37**	**37**	Pn	**Pn**	**23 29 34.5**	**+1.0**
EZAR				Sn	**Sn**	**23 30 27.7**	**+3.4**
EZAR				*i* lVmb_Lg		23 30 29.6	
PSIM	**Granatula de C**	**4.50**	**13**	Pn	**Pn**	**23 29 36.2**	**+0.8**
PSIM				Sn	**Sn**	**23 30 29.0**	**+1.4**
PLOUS	**Minas do Lousa**	**4.54**	**324**	*e*P	**Pn**	**23 29 35.2**	**-0.5**
PLOUS				*e*S	**Sn**	**23 30 26.1**	**-2.2**
PLOUS				*i* IAML		23 30 29.6	
PLOUS				*i* IAML		23 30 30.0	
PLOUS				*i* IAML		23 30 30.2	
EMUR	**La Murta**	**4.58**	**41**	Pn	**Pn**	**23 29 38.4**	**+2.1**
EMUR				Sn	**Sn**	**23 30 30.2**	**+0.8**
EMUR				*i* lVmb_Lg		23 30 34.5	
EBAD	**Badajoz**	**4.62**	**340**	Pn	**Pn**	**23 29 36.0**	**-0.8**
EBAD				Sn	**Sn**	**23 30 28.5**	**-1.9**
EBAD	**Badajoz**	**4.62**	**340**	Pn	**Pn**	**23 29 37.3**	**+0.5**
EBAD				Sn	**Sn**	**23 30 29.7**	**-0.7**
EBAD				*i* lVmb_Lg		23 30 33.7	
EAH	**EAH**	**4.74**	**236**	P	**Pn**	**23 29 37.7**	**-0.8**
EAH				S	**Sn**	**23 30 37.3**	**+4.0**
EVO	**Evora**	**4.76**	**330**	*e*P	**Pn**	**23 29 38.9**	**0.0**
EVO				*e*S	**Sn**	**23 30 32.2**	**-1.8**
EVO				*i* IAML		23 30 34.5	
EVO				*i* IAML		23 30 36.0	
EVO				*i* IAML		23 30 36.2	
PESTR	**Estremoz**	**4.90**	**336**	Pn	**Pn**	**23 29 40.8**	**0.0**
PESTR				Sn	**Sn**	**23 30 35.2**	**-2.2**
PESTR	**Estremoz**	**4.90**	**336**	*e*P	**Pn**	**23 29 41.0**	**+0.3**
PESTR				*e*S	**Sn**	**23 30 36.3**	**-1.1**
PESTR				*i* IAML		23 30 37.2	
PESTR				*i* IAML		23 30 37.8	
PESTR				*i* IAML		23 30 39.8	
PESTR	**Estremoz**	**4.90**	**336**	P	**Pn**	**23 29 41.8**	**+1.1**
MOE	**Montemor**	**4.90**	**328**	*e*P	**Pn**	**23 29 40.8**	**+0.1**
MOE				*e*S	**Sn**	**23 30 36.2**	**-1.1**
MOE				*i* IAML		23 30 39.6	
MOE				*i* IAML		23 30 45.4	
MOE				*i* IAML		23 30 47.2	
PARRA	**Arraiolos**	**5.02**	**332**	*e*P	**Pn**	**23 29 41.9**	**-0.5**
PARRA				*e*S	**Sn**	**23 30 38.7**	**-1.6**
PARRA				*i* IAML		23 30 41.6	
PARRA				*i* IAML		23 30 42.0	
PARRA				*i* IAML		23 30 43.3	
ETOB	**Tobarra**	**5.05**	**32**	Pn	**Pn**	**23 29 45.5**	**+2.6**
ETOB	**Tobarra**	**5.05**	**32**	Pn	**Pn**	**23 29 45.9**	**+3.0**
ESDC	**Sonseca Array**	**5.31**	**9**	Pn	**Pn**	**23 29 46.7**	**+0.3**
ESDC				Sn	**Sn**	**23 30 46.7**	**-0.8**
ESDC				*i* lVmb_Lg		23 30 48.3	
PMTG	**Montargil**	**5.31**	**332**	*e*P	**Pn**	**23 29 46.3**	**-0.1**
PMTG				*e*S	**Sn**	**23 30 46.4**	**-1.0**
PMTG				*i* IAML		23 30 49.6	
PMTG				*i* IAML		23 30 51.4	
PMTG				*i* IAML		23 31 02.1	
ESBB	**Sonseca Array**	**5.31**	**9**	Pn	**Pn**	**23 29 46.7**	**+0.3**
ESBB				Sn	**Sn**	**23 30 46.6**	**-0.9**
PMRV	**Marv??o**	**5.35**	**340**	*e*P	**Pn**	**23 29 46.9**	**-0.1**
PMRV				*e*S	**Sn**	**23 30 45.6**	**-2.9**
PMRV				*i* IAML		23 30 54.2	
PMRV				*i* IAML		23 30 58.2	
PMRV				*i* IAML		23 30 59.9	
EPLA	**Plasencia**	**5.70**	**352**	Pn	**Pn**	**23 29 52.3**	**+0.5**
EPLA				Sn	**Sn**	**23 30 55.0**	**-2.0**
EPLA				*i* lVmb_Lg		23 30 58.8	
EVIV	**Cofrentes, Val**	**5.75**	**32**	Pn	**Pn**	**23 29 53.9**	**+1.4**
PSARD	**Sardoal**	**5.75**	**335**	*e*P	**Pn**	**23 29 52.3**	**-0.2**
PSARD				*e*S	**Sn**	**23 30 55.9**	**-2.5**
PSARD				*i* IAML		23 30 57.4	
PSARD				*i* IAML		23 30 58.7	
PSARD				*i* IAML		23 31 00.8	
PCBR	**Castelo Branco**	**5.76**	**341**	*e*P	**Pn**	**23 29 52.6**	**+0.1**
PCBR				*e*S	**Sn**	**23 30 56.4**	**-2.0**
PCBR				*i* IAML		23 30 57.9	
PCBR				*i* IAML		23 30 58.1	
PCBR				*i* IAML		23 31 00.1	
PSBE	**So Bento**	**5.92**	**330**	*e*P	**Pn**	**23 29 54.9**	**+0.1**
PSBE				*e*S	**Sn**	**23 31 00.6**	**-1.9**
UCM	**Universidad Co**	**6.04**	**13**	Pn	**Pn**	**23 29 56.7**	**+0.2**
UCM				Sn	**Sn**	**23 31 04.3**	**-1.2**
ECHE	**Chera**	**6.09**	**31**	Pn	**Pn**	**23 29 58.4**	**+1.3**
PCAS	**Casmilo, Conde**	**6.27**	**335**	*e*P	**Pn**	**23 30 00.1**	**+0.5**
MTE	**Manteigas**	**6.30**	**342**	*e*P	**Pn**	**23 30 00.4**	**+0.4**
PVIS	**Viseu**	**6.69**	**341**	*e*P	**Pn**	**23 30 05.1**	**-0.3**
PVIS				*e*S	**Sn**	**23 31 19.2**	**-2.3**
EJUZ	**Juzbado, Salam**	**6.69**	**354**	Pn	**Pn**	**23 30 06.2**	**+0.8**
ETOR	**Torete**	**6.80**	**19**	Pn	**Pn**	**23 30 07.3**	**+0.4**
ETOR				Sn	**Sn**	**23 31 24.8**	**+0.5**
ETOR				*i* lVmb_Lg		23 31 27.1	
EIBI	**Ibiza**	**6.86**	**46**	Pn	**Pn**	**23 30 09.4**	**+1.7**
MVO	**Moncorvo**	**6.92**	**347**	*e*P	**Pn**	**23 30 09.0**	**+0.5**
MVO				*e*S	**Sn**	**23 31 25.2**	**-2.0**
EMOS	**Mosqueruela**	**6.94**	**30**	Pn	**Pn**	**23 30 11.1**	**+2.2**
PVRL	**Vila Real**	**7.17**	**343**	*e*P	**Pn**	**23 30 12.1**	**+0.2**
PVRL				*e*S	**Sn**	**23 31 29.8**	**-3.5**
PVRL				*i* IAML		23 31 32.2	
PVRL				*i* IAML		23 31 32.2	
PVRL				*i* IAML		23 31 32.3	
POLO	**Lamas de Olo**	**7.28**	**343**	*e*P	**Pn**	**23 30 13.7**	**+0.1**
POLO				*e*S	**Sn**	**23 31 32.0**	**-4.1**
PBRG	**Braganca**	**7.50**	**350**	*e*P	**Pn**	**23 30 17.7**	**+1.2**
ECAL	**Calabor**	**7.63**	**350**	Pn	**Pn**	**23 30 18.6**	**+0.3**
ECAL				Sn	**Sn**	**23 31 41.7**	**-3.0**
ECAL	**Calabor**	**7.63**	**350**	Pn	**Pn**	**23 30 19.3**	**+1.0**
ECAL				Sn	**Sn**	**23 31 42.4**	**-2.3**
ELOB	**Lobios**	**7.81**	**343**	Pn	**Pn**	**23 30 20.9**	**+0.1**
ELOB				Sn	**Sn**	**23 31 46.7**	**-2.5**
PGAV	**Gavieira, Arco**	**7.96**	**342**	*e*P	**Pn**	**23 30 22.9**	**+0.1**
ETOS	**Mallorca**	**8.21**	**47**	Pn	**Pn**	**23 30 28.5**	**+2.2**
EARA	**Aranguren**	**8.76**	**17**	Pn	**Pn**	**23 30 33.6**	**-0.1**

MOS ***04*** *23:30:58.6±1.1, 47˚.96N×152˚.62E, h140km, mb3.9/9, Error ellipse: s-maj=13.3km s-min=7.2km az=59.0*
SKHL ***04*** *23:30:58.4±0.1, 47˚.70N×153˚.10E, h142km±8km, mb5.2/5, msh5.7/7*
IDC ***04*** *23:30:58.9±0.9, 47˚.99N×152˚.65E, h128km±7km, mb3.6/16, mbtmp4.0/19, Error ellipse: s-maj=16.5km s-min=10.1km az=149.0*
NEIC ***04*** *23:31:00.7±1.8, 48˚.08N±0˚.06×152˚.5E±0˚.2, h141km±7km, mb4.2/25, Error ellipse: s-maj=17.5km s-min=4.2km az=115.0*
JMA ***04*** *23:31:01.1±1.0, 47˚.7N×15˚.3E±˚, h133km, MV4.0/13, KURILE ISLANDS REGION*

ISC 04 23:30:57.5±0.5**, 47˚90N**±0˚.08×**152˚65E**±0˚.07**, h117**km, **n118,** σ1**s96**/134**, mb4.1**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.59**	**38**	*e*PN	**Pn**	**23 31 52.8**	**+1.3**
SKR				*e*S	**Sn**	**23 32 33.7**	**+0.4**
SKR				pmax	pmax		
	comp=Z,85nm,0.5s						
SKR				smax	smax		
	comp=N,597nm,0.6s						
SKR				smax	smax		
	comp=E,507nm,0.4s						
SKR	**Severo-Kuril's**	**3.59**	**38**	*e*P	**Pn**	**23 31 53.6**	**+2.1**
SKR					AMB	AMB	23 31 53.9	
	comp=E,80nm,0.4s						
SKR				*e*S	**Sn**	**23 32 34.6**	**+1.3**
SKR				A	A	23 32 41.3	
	comp=E,290nm,0.2s						
SKR				A	A	23 32 41.3	
	comp=E,210nm,0.2s						
REI	**Reidovoe**	**4.14**	**232**	*e*P	**Pn**	**23 32 01.9**	**+3.1**
REI				AMB	AMB	23 32 03.3	
	comp=E,60nm,0.3s						
REI				*e*S	**Sn**	**23 32 49.5**	**+3.2**
REI				A	A	23 32 53.0	
	comp=E,40nm,0.3s						
REI				A	A	23 32 53.0	
	comp=E,30nm,0.3s						
KUR	**Kuril'sk**	**4.24**	**233**	*e*PN	**Pn**	**23 32 03.9**	**+3.7**
KUR				*e*S	**Sn**	**23 32 54.1**	**+5.4**
KUR				pmax	pmax		
	comp=Z,71nm,0.4s						
KUR				smax	smax		
	comp=N,148nm,0.4s						
KUR				smax	smax		
	comp=E,90nm,0.4s						
KUR	**Kuril'sk**	**4.24**	**233**	*e*P	**Pn**	**23 32 03.6**	**+3.4**
KUR				AMB	AMB	23 32 04.5	
	comp=E,120nm,0.4s						
KUR				*e*S	**Sn**	**23 32 52.8**	**+4.1**
KUR				A	A	23 33 01.0	
	comp=E,220nm,0.5s						
KUR				A	A	23 33 01.0	
	comp=E,180nm,0.5s						
PAU	**Pauzhetka**	**4.48**	**36**	*e*P	**Pn**	**23 32 05.4**	**+2.1**
PAU				AMB	AMB	23 32 05.6	
	comp=E,30nm,0.3s						
PAU				*e*S	**Sn**	**23 32 54.9**	**+0.5**
PAU				A	A	23 32 58.1	
	comp=E,480nm,0.3s						
PAU				A	A	23 32 58.1	
	comp=E,280nm,0.3s						
SHO	**Shikotan**	**5.72**	**227**	*e*P	Pn	23 32 32.0	+12
SHO				AMB	AMB	23 32 34.5	
	comp=E,40nm,0.3s						
SHO				*e*S	**Sn**	**23 33 31.6**	**+7.2**
SHO				A	A	23 33 36.5	
	comp=E,110nm,0.3s						
SHO				A	A	23 33 36.5	
	comp=E,120nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.11**	**233**	*e*PN	**Pn**	**23 32 26.8**	**+1.5**
YUK				*i* S	**Sn**	**23 33 35.3**	**+1.5**
YUK				pmax	pmax		
	comp=Z,446nm,0.3s						
YUK				pmax	pmax		
	comp=N,50nm,0.2s						
YUK				pmax	pmax		
	comp=E,42nm,0.2s						
YUK				smax	smax		
	comp=N,156nm,0.3s						
YUK				smax	smax		
	comp=E,39nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**6.11**	**233**	*e*P	**Pn**	**23 32 27.2**	**+1.9**
YUK				AMB	AMB	23 32 27.7	
	comp=E,240nm,0.3s						
YUK				*i* S	**Sn**	**23 33 35.3**	**+1.5**
YUK				A	A	23 33 43.0	
	comp=E,140nm,0.4s						
YUK				A	A	23 33 43.0	
	comp=E,40nm,0.4s						
PEA0B	**Petropavlovsk-**	**6.13**	**30**	Pn	**Pn**	**23 32 27.1**	**+1.5**
PEA0B	**Petropavlovsk-**	**6.13**	**30**	PN	**Pn**	**23 32 27.1**	**+1.5**
PETK	**Petropavlovsk-**	**6.13**	**30**	P	**Pn**	**23 32 27.8**	**+2.2**
	comp=E,8.5nm,0.6s,baz=200,slow=9.9,SNR=27						
PETK				S	**Sn**	**23 33 35.3**	**+1.0**
	comp=E,2.1nm,0.6s,baz=228,slow=28,SNR=1.5						
PETK	**Petropavlovsk-**	**6.13**	**30**		**Pn**	**23 32 27.3**	**+1.8**
RUSJ	**Misakicho**	**6.40**	**236**	*e*PN	**Pn**	**23 32 31.3**	**+2.0**
RUSJ				*i* S	**Sn**	**23 33 43.9**	**+3.0**
PET	**Petropavlovsk**	**6.40**	**35**	Pn	**Pn**	**23 32 30.9**	**+1.6**
PET	**Petropavlovsk**	**6.40**	**35**	*i* PN	**Pn**	**23 32 31.3**	**+2.1**
PET				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PET	**Petropavlovsk**	**6.40**	**35**	*e*P	**Pn**	**23 32 31.0**	**+1.8**
PET				*e*S	**Sn**	**23 33 38.9**	**-2.0**
PET				A	A	23 33 42.3	
	comp=Z,40nm,0.4s						
PET				A	A	23 33 42.3	
	comp=Z,30nm,0.4s						
JRA	**Rausu**	**6.57**	**236**	P	**Pn**	**23 32 33.5**	**+1.8**
NEM2	**Nemuro 2**	**6.63**	**229**	P	**Pn**	**23 32 31.2**	**-1.1**
NEM2				*e*S	**Sn**	**23 33 41.6**	**-4.8**
NMR	**Nemuro--Hokkai**	**6.63**	**230**	*e*PN	**Pn**	**23 32 31.3**	**-1.2**
NMR	**Nemuro--Hokkai**	**6.63**	**230**	*e*P	**Pn**	**23 32 31.2**	**-1.2**

C23K	Itkillik River	34.74	31	P		P		23 37 35.8	-0.1
YULB	Yu-li	34.91	237	P		P		23 37 38.1	+0.2
NEA2	Nenana	34.92	40	P		P		23 37 37.5	0.0
NEA2				IAmb		IAmb		23 37 39.5	
	comp=Z,4.3nm,0.8s								
TPUB	Ta-pu	35.36	237	P		P		23 37 41.8	0.0
C24K	Franklin Bluff	35.38	31	P		P		23 37 41.4	0.0
G24K	Hadweenzic Riv	35.61	36	P		P		23 37 43.5	+0.1
G24K				IAmb		IAmb		23 37 45.8	
	comp=Z,3.2nm,0.9s								
ILAR	Eielson Array	35.86	40	P		P		23 37 46.0	+0.4
	comp=Z,1.7nm,1.0s,baz=255,slow=8.4,SNR=11								
	comp=Z,1.7nm,1.0s								
ILAR	Eielson Array	35.86	40	*eP*		P		23 37 45.9	+0.4
ILAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
K27K	Chicken	37.99	41	P		P		23 38 03.9	+0.2
K27K				IAmb		IAmb		23 38 05.5	
	comp=Z,3.8nm,0.9s								
I28M	Miner Creek	38.74	38			P		23 38 10.5	+0.5
I28M				IAmb		IAmb		23 38 12.2	
	comp=Z,2.6nm,0.8s								
I30M	Mount Dempster	40.25	38			P		23 38 23.2	+0.7
I30M				IAmb		IAmb		23 38 24.4	
	comp=Z,4.0nm,0.8s								
ZALV	Zalesovo Beam	41.69	305	P		P		23 38 33.9	-0.4
	comp=Z,0.6nm,0.5s,baz=67,slow=8.5,SNR=3.5								
	comp=Z,0.6nm,0.5s								
ZALV	Zalesovo Beam	41.69	305	P		P		23 38 33.2	-1.1
ZALV	Zalesovo Beam	41.69	305	*iP*		P		23 38 33.5	-0.8
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.5s								
A36M	Sachs Harbour	42.97	27			P		23 38 45.3	+0.9
A36M				IAmb		IAmb		23 38 46.5	
	comp=Z,4.0nm,0.8s								
MKAR	Makanchi Array	46.14	296	P		P		23 39 09.1	-0.9
	comp=Z,0.3nm,0.5s,baz=64,slow=7.2,SNR=5.8								
MKAR				pP		pwP		23 39 38.9	-1.5
	comp=Z,0.7nm,0.7s,baz=74,slow=6.8,SNR=4.4								
MKAR				PcP		PcP		23 40 44.1	+0.1
	comp=Z,0.4nm,0.9s,baz=94,slow=4.3,SNR=1.9								
	comp=Z,0.3nm,0.5s								
MKAR	Makanchi Array	46.14	296	P		P		23 39 08.5	-1.5
MKAR				PcP		PcP		23 40 43.9	-0.1
MKAR	Makanchi Array	46.14	296	*iP*		P		23 39 09.6	-0.4
MKAR	Makanchi Array	46.14	296	*eP*		P		23 39 09.7	-0.3
KURK	Kurchatov	46.47	303			P		23 39 10.2	-2.2
KURK	Kurchatov	46.47	303	*iP*		P		23 39 11.9	-0.5
KURK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KURK	Kurchatov	46.47	303	*eP*		P		23 39 12.0	-0.5
KURBB	Kurchatov Arra	46.56	302	P		P		23 39 12.6	-0.5
	comp=Z,2.4nm,0.8s,baz=66,slow=8.3,SNR=13								
KURBB				pP		pwP		23 39 42.2	-1.2
	comp=Z,1.2nm,0.8s,baz=67,slow=8.3,SNR=2.6								
	comp=Z,2.4nm,0.8s								
BVAR	Borovoye Array	49.89	309	P		P		23 39 38.5	-0.2
	comp=Z,0.5nm,0.5s,baz=49,slow=8.8,SNR=4.8								
BVAR				PcP		PcP		23 40 57.5	+0.2
	comp=Z,0.5nm,0.4s,baz=75,slow=1.6,SNR=3.8								
	comp=Z,0.5nm,0.5s								
BORK	Borovoye	49.92	309	*iP*		P		23 39 38.7	-0.2
BORK				pmax		pmax			
	comp=Z,1.0nm,1.1s								
YKA	Yellowknife Ar	50.20	37	P		P		23 39 41.4	+0.5
	comp=Z,0.8nm,0.5s,baz=306,slow=7.3,SNR=5.1								
	comp=Z,0.8nm,0.5s								
YKA	Yellowknife Ar	50.20	37	*eP*		P		23 39 41.5	+0.7
YKA				pmax		pmax			
	comp=Z,1.0nm,0.5s								
CMAR	Chiang Mai Arr	52.35	255	P		P		23 39 58.6	+1.2
	comp=Z,1.1nm,0.3s,baz=36,slow=7.3,SNR=9.1								
	comp=Z,1.1nm,0.3s								
CMAR	Chiang Mai Arr	52.35	255	*eP*		P		23 39 59.1	+1.6
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
I03D	Drain, OR	55.93	61	P		P		23 40 24.0	+0.8
I03D				IAmb		IAmb		23 40 25.3	
	comp=Z,2.2nm,0.6s								
AB31	Akbulak array	57.45	309	P		P		23 40 32.5	-1.3
ABKAR	Akbulak array	57.45	309	P		P		23 40 32.1	-1.7
C03E	Paynes Creek	58.91	63	P		P		23 40 42.9	-1.3
PLID	Pearl Lake	59.28	55			P		23 40 46.4	-0.4
BOZ	Bozeman (W)	61.34	53	P		P		23 41 01.3	+0.5
BOZ				IAmb		IAmb		23 41 02.2	
	comp=Z,2.0nm,0.5s								
BOZ	Bozeman (W)	61.34	53	P		P		23 41 01.3	+0.5
BOZ				pmax		pmax			
	comp=Z,2.0nm,0.5s								
NVAR	Mina Array Bea	62.18	63	P		P		23 41 05.5	-1.2
	comp=Z,0.7nm,0.4s,baz=304,slow=4.5,SNR=12								
	comp=Z,0.7nm,0.4s								
NVAR	Mina Array Bea	62.18	63	P		P		23 41 06.8	+0.2
FINES	FINESS Array B	62.87	334	P		P		23 41 08.1	-2.4
	comp=Z,2.9nm,0.8s,baz=44,slow=6.3,SNR=4.7								
	comp=Z,2.9nm,0.8s								
FINES	FINESS Array B	62.87	334	P		P		23 41 08.4	-2.1
FINES	FINESS Array B	62.87	334	*iP*		P		23 41 09.0	-1.5
FINES				pmax		pmax			
	comp=Z,4.0nm,0.9s								
PDAR	Pinedale Array	64.33	54	P		P		23 41 20.3	-0.4
	comp=Z,1.2nm,0.6s,baz=300,slow=2.7,SNR=10.0								
	comp=Z,1.2nm,0.6s								
PDAR	Pinedale Array	64.33	54	P		P		23 41 20.0	-0.7
HFS	Hagfors	67.27	339	P		P		23 41 39.0	0.0
	comp=Z,0.5nm,0.5s,baz=45,slow=6.5,SNR=1.4								
	comp=Z,0.5nm,0.5s								
HFS	Hagfors	67.27	339	P		P		23 41 39.0	0.0
WRA	Warramunga Arr	69.50	198	P		P		23 41 53.5	+0.2
	comp=Z,0.4nm,0.4s,baz=18,slow=6.3,SNR=4.7								
	comp=Z,0.4nm,0.4s								
KIV	Kislovodsk	69.77	314	*eP*		P		23 41 54.5	-0.4
KIV				pmax		pmax			
	comp=Z,2.0nm,1.0s								
KIV	Kislovodsk	69.77	314	*eP*		P		23 41 54.3	-0.6
AKASG	Malin Array Be	70.42	326	P		P		23 41 57.3	-1.3
	comp=Z,0.1nm,0.3s,baz=36,slow=6.0,SNR=1.7								
	comp=Z,0.1nm,0.3s								
AS31	Alice Springs	73.20	198	P		P		23 42 16.4	+0.9
AS31				IAmb		IAmb		23 42 17.0	
	comp=Z,1.5nm,0.5s								
ASAR	Alice Springs	73.20	198	P		P		23 42 16.1	+0.7
	comp=Z,2.2nm,0.5s,baz=9.5,slow=5.7,SNR=53								
	comp=Z,2.2nm,0.5s								
ASAR	Alice Springs	73.20	198	P		P		23 42 16.0	+0.5
TXAR	Lajitas Array	77.20	60	P		P		23 42 38.9	+0.2
TXAR				pP		pP		23 43 09.5	+1.5
	comp=Z,0.3nm,0.6s,baz=309,slow=4.9,SNR=3.0								
	comp=Z,2.2nm,0.6s								
TXAR	Lajitas Array	77.20	60			P		23 42 38.6	-0.1

*NOU **04** 23:46:01.5, 12°.80S×166°.51E, h0km, mb5.3/17, Santa Cruz Islands*
*IDC **04** 23:46:04.9±2.4, 12°.80S×166°.52E, h76km±20km, mb4.0/16, mbtmp4.3/19, MS3.5/29, Error ellipse: s-maj=18.6km s-min=13.1km az=64.0*
*NEIC **04** 23:46:04.8±1.9, 12°.81S±0°.09×166°.6E±0°.1, h73km±6km, mb4.5/21, Error ellipse: s-maj=16.7km s-min=10.0km az=53.0*

ISC 04 23:46:04.4±0.5,**12°.81S**±0°.06×**166°.52E**±0°.07,**h73**km,**n96,** σ0**99**/77,**mb4.4**/23,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.71	166	P		P	Pn	23 46 46.1	+0.4
SANVU	Saraoutou	2.71	166				Pn	23 46 46.0	+0.4
SANVU						Sn	Sn	23 47 16.3	-1.2
DVP	Devils Point	5.15	162	P		P	Pn	23 47 21.6	+2.6
RTV	Rentapao	5.29	160	P		P	Pn	23 47 22.3	+1.4
NGOA	Tingoa Renbel	6.43	280	P		P	Pn	23 47 35.5	-1.0
HNR	Honiara	7.27	297	P		P	Pn	23 47 49.2	+1.3
	48nm,0.6s,baz=100,slow=17,SNR=46								
HNR				S			Sn	23 49 08.7	-0.3
	12nm,0.8s,baz=163,slow=17,SNR=6.6								
HNR				LR		LR		23 50 43.0	
	comp=Z,11nm,20.2s,baz=220,slow=38								
HNR	Honiara	7.27	297	P			Pn	23 47 49.3	+1.3
HNR	Honiara	7.27	297				Pn	23 47 48.8	+0.8
HNR						Sn	Sn	23 49 08.8	-0.2
SAVO	Savo Central	7.52	298	P		P	Pn	23 47 53.3	+1.9
TATA	Tatamba Isabel	7.93	303	P		P	Pn	23 47 57.9	+0.9
KOUNC	Koumac, New Ca	7.99	195	P		P	Pn	23 47 59.8	+1.9
KOUNC	Koumac, New Ca	7.99	195				Pn	23 47 59.6	+1.7
MARNC	Mare, Loyalty	8.75	171	P			Pn	23 48 08.6	+0.5
MARNC	Mare, Loyalty	8.75	171				Pn	23 48 08.7	+0.5
YATNC	Mamie plateau,	9.21	178	P		P	Pn	23 48 14.5	0.0
DZM	Mont Dzumac	9.21	180	P		P	Pn	23 48 15.7	+1.0
	26nm,0.3s,baz=352,slow=8.6,SNR=156								
DZM				S			Sn	23 49 54.6	-2.2
	baz=90,slow=20								
NOUC	Port Laguerre	9.25	181	P		P	Pn	23 48 16.9	+1.9
ONTNC	Ouen Toro	9.45	180	P		P	Pn	23 48 19.5	+1.7
ONTNC	Ouen Toro	9.45	180				Pn	23 48 18.6	+0.8
OUENC	Ouen Island, N	9.57	178	P		P	Pn	23 48 21.0	+1.7
OUENC	Ouen Island, N	9.57	178				Pn	23 48 20.3	+0.9
MSVF	Nonsavu	12.16	115	P		P	Pn	23 48 56.6	+1.8
	20nm,1.1s,baz=274,slow=15,SNR=5.5								
MSVF	Nonsavu	12.16	115				Pn	23 48 56.2	+1.4
KRVT	Keravat (AS076	16.62	299	LR		LR		23 56 54.9	
	comp=Z,7.7nm,19.5s,baz=89,slow=39								
EIDS	Eidsvold	19.18	227	P		P	Pn	23 50 24.4	+0.5
EIDS						IAmb	IAmb	23 50 28.2	
	comp=Z,20nm,0.9s								
PMG	Port Moresby	19.29	278	LR		LR		23 57 02.0	
	comp=Z,114nm,21.3s,baz=95,slow=34								
CTA	Charters Tower	20.73	247	P		P		23 50 40.2	+1.1
	comp=Z,10.0nm,0.8s,baz=78,slow=13,SNR=8.2								
CTA				LR		LR		23 57 34.2	
	comp=Z,196nm,20.2s,baz=44,slow=33								
	comp=Z,10.0nm,0.8s								
CTAO	Charters Tower	20.73	247	P		P		23 50 39.5	+0.3
AFI	Afiamalu	21.15	95	LR		LR		23 56 26.4	
	comp=Z,59nm,20.1s,baz=26,slow=29								
ARMA	Armidale	22.29	216	P		P		23 50 56.7	+0.8
ARMA						IAmb	IAmb	23 50 59.6	
	comp=Z,19nm,0.9s								
URZ	Urewera	27.05	161	LR		LR		00 00 45.3	
	comp=Z,120nm,20.1s,baz=304,slow=32								
RTZ	Ruatahuna	27.34	162	P		P		23 51 41.4	-1.1
RTZ						IAmb	IAmb	23 52 07.8	
	comp=Z,17nm,1.1s								
BKZ	Black Stump Fm	27.70	163	P		P		23 51 44.4	-1.4
BKZ						IAmb	IAmb	23 51 46.5	
	comp=Z,11nm,1.1s								
INKA	Innaminka	28.29	234	P		P		23 51 51.9	+0.8
STKA	Stephens Creek	29.73	226	P		P		23 52 04.8	+0.9
	comp=Z,3.5nm,0.7s,baz=18,slow=7.7,SNR=7.2								
STKA				LR		LR		00 03 19.6	
	comp=Z,104nm,19.1s,baz=31,slow=35								
	comp=Z,3.5nm,0.7s								
RPZ	Rata Peaks	31.05	174	LR		LR		00 03 00.8	
	comp=Z,22nm,19.2s,baz=38,slow=33								
WB0	Warramunga Arr	31.56	253	P		P		23 52 19.3	-0.9
WB0						IAmb	IAmb	23 52 44.4	
	comp=Z,15nm,1.4s								
WRA	Warramunga Arr	31.64	253	P		P		23 52 20.5	-0.4
	comp=Z,3.5nm,0.8s,baz=84,slow=8.9,SNR=9.4								
	comp=Z,3.5nm,0.8s								
AS31	Alice Springs	32.73	246	P		P		23 52 29.0	-1.4
ASAR	Alice Springs	32.73	246	P		P		23 52 29.9	-0.5
	comp=Z,6.3nm,0.7s,baz=69,slow=9.6,SNR=87								
ASAR				PcP		PcP		23 55 14.6	0.0
	comp=Z,0.6nm,0.8s,baz=98,slow=2.5,SNR=3.2								
ASAR				LR		LR		00 04 31.0	
	comp=Z,172nm,20.6s,baz=94,slow=34								
	comp=Z,6.3nm,0.7s								
ASAR	Alice Springs	32.73	246	P		P		23 52 29.5	-0.9
GUMO	Guam	33.88	320	LR		LR		00 05 24.3	
	comp=Z,77nm,21.0s,baz=126,slow=34								
BBOO	Buckleboo	34.22	229	P		P		23 52 43.3	+0.1
BBOO						IAmb	IAmb	23 52 44.9	
	comp=Z,9.5nm,0.8s								
KNRA	Kununurra	36.67	261	P		P		23 53 03.7	-0.8
FORT	Forest	39.69	237	P		P		23 53 29.7	+0.1
FITZ	Fitzroy Crossi	39.69	257	LR		LR		00 08 31.9	
	comp=Z,82nm,21.5s,baz=15,slow=34								
FITZ	Fitzroy Crossi	39.69	257	P		P		23 53 29.0	-0.8
FITZ						IAmb	IAmb	23 53 40.9	
	comp=Z,7.5nm,1.4s								
PPT2	Papeete2	42.57	102	*e*LR		LR		00 05 57.8	
	comp=Z,213nm,31.8s								
PPT2				*e*LR		LR		00 05 59.5	
	comp=Z,293nm,30.2s								
PPT	Papeete	42.57	102	LR		LR		00 08 11.4	
	comp=Z,41nm,21.4s,baz=300,slow=31								
DAV	Davao City (W)	45.22	294	LR		LR		00 10 01.1	
	comp=Z,44nm,20.0s,baz=165,slow=32								
MORW	Morawa	49.47	243	P		P		23 54 47.2	-0.4
TAOE	Nuku Hiva Isla	52.46	91	*e*LR		LR		00 10 30.0	
	comp=Z,117nm,26.4s								
JOW	Kunigami	54.15	317	LR		LR		00 17 27.0	
	comp=Z,26nm,20.5s,baz=134,slow=35								
MJAR	Matsushiro Arr	55.87	333	P		P		23 55 34.3	-0.4
	comp=Z,1.2nm,0.8s,baz=152,slow=8.8,SNR=3.0								
MJAR				LR		LR		00 17 36.6	
	comp=Z,16nm,21.7s,baz=138,slow=34								
	comp=Z,1.2nm,0.8s								
KSRS	Korea Array	61.75	326	LR		LR		00 20 16.1	
	comp=Z,13nm,21.0s,baz=170,slow=33								
VNDA	Vanda	64.76	181	P		P		23 56 35.4	+0.7
	comp=Z,0.9nm,0.5s,baz=0.9,slow=9.2,SNR=8.5								
	comp=Z,0.9nm,0.5s								
VNDA	Vanda	64.76	181	P		P		23 56 34.6	-0.1
VNDA						IAmb	IAmb	23 56 35.5	
	comp=Z,5.1nm,1.1s								
CASY	Casey	65.03	202	P		P		23 56 36.0	-0.6
CASY						IAmb	IAmb	23 56 37.5	
	comp=Z,11nm,1.4s								
SBA	Scott Base	65.05	180	P		P		23 56 36.8	+0.3
SHEM	Shemya Is, Ala	65.59	5	LR		LR		00 19 31.5	
	comp=Z,26nm,20.1s,baz=266,slow=31								
KLR	Kul'dur	68.95	336	LR		LR		00 24 12.0	
	comp=Z,42nm,19.8s,baz=202,slow=33								
MA2	Magadan	73.25	352	LR		LR		00 24 19.1	
	comp=Z,29nm,21.9s,baz=184,slow=31								
CMAR	Chiang Mai Arr	73.51	294	P		P		23 57 30.9	+1.0
	comp=Z,1.3nm,0.7s,baz=119,slow=4.4,SNR=6.5								
	comp=Z,1.3nm,0.7s								
CMAR	Chiang Mai Arr	73.51	294	P		P		23 57 29.0	-0.9
QSPA	South Pole Qui	77.21	180	P		P		23 57 50.3	-0.1
	comp=Z,23nm,1.0s,baz=18,slow=1.7,SNR=54								
	comp=Z,23nm,1.0s								
QSPA	South Pole Qui	77.21	180	P		P		23 57 50.5	+0.1
KDAK	Kodiak Island	77.94	21	LR		LR		00 27 14.7	
	comp=Z,44nm,20.3s,baz=207,slow=32								
YAK	Yakutsk	79.99	343	LR		LR		00 29 16.4	
	comp=Z,22nm,21.9s,baz=166,slow=32								
ULN	Ulaanbaatar	80.16	324	P		P		23 58 07.8	+1.0
ULN						IAmb	IAmb	23 58 08.9	
	comp=Z,3.3nm,0.8s								
SONM	Songino Array	80.52	324	P		P		23 58 08.9	+0.1
	comp=Z,0.7nm,0.5s,baz=145,slow=5.3,SNR=7.3								
SONM				LR		LR		00 32 24.1	
	comp=Z,35nm,19.4s,baz=164,slow=34								
	comp=Z,0.7nm,0.5s								
SONM	Songino Array	80.52	324	P		P		23 58 09.2	+0.4
MAW	Mawson	83.38	202	P		P		23 58 23.3	0.0
	comp=Z,2.6nm,0.7s,baz=132,slow=5.1,SNR=7.6								
	comp=Z,2.6nm,0.7s								
MAW	Mawson	83.38	202	P		P		23 58 23.6	+0.3
TLY	Talaya	84.00	326	LR		LR		00 33 21.4	
	comp=Z,34nm,20.6s,baz=169,slow=34								
ILAR	Eielson Array	84.94	18	P		P		23 58 30.4	-0.6
	comp=Z,0.5nm,0.4s,baz=236,slow=5.1,SNR=10								
	comp=Z,0.5nm,0.4s								
ILAR	Eielson Array	84.94	18	P		P		23 58 31.1	0.0
PFO	Pinyon Flats O	86.48	55	LR		LR		00 33 30.9	
	comp=Z,44nm,18.1s,baz=94,slow=33								
NVAR	Mina Array Bea	86.59	50	LR		LR		00 29 10.2	
	comp=Z,34nm,20.3s,baz=274,slow=30								
ELK	Elko	89.55	48	LR		LR		00 37 32.7	
	comp=Z,31nm,18.5s,baz=312,slow=34								
ANMO	Albuquerque	94.82	55	LR		LR		00 33 13.2	
	comp=Z,26nm,21.9s,baz=290,slow=30								
MKAR	Makanchi Array	95.31	317	P		P		23 59 21.1	+0.6
	comp=Z,0.9nm,0.5s,baz=86,slow=6.5,SNR=13								
MKAR				LR		LR		00 42 01.5	
	comp=Z,15nm,20.9s,baz=172,slow=35								
	comp=Z,0.9nm,0.5s								
MKAR	Makanchi Array	95.31	317	P		P		23 59 19.7	-0.8
SNAA	Sanae	95.42	183	P		P		23 59 20.9	+0.3
	comp=Z,1.9nm,0.8s,baz=135,slow=4.3,SNR=4.4								
	comp=Z,1.9nm,0.8s								
SNAA	Sanae	95.42	183	P		P		23 59 20.0	-0.6
SNAA						IAmb	IAmb	23 59 20.5	
	comp=Z,1.0nm,0.8s								
ZALV	Zalesovo Beam	95.42	324	P		P		23 59 20.7	0.0
	comp=Z,0.9nm,0.5s,baz=123,slow=7.8,SNR=4.8								
ZALV				LR		LR		00 42 42.5	
	comp=Z,23nm,19.2s,baz=108,slow=36								
	comp=Z,0.9nm,0.5s								
ZALV	Zalesovo Beam	95.42	324	P		P		23 59 19.8	-0.9
TXAR	Lajitas Array	96.00	61	P		P		23 59 23.7	-0.4
	comp=Z,0.2nm,0.9s,baz=258,slow=4.6,SNR=2.1								
TXAR				LR		LR		00 38 28.9	
	comp=Z,22nm,18.1s,baz=218,slow=33								
	comp=Z,0.2nm,0.9s								
NRIK	Noril'sk	98.03	339	LR		LR		00 41 21.3	
	comp=Z,24nm,20.5s,baz=92,slow=34								
KURBB	Kurchatov Arra	98.51	320	P		P		23 59 34.2	-0.5
	comp=Z,0.2nm,0.5s,baz=93,slow=5.2,SNR=4.5								
	comp=Z,0.2nm,0.5s								
ARCES	ARCESS Array B	118.22	345	PKP		PKPdf		00 04 41.8	-0.8
	comp=Z,0.5nm,0.3s,baz=76,slow=1.7,SNR=18								
FINES	FINESS Array B	123.68	338	PKP		PKPdf		00 04 52.6	-0.7
	comp=Z,1.6nm,0.8s,baz=103,slow=3.1,SNR=5.1								
KEST	Kesra	149.26	322	PKPbc		PKPbc		00 05 45.3	0.0
	comp=Z,4.6nm,0.8s,baz=349,slow=2.2,SNR=5.9								
KEST	Kesra	149.26	322			PKPbc		00 05 44.4	-1.0
ESDC	Sonseca Array	151.95	344	PKPbc		PKPbc		00 05 51.2	-0.3
	comp=Z,1.1nm,0.9s,baz=7.5,slow=3.0,SNR=7.4								
ESDC	Sonseca Array	151.95	344			PKPbc		00 05 50.2	-1.4
TORD	Torodi Ar. Bea	165.20	273	PKPab		PKPab		00 06 58.4	-0.6
	comp=Z,0.4nm,0.5s,baz=86,slow=4.6,SNR=7.8								

*IDC **04** 23:59:51.4±1.0, 42°.35S×173°.36E, h0km, mb3.9/4, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=32.5km s-min=26.7km az=124.0*
*NOU **04** 23:59:56.4, 42°.68S×173°.51E, h32km, MLv4.2/8, South Island, New Zealand*
*WEL **04** 23:59:57.8, 42°.50S×173°.22E, ML4.1, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.89; Mθθ=0.47; Mϕϕ=-1.23; Mrθ=0.53; Mθϕ=0.11; Mϕr=0.08; Fault plane solution: M0 1.25000×10^15^ NP1: ϕs=222.00000°, δ=86.00000°, λ=157.00000°. NP2: ϕs=314.00000°, δ=67.00000°, λ=4.00000°. Principal axes: T 1.2147, Plg19.0000°, Azm176.0000°; N -0.5167, Plg66.0000°, Azm34.0000°; P -0.6980, Plg14.0000°, Azm270.0000°; Stations used: DSZ GVZ INZ LTZ MQZ NNZ OXZ QRZ THZ WEL WVZ STRIKE-SLIP FAULTING*
*WEL **04** 23:59:57.8±0.5, 43°.3S×17°.3E±°, h27km±4km, M3.9/7, ML3.9/7, MLv3.9/7 Error ellipse: s-maj=4.4km s-min=2.7km az=134.5*

ISC 04 23:59:58.2±0.8,**42°.56S**±0°.03×**173°.34E**±0°.04,**h49**km±5km, **n110,** σ1**33**/123,**mb3.8**/4,**South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.20	46	P		P	Pn	00 00 05.0	-1.4
KHZ	Kahutara	0.20	46	P		P	Pn	00 00 05.0	-0.5
KHZ				S			Sn	00 00 11.4	-0.8
CECS	Cheviot Emerge	0.26	191	P		P	Pn	00 00 07.0	+0.1
CECS				S			Sn	00 00 13.6	+0.5
KIKS	Kaikoura	0.28	63	P		P	Pn	00 00 07.2	+0.1
KIKS				S			Sn	00 00 14.0	+0.6
HSES	Hanmer Springs	0.38	275	P		P	Pn	00 00 06.6	-1.5
HSES				S			Sn	00 00 12.7	-2.3
WIGC	Waiau Gorge	0.42	250	P		P	Pn	00 00 07.5	-1.0
WIGC				S			Sn	00 00 14.7	-1.2
CULC	Culverden Airl	0.45	243	P		P	Pn	00 00 08.1	-0.7
CULC				S			Sn	00 00 15.3	-1.0
GVZ	Greta Valley S	0.47	209	P		P	Pn	00 00 09.0	-0.1
GVZ				S			Sn	00 00 16.9	+0.1
MOLW	Molesworth Sta	0.47	352	P		P	Pn	00 00 07.9	-1.3
MOLW				S			Sn	00 00 14.8	-2.2
SCAC	Scargill	0.49	219	S		P	Pn	00 00 17.1	-0.1
LOKS	Mount Lookout	0.55	11	P		P	Pn	00 00 09.6	-0.6
LOKS				S			Sn	00 00 17.9	-0.9
WAKC	Waikari	0.62	229	S		P	Pn	00 00 19.3	-0.7
LSRC	Lake Sumner Ro	0.67	242	P		P	Pn	00 00 10.8	-0.7
LSRC				S			Sn	00 00 20.3	-0.7
AMCZ	Amberley	0.80	219	P		P	Pn	00 00 12.7	-0.5
LTZ	Lake Taylor	0.82	254	P		P	Pn	00 00 12.7	-0.8
LTZ				S			Sn	00 00 23.0	-1.8
THZ	Tophouse	0.86	338	P		P	Pn	00 00 12.8	-1.3

EAZ	Earnscleugh	3.96	226	P	Pn	00 00 55.1	-1.2
BKZ	Black Stump Fm	4.14	36	P	Pn	00 00 56.8	-2.2
BKZ	Black Stump Fm	4.14	36	P	Pn	00 00 57.3	-1.7
HIZ	Hauiti	4.20	16	P	Pn	00 01 00.1	+0.4
URZ	Urewera	5.17	35	Pn	Pn	00 01 09.7	-3.3
	2.4nm,0.3s,baz=205,slow=5.5,SNR=16						
URZ				Sn	Sn	00 02 05.6	-5.6
	14nm,0.3s,baz=270,slow=19,SNR=15						
	4.7nm,0.3s						
ASAR	Alice Springs	37.61	287	P	P	00 07 07.5	-0.7
	0.9nm,1.0s,baz=130,slow=6.6,SNR=4.4						
	0.9nm,1.0s						
WRA	Warramunga Arr	39.77	292	P	P	00 07 26.4	+0.1
	1.1nm,0.8s,baz=130,slow=7.7,SNR=7.6						
	1.1nm,0.8s						
QSPA	South Pole Qui	47.57	180	P	P	00 08 31.9	+3.2
	1.5nm,1.0s,baz=315,slow=4.3,SNR=2.5						
	1.5nm,1.0s						
CMAR	Chiang Mai Arr	91.34	294	P	P	00 13 00.0	+1.2
	0.5nm,0.3s,baz=120,slow=5.3,SNR=1.8						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	123.98	310	PKP	PKPdf	00 18 49.2	-1.0
	0.1nm,0.4s,baz=117,slow=2.0,SNR=2.3						
MMAI	Mount Meron Ar	145.72	268	PKPbc	PKPab	00 19 32.8	+0.8
	0.2nm,0.3s,baz=90,slow=0.7,SNR=1.9						
ARCES	ARCESS Array B	148.30	339	PKPbc	PKPdf	00 19 36.2	+2.0
	3.5nm,1.0s,baz=54,slow=4.6,SNR=3.8						
BRTR	Keskin Array B	149.72	278	PKPbc	PKPbc	00 19 41.1	-1.3
	0.4nm,0.6s,baz=104,slow=6.1,SNR=2.6						
TORD	Torodi Ar. Bea	149.82	196	PKPbc	PKPbc	00 19 43.2	+0.2
	1.8nm,0.8s,baz=171,slow=1.6,SNR=6.8						
FINES	FINESS Array B	152.82	325	PKPbc	PKPbc	00 19 47.5	-1.1
	3.5nm,0.9s,baz=64,slow=3.2,SNR=5.0						

DJA 05 00:09:52.3±0.5,2°N±5°×12°8E±°, h150km±4km, M3.7/9, mb4.3/3, MLv3.4/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	Galela, Maluku	0.52	224	P	Pn	00 10 14.7	+0.9
GAMI				S	Sn	00 10 32.4	+2.3
SGSI	Sangihe	3.00	299	P	Pn	00 10 40.0	+0.3
GTOI	Gorontalo	5.37	253	P	Pn	00 11 12.1	+1.4
	0.0nm7.6nm,1.3s						
FAKI	Fak Fak	6.54	141	P	Pn	00 11 26.5	+0.2
	36nm,1.5s						

IDC 05 01:16:47.5±4.8,2.6°S×140.1°E, h0km, mb3.5/2, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=185.6km s-min=31.2km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.09	198	P	Pn	01 20 59.0	-1.6
	0.3nm,0.3s,baz=19,slow=12,SNR=7.3						
	0.8nm,0.6s						
ASAR	Alice Springs	21.75	196	P	P	01 21 41.4	+0.6
	1.6nm,0.7s,baz=17,slow=11,SNR=16						
	1.6nm,0.7s						
MKAR	Makanchi Array	70.59	322	P	P	01 28 04.9	+0.2
	0.3nm,0.6s,baz=110,slow=7.8,SNR=2.3						
	0.3nm,0.6s						

*JMA **05** 01:39:41.4±0.5,27°N±2°×14°4E±°, h0km, MV4.5/19, NEAR CHICHIJIMA ISLAND*
*IDC **05** 01:39:42.1±0.8,26.2°34N×143.3°34E, h0km, mb3.9/14, mbtmp3.8/16, ML3.4/2, MS3.1/6, Error ellipse: s-maj=27.9km s-min=17.2km az=67.0*
*NEIC **05** 01:39:44.6±1.8,26.4°N±0.1°×143.3°E±0.1, h10km±1km, mb4.5/8, Error ellipse: s-maj=23.2km s-min=11.8km az=218.0*
ISC 05 01:39:44.0±0.7, 26°43N±0.1°×143°39E±0.1°07, h10km, n51, σ1s38/47, mb4.0/17, MS3.5/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	1.11	281	P	Pn	01 40 06.2	+0.6
JHH2				eS	Sn	01 40 25.3	+4.3
JCJ	Chichijima	1.27	302	Pn	Pb	01 40 06.8	-1.2
	126nm,0.3s,baz=251,slow=13,SNR=159						
JCJ				Sn	Sg	01 40 23.4	-1.4
	94nm,0.3s,baz=85,slow=21,SNR=13						
JCJ	Chichijima	1.27	302		Pg	01 40 08.0	-0.3
JCJ					Sg	01 40 23.4	-1.4
CBIJ	Chichi jima	1.27	302	P	Pg	01 40 07.9	-0.4
CBIJ				eS	Sn	01 40 26.1	+1.2
BSO3	Boso 3	8.70	344	P	Pn	01 41 47.4	-2.3
BSO4	Boso 4	8.92	344	eP	Pn	01 41 52.3	-0.6
JHO	Hitachi	10.43	347	eP	Pn	01 42 05.7	-7.9
JHO				eS	Sn	01 43 58.7	-12
JAG	Ashikaga	10.51	342	eP	Pn	01 42 13.2	-1.6
MJAR	Matsushiro Arr	11.00	338	Pn	Pn	01 42 20.5	-1.0
	0.1nm,0.3s,baz=165,slow=11,SNR=4.8						
	0.7nm,0.6s						
MJAR	Matsushiro Arr	11.00	338		Pn	01 42 20.0	-1.5
MAJO	Matsushiro	11.00	338	Pn	Pn	01 42 22.2	+0.7
GUMO	Guam	12.85	174	LR	LR	01 47 02.4	
	comp=Z,67nm,21.2s,baz=72,slow=34						
JOW	Kunigami	13.53	275	LR	LR	01 47 40.9	
	comp=Z,44nm,19.5s,baz=7.5,slow=36						
KSRS	Korea Array	17.10	314	P	Pn	01 43 42.9	-0.1
	0.5nm,0.3s,baz=124,slow=11,SNR=7.3						
KSRS				LR	LR	01 50 16.0	
	comp=Z,62nm,18.3s,baz=120,slow=37						
	0.7nm,0.4s						
KSAR	Wonju Array Be	17.11	314		Pn	01 43 43.2	-0.1
USRK	Ussuriysk Ar.	19.98	335	P	P	01 44 16.8	+0.3
	2.2nm,0.8s,baz=129,slow=16,SNR=2.6						
	2.2nm,0.8s						
USRK	Ussuriysk Ar.	19.98	335	P	P	01 44 16.2	-0.3
H11N2	WAKE ISLAND Hy	22.61	102	T	T	02 08 28.1	
	baz=290						
H11N1	WAKE ISLAND Hy	22.61	102	T	T	02 08 23.8	
	baz=290,slow=74						
H11N3	WAKE ISLAND Hy	22.62	102	T	T	02 08 26.0	
	baz=290,slow=74						
H11S3	WAKE ISLAND Hy	22.91	105	T	T	02 08 38.1	
	baz=294,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	22.91	105	T	T	02 08 49.5	
	baz=294,slow=17,SNR=17						
H11S2	WAKE ISLAND Hy	22.92	105	T	T	02 08 47.6	
	baz=294,slow=75,SNR=24						
HEH	HeiHe	26.77	337	eP	P	01 45 28.8	+4.9
SONM	Songino Array	35.94	316	P	P	01 46 45.0	+0.3
	0.4nm,0.4s,baz=108,slow=9.3,SNR=2.4						
	0.4nm,0.4s						
CMAR	Chiang Mai Arr	41.68	268	LR	LR	02 03 15.1	
	comp=Z,17nm,20.1s,baz=75,slow=34						
WB0	Warramunga Arr	46.75	192	P	P	01 48 11.9	-1.7
WR8	Warramunga Arr	46.91	191	P	P	01 48 13.4	-1.4
WRA	Warramunga Arr	46.93	192	P	P	01 48 13.5	-1.5
	2.4nm,0.7s,baz=12,slow=8.6,SNR=8.0						
	2.4nm,0.7s						
ASAR	Alice Springs	50.65	191	P	P	01 48 41.9	-1.6
	0.5nm,0.8s,baz=15,slow=8.2,SNR=2.6						
ASAR				PcP	PcP	01 50 00.7	-0.3
	0.8nm,0.8s,baz=16,slow=4.6,SNR=5.5						
	0.5nm,0.8s						
ASAR	Alice Springs	50.65	191	P	P	01 48 43.6	0.0
ZALV	Zalesovo Beam	50.69	319	P	P	01 48 43.8	+0.2
	0.4nm,0.3s,baz=109,slow=7.8,SNR=2.1						
	0.4nm,0.3s						
MKAR	Makanchi Array	51.73	310	P	P	01 48 50.6	-0.9
	0.8nm,0.9s,baz=87,slow=8.7,SNR=5.0						
MKAR				PcP	PcP	01 50 04.5	-0.3
	0.8nm,0.9s,baz=90,slow=4.3,SNR=2.6						
	0.8nm,0.9s						
MKAR	Makanchi Array	51.73	310	P	P	01 48 50.4	-1.2
E18K	Tukpahlearik C	52.98	24	P	P	01 49 01.6	+1.2
H18K	Honhosa River	53.08	27	P	P	01 49 01.2	0.0
H18K				IAmb	IAmb	01 49 09.4	
	comp=Z,7.3nm,1.4s						
C19K	Lookout Ridge	53.96	22	P	P	01 49 09.6	+1.9
KDAK	Kodiak Island	54.25	36	P	P	01 49 10.2	+0.3
KDAK				IAmb	IAmb	01 49 13.5	
	comp=Z,12nm,1.3s						
KURBB	Kurchatov Arra	54.27	315	P	P	01 49 10.9	+0.8
	comp=Z,1.3nm,0.2s,baz=93,slow=7.4,SNR=4.8						
KURBB				LR	LR	02 13 16.7	
	comp=Z,44nm,18.8s,baz=183,slow=37						
	comp=Z,1.3nm,0.2s						
ILAR	Eielson Array	57.77	28	P	P	01 49 34.9	-0.2
	comp=Z,0.9nm,0.8s,baz=253,slow=5.8,SNR=5.2						
	comp=Z,0.9nm,0.8s						

BVAR	Borovoye Array	59.26	318	P	P	01 49 46.0	+0.5
	comp=Z,1.4nm,0.5s,baz=81,slow=7.5,SNR=8.0						
	comp=Z,1.4nm,0.5s						
BORK	Borovoye	59.30	318	P	P	01 49 45.8	-0.1
BORK				IAmb	IAmb	01 49 56.6	
	comp=Z,4.3nm,1.1s						
KK31	Karatay Array	60.35	306	P	P	01 49 53.5	+0.2
KK31				IAmb	IAmb	01 49 55.2	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	60.35	306	P	P	01 49 52.9	-0.4
YKA	Yellowknife Ar	72.21	28	P	P	01 51 09.4	+0.5
	comp=Z,0.5nm,0.6s,baz=294,slow=6.3,SNR=2.7						
	comp=Z,0.5nm,0.6s						
FINES	FINESS Array B	79.01	334	P	P	01 51 48.5	+0.5
	comp=Z,1.4nm,0.8s,baz=63,slow=5.1,SNR=10						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	79.01	334	P	P	01 51 48.7	+0.8
KBZ	Khabaz	79.25	313	P	P	01 51 50.4	+0.9
	comp=Z,1.7nm,0.8s,baz=65,slow=4.8,SNR=3.9						
	comp=Z,1.7nm,0.8s						
HFS	Hagfors	84.45	337	P	P	01 52 16.2	-0.5
	comp=Z,0.6nm,0.5s,baz=72,slow=4.7,SNR=4.3						
HFS				LR	LR	02 31 53.2	
	comp=Z,23nm,18.6s,baz=52,slow=37						
	comp=Z,0.6nm,0.5s						
BRTR	Keskin Array B	87.24	313	P	P	01 52 30.4	-0.7
	comp=Z,0.6nm,0.9s,baz=56,slow=5.1,SNR=3.9						
	comp=Z,0.6nm,0.9s						
LPAZ	La Paz	149.03	77	PKPbc	PKPbc	01 59 33.8	-0.1
	comp=Z,1.1nm,1.0s,baz=302,slow=1.3,SNR=3.9						

*IDC **05** 01:59:36.0±2.2,23.°10S×67.°57W, h93km±20km, mb4.0/4, mbtmp4.1/9, Error ellipse: s-maj=42.8km s-min=13.7km az=113.0*
*SJA **05** 01:59:35.9±0.6,23.°01S×68.°15W, h143km±3km, ML3.9, MW3.8*
*NEIC **05** 01:59:37.5±2.1,22.°97S±0.°06×68.°16W±0.°10, h130km±4km, mb4.3/11, ML4.1(GUC), Error ellipse: s-maj=12.9km s-min=8.3km az=104.0*
*GUC **05** 01:59:38.2±0.6,22.°89S×68.°21W, h133km±3km, ML4.1*
*VAO **05** 01:59:38.8±2.3,22.°64S×67.°96W, h132km±10km, mb4.3, Presumed earthquake*
ISC 05 01:59:36.9±0.6, 22.°98S±0.°04×68.°15W±0.°04, h129km±6km, n104, σ1s71/132, mb4.2/5, 6C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	0.04	312		Pn	01 59 55.6	+0.8
AF01				Sn	Sn	02 00 09.2	+0.9
AF01	San Pedro de A	0.04	312	eP	Pn	01 59 55.6	+0.8
AF01				eS	Sn	02 00 11.0	+2.7
AF01				IAML		02 00 11.8	
	comp=Z,2μm,0.6s						
AF01	San Pedro de A	0.04	312	eP	Pn	01 59 55.6	+0.8
AF01				i S	Sn	02 00 09.4	+1.1
AF01				IAML		02 00 10.9	
	comp=E,9μm,0.7s						
PB06	IPOC Station P	1.34	281		Pn	02 00 04.3	+0.9
PB06	IPOC Station P	1.34	281	eP	Pn	02 00 04.1	+0.7
PB06				eS	Sn	02 00 25.4	+1.8
PB06				IAML		02 00 28.1	
	comp=Z,2μm,0.5s						
PB06	IPOC Station P	1.34	281	↑iP	Pn	02 00 04.3	+0.9
PB06				i S	Sn	02 00 23.9	+0.4
PB06				IAML		02 00 27.3	
	comp=N,4μm,0.1s						
PB09	IPOC Station P	1.56	319		Pn	02 00 06.9	+1.1
PB09	IPOC Station P	1.56	319	eP	Pn	02 00 01.7	-4.1
PB09				eP		02 00 06.9	
PB09				eS	Sn	02 00 29.3	+1.6
PB09				IAML		02 00 31.3	
	comp=Z,981nm,0.3s						
PB09	IPOC Station P	1.56	319	eP	Pn	02 00 06.9	+1.1
PB09				i S	Sn	02 00 28.1	+0.3
PB09				IAML		02 00 31.9	
	comp=N,990nm,0.2s						
PB03	IPOC Station P	1.75	302		Pn	02 00 08.6	+0.6
PB03	IPOC Station P	1.75	302	eP	Pn	02 00 08.7	+0.6
PB03				eS	Sn	02 00 32.1	+0.3
PB03				IAML		02 00 32.5	
	comp=Z,1μm,0.4s						
PB03	IPOC Station P	1.75	302	↑iP	Pn	02 00 08.7	+0.6
PB03				i S	Sn	02 00 31.3	-0.4
PB03				IAML		02 00 32.4	
	comp=N,2μm,0.3s						
PB05	IPOC Station P	1.90	273		Pn	02 00 10.1	+0.4
PB05	IPOC Station P	1.90	273	eP	Pn	02 00 10.2	+0.5
PB05				eS	Sn	02 00 38.0	+3.1
PB05				IAML		02 00 39.4	
	comp=Z,285nm,0.3s						
PB05	IPOC Station P	1.90	273	↑iP	Pn	02 00 10.2	+0.4
PB05				i S	Sn	02 00 34.7	-0.1
PB07	IPOC Station P	2.04	307		Pn	02 00 12.0	+0.5
PB07	IPOC Station P	2.04	307	eP	Pn	02 00 11.9	+0.5
PB07				eS	Sn	02 00 38.0	+0.1
PB07				IAML		02 00 38.5	
	comp=Z,994nm,0.2s						
PB07	IPOC Station P	2.04	307	↑iP	Pn	02 00 12.1	+0.6
PB07				i S	Sn	02 00 37.1	-0.8
PB07				IAML		02 00 39.2	
	comp=E,2μm,0.2s						
SALTA		2.07	127	eP	Pn	02 00 14.5	+2.3
SALTA				eP	Pn	02 00 14.5	+2.3
SALTA				eP	Pn	02 00 14.5	+2.3
PB10	IPOC Station P	2.28	256		Pn	02 00 14.8	+0.5
PB10	IPOC Station P	2.28	256	eP	Pn	02 00 14.8	+0.5
PB10				eS	Sn	02 00 45.2	+2.3
PB10				IAML		02 00 52.5	
	comp=Z,227nm,0.6s						
PB10	IPOC Station P	2.28	256	eP	Pn	02 00 14.8	+0.5
PB10				eS	Sn	02 00 43.6	+0.6
PB02	IPOC Station P	2.32	315		Pn	02 00 15.2	+0.3
PB02	IPOC Station P	2.32	315	eP	Pn	02 00 15.2	+0.3
PB02				eS	Sn	02 00 43.5	-0.4
PB02				IAML		02 00 49.5	
	comp=Z,1μm,0.3s						
PB02	IPOC Station P	2.32	315	eP	Pn	02 00 15.1	+0.3
PB02				i S	Sn	02 00 42.9	-1.1
PB02				IAML		02 00 44.7	
	comp=E,1μm,0.2s						
HJA	Humahuaca	2.53	96	eP	Pn	02 00 14.8	-3.0
HJA				eP		02 00 20.5	
PB14	IPOC Station P	2.64	231		Pn	02 00 19.4	+0.3
PB14	IPOC Station P	2.64	231	eP	Pn	02 00 19.5	+0.4
PB14				eS	Sn	02 00 51.4	-0.2
PB14				IAML		02 00 53.2	
	comp=Z,420nm,0.2s						
PB14	IPOC Station P	2.64	231	↑iP	Pn	02 00 19.4	+0.3
PB14				i S	Sn	02 00 51.1	-0.5
PB14				IAML		02 00 52.2	
	comp=E,286nm,0.3s						
SLA	San Lorenzo	2.98	126	eP	Pn	02 00 26.7	+3.4
SLA				IAML		02 01 23.8	
	comp=Z,543nm,2.7s						
SLA	San Lorenzo	2.98	126	↑eP	Pn	02 00 26.5	+3.2
PB08	IPOC Station P	2.98	341		Pn	02 00 24.8	+1.2
PB08	IPOC Station P	2.98	341	eP	Pn	02 00 24.8	+1.2
PB08				eS	Sn	02 01 00.5	+0.9
PB08	IPOC Station P	2.98	341	eP	Pn	02 00 24.6	+1.1
PB08				i S	Sn	02 00 59.1	-0.4
TA02	Huaiquique	3.27	325	eS	Sn	02 01 01.2	-4.0
TA02				IAML		02 01 02.2	
	comp=Z,186nm,0.5s						
TA02	Huaiquique	3.27	325	eP	Pn	02 00 30.9	+3.9
TA02				IAML		02 01 16.6	
	comp=E,570nm,0.1s						
GO01	Chusmiza	3.44	343		Pn	02 00 30.3	+0.6
GO01	Chusmiza	3.44	343	eP	Pn	02 00 30.2	+0.5
GO01				eS	Sn	02 01 11.4	+0.9
GO01	Chusmiza	3.44	343	eP	Pn	02 00 30.2	+0.5
PB11	IPOC Station P	3.50	336		Pn	02 00 29.6	-0.6
PB11	IPOC Station P	3.50	336	eP	Pn	02 00 20.2	-10
PB11				eP		02 00 29.3	
PB11				eS	Sn	02 01 09.8	-1.5
PB11				IAML		02 01 16.6	
	comp=Z,93nm,0.2s						
PB11	IPOC Station P	3.50	336	eP	Pn	02 00 29.5	-0.7
PB11				i S	Sn	02 01 08.8	-2.6
PB11				IAML		02 01 45.7	
	comp=E,158nm,0.4s						
FSA	Cafayete	3.69	148	eP	Pn	02 00 30.5	-2.2
FSA				eS	Sn	02 01 00.3	-16

PSGCX	Pisagua	3.84	331		Pn	02 00 34.1	-0.5
PSGCX	Pisagua	3.84	331	eP	Pn	02 00 32.9	-1.7
AC01	Pan de Azucar	3.87	215		Pn	02 00 34.3	-0.6
AC01	Pan de Azucar	3.87	215	eP	Pn	02 00 34.6	-0.2
AC01				eS	Sn	02 01 18.6	-1.2
AC01				IAML		02 01 20.7	
	comp=Z,129nm,0.2s						
AC01	Pan de Azucar	3.87	215	eP	Pn	02 00 34.2	-0.7
AC02	Maricunga	3.94	193		Pn	02 00 37.5	+1.2
AC02	Maricunga	3.94	193	eP	Pn	02 00 37.7	+1.4
AC02				eS	Sn	02 01 24.7	+2.4
AC02				IAML		02 01 32.4	
	comp=Z,77nm,0.5s						
AC02	Maricunga	3.94	193	eP	Pn	02 00 37.7	+1.4
PB16	IPOC Station P	4.79	344		Pn	02 00 48.1	+0.3
PB16	IPOC Station P	4.79	344	eP	Pn	02 00 48.1	+0.3
PB16				eS	Sn	02 01 31.3	-12
PB12	IPOC Station P	4.80	334		Pn	02 00 46.8	-0.7
PB12	IPOC Station P	4.80	334	eP	Pn	02 00 45.9	-1.6
PB12				eS	Sn	02 01 29.7	-13
PB12				IAML		02 01 38.8	
	comp=Z,30nm,0.7s						
GO03	Copiapo	4.97	202		Pn	02 00 48.5	-1.0
TINO	Tinogasta	5.09	174	eP	Pn	02 00 52.8	+1.6
AC04	Llanos de Chal	5.84	206		Pn	02 00 58.1	-3.1
AC05	El Transito	6.14	198		Pn	02 01 04.2	-1.2
LCO	Las Campanas	6.43	200		Pn	02 01 06.9	-2.5
LPAZ	La Paz	6.66	0	P	Pn	02 01 13.8	+1.0
	comp=Z,1.4nm,0.4s,baz=173,slow=6.9,SNR=5.5						
LPAZ	La Paz	6.66	0		Pn	02 01 13.5	+0.6
CO02	Combarbal	8.58	197	Pn	Pn	02 01 34.6	-3.6
CFA	Coronel Fontan	8.59	181	P	Pn	02 01 36.5	-1.8
	comp=Z,0.6nm,0.3s,baz=15,slow=15,SNR=12						
CFA				S	Sn	02 03 08.0	-5.6
	comp=Z,1.4nm,0.4s,baz=275,slow=22,SNR=2.1						
BBSD	Serra de San D	9.13	52	eP	Pn	02 01 42.2	-3.4
SIV	San Ignacio	9.63	45	P	Pn	02 01 48.4	-4.0
	comp=Z,17nm,0.4s,baz=237,slow=8.7,SNR=51						
SIV				S	Sn	02 03 29.4	-10
	comp=Z,4.5nm,0.4s,baz=138,slow=19,SNR=11						
MURT	Porto Murtinho	9.84	84	eP	Pn	02 01 51.5	-3.6
COIM	Forte Coimbra	10.12	74	eP	Pn	02 01 57.3	-1.5
PTLB	Pontes e Lacer	11.33	50		Pn	02 02 12.0	-3.1
PTLB	Pontes e Lacer	11.33	50	eP	Pn	02 02 12.0	-3.1
AMBA	Amambai (Brazi	12.12	92	eP	Pn	02 02 26.8	+1.3
VILB	Vilhena	12.51	38		Pn	02 02 28.7	-1.9
VILB	Vilhena	12.51	38	eP	Pn	02 02 28.4	-2.2
PP1B	Ponte de Pedra	13.54	69	eP	Pn	02 02 42.9	-1.0
PTGB	Pitanga	14.82	100	eP	P	02 03 02.2	-0.5
CPSB	Cacapava Do Su	15.07	122	P	P	02 03 05.4	+0.1
CPSB				IAmb	IAmb	02 03 06.2	
	comp=Z,12nm,0.6s						
CPSB	Cacapava Do Su	15.07	122	eP	P	02 03 05.1	-0.2
ITAB	Concordia	15.11	110	P	P	02 03 05.5	-0.3
ITAB				IAmb	IAmb	02 03 07.4	
	comp=Z,14nm,1.0s						
ITAB	Concordia	15.11	110	eP	P	02 03 05.8	0.0
GO06	Curarrehue	16.79	189	P	Pn	02 03 25.0	+0.6
CLDB	Colider	16.85	46	eP	P	02 03 22.6	-2.5
ARAG	Araguaiana, MT	17.02	68	eP	P	02 03 25.7	-1.3
PLCA	Paso Flores	17.82	186	P	Pn	02 03 37.8	+1.1
	comp=Z,0.4nm,0.5s,baz=27,slow=12,SNR=4.7						
IPMB	Ipameri, GO	19.32	79	eP	P	02 03 51.3	-0.9
SNDB	Serra Nova Dou	19.42	59	eP	P	02 03 51.9	-1.4
VAO	Valinhos	19.50	94	P	P	02 03 53.6	-0.5
VAO				IAmb	IAmb	02 03 55.3	
	comp=Z,17nm,0.5s						
BDFB	Brasilia	20.34	73	P	P	02 04 01.9	-1.3
	comp=Z,3.1nm,0.3s,baz=224,slow=8.5,SNR=12						
BDFB	Brasilia	20.34	73	P	P	02 04 02.9	-0.4
BDFB				IAmb	IAmb	02 04 03.3	
	comp=Z,5.2nm,0.5s						
BSCB	Bom Sucesso	21.76	89	eP	P	02 04 17.4	-1.0
ITTB	Itaituba	22.05	35	eP	P	02 04 19.0	-2.4
JANB	Januaria	23.85	75	eP	P	02 04 36.0	-2.5
SMTB	Santa Maria do	24.20	58	eP	P	02 04 40.2	-1.4
PRPB	Parauapebas	24.32	49	eP	P	02 04 41.5	-1.2
ARCA	Araçuai, MG	25.34	81	eP	P	02 04 51.5	-0.5
BOAV	Boa Vista	26.29	17	P	P	02 05 01.5	+0.9
BOAV				IAmb	IAmb	02 05 24.7	
	comp=Z,6.4nm,1.3s						
W52A	Murphy	59.66	345	P	P	02 09 28.5	+0.9
V55A	Taylorsville	59.80	348	P	P	02 09 30.1	+1.6
V55A				IAmb	IAmb	02 09 56.7	
	comp=Z,8.7nm,1.4s						
SNAA	Sanae	60.66	161	P	P	02 09 35.4	+1.4
	comp=Z,0.6nm,0.6s,baz=276,slow=9.2,SNR=1.8						
	comp=Z,0.6nm,0.6s						
SNAA	Sanae	60.66	161	P	P	02 09 35.2	+1.3
QSPA	South Pole Qui	67.22	180	P	P	02 10 19.3	+2.3
	comp=Z,2.0nm,0.5s,baz=316,slow=1.0,SNR=36						
	comp=Z,2.0nm,0.5s						
QSPA	South Pole Qui	67.22	180	P	P	02 10 19.5	+2.5
QSPA				IAmb	IAmb	02 10 20.0	
	comp=Z,2.6nm,0.7s						
DBIC	Dimbokro	68.49	73	P	P	02 10 25.9	+0.3
	comp=Z,10nm,1.0s,baz=253,slow=4.5,SNR=3.8						
	comp=Z,10nm,1.0s						
DBIC	Dimbokro	68.49	73	P	P	02 10 26.0	+0.3
TORD	Torodi Ar. Bea	77.19	70	P	P	02 11 17.0	0.0
	comp=Z,2.0nm,0.4s,baz=255,slow=5.4,SNR=22						
	comp=Z,2.0nm,0.4s						

*IDC **05** 02:13:10.9±4.6,64.°27S×174.°02E, h0km, mb3.9/4, mbtmp4.1/5, ML4.4/1

RPN Rapa Nui 60.05 91 LR LR 02 41 07.8
comp=Z,20nm,19.2s,baz=1.0,slow=28
H03S2 Juan Fernandez 66.86 120 T T 03 37 15.9
baz=205,slow=74,SNR=18
H03S1 Juan Fernandez 66.86 120 T T 03 37 23.5
baz=205,slow=74,SNR=16
H03S3 Juan Fernandez 66.87 120 T T 03 37 17.2
baz=205,slow=74,SNR=15
H03N3 Juan Fernandez 67.20 120 T T 03 37 44.5
baz=204,slow=72,SNR=8.4
H03N2 Juan Fernandez 67.21 120 T T 03 37 43.2
baz=204,slow=72,SNR=27
H03N1 Juan Fernandez 67.21 120 T T 03 37 42.4
baz=204,slow=72,SNR=6.9
H08S2 Diego Garcia H 88.24 256 T T 04 04 24.1
baz=154,slow=76,SNR=28
H08S1 Diego Garcia H 88.25 256 T T 04 04 36.3
baz=154,slow=76,SNR=24
H08S3 Diego Garcia H 88.26 256 T T 04 04 33.0
baz=154,slow=76,SNR=40
TSUM Tsumeb 94.89 202 LR LR 03 07 51.4
comp=Z,78nm,19.6s,baz=152,slow=35
H02S1 DAWSON INLET TI 24.14 36 T T 04 48 19.7
SNR=78
H02S2 DAWSON INLET TI 24.14 36 T T 04 48 19.7
SNR=77
BRTR Keskin Array B 146.41 242 PKPbc PKPab 02 32 52.5 -0.5
comp=Z,0.9nm,0.9s,baz=153,slow=4.1,SNR=4.8

*NOU **05** 02:16:40.8,24˚.24S×179˚.40W, h524km, mb4.4/40, South of Fiji Islands*
*IDC **05** 02:16:41.0±1.1, 24˚.35S×179˚.81W, h482km±10km, mb3.6/15, mbtmp4.6/18, Error ellipse: s-maj=15.0km s-min=11.6km az=95.0*
*GFZ **05** 02:16:41.3±0.4, 24˚S±4˚×178˚0W±˚, h515km±7km, M4.5/19, mb4.5/19, Error ellipse: s-maj=11.5km s-min=7.7km az=82.9, confirmed*
*NEIC **05** 02:16:42.4±2.2, 24˚.42S±0˚.09×179˚.9W±0˚.1, h486km±7km, mb4.4/21, Error ellipse: s-maj=18.0km s-min=13.0km az=93.0*
ISC 05 02:16:42.5±0.3, 24˚29S±0˚.05×179˚81W±0˚.06, h505km, n206, σ1§45/220, mb4.3/27, 25C-5D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.23	162	P		P	02 18 10.2	-1.6
	766nm,0.2s,baz=71,slow=7.2,SNR=29							
RAO				S		S	02 19 19.6	-5.0
	289nm,0.3s,baz=105,slow=22,SNR=4.0							
RAO	Raoul Island	5.23	162	P		P	02 18 11.9	+0.2
RAO	Raoul Island	5.23	162	S		S	02 19 23.6	-1.1
RAO	Raoul Island	5.23	162	P		P	02 18 11.9	+0.2
RAO	Raoul Island	5.23	162	P		P	02 18 10.1	-1.6
GLKZ	Green Lake	5.24	162	P		P	02 18 12.0	+0.2
GLKZ				S		S	02 19 28.6	+3.8
MSVF	Nonsavu	6.82	343	P		P	02 18 26.7	-0.6
	25nm,0.3s,baz=233,slow=22,SNR=92							
MSVF	Nonsavu	6.82	343	P		P	02 18 27.4	+0.1
MSVF	Nonsavu	6.82	343	P		P	02 18 27.2	-0.1
MSVF	Nonsavu	6.82	343	P		P	02 18 27.2	-0.1
NIUE	Niue	10.55	62	P		P	02 19 10.5	+4.7
NIUE				S		S	02 21 04.5	+0.8
MARNC	Mare, Loyalty	11.55	282	P		P	02 19 17.3	+0.9
MARNC	Mare, Loyalty	11.55	282	P		P	02 19 15.3	-1.1
OUZ	Omahuta	12.31	206	P		P	02 19 25.4	+1.3
OUZ	Omahuta	12.31	206	P		P	02 19 24.9	+0.8
OUENC	Ouen Island, N	12.40	276	P		P	02 19 26.1	+0.7
YATNC	Mamie plateau,	12.43	278	P		P	02 19 27.5	+1.8
WCZ	Waipu Caves	12.66	202	P		P	02 19 28.9	+1.0
AFI	Afiamalu	12.81	38	P		P	02 19 27.4	-2.4
	51nm,0.6s,baz=215,slow=11,SNR=14							
AFI				S		S	02 21 44.3	-3.4
	21nm,0.4s,baz=33,slow=21,SNR=4.2							
AFI	Afiamalu	12.81	38	P		P	02 19 27.8	-2.0
AFI	Afiamalu	12.81	38	P		P	02 19 25.8	-4.0
AFI	Afiamalu	12.81	38	P		P	02 19 27.4	-2.4
DZM	Mont Dzumac	12.84	277	P		P	02 19 29.9	-0.1
	35nm,0.8s,baz=85,slow=17,SNR=28							
NOUC	Port Laguerre	12.96	277	P		P	02 19 32.7	+1.5
MXZ	Matakaoa Point	13.33	187	P		P	02 19 33.8	-1.2
MXZ	Matakaoa Point	13.33	187	P		P	02 19 34.9	-0.1
ETAZ	East Tamaki Re	13.41	198	P		P	02 19 36.2	+0.4
WMGZ	Waiomatatini S	13.58	186	P		P	02 19 39.0	+1.5
WMGZ				S		S	02 22 01.2	-0.6
HAZ	Te Kaha	13.59	188	P		P	02 19 35.4	-2.2
HAZ				S		S	02 22 01.3	-0.7
AWAZ	Awhitu Peninsu	13.60	199	P		P	02 19 37.8	+0.1
PKGZ	Pakihiroa	13.66	187	P		P	02 19 36.0	-2.4
PKGZ				S		S	02 22 00.7	-2.8
RUGZ	Raukumara Rang	13.80	188	P		P	02 19 38.2	-1.9
RUGZ				S		S	02 22 08.4	+1.9
TGRZ	Tauranga	13.82	193	P		P	02 19 36.4	-3.7
TWGZ	Tauwhareparae	13.98	187	P		P	02 19 39.6	-2.2
TWGZ				S		S	02 22 10.4	+0.8
URZ	Urewera	14.18	190	P		P	02 19 39.3	-4.5
	26nm,0.6s,baz=11,slow=11,SNR=13							
URZ				S		S	02 22 11.8	-1.5
	20nm,0.7s,baz=13,slow=20,SNR=9.2							
URZ	Urewera	14.18	190	P		P	02 19 39.9	-3.9
URZ				S		S	02 22 12.6	-0.7
URZ	Urewera	14.18	190	P		P	02 19 42.4	-1.4
TKGZ	Te Karaka	14.25	187	P		P	02 19 44.7	+0.1
CNGZ	Carnagh Statio	14.26	186	P		P	02 19 46.1	+1.5
RTZ	Ruatahuna	14.54	190	P		P	02 19 43.8	-4.0
HIZ	Hauiti	14.89	196	P		P	02 19 50.5	-0.9
HIZ	Hauiti	14.89	196	P		P	02 19 50.4	-0.9
BKZ	Black Stump Fm	15.16	191	P		P	02 19 51.3	-2.9
BFZ	Birch Farm	16.68	190	P		P	02 20 07.7	-2.2
SNZO	South Karori	17.59	194	P		P	02 20 17.0	-1.6
SNZO	South Karori	17.59	194	P		P	02 20 16.4	-2.2
QRZ	Quartz Range	17.70	199	P		P	02 20 17.9	-1.8
QRZ	Quartz Range	17.70	199	P		P	02 20 17.8	-2.0
RAR	Rarotonga	18.73	85	P		P	02 20 26.7	-2.7
KHZ	Kahutara	18.91	195	P		P	02 20 28.6	-2.1
KHZ	Kahutara	18.91	195	P		P	02 20 28.4	-2.3
LUES	Luesalemba Tem	19.18	312	P		P	02 20 31.6	-2.0
OXZ	Oxford	20.14	197	P		P	02 20 39.7	-2.3
RPZ	Rata Peaks	20.78	199	P		P	02 20 45.7	-2.1
	4.3nm,0.5s,baz=357,slow=1.9,SNR=15 4.3nm,0.5s							
RPZ	Rata Peaks	20.78	199	P		P	02 20 47.3	-0.5
RPZ	Rata Peaks	20.78	199	P		P	02 20 46.2	-1.6
ODZ	Otahua Downs	22.12	198	P		P	02 20 58.0	-1.8
ODZ	Otahua Downs	22.12	198	P		P	02 20 57.7	-2.1
TATA	Tatamba Isabel	25.09	306	P		P	02 21 25.3	-1.4
ARMA	Armidale	26.05	250	P		P	02 21 36.7	+1.5
ARMA	Armidale	26.05	250	P		P	02 21 34.5	-0.7
EIDS	Eidsvold	26.42	262	P		P	02 21 39.1	+0.7
EIDS	Eidsvold	26.42	262	P		P	02 21 39.1	+0.7
EIDS				IAmb		IAmb	02 21 39.8	
	comp=Z,23nm,1.1s							
EIDS	Eidsvold	26.42	262	P		P	02 21 37.7	-0.6
CAN	Canberra	29.10	241	P		P	02 22 03.1	+1.3
CMSA	Cobar Meteorol	31.24	249	P		P	02 22 20.4	+0.1
CMSA	Cobar Meteorol	31.24	249	P		P	02 22 19.8	-0.4
CTA	Charters Tower	31.65	271	P		P	02 22 24.7	+0.7
CTAO	Charters Tower	31.65	271	P		P	02 22 24.8	+0.7
CTAO	Charters Tower	31.65	271	P		P	02 22 24.7	+0.7
CTAO	Charters Tower	31.65	271	P		P	02 22 23.8	-0.2
QLP	Quilpie	32.49	258	P		P	02 22 31.4	+0.4
QLP	Quilpie	32.49	258	P		P	02 22 30.9	-0.2
MTSU	Mount Surprise	33.93	273	P		P	02 22 43.5	+0.1
STKA	Stephens Creek	34.74	249	P		P	02 22 49.9	-0.1
	comp=Z,8.5nm,0.5s,baz=92,slow=9.4,SNR=17 comp=Z,8.5nm,0.5s							
STKA	Stephens Creek	34.74	249	P		P	02 22 50.2	+0.2
STKA	Stephens Creek	34.74	249	P		P	02 22 50.0	0.0
PMG	Port Moresby	34.78	289	P		P	02 22 50.2	-0.4
INKA	Innaminka	35.51	256			P	02 22 56.7	+0.3
INKA				IAmb		IAmb	02 22 58.3	
	comp=Z,7.1nm,0.9s							
COEN	Coen	36.35	280	P		P	02 23 02.6	-1.0
HTT	Hallett	37.08	246	P		P	02 23 09.2	-0.2
QIS	Mount Isa	37.61	267	P		P	02 23 13.7	-0.2
QIS	Mount Isa	37.61	267	P		P	02 23 13.2	-0.7
BBOO	Buckleboo	39.45	247	P		P	02 23 27.7	-1.0
BBOO	Buckleboo	39.45	247	P		P	02 23 27.8	-1.0
AS01	Alice Springs	42.10	261	P		P	02 23 49.7	-0.4
AS31	Alice Springs	42.14	261			P	02 23 50.1	-0.3
ASAR	Alice Springs	42.15	261	P		P	02 23 50.0	-0.4
	comp=Z,7.8nm,0.6s,baz=90,slow=6.6,SNR=120							
ASAR				PcP		PcP	02 25 33.6	+0.3
	comp=Z,0.4nm,0.7s,baz=101,slow=3.7,SNR=4.2							
ASAR				ScP		ScP	02 28 38.9	+3.2
	comp=Z,1.2nm,0.8s,baz=108,slow=4.7,SNR=5.1							
ASAR				S		S	02 29 31.4	-2.0
	comp=Z,0.5nm,0.7s,baz=101,slow=13,SNR=3.0 comp=Z,7.8nm,0.6s							
ASAR	Alice Springs	42.15	261			P	02 23 49.6	-0.8
WR8	Warramunga Arr	42.41	267	P		P	02 23 51.9	-0.6
WR8				IAmb		IAmb	02 23 52.6	
	comp=Z,22nm,1.0s							
WRAB	Tennant Creek	42.55	267	P		P	02 23 52.6	-1.0
WRAB	Tennant Creek	42.55	267	P		P	02 23 52.6	-1.0
WB0	Warramunga Arr	42.55	267	P		P	02 23 53.0	-0.6
WRA	Warramunga Arr	42.55	266	P		P	02 23 52.7	-1.0
	comp=Z,11nm,0.3s,baz=98,slow=8.5,SNR=145							
WRA				ScP		ScP	02 28 41.0	+3.7
	comp=Z,5.4nm,1.0s,baz=105,slow=4.0,SNR=11 comp=Z,11nm,0.3s							
JAY	Jayapura	43.83	293	P		P	02 24 03.1	-0.6
GENI	Genyem	44.23	293	P		P	02 24 06.0	-0.8
FORT	Forrest	46.34	250	P		P	02 24 21.6	-1.1
FORT				IAmb		IAmb	02 24 22.8	
	comp=Z,14nm,0.7s							
DRS	Darwin Rock St	48.02	275	P		P	02 24 34.4	-1.2
KNRA	Kununurra	48.86	270	P		P	02 24 41.9	+0.1
KNRA				IAmb		IAmb	02 24 42.6	
	comp=Z,26nm,0.8s							
FAKI	Fak Fak	50.86	287	P		P	02 24 56.5	-0.1
FITZ	Fitzroy Crossi	50.97	266	P		P	02 24 57.6	+0.2
FITZ				IAmb		IAmb	02 24 58.9	
	comp=Z,4.4nm,0.8s							
SBA	Scott Base	54.01	183	P		P	02 25 18.6	+0.4
VNDA	Vanda	54.01	185	P		P	02 25 18.6	+0.4
	comp=Z,0.9nm,0.7s,baz=20,slow=9.2,SNR=6.0 comp=Z,0.9nm,0.7s							
VNDA	Vanda	54.01	185	P		P	02 25 19.3	+1.1
KLBR	Kellerberrin	55.00	247	P		P	02 25 25.0	-1.0
SOEI	Soe	55.05	275	P		P	02 25 26.8	+0.1
MEEK	Meekatharra	55.17	254	P		P	02 25 26.5	-0.8
MBWA	Marble Bar	55.48	260	P		P	02 25 28.7	-0.8
BLDU	Ballidu	56.05	248	P		P	02 25 32.3	-1.0
MORW	Morawa	56.91	250	P		P	02 25 38.9	-0.4
PLAI	Plampang	61.31	273	P		P	02 26 08.4	-0.7
TOLI2	Tolitoli	62.84	285	P		P	02 26 18.5	-0.5
TOLI2	Tolitoli	62.84	285			P	02 26 18.5	-0.5
TOLI2				IAmb		IAmb	02 26 20.7	
	comp=Z,11nm,0.8s							
QSPA	South Pole Qui	65.80	180	P		P	02 26 37.2	+0.1
	comp=Z,6.4nm,1.0s,baz=195,slow=1.7,SNR=17 comp=Z,6.4nm,1.0s							
QSPA	South Pole Qui	65.80	180			P	02 26 37.4	+0.3
QSPA				IAmb		IAmb	02 26 40.1	
	comp=Z,12nm,1.2s							
LEM	Lembang	71.36	271	P		P	02 27 12.1	+0.4
	comp=Z,27nm,0.7s,baz=197,slow=19,SNR=2.5 comp=Z,27nm,0.7s							
MJAR	Matsushiro Arr	72.31	326	P		P	02 27 16.9	+0.4
	comp=Z,2.4nm,0.8s,baz=163,slow=6.3,SNR=8.1 comp=Z,2.4nm,0.8s							
MJAR	Matsushiro Arr	72.31	326	P		P	02 27 17.2	+0.7
NACB	Ninganchiao	74.47	306	P		P	02 27 29.3	+0.2
NACB				IAmb		IAmb	02 27 29.5	
	comp=Z,17nm,0.9s							
MAW	Mawson	77.45	200	P		P	02 27 44.9	0.0
	comp=Z,1.6nm,0.7s,baz=130,slow=7.3,SNR=4.1 comp=Z,1.6nm,0.7s							
MAW	Mawson	77.45	200	P		P	02 27 46.0	+1.1
KSRS	Korea Array	78.65	320	P		P	02 27 53.0	+1.2
	comp=Z,1.7nm,0.7s,baz=142,slow=5.5,SNR=9.3 comp=Z,1.7nm,0.7s							
PETK	Petropavlovsk-	79.51	346	P		P	02 27 56.5	+0.4
	comp=Z,3.0nm,0.8s,baz=92,slow=8.8,SNR=4.9 comp=Z,3.0nm,0.8s							
USRK	Ussuriysk Ar.	81.18	327	P		P	02 28 06.2	+1.3
	comp=Z,3.9nm,0.8s,baz=134,slow=5.2,SNR=6.5 comp=Z,3.9nm,0.8s							
USRK	Ussuriysk Ar.	81.18	327	P		P	02 28 05.8	+0.9
CN2	Changchun	84.30	324	P		P	02 28 22.0	+1.3
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
BNX	BinXian	84.57	326	P	⇓	P	02 28 22.1	+0.1
BNX				pmax		pmax		
	comp=Z,6.0nm,1.1s							
NVAR	Mina Array Bea	84.91	44	P		P	02 28 24.2	+0.1
	comp=Z,0.4nm,0.6s,baz=253,slow=4.7,SNR=2.7 comp=Z,0.4nm,0.6s							
TUC	Tucson	86.61	52			P	02 28 34.7	+2.4
TUC				IAmb		IAmb	02 28 35.8	
	comp=Z,2.2nm,0.8s							
CMAR	Chiang Mai Ar	89.82	290	P		P	02 28 49.6	+2.2
	comp=Z,1.4nm,0.3s,baz=142,slow=3.6,SNR=12 comp=Z,1.4nm,0.3s							
CMAR	Chiang Mai Arr	89.82	290			P	02 28 48.8	+1.4
CRQM	Cirque	89.82	17	P		P	02 28 52.3	+5.7
TX31	Lajitas Ar. Si	90.49	58			P	02 28 52.3	+1.9
TX31				IAmb		IAmb	02 28 53.0	
	comp=Z,1.4nm,0.8s							
TXAR	Lajitas Array	90.49	58	P		P	02 28 51.9	+1.4
	comp=Z,0.8nm,0.7s,baz=241,slow=4.9,SNR=16 comp=Z,0.8nm,0.7s							
TXAR	Lajitas Array	90.49	58	P		P	02 28 52.1	+1.7
HHC	Hu-ho-hao-te	90.81	315	eP		P	02 28 55.1	+3.4
HHC				pmax		pmax		
	comp=Z,10.0nm,0.6s							
PZH	PanZhiHua	91.02	299	P		P	02 28 55.3	+2.3
MKAR	Makanchi Array	112.54	313	PKiKP		PKiKP	02 34 20.3	-0.6
	comp=Z,0.4nm,0.4s,baz=136,slow=2.6,SNR=7.6							
KURK	Kurchatov	115.60	316			PKPdf	02 34 26.1	-0.5
KURBB	Kurchatov Arra	115.64	316	PKP		PKPdf	02 34 26.0	-0.7
	comp=Z,0.4nm,0.2s,baz=107,slow=2.1,SNR=6.9							
BVAR	Borovoye Array	120.84	319	PKP		PKPdf	02 34 36.1	-0.5
	comp=Z,1.5nm,0.3s,baz=120,slow=1.8,SNR=17							
ARCES	ARCESS Array B	132.30	348	PKhKP		PKPpre	02 34 51.0	
	comp=Z,2.2nm,0.9s,baz=28,slow=1.8,SNR=3.7							
ARCES				PKP		PKPdf	02 34 58.3	+0.2
	comp=Z,1.4nm,0.5s,baz=76,slow=1.5,SNR=7.8							
ARCES				SKPbc		SKPab	02 37 39.4	+0.3
	comp=Z,1.5nm,0.8s,baz=38,slow=4.6,SNR=4.4							
STOK	Stokkvaagen	137.17	352	eP		PKiKP	02 35 08.9	-0.2
FINES	FINESS Array B	138.87	341	PKhKP		PKPpre	02 35 01.4	
	comp=Z,0.4nm,0.3s,baz=39,slow=4.9,SNR=10							
FINES				PKP		PKiKP	02 35 12.2	-0.6
	comp=Z,1.3nm,0.3s,baz=103,slow=4.4,SNR=2.7							
FINES				SKPbc		SKiKP	02 37 59.9	-0.9
	comp=Z,1.5nm,0.5s,baz=60,slow=4.9,SNR=12							
NB2	NORSAR Subarra	142.49	351	PKP		PKPdf	02 35 13.3	-3.8
	comp=Z,0.2nm,0.4s,baz=11,slow=3.4							
NOA	NORSAR Array B	142.49	351	PKhKP		PKPpre	02 35 13.1	
	comp=Z,0.2nm,0.5s,baz=18,slow=3.1,SNR=6.8							
NC602	NORSAR Array S	142.73	351	eP		PKPdf	02 35 14.5	-3.0
HFS	Hagfors	142.96	349	PKhKP		PKPpre	02 35 15.1	
	comp=Z,8.1nm,0.3s,baz=34,slow=2.0,SNR=150							
OSL	Oslo	143.62	351	eP		PKPab	02 35 17.8	+0.3
BER	Bergen	143.75	356	eP		PKPdf	02 35 18.9	-0.3
KONO	Kongsberg	144.05	352	eP		PKPab	02 35 19.4	+0.2
BLS5	Blasjo	144.61	354	eP		PKPab	02 35 21.5	+0.1
KMY	Karmoy	144.92	355	eP		PKPab	02 35 22.8	+0.3
AKASG	Malin Array Be	145.39	327	PKPbc		PKPdf	02 35 23.0	+0.7
	comp=Z,2.7nm,0.3s,baz=47,slow=4.3,SNR=21							
AKASG	Malin Array Be	145.39	327			PKPdf	02 35 23.0	+0.7
AKBB	Malin Array Si	145.39	327			PKPbc	02 35 23.3	-0.2
AKBB	Malin Array Si	145.39	327	P		PKPab	02 35 24.5	-0.1
KIEV	Kiev	145.40	327	P	⇑	PKPdf	02 35 22.4	+0.1
KIEV	Kiev	145.40	327			PKPbc	02 35 23.6	+0.1
HOMB	Hombersund	145.53	352	eP		PKPab	02 35 25.2	+0.4
SNART	Snartemo	145.61	353	eP		PKPbc	02 35 24.6	+0.8
BNN	Bunyan	146.56	304			PKPbc	02 35 27.7	+0.4
ASF	Jabal al Asfar	146.84	292	PKPbc		PKiKP	02 35 29.6	-0.7
	comp=Z,3.1nm,0.6s,baz=88,slow=3.3,SNR=10							
KIRS	Kirsehir-Merke	147.93	306		⇓	PKPbc	02 35 31.0	+0.1
BRTR	Keskin Array B	147.95	307	PKPbc		PKPbc	02 35 30.9	-0.1
	comp=Z,1.3nm,0.4s,baz=70,slow=3.3,SNR=18							
MMAI	Mount Meron Ar	148.02	294	PKPbc		PKPbc	02 35 32.0	+0.8
	comp=Z,4.7nm,0.4s,baz=71,slow=8.0,SNR=22							
EIL	Elat	148.64	289	PKPbc		PKPbc	02 35 33.1	+0.3
	comp=Z,7.1nm,0.9s,baz=94,slow=3.3,SNR=5.5							
EKA	Eskdalemuir Ar	148.89	4	PKPbc		PKPbc	02 35 32.3	-0.3
	comp=Z,0.5nm,0.3s,baz=311,slow=2.3,SNR=5.6							
CFR	Carcaliu	149.24	320		⇑	PKPbc	02 35 34.1	+0.4
TPGR	Topolog	149.24	319		⇑	PKPbc	02 35 34.1	+0.3
BURAR	Bucovina Array	149.38	326		⇑	PKiKP	02 35 35.0	-0.1
BURAR	Bucovina Array	149.38	326			PKiKP	02 35 35.5	+0.4
CSS	Mathiatis	149.42	298			PKPbc	02 35 35.0	+0.4
VRI	Vrincioaia	149.66	322		⇑	PKPbc	02 35 35.0	+0.2
PLOR	Plostina	149.71	322		⇑	PKPab	02 35 42.8	+0.4
KOLS	Kolonicke sedl	149.89	330	ePKP		PKiKP	02 35 36.4	+0.5
TURR	Turia	149.94	323		⇑	PKPab	02 35 45.4	+2.0
OZUR		150.04	323		⇓	PKPdf	02 35 20.0	-10
MLR	Muntele Rosu	150.32	322		⇑	PKPbc	02 35 34.8	-1.7
CJR	Cluj-Napoca	150.81	326		⇑	PKiKP	02 35 38.4	+0.4
VOIR		150.86	323		⇑	PKPbc	02 35 38.0	+0.3
LANS	Liptovska Anna	150.93	334	ePKP		PKiKP	02 35 39.4	+1.3
STEB	Steborice	150.96	336	ePKP		PKPbc	02 35 37.5	-0.2
OSTC	Ostas	150.98	339	ePKP		PKiKP	02 35 38.7	+0.6
CHVC	Chvalec	151.00	339	ePKP		PKiKP	02 35 38.4	+0.2
MARR	Marisel-Cluj	151.08	326		⇓	PKPbc	02 35 37.8	-0.3
UPC	Upice	151.09	339	ePKP		PKiKP	02 35 38.6	+0.3
DPC	Dobruska-Polom	151.12	338	ePKP		PKiKP	02 35 39.1	+0.7
ARR	Arges	151.13	323		⇑	PKiKP	02 35 39.6	+0.8
MORC	Moravsky Berou	151.17	336	ePKP		PKiKP	02 35 38.7	+0.1
MORC				e			02 35 49.0	
KRLC	Kraliky	151.19	338	ePKP	⇑	PKiKP	02 35 38.8	+0.2
DRGR		151.20	327		⇑	PKiKP	02 35 39.3	+0.5
CLL	Collm	151.27	343	i PKPbc		PKPbc	02 35 38.4	+0.1
	comp=Z,5.0nm,0.7s							
CLL				ePKPab		PKPab	02 35 49.0	+0.4
CLL				epPKPab		pPKPab	02 37 41.0	-1.0
BRG	Berggiesshubel	151.40	342	i PKPb	⇑		02 35 39.4	
BRG				Amp			02 35 40.3	
	comp=Z,5.0nm,0.4s							
BRG				PKPab		PKPab	02 35 50.4	+1.2
BRG				Amp			02 35 52.0	
	comp=Z,3.2nm,0.9s							
MAUC	Maruska	151.40	336	ePKP	⇑	PKiKP	02 35 40.5	+1.4
PVCC	Panska Ves	151.53	341	ePKP		PKiKP	02 35 39.9	+0.7
JAVC	Velka Javorina	151.88	335	ePKP		PKPab	02 35 52.7	+1.3
VRAC	Vranov	151.91	337		⇑	PKPab	02 35 51.0	-0.4
VRAC	Vranov	151.91	337	ePKP		PKPab	02 35 52.1	+0.7
SIRR	Siria	152.09	327		⇓	PKiKP	02 35 40.8	+0.2
KRUC	Moravsky	152.18	337	ePKP		PKPab	02 35 52.6	0.0
MODS	Modra-Piesok	152.42	335	ePKP		PKiKP	02 35 42.0	+0.8
MODS				e			02 35 55.0	
BZS	Buzias	152.56	326		⇑	PKPbc	02 35 41.3	-0.1
HERR	Herculane	152.65	324		⇑	PKPbc	02 35 41.6	0.0
KHC	Kasperske Hory	153.06	340	ePKP		PKPdf	02 35 34.5	-0.1
GERES	GERESS Array B	153.28	340	PKPbc		PKPbc	02 35 42.9	-0.1
	comp=Z,0.2nm,0.3s,baz=40,slow=1.9,SNR=5.0							

*IDC **05** 02:23:07.7±1.3, 37˚.45N×20˚.47E, h0km, mb3.4/7, mbtmp3.4/10, ML0.9/2, MS2.8/4, Error ellipse: s-maj=26.9km s-min=21.7km az=133.0*
*ATH **05** 02:23:07.2, 37˚.25N×20˚.35E, h12km±1km, ML3.3/13, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*THE **05** 02:23:09.5, 37˚N±2˚×20˚E±˚, h0km±1km, M3.1/35, MLh3.1/35*
ISC 05 02:23:08.2±1.7, 37˚31N±0˚.04×20˚46E±0˚.04, h3km±11km, n75, σ0§97/89, mb3.5/6, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.50	37	P		Pb	02 23 19.3	-0.3
LTHK				S		Sb	02 23 27.1	-0.2
LTHK	Lithakia	0.50	37	P		Pb	02 23 18.9	-0.7
LTHK				S		Sb	02 23 27.6	+0.3
ORTH	Orthonies,Zaky	0.57	20	P		Pb	02 23 20.6	-0.2
ORTH				S		Sb	02 23 28.9	-0.5
ORTH	Orthonies,Zaky	0.57	20	P		Pb	02 23 20.2	-0.6
ORTH				S		Sb	02 23 28.9	-0.5
KYPS	Kipseli, Zakin	0.58	30	P		Pb	02 23 21.0	-0.1
KYPS				S		Sb	02 23 30.8	+1.0
CLEM	Kyllini,Ilia,G	0.79	43	P		Pb	02 23 24.9	+0.4
CLEM				S		Sb	02 23 36.4	+0.8
RTZL	Ratzakli, Kefa	0.80	18	P		Pb	02 23 24.6	-0.1
RTZL				S		Sn	02 23 38.0	-0.9
RTZL	Ratzakli, Kefa	0.80	18	P		Pb	02 23 24.0	-0.8
RTZL				S		Sb	02 23 36.3	+0.3
KFL1	Kefalonia,Entr	0.85	2	P		Pb	02 23 25.9	+

0.3nm,0.7s
KURBB **Kurchatov Arra** 42.79 53 P P 02 31 06.3 -0.5
0.2nm,0.4s,baz=277,slow=8.9,SNR=3.3
0.2nm,0.4s
MKAR **Makanchi Array** 45.80 58 P P 02 31 30.4 -0.8
0.2nm,0.6s,baz=286,slow=5.8,SNR=1.6
0.2nm,0.6s
ZALV **Zalesovo Beam** 46.31 47 P P 02 31 34.0 -0.9
0.4nm,0.3s,baz=270,slow=8.6,SNR=2.0
0.4nm,0.3s
OPO **Ambohidratompo** 61.03 151 LR LR 03 01 16.8
comp=Z,49nm,18.1s,baz=272,slow=37

*IDC **05** 02:29:00.1±1.7, 1°.10N×123°.10E, h0km, mb3.6/4, mbtmp3.7/6, ML3.9/2, MS2.7/2, Error ellipse: s-maj=58.1km s-min=26.0km az=66.0*
*DJA **05** 02:29:08.4±0.3, 1°N±3°×12°.3E±°, h43km±5km, M4.4/23, mB4.7/2, mb4.5/6, MLv4.3/23, Mw(mB)4.0/2*
ISC 05 02:29:07.6±1.0, 0.97N±0.08×122.72E±0.08, h50km, n20, σ1s54/19, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.45**	**139**	P	**Pn**	**02 29 19.2**	**+1.0**
GTOI				S	**Sn**	**02 29 27.0**	**+1.2**
LUWI	**Luwuk**	**2.00**	**178**	P	**Pn**	**02 29 41.2**	**+2.2**
APSI	**Ampana**	**2.16**	**210**	P	**Pn**	**02 29 43.9**	**+2.8**
MNI	**Manado**	**2.17**	**78**	P	**Pn**	**02 29 41.9**	**+0.6**
PCI	**Palu**	**3.43**	**237**	P	**Pn**	**02 29 58.3**	**-0.3**
SGSI	**Sangihe**	**3.89**	**46**	P	**Pn**	**02 30 05.2**	**+0.3**
SANI	**Sanana**	**4.44**	**133**	P	**Pn**	**02 30 12.6**	**+0.2**
KDI	**Kendari**	**4.90**	**181**	P	**Pn**	**02 30 20.3**	**+1.5**
	0.2nm34nm,0.6s						
MMSI	**Mamuju**	**5.27**	**226**	P	**Pn**	**02 30 25.3**	**+1.5**
	0.2nm69nm,0.6s						
KAPI	**Kappang**	**6.64**	**206**	Pn	**Pn**	**02 30 44.0**	**+1.3**
	2.2nm,0.3s,baz=24,slow=3.7,SNR=6.8						
	7.2nm,0.5s						
DAV	**Davao City (W)**	**6.69**	**25**	LR	LR	02 33 30.0	
	comp=Z,25nm,19.6s,baz=152,slow=42						
PAGZ	**Pagadian**	**6.86**	**6**	*i* P	**Pn**	**02 30 46.6**	**+0.9**
BIPH	**Bislig**	**8.03**	**27**	*e*P	**Pn**	**02 31 03.6**	**+1.9**
FAKI	**Fak Fak**	**10.28**	**112**	P	**Pn**	**02 31 33.3**	**+0.7**
TGY	**Tagaytay City**	**13.16**	**352**	LR	LR	02 37 50.5	
	comp=Z,84nm,18.8s,baz=257,slow=40						
FITZ	**Fitzroy Crossi**	**19.17**	**172**	P	**P**	**02 33 25.9**	**-1.2**
	0.3nm,0.3s,baz=349,slow=11,SNR=1.2						
	4.2nm,0.9s						
WRA	**Warramunga Arr**	**23.71**	**152**	P	**P**	**02 34 12.6**	**-2.5**
	1.8nm,0.6s,baz=327,slow=10,SNR=13						
	1.8nm,0.6s						
ASAR	**Alice Springs**	**26.80**	**157**	P	**P**	**02 34 41.9**	**-1.3**
	0.2nm,0.3s,baz=329,slow=9.0,SNR=4.3						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**37.25**	**153**	P	**P**	**02 36 13.4**	**-1.1**
	1.3nm,0.6s,baz=341,slow=9.9,SNR=3.0						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**57.64**	**328**	P	**P**	**02 38 52.8**	**0.0**
	0.2nm,0.5s,baz=125,slow=7.6,SNR=2.2						
	0.2nm,0.5s						

*IDC **05** 02:44:41.5±1.1, 34°.12N×25°.81E, h0km, mb3.8/9, mbtmp3.7/16, ML3.1/6, MS3.0/5, Error ellipse: s-maj=21.2km s-min=17.0km az=20.0*
*NEIC **05** 02:44:42.2±2.3, 33°.9N±0°.1×25°.67E±0°.09, h10km±1km, mb4.2/6, Error ellipse: s-maj=18.4km s-min=10.4km az=204.0*
*GII **05** 02:44:50.8±0.0, 33°.657N±0°.004×26°.274E±0°.001, h0km, Mws3.6, confirmed*
ISC 05 02:44:44.3±0.8, 33°.94N±0°.08×25°.84E±0°.07, h26km, n62, σ2s27/71, mb3.8/9, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.56**	**330**	Pn	**Pn**	**02 45 10.2**	**-0.2**
	6.1nm,0.3s,baz=141,slow=21,SNR=26						
AKAS	**Kas**	**3.84**	**52**		**Pn**	**02 45 43.2**	**+1.3**
ELL	**Elmali**	**4.35**	**49**		**Pn**	**02 45 50.9**	**+2.1**
CSS	**Mathiatis**	**6.27**	**79**		**Pn**	**02 46 15.2**	**0.0**
CSS	**Mathiatis**	**6.27**	**79**	P	**Pn**	**02 46 16.8**	**+1.6**
	0.1nm24nm,1.0s						
CSS	**Mathiatis**	**6.27**	**79**	P	**Pn**	**02 46 16.8**	**+1.6**
CSS				S	**Sn**	**02 47 24.7**	**-1.2**
KZIT	**Kziot**	**7.84**	**110**	P	**Pn**	**02 46 39.4**	**+2.7**
	0.1nm836nm30nm,1.1s						
KZIT	**Kziot**	**7.84**	**110**	P	**Pn**	**02 46 37.0**	**+0.3**
KZIT				S	**Sn**	**02 48 00.1**	**-4.5**
SLTI	**Sal'it**	**7.90**	**100**	P	**Pn**	**02 46 38.6**	**+1.0**
SLTI				S	**Sn**	**02 48 02.8**	**-3.4**
MMA0B	**Mount Meron ar**	**8.04**	**94**	P	**Pn**	**02 46 41.5**	**+2.0**
MMA0B				S	**Sn**	**02 48 06.8**	**-2.9**
MMAI	**Mount Meron Ar**	**8.04**	**94**	Pn	**Pn**	**02 46 40.3**	**+0.8**
	2.0nm,0.3s,baz=282,slow=15,SNR=2.8						
MMAI				Sn	**Sn**	**02 48 09.3**	**-0.3**
	2.2nm,0.3s,baz=270,slow=32,SNR=5.5						
	0.6nm,0.3s						
SALP	**Salfit**	**8.07**	**101**	P	**Pn**	**02 46 41.0**	**+1.1**
	0.1nm21nm,0.8s						
SALP	**Salfit**	**8.07**	**101**	P	**Sn**	**02 48 10.5**	**+0.2**
	0.1nm67µm1µm27nm,0.7s						
MMLI	**Mount Malkishu**	**8.17**	**98**	P	**Pn**	**02 46 42.0**	**+0.8**
MMLI				S	**Sn**	**02 48 09.8**	**-2.9**
GEM	**Giv'at Ha'Em**	**8.23**	**92**	P	**Pn**	**02 46 43.8**	**+1.7**
GEM				S	**Sn**	**02 48 12.8**	**-1.4**
RMNI	**Mount Ramon**	**8.26**	**111**	P	**Pn**	**02 46 43.0**	**+0.6**
RMNI				S	**Sn**	**02 48 10.1**	**-4.8**
QRNJ	**Al-Qirein**	**8.32**	**98**	P	**Pn**	**02 46 45.0**	**+1.8**
	16µm1µm,0.9s						
QRNJ	**Al-Qirein**	**8.32**	**98**	P	**Sn**	**02 48 18.5**	**+2.2**
	7.0nm23µm2µm,0.7s						
MSBI	**Mazada**	**8.44**	**105**	P	**Pn**	**02 46 47.2**	**+2.3**
	4.0nm,1.2s						
MSBI	**Mazada**	**8.44**	**105**	P	**Sn**	**02 48 19.7**	**+0.4**
	0.0nm3.1nm,0.5s						
MSBI	**Mazada**	**8.44**	**105**	P	**Pn**	**02 46 45.7**	**+0.8**
MSBI				S	**Sn**	**02 48 15.8**	**-3.6**
BR131	**Keskin Array S**	**8.51**	**45**		**Pn**	**02 46 48.5**	**+2.5**
BRTR	**Keskin Array B**	**8.51**	**45**	Pn	**Pn**	**02 46 46.5**	**+0.5**
	0.2nm,0.3s,baz=229,slow=13,SNR=8.6						
BRTR				LR	LR	02 51 12.7	
	comp=Z,86nm,20.0s,baz=229,slow=47						
	1.5nm,0.9s						
GHAJ	**Ghor Haditha**	**8.61**	**105**		**Pn**	**02 46 49.0**	**+1.7**
GHAJ	**Ghor Haditha**	**8.61**	**105**	P	**Pn**	**02 46 49.2**	**+1.9**
	532nm21nm,0.5s						
GHAJ	**Ghor Haditha**	**8.61**	**105**	P	**Sn**	**02 48 30.2**	**+6.7**
GHAJ	**Ghor Haditha**	**8.61**	**105**	P	**Pn**	**02 46 48.0**	**+0.8**
GHAJ				S	**Sn**	**02 48 19.4**	**-4.1**
HRFI	**Mount Harif**	**8.72**	**114**	P	**Pn**	**02 46 51.1**	**+2.2**
	17nm,0.4s						
HRFI	**Mount Harif**	**8.72**	**114**	P	**Sn**	**02 48 30.7**	**+4.3**
	0.0nm11nm,0.7s						
HRFI	**Mount Harif**	**8.72**	**114**	P	**Pn**	**02 46 49.1**	**+0.3**
HRFI				S	**Sn**	**02 48 21.8**	**-4.6**
EIL	**Elat**	**8.84**	**116**		**Pn**	**02 46 52.5**	**+2.1**
	1.7nm,0.3s,baz=285,slow=7.9,SNR=16						
EIL				Sn	**Sn**	**02 48 25.6**	**-3.6**
	1.1nm,0.3s,baz=358,slow=3.6,SNR=5.7						
	7.0nm,0.5s						
EIL	**Elat**	**8.84**	**116**	P	**Pn**	**02 46 53.3**	**+2.9**
	0.0nm12nm,1.1s						
EIL	**Elat**	**8.84**	**116**	P	**Pn**	**02 46 51.1**	**+0.6**
EIL				S	**Sn**	**02 48 24.4**	**-4.8**
TIP	**Timpagrande**	**8.98**	**308**	Pn	**Pn**	**02 46 51.7**	**-0.7**
BNN	**Bunyan**	**9.43**	**56**		**Pn**	**02 47 00.8**	**+2.1**
ASF	**Jabal al Asfar**	**9.44**	**98**	Pn	**Pn**	**02 46 59.0**	**+0.2**
	0.2nm,0.3s,baz=297,slow=24,SNR=2.4						
	1.2nm,0.5s						
PDG	**Podgorica**	**9.93**	**330**	Pn	**Pn**	**02 47 02.9**	**-2.4**
MLR	**Muntele Rosu**	**11.54**	**0**	LR	LR	02 52 45.3	
	comp=Z,51nm,18.8s,baz=250,slow=43						
SABO	**M.te Sabotino**	**15.23**	**326**	Pn	**Pn**	**02 48 16.2**	**-1.4**
SABO				IAmb	IAmb	02 48 54.9	
	comp=Z,16nm,1.4s						
GNI	**Garni**	**16.30**	**62**	LR	LR	02 56 32.0	
	comp=Z,39nm,18.4s,baz=258,slow=44						
KIV	**Kislovodsk**	**16.45**	**48**	P	**P**	**02 48 37.3**	**+1.3**
KIV				IAmb	IAmb	02 48 38.9	
	comp=Z,17nm,1.2s						
KBZ	**Khabaz**	**16.47**	**49**	Pn	**P**	**02 48 35.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=247,slow=9.0,SNR=8.8						
	comp=Z,6.2nm,1.0s						
AKASG	**Malin Array Be**	**16.93**	**7**	Pn	**Pn**	**02 48 38.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=200,slow=11,SNR=7.4						
GERES	**GERESS Array B**	**17.42**	**332**	P	**Pn**	**02 48 45.3**	**-0.3**
	baz=140,slow=13,SNR=2.6						
	comp=Z,0.3nm,0.7s						
HFS	**Hagfors**	**27.39**	**347**	P	**P**	**02 50 25.9**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=155,slow=7.9,SNR=6.6						
	comp=Z,0.5nm,0.4s						
FINES	**FINESS Array B**	**27.52**	**0**	P	**P**	**02 50 26.7**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=161,slow=11,SNR=17						
	comp=Z,0.7nm,0.3s						
FIA1	**FINESS Array S**	**27.52**	**0**	P	**P**	**02 50 26.4**	**-2.0**
AKTO	**Aktyubinsk**	**28.69**	**45**	LR	LR	03 06 02.9	
	comp=Z,27nm,18.6s,baz=255,slow=45						
NOA	**NORSAR Array B**	**28.72**	**345**	P	**P**	**02 50 37.8**	**-1.4**
	comp=Z,0.1nm,0.5s,baz=155,slow=8.5,SNR=1.6						
	comp=Z,0.1nm,0.5s						
AB31	**Akbulak array**	**29.44**	**48**	P	**P**	**02 50 46.6**	**+0.9**
ABKAR	**Akbulak array**	**29.44**	**48**	P	**P**	**02 50 47.0**	**+1.2**
TORD	**Torodi Ar. Bea**	**30.17**	**232**	P	**P**	**02 50 54.2**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=31,slow=8.8,SNR=14						
	comp=Z,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**35.65**	**360**	P	**P**	**02 51 38.0**	**-1.7**
	comp=Z,2.2nm,1.0s,baz=172,slow=9.4,SNR=6.9						
	comp=Z,2.2nm,1.0s						
ARCES	**ARCESS Array B**	**35.65**	**360**	P	**P**	**02 51 37.5**	**-2.2**
ARCES				IAmb	IAmb	02 52 17.0	
	comp=Z,23nm,1.5s						
JMIC	**Jan Mayen**	**41.41**	**344**	LR	LR	03 09 41.6	
	comp=Z,60nm,20.6s,baz=343,slow=36						
KURBB	**Kurchatov Arra**	**41.46**	**50**	P	**P**	**02 52 29.7**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=277,slow=8.8,SNR=13						
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**41.52**	**50**	P	**P**	**02 52 30.4**	**+1.2**
KURK				IAmb	IAmb	02 52 32.8	
	comp=Z,3.0nm,1.1s						
MKAR	**Makanchi Array**	**43.99**	**56**	P	**P**	**02 52 50.7**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=272,slow=6.7,SNR=9.3						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**43.99**	**56**	P	**P**	**02 52 51.3**	**+1.9**
ZALV	**Zalesovo Beam**	**45.45**	**45**	P	**P**	**02 52 59.9**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=268,slow=7.2,SNR=3.9						
	comp=Z,1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**45.45**	**45**	P	**P**	**02 53 01.1**	**+0.2**
SONM	**Songino Array**	**59.83**	**50**	P	**P**	**02 54 48.8**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=288,slow=7.5,SNR=1.8						
	comp=Z,0.4nm,0.5s						

DJA 05 02:52:04.4±0.4, 1°N±4°×12°1E±°, h70km±8km, M4.1/18, mb4.5/1, MLv4.0/18, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**1.72**	**162**	P	Pn	02 52 31.2	-1.1
GTOI	**Gorontalo**	**1.90**	**93**	P	Pn	02 52 33.0	-1.7
GTOI				S	Sn	02 52 55.0	-2.8
PCI	**Palu**	**2.06**	**218**	P	Pn	02 52 36.8	-0.2
LUWI	**Luwuk**	**2.42**	**137**	P	Pn	02 52 42.3	+0.5
MNI	**Manado**	**3.80**	**79**	P	Pn	02 53 01.0	+0.5
MMSI	**Mamuju**	**4.05**	**213**	P	Pn	02 53 03.9	-0.1
KDI	**Kendari**	**4.89**	**162**	P	Pn	02 53 14.7	-0.8
SANI	**Sanana**	**5.61**	**120**	P	Pn	02 53 23.6	-1.6

*IDC **05** 03:05:10.5±1.4, 9°.28S×156°.59E, h0km, mb3.9/7, mbtmp3.9/7, MS3.0/10, Error ellipse: s-maj=48.4km s-min=25.3km az=110.0*
ISC 05 03:05:14.4±1.3, 9°.3S±0°.2×156°.6E±0°.3, h24km, n17, σ0s80/7, mb3.7/7, MS3.1/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.32**	**93**	LR	LR	03 07 17.1	
	comp=Z,24nm,20.0s,baz=302,slow=38						
KRVT	**Keravat (AS076**	**6.71**	**317**	LR	LR	03 09 28.9	
	comp=Z,18nm,20.7s,baz=263,slow=38						
PMG	**Port Moresby**	**9.30**	**269**	LR	LR	03 10 53.7	
	comp=Z,312nm,20.9s,baz=140,slow=37						
DZM	**Mont Dzumac**	**15.84**	**144**	LR	LR	03 13 55.8	
	comp=Z,75nm,20.7s,baz=242,slow=33						
MSVF	**Nonsavu**	**22.47**	**114**	LR	LR	03 17 46.8	
	comp=Z,45nm,19.0s,baz=213,slow=34						
WRA	**Warramunga Arr**	**23.96**	**241**	P	**P**	**03 10 26.6**	**-0.5**
	1.9nm,0.8s,baz=65,slow=9.0,SNR=5.2						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**25.96**	**234**	P	**P**	**03 10 44.8**	**-0.6**
	1.2nm,0.9s,baz=66,slow=9.5,SNR=7.1						
	1.2nm,0.9s						
STKA	**Stephens Creek**	**26.43**	**210**	P	**P**	**03 10 49.8**	**+0.3**
	4.0nm,0.9s,baz=39,slow=11,SNR=6.2						
	4.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**31.27**	**250**	LR	LR	03 23 00.0	
	comp=Z,91nm,19.9s,baz=344,slow=34						
AFI	**Afiamalu**	**31.31**	**101**	LR	LR	03 22 32.4	
	comp=Z,60nm,19.2s,baz=351,slow=33						
RPZ	**Rata Peaks**	**36.53**	**162**	LR	LR	03 26 46.8	
	comp=Z,11nm,18.3s,baz=352,slow=36						
KSRS	**Korea Array**	**53.70**	**332**	LR	LR	03 38 02.8	
	comp=Z,8.6nm,18.0s,baz=220,slow=37						
SONM	**Songino Array**	**72.11**	**327**	P	**P**	**03 16 36.6**	**-0.4**
	1.1nm,0.8s,baz=128,slow=9.3,SNR=4.4						
	1.1nm,0.8s						
QSPA	**South Pole Qui**	**80.69**	**180**	P	**P**	**03 17 25.5**	**+0.1**
	2.7nm,1.0s,baz=360,slow=4.4,SNR=5.1						
	2.7nm,1.0s						
MAW	**Mawson**	**82.89**	**203**	LR	LR	03 51 03.5	
	comp=Z,39nm,18.3s,baz=252,slow=33						
ILAR	**Eielson Array**	**84.93**	**21**	P	**P**	**03 17 46.7**	**-0.5**
	0.4nm,1.0s,baz=237,slow=4.7,SNR=3.2						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**86.16**	**318**	P	**P**	**03 17 54.9**	**+1.2**
	0.3nm,0.6s,baz=104,slow=5.1,SNR=3.7						
	0.3nm,0.6s						

KRSC 05 03:12:49.3±3.5, 55°.30N×166°.54E, h40km±17km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.34**	**255**	*e*P	Pn	03 12 59.0	+1.0
BKI				*e*S	Sn	03 13 04.5	+0.5
KBTR	**Krutoberegovo**	**2.29**	**295**	*e*P	Pn	03 13 25.8	+1.2
MKZ	**Mys Kozlova**	**2.87**	**257**	*e*P	Pn	03 13 36.3	+3.8
SMKR	**Semkarok**	**3.13**	**296**	*e*P	Pn	03 13 39.3	+3.1
TUMD	**Tumrok D**	**3.52**	**271**	*e*S	Sn	03 14 27.0	+5.2
KMNR	**Kamenistaya**	**3.61**	**280**	*e*P	Pn	03 13 47.2	+4.4
TUMR	**Tumrok**	**3.66**	**272**	*e*P	Pn	03 13 48.3	+4.9
SRDR	**Sredinnyy**	**3.98**	**288**	*e*P	Pn	03 13 52.2	+4.3
SPN	**Mys Shipunski**	**4.42**	**243**	*e*P	Pn	03 13 58.6	+4.9
SPN				*e*S	Sn	03 14 47.7	+3.9
SDLR	**Sedlovina**	**4.92**	**249**	*e*P	Pn	03 14 05.7	+4.8
SMAR	**Somma**	**4.97**	**249**	*e*P	Pn	03 14 06.7	+5.2
KRER	**Koryakskii**	**4.98**	**250**	*e*P	Pn	03 14 07.1	+5.4
KRX	**Arik**	**5.01**	**250**	*e*P	Pn	03 14 07.3	+5.2
KOK	**Koryaka**	**5.05**	**250**	*e*P	Pn	03 14 07.7	+5.2
DALK	**Dalny**	**5.11**	**247**	*e*P	Pn	03 14 00.6	-2.6
PET	**Petropavlovsk**	**5.16**	**247**	*e*S	Sn	03 15 07.2	+5.0
GNL	**Ganaly**	**5.26**	**256**	*e*P	Pn	03 14 10.8	+5.4
KRMR	**Karymshinskiy**	**5.54**	**247**	*e*S	Sn	03 15 17.2	+5.8
RUS	**Russkaya**	**5.55**	**242**	*e*P	Pn	03 14 13.6	+4.3
MTVR	**Mutnovka**	**5.69**	**244**	*e*P	Pn	03 14 16.5	+5.2
ASAK	**Asacha**	**5.89**	**244**	*e*P	Pn	03 14 19.9	+5.9

*IDC **05** 03:26:54.9±1.0, 30°.27N×138°.70E, h420km±14km, mb3.0/9, mbtmp3.8/14, Error ellipse: s-maj=38.0km s-min=14.2km az=73.0*
*JMA **05** 03:26:54.8±0.2, 30°N±1°×13°9E±°, h435km, MV3.4/19, NEAR TORISHIMA IS*
ISC 05 03:26:55.3±0.7, 30°.32N±0°.07×139°.2E±0°.1, h450km, n18, σ1s70/23, mb3.4/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.83**	**10**	*e*S	**S**	**03 28 51.9**	**-2.6**
JHJ	**Hachijo jima 2**	**2.83**	**10**	P	**P**	**03 28 01.1**	**0.0**
	56nm,0.6s,baz=313,slow=21,SNR=6.3						
JHJ				S	**S**	**03 28 51.5**	**-3.0**
	56nm,0.3s,baz=244,slow=23,SNR=5.8						
CBIJ	**Chichi jima**	**4.14**	**140**	P	**P**	**03 28 12.2**	**+0.4**
CBIJ				*e*S	**S**	**03 29 11.9**	**-2.0**
JCJ	**Chichijima**	**4.14**	**140**	P	**P**	**03 28 11.1**	**-0.8**
	18nm,0.3s,baz=282,slow=18,SNR=22						
JCJ				S	**S**	**03 29 11.1**	**-2.8**
	49nm,0.3s,baz=275,slow=20,SNR=12						
BSO1	**Boso 1**	**4.57**	**19**	*e*P	**P**	**03 28 15.4**	**+0.6**
BSO1				*e*S	**S**	**03 29 19.4**	**-0.5**
BSO3	**Boso 3**	**4.60**	**13**	*e*P	**P**	**03 28 15.4**	**-0.1**
BSO3				*e*S	**S**	**03 29 19.1**	**-1.8**
MJAR	**Matsushiro Arr**	**6.26**	**353**	P	**P**	**03 28 31.5**	**-0.8**
	0.6nm,0.4s,baz=171,slow=12,SNR=1.9						
KSRS	**Korea Array**	**11.77**	**310**	P	**P**	**03 29 29.3**	**-2.3**
	2.3nm,0.9s,baz=123,slow=11,SNR=11						
KLR	**Kul'dur**	**19.72**	**345**	P	**P**	**03 30 55.8**	**+1.9**
	1.0nm,0.6s,baz=162,slow=9.4,SNR=4.0						
SONM	**Songino Array**	**30.59**	**314**	P	**P**	**03 32 30.3**	**-0.6**
	0.5nm,0.5s,baz=111,slow=7.9,SNR=3.1						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**46.43**	**307**	P	**P**	**03 34 39.0**	**-1.1**
	0.4nm,0.7s,baz=92,slow=7.7,SNR=5.1						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**48.94**	**313**	P	**P**	**03 34 57.9**	**-0.9**
	0.8nm,0.5s,baz=92,slow=9.4,SNR=11						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**50.19**	**186**	P	**P**	**03 35 10.7**	**+2.2**
	0.4nm,0.8s,baz=2.2,slow=7.4,SNR=1.9						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**53.91**	**316**	P	**P**	**03 35 34.8**	**-0.2**
	0.7nm,0.3s,baz=95,slow=7.2,SNR=5.3						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**53.92**	**186**	P	**P**	**03 35 36.4**	**+1.0**
	0.2nm,0.7s,baz=2.6,slow=6.0,SNR=1.1						
	0.2nm,0.7s						
ARCES	**ARCESS Array B**	**69.64**	**340**	P	**P**	**03 37 20.0**	**+2.1**
	2.1nm,1.0s,baz=57,slow=7.4,SNR=5.0						
	2.1nm,1.0s						
FINES	**FINESS Array B**	**73.90**	**333**	P	**P**	**03 37 44.1**	**+1.1**
	4.0nm,1.0s,baz=61,slow=6.0,SNR=8.7						
	4.0nm,1.0s						
HFS	**Hagfors**	**79.43**	**336**	P	**P**	**03 38 14.9**	**+1.5**
	3.5nm,1.0s,baz=51,slow=5.9,SNR=8.9						
	3.5nm,1.0s						

*IDC **05** 04:36:34.7±0.5, 26°.88S×113°.75W, h0km, mb4.5/18, mbtmp4.4/19, ML3.4/1, MS3.9/40, Error ellipse: s-maj=19.2km s-min=14.6km az=81.0*
*MOS **05** 04:36:35.8±1.4, 26°.80S×113°.70W, h10km, mb5.1/23, Error ellipse: s-maj=13.0km s-min=10.3km az=69.8*
*NEIC **05** 04:36:37.6±1.4, 27°.0S±0°.1×113°.8W±0°.2, h10km±1km, mb5.1/513, Error ellipse: s-maj=25.1km s-min=19.4km az=284.0*
*GFZ **05** 04:36:37.1±0.3, 27°S±5°×11°4W±1°0, h10km, M4.8/23, mb4.8/23*
*GCMT **05** 04:36:39.6±0.2, 26°.99S±0°.02×113°.74W±0°.01, h16km, MW4.9/109, Moment Tensor Solution. s36,c47; s109,c163; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.71±.15; Mθθ-0.53±.10; Mϕϕ3.24±.11; Mrθ-0.72±.34; Mθϕ-0.71±.07; Mϕr-0.67±.26; Best double couple: M◻3.22600×10^16 NP1◻s151.00000°, δ43.00000°, λ-118.00000°. NP2◻s7.00000°, δ53.00000°, λ-66.00000°. Principal axes: T 3.4140, Plg5.0000°, Azm81.0000°; N -0.3750, Plg19.0000°, Azm172.0000°; P -3.0380, Plg70.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 04:36:36.4±0.3, 26°.88S±0°.08×113°.91W±0°.07, h10km, n506, σ1s21/248, mb5.1/251, MS4.0/40, 4C-6D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA02	**Isla de Pascua**	**4.00**	**95**	*e*P	**Pn**	**04 37 35.0**	**-2.8**
RPN	**Rapa Nui**	**4.09**	**94**	Pn	**Pn**	**04 37 36.1**	**-2.9**
	2.8nm,0.3s,baz=259,slow=9.6,SNR=3.9						
RPN				LR	LR	04 38 47.8	
	comp=Z,2µm,19.8s,baz=332,slow=34						
	146nm,1.1s						
RPN	**Rapa Nui**	**4.09**	**94**	Pn	**Pn**	**04 37 35.0**	**-4.0**
RPN	**Rapa Nui**	**4.09**	**94**	P	**Pn**	**04 37 35.0**	**-4.0**
TAOE	**Nuku Hiva Isla**	**30.63**	**301**	*e*S	**S**	**04 47 48.8**	**-4.8**
	140nm,28.1s						
TAOE				*e*LR	LR	04 50 54.2	
	860nm,25.6s						
H03N2	**Juan Fernandez**	**30.84**	**111**	T	T	05 15 01.2	
	baz=277,slow=74,SNR=3216						
H03N3	**Juan Fernandez**	**30.85**	**111**	T	T	05 15 02.4	
	baz=277,slow=74,SNR=2849						
H03N1	**Juan Fernandez**	**30.86**	**111**	T	T	05 15 02.8	
	baz=277,slow=74,SNR=3918						
TBI	**Tubuai**	**32.32**	**268**	*e*S	**S**	**04 48 18.1**	**-1.6**
	1µm,32.0s						
TBI				*e*LR	LR	04 51 29.7	
	3µm,39.5s						
TBI				*e*T	T	05 17 11.2	
	1.5nm,0.1s						
PPT2	**Papeete2**	**34.19**	**278**	*e*S	**S**	**04 48 44.1**	**-4.9**
	142nm,26.5s

comp=Z,2.0nm,0.3s
ROSC El Rosal 49.60 57 P P 04 45 27.0 -1.6
ROSC IAmb IAmb 04 45 39.5
comp=Z,22nm,1.2s
ROSC El Rosal 49.60 57 P P 04 45 27.0 -1.6
ROSC pmax pmax
comp=Z,22nm,1.2s
SIV San Ignacio 50.05 89 LR LR 05 02 45.8
comp=Z,330nm,21.7s,baz=292,slow=32
CPUP Villa Florida 50.22 103 P P 04 45 31.6 -1.2
comp=Z,2.3nm,1.0s,baz=254,slow=7.5,SNR=4.3
CPUP LR LR 05 02 55.7
comp=Z,128nm,21.3s,baz=248,slow=32
comp=Z,2.3nm,1.0s
LPIG La Paz 50.81 4 LR LR 05 02 00.3
comp=Z,107nm,20.1s,baz=180,slow=30
HPIG 54.09 9 P P 04 46 02.0 +0.3
SDV Santo Domingo 55.00 56 LR LR 05 04 50.4
comp=Z,111nm,19.3s,baz=262,slow=31
AFI Afiamalu 55.34 271 LR LR 05 03 48.1
comp=Z,151nm,19.2s,baz=78,slow=29
HBVL Hebbronville 55.61 17 P P 04 46 13.7 +1.3
HSIG 55.66 3 P P 04 46 13.4 +0.7
833A Chaparral WMA, 56.63 15 IAmb IAmb 04 46 21.6
comp=Z,23nm,0.8s
TXAR Lajitas Array 56.75 11 P P 04 46 21.3 +0.7
comp=Z,4.4nm,0.9s,baz=193,slow=8.9,SNR=44
TXAR LR LR 05 05 29.8
comp=Z,58nm,21.1s,baz=264,slow=31
comp=Z,4.4nm,0.9s
TXAR Lajitas Array 56.75 11 P P 04 46 21.5 +0.8
TXAR Lajitas Array 56.75 11 P P 04 46 21.5 +0.8
TX31 Lajitas Ar. Si 56.75 11 P P 04 46 21.6 +0.9
SAND Sanderson 57.63 12 P 04 46 27.9 +1.0
HNDO Hondo 57.82 15 IAmb IAmb 04 46 30.1
comp=Z,24nm,0.9s
EF04 Eagle Ford 04 57.88 17 IAmb IAmb 04 46 29.9
comp=Z,29nm,1.1s
VHRN Van Horn 57.98 9 P P 04 46 29.6 +0.3
URZ Urewera 58.02 240 LR LR 05 06 06.7
comp=Z,363nm,20.0s,baz=137,slow=30
PIX Pinacate 58.12 0 P P 04 46 31.5 +1.4
PIX IAmb IAmb 04 46 32.7
comp=Z,18nm,1.1s
TPB01 Permian Basin 58.31 10 IAmb IAmb 04 46 33.2
comp=Z,11nm,1.0s
TPB05 Hovey Rd 58.36 11 IAmb IAmb 04 46 34.1
comp=Z,21nm,0.9s
PECS Pecos 58.72 10 P P 04 46 34.4 0.0
EPT El Paso 58.75 7 IAmb IAmb 04 46 36.8
comp=Z,15nm,0.9s
OZNA Ozona 58.76 13 P P 04 46 35.0 +0.2
OZNA IAmb IAmb 04 46 36.3
comp=Z,20nm,1.4s
MNTX Cornudas Mount 58.82 8 P P 04 46 35.5 +0.5
MNHN Monahans 58.87 11 IAmb IAmb 04 46 37.1
comp=Z,16nm,0.9s
TPB13 Reeves - Culbe 58.90 10 IAmb IAmb 04 46 37.5
comp=Z,23nm,0.9s
TUC Tucson 58.94 3 P P 04 46 37.1 +1.1
TUC IAmb IAmb 04 46 38.4
comp=Z,12nm,0.9s
TUC Tucson 58.94 3 P P 04 46 37.1 +1.1
TUC pmax pmax
comp=Z,12nm,1.0s
TUC Tucson 58.94 3 P P 04 46 37.4 +1.5
TPB06 Permian Basin 59.09 11 IAmb IAmb 04 46 38.6
comp=Z,17nm,0.9s
BOAV Boa Vista 59.10 69 P P 04 46 35.9 -1.5
BOAV IAmb IAmb 04 46 39.8
comp=Z,26nm,1.5s
HKT Hockley 59.10 18 P P 04 46 37.8 +0.9
HKT IAmb IAmb 04 46 39.0
comp=Z,20nm,1.1s
HKT Hockley 59.10 18 *d i* P P **04 46 37.8 +0.9**
HKT pmax pmax
comp=Z,15nm,1.0s
HKT Hockley 59.10 18 P P 04 46 38.0 +1.1
YUH Yuha Desert 59.23 358 P P 04 46 39.7 +1.8
YUH IAmb IAmb 04 46 40.6
comp=Z,18nm,1.1s
113A Mohawk Valley, 59.32 0 P P 04 46 39.9 +1.4
113A IAmb IAmb 04 46 41.1
comp=Z,14nm,0.8s
229A Bryant Ranch, 59.65 12 IAmb IAmb 04 46 42.2
comp=Z,9.7nm,0.9s
BORC Borrego Spring 59.87 358 P P 04 46 43.8 +1.5
BORC IAmb IAmb 04 46 44.9
comp=Z,21nm,1.1s
128A Castleberry Fa 60.17 11 IAmb IAmb 04 46 45.8
comp=Z,20nm,0.9s
PFO Pinyon Flats O 60.21 358 LR LR 05 07 33.5
comp=Z,64nm,20.0s,baz=133,slow=31
PFO Pinyon Flats O 60.21 358 P P 04 46 46.4 +1.6
PFO Pinyon Flats O 60.21 358 *e* P P **04 46 45.5 +0.7**
PFO pmax pmax
comp=Z,9.0nm,1.0s
129A Stewart Farms, 60.28 12 IAmb IAmb 04 46 46.7
comp=Z,20nm,1.0s
BLYC Blythe 60.30 359 IAmb IAmb 04 46 48.0
comp=Z,18nm,0.9s
WHTX Lake Whitney, 60.61 16 IAmb IAmb 04 46 48.6
comp=Z,16nm,0.8s
ABTX Abilene, Hawle 60.72 14 IAmb IAmb 04 46 49.4
comp=Z,23nm,1.1s
IRM Iron Mountain 60.72 359 IAmb IAmb 04 46 50.9
comp=Z,20nm,1.2s
BFSC Mount Baldy Ra 60.89 356 IAmb IAmb 04 46 51.8
comp=Z,12nm,1.1s
SN07 Snyder 07 60.91 12 IAmb IAmb 04 46 50.5
comp=Z,15nm,0.9s
X18A Snowflake 61.19 4 IAmb IAmb 04 46 54.1
comp=Z,19nm,0.9s
RPZ Rata Peaks 61.52 233 LR LR 05 09 16.4
comp=Z,33nm,18.1s,baz=48,slow=32
BDFB Brasilia 61.84 94 P P 04 46 57.3 +1.0
comp=Z,2.8nm,0.8s,baz=237,slow=6.5,SNR=5.7
BDFB LR LR 05 10 38.4
comp=Z,144nm,20.9s,baz=284,slow=33
comp=Z,2.8nm,0.8s
ANMO Albuquerque 61.90 7 LR LR 05 09 06.0
comp=Z,94nm,18.8s,baz=198,slow=32
ANMO Albuquerque 61.90 7 P P 04 46 56.9 +0.7
ANMO Albuquerque 61.90 7 ⇑ *i* P P **04 46 56.7 +0.4**
ANMO pmax pmax
comp=Z,4.0nm,0.9s
ANMO Albuquerque 61.90 7 P P 04 46 57.1 +0.9
GSC Goldstone, Bar 61.91 357 IAmb IAmb 04 46 59.0
comp=Z,23nm,1.1s
Z35A Perchaven, San 61.94 16 IAmb IAmb 04 46 59.6
comp=Z,18nm,0.9s
MTPC Mountain Pass 62.05 358 IAmb IAmb 04 47 00.2
comp=Z,13nm,1.1s
WUAZ Wupatki 62.11 2 IAmb IAmb 04 47 00.4
comp=Z,16nm,1.1s
LRMC Laurel Mtn Rad 62.13 357 IAmb IAmb 04 47 00.3
comp=Z,22nm,1.2s
QSM Queen of Sheba 62.57 357 IAmb IAmb 04 47 03.2
comp=Z,18nm,1.0s
LOOK Love County 62.59 16 IAmb IAmb 04 47 01.9
comp=Z,15nm,0.9s
VNDA Vanda 62.71 194 P P 04 47 01.2 +0.2
comp=Z,1.5nm,1.0s,baz=90,slow=6.8,SNR=5.0
VNDA LR LR 05 07 38.3
comp=Z,69nm,18.9s,baz=195,slow=30
comp=Z,1.5nm,1.0s
VNDA Vanda 62.71 194 P P 04 47 02.3 +1.3
VNDA Vanda 62.71 194 P P 04 47 02.3 +1.3
VNDA pmax pmax
comp=Z,14nm,2.0s
GWY Greenwater Val 62.78 357 IAmb IAmb 04 47 04.7
comp=Z,20nm,1.1s
WMOK Wichita Mounta 62.94 14 P P 04 47 02.9 -0.1
MSVF Nonsavu 62.97 263 LR LR 05 07 38.5
comp=Z,242nm,21.5s,baz=93,slow=30
FURC Furnace Creek, 63.07 357 IAmb IAmb 04 47 06.7
comp=Z,19nm,1.0s
QSPA South Pole Qui 63.29 180 P P 04 47 05.8 +0.6
comp=Z,4.5nm,0.9s,baz=135,slow=1.6,SNR=13
comp=Z,4.5nm,0.9s
QSPA South Pole Qui 63.29 180 P P 04 47 05.4 +0.2
QSPA IAmb IAmb 04 47 13.9
comp=Z,22nm,1.2s
QSPA South Pole Qui 63.29 180 P P 04 47 06.4 +1.1
TPNV Topopah Spring 63.53 358 IAmb IAmb 04 47 10.3
comp=Z,18nm,1.1s
KNB Kanab 63.57 1 IAmb IAmb 04 47 10.0
comp=Z,15nm,1.1s
W35A Tecumseh 63.77 16 IAmb IAmb 04 47 09.0
comp=Z,14nm,1.0s
RTBA Rita Blanca 63.86 10 IAmb IAmb 04 47 10.7
comp=Z,22nm,1.2s
MVCO Mesa Verde 63.96 5 P P 04 47 11.0 +1.0
PRN Pahroc Range 63.96 359 IAmb IAmb 04 47 13.2
comp=Z,15nm,1.1s
DSP Deep Springs 64.03 356 IAmb IAmb 04 47 13.2
comp=Z,16nm,1.1s
MIAR Mount Ida 64.06 19 IAmb IAmb 04 47 11.3
comp=Z,12nm,0.9s
MIAR Mount Ida 64.06 19 P P 04 47 10.5 +0.1
SZCU Shurtz Canyon 64.14 1 IAmb IAmb 04 47 14.1
comp=Z,18nm,1.1s
SJG San Juan 64.40 51 LR LR 05 12 37.2
comp=Z,20nm,18.1s,baz=224,slow=34
DEOK Depew 64.52 16 IAmb IAmb 04 47 13.9
comp=Z,12nm,0.9s
HMU Henry Mountain 64.55 3 IAmb IAmb 04 47 16.2
comp=Z,20nm,1.2s
S22A 4UR Ranch, Cre 64.63 6 IAmb IAmb 04 47 16.6
comp=Z,11nm,1.2s
UALR University of 64.63 20 IAmb IAmb 04 47 15.4
comp=Z,17nm,0.9s
TPH Tonopah 64.69 357 IAmb IAmb 04 47 17.6
comp=Z,14nm,0.8s
Y45A Yeager Farm, C 64.69 22 IAmb IAmb 04 47 17.3
comp=Z,19nm,1.0s
SDCO Great Sand Dun 64.77 7 IAmb IAmb 04 47 17.2
comp=Z,11nm,1.1s
CROK Carrier 64.81 14 IAmb IAmb 04 47 16.5
comp=Z,16nm,1.0s
LRAL Lakeview Retre 64.85 25 IAmb IAmb 04 47 16.3
comp=Z,9.4nm,0.8s
CMB Columbia Colle 64.86 354 IAmb IAmb 04 47 18.3
comp=Z,9.2nm,0.9s
PV01 Paradox Valley 64.87 5 IAmb IAmb 04 47 17.7
comp=Z,11nm,1.2s
PV02 Paradox Valley 64.93 4 IAmb IAmb 04 47 18.9
comp=Z,13nm,1.0s
LHV Little Huntoon 64.94 356 IAmb IAmb 04 47 19.5
comp=Z,20nm,1.0s
PV18 Skein Mesa, Pa 64.96 4 IAmb IAmb 04 47 17.5
comp=Z,13nm,1.0s
PV16 Nyswonger Mesa 65.02 4 IAmb IAmb 04 47 18.8
comp=Z,36nm,1.8s
PV20 West Nyswonger 65.05 4 IAmb IAmb 04 47 19.6
comp=Z,18nm,1.2s
OK051 E0350 and S346 65.07 15 IAmb IAmb 04 47 21.2
comp=Z,13nm,1.1s
PSUT Pine Spring 65.07 0 IAmb IAmb 04 47 23.7
comp=Z,7.8nm,0.9s
PV15 Paradox Valley 65.08 5 IAmb IAmb 04 47 19.1
comp=Z,15nm,1.0s
NVAR Mina Array Bea 65.10 356 P P 04 47 19.1 +1.7
comp=Z,14nm,0.8s,baz=184,slow=9.6,SNR=67
NVAR LR LR 05 09 42.8
comp=Z,118nm,19.8s,baz=174,slow=30
comp=Z,14nm,0.8s
TCRU Three Creeks R 65.16 1 IAmb IAmb 04 47 20.7
comp=Z,17nm,0.9s
BLOK Blackwell 65.23 15 IAmb IAmb 04 47 18.6
comp=Z,15nm,0.9s
PV22 Blue Mesa, Par 65.25 4 IAmb IAmb 04 47 20.1
comp=Z,13nm,0.9s
PV21 Cone Mtn., Par 65.27 4 IAmb IAmb 04 47 20.4
comp=Z,20nm,1.1s
Q16A Castle Valley 65.51 2 IAmb IAmb 04 47 22.2
comp=Z,21nm,1.3s
T35A Sooner Cattle 65.54 15 IAmb IAmb 04 47 21.2
comp=Z,10nm,0.8s
HHAR Hobbs 65.59 18 IAmb IAmb 04 47 21.2
comp=Z,19nm,1.3s
KVN Kaiserville 65.71 356 IAmb IAmb 04 47 24.1
comp=Z,13nm,1.1s
SRU San Rafael Swe 65.73 3 IAmb IAmb 04 47 23.1
comp=Z,20nm,1.0s
FCAR Ozark Folk Cen 65.73 19 IAmb IAmb 04 47 22.2
comp=Z,17nm,1.2s
Y49A Blount Mountai 65.80 25 IAmb IAmb 04 47 22.5
comp=Z,11nm,0.8s
AFDM Forest Hills D 65.82 354 IAmb IAmb 04 47 24.4
comp=Z,14nm,1.2s
X48A Hartselle 66.10 24 IAmb IAmb 04 47 23.6
comp=Z,7.2nm,0.8s
P18A Preston Nutter 66.25 3 IAmb IAmb 04 47 26.7
comp=Z,15nm,1.4s
R32A Long Quarter, 66.50 13 IAmb IAmb 04 47 27.4
comp=Z,12nm,1.0s
NLU North Lily Min 66.52 2 IAmb IAmb 04 47 29.0
comp=Z,13nm,1.1s
GOGA Godfrey 66.57 28 IAmb IAmb 04 47 27.3
comp=Z,15nm,0.9s
GOGA Godfrey 66.57 28 P P 04 47 26.6 -0.1
MPU Maple Canyon 66.59 2 IAmb IAmb 04 47 29.2
comp=Z,15nm,1.2s
BEKR Beckworth 66.68 355 IAmb IAmb 04 47 30.2
comp=Z,23nm,1.7s
Y52A Lilburn 66.72 27 IAmb IAmb 04 47 28.3
comp=Z,15nm,0.8s
DUG Dugway, Tooele 66.74 1 IAmb IAmb 04 47 30.3
comp=Z,15nm,1.1s
DUG Dugway, Tooele 66.74 1 P P 04 47 29.2 +1.4
ISCO Idaho Springs 66.79 7 P P 04 47 29.1 +0.7
X51A Calhoun 67.03 26 IAmb IAmb 04 47 30.1
comp=Z,12nm,0.9s
S39A Bolivar 67.08 18 IAmb IAmb 04 47 30.9
comp=Z,18nm,1.3s
T42A Van Buren 67.10 20 IAmb IAmb 04 47 30.6
comp=Z,16nm,0.8s
BSUT Blindstream Ca 67.14 3 IAmb IAmb 04 47 32.6
comp=Z,11nm,0.9s
MDP Montagnes des 67.17 71 LR LR 05 14 29.1
comp=Z,120nm,18.9s,baz=229,slow=34
O02D Mt. Diablo Mer 67.23 353 IAmb IAmb 04 47 33.9
comp=Z,20nm,1.1s
ELK Elko 67.29 359 LR LR 05 12 45.9
comp=Z,94nm,18.2s,baz=282,slow=32
WVT Waverly 67.33 23 P P 04 47 30.6 -0.9
WVT IAmb IAmb 04 47 31.7
comp=Z,9.3nm,0.8s
WVT Waverly 67.33 23 P P **04 47 30.6 -0.9**
WVT pmax pmax
comp=Z,9.0nm,0.9s
WVT Waverly 67.33 23 P P 04 47 30.4 -1.1
V48A Smith Brothers 67.33 24 IAmb IAmb 04 47 31.8
comp=Z,12nm,1.0s
W50A Signal Mountai 67.41 25 IAmb IAmb 04 47 32.4
comp=Z,9.4nm,0.9s
BGU Big Grassy Mou 67.47 1 IAmb IAmb 04 47 34.8
comp=Z,31nm,1.6s
TCUT Toone Canyon 67.69 2 IAmb IAmb 04 47 36.0
comp=Z,29nm,1.5s
HODGE Hodges 67.78 28 IAmb IAmb 04 47 35.2
comp=Z,16nm,0.9s
CPCT Cooper Cave 67.93 26 IAmb IAmb 04 47 35.9
comp=Z,12nm,0.9s
CCM Cathedral Cave 68.00 19 P P 04 47 35.6 -0.1
CCM Cathedral Cave 68.00 19 P P 04 47 35.6 -0.1
CCM pmax pmax
comp=Z,17nm,0.8s
BG3 Lake Jocassee 68.16 27 IAmb IAmb 04 47 37.8
comp=Z,18nm,0.9s
HWUT Hardware Ranch 68.18 2 P P 04 47 37.5 +0.5
U49A Red Boiling Sp 68.40 24 IAmb IAmb 04 47 39.9
comp=Z,11nm,0.9s
TKL Tuckaleechee C 68.41 26 LR LR 05 13 30.8
comp=Z,36nm,19.3s,baz=182,slow=32
TKL Tuckaleechee C 68.41 26 IAmb IAmb 04 47 38.5
comp=Z,8.5nm,0.9s
M02C Callahan 68.43 353 IAmb IAmb 04 47 41.2
comp=Z,13nm,1.1s
PAULI Pauline 68.48 28 IAmb IAmb 04 47 39.6
comp=Z,17nm,0.9s
YBH Yreka Blue Hor 68.75 353 LR LR 05 13 23.1
comp=Z,77nm,18.3s,baz=180,slow=32
V53A Saluda 68.80 27 IAmb IAmb 04 47 41.7
comp=Z,20nm,1.0s
KMSC Kings Mountain 68.95 28 IAmb IAmb 04 47 42.5
comp=Z,16nm,1.0s
L04D Klamath Falls 69.19 353 IAmb IAmb 04 47 45.1
comp=Z,18nm,0.8s
T50A Nancy 69.20 25 IAmb IAmb 04 47 43.6
comp=Z,10nm,1.1s
L02F Cave Junction 69.24 352 IAmb IAmb 04 47 45.8
comp=Z,14nm,0.9s
TZTN Tazewell 69.27 26 IAmb IAmb 04 47 44.6
comp=Z,17nm,0.9s
TZTN Tazewell 69.27 26 P P 04 47 43.6 -0.1
AHID Auburn Hatcher 69.35 2 IAmb IAmb 04 47 45.1
comp=Z,8.1nm,0.8s
AHID Auburn Hatcher 69.35 2 P P 04 47 43.1 -1.2
BW06 Boulder Array 69.42 3 IAmb IAmb 04 47 45.7
comp=Z,18nm,1.4s
PD31 Pinedale Array 69.42 3 IAmb IAmb 04 47 45.7
comp=Z,19nm,1.4s
PDAR Pinedale Array 69.42 3 P P 04 47 44.4 -0.4
comp=Z,5.8nm,1.0s,baz=165,slow=6.2,SNR=29
PDAR LR LR 05 13 38.1
comp=Z,38nm,18.2s,baz=188,slow=32
comp=Z,5.8nm,1.0s
PDAR Pinedale Array 69.42 3 P P 04 47 44.5 -0.2
OLIL Olney 69.60 21 IAmb IAmb 04 47 46.6
comp=Z,17nm,0.9s
V55A Taylorsville 69.61 28 IAmb IAmb 04 47 46.7
comp=Z,21nm,1.0s
WCI Wyandotte Cave 69.75 23 P P 04 47 45.4 -1.2
WCI IAmb IAmb 04 47 46.7
comp=Z,11nm,1.0s
WCI Wyandotte Cave 69.75 23 P P 04 47 45.4 -1.2
WCI pmax pmax
comp=Z,11nm,1.0s
WCI Wyandotte Cave 69.75 23 P P 04 47 45.9 -0.7
K02D Willamette Mer 69.81 352 IAmb IAmb 04 47 49.6
comp=Z,19nm,1.0s
BBOR Butler Butte 69.89 353 IAmb IAmb 04 47 49.2
comp=Z,13nm,0.9s
U54A Nelsons Funny 69.94 27 IAmb IAmb 04 47 48.4
comp=Z,13nm,0.9s
MFID Camas Ranch 69.97 359 IAmb IAmb 04 47 50.8
comp=Z,11nm,1.0s
VNA2 Neumayer--Watz 70.05 160 ⇓ P P **04 47 47.5 -0.6**
comp=Z,7.7nm,0.9s,baz=256,slow=4.8
HLID Hailey 70.10 360 P P **04 47 50.2 +1.4**
R49A Shelbyville 70.20 24 IAmb IAmb 04 47 49.6
comp=Z,20nm,1.0s
LOHW Long Hollow 70.21 3 IAmb IAmb 04 47 50.9
comp=Z,13nm,1.2s
W59A Clinton 70.24 30 IAmb IAmb 04 47 50.6
comp=Z,23nm,1.1s
U56A King 70.38 28 IAmb IAmb 04 47 51.4
comp=Z,12nm,1.0s
L34A Svendsen Farm, 70.40 14 IAmb IAmb 04 47 51.8
comp=Z,19nm,0.9s
V58A Windy Hill, Pi 70.46 29 IAmb IAmb 04 47 51.5
comp=Z,12nm,0.9s
R50A Paris 70.50 24 IAmb IAmb 04 47 51.3
comp=Z,16nm,1.1s
FLWY Flagg Ranch 70.68 2 IAmb IAmb 04 47 54.1
comp=Z,18nm,0.9s
I04A Tendick Farm, 70.76 353 IAmb IAmb 04 47 54.6
comp=Z,9.6nm,0.9s
I03D Drain, OR 70.77 353 IAmb IAmb 04 47 54.4
comp=Z,9.9nm,0.9s
BCYI Bear Canyon 70.85 0 IAmb IAmb 04 47 55.7
comp=Z,14nm,1.0s
HDIL Hopedale 70.89 20 IAmb IAmb 04 47 54.4
comp=Z,14nm,0.8s
WIFE Three Sisters- 70.97 354 IAmb IAmb 04 47 56.6
comp=Z,19nm,0.9s
SNAA Sanae 71.03 162 ⇓ P P **04 47 53.2 -1.0**
comp=Z,68nm,0.9s
SNAA Sanae 71.03 162 P P 04 47 52.9 -1.3
comp=Z,3.5nm,1.0s,baz=232,slow=3.8,SNR=8.0
comp=Z,3.5nm,1.0s
SNAA Sanae 71.03 162 P P 04 47 53.5 -0.7
SNAA Sanae 71.03 162 *i* P P **04 47 53.7 -0.5**
SNAA pmax pmax
comp=Z,5.0nm,1.1s
SCIA State Center 71.07 16 IAmb IAmb 04 47 55.9
comp=Z,15nm,0.8s
BLA Blacksburg 71.10 28 IAmb IAmb 04 47 56.2
comp=Z,17nm,0.9s
BUCK Buck Mountain 71.22 353 P P 04 47 56.9 +1.4
BUCK IAmb IAmb 04 47 57.8
comp=Z,13nm,1.0s
I02E Swisshome, OR 71.23 352 P P 04 47 56.7 +1.2
RSSD Black Hills 71.23 7 P P 04 47 55.9 +0.1
RSSD Black Hills 71.23 7 P P 04 47 55.9 +0.1
RSSD pmax pmax
comp=Z,11nm,1.2s
RSSD Black Hills 71.23 7 P P 04 47 56.1 +0.3
YHL Hebgen Lake 71.43 2 IAmb IAmb 04 47 59.4
comp=Z,13nm,1.0s
Q51A Peebles 71.52 25 IAmb IAmb 04 47 57.8
comp=Z,14nm,1.0s
H04A Detroit Lake 71.62 354 IAmb IAmb 04 47 59.6
comp=Z,11nm,0.9s
COR Corvallis 71.64 353 P P 04 47 59.4 +1.5
COR Corvallis 71.64 353 P P 04 47 59.4 +1.5
COR pmax pmax
comp=Z,26nm,0.9s
PLID Pearl Lake 71.65 358 IAmb IAmb 04 48 00.1
comp=Z,12nm,0.9s
DLMT Dillon 71.91 1 IAmb IAmb 04 48 01.6
comp=Z,16nm,1.2s
O48B Farmland 71.96 23 IAmb IAmb 04 47 59.9
comp=Z,15nm,1.1s
ECSD EROS Data Cent 72.04 13 P P 04 48 00.5 0.0
G05A Wamic 72.09 355 IAmb IAmb 04 48 03.0
comp=Z,19nm,0.8s
L42A Oliver, Polo 72.11 19 IAmb IAmb 04 48 01.3
comp=Z,13nm,0.9s
TROLL Troll, Antarti 72.31 163 P P 04 48 01.8 -0.1
comp=Z,210nm,1.0s
N47A Urbana 72.33 22 IAmb IAmb 04 48 02.2
comp=Z,18nm,1.1s
Q54A Coxs Mills 72.45 26 IAmb IAmb 04 48 04.0
comp=Z,11nm,0.9s
F10A Beach Ranch, E 72.57 358 IAmb IAmb 04 48 10.5
comp=Z,12nm,0.9s
P53A Whipple 72.67 26 IAmb IAmb 04 48 05.0
comp=Z,10nm,0.9s
ACSO Alum Creek Sta 72.71 24 IAmb IAmb 04 48 04.8
comp=Z,9.5nm,0.8s
K43A Burlington 73.15 19 IAmb IAmb 04 48 07.8
comp=Z,25nm,1.0s
E08A Dider Farm, El 73.18 356 IAmb IAmb 04 48 09.6
comp=Z,18nm,1.1s
MSO Missoula 73.36 360 IAmb IAmb 04 48 10.2
comp=Z,12nm,0.9s
MCWV Mont Chateau 73.42 27 IAmb IAmb 04 48 09.9
comp=Z,18nm,0.9s
WAH2 Wahluke Slope 73.47 356 IAmb IAmb 04 48 11.1
comp=Z,18nm,1.0s
LAO LASA Array 73.56 6 IAmb IAmb 04 48 10.9
comp=Z,18nm,1.1s
E03A Lebam 73.60 353 IAmb IAmb 04 48 12.4
comp=Z,28nm,1.0s
O54A Avella 73.66 26 IAmb IAmb 04 48 11.4
comp=Z,14nm,1.1s
M50A Fremont 73.72 24 IAmb IAmb 04 48 11.4
comp=Z,26nm,1.0s
P57A Homestead Farm 74.03 28 IAmb IAmb 04 48 13.6
comp=Z,11nm,0.8s
EPH Ephrata 74.07 356 IAmb IAmb 04 48 14.8
comp=Z,12nm,0.9s
D05A Enumclaw 74.08 354 IAmb IAmb 04 48 14.7
comp=Z,22nm,0.9s
AAM Ann Arbor 74.29 23 IAmb IAmb 04 48 14.8
comp=Z,26nm,1.1s
C09A Chrisman Ranch 74.44 357 IAmb IAmb 04 48 16.3
comp=Z,11nm,0.8s
NLWA Neilton Lookou 74.47 353 IAmb IAmb 04 48 17.2
comp=Z,18nm,0.9s
GNW Green Mountain 74.54 354 IAmb IAmb 04 48 16.9
comp=Z,12nm,0.8s
EGMT Eagleton 74.65 3 IAmb IAmb 04 48 18.2
comp=Z,21nm,1.2s
NEW Newport 74.86 358 LR LR 05 15 45.3
comp=Z,126nm,18.4s,baz=260,slow=31
NEW Newport 74.86 358 IAmb IAmb 04 48 19.1
comp=Z,23nm,1.1s
NEW Newport 74.86 358 P P 04 48 18.0 +1.0
G40A Rib Lake 74.99 17 IAmb IAmb 04 48 19.4
comp=Z,16nm,1.2s
ALLY Alegheny Colle 75.01 26 IAmb IAmb 04 48 18.9
comp=Z,12nm,0.9s
K50A Casco 75.07 23 IAmb IAmb 04 48 19.0
comp=Z,29nm,1.2s
PAOC Oil Creek Stat 75.07 26 IAmb IAmb 04 48 19.5
comp=Z,13nm,0.9s
MVL Millersville 75.17 29 IAmb IAmb 04 48 19.9
comp=Z,12nm,0.8s
PAGS Pennsylvania G 75.20 29 IAmb IAmb 04 48 19.8

	comp=Z,22nm,0.8s								
MDND	**Maddock**	75.49	10	IAmb	IAmb	04 48 21.7			
	comp=Z,27nm,1.4s								
N58A	**Sunbury**	75.71	28	IAmb	IAmb	04 48 22.9			
	comp=Z,12nm,0.9s								
A05A	**Maple Falls**	75.89	354	IAmb	IAmb	04 48 24.7			
	comp=Z,18nm,0.8s								
L56A	**Greenwood**	76.44	27	IAmb	IAmb	04 48 27.3			
	comp=Z,22nm,0.9s								
AGMN	**Agassiz Nation**	76.57	12	P	P	04 48 27.3	+0.6		
RCBR	**Riachuelo**	76.70	90	LR	LR	05 18 57.9			
	comp=Z,54nm,21.5s,baz=248,slow=33								
MMNY	**Mt. Morris Dam**	76.80	26	IAmb	IAmb	04 48 29.1			
	comp=Z,15nm,1.0s								
ELIB	**Princess Elisa**	77.12	167	*d*P	P	04 48 29.7	-0.2		
	comp=Z,3.3nm,1.2s								
BINY	**Binghamton**	77.14	28	IAmb	IAmb	04 48 31.4			
	comp=Z,22nm,0.9s								
BINY	**Binghamton**	77.14	28	P	P	04 48 30.4	+0.3		
EYMN	**Ely**	77.16	15	IAmb	IAmb	04 48 31.1			
	comp=Z,11nm,0.9s								
EYMN	**Ely**	77.16	15	P	P	04 48 30.2	+0.1		
K57A	**Scipio Center**	77.36	27	IAmb	IAmb	04 48 32.3			
	comp=Z,22nm,1.2s								
L59A	**Walton**	77.53	29	IAmb	IAmb	04 48 33.3			
	comp=Z,11nm,0.9s								
E46A	**Sault Ste Mari**	77.69	20	IAmb	IAmb	04 48 34.6			
	comp=Z,17nm,1.0s								
SADO	**Sadowa**	78.06	25	LR	LR	05 18 40.3			
	comp=Z,43nm,21.7s,baz=224,slow=32								
SADO	**Sadowa**	78.06	25	IAmb	IAmb	04 48 36.0			
	comp=Z,14nm,1.0s								
PECO	**Prince Edward**	78.17	26	IAmb	IAmb	04 48 36.6			
	comp=Z,17nm,0.9s								
DELO	**Deloro Mine**	78.42	26	IAmb	IAmb	04 48 38.0			
	comp=Z,14nm,0.9s								
ULM	**Lac du Bonnet**	78.44	12	P	P	04 48 36.6	-0.5		
	comp=Z,11nm,0.8s,baz=200,slow=6.1,SNR=31								
ULM				LR	LR	05 19 54.9			
	comp=Z,33nm,19.3s,baz=212,slow=33								
	comp=Z,11nm,0.8s								
ULM	**Lac du Bonnet**	78.44	12	P	P	04 48 36.5	-0.6		
ULM				IAmb	IAmb	04 48 38.0			
	comp=Z,12nm,0.8s								
ULM	**Lac du Bonnet**	78.44	12	*e*P	P	04 48 36.9	-0.2		
ULM				pmax	pmax				
	comp=Z,11nm,0.8s								
BUKO	**Buck Lake**	78.54	24	IAmb	IAmb	04 48 38.4			
	comp=Z,13nm,0.9s								
NCB	**Newcomb**	79.33	28	IAmb	IAmb	04 48 43.3			
	comp=Z,16nm,0.9s								
BBB	**Bella Bella**	79.71	351	IAmb	IAmb	04 48 45.8			
	comp=Z,16nm,0.8s								
BBB	**Bella Bella**	79.71	351	P	P	04 48 44.9	+1.0		
LONY	**Lake Ozonia**	79.71	27	IAmb	IAmb	04 48 45.4			
	comp=Z,15nm,1.0s								
TRQ	**Mont Tremblant**	81.04	26	IAmb	IAmb	04 48 52.4			
	comp=Z,19nm,1.0s								
H62A	**Milan**	81.13	29	IAmb	IAmb	04 48 53.3			
	comp=Z,17nm,0.9s								
G62A	**West of Eustis**	81.91	29	IAmb	IAmb	04 48 59.7			
	comp=Z,30nm,1.6s								
FFC	**Flin Flon**	81.92	7	P	P	04 48 54.5	-1.2		
FFC	**Flin Flon**	81.92	7	P	P	04 48 54.6	-1.2		
FFC				pmax	pmax				
	comp=Z,7.0nm,1.0s								
FFC	**Flin Flon**	81.92	7	P	P	04 48 54.9	-0.9		
V35K	**Ketchikan**	83.27	350	P	P	04 49 04.2	+1.5		
	baz=164								
F64A	**Sherman**	83.38	30	IAmb	IAmb	04 49 04.8			
	comp=Z,12nm,1.0s								
LDAQ	**Lac Daran**	83.78	27	IAmb	IAmb	04 49 06.6			
	comp=Z,16nm,1.0s								
U33K	**Whale Pass**	84.27	349	IAmb	IAmb	04 49 09.9			
	comp=Z,16nm,1.0s								
U33K	**Whale Pass**	84.27	349	P	P	04 49 08.6	+0.7		
	baz=163								
WRAK	**Wrangell Islan**	84.44	350	IAmb	IAmb	04 49 10.6			
	comp=Z,8.2nm,0.8s								
T35M	**Bob Quinn**	84.67	351	IAmb	IAmb	04 49 12.2			
	comp=Z,14nm,1.1s								
T35M	**Bob Quinn**	84.67	351	P	P	04 49 11.1	+1.2		
	baz=165								
S34M	**Telegraph Cree**	85.70	351	IAmb	IAmb	04 49 17.2			
	comp=Z,14nm,0.8s								
S34M	**Telegraph Cree**	85.70	351	P	P	04 49 16.4	+1.4		
	baz=164								
MAW	**Mawson**	85.77	179	P	P	04 49 15.6	+0.1		
	comp=Z,2.0nm,0.8s,baz=226,slow=6.0,SNR=4.8								
	comp=Z,2.0nm,0.8s								
MAW	**Mawson**	85.77	179	P	P	04 49 16.5	+1.0		
DLBC	**Dease Lake**	86.06	352	P	P	04 49 18.0	+1.1		
	baz=166								
Q32M	**Nakina River**	86.87	351	IAmb	IAmb	04 49 23.0			
	comp=Z,14nm,1.2s								
Q32M	**Nakina River**	86.87	351	P	P	04 49 21.6	+0.5		
	baz=164								
R33M	**Jennings River**	87.11	351	P	P	04 49 23.1	+1.0		
	baz=165								
STKA	**Stephens Creek**	87.35	236	LR	LR	05 22 18.9			
	comp=Z,108nm,19.1s,baz=178,slow=31								
STKA	**Stephens Creek**	87.35	236	*e*P	P	04 49 25.0	+1.0		
WTLY	**Watson Lake, Y**	87.54	353	IAmb	IAmb	04 49 25.3			
	comp=Z,11nm,1.3s								
P33M	**Teslin, Yukon**	88.15	351	P	P	04 49 27.1	0.0		
	baz=163								
P30M	**Million Dollar**	88.73	349	P	P	04 49 29.8	+0.1		
	baz=159								
YKAW1	**Yellowknife Wh**	89.05	360	IAmb	IAmb	04 49 33.8			
	comp=Z,14nm,1.4s								
YKA	**Yellowknife Ar**	89.06	360	P	P	04 49 30.6	-0.6		
	comp=Z,4.4nm,0.8s,baz=178,slow=5.2,SNR=26								
	comp=Z,4.4nm,0.8s								
YKA	**Yellowknife Ar**	89.06	360	P	P	04 49 30.4	-0.7		
YKA	**Yellowknife Ar**	89.06	360	*e*P	P	04 49 31.3	+0.1		
YKA				pmax	pmax				
	comp=Z,4.0nm,0.8s								
YKAW3	**Yellowknife Wh**	89.13	360	IAmb	IAmb	04 49 32.6			
	comp=Z,7.9nm,0.9s								
H11S2	**WAKE ISLAND Hy**	89.18	291	T	T	06 28 30.1			
	baz=119,slow=76,SNR=14								
H11S1	**WAKE ISLAND Hy**	89.19	291	T	T	06 28 28.2			
	baz=119,slow=76,SNR=16								
O29M	**Mount Kennedy**	89.19	348	P	P	04 49 32.2	+0.2		
	baz=158								
H11S3	**WAKE ISLAND Hy**	89.19	291	T	T	06 28 29.7			
	baz=119,slow=76,SNR=12								
CTA	**Charters Tower**	89.42	248	LR	LR	05 22 35.9			
	comp=Z,75nm,21.0s,baz=110,slow=31								
HYT	**Haines Junctio**	89.49	349	P	P	04 49 33.9	+0.5		
	baz=159								
H11N3	**WAKE ISLAND Hy**	89.59	292	T	T	06 28 59.8			
	baz=115,slow=78,SNR=4.8								
H11N1	**WAKE ISLAND Hy**	89.61	292	T	T	06 28 57.4			
	baz=115,slow=78,SNR=18								
H11N2	**WAKE ISLAND Hy**	89.61	292	T	T	06 28 58.5			
	baz=115,slow=78,SNR=15								
O28M	**Mount Upton**	89.93	347	IAmb	IAmb	04 49 37.4			
	comp=Z,10nm,0.9s								
O28M	**Mount Upton**	89.93	347	P	P	04 49 36.7	+1.0		
	baz=157								
N30M	**Aishikik Lake**	90.01	349	P	P	04 49 36.9	+1.1		
	baz=159								
INKA	**Innaminka**	90.07	239	P	P	04 49 37.5	+0.6		
OHAK	**Old Harbor**	90.11	340	P	P	04 49 36.6	+0.5		
	baz=145								
WRGLY	**Wrigley**	90.12	356	IAmb	IAmb	04 49 37.0			
	comp=Z,13nm,1.1s								
KDAK	**Kodiak Island**	90.36	340	LR	LR	05 23 08.5			
	comp=Z,71nm,18.2s,baz=176,slow=31								
BARN	**Barnard Glacie**	90.49	347	IAmb	IAmb	04 49 39.5			
	comp=Z,12nm,1.1s								
CRQE	**Cirque**	90.51	346	P	P	04 49 39.3	+1.1		
	baz=154								
CRQM	**Cirque**	90.52	346	IAmb	IAmb	04 49 40.0			
	comp=Z,14nm,1.0s								
SCHQ	**Schefferville**	90.86	25	P	P	04 49 38.1	-1.7		
	comp=Z,3.4nm,0.9s,baz=258,slow=4.0,SNR=3.5								
SCHQ				LR	LR	05 26 03.7			
	comp=Z,52nm,19.2s,baz=217,slow=33								
	comp=Z,3.4nm,0.9s								
M30M	**Minto, Yukon**	91.01	350	P	P	04 49 40.3	0.0		
	baz=160								
M29M	**Somme Creek**	91.17	349	P	P	04 49 41.4	+0.2		
	baz=158								
R17L	**Mt. Peulik Vol**	91.41	339	P	P	04 49 43.0	+0.7		
	baz=143								
L29M	**L29M**	91.73	349	P	P	04 49 44.4	+0.7		
	baz=158								
Q17K	**Contact Creek**	91.77	339	P	P	04 49 44.5	+0.5		
	baz=143								
Q18K	**Katmai Hardscr**	91.80	340	P	P	04 49 44.4	+0.2		
	baz=144								
BLKN	**Baker Lake**	91.98	8	IAmb	IAmb	04 49 45.0			
	comp=Z,8.9nm,0.9s								
K29M	**Barlow Dome**	92.32	350	P	P	04 49 45.6	-0.9		
	baz=159								
L27K	**Beaver Creek,**	92.35	348	P	P	04 49 45.7	-0.8		
	baz=155								
P17K	**Kvichak River**	92.69	340	P	P	04 49 48.8	+0.7		
	baz=143								
DAWY	**Dawson**	92.83	349	P	P	04 49 48.4	-0.3		
	baz=157								
O18K	**Koktuh Hills**	92.84	341	P	P	04 49 48.5	-0.3		
	baz=144								
O17K	**Koliganek Bris**	93.35	340	P	P	04 49 51.9	+0.8		
	baz=142								
N19K	**Bonanza Creek**	93.41	341	IAmb	IAmb	04 49 51.8			
	comp=Z,7.1nm,0.9s								
N19K	**Bonanza Creek**	93.41	341	P	P	04 49 51.0	-0.6		
	baz=144								
I30M	**Mount Dempster**	93.44	351	P	P	04 49 51.1	-0.6		
	baz=160								
O16K	**Kokwok River B**	93.52	339	IAmb	IAmb	04 49 52.8			
	comp=Z,9.6nm,1.0s								
O16K	**Kokwok River B**	93.52	339	P	P	04 49 52.2	+0.2		
	baz=141								
RIDG	**Independent Ri**	93.56	347	IAmb	IAmb	04 49 53.0			
	comp=Z,7.7nm,0.9s								
RIDG	**Independent Ri**	93.56	347	P	P	04 49 52.5	+0.4		
	baz=152,SNR=5.6								
SKT	**Skwentna**	93.58	343	IAmb	IAmb	04 49 53.0			
	comp=Z,9.3nm,1.0s								
SKT	**Skwentna**	93.58	343	P	P	04 49 51.9	-0.3		
	baz=147,SNR=6.3								
SCRK	**Sand Creek**	93.59	347	P	P	04 49 52.4	0.0		
	baz=153								
PMG	**Port Moresby**	93.66	258	*e*P	P	04 49 53.2	-0.5		
PMG				pmax	pmax				
	comp=Z,28nm,1.1s								
N18K	**Kilae Creek**	93.71	341	IAmb	IAmb	04 49 54.2			
	comp=Z,9.3nm,1.3s								
N18K	**Kilae Creek**	93.71	341	P	P	04 49 51.9	-0.9		
	baz=143								
L22K	**Petersville**	93.84	344	IAmb	IAmb	04 49 54.3			
	comp=Z,5.9nm,0.8s								
L22K	**Petersville**	93.84	344	P	P	04 49 53.5	0.0		
	baz=148								
M20K	**Styx River**	93.92	343	P	P	04 49 53.5	-0.3		
	baz=146								
N17K	**Nushagak Hills**	93.98	340	P	P	04 49 54.8	+0.8		
	baz=142								
M19K	**Big River Lodg**	94.28	342	P	P	04 49 54.9	-0.5		
	baz=144								
MCK	**McKinley**	94.44	345	P	P	04 49 55.6	-0.5		
	baz=149								
J25K	**Salcha River,**	94.44	347	IAmb	IAmb	04 49 57.1			
	comp=Z,5.8nm,1.0s								
J25K	**Salcha River,**	94.44	347	P	P	04 49 56.3	+0.1		
	baz=152,SNR=7.0								
TRF	**Thorofare Moun**	94.51	344	IAmb	IAmb	04 49 57.4			
	comp=Z,8.2nm,0.9s								
TRF	**Thorofare Moun**	94.51	344	P	P	04 49 56.9	+0.2		
	baz=148,SNR=5.6								
PPLA	**Purkeypile**	94.51	343	IAmb	IAmb	04 49 56.8			
	comp=Z,8.9nm,1.0s								
PPLA	**Purkeypile**	94.51	343	P	P	04 49 56.0	-0.6		
	baz=146								
I27K	**Kandik River**	94.63	349	IAmb	IAmb	04 49 57.4			
	comp=Z,6.4nm,1.2s								
I27K	**Kandik River**	94.63	349	P	P	04 49 57.2	+0.2		
	baz=155,SNR=5.6								
WRH	**Wood River Hil**	94.89	346	IAmb	IAmb	04 49 59.0			
	comp=Z,14nm,1.4s								
ILAR	**Eielson Array**	94.89	346	P	P	04 49 57.5	-0.6		
	comp=Z,1.2nm,0.9s,baz=151,slow=4.5,SNR=11								
	comp=Z,1.2nm,0.9s								
ILAR	**Eielson Array**	94.89	346	P	P	04 49 57.3	-0.8		
CAST	**Castle Rocks**	94.92	344	IAmb	IAmb	04 49 58.7			
	comp=Z,4.6nm,0.8s								
CAST	**Castle Rocks**	94.92	344	P	P	04 49 58.0	-0.3		
	baz=146,SNR=5.8								
CCB	**Clear Creek Bu**	94.98	346	IAmb	IAmb	04 49 59.0			
	comp=Z,5.4nm,0.9s								
COLA	**College**	95.18	346	*i* P	P	04 49 59.5	+0.1		
COLA				pmax	pmax				
	comp=Z,9.0nm,1.1s								
COLA	**College**	95.18	346	P	P	04 49 59.7	+0.3		
H27K	**Steamboat Moun**	95.19	349	P	P	04 49 59.4	-0.1		
	baz=155								
M15K	**Kasigluk River**	95.20	339	P	P	04 50 00.7	+1.1		
	baz=139								
NEA2	**Nenana**	95.21	346	P	P	04 49 59.2	-0.4		
	baz=149								
PRP	**Porcupine Dome**	95.27	347	IAmb	IAmb	04 50 01.8			
	comp=Z,4.9nm,1.0s								
PRP	**Porcupine Dome**	95.27	347	P	P	04 50 00.5	+0.4		
	baz=152,SNR=6.0								
L17K	**Dinin**	95.57	341	P	P	04 50 02.4	+1.1		
	baz=141,SNR=5.8								
I23K	**Minto, Yukon-K**	95.75	346	IAmb	IAmb	04 50 02.9			
	comp=Z,5.7nm,0.8s								
I23K	**Minto, Yukon-K**	95.75	346	P	P	04 50 01.7	-0.3		
	baz=149								
MLY	**Manley**	95.96	345	P	P	04 50 02.7	-0.4		
	baz=147								
H24K	**Noodor Dome**	96.03	347	P	P	04 50 02.7	-0.7		
	baz=150								
G25K	**Bearman Lake**	96.49	348	P	P	04 50 05.6	+0.2		
	baz=151								
G24K	**Hadweenzic Riv**	96.70	347	P	P	04 50 06.3	0.0		
	baz=150								
H22K	**Ishtalitna Cre**	96.83	345	P	P	04 50 06.4	-0.5		
	baz=147								
F26K	**Sheenjek River**	96.96	349	IAmb	IAmb	04 50 10.0			
	comp=Z,5.2nm,1.2s								
F26K	**Sheenjek River**	96.96	349	P	P	04 50 07.8	+0.3		
	baz=153								
E27K	**Coleen River**	96.98	350	IAmb	IAmb	04 50 09.3			
	comp=Z,5.2nm,1.0s								
G23K	**Bananza Creek**	97.23	346	IAmb	IAmb	04 50 09.2			
	comp=Z,6.8nm,1.4s								
G23K	**Bananza Creek**	97.23	346	P	P	04 50 09.0	+0.2		
	baz=148								
H20K	**Anotleneega Mo**	97.32	344	P	P	04 50 09.5	+0.3		
	baz=144								
ASAR	**Alice Springs**	97.45	239	P	P	04 50 11.2	+0.2		
	comp=Z,0.3nm,0.4s,baz=110,slow=7.5,SNR=2.8								
ASAR				LR	LR	05 27 42.4			
	comp=Z,128nm,19.9s,baz=116,slow=31								
	comp=Z,0.3nm,0.4s								
F24K	**Squaw Lake**	97.49	347	P	P	04 50 10.9	+0.9		
	baz=150								
COLD	**Coldfoot**	97.70	347	IAmb	IAmb	04 50 12.6			
	comp=Z,4.9nm,1.0s								
COLD	**Coldfoot**	97.70	347	P	P	04 50 11.1	+0.3		
	baz=148								
G22K	**Bettles**	97.72	346	P	P	04 50 10.8	-0.1		
	baz=147								
H19K	**Roundabout Mou**	97.74	343	P	P	04 50 11.4	+0.3		
	baz=142								
G21K	**Allakaket**	97.83	345	P	P	04 50 11.2	-0.3		
	baz=145								
G19K	**Purcell Mounta**	98.39	344	P	P	04 50 13.9	0.0		
	baz=142								
WRAB	**Tennant Creek**	99.14	242	*e*P	Pdif	04 50 17.7	-0.9		
WRAB				pmax	pmax				
	comp=Z,5.0nm,0.9s								
WRA	**Warramunga Arr**	99.14	242	P	Pdif	04 50 19.8	+1.2		
	comp=Z,1.1nm,0.9s,baz=107,slow=4.4,SNR=4.1								
	comp=Z,1.1nm,0.9s								
H01W1	**Cape Leeuwin H**	103.56	219	T	T	06 46 20.5			
	baz=134,slow=76,SNR=17								
H01W2	**Cape Leeuwin H**	103.57	219	T	T	06 46 20.6			
	baz=134,slow=76,SNR=20								
H01W3	**Cape Leeuwin H**	103.58	219	T	T	06 46 22.1			
	baz=134,slow=76,SNR=18								
BILL	**Bilibino**	110.94	337	*i* PKIKP	PKiKP	04 55 09.8	+0.7		
BILL				pmax	pmax				
	comp=Z,2.0nm,1.0s								
SEY	**Seymchan**	115.24	330	*i* PKIKP	PKPdf	04 55 19.4	+2.0		
BMRD	**Maredsous**	128.31	46	*d*PKPdf	PKPdf	04 55 44.1	+1.2		
FINES	**FINESS Array B**	136.31	27	PKP	PKPdf	04 55 56.2	-1.5		
	comp=Z,2.7nm,0.9s,baz=341,slow=3.0,SNR=1.9								
MODS	**Modra-Piesok**	136.66	47	*e*PKIKP	PKPdf	04 55 59.4	+0.6		
MODS	**Modra-Piesok**	136.66	47	*e*PKP	PKPdf	04 55 59.4	+0.6		
RNPP9	**Sopachiv**	141.06	40	PKPdf	PKPPre	04 56 04.2			
RNPP5	**Staryi Chortor**	141.13	40	PKPdf	PKPPre	04 56 02.4			
KLMR	**Klimovskoe**	141.56	21	*e*PKIKP	PKPPre	04 56 04.3			
KLMR				pmax	pmax				
	comp=Z,19nm,1.4s								
ULN	**Ulaanbaatar**	141.88	314	*i* PKIKP	PKPdf	04 56 08.1	-0.4		
SONM	**Songino Array**	142.30	315	PKhKP	PKPpre	04 56 04.2			
	comp=Z,2.0nm,0.6s,baz=82,slow=2.3,SNR=9.0								
SONM	**Songino Array**	142.30	315	*e*PKIKP	PKPdf	04 56 09.5	+0.3		
SONM				pmax	pmax				
	comp=Z,2.0nm,0.6s								
KMPD	**K-Podol'skiy**	142.48	44	PKPdf	PKPPre	04 56 06.2			
LUBAR	**Lubar, Ukraine**	142.75	41	PKPdf	PKPdf	04 56 08.1	-1.6		
AK21	**Malin Array Si**	143.14	40	PKPdf	PKPab	04 56 05.9	0.0		
AK19	**Malin Array Si**	143.14	40	PKPdf	PKPab	04 56 06.5	+0.6		
AK11	**Malin Array Si**	143.25	40	PKPdf	PKPab	04 56 05.5	-0.9		
KIEV	**Kiev**	143.27	40	PKPdf	PKPab	04 56 06.4	0.0		
AKASG	**Malin Array Be**	143.27	40	PKhKP	PKPpre	04 56 05.9			
	comp=Z,0.9nm,0.7s,baz=284,slow=3.3,SNR=2.4								
AKBB	**Malin Array Si**	143.27	40	PKPdf	PKPab	04 56 06.4	0.0		
OBN	**Obninsk**	144.55	29	*i* PKIKP	PKPab	04 56 11.7	+0.6		
OBN				*i*		04 59 29.9			
OBN				*i*		05 03 21.6			
OBN				*i* SS	SS	05 18 14.8	-0.8		
OBN				pmax	pmax				
	comp=Z,32nm,1.5s								
OBN				MLR	MLR				
	comp=Z,29nm,18.0s								
OBN	**Obninsk**	144.55	29	PKPdf	PKPab	04 56 10.2	-0.9		
MOS	**Moscow**	144.59	28	*i* PKIKP	PKPab	04 56 11.4	+0.1		
MOS				pmax	pmax				
	comp=Z,24nm,0.6s								
BAL3X	**Bal3x, Balta**	144.66	44	PKPdf	PKPab	04 56 10.5	-1.3		
TIRR	**Tirgusor**	145.10	50	PKPdf	PKPbc	04 56 11.7	-1.8		
KIRV	**Kirov**	146.23	16	*i* PKP2	PKPdf	04 56 15.9	+0.4		
KNGR	**Kungurtug, Tuv**	146.33	323	*i* PKP2	PKPdf	04 56 16.4	+0.3		
LZH	**Lanzhou**	146.69	295	*e*P	PKPdf	04 56 19.1	+1.8		
LZH				pP	sPKPab	04 56 25.1	+1.6		
LZH				pmax	pmax				
	comp=Z,19nm,1.6s								
LPSR	**Galich'ya Gora**	147.26	31	*e*PKIKP	PKPdf	04 56 17.1	-0.3		
LPSR				pmax	pmax				
	comp=Z,20nm,0.9s								
VORR	**Voronezh**	147.99	32	*e*PKP2	PKPdf	04 56 20.7	+2.0		
VORR				pmax	pmax				
	comp=Z,20nm,0.9s								
VSR	**Storozhevoye**	148.27	33	*e*PKP2	PKPbc	04 56 22.2	-0.3		
VSR				pmax	pmax				
	comp=Z,25nm,1.0s								
VORD	**Divnogorie**	148.49	33	*e*PKIKP	PKPdf	04 56 21.2	+1.7		
VORD				pmax	pmax				
	comp=Z,10.0nm,0.9s								
CMAR	**Chiang Mai Arr**	148.62	261	PKPbc	PKPbc	04 56 24.8	+0.3		
	comp=Z,1.6nm,0.3s,baz=135,slow=1.2,SNR=18								
CMAR	**Chiang Mai Arr**	148.62	261	PKPbc	PKPdf	04 56 23.6	+2.9		
GTA2	**Gaotai**	149.33	303	P	PKPbc	04 56 26.0	+0.2		
GTA2				pP	PKPab	04 56 31.5	+1.0		
GTA2				pmax	pmax				
	comp=Z,9.0nm,1.2s								
VRH	**Novokhopyorsk**	149.48	31	*e*PKIKP	PKPdf	04 56 22.6	+1.5		
VRH				pmax	pmax				
	comp=Z,20nm,0.9s								
ZAA0	**Zalesovo Array**	149.63	338		PKPdf	04 56 20.6	-0.7		
ZALV	**Zalesovo Beam**	149.63	338	PKPbc	PKPbc	04 56 25.1	-0.7		
	comp=Z,9.5nm,0.6s,baz=23,slow=2.8,SNR=45								
ZALV	**Zalesovo Beam**	149.63	338		PKPdf	04 56 20.8	-0.5		
ZALV	**Zalesovo Beam**	149.63	338	*e*PKP2	PKPbc	04 56 25.3	-0.6		
ZALV				pmax	pmax				
	comp=Z,10.0nm,0.6s								
SVE	**Sverdlovsk**	149.82	6	*e*PKP2	PKPbc	04 56 26.5	+0.3		
SVE				pmax	pmax				
	comp=Z,20nm,1.3s								
ARTI	**Arti**	150.00	9	*i* PKHKP	PKPpre	04 56 24.8			
BRTR	**Keskin Array B**	150.18	56	PKPbc	PKPbc	04 56 27.1	-0.7		
	comp=Z,6.5nm,0.9s,baz=270,slow=2.3,SNR=29								
BRTR	**Keskin Array B**	150.18	56		PKPbc	04 56 27.4	-0.5		
BRTR	**Keskin Array B**	150.18	56	PKP2	PKPbc	04 56 27.4	-0.5		
DGZ	**Jazzator, Alta**	151.91	330	*i* PKIKP	PKPdf	04 56 24.7	-0.5		
BORK	**Borovoye**	153.68	354	*i* PKIKP	PKPdf	04 56 27.3	-0.1		
BVAR	**Borovoye Array**	153.69	354	PKP	PKPdf	04 56 27.4	0.0		
	comp=Z,0.7nm,0.4s,baz=2.9,slow=3.0,SNR=6.3								
BVAR				PKPbc	PKPbc	04 56 34.9	-0.3		
	comp=Z,5.4nm,0.8s,baz=349,slow=1.5,SNR=17								
BVAR				PKPab	PKPab	04 56 48.1	+0.2		
	comp=Z,7

n56,σ1ᵍ03/83, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.36**	**25**	*i* P	**Pn**	**05 05 09.7**	**-0.3**
LYUB				S	**Sn**	**05 05 16.4**	**-0.1**
LAY	**Lan-yu**	**0.38**	**18**	P	**Pn**	**05 05 09.6**	**-0.7**
LAY				*i* S	**Sn**	**05 05 16.7**	**-0.4**
TSEB	**Hengchuen, Pin**	**0.53**	**295**	*e*S	**Sn**	**05 05 22.0**	**+1.1**
TWKBT	**Hengchun**	**0.62**	**295**	*i* P	**Pn**	**05 05 13.5**	**-0.2**
TWKBT				*e*S	**Sb**	**05 05 21.9**	**+1.6**
TWK1	**Hengchun**	**0.63**	**295**	*e*P	**Pn**	**05 05 13.4**	**-0.3**
TWK1				*e*S	**Sb**	**05 05 22.0**	**+1.4**
SMST	**Manzhou Townsh**	**0.64**	**302**	*i* P	**Pn**	**05 05 13.5**	**-0.4**
SMST				S	**Sn**	**05 05 23.0**	**-0.5**
HEN	**Hengchun**	**0.71**	**297**	*e*S	**Sn**	**05 05 25.3**	**0.0**
SLIU	**Shizi**	**0.79**	**313**	*e*P	**Pn**	**05 05 15.5**	**-0.4**
SLIU				*e*S	**Sg**	**05 05 26.2**	**+0.4**
TAW	**Tawu**	**0.83**	**324**	*e*S	**Sg**	**05 05 27.5**	**+0.2**
EAST	**Anshuo**	**0.88**	**323**	*e*P	**Pg**	**05 05 17.0**	**-0.1**
EAST				*e*S	**Sb**	**05 05 28.7**	**+0.7**
LDUT	**Ludao**	**0.99**	**3**	*e*P	**Pn**	**05 05 18.6**	**-0.1**
ECL	**Taimali**	**1.01**	**335**	P	**Pb**	**05 05 18.3**	**-0.4**
ECL				*e*S	**Sb**	**05 05 30.8**	**-0.9**
SCZT	**Fangliau**	**1.02**	**313**	P	**Pg**	**05 05 19.2**	**-0.4**
TTN	**Taitung**	**1.10**	**347**	*e*P	**Pg**	**05 05 21.6**	**+0.3**
TTN				*e*S	**Sg**	**05 05 37.2**	**+1.5**
SSPT	**Xinbi**	**1.13**	**316**	*e*P	**Pg**	**05 05 22.7**	**+0.9**
TWGBT	**Beinan**	**1.18**	**344**	P	**Pn**	**05 05 20.7**	**-0.5**
TWGBT				*e*S	**Sb**	**05 05 35.3**	**-1.2**
TWG	**Pinlang**	**1.18**	**344**	*e*P	**Pn**	**05 05 20.4**	**-0.9**
TWG				*e*S	**Sb**	**05 05 35.8**	**-0.8**
MASBT	**Mashibuluo**	**1.18**	**322**	P	**Pb**	**05 05 21.6**	**0.0**
TSMG	**Majia**	**1.25**	**325**	*e*P	**Pg**	**05 05 24.3**	**+0.2**
SSD	**Sandimen**	**1.29**	**326**	P	**Pg**	**05 05 24.6**	**-0.3**
EDH	**Donghe**	**1.29**	**355**	*e*P	**Pn**	**05 05 22.9**	**0.0**
EDH				*e*S	**Sn**	**05 05 39.9**	**+0.3**
CHKH	**Chenggong**	**1.51**	**359**	*e*P	**Pb**	**05 05 27.6**	**+0.4**
CHKH				*e*S	**Sb**	**05 05 47.3**	**+1.4**
FULB	**Fuli**	**1.52**	**356**	*e*P	**Pn**	**05 05 26.4**	**+0.4**
STYH	**Taoyuan**	**1.60**	**338**	*e*P	**Pn**	**05 05 27.8**	**+0.8**
EYUL	**Yuli**	**1.67**	**357**	*e*P	**Pg**	**05 05 31.5**	**-0.5**
TWF1	**Yuli**	**1.67**	**356**	*e*P	**Pb**	**05 05 30.9**	**+0.8**
TWF1				*e*S	**Sn**	**05 05 50.0**	**+1.0**
YULB	**Yu-li**	**1.71**	**356**	*e*P	**Pb**	**05 05 30.5**	**-0.2**
CHN1	**Nanshi**	**1.71**	**331**	*e*P	**Pg**	**05 05 31.8**	**-1.1**
CHN1				*e*S	**Sg**	**05 05 54.0**	**-1.3**
WTP	**Ta-pu**	**1.73**	**335**	*e*P	**Pb**	**05 05 31.6**	**+0.5**
WTP				*e*S	**Sb**	**05 05 53.2**	**+0.8**
TPUB	**Ta-pu**	**1.77**	**336**	*e*P	**Pb**	**05 05 31.7**	**0.0**
TPUB				*e*S	**Sb**	**05 05 55.8**	**+2.2**
TWK	**Hsinying**	**1.80**	**332**	*e*P	**Pb**	**05 05 32.3**	**+0.1**
EHYH	**Wanrong**	**1.81**	**358**	*e*P	**Pb**	**05 05 32.1**	**-0.2**
EHY	**Hungye**	**1.82**	**357**	*e*P	**Pn**	**05 05 30.0**	**-0.2**
WCKO	**Fanlu**	**1.91**	**337**	*e*S	**Sb**	**05 05 56.8**	**-0.7**
ALS	**Alishan**	**1.91**	**343**	*e*P	**Pb**	**05 05 33.8**	**-0.4**
ALS				*e*S	**Sn**	**05 05 55.6**	**+0.3**
TSCK	**Chigu Township**	**1.92**	**320**	*e*P	**Pb**	**05 05 32.8**	**-1.3**
TSCK				*e*S	**Sb**	**05 05 56.8**	**-0.9**
CHN5	**Tsauling**	**2.03**	**340**	*e*P	**Pb**	**05 05 35.1**	**-1.1**
WARBT	**Fenglin Townsh**	**2.03**	**359**	*e*P	**Pn**	**05 05 34.1**	**+1.1**
WHYT	**Xinyi Township**	**2.08**	**345**	*e*P	**Pn**	**05 05 35.0**	**+1.3**
SHUL	**Shoufeng**	**2.10**	**4**	*e*P	**Pb**	**05 05 36.0**	**-1.4**
WDGT	**Dungji**	**2.27**	**314**	*e*P	**Pn**	**05 05 36.5**	**+0.3**
WDGT				*e*S	**Sn**	**05 06 02.6**	**-1.0**
WUSB	**Renai**	**2.32**	**353**	*e*P	**Pn**	**05 05 38.5**	**+1.4**
VCHM	**Qimei**	**2.39**	**310**	*e*P	**Pn**	**05 05 38.5**	**+0.5**
VCHM				*e*S	**Sn**	**05 06 07.0**	**+0.2**
NACB	**Ninganchiao**	**2.49**	**4**	*e*P	**Pn**	**05 05 41.1**	**+1.7**
PHUB	**P'eng-hu**	**2.50**	**317**	*e*P	**Pn**	**05 05 38.9**	**-0.6**
PHUB				*e*S	**Sn**	**05 06 08.0**	**-1.5**
EOS4	**EOS4**	**2.57**	**19**	*e*P	**Pb**	**05 05 42.9**	**-2.2**
WHP	**Taichung City**	**2.62**	**350**	*e*P	**Pb**	**05 05 44.2**	**-2.1**
EOS3	**EOS3**	**2.73**	**17**	*e*P	**Pb**	**05 05 45.7**	**-2.1**
NNSB	**Datong**	**2.74**	**359**	*e*P	**Pb**	**05 05 46.7**	**-1.6**
JYNG	**Yonagunijimaku**	**3.10**	**27**	*e*S	**Sn**	**05 06 25.8**	**+1.6**
YOJ	**Yonaguni jima**	**3.13**	**28**	*e*P	**Pn**	**05 05 50.5**	**+2.3**
YOJ				*e*S	**Sn**	**05 06 26.5**	**+1.5**
HATJ	**Hateruma jima**	**3.23**	**42**	*e*P	**Pn**	**05 05 50.7**	**+1.2**
HATJ				*e*S	**Sn**	**05 06 27.4**	**-0.1**
JKRS	**Kuro-shima**	**3.49**	**43**	*e*P	**Pn**	**05 05 54.2**	**+1.1**
JKRS				*e*S	**Sn**	**05 06 32.7**	**-1.1**
JIJ	**Ishigaki jima**	**3.67**	**43**	*e*P	**Pn**	**05 05 55.7**	**+0.2**
JIJ				*e*S	**Sn**	**05 06 37.0**	**-1.2**
JISG	**Ishigakijimahi**	**3.93**	**42**	*e*S	**Sn**	**05 06 45.7**	**+1.0**
JTJ	**Tarama**	**4.22**	**45**	*e*P	**Pn**	**05 06 04.5**	**+1.4**
JTJ				*e*S	**Sn**	**05 06 50.7**	**-1.2**

*OSPL **05** 05:11:54.8±0.3, 17°.74N×66°.99W, h7km±3km, ML3.5, Presumed earthquake*
*NEIC **05** 05:11:54.2±0.9, 17°.87N±0°.01×67°.05W±0°.01, h8km±5km, ML3.4/37, Md3.4/19(RSPR), Error ellipse: s-maj=2.2km s-min=1.6km az=159.0*
*RSPR **05** 05:11:55.5, 17°.95N×67°.02W, h6km, MD3.4/19*
ISC 05 05:11:54.5±1.4, 17°.88N±0°.06×67°.04W±0°.03, h9km±7km, n38,σ0ᵍ49/57, 12D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.09**	**357**		**Pg**	**05 11 56.7**	**-0.1**
MLPR				Sg	**Sg**	**05 11 57.6**	**-1.0**
MLPR	**Magueyes Islan**	**0.09**	**357**	⇑*i*P	**Pg**	**05 11 56.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.15**	**333**		**Pg**	**05 11 58.0**	**+0.2**
CRPR				IAML		05 11 58.3	
	8μm,0.1s						
CRPR				Sg	**Sg**	**05 11 59.5**	**-0.4**
CRPR				IAML		05 12 00.3	
	10μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.15**	**333**	⇑*i*P	**Pg**	**05 11 58.1**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.18**	**57**		**Pg**	**05 11 58.7**	**+0.4**
GBPR					**Sg**	**05 12 01.0**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.18**	**57**	⇑*i*P	**Pg**	**05 11 58.7**	**+0.4**
GBPR				*e*S	**Sg**	**05 12 01.0**	**+0.1**
LSP	**Las Mesas**	**0.30**	**351**		**Pg**	**05 12 00.6**	**0.0**
LSP					**Sg**	**05 12 05.1**	**+0.5**
LSP	**Las Mesas**	**0.30**	**351**	⇓*i*P	**Pg**	**05 12 00.6**	**0.0**
LSP				*e*S	**Sg**	**05 12 05.1**	**+0.5**
PRSN	**Puerto Rico Se**	**0.35**	**343**		**Pg**	**05 12 01.6**	**+0.1**
PRSN	**Puerto Rico Se**	**0.35**	**343**	⇑*i*P	**Pg**	**05 12 01.6**	**+0.1**
OBIP	**Obispado Ponce**	**0.44**	**68**		**Pg**	**05 12 03.3**	**+0.1**
OBIP					**Sg**	**05 12 09.9**	**+0.8**
OBIP	**Obispado Ponce**	**0.44**	**68**	*i* P	**Pg**	**05 12 03.4**	**+0.2**
OBIP				*e*S	**Sg**	**05 12 09.8**	**+0.8**
OBIP				IAML		05 12 11.8	
	comp=Z,4μm,0.2s						
OBIP	**Obispado Ponce**	**0.44**	**68**	⇓*i*P	**Pg**	**05 12 03.5**	**+0.3**
OBIP				*e*S	**Sg**	**05 12 09.9**	**+0.8**
CELP	**Cerrillos**	**0.48**	**66**		**Pg**	**05 12 04.0**	**+0.1**
CELP				Sg	**Sg**	**05 12 10.1**	**-0.1**
CELP				IAML		05 12 11.6	
	comp=Z,997nm,0.4s						
CELP	**Cerrillos**	**0.48**	**66**	⇓*i*P	**Pg**	**05 12 04.1**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.48**	**39**		**Pg**	**05 12 03.6**	**-0.3**
UUPR					**Sg**	**05 12 10.2**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.48**	**39**	⇓*i*P	**Pg**	**05 12 03.6**	**-0.3**
AOPR	**Arecibo Observ**	**0.54**	**30**		**Pg**	**05 12 04.5**	**-0.5**
AOPR				Sg	**Sg**	**05 12 11.6**	**-0.6**
AOPR				IAML		05 12 13.0	
	comp=Z,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.54**	**30**	⇓*i*P	**Pg**	**05 12 04.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.59**	**353**		**Pg**	**05 12 05.8**	**-0.2**
AGPR				Sg	**Sg**	**05 12 13.2**	**-0.6**
AGPR				IAML		05 12 13.8	
	comp=Z,2μm,0.4s						
AGPR				IAML		05 12 13.8	
	comp=Z,2μm,0.6s						
AGPR	**Aguadilla, PR**	**0.59**	**353**	⇑*i*P	**Pg**	**05 12 05.8**	**-0.2**
IDE	**Isla Desecheo**	**0.66**	**321**		**Pg**	**05 12 07.0**	**-0.2**
IDE					**Sg**	**05 12 15.8**	**0.0**
IDE	**Isla Desecheo**	**0.66**	**321**	⇓*i*P	**Pg**	**05 12 07.0**	**-0.2**
IDE				*e*S	**Sg**	**05 12 15.8**	**0.0**
EMPR	**Esperanza - Ma**	**0.77**	**39**		**Pg**	**05 12 09.4**	**+0.1**
EMPR					**Sg**	**05 12 19.4**	**0.0**
EMPR	**Esperanza - Ma**	**0.77**	**39**	⇓*i*P	**Pg**	**05 12 09.4**	**+0.1**
EMPR				*e*S	**Sg**	**05 12 19.4**	**0.0**
ECPR	**Experimental S**	**0.78**	**55**		**Pg**	**05 12 08.8**	**-0.7**
ECPR				IAML		05 12 20.5	
	comp=Z,2μm,0.2s						
ECPR				IAML		05 12 21.1	
	comp=Z,1μm,0.2s						
ECPR	**Experimental S**	**0.78**	**55**	⇓*i*P	**Pg**	**05 12 08.9**	**-0.7**
SJG	**San Juan**	**0.88**	**74**		**Pg**	**05 12 10.8**	**-0.6**
SJG	**San Juan**	**0.88**	**74**	*i* P	**Pg**	**05 12 10.8**	**-0.6**
SJG				*e*S	**Sg**	**05 12 22.4**	**-0.5**
SJG				IAML		05 12 24.8	
	comp=Z,3μm,0.3s						
SJG	**San Juan**	**0.88**	**74**	⇓*i*P	**Pg**	**05 12 11.0**	**-0.4**
IGPR	**InterUniversit**	**0.89**	**84**		**Pg**	**05 12 11.5**	**-0.1**
IGPR					**Sb**	**05 12 25.0**	**+0.9**
IGPR	**InterUniversit**	**0.89**	**84**	⇓*i*P	**Pg**	**05 12 11.5**	**-0.1**
PDPR	**Patillas Dam,**	**0.98**	**82**		**Pg**	**05 12 12.7**	**-0.6**
PDPR	**Patillas Dam,**	**0.98**	**82**	⇓*e*P	**Pg**	**05 12 12.8**	**-0.5**
HUMP	**Col San Antoni**	**1.16**	**77**		**Pg**	**05 12 15.6**	**-1.3**
HUMP				IAML		05 12 35.2	
	comp=Z,363nm,0.7s						
HUMP	**Col San Antoni**	**1.16**	**77**	⇓*e*P	**Pg**	**05 12 15.6**	**-1.3**
PCDR	**Punta Cana, DR**	**1.43**	**297**	Pn	**Pn**	**05 12 20.2**	**-0.3**
PCDR	**Punta Cana, DR**	**1.43**	**297**	*i* P	**Pn**	**05 12 20.8**	**+0.2**
PCDR				IAML		05 12 58.7	
	comp=Z,101nm,1.4s						

*ISK **05** 05:29:14.9, 36°.91N×27°.65E, h10km, ML2.5/17*
*AFAD **05** 05:29:14.8, 36°.89N×27°.65E, h7km±2km, ML2.4*
ISC 05 05:29:15.2±0.9, 36°.92N±0°.03×27°.67E±0°.02, h11km±9km, n36,σ0ᵍ45/49, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.21**	**201**	Pg	**Pg**	**05 29 19.3**	**-0.4**
DAT				Sg	**Sg**	**05 29 23.0**	**+0.2**
BODA	**Bodrum-Mula**	**0.22**	**300**	Pg	**Pg**	**05 29 19.8**	**0.0**
BODA				Sg	**Sg**	**05 29 23.5**	**+0.5**
BDRM	**Kayabasi**	**0.23**	**308**	P	**Pg**	**05 29 20.2**	**+0.2**
BDRM				IAML		05 29 24.0	
	comp=E,2μm,0.3s						
YAZI	**Mula-Datša-**	**0.30**	**216**	P	**Pg**	**05 29 21.0**	**-0.2**
YAZI				S	**Sg**	**05 29 24.7**	**-0.6**
YAZI				IAML		05 29 26.0	
	comp=N,415nm,0.5s						
BODT	**Bodrum**	**0.32**	**296**	Pg	**Pg**	**05 29 21.7**	**+0.1**
BODT				Sg	**Sg**	**05 29 26.6**	**+0.6**
YKAV	**Yalikavak-Bodr**	**0.37**	**303**	Pg	**Pg**	**05 29 22.1**	**-0.5**
TURN	**Turunc**	**0.48**	**108**	Pg	**Pg**	**05 29 24.7**	**+0.1**
TURN				Sg	**Sb**	**05 29 32.6**	**-0.1**
TURN	**Turunc**	**0.48**	**108**	P	**Pg**	**05 29 24.5**	**-0.1**
TURN				S	**Sb**	**05 29 32.2**	**-0.6**
TURN				IAML		05 29 35.0	
	comp=N,240nm,0.2s						
TURN				IAML		05 29 35.0	
	comp=E,359nm,0.3s						
YER	**Yerkesik**	**0.53**	**67**	Pg	**Pb**	**05 29 26.4**	**-0.1**
YER				Sg	**Sb**	**05 29 34.2**	**0.0**
DIDI	**Didim-Aydin**	**0.57**	**323**	Pg	**Pb**	**05 29 26.8**	**-0.3**
MULA	**Mugla, Merkez-**	**0.62**	**57**	P	**Pg**	**05 29 26.0**	**-1.2**
DDIM	**Aydin, Didim**	**0.63**	**327**	P	**Pg**	**05 29 27.1**	**-0.3**
DDIM				S	**Sb**	**05 29 37.1**	**0.0**
DDIM				IAML		05 29 42.0	
	comp=N,261nm,0.8s						
AYDN	**Tasoluk**	**0.75**	**13**	P	**Pg**	**05 29 29.5**	**-0.2**
AYDN				S	**Sg**	**05 29 39.7**	**+0.1**
AYDN				IAML		05 29 43.0	
	comp=E,368nm,0.3s						
DALY	**Dalyan (Mula)**	**0.80**	**97**	Pg	**Pg**	**05 29 30.2**	**-0.3**
DALY	**Dalyan (Mula)**	**0.80**	**97**	P	**Pg**	**05 29 30.2**	**-0.3**
DALY				S	**Sb**	**05 29 41.8**	**+0.1**
GCAM	**G?zelcaml?**	**0.85**	**336**	Pg	**Pb**	**05 29 31.9**	**0.0**
GCAM	**G?zelcaml?**	**0.85**	**336**	P	**Pb**	**05 29 32.0**	**0.0**
GCAM				S	**Sg**	**05 29 42.9**	**+0.3**
GCAM				IAML		05 29 49.0	
	comp=E,221nm,0.3s						
KUSD	**Kusadasi-Aydin**	**0.98**	**342**	Pg	**Pb**	**05 29 34.4**	**+0.2**
ESEN	**Aydn-Nazilli**	**1.02**	**32**	P	**Pg**	**05 29 34.0**	**-0.9**
ESEN				S	**Sg**	**05 29 47.9**	**-0.4**
ESEN				IAML		05 29 53.0	
	comp=E,103nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.03**	**10**	Pg	**Pg**	**05 29 35.3**	**+0.2**
SABU	**Mula-Dalaman**	**1.04**	**95**	P	**Pb**	**05 29 35.6**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.13**	**61**	P	**Pg**	**05 29 37.0**	**+0.1**
TAVA				S	**Sn**	**05 29 53.4**	**+0.9**
NAZL	**Nazilli-Aydin**	**1.15**	**25**	Pn	**Pn**	**05 29 37.8**	**+0.6**
DGB	**zmir**	**1.29**	**331**	P	**Pn**	**05 29 37.7**	**-1.3**
DNIZ	**Denizli-Tavas-**	**1.30**	**57**	P	**Pn**	**05 29 39.2**	**0.0**
DUVT	**Torbali**	**1.30**	**352**	P	**Pn**	**05 29 39.1**	**-0.2**
CAME	**Cameli-Denizli**	**1.31**	**89**	Pn	**Pg**	**05 29 40.3**	**0.0**
IZZE	**Mula-Seydike**	**1.34**	**111**	P	**Pn**	**05 29 40.0**	**+0.2**
ODEM	**Odemis-Izmir**	**1.39**	**13**	Pn	**Pn**	**05 29 41.1**	**+0.6**
KIRA	**zmir-Kiraz**	**1.40**	**24**	P	**Pn**	**05 29 40.5**	**-0.2**
APMY	**Acipayam-Deniz**	**1.41**	**67**	Pn	**Pb**	**05 29 41.6**	**0.0**
BLCB	**Balcova**	**1.54**	**341**	Pn	**Pn**	**05 29 42.9**	**+0.3**
GOLH	**Golhisar**	**1.54**	**78**	P	**Pb**	**05 29 43.7**	**-0.1**
URLA	**Izmir**	**1.67**	**330**	Pn	**Pb**	**05 29 45.3**	**-0.6**
AKAS	**Kas**	**1.70**	**113**	P	**Pg**	**05 29 47.6**	**-0.2**
CHOS	**Chios island**	**1.94**	**319**	Pn	**Pn**	**05 29 48.4**	**+0.2**

*BJI **05** 05:34:03.4, 2°.48N×128°.40E, h78km, mB4.9/5, mb4.8/43, Ms4.6/4, Ms7 4.4/4*
*MAN **05** 05:34:05.0, 2°.74N×128°.22E, h180km, MS4.6*
*IDC **05** 05:34:05.2±1.3, 2°.64N×128°.36E, h71km±12km, mb4.3/24, mbtmp4.6/28, MS3.4/16, Error ellipse: s-maj=15.8km s-min=7.6km az=71.0*
*NEIC **05** 05:34:05.9±1.3, 2°.66N±0°.06×128°.26E±0°.09, h70km±7km, mb4.8/108, Error ellipse: s-maj=13.5km s-min=9.0km az=78.0*
*DJA **05** 05:34:05.3±0.2, 3°N±2°×12°8E±°, h55km±2km, M5.3/71, mb5.1/71, mB5.8/32, MLv5.0/24, Mw(mB)5.3/32, MwMwp4.7/2, Mwp5.0/2*
*GFZ **05** 05:34:06.2±0.2, 3°N±2°×12°8E±°, h69km, M4.8/42, mb5.0/42*
ISC 05 05:34:06.2±0.5, 2°.61N±0°.03×128°.23E±0°.05, h77km±4km, h77km:pP-P, n524, σ1ᵍ08/487, mb4.8/111, 1C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.88**	**210**	P	**Pn**	**05 34 21.1**	**-2.6**
GAMI				S	**Sn**	**05 34 33.8**	**-2.9**
TNTI	**Ternate**	**2.02**	**205**		**Pn**	**05 34 37.3**	**-1.0**
TNTI	**Ternate**	**2.02**	**205**	P	**Pn**	**05 34 37.1**	**-1.2**
TNTI				S	**Sn**	**05 35 03.4**	**+0.7**
TNTI	**Ternate**	**2.02**	**205**	P	**Pn**	**05 34 37.5**	**-0.8**
SGSI	**Sangihe**	**2.91**	**292**	P	**Pn**	**05 34 48.5**	**-1.7**
SGSI	**Sangihe**	**2.91**	**292**	P	**Pn**	**05 34 48.3**	**-1.9**
MNI	**Manado**	**3.58**	**251**	P	**Pn**	**05 34 59.1**	**-0.3**
SWI	**Sorong**	**4.59**	**139**	P	**Pn**	**05 35 12.6**	**-0.6**
SIJI	**Sorong**	**4.59**	**139**	P	**Pn**	**05 35 11.9**	**-1.3**
	61nm,0.2s,baz=168,slow=23,SNR=44						
SIJI				S	**Sn**	**05 36 02.4**	**-3.0**
	22nm,0.3s,baz=164,slow=21,SNR=9.2						
SIJI				LR	LR	05 37 15.6	
	comp=Z,322nm,20.6s,baz=330,slow=42						
SIJI	**Sorong**	**4.59**	**139**	P	**Pn**	**05 35 12.6**	**-0.6**
SIJI	**Sorong**	**4.59**	**139**	P	**Pn**	**05 35 12.3**	**-1.0**
GSPH	**General Santos**	**4.76**	**317**	*i* P	**Pn**	**05 35 14.8**	**-0.8**
GSPH				*i* S	**Sn**	**05 36 09.8**	**+0.2**
SANI	**Sanana**	**5.14**	**206**	P	**Pn**	**05 35 19.7**	**-1.0**
	0.6nm193nm,0.8s						
SANI	**Sanana**	**5.14**	**206**	P	**Pn**	**05 35 20.5**	**-0.2**
DAV	**Davao City (W)**	**5.16**	**329**	P	**Pn**	**05 35 21.0**	**0.0**
	85nm,0.3s,baz=146,slow=14,SNR=2.1						
DAV				S	**Sn**	**05 36 20.9**	**+1.6**
	176nm,0.5s,baz=93,slow=20,SNR=1.9						
DAV	**Davao City (W)**	**5.16**	**329**		**Pn**	**05 35 19.7**	**-1.3**
DAV	**Davao City (W)**	**5.16**	**329**	P	**Pn**	**05 35 23.0**	**+2.0**
	2.1nm3μm267nm,0.6s						
DMPH	**Davao City--Mi**	**5.21**	**329**	*e*P	**Pn**	**05 35 23.3**	**+1.7**
DMPH				*i* S	**Sn**	**05 36 22.5**	**+2.0**
KCP	**Kidapawan**	**5.38**	**325**	*e*P	**Pn**	**05 35 27.3**	**+3.3**
KCP				*i* S	Sn	05 36 31.1	+6.5
CDOP	**Cateel, Davao**	**5.45**	**341**	*e*P	**Pn**	**05 35 24.1**	**-0.7**
CDOP				*i* S	**Sn**	**05 36 22.1**	**-4.1**
GTOI	**Gorontalo**	**5.58**	**250**	P	**Pn**	**05 35 26.7**	**+0.1**
BIPH	**Bislig**	**5.85**	**341**	*e*P	**Pn**	**05 35 29.4**	**-1.0**
BIPH				*e*S	Sn	05 36 20.5	-16
KRAI	**Karang Ratu**	**5.89**	**178**	P	**Pn**	**05 35 33.0**	**+2.1**
	0.4nm62nm,0.6s						
KRAI	**Karang Ratu**	**5.89**	**178**	P	**Pn**	**05 35 33.3**	**+2.4**
NLAI	**Namlea**	**5.92**	**191**	P	**Pn**	**05 35 32.4**	**+1.1**
	0.8nm264nm,0.9s						
NLAI	**Namlea**	**5.92**	**191**	P	**Pn**	**05 35 33.7**	**+2.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**6.07**	**319**	*i* P	**Pn**	**05 35 33.9**	**+0.5**
BUKP	**Musuan**	**6.12**	**329**	*i* P	Pn	05 35 38.9	+4.9
BUKP				*i* S	**Sn**	**05 36 44.9**	**+2.2**
LUWI	**Luwuk**	**6.55**	**236**		**Pn**	**05 35 40.6**	**+0.6**
LUWI	**Luwuk**	**6.55**	**236**	P	**Pn**	**05 35 40.4**	**+0.4**
	3μm3μm216nm,0.9s						
LUWI	**Luwuk**	**6.55**	**236**	P	**Pn**	**05 35 41.3**	**+1.3**
TSSP	**Tandag City**	**6.71**	**343**	*e*P	**Pn**	**05 35 41.1**	**-1.0**
TSSP				*e*S	Sn	05 36 30.4	-27
MWPI	**Manokwari, Pap**	**6.79**	**121**	P	**Pn**	**05 35 45.7**	**+2.5**
	0.5nm102nm,0.8s						
FAKI	**Fak Fak**	**6.80**	**144**	Pn	**Pn**	**05 35 43.2**	**-0.1**
FAKI	**Fak Fak**	**6.80**	**144**	P	**Pn**	**05 35 43.2**	**-0.1**
	0.3nm58nm,1.1s						
APSI	**Ampana**	**7.45**	**242**	P	**Pn**	**05 35 52.6**	**+0.3**
	0.9nm2μm114nm,0.6s						
APSI	**Ampana**	**7.45**	**242**	P	**Pn**	**05 35 51.5**	**-0.8**
TOLI2	**Tolitoli**	**7.59**	**259**		**Pn**	**05 35 53.4**	**-0.8**
TOLI2	**Tolitoli**	**7.59**	**259**	P	**Pn**	**05 35 53.3**	**-1.0**
SCPH	**Surigao**	**7.63**	**339**	*e*P	**Pn**	**05 35 53.4**	**-1.3**
DCPH	**Dipolog City**	**7.67**	**321**	*i* P	Pn	05 35 43.6	-12
SNPH	**Sibulan**	**8.34**	**324**	*e*P	**Pn**	**05 36 06.9**	**+2.5**
KDI	**Kendari**	**8.60**	**221**	P	**Pn**	**05 36 07.6**	**-0.4**
	5μm68nm,1.0s						
MPSI	**Mapaga**	**8.63**	**255**	P	**Pn**	**05 36 08.1**	**-0.3**
BAKI	**Biak**	**8.73**	**116**	P	**Pn**	**05 36 09.0**	**-0.7**
	50nm,0.8s						
PCI	**Palu**	**9.09**	**248**	P	**Pn**	**05 36 15.8**	**+1.1**
	113nm,1.0s						
SRPI	**Serui, Papua**	**9.16**	**119**	P	**Pn**	**05 36 19.7**	**+4.1**
KKSI	**Kolaka, Sulawe**	**9.41**	**224**	P	**Pn**	**05 36 18.9**	**-0.2**
	2μm63nm,0.7s						
KKSI	**Kolaka, Sulawe**	**9.41**	**224**	P	**Pn**	**05 36 18.6**	**-0.5**
SPSI	**Sidrap Palu**	**10.69**	**232**	P	**Pn**	**05 36 35.0**	**-1.4**
MMSI	**Mamuju**	**10.70**	**241**	P	**Pn**	**05 36 36.6**	**-0.1**
	28nm,0.7s						
MMSI	**Mamuju**	**10.70**	**241**	P	**Pn**	**05 36 35.6**	**-1.1**
KAPI	**Kappang**	**11.36**	**228**	P	**Pn**	**05 36 46.6**	**+1.0**
	15nm,0.4s,baz=52,slow=4.2,SNR=7.4						
KAPI				S	**Sn**	**05 38 47.9**	**-3.0**
	9.4nm,0.6s,baz=242,slow=19,SNR=1.7						
KAPI	**Kappang**	**11.36**	**228**		**Pn**	**05 36 45.6**	**-0.1**
KAPI	**Kappang**	**11.36**	**228**	P	**Pn**	**05 36 45.9**	**+0.2**
KAPI	**Kappang**	**11.36**	**228**	P	**Pn**	**05 36 45.7**	**+0.1**
KKM	**Kota Kinabalu**	**12.46**	**286**		**Pn**	**05 37 00.6**	**-0.1**
KKM	**Kota Kinabalu**	**12.46**	**286**	P	**Pn**	**05 37 02.0**	**+1.3**
	17nm,0.5s						
SOEI	**Soe**	**12.90**	**198**	P	**Pn**	**05 37 09.5**	**+2.8**
	100nm,1.0s						
SOEI	**Soe**	**12.90**	**198**	P	**Pn**	**05 37 09.8**	**+3.1**
LQP	**Lukban**	**13.21**	**330**	*e*P	**P**	**05 37 13.6**	**-4.4**
**JAY

ASAR ScP **ScP** **05 46 33.3 -0.6**
comp=Z,0.7nm,0.6s,baz=353,slow=2.6,SNR=7.0
ASAR LR LR 05 51 11.8
comp=Z,97nm,19.0s,baz=318,slow=38
comp=Z,2.5nm,0.6s
ASAR Alice Springs 26.69 168 P **P** **05 39 38.6 +0.3**
AS17 Alice Springs 26.71 168 P **P** **05 39 39.3 +0.8**
comp=Z,15nm,0.9s
AS09 Alice Springs 26.73 168 P **P** **05 39 39.5 +0.8**
comp=Z,7.9nm,0.9s
WRKA Warakurna 27.48 180 P **P** **05 39 44.8 -0.6**
comp=Z,3.9nm,1.0s
JCJ Chichijima 27.78 27 LR LR 05 48 15.0
comp=Z,88nm,21.8s,baz=53,slow=31
JCJ Chichijima 27.78 27 P **P** **05 39 46.6 -1.4**
GIRL Giralia 28.57 208 P **P** **05 39 55.5 +0.4**
CTA Charters Tower 28.66 143 P **P** **05 39 57.6 +1.7**
comp=Z,3.4nm,1.4s
CTA Charters Tower 28.66 143 LR LR 05 52 42.8
comp=Z,74nm,18.6s,baz=18,slow=39
PATS Pohnpei 30.26 81 P **P** **05 40 08.5 -1.7**
JNU Nakatsue 30.46 4 LR LR 05 49 47.6
comp=Z,102nm,21.4s,baz=162,slow=31
JNU Nakatsue 30.46 4 IAmb IAmb 05 41 11.7
comp=Z,14nm,0.7s
MEEK Meekatharra 30.52 197 P **P** **05 40 10.5 -1.8**
comp=Z,14nm,1.6s
NJ2 Nanjing 30.59 344 *eP* **P** **05 40 14.1 +1.2**
NJ2 pmax pmax
comp=Z,31nm,0.6s
CMAR Chiang Mai Arr 32.73 301 P **P** **05 40 32.8 +0.9**
comp=Z,1.7nm,0.7s,baz=119,slow=7.2,SNR=7.6
comp=Z,1.7nm,0.7s
CMAR Chiang Mai Arr 32.73 301 P **P** **05 40 32.2 +0.3**
ENH Enshi 32.75 329 P **P** **05 40 32.4 +0.5**
ENH pP **pP** **05 40 49.4 +0.4**
CHTO Chiang Mai 32.88 301 P **P** **05 40 33.2 0.0**
CHTO IAmb IAmb 05 40 56.0
comp=Z,22nm,1.6s
CHTO Chiang Mai 32.88 301 P **P** **05 40 33.5 +0.3**
comp=Z,5.6nm,0.6s
FORT Forrest 33.20 180 P **P** **05 40 36.1 +0.3**
comp=Z,12nm,0.9s
FORT Forrest 33.20 180 **P** **05 40 36.3 +0.6**
INU Inuyama 33.58 13 P **P** **05 40 38.2 -0.8**
INU Inuyama 33.58 13 P **P** **05 40 38.0 -1.1**
INU pP **pP** **05 40 54.5 -1.7**
MORW Morawa 33.59 200 P **P** **05 40 39.0 -0.2**
comp=Z,8.9nm,1.4s
MORW Morawa 33.59 200 P **P** **05 40 38.7 -0.5**
TJN Taejon 33.61 359 **P** **05 40 38.5 -0.8**
KMBL Kambalda 34.32 190 P **P** **05 40 45.0 -0.5**
comp=Z,7.0nm,2.2s
KSAR Wonju Array Be 34.67 360 **P** **05 40 47.9 -0.5**
KSRS Korea Array 34.68 360 P **P** **05 40 48.4 -0.1**
comp=Z,13nm,0.7s,baz=176,slow=9.8,SNR=80
KSRS LR LR 05 54 17.5
comp=Z,35nm,21.7s,baz=180,slow=35
comp=Z,13nm,0.7s
KS19 Wonju Array Si 34.73 359 P **P** **05 40 48.6 -0.3**
PZH PanZhiHua 34.79 316 P **P** **05 40 51.7 +1.9**
BLDU Ballidu 34.82 198 P **P** **05 40 49.5 -0.3**
comp=Z,12nm,0.8s
MAJO Matsushiro 35.00 14 P **P** **05 40 49.6 -1.8**
MAJO IAmb IAmb 05 40 50.9
comp=Z,15nm,0.9s
MAJO Matsushiro 35.00 14 P **P** **05 40 49.1 -2.3**
MJAR Matsushiro Arr 35.00 14 P **P** **05 40 48.9 -2.5**
comp=Z,6.8nm,0.6s,baz=184,slow=9.7,SNR=28
MJAR LR LR 05 53 05.8
comp=Z,110nm,21.7s,baz=196,slow=33
comp=Z,6.8nm,0.6s
MJAR Matsushiro Arr 35.00 14 **P** **05 40 49.2 -2.1**
MJB9 Matsu-Tunnel 35.01 14 P **P** **05 40 49.5 -1.9**
MJB9 IAmb IAmb 05 40 50.8
comp=Z,14nm,0.9s
RMQ Roma 35.07 147 P **P** **05 40 52.7 +0.6**
comp=Z,23nm,1.1s
KLBR Kellerberrin 35.44 196 P **P** **05 40 54.5 -0.7**
comp=Z,55nm,0.8s
EIDS Eidsvold 35.55 143 P **P** **05 40 56.1 -0.1**
comp=Z,6.2nm,1.0s
BBOO Buckleboo 35.99 169 P **P** **05 40 59.6 -0.3**
comp=Z,13nm,2.0s
BBOO Buckleboo 35.99 169 P **P** **05 40 58.9 -1.0**
XAN Xi'an 36.10 332 ⇑P **P** **05 41 01.3 +0.5**
XAN pmax pmax
comp=Z,26nm,0.8s
MUN Mundaring 36.24 197 P **P** **05 41 02.0 0.0**
comp=Z,18nm,1.0s
STKA Stephens Creek 36.57 161 P **P** **05 41 04.6 -0.2**
comp=Z,115nm,0.7s
STKA Stephens Creek 36.57 161 P **P** **05 41 04.5 -0.3**
comp=Z,20nm,0.8s,baz=334,slow=7.9,SNR=36
STKA LR LR 05 57 54.4
comp=Z,64nm,18.7s,baz=246,slow=39
comp=Z,20nm,0.8s
DL2 Dalian 36.63 351 P **P** **05 41 07.9 +2.7**
DL2 pmax pmax
comp=Z,35nm,1.1s
HNS HongShan 36.79 342 ⇓P **P** **05 41 06.1 -0.5**
HNS pmax pmax
comp=Z,12nm,0.8s
NWAO Narrogin (SRO) 36.84 196 P **P** **05 41 06.7 -0.4**
HTT Hallett 37.24 165 P **P** **05 41 11.0 +0.5**
comp=Z,3.5nm,2.6s
RKGY Rocky Gully 38.50 195 P **P** **05 41 22.0 +1.0**
BJI2 Beijing 38.82 345 P **P** **05 41 23.0 -0.6**
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJT Baijiatuan 38.82 345 P **P** **05 41 23.1 -0.5**
ARMA Armidale 39.71 148 P **P** **05 41 34.4 +3.0**
comp=Z,18nm,1.7s
ARMA Armidale 39.71 148 P **P** **05 41 31.3 0.0**
ARMA IAmb IAmb 05 41 36.7
comp=Z,17nm,1.1s
JTM Tenmabayashi 39.74 15 P **P** **05 41 31.3 +0.1**
LZDM Lanzhou Array 40.21 329 P **P** **05 41 36.0 +0.3**
comp=Z,6.2nm,0.6s,baz=161,slow=9.4,SNR=7.8
comp=Z,6.2nm,0.6s
LZH Lanzhou 40.23 329 *eP* **P** **05 41 36.8 +1.1**
LZH pP pP 05 41 52.4 -0.7
LZH pmax pmax
comp=Z,34nm,1.3s
H11S3 WAKE ISLAND Hy 40.83 65 T T 06 24 57.4
baz=252,slow=75,SNR=34
H11S2 WAKE ISLAND Hy 40.84 65 T T 06 25 13.2
baz=252,slow=75,SNR=27
H11S1 WAKE ISLAND Hy 40.85 64 T T 06 25 29.4
baz=252,slow=75,SNR=19
HHC Hu-ho-hao-te 40.94 341 *eP* **P** **05 41 43.7 +2.3**
HHC S **S** **05 47 50.4 +2.7**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC L L
comp=Z,740nm,14.3s
HHC L L
comp=Z,800nm,13.5s
HHC L L
comp=Z,830nm,15.1s
CN2 Changchun 41.09 357 P **P** **05 41 41.8 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
ARPS Mount Arapiles 41.17 163 P **P** **05 41 45.4 +2.2**
H11N1 WAKE ISLAND Hy 41.40 63 T T 06 25 37.8
baz=250,slow=75,SNR=36
H11N2 WAKE ISLAND Hy 41.41 63 T T 06 25 40.7
baz=250,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 41.42 63 T T 06 25 38.8
baz=250,slow=75,SNR=45
BTO2 Baotou 41.43 339 *eP* **P** **05 41 48.3 +2.9**
BTO2 pP **pwP** **05 42 05.8 -1.7**
BTO2 sP **sP** **05 42 15.8 +4.4**
BTO2 S **S** **05 48 00.1 +5.0**
BTO2 pmax pmax
comp=Z,15nm,0.5s
BTO2 pmax pmax
comp=Z,65nm,4.5s
BTO2 L L
comp=Z,190nm,6.5s
BTO2 L L
comp=Z,140nm,9.7s
BTO2 L L
comp=Z,110nm,5.6s
USA0B Ussuriysk Arra 41.55 4 P **P** **05 41 46.0 -0.2**
USA0B IAmb IAmb 05 41 47.7
comp=Z,9.9nm,0.8s
USRK Ussuriysk Ar. 41.55 4 P **P** **05 41 46.4 +0.2**
comp=Z,12nm,0.7s,baz=184,slow=7.0,SNR=16
comp=Z,12nm,0.7s
USRK Ussuriysk Ar. 41.55 4 P **P** **05 41 45.9 -0.3**
SHL Shillong 41.75 306 **P** **05 41 49.0 +0.7**
MDJ Mudanjiang 41.85 1 P **P** **05 41 48.8 +0.2**
MDJ pmax pmax
comp=Z,16nm,1.1s
LSA Lhasa 44.30 311 ⇓P P 05 41 55.7 -14
LSA pmax pmax
comp=Z,10.0nm,0.6s
GTA2 Gaotai 44.91 328 P **P** **05 42 13.9 +0.3**
GTA2 pP pwP 05 42 33.8 -2.3
GTA2 pmax pmax
comp=Z,13nm,0.8s
GOMU GeErMu 45.49 321 P **P** **05 42 18.1 -0.4**
GOMU pmax pmax
comp=Z,5.0nm,0.5s
EVN Everest 46.86 307 P **P** **05 42 29.5 -0.2**
EVN IAmb IAmb 05 42 31.5
comp=Z,12nm,0.7s
EVN Everest 46.86 307 P **P** **05 42 30.8 +1.1**
HEH HeiHe 47.48 359 *eP* P 05 42 42.9 +10
ULN Ulaanbaatar 48.65 341 P **P** **05 42 42.5 -0.2**
SONM Songino Array 48.84 341 P **P** **05 42 43.5 -0.6**
comp=Z,3.1nm,0.6s,baz=153,slow=7.7,SNR=13
comp=Z,3.1nm,0.6s
SONM Songino Array 48.84 341 P **P** **05 42 43.4 -0.6**
MSVF Nonsavu 53.08 114 LR LR 06 05 38.5
comp=Z,27nm,18.1s,baz=298,slow=36
WMQ Urumqi 54.50 325 *eP* **P** **05 43 27.2 +1.0**
WMQ pP pwP 05 43 47.6 -1.4
WMQ pmax pmax
comp=Z,17nm,0.7s
PEA0B Petropavlovsk- 55.92 21 P **P** **05 43 36.2 +0.1**
PETK Petropavlovsk- 55.92 21 P **P** **05 43 36.0 -0.1**
comp=Z,12nm,0.7s,baz=193,slow=3.9,SNR=19
comp=Z,12nm,0.7s
PETK Petropavlovsk- 55.92 21 P **P** **05 43 36.3 +0.2**
YAK Yakutsk 59.29 1 P **P** **05 43 58.4 -1.3**
MKAR Makanchi Array 59.33 325 P **P** **05 44 00.1 -0.3**
comp=Z,4.4nm,0.5s,baz=121,slow=8.1,SNR=30
comp=Z,4.4nm,0.5s
MKAR Makanchi Array 59.33 325 P **P** **05 43 60.0 -0.3**
MAKZ Makanchi 59.52 325 P **P** **05 44 01.4 -0.2**
MAKZ Makanchi 59.52 325 P **P** **05 44 01.6 +0.1**
MAKZ Makanchi 59.52 325 P **P** **05 44 01.4 -0.2**
MAKZ pP **pP** **05 44 19.6 -0.5**
NIL Nilore 59.80 308 P **P** **05 44 03.5 -0.2**
NIL IAmb IAmb 05 44 28.9
comp=Z,9.7nm,1.0s
RPZ Rata Peaks 59.99 145 LR LR 06 11 20.7
comp=Z,14nm,19.0s,baz=324,slow=37
KSH2 Kashi 60.03 314 P **P** **05 44 09.7 +4.3**
KSH2 pmax pmax
comp=Z,4.0nm,0.8s
ASAI AK-SAY(Kyrgyzs 60.10 317 P **P** **05 44 06.2 +0.1**
URZ Urewera 60.70 137 LR LR 06 11 05.9
comp=Z,43nm,18.0s,baz=328,slow=37
ZALV Zalesovo Beam 62.27 333 P **P** **05 44 18.6 -1.4**
comp=Z,0.7nm,0.3s,baz=121,slow=7.1,SNR=5.8
comp=Z,0.7nm,0.3s
ARSB Arslanbob 62.70 316 P **P** **05 44 22.8 -0.6**
ARSB IAmb IAmb 05 44 46.4
comp=Z,12nm,1.3s
KURBB Kurchatov Arra 63.49 327 P **P** **05 44 26.9 -1.2**
comp=Z,3.9nm,0.6s,baz=126,slow=6.2,SNR=25
comp=Z,3.9nm,0.6s
KURK Kurchatov 63.49 327 P **P** **05 44 27.7 -0.5**
KURK IAmb IAmb 05 44 48.2
comp=Z,6.1nm,0.7s
KURK Kurchatov 63.49 327 P **P** **05 44 27.7 -0.5**
KURK pP **pP** **05 44 47.7 +0.8**
ARK Arkit 63.59 316 P **P** **05 44 29.9 +0.6**
BTK Batken 63.78 314 P **P** **05 44 30.2 -0.2**
GAR Garm 63.78 313 P **P** **05 44 29.9 -0.6**
KK31 Karatay Array 65.07 317 P **P** **05 44 38.3 -0.4**
KK31 IAmb IAmb 05 44 59.4
comp=Z,7.5nm,0.9s
KKAR Karatay Array 65.07 317 P **P** **05 44 38.2 -0.5**
KIWB Kanaga Island 66.78 33 P **P** **05 44 49.2 -0.3**
ADK Adak 67.05 33 P **P** **05 44 51.0 -0.2**
ADK Adak 67.05 33 P **P** **05 44 50.5 -0.6**
ATKA Atka Island 68.57 34 P **P** **05 45 00.5 -0.2**
TIXI Tiksi 68.95 0 P **P** **05 45 01.8 -0.9**
TIXI IAmb IAmb 05 45 15.8
comp=Z,20nm,1.1s
BVAR Borovoye Array 69.08 327 P **P** **05 45 02.8 -1.1**
comp=Z,1.4nm,0.4s,baz=114,slow=7.2,SNR=12
comp=Z,1.4nm,0.4s
BORK Borovoye 69.12 327 P **P** **05 45 03.5 -0.7**
NRIK Noril'sk 71.87 346 P **P** **05 45 19.2 -1.4**
comp=Z,4.3nm,0.7s,baz=135,slow=5.7,SNR=3.5
comp=Z,4.3nm,0.7s
NRIK Noril'sk 71.87 346 P **P** **05 45 20.0 -0.6**
NRIK IAmb IAmb 05 45 27.1
comp=Z,5.1nm,0.6s
SPIA Saint Paul Isl 72.70 30 P **P** **05 45 26.1 +0.4**
baz=247
UNV Unalaska Valle 73.50 34 P **P** **05 45 30.7 +0.2**
baz=251
AB31 Akbulak array 73.97 321 P **P** **05 45 32.5 -0.8**
AKUT Akutan 74.00 34 P **P** **05 45 33.4 0.0**
GAMB Gambell 74.81 24 P **P** **05 45 38.5 +0.6**
baz=244
M11K Mekoryuk 75.85 28 P **P** **05 45 44.6 +0.6**
baz=250
TNA Tin City 77.04 23 P **P** **05 45 51.0 +0.4**
baz=247
K13K Kusilvak Mount 77.08 27 P **P** **05 45 51.3 +0.4**
baz=251
M13K Dall Lake 77.20 28 P **P** **05 45 52.1 +0.6**
baz=252
SDPT Sand Point 77.28 34 P **P** **05 45 52.5 +0.3**
baz=256
F14K Arctic Creek 77.62 23 P **P** **05 45 54.3 +0.4**
baz=248
CHNA Chernabura Isl 77.66 34 P **P** **05 45 54.6 +0.4**
baz=257
L14K Kuka Creek 77.79 27 P **P** **05 45 55.5 +0.6**
L14K IAmb IAmb 05 45 57.1
comp=Z,13nm,0.9s
L14K Kuka Creek 77.79 27 P **P** **05 45 55.2 +0.4**
baz=253
N14K Kuskokwak Cree 77.85 29 P **P** **05 45 55.7 +0.4**
baz=254
O14K Tigyukauivet M 77.87 30 P **P** **05 45 55.6 +0.3**
baz=254
M14K Bethel 77.95 28 P **P** **05 45 56.6 +0.8**
M14K IAmb IAmb 05 45 57.8
comp=Z,12nm,0.7s
M14K Bethel 77.95 28 P **P** **05 45 56.1 +0.4**
baz=253,SNR=5.4
S14K Fog Glacier 78.01 33 P **P** **05 45 56.5 +0.1**
baz=256
F15K North Star Dit 78.36 23 P **P** **05 45 58.7 +0.7**
baz=250
G15K Niukluk 78.36 24 P **P** **05 45 58.4 +0.4**
baz=251
L15K Ungalak Mounta 78.44 27 P **P** **05 45 58.9 +0.4**
baz=254
M15K Kasigluk River 78.54 28 P **P** **05 45 59.5 +0.5**
baz=255
O15K Ungalikthiuk R 78.57 30 P **P** **05 45 59.7 +0.5**
baz=256
CHGN Chignik 78.64 33 P **P** **05 45 59.9 +0.3**
baz=258
N15K Kwethluk River 78.69 29 P **P** **05 46 00.4 +0.6**
baz=255
H16K Elim 78.97 24 P **P** **05 46 01.9 +0.5**
baz=252
C16K Lisburne Hills 79.01 20 P **P** **05 46 02.2 +0.7**
baz=249
J16K Anvik River 79.28 26 P **P** **05 46 03.6 +0.5**
baz=254
L16K Owhat River 79.37 28 IAmb IAmb 05 46 05.2
comp=Z,9.3nm,1.1s
L16K Owhat River 79.37 28 P **P** **05 46 04.0 +0.5**
baz=256
N16K Nishlik Lake 79.40 29 P **P** **05 46 04.3 +0.5**
baz=256,SNR=5.4
I17K Unalakleet 79.40 25 P **P** **05 46 04.2 +0.6**
baz=254
M16K Timber Creek 79.44 28 IAmb IAmb 05 46 06.1
comp=Z,8.1nm,0.9s
M16K Timber Creek 79.44 28 P **P** **05 46 04.4 +0.5**
baz=256
P16K Nushagak River 79.46 30 P **P** **05 46 04.5 +0.5**
baz=257
O16K Kokwok River B 79.53 30 IAmb IAmb 05 46 05.9
comp=Z,8.3nm,1.0s
O16K Kokwok River B 79.53 30 P **P** **05 46 04.8 +0.4**
baz=257
D17K Noatak River 79.61 21 P **P** **05 46 05.3 +0.5**
baz=251
RDOG Red Dog Mine 79.79 21 P **P** **05 46 06.2 +0.5**
baz=251
C17K DeLong Mountai 79.83 20 P **P** **05 46 06.7 +0.7**
baz=251
G17K Kiwalik Mounta 79.87 24 P **P** **05 46 06.7 +0.5**
baz=254
E17K Hotham Inlet 79.88 22 P **P** **05 46 06.7 +0.5**
baz=252
F17K Baldwin Pennin 79.91 23 P **P** **05 46 07.0 +0.6**
baz=253
J17K VABM Dome 79.97 26 P **P** **05 46 07.0 +0.3**
baz=256
R17L Mt. Peulik Vol 80.01 32 P **P** **05 46 07.1 0.0**
baz=259
L17K Donlin 80.01 27 P **P** **05 46 07.5 +0.4**
baz=256
H17K Granite Mounta 80.02 24 P **P** **05 46 07.4 +0.4**
baz=254
Q16K King Salmon 80.06 31 P **P** **05 46 07.6 +0.2**
baz=259
O17K Koliganek Bris 80.06 30 P **P** **05 46 07.4 +0.1**
baz=258,SNR=5.9
K17K Iditarod 80.15 27 P **P** **05 46 08.3 +0.6**
baz=256
N17K Nushagak Hills 80.18 29 P **P** **05 46 08.4 +0.5**
baz=258
M17K Holitna River 80.25 28 P **P** **05 46 08.9 +0.6**
baz=257
P17K Kvichak River 80.27 30 P **P** **05 46 09.0 +0.6**
baz=259
Q17K Contact Creek 80.38 31 P **P** **05 46 08.9 -0.3**
baz=259
E18K Tukpahlearik C 80.43 22 IAmb IAmb 05 46 10.8
comp=Z,8.5nm,0.7s
E18K Tukpahlearik C 80.43 22 P **P** **05 46 09.7 +0.5**
baz=254,SNR=10.0
F18K Selawik 80.56 23 P **P** **05 46 10.4 +0.6**
baz=254
C18K Utukok River 80.58 20 IAmb IAmb 05 48 06.0
comp=Z,20nm,1.8s
C18K Utukok River 80.58 20 P **P** **05 46 10.3 +0.3**
baz=253,SNR=6.3
H18K Honhosa River 80.71 24 P **P** **05 46 11.0 +0.3**
baz=256
L18K Granite Mounta 80.77 27 IAmb IAmb 05 46 13.1
comp=Z,23nm,1.9s
L18K Granite Mounta 80.77 27 P **P** **05 46 11.6 +0.5**
baz=258
G18K Tagagawik 80.77 23 P **P** **05 46 11.5 +0.5**
baz=256
N18K Kilae Creek 80.83 29 P **P** **05 46 11.7 +0.2**
baz=259
Q18K Katmai Hardscr 80.90 31 P **P** **05 46 11.6 -0.4**
baz=260
P18K Big Mountain, 80.92 30 P **P** **05 46 12.1 +0.1**
baz=260
SII Sitkinak Islan 80.99 33 P **P** **05 46 12.9 +0.4**
baz=261
O18K Koktuh Hills 81.01 30 P **P** **05 46 12.9 +0.5**
baz=260
M18K Stony River 81.02 28 P **P** **05 46 13.1 +0.6**
baz=259
GCSA Galena City Sc 81.23 25 P **P** **05 46 13.8 +0.4**
baz=257
C19K Lookout Ridge 81.27 20 IAmb IAmb 05 46 15.2
comp=Z,9.1nm,0.6s
C19K Lookout Ridge 81.27 20 P **P** **05 46 14.2 +0.5**
baz=254,SNR=9.5
F19K Shaleruckim Mo 81.35 23 P **P** **05 46 14.4 +0.3**
baz=256
G19K Purcell Mounta 81.45 23 IAmb IAmb 05 46 17.2
comp=Z,6.4nm,0.7s
G19K Purcell Mounta 81.45 23 P **P** **05 46 15.4 +0.8**
baz=257,SNR=12
N19K Bonanza Creek 81.54 29 P **P** **05 46 15.8 +0.5**
baz=260
H19K Roundabout Mou 81.57 24 IAmb IAmb 05 46 18.0
comp=Z,8.2nm,0.7s
H19K Roundabout Mou 81.57 24 P **P** **05 46 16.1 +0.9**
baz=258,SNR=12
OHAK Old Harbor 81.58 33 P **P** **05 46 16.2 +0.7**
baz=262
L19K White Mountain 81.60 28 P **P** **05 46 16.1 +0.5**
baz=260
J19K Poorman 81.61 26 IAmb IAmb 05 46 17.1
comp=Z,15nm,1.5s
J19K Poorman 81.61 26 P **P** **05 46 16.3 +0.8**
baz=259,SNR=5.8
D19K Kuna River 81.62 21 IAmb IAmb 05 46 16.9
comp=Z,9.5nm,0.6s
D19K Kuna River 81.62 21 P **P** **05 46 16.2 +0.7**
baz=256,SNR=11
Q19K Cape Douglas, 81.65 31 P **P** **05 46 16.3 +0.4**
baz=261
E19K Redstone River 81.70 22 IAmb IAmb 05 46 17.7
comp=Z,7.7nm,0.8s
E19K Redstone River 81.70 22 P **P** **05 46 16.6 +0.7**
baz=257,SNR=13
M19K Big River Lodg 81.77 28 P **P** **05 46 17.0 +0.6**
baz=260
P19K Oil Pt 81.97 30 P **P** **05 46 17.9 +0.4**
baz=261
KDAK Kodiak Island 82.03 32 P **P** **05 46 18.1 +0.2**
KDAK IAmb IAmb 05 46 19.5
comp=Z,16nm,1.0s
KDAK Kodiak Island 82.03 32 P **P** **05 46 18.2 +0.4**
baz=262
KDAK Kodiak Island 82.03 32 P **P** **05 46 17.4 -0.4**
KDAK x x 05 46 30.9
VNDA Vanda 82.13 173 P **P** **05 46 18.1 +0.1**
comp=Z,1.2nm,0.5s,baz=320,slow=7.4,SNR=14
VNDA LR LR 06 20 49.6
comp=Z,43nm,21.2s,baz=212,slow=34
comp=Z,1.2nm,0.5s
VNDA Vanda 82.13 173 **P** **05 46 18.6 +0.6**
K20K Telida 82.17 26 IAmb IAmb 05 46 21.4
comp=Z,34nm,1.9s
K20K Telida 82.17 26 P **P** **05 46 19.2 +0.7**
baz=260
F20K Avaraart Lake 82.18 23 P **P** **05 46 19.3 +0.9**
baz=258
H20K Anotleneega Mo 82.21 24 P **P** **05 46 19.5 +0.9**
baz=259,SNR=6.8
D20K Etivluk River 82.21 21 IAmb IAmb 05 46 20.5
comp=Z,6.2nm,0.7s
D20K Etivluk River 82.21 21 P **P** **05 46 19.2 +0.6**
baz=257,SNR=11
I20K Naagheheneel 82.25 25 P **P** **05 46 19.4 +0.6**
baz=260
E20K Nigu River 82.26 21 P **P** **05 46 19.6 +0.6**
baz=258,SNR=18
J20K Nowinta River 82.28 26 IAmb IAmb 05 46 21.1
comp=Z,17nm,1.6s
J20K Nowinta River 82.28 26 P **P** **05 46 19.7 +0.7**
baz=260,SNR=5.7
B20K Meade River 82.32 20 P **P** **05 46 20.0 +0.9**
baz=256
M20K Styx River 82.36 28 P **P** **05 46 20.1 +0.5**
baz=261
A21K Barrow 82.81 18 P **P** **05 46 22.3 +0.7**
baz=257
PPLA Purkeypile 82.94 27 P **P** **05 46 22.9 +0.2**
baz=262
G21K Allakaket 82.94 23 P **P** **05 46 22.8 +0.3**
baz=260,SNR=5.9
C21K Knifeblade Rid 82.95 21 P **P** **05 46 22.9 +0.5**
baz=259
CHUM Lake Minchumin 83.02 26 P **P** **05 46 23.2 +0.3**
baz=262
CAST Castle Rocks 83.06 26 P **P** **05 46 23.4 +0.2**
baz=262
F21K Alatna River 83.07 23 P **P** **05 46 23.4 +0.2**
baz=260
H21K Melozitna Rive 83.09 24 IAmb IAmb 05 46 24.9
comp=Z,17nm,1.6s
H21K Melozitna Rive 83.09 24 P **P** **05 46 23.5 +0.3**
baz=261,SNR=6.8
B21K Ikpikpuk River 83.10 20 IAmb IAmb 05 46 24.8

comp=Z,10nm,0.8s
B21K Ikpikpuk River 83.10 20 P P 05 46 23.6 +0.4
baz=259
E21K Killik River 83.11 21 P P 05 46 23.6 +0.3
baz=260
SKT Skwentna 83.12 28 IAmb IAmb 05 46 23.6
comp=Z,12nm,1.2s
SKT Skwentna 83.12 28 P P 05 46 23.3 -0.2
baz=263
MAW Mawson 83.23 201 P P 05 46 23.9 +0.1
comp=Z,2.8nm,0.8s,baz=65,slow=5.2,SNR=7.2
comp=Z,2.8nm,0.8s
MAW Mawson 83.23 201 P P 05 46 24.1 +0.3
PPT2 Papeete2 83.34 108 *e*LR LR 06 12 29.8
comp=Z,98nm,33.0s
PPT2 *e*LR LR 06 12 31.6
comp=Z,45nm,24.2s
I21K Tanana 83.35 25 IAmb IAmb 05 46 26.4
comp=Z,16nm,1.5s
I21K Tanana 83.35 25 P P 05 46 25.1 +0.6
baz=262
L22K Petersville 83.54 27 P P 05 46 25.2 -0.5
L22K IAmb IAmb 05 46 25.9
comp=Z,13nm,1.2s
L22K Petersville 83.54 27 P P 05 46 25.7 0.0
baz=263,SNR=7.5
F22K John River 83.62 22 P P 05 46 26.5 +0.6
baz=261
B22K Teshekpuk Lake 83.64 19 P P 05 46 26.6 +0.7
baz=260
H22K Ishtalitna Cre 83.70 24 IAmb IAmb 05 46 49.9
comp=Z,13nm,1.4s
H22K Ishtalitna Cre 83.70 24 P P 05 46 27.0 +0.6
baz=262,SNR=5.6
M22K Willow 83.75 28 P P 05 46 26.9 +0.3
baz=264
CUT Chulitna 83.76 28 P P 05 46 27.3 +0.6
baz=264
G22K Bettles 83.79 23 P P 05 46 27.4 +0.6
baz=262
E22K Anaktuvuk Pass 83.85 22 IAmb IAmb 05 46 28.8
comp=Z,6.8nm,0.7s
E22K Anaktuvuk Pass 83.85 22 P P 05 46 27.4 +0.3
baz=262
MLY Manley 83.86 25 P P 05 46 27.5 +0.2
baz=263,SNR=5.7
TRF Thorofare Moun 83.86 27 P P 05 46 27.4 0.0
baz=264
RC01 Rabbit Creek A 83.87 29 P P 05 46 27.2 -0.1
baz=264
SEW Seward 83.91 30 P P 05 46 27.6 +0.1
baz=265
TBI Tubuai 83.97 114 *e*LR LR 06 13 05.7
comp=Z,624nm,39.0s
PMR Palmer 84.21 28 IAmb IAmb 05 46 29.5
comp=Z,20nm,1.5s
PMR Palmer 84.21 28 P P 05 46 28.8 -0.2
baz=265
COLD Coldfoot 84.34 23 IAmb IAmb 05 46 31.3
comp=Z,6.7nm,0.6s
COLD Coldfoot 84.34 23 P P 05 46 29.8 +0.3
baz=263,SNR=7.8
G23K Bananza Creek 84.35 23 P P 05 46 30.1 +0.5
baz=263,SNR=9.7
D23K Nanushuk River 84.38 21 IAmb IAmb 05 46 32.7
comp=Z,6.2nm,0.8s
D23K Nanushuk River 84.38 21 P P 05 46 30.2 +0.5
baz=263,SNR=9.3
H23K Yukon River 84.44 24 P P 05 46 30.3 +0.1
baz=264
I23K Minto, Yukon-K 84.45 25 IAmb IAmb 05 46 31.8
comp=Z,17nm,1.6s
I23K Minto, Yukon-K 84.45 25 P P 05 46 30.5 +0.3
baz=264
MCK McKinley 84.50 26 IAmb IAmb 05 46 53.1
comp=Z,8.0nm,1.1s
MCK McKinley 84.50 26 P P 05 46 30.4 0.0
baz=265
RND Reindeer 84.50 27 IAmb IAmb 05 46 31.4
comp=Z,6.8nm,1.0s
C23K Itkillik River 84.51 20 P P 05 46 30.6 +0.3
baz=263,SNR=16
KNK Knik Glacier 84.52 29 P P 05 46 30.9 +0.3
baz=265
NEA2 Nenana 84.52 25 IAmb IAmb 05 46 57.5
comp=Z,9.4nm,1.6s
NEA2 Nenana 84.52 25 P P 05 46 30.8 +0.3
baz=264
WAT1 Susitna Watana 84.59 27 P P 05 46 31.1 +0.1
baz=265
SML Sawmill 84.61 28 P P 05 46 30.7 -0.4
baz=265
E23K Chandalar 84.66 22 IAmb IAmb 05 46 34.2
comp=Z,6.3nm,0.7s
E23K Chandalar 84.66 22 P P 05 46 32.1 +0.9
baz=264,SNR=11
TOLK Toolik Lake Re 84.74 21 P P 05 46 32.2 +0.6
baz=264,SNR=6.2
M23K Glacier View 84.89 28 P P 05 46 33.0 +0.5
baz=266
P23K Montague Islan 84.93 30 P P 05 46 33.4 +0.7
baz=266
WAT6 Susitna Watana 84.94 28 P P 05 46 33.3 +0.4
baz=266
D24K Happy Valley 85.06 21 IAmb IAmb 05 46 34.9
comp=Z,8.5nm,0.7s
D24K Happy Valley 85.06 21 P P 05 46 33.7 +0.5
baz=264,SNR=8.8
CCB Clear Creek Bu 85.07 25 IAmb IAmb 05 46 33.2
comp=Z,14nm,1.7s
E24K Your Creek 85.08 22 P P 05 46 33.9 +0.5
baz=265
SCM Sheep Creek Mo 85.08 28 P P 05 46 33.9 +0.4
baz=266
DHY Denali Highway 85.14 27 P P 05 46 34.2 +0.3
baz=266
C24K Franklin Bluff 85.16 20 IAmb IAmb 05 46 34.9
comp=Z,5.6nm,0.7s
C24K Franklin Bluff 85.16 20 P P 05 46 34.2 +0.6
baz=264
POKR Poker Plat Res 85.26 25 P P 05 46 34.5 +0.3
baz=266
F24K Squaw Lake 85.26 23 P P 05 46 34.8 +0.5
baz=265,SNR=5.6
G24K Hadweenzic Riv 85.36 23 P P 05 46 35.0 +0.3
baz=266
Q23K Middleton Isla 85.43 31 P P 05 46 35.3 +0.2
baz=267
ILAR Eielson Array 85.47 25 P P 05 46 33.9 -1.4
comp=Z,0.7nm,0.5s,baz=244,slow=5.4,SNR=23
comp=Z,0.7nm,0.5s
ILAR Eielson Array 85.47 25 P P 05 46 34.9 -0.4
M24K Tolsona, Glenn 85.64 28 P P 05 46 36.3 +0.1
baz=267
KLU Klutina 85.73 29 P P 05 46 37.3 +0.5
KLU IAmb IAmb 05 47 19.8
comp=Z,13nm,1.4s
KLU Klutina 85.73 29 P P 05 46 36.8 +0.1
baz=268
EYAK Cordova Ski Ar 85.78 30 P P 05 46 36.8 0.0
baz=268
K24K Donnelly Dome 85.90 26 P P 05 46 37.7 +0.2
baz=268
G25K Bearman Lake 85.91 23 P P 05 46 37.9 +0.5
baz=267
D25K Kavik River 85.94 21 P P 05 46 38.0 +0.3
baz=267
J25K Salcha River, 86.11 26 P P 05 46 38.5 0.0
baz=268
F25K Christian Rive 86.12 23 P P 05 46 38.6 +0.1
baz=267
HARP HAARP 86.13 28 P P 05 46 38.8 +0.2
baz=268
E25K Arctic Village 86.18 22 P P 05 46 38.9 +0.1
baz=267
RIDG Independent Ri 86.31 26 P P 05 46 39.7 +0.2
baz=268
BMRM Bremner River 86.36 29 P P 05 46 40.1 +0.3
baz=269
N25K Chitina, Valde 86.37 29 P P 05 46 40.2 +0.2
baz=269
KAIM Kayak Island 86.43 30 P P 05 46 40.4 +0.3
baz=269
C26K Camden Bay 86.48 20 P P 05 46 40.5 +0.3
baz=268
SCRK Sand Creek 86.70 26 P P 05 46 41.6 +0.1
baz=269
F26K Sheenjek River 86.70 22 P P 05 46 41.4 +0.1
baz=269
G26K Porcupine Rive 86.83 23 P P 05 46 42.0 +0.1
baz=269
C27K Jago River 86.89 21 P P 05 46 42.3 +0.1
baz=269
L26K Log Cabin Wild 86.97 27 P P 05 46 43.0 +0.2
baz=270
CRQE Circue 87.09 29 P P 05 46 43.3 -0.2
baz=270
MCARA McCarthy VSAT 87.13 29 P P 05 46 43.2 -0.3
baz=270
M26K Nabesna, AK 87.14 28 P P 05 46 43.4 -0.2
baz=270
M27K Edge Creek, AK 87.66 28 P P 05 46 46.0 -0.2
baz=271
E27K Coleen River 87.66 22 P P 05 46 45.8 -0.2
baz=271
G27K Doyon Strip 87.67 23 P P 05 46 45.9 -0.1
baz=271
L27K Beaver Creek, 87.67 27 P P 05 46 45.8 -0.3
baz=271
I27K Kandik River 87.71 25 P P 05 46 46.1 -0.1
baz=271
H27K Steamboat Moun 87.73 24 P P 05 46 46.2 -0.1
baz=271
BVCY Beaver Creek 88.13 28 P P 05 46 47.9 -0.4
baz=272
F28M Old Crow 88.33 23 IAmb IAmb 05 46 49.5
comp=Z,20nm,1.9s
F28M Old Crow 88.33 23 P P 05 46 48.9 -0.3
baz=273
YUK3 Moose Creek 88.34 28 P P 05 46 49.0 -0.5
baz=272
E28M Babbage River 88.41 22 P P 05 46 49.3 -0.2
baz=273
I28M Miner Creek 88.41 25 IAmb IAmb 05 46 50.5
comp=Z,3.4nm,0.7s
I28M Miner Creek 88.41 25 P P 05 46 49.3 -0.4
baz=273
O28M Mount Upton 88.52 29 P P 05 46 49.9 -0.6
baz=273
PINM Pinnacle 88.52 30 P P 05 46 50.0 -0.3
baz=273
DAWY Dawson 88.72 26 P P 05 46 51.0 -0.1
baz=273
H29M Whitestone 89.01 24 P P 05 46 52.3 -0.1
baz=274
E29M Blow River 89.03 22 P P 05 46 52.4 0.0
baz=275
G29M Pine Creek 89.10 23 P P 05 46 52.7 0.0
baz=274
YUK4 Talbot Arm 89.23 29 P P 05 46 53.4 -0.3
baz=274
M29M Bonnifield Creek 89.24 28 P P 05 46 53.5 -0.2
baz=274
O29M Mount Kennedy 89.34 30 P P 05 46 54.0 -0.1
baz=274
L29M L29M 89.35 27 P P 05 46 54.3 +0.2
baz=274
YUK6 Outpost Mounta 89.40 29 P P 05 46 54.5 -0.1
baz=274
K29M Barlow Dome 89.56 26 P P 05 46 55.1 0.0
baz=275
EPYK Eagle Plains 89.66 24 P P 05 46 55.5 0.0
baz=276
G30M tAoh Zraii Nji 89.80 23 P P 05 46 56.1 +0.1
baz=276
P29M Windy Craggy 89.81 30 P P 05 46 56.2 0.0
baz=275
HYT Haines Junctio 89.83 29 P P 05 46 56.4 -0.1
baz=275
F30M Barrier River 89.89 22 P P 05 46 56.4 -0.1
baz=276
I30M Mount Dempster 89.92 25 P P 05 46 56.8 0.0
baz=276
N30M Aishikik Lake 89.97 29 P P 05 46 57.4 +0.4
baz=275
M30M Minto, Yukon 90.00 27 P P 05 46 57.3 +0.2
baz=276
J30M Hart River 90.01 25 P P 05 46 57.4 +0.2
baz=276
P30M Million Dollar 90.16 30 P P 05 46 58.2 +0.3
baz=276
O30N Mendenhall 90.52 29 P P 05 46 59.8 +0.2
baz=276
PLBC Pleasant Camp 90.53 31 P P 05 46 59.7 +0.2
baz=276
N31M Braeburn, Yuko 90.59 29 P P 05 47 00.2 +0.3
baz=276
H31M Peel River 90.69 24 P P 05 47 00.4 +0.2
baz=278
S31K Pelican 90.75 32 P P 05 47 00.8 +0.3
baz=276
WHY Whitehorse 91.13 29 P P 05 47 02.6 +0.1
baz=277
M31M Drury Creek, Y 91.16 28 P P 05 47 02.8 +0.3
baz=278
SIT Sitka 91.34 33 P P 05 47 03.5 +0.2
baz=277
R32K Eaglecrest 91.62 32 P P 05 47 04.8 +0.1
baz=278
S32K Killisnoo 91.69 32 P P 05 47 05.1 +0.1
baz=278
P32M Atlin 91.85 30 P P 05 47 05.7 -0.1
baz=278
SPITS Spitsbergen Ar 91.86 349 P P 05 47 06.4 +1.0
comp=Z,5.7nm,0.9s,baz=72,slow=4.5,SNR=1.6
comp=Z,5.7nm,0.9s
TAOE Nuku Hiva Isla 91.99 99 *e*LR LR 06 16 36.0
comp=Z,88nm,25.7s
ARCES ARCESS Array B 92.01 340 P P 05 47 07.0 +0.7
comp=Z,1.4nm,0.6s,baz=79,slow=5.7,SNR=9.4
comp=Z,1.4nm,0.6s
ARCES ARCESS Array B 92.01 340 P P 05 47 04.7 -1.5
P33M Teslin, Yukon 92.20 30 P P 05 47 07.4 0.0
baz=279
QSPA South Pole Qui 92.52 180 P P 05 47 09.6 +0.8
comp=Z,1.1nm,0.7s,baz=347,slow=4.5,SNR=8.7
comp=Z,1.1nm,0.7s
QSPA South Pole Qui 92.52 180 P P 05 47 08.6 -0.2
MMPY Sheldon Lake, 92.53 27 P P 05 47 08.9 +0.1
baz=280
A36M Sachs Harbour 92.61 17 P P 05 47 08.8 -0.1
baz=286
U33K Whale Pass 92.68 34 P P 05 47 09.3 -0.2
baz=279
Q32M Nakina River 92.68 31 P P 05 47 09.4 -0.4
baz=280
CRAG Craig 92.77 34 P P 05 47 09.9 0.0
baz=279
R33M Jennings River 93.27 30 P P 05 47 12.2 -0.2
baz=281
FINES FINESS Array B 93.52 332 P P 05 47 14.4 +1.1
comp=Z,4.1nm,1.1s,baz=115,slow=26,SNR=3.8
comp=Z,4.1nm,1.1s
FINES FINESS Array B 93.52 332 P P 05 47 13.3 -0.1
V35K Ketchikan 93.64 34 P P 05 47 13.5 -0.5
baz=280
C36M Paulatuk 93.76 20 IAmb IAmb 05 47 14.3
comp=Z,2.8nm,0.7s
C36M Paulatuk 93.76 20 P P 05 47 13.9 -0.3
baz=288
KOLS Kolonicke sedl 98.46 320 *e*PDIFF Pdif 05 47 45.0 +8.9
MODS Modra-Piesok 101.80 320 *e*PDIFF **Pdif** 05 47 56.3 +5.3
TXAR Lajitas Array 121.08 53 PKP **PKPdf** 05 52 50.0 -0.9
comp=Z,0.2nm,0.6s,baz=320,slow=2.1,SNR=6.3
TORD Torodi Ar. Bea 124.69 288 PKP **PKPdf** 05 52 57.4 -0.7
comp=Z,1.1nm,0.7s,baz=98,slow=2.5,SNR=5.9
ROSC El Rosal 156.28 72 PKPab **PKPab** 05 54 21.4 -0.6
comp=Z,6.2nm,0.6s,baz=91,slow=7.6,SNR=7.8
LPAZ La Paz 158.93 131 PKPab **PKPab** 05 54 32.6 -0.9
comp=Z,0.9nm,0.7s,baz=157,slow=2.2,SNR=5.5

*TAP **05** 05:37:14.6,24˚.86N×122˚.90E,h139km±1km,ML3.9,D*
*JMA **05** 05:37:16.4±0.3,25˚N±3˚×12˚3E±˚,h125km,MV1.8/13,NW OFF ISHIGAKIJIMA IS*
ISC 05 05:37:13.8±2.2,24˚.8N±0˚.1×122˚.90E±0˚.04,h149km±13km, n24,σ0°92/43,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.33**	**172**	*e*P		**Pn**	**05 37 35.5**	**+1.2**
JYNG				*e*S		**Sn**	**05 37 48.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.33**	**162**	*e*P		**Pn**	**05 37 34.6**	**+0.3**
YOJ				*e*S		**Sn**	**05 37 49.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.33**	**162**	*e*S		**Sn**	**05 37 48.3**	**-1.6**
EOS2	**EOS2**	**0.70**	**240**	*e*S		**Sn**	**05 37 52.8**	**-0.1**
EOS3	**EOS3**	**0.72**	**228**	*e*P		**Pn**	**05 37 36.9**	**+0.8**
EOS3				*e*S		**Sn**	**05 37 53.2**	**+0.1**
EOS4	**EOS4**	**0.84**	**219**	*e*P		**Pn**	**05 37 38.1**	**+1.4**
EOS4				*e*S		**Sn**	**05 37 54.6**	**+0.4**
IRIF	**Iriomote-Funau**	**0.88**	**120**	*e*S		**Sn**	**05 37 54.7**	**-0.7**
HATJ	**Hateruma jima**	**1.09**	**131**	*e*P		**Pn**	**05 37 40.6**	**+1.4**
HATJ				*e*S		**Sn**	**05 37 58.1**	**-0.5**
JKRS	**Kuro-shima**	**1.15**	**118**	*e*P		**Pn**	**05 37 40.9**	**+1.2**
JKRS				*e*S		**Sn**	**05 37 59.1**	**-0.4**
JIJ	**Ishigaki jima**	**1.21**	**110**	*e*P		**Pn**	**05 37 40.9**	**+0.6**
JIJ				*e*S		**Sn**	**05 37 59.0**	**-1.5**
LATG	**Datong**	**1.27**	**259**	*e*P		**Pn**	**05 37 41.7**	**+0.7**
LATG				*e*S		**Sn**	**05 38 01.7**	**-0.2**
JISG	**Ishigakijimahi**	**1.30**	**98**	*e*P		**Pn**	**05 37 41.7**	**+0.5**
JISG				*e*S		**Sn**	**05 38 00.4**	**-1.7**
ETLH	**Xiulin Townshi**	**1.41**	**247**	*e*P		**Pn**	**05 37 42.9**	**+0.4**
ETLH				*e*S		**Sn**	**05 38 03.5**	**-0.8**
NNSB	**Datong**	**1.42**	**256**	*e*P		**Pn**	**05 37 43.0**	**+0.4**
NNSB				*e*S		**Sn**	**05 38 03.4**	**-1.2**
LXIB	**Xiulin Townshi**	**1.55**	**241**	*e*P		**Pn**	**05 37 44.1**	**+0.1**
LXIB				*e*S		**Sn**	**05 38 05.5**	**-1.5**
SHUL	**Shoufeng**	**1.57**	**231**	*e*P		**Pn**	**05 37 44.3**	**+0.3**
SHUL				*e*S		**Sn**	**05 38 06.9**	**-0.1**
FUSS	**Fushou**	**1.60**	**251**	*e*P		**Pn**	**05 37 44.0**	**-0.5**
FUSS				*e*S		**Sn**	**05 38 07.6**	**-0.5**
WHF	**Hehuan Shan**	**1.61**	**247**	*e*S		**Sn**	**05 38 08.3**	**-0.5**
JTJ	**Tarama**	**1.65**	**94**	*e*P		**Pn**	**05 37 45.7**	**+0.9**
JTJ				*e*S		**Sn**	**05 38 07.7**	**-0.9**
WARBT	**Fenglin Townsh**	**1.74**	**233**	*e*P		**Pn**	**05 37 45.6**	**-0.2**
WARBT				*e*S		**Sn**	**05 38 08.8**	**-1.6**
OWD	**Renai**	**1.77**	**243**	*e*P		**Pn**	**05 37 47.4**	**+1.0**
OWD				*e*S		**Sn**	**05 38 10.1**	**-1.2**
WUSB	**Renai**	**1.80**	**245**	*e*P		**Pn**	**05 37 47.1**	**+0.3**
WUSB				*e*S		**Sn**	**05 38 11.5**	**-0.4**
WHP	**Taichung City**	**1.85**	**255**	*e*P		**Pn**	**05 37 48.3**	**+1.1**
WHP				*e*S		**Sn**	**05 38 13.3**	**+0.5**
YULB	**Yu-li**	**2.01**	**227**	*e*P		**Pn**	**05 37 49.5**	**+0.5**

*CATAC **05** 05:50:30.6±0.5,13˚N±3˚×9˚0W±˚,h23km±2km,M3.0/20, MLv3.0/20,Error ellipse: s-maj=6.1km s-min=3.8km az=26.8,confirmed*
*SNET **05** 05:50:31.0±0.9,13˚.07N×89˚.52W,h48km±12km,ML2.9, Presumed earthquake*
*GCG **05** 05:50:32.4±0.9,13˚.14N×89˚.64W,h30km±5km,MD3.6, Presumed earthquake*
ISC 05 05:50:30.5±2.1,13˚.03N±0˚.09×89˚.54W±0˚.05,h27km±12km, n51,σ0°41/74,1C,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.50**	**26**	P		**Pb**	**05 50 40.9**	**0.0**
LALI	**Alcalda de L**	**0.50**	**26**	*e*P		**Pb**	**05 50 40.8**	**-0.1**
LALI				*e*S		**Sn**	**05 50 49.8**	**+0.1**
JAYA	**Jayaque - finc**	**0.62**	**8**	P		**Pn**	**05 50 43.8**	**0.0**
JAYA				S		**Sn**	**05 50 52.6**	**-0.4**
JAYA	**Jayaque - finc**	**0.62**	**8**	*i* P		**Pn**	**05 50 43.7**	**0.0**
JAYA				*i* S		**Sb**	**05 50 51.6**	**+0.1**
JAYA	**Jayaque - finc**	**0.62**	**8**	*e*P		**Pn**	**05 50 43.7**	**0.0**
JAYA				*e*S		**Sn**	**05 50 53.0**	**+0.1**
LOMA	**Loma Larga**	**0.71**	**31**	P		**Pn**	**05 50 44.8**	**-0.1**
LOMA				S		**Sn**	**05 50 54.9**	**-0.1**
LOMA	**Loma Larga**	**0.71**	**31**	*e*P		**Pn**	**05 50 44.8**	**-0.1**
PMON	**Piamonte**	**0.71**	**18**	P		**Pn**	**05 50 44.8**	**-0.1**
PMON	**Piamonte**	**0.71**	**18**	*e*P		**Pn**	**05 50 44.7**	**-0.2**
SEMO	**Seminario San**	**0.73**	**25**	P		**Pn**	**05 50 45.1**	**-0.1**
SEMO				S		**Sn**	**05 50 55.9**	**+0.3**
UEES	**Universidad Ev**	**0.74**	**24**	P		**Pn**	**05 50 45.2**	**-0.2**
UEES	**Universidad Ev**	**0.74**	**24**	*e*P		**Pn**	**05 50 45.1**	**-0.2**
BOQS	**Boqueron**	**0.74**	**20**	*e*P		**Pn**	**05 50 45.5**	**0.0**
BOQS				*e*S		**Sn**	**05 50 56.1**	**+0.1**
LFRS	**El Faro**	**0.75**	**39**	*e*P		**Pn**	**05 50 45.6**	**+0.1**
LFRS				*e*S		**Sn**	**05 50 55.6**	**-0.4**
CEDA	**San Andres**	**0.78**	**11**	P		**Pb**	**05 50 45.6**	**+0.1**
CEDA				S		**Sn**	**05 50 56.6**	**0.0**
CEDA	**San Andres**	**0.78**	**11**	*e*P		**Pb**	**05 50 45.6**	**+0.1**
SJTE	**Alcalda de S**	**0.78**	**42**	*e*P		**Pn**	**05 50 45.6**	**-0.2**
CEVE	**Cerro Verde**	**0.79**	**354**	P		**Pb**	**05 50 46.5**	**+0.5**
CEVE				S		**Sn**	**05 50 58.1**	**+0.9**
CEVE	**Cerro Verde**	**0.79**	**354**	*e*P		**Pb**	**05 50 46.4**	**+0.5**
SBLS	**San Blas**	**0.81**	**354**	*e*P		**Pb**	**05 50 46.4**	**+0.3**
LFU	**La Fuente**	**0.82**	**30**	*e*P		**Pb**	**05 50 46.6**	**+0.3**
SNJE	**San Jose**	**0.83**	**356**	*e*P		**Pb**	**05 50 46.8**	**+0.2**
RTR	**El Retiro**	**0.86**	**353**	*e*P		**Pb**	**05 50 47.4**	**+0.3**
COEG	**Centro de Oper**	**0.87**	**48**	P		**Pn**	**05 50 46.9**	**-0.2**
COEG				S		**Sn**	**05 50 58.6**	**-0.3**
COEG	**Centro de Oper**	**0.87**	**48**	*e*P		**Pn**	**05 50 46.8**	**-0.2**
NUBE	**Las Nubes**	**0.89**	**345**	P		**Pn**	**05 50 47.5**	**0.0**
NUBE	**Las Nubes**	**0.89**	**345**	*i* P		**Pn**	**05 50 47.5**	**0.0**
NUBE				*i* S		**Sb**	**05 50 58.7**	**-0.5**
NUBE	**Las Nubes**	**0.89**	**345**	⇑*e*P		**Pn**	**05 50 47.5**	**0.0**
NUBE				*e*S		**Sn**	**05 50 59.1**	**-0.5**
TECO	**Alcaldia de Te**	**0.90**	**56**	P		**Pn**	**05 50 46.9**	**-0.4**
TECO				S		**Sb**	**05 50 58.9**	**-0.2**
TECO	**Alcaldia de Te**	**0.90**	**56**	*e*P		**Pn**	**05 50 47.0**	**-0.4**
PAVA	**Las Pavas**	**0.90**	**41**	P		**Pb**	**05 50 47.6**	**0.0**
PAVA				S		**Sn**	**05 51 00.0**	**+0.4**
PAVA	**Las Pavas**	**0.90**	**41**	*e*P		**Pb**	**05 50 47.6**	**0.0**
FAME	**Alcaldia de Sa**	**0.93**	**330**	P		**Pn**	**05 50 47.8**	**0.0**
FAME				S		**Sn**	**05 50 59.0**	**-1.3**
UNIC	**Universidad Ca**	**0.94**	**360**	P		**Pb**	**05 50 48.4**	**+0.1**
UNIC				S		**Sb**	**05 51 01.7**	**+1.3**
SCLA	**Alcaldia de Sa**	**1.03**	**50**	S		**Sb**	**05 51 03.2**	**+0.2**
RBDL	**Robledal**	**1.08**	**353**	*e*P		**Pb**	**05 50 50.6**	**-0.2**
P5NO	**Presa 5 de nov**	**1.22**	**39**	P		**Pn**	**05 50 51.7**	**0.0**
P5NO				S		**Sb**	**05 51 07.4**	**-0.8**
P5NO	**Presa 5 de nov**	**1.22**	**39**	*e*P		**Pn**	**05 50 51.8**	**0.0**
LLGN	**La Laguna**	**1.26**	**27**	P		**Pn**	**05 50 52.6**	**+0.1**
LLGN				S		**Sb**	**05 51 09.3**	**-0.4**
PACA	**Pacayal**	**1.26**	**70**	P		**Pn**	**05 50 53.0**	**+0.4**
PACA				S		**Sb**	**05 51 09.0**	**-0.7**
PACA	**Pacayal**	**1.26**	**70**	*e*P		**Pn**	**05 50 52.8**	**+0.3**
JUAM	**Asuncion Mita**	**1.30**	**353**	*i* P		**Pn**	**05 50 53.4**	**+0.4**
JUAM				*i* S		**Sb**	**05 51 09.8**	**-1.0**
MTO3	**Montecristo**	**1.37**	**7**	P		**Pn**	**05 50 54.4**	**+0.3**
MTO3	**Montecristo**	**1.37**	**7**	*i* P		**Pn**	**05 50 54.3**	**+0.3**
MTO3	**Montecristo**	**1.37**	**7**	*e*P		**Pn**	**05 50 54.4**	**+0.3**
ESQI	**Esquipulas**	**1.53**	**7**	P		**Pn**	**05 50 56.8**	**+0.6**
ESQI				S		**Sb**	**05 51 16.6**	**-0.7**
LCND	**La Caada**	**1.63**	**80**	P		**Pn**	**05 50 57.8**	**+0.3**
LCND	**La Caada**	**1.63**	**80**	*e*P		**Pn**	**05 50 57.6**	**+0.1**
CNCH	**Conchagua**	**1.68**	**82**	P		**Pn**	**05 50 58.3**	**0.0**
CNCH				S		**Sn**	**05 51 19.7**	**+0.7**
CNCH	**Conchagua**	**1.68**	**82**	*e*P		**Pn**	**05 50 58.1**	**-0.2**
SARH	**Santa Rosa de**	**1.89**	**24**	P		**Pn**	**05 51 02.0**	**+0.9**

*CATAC **05** 05:55:41.5±0.7,13˚N±4˚×9˚0W±˚,h18km±3km,M3.1/13, MLv3.1/13,Error ellipse: s-maj=7.9km s-min=7.0km az=159.8,confirmed*
*GCG **05** 05:55:41.0±1.4,13˚.55N×90˚.50W,h16km±9km,MD3.7, ML3.5,Presumed earthquake*
*SNET **05** 05:55:42.0±0.9,13˚.56N×90˚.44W,h35km±7km,ML3.0, Presumed earthquake*
ISC 05 05:55:43.0±1.5,13˚.56N±0˚.07×90˚.35W±0˚.04,h16km±9km, n40,σ0°56/57,1C-4D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.43**	**49**	P		**Pb**	**05 55 53.1**	**+0.8**
NUBE	**Las Nubes**	**0.65**	**58**	P		**Pb**	**05 55 56.3**	**+0.2**
NUBE	**Las Nubes**	**0.65**	**58**	*i* P		**Pb**	**05 55 56.3**	**+0.2**
NUBE				*i* S		**Sn**	**05 56 06.8**	**-0.9**
NUBE	**Las Nubes**	**0.65**	**58**	⇓*i* P		**Pb**	**05 55 56.3**	**+0.2**
NUBE				*e*S		**Sn**	**05 56 07.2**	**-0.6**
LOAL	**Lomas de Alarc**	**0.71**	**52**	P		**Pb**	**05 55 57.4**	**+0.4**
LOAL				S		**Sn**	**05 56 09.6**	**+0.6**
LOAL	**Lomas de Alarc**	**0.71**	**52**	*e*P		**Pb**	**05 55 57.3**	**+0.3**
FG8	**Yepocapa, Chim**	**0.72**	**344**	*i* P		**Pn**	**05 55 59.0**	**+0.3**
FG16	**Alotenango, Sa**	**0.73**	**348**	*i* P		**Pn**	**05 55 59.3**	**+0.5**
FG16				IAML			05 56 18.2	
	comp=N,1μm,0.2s							
CEVE	**Cerro Verde**	**0.76**	**69**	P		**Pg**	**05 55 58.2**	**+0.3**
CEVE				S		**Sn**	**05 56 10.9**	**+0.4**
CEVE	**Cerro Verde**	**0.76**	**69**	*e*P		**Pg**	**05 55 58.1**	**+0.3**
SBLS	**San Blas**	**0.76**	**68**	⇓*i* P		**Pg**	**05 55 58.1**	**+0.1**
RTR	**El Retiro**	**0.77**	**64**	*e*P		**Pb**	**05 55 58.4**	**+0.3**
SNJE	**San Jose**	**0.79**	**67**	⇓*i* P		**Pg**	**05 55 58.5**	**+0.1**
RBDL	**Robledal**	**0.85**	**50**	⇓*e*P		**Pb**	**05 55 59.5**	**0.0**

JAYA	**Jayaque - finc**	**0.88**	**84**	P		**Pb**	**05 55 59.5**	**-0.5**
JAYA				S		**Sn**	**05 56 13.2**	**-0.3**
JAYA	**Jayaque - finc**	**0.88**	**84**	*i* P		**Pb**	**05 55 59.4**	**-0.7**
JAYA				*i* S		**Sg**	**05 56 12.4**	**+0.5**
JAYA	**Jayaque - finc**	**0.88**	**84⇑**	*eP*		**Pb**	**05 55 59.5**	**-0.5**
JAYA				*eS*		**Sg**	**05 56 12.6**	**+0.6**
UNIC	**Universidad Ca**	**0.89**	**62**	P		**Pb**	**05 55 59.9**	**-0.2**
UNIC				S		**Sn**	**05 56 13.6**	**+0.2**
JUAM	**Asuncion Mita**	**0.99**	**39**	*i* P		**Pb**	**05 56 01.1**	**-0.8**
JUAM				*i* S		**Sn**	**05 56 16.1**	**0.0**
PMON	**Piamonte**	**1.02**	**81**	P		**Pb**	**05 56 02.0**	**-0.4**
PMON				S		**Sn**	**05 56 17.4**	**+0.6**
PMON	**Piamonte**	**1.02**	**81**	*eP*		**Pb**	**05 56 01.7**	**-0.7**
UEES	**Universidad Ev**	**1.09**	**82**	P		**Pb**	**05 56 03.0**	**-0.6**
UEES				S		**Sn**	**05 56 18.9**	**+0.4**
UEES	**Universidad Ev**	**1.09**	**82**	*eP*		**Pb**	**05 56 02.9**	**-0.7**
SEMO	**Seminario San**	**1.11**	**82**	P		**Pb**	**05 56 03.2**	**-0.6**
SEMO				S		**Sn**	**05 56 19.1**	**+0.2**
PANCS	**Alcalda de**	**1.14**	**87**	S		**Sb**	**05 56 19.6**	**+0.5**
LOMA	**Loma Larga**	**1.15**	**86**	S		**Sn**	**05 56 20.4**	**+0.3**
MTO3	**Montecristo**	**1.27**	**49**	P		**Pn**	**05 56 05.5**	**-0.8**
MTO3				S		**Sg**	**05 56 23.8**	**-0.5**
MTO3	**Montecristo**	**1.27**	**49**	*i* P		**Pn**	**05 56 05.5**	**-0.8**
MTO3	**Montecristo**	**1.27**	**49**	*eP*		**Pn**	**05 56 06.3**	**0.0**
STG5	**El Palmar, Qui**	**1.28**	**311**	*i* P		**Pb**	**05 56 07.0**	**+0.2**
SJTE	**Alcalda de S**	**1.31**	**87**	*eP*		**Pn**	**05 56 06.0**	**-0.7**
STG8	**El Palmar, Qui**	**1.31**	**313**	*i* P		**Pg**	**05 56 08.2**	**-0.2**
PAVA	**Las Pavas**	**1.39**	**83**	P		**Pn**	**05 56 07.2**	**-0.6**
PAVA				S		**Sb**	**05 56 26.9**	**+0.8**
ESQI	**Esquipulas**	**1.40**	**44**	P		**Pn**	**05 56 06.6**	**-1.3**
ESQI				S		**Sg**	**05 56 27.5**	**-0.7**
ESQI	**Esquipulas**	**1.40**	**44**	*eP*		**Pn**	**05 56 08.2**	**+0.3**
COEG	**Centro de Oper**	**1.43**	**87**	P		**Pn**	**05 56 08.3**	**-0.1**
COEG				S		**Sb**	**05 56 28.3**	**+0.8**
COEG	**Centro de Oper**	**1.43**	**87**	*eP*		**Pn**	**05 56 08.3**	**-0.1**
APG	**El Apazote**	**1.44**	**356**	*i* P		**Pn**	**05 56 07.4**	**-1.3**
TECO	**Alcaldia de Te**	**1.53**	**91**	P		**Pn**	**05 56 09.5**	**-0.2**
TECO				S		**Sn**	**05 56 29.4**	**+0.1**
TECO	**Alcaldia de Te**	**1.53**	**91**	*eP*		**Pn**	**05 56 09.5**	**-0.2**

IDC ***05*** *05:59:32.0±0.8, 6°.79N×72°.95W, h161km±11km, mb3.0/4, mbtmp3.6/6, Error ellipse: s-maj=35.8km s-min=7.5km az=131.0*
RSNC ***05*** *05:59:33.4±0.0, 7°.1N±1°×7°.3W±°, h143km±1km, M3.2, mB4.8, mb3.8, ML2.9, Mw(mB)4.0*
FUNV ***05*** *05:59:33.0, 7°.18N×73°.27W, h2km, MW3.2, Presumed earthquake*

ISC 05 05:59:31.6±0.8, 6°.87N±0°.03×73°.10W±0°.05, h149km±6km, n36, σ1s59/64, mb3.3/4, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BARC	**Barichara**	**0.28**	**197**	P	**Pn**	**05 59 53.0**		**+0.7**
BARC				S	**Sn**	**06 00 08.4**		**+0.4**
PAMC	**Pamplona, Colo**	**0.62**	**40**	P	**Pn**	**05 59 55.6**		**+1.6**
PAMC				S	**Sn**	**06 00 12.0**		**+0.9**
RUSC	**La Rusia**	**0.97**	**179**	P	**Pn**	**05 59 56.9**		**+0.3**
RUSC				S	**Sn**	**06 00 15.6**		**0.0**
RUSC	**La Rusia**	**0.97**	**179**	*eP*	**Pn**	**05 59 56.8**		**+0.2**
RUSC				*eS*	**Sn**	**06 00 14.1**		**-1.5**
OCAC	**Ocana**	**1.38**	**351**	P	**Pn**	**06 00 00.9**		**+0.9**
OCAC				S	**Sn**	**06 00 22.6**		**+0.8**
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	P	**Pn**	**05 59 59.4**		**-0.5**
PTBC				S	**Sn**	**06 00 20.4**		**-1.1**
SPBC	**San Pablo de B**	**1.54**	**219**	P	**Pn**	**06 00 01.9**		**+0.2**
SPBC				S	**Sn**	**06 00 23.8**		**-0.9**
CHIC	**Chingaza**	**2.31**	**196**	P	**Pn**	**06 00 11.5**		**+0.7**
CHIC				S	**Sn**	**06 00 40.6**		**-0.3**
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**06 00 12.9**		**+1.7**
	36nm,0.3s,baz=324,slow=2.3,SNR=109							
ROSC				S	**Sn**	**06 00 44.0**		**+2.3**
	160nm,0.3s,baz=20,slow=23,SNR=25							
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**06 00 12.9**		**+1.7**
ROSC				S	**Sn**	**06 00 41.2**		**-0.5**
CVER	**Cruz Verde, Cu**	**2.52**	**203**	P	**Pn**	**06 00 14.5**		**+1.1**
CVER				S	**Sn**	**06 00 46.0**		**+0.4**
UREC	**San Jos de Ur**	**2.57**	**290**	P	**Pn**	**06 00 13.2**		**-0.3**
UREC				S	**Sn**	**06 00 44.0**		**-1.8**
GUY2C	**Guyana, Caldas**	**2.78**	**234**	P	**Pn**	**06 00 17.3**		**+0.7**
GUY2C				S	**Sn**	**06 00 52.3**		**+1.0**
NIZA	**Niza - Manizal**	**2.96**	**233**	P	**Pn**	**06 00 21.0**		**+2.3**
NIZA				S	**Sn**	**06 00 59.9**		**+4.8**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**06 00 20.9**		**+1.1**
CBOC				S	**Sn**	**06 00 56.7**		**-0.4**
SDV	**Santo Domingo**	**3.16**	**50**	P	**Pn**	**06 00 22.1**		**+0.9**
	43nm,0.3s,baz=234,slow=12,SNR=40							
SDV				S	**Sn**	**06 00 59.6**		**0.0**
	38nm,0.4s,baz=260,slow=23,SNR=15							
SDV	**Santo Domingo**	**3.16**	**50**	*eP*	**Pn**	**06 00 22.0**		**+0.9**
SDV				*eS*	**Sn**	**06 00 59.0**		**-0.6**
APAC	**Apartado, Choc**	**3.60**	**287**	P	**Pn**	**06 00 27.1**		**+0.5**
APAC				S	**Sn**	**06 01 08.7**		**-0.6**
PRAC	**Prado**	**3.60**	**210**	P	**Pn**	**06 00 26.3**		**-0.4**
PRAC				S	**Sn**	**06 01 09.2**		**-0.3**
PLMC	**San Jos del P**	**3.72**	**239**	P	**Pn**	**06 00 28.8**		**+0.6**
PLMC				S	**Sn**	**06 01 10.2**		**-1.9**
URMC	**La Uribe, Meta**	**3.81**	**200**	P	**Pn**	**06 00 30.1**		**+0.6**
URMC				S	**Sn**	**06 01 10.4**		**+0.5**
MACC	**Macarena, Meta**	**4.75**	**189**	P	**Pn**	**06 00 40.3**		**-1.4**
MACC				S	**Sn**	**06 01 32.4**		**-4.0**
URIC	**Uribia, Colomb**	**4.93**	**13**	P	**Pn**	**06 00 43.7**		**-0.3**
URIC	**Uribia, Colomb**	**4.93**	**13**	*eP*	**Pn**	**06 00 43.2**		**-0.9**
URIC				*eS*	**Sn**	**06 01 34.6**		**-5.9**
JAMC	**Jamundi, Valle**	**5.08**	**225**	P	**Pn**	**06 00 46.0**		**-0.3**
	11nm,0.5s							
JAMC				S	**Sn**	**06 01 46.8**		**+2.3**
	11nm,0.5s							
GARC	**Garzon, Huila**	**5.22**	**207**	P	**Pn**	**06 00 47.7**		**-0.5**
GARC				S	**Sn**	**06 01 45.2**		**-2.8**
POPC	**Popayan, Colom**	**5.58**	**220**	P	**Pn**	**06 00 52.8**		**-0.2**
	4.7nm,0.5s							
POPC				S	**Sn**	**06 01 56.9**		**+0.4**
	4.7nm,0.5s							
FLOC	**Florencia**	**5.83**	**206**	P	**Pn**	**06 00 55.9**		**-0.2**
	7.4nm,1.0s							
FLOC				S	**Sn**	**06 01 58.6**		**-3.6**
	7.4nm,1.0s							
BCIP	**Isla Barro Col**	**7.05**	**289**	P	**Pn**	**06 01 11.3**		**-1.0**
BCIP				S	**Sn**	**06 02 32.7**		**+1.3**
AZU	**Azuero**	**7.17**	**278**	P	**Pn**	**06 01 14.0**		**0.0**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**06 06 22.8**		**+0.5**
	0.1nm,0.4s,baz=121,slow=8.4,SNR=5.8							
	0.1nm,0.4s							
ULM	**Lac du Bonnet**	**47.25**	**340**	P	**P**	**06 07 49.5**		**-0.1**
	0.7nm,0.4s,baz=140,slow=14,SNR=1.9							
	0.7nm,0.4s							
PDAR	**Pinedale Array**	**48.05**	**324**	P	**P**	**06 07 56.9**		**+0.8**
	0.1nm,0.5s,baz=115,slow=7.5,SNR=1.8							
	0.1nm,0.5s							
YKA	**Yellowknife Ar**	**63.23**	**340**	P	**P**	**06 09 43.9**		**+0.1**
	0.5nm,0.6s,baz=134,slow=5.9,SNR=3.4							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**06 19 01.8**		**-1.5**
	0.3nm,0.4s,baz=108,slow=2.9,SNR=2.3							
WRA	**Warramunga Ar**	**150.38**	**241**	PKPbc	**PKPbc**	**06 19 05.3**		**-1.0**
	0.3nm,0.5s,baz=109,slow=2.4,SNR=6.1							

IDC ***05*** *06:02:58.3±0.8, 5°.46S×130°.74E, h0km, mb4.1/7, mbtmp4.1/10, ML4.2/4, Error ellipse: s-maj=60.6km s-min=16.1km az=75.0*
NEIC ***05*** *06:03:00.8±1.2, 5°.40S±0°.05×130°.89E±0°.06, h10km±1km, mb4.2/12, Error ellipse: s-maj=11.9km s-min=7.2km az=236.0*
DJA ***05*** *06:03:08.1±0.2, 5°.5±2°×13°1E±°, h65km±10km, M4.5/18, mB5.5/4, mb4.6/8, MLv4.4/18, Mw(mB)5.0/4*

ISC 05 06:03:06.2±0.5, 5°.30S±0°.05×131°.18E±0°.05, h68km, n49, σ1s76/48, mb4.1/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BNDI	**Bandanaira**	**1.49**	**301**	P	**Pn**	**06 03 31.8**		**+0.9**
BNDI				S	**Sn**	**06 03 49.9**		**+0.3**
FAKI	**Fak Fak**	**2.60**	**24**		**Pn**	**06 03 46.7**		**+0.7**
FAKI				Sn	**Sn**	**06 04 16.0**		**-0.4**
FAKI	**Fak Fak**	**2.60**	**24**	P	**Pn**	**06 03 46.9**		**+1.0**
SAUI	**Saumlaki**	**2.67**	**177**	Pn	**Pn**	**06 03 43.6**		**-3.2**
SAUI	**Saumlaki**	**2.67**	**177**	P	**Pn**	**06 03 48.8**		**+2.0**
MSAI	**Masohi**	**2.97**	**311**	P	**Pn**	**06 03 51.6**		**+0.6**
KMPI	**Kaimana, Papua**	**3.00**	**57**	P	**Pn**	**06 03 53.4**		**+2.0**
KRAI	**Karang Ratu**	**3.40**	**305**	P	**Pn**	**06 03 58.8**		**+1.9**
SIJI	**Sorong**	**4.41**	**1**	Pn	**Pn**	**06 04 10.2**		**-0.5**
	52nm,0.3s,baz=205,slow=12,SNR=119							
SIJI				Sn	**Sn**	**06 04 56.0**		**-4.7**
	17nm,0.3s,baz=222,slow=23,SNR=8.1							
SIJI	**Sorong**	**4.41**	**1**	P	**Pn**	**06 04 10.1**		**-0.5**
MWPI	**Manokwari, Pap**	**5.20**	**33**	P	**Pn**	**06 04 24.1**		**+2.6**
	2µm71nm,0.5s							
SANI	**Sanana**	**6.10**	**302**	P	**Pn**	**06 04 35.6**		**+1.8**
	0.2nm53nm,0.9s							
BAKI	**Biak**	**6.39**	**50**	P	**Pn**	**06 04 42.2**		**+4.4**
	0.2nm78nm,0.8s							
MTN	**Manton Dam**	**7.49**	**180**		**Pn**	**06 04 52.8**		**0.0**
KNRA	**Kununurra**	**10.58**	**193**	Pn	**Pn**	**06 05 32.9**		**-2.1**
WBSI	**Waikabubak, Su**	**12.45**	**249**	P	**Pn**	**06 06 02.7**		**+2.0**
	40nm,1.2s							
PLAI	**Plampang**	**13.75**	**254**	P	**Pn**	**06 06 19.8**		**+1.7**
	34nm,1.4s							
FITZ	**Fitzroy Crossi**	**13.82**	**203**	Pn	Pn	06 06 13.1		-6.0
	0.5nm,0.3s,baz=22,slow=6.6,SNR=17							
FITZ				Sn	Sn	06 08 39.5		-11
	1.0nm,0.3s,baz=214,slow=20,SNR=6.4							
	4.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**13.82**	**203**		Pn	06 06 14.0		-5.0
COEN	**Coen**	**14.62**	**127**	Pn	**Pn**	**06 06 27.5**		**-2.0**
WB0	**Warramunga Arr**	**14.71**	**168**	Pn	Pn	06 06 25.9		-4.9
WRA	**Warramunga Ar**	**14.87**	**168**	Pn	**Pn**	**06 06 28.5**		**-4.3**
	0.7nm,0.3s,baz=350,slow=13,SNR=23							
WRA				Sn	Sn	06 09 01.5		-15
	1.7nm,0.3s,baz=356,slow=23,SNR=7.6							
	2.3nm,0.7s							
WR8	**Warramunga Arr**	**14.92**	**168**	Pn	Pn	06 06 28.3		-5.1
AS31	**Alice Springs**	**18.44**	**172**	P	**P**	**06 07 15.7**		**-0.8**
ASAR	**Alice Springs**	**18.45**	**172**	Pn	**P**	**06 07 15.3**		**-1.2**
	1.1nm,0.3s,baz=349,slow=10,SNR=56							
ASAR				Sn	Sn	06 10 28.9		-14
	0.4nm,0.3s,baz=353,slow=26,SNR=7.9							
	4.3nm,0.6s							
ASAR	**Alice Springs**	**18.45**	**172**	P	**P**	**06 07 16.4**		**0.0**
MBWA	**Marble Bar**	**19.28**	**214**	P	**P**	**06 07 22.7**		**-2.9**
GIRL	**Giralia**	**23.77**	**222**	P	**P**	**06 08 10.5**		**-2.2**
INKA	**Innaminka**	**24.10**	**159**	P	**P**	**06 08 16.9**		**+1.3**
INKA				IAmb	IAmb	06 08 19.3		
	comp=Z,7.1nm,1.1s							
FORT	**Forrest**	**25.51**	**186**	P	**P**	**06 08 27.7**		**-0.7**
FORT				IAmb	IAmb	06 08 44.5		
	comp=Z,5.0nm,0.7s							
EIDS	**Eidsvold**	**27.61**	**138**	P	**P**	**06 08 49.1**		**+1.8**
EIDS				IAmb	IAmb	06 09 05.4		
	comp=Z,7.0nm,1.1s							
BBOO	**Buckleboo**	**27.74**	**171**	P	**P**	**06 08 48.7**		**+0.2**
STKA	**Stephens Creek**	**28.18**	**161**	P	**P**	**06 08 53.3**		**+0.9**
	comp=Z,1.1nm,0.4s,baz=5.3,slow=8.2,SNR=4.6							
	comp=Z,1.1nm,0.4s							
TOO	**Toolangi**	**34.67**	**160**	P	**P**	**06 09 50.0**		**+0.6**
TOO				IAmb	IAmb	06 09 53.1		
	comp=Z,2.7nm,1.1s							
MKAR	**Makanchi Array**	**67.47**	**326**	P	**P**	**06 13 55.9**		**+1.0**
	comp=Z,1.4nm,0.6s,baz=126,slow=7.9,SNR=17							
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**67.47**	**326**	P	**P**	**06 13 55.1**		**+0.2**
MAKZ	**Makanchi**	**67.65**	**326**	P	**P**	**06 13 56.9**		**+0.8**
MAKZ				IAmb	IAmb	06 13 58.5		
	comp=Z,1.8nm,1.0s							
ZALV	**Zalesovo Beam**	**70.60**	**333**	P	**P**	**06 14 14.7**		**+0.6**
	comp=Z,0.9nm,0.3s,baz=134,slow=6.4,SNR=4.8							
	comp=Z,0.9nm,0.3s							
ZALV	**Zalesovo Beam**	**70.60**	**333**	P	**P**	**06 14 14.5**		**+0.4**
KURBB	**Kurchatov Arra**	**71.70**	**328**	P	**P**	**06 14 21.6**		**+0.8**
	comp=Z,0.9nm,0.6s,baz=128,slow=4.9,SNR=11							
	comp=Z,0.9nm,0.6s							
KURK	**Kurchatov**	**71.70**	**328**	P	**P**	**06 14 20.9**		**+0.1**
VNDA	**Vanda**	**73.98**	**173**	P	**P**	**06 14 34.8**		**+0.9**
	comp=Z,0.8nm,0.7s,baz=321,slow=6.9,SNR=4.6							
	comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**73.98**	**173**	P	**P**	**06 14 35.4**		**+1.4**
BVAR	**Borovoye Array**	**77.27**	**327**	P	**P**	**06 14 53.1**		**0.0**
	comp=Z,0.5nm,0.5s,baz=118,slow=6.1,SNR=3.9							
	comp=Z,0.5nm,0.5s							
QSPA	**South Pole Qui**	**84.66**	**180**	P	**P**	**06 15 32.4**		**0.0**
	comp=Z,1.8nm,0.7s,baz=276,slow=1.5,SNR=12							
	comp=Z,1.8nm,0.7s							
QSPA	**South Pole Qui**	**84.66**	**180**	P	**P**	**06 15 32.8**		**+0.4**
QSPA				IAmb	IAmb	06 15 57.9		
	comp=Z,1.4nm,1.1s							
TORD	**Torodi Ar. Bea**	**129.61**	**283**	PKP	**PKiKP**	**06 22 09.4**		**+0.1**
	comp=Z,0.7nm,1.0s,baz=101,slow=1.9,SNR=4.0							
CPUP	**Villa Florida**	**147.49**	**166**	PKPbc	**PKPbc**	**06 22 44.3**		**+1.0**
	comp=Z,0.5nm,0.5s,baz=199,slow=20,SNR=3.9							
LPAZ	**La Paz**	**151.27**	**139**	PKPbc	**PKiKP**	**06 22 55.5**		**+1.2**
	comp=Z,0.8nm,0.6s,baz=222,slow=2.3,SNR=5.6							

JMA ***05*** *06:09:34.8±0.1, 36°.2N±0°.1×137°.7E±0°.1, h3km±1km, MV3.8/20, HIDA MOUNTAINS REGION*
IDC ***05*** *06:09:35.1±0.8, 36°.31N×137°.76E, h0km, mb3.7/11, mbtmp3.7/15, ML3.3/4, MS4.1/73, Error ellipse: s-maj=18.4km s-min=11.1km az=164.0*
NEIC ***05*** *06:09:35.9±0.7, 36°.37N±0°.06×137°.84E±0°.05, h10km±1km, mb4.4/9, Error ellipse: s-maj=11.8km s-min=3.0km az=145.0*
NIED ***05*** *06:09:49.8, 36°.26N×137°.62E, h4km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr0.15; Mθθ-0.68; Mφφ0.53; Mrθ0.31; Mθφ-0.76; Mφr-0.07; Fault plane solution: M0 1.02000×10^16 NP1: φs199.00000°, δ71.00000°, λ2.00000°. NP2:φs109.00000°, δ88.00000°, λ161.00000°.*
GCMT ***05*** *06:09:50.9±0.3, 36°.29N±0°.01×137°.60E±0°.02, h18km±1km, MW4.8/109, Moment Tensor Solution. s18,c18; s109,c147; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.19±.07; Mθθ-0.05±.07; Mφφ0.24±.07; Mrθ-0.22±.15; Mθφ-1.93±.06; Mφr0.35±.16; Best double couple: M0 1.97400×10^16 NP1:φs272.00000°, δ81.00000°, λ175.00000°. NP2:φs3.00000°, δ85.00000°, λ9.00000°. Principal axes: T 2.1050, Plg10.0000°, Azm227.0000°; N -0.2620, Plg79.0000°, Azm31.0000°; P -1.8430, Plg3.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 06:09:35.5±0.5, 36°.30N±0°.05×137°.69E±0°.05, h10km, n117, σ1s80/50, mb3.9/19, MS4.1/71, 1C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JGN	**Niukaw**	**0.31**	**256**	*eS*	**Sg**	**06 09 44.3**		**-1.6**
MAJO	**Matsushiro**	**0.48**	**59**		**Pg**	**06 09 42.7**		**-2.3**
MJB9	**Matsu-Tunnel**	**0.48**	**59**		**Pg**	**06 09 42.8**		**-2.2**
MJAR	**Matsushiro Arr**	**0.49**	**60**	Pg	**Pg**	**06 09 42.9**		**-2.2**
	23nm,0.3s,baz=246,slow=19,SNR=523							
MJAR	**Matsushiro Arr**	**0.49**	**60**		**Pg**	**06 09 42.6**		**-2.4**
JNT	**Takato**	**0.56**	**139**	*eP*	**Pg**	**06 09 45.2**		**-1.1**
JNT				*eS*	**Sg**	**06 09 52.6**		**-1.1**
JSG	**Sagara**	**1.67**	**166**		**Pn**	**06 10 03.3**		**-1.5**
JHJ	**Hachijo jima 2**	**3.61**	**151**	Pn	**Pn**	**06 10 31.9**		**+0.4**
	24nm,0.3s,baz=152,slow=3.7,SNR=8.9							
JHJ				LR	LR	06 12 01.8		
	comp=Z,1µm,18.2s,baz=152,slow=41							
	83nm,1.0s							
JHJ2	**Mitsune**	**3.63**	**150**	Pn	**Pn**	**06 10 32.1**		**+0.3**
JMN	**Monobe**	**4.04**	**232**		**Pn**	**06 10 37.4**		**-0.1**
JTM	**Tenmabayashi**	**5.21**	**30**		**Pn**	**06 10 52.1**		**-1.3**
KSRS	**Korea Array**	**7.91**	**281**	Pn	**Pn**	**06 11 31.1**		**+0.5**
	0.5nm,0.3s,baz=97,slow=14,SNR=8.0							
KSRS				LR	LR	06 14 32.7		
	comp=Z,2µm,18.6s,baz=95,slow=37							
	1.4nm,0.5s							
KSAR	**Wonju Array Be**	**7.94**	**281**	Pn	**Pn**	**06 11 32.7**		**+1.7**
KS19	**Wonju Array Si**	**7.96**	**282**	Pn	**Pn**	**06 11 32.3**		**+1.0**
JKA	**Kamikawa-asahi**	**8.66**	**24**	Pn	**Pn**	**06 11 39.8**		**-1.1**
USRK	**Ussuriysk Ar.**	**9.01**	**333**	Pn	**Pn**	**06 11 46.1**		**+0.4**
	0.1nm,0.3s,baz=139,slow=11,SNR=2.0							
USRK				LR	LR	06 15 14.0		
	comp=Z,1µm,19.1s,baz=140,slow=38							
	0.8nm,0.6s							
USRK	**Ussuriysk Ar.**	**9.01**	**333**		**Pn**	**06 11 45.6**		**-0.1**
JCJ	**Chichijima**	**9.94**	**156**	LR	LR	06 15 48.6		
	comp=Z,708nm,18.6s,baz=354,slow=38							
CN2	**Changchun**	**12.00**	**312**	P	Pn	06 12 32.4		+5.9
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,800nm,17.0s							
CN2				LR	LR			
	comp=E,800nm,17.0s							
CN2				LR	LR			
	comp=Z,900nm,16.0s							
BNX	**BinXian**	**12.21**	**324**	⇑P	Pn	06 12 34.8		+5.4
BNX				pmax	pmax			
	comp=Z,8.0nm,1.1s							
DL2	**Dalian**	**13.00**	**286**	P	Pn	06 12 33.8		-6.5
DL2				S	Sn	06 14 55.8		-9.1
DL2				pmax	pmax			
	comp=Z,19nm,1.5s							
DL2				pmax	pmax			
	comp=Z,150nm,6.4s							
DL2				LR	LR			
	comp=N,3µm,12.8s							
DL2				LR	LR			
	comp=E,2µm,14.9s							
DL2				LR	LR			
	comp=Z,3µm,15.2s							
KLR	**Kul'dur**	**13.63**	**343**	Pn	**Pn**	**06 12 50.4**		**+1.5**
	comp=Z,0.1nm,0.3s,baz=170,slow=9.0,SNR=6.3							
KLR				LR	LR	06 18 10.6		
	comp=Z,1µm,18.9s,baz=159,slow=38							
	comp=Z,0.7nm,0.5s							
SSE	**Sheshan**	**14.68**	**254**	P	Pn	06 12 55.2		-8.0
SSE				S	Sn	06 15 38.8		-7.2
SSE				pmax	pmax			
	comp=Z,7.0nm,1.0s							
SSE				pmax	pmax			
	comp=Z,79nm,3.5s							
SSE				LR	LR			
	comp=N,1µm,17.3s							
SSE				LR	LR			
	comp=E,830nm,17.1s							
HILR	**Hailar Array B**	**18.59**	**321**	LR	LR	06 21 01.9		
	comp=E,529nm,21.1s,baz=115,slow=37							
PETK	**Petropavlovsk-**	**21.90**	**34**	LR	LR	06 23 10.1		
	comp=E,482nm,19.0s,baz=227,slow=37							
BTO2	**Baotou**	**22.16**	**290**	*eP*	P	06 14 25.4		-6.3
BTO2				pP	pP	06 14 30.5		-4.6
BTO2				PP	**PnPn**	**06 14 53.8**		**0.0**
BTO2				S	**S**	**06 18 29.6**		**-6.3**
BTO2				pmax	pmax			
	comp=Z,18nm,0.6s							
BTO2				AMB	AMB			
	comp=Z,52nm,6.1s							
BTO2				LR	LR			
	comp=N,3µm,15.1s							
BTO2				LR	LR			
	comp=E,750nm,12.5s							
BTO2				LR	LR			
	comp=Z,1µm,12.5s							
GUMO	**Guam**	**23.51**	**162**	LR	LR	06 23 19.2		
	comp=Z,275nm,18.1s,baz=20,slow=35							
MA2	**Magadan**	**24.79**	**16**	LR	LR	06 25 53.1		
	comp=Z,144nm,18.3s,baz=197,slow=40							
SONM	**Songino Array**	**25.76**	**306**	P	**P**	**06 15 07.4**		**+0.9**
	comp=Z,2.4nm,1.0s,baz=115,slow=10.0,SNR=3.7							
SONM				LR	LR	06 25 47.9		
	comp=Z,1µm,19.0s,baz=109,slow=38							
	comp=Z,2.4nm,1.0s							
SONM	**Songino Array**	**25.76**	**306**	P	**P**	**06 15 06.8**		**+0.4**
YAK	**Yakutsk**	**26.24**	**351**	LR	LR	06 25 43.3		
	comp=Z,1µm,18.1s,baz=161,slow=37							
YAK	**Yakutsk**	**26.24**	**351**	P	**P**	**06 15 09.7**		**-0.7**
TLY	**Talaya**	**28.60**	**313**	LR	LR	06 28 03.4		
	comp=Z,342nm,18.2s,baz=106,slow=39							
QIZ	**Qiongzhong**	**29.91**	**242**	P	P	06 15 37.5		-6.2
QIZ				S	**S**	**06 20 35.5**		**-5.6**
QIZ				LR	LR			
	comp=N,790nm,14.9s							
QIZ				LR	LR			
	comp=E,730nm,15.8s							
QIZ				LR	LR			
	comp=Z,400nm,17.4s							
SHEM	**Shemya Is, Ala**	**30.32**	**46**	LR	LR	06 27 09.1		
	comp=Z,11nm,21.6s,baz=288,slow=35							
DAV	**Davao City (W)**	**31.13**	**204**	LR	LR	06 29 17.0		
	comp=Z,139nm,18.0s,baz=346,slow=38							
TIXI	**Tiksi**	**35.72**	**355**	LR	LR	06 30 00.9

MSVF	**Nonsavu**	**65.91**	**137**	LR	LR	06 45 44.9	
	comp=Z,53nm,20.7s,baz=336,slow=33						
YKA	**Yellowknife Ar**	**65.92**	**29**	P	**P**	**06 20 23.0**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=300,slow=5.9,SNR=2.3						
YKA				LR	LR	06 53 30.4	
	comp=Z,78nm,18.4s,baz=342,slow=40						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**65.92**	**29**	P	**P**	**06 20 19.9**	**-1.4**
YKAW1	**Yellowknife Wh**	**65.98**	**29**		**P**	**06 20 20.6**	**-1.1**
NEEM	**North Greenlan**	**66.39**	**2**	*i* P	P	06 20 33.5	+9.0
NEEM				IAmb	IAmb	06 20 45.0	
	comp=Z,4.9nm,0.8s						
OBN	**Obninsk**	**66.87**	**322**	LR	LR	06 52 13.1	
	comp=Z,494nm,19.5s,baz=12,slow=38						
STKA	**Stephens Creek**	**67.92**	**176**	LR	LR	06 51 35.8	
	comp=Z,34nm,18.0s,baz=17,slow=37						
FINES	**FINESS Array B**	**68.04**	**331**	P	**P**	**06 20 36.3**	**+1.6**
	comp=Z,3.3nm,1.0s,baz=54,slow=6.4,SNR=4.9						
FINES				LR	LR	06 52 31.1	
	comp=Z,152nm,18.3s,baz=42,slow=38						
	comp=Z,3.3nm,1.0s						
FINES	**FINESS Array B**	**68.04**	**331**	P	**P**	**06 20 34.9**	**+0.1**
AFI	**Afiamalu**	**69.03**	**127**	LR	LR	06 45 24.6	
	comp=Z,74nm,21.8s,baz=52,slow=31						
KBZ	**Khabaz**	**69.08**	**309**	LR	LR	06 54 56.3	
	comp=Z,210nm,20.1s,baz=66,slow=39						
GNI	**Garni**	**69.72**	**305**	LR	LR	06 53 57.5	
	comp=Z,334nm,18.6s,baz=70,slow=38						
SUMG	**Summit**	**71.39**	**359**	*i* P	**P**	**06 20 59.0**	**+3.3**
SUMG				IAmb	IAmb	06 21 01.4	
	comp=Z,4.3nm,0.9s						
NEW	**Newport**	**72.72**	**42**	LR	LR	06 51 10.9	
	comp=Z,48nm,21.0s,baz=298,slow=34						
AKASG	**Malin Array Be**	**73.01**	**321**	LR	LR	06 55 45.6	
	comp=Z,319nm,18.6s,baz=54,slow=38						
YBH	**Yreka Blue Hor**	**73.14**	**50**	LR	LR	06 46 29.5	
	comp=Z,35nm,20.4s,baz=301,slow=39						
HFS	**Hagfors**	**73.49**	**334**	LR	LR	06 57 34.6	
	comp=Z,197nm,18.1s,baz=42,slow=39						
NOA	**NORSAR Array B**	**73.67**	**336**	P	**P**	**06 21 10.4**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=47,slow=5.8,SNR=2.8						
NOA				LR	LR	06 57 25.3	
	comp=Z,178nm,19.1s,baz=50,slow=39						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**77.06**	**310**	LR	LR	06 59 10.4	
	comp=Z,95nm,19.4s,baz=120,slow=39						
NVAR	**Mina Array Bea**	**77.81**	**51**	P	**P**	**06 21 35.8**	**+2.4**
	comp=Z,0.5nm,0.8s,baz=293,slow=7.6,SNR=4.4						
	comp=Z,0.5nm,0.8s						
MLR	**Muntele Rosu**	**77.97**	**318**	LR	LR	07 00 35.0	
	comp=Z,92nm,18.2s,baz=60,slow=39						
FRB	**Frobisher Bay**	**78.13**	**12**	LR	LR	07 00 22.4	
	comp=Z,90nm,18.4s,baz=311,slow=39						
MMAI	**Mount Meron Ar**	**79.91**	**304**	LR	LR	07 00 57.2	
	comp=Z,212nm,18.8s,baz=56,slow=39						
VRAC	**Vranov**	**80.06**	**325**	LR	LR	07 00 23.3	
	comp=Z,206nm,18.3s,baz=42,slow=38						
PDAR	**Pinedale Array**	**80.29**	**44**	P	**P**	**06 21 49.6**	**+2.6**
	comp=Z,0.2nm,0.7s,baz=316,slow=7.5,SNR=2.5						
	comp=Z,0.2nm,0.7s						
PDAR	**Pinedale Array**	**80.29**	**44**	P	**P**	**06 21 45.6**	**-1.4**
GERES	**GERESS Array B**	**81.71**	**326**	LR	LR	07 00 00.4	
	comp=Z,127nm,18.8s,baz=68,slow=37						
ULM	**Lac du Bonnet**	**81.73**	**73**	LR	LR	07 01 45.3	
	comp=Z,101nm,18.0s,baz=338,slow=38						
PFO	**Pinyon Flats O**	**81.92**	**54**	LR	LR	06 52 31.7	
	comp=Z,86nm,20.2s,baz=298,slow=32						
EIL	**Elat**	**82.23**	**301**	LR	LR	07 02 42.1	
	comp=Z,124nm,19.0s,baz=74,slow=39						
URZ	**Urewera**	**82.66**	**150**	LR	LR	06 55 56.4	
	comp=Z,45nm,20.6s,baz=319,slow=34						
EKA	**Eskdalemuir Ar**	**82.78**	**339**	LR	LR	07 03 48.7	
	comp=Z,112nm,18.1s,baz=5,slow=39						
DAVOX	**Davos/Discmat**	**84.96**	**327**	LR	LR	07 03 46.7	
	comp=Z,190nm,19.2s,baz=54,slow=38						
RPZ	**Rata Peaks**	**85.22**	**156**	LR	LR	06 55 36.6	
	comp=Z,22nm,18.8s,baz=356,slow=32						
SCHQ	**Schefferville**	**86.82**	**14**	LR	LR	07 06 08.4	
	comp=Z,80nm,18.3s,baz=338,slow=39						
PPT	**Papeete**	**87.03**	**114**	LR	LR	06 55 35.4	
	comp=Z,67nm,19.4s,baz=326,slow=32						
ANMO	**Albuquerque**	**87.33**	**48**	LR	LR	07 04 44.2	
	comp=Z,31nm,18.4s,baz=328,slow=38						
LPIG	**La Paz**	**92.14**	**58**	LR	LR	07 01 42.8	
	comp=Z,45nm,18.1s,baz=338,slow=34						
SADO	**Sadowa**	**92.69**	**25**	LR	LR	07 08 47.2	
	comp=Z,80nm,18.2s,baz=358,slow=38						
TXAR	**Lajitas Array**	**92.92**	**50**	LR	LR	07 03 28.7	
	comp=Z,39nm,19.5s,baz=321,slow=35						
ESDC	**Sonseca Array**	**96.56**	**331**	LR	LR	07 11 54.3	
	comp=Z,128nm,19.7s,baz=350,slow=38						
TKL	**Tuckaleechee C**	**98.68**	**33**	LR	LR	07 11 19.6	
	comp=Z,81nm,18.8s,baz=336,slow=38						
LPAZ	**La Paz**	**149.62**	**56**	PKPbc	**PKiKP**	**06 29 28.2**	**+0.6**
	comp=Z,1.5nm,1.0s,baz=81,slow=7.4,SNR=4.3						

JMA 05 06:09:49.8±0.0,36.3N±0.2×137.6E±0.2,h4km,MD4.8/18, MW4.7/18,HIDA MOUNTAINS REGION,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.25**	**262**	*e*P	Pg	06 09 54.8	+0.2
JGN				A	A	06 09 54.8	
	comp=N,184nm,2.6s,comp=E,36nm,5.3s						
JGN				S	Sg	06 09 58.5	+0.5
JNG	**Nsakai**	**0.41**	**69**	A	A	06 10 03.6	
	comp=N,66nm,3.0s,comp=E,60nm,2.9s						
JNG				*e*S	Sg	06 10 03.6	+0.3
JTT	**Ttatey**	**0.41**	**326**	*e*P	Pg	06 09 58.3	+0.4
JTT				A	A	06 09 58.3	
	comp=N,190nm,2.4s,comp=E,158nm,1.8s						
JTT				*e*S	Sg	06 10 04.6	+1.3
MAT	**Matsushiro**	**0.55**	**59**	*e*P	Pg	06 10 00.8	+0.3
MAT				*e*S	Sg	06 10 08.2	+0.6
JNT	**Takato**	**0.57**	**132**	A	A	06 10 00.9	
	comp=N,38nm,3.8s,comp=E,20nm,3.6s						
JGF	**Kuroka**	**0.69**	**198**	A	A	06 10 03.2	
	comp=N,34nm,2.7s,comp=E,81nm,3.4s						
JGK	**Kuni**	**0.89**	**70**	A	A	06 10 06.6	
	comp=N,37nm,4.1s,comp=E,47nm,3.7s						
JNY	**Yasuok**	**0.92**	**168**	A	A	06 10 07.4	
	comp=N,42nm,5.0s,comp=E,51nm,2.7s						
JJH	**Hakui**	**0.95**	**315**	A	A	06 10 08.0	
	comp=N,26nm,3.9s,comp=E,26nm,3.6s						
JJN	**Nakama**	**0.95**	**27**	A	A	06 10 08.0	
	comp=N,26nm,6.0s,comp=E,33nm,2.7s						
JYTA	**Yamagatataniai**	**0.98**	**227**	A	A	06 10 08.5	
	comp=N,43nm,3.2s,comp=E,20nm,3.2s						
JAO	**Obara**	**1.00**	**197**	A	A	06 10 09.5	
	comp=N,35nm,2.5s,comp=E,76nm,5.1s						
JKG	**Kaga**	**1.04**	**271**	A	A	06 10 09.7	
	comp=N,61nm,6.3s,comp=E,21nm,3.7s						
JRY	**Ryogami san**	**1.06**	**103**	A	A	06 10 10.0	
	comp=N,27nm,5.0s,comp=E,15nm,3.6s						
JYN	**Shimob**	**1.07**	**135**	A	A	06 10 10.1	
	comp=N,44nm,3.9s,comp=E,30nm,5.7s						
JICN	**Ichinomiyachia**	**1.15**	**214**	A	A	06 10 11.5	
	comp=N,50nm,2.3s,comp=E,53nm,3.5s						
SHZ3	**Shizuoka 3**	**1.28**	**158**	A	A	06 10 13.8	
	comp=N,29nm,4.9s,comp=E,48nm,5.3s						
JSSY	**Shinshiroyabe**	**1.35**	**184**	A	A	06 10 14.9	
	comp=N,12nm,3.6s,comp=E,25nm,5.9s						
JFNN	**Fujinakano**	**1.37**	**141**	A	A	06 10 15.4	
	comp=N,50nm,5.3s,comp=E,38nm,7.3s						
HMMJ	**Hamamatsu 2**	**1.40**	**177**	A	A	06 10 15.8	
	comp=N,19nm,4.5s,comp=E,27nm,3.3s						
JHU2	**Hanno**	**1.41**	**107**	A	A	06 10 15.9	
	comp=N,26nm,3.8s,comp=E,13nm,4.2s						
JSGW	**Sagamiharawaka**	**1.45**	**117**	A	A	06 10 16.5	
	comp=N,13nm,3.7s,comp=E,15nm,3.9s						
JAG	**Ashikaga**	**1.49**	**83**	A	A	06 10 17.2	
	comp=N,16nm,4.4s,comp=E,8.0nm,6.5s						
JUON	**Uonuma**	**1.49**	**50**	A	A	06 10 17.3	
	comp=N,7.0nm,2.2s,comp=E,8.0nm,4.1s						
JEG	**Eigenji**	**1.50**	**222**	A	A	06 10 17.4	
	comp=N,14nm,5.8s,comp=E,16nm,7.7s						
JFM	**Mihama**	**1.52**	**242**	A	A	06 10 17.7	
	comp=N,32nm,3.9s,comp=E,31nm,4.4s						
JKKS	**Kakegawashinom**	**1.54**	**169**	A	A	06 10 17.9	
	comp=N,50nm,2.0s,comp=E,85nm,4.8s						
JIZZ	**Izumozaki**	**1.54**	**34**	A	A	06 10 18.0	
	comp=N,43nm,5.3s,comp=E,43nm,3.3s						
JSG	**Sagara**	**1.65**	**164**	A	A	06 10 19.6	
	comp=N,62nm,5.8s,comp=E,67nm,5.8s						
JAA	**Atsumi**	**1.67**	**194**	A	A	06 10 20.0	
	comp=N,15nm,4.6s,comp=E,36nm,4.5s						
JHG	**Hegura jima**	**1.68**	**341**	A	A	06 10 20.2	
	comp=N,8.0nm,5.0s,comp=E,9.0nm,2.2s						
JHTM	**Izuhatsuma**	**1.72**	**139**	A	A	06 10 20.8	
	comp=N,30nm,2.0s,comp=E,27nm,0.7s						
TOK	**Tokyo**	**1.83**	**108**	A	A	06 10 22.3	
	comp=N,83nm,5.9s,comp=E,67nm,6.4s						
JIZS	**Izushimoda**	**1.85**	**146**	A	A	06 10 22.6	
	comp=N,13nm,5.3s,comp=E,18nm,4.7s						
JYO	**Yokosk**	**1.96**	**121**	A	A	06 10 24.3	
	comp=N,29nm,6.7s,comp=E,22nm,3.7s						
JSB	**Shiboa**	**1.98**	**68**	A	A	06 10 24.6	
	comp=N,19nm,4.8s,comp=E,16nm,3.9s						
TTO5	**TONANKAI O.B.S**	**2.00**	**178**	A	A	06 10 25.0	
	comp=N,50nm,4.5s,comp=E,50nm,1.6s						
JIE	**Ise**	**2.01**	**202**	A	A	06 10 25.0	
	comp=N,10.0nm,2.8s,comp=E,19nm,6.4s						
JFY	**Yanaizu**	**2.03**	**55**	A	A	06 10 25.3	
	comp=N,8.0nm,6.7s,comp=E,6.0nm,4.7s						
JWT	**Wachi**	**2.05**	**242**	A	A	06 10 25.7	
	comp=N,20nm,3.5s,comp=E,14nm,4.0s						
JNS	**Sasagawa**	**2.06**	**41**	A	A	06 10 25.9	
	comp=N,5.0nm,4.2s,comp=E,5.0nm,2.3s						
JIM2	**Oshima 3**	**2.13**	**136**	A	A	06 10 26.8	
	comp=N,18nm,2.2s,comp=E,15nm,3.5s						
JKY	**Yasaka**	**2.14**	**254**	A	A	06 10 26.9	
	comp=N,8.0nm,3.3s,comp=E,11nm,4.6s						
TTO4	**TONANKAI O.B.S**	**2.25**	**182**	A	A	06 10 28.5	
	comp=N,30nm,5.3s,comp=E,62nm,7.9s						
JHE	**Heguri**	**2.25**	**225**	A	A	06 10 28.6	
	comp=N,17nm,5.3s,comp=E,12nm,5.1s						
JCCN	**Chibachonan**	**2.30**	**112**	A	A	06 10 29.2	
	comp=N,26nm,5.5s,comp=E,33nm,5.2s						
JNIO	**Niijimaoohara**	**2.33**	**144**	A	A	06 10 29.7	
	comp=N,24nm,3.2s,comp=E,27nm,2.0s						

UCR ***05*** *06:21:32.2±0.7,9.49N×82.64W,h14km±3km,MW4.0, Presumed earthquake*

CATAC ***05*** *06:21:32.3±0.3,9.9N±2.2×8.3W±.,h19km±2km,M4.2/14, mb4.4/1,MLv4.0/14,Error ellipse: s-maj=5.2km s-min=3.4km az=73.6,confirmed*

UPA ***05*** *06:21:32.9±2.4,9.39N×82.65W,h7km±4km,ML3.6,MW3.9, Presumed earthquake*

ISC 05 06:21:32.0±0.9,9.46N±0.02×82.64W±0.02,h17km±6km, n165,σ1s02/216,2C-22D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGM0	**Gandoca**	**0.14**	**15**	P	**Pb**	**06 21 37.3**	**+1.1**
RGM0				S	Sb	06 21 42.4	+3.5
RGM0	**Gandoca**	**0.14**	**15**	*e*P	Pb	06 21 37.3	+1.1
RGM0	**Gandoca**	**0.14**	**15**	||*i*P	Pb	06 21 37.3	+1.1
RGM0				*i* S	Sb	06 21 42.4	+3.5
CNI2	**El Empalme, Bo**	**0.17**	**102**	||*i*P	Pg	06 21 36.5	+0.2
CNI2				*i* S	Sg	06 21 39.5	+0.2
SCLRA	**Santa Clara, W**	**0.64**	**192**	*e*P	Pg	06 21 44.6	0.0
SCLRA	**Santa Clara, W**	**0.64**	**192**	||*i*P	Pg	06 21 44.6	0.0
BRU2	**Volcan**	**0.66**	**184**	P	Pg	06 21 44.9	-0.2
BRU2				S	Sg	06 21 54.4	+0.4
BRU2	**Volcan**	**0.66**	**184**	*e*P	Pg	06 21 44.9	-0.2
BRU2	**Volcan**	**0.66**	**184**	||*i*P	Pg	06 21 44.9	-0.2
BRU2				*e*S	Sb	06 21 55.3	+1.0
EDP2	**Potrero Grande**	**0.69**	**230**	*e*P	Pg	06 21 45.3	-0.2
EDP2				*e*S	Sb	06 21 55.5	+0.6
LNBQ3	**Los Naranjos,**	**0.69**	**163**	||*i*P	Pg	06 21 45.1	-0.5
LNBQ3				*i* S	Sg	06 21 55.3	+0.4
CLLRA	**Cordillera,**	**0.71**	**178**	*e*P	Pg	06 21 45.8	-0.2
CLLRA	**Cordillera,**	**0.71**	**178**	*i* P	Pg	06 21 45.4	-0.6
CLLRA				*e*S	Sb	06 21 56.8	+1.1
VITO	**San Vito**	**0.71**	**207**	*e*P	Pg	06 21 46.1	+0.1
VITO				*e*S	Sb	06 21 57.2	+1.5
VITO	**San Vito**	**0.71**	**207**	||*i*P	Pg	06 21 46.1	+0.1
VITO				*e*S	Sb	06 21 56.6	+1.0
PBNVO	**Pueblo Nuevo,**	**0.72**	**142**	*e*P	Pg	06 21 45.6	-0.5
PBNVO	**Pueblo Nuevo,**	**0.72**	**142**	*i* P	Pg	06 21 45.3	-0.8
PBNVO				*e*S	Sg	06 21 55.1	-0.5
PBNVO				IAML		06 21 56.1	
	comp=Z,2μm,0.3s						
BQTLY	**Boquete Panama**	**0.72**	**166**	*e*P	Pg	06 21 45.8	-0.4
BQTLY	**Boquete Panama**	**0.72**	**166**	||*i*P	Pg	06 21 45.8	-0.4
BQTLY				*e*S	Sg	06 21 56.1	+0.3
BURE	**Buenos Aires**	**0.74**	**248**	*e*P	Pg	06 21 46.0	-0.6
BURE				*e*S	Sg	06 21 56.2	-0.2
RBALA	**Bur**	**0.75**	**140**	*e*P	Pg	06 21 45.8	-0.9
RBALA	**Bur**	**0.75**	**140**	*i* P	Pg	06 21 45.8	-0.9
RBALA				*e*S	Sg	06 21 55.1	-1.6
PTAR3	**Potrerillos Ar**	**0.78**	**169**	||*i*P	Pg	06 21 46.9	-0.3
PTAR3				*e*P	Pg	06 21 46.9	-0.3
PTAR3				*i* S	Sg	06 21 57.8	+0.3
JEFFS	**S de V. Baru**	**0.79**	**172**	*e*P	Pg	06 21 47.0	-0.5
JEFFS	**S de V. Baru**	**0.79**	**172**	||*i*P	Pg	06 21 47.0	-0.5
JEFFS				*e*S	Sb	06 21 59.0	+1.3
FIMO	**Fila Mora**	**0.84**	**236**	*e*P	Pg	06 21 48.4	-0.1
NELY	**Ciudad Neily**	**0.86**	**200**	*e*P	Pg	06 21 48.9	+0.2
NELY	**Ciudad Neily**	**0.86**	**200**	||*i*P	Pg	06 21 49.0	+0.3
NELY				*e*S	Sn	06 22 02.3	+0.7
SAJE	**San Jernim**	**0.86**	**263**	*e*P	Pg	06 21 48.0	-0.8
SAJE				*e*S	Sg	06 21 59.6	-0.6
CDITO	**Canoas**	**0.91**	**194**	P	Pb	06 21 49.6	+0.3
CDITO				S	Sn	06 22 03.9	+1.1
TAAN	**Batan**	**0.93**	**312**	*e*P	Pb	06 21 49.2	-0.6
TAAN				*e*S	Sg	06 22 02.7	+0.3
PANP	**Palmar Norte**	**0.95**	**238**	*e*P	Pb	06 21 50.6	+0.6
EDAD	**Golfito**	**0.95**	**213**	*e*P	Pb	06 21 49.9	-0.2
EDPE	**Pejibaye, P**	**0.96**	**252**	*e*P	Pb	06 21 50.1	-0.2
FITO	**Golfito**	**0.97**	**211**	*e*P	Pb	06 21 49.9	-0.5
FITO	**Golfito**	**0.97**	**211**	*i* P	Pb	06 21 49.9	-0.5
BGUAL	**Bijagual, Pana**	**0.99**	**162**	*e*P	Pb	06 21 50.6	-0.2
BGUAL	**Bijagual, Pana**	**0.99**	**162**	||*i*P	Pb	06 21 50.6	-0.2
KKNTU	**Kakint[e]**	**1.03**	**127**	*e*P	Pb	06 21 50.4	-1.1
KKNTU	**Kakint[e]**	**1.03**	**127**	||*i*P	Pb	06 21 50.4	-1.1
KKNTU				*e*S	Sb	06 22 03.5	-1.2
ZEDO	**Perez Zeledon**	**1.03**	**264**	*e*P	Pb	06 21 51.0	-0.5
DVD	**David**	**1.03**	**169**	||*i*P	Pb	06 21 51.4	-0.1
DVD				*i* S	Sb	06 22 04.2	-0.7
LESP3	**La Esperanza,**	**1.06**	**188**	||*i*P	Pb	06 21 51.9	0.0
LESP3				*i* S	Sb	06 22 05.2	-0.3
IRES	**Siquirres**	**1.06**	**307**	*e*P	Pb	06 21 51.1	-0.9
IRES				*e*S	Sb	06 22 05.7	+0.1
TURIB	**Turrialba**	**1.12**	**293**	*e*P	Pb	06 21 52.0	-1.0
TURIB				*e*S	Sb	06 22 06.8	-0.6
RVLA	**Villa Bonita**	**1.13**	**305**	*e*P	Pb	06 21 52.2	-1.0
RESJ	**San Isidro (Tu**	**1.14**	**300**	*e*P	Pb	06 21 52.5	-0.8
VERB	**Verbena**	**1.14**	**295**	*e*P	Pb	06 21 52.7	-0.7
VINA	**Juan Vinas**	**1.17**	**292**	*e*P	Pn	06 21 52.9	-0.9
VTCV	**VTCV, Calle Va**	**1.19**	**296**	*e*P	Pn	06 21 53.4	-0.7
ABRB	**Las Abras (San**	**1.19**	**297**	*e*P	Pn	06 21 53.6	-0.6
CVTQ	**Turrialba Volc**	**1.23**	**296**	*e*P	Pn	06 21 54.3	-0.6
CVTR	**Volcan Turrial**	**1.23**	**297**	*e*P	Pn	06 21 54.1	-0.8
VTR0	**Volcan Turrial**	**1.23**	**297**	*e*P	Pn	06 21 54.2	-0.7
PCAYA	**Pacayas**	**1.24**	**292**	*e*P	Pn	06 21 54.1	-0.7
PIRO	**Carate, Puerto**	**1.25**	**213**	P	Pn	06 21 54.8	0.0
PIRO				S	Sg	06 22 12.6	+0.1
PIRO	**Carate, Puerto**	**1.25**	**213**	*e*P	Pn	06 21 54.6	-0.2
PIRO	**Carate, Puerto**	**1.25**	**213**	||*i*P	Pn	06 21 54.7	-0.2
PIRO				*e*S	Sb	06 22 10.0	-1.1
RAFA	**San Farael, Vo**	**1.25**	**293**	*e*P	Pn	06 21 54.3	-0.8
REPA	**Paraso**	**1.26**	**287**	*e*P	Pn	06 21 54.3	-0.7
PTPM	**Petroterminale**	**1.27**	**191**	||*i*P	Pn	06 21 55.4	+0.4
PTPM				*i* S	Sb	06 22 11.7	+0.1
PTPA	**Petro Terminal**	**1.27**	**190**	*e*P	Pn	06 21 55.0	-0.1
VICA	**Volcano Irazu**	**1.29**	**294**	*e*P	Pn	06 21 54.9	-0.8
CVTG	**V. Turrialba,**	**1.31**	**302**	*e*P	Pn	06 21 55.2	-0.4
PIEC	**Cerro El Cedra**	**1.31**	**277**	*e*P	Pn	06 21 55.1	-0.7
TAGO	**Cartago**	**1.33**	**288**	*e*P	Pn	06 21 55.4	-0.5
PILE	**Guapiles**	**1.36**	**304**	*e*P	Pn	06 21 55.8	-0.5
RAZU	**San Marcos de**	**1.38**	**278**	*e*P	Pn	06 21 56.2	-0.4
PITB	**Pirrs, San**	**1.38**	**278**	*e*P	Pn	06 21 56.5	-0.2
TRIO	**Tres Rios**	**1.40**	**288**	*e*P	Pn	06 21 56.4	-0.6
CORON	**Coronado**	**1.43**	**291**	*e*P	Pn	06 21 57.5	0.0
ECI	**Escuela Centro**	**1.47**	**289**	*e*P	Pn	06 21 57.9	0.0
SJS3	**Mercedes San J**	**1.47**	**289**	*e*P	Pn	06 21 57.9	0.0
SJS	**Escuela Geolog**	**1.47**	**289**	*e*P	Pn	06 21 57.8	-0.1
LUJA	**Lujan**	**1.48**	**288**	*e*P	Pn	06 21 58.0	-0.1
TIBA	**Tibas**	**1.50**	**290**	*e*P	Pn	06 21 58.4	+0.1
MEXI	**Barrio Mexico**	**1.50**	**289**	*e*P	Pn	06 21 58.3	-0.1
QUEP	**Quepos**	**1.50**	**269**	P	Pn	06 21 59.0	+0.8
QUEP				S	Sb	06 22 19.4	+1.1
QUEP	**Quepos**	**1.50**	**269**	*e*P	Pn	06 21 58.8	+0.6
SVQ2	**Quepos**	**1.50**	**269**	*e*P	Pn	06 21 58.7	+0.5
NANC3	**Nancito, Chiri**	**1.51**	**143**	||*e*P	Pn	06 21 58.9	+0.5
NANC3				*i* S	Sb	06 22 19.0	+0.5
DOMI	**Santo Domingo**	**1.52**	**290**	*e*P	Pn	06 21 58.8	+0.2
PAVB	**Pavas, San Jos**	**1.53**	**288**	*e*P	Pn	06 21 58.8	+0.1
TRT2	**Tortugero**	**1.53**	**315**	P	Pn	06 21 57.8	-0.8
TRT2				S	Sn	06 22 18.2	0.0
TRT2	**Tortugero**	**1.53**	**315**	*e*P	Pn	06 21 57.5	-1.1
TRT2	**Tortugero**	**1.53**	**315**	||*e*P	Pn	06 21 57.7	-0.9
TRT2				*i* S	Sn	06 22 15.9	-2.3
TRT2				*e*S	Sb	06 22 16.5	-2.7
ACOS	**Acosta**	**1.54**	**283**	*e*P	Pn	06 21 59.0	+0.2
PICV	**PH. Pirrs**	**1.54**	**276**	*e*P	Pn	06 21 59.0	+0.2
HDC	**Heredia**	**1.55**	**290**	*e*P	Pn	06 21 59.2	+0.2
HEME	**Heredia, Merce**	**1.57**	**290**	*e*P	Pn	06 21 59.6	+0.3
VBV1	**V. Barva**	**1.58**	**294**	*e*P	Pn	06 21 59.6	+0.1
SANTA	**Santa Ana**	**1.59**	**287**	*e*P	Pn	06 21 59.6	0.0
BELE	**Belen**	**1.61**	**289**	*e*P	Pn	06 21 60.0	+0.2
UELA	**Alajuela**	**1.64**	**290**	*e*P	Pn	06 22 00.7	+0.5
POAS	**San Pedro de P**	**1.69**	**291**	*e*P	Pn	06 22 01.8	+0.8
VPS5	**V. Poas**	**1.73**	**295**	*e*P	Pn	06 22 02.3	+0.6
VPS8	**V Poas**	**1.73**	**295**	*e*P	Pn	06 22 02.2	+0.5
TCS1	**Tacares**	**1.73**	**290**	P	Pn	06 22 02.5	+1.0
PVID3	**Puerto Vidal,**	**1.73**	**144**	||*e*P	Pn	06 22 02.2	+0.8
PVID3				*e*S	Sn	06 22 24.5	+1.3
GREC	**Grecia**	**1.75**	**291**	*e*P	Pn	06 22 02.8	+1.0
ARTO	**Ro Cuarto**	**1.78**	**300**	*e*P	Pn	06 22 02.0	-0.1
ATEO	**Atenas**	**1.79**	**287**	*e*P	Pn	06 22 03.0	+0.7
SARCI	**Sarchi**	**1.79**	**291**	*e*P	Pn	06 22 03.5	+1.2
NARAN	**Naranjo de Ala**	**1.82**	**291**	*e*P	Pn	06 22 03.8	+1.0
PALD	**Palmares**	**1.86**	**289**	*e*P	Pn	06 22 04.1	+0.8
VPL3	**V. Platanar**	**1.86**	**298**	*e*P	Pn	06 22 03.5	+0.2
ZARE	**Zarcero**	**1.87**	**293**	*e*P	Pn	06 22 04.4	+1.0
VPL1	**V. Platanar**	**1.87**	**295**	*e*P	Pn	06 22 04.1	+0.6
ITAL	**Pital**	**1.88**	**302**	*e*P	Pn	06 22 03.8	+0.3
RAMO	**San Ramon**	**1.90**	**289**	*e*P	Pn	06 22 04.7	+0.9
OROT	**Orotina**	**1.91**	**284**	*e*P	Pn	06 22 04.6	+0.8
SRA1	**San Ramn**	**1.91**	**289**	*e*P	Pn	06 22 04.9	+0.8
BITO	**Garabito Jaco**	**1.96**	**275**	*e*P	Pn	06 22 06.3	+1.8
QUEU	**Ciudad Quesada**	**1.96**	**296**	*e*P	Pn	06 22 05.9	+1.2
ARZA	**Esparza**	**2.06**	**285**	*e*P	Pn	06 22 07.0	+1.0
RSUS3	**Rio de Jesus,**	**2.07**	**135**	||*e*P	Pn	06 22 07.1	+1.0
RSUS3				*i* S	Sn	06 22 33.9	+2.3
CALO3	**Calobre, Verag**	**2.11**	**122**	*e*P	Pn	06 22 07.9	+1.3
CALO3				*i* S	Sn	06 22 33.9	+1.4
STIA3	**Santiago, Vera**	**2.13**	**129**	*e*P	Pb	06 22 09.2	-1.0
STIA3				*i* S	Sb	06 22 36.9	+0.4

TECO	**Alcaldia de Te**	**0.90**	**96**	P		**Pn**	**06 30 56.2**	**-0.3**
TECO				S		**Sn**	**06 31 12.1**	**-0.1**
TECO	**Alcaldia de Te**	**0.90**	**96**	*eP*		**Pn**	**06 30 56.2**	**-0.3**
ESQI	**Esquipulas**	**0.98**	**20**	P		**Pn**	**06 30 57.4**	**-0.1**
ESQI				S		**Sn**	**06 31 13.8**	**0.0**
ESQI	**Esquipulas**	**0.98**	**20**	*i* P		**Pn**	**06 30 57.5**	**-0.1**
ZAFR2	**Estanzuela, Za**	**1.00**	**20**	*i* P		**Pn**	**06 31 01.0**	**+3.5**
TECA	**Tecapa**	**1.17**	**97**	*eP*		**Pn**	**06 30 59.4**	**-0.1**
PACA	**Pacayal**	**1.34**	**97**	P		**Pn**	**06 31 01.0**	**-0.3**
PACA				S		**Sn**	**06 31 21.2**	**+0.5**
RANC	**El Ranchito**	**1.38**	**98**	P		**Pn**	**06 31 01.8**	**0.0**
SARH	**Santa Rosa de**	**1.45**	**39**	P		**Pn**	**06 31 02.6**	**0.0**
SARH				S		**Sn**	**06 31 23.3**	**+0.5**
SARH	**Santa Rosa de**	**1.45**	**39**	*i* P		**Pn**	**06 31 02.6**	**0.0**
SARH				*i* S		**Sn**	**06 31 20.8**	**-2.0**
LCND	**La Caada**	**1.79**	**100**	P		**Pn**	**06 31 06.3**	**-0.1**
CNCH	**Conchagua**	**1.85**	**101**	P		**Pn**	**06 31 07.3**	**0.0**

*GCG **05** 06:37:11.3±1.2, 13°.55N×90°.50W, h24km±8km, MD3.6, MW3.0, Presumed earthquake*
*CATAC **05** 06:37:11.0±0.6, 14°N±4°×9°1W±°, h23km±3km, M3.1/17, MLv3.1/17, Error ellipse: s-maj=7.8km s-min=3.5km az=16.9, confirmed*
*SNET **05** 06:37:12.0±0.8, 13°.62N×90°.45W, h37km±7km, ML2.8, Presumed earthquake*

ISC 05 06:37:12.4±1.5, 13°.52N±0°.07×90°.44W±0°.04, h24km±13km, n38, σ0°98/56, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.52**	**52**	P	**Pb**	**06 37 23.1**	**+0.2**
FAME				S	**Sn**	**06 37 32.0**	**-0.3**
NUBE	**Las Nubes**	**0.74**	**59**	P	**Pb**	**06 37 26.4**	**-0.3**
NUBE	**Las Nubes**	**0.74**	**59**	*i* P	**Pb**	**06 37 26.5**	**-0.2**
NUBE	**Las Nubes**	**0.74**	**59**	*eP*	**Pb**	**06 37 26.5**	**-0.2**
NUBE				*eS*	**Sb**	**06 37 37.3**	**+0.8**
FG8	**Yepocapa, Chim**	**0.74**	**351**	*i* P	**Pn**	**06 37 29.6**	**+2.1**
FG16	**Alotenango, Sa**	**0.75**	**354**	*i* P	**Pn**	**06 37 29.3**	**+1.6**
LOAL	**Lomas de Alarc**	**0.79**	**53**	P	**Pb**	**06 37 27.0**	**-0.5**
LOAL				S	**Sn**	**06 37 39.5**	**+0.3**
LOAL	**Lomas de Alarc**	**0.79**	**53**	*eP*	**Pn**	**06 37 27.6**	**-0.4**
CEVE	**Cerro Verde**	**0.84**	**69**	P	**Pb**	**06 37 28.0**	**-0.6**
CEVE				S	**Sn**	**06 37 40.8**	**+0.1**
SBLS	**San Blas**	**0.85**	**68**	*eP*	**Pb**	**06 37 28.3**	**-0.4**
RTR	**El Retiro**	**0.85**	**64**	*eP*	**Pn**	**06 37 28.6**	**-0.4**
SNJE	**San Jose**	**0.88**	**67**	*eP*	**Pb**	**06 37 28.6**	**-0.4**
RBDL	**Robledal**	**0.94**	**51**	*eP*	**Pn**	**06 37 29.7**	**-0.4**
ESSG	**Sabana Grande**	**0.94**	**336**	*i* P	**Pb**	**06 37 27.8**	**-2.3**
JAYA	**Jayaque - finc**	**0.97**	**82**	P	**Pn**	**06 37 29.8**	**-0.8**
JAYA				S	**Sb**	**06 37 43.3**	**+0.3**
JAYA	**Jayaque - finc**	**0.97**	**82**	*i* P	**Pn**	**06 37 29.7**	**-0.8**
JAYA				*i* S	**Sb**	**06 37 42.7**	**-0.3**
JAYA	**Jayaque - finc**	**0.97**	**82**	*eP*	**Pn**	**06 37 29.8**	**-0.8**
UNIC	**Universidad Ca**	**0.97**	**62**	P	**Pn**	**06 37 29.9**	**-0.6**
UNIC				S	**Sn**	**06 37 43.7**	**0.0**
CEDA	**San Andres**	**1.05**	**74**	P	**Pn**	**06 37 31.0**	**-0.6**
CEDA				S	**Sn**	**06 37 46.0**	**+0.5**
JUAM	**Asuncion Mita**	**1.07**	**41**	*i* P	**Pb**	**06 37 31.5**	**-0.8**
JUAM				*i* S	**Sn**	**06 37 46.7**	**+0.6**
LALI	**Alcalda de L**	**1.08**	**92**	P	**Pn**	**06 37 31.4**	**-0.6**
LALI				S	**Sn**	**06 37 46.5**	**+0.2**
PMON	**Piamonte**	**1.11**	**80**	P	**Pn**	**06 37 32.1**	**-0.3**
PMON				S	**Sb**	**06 37 47.7**	**+0.8**
PMON	**Piamonte**	**1.11**	**80**	*eP*	**Pn**	**06 37 31.9**	**-0.5**
UEES	**Universidad Ev**	**1.18**	**80**	P	**Pn**	**06 37 33.2**	**-0.2**
UEES				S	**Sn**	**06 37 49.1**	**+0.4**
UEES	**Universidad Ev**	**1.18**	**80**	*eP*	**Pn**	**06 37 33.3**	**-0.1**
PANCS	**Alcalda de**	**1.23**	**86**	P	**Pn**	**06 37 33.5**	**-0.5**
PANCS				S	**Sn**	**06 37 49.5**	**-0.3**
LOMA	**Loma Larga**	**1.23**	**84**	P	**Pn**	**06 37 33.9**	**-0.3**
LOMA				S	**Sn**	**06 37 50.8**	**+0.6**
LOMA	**Loma Larga**	**1.23**	**84**	*eP*	**Pn**	**06 37 34.0**	**-0.3**
STG5	**El Palmar, Qui**	**1.25**	**315**	*i* P	**Pb**	**06 37 37.3**	**+2.1**
STG8	**El Palmar, Qui**	**1.28**	**316**	*i* P	**Pb**	**06 37 38.1**	**+2.2**
MTO3	**Montecristo**	**1.36**	**50**	P	**Pn**	**06 37 35.7**	**-0.3**
MTO3				S	**Sb**	**06 37 53.9**	**-0.5**
MTO3	**Montecristo**	**1.36**	**50**	*i* P	**Pn**	**06 37 35.5**	**-0.5**
PAVA	**Las Pavas**	**1.47**	**82**	P	**Pn**	**06 37 37.4**	**0.0**
COEG	**Centro de Oper**	**1.52**	**86**	P	**Pn**	**06 37 38.6**	**+0.6**
COEG				S	**Sn**	**06 37 58.4**	**+1.3**
COEG	**Centro de Oper**	**1.52**	**86**	*eP*	**Pn**	**06 37 38.6**	**+0.6**
RTAL	**Retalhuleu**	**1.58**	**309**	P	**Pn**	**06 37 36.8**	**-2.0**
RTAL				S	**Sn**	**06 37 55.2**	**-3.2**
LCND	**La Caada**	**2.49**	**95**	P	**Pn**	**06 37 51.7**	**+0.4**
LCND				S	**Sn**	**06 38 22.0**	**+1.1**
NADN	**Granada**	**4.64**	**112**	P	**Pn**	**06 38 20.8**	**-0.2**

*IDC **05** 06:58:10.5±3.5, 12°.21N×123°.74E, h0km, mb3.7/4, mbtmp3.7/4, MS3.1/2, Error ellipse: s-maj=351.4km s-min=24.1km az=64.0*
*MAN **05** 06:58:10.0, 13°.06N×125°.31E, h13km, MS4.0*

ISC 05 06:58:11.6±1.0, 12°.39N±0°.06×123°.9E±0°.1, h14km, n10, σ1°43/9, mb3.7/4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.23**	**12**	*eP*	**Pn**	**06 58 32.5**	**-1.9**
PVCP				*i* S	**Sg**	**06 58 52.5**	**+1.1**
PLP	**Palo**	**1.61**	**139**	*eP*	**Pg**	**06 58 42.2**	**-0.5**
PLP				*eS*	**Sg**	**06 59 05.1**	**+1.5**
LQP	**Lukban**	**2.87**	**307**	*eP*	Pg	06 59 14.7	+8.1
SCPH	**Surigao**	**3.02**	**149**	*eP*	Pn	06 58 51.6	-7.6
CGP	**Cagayan de Oro**	**3.98**	**169**	*eP*	**Pg**	**06 59 27.2**	**-0.8**
SIJI	**Sorong**	**15.06**	**150**	LR	LR	07 09 02.8	
	comp=Z,30nm,18.6s,baz=25,slow=44						
WRA	**Warramunga Arr**	**33.73**	**162**	P	**P**	**07 04 53.2**	**+0.3**
	0.3nm,0.6s,baz=341,slow=8.1,SNR=1.6 0.3nm,0.6s						
ASAR	**Alice Springs**	**37.15**	**165**	P	**P**	**07 05 21.6**	**-0.7**
	0.3nm,0.3s,baz=348,slow=9.3,SNR=2.3 0.3nm,0.3s						
MKAR	**Makanchi Array**	**48.94**	**323**	P	**P**	**07 06 59.2**	**+1.6**
	0.9nm,0.8s,baz=110,slow=9.2,SNR=6.9 0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**53.02**	**325**	P	**P**	**07 07 29.1**	**+1.0**
	0.8nm,0.2s,baz=119,slow=7.6,SNR=4.2						
KURBB				LR	LR	07 32 18.5	
	comp=Z,36nm,21.1s,baz=182,slow=39 0.8nm,0.2s						

*IDC **05** 07:11:13.9±1.2, 36°.95S×52°.10E, h0km, mb3.7/4, mbtmp3.8/5, ML4.0/1, MS3.6/8, Error ellipse: s-maj=43.8km s-min=28.7km az=54.0*
*NEIC **05** 07:11:15.7±0.8, 37°.07S±0°.08×52°.3E±0°.2, h10km±1km, mb4.3/12, Error ellipse: s-maj=30.2km s-min=13.4km az=269.0*

ISC 05 07:11:15.2±0.7, 37°.03S±0°.09×52°.2E±0°.2, h10km, n37, σ0°80/20, mb4.2/7, MS3.5/8, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N1	**CROZET ISLANDS**	**9.13**	**182**	T	T	07 23 06.6	
	baz=2.9,slow=75,SNR=605						
H04N2	**CROZET ISLANDS**	**9.13**	**182**	T	T	07 23 05.4	
	baz=2.9,slow=75,SNR=625						
H04N3	**CROZET ISLANDS**	**9.14**	**182**	T	T	07 23 03.7	
	baz=2.9,slow=75,SNR=896						
CRZF	**Crozet Islands**	**9.39**	**181**	Pn	**Pn**	**07 13 30.1**	**-0.4**
FOMA	**Nahampoana Res**	**12.82**	**338**	Pn	**Pn**	**07 14 18.4**	**+0.7**
VOI	**Vohitsoka**	**15.79**	**341**	Pn	**Pn**	**07 14 58.1**	**+0.3**
VOI				IAmb	IAmb	07 15 02.1	
	comp=Z,6.1nm,0.4s						
ABPO	**Ambohimpanom**	**18.47**	**345**	P	**Pn**	**07 15 31.8**	**+0.2**
OPO	**Ambohidratompo**	**18.91**	**345**	P	**Pn**	**07 15 37.1**	**+0.2**
	baz=164,slow=7.4,SNR=2.1 comp=Z,3nm,0.6s						
LBTB	**Lobatse**	**25.67**	**290**	LR	LR	07 26 02.3	
	comp=Z,104nm,18.2s,baz=137,slow=35						
MATP	**Matopo**	**26.46**	**302**	LR	LR	07 25 32.1	
	comp=Z,155nm,20.5s,baz=147,slow=33						
LSZ	**Lusaka**	**30.41**	**309**	LR	LR	07 27 13.9	
	comp=Z,92nm,18.9s,baz=140,slow=32						
MAW	**Mawson**	**31.21**	**172**	LR	LR	07 27 09.0	
	comp=Z,107nm,20.2s,baz=272,slow=30						
H08S1	**Diego Garcia H**	**34.58**	**37**	T	T	07 54 16.5	
	baz=209						
H08S2	**Diego Garcia H**	**34.59**	**37**	T	T	07 54 17.8	
	baz=209						
H08S3	**Diego Garcia H**	**34.60**	**37**	T	T	07 54 17.4	
	baz=209						
TSUM	**Tsumeb**	**35.08**	**291**	LR	LR	07 30 06.9	
	comp=Z,101nm,20.8s,baz=151,slow=32						
KMBO	**Kilima Mbogo**	**38.31**	**335**	LR	LR	07 32 07.7	
	comp=Z,53nm,19.1s,baz=132,slow=33						
CASY	**Casey**	**44.08**	**150**	P	**P**	**07 19 23.3**	**+0.3**
CASY				IAmb	IAmb	07 19 40.5	
	comp=Z,7.2nm,1.1s						
H01W2	**Cape Leeuwin H**	**49.38**	**107**	T	T	08 13 07.9	
	baz=249,slow=75,SNR=32						
H01W3	**Cape Leeuwin H**	**49.38**	**107**	T	T	08 13 09.7	
	baz=249,slow=75,SNR=39						
H01W1	**Cape Leeuwin H**	**49.39**	**107**	T	T	08 13 09.3	
	baz=249,slow=75,SNR=36						
PALK	**Pallekele**	**51.52**	**37**	P	**P**	**07 20 20.9**	**-0.5**
QSPA	**South Pole Qui**	**53.16**	**180**	P	**P**	**07 20 34.4**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=260,slow=3.6,SNR=7.7 comp=Z,2.1nm,1.0s						
QSPA	**South Pole Qui**	**53.16**	**180**	P	**P**	**07 20 33.3**	**+0.2**
QSPA				IAmb	IAmb	07 20 48.4	
	comp=Z,3.1nm,1.1s						
MORW	**Morawa**	**53.22**	**101**	P	**P**	**07 20 33.8**	**-0.1**
MORW				IAmb	IAmb	07 21 00.7	
	comp=Z,2.6nm,0.9s						
BBJI	**Bungbulang**	**58.16**	**74**	P	**P**	**07 21 09.2**	**-0.4**
VNDA	**Vanda**	**58.21**	**166**	P	**P**	**07 21 09.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**68.89**	**306**	P	**P**	**07 22 18.9**	**-1.5**
	comp=Z,0.9nm,0.9s,baz=130,slow=10.0,SNR=1.9 comp=Z,0.9nm,0.9s						
ASAR	**Alice Springs**	**69.80**	**105**	P	**P**	**07 22 27.0**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=232,slow=5.4,SNR=8.0 comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**69.80**	**105**	P	**P**	**07 22 24.4**	**-1.7**
AS31	**Alice Springs**	**69.80**	**105**	P	**P**	**07 22 25.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**70.62**	**47**	LR	LR	07 50 40.8	
	comp=Z,39nm,18.1s,baz=210,slow=34						
WRA	**Warramunga Arr**	**72.16**	**102**	P	**P**	**07 22 41.1**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=238,slow=5.8,SNR=1.5 comp=Z,0.2nm,0.4s						
EVN	**Everest**	**72.37**	**32**	P	**P**	**07 22 41.6**	**-0.5**
EVN				IAmb	IAmb	07 22 53.2	
	comp=Z,4.3nm,1.1s						
NIL	**Nilore**	**73.01**	**18**	P	**P**	**07 22 45.8**	**+0.8**
NIL				IAmb	IAmb	07 23 14.7	
	comp=Z,2.6nm,0.7s						
DAV	**Davao City (W)**	**81.14**	**74**	LR	LR	07 53 34.3	
	comp=Z,49nm,20.5s,baz=146,slow=31						
KKAR	**Karatay Array**	**81.48**	**13**	P	**P**	**07 23 33.0**	**+0.6**

*IDC **05** 07:32:11.8±6.0, 36°.19N×71°.36E, h80km±46km, mb3.5/7, mbtmp3.8/12, ML3.2/4, Error ellipse: s-maj=52.8km s-min=34.4km az=145.0*
*NNC **05** 07:32:20.2±4.5, 36°.81N×70°.81E, h82km±80km, mb3.4, mpv4.1, Error ellipse: s-maj=38.8km s-min=32.4km az=148.0*

ISC 05 07:32:16.7±1.5, 36°.6N±0°.1×71°.0E±0°.1, h100km, n24, σ1°35/27, mb4.0/5, 4C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.28**	**25**	P	**Pn**	**07 33 47.5**	**+0.3**
	SNR=13						
EKS2	**Erkin-Say**	**6.46**	**19**	P	**Pn**	**07 33 50.0**	**+0.7**
	SNR=37						
KK31	**Karatay Array**	**6.54**	**357**	⇑P	**Pn**	**07 33 50.8**	**+0.5**
	7.0nm,0.2s,baz=175,slow=12,SNR=258						
KK31				⇓S	**Sn**	**07 35 02.0**	**-1.3**
	5.6nm,0.3s,baz=186,slow=23,SNR=8.6						
AAK	**Ala-Archa**	**6.64**	**23**	P	**Pn**	**07 33 51.9**	**+0.1**
	17nm,0.3s,baz=187,slow=5.6,SNR=35						
AAK				S	**Sn**	**07 35 06.3**	**+0.2**
	3.0nm,0.3s,baz=153,slow=23,SNR=8.2						
AAK	**Ala-Archa**	**6.64**	**23**	P	**Pn**	**07 33 52.3**	**+0.5**
	SNR=15						
AAK	**Ala-Archa**	**6.64**	**23**	⇑P	**Pn**	**07 33 52.3**	**+0.5**
	3.4nm,0.4s						
AAK				⇓S	**Sn**	**07 35 05.7**	**-0.4**
	1.9nm,0.5s						
CHMS	**Chumysh**	**7.05**	**23**	P	**Pn**	**07 33 57.7**	**+0.4**
	SNR=23						
USP	**Ospennovka**	**7.22**	**21**	P	**Pn**	**07 33 59.8**	**+0.3**
	SNR=14						
TKM2	**Tokmak 2**	**7.28**	**28**	P	**Pn**	**07 34 00.2**	**-0.3**
	SNR=13						
MK31	**Makanchi Array**	**13.25**	**36**	⇓P	**Pn**	**07 35 25.1**	**+4.4**
	0.2nm,0.3s,baz=202,slow=7.9,SNR=16						
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**07 35 18.5**	**-2.2**
	baz=217,slow=14,SNR=3.5 0.3nm,0.5s						
AB31	**Akbulak array**	**15.01**	**331**	⇑P	**Pn**	**07 35 42.7**	**-0.7**
	0.2nm,0.2s,baz=162,slow=12,SNR=4.9						
KURBB	**Kurchatov Arra**	**15.07**	**19**	P	**Pn**	**07 35 44.5**	**+0.5**
	0.1nm,0.3s,baz=207,slow=10,SNR=7.4 0.7nm,0.5s						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**Pn**	**07 36 00.6**	**-0.9**
	0.1nm,0.3s,baz=155,slow=13,SNR=4.4 0.7nm,0.4s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**P**	**07 36 05.3**	**+0.1**
	0.3nm,0.3s,baz=145,slow=12,SNR=6.3 0.9nm,0.3s						
AKTO	**Aktyubinsk**	**16.71**	**330**	⇑P	**Pn**	**07 36 05.1**	**+0.5**
	0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**19.86**	**25**	P	**P**	**07 36 38.1**	**-1.5**
	2.3nm,0.3s,baz=210,slow=11,SNR=14 2.3nm,0.3s						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**07 39 20.7**	**+1.1**
	1.8nm,0.8s,baz=110,slow=8.6,SNR=4.2 1.8nm,0.8s						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**07 39 51.3**	**+1.3**
	2.4nm,1.1s,baz=115,slow=8.6,SNR=5.0 2.4nm,1.1s						
HFS	**Hagfors**	**43.00**	**322**	P	**P**	**07 40 07.4**	**+1.7**
	0.9nm,0.4s,baz=94,slow=12,SNR=7.8 0.9nm,0.4s						
NB2	**NORSAR Subarra**	**44.31**	**323**	P	**P**	**07 40 17.6**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**07 40 17.6**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=99,slow=8.2,SNR=1.8 comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P	**P**	**07 42 49.2**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=52,slow=6.0,SNR=5.0 comp=Z,0.4nm,0.5s						
YKA	**Yellowknife A**	**81.18**	**3**	P	**P**	**07 44 20.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=356,slow=5.6,SNR=1.9 comp=Z,0.2nm,0.4s						

TRN 05 07:37:17.3, 17°.06N×62°.16W, h101km, MD3.7, East of St. Kitts., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBWH	**Windy Hill**	**0.32**	**185**	*eP*	Pn	07 37 33.7	+1.5
MBWH				*eS*	Sn	07 37 45.0	+1.7
SKI	**Saint Kitts**	**0.61**	**296**	*eP*	Pn	07 37 35.7	+1.6
SKI				*eS*	Sn	07 37 47.4	+0.7
ANWB	**Willy Bob**	**0.70**	**31**	*eP*	Pn	07 37 36.2	+1.4
ANWB				*eS*	Sn	07 37 49.6	+1.6
DHSZ	**Broadband at M**	**0.87**	**154**	*eP*	Pn	07 37 38.0	+1.5
DHSZ				*eS*	Sn	07 37 52.2	+1.3
SEUS	**St. Eustatius**	**0.89**	**299**	*eP*	Pn	07 37 38.5	+1.8
MMLZ	**Guadeloupe Bro**	**1.12**	**155**	*eP*	Pn	07 37 40.9	+1.8
MMLZ				*eS*	Sn	07 37 57.6	+2.1
SABA	**Saba**	**1.17**	**298**	*eP*	Pn	07 37 41.2	+1.5
TBG	**Guadaloupe-3**	**1.30**	**157**	*eP*	Pn	07 37 42.7	+1.4
TBG				*eS*	Sn	07 38 01.4	+2.1
MAGL	**Barre de l'ile**	**1.39**	**143**	*eP*	Pn	07 37 43.6	+1.2
MAGL				*eS*	Sn	07 38 03.1	+1.8
DWS	**Wesley**	**1.70**	**151**	*eP*	Pn	07 37 47.0	+0.9
DWS				*eS*	Sn	07 38 09.0	+1.1
DSLB	**Salisbury**	**1.77**	**156**	*eP*	Pn	07 37 48.3	+1.3
DSLB				*eS*	Sn	07 38 11.1	+1.5
BIM	**Bigot**	**2.74**	**157**	*eP*	Pn	07 38 00.1	+0.3
BIM				*eS*	Sn	07 38 33.5	+1.2
SLBI	**Saint Lucia, B**	**3.23**	**159**	*eP*	Pn	07 38 06.8	+0.6
SLBI				*eS*	Sn	07 38 45.0	+1.1

BER 05 07:39:39.1±2.4, 72°.56N×3°.54E, h20km±22km, Mw3.6, Confirmed Earthquake, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**4.04**	**253**	*eP*	Pn	07 40 36.8	-2.8
JNE				IAML		07 40 38.3	
JNW	**Jan Mayen West**	**4.06**	**253**	*eP*	Pn	07 40 36.6	-3.3
LOF	**Lofoten**	**5.58**	**138**	*eP*	Pn	07 40 58.9	-1.9
LOF				IAML		07 41 04.2	
	comp=Z,1.2nm,0.5s						
LOF				*eS*	Sn	07 41 56.5	-7.8
TRO	**Tromso**	**5.79**	**113**	*eP*	Pn	07 41 00.7	-3.0
TRO				IAML		07 41 01.9	
	comp=Z,3.7nm,0.3s						
TRO				*eS*	Sn	07 42 01.9	-7.6
STEI	**Steigen**	**6.10**	**134**	*eP*	Pn	07 41 06.1	-1.9
STEI				IAML		07 41 07.6	
	comp=Z,1.4nm,0.4s						
STEI				*eS*	Sn	07 42 10.9	-6.2
JETT	**Jettan, Norway**	**6.25**	**111**	*eP*	Pn	07 41 07.5	-2.6
JETT				IAML		07 41 09.4	
	comp=Z,4.5nm,0.3s						
JETT				*eS*	Sn	07 42 16.4	-4.5
SPA0	**Spitsbergen Ar**	**6.49**	**24**	*eP*	Pn	07 41 11.0	-2.3
FAUS	**Fauske**	**6.57**	**137**	*eP*	Pn	07 41 13.2	-1.2
FAUS				*eS*	Sn	07 42 20.7	-7.9
HAMF	**Hammerfest**	**6.64**	**97**	*eP*	Pn	07 41 11.6	-3.8
KBS	**Kingsbay**	**6.71**	**14**	*eP*	Pn	07 41 13.9	-2.4
VAGH	**Vaagaholmen**	**6.76**	**145**	*eP*	Pn	07 41 15.4	-1.6
VAGH				IAML		07 41 21.7	
	comp=Z,1.8nm,0.5s						
VAGH				*eS*	Sn	07 42 25.1	-8.1
KONS	**Konsvik**	**6.94**	**146**	*eP*	Pn	07 41 17.5	-2.0
KONS				IAML		07 41 19.2	
	comp=Z,2.4nm,0.2s						
KONS				*eS*	Sn	07 42 28.9	-8.9
DBG	**Daneborg**	**6.99**	**296**	*eP*	Pn	07 41 19.8	-0.3
STOK	**Stokkvaagen**	**7.08**	**147**	*eP*	Pn	07 41 19.9	-1.5
STOK				*eS*	Sn	07 42 32.4	-8.7
RAUS	**Rausandaksla**	**7.16**	**144**	*eP*	Pn	07 41 20.9	-1.7
LEIR	**Leirfjorden**	**7.30**	**148**	*eP*	Pn	07 41 22.3	-2.1
LEIR				*eS*	Sn	07 42 37.9	-8.6
KTK1	**Kautokeino**	**7.38**	**109**	*eP*	Pn	07 41 23.4	-2.1
LANU	**Lannavaara**	**7.68**	**117**	*eP*	Pn	07 41 27.1	-2.5
HEF	**Hetta**	**7.89**	**112**	*eP*	Pn	07 41 29.3	-3.2
NSS	**Namsos**	**8.63**	**155**	*eP*	Pn	07 41 42.0	-0.5
NSS				*eS*	Sn	07 43 10.7	-8.5

*NEIC **05** 07:39:52.5±0.8, 11°.1S±0°.1×162°.2E±0°.1, h10km±1km, mb4.2/10, Error ellipse: s-maj=28.7km s-min=12.8km az=43.0*
*IDC **05** 07:39:53.2±8.4, 11°.18S×161°.88E, h0km, mb3.8/3, mbtmp3.9/4, ML4.0/1, MS3.4/4, Error ellipse: s-maj=138.6km s-min=32.3km az=71.0*

ISC 05 07:39:52.0±1.0, 11°.1S±0°.1×162°.2E±0°.1, h10km, n22, σ0°75/21, mb4.0/6, MS3.3/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.73**	**307**	Pn	**Pn**	**07 40 36.9**	**+0.9**
	0.7nm,0.3s,baz=114,slow=20,SNR=2.5						
HNR				Sn	**Sn**	**07 41 08.8**	**-0.3**
	2.9nm,0.3s,baz=137,slow=10,SNR=3.8						
HNR				LR	LR	07 41 48.1	
	comp=Z,14nm,21.2s,baz=222,slow=45						
HNR	**Honiara**	**2.73**	**307**		**Pn**	**07 40 36.6**	**+0.7**
SANVU	**Saraoutou**	**6.54**	**132**	Pn	**Pn**	**07 41 28.4**	**+0.1**
PMG	**Port Moresby**	**14.86**	**275**	LR	LR	07 48 35.7	
	comp=Z,162nm,19.3s,baz=164,slow=36						
CTA	**Charters Tower**	**17.73**	**238**	P	**P**	**07 44 00.1**	**+0.1**
	0.4nm,0.3s,baz=54,slow=13,SNR=2.6 3.6nm,0.6s						
CTAO	**Charters Tower**	**17.73**	**238**	P	**Pn**	**07 43 59.6**	**+0.4**
PATS	**Pohnpei**	**18.22**	**348**		**Pn**	**07 44 05.5**	**+0.4**
PATS				IAmb	IAmb	07 44 13.6	
	comp=Z,16nm,0.8s						
COEN	**Coen**	**18.75**	**259**	P	**P**	**07 44 11.5**	**+0.2**
COEN				IAmb	IAmb	07 44 22.6	
	comp=Z,17nm,1.1s						
WR8	**Warramunga Arr**	**28.04**	**248**		**P**	**07 45 43.8**	**+0.1**
WR8				IAmb	IAmb	07 45 55.9	
	comp=Z,4.5nm,1.1s						
STKA	**Stephens Creek**	**28.08**	**219**	P	**P**	**07 45 45.2**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=38,slow=12,SNR=3.4						
STKA				LR	LR	07 56 05.9	
	comp=Z,72nm,19.1s,baz=356,slow=35 comp=Z,1.4nm,0.7s						
WB0	**Warramunga Arr**	**28.09**	**249**	P	**P**	**07 45 44.1**	**0.0**
WB0				IAmb	IAmb	07 46 06.5	
	comp=Z,5.7nm,1.1s						
WRA	**Warramunga Arr**	**28.18**	**248**	P	**P**	**07 45 44.9**	**0.0**
	comp=Z,1.2nm,1.1s,baz=76,slow=10,SNR=1.5 comp=Z,1.2nm,1.1s						
ASAR	**Alice Springs**	**29.66**	**241**	P	**P**	**07 45 57.1**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=65,slow=10,SNR=7.6						
ASAR				LR	LR	07 57 04.5	

KOPR	**Koprukoy-ERZUR**	**0.85**	**263**	Pg	**Pn**	**07 51 16.2**	**-0.6**
KOPR				Sg	**Sn**	**07 51 29.1**	**-0.4**
TASB	**TASBURUN-IGDIR**	**0.99**	**96**	Pg	**Pn**	**07 51 18.6**	**0.0**
AHAN	**Ardahan-Merkez**	**1.10**	**347**	P	**Pn**	**07 51 20.4**	**+0.2**
AHAN				S	**Sn**	**07 51 37.0**	**+1.3**
AHAN				IAML		07 51 38.0	
	comp=N,64nm,0.5s						
AHAN				IAML		07 51 42.0	
	comp=E,104nm,0.8s						
CLDR	**Caldiran**	**1.21**	**142**	Pn	**Pg**	**07 51 21.4**	**-0.1**
DDEM	**Demirkent**	**1.21**	**311**	P	**Pg**	**07 51 21.5**	**-0.2**
DDEM				S	**Sb**	**07 51 37.5**	**0.0**
DDEM				IAML		07 51 48.0	
	comp=E,53nm,0.5s						
GNI	**Garni**	**1.37**	**87**	Pn	**Pg**	**07 51 25.8**	**+1.2**
AKDM	**Akdamar-Van**	**1.77**	**179**	Pn	**Pb**	**07 51 31.2**	**+0.2**

*NNC **05** 07:54:16.7±3.1,41.91N×82.31E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=25.6km s-min=12.6km az=163.0*
*SOME **05** 07:54:16.7,42.17N×82.62E,h20km*
ISC 05 07:54:21.1±1.7,41.98N±0.07×82.08E±0.06,h14km,n24, σ2§07/37,5C-6D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**2.27**	**302**	Pg	**Pn**	**07 54 58.2**	**-0.1**
	151nm,0.2s						
SHLS				Lg	Lg	07 55 29.3	
	587nm,0.4s						
SHLS	**Shalkode**	**2.27**	**302**	*eP*	**Pn**	**07 54 56.5**	**-1.8**
	151nm,0.3s						
SHLS				*eS*	**Sn**	**07 55 25.8**	**-0.3**
	587nm,0.5s						
PDGK	**Podgornoye**	**2.34**	**306**	⇓Pn	**Pb**	**07 55 01.7**	**-1.4**
	30nm,0.5s						
PDGK				⇑Lg	Lg	07 55 37.4	
	344nm,0.6s						
DJR	**Jarkent**	**2.89**	**325**	Pg	**Pn**	**07 55 08.4**	**+1.6**
	12nm,0.4s						
DJR				Lg	Lg	07 55 47.3	
	34nm,0.4s						
DJR	**Jarkent**	**2.89**	**325**	*eP*	**Pb**	**07 55 11.2**	**-1.3**
	10nm,0.3s						
DJR				*eS*	**Sg**	**07 55 50.6**	**-3.3**
	34nm,0.4s						
KPKS	**Kokpek**	**2.91**	**302**	Pg	**Pb**	**07 55 09.7**	**-3.2**
	0.4nm,0.4s						
KPKS				Lg	Lg	07 55 49.7	
	272nm,0.6s						
KPKS	**Kokpek**	**2.91**	**302**	*eP*	**Pg**	**07 55 14.5**	**-2.5**
	0.4nm,0.4s						
KPKS				*eS*	**Sg**	**07 55 56.1**	**+1.4**
	13nm,0.2s						
KURS	**Kuram**	**3.25**	**299**	Pg	**Pb**	**07 55 19.5**	**+0.8**
	9.4nm,0.5s						
KURS				Lg	Lg	07 56 06.3	
	64nm,1.1s						
KURS	**Kuram**	**3.25**	**299**	*eP*	**Pb**	**07 55 19.5**	**+0.8**
	5.2nm,0.3s						
KURS				*eS*	**Sg**	**07 56 04.6**	**-1.0**
	64nm,0.7s						
KAPS	**Kapalarasan**	**3.85**	**330**	Pg	**Pn**	**07 55 22.6**	**+2.5**
	29nm,0.4s						
KAPS				Lg	Lg	07 56 10.8	
	70nm,0.2s						
KAPS	**Kapalarasan**	**3.85**	**330**	*eP*	**Pb**	**07 55 27.3**	**-1.6**
	10nm,0.3s						
KAPS				*eS*	**Sb**	**07 56 18.1**	**+2.6**
	38nm,0.2s						
MDOK	**Medeo**	**3.90**	**289**	Pg	**Pb**	**07 55 30.1**	**+0.3**
	19nm,0.5s						
MDOK				Lg	Lg	07 56 24.8	
	84nm,0.8s						
TNSS	**Tian-Shan**	**3.94**	**287**	Pg	**Pb**	**07 55 31.6**	**+1.0**
	5.4nm,0.6s						
TNSS				Lg	Lg	07 56 27.6	
	15nm,1.0s						
TNSS	**Tian-Shan**	**3.94**	**287**	*eP*	**Pg**	**07 55 33.3**	**-3.4**
	4.8nm,0.3s						
TNSS				*eS*	**Sg**	**07 56 28.7**	**+1.0**
	15nm,1.0s						
KNDC	**Almaty**	**3.97**	**290**	⇓Pg	**Pg**	**07 55 36.0**	**-1.2**
	58nm,0.7s						
KNDC				⇓Lg	Lg	07 56 30.5	
	162nm,0.9s						
KUU	**Kurty**	**4.63**	**296**	Pg	**Pb**	**07 55 43.8**	**+1.7**
	4.7nm,0.1s						
KUU				Lg	Lg	07 56 47.4	
	46nm,0.8s						
KUU	**Kurty**	**4.63**	**296**	*eP*	**Pb**	**07 55 44.8**	**+2.7**
	3.2nm,0.1s						
KUU				*eS*	**Sg**	**07 56 48.4**	**-1.3**
	37nm,0.3s						
MK31	**Makanchi Array**	**4.82**	**2**	Pn	**Pn**	**07 55 33.2**	**-0.1**
MK31				⇓Pg	**Pb**	**07 55 47.0**	**+1.7**
	1.3nm,0.3s,baz=186,slow=14,SNR=38						
MK31				⇑Sn	**Sn**	**07 56 29.8**	**+0.9**
	8.5nm,0.6s,baz=189,slow=13,SNR=5.8						
MK31				⇓Lg	Lg	07 56 51.6	
	19nm,0.7s,baz=174,slow=26,SNR=3.9						
MAKZ	**Makanchi**	**4.83**	**359**	⇑Pn	**Pn**	**07 55 33.4**	**0.0**
	5.5nm,0.6s						
MAKZ				⇑Pg	**Pb**	**07 55 48.3**	**+2.7**
	10nm,0.7s						
MAKZ				⇑Sn	**Sn**	**07 56 29.5**	**+0.3**
	13nm,0.7s						
MAKZ				⇓Lg	Lg	07 56 50.9	
	31nm,0.8s						
KSH2	**Kashi**	**5.71**	**242**	Pn	**Pb**	**07 56 02.8**	**+2.2**
KSH2				Sn	**Sb**	**07 57 09.3**	**+0.3**
KSH2				smax	smax		
	comp=N,26nm,0.9s						
KSH2				smax	smax		
	comp=E,33nm,1.0s						
ZSN	**Zaisan**	**5.82**	**19**	Pg	**Pb**	**07 55 59.9**	**-2.5**
	comp=E,9.2nm,0.3s						
ZSN				Lg	Lg	07 57 16.1	
	comp=E,46nm,0.7s						
ZSN	**Zaisan**	**5.82**	**19**	*eP*	**Pb**	**07 55 59.9**	**-2.5**
	comp=E,9.2nm,0.3s						
ZSN				*eS*	**Sb**	**07 57 14.9**	**+3.0**
	comp=E,46nm,0.6s						
BTLS	**Baital**	**6.59**	**300**	Pg	Pg	07 56 22.3	-5.0
	comp=E,2.7nm,0.4s						
BTLS				Lg	Lg	07 57 53.7	
	comp=E,12nm,0.7s						
BTLS	**Baital**	**6.59**	**300**	*eP*	**Pg**	**07 56 24.7**	**-2.6**
	comp=E,2.8nm,0.6s						
BTLS				*eS*	**Sg**	**07 57 56.8**	**+4.1**
	comp=E,12nm,1.0s						

*IDC **05** 08:25:32.7±1.0,9.72N×93.09E,h0km,mb3.6/10, mbtmp3.6/11,ML4.0/1,MS3.3/1,Error ellipse: s-maj=40.9km s-min=19.6km az=61.0*
ISC 05 08:25:38.1±1.1,9.8N±0.2×93.2E±0.2,h35km,n13, σ1§14/12,mb3.6/10,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.25**	**32**	Pn	**Pn**	**08 28 02.0**	**-0.9**
	0.4nm,0.3s,baz=216,slow=12,SNR=1.1						
	0.4nm,0.3s						
AAK	**Ala-Archa**	**36.58**	**337**	LR	LR	08 48 40.0	
	comp=Z,48nm,20.6s,baz=174,slow=38						
MKAR	**Makanchi Array**	**38.02**	**348**	P	**P**	**08 32 54.8**	**+1.9**
	0.3nm,0.5s,baz=169,slow=8.5,SNR=5.5						
	0.3nm,0.5s						
SONM	**Songino Array**	**39.52**	**14**	P	**P**	**08 33 07.2**	**+1.6**
	0.2nm,0.4s,baz=198,slow=3.6,SNR=1.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**42.46**	**346**	P	**P**	**08 33 28.6**	**-1.0**
	0.3nm,0.5s,baz=159,slow=8.0,SNR=3.2						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.54**	**353**	P	**P**	**08 33 45.4**	**-0.8**
	0.5nm,0.5s,baz=178,slow=9.8,SNR=1.7						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**46.88**	**341**	P	**P**	**08 34 04.4**	**-0.4**
	0.3nm,0.4s,baz=155,slow=11,SNR=2.0						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**50.14**	**126**	P	**P**	**08 34 30.7**	**+0.3**
	0.4nm,0.6s,baz=303,slow=7.5,SNR=6.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**51.87**	**131**	P	**P**	**08 34 42.6**	**-0.8**
	0.7nm,0.9s,baz=308,slow=8.5,SNR=4.7						
	0.7nm,0.9s						
BRTR	**Keskin Array B**	**60.47**	**310**	P	**P**	**08 35 43.9**	**-0.9**
	0.2nm,0.4s,baz=116,slow=9.8,SNR=1.6						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**70.58**	**332**	P	**P**	**08 36 50.2**	**+0.7**
	0.7nm,0.8s,baz=121,slow=13,SNR=1.0						
	0.7nm,0.8s						
ARCES	**ARCESS Array B**	**73.15**	**340**	P	**P**	**08 37 04.7**	**-0.1**
	1.7nm,0.9s,baz=111,slow=4.9,SNR=1.9						
	1.7nm,0.9s						
PLCA	**Paso Flores**	**145.99**	**202**	PKPbc	**PKPdf**	**08 45 14.7**	**+0.8**
	0.9nm,0.8s,baz=236,slow=3.6,SNR=3.7						

*IDC **05** 08:27:48.1±1.3,9.81N×93.00E,h0km,mb3.4/8, mbtmp3.5/9,ML4.2/1,Error ellipse: s-maj=48.4km s-min=19.7km az=59.0*
ISC 05 08:27:54.3±1.2,10.0N±0.2×93.2E±0.2,h43km,n10, σ1§07/10,mb3.5/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.15**	**33**	Pn	**Pn**	**08 30 16.7**	**-0.9**
	0.6nm,0.3s,baz=216,slow=12,SNR=1.8						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**37.87**	**348**	P	**P**	**08 35 07.3**	**+0.2**
	0.3nm,0.7s,baz=166,slow=6.9,SNR=1.6						
	0.3nm,0.7s						
SONM	**Songino Array**	**39.38**	**14**	P	**P**	**08 35 20.3**	**+0.4**
	0.4nm,0.7s,baz=208,slow=8.1,SNR=2.0						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**42.31**	**346**	P	**P**	**08 35 44.5**	**+0.6**
	0.4nm,0.3s,baz=162,slow=8.5,SNR=1.4						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**44.39**	**353**	P	**P**	**08 36 01.9**	**+1.4**
	0.5nm,0.3s,baz=163,slow=10,SNR=2.0						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**46.73**	**341**	P	**P**	**08 36 20.4**	**+1.4**
	0.2nm,0.4s,baz=141,slow=5.5,SNR=1.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**50.26**	**126**	P	**P**	**08 36 47.3**	**+0.6**
	0.5nm,0.7s,baz=300,slow=7.8,SNR=8.1						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**51.99**	**131**	P	**P**	**08 36 59.2**	**-0.6**
	0.2nm,0.7s,baz=306,slow=7.8,SNR=9.2						
	0.2nm,0.7s						
BRTR	**Keskin Array B**	**60.35**	**310**	P	**P**	**08 37 57.9**	**-1.5**
	0.2nm,0.4s,baz=103,slow=6.4,SNR=1.4						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**137.71**	**22**	PKP	**PKiKP**	**08 47 17.2**	**+0.5**
	baz=342,slow=2.6,SNR=1.7						

TAP 05 08:29:48.0,23.65N×120.75E,h14km,ML2.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHN5	**Tsauling**	**0.08**	**232**	*i* P	Pg	08 29 51.4	+0.4
CHN5				*i* S	Sg	08 29 53.8	+0.8
WHYT	**Xinyi Township**	**0.11**	**64**	*i* P	Pb	08 29 51.7	-0.2
WHYT				S	Sb	08 29 54.2	-0.3
ALS	**Alishan**	**0.15**	**159**	*i* P	Pb	08 29 52.6	-0.1
ALS				S	Sb	08 29 55.8	-0.1
WJS	**Zhushan**	**0.17**	**354**	P	Pb	08 29 52.8	-0.2
WJS				*eS*	Sb	08 29 56.2	-0.2
WGK	**Gukeng**	**0.17**	**283**	*eP*	Pb	08 29 53.0	0.0
WGK				S	Sb	08 29 56.9	+0.5
WDLH	**Douliu**	**0.20**	**282**	*eP*	Pb	08 29 53.2	-0.1
WDLH				*eS*	Sb	08 29 57.3	+0.2
SSLB	**Suanglung**	**0.23**	**54**	P	Pb	08 29 53.6	-0.4
SSLB				S	Sb	08 29 57.5	-0.7
WNT	**Mingjian**	**0.24**	**346**	*eP*	Pb	08 29 54.2	+0.1
WNT				S	Sb	08 29 58.4	+0.2
WCKO	**Fanlu**	**0.25**	**212**	P	Pb	08 29 54.1	-0.2
WCKO				*i* S	Sb	08 29 58.4	0.0
WNT1	**Nantou City**	**0.27**	**346**	P	Pb	08 29 54.8	+0.2
WNT1				*eS*	Sb	08 29 59.4	+0.4
SMLT	**Sun Moon Lake**	**0.27**	**31**	P	Pb	08 29 54.7	-0.1
SMLT				S	Sb	08 29 59.5	+0.2
TYC	**Yuchr**	**0.27**	**21**	*i* P	Pb	08 29 54.8	+0.1
TYC				S	Sb	08 29 59.6	+0.4
WTK	**Tuku**	**0.33**	**277**	P	Pb	08 29 55.9	+0.2
WTK				*i* S	Sb	08 30 01.1	+0.2
CHY	**Chiayi**	**0.33**	**243**	P	Pb	08 29 55.6	-0.1
CHY				S	Sb	08 30 01.0	+0.1
TPUB	**Ta-pu**	**0.36**	**197**	P	Pb	08 29 56.1	-0.2
TPUB				S	Sb	08 30 02.0	+0.2
WTP	**Ta-pu**	**0.42**	**197**	P	Pb	08 29 57.0	-0.2
WTP				S	Sb	08 30 03.6	+0.2
RLNB	**Erlin**	**0.43**	**304**	*eP*	Pb	08 29 57.7	+0.3
RLNB				S	Sb	08 30 04.3	+0.6
WCS	**Beigang Elemen**	**0.43**	**20**	P	Pb	08 29 57.4	-0.1
WCS				*i* S	Sb	08 30 04.0	+0.1
TWK	**Hsinying**	**0.45**	**212**	*eP*	Pb	08 29 58.1	+0.4
TWK				*eS*	Sb	08 30 04.7	+0.4
WCHH	**Zhanghua**	**0.46**	**338**	P	Pb	08 29 58.0	+0.1
WCHH				S	Sb	08 30 05.8	+1.1
STYH	**Taoyuan**	**0.48**	**177**	P	Pb	08 29 57.9	-0.3
STYH				S	Sb	08 30 04.7	-0.3
WUSB	**Renai**	**0.48**	**45**	P	Pb	08 29 58.0	-0.3
WUSB				S	Sg	08 30 04.7	+0.6
WSL	**Shuilin Townsh**	**0.49**	**255**	P	Pb	08 29 58.7	+0.2
WSL				S	Sb	08 30 06.9	+1.4
OWD	**Renai**	**0.50**	**52**	*eP*	Pb	08 29 58.6	-0.1
OWD				*eS*	Sg	08 30 05.1	+0.5
CHN1	**Nanshi**	**0.50**	**204**	*eP*	Pb	08 29 58.7	0.0
CHN1				S	Sb	08 30 06.6	+0.7
ICHU	**Yijhu**	**0.52**	**236**	*eP*	Pb	08 29 58.9	0.0
ICHU				*eS*	Sb	08 30 06.7	+0.4
ELDTW	**Lidau**	**0.52**	**152**	*eP*	Pb	08 29 59.0	0.0
ELDTW				*eS*	Sg	08 30 06.3	-0.1
EHY	**Hungye**	**0.55**	**105**	P	Pb	08 29 59.6	+0.3
EHY				*eS*	Sb	08 30 07.6	+0.5
YULB	**Yu-li**	**0.56**	**117**	P	Pb	08 29 59.8	+0.1
YULB				S	Sb	08 30 07.9	+0.2
EHYH	**Wanrong**	**0.57**	**106**	*eP*	Pb	08 29 59.9	+0.1
EHYH				*eS*	Sb	08 30 07.9	+0.1
TWF1	**Yuli**	**0.58**	**120**	P	Pb	08 30 00.4	+0.4
TWF1				*eS*	Sb	08 30 08.7	+0.5
WARBT	**Fenglin Townsh**	**0.59**	**83**	P	Pb	08 30 00.2	+0.1
WARBT				S	Sb	08 30 08.3	0.0
EYUL	**Yuli**	**0.60**	**120**	*eP*	Pb	08 30 00.5	+0.1
EYUL				*eS*	Sb	08 30 09.4	+0.7
WHP	**Taichung City**	**0.65**	**16**	P	Pb	08 30 01.5	+0.2
WHP				*eS*	Sb	08 30 10.8	+0.5
FULB	**Fuli**	**0.67**	**132**	*eP*	Pb	08 30 02.3	-0.8
WHF	**Hehuan Shan**	**0.69**	**44**	P	Pb	08 30 02.2	+0.2
WHF				S	Sb	08 30 11.6	+0.1
TWQ1	**Liyutan**	**0.70**	**2**	*eP*	Pb	08 30 02.4	+0.4
TWQ1				S	Sb	08 30 12.8	+1.3
LXIB	**Xiulin Townshi**	**0.71**	**58**	*eP*	Pb	08 30 02.6	+0.2
LXIB				*eS*	Sb	08 30 11.7	-0.3
TSCK	**Chigu Township**	**0.79**	**231**	*eP*	Pb	08 30 03.6	+0.2
TSCK				*eS*	Sb	08 30 14.9	+0.9
NNSB	**Datong**	**0.97**	**37**	P	Pb	08 30 06.6	-0.1

*IDC **05** 08:35:08.3±2.1,7.04S×129.44E,h129km±24km, mb3.2/2, mbtmp4.1/7,Error ellipse: s-maj=27.2km s-min=19.2km az=113.0*
ISC 05 08:35:06.7±0.9,7.13S±0.06×129.7E±0.1,h139km,n7, σ3§65/12,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.42**	**14**	P	**Pn**	**08 36 39.8**	**+0.8**
	5.9nm,0.3s,baz=198,slow=20,SNR=22						
SIJI				S	**Sn**	**08 37 45.8**	**-5.5**
	26nm,0.2s,baz=216,slow=23,SNR=11						
BATI	**Baumata**	**6.67**	**242**	P	**Pn**	**08 36 43.1**	**+0.7**
	69nm,0.4s,baz=99,slow=5.5,SNR=7.1						
BATI				S	**Sn**	**08 37 55.8**	**-1.5**
	31nm,0.4s,baz=72,slow=9.6,SNR=1.9						
FITZ	**Fitzroy Crossi**	**11.59**	**199**	P	**Pn**	**08 37 49.2**	**+1.2**
	2.0nm,0.3s,baz=17,slow=11,SNR=14						
FITZ				S	**Sn**	**08 39 49.9**	**-6.0**
	5.6nm,0.3s,baz=74,slow=20,SNR=7.4						
WRA	**Warramunga Arr**	**13.52**	**161**	P	**Pn**	**08 38 15.3**	**+2.3**
	2.4nm,0.5s,baz=335,slow=13,SNR=39						
WRA				S	**Sn**	**08 40 40.9**	**-1.6**
	1.2nm,0.4s,baz=338,slow=23,SNR=3.1						
ASAR	**Alice Springs**	**16.94**	**167**	P	**Pn**	**08 39 00.6**	**+5.1**
	5.4nm,0.7s,baz=346,slow=11,SNR=64						
ASAR				S	**S**	**08 42 01.3**	**-3.4**
	0.4nm,0.6s,baz=347,slow=28,SNR=1.3						
MKAR	**Makanchi Array**	**68.16**	**327**	P	**P**	**08 45 53.4**	**+1.5**
	0.4nm,0.5s,baz=117,slow=6.6,SNR=3.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.45**	**329**	P	**P**	**08 46 19.3**	**+1.4**
	0.1nm,0.3s,baz=134,slow=5.4,SNR=1.8						
	0.1nm,0.3s						

ROM 05 08:35:23.7±0.1,42.461N±0.004×13.300E±0.007, h12km±1km,ML1.0/21,Error ellipse: s-maj=0.5km s-min=0.2km az=239.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.08**	**307**	P	Pg	08 35 26.8	+0.4
RM33				S	Sg	08 35 28.7	+0.3
CAMP	**Campotosto**	**0.11**	**47**	P	Pb	08 35 27.4	-0.4
CAMP				S	Sg	08 35 29.6	+0.5
CAMP				AML	AML		
	comp=E,246μm,0.5s						
CAMP				AML	AML		
	comp=N,475μm,0.5s						
CAMP				AML	AML		
	comp=E,38μm,0.3s						
AQU	**L'Aquila**	**0.13**	**145**	P	Pg	08 35 27.2	+0.1
SMA1	**SAN MARTINO**	**0.17**	**9**	P	Pb	08 35 28.4	-0.5
SMA1				S	Sg	08 35 31.7	+1.2
SMA1				AML	AML		
	comp=N,1625μm,0.4s						
SMA1				AML	AML		
	comp=E,922μm,0.2s						
GIGS	**Gran Sasso**	**0.20**	**93**	P	Pg	08 35 28.5	+0.4
FIAM	**Fiamignano**	**0.24**	**215**	P	Pg	08 35 29.1	+0.3
FIAM				S	Sg	08 35 33.3	+1.2
FIAM				AML	AML		
	comp=E,65μm,0.4s						
FIAM				AML	AML		
	comp=N,75μm,1.1s						
FIAM				AML	AML		
	comp=N,75μm,0.9s						
LNSS	**Leonessa**	**0.24**	**307**	P	Pg	08 35 29.2	+0.4
LNSS				S	Sg	08 35 33.4	+1.1
LNSS				AML	AML		
	comp=E,242μm,0.5s						
LNSS				AML	AML		
	comp=N,240μm,0.3s						
LNSS				AML	AML		
	comp=N,240μm,1.7s						
LNSS				AML	AML		
	comp=E,242μm,1.5s						
TERO	**Teramo**	**0.28**	**54**	P	Pg	08 35 29.8	+0.3
TERO				S	Sg	08 35 34.0	+0.7
TERO				AML	AML		
	comp=E,304μm,0.5s						
TERO				AML	AML		
	comp=N,239μm,0.1s						
TERO				AML	AML		
	comp=E,304μm,1.5s						
TERO				AML	AML		
	comp=E,100μm,0.7s						
MTRA	**Matera**	**0.30**	**14**	P	Pg	08 35 30.2	+0.3
MTRA				AML	AML		
	comp=E,360μm,0.2s						
MTRA				AML	AML		
	comp=N,567μm,0.5s						
MTRA				AML	AML		
	comp=E,84μm,0.5s						
MTRA				AML	AML		
	comp=N,107μm,0.3s						
GAVE	**Gavelli**	**0.38**	**308**	P	Pg	08 35 31.8	+0.5
GAVE				AML	AML		
	comp=N,107μm,0.5s						
GAVE				AML	AML		
	comp=E,120μm,0.2s						
NRCA	**Norcia**	**0.40**	**340**	P	Pg	08 35 31.9	+0.3
NRCA				S	Sg	08 35 37.2	+0.2
NRCA				AML	AML		
	comp=E,180μm,0.2s						
NRCA				AML	AML		
	comp=N,150μm,1.6s						
NRCA				AML	AML		
	comp=N,150μm,0.4s						
ARRO	**Arrone**	**0.41**	**287**	P	Pg	08 35 32.3	+0.4
ARRO				AML	AML		
	comp=N,102μm,0.6s						
ARRO				AML	AML		
	comp=E,93μm,0.2s						
ARRO				AML	AML		
	comp=N,102μm,0.6s						
T0110	**Collepietro**	**0.43**	**123**	P	Pg	08 35 32.4	+0.2
T0110				S	Sg	08 35 38.1	+0.2
T0110				AML	AML		
	comp=N,37μm,2.6s						
T0110				AML	AML		
	comp=N,185μm,0.3s						
T0110				AML	AML		
	comp=E,180μm,0.3s						
MC2	**Monte Cornacci**	**0.46**	**350**	P	Pg	08 35 32.6	-0.2
MC2				S	Sg	08 35 39.6	+0.7
MF5	**Montefalcone A**	**0.54**	**13**	P	Pb	08 35 35.1	-0.1
MF5				S	Sb	08 35 42.5	-0.4
FDMO	**Fiordimonte**	**0.60**	**345**	P	Pg	08 35 35.5	+0.2
FDMO				AML	AML		
	comp=E,26μm,1.3s						
FDMO				AML	AML		
	comp=N,23μm,1.1s						
GUMA	**Gualdo di Mace**	**0.60**	**2**	AML	AML		
	comp=N,112μm,1.2s						
GUMA				AML	AML		
	comp=E,155μm,0.3s						
MOMA	**Monte Martano**	**0.64**	**303**	AML	AML		
	comp=E,74μm,0.3s						
MOMA				AML	AML		
	comp=N,99μm,0.2s						

*NEIC **05** 08:50:09.6±1.0,10.7S±0.1×166.2E±0.1,h159km±8km, mb4.4/23,Error ellipse: s-maj=18.8km s-min=14.6km az=75.0*
*IDC **05** 08:50:10.2±3.5,10.56S×166.13E,h176km±28km, mb3.9/10,mbtmp4.4/11,Error ellipse: s-maj=26.6km s-min=19.6km az=78.0*
ISC 05 08:50:07.9±0.7,10.66S±0.07×166.24E±0.10,h155km,n44, σ1§31/48,mb4.3/20,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.85**	**169**		**Pn**	**08 51 21.1**	**+1.6**
SANVU					Sn	**08 52 16.5**	**+1.2**
HNR	**Honiara**	**6.32**	**281**		**Pn**	**08 51 40.1**	**+1.1**
	5.0nm,0.7s,baz=99,slow=4.8,SNR=3.6						
MARNC	**Mare, Loyalty**	**10.89**	**171**	Pn	**Pn**	**08 52 40.7**	**+1.0**
DZM	**Mont Dzumac**	**11.35**	**179**	P	**Pn**	**08 52 49.1**	**+3.4**
	12nm,0.5s,baz=331,slow=19,SNR=56						
DZM				S	**Sn**	**08 54 48.5**	**-2.8**
	4.2nm,0.4s,baz=331,slow=19,SNR=6.2						
YATNC	**Mamie plateau,**	**11.35**	**177**	P	**Pn**	**08 52 48.9**	**+3.2**
NOUC	**Port Laguerre**	**11.38**	**180**	P	**P**	**08 52 50.7**	**-2.9**
ONTNC	**Ouen Toro**	**11.58**	**179**	P	**P**	**08 52 53.4**	**-2.5**
ONTNC	**Ouen Toro**	**11.58**	**179**	Pn	**Pn**	**08 52 48.5**	**-0.2**
OUENC	**Ouen Island, N**	**11.70**	**177**	P	**P**	**08 52 54.6**	**-2.6**
PMG	**Port Moresby**	**18.83**	**272**	P	**P**	**08 54 15.8**	**-0.3**
EIDS	**Eidsvold**	**20.50**	**222**	P	**P**	**08 54 34.8**	**+0.8**

WB0	**Warramunga Arr**	**31.99**	**250**	P	**P**		08 56 19.6	**-0.1**
WB0				IAmb	IAmb		08 56 19.6	
	comp=Z,8.2nm,0.7s							
WRAB	**Tennant Creek**	**32.06**	**249**	P	**P**		08 56 19.9	**-0.5**
WRAB				IAmb	IAmb		08 56 20.4	
	comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**32.07**	**249**	P	**P**		08 56 19.6	**-0.9**
	comp=Z,3.1nm,0.5s,baz=78,slow=8.6,SNR=47							
WRA				PcP	**PcP**		08 59 05.7	**-0.7**
	comp=Z,0.6nm,0.6s,baz=79,slow=3.2,SNR=3.1							
	comp=Z,3.1nm,0.5s							
TOO	**Toolangi**	**32.65**	**211**	P	**P**		08 56 25.0	**-0.3**
AS31	**Alice Springs**	**33.40**	**243**	P	**P**		08 56 31.2	**-0.8**
ASAR	**Alice Springs**	**33.40**	**243**	P	**P**		08 56 30.7	**-1.3**
	comp=Z,4.6nm,0.8s,baz=78,slow=8.8,SNR=34							
ASAR				PcP	**PcP**		08 59 08.9	**-1.1**
	comp=Z,0.6nm,0.6s,baz=79,slow=2.3,SNR=6.4							
	comp=Z,4.6nm,0.8s							
BBOO	**Buckleboo**	**35.44**	**227**	P	**P**		08 56 49.8	**+0.4**
KNRA	**Kununurra**	**36.80**	**258**	P	**P**		08 57 01.0	**-0.2**
KNRA				IAmb	IAmb		08 57 01.2	
	comp=Z,6.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**39.95**	**255**	P	**P**		08 57 27.4	**0.0**
FORT	**Forrest**	**40.66**	**235**	P	**P**		08 57 33.5	**+0.4**
FORT				IAmb	IAmb		08 57 34.1	
	comp=Z,6.3nm,0.7s							
MBWA	**Marble Bar**	**45.78**	**251**	P	**P**		08 58 14.8	**+0.4**
MBWA				IAmb	IAmb		08 58 27.2	
	comp=Z,8.9nm,1.1s							
NWAO	**Narrogin (SRO)**	**50.08**	**236**	P	**P**		08 58 47.9	**+0.6**
NWAO				IAmb	IAmb		08 58 48.0	
	comp=Z,11nm,0.8s							
MORW	**Morawa**	**50.23**	**241**	P	**P**		08 58 48.7	**+0.2**
MORW				IAmb	IAmb		08 59 12.1	
	comp=Z,8.4nm,1.1s							
GSI	**Gunungsitoli**	**69.31**	**275**	P	**P**		09 00 59.3	**+0.2**
CMAR	**Chiang Mai Arr**	**72.41**	**293**	P	**P**		09 01 17.8	**0.0**
	comp=Z,1.3nm,0.3s,baz=112,slow=5.9,SNR=5.3							
	comp=Z,1.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**72.41**	**293**	P	**P**		09 01 17.7	**-0.1**
SONM	**Songino Aray**	**78.65**	**324**	P	**P**		09 01 51.9	**-0.9**
	comp=Z,0.6nm,0.5s,baz=141,slow=4.8,SNR=2.4							
	comp=Z,0.6nm,0.5s							
QSPA	**South Pole Qui**	**79.34**	**180**	P	**P**		09 01 57.0	**+0.6**
	comp=Z,1.2nm,0.6s,baz=24,slow=20,SNR=14							
	comp=Z,1.2nm,0.6s							
QSPA	**South Pole Qui**	**79.34**	**180**	P	**P**		09 01 57.1	**+0.7**
ILAR	**Eielson Array**	**83.00**	**18**	P	**P**		09 02 13.4	**-2.0**
	comp=Z,3.3nm,0.9s,baz=225,slow=5.7,SNR=3.4							
	comp=Z,3.3nm,0.9s							
CLRS	**Cowichan Lake**	**84.94**	**38**	P	**P**		09 02 26.6	**+1.0**
MAW	**Mawson**	**85.26**	**202**	P	**P**		09 02 27.3	**+0.4**
	comp=Z,1.5nm,0.7s,baz=162,slow=6.4,SNR=2.6							
	comp=Z,1.5nm,0.7s							
A04D	**Lummi Island**	**85.78**	**39**		**P**		09 02 30.8	**+1.1**
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**		09 03 06.4	**-0.1**
	comp=Z,1.1nm,0.6s,baz=110,slow=5.0,SNR=10							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**		09 03 06.8	**+0.2**

*BJI **05** 08:53:32.9,53˙11N×160˙92W,h10km,mB5.5/65, mb5.1/85,Ms5.3/85,Ms7 5.0/81*

*IDC **05** 08:53:32.1±0.3,53˙26N×160˙37W,h0km,mb5.1/50, mbtmp5.1/56,ML4.7/6,MS4.5/87,Error ellipse: s-maj=7.5km s-min=6.8km az=167.0*

*MOS **05** 08:53:33.1±0.9,53˙17N×160˙47W,h14km,mb5.7/106, MS4.7/22,Error ellipse: s-maj=8.4km s-min=4.3km az=104.0*

*NEIC **05** 08:53:34.4,53˙30N×160˙38W,h10km*

*NEIC **05** 08:53:34.4,53˙30N×160˙38W,h10km*

*GFZ **05** 08:53:34.9,53˙20N×160˙46W,h14km,Mw5.4/66, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.54; Mθθ1.32; Mφφ0.23; Mrθ0.45; Mθφ0.40; Mφr-0.01; Fault plane solution: M₀1.56213×10¹⁷ NP1:φs66.79785°, δ37.37961°,λ-98.07999°. NP2:φs256.92717°,δ53.05369°, λ-83.87086°. Principal axes: T 1.5067, Plg7.8668°, Azm342.5561°; N 0.1056, Plg4.8950°, Azm73.2342°; P -1.6122, Plg80.7182°, Azm194.8371°;*

*NEIC **05** 08:53:34.9,53˙00N×160˙21W,h12km,Moment Tensor Solution. Duration: 2s8 Moment tensor: Scale 10¹⁷Nm; Mrr-1.70; Mθθ1.50; Mφφ0.21; Mrθ-0.03; Mθφ0.73; Mφr-0.98; Fault plane solution: M₀2.02000×10¹⁷ NP1: φs266.71000°,δ42.49000°,λ-54.86000°. NP2:φs43.04000°, δ56.48000°,λ-117.80000°. Principal axes: T 1.8828, Plg8.0000°, Azm152.0000°; N 0.2510, Plg23.0000°, Azm59.0000°; P -2.1338, Plg66.0000°, Azm260.0000°;*

*NEIC **05** 08:53:34.4,53˙30N×160˙38W,h10km*

*NEIC **05** 08:53:34.4±1.2,53˙30N±0˙05×160˙42W±0˙08,h10km±1km, mb5.6/883,ML5.3/12,Ms_20 4.8/359,Mwb5.4/70, Mwr5.2/40,Mww5.5/92,ML5.1(AEIC),Error ellipse: s-maj=9.7km s-min=7.3km az=156.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-8.37; Mθθ6.78; Mφφ1.59; Mrθ0.06; Mθφ2.59; Mφr-3.15; Fault plane solution: M₀8.71000×10¹⁶ NP1:φs51.00000°, δ51.48000°,λ-111.14000°. NP2:φs262.84000°, δ43.14000°,λ-65.62000°. Principal axes: T 7.9370, Plg4.0000°, Azm156.0000°; N 1.3807, Plg16.0000°, Azm65.0000°; P -9.3177, Plg73.0000°, Azm260.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr-1.23; Mθθ1.02; Mφφ0.22; Mrθ1.21; Mθφ0.41; Mφr0.35; Fault plane solution: M₀1.75000×10¹⁷ NP1: φs251.86000°,δ68.09000°,λ-86.59000°. NP2:φs62.79000°, δ22.16000°,λ-98.41000°. Principal axes: T 1.7199, Plg23.0000°, Azm339.0000°; N 0.0528, Plg3.0000°, Azm71.0000°; P -1.7726, Plg67.0000°, Azm168.0000°;*

*IPGP **05** 08:53:35.0,53˙37N×160˙43W,h7km,Mw5.6,Fault plane solution: NP1:φs83.00000°,δ30.00000°,λ-69.00000°. NP2:φs239.00000°,δ62.00000°,λ-102.00000°.*

*GFZ **05** 08:53:35.0±0.2,53˙N±3˙×16˙0W±˙,h10km,M5.4/56, mb5.5/56*

*AEIC **05** 08:53:37.2±1.2,53˙21N±0˙06×160˙38W±0˙08,h3km±3km, Error ellipse: s-maj=8.4km s-min=6.3km az=159.0*

*GCMT **05** 08:53:37.4±0.1,53˙22N×160˙41W,h12km,MW5.4/169, Moment Tensor Solution. s130,c236; s169,c355; Duration: 1s3 Moment tensor: Scale 10¹⁷Nm; Mrr-1.56±.01; Mθθ1.48±.01; Mφφ0.08±.01; Mrθ0.46±.04; Mθφ0.71±.01; Mφr0.11±.04; Best double couple: M₀1.73500×10¹⁷ NP1:φs64.00000°,δ37.00000°, λ-95.00000°. NP2:φs250.00000°,δ53.00000°, λ-86.00000°. Principal axes: T 1.8400, Plg8.0000°, Azm338.0000°; N -0.2040, Plg3.0000°, Azm268.0000°; P -1.6290, Plg82.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ANF **05** 08:53:38.9±1.9,53˙69N×160˙15W,h6km±13km,ML5.5/9 Error ellipse: s-maj=14.7km s-min=4.8km az=29.0*

*BGR **05** 08:53:41.8,54˙19N×160˙62W,h33km±1km,mb5.4, mB_BB5.7,Ms4.6*

ISC 05 08:53:34.6±0.4,53˚22N±0˚03×160˚41W±0˚02,h15km±1km, h15km:pP-P,n1780,σ1957/1558,mb5.6/662,MS4.7/298, 54C-75D,South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.67**	**16**			**Pn**	**08 54 02.1**	**-1.2**
CNBA						**Sn**	**08 54 22.2**	**-2.3**
CHNA	**Chernabura Isl**	**1.68**	**16**	P		**Pn**	**08 54 02.0**	**-1.5**
CHNA	**Chernabura Isl**	**1.68**	**16**	S		**Sn**	**08 54 22.4**	**-2.3**
CHNA	**Chernabura Isl**	**1.68**	**16**	P		**Pn**	**08 54 02.1**	**-1.4**
	baz=199,SNR=150							
CHNA				S		**Sn**	**08 54 21.6**	**-3.1**
	baz=199							
DOL	**Dolgoi Island**	**2.11**	**337**			**Pn**	**08 54 08.5**	**-0.9**
DOL						**Sn**	**08 54 33.1**	**-2.3**
DOL						**Sb**	**08 54 34.0**	**-4.6**
SDPT	**Sand Point**	**2.13**	**359**	P		**Pn**	**08 54 08.5**	**-1.1**
SDPT	**Sand Point**	**2.13**	**359**	S		**Sn**	**08 54 33.1**	**-2.7**
SDPT	**Sand Point**	**2.13**	**359**			**Pn**	**08 54 08.6**	**-1.0**
SDPT					Sn	**Sn**	**08 54 33.9**	**-1.9**
SDPT					IAML		08 54 37.1	
	comp=E,17μm,1.0s							
SDPT	**Sand Point**	**2.13**	**359**	P		**Pn**	**08 54 08.6**	**-1.0**
	baz=179,SNR=298							
SDPT				S		**Sn**	**08 54 33.7**	**-2.1**
	baz=179							
DT1	**Dutton Round H**	**2.19**	**331**			**Pn**	**08 54 09.5**	**-0.9**
DT1						**Sn**	**08 54 36.3**	**-0.9**
DT1						**Sb**	**08 54 36.5**	**-4.2**
DTNA	**Dutton South F**	**2.21**	**331**			**Pn**	**08 54 10.1**	**-0.7**
DTNA						**Sn**	**08 54 36.2**	**-1.7**
DTNA						**Sb**	**08 54 38.1**	**-3.5**
PS4A	**Pavlof South-4**	**2.29**	**339**			**Pn**	**08 54 11.4**	**-0.5**
PS4A						**Sn**	**08 54 38.5**	**-1.3**
PS4A						**Sb**	**08 54 39.7**	**-4.0**
PS1A	**Pavlof South-1**	**2.34**	**341**			**Pn**	**08 54 12.0**	**-0.5**
PS1A						**Sn**	**08 54 39.2**	**-1.7**
PN7A	**Pavlof North-7**	**2.40**	**338**			**Pn**	**08 54 13.3**	**-0.1**
ISNN	**Isanotski Nort**	**2.56**	**310**			**Pn**	**08 54 15.4**	**-0.2**
ISNN						**Sn**	**08 54 45.5**	**-1.0**
ISNN						**Sb**	**08 54 45.7**	**-5.8**
SSLS	**Shishaldin Sou**	**2.59**	**307**			**Pn**	**08 54 15.7**	**-0.4**
SSLN	**Shishaldin Nor**	**2.65**	**308**			**Pn**	**08 54 16.8**	**0.0**
SSBA	**Shishaldin**	**2.69**	**307**			**Pn**	**08 54 16.8**	**-0.5**
SSBA						**Sn**	**08 54 47.7**	**-2.0**
SSBA						**Sb**	**08 54 47.8**	**-7.4**
VNKR	**Veniaminof 5**	**2.88**	**12**			**Pn**	**08 54 19.7**	**-0.3**
VNWF	**Veniaminof 8**	**2.98**	**9**			**Pn**	**08 54 21.5**	**+0.1**
VNSS	**Veniaminof 8**	**3.06**	**10**			**Sn**	**08 54 59.5**	**+0.5**
S14K	**Fog Glacier**	**3.11**	**9**	P		**Pn**	**08 54 23.5**	**+0.3**
	baz=190,SNR=151							
VNFG	**Fog Glacier, M**	**3.11**	**9**			**Pn**	**08 54 23.7**	**+0.5**
VNFG	**Fog Glacier, M**	**3.11**	**9**			**Sn**	**08 54 24.7**	**+0.3**
AKSA	**Akutan Strait**	**3.28**	**288**			**Pn**	**08 54 24.7**	**-0.7**
AKSA						**Sn**	**08 55 01.2**	**-2.8**
CHGN	**Chignik**	**3.29**	**20**			**Pn**	**08 54 29.9**	**-0.7**
CHGN					IAML		08 55 05.8	
	comp=E,7μm,0.8s							
CHGN					IAML		08 55 08.2	
	comp=N,5μm,0.6s							
CHGN	**Chignik**	**3.29**	**20**	P		**Pn**	**08 54 25.0**	**-0.7**
	baz=202,SNR=140							
CHGN				S		**Sn**	**08 55 02.6**	**-1.9**
	baz=202							
AKUT	**Akutan**	**3.32**	**288**	P		**Pn**	**08 54 25.3**	**-0.6**
AKUT	**Akutan**	**3.32**	**288**	S		**Sn**	**08 55 03.8**	**-1.2**
AKUT	**Akutan**	**3.32**	**288**			**Pn**	**08 54 25.3**	**-0.6**
AKUT						**Sn**	**08 55 01.9**	**-3.1**
AKUT					IAML		08 55 04.2	
	comp=N,8μm,0.6s							
AKUT					IAML		08 55 05.1	
	comp=E,8μm,0.8s							
AHB	**Akutan Harbor**	**3.34**	**288**			**Pn**	**08 54 25.7**	**-0.6**
AKBBA	**Akutan Broad B**	**3.40**	**287**			**Pn**	**08 54 26.5**	**-0.6**
AKV	**Akutan Volcano**	**3.43**	**288**			**Pn**	**08 54 26.9**	**-0.6**
ZRO	**Akutan Zero**	**3.43**	**287**			**Pn**	**08 54 26.9**	**-0.6**
AKLV	**Akutan Long Va**	**3.43**	**288**			**Pn**	**08 54 26.9**	**-0.6**
AKGG	**Akutan Green G**	**3.46**	**289**			**Pn**	**08 54 27.6**	**-0.3**
LVA	**Lava Point**	**3.47**	**288**			**Pn**	**08 54 27.9**	**-0.2**
AKRB	**Akutan Reef Bi**	**3.49**	**287**			**Pn**	**08 54 27.8**	**-0.4**
UNV	**Unalaska Valle**	**3.69**	**282**			**Pn**	**08 54 30.1**	**-1.0**
UNV						**Sn**	**08 55 10.3**	**-3.9**
ANPB	**Aniakchak Plen**	**3.79**	**18**			**Pn**	**08 54 32.2**	**-0.3**
MNAT	**Makushin Natee**	**3.80**	**283**			**Sn**	**08 55 13.0**	**-4.0**
MREP	**Makushin Rep't**	**3.83**	**281**			**Pn**	**08 54 32.5**	**-0.6**
MGOD	**Makushin Gods**	**3.90**	**281**			**Pn**	**08 54 33.4**	**-0.6**
MAPS	**Pakushin South**	**3.94**	**281**			**Pn**	**08 54 34.2**	**-0.3**
ANNW	**Aniakchak Nort**	**3.96**	**18**			**Pn**	**08 54 34.8**	**0.0**
OKFG	**Magazine Ridge**	**4.50**	**275**			**Pn**	**08 54 41.6**	**-0.6**
OKTU	**Okmok Mt. Tuli**	**4.58**	**275**			**Pn**	**08 54 42.9**	**-0.4**
OKER	**Okmok East Rim**	**4.59**	**276**			**Pn**	**08 54 43.3**	**-0.1**
OKNC	**Okmok New Cone**	**4.63**	**276**			**Pn**	**08 54 43.9**	**-0.1**
OKCE	**Okmok Cone E**	**4.66**	**276**			**Pn**	**08 54 44.3**	**-0.1**
SII	**Sitkinak Islan**	**4.91**	**45**	P		**Pn**	**08 54 46.7**	**-1.1**
SII	**Sitkinak Islan**	**4.91**	**45**			**Pn**	**08 54 46.5**	**-1.3**
SII					IAML		08 55 56.6	
	comp=N,2μm,0.7s							
SII	**Sitkinak Islan**	**4.91**	**45**	P		**Pn**	**08 54 46.8**	**-1.0**
	baz=231,SNR=72							
SII				S		**Sn**	**08 55 38.8**	**-5.5**
	baz=231							
PLBL	**Peulik Blue Cr**	**4.93**	**23**			**Pn**	**08 54 48.1**	**0.0**
R17L	**Mt. Peulik Vol**	**4.98**	**26**			**Pn**	**08 54 49.3**	**+0.4**
R17L	**Mt. Peulik Vol**	**4.98**	**26**	P		**Pn**	**08 54 49.3**	**+0.4**
	baz=210							
R17L				S		**Sn**	**08 55 44.3**	**-1.8**
	baz=210							
PLK1	**Peulik 1**	**5.07**	**24**			**Pn**	**08 54 50.0**	**0.0**
PLK5	**Peulik 5**	**5.19**	**21**			**Pn**	**08 54 51.4**	**-0.2**
Q17K	**Contact Creek**	**5.66**	**25**	P		**Pn**	**08 54 57.8**	**-0.4**
	baz=209							
Q17K				S		**Sn**	**08 55 58.2**	**-4.8**
	baz=209							
ANCK	**Angle Creek**	**5.71**	**27**			**Pn**	**08 54 58.5**	**-0.3**
OHAK	**Old Harbor**	**5.71**	**43**	P		**Pn**	**08 54 57.6**	**-1.2**
OHAK	**Old Harbor**	**5.71**	**43**			**Pn**	**08 54 57.7**	**-1.1**
OHAK	**Old Harbor**	**5.71**	**43**	P		**Pn**	**08 54 57.8**	**-1.1**
	baz=230,SNR=142							
OHAK				S		**Sn**	**08 55 58.2**	**-5.8**
	baz=230							
ACHA	**Angle Creek He**	**5.76**	**28**			**Pn**	**08 54 58.3**	**-1.3**
KABU	**Katmai Buttres**	**5.83**	**28**			**Pn**	**08 55 00.3**	**-0.2**
Q16K	**King Salmon**	**5.86**	**20**			**Pn**	**08 55 00.5**	**-0.3**
Q16K	**King Salmon**	**5.86**	**20**	P		**Pn**	**08 55 00.5**	**-0.3**
	baz=203,SNR=249							
Q16K				S		**Sn**	**08 56 04.3**	**-3.3**
	baz=203							
O15K	**Ungalikthiuk R**	**5.98**	**3**			**Pn**	**08 55 01.5**	**-0.9**
O15K	**Ungalikthiuk R**	**5.98**	**3**	P		**Pn**	**08 55 01.6**	**-0.9**
	baz=184,SNR=86							
O15K				S		**Sn**	**08 56 07.2**	**-3.4**
	baz=184							
P16K	**Nushagak River**	**5.98**	**12**			**Pn**	**08 55 02.3**	**-0.2**
KAWH	**Katmai**	**6.06**	**29**			**Pn**	**08 55 02.5**	**-1.1**
O14K	**Tigyukauivet M**	**6.07**	**356**			**Pn**	**08 55 03.1**	**-0.6**
O14K	**Tigyukauivet M**	**6.07**	**356**	P		**Pn**	**08 55 03.2**	**-0.4**
	baz=175,SNR=153							
O14K				S		**Sn**	**08 56 10.1**	**-2.6**
	baz=175							
KARR	**Katmai Rainbow**	**6.18**	**29**			**Pn**	**08 55 04.6**	**-0.7**
Q18K	**Katmai Hardscr**	**6.23**	**27**			**Pn**	**08 55 05.3**	**-0.6**
Q18K	**Katmai Hardscr**	**6.23**	**27**	P		**Pn**	**08 55 05.5**	**-0.5**
	baz=212,SNR=98							
Q18K				S		**Sn**	**08 56 13.6**	**-3.3**
	baz=212							
KDAK	**Kodiak Island**	**6.37**	**41**	Pn		**Pn**	**08 55 05.9**	**-1.9**
	comp=N,19nm,0.3s,baz=221,slow=8.4,SNR=496							
KDAK					Sn	**Sn**	**08 56 15.5**	**-4.8**
	comp=N,48nm,0.3s,baz=239,slow=12,SNR=9.0							
	comp=N,77nm,0.4s							
KDAK	**Kodiak Island**	**6.37**	**41**			**Pn**	**08 55 06.2**	**-1.6**
KDAK	**Kodiak Island**	**6.37**	**41**	*c*	*iP*	**Pn**	**08 55 06.4**	**-1.4**
KDAK	**Kodiak Island**	**6.37**	**41**	P		**Pn**	**08 55 06.5**	**-1.4**
	baz=228							
KDAK				S		**Sn**	**08 56 15.1**	**-5.2**
	baz=228							
KDAK	**Kodiak Island**	**6.37**	**41**	P		**Pn**	**08 55 07.0**	**-0.9**
P17K	**Kvichak River**	**6.38**	**19**			**Pn**	**08 55 08.0**	**0.0**
O16K	**Kokwok River B**	**6.52**	**10**			**Pn**	**08 55 09.0**	**-0.8**
O16K	**Kokwok River B**	**6.52**	**10**	P		**Pn**	**08 55 09.1**	**-0.7**
	baz=193,SNR=118							
N14K	**Kuskokwak Cree**	**6.76**	**355**			**Pn**	**08 55 12.7**	**-0.4**
N14K	**Kuskokwak Cree**	**6.76**	**355**	P		**Pn**	**08 55 12.7**	**-0.4**
	baz=174,SNR=135							
O17K	**Koliganek Bris**	**6.82**	**14**			**Pn**	**08 55 13.3**	**-0.6**
O17K	**Koliganek Bris**	**6.82**	**14**	P		**Pn**	**08 55 13.4**	**-0.6**
	baz=197,SNR=220							
P18K	**Big Mountain,**	**6.82**	**23**			**Pn**	**08 55 13.7**	**-0.4**
P18K	**Big Mountain,**	**6.82**	**23**	P		**Pn**	**08 55 13.8**	**-0.2**
	baz=208,SNR=148							
P18K				S		**Sn**	**08 56 27.9**	**-3.5**
	baz=208							
Q19K	**Cape Douglas,**	**6.86**	**31**			**Pn**	**08 55 14.4**	**-0.2**
SPIA	**Saint Paul Isl**	**6.88**	**309**			**Pn**	**08 55 14.9**	**+0.1**
N15K	**Kwethluk River**	**6.97**	**1**			**Pn**	**08 55 15.7**	**-0.4**
N15K	**Kwethluk River**	**6.97**	**1**	P		**Pn**	**08 55 15.6**	**-0.4**
	baz=182,SNR=309							
O18K	**Koktuh Hills**	**7.24**	**21**			**Pn**	**08 55 19.6**	**-0.2**
AUI	**Augustine Isla**	**7.25**	**30**			**Pn**	**08 55 19.6**	**-0.4**
AUW	**Augustine West**	**7.27**	**29**			**Pn**	**08 55 19.9**	**-0.3**
AUCH	**Augustine Cone**	**7.27**	**29**			**Pn**	**08 55 20.3**	**0.0**
AGU	**Augustine-Summ**	**7.27**	**29**			**Pn**	**08 55 20.3**	**0.0**
AUL	**Augustine Lava**	**7.29**	**29**			**Pn**	**08 55 20.4**	**0.0**
N16K	**Nishlik Lake**	**7.33**	**6**			**Pn**	**08 55 20.8**	**-0.2**
N16K	**Nishlik Lake**	**7.33**	**6**	P		**Pn**	**08 55 20.9**	**0.0**
	baz=188,SNR=229							
N16K				S		**Sn**	**08 56 41.2**	**-2.6**
	baz=188							
M13K	**Dall Lake**	**7.39**	**349**			**Pn**	**08 55 21.5**	**-0.3**
M13K	**Dall Lake**	**7.39**	**349**	P		**Pn**	**08 55 21.7**	**0.0**
	baz=166,SNR=92							
M13K					S	**Sn**	**08 56 44.3**	**-0.8**
	baz=166							
M15K	**Kasigluk River**	**7.50**	**359**			**Pn**	**08 55 22.2**	**-1.1**
M15K	**Kasigluk River**	**7.50**	**359**	P		**Pn**	**08 55 22.1**	**-1.2**
	baz=179,SNR=152							
M15K					S	**Sn**	**08 56 44.5**	**-3.3**
	baz=179							
N17K	**Nushagak Hills**	**7.53**	**12**			**Pn**	**08 55 22.9**	**-0.9**
N17K	**Nushagak Hills**	**7.53**	**12**	P		**Pn**	**08 55 23.1**	**-0.7**
	baz=195,SNR=191							
P19K	**Oil Pt**	**7.57**	**29**			**Pn**	**08 55 24.1**	**-0.2**
P19K	**Oil Pt**	**7.57**	**29**	P		**Pn**	**08 55 23.9**	**-0.4**
	baz=215							
P19K					S	**Sn**	**08 56 47.5**	**-2.3**
	baz=215							
M14K	**Bethel**	**7.60**	**354**			**Pn**	**08 55 23.9**	**-0.7**
M14K	**Bethel**	**7.60**	**354**	P		**Pn**	**08 55 24.1**	**-0.5**
	baz=173,SNR=363							
M14K					S	**Sn**	**08 56 47.9**	**-2.4**
	baz=173							
M11K	**Mekoryuk**	**7.85**	**338**			**Pn**	**08 55 27.6**	**-0.4**
M11K	**Mekoryuk**	**7.85**	**338**	P		**Pn**	**08 55 27.9**	**-0.2**
	baz=153,SNR=33							
M16K	**Timber Creek**	**7.86**	**5**			**Pn**	**08 55 28.1**	**-0.2**
M16K	**Timber Creek**	**7.86**	**5**	P		**Pn**	**08 55 27.9**	**-0.4**
	baz=187							
ILS	**Iliamna Low So**	**7.87**	**28**			**Pn**	**08 55 28.3**	**-0.2**
ILSW	**Iliamna Southw**	**7.87**	**28**			**Pn**	**08 55 27.7**	**-0.8**
N18K	**Kilae Creek**	**7.87**	**16**			**Pn**	**08 55 28.2**	**-0.2**
IVE	**Iliamna Volcan**	**7.93**	**28**			**Pn**	**08 55 28.8**	**-0.6**
HOM	**Homer**	**8.07**	**33**			**Pn**	**08 55 30.8**	**-0.3**
O20K	**Slope Mountain**	**8.10**	**29**			**Pn**	**08 55 31.1**	**-0.6**
CNPM	**China Poot**	**8.11**	**35**			**Pn**	**08 55 30.1**	**-1.6**
L14K	**Kuka Creek**	**8.23**	**352**			**Pn**	**08 55 32.5**	**-0.8**
L14K	**Kuka Creek**	**8.23**	**352**	P		**Pn**	**08 55 32.7**	**-0.6**
	baz=170,SNR=190							
L14K					S	**Sn**	**08 57 03.0**	**-3.0**
	baz=170							
N19K	**Bonanza Creek**	**8.27**	**21**			**Pn**	**08 55 33.8**	**-0.1**
KOVE	**Korovin Southe**	**8.32**	**269**			**Pn**	**08 55 34.6**	**0.0**
RED	**Redoubt Volcan**	**8.34**	**27**			**Pn**	**08 55 34.2**	**-0.7**
M17K	**Holitna River**	**8.36**	**10**			**Pn**	**08 55 34.3**	**-0.8**
M17K	**Holitna River**	**8.36**	**10**	P		**Pn**	**08 55 34.4**	**-0.7**
	baz=193,SNR=140							
M17K					S	**Sn**	**08 57 05.5**	**-3.5**
	baz=193							
KOFP	**Korovin Flat P**	**8.36**	**269**			**Pn**	**08 55 35.8**	**+0.6**
RDSO	**Redoubt South**	**8.37**	**27**			**Pn**	**08 55 34.8**	**-0.6**
RDWB	**Redoubt West**	**8.38**	**27**			**Pn**	**08 55 34.8**	**-0.7**
BRLK	**Bradley Lake**	**8.40**	**35**			**Pn**	**08 55 34.1**	**-1.7**
KOKL	**Mount Kliuchef**	**8.41**	**269**			**Pn**	**08 55 36.0**	**0.0**
NCT	**North Crescent**	**8.41**	**26**			**Pn**	**08 55 35.5**	**-0.5**
KOWE	**Korovin West**	**8.44**	**270**			**Pn**	**08 55 36.4**	**+0.2**
ATKA	**Atka Island**	**8.44**	**269**	P		**Pn**	**08 55 36.1**	**-0.1**
ATKA	**Atka Island**	**8.44**	**269**			**Pn**	**08 55 36.1**	**-0.1**
BRSE	**Bradley Lake S**	**8.44**	**35**			**Pn**	**08 55 34.8**	**-1.4**
BRSE	**Bradley Lake S**	**8.44**	**35**	P		**Pn**	**08 55 34.4**	**-1.8**
	baz=224,SNR=18							
RDJH	**Redoubt Jeurge**	**8.47**	**26**			**Pn**	**08 55 36.1**	**-0.6**
L15K	**Ungalak Mounta**	**8.50**	**357**			**Pn**	**08 55 35.9**	**-1.1**
L15K	**Ungalak Mounta**	**8.50**	**357**	P		**Pn**	**08 55 35.7**	**-1.3**
	baz=176,SNR=65							
L15K					S	**Sn**	**08 57 06.6**	**-5.9**
	baz=176							
DFR	**Drift River**	**8.51**	**27**			**Pn**	**08 55 36.9**	**-0.3**
L16K	**Owhat River**	**8.53**	**3**			**Pn**	**08 55 36.3**	**-1.0**
L16K	**Owhat River**	**8.53**	**3**	P		**Pn**	**08 55 36.4**	**-1.0**
	baz=184,SNR=75							
L16K					S	**Sn**	**08 57 10.4**	**-2.8**
	baz=184							
RDT	**Redoubt**	**8.57**	**27**			**Pn**	**08 55 37.5**	**-0.5**
M18K	**Stony River**	**8.65**	**15**			**Pn**	**08 55 38.3**	**-0.8**
M18K	**Stony River**	**8.65**	**15**	P		**Pn

H16K Elim 11.49 356 P Pn 08 56 16.9 -1.0
baz=174,SNR=41
WAT6 Susitna Watana 11.53 31 P Pn 08 56 14.8 -3.8
baz=222,SNR=37
BMRM Bremner River 11.55 42 P Pn 08 56 16.7 -2.2
baz=235,SNR=29
BERG Berg Lake 11.61 45 Pn 08 56 19.4 -0.2
ANM Nome 11.66 349 Pn 08 56 19.7 -0.5
ANM Nome 11.66 349 P Pn 08 56 19.7 -0.5
ANM Nome 11.66 349 P Pn 08 56 19.4 -0.8
baz=165,SNR=65
M24K Tolsona, Glenn 11.69 35 Pn 08 56 20.0 -0.8
M24K Tolsona, Glenn 11.69 35 P Pn 08 56 19.9 -0.9
baz=227,SNR=50
H17K Granite Mounta 11.76 1 Pn 08 56 20.2 -1.4
H17K Granite Mounta 11.76 1 P Pn 08 56 20.4 -1.1
baz=182,SNR=32
RND Reindeer 11.86 26 Pn 08 56 19.1 -3.9
RND Reindeer 11.86 26 P Pn 08 56 19.1 -3.9
N25K Chitina, Valde 11.94 39 P Pn 08 56 23.2 -0.9
baz=233,SNR=38
G15K Niukluk 11.95 353 P Pn 08 56 23.2 -1.0
baz=169,SNR=37
I20K Naaghedeneel 12.00 12 Pn 08 56 23.8 -1.0
I20K Naaghedeneel 12.00 12 P Pn 08 56 24.0 -0.8
baz=198,SNR=31
H18K Honhosa River 12.01 4 Pn 08 56 24.1 -1.0
H18K Honhosa River 12.01 4 P Pn 08 56 24.1 -1.0
baz=186,SNR=62
CRQM Cirque 12.04 44 Pn 08 56 24.7 -0.9
CRQE Cirque 12.06 44 P Pn 08 56 24.8 -1.0
baz=240,SNR=39
VRDI Verde Repeater 12.16 42 Pn 08 56 26.0 -1.3
TGL Tana Glacier 12.17 45 Pn 08 56 26.2 -1.1
G17K Kiwalik Mounta 12.32 360 P Pn 08 56 28.2 -1.1
baz=179,SNR=22
BWN Browne 12.34 23 Pn 08 56 28.7 -0.8
H19K Roundabout Mou 12.50 8 Pn 08 56 30.5 -1.2
H19K Roundabout Mou 12.50 8 P Pn 08 56 30.8 -0.9
baz=191,SNR=133
AMKA Amchitka 12.55 270 Pn 08 56 31.3 -1.1
H20K Anotelenegga Mo 12.62 11 P Pn 08 56 32.3 -1.1
baz=196,SNR=223
F14K Arctic Creek 12.65 349 P Pn 08 56 33.4 -0.3
baz=164,SNR=53
F15K North Star Dit 12.71 352 Pn 08 56 33.6 -0.9
F15K North Star Dit 12.71 352 P Pn 08 56 34.2 -0.3
baz=168,SNR=32
G18K Tagagawik 12.74 3 P Pn 08 56 34.0 -1.1
baz=185,SNR=80
BARN Barnard Glacie 12.82 45 Pn 08 56 36.2 0.0
PINM Pinnacle 13.01 50 P Pn 08 56 39.0 +0.2
baz=248,SNR=52
G19K Purcell Mounta 13.07 6 Pn 08 56 39.3 -0.1
G19K Purcell Mounta 13.07 6 P Pn 08 56 39.2 -0.3
baz=189,SNR=62
MENT Mentasta 13.10 35 P Pn 08 56 39.1 -0.8
MENT Mentasta 13.10 35 S Sn 08 59 03.5 -1.7
MENT Mentasta 13.10 35 Pn 08 56 39.5 -0.4
F17K Baldwin Pennin 13.27 359 Pn 08 56 42.4 +0.2
F17K Baldwin Pennin 13.27 359 P Pn 08 56 42.0 -0.2
baz=178,SNR=55
COLA College 13.31 24 P Pn 08 56 39.7 -3.1
COLA College 13.31 24 Pn 08 56 39.4 -3.4
COLA College 13.31 24 P Pn 08 56 39.4 -3.4
COLA College 13.31 24 P Pn 08 56 38.6 -4.2
baz=215
COLA College 13.31 24 P Pn 08 56 39.1 -3.7
O28M Mount Upton 13.32 47 Pn 08 56 43.0 -0.2
O28M Mount Upton 13.32 47 P Pn 08 56 42.4 -0.8
baz=245,SNR=80
F18K Selawik 13.43 1 P Pn 08 56 44.1 -0.2
baz=182,SNR=52
IL31 13.47 25 Pn 08 56 40.5 -4.5
ILAR Eielson Array 13.47 25 Pn Pn 08 56 40.3 -4.7
comp=N,5.4nm,0.3s,baz=217,slow=13,SNR=98
ILAR Sn Sn 08 59 01.8 -12
comp=N,2.3nm,0.3s,baz=220,slow=20,SNR=6.4
comp=N,12nm,0.3s
ILAR Eielson Array 13.47 25 Pn 08 56 40.1 -4.8
YUK3 Moose Creek 13.67 43 P Pn 08 56 47.3 -0.6
baz=241,SNR=59
F19K Shaleruckik Mo 13.72 4 Pn 08 56 48.0 -0.3
F19K Shaleruckik Mo 13.72 4 P Pn 08 56 47.8 -0.5
baz=187,SNR=94
YUK8 Steele Glacier 13.73 46 P Pn 08 56 48.5 -0.3
baz=244,SNR=107
G21K Allakaket 13.77 12 Pn 08 56 48.1 -0.8
G21K Allakaket 13.77 12 P Pn 08 56 48.6 -0.3
baz=198,SNR=216
BVCY Beaver Creek 13.84 41 P Pn 08 56 50.5 +0.4
baz=238,SNR=19
L27K Beaver Creek, 13.85 37 Pn 08 56 49.1 -1.1
L27K Beaver Creek, 13.85 37 P Pn 08 56 49.0 -1.1
baz=234,SNR=75
O29M Mount Kennedy 13.87 51 P Pn 08 56 50.4 -0.1
baz=249,SNR=94
BCAR Beaver Creek A 13.87 37 Pn 08 56 48.8 -1.6
E17K Hotham Inlet 13.92 358 P Pn 08 56 51.1 0.0
baz=176,SNR=65
P29M Windy Craggy 14.04 54 P Pn 08 56 53.2 +0.4
baz=253,SNR=67
F20K Avaraart Lake 14.06 8 P Pn 08 56 52.8 -0.2
baz=192
BRWY Burwash Landin 14.09 46 P Pn 08 56 53.7 +0.3
baz=245,SNR=14
YUK6 Outpost Mounta 14.21 48 P Pn 08 56 55.5 +0.3
baz=247,SNR=36
YUK4 Talbot Arm 14.24 47 P Pn 08 56 56.9 +1.1
baz=245,SNR=73
E18K Tukpahlearik C 14.25 360 Pn 08 56 56.0 +0.5
E18K Tukpahlearik C 14.25 360 P Pn 08 56 55.4 -0.1
baz=180,SNR=90
E19K Redstone River 14.37 5 P Pn 08 56 57.1 -0.1
baz=188,SNR=294
G22K Bettles 14.42 14 P Pn 08 56 56.6 -1.2
baz=202
F21K Alatna River 14.45 11 Pn 08 56 58.0 -0.3
F21K Alatna River 14.45 11 P Pn 08 56 58.0 -0.3
baz=197,SNR=172
G23K Bananza Creek 14.46 17 P Pn 08 56 56.4 -2.1
baz=206,SNR=210
HYT Haines Junctio 14.55 49 P Pn 08 57 00.2 +0.3
HYT Haines Junctio 14.55 49 P Pn 08 57 00.3 +0.5
baz=249,SNR=26
P30M Million Dollar 14.57 52 P Pn 08 57 00.8 +0.8
baz=252
D17K Noatak River 14.58 356 P Pn 08 57 00.2 +0.1
baz=174,SNR=42
PLBC Pleasant Camp 14.67 55 P Pn 08 57 02.1 +0.8
baz=256
R31K City Hall, Gus 14.76 60 P Pn 08 57 02.6 +0.1
baz=261
SIT Sitka 14.81 65 P Pn 08 57 03.6 +0.3
SIT Sitka 14.81 65 P Pn 08 57 02.9 -0.4
baz=266,SNR=13
M29M Somme Creek 14.82 43 Pn 08 57 03.0 -0.5
M29M Somme Creek 14.82 43 P Pn 08 57 03.1 -0.5
baz=242,SNR=93
F22K John River 14.88 12 P Pn 08 57 03.4 -0.7
baz=200
RDOG Red Dog Mine 14.93 356 P Pn 08 57 03.4 -1.5
baz=174,SNR=27
G24K Hadweenzic Riv 14.94 20 P Pn 08 56 59.5 -5.5
baz=212,SNR=24
N30M Aishikik Lake 14.98 47 Pn 08 57 05.5 0.0
N30M Aishikik Lake 14.98 47 P Pn 08 57 05.0 -0.5
baz=248,SNR=43
O30N Mendenhall 15.18 51 P Pn 08 57 08.6 +0.3
baz=251,SNR=26
SKAG Skagway 15.18 56 P Pn 08 57 08.9 +0.7
SKAG Skagway 15.18 56 P Pn 08 57 09.4 +1.2
baz=257,SNR=16
E20K Nigu River 15.22 6 P Pn 08 57 08.5 -0.3
baz=190
L29M L29M 15.28 41 Pn 08 57 10.0 +0.4
L29M L29M 15.28 41 P Pn 08 57 09.6 0.0
baz=240,SNR=34
C16K Lisburne Hills 15.29 353 IAmb IAmb 08 57 13.4
comp=Z,237nm,1.0s
C16K Lisburne Hills 15.29 353 P Pn 08 57 09.6 0.0
baz=169
G25K Bearman Lake 15.29 22 P Pn 08 57 03.0 -6.6
baz=214,SNR=8.8
DAWY Dawson 15.32 37 Pn 08 57 09.8 -0.3
DAWY Dawson 15.32 37 P Pn 08 57 08.5 -1.7
baz=235,SNR=58
SHEM Shemya Is, Ala 15.34 278 Pn Pn 08 57 09.4 -1.0
comp=Z,5.3nm,0.3s,baz=59,slow=5.9,SNR=7.7
SHEM Sn Sn 08 59 59.2 -0.6
comp=Z,1.0nm,0.3s,baz=90,slow=20,SNR=1.1
comp=Z,48nm,0.7s
SHEM Shemya Is, Ala 15.34 278 Sn 08 59 59.2 -0.6
C17K DeLong Mountai 15.36 356 P Pn 08 57 10.4 -0.2
baz=174,SNR=119
D19K Kuna River 15.37 3 Pn 08 57 09.3 -1.3
D19K Kuna River 15.37 3 P Pn 08 57 09.8 -0.8
baz=185,SNR=115
JIS Juneau Island 15.45 61 P Pn 08 57 13.3 +1.6
C18K Utukok River 15.48 359 Pn 08 57 11.8 -0.4
C18K IAmb IAmb 08 57 18.5
comp=Z,391nm,0.8s
C18K Utukok River 15.48 359 P Pn 08 57 12.0 -0.2
baz=178,SNR=184
E22K Anaktuvuk Pass 15.52 12 Pn 08 57 11.8 -0.8
E22K IAmb IAmb 08 57 14.5
comp=Z,316nm,1.2s
E22K Anaktuvuk Pass 15.52 12 P Pn 08 57 12.0 -0.6
baz=200
F24K Squaw Lake 15.57 18 P Pn 08 57 08.4 -4.9
baz=209,SNR=33
M30M Minto, Yukon 15.57 44 Pn 08 57 13.1 -0.2
M30M Minto, Yukon 15.57 44 P Pn 08 57 12.8 -0.5
baz=244,SNR=20
N31M Braeburn, Yuko 15.57 48 P Pn 08 57 13.2 -0.1
baz=249,SNR=110
E21K Killik River 15.57 9 Pn 08 57 12.8 -0.6
E21K Killik River 15.57 9 P Pn 08 57 12.7 -0.7
baz=195
D20K Etivluk River 15.65 5 Pn 08 57 13.4 -1.0
D20K IAmb IAmb 08 57 20.4
comp=Z,783nm,1.9s
D20K Etivluk River 15.65 5 P Pn 08 57 13.3 -1.0
baz=189,SNR=61
WHY White 15.71 52 P Pn 08 57 15.7 +0.4
baz=254,SNR=68
E23K Chandalar 15.75 15 P Pn 08 57 14.1 -1.6
baz=205,SNR=98
K29M Barlow Dome 15.89 39 Pn 08 57 17.7 +0.1
K29M Barlow Dome 15.89 39 P Pn 08 57 16.7 -0.9
baz=239,SNR=31
C19K Lookout Ridge 15.94 1 Pn 08 57 17.4 -0.8
C19K Lookout Ridge 15.94 1 P Pn 08 57 17.1 -1.1
baz=182,SNR=79
E24K Your Creek 15.95 16 P Pn 08 57 14.3 -4.0
baz=207
J29N Klondike Camp 15.97 37 Pn 08 57 18.9 +0.4
J29N Klondike Camp 15.97 37 P Pn 08 57 15.6 -2.9
baz=236
G26K Porcupine Rive 15.98 24 P Pn 08 57 11.3 -7.2
baz=219
I28M Miner Creek 15.99 32 P Pn 08 57 16.8 -2.0
baz=230,SNR=292
P32M Atlin 16.01 56 P Pn 08 57 18.9 -0.1
baz=259,SNR=76
CRAG Craig 16.03 71 P Pn 08 57 20.0 +0.8
CRAG Craig 16.03 71 Pn 08 57 20.1 +0.8
CRAG IAmb IAmb 08 57 26.9
comp=Z,697nm,1.6s
CRAG Craig 16.03 71 P Pn 08 57 18.9 -0.3
baz=274,SNR=25
H27K Steamboat Moun 16.04 28 P Pn 08 57 15.6 -3.9
baz=225,SNR=24
F25K Christian Rive 16.08 21 P Pn 08 57 17.3 -2.6
baz=214,SNR=11
T33K Petersburg 16.10 66 P Pn 08 57 19.1 -1.0
baz=269
C21K Knifeblade Rid 16.20 7 P Pn 08 57 20.3 -1.1
baz=192,SNR=258
G27K Doyon Strip 16.43 27 P Pn 08 57 21.5 -2.8
baz=223,SNR=28
WRAK Wrangell Islan 16.43 68 P P 08 57 26.7 -0.4
WRAK IAmb IAmb 08 57 32.0
comp=Z,518nm,1.3s
WRAK Wrangell Islan 16.43 68 P Pn 08 57 24.4 0.0
baz=271,SNR=112
D23K Nanushuk River 16.44 12 Pn 08 57 22.9 -1.5
D23K Nanushuk River 16.44 12 P Pn 08 57 23.4 -1.0
baz=201,SNR=165
M31M Drury Creek, Y 16.44 47 P Pn 08 57 24.6 0.0
baz=249,SNR=112
F26K Sheenjek River 16.49 22 P Pn 08 57 23.9 -1.2
baz=217,SNR=11
E25K Arctic Village 16.54 20 P Pn 08 57 23.7 -2.0
baz=213
P33M Teslin, Yukon 16.59 54 P P 08 57 28.2 -0.7
P33M IAmb IAmb 08 57 33.8
comp=Z,523nm,1.4s
P33M Teslin, Yukon 16.59 54 P Pn 08 57 26.2 -0.2
baz=258,SNR=285
Q32M Nakina River 16.64 59 P P 08 57 29.4 -0.2
Q32M Nakina River 16.64 59 P Pn 08 57 27.1 -0.1
baz=262,SNR=76
B21K Ikpikpuk River 16.68 7 Pn 08 57 26.2 -1.1
B21K Ikpikpuk River 16.68 7 P Pn 08 57 26.3 -1.0
baz=192
DIB Dawson Inlet, 16.69 79 P P 08 57 30.6 +0.7
H02S1 DAWSON INLET T 16.69 79 Pn Pn 08 57 28.2 +0.5
H02S1 Sn Sn 09 00 22.3 -10
H02S1 T T 09 15 34.8
SNR=5.0
H02S2 DAWSON INLET T 16.69 79 Pn Pn 08 57 28.2 +0.5
H02S2 Sn Sn 09 00 22.3 -10
H02S2 T T 09 15 34.1
SNR=4.3
N32M Quiet Lake 16.70 51 P P 08 57 30.5 +0.4
N32M Quiet Lake 16.70 51 P Pn 08 57 28.7 +0.9
baz=254
J30M Hart River 16.72 38 P Pn 08 57 28.7 +0.5
baz=239,SNR=116
D24K Happy Valley 16.88 14 P Pn 08 57 28.9 -1.1
baz=205
B20K Meade River 16.91 4 Pn 08 57 29.0 -1.3
B20K IAmb IAmb 08 57 33.6
comp=Z,316nm,0.9s
B20K Meade River 16.91 4 P Pn 08 57 29.1 -1.3
baz=187
H29M Whitestone 16.98 31 IAmb IAmb 08 57 39.4
comp=Z,337nm,0.8s
H29M Whitestone 16.98 31 P Pn 08 57 29.3 -2.1
baz=231,SNR=34
MOBC Moresby Island 17.00 79 P P 08 57 33.6 +0.1
A19K Wainwright 17.05 359 P Pn 08 57 31.1 -0.9
baz=179,SNR=14
I30M Mount Dempster 17.05 36 Pn 08 57 32.1 -0.2
I30M IAmb IAmb 08 57 40.8
comp=Z,460nm,0.8s
I30M Mount Dempster 17.05 36 P Pn 08 57 31.8 -0.5
baz=237,SNR=150
S34M Telegraph Cree 17.13 62 P P 08 57 35.7 +0.9
S34M Telegraph Cree 17.13 62 P P 08 57 34.6 -0.2
baz=267,SNR=65
C23K Itkillik River 17.27 11 Pn 08 57 33.3 -1.6
C23K IAmb IAmb 08 57 39.2
comp=Z,854nm,1.1s
C23K Itkillik River 17.27 11 P Pn 08 57 33.0 -1.8
baz=200,SNR=645
R33M Jennings River 17.36 57 P P 08 57 37.9 +0.4
baz=262,SNR=86
C24K Franklin Bluff 17.41 14 IAmb IAmb 08 57 36.9
comp=Z,624nm,1.0s
C24K Franklin Bluff 17.41 14 P Pn 08 57 34.4 -2.2
baz=204
D25K Kavik River 17.42 17 P Pn 08 57 35.1 -1.7
baz=209
B22K Teshekpuk Lake 17.47 8 P Pn 08 57 36.3 -1.0
baz=194
E27K Coleen River 17.48 24 P Pn 08 57 34.6 -2.8
baz=220,SNR=6.2
F28M Old Crow 17.49 27 P Pn 08 57 34.6 -3.1
baz=225,SNR=27
G29M Pine Creek 17.54 30 P Pn 08 57 35.4 -2.8
baz=230,SNR=58
T35M Bob Quinn 17.58 66 P P 08 57 40.0 +0.1
baz=271,SNR=66
EPYK Eagle Plains 17.60 32 P Pn 08 57 38.3 -0.7
baz=233,SNR=225
HG4B Hotspring 17.65 81 P P 08 57 40.9 +0.3
DLBC Dease Lake 17.75 61 P Pn 08 57 41.4 +0.4
comp=Z,0.6nm,0.3s,baz=251,slow=14,SNR=33
DLBC S Sn 09 00 57.3 -1.0
comp=Z,12nm,1.0s,baz=248,slow=19,SNR=1.1
DLBC LR LR 09 03 33.6
comp=Z,1μm,18.1s,baz=270,slow=34
comp=Z,20nm,0.9s
DLBC Dease Lake 17.75 61 P P 08 57 43.0 +1.3
baz=266,SNR=41
RUBB Prince Rupert 17.80 74 P P 08 57 42.5 +0.3
MMPY Sheldon Lake, 17.95 47 P P 08 57 45.1 +1.1
baz=252,SNR=124
A22K Sinclair Lake 18.01 6 P Pn 08 57 42.3 -1.7
baz=191
H31M Peel River 18.08 36 P Pn 08 57 44.9 -0.1
H31M Peel River 18.08 36 P Pn 08 57 43.5 -1.4
baz=239,SNR=295
G30M tAoh Zraii Nji 18.13 31 IAmb IAmb 08 57 50.6
comp=Z,641nm,0.9s
G30M tAoh Zraii Nji 18.13 31 P Pn 08 57 43.9 -1.7
baz=233,SNR=97
C27K Jago River 18.17 19 P P 08 57 46.3 0.0
C27K Jago River 18.17 19 P Pn 08 57 44.6 -1.4
baz=214,SNR=38
C26K Camden Bay 18.20 17 P Pn 08 57 44.1 -2.1
baz=211,SNR=17
E28M Babbage River 18.30 25 P Pn 08 57 46.6 -0.9
E28M Babbage River 18.30 25 P Pn 08 57 45.5 -2.0
baz=223,SNR=18
D27M Malcolm River 18.44 22 P P 08 57 45.3 -4.0
baz=219
WTLY Watson Lake, Y 18.55 56 P Pn 08 57 52.5 +1.8
baz=263,SNR=49
E29M Blow River 18.57 26 P P 08 57 47.4 -3.2
baz=226,SNR=23
F30M Barrier River 18.65 30 IAmb IAmb 08 57 59.2
comp=Z,396nm,1.1s
F30M Barrier River 18.65 30 P P 08 57 51.3 -0.2
baz=232,SNR=109
G31M Satah River 18.72 33 IAmb IAmb 08 57 56.4
comp=Z,591nm,1.0s
G31M Satah River 18.72 33 P P 08 57 51.3 -0.9
baz=236,SNR=206
D28M Stokes Point 19.02 24 P P 08 57 55.6 +0.1
baz=223
F31M Tsiigehtchic 19.18 32 IAmb IAmb 08 58 02.0
comp=Z,327nm,1.1s
F31M Tsiigehtchic 19.18 32 P P 08 57 57.5 +0.2
baz=236,SNR=16
BBB Bella Bella 19.51 80 P Pn 08 58 02.1 -0.2
comp=Z,0.4nm,0.3s,baz=265,slow=15,SNR=26
BBB PcP PcP 09 02 20.6 -0.3
comp=Z,16nm,1.0s,baz=310,slow=2.0,SNR=6.3
BBB LR LR 09 03 41.7
comp=Z,1μm,19.1s,baz=289,slow=31
comp=Z,57nm,1.1s
BBB Bella Bella 19.51 80 P Pn 08 58 02.4 +0.1
BBB Bella Bella 19.51 80 P Pn 08 58 03.5 +1.2
INK Inuvik 19.75 30 P P 08 58 02.9 -0.6
comp=Z,11nm,0.3s,baz=237,slow=11,SNR=122
INK S S 09 01 42.9 -2.6
comp=Z,41nm,1.1s,baz=235,slow=19,SNR=13
INK LR LR 09 05 56.1
comp=Z,2μm,20.3s,baz=233,slow=38
comp=Z,125nm,0.7s
INK Inuvik 19.75 30 P P 08 58 04.3 +0.7
baz=234,SNR=146
INK Inuvik 19.75 30 P P 08 58 03.2 -0.3
LIRD Liard River Hi 19.84 58 P Pn 08 58 06.7 +0.4
baz=267,SNR=37
KOTAN Kotaneelee Air 20.91 56 P Pn 08 58 17.8 -0.9
baz=267,SNR=30
WRGLY Wrigley 21.56 48 IAmb IAmb 08 58 40.0
comp=Z,232nm,1.0s
WRGLY Wrigley 21.56 48 P P 08 58 23.7 +0.6
baz=260,SNR=26
BILL Bilibino 21.67 326 P P 08 58 24.0 -0.2
BILL IAmb IAmb 08 58 25.6
comp=Z,420nm,1.1s
BILL IAMs_20 IAMs_20 09 07 32.5
comp=Z,3μm,18.0s
BILL Bilibino 21.67 326 *c* *i*P P 08 58 24.3 +0.1
BILL pmax pmax
comp=Z,503nm,1.3s
CLRS Cowichan Lake 23.07 86 IAmb IAmb 08 58 44.6
comp=Z,287nm,1.6s
C03A Quillayute Air 23.19 89 IAmb IAmb 08 58 45.2
comp=Z,584nm,2.0s
C36M Paulatuk 23.24 32 P P 08 58 40.6 -0.2
C36M Paulatuk 23.24 32 P P 08 58 40.8 0.0
baz=245,SNR=132
PGC Sidney 23.55 86 IAmb IAmb 08 58 49.1
comp=Z,209nm,1.7s
LLLB Lillooet 23.71 81 IAmb IAmb 08 58 51.2
comp=Z,186nm,1.2s
B04A Port Angeles 23.78 88 IAmb IAmb 08 58 51.6
comp=Z,258nm,1.6s
NLWA Neilton Lookou 23.86 89 IAmb IAmb 08 58 52.4
comp=Z,158nm,1.2s
A04D Lummi Island 23.97 85 IAmb IAmb 08 58 52.8
comp=Z,163nm,1.2s
WISH Wishkah 24.05 90 IAmb IAmb 08 58 53.6
comp=Z,224nm,1.4s
A36M Sachs Harbour 24.17 26 P P 08 58 50.4 +0.6
baz=238,SNR=30
A05A Maple Falls 24.22 84 IAmb IAmb 08 59 05.3
comp=Z,327nm,1.4s
PET Petropavlovsk 24.34 286 P P 08 58 52.8 +1.3
PET Petropavlovsk 24.34 286 P P 08 58 50.7 -0.7
PET IAmb IAmb 08 59 11.7
comp=Z,271nm,1.1s
PET Petropavlovsk 24.34 286 *e*P P 08 58 48.8 -2.7
PET *e*S S 09 03 05.8 -4.0
PET pmax pmax
comp=Z,1μm,3.0s
PET pmax pmax
comp=Z,500nm,4.1s
PET pmax pmax
comp=Z,253nm,1.1s
PET MLR MLR
comp=Z,1μm,22.0s
PET MLR MLR
comp=Z,1μm,19.0s
PET Petropavlovsk 24.34 286 P P 08 58 51.9 +0.4
comp=Z,4μmcomp=Z,235nm,1.5s
PET Petropavlovsk 24.34 286 P P 08 58 51.7 +0.2
GNW Green Mountain 24.41 88 P P 08 58 53.7 +1.5
E03A Lebam 24.45 91 IAmb IAmb 08 58 57.2
comp=Z,144nm,1.0s
F03A Seaside 24.76 92 IAmb IAmb 08 59 10.2
comp=Z,266nm,1.1s
PEA0B Petropavlovsk- 24.86 287 *c* *i*P P 08 58 56.4 +0.1
PETK Petropavlovsk- 24.86 287 P P 08 58 55.8 -0.5
comp=Z,117nm,0.9s,baz=75,slow=11,SNR=101
PETK PcP PcP 09 02 31.4 -0.3
comp=Z,13nm,0.9s,baz=66,slow=4.8,SNR=5.5
PETK S S 09 03 15.2 -3.2
comp=Z,5.8nm,0.9s,baz=78,slow=7.5,SNR=1.7
PETK LR LR 09 08 32.4
comp=Z,1μm,21.0s,baz=86,slow=36
comp=Z,117nm,0.9s
PETK Petropavlovsk- 24.86 287 P P 08 58 56.6 +0.4
G03D McMinnville, O 25.31 93 IAmb IAmb 08 59 04.3
comp=Z,238nm,1.4s
YKAW3 Yellowknife Wh 25.54 50 IAmb IAmb 08 59 15.6
comp=Z,177nm,1.2s
YKA Yellowknife Ar 25.54 51 P P 08 59 03.2 +0.9
comp=Z,93nm,1.1s,baz=270,slow=8.8,SNR=151
YKA PcP PcP 09 02 32.5 -0.5
comp=Z,3.2nm,0.7s,baz=271,slow=2.2,SNR=5.4
YKA S S 09 03 30.2 +1.2
comp=Z,2.5nm,1.0s,baz=269,slow=15,SNR=2.3
YKA ScP ScP 09 06 11.5 -0.1
comp=Z,1.8nm,0.9s,baz=272,slow=2.6,SNR=5.7
YKA LR LR 09 09 08.2
comp=Z,1μm,20.0s,baz=264,slow=37
YKA P3KPbc 09 31 48.7
comp=Z,0.8nm,0.8s,baz=96,slow=3.9,SNR=4.5
comp=Z,93nm,1.1s
I02E Swisshome, OR 25.56 96 P P 08 59 04.5 +1.9
I02E IAmb IAmb 08 59 06.7
comp=Z,225nm,1.2s
YKAW1 Yellowknife Wh 25.59 51 IAmb IAmb 08 59 16.1
comp=Z,246nm,1.3s
COR Corvallis 25.62 95 P P 08 59 05.5 +2.3
COR IAmb IAmb 08 59 07.5
comp=Z,276nm,1.2s
COR Corvallis 25.62 95 IAMs_20 IAMs_20 09 05 38.9
comp=Z,2μm,19.0s
COR Corvallis 25.62 95 P P 08 59 05.5 +2.3
COR pmax pmax
comp=Z,276nm,1.2s
COR Corvallis 25.62 95 P P 08 59 06.3 +3.0

G04A Mulino 25.79 93 IAmb IAmb 08 59 38.9
comp=Z,220nm,1.3s
H04D Lebanon 26.00 94 IAmb IAmb 08 59 21.3
comp=Z,142nm,1.1s
BUCK Buck Mountain 26.03 95 IAmb IAmb 08 59 11.3
comp=Z,231nm,1.3s
J01E Myrtle Point 26.05 98 IAmb IAmb 08 59 11.2
comp=Z,226nm,1.3s
I03D Drain, OR 26.09 96 IAmb IAmb 08 59 11.5
comp=Z,188nm,1.4s
B08A Colville Reser 26.15 84 IAmb IAmb 08 59 14.2
comp=Z,191nm,1.5s
SEY Seymchan 26.18 310 LR LR 09 10 26.5
comp=Z,2µm,19.6s,baz=88,slow=39
SEY Seymchan 26.18 310 ceP P 08 59 07.9 -0.2
SEY i *PP pP 08 59 10.2 -0.8
SEY pmax pmax
comp=Z,59nm,0.9s
HOOD Mount Hood Mea 26.22 92 IAmb IAmb 08 59 12.4
comp=Z,145nm,1.2s
EPH Ephrata 26.45 86 IAmb IAmb 08 59 16.4
comp=Z,206nm,1.5s
G05A Wamic 26.47 92 IAmb IAmb 08 59 20.8
comp=Z,301nm,1.5s
K02D Willamette Mer 26.48 98 IAmb IAmb 08 59 15.1
comp=Z,148nm,1.3s
SKR Severo-Kuril's 26.61 282 eP P 08 59 02.4 -10
SKR pmax pmax
comp=Z,62nm,1.1s
WAH2 Wahluke Slope 26.75 87 IAmb IAmb 08 59 19.7
comp=Z,193nm,1.5s
WIFE Three Sisters- 26.80 94 IAmb IAmb 08 59 18.0
comp=Z,270nm,1.4s
L02F Cave Junction 26.88 99 IAmb IAmb 08 59 18.6
comp=Z,187nm,1.4s
I05D Terrebonne, OR 26.94 93 IAmb IAmb 08 59 18.9
comp=Z,267nm,1.4s
HAWA Hanford 26.95 88 IAmb IAmb 08 59 18.7
comp=Z,164nm,1.7s
HAWA IAMs_20 IAMs_20 09 08 29.8
comp=Z,2µm,18.0s
BBOR Butler Butte 26.96 97 IAmb IAmb 08 59 19.7
comp=Z,260nm,1.3s
J04A Umpqua Nationa 27.09 96 IAmb IAmb 08 59 20.7
comp=Z,248nm,1.3s
MA2 Magadan 27.22 303 P P 08 59 17.4 -0.1
MA2 Magadan 27.22 303 P P 08 59 17.5 0.0
MA2 IAmb IAmb 08 59 22.9
comp=Z,100nm,0.8s
MA2 Magadan 27.22 303 c iP P 08 59 17.9 +0.4
MA2 pmax pmax
comp=Z,107nm,0.9s
MA2 Magadan 27.22 303 P P 08 59 17.8 +0.3
comp=Z,147nm,0.8s
MA2 Magadan 27.22 303 P P 08 59 18.6 +1.1
JCC Jacoby Creek, 27.41 102 IAmb IAmb 08 59 23.4
comp=Z,236nm,1.4s
JCC IAMs_20 IAMs_20 09 06 36.7
comp=Z,2µm,20.0s
PINE Pine Mountain 27.48 94 IAmb IAmb 08 59 24.4
comp=Z,207nm,1.4s
NEW Newport 27.51 83 LR LR 09 08 11.6
comp=Z,672nm,18.2s,baz=288,slow=32
NEW Newport 27.51 83 P P 08 59 22.1 +1.8
KHMM Horse Mountain 27.55 102 IAMs_20 IAMs_20 09 07 35.3
comp=Z,2µm,20.0s
L04D Klamath Falls 27.57 98 IAmb IAmb 08 59 24.8
comp=Z,157nm,1.3s
J05D Fort Rock, OR 27.59 95 IAmb IAmb 08 59 25.4
comp=Z,215nm,1.2s
KMPM Mount Pierce 27.62 103 IAmb IAmb 08 59 25.5
comp=Z,151nm,1.1s
YBH Yreka Blue Hor 27.63 99 LR LR 09 07 48.9
comp=Z,2µm,18.2s,baz=302,slow=31
K04D Chiloquin, OR 27.66 97 IAmb IAmb 08 59 25.8
comp=Z,253nm,1.4s
M02C Callahan 27.75 100 IAmb IAmb 08 59 27.1
comp=Z,195nm,1.4s
M02C IAMs_20 IAMs_20 09 07 32.4
comp=Z,2µm,18.0s
EDM Edmonton 27.78 71 IAmb IAmb 08 59 25.3
comp=Z,140nm,1.4s
KHBM Hayfork Bally 27.99 102 IAmb IAmb 08 59 28.8
comp=Z,160nm,1.4s
KHBM IAMs_20 IAMs_20 09 09 04.9
comp=Z,2µm,18.0s
N02D Trinity Center 28.10 101 IAmb IAmb 08 59 29.9
comp=Z,178nm,1.4s
I07A Izee 28.18 92 IAmb IAmb 08 59 30.0
comp=Z,195nm,1.6s
KCPM Cahto Peak 28.40 104 IAmb IAmb 08 59 32.4
comp=Z,247nm,1.5s
O02D Mt. Diablo Mer 28.55 102 IAmb IAmb 08 59 33.9
comp=Z,234nm,1.4s
HATC Hat Creek Radi 28.93 100 IAmb IAmb 08 59 37.1
comp=Z,212nm,1.1s
HATC IAMs_20 IAMs_20 09 08 09.7
comp=Z,1µm,19.0s
O03E Paynes Creek 29.06 101 IAmb IAmb 08 59 37.4
comp=Z,206nm,1.2s
HOPS Hopland Field 29.16 104 IAmb IAmb 08 59 38.5
comp=Z,167nm,1.4s
HOPS IAMs_20 IAMs_20 09 07 51.9
comp=Z,2µm,20.0s
GDXM Geysers 29.44 104 IAmb IAmb 08 59 41.6
comp=Z,119nm,1.2s
WVOR Wild Horse Val 29.64 94 IAmb IAmb 08 59 43.2
comp=Z,178nm,1.4s
WVOR IAMs_20 IAMs_20 09 09 01.2
comp=Z,2µm,18.0s
WVOR Wild Horse Val 29.64 94 P P 08 59 41.8 +2.4
SUTB Sutter Butte 29.75 102 IAmb IAmb 08 59 43.0
comp=Z,127nm,1.2s
MCCM Marconi Confer 29.84 105 IAMs_20 IAMs_20 09 08 35.9
comp=Z,2µm,19.0s
CVS Carmenet Viney 29.95 104 IAmb IAmb 08 59 45.3
comp=Z,167nm,1.2s
FARB Farallon Islan 30.07 106 IAMs_20 IAMs_20 09 08 25.1
comp=Z,2µm,18.0s
MSO Missoula 30.09 83 IAmb IAmb 08 59 46.0
comp=Z,109nm,1.6s
MSO IAMs_20 IAMs_20 09 10 16.8
comp=Z,1µm,18.0s
BEKR Beckworth 30.18 100 IAmb IAmb 08 59 47.6
comp=Z,173nm,1.5s
AFDM Forest Hills D 30.42 102 IAmb IAmb 08 59 49.6
comp=Z,101nm,1.3s
JRSC Jasper Ridge 30.71 106 IAMs_20 IAMs_20 09 09 08.1
comp=Z,2µm,18.0s
WELL Weller Preserv 30.90 102 IAMs_20 IAMs_20 09 08 23.9
comp=Z,2µm,19.0s
MHC Mount Hamilton 31.10 105 IAmb IAmb 08 59 55.7
comp=Z,164nm,1.4s
MHC IAMs_20 IAMs_20 09 09 30.4
comp=Z,2µm,18.0s
CMB Columbia Colle 31.36 103 IAmb IAmb 08 59 58.2
comp=Z,82nm,1.2s
FORD Fort Ord Natur 31.47 106 IAMs_20 IAMs_20 09 09 13.2
comp=Z,2µm,19.0s
HLID Hailey 31.53 89 IAmb IAmb 08 59 59.6
comp=Z,117nm,1.8s
HLID Hailey 31.53 89 P P 08 59 58.1 +2.0
SAO San Andreas Ge 31.61 106 IAMs_20 IAMs_20 09 09 46.9
comp=Z,2µm,18.0s
KIP Kipapa 31.80 176 IAMs_20 IAMs_20 09 12 42.3
comp=Z,1µm,18.0s
KVN Kaiserville 32.05 99 IAmb IAmb 09 00 04.4
comp=Z,104nm,1.4s
BOZ Bozeman (W) 32.09 84 IAmb IAmb 09 00 03.8
comp=Z,152nm,1.8s
HULI Fort Hunter Li 32.25 106 IAMs_20 IAMs_20 09 09 44.9
comp=Z,2µm,19.0s
NVAR Mina Array Bea 32.33 100 P P 09 00 04.5 +1.2
comp=Z,49nm,0.8s,baz=312,slow=11,SNR=226
NVAR PcP PcP 09 02 49.7 -1.1
comp=Z,12nm,0.9s,baz=308,slow=3.4,SNR=8.9
NVAR ScP ScP 09 06 33.6 -0.1
comp=Z,2.2nm,1.0s,baz=308,slow=3.1,SNR=4.3
NVAR LR LR 09 10 17.1
comp=Z,962nm,20.3s,baz=296,slow=31
comp=Z,49nm,0.8s
NVAR Mina Array Bea 32.33 100 P P 09 00 05.4 +2.2
PMPB Monarch Peak 32.37 106 IAmb IAmb 09 00 12.4
comp=Z,96nm,1.2s
MDPB Devils Postpil 32.40 102 IAmb IAmb 09 00 07.9
comp=Z,106nm,0.9s
ELK Elko 32.69 94 LR LR 09 11 01.9
comp=Z,1µm,18.1s,baz=303,slow=32

ELK Elko 32.69 94 IAmb IAmb 09 00 09.9
comp=Z,132nm,1.4s
PKD Bear Valley Ra 32.70 106 IAmb IAmb 09 00 09.7
comp=Z,179nm,1.5s
YMR Madison River 32.99 85 IAmb IAmb 09 00 11.9
comp=Z,64nm,1.0s
YNR Norris Junctio 33.13 84 IAmb IAmb 09 00 13.7
comp=Z,98nm,1.0s
RES Resolute Bay 33.22 26 LR LR 09 16 48.5
comp=Z,904nm,18.0s,baz=278,slow=42
RES Resolute Bay 33.22 26 P P 09 00 10.3 -0.1
RES Resolute Bay 33.22 26 P P 09 00 10.3 -0.1
RES pmax pmax
comp=Z,26nm,1.0s
RES Resolute Bay 33.22 26 P P 09 00 11.7 +1.3
DSP Deep Springs 33.23 101 IAmb IAmb 09 00 15.3
comp=Z,169nm,1.3s
H17A Grant Village 33.37 85 IAmb IAmb 09 00 16.8
comp=Z,96nm,1.3s
YNE Yellowstone No 33.38 83 IAmb IAmb 09 00 15.2
comp=Z,106nm,1.5s
FFC Flin Flon 33.54 63 P P 09 00 14.2 +0.8
FFC Flin Flon 33.54 63 IAMs_20 IAMs_20 09 13 01.8
comp=Z,2µm,18.0s
FFC Flin Flon 33.54 63 P P 09 00 14.2 +0.8
FFC pmax pmax
comp=Z,21nm,1.2s
FFC MLR MLR
comp=Z,2µm,18.0s
FFC Flin Flon 33.54 63 P P 09 00 14.3 +0.8
POHA Pohakuloa 33.61 172 P P 09 00 16.0 +1.4
POHA IAmb IAmb 09 00 16.6
comp=Z,75nm,1.0s
POHA IAMs_20 IAMs_20 09 09 53.3
comp=Z,2µm,19.0s
VES Vestal, Richgr 33.62 104 IAMs_20 IAMs_20 09 09 32.1
comp=Z,2µm,19.0s
GMN Gold Mountain 33.70 101 IAmb IAmb 09 00 18.9
comp=Z,146nm,1.6s
SNOW Snow King Moun 33.78 86 IAmb IAmb 09 00 19.6
comp=Z,111nm,1.9s
CWC Cottonwood Cre 33.80 103 IAmb IAmb 09 00 19.9
comp=Z,177nm,1.5s
MLOA Mauna Loa Obse 33.83 172 P P 09 00 18.7 +2.0
BGU Big Grassy Mou 33.91 92 IAmb IAmb 09 00 20.4
comp=Z,165nm,1.6s
RSD Rainshed 33.93 171 P P 09 00 18.4 +1.2
AHID Auburn Hatcher 33.98 88 IAMs_20 IAMs_20 09 12 46.5
comp=Z,2µm,18.0s
AHID Auburn Hatcher 33.98 88 P P 09 00 19.6 +2.0
JOKA Jonika Flow 33.98 171 P P 09 00 18.6 +1.1
JOKA IAmb IAmb 09 00 19.3
comp=Z,68nm,1.0s
STCH Steam Cracks 34.02 171 IAmb IAmb 09 00 19.8
comp=Z,99nm,1.2s
PUH Pauahi 34.02 171 IAmb IAmb 09 00 20.0
comp=Z,101nm,1.0s
ISA Isabella, Lake 34.10 104 IAmb IAmb 09 00 21.7
comp=Z,140nm,1.2s
ISA IAMs_20 IAMs_20 09 11 33.8
comp=Z,2µm,18.0s
TYV Tymovskoe 34.31 290 eP P 09 00 26.7 +6.6
TYV pmax pmax
comp=Z,50nm,1.0s
TYV pmax pmax
comp=Z,200nm,2.5s
HWUT Hardware Ranch 34.38 90 IAmb IAmb 09 00 24.4
comp=Z,114nm,1.9s
HWUT Hardware Ranch 34.38 90 P P 09 00 22.9 +1.9
WCT Wildcat Mounta 34.41 101 IAmb IAmb 09 00 24.9
comp=Z,111nm,1.4s
NKL Nikolayevsk 34.43 294 eP P 09 00 21.0 0.0
NKL eS S 09 05 47.9 -0.4
NKL pmax pmax
comp=N,198nm,1.1s
NKL smax smax
comp=E,351nm,3.4s
NKL smax smax
comp=N,372nm,4.7s
NKL MLR MLR
comp=E,8µm,17.0s
NKL MLR MLR
comp=N,3µm,15.0s
NKL MLR MLR
comp=Z,6µm,18.0s
DUG Dugway, Tooele 34.49 93 IAmb IAmb 09 00 25.4
comp=Z,190nm,1.4s
DUG Dugway, Tooele 34.49 93 P P 09 00 24.1 +2.2
TPNV Topopah Spring 34.53 100 IAMs_20 IAMs_20 09 11 10.0
comp=Z,2µm,20.0s
LRMC Laurel Mtn Rad 34.69 103 IAmb IAmb 09 00 27.0
comp=Z,109nm,1.4s
LRMC IAMs_20 IAMs_20 09 11 55.4
comp=Z,1µm,19.0s
OSI Osito Audit: C 34.70 106 IAmb IAmb 09 00 27.2
comp=Z,211nm,1.6s
OSI IAMs_20 IAMs_20 09 11 06.5
comp=Z,2µm,19.0s
LAO LASA Array 34.74 78 IAmb IAmb 09 00 27.2
comp=Z,122nm,1.3s
TCUT Toone Canyon 34.77 90 IAmb IAmb 09 00 27.7
comp=Z,124nm,1.6s
TPO Tropico Hills 34.80 105 IAmb IAmb 09 00 27.9
comp=Z,208nm,1.5s
TIXI Tiksi 34.84 328 LR LR 09 16 22.7
comp=Z,2µm,18.0s,baz=138,slow=39
TIXI Tiksi 34.84 328 P P 09 00 24.4 0.0
TIXI IAmb IAmb 09 00 36.8
comp=Z,80nm,1.1s
TIXI Tiksi 34.84 328 P P 09 00 24.4 0.0
TIXI pmax pmax
comp=Z,80nm,1.1s
TIXI MLR MLR
comp=Z,2µm,19.0s
BW06 Boulder Array 34.90 86 IAMs_20 IAMs_20 09 13 29.9
comp=Z,1µm,19.0s
PDAR Pinedale Array 34.90 86 P P 09 00 26.8 +1.2
comp=Z,16nm,0.8s,baz=305,slow=9.0,SNR=171
PDAR PcP PcP 09 02 56.0 -2.0
comp=Z,3.4nm,1.0s,baz=313,slow=4.2,SNR=2.4
PDAR PKiKP PKiKP 09 10 18.4 -1.5
comp=Z,0.3nm,0.6s,baz=300,slow=4.8,SNR=3.7
PDAR LR LR 09 12 58.4
comp=Z,378nm,18.4s,baz=294,slow=33
PDAR P3KPbc 09 31 15.7
comp=Z,0.5nm,0.8s,baz=103,slow=5.3,SNR=4.9
comp=Z,16nm,0.8s
PDAR Pinedale Array 34.90 86 P P 09 00 26.6 +1.0
PSUT Pine Spring 34.91 96 IAmb IAmb 09 00 29.0
comp=Z,148nm,1.3s
DGMT Dagmar 35.02 75 IAmb IAmb 09 00 28.9
comp=Z,91nm,1.2s
DGMT Dagmar 35.02 75 IAMs_20 IAMs_20 09 13 37.7
comp=Z,2µm,18.0s
NLU North Lily Min 35.08 92 IAmb IAmb 09 00 30.3
comp=Z,93nm,1.5s
PASC Pasadena Art C 35.32 105 IAmb IAmb 09 00 32.3
comp=Z,177nm,1.7s
PASC IAMs_20 IAMs_20 09 10 31.2
comp=Z,1µm,19.0s
MWC Mount Wilson 35.36 105 IAmb IAmb 09 00 33.0
comp=Z,184nm,1.4s
MWC IAMs_20 IAMs_20 09 10 33.1
comp=Z,2µm,18.0s
UGL Uglegorsk 35.48 287 eP P 09 00 31.0 +0.8
BFSC Mount Baldy Ra 35.58 105 IAmb IAmb 09 00 34.8
comp=Z,191nm,1.4s
BFSC IAMs_20 IAMs_20 09 10 41.9
comp=Z,2µm,18.0s
MTPC Mountain Pass 35.94 101 IAmb IAmb 09 00 38.0
comp=Z,137nm,1.4s
SZCU Shurtz Canyon 35.98 96 IAmb IAmb 09 00 38.3
comp=Z,150nm,1.5s
TMUT Trail Mountain 36.01 93 IAmb IAmb 09 00 38.8
comp=Z,116nm,1.3s
FCC Fort Churchill 36.12 54 P P 09 00 35.6 +0.1
FCC IAmb IAmb 09 00 37.7
comp=Z,162nm,1.3s
FCC Fort Churchill 36.12 54 P P 09 00 35.6 +0.1
FCC pmax pmax
comp=Z,162nm,1.3s
ELS Elsinore Mount 36.14 105 IAmb IAmb 09 00 39.2
comp=Z,232nm,1.6s
YSS Yuzhno-Sakhali 36.16 284 eP P 09 00 37.1 +1.1
YSS e 09 00 46.2
YSS e 09 02 59.1
YSS eS S 09 06 12.9 -2.1

YSS eSSS SSS 09 09 00.6
YSS pmax pmax
comp=Z,300nm,4.4s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS smax smax
comp=N,500nm,8.7s
YSS MLR MLR
comp=Z,800nm,16.0s
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=E,800nm,17.0s
P17A Butcher Ranch, 36.18 92 IAmb IAmb 09 00 40.0
comp=Z,181nm,1.7s
RDMU Red Mountain 36.20 89 IAmb IAmb 09 00 39.9
comp=Z,225nm,1.5s
MTPU Mount Pierson 36.23 95 IAmb IAmb 09 00 41.1
comp=Z,190nm,1.6s
Q16A Castle Valley 36.27 93 IAmb IAmb 09 00 41.1
comp=Z,197nm,1.3s
LCMT Little Creek M 36.28 97 IAmb IAmb 09 00 41.2
comp=Z,229nm,1.4s
P18A Preston Nutter 36.38 91 IAmb IAmb 09 00 41.9
comp=Z,115nm,1.3s
SRU San Rafael Swe 36.54 92 IAmb IAmb 09 00 43.2
comp=Z,224nm,1.5s
PKCU Pink Cliffs 36.55 96 IAmb IAmb 09 00 43.7
comp=Z,206nm,1.4s
YAK Yakutsk 36.68 312 LR LR 09 17 06.4
comp=Z,1µm,20.4s,baz=73,slow=39
YAK Yakutsk 36.68 312 P P 09 00 40.0 -0.3
YAK Yakutsk 36.68 312 IAMs_20 IAMs_20 09 16 48.0
comp=Z,1µm,21.0s
YAK Yakutsk 36.68 312 c iP P 09 00 39.7 -0.6
YAK e*PP sP 09 00 47.6 +3.2
YAK e 09 02 00.9
YAK e 09 03 02.3
YAK eS S 09 06 21.7 -0.9
YAK eSS SnSn 09 08 48.4 -4.3
YAK e 09 10 52.4
YAK pmax pmax
comp=Z,230nm,0.9s
YAK pmax pmax
comp=N,34nm,1.2s
YAK pmax pmax
comp=E,46nm,0.9s
YAK pmax pmax
comp=Z,147nm,22.0s
YAK pmax pmax
comp=N,129nm,3.9s
YAK pmax pmax
comp=E,70nm,1.5s
YAK smax smax
comp=N,576nm,2.5s
YAK smax smax
comp=E,296nm,1.7s
YAK MLR MLR
comp=Z,2µm,37.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK MLR MLR
comp=E,898nm,19.0s
YAK Yakutsk 36.68 312 P P 09 00 40.2 -0.1
BELC Belle Mtn. Jos 36.72 103 IAmb IAmb 09 00 44.0
comp=Z,193nm,1.5s
BELC IAMs_20 IAMs_20 09 12 60.0
comp=Z,2µm,18.0s
PFO Pinyon Flats O 36.72 104 LR LR 09 12 50.5
comp=Z,1µm,18.4s,baz=304,slow=32
PFO Pinyon Flats O 36.72 104 P P 09 00 42.6 +1.5
PFO IAmb IAmb 09 00 44.4
comp=Z,148nm,1.4s
PFO Pinyon Flats O 36.72 104 IAMs_20 IAMs_20 09 12 10.3
comp=Z,2µm,19.0s
PFO Pinyon Flats O 36.72 104 d iP P 09 00 42.7 +1.5
PFO pmax pmax
comp=Z,102nm,1.2s
PMD Palm Desert 36.75 104 IAmb IAmb 09 00 44.1
comp=Z,168nm,1.4s
K22A Casper 36.79 84 IAmb IAmb 09 00 43.8
comp=Z,97nm,1.0s
DPP Dos Picos Cty 36.88 106 IAmb IAmb 09 00 45.9
comp=Z,236nm,1.4s
BORC Borrego Spring 36.99 105 IAmb IAmb 09 00 46.9
comp=Z,218nm,1.4s
IRM Iron Mountain 37.11 102 IAmb IAmb 09 00 47.8
comp=Z,248nm,1.3s
IRM IAMs_20 IAMs_20 09 14 03.2
comp=Z,947nm,18.0s
W13A Hualapai Mount 37.19 100 IAmb IAmb 09 00 48.6
comp=Z,230nm,1.4s
U15A North Rim 37.23 97 IAmb IAmb 09 00 49.4
comp=Z,220nm,1.3s
BAR Barrett 37.27 106 IAmb IAmb 09 00 49.3
comp=Z,209nm,1.4s
BC3 Big Chuckawall 37.28 103 IAmb IAmb 09 00 48.7
comp=Z,119nm,1.4s
BC3 IAMs_20 IAMs_20 09 13 01.9
comp=Z,2µm,19.0s
RSSD Black Hills 37.42 81 P P 09 00 48.3 +1.2
RSSD IAmb IAmb 09 00 49.4
comp=Z,172nm,1.2s
RSSD Black Hills 37.42 81 P P 09 00 48.3 +1.2
RSSD pmax pmax
comp=Z,172nm,1.3s
RSSD Black Hills 37.42 81 P P 09 00 48.3 +1.2
HAYD Hayden 37.62 88 IAmb IAmb 09 00 51.5
comp=Z,149nm,1.7s
YUH Yuha Desert 37.73 105 IAmb IAmb 09 00 52.9
comp=Z,140nm,1.4s
PV21 Cone Mtn., Par 37.82 92 IAmb IAmb 09 00 53.3
comp=Z,191nm,1.9s
GRNR Gornyy 37.85 293 ⇑iP P 09 00 50.4 0.0
GRNR e 09 01 00.2
GRNR pmax pmax
comp=E,10.0nm,0.6s
GRNR pmax pmax
comp=Z,30nm,0.7s
CCX Cicese 37.87 107 IAmb IAmb 09 00 54.4
comp=Z,202nm,1.6s
PV23 Carpenter Ridg 37.87 92 IAmb IAmb 09 00 53.8
comp=Z,231nm,1.6s
ILON Igloolik, Nuna 37.88 34 P P 09 00 51.0 +0.7
ILON IAmb IAmb 09 01 03.0
comp=Z,195nm,1.2s
PV10 Paradox Valley 37.90 92 IAmb IAmb 09 00 54.4
comp=Z,246nm,1.3s
PV20 West Nyswonger 37.97 92 IAmb IAmb 09 00 54.4
comp=Z,105nm,1.1s
PV04 Paradox Valley 37.97 92 IAmb IAmb 09 00 54.6
comp=Z,144nm,1.6s
PV19 Morning Glory 37.98 92 IAmb IAmb 09 00 54.5
comp=Z,104nm,0.9s
MDND Maddock 37.99 73 IAMs_20 IAMs_20 09 15 23.1
comp=Z,2µm,19.0s
PV17 East Wray Mesa 38.01 92 IAmb IAmb 09 00 54.7
comp=Z,103nm,1.2s
E28A Huff 38.03 75 IAMs_20 IAMs_20 09 15 13.5
comp=Z,1µm,18.0s
PV11 David Mesa, Pa 38.05 92 IAmb IAmb 09 00 55.2
comp=Z,131nm,1.3s
PV05 Paradox Valley 38.06 92 IAmb IAmb 09 00 55.5
comp=Z,188nm,1.5s
GLA Glamis 38.08 103 IAmb IAmb 09 00 55.8
comp=Z,243nm,1.4s
GLA IAMs_20 IAMs_20 09 14 15.0
comp=Z,2µm,18.0s
PV03 Paradox Valley 38.10 92 IAmb IAmb 09 00 55.5
comp=Z,176nm,1.6s
PV13 Radium Mtn., P 38.17 92 IAmb IAmb 09 00 56.1
comp=Z,286nm,1.4s
ESJX Sierra Juarez 38.18 106 IAmb IAmb 09 00 57.2
comp=Z,184nm,1.3s
CPBX Cerro Prieto 38.25 105 IAmb IAmb 09 01 14.3
comp=Z,276nm,1.7s
PV01 Paradox Valley 38.34 92 IAmb IAmb 09 00 57.6
comp=Z,243nm,1.6s
WUAZ Wupatki 38.40 97 IAmb IAmb 09 00 58.9
comp=Z,246nm,1.4s
WUAZ IAMs_20 IAMs_20 09 14 04.2
comp=Z,1µm,19.0s
Y14A Wickenburg 38.52 101 IAmb IAmb 09 00 59.4
comp=Z,218nm,1.4s
ULM Lac du Bonnet 38.87 67 P P 09 00 58.7 -0.3
comp=Z,35nm,0.8s,baz=299,slow=9.4,SNR=82
ULM PcP PcP 09 03 09.1 -0.5

comp=Z,5.3nm,0.8s,baz=315,slow=5.7,SNR=2.0
ULM LR LR 09 16 05.7
comp=Z,688nm,19.5s,baz=303,slow=35
comp=Z,35nm,0.8s
ULM Lac du Bonnet 38.87 67 P **P 09 00 59.1 +0.2**
ULM IAmb IAmb 09 01 00.5
comp=Z,169nm,1.6s
ULM Lac du Bonnet 38.87 67 P **P 09 00 59.1 +0.2**
ULM pmax pmax
comp=Z,169nm,1.6s
113A Mohawk Valley, 38.90 103 IAmb IAmb 09 01 02.5
comp=Z,166nm,1.4s
MVCO Mesa Verde 38.99 93 P **P 09 01 01.5 +1.1**
ISCO Idaho Springs 39.06 87 IAMs_20 IAMs_20 09 15 33.0
comp=Z,1µm,18.0s
ISCO Idaho Springs 39.06 87 P **P 09 01 02.3 +1.3**
X16A Lo Mia Camp, P 39.11 99 IAmb IAmb 09 01 05.3
comp=Z,140nm,1.3s
TULEG Thule 39.39 22 IAMs_20 IAMs_20 09 19 37.8
comp=Z,1µm,19.0s
AGMN Agassiz Nation 39.88 70 IAMs_20 IAMs_20 09 16 30.0
comp=Z,1µm,19.0s
AGMN Agassiz Nation 39.88 70 P **P 09 01 07.6 +0.2**
X18A Snowflake 39.92 97 IAmb IAmb 09 01 11.8
comp=Z,192nm,1.5s
PIX Pinacate 39.95 104 IAmb IAmb 09 01 11.3
comp=Z,202nm,1.4s
SUSD Miller 40.24 77 P **P 09 01 10.7 +0.3**
SUSD IAmb IAmb 09 01 12.2
comp=Z,227nm,1.0s
SUSD IAMs_20 IAMs_20 09 16 09.9
comp=Z,835nm,18.0s
EPLO Experimental L 40.35 67 P **P 09 01 11.3 0.0**
OGNE Ogallala 40.49 83 IAmb IAmb 09 01 15.4
comp=Z,156nm,0.9s
K30B Basset 40.89 80 IAMs_20 IAMs_20 09 16 17.3
comp=Z,915nm,18.0s
TUC Tucson 40.99 100 P **P 09 01 18.6 +1.8**
TUC IAmb IAmb 09 01 20.3
comp=Z,146nm,1.2s
TUC Tucson 40.99 100 P **P 09 01 18.6 +1.8**
TUC pmax pmax
comp=Z,146nm,1.3s
TUC Tucson 40.99 100 P **P 09 01 19.0 +2.1**
KLR Kul'dur 41.23 293 LR LR 09 19 41.7
comp=Z,526nm,19.9s,baz=61,slow=38
KLR Kul'dur 41.23 293 ⇓*i* P **P 09 01 18.6 0.0**
KLR pmax pmax
comp=Z,15nm,1.1s
ZEA Zeya 41.31 301 *e*P **P 09 01 18.9 -0.3**
ZEA *e*S **S 09 07 31.3 -1.3**
ZEA pmax pmax
comp=Z,100nm,1.8s
ZEA pmax pmax
comp=Z,100nm,0.8s
ZEA smax smax
comp=N,200nm,7.1s
ZEA smax smax
comp=E,300nm,6.0s
ZEA MLR MLR
comp=N,500nm,13.0s
ZEA MLR MLR
comp=Z,600nm,12.0s
T25A Trinidad 41.49 90 IAmb IAmb 09 01 24.3
comp=Z,210nm,1.4s
ANMO Albuquerque 41.73 94 LR LR 09 16 26.4
comp=Z,673nm,19.6s,baz=308,slow=33
ANMO Albuquerque 41.73 94 P **P 09 01 24.2 +1.2**
ANMO Albuquerque 41.73 94*d i* P **P 09 01 24.3 +1.2**
ANMO pmax pmax
comp=Z,58nm,1.3s
ANMO Albuquerque 41.73 94 P **P 09 01 24.5 +1.4**
ALQ Albuquerque 41.73 94 IAMs_20 IAMs_20 09 16 32.9
comp=Z,738nm,20.0s
H11N2 WAKE ISLAND Hy 41.85 230 T T 09 46 25.0
baz=26,slow=76,SNR=114
H11N3 WAKE ISLAND Hy 41.86 230 T T 09 46 20.2
baz=26,slow=76
H11N1 WAKE ISLAND Hy 41.87 230 T T 09 46 39.9
baz=26,slow=76,SNR=86
ECSD EROS Data Cent 42.02 76 IAMs_20 IAMs_20 09 17 16.0
comp=Z,952nm,18.0s
ECSD EROS Data Cent 42.02 76 P **P 09 01 25.0 -0.1**
Y22A Socorro 42.12 95 IAmb IAmb 09 01 29.9
comp=Z,178nm,1.2s
WAKE Wake Island 42.36 230 P **P 09 01 28.2 +0.2**
EYMN Ely 42.53 68 IAmb IAmb 09 01 30.6
comp=Z,131nm,1.3s
EYMN Ely 42.53 68 P **P 09 01 29.4 +0.2**
NEEM North Greenlan 42.60 18 *i* P **P 09 01 29.8 0.0**
NEEM IAmb IAmb 09 01 42.2
comp=Z,56nm,0.9s
121A Cookes Peak, D 42.61 97 IAmb IAmb 09 01 33.6
comp=Z,184nm,1.4s
KULLO Kullorsuaq 42.84 23 *i* P **P 09 01 33.8 +2.4**
RTBA Rita Blanca 42.96 89 P **P 09 01 33.5 +0.5**
RTBA IAmb IAmb 09 01 35.5
comp=Z,267nm,1.6s
H11S1 WAKE ISLAND Hy 43.01 229 T T 09 47 38.1
baz=26,slow=74,SNR=46
H11S2 WAKE ISLAND Hy 43.02 229 T T 09 47 17.6
baz=26
H11S3 WAKE ISLAND Hy 43.03 229 T T 09 47 45.2
baz=26,slow=74
HEH HeiHe 43.05 296 *e*P **P 09 01 32.7 -0.6**
HEH PP **PP 09 03 14.3 +1.2**
HEH PcP **PcP 09 03 23.2 0.0**
HEH ScP **ScP 09 07 13.5 0.0**
HEH S **S 09 07 54.2 -4.0**
HEH pmax pmax
comp=Z,31nm,0.9s
HEH L L
comp=Z,680nm,14.6s
HEH L L
comp=Z,1µm,17.0s
HEH L L
comp=Z,2µm,16.0s
CBKS Cedar Bluff 43.21 84 IAmb IAmb 09 01 37.4
comp=Z,233nm,1.1s
L34A Svendsen Farm, 43.23 78 IAmb IAmb 09 01 36.2
comp=Z,179nm,1.1s
E38A The Farm, Brul 43.26 70 IAmb IAmb 09 01 36.1
comp=Z,141nm,1.4s
HSIG 43.29 104 IAmb IAmb 09 01 38.5
comp=Z,136nm,1.4s
I37A Lemond, Waseca 43.72 74 IAmb IAmb 09 01 40.4
comp=Z,240nm,1.5s
SRIG Santa Rosalia 43.81 107 IAmb IAmb 09 01 42.5
comp=Z,132nm,1.5s
SRIG Santa Rosalia 43.81 107 P **P 09 01 41.2 +1.4**
EPT El Paso 43.91 97 IAmb IAmb 09 01 43.6
comp=Z,131nm,1.1s
EPT IAMs_20 IAMs_20 09 17 34.1
comp=Z,1µm,20.0s
USA0B Ussuriysk Arra 43.95 287 *e*P **P 09 01 41.5 +0.8**
USRK Ussuriysk Ar. 43.95 287 P **P 09 01 40.8 +0.1**
comp=Z,6.8nm,0.8s,baz=51,slow=7.6,SNR=5.6
USRK PcP **PcP 09 03 26.4 +0.1**
comp=Z,12nm,1.0s,baz=46,slow=4.2,SNR=7.7
USRK LR LR 09 21 17.5
comp=Z,641nm,19.5s,baz=57,slow=38
comp=Z,6.8nm,0.8s
USRK Ussuriysk Ar. 43.95 287 P **P 09 01 40.6 -0.1**
NOR Nord 44.02 7 P **P 09 01 42.9 +2.0**
NOR Nord 44.02 7 *i* P **P 09 01 42.6 +1.8**
NOR IAmb IAmb 09 01 52.9
comp=Z,94nm,1.1s
UPNV Upernavik 44.06 25 P **P 09 01 42.4 +1.1**
UPNV Upernavik 44.06 25 *i* P **P 09 01 40.8 -0.4**
UPNV IAmb IAmb 09 01 52.6
comp=Z,95nm,1.4s
PH02 Texas Public H 44.14 90 IAmb IAmb 09 01 44.9
comp=Z,252nm,1.3s
N35A Tabor 44.34 79 IAMs_20 IAMs_20 09 18 25.8
comp=Z,747nm,18.0s
MSTX Muleshoe 44.61 92 IAmb IAmb 09 01 48.7
comp=Z,166nm,1.4s
MNTX Cornudas Mount 44.63 96 IAmb IAmb 09 01 49.5
comp=Z,93nm,1.1s
MNTX IAMs_20 IAMs_20 09 17 57.2
comp=Z,1µm,19.0s
MNTX Cornudas Mount 44.63 96 P **P 09 01 48.2 +1.8**
AMTX Amarillo 44.64 90 IAmb IAmb 09 01 49.1
comp=Z,200nm,1.5s
AMTX IAMs_20 IAMs_20 09 18 22.1
comp=Z,672nm,18.0s
VLA Vladivostok 44.67 285 ⇑*i* P **P 09 01 48.0 +1.6**
VLA pmax pmax
comp=Z,31nm,1.1s
KSU1 Kansas State U 44.89 82 IAmb IAmb 09 01 50.2
comp=Z,61nm,0.9s
FRB Frobisher Bay 45.01 39 LR LR 09 22 26.8
comp=Z,1µm,18.8s,baz=300,slow=39
FRB Frobisher Bay 45.01 39 P **P 09 01 49.4 +0.5**
MDJ Mudanjiang 45.08 289 P **P 09 01 49.5 -0.2**
MDJ IAMs_20 IAMs_20 09 23 02.4
comp=Z,793nm,19.0s
MDJ Mudanjiang 45.08 289 P **P 09 01 49.1 -0.6**
MDJ PP **PcP 09 03 31.3 +1.1**
MDJ S **S 09 08 24.0 -3.9**
MDJ pmax pmax
comp=Z,18nm,1.4s
MDJ L L
comp=Z,770nm,19.2s
MDJ L L
comp=Z,770nm,19.9s
MDJ L L
comp=Z,1µm,21.3s
SCIA State Center 45.12 76 P **P 09 01 49.9 -0.1**
SCIA IAmb IAmb 09 01 51.5
comp=Z,155nm,1.6s
SCIA IAMs_20 IAMs_20 09 19 11.9
comp=Z,834nm,19.0s
MAJO Matsushiro 45.12 274 P **P 09 01 50.1 -0.1**
MAJO IAmb IAmb 09 02 02.2
comp=Z,106nm,1.4s
MAJO Matsushiro 45.12 274 ⇓*i* P **P 09 01 50.7 +0.5**
MAJO pmax pmax
comp=Z,28nm,1.1s
MAJO Matsushiro 45.12 274 P **P 09 01 50.6 +0.5**
MJAR Matsushiro Arr 45.12 274 P **P 09 01 50.6 +0.4**
comp=Z,7.2nm,0.9s,baz=43,slow=6.6,SNR=9.7
MJAR PcP **PcP 09 03 29.3 -1.2**
comp=Z,16nm,1.1s,baz=29,slow=2.8,SNR=5.6
MJAR LR LR 09 21 11.3
comp=Z,449nm,19.2s,baz=56,slow=37
comp=Z,7.2nm,0.9s
MJAR Matsushiro Arr 45.12 274 P **P 09 01 50.6 +0.4**
MJAR Matsushiro Arr 45.12 274 P **P 09 01 50.6 +0.4**
MJAR pmax pmax
comp=Z,23nm,1.2s
MJB9 Matsu-Tunnel 45.12 274 P **P 09 01 50.4 +0.2**
MJB9 IAmb IAmb 09 02 02.2
comp=Z,99nm,1.4s
OK038 West end E0370 45.33 86 IAmb IAmb 09 01 53.9
comp=Z,88nm,1.0s
I40A Norwalk 45.40 72 IAmb IAmb 09 01 53.3
comp=Z,115nm,1.5s
MSHR Mys Shultsa 45.42 285 *i* P **P 09 01 53.3 +0.9**
MSHR pmax pmax
comp=Z,35nm,0.9s
KAN01 Argonia South 45.47 85 IAmb IAmb 09 01 54.5
comp=Z,119nm,1.4s
NUUG Nuugaatsiaq 45.52 25 *i* P **P 09 01 52.9 +0.1**
NUUG IAmb IAmb 09 02 08.7
comp=Z,76nm,1.0s
BOD Bodaibo 45.59 312 *e*P **P 09 01 53.3 -0.3**
BOD pmax pmax
comp=Z,162nm,1.4s
BNX BinXian 45.64 291 ⇑P **P 09 01 54.6 +0.5**
BNX PcP **PcP 09 03 32.2 +0.1**
BNX PP **PP 09 03 42.5 +1.7**
BNX S **S 09 08 35.4 -0.6**
BNX pmax pmax
comp=Z,48nm,1.1s
BNX pmax pmax
comp=Z,270nm,4.6s
BNX L L
comp=Z,740nm,17.9s
BNX L L
comp=Z,680nm,18.4s
BNX L L
comp=Z,560nm,19.5s
TPB13 Reeves - Culbe 45.66 95 IAmb IAmb 09 01 57.7
comp=Z,174nm,1.5s
F42A Maple Grove Fa 45.67 69 IAMs_20 IAMs_20 09 20 15.1
comp=Z,938nm,18.0s
128A Castleberry Fa 45.72 93 IAmb IAmb 09 01 57.6
comp=Z,259nm,1.2s
PECS Pecos 45.77 95 IAmb IAmb 09 01 58.7
comp=Z,149nm,1.3s
N38A Joes South For 45.80 77 IAmb IAmb 09 01 56.5
comp=Z,144nm,1.2s
N38A IAMs_20 IAMs_20 09 19 34.3
comp=Z,701nm,19.0s
DKNS Dickens 45.93 91 IAmb IAmb 09 03 34.7
comp=Z,56nm,1.0s
TPB06 Permian Basin 45.97 94 IAmb IAmb 09 01 58.8
comp=Z,71nm,1.5s
ODSA Odessa 46.03 93 IAmb IAmb 09 02 01.2
comp=Z,56nm,1.0s
129A Stewart Farms, 46.09 92 IAmb IAmb 09 02 00.1
comp=Z,116nm,1.3s
TPB01 Permian Basin 46.13 96 IAmb IAmb 09 02 01.0
comp=Z,119nm,1.3s
L40A Anamosa 46.18 75 IAmb IAmb 09 01 59.0
comp=Z,68nm,1.4s
JFWS Jewell Farm 46.21 73 IAmb IAmb 09 01 58.9
comp=Z,114nm,1.6s
SAATT Saattut 46.36 26 *i* P **P 09 01 59.1 -0.4**
SAATT IAmb IAmb 09 02 11.1
comp=Z,55nm,1.0s
I42A Draeger Farm, 46.37 71 IAmb IAmb 09 02 00.2
comp=Z,45nm,0.8s
P38A Dawn 46.38 79 IAmb IAmb 09 02 00.7
comp=Z,110nm,1.2s
T35A Sooner Cattle 46.38 84 IAmb IAmb 09 02 01.4
comp=Z,93nm,1.0s
TPB05 Hovey Rd 46.42 95 IAmb IAmb 09 02 03.3
comp=Z,83nm,1.3s
MNHN Monahans 46.46 94 IAmb IAmb 09 02 03.1
comp=Z,64nm,1.2s
WMOK Wichita Mounta 46.48 88 IAMs_20 IAMs_20 09 20 10.7
comp=Z,737nm,20.0s
WMOK Wichita Mounta 46.48 88 P **P 09 02 01.8 +0.8**
JHJ Hachije Jima 2 46.51 269 LR LR 09 18 50.3
comp=Z,259nm,20.3s,baz=78,slow=33
OK029 Liberty Lake 46.56 86 IAMs_20 IAMs_20 09 21 28.5
comp=Z,825nm,18.0s
229A Bryant Ranch, 46.59 93 IAmb IAmb 09 02 04.0
comp=Z,26nm,1.1s
ALPN Alpine 46.62 96 IAmb IAmb 09 02 04.8
comp=Z,71nm,1.1s
OK052 Battle Ridge R 46.82 85 IAMs_20 IAMs_20 09 20 38.3
comp=Z,852nm,18.0s
N41A Harden Midland 47.25 76 IAmb IAmb 09 02 07.5
comp=Z,62nm,1.3s
N41A IAMs_20 IAMs_20 09 20 39.4
comp=Z,995nm,19.0s
P40A Paris 47.31 78 IAMs_20 IAMs_20 09 20 02.2
comp=Z,823nm,18.0s
WTFS Witchita Falls 47.34 88 IAmb IAmb 09 02 09.6
comp=Z,119nm,1.4s
TXAR Lajitas Array 47.36 97 P **P 09 02 08.7 +0.7**
comp=Z,70nm,0.8s,baz=318,slow=6.8,SNR=843
TXAR PcP **PcP 09 03 37.1 -1.4**
comp=Z,5.0nm,0.5s,baz=322,slow=3.6,SNR=13
TXAR ScP **ScP 09 07 31.5 -0.3**
comp=Z,0.7nm,0.8s,baz=306,slow=4.9,SNR=3.5
TXAR PKiKP **PKiKP 09 10 30.1 -1.1**
comp=Z,0.2nm,0.6s,baz=296,slow=0.7,SNR=5.5
TXAR LR LR 09 20 14.8
comp=Z,579nm,18.3s,baz=306,slow=34
comp=Z,70nm,0.8s
TXAR Lajitas Array 47.36 97 P **P 09 02 09.5 +1.5**
LPIG La Paz 47.40 108 LR LR 09 19 14.1
comp=Z,417nm,18.0s,baz=310,slow=32
ABTX Abilene, Hawle 47.43 91 IAMs_20 IAMs_20 09 20 32.8
comp=Z,831nm,20.0s
E46A Sault Ste Mari 47.43 66 IAMs_20 IAMs_20 09 21 18.4
comp=Z,1µm,19.0s
K43A Burlington 47.44 72 IAmb IAmb 09 02 08.6
comp=Z,68nm,1.0s
HILR Hailar Array B 47.51 300 P **P 09 02 08.8 -0.1**
comp=Z,12nm,0.7s,baz=63,slow=11,SNR=7.8
HILR PcP **PcP 09 03 38.5 -0.3**
comp=Z,13nm,0.8s,baz=45,slow=4.3,SNR=4.6
HILR S **S 09 09 03.7 +0.8**
comp=Z,0.6nm,0.2s,baz=36,slow=16,SNR=1.5
HILR LR LR 09 23 50.7
comp=Z,491nm,19.3s,baz=60,slow=38
comp=Z,12nm,0.7s
ILULI Ilulissat 47.51 27 P **P 09 02 09.3 +0.8**
HIA Hailar 47.69 299 P **P 09 02 10.4 +0.2**
HIA pmax pmax
comp=Z,31nm,1.1s
HIA MLR MLR
comp=Z,500nm,19.0s
S39A Bolivar 47.76 81 IAmb IAmb 09 02 10.6
comp=Z,59nm,1.2s
CN2 Changchun 47.93 290 P **P 09 02 12.5 +0.4**
CN2 PcP **PcP 09 03 46.1 +5.9**
CN2 S **S 09 09 07.0 -1.8**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 L L
comp=Z,800nm,19.0s
CN2 L L
comp=Z,600nm,19.0s
CN2 L L
comp=Z,900nm,18.0s
SLBS Sierra La Lagu 47.93 108 P **P 09 02 13.2 +0.8**
SLBS IAmb IAmb 09 02 15.2
comp=Z,82nm,1.3s
SLBS Sierra La Lagu 47.93 108 P **P 09 02 13.9 +1.5**
HPIG 47.94 101 IAmb IAmb 09 02 15.4
comp=Z,69nm,1.2s
HPIG 47.94 101 P **P 09 02 14.0 +1.4**
R40A Maddies Statio 47.99 79 P **P 09 02 11.1 -1.5**
R40A IAmb IAmb 09 02 13.7
comp=Z,31nm,0.8s
R40A IAMs_20 IAMs_20 09 20 49.3
comp=Z,664nm,19.0s
DAG Danmarks Havn 48.03 11 P **P 09 02 13.4 +1.0**
KBS Kingsbay 48.03 2 IAMs_20 IAMs_20 09 23 23.9
comp=Z,747nm,18.0s
KBS Kingsbay 48.03 2⇑*e*P **P 09 02 14.9 +2.5**
KBS pmax pmax
comp=Z,57nm,0.8s
KBS Kingsbay 48.03 2 *e*P **P 09 02 15.2 +2.8**
KBS IAmb IAmb 09 02 25.1
comp=Z,130nm,1.0s
KBS *e*S **S 09 09 11.8 +2.4**
KBS Kingsbay 48.03 2 P **P 09 02 16.5 +4.1**
NRIK Noril'sk 48.17 334 P **P 09 02 14.3 +0.7**
comp=Z,87nm,0.9s,baz=52,slow=7.6,SNR=84
NRIK S **S 09 09 13.1 +1.6**
comp=Z,1.2nm,0.5s,baz=8.7,slow=13,SNR=11
NRIK LR LR 09 25 01.9
comp=Z,2µm,20.7s,baz=52,slow=39
comp=Z,87nm,0.9s
NRIK Noril'sk 48.17 334*c i* P **P 09 02 14.7 +1.1**
NRIK *i* *PP **pwP 09 02 22.2 -1.7**
NRIK pmax pmax
comp=Z,105nm,0.9s
SUMG Summit 48.24 20 IAMs_20 IAMs_20 09 24 14.6
comp=Z,917nm,19.0s
SUMG Summit 48.24 20 P **P 09 02 16.2 +1.6**
SUMG Summit 48.24 20 *i* P **P 09 02 15.2 +0.6**
SUMG IAmb IAmb 09 02 28.3
comp=Z,54nm,1.0s
HHAR Hobbs 48.34 83 IAmb IAmb 09 02 15.8
comp=Z,70nm,1.2s
Z35A Perchaven, San 48.37 88 IAMs_20 IAMs_20 09 22 16.6
comp=Z,743nm,18.0s
P43A Skaggs, Pawnee 48.72 76 IAMs_20 IAMs_20 09 21 34.3
comp=Z,908nm,19.0s
CCM Cathedral Cave 48.75 79 P **P 09 02 17.3 -1.2**
CCM IAmb IAmb 09 02 18.2
comp=Z,65nm,1.3s
CCM IAMs_20 IAMs_20 09 22 08.7
comp=Z,750nm,19.0s
CCM Cathedral Cave 48.75 79 P **P 09 02 17.3 -1.2**
CCM pmax pmax
comp=Z,65nm,1.3s
BRDY Brady 48.76 91 P **P 09 02 19.0 +0.3**
BRDY IAmb IAmb 09 02 20.5
comp=Z,141nm,1.4s
SPA0 Spitsbergen Ar 48.85 1 *e*S **S 09 09 21.0 0.0**
SPITS Spitsbergen Ar 48.85 1 P **P 09 02 18.6 -0.1**
comp=Z,4.4nm,0.4s,baz=18,slow=9.7,SNR=17
SPITS LR LR 09 23 53.9
comp=Z,879nm,18.2s,baz=348,slow=37
comp=Z,4.4nm,0.4s
SPITS Spitsbergen Ar 48.85 1 P **P 09 02 18.4 -0.4**
SPITS pmax pmax
comp=Z,100nm,1.1s
SLM Saint Louis 48.96 78 IAmb IAmb 09 02 20.7
comp=Z,92nm,1.1s
J47A Sunmer 49.10 69 IAmb IAmb 09 02 21.3
comp=Z,48nm,0.9s
SFJD Kangerlussuaq 49.10 29 LR LR 09 24 27.4
comp=Z,424nm,19.1s,baz=306,slow=38
SFJD Kangerlussuaq 49.10 29 P **P 09 02 20.8 +0.1**
SFJD Kangerlussuaq 49.10 29 P **P 09 02 20.8 +0.1**
SFJD pmax pmax
comp=Z,126nm,1.1s
SFJD Kangerlussuaq 49.10 29 P **P 09 02 22.2 +1.4**
SFJD Kangerlussuaq 49.10 29 *i* P **P 09 02 20.7 0.0**
SFJD IAmb IAmb 09 02 33.2
comp=Z,113nm,1.1s
CIT Chita 49.17 305 *e*P **P 09 02 21.8 +0.2**
CIT *e* 09 02 31.0
CIT pmax pmax
comp=Z,204nm,1.2s
WHTX Lake Whitney, 49.19 89 IAMs_20 IAMs_20 09 21 18.3
comp=Z,862nm,19.0s
HHU Hamhung 49.22 285 P **P 09 02 22.4 +0.4**
HHU S **S 09 09 24.8 -2.2**
HHU AmB
comp=Z,232nm,2.5s
JCJ Chichijima 49.40 262 LR LR 09 20 53.6
comp=Z,174nm,20.5s,baz=46,slow=33
JCJ Chichijima 49.40 262 P **P 09 02 24.0 +0.4**
Q44A Meyer Farm, Va 49.50 77 IAmb IAmb 09 02 24.8
comp=Z,74nm,1.2s
Q44A IAMs_20 IAMs_20 09 22 14.4
comp=Z,1µm,18.0s
JMN Monobe 49.63 274 IAmb IAmb 09 02 39.2
comp=Z,48nm,1.0s
FCAR Ozark Folk Cen 49.68 82 IAmb IAmb 09 02 25.5
comp=Z,107nm,1.1s
MIAR Mount Ida 49.74 84 IAmb IAmb 09 02 27.5
comp=Z,91nm,1.2s
MIAR Mount Ida 49.74 84 P **P 09 02 26.3 +0.2**
I49A Point Hope 49.77 68 IAmb IAmb 09 02 27.0
comp=Z,122nm,1.7s
I49A IAMs_20 IAMs_20 09 22 34.3
comp=Z,703nm,20.0s
Z38A Mt. Pleasant 49.78 86 IAMs_20 IAMs_20 09 22 17.8
comp=Z,768nm,21.0s
435B Jarrell 49.97 91 IAmb IAmb 09 02 30.4
comp=Z,139nm,1.1s
HSPB Hornsund (broa 50.02 1 P **P 09 02 32.0 +4.3**
P46A Rosedale 50.08 75 IAmb IAmb 09 02 29.4
comp=Z,111nm,1.3s
S44A Carbondale 50.16 78 IAmb IAmb 09 02 29.6
comp=Z,86nm,1.4s
SNY Shenyang 50.25 289 ⇓P **P 09 02 30.9 +1.1**
SNY pP **pwP 09 02 39.2 -0.5**
SNY S **S 09 09 40.7 -0.7**
SNY pmax pmax
comp=Z,32nm,1.0s
SNY pmax pmax
comp=Z,360nm,5.5s
SNY L L
comp=Z,390nm,19.7s
SNY L L
comp=Z,730nm,20.2s
SNY L L
comp=Z,690nm,19.5s
AAM Ann Arbor 50.36 70 IAmb IAmb 09 02 31.4
comp=Z,84nm,1.6s
AAM IAMs_20 IAMs_20 09 23 09.1
comp=Z,1µm,18.0s
KSRS Korea Array 50.63 282 P **P 09 02 33.5 +0.7**
comp=Z,8.0nm,0.9s,baz=51,slow=6.9,SNR=31
KSRS PcP **PcP 09 03 51.4 +1.2**
comp=Z,9.2nm,0.9s,baz=44,slow=4.8,SNR=1.8
KSRS LR LR 09 24 08.6
comp=Z,194nm,19.7s,baz=55,slow=36
comp=Z,8.0nm,0.9s
K50A Casco 50.63 69 IAmb IAmb 09 02 33.3
comp=Z,79nm,1.4s
KS19 Wonju Array Si 50.63 282 P **P 09 02 32.7 -0.2**
NUUK Nuuk 50.65 32 P **P 09 02 34.3 +1.7**
NUUK Nuuk 50.65 32 *i* P **P 09 02 32.5 -0.1**

NUUK IAmb IAmb 09 02 45.8
comp=Z,128nm,1.2s
KSAR Wonju Array Be 50.66 282 P P 09 02 33.3 +0.3
KSAR Wonju Array Be 50.66 282 P P 09 02 33.3 +0.3
BUKO Buck Lake 50.68 64 P P 09 02 32.6 -0.5
BUKO IAmb IAmb 09 02 34.0
comp=Z,117nm,1.4s
BLO Bloomington 50.77 75 IAmb IAmb 09 02 34.3
comp=Z,76nm,1.1s
HBAR Harrisburg 50.78 81 IAmb IAmb 09 02 34.8
comp=Z,70nm,1.0s
PYAG 50.82 285 P P 09 02 35.1 +0.9
PYAG S **S 09 09 47.4 -2.0**
PYAG AmB
comp=Z,114nm,1.2s
EF02 Christine 50.84 93 IAmb IAmb 09 02 37.1
comp=Z,452nm,1.3s
O48B Farmland 50.84 73 IAmb IAmb 09 02 33.9
comp=Z,60nm,0.9s
SUJ Sinujju 50.85 287 P P 09 02 34.9 +0.4
PEBM Pemiscott Bayo 50.87 80 IAmb IAmb 09 02 34.9
comp=Z,150nm,1.3s
GNAR Gosnell 50.88 80 IAmb IAmb 09 02 35.0
comp=Z,76nm,1.2s
SCHQ Schefferville 50.95 48 P **P 09 02 34.5 -0.6**
comp=Z,34nm,1.1s,baz=313,slow=10,SNR=20
SCHQ LR LR 09 25 56.5
comp=Z,796nm,19.3s,baz=324,slow=38
comp=Z,34nm,1.1s
SCHQ Schefferville 50.95 48 IAmb IAmb 09 02 36.2
comp=Z,104nm,1.5s
N49A Columbus Grove 50.96 71 IAmb IAmb 09 02 35.4
comp=Z,143nm,1.4s
T45A Paducah 50.98 78 IAmb IAmb 09 02 35.8
comp=Z,92nm,1.3s
T45A IAMs_20 IAMs_20 09 22 36.3
comp=Z,712nm,19.0s
XMAS Kiritimati 51.06 176 P P 09 02 36.8 +0.6
XMAS IAmb IAmb 09 02 37.4
comp=Z,95nm,1.1s
Z41A Richland Creek 51.09 85 IAmb IAmb 09 02 38.0
comp=Z,76nm,1.1s
GLAT Glass 51.11 79 IAmb IAmb 09 02 37.2
comp=Z,144nm,1.3s
SADO Sadowa 51.26 65 LR LR 09 23 42.2
comp=Z,805nm,18.6s,baz=349,slow=35
SADO Sadowa 51.26 65 IAmb IAmb 09 02 37.9
comp=Z,97nm,1.5s
M50A Fremont 51.29 70 IAMs_20 IAMs_20 09 23 46.8
comp=Z,1µm,18.0s
HALT Halls 51.32 80 IAmb IAmb 09 02 38.6
comp=Z,162nm,1.3s
O49A Covington 51.36 72 IAmb IAmb 09 02 38.1
comp=Z,98nm,1.5s
INCN Inchon 51.37 283 P P 09 02 38.4 0.0
INCN IAmb IAmb 09 02 49.8
comp=Z,60nm,0.8s
INCN Inchon 51.37 283 P P 09 02 38.4 0.0
INCN pmax pmax
comp=Z,60nm,0.9s
INCN MLR MLR
comp=Z,300nm,22.0s
HJU Haeju 51.52 284 P P 09 02 39.7 +0.3
HJU S **S 09 09 56.8 -2.2**
HJU AmB
comp=Z,198nm,1.4s
WCI Wyandotte Cave 51.54 75 P P 09 02 38.7 -0.9
WCI Wyandotte Cave 51.54 75 IAMs_20 IAMs_20 09 23 21.8
comp=Z,1µm,19.0s
WCI Wyandotte Cave 51.54 75 P P 09 02 38.7 -0.9
WCI pmax pmax
comp=Z,41nm,1.2s
WCI Wyandotte Cave 51.54 75 P P 09 02 38.9 -0.8
HKT Hockley 51.61 90 P P 09 02 40.9 +0.7
HKT Hockley 51.61 90 IAMs_20 IAMs_20 09 22 40.3
comp=Z,778nm,19.0s
HKT Hockley 51.61 90*d i* P **P 09 02 41.5 +1.3**
HKT pmax pmax
comp=Z,144nm,1.3s
HKT Hockley 51.61 90 P P 09 02 41.6 +1.3
TJN Taejon 51.69 282*c i* P **P 09 02 41.2 +0.5**
T47A Sharon Grove 51.90 77 IAmb IAmb 09 02 43.1
comp=Z,103nm,1.1s
T47A IAMs_20 IAMs_20 09 23 24.7
comp=Z,709nm,19.0s
N51A Ashland 51.99 70 IAmb IAmb 09 02 43.0
comp=Z,98nm,1.3s
N51A IAMs_20 IAMs_20 09 24 18.3
comp=Z,924nm,19.0s
WVT Waverly 52.06 78 P P 09 02 43.1 -0.5
WVT IAmb IAmb 09 02 44.3
comp=Z,139nm,1.4s
WVT Waverly 52.06 78 P P 09 02 43.1 -0.5
WVT pmax pmax
comp=Z,139nm,1.4s
WVT Waverly 52.06 78 P P 09 02 43.2 -0.3
ACSO Alum Creek Sta 52.10 71 IAmb IAmb 09 02 44.1
comp=Z,110nm,1.4s
KVTX Kingsville 52.12 94 P P 09 02 46.4 +2.3
M52A Chesterland 52.15 69 IAMs_20 IAMs_20 09 23 47.5
comp=Z,785nm,18.0s
BJO1 Bjornoya 52.56 0 *e*S **S 09 10 13.5 +1.1**
P51A Williamsport 52.56 72 IAmb IAmb 09 02 47.3
comp=Z,95nm,1.3s
Y45A Yeager Farm, C 52.61 82 IAmb IAmb 09 02 48.6
comp=Z,110nm,1.2s
Y45A IAMs_20 IAMs_20 09 28 34.8
comp=Z,542nm,18.0s
441A DeRidder 52.63 87 IAmb IAmb 09 02 49.8
comp=Z,72nm,0.8s
441A IAMs_20 IAMs_20 09 24 57.7
comp=Z,887nm,18.0s
MEDO Medina 52.68 66 IAmb IAmb 09 02 49.0
comp=Z,133nm,1.2s
TRQ Mont Tremblant 52.75 60 IAmb IAmb 09 02 49.0
comp=Z,136nm,1.4s
O52A Adamsville 52.83 71 IAmb IAmb 09 02 49.3
comp=Z,113nm,1.2s
O52A IAMs_20 IAMs_20 09 24 37.5
comp=Z,814nm,18.0s
V48A Smith Brothers 52.92 78 IAMs_20 IAMs_20 09 23 44.7
comp=Z,643nm,19.0s
ZAIG Zacatecas 52.92 102 IAmb IAmb 09 02 52.9
comp=Z,133nm,1.4s
ZAIG Zacatecas 52.92 102 P P 09 02 51.7 +1.2
N53A Lisbon 52.93 69 IAmb IAmb 09 02 50.0
comp=Z,94nm,1.4s
N53A IAMs_20 IAMs_20 09 24 10.1
comp=Z,837nm,19.0s
J55A Hilton 52.96 65 IAmb IAmb 09 02 50.9
comp=Z,100nm,1.2s
U49A Red Boiling Sp 53.00 77 IAMs_20 IAMs_20 09 23 45.7
comp=Z,817nm,20.0s
SCO Scoresbysund 53.04 16 IAMs_20 IAMs_20 09 28 17.2
comp=Z,763nm,18.0s
SCO Scoresbysund 53.04 16 P P 09 02 51.5 +1.3
XLT XiLinHaoTe 53.04 296*e* P **P 09 02 52.7 +1.9**
XLT sP pwP 09 03 01.7 +0.9
XLT S **S 09 10 21.7 +1.7**
XLT pmax pmax
comp=Z,31nm,1.2s
XLT pmax pmax
comp=Z,270nm,3.7s
XLT L L
comp=Z,570nm,19.4s
XLT L L
comp=Z,280nm,14.9s
O53A New Philadelph 53.09 70 IAmb IAmb 09 02 51.1
comp=Z,74nm,1.3s
SOEG Soedalen 53.15 21 *i* P **P 09 02 51.5 +0.4**
SOEG IAmb IAmb 09 03 02.5
comp=Z,170nm,1.3s
VBMS Vicksburg 53.19 84 IAmb IAmb 09 02 53.6
comp=Z,144nm,1.1s
VBMS IAMs_20 IAMs_20 09 25 54.2
comp=Z,729nm,19.0s
T50A Nancy 53.20 75 IAMs_20 IAMs_20 09 24 32.9
comp=Z,828nm,19.0s
MMNY Mt. Morris Dam 53.27 66 IAmb IAmb 09 02 53.0
comp=Z,110nm,1.3s
DL2 Dalian 53.30 288 P P 09 02 51.8 -0.9
DL2 S **S 09 10 25.2 +1.8**
DL2 pmax pmax
comp=Z,40nm,0.7s
DL2 pmax pmax
comp=Z,370nm,6.6s
DL2 L L
comp=Z,430nm,18.5s
DL2 L L
comp=Z,1µm,16.8s
DL2 L L
comp=Z,1µm,20.8s
LDAQ Lac Daran 53.30 57 IAmb IAmb 09 02 53.4
comp=Z,121nm,1.6s
IRK Irkutsk 53.43 310*e* P **P 09 02 53.7 +0.2**
IRK *e*S **S 09 10 21.1 -3.8**
IRK pmax pmax
comp=Z,172nm,1.3s
O54A Avella 53.61 70 IAmb IAmb 09 02 54.9
comp=Z,134nm,1.4s
X48A Hartselle 53.69 79 IAMs_20 IAMs_20 09 23 46.0
comp=Z,513nm,18.0s
ANGG Ammassalik, Gr 53.72 26 P **P 09 02 55.5 +0.2**
ANGG Ammassalik, Gr 53.72 26*i* P **P 09 02 54.4 -0.9**
ANGG IAmb IAmb 09 03 05.8
comp=Z,244nm,1.7s
ANGG Ammassalik, Gr 53.72 26*i* P **S 09 10 24.6 -3.7**
ANGG *i* S S 09 10 28.0 -0.3
146A Union 53.77 82 IAMs_20 IAMs_20 09 24 11.4
comp=Z,558nm,18.0s
LONY Lake Ozonia 53.80 62 IAmb IAmb 09 02 56.8
comp=Z,107nm,1.5s
J57A Williamstown 53.85 64 IAmb IAmb 09 02 57.5
comp=Z,89nm,1.3s
J57A IAMs_20 IAMs_20 09 25 00.1
comp=Z,887nm,20.0s
L56A Greenwood 53.86 66 IAMs_20 IAMs_20 09 25 05.4
comp=Z,1µm,19.0s
IVI Ivigtut 53.92 34 IAmb IAmb 09 02 58.6
comp=Z,93nm,1.6s
Z47A Carrollton 53.96 81 IAmb IAmb 09 02 58.0
comp=Z,82nm,1.1s
K57A Scipio Center 54.03 65 IAmb IAmb 09 03 01.1
comp=Z,95nm,1.5s
K57A IAMs_20 IAMs_20 09 25 17.8
comp=Z,820nm,20.0s
LMQ La Malbaie 54.04 57 IAmb IAmb 09 02 58.4
comp=Z,75nm,1.6s
TLY Talaya 54.09 310 LR LR 09 27 44.2
comp=Z,762nm,19.0s,baz=26,slow=38
TLY Talaya 54.09 310 P **P 09 02 59.0 +0.6**
TLY Talaya 54.09 310*d i* P **P 09 02 59.7 +1.3**
TLY *i* *PP **pwP 09 03 09.0 +0.2**
TLY pmax pmax
comp=Z,39nm,0.9s
TLY Talaya 54.09 310 P **P 09 02 60.0 +1.6**
FRNY Flat Rock 54.18 61 IAmb IAmb 09 02 59.1
comp=Z,63nm,1.4s
W50A Signal Mountai 54.19 77 IAmb IAmb 09 02 59.4
comp=Z,49nm,1.1s
W50A IAMs_20 IAMs_20 09 24 25.0
comp=Z,834nm,19.0s
MCWV Mont Chateau 54.27 70 IAmb IAmb 09 02 59.9
comp=Z,110nm,1.4s
TZTN Tazewell 54.28 75 IAmb IAmb 09 03 00.4
comp=Z,82nm,1.3s
TZTN Tazewell 54.28 75 P **P 09 02 59.3 -0.7**
346A Big Creek Wild 54.41 84 IAmb IAmb 09 03 02.1
comp=Z,80nm,1.0s
346A IAMs_20 IAMs_20 09 30 45.5
comp=Z,523nm,18.0s
JNW Jan Mayen West 54.45 11*e*S **S 09 10 40.6 +2.5**
Y49A Blount Mountai 54.48 79 IAMs_20 IAMs_20 09 25 31.9
comp=Z,500nm,18.0s
JMIC Jan Mayen 54.48 11 LR LR 09 26 37.7
comp=Z,816nm,21.1s,baz=35,slow=36
JNE Jan Mayen East 54.50 11*e*S **S 09 10 41.1 +2.4**
J59A Piesco 54.62 63 IAmb IAmb 09 03 02.9
comp=Z,135nm,1.6s
J59A IAMs_20 IAMs_20 09 25 10.3
comp=Z,997nm,19.0s
M57A Sunshine Farm, 54.64 66 IAmb IAmb 09 03 03.1
comp=Z,141nm,1.3s
M57A IAMs_20 IAMs_20 09 25 32.0
comp=Z,961nm,18.0s
BINY Binghamton 54.68 65 IAmb IAmb 09 03 03.6
comp=Z,109nm,1.2s
BINY IAMs_20 IAMs_20 09 25 36.0
comp=Z,740nm,18.0s
BINY Binghamton 54.68 65 P **P 09 03 02.5 -0.2**
TKL Tuckaleechee C 54.77 76 LR LR 09 25 15.3
comp=Z,620nm,18.9s,baz=323,slow=35
X51A Calhoun 54.90 78 IAmb IAmb 09 03 04.5
comp=Z,55nm,1.2s
X51A IAMs_20 IAMs_20 09 25 49.8
comp=Z,673nm,18.0s
D62A Allapoint, All 55.00 57 IAmb IAmb 09 03 05.5
comp=Z,98nm,1.4s
D62A IAMs_20 IAMs_20 09 27 56.7
comp=Z,940nm,18.0s
ULN Ulaanbaatar 55.05 305 P **P 09 03 06.4 +0.8**
ULN IAmb IAmb 09 03 17.0
comp=Z,90nm,0.9s
ULN Ulaanbaatar 55.05 305 IAMs_20 IAMs_20 09 29 26.5
comp=Z,816nm,19.0s
ULN Ulaanbaatar 55.05 305 P **P 09 03 06.4 +0.8**
ULN pmax pmax
comp=Z,90nm,1.0s
ULN MLR MLR
comp=Z,800nm,19.0s
ULN Ulaanbaatar 55.05 305 P **P 09 03 06.5 +1.0**
ULN Ulaanbaatar 55.05 305 P **P 09 03 06.6 +1.0**
Q56A Snyder Ridge, 55.06 70 IAMs_20 IAMs_20 09 26 04.5
comp=Z,743nm,19.0s
W52A Murphy 55.07 77 IAMs_20 IAMs_20 09 25 13.4
comp=Z,946nm,19.0s
L59A Walton 55.20 64 IAmb IAmb 09 03 07.5
comp=Z,76nm,1.4s
L59A IAMs_20 IAMs_20 09 25 43.7
comp=Z,652nm,20.0s
N58A Sunbury 55.21 67 IAmb IAmb 09 03 07.0
comp=Z,101nm,1.1s
N58A IAMs_20 IAMs_20 09 25 27.1
comp=Z,789nm,20.0s
KSPA Keystone Colle 55.24 65 IAmb IAmb 09 03 07.4
comp=Z,82nm,1.3s
U54A Nelsons Funny 55.30 74 IAmb IAmb 09 03 07.9
comp=Z,73nm,1.2s
MOY Mondy 55.31 312*e* P P 09 03 18.2 +11
MOY pmax pmax
comp=Z,93nm,1.4s
V53A Saluda 55.32 75 IAmb IAmb 09 03 07.9
comp=Z,73nm,1.3s
SONM Songino Array 55.40 305 P **P 09 03 08.8 +0.8**
comp=Z,16nm,0.9s,baz=48,slow=6.5,SNR=71
SONM PcP **PcP 09 04 08.2 0.0**
comp=Z,22nm,1.0s,baz=60,slow=2.3,SNR=4.4
SONM ScP **ScP 09 08 07.1 +0.8**
comp=Z,1.3nm,0.8s,baz=67,slow=3.7,SNR=2.4
SONM S **S 09 10 55.1 +3.2**
comp=Z,0.3nm,0.3s,baz=35,slow=13,SNR=5.1
SONM LR LR 09 28 47.6
comp=Z,1µm,18.2s,baz=45,slow=38
comp=Z,16nm,0.9s
SONM Songino Array 55.40 305 P **P 09 03 08.8 +0.8**
SONM IAmb IAmb 09 03 19.9
comp=Z,92nm,1.0s
SONM Songino Array 55.40 305 P **P 09 03 08.8 +0.8**
SONM pmax pmax
comp=Z,92nm,1.0s
P57A Homestead Farm 55.42 69 IAmb IAmb 09 03 08.3
comp=Z,85nm,1.2s
P57A IAMs_20 IAMs_20 09 25 47.8
comp=Z,777nm,20.0s
LBNH Lisbon 55.46 61 IAMs_20 IAMs_20 09 24 57.0
comp=Z,621nm,20.0s
G62A West of Eustis 55.52 59 IAmb IAmb 09 03 09.3
comp=Z,81nm,1.2s
BJI2 Beijing 55.62 292 P **P 09 03 08.9 -0.6**
BJI2 PcP **PcP 09 04 09.0 0.0**
BJI2 S **S 09 10 53.8 -0.9**
BJI2 ScS **ScS 09 12 58.6 +0.6**
BJI2 pmax pmax
comp=Z,7.0nm,0.9s
BJI2 pmax pmax
comp=Z,160nm,5.7s
BJI2 L L
comp=Z,320nm,13.5s
BJI2 L L
comp=Z,350nm,15.9s
BJI2 L L
comp=Z,460nm,14.8s
BJT Baijiatuau 55.62 292 P **P 09 03 09.8 +0.3**
BJT Baijiatuau 55.62 292 IAMs_20 IAMs_20 09 29 00.3
comp=Z,497nm,19.0s
BJT Baijiatuau 55.62 292 P **P 09 03 09.8 +0.3**
BJT pmax pmax
comp=Z,21nm,0.8s
BJT MLR MLR
comp=Z,500nm,19.0s
BLA Blacksburg 55.62 72 IAmb IAmb 09 03 10.1
comp=Z,70nm,1.2s
H62A Milan 55.63 60 IAmb IAmb 09 03 10.1
comp=Z,88nm,1.3s
J61A Chester 55.74 62 IAmb IAmb 09 03 11.6
comp=Z,102nm,1.4s
250A Grady 55.89 81 IAmb IAmb 09 03 11.8
comp=Z,90nm,1.2s
250A IAMs_20 IAMs_20 09 29 03.5
comp=Z,503nm,18.0s
MVL Millersville 55.99 67 IAmb IAmb 09 03 12.4
comp=Z,69nm,1.3s
BRAL Brewton 56.01 82 IAMs_20 IAMs_20 09 25 50.6
comp=Z,866nm,18.0s
S57A Dark Hollow, R 56.08 71 IAmb IAmb 09 04 41.8
comp=Z,99nm,1.0s
F64A Sherman 56.19 57 IAmb IAmb 09 03 13.8
comp=Z,145nm,1.6s
L61B Northampton 56.29 63 IAMs_20 IAMs_20 09 26 32.4
comp=Z,958nm,20.0s
I63A Otisfield 56.29 60 IAmb IAmb 09 03 15.2
comp=Z,90nm,1.4s
152A Waverly Hall 56.32 79 IAMs_20 IAMs_20 09 26 33.6
comp=Z,671nm,18.0s
BATG Bathurst New B 56.35 55 IAmb IAmb 09 03 15.2
comp=Z,122nm,1.4s
KSCT Kent School, K 56.36 64 IAmb IAmb 09 03 15.9
comp=Z,116nm,1.4s
K62A Royalston 56.38 62 IAmb IAmb 09 03 16.1
comp=Z,129nm,1.4s
K62A IAMs_20 IAMs_20 09 26 40.8
comp=Z,660nm,20.0s
HAMF Hammerfest 56.41 358*e* P **P 09 03 15.3 +0.7**
HAMF IAmb IAmb 09 03 25.9
comp=Z,48nm,1.0s
HAMF *e*S **S 09 11 06.6 +2.3**
WVL Waterville 56.42 59 IAmb IAmb 09 03 15.3
comp=Z,75nm,1.3s
GOGA Godfrey 56.53 78 IAMs_20 IAMs_20 09 26 51.0
comp=Z,842nm,18.0s
GOGA Godfrey 56.53 78 P **P 09 03 14.2 -1.8**
R58B Mineral 56.55 70 IAmb IAmb 09 03 16.8
comp=Z,58nm,1.3s
R58B IAMs_20 IAMs_20 09 27 09.8
comp=Z,781nm,18.0s
KMSC Kings Mountain 56.55 75 IAmb IAmb 09 03 16.1
comp=Z,85nm,1.3s
PAL Palisades 56.63 65 IAmb IAmb 09 03 17.5
comp=Z,65nm,1.4s
PAL IAMs_20 IAMs_20 09 26 25.6
comp=Z,759nm,20.0s
CBN Corbin Frederi 56.66 69 IAmb IAmb 09 03 17.2
comp=Z,88nm,1.4s
CBN IAMs_20 IAMs_20 09 27 10.9
comp=Z,651nm,19.0s
CPNY Central Park 56.75 65 IAmb IAmb 09 03 18.5
comp=Z,77nm,1.3s
VADS Vadso 56.76 356*e* P **P 09 03 17.5 +0.2**
VADS IAmb IAmb 09 03 31.6
comp=Z,67nm,1.0s
VADS *e*S **S 09 11 09.9 +0.9**
WSPT Westport, CT 56.83 64 IAmb IAmb 09 03 18.8
comp=Z,75nm,1.3s
WSPT IAMs_20 IAMs_20 09 26 41.8
comp=Z,670nm,20.0s
HRV Adam Dziewonsk 56.85 62 P **P 09 03 17.7 -0.6**
HRV IAmb IAmb 09 03 19.3
comp=Z,74nm,1.4s
HRV Adam Dziewonsk 56.85 62 IAMs_20 IAMs_20 09 26 47.8
comp=Z,1µm,20.0s
HRV Adam Dziewonsk 56.85 62 P **P 09 03 17.7 -0.6**
HRV pmax pmax
comp=Z,74nm,1.4s
N62A Caumsett State 56.92 65 P **P 09 03 18.3 -0.5**
N62A IAmb IAmb 09 03 19.5
comp=Z,84nm,1.2s
N62A IAMs_20 IAMs_20 09 26 35.3
comp=Z,668nm,19.0s
352A Blakely 57.04 80 IAmb IAmb 09 03 20.4
comp=Z,62nm,0.9s
352A IAMs_20 IAMs_20 09 28 46.0
comp=Z,508nm,18.0s
WES Weston 57.06 62 IAmb IAmb 09 03 20.6
comp=Z,154nm,1.5s
P61A Hammonton 57.08 66 IAMs_20 IAMs_20 09 26 56.5
comp=Z,865nm,18.0s
PATS Pohnpei 57.10 231 P **P 09 03 21.0 +0.6**
PATS Pohnpei 57.10 231 P **P 09 03 20.8 +0.5**
PATS Pohnpei 57.10 231 P **P 09 03 20.9 +0.6**
BCX Boston College 57.17 62 IAmb IAmb 09 03 21.4
comp=Z,94nm,1.6s
BCX IAMs_20 IAMs_20 09 26 40.8
comp=Z,907nm,20.0s
KEV Kevo 57.21 357 P **P 09 03 20.6 +0.2**
KEV IAmb IAmb 09 03 35.5
comp=Z,60nm,0.9s
KEV IAMs_20 IAMs_20 09 26 40.4
comp=Z,578nm,22.0s
KEV Kevo 57.21 357 P **P 09 03 20.6 +0.2**
KEV pmax pmax
comp=Z,60nm,0.9s
KEV Kevo 57.21 357 P **P 09 03 23.8 +3.3**
154A Montrose 57.31 78 IAmb IAmb 09 03 21.8
comp=Z,61nm,1.0s
154A IAMs_20 IAMs_20 09 25 59.7
comp=Z,564nm,19.0s
M63A Gales Ferry 57.36 63 IAmb IAmb 09 03 22.7
comp=Z,131nm,1.2s
M63A IAMs_20 IAMs_20 09 26 44.7
comp=Z,818nm,19.0s
V58A Windy Hill, Pi 57.37 73 IAmb IAmb 09 03 22.2
comp=Z,67nm,1.2s
T59A Double "B" Far 57.43 71 IAmb IAmb 09 03 22.8
comp=Z,112nm,1.4s
EMMW East Machias 57.44 58 IAmb IAmb 09 03 22.6
comp=Z,60nm,1.2s
TRO Tromso 57.45 0*e* P **P 09 03 23.2 +1.1**
TRO IAmb IAmb 09 03 33.5
comp=Z,80nm,1.0s
TRO *e*S **S 09 11 19.2 +1.0**
ARA0 ARCESS Array S 57.48 358*e* P **P 09 03 22.5 +0.1**
ARA0 IAmb IAmb 09 03 33.1
comp=Z,55nm,1.1s
ARA0 *e*S **S 09 11 19.4 +0.8**
ARCES ARCESS Array B 57.48 358 P **P 09 03 22.1 -0.2**
comp=Z,11nm,0.9s,baz=12,slow=7.1,SNR=20
ARCES LR LR 09 29 54.5
comp=Z,387nm,18.3s,baz=357,slow=38
comp=Z,11nm,0.9s
ARCES ARCESS Array B 57.48 358 P **P 09 03 22.2 -0.2**
ARCES IAmb IAmb 09 03 34.0
comp=Z,62nm,1.1s
ARCES ARCESS Array B 57.48 358 P **P 09 03 22.2 -0.2**
ARCES pmax pmax
comp=Z,62nm,1.2s
JETT Jettan, Norway 57.53 360*e* P **P 09 03 23.9 +1.1**
JETT IAmb IAmb 09 03 34.3
comp=Z,93nm,0.9s
HHC Hu-ho-hao-te 57.57 296⇑*i* P **P 09 03 25.1 +1.6**
HHC sP pwP 09 03 33.2 -0.3
HHC PP **PP 09 05 32.8 +1.9**
HHC S **S 09 11 20.9 +0.2**
HHC sS sS 09 11 26.8 +1.2
HHC pmax pmax
comp=Z,29nm,1.2s
HHC pmax pmax
comp=Z,210nm,7.6s
HHC L L
comp=Z,610nm,14.6s
HHC L L
comp=Z,980nm,13.8s
HHC L L
comp=Z,880nm,14.5s
KNGR Kungurtug, Tuv 57.61 312⇑*i* P **P 09 03 25.9 +2.2**
KNGR pmax pmax
comp=Z,21nm,0.7s
L64A Middleborough 57.63 62 IAMs_20 IAMs_20 09 27 12.8
comp=Z,960nm,20.0s
R61A Willards 57.71 68 IAMs_20 IAMs_20 09 27 28.6
comp=Z,891nm,20.0s
TIA Tai'an 57.74 289 P **P 09 03 25.3 +0.6**

TIA S **S** **09 11 18.3 -4.6**
TIA pmax pmax
comp=Z,38nm,1.0s
TIA pmax pmax
comp=Z,270nm,5.1s
TIA L L
comp=Z,800nm,17.3s
TIA L L
comp=Z,640nm,16.5s
TIA L L
comp=Z,1µm,18.0s
TIGA Tifton 57.86 79 IAMs_20 IAMs_20 09 28 33.6
comp=Z,719nm,18.0s
JOW Kunigami 57.94 273 LR LR 09 27 48.4
comp=Z,98nm,20.3s,baz=76,slow=36
LMN Caledonia Moun 57.97 55 IAmb IAmb 09 03 26.5
comp=Z,134nm,1.3s
S61A Accomac 57.99 69 IAMs_20 IAMs_20 09 29 02.8
comp=Z,621nm,18.0s
M65A Busby, Falmout 58.00 62 IAMs_20 IAMs_20 09 27 24.1
comp=Z,858nm,20.0s
KTK1 Kautokeino 58.05 358 *e*P **P** **09 03 28.6 +2.3**
KTK1 IAmb IAmb 09 03 37.1
comp=Z,41nm,1.0s
KTK1 *e*S **S** **09 11 26.9 +0.8**
X58A Rowland 58.12 74 IAmb IAmb 09 03 27.5
comp=Z,56nm,1.3s
BORG Borgarnes 58.21 19 P **P** **09 03 26.6 -0.9**
comp=Z,11nm,1.1s,baz=354,slow=10,SNR=1.7
BORG LR LR 09 31 36.5
comp=Z,322nm,18.7s,baz=336,slow=39
comp=Z,11nm,1.1s
HNS HongShan 58.27 291 ⇓P **P** **09 03 29.5 +1.2**
HNS S **S** **09 11 32.9 +3.2**
HNS ScS **ScS** **09 13 19.4 +2.2**
HNS pmax pmax
comp=Z,54nm,1.2s
HNS L L
comp=Z,680nm,16.5s
HNS L L
comp=Z,750nm,16.1s
HNS L L
comp=Z,1µm,17.3s
GUMO Guam 58.38 249 LR LR 09 23 51.7
comp=Z,183nm,21.9s,baz=75,slow=31
BTO2 Baotou 58.55 297 *e*P **P** **09 03 31.6 +1.2**
BTO2 sP **pwP** **09 03 39.0 -1.4**
BTO2 PP **PP** **09 05 46.6 +7.0**
BTO2 S **S** **09 11 37.3 +3.7**
BTO2 SS **SS** **09 15 23.5 -2.0**
BTO2 pmax pmax
comp=Z,46nm,1.1s
BTO2 pmax pmax
comp=Z,760nm,4.7s
BTO2 L L
comp=Z,1µm,17.6s
BTO2 L L
comp=Z,1µm,15.5s
BTO2 L L
comp=Z,780nm,14.7s
NHSC New Hope 58.67 76 IAmb IAmb 09 03 32.1
comp=Z,109nm,1.2s
LVZ Lovozero 58.68 353 P **P** **09 03 30.7 -0.1**
LVZ IAmb IAmb 09 03 43.1
comp=Z,83nm,1.0s
LVZ IAMs_20 IAMs_20 09 30 57.1
comp=Z,776nm,19.0s
LVZ Lovozero 58.68 353 ⇑*i*P **P** **09 03 30.2 -0.6**
LVZ pmax pmax
comp=Z,26nm,1.3s
LVZ Lovozero 58.68 353 P **P** **09 03 30.6 -0.2**
comp=Z,1µmcomp=Z,106nm,1.1s
LVZ Lovozero 58.68 353 P **P** **09 03 31.7 +0.9**
RGRS Roger Stewart 58.80 76 IAmb IAmb 09 03 32.4
comp=Z,84nm,1.2s
CSU Charleston Sou 58.82 76 IAmb IAmb 09 03 32.5
comp=Z,123nm,1.4s
LOF Lofoten 58.88 3 *e*P **P** **09 03 32.5 +0.4**
LOF IAmb IAmb 09 03 41.3
comp=Z,24nm,0.9s
LOF *e*S **S** **09 11 37.6 +0.8**
DRLN Deer Lake 58.96 48 IAmb IAmb 09 03 33.5
comp=Z,66nm,1.2s
257A Skidaway Islan 58.99 77 IAMs_20 IAMs_20 09 27 23.1
comp=Z,660nm,20.0s
SSE Sheshan 59.05 282 P **P** **09 03 33.1 -0.7**
SSE S **S** **09 11 40.7 +0.8**
SSE pmax pmax
comp=Z,28nm,1.1s
SSE pmax pmax
comp=Z,230nm,4.0s
SSE L L
comp=Z,120nm,12.2s
SSE L L
comp=Z,150nm,12.5s
APA Apatity 59.09 354 ⇓*e*P **P** **09 03 33.8 +0.2**
APA *e* 09 04 18.2
APA *e*S **S** **09 11 33.8 -5.7**
APA *e* 09 13 16.9
APA pmax pmax
comp=Z,19nm,1.0s
APA MLR MLR
comp=Z,773nm,23.4s
STEI Steigen 59.12 2 *e*P **P** **09 03 34.9 +1.1**
STEI IAmb IAmb 09 03 45.0
comp=Z,48nm,1.1s
456A Hilliard 59.31 79 IAmb IAmb 09 03 36.5
comp=Z,49nm,1.2s
456A IAMs_20 IAMs_20 09 27 18.8
comp=Z,600nm,19.0s
TIY Taiyuan 59.31 293 *e*P **P** **09 03 37.5 +1.8**
TIY ScS **ScS** **09 13 22.3 -2.9**
TIY pmax pmax
comp=Z,30nm,0.8s
TIY pmax pmax
comp=Z,240nm,3.7s
TIY L L
comp=Z,360nm,13.7s
TIY L L
comp=Z,370nm,14.4s
TIY L L
comp=Z,300nm,20.6s
SGF Sodankyl 59.55 357 P **P** **09 03 38.0 +1.3**
FAUS Fauske 59.67 2 *e*P **P** **09 03 38.5 +0.9**
FAUS IAmb IAmb 09 03 55.8
comp=Z,48nm,1.0s
FAUS *e*S **S** **09 11 48.4 +1.3**
NJ2 Nanjing 59.72 284 ⇓P **P** **09 03 38.6 +0.1**
NJ2 sP **pwP** **09 03 46.0 -2.5**
NJ2 pmax pmax
comp=Z,70nm,1.1s
656A Willston 59.99 80 IAMs_20 IAMs_20 09 30 36.0
comp=Z,495nm,18.0s
VAGH Vaagaholmen 60.28 3 *e*P **P** **09 03 43.1 +1.3**
VAGH IAmb IAmb 09 03 53.0
comp=Z,28nm,0.9s
ZAA0 Zalesovo Array 60.29 322 P **P** **09 03 42.8 +0.7**
ZAA0 IAmb IAmb 09 03 59.6
comp=Z,44nm,1.1s
ZALV Zalesovo Beam 60.29 322 P **P** **09 03 42.7 +0.6**
comp=Z,9.1nm,0.6s,baz=41,slow=6.0,SNR=39
ZALV S **S** **09 11 57.9 +2.5**
comp=Z,0.3nm,0.3s,baz=46,slow=6.2,SNR=1.3
ZALV LR LR 09 31 25.3
comp=Z,1µm,21.1s,baz=38,slow=38
comp=Z,9.1nm,0.6s
ZALV Zalesovo Beam 60.29 322 *i* P **P** **09 03 43.0 +0.9**
ZALV pmax pmax
comp=Z,9.0nm,0.6s
KONS Konsvik 60.50 3 *e*P **P** **09 03 44.2 +0.9**
KONS IAmb IAmb 09 03 55.2
comp=Z,52nm,1.1s
RAUS Rausandaksla 60.59 3 *e*P **P** **09 03 45.0 +1.1**
RAUS IAmb IAmb 09 03 56.8
comp=Z,101nm,1.1s
RAUS *e*S **S** **09 11 59.1 +0.2**
STOK Stokkvaagen 60.67 3 *e*P **P** **09 03 45.2 +0.8**
STOK IAmb IAmb 09 03 57.0
comp=Z,73nm,1.1s
STOK *e*S **S** **09 12 00.7 +0.9**
LEIR Leirfjorden 60.89 3 *e*P **P** **09 03 46.9 +0.9**
LEIR IAmb IAmb 09 03 58.0
comp=Z,104nm,1.4s
LEIR *e*S **S** **09 12 03.8 +1.1**
DWPF Disney Wildern 61.57 80 P **P** **09 03 50.3 -0.8**
DWPF IAmb IAmb 09 03 51.3
comp=Z,39nm,1.1s
DWPF Disney Wildern 61.57 80 IAMs_20 IAMs_20 09 30 20.9
comp=Z,394nm,18.0s
LYN LuoYang 61.58 290 P **P** **09 03 51.7 +0.6**
LYN PP **PP** **09 06 10.9 +4.6**
LYN S **S** **09 12 14.2 +1.9**
LYN SKS **SKKSac** **09 13 37.0 -4.9**
LYN pmax pmax
comp=Z,88nm,1.0s
LYN pmax pmax
comp=Z,490nm,3.9s
LYN L L
comp=Z,810nm,17.5s
LYN L L
comp=Z,850nm,16.8s
LYN L L
comp=Z,1µm,17.5s
CMIG Matias Romero 61.86 99 LR LR 09 27 18.9
comp=Z,370nm,21.4s,baz=308,slow=33
OUL Oulu 61.92 357 P **P** **09 03 54.1 +1.1**
ADZR Andozero 62.28 351 *e*P **P** **09 03 55.5 +0.1**
ADZR pmax pmax
comp=Z,114nm,1.1s
NSS Namsos 62.43 4 *e*P **P** **09 03 57.4 +1.0**
NSS IAmb IAmb 09 04 08.1
comp=Z,57nm,1.0s
DGZ Jazzator, Alta 62.59 317 *d*/*i*P **P** **09 03 59.2 +1.3**
DGZ pmax pmax
comp=Z,17nm,0.9s
060A Indiantown 63.00 80 IAMs_20 IAMs_20 09 31 47.8
comp=Z,546nm,20.0s
WHN Wuhan 63.44 286 P **P** **09 04 03.6 0.0**
WHN sP **pP** **09 04 07.5 +0.7**
WHN S **S** **09 12 37.2 +1.3**
WHN pmax pmax
comp=Z,56nm,0.7s
WHN pmax pmax
comp=Z,960nm,3.9s
WHN L L
comp=Z,1µm,10.9s
WHN L L
comp=Z,970nm,12.9s
WHN L L
comp=Z,1µm,13.4s
NACB Ninganchiao 63.92 276 IAmb IAmb 09 04 18.6
comp=Z,56nm,1.1s
NACB Ninganchiao 63.92 276 P **P** **09 04 06.4 -0.4**
XAN Xi'an 63.94 292 ⇑P **P** **09 04 07.7 +0.8**
XAN pP pwP 09 04 16.2 -0.7
XAN S **S** **09 12 42.4 +0.3**
XAN pmax pmax
comp=Z,45nm,1.2s
XAN pmax pmax
comp=Z,530nm,5.4s
XAN L L
comp=Z,680nm,15.1s
XAN L L
comp=Z,760nm,19.5s
XAN L L
comp=Z,870nm,19.2s
MOL Molde 64.16 6 *e*P **P** **09 04 08.5 +0.6**
MOL IAmb IAmb 09 04 16.1
comp=Z,44nm,0.9s
TAOE Nuku Hiva Isla 64.20 158 *e*P P 09 04 01.4 -7.3
comp=Z,82nm,24.1s
TAOE *e*S **S** **09 12 47.1 +1.6**
comp=Z,419nm,23.8s
TAOE *e*SS **SS** **09 16 45.3 -10**
comp=Z,397nm,27.7s
TAOE *e*LR LR 09 23 12.0
comp=Z,3µm,29.4s
AKN Aaknes 64.51 7 *e*P **P** **09 04 11.6 +1.4**
AKN IAML 09 04 19.7
comp=Z,25nm,0.7s
AKN *e*S **S** **09 12 49.9 +1.6**
SSLB Suanglung 64.60 276 IAmb IAmb 09 04 22.0
comp=Z,52nm,0.8s
SSLB Suanglung 64.60 276 P **P** **09 04 11.6 +0.3**
YULB Yu-li 64.69 276 IAmb IAmb 09 04 59.4
comp=Z,48nm,1.2s
GTA2 Gaotai 64.75 303 P **P** **09 04 12.6 +0.3**
GTA2 sP pwP 09 04 22.1 -0.2
GTA2 S **S** **09 12 51.9 -0.2**
GTA2 SS **SS** **09 16 58.6 -3.9**
GTA2 pmax pmax
comp=Z,49nm,1.0s
GTA2 pmax pmax
comp=Z,370nm,6.5s
GTA2 L L
comp=Z,870nm,21.3s
GTA2 L L
comp=Z,1µm,21.3s
GTA2 L L
comp=Z,760nm,15.8s
DOMB Dombas 64.78 5 *e*P **P** **09 04 13.2 +1.2**
DOMB IAML 09 04 20.6
comp=Z,17nm,0.7s
FOO Floro 64.94 8 *e* P 09 04 20.8 +7.9
FOO *e*S **S** **09 12 54.5 +1.0**
QZH2 Quanzhou 65.13 279 P **P** **09 04 14.9 +0.2**
QZH2 S **S** **09 12 58.6 +1.8**
QZH2 pmax pmax
comp=Z,290nm,5.8s
QZH2 L L
comp=Z,370nm,13.4s
KURK Kurchatov 65.16 323 P **P** **09 04 16.1 +1.5**
KURK S **S** **09 13 00.0 +3.4**
KLMR Klimovskoe 65.17 349 *e*P **P** **09 04 14.1 -0.3**
KLMR *e* 09 04 45.4
KLMR S **S** **09 12 53.2 -3.1**
KLMR pmax pmax
comp=Z,95nm,1.2s
LZH Lanzhou 65.18 297 P **P** **09 04 16.0 +0.9**
LZH sP pwP 09 04 26.0 +0.8
LZH S **S** **09 12 58.8 +1.2**
LZH pmax pmax
comp=Z,86nm,1.7s
LZH pmax pmax
comp=Z,400nm,4.9s
LZH L L
comp=Z,1µm,14.3s
LZH L L
comp=Z,940nm,16.5s
LZH L L
comp=Z,1µm,15.2s
KURBB Kurchatov Arra 65.27 323 P **P** **09 04 16.1 +0.8**
comp=Z,6.2nm,0.4s,baz=29,slow=6.2,SNR=41
KURBB PP **PP** **09 06 34.0 -4.3**
comp=Z,5.1nm,0.7s,baz=36,slow=9.1,SNR=4.1
KURBB S **S** **09 12 60.0 +2.1**
comp=Z,3.8nm,0.2s,baz=36,slow=12,SNR=5.6
KURBB LR LR 09 35 11.6
comp=Z,2µm,19.1s,baz=352,slow=38
comp=Z,6.2nm,0.4s
KURBB Kurchatov Arra 65.27 323 P **P** **09 04 15.9 +0.6**
SVE Sverdlovsk 65.28 337 ⇓*i*P **P** **09 04 16.8 +1.5**
SVE *e*S **S** **09 12 59.3 +1.4**
SVE *e* 09 14 07.3
SVE pmax pmax
comp=Z,85nm,1.2s
LZDM Lanzhou Array 65.36 297 P **P** **09 04 17.1 +0.6**
comp=Z,14nm,0.6s,baz=48,slow=2.1,SNR=11
LZDM S **S** **09 13 00.9 +0.9**
comp=Z,1.7nm,0.3s,baz=69,slow=7.9,SNR=1.4
comp=Z,14nm,0.6s
ZSN Zaisan 65.41 317 *e*P **P** **09 04 17.1 +0.8**
ZSN pmax pmax
comp=Z,37nm,1.0s
ZSN Zaisan 65.41 317 *e*P **P** **09 04 17.1 +0.8**
comp=Z,37nm,1.0s
VALR Valaam 65.41 354 ⇑*e*P **P** **09 04 17.2 +1.2**
SUE Sulen 65.46 8 *e*P **P** **09 04 20.5 +4.2**
SUE *e*S **S** **09 13 00.7 +0.8**
HYA Hoyanger 65.46 7 *e*P **P** **09 04 19.9 +3.6**
HYA *e*S **S** **09 13 00.7 +0.8**
FIA1 FINESS Array S 65.56 357 P **P** **09 04 17.4 +0.5**
FINES FINESS Array B 65.56 357 P **P** **09 04 17.5 +0.5**
comp=Z,24nm,0.9s,baz=10,slow=7.0,SNR=26
FINES S **S** **09 13 01.4 +0.3**
comp=Z,1.7nm,1.0s,baz=9.8,slow=25,SNR=2.3
FINES LR LR 09 35 56.0
comp=Z,272nm,18.0s,baz=14,slow=39
comp=Z,24nm,0.9s
FINES FINESS Array B 65.56 357 P **P** **09 04 17.1 +0.1**
FINES FINESS Array B 65.56 357 *i* P **P** **09 04 17.7 +0.7**
FINES pmax pmax
comp=Z,24nm,0.9s
RTAL Retalhuleu 65.76 98 P **P** **09 04 18.7 -0.2**
NB2 NORSAR Subarra 65.89 4 P **P** **09 04 19.6 +0.4**
comp=Z,34nm,1.2s,baz=355,slow=6.5
NB2 NORSAR Subarra 65.89 4 P **P** **09 04 19.6 +0.4**
NOA NORSAR Array B 65.89 4 P **P** **09 04 20.2 +1.0**
comp=Z,11nm,1.0s,baz=355,slow=6.6,SNR=21
NOA LR LR 09 34 39.7
comp=Z,208nm,18.0s,baz=345,slow=38
comp=Z,11nm,1.0s
KIRV Kirov 65.96 343 P **P** **09 04 20.2 +0.7**
comp=Z,22nm,0.7s,baz=20,slow=5.4,SNR=10.0
KIRV S **S** **09 13 06.3 +0.3**
comp=Z,6.1nm,0.5s,baz=351,slow=19,SNR=2.1
KIRV LR LR 09 38 30.5
comp=Z,605nm,18.1s,baz=19,slow=41
comp=Z,22nm,0.7s
BVAR Borovoye Array 65.97 329 P **P** **09 04 20.8 +1.0**
comp=Z,77nm,0.9s,baz=38,slow=6.1,SNR=107
BVAR S **S** **09 13 08.8 +2.4**
comp=Z,4.3nm,1.1s,baz=33,slow=8.6,SNR=5.0
comp=Z,77nm,0.9s
BORK Borovoye 65.97 329 P **P** **09 04 20.8 +1.0**
BORK Borovoye 65.97 329 *d*/*i*P **P** **09 04 20.9 +1.1**
BORK pmax pmax
comp=Z,45nm,1.0s
CNSH ChangSha 66.03 285 P **P** **09 04 20.9 +0.4**
CNSH S **S** **09 13 09.0 +1.2**
CNSH pmax pmax
comp=Z,42nm,0.9s
CNSH L L
comp=Z,310nm,11.2s
CNSH L L
comp=Z,330nm,13.1s
CNSH L L
comp=Z,370nm,13.7s
ASK Askoy 66.06 8 *e*P **P** **09 04 21.1 +0.9**
ASK *e*S **S** **09 13 08.3 +1.1**
SKAR Skarslia 66.09 6 *e*P **P** **09 04 21.3 +0.9**
SKAR IAmb IAmb 09 04 29.4
comp=Z,50nm,0.8s
SKAR *e*S **S** **09 13 09.9 +2.1**
BER Bergen 66.17 8 *e*S **S** **09 13 09.9 +1.4**
ARTI Arti 66.21 338 P **P** **09 04 21.7 +0.5**
comp=Z,64nm,0.9s,baz=25,slow=4.4,SNR=45
ARTI S **S** **09 13 08.8 -0.4**
comp=Z,0.6nm,0.3s,baz=45,slow=20,SNR=1.0
ARTI LR LR 09 37 53.9
comp=Z,868nm,18.3s,baz=358,slow=40
comp=Z,64nm,0.9s
ARTI Arti 66.21 338 P **P** **09 04 21.5 +0.3**
ARTI Arti 66.21 338 *d*/*i*P **P** **09 04 21.8 +0.5**
ARTI 09 04 51.4
ARTI S **S** **09 13 09.0 -0.2**
ARTI 09 14 15.8
ARTI SS **SS** **09 17 20.9 -3.1**
ARTI pmax pmax
comp=Z,41nm,0.7s
ARTI MLR MLR
comp=Z,847nm,19.0s
NC602 NORSAR Array S 66.21 4 *e*P **P** **09 04 23.2 +2.0**
NC602 *e*S **S** **09 13 09.9 +0.8**
ENH Enshi 66.43 289 P **P** **09 04 22.8 -0.3**
ENH IAMs_20 IAMs_20 09 34 56.6
comp=Z,463nm,20.0s
ODD1 Odda 66.74 7 *e*P **P** **09 04 28.3 +3.7**
HFS Hagfors 66.90 3 P **P** **09 04 25.6 0.0**
comp=Z,15nm,0.8s,baz=7.1,slow=5.8,SNR=19
HFS LR LR 09 33 15.5
comp=Z,293nm,20.7s,baz=360,slow=36
comp=Z,15nm,0.8s
OSL Oslo 66.97 5 *e*P **P** **09 04 29.8 +3.8**
MK31 Makanchi Array 66.98 318 P **P** **09 04 26.7 +0.3**
MK31 Makanchi Array 66.98 318 P **P** **09 04 26.7 +0.3**
MK31 pmax pmax
comp=Z,30nm,1.1s
MKAR Makanchi Array 66.98 318 P **P** **09 04 26.5 +0.2**
comp=Z,4.6nm,0.7s,baz=43,slow=7.1,SNR=26
MKAR S **S** **09 13 19.7 +0.8**
comp=Z,0.6nm,0.8s,baz=52,slow=2.4,SNR=1.5
MKAR LR LR 09 36 35.5
comp=Z,840nm,19.9s,baz=21,slow=39
comp=Z,4.6nm,0.7s
MKAR Makanchi Array 66.98 318 P **P** **09 04 26.7 +0.3**
MAKZ Makanchi 67.09 319 P **P** **09 04 27.3 +0.2**
MAKZ IAmb IAmb 09 04 38.4
comp=Z,63nm,1.2s
MAKZ Makanchi 67.09 319 P **P** **09 04 27.3 +0.2**
MAKZ pmax pmax
comp=Z,63nm,1.2s
MAKZ MLR MLR
comp=Z,1µm,20.0s
WMQ Urumqi 67.11 313 *e*P **P** **09 04 29.0 +1.7**
WMQ sP pwP 09 04 38.4 +1.1
WMQ PcP **PcP** **09 05 00.6 +5.2**
WMQ S **S** **09 13 22.9 +2.3**
WMQ pmax pmax
comp=Z,36nm,1.7s
WMQ pmax pmax
comp=Z,380nm,5.5s
WMQ L L
comp=Z,770nm,23.9s
WMQ L L
comp=Z,740nm,24.2s
WMQ L L
comp=Z,900nm,24.1s
KONO Kongsberg 67.19 5 ⇑*i*P **P** **09 04 29.1 +1.6**
KONO pmax pmax
comp=Z,47nm,1.4s
KONO Kongsberg 67.19 5 *e*P **P** **09 04 28.5 +1.1**
KONO *e*S **S** **09 13 22.2 +1.2**
KONO Kongsberg 67.19 5 P **P** **09 04 29.0 +1.6**
BLS5 Blasjo 67.21 7 *e*P **P** **09 04 28.9 +1.3**
BLS5 IAmb IAmb 09 04 36.9
comp=Z,47nm,0.9s
BLS5 *e*S **S** **09 13 23.7 +2.5**
KMY Karmoy 67.32 8 *e*S **S** **09 13 23.7 +1.2**
AFI Afiamalu 67.57 192 LR LR 09 27 36.7
comp=Z,433nm,21.0s,baz=10.0,slow=30
ARBE Arbavere 67.58 356 P **P** **09 04 33.8 +3.9**
BRZS Berezniki 67.85 326 *e*P **P** **09 04 32.4 +0.6**
BRZS Berezniki 67.85 326 *e*P **P** **09 04 32.5 +0.6**
STRU Stroemstad 67.89 5 *i* P P 09 04 39.7 +7.9
SNART Snartemo 68.34 7 *i* P P 09 04 43.3 +8.6
VSU Vasula 68.52 356 *d*/*i*P **P** **09 04 35.5 -0.3**
VSU pmax pmax
comp=Z,43nm,1.1s
VSU Vasula 68.52 356 P **P** **09 04 36.1 +0.3**
PMOR Pomariorio Ree 68.79 167 *e*T T 10 18 43.7
comp=Z,16nm,0.2s
TJOU Tjoern 68.92 5 *i* P P 09 04 46.1 +7.9
CD2 Chengdu 69.15 294 P **P** **09 04 40.7 +0.4**
CD2 pP pP 09 04 43.1 -0.4
CD2 S **S** **09 13 47.5 +2.2**
CD2 sS sS 09 13 51.0 +0.6
CD2 SKS **SKSac** **09 14 40.5 +0.8**
CD2 SS **SS** **09 18 11.2 +0.3**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,480nm,6.3s
CD2 L L
comp=Z,640nm,16.5s
CD2 L L
comp=Z,850nm,13.3s
CD2 L L
comp=Z,770nm,16.6s
ONAU Onsala 69.56 4 *i* P P 09 04 49.6 +7.3
GULI GuiLin 69.71 285 ⇓P **P** **09 04 42.8 -0.9**
GULI S **S** **09 13 52.1 +0.2**
GULI pmax pmax
comp=Z,38nm,1.3s
GULI L L
comp=Z,360nm,12.7s
GULI L L
comp=Z,310nm,16.9s
GULI L L
comp=Z,580nm,15.1s
IDGL Inch Island, C 69.77 16 P **P** **09 04 42.6 -1.0**
GOMU GeErMu 69.77 304 P **P** **09 04 44.8 +0.4**
GOMU sP sP 09 04 50.6 +1.7
GOMU S **S** **09 13 52.7 -0.5**
GOMU pmax pmax
comp=Z,20nm,1.0s
GOMU L L

comp=Z,1μm,15.8s
GOMU L L
comp=Z,480nm,15.3s
TDK Taldyqorghan 69.99 320 *e*P **P 09 04 46.0 +0.8**
TDK pmax pmax
comp=Z,52nm,0.9s
TDK Taldyqorghan 69.99 320 *e*P **P 09 04 46.1 +0.8**
comp=Z,52nm,0.9s
FABU Falkenberg 69.99 4 *i* P P 09 04 52.1 +7.2
MANU Manus Island 70.14 237 IAmb IAmb 09 04 57.1
comp=Z,62nm,1.1s
EKA Eskdalemuir Ar 70.19 14 P **P 09 04 46.4 +0.2**
comp=Z,15nm,0.9s,baz=349,slow=5.9,SNR=16
EKA LR LR 09 38 21.0
comp=Z,283nm,18.1s,baz=360,slow=38
comp=Z,15nm,0.9s
EKA Eskdalemuir Ar 70.19 14 P **P 09 04 46.5 +0.3**
EKA pmax pmax
comp=Z,52nm,1.0s
MUD Monsted U'grnd 70.35 6 *i* P P 09 04 56.0 +8.9
MUD IAmb IAmb 09 05 02.3
comp=Z,203nm,1.8s
MOS Moscow 70.39 349 *e*P **P 09 04 48.4 +1.0**
MOS *e* 09 05 09.8
MOS *e* 09 07 25.8
MOS *e*S **S 09 13 57.7 -1.3**
MOS pmax pmax
comp=Z,97nm,1.3s
SIUN Universidad Ur 70.53 93 IAmb IAmb 09 04 50.4
comp=Z,68nm,1.2s
DEL Delary 70.57 3 *i* P P 09 04 55.9 +7.4
CHIV Chivirico 70.70 82 IAmb IAmb 09 04 50.0
comp=Z,40nm,0.9s
BLEU Blekinge 70.79 2 *i* P P 09 04 57.3 +7.5
HNR Honiara 70.93 222 LR LR 09 30 51.8
comp=Z,8.9nm,19.4s,baz=106,slow=32
BJUU Bjuv 70.93 4 *i* P P 09 04 58.1 +7.4
GYA Guiyang 70.94 289 ⇓P **P 09 04 51.8 +0.4**
GYA S **S 09 14 07.3 +0.8**
GYA pmax pmax
comp=Z,74nm,1.2s
PDGK Podgornoye 70.96 318 P **P 09 04 51.9 +0.6**
ILTH Belurgan, Co L 70.97 16 P **P 09 04 51.4 +0.5**
BOAB BOACO BROADBAN 70.99 95 P **P 09 04 51.1 -0.6**
IGLA Glengowla, Co 71.02 18 P **P 09 04 52.8 +1.5**
NMDO Nuevo Mundo 71.10 81 P **P 09 04 51.9 -0.3**
NMDO IAmb IAmb 09 04 52.8
comp=Z,34nm,0.9s
SHLS Shalkode 71.11 318 *e*P **P 09 04 52.0 -0.2**
SHLS pmax pmax
comp=Z,38nm,0.9s
SHLS Shalkode 71.11 318 *e*P **P 09 04 52.0 -0.2**
comp=Z,38nm,0.9s
PPT Papeete 71.11 169 LR LR 09 28 39.8
comp=Z,415nm,21.7s,baz=339,slow=30
OBN Obninsk 71.12 350 P **P 09 04 51.8 -0.1**
comp=Z,15nm,0.4s,baz=353,slow=8.1,SNR=7.9
OBN S **S 09 14 06.5 -0.9**
comp=Z,11nm,0.4s,baz=15,slow=19,SNR=1.8
OBN LR LR 09 41 20.4
comp=Z,328nm,19.4s,baz=348,slow=40
comp=Z,15nm,0.4s
OBN Obninsk 71.12 350 P **P 09 04 52.0 +0.2**
OBN IAMs_20 IAMs_20 09 40 59.0
comp=Z,612nm,20.0s
OBN Obninsk 71.12 350⇑ *e*P **P 09 04 51.3 -0.5**
OBN *e* 09 07 28.9
OBN *i*S **S 09 14 06.2 -1.3**
OBN pmax pmax
comp=Z,54nm,1.2s
OBN MLR MLR
comp=Z,559nm,19.0s
OBN Obninsk 71.12 350 P **P 09 04 51.7 -0.1**
comp=Z,753nmcomp=Z,48nm,1.3s
TIAR Tiarei 71.13 169 *e*T T 10 22 43.6
comp=Z,160nm,0.4s
PPT2 Papeete2 71.14 169 *e*P **P 09 04 51.5 -0.9**
comp=Z,83nm,23.0s
PPT2 *e*S **S 09 14 10.2 +1.7**
comp=Z,468nm,30.5s
PPT2 *e*SS **SS 09 18 43.1 +0.4**
comp=Z,239nm,30.5s
PPT2 *e*LQ LQ 09 22 51.6
comp=Z,607nm,27.2s
PPT2 *e*LR LR 09 26 11.9
comp=Z,2μm,32.0s
PPT2 *e*LR LR 09 26 19.1
comp=Z,3μm,30.0s
KPKS Kokpek 71.17 319 *e*P **P 09 04 53.3 +0.8**
KPKS Kokpek 71.17 319 *e*P **P 09 04 53.4 +0.8**
UZB Uzynbulak 71.30 318 *e*P **P 09 04 54.2 +0.8**
UZB Uzynbulak 71.30 318 *e*P **P 09 04 54.2 +0.8**
MTDJ Mount Denham 71.38 84 P **P 09 04 54.4 -0.1**
MTDJ IAmb IAmb 09 04 54.3
comp=Z,49nm,0.9s
GTBY Guantanamo Bay 71.51 81 IAMs_20 IAMs_20 09 41 35.0
comp=Z,458nm,18.0s
GTBY Guantanamo Bay 71.51 81 P **P 09 04 54.7 -0.1**
PABE Paberze 71.58 357 P **P 09 04 55.0 +0.4**
PABE IAMs_20 IAMs_20 09 40 04.9
comp=Z,445nm,19.0s
PABE Paberze 71.58 357 P **P 09 04 55.8 +1.2**
BTLS Baital 71.60 323 *e*P **P 09 04 55.9 +0.9**
BTLS Baital 71.60 323 *e*P **P 09 04 55.9 +0.9**
SATY Saty 71.62 319 *e*P **P 09 04 56.0 +0.8**
SATY Saty 71.62 319 *e*P **P 09 04 56.1 +0.8**
DSB Dublin 71.71 16 P **P 09 04 55.2 -0.3**
AKTO Aktyubinsk 71.76 335 P **P 09 04 56.4 +0.5**
comp=Z,35nm,1.0s,baz=23,slow=4.5,SNR=42
AKTO LR LR 09 40 44.8
comp=Z,933nm,20.1s,baz=31,slow=40
comp=Z,35nm,1.0s
AKTO Aktyubinsk 71.76 335 P **P 09 04 56.7 +0.9**
BSD Bornholm Skovb 71.96 3 *i* P P 09 05 05.7 +8.8
BSD IAmb IAmb 09 05 06.2
comp=Z,34nm,1.0s
TGY Tagaytay City 72.05 270 LR LR 09 34 09.4
comp=Z,78nm,19.0s,baz=4.5,slow=34
MDOK Medeo 72.06 320 *e*P **P 09 04 58.7 +0.7**
MDOK Medeo 72.06 320 *e*P **P 09 04 58.8 +0.7**
AAA Alma-Ata 72.08 320 *e*P **P 09 04 58.9 +0.9**
AAA pmax pmax
comp=Z,30nm,1.2s
AAA Alma-Ata 72.08 320 *e*P **P 09 04 58.9 +0.9**
comp=Z,30nm,1.2s
BELG Belogornoye 72.17 342 P **P 09 04 58.2 0.0**
comp=Z,41nm,1.0s,baz=6.6,slow=1.7,SNR=23
BELG S **S 09 14 18.9 -0.7**
comp=Z,2.9nm,0.6s,baz=38,slow=20,SNR=1.4
BELG LR LR 09 40 53.4
comp=Z,1μm,20.3s,baz=319,slow=39
comp=Z,41nm,1.0s
BELG Belogornoye 72.17 342*d i*P **P 09 04 58.6 +0.4**
BELG pmax pmax
comp=Z,15nm,1.3s
TNSS Tian-Shan 72.21 320 *e*P **P 09 04 59.6 +0.4**
TNSS Tian-Shan 72.21 320 *e*P **P 09 04 59.6 +0.4**
AB31 Akbulak array 72.34 334 P **P 09 05 00.3 +1.0**
ABKAR Akbulak array 72.34 334 P **P 09 05 00.1 +0.8**
MNK Minsk 72.42 355 *i* P **P 09 05 00.3 +0.6**
comp=E,10.0nm,0.7s
MNK *i* P **P 09 05 00.3 +0.6**
comp=N,6.0nm,0.8s
MNK *i* P **P 09 05 00.3 +0.6**
comp=Z,24nm,0.8s,baz=5.3
MNK *i* PcP **PcP 09 05 14.8 -2.7**
MNK *i* PP PP 09 08 42.0 +62
MNK *i* PPP PPP 09 09 42.4
MNK *i*S **S 09 14 24.3 +1.8**
MNK *i* PS PnS 09 15 11.9 +19
MNK *i* SS SS 09 18 20.7 -39
MNK *i* SSS SSS 09 23 08.5
MNK *i* LRM MLR 09 39 25.2
comp=E,523nm,18.0s
MNK *i* LRM MLR 09 39 37.9
comp=N,387nm,17.3s
MNK Minsk 72.42 355 *i* P **P 09 05 00.3 +0.6**
MNK *i* 09 05 14.8
MNK *i*S **S 09 14 24.3 +1.8**
MNK *i* PS PnS 09 15 11.9 +19
MNK pmax pmax
comp=Z,24nm,0.8s
MNK pmax pmax
comp=E,10.0nm,0.7s
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK MLR MLR
comp=E,523nm,18.0s
MNK MLR MLR
comp=N,387nm,17.0s
SGDS Sogindy 72.74 321 *e*P **P 09 05 02.9 +0.9**
TKM2 Tokmak 2 72.83 320 P **P 09 05 04.6 +2.0**
SNR=11
WUS Wushi 72.85 317 IAMs_20 IAMs_20 09 40 36.5
comp=Z,600nm,19.0s
KDJ Kajisay 72.89 319 IAmb IAmb 09 05 15.2
comp=Z,47nm,0.9s
BSEG Bad Segeberg 72.93 6 *e*P **P 09 05 04.1 +1.4**
comp=Z,46nm,1.6s,baz=355,slow=5.8
BSEG *e*pP **pwP 09 05 13.4 +0.2**
baz=356,slow=5.9
USP Osepenovka 72.95 321 P **P 09 05 05.1 +1.9**
SNR=16
BOOM Boomskoye usch 73.06 320 IAmb IAmb 09 05 16.3
comp=Z,76nm,0.8s
MSVF Nonsavu 73.07 201 P **P 09 05 04.3 +0.3**
comp=Z,27nm,1.0s,baz=355,slow=18,SNR=10
MSVF LR LR 09 31 13.0
comp=Z,334nm,20.0s,baz=2.4,slow=31
comp=Z,27nm,1.0s
MSVF Nonsavu 73.07 201 P **P 09 05 04.8 +0.8**
MSVF IAmb IAmb 09 05 05.9
comp=Z,47nm,1.1s
MSVF Nonsavu 73.07 201*d i*P **P 09 05 04.6 +0.6**
MSVF pmax pmax
comp=Z,57nm,1.2s
CHMS Chumysh 73.09 321 P **P 09 05 05.9 +2.0**
SNR=16
SUW Suwalki 73.09 358 *e*P **P 09 05 03.4 -0.3**
SUW Suwalki 73.09 358 IAMs_20 IAMs_20 09 43 20.9
comp=Z,430nm,20.0s
KBK Karagaybulak 73.30 321 P **P 09 05 07.4 +2.0**
SNR=9.9
LPSR Galich'ya Gora 73.31 348 *e*P **P 09 05 03.8 -1.2**
LPSR pmax pmax
comp=Z,80nm,1.1s
AAK Ala-Archa 73.49 321 P **P 09 05 07.3 +0.8**
comp=Z,10nm,0.5s,baz=51,slow=6.2,SNR=27
AAK S **SKiKP 09 14 38.8 +2.7**
comp=Z,1.3nm,0.3s,baz=30,slow=20,SNR=7.4
AAK LR LR 09 40 11.3
comp=Z,2μm,19.9s,baz=30,slow=38
comp=Z,10nm,0.5s
AAK Ala-Archa 73.49 321 P **P 09 05 08.0 +1.4**
SNR=14
AAK Ala-Archa 73.49 321 P **P 09 05 06.9 +0.4**
AAK IAmb IAmb 09 05 18.8
comp=Z,67nm,1.1s
AAK Ala-Archa 73.49 321*d i*P **P 09 05 07.9 +1.4**
AAK pmax pmax
comp=Z,30nm,1.0s
PZH PanZhiHua 73.68 292 P **P 09 05 09.3 +1.5**
EKS2 Erkin-Say 73.74 321 P **P 09 05 09.1 +1.2**
SNR=15
UCH Uchtor 73.84 321 P **P 09 05 10.4 +1.5**
SNR=8.6
HDC Heredia 73.85 95 IAMs_20 IAMs_20 09 33 41.8
comp=Z,359nm,21.0s
GKP Gorka Klasztor 73.86 1 *e*P **P 09 05 09.5 +1.3**
GORT1 Trebel 73.93 5 *e*P **P 09 05 10.3 +1.8**
comp=Z,75nm,1.4s,baz=355,slow=5.8
NRN Naryn 73.94 319 IAmb IAmb 09 05 22.1
comp=Z,92nm,1.2s
JAY Jayapura 74.00 243 P **P 09 05 09.5 -0.1**
comp=Z,21nm,1.0s,baz=36,slow=4.9,SNR=8.9
JAY LR LR 09 34 08.2
comp=Z,182nm,19.6s,baz=8.0,slow=33
comp=Z,21nm,1.0s
JAY Jayapura 74.00 243 P **P 09 05 09.8 +0.2**
comp=Z,688nmcomp=Z,43nm,1.3s
RETH Rethem/Aller, 74.06 6 *e*P **P 09 05 10.9 +1.6**
comp=Z,87nm,1.6s,baz=355,slow=5.8
RETH *e*pP **pwP 09 05 20.2 +0.4**
baz=356,slow=5.9
RAR Rarotonga 74.12 179 LR LR 09 34 33.1
comp=Z,220nm,18.7s,baz=5.5,slow=33
KMI2 Kunming 74.17 291 ⇓P **P 09 05 11.0 +0.2**
KMI2 sP pwP 09 05 20.2 -0.7
KMI2 S **S 09 14 42.4 -1.3**
KMI2 pmax pmax
comp=Z,23nm,1.2s
KMI2 pmax pmax
comp=Z,260nm,4.9s
KMI2 L L
comp=Z,430nm,21.5s
KMI2 L L
comp=Z,370nm,23.5s
KMI2 L L
comp=Z,460nm,19.9s
VORR Voronezh 74.19 347 *e*P **P 09 05 10.9 +0.7**
VORR pmax pmax
comp=Z,49nm,1.2s
VRH Novokhopyorsk 74.30 346 *e*P **P 09 05 09.2 -1.6**
VRH pmax pmax
comp=Z,40nm,1.0s
GENI Genyem 74.36 243 P **P 09 05 12.9 +1.3**
comp=Z,3μmcomp=Z,86nm,1.0s
IBBN Ibbenburen 74.38 8 *e*P **P 09 05 12.7 +1.5**
comp=Z,43nm,1.1s,baz=355,slow=5.8
IBBN *e*pP **pwP 09 05 22.2 +0.6**
baz=356,slow=5.9
DZA Taraz 74.44 323 *e*P **P 09 05 12.6 +0.7**
DZA Taraz 74.44 323 *e*P **P 09 05 12.7 +0.8**
SC01 Santiago de lo 74.49 78 IAmb IAmb 09 05 16.3
comp=Z,59nm,1.1s
SDDR Presa de Saban 74.51 79 IAMs_20 IAMs_20 09 37 12.4
comp=Z,548nm,20.0s
KK31 Karatay Array 74.55 324 P **P 09 05 12.9 +0.4**
KK31 IAmb IAmb 09 05 24.1
comp=Z,47nm,1.0s
KK31 Karatay Array 74.55 324 P **P 09 05 12.9 +0.4**
KK31 pmax pmax
comp=Z,47nm,1.0s
KKAR Karatay Array 74.55 324 P **P 09 05 12.9 +0.4**
KKAR Karatay Array 74.55 324 P **P 09 05 12.9 +0.4**
RUE Ruedersdorf 74.56 4 *e*P **P 09 05 13.6 +1.3**
comp=Z,91nm,1.4s,baz=355,slow=5.8
FLTG Flechtingen 74.59 5 *e*P **P 09 05 13.2 +0.8**
comp=Z,41nm,1.2s,baz=355,slow=5.8
VSR Storozhevoye 74.64 347 *e*P **P 09 05 13.0 +0.2**
VSR pmax pmax
comp=Z,56nm,1.3s
ASSE Asse, Remlinge 74.75 6 *e*P **P 09 05 14.7 +1.4**
comp=Z,28nm,1.2s,baz=355,slow=5.8
ASSE *e*pP **pwP 09 05 24.1 +0.3**
baz=356,slow=5.9
DAV Davao City (W) 74.81 261 LR LR 09 34 43.7
comp=Z,123nm,20.0s,baz=50,slow=33
QIZ Qiongzhong 74.84 281 P **P 09 05 14.6 +0.2**
QIZ IAmb IAmb 09 05 26.9
comp=Z,61nm,1.3s
QIZ Qiongzhong 74.84 281 P **P 09 05 15.6 +1.1**
QIZ PcP **PcP 09 05 28.8 +0.4**
QIZ S **S 09 14 51.5 +0.6**
QIZ pmax pmax
comp=Z,30nm,1.2s
QIZ pmax pmax
comp=Z,290nm,6.4s
QIZ L L
comp=Z,280nm,14.4s
QIZ L L
comp=Z,280nm,17.5s
QIZ L L
comp=Z,300nm,15.4s
BRLS Borolday 74.85 324 *e*P **P 09 05 16.3 +2.1**
BRLS Borolday 74.85 324 *e*P **P 09 05 16.4 +2.1**
VORD Divnogorie 74.87 347 *e*P **P 09 05 12.9 -1.2**
VORD pmax pmax
comp=Z,70nm,1.0s
R9F13 Warsaw-Wawer 74.92 359 *e*P **P 09 05 16.0 +1.6**
R9F13 *e*pP **pwP 09 05 25.7 +0.9**
R9F13 *e*S **S 09 14 53.6 +2.8**
CLZ Clausthal 75.02 6 *e*P **P 09 05 16.7 +1.7**
comp=Z,59nm,1.3s,baz=355,slow=5.8
CLZ *e*pP **pwP 09 05 26.1 +0.6**
baz=356,slow=5.9
ARSB Arslanbob 75.19 321 IAmb IAmb 09 05 28.4
comp=Z,50nm,1.0s
BUG Bochum--Univer 75.20 8 *e*P **P 09 05 17.1 +1.1**
comp=Z,57nm,1.2s,baz=355,slow=5.8
BUG *e*pP **pwP 09 05 26.7 +0.3**
baz=356,slow=5.9
GTTG Gottingen 75.29 6 *e*P **P 09 05 18.1 +1.6**
comp=Z,47nm,1.1s,baz=355,slow=5.8
GTTG *e*pP **pwP 09 05 27.7 +0.7**
baz=356,slow=5.9
BEL Belsk 75.31 359 *e*P **P 09 05 18.2 +1.6**
BAKI Biak 75.41 248 P **P 09 05 19.8 +2.1**
comp=Z,936nmcomp=Z,43nm,1.4s
KASTN Kahler Asten 75.52 7 *e*P **P 09 05 19.4 +1.4**
comp=Z,25nm,1.2s,baz=355,slow=5.8
KASTN *e*pP **pwP 09 05 28.9 +0.5**
baz=356,slow=5.9
IUG Iuzhnay 75.56 324 *e*P **P 09 05 19.2 +0.8**
IUG pmax pmax
comp=Z,34nm,1.1s
IUG Iuzhnay 75.56 324 *e*P **P 09 05 19.2 +0.8**
comp=Z,34nm,1.1s
CHM Chimkent 75.56 324 *e*P **P 09 05 19.2 +0.9**
CHM Chimkent 75.56 324 *e*P **P 09 05 19.2 +0.9**
UCC Uccle 75.56 10 P **P 09 05 18.1 0.0**
UCC Uccle 75.56 10 P **P 09 05 18.1 0.0**
UCC pmax pmax
comp=Z,38nm,1.1s
UCC Uccle 75.56 10 *d*P **P 09 05 18.1 0.0**
comp=Z,21nm,1.2s
RNPP9 Sopachiv 75.60 356 P **P 09 05 18.8 +0.5**
RNPP8 Varash 75.68 356 P **P 09 05 19.1 +0.3**
CLL Collm 75.70 4 IAMs_20 IAMs_20 09 41 03.8
comp=Z,386nm,21.0s
CLL Collm 75.70 4⇓ *i*P **P 09 05 19.6 +0.7**
CLL *e*S **S 09 15 06.0 +6.6**
CLL pmax pmax
comp=Z,57nm,1.6s
CLL MLR MLR
comp=Z,300nm,20.8s
CLL Collm 75.70 4 *e*P **P 09 05 19.8 +0.9**
comp=Z,66nm,1.6s,baz=355,slow=5.8
CLL *e*pP **pwP 09 05 29.1 -0.2**
baz=356,slow=5.9
CLL Collm 75.70 4 P **P 09 05 19.4 +0.5**
comp=Z,26nm,1.2s
CLL Collm 75.70 4⇓ *i*P **P 09 05 19.6 +0.7**
comp=Z,57nm,1.6s
CLL *i* x x 09 05 28.6
CLL *e*PP **PP 09 08 10.0 +2.2**
CLL *e*PPP PPP 09 10 00.0
CLL *e*S **S 09 15 06.0 +6.6**
CLL *e*SS **SS 09 20 00.0 +11**
CLL *e*SSS SSS 09 23 12.0
CLL *e*x x 09 25 42.0
CLL AMS AMS 09 41 00.0
comp=Z,300nm,20.8s
NEUB Neuenburg 75.73 5 *e*P **P 09 05 20.4 +1.3**
comp=Z,121nm,1.5s,baz=355,slow=5.8
NEUB *e*pP **pwP 09 05 29.8 +0.3**
baz=356,slow=5.9
DR12 Loma Pena Alta 75.78 78 P **P 09 05 19.9 -0.1**
RNPP5 Staryi Chortor 75.79 356 P **P 09 05 19.8 +0.4**
BSTI Sart Tilman 75.89 9 *d*P **P 09 05 21.0 +1.0**
comp=Z,6.9nm,0.9s
BSTI *d*PcP **pwP 09 05 30.8 +0.4**
MEM Membach 75.91 9 *d*P **P 09 05 21.0 +0.8**
comp=Z,28nm,1.0s
BTNL Ternell 75.94 9 *d*P **P 09 05 21.8 +1.4**
comp=Z,20nm,1.1s
MI28 Mi28,Pidlybu 76.00 355 P **P 09 05 20.2 -0.4**
UBBA Unterbreizbach 76.02 6 *e*P **P 09 05 22.1 +1.5**
comp=Z,37nm,1.6s,baz=355,slow=5.8
BCLA Clavier 76.03 9 *d*P **P 09 05 21.2 +0.4**
comp=Z,14nm,1.2s
BGES Gesves 76.04 10 *d*P **P 09 05 20.7 -0.2**
comp=Z,17nm,0.9s
KSH2 Kashi 76.07 318 P **P 09 05 23.0 +1.5**
KSH2 sP PcP 09 05 33.3 -0.4
KSH2 S **S 09 14 59.7 -4.6**
KSH2 pmax pmax
comp=Z,29nm,1.0s
KSH2 L L
comp=Z,3μm,18.2s
KSH2 L L
comp=Z,1μm,22.3s
KSH2 L L
comp=Z,890nm,23.4s
BMRD Maredsous 76.09 10 *d*P **P 09 05 22.0 +0.9**
comp=Z,27nm,1.1s
BMRD *d*PcP **pwP 09 05 32.0 +0.4**
AKASG Malin Array Be 76.13 354 P **P 09 05 21.3 -0.1**
comp=Z,27nm,0.9s,baz=9.0,slow=5.6,SNR=75
AKASG S **S 09 15 04.6 +0.3**
comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=6.2
AKASG LR LR 09 41 49.4
comp=Z,419nm,19.1s,baz=9.5,slow=38
comp=Z,27nm,0.9s
AKASG Malin Array Be 76.13 354 P **P 09 05 21.4 -0.1**
AKASG IAmb IAmb 09 05 30.1
comp=Z,58nm,1.0s
AKASG Malin Array Be 76.13 354 *i* P **P 09 05 21.3 -0.1**
AKASG pmax pmax
comp=Z,28nm,0.9s
AKBB Malin Array Si 76.13 354 P **P 09 05 21.5 +0.1**
AKBB IAmb IAmb 09 05 30.2
comp=Z,68nm,1.0s
AKBB Malin Array Si 76.13 354*ce*P **P 09 05 21.4 +0.1**
AKBB pmax pmax
comp=Z,44nm,1.1s
AKBB Malin Array Si 76.13 354 P **P 09 05 21.6 +0.2**
KIEV Kiev 76.14 354⇑P **P 09 05 21.5 +0.1**
KIEV Kiev 76.14 354 P **P 09 05 21.5 +0.1**
KIEV IAmb IAmb 09 05 30.2
comp=Z,61nm,1.0s
KIEV Kiev 76.14 354 P **P 09 05 21.5 +0.1**
KIEV Kiev 76.14 354 P **P 09 05 21.4 0.0**
comp=Z,3μmcomp=Z,249nm,0.8s
BHOU Houvegnez 76.16 9 *d*P **P 09 05 22.9 +1.3**
BRG Berggiesshubel 76.17 4 *e*P **P 09 05 22.8 +1.2**
comp=Z,44nm,1.4s,baz=355,slow=5.8
BRG *e*pP **pwP 09 05 32.0 -0.1**
baz=356,slow=5.9
BRG Berggiesshubel 76.17 4 *i* P **P 09 05 22.6 +0.9**
BRG Amp 09 05 24.0
comp=Z,30nm,1.3s
BRG Berggiesshubel 76.17 4 P P 09 05 31.5 +10
BRG Amp 09 05 34.6
comp=Z,64nm,1.4s
BRG Berggiesshubel 76.17 4 S **S 09 15 09.0 +4.3**
BRG Berggiesshubel 76.17 4 SS SS 09 19 59.0 +2.4
KSP Ksiaz 76.27 2 *e*P **P 09 05 23.6 +1.4**
KSP Ksiaz 76.27 2 P **P 09 05 22.5 +0.3**
comp=Z,501nmcomp=Z,43nm,1.2s
DOU Dourbes 76.28 10 *d*P **P 09 05 22.6 +0.3**
comp=Z,18nm,1.2s
RCHB Rochefort 76.28 9 *d*P **P 09 05 22.8 +0.5**
comp=Z,16nm,1.0s
RCHB *d*x x 09 05 32.9
MOX Moxa 76.29 5 *e*P **P 09 05 23.6 +1.3**
comp=Z,69nm,1.4s,baz=355,slow=5.8
MOX *e*L L 09 45 19.5
comp=Z,237nm,18.2s
HSKC Hora Svate Kat 76.41 4 *e*P **P 09 05 24.4 +1.4**
PLN Plauen 76.48 5 *e*P **P 09 05 24.7 +1.3**
comp=Z,8.5nm,1.3s,baz=355,slow=5.8
SLVN Son La 76.50 287 IAmb IAmb 09 05 35.9
comp=Z,56nm,1.0s
SLVN IAMs_20 IAMs_20 09 40 38.7
comp=Z,390nm,20.0s
TNS Taunus Mts 76.50 7 *e*P **P 09 05 24.9 +1.4**
comp=Z,36nm,1.3s,baz=355,slow=5.8
TNS *e*pP **pwP 09 05 34.7 +0.7**
baz=356,slow=5.9
OSTC Ostas 76.56 2 *e*P **P 09 05 25.1 +1.3**
OSTC MLR MLR
comp=Z,300nm,19.5s
OSTC Ostas 76.56 2 *e*P **P 09 05 25.1 +1.3**
OSTC AMS AMS 09 48 30.0
comp=Z,300nm,19.5s
TANN Tannenbergstha 76.56 5 *e*P **P 09 05 25.5 +1.6**
comp=Z,109nm,2.2s,baz=355,slow=5.8
TANN *e*pP **pwP 09 05 34.7 +0.4**
baz=356,slow=5.9
PMG Port Moresby 76.58 234 P **P 09 05 23.4 -1.0**
comp=Z,43nm,0.8s,baz=9.2,slow=9.3,SNR=6.1
PMG LR LR 09 35 06.4
comp=Z,144nm,20.4s,baz=46,slow=32
comp=Z,43nm,0.8s
PMG Port Moresby 76.58 234 P **P 09 05 24.5 +0.2**
PMG IAmb IAmb 09 05 35.2
comp=Z,97nm,1.1s

PMG Port Moresby 76.58 234 *d* iP **P 09 05 24.0 -0.3**
PMG pmax pmax
comp=Z,85nm,1.0s
PMG Port Moresby 76.58 234 P **P 09 05 24.6 +0.2**
comp=Z,92nm,1.2s
UPC Upice 76.60 2 AMS AMS 09 48 40.0
comp=Z,400nm,16.3s
TNCH TengChong 76.62 294 P **P 09 05 25.9 +1.1**
TNCH PcP **PcP 09 05 36.1 -0.2**
TNCH S **S 09 15 09.7 -1.1**
TNCH pmax pmax
comp=Z,98nm,0.9s
TNCH pmax pmax
comp=Z,560nm,4.0s
TNCH L L
comp=Z,640nm,14.7s
TNCH L L
comp=Z,500nm,15.0s
TNCH L L
comp=Z,470nm,19.4s
NKC Novy Kostel 76.74 5 *e*P **P 09 05 21.2 -3.7**
NKC Novy Kostel 76.74 5 *e*P **P 09 05 21.2 -3.7**
DPC Dobruska-Polom 76.77 2 *e*P **P 09 05 25.9 +0.8**
DPC *e*S **S 09 15 14.4 +3.1**
DPC MLR MLR
comp=Z,300nm,21.6s
DPC Dobruska-Polom 76.77 2 *e*P **P 09 05 25.9 +0.8**
DPC *e*S **S 09 15 14.4 +3.1**
DPC AMS AMS 09 49 00.0
comp=Z,300nm,21.6s
DPC Dobruska-Polom 76.77 2 P **P 09 05 25.3 +0.2**
comp=Z,697nmcomp=Z,52nm,1.2s
LSA Lhasa 76.80 302 **P 09 05 27.3 +1.2**
LSA Lhasa 76.80 302 P **P 09 05 27.3 +1.2**
LSA pmax pmax
comp=Z,106nm,1.0s
LSA MLR MLR
comp=Z,600nm,18.0s
TBI Tubuai 76.84 170 *e*S **S 09 15 13.1 +0.8**
comp=Z,2µm,31.0s
TBI *e*SS **SS 09 20 14.1 +4.7**
comp=Z,1µm,28.5s
TBI *e*LQ LQ 09 25 11.0
comp=Z,2µm,25.8s
TBI *e*LR LR 09 28 36.9
comp=Z,2µm,32.2s
TBI *e*LR LR 09 28 49.7
comp=Z,8µm,29.0s
TBI *e*T T 10 31 01.5
comp=Z,5.6nm,0.3s
WLF Walferdange 76.86 9 P **P 09 05 26.1 +0.6**
WLF IAmb IAmb 09 05 38.1
comp=Z,72nm,1.1s
WLF Walferdange 76.86 9 P **P 09 05 26.1 +0.6**
WLF pmax pmax
comp=Z,72nm,1.1s
WLF Walferdange 76.86 9 *d*P **P 09 05 26.9 +1.4**
comp=Z,36nm,1.1s
WLF *d*x x 09 05 33.2
WLF Walferdange 76.86 9 *e*P **P 09 05 27.2 +1.7**
comp=Z,50nm,1.3s,baz=355,slow=5.8
WLF *e*pP **PcP 09 05 37.2 +0.5**
baz=356,slow=5.9
OJC Ojcow 76.93 360 *e*P **P 09 05 27.3 +1.4**
OJC Ojcow 76.93 360 P **P 09 05 25.9 -0.1**
comp=Z,460nmcomp=Z,30nm,1.4s
LUBAR Lubar, Ukraine 77.00 355 **P 09 05 25.4 -0.9**
KRLC Kraliky 77.05 2 *e*P **P 09 05 27.3 +0.6**
KRLC *e*S **S 09 15 16.6 +2.1**
KRLC MLR MLR
comp=Z,500nm,18.7s
KRLC Kraliky 77.05 2 *e*P **P 09 05 27.3 +0.6**
KRLC *e*S **S 09 15 16.6 +2.1**
KRLC AMS AMS 09 49 00.0
comp=Z,500nm,18.7s
BCIP Isla Barro Col 77.07 92 P P 09 05 22.4 -4.8
PRU Pruhonice 77.08 3 *e*P **P 09 05 27.5 +0.8**
PRU *e*S **S 09 15 13.3 -1.3**
PRU Pruhonice 77.08 3 *e*P **P 09 05 27.5 +0.8**
PRU *e*S **S 09 15 13.3 -1.3**
BTK Batken 77.10 322 IAmb IAmb 09 05 39.1
comp=Z,72nm,1.0s
ROTZ Rotzenmuhle 77.20 5 *e*P **P 09 05 29.1 +1.6**
comp=Z,16nm,1.6s,baz=355,slow=5.8
ROTZ *e*pP **PcP 09 05 38.5 +0.4**
baz=356,slow=5.9
STEB Steborice 77.21 1 *e*P **P 09 05 28.4 +0.9**
GRA1 Grafenberg Arr 77.22 6 IAmb IAmb 09 05 40.0
comp=Z,87nm,1.5s
GRA1 IAMs_20 IAMs_20 09 38 24.1
comp=Z,390nm,22.0s
GRF Grafenberg Arr 77.22 6 *e*P **P 09 05 29.3 +1.7**
comp=Z,74nm,1.6s,baz=355,slow=5.8
GRF *e*pP **PcP 09 05 39.0 +0.7**
baz=356,slow=5.9
GRF *e*L L 09 38 35.5
comp=Z,377nm,21.8s
GRFO Grafenberg 77.22 6 IAMs_20 IAMs_20 09 38 25.1
comp=Z,395nm,22.0s
PNME Penonome 77.31 93 P **P 09 05 26.9 -1.7**
comp=Z,1µmcomp=Z,79nm,1.9s
GMAL Guarumal, Vera 77.34 94 P **P 09 05 28.6 -0.1**
comp=Z,17nm,1.8s
MORC Moravsky Berou 77.36 1 ⇓P **P 09 05 29.1 +0.7**
MORC Moravsky Berou 77.36 1 IAmb IAmb 09 05 40.6
comp=Z,57nm,1.4s
MORC Moravsky Berou 77.36 1 P **P 09 05 29.1 +0.7**
MORC Moravsky Berou 77.36 1 *e*P **P 09 05 29.2 +0.7**
KWP Kalwaria Pacla 77.49 358 *e*P **P 09 05 30.4 +1.4**
STHS Stebnicka Huta 77.73 359 *e*P **P 09 05 31.5 +1.1**
STHS *e* 09 05 41.8
STHS pmax pmax
comp=Z,18nm,0.8s
STHS Stebnicka Huta 77.73 359 *e*P **P 09 05 31.5 +1.1**
STHS *e* 09 05 41.8
NIE Niedzica 77.73 360 *e*P **P 09 05 32.4 +1.9**
NIE Niedzica 77.73 360 P **P 09 05 31.1 +0.6**
comp=Z,254nmcomp=Z,21nm,1.3s
MOKO MOKOCHONG 77.76 298 *e*P **P 09 05 32.4 +1.3**
MOKO *i*x x 09 05 42.6
MAUC Maruska 77.78 1 *e*P **P 09 05 31.1 +0.4**
MAUC *e*S **SKSac 09 15 37.6 -6.0**
VRAC Vranov 77.81 2 P **P 09 05 31.8 +0.9**
comp=Z,14nm,1.0s,baz=359,slow=6.4,SNR=22
comp=Z,14nm,1.0s
VRAC Vranov 77.81 2 ⇓P **P 09 05 32.3 +1.4**
VRAC Vranov 77.81 2 P **P 09 05 32.3 +1.4**
VRAC Vranov 77.81 2 *e*P **P 09 05 32.1 +1.2**
WET Wettzell 77.85 5 *e*P **P 09 05 32.9 +1.7**
comp=Z,53nm,1.4s,baz=355,slow=5.8
WET *e*pP **pwP 09 05 42.4 +0.8**
baz=356,slow=5.9
SIJI Sorong 77.88 252 LR LR 09 38 11.3
comp=Z,66nm,18.1s,baz=39,slow=34
SIJI Sorong 77.88 252 P **P 09 05 31.6 -0.1**
comp=Z,862nmcomp=Z,43nm,1.1s
AZU Azuero 77.89 93 P **P 09 05 30.4 -1.4**
comp=Z,62nm,1.5s
KHC Kasperske Hory 77.89 4 IAmb IAmb 09 05 34.2
comp=Z,67nm,1.4s
KHC IAMs_20 IAMs_20 09 43 22.0
comp=Z,386nm,19.0s
KHC Kasperske Hory 77.89 4 *d* iP **P 09 05 32.8 +1.4**
KHC pmax pmax
comp=Z,68nm,1.7s
KHC Kasperske Hory 77.89 4 *e*P **P 09 05 32.0 +0.6**
KHC *e*x x 09 05 47.5
KHC *e*S **S 09 15 27.4 +3.8**
KHC AMS AMS 09 43 10.0
comp=Z,400nm,24.5s
KHC Kasperske Hory 77.89 4 P **P 09 05 32.2 +0.8**
comp=Z,529nmcomp=Z,32nm,1.2s
ECPR Experimental S 77.92 76 IAmb IAmb 09 05 34.6
comp=Z,50nm,1.2s
CELP Cerrillos 77.98 76 IAmb IAmb 09 05 33.1
comp=Z,41nm,1.0s
STU Stuttgart 78.00 7 *e*P **P 09 05 33.1 +1.2**
comp=Z,73nm,1.1s,baz=355,slow=5.8
STU *e*pP **pwP 09 05 43.1 +0.7**
baz=356,slow=5.9
LANS Liptovska Anna 78.00 0 *e*P **P 09 05 34.2 +2.2**
LANS pmax pmax
comp=Z,33nm,1.5s
LANS Liptovska Anna 78.00 0 *e*P **P 09 05 34.2 +2.2**
KRUC Moravsky 78.06 2 *e*P **P 09 05 33.0 +0.8**
GEC2 GERESS Array S 78.19 4 *e*P **P 09 05 34.4 +1.3**
comp=Z,47nm,1.6s,baz=355,slow=5.8
GEC2 *e*pP **pwP 09 05 44.0 +0.4**
baz=356,slow=5.9
GERES GERESS Array B 78.19 4 P **P 09 05 33.5 +0.4**
comp=Z,4.2nm,0.9s,baz=358,slow=5.6,SNR=12
comp=Z,4.2nm,0.9s
GERES GERESS Array B 78.19 4 P **P 09 05 33.7 +0.6**
GERES GERESS Array B 78.19 4 P **P 09 05 33.7 +0.6**
KOLS Kolonicke sedl 78.19 358 *e*P **P 09 05 34.7 +1.7**
KOLS *e* 09 05 44.8
KOLS pmax pmax
comp=Z,19nm,1.2s
KOLS Kolonicke sedl 78.19 358 *e*P **P 09 05 34.7 +1.7**
KOLS *e* 09 05 44.8
SJG San Juan 78.20 76 LR LR 09 39 51.8
comp=Z,224nm,19.0s,baz=318,slow=36
SJG San Juan 78.20 76 IAMs_20 IAMs_20 09 40 20.1
comp=Z,324nm,19.0s
JAVC Velka Javorina 78.28 1 *e*P **P 09 05 35.7 +2.1**
BFO Black Forest 78.37 8 P **P 09 05 34.1 0.0**
BFO IAmb IAmb 09 05 46.0
comp=Z,65nm,1.6s
BFO Black Forest 78.37 8 P **P 09 05 34.1 0.0**
BFO pmax pmax
comp=Z,65nm,1.6s
BFO Black Forest 78.37 8 *e*P **P 09 05 35.2 +1.1**
comp=Z,54nm,1.6s,baz=355,slow=5.8
BFO *e*pP **pwP 09 05 45.2 +0.7**
baz=356,slow=5.9
KMPD K-Podol'skiy 78.42 355 P **P 09 05 33.4 -0.9**
TEZP TEZPUR 78.43 299 *e*P **P 09 05 34.5 -0.2**
TEZP *i*x x 09 05 44.6
KOHI KOHIMA 78.46 297 *e*P **P 09 05 35.6 +0.5**
KOHI *i*x x 09 05 45.9
UZHM Uzhgorod 78.50 358 P **P 09 05 35.7 +1.0**
SMOL Smolenice 78.62 1 *e*P **P 09 05 37.5 +2.1**
SMOL *e* 09 05 47.1
SMOL pmax pmax
comp=Z,25nm,1.6s
KECS Kecovo 78.67 359 *e*P **P 09 05 37.3 +1.7**
KECS Kecovo 78.67 359 *e*P **P 09 05 37.3 +1.7**
FUR Furstenfeldbru 78.74 6 *e*P **P 09 05 37.7 +1.6**
comp=Z,126nm,1.5s,baz=355,slow=5.8
FUR *e*pP **pwP 09 05 47.5 +0.9**
baz=356,slow=5.9
SORM Soroca 78.75 354 ⇑P **P 09 05 36.4 +0.4**
SORM Soroca 78.75 354 P **P 09 05 36.4 +0.4**
MODS Modra-Piesok 78.76 2 *e*P **P 09 05 37.8 +1.6**
MODS *e* 09 05 47.9
MODS pmax pmax
comp=Z,139nm,1.4s
MODS Modra-Piesok 78.76 2 *e*P **P 09 05 37.8 +1.6**
MODS *e* 09 05 47.9
BAL3X Bal3x, Balta 78.86 353 P **P 09 05 36.2 -0.5**
CHGR Chuyangaron 78.95 323 *d* iP **P 09 05 38.0 +0.5**
CHGR pmax pmax
comp=Z,152nm,0.9s
MANEM Manem 78.98 320 IAmb IAmb 09 05 50.5
comp=Z,148nm,1.0s
WINA Alland / Wiene 79.00 2 *i* pP **P 09 05 38.7 +1.2**
comp=Z,35nm,1.4s,SNR=20
CONA Conrad Observa 79.18 3 *i* pP **P 09 05 40.0 +1.4**
comp=Z,25nm,1.1s,SNR=18
MOA Molln 79.20 4 *e*pP **P 09 05 39.5 +0.9**
comp=Z,12nm,1.3s,SNR=7.3
PSZ Piszkesteto 79.24 360 ⇑P **P 09 05 40.3 +1.5**
PSZ Piszkesteto 79.24 360 IAmb IAmb 09 05 51.9
comp=Z,57nm,1.2s
PSZ Piszkesteto 79.24 360 P **P 09 05 40.3 +1.5**
BIOA Bad Ischl, Aus 79.34 4 *e*pP **P 09 05 40.3 +1.0**
comp=Z,38nm,1.5s,SNR=14
GUWA GUWAHATI 79.36 300 *e*P **P 09 05 39.6 -0.1**
GUWA *i*x x 09 05 49.4
GUWA *e*x x 09 05 57.3
RETA Reutte 79.39 6 *e*pP **P 09 05 40.8 +1.1**
comp=Z,17nm,1.3s,SNR=6.1
BUR08 Bucovina Ar. S 79.40 356 IAmb IAmb 09 05 52.2
comp=Z,107nm,1.6s
RONA Rosalia, Austr 79.42 2 *i* pP **P 09 05 41.3 +1.5**
comp=Z,15nm,1.0s,SNR=11
BMR Baia Mare 79.43 357 ⇑P **P 09 05 41.0 +1.2**
BMR Baia Mare 79.43 357 P **P 09 05 41.0 +1.2**
BURAR Bucovina Array 79.43 356 ⇑P **P 09 05 41.2 +1.3**
BURAR Bucovina Array 79.43 356 P **P 09 05 40.4 +0.4**
BURAR Bucovina Array 79.43 356 P **P 09 05 41.2 +1.3**
DAVA Damuels 79.53 7 *i* pP **P 09 05 41.1 +0.5**
comp=Z,10nm,1.0s
MOTA Moosalm 79.55 6 *i* pP **P 09 05 41.6 +0.9**
comp=Z,37nm,1.2s,SNR=19
LESA Schwarzleotal 79.56 5 *e*pP **P 09 05 41.6 +1.0**
comp=Z,18nm,1.1s,SNR=18
WATA Walderalm 79.59 6 *i* pP **P 09 05 41.8 +0.9**
comp=Z,60nm,1.3s,SNR=26
WTTA Wattenberg 79.66 5 *i* pP **P 09 05 42.4 +1.1**
comp=Z,41nm,1.2s,SNR=16
SQTA Sankt Quirin 79.68 6 *i* pP **P 09 05 42.4 +1.1**
comp=Z,43nm,1.1s,SNR=18
SHL Shillong 79.76 299 IAmb IAmb 09 05 52.7
comp=Z,111nm,1.0s
SHL Shillong 79.76 299 *ex* x 09 05 41.6
SHL *i*x x 09 05 51.8
ERBR Yeremizino-Bor 79.83 345 *e*P **P 09 05 43.5 +1.5**
ERBR *e*S **SKSac 09 16 00.4 +2.1**
ERBR pmax pmax
comp=Z,89nm,1.6s
ARSA Arzberg 79.84 3 *e*pP **P 09 05 43.6 +1.5**
comp=Z,24nm,1.1s,SNR=20
FETA Feichten 79.85 6 *i* pP **P 09 05 43.5 +1.1**
comp=Z,25nm,1.1s,SNR=12
KBA Koenbreinsper 79.94 4 *e*pP **P 09 05 44.3 +1.4**
comp=Z,56nm,1.1s,SNR=28
SESA Seetaler Alpe, 79.95 3 *i* pP **P 09 05 44.3 +1.4**
comp=Z,89nm,1.1s,SNR=35
MESR Meseseni 79.96 358 ⇑P **P 09 05 44.3 +1.6**
ARCR ARCALIA 79.99 357 ⇓P **P 09 05 43.9 +1.0**
NE56 Odesa 80.01 352 P **P 09 05 42.2 -0.8**
APAC Apartado, Choc 80.03 90 P **P 09 05 42.3 -1.2**
comp=Z,2µmcomp=Z,141nm,1.4s
DAVOX Davos/Dischmat 80.03 7 LR LR 09 44 02.2
comp=Z,141nm,19.9s,baz=82,slow=38
SMRT St. Maarten 80.03 73 IAMs_20 IAMs_20 09 46 22.3
comp=Z,299nm,18.0s
GOF Gofitskoye 80.06 343 *ce*P **P 09 05 44.6 +1.3**
HNLY HANLEY 80.07 313 *e*P **P 09 05 45.1 +0.9**
HNLY IAmb IAmb 09 05 48.6
comp=Z,61nm,1.7s
FUORN Ofenpass-Fuorn 80.22 7 IAmb IAmb 09 05 57.3
comp=Z,63nm,1.2s
FUORN IAMs_20 IAMs_20 09 40 40.4
comp=Z,380nm,21.0s
ABTA Abfaltersbach 80.22 5 *e*pP **P 09 05 45.0 +0.7**
comp=Z,36nm,1.2s,SNR=12
SHAA Shahritus 80.29 323 P **P 09 05 45.6 +0.9**
SHAA IAmb IAmb 09 06 04.1
comp=Z,162nm,1.0s
TUE Stuetta 80.30 7 P **P 09 05 46.0 +1.1**
DRGR 80.33 358 ⇑P **P 09 05 46.2 +1.3**
DRGR 80.33 358 P **P 09 05 46.1 +1.3**
CJR Cluj-Napoca 80.38 357 ⇑P **P 09 05 46.4 +1.3**
CJR Cluj-Napoca 80.38 357 P **P 09 05 46.4 +1.3**
MYKA Terra Mystica 80.40 4 *e*pP **P 09 05 45.8 +0.6**
comp=Z,16nm,1.2s,SNR=10
SOKA Soboth 80.40 3 *i* pP **P 09 05 46.3 +1.1**
comp=Z,46nm,1.1s,SNR=40
MARR Marisel-Cluj 80.43 358 ⇓P **P 09 05 45.9 +0.5**
PERS Pernice 80.45 3 *i* P **P 09 05 46.5 +1.1**
PERS *e*pP **pwP 09 05 56.5 +0.7**
TESR Tescani 80.46 355 ⇓P **P 09 05 46.0 +0.6**
TESR Tescani 80.46 355 P **P 09 05 45.5 +0.1**
comp=Z,788nmcomp=Z,38nm,2.0s
SEUS St. Eustatius 80.53 74 IAMs_20 IAMs_20 09 42 19.5
comp=Z,514nm,22.0s
OBKA Obir 80.55 4 *i* pP **P 09 05 47.1 +1.0**
comp=Z,17nm,0.8s,SNR=19
ONER Baraj Valea Uz 80.65 355 ⇑P **P 09 05 48.3 +1.8**
BEHE Becsehely 80.66 2 ⇓*i* P **P 09 05 47.9 +1.4**
UREC San Jos de Ur 80.78 89 P **P 09 05 44.9 -2.7**
CADS Cadrg 80.80 4 *i* P **P 09 05 47.5 +0.1**
CADS *e*pP **pwP 09 05 57.5 -0.3**
LABN Labinsk 80.84 345 *e*P **P 09 05 47.8 +0.3**
LABN *e*S **S 09 15 53.1 -1.9**
LABN pmax pmax
comp=Z,52nm,1.2s
OZUR 80.92 356 ⇓P **P 09 05 49.5 +1.6**
MDB Medias 80.93 357 ⇑P **P 09 05 48.7 +0.7**
MDB Medias 80.93 357 P **P 09 05 48.6 +0.7**
MORH Mrgy, Hungar 80.94 1 ⇓P **P 09 05 49.1 +1.1**
MORH Mrgy, Hungar 80.94 1 *e*P **P 09 05 48.5 +0.6**
MORH Mrgy, Hungar 80.94 1 P **P 09 05 48.1 +0.2**
comp=Z,369nmcomp=Z,18nm,1.7s
BOSR Bodos 80.94 356 ⇑P **P 09 05 49.7 +1.6**
SABO M.te Sabotino 81.04 4 IAmb IAmb 09 06 00.1
comp=Z,54nm,1.1s
DOPR Dopca 81.06 356 ⇓P **P 09 05 50.3 +1.6**
VRI Vrincioaia 81.10 355 ⇓P **P 09 05 49.9 +1.0**
VRI Vrincioaia 81.10 355 P **P 09 05 49.9 +1.0**
VRI Vrincioaia 81.10 355 P **P 09 05 49.9 +1.0**
comp=Z,574nmcomp=Z,34nm,1.3s
PLOR Plostina 81.12 355 ⇑P **P 09 05 50.1 +1.1**
PLOR Plostina 81.12 355 P **P 09 05 50.1 +1.1**
COVR Voineasa-Covas 81.15 355 ⇑P **P 09 05 50.3 +1.1**
ANN Anapa 81.16 347 *e*P **P 09 05 49.5 +0.3**
ANN *e*S **S 09 15 56.0 -2.2**
ANN pmax pmax
comp=Z,71nm,1.4s
ANN MLR MLR
comp=N,1µm,19.0s
KVAR Kislovodsk Arr 81.19 343 P **P 09 05 50.0 +0.5**
comp=N,9.3nm,1.0s,baz=325,slow=12,SNR=3.1
KVAR LR LR 09 46 50.3
comp=N,491nm,20.4s,baz=262,slow=39
comp=N,9.3nm,1.0s
KVAR Kislovodsk Arr 81.19 343 P **P 09 05 50.0 +0.5**
KIV Kislovodsk 81.19 343 ⇑P **P 09 05 51.2 +1.8**
KIV Kislovodsk 81.19 343 P **P 09 05 50.8 +1.3**
KIV IAmb IAmb 09 06 02.1
comp=Z,82nm,0.9s
KIV Kislovodsk 81.19 343 *e*P **P 09 05 50.7 +1.3**
KIV *e* 09 08 55.7
KIV *e*S **S 09 15 58.7 -0.1**
KIV pmax pmax
comp=Z,60nm,1.0s
KIV pmax pmax
comp=Z,51nm,3.0s
KIV MLR MLR
comp=Z,436nm,19.0s
KIV Kislovodsk 81.19 343 P **P 09 05 50.2 +0.7**
comp=Z,710nmcomp=Z,78nm,1.0s
DLV Lat 81.20 278 IAMs_20 IAMs_20 09 34 43.4
comp=Z,388nm,22.0s
KKM Kota Kinabalu 81.22 268 IAmb IAmb 09 06 01.8
comp=Z,53nm,1.0s
KKM Kota Kinabalu 81.22 268 P **P 09 05 50.5 +0.4**
comp=Z,747nmcomp=Z,56nm,1.1s
MAK Makhachkala 81.23 340 *c* iP **P 09 05 47.4 -2.1**
MAK *e* 09 08 59.6
MAK *e*PPP PPP 09 10 55.9
MAK *e*S **S 09 15 55.4 -3.5**
MAK *e*SS **SS 09 21 15.4 +2.6**
MAK pmax pmax
comp=Z,244nm,1.5s
DEV Deva 81.23 358 ⇓P **P 09 05 51.0 +1.4**
DEV Deva 81.23 358 P **P 09 05 50.9 +1.4**
SALO Salr 81.23 6 IAmb IAmb 09 06 01.8
comp=Z,41nm,0.9s
SAHR Sahastru 81.24 355 ⇓P **P 09 05 51.2 +1.5**
TSSA Tissa 81.24 315 *e*P **P 09 05 51.3 +1.2**
CHTO Chiang Mai 81.32 290 P **P 09 05 50.1 -0.4**
CHTO IAMs_20 IAMs_20 09 47 39.1
comp=Z,370nm,18.0s
CHTO Chiang Mai 81.32 290 P **P 09 05 50.1 -0.4**
CHTO pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 81.32 290 P **P 09 05 50.4 0.0**
comp=Z,35nm,1.2s
IZVR Izvoarele 81.36 354 ⇑P **P 09 05 51.9 +1.7**
KBZ Khabaz 81.37 343 P **P 09 05 51.2 +0.9**
comp=Z,24nm,0.9s,baz=9.1,slow=5.4,SNR=34
KBZ S **S 09 16 00.2 -0.2**
comp=Z,0.5nm,0.5s,baz=343,slow=17,SNR=1.7
KBZ LR LR 09 46 52.7
comp=Z,496nm,19.9s,baz=11,slow=39
comp=Z,24nm,0.9s
KBZ Khabaz 81.37 343 *d* iP **P 09 05 51.7 +1.4**
KBZ pmax pmax
comp=Z,33nm,1.1s
SHA1 Shidzhatmaz 81.40 343 *ce*P **P 09 05 52.1 +1.3**
SIM Simferopol' 81.42 350 *e*P **P 09 05 51.5 +1.0**
SIM *e* 09 09 01.0
SIM *e*S **S 09 16 01.0 +0.1**
SIM pmax pmax
comp=Z,22nm,0.7s
SIM pmax pmax
comp=Z,80nm,5.4s
SIM pmax pmax
comp=Z,50nm,5.8s
SCHLR Schela 81.43 354 ⇑P **P 09 05 52.3 +1.7**
KLP Kalpa 81.44 312 *e*P **P 09 05 51.7 +0.4**
AGT Agartala 81.46 299 *e*P **P 09 05 52.7 +1.6**
AGT *i*x x 09 06 02.1
BNI Bardonecchia 81.48 9 IAmb IAmb 09 06 04.2
comp=Z,70nm,1.1s
BNI IAMs_20 IAMs_20 09 46 06.6
comp=Z,359nm,19.0s
MLR Muntele Rosu 81.51 355 P **P 09 05 52.0 +0.8**
comp=Z,10nm,1.1s,baz=7.1,slow=5.7,SNR=17
MLR S **S 09 16 04.8 +2.6**
comp=Z,0.5nm,0.3s,baz=24,slow=18,SNR=1.4
comp=Z,10nm,1.1s
MLR Muntele Rosu 81.51 355 ⇑P **P 09 05 53.0 +1.8**
MLR Muntele Rosu 81.51 355 IAmb IAmb 09 06 04.7
comp=Z,144nm,1.9s
MLR Muntele Rosu 81.51 355 P **P 09 05 52.3 +1.1**
comp=Z,695nmcomp=Z,35nm,1.4s
BZS Buzias 81.52 359 ⇑P **P 09 05 52.0 +0.8**
BZS Buzias 81.52 359 P **P 09 05 51.9 +0.8**
CM31 Chiang Mai Arr 81.61 289 IAmb IAmb 09 06 03.5
comp=Z,91nm,0.9s
CMAR Chiang Mai Arr 81.61 289 P **P 09 05 52.3 +0.3**
comp=Z,48nm,1.0s,baz=36,slow=4.3,SNR=133
CMAR PKKPbc **PKKPbc 09 24 22.1 +0.5**
comp=Z,1.3nm,0.6s,baz=217,slow=2.0,SNR=7.5
CMAR LR LR 09 47 14.8
comp=Z,294nm,18.1s,baz=40,slow=40
comp=Z,48nm,1.0s
CMAR Chiang Mai Arr 81.61 289 P **P 09 05 51.9 0.0**
CMAR Chiang Mai Arr 81.61 289 *i* P **P 09 05 52.2 +0.3**
CMAR pmax pmax
comp=Z,39nm,0.9s
VOIR 81.61 356 ⇑P **P 09 05 53.1 +1.5**
VOIR 81.61 356 P **P 09 05 53.1 +1.5**
LOT Lotru 81.64 357 ⇑P **P 09 05 52.6 +0.7**
TLCR 81.65 353 ⇓P **P 09 05 52.9 +1.1**
TLCR 81.65 353 P **P 09 05 52.8 +1.1**
DHRM DHARAMSHALA 81.68 314 *e*P **P 09 05 53.3 +0.8**
DHRM IAmb IAmb 09 06 04.9
comp=Z,49nm,0.9s
ARR Arges 81.69 356 ⇓P **P 09 05 53.6 +1.5**
CFR Carcaliu 81.70 354 ⇑P **P 09 05 52.2 +0.1**
CFR Carcaliu 81.70 354 P **P 09 05 52.1 +0.1**
OCAC Ocana 81.72 87 P **P 09 05 51.3 -1.5**
comp=Z,1µmcomp=Z,65nm,1.5s
GZR Gura Zlata 81.72 358 ⇓P **P 09 05 53.4 +1.1**
GZR Gura Zlata 81.72 358 P **P 09 05 53.4 +1.1**
NIL Nilore 81.75 317 P **P 09 05 53.4 +0.9**
NIL IAmb IAmb 09 06 04.8
comp=Z,114nm,1.1s
NIL Nilore 81.75 317 P **P 09 05 53.4 +0.9**
NIL pmax pmax
comp=Z,114nm,1.2s
NIL MLR MLR
comp=Z,600nm,19.0s
ISR Istrita 81.86 355 ⇑P **P 09 05 53.2 +0.2**
ISR Istrita 81.86 355 P **P 09 05 53.1 +0.2**
CBOC Ciudad Bolivar 81.98 91 P **P 09 05 52.0 -2.2**
FRGS Fruska Gora 82.00 360 ⇓*i* P **P 09 05 53.7 +0.1**
TPGR Topolog 82.01 354 ⇓P **P 09 05 54.7 +1.1**
SOC Sochi 82.03 345 *e*P **P 09 05 54.2 +0.4**
SOC *e*S **S 09 16 05.1 -2.2**
SOC *e*SS **SS 09 21 25.1 +0.4**
SOC pmax pmax
comp=Z,54nm,0.8s
PGAV Gavieira, Arco 82.19 21 *e*P **P 09 05 56.1 +1.3**
PGAV *i* IAmb IAmb 09 06 00.1
comp=Z,70nm,1.7s
PGAV *e*pP **pwP 09 06 06.2 +0.8**
PGAV *e*S **SKSac 09 16 16.6 +1.8**
PGAV *e*LR LR 09 33 29.1
PGAV *i* IAMs_20 IAMs_20 09 43 49.1
comp=Z,376nm,18.0s

PTH Pithoragarh 82.21 310 *eP* **P 09 05 55.8 +0.6**
BRDH Bariadhala 82.23 298 LR LR 09 47 19.3
comp=Z,352nm,18.5s,baz=139,slow=39
SHBG Sahibganj 82.23 302 *ex* x 09 06 05.1
HERR Herculane 82.24 358 ⇓P **P 09 05 55.3 +0.4**
MDVR Moldovita 82.36 358 ⇓P **P 09 05 56.6 +1.0**
BLY Banja Luka 82.39 2 ⇓P **P 09 05 56.9 +1.3**
BLY Banja Luka 82.39 2 IAms_20 IAms_20 09 47 24.8
comp=Z,371nm,21.0s
BLY Banja Luka 82.39 2 ⇓*i*P **P 09 05 56.0 +0.4**
TIRR Tirgusor 82.40 354 ⇓P **P 09 05 56.6 +0.9**
TIRR Tirgusor 82.40 354 IAmb IAmb 09 06 07.5
comp=Z,87nm,1.2s
TIRR IAMs_20 IAMs_20 09 45 22.4
comp=Z,578nm,22.0s
TIRR Tirgusor 82.40 354 P **P 09 05 56.6 +0.9**
LGTI Lohaghat 82.42 310 *eP* **P 09 05 56.9 +0.5**
COEN Coen 82.45 235 P **P 09 05 56.1 -0.1**
comp=Z,43nm,3.0s
COEN Coen 82.45 235 P **P 09 05 56.1 -0.1**
COEN IAmb IAmb 09 05 56.8
comp=Z,84nm,1.4s
PCAB Cabril 82.49 20 *eP* **P 09 05 57.4 +1.1**
PCAB *epP* **pwP 09 06 07.6 +0.8**
PCAB *i* IAmb IAmb 09 06 08.6
comp=Z,89nm,1.4s
ZCCA Zocca 82.52 6 IAmb IAmb 09 06 23.2
comp=Z,46nm,1.0s
PLMC San Jos del P 82.58 92 P **P 09 05 55.5 -1.7**
comp=Z,845nmcomp=Z,60nm,1.2s
AKT Akhty 82.60 339 *eP* **P 09 05 58.0 +1.0**
AKT *e* 09 06 01.0
AKT *e* 09 09 05.4
AKT *eS* **S 09 16 11.1 -2.3**
AKT pmax pmax
comp=Z,74nm,1.3s
TEKS Tekeris 82.61 0 ⇓*i*P **P 09 05 57.4 +0.6**
KBL Kabul 82.63 321 P **P 09 05 57.1 -0.3**
KBL IAmb IAmb 09 06 07.8
comp=Z,52nm,1.0s
KBL Kabul 82.63 321 P **P 09 05 57.1 -0.3**
KBL pmax pmax
comp=Z,52nm,1.0s
PBRG Braganca 82.66 20 *eP* **P 09 05 58.2 +1.0**
PBRG *i* IAmb IAmb 09 06 02.1
comp=Z,65nm,1.9s
PBRG *epP* **pwP 09 06 08.3 +0.6**
ICOR Ion Corvin 82.78 354 ⇑P **P 09 05 59.4 +1.7**
PAMC Pamplona, Colo 82.81 87 P **P 09 05 58.0 -0.8**
comp=Z,917nmcomp=Z,72nm,1.2s
SDV Santo Domingo 82.82 85 P **P 09 05 57.5 -1.1**
SDV IAmb IAmb 09 05 59.2
comp=Z,66nm,1.6s
SDV Santo Domingo 82.82 85 *eP* **P 09 05 57.6 -0.9**
POLO Lamas de Olo 82.86 20 *eP* **P 09 05 59.4 +1.1**
POLO *epP* **pwP 09 06 09.7 +0.9**
POLO *i* IAmb IAmb 09 06 11.3
comp=Z,59nm,1.3s
GUY2C Guyana, Caldas 82.88 91 P **P 09 05 58.5 -0.7**
comp=Z,1µmcomp=Z,83nm,1.2s
PTO Porto 82.91 21 *eP* **P 09 05 59.3 +0.9**
PTO *i* IAmb IAmb 09 06 00.7
comp=Z,98nm,1.3s
PTO *epP* **pwP 09 06 09.7 +0.8**
PVRL Vila Real 82.97 20 *eP* **P 09 06 00.1 +1.2**
PVRL *i* IAmb IAmb 09 06 04.5
comp=Z,113nm,1.7s
PVRL *epP* **pwP 09 06 10.2 +0.8**
MVO Moncorvo 83.22 20 *eP* **P 09 06 01.1 +0.9**
MVO *i* IAmb IAmb 09 06 02.5
comp=Z,120nm,1.2s
MVO *epP* **pwP 09 06 11.5 +0.9**
MVO *eS* **S 09 16 21.0 +1.3**
MVO *e*LR LR 09 33 03.4
MVO *i* IAMs_20 IAMs_20 09 48 08.6
comp=Z,270nm,18.0s
PSN Preselentsi 83.24 354 *i* P **P 09 06 01.4 +1.3**
CEST Esterri de Car 83.26 14 IAmb IAmb 09 06 02.7
comp=Z,65nm,1.1s
BBLS Lazi&#263i 83.29 0 ⇓*i*P **P 09 06 01.7 +1.2**
VALD Valchedram 83.41 357 *eP* **P 09 06 01.4 +0.5**
PVIS Viseu 83.47 21 *eP* **P 09 06 02.4 +0.9**
PVIS *epP* **pwP 09 06 12.7 +0.8**
BOVS Bovan 83.50 358 ⇑P **P 09 06 02.7 +1.2**
APSI Ampana 83.51 260 P P 09 06 11.9 +10
PLVB Pleven 83.67 356 ⇓P **P 09 06 03.2 +0.9**
JAMC Jamundi, Valle 83.68 93 P **P 09 06 02.8 -0.3**
comp=Z,1µmcomp=Z,98nm,1.3s
RUSC La Rusia 83.72 89 P **P 09 06 02.2 -1.4**
comp=Z,2µmcomp=Z,165nm,1.4s
MPEP Malo Peshtene 83.73 357 *i* P **P 09 06 03.0 +0.3**
SZH Strazhitsa 83.73 355 *i* P **P 09 06 02.6 -0.1**
PRD Provadia 83.76 354 *i* P **P 09 06 03.6 +0.8**
GAYA Gaya 83.80 304 *eP* **P 09 06 03.8 +0.5**
ROSC El Rosal 83.81 90 P **P 09 06 04.2 +0.3**
comp=Z,17nm,1.0s,baz=0.3,slow=2.5,SNR=12
comp=Z,17nm,1.0s
ROSC El Rosal 83.81 90 P **P 09 06 03.9 0.0**
ROSC IAmb IAmb 09 06 07.3
comp=Z,46nm,1.2s
ROSC El Rosal 83.81 90 P **P 09 06 03.9 0.0**
ROSC pmax pmax
comp=Z,46nm,1.2s
MTE Manteigas 83.85 21 IAMs_20 IAMs_20 09 45 22.8
comp=Z,475nm,18.0s
MTE Manteigas 83.85 21 *eP* **P 09 06 04.3 +0.9**
MTE *epP* **pwP 09 06 14.7 +1.3**
MTE *i* IAmb IAmb 09 06 16.3
comp=Z,130nm,1.2s
MTE *eS* **S 09 16 30.5 +4.4**
MTE *e*LR LR 09 33 57.1
MTE *i* IAMs_20 IAMs_20 09 44 16.8
comp=Z,282nm,20.0s
SJES Sjenica 83.89 360 ⇓*i*P **P 09 06 04.9 +1.3**
PCAS Casmilo, Conde 83.97 21 *eP* **P 09 06 04.5 +0.5**
PCAS *i* IAmb IAmb 09 06 06.9
comp=Z,116nm,1.4s
PCAS *epP* **pwP 09 06 14.9 +0.9**
CORI Orista 83.98 13 IAmb IAmb 09 06 16.1
comp=Z,46nm,1.1s
NRCA Norcia 84.16 5 IAmb IAmb 09 06 07.5
comp=Z,81nm,1.2s
POPC Popayan, Colom 84.22 93 P **P 09 06 04.3 -1.5**
comp=Z,689nmcomp=Z,40nm,1.4s
BRY Bratogost 84.25 1 *eP* **P 09 06 06.0 +0.5**
BOK Bokaro 84.31 303 *ex* x 09 05 59.9
NDI New Delhi 84.34 312 *eP* **P 09 06 05.8 -0.1**
PRAC Prado 84.36 91 P **P 09 06 05.8 -0.5**
comp=Z,1µmcomp=Z,74nm,1.5s
PCBR Castelo Branco 84.40 21 *eP* **P 09 06 06.9 +0.8**
PCBR *i* IAmb IAmb 09 06 08.0
comp=Z,57nm,1.2s
PCBR *epP* **pwP 09 06 17.4 +1.3**
NPLP NPLP New Delhi 84.40 312 *eP* **P 09 06 06.9 +0.6**
PSBE So Bento 84.42 22 *eP* **P 09 06 06.9 +0.6**
PSBE *i* IAmb IAmb 09 06 09.1
comp=Z,130nm,1.5s
PSBE *epP* **pwP 09 06 17.4 +1.0**
TREB Trebinje 84.43 1 *eP* **P 09 06 06.5 +0.3**
PSARD Sardoal 84.48 21 *eP* **P 09 06 07.3 +0.7**
PSARD *epP* **pwP 09 06 16.3 -0.2**
PSARD *i* IAmb IAmb 09 06 18.9
comp=Z,91nm,1.4s
VTS Vitosha 84.48 357 *i* P **P 09 06 07.0 +0.3**
GNI Garni 84.49 341 P **P 09 06 06.7 -0.1**
comp=Z,10nm,0.6s,baz=344,slow=19,SNR=7.5
GNI LR LR 09 47 44.3
comp=Z,714nm,21.9s,baz=28,slow=38
comp=Z,10nm,0.6s
GNI Garni 84.49 341 P **P 09 06 08.3 +1.5**
GNI IAmb IAmb 09 06 20.0
comp=Z,75nm,1.1s
GNI Garni 84.49 341 P **P 09 06 08.3 +1.5**
GNI pmax pmax
comp=Z,75nm,1.2s
GNI MLR MLR
comp=Z,900nm,22.0s
AQU L'Aquila 84.65 5 *eP* **P 09 06 07.9 +0.5**
HCY Herceg Novi 84.70 1 *eP* **P 09 06 06.3 -1.3**
PDG Podgorica 84.72 0 ⇑P **P 09 06 08.8 +1.1**
PDG Podgorica 84.72 0 P **P 09 06 07.9 +0.2**
PDG IAMs_20 IAMs_20 09 47 44.7
comp=Z,359nm,22.0s
PDG Podgorica 84.72 0 ⇓*i*P **P 09 06 08.0 +0.3**

PAC1 Pacto, Paraso 84.76 97 P **P 09 06 08.4 0.0**
comp=Z,2µmcomp=Z,87nm,1.5s
SONA Sohna 84.78 312 *eP* **P 09 06 08.9 +0.6**
CMBC Cumbal 84.80 95 P **P 09 06 09.1 +0.1**
PMRV Marv??o 84.81 21 *eP* **P 09 06 09.2 +1.0**
PMRV *i* IAmb IAmb 09 06 10.8
comp=Z,56nm,1.5s
PMRV *epP* **pwP 09 06 18.8 +0.6**
PMRV *eP*P **PP 09 09 26.7 +3.1**
PMRV *eS* **S 09 16 36.6 +1.0**
PMRV *e*LR LR 09 34 50.1
PMRV *i* IAMs_20 IAMs_20 09 46 11.8
comp=Z,231nm,18.0s
PMAFR Mafra 84.85 22 *eP* **P 09 06 09.5 +1.1**
PMAFR *epP* **pwP 09 06 19.3 +0.8**
PMAFR *i* IAmb IAmb 09 06 20.9
comp=Z,228nm,1.2s
CUSE Cuicocha Este 84.96 96 P **P 09 06 10.2 +0.4**
comp=Z,3µmcomp=Z,63nm,1.3s
DRME Dracevica, Mon 84.97 0 *eP* **P 09 06 10.2 +1.3**
PMTG Montargil 84.98 21 *eP* **P 09 06 09.1 +0.1**
PMTG *i* IAmb IAmb 09 06 21.9
comp=Z,43nm,1.3s
OTAV Otavalo 84.98 96 P **P 09 06 10.0 +0.1**
OTAV IAmb IAmb 09 06 10.9
comp=Z,34nm,0.9s
OTAV Otavalo 84.98 96 P **P 09 06 10.0 +0.1**
OTAV pmax pmax
comp=Z,34nm,1.0s
TULM Tulcn-Chalpat 85.00 95 P **P 09 06 11.7 +1.6**
ALBI Allahabad 85.06 307 *eP* **P 09 06 09.9 +0.2**
ALBI IVmBBB 09 06 12.8
comp=Z,557nm,1.0s
KUDL Kundal 85.13 312 *eP* **P 09 06 10.2 +0.3**
SKO Skopje 85.17 359 ⇓*i*P **P 09 06 11.6 +1.6**
GARC Garzon, Huila 85.21 93 P **P 09 06 10.8 0.0**
comp=Z,1µmcomp=Z,49nm,1.6s
HRA Herat 85.21 326 IAmb IAmb 09 06 22.3
comp=Z,50nm,1.3s
ESDC Sonseca Array 85.26 18 P **P 09 06 10.0 -0.5**
comp=Z,10nm,0.9s,baz=346,slow=4.6,SNR=39
ESDC PP **PP 09 09 28.0 +0.7**
comp=Z,1.5nm,1.0s,baz=350,slow=9.6,SNR=2.6
ESDC LR LR 09 47 18.0
comp=Z,133nm,18.3s,baz=344,slow=38
comp=Z,10nm,0.9s
ESDC Sonseca Array 85.26 18 P **P 09 06 10.7 +0.1**
ESDC IAmb IAmb 09 06 22.7
comp=Z,73nm,1.2s
PARRA Arraiolos 85.26 21 *eP* **P 09 06 11.1 +0.6**
PARRA *i* IAmb IAmb 09 06 12.1
comp=Z,45nm,1.5s
PARRA *epP* **pwP 09 06 20.8 +0.3**
KKB Krupnik 85.26 357 *i* P **P 09 06 11.6 +1.2**
PESTR Estremoz 85.31 21 *eP* **P 09 06 11.1 +0.4**
PESTR *i* IAmb IAmb 09 06 33.9
comp=Z,32nm,1.9s
PAB San Pablo 85.31 18 P **P 09 06 10.2 -0.6**
PAB San Pablo 85.31 18 IAMs_20 IAMs_20 09 49 07.4
comp=Z,344nm,20.0s
PAB San Pablo 85.31 18 P **P 09 06 10.2 -0.6**
PAB pmax pmax
comp=Z,28nm,1.5s
KOPT Kop Dagi 85.39 344 IAmb IAmb 09 06 24.9
comp=Z,40nm,1.1s
MOE Montemor 85.47 22 *eP* **P 09 06 12.7 +1.1**
MOE *epP* **pwP 09 06 22.0 +0.4**
MOE *i* IAmb IAmb 09 06 34.4
comp=Z,66nm,1.6s
MTSU Mount Surprise 85.50 232 P **P 09 06 12.2 +0.5**
comp=Z,32nm,0.9s
EVO Evora 85.54 21 *ep*P pP 09 06 26.1 +11
MMB Musomishta 85.54 357 *i* P **P 09 06 12.8 +0.9**
FLOC Florencia 85.59 93 P **P 09 06 12.7 +0.2**
comp=Z,1µmcomp=Z,85nm,1.2s
SLOR San Lorenzo - 85.73 97 IAmb IAmb 09 06 15.7
comp=Z,35nm,0.9s
VAY Valandovo 85.80 358 ⇓*i*P **P 09 06 14.4 +1.4**
PLOUS Minas do Lousa 85.93 22 *eP* **P 09 06 14.2 +0.4**
PLOUS *i* IAmb IAmb 09 06 26.1
comp=Z,46nm,1.7s
PAOL Paolisi 86.02 4 IAmb IAmb 09 06 25.9
comp=Z,65nm,1.0s
OHR Ohrid 86.04 359 ⇓*i*P **P 09 06 15.7 +1.3**
PIAT Ana Tenorio 86.08 97 P **P 09 06 15.6 +0.3**
comp=Z,859nmcomp=Z,58nm,1.2s
ALN Alexandroupoli 86.09 355 IAmb IAmb 09 06 16.6
comp=Z,70nm,1.1s
PBAR Barrancos 86.09 21 *eP* **P 09 06 15.3 +0.7**
PBAR *ep*P **pwP 09 06 25.4 +0.8**
PBAR *i* IAmb IAmb 09 06 37.4
comp=Z,50nm,1.9s
MESJ Messejana 86.16 22 *eP* **P 09 06 15.7 +0.8**
MESJ *e*SKSac **SKSac 09 16 41.2 +0.9**
MESJ IAMs_20 IAMs_20 09 46 26.3
comp=Z,547nm,16.3s
MESJ Messejana 86.16 22 *eP* **P 09 06 15.3 +0.4**
MESJ *i* IAmb IAmb 09 07 01.5
comp=Z,33nm,1.7s
MESJ Messejana 86.16 22 *eP* **P 09 06 15.7 +0.8**
MESJ *e* 09 16 41.2
MACC Macarena, Meta 86.23 91 P **P 09 06 14.7 -0.9**
comp=Z,535nmcomp=Z,38nm,1.2s
CTA Charters Tower 86.29 229 P **P 09 06 15.9 +0.3**
comp=Z,17nm,1.6s
CTA Charters Tower 86.29 229 P **P 09 06 14.5 -1.2**
comp=Z,19nm,1.0s,baz=23,slow=5.5,SNR=8.7
CTA LR LR 09 40 05.8
comp=Z,74nm,19.4s,baz=26,slow=32
comp=Z,19nm,1.0s
CTAO Charters Tower 86.29 229 P **P 09 06 15.6 0.0**
CTAO IAmb IAmb 09 06 16.7
comp=Z,114nm,1.7s
CTAO Charters Tower 86.29 229 P **P 09 06 15.6 0.0**
CTAO pmax pmax
comp=Z,114nm,1.7s
PTEO Sao Teotonio 86.32 22 *eP* **P 09 06 16.6 +0.9**
PTEO *epP* **pwP 09 06 26.3 +0.5**
PTEO *i* IAmb IAmb 09 06 38.0
comp=Z,88nm,2.5s
PCVE Castro Verde 86.39 22 *eP* **P 09 06 16.8 +0.6**
PCVE *i* IAmb IAmb 09 07 08.3
comp=Z,32nm,1.7s
JHNI Jhansi 86.46 309 *eP* **P 09 06 16.2 -0.4**
MATE Matera 86.47 2 ⇓P **P 09 06 17.1 +0.8**
BAND Balkesir-Ban 86.51 353 ⇑P **P 09 06 16.6 0.0**
GURO Guroymak-BITLI 86.55 343 P **P 09 06 18.0 +0.9**
GURO IAmb IAmb 09 06 40.9
comp=Z,26nm,0.6s
MORF Marmelete 86.57 22 *eP* **P 09 06 17.9 +0.9**
MORF IAMs_20 IAMs_20 09 40 57.4
comp=Z,812nm,18.9s
MORF Marmelete 86.57 22 *eP* **P 09 06 17.6 +0.5**
MORF *i* IAmb IAmb 09 06 19.4
comp=Z,73nm,1.5s
MORF *epP* **pwP 09 06 27.9 +0.8**
MORF Marmelete 86.57 22 *eP* **P 09 06 17.9 +0.9**
BR131 Keskin Array S 86.63 349 P **P 09 06 18.1 +0.6**
BR131 Keskin Array S 86.63 349 P **P 09 06 18.1 +0.6**
BR131 pmax pmax
comp=Z,80nm,1.1s
BRTR Keskin Array B 86.63 349 P **P 09 06 18.0 +0.6**
comp=Z,34nm,1.0s,baz=27,slow=2.2,SNR=117
BRTR PP **PP 09 09 39.6 +1.2**
comp=Z,2.5nm,0.9s,baz=5.0,slow=3.3,SNR=3.6
BRTR LR LR 09 52 24.8
comp=Z,305nm,18.7s,baz=5.0,slow=41
comp=Z,34nm,1.0s
BRTR Keskin Array B 86.63 349 *i* P **P 09 06 18.3 +0.9**
BRTR pmax pmax
comp=Z,35nm,1.0s
ARPR Arapgir-MALATY 86.64 345 IAmb IAmb 09 06 54.0
comp=Z,51nm,0.9s
PVAQ Vaqueiros 86.69 21 *eP* **P 09 06 18.4 +0.9**
PVAQ *epP* **pwP 09 06 27.9 +0.3**
PVAQ *i* IAmb IAmb 09 06 51.1
comp=Z,43nm,1.8s
PVAQ *ePP* **PP 09 09 44.8 +6.1**
PVAQ *eS* **S 09 17 02.1 +8.1**
PVAQ *e*LR LR 09 35 42.5
PVAQ *i* IAMs_20 IAMs_20 09 47 36.6
comp=Z,365nm,16.0s
PFVI Vila Bisbo 86.70 22 *eP* **P 09 06 18.5 +0.9**
PFVI *i* IAmb IAmb 09 06 27.8
comp=Z,87nm,2.0s

PBDV Barranco-do-Ve 86.79 22 *eP* **P 09 06 18.9 +0.8**
PBDV *i* IAmb IAmb 09 06 40.7
comp=Z,74nm,1.7s
KDU Kakadu 86.92 244 P **P 09 06 17.9 -0.9**
comp=Z,24nm,1.3s
LIT Litokhoron 87.02 358 IAmb IAmb 09 06 30.7
comp=Z,62nm,1.0s
KIRS Kirsehir-Merke 87.19 349 ⇓P **P 09 06 21.4 +1.3**
PMSI Majene 87.20 260 P **P 09 06 21.8 +1.5**
PTLC Puerto Leguiza 87.23 93 P **P 09 06 22.0 +1.5**
comp=Z,1µmcomp=Z,105nm,1.2s
BWNR Bhubaneshwar 87.28 301 *eP* **P 09 06 21.4 +0.8**
BWNR IAmb IAmb 09 06 22.7
comp=Z,58nm,0.9s
BWNR *i* x x 09 06 31.5
AJM Ajmer 87.44 313 *ex* x 09 06 30.9
BLSP Bilaspur 87.59 305 *eP* **P 09 06 21.8 -0.4**
BLSP IAmb IAmb 09 06 23.1
comp=Z,43nm,0.8s
BLSP *i* x x 09 06 32.1
GUNA GUNA 87.75 310 *ex* x 09 06 20.2
MCRA Macar, Loja 87.77 100 P **P 09 06 22.0 -1.1**
comp=Z,835nmcomp=Z,53nm,1.5s
KAPI Kappang 87.92 259 P **P 09 06 23.9 +0.2**
KAPI IAmb IAmb 09 06 24.8
comp=Z,76nm,1.4s
KAPI Kappang 87.92 259 P **P 09 06 23.9 +0.2**
KAPI pmax pmax
comp=Z,76nm,1.4s
KAPI Kappang 87.92 259 P **P 09 06 23.6 -0.1**
comp=Z,22nm,1.2s
TIP Timpagrande 87.94 2 ⇑P **P 09 06 24.4 +0.8**
TIP Timpagrande 87.94 2 IAmb IAmb 09 06 35.4
comp=Z,54nm,1.1s
TIP IAMs_20 IAMs_20 09 47 14.8
comp=Z,300nm,21.0s
MANT Manisa 88.33 353 P **P 09 06 25.9 +0.2**
PMOZ Porto Moniz, M 88.53 30 *e*LR LR 09 40 33.8
PMOZ *i* IAMs_20 IAMs_20 09 43 32.9
comp=Z,211nm,20.0s
JASL Jaisalmer 88.61 316 ⇑*ex* x 09 05 49.4
PMAR Madeira 88.71 30 *eP* **P 09 06 29.0 +1.4**
EIDS Eidsvold 88.86 223 P **P 09 06 28.4 +0.6**
comp=Z,15nm,1.2s
EIDS Eidsvold 88.86 223 P **P 09 06 28.2 +0.4**
BHPL Bhopal 88.91 309 *eP* **P 09 06 27.8 -0.6**
BHPL *i* pP **pwP 09 06 38.3 -0.3**
DGPR DIGLIPUR 89.25 291 *ex* x 09 05 00.4
DGPR *i* x x 09 05 11.1
RAGD RAYAGADA 89.34 302 *eP* **P 09 06 31.2 +0.8**
NRDN NARMADA NAGAR 89.48 309 *ex* x 09 06 13.4
QIS Mount Isa 89.83 234 P **P 09 06 32.0 -0.6**
comp=Z,38nm,1.8s
ITM Ithomi 89.95 358 IAmb IAmb 09 06 44.3
comp=Z,75nm,1.2s
ELL Eimali 89.95 352 IAmb IAmb 09 06 45.5
comp=Z,44nm,1.3s
VIS Vishakhapatnam 90.68 301 *eP* **P 09 06 37.8 +1.0**
VIS *i* x x 09 06 47.2
KEST Kesra 90.97 8 P **P 09 06 37.4 -0.5**
comp=Z,16nm,1.0s,baz=330,slow=20,SNR=7.6
KEST LR LR 09 52 29.7
comp=Z,178nm,18.5s,baz=24,slow=39
comp=Z,16nm,1.0s
KEST Kesra 90.97 8 IAmb IAmb 09 06 49.7
comp=Z,32nm,1.1s
KULM Kulim 91.14 280 IAmb IAmb 09 06 40.4
comp=Z,29nm,1.3s
KULM IAMs_20 IAMs_20 09 49 49.1
comp=Z,346nm,18.0s
KULM Kulim 91.14 280 P **P 09 06 39.1 +0.2**
comp=Z,16nm,1.3s
CSS Mathiatis 91.37 349 IAmb IAmb 09 06 51.8
comp=Z,52nm,1.1s
CSS IAMs_20 IAMs_20 09 50 38.9
comp=Z,301nm,22.0s
RPN Rapa Nui 91.47 136 LR LR 09 39 02.2
comp=Z,214nm,20.5s,baz=326,slow=30
MD01 Midelt array s 91.69 20 P **P 09 06 41.0 -0.4**
IDI Anoyia 91.74 356 LR LR 09 52 13.8
comp=Z,139nm,19.8s,baz=316,slow=38
MDT Midelt 91.77 20 LR LR 09 50 57.7
comp=Z,220nm,18.1s,baz=2.0,slow=38
CY604 RAF Akrotiri, 91.84 348 P **P 09 06 42.1 +0.6**
CY604 IAmb IAmb 09 06 54.3
comp=Z,48nm,1.3s
WRAB Tennant Creek 91.94 239 P **P 09 06 42.0 -0.3**
WRAB IAmb IAmb 09 06 42.8
comp=Z,32nm,1.3s
WRAB Tennant Creek 91.94 239 P **P 09 06 42.0 -0.3**
WRAB pmax pmax
comp=Z,32nm,1.3s
WRA Warramunga Arr 91.95 239 P **P 09 06 41.6 -0.8**
comp=Z,9.8nm,1.0s,baz=33,slow=4.1,SNR=26
comp=Z,9.8nm,1.0s
MYKOM Kota Tinggi 92.03 276 IAmb IAmb 09 06 44.8
comp=Z,35nm,1.3s
MYKOM Kota Tinggi 92.03 276 P **P 09 06 43.5 +0.5**
comp=Z,24nm,1.4s
QLP Quilpie 92.84 228 P **P 09 06 47.5 +1.2**
comp=Z,91nm,1.4s
MMAI Mount Meron Ar 93.03 347 LR LR 09 54 31.1
comp=Z,150nm,19.6s,baz=10.0,slow=39
ARMA Armidale 93.14 220 P **P 09 06 49.2 +1.5**
comp=Z,25nm,2.2s
URZ Urewera 93.17 198 LR LR 09 42 03.6
comp=Z,288nm,20.9s,baz=24,slow=31
HYB Hyderabad 93.34 305 *eP* **P 09 06 48.9 -0.2**
HYB *i* x x 09 06 58.9
HYB Hyderabad 93.34 305 *eP* **P 09 06 49.2 +0.1**
HYB *eP*cP **PcP 09 06 49.6 -0.1**
HYB *e*SKSac **SKSac 09 17 23.1 +0.1**
HYB *eS* **S 09 17 56.7 +0.5**
ASF Jabal al Asfar 93.64 345 PP **PP 09 10 34.4 +0.3**
comp=Z,3.1nm,0.7s,baz=24,slow=9.5,SNR=2.5
ASF LR LR 09 53 16.7
comp=Z,147nm,19.2s,baz=15,slow=38
BOAV Boa Vista 94.01 81 *eP* **P 09 06 51.5 -0.6**
PSI Prapat 94.15 280 P **P 09 06 53.9 +1.0**
comp=Z,23nm,1.3s
GHAJ Ghor Haditha 94.69 346 IAMs_20 IAMs_20 09 54 51.8
comp=Z,314nm,22.0s
CZSB Cruzeiro do Su 94.75 96 P **P 09 06 55.4 -0.1**
CZSB Cruzeiro do Su 94.75 96 P **P 09 06 54.0 -1.5**
CZSB Cruzeiro do Su 94.75 96 *eP* **P 09 06 54.9 -0.6**
BKNI Bangkinang 94.87 272 IAMs_20 IAMs_20 09 45 39.3
comp=Z,262nm,18.0s
FITZ Fitzroy Crossi 95.08 247 LR LR 09 47 01.6
comp=Z,102nm,19.2s,baz=2.0,slow=34
AS17 Alice Springs 95.23 237 P **P 09 06 57.4 -0.1**
comp=Z,9.7nm,1.1s
AS15 Alice Springs 95.25 237 P **P 09 06 57.5 0.0**
comp=Z,8.9nm,1.1s
AS31 Alice Springs 95.27 237 P **P 09 06 56.1 -1.6**
comp=Z,2.9nm,1.2s
ASAR Ice Springs 95.28 237 P **P 09 06 56.2 -1.5**
comp=Z,7.2nm,1.1s,baz=34,slow=4.2,SNR=23
ASAR PKKP **PKKPbc 09 23 49.3 +0.1**
comp=Z,1.1nm,0.5s,baz=207,slow=2.1,SNR=38
ASAR LR LR 09 46 48.7
comp=Z,226nm,18.9s,baz=24,slow=34
comp=Z,7.2nm,1.1s
ASAR Alice Springs 95.28 237 P **P 09 06 57.3 -0.4**
AS09 Alice Springs 95.28 237 P **P 09 06 57.7 0.0**
comp=Z,11nm,1.3s
NNA Nana 95.68 102 IAMs_20 IAMs_20 09 38 14.2
comp=Z,188nm,18.0s
EIL Elat 96.38 347 LR LR 09 55 02.4
comp=Z,125nm,20.2s,baz=40,slow=38
MDP Montagnes des 96.44 73 LR LR 09 48 03.1
comp=Z,279nm,22.0s,baz=330,slow=34
CMSA Cobar Meteorol 96.51 224 P **P 09 07 03.7 +0.7**
comp=Z,8.7nm,1.4s
KSI Kapahiang 97.10 273 P Pdif 09 07 07.7 +1.3
STKA Stephens Creek 98.56 227 P **P 09 07 11.2 -1.1**
comp=Z,2.2nm,0.9s,baz=28,slow=8.9,SNR=3.6
STKA LR LR 09 54 45.2
comp=Z,170nm,18.1s,baz=24,slow=37
comp=Z,2.2nm,0.9s
RPZ Rata Peaks 99.62 201 LR LR 09 46 51.1
comp=Z,44nm,19.7s,baz=35,slow=32
LPAZ La Paz 104.22 98 Pdiff **Pdif 09 07 38.7 +0.1**
comp=Z,1.5nm,1.1s,baz=332,slow=4.3,SNR=4.7
LPAZ PKKPbc **PKKPbc 09 23 20.9 -3.3**
comp=Z,0.4nm,0.3s,baz=183,slow=1.9,SNR=1.9
TORD Torodi Ar. Bea 112.14 19 PKiKP **PKiKP 09 12 08.5 -1.0**

comp=Z,1.3nm,0.9s,baz=347,slow=3.0,SNR=5.0
TORD PKKPbc **PKKPbc** **09 22 55.7 -2.8**
comp=Z,0.8nm,0.7s,baz=171,slow=3.1,SNR=5.1
TORD PKKPab **PKKPab** **09 23 08.0 -3.9**
comp=Z,4.6nm,1.1s,baz=150,slow=3.4,SNR=8.7
BDFB Brasilia 115.77 82 PKP **PKPdf 09 12 14.9 -1.7**
comp=Z,2.5nm,0.9s,baz=349,slow=5.2,SNR=2.1
CFA Coronel Fontan 115.86 109 PKKPbc PKKPbc 09 22 45.6 -0.6
comp=Z,1.6nm,0.9s,baz=159,slow=5.5,SNR=5.3
DBIC Dimbokro 116.84 27 PKKPbc PKKPbc 09 22 40.6 -1.8
comp=Z,1.5nm,0.6s,baz=190,slow=6.1,SNR=1.0
AMBA Amambai (Brazi 117.19 92 *eP* **PKPdf 09 12 18.5 -0.5**
CPUP Villa Florida 118.33 97 PKP **PKPdf 09 12 18.7 -2.3**
comp=Z,3.1nm,0.9s,baz=350,slow=5.3,SNR=9.4
CPUP PKKPbc **PKKPbc** **09 22 34.3 -2.8**
comp=Z,3.4nm,1.1s,baz=146,slow=3.6,SNR=5.9
FRTB Fartura 120.76 88 *eP* **PKiKP 09 12 26.6 +0.7**
PLCA Paso Flores 121.21 117 PKP **PKPdf 09 12 23.8 -2.4**
comp=Z,10nm,1.0s,baz=307,slow=3.4,SNR=15
PLCA PKKPbc **PKKPab** **09 22 27.5 +0.4**
comp=Z,1.5nm,0.7s,baz=162,slow=9.6,SNR=3.1
PLCA Paso Flores 121.21 117 **PKPdf 09 12 26.2 0.0**
PLCA Paso Flores 121.21 117 PKIKP **PKPdf 09 12 26.2 0.0**
PSAL Palomas, Salto 121.65 101 *eP* **PKPdf 09 12 26.9 -0.4**
CPSB Cacapava Do Su 123.64 97 **PKPdf 09 12 31.0 -0.1**
CPSB Cacapava Do Su 123.64 97 *eP* **PKPdf 09 12 30.6 -0.5**
TRQA Tornquist 124.06 110 **PKPdf 09 12 31.2 -0.5**
TRQA Tornquist 124.06 110 PKIKP **PKPdf 09 12 31.2 -0.5**
DUB01 Friburgo-RJ 124.11 81 *eP* **PKPdf 09 12 31.5 -0.8**
VNDA Vanda 132.57 190 PKP **PKPdf 09 12 46.0 -0.7**
comp=Z,1.0nm,1.1s,baz=45,slow=2.9,SNR=2.1
VNDA Vanda 132.57 190 **PKPdf 09 12 46.9 +0.2**
VNDA Vanda 132.57 190 PKIKP **PKPdf 09 12 46.9 +0.2**
EFI East Falkland 134.85 121 **PKPdf 09 12 51.5 -0.2**
EFI East Falkland 134.85 121 PKIKP **PKPdf 09 12 51.5 -0.2**
QSPA South Pole Qui 143.00 180 PKhKP PKPpre 09 13 01.2
comp=Z,5.5nm,0.8s,baz=32,slow=2.4,SNR=38
TSUM Tsumeb 146.01 3 **PKPbc 09 13 13.6 -0.2**
HOPE Hope Point 147.56 115 **PKPbc 09 13 16.3 -0.7**
HOPE Hope Point 147.56 115 PKP2 **PKPbc 09 13 16.3 -0.7**
BELA Belgrano 2 148.79 161 **PKPbc 09 13 18.3 -1.4**
MAW Mawson 154.93 218 P **PKPdf 09 13 25.6 +0.4**
MAW Mawson 154.93 218 PKP **PKPdf 09 13 24.8 -0.3**
comp=Z,5.8nm,1.2s,baz=266,slow=5.4,SNR=4.3
MAW PKPbc **PKPbc** **09 13 32.8 -1.1**
comp=Z,4.6nm,0.9s,baz=103,slow=2.6,SNR=12
MAW PKPab **PKPab** **09 13 48.0 -1.5**
comp=Z,8.7nm,0.8s,baz=115,slow=5.0,SNR=7.7
VNA2 Neumayer--Watz 158.56 156 ⇑PKPdf **PKPdf 09 13 27.0 -2.8**
comp=Z,3.8nm,0.8s,baz=271,slow=1.6
SNAA Sanae 159.04 160 PKPdf **PKPdf 09 13 27.1 -3.3**
comp=Z,85nm,0.9s
SNAA Sanae 159.04 160 PKP **PKPdf 09 13 27.5 -3.0**
comp=Z,4.7nm,1.0s,baz=226,slow=1.2,SNR=7.2
SNAA PKPab **PKPab** **09 14 05.4 -1.8**
comp=Z,7.4nm,0.9s,baz=223,slow=4.0,SNR=7.8
TROLL Troll, Antarti 159.74 165 ⇑PKPdf **PKPdf 09 13 28.8 -2.5**
comp=Z,327nm,0.2s
ELIB Princess Elisa 161.13 184 *d*PKPdf **PKPdf 09 13 30.8 -2.1**
SYO Syowa Base 161.61 203⇑ *eP* **PKPdf 09 13 32.0 -1.2**
NVL N'lazarevskaya 162.05 172 *e*PKIKP **PKPdf 09 13 29.6 -4.0**
NVL *e* 09 18 09.5
NVL pmax pmax
comp=Z,6.0nm,0.9s

CATAC ***05*** *08:55:15.4±0.5, 13°N±2°×9°0W±°, h25km±2km, M3.3/22, MLv3.3/22, Error ellipse: s-maj=5.6km s-min=3.3km az=30.1, confirmed*
SNET ***05*** *08:55:16.0±0.8, 13°11N×89°50W, h49km±12km, ML3.1, Presumed earthquake*
GCG ***05*** *08:55:17.7±0.5, 13°20N×89°60W, h45km±9km, MD3.8, ML3.6, Presumed earthquake*
ISC 05 08:55:15.7±1.9, 13°02N±0°08×89°53W±0°05, h32km±10km, n61, σ0s36/88, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.51**	**24**	P	**Pb**	**08 55 26.2**	**-0.2**
LALI				S	**Sb**	**08 55 34.3**	**+0.6**
LALI	**Alcalda de L**	**0.51**	**24**	*eP*	**Pb**	**08 55 26.8**	**+0.5**
JAYA	**Jayaque - finc**	**0.63**	**7**	P	**Pb**	**08 55 28.2**	**-0.3**
JAYA	**Jayaque - finc**	**0.63**	**7**	*iP*	**Pb**	**08 55 28.4**	**-0.2**
JAYA				*i* S	**Sb**	**08 55 36.6**	**-0.7**
JAYA				IAML		08 55 40.6	
	comp=N,3μm,0.2s						
JAYA	**Jayaque - finc**	**0.63**	**7**	*eP*	**Pb**	**08 55 28.4**	**-0.2**
JAYA				*eS*	**Sb**	**08 55 37.5**	**+0.2**
PANCS	**Alcalda de**	**0.68**	**30**	P	**Pb**	**08 55 28.7**	**-0.5**
PANCS				S	**Sb**	**08 55 38.4**	**0.0**
PANCS	**Alcalda de**	**0.68**	**30**	*eP*	**Pb**	**08 55 28.9**	**-0.3**
LOMA	**Loma Larga**	**0.71**	**29**	P	**Pn**	**08 55 29.2**	**-0.4**
LOMA	**Loma Larga**	**0.71**	**29**	*eP*	**Pn**	**08 55 29.4**	**-0.2**
LOMA				*eS*	**Sb**	**08 55 39.7**	**+0.3**
PMON	**Piamonte**	**0.72**	**17**	P	**Pn**	**08 55 29.5**	**-0.2**
PMON				S	**Sb**	**08 55 40.2**	**+0.7**
PMON	**Piamonte**	**0.72**	**17**	*eP*	**Pn**	**08 55 29.4**	**-0.2**
SEMO	**Seminario San**	**0.74**	**24**	P	**Pn**	**08 55 30.3**	**+0.4**
SEMO				S	**Sb**	**08 55 40.2**	**+0.1**
UEES	**Universidad Ev**	**0.74**	**22**	P	**Pn**	**08 55 29.7**	**-0.3**
UEES				S	**Sb**	**08 55 39.9**	**-0.4**
UEES	**Universidad Ev**	**0.74**	**22**	*eP*	**Pn**	**08 55 29.8**	**-0.3**
BOQS	**Boqueron**	**0.75**	**19**	*eP*	**Pn**	**08 55 30.1**	**-0.1**
LFRS	**El Faro**	**0.75**	**37**⇓	*iP*	**Pn**	**08 55 30.1**	**-0.1**
LFRS				*eS*	**Sb**	**08 55 39.7**	**-0.8**
PIC2	**El Picacho**	**0.77**	**20**	*eP*	**Pn**	**08 55 30.5**	**0.0**
IGN	**Direccin Gen**	**0.77**	**27**	S	**Sb**	**08 55 40.7**	**-0.3**
SJTE	**Alcalda de S**	**0.78**	**41**	*eP*	**Pn**	**08 55 30.2**	**-0.3**
SJTE				*eS*	**Sb**	**08 55 40.8**	**-0.4**
CEDA	**San Andres**	**0.79**	**10**	P	**Pn**	**08 55 30.3**	**-0.2**
CEDA				S	**Sb**	**08 55 41.5**	**+0.1**
CEDA	**San Andres**	**0.79**	**10**	*eP*	**Pn**	**08 55 30.4**	**-0.2**
CEVE	**Cerro Verde**	**0.81**	**353**	P	**Pn**	**08 55 31.0**	**0.0**
CEVE				S	**Sb**	**08 55 42.5**	**+0.3**
CEVE	**Cerro Verde**	**0.81**	**353**	*eP*	**Pn**	**08 55 31.1**	**0.0**
SBLS	**San Blas**	**0.82**	**354**	*eP*	**Pn**	**08 55 31.1**	**-0.1**
SBLS				*eP*		08 55 31.3	
LFIJ	**La Fuente**	**0.83**	**29**	*eP*	**Pn**	**08 55 31.3**	**+0.2**
SNJE	**San Jose**	**0.84**	**355**	*eP*	**Pn**	**08 55 31.4**	**-0.1**
LBRS	**Las Brisas**	**0.85**	**34**	*eP*	**Pn**	**08 55 31.8**	**+0.2**
COEG	**Centro de Oper**	**0.87**	**47**	P	**Pn**	**08 55 31.2**	**-0.5**
COEG				S	**Sn**	**08 55 42.8**	**-0.5**
COEG	**Centro de Oper**	**0.87**	**47**	*eP*	**Pn**	**08 55 31.2**	**-0.5**
RTR	**El Retiro**	**0.88**	**353**	*eP*	**Pn**	**08 55 32.0**	**+0.1**
TECO	**Alcaldia de Te**	**0.89**	**55**	P	**Pn**	**08 55 31.2**	**-0.8**
TECO				S	**Sn**	**08 55 43.6**	**-0.2**
TECO	**Alcaldia de Te**	**0.89**	**55**	*eP*	**Pn**	**08 55 31.2**	**-0.8**
PAVA	**Las Pavas**	**0.90**	**40**	P	**Pn**	**08 55 32.0**	**-0.2**
PAVA				S	**Sn**	**08 55 44.5**	**+0.4**
PAVA	**Las Pavas**	**0.90**	**40**	*eP*	**Pn**	**08 55 32.1**	**0.0**
NUBE	**Las Nubes**	**0.91**	**344**	P	**Pn**	**08 55 31.9**	**-0.4**
NUBE				S	**Sn**	**08 55 44.2**	**-0.2**
NUBE	**Las Nubes**	**0.91**	**344**	*iP*	**Pn**	**08 55 32.1**	**-0.3**
NUBE	**Las Nubes**	**0.91**	**344**	*eP*	**Pn**	**08 55 32.1**	**-0.3**
FAME	**Alcaldia de Sa**	**0.94**	**330**	P	**Pn**	**08 55 32.5**	**-0.2**
FAME				S	**Sn**	**08 55 44.8**	**-0.2**
UNIC	**Universidad Ca**	**0.95**	**359**	P	**Pn**	**08 55 33.0**	**+0.1**
UNIC				S	**Sn**	**08 55 46.0**	**+0.6**
LOAL	**Lomas de Alarc**	**1.00**	**346**	P	**Pn**	**08 55 33.8**	**+0.3**
LOAL				S	**Sn**	**08 55 47.1**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.03**	**49**	S	**Sn**	**08 55 47.5**	**+0.2**
RBDL	**Robledal**	**1.09**	**352**	*eP*	**Pn**	**08 55 35.1**	**+0.2**
TECA	**Tecapa**	**1.10**	**65**	*eP*	**Pn**	**08 55 35.5**	**+0.5**
P5NO	**Presa 5 de nov**	**1.22**	**38**	P	**Pn**	**08 55 36.0**	**-0.4**
PACA	**Pacayal**	**1.25**	**69**	P	**Pn**	**08 55 37.1**	**+0.1**
PACA				S	**Sn**	**08 55 53.5**	**+0.6**
PACA	**Pacayal**	**1.25**	**69**	*eP*	**Pn**	**08 55 37.2**	**+0.1**
LCY	**Lacayo**	**1.27**	**72**	*eP*	**Pn**	**08 55 37.5**	**+0.3**
LLGN	**La Laguna**	**1.27**	**27**	P	**Pn**	**08 55 36.6**	**-0.7**
LLGN				S	**Sn**	**08 55 54.1**	**+0.9**
RANC	**El Ranchito**	**1.27**	**71**	P	**Pn**	**08 55 37.3**	**-0.1**
RANC				S	**Sn**	**08 55 53.8**	**+0.3**
RANC	**El Ranchito**	**1.27**	**71**	*eP*	**Pn**	**08 55 37.5**	**+0.1**
JUAM	**Asuncion Mita**	**1.32**	**353**	*iP*	**Pn**	**08 55 37.5**	**-0.3**
MTO3	**Montecristo**	**1.38**	**7**	P	**Pn**	**08 55 38.6**	**-0.2**
MTO3				S	**Sn**	**08 55 56.3**	**+0.1**
MTO3	**Montecristo**	**1.38**	**7**	*iP*	**Pn**	**08 55 38.8**	**-0.1**
ESQI	**Esquipulas**	**1.54**	**7**	P	**Pn**	**08 55 41.0**	**0.0**
ESQI				S	**Sn**	**08 56 00.5**	**+0.6**
LCND	**La Caada**	**1.62**	**80**	P	**Pn**	**08 55 42.3**	**+0.3**
LCND	**La Caada**	**1.62**	**80**	*eP*	**Pn**	**08 55 42.3**	**+0.3**
CNCH	**Conchagua**	**1.67**	**81**	P	**Pn**	**08 55 43.0**	**+0.2**
CNCH				S	**Sn**	**08 56 03.6**	**+0.4**
CNCH	**Conchagua**	**1.67**	**81**	*eP*	**Pn**	**08 55 43.1**	**+0.3**
SARH	**Santa Rosa de**	**1.90**	**23**	P	**Pn**	**08 55 46.2**	**+0.4**
SARH				S	**Sn**	**08 56 09.0**	**+0.3**
SARH	**Santa Rosa de**	**1.90**	**23**	*i* P	**Pn**	**08 55 46.3**	**+0.4**
LIMN	**Finca el Limon**	**3.08**	**89**	P	**Pn**	**08 56 02.1**	**-0.1**
LIMN				S	**Sn**	**08 56 37.7**	**-0.3**

RSPR 05 08:56:29.6, 17°96N×66°98W, h6km, MD3.1/8, 5C-10D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.06**	**276**⇑	*eP*	Pg	08 56 31.4	+0.2
GBPR	**Guanica, Bosqu**	**0.10**	**83**⇑	*eP*	Pg	08 56 32.0	+0.2
GBPR				*eS*	Sg	08 56 33.8	+0.5
CRPR	**Cabo Rojo, PR**	**0.13**	**289**⇑	*eP*	Pg	08 56 32.6	+0.3
LSP	**Las Mesas**	**0.23**	**335**⇓	*eP*	Pg	08 56 34.9	+0.6
LSP				*eS*	Sg	08 56 38.8	+1.4
PRSN	**Puerto Rico Se**	**0.30**	**328**⇑	*eP*	Pg	08 56 35.8	+0.4
OBIP	**Obispado Ponce**	**0.36**	**77**⇓	*eP*	Pg	08 56 36.8	0.0
OBIP				*eS*	Sg	08 56 42.5	+0.9
UUPR	**Utuado, UPR, P**	**0.38**	**41**⇓	*eP*	Pg	08 56 37.1	+0.1
CELP	**Cerrillos**	**0.40**	**74**⇓	*eP*	Pg	08 56 37.4	+0.1
AOPR	**Arecibo Observ**	**0.44**	**29**⇓	*eP*	Pg	08 56 38.2	+0.1
AGPR	**Aguadilla, PR**	**0.52**	**346**⇑	*eP*	Pg	08 56 39.9	+0.3
IDE	**Isla Desecheo**	**0.63**	**312**⇓	*eP*	Pg	08 56 41.8	+0.1
IDE				*eS*	Sg	08 56 50.4	+0.4
EMPR	**Esperanza - Ma**	**0.67**	**40**⇓	*eP*	Pg	08 56 42.7	+0.3
EMPR				*eS*	Sg	08 56 51.0	-0.2
ECPR	**Experimental S**	**0.69**	**59**⇓	*eP*	Pg	08 56 42.3	-0.5
IGPR	**InterUniversit**	**0.83**	**90**⇓	*eP*	Pg	08 56 45.2	-0.4
HUMP	**Col San Antoni**	**1.09**	**80**⇓	*eP*	Pg	08 56 48.3	-2.3

IDC ***05*** *09:08:13.7±1.5, 7°26S×148°09E, h0km, mb3.6/4, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=76.2km s-min=22.6km az=117.0*
ISC 05 09:08:18.7±1.4, 7°2S±0°2×147°9E±0°4, h35km, n6, σ0s95/7, mb3.6/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.35**	**198**	Pn	**Pn**	**09 08 55.0**	**+0.2**
	14nm,0.4s,baz=26,slow=10,SNR=12						
PMG				Sn	**Sn**	**09 09 23.5**	**+1.1**
	6.0nm,0.3s,baz=13,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**18.29**	**225**	P	**Pn**	**09 12 30.0**	**+0.1**
	0.1nm,0.3s,baz=51,slow=12,SNR=1.6						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**21.21**	**218**	P	**P**	**09 13 01.0**	**-0.7**
	0.9nm,1.1s,baz=42,slow=10,SNR=7.4						
	0.9nm,1.1s						
STKA	**Stephens Creek**	**25.28**	**193**	P	**P**	**09 13 41.2**	**-0.7**
	0.8nm,0.7s,baz=14,slow=8.3,SNR=1.5						
	0.8nm,0.7s						
QSPA	**South Pole Qui**	**82.81**	**180**	P	**P**	**09 20 38.6**	**-0.7**
	0.9nm,1.0s,baz=347,slow=2.5,SNR=1.6						
	0.9nm,1.0s						
ILAR	**Eielson Array**	**86.19**	**23**	P	**P**	**09 20 57.1**	**+0.9**
	0.8nm,0.6s,baz=256,slow=5.1,SNR=8.1						
	0.8nm,0.6s						

IDC ***05*** *09:27:21.8±38.0, 6°61N×126°93E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=651.4km s-min=232.4km az=157.0*
MAN ***05*** *09:27:40.0, 5°85N×126°75E, h113km, MS3.2*
ISC 05 09:27:39.3±1.2, 6°0N±0°1×127°1E±0°2, h100km, n5, σ1s97/7, mb3.3/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**2.33**	**341**	*eP*	**Pn**	**09 28 18.1**	**+2.0**
BIPH				*eS*	**Sn**	**09 28 41.8**	**-2.5**
CGP	**Cagayan de Oro**	**3.45**	**316**	*eP*	**Pn**	**09 28 32.5**	**+1.5**
CGP				*eS*	**Sn**	**09 29 09.8**	**-1.3**
WRA	**Warramunga Arr**	**26.71**	**165**	P	**P**	**09 33 08.4**	**-1.0**
	1.0nm,1.1s,baz=345,slow=9.4,SNR=5.4						
	1.0nm,1.1s						
ASAR	**Alice Springs**	**30.19**	**168**	P	**P**	**09 33 40.4**	**0.0**
	0.4nm,0.8s,baz=343,slow=8.4,SNR=5.1						
	0.4nm,0.8s						
STKA	**Stephens Creek**	**40.09**	**161**	P	**P**	**09 35 04.7**	**-0.3**
	1.9nm,1.0s,baz=336,slow=10.0,SNR=4.5						
	1.9nm,1.0s						

IDC ***05*** *09:33:04.4±1.1, 35°47N×82°52E, h0km, mb3.5/6, mbtmp3.7/10, ML3.5/3, Error ellipse: s-maj=30.6km s-min=19.7km az=58.0*
ISC 05 09:33:09.6±1.0, 35°73N±0°10×82°6E±0°2, h35km, n10, σ2s44/11, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**11.06**	**359**	Pn	**Pn**	**09 35 46.4**	**+1.2**
	0.8nm,0.3s,baz=180,slow=12,SNR=32						
MKAR				Sn	**Sn**	**09 37 43.3**	**-4.3**
	baz=176,slow=22						
	6.2nm,0.7s						
KURBB	**Kurchatov Arra**	**15.18**	**350**	Pn	**Pn**	**09 36 40.3**	**-0.9**
	0.1nm,0.3s,baz=171,slow=11,SNR=1.5						
	1.0nm,0.2s						
ZALV	**Zalesovo Beam**	**18.29**	**4**	P	**Pn**	**09 37 21.3**	**+1.0**
	1.2nm,0.7s,baz=194,slow=10,SNR=4.7						
BVAR	**Borovoye Array**	**19.33**	**337**	P	**Pn**	**09 37 34.7**	**+1.9**
	0.1nm,0.3s,baz=143,slow=11,SNR=6.4						
	1.4nm,0.5s						
SONM	**Songino Array**	**21.38**	**48**	P	**P**	**09 37 57.4**	**+3.4**
	0.2nm,0.3s,baz=238,slow=9.9,SNR=1.4						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**22.47**	**136**	P	**P**	**09 38 03.2**	**-2.7**
	0.5nm,0.3s,baz=335,slow=11,SNR=1.4						
	0.5nm,0.3s						
BRTR	**Keskin Array B**	**38.55**	**291**	P	**P**	**09 40 28.0**	**-1.0**
	0.4nm,0.5s,baz=78,slow=9.3,SNR=1.3						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**73.92**	**130**	P	**P**	**09 44 41.6**	**+0.3**
	0.7nm,1.0s,baz=318,slow=6.2,SNR=2.3						
	0.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**75.13**	**276**	P	**P**	**09 44 49.8**	**+1.3**
	0.6nm,0.8s,baz=52,slow=4.6,SNR=2.1						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**76.44**	**133**	P	**P**	**09 44 54.6**	**-1.2**
	0.8nm,1.1s,baz=325,slow=4.9,SNR=2.2						
	0.8nm,1.1s						

IDC ***05*** *09:39:44.0±0.8, 9°93N×84°28W, h0km, mb3.9/15, mbtmp4.0/18, ML3.0/3, MS3.5/4, Error ellipse: s-maj=23.2km s-min=8.5km az=27.0*
CATAC ***05*** *09:39:46.0±0.2, 10°N±2°×8°4W±°, h3km±1km, M4.9/20, MLv4.9/20, Error ellipse: s-maj=4.4km s-min=2.2km az=43.6, confirmed*
UCR ***05*** *09:39:45.6±0.8, 9°86N×84°39W, h7km±1km, MW4.8, Fault plane solution: NP1:φ323.20000°, δ68.30000°, λ176.00000°., Presumed earthquake*
NEIC ***05*** *09:39:46.1±1.4, 9°85N±0°04×84°39W±0°06, h3km±6km, mb4.3/35, Error ellipse: s-maj=8.6km s-min=4.9km az=63.0*
UPA ***05*** *09:39:46.7±2.6, 9°90N×84°45W, h8km±7km, MW4.6, Presumed earthquake*
ISC 05 09:39:46.2±0.7, 9°85N±0°02×84°40W±0°02, h14km±4km, n249, σ1s32/284, mb4.2/29, MS3.4/4, 91C-23D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATEO	**Atenas**	**0.13**	**8**⇓	*eP*	**Pg**	**09 39 49.1**	**-0.8**
ATEO				*eS*	**Sg**	**09 39 51.4**	**-0.9**
OROT	**Orotina**	**0.14**	**297**⇑	*eP*	**Pg**	**09 39 49.2**	**-0.7**
OROT				*eS*	**Sg**	**09 39 51.6**	**-0.8**
PALD	**Palmares**	**0.21**	**351**⇓	*eP*	**Pg**	**09 39 50.3**	**-0.7**
TCS1	**Tacares**	**0.22**	**27**	P	**Pg**	**09 39 50.5**	**-0.7**
SANTA	**Santa Ana**	**0.23**	**68**⇑	*eP*	**Pg**	**09 39 50.6**	**-0.8**
ACOS	**Acosta**	**0.24**	**103**⇑	*eP*	**Pg**	**09 39 50.8**	**-0.7**
GREC	**Grecia**	**0.24**	**22**⇓	*eP*	**Pg**	**09 39 51.4**	**-0.1**
BELE	**Belen**	**0.24**	**59**⇑	*eP*	**Pg**	**09 39 51.0**	**-0.6**
BELE				*eS*	**Sg**	**09 39 54.6**	**-0.7**
RAMO	**San Ramon**	**0.25**	**345**⇓	*eP*	**Pg**	**09 39 51.1**	**-0.5**
SARCI	**Sarchi**	**0.25**	**13**⇓	*eP*	**Pg**	**09 39 51.5**	**-0.1**
SRA1	**San Ramn**	**0.25**	**342**⇓	*eP*	**Pg**	**09 39 51.0**	**-0.7**
SRA1				*eS*	**Sg**	**09 39 54.8**	**-0.5**
NARAN	**Naranjo de Ala**	**0.25**	**5**⇓	*eP*	**Pg**	**09 39 51.5**	**-0.2**
UELA	**Alajuela**	**0.25**	**48**	*eP*	**Pg**	**09 39 51.3**	**-0.4**
POAS	**San Pedro de P**	**0.27**	**34**⇓	*eP*	**Pg**	**09 39 52.0**	**-0.1**
PAVB	**Pavas, San Jos**	**0.29**	**72**⇑	*eP*	**Pg**	**09 39 51.7**	**-0.7**
HEME	**Heredia, Merce**	**0.30**	**61**⇑	*eP*	**Pg**	**09 39 52.2**	**-0.4**
ARZA	**Esparza**	**0.30**	**298**⇑	*eP*	**Pg**	**09 39 52.2**	**-0.3**
PICV	**PH. Pirrs**	**0.30**	**137**⇑	*eP*	**Pg**	**09 39 51.9**	**-0.7**
BITO	**Garabito Jaco**	**0.32**	**224**⇓	*eP*	**Pg**	**09 39 52.8**	**0.0**
HDC	**Heredia**	**0.32**	**62**	Pg	**Pg**	**09 39 52.6**	**-0.3**
HDC				Sg	**Sg**	**09 39 57.5**	**0.0**
HDC	**Heredia**	**0.32**	**62**	*eP*	**Pg**	**09 39 52.2**	**-0.8**
MEXI	**Barrio Mexico**	**0.32**	**73**⇑	*eP*	**Pg**	**09 39 52.5**	**-0.5**
DOMI	**Santo Domingo**	**0.33**	**66**⇑	*eP*	**Pg**	**09 39 52.8**	**-0.3**
LUJA	**Lujan**	**0.33**	**77**⇑	*eP*	**Pg**	**09 39 52.6**	**-0.6**
ZARE	**Zarcero**	**0.33**	**2**⇓	*eP*	**Pg**	**09 39 53.3**	**+0.1**
TIBA	**Tibas**	**0.34**	**71**⇑	*eP*	**Pg**	**09 39 52.9**	**-0.4**
SJS	**Escuela Geolog**	**0.35**	**75**⇑	*eP*	**Pg**	**09 39 53.0**	**-0.5**
SJS3	**Mercedes San J**	**0.35**	**75**⇑	*eP*	**Pg**	**09 39 53.2**	**-0.4**
ECI	**Escuela Centro**	**0.35**	**75**⇑	*eP*	**Pg**	**09 39 53.0**	**-0.5**
VPS8	**V Poas**	**0.36**	**25**⇓	*eP*	**Pg**	**09 39 53.7**	**-0.1**
VPS5	**V. Poas**	**0.38**	**26**⇓	*eP*	**Pg**	**09 39 53.7**	**-0.4**
VBV1	**V. Barva**	**0.40**	**48**⇓	*eP*	**Pg**	**09 39 54.1**	**-0.3**
TRIO	**Tres Rios**	**0.40**	**82**⇑	*eP*	**Pg**	**09 39 53.7**	**-0.8**
VPL1	**V. Platanar**	**0.41**	**5**⇓	*eP*	**Pg**	**09 39 54.1**	**-0.5**
CORON	**Coronado**	**0.41**	**72**⇑	*eP*	**Pg**	**09 39 54.3**	**-0.2**
PITB	**Pirrs, San**	**0.42**	**117**⇑	*eP*	**Pg**	**09 39 53.9**	**-0.7**
RAZU	**San Marcos de**	**0.42**	**117**⇑	*eP*	**Pg**	**09 39 53.9**	**-0.8**
ENAS	**Puntarenas**	**0.45**	**287**⇑	*eP*	**Pg**	**09 39 54.8**	**-0.3**
TAGO	**Cartago**	**0.47**	**88**⇑	*eP*	**Pg**	**09 39 54.9**	**-0.7**
QUEU	**Ciudad Quesada**	**0.47**	**356**⇓	*eP*	**Pg**	**09 39 56.1**	**-0.3**
SVQ2	**Quepos**	**0.47**	**151**	*eP*	**Pg**	**09 39 55.3**	**-0.3**
QUEP	**Quepos**	**0.48**	**151**	P	**Pg**	**09 39 55.4**	**-0.3**
QUEP				S	**Sg**	**09 40 02.5**	**+0.4**
QUEP	**Quepos**	**0.48**	**151**	*eP*	**Pg**	**09 39 55.3**	**-0.3**
CVIMO	**Finca Echandi**	**0.48**	**69**⇑	*eP*	**Pn**	**09 39 60.0**	**+1.1**
PIEC	**Cerro El Cedra**	**0.49**	**117**⇑	*eP*	**Pg**	**09 39 55.4**	**-0.7**
VPL3	**V. Platanar**	**0.50**	**10**⇓	*eP*	**Pg**	**09 39 55.9**	**-0.4**
ARTO	**Ro Cuarto**	**0.52**	**20**⇓	*eP*	**Pg**	**09 39 56.0**	**-0.6**
ARTO				*eS*	**Sg**	**09 40 03.6**	**-0.1**
REPA	**Paraso**	**0.52**	**92**⇑	*eP*	**Pg**	**09 39 55.8**	**-0.9**
PAQE	**Paquera**	**0.53**	**267**⇓	*eP*	**Pg**	**09 39 56.2**	**-0.4**
VICA	**Volcano Irazu**	**0.56**	**76**⇑	*eP*	**Pg**	**09 39 56.6**	**-0.8**
PCAYA	**Pacayas**	**0.58**	**83**⇑	*eP*	**Pg**	**09 39 57.0**	**-0.8**
RAFA	**San Farael, Vo**	**0.59**	**79**	Pg	**Pg**	**09 39 57.2**	**-0.8**
RAFA				Sg	**Sg**	**09 40 04.3**	**-1.5**
RAFA	**San Farael, Vo**	**0.59**	**79**⇑	*eP*	**Pg**	**09 39 57.1**	**-0.8**
ITAL	**Pital**	**0.61**	**12**⇓	*eP*	**Pg**	**09 39 57.7**	**-0.6**
MTEVE	**Monteverde**	**0.63**	**318**⇑	*eP*	**Pg**	**09 39 58.0**	**-0.6**
CVFQ	**Turrialba Volc**	**0.64**	**76**⇑	*eP*	**Pg**	**09 39 58.2**	**-0.7**
VINA	**Juan Vinas**	**0.65**	**86**⇑	*eP*	**Pg**	**09 39 58.1**	**-0.8**
VTR0	**Volcan Turrial**	**0.65**	**75**⇑	*eP*	**Pg**	**09 39 58.5**	**-0.6**
CVTR	**Volcan Turrial**	**0.65**	**75**⇑	*eP*	**Pg**	**09 39 58.5**	**-0.7**
CASO	**Castillo**	**0.67**	**331**	*eP*	**Pg**	**09 39 58.7**	**-0.6**
FORC	**Fortuna**	**0.67**	**337**⇑	*eP*	**Pg**	**09 39 58.9**	**-0.4

JAPN Al SSO del Vol 2.09 323 P **Pn** 09 40 21.3 +0.5
LESP3 La Esperanza, 2.14 132 *e*P **Pn** 09 40 21.2 -0.3
LESP3 *i* S **Sg** 09 40 54.2 -1.0
BQTLY Boquete Panama 2.20 119 *e*P **Pn** 09 40 23.3 +0.8
LNBQ3 Los Naranjos, 2.20 118 *e*P **Pn** 09 40 23.4 +0.9
LNBQ3 *i* S **Sn** 09 40 51.8 +2.2
PTAR3 Potrerillos Ar 2.20 121 *e*P **Pn** 09 40 23.7 +1.2
PTAR3 *i* S **Sn** 09 40 51.5 +1.9
PTPM Petroterminale 2.22 137⇑ *i*P **Pn** 09 40 24.2 +1.6
PTPM *i* S **Sb** 09 40 53.9 +0.4
PTPA Petro Terminal 2.23 137 *e*P **Pn** 09 40 23.9 +1.1
BLUN Bluefields 2.23 16 P **Pn** 09 40 22.8 0.0
BQSF3 Alto Boquete, 2.23 119 *e*P **Pn** 09 40 24.1 +1.3
ACON Acoyapa 2.24 340 P **Pn** 09 40 22.9 0.0
ACON S **Sn** 09 40 52.4 +2.1
ACON Acoyapa 2.24 340 *e*P **Pn** 09 40 23.0 +0.1
LIMO3 Limones 2.31 139 *e*P **Pn** 09 40 25.0 +1.2
DVD David 2.38 126 *e*P **Pn** 09 40 25.6 +0.8
RBALA Bur 2.42 113 *e*P **Pn** 09 40 26.4 +1.1
BGUAL Bijagual, Pana 2.44 123 *e*P **Pn** 09 40 26.4 +0.8
SABN Sabanita 2.72 321 P **Pn** 09 40 31.4 +1.9
MASN Masaya 2.73 321 P **Pn** 09 40 31.5 +1.8
MAS3 Al N del Volca 2.78 321 P **Pn** 09 40 31.7 +1.4
BOAB BOACO BROADBAN 2.87 334 **Pn** 09 40 31.9 +0.3
BOAB BOACO BROADBAN 2.87 334 P **Pn** 09 40 31.2 -0.3
BOAB S **Sn** 09 41 07.7 +1.9
MGAN Managua 2.92 322 **Pn** 09 40 32.5 +0.3
TISN Laguna Tiscapa 2.93 321 P **Pn** 09 40 33.2 +0.9
NANC3 Nancito, Chiri 3.08 121⇓ *e*P **Pn** 09 40 37.7 +3.2
NANC3 *i* S **Sb** 09 41 17.1 -1.2
COPN Copaltepe 3.16 317 P **Pn** 09 40 36.4 +0.9
PVID3 Puerto Vidal, 3.29 123 *e*P **Pn** 09 40 41.0 +3.7
RSUS3 Rio de Jesus, 3.70 120⇓ *e*P **Pn** 09 40 47.4 +4.4
RSUS3 *i* S **Sb** 09 41 32.9 -3.2
GMAL Guarumal, Vera 3.75 123 *e*P **Pn** 09 40 44.9 +1.2
STIA3 Santiago, Vera 3.81 117 *e*P **Pn** 09 40 48.6 +4.1
CALO3 Calobre, Verag 3.83 113 *e*P **Pn** 09 40 48.1 +3.4
CRIN San Cristobal 3.84 318 Pn **Pn** 09 40 44.5 -0.5
SIUN Universidad Ur 3.86 355 Pn **Pn** 09 40 47.4 +2.2
PNME Penonome 4.24 108 *e*P **Pn** 09 40 53.1 +2.6
BILN Bilwi Airport 4.29 13 Pn **Pn** 09 40 52.5 +1.4
CHIT3 Chitre 4.36 115⇓ *e*P **Pn** 09 40 55.0 +3.0
BCIP Isla Barro Col 4.55 98 Pn **Pn** 09 40 55.8 +1.1
BCIP Isla Barro Col 4.55 98 *i* P **Pn** 09 40 55.6 +0.9
BCIP *i* S **Sn** 09 41 47.0 -0.4
ZANG Zanguenga, Cho 4.56 101⇓ *e*P **Pn** 09 40 56.2 +1.3
AZU Azuero 4.56 116 *i* P **Pn** 09 40 58.4 +3.5
AZU *i* S **Sn** 09 41 52.1 +4.5
TOSI3 Tonosi 4.61 121 *e*P **Pn** 09 40 59.9 +4.4
FRIJ El Hiral 4.65 97 *e*P **Pn** 09 40 57.3 +1.2
FRIJ eS **Sn** 09 41 49.9 0.0
CHOR3 La Chorrera 4.67 101 *i* P **Pn** 09 40 58.2 +1.9
GAMB1 Gamboa 4.68 99 *i* P **Pn** 09 40 57.5 +1.0
ARRA3 Arraijan, Pana 4.76 100 *e*P **Pn** 09 40 58.9 +1.3
ACHO3 Achotines, Los 4.83 120 *e*P Pn 09 41 05.2 +6.7
FLAM Flamenco Islan 4.89 101 *e*P **Pn** 09 41 01.5 +2.1
PEDA3 Pedasi 4.90 118 *e*P **Pn** 09 41 00.5 +1.0
CHPO Chepo, Panama 5.26 97 *e*P **Pn** 09 41 06.6 +2.2
CHPO *e*S **Sn** 09 42 07.2 +2.4
CNTA3 Canitas, Panam 5.47 96⇑ *i*P **Pn** 09 41 10.3 +3.0
TOTI Torti 6.08 98 *e*P **Pn** 09 41 18.3 +2.6
MTO3 Montecristo 6.63 313 **Pn** 09 41 26.3 +2.8
ESQI Esquipulas 6.73 315 **Pn** 09 41 25.0 +0.3
APG El Apazote 7.83 311 Pn **Pn** 09 41 39.7 -0.3
0.1nm,0.3s,baz=130,slow=12,SNR=9.3
APG LR LR 09 44 48.0
comp=Z,16nm,18.1s,baz=117,slow=39
CMIG Matias Romero 12.48 306 Pn **Pn** 09 42 45.2 +1.8
8.9nm,0.5s,baz=126,slow=8.7,SNR=21
SDV Santo Domingo 13.62 93 Pn **Pn** 09 42 55.9 -3.4
0.5nm,0.3s,baz=260,slow=18,SNR=1.5
SDV Sn **Sn** 09 45 27.2 -3.4
1.4nm,0.3s,baz=317,slow=19,SNR=9.2
2.0nm,0.3s
SDV Santo Domingo 13.62 93 **Pn** 09 42 58.3 -1.0
TLIG Tlapa 15.75 301 **Pn** 09 43 29.3 +1.4
TLIG IAmb IAmb 09 43 56.9
comp=Z,14nm,1.0s
ATAH Atahualpa 17.90 160 P **Pn** 09 43 55.3 0.0
comp=Z,0.2nm,0.3s,baz=343,slow=20,SNR=1.7
comp=Z,1.2nm,0.4s
CZSB Cruzeiro do Su 20.99 146 P **P** 09 44 30.3 +0.9
CZSB IAmb IAmb 09 44 40.2
comp=Z,9.6nm,0.8s
HBVL Hebbronville 21.79 324 P **P** 09 44 38.7 +0.9
HBVL IAmb IAmb 09 44 41.2
comp=Z,8.7nm,0.8s
HKT Hockley 22.67 333 P **P** 09 44 47.7 +0.5
LRAL Lakeview Retre 23.20 354 **P** 09 44 54.8 +2.1
LRAL IAmb IAmb 09 44 56.8
comp=Z,8.3nm,0.8s
Z47A Carrollton 23.48 352 P **P** 09 44 57.8 +2.3
Y52A Lilburn 23.90 1 P **P** 09 45 00.4 +0.8
Y52A IAmb IAmb 09 45 06.4
comp=Z,5.3nm,0.6s
HNDO Hondo 24.02 327 **P** 09 45 00.7 -0.1
HNDO IAmb IAmb 09 45 03.3
comp=Z,5.5nm,0.8s
HODGE Hodges 24.35 4 P **P** 09 45 03.9 +0.2
HODGE IAmb IAmb 09 45 11.7
comp=Z,5.2nm,0.9s
JCT Junction City 25.05 327 P **P** 09 45 10.1 0.0
JCT IAmb IAmb 09 45 13.1
comp=Z,5.1nm,0.7s
BRDY Brady 25.28 330 **P** 09 45 13.6 +1.4
BRDY IAmb IAmb 09 45 14.9
comp=Z,4.9nm,0.8s
TKL Tuckaleechee C 25.70 1 P **P** 09 45 15.9 -0.1
comp=Z,1.2nm,1.0s,baz=183,slow=11,SNR=4.0
TKL LR LR 09 54 58.3
comp=Z,100nm,18.4s,baz=350,slow=36
comp=Z,1.2nm,1.0s
V48A Smith Brothers 25.87 355 P **P** 09 45 18.6 +1.1
SAND Sanderson 25.96 323 P **P** 09 45 19.9 +1.4
MIAR Mount Ida 25.98 343 P **P** 09 45 19.2 +0.6
MIAR IAmb IAmb 09 45 22.5
comp=Z,4.3nm,0.7s
TXAR Lajitas Array 26.48 320 P **P** 09 45 23.4 +0.2
comp=Z,0.9nm,0.7s,baz=135,slow=8.4,SNR=14
comp=Z,0.9nm,0.7s
TX31 Lajitas Ar. Si 26.48 320 **P** 09 45 23.8 +0.6
ALPN Alpine 27.18 321 P **P** 09 45 30.6 +1.0
MNHN Monahans 27.35 324 P **P** 09 45 31.8 +0.7
MNHN IAmb IAmb 09 45 33.4
comp=Z,3.8nm,0.8s
CCM Cathedral Cave 28.75 349 P **P** 09 45 43.8 +0.4
CCM IAmb IAmb 09 45 44.9
comp=Z,2.8nm,0.8s
O48B Farmland 30.29 359 P **P** 09 45 58.0 +1.0
O48B IAmb IAmb 09 45 59.3
comp=Z,4.7nm,0.8s
HDIL Hopedale 30.89 353 P **P** 09 46 02.6 +0.4
319A Douglas 31.49 316 P **P** 09 46 09.2 +1.3
N38A Joes South For 31.80 347 P **P** 09 46 10.7 +0.4
ANMO Albuquerque 32.09 325 LR LR 10 00 26.6
comp=Z,39nm,18.2s,baz=9.0,slow=39
L42A Oliver, Polo 32.36 353 P **P** 09 46 15.4 +0.1
JFWS Jewell Farm 33.33 352 P **P** 09 46 24.0 +0.3
JFWS IAmb IAmb 09 46 25.8
comp=Z,4.2nm,0.7s
X16A Lo Mia Camp, P 34.79 319 **P** 09 46 38.0 +1.3
X16A IAmb IAmb 09 46 44.1
comp=Z,3.7nm,1.0s
113A Mohawk Valley, 35.40 315 P **P** 09 46 43.4 +1.6
Y14A Wickenburg 35.54 317 P **P** 09 46 44.1 +1.1
PV03 Paradox Valley 35.80 326 P **P** 09 46 46.7 +1.3
PV18 Skein Mesa, Pa 35.83 326 P **P** 09 46 46.7 +1.0
PV10 Paradox Valley 35.99 326 P **P** 09 46 47.7 +0.6
PV10 IAmb IAmb 09 46 53.4
comp=Z,5.2nm,0.9s
PFO Pinyon Flats O 37.76 314 P **P** 09 47 03.2 +1.1
comp=Z,1.7nm,0.7s,baz=108,slow=8.6,SNR=4.7
PFO LR LR 10 03 27.0
comp=Z,55nm,18.9s,baz=118,slow=38
comp=Z,1.7nm,0.7s
PDAR Pinedale Array 39.48 331 P **P** 09 47 15.7 -0.9
comp=Z,0.2nm,0.3s,baz=149,slow=4.6,SNR=1.8
comp=Z,0.2nm,0.3s
EPLO Experimental L 40.45 351 P **P** 09 47 24.1 -0.1
EPLO IAmb IAmb 09 47 30.6
comp=Z,5.4nm,1.1s
ULM Lac du Bonnet 41.38 349 P **P** 09 47 29.8 -2.0
comp=Z,3.0nm,0.9s,baz=153,slow=10,SNR=4.9
comp=Z,3.0nm,0.9s
NVAR Mina Array Bea 41.62 319 P **P** 09 47 34.5 +0.3
comp=Z,0.8nm,0.7s,baz=121,slow=5.2,SNR=8.8
comp=Z,0.8nm,0.7s
BDFB Brasilia 44.05 125 P **P** 09 47 54.6 +0.5
comp=Z,3.8nm,0.8s,baz=284,slow=4.2,SNR=3.9
comp=Z,3.8nm,0.8s
SCHQ Schefferville 46.99 14 P **P** 09 48 16.0 -0.7
comp=Z,1.5nm,0.6s,baz=231,slow=14,SNR=3.6
comp=Z,1.5nm,0.6s
PLCA Paso Flores 51.93 167 P **P** 09 48 54.3 -0.4
comp=Z,4.6nm,1.1s,baz=351,slow=10,SNR=7.3
comp=Z,4.6nm,1.1s
FRB Frobisher Bay 54.98 9 LR LR 10 11 40.1
comp=Z,88nm,18.2s,baz=131,slow=35
YKA Yellowknife Ar 56.91 344 P **P** 09 49 29.2 -1.3
comp=Z,1.3nm,0.9s,baz=140,slow=6.4,SNR=5.7
comp=Z,1.3nm,0.9s
ILAR Eielson Array 69.60 336 P **P** 09 50 54.0 -0.7
comp=Z,0.6nm,0.8s,baz=107,slow=5.7,SNR=6.0
comp=Z,0.6nm,0.8s
ESDC Sonseca Array 76.44 52 P **P** 09 51 35.8 +0.1
comp=Z,7.2nm,0.8s,baz=272,slow=5.2,SNR=10.0
comp=Z,1.7nm,0.8s
ESDC Sonseca Array 76.44 52 P **P** 09 51 36.3 +0.5
EKA Eskdalemuir Ar 76.98 35 P **P** 09 51 38.1 -0.4
comp=Z,3.2nm,0.9s,baz=267,slow=6.5,SNR=2.7
comp=Z,3.2nm,0.9s
TORD Torodi Ar. Bea 84.04 78 P **P** 09 52 16.5 -0.7
comp=Z,0.7nm,0.7s,baz=291,slow=6.0,SNR=1.6
comp=Z,0.7nm,0.7s
NOA NORSAR Array B 84.17 29 P **P** 09 52 16.9 0.0
comp=Z,0.8nm,0.7s,baz=304,slow=8.8,SNR=2.0
comp=Z,0.8nm,0.7s
HHC Hu-ho-hao-te 127.45 345 *e*P **PKPdf** 09 58 48.4 -2.9
ASAR Alice Springs 140.97 244 PKhKP PKPpre 09 59 12.7
comp=Z,0.4nm,0.9s,baz=96,slow=1.7,SNR=2.2
WRA Warramunga Arr 141.33 250 PKP **PKPdf** 09 59 16.8 -0.8
comp=Z,0.7nm,0.6s,baz=85,slow=1.8,SNR=4.9
PZH PanZhiHua 143.38 351 PKP PKPbc 09 59 21.4 +3.2

*IDC **05** 09:47:40.5±1.2, 1°.14S×98°.02E, h0km, mb4.0/12, mbtmp4.0/13, ML4.5/1, MS3.4/4, Error ellipse: s-maj=42.6km s-min=15.9km az=55.0*
*NEIC **05** 09:47:43.0±0.7, 1°.15S±0°.08×98°.00E±0°.10, h10km±1km, mb4.6/16, Error ellipse: s-maj=21.5km s-min=4.9km az=230.0*
*DJA **05** 09:47:43.8±0.9, 1°S±3°×9°8E±°, h15km±6km, M4.7/23, mB5.6/4, mb5.1/6, MLv4.5/23, Mw(mB)5.0/4*
ISC 05 09:47:44.4±0.7, 1°.15S±0°.06×98°.00E±0°.07, h26km, n73, σ0s88/60, mb4.3/19, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**1.11**	**99**	P	**Pn**	**09 48 03.6**	**-0.7**
SISI				S	**Sn**	**09 48 16.8**	**-1.9**
PBSI	**Pulau Batu**	**1.12**	**15**	P	**Pn**	**09 48 03.6**	**-0.9**
PBSI				S	**Sb**	**09 48 19.1**	**-0.3**
GSI	**Gunungsitoli**	**2.47**	**350**		**Pn**	**09 48 21.4**	**-1.6**
GSI	**Gunungsitoli**	**2.47**	**350**	P	**Pn**	**09 48 21.3**	**-1.8**
PDSI	**Padang**	**2.48**	**85**	P	**Pn**	**09 48 21.9**	**-1.2**
MNSI	**Mandailing Nat**	**2.50**	**39**	P	**Pn**	**09 48 23.5**	**+0.1**
PPI	**Padang Panjang**	**2.50**	**74**	P	**Pn**	**09 48 22.6**	**-0.8**
PPSI	**Pulau Pagai**	**2.57**	**129**	P	**Pn**	**09 48 23.7**	**-0.7**
BKNI	**Bangkinang**	**3.38**	**64**	Pn	**Pn**	**09 48 34.6**	**-0.9**
BKNI	**Bangkinang**	**3.38**	**64**	P	Pb	09 48 51.0	+7.4
SNSI	**Sinabang, Aceh**	**3.91**	**335**	P	**Pn**	**09 48 44.2**	**+1.4**
RPSI	**Rantau Prapat**	**3.93**	**14**		**Pn**	**09 48 43.4**	**+0.3**
PSI	**Prapat**	**4.03**	**13**	P	**Pn**	**09 48 43.4**	**-1.2**
TPTI		**4.45**	**349**	P	**Pn**	**09 48 49.8**	**-0.5**
MNAI	**Manna**	**5.89**	**123**		**Pn**	**09 49 09.4**	**-0.7**
MNAI	**Manna**	**5.89**	**123**	P	**Pn**	**09 49 09.6**	**-0.5**
	17μm212nm,1.2s						
EGSI	**Enggano, Bengk**	**5.98**	**134**	P	**Pn**	**09 49 09.4**	**-1.9**
	0.6nm109nm,0.6s						
MYKOM	**Kota Tinggi**	**6.54**	**64**	Pn	**Pn**	**09 49 20.4**	**+1.4**
DSRI	**Dabo**	**6.62**	**84**	P	**Pn**	**09 49 22.1**	**+2.1**
KULM	**Kulim**	**6.92**	**22**		**Pn**	**09 49 25.1**	**+0.8**
LEM	**Lembang**	**11.13**	**121**	LR	LR	09 54 37.7	
	comp=Z,160nm,18.2s,baz=236,slow=38						
BKB	**Balikpapan**	**18.90**	**91**	P	**P**	**09 52 03.2**	**0.0**
CM31	**Chiang Mai Arr**	**19.50**	**3**	P	**P**	**09 52 09.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**19.50**	**3**	P	**Pn**	**09 52 10.4**	**-0.8**
	0.5nm,0.3s,baz=180,slow=11,SNR=11						
CMAR				LR	LR	09 59 45.7	
	comp=Z,79nm,18.5s,baz=305,slow=37						
	3.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.50**	**3**	P	**P**	**09 52 09.8**	**0.0**
CHTO	**Chiang Mai**	**19.86**	**3**	P	**P**	**09 52 13.7**	**0.0**
H08S2	**Diego Garcia H**	**26.22**	**255**	T	T	10 20 33.8	
	baz=76,slow=76,SNR=144						
H08S3	**Diego Garcia H**	**26.23**	**255**	T	T	10 20 32.5	
	baz=76,slow=76,SNR=869						
H08S1	**Diego Carcia H**	**26.24**	**255**	T	T	10 20 33.5	
	baz=76,slow=76,SNR=98						
HYB	**Hyderabad**	**26.60**	**315**	*e*P	**P**	**09 53 20.6**	**-0.3**
HYB				*e*S	S	09 58 07.1	+13
SHL	**Shillong**	**27.21**	**348**		**P**	**09 53 26.3**	**-0.1**
SHL				IAmb	IAmb	09 53 34.6	
	comp=Z,16nm,1.2s						
DAV	**Davao City (W)**	**28.71**	**73**	LR	LR	10 05 33.2	
	comp=Z,101nm,18.4s,baz=336,slow=37						
LSA	**Lhasa**	**31.36**	**349**	P	**P**	**09 54 04.8**	**+1.2**
H01W3	**Cape Leeuwin H**	**36.79**	**158**	T	T	10 33 54.5	
	baz=333,slow=76,SNR=242						
H01W2	**Cape Leeuwin H**	**36.80**	**158**	T	T	10 33 55.5	
	baz=333,slow=76,SNR=296						
H01W1	**Cape Leeuwin H**	**36.80**	**158**	T	T	10 33 55.7	
	baz=333,slow=76,SNR=272						
WB0	**Warramunga Arr**	**40.13**	**120**	P	**P**	**09 55 18.1**	**-0.3**
WB0				IAmb	IAmb	09 55 19.3	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**40.15**	**120**	P	**P**	**09 55 17.5**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=296,slow=8.3,SNR=12						
	comp=Z,3.9nm,1.0s						
WRA	**Warramunga Arr**	**40.15**	**120**	P	**P**	**09 55 18.1**	**-0.5**
ASAR	**Alice Springs**	**41.37**	**126**	P	**P**	**09 55 28.5**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=299,slow=8.6,SNR=46						
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	**41.37**	**126**	P	**P**	**09 55 29.0**	**+0.3**
AS31	**Alice Springs**	**41.37**	**126**	P	**P**	**09 55 28.7**	**-0.1**
PDGK	**Podgornoye**	**47.29**	**342**	P	**P**	**09 56 16.5**	**+0.6**
KSAR	**Wonju Array Be**	**47.32**	**33**	P	**P**	**09 56 15.4**	**-0.6**
KSRS	**Korea Array**	**47.35**	**33**	P	**P**	**09 56 14.6**	**-1.6**
	comp=Z,1.8nm,0.9s,baz=232,slow=6.0,SNR=7.3						
KSRS				LR	LR	10 16 04.5	
	comp=Z,45nm,20.4s,baz=225,slow=36						
	comp=Z,1.8nm,0.9s						
BBOO	**Buckleboo**	**47.65**	**135**	P	**P**	**09 56 19.3**	**+0.5**
ARSB	**Arslanbob**	**47.99**	**335**	P	**P**	**09 56 21.4**	**0.0**
ARSB				IAmb	IAmb	09 56 30.1	
	comp=Z,6.8nm,1.0s						
HRA	**Herat**	**48.71**	**320**	P	**P**	**09 56 28.4**	**+1.2**
HRA				IAmb	IAmb	09 56 45.9	
	comp=Z,9.6nm,1.2s						
SONM	**Songino Array**	**49.33**	**7**	P	**P**	**09 56 32.2**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=184,slow=7.1,SNR=7.5						
	comp=Z,1.9nm,0.7s						
SONM	**Songino Array**	**49.33**	**7**		**P**	**09 56 31.8**	**+0.2**
SONM				IAmb	IAmb	09 56 40.1	
	comp=Z,3.9nm,1.0s						
ULN	**Ulaanbaatar**	**49.45**	**8**	P	**P**	**09 56 32.2**	**-0.3**
ULN				IAmb	IAmb	09 56 40.8	
	comp=Z,11nm,1.5s						
MKAR	**Makanchi Array**	**49.70**	**346**	P	**P**	**09 56 34.5**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=155,slow=8.3,SNR=15						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**49.70**	**346**	P	**P**	**09 56 34.8**	**+0.5**
STKA	**Stephens Creek**	**51.21**	**131**	P	**P**	**09 56 46.8**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=306,slow=10.0,SNR=4.0						
	comp=Z,2.5nm,0.9s						
KURBB	**Kurchatov Arra**	**54.19**	**345**	P	**P**	**09 57 07.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=166,slow=6.8,SNR=5.3						
	comp=Z,0.2nm,0.3s						
USA0B	**Ussuriysk Arra**	**54.38**	**30**	P	**P**	**09 57 09.1**	**0.0**
USRK	**Ussuriysk Ar.**	**54.38**	**30**	P	**P**	**09 57 09.2**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=229,slow=6.6,SNR=5.1						
	comp=Z,3.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.38**	**30**	P	**P**	**09 57 09.7**	**+0.6**
ZAA0	**Zalesovo Array**	**55.99**	**351**		**P**	**09 57 20.8**	**+0.3**
ZAA0				IAmb	IAmb	09 57 28.9	
	comp=Z,6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**55.99**	**351**	P	**P**	**09 57 20.5**	**0.0**
	comp=Z,3.7nm,0.7s,baz=165,slow=8.6,SNR=15						
	comp=Z,3.7nm,0.7s						
ZALV	**Zalesovo Beam**	**55.99**	**351**		**P**	**09 57 21.3**	**+0.8**
BVAR	**Borovoye Array**	**58.71**	**341**	P	**P**	**09 57 39.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=139,slow=9.5,SNR=4.5						
	comp=Z,1.0nm,0.7s						
AB31	**Akbulak array**	**59.95**	**332**	P	**P**	**09 57 47.8**	**-0.6**
AB31				IAmb	IAmb	09 57 55.6	
	comp=Z,4.1nm,1.1s						
ABKAR	**Akbulak array**	**59.95**	**332**	P	**P**	**09 57 48.0**	**-0.4**
H04N2	**CROZET ISLANDS**	**60.31**	**215**	T	T	11 03 14.9	
	baz=57,slow=75,SNR=547						
H04N1	**CROZET ISLANDS**	**60.32**	**215**	T	T	11 03 15.3	
	baz=57,slow=75,SNR=415						
H04N3	**CROZET ISLANDS**	**60.33**	**215**	T	T	11 03 14.7	
	baz=57,slow=75,SNR=407						
H04S1	**CROZET ISLANDS**	**60.62**	**215**	T	T	11 03 36.0	
	baz=55,slow=76,SNR=76						
H04S3	**CROZET ISLANDS**	**60.64**	**215**	T	T	11 03 35.7	
	baz=55,slow=76,SNR=91						
H04S2	**CROZET ISLANDS**	**60.64**	**215**	T	T	11 03 37.3	
	baz=55,slow=76,SNR=47						
AKTO	**Aktyubinsk**	**61.66**	**332**	P	**P**	**09 57 58.6**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=166,slow=4.2,SNR=4.3						
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**71.28**	**313**	P	**P**	**09 59 02.7**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=116,slow=6.6,SNR=1.5						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**145.19**	**34**	PKPbc	**PKPdf**	**10 07 20.6**	**0.0**
	comp=Z,1.6nm,0.8s,baz=316,slow=1.9,SNR=25						

*IDC **05** 09:52:23.2±2.5, 6°.90S×129°.64E, h146km±35km, mb2.9/1, mbtmp3.7/5, Error ellipse: s-maj=53.8km s-min=15.4km az=89.0*
ISC 05 09:52:23.1±1.0, 6°.98S±0°.06×129°.7E±0°.2, h150km, n5, σ2s87/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.27**	**15**	P	**Pn**	**09 53 54.6**	**+1.1**
	3.3nm,0.3s,baz=189,slow=19,SNR=9.8						
SIJI				S	**Sn**	**09 55 01.1**	**-3.2**
	7.4nm,0.5s,baz=232,slow=19,SNR=7.2						
FITZ	**Fitzroy Crossi**	**11.74**	**199**	P	**Pn**	**09 55 07.9**	**+1.8**
	6.3nm,1.0s,baz=26,slow=12,SNR=10.0						
FITZ				S	**Sn**	**09 57 11.6**	**-4.2**
	3.3nm,0.7s,baz=105,slow=19,SNR=2.0						
WRA	**Warramunga Ar**	**13.66**	**161**	P	**Pn**	**09 55 32.6**	**+1.8**
	0.6nm,0.4s,baz=338,slow=14,SNR=15						
WRA				S	**Sn**	**09 57 59.2**	**-2.9**
	0.5nm,0.4s,baz=346,slow=24,SNR=6.3						
ASAR	**Alice Springs**	**17.08**	**167**	P	**Pn**	**09 56 15.3**	**+2.2**
	1.0nm,0.6s,baz=346,slow=10,SNR=12						
ASAR				S	**S**	**09 59 22.3**	**-0.7**
	1.1nm,0.9s,baz=342,slow=29,SNR=5.9						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**10 03 06.1**	**-0.2**
	0.1nm,0.4s,baz=120,slow=7.7,SNR=2.1						
	0.1nm,0.4s						

*AZER **05** 10:01:04.5, 38°.23N×44°.66E, h6km, ml2.6*
*AFAD **05** 10:01:05.6, 38°.37N×44°.62E, h6km±5km, ML2.4*
ISC 05 10:01:06.7±1.3, 38°.34N±0°.03×44°.58E±0°.03, h4km±11km, n17, σ2s08/33, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.57**	**305**	P	**Pb**	**10 01 17.9**	**-1.5**
OZAP				S	**Sg**	**10 01 25.0**	**+0.1**
OZAP				IAML		10 01 34.0	
	comp=N,256nm,1.1s						
OZAP				IAML		10 01 37.0	
	comp=E,119nm,1.0s						
TVAN	**Van**	**0.94**	**282**	P	**Pb**	**10 01 24.9**	**-0.8**
TVAN				S	**Sn**	**10 01 41.9**	**+0.9**
TVAN				IAML		10 01 44.0	
	comp=E,125nm,0.5s						
TVAN				IAML		10 01 48.0	
	comp=N,130nm,1.0s						
CLDR	**Caldiran**	**0.96**	**327**	P	**Pg**	**10 01 22.2**	**-2.9**
CLDR				S	**Sb**	**10 01 36.9**	**-2.3**
CLDR				IAML		10 01 38.0	
	comp=E,346nm,0.4s						
CLDR				IAML		10 01 38.0	
	comp=N,236nm,0.4s						
VMUR	**Van-Muradiye**	**1.03**	**310**	P	**Pn**	**10 01 28.4**	**+0.3**
VMUR				S	**Sn**	**10 01 42.6**	**-0.4**
HAKT	**HAKKARI**	**1.04**	**222**	P	**Pb**	**10 01 26.9**	**-0.5**
HAKT				S	**Sb**	**10 01 41.3**	**-0.1**
HAKT				IAML		10 01 45.0	
	comp=N,85nm,0.5s						
HAKT				IAML		10 01 54.0	
	comp=E,99nm,0.6s						
HAKT	**HAKKARI**	**1.04**	**222**	P	**Pg**	**10 01 26.3**	**-0.3**
HAKT				S	**Sb**	**10 01 42.1**	**+0.7**
NAX	**Nakhchivan**	**1.10**	**40**	P	**Pn**	**10 01 28.2**	**-0.7**
NAX				S	**Sn**	**10 01 46.3**	**+1.6**
GEVA	**Gevas**	**1.20**	**269**	P	**Pg**	**10 01 28.5**	**-1.1**
GEVA				S	**Sn**	**10 01 46.8**	**-0.4**
GEVA				IAML		10 01 53.0	
	comp=E,53nm,0.5s						
GEVA				IAML		10 01 54.0	
	comp=N,106nm,0.5s						
ORD	**Ordubad**	**1.25**	**61**	P	**Pn**	**10 01 32.0**	**+0.9**
ORD				S	**Sn**	**10 01 50.4**	**+1.9**
SBZ	**Shahbuz**	**1.30**	**35**	P	**Pn**	**10 01 32.5**	**+0.6**
SBZ				S	**Sn**	**10 01 54.0**	**+4.2**
HYR	**Heyderabad**	**1.40**	**9**	P	**Pg**	**10 01 36.4**	**+2.9**
HYR				S	Sn	10 01 59.3	+7.3
IGDI	**IGDIR**	**1.58**	**346**	P	**Pg**	**10 01 39.2**	**+2.2**
IGDI				S	**Sg**	**10 02 03.2**	**+5.7**
PERV	**Siirt/Pervari-**	**1.66**	**257**	P	**Pg**	**10 01 39.8**	**+1.4**
PERV				S	**Sg**	**10 02 02.0**	**+2.2**
PERV				IAML		10 02 09.0	
	comp=N,84nm,0.9s						
PERV				IAML		10 02 09.0	
	comp=E,92nm,0.6s						
KOTA	**Agri, Merkez-K**	**1.81**	**324**	P	**Pg**	**10 01 40.9**	**-0.6**
KOTA				S	**Sg**	**10 02 05.0**	**0.0**
KOTA				IAML		10 02 13.0	
	comp=E,16nm,0.9s						
SRTM	**Siirt_Merkez**	**2.12**	**262**	P	**Pg**	**10 01 48.0**	**+0.6**
SRTM				S	**Sg**	**10 02 15.0**	**+0.1**
GANJ	**Ganja**	**2.67**	**30**	P	**Pb**	**10 01 53.4**	**-1.7**
GANJ				S	**Sg**	**10 02 29.7**	**

NUBE					IAML		10 03 00.5	
	comp=N,7μm,0.3s							
NUBE	**Las Nubes**	**0.63**	**355**	⇓*i*	P	**Pn**	**10 02 50.8**	**-0.8**
NUBE					*e*S	**Sn**	**10 03 00.0**	**-0.8**
FAME	**Alcaldia de Sa**	**0.63**	**334**		P	**Pn**	**10 02 50.2**	**-1.3**
FAME					S	**Sn**	**10 02 59.6**	**-1.1**
PANCS	**Alcalda de**	**0.63**	**58**		P	**Pb**	**10 02 50.7**	**-0.3**
PANCS					S	**Sn**	**10 03 00.4**	**-0.4**
PANCS	**Alcalda de**	**0.63**	**58**	*e*P		**Pb**	**10 02 50.9**	**-0.2**
BOQS	**Boqueron**	**0.63**	**43**	*e*P		**Pn**	**10 02 51.4**	**-0.4**
UEES	**Universidad Ev**	**0.65**	**47**		P	**Pn**	**10 02 51.3**	**-0.5**
UEES					S	**Sn**	**10 03 01.6**	**+0.4**
UEES	**Universidad Ev**	**0.65**	**47**	⇓*i*	P	**Pn**	**10 02 51.3**	**-0.5**
SEMO	**Seminario San**	**0.65**	**49**		P	**Pb**	**10 02 51.2**	**-0.1**
SEMO					S	**Sn**	**10 03 02.7**	**+1.4**
LOMA	**Loma Larga**	**0.66**	**56**		P	**Pb**	**10 02 51.3**	**-0.2**
LOMA					S	**Sn**	**10 03 02.2**	**+0.7**
LOMA	**Loma Larga**	**0.66**	**56**	⇓*i*	P	**Pn**	**10 02 51.5**	**-0.5**
LOMA					*e*S	**Sn**	**10 03 01.8**	**+0.3**
PIC2	**El Picacho**	**0.66**	**44**	*e*P		**Pn**	**10 02 52.0**	**-0.1**
IGN	**Direccin Gen**	**0.70**	**51**		P	**Pb**	**10 02 51.8**	**-0.3**
IGN					S	**Sn**	**10 03 02.9**	**+0.5**
LOAL	**Lomas de Alarc**	**0.72**	**356**		P	**Pn**	**10 02 52.3**	**-0.5**
LOAL					S	**Sn**	**10 03 03.3**	**+0.2**
LOAL	**Lomas de Alarc**	**0.72**	**356**	*e*P		**Pn**	**10 02 52.4**	**-0.5**
UNIC	**Universidad Ca**	**0.73**	**14**		P	**Pn**	**10 02 52.3**	**-0.6**
UNIC					S	**Sn**	**10 03 03.7**	**+0.6**
UNIC	**Universidad Ca**	**0.73**	**14**	⇓*i*	P	**Pn**	**10 02 52.3**	**-0.6**
LFRS	**El Faro**	**0.74**	**62**	*i*	P	**Pn**	**10 02 52.6**	**-0.5**
LFIJ	**La Fuente**	**0.76**	**52**	*e*P		**Pb**	**10 02 53.1**	**-0.1**
SJTE	**Alcalda de S**	**0.78**	**64**	⇓*e*P		**Pn**	**10 02 53.2**	**-0.4**
SJTE					*e*S	**Sn**	**10 03 04.4**	**0.0**
LBRS	**Las Brisas**	**0.81**	**55**	*e*P		**Pb**	**10 02 53.9**	**-0.2**
RBDL	**Robledal**	**0.84**	**3**	⇓*i*	P	**Pb**	**10 02 54.0**	**-0.6**
PAVA	**Las Pavas**	**0.89**	**60**		P	**Pb**	**10 02 54.9**	**-0.4**
PAVA					S	**Sn**	**10 03 07.9**	**+0.7**
PAVA	**Las Pavas**	**0.89**	**60**	⇓*i*	P	**Pb**	**10 02 55.1**	**-0.2**
COEG	**Centro de Oper**	**0.90**	**67**		P	**Pn**	**10 02 54.7**	**-0.5**
COEG					S	**Sb**	**10 03 07.6**	**+0.5**
COEG	**Centro de Oper**	**0.90**	**67**	⇓*e*P		**Pn**	**10 02 54.8**	**-0.4**
TECO	**Alcaldia de Te**	**0.96**	**74**		P	**Pn**	**10 02 55.2**	**-0.9**
TECO					S	**Sn**	**10 03 08.4**	**-0.4**
TECO	**Alcaldia de Te**	**0.96**	**74**	⇓*e*P		**Pn**	**10 02 55.3**	**-0.7**
JUAM	**Asuncion Mita**	**1.06**	**1**	*i*	P	**Pn**	**10 02 56.6**	**-0.9**
JUAM				*i*	S	**Sn**	**10 03 10.4**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.06**	**66**		S	**Sb**	**10 03 11.8**	**0.0**
PCG5	**San Vicente Pa**	**1.13**	**326**	*i*	P	**Pb**	**10 03 01.5**	**+2.1**
LLGN	**La Laguna**	**1.17**	**41**		P	**Pn**	**10 02 58.1**	**-0.9**
LLGN					S	**Sn**	**10 03 14.3**	**+0.2**
MTO3	**Montecristo**	**1.18**	**18**		P	**Pn**	**10 02 58.2**	**-1.1**
MTO3					S	**Sb**	**10 03 14.6**	**-0.6**
MTO3	**Montecristo**	**1.18**	**18**	*i*	P	**Pn**	**10 02 58.4**	**-0.9**
MTO3	**Montecristo**	**1.18**	**18**	⇓*i*	P	**Pn**	**10 02 58.4**	**-0.9**
P5NO	**Presa 5 de nov**	**1.18**	**53**		P	**Pn**	**10 02 58.2**	**-0.8**
P5NO					S	**Sn**	**10 03 14.6**	**+0.3**
P5NO	**Presa 5 de nov**	**1.18**	**53**	*e*P		**Pn**	**10 02 58.3**	**-0.8**
PQSS	**Presa 15 de Se**	**1.19**	**73**		P	**Pn**	**10 02 58.9**	**-0.3**
PQSS					S	**Sn**	**10 03 14.9**	**+0.5**
TECA	**Tecapa**	**1.21**	**79**	*e*P		**Pn**	**10 02 59.1**	**-0.6**
FG16	**Alotenango, Sa**	**1.25**	**323**	*i*	P	**Pb**	**10 03 04.1**	**+2.6**
FG8	**Yepocapa, Chim**	**1.27**	**321**	*i*	P	**Pb**	**10 03 04.5**	**+2.7**
ESQI	**Esquipulas**	**1.33**	**16**		P	**Pn**	**10 03 00.5**	**-0.8**
ESQI					S	**Sn**	**10 03 18.3**	**+0.2**
ESQI	**Esquipulas**	**1.33**	**16**	⇓*i*	P	**Pn**	**10 03 00.7**	**-0.6**
ZAFR2	**Estanzuela, Za**	**1.35**	**16**	*i*	P	**Pb**	**10 03 05.6**	**+2.4**
PACA	**Pacayal**	**1.38**	**82**		P	**Pn**	**10 03 01.5**	**-0.4**
PACA					S	**Sb**	**10 03 21.0**	**0.0**
PACA	**Pacayal**	**1.38**	**82**	*e*P		**Pn**	**10 03 01.7**	**-0.2**
LCY	**Lacayo**	**1.40**	**84**	*e*P		**Pn**	**10 03 02.3**	**+0.1**
RANC	**El Ranchito**	**1.41**	**83**		P	**Pn**	**10 03 02.2**	**-0.2**
RANC					S	**Sn**	**10 03 20.6**	**+0.5**
INTP	**Intipuca**	**1.63**	**92**	*e*P		**Pn**	**10 03 05.2**	**-0.1**
SARH	**Santa Rosa de**	**1.77**	**32**		P	**Pn**	**10 03 06.9**	**-0.3**
SARH					S	**Sn**	**10 03 28.8**	**0.0**
SARH	**Santa Rosa de**	**1.77**	**32**	*i*	P	**Pn**	**10 03 07.1**	**-0.1**
LCND	**La Caada**	**1.79**	**89**		P	**Pn**	**10 03 07.2**	**-0.3**
LCND	**La Caada**	**1.79**	**89**	⇓*i*	P	**Pn**	**10 03 07.2**	**-0.3**
CNCH	**Conchagua**	**1.84**	**90**		P	**Pn**	**10 03 07.8**	**-0.5**
CNCH					S	**Sn**	**10 03 31.7**	**+0.9**
CNCH	**Conchagua**	**1.84**	**90**	*e*P		**Pn**	**10 03 07.9**	**-0.4**
APG	**El Apazote**	**1.86**	**338**	*i*	P	**Pn**	**10 03 08.0**	**-0.7**
STG5	**El Palmar, Qui**	**1.93**	**306**	*i*	P	**Pb**	**10 03 13.4**	**+0.3**
STG8	**El Palmar, Qui**	**1.96**	**307**	*i*	P	**Pb**	**10 03 13.6**	**-0.1**
RTAL	**Retalhuleu**	**2.28**	**303**		P	**Pn**	**10 03 13.4**	**-0.8**
RTAL					S	**Sn**	**10 03 39.9**	**-1.5**
QUEN	**Al S de Volca**	**2.88**	**103**		P	**Pn**	**10 03 22.3**	**-0.3**
PLRN	**Geotermica Pol**	**2.97**	**103**		P	**Pn**	**10 03 23.6**	**-0.1**
CNGA	**Al SSO del Vol**	**3.05**	**104**		P	**Pn**	**10 03 24.6**	**-0.3**
CNGN	**Cerro Negro**	**3.05**	**104**		P	**Pn**	**10 03 24.8**	**-0.1**
CNGN					S	**Sn**	**10 04 00.4**	**-0.1**
MACN	**El Madrono**	**3.08**	**105**		P	**Pn**	**10 03 25.2**	**-0.1**
MACN					S	**Sn**	**10 04 01.0**	**-0.3**
OCON	**Estacion meteo**	**3.18**	**83**		P	**Pn**	**10 03 26.1**	**-0.6**
COPN	**Copaltepe**	**3.25**	**109**		P	**Pn**	**10 03 27.4**	**-0.2**
LIMN	**Finca el Limon**	**3.28**	**93**		P	**Pn**	**10 03 27.2**	**-0.9**
LIMN					S	**Sn**	**10 04 06.3**	**+0.1**
SAPS	**Ciudad Sandino**	**3.42**	**108**		P	**Pn**	**10 03 30.5**	**+0.6**
SAPS					S	**Sn**	**10 04 09.2**	**-0.4**
RCFN	**Al S de San Ju**	**3.43**	**85**		P	**Pn**	**10 03 29.4**	**-0.8**
RCVN	**Varillal2**	**3.45**	**84**		P	**Pn**	**10 03 29.9**	**-0.6**
RCON	**San Juan de Ri**	**3.48**	**86**		P	**Pn**	**10 03 30.5**	**-0.4**
RCON					S	**Sn**	**10 04 10.9**	**-0.5**
TISN	**Laguna Tiscapa**	**3.56**	**108**		P	**Pn**	**10 03 31.1**	**-0.7**

*MDD **05** 10:26:06.7±1.1,36°.93N×11°.28W,h0km,Mb3.8/6, M_mb3.0/7,Error ellipse: s-maj=9.6km s-min=8.7km az=176.0*
*IGIL **05** 10:26:07.3,36°.88N×11°.39W,h13km,ML1.8*
*INMG **05** 10:26:07.6±1.2,36°.83N×11°.52W,h30km,ML2.1,Error ellipse: s-maj=5.1km s-min=4.4km az=97.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

ISC 05 10:26:04.3±2.5,36°.90N±0°.07×11°.4W±0°.1,h10km,n52, σ1s16/88,7C-1D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.06**	**83**	P	**Pn**	**10 26 39.5**	**+0.6**
PFVI				S	**Sn**	**10 27 04.1**	**-0.5**
PFVI	**Vila Bisbo**	**2.06**	**83**	*e*P	**Pn**	**10 26 40.0**	**+1.1**
PFVI				*e*S	**Sn**	**10 27 04.4**	**-0.2**
PFVI				*i* IAML		10 27 05.1	
PFVI				*i* IAML		10 27 05.5	
PFVI				*i* IAML		10 27 06.4	
PTEO	**Sao Teotonio**	**2.22**	**72**	*e*P	**Pn**	**10 26 42.5**	**+1.4**
PTEO				*e*S	**Sn**	**10 27 08.3**	**-0.3**
PTEO				*i* IAML		10 27 10.2	
PTEO				*i* IAML		10 27 10.2	
PTEO				*i* IAML		10 27 10.3	
MORF	**Marmelete**	**2.22**	**79**	*e*P	**Pn**	**10 26 42.2**	**+1.0**
MORF				*e*S	**Sn**	**10 27 07.8**	**-0.9**
MORF				IAML		10 27 10.0	
	comp=E,8.6nm,0.1s						
MORF	**Marmelete**	**2.22**	**79**	*e*P	**Pn**	**10 26 42.4**	**+1.2**
MORF				*e*S	**Sn**	**10 27 08.6**	**-0.1**
MORF				*i* IAML		10 27 10.0	
MORF				*i* IAML		10 27 11.4	
MORF				*i* IAML		10 27 11.5	
PLOUS	**Minas do Lousa**	**2.61**	**63**	⇓*e*P	**Pn**	**10 26 47.7**	**+1.1**
PLOUS				*e*S	**Sn**	**10 27 17.7**	**-0.6**
PLOUS				*i* IAML		10 27 20.4	
PLOUS				*i* IAML		10 27 20.5	
PLOUS				*i* IAML		10 27 21.6	
PMAFR	**Mafra**	**2.64**	**38**	P	**Pn**	**10 26 47.6**	**+0.7**
PMAFR				S	**Sn**	**10 27 19.3**	**+0.3**
PMAFR	**Mafra**	**2.64**	**38**	*e*P	**Pn**	**10 26 47.9**	**+0.9**
PMAFR				*e*S	**Sn**	**10 27 20.0**	**+1.0**
PMAFR				*i* IAML		10 27 21.3	
PMAFR				*i* IAML		10 27 22.4	
PMAFR				*i* IAML		10 27 26.9	
MESJ	**Messejana**	**2.69**	**69**	*e*P	**Pn**	**10 26 48.7**	**+1.1**
MESJ				*e*S	**Sn**	**10 27 19.3**	**-0.9**
MESJ				IAML		10 27 21.7	
	comp=E,2.7nm,0.2s						
MESJ	**Messejana**	**2.69**	**69**	*e*P	**Pn**	**10 26 48.8**	**+1.1**
MESJ				*e*S	**Sn**	**10 27 19.6**	**-0.6**
MESJ				*i* IAML		10 27 22.4	
MESJ				*i* IAML		10 27 23.1	
MESJ				*i* IAML		10 27 26.1	
PCVE	**Castro Verde**	**2.77**	**74**	P	**Pn**	**10 26 50.3**	**+1.7**
PCVE				S	**Sn**	**10 27 22.0**	**-0.1**
PCVE	**Castro Verde**	**2.77**	**74**	*e*P	**Pn**	**10 26 50.8**	**+2.1**
PCVE				*e*S	**Sn**	**10 27 22.2**	**+0.1**
PCVE				*i* IAML		10 27 24.4	
PCVE				*i* IAML		10 27 25.0	
PCVE				*i* IAML		10 27 25.8	
PBDV	**Barranco-do-Ve**	**2.78**	**82**	P	**Pn**	**10 26 50.2**	**+1.3**
PBDV				S	**Sn**	**10 27 22.7**	**+0.2**
PBDV	**Barranco-do-Ve**	**2.78**	**82**	*e*P	**Pn**	**10 26 50.5**	**+1.6**
PBDV				*e*S	**Sn**	**10 27 22.0**	**-0.5**
PBDV				*i* IAML		10 27 25.5	
PBDV				*i* IAML		10 27 26.3	
PBDV				*i* IAML		10 27 34.9	
MOE	**Montemor**	**2.90**	**55**	⇑*e*P	**Pn**	**10 26 51.5**	**+1.0**
MOE				*e*S	**Sn**	**10 27 24.8**	**-0.6**
MOE				*i* IAML		10 27 27.5	
MOE				*i* IAML		10 27 28.1	
MOE				*i* IAML		10 27 30.2	
PVAQ	**Vaqueiros**	**2.97**	**79**	*e*P	**Pn**	**10 26 53.3**	**+1.9**
PVAQ				*e*S	**Sn**	**10 27 27.2**	**+0.1**
PVAQ				*i* IAML		10 27 28.8	
PVAQ				*i* IAML		10 27 29.4	
PVAQ				*i* IAML		10 27 31.5	
PBEJ	**Beja**	**3.02**	**67**	*e*P	**Pn**	**10 26 53.7**	**+1.6**
PBEJ				*e*S	**Sn**	**10 27 27.3**	**-1.0**
PBEJ				*i* IAML		10 27 30.5	
PBEJ				*i* IAML		10 27 31.3	
PBEJ				*i* IAML		10 27 32.5	
EVO	**Evora**	**3.13**	**58**	P	Pn	10 26 53.2	-0.5
EVO				S	**Sn**	**10 27 30.2**	**-0.9**
EVO	**Evora**	**3.13**	**58**	*e*P	**Pn**	**10 26 55.2**	**+1.6**
EVO				*e*S	**Sn**	**10 27 30.6**	**-0.5**
EVO				*i* IAML		10 27 33.7	
EVO				*i* IAML		10 27 33.9	
EVO				*i* IAML		10 27 33.9	
EGRO	**El Granado**	**3.18**	**77**	P	**Pn**	**10 26 55.6**	**+1.2**
EGRO				S	**Sn**	**10 27 31.9**	**-0.3**
EGRO	**El Granado**	**3.18**	**77**	Pn	**Pn**	**10 26 55.5**	**+1.2**
EGRO				⇑*i*Vmb_VC		10 26 57.7	
	comp=E,119nm,SNR=1.1						
EGRO				Sn	**Sn**	**10 27 31.3**	**-0.9**
PARRA	**Arraiolos**	**3.26**	**53**	*e*P	**Pn**	**10 26 56.1**	**+0.6**
PARRA				*e*S	**Sn**	**10 27 33.7**	**-0.7**
PARRA				*i* IAML		10 27 38.5	
PARRA				*i* IAML		10 27 39.1	
PARRA				*i* IAML		10 27 41.2	
PMTG	**Montargil**	**3.30**	**48**	*e*P	**Pn**	**10 26 56.8**	**+0.7**
PMTG				*e*S	**Sn**	**10 27 34.5**	**-0.8**
PMTG				*i* IAML		10 27 34.6	
PMTG				*i* IAML		10 27 38.1	
PMTG				*i* IAML		10 27 38.2	
PSBE	**So Bento**	**3.31**	**37**	*e*P	**Pn**	**10 26 57.5**	**+1.3**
PSBE				*e*S	**Sn**	**10 27 37.8**	**+2.2**
PSBE				*i* IAML		10 27 39.9	
PSBE				*i* IAML		10 27 42.0	
PSBE				*i* IAML		10 27 44.9	
PESTR	**Estremoz**	**3.59**	**56**	P	Pn	10 26 59.4	-0.5
PESTR				S	**Sn**	**10 27 41.9**	**-0.5**
PESTR	**Estremoz**	**3.59**	**56**	*e*P	**Pn**	**10 27 01.3**	**+1.4**
PESTR				*e*S	**Sn**	**10 27 41.2**	**-1.2**
PESTR				*i* IAML		10 27 41.5	
PESTR				*i* IAML		10 27 46.8	
PESTR				*i* IAML		10 27 50.2	
PBAR	**Barrancos**	**3.68**	**68**	P	**Pn**	**10 27 02.4**	**+1.1**
PBAR				S	**Sn**	**10 27 42.9**	**-1.8**
PBAR	**Barrancos**	**3.68**	**68**	*e*P	**Pn**	**10 27 02.3**	**+1.1**
PBAR				*e*S	**Sn**	**10 27 43.2**	**-1.4**
PBAR				*i* IAML		10 27 47.3	
PBAR				*i* IAML		10 27 47.4	
PBAR				*i* IAML		10 27 47.9	
PSARD	**Sardoal**	**3.70**	**42**	*e*P	**Pn**	**10 27 02.4**	**+0.9**
PSARD				*e*S	**Sn**	**10 27 44.5**	**-0.7**
PSARD				*i* IAML		10 27 47.9	
PSARD				*i* IAML		10 27 49.0	
PSARD				*i* IAML		10 27 49.9	
EMIN	**Mina Concepcio**	**3.85**	**76**	P	**Pn**	**10 27 04.2**	**+0.7**
EMIN	**Mina Concepcio**	**3.85**	**76**	Pn	**Pn**	**10 27 04.7**	**+1.1**
EMIN				⇑*i*Vmb_VC		10 27 06.1	
	comp=E,82nm,SNR=1.4						
EMIN				Sn	**Sn**	**10 27 47.2**	**-1.7**
PCAS	**Casmilo, Conde**	**3.88**	**35**	*e*P	**Pn**	**10 27 04.8**	**+0.8**
PCAS				*e*S	**Sn**	**10 27 48.1**	**-1.4**
PCAS				*i* IAML		10 27 50.4	
PCAS				*i* IAML		10 27 54.1	
PCAS				*i* IAML		10 27 56.6	
EBAD	**Badajoz**	**3.92**	**60**	P	**Pn**	**10 27 05.5**	**+0.9**
EBAD				S	**Sn**	**10 27 49.2**	**-1.5**
EBAD	**Badajoz**	**3.92**	**60**	Pn	**Pn**	**10 27 05.7**	**+1.1**
EBAD				⇑*i*Vmb_VC		10 27 06.7	
	comp=E,176nm,SNR=2.0						
EBAD				Sn	**Sn**	**10 27 49.2**	**-1.5**
PMRV	**Marv??o**	**4.03**	**50**	*e*P	**Pn**	**10 27 06.8**	**+0.6**
PMRV				*e*S	**Sn**	**10 27 51.7**	**-1.8**
PMRV				*i* IAML		10 27 53.9	
PMRV				*i* IAML		10 27 55.5	
PMRV				*i* IAML		10 27 57.8	
PCBR	**Castelo Branco**	**4.25**	**45**	*e*P	**Pn**	**10 27 10.1**	**+1.1**
ESPR	**Espera**	**4.43**	**89**	P	**Pn**	**10 27 12.6**	**+1.1**
ESPR				S	**Sn**	**10 28 02.2**	**-1.0**
ESPR	**Espera**	**4.43**	**89**	Pn	**Pn**	**10 27 12.9**	**+1.3**
ESPR				⇑*i*Vmb_VC		10 27 14.7	
	comp=E,127nm,SNR=1.4						
ESPR				Sn	**Sn**	**10 28 02.7**	**-0.5**
PVIS	**Viseu**	**4.68**	**34**	*e*P	**Pn**	**10 27 15.7**	**+0.6**
PVIS				*e*S	**Sn**	**10 28 08.1**	**-1.4**
AVE	**Averroes**	**4.85**	**137**	P	**Pn**	**10 27 17.2**	**-0.1**
ECAB	**El Cabril**	**4.89**	**74**	P	**Pn**	**10 27 18.7**	**+0.9**
ECAB				S	Sn	10 28 11.7	-2.8
ECAB	**El Cabril**	**4.89**	**74**	Pn	**Pn**	**10 27 19.0**	**+1.2**
ECAB				⇑*i*Vmb_VC		10 27 20.5	
	comp=E,82nm,SNR=1.9						
ECAB				Sn	**Sn**	**10 28 12.6**	**-1.8**
EPLA	**Plasencia**	**5.22**	**51**	Pn	**Pn**	**10 27 23.5**	**+1.0**
EPLA				Sn	**Sn**	**10 28 20.8**	**-2.0**
POLO	**Lamas de Olo**	**5.27**	**31**	*e*P	**Pn**	**10 27 23.7**	**+0.5**
POLO				*e*S	**Sn**	**10 28 21.9**	**-2.1**
POLO				*i* IAML		10 28 23.0	
POLO				*i* IAML		10 28 25.7	
POLO				*i* IAML		10 28 27.5	
PCAB	**Cabril**	**5.46**	**27**	*e*P	**Pn**	**10 27 26.0**	**+0.3**
EADA	**Adamuz**	**5.55**	**75**	P	**Pn**	**10 27 27.8**	**+0.8**
EADA				S	**Sn**	**10 28 29.1**	**-1.8**
EADA	**Adamuz**	**5.55**	**75**	Pn	**Pn**	**10 27 27.6**	**+0.6**
EADA				⇑*i*Vmb_VC		10 27 30.8	
	comp=E,61nm,SNR=1.2						
EADA				Sn	**Sn**	**10 28 28.5**	**-2.5**
PGAV	**Gavieira, Arco**	**5.60**	**24**	*e*P	**Pn**	**10 27 28.2**	**+0.5**
IFR	**Ifrane**	**6.13**	**122**	S	Sn	10 28 38.1	-7.3
ECAL	**Calabor**	**6.19**	**34**	P	Pn	10 27 35.6	-0.1
ECAL				S	Sn	10 28 42.9	-3.7
ELGU	**Los Guajares,**	**6.22**	**88**	S	Sn	10 28 44.4	-3.0
TIO	**Tiouine**	**6.87**	**149**	P	Pn	10 27 42.6	-2.6
TIO				S	Sn	10 28 56.3	-7.3

*IDC **05** 10:32:34.7±1.0,35°.98N×71°.52E,h0km,mb3.8/13, mbtmp3.9/18,ML3.5/4,Error ellipse: s-maj=21.2km s-min=18.2km az=180.0*
*NNC **05** 10:32:53.3±4.3,36°.82N×71°.59E,h149km±51km,mb3.5, mpv4.6,Error ellipse: s-maj=39.6km s-min=29.7km az=177.0*

ISC 05 10:32:50.1±0.6,36°.44N±0°.05×71°.97E±0°.07,h150km,n44, σ2s68/53,mb3.5/11,3C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**3.33**	**135**	*ex*	x	10 33 11.3	
SRNI				*e*S	**Sn**	**10 34 21.9**	**+0.2**
SRNI				IAML		10 34 25.2	
	comp=E,1μm,0.1s						
SRNI				IAML		10 34 25.3	
	comp=N,2μm,0.2s						
JMU	**Jammu**	**4.35**	**146**	*e*P	**Pn**	**10 33 55.8**	**+0.9**
JMU				*e*S	**Sn**	**10 34 43.9**	**-1.4**
JMU				IAML		10 34 49.4	
	comp=N,806nm,0.4s						
JMU				IAML		10 34 51.6	
	comp=E,540nm,0.0s						
TSSA	**Tissa**	**4.98**	**135**	*e*P	**Pn**	**10 34 02.8**	**-0.6**
TSSA				*i* x	x	10 34 10.2	
TSSA				*e*S	**Sn**	**10 34 57.9**	**-2.6**
TSSA				IAML		10 35 01.2	
	comp=N,1μm,0.4s						
TSSA				IAML		10 35 01.8	
	comp=E,539nm,0.0s						
THN	**Thein Dam**	**5.07**	**141**	*e*P	**Pn**	**10 34 04.7**	**+0.2**
THN				*e*S	**Sn**	**10 34 59.6**	**-2.8**
THN				IAML		10 35 03.3	
	comp=E,475nm,0.7s						
THN				IAML		10 35 05.8	
	comp=N,561nm,0.4s						
DHRM	**DHARAMSHALA**	**5.50**	**138**	*e*P	**Pn**	**10 34 10.1**	**-0.3**
DHRM				*e*S	**Sn**	**10 35 09.6**	**-3.5**
TLWR	**Talawar**	**5.56**	**142**	*e*P	**Pn**	**10 34 11.9**	**+1.0**
TLWR				*e*S	**Sn**	**10 35 10.9**	**-3.2**
UCH	**Uchtor**	**6.10**	**18**	P	**Pn**	**10 34 18.0**	**-0.5**
	SNR=74						
BHK	**Bhakra**	**6.22**	**143**	*ex*	x	10 34 20.4	
BHK				*ex*	x	10 35 25.8	
EKS2	**Erkin-Say**	**6.37**	**12**	P	**Pn**	**10 34 21.2**	**-0.5**
	SNR=24						
AAK	**Ala-Archa**	**6.49**	**17**	Pn	**Pn**	**10 34 23.1**	**-0.2**
	comp=N,38nm,0.4s,baz=191,slow=9.0,SNR=65						
AAK				Sn	**Sn**	**10 35 33.9**	**-2.5**
	comp=N,2.5nm,0.3s,baz=163,slow=19,SNR=24						
AAK	**Ala-Archa**	**6.49**	**17**	P	**Pn**	**10 34 23.7**	**+0.3**
	SNR=38						
AAK	**Ala-Archa**	**6.49**	**17**	⇑P		**10 34 23.3**	**0.0**
	comp=N,7.9nm,0.4s						
AAK				⇓S	**Sn**	**10 35 33.6**	**-2.8**
	comp=N,19nm,0.6s						
KK31	**Karatay Array**	**6.75**	**351**	⇓P	**Pn**	**10 34 24.2**	**-2.5**
	comp=N,38nm,0.2s,baz=179,slow=13,SNR=901						
KK31				⇑S	**Sn**	**10 35 36.4**	**-6.0**
	comp=N,10nm,0.3s,baz=161,slow=21,SNR=6.1						
HNLY	**HANLEY**	**6.83**	**120**	*e*P	**Pn**	**10 34 27.3**	**-1.1**
HNLY				*e*S	**Sn**	**10 35 43.6**	**-1.6**
HNLY				IAML		10 35 47.1	
	comp=N,31nm,0.4s						
HNLY				IAML		10 35 48.1	
	comp=E,20nm,0.3s						
CHMS	**Chumysh**	**6.89**	**17**	P	**Pn**	**10 34 28.5**	**-0.1**
	SNR=28						
TKM2	**Tokmak 2**	**7.05**	**22**	P	**Pn**	**10 34 31.9**	**+1.0**
	SNR=40						
USP	**Ospenovka**	**7.09**	**15**	P	**Pn**	**10 34 30.7**	**-0.5**
	SNR=15						
KLP	**Kalpa**	**7.15**	**131**	*e*P	**Pn**	**10 34 34.8**	**+2.3**
KLP				*e*S	**Sn**	**10 35 47.9**	**-4.8**
JASL	**Jaisalmer**	**9.53**	**186**	*e*P	**Pn**	**10 34 59.8**	**-4.1**
PTH	**Pithoragarh**	**9.72**	**132**	*e*P	**Pn**	**10 35 06.4**	**-0.1**
LGTI	**Lohaghat**	**9.79**	**134**	*e*P	**Pn**	**10 35 06.3**	**-1.1**
LGTI				*e*S	**Sn**	**10 36 48.7**	**-7.3**
LGTI				IAML		10 36 52.0	
	comp=E,397nm,0.1s						
LGTI				IAML		10 36 55.6	
	comp=N,483nm,0.6s						
AJM	**Ajmer**	**10.24**	**166**	*e*P	**Pn**	**10 35 10.4**	**-3.0**
AJM				*e*P		10 35 10.8	
AJM				*i* x	x	10 35 21.0	
JHNI	**Jhansi**	**12.34**	**151**	*e*P	**Pn**	**10 35 38.5**	**-2.3**
MK31	**Makanchi Array**	**12.89**	**33**	P	**Pn**	**10 35 48.8**	**+1.0**
	comp=N,0.8nm,0.7s,baz=217,slow=15,SNR=14						
MKAR	**Makanchi Array**	**12.89**	**33**	Pn	**Pn**	**10 35 48.3**	**+0.5**
	comp=N,0.1nm,0.3s,baz=221,slow=14,SNR=12						
MKAR				Sn	**Sn**	**10 38 06.7**	**-3.6**
	comp=N,0.1nm,0.3s,baz=213,slow=26,SNR=1.9 comp=N,2.4nm,0.9s						
KURBB	**Kurchatov Arra**	**14.94**	**16**	Pn	**Pn**	**10 36 11.8**	**-1.7**
	comp=N,0.1nm,0.3s,baz=209,slow=12,SNR=12 comp=N,1.7nm,0.9s						
AB31	**Akbulak array**	**15.52**	**329**	P	**Pn**	**10 36 17.0**	**-3.8**
	comp=N,2.6nm,0.5s,baz=140,slow=12,SNR=99						
BVAR	**Borovoye Array**	**16.62**	**357**	P	**P**	**10 36 32.7**	**-1.3**
	comp=N,0.1nm,0.3s,baz=166,slow=10,SNR=13 comp=N,3.4nm,0.5s						
AKTO	**Aktyubinsk**	**17

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.27**	**253**	*eP*	Pg	10 39 54.5	+0.2
JGN				S	Sg	10 39 58.2	+0.4
JNG	**Nsakai**	**0.39**	**74**	*eS*	Sg	10 40 02.3	+0.3
MAT	**Matsushiro**	**0.53**	**62**	*eS*	Sg	10 40 06.7	+0.7

JMA 05 10:57:15.6±0.1, 36°2N±0°3×137°7E±0°4, h11km±1km, MV0.8/24, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	**Takato**	**0.52**	**133**	*eS*	Sg	10 57 32.8	+0.1

JMA 05 11:12:19.3±0.0, 36°3N±0°2×137°6E±0°1, h3km±1km, MV0.5/23, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.27**	**257**	P	Pg	11 12 24.8	+0.3
JGN				*eS*	Sg	11 12 28.6	+0.6
JNG	**Nsakai**	**0.39**	**72**	*eP*	Pg	11 12 27.3	+0.4
JTT	**Ttatey**	**0.40**	**323**	P	Pg	11 12 27.7	+0.6
MAT	**Matsushiro**	**0.53**	**60**	*eP*	Pg	11 12 29.4	0.0

*MDD **05** 11:43:21.4±1.1, 36°.65N×14°.07W, h35km±43km, Mb4.3/5, M_mb3.7/5, Error ellipse: s-maj=17.8km s-min=6.4km az=80.0*

*INMG **05** 11:43:23.8±1.3, 36°.64N×14°.15W, h10km, ML2.3, Error ellipse: s-maj=8.4km s-min=5.2km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

ISC 05 11:43:23.3±3.8, 36°9N±0°1×13°6W±0°2, h10km, n41, σ1§25/56, 5C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.84**	**86**	*eS*	**Sn**	**11 45 06.5**	**-1.0**
PTEO	**Sao Teotonio**	**3.95**	**80**	*eS*	**Sn**	**11 45 11.0**	**+0.6**
PTEO				*i* IAML		11 45 11.8	
PTEO				*i* IAML		11 45 12.0	
PTEO				*i* IAML		11 45 12.9	
PMAFR	**Mafra**	**3.98**	**58**	*eP*	**Pb**	**11 44 31.7**	**-1.8**
PMAFR				*eS*	**Sn**	**11 45 11.9**	**+0.9**
PMAFR				*i* IAML		11 45 13.2	
PMAFR				*i* IAML		11 45 13.6	
PMAFR				*i* IAML		11 45 19.1	
MORF	**Marmelete**	**3.98**	**83**	*eS*	**Sn**	**11 45 12.1**	**+0.8**
MORF				*i* IAML		11 45 16.2	
MORF				*i* IAML		11 45 19.0	
MORF				*i* IAML		11 45 29.0	
PLOUS	**Minas do Lousa**	**4.28**	**74**	*eP*	**Pn**	**11 44 29.5**	**+1.1**
PLOUS				*eS*	**Sn**	**11 45 18.9**	**+0.5**
PLOUS				*i* IAML		11 45 20.6	
PLOUS				*i* IAML		11 45 23.4	
PLOUS				*i* IAML		11 45 28.2	
MESJ	**Messejana**	**4.39**	**76**	*eP*	**Pn**	**11 44 31.7**	**+1.6**
MESJ				*eS*	**Sn**	**11 45 22.0**	**+0.7**
MESJ				*i* IAML		11 45 28.5	
MESJ				*i* IAML		11 45 29.2	
MESJ				*i* IAML		11 45 33.8	
MOE	**Montemor**	**4.47**	**68**	*eP*	**Pn**	**11 44 31.6**	**+0.5**
MOE				*eS*	**Sn**	**11 45 23.9**	**+0.8**
MOE				*i* IAML		11 45 24.1	
MOE				*i* IAML		11 45 26.5	
MOE				*i* IAML		11 45 26.5	
PCVE	**Castro Verde**	**4.50**	**79**	S	**Sn**	**11 45 24.8**	**+0.8**
PCVE	**Castro Verde**	**4.50**	**79**	*eS*	**Sn**	**11 45 24.0**	**0.0**
PCVE				*i* IAML		11 45 29.2	
PCVE				*i* IAML		11 45 29.4	
PCVE				*i* IAML		11 45 29.7	
PBDV	**Barranco-do-Ve**	**4.56**	**84**	*eS*	**Sn**	**11 45 28.3**	**+2.9**
PSBE	**So Bento**	**4.59**	**54**	*eS*	**Sn**	**11 45 29.0**	**+2.9**
PBEJ	**Beja**	**4.70**	**75**	*eS*	**Sn**	**11 45 29.7**	**+0.8**
PBEJ				*i* IAML		11 45 32.5	
PBEJ				*i* IAML		11 45 33.4	
EVO	**Evora**	**4.72**	**69**	S	**Sn**	**11 45 28.5**	**-0.8**
EVO	**Evora**	**4.72**	**69**	*eS*	**Sn**	**11 45 29.3**	**0.0**
EVO				*i* IAML		11 45 31.9	
EVO				*i* IAML		11 45 32.0	
EVO				*i* IAML		11 45 33.5	
PVAQ	**Vaqueiros**	**4.74**	**83**	*eP*	**Pn**	**11 44 35.7**	**+0.9**
PVAQ				*eS*	**Sn**	**11 45 29.2**	**-0.5**
PVAQ				*i* IAML		11 45 31.9	
PVAQ				*i* IAML		11 45 32.6	
PVAQ				*i* IAML		11 45 32.9	
PMTG	**Montargil**	**4.76**	**62**	*eP*	**Pn**	**11 44 38.0**	**+2.9**
PMTG				*eS*	**Sn**	**11 45 31.0**	**+0.6**
PMTG				*i* IAML		11 45 32.8	
PMTG				*i* IAML		11 45 33.7	
PMTG				*i* IAML		11 45 35.0	
PARRA	**Arraiolos**	**4.79**	**65**	*eP*	**Pn**	**11 44 37.2**	**+1.7**
PARRA				*eS*	**Sn**	**11 45 31.4**	**+0.3**
PARRA				*i* IAML		11 45 33.2	
PARRA				*i* IAML		11 45 35.0	
PARRA				*i* IAML		11 45 36.2	
EGRO	**El Granado**	**4.93**	**81**	S	**Sn**	**11 45 34.0**	**-0.5**
EGRO	**El Granado**	**4.93**	**81**	Pn	**Pn**	**11 44 37.4**	**0.0**
EGRO				⇑*i*Vmb_VC		11 44 45.4	
	124nm,SNR=1.2						
EGRO				Sn	**Sn**	**11 45 33.7**	**-0.8**
PSARD	**Sardoal**	**5.05**	**57**	*eP*	Pn	11 44 43.5	+4.4
PSARD				*eS*	**Sn**	**11 45 40.1**	**+2.6**
PSARD				*i* IAML		11 45 40.5	
PSARD				*i* IAML		11 45 41.1	
PSARD				*i* IAML		11 45 42.3	
PCAS	**Casmilo, Conde**	**5.08**	**51**	*eP*	**Pn**	**11 44 41.1**	**+1.6**
PCAS				*eS*	**Sn**	**11 45 39.5**	**+1.2**
PCAS				*i* IAML		11 45 42.9	
PCAS				*i* IAML		11 45 43.8	
PCAS				*i* IAML		11 45 46.5	
PESTR	**Estremoz**	**5.14**	**66**	P	Pn	11 44 45.5	+5.1
PESTR				S	**Sn**	**11 45 40.3**	**+0.5**
PESTR	**Estremoz**	**5.14**	**66**	*eS*	**Sn**	**11 45 39.7**	**0.0**
PESTR				*i* IAML		11 45 42.0	
PESTR				*i* IAML		11 45 44.0	
PESTR				*i* IAML		11 45 46.6	
PBAR	**Barrancos**	**5.37**	**75**	P	Pn	11 45 42.3	+4.8
PBAR				S	**Sn**	**11 45 44.6**	**-0.8**
PBAR	**Barrancos**	**5.37**	**75**	*eS*	**Sn**	**11 45 45.3**	**-0.1**
PBAR				*i* IAML		11 45 49.6	
PBAR				*i* IAML		11 45 50.3	
PBAR				*i* IAML		11 45 52.1	
PMRV	**Marv??o**	**5.50**	**61**	*eS*	**Sn**	**11 45 49.1**	**+0.5**
PMRV				*i* IAML		11 45 50.5	
PMRV				*i* IAML		11 45 51.5	
PMRV				*i* IAML		11 45 51.7	
EBAD	**Badajoz**	**5.53**	**69**	S	**Sn**	**11 45 47.7**	**-1.7**
EBAD	**Badajoz**	**5.53**	**69**	⇑*i*Vmb_VC		11 44 45.6	
	158nm,SNR=1.7						
EBAD				Pn	**Pn**	**11 44 46.3**	**+0.6**
EBAD				Sn	**Sn**	**11 45 49.4**	**0.0**
EMIN	**Mina Concepcio**	**5.59**	**79**	Pn	**Pn**	**11 44 47.6**	**+1.0**
EMIN				⇑*i*Vmb_VC		11 44 54.5	
	114nm,SNR=1.6						
EMIN				Sn	**Sn**	**11 45 50.6**	**-0.3**
PCBR	**Castelo Branco**	**5.63**	**57**	*eS*	**Sn**	**11 45 52.6**	**+0.9**
PCBR				*i* IAML		11 45 54.2	
PCBR				*i* IAML		11 45 54.3	
PCBR				*i* IAML		11 45 55.6	
PVIS	**Viseu**	**5.85**	**48**	*eS*	**Sn**	**11 45 57.2**	**0.0**
POLO	**Lamas de Olo**	**6.33**	**44**	*eS*	**Sn**	**11 46 08.6**	**-0.7**
POLO				*i* IAML		11 46 12.9	
POLO				*i* IAML		11 46 15.2	
POLO				*i* IAML		11 46 17.6	
PCAB	**Cabril**	**6.44**	**41**	*eS*	**Sn**	**11 46 11.5**	**-0.3**
PCAB				*i* IAML		11 46 12.5	
PCAB				*i* IAML		11 46 17.4	
EZAM	**Zamans**	**6.45**	**35**	Pn	**Pn**	**11 44 59.7**	**+1.4**
EZAM				Sn	**Sn**	**11 46 11.3**	**-0.6**
PGAV	**Gavieira, Arco**	**6.51**	**38**	*eP*	**Pn**	**11 44 58.8**	**-0.4**
PGAV				*eS*	**Sn**	**11 46 12.2**	**-1.4**
PGAV				*i* IAML		11 46 13.2	
PGAV				*i* IAML		11 46 15.3	
PGAV				*i* IAML		11 46 19.3	
ELOB	**Lobios**	**6.54**	**39**	Pn	**Pn**	**11 45 01.2**	**+1.6**
ELOB				⇑*i*Vmb_VC		11 45 07.8	
	182nm,SNR=1.5						
ELOB				Sn	**Sn**	**11 46 12.3**	**-2.0**
ECAB	**El Cabril**	**6.62**	**78**	Sn	**Sn**	**11 46 14.5**	**-1.6**
MVO	**Moncorvo**	**6.64**	**48**	*eS*	**Sn**	**11 46 16.3**	**-0.5**
MVO				*i* IAML		11 46 18.4	
MVO				*i* IAML		11 46 19.2	
MVO				*i* IAML		11 46 20.2	
EADA	**Adamuz**	**7.29**	**78**	Pn	**Pn**	**11 45 11.0**	**+1.2**
EADA				⇑*i*Vmb_VC		11 45 11.2	
	76nm,SNR=1.6						
EADA				Sn	**Sn**	**11 46 30.7**	**-1.9**
ECAL	**Calabor**	**7.30**	**45**	Sn	**Sn**	**11 46 32.4**	**-0.7**
PSIM	**Granatula de C**	**8.02**	**73**	Sn	**Sn**	**11 46 49.6**	**-1.1**

*NDI **05** 11:56:30.6±2.4, 22°.90N×93°.46E, h10km, ML4.1, MW4.5, Presumed earthquake*

*GCMT **05** 11:56:33.5±0.4, 23°.12N±0°.02×93°.25E±0°.02, h23km±1km, MW4.7/66, Moment Tensor Solution. s7,c8; s66,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.09; $M_{\theta\theta}$0.35±.07; $M_{\phi\phi}$-0.18±.07; $M_{r\theta}$0.37±.11; $M_{\theta\phi}$1.30±.06; $M_{\phi r}$0.09±.09; Best double couple: M_o1.37700×10^{16} NP1:ϕ$_s$5.00000°, δ75.00000°, λ178.00000°. NP2: ϕ$_s$96.00000°, δ88.00000°, λ15.00000°. Principal axes: T 1.4850, Plg12.0000°, Azm322.0000°; N -0.2170, Plg75.0000°, Azm104.0000°; P -1.2680, Plg9.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **05** 11:56:34.7, 23°.22N×93°.18E, h29km, mB4.7/18, mb4.6/52, Ms4.5/57, Ms7 4.3/56*

*NEIC **05** 11:56:34.5±1.4, 23°.17N±0°.06×93°.3E±0°.1, h10km±1km, mb4.8/36, Error ellipse: s-maj=17.9km s-min=6.7km az=238.0*

*GFZ **05** 11:56:35.5±0.2, 23°.N±4°×9°.3E±°, h10km, M4.6/20, mb4.8/20*

*IDC **05** 11:56:39.5±1.6, 23°.08N×93°.35E, h60km±16km, mb3.9/22, mbtmp4.2/24, MS4.0/69, Error ellipse: s-maj=14.2km s-min=11.1km az=30.0*

ISC 05 11:56:36.1±0.9, 23°11N±0°.03×93°26E±0°.03, h25km±6km, n227, σ1§62/210, mb4.5/63, MS4.0/78, 3C-1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.47**	**40**		**Pn**	**11 57 00.3**	**-0.8**
BRDH	**Bariadhala**	**1.55**	**254**	P	**Pb**	**11 57 03.6**	**-0.5**
	1μm,0.4s,baz=75,slow=12,SNR=42						
BRDH				S	**Sb**	**11 57 26.8**	**+3.4**
	1μm,0.3s,baz=68,slow=20,SNR=3.8						
BRDH				LR	LR	11 57 50.4	
	comp=Z,1μm,20.0s,baz=344,slow=44						
BELO	**BELONIA**	**1.68**	**275**	*eP*	**Pn**	**11 57 04.6**	**+0.8**
BELO				*i* x	x	11 57 07.7	
BELO				*eS*	**Sb**	**11 57 27.6**	**+0.6**
SILR	**SILCHAR**	**1.72**	**346**	*eP*	**Pn**	**11 57 04.2**	**-0.2**
SILR				*eS*	**Sb**	**11 57 30.0**	**+1.8**
SILR				IAML		11 58 12.0	
	comp=E,5μm,0.4s						
SILR				IAML		11 58 13.1	
	comp=N,5μm,1.3s						
IMP	**Imphal**	**1.83**	**20**	*eP*	**Pn**	**11 57 04.7**	**-1.3**
IMP				*eS*	**Sn**	**11 57 28.6**	**+0.2**
IMP				IAML		11 57 39.2	
	comp=E,1μm,1.1s						
IMP				IAML		11 57 40.8	
	comp=N,397nm,0.6s						
KOHI	**KOHIMA**	**2.71**	**16**	*eP*	**Pn**	**11 57 17.2**	**-1.0**
KOHI				IAML		11 57 58.9	
	comp=N,1μm,1.0s						
KOHI				IAML		11 57 59.0	
	comp=E,1μm,0.7s						
KOHI				IAML		11 58 03.2	
	comp=E,1μm,1.0s						
SHL	**Shillong**	**2.75**	**333**		**Pn**	**11 57 16.4**	**-2.4**
SHL	**Shillong**	**2.75**	**333**	*eP*	**Pn**	**11 57 18.5**	**-0.4**
SHL				*eS*	**Sn**	**11 57 52.1**	**+0.7**
GUWA	**GUWAHATI**	**3.39**	**335**	*eP*	**Pn**	**11 57 25.7**	**-1.7**
GUWA				*eS*	**Sn**	**11 58 08.6**	**+1.8**
GUWA				*eS*	**Sb**	**11 58 10.0**	**-6.2**
MOKO	**MOKOCHONG**	**3.40**	**19**	*eP*	**Pn**	**11 57 26.9**	**-0.7**
MOKO				*eS*	**Sn**	**11 58 06.7**	**-0.6**
MOKO				IAML		11 58 11.9	
	comp=E,353nm,0.7s						
MOKO				IAML		11 58 13.2	
	comp=N,386nm,0.7s						
TEZP	**TEZPUR**	**3.52**	**353**	*ex*	x	11 57 25.9	
DHUB	**DHUBRI**	**4.16**	**315**	*eP*	**Pn**	**11 57 36.4**	**-1.6**
DHUB				*ex*	x	11 58 18.2	
NPW	**Naypyitaw**	**4.26**	**140**	P	**Pn**	**11 57 42.0**	**+2.6**
ZIRO	**ZIRO**	**4.43**	**7**	*eP*	**Pn**	**11 57 39.2**	**-2.7**
ZIRO				*eS*	**Sn**	**11 58 31.2**	**-1.7**
TAWA	**Tawang**	**4.64**	**345**	*eP*	**Pn**	**11 57 44.6**	**-0.4**
TAWA				*eS*	**Sn**	**11 58 38.6**	**+0.3**
TAWA				IAML		11 59 29.5	
	comp=E,306nm,1.5s						
TNCH	**TengChong**	**5.17**	**67**	Pn	**Pn**	**11 57 53.7**	**+1.6**
TNCH				Sg	Sb	11 59 23.4	+16
TNCH				L	L		
	comp=E,3μm,6.2s						
TNCH				L	L		
	comp=E,3μm,5.2s						
TNCH				L	L		
	comp=E,2μm,11.3s						
SHBG	**Sahibganj**	**5.56**	**294**	*eP*	**Pn**	**11 57 56.8**	**-0.4**
BOK	**Bokaro**	**6.81**	**277**	*eP*	**Pn**	**11 58 13.8**	**-0.6**
BOK				*eS*	**Sn**	**11 59 28.4**	**-2.8**
CHTO	**Chiang Mai**	**6.81**	**128**		**Pn**	**11 58 15.1**	**+0.6**
CHTO	**Chiang Mai**	**6.81**	**128**	P	**Pn**	**11 58 15.8**	**+1.3**
	comp=E,0.3nmcomp=E,30nm,0.9s						
CHTO	**Chiang Mai**	**6.81**	**128**	P	**Pn**	**11 58 16.7**	**+2.2**
LSA	**Lhasa**	**6.83**	**344**	Pn	**Pn**	**11 58 14.3**	**-0.9**
CM31	**Chiang Mai Arr**	**7.04**	**130**	Pn	**Pn**	**11 58 18.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**7.04**	**130**	P	**Pn**	**11 58 18.6**	**+1.0**
	comp=E,21nm,0.8s,baz=306,slow=14,SNR=48						
CMAR				S	**Sn**	**11 59 31.4**	**-5.6**
	comp=E,8.6nm,0.9s,baz=311,slow=15,SNR=1.3						
CMAR				LR	LR	12 00 56.3	
	comp=E,327nm,19.1s,baz=300,slow=37						
CMAR	**Chiang Mai Arr**	**7.04**	**130**		**Pn**	**11 58 18.8**	**+1.2**
EVN	**Everest**	**7.56**	**311**		**Pn**	**11 58 23.8**	**-1.5**
EVN	**Everest**	**7.56**	**311**	P	**Pn**	**11 58 24.2**	**-1.1**
PZH	**PanZhiHua**	**8.41**	**65**	P	**Pn**	**11 58 40.2**	**+3.7**
PZH				S	**Sn**	**12 00 13.3**	**+2.5**
PZH				sS	Sb	12 00 19.8	-21
PZH				pmax	pmax		
	comp=E,20nm,1.5s						
PZH				pmax	pmax		
	comp=E,140nm,3.6s						
PZH				L	L		
	comp=E,2μm,10.5s						
PZH				L	L		
	comp=E,1μm,9.9s						
PZH				L	L		
	comp=E,1μm,13.5s						
KMI2	**Kunming**	**8.90**	**75**	⇓P	**Pn**	**11 58 45.6**	**+2.3**
KMI2				S	**Sn**	**12 00 20.7**	**-2.2**
KMI2				L	L		
	comp=E,3μm,13.0s						
KMI2				L	L		
	comp=E,1μm,8.4s						
KMI2				L	L		
	comp=E,1μm,10.9s						
RAGD	**RAYAGADA**	**9.92**	**249**	*eP*	**Pn**	**11 58 54.6**	**-2.5**
CD2	**Chengdu**	**12.16**	**48**	P	**Pn**	**11 59 28.2**	**+0.4**
CD2				S	**Sn**	**12 01 44.7**	**+2.1**
CD2				L	L		
	comp=E,3μm,16.3s						
CD2				L	L		
	comp=E,2μm,9.6s						
CD2				L	L		
	comp=E,1μm,12.7s						
NGP	**Nagpur**	**13.31**	**264**	*ex*	x	11 59 45.1	
PTH	**Pithoragarh**	**13.36**	**302**	*ex*	x	11 59 41.3	
BHPL	**Bhopal**	**14.57**	**274**	*eP*	**Pn**	**11 59 58.3**	**-2.4**
HYB	**Hyderabad**	**14.91**	**250**	*eP*	**P**	**12 00 11.6**	**+0.8**
HYB				*eS*	**S**	**12 03 09.1**	**+1.6**
NDI	**New Delhi**	**15.47**	**294**	*eP*	**Pn**	**12 00 10.7**	**-1.9**
LZDM	**Lanzhou Array**	**15.68**	**33**	P	**Pn**	**12 00 17.3**	**+1.6**
	comp=E,3.3nm,0.4s,baz=217,slow=12,SNR=7.4						
LZDM				LR	LR	12 07 31.9	
	comp=E,1μm,21.2s,baz=205,slow=42						
KLP	**Kalpa**	**15.75**	**305**	*eP*	**Pn**	**12 00 16.4**	**-0.2**
LZH	**Lanzhou**	**15.86**	**33**	*eP*	**Pn**	**12 00 15.6**	**-2.2**
LZH				pP	P	12 00 19.6	-1.8
LZH				pmax	pmax		
	comp=E,19nm,1.3s						
LZH				pmax	pmax		
	comp=E,67nm,4.3s						
LZH				L	L		
	comp=E,2μm,15.6s						
LZH				L	L		
	comp=E,2μm,14.9s						
LZH				L	L		
	comp=E,2μm,16.5s						
KUDL	**Kundal**	**15.94**	**292**	*eP*	**Pn**	**12 00 16.4**	**-2.3**
QIZ	**Qiongzhong**	**16.00**	**102**	P	**Pn**	**12 00 17.1**	**-2.4**
QIZ				S	**Sn**	**12 03 15.3**	**-0.9**
QIZ				L	L		
	comp=E,800nm,17.0s						
QIZ				L	L		
	comp=E,400nm,15.1s						
QIZ				L	L		
	comp=E,670nm,11.7s						
GTA2	**Gaotai**	**17.24**	**17**	*eP*	**P**	**12 00 36.4**	**-0.2**
GTA2				sP	pP	12 00 43.3	-0.4
GTA2				S	**Sn**	**12 03 47.5**	**+1.1**
GTA2				L	L		
	comp=E,1μm,17.5s						
GTA2				L	L		
	comp=E,870nm,15.1s						
GTA2				L	L		
	comp=E,1μm,17.2s						
XAN	**Xi'an**	**17.52**	**48**	⇑P	**P**	**12 00 39.4**	**-0.3**
XAN				pP	pP	12 00 43.1	-3.7
XAN				S	**Sn**	**12 03 53.9**	**+0.7**
XAN				pmax	pmax		
	comp=E,14nm,1.0s						
XAN				pmax	pmax		
	comp=E,93nm,4.8s						
XAN				L	L		
	comp=E,2μm,13.8s						
XAN				L	L		
	comp=E,830nm,13.5s						
XAN				L	L		
	comp=E,900nm,13.7s						
THN	**Thein Dam**	**18.05**	**305**	*eP*	**Pn**	**12 00 44.4**	**-0.8**
DLV	**Lat**	**18.25**	**125**		**Pn**	**12 00 47.1**	**-0.9**
KULM	**Kulim**	**19.09**	**157**	P	**Pn**	**12 00 59.0**	**+1.0**
PALK	**Pallekele**	**19.84**	**219**	LR	LR	12 08 53.7	
	comp=E,294nm,21.6s,baz=38,slow=37						
KCSI	**Kotacane, Aceh**	**19.95**	**167**	P	**Pn**	**12 01 10.0**	**+1.8**
WHN	**Wuhan**	**20.21**	**64**	P	Pn	12 01 12.1	+1.0
WHN				S	Sn	12 04 58.9	+0.9
WHN				L	L		
	comp=E,2μm,10.1s						
WHN				L	L		
	comp=E,1μm,4.5s						
WHN				L	L		
	comp=E,2μm,20.0s						
NIL	**Nilore**	**20.47**	**305**		**P**	**12 01 10.8**	**-1.2**
NIL				IAmb	IAmb	12 01 15.2	
	comp=E,69nm,0.9s						
NIL	**Nilore**	**20.47**	**305**	P	**P**	**12 01 12.1**	**+0.1**
RPSI	**Rantau Prapat**	**21.02**	**164**		**P**	**12 01 17.8**	**-0.2**
WMQ	**Urumqi**	**21.17**	**349**	*eP*	**P**	**12 01 20.4**	**+0.9**
WMQ				S	**S**	**12 05 15.5**	**+1.8**
WMQ				pmax	pmax		
	comp=E,30nm,1.1s						
WMQ				pmax	pmax		
	comp=E,140nm,3.9s						
WMQ				L	L		
	comp=E,350nm,24.1s						
WMQ				L	L		
	comp=E,290nm,23.8s						
WMQ				L	L		
	comp=E,420nm,23.9s						
WUS	**Wushi**	**21.56**	**330**	P	**P**	**12 01 23.1**	**-0.7**
KSH2	**Kashi**	**21.96**	**321**	P	**P**	**12 01 28.2**	**0.0**
KSH2				PcP	**PcP**	**12 05 26.0**	**-0.4**
KSH2				pmax	pmax		
	comp=E,36nm,1.3s						
KSH2				L	L		
	comp=E,1μm,23.4s						
KSH2				L	L		
	comp=E,510nm,13.7s						
KSH2				L	L		
	comp=E,830nm,17.5s						
BTO2	**Baotou**	**22.47**	**35**	*eP*	**P**	**12 01 31.4**	**-2.2**
BTO2				pP	**pP**	**12 01 40.8**	**0.0**
BTO2				PP	**PnPn**	**12 02 00.6**	**+3.5**
BTO2				S	**S**	**12 05 34.8**	**-4.2**
BTO2				pmax	pmax		
	comp=E,50nm,1.1s						
BTO2				pmax	pmax		
	comp=E,260nm,4.2s						
BTO2				L	L		
	comp=E,3μm,15.1s						
BTO2				L	L		
	comp=E,2μm,14.4s						
BTO2				L	L		
	comp=E,4μm,15.6s						
TARG	**Taragay, Kyrgy**	**22.63**	**329**	P	**P**	**12 01 35.0**	**-0.6**
TARG				IAmb	IAmb	12 01 45.8	
	comp=E,65nm,1.3s						
TARG	**Taragay, Kyrgy**	**22.63**	**329**	P	**P**	**12 01 38.1**	**+2.5**
ASAI	**AK-SAY(Kyrgyzs**	**22.67**	**325**	P	**P**	**12 01 37.3**	**+1.4**
PRZ	**Przheval'sk**	**22.95**	**331**	P	**P**	**12 01 38.7**	**+0.1**
PRZ				IAmb	IAmb	12 01 42.0	
	comp=Z,54nm,1.1s						
PRZ	**Przheval'sk**	**22.95**	**331**	P	**P**	**12 01 41.5**	**+2.9**
SHLS	**Shalkode**	**23.04**	**334**	*eP*	**P**	**12 01 38.5**	**-1.0**
	comp=Z,20nm,1.4s						
PDGK	**Podgornoye**	**23.17**	**334**	P	**P**	**12 01 40.4**	**-0.4**
QZH2	**Quanzhou**	**23.21**	**80**	*eP*	**P**	**12 01 41.0**	**-0.2**
QZH2				S	**S**	**12 05 54.2**	**+2.5**
QZH2				L	L		
	comp=Z,2μm,11.0s						
QZH2				L	L		
	comp=Z,680nm,10.7s						
UZB	**Uzynbulak**	**23.21**	**333**	*eP*	**P**	**12 01 42.2**	**+0.9**
	comp=Z,16nm,1.5s						
KDJ	**Kajisay**	**23.24**	**329**	P	**P**	**12 01 41.0**	**-0.6**
KDJ				IAmb	IAmb	12 01 50.2	
	comp=Z,22nm,0.9s						
KDJ	**Kajisay**	**23.24**	**329**	P	**P**	**12 01 43.3**	**+1.7**
HNS	**HongShan**	**23.30**	**47**	⇑P	**P**	**12 01 41.5**	**-0.5**
HNS				S	**S**	**12 05 54.2**	**+1.2**
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
HNS				L	L		
	comp=Z,300nm,11.6s						
HNS				L	L		
	comp=Z,370nm,16.3s						
HNS				L	L		
	comp=Z,450nm,17.5s						
NRN	**Naryn**	**23.31**	**326**	P	**P**	**12 01 41.9**	**-0.6**
NRN				IAmb	IAmb	12 01 54.0	
	comp=Z,19nm,1.2s						
SATY	**Saty**	**23.40**	**332**	*eP*	**P**	**12 01 44.1**	**+0.9**
	comp=Z,18nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.45**	**37**	*eP*	**P**	**12 01 43.3**	**-0.4**
HHC				S	**S**	**12 05 51.0**	**-4.8**
HHC				sS	pS	12 06 01.9	-1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,73nm,5.5s						
HHC				L	L		
	comp=Z,880nm,14.7s						
HHC				L	L		
	comp=Z,520nm,15.5s						
HHC				L	L		
	comp=Z,1μm,17.6s						
MANEM	**Manem**	**23.46**	**313**		**P**	**12 01 43.7**	**-0.3**
MANEM				IAmb	IAmb	12 01 51.2	
	comp=Z,187nm,1.1s						
KPKS	**Kokpek**	**23.61**	**333**	*eP*	**P**	**12 01 46.1**	**+0.9**
KBL	**Kabul**	**24.02**	**304**	P	**P**	**12 01 48.9**	**-0.4**

NJ2 pmax pmax
comp=Z,49nm,1.1s
TIA Tai'an 24.43 52 P **P 12 01 54.7 +1.9**
TIA pmax pmax
comp=Z,11nm,1.6s
TIA L L
comp=Z,660nm,14.0s
TIA L L
comp=Z,510nm,11.8s
TIA L L
comp=Z,750nm,23.1s
OHH Osh 24.49 320 P **P 12 01 54.3 +0.9**
TKM2 Tokmak 2 24.60 328 P **P 12 01 57.7 +3.1**
SNR=11
UCH Uchtor 24.66 325 P **P 12 01 56.4 +1.1**
SNR=12
ARSB Arslanbob 24.88 322 P **P 12 01 57.5 +0.4**
ARSB IAmb IAmb 12 02 13.1
comp=Z,37nm,1.4s
AAK Ala-Archa 24.96 326 LR LR 12 13 36.9
comp=Z,368nm,19.2s,baz=127,slow=41
AAK Ala-Archa 24.96 326 P **P 12 01 59.0 +1.4**
SNR=5.9
AAK Ala-Archa 24.96 326 **P 12 01 58.9 +1.2**
AAK IAmb IAmb 12 02 13.3
comp=Z,43nm,1.8s
AAK Ala-Archa 24.96 326 P **P 12 01 59.1 +1.4**
TDK Taldyqorghan 24.99 334 *e*P **P 12 01 59.3 +1.5**
comp=Z,15nm,1.0s
CHMS Chumysh 25.08 327 P **P 12 01 59.9 +1.3**
SNR=6.8
GAR Garm 25.15 314 **P 12 01 59.1 -0.3**
GAR Garm 25.15 314 P **P 12 01 58.6 -0.8**
ZSN Zaisan 25.21 347 *e*P **P 12 02 01.1 +1.3**
comp=Z,6.3nm,0.8s
MKAR Makanchi Array 25.24 342 P **P 12 02 00.7 +0.7**
comp=Z,9.5nm,0.8s,baz=158,slow=8.3,SNR=75
MKAR LR LR 12 14 01.6
comp=Z,330nm,20.4s,baz=158,slow=41
comp=Z,9.5nm,0.8s
MKAR Makanchi Array 25.24 342 P **P 12 02 00.2 +0.2**
MAKZ Makanchi 25.34 342 **P 12 01 01.1 +0.2**
MAKZ IAmb IAmb 12 02 03.7
comp=Z,11nm,0.8s
MAKZ Makanchi 25.34 342 P **P 12 02 01.7 +0.8**
EKS2 Erkin-Say 25.35 325 P **P 12 02 02.8 +1.7**
SNR=8.8
USP Ospenovka 25.40 327 P **P 12 02 03.1 +1.5**
SNR=7.5
BTK Batken 25.41 317 **P 12 02 01.9 +0.2**
BTK Batken 25.41 317 P **P 12 02 02.6 +0.9**
SGDS Sogindy 25.47 327 *e*P **P 12 02 03.5 +1.2**
CHGR Chuyangaron 25.74 313 **P 12 02 04.2 -0.6**
ARK Arkit 25.77 321 P **P 12 02 07.9 +2.9**
SHAA Shahritus 25.94 309 **P 12 02 06.2 -0.4**
SHAA IAmb IAmb 12 02 41.6
comp=Z,139nm,1.4s
SONM Songino Array 26.82 20 P **P 12 02 14.0 -0.4**
comp=Z,2.6nm,0.8s,baz=200,slow=10,SNR=10
SONM LR LR 12 14 16.3
comp=Z,654nm,19.8s,baz=210,slow=39
comp=Z,2.6nm,0.8s
SONM Songino Array 26.82 20 P **P 12 02 13.0 -1.4**
DZA Taraz 26.84 323 *e*P **P 12 02 16.1 +1.5**
comp=Z,4.0nm,0.6s
BTLS Baital 26.93 329 *e*P **P 12 02 16.6 +1.3**
ULN Ulaanbaatar 27.05 21 P **P 12 02 16.4 -0.2**
ULN Ulaanbaatar 27.05 21 P **P 12 02 20.6 +4.0**
ULN Ulaanbaatar 27.05 21 P **P 12 02 19.1 +2.5**
IUG Iuzhnay 27.12 320 *e*P **P 12 02 18.7 +1.5**
comp=Z,7.5nm,1.0s
KK31 Karatay Array 27.43 322 P **P 12 02 19.5 -0.3**
KKAR Karatay Array 27.43 322 P **P 12 02 19.8 -0.1**
CHM Chimkent 27.48 320 *e*P **P 12 02 21.9 +1.6**
comp=Z,5.9nm,0.6s
XLT XiLinHaoTe 27.98 37 *e*P **P 12 02 27.9 +3.1**
XLT pmax pmax
comp=Z,13nm,1.0s
XLT L L
comp=Z,1µm,13.6s
XLT L L
comp=Z,2µm,13.9s
DL2 Dalian 28.81 50 P **P 12 02 34.2 +2.0**
DL2 S **S 12 07 20.1 -0.5**
DL2 pmax pmax
comp=Z,46nm,1.3s
DL2 pmax pmax
comp=Z,260nm,5.7s
DL2 L L
comp=Z,620nm,16.0s
DL2 L L
comp=Z,540nm,16.5s
DL2 L L
comp=Z,780nm,17.5s
TLY Talaya 29.63 13 LR LR 12 15 44.6
comp=Z,438nm,18.1s,baz=191,slow=39
KURBB Kurchatov Arra 29.77 341 P **P 12 02 40.6 0.0**
comp=Z,4.5nm,0.9s,baz=157,slow=8.4,SNR=30
KURBB PcP **PcP 12 05 42.5 -1.3**
comp=Z,0.5nm,0.6s,baz=170,slow=2.4,SNR=5.9
KURBB LR LR 12 16 56.6
comp=Z,282nm,19.8s,baz=163,slow=41
comp=Z,4.5nm,0.9s
KURK Kurchatov 29.83 341 P **P 12 02 40.7 -0.3**
BRZS Berezniki 31.30 334 *e*P **P 12 02 55.4 +1.3**
ZAA0 Zalesovo Array 31.45 350 P **P 12 02 55.7 +0.4**
ZALV Zalesovo Beam 31.45 350 P **P 12 02 55.1 -0.3**
comp=Z,2.7nm,0.6s,baz=173,slow=8.9,SNR=11
ZALV LR LR 12 17 19.3
comp=Z,166nm,20.7s,baz=178,slow=39
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 31.45 350 P **P 12 02 55.5 +0.2**
JOW Kunigami 31.89 76 LR LR 12 18 20.9
comp=Z,212nm,21.9s,baz=208,slow=41
LEM Lembang 32.90 153 LR LR 12 18 37.2
comp=Z,383nm,18.5s,baz=352,slow=40
KSRS Korea Array 32.97 56 LR LR 12 17 52.1
comp=Z,322nm,19.8s,baz=255,slow=39
HILR Hailar Array B 33.62 32 P **P 12 03 13.7 -0.7**
comp=Z,1.9nm,0.4s,baz=210,slow=8.6,SNR=5.3
HILR LR LR 12 18 33.0
comp=Z,779nm,19.2s,baz=150,slow=39
comp=Z,1.9nm,0.4s
JNU Nakatsue 34.49 65 LR LR 12 19 11.9
comp=Z,215nm,18.6s,baz=216,slow=39
BVAR Borovoye Array 34.57 336 P **P 12 03 22.7 0.0**
comp=Z,2.3nm,0.7s,baz=141,slow=9.6,SNR=9.9
comp=Z,2.3nm,0.7s
DAV Davao City (W) 34.92 112 LR LR 12 20 00.6
comp=Z,133nm,19.1s,baz=302,slow=40
BNX BinXian 35.69 42 ⇑P **P 12 03 31.9 -0.4**
BNX pmax pmax
comp=Z,6.0nm,1.3s
AB31 Akbulak array 36.98 323 **P 12 03 43.6 +0.3**
ABKAR Akbulak array 36.98 323 P **P 12 03 43.0 -0.3**
LUWI Luwuk 37.43 126 P **P 12 03 47.7 +0.2**
HEH HeiHe 37.97 36 *e*P **P 12 03 51.0 -0.7**
HEH pmax pmax
comp=Z,19nm,1.4s
HEH L L
comp=Z,730nm,13.7s
HEH L L
comp=Z,1µm,15.7s
HEH L L
comp=Z,2µm,14.3s
USRK Ussuriysk Ar. 38.03 47 P **P 12 03 52.1 -0.1**
comp=Z,0.6nm,0.4s,baz=248,slow=7.6,SNR=4.5
USRK LR LR 12 22 06.0
comp=Z,178nm,19.3s,baz=252,slow=40
comp=Z,0.6nm,0.4s
KAPI Kappang 38.09 134 LR LR 12 22 56.7
comp=Z,134nm,19.3s,baz=276,slow=42
AKTO Aktyubinsk 38.66 324 LR LR 12 22 01.0
comp=Z,299nm,18.4s,baz=214,slow=39
KLR Kul'dur 39.91 39 LR LR 12 22 34.6
comp=Z,269nm,18.0s,baz=244,slow=39
MJAR Matsushiro Arr 40.88 60 P **P 12 04 15.5 -0.7**
comp=Z,1.4nm,0.7s,baz=268,slow=8.5,SNR=5.6
MJAR LR LR 12 21 42.9
comp=Z,219nm,19.7s,baz=260,slow=37
comp=Z,1.4nm,0.7s
ARTI Arti 41.90 332 LR LR 12 24 59.3
comp=Z,222nm,19.2s,baz=162,slow=40
ARTI Arti 41.90 332 P **P 12 04 24.8 +0.6**
JCJ Chichijima 44.26 74 LR LR 12 25 11.6
comp=Z,100nm,18.1s,baz=162,slow=39
KBZ Khabaz 46.01 309 P **P 12 04 58.0 +0.6**
comp=Z,2.0nm,0.7s,baz=104,slow=3.9,SNR=5.7
KBZ LR LR 12 27 48.1
comp=Z,102nm,19.8s,baz=107,slow=40
comp=Z,2.0nm,0.7s
YAK Yakutsk 46.10 23 LR LR 12 26 05.0
comp=Z,281nm,21.0s,baz=224,slow=38
NRIK Noril'sk 46.37 357 P **P 12 05 00.0 +0.1**
comp=Z,2.4nm,0.5s,baz=164,slow=8.6,SNR=4.2
NRIK LR LR 12 26 36.3
comp=Z,158nm,18.0s,baz=179,slow=39
comp=Z,2.4nm,0.5s
KIRV Kirov 47.14 330 LR LR 12 28 00.6
comp=Z,161nm,19.2s,baz=131,slow=40
ASF Jabal al Asfar 50.26 293 LR LR 12 28 46.2
comp=Z,81nm,18.8s,baz=80,slow=38
MMAI Mount Meron Ar 51.45 295 LR LR 12 30 25.0
comp=Z,105nm,20.9s,baz=86,slow=39
FITZ Fitzroy Crossi 51.75 140 LR LR 12 30 41.0
comp=Z,126nm,19.5s,baz=327,slow=40
KNRA Kununurra 51.88 135 P **P 12 05 43.4 +0.7**
EIL Elat 52.19 290 LR LR 12 32 08.0
comp=Z,80nm,19.4s,baz=88,slow=41
OBN Obninsk 52.42 323 LR LR 12 31 47.1
comp=Z,77nm,18.1s,baz=198,slow=40
BR104 Keskin Array S 52.59 303 P **P 12 05 48.7 +0.7**
comp=Z,1.2nm,0.8s
BRTR Keskin Array B 52.59 303 P **P 12 05 46.8 -1.2**
comp=Z,0.6nm,0.7s,baz=107,slow=9.7,SNR=4.3
BRTR LR LR 12 32 41.1
comp=Z,84nm,21.0s,baz=114,slow=41
comp=Z,0.6nm,0.7s
TIXI Tiksi 52.61 13 LR LR 12 32 06.5
comp=Z,132nm,18.0s,baz=211,slow=40
MA2 Magadan 54.01 32 LR LR 12 31 16.2
comp=Z,549nm,19.8s,baz=250,slow=38
AK08 Malin Array Si 56.10 316 P **P 12 06 12.5 -0.6**
AKASG Malin Array Be 56.12 316 P **P 12 06 12.1 -1.2**
comp=Z,1.5nm,0.7s,baz=83,slow=6.6,SNR=8.9
AKASG LR LR 12 33 53.7
comp=Z,104nm,20.3s,baz=76,slow=40
comp=Z,1.5nm,0.7s
AKBB Malin Array Si 56.12 316 P **P 12 06 13.8 +0.5**
KIEV Kiev 56.13 316 P **P 12 06 13.6 +0.2**
comp=Z,20nm,0.9s
PETK Petropavlovsk- 56.58 41 LR LR 12 33 56.2
comp=Z,127nm,19.3s,baz=259,slow=40
LUBAR Lubar, Ukraine 57.01 315 P **P 12 06 20.0 +0.3**
MI28 Mi28,Pidlybu 57.12 317 P **P 12 06 20.9 +0.5**
MNK Minsk 57.27 321 *i* P **P 12 06 22.8 +1.4**
comp=E,14nm,0.8s
MNK *i* P **P 12 06 22.8 +1.4**
comp=N,11nm,0.8s
MNK *i* P **P 12 06 22.8 +1.4**
comp=Z,5.0nm,0.7s,baz=95
MNK *i* PcP **PcP 12 07 16.8 +1.3**
MNK *i* PP **PP 12 08 30.1 +1.6**
MNK *i* PPP PPP 12 09 46.4
MNK *i* S **S 12 14 19.8 +4.0**
MNK *i* ScS **ScS 12 16 02.6 -6.5**
MNK *i* SS SS 12 19 03.9 +59
MNK *i* LQ LQ 12 27 59.1
MNK *i* LR LR 12 31 17.0
VRI Vrincioaia 57.63 311 P **P 12 06 24.7 +0.5**
comp=Z,7.0nm,1.0s
VRI Vrincioaia 57.63 311 P **P 12 06 22.1 -2.1**
KMPD K-Podol'skiy 57.82 314 P **P 12 06 26.0 +0.6**
MLR Muntele Rosu 58.19 310 LR LR 12 36 32.5
comp=Z,128nm,18.6s,baz=64,slow=41
MLR Muntele Rosu 58.19 310 **P 12 06 28.0 -0.3**
MLR IAmb IAmb 12 06 32.5
comp=Z,5.1nm,0.7s
MLR Muntele Rosu 58.19 310 P **P 12 06 28.6 +0.4**
comp=Z,8.0nm,0.8s
RNPP5 Staryi Chortor 58.26 317 P **P 12 06 28.2 -0.2**
WRA Warramunga Arr 58.62 134 P **P 12 06 29.4 -2.0**
comp=Z,7.0nm,0.8s,baz=321,slow=7.4,SNR=66
comp=Z,7.0nm,0.8s
WR8 Warramunga Arr 58.74 133 P **P 12 06 31.7 -0.4**
WR8 IAmb IAmb 12 06 35.0
comp=Z,11nm,0.8s
FINES FINESS Array B 59.09 329 P **P 12 06 33.8 -0.1**
comp=Z,1.2nm,0.6s,baz=100,slow=9.9,SNR=6.4
FINES LR LR 12 34 19.5
comp=Z,138nm,20.1s,baz=81,slow=38
comp=Z,1.2nm,0.6s
LODK Lodwar 59.23 260 **P 12 06 36.8 +0.9**
LODK IAmb IAmb 12 06 43.7
comp=Z,6.1nm,1.2s
NWAO Narrogin (SRO) 60.23 157 LR LR 12 32 32.4
comp=Z,118nm,21.6s,baz=323,slow=36
DRGR 60.39 312 P **P 12 06 42.7 -0.7**
IMMV Iera Moni Meta 60.58 299 P **P 12 06 46.7 +2.0**
ARCES ARCESS Array B 60.80 338 P **P 12 06 46.2 +0.6**
comp=Z,1.1nm,0.6s,baz=123,slow=30,SNR=4.1
ARCES LR LR 12 36 07.8
comp=Z,129nm,19.0s,baz=96,slow=39
comp=Z,1.1nm,0.6s
AS31 Alice Springs 61.00 137 P **P 12 06 46.9 -0.7**
AS31 IAmb IAmb 12 06 50.3
comp=Z,3.6nm,0.6s
ASAR Alice Springs 61.00 137 P **P 12 06 46.7 -1.0**
comp=Z,8.7nm,0.5s,baz=317,slow=6.3,SNR=69
comp=Z,8.7nm,0.5s
ASAR Alice Springs 61.00 137 P **P 12 06 47.8 +0.2**
NIE Niedzica 61.86 315 P **P 12 06 53.8 +0.6**
VRAC Vranov 64.28 315 LR LR 12 39 05.9
comp=Z,74nm,21.5s,baz=77,slow=40
SPITS Spitsbergen Ar 64.86 347 LR LR 12 41 26.9
comp=Z,144nm,19.1s,baz=100,slow=41
HFS Hagfors 65.09 327 P **P 12 07 13.0 -1.3**
comp=Z,3.3nm,0.7s,baz=96,slow=6.0,SNR=7.0
HFS LR LR 12 37 54.6
comp=Z,109nm,19.2s,baz=107,slow=38
comp=Z,3.3nm,0.7s
MBAR Mbarara 65.12 258 LR LR 12 37 59.0
comp=Z,74nm,18.8s,baz=147,slow=38
GERES GERESS Array B 66.23 315 P **P 12 07 21.2 -0.8**
comp=Z,1.6nm,0.7s,baz=80,slow=7.2,SNR=10
comp=Z,1.6nm,0.7s
NOA NORSAR Array B 66.24 328 P **P 12 07 21.8 0.0**
comp=Z,0.9nm,0.7s,baz=86,slow=6.2,SNR=3.4
NOA LR LR 12 38 40.7
comp=Z,107nm,20.7s,baz=80,slow=38
comp=Z,0.9nm,0.7s
CLL Ilm 66.33 318 *i* P **P 12 07 19.8 -2.6**
comp=Z,4.0nm,0.8s
CLL *e*PP **PP 12 09 49.0 +0.6**
CLL AMS AMS 12 39 00.0
comp=Z,200nm,20.8s
SHEM Shemya Is, Ala 66.49 41 LR LR 12 38 07.9
comp=Z,33nm,21.9s,baz=222,slow=37
DAVOX Davos/Dischmat 69.12 313 LR LR 12 43 54.6
comp=Z,68nm,18.6s,baz=78,slow=41
STKA Stephens Creek 71.60 138 P **P 12 07 54.9 -0.5**
comp=Z,5.1nm,1.1s,baz=13,slow=4.7,SNR=4.1
STKA LR LR 12 42 53.5
comp=Z,151nm,18.9s,baz=254,slow=39
comp=Z,5.1nm,1.1s
C18K Utukok River 74.17 22 **P 12 08 10.9 +0.6**
C18K IAmb IAmb 12 08 14.8
comp=Z,7.9nm,1.0s
LSZ Lusaka 74.20 245 LR LR 12 38 07.2
comp=Z,90nm,21.9s,baz=122,slow=34
EKA Eskdalemuir Ar 74.85 324 LR LR 12 47 17.5
comp=Z,83nm,18.5s,baz=54,slow=40
D19K Kuna River 75.27 21 P **P 12 08 16.4 -0.1**
D19K IAmb IAmb 12 08 21.3
comp=Z,7.4nm,0.9s
MATP Matopo 76.54 241 LR LR 12 40 12.9
comp=Z,104nm,20.1s,baz=95,slow=34
C23K Itkillik River 76.97 19 **P 12 08 25.9 -0.2**
C23K IAmb IAmb 12 08 35.1
comp=Z,7.8nm,0.9s
H19K Roundabout Mou 77.19 24 **P 12 08 27.5 0.0**
H19K IAmb IAmb 12 08 32.4
comp=Z,5.5nm,1.0s
D23K Nanushuk River 77.42 19 **P 12 08 28.7 0.0**
D23K IAmb IAmb 12 08 34.0
comp=Z,9.3nm,0.9s
BORG Borgarnes 79.16 337 LR LR 12 45 18.7
comp=Z,46nm,19.8s,baz=77,slow=37
ESDC Sonseca Array 80.87 309 LR LR 12 50 42.6
comp=Z,66nm,19.1s,baz=50,slow=40
ILAR Eielson Array 81.02 22 P **P 12 08 48.3 -0.2**
comp=Z,2.4nm,1.0s,baz=295,slow=5.7,SNR=11
ILAR LR LR 12 48 38.1
comp=Z,154nm,18.3s,baz=270,slow=38
comp=Z,2.4nm,1.0s
ILAR Eielson Array 81.02 22 P **P 12 08 47.6 -0.8**
LBTB Lobatse 81.18 238 LR LR 12 45 36.7
comp=Z,63nm,18.2s,baz=114,slow=36
RES Resolute Bay 82.30 2 LR LR 12 47 13.1
comp=Z,57nm,20.2s,baz=22,slow=37
INK Inuvik 82.66 16 LR LR 12 50 51.1
comp=Z,67nm,19.7s,baz=250,slow=39
INK Inuvik 82.66 16 P **P 12 08 58.8 +1.8**
KDAK Kodiak Island 82.67 30 LR LR 12 49 19.2
comp=Z,117nm,18.7s,baz=284,slow=38
BCAR Beaver Creek A 83.85 22 P **P 12 09 03.8 +0.5**
MDT Midelt 84.01 303 LR LR 12 53 43.3
comp=Z,54nm,18.1s,baz=45,slow=41
TSUM Tsumeb 84.97 247 LR LR 12 45 59.8
comp=Z,111nm,19.4s,baz=150,slow=35
SFJD Kangerlussuaq 86.19 347 LR LR 12 52 03.8
comp=Z,114nm,19.3s,baz=17,slow=39
TORD Torodi Ar. Bea 86.35 283 P **P 12 09 16.0 -0.7**
comp=Z,1.1nm,0.9s,baz=48,slow=5.1,SNR=8.9
TORD LR LR 12 51 09.4
comp=Z,159nm,20.3s,baz=120,slow=38
comp=Z,1.1nm,0.9s
SUR Sutherland 88.46 234 LR LR 12 50 04.0
comp=Z,62nm,18.5s,baz=116,slow=36
DLBC Dease Lake 91.18 21 LR LR 12 55 09.8
comp=Z,84nm,19.9s,baz=266,slow=38
FRB Frobisher Bay 92.27 352 LR LR 12 55 11.8
comp=Z,72nm,20.7s,baz=330,slow=38
DBIC Dimbokro 94.83 279 LR LR 12 56 25.9
comp=Z,53nm,19.4s,baz=116,slow=38
BBB Bella Bella 96.77 24 LR LR 12 55 54.4
comp=Z,158nm,19.8s,baz=326,slow=37
RPZ Rata Peaks 97.33 134 LR LR 12 55 31.2
comp=Z,19nm,22.0s,baz=236,slow=36
URZ Urewera 99.38 128 LR LR 13 00 18.2
comp=Z,31nm,19.1s,baz=354,slow=38
TXAR Lajitas Array 125.38 18 PKP **PKPdf 12 15 35.1 -0.4**
comp=Z,0.4nm,0.8s,baz=182,slow=0.5,SNR=6.3

JMA 05 11:57:57.0±0.0, **36.3N**±0.2×**137.6E**±0.1, **h4**km±1km,
MV0.9/28, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.26**	**253**	P		Pg 11 58 02.3	+0.2
JGN				S		Sg 11 58 06.0	+0.4
JTT	**Ttatey**	**0.38**	**322**	P		Pg 11 58 05.0	+0.6
JTT				*e*S		Sg 11 58 10.8	+1.4
JNG	**Nsakai**	**0.40**	**75**	*e*P		Pg 11 58 04.9	+0.3
JNG				*e*S		Sg 11 58 10.2	+0.4
MAT	**Matsushiro**	**0.53**	**63**	*e*P		Pg 11 58 07.1	0.0
MAT				*e*S		Sg 11 58 14.1	+0.2
JNT	**Takato**	**0.59**	**136**	*e*P		Pg 11 58 08.4	0.0

*SJA **05** 12:14:15.1±1.0,28.88S×71.33W,h37km±2km, ML3.8, MW3.7*
*NEIC **05** 12:14:16.6±2.1,28.87S±0.04×71.39W±0.07, h35km±2km, mb4.1/4, ML3.7(GUC), Error ellipse: s-maj=11.1km s-min=5.7km az=109.0*
*GUC **05** 12:14:16.1±0.8,28.90S×71.37W, h44km±2km, ML3.8*
*IDC **05** 12:14:43.4±6.8, 27.79S×69.61W, h198km±52km, mb3.1/2, mbtmp3.6/4, Error ellipse: s-maj=72.0km s-min=31.0km az=35.0*

ISC 05 12:14:15.1±1.6, **28.85S**±0.03×**71.42W**±0.06, **h25**km±11km,
n53,σ1s06/69, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.65**	**105**			**Pb 12 14 28.0**	**+0.1**
LCO				Sn		**Sb 12 14 37.0**	**+0.3**
LCO	**Las Campanas**	**0.65**	**105**	*e*P		**Pb 12 14 28.1**	**+0.1**
LCO				*e*S		**Sb 12 14 37.0**	**+0.3**
LCO				IAML		12 14 37.2	
	comp=Z,17µm,0.6s						
LCO	**Las Campanas**	**0.65**	**105**	*e*P		**Pb 12 14 28.2**	**+0.3**
LCO				*e*S		**Sb 12 14 36.8**	**+0.1**
AC04	**Llanos de Chal**	**0.71**	**25**			**Pn 12 14 30.1**	**+0.6**
AC04	**Llanos de Chal**	**0.71**	**25**	*e*P		**Pn 12 14 30.5**	**+1.0**
AC04				*e*S		**Sn 12 14 40.6**	**+0.9**
AC04				IAML		12 14 44.6	
	comp=Z,2µm,0.4s						
AC04	**Llanos de Chal**	**0.71**	**25**	*e*P		**Pn 12 14 30.2**	**+0.7**
AC04				*e*S		**Sn 12 14 40.5**	**+0.9**
AC04				IAML		12 14 44.2	
	comp=E,5µm,0.3s						
AC05	**El Transito**	**1.00**	**90**			**Pn 12 14 33.7**	**0.0**
AC05				Sn		**Sb 12 14 46.1**	**-0.6**
AC05	**El Transito**	**1.00**	**90**	*e*P		**Pn 12 14 33.7**	**0.0**
AC05				*e*S		**Sb 12 14 46.4**	**-0.3**
AC05				IAML		12 14 46.8	
	comp=Z,3µm,0.3s						
AC05	**El Transito**	**1.00**	**90**	*e*P		**Pn 12 14 33.6**	**0.0**
AC05				*e*S		**Sb 12 14 46.4**	**-0.3**
AC05				IAML		12 14 47.0	
	comp=E,7µm,0.4s						
GO04	**Tololo Observa**	**1.42**	**158**			**Pn 12 14 39.7**	**+0.1**
GO04				Sn		**Sn 12 14 58.0**	**+0.3**
GO04	**Tololo Observa**	**1.42**	**158**	*e*P		**Pn 12 14 39.4**	**-0.2**
GO04				*e*S		**Sn 12 14 58.4**	**+0.7**
GO04				IAML		12 15 03.5	
	comp=Z,2µm,0.3s						
GO04	**Tololo Observa**	**1.42**	**158**	*e*P		**Pn 12 14 39.5**	**-0.1**
GO04				*e*S		**Sn 12 14 58.2**	**+0.5**
CO01	**Juntas del Tor**	**1.61**	**135**			**Pn 12 14 42.9**	**+0.7**
CO01				Sn		**Sn 12 15 02.3**	**0.0**
CO01	**Juntas del Tor**	**1.61**	**135**	*e*P		**Pn 12 14 42.1**	**0.0**
CO01				*e*S		**Sn 12 15 02.8**	**+0.5**
CO01				IAML		12 15 02.9	
	comp=Z,747nm,0.4s						
CO01	**Juntas del Tor**	**1.61**	**135**	*e*P		**Pn 12 14 43.0**	**+0.9**
CO01				*e*S		**Sn 12 15 02.8**	**+0.5**
CO01				IAML		12 15 03.9	
	comp=N,904nm,0.6s						
GO03	**Copiapo**	**1.63**	**40**			**Pn 12 14 43.4**	**+1.2**
GO03	**Copiapo**	**1.63**	**40**	*e*P		**Pn 12 14 42.9**	**+0.6**
GO03				*e*S		**Sb 12 15 03.7**	**-0.9**
GO03				IAML		12 15 09.0	
	comp=Z,1µm,0.5s						
GO03	**Copiapo**	**1.63**	**40**	*e*P		**Pn 12 14 43.6**	**-0.9**
GO03				*e*S		**Sb 12 15 04.9**	**+0.3**
GO03				IAML		12 15 09.8	
	comp=N,2µm,0.5s						
CO06	**Fray Jorge**	**1.83**	**186**			**Pn 12 14 44.8**	**-0.2**
CO02	**Combarbal**	**2.37**	**171**			**Pn 12 14 52.8**	**+0.2**
CO02	**Combarbal**	**2.37**	**171**	*e*P		**Pn 12 14 52.7**	**+0.2**
CO02				*e*S		**Sn 12 15 21.6**	**+0.6**
CO02				IAML		12 15 31.6	
	comp=Z,752nm,0.4s						
CO02	**Combarbal**	**2.37**	**171**	*e*P		**Pn 12 14 52.9**	**+0.4**
CO02				*e*S		**Sn 12 15 20.8**	**-0.2**
AC01	**Pan de Azucar**	**2.79**	**15**			**Pn 12 14 57.9**	**-0.2**
AC01	**Pan de Azucar**	**2.79**	**15**	*e*P		**Pn 12 14 58.2**	**+0.1**
AC02	**Maricunga**	**2.85**	**46**			**Pn 12 15 01.6**	**+2.2**
AC02	**Maricunga**	**2.85**	**46**	*e*P		**Pn 12 15 02.1**	**+2.6**
CO04	**Los Peladeros**	**3.21**	**173**			**Pn 12 14 58.4**	**+0.7**
CO04	**Los Peladeros**	**3.21**	**173**	*e*P		**Pn 12 15 05.0**	**+0.8**
CO04				IAML		12 15 56.4	
	comp=N,373nm,0.2s						
VA03	**San Esteban**	**3.97**	**169**			**Pn 12 15 15.8**	**+1.3**
VA03	**San Esteban**	**3.97**	**169**	*e*P		**Pn 12 15 16.4**	**+1.9**
PB14	**IPOC Station P**	**4.30**	**12**	Pn		**Pn 12 15 18.9**	**-0.4**
PEL	**Peldehue**	**4.33**	**172**			**Pn 12 15 20.4**	**+1.1**
MT02	**Curacav**	**4.40**	**177**			**Pn 12 15 21.8**	**+1.5**
MT05	**Renca**	**4.57**	**173**			**Pn 12 15 24.0**	**+1.3**
MT16	**CCHEN**	**4.63**	**171**			**Pn 12 15 26.5**	**+3.0**
MT03	**Universidad Ad**	**4.70**	**171**			**Pn 12 15 27.2**	**+2.7**
MT09	**Talagante**	**4.93**	**176**			**Pn 12 15 27.8**	**+0.2**
MT01	**Popeta**	**5.00**	**178**			**Pn 12 15 28.6**	**0.0**
BO04	**La Punta**	**5.17**	**173**			**Pn 12 15 32.7**	**+1.8**
PB05	**IPOC Station P**	**6.07**	**11**	Pn		**Pn 12 15 41.2**	**-2.1**
TCA	**Tanti**	**6.41**	**114**	*e*P		**Pn 12 15 48.5**	**+0.5**
TCA				*e*S		**Sn 12 16 57.7**	**-2.6**
CPUP	**Villa Florida**	**12.74**	**82**	Pn		**Pn 12 17 16.2**	**+1.5**
	comp=N,1.1nm,0.6s,baz=249,slow=14,SNR=3.4						
CPUP	**Villa Florida**	**12.74**	**82**	Pn		**Pn 12 17 13.3**	**-1.4**
LPAZ	**La Paz**	**12.86**	**14**	P		Pn 12 17 22.1	+5.2
	comp=N,1.1nm,0.8s,baz=190,slow=13,SNR=5.2						
CPSB	**Cacapava Do Su**	**15.71**	**100**	Pn		**Pn 12 17 55.0**	**+0.2**
ITAB	**Concordia**	**17.10**	**89**	Pn		**Pn 12 18 11.4**	**-1.1**
ITAB				IAmb	IAmb	12 18 51.4	
	comp=Z,22nm,1.3s						

NNA	**Nana**	**17.52 342**	P	**Pn**	**12 18 17.3**	**-0.5**
QSPA	**South Pole Qui**	**61.37 180**	P	**P**	**12 24 28.7**	**0.0**
QSPA			IAmb	IAmb	12 25 10.8	
	comp=Z,2.1nm,1.1s					
TXAR	**Lajitas Array**	**65.55 329**	P	P	12 25 06.4	+10
	comp=Z,0.2nm,0.8s,baz=150,slow=6.9,SNR=3.7					
	comp=Z,0.2nm,0.8s					
TORD	**Torodi Ar. Bea**	**81.96 70**	P	**P**	**12 26 32.6**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=235,slow=5.1,SNR=5.0					
	comp=Z,0.8nm,0.6s					
WRA	**Warramunga Arr**	**125.49 210**	PKP	PKiKP	12 33 24.4	+9.3
	comp=Z,0.2nm,0.5s,baz=150,slow=1.8,SNR=1.6					
KURBB	**Kurchatov Arra**	**148.62 38**	PKPbc	**PKPbc**	**12 33 59.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=308,slow=2.9,SNR=2.3					
ZALV	**Zalesovo Beam**	**149.51 28**	PKPbc	**PKPbc**	**12 34 02.3**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=294,slow=4.2,SNR=2.7					

*AEIC **05** 12:16:16.8±1.3, 69°.47N±0°.05×143°.83W±0°.08, h12km±6km, Error ellipse: s-maj=7.0km s-min=4.3km az=178.0*
*NEIC **05** 12:16:18.6±1.3, 69°.54N±0°.05×143°.88W±0°.06, h10km±2km, ML2.7/120, ML2.6(AEIC), Error ellipse: s-maj=9.2km s-min=3.1km az=10.0*

ISC 05 12:16:17.7±1.2, 69°.48N±0°.03×143°.92W±0°.03, h1km±15km, n92, σ0s73/99, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
C27K	**Jago River**	**0.17**	**26**			**Pg**	**12 16 20.6**	**-0.3**
C27K				Sg		**Sg**	**12 16 22.6**	**-0.4**
C27K				IAML			12 16 23.6	
	comp=E,3μm,0.4s							
C27K				IAML			12 16 23.8	
	comp=N,2μm,0.4s							
C26K	**Camden Bay**	**0.56**	**322**			**Pg**	**12 16 28.8**	**+0.3**
C26K						**Sg**	**12 16 36.9**	**+1.3**
D25K	**Kavik River**	**0.88**	**261**	Pg		**Pg**	**12 16 33.2**	**-1.3**
D25K						**Sg**	**12 16 45.8**	**-0.1**
D27M	**Malcolm River**	**1.07**	**101**			**Pg**	**12 16 38.6**	**+0.4**
D27M						**Sg**	**12 16 52.3**	**+0.2**
D27M				IAML			12 16 57.1	
	comp=E,125nm,0.3s							
D27M				IAML			12 16 58.3	
	comp=N,146nm,0.7s							
E25K	**Arctic Village**	**1.49**	**204**			**Pn**	**12 16 45.5**	**-0.1**
E25K						**Sg**	**12 17 06.7**	**+1.2**
E27K	**Coleen River**	**1.55**	**146**			**Pn**	**12 16 45.9**	**-0.5**
C24K	**Franklin Bluff**	**1.69**	**281**			**Pn**	**12 16 48.5**	**+0.2**
C24K						**Sg**	**12 17 12.3**	**+0.3**
C24K				IAML			12 17 13.4	
	comp=N,92nm,0.6s							
C24K				IAML			12 17 16.1	
	comp=E,87nm,1.4s							
D24K	**Happy Valley**	**1.77**	**262**			**Pb**	**12 16 50.5**	**-0.4**
D24K				IAML			12 17 21.1	
	comp=N,92nm,0.5s							
D24K				IAML			12 17 24.8	
	comp=E,81nm,0.6s							
F26K	**Sheenjek River**	**1.79**	**183**			**Pb**	**12 16 50.8**	**-0.5**
F26K						**Sb**	**12 17 14.0**	**-0.3**
F26K				IAML			12 17 18.9	
	comp=N,86nm,0.5s							
E28M	**Babbage River**	**1.81**	**117**			**Pn**	**12 16 50.0**	**+0.1**
F25K	**Christian Rive**	**2.00**	**199**			**Pn**	**12 16 53.3**	**+0.7**
BM05	**Burnt Mountain**	**2.07**	**187**			**Pn**	**12 16 54.4**	**+0.8**
E24K	**Your Creek**	**2.18**	**232**			**Pn**	**12 16 56.0**	**+1.0**
TOLK	**Toolik Lake Re**	**2.20**	**250**			**Pn**	**12 16 56.3**	**+1.0**
C23K	**Itkillik River**	**2.37**	**282**			**Pn**	**12 16 58.6**	**+1.0**
C23K				IAML			12 17 44.8	
	comp=E,52nm,0.6s							
F28M	**Old Crow**	**2.39**	**140**			**Pn**	**12 16 58.0**	**+0.1**
F28M				IAML			12 17 38.8	
	comp=N,32nm,0.5s							
E29M	**Blow River**	**2.44**	**114**			**Pn**	**12 16 59.0**	**+0.5**
E29M				IAML			12 17 39.8	
	comp=N,30nm,0.7s							
F24K	**Squaw Lake**	**2.45**	**218**			**Pn**	**12 16 59.1**	**+0.4**
F24K				IAML			12 17 37.6	
	comp=N,28nm,0.5s							
D23K	**Nanushuk River**	**2.46**	**261**			**Pn**	**12 16 59.9**	**+1.0**
D23K				IAML			12 17 50.9	
	comp=N,29nm,0.9s							
E23K	**Chandalar**	**2.52**	**238**			**Pn**	**12 17 00.2**	**+0.5**
E23K				IAML			12 17 43.7	
	comp=N,26nm,0.7s							
G26K	**Porcupine Rive**	**2.54**	**179**			**Pn**	**12 17 00.4**	**+0.5**
G27K	**Doyon Strip**	**2.81**	**161**			**Pn**	**12 17 04.0**	**+0.3**
G25K	**Bearman Lake**	**2.84**	**198**			**Pn**	**12 17 04.8**	**+0.7**
FYU	**Fort Yukon**	**2.97**	**190**			**Pn**	**12 17 06.7**	**+0.9**
G24K	**Hadweenzic Riv**	**3.09**	**207**			**Pn**	**12 17 07.6**	**+0.1**
G24K				IAML			12 18 04.8	
	comp=E,25nm,0.6s							
E22K	**Anaktuvuk Pass**	**3.17**	**249**	Pn		**Pn**	**12 17 08.8**	**+0.2**
COLD	**Coldfoot**	**3.24**	**229**	Pn		**Pn**	**12 17 10.6**	**+1.0**
H27K	**Steamboat Moun**	**3.39**	**163**	Pn		**Pn**	**12 17 12.0**	**+0.4**
H27K				IAML			12 18 11.8	
	comp=E,14nm,1.1s							
G29M	**Pine Creek**	**3.39**	**137**			**Pn**	**12 17 12.1**	**+0.4**
B22K	**Teshekpuk Lake**	**3.39**	**289**			**Pn**	**12 17 12.3**	**+0.7**
B22K				IAML			12 18 17.0	
	comp=N,19nm,1.2s							
F30M	**Barrier River**	**3.53**	**118**			**Pn**	**12 17 14.3**	**+0.8**
F30M				IAML			12 18 16.9	
	comp=E,14nm,1.4s							
F30M				IAML			12 18 28.1	
	comp=N,13nm,0.8s							
G23K	**Bananza Creek**	**3.60**	**222**			**Pn**	**12 17 14.8**	**+0.2**
G23K				IAML			12 18 23.2	
	comp=N,11nm,0.7s							
G23K				IAML			12 18 23.9	
	comp=E,13nm,0.7s							
B21K	**Ikpikpuk River**	**3.76**	**277**			**Pn**	**12 17 16.8**	**+0.1**
B21K				IAML			12 18 07.6	
	comp=E,14nm,0.7s							
B21K				IAML			12 18 40.9	
	comp=N,11nm,1.2s							
E21K	**Killik River**	**3.77**	**259**			**Pn**	**12 17 16.7**	**-0.2**
E21K				IAML			12 18 24.3	
	comp=E,8.5nm,0.6s							
E21K				IAML			12 18 26.4	
	comp=N,9.9nm,0.8s							
G30M	**tAoh Zraii Nji**	**3.81**	**128**			**Pn**	**12 17 16.8**	**-0.7**
G30M				IAML			12 18 28.6	
	comp=N,8.4nm,1.0s							
C21K	**Knifeblade Rid**	**3.87**	**270**			**Pn**	**12 17 18.8**	**+0.6**
H29M	**Whitestone**	**3.89**	**145**			**Pn**	**12 17 18.8**	**+0.3**
H29M				IAML			12 18 09.4	
	comp=E,12nm,0.5s							
H29M				IAML			12 18 34.1	
	comp=N,12nm,1.2s							
INK	**Inuvik**	**3.94**	**102**	Pn		**Pn**	**12 17 20.1**	**+1.0**
H24K	**Noodor Dome**	**3.96**	**204**			**Pn**	**12 17 19.7**	**+0.3**
H24K				IAML			12 18 34.3	
	comp=E,11nm,0.8s							
I27K	**Kandik River**	**3.99**	**166**			**Pn**	**12 17 20.9**	**+0.9**
I27K				IAML			12 18 36.4	
	comp=N,12nm,0.9s							
I27K				IAML			12 18 39.6	
	comp=E,12nm,1.0s							
PRP	**Porcupine Dome**	**4.03**	**190**			**Pn**	**12 17 20.7**	**+0.2**
PRP				IAML			12 18 11.1	
	comp=E,8.2nm,0.4s							
EPYK	**Eagle Plains**	**4.14**	**136**			**Pn**	**12 17 21.6**	**-0.4**
EPYK	**Eagle Plains**	**4.14**	**136**	Pn		**Pn**	**12 17 22.2**	**+0.3**
F21K	**Alatna River**	**4.20**	**242**			**Pn**	**12 17 23.4**	**+0.6**
F21K				IAML			12 18 42.0	
	comp=N,7.3nm,0.7s							
H23K	**Yukon River**	**4.25**	**213**			**Pn**	**12 17 24.6**	**+1.1**
H23K				IAML			12 18 38.5	
	comp=E,9.6nm,0.8s							
H23K				IAML			12 18 40.7	
	comp=N,9.5nm,0.6s							
I28M	**Miner Creek**	**4.33**	**157**			**Pn**	**12 17 25.3**	**+0.7**
I28M				IAML			12 18 17.5	
	comp=N,6.8nm,0.6s							
I28M				IAML			12 18 22.0	
	comp=E,6.7nm,0.8s							
G31M	**Satah River**	**4.42**	**121**			**Pn**	**12 17 25.9**	**+0.2**
G31M				IAML			12 18 39.5	
	comp=N,6.4nm,0.9s							
G31M				IAML			12 18 50.4	
	comp=E,8.6nm,1.4s							
H22K	**Ishtalitna Cre**	**4.58**	**222**			**Pn**	**12 17 28.6**	**+0.6**
H22K				IAML			12 18 51.4	
	comp=E,5.6nm,0.9s							
POKR	**Poker Plat Res**	**4.59**	**199**			**Pn**	**12 17 29.0**	**+0.9**
E20K	**Nigu River**	**4.61**	**260**			**Pn**	**12 17 29.1**	**+0.7**
D20K	**Etivluk River**	**4.61**	**266**			**Pn**	**12 17 29.2**	**+0.8**
D20K				IAML			12 18 55.0	
	comp=E,5.2nm,1.3s							
D20K				IAML			12 19 08.5	
	comp=N,6.7nm,1.0s							
B20K	**Meade River**	**4.63**	**283**	Pn		**Pn**	**12 17 29.4**	**+0.8**
G21K	**Allakaket**	**4.67**	**235**			**Pn**	**12 17 29.2**	**-0.1**
G21K				IAML			12 18 54.1	
	comp=N,5.4nm,1.1s							
G21K				IAML			12 19 03.2	
	comp=E,6.8nm,1.1s							
I23K	**Minto, Yukon-K**	**4.83**	**208**			**Pn**	**12 17 32.5**	**+1.2**
I23K				IAML			12 18 56.2	
	comp=N,6.7nm,1.5s							
MDM	**Murphy Dome**	**4.84**	**202**			**Pn**	**12 17 31.9**	**+0.4**
IL31		**4.87**	**195**			**Pn**	**12 17 32.8**	**+1.0**
COLA	**College**	**4.87**	**200**			**Pn**	**12 17 33.8**	**+1.8**
J25K	**Salcha River,**	**4.92**	**187**			**Pn**	**12 17 33.5**	**+0.8**
J25K				IAML			12 18 54.8	
	comp=E,5.1nm,0.6s							
J25K				IAML			12 18 57.0	
	comp=N,4.0nm,0.8s							
F20K	**Avaraart Lake**	**5.02**	**247**			**Pn**	**12 17 35.0**	**+1.1**
F20K				IAML			12 19 06.7	
	comp=N,4.4nm,1.1s							
CCB	**Clear Creek Bu**	**5.08**	**199**			**Pn**	**12 17 35.5**	**+0.6**
CCB				IAML			12 18 38.6	
	comp=N,3.8nm,0.5s							
CCB				IAML			12 19 05.7	
	comp=E,3.8nm,1.4s							
IM03		**5.12**	**231**			**Pn**	**12 17 35.8**	**+0.4**
H21K	**Melozitna Rive**	**5.12**	**226**			**Pn**	**12 17 35.1**	**-0.4**
H21K				IAML			12 19 15.1	
	comp=E,4.8nm,1.0s							
H21K				IAML			12 19 23.8	
	comp=N,3.1nm,1.1s							
I30M	**Mount Dempster**	**5.17**	**142**			**Pn**	**12 17 35.8**	**-0.4**
I30M				IAML			12 19 19.5	
	comp=E,3.6nm,1.1s							
MLY	**Manley**	**5.19**	**214**			**Pn**	**12 17 36.7**	**+0.3**
MLY				IAML			12 19 09.6	
	comp=E,3.1nm,1.4s							
H31M	**Peel River**	**5.19**	**131**			**Pn**	**12 17 36.0**	**-0.4**
H31M				IAML			12 19 14.4	
	comp=E,3.7nm,0.9s							
H31M				IAML			12 19 16.7	
	comp=N,4.1nm,1.2s							
D19K	**Kuna River**	**5.20**	**266**			**Pn**	**12 17 37.0**	**+0.5**
D19K				IAML			12 18 41.2	
	comp=N,4.7nm,0.5s							
HDA	**Harding Lake**	**5.23**	**195**			**Pn**	**12 17 38.4**	**+1.5**
WRH	**Wood River Hil**	**5.29**	**200**			**Pn**	**12 17 37.6**	**0.0**
E19K	**Redstone River**	**5.30**	**254**			**Pn**	**12 17 38.6**	**+0.7**
E19K				IAML			12 19 19.3	
	comp=E,3.7nm,1.1s							
E19K				IAML			12 19 27.0	
	comp=N,4.9nm,1.2s							
I21K	**Tanana**	**5.32**	**220**			**Pn**	**12 17 39.2**	**+1.1**
K27K	**Chicken**	**5.52**	**172**			**Pn**	**12 17 41.5**	**+0.6**
SCRK	**Sand Creek**	**5.53**	**180**			**Pn**	**12 17 42.0**	**+0.9**
C19K	**Lookout Ridge**	**5.57**	**274**			**Pn**	**12 17 42.5**	**+0.9**
DAWY	**Dawson**	**5.72**	**160**			**Pn**	**12 17 44.2**	**+0.5**
DAWY	**Dawson**	**5.72**	**160**	Pn		**Pn**	**12 17 44.0**	**+0.3**
J30M	**Hart River**	**5.75**	**145**			**Pn**	**12 17 43.8**	**-0.3**
K24K	**Donnelly Dome**	**5.75**	**188**			**Pn**	**12 17 45.0**	**+1.0**
F19K	**Shaleruckik Mo**	**5.81**	**249**			**Pn**	**12 17 45.7**	**+1.0**
G19K	**Purcell Mounta**	**6.00**	**242**			**Pn**	**12 17 47.6**	**+0.1**
K29M	**Barlow Dome**	**6.20**	**153**			**Pn**	**12 17 49.9**	**-0.5**
C18K	**Utukok River**	**6.24**	**270**			**Pn**	**12 17 51.0**	**+0.2**
E18K	**Tukpahlearik C**	**6.48**	**259**			**Pn**	**12 17 54.6**	**+0.6**
L26K	**Log Cabin Wild**	**6.49**	**178**			**Pn**	**12 17 54.8**	**+0.6**
BC05	**Beaver Creek A**	**6.50**	**171**			**Pn**	**12 17 55.1**	**+0.7**
F18K	**Selawik**	**6.56**	**251**			**Pn**	**12 17 55.5**	**+0.4**
MENT	**Mentasta**	**6.57**	**179**			**Pn**	**12 17 56.8**	**+1.5**
DHY	**Denali Highway**	**6.58**	**194**			**Pn**	**12 17 56.6**	**+1.0**
A36M	**Sachs Harbour**	**6.66**	**59**			**Pn**	**12 17 55.1**	**-1.3**
C17K	**DeLong Mountai**	**6.99**	**271**			**Pn**	**12 18 00.4**	**-0.7**
C36M	**Paulatuk**	**6.99**	**82**	Pn		**Pn**	**12 17 59.9**	**-1.1**
C36M	**Paulatuk**	**6.99**	**82**	Pn		**Pn**	**12 17 59.7**	**-1.3**
E17K	**Hotham Inlet**	**7.05**	**259**			**Pn**	**12 18 01.4**	**-0.5**

JMA 05 12:16:21.5±0.2, 25°.7N±1°.1×123°.4E±0°.3, h32km, MV1.5/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.55**	**221**	P		Pb	12 16 32.4	-0.3
YOJ				*e*S		Sb	12 16 39.6	-0.8
JYNG	**Yonagunijimaku**	**0.59**	**225**	*e*P		Pb	12 16 33.1	-0.4
JYNG				*e*S		Sb	12 16 41.3	-0.4
IRIF	**Iriomote-Funau**	**0.61**	**151**	P		Pb	12 16 33.0	-0.4
IRIF				S		Sb	12 16 42.0	-0.2
JKRS	**Kuro-shima**	**0.84**	**139**	*e*P		Pn	12 16 36.9	-0.1
JKRS				*e*S		Sn	12 16 47.9	-0.4
JJJ	**Ishigaki jima**	**0.84**	**127**	*e*P		Pn	12 16 37.1	+0.1
JISG	**Ishigakijimahi**	**0.87**	**109**	*e*P		Pn	12 16 36.9	-0.5
JISG				*e*S		Sn	12 16 47.8	-1.3

TAP 05 12:16:59.5, 24°.77N×121°.27E, h8km, ML1.9, 2C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KSHI	**Guanxi Townshi**	**0.09**	**272**	⇓*i*P		Pg	12 17 02.0	+0.3
KSHI				*i* S		Sg	12 17 04.0	+0.8
NSK	**Sanguang**	**0.13**	**141**	⇓*i*P		Pg	12 17 03.4	+1.1
NSK				*i* S		Sg	12 17 06.1	+1.9
YHNB	**Yeheng**	**0.14**	**137**	⇑*i*P		Pg	12 17 03.6	+1.0
YHNB				*i* S		Sg	12 17 06.3	+1.6
NFF	**Wufeng Townshi**	**0.20**	**224**	P		Pg	12 17 04.2	+0.6
NFF				S		Sg	12 17 07.8	+1.4
NCUH	**Zhongli**	**0.21**	**338**	*e*S		Sg	12 17 09.0	+2.4
NWLT	**Wulai**	**0.21**	**89**	P		Pg	12 17 04.7	+0.9
NWLT				*i* S		Sg	12 17 08.3	+1.6
LIOB	**Emei**	**0.26**	**241**	P		Pb	12 17 05.9	-0.7
LIOB				*i* S		Sb	12 17 10.5	-0.7
NDT	**Datong Townshi**	**0.28**	**128**	P		Pb	12 17 06.1	-0.7
NDT				S		Sb	12 17 11.0	-0.7
NSTT	**Nanjuang**	**0.28**	**240**	*i* P		Pb	12 17 06.1	-0.8
NSTT				*i* S		Sb	12 17 11.1	-0.7
FUSB	**Fushanzhiwuyua**	**0.29**	**93**	⇑*i*P		Pb	12 17 06.2	-0.8
FUSB				*i* S		Sb	12 17 10.7	-1.4
ENTT	**Nioudou**	**0.30**	**116**	*i* P		Pb	12 17 07.0	-0.2
ENTT				*i* S		Sb	12 17 11.5	-0.8
LATG	**Datong**	**0.33**	**135**	P		Pb	12 17 07.7	-0.1
LATG				*i* S		Sb	12 17 13.1	-0.3
TAP	**Taipei**	**0.34**	**39**	*i* P		Pb	12 17 07.3	-0.6
TAP				*i* S		Sb	12 17 13.1	-0.4
NNS	**Nan Shan**	**0.34**	**164**	*i* P		Pb	12 17 07.5	-0.5
NNS				*i* S		Sb	12 17 12.7	-1.0
TWS1	**Kuangyinshan**	**0.35**	**22**	S		Sb	12 17 13.7	-0.1
NNSB	**Datong**	**0.36**	**163**	*i* P		Pb	12 17 07.7	-0.5
NNSB				S		Sb	12 17 12.9	-1.2
NHY	**Taipei**	**0.38**	**46**	*e*P		Pb	12 17 08.0	-0.5
NDS	**Dongshan**	**0.43**	**109**	*e*P		Pb	12 17 09.0	-0.3
NDS				*e*S		Sb	12 17 15.0	-1.0
YM01	**YM01**	**0.46**	**36**	*e*S		Sb	12 17 17.1	+0.1

*NEIC **05** 12:25:13.7±1.4, 17°.84N±0°.03×66°.97W±0°.02, h10km±1km, ML3.7/37, Md3.5/25(RSPR), Error ellipse: s-maj=5.2km s-min=2.9km az=31.0*
*RSPR **05** 12:25:14.9, 17°.94N×66°.96W, h6km, MD3.5/25*
*OSPL **05** 12:25:15.7±3.2, 17°.74N×66°.86W, h0km±62km, ML3.7, Presumed earthquake*

ISC 05 12:25:14.3±1.0, 17°.92N±0°.05×66°.97W±0°.02, h15km±5km, n46, σ1s13/69, 1C-12D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.09**	**304**			**Pg**	**12 25 17.1**	**-0.3**
MLPR				IAML			12 25 19.1	
	40μm,0.4s							
MLPR	**Magueyes Islan**	**0.09**	**304**	⇑*i*P		**Pg**	**12 25 17.2**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.10**	**56**			**Pg**	**12 25 17.1**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.10**	**56**	⇑*i*P		**Pg**	**12 25 17.1**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.16**	**303**			**Pb**	**12 25 18.4**	**-0.6**
CRPR						**Sg**	**12 25 21.4**	**+0.5**
CRPR				IAML			12 25 22.4	
	13μm,0.3s							
CRPR				IAML			12 25 22.6	
	15μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.16**	**303**	⇑*i*P		**Pb**	**12 25 18.4**	**-0.6**
LSP	**Las Mesas**	**0.28**	**336**			**Pb**	**12 25 20.6**	**-0.4**
LSP	**Las Mesas**	**0.28**	**336**	⇑*i*P		**Pb**	**12 25 20.6**	**-0.4**
PRSN	**Puerto Rico Se**	**0.34**	**330**			**Pb**	**12 25 21.6**	**-0.5**
PRSN						**Sb**	**12 25 27.6**	**+0.2**
PRSN	**Puerto Rico Se**	**0.34**	**330**	⇑*i*P		**Pb**	**12 25 21.6**	**-0.5**
OBIP	**Obispado Ponce**	**0.36**	**70**			**Pb**	**12 25 21.8**	**-0.6**
OBIP						**Sb**	**12 25 27.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.36**	**70**	*i* P		**Pb**	**12 25 21.9**	**-0.6**
OBIP				*e*S		**Sb**	**12 25 27.7**	**-0.3**
OBIP				IAML			12 25 28.1	
	comp=Z,12μm,0.3s							
OBIP	**Obispado Ponce**	**0.36**	**70**	⇓*i*P		**Pb**	**12 25 21.9**	**-0.6**
OBIP				*e*S		**Sb**	**12 25 27.9**	**-0.1**
CELP	**Cerrillos**	**0.40**	**67**			**Pb**	**12 25 22.5**	**-0.6**
CELP						**Sb**	**12 25 28.3**	**-0.7**
CELP	**Cerrillos**	**0.40**	**67**	⇓*i*P		**Pb**	**12 25 22.5**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.41**	**35**			**Pb**	**12 25 22.4**	**-0.8**
UUPR						**Sb**	**12 25 28.5**	**-0.8**
UUPR	**Utuado, UPR, P**	**0.41**	**35**	⇓*i*P		**Pb**	**12 25 22.4**	**-0.8**
AOPR	**Arecibo Observ**	**0.47**	**25**			**Pb**	**12 25 23.6**	**-0.8**
AOPR				IAML			12 25 30.5	
	comp=Z,6μm,0.5s							
AOPR						**Sb**	**12 25 30.7**	**-0.5**
AOPR	**Arecibo Observ**	**0.47**	**25**	⇓*i*P		**Pb**	**12 25 23.7**	**-0.7**
AGPR	**Aguadilla, PR**	**0.56**	**346**			**Pb**	**12 25 25.5**	**-0.4**
AGPR						**Sb**	**12 25 33.6**	**-0.1**
AGPR				IAML			12 25 34.0	
	comp=Z,4μm,0.3s							
AGPR	**Aguadilla, PR**	**0.56**	**346**	⇑*i*P		**Pb**	**12 25 25.6**	**-0.2**
IDE	**Isla Desecheo**	**0.67**	**314**			**Pb**	**12 25 27.6**	**-0.1**
IDE						**Sb**	**12 25 36.7**	**-0.1**
IDE	**Isla Desecheo**	**0.67**	**314**	⇓*i*P		**Pb**	**12 25 27.6**	**-0.1**
IDE				*e*S		**Sb**	**12 25 36.7**	**-0.1**
EMPR	**Esperanza - Ma**	**0.69**	**37**			**Pb**	**12 25 28.2**	**+0.1**
EMPR						**Sn**	**12 25 38.3**	**-1.8**
EMPR	**Esperanza - Ma**	**0.69**	**37**	⇓*i*P		**Pb**	**12 25 28.2**	**+0.1**
EMPR				*e*S		**Sn**	**12 25 38.3**	**-1.8**
ECPR	**Experimental S**	**0.70**	**55**			**Pb**	**12 25 27.6**	**-0.6**
ECPR						**Sb**	**12 25 37.3**	**-0.3**
ECPR				IAML			12 25 38.2	
	comp=Z,4μm,0.3s							
ECPR				IAML			12 25 40.9	
	comp=Z,4μm,0.2s							
ECPR	**Experimental S**	**0.70**	**55**	⇓*i*P		**Pb**	**12 25 27.6**	**-0.6**
SJG	**San Juan**	**0.80**	**76**			**Pg**	**12 25 29.4**	**-0.5**
SJG				IAML			12 25 44.0	
	comp=Z,1μm,0.4s							
SJG	**San Juan**	**0.80**	**76**	*i* P		**Pg**	**12 25 29.4**	**-0.5**
SJG				*e*S		**Sb**	**12 25 40.6**	**0.0**
SJG				IAML			12 25 41.9	
	comp=Z,19μm,0.2s							
SJG	**San Juan**	**0.80**	**76**	⇓*i*P		**Pb**	**12 25 29.5**	**-0.4**
IGPR	**InterUniversit**	**0.82**	**87**			**Pb**	**12 25 30.4**	**+0.1**
IGPR						**Sb**	**12 25 41.4**	**+0.2**
IGPR	**InterUniversit**	**0.82**	**87**	⇓*i*P		**Pb**	**12 25 30.4**	**+0.1**
PDPR	**Patillas Dam,**	**0.91**	**84**			**Pb**	**12 25 31.4**	**-0.3**
PDPR						**Sb**	**12 25 43.6**	**+0.1**
PDPR	**Patillas Dam,**	**0.91**	**84**	⇓*i*P		**Pb**	**12 25 31.7**	**0.0**
HUMP	**Col San Antoni**	**1.09**	**78**			**Pb**	**12 25 34.1**	**-0.7**
HUMP						**Sb**	**12 25 47.8**	**-1.1**
HUMP	**Col San Antoni**	**1.09**	**78**	⇓*i*P		**Pb**	**12 25 34.1**	**-0.7**
PCDR	**Punta Cana, DR**	**1.47**	**294**	Pn		**Pb**	**12 25 40.8**	**-0.5**
PCDR						**Sn**	**12 25 58.6**	**-0.6**
PCDR				IAML			12 26 16.2	
	comp=N,587nm,0.9s							
PCDR	**Punta Cana, DR**	**1.47**	**294**	*i* P		**Pg**	**12 25 42.9**	**+0.3**
PCDR				*e*S		**Sg**	**12 26 04.3**	**+2.6**
PCDR				IAML			12 26 13.1	
	comp=Z,172nm,0.6s							
PCDR	**Punta Cana, DR**	**1.47**	**294**	⇓*e*P		**Pn**	**12 25 40.4**	**+0.2**
PCDR				*e*S		**Sn**	**12 25 58.6**	**-0.6**
HIDR	**Higuey Centro**	**1.79**	**292**	⇑*e*P		**Pn**	**12 25 45.7**	**+1.0**
DR12	**Loma Pena Alta**	**2.45**	**291**			**Pn**	**12 25 55.0**	**+1.2**
DR12						**Sn**	**12 26 26.0**	**+2.4**
SMDR	**Samana, DR**	**2.51**	**303**			**Pb**	**12 25 57.6**	**-1.5**
SMDR						**Sb**	**12 26 27.4**	**-2.4**
SMDR	**Samana, DR**	**2.51**	**303**	*e*S		**Sb**	**12 26 27.4**	**-2.4**
LOVI	**El Cajuil, Ovi**	**4.19**	**269**	*i* P		**Pn**	**12 26 18.6**	**+0.8**
LOVI				IAML			12 27 09.0	
	comp=Z,55nm,1.1

JNG S Sg 12 28 42.3 +1.2

*KRNET **05** 12:40:11.7±0.1,39°.44N×73°.25E,h14km,mb4.0*
*NNC **05** 12:40:18.7±2.4,39°.70N×73°.29E,h0km,mb4.0,mpv3.7,*
Error ellipse: s-maj=17.3km s-min=9.4km az=153.0
ISC 05 12:40:13.4±0.9,39°.50N±0°.04×73°.25E±0°.03,h10km,n41,
σ2s83/61,31C-22D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.55**	**21**	⇑*iP*	**Pg**	**12 40 23.7**	**-0.4**
SFK				⇑*iS*	**Sg**	**12 40 32.4**	**+1.0**
OHH	**Osh**	**1.08**	**341**	⇓*iP*	**Pb**	**12 40 33.3**	**-1.0**
OHH				⇓*iS*	**Sn**	**12 40 49.6**	**-0.3**
KSH2	**Kashi**	**1.83**	**100**	Pn	**Pb**	**12 40 45.5**	**-1.5**
KSH2				Sn	**Sg**	**12 41 15.5**	**+3.3**
KSH2	comp=N,370nm,0.6s			smax	smax		
KSH2	comp=E,250nm,0.7s			smax	smax		
ARSB	**Arslanbob**	**1.83**	**354**	⇑*iP*	**Pb**	**12 40 47.1**	**0.0**
ARSB				⇑*iS*	**Sg**	**12 41 12.8**	**+0.4**
BTK	**Batken**	**1.96**	**287**	⇓*iP*	**Pb**	**12 40 48.5**	**-0.7**
BTK				⇓*iS*	**Sg**	**12 41 15.3**	**-1.0**
GAR	**Garm**	**2.33**	**259**	⇓*iP*	**Pb**	**12 40 53.2**	**-2.4**
GAR				⇓*iS*	**Sb**	**12 41 23.6**	**-1.0**
ARK	**Arkit**	**2.50**	**337**	⇑*iP*	**Pb**	**12 40 56.5**	**-1.9**
ARK				⇑*iS*	**Sb**	**12 41 29.2**	**0.0**
TRKS	**Terek-Say**	**2.59**	**322**	⇑*iP*	**Pn**	**12 40 56.7**	**+1.2**
TRKS				⇑*iS*	**Sb**	**12 41 29.8**	**-2.2**
NRN	**Naryn**	**2.85**	**46**	⇑*iP*	**Pb**	**12 41 01.0**	**-3.5**
NRN				⇑*iS*	**Sb**	**12 41 36.9**	**-2.7**
UCH	**Uchtor**	**2.89**	**19**	P	**Pb**	**12 41 03.9**	**-1.4**
	SNR=44						
UCH	**Uchtor**	**2.89**	**19**	⇑*iP*	**Pb**	**12 41 02.2**	**-3.1**
UCH				⇑*iS*	**Sb**	**12 41 39.0**	**-1.8**
MNAS	**Manas**	**3.04**	**349**	⇑*iP*	**Pb**	**12 41 04.1**	**-3.5**
MNAS				⇑*iS*	**Sb**	**12 41 42.4**	**-2.4**
EKS2	**Erkin-Say**	**3.18**	**7**	P	**Pb**	**12 41 08.4**	**-1.7**
	SNR=8.8						
EKS2	**Erkin-Say**	**3.18**	**7**	⇑*iP*	**Pn**	**12 41 06.1**	**+2.5**
EKS2				⇑*iS*	**Sb**	**12 41 45.8**	**-3.2**
AAK	**Ala-Archa**	**3.27**	**16**	P	**Pb**	**12 41 09.6**	**-2.0**
	SNR=36						
AAK	**Ala-Archa**	**3.27**	**16**	⇓Pn	**Pb**	**12 41 09.3**	**-2.3**
	comp=E,13nm,0.5s						
AAK				⇓Lg	Lg	12 41 54.4	
	comp=E,11nm,0.6s						
AAK	**Ala-Archa**	**3.27**	**16**	⇓*iP*	**Pn**	**12 41 07.4**	**+2.5**
AAK				⇓*iS*	**Sb**	**12 41 48.0**	**-3.6**
CHGR	**Chuyangaron**	**3.30**	**256**	⇑*iP*	**Pn**	**12 41 06.4**	**+1.2**
CHGR				⇑*iS*	**Sb**	**12 41 46.5**	**-5.7**
KBK	**Karagaybulak**	**3.40**	**22**	P	**Pb**	**12 41 11.7**	**-2.2**
	SNR=11						
KBK	**Karagaybulak**	**3.40**	**22**	⇑*iP*	**Pn**	**12 41 09.1**	**+2.4**
KBK				⇑*iS*	**Sn**	**12 41 51.1**	**+3.9**
FRU1	**Bishkek**	**3.47**	**17**	⇑*iP*	**Pn**	**12 41 10.2**	**+2.7**
FRU1				⇑*iS*	**Sb**	**12 41 53.0**	**-4.1**
BOOM	**Boomskoye usch**	**3.61**	**33**	⇓*iP*	**Pn**	**12 41 12.0**	**+2.4**
BOOM				⇓*iS*	**Sn**	**12 41 56.0**	**+3.6**
CHMS	**Chumysh**	**3.67**	**17**	P	**Pb**	**12 41 14.8**	**-3.6**
	SNR=8.6						
CHMS	**Chumysh**	**3.67**	**17**	⇑*iP*	**Pn**	**12 41 12.7**	**+2.4**
CHMS				⇑*iS*	**Sn**	**12 41 57.3**	**+3.6**
TKM2	**Tokmak 2**	**3.85**	**27**	P	**Pb**	**12 41 17.2**	**-4.3**
	SNR=13						
TKM2	**Tokmak 2**	**3.85**	**27**	⇓*iP*	**Pn**	**12 41 15.3**	**+2.5**
TKM2				⇓*iS*	**Sn**	**12 42 01.8**	**+3.6**
USP	**Ospenovka**	**3.88**	**14**	P	**Pb**	**12 41 17.5**	**-4.4**
	SNR=9.3						
USP	**Ospenovka**	**3.88**	**14**	⇓*iP*	**Pn**	**12 41 15.6**	**+2.5**
USP				⇓*iS*	**Sn**	**12 42 02.3**	**+3.6**
KDJ	**Kajisay**	**3.97**	**47**	⇓*iP*	**Pn**	**12 41 16.9**	**+2.4**
KDJ				⇓*iS*	**Sn**	**12 42 04.6**	**+3.3**
SGDS	**Sogindy**	**4.08**	**14**	Pg	**Pn**	**12 41 18.8**	**+2.9**
	comp=E,5.8nm,0.2s						
SGDS				Pg	Pb	12 41 19.6	-5.7
	comp=E,5.8nm,0.2s						
SGDS				Lg	Lg	12 42 22.5	
	comp=E,12nm,0.6s						
SGDS				Lg	Lg	12 42 23.5	
	comp=E,25nm,0.5s						
KST	**Kastek**	**4.09**	**29**	Pg	Pb	12 41 20.4	-5.1
	comp=E,11nm,0.5s						
KST				Pg	Pn	12 41 20.4	+4.3
	comp=E,11nm,0.4s						
KST				Lg	Lg	12 42 23.8	
	comp=E,33nm,0.5s						
KST				Lg	Lg	12 42 25.8	
	comp=E,33nm,0.5s						
TARG	**Taragay, Kyrgy**	**4.12**	**56**	⇑*iP*	**Pn**	**12 41 18.8**	**+2.1**
TARG				⇑*iS*	**Sn**	**12 42 07.8**	**+2.6**
KK31	**Karatay Array**	**4.15**	**331**	⇑Pn	**Pn**	**12 41 20.4**	**+3.6**
	comp=E,4.6nm,0.6s,baz=136,slow=12,SNR=52						
KK31				⇓Sn	**Sn**	**12 42 10.4**	**+5.0**
	comp=E,4.1nm,0.2s,baz=191,slow=30,SNR=5.0						
KK31				⇑Lg	Lg	12 42 26.4	
	comp=E,8.9nm,0.3s,baz=150,slow=28,SNR=3.8						
TNSS	**Tian-Shan**	**4.50**	**37**	Pg	Pn	12 41 26.3	+4.3
	comp=E,2.8nm,0.3s						
TNSS				Pg	Pb	12 41 26.8	-5.9
	comp=E,2.8nm,0.3s						
TNSS				Lg	Lg	12 42 35.0	
	comp=E,6.5nm,0.8s						
TNSS				Lg	Lg	12 42 35.9	
	comp=E,6.8nm,0.5s						
MDOK	**Medeo**	**4.64**	**37**	Pg	Pb	12 41 29.1	-5.9
	comp=E,6.3nm,0.3s						
MDOK				Pg	Pn	12 41 31.0	+7.2
	comp=E,5.6nm,0.4s						
MDOK				Lg	Lg	12 42 40.6	
	comp=E,27nm,0.5s						
MDOK				Lg	Lg	12 42 42.1	
	comp=E,28nm,0.6s						
ANVS	**Anan'yevo**	**4.67**	**44**	⇑*iP*	**Pn**	**12 41 26.6**	**+2.4**
ANVS				⇑*iS*	**Sn**	**12 42 21.3**	**+2.7**
PRZ	**Przheval'sk**	**4.90**	**51**	⇓*iP*	**Pn**	**12 41 29.9**	**+2.6**
PRZ				⇓*iS*	**Sn**	**12 42 26.7**	**+2.5**
SATY	**Saty**	**5.26**	**46**	Pg	Pb	12 41 40.0	-5.6
	comp=E,1.9nm,0.2s						
SATY				Lg	Lg	12 42 58.9	
	comp=E,11nm,0.3s						
BTLS	**Baital**	**5.57**	**6**	Pg	Pb	12 41 45.0	-5.7
	comp=E,2.2nm,0.2s						
BTLS				Lg	Lg	12 43 07.9	
	comp=E,8.4nm,0.3s						
PDGK	**Podgornoye**	**6.05**	**49**	⇓Pg	**Pg**	**12 42 07.7**	**-1.5**
	comp=E,3.3nm,0.5s						
PDGK				⇑Lg	Lg	12 43 26.8	
	comp=E,14nm,0.8s						
DJR	**Jarkent**	**6.86**	**43**	Pg	Pb	**12 42 08.5**	**-4.2**
	comp=E,3.0nm,0.4s						
DJR				Lg	Lg	12 43 48.0	
	comp=E,3.3nm,0.6s						

*IDC **05** 12:42:35.5±2.0,7°.65S×127°.98E,h138km±20km,mb3.5/8,*
mbtmp4.1/13,MS3.2/1,Error ellipse: s-maj=19.8km
s-min=14.8km az=85.0
ISC 05 12:42:35.1±0.7,7.70S±0°.06×128°.13E±0°.09,h142km,n14,
σ2s19/16,mb3.5/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.06**	**240**	P	**Pn**	**12 43 49.7**	**+0.5**
	67nm,0.5s,baz=84,slow=10,SNR=13						
BATI				S	**Sn**	**12 44 45.4**	**-1.6**
	76nm,0.3s,baz=60,slow=18,SNR=16						
SIJI	**Sorong**	**7.47**	**25**	P	**Pn**	**12 44 22.2**	**+0.6**
	3.1nm,0.4s,baz=213,slow=18,SNR=4.2						
SIJI				S	**Sn**	**12 45 41.9**	**-3.1**
	11nm,0.9s,baz=235,slow=23,SNR=2.4						
FITZ	**Fitzroy Crossi**	**10.61**	**193**	P	**Pn**	**12 45 04.2**	**+0.8**
	9.7nm,0.3s,baz=26,slow=11,SNR=56						
FITZ				S	**Sn**	**12 46 57.0**	**-3.8**
	11nm,0.4s,baz=129,slow=21,SNR=8.9						
WRA	**Warramunga Arr**	**13.58**	**154**	P	**Pn**	**12 45 42.6**	**+0.6**
	5.9nm,0.5s,baz=328,slow=14,SNR=79						
WRA				S	Sn	12 48 03.9	-8.4
	5.6nm,0.4s,baz=333,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.82**	**161**	P	**Pn**	**12 46 25.4**	**+3.1**
	14nm,0.6s,baz=342,slow=11,SNR=172						
ASAR				S	**S**	**12 49 25.9**	**-4.0**
	2.7nm,0.7s,baz=348,slow=26,SNR=8.1						

PMG	**Port Moresby**	**18.90**	**97**	LR	LR	12 56 19.2	
	comp=Z,69nm,19.4s,baz=314,slow=43						
STKA	**Stephens Creek**	**27.13**	**154**	P	**P**	**12 48 07.6**	**+2.6**
	0.9nm,0.5s,baz=347,slow=9.1,SNR=3.1						
	0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.79**	**312**	P	**P**	**12 49 46.2**	**0.0**
	0.7nm,0.6s,baz=140,slow=6.9,SNR=5.5						
	0.7nm,0.6s						
KSRS	**Korea Array**	**44.92**	**360**	P	**P**	**12 50 35.7**	**0.0**
	0.5nm,0.7s,baz=161,slow=5.9,SNR=2.1						
	0.5nm,0.7s						
SONM	**Songino Array**	**58.54**	**343**	P	**P**	**12 52 16.5**	**-0.2**
	0.5nm,0.4s,baz=162,slow=11,SNR=3.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**67.81**	**328**	P	**P**	**12 53 17.6**	**-0.1**
	0.3nm,0.5s,baz=116,slow=8.5,SNR=4.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**72.15**	**329**	P	**P**	**12 53 43.7**	**-0.4**
	0.5nm,0.6s,baz=137,slow=4.9,SNR=5.4						
	0.5nm,0.6s						
MAW	**Mawson**	**73.62**	**201**	P	**P**	**12 53 53.6**	**+1.1**
	0.3nm,0.3s,baz=45,slow=13,SNR=1.5						
	0.3nm,0.3s						
BRTR	**Keskin Array B**	**98.31**	**309**	P	Pdif	12 55 57.4	+0.4
	0.5nm,0.4s,baz=96,slow=6.0,SNR=2.7						
	0.5nm,0.4s						

CATAC 05 12:43:37.2±0.5,11°.N±4°×8°.7W±°,h17km±7km,M3.8/24,
MLv3.8/24,Error ellipse: s-maj=8.6km s-min=5.0km
az=33.6,confirmed,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**1.33**	**26**	P	Pn	12 44 00.3	-0.8
SAPS	**Ciudad Sandino**	**1.41**	**33**	P	Pn	12 44 01.5	-0.7
SAPS				S	Sb	12 44 21.7	+0.8
NANN	**Nandasmo**	**1.42**	**47**	P	Pb	12 44 03.3	0.0
NANN				S	Sb	12 44 21.5	+0.4
MASN	**Masaya**	**1.43**	**45**	P	Pn	12 44 02.0	-0.5
MASN				S	Sg	12 44 23.5	0.0
MAS3	**Al N del Volca**	**1.44**	**43**	P	Pn	12 44 01.8	-0.8
MAS3				S	Sb	12 44 22.2	+0.5
UNAN	**Cigeo UNAN**	**1.44**	**38**	P	Pn	12 44 02.8	+0.2
UNAN				S	Sn	12 44 21.5	+0.3
AMNT	**Mateare**	**1.46**	**30**	S	Sn	12 44 21.5	-0.1
TISN	**Laguna Tiscapa**	**1.47**	**38**	P	Pn	12 44 02.2	-0.8
ALLN	**Telcor Managua**	**1.48**	**37**	S	Sn	12 44 22.0	0.0
APQ2	**Apoyeque**	**1.48**	**35**	P	Pn	12 44 03.1	0.0
APQ2				S	Sn	12 44 19.7	-2.4
APQ2				S	Sb	12 44 22.0	-0.9
APQ2	**Apoyeque**	**1.48**	**35**	P	Pn	12 44 02.5	-0.6
MGAN	**Managua**	**1.49**	**38**	P	Pn	12 44 03.0	-0.2
MGAN				S	Sb	12 44 23.7	+0.7
APYN	**Apoyeque**	**1.50**	**33**	P	Pn	12 44 03.5	+0.1
APYN				S	Sn	12 44 22.0	-0.6
AERN	**Aeropuerto Man**	**1.53**	**41**	P	Pn	12 44 03.3	-0.6
AERN				S	Sn	12 44 23.5	+0.1
WILN	**Americas 2**	**1.53**	**40**	P	Pn	12 44 03.8	0.0
WILN				S	Sn	12 44 23.7	+0.3
MOMN	**Momotombo**	**1.56**	**24**	P	Pn	12 44 04.2	-0.1
MOMN				S	Sn	12 44 24.2	+0.1
MACN	**El Madrono**	**1.57**	**19**	P	Pn	12 44 03.9	-0.4
MACN				S	Sb	12 44 26.0	+0.6
CNGA	**Al SSO del Vol**	**1.58**	**17**	P	Pn	12 44 04.8	+0.2
CNGN	**Cerro Negro**	**1.59**	**17**	P	Pn	12 44 04.8	+0.1
CNGN				S	Sb	12 44 26.5	+0.4
OMEN	**Al SSO del Vol**	**1.62**	**71**	P	Pn	12 44 05.3	+0.2
CONN	**Concepcion**	**1.64**	**69**	P	Pn	12 44 05.5	+0.2
QUEN	**Al S del Volca**	**1.64**	**11**	P	Pn	12 44 05.3	-0.1
QUEN				S	Sn	12 44 25.2	-0.9
PLRN	**Geotermica Pol**	**1.65**	**14**	P	Pn	12 44 04.8	-0.7
PLRN				S	Sn	12 44 26.5	+0.1
CRIN	**San Cristobal**	**1.72**	**4**	P	Pn	12 44 06.5	0.0
CRIN				S	Sn	12 44 29.0	+0.8
BOAB	**BOACO BROADBAN**	**2.09**	**45**	P	Pn	12 44 11.2	-0.3
BOAB				S	Sn	12 44 36.9	-0.2
LIMN	**Finca el Limon**	**2.23**	**21**	P	Pn	12 44 13.0	-0.5
LIMN				S	Sn	12 44 41.4	+0.8
JTS	**Las Juntas de**	**2.30**	**107**	P	Pg	12 44 21.0	-0.4
JTS				S	Sg	12 44 50.2	-1.0
MATN	**Matagalpa**	**2.30**	**32**	P	Pn	12 44 14.0	-0.5
MATN				S	Sn	12 44 42.4	-0.1
CNCH	**Conchagua**	**2.38**	**345**	P	Pg	12 44 23.2	+0.4
RCPN	**Sur Rio San Ju**	**2.75**	**23**	P	Pn	12 44 20.2	-0.5
RCPN				S	Sn	12 44 54.9	+1.2
RCVN	**Varilla2**	**2.77**	**20**	P	Pn	12 44 20.7	-0.3

*MEX **05** 12:58:47.8±1.1,15°.58N×96°.09W,h18km±8km,*
MD4.7(UNK)
*GFZ **05** 12:58:49.9±1.1,16°.N±14°×9°.6W±°,h29km,M4.4/18,*
mb4.4/18
*NEIC **05** 12:58:51.4±2.4,15°.79N±0°.06×96°.08W±0°.04,h28km±7km,*
mb4.3/51,Md4.7/209(MEX),Error ellipse: s-maj=8.4km
s-min=5.5km az=167.0
*IDC **05** 12:59:00.9±1.8,16°.57N×95°.47W,h78km±12km,mb3.7/13,*
mbtmp4.0/15,MS3.6/33,Error ellipse: s-maj=31.0km
s-min=11.8km az=45.0
ISC 05 12:58:49.9±0.8,15.71N±0°.04×96.09W±0°.03,h26km±5km,
n253,σ1s65/327,mb4.2/21,MS3.6/31,Near coast of
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.06**	**346**	*eS*	**Pb**	**12 58 54.5**	**0.0**
PEIG	**Puerto Escondi**	**1.05**	**286**	*eP*	**Pn**	**12 59 07.0**	**-2.1**
PEIG				*eS*	**Sn**	**12 59 21.1**	**-1.9**
OXLC	**Oaxaca**	**1.47**	**337**		**Pn**	**12 59 14.2**	**-0.7**
OXLC					**Sn**	**12 59 33.2**	**-0.3**
OXLC	**Oaxaca**	**1.47**	**337**	*eP*	**Pn**	**12 59 14.2**	**-0.7**
OXLC				*eS*	**Sn**	**12 59 33.2**	**-0.3**
OXBJ	**Oaxaca**	**1.48**	**336**		**Pn**	**12 59 14.3**	**-0.8**
OXBJ	**Oaxaca**	**1.48**	**336**	*eP*	**Pn**	**12 59 14.3**	**-0.8**
OXBJ				*eS*	**Sn**	**12 59 33.2**	**-0.6**
OXIG	**Oaxaca**	**1.49**	**336**		**Pn**	**12 59 14.5**	**-0.8**
OXIG					**Sn**	**12 59 34.0**	**+0.1**
VHO	**Vista Hermosa**	**1.49**	**336**	*eP*	**Pn**	**12 59 14.5**	**-0.7**
VHO				*eS*	**Sn**	**12 59 34.0**	**+0.1**
CMIG	**Matias Romero**	**1.80**	**40**	P	**Pn**	**12 59 17.8**	**-1.6**
	1μm,0.5s,baz=233,slow=12,SNR=222						
CMIG				Lg	Lg	12 59 37.2	
	526nm,0.3s,baz=329,slow=14,SNR=16						
CMIG	**Matias Romero**	**1.80**	**40**		**Sn**	**12 59 41.7**	**+0.3**
CMIG	**Matias Romero**	**1.80**	**40**	*eP*	**Pn**	**12 59 17.0**	**-2.3**
CMIG				*eS*	**Sn**	**12 59 41.7**	**+0.3**
YOIG	**Yosondua**	**1.80**	**309**		**Pn**	**12 59 19.4**	**-0.2**
YOIG					**Sn**	**12 59 41.8**	**0.0**
YOIG	**Yosondua**	**1.80**	**309**	*eP*	**Pn**	**12 59 19.4**	**-0.2**
YOIG				*eS*	**Sn**	**12 59 41.8**	**0.0**
NEUV	**Arroyo Zacate**	**2.01**	**8**		**Pn**	**12 59 21.3**	**-0.9**
NEUV					**Sb**	**12 59 48.6**	**-1.8**
NEUV	**Arroyo Zacate**	**2.01**	**8**	*eP*	**Pn**	**12 59 21.3**	**-0.9**
NEUV				*eS*	**Sb**	**12 59 48.6**	**-1.8**
CARR	**Arriaga**	**2.16**	**75**	*eP*	**Pn**	**12 59 23.3**	**-1.0**
CARR				*eS*	**Sn**	**12 59 49.5**	**-0.8**
TXIG	**Tlaxiaco**	**2.22**	**314**		**Pn**	**12 59 25.5**	**+0.1**
TXIG	**Tlaxiaco**	**2.22**	**314**	*eP*	**Pn**	**12 59 25.5**	**+0.1**
TOIG	**Toxpalan**	**2.55**	**339**		**Pn**	**12 59 29.8**	**+0.1**
TOIG					**Sn**	**13 00 00.8**	**+0.7**
TOIG	**Toxpalan**	**2.55**	**339**	*eP*	**Pn**	**12 59 29.8**	**+0.1**
TOIG				*eS*	**Sn**	**13 00 00.8**	**+0.7**
HLIG	**Huajuapan de L**	**2.67**	**322**		**Pn**	**12 59 31.9**	**+0.4**
HLIG					**Sn**	**13 00 03.9**	**+0.7**
HLIG	**Huajuapan de L**	**2.67**	**322**	*eP*	**Pn**	**12 59 31.9**	**+0.4**
HLIG				*eS*	**Sn**	**13 00 03.9**	**+0.7**
MIHL	**Minatitlan**	**2.71**	**33**		**Pn**	**12 59 31.7**	**-0.1**
MIHL					**Sn**	**13 00 03.5**	**-0.2**
MIHL	**Minatitlan**	**2.71**	**33**	*eP*	**Pn**	**12 59 31.7**	**-0.1**
MIHL				*eS*	**Sn**	**13 00 03.5**	**-0.2**
MGIG	**Malinaltepec**	**2.87**	**302**	*eP*	**Pn**	**12 59 37.7**	**+3.4**
MGIG				*eS*	**Sn**	**13 00 05.7**	**-2.3**
FTIG	**Fresnillo de T**	**2.93**	**318**		**Pn**	**12 59 36.1**	**+1.1**
FTIG					**Sn**	**13 00 09.1**	**-0.4**
FTIG	**Fresnillo de T**	**2.93**	**318**	*eP*	**Pn**	**12 59 36.1**	**+1.1**
FTIG				*eS*	**Sn**	**13 00 09.1**	**-0.4**
TPIG	**Tehuac#an**	**2.96**	**336**		**Pn**	**12 59 36.6**	**+1.2**
TPIG					**Sn**	**13 00 10.8**	**+0.7**
TPIG	**Tehuac#an**	**2.96**	**336**	*eP*	**Pn**	**12 59 36.6**	**+1.2**
TPIG				*eS*	**Sn**	**13 00 10.8**	**+0.7**
TLIG	**Tlapa**	**3.00**	**308**		**Pn**	**12 59 37.2**	**+1.2**
TLIG	**Tlapa**	**3.00**	**308**	*eP*	**Pn**	**12 59 38.0**	**+2.0**
TLIG				*eS*	**Sn**	**13 00 11.0**	**-0.3**
TGIG		**3.04**	**69**		**Pn**	**12 59 35.8**	**-0.8**
TGIG		**3.04**	**69**	*eP*	**Pn**	**12 59 35.8**	**-0.8**
CRIG	**Cruz Grande**	**3.09**	**290**		**Pn**	**12 59 36.1**	**-1.0**
CRIG	**Cruz Grande**	**3.09**	**290**	*eP*	**Pn**	**12 59 36.1**	**-1.0**
CRIG				*eS*	**Sn**	**13 00 09.4**	**-3.9**
HMTT	**Tlapaneco**	**3.15**	**312**		**Pn**	**12 59 38.9**	**+0.9**
HMTT					**Sn**	**13 00 14.0**	**-0.7**
HMTT	**Tlapaneco**	**3.15**	**312**	*eP*	**Pn**	**12 59 38.9**	**+0.9**
HMTT				*eS*	**Sn**	**13 00 14.0**	**-0.7**
DAIG	**Los Arroyos**	**3.66**	**291**		**Pn**	**12 59 44.4**	**-0.5**
DAIG	**Los Arroyos**	**3.66**	**291**	*eP*	**Pn**	**12 59 44.4**	**-0.5**
DAIG				*eS*	**Sn**	**13 00 24.5**	**-2.7**
JAUV	**Jalcomulco**	**3.70**	**350**		**Pn**	**12 59 44.2**	**-1.3**
JAUV					**Sn**	**13 00 29.1**	**+0.7**
JAUV	**Jalcomulco**	**3.70**	**350**	*eP*	**Pn**	**12 59 44.2**	**-1.3**
JAUV				*eS*	**Sn**	**13 00 29.1**	**+0.7**
PATR	**El Naranjo**	**3.77**	**98**		**Pn**	**12 59 45.9**	**-0.7**
PATR	**El Naranjo**	**3.77**	**98**	*eP*	**Pn**	**12 59 45.9**	**-0.7**
THIG		**3.78**	**102**		**Pn**	**12 59 45.0**	**-1.6**
THIG		**3.78**	**102**	*eP*	**Pn**	**12 59 45.0**	**-1.6**
THIG				*eS*	**Sn**	**13 00 27.3**	**-2.9**
PAVE	**Pavencul**	**3.81**	**97**		**Pn**	**12 59 46.6**	**-0.6**
PAVE	**Pavencul**	**3.81**	**97**	*eP*	**Pn**	**12 59 46.6**	**-0.6**
PHPU	**Puebla**	**3.86**	**329**		**Pn**	**12 59 48.4**	**+0.4**
PHPU	**Puebla**	**3.86**	**329**	*eP*	**Pn**	**12 59 48.4**	**+0.4**
PHPU				*eS*	**Sn**	**13 00 31.5**	**-1.2**
CHUJ	**Union Juarez**	**3.89**	**99**	*eP*	**Pn**	**12 59 47.3**	**-1.1**
PPAX	**Atlixo**	**3.89**	**326**	*eP*	**Pn**	**12 59 51.7**	**+3.3**
PPAX				*eS*	**Sn**	**13 00 35.2**	**+1.9**
LVIG	**Laguna Verde**	**4.00**	**356**		**Pn**	**12 59 50.0**	**+0.4**
LVIG	**Laguna Verde**	**4.00**	**356**	*eP*	**Pn**	**12 59 50.0**	**+0.4**
LVIG				*eS*	**Sn**	**13 00 37.0**	**+1.2**
PBCV	**Popocatepetl**	**4.02**	**325**	*eP*	**Pn**	**12 59 51.9**	**+1.7**
PBCV				*eS*	**Sn**	**13 00 35.2**	**-1.5**
MEIG	**Mezcala**	**4.03**	**304**		**Pn**	**12 59 52.6**	**+2.5**
MEIG					**Sn**	**13 00 37.6**	**+0.9**
MEIG	**Mezcala**	**4.03**	**304**	*eP*	**Pn**	**12 59 52.6**	**+2.5**
MEIG				*eS*	**Sn**	**13 00 37.6**	**+0.9**
PPCU	**Popocatapetl**	**4.07**	**324**	*eP*	**Pn**	**12 59 53.8**	**+2.7**
PPCU				*eS*	**Sn**	**13 00 42.8**	**+4.7**
PPSX	**Xalitzintla**	**4.07**	**326**	*eP*	**Pn**	**12 59 53.8**	**+2.9**
PPSX				*eS*	**Sn**	**13 00 39.6**	**+1.6**
PBXN	**Popocatepetl**	**4.09**	**324**	*eP*	**Pn**	**12 59 53.9**	**+2.5**
PBXN				*eS*	**Sn**	**13 00 38.4**	**-0.3**
PBPN	**Popocatepetl**	**4.10**	**324**	*eP*	**Pn**	**12 59 53.8**	**+2.3**
PBPN				*eS*	**Sn**	**13 00 39.9**	**+0.9**
PPM	**Popocatepetl**	**4.12**	**324**	*eP*	**Pn**	**12 59 55.5**	**+3.7**
PPM				*eS*	**Sn**	**13 00 41.1**	**+1.6**
PPIG	**Popocatepetl**	**4.12**	**324**		**Sn**	**13 00 41.1**	**+1.6**
PLIG	**Platanillo**	**4.21**	**310**		**Pn**	**12 59 52.3**	**-0.3**
PLIG					**Sn**	**13 00 41.2**	**+0.2**
PLIG	**Platanillo**	**4.21**	**310**	*eP*	**Pn**	**12 59 52.3**	**-0.3**
PLIG				*eS*	**Sn**	**13 00 41.2**	**+0.2**
CAIG	**El Cayaco**	**4.22**	**289**		**Pn**	**12 59 54.4**	**+1.7**
CAIG					**Sn**	**13 00 41.2**	**0.0**
CAIG	**El Cayaco**	**4.22**	**289**	*eP*	**Pn**	**12 59 54.4**	**+1.7**
CAIG				*eS*	**Sn**	**13 00 41.2**	**0.0**
YAIG	**Yautepec**	**4.23**	**318**		**Pn**	**12 59 54.6**	**+1.7**
YAIG					**Sn**	**13 00 41.3**	**-0.3**
YAIG	**Yautepec**	**4.23**	**318**	*eP*	**Pn**	**12 59 54.6**	**+1.7**
YAIG				*eS*	**Sn**	**13 00 41.3**	**-0.3**
AMVM	**AMECAMECA**	**4.26**	**323**		**Sn**	**13 00 43.5**	**+0.8**
AMVM	**AMECAMECA**	**4.26**	**323**	*eP*	**Pn**	**12 59 58.2**	**+4.7**
AMVM				*eS*	**Sn**	**13 00 43.5**	**+0.8**
RTAL	**Retalhuleu**	**4.41**	**105**	Pn	**Pn**	**12 59 56.1**	**+0.8**
RTAL	**Retalhuleu**	**4.41**	**105**	*eP*	**Pn**	**12 59 54.2**	**-1.0**
RTAL		

PETF				*e*S		**Sn**	**13 01 23.4**	**-4.1**
CTUV	**Llano Grande**	**6.12**	**340**			**Pn**	**13 00 20.6**	**+1.8**
CTUV						**Sn**	**13 01 28.6**	**+0.7**
CTUV	**Llano Grande**	**6.12**	**340**	*e*P		**Pn**	**13 00 20.6**	**+1.8**
CTUV				*e*S		**Sn**	**13 01 28.6**	**+0.7**
MOIG	**Morelia**	**6.26**	**310**	Pn		**Pn**	**13 00 22.3**	**+1.5**
MOIG	**Morelia**	**6.26**	**310**	*e*P		**Pn**	**13 00 21.1**	**+0.2**
MOIG				*e*S		**Sn**	**13 01 30.1**	**-1.7**
ESQI	**Esquipulas**	**6.62**	**99**	Pn		**Pn**	**13 00 26.8**	**+1.1**
MTO3	**Montecristo**	**6.63**	**100**			**Pn**	**13 00 28.0**	**+1.9**
RPIG	**Rio Verde**	**7.16**	**330**			**Pn**	**13 00 34.3**	**+1.1**
RPIG	**Rio Verde**	**7.16**	**330**	*e*P		**Pn**	**13 00 34.3**	**+1.1**
RPIG				*e*S		**Sn**	**13 01 51.9**	**-1.9**
MMIG	**Aquila**	**7.40**	**291**			**Pn**	**13 00 36.7**	**+0.4**
MMIG	**Aquila**	**7.40**	**291**	*e*P		**Pn**	**13 00 36.7**	**+0.4**
MMIG				*e*S		**Sn**	**13 01 54.9**	**-4.6**
GTIG	**Gomez Farias**	**7.87**	**339**			**Pn**	**13 00 42.7**	**-0.2**
GTIG	**Gomez Farias**	**7.87**	**339**	*e*P		**Pn**	**13 00 42.7**	**-0.2**
MYIG	**Merida**	**7.98**	**48**			**Pn**	**13 00 43.8**	**-0.5**
MYIG	**Merida**	**7.98**	**48**	*e*P		**Pn**	**13 00 43.8**	**-0.5**
MYIG				*e*S		**Sn**	**13 02 09.0**	**-4.7**
ZAIG	**Zacatecas**	**9.31**	**320**	Pn		**Pn**	**13 01 02.7**	**-0.1**
ZAIG	**Zacatecas**	**9.31**	**320**	*e*P		**Pn**	**13 01 04.7**	**+1.8**
ZAIG	**Zacatecas**	**9.31**	**320**	P		**Pn**	**13 01 06.8**	**+4.0**
CJM	**Chamela**	**9.33**	**295**	*e*P		**Pn**	**13 01 04.7**	**+1.9**
CJM				*e*S		**Sn**	**13 02 41.6**	**-5.4**
ANIG	**Ahuacatlan**	**9.60**	**305**			**Pn**	**13 01 08.2**	**+1.6**
ANIG	**Ahuacatlan**	**9.60**	**305**	*e*P		**Pn**	**13 01 08.2**	**+1.6**
ANIG				*e*S		**Sn**	**13 02 50.0**	**-3.9**
LNIG	**Linares**	**9.67**	**341**	*e*P		**Pn**	**13 01 09.9**	**+2.4**
LNIG				*e*S		**Sn**	**13 02 53.1**	**-2.4**
JUD3	**Juan Diaz 3**	**11.67**	**117**	Pn		**Pn**	**13 01 35.2**	**+0.2**
JTS	**Las Juntas de**	**12.12**	**115**	P		**P**	**13 01 49.3**	**-4.2**
	4.2nm,0.8s,baz=327,slow=20,SNR=2.7							
JTS				LR		LR	13 06 01.5	
	comp=Z,129nm,20.9s,baz=313,slow=35							
HNDO	**Hondo**	**14.06**	**348**			**Pn**	**13 02 06.6**	**-1.0**
HKT	**Hockley**	**14.18**	**1**	P		**Pn**	**13 02 08.8**	**-0.2**
HPIG		**14.28**	**323**	P		**Pn**	**13 02 14.2**	**+3.4**
435B	**Jarrell**	**15.07**	**355**	Pn		**Pn**	**13 02 20.1**	**-1.1**
JCT	**Junction City**	**15.09**	**348**	Pn		**Pn**	**13 02 20.8**	**-0.7**
JCT				IAmb		IAmb	13 02 56.9	
	comp=Z,17nm,0.9s							
SAND	**Sanderson**	**15.22**	**340**			**Pn**	**13 02 23.1**	**-0.2**
TXAR	**Lajitas Array**	**15.25**	**334**	P		**Pn**	**13 02 25.7**	**+2.0**
	comp=Z,3.5nm,0.9s,baz=146,slow=8.4,SNR=29							
TXAR				LR		LR	13 07 35.3	
	comp=Z,128nm,20.5s,baz=302,slow=35							
TXAR	**Lajitas Array**	**15.25**	**334**			**Pn**	**13 02 24.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**15.25**	**334**			**Pn**	**13 02 24.2**	**+0.5**
BRDY	**Brady**	**15.73**	**351**			**Pn**	**13 02 29.3**	**-0.6**
BRDY				IAmb		IAmb	13 02 43.5	
	comp=Z,15nm,0.9s							
OZNA	**Ozona**	**15.83**	**344**			**Pn**	**13 02 31.1**	**0.0**
OZNA				IAmb		IAmb	13 02 48.1	
	comp=Z,17nm,0.8s							
ALPN	**Alpine**	**16.16**	**336**	Pn		**Pn**	**13 02 35.4**	**0.0**
ALPN				IAmb		IAmb	13 02 48.4	
	comp=Z,23nm,1.2s							
FW13	**Cleburne**	**16.61**	**356**			**Pn**	**13 02 39.1**	**-2.0**
FW13				IAmb		IAmb	13 02 51.6	
	comp=Z,26nm,1.0s							
346A	**Big Creek Wild**	**16.74**	**20**			**Pn**	**13 02 41.5**	**-1.2**
346A				IAmb		IAmb	13 03 02.2	
	comp=Z,37nm,1.0s							
SGCY	**Sterling City**	**16.77**	**345**	Pn		**Pn**	**13 02 42.5**	**-0.7**
SGCY				IAmb		IAmb	13 03 03.3	
	comp=Z,27nm,1.0s							
TREL	**Terrell**	**16.95**	**0**	Pn		**Pn**	**13 02 43.8**	**-1.5**
TREL				IAmb		IAmb	13 02 54.9	
	comp=Z,22nm,0.8s							
PECS	**Pecos**	**17.13**	**337**	Pn		**Pn**	**13 02 47.6**	**-0.1**
PECS				IAmb		IAmb	13 03 04.5	
	comp=Z,17nm,1.0s							
ODSA	**Odessa**	**17.36**	**341**	Pn		**Pn**	**13 02 49.8**	**-0.8**
ODSA				IAmb		IAmb	13 03 01.0	
	comp=Z,34nm,0.8s							
Z35A	**Perchaven, San**	**17.58**	**357**			**Pn**	**13 02 52.2**	**-0.9**
Z35A				IAmb		IAmb	13 03 15.6	
	comp=Z,18nm,0.8s							
146A	**Union**	**18.02**	**20**	P		**Pn**	**13 02 58.5**	**-0.1**
146A				IAmb		IAmb	13 03 08.3	
	comp=Z,16nm,0.9s							
MNTX	**Cornudas Mount**	**18.03**	**334**	P		**P**	**13 02 59.4**	**+0.3**
MNTX	**Cornudas Mount**	**18.03**	**334**	P		**P**	**13 02 59.8**	**+0.7**
WTFS	**Witchita Falls**	**18.11**	**354**	Pn		**Pn**	**13 02 57.9**	**-1.8**
WTFS				IAmb		IAmb	13 03 08.6	
	comp=Z,23nm,1.0s							
LOOK	**Love County**	**18.23**	**357**			**Pn**	**13 03 00.9**	**-0.3**
250A	**Grady**	**18.50**	**27**			**P**	**13 03 03.4**	**-0.8**
250A				IAmb		IAmb	13 03 15.5	
	comp=Z,17nm,0.6s							
352A	**Blakely**	**18.71**	**31**	P		**P**	**13 03 04.5**	**-2.1**
352A				IAmb		IAmb	13 03 20.1	
	comp=Z,14nm,0.6s							
Z47A	**Carrollton**	**18.87**	**21**	P		**P**	**13 03 06.1**	**-2.2**
Z47A				IAmb		IAmb	13 03 19.2	
	comp=Z,17nm,0.9s							
MIAR	**Mount Ida**	**18.89**	**6**	P		**P**	**13 03 07.5**	**-1.1**
HSIG		**19.06**	**317**			**P**	**13 03 11.3**	**+0.9**
WMOK	**Wichita Mounta**	**19.10**	**353**	P		**P**	**13 03 10.2**	**-0.7**
W35A	**Tecumseh**	**19.38**	**358**	P		**P**	**13 03 13.2**	**-0.7**
319A	**Douglas**	**19.70**	**325**	P		**P**	**13 03 18.8**	**+1.2**
319A				IAmb		IAmb	13 03 30.1	
	comp=Z,20nm,1.3s							
TUL3	**Leonard**	**20.12**	**1**			**P**	**13 03 20.3**	**-1.7**
154A	**Montrose**	**20.55**	**33**	P		**P**	**13 03 25.9**	**-0.7**
FPAL	**Fort Paine**	**20.99**	**25**			**P**	**13 03 30.2**	**-1.2**
GOGA	**Godfrey**	**21.00**	**31**	P		**P**	**13 03 27.8**	**-3.7**
TUC	**Tucson**	**21.25**	**324**	P		**P**	**13 03 36.8**	**+2.6**
ANMO	**Albuquerque**	**21.30**	**336**	P		**P**	**13 03 36.2**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=149,slow=12,SNR=13							
ANMO				LR		LR	13 12 45.0	
	comp=Z,166nm,20.2s,baz=64,slow=40							
	comp=Z,2.0nm,0.8s							
ANMO	**Albuquerque**	**21.30**	**336**			**P**	**13 03 35.6**	**+0.7**
ANMO	**Albuquerque**	**21.30**	**336**	P		**P**	**13 03 35.2**	**+0.3**
WVT	**Waverly**	**21.63**	**18**			**P**	**13 03 37.5**	**-0.8**
WVT				IAmb		IAmb	13 03 46.8	
	comp=Z,7.5nm,0.7s							
WVT	**Waverly**	**21.63**	**18**	P		**P**	**13 03 34.9**	**-3.4**
TKL	**Tuckaleechee C**	**22.72**	**27**	P		**P**	**13 03 46.4**	**-3.5**
	comp=Z,3.0nm,0.7s,baz=184,slow=15,SNR=7.1							
TKL				LR		LR	13 15 33.8	
	comp=Z,107nm,18.5s,baz=234,slow=46							
	comp=Z,3.0nm,0.7s							
ROSC	**El Rosal**	**23.96**	**114**	P		**P**	**13 04 08.4**	**+5.5**
	comp=Z,3.8nm,0.4s,baz=354,slow=14,SNR=5.3							
	comp=Z,3.8nm,0.4s							
WCI	**Wyandotte Cave**	**24.04**	**19**	P		**P**	**13 04 00.4**	**-2.5**
V55A	**Taylorsville**	**24.06**	**31**			**P**	**13 04 00.6**	**-2.6**
V55A				IAmb		IAmb	13 04 08.2	
	comp=Z,9.5nm,0.7s							
MVCO	**Mesa Verde**	**24.08**	**335**	P		**P**	**13 04 04.5**	**+1.0**
MVCO				pP		**pP**	**13 04 13.1**	**+1.9**
GLA	**Glamis**	**24.21**	**319**	P		**P**	**13 04 05.5**	**+0.9**
BC3	**Big Chuckawall**	**25.00**	**319**			**P**	**13 04 13.1**	**+1.2**
BC3				IAmb		IAmb	13 04 22.6	
	comp=Z,11nm,0.9s							
ISCO	**Idaho Springs**	**25.40**	**343**	P		**P**	**13 04 15.9**	**+0.2**
ISCO				pP		**pP**	**13 04 23.8**	**+0.4**
BELC	**Belle Mtn. Jos**	**25.57**	**319**	P		**P**	**13 04 19.0**	**+2.0**
BELC				IAmb		IAmb	13 04 29.5	
	comp=Z,7.4nm,1.0s							
PFO	**Pinyon Flats O**	**25.61**	**318**	LR		LR	13 15 47.1	
	comp=Z,79nm,20.6s,baz=244,slow=40							
HMU	**Henry Mountain**	**25.64**	**332**	P		**P**	**13 04 19.1**	**+1.2**
OGNE	**Ogallala**	**25.67**	**350**			**P**	**13 04 18.7**	**+0.9**
PKCU	**Pink Cliffs**	**25.98**	**330**			**P**	**13 04 21.2**	**+0.2**
PKCU				IAmb		IAmb	13 04 33.5	
	comp=Z,6.3nm,1.0s							
Q16A	**Castle Valley**	**26.64**	**333**			**P**	**13 04 27.0**	**+0.1**
Q16A				IAmb		IAmb	13 04 41.6	
	comp=Z,5.4nm,0.9s							
ECSD	**EROS Data Cent**	**27.93**	**359**	P		**P**	**13 04 36.4**	**-1.8**
ATAH	**Atahualpa**	**28.68**	**141**	LR		LR	13 15 03.1	
	comp=Z,79nm,18.3s,baz=331,slow=33							
HWUT	**Hardware Ranch**	**29.06**	**336**	P		**P**	**13 04 49.1**	**+0.6**
ALLY	**Alegheny Colle**	**29.29**	**25**	P		**P**	**13 04 49.2**	**-1.0**
ALLY				IAmb		IAmb	13 04 49.7	
	comp=Z,5.8nm,0.8s							
BW06	**Boulder Array**	**29.33**	**340**	P		**P**	**13 04 51.0**	**+0.1**
PDAR	**Pinedale Array**	**29.33**	**340**	P		**P**	**13 04 51.2**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=139,slow=10.0,SNR=10							
PDAR				LR		LR	13 17 48.0	
	comp=Z,42nm,18.3s,baz=162,slow=39							
	comp=Z,1.1nm,0.7s							
HVU	**Hansel Valley**	**29.70**	**334**	P		**P**	**13 04 54.8**	**+0.8**
AHID	**Auburn Hatcher**	**29.88**	**337**	P		**P**	**13 04 57.0**	**+1.4**
NVAR	**Mina Array Bea**	**29.90**	**323**	P		**P**	**13 04 58.8**	**+2.8**
	comp=Z,2.6nm,0.8s,baz=143,slow=9.5,SNR=21							
NVAR				LR		LR	13 18 32.6	
	comp=Z,147nm,18.7s,baz=138,slow=40							
	comp=Z,2.6nm,0.8s							
ELK	**Elko**	**29.98**	**330**	LR		LR	13 18 44.1	
	comp=Z,240nm,20.6s,baz=156,slow=40							
HLID	**Hailey**	**31.85**	**334**	P		**P**	**13 05 14.9**	**+1.9**
SADO	**Sadowa**	**32.32**	**23**	LR		LR	13 21 25.8	
	comp=Z,75nm,18.2s,baz=150,slow=43							
EYMN	**Ely**	**32.37**	**6**	P		**P**	**13 05 15.9**	**-1.4**
AGMN	**Agassiz Nation**	**32.50**	**0**	P		**P**	**13 05 17.6**	**-0.8**
WVOR	**Wild Horse Val**	**32.92**	**329**	P		**P**	**13 05 24.5**	**+2.1**
ULM	**Lac du Bonnet**	**34.45**	**0**	P		**P**	**13 05 33.3**	**-2.1**
	comp=Z,5.3nm,0.9s,baz=182,slow=11,SNR=12							
ULM				LR		LR	13 21 06.6	
	comp=Z,65nm,18.4s,baz=161,slow=40							
	comp=Z,5.3nm,0.9s							
YBH	**Yreka Blue Hor**	**34.62**	**324**	LR		LR	13 20 48.6	
	comp=Z,122nm,19.1s,baz=154,slow=38							
NEW	**Newport**	**36.79**	**336**	LR			13 23 07.9	
	comp=Z,79nm,19.6s,baz=157,slow=40							
NEW	**Newport**	**36.79**	**336**	P		**P**	**13 05 56.2**	**+0.6**
FFC	**Flin Flon**	**39.20**	**355**			**P**	**13 06 15.2**	**-0.5**
FFC	**Flin Flon**	**39.20**	**355**	P		**P**	**13 06 14.5**	**-1.3**
LPAZ	**La Paz**	**42.10**	**138**	P		P	13 06 47.5	+6.7
	comp=Z,1.5nm,1.0s,baz=319,slow=11,SNR=7.4							
	comp=Z,1.5nm,1.0s							
MDP	**Montagnes des**	**43.93**	**99**	LR		LR	13 27 19.9	
	comp=Z,52nm,19.8s,baz=328,slow=39							
BBB	**Bella Bella**	**44.37**	**332**	LR		LR	13 28 06.5	
	comp=Z,109nm,20.0s,baz=192,slow=40							
RPN	**Rapa Nui**	**44.48**	**197**	LR		LR	13 20 44.0	
	comp=Z,56nm,20.3s,baz=21,slow=29							
SCHQ	**Schefferville**	**45.12**	**24**	P		P	13 06 59.2	-4.8
	comp=Z,2.6nm,0.8s,baz=235,slow=11,SNR=5.3							
	comp=Z,2.6nm,0.8s							
YKA	**Yellowknife Ar**	**48.52**	**349**	P		**P**	**13 07 29.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=155,slow=7.5,SNR=4.4							
YKA				LR		LR	13 28 56.4	
	comp=Z,58nm,18.9s,baz=264,slow=38							
	comp=Z,0.8nm,0.7s							
GO03	**Copiapo**	**49.82**	**150**	*e*S		S	13 14 41.1	-8.1
GO03				IAML			13 14 46.7	
	comp=N,49nm,0.4s							
FRB	**Frobisher Bay**	**51.63**	**15**	LR		LR	13 32 11.2	
	comp=N,46nm,20.3s,baz=318,slow=39							
INK	**Inuvik**	**57.72**	**344**	LR		LR	13 35 15.7	
	comp=N,58nm,18.3s,baz=233,slow=38							
F30M	**Barrier River**	**57.83**	**343**	P		**P**	**13 08 39.3**	**+0.3**
RES	**Resolute Bay**	**58.98**	**0**	LR		LR	13 35 55.3	
	comp=N,48nm,18.1s,baz=328,slow=38							
ILAR	**Eielson Array**	**59.73**	**337**	P		**P**	**13 08 52.5**	**+0.3**
	comp=N,1.5nm,0.9s,baz=120,slow=4.4,SNR=11							
ILAR				LR		LR	13 36 31.8	
	comp=N,66nm,18.1s,baz=237,slow=38							
	comp=N,1.5nm,0.9s							
F25K	**Christian Rive**	**60.79**	**340**	P		**P**	**13 09 00.4**	**+1.0**
F25K				IAmb		IAmb	13 09 09.1	
	comp=Z,2.4nm,1.0s							
PPT	**Papeete**	**62.23**	**240**	LR		LR	13 28 27.6	
	comp=Z,39nm,19.0s,baz=128,slow=28							
BORG	**Borgarnes**	**69.41**	**26**	LR		LR	13 39 36.9	
	comp=Z,23nm,20.1s,baz=266,slow=36							
EKA	**Eskdalemuir Ar**	**78.89**	**36**	P		**P**	**13 10 50.0**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=218,slow=25,SNR=3.7							
EKA				LR		LR	13 42 19.9	
	comp=Z,34nm,22.0s,baz=190,slow=33							
	comp=Z,2.6nm,0.8s							
ESDC	**Sonseca Array**	**81.75**	**51**	P		**P**	**13 11 06.9**	**+0.1**
	comp=Z,0.9nm,1.1s,baz=292,slow=4.4,SNR=2.9							
	comp=Z,0.9nm,1.1s							
NB2	**NORSAR Subarra**	**84.51**	**28**	P		**P**	**13 11 21.3**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=296,slow=5.3							
NOA	**NORSAR Array B**	**84.51**	**28**	P		**P**	**13 11 20.6**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=295,slow=4.9,SNR=4.8							
NOA				LR		LR	13 47 31.7	
	comp=Z,22nm,21.9s,baz=285,slow=35							
	comp=Z,0.9nm,0.8s							
ARCES	**ARCESS Array B**	**85.73**	**17**	LR		LR	13 49 04.8	
	comp=Z,29nm,21.9s,baz=295,slow=36							
HFS	**Hagfors**	**86.00**	**28**	LR		LR	13 48 01.7	
	comp=Z,34nm,22.0s,baz=280,slow=35							
DAVOX	**Davos/Dischmat**	**89.24**	**41**	LR		LR	13 47 35.6	
	comp=Z,44nm,19.4s,baz=255,slow=33							
FINES	**FINESS Array B**	**90.60**	**24**	LR		LR	13 53 15.9	
	comp=Z,31nm,19.9s,baz=216,slow=36							
VRAC	**Vranov**	**92.27**	**37**	LR		LR	13 51 31.5	
	comp=Z,25nm,21.2s,baz=260,slow=34							
YAK	**Yakutsk**	**94.55**	**340**	LR		LR	13 58 04.9	
	comp=Z,27nm,18.1s,baz=173,slow=38							
VAE	**Valguarnera**	**96.05**	**49**	LR		LR	13 51 09.4	
	comp=Z,88nm,18.6s,baz=359,slow=33							
AKASG	**Malin Array Be**	**98.42**	**32**	LR		LR	13 58 05.7	
	comp=Z,38nm,19.1s,baz=242,slow=36							
HHC	**Hu-ho-hao-te**	**118.15**	**336**	*e*P		**PKPdf**	**13 17 35.1**	**-0.1**
NJ2	**Nanjing**	**121.89**	**325**	*e*P		**PKiKP**	**13 17 43.6**	**+1.0**
NJ2				pmax		pmax		
	comp=Z,22nm,0.5s							
WRA	**Warramunga Arr**	**131.94**	**257**	PKP		**PKiKP**	**13 18 07.6**	**+4.6**
	comp=Z,0.5nm,0.8s,baz=80,slow=2.8,SNR=2.2							
PZH	**PanZhiHua**	**134.60**	**337**	PKP		**PKPdf**	**13 18 07.9**	**+0.9**

*SDD **05** 13:02:25.7±2.1, 19°.98N×71°.07W, h20km±11km, MD2.7, ML1.9, MW2.5, Presumed earthquake*
*OSPL **05** 13:02:26.8±1.1, 20°.05N×71°.03W, h12km±4km, ML1.7, Presumed earthquake*
ISC 05 13:02:24.2±1.6, 20°.03N±0°.09×71°.02W±0°.05, h28km±7km, n12, σ0°92/21, 14C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LUDR	**Luperon**	**0.14**	**154**	↑*e*Pg		**Pb**	**13 02 30.2**	**+0.6**
LUDR				↑*e*Sg		**Sb**	**13 02 33.0**	**-0.2**
LOPP1	**Punta Rusia, P**	**0.24**	**225**	*i* P		**Pn**	**13 02 31.4**	**-0.5**
LOPP1				*e*S		**Sb**	**13 02 35.8**	**+0.8**
LOPP1				IAML			13 02 36.2	
	comp=Z,155nm,0.3s							
MADR	**Mao Valverde**	**0.46**	**190**	↑*e*Pg		**Pb**	**13 02 33.1**	**-0.8**
MADR				↑*e*Sg		**Sb**	**13 02 39.6**	**-1.0**
MADR				IAML			13 02 41.3	
	comp=N,97nm,0.5s							
MCDR	**Montecristi**	**0.61**	**258**	↑*e*Pg		**Pn**	**13 02 36.2**	**-0.8**
MCDR				↑*e*Sg		**Sb**	**13 02 44.7**	**0.0**
MCDR				IAML			13 02 52.8	
	comp=N,50nm,0.6s							
SC01	**Santiago de Io**	**0.66**	**155**	↑*e*Pg		**Pb**	**13 02 35.5**	**-1.6**
SC01				↑*e*Sg		**Sb**	**13 02 45.1**	**-0.7**
SC01				IAML			13 02 53.6	
	comp=N,30nm,1.4s							
SC01	**Santiago de Io**	**0.66**	**155**	*e*S		**Sn**	**13 02 47.7**	**+0.7**
SC01				IAML			13 02 49.7	
	comp=Z,26nm,0.5s							
LODA1	**ITESIL, Dajabo**	**0.80**	**234**	*e*S		**Sn**	**13 02 51.4**	**+0.8**
SDDR	**Presa de Saban**	**1.07**	**194**	↑*e*Pg		**Pn**	**13 02 43.0**	**-0.4**
SDDR				↑*e*Sg		**Sb**	**13 02 56.7**	**-1.0**
SDDR				IAML			13 02 58.1	
	comp=N,17nm,0.4s							
LONE3	**El Aguacate, B**	**1.47**	**196**	*i* P		**Pb**	**13 02 51.4**	**+0.4**
LONE3				*e*S		**Sb**	**13 03 10.2**	**+0.9**
LODU1	**El Espartillar**	**1.72**	**195**	*i* P		**Pb**	**13 02 55.8**	**+0.8**
BANI	**BANI**	**1.74**	**159**	↑*e*Pg		**Pb**	**13 02 55.8**	**+0.3**
BANI				↑*e*Sg		**Sb**	**13 03 18.5**	**+1.5**
BANI				IAML			13 03 22.2	
	comp=N,32nm,0.2s							
HATOM	**Hato Mayor del**	**1.98**	**128**	↑*e*Pg		**Pb**	**13 02 59.1**	**-0.4**
HATOM				↑*e*Sg		**Sb**	**13 03 25.1**	**+1.4**
HATOM				IAML			13 03 27.8	
	comp=N,10nm,0.5s							

*NEIC **05** 13:09:26.0±0.6, 20°.5S±0°.1×178°.1W±0°.1, h561km±8km, mb4.3/20, Error ellipse: s-maj=18.4km s-min=16.3km az=52.0*
*IDC **05** 13:09:27.4±2.2, 20°.25S×178°.27W, h577km±24km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=31.1km s-min=27.8km az=25.0*
ISC 05 13:09:25.2±0.7, 20°.44S±0°.10×178°.1W±0°.1, h550km, n30, σ0°89/30, mb4.2/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MSVF	**Nonsavu**	**4.51**	**306**	P		**P**	**13 10 53.2**	**+2.0**
	8.5nm,0.4s,baz=142,slow=2.8,SNR=32							
MSVF	**Nonsavu**	**4.51**	**306**	P		**P**	**13 10 52.8**	**+1.6**
RAO	**Raoul Island**	**8.77**	**179**	P		**P**	**13 11 31.1**	**+0.5**
AFI	**Afiamalu**	**8.89**	**44**	P		**P**	**13 11 31.8**	**-0.2**
MRZ	**Mangatainoka R**	**20.86**	**194**	P		**P**	**13 13 28.0**	**-0.9**
INZ	**Inchbonnie**	**23.89**	**199**	P		**P**	**13 13 55.9**	**0.0**
CTAO	**Charters Tower**	**33.38**	**264**	P		**P**	**13 15 18.5**	**-0.1**
CTAO				IAmb		IAmb	13 15 26.4	
	comp=Z,20nm,1.3s							
PMG	**Port Moresby**	**35.22**	**283**	P		**P**	**13 15 34.2**	**+0.1**
TOO	**Toolangi**	**35.84**	**234**	P		**P**	**13 15 38.6**	**-0.4**
TOO				IAmb		IAmb	13 15 47.4	
	comp=Z,9.6nm,1.4s							
BBOO	**Buckleboo**	**42.47**	**243**	P		**P**	**13 16 32.1**	**-0.3**
BBOO				IAmb		IAmb	13 16 59.2	
	comp=Z,25nm,1.4s							
WR8	**Warramunga Arr**	**44.34**	**262**	P		**P**	**13 16 46.8**	**-0.4**
WR8				IAmb		IAmb	13 17 15.4	
	comp=Z,15nm,1.5s							
AS31	**Alice Springs**	**44.42**	**257**	P		**P**	**13 16 47.5**	**-0.2**
ASAR	**Alice Springs**	**44.42**	**257**	P		**P**	**13 16 47.5**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=90,slow=7.8,SNR=34							
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**44.42**	**257**	P		**P**	**13 16 46.9**	**-0.9**
WB0	**Warramunga Arr**	**44.47**	**262**	P		**P**	**13 16 47.3**	**-0.8**
WB0				IAmb		IAmb	13 17 01.2	
	comp=Z,15nm,1.4s							
WRA	**Warramunga Arr**	**44.49**	**262**	P		**P**	**13 16 47.6**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.6,SNR=20							
	comp=Z,0.7nm,0.4s							
WRA	**Warramunga Arr**	**44.49**	**262**	P		**P**	**13 16 47.6**	**-0.8**
MTN	**Manton Dam**	**49.05**	**271**	P		**P**	**13 17 22.0**	**-0.7**
CASY	**Casey**	**63.97**	**205**	P		**P**	**13 19 04.7**	**+0.4**
CASY				IAmb		IAmb	13 19 05.5	
	comp=Z,9.4nm,1.3s							
QSPA	**South Pole Qui**	**69.62**	**180**	P		**P**	**13 19 40.4**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=10,slow=0.9,SNR=20							
	comp=Z,2.2nm,0.7s							
QSPA	**South Pole Qui**	**69.62**	**180**	P		**P**	**13 19 40.4**	**+1.0**
KIWB	**Kanaga Island**	**71.99**	**1**	P		**P**	**13 19 53.2**	**0.0**
UNV	**Unalaska Valle**	**74.66**	**7**	P		**P**	**13 20 08.2**	**-0.1**
P17K	**Kvichak River**	**81.33**	**11**	P		**P**	**13 20 44.3**	**+0.3**
P17K				IAmb		IAmb	13 20 54.0	
	comp=Z,15nm,1.2s							
M16K	**Timber Creek**	**82.64**	**9**	P		**P**	**13 20 51.1**	**+0.4**
M16K				IAmb		IAmb	13 20 52.3	
	comp=Z,6.8nm,1.4s							
I17K	**Unalakleet**	**85.15**	**8**	P		**P**	**13 21 03.0**	**0.0**
I17K				IAmb		IAmb	13 21 04.5	
	comp=Z,15nm,1.1s							
CCB	**Clear Creek Bu**	**87.99**	**13**	P		**P**	**13 21 16.5**	**+0.1**
ILAR	**Eielson Array**	**88.28**	**13**	P		**P**	**13 21 17.6**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=208,slow=5.4,SNR=2.3							
	comp=Z,0.2nm,0.4s							
G23K	**Bananza Creek**	**89.41**	**11**	P		**P**	**13 21 23.2**	**+0.1**
G23K				IAmb		IAmb	13 21 52.7	
	comp=Z,3.1nm,1.4s							
AKASG	**Malin Array Be**	**142.91**	**331**	PKP		**PKPdf**	**13 27 53.5**	**-2.8**

DBNI	**Kabupaten Domp**	**9.99**	**257**	P		**Pn**	**13 28 41.5 +0.9**
	33nm,1.0s						
DBNI	**Kabupaten Domp**	**9.99**	**257**	P		**Pn**	**13 28 40.6 0.0**
SGSI	**Sangihe**	**10.28**	**345**	P		**Pn**	**13 28 43.2 -0.8**
SGSI	**Sangihe**	**10.28**	**345**	P		**Pn**	**13 28 42.5 -1.5**
TOLI2	**Tolitoli**	**10.42**	**315**	P		**P**	**13 28 46.6 -0.1**
TOLI2	**Tolitoli**	**10.42**	**315**	S		**S**	**13 30 44.1 +1.0**
TOLI2	**Tolitoli**	**10.42**	**315**			**P**	**13 28 46.5 -0.1**
TOLI2	**Tolitoli**	**10.42**	**315**	P		**Pn**	**13 28 45.5 -0.2**
MPSI	**Mapaga**	**10.56**	**308**	P		**P**	**13 28 49.5 +1.3**
PLAI	**Plampang**	**10.58**	**256**	P		**Pn**	**13 28 47.3 -0.2**
FITZ	**Fitzroy Crossi**	**11.96**	**192**	P		**Pn**	**13 29 04.8 +1.0**
	7.1nm,0.7s,baz=23,slow=11,SNR=24						
FITZ	**Fitzroy Crossi**	**11.96**	**192**	P		**P**	**13 29 04.5 +0.9**
FITZ	**Fitzroy Crossi**	**11.96**	**192**	P		**P**	**13 29 02.7 -0.9**
GENI	**Genyem**	**12.54**	**73**	P		**Pn**	**13 29 12.5 +1.7**
	1µm64nm,0.9s						
GENI	**Genyem**	**12.54**	**73**	P		**Pn**	**13 29 11.6 +0.8**
JAY	**Jayapura**	**13.07**	**74**	P		**Pn**	**13 29 17.7 +0.6**
	21nm,0.8s,baz=224,slow=9.4,SNR=6.6						
JAY	**Jayapura**	**13.07**	**74**	P		**Pn**	**13 29 19.0 +1.9**
JAY	**Jayapura**	**13.07**	**74**	P		**Pn**	**13 29 17.5 +0.4**
JAGI	**Jajag, Banyuwa**	**14.05**	**260**	P		**Pn**	**13 29 29.3 +0.9**
JAGI	**Jajag, Banyuwa**	**14.05**	**260**	P		**Pn**	**13 29 28.2 -0.2**
WB0	**Warramunga Arr**	**14.68**	**156**	P		**P**	**13 29 34.4 +0.8**
WRAB	**Tennant Creek**	**14.81**	**157**	P		**P**	**13 29 36.0 +0.9**
WRAB	**Tennant Creek**	**14.81**	**157**	P		**Pn**	**13 29 37.2 0.0**
WRA	**Warramunga Arr**	**14.81**	**157**	P		**P**	**13 29 36.0 +0.9**
	17nm,0.6s,baz=335,slow=12,SNR=120						
WRA				S		**S**	**13 32 12.1 -2.6**
	6.5nm,0.6s,baz=335,slow=21,SNR=13						
WRA	**Warramunga Arr**	**14.81**	**157**			**P**	**13 29 34.6 -0.5**
WRA						**S**	**13 32 12.1 -2.6**
WR8	**Warramunga Arr**	**14.89**	**156**	P		**P**	**13 29 36.6 +0.7**
SNJI	**Sawahan-Nganju**	**16.33**	**264**	P		**Pn**	**13 29 55.1 0.0**
COEN	**Coen**	**16.61**	**118**	P		**P**	**13 29 56.3 +1.6**
COEN	**Coen**	**16.61**	**118**	P		**P**	**13 29 55.8 +1.1**
COEN	**Coen**	**16.61**	**118**	P		**P**	**13 29 55.3 +0.6**
MBWA	**Marble Bar**	**16.85**	**208**	P		**P**	**13 29 57.7 +0.5**
MBWA	**Marble Bar**	**16.85**	**208**	P		**P**	**13 29 57.4 +0.2**
MBWA				IAmb		IAmb	13 29 58.3
	comp=Z,19nm,1.0s						
MBWA	**Marble Bar**	**16.85**	**208**	P		**P**	**13 29 56.9 -0.3**
KKM	**Kota Kinabalu**	**17.11**	**316**	P		**P**	**13 30 01.7 +1.5**
KKM	**Kota Kinabalu**	**17.11**	**316**			**P**	**13 30 00.1 -0.1**
KKM	**Kota Kinabalu**	**17.11**	**316**	P		**P**	**13 30 01.0 +0.8**
	comp=Z,65nm,0.8s						
KKM	**Kota Kinabalu**	**17.11**	**316**	P		**P**	**13 29 60.0 -0.1**
QIS	**Mount Isa**	**17.99**	**143**	P		**P**	**13 30 11.1 +1.7**
QIS	**Mount Isa**	**17.99**	**143**	P		**P**	**13 30 10.3 +0.9**
AS31	**Alice Springs**	**18.11**	**163**			**P**	**13 30 11.3 +0.6**
ASAR	**Alice Springs**	**18.11**	**163**	P		**P**	**13 30 11.4 +0.7**
	comp=Z,4.5nm,0.6s,baz=345,slow=12,SNR=86						
ASAR				S		**S**	**13 33 18.4 -1.4**
	comp=Z,4.9nm,0.7s,baz=340,slow=18,SNR=13						
AS01	**Alice Springs**	**18.12**	**163**	P		**P**	**13 30 11.6 +0.8**
PMG	**Port Moresby**	**19.07**	**100**	P		**P**	**13 30 22.0 +1.1**
	comp=Z,13nm,0.8s,baz=315,slow=13,SNR=1.3						
PMG	**Port Moresby**	**19.07**	**100**	P		**P**	**13 30 22.0 +1.1**
BBJI	**Bungbulang**	**20.39**	**266**	P		**P**	**13 30 36.3 +2.1**
MEEK	**Meekatharra**	**22.15**	**203**	P		**P**	**13 30 51.9 +1.8**
BBOO	**Buckleboo**	**27.36**	**165**	P		**P**	**13 31 37.3 +0.6**
BBOO	**Buckleboo**	**27.36**	**165**	P		**P**	**13 31 37.2 +0.5**
BBOO				IAmb		IAmb	13 32 12.8
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**28.36**	**155**	P		**P**	**13 31 46.1 +0.6**
	comp=Z,1.1nm,0.5s,baz=342,slow=9.6,SNR=2.1						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**28.36**	**155**	pP		pP	13 32 52.1 +1.3
KULM	**Kulim**	**29.78**	**292**	P		**P**	**13 31 58.8 +0.6**
KULM				IAmb		IAmb	13 31 59.9
	comp=Z,7.4nm,0.9s						
KULM	**Kulim**	**29.78**	**292**	P		**P**	**13 31 59.1 +1.0**
TWG	**Pinlang**	**29.78**	**347**	P		**P**	**13 31 57.0 -1.1**
CMSA	**Cobar Meteorol**	**29.98**	**149**	P		**P**	**13 32 00.9 +1.2**
YOJ	**Yonaguni jima**	**31.00**	**351**	P		**P**	**13 32 06.1 -2.6**
YHNB	**Yeheng**	**31.50**	**348**	P		**P**	**13 32 11.3 -1.8**
JOW	**Kunigami**	**32.96**	**0**	P		**P**	**13 32 25.4 -0.2**
SLVN	**Son La**	**36.35**	**320**			**P**	**13 32 54.5 0.0**
SLVN				IAmb		IAmb	13 32 55.7
	comp=Z,10.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**37.90**	**311**	P		**P**	**13 33 07.4 0.0**
	comp=Z,1.1nm,0.7s,baz=148,slow=7.8,SNR=7.7						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.90**	**311**	P		**P**	**13 33 06.2 -1.2**
WHN	**Wuhan**	**38.97**	**341**	‖P		**P**	**13 33 15.8 -0.2**
WHN				pmax		pmax	
	comp=Z,58nm,1.0s						
PZH	**PanZhiHua**	**41.48**	**323**	P		**P**	**13 33 38.5 +1.9**
KSAR	**Wonju Array Be**	**43.54**	**360**			**P**	**13 33 52.7 0.0**
KSRS	**Korea Array**	**43.55**	**360**	P		**P**	**13 33 53.1 +0.3**
	comp=Z,3.2nm,0.8s,baz=177,slow=10,SNR=21						
	comp=Z,3.2nm,0.8s						
KS19	**Wonju Array Si**	**43.60**	**360**	P		**P**	**13 33 53.0 -0.2**
KS19				IAmb		IAmb	13 34 12.2
	comp=Z,16nm,1.4s						
MJAR	**Matsushiro Arr**	**43.67**	**12**	P		**P**	**13 33 52.5 -1.3**
	comp=Z,2.7nm,0.9s,baz=189,slow=8.8,SNR=8.4						
	comp=Z,2.7nm,0.9s						
MJAR	**Matsushiro Arr**	**43.67**	**12**	P		**P**	**13 33 52.3 -1.5**
LZDM	**Lanzhou Array**	**47.92**	**333**	P		**P**	**13 34 27.1 0.0**
	comp=Z,1.6nm,0.3s,baz=161,slow=14,SNR=4.5						
	comp=Z,1.6nm,0.3s						
HHC	**Hu-ho-hao-te**	**49.35**	**343**	*e*P		**P**	**13 34 41.6 +4.1**
HHC				pmax		pmax	
	comp=Z,16nm,0.6s						
USA0B	**Ussuriysk Arra**	**50.41**	**4**	P		**P**	**13 34 45.6 +0.5**
USRK	**Ussuriysk Ar.**	**50.41**	**4**	P		**P**	**13 34 45.1 -0.1**
	comp=Z,2.9nm,0.8s,baz=191,slow=7.3,SNR=4.7						
	comp=Z,2.9nm,0.8s						
EVN	**Everest**	**52.47**	**313**			**P**	**13 35 00.5 -0.9**
EVN				IAmb		IAmb	13 35 01.9
	comp=Z,14nm,1.2s						
GTA2	**Gaotai**	**52.60**	**332**	P		**P**	**13 35 01.5 0.0**
GTA2				pP		PcP	13 35 54.7 -12
GTA2				pmax		pmax	
	comp=Z,13nm,0.8s						
TUWZ	**Tuamarina**	**53.61**	**138**	P		**P**	**13 35 09.3 +0.7**
HILR	**Hailar Array B**	**56.13**	**353**	P		**P**	**13 35 26.3 -0.1**
	comp=Z,1.2nm,0.5s,baz=182,slow=12,SNR=2.3						
	comp=Z,1.2nm,0.5s						
HEH	**HeiHe**	**56.35**	**359**	*e*P		**P**	**13 35 27.4 -0.4**
ULN	**Ulaanbaatar**	**57.07**	**343**			**P**	**13 35 33.4 +0.2**
ULN				IAmb		IAmb	13 35 34.5
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**57.24**	**343**	P		**P**	**13 35 34.6 +0.4**
	comp=Z,4.5nm,0.8s,baz=165,slow=8.1,SNR=14						
	comp=Z,4.5nm,0.8s						
SONM	**Songino Array**	**57.24**	**343**			**P**	**13 35 34.6 +0.4**
PDGK	**Podgornoye**	**66.15**	**323**			**P**	**13 36 33.4 +0.1**
MKAR	**Makanchi Array**	**66.66**	**328**	P		**P**	**13 36 36.2 -0.1**
	comp=Z,3.7nm,0.5s,baz=124,slow=7.9,SNR=53						
	comp=Z,3.7nm,0.5s						
MKAR	**Makanchi Array**	**66.66**	**328**			**P**	**13 36 35.9 -0.4**
MAKZ	**Makanchi**	**66.84**	**327**			**P**	**13 36 36.9 -0.6**
MAKZ				IAmb		IAmb	13 36 38.0
	comp=Z,8.6nm,1.2s						
ZAA0	**Zalesovo Array**	**70.17**	**334**			**P**	**13 36 56.7 -0.9**
ZAA0				IAmb		IAmb	13 36 57.6
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**70.17**	**334**	P		**P**	**13 36 56.9 -0.8**
	comp=Z,4.3nm,0.7s,baz=124,slow=4.3,SNR=21						
	comp=Z,4.3nm,0.7s						
ZALV	**Zalesovo Beam**	**70.17**	**334**			**P**	**13 36 56.5 -1.2**
KURBB	**Kurchatov Arra**	**70.98**	**329**	P		**P**	**13 37 02.3 -0.3**
	comp=Z,5.7nm,0.7s,baz=131,slow=5.0,SNR=62						
	comp=Z,5.7nm,0.7s						
KURK	**Kurchatov**	**70.99**	**329**	P		**P**	**13 37 01.5 -1.1**
BVAR	**Borovoye Array**	**76.52**	**328**	P		**P**	**13 37 33.6 -0.8**
	comp=Z,1.1nm,0.5s,baz=133,slow=6.3,SNR=11						
	comp=Z,1.1nm,0.5s						
BORK	**Borovoye**	**76.57**	**328**			**P**	**13 37 34.4 -0.3**
AB31	**Akbulak array**	**80.84**	**322**	P		**P**	**13 37 57.4 -0.4**
ABKAR	**Akbulak array**	**80.84**	**322**	P		**P**	**13 37 57.3 -0.6**
QSPA	**South Pole Qui**	**83.65**	**180**	P		**P**	**13 38 11.6 -0.6**
	comp=Z,0.8nm,0.4s,baz=171,slow=0.8,SNR=17						
	comp=Z,0.8nm,0.4s						
QSPA	**South Pole Qui**	**83.65**	**180**	P		**P**	**13 38 11.7 -0.5**
QSPA				IAmb		IAmb	13 38 28.4
	comp=Z,4.1nm,1.3s						
CPUP	**Villa Florida**	**147.11**	**171**	PKPbc		**PKPbc**	**13 45 24.5 -0.7**
	comp=Z,2.6nm,1.1s,baz=39,slow=2.8,SNR=3.7						
CPUP	**Villa Florida**	**147.11**	**171**			**PKPdf**	**13 45 22.9 +0.3**
LPAZ	**La Paz**	**152.35**	**145**	PKPbc		**PKPbc**	**13 45 38.6 -0.3**
	comp=Z,0.5nm,0.4s,baz=54,slow=5.1,SNR=5.6						
LPAZ	**La Paz**	**152.35**	**145**			**PKPbc**	**13 45 36.5 -2.4**

*IDC **05** 13:37:57.8±1.0, 10.01°S×161.12°E, h0km, mb3.7/9, mbtmp3.7/9, MS3.5/2, Error ellipse: s-maj=27.0km s-min=21.3km az=53.0*
*NOU **05** 13:38:01.3, 10.18°S×160.97°E, h0km, MLv4.2/12, Solomon Islands*

ISC 05 13:38:04.0±0.8, 10°2S±0.1°×161°0E±0.1°, h35km, n22, σ1°62/21, mb3.7/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.24**	**307**	P*n*	**Pn**	**13 38 23.6**	**-1.3**
	4.5nm,0.3s,baz=187,slow=1.4,SNR=103						
HNR				S*n*	**Sn**	**13 38 40.3**	**-0.1**
	8.2nm,0.3s,baz=330,slow=11,SNR=12						
HNR	**Honiara**	**1.24**	**307**	P	**Pn**	**13 38 23.6**	**-1.3**
HNR	**Honiara**	**1.24**	**307**	S	**Sn**	**13 38 41.1**	**+0.7**
SAVO	**Savo Central**	**1.52**	**312**	P	**Pn**	**13 38 28.3**	**-0.5**
SAVO	**Savo Central**	**1.52**	**312**	S	**Sn**	**13 38 50.3**	**+2.9**
NGOA	**Tingoa Renbel**	**1.62**	**212**	P	**Pn**	**13 38 31.0**	**+0.9**
TATA	**Tatamba Isabel**	**2.11**	**328**	P	**Pn**	**13 38 38.5**	**+1.6**
TATA	**Tatamba Isabel**	**2.11**	**328**	S	**Sn**	**13 39 05.5**	**+3.6**
SANVU	**Saraoutou**	**8.04**	**131**	P	**Pn**	**13 39 59.1**	**+0.8**
NOUC	**Port Laguerre**	**12.92**	**157**	P	**Pn**	**13 41 05.9**	**+0.7**
MARNC	**Mare, Loyalty**	**13.13**	**150**	P	**Pn**	**13 41 09.7**	**+1.5**
PMG	**Port Moresby**	**13.61**	**272**	LR	LR	13 46 01.9	
	comp=Z,183nm,18.0s,baz=104,slow=35						
AFI	**Afiamalu**	**26.92**	**101**	LR	LR	13 52 04.6	
	comp=Z,86nm,18.2s,baz=4.0,slow=32						
WRA	**Warramunga Arr**	**27.43**	**246**	P	**P**	**13 43 47.9**	**+1.1**
	0.4nm,0.5s,baz=75,slow=9.0,SNR=6.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**29.07**	**239**	P	**P**	**13 44 02.6**	**+1.2**
	0.1nm,0.3s,baz=64,slow=9.4,SNR=5.2						
	0.1nm,0.3s						
KSRS	**Korea Array**	**56.60**	**329**	P	**P**	**13 47 42.6**	**-0.9**
	0.2nm,0.5s,baz=139,slow=7.6,SNR=4.4						
	0.2nm,0.5s						
SONM	**Songino Array**	**75.23**	**325**	P	**P**	**13 49 40.5**	**-2.9**
	0.7nm,0.6s,baz=144,slow=5.4,SNR=2.1						
	0.7nm,0.6s						
QSPA	**South Pole Qui**	**79.81**	**180**	P	**P**	**13 50 08.6**	**-0.1**
	1.4nm,0.8s,baz=281,slow=0.6,SNR=7.9						
	1.4nm,0.8s						
MAW	**Mawson**	**83.73**	**202**	P	**P**	**13 50 29.4**	**+0.3**
	2.1nm,0.8s,baz=93,slow=10.0,SNR=4.4						
	2.1nm,0.8s						
ILAR	**Eielson Array**	**84.25**	**20**	P	**P**	**13 50 30.1**	**-1.6**
	0.3nm,0.6s,baz=240,slow=5.3,SNR=5.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**89.69**	**318**	P	**P**	**13 50 59.2**	**+0.6**
	0.3nm,0.8s,baz=106,slow=3.7,SNR=2.4						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**93.02**	**321**	P	**P**	**13 51 13.7**	**-0.2**
	0.2nm,0.5s,baz=95,slow=4.4,SNR=2.6						
	0.2nm,0.5s						

NOU 05 13:41:52.8, 15.54S×167.73E, h0km, MLv4.5/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.52**	**280**	P	Pg	13 42 03.1	+0.4
SANVU	**Saraoutou**	**0.52**	**280**	S	Sg	13 42 09.1	-0.3
DVP	**Devils Point**	**2.22**	**169**	P	Pb	13 42 33.0	-0.8
MARNC	**Mare, Loyalty**	**5.92**	**177**	P	Pn	13 43 20.2	-1.5
MARNC	**Mare, Loyalty**	**5.92**	**177**	S	Sn	13 44 30.8	+0.5
YATNC	**Mamie, Loyalty**	**6.53**	**187**	P	Pn	13 43 30.0	-0.2
NOUC	**Port Laguerre**	**6.67**	**191**	P	Pn	13 43 31.8	-0.2
ONTNC	**Ouen Toro**	**6.84**	**190**	P	Pn	13 43 35.2	+0.8
OUENC	**Ouen Island, N**	**6.89**	**187**	P	Pn	13 43 35.5	+0.3

JMA 05 13:42:36.0±0.2, 25°N±1°×123.3°E±0.5, h26km, MV2.2/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.51**	**214**	*e*S	Sb	13 42 53.5	0.0
JYNG	**Yonagunijimaku**	**0.55**	**218**	P	Pb	13 42 46.9	-0.2
JYNG				*e*S	Sb	13 42 55.0	+0.3
IRIF	**Iriomote-Funau**	**0.67**	**146**	P	Pb	13 42 48.9	-0.2
IRIF				S	Sb	13 42 57.2	-0.6
JKRS	**Kuro-shima**	**0.90**	**136**	S	Sb	13 43 04.1	-0.5
JIJ	**Ishigaki jima**	**0.91**	**125**	*e*P	Pn	13 42 52.8	-0.4
JIJ				S	Sb	13 43 04.8	-0.2
HATJ	**Hateruma jima**	**0.94**	**152**	S	Sb	13 43 05.0	-0.7
JISG	**Ishigakijimahi**	**0.95**	**108**	*e*P	Pn	13 42 52.9	-0.7
JISG				*e*S	Sb	13 43 05.1	-0.9

TAP 05 13:43:35.9, 24.46N×121.89E, h21km, ML2.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.10**	**260**	*i* P	Pb	13 43 39.9	-0.1
EWUT				*i* S	Sb	13 43 42.7	-0.1
ESAO	**Su ao**	**0.12**	**341**	*i* P	Pb	13 43 40.3	-2.1
ESAO				*i* S	Sb	13 43 43.1	-3.9
TWC	**Suao**	**0.15**	**347**	*i* P	Pb	13 43 40.6	-1.4
TWC				*i* S	Sb	13 43 43.6	-2.6
EAHA	**Aohua**	**0.19**	**225**	*i* P	Pb	13 43 41.0	-0.8
EAHA				*i* S	Sb	13 43 44.9	-1.1
NDS	**Dongshan**	**0.23**	**318**	*i* P	Pb	13 43 41.9	0.0
NDS				*i* S	Sb	13 43 45.6	-0.5
EOS2	**EOS2**	**0.32**	**98**	*e*P	Pb	13 43 43.4	+0.6
EOS2				*e*S	Sb	13 43 49.1	+1.7
TWE	**Neicheng**	**0.33**	**322**	*i* P	Pb	13 43 43.4	+0.5
TWE				*i* S	Sb	13 43 48.1	+0.4
ILA	**Ilan**	**0.33**	**337**	*i* P	Pb	13 43 43.6	+0.7
ILA				*i* S	Sb	13 43 48.8	+1.0
LATG	**Datong**	**0.34**	**282**	*i* P	Pb	13 43 43.7	+0.5
LATG				*i* S	Sb	13 43 48.8	+0.6
ENTT	**Nioudou**	**0.34**	**301**	*i* P	Pb	13 43 43.6	+0.4
ENTT				*i* S	Sb	13 43 48.7	+0.5
NDT	**Datong Townshi**	**0.37**	**292**	P	Pb	13 43 44.2	+0.6
NDT				S	Sb	13 43 49.6	+0.8
EGS		**0.38**	**6**	*e*P	Pb	13 43 44.9	+1.0
EGS				*e*S	Sb	13 43 50.6	+1.4
ETL	**Fush Village**	**0.39**	**218**	*e*P	Pb	13 43 44.2	+0.3
NACB	**Ninganchiao**	**0.39**	**223**	*e*P	Pb	13 43 44.1	+0.1
NACB				*e*S	Sb	13 43 50.2	+0.7
FUSB	**Fushanzhiwuyua**	**0.40**	**317**	P	Pb	13 43 44.8	+0.6
FUSB				S	Sb	13 43 50.8	+0.9
EOS3	**EOS3**	**0.43**	**114**	*e*P	Pb	13 43 45.3	+0.7
EOS3				*e*S	Sn	13 43 52.5	-1.3
ETLH	**Xiulin Townshi**	**0.45**	**235**	*e*P	Pb	13 43 45.2	+0.1
ETLH				*e*S	Sb	13 43 52.6	+1.3
NNSB	**Datong**	**0.46**	**266**	P	Pb	13 43 45.6	+0.3
NNSB				*e*S	Sb	13 43 52.3	+0.6
NNSH	**Datong**	**0.46**	**266**	P	Pb	13 43 45.8	+0.4
NNSH				*e*S	Sb	13 43 52.5	+0.8
TWD	**Chiawan**	**0.46**	**215**	*e*P	Pb	13 43 45.6	+0.3
TWD				*e*S	Sn	13 43 53.4	-1.5
NNS	**Nan Shan**	**0.47**	**267**	*e*P	Pb	13 43 45.6	+0.2
NNS				*e*S	Sb	13 43 53.2	+1.2
NWLT	**Wulai**	**0.47**	**312**	P	Pb	13 43 45.8	+0.4
NWLT				S	Sb	13 43 52.3	+0.4
YHNB	**Yeheng**	**0.51**	**294**	P	Pb	13 43 46.5	+0.3
YHNB				*e*S	Sb	13 43 53.1	0.0
TIPB	**Shuangxi**	**0.51**	**354**	P	Pb	13 43 46.7	+0.5
TIPB				*e*S	Sb	13 43 54.1	+1.0
EOS4	**EOS4**	**0.52**	**131**	*e*P	Pb	13 43 46.7	+0.6
EOS4				*e*S	Sn	13 43 55.4	-0.3
NSK	**Sanguang**	**0.53**	**294**	*i* P	Pb	13 43 46.8	+0.3
NSK				S	Sb	13 43 53.9	+0.2
LXIB	**Xiulin Townshi**	**0.62**	**225**	*e*P	Pb	13 43 48.2	+0.1
LXIB				*e*S	Sn	13 43 58.6	-0.3
FUSS	**Fushou**	**0.62**	**250**	*e*P	Pb	13 43 48.7	+0.4
FUSS				*e*S	Sn	13 43 58.1	-1.1
SXI1	**Grass Mountain**	**0.63**	**359**	*e*P	Pn	13 43 49.0	-0.7
SXI1				*e*S	Sb	13 43 57.9	+1.1
WHF	**Hehuan Shan**	**0.65**	**241**	*e*P	Pb	13 43 49.1	+0.2
WHF				*e*S	Sb	13 43 58.8	+1.1
YM01	**YM01**	**0.74**	**337**	*e*P	Pb	13 43 50.5	+0.4

*IDC **05** 13:46:06.4±3.3, 25.02°N×123.44°E, h122km±35km, mb3.4/8, mbtmp3.8/11, Error ellipse: s-maj=25.6km s-min=14.3km az=62.0*
*NEIC **05** 13:46:06.7±1.6, 24.98°N±0.08°×123.39°E±0.07°, h118km±6km, mb4.2/12, Error ellipse: s-maj=13.0km s-min=8.0km az=152.0*
*NIED **05** 13:46:07.6, 24.90°N×123.36°E, h113km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr=2.34; Mθθ 0.19; Mφφ 2.15; Mrθ 0.67; Mθφ -1.53; Mφr -5.96; Fault plane solution: M0 6.58000×10^14 NP1: φs128.00000°, δ15.00000°, λ-133.00000°. NP2: φs352.00000°, δ79.00000°, λ-79.00000°.*
*JMA **05** 13:46:07.6±0.2, 25.00°N±2.1°×123.4°E±0.5, h113km±2km, MV4.0/18, NW OFF ISHIGAKIJIMA IS*

ISC 05 13:46:06.3±0.6, 24°87N±0.06°×123°36E±0.03°, h125km±6km, n78, σ1°91°/92, mb3.8/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.52**	**218**	P	**Pn**	**13 46 25.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.52**	**218**	P	**Pn**	**13 46 25.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.52**	**218**		**Pn**	**13 46 25.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.52**	**218**	P	**Pn**	**13 46 25.2**	**+0.3**
YOJ				S	**Sn**	**13 46 38.4**	**-0.5**
JYNG	**Yonagunijimaku**	**0.56**	**222**	P	**Pn**	**13 46 25.5**	**+0.3**
JYNG				S	**Sn**	**13 46 38.9**	**-0.5**
IRIF	**Iriomote-Funau**	**0.63**	**147**	P	**Pn**	**13 46 25.8**	**+0.1**
IRIF				S	**Sn**	**13 46 39.4**	**-1.0**
JKRS	**Kuro-shima**	**0.87**	**137**	P	**Pn**	**13 46 28.3**	**+0.8**
JKRS				S	**Sn**	**13 46 43.7**	**+0.1**
JIJ	**Ishigaki jima**	**0.88**	**125**	*i* P	**Pn**	**13 46 28.0**	**+0.3**
JIJ				S	**Sn**	**13 46 42.9**	**-0.9**
HATJ	**Hateruma jima**	**0.91**	**153**	P	**Pn**	**13 46 28.6**	**+0.7**
HATJ				S	**Sn**	**13 46 45.2**	**+0.9**
JISG	**Ishigakijimahi**	**0.91**	**108**	*i* P	**Pn**	**13 46 28.4**	**+0.4**
JISG				S	**Sn**	**13 46 44.0**	**-0.3**
JTJ	**Tarama**	**1.24**	**100**	*i* P	**Pn**	**13 46 32.1**	**+0.9**
JIRJ	**Irabujima**	**1.67**	**91**	*i* P	**Pn**	**13 46 36.8**	**+0.8**
JIRJ				S	**Sn**	**13 46 58.7**	**0.0**
TATO	**Taipei**	**1.70**	**274**	P	**Pn**	**13 46 37.3**	**+0.9**
TATO	**Taipei**	**1.70**	**274**	P	**Sn**	**13 47 00.7**	**+1.4**
TATO	**Taipei**	**1.70**	**274**	P	**Pn**	**13 46 37.5**	**+1.1**
TATO	**Taipei**	**1.70**	**274**	S	**Sn**	**13 46 59.8**	**+0.5**
TATO	**Taipei**	**1.70**	**274**		**Pn**	**13 46 37.4**	**+1.1**
JIKM	**Ikemajima**	**1.72**	**88**	P	**Pn**	**13 46 37.6**	**+1.1**
JIKM				S	**Sn**	**13 47 00.3**	**+0.6**
NACB	**Ninganchiao**	**1.75**	**247**	P	**Pn**	**13 46 36.7**	**-0.2**
NACB	**Ninganchiao**	**1.75**	**247**	S	**Sn**	**13 46 59.6**	**-0.8**
NACB	**Ninganchiao**	**1.75**	**247**	P	**Pn**	**13 46 36.9**	**-0.1**
NACB	**Ninganchiao**	**1.75**	**247**		**Pn**	**13 46 36.8**	**-0.2**
JMJ2	**Miyako jima3**	**1.80**	**94**	*i* P	**Pn**	**13 46 38.8**	**+1.3**
JMJ2				S	**Sn**	**13 47 02.1**	**+0.8**
YHNB	**Yeheng**	**1.81**	**264**	P	**Pn**	**13 46 38.9**	**+1.1**
YHNB	**Yeheng**	**1.81**	**264**	S	**Sn**	**13 47 02.5**	**+0.6**
YHNB	**Yeheng**	**1.81**	**264**	P	**Pn**	**13 46 39.1**	**+1.3**
YHNB	**Yeheng**	**1.81**	**264**	P	**Sn**	**13 47 02.3**	**+0.4**
YHNB	**Yeheng**	**1.81**	**264**		**Pn**	**13 46 39.0**	**+1.1**
JOGS	**Gusukube**	**1.87**	**93**	P	**Pn**	**13 46 39.8**	**+1.4**
JOGS				S	**Sn**	**13 47 04.0**	**+1.2**
YULB	**Yu-li**	**2.39**	**232**	S	**Sn**	**13 47 13.3**	**-1.2**
YULB	**Yu-li**	**2.39**	**232

STIA3				*i* S		**Sn**	**13 57 59.0 +0.5**		
DVD	**David**	**1.10**	**328**	*i* P		**Pb**	**13 57 43.0 -1.5**		
DVD				*i* S		**Sn**	**13 58 04.3 +4.6**		
BGUAL	**Bijagual, Pana**	**1.11**	**335**	*e*P		**Pb**	**13 57 43.9 -0.7**		
PTPM	**Petroterminale**	**1.24**	**305**	*i* P		**Pg**	**13 57 49.7 +2.3**		
CALO3	**Calobre, Verag**	**1.29**	**51**	*e*P		**Pn**	**13 57 47.0 -0.3**		
CALO3				*i* S		**Sb**	**13 58 04.6 +0.4**		
KKNTU	**Kakint²**	**1.33**	**2**	*e*P		**Pn**	**13 57 47.0 -0.8**		
BQTLY	**Boquete Panama**	**1.39**	**334**	*e*P		**Pn**	**13 57 47.5 -1.2**		
TOSI3	**Tonosi**	**1.40**	**94**	*e*P		**Pn**	**13 57 48.2 -0.5**		
TOSI3				*e*S		**Sn**	**13 58 07.5 +0.6**		
RBALA	**Bur**	**1.41**	**348**	*e*P		**Pn**	**13 57 48.0 -0.8**		
RBALA	**Bur**	**1.41**	**348**	*i* P		**Pn**	**13 57 47.8 -0.9**		
RBALA				*e*S		**Sn**	**13 58 06.0 -1.1**		
LNBQ3	**Los Naranjos,**	**1.41**	**336**	*e*P		**Pn**	**13 57 47.2 -1.7**		
PBNVO	**Pueblo Nuevo,**	**1.43**	**346**	*e*P		**Pn**	**13 57 47.6 -1.4**		
PBNVO	**Pueblo Nuevo,**	**1.43**	**346**	*i* P		**Pn**	**13 57 47.5 -1.5**		
PBNVO				*e*S		**Sn**	**13 58 06.4 -1.2**		
CLLRA	**Cordillera,**	**1.45**	**329**	*i* P		Pn	13 57 43.2 -6.4		
CHIT3	**Chitre**	**1.49**	**72**	*i*P		**Pn**	**13 57 49.8 -0.1**		
CHIT3				*i* S		**Sn**	**13 58 10.2 +1.0**		
BRU2	**Volcan**	**1.53**	**327**	*e*P		**Pn**	**13 57 49.6 -1.0**		
BRU2	**Volcan**	**1.53**	**327**	*i* P		Pn	13 57 42.9 -7.8		
BRU2				*e*P		**Pn**	**13 57 49.7 -1.0**		
BRU2				*i* S		**Sg**	**13 58 13.8 +0.8**		
AZU	**Azuero**	**1.59**	**79**	*e*P		**Pn**	**13 57 51.3 0.0**		
AZU	**Azuero**	**1.59**	**79**	*i*P		**Pn**	**13 57 51.5 +0.2**		
AZU				*i* S		**Sn**	**13 58 10.8 -0.9**		
ACHO3	**Achotines, Los**	**1.67**	**93**	*e*P		**Pn**	**13 57 51.9 -0.4**		
ACHO3				*i* S		**Sn**	**13 58 11.9 -1.6**		
EDAD	**Golfito**	**1.73**	**311**	*e*P		**Pn**	**13 57 51.1 -2.2**		
ALCO	**Alturas Coton,**	**1.74**	**326**	*e*P		**Pn**	**13 57 52.7 -0.8**		
PNME	**Penonome**	**1.80**	**57**	*e*P		**Pn**	**13 57 55.0 +0.8**		
PNME				*i* S		**Sb**	**13 58 18.9 +0.1**		
FIMO	**Fila Mora**	**2.10**	**315**	*e*P		**Pn**	**13 57 58.1 -0.4**		
ZANG	**Zanguenga, Cho**	**2.44**	**53**	*e*P		**Pn**	**13 58 04.4 +1.4**		
ZANG	**Zanguenga, Cho**	**2.44**	**53**	*i* P		**Pn**	**13 58 04.5 +1.4**		
ZANG				*i* S		**Sb**	**13 58 38.0 +0.7**		
CHOR3	**La Chorrera**	**2.49**	**56**	*e*P		**Pb**	**13 58 06.3 -1.8**		
CHOR3				*i* S		**Sg**	**13 58 43.4 -0.3**		
BCIP	**Isla Barro Col**	**2.59**	**50**	*e*P		**Pn**	**13 58 07.0 +2.0**		
FLAM	**Flamenco Islan**	**2.69**	**58**	*e*P		**Pn**	**13 58 07.2 +0.8**		
FRIJ	**El Hiral**	**2.71**	**51**	*e*P		**Pn**	**13 58 09.1 +2.3**		
CHPO	**Chepo, Panama**	**3.18**	**58**	*e*P		**Pn**	**13 58 13.5 +0.3**		

*IDC **05** 13:57:24.1±0.5,36˚12N×136˚94E,h266km±4km,mb3.4/19, mbtmp4.0/22,Error ellipse: s-maj=15.2km s-min=10.7km az=71.0*
*JMA **05** 13:57:24.2±0.2,36˚2N±0˚7×137˚0E±0˚8,h274km±1km, MV3.6/33,NORTHERN GIFU PREF*
*NEIC **05** 13:57:24.6±1.1,36˚19N±0˚07×136˚9E±0˚1,h265km±5km, mb4.0/48,Error ellipse: s-maj=13.3km s-min=9.6km az=103.0*

ISC 05 13:57:24.6±0.6,36˚17N±0˚05×137˚01E±0˚05,h269km±5km, n105,σ0§83/119,mb3.8/40,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	**Kaga**	**0.56**	**282**	P	**Pn**	**13 58 00.0**	**+0.3**
JKG				S	**S**	**13 58 28.3**	**+0.7**
JYTA	**Yamagatataniai**	**0.61**	**201**	P	**Pn**	**13 58 00.0**	**0.0**
JYTA				*e*S	**S**	**13 58 27.7**	**-0.4**
JGF	**Kuroka**	**0.63**	**153**		**Pn**	**13 57 59.7**	**-0.5**
INU	**Inuyama**	**0.81**	**180**		**Pn**	**13 58 00.5**	**-0.4**
MJB9	**Matsu-Tunnel**	**1.04**	**68**		**Pn**	**13 58 01.9**	**+0.1**
MAJO	**Matsushiro**	**1.04**	**68**		**Pn**	**13 58 01.9**	**+0.1**
MAT	**Matsushiro**	**1.04**	**68**	P	**Pn**	**13 58 02.1**	**+0.3**
MAT				*e*S	**S**	**13 58 31.7**	**+0.4**
MJAR	**Matsushiro Arr** 13nm,0.3s,baz=245,slow=3.9,SNR=129	**1.04**	**68**	P	**Pn**	**13 58 02.6**	**+0.8**
MJAR	18nm,0.7s,baz=256,slow=9.6,SNR=19			S	**S**	**13 58 31.2**	**-0.1**
MJAR	**Matsushiro Arr**	**1.04**	**68**		**Pn**	**13 58 02.0**	**+0.2**
MJAR					**S**	**13 58 31.2**	**-0.1**
JSZ	**Suzu**	**1.31**	**12**	*e*P	**Pn**	**13 58 03.6**	**+0.2**
JSZ				*e*S	**S**	**13 58 33.7**	**-0.4**
JYN	**Shimob**	**1.41**	**118**	*e*P	**Pn**	**13 58 03.8**	**-0.4**
JRY	**Ryogami san**	**1.54**	**95**	*e*P	**Pn**	**13 58 05.0**	**0.0**
JRY				*e*S	**S**	**13 58 36.5**	**-0.6**
JWT	**Wachi**	**1.58**	**237**		**S**	**13 58 40.9**	**+3.4**
JWT	**Wachi**	**1.58**	**237**	P	**Pn**	**13 58 05.1**	**-0.2**
JHG	**Hegura jima**	**1.68**	**358**	P	**Pn**	**13 58 06.6**	**+0.7**
JHG				*e*S	**S**	**13 58 39.2**	**+0.4**
JIE	**Ise**	**1.79**	**188**	P	**Pn**	**13 58 07.3**	**+0.3**
JIE				S	**S**	**13 58 40.9**	**+0.4**
JOD2	**Odawara 2**	**1.92**	**117**	*e*P	**Pn**	**13 58 08.2**	**+0.3**
JOD2				*e*S	**S**	**13 58 42.9**	**+0.5**
JAG	**Ashikaga**	**1.99**	**82**	*e*P	**Pn**	**13 58 08.2**	**-0.4**
JAG				*e*S	**S**	**13 58 41.7**	**-1.7**
JWY	**Kouya**	**2.26**	**211**	P	**Pn**	**13 58 11.2**	**+0.1**
JWY				*e*S	**S**	**13 58 47.1**	**-0.9**
JNS	**Sasagawa**	**2.48**	**48**	P	**Pn**	**13 58 13.2**	**+0.4**
TTO1	**TONÂNKAI O.B.S**	**2.54**	**184**	*e*P	**Pn**	**13 58 14.2**	**+0.8**
JTNC	**Tanabenakahech**	**2.61**	**207**	P	**Pn**	**13 58 14.1**	**-0.2**
JTNC				*e*S	**S**	**13 58 52.9**	**-0.9**
JHJ	**Hachijo jima 2** 39nm,0.3s,baz=50,slow=23,SNR=6.7	**3.80**	**142**	S	**S**	**13 59 17.6**	**+0.8**
JTM	**Tenmabayashi**	**5.61**	**33**		**Pn**	**13 58 48.1**	**-0.1**
JNU	**Nakatsue**	**5.89**	**241**		**Pn**	**13 58 51.4**	**-0.5**
KSRS	**Korea Array** 0.6nm,0.4s,baz=104,slow=13,SNR=4.2	**7.40**	**283**	P	**Pn**	**13 59 10.5**	**+0.1**
USRK	**Ussuriysk Ar.** 2.2nm,0.6s,baz=163,slow=13,SNR=2.9	**8.89**	**336**	P	**Pn**	**13 59 29.9**	**+0.9**
JKA	**Kamikawa-asahi**	**9.02**	**27**		**Pn**	**13 59 28.3**	**-2.2**
JCJ	**Chichijima** 13nm,0.4s,baz=273,slow=22,SNR=1.5	**10.06**	**153**	P	**Pn**	**13 59 43.3**	**-0.4**
JCJ	13nm,0.3s,baz=280,slow=22,SNR=5.7			S	S	14 01 23.5	-13
YSS	**Yuzhno-Sakhali**	**11.60**	**20**		**Pn**	**14 00 00.7**	**-1.9**
KLR	**Kul'dur** 2.4nm,0.6s,baz=156,slow=10,SNR=8.8	**13.61**	**345**	P	**Pn**	**14 00 25.9**	**-1.3**
KIWB	**Kanaga Island**	**35.85**	**49**	P	**P**	**14 03 59.2**	**+0.5**
FAKI	**Fak Fak**	**39.14**	**188**	P	**P**	**14 04 27.2**	**+0.6**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=103,slow=12,SNR=1.9	**39.90**	**313**	P	**P**	**14 04 31.8**	**-0.6**
ZALV	1.1nm,0.6s,baz=72,slow=4.8,SNR=4.8			PcP	**PcP**	**14 06 31.8**	**-0.4**
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=90,slow=9.8,SNR=11	**41.58**	**302**	P	**P**	**14 04 46.2**	**-0.1**
MKAR	**Makanchi Array**	**41.58**	**302**	P	**P**	**14 04 45.9**	**-0.4**
MAKZ	**Makanchi**	**41.79**	**302**	P	**P**	**14 04 47.9**	**-0.1**
KURK	**Kurchatov**	**43.68**	**308**	P	**P**	**14 05 02.5**	**-0.4**
KURK	comp=Z,3.9nm,0.7s			IAmb	IAmb	14 05 03.4	
KURBB	**Kurchatov Arra** comp=Z,1.6nm,0.5s,baz=85,slow=7.7,SNR=25	**43.75**	**308**	P	**P**	**14 05 03.1**	**-0.3**
	comp=Z,1.6nm,0.5s						
PDGK	**Podgornoye**	**44.04**	**298**		**P**	**14 05 05.6**	**-0.5**
N15K	**Kwethluk River**	**46.12**	**38**	P	**P**	**14 05 23.1**	**+1.1**
N15K	comp=Z,5.8nm,1.1s			IAmb	IAmb	14 06 04.9	
F17K	**Baldwin Pennin**	**46.21**	**29**	P	**P**	**14 05 23.8**	**+1.3**
F17K	comp=Z,8.0nm,1.3s			IAmb	IAmb	14 05 28.5	
C18K	**Utukok River**	**46.62**	**26**	P	**P**	**14 05 26.9**	**+1.1**
G18K	**Tagagawik**	**47.19**	**30**	P	**P**	**14 05 31.4**	**+1.4**
G18K	comp=Z,5.8nm,1.4s			IAmb	IAmb	14 05 31.9	
D19K	**Kuna River**	**47.72**	**27**	P	**P**	**14 05 35.3**	**+1.2**
D19K	comp=Z,2.6nm,0.7s			IAmb	IAmb	14 05 36.2	
E19K	**Redstone River**	**47.92**	**28**	P	**P**	**14 05 37.0**	**+1.4**
B20K	**Meade River**	**48.27**	**25**	P	**P**	**14 05 39.4**	**+1.2**
B20K	comp=Z,12nm,1.4s			IAmb	IAmb	14 05 41.2	
D20K	**Etivluk River**	**48.29**	**27**	P	**P**	**14 05 39.8**	**+1.3**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.4s,baz=108,slow=8.8,SNR=3.2	**48.53**	**312**	P	**P**	**14 05 40.2**	**-0.4**
	comp=Z,0.5nm,0.4s						
E21K	**Killik River**	**49.23**	**27**	P	**P**	**14 05 46.7**	**+1.1**
G21K	**Allakaket**	**49.31**	**30**	P	**P**	**14 05 47.2**	**+1.0**
KDAK	**Kodiak Island**	**50.10**	**41**	P	**P**	**14 05 53.1**	**+0.9**
KDAK	comp=Z,14nm,1.4s			IAmb	IAmb	14 05 59.1	
C24K	**Franklin Bluff**	**51.17**	**26**	P	**P**	**14 06 01.0**	**+1.0**
C24K	comp=Z,9.0nm,1.4s			IAmb	IAmb	14 06 17.9	
D25K	**Kavik River**	**51.99**	**26**	P	**P**	**14 06 07.3**	**+1.1**
D25K				IAmb	IAmb	14 06 07.8	

	comp=Z,5.3nm,1.5s								
IL31		**52.11**	**32**	P		**P**	**14 06 07.5**	**+0.5**	
ILAR	**Eielson Array** comp=Z,0.5nm,0.6s,baz=259,slow=5.8,SNR=10	**52.11**	**32**	P		**P**	**14 06 07.6**	**+0.6**	
	comp=Z,0.5nm,0.6s								
KNRA	**Kununurra**	**52.15**	**190**	P		**P**	**14 06 07.3**	**-0.5**	
K27K	**Chicken**	**54.28**	**32**	P		**P**	**14 06 24.1**	**+1.3**	
K27K	comp=Z,4.9nm,1.5s			IAmb		IAmb	14 06 26.5		
L27K	**Beaver Creek,**	**54.57**	**34**	P		**P**	**14 06 26.6**	**+1.6**	
BCAR	**Beaver Creek A**	**54.59**	**34**	P		**P**	**14 06 26.5**	**+1.4**	
H29M	**Whitestone**	**55.40**	**29**	P		**P**	**14 06 32.2**	**+1.5**	
H29M	comp=Z,5.3nm,1.4s			IAmb		IAmb	14 06 36.0		
WB0	**Warramunga Arr**	**55.68**	**183**	P		**P**	**14 06 32.5**	**-0.7**	
WB0	comp=Z,14nm,1.5s			IAmb		IAmb	14 06 35.3		
AB31	**Akbulak array**	**55.77**	**309**	P		**P**	**14 06 33.0**	**-0.6**	
ABKAR	**Akbulak array**	**55.77**	**309**	P		**P**	**14 06 33.0**	**-0.6**	
WRA	**Warramunga Arr** comp=Z,1.0nm,0.3s,baz=360,slow=7.6,SNR=26	**55.86**	**183**	P		**P**	**14 06 33.6**	**-0.9**	
	comp=Z,1.0nm,0.3s								
WRA	**Warramunga Arr**	**55.86**	**183**	P		**P**	**14 06 33.0**	**-1.5**	
WR8	**Warramunga Arr**	**55.87**	**183**	P		**P**	**14 06 33.8**	**-0.8**	
WR8	comp=Z,9.0nm,1.2s			IAmb		IAmb	14 06 45.1		
G30M	**tAoh Zraii Nji**	**56.07**	**28**	P		**P**	**14 06 36.5**	**+1.0**	
G30M	comp=Z,3.4nm,0.5s			IAmb		IAmb	14 06 37.1		
I30M	**Mount Dempster**	**56.43**	**30**	P		**P**	**14 06 38.9**	**+0.7**	
I30M	comp=Z,3.5nm,1.2s			IAmb		IAmb	14 06 40.7		
G31M	**Satah River**	**56.83**	**28**	P		**P**	**14 06 41.6**	**+0.9**	
G31M	comp=Z,4.7nm,1.1s			IAmb		IAmb	14 06 46.9		
H31M	**Peel River**	**57.10**	**29**	P		**P**	**14 06 43.7**	**+1.0**	
H31M	comp=Z,3.6nm,0.8s			IAmb		IAmb	14 06 44.9		
AS31	**Alice Springs**	**59.58**	**183**	P		**P**	**14 06 59.8**	**-0.5**	
ASAR	**Alice Springs** comp=Z,0.4nm,0.3s,baz=358,slow=5.4,SNR=29	**59.58**	**183**	P		**P**	**14 06 59.8**	**-0.5**	
	comp=Z,0.4nm,0.3s								
ASAR	**Alice Springs**	**59.58**	**183**	P		**P**	**14 06 59.6**	**-0.7**	
C36M	**Paulatuk**	**59.68**	**24**	P		**P**	**14 07 00.9**	**+0.5**	
C36M	comp=Z,6.1nm,0.7s			IAmb		IAmb	14 07 01.9		
DIB	**Dawson Inlet,**	**62.29**	**43**	P		**P**	**14 07 18.7**	**+0.6**	
DIB	comp=Z,16nm,1.3s			IAmb		IAmb	14 07 59.6		
ARCES	**ARCESS Array B** comp=Z,0.9nm,0.5s,baz=59,slow=7.2,SNR=6.2	**63.53**	**339**	P		**P**	**14 07 26.2**	**+0.2**	
	comp=Z,0.9nm,0.5s								
ARCES	**ARCESS Array B**	**63.53**	**339**	P		**P**	**14 07 25.1**	**-0.9**	
YKA	**Yellowknife Ar** comp=Z,0.5nm,0.4s,baz=331,slow=6.8,SNR=2.3	**66.31**	**29**	P		**P**	**14 07 44.1**	**+0.2**	
	comp=Z,0.5nm,0.4s								
FIA1	**FINESS Array S**	**67.89**	**331**	P		**P**	**14 07 53.5**	**-0.3**	
FINES	**FINESS Array B** comp=Z,3.2nm,0.7s,baz=78,slow=5.8,SNR=24	**67.89**	**331**	P		**P**	**14 07 53.5**	**-0.3**	
	comp=Z,3.2nm,0.7s								
FINES	**FINESS Array B**	**67.89**	**331**	P		**P**	**14 07 53.6**	**-0.2**	
RADR	**Rader Ridge**	**70.44**	**46**	P		**P**	**14 08 10.0**	**+0.3**	
BLKN	**Baker Lake**	**71.54**	**22**	P		**P**	**14 08 16.2**	**+0.3**	
BLKN	comp=Z,6.9nm,1.3s			IAmb		IAmb	14 08 24.3		
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,baz=42,slow=7.0,SNR=1.9	**72.77**	**321**	P		**P**	**14 08 22.8**	**-0.6**	
	comp=Z,0.2nm,0.3s								
AKASG	**Malin Array Be**	**72.77**	**321**	P		**P**	**14 08 22.8**	**-0.6**	
NC405	**NORSAR Array S**	**73.35**	**336**	P		**P**	**14 08 26.6**	**-0.1**	
HFS	**Hagfors** comp=Z,0.0nm,0.6s,baz=132,slow=2.2,SNR=13	**73.37**	**334**	P		**P**	**14 08 26.5**	**-0.2**	
	comp=Z,2.2nm,0.6s								
NC303	**NORSAR Array S**	**73.38**	**336**	P		**P**	**14 08 26.8**	**0.0**	
NC204	**NORSAR Array S**	**73.54**	**336**	P		**P**	**14 08 28.0**	**+0.1**	
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.5s,baz=43,slow=5.9	**73.57**	**336**	P		**P**	**14 08 27.6**	**-0.3**	
NOA	**NORSAR Array B** comp=Z,1.9nm,0.7s,baz=44,slow=5.7,SNR=6.1	**73.57**	**336**	P		**P**	**14 08 27.7**	**-0.3**	
	comp=Z,1.9nm,0.7s								
ILULI	**Ilulissat**	**74.76**	**3**	P		**P**	**14 08 35.7**	**+1.1**	
BRTR	**Keskin Array B** comp=Z,0.3nm,0.4s,baz=66,slow=4.2,SNR=3.9	**76.72**	**310**	P		**P**	**14 08 46.9**	**+0.4**	
	comp=Z,0.3nm,0.4s								
BRTR	**Keskin Array B**	**76.72**	**310**	P		**P**	**14 08 45.6**	**-0.8**	
TPNV	**Topopah Spring**	**80.51**	**51**	P		**P**	**14 09 07.7**	**+0.6**	
TPNV	comp=Z,3.5nm,1.3s			IAmb		IAmb	14 09 09.9		
PDAR	**Pinedale Array** comp=Z,0.6nm,0.7s,baz=27,slow=0.3,SNR=5.3	**80.76**	**43**	P		**P**	**14 09 08.8**	**+0.4**	
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	**80.76**	**43**	P		**P**	**14 09 08.7**	**+0.3**	
GERES	**GERESS Array B** comp=Z,0.4nm,0.6s,baz=64,slow=9.1,SNR=2.5	**81.52**	**326**	P		**P**	**14 09 11.4**	**-0.6**	
	comp=Z,0.4nm,0.6s								
EKA	**Eskdalemuir Ar** comp=Z,1.5nm,0.5s,baz=36,slow=4.8,SNR=12	**82.70**	**338**	P		**P**	**14 09 17.5**	**-0.4**	
	comp=Z,1.5nm,0.5s								
PV10	**Paradox Valley**	**83.97**	**46**	P		**P**	**14 09 25.7**	**+0.6**	
ITM	**Ithomi**	**85.44**	**313**	P		**P**	**14 09 31.6**	**-0.5**	
SCHQ	**Schefferville** comp=Z,1.0nm,0.5s,baz=315,slow=4.3,SNR=2.0	**87.08**	**14**	P		**P**	**14 09 39.6**	**-0.1**	
	comp=Z,1.0nm,0.5s								
SCHQ	**Schefferville**	**87.08**	**14**	P		**P**	**14 09 40.1**	**+0.4**	
SCHQ	comp=Z,9.2nm,1.4s			IAmb		IAmb	14 09 48.8		
TXAR	**Lajitas Array** comp=Z,0.6nm,0.6s,baz=293,slow=3.1,SNR=13	**93.42**	**50**	P		**P**	**14 10 10.9**	**+1.1**	
	comp=Z,0.6nm,0.6s								

*IDC **05** 14:22:48.0±1.0,3˚47N×128˚33E,h0km,mb3.9/8, mbtmp3.9/9,ML3.5/1,Error ellipse: s-maj=79.2km s-min=14.0km az=68.0*
*DJA **05** 14:22:50.7±0.6,4˚N±4˚×12˚9E±˚,h10km,M4.1/12,mB4.8/2, mb4.3/3,MLv4.0/12,Mw(mB)4.1/2*
*NEIC **05** 14:22:55.6±2.8,3˚35N±0˚09×128˚62E±0˚08,h43km±8km, mb4.3/16,Error ellipse: s-maj=14.6km s-min=11.2km az=210.0*

ISC 05 14:22:53.3±0.7,3˚50N±0˚07×128˚77E±0˚07,h35km,n42, σ1§54/42,mb4.2/16,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.06**	**207**	Pn	**Pn**	**14 23 38.5**	**-0.6**
TNTI	**Ternate**	**3.06**	**207**	P	**Pn**	**14 23 41.1**	**+1.9**
SGSI	**Sangihe**	**3.24**	**273**	P	**Pn**	**14 23 41.5**	**-0.2**
SGSI				S	**Sn**	**14 24 21.5**	**+2.4**
MNI	**Manado**	**4.43**	**243**	P	**Pn**	**14 23 58.7**	**+0.6**
MNI				S	**Sn**	**14 24 51.6**	**+3.1**
CDOP	**Cateel, Davao**	**4.84**	**331**	*i* P	Pn	14 24 02.1	-1.7
CDOP				*i* S	Sn	14 24 46.7	-12
SIJI	**Sorong** 1.5nm,0.3s,baz=272,slow=23,SNR=18	**5.01**	**150**	Pn	**Pn**	**14 24 08.2**	**+2.1**
SIJI	1.5nm,0.3s,baz=136,slow=24,SNR=5.6			Sn	**Sn**	**14 25 03.3**	**+0.5**
	2.4nm,0.4s						
SIJI	**Sorong**	**5.01**	**150**	P	**Pn**	**14 24 07.8**	**+1.7**
BIPH	**Bislig**	**5.23**	**333**	*e*P	Pn	14 24 16.4	+7.3
BIPH				*e*S	Sn	14 25 01.3	-6.9
TSSP	**Tandag City**	**6.07**	**335**	*e*P	Pn	14 24 17.7	-2.8
TSSP				*e*S	Sn	14 24 59.7	-29
GTOI	**Gorontalo**	**6.42**	**244**	P	**Pn**	**14 24 28.0**	**+2.5**
FAKI	**Fak Fak**	**7.27**	**151**	Pn	**Pn**	**14 24 39.3**	**+2.2**
TOLI2	**Tolitoli**	**8.33**	**254**	Pn	**Pn**	**14 24 52.1**	**+0.4**
SOEI	**Soe**	**13.91**	**199**	Pn	**Pn**	**14 26 06.9**	**-1.4**
MTN	**Manton Dam**	**16.41**	**172**	Pn	**Pn**	**14 26 38.0**	**-3.1**
MTN	comp=Z,21nm,1.3s			IAmb	IAmb	14 27 01.8	
KNRA	**Kununurra**	**19.06**	**180**		**P**	**14 27 12.2**	**-0.5**
FITZ	**Fitzroy Crossi** comp=Z,3.1nm,0.8s,baz=14,slow=12,SNR=1.6	**21.69**	**188**	P	**P**	**14 27 41.0**	**-0.2**
	comp=Z,3.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.69**	**188**	P	**P**	**14 27 41.4**	**+0.1**
WR0	**Warramunga Arr**	**23.78**	**167**	P	**P**	**14 28 03.6**	**+0.7**
WB0	comp=Z,9.8nm,1.2s			IAmb	IAmb	14 28 37.4	
WRA	**Warramunga Arr** comp=Z,1.9nm,0.7s,baz=344,slow=10.0,SNR=16	**23.93**	**167**	P	**P**	**14 28 04.3**	**0.0**
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**23.93**	**167**	P	**P**	**14 28 03.0**	**-1.3**
WR8	**Warramunga Arr**	**23.98**	**167**	P	**P**	**14 28 05.2**	**+0.5**
WR8	comp=Z,14nm,1.3s			IAmb	IAmb	14 28 42.1	
AS31	**Alice Springs**	**27.46**	**170**	P	**P**	**14 28 35.9**	**-0.4**

ASAR	**Alice Springs** comp=Z,0.1nm,0.3s,baz=350,slow=7.3,SNR=14	**27.47**	**170**	P		**P**	**14 28 35.6**	**-0.7**	
ASAR	comp=Z,0.3nm,0.6s,baz=340,slow=2.8,SNR=4.8			PcP		**PcP**	**14 31 54.9**	**+0.4**	
	comp=Z,0.1nm,0.3s								
ASAR	**Alice Springs**	**27.47**	**170**	P		**P**	**14 28 36.5**	**+0.1**	
ASAR						**PcP**	**14 31 54.9**	**+0.4**	
KULM	**Kulim**	**28.09**	**275**	P		**P**	**14 28 39.7**	**-2.4**	
KULM	comp=Z,11nm,1.3s			IAmb		IAmb	14 28 58.0		
JHJ2	**Mitsune**	**31.22**	**18**	P		**P**	**14 29 12.4**	**+3.0**	
BBOO	**Buckleboo**	**36.77**	**170**	P		**P**	**14 29 56.5**	**-1.2**	
STKA	**Stephens Creek** comp=Z,3.0nm,0.8s,baz=346,slow=7.7,SNR=5.8	**37.24**	**162**	P		**P**	**14 30 01.9**	**+0.2**	
	comp=Z,3.0nm,0.8s								
MKAR	**Makanchi Array** comp=Z,1.2nm,0.3s,baz=114,slow=7.1,SNR=26	**58.91**	**324**	P		**P**	**14 32 48.2**	**-0.8**	
	comp=Z,1.2nm,0.3s								
MKAR	**Makanchi Array**	**58.91**	**324**	P		**P**	**14 32 48.0**	**-0.9**	
MAKZ	**Makanchi**	**59.10**	**324**	P		**P**	**14 32 49.4**	**-0.9**	
MAKZ	comp=Z,2.7nm,0.9s			IAmb		IAmb	14 32 50.2		
ZAA0	**Zalesovo Array**	**61.72**	**332**	P		P	14 33 05.2	-2.8	
ZAA0	comp=Z,4.3nm,1.4s			IAmb		IAmb	14 33 34.3		
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,baz=111,slow=7.9,SNR=3.9	**61.72**	**332**	P		P	14 33 05.8	-2.3	
	comp=Z,0.5nm,0.4s								
ZALV	**Zalesovo Beam**	**61.72**	**332**	P		**P**	**14 33 06.0**	**-2.0**	
KURK	**Kurchatov**	**63.03**	**327**	P		**P**	**14 33 15.7**	**-1.1**	
KURBB	**Kurchatov Arra** comp=Z,1.9nm,0.6s,baz=123,slow=6.2,SNR=21	**63.04**	**327**	P		**P**	**14 33 15.9**	**-0.9**	
	comp=Z,1.9nm,0.6s								
KKAR	**Karatay Array**	**64.79**	**316**	P		**P**	**14 33 27.4**	**-1.3**	
BVAR	**Borovoye Array** comp=Z,1.4nm,0.8s,baz=132,slow=8.8,SNR=9.2	**68.62**	**326**	P		**P**	**14 33 51.0**	**-1.8**	
	comp=Z,1.4nm,0.8s								
BORK	**Borovoye**	**68.67**	**326**	P		**P**	**14 33 52.2**	**-0.9**	
BORK	comp=Z,2.5nm,0.8s			IAmb		IAmb	14 33 52.7		
AB31	**Akbulak array**	**73.62**	**320**	P		**P**	**14 34 21.7**	**-1.4**	
AB31	comp=Z,1.5nm,0.9s			IAmb		IAmb	14 34 22.5		
ABKAR	**Akbulak array**	**73.62**	**320**	P		**P**	**14 34 22.0**	**-1.2**	
G23K	**Bananza Creek**	**83.32**	**23**	P		**P**	**14 35 18.3**	**+1.9**	
G23K	comp=Z,2.9nm,1.0s			IAmb		IAmb	14 35 18.8		

WEL 05 15:06:15.3±0.7,45˚S±3˚×16˚8E±˚,h5km,M3.6/11, ML3.5/12,MLv3.6/11,Error ellipse: s-maj=5.4km s-min=3.0km az=123.2,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.26**	**83**	P	Pg	15 06 20.7	+0.3
MSZ				S	Sg	15 06 24.3	+0.7
GLNY	**Glenorchy**	**0.62**	**105**	P	Pg	15 06 27.1	-0.1
GLNY				S	Sg	15 06 36.1	+0.9
TAFS	**Te Anau Fire S**	**0.72**	**172**	P	Pg	15 06 29.8	+0.6
TAFS				S	Sb	15 06 40.8	+0.2
MLZ	**Mavora Lakes**	**0.77**	**150**	P	Pg	15 06 30.3	+0.2
MLZ				S	Sb	15 06 41.9	-0.1
DCZ	**Deep Cove**	**0.82**	**201**	P	Pg	15 06 30.1	-0.9
DCZ				S	Sg	15 06 41.6	0.0
WKZ	**Wanaka**	**1.04**	**97**	P	Pg	15 06 34.9	-0.3
WKZ				S	Sb	15 06 49.2	-0.5
NSBS	**Neils Beach**	**1.05**	**48**	P	Pg	15 06 34.8	-

WR8	**Warramunga Arr**	**44.54**	**262**	P	**P**	**15 48 47.7**	**-1.1**
WR8				IAmb	IAmb	15 49 17.0	
	comp=Z,12nm,1.3s						
AS31	**Alice Springs**	**44.59**	**257**	P	**P**	**15 48 48.0**	**-1.2**
AS31				IAmb	IAmb	15 48 49.3	
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**15 48 48.0**	**-1.3**
	comp=Z,4.6nm,0.5s,baz=92,slow=8.1,SNR=152						
	comp=Z,4.6nm,0.5s						
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**15 48 47.6**	**-1.6**
WB0	**Warramunga Arr**	**44.67**	**262**	P	**P**	**15 48 49.0**	**-0.9**
WB0				IAmb	IAmb	15 49 28.8	
	comp=Z,15nm,1.2s						
WRAB	**Tennant Creek**	**44.69**	**262**	P	**P**	**15 48 48.3**	**-1.7**
WRA	**Warramunga Arr**	**44.69**	**262**	P	**P**	**15 48 49.3**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=96,slow=7.6,SNR=60						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**44.69**	**262**	P	**P**	**15 48 49.0**	**-1.0**
MTN	**Manton Dam**	**49.29**	**271**	P	**P**	**15 49 24.6**	**-0.2**
KNRA	**Kununurra**	**50.77**	**266**	P	**P**	**15 49 35.5**	**-0.2**
KNRA				IAmb	IAmb	15 50 11.0	
	comp=Z,39nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.12**	**262**	P	**P**	**15 49 53.2**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=90,slow=9.1,SNR=2.2						
	comp=Z,2.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.12**	**262**	P	**P**	**15 49 53.2**	**+0.6**
FITZ				IAmb	IAmb	15 49 58.8	
	comp=Z,5.8nm,1.4s						
SOEI	**Soe**	**56.63**	**272**	P	**P**	**15 50 19.3**	**+1.8**
SBA	**Scott Base**	**57.68**	**184**	P	**P**	**15 50 23.9**	**+0.5**
MBWA	**Marble Bar**	**57.93**	**257**	P	**P**	**15 50 25.4**	**-0.7**
MBWA				IAmb	IAmb	15 50 52.1	
	comp=Z,38nm,1.5s						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**15 51 38.9**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=57,slow=1.2,SNR=7.6						
	comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**15 51 38.9**	**+0.2**
QSPA				IAmb	IAmb	15 51 59.9	
	comp=Z,5.3nm,1.4s						
BELA	**Belgrano 2**	**79.34**	**173**	P	**P**	**15 52 34.6**	**-0.2**
SBM	**South Baldy**	**86.46**	**52**	P	**P**	**15 53 11.0**	**-0.7**
TXAR	**Lajitas Array**	**87.06**	**57**	P	**P**	**15 53 16.3**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=207,slow=5.2,SNR=4.2						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**88.48**	**13**	P	**P**	**15 53 21.4**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=226,slow=5.0,SNR=1.8						
	comp=Z,0.1nm,0.4s						
AKASG	**Malin Array Be**	**143.25**	**331**	PKP	**PKPdf**	**15 59 58.1**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=44,slow=4.2,SNR=5.0						

*IDC **05** 16:00:45.8±2.0, 53˚.40N× 160˚.54W, h0km, mb3.6/2, mbtmp3.5/4, ML3.1/2, MS3.5/4, Error ellipse: s-maj=41.4km s-min=28.2km az=159.0*

*NEIC **05** 16:00:45.7±1.6, 53˚.26N±0˚.08× 160˚.41W±0˚.09, h10km±2km, mb3.8/13, ML3.2/16, ML3.1(AEIC), Error ellipse: s-maj=13.7km s-min=8.5km az=155.0*

ISC 05 16:00:45.9±1.0, 53˚.27N±0˚.08× 160˚.42W±0˚.05, h10km, n85, σ1s52/95, mb3.9/3, MS3.5/4, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**1.63**	**17**		**Pn**	**16 01 13.8**	**-0.8**
CNBA					**Sn**	**16 01 34.3**	**-1.3**
DOL	**Dolgoi Island**	**2.06**	**336**		**Pn**	**16 01 20.0**	**-0.6**
DOL					**Sn**	**16 01 44.5**	**-1.8**
SDPT	**Sand Point**	**2.08**	**359**		**Pn**	**16 01 20.2**	**-0.6**
SDPT					**Sn**	**16 01 44.4**	**-2.4**
SDPT				IAML		16 01 50.0	
	comp=E,129nm,1.1s						
DT1	**Dutton Round H**	**2.14**	**330**		**Pn**	**16 01 21.0**	**-0.6**
DTNA	**Dutton South F**	**2.17**	**331**		**Pn**	**16 01 21.7**	**-0.3**
DTNA					**Sn**	**16 01 47.6**	**-1.3**
HAG	**Hague Volcano**	**2.23**	**338**		**Pn**	**16 01 22.5**	**-0.4**
PS4A	**Pavlof South-4**	**2.24**	**339**		**Pn**	**16 01 23.2**	**+0.1**
PS4A					**Sn**	**16 01 50.1**	**-0.6**
PS1A	**Pavlof South-1**	**2.29**	**341**		**Pn**	**16 01 23.7**	**0.0**
PS1A					**Sn**	**16 01 51.1**	**-0.8**
ISNN	**Isanotski Nort**	**2.52**	**310**		**Pn**	**16 01 27.0**	**+0.1**
ISNN					**Sn**	**16 01 56.0**	**-1.6**
SSLS	**Shishaldin Sou**	**2.56**	**306**		**Pn**	**16 01 27.1**	**-0.3**
SSLN	**Shishaldin Nor**	**2.61**	**308**		**Pn**	**16 01 28.3**	**+0.1**
SSBA	**Shishaldin**	**2.65**	**306**		**Pn**	**16 01 28.6**	**-0.1**
SSBA					**Sn**	**16 01 58.7**	**-2.2**
VNWF	**Veniaminof 8**	**2.93**	**9**		**Pn**	**16 01 32.8**	**+0.2**
VNFG	**Fog Glacier, M**	**3.06**	**9**		**Pn**	**16 01 34.5**	**+0.1**
VNFG				IAML		16 02 24.2	
	comp=E,125nm,1.1s						
AKSA	**Akutan Strait**	**3.25**	**288**		**Pn**	**16 01 36.4**	**-0.5**
AKSA					**Sn**	**16 02 12.8**	**-2.8**
CHGN	**Chignik**	**3.25**	**20**		**Pn**	**16 01 36.8**	**-0.1**
CHGN					**Sn**	**16 02 13.3**	**-2.3**
CHGN				IAML		16 02 16.6	
	comp=E,57nm,0.1s						
CHGN				IAML		16 02 17.7	
	comp=N,40nm,0.2s						
AKUT	**Akutan**	**3.29**	**287**	Pn	**Pn**	**16 01 36.9**	**-0.6**
AKUT					**Sn**	**16 02 13.6**	**-3.0**
AKUT				IAML		16 02 16.2	
	comp=N,67nm,0.7s						
AKUT				IAML		16 02 17.6	
	comp=E,56nm,0.5s						
AHB	**Akutan Harbor**	**3.32**	**287**		**Pn**	**16 01 37.5**	**-0.3**
AHB					**Sn**	**16 02 15.1**	**-2.2**
AKBBA	**Akutan Broad B**	**3.38**	**286**		**Pn**	**16 01 38.2**	**-0.5**
ZRO	**Akutan Zero**	**3.41**	**286**		**Pn**	**16 01 38.5**	**-0.5**
AKLV	**Akutan Long Va**	**3.41**	**287**		**Pn**	**16 01 38.5**	**-0.5**
AKGG	**Akutan Green G**	**3.44**	**288**		**Pn**	**16 01 39.3**	**-0.1**
LVA	**Lava Point**	**3.45**	**287**		**Pn**	**16 01 39.6**	**-0.1**
LVA				IAML		16 02 23.4	
	comp=E,74nm,0.7s						
UNV	**Unalaska Valle**	**3.67**	**281**		**Pn**	**16 01 41.7**	**-0.9**
UNV					**Sn**	**16 02 20.8**	**-5.2**
UNV				IAML		16 02 26.5	
	comp=N,25nm,0.7s						
MNAT	**Makushin Natee**	**3.78**	**282**		**Pn**	**16 01 43.5**	**-0.7**
MGOD	**Makushin Gods**	**3.88**	**280**		**Pn**	**16 01 45.2**	**-0.4**
OKER	**Okmok East Rim**	**4.57**	**275**		**Pn**	**16 01 55.1**	**0.0**
OKCE	**Okmok Cone E**	**4.64**	**275**		**Pn**	**16 01 56.1**	**+0.1**
SII	**Sitkinak Islan**	**4.88**	**45**	Pn	**Pn**	**16 01 58.4**	**-0.9**
R17L	**Mt. Peulik Vol**	**4.94**	**26**		**Pn**	**16 01 59.9**	**-0.2**
PLK1	**Peulik 1**	**5.03**	**24**		**Pn**	**16 02 01.7**	**+0.4**
PLK5	**Peulik 5**	**5.15**	**22**		**Pn**	**16 02 03.3**	**+0.4**
CAHL	**Cahill**	**5.60**	**29**		**Pn**	**16 02 08.6**	**-0.6**
Q17K	**Contact Creek**	**5.62**	**25**		**Pn**	**16 02 09.5**	**-0.1**
OHAK	**Old Harbor**	**5.69**	**43**		**Pn**	**16 02 09.8**	**-0.5**
KABU	**Katmai Buttres**	**5.79**	**28**		**Pn**	**16 02 11.1**	**-0.7**
Q18K	**Katmai Hardscr**	**6.19**	**27**		**Pn**	**16 02 17.1**	**-0.2**
P17K	**Kvichak River**	**6.34**	**19**	Pn	**Pn**	**16 02 20.1**	**+0.8**
KDAK	**Kodiak Island**	**6.34**	**41**	Pn	**Pn**	**16 02 17.9**	**-1.4**
	comp=N,0.5nm,0.3s,baz=192,slow=4.0,SNR=20						
KDAK				Sn	**Sn**	**16 03 26.1**	**-5.6**
	comp=N,0.5nm,0.3s,baz=355,slow=21,SNR=1.6						
	comp=N,4.0nm,0.8s						
KDAK	**Kodiak Island**	**6.34**	**41**		**Pn**	**16 02 18.1**	**-1.2**
O16K	**Kokwok River B**	**6.47**	**11**	Pn	**Pn**	**16 02 20.6**	**-0.4**
N14K	**Kuskokwak Cree**	**6.71**	**355**	Pn	**Pn**	**16 02 24.1**	**-0.2**
O17K	**Koliganek Bris**	**6.77**	**14**		**Pn**	**16 02 24.8**	**-0.5**
N15K	**Kwethluk River**	**6.92**	**1**	Pn	**Pn**	**16 02 27.2**	**0.0**
Q18K	**Koktuh Hills**	**7.20**	**21**	Pn	**Pn**	**16 02 29.6**	**-1.5**
N16K	**Nishlik Lake**	**7.28**	**6**		**Pn**	**16 02 31.5**	**-0.7**
N17K	**Nushagak Hills**	**7.49**	**12**		**Pn**	**16 02 35.2**	**+0.2**
M16K	**Timber Creek**	**7.81**	**5**	Pn	**Pn**	**16 02 40.0**	**+0.5**
L14K	**Kuka Creek**	**8.19**	**352**	Pn	**Pn**	**16 02 44.5**	**-0.1**
N19K	**Bonanza Creek**	**8.22**	**21**	Pn	**Pn**	**16 02 45.6**	**+0.4**
M17K	**Holitna River**	**8.31**	**10**	Pn	**Pn**	**16 02 46.2**	**-0.1**
ATKA	**Atka Island**	**8.43**	**268**	Pn	**Pn**	**16 02 47.6**	**-0.3**
L16K	**Owhat River**	**8.48**	**3**	Pn	**Pn**	**16 02 49.1**	**+0.5**
K13K	**Kusilvak Mount**	**8.98**	**347**	Pn	**Pn**	**16 02 55.9**	**+0.5**
L18K	**Granite Mounta**	**9.19**	**11**	Pn	**Pn**	**16 02 57.2**	**-1.2**
L19K	**White Mountain**	**9.41**	**16**	Pn	**Pn**	**16 03 01.4**	**0.0**
K17K	**Iditarod**	**9.54**	**6**	Pn	**Pn**	**16 03 03.5**	**+0.4**
HIN	**Hinchinbrook I**	**10.43**	**41**	Pn	**Pn**	**16 03 15.5**	**+0.1**
KAIM	**Kayak Island**	**11.04**	**46**	Pn	**Pn**	**16 03 23.3**	**-0.3**
SCM	**Shep Creek Mo**	**11.07**	**34**	Pn	**Pn**	**16 03 24.4**	**+0.2**
RAGM	**Ragged Mountai**	**11.17**	**44**	Pn	**Pn**	**16 03 26.2**	**+0.7**
J20K	**Nowinta River**	**11.41**	**14**	Pn	**Pn**	**16 03 31.8**	**+3.2**
I21K	**Tanana**	**12.69**	**16**	Pn	**Pn**	**16 03 46.9**	**+0.8**
RIDG	**Independent Ri**	**13.23**	**31**	Pn	**Pn**	**16 03 53.9**	**+0.2**
ILAR	**Eielson Array**	**13.43**	**26**	Pn	**Pn**	**16 03 53.1**	**-3.1**
	comp=N,0.1nm,0.3s,baz=221,slow=13,SNR=5.2						
	comp=N,0.2nm,0.4s						
M29M	**Somme Creek**	**14.79**	**43**	Pn	**Pn**	**16 04 14.7**	**-0.2**
C16K	**Lisburne Hills**	**15.24**	**353**	P	**P**	**16 04 27.4**	**+1.7**
L29M	**L29M**	**15.25**	**41**	P	**P**	**16 04 26.0**	**0.0**
L29M				IAmb	IAmb	16 04 30.8	
	comp=Z,3.7nm,0.8s						
D19K	**Kuna River**	**15.32**	**3**	P	**P**	**16 04 26.5**	**-0.2**
D19K				IAmb	IAmb	16 04 57.7	
	comp=Z,6.5nm,1.4s						
C18K	**Utukok River**	**15.44**	**359**	P	**P**	**16 04 29.2**	**+1.2**
I27K	**Kandik River**	**15.54**	**30**	P	**P**	**16 04 32.7**	**+3.5**
I27K				IAmb	IAmb	16 04 34.0	
	comp=Z,4.6nm,0.9s						
I28M	**Miner Creek**	**15.95**	**32**	P	**P**	**16 04 36.8**	**+2.9**
H29M	**Whitestone**	**16.95**	**31**	Pn	**Pn**	**16 04 40.4**	**-2.4**
H29M				IAmb	IAmb	16 04 58.8	
	comp=Z,8.4nm,1.2s						
I30M	**Mount Dempster**	**17.02**	**36**	Pn	**Pn**	**16 04 42.2**	**-1.6**
I30M				IAmb	IAmb	16 04 53.3	
	comp=Z,6.0nm,0.8s						
C23K	**Itkillik River**	**17.23**	**12**	Pn	**Pn**	**16 04 44.9**	**-1.4**
C24K	**Franklin Bluff**	**17.37**	**14**	Pn	**Pn**	**16 04 46.1**	**-1.9**
G29M	**Pine Creek**	**17.50**	**30**	P	**P**	**16 04 53.5**	**+2.7**
G29M				IAmb	IAmb	16 04 56.8	
	comp=Z,5.6nm,0.8s						
EPYK	**Eagle Plains**	**17.56**	**32**	P	**P**	**16 04 55.5**	**+4.0**
A36M	**Sachs Harbour**	**24.13**	**26**	P	**P**	**16 06 01.3**	**-0.1**
A36M				IAmb	IAmb	16 06 09.5	
	comp=Z,4.5nm,0.9s						
PETK	**Petropavlovsk-**	**24.84**	**287**	P	**P**	**16 06 08.6**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=75,slow=12,SNR=2.5						
	comp=Z,1.9nm,0.7s						
PFO	**Pinyon Flats O**	**36.74**	**104**	LR	LR	16 19 28.1	
	comp=Z,140nm,19.2s,baz=351,slow=30						
TXAR	**Lajitas Array**	**47.38**	**97**	P	**P**	**16 09 21.9**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=291,slow=5.2,SNR=4.1						
	comp=Z,0.4nm,0.8s						
NRIK	**Noril'sk**	**48.12**	**334**	LR	LR	16 32 08.9	
	comp=Z,30nm,18.2s,baz=150,slow=39						
TKL	**Tuckaleechee C**	**54.76**	**76**	LR	LR	16 33 41.7	
	comp=Z,59nm,18.4s,baz=98,slow=36						
JTS	**Las Juntas de**	**73.13**	**95**	LR	LR	16 43 00.6	
	comp=Z,19nm,20.6s,baz=337,slow=35						

IDC 05 16:12:00.8±5.2, 15˚.40S× 173˚.26W, h0km, mb3.8/3, mbtmp3.8/4, ML3.9/1, MS3.6/34, Error ellipse: s-maj=250.9km s-min=20.4km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.06**	**44**	Pn	Pn	16 12 35.5	-1.3
	39nm,0.3s,baz=232,slow=2.3,SNR=38						
AFI				Sn	Sn	16 13 02.8	-0.5
	81nm,0.3s,baz=140,slow=22,SNR=7.7						
	114nm,0.4s						
MSVF	**Nonsavu**	**8.65**	**253**	LR	LR	16 16 41.8	
	comp=Z,134nm,18.5s,baz=42,slow=32						
RAR	**Rarotonga**	**14.05**	**116**	LR	LR	16 19 41.8	
	comp=Z,159nm,21.9s,baz=204,slow=33						
RAO	**Raoul Island**	**14.44**	**197**	LR	LR	16 19 32.9	
	comp=Z,519nm,21.3s,baz=27,slow=31						
PAE	**Paea**	**22.81**	**99**	*e*T	T	16 41 16.0	
	10.0nm,0.2s						
PPT	**Papeete**	**22.81**	**99**	LR	LR	16 25 06.7	
	comp=Z,69nm,18.7s,baz=288,slow=34						
PPT2	**Papeete2**	**22.81**	**99**	*e*LR	LR	16 22 26.9	
	269nm,29.0s						
PPT2				*e*LR	LR	16 22 27.3	
	238nm,26.5s						
PPT2				*e*T	T	16 41 18.2	
	2.6nm,0.3s						
TBI	**Tubuai**	**23.78**	**113**	*e*LR	LR	16 22 59.2	
	1μm,26.5s						
TBI				*e*T	T	16 42 32.0	
	4.8nm,0.3s						
URZ	**Urewera**	**24.31**	**199**	LR	LR	16 25 57.7	
	comp=Z,228nm,18.5s,baz=358,slow=34						
HNR	**Honiara**	**26.81**	**280**	LR	LR	16 26 10.0	
	comp=Z,4.2nm,18.2s,baz=212,slow=32						
RPZ	**Rata Peaks**	**31.23**	**202**	LR	LR	16 30 57.5	
	comp=Z,29nm,18.4s,baz=248,slow=36						
TAOE	**Nuku Hiva Isla**	**32.99**	**83**	*e*LR	LR	16 27 18.4	
	105nm,24.5s						
CTA	**Charters Tower**	**38.77**	**257**	LR	LR	16 33 52.1	
	comp=Z,74nm,18.0s,baz=216,slow=34						
H11S2	**WAKE ISLAND Hy**	**39.03**	**329**	T	T	16 59 57.6	
	baz=149,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**39.04**	**329**	T	T	16 59 59.6	
	baz=149,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**39.05**	**329**	T	T	17 00 02.7	
	baz=149,slow=76,SNR=26						
PMG	**Port Moresby**	**39.07**	**274**	LR	LR	16 33 48.2	
	comp=Z,77nm,19.7s,baz=62,slow=34						
H11N3	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	17 01 13.7	
	baz=150,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**39.98**	**330**	T	T	17 01 10.9	
	baz=150,slow=76,SNR=19						
H11N2	**WAKE ISLAND Hy**	**39.99**	**330**	T	T	17 01 17.7	
	baz=150,slow=76,SNR=17						
STKA	**Stephens Creek**	**44.15**	**240**	LR	LR	16 36 09.4	
	comp=Z,52nm,18.0s,baz=204,slow=33						
WRA	**Warramunga Arr**	**49.97**	**257**	P	P	16 20 56.3	-0.8
	0.5nm,0.5s,baz=90,slow=7.0,SNR=11						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**50.24**	**252**	P	P	16 20 58.6	-0.5
	2.2nm,0.5s,baz=88,slow=7.6,SNR=85						
	2.2nm,0.5s						
GUMO	**Guam**	**50.44**	**303**	LR	LR	16 40 03.4	
	comp=Z,23nm,19.3s,baz=140,slow=33						
SIJI	**Sorong**	**56.59**	**279**	LR	LR	16 45 01.0	
	comp=Z,31nm,21.3s,baz=80,slow=35						
JCJ	**Chichijima**	**60.45**	**314**	LR	LR	16 43 35.9	
	comp=Z,37nm,19.6s,baz=130,slow=31						
DAV	**Davao City (W)**	**64.56**	**228**	LR	LR	16 48 40.2	
	comp=Z,60nm,18.8s,baz=136,slow=34						
MJAR	**Matsushiro Arr**	**69.02**	**320**	LR	LR	16 46 42.5	
	comp=Z,42nm,21.6s,baz=158,slow=30						
TGY	**Tagaytay City**	**71.35**	**291**	LR	LR	16 49 42.9	
	comp=Z,68nm,21.6s,baz=217,slow=32						
PETK	**Petropavlovsk-**	**72.67**	**342**	LR	LR	16 47 50.4	
	comp=Z,16nm,21.5s,baz=146,slow=30						
PFO	**Pinyon Flats O**	**72.82**	**47**	LR	LR	16 49 07.3	
	comp=Z,64nm,19.2s,baz=202,slow=31						
LPIG	**La Paz**	**72.92**	**58**	LR	LR	16 49 25.9	
	comp=Z,33nm,18.8s,baz=294,slow=31						
YBH	**Yreka Blue Hor**	**73.52**	**37**	LR	LR	16 48 42.9	
	comp=Z,41nm,19.3s,baz=302,slow=30						
NVAR	**Mina Array Bea**	**74.24**	**42**	LR	LR	16 49 58.9	
	comp=Z,65nm,20.2s,baz=280,slow=31						
KSRS	**Korea Array**	**76.25**	**316**	LR	LR	16 52 04.5	
	comp=Z,17nm,21.1s,baz=95,slow=32						
USRK	**Ussuriysk Ar.**	**77.46**	**323**	LR	LR	16 51 17.1	
	comp=Z,50nm,21.0s,baz=135,slow=30						
MA2	**Magadan**	**80.20**	**342**	LR	LR	16 51 52.7	
	comp=Z,25nm,21.9s,baz=136,slow=30						
ANMO	**Albuquerque**	**80.70**	**50**	LR	LR	16 53 06.8	
	comp=Z,52nm,18.4s,baz=268,slow=31						
DLBC	**Dease Lake**	**81.65**	**21**	LR	LR	16 54 03.9	
	comp=Z,42nm,19.7s,baz=223,slow=31						
PDAR	**Pinedale Array**	**82.17**	**42**	LR	LR	16 56 17.1	
	comp=Z,23nm,19.1s,baz=280,slow=32						
ILAR	**Eielson Array**	**82.42**	**11**	P	P	16 24 25.4	+0.9
	0.1nm,0.5s,baz=224,slow=3.7,SNR=4.5						
	0.1nm,0.5s						
H03S2	**Juan Fernandez**	**85.09**	**124**	T	T	17 59 36.0	
	baz=252,slow=75,SNR=4.2						
H03S1	**Juan Fernandez**	**85.11**	**124**	T	T	17 59 41.4	
	baz=252,slow=75,SNR=3.6						
H03S3	**Juan Fernandez**	**85.11**	**124**	T	T	17 59 36.7	
	baz=252,slow=75,SNR=4.1						
YAK	**Yakutsk**	**89.16**	**337**	LR	LR	16 57 08.2	
	comp=Z,24nm,21.8s,baz=120,slow=30						
PLCA	**Paso Flores**	**89.42**	**132**	LR	LR	16 56 43.9	
	comp=Z,51nm,20.1s,baz=190,slow=30						
YKA	**Yellowknife Ar**	**90.04**	**23**	LR	LR	16 59 01.0	
	comp=Z,28nm,18.6s,baz=274,slow=31						
CMAR	**Chiang Mai Arr**	**92.74**	**288**	LR	LR	17 00 54.4	
	comp=Z,16nm,21.8s,baz=120,slow=32						
ATAH	**Atahualpa**	**92.79**	**98**	LR	LR	16 56 55.5	
	comp=Z,36nm,21.3s,baz=134,slow=29						
ULM	**Lac du Bonnet**	**93.85**	**39**	LR	LR	17 01 17.1	
	comp=Z,53nm,19.8s,baz=184,slow=32						
TIXI	**Tiksi**	**95.03**	**344**	LR	LR	17 04 04.2	
	comp=Z,27nm,20.8s,baz=171,slow=33						
TLY	**Talaya**	**97.72**	**321**	LR	LR	17 08 39.3	
	comp=Z,31nm,18.0s,baz=138,slow=35						
BRTR	**Keskin Array B**	**146.24**	**321**	PKPbc	PKPab	16 31 44.5	0.0
	0.5nm,0.6s,baz=72,slow=4.7,SNR=3.7						

*SDD **05** 16:13:27.6±1.5, 18˚.51N× 70˚.38W, h20km±11km, MD2.5, ML1.7, MW2.6, Presumed earthquake*

*OSPL **05** 16:13:28.6±1.1, 18˚.45N× 70˚.43W, h0km±12km, ML2.2, Presumed earthquake*

ISC 05 16:13:26.7±1.7, 18˚.51N±0˚.04× 70˚.40W±0˚.04, h14km±15km, n11, σ0s72/20, 8C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	**BANI**	**0.13**	**160**	⇑*e*Pg	**Pb**	**16 13 31.1**	**+0.1**
BANI				⇑*e*Sg	**Sb**	**16 13 44.3**	**+0.6**
BANI				IAML		16 13 35.4	
	comp=N,1μm,0.1s						
ABDR	**Alto Bandera**	**0.37**	**325**	⇑*e*Pg	**Pb**	**16 13 35.2**	**-0.1**
ABDR				⇑*e*Sg	**Sb**	**16 13 41.2**	**+0.2**
ABDR				IAML		16 13 42.2	
	comp=E,5.1nm,0.2s						
SDD	**Santo Domingo**	**0.47**	**97**	*e*S	**Sb**	**16 13 44.2**	**+0.7**
SDDR	**Presa de Saban**	**0.96**	**299**	⇑*e*Pg	**Pb**	**16 13 44.6**	**-0.5**
SDDR				⇑*e*Sg	**Sb**	**16 13 57.8**	**0.0**
SDDR				IAML		16 14 02.9	
	comp=N,31nm,1.4s						
SDDR	**Presa de Saban**	**0.96**	**299**	*i* P	**Pn**	**16 13 45.9**	**+0.1**
SDDR				*e*S	**Sn**	**16 13 59.1**	**-0.3**
SDDR				IAML		16 14 05.6	
	comp=Z,295nm,0.3s						
SC01	**Santiago de lo**	**0.96**	**341**	*i* P	**Pn**	**16 13 46.6**	**+0.7**
SC01				*e*S	**Sn**	**16 14 00.1**	**+0.8**
LONE3	**El Aguacate, B**	**1.00**	**275**	*i* P	**Pb**	**16 13 45.6**	**-0.4**
LONE3				*e*S	**Sn**	**16 14 00.1**	**-0.5**
LONE3				IAML		16 14 04.5	
	comp=Z,9.5nm,0.5s						
HATOM	**Hato Mayor del**	**1.01**	**74**	⇑*e*Pg	**Pg**	**16 13 46.3**	**+0.1**
HATOM				⇑*e*Sg	**Sb**	**16 13 57.1**	**-2.0**
HATOM				IAML		16 14 00.9	
	comp=N,20nm,0.5s						
LODU1	**El Espartillar**	**1.03**	**261**	*i* P	**Pb**	**16 13 46.3**	**0.0**
LODU1				IAML		16 14 02.0	
	comp=Z,29nm,2.0s						
LOVI	**El Cajuil, Ovi**	**1.16**	**232**	*i* P	**Pn**	**16 13 47.8**	**-0.7**
LOVI				*e*S	**Sb**	**16 14 03.0**	**-0.4**
LOVI				IAML		16 14 04.7	
	comp=Z,52nm,0.9s						
LOBH	**Bahia de las A**	**1.34**	**241**	*i* P	**Pn**	**16 13 51.3**	**+0.3**
LOBH				*e*S	**Sb**	**16 14 09.4**	**+0.7**
LOBH				IAML		16 14 14.4	
	comp=Z,41nm,2.1s						

*IDC **05** 16:14:06.0±1.8, 38˚.67N× 122˚.95W, h0km, mb3.6/1, mbtmp3.5/6, ML3.3/5, MS3.2/3, Error ellipse: s-maj=21.0km s-min=11.6km az=46.0*

*NEIC **05** 16:14:06.9±2.0, 38˚.781N±0˚.010× 122˚.66W±0˚.02, h5km±1km, mb3.8/12, ML3.4/134, Mwr4.0/3(NCEDC), Error ellipse: s-maj=3.0km s-min=2.1km az=297.0*

*NEIC **05** 16:14:07.7, 38˚.79N× 122˚.77W, h1km*

*NEIC **05** 16:14:07.7, 38˚.79N× 122˚.77W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.44; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$ 1.10; $M_{r\theta}$0.58; $M_{\theta\phi}$0.11; $M_{\phi r}$-0.06; Fault plane solution: $M_0$1.13000×10^{15} NP1:ϕ_s325.83000°, δ64.23000°, λ-149.04000°. NP2:ϕ_s221.22000°, δ62.40000°, λ-29.37000°. Principal axes: T 1.1075, Plg1.0000°, Azm93.0000°; N 0.0429, Plg51.0000°, Azm2.0000°; P -1.1503, Plg39.0000°, Azm184.0000°;*

*NCEDC **05** 16:14:07.7±2.1, 38˚.79N±0˚.02× 122˚.77W±0˚.02, h1km Error ellipse: s-maj=2.6km s-min=1.8km az=49.0*

ISC 05 16:14:07.4±0.8, 38˚.74N±0˚.02× 122˚.77W±0˚.02, h8km±4km, n179, σ0s83/164, Northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAXM	**Alexander Vall**	**0.03**	**162**		**Pg**	**16 14 09.

AFDM	**Forest Hills D**	**1.42**	**81**			**Pn**	**16 14 32.2**	**-1.4**
AFDM				IAML			16 14 57.2	
	comp=N,413nm,0.6s							
O02D	**Mt. Diablo Mer**	**1.43**	**359**			**Pb**	**16 14 34.4**	**-0.1**
O02D				IAML			16 14 40.2	
	comp=N,368nm,0.7s							
JFP	**Foothills Park**	**1.45**	**162**			**Pn**	**16 14 33.3**	**-0.7**
CSTL	**Corral Hollow**	**1.49**	**137**			**Pn**	**16 14 34.1**	**-0.4**
CALM	**Calaveras Res.**	**1.50**	**149**			**Pn**	**16 14 33.8**	**-0.9**
JBMM	**Black Mountain**	**1.50**	**161**			**Pn**	**16 14 34.4**	**-0.4**
JSJM	**St Joseph**	**1.50**	**159**			**Pb**	**16 14 34.4**	**-1.2**
JPC	**Peters Creek,**	**1.53**	**163**			**Pn**	**16 14 34.5**	**-0.6**
CMLM	**Mount Lewis**	**1.54**	**145**			**Pn**	**16 14 34.6**	**-0.7**
LTCM	**Tuscan Springs**	**1.55**	**19**			**Pn**	**16 14 34.1**	**-1.2**
JPSM		**1.57**	**168**			**Pn**	**16 14 35.1**	**-0.6**
MHR	**Mount Hamilton**	**1.59**	**150**			**Pn**	**16 14 35.6**	**-0.3**
BRIC	**Briceland Vine**	**1.62**	**328**			**Pn**	**16 14 36.7**	**+0.3**
BRIC				IAML			16 15 14.3	
	comp=N,344nm,1.3s							
BRIC				IAML			16 15 23.9	
	comp=E,309nm,1.6s							
CMMM	**Mount Mocho**	**1.63**	**142**			**Pn**	**16 14 36.2**	**-0.3**
WELL	**Weller Preserv**	**1.63**	**100**			**Pn**	**16 14 35.9**	**-0.6**
WELL				IAML			16 14 57.7	
	comp=N,331nm,0.5s							
WELL				IAML			16 14 59.8	
	comp=E,310nm,0.7s							
MHC	**Mount Hamilton**	**1.66**	**147**			**Pn**	**16 14 36.4**	**-0.5**
MHC				IAML			16 15 08.6	
	comp=E,401nm,0.6s							
MHC				IAML			16 15 19.7	
	comp=N,443nm,0.8s							
MTOS	**Mt Oso, Westle**	**1.68**	**137**			**Pn**	**16 14 36.7**	**-0.4**
ARN	**Arnold Ranch**	**1.70**	**145**			**Pn**	**16 14 36.9**	**-0.5**
JSTM	**Santa Teresa H**	**1.71**	**153**			**Pn**	**16 14 37.0**	**-0.6**
CCOB	**Coe Ranch Numb**	**1.71**	**149**			**Pb**	**16 14 38.0**	**-1.2**
O03E	**Paynes Creek**	**1.72**	**25**			**Pn**	**16 14 36.4**	**-1.4**
CADM	**Anderson Res.**	**1.81**	**150**			**Pn**	**16 14 38.6**	**-0.3**
JUCM	**University of**	**1.83**	**162**			**Pn**	**16 14 38.4**	**-0.8**
YUBA	**Cisco Grove, Y**	**1.84**	**70**			**Pn**	**16 14 39.1**	**-0.5**
LDBM	**Digger Butte**	**1.85**	**24**			**Pn**	**16 14 38.6**	**-1.0**
KCRM	**Chalk Rock**	**1.87**	**335**			**Pn**	**16 14 40.3**	**+0.5**
GHS	**Gilroy Hot Spr**	**1.95**	**147**			**Pn**	**16 14 40.3**	**-0.6**
KHBM	**Hayfork Bally**	**1.95**	**350**			**Pn**	**16 14 41.4**	**+0.4**
SIFF	**Sifford Mounta**	**1.95**	**32**			**Pn**	**16 14 40.6**	**-0.5**
JELB	**Ellicott, Sant**	**1.96**	**157**			**Pn**	**16 14 40.1**	**-0.9**
KMPM	**Mount Pierce**	**1.97**	**328**			**Pn**	**16 14 41.2**	**0.0**
KMPM				IAML			16 14 53.0	
	comp=E,326nm,0.9s							
KMPM				IAML			16 14 56.0	
	comp=N,300nm,1.0s							
LAS	**Mount Lassen**	**1.99**	**29**			**Pn**	**16 14 40.6**	**-1.0**
LRDM	**Redding Peak**	**2.00**	**30**			**Pn**	**16 14 41.3**	**-0.3**
CMB	**Columbia Colle**	**2.00**	**110**			**Pn**	**16 14 41.8**	**+0.2**
CMB				IAML			16 15 09.0	
	comp=N,231nm,1.2s							
CMB				IAML			16 15 09.2	
	comp=E,224nm,1.1s							
DONR	**Donner Summit**	**2.00**	**71**			**Pn**	**16 14 41.9**	**+0.1**
HCBM	**Chamberlain**	**2.01**	**154**			**Pn**	**16 14 41.2**	**-0.4**
CSR	**Chase Ranch**	**2.01**	**152**			**Pn**	**16 14 41.1**	**-0.6**
HPCM	**Pacheco Lake**	**2.05**	**144**			**Pn**	**16 14 42.2**	**-0.1**
HFEM	**San Felipe**	**2.06**	**148**			**Pn**	**16 14 42.4**	**0.0**
SLD	**San Luis Dam**	**2.06**	**143**			**Pn**	**16 14 42.3**	**-0.2**
DMOR	**Dinsmores, CA**	**2.09**	**340**			**Pn**	**16 14 44.1**	**+1.1**
LSHM	**Sage Hen Hill**	**2.12**	**15**			**Pn**	**16 14 43.0**	**-0.3**
HJGM	**San Juan Grade**	**2.16**	**154**			**Pn**	**16 14 42.4**	**-1.3**
HSFM	**Saint Francis**	**2.17**	**152**			**Pn**	**16 14 43.6**	**-0.3**
BEKR	**Beckworth**	**2.18**	**58**			**Pn**	**16 14 44.8**	**+0.6**
BEKR				IAML			16 15 14.5	
	comp=N,184nm,0.5s							
BEKR				IAML			16 15 19.1	
	comp=E,247nm,0.8s							
FRP	**Fremont Peak**	**2.23**	**153**			**Pn**	**16 14 43.5**	**-1.3**
N02D	**Trinity Center**	**2.23**	**1**			**Pn**	**16 14 45.1**	**+0.3**
N02D				IAML			16 15 09.7	
	comp=N,167nm,0.7s							
SAO	**San Andreas Ge**	**2.23**	**152**			**Pn**	**16 14 44.5**	**-0.3**
HMOM	**Monterey**	**2.24**	**162**			**Pn**	**16 14 44.0**	**-0.9**
KHMM	**Horse Mountain**	**2.26**	**341**			**Pn**	**16 14 45.8**	**+0.6**
KHMM				IAML			16 14 58.5	
	comp=E,156nm,1.0s							
BSRM	**Salinas Radio**	**2.29**	**154**			**Pn**	**16 14 44.6**	**-1.1**
HATC	**Hat Creek Radi**	**2.30**	**25**			**Pn**	**16 14 45.8**	**-0.1**
HATC				IAML			16 16 02.5	
	comp=N,147nm,1.3s							
HATC				IAML			16 16 03.5	
	comp=E,189nm,2.9s							
BUCR	**Buckhorn Ranch**	**2.32**	**117**			**Pn**	**16 14 46.7**	**+0.6**
BPCNC	**Pine Canyon**	**2.34**	**157**			**Pn**	**16 14 45.9**	**-0.4**
PEAR	**Peavine Mounta**	**2.35**	**67**			**Pn**	**16 14 47.5**	**+1.0**
SCZ	**Santa Cruz**	**2.40**	**153**			**Pn**	**16 14 45.8**	**-1.2**
BJCM	**Johnson Can.**	**2.45**	**153**			**Pg**	**16 14 53.1**	**-1.2**
PNTR	**Pine Nut**	**2.50**	**81**			**Pn**	**16 14 49.6**	**+1.1**
BBGB	**Big Mountain B**	**2.56**	**147**			**Pn**	**16 14 50.7**	**+1.4**
LEGD	**La Grand CA**	**2.57**	**126**			**Pn**	**16 14 49.4**	**0.0**
BMSM	**Mercy Hot Spri**	**2.60**	**142**			**Pn**	**16 14 50.0**	**+0.1**
WAKR	**Walker**	**2.62**	**94**			**Pn**	**16 14 51.8**	**+1.5**
WAKR				IAML			16 15 30.3	
	comp=N,252nm,0.6s							
M02C	**Callahan**	**2.65**	**359**			**Pn**	**16 14 51.5**	**+0.9**
PAHR	**Pah Rah Range**	**2.80**	**69**			**Pn**	**16 14 53.0**	**+0.3**
PAHR				IAML			16 15 52.9	
	comp=N,108nm,1.6s							
PAHR				IAML			16 15 53.6	
	comp=E,116nm,1.6s							
PMPB	**Monarch Peak**	**2.97**	**148**			**Pn**	**16 14 55.1**	**+0.2**
PMPB				IAML			16 15 59.3	
	comp=E,144nm,1.2s							
PMPB				IAML			16 16 04.1	
	comp=N,188nm,1.3s							
HULI	**Fort Hunter Li**	**2.98**	**155**	IAML			16 15 48.7	
	comp=E,184nm,1.4s							
HULI				IAML			16 16 06.7	
	comp=N,190nm,1.6s							
YBH	**Yreka Blue Hor**	**2.99**	**1**	Pn		**Pn**	**16 14 57.3**	**+2.1**
	comp=N,1.0nm,0.3s,baz=185,slow=12,SNR=16							
YBH				Sn		**Sn**	**16 15 29.6**	**-1.7**
	comp=N,1.2nm,0.3s,baz=106,slow=10,SNR=4.5							
YBH				LR		LR	16 16 16.9	
	comp=N,263nm,19.3s,baz=264,slow=43 comp=N,3.4nm,0.4s							
MDPB	**Devils Postpil**	**3.11**	**110**	IAML			16 15 42.9	
	comp=E,167nm,0.8s							
PKD	**Bear Valley Ra**	**3.31**	**147**	IAML			16 16 04.6	
	comp=N,74nm,1.1s							
PKD				IAML			16 16 08.4	
	comp=E,72nm,1.3s							
NVAR	**Mina Arroy Bea**	**3.51**	**94**	Pn		**Pn**	**16 15 03.7**	**+1.1**
	comp=E,3.5nm,0.3s,baz=274,slow=15,SNR=56							
NVAR				Pg		**Pb**	**16 15 10.3**	**+0.3**
	comp=E,16nm,0.3s,baz=263,slow=19,SNR=44							
NVAR				Lg		Lg	16 16 00.2	
	comp=E,8.1nm,0.3s,baz=293,slow=27,SNR=4.5 comp=E,10nm,0.6s							
DSP	**Deep Springs**	**4.03**	**108**	IAML			16 16 15.0	
	comp=E,70nm,1.0s							
DSP				IAML			16 16 28.1	
	comp=N,40nm,1.1s							
VES	**Vestal, Richgr**	**4.12**	**133**	IAML			16 16 21.5	
	comp=E,69nm,0.9s							
K05A	**Summer Lake**	**4.23**	**19**	IAML			16 16 56.9	
	comp=E,29nm,2.3s							
CWC	**Cottonwood Cre**	**4.37**	**120**	IAML			16 16 23.9	
	comp=E,46nm,0.9s							
CWC				IAML			16 16 26.4	
	comp=N,63nm,0.9s							
TPH	**Tonopah**	**4.41**	**97**	IAML			16 16 29.4	
	comp=N,28nm,0.9s							
TPH				IAML			16 16 39.5	
	comp=E,28nm,1.0s							
J01E	**Myrtle Point**	**4.50**	**349**	IAML			16 17 13.4	
	comp=E,28nm,4.3s							
J01E				IAML			16 17 14.4	
	comp=N,29nm,2.5s							
GMN	**Gold Mountain**	**4.58**	**107**	IAML			16 16 39.2	
	comp=N,27nm,1.1s							
ISA	**Isabella, Lake**	**4.60**	**131**	IAML			16 16 31.3	
	comp=N,31nm,0.9s							
ISA				IAML			16 16 31.6	
	comp=E,57nm,0.7s							
WVOR	**Wild Horse Val**	**4.85**	**39**	IAML			16 17 25.4	
	comp=E,20nm,3.9s							
I03D	**Drain, OR**	**4.97**	**355**	IAML			16 17 21.5	
	comp=E,18nm,2.7s							
WCT	**Wildcat Mounta**	**5.24**	**110**	IAML			16 16 52.4	
	comp=E,20nm,0.8s							
WCT				IAML			16 17 03.6	
	comp=N,24nm,1.5s							
TPO	**Tropico Hills**	**5.30**	**135**	IAML			16 17 14.2	
	comp=N,36nm,1.1s							
TPO				IAML			16 17 15.6	
	comp=E,33nm,1.0s							
WIFE	**Three Sisters-**	**5.36**	**7**	IAML			16 17 54.4	
	comp=E,13nm,3.2s							
TPNV	**Topopah Spring**	**5.46**	**107**	IAML			16 17 05.2	
	comp=E,30nm,1.9s							
TPNV				IAML			16 17 12.4	
	comp=E,32nm,1.5s							
ELK	**Elko**	**6.14**	**69**	Pn		**Pn**	**16 15 40.2**	**+1.6**
	comp=E,0.3nm,0.3s,baz=256,slow=13,SNR=16							
ELK				Lg		Lg	16 17 23.4	
	comp=E,0.4nm,0.3s,baz=77,slow=13,SNR=4.0 comp=E,3.7nm,0.7s							
PFO	**Pinyon Flats O**	**7.22**	**133**	Pn		**Pn**	**16 15 54.5**	**+1.0**
	comp=E,0.3nm,0.3s,baz=321,slow=12,SNR=4.6							
PFO				Lg		Lg	16 17 54.0	
	comp=E,0.1nm,0.3s,baz=244,slow=3.7,SNR=4.7 comp=E,0.8nm,0.4s							
PDAR	**Pinedale Array**	**10.80**	**64**	Pn		Pn	16 16 47.1	+4.6
	baz=250,slow=12,SNR=20							
PDAR				LR		LR	16 21 27.4	
	comp=E,37nm,18.6s,baz=243,slow=40 comp=E,3.3nm,1.0s							
EDM	**Edmonton**	**15.87**	**21**	P		**P**	**16 17 55.5**	**+0.6**
EDM				IAmb		IAmb	16 17 56.9	
	comp=Z,4.8nm,0.7s							
RTBA	**Rita Blanca**	**16.04**	**92**	P		**P**	**16 17 57.4**	**+0.4**
RTBA				IAmb		IAmb	16 18 02.8	
	comp=Z,11nm,1.4s							
MSTX	**Muleshoe**	**16.79**	**100**	P		**P**	**16 18 06.2**	**+0.9**
MSTX				IAmb		IAmb	16 18 09.5	
	comp=Z,11nm,1.3s							
TX31	**Lajitas Ar. Si**	**18.37**	**115**			**P**	**16 18 23.8**	**+1.0**
TXAR	**Lajitas Array**	**18.37**	**115**			**P**	**16 18 23.7**	**+0.9**
ECSD	**EROS Data Cent**	**20.25**	**67**	P		Pn	16 18 44.0	-1.2
FFC	**Flin Flon**	**21.29**	**35**	P		**P**	**16 18 54.0**	**-0.3**
ULM	**Lac du Bonnet**	**22.24**	**50**	P		**P**	**16 19 07.2**	**+2.7**
	comp=Z,1.8nm,0.7s,baz=233,slow=5.1,SNR=4.1 comp=Z,1.8nm,0.7s							
ULM	**Lac du Bonnet**	**22.24**	**50**	P		**P**	**16 19 03.8**	**-0.7**
ULM				IAmb		IAmb	16 19 10.3	
	comp=Z,6.2nm,1.5s							
O30N	**Mendenhall**	**23.58**	**344**	P		**P**	**16 19 17.4**	**-1.0**
M29M	**Somme Creek**	**25.59**	**343**	P		**P**	**16 19 36.4**	**-0.6**
M29M				IAmb		IAmb	16 20 00.8	
	comp=Z,3.8nm,1.4s							
HDIL	**Hopedale**	**25.75**	**75**	P		**P**	**16 19 37.2**	**-1.3**
C27K	**Jago River**	**32.91**	**347**	P		**P**	**16 20 41.2**	**-0.6**
RPN	**Rapa Nui**	**66.72**	**167**	LR		LR	16 48 02.8	
	comp=Z,80nm,18.5s,baz=237,slow=30							

*NEIC **05** 16:29:07.1±0.5,20°.3S±0°.1×177°.74W±0°.10, h558km±8km, mb4.4/26, Error ellipse: s-maj=19.7km s-min=11.8km az=155.0*

*IDC **05** 16:29:08.2±9.1,20°.12S×177°.82W, h580km±90km, mb3.3/5, mbtmp4.2/6, Error ellipse: s-maj=65.6km s-min=29.8km az=54.0*

ISC 05 16:29:06.2±0.6,**20°.3S**±0°.1×**177.79W**±0°.10,**h550**km,**n40,** σ1s**00**/42,**mb4.3**/19,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.69**	**302**	P	**P**	**16 30 34.2**	**+0.6**
AFI	**Afiamalu**	**8.55**	**43**	P	**P**	**16 31 10.0**	**+0.3**
MARNC	**Mare, Loyalty**	**13.31**	**262**	P	**P**	**16 31 57.6**	**-0.7**
DZM	**Mont Dzumac**	**14.82**	**260**	P	**P**	**16 32 16.0**	**+2.1**
	2.6nm,0.3s,baz=128,slow=20,SNR=9.8						
SANVU	**Saraoutou**	**15.07**	**286**	P	**P**	**16 32 18.3**	**+1.7**
THZ	**Tophouse**	**22.82**	**198**	P	**P**	**16 33 28.0**	**+0.5**
THZ				IAmb	IAmb	16 33 44.9	
	comp=Z,35nm,1.3s						
HNR	**Honiara**	**24.04**	**293**	P	**P**	**16 33 38.6**	**-0.1**
WHZ	**Wether Hill Ro**	**28.11**	**201**	P	**P**	**16 34 14.9**	**+0.8**
EIDS	**Eidsvold**	**29.10**	**254**	P	**P**	**16 34 23.4**	**+0.4**
EIDS				IAmb	IAmb	16 34 33.9	
	comp=Z,6.0nm,1.1s						
ARMA	**Armidale**	**29.34**	**244**	P	**P**	**16 34 25.4**	**+0.2**
ARMA				IAmb	IAmb	16 35 07.7	
	comp=Z,30nm,1.4s						
CTAO	**Charters Tower**	**33.71**	**264**	P	**P**	**16 35 02.6**	**+0.1**
CTAO				IAmb	IAmb	16 35 45.9	
	comp=Z,18nm,1.2s						
STKA	**Stephens Creek**	**38.06**	**244**	P	**P**	**16 35 38.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=74,slow=8.4,SNR=8.2 comp=Z,1.8nm,0.7s						
BBOO	**Buckleboo**	**42.82**	**243**	P	**P**	**16 36 16.4**	**+0.2**
BBOO				IAmb	IAmb	16 36 36.6	
	comp=Z,15nm,1.4s						
WR8	**Warramunga Arr**	**44.68**	**262**	P	**P**	**16 36 30.0**	**-0.7**
WR8				IAmb	IAmb	16 36 31.0	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**44.76**	**256**	P	**P**	**16 36 31.2**	**-0.2**
ASAR	**Alice Springs**	**44.76**	**256**	P	**P**	**16 36 31.4**	**-0.1**
	comp=Z,4.8nm,0.6s,baz=90,slow=7.6,SNR=130						
ASAR				PcP	**PcP**	**16 38 00.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=103,slow=3.8,SNR=5.8 comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**44.76**	**256**	P	**P**	**16 36 30.8**	**-0.6**
ASAR					**PcP**	**16 38 00.8**	**-0.9**
WB0	**Warramunga Arr**	**44.81**	**262**	P	**P**	**16 36 30.9**	**-0.8**
WB0				IAmb	IAmb	16 36 31.7	
	comp=Z,8.0nm,0.5s						
WRA	**Warramunga Arr**	**44.83**	**262**	P	**P**	**16 36 31.2**	**-0.8**
	comp=Z,3.5nm,0.4s,baz=97,slow=7.8,SNR=82 comp=Z,3.5nm,0.4s						
MTN	**Manton Dam**	**49.36**	**270**	P	**P**	**16 37 05.6**	**-0.4**
MTN				IAmb	IAmb	16 37 06.1	
	comp=Z,32nm,1.1s						
FORT	**Forrest**	**49.56**	**246**	P	**P**	**16 37 07.1**	**-0.2**
FORT				IAmb	IAmb	16 37 38.0	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**50.87**	**266**	P	**P**	**16 37 16.8**	**-0.3**
KNRA				IAmb	IAmb	16 37 19.9	
	comp=Z,31nm,1.4s						
FAKI	**Fak Fak**	**51.65**	**283**	P	**P**	**16 37 22.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.25**	**262**	P	**P**	**16 37 33.9**	**-0.2**
MBWA	**Marble Bar**	**58.09**	**257**	P	**P**	**16 38 07.2**	**-0.5**
MBWA				IAmb	IAmb	16 38 43.3	
	comp=Z,13nm,1.1s						
MORW	**Morawa**	**60.09**	**247**	P	**P**	**16 38 20.4**	**-0.6**
MORW				IAmb	IAmb	16 38 28.1	
	comp=Z,21nm,1.5s						
QSPA	**South Pole Qui**	**69.78**	**180**	P	**P**	**16 39 22.0**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=339,slow=6.6,SNR=7.9 comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**69.78**	**180**	P	**P**	**16 39 21.6**	**+0.3**
KKM	**Kota Kinabalu**	**69.90**	**285**	P	**P**	**16 39 22.6**	**-0.3**
KKM				IAmb	IAmb	16 39 25.4	
	comp=Z,9.1nm,1.3s						
UGM	**Wanagama**	**70.17**	**269**	P	**P**	**16 39 24.1**	**-0.4**
AKUT	**Akutan**	**74.83**	**7**	P	**P**	**16 39 51.2**	**+0.9**
BAR	**Barrett**	**78.62**	**49**	P	**P**	**16 40 11.4**	**-0.3**
BELA	**Belgrano 2**	**79.75**	**173**	P	**P**	**16 40 16.8**	**0.0**
M16K	**Timber Creek**	**82.44**	**9**	P	**P**	**16 40 31.1**	**+0.4**
CRQM	**Cirque**	**85.47**	**16**	P	**P**	**16 40 46.5**	**+0.6**
CRQM				IAmb	IAmb	16 41 21.6	
	comp=Z,5.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**90.23**	**289**	P	**P**	**16 41 09.3**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=104,slow=3.0,SNR=5.2 comp=Z,0.6nm,0.7s						
AKASG	**Malin Array Be**	**142.92**	**331**	PKP	**PKPdf**	**16 47 33.1**	**-4.1**
	comp=Z,0.4nm,0.3s,baz=43,slow=4.7,SNR=4.5						
BRTR	**Keskin Array B**	**146.84**	**313**	PKPbc	**PKPdf**	**16 47 45.5**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=70,slow=4.7,SNR=3.9						
CLL	**Colim**	**147.90**	**347**	*e*PKPbc	**PKPbc**	**16 47 51.0**	**+1.4**
GERES	**GERESS Array B**	**150.05**	**345**	PKPbc	**PKPbc**	**16 47 53.4**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=338,slow=1.4,SNR=3.9						

*IDC **05** 16:35:40.5±1.6,38°.19N×73°.05E, h0km, mb3.7/5, mbtmp3.6/10, ML3.1/5, MS3.0/1, Error ellipse: s-maj=24.9km s-min=21.6km az=38.0*

*NNC **05** 16:35:47.0±4.4,38°.62N×72°.89E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=30.9km s-min=18.4km az=177.0*

ISC 05 16:35:40.6±1.3,**38°.1N**±0°.1×**72°.58E**±0°.08,**h10**km,**n20,** σ1s**79**/**21**,**mb3.6**/5,**2C-2D**,**Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.53**	**335**	Pg	**Pb**	**16 36 59.1**	**-1.2**
	88nm,0.6s						
IUG				Lg	Lg	16 37 54.4	
	55nm,0.5s						
MRKS	**Merke**	**4.71**	**6**	Pg	**Pb**	**16 37 00.5**	**-2.9**
	7.9nm,0.2s						
MRKS				Lg	Lg	16 37 56.5	
	23nm,0.5s						
AAK	**Ala-Archa**	**4.80**	**17**	Pn	**Pn**	**16 36 55.2**	**+2.0**
	1.5nm,0.3s,baz=185,slow=7.8,SNR=18						
AAK				Sn	**Sn**	**16 37 50.2**	**+1.2**
	1.9nm,0.3s,baz=8.9,slow=23,SNR=7.2 6.6nm,0.6s						
AAK	**Ala-Archa**	**4.80**	**17**	⇑Pg	**Pb**	**16 37 04.4**	**-0.7**
	13nm,0.8s						
AAK				⇓Lg	Lg	16 38 01.4	
	12nm,0.8s						
KK31	**Karatay Array**	**5.28**	**343**	Pn	**Pn**	**16 37 01.1**	**+1.5**
	11nm,0.7s,baz=150,slow=12,SNR=38						
KK31				⇑Sn	**Sn**	**16 38 00.3**	**-0.3**
	7.3nm,0.6s,baz=134,slow=24						
KK31				⇓Lg	Lg	16 38 20.5	
	7.7nm,0.6s,baz=152,slow=27						
KST	**Kastek**	**5.61**	**26**	Pg	**Pb**	**16 37 18.2**	**-0.5**
	6.8nm,0.6s						
KST				Lg	Lg	16 38 27.3	
	24nm,0.6s						
SGDS	**Sogindy**	**5.61**	**15**	Pg	**Pb**	**16 37 19.2**	**+0.5**
	7.0nm,0.5s						
SGDS				Lg	Lg	16 38 29.2	
	19nm,0.8s						
TNSS	**Tian-Shan**	**5.98**	**32**	Pg	**Pb**	**16 37 27.0**	**+1.8**
	3.7nm,0.4s						
TNSS				Lg	Lg	16 38 42.3	
	7.1nm,1.1s						
MDOK	**Medeo**	**6.13**	**32**	Pg	**Pb**	**16 37 27.5**	**-0.1**
	12nm,0.6s						
MDOK				Lg	Lg	16 38 43.3	
	12nm,0.9s						
KURS	**Kuram**	**6.89**	**36**	Pg	**Pb**	**16 37 40.0**	**-0.4**
	6.2nm,0.9s						
KURS				Lg	Lg	16 39 04.7	
	8.0nm,0.8s						
MKAR	**Makanchi Array**	**11.29**	**36**	Pn	**Pn**	**16 38 20.6**	**-1.5**
	0.1nm,0.3s,baz=216,slow=14,SNR=4.5 0.6nm,0.9s						
BVAR	**Borovoye Array**	**15.05**	**355**	Pn	**Pn**	**16 39 11.7**	**-1.6**
	0.1nm,0.3s,baz=172,slow=10,SNR=5.1 0.5nm,0.5s						
AKTO	**Aktyubinsk**	**16.15**	**325**	Pn	**Pn**	**16 39 27.4**	**-0.3**
	0.3nm,0.3s,baz=122,slow=11,SNR=5.2 1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**17.98**	**24**	P	**Pn**	**16 39 47.4**	**-3.2**
	0.3nm,0.3s,baz=216,slow=11,SNR=3.9 0.6nm,0.5s						
SONM	**Songino Array**	**26.43**	**57**	P	**P**	**16 41 15.7**	**-1.8**
	0.4nm,0.4s,baz=282,slow=14,SNR=2.0 0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.17**	**123**	P	**P**	**16 41 50.2**	**-0.8**
	0.4nm,0.7s,baz=313,slow=11,SNR=2.7 0.4nm,0.7s						
FINES	**FINESS Array B**	**36.92**	**325**	P	**P**	**16 42 51.3**	**+1.9**
	1.0nm,0.7s,baz=101,slow=7.9,SNR=4.0 1.0nm,0.7s						
VRAC	**Vranov**	**41.14**	**304**	LR	LR	17 04 58.0	
	comp=Z,23nm,21.2s,baz=336,slow=42						
HFS	**Hagfors**	**42.64**	**321**	P	**P**	**16 43 38.0**	**+1.1**
	1.9nm,0.7s,baz=134,slow=4.3,SNR=5.4 1.9nm,0.7s						
NOA	**NORSAR Array B**	**43.92**	**322**	P	**P**	**16 43 50.9**	**+3.6**
	0.5nm,0.5s,baz=90,slow=7.9,SNR=1.9 0.5nm,0.5s						

*TAP **05** 16:46:26.9,24°.78N×122°.21E, h100km, ML3.0, B*

*JMA **05** 16:46:26.6±0.1,24°.8N±0°.8×122°.2E±0°.3, h102km±1km, MV2.2/13, TAIWAN REGION*

ISC 05 16:46:27.0±1.4,**24.78N**±0°.04×**122°.22E**±0°.03,**h99**km±7km, **n90,** σ0s**66**/155,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.27**	**284**	P	**Pn**	**16 46 41.8**	**+0.4**
TWB1	**Santiao Chiao**	**0.31**	**317**	*i* P	**Pn**	**16 46 41.6**	**0.0**
TWB1				S	**Sn**	**16 46 52.2**	**-0.3**
EOS2	**EOS2**	**0.36**	**179**	P	**Pn**	**16 46 42.4**	**+0.7**
EOS2				S	**Sn**	**16 46 54.1**	**+1.5**
TWC	**Suao**	**0.38**	**243**	P	**Pn**	**16 46 41.8**	**-0.2**
TWC				S	**Sn**	**16 46 52.2**	**-0.9**
ESAO	**Su ao**	**0.40**	**239**	*e*S	**Sn**	**16 46 52.9**	**-0.5**
TIPB	**Shuangxi**	**0.41**	**298**	*i* P	**Pn**	**16 46 42.2**	**0.0**
TIPB				S	**Sn**	**16 46 52.9**	**-0.6**
ILA	**Ilan**	**0.43**	**268**	P	**Pn**	**16 46 42.4**	**+0.2**
ILA				S	**Sn**	**16 46 53.8**	**+0.1**
SXI1	**Grass Mountain**	**0.44**	**315**	P	**Pn**	**16 46 42.4**	**-0.1**
SXI1				*e*S	**Sn**	**16 46 54.0**	**-0.1**
NDS

NCUH				S	Sn	16 47 02.7	+0.7
NFF	**Wufeng Townshi**	**1.02**	**262**	*i* P	Pn	16 46 47.5	-0.2
NFF				S	Sn	16 47 02.5	-0.7
FUSS	**Fushou**	**1.04**	**239**	P	Pn	16 46 48.3	+0.2
FUSS				S	Sn	16 47 03.8	-0.1
ETM	**Tongmen**	**1.05**	**220**	*e*P	Pn	16 46 48.2	+0.2
ETM				*e*S	Sn	16 47 04.0	+0.2
LXIB	**Xiulin Townshi**	**1.06**	**224**	P	Pn	16 46 47.5	-0.7
LXIB				S	Sn	16 47 03.9	-0.3
TEYL	**Yanliau Villag**	**1.07**	**212**	*e*P	Pn	16 46 48.0	-0.2
TEYL				*e*S	Sn	16 47 04.1	-0.1
WHF	**Hehuan Shan**	**1.08**	**234**	S	Sn	16 47 04.8	-0.3
TWT	**Tachien**	**1.09**	**241**	*e*P	Pn	16 46 49.3	+0.7
TWT				S	Sn	16 47 05.1	+0.3
TDCB	**Techi**	**1.10**	**242**	*i* P	Pn	16 46 49.2	+0.5
TDCB				*i* S	Sn	16 47 05.2	+0.1
LIOB	**Emei**	**1.11**	**263**	*i* P	Sn	16 46 48.6	0.0
LIOB				S	Sn	16 47 04.7	-0.2
NSTT	**Nanjuang**	**1.12**	**263**	P	Sn	16 46 48.7	-0.1
NSTT				S	Sn	16 47 04.7	-0.5
SHUL	**Shoufeng**	**1.16**	**211**	*e*P	Pn	16 46 49.6	+0.4
SHUL				S	Sn	16 47 05.9	0.0
ESL	**Shilin**	**1.20**	**217**	*e*S	Sn	16 47 06.1	-0.8
TEGC	**Jichi Village**	**1.24**	**210**	*e*S	Sn	16 47 07.5	0.0
OWD	**Renai**	**1.26**	**229**	*e*P	Pn	16 46 50.5	-0.1
OWD				S	Sn	16 47 07.8	-0.5
WHP	**Taichung City**	**1.27**	**247**	*i* P	Pn	16 46 51.2	+0.6
WHP				S	Sn	16 47 08.3	0.0
WUSB	**Renai**	**1.28**	**232**	*i* P	Pn	16 46 51.0	+0.3
WUSB				S	Sn	16 47 08.4	-0.2
WARBT	**Fenglin Townsh**	**1.30**	**216**	P	Pn	16 46 50.2	-0.8
WARBT				*e*S	Sn	16 47 07.6	-1.4
TWQ1	**Liyutan**	**1.39**	**252**	S	Sn	16 47 11.0	+0.2
WCS	**Beigang Elemen**	**1.40**	**239**	*e*P	Pn	16 46 52.5	+0.5
WCS				S	Sn	16 47 11.7	+0.8
IRIF	**Iriomote-Funau**	**1.44**	**108**	*e*P	Pn	16 46 52.6	+0.1
IRIF				*e*S	Sn	16 47 11.6	-0.3
SMLT	**Sun Moon Lake**	**1.50**	**234**	*e*P	Pn	16 46 54.5	+1.1
SMLT				*e*S	Sn	16 47 15.1	+1.7
WDJ	**Dajia District**	**1.50**	**254**	*e*S	Sn	16 47 13.6	+0.4
TYC	**Yuchr**	**1.52**	**235**	*e*P	Pn	16 46 55.2	+1.7
TYC				*e*S	Sn	16 47 14.9	+1.3
SSLB	**Suanglung**	**1.52**	**230**	P	Pn	16 46 54.5	+0.9
SSLB				S	Sn	16 47 14.6	+0.8
HATJ	**Hateruma jima**	**1.61**	**116**	*e*P	Pn	16 46 54.8	+0.1
YULB	**Yu-li**	**1.62**	**212**	*e*P	Pn	16 46 53.9	-1.0
WHYT	**Xinyi Township**	**1.65**	**229**	P	Pn	16 46 56.3	+1.1
WHYT				S	Sn	16 47 18.0	+1.3
WNT	**Mingjian**	**1.67**	**238**	S	Sn	16 47 17.6	+0.7
JKRS	**Kuro-shima**	**1.71**	**108**	P	Pn	16 46 56.3	+0.3
JKRS				*e*S	Sn	16 47 17.8	-0.1
JIJ	**Ishigaki jima**	**1.80**	**103**	P	Pn	16 46 56.8	-0.2
JIJ				*e*S	Sn	16 47 19.9	+0.1
ALS	**Alishan**	**1.81**	**226**	P	Pn	16 46 58.5	+1.0
ALS				S	Sn	16 47 21.1	+0.5
CHN5	**Tsauling**	**1.84**	**230**	*e*P	Pn	16 46 58.1	+0.4
CHN5				S	Sn	16 47 21.8	+0.8
CHKT	**Chengkung**	**1.85**	**205**	*e*S	Sn	16 47 18.4	-2.6
WDLH	**Douliu**	**1.88**	**235**	*e*P	Pn	16 46 58.5	+0.3
WDLH				*e*S	Sn	16 47 22.2	+0.5
WRL	**Guolierlin Hig**	**1.90**	**243**	*e*P	Pn	16 46 57.6	-0.7
WRL				*e*S	Sn	16 47 20.9	-1.2
JISG	**Ishigakijimahi**	**1.91**	**95**	*e*P	Pn	16 46 58.6	+0.2
JISG				*e*S	Sn	16 47 22.1	-0.2
ECS	**Chishang**	**1.91**	**209**	*e*P	Pn	16 46 58.7	+0.1
ELDTW	**Lidau**	**1.93**	**215**	*e*P	Pn	16 46 58.6	-0.2
ELDTW				*e*S	Sn	16 47 21.4	-1.7
EDH	**Donghe**	**1.99**	**205**	*e*P	Pn	16 46 58.7	-0.7
EDH				*e*S	Sn	16 47 21.7	-2.5
WCKO	**Fanlu**	**1.99**	**228**	*e*S	Sn	16 47 25.5	+1.1
WTK	**Tuku**	**2.00**	**237**	*e*S	Sn	16 47 24.1	-0.2
TPUB	**Ta-pu**	**2.07**	**225**	*e*S	Sn	16 47 27.0	+0.8
CHN1	**Nanshi**	**2.22**	**225**	*e*S	Sn	16 47 30.3	+0.7
JTJ	**Tarama**	**2.26**	**93**	*e*P	Pn	16 47 03.4	+0.5
SGST	**Jiashian**	**2.26**	**222**	*e*S	Sn	16 47 29.8	-0.8

*IDC **05** 16:46:47.4±17.0, 47°.26N×152°.82E, h120km±84km, mb3.2/3, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=223.4km s-min=41.6km az=172.0*
*SKHL **05** 16:46:48.2±0.3, 47°.10N×153°.50E, h118km±7km, mb4.8/5, msh5.3/3*

ISC 05 16:46:50.2±1.8, **47°.5N**±0°.3×**153°.0E**±0°.3, **h150**km, **n18, σ1s49/11, mb3.2/3, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.84**	**31**	*e*P	**Pn**	**16 47 47.3**	**-0.9**
SKR				AMB	AMB	16 47 49.4	
	30nm,0.2s						
SKR				*e*S	**Sn**	**16 48 31.1**	**-2.2**
SKR				A	A	16 48 35.9	
	50nm,0.3s						
SKR				A	A	16 48 35.9	
	70nm,0.3s						
REI	**Reidovoe**	**4.07**	**239**	*e*P	Pn	16 47 51.8	+0.4
REI				AMB	AMB	16 47 53.3	
	30nm,0.4s						
REI				*e*S	**Sn**	**16 48 38.9**	**0.0**
REI				A	A	16 48 41.8	
	20nm,0.4s						
REI				A	A	16 48 41.8	
	20nm,0.4s						
KUR	**Kuril'sk**	**4.18**	**240**	*e*P	Pn	16 47 53.5	+0.7
KUR				AMB	AMB	16 47 55.6	
	50nm,0.5s						
KUR				*e*S	**Sn**	**16 48 42.0**	**+0.6**
KUR				A	A	16 48 44.7	
	50nm,0.5s						
KUR				A	A	16 48 44.7	
	50nm,0.5s						
SHO	**Shikotan**	**5.60**	**233**	*e*P	Pn	16 48 22.4	+11
SHO				AMB	AMB	16 48 26.8	
	20nm,0.3s						
SHO				*e*S	Sn	16 49 20.9	+5.8
SHO				A	A	16 49 28.0	
	20nm,0.3s						
SHO				A	A	16 49 28.0	
	20nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.04**	**238**	*e*P	Pn	16 48 17.4	0.0
YUK				AMB	AMB	16 48 18.4	
	60nm,0.5s						
YUK				*e*S	**Sn**	**16 49 24.5**	**-1.1**
YUK				A	A	16 49 28.4	
	90nm,0.5s						
YUK				A	A	16 49 28.4	
	90nm,0.5s						
PETK	**Petropavlovsk-**	**6.42**	**26**	P	**Pn**	**16 48 22.2**	**-0.2**
	0.6nm,0.3s,baz=176,slow=11,SNR=22 1.4nm,0.4s						
NMR	**Nemuro--Hokkai**	**6.54**	**234**	*e*P	**Pn**	**16 48 22.0**	**-2.0**
PET	**Petropavlovsk**	**6.66**	**31**	*e*P	**Pn**	**16 48 25.6**	**+0.1**
AKK	**Akkeshi**	**7.26**	**235**	*e*P	Pn	16 48 34.7	+1.1
H11N2	**WAKE ISLAND Hy**	**29.88**	**153**	T	T	17 24 33.7	
	baz=340,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**29.89**	**153**	T	T	17 24 34.8	
	baz=340,slow=76,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**29.90**	**153**	T	T	17 24 35.0	
	baz=340,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**30.97**	**154**	T	T	17 25 59.9	
	baz=342,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**30.98**	**154**	T	T	17 26 10.7	
	baz=342,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**30.99**	**154**	T	T	17 26 07.9	
	baz=342,slow=76,SNR=8.5						
ILAR	**Eielson Array**	**36.06**	**39**	P	**P**	**16 53 39.1**	**+2.3**
	0.2nm,0.7s,baz=276,slow=7.3,SNR=2.3 0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**47.00**	**303**	P	**P**	**16 55 06.5**	**+0.6**
	0.4nm,0.6s,baz=72,slow=8.8,SNR=3.3 0.4nm,0.6s						
FINES	**FINESS Array B**	**63.37**	**335**	P	**P**	**16 57 03.8**	**+0.9**
	1.8nm,1.0s,baz=38,slow=6.4,SNR=10.0 1.8nm,1.0s						

*SDD **05** 17:07:36.7±2.8, 19°.71N×70°.60W, h238km±49km, MD3.1, ML2.9, MW3.9, Presumed earthquake*
*OSPL **05** 17:07:40.8±2.2, 20°.16N×70°.60W, h4km±13km, ML2.3, Presumed earthquake*
*SSNC **05** 17:07:40.5±2.7, 20°.10N×70°.80W, h0km±20km, MD3.1, ML2.4, Presumed earthquake*

ISC 05 17:07:40.1±1.2, **20°.17N**±0°.03×**70°.72W**±0°.06, **h33**km±7km, **n14, σ1s20/21, 7C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SODR	**Sosua Marina B**	**0.43**	**162**	*e*Pg	Pn	17 08 07.8	+18
LOPP1	**Punta Rusia, P**	**0.55**	**236**	*i* P	**Pn**	**17 07 52.4**	**+0.9**
LOPP1				*e*S	**Sn**	**17 08 00.6**	**+1.0**
LOPP1				IAML		17 08 03.8	
	comp=Z,144nm,0.4s						
SC01	**Santiago de lo**	**0.73**	**180**	*e*Pg	Pn	17 08 07.0	+13
SC01				IAML		17 08 11.4	
	comp=N,135nm,0.6s						
MCDR	**Montecristi**	**0.92**	**253**	*e*Pg	Pb	17 08 07.2	+10
MCDR				IAML		17 08 20.0	
	comp=N,52nm,0.3s						
SDDR	**Presa de Saban**	**1.29**	**205**	*i* P	**Pb**	**17 08 03.0**	**-0.9**
SDDR				*e*S	**Sb**	**17 08 20.4**	**+0.2**
SDDR	**Presa de Saban**	**1.29**	**205**	*e*P	**Pb**	**17 08 02.7**	**-1.2**
SDDR				*e*S	**Sn**	**17 08 17.6**	**-0.5**
SDDR				IAML		17 08 22.7	
	comp=N,65nm,0.5s						
SDDR				IAML		17 08 23.4	
	comp=N,75nm,0.5s						
GRTK	**Grand Turk**	**1.39**	**344**	*i* P	**Pb**	**17 08 05.2**	**-0.4**
GRTK				*e*S	**Sb**	**17 08 24.3**	**+1.3**
GRTK	**Grand Turk**	**1.39**	**344**	*e*P	**Pb**	**17 08 04.5**	**-1.1**
GRTK				*e*S	**Sb**	**17 08 24.1**	**+1.1**
LONE3	**El Aguacate, B**	**1.70**	**204**	*i* P	**Pb**	**17 08 09.9**	**-0.9**
LONE3				*e*S	**Sb**	**17 08 32.7**	**+0.8**
LONE3				IAML		17 08 34.3	
	comp=Z,29nm,0.3s						
BANI	**BANI**	**1.80**	**169**	*e*Pg	**Pb**	**17 08 11.2**	**-1.2**
BANI				*e*Sg	**Sb**	**17 08 37.4**	**+2.7**
BANI				IAML		17 08 41.8	
	comp=N,101nm,0.8s						
HATOM	**Hato Mayor del**	**1.86**	**137**	*e*Pg	**Pb**	**17 08 12.3**	**-1.3**
HATOM				*e*Sg	**Sb**	**17 08 37.5**	**+1.0**
HATOM				IAML		17 08 37.7	
	comp=N,20nm,1.9s						
LODU1	**El Espartillar**	**1.94**	**202**	*i* P	**Pb**	**17 08 14.3**	**-0.5**
LODU1				IAML		17 08 41.4	
	comp=Z,101nm,0.4s						
MASC	**Masc**	**3.30**	**271**	*e*P	**Pn**	**17 08 29.4**	**0.0**
MASC				*e*S	**Sn**	**17 09 08.3**	**+0.8**
QMBU	**Quimbuelo**	**3.84**	**271**	*e*P	**Pn**	**17 08 35.8**	**-1.1**
QMBU				*e*S	**Sn**	**17 09 20.2**	**-0.8**

*VIE **05** 17:14:41.9±0.6, 44°.70N×19°.07E, h10km, mb2.5/9, ml2.1/9, Error ellipse: s-maj=8.0km s-min=3.9km az=7.0 87 km SW of Novi Sad*
*BEO **05** 17:14:47.8±0.3, 44°.54N×18°.07E, h0km, ML2.3/8*

ISC 05 17:14:46.0±3.2, **44°.58N**±0°.04×**17°.98E**±0°.04, **h8**km±24km, **n19, σ1s52/27, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.59**	**287**	*e*Pg	**Pn**	**17 14 59.9**	**-0.9**
BLY				*e*Sg	**Sn**	**17 15 08.7**	**-1.9**
TEKS	**Tekeris**	**1.11**	**91**	*e*Pg	**Pb**	**17 15 07.4**	**-0.1**
TEKS				*e*Sg	**Sb**	**17 15 20.3**	**-1.9**
BBLS	**Lazi&#263i**	**1.25**	**124**	*e*Pg	**Pn**	**17 15 09.1**	**-0.8**
BBLS				*e*Sg	**Sb**	**17 15 25.0**	**-1.2**
FRGS	**Fruska Gora**	**1.43**	**65**	*e*Pn	**Pb**	**17 15 13.7**	**+0.7**
FRGS				*e*Sg	**Sn**	**17 15 31.3**	**-0.1**
STON	**Ston**	**1.72**	**187**	*e*Pn	**Pb**	**17 15 18.5**	**+0.7**
STON				*e*Sn	**Sn**	**17 15 39.1**	**+0.8**
TRUS	**Trudelj**	**1.78**	**101**	*e*Pn	**Pb**	**17 15 18.9**	**0.0**
TRUS				*e*Sg	**Sn**	**17 15 40.7**	**+0.8**
IVAS	**Ivanjica**	**1.86**	**122**	*e*Pn	**Pb**	**17 15 20.1**	**-0.2**
SJES	**Sjenica**	**1.95**	**132**	*e*Pn	**Pb**	**17 15 22.3**	**+0.3**
SJES				*e*Sn	**Sn**	**17 15 44.8**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.32**	**115**	*e*Pn	**Pb**	**17 15 28.2**	**0.0**
VRSS	**Vrsac**	**2.44**	**76**	*e*Pn	**Pn**	**17 15 28.5**	**+2.2**
SOKA	**Soboth**	**2.94**	**317**	*i* Pn	**Pn**	**17 15 35.2**	**+2.0**
	0.4nm,0.2s						
OBKA	**Obir**	**3.09**	**310**	*e*Pn	**Pn**	**17 15 38.1**	**+2.9**
	0.2nm,0.1s						
ARSA	**Arzberg**	**3.17**	**328**	*i* Pn	**Pn**	**17 15 37.1**	**+0.8**
	2.0nm,0.3s						
ARSA				*e*Sn	**Sb**	**17 16 19.0**	**-2.6**
	1.4nm,0.4s						
RONA	**Rosalia, Austr**	**3.33**	**340**	*i* Pn	**Pn**	**17 15 37.2**	**-1.3**
	2.0nm,0.2s						
SESA	**Seetaler Alpe,**	**3.48**	**318**	*i* Pn	**Pn**	**17 15 42.8**	**+2.1**
	0.7nm,0.2s						
CONA	**Conrad Observa**	**3.66**	**337**	*i* Pn	**Pn**	**17 15 43.1**	**+0.1**
	1.1nm,0.4s						
MYKA	**Terra Mystica**	**3.67**	**306**	*e*Pg	Pg	17 16 03.0	+6.7
	0.8nm,0.2s						
WINA	**Alland / Wiene**	**3.77**	**340**	*i* Pn	**Pn**	**17 15 42.8**	**-1.7**
	1.1nm,0.3s						
WINA				*e*Sn	**Sn**	**17 16 31.0**	**+2.0**
	3.4nm,0.5s						
MOA	**Molln**	**4.16**	**323**	*i* Pn	**Pn**	**17 15 51.6**	**+1.7**
	0.9nm,0.3s						

*NIED **05** 17:17:28.9, 36°.24N×137°.64E, h6km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr=2.05; Mθθ=4.36; Mφφ=-2.31; Mrθ=3.16; Mθφ=-3.65; Mφr=3.78; Fault plane solution: M0=7.07000×10^14 NP1: φs=150.00000°, δ=53.00000°, λ=-22.00000°. NP2: φs=254.00000°, δ=73.00000°, λ=-141.00000°.*

JMA 05 17:17:28.9±0.0, **36°.2N**±0°.1×**137°.6E**±0°.1, **h6**km±1km, **MV3.5**/20, **4D, HIDA MOUNTAINS REGION, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.26**	**267**	⇓*i*P	Pg	17 17 34.3	+0.1
JGN				⇓S	Sg	17 17 38.1	+0.5
JNG	**Nsakai**	**0.41**	**65**	⇓*i*P	Pg	17 17 37.0	+0.1
JNG				⇓S	Sg	17 17 42.6	+0.3
JTT	**Ttatey**	**0.44**	**326**	*i* P	Pg	17 17 38.0	+0.5
JTT				S	Sg	17 17 44.0	+0.6
JNT	**Takato**	**0.54**	**132**	*i* P	Pg	17 17 39.3	-0.1
JNT				S	Sg	17 17 46.4	0.0
MAT	**Matsushiro**	**0.55**	**56**	*i* P	Pg	17 17 39.4	-0.2
MAT				S	Sg	17 17 46.7	0.0

*AFAD **05** 17:26:55.3, 35°.24N×27°.25E, h7km, MW3.8*
*IDC **05** 17:26:57.4±1.1, 35°.37N×27°.62E, h0km, mb3.7/4, mbtmp3.5/9, ML2.7/4, MS2.8/2, Error ellipse: s-maj=26.1km s-min=17.1km az=173.0*
*ATH **05** 17:26:59.3, 35°.40N×27°.59E, h5km±2km, ML3.5/12, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*ISK **05** 17:27:01.1, 35°.52N×27°.41E, h9km, ML3.4/27*
*THE **05** 17:27:02.2, 35°.N±5°×27°.7E±°, h9km±12km, M3.3/15, MLh3.3/15*
*GII **05** 17:27:02.5±0.0, 35°.169N±0°.005×27°.597E±0°.002, h0km, Mws3.5, confirmed*

ISC 05 17:26:59.0±1.1, **35°.35N**±0°.03×**27°.58E**±0°.03, **h11**km±8km, **n130, σ1s32/171, mb3.5/3, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.39**	**301**	Pg	**Pg**	**17 27 06.0**	**-0.8**
KARP	**Karpathos**	**0.39**	**301**	P	**Pg**	**17 27 06.2**	**-0.6**
KARP				S	**Sg**	**17 27 11.6**	**-0.5**
KARP	**Karpathos**	**0.39**	**301**	P	**Pg**	**17 27 06.2**	**-0.6**
KARP				S	**Sg**	**17 27 11.7**	**-0.4**
ARG	**Arkhangelos**	**0.98**	**27**	Pg	**Pn**	**17 27 19.2**	**+0.5**
ARG	**Arkhangelos**	**0.98**	**27**	P	**Pn**	**17 27 18.5**	**-0.2**
ARG				S	**Sn**	**17 27 32.9**	**+0.3**
ARG	**Arkhangelos**	**0.98**	**27**	P	**Pb**	**17 27 17.3**	**-0.7**
ARG				S	**Sg**	**17 27 30.4**	**-0.2**
ZKR	**Zakros**	**1.14**	**259**	P	**Pn**	**17 27 20.0**	**-0.9**
ZKR	**Zakros**	**1.14**	**259**	P	**Pn**	**17 27 19.9**	**-0.9**
ZKR				S	**Sb**	**17 27 37.0**	**+1.6**
SIT2	**Siteia**	**1.21**	**264**	P	**Pn**	**17 27 22.3**	**+0.4**
SIT2				S	**Sb**	**17 27 39.0**	**+1.5**
RODDB	**Rodos**	**1.22**	**25**	P	**Pb**	**17 27 22.0**	**-0.1**
RDI1	**Rhodes Town Ha**	**1.22**	**25**	P	**Pb**	**17 27 21.6**	**-0.5**
YAZI	**Mula-Dat§a-**	**1.34**	**356**	P	**Pb**	**17 27 24.0**	**-0.1**
YAZI				S	**Sg**	**17 27 42.8**	**+0.7**
DAT	**Datca**	**1.38**	**0**	Pn	**Pb**	**17 27 24.8**	**-0.1**
DAT				Sn	**Sb**	**17 27 42.1**	**-0.6**
DAT	**Datca**	**1.38**	**0**	S	**Sg**	**17 27 43.2**	**-0.3**
DATC	**Datca-Mugla**	**1.41**	**3**	Pn	**Pb**	**17 27 25.3**	**-0.1**
AGNA	**Agios Nikolaos**	**1.53**	**265**	P	Pn	**17 27 27.2**	**+1.0**
TURN	**Turunc**	**1.53**	**21**	Pn	**Pg**	**17 27 27.8**	**-0.5**
TURN				Sn	**Sg**	**17 27 47.4**	**-0.7**
TURN	**Turunc**	**1.53**	**21**	P	**Pg**	**17 27 28.0**	**-0.3**
TURN				S	**Sg**	**17 27 51.8**	**+3.7**
TURN				IAML		17 27 56.0	
	comp=E,324nm,0.3s						
TURN				IAML		17 27 59.0	
	comp=N,529nm,0.4s						
NPS	**Neapolis**	**1.61**	**268**	P	**Pn**	**17 27 28.4**	**+1.0**
NPS				S	**Sn**	**17 27 49.5**	**+1.4**
NPS	**Neapolis**	**1.61**	**268**	P	**Pn**	**17 27 28.6**	**+1.2**
NPS				S	**Sn**	**17 27 50.0**	**+1.9**
KLNA	**Kalymnos**	**1.68**	**343**	P	**Pn**	**17 27 28.3**	**-0.1**
BODA	**Bodrum-Mula**	**1.69**	**356**	Pn	**Pn**	**17 27 29.1**	**+0.6**
DALY	**Dalyan (Mula)**	**1.71**	**30**	Pn	**Pb**	**17 27 30.7**	**+0.3**
DALY	**Dalyan (Mula)**	**1.71**	**30**	P	**Pg**	**17 27 31.4**	**-0.4**
DALY				S	**Sg**	**17 27 58.4**	**+4.4**
DALY				IAML		17 28 02.0	
	comp=E,324nm,0.6s						
DALY				IAML		17 28 04.0	
	comp=N,392nm,1.0s						
BDRM	**Kayabasi**	**1.72**	**357**	P	**Pn**	**17 27 29.4**	**+0.4**
BDRM				S	**Sg**	**17 27 55.1**	**+0.7**
BDRM				IAML		17 27 58.0	
	comp=E,183nm,0.8s						
BODT	**Bodrum**	**1.73**	**353**	Pn	**Pn**	**17 27 29.5**	**+0.5**
BODT				Sn	**Sn**	**17 27 50.5**	**-0.6**
BODT	**Bodrum**	**1.73**	**353**	P	**Pn**	**17 27 29.2**	**+0.2**
BODT				S	**Sn**	**17 27 50.2**	**-0.9**
IZZE	**Mula-Seydike**	**1.73**	**50**	P	**Pb**	**17 27 30.5**	**-0.2**
IZZE				S	**Sg**	**17 27 57.1**	**+2.5**
YKAV	**Yalikavak-Bodr**	**1.79**	**352**	Pn	**Pn**	**17 27 30.2**	**+0.3**
SABU	**Mula-Dalaman**	**1.86**	**37**	P	**Pb**	**17 27 32.9**	**-0.1**
SABU				IAML		17 28 09.0	
	comp=E,223nm,0.7s						
SABU				IAML		17 28 17.0	
	comp=N,206nm,1.4s						
YER	**Yerkesik**	**1.88**	**18**	Pn	**Pb**	**17 27 32.4**	**-0.9**
YER	**Yerkesik**	**1.88**	**18**	P	**Pb**	**17 27 33.0**	**-0.4**
THERA	**Ancient Thera,**	**1.99**	**301**	P	**Pn**	**17 27 32.9**	**+0.3**
THERA				S	**Sn**	**17 27 57.0**	**-0.6**
THERA	**Ancient Thera,**	**1.99**	**301**	P	**Pn**	**17 27 33.0**	**+0.4**
THERA				S	**Sn**	**17 27 57.6**	**+0.1**
MULA	**Mugla, Merkez-**	**2.00**	**17**	S	**Sg**	**17 28 05.8**	**+2.5**
THR8	**Santorini-Mono**	**2.00**	**303**	P	**Pn**	**17 27 33.0**	**+0.2**
THR8	**Santorini-Mono**	**2.00**	**303**	P	**Pn**	**17 27 33.3**	**+0.5**
THR6	**Thira Island,**	**2.04**	**300**	P	**Pn**	**17 27 33.4**	**+0.1**
THR6	**Thira Island,**	**2.04**	**300**	P	**Pn**	**17 27 34.1**	**+0.8**
THR2	**Thira island,**	**2.06**	**303**	P	**Pn**	**17 27 33.1**	**-0.4**
THR2	**Thira island,**	**2.06**	**303**	P	**Pn**	**17 27 34.4**	**+0.9**
THR3	**Thira island,**	**2.06**	**302**	P	**Pn**	**17 27 34.5**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.06**	**301**	P	**Pn**	**17 27 35.3**	**+1.7**
SNT5	**Nea Kammeni, S**	**2.06**	**301**	P	**Pn**	**17 27 35.2**	**+1.6**
SNT5				S	**Sn**	**17 28 00.1**	**+0.8**
THR9	**Santorini-Faro**	**2.07**	**300**	P	**Pn**	**17 27 34.3**	**+0.7**
THR9	**Santorini-Faro**	**2.07**	**300**	P	**Pn**	**17 27 34.7**	**+1.0**
THR5	**Thira Island,**	**2.10**	**301**	P	**Pn**	**17 27 34.9**	**+0.7**
SAP3	**Santorini-Thir**	**2.11**	**302**	P	**Pn**	**17 27 35.0**	**+0.7**
SAP3	**Santorini-Thir**	**2.11**	**302**	P	**Pn**	**17 27 35.1**	**+0.8**
CAME	**Cameli-Denizli**	**2.12**	**41**	Pn	**Pb**	**17 27 37.1**	**-0.5**
DDIM	**Aydin, Didim**	**2.12**	**353**	P	**Pn**	**17 27 35.4**	**+0.9**
DDIM				S	**Sb**	**17 28 05.2**	**+1.3**
DDIM				IAML		17 28 10.0	
	comp=N,160nm,0.8s						
DDIM				IAML		17 28 10.0	
	comp=E,128nm,0.8s						
IDI	**Anoyia**	**2.20**	**269**	Pn	**Pn**	**17 27 37.2**	**+1.7**
	13nm,0.3s,baz=54,slow=15,SNR=49						
IDI				Sn	**Sn**	**17 28 04.6**	**+1.8**
	16nm,0.3s,baz=278,slow=22,SNR=3.8 36nm,0.3s						
IDI	**Anoyia**	**2.20**	**269**	Pn	**Pn**	**17 27 37.2**	**+1.7**
IDI	**Anoyia**	**2.20**	**269**	P	**Pn**	**17 27 37.0**	**+1.5**
IDI				S	**Sn**	**17 28 04.0**	**+1.3**
IDI	**Anoyia**	**2.20**	**269**	P	**Pn**	**17 27 37.1**	**+1.6**
IDI				S	**Sn**	**17 28 04.6**	**+1.8**
SIVA	**Sivas**	**2.29**	**263**	P	**Pn**	**17 27 39.5**	**+2.8**
SIVA				S	**Sn**	**17 28 05.1**	**+0.2**
SIVA	**Sivas**	**2.29**	**263**	P	**Pn**	**17 27 39.6**	**+2.9**
AYDN	**Tasoluk**	**2.32**	**6**	P	**Pn**	**17 27 37.9**	**+0.6**
AYDN				S	**Sg**	**17 28 11.5**	**-2.2**
AYDN				IAML		17 28 16.0	
	comp=N,132nm,0.4s						
AYDN				IAML		17 28 22.0	
	comp=E,158nm,0.6s						
GCAM	**G?zelcaml?**	**2.37**	**353**	Pn	**Pn**	**17 27 38.7**	**+0.9**
GCAM	**G?zelcaml?**	**2.37**	**353**	P	**Pn**	**17 27 38.9**	**+1.1**
GCAM				S	**Sn**	**17 28 07.9**	**+1.1**
GCAM				IAML		17 28 13.0	
	comp=E,69nm,0.6s						
GCAM				IAML		17 28 20.0	
	comp=N,58nm,0.5s						
TAVA	**DENIZLI_Tavas**	**2.38**	**27**	P	**Pb**	**17 27 39.6**	**-2.3**
TAVA				S	**Sg

VIL2	**Platees**	**4.49**	**311**	P		**Pn**	**17 28 07.4**	**+0.5**
CSS	**Mathiatis**	**4.73**	**93**	P		**Pn**	**17 28 11.1**	**+0.7**
CSS				S		**Sn**	**17 29 04.8**	**-0.4**
BRTR	**Keskin Array B**	**6.50**	**46**	Pn		**Pn**	**17 28 35.4**	**+0.5**
	0.2nm,0.3s,baz=11,slow=5.8,SNR=5.1							
	0.6nm,0.5s							
MMAI	**Mount Meron Ar**	**6.89**	**107**	Pn		**Pn**	**17 28 37.5**	**-2.5**
	0.5nm,0.3s,baz=324,slow=16,SNR=5.1							
MMAI				Sn		**Sn**	**17 29 57.8**	**-0.8**
	3.2nm,0.3s,baz=304,slow=27,SNR=5.7							
GEM	**Giv'at Ha'Em**	**7.03**	**105**	P		**Pn**	**17 28 41.8**	**0.0**
GEM				S		**Sn**	**17 30 00.9**	**-0.9**
AMAZ	**Amatzia**	**7.22**	**120**	P		**Pn**	**17 28 44.3**	**-0.2**
AMAZ				S		**Sn**	**17 30 04.6**	**-1.9**
KZIT	**Kziot**	**7.23**	**126**	P		**Pn**	**17 28 45.1**	**+0.3**
KZIT				S		**Sn**	**17 30 04.1**	**-2.7**
MSBI	**Mazada**	**7.65**	**120**	P		**Pn**	**17 28 50.8**	**+0.4**
MSBI				S		**Sn**	**17 30 16.2**	**-1.0**
RMNI	**Mount Ramon**	**7.67**	**126**	P		**Pn**	**17 28 51.2**	**+0.4**
RMNI				S		**Sn**	**17 30 15.2**	**-2.6**
GHAJ	**Ghor Haditha**	**7.81**	**119**	P		**Pn**	**17 28 52.6**	**0.0**
GHAJ				S		**Sn**	**17 30 18.9**	**-2.0**
HRFI	**Mount Harif**	**8.22**	**128**	P		**Pn**	**17 28 58.3**	**+0.1**
HRFI				S		**Sn**	**17 30 28.9**	**-2.2**
ASF	**Jabal al Asfar**	**8.38**	**110**	LR		LR	17 33 25.4	
	comp=Z,46nm,19.2s,baz=213,slow=46							
EIL	**Elat**	**8.41**	**130**	Pn		**Pn**	**17 29 00.3**	**-0.6**
	0.5nm,0.3s,baz=344,slow=5.0,SNR=6.8							
EIL				Sn		**Sn**	**17 30 32.1**	**-3.8**
	1.3nm,0.3s,baz=11,slow=11,SNR=5.3							
	3.2nm,0.6s							
EIL	**Elat**	**8.41**	**130**	P		**Pn**	**17 29 00.6**	**-0.3**
EIL				S		**Sn**	**17 30 32.4**	**-3.5**
VRAC	**Vranov**	**16.12**	**333**	LR		LR	17 38 28.3	
	comp=Z,34nm,18.2s,baz=31,slow=43							
GERES	**GERESS Array B**	**16.93**	**327**	Pn		**P**	**17 30 57.2**	**-0.7**
	baz=139,slow=13,SNR=2.6							
	0.2nm,0.5s							
ESDC	**Sonseca Array**	**25.32**	**289**	P		**P**	**17 32 25.2**	**-0.5**
	0.5nm,0.5s,baz=82,slow=9.7,SNR=10							
	0.5nm,0.5s							
FINES	**FINESS Array B**	**26.14**	**358**	P		**P**	**17 32 31.7**	**-1.1**
	2.7nm,1.1s,baz=188,slow=9.4,SNR=1.8							
	2.7nm,1.1s							
TORD	**Torodi Ar. Bea**	**32.15**	**233**	P		**P**	**17 33 27.1**	**+0.3**
	1.7nm,0.7s,baz=34,slow=9.9,SNR=9.6							
	1.7nm,0.7s							
MKAR	**Makanchi Array**	**42.02**	**57**	P		**P**	**17 34 51.9**	**+1.5**
	0.2nm,0.5s,baz=284,slow=7.0,SNR=2.0							
	0.2nm,0.5s							

*IDC **05** 17:37:41.0±5.1,22°.12S×179°.06W,h587^{km}±31^{km},mb3.2/5, mbtmp4.1/6,Error ellipse: s-maj=98.0km s-min=23.9km az=130.0*

ISC 05 17:37:33.6±2.6,22°.8S±0°.3×178°.2W±0°.4,h550^{km},n7, σ1°20/8,mb3.8/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MSVF	**Nonsavu**	**6.19**	**324**	P	**P**	**17**	**39**	**15.0**	**+0.7**
	17nm,0.5s,baz=263,slow=22,SNR=36								
STKA	**Stephens Creek**	**36.68**	**247**	P	**P**	**17**	**43**	**55.1**	**+0.7**
	1.0nm,0.4s,baz=88,slow=8.7,SNR=7.1								
	1.0nm,0.4s								
ASAR	**Alice Springs**	**43.87**	**259**	P	**P**	**17**	**44**	**51.8**	**-0.1**
	2.3nm,0.5s,baz=95,slow=8.1,SNR=71								
ASAR				PcP	**pP**	**17**	**46**	**28.5**	**-0.9**
	0.5nm,0.8s,baz=116,slow=3.8,SNR=4.2								
	2.3nm,0.5s								
WRA	**Warramunga Arr**	**44.16**	**264**	P	**P**	**17**	**44**	**52.8**	**-1.4**
	1.8nm,0.5s,baz=97,slow=7.7,SNR=52								
	1.8nm,0.5s								
PETK	**Petropavlovsk-**	**78.48**	**345**	P	**P**	**17**	**48**	**36.5**	**-1.3**
	3.0nm,1.0s,baz=165,slow=6.2,SNR=5.8								
	3.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**90.74**	**290**	P	**P**	**17**	**49**	**39.9**	**+1.2**
	0.5nm,0.7s,baz=135,slow=2.9,SNR=5.3								
	0.5nm,0.7s								
AKASG	**Malin Array Be**	**144.95**	**329**	PKP	**PKPdf**	**17**	**56**	**08.6**	**+0.5**
	0.6nm,0.3s,baz=43,slow=4.4,SNR=8.7								

*NEIC **05** 17:46:33.0±1.4,51°.61N±0°.09×175°.85W±0°.04,h52^{km}±9^{km}, mb3.8/24,ML4.1/10,ML3.9(AEIC),Error ellipse: s-maj=13.2km s-min=1.6km az=165.0*

*IDC **05** 17:46:33.4±3.6,51°.70N×175°.74W,h53^{km}±32^{km},mb3.6/11, mbtmp3.9/15,ML4.1/3,MS2.9/5,Error ellipse: s-maj=28.6km s-min=15.6km az=172.0*

*AEIC **05** 17:46:34.0±2.2,51°.59N±0°.04×175°.82W±0°.05,h42^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=3.0km az=212.0*

ISC 05 17:46:32.9±1.2,51°.6N±0°.1×175°.83W±0°.04,h48^{km}±10^{km}, n101,σ1°16/100,mb3.9/18,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GSIG	**Igitkin Island**	**0.39**	**351**		**Pn**	**17**	**46**	**42.6**	**-0.2**
GSIG					**Sn**	**17**	**46**	**50.2**	**+0.4**
ETKA	**Kagalaska Isla**	**0.45**	**306**		**Pn**	**17**	**46**	**43.1**	**-0.3**
ETKA					**Sn**	**17**	**46**	**51.1**	**+0.2**
GSCK	**Great Sitkin C**	**0.46**	**333**		**Pn**	**17**	**46**	**43.7**	**+0.1**
GSCK					**Sn**	**17**	**46**	**52.1**	**+0.8**
GSMY	**Great Sitkin M**	**0.47**	**342**		**Pn**	**17**	**46**	**43.7**	**+0.1**
GSMY					**Sn**	**17**	**46**	**52.1**	**+0.8**
GSTD	**Great Sitkin T**	**0.50**	**337**		**Pn**	**17**	**46**	**44.2**	**+0.2**
GSTD					**Sn**	**17**	**46**	**52.9**	**+0.8**
GSTR	**Great Sitkin T**	**0.52**	**344**		**Pn**	**17**	**46**	**44.5**	**+0.2**
GSSP	**Great Sitkin S**	**0.54**	**336**		**Pn**	**17**	**46**	**44.8**	**+0.3**
GSSP					**Sn**	**17**	**46**	**53.8**	**+1.0**
ADK	**Adak**	**0.60**	**298**		**Pn**	**17**	**46**	**44.8**	**-0.6**
ADK				IAML		17	46	54.9	
	15μm,0.3s								
ADK				IAML		17	46	55.2	
	10μm,0.2s								
ADK	**Adak**	**0.60**	**298**		**Sn**	**17**	**46**	**54.3**	**+0.1**
ADAG	**Mount Adagdak**	**0.61**	**309**		**Pn**	**17**	**46**	**46.0**	**+0.5**
KIRH	**Kanaga Island**	**0.84**	**291**		**Pn**	**17**	**46**	**48.6**	**+0.2**
KIWB	**Kanaga Island**	**0.86**	**288**		**Pn**	**17**	**46**	**48.5**	**-0.2**
KIWB					**Sn**	**17**	**47**	**00.4**	**+0.1**
KIWB				IAML		17	47	01.8	
	comp=E,9μm,0.6s								
KIWB				IAML		17	47	02.3	
	comp=N,5μm,0.4s								
KIKV	**Kanaga Island**	**0.88**	**289**		**Sn**	**17**	**47**	**01.0**	**+0.2**
ATKA	**Atka Island**	**1.18**	**59**		**Pn**	**17**	**46**	**51.9**	**-1.0**
ATKA					**Sn**	**17**	**47**	**09.1**	**+1.3**
KOKL	**Mount Kliuchef**	**1.24**	**54**		**Pn**	**17**	**46**	**53.7**	**-0.2**
KOKL					**Sn**	**17**	**47**	**10.2**	**+0.7**
KOWE	**Korovin West**	**1.24**	**51**		**Pn**	**17**	**46**	**54.0**	**+0.1**
KOWE					**Sn**	**17**	**47**	**10.7**	**+1.2**
TAPA	**Tanaga Point A**	**1.25**	**281**		**Pn**	**17**	**46**	**54.5**	**+0.4**
KOFP	**Korovin Flat P**	**1.27**	**57**		**Pn**	**17**	**46**	**54.0**	**-0.3**
KOKV	**Korovin Volcan**	**1.28**	**53**		**Pn**	**17**	**46**	**54.6**	**+0.2**
KOKV					**Sn**	**17**	**47**	**11.7**	**+1.2**
KONW	**Korovin Northw**	**1.28**	**51**		**Pn**	**17**	**46**	**54.8**	**+0.4**
TAFL	**Tanaga Flats**	**1.30**	**278**		**Pn**	**17**	**46**	**55.1**	**+0.4**
KONE	**Korovin Northe**	**1.32**	**52**		**Pn**	**17**	**46**	**55.7**	**+0.7**
TAFP	**Tanaga Falls P**	**1.37**	**283**		**Pn**	**17**	**46**	**56.3**	**+0.6**
TAFP					**Sn**	**17**	**47**	**14.1**	**+1.4**
GALAA	**Gareloi Lava P**	**1.84**	**276**		**Pn**	**17**	**47**	**03.0**	**+0.9**
GANE	**Gareloi Northe**	**1.85**	**278**		**Sn**	**17**	**47**	**26.9**	**+2.6**
GAKI	**Gareloi-Kavalg**	**1.86**	**270**		**Pn**	**17**	**47**	**03.1**	**+0.7**
GAKI					**Sn**	**17**	**47**	**26.6**	**+1.9**
GANO	**Gareloi North**	**1.87**	**278**		**Pn**	**17**	**47**	**03.1**	**+0.7**
GASW	**Gareloi Southw**	**1.89**	**277**		**Pn**	**17**	**47**	**03.6**	**+0.8**
AMKA	**Amchitka**	**3.05**	**268**		**Pn**	**17**	**47**	**19.3**	**+0.7**
AMKA				IAML		17	48	07.5	
	comp=E,348nm,0.6s								
AMKA				IAML		17	48	10.7	
	comp=N,461nm,0.6s								
LSPA	**Little Sitkin**	**3.50**	**278**		**Pn**	**17**	**47**	**26.4**	**+1.6**
LSSE	**Little Sitkin**	**3.50**	**278**		**Pn**	**17**	**47**	**26.2**	**+1.4**
LSNW	**Little Sitkin**	**3.53**	**278**		**Pn**	**17**	**47**	**26.4**	**+1.2**
LSSA	**Little Sitkin**	**3.53**	**278**		**Pn**	**17**	**47**	**26.6**	**+1.4**
OKWE	**Okmok W'ng Wal**	**5.00**	**65**		**Pn**	**17**	**47**	**47.3**	**+1.9**
OKCE	**Okmok Cone E**	**5.02**	**66**		**Pn**	**17**	**47**	**47.8**	**+2.1**
MGOD	**Makushin Gods**	**5.87**	**65**		**Pn**	**17**	**47**	**58.9**	**+1.5**
MREP	**Makushin Rep't**	**5.95**	**65**		**Pn**	**17**	**48**	**00.1**	**+1.8**
MNAT	**Makushin Natee**	**6.00**	**64**		**Pn**	**17**	**48**	**00.7**	**+1.5**
UNV	**Unalaska Valle**	**6.09**	**65**		**Pn**	**17**	**48**	**01.9**	**+1.5**
SHEM	**Shemya Is, Ala**	**6.30**	**284**	P	**Pn**	**17**	**48**	**03.8**	**+0.7**
	comp=N,5.2nm,0.3s,baz=208,slow=2.0,SNR=4.8								
SHEM				LR	LR	17	49	49.9	
	comp=N,43nm,20.6s,baz=168,slow=31								
	comp=N,52nm,0.8s								
LVA	**Lava Point**	**6.46**	**63**		**Pn**	**17**	**48**	**07.7**	**+2.3**
SPIA	**Saint Paul Isl**	**6.47**	**28**		**Pn**	**17**	**48**	**07.8**	**+2.4**
AKBBA	**Akutan Broad B**	**6.50**	**63**		**Pn**	**17**	**48**	**08.3**	**+2.5**
SSBA	**Shishaldin**	**7.71**	**61**		**Pn**	**17**	**48**	**24.5**	**+2.0**
DT1	**Dutton Round H**	**8.83**	**61**		**Pn**	**17**	**48**	**38.7**	**+0.9**
DTNA	**Dutton South F**	**8.86**	**61**		**Pn**	**17**	**48**	**39.0**	**+0.8**
DOL	**Dolgoi Island**	**9.07**	**61**		**Pn**	**17**	**48**	**42.0**	**+0.9**
SDPT	**Sand Point**	**9.89**	**62**	Pn	**Pn**	**17**	**48**	**52.6**	**+0.3**
CNBA	**Chernabura Isl**	**10.26**	**65**	Pn	**Pn**	**17**	**48**	**56.4**	**-0.9**
KDAK	**Kodiak Island**	**14.75**	**56**	P	**Pn**	**17**	**49**	**56.1**	**-2.2**
	comp=N,0.4nm,0.3s,baz=81,slow=2.5,SNR=28								
KDAK				LR	LR	17	55	36.3	
	comp=N,102nm,18.7s,baz=233,slow=37								
	comp=N,1.5nm,0.3s								
PEA0B	**Petropavlovsk-**	**16.21**	**286**	Pn	**Pn**	**17**	**50**	**16.3**	**-1.0**
PETK	**Petropavlovsk-**	**16.21**	**286**	P	**P**	**17**	**50**	**18.9**	**-0.8**
	comp=N,1.7nm,0.8s,baz=90,slow=16,SNR=1.4								
PETK				LR	LR	17	55	46.4	
	comp=N,33nm,21.3s,baz=101,slow=34								
F19K	**Shaleruckik Mo**	**17.73**	**24**	P	**P**	**17**	**50**	**37.7**	**+1.4**
KTH	**Kantishna Hill**	**17.78**	**38**	IAmb	IAmb	17	50	58.4	
	comp=Z,11nm,1.0s								
E19K	**Redstone River**	**18.35**	**23**	IAmb	IAmb	17	50	47.6	
	comp=Z,7.3nm,1.4s								
RND	**Reindeer**	**18.52**	**40**	IAmb	IAmb	17	51	01.0	
	comp=Z,11nm,1.4s								
SCM	**Sheep Creek Mo**	**18.53**	**45**	IAmb	IAmb	17	50	48.1	
	comp=Z,9.0nm,0.8s								
G23K	**Bananza Creek**	**19.87**	**31**		**P**	**17**	**50**	**59.1**	**-0.7**
IL31		**19.92**	**37**		**P**	**17**	**51**	**00.3**	**+0.1**
IL31				IAmb	IAmb	17	51	14.2	
	comp=Z,7.7nm,1.5s								
ILAR	**Eielson Array**	**19.92**	**37**	P	**P**	**17**	**50**	**58.8**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=239,slow=10.0,SNR=42								
	comp=Z,0.5nm,0.3s								
ILAR	**Eielson Array**	**19.92**	**37**	P	**P**	**17**	**50**	**60.0**	**-0.4**
MA2	**Magadan**	**20.31**	**306**	LR	LR	17	58	25.6	
	comp=Z,46nm,19.3s,baz=130,slow=35								
E24K	**Your Creek**	**21.17**	**29**	P	**P**	**17**	**51**	**13.3**	**-0.5**
C23K	**Itkillik River**	**21.75**	**23**		**P**	**17**	**51**	**19.9**	**0.0**
C23K				IAmb	IAmb	17	51	36.5	
	comp=Z,7.0nm,1.1s								
F25K	**Christian Rive**	**21.78**	**31**	P	**P**	**17**	**51**	**19.5**	**-0.8**
F25K				IAmb	IAmb	17	51	22.2	
	comp=Z,3.2nm,1.1s								
G26K	**Porcupine Rive**	**22.07**	**34**	P	**P**	**17**	**51**	**22.9**	**-0.6**
G26K				IAmb	IAmb	17	51	28.4	
	comp=Z,3.5nm,1.0s								
I28M	**Miner Creek**	**22.89**	**39**		**P**	**17**	**51**	**31.1**	**-1.1**
I28M				IAmb	IAmb	17	51	39.0	
	comp=Z,6.8nm,1.4s								
J30M	**Hart River**	**24.10**	**42**		**P**	**17**	**51**	**42.9**	**-1.0**
J30M				IAmb	IAmb	17	51	45.7	
	comp=Z,2.2nm,0.8s								
I30M	**Mount Dempster**	**24.24**	**41**	P	**P**	**17**	**51**	**43.4**	**-1.8**
I30M				IAmb	IAmb	17	51	46.5	
	comp=Z,3.6nm,0.9s								
KLR	**Kul'dur**	**32.90**	**287**	LR	LR	18	06	32.6	
	comp=Z,26nm,18.3s,baz=209,slow=36								
YKA	**Yellowknife Ar**	**33.73**	**47**	PcP	**PcP**	**17**	**55**	**48.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=286,slow=3.1,SNR=4.3								
H11N2	**WAKE ISLAND Hy**	**34.58**	**210**	T	T	18	29	56.0	
	baz=18,slow=76,SNR=346								
H11N3	**WAKE ISLAND Hy**	**34.59**	**210**	T	T	18	29	51.8	
	baz=18,slow=76,SNR=271								
H11N1	**WAKE ISLAND Hy**	**34.60**	**210**	T	T	18	29	57.5	
	baz=18,slow=76,SNR=277								
USRK	**Ussuriysk Ar.**	**35.10**	**279**	P	**P**	**17**	**53**	**21.4**	**0.0**
	comp=Z,5.8nm,1.1s,baz=79,slow=10,SNR=1.4								
	comp=Z,5.8nm,1.1s								
USRK	**Ussuriysk Ar.**	**35.10**	**279**	P	**P**	**17**	**53**	**20.9**	**-0.5**
MJAR	**Matsushiro Arr**	**35.66**	**263**	P	**P**	**17**	**53**	**28.2**	**+1.9**
MAJO	**Matsushiro**	**35.66**	**263**	P	**P**	**17**	**53**	**28.3**	**+2.0**
MJB9	**Matsu-Tunnel**	**35.66**	**263**	P	**P**	**17**	**53**	**28.3**	**+2.0**
H11S1	**WAKE ISLAND Hy**	**35.79**	**209**	T	T	18	31	35.0	
	baz=19,slow=76,SNR=380								
H11S2	**WAKE ISLAND Hy**	**35.80**	**209**	T	T	18	31	39.3	
	baz=19,slow=76,SNR=289								
H11S3	**WAKE ISLAND Hy**	**35.81**	**209**	T	T	18	31	40.6	
	baz=19,slow=76,SNR=206								
JGF	**Kuroka**	**36.79**	**263**	P	**P**	**17**	**53**	**32.5**	**-3.5**
INU	**Inuyama**	**37.16**	**263**	P	**P**	**17**	**53**	**38.5**	**-0.6**
KSRS	**Korea Array**	**41.49**	**273**	P	**P**	**17**	**54**	**16.5**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=53,slow=8.1,SNR=5.8								
	comp=Z,0.8nm,0.6s								
PDAR	**Pinedale Array**	**44.47**	**74**	P	**P**	**17**	**54**	**39.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=300,slow=4.5,SNR=7.0								
	comp=Z,0.8nm,0.6s								
SONM	**Songino Array**	**48.20**	**298**	PcP	**PcP**	**17**	**56**	**35.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=70,slow=1.7,SNR=4.3								
TXAR	**Lajitas Array**	**56.78**	**83**	P	**P**	**17**	**56**	**11.8**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=306,slow=6.1,SNR=4.7								
	comp=Z,0.2nm,0.6s								
KURK	**Kurchatov**	**60.19**	**315**	P	**P**	**17**	**56**	**35.0**	**-0.5**
KURK				IAmb	IAmb	17	56	35.6	
	comp=Z,1.2nm,0.8s								
KURBB	**Kurchatov Arra**	**60.30**	**315**	P	**P**	**17**	**56**	**35.5**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=42,slow=6.8,SNR=9.4								
	comp=Z,0.8nm,0.6s								
MKAR	**Makanchi Array**	**61.33**	**310**	P	**P**	**17**	**56**	**41.9**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=49,slow=6.8,SNR=8.8								
	comp=Z,0.3nm,0.3s								
BVAR	**Borovoye Array**	**61.90**	**321**	P	**P**	**17**	**56**	**47.5**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=53,slow=7.5,SNR=8.1								
	comp=Z,0.9nm,0.5s								
FINES	**FINESS Array B**	**65.95**	**349**	P	**P**	**17**	**57**	**13.6**	**0.0**
	comp=Z,2.1nm,1.0s,baz=10,slow=7.0,SNR=1.6								
	comp=Z,2.1nm,1.0s								
CMAR	**Chiang Mai Arr**	**72.83**	**278**	P	**P**	**17**	**57**	**57.5**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=32,slow=7.0,SNR=6.9								
	comp=Z,1.0nm,0.8s								
CLL	**Collm**	**77.19**	**354**	*i* P	**P**	**17**	**58**	**21.5**	**+0.2**
CLL				*e*PP	**PP**	**18**	**01**	**15.0**	**+0.3**
WRA	**Warramunga Arr**	**83.49**	**226**	P	**P**	**17**	**58**	**54.9**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=33,slow=5.9,SNR=4.7								
	comp=Z,0.4nm,0.6s								
ASAR	**Alice Springs**	**86.93**	**225**	P	**P**	**17**	**59**	**13.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=23,slow=3.9,SNR=14								
	comp=Z,0.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**115.49**	**3**	PKP	**PKiKP**	**18**	**05**	**08.3**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=331,slow=2.0,SNR=1.5								
H03N2	**Juan Fernandez**	**119.43**	**108**	T	T	20	16	18.8	
	baz=317,slow=77,SNR=140								
H03N1	**Juan Fernandez**	**119.44**	**108**	T	T	20	16	18.9	
	baz=317,slow=77,SNR=136								
H03N3	**Juan Fernandez**	**119.44**	**108**	T	T	20	16	22.5	
	baz=317,slow=77,SNR=133								

*AEIC **05** 17:59:54.2±1.5,69°.46N±0°.03×143°.92W±0°.07,h8^{km}±6^{km}, Error ellipse: s-maj=4.0km s-min=3.4km az=180.0*

*NEIC **05** 17:59:56.1±1.9,69°.46N±0°.03×143°.95W±0°.07,h5^{km}±2^{km}, ML3.2/98,ML3.0(AEIC),Error ellipse: s-maj=4.9km s-min=3.5km az=312.0*

*IDC **05** 17:59:58.2±3.5,69°.31N×143°.74W,h0^{km},mb2.9/1, mbtmp3.2/4,ML3.1/3,Error ellipse: s-maj=45.1km s-min=20.4km az=143.0*

ISC 05 17:59:55.5±0.7,69°.47N±0°.03×143°.88W±0°.03,h10^{km}, n105,σ1°37/120,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
C27K	**Jago River**	**0.17**	**21**		**Pg**	**17**	**59**	**57.9**	**-1.3**
C27K				Sg	**Sg**	**18**	**00**	**00.1**	**-1.6**
C27K				IAML		18	00	01.5	
	comp=N,6μm,0.4s								
C26K	**Camden Bay**	**0.58**	**322**		**Pg**	**18**	**00**	**06.4**	**-0.3**
C26K					**Sg**	**18**	**00**	**15.2**	**+0.9**
D25K	**Kavik River**	**0.89**	**262**		**Pg**	**18**	**00**	**10.9**	**-1.8**
D25K				Sg	**Sg**	**18**	**00**	**23.3**	**-1.0**
D27M	**Malcolm River**	**1.06**	**101**		**Pg**	**18**	**00**	**13.9**	**-1.9**
D27M				IAML		18	00	34.9	
	comp=N,606nm,0.4s								
D27M				IAML		18	00	36.4	
	comp=E,401nm,0.3s								
E25K	**Arctic Village**	**1.49**	**205**		**Pn**	**18**	**00**	**22.8**	**+0.5**
E25K					**Sg**	**18**	**00**	**43.0**	**-0.2**
E27K	**Coleen River**	**1.53**	**146**		**Pn**	**18**	**00**	**23.3**	**+0.4**
E27K					**Sg**	**18**	**00**	**45.5**	**+0.8**
C24K	**Franklin Bluff**	**1.71**	**281**		**Pn**	**18**	**00**	**25.9**	**+0.6**
C24K					**Sb**	**18**	**00**	**48.7**	**+0.3**
C24K				IAML		18	00	51.0	
	comp=N,256nm,0.8s								
C24K				IAML		18	00	58.5	
	comp=E,200nm,0.8s								
D24K	**Happy Valley**	**1.78**	**262**		**Pn**	**18**	**00**	**27.2**	**+0.9**
D24K					**Sb**	**18**	**00**	**50.5**	**-0.1**
D24K				IAML		18	01	02.2	
	comp=E,246nm,0.6s								
F26K	**Sheenjek River**	**1.78**	**183**		**Pb**	**18**	**00**	**27.8**	**-0.5**
F26K					**Sb**	**18**	**00**	**51.4**	**+0.7**
F26K				IAML		18	00	56.4	
	comp=N,259nm,0.5s								
E28M	**Babbage River**	**1.79**	**117**		**Pn**	**18**	**00**	**27.6**	**+1.2**
E28M				IAML		18	00	56.7	
	comp=N,180nm,0.3s								
PS01	**TAPS Pump Stn**	**1.82**	**298**		**Pb**	**18**	**00**	**28.7**	**-0.1**
PS01					**Sb**	**18**	**00**	**52.6**	**+1.0**
D28M	**Stokes Point**	**1.83**	**92**		**Pn**	**18**	**00**	**28.5**	**+1.6**
F25K	**Christian Rive**	**1.99**	**200**		**Pb**	**18**	**00**	**30.9**	**-0.9**
F25K					**Sb**	**18**	**00**	**56.6**	**-0.1**
BM04	**Burnt Mountain**	**2.08**	**187**		**Pn**	**18**	**00**	**31.9**	**+1.5**
E24K	**Your Creek**	**2.18**	**232**		**Pn**	**18**	**00**	**33.5**	**+1.6**
TOLK	**Toolik Lake Re**	**2.21**	**251**		**Pn**	**18**	**00**	**33.0**	**+0.8**
PS04	**TAPS Pump Stn4**	**2.24**	**245**		**Pn**	**18**	**00**	**33.5**	**+0.9**
PS04					**Pb**	**18**	**00**	**34.1**	**-1.9**
F28M	**Old Crow**	**2.38**	**140**		**Pn**	**18**	**00**	**35.2**	**+0.7**
F28M				IAML		18	01	16.3	
	comp=E,92nm,0.5s								
F28M				IAML		18	01	16.5	
	comp=N,126nm,0.5s								
C23K	**Itkillik River**	**2.38**	**282**		**Pn**	**18**	**00**	**35.3**	**+0.8**
C23K				IAML		18	01	25.2	
	comp=E,152nm,0.9s								
E29M	**Blow River**	**2.42**	**114**		**Pn**	**18**	**00**	**36.1**	**+1.0**
E29M				IAML		18	01	14.4	
	comp=N,102nm,0.6s								
E29M				IAML		18	01	23.3	
	comp=E,97nm,0.6s								
F24K	**Squaw Lake**	**2.45**	**219**		**Pn**	**18**	**00**	**36.8**	**+1.2**
F24K				IAML		18	01	15.2	
	comp=N,104nm,0.5s								
D23K	**Nanushuk River**	**2.48**	**261**		**Pn**	**18**	**00**	**37.3**	**+1.4**
E23K	**Chandalar**	**2.52**	**239**		**Pn**	**18**	**00**	**38.0**	**+1.5**
E23K				IAML		18	01	21.4	
	comp=N,79nm,0.8s								
E23K				IAML		18	01	26.6	
	comp=E,79nm,0.7s								
G26K	**Porcupine Rive**	**2.53**	**179**		**Pn**	**18**	**00**	**37.5**	**+0.9**
G27K	**Doyon Strip**	**2.80**	**162**		**Pn**	**18**	**00**	**41.3**	**+1.0**
FYU	**Fort Yukon**	**2.96**	**191**		**Pn**	**18**	**00**	**44.5**	**+2.0**
E22K	**Anaktuvuk Pass**	**3.18**	**249**		**Pn**	**18**	**00**	**46.2**	**+0.7**
COLD	**Coldfoot**	**3.25**	**229**		**Pn**	**18**	**00**	**47.6**	**+1.2**
COLD			

WRH	**Wood River Hil**	**5.28**	**200**	IAML		18 02 18.2
	comp=N,14nm,0.8s					
WRH				IAML		18 02 49.6
	comp=E,11nm,1.1s					
NEA2	**Nenana**	**5.30**	**205**		**Pn**	**18 01 15.7 +1.1**
E19K	**Redstone River**	**5.31**	**254**		**Pn**	**18 01 15.8 +1.0**
E19K				IAML		18 02 20.6
	comp=E,10.0nm,0.6s					
E19K				IAML		18 03 04.7
	comp=N,15nm,1.0s					
I21K	**Tanana**	**5.32**	**220**		**Pn**	**18 01 16.2 +1.4**
K27K	**Chicken**	**5.51**	**172**		**Pn**	**18 01 19.5 +2.0**
SCRK	**Sand Creek**	**5.52**	**180**		**Pn**	**18 01 19.8 +2.1**
DAWY	**Dawson**	**5.71**	**160**		**Pn**	**18 01 21.6 +1.4**
H20K	**Anotleneega Mo**	**5.81**	**232**		**Pn**	**18 01 22.3 +0.7**
F19K	**Shaleruckik Mo**	**5.82**	**250**		**Pn**	**18 01 22.7 +1.0**
A19K	**Wainwright**	**5.99**	**285**		**Pn**	**18 01 24.9 +0.9**
A19K					Pb	18 01 25.1 -15
MCK	**McKinley**	**6.10**	**202**		**Pn**	**18 01 26.7 +1.1**
K29M	**Barlow Dome**	**6.18**	**153**		**Pn**	**18 01 28.2 +1.4**
H19K	**Roundabout Mou**	**6.23**	**237**		**Pn**	**18 01 28.2 +0.9**
C18K	**Utukok River**	**6.26**	**271**		**Pn**	**18 01 28.5 +0.7**
L26K	**Log Cabin Wild**	**6.47**	**178**		**Pn**	**18 01 32.9 +2.1**
BC01	**Beaver Creek A**	**6.49**	**172**		**Pn**	**18 01 32.6 +1.7**
E18K	**Tukpahlearik C**	**6.49**	**259**		**Pn**	**18 01 32.0 +1.1**
KTH	**Kantishna Hill**	**6.57**	**209**		**Pn**	**18 01 34.2 +2.2**
DHY	**Denali Highway**	**6.57**	**194**		**Pn**	**18 01 34.6 +2.4**
A36M	**Sachs Harbour**	**6.65**	**59**		**Pn**	**18 01 32.5 -0.6**
G18K	**Tagagawik**	**6.66**	**245**		**Pn**	**18 01 34.1 +0.9**
J20K	**Nowinta River**	**6.67**	**222**		**Pn**	**18 01 34.5 +1.1**
L29M	**L29M**	**6.79**	**157**		**Pn**	**18 01 36.4 +1.3**
CAST	**Castle Rocks**	**6.90**	**212**		**Pn**	**18 01 38.1 +1.6**
C17K	**DeLong Mountai**	**7.00**	**271**		**Pn**	**18 01 37.8 -0.2**
E17K	**Hotham Inlet**	**7.07**	**259**		**Pn**	**18 01 39.2 +0.4**
F17K	**Baldwin Pennin**	**7.19**	**253**		**Pn**	**18 01 41.5 +1.0**
M29M	**Somme Creek**	**7.39**	**160**		**Pn**	**18 01 45.0 +1.6**
PPLA	**Purkeypile**	**7.40**	**211**		**Pn**	**18 01 44.8 +1.3**
YUK2	**White River**	**7.81**	**169**		**Pn**	**18 01 51.7 +2.5**
C16K	**Lisburne Hills**	**7.83**	**271**		**Pn**	**18 01 49.1 -0.2**
YUK6	**Outpost Mounta**	**8.86**	**162**		**Pn**	**18 02 06.3 +2.6**
YKA	**Yellowknife Ar**	**13.69**	**106**	Pn	**Pn**	**18 03 06.8 -2.5**
	comp=N,0.3nm,0.3s,baz=314,slow=13,SNR=4.3 comp=N,1.1nm,0.5s					
TXAR	**Lajitas Array**	**46.27**	**129**	P	**P**	**18 08 24.4 +3.5**
	comp=N,0.1nm,0.5s,baz=349,slow=9.9,SNR=2.0 comp=N,0.1nm,0.5s					

IDC 05 18:04:29.1±2.5, 21°.17S×178°.95W, h622km±63km, mb2.7/4, mbtmp3.7/5, Error ellipse: s-maj=128.3km s-min=32.4km az=24.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**320**	P	P	18 05 59.3	-0.1
	2.2nm,0.4s,baz=135,slow=17,SNR=7.4						
STKA	**Stephens Creek**	**36.70**	**245**	P	P	18 10 45.1	-0.5
	0.7nm,0.5s,baz=73,slow=10,SNR=1.9 0.7nm,0.5s						
ASAR	**Alice Springs**	**43.50**	**258**	P	P	18 11 40.0	+0.1
	0.8nm,0.5s,baz=93,slow=8.1,SNR=33 0.8nm,0.5s						
WRA	**Warramunga Arr**	**43.63**	**263**	P	P	18 11 40.9	0.0
	0.4nm,0.3s,baz=97,slow=7.7,SNR=11 0.4nm,0.3s						
QSPA	**South Pole Qui**	**68.90**	**180**	P	P	18 14 33.2	+0.1
	0.6nm,0.6s,baz=37,slow=0.9,SNR=5.8 0.6nm,0.6s						

NNC 05 18:05:44.4±2.1, 38°.16N×77°.97E, h18km±7km, mb3.9, mpv3.5, 4C-2D, Error ellipse: s-maj=22.6km s-min=14.1km az=92.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**4.93**	**351**	Pg	Pg	18 07 14.9	-4.0
	3.0nm,0.7s						
TNSS				Lg	Lg	18 08 21.9	
	3.3nm,0.8s						
MDOK	**Medeo**	**5.05**	**352**	Pg	Pg	18 07 17.5	-3.5
	7.5nm,0.6s						
MDOK				Lg	Lg	18 08 26.0	
	20nm,0.5s						
UZB	**Uzymbulak**	**5.05**	**9**	Pg	Pg	18 07 17.1	-3.9
	1.9nm,0.2s						
UZB				Lg	Lg	18 08 25.4	
	13nm,0.6s						
KST	**Kastek**	**5.11**	**343**	Pg	Pb	18 07 16.5	+3.1
	3.4nm,0.5s						
KST				Lg	Lg	18 08 24.3	
	7.0nm,0.4s						
SHLS	**Shalkode**	**5.12**	**12**	Pg	Pg	18 07 18.9	-3.6
	9.5nm,0.4s						
SHLS				Lg	Lg	18 08 28.2	
	34nm,0.4s						
PDGK	**Podgornoye**	**5.29**	**12**	⇓Pn	Pn	18 07 02.4	-0.2
	2.9nm,0.6s						
PDGK				⇑Pg	Pb	18 07 19.6	+3.2
	3.6nm,0.5s						
PDGK				⇑Sn	Sn	18 08 04.7	+1.5
	5.8nm,0.7s						
PDGK				⇑Lg	Lg	18 08 32.0	
	15nm,0.7s						
KPKS	**Kokpek**	**5.33**	**6**	Pg	Pg	18 07 23.0	-3.5
	0.2nm,0.1s						
KPKS				Lg	Lg	18 08 35.2	
	18nm,0.4s						
MK31	**Makanchi Array**	**9.20**	**19**	⇓Pn	Pn	18 07 56.3	+0.1
	0.1nm,0.2s,baz=202,slow=13,SNR=22						
MK31				⇑Sn	Sn	18 09 38.8	-0.3
	0.3nm,0.4s,baz=186,slow=23						

ISC 05 18:07:33.4±1.1, 45°.24N±0°.03×14°.69E±0°.04, h13km±9km, n12, σ0s54/20, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIY	**Rijeka**	**0.17**	**301**	*i* Pg	**Pg**	**18 07 37.1**	**-0.3**
RIY				*i* Sg	**Sg**	**18 07 40.1**	**0.0**
GBRS	**Gornja Briga**	**0.30**	**16**	⇓*i*Pg	**Pg**	**18 07 39.6**	**0.0**
GBRS				*i* Sg	**Sg**	**18 07 44.4**	**+0.4**
KNDS	**Knezji Dol**	**0.36**	**323**	*i* Pg	**Pg**	**18 07 40.4**	**-0.3**
KNDS				*i* Sg	**Sg**	**18 07 46.3**	**+0.6**
KNDS				IAML		18 07 47.3	
	comp=Z,4.6nm,0.1s						
BOJS	**Bojanci**	**0.48**	**56**	*i* Pg	**Pg**	**18 07 42.4**	**-0.4**
BOJS				*i* Sg	**Sg**	**18 07 48.8**	**-0.3**
BOJS				IAML		18 07 50.6	
	comp=Z,7.1nm,0.1s						
RABC	**Rab**	**0.49**	**172**	Sg	**Sg**	**18 07 50.3**	**+0.7**
SKDS	**Skadanscina**	**0.57**	**303**	*i* Pg	**Pg**	**18 07 43.7**	**-0.8**
SKDS				*i* Sg	**Sg**	**18 07 52.9**	**+0.8**
SKDS				IAML		18 07 53.6	
	comp=Z,1.4nm,0.0s						
VISS	**Visnje**	**0.57**	**10**	*i* Pg	**Pg**	**18 07 44.4**	**-0.2**
VISS				*i* Sg	**Sg**	**18 07 52.3**	**0.0**
VISS				IAML		18 07 54.1	
	comp=Z,2.9nm,0.1s						
NVLJ	**Novalja**	**0.69**	**169**	*e*Pg	**Pg**	**18 07 46.1**	**-0.6**
NVLJ				Sg	**Sb**	**18 07 56.5**	**0.0**
PLIT	**Plitvice**	**0.75**	**118**	Sg	**Sg**	**18 07 57.6**	**-0.2**
JAVS	**Javornik**	**0.79**	**326**	*i* Pg	**Pg**	**18 07 47.9**	**-0.8**
JAVS				*i* Sg	**Sb**	**18 07 59.8**	**+0.2**
JAVS				IAML		18 08 01.7	
	comp=Z,4.3nm,0.1s						
VIRC	**Vir**	**0.98**	**165**	Sg	**Sn**	**18 08 06.5**	**0.0**
UDBI	**Udbina**	**1.04**	**133**	Sg	**Sb**	**18 08 07.7**	**+0.9**

JMA 05 18:14:46.5±0.0, 36°.3N±0°.2×137°.6E±0°.2, h5km±1km, MV1.1/30, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.26**	**261**	*e*P	Pg	18 14 51.6	+0.1
JGN				*e*S	Sg	18 14 55.0	+0.1
JNG	**Nsakai**	**0.41**	**69**	P	Pg	18 14 54.6	+0.3
JNG				S	Sg	18 15 00.1	+0.4
JTT	**Ttatey**	**0.42**	**325**	*e*P	Pg	18 14 55.0	+0.5
JTT				*e*S	Sb	18 15 01.5	-1.4
MAT	**Matsushiro**	**0.54**	**59**	P	Pg	18 14 56.9	0.0

*BJI **05** 18:26:47.7, 6°.98S×131°.80E, h15km, mB4.9/4, mb4.8/40, Ms4.7/4, Ms7 4.4/2*
*IDC **05** 18:26:49.4±0.5, 6°.64S×131°.60E, h0km, mb4.5/17, mbtmp4.5/21, ML4.3/4, MS3.8/7, Error ellipse: s-maj=22.0km s-min=12.1km az=80.0*
*NEIC **05** 18:26:50.2±2.2, 6°.74S±0°.04×131°.9E±0°.1, h10km±1km, mb4.7/17, Error ellipse: s-maj=19.3km s-min=7.0km az=100.0*
*GFZ **05** 18:26:50.8±0.2, 7°.S±3°×13°.2E±°, h10km, M4.6/22, mb4.9/22, confirmed*
*DJA **05** 18:26:53.4±1.1, 7°.S±2°×13°.2E±°, h29km±12km, M4.6/40, mb4.8/40, mB5.1/11, MLv4.8/21, Mw(mB)4.5/11*

ISC 05 18:26:50.4±0.3, 6°.76S±0°.04×131°.74E±0°.06, h10km, n127, σ1s95/130, mb4.7/33, MS3.7/3, 1C-2D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.29**	**200**		**Pb**	**18 27 15.5**	**+0.7**
SAUI	**Saumlaki**	**1.29**	**200**	P	**Pg**	**18 27 16.1**	**+0.9**
SAUI	**Saumlaki**	**1.29**	**200**	P	**Pg**	**18 27 18.3**	**+3.1**
BNDI	**Bandanaira**	**2.88**	**321**	P	**Pn**	**18 27 37.2**	**+0.8**
KMPI	**Kaimana, Papua**	**3.65**	**33**	P	**Pn**	**18 27 46.3**	**-0.7**
FAKI	**Fak Fak**	**3.85**	**8**		**Pn**	**18 27 49.3**	**-0.6**
FAKI				Sn	**Sn**	**18 28 32.0**	**-3.1**
FAKI	**Fak Fak**	**3.85**	**8**	P	**Pn**	**18 27 49.9**	**+0.1**
FAKI	**Fak Fak**	**3.85**	**8**	P	**Pn**	**18 27 49.5**	**-0.3**
SIJI	**Sorong**	**5.87**	**355**	Pn	**Pn**	**18 28 15.3**	**-2.4**
	7.3nm,0.3s,baz=219,slow=21,SNR=26						
SIJI				Sn	**Sn**	**18 29 19.3**	**-5.8**
	7.4nm,0.3s,baz=47,slow=23,SNR=8.2 14nm,0.3s						
SIJI	**Sorong**	**5.87**	**355**	P	**Pn**	**18 28 17.4**	**-0.2**
	0.3nm2µm56nm,0.7s						
SWI	**Sorong**	**5.88**	**355**	P	**Pn**	**18 28 17.9**	**+0.1**
MTN	**Manton 8 Dam**	**6.07**	**186**		**Pn**	**18 28 20.9**	**+0.6**
MWPI	**Manokwari, Pap**	**6.23**	**22**	P	**Pn**	**18 28 24.3**	**+1.7**
	1.0nm104nm,0.7s						
SRPI	**Serui, Papua**	**6.61**	**43**	P	**Pn**	**18 28 28.5**	**+0.7**
	0.3nm76nm,0.5s						
BAKI	**Biak**	**7.04**	**38**	P	**Pn**	**18 28 36.1**	**+2.4**
	0.2nm775nm56nm,0.6s						
SANI	**Sanana**	**7.40**	**309**	P	**Pn**	**18 28 42.4**	**+3.8**
	0.4nm85nm,1.2s						
WAMI	**Wamena**	**7.51**	**68**	P	**Pn**	**18 28 42.1**	**+2.0**
SOEI	**Soe**	**7.97**	**248**	P	**Pn**	**18 28 48.5**	**+1.9**
SOEI	**Soe**	**7.97**	**248**	P	**Pn**	**18 28 48.6**	**+2.0**
SOEI	**Soe**	**7.97**	**248**	P	**Pn**	**18 28 48.3**	**+1.7**
TNTI	**Ternate**	**8.66**	**330**	P	**Pn**	**18 28 58.6**	**+2.6**
BATI	**Baumata**	**8.69**	**246**	Pn	**Pn**	**18 28 54.1**	**-2.2**
	15nm,0.3s,baz=135,slow=3.6,SNR=20						
BATI				Sn	**Sn**	**18 30 33.5**	**-1.0**
	3.3nm,0.3s,baz=122,slow=20,SNR=1.4 78nm,0.6s						
BATI	**Baumata**	**8.69**	**246**	P	**Pn**	**18 28 55.5**	**-0.9**
MMPI	**Merauke**	**8.73**	**102**	P	**Pn**	**18 28 57.5**	**+0.6**
KNRA	**Kununurra**	**9.33**	**198**		**Pn**	**18 29 04.5**	**-0.5**
GENI	**Genyem**	**9.37**	**64**	P	**Pn**	**18 29 06.6**	**+1.0**
	47nm,0.8s						
MMRI	**Maumere**	**9.60**	**258**	P	**Pn**	**18 29 10.9**	**+2.1**
	68nm,0.8s						
MMRI	**Maumere**	**9.60**	**258**	P	**Pn**	**18 29 11.2**	**+2.4**
JAY	**Jayapura**	**9.88**	**65**	Pn	**Pn**	**18 29 13.8**	**+1.1**
	2.5nm,0.3s,baz=223,slow=13,SNR=12 13nm,0.4s						
JAY	**Jayapura**	**9.88**	**65**	P	**Pn**	**18 29 14.6**	**+1.9**
	27nm,0.9s						
MNI	**Manado**	**10.67**	**320**	P	**Pn**	**18 29 25.2**	**+1.7**
WSI	**Waingapu**	**11.69**	**255**	P	**Pn**	**18 29 37.2**	**-0.2**
LBFI	**Labuhan Bajo,**	**11.87**	**261**	P	**Pn**	**18 29 43.7**	**+3.8**
KAPI	**Kappang**	**12.05**	**278**	LR	LR	18 34 15.1	
	comp=Z,788nm,21.1s,baz=92,slow=38						
WBSI	**Waikabubak, Su**	**12.55**	**256**	P	**Pn**	**18 29 50.2**	**+0.9**
WBSI	**Waikabubak, Su**	**12.55**	**256**	P	**Pn**	**18 29 49.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**12.74**	**207**	Pn	**Pn**	**18 29 47.9**	**-3.9**
	3.4nm,0.3s,baz=28,slow=11,SNR=40						
FITZ				Sn	Sn	18 32 04.1	-10
	9.7nm,0.3s,baz=199,slow=17,SNR=14						
FITZ				LR	LR	18 35 53.5	
	comp=Z,296nm,20.7s,baz=25,slow=43						
FITZ	**Fitzroy Crossi**	**12.74**	**207**	Pn	**Pn**	**18 29 51.9**	**+0.1**
WB0	**Warramunga Arr**	**13.18**	**169**		**Pn**	**18 29 54.7**	**-3.2**
WRAB	**Tennant Creek**	**13.34**	**169**		**Pn**	**18 29 57.2**	**-2.8**
WRA	**Warramunga Arr**	**13.34**	**169**	Pn	**Pn**	**18 29 55.8**	**-4.3**
	2.2nm,0.3s,baz=339,slow=14,SNR=43						
WRA				Sn	Sn	18 32 18.4	-10
	3.6nm,0.3s,baz=351,slow=19,SNR=7.7						
WRA	**Warramunga Arr**	**13.34**	**169**		**Pn**	**18 29 57.7**	**-2.3**
WR8	**Warramunga Arr**	**13.39**	**169**		**Pn**	**18 29 56.5**	**-4.2**
MMSI	**Mamuju**	**13.41**	**287**	P	Pn	18 30 06.2	+5.2
	17nm,0.8s						
DBNI	**Kabupaten Domp**	**13.42**	**262**	P	**Pn**	**18 30 02.8**	**+1.7**
	25nm,0.6s						
PLAI	**Plampang**	**13.99**	**261**	P	**Pn**	**18 30 09.0**	**+0.1**
	38nm,0.7s						
PMG	**Port Moresby**	**15.49**	**101**	LR	LR	18 37 55.1	
	comp=Z,334nm,19.5s,baz=238,slow=43						
QIS	**Mount Isa**	**15.69**	**152**	P	**Pn**	**18 30 28.9**	**-2.9**
MTSU	**Mount Surprise**	**16.68**	**134**	P	**Pn**	**18 30 42.7**	**-1.7**
AS31	**Alice Springs**	**16.93**	**173**		**Pn**	**18 30 44.2**	**-3.5**
ASAR	**Alice Springs**	**16.94**	**173**	Pn	**Pn**	**18 30 43.1**	**-4.6**
	1.7nm,0.3s,baz=8.1,slow=14,SNR=65						
ASAR				Sn	**Sn**	**18 33 47.0**	**-9.1**
	2.3nm,0.3s,baz=1.0,slow=28,SNR=8.2						
ASAR	**Alice Springs**	**16.94**	**173**		**Pn**	**18 30 42.7**	**-5.1**
JAGI	**Jajag, Banyuwa**	**17.52**	**263**	P	**Pn**	**18 30 53.7**	**-1.3**
CTA	**Charters Tower**	**19.34**	**135**	P	**Pn**	**18 31 19.1**	**+1.8**
	0.3nm,0.3s,baz=307,slow=15,SNR=2.5						
CTA				LR	LR	18 39 36.2	
	comp=Z,575nm,18.2s,baz=308,slow=39 3.7nm,0.6s						
SNJI	**Sawahan-Nganju**	**19.85**	**266**	P	**P**	**18 31 23.2**	**+1.3**
	28nm,0.8s						
KKM	**Kota Kinabalu**	**20.05**	**309**		**P**	**18 31 22.0**	**-2.0**
KKM				IAmb	IAmb	18 31 25.1	
	comp=Z,34nm,0.9s						
KKM	**Kota Kinabalu**	**20.05**	**309**	P	**P**	**18 31 24.1**	**+0.1**
KKM	**Kota Kinabalu**	**20.05**	**309**	P	**P**	**18 31 24.5**	**+0.4**
KRVT	**Keravat (AS076**	**20.34**	**84**	LR	LR	18 41 05.3	
	comp=Z,27nm,18.6s,baz=194,slow=42						
INKA	**Innaminka**	**22.55**	**159**		**P**	**18 31 50.6**	**-0.1**
INKA				IAmb	IAmb	18 32 09.4	
	comp=Z,19nm,0.9s						
QLP	**Quilpie**	**23.02**	**150**	P	**P**	**18 31 57.8**	**+2.0**
MEEK	**Meekatharra**	**23.39**	**211**	P	**P**	**18 32 00.8**	**+1.2**
BBJI	**Bungbulang**	**23.91**	**267**	P	**P**	**18 32 04.7**	**-0.3**
BBJI				IAmb	IAmb	18 32 05.8	
	comp=Z,18nm,0.7s						
BBJI	**Bungbulang**	**23.91**	**267**	P	**P**	**18 32 04.6**	**-0.3**
FORT	**Forrest**	**24.14**	**188**		**P**	**18 32 06.4**	**-0.3**
FORT				IAmb	IAmb	18 32 24.6	
	comp=Z,15nm,0.8s						
BBOO	**Buckleboo**	**26.23**	**172**		**P**	**18 32 25.3**	**-0.4**
BBOO				IAmb	IAmb	18 32 45.9	
	comp=Z,17nm,1.1s						
BBOO	**Buckleboo**	**26.23**	**172**	P	**P**	**18 32 25.9**	**+0.2**
STKA	**Stephens Creek**	**26.63**	**161**	P	**P**	**18 32 29.6**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=353,slow=7.3,SNR=13						
STKA				LR	LR	18 44 10.9	
	comp=Z,473nm,18.6s,baz=338,slow=39 comp=Z,2.1nm,0.4s						
KLBR	**Kellerberrin**	**27.95**	**206**	P	**P**	**18 32 42.3**	**+1.1**
NWAO	**Narrogin (SRO)**	**29.32**	**205**	P	**P**	**18 32 53.1**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=30,slow=14,SNR=1.7						
NWAO				LR	LR	18 46 10.0	
	comp=Z,221nm,21.7s,baz=84,slow=40 comp=Z,6.8nm,0.8s						
NJ2	**Nanjing**	**40.51**	**343**	*e*P	**P**	**18 34 31.7**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,16nm,0.9s						
WHN	**Wuhan**	**40.67**	**337**	⇓P	**P**	**18 34 31.9**	**+0.8**
WHN				pmax	pmax		
	comp=Z,44nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.92**	**308**	P	**P**	**18 34 33.4**	**0.0**
	comp=Z,1.5nm,0.7s,baz=134,slow=6.6,SNR=18						
CMAR				PcP	**PcP**	**18 36 34.8**	**+0.8**
	comp=Z,2.2nm,0.9s,baz=170,slow=3.3,SNR=9.6 comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**40.92**	**308**	P	**P**	**18 34 31.6**	**-1.8**
CMAR				PcP	**PcP**	**18 36 36.0**	**+2.0**
CHTO	**Chiang Mai**	**41.12**	**309**		**P**	**18 34 34.5**	**-0.6**
PZH	**PanZhiHua**	**44.04**	**320**	P	**P**	**18 35 00.7**	**+1.9**
KSRS	**Korea Array**	**44.13**	**356**	P	**P**	**18 34 59.8**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=182,slow=10.0,SNR=4.8						
KSRS				PcP	**PcP**	**18 36 44.5**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=194,slow=3.2,SNR=5.5 comp=Z,0.8nm,0.8s						
HNS	**HongShan**	**46.73**	**341**	⇑P	**P**	**18 35 19.4**	**-0.4**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
LZH	**Lanzhou**	**50.03**	**330**	*e*P	**P**	**18 35 45.0**	**-0.5**
LZH				sP	sP	18 35 55.2	+5.4
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
SHL	**Shillong**	**50.33**	**311**		**P**	**18 35 47.2**	**-0.8**
CN2	**Changchun**	**50.65**	**354**	P	**P**	**18 35 51.1**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**50.88**	**340**	*e*P	**P**	**18 35 54.4**	**+2.6**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
MDJ	**Mudanjiang**	**51.18**	**358**	P	**P**	**18 35 57.0**	**+3.2**
MDJ				pmax	pmax		
	comp=Z,12nm,1.9s						
GTA2	**Gaotai**	**54.70**	**330**	*e*P	**P**	**18 36 21.0**	**+0.9**
GTA2				pP	sP	18 36 29.9	+5.5
GTA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EVN	**Everest**	**55.42**	**311**		**P**	**18 36 26.1**	**-0.1**
EVN	**Everest**	**55.42**	**311**	P	**P**	**18 36 26.2**	**0.0**
ULN	**Ulaanbaatar**	**58.59**	**341**	P	**P**	**18 36 48.6**	**+0.9**
SONM	**Songino Array**	**58.78**	**340**	P	**P**	**18 36 49.1**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=160,slow=7.1,SNR=9.1 comp=Z,2.6nm,0.9s						
SONM	**Songino Array**	**58.78**	**340**	P	**P**	**18 36 49.4**	**+0.5**
PETK	**Petropavlovsk-**	**63.58**	**17**	P	**P**	**18 37 20.1**	**-1.2**
	comp=Z,4.8nm,0.9s,baz=181,slow=7.4,SNR=4.0 comp=Z,4.8nm,0.9s						
WMQ	**Urumqi**	**64.15**	**326**	*e*P	**P**	**18 37 23.1**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,46nm,1.3s						
WUS	**Wushi**	**67.71**	**320**	P	**P**	**18 37 47.2**	**-1.2**
YAK	**Yakutsk**	**68.61**	**359**	P	**P**	**18 37 52.6**	**-0.7**
	comp=Z,16nm,0.7s,baz=207,slow=1.1,SNR=10 comp=Z,16nm,0.7s						
YAK	**Yakutsk**	**68.61**	**359**		**P**	**18 37 52.1**	**-1.2**
YAK	**Yakutsk**	**68.61**	**359**	P	**P**	**18 37 54.0**	**+0.7**
PDGK	**Podgornoye**	**68.67**	**322**		**P**	**18 37 54.9**	**+0.5**
MKAR	**Makanchi Array**	**68.98**	**326**	P	**P**	**18 37 54.0**	**-2.1**
	comp=Z,8.4nm,0.6s,baz=119,slow=8.1,SNR=62 comp=Z,8.4nm,0.6s						
MKAR	**Makanchi Array**	**68.98**	**326**		**P**	**18 37 55.6**	**-0.5**
KSH2	**Kashi**	**69.12**	**316**	P	**P**	**18 37 58.0**	**+0.7**
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH2				L	L		
	comp=Z,100nm,7.2s						
KSH2				L	L		
	comp=Z,250nm,7.2s						
MAKZ	**Makanchi**	**69.17**	**326**	P	**P**	**18 37 57.6**	**+0.3**
SEY	**Seymchan**	**71.27**	**10**	P	**P**	**18 38 09.9**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=196,slow=4.0,SNR=5.9 comp=Z,2.9nm,0.8s						
AAK	**Ala-Archa**	**71.48**	**319**	P	**P**	**18 38 13.0**	**+1.3**
ZALV	**Zalesovo Beam**	**72.14**	**333**	P	**P**	**18 38 14.6**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=122,slow=5.1,SNR=23 comp=Z,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**72.14**	**333**		**P**	**18 38 14.0**	**-1.2**
VNDA	**Vanda**	**72.48**	**173**	P	**P**	**18 38 18.0**	**+1.1**
	comp=Z,2.8nm,0.5s,baz=309,slow=5.9,SNR=15 comp=Z,2.8nm,0.5s						
VNDA	**Vanda**	**72.48**	**173**		**P**	**18 38 17.4**	**+0.5**
VNDA				IAmb	IAmb	18 38 19.2	
	comp=Z,4.7nm,0.9s						
GAR	**Garm**	**72.73**	**314**	P	**P**	**18 38 19.9**	**+0.7**
ARK	**Arkit**	**72.78**	**317**	P	**P**	**18 38 20.3**	**+0.9**
KURBB	**Kurchatov Arra**	**73.22**	**328**	P	**P**	**18 38 21.9**	**+0.2**
	comp=Z,2.2nm,0.2s,baz=127,slow=4.9,SNR=26 comp=Z,2.2nm,0.2s						
KURK	**Kurchatov**	**73.22**	**328**	P	**P**	**18 38 21.8**	**+0.2**
KURK				IAmb	IAmb	18 38 24.1	
	comp=Z,4.5nm,0.7s						
CHGR	**Chuyangaron**	**73.42**	**314**	P	**P**	**18 38 23.7**	**+0.4**
MAW	**Mawson**	**75.80**	**202**	P	**P**	**18 38 38.6**	**+2.2**
	comp=Z,4.0nm,0.7s,baz=78,slow=4.3,SNR=10 comp=Z,4.0nm,0.7s						
MAW	**Mawson**	**75.80**	**202**	P	**P**	**18 38 35.6**	**-0.8**
BVAR	**Borovoye Array**	**78.79**	**327**	P	**P**	**18 38 52.8**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=120,slow=8.8,SNR=8.0 comp=Z,3.4nm,0.8s						
NRIK	**Noril'sk**	**81.76**	**346**	P	**P**	**18 39 08.7**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=163,slow=5.4,SNR=4.9 comp=Z,2.9nm,0.6s						
QSPA	**South Pole Qui**	**83.21**	**180**	P	**P**	**18 39 18.1**	**+1.1**
	comp=Z,4.1nm,0.8s,baz=295,slow=0.9,SNR=26 comp=Z,4.1nm,0.8s						
QSPA	**South Pole Qui**	**83.21**	**180**		**P**	**18 39 15.8**	**-1.2**
QSPA				IAmb	IAmb	18 39 18.9	
	comp=Z,4.6nm,0.8s						
ABKAR	**Akbulak array**	**83.40**

1.1nm,0.7s
QSPA South Pole Qui 66.21 180 P **P** **18 49 09.9 +0.2**
1.2nm,0.9s,baz=176,slow=6.4,SNR=2.6
1.2nm,0.9s
MKAR Makanchi Array 71.31 9 P **P** **18 49 41.2 -0.3**
0.7nm,0.7s,baz=197,slow=6.5,SNR=7.0
0.7nm,0.7s
BRTR Keskin Array B 71.63 332 P **P** **18 49 44.6 +0.8**
0.3nm,0.5s,baz=167,slow=8.3,SNR=2.0
0.3nm,0.5s
KURBB Kurchatov Arra 74.63 6 P **P** **18 50 00.8 -0.2**
0.4nm,0.9s,baz=204,slow=6.4,SNR=4.2
0.4nm,0.9s
ZALV Zalesovo Beam 78.65 9 P **P** **18 50 23.6 -0.1**
0.5nm,0.5s,baz=226,slow=3.9,SNR=3.7
0.5nm,0.5s
AKASG Malin Array Be 82.38 335 P **P** **18 50 42.9 -0.9**
0.4nm,0.5s,baz=146,slow=4.7,SNR=2.3
0.4nm,0.5s

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*IDC **05** 18:50:01.9±0.4, 14°92S×167°31E, h123km±2km, mb4.9/33, mbtmp5.3/35, MS4.7/48, Error ellipse: s-maj=9.8km s-min=9.4km az=117.0*
*NEIC **05** 18:50:01.9, 14°91S×167°36E, h120km*
*NEIC **05** 18:50:01.3±1.9, 14°90S±0°07×167°38E±0°10, h115km±1km, mb5.3/296, Mwb5.9/56, Mww5.8/24, Error ellipse: s-maj=16.2km s-min=12.4km az=84.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.21; Mθθ2.60; Mϕϕ-2.81; Mrθ-2.62; Mθϕ7.00; Mϕr-2.41; Fault plane solution: M₀8.31000×10¹⁷ NP1:ϕ₁282.89000°, δ71.40000°, λ13.20000°. NP2:ϕ₂188.61000°, δ77.50000°, λ160.93000°. Principal axes: T 8.8430, Plg22.0000°, Azm145.0000°; N -1.1939, Plg67.0000°, Azm337.0000°; P -7.6491, Plg4.0000°, Azm237.0000°;*
*IPGP **05** 18:50:01.0, 14°93S×167°37E, h122km, Mw5.9, Fault plane solution: NP1:ϕ₁198.00000°, δ77.00000°, λ159.00000°. NP2:ϕ₂293.00000°, δ70.00000°, λ14.00000°.*
*NEIC **05** 18:50:01.7, 14°91S×167°36E, h117km*
*GFZ **05** 18:50:01.6±0.1, 15°S×16°E, h118km, M5.6/75, mb5.7/75, confirmed*
*GFZ **05** 18:50:01.6, 14°93S×167°32E, h118km, Mw5.9/15, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.34; Mθθ4.00; Mϕϕ-4.34; Mrθ-1.42; Mθϕ6.19; Mϕr-2.18; Fault plane solution: M₀7.91303×10¹⁷ NP1: ϕ₁287.91048°, δ71.55931°, λ5.59980°. NP2:ϕ₂196.13404°, δ84.68859°, λ161.47690°. Principal axes: T 7.9883, Plg16.8059°, Azm150.5923°; N -0.1527, Plg70.7561°, Azm0.6891°; P -7.8356, Plg9.1035°, Azm243.3663°;*
*BJI **05** 18:50:01.1, 14°50S×167°35E, h120km, mB5.2/47, mb5.2/85*
*MOS **05** 18:50:02.3±1.0, 14°87S×167°26E, h137km, mb5.4/35, MS5.2/7, Error ellipse: s-maj=8.4km s-min=6.3km az=133.5*
*PTWC **05** 18:50:02, 15°00S×167°30E, h103km, Mwp5.9/16*
*NOU **05** 18:50:02.4, 14°96S×167°29E, h116km, ML5.7/170, Vanuatu Islands*
*NEIC **05** 18:50:03.2, 14°91S×167°26E, h130km, Moment Tensor Solution. Duration: 4ˢ1 Moment tensor: Scale 10¹⁷Nm; Mrr-0.31; Mθθ3.49; Mϕϕ-3.18; Mrθ-1.03; Mθϕ5.37; Mϕr-2.64; Fault plane solution: M₀6.93000×10¹⁷ NP1: ϕs286.19000°, δ65.98000°, λ0.13000°. NP2:ϕs196.14000°, δ89.88000°, λ155.98000°. Principal axes: T 7.1400, Plg17.0000°, Azm149.0000°; N -0.4314, Plg66.0000°, Azm16.0000°; P -6.7086, Plg17.0000°, Azm244.0000°;*
*GCMT **05** 18:50:04.3±0.1, 14°92S×167°21E, h128km, MW5.9/168, Moment Tensor Solution. s156,c334; s168,c474; Duration: 2ˢ2 Moment tensor: Scale 10¹⁷Nm; Mrr-0.25±.04; Mθθ4.68±.06; Mϕϕ-4.43±.05; Mrθ-2.34±.04; Mθϕ6.82±.05; Mϕr-2.44±.04; Best double couple: M₀8.81400×10¹⁷ NP1:ϕ₁288.00000°, δ71.00000°, λ8.00000°. NP2:ϕ₂196.00000°, δ83.00000°, λ161.00000°. Principal axes: T 9.4030, Plg19.0000°, Azm151.0000°; N -1.1800, Plg70.0000°, Azm356.0000°; P -8.2260, Plg8.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 05 18:50:01.8±0.2, 14°93S±0°03×167°35E±0°03, h126km±1km, h126km:pP-P, n1273, σ1ˢ44/1304, mb5.4/313, 45C-51D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.53**	**196**	P	**Pn**	**18 50 20.3**	**-0.3**
SANVU	**Saraoutou**	**0.53**	**196**	S	**Sn**	**18 50 34.3**	**-0.5**
SANVU	**Saraoutou**	**0.53**	**196**		**Pn**	**18 50 19.7**	**-0.9**
SANVU				Sn	**Sn**	**18 50 35.0**	**+0.2**
SANVU	**Saraoutou**	**0.53**	**196**	P	**Pn**	**18 50 20.1**	**-0.5**
SANVU	**Saraoutou**	**0.53**	**196**	P	**Pn**	**18 50 19.9**	**-0.7**
DVP	**Devils Point**	**2.89**	**164**	P	**Pn**	**18 50 47.4**	**+0.5**
DVP	**Devils Point**	**2.89**	**164**	P	**Pn**	**18 50 46.9**	**0.0**
RTV	**Rentapao**	**3.03**	**160**	P	**Pn**	**18 50 48.7**	**+0.1**
RTV	**Rentapao**	**3.03**	**160**	P	**Pn**	**18 50 47.9**	**-0.7**
KOUNC	**Koumac, New Ca**	**6.31**	**207**	P	**Pn**	**18 51 33.7**	**+1.3**
KOUNC	**Koumac, New Ca**	**6.31**	**207**	S	**Sn**	**18 52 43.1**	**-0.1**
KOUNC	**Koumac, New Ca**	**6.31**	**207**		**Pn**	**18 51 32.7**	**+0.3**
KOUNC				Sn	**Sn**	**18 52 40.9**	**-2.3**
KOUNC	**Koumac, New Ca**	**6.31**	**207**	P	**Pn**	**18 51 33.5**	**+1.1**
MARNC	**Mare, Loyalty**	**6.55**	**174**	P	**Pn**	**18 51 33.6**	**-2.1**
MARNC	**Mare, Loyalty**	**6.55**	**174**		**Pn**	**18 51 33.5**	**-2.1**
MARNC	**Mare, Loyalty**	**6.55**	**174**	P	**Pn**	**18 51 33.5**	**-2.1**
YATNC	**Mamie plateau,**	**7.10**	**183**	P	**Pn**	**18 51 42.1**	**-1.1**
YATNC	**Mamie plateau,**	**7.10**	**183**	S	**Sn**	**18 53 02.7**	**+0.2**
YATNC	**Mamie plateau,**	**7.10**	**183**	P	**Pn**	**18 51 42.3**	**-0.9**
DZM	**Mont Dzumac**	**7.16**	**187**	P	**Pn**	**18 51 43.9**	**-0.1**
	2µm,0.4s,baz=34,slow=16,SNR=1018						
DZM				S	**Sn**	**18 53 01.7**	**-2.2**
	359nm,0.5s,baz=259,slow=13,SNR=4.1						
NOUC	**Port Laguerre**	**7.20**	**188**	P	**Pn**	**18 51 45.2**	**+0.7**
NOUC	**Port Laguerre**	**7.20**	**188**	S	**Sn**	**18 53 05.1**	**+0.2**
NOUC	**Port Laguerre**	**7.20**	**188**	P	**Pn**	**18 51 45.7**	**+1.2**
I22FR	**PORTLAGUERRE I**	**7.23**	**184**	I	I	19 32 30.0	
	baz=6.1,slow=322,SNR=2.0						
ONTNC	**Ouen Toro**	**7.39**	**186**	P	**Pn**	**18 51 48.0**	**+1.0**
ONTNC	**Ouen Toro**	**7.39**	**186**	S	**Sn**	**18 53 09.6**	**+0.3**
ONTNC	**Ouen Toro**	**7.39**	**186**		**Pn**	**18 51 46.9**	**-0.1**
ONTNC	**Ouen Toro**	**7.39**	**186**	P	**Pn**	**18 51 47.3**	**+0.3**
OUENC	**Ouen Island, N**	**7.46**	**184**	P	**Pn**	**18 51 48.9**	**+0.9**
OUENC	**Ouen Island, N**	**7.46**	**184**	S	**Sn**	**18 53 11.5**	**+0.3**
OUENC	**Ouen Island, N**	**7.46**	**184**		**Pn**	**18 51 48.5**	**+0.4**
OUENC	**Ouen Island, N**	**7.46**	**184**	P	**Pn**	**18 51 48.5**	**+0.4**
NGOA	**Tingoa Renbel**	**7.85**	**294**	P	**Pn**	**18 51 54.1**	**+0.8**
NGOA	**Tingoa Renbel**	**7.85**	**294**	S	**Sn**	**18 53 20.8**	**+0.2**
NGOA	**Tingoa Renbel**	**7.85**	**294**	P	**Pn**	**18 51 53.9**	**+0.6**
HNR	**Honiara**	**9.07**	**306**	P	**Pn**	**18 52 09.6**	**-0.2**
	36nm,0.4s,baz=60,slow=15,SNR=89						
HNR				S	**Sn**	**18 53 49.0**	**-1.2**
	139nm,0.7s,baz=238,slow=17,SNR=6.0						
HNR				LR	LR	18 55 35.6	
	comp=Z,273nm,20.1s,baz=222,slow=37						
HNR	**Honiara**	**9.07**	**306**	P	**Pn**	**18 52 11.3**	**+1.5**
HNR	**Honiara**	**9.07**	**306**	S	**Sn**	**18 53 50.8**	**+0.6**
HNR	**Honiara**	**9.07**	**306**		**Pn**	**18 52 10.3**	**+0.5**
HNR	**Honiara**	**9.07**	**306**	P	**Pn**	**18 52 10.4**	**+0.6**
SAVO	**Savo Central**	**9.35**	**307**	P	**Pn**	**18 52 14.6**	**+1.1**
SAVO	**Savo Central**	**9.35**	**307**	S	**Sn**	**18 53 57.9**	**+0.9**
SAVO	**Savo Central**	**9.35**	**307**	P	**Pn**	**18 52 14.3**	**+0.8**
TATA	**Tatamba Isabel**	**9.84**	**311**	P	**Pn**	**18 52 21.5**	**+1.3**
TATA	**Tatamba Isabel**	**9.84**	**311**	S	**Sn**	**18 54 09.7**	**+0.7**
TATA	**Tatamba Isabel**	**9.84**	**311**	P	**Pn**	**18 52 20.4**	**+0.2**
MSVF	**Nonsavu**	**10.64**	**107**	P	**Pn**	**18 52 33.1**	**+2.1**
	60nm,1.1s,baz=267,slow=10.0,SNR=18						
MSVF	**Nonsavu**	**10.64**	**107**	P	**Pn**	**18 52 34.4**	**+3.4**
MSVF	**Nonsavu**	**10.64**	**107**	*d*P	**Pn**	**18 52 33.4**	**+2.4**
MSVF	**Nonsavu**	**10.64**	**107**	P	**Pn**	**18 52 34.7**	**+3.7**
FUNA	**Funafuti**	**13.22**	**63**	P	**Pn**	**18 53 07.2**	**+2.3**
FUNA	**Funafuti**	**13.22**	**63**	P	**Pn**	**18 53 05.2**	**+0.4**
NFK	**Norfolk Island**	**14.06**	**178**	P	**Pn**	**18 53 15.5**	**0.0**
	comp=Z,515nm,1.5s						
NFK	**Norfolk Island**	**14.06**	**178**	P	**Pn**	**18 53 15.6**	**+0.2**
NFK	**Norfolk Island**	**14.06**	**178**	P	**Pn**	**18 53 15.6**	**+0.2**
FUTU	**Fugatoga**	**14.07**	**89**	P	**P**	**18 53 18.2**	**-1.3**
GD1S	**Gladstone Soft**	**17.64**	**237**	P	**Pn**	**18 53 59.9**	**+0.1**
AUBSH	**Beerwah State**	**17.92**	**226**	P	**Pn**	**18 54 03.4**	**+0.3**
AUNRC	**North Rockhamp**	**17.95**	**240**	P	**Pn**	**18 54 03.7**	**+0.2**
LHI	**Lord Howe Isla**	**18.17**	**203**	P	**Pn**	**18 54 06.6**	**+0.6**
	comp=Z,256nm,1.0s						
RABL	**Rabaul**	**18.37**	**304**	P	**Pn**	**18 54 09.0**	**+0.4**
GC1S	**Gold Coast 1 S**	**18.39**	**222**	P	**Pn**	**18 54 09.3**	**+0.6**
KRVT	**Keravat (AS076**	**18.42**	**303**	LR	LR	19 00 41.4	
	comp=Z,471nm,19.7s,baz=48,slow=35						
EIDS	**Eidsvold**	**18.45**	**233**	P	**Pn**	**18 54 10.2**	**+0.7**
	comp=Z,2µm,1.0s,comp=Z,0.0nm						
EIDS	**Eidsvold**	**18.45**	**233**	P	**Pn**	**18 54 10.0**	**+0.5**
EIDS	**Eidsvold**	**18.45**	**233**	P	**Pn**	**18 54 10.3**	**+0.8**
TW1H	**Toowoomba 1 Ha**	**19.03**	**226**	P	**P**	**18 54 14.9**	**+0.7**
AUTOO	**Toowoomba Stat**	**19.03**	**226**	P	**Pn**	**18 54 15.9**	**-0.4**
AUAYR	**Ayr State High**	**19.59**	**254**	P	**Pn**	**18 54 22.1**	**-0.8**
GLKZ	**Green Lake**	**19.71**	**139**	P	**Pn**	**18 54 23.8**	**-0.3**
AFI	**Afiamalu**	**20.24**	**90**	P	Pn	18 54 29.0	-1.5
	comp=Z,229nm,1.1s,baz=251,slow=9.4,SNR=11						
	comp=Z,229nm,1.1s						
AFI	**Afiamalu**	**20.24**	**90**	P	Pn	18 54 29.5	-1.0
AFI	**Afiamalu**	**20.24**	**90**	P	**P**	**18 54 27.1**	**-0.3**
AFI	**Afiamalu**	**20.24**	**90**	P	**P**	**18 54 27.1**	**-0.3**
KAVG	**Kavieng**	**20.42**	**305**	P	Pn	18 54 31.4	-1.2
PMG	**Port Moresby**	**20.48**	**283**	P	**P**	**18 54 31.1**	**+1.2**
	comp=Z,347nm,0.9s,baz=88,slow=5.9,SNR=45						
PMG				LR	LR	19 00 56.2	
	comp=Z,7µm,21.0s,baz=92,slow=32						
	comp=Z,347nm,0.9s						
PMG	**Port Moresby**	**20.48**	**283**	P	**P**	**18 54 30.3**	**+0.4**
PMG	**Port Moresby**	**20.48**	**283**	P	**P**	**18 54 30.7**	**+0.8**
PMG	**Port Moresby**	**20.48**	**283**		**P**	**18 54 30.3**	**+0.4**
PMG	**Port Moresby**	**20.48**	**283**	*d*P	**P**	**18 54 31.2**	**+1.2**
PMG				pmax	pmax		
	comp=Z,531nm,1.0s						
PMG	**Port Moresby**	**20.48**	**283**	P	**P**	**18 54 30.4**	**+0.5**
	comp=Z,10µmcomp=Z,6µmcomp=Z,542nm,1.1s						
CTA	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 34.0**	**+1.2**
	comp=Z,364nm,1.0s						
CTA	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 34.1**	**+1.2**
	comp=Z,600nm,0.8s,baz=77,slow=11,SNR=362						
CTA				ScP	**ScP**	**19 02 03.5**	**+0.9**
	comp=Z,7.2nm,1.0s,baz=307,slow=5.2,SNR=3.1						
	comp=Z,600nm,0.8s						
CTA	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 33.6**	**+0.7**
CTAO	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 33.6**	**+0.7**
CTAO	**Charters Tower**	**20.76**	**253**		**P**	**18 54 34.2**	**+1.3**
CTAO	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 34.2**	**+1.3**
CTAO	**Charters Tower**	**20.76**	**253**	P	**P**	**18 54 34.2**	**+1.3**
RMQ	**Roma**	**20.82**	**234**	P	**P**	**18 54 35.2**	**+1.8**
	comp=Z,427nm,1.0s						
RMQ	**Roma**	**20.82**	**234**	P	**P**	**18 54 34.1**	**+0.6**
OUZ	**Omahuta**	**20.97**	**166**	P	**P**	**18 54 36.8**	**+1.9**
OUZ	**Omahuta**	**20.97**	**166**	P	**P**	**18 54 36.2**	**+1.3**
ARMA	**Armidale**	**21.13**	**220**	P	**P**	**18 54 38.5**	**+1.7**
	comp=Z,459nm,1.2s,comp=Z,0.0nm						
ARMA	**Armidale**	**21.13**	**220**	P	**P**	**18 54 38.1**	**+1.3**
ARMA	**Armidale**	**21.13**	**220**		**P**	**18 54 38.2**	**+1.4**
ARMA	**Armidale**	**21.13**	**220**	P	**P**	**18 54 38.8**	**+2.0**
WCZ	**Wauga Caves**	**21.84**	**165**	P	**P**	**18 54 45.8**	**+1.6**
AUPHS	**Peel High Scho**	**22.06**	**220**	P	**P**	**18 54 47.3**	**+0.7**
NIUE	**Niue**	**22.11**	**104**	P	**P**	**18 54 49.5**	**+2.3**
	comp=Z,842nm,1.1s						
NIUE	**Niue**	**22.11**	**104**	P	**P**	**18 54 48.9**	**+1.7**
NIUE	**Niue**	**22.11**	**104**	P	**P**	**18 54 47.2**	**0.0**
NIUE	**Niue**	**22.11**	**104**	P	**P**	**18 54 47.6**	**+0.4**
NIUE	**Niue**	**22.11**	**104**	P	**P**	**18 54 48.2**	**+1.0**
MTSU	**Mount Surprise**	**22.31**	**259**	P	**P**	**18 54 49.8**	**+0.5**
	comp=Z,608nm,0.8s						
MTSU	**Mount Surprise**	**22.31**	**259**	P	**P**	**18 54 50.0**	**+0.7**
MTSU	**Mount Surprise**	**22.31**	**259**	P	**P**	**18 54 50.0**	**+0.7**
GRZ	**Great Barrier**	**22.43**	**163**	P	**P**	**18 54 51.8**	**+1.6**
ABAZ	**Army Bay**	**22.59**	**164**	P	**P**	**18 54 53.9**	**+2.1**
MBAZ	**Motutapu North**	**22.77**	**164**	P	**P**	**18 54 55.5**	**+2.0**
WTAZ	**Waiatarua**	**22.84**	**165**	P	**P**	**18 54 56.4**	**+2.2**
WIAZ	**Waiheke Island**	**22.85**	**164**	P	**P**	**18 54 55.8**	**+1.5**
ETAZ	**East Tamaki Re**	**22.95**	**164**	P	**P**	**18 54 57.1**	**+1.9**
AULRC	**Lightning Ridg**	**22.97**	**228**	P	**P**	**18 54 55.9**	**+0.3**
AWAZ	**Awhitu Peninsu**	**22.98**	**165**	P	**P**	**18 54 57.7**	**+2.2**
PATS	**Pohnpei**	**23.41**	**337**	P	**P**	**18 54 59.4**	**-0.4**
	comp=Z,641nm,1.4s,comp=Z,0.0nm						
PATS	**Pohnpei**	**23.41**	**337**	P	**P**	**18 55 00.7**	**+1.0**
PATS	**Pohnpei**	**23.41**	**337**		**P**	**18 54 57.9**	**-1.8**
PATS	**Pohnpei**	**23.41**	**337**	P	**P**	**18 55 00.1**	**+0.4**
MGCD	**Mangrove Creek**	**23.42**	**216**	P	**P**	**18 55 00.9**	**+1.2**
	comp=Z,297nm,0.8s						
MGCD	**Mangrove Creek**	**23.42**	**216**	P	**P**	**18 55 01.4**	**+1.7**
MGCD	**Mangrove Creek**	**23.42**	**216**	P	**P**	**18 55 01.5**	**+1.9**
COEN	**Coen**	**23.43**	**269**	P	**P**	**18 55 00.4**	**+0.4**
	comp=Z,296nm,1.6s						
COEN	**Coen**	**23.43**	**269**	P	**P**	**18 55 00.6**	**+0.6**
COEN	**Coen**	**23.43**	**269**		**P**	**18 54 58.3**	**-1.6**
COEN	**Coen**	**23.43**	**269**	P	**P**	**18 55 00.6**	**+0.6**
COEN	**Coen**	**23.43**	**269**	P	**P**	**18 55 00.7**	**+0.6**
AUKHS	**Kincumber High**	**23.45**	**215**	P	**P**	**18 55 01.4**	**+1.5**
TOZ	**Tahuroa Road**	**23.83**	**164**	P	**P**	**18 55 03.5**	**+0.2**
TOZ	**Tahuroa Road**	**23.83**	**164**	P	**P**	**18 55 04.4**	**+1.1**
SYDH	**Sydney Hard Ro**	**24.03**	**216**	P	**P**	**18 55 06.2**	**+1.0**
TGRZ	**Tauranga**	**24.04**	**162**	P	**P**	**18 55 07.2**	**+2.0**
KMRZ	**Kaimai**	**24.06**	**163**	P	**P**	**18 55 07.8**	**+2.4**
OPRZ	**Ohinepanea**	**24.24**	**162**	P	**P**	**18 55 08.2**	**+1.2**
AUDCS	**Dubbo College**	**24.24**	**221**	P	**P**	**18 55 08.2**	**+1.1**
TLZ	**Tolley Road**	**24.41**	**164**	P	**P**	**18 55 09.7**	**+1.1**
HIZ	**Hauiti**	**24.41**	**166**	P	**P**	**18 55 10.4**	**+1.9**
HIZ	**Hauiti**	**24.41**	**166**	P	**P**	**18 55 10.2**	**+1.6**
HIZ	**Hauiti**	**24.41**	**166**	P	**P**	**18 55 10.1**	**+1.6**
HIZ	**Hauiti**	**24.41**	**166**	P	**P**	**18 55 10.2**	**+1.6**
WOLH	**Wollongong Har**	**24.43**	**215**	P	**P**	**18 55 10.0**	**+1.2**
QLP	**Quilpie**	**24.48**	**238**	P	**P**	**18 55 10.2**	**+0.9**
	comp=Z,1µm,0.9s						
QLP	**Quilpie**	**24.48**	**238**	P	**P**	**18 55 10.3**	**+0.9**
QLP	**Quilpie**	**24.48**	**238**	P	**P**	**18 55 10.4**	**+1.0**
HAZ	**Te Kaha**	**24.54**	**160**	P	**P**	**18 55 10.2**	**+0.4**
URZ	**Urewera**	**24.79**	**161**	P	**P**	**18 55 13.2**	**+1.2**
URZ	**Urewera**	**24.79**	**161**	P	**P**	**18 55 12.3**	**+0.3**
URZ				S	**S**	**18 59 25.6**	**+0.4**
URZ	**Urewera**	**24.79**	**161**	P	**P**	**18 55 12.1**	**+0.1**
VRZ	**Vera Road**	**24.97**	**166**	P	**P**	**18 55 14.9**	**+1.2**
MWZ	**Matawai**	**24.99**	**161**	P	**P**	**18 55 13.7**	**-0.1**
MWZ				S	**S**	**18 59 27.8**	**-0.7**
PUZ	**Puketiti**	**24.99**	**159**	P	**P**	**18 55 13.2**	**-0.7**
RTZ	**Ruatahuna**	**25.08**	**162**	P	**P**	**18 55 14.5**	**-0.2**
RTZ	**Ruatahuna**	**25.08**	**162**	P	**P**	**18 55 14.8**	**+0.1**
NGZ	**Ngauruhoe**	**25.22**	**165**	P	**P**	**18 55 17.4**	**+1.3**
AUUHS	**Ulladulla High**	**25.37**	**214**	P	**P**	**18 55 19.4**	**+2.1**
BKZ	**Black Stump Fm**	**25.45**	**163**	P	**P**	**18 55 18.7**	**+0.7**
BKZ	**Black Stump Fm**	**25.45**	**163**	P	**P**	**18 55 18.5**	**+0.4**
BKZ	**Black Stump Fm**	**25.45**	**163**	P	**P**	**18 55 18.4**	**+0.4**
BKZ				S	**S**	**18 59 32.5**	**-3.3**
BKZ	**Black Stump Fm**	**25.45**	**163**	P	**P**	**18 55 17.9**	**-0.1**
WAZ	**Wanganui**	**25.62**	**166**	P	**P**	**18 55 21.5**	**+1.9**
KNZ	**Kokohu**	**25.66**	**161**	P	**P**	**18 55 18.9**	**-1.0**
CMSA	**Cobar Meteorol**	**25.79**	**226**	P	**P**	**18 55 21.5**	**+0.3**
	comp=Z,362nm,1.3s,comp=Z,0.0nm						
CMSA	**Cobar Meteorol**	**25.79**	**226**	P	**P**	**18 55 22.1**	**+0.8**
CMSA	**Cobar Meteorol**	**25.79**	**226**	P	**P**	**18 55 22.0**	**+0.8**
CNB	**Canberra Magne**	**25.94**	**215**	P	**P**	**18 55 23.5**	**+0.9**
	comp=Z,3.0nm,1.0s						
AUDAR	**Daramalan Coll**	**26.02**	**216**	P	**P**	**18 55 24.1**	**+0.8**
AUMHS	**Melrose High S**	**26.13**	**216**	P	**P**	**18 55 25.1**	**+0.9**
AUMTS	**Mt Stromlo**	**26.15**	**216**	P	**P**	**18 55 25.4**	**+1.0**
CAN	**Canberra**	**26.15**	**216**	P	**P**	**18 55 25.3**	**+0.8**
	comp=Z,82nm,1.9s						
CAN	**Canberra**	**26.15**	**216**	P	**P**	**18 55 25.6**	**+1.2**
CAN	**Canberra**	**26.15**	**216**		**P**	**18 55 25.1**	**+0.7**
CAN				IAmb	IAmb	18 55 26.6	
	comp=Z,201nm,1.5s						
CAN	**Canberra**	**26.15**	**216**	P	**P**	**18 55 25.1**	**+0.7**
CAN				pmax	pmax		
	comp=Z,201nm,1.5s						
CAN	**Canberra**	**26.15**	**216**	P	**P**	**18 55 25.2**	**+0.8**
QRZ	**Quartz Range**	**26.19**	**171**	P	**P**	**18 55 26.2**	**+1.6**
QRZ	**Quartz Range**	**26.19**	**171**	P	**P**	**18 55 26.1**	**+1.4**
TKNZ	**Takaka Hill**	**26.46**	**170**	P	**P**	**18 55 27.9**	**+0.8**
MRZ	**Mangatainoka R**	**26.62**	**166**	P	**P**	**18 55 27.1**	**-1.4**
MRNZ	**Matariki Terra**	**26.79**	**171**	P	**P**	**18 55 30.8**	**+0.7**
BFZ	**Birch Farm**	**26.80**	**165**	P	**P**	**18 55 30.2**	**0.0**
BFZ	**Birch Farm**	**26.80**	**165**	P	**P**	**18 55 28.5**	**-1.7**
BFZ	**Birch Farm**	**26.80**	**165**	P	**P**	**18 55 29.1**	**-1.0**
BFZ	**Birch Farm**	**26.80**	**165**	P	**P**	**18 55 29.1**	**-1.0**
QIS	**Mount Isa**	**26.99**	**254**	P	**P**	**18 55 32.0**	**-0.2**
	comp=Z,154nm,0.9s,comp=Z,0.0nm						
QIS	**Mount Isa**	**26.99**	**254**	P	**P**	**18 55 32.2**	**0.0**
QIS	**Mount Isa**	**26.99**	**254**	P	**P**	**18 55 32.2**	**0.0**
DSZ	**Denniston Nort**	**27.00**	**173**	P	**P**	**18 55 33.7**	**+1.7**
AUSMG	**Snowy Mountain**	**27.16**	**215**	P	**P**	**18 55 34.7**	**+1.1**
THZ	**Tophouse**	**27.17**	**171**	P	**P**	**18 55 33.6**	**+0.1**
MILA	**Mila**	**27.34**	**213**	P	**P**	**18 55 35.8**	**+0.7**
	comp=Z,26nm,0.9s						
INKA	**Innaminka**	**27.80**	**238**	P	**P**	**18 55 40.1**	**+0.9**
KHZ	**Kahutara**	**27.91**	**170**	P	**P**	**18 55 39.3**	**-0.6**
KHZ	**Kahutara**	**27.91**	**170**	P	**P**	**18 55 39.0**	**-0.9**
KHZ	**Kahutara**	**27.91**	**170**	P	**P**	**18 55 40.7**	**+0.7**
LTZ	**Lake Taylor**	**28.08**	**172**	P	**P**	**18 55 41.8**	**+0.2**
GVZ	**Greta Valley S**	**28.36**	**171**	P	**P**	**18 55 43.9**	**-0.2**
FOZ	**Fox Glacier**	**28.58**	**176**	P	**P**	**18 55 46.6**	**+0.6**
QXZ	**Oxford**	**28.58**	**173**	P	**P**	**18 55 45.4**	**-0.5**
RPZ	**Rata Peaks**	**28.86**	**174**	LR	LR	19 06 38.6	
	comp=Z,910nm,18.9s,baz=343,slow=34						
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**18 55 50.2**	**+1.0**
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**18 55 50.4**	**+1.2**
	comp=Z,567nm,0.8s,baz=49,slow=8.0,SNR=848						
STKA				ScP	**ScP**	**19 02 26.4**	**+1.1**
	comp=Z,30nm,1.0s,baz=22,slow=3.6,SNR=8.0						
STKA				LR	LR	19 07 13.6	
	comp=Z,2µm,18.1s,baz=87,slow=36						
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**18 55 50.5**	**+1.3**
JAY	**Jayapura**	**29.04**	**293**	LR	LR	19 06 46.9	
	comp=Z,3µm,21.0s,baz=115,slow=35						
MQZ	**McQueen's Vall**	**29.04**	**172**	P	**P**	**18 55 49.7**	**-0.2**
JCZ	**Jackson Bay**	**29.07**	**178**	P	**P**	**18 55 51.7**	**+1.3**
AUMAG	**Moama Anglican**	**29.20**	**220**	P	**P**	**18 55 52.8**	**+1.3**
GENI	**Genyem**	**29.48**	**292**	P	**P**	**18 55 54.4**	**+1.1**
GENI	**Genyem**	**29.48**	**292**	P	**P**	**18 55 54.4**	**+0.1**
	comp=Z,4µmcomp=Z,2µmcomp=Z,264nm,1.1s						
GENI	**Genyem**	**29.48**	**292**	P	**P**	**18 55 54.6**	**+0.3**
MSZ	**Milford Sound**	**29.65**	**179**	P	**P**	**18 55 57.4**	**+2.0**
TOO	**Toolangi**	**29.74**	**217**	P	**P**	**18 55 57.2**	**+0.8**
	comp=Z,53nm,1.1s,comp=Z,0.0nm						
TOO	**Toolangi**	**29.74**	**217**	IAmb	IAmb	18 55 58.4	
	comp=Z,60nm,1.1s						
WKZ	**Wanaka**	**29.83**	**178**	P	**P**	**18 55 58.5**	**+1.4**
ODZ	**Otahua Downs**	**30.15**	**175**	P	**P**	**18 56 01.4**	**+1.6**
ODZ	**Otahua Downs**	**30.15**	**175**	P	**P**	**18 55 59.3**	**-0.5**
ODZ	**Otahua Downs**	**30.15**	**175**	P	**P**	**18 55 59.2**	**-0.6**
EAZ	**Earnscleugh**	**30.25**	**177**	P	**P**	**18 56 00.4**	**-0.3**
MLZ	**Mavora Lakes**	**30.35**	**179**	P	**P**	**18 56 02.1**	**+0.5**
DCZ	**Deep Cove**	**30.44**	**180**	P	**P**	**18 56 03.2**	**+0.9**
BRAT	**Ballarat**	**30.64**	**218**	P	**P**	**18 56 05.4**	**+1.2**
WHZ	**Wether Hill Ro**	**30.87**	**179**	P	**P**	**18 56 05.7**	**-0.5**
GLAD	**Gladstone**	**30.93**	**209**	P	**P**	**18 56 08.0**	**+1.2**
HHSZ	**Highcliff Hill**	**30.98**	**176**	P	**P**	**18 56 08.6**	**+1.5**
TUZ	**Tuapeka**	**30.99**	**177**	P	**P**	**18 56 08.1**	**+1.0**
PYZ	**Puysegur Point**	**31.

PPT2 eS S 19 03 34.4 -7.2
comp=Z,1μm,24.0s
PPT2 eLQ LQ 19 07 24.8
comp=Z,15μm,29.2s
PPT2 eLR LR 19 09 06.7
comp=Z,3μm,26.2s
PPT2 eLR LR 19 09 08.8
comp=Z,2μm,29.8s
PPT Papeete 41.37 100 P P 18 57 37.7 +1.8
comp=Z,168nm,1.0s,baz=271,slow=2.5,SNR=8.2
comp=Z,168nm,1.0s
PPTF Pamatai, Papee 41.38 100 P P 18 57 37.0 +0.9
PPTF Pamatai, Papee 41.38 100 P P 18 57 37.0 +0.9
PPTF Pamatai, Papee 41.38 100 P P 18 57 37.9 +1.8
TBI Tubuai 41.52 108 eS S 19 03 42.1 -1.5
comp=Z,7μm,27.2s
TBI eLQ LQ 19 07 32.6
comp=Z,45μm,28.2s
TBI eLR LR 19 09 08.8
comp=Z,2μm,26.8s
TBI eLR LR 19 09 20.7
comp=Z,11μm,29.0s
TIAR Tiarei 41.59 100 eP P 18 57 37.8 +0.1
comp=Z,2μm,1.5s
TVO Taravao 41.67 100 eP P 18 57 39.3 +0.9
comp=Z,524nm,1.3s
SOEI Soe 42.35 272 P P 18 57 46.1 +2.1
SOEI Soe 42.35 272 P P 18 57 44.3 +0.3
SOEI Soe 42.35 272 P P 18 57 44.6 +0.6
SOEI Soe 42.35 272 P P 18 57 43.3 -0.7
comp=Z,4μmcomp=Z,380nm,1.2s
SOEI Soe 42.35 272 P P 18 57 45.1 +1.0
TNTI Ternate 42.51 288 P P 18 57 47.2 +2.0
TNTI Ternate 42.51 288 P P 18 57 45.7 +0.5
TNTI IAmb IAmb 18 57 53.4
comp=Z,86nm,1.1s
TNTI Ternate 42.51 288 P P 18 57 45.0 -0.2
TNTI Ternate 42.51 288 P P 18 57 45.9 +0.8
SANI Sanana 42.77 283 P P 18 57 48.2 +1.0
SANI Sanana 42.77 283 P P 18 57 47.4 +0.2
SANI Sanana 42.77 283 P P 18 57 47.0 -0.2
comp=Z,4μmcomp=Z,332nm,0.8s
SANI Sanana 42.77 283 P P 18 57 47.8 +0.5
BATI Baumata 42.85 271 LR LR 19 13 38.1
comp=Z,2μm,21.8s,baz=102,slow=33
BATI Baumata 42.85 271 P P 18 57 45.6 -2.4
PMOR Pomariorio Ree 43.18 96 eP P 18 57 50.4 -0.1
comp=Z,734nm,1.3s
PMOR epP pP 18 58 25.2 +6.2
comp=Z,326nm,1.4s
VAH Vaihoa 43.41 96 eP P 18 57 50.4 -2.0
comp=Z,381nm,1.3s
MMRI Maumere 44.54 273 P P 18 58 01.9 +0.4
MMRI Maumere 44.54 273 P P 18 58 00.7 -0.8
MMRI Maumere 44.54 273 P P 18 58 00.3 -1.2
MMRI Maumere 44.54 273 P P 18 58 01.3 -0.2
KMBL Kambalda 44.56 240 P P 18 58 01.0 -0.4
comp=Z,102nm,1.1s
BBSI Bau Bau 44.98 277 P P 18 58 06.9 +1.9
comp=Z,4μmcomp=Z,284nm,1.2s
SGSI Sangihe 45.37 291 P P 18 58 07.1 -0.9
comp=Z,5μmcomp=Z,554nm,0.9s
MBWA Marble Bar 45.57 255 P P 18 58 09.6 0.0
comp=Z,517nm,1.2s
MBWA Marble Bar 45.57 255 P P 18 58 10.1 +0.6
MBWA Marble Bar 45.57 255 P P 18 58 09.8 +0.3
MBWA Marble Bar 45.57 255 P P 18 58 09.8 +0.3
MBWA Marble Bar 45.57 255 P P 18 58 09.6 0.0
MBWA x x 18 58 39.2
LUWI Luwuk 46.13 283 P P 18 58 14.9 +0.9
LUWI Luwuk 46.13 283 P P 18 58 14.4 +0.4
LUWI Luwuk 46.13 283 P P 18 58 13.0 -1.0
comp=Z,3μmcomp=Z,281nm,1.3s
LUWI Luwuk 46.13 283 P P 18 58 14.6 +0.6
WSI Waingapu 46.20 271 P P 18 58 13.7 -0.9
KKSI Kolaka, Sulawe 46.22 279 P P 18 58 14.1 -0.6
comp=Z,2μmcomp=Z,3μmcomp=Z,190nm,1.8s
GTOI Gorontalo 46.49 285 P P 18 58 16.3 -0.5
comp=Z,2μmcomp=Z,135nm,0.8s
MEEK Meekatharra 46.78 247 P P 18 58 18.9 -0.1
comp=Z,460nm,1.0s
MEEK Meekatharra 46.78 247 P P 18 58 18.9 -0.1
MEEK Meekatharra 46.78 247 P P 18 58 19.0 0.0
BSSI Bau Bau, Buton 46.81 276 P P 18 58 18.4 -0.9
comp=Z,245nm,0.8s
DAV Davao City (W) 46.83 295 LR LR 19 17 17.6
comp=Z,536nm,19.0s,baz=117,slow=35
LBFI Labuhan Bajo, 46.84 272 P P 18 58 18.3 -1.3
WBSI Waikabubak, Su 47.09 271 P P 18 58 19.9 -1.6
APSI Ampana 47.23 283 P P 18 58 22.4 -0.2
comp=Z,2μmcomp=Z,219nm,1.6s
KAPI Kappang 47.81 277 P P 18 58 28.1 +1.0
KAPI Kappang 47.81 277 P P 18 58 27.5 +0.5
KAPI Kappang 47.81 277*d iP* P 18 58 27.6 +0.5
KAPI pmax pmax
comp=Z,277nm,0.9s
KAPI Kappang 47.81 277 P P 18 58 25.9 -1.2
comp=Z,2μmcomp=Z,2μmcomp=Z,185nm,1.0s
KAPI Kappang 47.81 277 P P 18 58 27.8 +0.8
KAPI Kappang 47.81 277 P P 18 58 27.5 +0.5
KAPI pP pP 18 58 55.2 -1.0
AUKUL Kulin High Sch 47.91 239 P P 18 58 27.3 -0.3
MKS Makassar 48.03 276 P P 18 58 29.8 +1.1
comp=Z,4μmcomp=Z,249nm,0.8s
KLBR Kellerberrin 48.08 241 P P 18 58 28.0 -0.9
comp=Z,226nm,0.9s
KLBR Kellerberrin 48.08 241 P P 18 58 28.1 -0.8
KLBR Kellerberrin 48.08 241 P P 18 58 28.2 -0.8
SPSI Sidrap Palu 48.08 278 P P 18 58 28.4 -0.7
comp=Z,2μmcomp=Z,125nm,1.2s
DBNI Kabupaten Domp 48.36 272 P P 18 58 30.9 -0.4
JCJ Chichijima 48.40 330 P P 18 58 32.4 +1.1
JCJ Chichijima 48.40 330 P P 18 58 30.9 -0.4
AUALB St Joseph's Co 48.54 236 P P 18 58 33.0 +0.6
NWAO Narrogin (SRO) 48.72 239 P P 18 58 33.3 -0.5
comp=Z,214nm,1.0s
NWAO Narrogin (SRO) 48.72 239 LR LR 19 19 45.8
comp=Z,2μm,18.1s,baz=86,slow=37
NWAO Narrogin (SRO) 48.72 239 P P 18 58 33.8 0.0
NWAO Narrogin (SRO) 48.72 239 P P 18 58 33.0 -0.7
NWAO PcP PcP 19 00 01.0 +3.9
NWAO Narrogin (SRO) 48.72 239 P P 18 58 33.0 -0.7
NWAO 19 00 01.0
NWAO pmax pmax
comp=Z,271nm,1.2s
NWAO Narrogin (SRO) 48.72 239 P P 18 58 33.1 -0.7
NWAO x x 18 59 02.6
TOLI2 Tolitoli 48.74 285 P P 18 58 33.9 -0.3
TOLI2 Tolitoli 48.74 285 P P 18 58 33.8 -0.4
PLAI Plampang 48.81 271 P P 18 58 35.2 +0.4
PLAI Plampang 48.81 271 P P 18 58 34.5 -0.3
PLAI Plampang 48.81 271 P P 18 58 34.7 -0.1
BLDU Ballidu 48.84 242 P P 18 58 34.0 -0.8
comp=Z,65nm,1.8s
BLDU Ballidu 48.84 242 P P 18 58 34.2 -0.5
BLDU Ballidu 48.84 242 P P 18 58 34.1 -0.7
KEKH Kekaha 48.87 42 P P 18 58 36.1 +1.1
PCI Palu 48.94 282 P P 18 58 37.5 +1.7
comp=Z,5μmcomp=Z,412nm,1.0s
RKGY Rocky Gully 49.21 237 P P 18 58 37.5 0.0
comp=Z,287nm,1.0s
MORW Morawa 49.25 244 P P 18 58 37.6 -0.4
comp=Z,260nm,0.9s
MORW Morawa 49.25 244 P P 18 58 37.7 -0.2
MORW Morawa 49.25 244 P P 18 58 37.7 -0.2
MMSI Mamuju 49.27 279 P P 18 58 38.6 +0.3
comp=Z,4μmcomp=Z,70nm,0.7s
MUN Mundaring 49.43 241 P P 18 58 38.8 -0.5
comp=Z,224nm,1.5s
MUN Mundaring 49.43 241 P P 18 58 39.0 -0.3
KIP Kipapa 49.60 44 P P 18 58 43.6 +3.0
KIP Kipapa 49.60 44 P P 18 58 43.8 +3.2
KIP Kipapa 49.60 44*ceP* P 18 58 42.0 +1.4
KIP pmax pmax
comp=Z,138nm,1.1s
TWSI Taliwang, Sumb 49.70 271 P P 18 58 41.2 -0.3
GIRL Giralia 50.66 253 P P 18 58 49.3 +0.7
comp=Z,144nm,1.5s
GIRL Giralia 50.66 253 P P 18 58 49.2 +0.6
KHKI Kahang-Kahang 51.01 271 P P 18 58 51.7 +0.4
comp=Z,3μmcomp=Z,214nm,1.2s
DNP Denpasar 51.32 271 P P 18 58 54.4 +0.7
SRBI Singaraja 51.45 272 P P 18 58 54.9 +0.3
comp=Z,4μmcomp=Z,257nm,1.5s

BKB Balikpapan 51.62 280 P P 18 58 57.0 +1.1
BKB Balikpapan 51.62 280 P P 18 58 59.3 +3.4
BKB Balikpapan 51.62 280 P P 18 58 57.8 +1.9
TAOE Nuku Hiva Isla 51.63 90 *e*PKIKP P 18 58 55.7 -0.4
comp=Z,398nm,1.4s
TAOE eS S 19 06 06.2 -1.9
comp=Z,675nm,24.9s
TAOE eSS SS 19 09 44.7 -1.4
comp=Z,618nm,25.3s
TAOE eLQ LQ 19 11 37.7
comp=Z,4μm,40.6s
TAOE eLR LR 19 13 41.6
comp=Z,3μm,29.7s
JAGI Jajag, Banyuwa 52.39 271 P P 18 59 01.8 +0.1
JAGI Jajag, Banyuwa 52.39 271 P P 18 59 00.4 -1.2
JAGI Jajag, Banyuwa 52.39 271 P P 18 59 00.4 -1.2
comp=Z,2μmcomp=Z,3μmcomp=Z,186nm,1.8s
JAGI Jajag, Banyuwa 52.39 271 P P 18 59 00.7 -0.9
ABJI Asem Bagus 52.46 272 P P 18 59 02.3 +0.2
comp=Z,3μmcomp=Z,258nm,1.1s
BLJI Banyuglugur 53.09 271 P P 18 59 06.8 +0.1
comp=Z,3μmcomp=Z,193nm,1.0s
TGY Tagaytay City 54.22 300 LR LR 19 20 44.1
comp=Z,322nm,21.1s,baz=137,slow=34
JHJ Hachijo jima 2 54.56 332 LR LR 19 24 42.8
comp=Z,194nm,18.3s,baz=121,slow=38
DRV Dumont d'Urvil 54.77 193 P P 18 59 18.2 +0.1
DRV pP pP 18 59 46.8 -1.0
KKM Kota Kinabalu 54.80 289 P P 18 59 20.6 +1.3
KKM Kota Kinabalu 54.80 289 P P 18 59 19.6 +0.3
KKM Kota Kinabalu 54.80 289 P P 18 59 19.3 0.0
comp=Z,3μmcomp=Z,4μmcomp=Z,300nm,1.3s
KKM Kota Kinabalu 54.80 289 P P 18 59 19.9 +0.6
SNJI Sawahan-Nganju 54.85 271 P P 18 59 20.6 +0.8
comp=Z,3μmcomp=Z,291nm,0.8s
NGJI Ngawi 55.23 271 P P 18 59 24.5 +2.2
comp=Z,415nm,0.8s
UGM Wanagama 56.02 270 P P 18 59 28.1 +0.1
UGM Wanagama 56.02 270 P P 18 59 27.7 -0.3
UGM Wanagama 56.02 270 P P 18 59 28.7 +0.7
comp=Z,372nm,1.0s
UGM Wanagama 56.02 270 P P 18 59 28.2 +0.2
JOW Kunigami 56.25 317 P P 18 59 31.4 +2.1
JOW Kunigami 56.25 317 P P 18 59 29.4 +0.1
YOGI Yogyakarta 56.26 271 P P 18 59 30.1 +0.4
SMRI Semarang 56.29 271 P P 18 59 31.5 +1.6
SMRI Semarang 56.29 271 P P 18 59 30.6 +0.7
comp=Z,4μmcomp=Z,372nm,1.1s
SMRI Semarang 56.29 271 P P 18 59 30.8 +0.9
SZP Santa 56.40 303 P P 18 59 31.9 +1.4
SZP Santa 56.40 303 P P 18 59 34.3 +3.8
KPJI Karang Pucung 57.68 271 P P 18 59 39.7 0.0
INU Inuyama 57.69 331 P P 18 59 41.4 +2.1
INU Inuyama 57.69 331 P P 18 59 39.7 +0.4
JMN Monobe 57.96 327 P P 18 59 42.3 +1.0
JMN Monobe 57.96 327 P P 18 59 42.3 +1.0
MJAR Matsushiro Arr 58.12 332 P P 18 59 41.7 -0.6
comp=Z,51nm,1.2s,baz=162,slow=6.9,SNR=33
MJAR pP pP 19 00 11.1 -0.8
comp=Z,14nm,0.7s,baz=166,slow=7.5,SNR=5.3
MJAR LR LR 19 22 16.8
comp=Z,251nm,21.1s,baz=149,slow=33
comp=Z,51nm,1.2s
MJAR Matsushiro Arr 58.12 332 P P 18 59 41.8 -0.6
MJAR lAmb lAmb 18 59 45.1
comp=Z,47nm,1.2s
MJAR Matsushiro Arr 58.12 332 P P 18 59 41.8 -0.5
MJAR pmax pmax
comp=Z,47nm,1.2s
MAJO Matsushiro 58.12 332 P P 18 59 44.0 +1.7
MAJO Matsushiro 58.12 332 P P 18 59 41.8 -0.4
MAJO Matsushiro 58.12 332*c iP* P 18 59 41.9 -0.4
MAJO pmax pmax
comp=Z,67nm,1.5s
MAJO Matsushiro 58.12 332 P P 18 59 42.3 0.0
MJB9 Matsu-Tunnel 58.12 332 P P 18 59 42.0 -0.3
JSU Suzuyama 58.19 323 P P 18 59 43.5 +0.6
YOJ Yonaguni jima 58.36 312 P P 18 59 44.1 -0.1
YOJ Yonaguni jima 58.36 312 P P 18 59 44.1 -0.1
YOJ pmax pmax
comp=Z,218nm,1.3s
BBJI Bungbulang 58.89 270 P P 18 59 47.9 -0.3
BBJI Bungbulang 58.89 270 P P 18 59 47.2 -1.0
comp=Z,125nm,1.0s
BBJI Bungbulang 58.89 270 P P 18 59 47.4 -0.9
YULB Yu-li 58.98 309 P P 18 59 51.0 +2.4
YULB Yu-li 58.98 309 P P 18 59 46.8 -1.7
YULB lAmb lAmb 19 00 38.3
comp=Z,55nm,1.1s
YULB Yu-li 58.98 309 P P 18 59 48.0 -0.5
LEM Lembang 59.07 271 LR LR 19 28 14.6
comp=Z,408nm,18.1s,baz=103,slow=39
NACB Ninganchiao 59.22 310 P P 18 59 50.9 +0.8
NACB Ninganchiao 59.22 310 P P 18 59 50.1 -0.1
TPUB Ta-pu 59.43 309 P P 18 59 52.6 +1.0
TPUB Ta-pu 59.43 309 P P 18 59 51.0 -0.6
TPUB Ta-pu 59.43 309 P P 18 59 51.0 -0.6
SSLB Suanglung 59.47 310 P P 18 59 51.7 -0.2
SSLB Suanglung 59.47 310 P P 18 59 51.5 -0.4
SSLB Suanglung 59.47 310 P P 18 59 51.3 -0.6
YHNB Yeheng 59.67 311 P P 18 59 54.4 +1.0
YHNB Yeheng 59.67 311 P P 18 59 53.2 -0.1
TATO Taipei 59.77 311 P P 18 59 55.0 +1.1
DBJI Dramaga 59.97 271 P P 18 59 55.3 -0.2
comp=Z,3μmcomp=Z,298nm,1.6s
TPI Tanjungpandan 60.04 275 P P 18 59 56.4 +0.4
comp=Z,2μmcomp=Z,186nm,0.9s
JTM Tenmabayashi 60.56 337 P P 19 00 00.4 +1.5
JTM Tenmabayashi 60.56 337 P P 18 59 58.6 -0.3
JTM Tenmabayashi 60.56 337 P P 18 59 59.6 +0.7
SBJI Serang 60.67 271 P P 19 00 00.6 +0.3
comp=Z,6μmcomp=Z,301nm,1.4s
JEM Erimo 60.90 340 P P 19 00 02.9 +1.7
CGJI Cibinong 60.98 271 P P 19 00 01.3 -1.1
PPBI Pangkal Pinang 61.66 276 P P 19 00 08.6 +1.6
QZH2 Quanzhou 61.89 309 P P 19 00 08.7 +0.5
QZH2 pP pP 19 00 35.9 -2.3
QZH2 sP PcP 19 00 48.8 +0.8
QZH2 S S 19 08 23.9 +1.5
QZH2 sS sS 19 09 15.6 +1.9
QZH2 L L
comp=Z,770nm,22.0s
QZH2 L L
comp=Z,600nm,20.6s
QZH2 L L
comp=Z,870nm,25.8s
KASI Kota Agung 62.39 272 P P 19 00 10.5 -1.3
comp=Z,2μmcomp=Z,241nm,0.9s
VNDA Vanda 62.66 181 P P 19 00 12.9 +0.3
comp=Z,32nm,0.7s,baz=358,slow=7.3,SNR=136
VNDA LR LR 19 24 42.5
comp=Z,444nm,19.1s,baz=9.5,slow=33
comp=Z,32nm,0.7s
VNDA Vanda 62.66 181 P P 19 00 13.0 +0.4
VNDA Vanda 62.66 181 P P 19 00 13.0 +0.4
VNDA pmax pmax
comp=Z,329nm,1.8s
PMBI Palembang 62.77 274 P P 19 00 16.1 +1.7
SBA Scott Base 62.94 180 P P 19 00 15.6 +1.2
SBA Scott Base 62.94 180 P P 19 00 15.6 +1.2
SBA pmax pmax
comp=Z,159nm,1.0s
SBA Scott Base 62.94 180 P P 19 00 15.6 +1.2
MDSI Maura Dua 62.95 273 P P 19 00 13.7 -1.8
comp=Z,2μmcomp=Z,123nm,0.8s
JKA Kamikawa-asahi 62.96 340 P P 19 00 16.5 +1.6
CASY Casey 63.37 202 P P 19 00 17.9 +0.4
CASY Casey 63.37 202 P P 19 00 18.1 +0.7
CASY Casey 63.37 202 P P 19 00 17.8 +0.4
CASY pP pP 19 00 46.9 -1.0
TJN Taejon 63.48 325 P P 19 00 19.6 +1.0
TJN Taejon 63.48 325*c iP* P 19 00 19.5 +1.0
DSRI Dabo 63.62 277 P P 19 00 20.3 +0.3
comp=Z,1μmcomp=Z,106nm,1.2s
SSE Sheshan 63.72 316 P P 19 00 22.6 +2.3
SSE S S 19 08 49.1 +4.0
SSE pmax pmax
comp=Z,83nm,3.5s
SSE L L
comp=Z,290nm,18.0s
SSE L L
comp=Z,300nm,18.2s
KSRS Korea Array 63.95 326 P P 19 00 21.6 0.0
comp=Z,7.1nm,0.7s,baz=140,slow=7.0,SNR=40

KSRS pP pP 19 00 51.6 0.0
comp=Z,7.5nm,0.8s,baz=139,slow=6.9,SNR=6.1
comp=Z,7.1nm,0.7s
TPRI Tanjung Pinang 64.07 278 P P 19 00 23.4 +0.5
comp=Z,2μmcomp=Z,112nm,1.4s
DLV Lat 64.12 291 P P 19 00 24.5 +1.1
DLV Lat 64.12 291 P P 19 00 23.9 +0.4
JMBI JAMBI 64.20 275 P P 19 00 25.9 +2.1
comp=Z,4μmcomp=Z,378nm,0.9s
KSI Kapahiang 64.69 273 P P 19 00 26.2 -0.8
comp=Z,2μmcomp=Z,121nm,0.7s
CCD Concordia, Ant 64.72 191 P P 19 00 26.6 0.0
CCD pP pP 19 00 55.0 -2.2
MYKOM Kota Tinggi 64.97 279 P P 19 00 29.8 +1.0
MYKOM Kota Tinggi 64.97 279 P P 19 00 29.2 +0.5
MYKOM lAmb lAmb 19 00 29.9
comp=Z,54nm,1.0s
MYKOM Kota Tinggi 64.97 279 P P 19 00 29.1 +0.3
comp=Z,72nm,1.2s
MYKOM Kota Tinggi 64.97 279 P P 19 00 29.2 +0.5
GZH2 Guangzhou 65.00 305 P P 19 00 30.0 +1.3
GZH2 pP pP 19 00 59.1 +0.1
GZH2 S S 19 09 04.0 +2.9
GZH2 pmax pmax
comp=Z,37nm,1.9s
GZH2 pmax pmax
comp=Z,240nm,3.8s
MASI Maura Aman, Be 65.16 273 P P 19 00 29.4 -0.7
comp=Z,325nm,0.8s
YSS Yuzhno-Sakhali 65.44 342 P P 19 00 32.9 +1.8
comp=Z,172nm,1.1s
YSS Yuzhno-Sakhali 65.44 342*ceP* P 19 00 32.5 +1.4
YSS *e**PP PcP 19 01 02.7 +0.7
YSS *e*S S 19 09 04.0 -1.6
YSS *e*PS PnS 19 09 39.6 -4.9
YSS *e*SS SS 19 13 17.8 -4.0
YSS pmax pmax
comp=Z,200nm,3.6s
YSS pmax pmax
comp=N,100nm,3.8s
YSS pmax pmax
comp=E,100nm,4.0s
YSS pmax pmax
comp=Z,130nm,1.1s
YSS smax smax
comp=N,300nm,7.5s
YSS smax smax
comp=E,500nm,7.1s
YSS Yuzhno-Sakhali 65.44 342 P P 19 00 33.1 +2.1
HJU Haeju 65.58 325 P P 19 00 28.0 -4.2
HJU pP pP 19 01 00.9 -1.5
HJU S S 19 09 04.6 -3.0
HJU AmB
comp=Z,128nm,2.1s
NJ2 Nanjing 65.88 316 ⇓P P 19 00 34.4 +0.2
NJ2 pP PcP 19 01 03.6 -0.6
NJ2 S S 19 09 12.6 +1.1
NJ2 pmax pmax
comp=Z,67nm,1.0s
NJ2 pmax pmax
comp=Z,510nm,3.8s
QIZ Qiongzhong 65.91 299 P P 19 00 37.0 +2.3
QIZ Qiongzhong 65.91 299 lAmb lAmb 19 00 36.8
comp=Z,35nm,0.9s
QIZ Qiongzhong 65.91 299 P P 19 00 35.6 +0.9
QIZ pP PcP 19 01 04.1 -0.5
QIZ sP sP 19 01 18.0 -0.6
QIZ S S 19 09 15.5 +3.2
QIZ pmax pmax
comp=Z,44nm,0.9s
QIZ L L
comp=Z,1μm,18.2s
QIZ L L
comp=Z,610nm,17.3s
QIZ L L
comp=Z,590nm,23.9s
SKR Severo-Kuril's 66.07 352 *e*P P 19 00 33.7 -1.3
SKR *e**PP pP 19 01 05.7 +0.4
SKR *e*S S 19 09 08.4 -4.6
SKR *e**SS pS 19 09 53.9 +6.0
SKR MLR MLR
comp=Z,700nm,17.0s
PYAG Pyongyang 66.28 326 P P 19 00 34.8 -1.8
PYAG pP PcP 19 01 06.0 +0.4
PYAG AmB
comp=Z,61nm,1.6s
PSTR Posyet 66.42 331*d iP* P 19 00 38.0 +0.6
USA0B Ussuriysk Arra 67.10 333*d iP* P 19 00 42.4 +0.7
USRK Ussuriysk Ar. 67.10 333 P P 19 00 42.8 +1.0
comp=Z,110nm,1.2s,baz=142,slow=5.2,SNR=39
comp=Z,110nm,1.2s
BKNI Bangkinang 67.24 277 P P 19 00 44.3 +1.0
BKNI Bangkinang 67.24 277 P P 19 00 43.6 +0.3
BKNI Bangkinang 67.24 277 P P 19 00 44.0 +0.7
comp=Z,3μmcomp=Z,358nm,1.0s
BKNI Bangkinang 67.24 277 P P 19 00 44.0 +0.7
PPSI Pulau Pagai 67.41 273 P P 19 00 45.6 +1.2
comp=Z,512nm,1.1s
PDSI Padang 67.46 275 P P 19 00 43.1 -1.6
comp=Z,71nm,0.8s
SHEM Shemya Is, Ala 67.63 4 LR LR 19 24 09.1
comp=Z,2μm,21.3s,baz=173,slow=30
PPI Padang Panjang 67.64 276 P P 19 00 46.4 +0.6
comp=Z,56nm,0.9s
SUJ Sinuiju 67.71 326 P P 19 00 45.8 +0.1
CNSH ChangSha 67.90 309 P P 19 00 46.7 -0.4
CNSH S S 19 09 34.8 -1.2
CNSH pmax pmax
comp=Z,13nm,1.2s
CNSH L L
comp=Z,470nm,17.1s
CNSH L L
comp=Z,510nm,23.5s
CNSH L L
comp=Z,770nm,29.2s
PET Petropavlovsk 68.09 354 P P 19 00 49.5 +1.8
PET Petropavlovsk 68.09 354 *eP* P 19 00 46.6 -1.1
PET *e**PP pP 19 01 17.0 -1.2
PET *e**SP sP 19 01 31.3 -0.3
PET *e*S S 19 09 38.3 +1.1
PET *e*PS PnS 19 10 11.8 -7.7
PET *e* 19 10 30.0
PET pmax pmax
comp=Z,96nm,1.3s
PET Petropavlovsk 68.09 354 P P 19 00 47.7 0.0
comp=Z,92nm,1.2s
PET Petropavlovsk 68.09 354 P P 19 00 49.0 +1.3
PET Petropavlovsk 68.09 354 P P 19 00 48.0 +0.3
WHN Wuhan 68.14 312 ⇓P P 19 00 48.5 0.0
WHN pP pP 19 01 18.5 -0.5
WHN sP sP 19 01 28.6 -3.9
WHN S S 19 09 37.1 -1.6
WHN pmax pmax
comp=Z,78nm,1.0s
WHN L L
comp=Z,3μm,26.1s
PEA0B Petropavlovsk- 68.27 354 P P 19 00 49.7 +0.8
PEA0B Petropavlovsk- 68.27 354 P P 19 00 49.7 +0.8
PEA0B pmax pmax
comp=Z,169nm,1.1s
PETK Petropavlovsk- 68.27 354 P P 19 00 49.4 +0.5
comp=Z,99nm,1.0s,baz=134,slow=4.5,SNR=51
PETK LR LR 19 25 45.7
comp=Z,1μm,21.3s,baz=151,slow=31
comp=Z,99nm,1.0s
GULI GuiLin 68.41 305 ⇓P P 19 00 50.6 +0.2
GULI S S 19 09 42.8 +0.7
GULI pmax pmax
comp=Z,47nm,0.9s
GULI L L
comp=Z,1μm,27.7s
GULI L L
comp=Z,710nm,25.9s
GULI L L
comp=Z,670nm,18.6s
MDJ Mudanjiang 68.50 332 P P 19 00 51.9 +1.4
MDJ Mudanjiang 68.50 332 lAmb lAmb 19 00 54.6
comp=Z,64nm,1.0s
MDJ Mudanjiang 68.50 332 P P 19 00 51.6 +1.1
MDJ PcP PcP 19 01 16.8 +2.0
MDJ pP pP 19 01 21.3 +0.5
MDJ sP sP 19 01 35.3 +1.1
MDJ PP PP 19 03 21.2 -2.3
MDJ S S 19 09 43.1 +0.7
MDJ ScS SKSac 19 10 37.3 -0.4

MDJ pmax pmax
comp=Z,52nm,1.4s
DL2 Dalian 68.51 323 P **P** **19 00 51.1 +0.4**
DL2 pP **pP** **19 01 20.9 -0.2**
DL2 sP **sP** **19 01 35.5 +1.0**
DL2 S **S** **19 09 42.5 -0.2**
DL2 pmax pmax
comp=Z,73nm,1.0s
DL2 pmax pmax
comp=Z,220nm,4.5s
MNSI Mandailing Nat 68.77 277 P **P** **19 00 52.2 -0.7**
comp=Z,202nm,0.9s
KULM Kulim 69.07 282 P **P** **19 00 55.1 +0.4**
KULM Kulim 69.07 282 P **P** **19 00 54.8 +0.1**
comp=Z,1μmcomp=Z,114nm,0.9s
KULM Kulim 69.07 282 P **P** **19 00 55.1 +0.4**
TIA Tai'an 69.54 318 P **P** **19 00 56.6 -0.6**
TIA pP **pP** **19 01 26.6 -1.2**
TIA sP **sP** **19 01 39.8 -1.5**
TIA S **S** **19 09 52.6 -2.5**
TIA pmax pmax
comp=Z,29nm,0.9s
TIA L L
comp=Z,770nm,24.0s
TIA L L
comp=Z,690nm,18.3s
TIA L L
comp=Z,1μm,25.0s
CN2 Changchun 69.86 329 P **P** **19 00 59.1 +0.2**
CN2 pP pP 19 01 29.1 -0.4
CN2 sP sP 19 01 41.2 -1.7
CN2 S **S** **19 09 58.5 0.0**
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,500nm,6.0s
RPSI Rantau Prapat 69.94 279 P **P** **19 00 58.8 -1.3**
PSI Prapat 69.97 279 P **P** **19 01 00.7 +0.3**
PSI Prapat 69.97 279 P **P** **19 00 58.8 -1.6**
PSI pmax pmax
comp=Z,99nm,0.9s
PSI Prapat 69.97 279 P **P** **19 00 59.3 -1.1**
comp=Z,1μmcomp=Z,125nm,1.0s
BNX BinXian 70.35 331 ⇓P **P** **19 01 01.7 -0.2**
BNX pP **pP** **19 01 31.9 -0.5**
BNX PP **PP** **19 03 41.4 +1.9**
BNX S **S** **19 10 04.2 +0.1**
BNX pmax pmax
comp=Z,43nm,0.7s
BNX pmax pmax
comp=Z,460nm,4.6s
BNX L L
comp=Z,560nm,19.0s
BNX L L
comp=Z,410nm,19.0s
BNX L L
comp=Z,570nm,34.7s
TSI Tuntungan 70.51 279 P **P** **19 01 03.3 -0.3**
comp=Z,114nm,0.8s
GRNR Gornyy 70.81 340 ⇑*i*P **P** **19 01 06.1 +1.5**
GRNR pmax pmax
comp=Z,80nm,1.2s
GSI Gunungsitoli 70.84 277 P **P** **19 01 06.6 +1.1**
GSI Gunungsitoli 70.84 277 P **P** **19 01 05.6 +0.1**
GSI Gunungsitoli 70.84 277 P **P** **19 01 05.7 +0.1**
comp=Z,236nm,1.0s
GSI Gunungsitoli 70.84 277 P **P** **19 01 05.9 +0.3**
KLR Kul'dur 71.22 336*d i*P **P** **19 01 07.7 +0.6**
KLR pmax pmax
comp=Z,89nm,1.3s
KCSI Kotacane, Aceh 71.28 279 P **P** **19 01 06.9 -1.3**
comp=Z,65nm,0.8s
ENH Enshi 71.56 309 P **P** **19 01 10.6 +1.0**
ENH Enshi 71.56 309 P **P** **19 01 08.6 -0.9**
ENH PcP **PcP** **19 01 28.5 +0.3**
ENH pP **pP** **19 01 38.8 -1.7**
NKL Nikolayevsk 71.59 343 *e*P **P** **19 01 08.6 -0.5**
NKL *e*S **S** **19 10 18.3 +0.3**
NKL pmax pmax
comp=N,58nm,1.1s
NKL pmax pmax
comp=E,88nm,1.1s
NKL pmax pmax
comp=Z,324nm,1.1s
NKL smax smax
comp=E,159nm,2.2s
NKL smax smax
comp=N,198nm,2.4s
NKL MLR MLR
comp=Z,4μm,19.0s
LYN LuoYang 71.67 315 P **P** **19 01 10.8 +0.7**
LYN pP pP 19 01 40.8 -0.1
LYN sP sP 19 01 54.4 +0.1
LYN S **S** **19 10 18.7 -1.2**
LYN SKS **SKSac** **19 10 54.7 -7.5**
LYN sS sS 19 11 11.6 +1.5
LYN pmax pmax
comp=Z,110nm,0.9s
LYN pmax pmax
comp=Z,270nm,5.1s
TPTI 71.77 279 P **P** **19 01 10.6 -0.5**
HNS HongShan 71.81 318 ⇓P **P** **19 01 11.4 +0.6**
HNS pP **pP** **19 01 41.4 -0.2**
HNS sP **sP** **19 01 55.1 +0.1**
HNS S **S** **19 10 22.0 +0.8**
HNS pmax pmax
comp=Z,33nm,0.9s
HNS L L
comp=Z,400nm,16.2s
HNS L L
comp=Z,850nm,18.2s
HNS L L
comp=Z,820nm,20.0s
GYA Guiyang 71.89 305 ⇓P **P** **19 01 12.0 +0.2**
GYA S **S** **19 10 21.7 -1.3**
GYA pmax pmax
comp=Z,39nm,0.9s
SLVN Son La 71.92 299 P **P** **19 01 13.1 +1.1**
UNV Unalaska Valle 72.06 16 P **P** **19 01 11.1 -0.9**
baz=206
BJI2 Beijing 72.46 321 P **P** **19 01 15.1 +0.4**
BJI2 PcP **PcP** **19 01 32.3 +0.5**
BJI2 pP **pP** **19 01 45.4 -0.1**
BJI2 PP **PP** **19 03 57.0 -0.7**
BJI2 S **S** **19 10 28.5 -0.2**
BJI2 ScS **SKKSac** **19 11 08.3 +0.3**
BJI2 sS **sS** **19 11 21.6 +1.8**
BJI2 SS **SS** **19 15 11.3 +1.0**
BJI2 pmax pmax
comp=Z,9.0nm,1.0s
BJI2 pmax pmax
comp=Z,49nm,5.3s
BJI2 L L
comp=Z,350nm,17.1s
BJI2 L L
comp=Z,210nm,14.9s
BJI2 L L
comp=Z,370nm,17.2s
BJT Baijiatuau 72.46 321 P **P** **19 01 15.3 +0.6**
BJT Baijiatuau 72.46 321 IAmb IAmb 19 02 24.1
comp=Z,45nm,1.1s
MLSI Meulaboh, Aceh 72.80 279 P **P** **19 01 17.2 -0.1**
TIY Taiyuan 73.46 317 *e*P **P** **19 01 21.6 +0.8**
TIY pP **pP** **19 01 51.0 -0.7**
TIY sP **sP** **19 02 06.7 +1.7**
TIY S **S** **19 10 43.6 +3.3**
TIY SKS **SKSac** **19 11 13.2 -2.5**
TIY pmax pmax
comp=Z,51nm,0.8s
HEH HeiHe 73.77 335 *e*P **P** **19 01 22.1 -0.1**
HEH pP **pP** **19 01 52.5 -0.4**
HEH S **S** **19 10 43.1 +0.1**
HEH pmax pmax
comp=Z,20nm,1.4s
XAN Xi'an 73.88 313 ⇓P **P** **19 01 23.6 +0.3**
XAN pP pP 19 01 53.2 -1.1
XAN S **S** **19 10 44.0 -1.1**
XAN SS **SS** **19 15 25.6 -6.7**
XAN pmax pmax
comp=Z,79nm,0.7s
XAN pmax pmax
comp=Z,200nm,8.4s
XAN L L
comp=Z,620nm,18.1s
XAN L L
comp=Z,850nm,21.7s
XAN L L
comp=Z,1μm,21.3s
XAN Xi'an 73.88 313 P **P** **19 01 23.2 -0.1**
XAN PcP **PcP** **19 01 33.0 -5.1**
XAN pP **pP** **19 01 52.9 -1.5**
BSI Banda Aceh 74.21 280 P **P** **19 01 25.0 -0.6**
comp=Z,3μmcomp=Z,219nm,0.8s
SPIA Saint Paul Isl 74.22 12 P **P** **19 01 23.0 -1.5**
baz=202
KMI Kunming 74.48 302 P **P** **19 01 28.2 +1.1**
KMI PcP **PcP** **19 01 40.4 -0.7**
KMI pP **pP** **19 01 56.4 -1.6**
KMI2 Kunming 74.48 302 ⇓P **P** **19 01 28.3 +1.1**
KMI2 pP pP 19 01 56.8 -1.2
KMI2 sP sP 19 02 12.3 +1.0
KMI2 S **S** **19 10 54.2 +1.7**
KMI2 SKS **SKSac** **19 11 23.4 -0.8**
KMI2 SS **SS** **19 15 37.2 -4.9**
KMI2 pmax pmax
comp=Z,56nm,0.9s
KMI2 pmax pmax
comp=Z,280nm,6.6s
KMI2 L L
comp=Z,230nm,16.9s
KMI2 L L
comp=Z,270nm,21.7s
KMI2 L L
comp=Z,580nm,24.9s
XLT XiLinHaoTe 74.91 324 *e*P **P** **19 01 30.0 +0.9**
XLT pP pP 19 01 59.9 -0.2
XLT sP sP 19 02 13.1 -0.3
XLT S **S** **19 10 56.5 +0.2**
XLT pmax pmax
comp=Z,25nm,1.3s
XLT L L
comp=Z,34nm,17.6s
XLT L L
comp=Z,230nm,19.9s
XLT L L
comp=Z,360nm,18.0s
CHNA Chernabura Isl 74.93 19 P **P** **19 01 27.4 -1.4**
baz=213
SDPT Sand Point 75.10 18 P **P** **19 01 28.2 -1.5**
baz=212
QSPA South Pole Qui 75.10 180 P **P** **19 01 29.7 -0.2**
comp=Z,68nm,0.7s,baz=355,slow=0.8,SNR=435
QSPA LR LR 19 32 06.8
comp=Z,661nm,18.4s,baz=24,slow=34
comp=Z,68nm,0.7s
QSPA South Pole Qui 75.10 180 P **P** **19 01 29.9 +0.1**
QSPA South Pole Qui 75.10 180 P **P** **19 01 30.0 +0.1**
CMAR Chiang Mai Arr 75.10 294 P **P** **19 01 31.8 +1.2**
comp=Z,21nm,0.8s,baz=132,slow=4.5,SNR=138
CMAR pP **pP** **19 02 02.1 +0.6**
comp=Z,14nm,0.8s,baz=126,slow=4.4,SNR=5.5
comp=Z,21nm,0.8s
CHTO Chiang Mai 75.23 294 P **P** **19 01 32.6 +1.3**
CHTO Chiang Mai 75.23 294 P **P** **19 01 31.4 +0.1**
CHTO IAmb IAmb 19 01 32.8
comp=Z,27nm,0.8s
CHTO Chiang Mai 75.23 294 P **P** **19 01 31.5 +0.1**
CHTO pmax pmax
comp=Z,27nm,0.8s
CHTO Chiang Mai 75.23 294 P **P** **19 01 32.0 +0.7**
CHTO Chiang Mai 75.23 294 P **P** **19 01 32.4 +1.1**
MA2 Magadan 75.46 351 P **P** **19 01 31.8 +0.1**
comp=Z,36nm,1.0s,baz=177,slow=4.1,SNR=9.9
MA2 LR LR 19 29 18.2
comp=Z,747nm,21.8s,baz=164,slow=31
comp=Z,36nm,1.0s
MA2 Magadan 75.46 351 P **P** **19 01 33.3 +1.6**
MA2 Magadan 75.46 351*ce*P **P** **19 01 31.8 +0.1**
MA2 pmax pmax
comp=Z,78nm,1.3s
MA2 Magadan 75.46 351 P **P** **19 01 31.6 -0.1**
comp=Z,63nm,1.5s
MA2 Magadan 75.46 351 P **P** **19 01 32.1 +0.4**
HHC Hu-ho-hao-te 75.79 320 ⇑*i*P **P** **19 01 35.2 +1.0**
HHC pP pP 19 02 05.4 +0.2
HHC S **S** **19 11 07.0 +0.9**
HHC pmax pmax
comp=Z,23nm,1.2s
PZH PanZhiHua 75.87 303 P **P** **19 01 35.1 +0.1**
PZH pP **pP** **19 02 07.1 +0.9**
PZH sP **sP** **19 02 18.8 -0.7**
PZH S **S** **19 11 07.6 0.0**
PZH SS **SS** **19 15 58.0 -4.9**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,270nm,7.1s
PZH L L
comp=Z,690nm,23.3s
PZH L L
comp=Z,390nm,22.7s
PZH L L
comp=Z,420nm,22.2s
S14K Fog Glacier 76.17 18 P **P** **19 01 34.9 -1.0**
baz=213,SNR=5.7
VNFG Fog Glacier, M 76.17 18 IAmb IAmb 19 02 25.7
comp=Z,56nm,0.8s
CD2 Chengdu 76.19 308 P **P** **19 01 36.8 +0.2**
CD2 pP pP 19 02 07.8 0.0
CD2 sP sP 19 02 21.7 +0.5
CD2 S **S** **19 11 11.3 +0.5**
CD2 sS sS 19 12 06.7 +4.7
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,290nm,5.9s
CD2 L L
comp=Z,930nm,16.7s
CD2 L L
comp=Z,950nm,22.2s
CD2 L L
comp=Z,970nm,19.0s
HIA Hailar 76.50 330 P **P** **19 01 39.3 +1.4**
ZEA Zeya 76.51 337 *e*P **P** **19 01 39.0 +1.2**
ZEA *e**PP **pP** **19 02 09.6 +0.8**
ZEA *e*S **S** **19 11 16.5 +3.3**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,40nm,1.0s
ZEA smax smax
comp=E,300nm,10.2s
HILR Hailar Array B 76.69 330 P **P** **19 01 39.2 +0.2**
comp=E,6.9nm,0.6s,baz=132,slow=8.8,SNR=5.3
HILR pP **pwP** **19 02 11.4 -0.5**
comp=E,17nm,0.9s,baz=132,slow=8.9,SNR=3.5
HILR LR LR 19 32 51.5
comp=E,430nm,21.8s,baz=75,slow=34
comp=E,6.9nm,0.6s
BTO2 Baotou 76.79 319 *e*P **P** **19 01 40.2 +0.3**
BTO2 pP **pP** **19 02 10.1 -0.8**
BTO2 S **S** **19 11 15.2 -2.0**
BTO2 pmax pmax
comp=E,15nm,0.7s
BTO2 pmax pmax
comp=E,360nm,5.1s
BTO2 L L
comp=E,710nm,13.4s
BTO2 L L
comp=E,480nm,13.0s
BTO2 L L
comp=E,550nm,14.0s
CHIR Chirikof Islan 77.05 20 P **P** **19 01 39.6 -1.1**
baz=217
RPN Rapa Nui 77.50 115 LR LR 19 29 25.6
comp=E,359nm,21.4s,baz=260,slow=30
TNCH TengChong 77.94 300 P **P** **19 01 47.5 +0.8**
TNCH pP pP 19 02 18.1 +0.1
TNCH sP sP 19 02 31.3 0.0
TNCH S **S** **19 11 32.5 +2.2**
TNCH sS sS 19 12 23.5 +1.5
TNCH pmax pmax
comp=E,46nm,0.9s
TNCH pmax pmax
comp=E,140nm,4.7s
TNCH L L
comp=E,280nm,17.5s
TNCH L L
comp=E,380nm,17.9s
TNCH L L
comp=E,640nm,21.9s
M11K Mekoryuk 78.01 13 P **P** **19 01 45.2 -0.8**
baz=206
NPW Naypyitaw 78.05 294 P **P** **19 01 48.8 +1.7**
SII Sitkinak Islan 78.12 21 P **P** **19 01 46.1 -0.7**
baz=218
O14K Tigyukauivet M 78.21 16 P **P** **19 01 46.7 -0.4**
baz=211
R17L Mt. Peulik Vol 78.27 19 P **P** **19 01 46.6 -0.9**
baz=216
SEY Seymchan 78.49 353 P **P** **19 01 48.5 -0.1**
comp=E,61nm,1.0s,baz=155,slow=5.7,SNR=54
SEY pP **pP** **19 02 20.5 +0.9**
comp=E,56nm,1.2s,baz=151,slow=5.8,SNR=4.9
SEY LR LR 19 32 12.3
comp=E,1μm,20.6s,baz=152,slow=32
comp=E,61nm,1.0s
SEY Seymchan 78.49 353*ce*P **P** **19 01 49.3 +0.7**
SEY pmax pmax
comp=Z,114nm,1.1s
LZH Lanzhou 78.51 312 *e*P **P** **19 01 50.8 +1.2**
LZH pP pP 19 02 22.0 +1.0
LZH sP sP 19 02 35.2 +0.9
LZH S **S** **19 11 38.7 +2.8**
LZH SS **SS** **19 16 42.1 -0.4**
LZH pmax pmax
comp=Z,51nm,1.7s
LZH pmax pmax
comp=Z,220nm,4.6s
LZH L L
comp=Z,520nm,15.9s
LZH L L
comp=Z,770nm,16.8s
LZH L L
comp=Z,1μm,17.1s
O15K Ungalikthiuk R 78.53 17 P **P** **19 01 48.1 -0.8**
O15K Ungalikthiuk R 78.53 17 P **P** **19 01 48.0 -0.8**
baz=212
LZDM Lanzhou Array 78.56 312 P **P** **19 01 51.4 +1.4**
comp=Z,4.7nm,0.4s,baz=126,slow=4.6,SNR=8.5
LZDM pP **pP** **19 02 21.3 -0.1**
comp=Z,13nm,0.7s,baz=106,slow=7.9,SNR=3.1
LZDM LR LR 19 34 18.7
comp=Z,646nm,21.3s,baz=275,slow=34
comp=Z,4.7nm,0.4s
N14K Kuskokwak Cree 78.68 15 IAmb IAmb 19 02 48.5
comp=Z,31nm,0.9s
N14K Kuskokwak Cree 78.68 15 P **P** **19 01 49.5 -0.2**
baz=210
M13K Dall Lake 78.69 14 P **P** **19 01 49.7 0.0**
baz=209
P16K Nushagak River 78.93 17 P **P** **19 01 49.9 -1.2**
baz=214
Q17K Contact Creek 78.93 19 P **P** **19 01 50.2 -1.1**
baz=216
OHAK Old Harbor 78.95 21 P **P** **19 01 50.6 -0.6**
baz=219
Q16K King Salmon 79.03 18 P **P** **19 01 50.7 -0.9**
baz=215,SNR=6.4
N15K Kwethluk River 79.30 16 IAmb IAmb 19 02 31.1
comp=Z,93nm,1.5s
N15K Kwethluk River 79.30 16 P **P** **19 01 53.6 +0.5**
baz=212,SNR=11
M14K Bethel 79.33 15 P **P** **19 01 53.2 0.0**
M14K IAmb IAmb 19 01 55.2
comp=Z,43nm,0.8s
M14K Bethel 79.33 15 P **P** **19 01 52.8 -0.4**
baz=210,SNR=16
O16K Kokwok River B 79.37 17 P **P** **19 01 51.8 -1.6**
baz=214
Q18K Katmai Hardscr 79.52 19 P **P** **19 01 53.2 -1.2**
baz=217,SNR=17
P17K Kvichak River 79.52 18 IAmb IAmb 19 02 51.8
comp=Z,28nm,0.8s
P17K Kvichak River 79.52 18 P **P** **19 01 52.7 -1.5**
baz=215
M15K Kasigluk River 79.60 15 P **P** **19 01 54.1 -0.6**
baz=211,SNR=13
KDAK Kodiak Island 79.62 21 LR LR 19 31 45.4
comp=Z,828nm,19.8s,baz=215,slow=31
KDAK Kodiak Island 79.62 21 P **P** **19 01 53.7 -1.1**
baz=219
L14K Kuka Creek 79.67 14 IAmb IAmb 19 02 55.9
comp=Z,48nm,1.1s
L14K Kuka Creek 79.67 14 P **P** **19 01 54.9 -0.1**
baz=209,SNR=14
K13K Kusilvak Mount 79.74 13 IAmb IAmb 19 01 57.9
comp=Z,30nm,0.8s
K13K Kusilvak Mount 79.74 13 P **P** **19 01 55.6 +0.2**
baz=207,SNR=9.0
O17K Koliganek Bris 79.80 17 P **P** **19 01 54.6 -1.2**
baz=215
N16K Nishlik Lake 79.92 16 P **P** **19 01 56.0 -0.5**
baz=213,SNR=14
P18K Big Mountain, 80.05 18 P **P** **19 01 55.9 -1.3**
baz=216,SNR=10.0
GAMB Gambell 80.11 9 P **P** **19 01 56.9 -0.4**
baz=200
Q19K Cape Douglas, 80.17 19 P **P** **19 01 57.0 -0.8**
baz=218
L15K Ungalak Mounta 80.24 14 P **P** **19 01 57.6 -0.5**
baz=210
M16K Timber Creek 80.33 16 IAmb IAmb 19 02 01.2
comp=Z,28nm,0.9s
M16K Timber Creek 80.33 16 P **P** **19 01 58.7 +0.1**
baz=213,SNR=15
N17K Nushagak Hills 80.40 17 P **P** **19 01 58.2 -0.8**
baz=215
O18K Koktuh Hills 80.42 18 P **P** **19 01 58.7 -0.5**
baz=216,SNR=5.1
L16K Owhat River 80.77 15 IAmb IAmb 19 03 04.3
comp=Z,42nm,1.4s
L16K Owhat River 80.77 15 P **P** **19 02 00.9 -0.1**
baz=212,SNR=8.4
P19K Oil Pt 80.87 19 P **P** **19 02 01.1 -0.5**
baz=218
N18K Kilae Creek 80.89 17 P **P** **19 02 01.2 -0.4**
baz=216
O19K Port Alsworth 80.97 18 P **P** **19 02 00.8 -1.2**
baz=217
M17K Holitna River 81.05 16 P **P** **19 02 01.9 -0.5**
baz=214
ILSW Iliamna Southw 81.16 19 IAmb IAmb 19 02 39.9
comp=Z,98nm,1.5s
MORE Moreh 81.22 298 IAmb IAmb 19 02 03.7
comp=Z,52nm,1.3s
CIT Chita 81.29 330 *e*P **P** **19 02 04.0 0.0**
CIT *e* 19 02 35.2
CIT *e* 19 02 52.4
CIT *e*S S 19 12 45.2 +41
CIT pmax pmax
comp=Z,177nm,1.2s
O20K Slope Mountain 81.40 19 P **P** **19 02 04.0 -0.4**
baz=219
N19K Bonanza Creek 81.41 18 P **P** **19 02 04.4 -0.1**
baz=217
L17K Donlin 81.43 16 P **P** **19 02 04.7 +0.3**
baz=213
M18K Stony River 81.57 17 P **P** **19 02 05.1 -0.1**
baz=216,SNR=17
BRLK Bradley Lake 81.72 20 IAmb IAmb 19 02 48.6
comp=Z,46nm,1.1s
MAW Mawson 81.73 202 P **P** **19 02 06.9 +0.9**
comp=Z,8.3nm,1.4s
MAW Mawson 81.73 202 P **P** **19 02 06.7 +0.7**
comp=Z,22nm,0.9s,baz=102,slow=6.5,SNR=34
MAW pP **pP** **19 02 37.8 -0.1**
comp=Z,25nm,1.0s,baz=119,slow=5.2,SNR=5.9
MAW LR LR 19 33 29.8
comp=Z,879nm,20.8s,baz=94,slow=32
comp=Z,22nm,0.9s
MAW Mawson 81.73 202 P **P** **19 02 05.9 -0.2**
MAW Mawson 81.73 202 P **P** **19 02 05.9 -0.2**
MAW pmax pmax
comp=Z,15nm,1.4s
MAW Mawson 81.73 202 P **P** **19 02 06.8 +0.7**
BRSE Bradley Lake S 81.75 20 P **P** **19 02 05.7 -0.5**
baz=221
J16K Anvik River 81.84 14 P **P** **19 02 06.8 +0.2**
baz=211,SNR=12
K17K Iditarod 81.92 15 P **P** **19 02 07.1 +0.2**
baz=213,SNR=12
L18K Granite Mounta 81.93 16 P **P** **19 02 07.3 +0.3**
baz=215,SNR=18
ANM Nome 81.94 12 P **P** **19 02 07.8 +0.7**
baz=206
YAK Yakutsk 82.25 343 P **P** **19 02 08.9 +0.2**
comp=Z,203nm,0.8s,baz=154,slow=0.8,SNR=119

YAK pP pP 19 02 39.8 -0.2
comp=Z,41nm,0.7s,baz=334,slow=4.2,SNR=2.9
YAK LR LR 19 38 35.9
comp=Z,303nm,18.6s,baz=128,slow=35
comp=Z,203nm,0.8s
YAK Yakutsk 82.25 343 P P 19 02 08.7 0.0
YAK Yakutsk 82.25 343 eP P 19 02 08.8 +0.2
YAK e*PP pP 19 02 39.9 -0.1
YAK e 19 05 14.7
YAK ePPP PPP 19 07 08.6
YAK eS S 19 12 12.3 -1.1
YAK e*SS sS 19 13 06.0 -1.5
YAK eSS SS 19 17 32.1 -4.6
YAK eSSS SSS 19 21 02.5
YAK pmax pmax
comp=Z,278nm,1.8s
YAK pmax pmax
comp=N,35nm,1.3s
YAK pmax pmax
comp=E,36nm,1.2s
YAK pmax pmax
comp=Z,47nm,2.3s
YAK pmax pmax
comp=N,68nm,3.6s
YAK pmax pmax
comp=E,67nm,3.8s
YAK smax smax
comp=E,74nm,1.5s
YAK smax smax
comp=N,74nm,1.7s
YAK Yakutsk 82.25 343 P P 19 02 08.8 +0.2
YAK Yakutsk 82.25 343 P P 19 02 08.5 -0.1
YAK x x 19 02 39.9
J17K VABM Dome 82.30 15 P P 19 02 09.8 +0.8
baz=213,SNR=11
M19K Big River Lodg 82.31 17 P P 19 02 09.1 0.0
baz=217
I17K Unalakleet 82.33 14 P P 19 02 09.3 +0.2
baz=211
ULN Ulaanbaatar 82.34 324 P P 19 02 10.2 +0.4
ULN IAmb IAmb 19 02 14.1
comp=Z,49nm,0.9s
ULN Ulaanbaatar 82.34 324 ceP P 19 02 10.2 +0.4
ULN pmax pmax
comp=Z,58nm,1.2s
ULN Ulaanbaatar 82.34 324 P P 19 02 10.1 +0.3
comp=Z,3µmcomp=Z,222nm,1.1s
ULN Ulaanbaatar 82.34 324 P P 19 02 10.4 +0.6
TNA Tin City 82.39 10 IAmb IAmb 19 02 55.7
comp=Z,85nm,1.6s
TNA Tin City 82.39 10 P P 19 02 09.4 +0.1
baz=204
L19K White Mountain 82.40 17 P P 19 02 09.4 -0.1
baz=217,SNR=12
SEW Seward 82.45 20 IAmb IAmb 19 02 55.5
comp=Z,36nm,1.0s
SEW Seward 82.45 20 P P 19 02 09.5 -0.2
baz=222
SLKM Skilak Lake 82.50 20 IAmb IAmb 19 02 11.3
comp=Z,63nm,1.0s
F14K Arctic Creek 82.59 11 P P 19 02 11.3 +0.9
baz=206,SNR=11
G15K Niukluk 82.59 12 P P 19 02 10.3 -0.2
baz=208,SNR=9.9
O22K Cooper Landing 82.64 20 P P 19 02 10.2 -0.5
baz=222
H16K Elim 82.65 13 P P 19 02 10.3 -0.5
baz=210,SNR=5.4
M20K Styx River 82.66 18 P P 19 02 10.0 -0.9
baz=218,SNR=9.6
SONM Songino Array 82.70 324 P P 19 02 11.8 +0.2
comp=Z,25nm,0.9s,baz=146,slow=6.4,SNR=73
SONM pP pP 19 02 42.4 -0.5
comp=Z,9.7nm,1.1s,baz=145,slow=5.4,SNR=2.8
SONM LR LR 19 35 40.6
comp=Z,291nm,21.8s,baz=121,slow=33
comp=Z,25nm,0.9s
SONM Songino Array 82.70 324 P P 19 02 11.8 +0.2
SONM IAmb IAmb 19 02 15.2
comp=Z,44nm,1.1s
SONM Songino Array 82.70 324 P P 19 02 11.8 +0.2
SONM pmax pmax
comp=Z,44nm,1.1s
BILL Bilibino 82.74 360 ceP P 19 02 11.4 +0.2
BILL pmax pmax
comp=Z,61nm,1.2s
GTA2 Gaotai 82.94 314 ⇓P P 19 02 13.7 +0.7
GTA2 pP pP 19 02 44.0 -0.6
GTA2 PP PP 19 05 24.3 -1.2
GTA2 S S 19 12 21.7 0.0
GTA2 pmax pmax
comp=Z,35nm,1.1s
GTA2 pmax pmax
comp=Z,130nm,8.6s
GTA2 L L
comp=Z,350nm,19.2s
GTA2 L L
comp=Z,400nm,21.6s
GTA2 L L
comp=Z,550nm,21.8s
Q23K Middleton Isla 83.03 22 P P 19 02 12.6 -0.2
baz=225
P23K Montague Islan 83.07 21 P P 19 02 12.3 -0.7
baz=224
RC01 Rabbit Creek A 83.09 19 P P 19 02 12.2 -0.9
baz=222
F15K North Star Dit 83.11 11 IAmb IAmb 19 02 59.8
comp=Z,43nm,1.6s
F15K North Star Dit 83.11 11 P P 19 02 12.7 -0.4
baz=207,SNR=6.1
SKT Skwentna 83.21 18 P P 19 02 12.2 -1.5
baz=220
H17K Granite Mounta 83.41 13 P P 19 02 14.4 -0.3
baz=212,SNR=12
M22K Willow 83.47 19 P P 19 02 14.3 -0.7
baz=221,SNR=9.8
K20K Telida 83.56 16 IAmb IAmb 19 02 17.6
comp=Z,40nm,1.3s
K20K Telida 83.56 16 P P 19 02 15.5 0.0
baz=217,SNR=18
J19K Poorman 83.66 15 P P 19 02 15.3 -0.6
baz=216,SNR=15
PMR Palmer 83.66 19 P P 19 02 17.6 +1.6
PMR Palmer 83.66 19 IAmb IAmb 19 02 54.4
comp=Z,30nm,0.9s
PMR Palmer 83.66 19 P P 19 02 15.4 -0.6
baz=222,SNR=11
HIN Hinchinbrook I 83.67 21 IAmb IAmb 19 02 18.6
comp=Z,45nm,1.1s
PPLA Purkeypile 83.72 17 P P 19 02 15.5 -1.0
baz=219
SHL Shillong 83.73 298 eP P 19 02 17.7 +0.2
G17K Kiwalik Mounta 83.73 13 P P 19 02 16.0 -0.3
baz=211,SNR=8.0
KNK Knik Glacier 83.75 20 IAmb IAmb 19 03 19.8
comp=Z,47nm,1.0s
KNK Knik Glacier 83.75 20 P P 19 02 16.2 -0.3
baz=223
GLI Glacier Island 83.81 21 IAmb IAmb 19 03 17.6
comp=Z,42nm,1.0s
GLI Glacier Island 83.81 21 P P 19 02 15.3 -1.5
baz=224,SNR=6.6
L22K Petersville 83.86 18 P P 19 02 15.8 -1.3
baz=220,SNR=15
GHO Glory Hole Cre 83.86 19 IAmb IAmb 19 03 17.5
comp=Z,90nm,1.4s
CUT Chulitna 83.92 18 P P 19 02 16.1 -1.2
baz=221,SNR=8.0
FID Port Fidalgo 83.93 21 IAmb IAmb 19 03 18.1
comp=Z,45nm,1.1s
H18K Honhosa River 83.95 14 P P 19 02 16.9 -0.5
baz=213
GCSA Galena City Sc 83.96 15 P P 19 02 17.2 -0.3
baz=215
EYAK Cordova Ski Ar 84.04 21 P P 19 02 19.4 +1.5
EYAK Cordova Ski Ar 84.04 21 P P 19 02 17.3 -0.7
baz=225
SML Sawmill 84.08 19 IAmb IAmb 19 03 11.0
comp=Z,34nm,0.9s
SML Sawmill 84.08 19 P P 19 02 17.8 -0.5
baz=223,SNR=7.1
KAIM Kayak Island 84.08 22 P P 19 02 17.6 -0.5
baz=226
CAST Castle Rocks 84.16 17 IAmb IAmb 19 02 19.6
comp=Z,61nm,0.8s
CAST Castle Rocks 84.16 17 P P 19 02 16.8 -1.8
baz=219,SNR=81
J20K Nowinta River 84.19 16 IAmb IAmb 19 02 20.7
comp=Z,23nm,0.8s
J20K Nowinta River 84.19 16 P P 19 02 17.8 -0.9
baz=217,SNR=26
M23K Glacier View 84.27 20 P P 19 02 18.6 -0.5
baz=223
F17K Baldwin Pennin 84.42 12 IAmb IAmb 19 02 22.4
comp=Z,25nm,0.8s
F17K Baldwin Pennin 84.42 12 P P 19 02 20.0 +0.3
baz=210,SNR=20
SCM Sheep Creek Mo 84.42 20 IAmb IAmb 19 03 34.6
comp=Z,94nm,1.4s
SCM Sheep Creek Mo 84.42 20 P P 19 02 19.7 -0.3
baz=224,SNR=7.2
CHUM Lake Minchumin 84.46 17 P P 19 02 19.0 -1.0
baz=219,SNR=26
G18K Tagagawik 84.51 13 P P 19 02 20.4 +0.2
baz=213
KTH Kantishna Hill 84.60 17 IAmb IAmb 19 02 22.1
comp=Z,38nm,0.9s
I20K Naagheneel 84.60 15 P P 19 02 21.2 +0.5
baz=217,SNR=22
KLU Klutina 84.65 21 P P 19 02 20.7 -0.4
baz=225
BERG Berg Lake 84.66 22 IAmb IAmb 19 02 58.9
comp=Z,53nm,0.9s
BOD Bodaibo 84.69 334 eP P 19 02 20.9 -0.4
BOD pmax pmax
comp=Z,77nm,1.3s
TRF Thorofare Moun 84.70 18 IAmb IAmb 19 03 34.1
comp=Z,45nm,1.1s
TRF Thorofare Moun 84.70 18 P P 19 02 19.9 -1.6
baz=221,SNR=22
H19K Roundabout Mou 84.71 14 IAmb IAmb 19 02 23.9
comp=Z,36nm,1.0s
H19K Roundabout Mou 84.71 14 P P 19 02 21.0 -0.2
baz=215,SNR=50
BMRM Bremner River 84.73 21 IAmb IAmb 19 03 28.6
comp=Z,33nm,1.1s
BMRM Bremner River 84.73 21 P P 19 02 21.3 -0.3
baz=226
WAT1 Susitna Watana 84.77 19 P P 19 02 21.6 -0.1
baz=222
O02D Mt. Diablo Mer 84.81 46 IAmb IAmb 19 03 02.6
comp=Z,24nm,0.9s
WAT6 Susitna Watana 84.84 19 P P 19 02 21.7 -0.5
baz=223,SNR=10
E17K Hotham Inlet 84.86 12 P P 19 02 23.0 +1.0
baz=210,SNR=47
F18K Selawik 84.89 13 P P 19 02 22.2 +0.2
baz=212,SNR=30
M24K Tolsona, Glenn 85.00 20 P P 19 02 22.4 -0.4
baz=225
H20K Anotleneega Mo 85.06 15 P P 19 02 22.9 -0.1
baz=216,SNR=55
G19K Purcell Mounta 85.07 14 IAmb IAmb 19 02 26.1
comp=Z,56nm,0.9s
G19K Purcell Mounta 85.07 14 P P 19 02 23.2 +0.1
baz=214,SNR=81
RND Reindeer 85.10 18 IAmb IAmb 19 03 03.1
comp=Z,76nm,1.3s
CRQM Cirque 85.11 22 IAmb IAmb 19 03 12.3
comp=Z,25nm,1.0s
CRQE Cirque 85.13 22 P P 19 02 23.5 -0.1
baz=228
D17K Noatak River 85.17 11 P P 19 02 23.7 +0.2
baz=209,SNR=18
GOMU GeErMu 85.18 309 P P 19 02 24.1 -0.6
GOMU S SKSac 19 12 33.7 -4.7
GOMU pmax pmax
comp=Z,6.0nm,0.7s
GOMU L L
comp=Z,260nm,21.2s
GOMU L L
comp=Z,620nm,22.4s
GOMU L L
comp=Z,70µm,22.6s
N25K Chitina, Valde 85.18 21 P P 19 02 23.5 -0.3
baz=226,SNR=10
N02D Trinity Center 85.19 46 IAmb IAmb 19 03 04.5
comp=Z,72nm,1.8s
C16K Lisburne Hills 85.29 10 IAmb IAmb 19 03 11.6
comp=Z,110nm,1.9s
C16K Lisburne Hills 85.29 10 P P 19 02 24.2 +0.2
baz=206
DHY Denali Highway 85.31 19 IAmb IAmb 19 03 29.1
comp=Z,22nm,1.0s
DHY Denali Highway 85.31 19 P P 19 02 24.2 -0.3
baz=224
MCK McKinley 85.32 18 IAmb IAmb 19 03 04.0
comp=Z,59nm,1.0s
MCK McKinley 85.32 18 P P 19 02 23.7 -0.7
baz=222,SNR=16
VRDI Verde Repeater 85.32 22 IAmb IAmb 19 02 58.5
comp=Z,54nm,1.8s
GLB Gilahina Butte 85.34 21 P P 19 02 24.1 -0.5
E18K Tukpahlearik C 85.40 12 P P 19 02 25.3 +0.7
E18K IAmb IAmb 19 02 27.4
comp=Z,28nm,0.9s
E18K Tukpahlearik C 85.40 12 P P 19 02 24.6 0.0
baz=211,SNR=31
F19K Shaleruckik Mo 85.49 13 P P 19 02 25.4 +0.3
F19K IAmb IAmb 19 02 27.1
comp=Z,42nm,1.0s
F19K Shaleruckik Mo 85.49 13 P P 19 02 25.2 +0.1
baz=214,SNR=67
YBH Yreka Blue Hor 85.50 45 P P 19 02 26.6 +0.7
comp=Z,5.3nm,0.9s,baz=147,slow=1.9,SNR=8.8
YBH LR LR 19 34 36.8
comp=Z,302nm,20.2s,baz=246,slow=31
comp=Z,5.3nm,0.9s
RDOG Red Dog Mine 85.51 11 P P 19 02 25.1 -0.1
baz=209,SNR=5.8
HARP HAARP 85.55 20 P P 19 02 25.0 -0.5
baz=226
I21K Tanana 85.56 16 P P 19 02 25.6 +0.1
I21K IAmb IAmb 19 02 27.9
comp=Z,49nm,0.8s
I21K Tanana 85.56 16 P P 19 02 25.4 -0.1
baz=219,SNR=75
MCARA McCarthy VSAT 85.58 22 IAmb IAmb 19 03 42.2
comp=Z,35nm,1.2s
MCARA McCarthy VSAT 85.58 22 P P 19 02 25.2 -0.5
baz=228
AFDM Forest Hills D 85.60 48 P P 19 02 26.9 +0.5
H21K Melozitna Rive 85.72 15 IAmb IAmb 19 02 28.9
comp=Z,23nm,0.9s
H21K Melozitna Rive 85.72 15 P P 19 02 26.6 +0.3
baz=218,SNR=45
LSA Lhasa 85.73 302 IAmb IAmb 19 02 29.5
comp=Z,21nm,0.8s
PINM Pinnacle 85.76 23 P P 19 02 26.4 -0.3
baz=230
MLY Manley 85.78 17 IAmb IAmb 19 03 06.5
comp=Z,43nm,1.5s
MLY Manley 85.78 17 P P 19 02 26.2 -0.5
baz=220,SNR=13
C17K DeLong Mountai 85.83 10 P P 19 02 26.2 -0.6
baz=208,SNR=13
BARN Barnard Glacie 85.86 22 IAmb IAmb 19 03 16.2
comp=Z,23nm,0.9s
NEA2 Nenana 85.92 17 IAmb IAmb 19 03 39.9
comp=Z,100nm,1.8s
NEA2 Nenana 85.92 17 P P 19 02 26.2 -1.1
baz=222,SNR=12
SIT Sitka 85.94 27 P P 19 02 26.8 -0.7
baz=235
L04D Klamath Falls 85.98 45 IAmb IAmb 19 03 07.9
comp=Z,33nm,1.0s
HATC Hat Creek Radi 85.99 46 IAmb IAmb 19 03 08.2
comp=Z,73nm,1.2s
MWC Mount Wilson 86.01 53 IAmb IAmb 19 03 07.3
comp=Z,27nm,1.0s
CRAG Craig 86.06 29 P P 19 02 27.4 -0.8
baz=237
S31K Pelican 86.08 26 P P 19 02 27.6 -0.6
baz=234
WRH Wood River Hil 86.12 18 IAmb IAmb 19 03 20.4
comp=Z,24nm,0.8s
F20K Avaraart Lake 86.13 14 IAmb IAmb 19 02 31.0
comp=Z,26nm,0.9s
F20K Avaraart Lake 86.13 14 P P 19 02 28.5 +0.3
baz=216,SNR=47
E19K Redstone River 86.13 13 IAmb IAmb 19 02 30.6
comp=Z,36nm,0.8s
E19K Redstone River 86.13 13 P P 19 02 28.6 +0.3
baz=214
IRK Irkutsk 86.15 327 eP P 19 02 27.8 -0.9
IRK pmax pmax
comp=Z,25nm,1.0s
TLY Talaya 86.20 326 LR LR 19 40 59.7
comp=Z,254nm,20.0s,baz=118,slow=36
TLY Talaya 86.20 326 P P 19 02 29.0 -0.1
TLY IAmb IAmb 19 02 30.3
comp=Z,19nm,0.9s
TLY Talaya 86.20 326 ceP P 19 02 28.9 -0.1
TLY pmax pmax
comp=Z,31nm,1.1s
TLY Talaya 86.20 326 P P 19 02 29.1 +0.1
TLY Talaya 86.20 326 P P 19 02 28.5 -0.5
TLY pP pP 19 02 58.5 -2.3
O28M Mount Upton 86.21 23 P P 19 02 28.2 -1.0
baz=230,SNR=9.1
G21K Allakaket 86.22 15 IAmb IAmb 19 02 31.2
comp=Z,28nm,0.8s
G21K Allakaket 86.22 15 P P 19 02 28.6 -0.1
baz=218,SNR=48
I23K Minto, Yukon-K 86.25 17 IAmb IAmb 19 03 30.8
comp=Z,37nm,1.5s
I23K Minto, Yukon-K 86.25 17 P P 19 02 28.4 -0.5
baz=222,SNR=7.9
H22K Ishtalitna Cre 86.28 16 IAmb IAmb 19 03 09.9
comp=Z,74nm,1.5s
H22K Ishtalitna Cre 86.28 16 P P 19 02 29.2 +0.1
baz=220,SNR=31
M26K Nabesna, AK 86.28 21 P P 19 02 29.1 -0.1
baz=228,SNR=9.3
CCB Clear Creek Bu 86.33 18 IAmb IAmb 19 03 08.7
comp=Z,80nm,1.8s
K24K Donnelly Dome 86.34 19 IAmb IAmb 19 03 35.2
comp=Z,28nm,0.8s
K24K Donnelly Dome 86.34 19 P P 19 02 29.5 +0.1
baz=225,SNR=9.0
C18K Utukok River 86.34 11 P P 19 02 29.8 +0.4
C18K IAmb IAmb 19 02 31.3
comp=Z,31nm,0.9s
C18K Utukok River 86.34 11 P P 19 02 29.9 +0.6
baz=210,SNR=28
HDA Harding Lake 86.41 18 IAmb IAmb 19 03 10.2
comp=Z,42nm,0.9s
HDA Harding Lake 86.41 18 P P 19 02 29.8 +0.1
baz=224,SNR=31
U33K Whale Pass 86.42 29 P P 19 02 30.3 +0.5
baz=236
P29M Windy Craggy 86.45 25 P P 19 02 30.0 0.0
baz=232
COLA College 86.48 18 P P 19 02 32.0 +2.0
COLA College 86.48 18 ⇑iP P 19 02 30.2 +0.2
COLA pmax pmax
comp=Z,21nm,0.9s
COLA College 86.48 18 P P 19 02 29.8 -0.2
COLA College 86.48 18 P P 19 02 30.2 +0.2
S32K Killisnoo 86.51 27 P P 19 02 30.2 -0.1
baz=235
BELA Belgrano 2 86.52 175 P P 19 02 28.6 -1.6
O29M Mount Kennedy 86.54 24 P P 19 02 30.4 -0.1
baz=232
WAKR Walker 86.54 49 IAmb IAmb 19 03 11.2
comp=Z,31nm,1.1s
L26K Log Cabin Wild 86.58 20 P P 19 02 30.7 +0.1
baz=227
RIDG Independent Ri 86.59 19 IAmb IAmb 19 03 28.4
comp=Z,24nm,1.0s
RIDG Independent Ri 86.59 19 P P 19 02 30.1 -0.6
baz=226,SNR=13
M27K Edge Creek, AK 86.64 21 P P 19 02 30.4 -0.6
baz=228,SNR=9.4
H04D Lebanon 86.64 42 IAmb IAmb 19 03 45.6
comp=Z,78nm,1.9s
IL31 86.69 18 IAmb IAmb 19 03 10.7
comp=Z,20nm,0.9s
ILAR Eielson Array 86.69 18 P P 19 02 29.9 -1.1
comp=Z,16nm,0.8s,baz=238,slow=5.1,SNR=96
ILAR pP pP 19 03 02.6 +0.3
comp=Z,11nm,0.8s,baz=245,slow=5.2,SNR=4.9
ILAR S SKSac 19 12 50.2 +4.4
comp=Z,0.6nm,0.9s,baz=254,slow=12,SNR=5.8
ILAR PKKPbc PKKPdf 19 20 24.9 +2.8
comp=Z,0.4nm,0.4s,baz=349,slow=3.3,SNR=8.3
ILAR LR LR 19 34 30.4
comp=Z,1µm,21.8s,baz=218,slow=31
comp=Z,16nm,0.8s
ILAR Eielson Array 86.69 18 P P 19 02 29.4 -1.7
YUK8 Steele Glacier 86.70 23 P P 19 02 31.0 -0.5
baz=230,SNR=10
V35K Ketchikan 86.71 30 P P 19 02 30.4 -0.9
baz=238
YUK3 Moose Creek 86.76 22 P P 19 02 31.2 -0.6
baz=230
POKR Poker Plat Res 86.78 18 P P 19 02 30.5 -1.0
baz=223
F21K Alatna River 86.79 14 IAmb IAmb 19 02 33.9
comp=Z,18nm,0.8s
F21K Alatna River 86.79 14 P P 19 02 31.7 +0.2
baz=218,SNR=29
D19K Kuna River 86.81 12 IAmb IAmb 19 02 33.6
comp=Z,35nm,1.0s
D19K Kuna River 86.81 12 P P 19 02 32.0 +0.4
baz=213
BBB Bella Bella 86.90 34 P P 19 02 33.0 +0.7
comp=Z,7.5nm,0.9s,baz=85,slow=2.8,SNR=4.9
BBB LR LR 19 36 24.5
comp=Z,646nm,18.9s,baz=244,slow=32
comp=Z,7.5nm,0.9s
BBB Bella Bella 86.90 34 P P 19 02 33.5 +1.2
PLBC Pleasant Camp 86.91 25 P P 19 02 32.2 0.0
baz=234
CLC China Lake 86.93 52 IAmb IAmb 19 03 26.8
comp=Z,31nm,1.4s
WRAK Wrangell Islan 86.95 29 P P 19 02 32.1 -0.4
baz=237
R32K Eaglecrest 87.00 27 P P 19 02 31.9 -0.8
baz=235
CCCA Chr Cany lake 87.01 52 IAmb IAmb 19 03 40.1
comp=Z,41nm,1.2s
E20K Nigu River 87.01 13 P P 19 02 32.8 +0.1
baz=215,SNR=73
YUK6 Outpost Mounta 87.02 23 P P 19 02 32.5 -0.5
baz=232
SCRK Sand Creek 87.03 19 IAmb IAmb 19 03 25.7
comp=Z,23nm,1.0s
SCRK Sand Creek 87.03 19 P P 19 02 32.9 +0.1
baz=227,SNR=13
PAHR Pah Rah Range 87.03 48 IAmb IAmb 19 03 13.2
comp=Z,32nm,1.2s
BVCY Beaver Creek 87.03 21 P P 19 02 32.7 -0.2
baz=229
G22K Bettles 87.04 15 P P 19 02 33.1 +0.5
baz=220
J25K Salcha River, 87.04 18 IAmb IAmb 19 03 31.2
comp=Z,26nm,0.9s
J25K Salcha River, 87.04 18 P P 19 02 32.8 -0.1
baz=225,SNR=25
C19K Lookout Ridge 87.04 11 IAmb IAmb 19 02 35.1
comp=Z,30nm,0.9s
C19K Lookout Ridge 87.04 11 P P 19 02 33.4 +0.6
baz=212,SNR=18
PFO Pinyon Flats O 87.05 54 P P 19 02 34.0 +0.3
comp=Z,4.7nm,0.8s,baz=255,slow=5.9,SNR=9.8
PFO pP pwP 19 03 07.0 -1.9
comp=Z,10nm,1.0s,baz=267,slow=4.5,SNR=4.3
PFO LR LR 19 32 32.0
comp=Z,956nm,21.9s,baz=248,slow=29
comp=Z,4.7nm,0.8s
PFO Pinyon Flats O 87.05 54 P P 19 02 34.3 +0.6
PFO Pinyon Flats O 87.05 54 ⇑iP P 19 02 33.5 -0.2
PFO pmax pmax
comp=Z,23nm,1.6s
P30M Million Dollar 87.06 24 P P 19 02 32.4 -0.6
baz=233
L27K Beaver Creek, 87.12 21 P P 19 02 32.5 -0.7
baz=229,SNR=5.2
LHV Little Huntoon 87.13 49 IAmb IAmb 19 03 13.9
comp=Z,32nm,1.1s
K05A Summer Lake 87.14 44 IAmb IAmb 19 03 14.0
comp=Z,28nm,1.0s
YUK4 Talbot Arm 87.16 23 P P 19 02 33.5 -0.2
baz=232
H24K Noodor Dome 87.18 17 P P 19 02 33.7 +0.2
baz=223,SNR=5.1
DSP Deep Springs 87.20 50 IAmb IAmb 19 03 14.2
comp=Z,18nm,0.9s
G23K Bananza Creek 87.25 16 P P 19 02 34.9 +1.1
G23K IAmb IAmb 19 03 15.4
comp=Z,20nm,0.9s
G23K Bananza Creek 87.25 16 P P 19 02 33.8 -0.1

baz=221,SNR=28
HYT Haines Junctio 87.28 24 P P 19 02 33.6 -0.6
baz=232
D20K Etivluk River 87.30 12 IAmb IAmb 19 02 36.7
comp=Z,39nm,0.8s
D20K Etivluk River 87.30 12 P P 19 02 33.7 -0.2
baz=215
F22K John River 87.33 14 P P 19 02 34.5 +0.4
baz=219,SNR=28
SKAG Skagway 87.34 25 P P 19 02 33.8 -0.4
baz=234
NVAR Mina Array Bea 87.34 49 P P 19 02 35.4 +0.3
comp=Z,3.6nm,0.8s,baz=230,slow=7.6,SNR=13
NVAR pP **pP** 19 03 07.5 +1.1
comp=Z,4.3nm,0.7s,baz=231,slow=7.7,SNR=5.6
NVAR LR LR 19 33 01.2
comp=Z,364nm,21.1s,baz=260,slow=30
comp=Z,3.6nm,0.8s
NV11 Mina Array Sit 87.45 49 IAmb IAmb 19 03 15.3
comp=Z,19nm,1.0s
PINE Pine Mountain 87.53 43 IAmb IAmb 19 03 15.9
comp=Z,25nm,1.2s
BELC Belle Mtn. Jos 87.54 54 IAmb IAmb 19 03 15.2
comp=Z,29nm,1.0s
COLD Coldfoot 87.60 15 IAmb IAmb 19 03 38.0
comp=Z,22nm,1.0s
COLD Coldfoot 87.60 15 P P 19 02 36.0 +0.7
baz=221,SNR=33
PRP Porcupine Dome 87.63 18 P P 19 02 35.1 -0.6
baz=225,SNR=5.8
MOY Mondy 87.64 325 *e*P P 19 02 36.2 +0.1
MOY *e* 19 03 07.2
MOY pmax pmax
comp=Z,16nm,1.7s
E21K Killik River 87.65 13 IAmb IAmb 19 02 38.3
comp=Z,33nm,0.8s
E21K Killik River 87.65 13 P P 19 02 35.9 +0.2
baz=217,SNR=35
FURC Furnace Creek, 87.72 51 IAmb IAmb 19 03 30.4
comp=Z,45nm,1.5s
O30N Mendenhall 87.80 24 P P 19 02 36.2 -0.3
baz=234
N30M Aishikik Lake 87.82 23 P P 19 02 36.5 -0.2
baz=233
M29M Somme Creek 87.91 22 P P 19 02 36.6 -0.5
baz=232
G24K Hadweenzic Riv 87.93 16 IAmb IAmb 19 03 59.8
comp=Z,19nm,1.0s
G24K Hadweenzic Riv 87.93 16 P P 19 02 36.8 -0.2
baz=223,SNR=17
TPH Tonopah 88.01 50 IAmb IAmb 19 03 32.0
comp=Z,46nm,1.8s
WCT Wildcat Mounta 88.01 51 IAmb IAmb 19 03 32.1
comp=Z,38nm,1.5s
C21K Knifeblade Rid 88.05 13 P P 19 02 38.5 +1.1
baz=216,SNR=42
GLA Glamis 88.15 55 IAmb IAmb 19 03 17.9
comp=Z,27nm,1.1s
LON Longmire 88.15 41 IAmb IAmb 19 04 05.7
comp=Z,33nm,1.9s
IRM Iron Mountain 88.26 54 IAmb IAmb 19 03 33.4
comp=Z,42nm,1.4s
B20K Meade River 88.26 12 IAmb IAmb 19 03 35.2
comp=Z,23nm,1.1s
B20K Meade River 88.26 12 P P 19 02 38.6 +0.2
baz=214
S34M Telegraph Cree 88.31 28 P P 19 02 38.6 -0.3
baz=238
N31M Braeburn, Yuko 88.34 24 P P 19 02 39.0 -0.1
baz=234
TPNV Topopah Spring 88.34 51 IAmb IAmb 19 03 33.7
comp=Z,31nm,1.4s
G25K Bearman Lake 88.35 17 P P 19 02 39.3 +0.4
baz=224,SNR=9.5
BOK Bokaro 88.36 295 *e*P P 19 02 40.3 +0.3
Q32M Nakina River 88.36 27 P P 19 02 38.9 -0.5
baz=237
E23K Chandalar 88.38 15 IAmb IAmb 19 03 43.0
comp=Z,36nm,1.3s
E23K Chandalar 88.38 15 P P 19 02 39.6 +0.4
baz=221,SNR=8.6
A04D Lummi Island 88.41 38 IAmb IAmb 19 03 35.0
comp=Z,49nm,1.0s
F24K Squaw Lake 88.42 16 P P 19 02 39.0 -0.3
baz=223,SNR=15
L29M L29M 88.45 22 P P 19 02 38.8 -0.7
baz=232
B21K Ikpikpuk River 88.46 12 IAmb IAmb 19 03 41.7
comp=Z,44nm,1.1s
B21K Ikpikpuk River 88.46 12 P P 19 02 39.7 +0.4
baz=216,SNR=16
SYO Syowa Base 88.54 197 *i*P P 19 02 39.4 -0.5
SYO Syowa Base 88.54 197 ⇓*i*P P 19 02 42.3 +2.4
WVOR Wild Horse Val 88.57 45 P P 19 02 41.3 +0.6
I07A Izee 88.59 44 P P 19 02 41.5 +0.7
I07A IAmb IAmb 19 03 20.9
comp=Z,21nm,1.2s
DAWY Dawson 88.61 21 P P 19 02 40.5 +0.2
baz=231
M30M Minto, Yukon 88.61 23 P P 19 02 40.1 -0.2
baz=233
PALK Pallekele 88.63 278 LR LR 19 42 38.5
comp=Z,315nm,19.7s,baz=104,slow=36
PALK Pallekele 88.63 278 ⇓*i*P P 19 02 41.1 -0.4
PALK pmax pmax
comp=Z,43nm,1.5s
E24K Your Creek 88.67 15 P P 19 02 41.2 +0.6
E24K Your Creek 88.67 15 P P 19 02 40.8 +0.3
baz=222
EVN Everest 88.78 299 P P 19 02 43.0 +0.4
D23K Nanushuk River 88.81 14 IAmb IAmb 19 03 16.7
comp=Z,27nm,0.9s
D23K Nanushuk River 88.81 14 P P 19 02 41.3 +0.2
baz=220,SNR=34
TOLK Toolik Lake Re 88.83 14 P P 19 02 40.6 -0.6
baz=221,SNR=9.7
I27K Kandik River 88.88 19 P P 19 02 40.9 -0.6
baz=229
113A Mohawk Valley, 88.90 56 IAmb IAmb 19 03 35.5
comp=Z,26nm,1.4s
F25K Christian Rive 89.07 16 P P 19 02 42.2 -0.1
baz=225,SNR=8.6
DLBC Dease Lake 89.08 28 LR LR 19 35 42.4
comp=Z,387nm,20.7s,baz=226,slow=31
DLBC Dease Lake 89.08 28 P P 19 02 41.7 -0.9
baz=239
K29M Barlow Dome 89.11 21 P P 19 02 41.2 -1.5
baz=232
G26K Porcupine Rive 89.14 17 IAmb IAmb 19 03 44.3
comp=Z,37nm,1.1s
G26K Porcupine Rive 89.14 17 P P 19 02 41.4 -1.2
baz=227,SNR=30
KNGR Kungurtug, Tuv 89.14 323 ⇓*i*P P 19 02 43.2 0.0
KNGR pmax pmax
comp=Z,13nm,0.9s
R33M Jennings River 89.16 27 P P 19 02 41.9 -1.2
baz=238
LPIG La Paz 89.21 65 LR LR 19 32 51.7
comp=Z,396nm,21.5s,baz=247,slow=29
N32M Quiet Lake 89.22 25 P P 19 02 42.1 -1.1
baz=236
B22K Teshekpuk Lake 89.28 12 IAmb IAmb 19 02 46.4
comp=Z,29nm,0.9s
B22K Teshekpuk Lake 89.28 12 P P 19 02 42.5 -0.7
baz=218,SNR=6.7
M31M Drury Creek, Y 89.30 23 P P 19 02 43.1 -0.4
baz=235
I28M Miner Creek 89.31 19 P P 19 02 42.7 -0.9
baz=230
H27K Steamboat Moun 89.32 18 P P 19 02 43.3 -0.2
baz=229
D24K Happy Valley 89.39 14 IAmb IAmb 19 03 43.4
comp=Z,40nm,1.4s
D24K Happy Valley 89.39 14 P P 19 02 43.8 0.0
baz=222
E25K Arctic Village 89.46 16 P P 19 02 44.4 +0.3
baz=225,SNR=5.8
C23K Itkillik River 89.50 13 P P 19 02 46.0 +1.8
C23K IAmb IAmb 19 02 47.9
comp=Z,40nm,0.9s
C23K Itkillik River 89.50 13 P P 19 02 44.3 +0.1
baz=220,SNR=43
A22K Sinclair Lake 89.50 12 P P 19 02 44.2 0.0
baz=216
F26K Sheenjek River 89.55 17 P P 19 02 44.2 -0.4
baz=226
G27K Doyon Strip 89.66 18 P P 19 02 44.7 -0.5
baz=229

EPH Ephrata 89.78 41 IAmb IAmb 19 03 26.1
comp=Z,25nm,1.3s
E08A Dider Farm, El 89.79 42 IAmb IAmb 19 03 26.4
comp=Z,42nm,1.3s
C24K Franklin Bluff 89.84 14 IAmb IAmb 19 03 48.1
comp=Z,38nm,0.9s
C24K Franklin Bluff 89.84 14 P P 19 02 45.4 -0.4
baz=222,SNR=22
Y14A Wickenburg 89.87 55 IAmb IAmb 19 03 37.5
comp=Z,41nm,1.8s
J30M Hart River 89.97 21 P P 19 02 46.3 -0.5
baz=234
ELIB Princess Elisa 90.03 191 *d*P P 19 02 46.7 -0.4
D25K Kavik River 90.11 15 P P 19 02 46.7 -0.5
baz=224
TIXI Tiksi 90.18 349 P P 19 02 47.4 0.0
comp=Z,38nm,1.1s,baz=136,slow=11,SNR=5.6
TIXI LR LR 19 38 57.1
comp=Z,393nm,21.5s,baz=154,slow=33
comp=Z,38nm,1.1s
TIXI Tiksi 90.18 349 P P 19 02 48.0 +0.6
TIXI IAmb IAmb 19 02 49.2
comp=Z,31nm,0.9s
TIXI Tiksi 90.18 349 ⇓*i*P P 19 02 47.4 0.0
TIXI pmax pmax
comp=Z,49nm,1.3s
H29M Whitestone 90.30 19 P P 19 02 47.5 -0.6
baz=232
B08A Colville Reser 90.32 40 IAmb IAmb 19 03 34.4
comp=Z,58nm,1.9s
BMO Blue Mountains 90.34 43 IAmb IAmb 19 03 28.7
comp=Z,31nm,1.5s
I30M Mount Dempster 90.34 21 P P 19 02 48.0 -0.5
baz=234
ELK Elko 90.36 48 P P 19 02 49.8 +0.5
comp=Z,4.3nm,1.0s,baz=252,slow=6.4,SNR=11
ELK LR LR 19 38 59.6
comp=Z,433nm,18.9s,baz=241,slow=32
comp=Z,4.3nm,1.0s
E27K Coleen River 90.59 17 P P 19 02 48.0 -1.4
baz=229
CCUT Cedar City 90.72 51 IAmb IAmb 19 03 35.0
comp=Z,23nm,1.3s
MMPY Sheldon Lake, 90.74 24 P P 19 02 49.6 -0.7
baz=238
F10A Beach Ranch, E 90.79 42 IAmb IAmb 19 03 30.7
comp=Z,28nm,1.1s
G29M Pine Creek 90.83 19 P P 19 02 49.7 -0.8
baz=232
C26K Camden Bay 90.90 15 P P 19 02 50.5 -0.2
baz=226
EPYK Eagle Plains 90.92 20 P P 19 02 50.4 -0.6
baz=233
C27K Jago River 91.00 15 IAmb IAmb 19 02 55.8
comp=Z,8.4nm,0.7s
C27K Jago River 91.00 15 P P 19 02 51.0 -0.2
baz=227,SNR=9.5
TUC Tucson 91.17 57 P P 19 02 54.1 +1.1
U15A North Rim 91.19 53 IAmb IAmb 19 03 31.1
comp=Z,16nm,1.0s
X16A Lo Mia Camp, P 91.25 55 IAmb IAmb 19 03 45.0
comp=Z,12nm,1.0s
H31M Peel River 91.37 21 P P 19 02 52.3 -0.9
baz=235
G30M tAoh Zraii Nji 91.44 19 P P 19 02 52.8 -0.6
baz=234
E28M Babbage River 91.45 17 P P 19 02 53.3 -0.1
baz=231
PMSA Palmer Station 91.55 160 LR LR 19 41 44.6
comp=Z,227nm,18.0s,baz=222,slow=34
WUAZ Wupatki 91.63 54 IAmb IAmb 19 03 39.0
comp=Z,14nm,1.1s
NEW Newport 91.66 40 P P 19 02 56.0 +1.1
comp=Z,2.5nm,0.8s,baz=243,slow=6.9,SNR=3.2
comp=Z,2.5nm,0.8s
MTPU Mount Pierson 91.76 51 IAmb IAmb 19 03 40.4
comp=Z,13nm,1.0s
HLID Hailey 91.86 45 P P 19 02 56.8 +0.6
DUG Dugway, Tooele 91.94 49 P P 19 02 55.7 -0.8
BGU Big Grassy Mou 92.01 48 IAmb IAmb 19 03 41.2
comp=Z,22nm,1.6s
319A Douglas 92.13 58 IAmb IAmb 19 03 36.7
comp=Z,15nm,1.0s
NLU North Lily Min 92.41 49 IAmb IAmb 19 03 41.5
comp=Z,11nm,1.1s
HVU Hansel Valley 92.45 47 IAmb IAmb 19 03 42.4
comp=Z,54nm,1.8s
TROLL Troll, Antarti 92.67 185 ⇑P P 19 02 58.6 -0.7
comp=Z,1μm,0.5s
NVL N'lazarevskaya 92.86 188 *e*P P 19 02 59.0 -1.0
NVL *e**PP **pP** 19 03 30.1 -2.1
NVL *e*S **SKSac** 19 13 21.4 -0.5
NVL pmax pmax
comp=Z,11nm,0.8s
WMQ Urumqi 92.93 315 *e*P P 19 03 01.8 +0.9
WMQ pP pP 19 03 32.6 -0.4
WMQ sP sP 19 03 47.1 +1.0
WMQ SKS **SKSac** 19 13 21.2 -2.0
WMQ pmax pmax
comp=Z,25nm,1.3s
WMQ L L
comp=Z,380nm,21.5s
WMQ L L
comp=Z,580nm,21.5s
WMQ L L
comp=Z,320nm,23.8s
INK Inuvik 93.05 19 LR LR 19 38 51.4
comp=Z,882nm,21.8s,baz=235,slow=32
P17A Butcher Ranch, 93.25 50 IAmb IAmb 19 03 22.2
comp=Z,11nm,1.0s
HYB Hyderabad 93.26 287 *e*P P 19 03 02.7 -0.2
SNAA Sanae 93.35 183 ⇑P P 19 03 01.1 -1.3
comp=Z,354nm,0.9s
SNAA ⇓pP **pP** 19 03 33.9 -0.7
comp=Z,200nm,0.7s
SNAA Sanae 93.35 183 P P 19 03 01.4 -1.0
comp=Z,13nm,0.7s,baz=195,slow=6.4,SNR=46
comp=Z,13nm,0.7s
SNAA Sanae 93.35 183 *c*i*P P 19 03 01.1 -1.3
SNAA *i* *PP **pP** 19 03 33.2 -1.4
SNAA pmax pmax
comp=Z,41nm,1.1s
SNAA Sanae 93.35 183 P P 19 03 01.4 -1.0
VNA2 Neumayer--Watz 94.28 182 ⇑P P 19 03 05.4 -1.2
comp=Z,24nm,0.6s,baz=176,slow=4.6
VNA2 ⇓pP **pP** 19 03 38.4 0.0
comp=Z,21nm,0.6s,baz=150,slow=5.0
VNA2 Neumayer--Watz 94.28 182 P P 19 03 05.6 -1.0
VNA1 Neumayer--Stat 94.58 181 ⇑P P 19 03 06.8 -1.1
comp=Z,7.1nm,0.6s
DGZ Jazzator, Alta 94.87 320 *d*i*P P 19 03 09.2 -0.6
DGZ pmax pmax
comp=Z,17nm,0.9s
PDAR Pinedale Array 95.02 47 PP PP 19 07 02.4 +0.4
comp=Z,0.4nm,0.6s,baz=273,slow=10,SNR=4.6
PDAR PKKPbc **PKKPdf** 19 20 04.8 -2.1
comp=Z,0.3nm,0.3s,baz=83,slow=4.9,SNR=4.2
PDAR LR LR 19 42 01.4
comp=Z,207nm,18.6s,baz=262,slow=33
ANMO Albuquerque 95.35 55 P P 19 03 13.5 +1.1
comp=Z,0.7nm,0.6s,baz=146,slow=5.6,SNR=3.2
comp=Z,0.7nm,0.6s
ANMO Albuquerque 95.35 55 *c*e*P P 19 03 13.5 +1.1
ANMO pmax pmax
comp=Z,7.0nm,3.0s
ZSN Zaisan 95.87 317 *e*P P 19 03 13.9 -0.3
ZSN Zaisan 95.87 317 *e*P P 19 03 13.9 -0.3
USHA Ushuaia 96.06 151 LR LR 19 38 02.8
comp=Z,207nm,20.3s,baz=166,slow=30
TXAR Lajitas Array 96.30 61 P P 19 03 17.2 +0.5
comp=Z,0.9nm,0.9s,baz=226,slow=6.5,SNR=8.0
TXAR pP **pP** 19 03 48.8 +0.7
comp=Z,1.5nm,0.7s,baz=215,slow=6.0,SNR=5.9
TXAR PP **PP** 19 07 11.8 -0.2
comp=Z,2.9nm,1.1s,baz=248,slow=6.6,SNR=7.2
TXAR PKKPbc **PKKPdf** 19 20 03.5 -0.5
comp=Z,0.4nm,0.8s,baz=100,slow=4.3,SNR=4.4
TXAR LR LR 19 40 34.6
comp=Z,361nm,19.4s,baz=252,slow=32
comp=Z,0.9nm,0.9s
C36M Paulatuk 96.55 19 P P 19 03 16.1 -0.6
baz=245
MK31 Makanchi Array 97.40 316 *d*i*P P 19 03 20.8 -0.4
MKAR Makanchi Array 97.40 316 P P 19 03 20.9 -0.2
comp=Z,11nm,0.8s,baz=99,slow=5.8,SNR=110
MKAR pP **pP** 19 03 52.8 -0.4
comp=Z,12nm,0.8s,baz=92,slow=6.8,SNR=5.9

MKAR PKiKP **PKiKP** 19 07 55.7 +0.2
comp=Z,2.3nm,1.0s,baz=90,slow=2.4,SNR=4.0
MKAR LR LR 19 47 59.3
comp=Z,247nm,20.7s,baz=107,slow=36
comp=Z,11nm,0.8s
MKAR Makanchi Array 97.40 316 P P 19 03 20.8 -0.3
ZALV Zalesovo Beam 97.60 324 P P 19 03 20.4 -1.5
comp=Z,35nm,1.1s,baz=108,slow=4.8,SNR=48
ZALV LR LR 19 46 10.0
comp=Z,275nm,20.7s,baz=104,slow=34
comp=Z,35nm,1.1s
ZALV Zalesovo Beam 97.60 324 P P 19 03 20.9 -0.9
ZALV Zalesovo Beam 97.60 324 P P 19 03 20.9 -0.9
MAKZ Makanchi 97.62 316 P P 19 03 22.1 0.0
MAKZ Makanchi 97.62 316 P P 19 03 22.1 0.0
MAKZ pmax pmax
comp=Z,23nm,1.2s
MAKZ Makanchi 97.62 316 P P 19 03 21.9 -0.2
YKA Yellowknife Ar 97.69 27 P P 19 03 20.6 -1.4
comp=Z,4.2nm,0.9s,baz=254,slow=4.6,SNR=9.3
YKA LR LR 19 42 34.8
comp=Z,220nm,19.2s,baz=250,slow=32
comp=Z,4.2nm,0.9s
SHLS Shalkode 98.54 312 *e*P P 19 03 24.6 -1.9
SHLS Shalkode 98.54 312 *e*P P 19 03 24.6 -1.9
UZB Uzynbulak 98.85 312 *e*P P 19 03 26.9 -1.0
UZB Uzynbulak 98.85 312 *e*P P 19 03 27.0 -1.0
KPKS Kokpek 99.16 312 *e*P **Pdif** 19 03 28.6 -0.6
KPKS Kokpek 99.16 312 *e*P **Pdif** 19 03 28.6 -0.6
SATY Saty 99.27 312 *e*P **Pdif** 19 03 29.2 -0.6
SATY pmax pmax
comp=Z,16nm,1.6s
SATY Saty 99.27 312 *e*P **Pdif** 19 03 29.2 -0.6
comp=Z,16nm,1.6s
SEM Semipalatinsk 99.53 320 *e*P **Pdif** 19 03 29.9 -0.9
SEM Semipalatinsk 99.53 320 *e*P **Pdif** 19 03 30.0 -0.9
TDK Taldyqorghan 99.66 314 *e*P **Pdif** 19 03 30.8 -0.5
TDK Taldyqorghan 99.66 314 *e*P **Pdif** 19 03 30.8 -0.5
MDOK Medeo 100.27 312 *e*P **Pdif** 19 03 33.6 -0.6
MDOK Medeo 100.27 312 *e*P **Pdif** 19 03 33.6 -0.6
NRIK Noril'sk 100.29 339 P **Pdif** 19 03 32.5 -1.0
comp=Z,14nm,1.0s,baz=109,slow=4.7,SNR=19
NRIK Noril'sk 100.29 339 *c*i*P **Pdif** 19 03 33.2 -0.3
NRIK pmax pmax
comp=Z,33nm,1.3s
TNSS Tian-Shan 100.32 312 *e*P **Pdif** 19 03 33.8 -0.9
TNSS Tian-Shan 100.32 312 *e*P **Pdif** 19 03 33.9 -0.9
AAA Alma-Ata 100.37 312 *e*P **Pdif** 19 03 34.2 -0.4
AAA Alma-Ata 100.37 312 *e*P **Pdif** 19 03 34.2 -0.4
KURK Kurchatov 100.61 320 P **Pdif** 19 03 34.3 -1.0
KURBB Kurchatov Arra 100.64 320 P **Pdif** 19 03 34.3 -1.1
comp=Z,1.1nm,0.7s,baz=96,slow=5.1,SNR=8.6
KURBB PP **PKiKP** 19 07 54.4 -6.7
comp=Z,1.2nm,0.9s,baz=98,slow=5.9,SNR=4.0
KURBB PKKPbc **PKKPbc** 19 19 51.7 +0.5
comp=Z,0.3nm,0.7s,baz=289,slow=3.3,SNR=2.9
SGDS Sogindy 102.06 312 *e*P **Pdif** 19 03 41.6 -0.5
BTLS Baital 102.71 313 *e*P **Pdif** 19 03 44.8 0.0
BTLS Baital 102.71 313 *e*P **Pdif** 19 03 44.9 0.0
BRZS Berezniki 104.26 318 *e*P **Pdif** 19 03 51.3 -0.3
BRZS Berezniki 104.26 318 *e*Pdif **Pdif** 19 03 51.4 -0.3
DZA Taraz 104.37 311 *e*P **Pdif** 19 03 51.9 -0.4
DZA Taraz 104.37 311 *e*Pdif **Pdif** 19 03 52.0 -0.4
BRLS Boroldaу 105.47 311 *e*P **Pdif** 19 03 57.1 -0.1
BRLS Boroldaу 105.47 311 *e*Pdif **Pdif** 19 03 57.2 -0.1
CHM Chimkent 105.57 310 *e*P **Pdif** 19 03 57.1 -0.5
CHM Chimkent 105.57 310 *e*Pdif **Pdif** 19 03 57.2 -0.5
BVAR Borovoye Array 105.95 321 Pdiff **Pdif** 19 03 58.9 -0.2
comp=Z,4.1nm,1.0s,baz=101,slow=4.7,SNR=16
BVAR PKiKP **PKiKP** 19 08 10.5 -0.2
comp=Z,1.1nm,0.7s,baz=149,slow=2.3,SNR=4.5
ARTI Arti 112.80 325 *i* PKiKP **PKiKP** 19 08 23.3 -0.2
ARTI 19 09 11.8
ARTI 19 15 24.1
ARTI SP **PS** 19 18 55.2 +5.5
ARTI PS PKKPdf 19 20 00.1 +26
APA Apatity 119.60 341 ⇓*e*PKiKP **PKPdf** 19 08 35.3 -0.9
APA *e* 19 09 14.1
APA pmax pmax
comp=Z,4.0nm,1.4s
APA MLR MLR
comp=Z,789nm,24.5s
BELG Belogornoye 119.74 322 *i* PKiKP **PKPdf** 19 08 36.8 -0.1
BELG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 120.42 9 PKP **PKPdf** 19 08 37.9 -0.3
ARCES ARCESS Array B 120.47 345 PKP **PKPdf** 19 08 37.4 -0.5
comp=Z,2.9nm,0.3s,baz=79,slow=2.2,SNR=50
ARCES PKKPbc **PKKPab** 19 18 44.1 -1.0
comp=Z,1.8nm,0.8s,baz=180,slow=0.6,SNR=4.1
ARCES ARCESS Array B 120.47 345 **PKPdf** 19 08 37.6 -0.3
ARCES ARCESS Array B 120.47 345 PKiKP **PKPdf** 19 08 37.6 -0.3
KLMR Klimovskoe 120.90 333 *e*PKiKP **PKPdf** 19 08 37.0 -1.9
KLMR *e* 19 09 08.1
KLMR pmax pmax
comp=Z,29nm,1.4s
KLMR MLR MLR
comp=Z,540nm,16.0s
MAK Makhachkala 121.81 311 *e*P **Pdif** 19 05 12.7 +3.0
MAK *i* 19 08 40.4
MAK *e* 19 09 13.6
MAK *e* 19 10 12.7
MAK *e* 19 15 30.8
MAK *e*SS SS 19 26 37.7 -5.8
MAK *e*SSS SSS 19 31 20.5
MAK pmax pmax
comp=Z,172nm,1.5s
MAK MLR MLR
comp=Z,335nm,18.0s
AKT Akhty 121.87 310 *i* PKiKP **PKPdf** 19 08 41.5 -0.1
AKT *e* 19 10 16.0
AKT *e* 19 20 09.0
AKT pmax pmax
comp=Z,8.0nm,0.8s
SDV Santo Domingo 123.07 89 *e*P **PKPdf** 19 08 44.2 -0.5
VRH Novokhopyorsk 123.59 322 *e*PKiKP **PKPdf** 19 08 42.4 -2.0
VRH *e* 19 09 17.0
VRH pmax pmax
comp=Z,10.0nm,0.9s
MOS Moscow 124.09 328 *i* PKiKP **PKiKP** 19 08 45.9 +0.4
MOS *e* 19 09 19.9
MOS *e* 19 10 37.7
MOS *e*PPP PPP 19 13 16.8
LPSR Galich'ya Gora 124.70 324 *e*PKiKP **PKPdf** 19 08 44.6 -1.9
LPSR *e* 19 09 18.2
LPSR pmax pmax
comp=Z,20nm,1.0s
RAYN Ar Rayn 124.74 288 ⇑PKiKP **PKiKP** 19 08 47.8 0.0
VORR Voronezh 124.90 323 *e*PKiKP **PKPdf** 19 08 45.7 -1.2
VORR *e* 19 09 18.3
VORR pmax pmax
comp=Z,20nm,0.9s
OBN Obninsk 124.91 328 ⇓*e*PKiKP **PKPdf** 19 08 46.9 +0.1
OBN *i* 19 09 20.0
OBN *e* 19 15 44.6
OBN *e*SS SS 19 27 25.0 +3.3
OBN pmax pmax
comp=Z,33nm,1.4s
KBZ Khabaz 124.95 313 PKP **PKPdf** 19 08 46.9 -0.3
comp=Z,3.0nm,0.7s,baz=137,slow=1.7,SNR=10
KBZ Khabaz 124.95 313 ⇑*e*PKiKP **PKPdf** 19 08 46.9 -0.3
KBZ pmax pmax
comp=Z,4.0nm,0.8s
PTLB Pontes e Lacer 125.03 121 *e*P **PKPdf** 19 08 45.8 -2.4
KIV Kislovodsk 125.04 313 *i* PKiKP **PKiKP** 19 08 48.1 +0.2
KIV *e* 19 10 37.3
KIV *e*PS **PS** 19 20 40.3 0.0
KIV *e*SS SS 19 27 25.3 +0.7
KIV pmax pmax
comp=Z,6.0nm,1.1s
VSR Storozhevoye 125.09 323 *e*PKiKP **PKPdf** 19 08 45.8 -1.5
VSR *e* 19 09 18.9
VSR pmax pmax
comp=Z,9.0nm,0.9s
VORD Divnogorie 125.11 323 *e*PKiKP **PKPdf** 19 08 45.5 -1.8
VORD *e* 19 09 18.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
TEFE Tefe 125.36 105 *e*P **PKPdf** 19 08 48.5 -0.4
MAKGR Makgori 125.51 222 P **PKiKP** 19 08 49.7 +0.2
LBTB Lobatse 125.53 224 **PKiKP** 19 08 49.6 +0.2
LBTB Lobatse 125.53 224 PKiKP **PKiKP** 19 08 49.7 +0.2
LBTB Lobatse 125.53 224 P **PKiKP** 19 08 49.5 -0.1

FINES	**FINESS Array B**	**125.94 338**	PKP	**PKPdf**	**19 08 48.3**	**-0.3**	
	comp=Z,6.2nm,0.9s,baz=0.0,slow=0.4,SNR=3.5						
ERBR	**Yeremizino-Bor**	**126.09 316**	*i* PKIKP	**PKPdf**	**19 08 49.5**	**+0.1**	
ERBR			*e*		19 09 21.6		
ERBR			pmax	pmax			
	comp=Z,18nm,0.5s						
LABN	**Labinsk**	**126.23 315**	*i* PKIKP	**PKPdf**	**19 08 49.3**	**-0.4**	
LABN			*e*		19 09 21.5		
LABN			pmax	pmax			
	comp=Z,12nm,0.6s						
SKOMA	**Sekoma**	**126.97 223**	P	**PKiKP**	**19 08 52.6**	**+0.2**	
KIBK	**Kibwezi**	**126.97 255**	PKP	**PKPdf**	**19 08 52.2**	**+0.1**	
SOC	**Sochi**	**127.22 314**	*e*PKIKP	**PKiKP**	**19 08 52.5**	**+0.4**	
SOC			*e*		19 10 53.7		
SOC			*e*PPP	PPP	19 13 35.7		
SOC			*e*SS	SS	19 27 53.9	+2.4	
SOC			*e*SSS	SSS	19 32 30.8		
ANN	**Anapa**	**128.42 316**	*i* PKIKP	**PKPdf**	**19 08 52.9**	**-0.9**	
ANN			*e*		19 09 26.1		
ANN			pmax	pmax			
	comp=Z,10.0nm,1.0s						
MNK	**Minsk**	**129.53 331**	*i* PKP	**PKiKP**	**19 08 56.5**	**+0.1**	
	comp=E,2.0nm,0.8s						
MNK			*i* PKP	**PKiKP**	**19 08 56.5**	**+0.1**	
	comp=N,3.0nm,0.7s						
MNK			*i* PKP	**PKiKP**	**19 08 56.5**	**+0.1**	
	comp=Z,7.0nm,0.7s,baz=55						
MNK			*i* PKiKP	**PKPdf**	**19 08 57.9**	**+2.3**	
	comp=Z,8.0nm,0.9s						
MNK			*i* pPKP	**pPKPdf**	**19 09 30.9**	**+2.1**	
MNK			*i* sPKP	**sPKPdf**	**19 09 43.6**	**+2.1**	
MNK			*i* PP	**PP**	**19 11 08.4**	**+1.6**	
MNK			*i* SKP	**SKPdf**	**19 12 18.3**	**-1.1**	
MNK			*i* PKS	**PKSdf**	**19 12 33.0**	**+1.1**	
MNK			*i* PPP	PPP	19 13 56.2		
MNK			*i* SKS	**SKSdf**	**19 15 56.2**	**+0.7**	
MNK			*i* SS	**SS**	**19 28 22.6**	**+3.6**	
MNK			*i* SSS	SSS	19 33 58.9		
MNK			*i* LQ	LQ	19 54 12.2		
MNK			*i* LR	LR	19 59 25.0		
MNK			*i* LRM	MLR	20 05 03.7		
	comp=N,207nm,18.4s						
MNK			*i* LRM	MLR	20 07 15.9		
	comp=E,293nm,18.8s						
MNK	**Minsk**	**129.53 331**	*i* PKIKP	**PKiKP**	**19 08 56.5**	**+0.1**	
MNK			*i*		19 09 30.9		
MNK			*i*		19 09 43.6		
MNK			*i*		19 11 08.4		
MNK			*i* PPP	PPP	19 13 56.2		
MNK			*i*		19 15 56.2		
MNK			*i* SS	SS	19 28 22.5	+3.6	
MNK			pmax	pmax			
	comp=N,3.0nm,0.7s						
MNK			pmax	pmax			
	comp=Z,7.0nm,0.7s						
MNK			pmax	pmax			
	comp=E,2.0nm,0.8s						
MNK			pmax	pmax			
	comp=Z,8.0nm,0.9s						
MNK			MLR	MLR			
	comp=N,207nm,18.0s						
MNK			MLR	MLR			
	comp=E,293nm,19.0s						
MNK			MLR	MLR			
	comp=Z,362nm,20.0s						
LSZ	**Lusaka**	**129.70 235**	P	**PKiKP**	**19 08 58.4**	**+0.3**	
CLDB	**Colider**	**130.15 118**	*e*P	**PKPdf**	**19 08 55.4**	**-2.6**	
NB2	**NORSAR Subarra**	**130.84 345**	PKPdf	**PKPdf**	**19 08 57.4**	**-0.6**	
	comp=Z,2.7nm,0.9s,baz=39,slow=1.9						
NB2			SKPa		19 12 10.3		
	comp=Z,3.6nm,0.8s,baz=39,slow=4.4						
NB2			PKS	PKSdf	19 13 10.3	+36	
	comp=Z,106nm,1.4s,baz=41,slow=4.6						
NOA	**NORSAR Array B**	**130.84 345**	PKP	**PKPdf**	**19 08 57.8**	**-0.2**	
	comp=Z,2.3nm,0.9s,baz=53,slow=2.2,SNR=7.1						
NOA			PP	**PP**	**19 11 21.5**	**+6.6**	
	comp=Z,1.1nm,0.8s,baz=32,slow=5.8,SNR=3.3						
NOA			SKPbc	**SKPbc**	**19 12 10.7**	**0.0**	
	comp=Z,8.2nm,0.9s,baz=33,slow=4.3,SNR=8.1						
AK03	**Malin Array Si**	**130.93 326**	PKPdf	**PKPdf**	**19 08 57.9**	**-0.5**	
HFS	**Hagfors**	**130.94 343**	PKP	**PKPdf**	**19 08 57.4**	**-0.7**	
	comp=Z,4.9nm,0.9s,baz=114,slow=6.6,SNR=5.6						
HFS			SKPbc	**SKPab**	**19 12 11.2**	**-0.1**	
	comp=Z,2.4nm,0.5s,baz=64,slow=3.4,SNR=7.1						
AKASG	**Malin Array Be**	**130.94 326**	PKP	**PKPdf**	**19 08 58.3**	**-0.1**	
	comp=Z,1.5nm,0.6s,baz=52,slow=1.5,SNR=15						
AKASG			SKPbc	**SKPab**	**19 12 11.8**	**+0.1**	
	comp=Z,4.7nm,0.8s,baz=48,slow=4.4,SNR=7.6						
AKBB	**Malin Array Si**	**130.94 326**	⇑PKIKP	**PKiKP**	**19 08 59.3**	**0.0**	
AKBB			pmax	pmax			
	comp=Z,20nm,1.4s						
AKBB	**Malin Array Si**	**130.94 326**	PKPdf	**PKPdf**	**19 08 57.6**	**-0.8**	
GRTLG	**Ghanzi**	**130.96 223**	P	**PKiKP**	**19 09 00.3**	**-0.2**	
KIEV	**Kiev**	**130.96 326**	⇓P	**PKiKP**	**19 08 59.8**	**+0.4**	
KIEV	**Kiev**	**130.96 326**	⇓PKIKP	**PKiKP**	**19 08 59.8**	**+0.4**	
KIEV	**Kiev**	**130.96 326**	PKPdf	**PKPdf**	**19 08 57.9**	**-0.5**	
MI28	**Mi28,Pidlybu**	**131.66 327**	PKPdf	**PKPdf**	**19 08 58.3**	**-1.5**	
BAL3X	**Bal3x, Balta**	**132.12 322**	PKPdf	**PKPdf**	**19 09 00.2**	**-0.5**	
LUBAR	**Lubar, Ukraine**	**132.16 326**	PKPdf	**PKPdf**	**19 09 00.0**	**-0.8**	
RNPP9	**Sopachiv**	**132.31 328**	PKPdf	**PKPdf**	**19 09 00.7**	**-0.3**	
RNPP5	**Staryi Chortor**	**132.42 328**	PKPdf	**PKiKP**	**19 09 01.8**	**-0.5**	
KIRS	**Kirsehir-Merke**	**132.68 310**	⇓P	**PKPdf**	**19 09 02.2**	**0.0**	
BR131	**Keskin Array S**	**132.70 311**	⇑PKIKP	**PKPdf**	**19 09 02.6**	**+0.3**	
BRTR	**Keskin Array B**	**132.70 311**	PKhKP	PKPpre	19 08 50.5		
	comp=Z,0.3nm,0.5s,baz=48,slow=1.8,SNR=3.6						
BRTR			PKP	**PKPdf**	**19 09 01.9**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=165,slow=5.1,SNR=4.5						
BRTR			SKPbc	**SKPab**	**19 12 19.5**	**-0.3**	
	comp=Z,8.4nm,1.2s,baz=114,slow=3.0,SNR=7.0						
BRTR	**Keskin Array B**	**132.70 311**	PKIKP	**PKPdf**	**19 09 02.0**	**-0.3**	
SORM	**Soroca**	**132.75 323**	⇑P	**PKPdf**	**19 09 00.0**	**-1.9**	
SORM	**Soroca**	**132.75 323**	⇑PKIKP	**PKPdf**	**19 09 00.0**	**-1.9**	
MMAI	**Mount Meron Ar**	**132.98 301**	PKP	**PKPdf**	**19 09 02.9**	**-0.1**	
	comp=Z,0.6nm,0.3s,baz=181,slow=4.2,SNR=5.1						
KMPD	**K-Podol'skiy**	**133.60 325**	PKPdf	**PKPdf**	**19 09 02.4**	**-1.1**	
BDFB	**Brasilia**	**133.70 130**	SKPbc	**SKPbc**	**19 12 21.1**	**-1.2**	
	comp=Z,2.9nm,0.6s,baz=161,slow=2.9,SNR=4.8						
VLDR	**Vladesti**	**134.04 321**	⇑P	PKPpre	19 08 58.2		
TPGR	**Topolog**	**134.29 319**	⇓P	**PKiKP**	**19 09 06.6**	**+0.3**	
CFR	**Carcaliu**	**134.32 320**	⇑P	**PKPdf**	**19 09 04.2**	**-0.8**	
CFR	**Carcaliu**	**134.32 320**	⇑PKIKP	**PKPdf**	**19 09 04.2**	**-0.8**	
TESR	**Tescani**	**134.57 322**	⇑P	**PKPdf**	**19 09 06.0**	**+0.6**	
ONER	**Baraj Valea Uz**	**134.81 322**	⇑P	**PKiKP**	**19 09 06.8**	**-0.6**	
BURAR	**Bucovina Array**	**134.82 324**	⇑P	**PKiKP**	**19 09 08.0**	**+0.6**	
BURAR	**Bucovina Array**	**134.82 324**	⇑PKIKP	**PKiKP**	**19 09 08.0**	**+0.6**	
VRI	**Vrincioaia**	**134.85 321**	⇓P	**PKiKP**	**19 09 06.9**	**-0.6**	
VRI	**Vrincioaia**	**134.85 321**	⇓PKIKP	**PKiKP**	**19 09 06.9**	**-0.6**	
PLOR	**Plostina**	**134.91 321**	⇓P	PKPpre	19 09 02.9		
PLOR	**Plostina**	**134.91 321**	PKIKP	PKPpre	19 09 02.9		
OZR	**Gura Zlata**	**135.30 322**	⇓P	**PKPdf**	**19 09 05.1**	**-1.7**	
MLR	**Muntele Rosu**	**135.52 321**	⇑P	**PKPdf**	**19 09 05.2**	**-2.2**	
MLR	**Muntele Rosu**	**135.52 321**	⇑PKIKP	**PKPdf**	**19 09 05.2**	**-2.2**	
KOLS	**Kolonicke sedl**	**135.66 327**	*e*PKIKP	**PKiKP**	**19 09 09.9**	**+0.9**	
KOLS	**Kolonicke sedl**	**135.66 327**	*e*PKP	**PKiKP**	**19 09 09.8**	**+0.8**	
KOLS			*e*		19 13 29.5		
UZHM	**Uzhgorod**	**135.83 327**	PKPdf	**PKPdf**	**19 09 07.7**	**0.0**	
VOIR		**136.08 322**	⇓P	PKPpre	19 09 00.6		
VOIR		**136.08 322**	⇓PKHKP	PKPpre	19 09 00.6		
ARR	**Arges**	**136.37 322**	⇓P	PKPpre	19 09 02.4		
LOT	**Lotru**	**136.84 322**	⇑P	**PKPdf**	**19 09 08.7**	**-1.1**	
STEB	**Steborice**	**137.23 331**	*e*PKPpre	PKPpre	19 09 05.7		
PLVB	**Pleven**	**137.40 319**	⇑P	PKPpre	19 09 03.3		
MORC	**Moravsky Berou**	**137.44 331**	⇓P	PKPpre	19 09 05.1		
MORC	**Moravsky Berou**	**137.44 331**	⇓PKIKP	PKPpre	19 09 05.1		
MORC	**Moravsky Berou**	**137.44 331**	*e*PKP	PKPpre	19 09 05.2		
GZR	**Gura Zlata**	**137.45 323**	⇑P	**PKPdf**	**19 09 10.9**	**0.0**	
GZR	**Gura Zlata**	**137.45 323**	⇑PKIKP	**PKPdf**	**19 09 10.9**	**0.0**	
OSTC	**Ostas**	**137.49 333**	AMS	AMS	20 09 50.0		
	comp=Z,600nm,19.1s						
PSZ	**Piszkesteto**	**137.53 328**	⇑P	**PKPdf**	**19 09 11.4**	**+0.4**	
PSZ	**Piszkesteto**	**137.53 328**	⇑PKIKP	**PKPdf**	**19 09 11.4**	**+0.4**	
SIRR	**Siria**	**137.59 325**	⇓P	**PKPdf**	**19 09 11.9**	**+0.8**	
DPC	**Dobruska-Polom**	**137.59 333**	AMS	AMS	20 10 00.0		
	comp=Z,500nm,26.5s						
HERR	**Herculane**	**137.95 322**	⇑P	PKPpre	19 09 00.7		
BZS	**Buzias**	**138.00 324**	⇓P	PKPpre	19 09 03.1		
BZS	**Buzias**	**138.00 324**	⇓PKHKP	PKPpre	19 09 03.1		
JAVC	**Velka Javorina**	**138.02 330**	*e*PKP	**PKPdf**	**19 09 04.5**	**-7.3**	
VRAC	**Vranov**	**138.21 331**	*e*PKP	**PKPdf**	**19 09 12.2**	**+0.1**	
VRAC			*ep*PKP	**pPKPdf**	**19 09 45.1**	**-0.2**	
BRG	**Berggiesshubel**	**138.22 335**	Amp		19 09 08.1		
	comp=Z,1.7nm,0.7s						
BRG	**Berggiesshubel**	**138.22 335**	P	**PKPdf**	**19 09 10.9**	**-1.2**	
BRG			Amp		19 09 16.6		
	comp=Z,9.8nm,1.1s						
BRG	**Berggiesshubel**	**138.22 335**	*e*PKP	PKPpre	19 09 03.5		
CLL	**Collm**	**138.27 336**	*i* PKIKP	**PKPdf**	**19 09 11.9**	**-0.2**	
CLL			*i*		19 09 46.3		
CLL			pmax	pmax			
	comp=Z,5.0nm,0.7s						
CLL	**Collm**	**138.27 336**	*i* PKPdf	**PKPdf**	**19 09 11.9**	**-0.2**	
	comp=Z,5.0nm,0.7s						
CLL			*i* PKiKP	**PKiKP**	**19 09 14.5**	**+0.3**	
	comp=Z,9.0nm,1.1s						
CLL			*i* pPKiKP	**pPKPdf**	**19 09 46.3**	**+0.9**	
CLL			*es*PKiKP	**sPKPdf**	**19 09 58.0**	**-0.1**	
CLL			*e*PP	**PP**	**19 12 03.0**	**+0.9**	
CLL			*i* SKPbc	**SKPbc**	**19 12 35.9**	**+0.9**	
CLL			*i* x	x	19 12 41.1		
	comp=Z,55nm,2.0s						
CLL			*i* PKSdf	**PKSdf**	**19 12 48.7**	**+0.7**	
CLL			*es*PKSdf		19 13 35.0		
CLL			*es*PPP		19 15 43.0		
CLL			*e*SKSac	**SKSac**	**19 16 18.0**	**+2.7**	
CLL			*e*(pSKSdf)		19 16 54.0		
CLL			*e*SKKSac	**SKKSac**	**19 18 48.0**	**+3.4**	
CLL			*e*Sdif	**Sdif**	**19 20 18.0**	**+2.3**	
CLL			*e*PSKS		19 22 06.0		
CLL			*e*PPS	PPS	19 24 18.0		
CLL			*ex*	x	19 25 59.0		
CLL			*e*SS	**SS**	**19 30 06.0**	**+2.2**	
CLL			*ex*	x	19 32 54.0		
CLL			*e*SSS	SSS	19 35 18.0		
CLL			*e*SSSS		19 39 18.0		
CLL			AMS	AMS	20 09 00.0		
	comp=Z,500nm,20.3s						
MDVR	**Moldovita**	**138.42 323**	⇓P	PKPpre	19 09 02.8		
KRUC	**Moravsky**	**138.48 331**	*e*PKP	**PKPdf**	**19 09 09.9**	**-2.7**	
MODS	**Modra-Piesok**	**138.54 330**	*e*PKIKP	**PKiKP**	**19 09 14.3**	**-0.6**	
MODS	**Modra-Piesok**	**138.54 330**	*e*PKP	**PKiKP**	**19 09 14.3**	**-0.6**	
MODS			*e*		19 13 38.7		
EKA	**Eskdalemuir Ar**	**139.02 352**	PKhKP	PKPpre	19 09 06.0		
	comp=Z,1.3nm,0.5s,baz=2.0,slow=2.8,SNR=5.1						
BOVS	**Bovan**	**139.07 321**	⇑P	PKPpre	19 09 01.8		
ZVC	**Zvikov**	**139.20 333**	*e*PKPpre	PKPpre	19 09 05.8		
ZVC			*e*SKP		19 12 26.9		
ZVC			*ex*	x	19 25 09.3		
MORH	**Mrgy, Hungar**	**139.27 326**	⇓P	PKPpre	19 09 06.2		
NKC	**Novy Kostel**	**139.33 335**	*e*PKHKP	PKPpre	19 09 07.4		
NKC	**Novy Kostel**	**139.33 335**	*e*PKPpre	PKPpre	19 09 07.4		
RONA	**Rosalia, Austr**	**139.48 330**	*i* PKP	**PKPdf**	**19 09 08.3**	**-6.3**	
	comp=Z,1.9nm,0.6s						
RONA			*ep*PKiKP	**pPKiKP**	**19 09 50.8**	**+0.7**	
	comp=Z,5.5nm,1.1s						
CONA	**Conrad Observa**	**139.53 330**	*i* PKP	**PKPdf**	**19 09 08.4**	**-6.2**	
	comp=Z,3.1nm,0.8s						
CONA			*ep*PKiKP	**pPKiKP**	**19 09 50.8**	**+0.7**	
	comp=Z,12nm,1.4s						
KHC	**Kasperske Hory**	**139.70 333**	*e*PKHKP	PKPpre	19 09 07.4		
KHC			MLR	MLR			
	comp=Z,400nm,18.3s						
KHC	**Kasperske Hory**	**139.70 333**	*e*PKPpre	PKPpre	19 09 07.4		
KHC			*ex*	x	19 09 50.0		
KHC			*e*SKP	**SKPdf**	**19 12 38.5**	**+0.3**	
KHC			*ex*	x	19 25 11.7		
KHC			*ex*	x	19 30 43.4		
KHC			AMS	AMS	19 59 10.0		
	comp=Z,400nm,18.3s						
GERES	**GERESS Array B**	**139.86 333**	PKhKP	PKPpre	19 09 09.4		
	comp=Z,2.2nm,0.7s,baz=34,slow=2.4,SNR=20						
GERES			SKPbc	**SKPbc**	**19 12 39.5**	**-0.2**	
	comp=Z,1.1nm,0.8s,baz=3.8,slow=4.0,SNR=3.5						
GERES			SKKPbc	**SKKPbc**	**19 21 12.2**	**-2.9**	
	comp=Z,0.5nm,0.7s,baz=259,slow=3.5,SNR=4.5						
GERES	**GERESS Array B**	**139.86 333**	PKPdf	**PKPdf**	**19 09 11.5**	**-3.8**	
GERES	**GERESS Array B**	**139.86 333**	PKIKP	**PKPdf**	**19 09 11.5**	**-3.8**	
ARSA	**Arzberg**	**140.17 330**	*i* PKP	**PKPdf**	**19 09 09.3**	**-6.4**	
	comp=Z,0.2nm,0.2s						
ARSA			*ep*PKiKP	**pPKiKP**	**19 09 52.4**	**+1.0**	
	comp=Z,5.5nm,1.3s						
MOA	**Molln**	**140.34 331**	*e*PKP	**PKPdf**	**19 09 09.6**	**-6.4**	
	comp=Z,0.3nm,0.2s						
SESA	**Seetaler Alpe,**	**140.73 330**	*e*PKP	**PKPdf**	**19 09 10.7**	**-6.4**	
	comp=Z,5.0nm,0.8s						
BIOA	**Bad Ischl, Aus**	**140.74 332**	*i* PKP	**PKPdf**	**19 09 10.8**	**-6.0**	
	comp=Z,0.6nm,0.2s						
BIOA			*ep*PKiKP	**pPKiKP**	**19 09 51.4**	**-1.2**	
	comp=Z,3.1nm,0.8s						
SOKA	**Soboth**	**140.81 330**	*e*PKP	**PKPdf**	**19 09 11.0**	**-6.0**	
	comp=Z,1.0nm,0.4s						
SOKA			*ep*PKiKP	**pPKiKP**	**19 09 51.8**	**-1.0**	
	comp=Z,4.6nm,1.0s						
KBA	**Koelnbreinsper**	**141.33 331**	*i* PKP	**PKPdf**	**19 09 12.5**	**-5.5**	
	comp=Z,0.8nm,0.2s						
KBA			*ep*PKP	**pPKPdf**	**19 09 51.6**	**+0.3**	
	comp=Z,2.4nm,0.5s						
MEM	**Membach**	**141.34 341**	*d*PKPdf	**PKPdf**	**19 09 13.7**	**-4.0**	
LESA	**Schwarzleotal**	**141.38 332**	*e*PKP	**PKPdf**	**19 09 13.4**	**-4.6**	
	comp=Z,2.3nm,0.3s,SNR=8.1						
LESA			*ep*PKiKP	**pPKiKP**	**19 09 55.0**	**+1.1**	
	comp=Z,17nm,1.5s						
MYKA	**Terra Mystica**	**141.52 331**	*e*PKP	**PKPdf**	**19 09 13.6**	**-4.7**	
	comp=Z,2.6nm,0.5s						
MYKA			*ep*PKiKP	**pPKiKP**	**19 09 54.5**	**+0.3**	
	comp=Z,5.2nm,1.0s						
WATA	**Walderalm**	**141.93 333**	*e*PKP	**PKPdf**	**19 09 14.4**	**-4.7**	
	comp=Z,1.8nm,0.4s,SNR=7.7						
WATA			*ep*PKiKP	**pPKiKP**	**19 09 54.5**	**-0.7**	
	comp=Z,21nm,1.4s						
ABTA	**Abfaltersbach**	**141.96 332**	*e*PKP	**PKPdf**	**19 09 14.2**	**-4.9**	
	comp=Z,0.3nm,0.1s,SNR=8.1						
ABTA			*ep*PKiKP	**pPKiKP**	**19 09 55.3**	**+0.1**	
	comp=Z,6.4nm,0.7s						
WTTA	**Wattenberg**	**141.96 333**	*e*PKP	**PKPdf**	**19 09 15.0**	**-4.2**	
	comp=Z,2.0nm,0.3s,SNR=11						
WTTA			*ep*PKiKP	**pPKiKP**	**19 09 54.3**	**-1.0**	
	comp=Z,17nm,1.5s						
BMRD	**Maredsous**	**141.99 342**	*d*PKP	**PKiKP**	**19 09 20.6**	**-1.2**	
BMRD			*dp*PKP	**pPKPdf**	**19 09 53.8**	**+1.6**	
WLF	**Walferdange**	**142.11 340**	PKP	**PKPdf**	**19 09 15.8**	**-3.4**	
MOTA	**Moosalm**	**142.13 334**	*e*PKP	**PKPdf**	**19 09 15.2**	**-4.3**	
	comp=Z,1.5nm,0.3s,SNR=16						
RETA	**Reutte**	**142.17 334**	*e*PKP	**PKPdf**	**19 09 15.4**	**-4.0**	
	comp=Z,10nm,0.8s,SNR=6.8						
SQTA	**Santa Quirin**	**142.18 333**	*e*PKP	**PKPdf**	**19 09 15.9**	**-3.6**	
	comp=Z,2.3nm,0.4s,SNR=15						
SQTA			*ep*PKiKP	**pPKPdf**	**19 09 53.9**	**+1.1**	
	comp=Z,27nm,1.5s						
DOU	**Dourbes**	**142.23 342**	*d*PKPdf	**PKPdf**	**19 09 16.8**	**-2.5**	
BFO	**Black Forest**	**142.47 337**		**PKPdf**	**19 09 18.2**	**-1.7**	
BFO	**Black Forest**	**142.47 337**	PKIKP	**PKPdf**	**19 09 18.2**	**-1.7**	
FETA	**Feichten**	**142.54 333**	*i* PKP	**PKPdf**	**19 09 17.0**	**-3.2**	
	comp=Z,18nm,0.8s,SNR=26						
DAVA	**Damuels**	**142.69 335**	*e*PKP	**PKPdf**	**19 09 17.3**	**-3.1**	
	comp=Z,10.0nm,0.9s,SNR=9.6						
SALO	**Salr**	**143.72 332**		**PKPdf**	**19 09 21.2**	**-1.0**	
MATE	**Matera**	**143.83 321**	⇓P	PKPab	19 09 18.6	-1.1	
AQU	**L'Aquila**	**144.65 326**	PKP	**PKPab**	**19 09 22.7**	**-0.1**	
TIP	**Timpagrande**	**144.65 319**	⇓P	**PKPdf**	**19 09 23.9**	**-0.2**	
TIP	**Timpagrande**	**144.65 319**		**PKPdf**	**19 09 23.8**	**-0.2**	
VLC	**Villacollemand**	**144.89 331**	PKP	PKPbc	19 09 22.6	-1.1	
NBPS	**Pedro II - PI**	**145.61 122**	*e*P	**PKPdf**	**19 09 24.1**	**-2.3**	
CEL	**Celeste**	**145.73 318**		**PKPab**	**19 09 26.9**	**-0.1**	
NBMA	**Muriti-CE**	**145.92 129**	*e*P	**PKPdf**	**19 09 25.2**	**-1.7**	
SSB	**Saint Sauveur**	**146.44 338**		**PKPab**	**19 09 29.6**	**+0.1**	
SSB	**Saint Sauveur**	**146.44 338**	PKP2	**PKPab**	**19 09 29.6**	**+0.1**	
RAFF	**Raffo Rosso**	**147.32 318**		**PKPab**	**19 09 33.0**	**-0.2**	
NBMO	**Morrinhos-CE**	**147.37 122**	*e*P	**PKPdf**	**19 09 29.1**	**-0.2**	
RCBR	**Riachuelo**	**149.07 130**	*e*P	**PKPdf**	**19 09 30.6**	**-1.6**	
EJON	**La Jonquera**	**149.49 337**	PKP	**PKPbc**	**19 09 34.7**	**-1.9**	
MAHO	**Mahon**	**151.05 332**	PKP	**PKPdf**	**19 09 37.2**	**+2.8**	
KEST	**Kesra**	**151.42 320**	PKPbc	**PKiKP**	**19 09 42.1**	**+0.3**	
	comp=Z,23nm,0.7s,baz=141,slow=3.9,SNR=22						
KEST			*ep*PKPbc	**pPKPbc**	**19 10 14.9**	**+0.2**	
	comp=Z,56nm,1.0s,baz=336,slow=4.5,SNR=6.7						
ETOS	**Mallorca**	**151.79 334**	PKP	**PKPbc**	**19 09 42.0**	**0.0**	
ECAL	**Calabor**	**152.60 350**	PKP	**PKPbc**	**19 09 43.6**	**-0.3**	
PBRG	**Braganca**	**152.74 350**	*e*PKPdf	**PKiKP**	**19 09 46.1**	**+1.7**	
PBRG			*e*PKPab	**PKPab**	**19 09 56.6**	**+1.3**	
PGAV	**Gavieira, Arco**	**152.80 353**	*e*PKPdf	**PKiKP**	**19 09 46.2**	**+1.7**	
PGAV			*i* tx	tx	19 10 18.9		
POLO	**Lamas de Olo**	**153.32 352**	*e*PKPdf	**PKiKP**	**19 09 45.9**	**+0.3**	
POLO			*e*PKPab	**PKPab**	**19 09 59.9**	**+2.1**	
ECHE	**Chera**	**153.38 340**	PKP	**PKPdf**	**19 09 39.6**	**+1.7**	
PVRL	**Vila Real**	**153.40 352**	*e*PKPdf	**PKiKP**	**19 09 46.6**	**+0.9**	
PVRL			*e*PKPab	**PKPab**	**19 09 59.7**	**+1.7**	
MVO	**Moncorvo**	**153.41 350**	*e*PKPdf	**PKiKP**	**19 09 47.9**	**+2.1**	
MVO			*e*PKPab	**PKPab**	**19 09 59.9**	**+1.8**	
MVO			*i* tx	tx	19 10 21.5		
UCM	**Universidad Co**	**153.41 344**	PKP	**PKPdf**	**19 09 38.9**	**+0.9**	
PVIS	**Viseu**	**153.98 352**	*e*PKPab	**PKPab**	**19 10 01.9**	**+1.3**	
ESDC	**Sonseca Array**	**154.20 344**	PKP	**PKPdf**	**19 09 39.3**	**+0.2**	
	comp=Z,0.9nm,1.0s,baz=321,slow=3.8,SNR=4.7						
ESDC			PKPbc	**PKiKP**	**19 09 48.0**	**+0.6**	
	comp=Z,3.0nm,1.1s,baz=14,slow=2.1,SNR=9.7						
ESDC			PKPab	**PKPab**	**19 10 02.5**	**+0.9**	
	comp=Z,16nm,1.1s,baz=17,slow=3.0,SNR=22						
ESDC			PP	**PP**	**19 13 33.8**	**-2.0**	
	comp=Z,5.1nm,1.0s,baz=13,slow=6.6,SNR=6.6						
MTE	**Manteigas**	**154.24 351**	*e*PKPab	**PKPab**	**19 10 03.3**	**+1.7**	
PCAS	**Casmilo, Conde**	**154.71 353**	*e*PKPab	**PKPab**	**19 10 05.1**	**+1.5**	
PCBR	**Castelo Branco**	**154.77 351**	*e*PKPab	**PKPab**	**19 10 05.4**	**+1.5**	
PCBR			*i* tx	tx	19 10 40.7		
PSARD	**Sardoal**	**155.11 352**	*e*PKPab	**PKPab**	**19 10 07.2**	**+1.8**	
PMRV	**Marv??o**	**155.16 350**	*e*PKPdf	PKPdf	19 09 52.2	+12	
PMRV			*e*PKPab	**PKPab**	**19 10 07.7**	**+2.2**	
PMTG	**Montargil**	**155.64 352**	*e*PKPab	**PKPab**	**19 10 09.0**	**+1.4**	
PESTR	**Estremoz**	**155.74 350**	*e*PKPab	**PKPab**	**19 10 08.7**	**+0.6**	
PARRA	**Arraiolos**	**155.86 351**	*e*PKPab	**PKPab**	**19 10 10.1**	**+1.5**	
EVO	**Evora**	**156.14 351**	*e*PKPab	**PKPab**	**19 10 11.6**	**+1.8**	
MOE	**Montemor**	**156.19 352**	*e*PKPab	**PKPab**	**19 10 11.8**	**+1.8**	
PBAR	**Barrancos**	**156.32 349**	*e*PKPab	**PKPab**	**19 10 11.5**	**+1.0**	
PBEJ	**Beja**	**156.61 350**	*e*PKPab	**PKPab**	**19 10 13.4**	**+1.6**	
PBEJ			*i* tx	tx	19 10 45.8		
PLOUS	**Minas do Lousa**	**156.69 352**	*e*PKPab	**PKPab**	**19 10 14.9**	**+2.8**	
MESJ	**Messejana**	**156.85 351**	*e*PKPab	**PKPab**	**19 10 12.5**	**-0.4**	
MESJ	**Messejana**	**156.85 351**	*e*PKPab	**PKPab**	**19 10 14.5**	**+1.7**	
PCVE	**Castro Verde**	**157.02 351**	*e*PKPab	**PKPab**	**19 10 15.6**	**+2.0**	
PVAQ	**Vaqueiros**	**157.19 350**	*e*PKPab	**PKPab**	**19 10 15.9**	**+1.6**	
PTEO	**Sao Teotonio**	**157.21 352**	*e*PKPab	**PKPab**	**19 10 16.9**	**+2.5**	
MORF	**Marmelete**	**157.43 352**	*e*PKPab	**PKPab**	**19 10 14.8**	**-0.6**	
MORF	**Marmelete**	**157.43 352**	*e*PKPab	**PKPab**	**19 10 17.1**	**+1.7**	
PFVI	**Vila Bisbo**	**157.63 352**	*e*PKPab	**PKPab**	**19 10 18.3**	**+2.1**	
TORD	**Torodi Ar. Bea**	**165.97 265**	PKP	**PKPdf**	**19 09 51.6**	**-1.2**	
	comp=Z,4.6nm,0.9s,baz=94,slow=1.3,SNR=21						
TORD			PKPab	**PKPab**	**19 10 53.0**	**-0.6**	
	comp=Z,8.8nm,0.8s,baz=97,slow=4.6,SNR=11						
TORD			pPKPab	**pPKPab**	**19 11 25.9**	**-0.1**	
	comp=Z,8.3nm,1.0s,baz=85,slow=3.3,SNR=3.4						
DBIC	**Dimbokro**	**168.78 224**

MLPR						Sn	19 27 00.5	+1.4
MLPR	**Magueyes Islan**	**1.87**	**233**	*i*	P	**Pn**	**19 26 35.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.90**	**235**			**Pn**	**19 26 36.4**	**+0.7**
CRPR						Sn	19 27 01.0	+1.3
CRPR	**Cabo Rojo, PR**	**1.90**	**235**	⇑	*i* P	**Pn**	**19 26 36.4**	**+0.7**
IDE	**Isla Desecheo**	**2.03**	**250**			**Pn**	**19 26 36.8**	**-0.7**
IDE					*e*S	Sn	19 27 03.8	+0.9
IDE	**Isla Desecheo**	**2.03**	**250**	⇑	*i* P	**Pn**	**19 26 36.8**	**-0.7**
IDE					*e*S	Sn	19 27 03.8	+0.9
PCDR	**Punta Cana, DR**	**2.82**	**258**			**Pn**	**19 26 47.9**	**-0.5**
PCDR						Sn	19 27 22.3	-0.1
PCDR					IAML		19 27 27.1	
	comp=N,165nm,2.0s							
PCDR	**Punta Cana, DR**	**2.82**	**258**	⇑	*i* P	**Pn**	**19 26 47.9**	**-0.5**
PCDR					*e*S	Sn	19 27 22.3	-0.1
SKI	**Saint Kitts**	**3.14**	**124**		*e*P	**Pn**	**19 26 52.6**	**-0.2**
SKI					*e*S	Sg	19 27 50.1	+5.9
DR12	**Loma Pena Alta**	**3.71**	**266**		Pn	**Pn**	**19 26 59.5**	**-1.3**
ANWB	**Willy Bob**	**3.78**	**112**		*e*P	**Pn**	**19 26 58.6**	**-3.1**
ANWB					*e*S	Sn	19 27 50.1	+3.8
MBWH	**Windy Hill**	**3.91**	**126**		*e*P	**Pn**	**19 27 02.2**	**-1.3**
MBWH					*e*S	Sn	19 27 45.0	-4.5
DSLB	**Salisbury**	**5.32**	**133**		*e*P	Pn	19 27 28.0	+5.1
DSLB					*e*S	**Sn**	**19 28 22.3**	**-2.0**
SDDR	**Presa de Saban**	**5.50**	**270**			**Pn**	**19 27 25.1**	**-0.3**
SDDR	**Presa de Saban**	**5.50**	**270**		*e*P	**Pn**	**19 27 25.0**	**-0.3**

JMA ***05*** *19:59:51.7±0.2, 43°.3N±0°.5×145°.6E±0°.8, h71km±1km, MV3.1/36, NEMURO REGION*
SKHL ***05*** *19:59:52.1±0.4, 43°.30N×145°.60E, h72km±4km, mb4.7/3*
ISC 05 19:59:52.7±1.6, 43°.35N±0°.06×145°.53E±0°.05, h64km±9km, n15, σ0s48/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NMR	**Nemuro--Hokkai**	**0.15**	**83**	*i* P	**Pn**	**20 00 02.2**	**-0.1**
NMR				*i* S	**Sn**	**20 00 09.6**	**+0.3**
NEM2	**Nemuro 2**	**0.16**	**85**	*i* P	**Pn**	**20 00 02.1**	**-0.2**
NEM2				*e*S	**Sn**	**20 00 09.5**	**+0.2**
JKHN	**Kushirohamanak**	**0.38**	**225**	*i* P	**Pn**	**20 00 03.7**	**-0.1**
JKHN				S	**Sn**	**20 00 12.5**	**+0.7**
JNSB	**Nemuroshibetsu**	**0.57**	**318**	*i* P	**Pn**	**20 00 05.0**	**-0.6**
JNSB				S	**Sn**	**20 00 15.7**	**+0.6**
AKK	**Akkeshi**	**0.60**	**236**	*i* P	**Pn**	**20 00 05.5**	**-0.5**
JNK	**Nakash**	**0.63**	**292**	*i* P	**Pn**	**20 00 05.8**	**-0.6**
JNK				S	**Sn**	**20 00 16.1**	**-0.3**
JRA	**Rausu**	**0.66**	**334**	*i* P	**Pn**	**20 00 06.5**	**-0.1**
JRA				*e*S	**Sn**	**20 00 17.8**	**+0.9**
JAK	**Akkeshi**	**0.70**	**240**	*i* P	**Pn**	**20 00 06.7**	**-0.5**
JAK				S	**Sn**	**20 00 18.0**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**0.72**	**20**	*e*P	**Pn**	**20 00 07.1**	**-0.4**
YUK				AMB	AMB	20 00 07.5	
	1μm,0.4s						
YUK				*i* S	**Sn**	**20 00 18.2**	**-0.1**
YUK				A	A	20 00 19.3	
	1μm,0.4s						
YUK				A	A	20 00 19.3	
	4μm,0.4s						
SHO	**Shikotan**	**1.08**	**61**	*e*P	Pn	20 00 23.4	+11
SHO				AMB	AMB	20 00 24.0	
	50nm,0.2s						
SHO				*e*S	Sn	20 00 37.2	+11
SHO				A	A	20 00 38.4	
	760nm,0.3s						
SHO				A	A	20 00 38.4	
	910nm,0.3s						
JAR	**Ashorobuto**	**1.28**	**268**	*i* P	**Pn**	**20 00 14.4**	**-0.1**
JAR				S	**Sn**	**20 00 31.3**	**+0.4**
JOB	**Onbets**	**1.32**	**251**	P	**Pn**	**20 00 14.9**	**-0.1**
JOB				S	**Sn**	**20 00 31.9**	**+0.1**
JTKR	**Abashiri--Toko**	**1.33**	**298**	*i* P	**Pn**	**20 00 15.2**	**+0.1**
JTKR				S	**Sn**	**20 00 32.1**	**+0.2**
KUR	**Kuril'sk**	**2.52**	**41**	*e*P	**Pn**	**20 00 32.0**	**+0.7**
KUR				AMB	AMB	20 00 34.2	
	30nm,0.2s						
KUR				*e*S	**Sn**	**20 01 00.3**	**-0.6**
KUR				A	A	20 01 09.1	
	90nm,0.3s						
KUR				A	A	20 01 09.1	
	90nm,0.3s						
REI	**Reidovoe**	**2.62**	**42**	*e*P	**Pn**	**20 00 32.9**	**+0.3**
REI				AMB	AMB	20 00 34.6	
	20nm,0.4s						
REI				*e*S	**Sn**	**20 01 02.4**	**-0.8**
REI				A	A	20 01 06.3	
	20nm,0.4s						
REI				A	A	20 01 06.3	
	20nm,0.4s						

SNET ***05*** *20:12:33.7±1.1, 13°.63N×90°.25W, h56km, ML3.6, Presumed earthquake*
CATAC ***05*** *20:12:33.7±0.4, 14°.N±3°.×9°.0W±°., h35km±3km, M3.7/18, MLv3.7/18, Error ellipse: s-maj=6.7km s-min=3.5km az=16.9, confirmed*
GCG ***05*** *20:12:34.3±0.6, 13°.64N×90°.25W, h41km±32km, MD4.0, ML3.9, MW3.4, Presumed earthquake*
ISC 05 20:12:34.3±1.5, 13°.56N±0°.07×90°.24W±0°.04, h57km±13km, n39, σ0s83/55, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.36**	**37**	P	**Pn**	**20 12 43.8**	**-0.9**
LOAL	**Lomas de Alarc**	**0.62**	**45**	P	**Pn**	**20 12 47.2**	**-0.4**
LOAL				S	**Sn**	**20 12 57.9**	**+0.7**
SLOZ	**Alcaldia de Sa**	**0.64**	**43**	P	**Pn**	**20 12 47.3**	**-0.5**
SLOZ				S	**Sn**	**20 12 58.6**	**+1.0**
CEVE	**Cerro Verde**	**0.66**	**66**	P	**Pn**	**20 12 47.6**	**-0.6**
CEVE	**Cerro Verde**	**0.66**	**66**	*e*P	**Pn**	**20 12 47.5**	**-0.6**
CEVE				*e*S	**Sn**	**20 12 59.1**	**+1.0**
PCG5	**San Vicente Pa**	**0.67**	**348**	*i* P	**Pn**	**20 12 50.0**	**+1.8**
FG16	**Alotenango, Sa**	**0.76**	**340**	*i* P	Pn	20 12 52.5	+3.1
FG8	**Yepocapa, Chim**	**0.77**	**336**	*i* P	Pn	20 12 52.9	+3.5
JAYA	**Jayaque - finc**	**0.77**	**83**	P	**Pn**	**20 12 48.8**	**-0.7**
JAYA				S	**Sn**	**20 13 00.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.77**	**83**	*i* P	**Pn**	**20 12 48.8**	**-0.7**
JAYA				*i* S	**Sn**	**20 12 59.7**	**-0.9**
JAYA				IAML		20 13 02.1	
	comp=N,10μm,0.2s						
UNIC	**Universidad Ca**	**0.79**	**58**	P	**Pn**	**20 12 48.9**	**-0.8**
UNIC				S	**Sn**	**20 13 01.1**	**+0.2**
CEDA	**San Andres**	**0.85**	**73**	P	**Pn**	**20 12 50.0**	**-0.5**
CEDA				S	**Sn**	**20 13 03.2**	**+0.9**
LALI	**Alcalda de L**	**0.90**	**94**	P	**Pn**	**20 12 50.4**	**-0.5**
LALI				S	**Sn**	**20 13 03.6**	**+0.5**
PMON	**Piamonte**	**0.91**	**80**	P	**Pn**	**20 12 50.8**	**-0.5**
PMON				S	**Sn**	**20 13 04.7**	**+1.0**
JUAN	**Asuncion Mita**	**0.93**	**34**	*i* P	**Pn**	**20 12 50.4**	**-1.0**
BQQS	**Boqueron**	**0.95**	**79**	*e*P	**Pn**	**20 12 51.0**	**-0.8**
UEES	**Universidad Ev**	**0.98**	**81**	P	**Pn**	**20 12 52.1**	**0.0**
UEES				S	**Sn**	**20 13 05.8**	**+0.5**
SEMO	**Seminario San**	**1.00**	**82**	P	**Pn**	**20 12 52.0**	**-0.3**
SEMO				S	**Sn**	**20 13 06.0**	**+0.4**
ESSG	**Sabana Grande**	**1.00**	**325**	*i* P	**Pn**	**20 12 51.2**	**-1.3**
ESSG				*i* S	**Sn**	**20 13 04.4**	**-1.3**
ESSG				IAML		20 13 06.7	
	comp=N,3μm,0.2s						
PANCS	**Alcalda de**	**1.03**	**87**	S	**Sn**	**20 13 06.6**	**+0.2**
LOMA	**Loma Larga**	**1.04**	**85**	P	**Pn**	**20 12 52.5**	**-0.4**
LOMA				S	**Sn**	**20 13 08.1**	**+1.3**
GCG4	**OSOP**	**1.06**	**344**	*i* P	**Pn**	**20 12 53.2**	**-0.1**
MTO3	**Montecristo**	**1.19**	**45**	P	**Pn**	**20 12 54.1**	**-1.0**
MTO3				S	**Sn**	**20 13 10.3**	**-0.2**
MTO3	**Montecristo**	**1.19**	**45**	*i* P	**Pn**	**20 12 54.1**	**-1.0**
PAVA	**Las Pavas**	**1.27**	**83**	P	**Pn**	**20 12 55.6**	**-0.4**
PAVA				S	**Sn**	**20 13 11.6**	**-0.7**
COEG	**Centro de Oper**	**1.32**	**87**	P	**Pn**	**20 12 56.5**	**-0.2**
COEG				S	**Sn**	**20 13 14.8**	**+1.4**
COEG	**Centro de Oper**	**1.32**	**87**	*e*P	**Pn**	**20 12 55.9**	**-0.7**
ESQI	**Esquipulas**	**1.32**	**41**	P	**Pn**	**20 12 55.9**	**-0.8**
ESQI				S	**Sn**	**20 13 13.4**	**0.0**
ESQI	**Esquipulas**	**1.32**	**41**	*e*P	**Pn**	**20 12 55.8**	**-0.8**
ZAFR2	**Estanzuela, Za**	**1.33**	**40**	*i* P	**Pn**	**20 12 59.0**	**+2.2**
STG5	**El Palmar, Qui**	**1.37**	**308**	*i* P	Pn	20 13 01.1	+3.8
STG5				*i* S	Sn	20 13 21.9	+7.5
STG8	**El Palmar, Qui**	**1.40**	**310**	*i* P	Pn	20 13 02.1	+4.3
STG8				*i* S	Sn	20 13 23.4	+8.0
STG8				IAML		20 13 29.9	
	comp=N,2μm,0.3s						
TECO	**Alcaldia de Te**	**1.42**	**91**	P	**Pn**	**20 12 57.5**	**-0.3**
TECO				S	**Sn**	**20 13 16.1**	**+0.5**
APG	**El Apazote**	**1.46**	**351**	*i* P	**Pn**	**20 12 58.1**	**-0.5**
RTAL	**Retalhuleu**	**1.71**	**304**	P	**Pn**	**20 13 01.0**	**-0.8**
RTAL				S	**Sn**	**20 13 22.8**	**+0.2**
PACA	**Pacayal**	**1.86**	**92**	P	**Pn**	**20 13 03.8**	**-0.3**
SARH	**Santa Rosa de**	**1.88**	**50**	P	**Pn**	**20 13 03.8**	**-0.3**
SARH				S	**Sn**	**20 13 27.0**	**+0.2**
SARH	**Santa Rosa de**	**1.88**	**50**	*i* P	**Pn**	**20 13 03.8**	**-0.3**
THIG		**2.38**	**305**	*i* P	**Pn**	**20 13 12.1**	**+1.1**

NEIC ***05*** *20:36:19.3±1.1, 53°.74N±0°.02×161°.15W±0°.07, h10km±2km, ML3.5/10, ML3.3(AEIC), Error ellipse: s-maj=7.5km s-min=3.5km az=241.0*
IDC ***05*** *20:36:19.6±1.4, 53°.88N×161°.43W, h0km, mb3.9/8, mbtmp3.8/10, ML3.1/2, Error ellipse: s-maj=34.4km s-min=19.1km az=9.0*
ISC 05 20:36:20.1±2.6, 53°.83N±0°.06×161°.28W±0°.04, h6km±15km, n62, σ0s79/66, mb4.1/8, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**1.37**	**346**		**Pn**	**20 36 45.4**	**-0.4**
DOL					**Sn**	**20 37 04.4**	**+0.2**
CNBA	**Chernabura Isl**	**1.40**	**44**		**Pn**	**20 36 45.2**	**-0.9**
CNBA					**Sb**	**20 37 03.2**	**-1.6**
DT1	**Dutton Round H**	**1.41**	**336**		**Pn**	**20 36 46.0**	**-0.3**
DT1					**Sg**	**20 37 05.8**	**+0.4**
DTNA	**Dutton South F**	**1.44**	**337**		**Pn**	**20 36 46.3**	**-0.4**
DTNA					**Sg**	**20 37 07.6**	**+1.2**
HAG	**Hague Volcano**	**1.54**	**347**		**Pb**	**20 36 48.3**	**-0.7**
PS4A	**Pavlof South-4**	**1.56**	**348**		**Pn**	**20 36 48.4**	**+0.1**
PS4A					**Sg**	**20 37 10.5**	**+0.3**
SDPT	**Sand Point**	**1.60**	**17**		**Pn**	**20 36 47.8**	**-1.0**
SDPT				IAML		20 37 23.9	
	comp=E,449nm,0.5s						
SDPT				IAML		20 37 24.4	
	comp=N,624nm,0.7s						
PS1A	**Pavlof South-1**	**1.62**	**351**		**Pn**	**20 36 49.2**	**0.0**
PS1A					**Sn**	**20 37 10.2**	**-0.2**
PN7A	**Pavlof North-7**	**1.66**	**346**		**Pn**	**20 36 49.5**	**-0.4**
ISNN	**Isanotski Nort**	**1.78**	**306**		**Pn**	**20 36 51.3**	**-0.1**
ISNN					**Sb**	**20 37 15.5**	**-0.1**
SSLS	**Shishaldin Sou**	**1.83**	**300**		**Pn**	**20 36 51.7**	**-0.4**
SSLN	**Shishaldin Nor**	**1.87**	**303**		**Pn**	**20 36 53.0**	**+0.3**
SSBA	**Shishaldin**	**1.92**	**301**		**Pn**	**20 36 53.2**	**-0.1**
SSBA					**Sn**	**20 37 18.2**	**+0.4**
VNSS	**Veniaminof 8**	**2.62**	**23**		**Pn**	**20 37 02.8**	**-0.4**
AKSA	**Akutan Strait**	**2.63**	**279**		**Pn**	**20 37 02.6**	**-0.3**
AKSA					**Sn**	**20 37 33.7**	**-1.5**
VNFG	**Fog Glacier, M**	**2.66**	**21**		**Pn**	**20 37 03.0**	**-0.5**
AHB	**Akutan Harbor**	**2.70**	**278**		**Pn**	**20 37 04.0**	**0.0**
AKBBA	**Akutan Broad B**	**2.76**	**278**		**Pn**	**20 37 04.6**	**-0.2**
ZRO	**Akutan Zero**	**2.79**	**277**		**Pn**	**20 37 05.2**	**-0.1**
AKGG	**Akutan Green G**	**2.81**	**280**		**Pn**	**20 37 05.2**	**-0.3**
AKMO	**Akutan Morgan**	**2.81**	**277**		**Pn**	**20 37 05.3**	**-0.2**
LVA	**Lava Point**	**2.83**	**279**		**Pn**	**20 37 05.7**	**-0.1**
LVA				IAML		20 37 51.7	
	comp=N,243nm,0.9s						
LVA				IAML		20 37 52.2	
	comp=E,125nm,1.1s						
AKRB	**Akutan Reef Bi**	**2.85**	**278**		**Pn**	**20 37 06.0**	**-0.1**
UNV	**Unalaska Valle**	**3.10**	**272**		**Pn**	**20 37 09.0**	**-0.4**
MNAT	**Makushin Natee**	**3.20**	**273**		**Pn**	**20 37 10.3**	**-0.6**
MNAT					**Sn**	**20 37 47.8**	**-1.5**
MREP	**Makushin Rep't**	**3.24**	**272**		**Pn**	**20 37 11.0**	**-0.5**
MGOD	**Makushin Gods**	**3.32**	**272**		**Pn**	**20 37 12.1**	**-0.4**
MGOD					**Sn**	**20 37 50.5**	**-1.7**
CHIR	**Chirikof Islan**	**3.83**	**56**		**Pn**	**20 37 18.5**	**-1.0**
CHIR				IAML		20 37 50.7	
	comp=N,55nm,1.2s						
CHIR				IAML		20 38 03.7	
	comp=E,51nm,1.1s						
OKTU	**Okmok Mt. Tuli**	**4.05**	**266**		**Pn**	**20 37 21.9**	**-0.7**
R17L	**Mt. Peulik Vol**	**4.72**	**34**		**Pn**	**20 37 32.0**	**+0.2**
O17K	**Contact Creek**	**5.38**	**32**		**Pn**	**20 37 40.5**	**-0.3**
O15K	**Unga Ilkthiuk R**	**5.42**	**8**		**Pn**	**20 37 41.9**	**+0.5**
O14K	**Tigyukauivet M**	**5.44**	**0**		**Pn**	**20 37 42.1**	**+0.5**
ANCK	**Angle Creek**	**5.45**	**34**		**Pn**	**20 37 41.7**	**-0.1**
KABU	**Katmai Buttres**	**5.58**	**35**		**Pn**	**20 37 43.6**	**0.0**
OHAK	**Old Harbor**	**5.67**	**50**		**Pn**	**20 37 43.7**	**-1.0**
KARR	**Katmai Rainbow**	**5.95**	**35**		**Pn**	**20 37 48.2**	**-0.4**
O16K	**Kokwok River B**	**6.04**	**16**		**Pn**	**20 37 49.5**	**-0.3**
N14K	**Kuskokwak Cree**	**6.12**	**358**		**Pn**	**20 37 51.0**	**+0.1**
KDAK	**Kodiak Island**	**6.30**	**48**	Pn	**Pn**	**20 37 52.4**	**-1.0**
	comp=E,1.3nm,0.3s,baz=230,slow=7.7,SNR=15						
	comp=E,4.3nm,0.5s						
O17K	**Koliganek Bris**	**6.39**	**19**		**Pn**	**20 37 54.5**	**-0.1**
N15K	**Kwethluk River**	**6.39**	**5**		**Pn**	**20 37 54.8**	**+0.1**
O19K	**Cape Douglas,**	**6.64**	**37**		**Pn**	**20 37 57.1**	**-1.0**
M15K	**Kasgluk River**	**6.89**	**2**		**Pn**	**20 38 00.6**	**-1.0**
M17K	**Holitna River**	**7.87**	**14**	Pn	**Pn**	**20 38 15.3**	**+0.4**
ATKA	**Atka Island**	**7.96**	**263**	Pn	**Pn**	**20 38 15.9**	**-0.3**
ANM	**Nome**	**10.97**	**351**		Pn	20 39 01.9	+4.6
ILAR	**Eielson Array**	**13.16**	**28**	Pn	**Pn**	**20 39 24.5**	**-2.9**
	baz=234,slow=13,SNR=2.0						
	comp=E,0.2nm,0.5s						
PETK	**Petropavlovsk-**	**24.20**	**285**	P	**P**	**20 41 36.0**	**-1.0**
	comp=E,3.5nm,0.6s,baz=74,slow=13,SNR=3.8						
	comp=E,3.5nm,0.6s						
YKA	**Yellowknife Ar**	**25.56**	**52**	P	**P**	**20 41 49.4**	**+0.1**
	comp=E,0.9nm,0.8s,baz=272,slow=8.9,SNR=2.8						
	comp=E,0.9nm,0.8s						
PDAR	**Pinedale Array**	**35.38**	**87**	P	**P**	**20 43 17.6**	**+1.0**
	comp=E,0.6nm,0.6s,baz=274,slow=4.2,SNR=8.6						
	comp=E,0.6nm,0.6s						
ULM	**Lac du Bonnet**	**39.12**	**68**	P	**P**	**20 43 48.7**	**+0.9**
	comp=E,2.5nm,0.6s,baz=328,slow=5.3,SNR=4.6						
	comp=E,2.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**41.86**	**228**	T	T	21 28 53.1	
	baz=27,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**41.87**	**228**	T	T	21 28 57.9	
	baz=27,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**41.88**	**228**	T	T	21 28 49.4	
	baz=27,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**43.02**	**228**	T	T	21 30 33.0	
	baz=26,slow=75,SNR=31						
H11S2	**WAKE ISLAND Hy**	**43.04**	**227**	T	T	21 30 34.2	
	baz=26,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**43.04**	**228**	T	T	21 30 34.3	
	baz=26,slow=75,SNR=22						
TXAR	**Lajitas Array**	**47.95**	**97**	P	**P**	**20 45 01.0**	**+1.6**
	comp=E,1.7nm,0.6s,baz=305,slow=5.6,SNR=25						
	comp=E,1.7nm,0.6s						
FINES	**FINESS Array B**	**64.93**	**356**	P	**P**	**20 46 59.3**	**-0.5**
	comp=E,2.3nm,0.9s,baz=2.9,slow=7.6,SNR=7.8						
	comp=E,2.3nm,0.9s						
BVAR	**Borovoye Array**	**65.18**	**329**	P	**P**	**20 47 01.5**	**-0.1**
	comp=E,0.9nm,0.6s,baz=15,slow=6.3,SNR=5.9						
	comp=E,0.9nm,0.6s						
MKAR	**Makanchi Array**	**66.18**	**318**	P	**P**	**20 47 09.2**	**+1.0**
	comp=E,0.2nm,0.7s,baz=58,slow=6.1,SNR=1.9						
	comp=E,0.2nm,0.7s						

IDC ***05*** *21:06:22.3±1.2, 4°.77S×68°.50E, h0km, mb4.3/15, mbtmp4.3/16, ML4.6/1, MS3.7/38, Error ellipse: s-maj=34.2km s-min=18.0km az=42.0*
NEIC ***05*** *21:06:22.7±1.5, 4°.99S±0°.10×68°.52E±0°.08, h10km±1km, mb4.6/41, Error ellipse: s-maj=21.4km s-min=3.7km az=218.0*
GFZ ***05*** *21:06:23.1±0.4, 5°.S±6°.×6°.9E±°., h10km, M4.3/7, mb4.3/7, Error ellipse: s-maj=14.9km s-min=8.4km az=140.8, confirmed*
GCMT ***05*** *21:06:27.7±0.4, 4°.80S±0°.02×68°.66E±0°.02, h15km±2km, MW4.8/80, Moment Tensor Solution. s9,c9; s80,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.37±.10; $M_{\theta\theta}$-1.26±.07; $M_{\phi\phi}$ 1.64±.09; $M_{r\theta}$-0.96±.28; $M_{\theta\phi}$-0.49±.07; $M_{\phi r}$ 0.17±.24; Best double couple: $M_0$1.84000×10^{16} NP1:ϕs131.00000°, δ61.00000°, λ-17.00000°. NP2: ϕs130.00000°, δ76.00000°, λ-150.00000°. Principal axes: T 1.7770, Plg10.0000°, Azm258.0000°; N 0.1320, Plg57.0000°, Azm152.0000°; P -1.9030, Plg31.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 21:06:23.2±0.5, 4°.94S±0°.08×68°.54E±0°.08, h13km, n149, σ0s91/116, mb4.5/57, MS3.7/40, 1C-1D, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.60**	**122**	Pn	**Pn**	**21 07 31.3**	**-1.2**
DGAR	**Diego Garcia**	**4.60**	**122**	P	**Pn**	**21 07 32.9**	**+0.4**
H08S3	**Diego Garcia H**	**4.75**	**124**	T	T	21 12 21.8	
	baz=310,slow=75,SNR=274						
H08S1	**Diego Carcia H**	**4.75**	**125**	T	T	21 12 24.8	
	baz=310,slow=75,SNR=365						
H08S2	**Diego Garcia H**	**4.76**	**125**	T	T	21 12 22.4	
	baz=310,slow=75,SNR=398						
KAAM	**Kaadhehdhoo**	**7.00**	**40**	P	**Pn**	**21 08 04.6**	**-0.8**
HMDM	**Hanimaadhoo**	**12.52**	**22**	Pn	**Pn**	**21 09 20.0**	**-1.2**
HALK	**Hakmana**	**16.34**	**48**	P	**Pn**	**21 10 11.6**	**-0.9**
PALK	**Pallekele**	**17.16**	**45**	P	**P**	**21 10 24.3**	**-0.3**
	2.2nm,0.3s,baz=226,slow=13,SNR=17						
	5.0nm,0.3s						
PALK	**Pallekele**	**17.16**	**45**		**Pn**	**21 10 23.5**	**+0.5**
PALK	**Pallekele**	**17.16**	**45**	P	**Pn**	**21 10 23.7**	**+0.7**
MALK	**Mahakanadarawa**	**17.86**	**42**	P	**Pn**	**21 10 30.6**	**-1.0**
RER	**Riviere de l'E**	**20.35**	**216**	P	**P**	**21 10 59.4**	**-0.2**
HYB	**Hyderabad**	**24.32**	**24**	*e*P	**P**	**21 11 40.8**	**0.0**
HYB				*e*S	**S**	**21 16 01.4**	**+1.7**
ABPO	**Ambohimpanom**	**25.06**	**234**	P	**P**	**21 11 47.9**	**+0.2**
ATD	**Arta Tunnel**	**30.35**	**303**	LR	LR	21 22 03.4	
	comp=Z,5.7nm,21.4s,baz=136,slow=31						
KCSI	**Kotacane, Aceh**	**30.39**	**74**	P	**P**	**21 12 35.8**	**+0.4**
KULM	**Kulim**	**33.64**	**73**	P	**P**	**21 13 03.1**	**-0.8**
KULM				IAmb	IAmb	21 13 11.6	
	comp=Z,10nm,1.1s						
KULM	**Kulim**	**33.64**	**73**	P	**P**	**21 13 03.6**	**-0.3**
LODK	**Lodwar**	**34.17**	**283**	P	**P**	**21 13 10.8**	**+2.2**
EVN	**Everest**	**37.16**	**27**	P	**P**	**21 13 33.7**	**-1.0**
EVN				IAmb	IAmb	21 14 12.5	
	comp=Z,11nm,1.4s						
CMAR	**Chiang Mai Arr**	**37.93**	**51**	P	**P**	**21 13 41.5**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=238,slow=8.9,SNR=14						
CMAR				PcP	**PcP**	**21 15 58.5**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=206,slow=4.3,SNR=5.5						
CMAR				LR	LR	21 28 45.7	
	comp=Z,60nm,18.2s,baz=240,slow=36						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.93**	**51**	P	**P**	**21 13 40.8**	**+0.1**
MBAR	**Mbarara**	**37.99**	**275**	LR	LR	21 25 59.6	
	comp=Z,120nm,19.8s,baz=110,slow=31						
CHTO	**Chiang Mai**	**38.14**	**51**	P	**P**	**21 13 42.3**	**-0.1**
NIL	**Nilore**	**38.64**	**6**		**P**	**21 13 45.0**	**-1.4**
NIL				IAmb	IAmb	21 13 48.2	
	comp=Z,13nm,0.8s						
LEM	**Lembang**	**38.91**	**95**	LR	LR	21 26 49.9	
	comp=Z,246nm,20.6s,baz=229,slow=32						
KBL	**Kabul**	**39.27**	**1**		**P**	**21 13 52.2**	**+0.2**
LSZ	**Lusaka**	**40.95**	**252**	LR	LR	21 27 57.0	
	comp=Z,235nm,21.3s,baz=118,slow=32						
MATP	**Matopo**	**41.83**	**245**	LR	LR	21 30 18.3	
	comp=Z,92nm,19.9s,baz=110,slow=34						
MANEM	**Manem**	**42.36**	**4**		**P**	**21 14 17.7**	**+0.2**
MANEM				IAmb	IAmb	21 14 19.1	
	comp=Z,31nm,1.2s						
GAR	**Garm**	**43.75**	**2**		**P**	**21 14 28.3**	**-0.3**
KSH2	**Kashi**	**44.34**	**8**	P	**P**	**21 14 33.5**	**+0.2**
KSH2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BTK	**Batken**	**44.82**	**2**		**P**	**21 14 37.1**	**0.0**
BTK				IAmb	IAmb	21 14 38.3	
	comp=Z,10nm,0.9s						
PZH	**PanZhiHua**	**44.84**	**44**	P	**P**	**21 14 39.2**	**+1.7**
LBTB	**Lobatse**	**45.76**	**240**	LR	LR	21 31 26.0	
	comp=Z,216nm,18.9s,baz=80,slow=33						
ARSB	**Arslanbob**	**46.22**	**5**	P	**P**	**21 14 47.5**	**-0.6**
ARSB				IAmb	IAmb	21 15 11.5	
	comp=Z,4.2nm,1.0s						
NRN	**Naryn**	**46.65**	**8**		**P**	**21 14 50.9**	**-0.9**
NRN				IAmb	IAmb	21 14 53.1	
	comp=Z,7.2nm,1.0s						
WUS	**Wushi**	**46.94**	**11**	P	**P**	**21 14 53.3**	**-0.6**
WUS				IAmb	IAmb	21 14 55.2	
	comp=Z,4.0nm,0.9s						
ASF	**Jabal al Asfar**	**47.62**	**323**	LR	LR	21 31 53.0	
	comp=Z,78nm,21.5s,baz=195,slow=32						
AAK	**Ala-Archa**	**47.66**	**6**	LR

HHC					pmax	pmax				
	comp=Z,13nm,0.8s									
ZAA0	**Zalesovo Array**	**60.24**	**11**			**P**	**21 16 30.5**	**-0.5**		
ZAA0					IAmb	IAmb	21 16 31.1			
	comp=Z,5.2nm,0.8s									
ZALV	**Zalesovo Beam**	**60.24**	**11**	P		**P**	**21 16 30.5**	**-0.5**		
	comp=Z,5.0nm,0.6s,baz=205,slow=7.6,SNR=26									
ZALV					LR	LR	21 40 00.2			
	comp=Z,40nm,19.4s,baz=228,slow=34									
	comp=Z,5.0nm,0.6s									
ZALV	**Zalesovo Beam**	**60.24**	**11**			**P**	**21 16 30.4**	**-0.6**		
NJ2	**Nanjing**	**60.33**	**49**	⇓P		**P**	**21 16 32.2**	**+0.2**		
NJ2					pmax	pmax				
	comp=Z,19nm,0.7s									
ARTI	**Arti**	**61.68**	**354**	LR		LR	21 43 19.1			
	comp=Z,32nm,18.2s,baz=164,slow=36									
ARTI	**Arti**	**61.68**	**354**	P		**P**	**21 16 40.1**	**-0.7**		
ARTI					IAmb	IAmb	21 16 48.6			
	comp=Z,4.3nm,0.7s									
SONM	**Songino Array**	**62.17**	**28**	P		**P**	**21 16 44.9**	**+0.5**		
	comp=Z,1.6nm,0.8s,baz=221,slow=7.0,SNR=9.9									
SONM					LR	LR	21 43 27.2			
	comp=Z,145nm,19.6s,baz=226,slow=36									
	comp=Z,1.6nm,0.8s									
SONM	**Songino Array**	**62.17**	**28**	P		**P**	**21 16 43.7**	**-0.8**		
SONM					IAmb	IAmb	21 17 06.2			
	comp=Z,6.3nm,1.3s									
ISR	**Istrita**	**62.36**	**328**	P		**P**	**21 16 45.2**	**-0.4**		
	comp=Z,9.2nm,1.0s									
ULN	**Ulaanbaatar**	**62.50**	**28**	P		**P**	**21 16 45.8**	**-0.9**		
ULN					IAmb	IAmb	21 17 27.3			
	comp=Z,5.1nm,1.4s									
SIJI	**Sorong**	**62.76**	**88**	LR		LR	21 44 18.7			
	comp=Z,24nm,19.2s,baz=108,slow=36									
VRI	**Vrincioaia**	**62.76**	**328**	P		**P**	**21 16 47.9**	**-0.3**		
	comp=Z,8.5nm,2.2s									
MLR	**Muntele Rosu**	**62.92**	**328**	P		**P**	**21 16 49.1**	**-0.4**		
MLR					IAmb	IAmb	21 17 14.1			
	comp=Z,6.9nm,1.4s									
TESR	**Tescani**	**63.23**	**329**	P		**P**	**21 16 50.9**	**-0.4**		
	comp=Z,5.5nm,0.9s									
VOIR		**63.37**	**327**	P		**P**	**21 16 52.2**	**-0.2**		
	comp=Z,2.9nm,1.7s									
TLY	**Talaya**	**63.86**	**24**	LR		LR	21 44 14.7			
	comp=Z,78nm,19.2s,baz=203,slow=36									
KMPD	**K-Podol'skiy**	**64.70**	**331**	P		**P**	**21 16 59.6**	**-1.3**		
AK09	**Malin Array Si**	**64.81**	**334**	P		**P**	**21 17 01.1**	**-0.5**		
AK06	**Malin Array Si**	**64.83**	**333**	P		**P**	**21 17 01.3**	**-0.4**		
AKASG	**Malin Array Be**	**64.90**	**334**	P		**P**	**21 17 01.5**	**-0.7**		
	comp=Z,1.4nm,0.6s,baz=136,slow=5.6,SNR=7.5									
AKASG					LR	LR	21 46 02.4			
	comp=Z,47nm,19.9s,baz=160,slow=37									
	comp=Z,1.4nm,0.6s									
AKASG	**Malin Array Be**	**64.90**	**334**	P		**P**	**21 17 01.2**	**-1.0**		
AKBB	**Malin Array Si**	**64.90**	**334**	P		**P**	**21 17 01.6**	**-0.6**		
KIEV	**Kiev**	**64.90**	**334**	P		**P**	**21 17 01.6**	**-0.6**		
	comp=Z,26nm,1.0s									
LUBAR	**Lubar, Ukraine**	**65.01**	**332**	P		**P**	**21 17 02.1**	**-0.9**		
AK20	**Malin Array Si**	**65.03**	**334**	P		**P**	**21 17 02.5**	**-0.5**		
OBN	**Obninsk**	**65.44**	**340**	P		**P**	**21 17 04.9**	**-0.7**		
ASAR	**Alice Springs**	**65.49**	**114**	P		**P**	**21 17 08.2**	**+1.6**		
	comp=Z,1.8nm,0.8s,baz=282,slow=6.5,SNR=11									
ASAR					LR	LR	21 42 32.4			
	comp=Z,114nm,21.5s,baz=284,slow=33									
	comp=Z,1.8nm,0.8s									
ASAR	**Alice Springs**	**65.49**	**114**	P		**P**	**21 17 05.9**	**-0.8**		
DL2	**Dalian**	**65.58**	**43**	P		**P**	**21 17 07.4**	**+0.5**		
DL2					pmax	pmax				
	comp=Z,60nm,1.3s									
WRA	**Warramunga Arr**	**65.59**	**110**	P		**P**	**21 17 08.9**	**+1.5**		
	comp=Z,3.8nm,0.7s,baz=284,slow=6.3,SNR=13									
	comp=Z,3.8nm,0.7s									
WRA	**Warramunga Arr**	**65.59**	**110**			**P**	**21 17 06.2**	**-1.2**		
WB0	**Warramunga Arr**	**65.63**	**109**	P		**P**	**21 17 06.7**	**-0.9**		
WR8	**Warramunga Arr**	**65.75**	**110**	P		**P**	**21 17 08.1**	**-0.3**		
RNPP5	**Staryi Chortor**	**66.78**	**332**	P		**P**	**21 17 13.9**	**-0.4**		
RNPP9	**Sopachiv**	**66.90**	**333**	P		**P**	**21 17 14.5**	**-0.6**		
AQU	**L'Aquila**	**68.61**	**319**	P		**P**	**21 17 25.5**	**-0.6**		
KSRS	**Korea Array**	**69.39**	**47**	LR		LR	21 48 06.4			
	comp=Z,68nm,19.4s,baz=95,slow=36									
CONA	**Conrad Observa**	**69.94**	**325**	*e*P		**P**	**21 17 34.2**	**-0.2**		
	comp=Z,0.2nm,0.2s									
HILR	**Hailar Array B**	**70.03**	**33**	P		**P**	**21 17 36.5**	**+1.7**		
	comp=Z,2.7nm,0.6s,baz=232,slow=7.1,SNR=2.3									
	comp=Z,2.7nm,0.6s									
SESA	**Seetaler Alpe,**	**70.26**	**324**	*i* P		**P**	**21 17 36.6**	**+0.1**		
	comp=Z,1.9nm,0.5s									
MOA	**Molln**	**70.81**	**325**	*i* P		**P**	**21 17 39.5**	**-0.1**		
	comp=Z,0.7nm,0.4s									
LESA	**Schwarzleotal**	**71.52**	**324**	*i* P		**P**	**21 17 43.5**	**-0.5**		
	comp=Z,0.5nm,0.3s									
INKA	**Innaminka**	**71.97**	**117**			**P**	**21 17 46.9**	**-0.2**		
WTTA	**Wattenberg**	**72.06**	**323**	*i* P		**P**	**21 17 47.2**	**-0.1**		
	comp=Z,2.1nm,0.7s									
SQTA	**Sankt Quirin**	**72.30**	**323**	*i* P		**P**	**21 17 48.7**	**0.0**		
	comp=Z,1.1nm,0.4s									
MOTA	**Moosalm**	**72.42**	**323**	*e*P		**P**	**21 17 49.3**	**-0.2**		
	comp=Z,2.5nm,0.6s									
FETA	**Feichten**	**72.49**	**323**	*e*P		**P**	**21 17 50.2**	**+0.3**		
	comp=Z,1.9nm,0.7s									
FUORN	**Ofenpass-Fuorn**	**72.59**	**322**	P		**P**	**21 17 50.2**	**-0.4**		
FUORN					IAmb	IAmb	21 17 58.1			
	comp=Z,3.7nm,0.9s									
RETA	**Reutte**	**72.69**	**323**	*e*P		**P**	**21 17 51.0**	**+0.1**		
	comp=Z,0.5nm,0.3s									
STKA	**Stephens Creek**	**73.03**	**122**	LR		LR	21 48 00.0			
	comp=Z,97nm,19.4s,baz=215,slow=34									
DAVA	**Damuels**	**73.13**	**323**	*e*P		**P**	**21 17 54.1**	**+0.5**		
	comp=Z,3.4nm,0.6s									
CLL	**Collm**	**73.30**	**327**	*e*P		**P**	**21 17 55.0**	**+0.6**		
CLL				*ex*		x	21 18 03.0			
FINES	**FINESS Array B**	**73.85**	**340**	P		**P**	**21 17 55.8**	**-1.6**		
	comp=Z,3.3nm,0.9s,baz=73,slow=6.4,SNR=3.3									
	comp=Z,3.3nm,0.9s									
FINES	**FINESS Array B**	**73.85**	**340**	P		**P**	**21 17 56.9**	**-0.4**		
DBIC	**Dimbokro**	**74.16**	**278**	LR		LR	21 49 14.6			
	comp=Z,55nm,20.9s,baz=126,slow=35									
SENIN	**Lac Senin/Sane**	**74.32**	**321**	P		**P**	**21 18 00.4**	**-0.3**		
SENIN					IAmb	IAmb	21 18 02.1			
	comp=Z,5.0nm,0.8s									
HEH	**HeiHe**	**74.63**	**35**	*e*P		**P**	**21 18 04.5**	**+2.3**		
NRIK	**Noril'sk**	**75.26**	**7**	LR		LR	21 52 03.8			
	comp=Z,38nm,19.4s,baz=186,slow=36									
CTA	**Charters Tower**	**76.80**	**109**	LR		LR	21 51 19.0			
	comp=Z,66nm,19.2s,baz=223,slow=35									
MJAR	**Matsushiro Arr**	**76.82**	**51**	P		**P**	**21 18 14.9**	**-0.2**		
	comp=Z,1.0nm,0.7s,baz=244,slow=5.4,SNR=4.1									
	comp=Z,1.0nm,0.7s									
MJAR	**Matsushiro Arr**	**76.82**	**51**	P		**P**	**21 18 14.9**	**-0.2**		
HFS	**Hagfors**	**77.69**	**335**	P		**P**	**21 18 19.9**	**+0.5**		
	comp=Z,3.7nm,0.6s,baz=151,slow=6.8,SNR=8.5									
HFS					LR	LR	21 52 54.7			
	comp=Z,28nm,20.0s,baz=182,slow=36									
	comp=Z,3.7nm,0.6s									
GUMO	**Guam**	**77.94**	**75**	LR		LR	21 50 27.8			
	comp=Z,25nm,20.6s,baz=74,slow=34									
PMG	**Port Moresby**	**78.00**	**99**	LR		LR	21 49 18.4			
	comp=Z,32nm,21.1s,baz=230,slow=33									
NOA	**NORSAR Array B**	**79.22**	**335**	LR		LR	21 53 59.8			
	comp=Z,20nm,19.5s,baz=100,slow=36									
ARCES	**ARCESS Array B**	**79.86**	**346**	LR		LR	21 54 51.0			
	comp=Z,39nm,20.2s,baz=90,slow=36									
YAK	**Yakutsk**	**81.30**	**25**	LR		LR	21 55 28.0			
	comp=Z,64nm,21.3s,baz=256,slow=36									
TIXI	**Tiksi**	**85.69**	**16**	LR		LR	21 58 23.8			
	comp=Z,56nm,19.1s,baz=260,slow=36									
VNDA	**Vanda**	**85.93**	**167**	P		**P**	**21 19 01.6**	**-1.0**		
SPITS	**Spitsbergen Ar**	**87.57**	**351**	LR		LR	22 02 18.1			
	comp=Z,29nm,18.8s,baz=128,slow=38									
PYZ	**Puysegur Point**	**92.10**	**136**	P		**P**	**21 19 31.3**	**-1.1**		
BORG	**Borgarnes**	**94.37**	**335**	LR		LR	22 05 17.5			
	comp=Z,36nm,18.2s,baz=84,slow=38									
NVAR	**Mina Array Bea**	**146.09**	**10**	PKPbc		**PKiKP**	**21 26 05.9**	**-1.2**		
	comp=Z,2.1nm,0.8s,baz=357,slow=3.0,SNR=9.4									

*NOU **05** 21:06:49.0, 22.°51S×179.°99W, h628km, mb4.5/20, South of Fiji Islands*
*NEIC **05** 21:06:51.4±2.0, 22.°70S±0.°04×179.°5E±0.°1, h581km±7km, mb4.5/24, Error ellipse: s-maj=19.0km s-min=6.2km az=93.0*
*IDC **05** 21:06:52.1±1.1, 22.°60S×179.°38E, h585km±10km, mb3.7/13, mbtmp4.6/15, Error ellipse: s-maj=15.5km s-min=11.9km az=91.0*
ISC 05 21:06:51.5±0.4, **22.°70S**±0.°05×**179.°48E**±0.°08, **h591km**,

n152, σ1s44/172, mb4.5/24, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.12**	**345**	P		**P**	**21 08 24.4**	**-0.6**
	84nm,0.7s,baz=200,slow=7.5,SNR=95							
MSVF					S	**S**	**21 09 40.8**	**-0.3**
	12nm,0.8s,baz=5.7,slow=22,SNR=0.8							
MSVF	**Nonsavu**	**5.12**	**345**	P		**P**	**21 08 24.5**	**-0.5**
MSVF	**Nonsavu**	**5.12**	**345**	P		**P**	**21 08 24.0**	**-1.0**
MSVF						**S**	**21 09 39.8**	**-1.4**
RAO	**Raoul Island**	**6.93**	**161**	P		**P**	**21 08 42.2**	**+1.9**
	300nm,0.3s,baz=298,slow=22,SNR=1.7							
RAO	**Raoul Island**	**6.93**	**161**	P		**P**	**21 08 38.4**	**-1.9**
GLKZ	**Green Lake**	**6.94**	**161**	P		**P**	**21 08 41.5**	**+1.1**
GLKZ					S	**S**	**21 10 07.9**	**-1.9**
AFI	**Afiamalu**	**12.05**	**45**	P		**P**	**21 09 28.1**	**-2.8**
	50nm,0.7s,baz=69,slow=14,SNR=5.5							
AFI	**Afiamalu**	**12.05**	**45**	P		**P**	**21 09 28.8**	**-2.2**
DZM	**Mont Dzumac**	**12.08**	**270**	P		**P**	**21 09 32.0**	**+0.8**
	5.9nm,0.7s,baz=101,slow=18,SNR=5.4							
OUZ	**Omahuta**	**13.49**	**201**	P		**P**	**21 09 46.3**	**+1.1**
OUZ	**Omahuta**	**13.49**	**201**	P		**P**	**21 09 47.7**	**+2.4**
SANVU	**Saraoutou**	**13.66**	**300**	P		**P**	**21 09 46.6**	**-0.6**
GRZ	**Great Barrier**	**13.95**	**194**	P		**P**	**21 09 52.2**	**+2.4**
WIAZ	**Waiheke Island**	**14.54**	**194**	P		**P**	**21 09 56.3**	**+0.8**
AWAZ	**Awhitu Peninsu**	**14.92**	**195**	P		**P**	**21 09 58.5**	**-0.5**
HAZ	**Te Kaha**	**15.08**	**185**	P		**P**	**21 09 59.5**	**-1.0**
HAZ					S	**S**	**21 12 31.3**	**-3.6**
WMGZ	**Waiomatatini S**	**15.10**	**183**	P		**P**	**21 10 00.7**	**0.0**
PKGZ	**Pakihiroa**	**15.17**	**184**	P		**P**	**21 09 58.4**	**-2.9**
PKGZ					S	**S**	**21 12 34.0**	**-2.4**
RUGZ	**Raukumara Rang**	**15.30**	**185**	P		**P**	**21 10 01.7**	**-0.9**
PUZ	**Puketiti**	**15.36**	**184**	P		**P**	**21 10 02.6**	**-0.5**
PUZ					S	**S**	**21 12 37.5**	**-2.1**
TOZ	**Tahuroa Road**	**15.37**	**192**	P		**P**	**21 10 04.1**	**+1.0**
TOZ	**Tahuroa Road**	**15.37**	**192**	P		**P**	**21 10 05.3**	**+2.1**
TWGZ	**Tauwhareparae**	**15.48**	**184**	P		**P**	**21 10 04.4**	**+0.1**
TWGZ					S	**S**	**21 12 38.2**	**-3.5**
URZ	**Urewera**	**15.64**	**187**	P		**P**	**21 10 03.0**	**-2.6**
	14nm,0.3s,baz=31,slow=12,SNR=21							
URZ					S	**S**	**21 12 40.5**	**-3.7**
	32nm,0.8s,baz=218,slow=22,SNR=7.6							
URZ	**Urewera**	**15.64**	**187**	P		**P**	**21 10 03.1**	**-2.6**
URZ	**Urewera**	**15.64**	**187**	P		**P**	**21 10 02.6**	**-3.1**
URZ					S	**S**	**21 12 41.8**	**-2.4**
CNGZ	**Carnagh Statio**	**15.77**	**184**	P		**P**	**21 10 06.1**	**-0.8**
TLZ	**Tolley Road**	**15.94**	**191**	P		**P**	**21 10 10.1**	**+1.6**
RIGZ	**Rimuhau**	**16.02**	**185**	P		**P**	**21 10 09.0**	**-0.3**
RIGZ					S	**S**	**21 12 47.8**	**-2.8**
SNGZ	**Shannon Statio**	**16.14**	**186**	P		**P**	**21 10 08.1**	**-2.2**
HIZ	**Hauiti**	**16.25**	**193**	P		**P**	**21 10 11.1**	**-0.3**
HIZ	**Hauiti**	**16.25**	**193**	P		**P**	**21 10 13.2**	**+1.9**
MTHZ	**Maungataniwha**	**16.26**	**187**	P		**P**	**21 10 11.3**	**-0.2**
MTHZ					S	**S**	**21 12 50.8**	**-3.6**
MRHZ	**Matea Rd**	**16.30**	**189**	P		**P**	**21 10 11.4**	**-0.4**
RAHZ	**Arahi**	**16.30**	**187**	P		**P**	**21 10 11.0**	**-0.8**
RAHZ					S	**S**	**21 12 50.5**	**-4.4**
KNZ	**Kokohu**	**16.35**	**185**	P		**P**	**21 10 10.4**	**-1.7**
NMHZ	**Naumai**	**16.51**	**187**	P		**P**	**21 10 13.1**	**-0.6**
NMHZ					S	**S**	**21 12 55.5**	**-3.0**
BKZ	**Black Stump Fm**	**16.61**	**188**	P		**P**	**21 10 13.0**	**-1.7**
BKZ	**Black Stump Fm**	**16.61**	**188**	S		**S**	**21 13 00.0**	**-0.2**
BKZ	**Black Stump Fm**	**16.61**	**188**	P		**P**	**21 10 12.5**	**-2.2**
BKZ					S	**S**	**21 12 57.7**	**-2.5**
WTVZ	**West Tongariro**	**16.70**	**191**	P		**P**	**21 10 16.0**	**+0.4**
FWVZ	**Far West T-bar**	**16.84**	**191**	P		**P**	**21 10 16.7**	**-0.3**
WHVZ	**Whangaehu Hut**	**16.86**	**190**	P		**P**	**21 10 16.9**	**-0.3**
VRZ	**Vera Road**	**16.86**	**193**	P		**P**	**21 10 20.0**	**+3.1**
KWHZ	**Kaweka Forest**	**16.88**	**188**	P		**P**	**21 10 16.2**	**-0.9**
WNVZ	**Wahianoa**	**16.91**	**190**	P		**P**	**21 10 17.2**	**-0.3**
MOVZ	**Moawhango**	**16.96**	**190**	P		**P**	**21 10 17.9**	**0.0**
BHHZ	**Black Hill Sta**	**16.99**	**189**	P		**P**	**21 10 17.2**	**-0.9**
KRHZ	**Kereru**	**17.10**	**188**	P		**P**	**21 10 18.0**	**-1.1**
KAHZ	**Kahuranaki**	**17.19**	**187**	P		**P**	**21 10 19.2**	**-0.7**
PNHZ	**Pukenui**	**17.39**	**188**	P		**P**	**21 10 20.8**	**-0.9**
PXZ	**Pawanui**	**17.42**	**187**	P		**P**	**21 10 20.8**	**-1.2**
TSZ	**Takapari Road**	**17.56**	**189**	P		**P**	**21 10 23.2**	**-0.1**
DVHZ	**Dannevirke**	**17.77**	**188**	P		**P**	**21 10 23.9**	**-1.4**
BFZ	**Birch Farm**	**18.14**	**188**	P		**P**	**21 10 27.6**	**-0.9**
BFZ	**Birch Farm**	**18.14**	**188**	S		**S**	**21 13 24.3**	**-0.5**
BFZ	**Birch Farm**	**18.14**	**188**	P		**P**	**21 10 27.4**	**-1.2**
MRZ	**Mangatainoka R**	**18.21**	**190**	P		**P**	**21 10 27.6**	**-1.5**
OGWZ	**Otaki Gorge**	**18.43**	**190**	P		**P**	**21 10 30.4**	**-0.7**
HOWZ	**Holdsworth Sta**	**18.45**	**190**	P		**P**	**21 10 30.3**	**-1.1**
DUWZ	**D'Urville Isla**	**18.65**	**193**	P		**P**	**21 10 32.9**	**-0.3**
MTW	**Mount Morrison**	**18.71**	**189**	P		**P**	**21 10 33.6**	**-0.1**
TRWZ	**Traveller**	**18.92**	**189**	P		**P**	**21 10 35.3**	**-0.3**
PAWZ	**Paruwai Farm**	**18.94**	**189**	P		**P**	**21 10 35.2**	**-0.6**
TCW	**Tory Channel**	**18.97**	**192**	P		**P**	**21 10 35.5**	**-0.6**
SNZO	**South Karori**	**18.99**	**191**	P		**P**	**21 10 35.7**	**-0.5**
MSWZ	**Moikau Station**	**19.00**	**190**	P		**P**	**21 10 36.3**	**-0.1**
QRZ	**Quartz Range**	**19.00**	**196**	P		**P**	**21 10 36.8**	**+0.4**
QRZ	**Quartz Range**	**19.00**	**196**	P		**P**	**21 10 37.4**	**+1.0**
TKNZ	**Takaka Hill**	**19.09**	**195**	P		**P**	**21 10 37.4**	**+0.2**
NNZ	**Nelson**	**19.17**	**194**	P		**P**	**21 10 37.7**	**-0.2**
TUWZ	**Tuamarina**	**19.25**	**193**	P		**P**	**21 10 37.8**	**-0.8**
THZ	**Tophouse**	**19.80**	**195**	P		**P**	**21 10 43.8**	**+0.2**
KHZ	**Kahutara**	**20.28**	**193**	P		**P**	**21 10 46.8**	**-1.1**
OXZ	**Oxford**	**21.48**	**195**	P		**P**	**21 10 58.1**	**-0.6**
JCZ	**Jackson Bay**	**23.07**	**200**	P		**P**	**21 11 13.2**	**+0.2**
ODZ	**Otahua Downs**	**23.44**	**196**	P		**P**	**21 11 16.1**	**0.0**
TATA	**Tatamba Isabel**	**23.66**	**304**	P		**P**	**21 11 16.7**	**-1.8**
WHZ	**Wether Hill Ro**	**24.97**	**199**	P		**P**	**21 11 29.9**	**+0.2**
ARMA	**Armidale**	**26.03**	**247**	P		**P**	**21 11 39.9**	**+0.6**
ARMA	**Armidale**	**26.03**	**247**	P		**P**	**21 11 40.2**	**+0.9**
ARMA					IAmb	IAmb	21 11 41.5	
	comp=Z,16nm,0.8s							
EIDS	**Eidsvold**	**26.05**	**258**	P		**P**	**21 11 39.1**	**-0.4**
EIDS					IAmb	IAmb	21 11 40.7	
	comp=Z,12nm,0.8s							
CTA	**Charters Tower**	**31.01**	**268**	P		**P**	**21 12 22.9**	**+0.4**
	comp=Z,25nm,0.7s,baz=90,slow=9.6,SNR=32							
	comp=Z,25nm,0.7s							
CTA	**Charters Tower**	**31.01**	**268**	P		**P**	**21 12 22.7**	**+0.2**
CTAO	**Charters Tower**	**31.01**	**268**	P		**P**	**21 12 22.6**	**0.0**
CMSA	**Cobar Meteorol**	**31.24**	**246**	P		**P**	**21 12 24.6**	**+0.3**
QLP	**Quilpie**	**32.21**	**256**	P		**P**	**21 12 32.9**	**+0.3**
TOO	**Toolangi**	**32.72**	**235**	P		**P**	**21 12 37.1**	**+0.4**
TOO					IAmb	IAmb	21 12 38.4	
	comp=Z,9.3nm,0.8s							
MTSU	**Mount Surprise**	**33.22**	**271**	P		**P**	**21 12 41.6**	**+0.4**
STKA	**Stephens Creek**	**34.75**	**246**	P		**P**	**21 12 54.3**	**+0.5**
	comp=Z,10nm,0.4s,baz=92,slow=7.8,SNR=93							
	comp=Z,10nm,0.4s							
INKA	**Innaminka**	**35.30**	**254**	P		**P**	**21 12 58.8**	**+0.3**
INKA					IAmb	IAmb	21 13 00.6	
	comp=Z,12nm,1.1s							
BBOO	**Buckleboo**	**39.49**	**246**	P		**P**	**21 13 32.0**	**-0.5**
BBOO					IAmb	IAmb	21 13 33.1	
	comp=Z,23nm,0.9s							
AS31	**Alice Springs**	**41.77**	**259**			**P**	**21 13 50.5**	**-0.2**
AS31					IAmb	IAmb	21 13 51.7	
	comp=Z,7.4nm,0.7s							
ASAR	**Alice Springs**	**41.77**	**259**	P		**P**	**21 13 50.5**	**-0.2**
	comp=Z,22nm,0.7s,baz=96,slow=7.8,SNR=202							
ASAR					ScP	**ScP**	**21 18 30.6**	**+3.2**
	comp=Z,0.9nm,0.6s,baz=108,slow=4.6,SNR=4.8							
ASAR					S	**S**	**21 19 23.2**	**-3.4**
	comp=Z,2.3nm,1.1s,baz=98,slow=14,SNR=6.7							
	comp=Z,22nm,0.7s							
WR8	**Warramunga Arr**	**41.87**	**265**	P		**P**	**21 13 50.8**	**-0.7**
WR8					IAmb	IAmb	21 13 52.2	
	comp=Z,18nm,1.4s							
WB0	**Warramunga Arr**	**42.01**	**265**	P		**P**	**21 13 51.9**	**-0.7**
WRA	**Warramunga Arr**	**42.02**	**265**	P		**P**	**21 13 51.9**	**-0.8**
	comp=Z,5.2nm,0.3s,baz=96,slow=8.3,SNR=224							
WRA					ScP	**ScP**	**21 18 31.5**	**+3.1**
	comp=Z,0.3nm,0.5s,baz=98,slow=3.4,SNR=1.6							
WRA					S	**S**	**21 19 25.9**	**-4.4**
	comp=Z,1.0nm,0.8s,baz=101,slow=15,SNR=3.8							
	comp=Z,5.2nm,0.3s							
WRA	**Warramunga Arr**	**42.02**	**265**			**P**	**21 13 51.5**	**-1.2**
FORT	**Forrest**	**46.29**	**249**	P		**P**	**21 14 24.5**	**-0.8**
FORT					IAmb	IAmb	21 14 25.7	
	comp=Z,20nm,0.7s							
KNRA	**Kununurra**	**48.23**	**269**	P		**P**	**21 14 39.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**50.45**	**265**	P		**P**	**21 14 56.6**	**+0.3**
	comp=Z,12nm,0.5s,baz=84,slow=6.1,SNR=61							
	comp=Z,12nm,0.5s							
FITZ	**Fitzroy Crossi**	**50.45**	**265**	P		**P**	**21 14 56.5**	**+0.1**
VNDA	**Vanda**	**55.53**	**185**	P		**P**	**21 15 33.4**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=7.6,slow=7.8,SNR=6.2							
	comp=Z,1.4nm,0.7s							
VNDA	**Vanda**	**55.53**	**185**	P		**P**	**21 15 32.7**	**+1.3**
SBA	**Scott Base**	**55.55**	**183**	P		**P**	**21 15 32.9**	**+1.5**
SBA					IAmb	IAmb	21 15 35.7	
	comp=Z,8.5nm,0.8s							
CASY	**Casey**	**60.98**	**206**	P		**P**	**21 16 08.1**	**0.0**
QSPA	**South Pole Qui**	**67.38**	**180**	P		**P**	**21 16 50.8**	**+2.1**
	comp=Z,12nm,0.6s,baz=290,slow=0.4,SNR=122							
	comp=Z,12nm,0.6s							
QSPA	**South Pole Qui**	**67.38**	**180**	P		**P**	**21 16 50.2**	**+1.4**
QSPA					IAmb	IAmb	21 16 51.5	
	comp=Z,11nm,0.7s							
MJAR	**Matsushiro Arr**	**70.64**	**326**	P		**P**	**21 17 08.6**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=154,slow=6.3,SNR=8.7							
	comp=Z,2.4nm,0.8s							
MJAR	**Matsushiro Arr**	**70.64**	**326**	P		**P**	**21 17 08.5**	**-0.1**
KSRS	**Korea Array**	**77.02**	**320**	P		**P**	**21 17 45.8**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=130,slow=5.5,SNR=5.5							
	comp=Z,1.1nm,0.8s							
BELA	**Belgrano 2**	**77.68**	**173**	P		**P**	**21 17 48.5**	**+0.9**
BELA					IAmb	IAmb	21 17 49.2	
	comp=Z,8.7nm,0.6s							
PETK	**Petropavlovsk-**	**77.83**	**347**	P		**P**	**21 17 49.2**	**+0.7**
	comp=Z,4.0nm,0.6s,baz=123,slow=5.7,SNR=7.9							
	comp=Z,4.0nm,0.6s							
MAW	**Mawson**	**78.70**	**200**	P		**P**	**21 17 54.6**	**+1.6**
	comp=Z,1.9nm,0.6s,baz=145,slow=4.3,SNR=8.3							
	comp=Z,1.9nm,0.6s							
MAW	**Mawson**	**78.70**	**200**	P		**P**	**21 17 54.2**	**+1.1**
TROLL	**Troll, Antarti**	**85.52**	**181**	⇑P		**P**	**21 18 28.3**	**+0.6**
	comp=Z,153nm,0.4s							
SNAA	**Sanae**	**85.87**	**179**	⇑P		**P**	**21 18 29.5**	**+0.2**
	comp=Z,59nm,0.4s							
SNAA	**Sanae**	**85.87**	**179**	P		**P**	**21 18 29.7**	**+0.5**
	comp=Z,2.3nm,0.4s,baz=160,slow=1.4,SNR=3.4							
	comp=Z,2.3nm,0.4s							
SNAA	**Sanae**	**85.87**	**179**	P		**P**	**21 18 29.2**	**0.0**
SNAA					IAmb	IAmb	21 18 51.

KST				S		Sn	21 44 29.4	+2.4	
	4.2nm,0.2s								
TKM2	**Tokmak 2**	**1.21**	**307**	⇓P		Pn	21 44 16.0	+3.4	
	1.8nm,0.1s								
TKM2				⇑S		Sg	21 44 28.5	+1.2	
	15nm,0.1s								
KBK	**Karagaybulak**	**1.53**	**288**	⇓P		Pg	21 44 19.6	+2.1	
	1.5nm,0.1s								
KBK				⇓S		Sn	21 44 35.3	-2.2	
	4.1nm,0.2s								
CHMS	**Chumysh**	**1.79**	**297**	⇓P		Pg	21 44 25.1	+2.6	
	0.9nm,0.1s								
CHMS				⇑S		Sb	21 44 44.1	-0.7	
	2.3nm,0.2s								
UZB	**Uzynbulak**	**1.82**	**58**	Pg		Pn	21 44 11.1	-10	
	1.5nm,0.2s								
UZB				Lg		Lg	21 44 37.1		
	0.6nm,0.1s								
USP	**Ospenovka**	**2.08**	**302**	⇓P		Pg	21 44 30.4	+2.4	
	1.7nm,0.3s								
USP				⇑S		Sb	21 44 53.7	+0.6	
	3.0nm,0.2s								
SGDS	**Sogindy**	**2.10**	**308**	Pg		Pn	21 44 21.7	-3.0	
	1.0nm,0.2s								
SGDS				Lg		Lg	21 44 55.2		
	1.3nm,0.1s								
EKS2	**Erkin-Say**	**2.37**	**282**	⇑P		Pg	21 44 34.3	+0.6	
	0.5nm,0.2s								
EKS2				⇓S		Sg	21 45 00.1	-4.2	
	0.9nm,0.2s								

*IDC **05** 21:45:56.2±1.6,53˚.41N×160˚.59W,h0km,mb3.5/4, mbtmp3.6/7,ML3.7/3,MS3.0/1,Error ellipse: s-maj=36.2km s-min=21.8km az=151.0*

*NEIC **05** 21:45:56.6±1.4,53˚.24N±0˚.07×160˚.42W±0˚.08,h10km±1km, ML3.4/14,ML3.3(AEIC),Error ellipse: s-maj=12.0km s-min=7.5km az=153.0 .*

*AEIC **05** 21:46:00.2±1.1,53˚.19N±0˚.09×160˚.37W±0˚.10,h6km±5km, Error ellipse: s-maj=13.5km s-min=8.0km az=166.0*

ISC 05 21:45:55.4±3.1,53˚.35N±0˚.07×160˚.43W±0˚.04,h5km±20km, n76,σ1°96/87,mb3.7/4,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.55**	**18**		**Pn**	**21 46 24.8**	**+0.2**
CNBA					**Sn**	**21 46 45.4**	**+1.2**
DOL	**Dolgoi Island**	**1.99**	**335**		**Pn**	**21 46 31.2**	**+1.4**
DOL					**Sn**	**21 46 55.4**	**+0.4**
SDPT	**Sand Point**	**2.00**	**359**		**Pn**	**21 46 31.2**	**+1.4**
SDPT					**Sn**	**21 46 56.3**	**+1.0**
SDPT				IAML		21 47 02.7	
	comp=E,204nm,0.9s						
DT1	**Dutton Round H**	**2.07**	**329**		**Pn**	**21 46 32.0**	**+1.2**
DT1					**Sn**	**21 46 57.8**	**+0.8**
DTNA	**Dutton South F**	**2.10**	**330**		**Pn**	**21 46 32.6**	**+1.4**
PS4A	**Pavlof South-4**	**2.17**	**338**		**Pb**	**21 46 34.5**	**-0.6**
PS4A					**Sn**	**21 47 01.0**	**+1.6**
PS1A	**Pavlof South-1**	**2.21**	**340**		**Pb**	**21 46 34.8**	**-1.1**
PS1A					**Sn**	**21 47 02.2**	**+1.7**
PS1A					**Sb**	**21 47 02.4**	**-1.2**
PN7A	**Pavlof North-7**	**2.28**	**337**		**Pb**	**21 46 36.0**	**-1.0**
ISNN	**Isanotski Nort**	**2.47**	**308**		**Pn**	**21 46 38.0**	**+1.6**
ISNN					**Sn**	**21 47 07.8**	**+0.8**
ISNN					**Sb**	**21 47 08.1**	**-2.9**
SSLS	**Shishaldin Sou**	**2.51**	**304**		**Pn**	**21 46 38.2**	**+1.2**
SSLN	**Shishaldin Nor**	**2.56**	**306**		**Pn**	**21 46 39.4**	**+1.8**
SSLN					**Sn**	**21 47 11.1**	**+1.9**
SSBA	**Shishaldin**	**2.60**	**305**		**Pn**	**21 46 39.3**	**+1.1**
VNKR	**Veniaminof 5**	**2.75**	**12**		**Pb**	**21 46 43.0**	**-2.1**
VNWF	**Veniaminof 8**	**2.85**	**10**		**Pb**	**21 46 44.5**	**-2.3**
VNHG	**Veniaminof 1**	**2.97**	**14**		**Pn**	**21 46 45.9**	**+2.7**
VNFG	**Fog Glacier, M**	**2.98**	**9**		**Pb**	**21 46 47.7**	**-1.4**
VNFG				IAML		21 47 35.4	
	comp=E,196nm,0.9s						
VNFG				IAML		21 47 40.2	
	comp=N,200nm,0.7s						
AKSA	**Akutan Strait**	**3.23**	**286**		**Pn**	**21 46 47.5**	**+0.8**
AHB	**Akutan Harbor**	**3.29**	**286**		**Pn**	**21 46 48.5**	**+0.9**
AHB					**Sn**	**21 47 25.9**	**-1.2**
AHB				Lg		21 47 26.4	
AKBBA	**Akutan Broad B**	**3.35**	**285**		**Pn**	**21 46 49.2**	**+0.7**
AKBBA					**Sn**	**21 47 27.1**	**-1.6**
AKV	**Akutan Volcano**	**3.38**	**285**		**Pn**	**21 46 49.9**	**+1.0**
ZRO	**Akutan Zero**	**3.38**	**285**		**Pn**	**21 46 49.6**	**+0.7**
ZRO					**Sn**	**21 47 27.5**	**-1.8**
AKLV	**Akutan Long Va**	**3.38**	**286**		**Pn**	**21 46 49.1**	**+0.3**
AKGG	**Akutan Green G**	**3.41**	**287**		**Pn**	**21 46 50.5**	**+1.3**
LVA	**Lava Point**	**3.43**	**286**		**Pn**	**21 46 50.8**	**+1.3**
LVA				IAML		21 47 32.0	
	comp=E,113nm,0.6s						
AKRB	**Akutan Reef Bi**	**3.44**	**285**		**Pn**	**21 46 50.8**	**+1.1**
UNV	**Unalaska Valle**	**3.66**	**280**		**Pn**	**21 46 52.8**	**+0.2**
UNV					**Sn**	**21 47 32.4**	**-3.7**
UNV				IAML		21 47 37.6	
	comp=E,40nm,0.4s						
UNV				IAML		21 47 38.4	
	comp=N,44nm,0.5s						
CHIR	**Chirikof Islan**	**3.73**	**47**	Pn	**Pn**	**21 46 54.5**	**+0.9**
CHIR				IAML		21 47 40.6	
	comp=N,48nm,0.7s						
CHIR				IAML		21 47 43.5	
	comp=E,47nm,1.2s						
MNAT	**Makushin Natee**	**3.77**	**281**		**Pn**	**21 46 54.6**	**+0.5**
MREP	**Makushin Rep't**	**3.79**	**279**		**Pn**	**21 46 55.1**	**+0.5**
MGOD	**Makushin Gods**	**3.87**	**279**		**Pn**	**21 46 56.3**	**+0.7**
MAPS	**Pakushin South**	**3.91**	**279**		**Pn**	**21 46 57.0**	**+0.8**
OKTU	**Okmok Mt. Tuli**	**4.56**	**273**		**Pn**	**21 47 05.7**	**+0.6**
OKER	**Okmok East Rim**	**4.56**	**274**		**Pn**	**21 47 05.8**	**+0.6**
OKCE	**Okmok Cone E**	**4.63**	**274**		**Pn**	**21 47 06.7**	**+0.6**
OKSP	**Okmok Steeple**	**4.72**	**272**		**Pn**	**21 47 07.3**	**0.0**
SII	**Sitkinak Islan**	**4.82**	**46**	Pn	**Pn**	**21 47 09.5**	**+0.8**
R17L	**Mt. Peulik Vol**	**4.87**	**27**		**Pn**	**21 47 12.1**	**+2.8**
PLK1	**Peulik 1**	**4.96**	**24**		**Pn**	**21 47 12.9**	**+2.4**
PLK5	**Peulik 5**	**5.07**	**22**		**Pn**	**21 47 14.2**	**+2.2**
ANCK	**Angle Creek**	**5.60**	**28**		**Pn**	**21 47 21.4**	**+2.1**
OHAK	**Old Harbor**	**5.63**	**44**	Pn	**Pn**	**21 47 20.3**	**+0.6**
KABU	**Katmai Buttres**	**5.72**	**28**		**Pn**	**21 47 23.5**	**+2.5**
O15K	**Ungalikthiuk R**	**5.85**	**3**	Pn	**Pn**	**21 47 24.8**	**+2.1**
O14K	**Tigyukauivet M**	**5.93**	**356**	Pn	**Pn**	**21 47 26.0**	**+2.1**
KARR	**Katmai Rainbow**	**6.08**	**30**		**Pn**	**21 47 27.7**	**+1.8**
Q18K	**Katmai Hardscr**	**6.12**	**28**		**Pn**	**21 47 28.5**	**+2.0**
P17K	**Kvichak River**	**6.26**	**19**	Pn	**Pn**	**21 47 29.9**	**+1.5**
KDAK	**Kodiak Island**	**6.28**	**42**	Pn	**Pn**	**21 47 28.9**	**+0.2**
	comp=E,1.1nm,0.3s,baz=215,slow=8.7,SNR=36						
KDAK				Sn	**Sn**	**21 48 36.2**	**-4.5**
	comp=E,0.6nm,0.3s,baz=321,slow=12,SNR=1.6 comp=E,2.8nm,0.4s						
KDAK	**Kodiak Island**	**6.28**	**42**	Pn	**Pn**	**21 47 29.3**	**+0.7**
KDAK					**Sn**	**21 48 36.2**	**-4.5**
O16K	**Kokwok River B**	**6.39**	**11**	Pn	**Pn**	**21 47 32.5**	**+2.4**
N14K	**Kuskokwak Cree**	**6.62**	**354**	Pn	**Pn**	**21 47 34.3**	**+0.9**
O17K	**Koliganek Bris**	**6.69**	**15**		**Pn**	**21 47 36.3**	**+2.0**
P18K	**Big Mountain,**	**6.71**	**23**		**Pn**	**21 47 36.5**	**+2.0**
N15K	**Kwethluk River**	**6.84**	**1**	Pn	**Pn**	**21 47 38.3**	**+2.0**
Q18K	**Koktuh Hills**	**7.12**	**22**	Pn	**Pn**	**21 47 42.2**	**+2.0**
N17K	**Nushagak Hills**	**7.41**	**13**	Pn	**Pn**	**21 47 47.0**	**+2.9**
M14K	**Bethel**	**7.47**	**354**	Pn	**Pn**	**21 47 46.2**	**+1.4**
M16K	**Timber Creek**	**7.73**	**5**	Pn	**Pn**	**21 47 50.8**	**+2.2**
N18K	**Kilae Creek**	**7.75**	**17**	Pn	**Pn**	**21 47 51.4**	**+2.6**
CNPM	**China Poot**	**8.01**	**36**	Pn	**Pn**	**21 47 53.5**	**+1.1**
L14K	**Kuka Creek**	**8.10**	**352**	Pn	**Pn**	**21 47 55.9**	**+2.3**
N19K	**Bonanza Creek**	**8.15**	**21**	Pn	**Pn**	**21 47 56.7**	**+2.4**
M17K	**Holitna River**	**8.23**	**10**	Pn	**Pn**	**21 47 57.6**	**+2.3**
M18K	**Stony River**	**8.53**	**15**		**Pn**	**21 48 01.3**	**+1.9**
ILAR	**Eielson Array**	**13.36**	**26**	Pn	**Pn**	**21 49 02.7**	**-2.8**
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=6.9						
ILAR				Sn	**Sn**	**21 51 26.8**	**-7.4**
	comp=E,0.1nm,0.3s,baz=209,slow=7.2,SNR=2.7 comp=E,0.2nm,0.4s						
INK	**Inuvik**	**19.65**	**30**	P	**P**	**21 50 24.9**	**+0.3**
	comp=E,0.4nm,0.3s,baz=238,slow=8.6,SNR=5.1 comp=E,1.5nm,0.4s						
PETK	**Petropavlovsk-**	**24.81**	**286**	P	**P**	**21 51 18.2**	**0.0**
	comp=E,0.7nm,0.4s,baz=71,slow=9.7,SNR=1.3						
PETK				LR	LR	22 01 30.3	
	comp=E,31nm,19.7s,baz=246,slow=38 comp=E,0.7nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**41.93**	**230**	T	T	22 39 58.2	
	baz=26,slow=76,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**41.94**	**230**	T	T	22 40 10.7	
	baz=26,slow=76,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**41.95**	**230**	T	T	22 40 15.3	
	baz=26,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**43.09**	**229**	T	T	22 41 39.9	
	baz=26,slow=76,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**43.10**	**229**	T	T	22 41 39.1	
	baz=26,slow=76,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**43.11**	**229**	T	T	22 41 39.4	
	baz=26,slow=76,SNR=2.9						
TXAR	**Lajitas Array**	**47.39**	**97**	P	**P**	**21 54 33.0**	**+2.4**
	comp=E,0.4nm,0.6s,baz=315,slow=7.5,SNR=3.6 comp=E,0.4nm,0.6s						
MKAR	**Makanchi Array**	**66.87**	**318**	P	**P**	**21 56 49.6**	**+1.4**
	comp=E,0.2nm,0.7s,baz=40,slow=7.6,SNR=2.1 comp=E,0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**81.55**	**289**	P	**P**	**21 58 15.3**	**+1.1**
	comp=E,0.5nm,0.6s,baz=21,slow=4.4,SNR=4.5 comp=E,0.5nm,0.6s						

*TAP **05** 21:47:49.6,24˚.26N×121˚.81E,h20km,ML3.6,B*

*JMA **05** 21:47:49.4±0.1,24˚.2N±0˚.5×121˚.8E±0˚.7,h30km±1km, MV2.8/12,TAIWAN REGION*

ISC 05 21:47:48.9±0.9,24˚.23N±0˚.01×121˚.90E±0˚.02,h15km±6km, n144,σ0°69/239,3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.16**	**299**	*eP*	**Pb**	**21 47 53.4**	**-0.2**
EHP				*i* S	**Sb**	**21 47 56.7**	**-0.1**
EAHA	**Aohua**	**0.17**	**304**	⇓*i*P	**Pb**	**21 47 53.6**	**-0.2**
EAHA				*i* S	**Sg**	**21 47 56.6**	**+0.6**
EWUT	**Wuta**	**0.24**	**333**	⇓*i*P	**Pb**	**21 47 54.7**	**-0.3**
EWUT				*i* S	**Sb**	**21 47 58.5**	**-0.5**
ETL	**Fush Village**	**0.26**	**253**	*i* P	**Pg**	**21 47 55.0**	**+0.4**
ETL				*i* S	**Sg**	**21 47 59.1**	**+0.7**
NACB	**Ninganchiao**	**0.28**	**258**	P	**Pg**	**21 47 55.0**	**+0.1**
NACB	**Ninganchiao**	**0.28**	**258**	S	**Sg**	**21 47 57.5**	**-1.5**
NACB	**Ninganchiao**	**0.28**	**258**	*i* P	**Pg**	**21 47 55.0**	**+0.1**
NACB				S	**Sg**	**21 47 59.3**	**+0.3**
TWD	**Chiawan**	**0.31**	**241**	*i* P	**Pg**	**21 47 55.8**	**+0.3**
TWD				S	**Sb**	**21 48 01.0**	**-0.2**
ESAO	**Su ao**	**0.34**	**352**	*i* P	**Pb**	**21 47 56.7**	**-0.1**
ESAO				S	**Sb**	**21 48 01.6**	**-0.4**
EOS2	**EOS2**	**0.36**	**59**	*i* P	**Pn**	**21 47 59.4**	**-0.1**
HWA	**Hwalien**	**0.37**	**226**	*i* P	**Pb**	**21 47 57.8**	**+0.6**
TWC	**Suao**	**0.38**	**354**	*i* P	**Pb**	**21 47 57.2**	**-0.1**
TWC				*e*S	**Sb**	**21 48 02.6**	**-0.4**
ETLH	**Xiulin Townshi**	**0.38**	**266**	*i* P	**Pg**	**21 47 56.7**	**0.0**
ETLH				S	**Sg**	**21 48 01.6**	**-0.3**
EOS3	**EOS3**	**0.39**	**82**	P	**Pn**	**21 48 00.5**	**+0.6**
EOS4	**EOS4**	**0.40**	**106**	*e*P	**Pn**	**21 48 00.5**	**+0.6**
NDS	**Dongshan**	**0.43**	**338**	*i* P	**Pb**	**21 47 58.0**	**-0.3**
NDS				*i* S	**Sg**	**21 48 03.9**	**+0.4**
LATG	**Datong**	**0.45**	**312**	⇓*i*P	**Pg**	**21 47 57.8**	**-0.2**
LATG				S	**Sg**	**21 48 03.7**	**-0.4**
ETM	**Tongmen**	**0.45**	**234**	*i* P	**Pg**	**21 47 58.3**	**+0.3**
ETM				*i* S	**Sb**	**21 48 05.5**	**+0.3**
TEYL	**Yanliau Villag**	**0.45**	**217**	P	**Pb**	**21 47 58.8**	**+0.2**
TEYL				*e*S	**Sb**	**21 48 06.3**	**+1.1**
LXIB	**Xiulin Townshi**	**0.49**	**244**	*i* P	**Pg**	**21 47 58.6**	**-0.1**
LXIB				*i* S	**Sg**	**21 48 06.2**	**+0.9**
ENTT	**Nioudou**	**0.50**	**324**	*i* P	**Pg**	**21 47 58.9**	**-0.1**
ENTT				*i* S	**Sg**	**21 48 05.9**	**+0.1**
NDT	**Datong Townshi**	**0.51**	**317**	*i* P	**Pg**	**21 47 59.1**	**+0.1**
NDT				*e*S	**Sg**	**21 48 06.1**	**+0.3**
NNSB	**Datong**	**0.51**	**293**	*i* P	**Pg**	**21 47 58.8**	**-0.2**
NNSB				S	**Sg**	**21 48 05.2**	**-0.6**
NNS	**Nan Shan**	**0.52**	**293**	*i* P	**Pg**	**21 47 59.0**	**-0.3**
NNS				S	**Sg**	**21 48 05.2**	**-1.0**
TWE	**Neicheng**	**0.53**	**337**	*i* P	**Pb**	**21 47 59.7**	**-0.3**
TWE				*e*S	**Sg**	**21 48 06.8**	**+0.4**
SHUL	**Shoufeng**	**0.54**	**214**	*i* P	**Pb**	**21 48 00.1**	**0.0**
SHUL				S	**Sb**	**21 48 09.2**	**+1.5**
ILA	**Ilan**	**0.55**	**346**	*i* P	**Pb**	**21 48 00.4**	**+0.2**
ILA				S	**Sb**	**21 48 07.7**	**-0.2**
WHF	**Hehuan Shan**	**0.58**	**261**	*i* P	**Pg**	**21 48 00.2**	**-0.3**
WHF				*e*S	**Sg**	**21 48 08.3**	**-0.1**
ESL	**Shilin**	**0.59**	**225**	*i* P	**Pg**	**21 48 00.6**	**-0.1**
ESL				*e*S	**Sg**	**21 48 08.7**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.59**	**332**	*i* P	**Pg**	**21 48 00.8**	**+0.1**
FUSB				S	**Sg**	**21 48 08.5**	**-0.1**
FUSS	**Fushou**	**0.59**	**271**	P	**Pg**	**21 48 00.7**	**0.0**
FUSS				*i* S	**Sg**	**21 48 08.4**	**-0.3**
EGS		**0.61**	**3**	P	**Pn**	**21 48 02.4**	**-0.7**
EGS				*e*S	**Sb**	**21 48 09.5**	**-0.2**
TEGC	**Jichi Village**	**0.61**	**212**	*e*P	**Pb**	**21 48 01.7**	**+0.3**
NTC	**Toucheng**	**0.62**	**355**	*e*P	**Pb**	**21 48 01.8**	**+0.3**
NTC				*e*S	**Sb**	**21 48 10.7**	**+0.7**
YHNB	**Yeheng**	**0.64**	**313**	P	**Pg**	**21 48 01.2**	**-0.3**
YHNB	**Yeheng**	**0.64**	**313**	*e*P	**Pg**	**21 48 01.3**	**-0.3**
YHNB				S	**Sg**	**21 48 10.0**	**-0.2**
NWLT	**Wulai**	**0.65**	**327**	*i* P	**Pg**	**21 48 01.6**	**-0.1**
NWLT				S	**Sg**	**21 48 09.9**	**-0.4**
TWT	**Tachien**	**0.66**	**272**	*e*P	**Pb**	**21 48 02.2**	**0.0**
TWT				S	**Sg**	**21 48 10.4**	**-0.2**
NSK	**Sanguang**	**0.66**	**312**	*i* P	**Pg**	**21 48 01.4**	**-0.4**
NSK				*i* S	**Sg**	**21 48 09.2**	**-1.4**
TDCB	**Techi**	**0.67**	**272**	P	**Pg**	**21 48 02.1**	**-0.1**
TDCB				S	**Sg**	**21 48 09.1**	**-1.2**
WARBT	**Fenglin Townsh**	**0.69**	**222**	*e*P	**Pg**	**21 48 02.0**	**-0.5**
OWD	**Renai**	**0.71**	**247**	P	**Pg**	**21 48 02.5**	**-0.4**
OWD				S	**Sg**	**21 48 12.1**	**-0.2**
TIPB	**Shuangxi**	**0.74**	**355**	P	**Pb**	**21 48 03.8**	**+0.3**
TIPB				S	**Sb**	**21 48 13.1**	**-0.3**
WUSB	**Renai**	**0.75**	**251**	*i* P	**Pg**	**21 48 03.4**	**-0.2**
WUSB				*e*S	**Sg**	**21 48 13.9**	**+0.4**
TWB1	**Santiao Chiao**	**0.78**	**6**	*i* P	**Pn**	**21 48 04.7**	**-0.7**
TWB1				*e*S	**Sb**	**21 48 14.9**	**+0.4**
TWA	**Mucha**	**0.80**	**339**	P	**Pg**	**21 48 04.9**	**+0.4**
TWA				S	**Sg**	**21 48 14.6**	**-0.4**
NHDH	**Xindian Distri**	**0.80**	**335**	*e*P	**Pn**	**21 48 05.3**	**-0.4**
NHDH				*e*S	**Sb**	**21 48 15.4**	**+0.2**
NFF	**Wufeng Townshi**	**0.81**	**299**	*e*P	**Pb**	**21 48 04.3**	**-0.5**
NFF				*e*S	**Sb**	**21 48 14.2**	**-1.4**
TATO	**Taipei**	**0.83**	**333**	P	**Pn**	**21 48 05.5**	**-0.6**
TATO	**Taipei**	**0.83**	**333**	S	**Sg**	**21 48 16.0**	**+0.1**
NWF	**Wu-fen Shan**	**0.84**	**353**	P	**Pn**	**21 48 06.0**	**-0.3**
NWF				S	**Sg**	**21 48 16.4**	**0.0**
WFSB	**Wu-fen Shan**	**0.84**	**353**	P	**Pn**	**21 48 06.0**	**-0.3**
WFSB				S	**Sg**	**21 48 16.6**	**+0.2**
KSHI	**Guanxi Townshi**	**0.85**	**310**	*e*P	**Pg**	**21 48 05.6**	**+0.1**
NHY	**Taipei**	**0.85**	**340**	*e*P	**Pn**	**21 48 06.6**	**+0.1**
SXI1	**Grass Mountain**	**0.86**	**359**	*i* P	**Pn**	**21 48 06.4**	**-0.2**
SXI1				S	**Sg**	**21 48 17.5**	**+0.6**
WHP	**Taichung City**	**0.87**	**273**	*e*P	**Pb**	**21 48 05.8**	**+0.1**
WHP				*e*S	**Sb**	**21 48 16.8**	**-0.4**
TAP	**Taipei**	**0.88**	**336**	*e*P	**Pn**	**21 48 06.3**	**-0.4**
TAP				*e*S	**Sg**	**21 48 17.9**	**+0.4**
EHYH	**Wanrong**	**0.89**	**214**	*e*P	**Pg**	**21 48 06.4**	**+0.1**
EHY	**Hungye**	**0.89**	**216**	*e*P	**Pb**	**21 48 05.0**	**-1.2**
LIOB	**Emei**	**0.90**	**297**	*i* P	**Pb**	**21 48 06.4**	**+0.1**
LIOB				*i* S	**Sb**	**21 48 17.7**	**-0.4**
NSTT	**Nanjuang**	**0.91**	**296**	P	**Pb**	**21 48 06.1**	**-0.3**
NSTT				S	**Sb**	**21 48 17.6**	**-0.6**
WCS	**Beigang Elemen**	**0.92**	**259**	*e*P	**Pb**	**21 48 06.2**	**-0.4**
WCS				*e*S	**Sb**	**21 48 18.3**	**-0.2**
TNOU	**National Taiwa**	**0.92**	**353**	P	**Pn**	**21 48 07.4**	**+0.1**
TNOU				S	**Sg**	**21 48 18.8**	**-0.1**
YM01	**YM01**	**0.96**	**342**	*e*P	**Pn**	**21 48 08.0**	**+0.1**
YM01				*e*S	**Sn**	**21 48 21.2**	**0.0**
TWS1	**Kuangyinshan**	**0.97**	**333**	*e*P	**Pn**	**21 48 08.1**	**+0.1**
TWS1				*e*S	**Sn**	**21 48 21.2**	**-0.3**
SSLB	**Suanglung**	**0.97**	**243**	P	**Pb**	**21 48 06.9**	**-0.6**
SSLB	**Suanglung**	**0.97**	**243**	*e*P	**Pb**	**21 48 06.9**	**-0.6**
SSLB				*e*S	**Sn**	**21 48 21.3**	**-0.3**
SMLT	**Sun Moon Lake**	**0.97**	**249**	*e*P	**Pb**	**21 48 07.0**	**-0.6**
SMLT				*i* S	**Sb**	**21 48 20.6**	**+0.2**
NCUH	**Zhongli**	**0.98**	**319**	*e*P	**Pn**	**21 48 08.4**	**+0.3**
NCUH				S	**Sn**	**21 48 22.0**	**+0.3**
ZUZH	**Zhuzihu**	**0.98**	**341**	*e*P	**Pg**	**21 48 07.8**	**-0.1**
ZUZH				S	**Sg**	**21 48 21.1**	**+0.4**
JYNG	**Yonagunijimaku**	**0.98**	**77**	*e*P	**Pn**	**21 48 09.4**	**+1.2**
YM08	**YM08**	**0.99**	**344**	*e*P	**Pn**	**21 48 08.5**	**+0.2**
YM08				*e*S	**Sn**	**21 48 22.4**	**+0.3**
SBCB	**Hsinchu**	**1.00**	**304**	*e*P	**Pg**	**21 48 08.4**	**+0.2**
SBCB				*e*S	**Sn**	**21 48 23.5**	**+1.3**
ECBN	**Changbin**	**1.00**	**204**	*e*P	**Pb**	**21 48 07.8**	**-0.2**
ECBN				*e*S	**Sn**	**21 48 22.2**	**0.0**
YULB	**Yu-li**	**1.00**	**213**	P	**Pb**	**21 48 07.4**	**-0.6**
YULB	**Yu-li**	**1.00**	**213**	*e*P	**Pb**	**21 48 06.7**	**-1.3**
YULB				*e*S	**Sg**	**21 48 21.6**	**+0.2**
TYC	**Yuchr**	**1.00**	**251**	*e*P	**Pb**	**21 48 07.8**	**-0.2**
TYC				*e*S	**Sb**	**21 48 20.8**	**-0.3**
ANP	**Anpu**	**1.01**	**340**	*e*P	**Pg**	**21 48 08.3**	**-0.2**
ANP				*e*S	**Sb**	**21 48 21.4**	**+0.1**
NTST	**Danshui**	**1.01**	**336**	*e*P	**Pg**	**21 48 08.7**	**+0.2**
NTST				S	**Sn**	**21 48 22.8**	**+0.3**
HSN	**Hsinchu**	**1.01**	**304**	*e*P	**Pg**	**21 48 10.0**	**+1.4**
HSN				*e*S	**Sg**	**21 48 22.3**	**+0.4**
EYUL	**Yuli**	**1.03**	**211**	*e*P	**Pb**	**21 48 08.3**	**-0.1**
EYUL				*e*S	**Sn**	**21 48 23.5**	**+0.5**
TWQ1	**Liyutan**	**1.03**	**277**	*e*P	**Pn**	**21 48 08.9**	**0.0**
TWQ1				*e*S	**Sb**	**21 48 22.0**	**+0.1**
TWF1	**Yuli**	**1.03**	**212**	*e*P	**Pb**	**21 48 08.2**	**-0.4**
TWF1				*e*S	**Sb**	**21 48 21.9**	**0.0**
YOJ	**Yonaguni jima**	**1.04**	**77**	P	**Pg**	**21 48 10.0**	**+0.8**
YOJ	**Yonaguni jima**	**1.04**	**77**	P	**Sn**	**21 48 25.3**	**+2.0**
YOJ	**Yonaguni jima**	**1.04**	**77**	*i* P	**Pg**	**21 48 10.1**	**+1.0**
YOJ				*e*S	**Sn**	**21 48 26.6**	**+3.3**
YOJ	**Yonaguni jima**	**1.04**	**77**	*e*P	**Pg**	**21 48 09.9**	**+0.8**
TWY	**Chenhua**	**1.07**	**346**	*e*P	**Pg**	**21 48 10.7**	**+1.0**
TWY				*e*S	**Sn**	**21 48 24.4**	**+0.3**
WHYT	**Xinyi Township**	**1.09**	**241**	*e*P	**Pb**	**21 48 09.3**	**-0.2**
WHYT				*e*S	**Sg**	**21 48 24.5**	**+0.1**
TCU	**Taichung**	**1.12**	**266**	*e*P	**Pg**	**21 48 10.8**	**+0.3**
TCU				*e*S	**Sg**	**21 48 26.9**	**+1.8**
CHKH	**Chenggong**	**1.13**	**204**	*e*P	**Pb**	**21 48 10.3**	**0.0**
CHKH				*e*S	**Sn**	**21 48 25.4**	**-0.2**
WDJ	**Dajia District**	**1.15**	**276**	*e*P	**Pb**	**21 48 10.7**	**+0.2**
WDJ				*e*S	**Sg**	**21 48 27.5**	**+1.3**
WNT	**Mingjian**	**1.16**	**253**	*e*P	**Pg**	**21 48 11.5**	**+0.1**
WNT				*e*S	**Sg**	**21 48 27.2**	**+0.6**
FULB	**Fuli**	**1.17**	**208**	*e*P	**Pb**	**21 48 11.0**	**+0.2**
FULB				S	**Sg**	**21 48 27.7**	**+0.9**
CHKT	**Chengkung**	**1.23**	**203**	*e*P	**Pb**	**21 48 11.8**	**0.0**
CHKT				*e*S	**Sg**	**21 48 28.3**	**-0.3**
ALS	**Alishan**	**1.23**	**234**	*e*P	**Pn**	**21 48 11.6**	**-0.3**
ALS				*e*S	**Sn**	**21 48 28.6**	**+0.2**
WCHH	**Zhanghua**	**1.23**	**263**	*e*P	**Pg**	**21 48 12.5**	**-0.1**
WCHH				*e*S	**Sg**	**21 48 29.7**	**+1.0**
WCH1	**Changhua City**	**1.24**	**263**	*e*P	**Pg**	**21 48 14.0**	**+1.1**
WCH1				*e*S	**Sg**	**21 48 30.3**	**+1.2**
EHD	**Haiduan**	**1.25**	**210**	*e*P	**Pb**	**21 48 12.0**	**-0.3**
EHD				*e*S	**Sg**	**21 48 30.4**	**+1.0**
ECS	**Chishang**	**1.29**	**209**	*e*P	**Pg**	**21 48 14.0**	**+0.2**
ELDTW	**Lidau**	**1.31**	**218**	*e*P	**Pn**	**21 48 12.1**	**-0.8**
WDLH	**Douliu**	**1.35**	**247**	P	**Pb**	**21 48 14.4**	**+0.4**
WDLH				*e*S	**Sg**

PBDV				*i* IAML			21 55 20.4	
MOE	**Montemor**	**3.22**	**61**	*eP*		**Pn**	**21 54 34.8**	**0.0**
MOE				*eS*		**Sn**	**21 55 16.9**	**+3.7**
MOE				*i* IAML			21 55 21.1	
MOE				*i* IAML			21 55 28.8	
PVAQ	**Vaqueiros**	**3.40**	**82**	*eP*		**Pn**	**21 54 37.6**	**+0.3**
PVAQ				*eS*		**Sn**	**21 55 19.5**	**+1.9**
PVAQ				*i* IAML			21 55 22.1	
PVAQ				*i* IAML			21 55 22.2	
PVAQ				*i* IAML			21 55 31.7	
EVO	**Evora**	**3.46**	**63**	*eS*		**Sn**	**21 55 21.6**	**+2.3**
EVO				*i* IAML			21 55 25.3	
EVO				*i* IAML			21 55 26.1	
PARRA	**Arraiolos**	**3.57**	**59**	*eP*		**Pn**	**21 54 39.4**	**-0.2**
PARRA				*eS*		**Sn**	**21 55 24.2**	**+2.3**
PARRA				*i* IAML			21 55 25.2	
PARRA				*i* IAML			21 55 25.7	
PARRA				*i* IAML			21 55 25.7	
PMTG	**Montargil**	**3.58**	**54**	*eP*		**Pn**	**21 54 40.1**	**+0.4**
PMTG				*eS*		**Sn**	**21 55 25.6**	**+3.5**
EGRO	**El Granado**	**3.60**	**80**	S		**Sn**	**21 55 23.4**	**+0.8**
EGRO	**El Granado**	**3.60**	**80**	Sn		**Sn**	**21 55 26.9**	**+4.4**
PESTR	**Estremoz**	**3.91**	**61**	S		**Sn**	**21 55 32.6**	**+2.4**
PESTR	**Estremoz**	**3.91**	**61**	*eS*		**Sn**	**21 55 32.9**	**+2.7**
PCAS	**Casmilo, Conde**	**4.06**	**41**	*eP*		**Pn**	**21 54 46.6**	**+0.2**
PBAR	**Barrancos**	**4.07**	**72**	P		**Pn**	**21 54 45.9**	**-0.5**
PBAR				S		**Sn**	**21 55 35.3**	**+1.2**
PBAR	**Barrancos**	**4.07**	**72**	*eP*		**Pn**	**21 54 47.4**	**+0.9**
PBAR				*eS*		**Sn**	**21 55 35.7**	**+1.7**
PBAR				*i* IAML			21 55 37.3	
PBAR				*i* IAML			21 55 38.0	
PBAR				*i* IAML			21 55 58.1	
EBAD	**Badajoz**	**4.27**	**65**	S		**Sn**	**21 55 41.1**	**+2.0**
EBAD	**Badajoz**	**4.27**	**65**	⇑*i*Vmb_VC			21 54 48.9	
	307nm,SNR=1.7							
EBAD				Pn		**Pn**	**21 54 49.4**	**+0.1**
EBAD				Sn		**Sn**	**21 55 41.4**	**+2.3**
PMRV	**Marv??o**	**4.32**	**55**	*eP*		**Pn**	**21 54 50.0**	**0.0**
PMRV				*eS*		**Sn**	**21 55 42.6**	**+2.3**
PMRV				*i* IAML			21 55 45.1	
PMRV				*i* IAML			21 56 04.8	
SFS	**San Fernando**	**4.65**	**95**	Sn		**Sn**	**21 55 50.7**	**+2.3**
ECAB	**El Cabril**	**5.29**	**77**	P		**Pn**	**21 55 01.8**	**-1.6**
ECAB				S		**Sn**	**21 56 04.7**	**+0.2**
ECAB	**El Cabril**	**5.29**	**77**	Pn		**Pn**	**21 55 03.1**	**-0.2**
ECAB				Sn		**Sn**	**21 56 05.8**	**+1.3**
POLO	**Lamas de Olo**	**5.41**	**35**	*eP*		**Pn**	**21 55 04.0**	**-1.0**
MVO	**Moncorvo**	**5.63**	**41**	*eP*		**Pn**	**21 55 06.3**	**-1.8**
ELOB	**Lobios**	**5.70**	**31**	Pn		**Pn**	**21 55 08.8**	**-0.1**
ELOB				⇑*i*Vmb_VC			21 55 09.5	
	116nm,SNR=0.8							
ELOB				Sn		**Sn**	**21 56 14.9**	**+0.5**
PGAV	**Gavieira, Arco**	**5.70**	**29**	*eS*		**Sn**	**21 56 14.3**	**-0.1**
EADA	**Adamuz**	**5.96**	**77**	S		**Sn**	**21 56 20.4**	**-0.5**
EADA	**Adamuz**	**5.96**	**77**	Sn		**Sn**	**21 56 22.3**	**+1.3**
PMOZ	**Porto Moniz, M**	**6.01**	**227**	S		**Pg**	**21 55 39.5**	**+0.2**
ECAL	**Calabor**	**6.35**	**38**	Pn		**Pn**	**21 55 17.5**	**-0.4**
ECAL				⇑*i*Vmb_VC			21 55 18.1	
	271nm,SNR=1.2							
EAGO	**Agolada(Pontev**	**6.49**	**26**	Pn		**Pn**	**21 55 19.2**	**-0.6**

RSNC ***05*** *21:54:41.4±0.0, 7°N±1°×7°3W±°, h147km±1km, M2.9, ML2.6*
FUNV ***05*** *21:54:42.4, 7°.18N×73°.24W, h7km, MW3.3, Presumed earthquake*

ISC 05 21:54:39.0±1.3,**6°.87N**±0°.03×**73°.10W**±0°.04,**h157**km±8km,
n28,σ1§**67**/56,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**197**	P	**Pn**	**21 55 01.4**	**+0.7**
BARC				S	**Sn**	**21 55 16.5**	**-0.6**
PAMC	**Pamplona, Colo**	**0.61**	**40**	P	**Pn**	**21 55 04.1**	**+1.8**
PAMC				S	**Sn**	**21 55 21.3**	**+1.2**
BRJC	**Barrancabermej**	**0.65**	**279**	P	**Pn**	**21 55 03.0**	**+1.1**
BRJC				S	**Sn**	**21 55 19.6**	**+0.2**
RUSC	**La Rusia**	**0.97**	**179**	P	**Pn**	**21 55 05.4**	**+0.6**
RUSC				S	**Sn**	**21 55 23.5**	**-1.0**
RUSC	**La Rusia**	**0.97**	**179**	*eP*	**Pn**	**21 55 05.6**	**+0.8**
RUSC				*eS*	**Sn**	**21 55 22.7**	**-1.8**
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P	**Pn**	**21 55 07.9**	**-0.1**
PTBC				S	**Sn**	**21 55 28.1**	**-2.1**
SPBC	**San Pablo de B**	**1.55**	**219**	P	**Pn**	**21 55 10.3**	**+0.6**
SPBC				S	**Sn**	**21 55 32.2**	**-1.1**
NORC	**Norcasia**	**2.19**	**234**	P	**Pn**	**21 55 17.5**	**+0.7**
NORC				S	**Sn**	**21 55 45.0**	**-0.9**
CHIC	**Chingaza**	**2.31**	**196**	P	**Pn**	**21 55 19.7**	**+1.0**
CHIC				S	**Sn**	**21 55 48.5**	**-0.7**
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**21 55 21.0**	**+1.9**
ROSC				S	**Sn**	**21 55 48.4**	**-1.6**
HELC	**Santa Helena**	**2.51**	**255**	P	**Pn**	**21 55 22.8**	**+1.9**
HELC				S	**Sn**	**21 55 53.8**	**+0.6**
HELC	**Santa Helena**	**2.51**	**255**	*eP*	**Pn**	**21 55 23.1**	**+2.2**
HELC				*eS*	**Sn**	**21 55 52.4**	**-0.8**
CVER	**Cruz Verde, Cu**	**2.53**	**203**	P	**Pn**	**21 55 22.8**	**+1.5**
CVER				S	**Sn**	**21 55 54.0**	**+0.1**
UREC	**San Jos de Ur**	**2.57**	**290**	P	**Pn**	**21 55 22.0**	**+0.7**
UREC				S	**Sn**	**21 55 51.6**	**-2.4**
GUY2C	**Guyana, Caldas**	**2.78**	**234**	P	**Pn**	**21 55 25.7**	**+1.3**
GUY2C				S	**Sn**	**21 55 59.9**	**+0.4**
VILC	**Villavicencio,**	**2.80**	**192**	P	**Pn**	**21 55 25.2**	**+0.8**
VILC				S	**Sn**	**21 55 59.5**	**0.0**
PTGC	**Puerto Gaitan,**	**2.82**	**160**	P	**Pn**	**21 55 24.6**	**+0.1**
PTGC				S	**Sn**	**21 55 58.0**	**-1.7**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**21 55 29.1**	**+1.5**
CBOC				S	**Sn**	**21 56 05.1**	**-0.1**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**21 55 28.8**	**+0.9**
DBBC				S	**Sn**	**21 56 04.5**	**-1.2**
SDV	**Santo Domingo**	**3.16**	**50**	*eP*	**Pn**	**21 55 30.7**	**+1.9**
SDV				*eS*	**Sn**	**21 56 06.9**	**-0.6**
APAC	**Apartado, Choc**	**3.60**	**287**	P	**Pn**	**21 55 35.9**	**+1.6**
APAC				S	**Sn**	**21 56 15.8**	**-1.5**
PRAC	**Prado**	**3.60**	**210**	P	**Pn**	**21 55 34.7**	**+0.3**
PRAC				S	**Sn**	**21 56 17.1**	**-0.4**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**21 55 36.3**	**+1.5**
ORTC				S	**Sn**	**21 56 18.8**	**+0.6**
PLMC	**San Jos del P**	**3.72**	**239**	P	**Pn**	**21 55 37.0**	**+1.1**
PLMC				S	**Sn**	**21 56 19.2**	**-0.9**
URMC	**La Uribe, Meta**	**3.82**	**200**	P	**Pn**	**21 55 38.6**	**+1.4**
URMC				S	**Sn**	**21 56 22.8**	**+0.3**
SMRC	**Santa Marta, M**	**4.41**	**345**	P	**Pn**	**21 55 46.5**	**+1.7**
SMRC				S	**Sn**	**21 56 33.5**	**-2.6**
MACC	**Macarena, Meta**	**4.75**	**189**	P	**Pn**	**21 55 48.6**	**-0.8**
MACC				S	**Sn**	**21 56 38.2**	**-6.1**
URIC	**Uribia, Colomb**	**4.92**	**13**	*eP*	**Pn**	**21 55 51.6**	**0.0**
URIC				*eS*	**Sn**	**21 56 43.0**	**-5.3**

IDC 05 21:56:00.4±4.4,**24°.35S**×**179°.47E,h253**km±58km,**mb3.4**/4,
mbtmp3.9/5,**Error ellipse: s-maj=57.7km s-min=28.4km az=30.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.71**	**348**	P	Pn	21 57 37.7	0.0
	6.9nm,0.5s,baz=170,slow=11,SNR=8.6						
ASAR	**Alice Springs**	**41.48**	**261**	P	P	22 03 24.5	+1.3
	1.0nm,0.5s,baz=93,slow=7.7,SNR=14						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**41.90**	**267**	P	P	22 03 24.9	-1.7
	0.4nm,0.4s,baz=97,slow=7.8,SNR=14						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**65.74**	**180**	P	P	22 06 17.8	-0.2
	0.8nm,0.6s,baz=186,slow=1.6,SNR=9.4						
	0.8nm,0.6s						
SONM	**Songino Array**	**97.12**	**319**	P	Pdif	22 09 05.4	+1.5
	0.3nm,0.4s,baz=113,slow=3.7,SNR=3.8						
	0.3nm,0.4s						

NIED ***05*** *22:03:31.9, 36°.24N×137°.64E, h6km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.52; Mθθ1.54; Mϕϕ-1.02; Mrθ0.24; Mrϕ-1.15; Mθϕ1.34; Fault plane solution: Mo2.21000×10¹⁵ NP1: ϕs252.00000°,δ60.00000°,λ-158.00000°. NP2: ϕs151.00000°,δ71.00000°,λ-32.00000°.*
JMA ***05*** *22:03:31.9±0.0, 36°.2N±0°.2×137°.6E±0°.1, h6km±1km, MV3.8/20, HIDA MOUNTAINS REGION*
JMA Felt II J1 at HIDA MOUNTAINS REGION .
IDC ***05*** *22:03:32.7±1.4, 36°.36N×137°.62E, h0km, mb3.4/3, mbtmp3.5/5, ML3.5/2, MS3.4/24, Error ellipse: s-maj=30.2km s-min=9.8km az=155.0*

ISC 05 22:03:33.7±0.9,**36°.25N**±0°.05×**137°.67E**±0°.04,**h11**km,**n34,**
σ1§**82**/14,**mb3.6**/3,**MS3.4**/19,**3D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.29**	**264**	⇓*i*P	**Pg**	**22 03 37.2**	**-2.3**
JNG	**Nsakai**	**0.38**	**66**	⇓*i*P	**Pg**	**22 03 39.9**	**-1.4**
JNG				⇓S	**Sg**	**22 03 45.3**	**-1.1**
JTT	**Ttatey**	**0.44**	**323**	*i* P	**Pg**	**22 03 41.0**	**-1.4**
MAT	**Matsushiro**	**0.52**	**56**	*i* P	**Pg**	**22 03 42.3**	**-1.7**
MAT				S	**Sg**	**22 03 49.6**	**-1.3**
MJAR	**Matsushiro Arr**	**0.52**	**56**	Pg	**Pg**	**22 03 42.6**	**-1.3**
	87nm,0.3s,baz=242,slow=18,SNR=561						
MJAR				Lg	Lg	22 03 50.3	
	122nm,0.3s,baz=263,slow=15,SNR=22						
MJAR				LR	LR	22 04 13.1	
	comp=Z,1μm,21.4s,baz=137,slow=80						
JNT	**Takato**	**0.54**	**134**	*i* P	**Pg**	**22 03 42.1**	**-2.0**
JNT				S	**Sg**	**22 03 49.1**	**-2.1**
JHJ	**Hachijo jima 2**	**3.58**	**150**	Pn	**Pn**	**22 04 31.4**	**+2.3**
	16nm,0.3s,baz=6.4,slow=15,SNR=4.6						
JHJ				Lg	Lg	22 05 21.4	
	baz=263,slow=9.7						
	56nm,0.6s						
JNU	**Nakatsue**	**6.41**	**243**	LR	LR	22 07 43.1	
	comp=Z,215nm,19.6s,baz=44,slow=39						
KSRS	**Korea Array**	**7.90**	**282**	Pn	**Pn**	**22 05 28.3**	**-0.2**
	0.5nm,0.3s,baz=96,slow=14,SNR=5.5						
KSRS				LR	LR	22 08 24.0	
	comp=Z,226nm,18.5s,baz=105,slow=37						
	0.9nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.05**	**333**	LR	LR	22 09 06.3	
	comp=Z,200nm,18.4s,baz=149,slow=37						
JCJ	**Chichijima**	**9.90**	**156**	LR	LR	22 09 23.3	
	comp=Z,201nm,20.4s,baz=92,slow=35						
KLR	**Kul'dur**	**13.67**	**343**	LR	LR	22 11 53.3	
	comp=Z,92nm,19.4s,baz=164,slow=37						
PETK	**Petropavlovsk-**	**21.94**	**34**	LR	LR	22 16 12.5	
	comp=Z,62nm,21.4s,baz=229,slow=35						
GUMO	**Guam**	**23.48**	**162**	LR	LR	22 17 18.7	
	comp=Z,53nm,18.5s,baz=349,slow=35						
MA2	**Magadan**	**24.84**	**16**	LR	LR	22 19 20.3	
	comp=Z,48nm,18.6s,baz=165,slow=38						
SONM	**Songino Array**	**25.77**	**306**	LR	LR	22 19 30.2	
	comp=Z,129nm,19.7s,baz=114,slow=37						
TLY	**Talaya**	**28.62**	**313**	LR	LR	22 21 19.4	
	comp=Z,84nm,18.2s,baz=106,slow=37						
SHEM	**Shemya Is, Ala**	**30.36**	**46**	LR	LR	22 21 60.0	
	comp=Z,28nm,21.8s,baz=234,slow=36						
DAV	**Davao City (W)**	**31.08**	**204**	LR	LR	22 23 17.7	
	comp=Z,39nm,18.0s,baz=190,slow=38						
CMAR	**Chiang Mai Arr**	**38.38**	**253**	LR	LR	22 26 35.8	
	comp=Z,33nm,18.1s,baz=205,slow=36						
ZALV	**Zalesovo Beam**	**40.23**	**313**	LR	LR	22 26 55.1	
	comp=Z,27nm,18.3s,baz=86,slow=35						
MKAR	**Makanchi Array**	**41.98**	**302**	LR	LR	22 29 21.5	
	comp=Z,78nm,18.4s,baz=56,slow=37						
KRVT	**Keravat (AS076**	**42.53**	**159**	LR	LR	22 26 49.1	
	comp=Z,5.0nm,19.7s,baz=95,slow=33						
NRIK	**Noril'sk**	**42.74**	**336**	LR	LR	22 30 17.4	
	comp=Z,109nm,18.5s,baz=112,slow=38						
ILAR	**Eielson Array**	**51.76**	**32**	P	**P**	**22 12 41.2**	**+0.3**
	0.3nm,0.7s,baz=280,slow=7.8,SNR=4.6						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**55.98**	**184**	P	**P**	**22 13 12.5**	**+0.3**
	0.7nm,1.1s,baz=2.6,slow=7.2,SNR=1.6						
	0.7nm,1.1s						
AKTO	**Aktyubinsk**	**56.94**	**311**	LR	LR	22 39 18.8	
	comp=Z,46nm,19.4s,baz=206,slow=38						
KIRV	**Kirov**	**59.04**	**322**	LR	LR	22 41 11.0	
	comp=Z,26nm,18.2s,baz=20,slow=38						
ASAR	**Alice Springs**	**59.70**	**184**	P	**P**	**22 13 40.6**	**+2.3**
	0.2nm,0.3s,baz=14,slow=5.2,SNR=2.2						
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**63.65**	**339**	LR	LR	22 45 56.8	
	comp=Z,46nm,18.1s,baz=42,slow=40						
OBN	**Obninsk**	**66.89**	**322**	LR	LR	22 46 12.7	
	comp=Z,78nm,19.7s,baz=184,slow=38						
KBZ	**Khabaz**	**69.09**	**309**	LR	LR	22 48 45.6	
	comp=Z,34nm,18.9s,baz=66,slow=39						
GNI	**Garni**	**69.73**	**305**	LR	LR	22 47 48.1	
	comp=Z,39nm,18.4s,baz=80,slow=38						
NOA	**NORSAR Array B**	**73.70**	**336**	LR	LR	22 49 16.9	
	comp=Z,26nm,18.3s,baz=195,slow=37						

IDC ***05*** *22:11:54.4±2.0, 67°.72N×34°.07E, h0km, mbtmp3.6/6, ML3.0/6, Error ellipse: s-maj=25.6km s-min=11.1km az=87.0*
KOLA ***05*** *22:11:54.7, 67°.67N×33°.74E, h0km, ML2.6, Error ellipse: s-maj=3.0km s-min=1.6km az=140.0, Khibiny, mines Kirovsk, Yukspor*
HEL ***05*** *22:11:54.3±0.1, 67°.65N×33°.70E, h0km, ML2.1, Explosion*
BER ***05*** *22:11:55.3±0.5, 67°.54N×33°.77E, h0km, Suspected explosion*

ISC 05 22:11:52.8±0.8,**67°.59N**±0°.03×**33°.79E**±0°.03,**h0**km,**n39,**
σ1§**74**/65,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.15**	**262**	P	**Pg**	**22 11 57.5**	**+1.9**
APA0	**Apatity Array**	**0.30**	**273**	P	**Pg**	**22 11 59.7**	**+1.1**
APA0				S	**Sg**	**22 12 04.2**	**+1.6**
LVZ	**Lovozero**	**0.45**	**46**	P	**Pg**	**22 12 02.4**	**+1.0**
LVZ				S	**Sg**	**22 12 08.4**	**+1.1**
LVZ	**Lovozero**	**0.45**	**46**	PG	**Pg**	**22 12 02.1**	**+0.7**
LVZ				SG	**Sg**	**22 12 08.1**	**+0.8**
KVDA	**Kovda**	**0.97**	**202**	P	**Pb**	**22 12 13.5**	**+1.0**
KVDA				S	**Sb**	**22 12 26.5**	**+0.8**
VRF	**Varrio**	**1.60**	**278**	PG	**Pn**	**22 12 22.6**	**+0.2**
	baz=87						
VRF				smax	smax	22 12 41.2	
	comp=Z,22nm,0.2s						
VRF				SN	**Sn**	**22 12 43.3**	**-0.5**
TERR	**Teriberka**	**1.69**	**16**	P	**Pn**	**22 12 23.8**	**+0.3**
TERR				S	**Sn**	**22 12 43.7**	**-2.1**
OLKF	**Oulanka, Finla**	**2.15**	**236**	PG	**Pb**	**22 12 33.1**	**+0.6**
OLKF				smax	smax	22 12 58.0	
	comp=Z,10.0nm,0.2s						
OLKF				SG	**Sg**	**22 13 02.5**	**+0.8**
KU6	**Riekki**	**2.20**	**226**	PG	**Pb**	**22 12 33.4**	**0.0**
	baz=44						
KU6				smax	smax	22 12 59.9	
	comp=Z,9.8nm,0.2s						
KU6				SG	**Sg**	**22 13 04.8**	**+1.3**
RAJF	**Raja-Jooseppi**	**2.24**	**296**	PB	**Pn**	**22 12 31.8**	**+0.7**
RAJF				SG	**Sn**	**22 13 00.8**	**+1.3**
MSF	**Maaselka**	**2.53**	**230**	PB	**Pb**	**22 12 38.4**	**-0.6**
KU1	**Kurvinen**	**2.64**	**222**	PB	**Pb**	**22 12 40.2**	**-0.8**
KU2	**Taivalkoski**	**2.91**	**232**	PB	**Pb**	**22 12 43.8**	**-1.6**
	baz=47						
KU2				SG	**Sg**	**22 13 25.2**	**-0.9**
VADS	**Vadso**	**3.00**	**330**	*eP*	**Pn**	**22 12 42.6**	**+1.0**
RANF	**Ranua**	**3.19**	**244**	PN	**Pn**	**22 12 46.4**	**+2.3**
RANF				SG	**Sg**	**22 13 34.3**	**-0.8**
RNF	**Rovaniemi**	**3.19**	**256**	PN	**Pn**	**22 12 45.5**	**+1.3**
	baz=69						
RNF				SB	**Sn**	**22 13 25.8**	**+2.9**
KEV	**Kevo**	**3.30**	**314**	*eP*	**Pn**	**22 12 47.0**	**+1.5**
KEV	**Kevo**	**3.30**	**314**	PN	**Pn**	**22 12 46.3**	**+0.8**
KEV				SN	**Sn**	**22 13 25.0**	**-0.4**
ARA0	**ARCESS Array S**	**3.61**	**307**	*eP*	**Pn**	**22 12 50.8**	**+0.9**
ARA0				*eS*	**Sn**	**22 13 32.0**	**-1.2**
ARA0	**ARCESS Array S**	**3.61**	**307**	PN	**Pn**	**22 12 50.3**	**+0.4**
ARA0				SN	**Sn**	**22 13 32.1**	**-1.2**
ARCES	**ARCESS Array B**	**3.61**	**307**	Pn	**Pn**	**22 12 50.8**	**+0.8**
	comp=Z,2.3nm,0.3s,baz=113,slow=14,SNR=167						
ARCES				Pg	**Pb**	**22 12 58.8**	**+1.3**
	comp=Z,2.8nm,0.3s,baz=117,slow=15,SNR=20						
ARCES				Sn	**Sn**	**22 13 30.4**	**-2.8**
	comp=Z,2.3nm,0.3s,baz=120,slow=31,SNR=8.9						
ARCES				Lg	Lg	22 13 41.7	
	comp=Z,2.2nm,0.3s,baz=114,slow=30,SNR=5.3						
	comp=Z,7.6nm,0.3s						
ARCES	**ARCESS Array B**	**3.61**	**307**	P	**Pn**	**22 12 50.4**	**+0.5**
ARCES				S	**Sn**	**22 13 31.8**	**-1.5**
RMF	**Romuvaara**	**3.74**	**207**	PN	**Pn**	**22 12 54.0**	**+2.3**
KLF	**Kolari**	**3.81**	**269**	PN	**Pn**	**22 12 53.4**	**+0.9**
	baz=84						
HEF	**Hetta**	**3.90**	**287**	*eP*	**Pn**	**22 12 54.8**	**+0.9**
HEF	**Hetta**	**3.90**	**287**	PN	**Pn**	**22 12 54.3**	**+0.5**
HEF				SG	**Sb**	**22 13 53.6**	**+3.6**
TOF	**Tornio**	**4.03**	**252**	PN	**Pn**	**22 12 56.6**	**+0.9**
OUL	**Oulu**	**4.05**	**235**	PB	**Pb**	**22 13 03.7**	**-1.3**
OUL				SB	**Sb**	**22 13 54.9**	**+0.5**
KTK1	**Kautokeino**	**4.17**	**295**	*eP*	**Pn**	**22 12 58.0**	**+0.5**
KTK1				*eS*	**Sn**	**22 13 45.1**	**-1.8**
KTK1	**Kautokeino**	**4.17**	**295**	PN	**Pn**	**22 12 58.2**	**+0.6**
KTK1				SG	**Sb**	**22 14 01.5**	**+3.7**
KALU	**Kalix**	**4.49**	**252**	PN	**Pn**	**22 13 03.3**	**+1.4**
LANU	**Lannavaara**	**4.49**	**281**	PN	**Pn**	**22 13 02.2**	**+0.2**
LANU				SG	**Sg**	**22 14 12.2**	**-4.7**
ERTU	**Ertsjaerv**	**4.65**	**262**	PN	**Pn**	**22 13 04.6**	**+0.3**
ERTU				SN	**Sn**	**22 13 59.2**	**+0.3**
FINES	**FINESS Array B**	**7.00**	**212**	Pn	**Pn**	**22 13 38.2**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=27,slow=13,SNR=13						
FINES				Sn	**Sn**	**22 14 58.2**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=24,slow=19,SNR=6.3						
FINES				Lg	Lg	22 15 30.1	
	comp=Z,1.6nm,0.3s,baz=39,slow=26,SNR=10						
	comp=Z,0.9nm,0.5s						
FAUS	**Fauske**	**7.10**	**277**	S	**Sn**	**22 14 55.1**	**-3.9**
HFS	**Hagfors**	**11.54**	**239**	Pn	**Pn**	**22 14 38.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=35,slow=13,SNR=4.5						
HFS				Sn	**Sn**	**22 16 44.0**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=46,slow=26,SNR=2.3						
HFS				Lg	Lg	22 17 49.4	
	comp=Z,0.4nm,0.3s,baz=56,slow=25,SNR=4.2						
	comp=Z,3.1nm,0.7s						
SPITS	**Spitsbergen Ar**	**11.72**	**342**	Pn	**Pn**	**22 14 38.5**	**-2.4**
	baz=139,slow=17						
	comp=Z,2.9nm,0.6s						
NOA	**NORSAR Array B**	**11.73**	**247**	Pn	**Pn**	**22 14 40.1**	**-1.0**
	baz=45,slow=19,SNR=1.8						
NOA				Lg	Lg	22 17 51.5	
	baz=46,slow=24,SNR=5.6						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**17.09**	**190**	Pn	**Pn**	**22 15 48.7**	**-4.1**
	comp=Z,0.4nm,0.3s,baz=6.8,slow=12,SNR=3.0						
	comp=Z,0.6nm,0.5s						

IGQ ***05*** *22:23:38.8±0.8, 1°S±3°×8°1W±°, h7km±3km, M4.4/22, Mjma4.5/22, MLv4.4/20, Ms(BB)4.3/18*
CATAC ***05*** *22:23:40.1±1.1, 1°S±5°×8°1W±1°2, h16km±17km, M4.6/7, mb4.4/2, mB4.6/1, MLv4.8/7, Mw(mB)3.8/1, Error ellipse: s-maj=25.2km s-min=9.9km az=93.7, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.65; Mθθ1.22; Mϕϕ-0.57; Mrθ0.17; Mϕθ0.11; Mϕr-0.10; Fault plane solution: Mo1.08290×10¹⁶ NP1:ϕs55.93141°, δ49.66045°,λ-136.26875°. NP2:ϕs294.16295°, δ58.20336°,λ-49.60694°. Principal axes: T 1.2428, Plg4.8842°, Azm356.7826°; N -0.5017, Plg33.4201°, Azm90.0152°; P -0.7410, Plg56.1296°, Azm259.4685°; confirmed*
NEIC ***05*** *22:23:41.9±1.6, 0°.73S±0°.07×81°.01W±0°.04, h10km±1km, mb4.4/20 Error ellipse: s-maj=11.5km s-min=6.1km az=169.0*
RSNC ***05*** *22:23:41.0±1.3, 1°S±5°×8°1W±1°1, h8km±10km, M4.1, mB5.0, mb4.6, ML3.6, Mw(mB)4.3*
VAO ***05*** *22:23:43.4±0.8, 0°.93S×80°.88W, h10km, mb4.7, Presumed earthquake*
IDC ***05*** *22:23:46.1±2.4, 0°.85S×81°.28W, h66km±22km, mb3.6/8, mbtmp4.1/13, MS3.2/13, Error ellipse: s-maj=31.2km s-min=15.1km az=67.0*

ISC 05 22:23:42.4±1.1,**0°.78S**±0°.03×**81°.10W**±0°.05,**h26**km±8km,
n195,σ1§**53**/195,**mb4.3**/13,**MS3.2**/8,**29C-3D,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMNT	**Manta-Manabi**	**0.40**	**114**	⇑P	**Pb**	**22 23 49.7**	**-1.5**
AMNT				S	**Sb**	**22 23 57.8**	**+0.8**
ISPT	**Isla de la Pla**	**0.48**	**176**	⇑P	**Pb**	**22 23 51.0**	**-1.5**
ISPT				S	**Sb**	**22 23 59.7**	**+0.5**
ABH3	**Manabi, Bahia**	**0.70**	**75**	P	**Pb**	**22 23 54.3**	**-1.8**
ABH3				S	**Sb**	**22 24 05.9**	**+0.4**
ABH2	**Ecuador-Univer**	**0.72**	**81**	⇑P	**Pb**	**22 23 55.1**	**-1.2**
ABH2				S	**Sn**	**22 24 08.4**	**+1.3**
JIPI	**JIPIJAPA**	**0.80**	**137**	⇑P	**Pb**	**22 23 56.6**	**-1.1**
PPLP	**Puerto Lpez**	**0.83**	**157**	P	**Pn**	**22 23 56.7**	**-1.8**
PPLP				⇑P	**Pb**	**22 23 56.6**	**-1.7**
PPLP				S	**Sn**	**22 24 10.0**	**+0.1**
PPLP				S	**Sb**	**22 24 10.6**	**+1.5**
PPLP	**Puerto Lpez**	**0.83**	**157**	P	**Pb**	**22 23 56.6**	**-1.7**

ECEN	Cerro Negro	3.51	63	P		Pn	22 24 35.4	-0.5	
BOSC	San Juan Bosco	3.52	132	⇑P		Pn	22 24 39.0	+3.4	
CHL1	Volcın Chiles	3.52	64	P		Pn	22 24 35.8	-0.2	
REVS	Reventador Sur	3.55	79	P		Pn	22 24 38.3	+2.2	
CHL2	Volcın Chiles	3.55	64	P		Pn	22 24 36.3	-0.1	
PKYU	Pakayacu	3.61	104	P		Pn	22 24 39.3	+2.5	
TULM	Tulcn-Chalpat	3.63	66	P		Pn	22 24 38.8	+1.3	
TULM	Tulcn-Chalpat	3.63	66	P		Pn	22 24 39.7	+2.2	
TULM	Tulcn-Chalpat	3.63	66	P		Pn	22 24 39.1	+1.6	
MCRA	Macar, Loja	3.75	162	P		Pn	22 24 38.5	-0.2	
MCRA	Macar, Loja	3.75	162	P		Pn	22 24 38.3	-0.4	
CASC	Dorado de Casc	3.87	76	P		Pn	22 24 42.8	+2.3	
CASC	Dorado de Casc	3.87	76	P		Pn	22 24 42.4	+1.9	
TAIS	Taisha	3.94	114	P		Pn	22 24 45.0	+3.7	
ZUMB	Zumba	4.51	154	P		Pn	22 24 51.3	+2.0	
BBAC	Balboa, Cauca	4.75	54	P		Pn	22 24 51.2	-1.5	
BBAC	Balboa, Cauca	4.75	54	P		Pn	22 24 50.7	-2.0	
CRUC	La Cruz	4.76	61	P		Pn	22 24 53.8	+0.9	
GR1C	Gorgona, Isla	4.77	38	P		Pn	22 24 56.7	+4.0	
POPC	Popayan, Colom	5.52	53	P		Pn	22 25 01.7	-1.5	
	529nm66nm,0.7s								
FLOC	Florencia	5.93	67	P		Pn	22 25 09.5	+0.8	
FLOC	Florencia	5.93	67	P		Pn	22 25 12.4	+3.7	
FLOC	Florencia	5.93	67	P		Pn	22 25 12.8	+4.0	
JAMC	Jamundi, Valle	5.95	48	P		Pn	22 25 09.3	+0.2	
	2µm55nm,1.0s								
GARC	Garzon, Huila	6.34	62	P		Pn	22 25 16.9	+2.4	
	1µm63nm,0.9s								
PTLC	Puerto Leguiza	6.38	82	P		Pn	22 25 15.3	+0.5	
	2µm234nm,1.1s								
BETC	Betania	6.62	59	P		Pn	22 25 19.3	+1.1	
ATAH	Atahualpa	6.87	157	P		Pn	22 25 24.3	+2.4	
	3.7nm,0.4s,baz=359,slow=7.5,SNR=7.7								
ATAH				S		Sn	22 26 39.6	+0.1	
	12nm,0.8s,baz=135,slow=18,SNR=1.2								
ATAH				LR		LR	22 28 31.5		
	comp=Z,282nm,19.6s,baz=344,slow=42								
PLMC	San Jos del P	7.42	40	P		Pn	22 25 30.1	+0.9	
	23nm,1.0s								
ORTC	Ortega, Tolima	7.48	51	P		Pn	22 25 32.4	+2.4	
	1µm118nm,1.3s								
PRAC	Prado	7.65	54	P		Pn	22 25 31.2	-1.2	
	30nm,1.1s								
MACC	Macarena, Meta	7.81	68	P		Pn	22 25 35.2	+0.6	
	537nm34nm,1.0s								
URMC	La Uribe, Meta	7.82	59	P		Pn	22 25 41.9	+7.2	
GUY2C	Guyana, Caldas	8.27	44	P		Pn	22 25 41.9	+0.6	
	14nm,0.9s								
CBOC	Ciudad Bolivar	8.33	38	P		Pn	22 25 44.2	+2.4	
	21nm,0.8s								
ROSC	El Rosal	8.78	50	P		Pn	22 25 54.1	+5.9	
	5.9nm,0.5s,baz=23,slow=23,SNR=7.2								
ROSC				LR		LR	22 30 14.6		
	comp=Z,255nm,19.4s,baz=223,slow=43								
ROSC	El Rosal	8.78	50	Pn		Pn	22 25 49.1	+0.9	
ROSC	El Rosal	8.78	50	P		Pn	22 25 49.6	+1.4	
	38nm,1.1s								
VILC	Villavicencio,	8.86	57	P		Pn	22 25 52.1	+3.1	
NORC	Norcasia	8.86	45	P		Pn	22 25 57.8	+8.9	
CHIC	Chingaza	9.12	54	P		Pn	22 25 54.0	+1.2	
	25nm,0.8s								
SPBC	San Pablo de B	9.49	48	P		Pn	22 25 57.6	-0.1	
	683nm14nm,1.1s								
PTBC	PUERTO BERRIO,	9.84	42	P		Pn	22 26 03.1	+0.7	
	7.8nm,0.9s								
RUSC	La Rusia	10.39	50	S		Sn	22 28 08.5	+2.1	
RUSC	La Rusia	10.39	50	P		Pn	22 26 10.3	-0.1	
CZSB	Cruzeiro do Su	10.85	130	eP		Pn	22 26 17.0	+0.7	
CZSB				eS		Sn	22 28 14.6	-2.4	
JTS	Las Juntas de	11.64	341	P		Pn	22 26 30.1	+3.0	
	4.3nm,0.9s,baz=176,slow=16,SNR=2.2								
JTS				LR		LR	22 29 13.9		
	comp=Z,33nm,19.1s,baz=173,slow=28								
JTS	Las Juntas de	11.64	341			Pn	22 26 28.4	+1.3	
NNA	Nana	11.91	159	P		Pn	22 26 32.1	+1.3	
	7.8nm,0.4s,baz=309,slow=9.8,SNR=4.9								
NNA				S		Sn	22 28 39.0	-4.0	
	3.4nm,0.3s,baz=252,slow=22,SNR=1.0								
NNA	Nana	11.91	159			Pn	22 26 31.8	+1.0	
NNA	Nana	11.91	159	P		Pn	22 26 31.3	+0.5	
SDV	Santo Domingo	14.18	47	P		P	22 27 06.0	-3.1	
	28nm,0.8s,baz=221,slow=7.3,SNR=22								
SDV				LR		LR	22 33 49.9		
	comp=Z,89nm,18.6s,baz=241,slow=42								
SDV	Santo Domingo	14.18	47	eP		Pn	22 27 04.4	+2.5	
APG	El Apazote	18.21	330	LR		LR	22 33 32.0		
	comp=Z,9.1nm,19.7s,baz=68,slow=32								
LPAZ	La Paz	20.03	141	P		Pn	22 28 16.2	+0.1	
	3.2nm,0.6s,baz=328,slow=8.4,SNR=18								
LPAZ				LR		LR	22 37 16.8		
	comp=Z,126nm,19.8s,baz=308,slow=40								
	3.2nm,0.6s								
LPAZ	La Paz	20.03	141			P	22 28 14.9	+0.6	
LPAZ	La Paz	20.03	141	eP		P	22 28 14.2	-0.1	
MACA	Manacapuru-AM	20.54	97	P		P	22 28 19.0	-0.3	
MACA	Manacapuru-AM	20.54	97	eP		P	22 28 19.9	+0.6	
BOAV	Boa Vista	20.82	81	eP		P	22 28 23.0	+0.8	
PB16	IPOC Station P	20.84	148			P	22 28 24.1	+1.1	
PB11	IPOC Station P	21.95	150			P	22 28 34.7	+0.3	
PB11				IAmb		IAmb	22 28 39.4		
	comp=Z,15nm,0.8s								
GO01	Chusmiza	22.10	149	P		P	22 28 37.4	+0.9	
CMIG	Matias Romero	22.36	323	LR		LR	22 35 07.6		
	comp=Z,59nm,19.0s,baz=175,slow=30								
PB08	IPOC Station P	22.52	149	P		P	22 28 41.7	+0.8	
PB08				IAmb		IAmb	22 28 46.1		
	comp=Z,6.1nm,0.7s								
SJG	San Juan	23.85	37	LR		LR	22 40 36.3		
	comp=Z,35nm,18.2s,baz=112,slow=42								
VILB	Vilhena	23.99	121	eP		P	22 28 55.8	+0.5	
SIV	San Ignacio	24.88	128	LR		LR	22 40 52.3		
	comp=Z,48nm,19.1s,baz=292,slow=41								
ITTB	Itaituba	25.59	98	eP		P	22 29 10.0	+0.1	
BBSD	Serra de San D	25.94	130	eP		P	22 29 14.1	+1.1	
PTLB	Pontes e Lacer	26.13	125			P	22 29 14.3	-0.4	
PTLB				IAmb		IAmb	22 29 22.3		
	comp=Z,9.4nm,1.3s								
PTLB	Pontes e Lacer	26.13	125	eP		P	22 29 16.0	+1.3	
NPGB	Novo Progresso	26.42	104	eP		P	22 29 17.4	0.0	
CLDB	Colider	27.07	113	eP		P	22 29 23.1	-0.2	
MDP	Montagnes des	29.02	78	LR		LR	22 41 58.5		
	comp=Z,60nm,19.7s,baz=256,slow=37								
MURT	Porto Murtinho	30.91	134	eP		P	22 29 57.3	0.0	
SNDB	Serra Nova Dou	31.60	112	eP		P	22 30 03.3	-0.1	
AQDB	Aquidauana	31.62	130	eP		P	22 30 04.3	+0.8	
PRPB	Paraupebas	31.68	100	eP		P	22 30 04.7	+0.5	
H03N2	Juan Fernandez	32.55	177	T		T	23 04 36.6		
	baz=354,slow=76,SNR=5.7								
H03N1	Juan Fernandez	32.56	177	T		T	23 04 37.6		
	baz=354,slow=76,SNR=5.8								
H03N3	Juan Fernandez	32.57	177	T		T	23 04 36.4		
	baz=354,slow=76,SNR=8.1								
CPUP	Villa Florida	34.19	140	LR		LR	22 46 41.9		
	comp=Z,48nm,20.2s,baz=54,slow=40								
SMTB	Santa Maria do	34.32	105	eP		P	22 30 27.8	+0.5	
BDFB	Brasilia	35.83	116	P		P	22 30 40.3	-0.1	
	comp=Z,3.8nm,0.9s,baz=282,slow=11,SNR=3.7								
	comp=Z,3.8nm,0.9s								
BDFB	Brasilia	35.83	116	P		P	22 30 40.8	+0.4	
CPCT	Cooper Cave	36.18	355	P		P	22 30 42.8	-0.2	
TKL	Tuckaleechee C	36.33	356	LR		LR	22 45 20.6		
	comp=Z,59nm,18.4s,baz=176,slow=36								
IPMB	Ipameri, GO	36.56	120	eP		P	22 30 47.0	+0.5	
TXAR	Lajitas Array	36.90	326	P		P	22 30 49.3	0.0	
	comp=Z,0.2nm,0.6s,baz=143,slow=6.9,SNR=1.4								
	comp=Z,0.2nm,0.6s								
TXAR	Lajitas Array	36.90	326	P		P	22 30 49.5	+0.2	
U56A	King	36.94	1	P		P	22 30 49.8	+0.4	
VHRN	Van Horn	38.74	326	P		P	22 31 05.3	+0.4	
JANB	Januaria	39.01	113	eP		P	22 31 09.3	+2.0	
PLCA	Paso Flores	40.91	168	P		P	22 31 21.3	-1.4	
	comp=Z,1.4nm,0.8s,baz=351,slow=13,SNR=3.3								
	comp=Z,1.4nm,0.8s								
PLCA	Paso Flores	40.91	168	P		P	22 31 23.9	+1.2	
PLCA				IAmb		IAmb	22 31 38.1		
	comp=Z,7.8nm,1.4s								
121A	Cookes Peak, D	41.63	325			P	22 31 30.6	+1.7	
X16A	Lo Mia Camp, P	45.10	324			P	22 31 57.9	+1.0	
X16A				IAmb		IAmb	22 32 07.7		
	comp=Z,3.8nm,1.1s								
ECSD	EROS Data Cent	46.44	344	P		P	22 32 07.0	-0.1	
ECSD				IAmb		IAmb	22 32 37.1		
	comp=Z,3.1nm,1.0s								
NVAR	Mina Array Bea	51.89	323	P		P	22 32 47.1	-2.1	
	comp=Z,1.0nm,0.8s,baz=122,slow=10,SNR=5.3								
	comp=Z,1.0nm,0.8s								
NVAR	Mina Array Bea	51.89	323	P		P	22 32 50.2	+1.0	
ULM	Lac du Bonnet	52.38	348	P		P	22 32 51.9	-0.4	
	comp=Z,1.6nm,0.5s,baz=162,slow=6.4,SNR=4.5								
	comp=Z,1.6nm,0.5s								
ULM	Lac du Bonnet	52.38	348	P		P	22 32 52.1	-0.2	
ULM				IAmb		IAmb	22 33 10.1		
	comp=Z,6.4nm,1.2s								
I07A	Izee	56.26	327	P		P	22 33 22.4	+1.5	
I07A				IAmb		IAmb	22 33 32.7		
	comp=Z,3.3nm,1.0s								
NEW	Newport	57.97	332	LR		LR	22 58 56.4		
	comp=Z,47nm,18.1s,baz=261,slow=36								
TORD	Torodi Ar. Bea	83.16	77	P		P	22 36 06.8	-0.2	
	comp=Z,0.8nm,0.9s,baz=268,slow=5.2,SNR=1.9								
	comp=Z,0.8nm,0.9s								
TORD	Torodi Ar. Bea	83.16	77	P		P	22 36 07.3	+0.2	
TORD				IAmb		IAmb	22 36 23.5		
	comp=Z,2.5nm,0.8s								
QSPA	South Pole Qui	89.28	180	P		P	22 36 36.3	+0.1	
	comp=Z,1.0nm,0.9s,baz=138,slow=1.9,SNR=2.0								
	comp=Z,1.0nm,0.9s								
QSPA	South Pole Qui	89.28	180	P		P	22 36 35.2	-1.0	
QSPA				IAmb		IAmb	22 36 57.7		
	comp=Z,4.6nm,1.2s								
ECH	Echery	89.41	42	P		P	22 36 38.4	+1.2	
ZALV	Zalesovo Beam	125.74	10	PKP		PKPdf	22 42 39.4	-2.4	
	comp=Z,0.4nm,0.5s,baz=287,slow=3.3,SNR=3.7								
ZALV	Zalesovo Beam	125.74	10	PKPdf		PKiKP	22 42 42.3	+0.1	
KURBB	Kurchatov Arra	127.41	16	PKP		PKPdf	22 42 44.1	-1.0	
	comp=Z,0.4nm,0.4s,baz=328,slow=2.9,SNR=2.1								
SONM	Songino Array	132.68	353	PKP		PKPdf	22 42 52.5	-2.9	
	comp=Z,0.2nm,0.5s,baz=315,slow=0.6,SNR=1.6								
SONM	Songino Array	132.68	353			PKiKP	22 42 57.3	+0.8	
WRA	Warramunga Arr	139.62	237	PKP		PKPdf	22 43 07.2	-1.7	
	comp=Z,0.4nm,0.7s,baz=103,slow=2.5,SNR=1.5								
WRA	Warramunga Arr	139.62	237			PKPdf	22 43 06.6	-2.3	

SSNC 05 22:35:50.9±0.3, 21°47N×80°43W, h0 km, MD 2.3, ML 0.8, 1D, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGV	Manicaragua	0.76	33	⇓eP	Pg	22 36 04.9	-0.6
MGV				e		22 36 04.9	
	baz=214,slow=22						
MGV				eS	Sg	22 36 15.2	-0.2
MGV				IAML		22 36 18.0	
	comp=E,8.7nm,0.2s						
MGV				IAML		22 36 18.1	
	comp=N,10nm,0.2s						

*NEIC **05** 22:36:47.8±1.4, 19°.19N±0°.02×68°.65W±0°.04, h11 km±6 km, ML3.0/43, Md3.7/13(RSPR), Error ellipse: s-maj=5.7km s-min=2.9km az=87.0*
*SDD **05** 22:36:48.7±2.2, 19°.19N×68°.55W, h19 km±80 km, MD3.2, ML2.9, MW3.2, Presumed earthquake*
*RSPR **05** 22:36:50.0, 19°.54N×68°.55W, h59 km±29 km, MD3.7/13*
*OSPL **05** 22:36:50.6±2.4, 19°.15N×68°.68W, h0 km±13 km, ML2.9, Presumed earthquake*

ISC 05 22:36:44.2±1.2, 19°34N±0°.04×68°52W±0°.02, h6 km±10 km, n58, σ1°14/91, 26C-9D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HIDR	Higuey Centro	0.76	194	⇓ePg	Pb	22 37 00.1	+0.2
HIDR				IAML		22 37 09.3	
	comp=N,603nm,0.2s						
HIDR				⇑eSg	Sb	22 37 09.4	-1.1
PCDR	Punta Cana, DR	0.83	171		Pn	22 37 01.8	-0.6
PCDR				Sg	Sg	22 37 11.0	+0.2
PCDR				IAML		22 37 13.6	
	comp=N,612nm,0.3s						
PCDR	Punta Cana, DR	0.83	171	i P	Pn	22 37 02.1	-0.3
PCDR				eS	Sb	22 37 12.2	-0.2
PCDR				IAML		22 37 13.8	
	comp=Z,134nm,0.2s						
DR12	Loma Pena Alta	0.98	236		Pb	22 37 03.2	-0.4
HATOM	Hato Mayor del	0.98	236	⇓ePg	Pb	22 37 03.5	-0.1
HATOM				⇑eSg	Sg	22 37 14.8	-0.8
HATOM				IAML		22 37 16.0	
	comp=N,113nm,0.2s						
IDE	Isla Desecheo	1.37	133		Pb	22 37 11.3	+1.0
IDE					Sn	22 37 29.1	+0.7
SDD	Santo Domingo	1.58	237	Pn	Pn	22 37 12.8	0.0
SDD				IAML		22 37 33.2	
	comp=N,327nm,0.5s						
SDD				IAML		22 37 33.5	
	comp=E,310nm,0.6s						
SDD	Santo Domingo	1.58	237	⇓ePg	Pn	22 37 12.9	+0.2
SDD				⇑eSg	Sn	22 37 32.7	-0.8
SDD				IAML		22 37 33.0	
	comp=N,110nm,0.3s						
SDD	Santo Domingo	1.58	237	i P	Pb	22 37 14.0	+0.2
SDD				eS	Sn	22 37 32.1	-1.4
SDD				IAML		22 37 36.1	
	comp=Z,2µm,0.2s						
AGPR	Aguadilla, PR	1.59	123		Pg	22 37 16.2	+1.5
AGPR					Sg	22 37 37.8	+2.4
AGPR				IAML		22 37 40.0	
	comp=Z,178nm,0.3s						
AGPR				IAML		22 37 45.1	
	comp=Z,156nm,0.3s						
AGPR	Aguadilla, PR	1.59	123	⇑ePg	Pg	22 37 15.6	+0.8
AGPR				IAML		22 37 45.1	
	comp=N,121nm,0.2s						
AGPR	Aguadilla, PR	1.59	123	⇑eP	Pg	22 37 16.8	+2.0
SFDR	San Fco. de Ma	1.62	269	⇑ePg	Pg	22 37 15.5	+0.2
SFDR				⇑eSg	Sg	22 37 37.6	+1.2
SFDR				IAML		22 37 41.7	
	comp=N,284nm,0.5s						
PRSN	Puerto Rico Se	1.71	130		Pg	22 37 16.9	-0.2
PRSN					Sg	22 37 40.9	+1.5
PRSN	Puerto Rico Se	1.71	130	⇑eP	Pg	22 37 19.5	+2.4
LSP	Las Mesas	1.79	130		Pg	22 37 18.4	0.0
LSP					Sg	22 37 44.1	+2.5
LSP	Las Mesas	1.79	130	⇓eP	Pg	22 37 18.4	0.0
LSP				eS	Sg	22 37 44.1	+2.5
CRPR	Cabo Rojo, PR	1.88	134		Pb	22 37 18.6	-0.4
CRPR					Sg	22 37 45.8	+1.0
CRPR	Cabo Rojo, PR	1.88	134	⇓eP	Pg	22 37 20.0	-0.3
AOPR	Arecibo Observ	1.94	120		Pg	22 37 21.3	-0.2
AOPR					Sg	22 37 46.2	-0.4
AOPR				IAML		22 37 50.5	
	comp=N,186nm,0.3s						
AOPR	Arecibo Observ	1.94	120	⇑ePg	Pg	22 37 20.9	-0.5
AOPR				⇑eSg	Sg	22 37 46.5	-0.2
AOPR				IAML		22 37 50.5	
	comp=N,166nm,0.2s						
AOPR	Arecibo Observ	1.94	120	⇑eP	Pg	22 37 22.2	+0.7
MLPR	Magueyes Islan	1.95	134		Pn	22 37 18.6	+0.7
BANI	BANI	1.98	242	Pn	Pn	22 37 19.2	+0.9
BANI	BANI	1.98	242	⇑ePg	Pb	22 37 20.9	+0.2
BANI				⇑eSg	Sb	22 37 45.6	0.0
BANI				IAML		22 37 52.2	
	comp=N,156nm,0.7s						
UUPR	Utuado, UPR, P	2.02	122		Pg	22 37 23.1	+0.2
UUPR					Sg	22 37 48.0	-1.1
UUPR	Utuado, UPR, P	2.02	122	⇓eP	Pg	22 37 23.1	+0.2
GBPR	Guanica, Bosqu	2.06	131		Pg	22 37 24.8	+1.0
GBPR					Sg	22 37 50.6	+0.1
GBPR	Guanica, Bosqu	2.06	131	⇓eP	Pg	22 37 24.8	+1.0
GBPR				eS	Sg	22 37 50.6	+0.1
EMPR	Esperanza - Ma	2.07	114		Pg	22 37 24.2	+0.3
EMPR					Sg	22 37 50.0	-0.8
EMPR	Esperanza - Ma	2.07	114	⇓eP	Pg	22 37 24.2	+0.3
EMPR				eS	Sg	22 37 50.0	-0.8
SC01	Santiago de lo	2.08	273	Pn	Pb	22 37 21.9	-0.6
SC01				IAML		22 38 00.5	
	comp=E,93nm,0.5s						
SC01				IAML		22 38 01.1	
	comp=N,110nm,0.4s						
SC01	Santiago de lo	2.08	273	⇑ePg	Pg	22 37 23.6	-0.6
SC01				⇑eSg	Sg	22 37 50.6	-0.6
SC01				IAML		22 38 01.0	
	comp=N,103nm,0.4s						
SC01	Santiago de lo	2.08	273	i P	Pb	22 37 23.1	+0.6
SC01				IAML		22 38 01.0	
	comp=Z,50nm,0.4s						
OBIP	Obispado Ponce	2.23	125		Pg	22 37 25.9	-1.0
OBIP	Obispado Ponce	2.23	125	i P	Pg	22 37 25.9	-1.0
OBIP				eS	Sg	22 37 54.8	-0.9
OBIP				IAML		22 37 56.6	
	comp=Z,416nm,0.3s						
OBIP	Obispado Ponce	2.23	125	⇑eP	Pg	22 37 25.9	-1.0
OBIP				eS	Sg	22 37 54.9	-0.9
CELP	Cerrillos	2.23	124		Pg	22 37 25.6	-1.3
CELP					Sg	22 37 53.6	-2.3
CELP				IAML		22 37 57.8	
	comp=Z,85nm,0.6s						
CELP				IAML		22 37 58.3	
	comp=Z,67nm,0.5s						
CELP	Cerrillos	2.23	124	⇑ePg	Pg	22 37 25.3	-1.6
CELP				⇓eSg	Sg	22 37 54.4	-1.5
CELP				IAML		22 37 57.2	
	comp=N,24nm,0.3s						
CELP	Cerrillos	2.23	124	⇑eP	Pg	22 37 25.6	-1.3
ECPR	Experimental S	2.28	116		Pg	22 37 26.4	-1.5
ECPR					Sb	22 37 53.6	-0.7
ECPR	Experimental S	2.28	116	⇑eP	Pg	22 37 26.4	-1.5
LUDR	Luperon	2.36	284	⇑ePg	Pg	22 37 29.6	+0.2
LUDR				⇑eSg	Sg	22 38 00.3	+0.4
MADR	Mao Valverde	2.44	276	⇑ePg	Pb	22 37 29.8	+1.2
MADR				⇑eSg	Sg	22 38 03.0	+0.2
MADR				IAML		22 38 10.0	
	comp=N,117nm,0.7s						
SJG	San Juan	2.56	118	Pn	Pb	22 37 29.7	-0.8
SJG				IAML		22 38 05.6	
	comp=N,45nm,0.5s						
SJG				IAML		22 38 07.5	
	comp=N,48nm,0.4s						
SJG	San Juan	2.56	118	i P	Pg	22 37 32.5	-0.7
SJG				eS	Sb	22 38 03.0	+0.8
SJG				IAML		22 38 08.2	
	comp=Z,629nm,0.8s						
LOPP1	Punta Rusia, P	2.58	282	i P	Pb	22 37 29.0	-1.8
SDDR	Presa de Saban	2.64	263	Pn	Pn	22 37 28.8	+0.4
IGPR	InterUniversit	2.67	120		Pb	22 37 32.2	-0.1
IGPR					Sb	22 38 05.3	0.0
IGPR	InterUniversit	2.67	120	⇓eP	Pb	22 37 32.2	-0.1
PDPR	Patillas Dam,	2.71	119		Pb	22 37 31.5	-1.5
PDPR					Sb	22 38 03.9	-2.7
PDPR				IAML		22 38 11.7	
	comp=Z,32nm,0.4s						
PDPR	Patillas Dam,	2.71	119	⇑eP	Pb	22 37 31.5	-1.5
HUMP	Col San Antoni	2.80	115		Pb	22 37 33.6	-1.0
HUMP					Sn	22 38 05.6	+2.0
HUMP				IAML		22 38 13.4	
	comp=Z,38nm,0.2s						
HUMP				IAML		22 38 13.9	
	comp=Z,45nm,0.2s						
HUMP	Col San Antoni	2.80	115	⇑eP	Pb	22 37 33.6	-1.0
LONE3	El Aguacate, B	2.87	256	i P	Pb	22 37 34.2	-1.7
LONE3				IAML		22 38 12.7	
	comp=Z,14nm,0.3s						
LODU1	El Espartillar	2.96	251	i P	Pb	22 37 36.3	-1.1
LODU1				IAML		22 38 17.7	
	comp=Z,34nm,0.8s						
GRTK	Grand Turk	3.27	312	Pn	Pn	22 37 37.4	+1.4
GRTK				IAML		22 39 14.3	
	comp=Z,44nm,0.1s						
LOBH	Bahia de las A	3.30	244	i P	Pn	22 37 39.3	+2.9
LOBH				IAML		22 38 26.5	
	comp=Z,39nm,1.3s						

*MEX **05** 22:50:48.1±0.5, 14°.98N×92°.37W, h107 km±4 km, MD3.5*
*GCG **05** 22:50:50.1±0.7, 15°.01N×92°.16W, h82 km±10 km, MD3.6, Presumed earthquake*

ISC 05 22:50:43.6±2.9, 15°1N±0°2×92°0W±0°2, h123 km±20 km, n10, σ2°12/17, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHUJ	Union Juarez	0.12	263	eP	Pn	22 51 02.4	+1.6
CHUJ				eS	Sn	22 51 13.4	-0.2
PAVE	Pavencul	0.20	294	eP	Pn	22 51 02.6	+1.7
PAVE				eS	Sn	22 51 14.0	+0.1
PATR	El Naranjo	0.24	272	eP	Pn	22 51 01.7	+0.7
PATR				eS	Sn	22 51 12.7	-1.4
THIG		0.34	234	eP	Pn	22 51 01.8	+0.7
THIG				eS	Sn	22 51 12.2	-2.1
THIG		0.34	234	i P	Pn	22 51 01.7	+0.7
THIG				i S	Sn	22 51 11.7	-2.6
RTAL	Retalhuleu	0.65	154	eP	Pn	22 51 05.8	+2.8
RTAL				eS	Sn	22 51 19.3	+1.8
STG8	El Palmar, Qui	0.90	137	i P	Pn	22 51 05.6	+0.3
STG5	El Palmar, Qui	0.93	139	i P	Pn	22 51 05.6	+0.2
STG5				i S	Sn	22 51 17.9	-4.0
APG	El Apazote	1.47	94	i P	Pn	22 51 18.5	+7.3
TGIG		1.99	327	eP	Pn	22 51 18.8	+1.6
TGIG				eS	Sn	22 51 39.9	-2.9

*NEIC **05** 22:52:37.3±1.2, 22°.7S±0°.1×175°.8W±0°.1, h112 km±8 km, mb4.4/12, Error ellipse: s-maj=20.7km s-min=11.4km az=133.0*
*IDC **05** 22:53:04.7±

BRJC	**Barrancabermej**	**0.61**	**280**	P	**Pn**	**23 07 46.1**	**+1.3**
RUSC	**La Rusia**	**0.96**	**177**	⇑*i*P	**Pn**	**23 07 48.3**	**+0.4**
RUSC				*e*S	**Sn**	**23 08 06.8**	**-0.4**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**23 07 50.8**	**0.0**
PTBC				S	**Sn**	**23 08 11.9**	**-0.6**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**23 07 52.7**	**+1.4**
OCAC				S	**Sn**	**23 08 15.1**	**+1.7**
SPBC	**San Pablo de B**	**1.52**	**218**	P	**Pn**	**23 07 53.1**	**+0.4**
SPBC				S	**Sn**	**23 08 15.0**	**-0.8**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**23 08 02.3**	**+0.5**
CHIC				S	**Sn**	**23 08 31.7**	**-0.3**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**23 08 04.0**	**+1.9**
ROSC				S	**Sn**	**23 08 34.3**	**+1.7**
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**23 08 04.4**	**+0.6**
HELC	**Santa Helena**	**2.47**	**254**	*e*P	**Pn**	**23 08 05.7**	**+1.9**
HELC				*e*S	**Sn**	**23 08 35.9**	**+0.3**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**23 08 05.8**	**+1.4**
CVER				S	**Sn**	**23 08 36.9**	**+0.3**
UREC	**San Jos de Ur**	**2.54**	**291**	P	**Pn**	**23 08 04.1**	**-0.2**
UREC				S	**Sn**	**23 08 35.1**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**23 08 08.5**	**+1.1**
GUY2C				S	**Sn**	**23 08 41.7**	**-0.2**
NIZA	**Niza - Manizal**	**2.93**	**232**	P	**Pn**	**23 08 10.3**	**+0.8**
NIZA				S	**Sn**	**23 08 47.0**	**+1.2**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	**Pn**	**23 08 11.7**	**+1.2**
CBOC				S	**Sn**	**23 08 46.8**	**-0.8**
DBBC	**Dabeiba**	**3.06**	**273**	P	**Pn**	**23 08 11.8**	**+1.0**
DBBC				S	**Sn**	**23 08 46.6**	**-1.6**
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**23 08 14.1**	**+1.5**
SDV				*e*S	**Sn**	**23 08 51.5**	**+0.1**
APAC	**Apartado, Choc**	**3.57**	**287**	P	**Pn**	**23 08 18.2**	**+0.9**
APAC				S	**Sn**	**23 08 59.2**	**-0.6**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**23 08 17.7**	**+0.2**
PRAC				S	**Sn**	**23 08 59.6**	**-0.6**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**23 08 18.7**	**+0.9**
ORTC				S	**Sn**	**23 09 01.3**	**+0.5**
PLMC	**San Jos del P**	**3.69**	**238**	P	**Pn**	**23 08 19.9**	**+1.0**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**23 08 21.4**	**+1.0**
URMC				S	**Sn**	**23 09 04.5**	**-0.8**
SMRC	**Santa Marta, M**	**4.41**	**346**	S	**Sn**	**23 09 17.8**	**-1.6**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**23 08 31.5**	**-1.1**
MACC				S	**Sn**	**23 09 22.4**	**-4.9**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**23 08 35.2**	**0.0**
URIC				S	**Sn**	**23 09 30.6**	**-1.4**
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*P	**Pn**	**23 08 33.9**	**-1.3**
URIC				*e*S	**Sn**	**23 09 26.2**	**-5.7**
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	**23 08 38.4**	**-0.6**
GARC				S	**Sn**	**23 09 35.2**	**-3.5**
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**23 08 47.3**	**+0.4**
	15nm,1.1s						
GR1C	**Gorgona, Isla**	**6.31**	**233**	P	**Pn**	**23 08 54.5**	**+1.1**
BBAC	**Balboa, Cauca**	**6.32**	**221**	P	**Pn**	**23 08 55.5**	**+1.8**
BBAC				S	**Sn**	**23 10 04.3**	**-0.9**

*NNC **05** 23:07:48.9±0.6,42°.93N×76°.98E, h5km±3km, mb2.8, mpv3.2, Error ellipse: s-maj=6.4km s-min=2.1km az=170.0*
*KRNET **05** 23:07:48.9±0.1,42°.94N×76°.96E, h22km, mb2.9*
*SOME **05** 23:07:48.9, 42°.95N×76°.92E, h15km*
*KNET **05** 23:07:50.4±0.3,42°.94N×76°.79E, h9km, 1km, ml2.2, Error ellipse: s-maj=2.3km s-min=1.4km az=29.0*

ISC 05 23:07:49.2±0.8,**42°.94N**±0°.02×**76°.96E**±0°.02,**h15**km±5km, **n49**, σ0**°93**/90,**38C-20D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.10**	**355**	P	**Pg**	**23 07 52.9**	**-0.2**
	315nm,0.1s						
TNSS				S	**Sg**	**23 07 55.5**	**0.0**
	638nm,0.2s						
TNSS	**Tian-Shan**	**0.10**	**355**	*e*P	**Pg**	**23 07 52.9**	**-0.2**
	315nm,0.1s						
TNSS				*e*S	**Sg**	**23 07 55.5**	**0.0**
	638nm,0.2s						
MDOK	**Medeo**	**0.23**	**16**	Pg	**Pg**	**23 07 54.1**	**-0.4**
	97nm,0.1s						
MDOK				Lg	Lg	23 07 57.8	
	3μm,0.1s						
MDOK	**Medeo**	**0.23**	**16**	*e*P	**Pg**	**23 07 54.1**	**-0.4**
	97nm,0.1s						
MDOK				*e*S	**Sg**	**23 07 57.8**	**-0.4**
	3μm,0.1s						
AAA	**Alma-Ata**	**0.27**	**353**	P	**Pb**	**23 07 55.2**	**-0.7**
	282nm,0.1s						
AAA				S	**Sb**	**23 07 59.6**	**-0.7**
	135nm,0.1s						
AAA	**Alma-Ata**	**0.27**	**353**	*e*P	**Pb**	**23 07 55.2**	**-0.7**
	282nm,0.1s						
AAA				*e*S	**Sb**	**23 07 59.6**	**-0.7**
	135nm,0.1s						
KNDC	**Almaty**	**0.28**	**1**	⇑P	**Pg**	**23 07 55.2**	**-0.1**
	107nm,0.3s						
KNDC				⇑S	**Sb**	**23 07 59.6**	**-0.8**
	772nm,0.3s						
ANVS	**Anan'yevo**	**0.54**	**107**	⇑*i*P	**Pg**	**23 07 59.5**	**-0.6**
ANVS				⇑*i*S	**Sg**	**23 08 07.1**	**-0.3**
KST	**Kastek**	**0.74**	**278**	P	**Pg**	**23 08 03.3**	**-0.4**
	9.4nm,0.1s						
KST				S	**Sb**	**23 08 13.6**	**-0.2**
	62nm,0.3s						
KST	**Kastek**	**0.74**	**278**	*e*P	**Pg**	**23 08 03.3**	**-0.4**
	9.4nm,0.1s						
KST				*e*S	**Sb**	**23 08 13.6**	**-0.2**
	62nm,0.3s						
KDJ	**Kajisay**	**0.83**	**168**	⇑*i*P	**Pg**	**23 08 04.6**	**-0.7**
KDJ				⇑*i*S	**Sg**	**23 08 15.8**	**-0.4**
ULHL	**Ulahol**	**0.87**	**218**	⇓P	**Pb**	**23 08 06.0**	**-0.2**
	12nm,0.1s						
ULHL				⇑S	**Sb**	**23 08 17.9**	**+0.2**
	31nm,0.1s						
ULHL	**Ulahol**	**0.87**	**218**	⇑*i*P	**Pg**	**23 08 05.4**	**-0.8**
ULHL				⇑*i*S	**Sg**	**23 08 17.2**	**-0.5**
BOOM	**Boomskoye usch**	**0.88**	**239**	⇓*e*P	**Pb**	**23 08 05.3**	**-0.9**
BOOM				⇓*i*S	**Sg**	**23 08 17.2**	**-0.6**
TKM2	**Tokmak 2**	**1.00**	**269**	⇑P	**Pb**	**23 08 07.3**	**-1.1**
	3.3nm,0.1s						
TKM2				⇓S	**Sb**	**23 08 20.7**	**-0.7**
	46nm,0.1s						
TKM2	**Tokmak 2**	**1.00**	**269**	⇓*i*P	**Pb**	**23 08 07.5**	**-0.9**
TKM2				⇓*i*S	**Sb**	**23 08 20.9**	**-0.5**
KURS	**Kuram**	**1.04**	**58**	P	**Pb**	**23 08 08.3**	**-0.7**
	2.2nm,0.1s						
KURS				S	**Sb**	**23 08 21.9**	**-0.6**
	9.4nm,0.2s						
KURS	**Kuram**	**1.04**	**58**	*e*P	**Pb**	**23 08 08.3**	**-0.7**
	0.8nm,0.1s						
KURS				*e*S	**Sb**	**23 08 21.9**	**-0.6**
	9.4nm,0.2s						
PRZ	**Przheval'sk**	**1.16**	**113**	⇓*i*P	**Pb**	**23 08 10.2**	**-0.8**
PRZ				⇓*e*S	**Sb**	**23 08 25.8**	**-0.1**
TARG	**Taragay, Kyrgy**	**1.36**	**152**	⇑*i*P	**Pb**	**23 08 14.1**	**-0.6**
TARG				⇑*i*S	**Sn**	**23 08 32.1**	**0.0**
KPKS	**Kokpek**	**1.37**	**67**	P	**Pb**	**23 08 14.1**	**-0.4**
	0.3nm,0.2s						
KPKS				S	**Sb**	**23 08 32.0**	**+0.2**
	108nm,0.2s						
KPKS	**Kokpek**	**1.37**	**67**	*e*P	**Pb**	**23 08 14.1**	**-0.4**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**23 08 32.0**	**+0.2**
	108nm,0.2s						
KBK	**Karagaybulak**	**1.51**	**260**	⇓P	**Pb**	**23 08 16.8**	**-0.2**
	6.2nm,0.1s						
KBK				⇓S	**Sg**	**23 08 37.0**	**-0.9**
	57nm,0.2s						
KBK	**Karagaybulak**	**1.51**	**260**	⇓*i*P	**Pb**	**23 08 16.4**	**-0.6**
KBK				⇓*i*S	**Sb**	**23 08 36.7**	**+0.7**
UZB	**Uzynbulak**	**1.53**	**82**	P	**Pb**	**23 08 16.8**	**-0.5**
	3.2nm,0.1s						
UZB				S	**Sb**	**23 08 37.0**	**+0.5**
	28nm,0.1s						
UZB	**Uzynbulak**	**1.53**	**82**	*e*P	**Pb**	**23 08 16.8**	**-0.5**
UZB				*e*S	**Sb**	**23 08 37.0**	**+0.5**
CHMS	**Chumysh**	**1.62**	**273**	⇑P	**Pb**	**23 08 18.4**	**-0.4**
	3.2nm,0.1s						
CHMS				⇑S	**Sg**	**23 08 40.3**	**-1.1**
	40nm,0.2s						
CHMS	**Chumysh**	**1.62**	**273**	⇑*i*P	**Pb**	**23 08 18.2**	**-0.6**
CHMS				⇑*i*S	**Sb**	**23 08 39.7**	**+0.6**
NRN	**Naryn**	**1.67**	**206**	⇑*i*P	**Pg**	**23 08 19.6**	**-0.2**
NRN				⇑*i*S	**Sg**	**23 08 41.9**	**-1.1**
FRU1	**Bishkek**	**1.72**	**266**	⇓*i*P	**Pb**	**23 08 20.0**	**-0.5**
FRU1				⇓*i*S	**Sb**	**23 08 42.9**	**+1.0**
SGDS	**Sogindy**	**1.78**	**288**	P	**Pb**	**23 08 21.0**	**-0.5**
	19nm,0.1s						
SGDS				S	**Sb**	**23 08 44.2**	**+0.5**
	26nm,0.1s						
USP	**Ospenovka**	**1.83**	**281**	⇑P	**Pb**	**23 08 22.0**	**-0.5**
	7.0nm,0.1s						
USP				⇑S	**Sb**	**23 08 46.1**	**+1.0**
	24nm,0.2s						
USP	**Ospenovka**	**1.83**	**281**	⇓*i*P	**Pb**	**23 08 21.7**	**-0.7**
USP				⇓*i*S	**Sb**	**23 08 45.4**	**+0.3**
AAK	**Ala-Archa**	**1.84**	**261**	⇑P	**Pb**	**23 08 22.7**	**+0.1**
	2.5nm,0.2s						
AAK				⇑S	**Sg**	**23 08 47.2**	**-1.2**
	11nm,0.3s						
AAK	**Ala-Archa**	**1.84**	**261**	⇑Pn	**Pb**	**23 08 21.9**	**-0.7**
	0.2nm,0.3s						
AAK				⇑Sn	**Sg**	**23 08 47.0**	**-1.4**
	2.2nm,0.4s						
AAK	**Ala-Archa**	**1.84**	**261**	⇓*i*P	**Pb**	**23 08 21.8**	**-0.8**
AAK				⇓*i*S	**Sb**	**23 08 45.8**	**+0.3**
SHLS	**Shalkode**	**1.85**	**82**	Pg	**Pg**	23 08 29.4	+4.7
	4.4nm,0.2s						
SHLS				Lg	Lg	23 08 58.2	
	32nm,0.2s						
SHLS	**Shalkode**	**1.85**	**82**	*e*P	**Pg**	23 08 29.4	+4.7
	3.3nm,0.1s						
SHLS				*e*S	**Sg**	23 08 58.2	+9.5
	32nm,0.2s						
PDGK	**Podgornoye**	**1.89**	**77**	⇓Pn	**Pb**	**23 08 22.5**	**-1.1**
	0.9nm,0.3s						
PDGK				⇑Sn	**Sb**	**23 08 47.0**	**-0.1**
	14nm,0.5s						
UCH	**Uchtor**	**1.94**	**249**	⇓P	**Pb**	**23 08 25.0**	**+0.5**
	1.4nm,0.1s						
UCH				⇑S	**Sg**	**23 08 50.4**	**-1.4**
	6.3nm,0.2s						
UCH	**Uchtor**	**1.94**	**249**	⇑*i*P	**Pb**	**23 08 23.4**	**-1.2**
UCH				⇑*i*S	**Sb**	**23 08 48.7**	**0.0**
EKS2	**Erkin-Say**	**2.36**	**264**	⇑P	**Pb**	**23 08 30.0**	**-1.5**
	1.9nm,0.2s						
EKS2				⇑S	**Sb**	**23 09 01.9**	**+1.5**
	9.8nm,0.3s						
DJR	**Jarkent**	**2.48**	**55**	Pg	**Pb**	**23 08 33.1**	**-0.5**
	2.4nm,0.3s						
DJR				Lg	Lg	23 09 04.5	
	7.8nm,0.3s						
MRKS	**Merke**	**2.75**	**267**	Pg	**Pb**	**23 08 38.8**	**+0.6**
	1.4nm,0.2s						
MRKS				Lg	Lg	23 09 14.3	
	7.1nm,0.2s						
MRKS	**Merke**	**2.75**	**267**	*e*P	**Pb**	**23 08 38.8**	**+0.6**
	1.3nm,0.2s						
MRKS				*e*S	**Sb**	**23 09 14.3**	**+2.6**
	7.1nm,0.2s						
MNAS	**Manas**	**3.31**	**264**	⇑*i*P	**Pn**	**23 08 42.3**	**+1.7**
MNAS				⇑*i*S	**Sn**	**23 09 21.3**	**+1.5**
ARSB	**Arslanbob**	**3.37**	**243**	⇑*e*P	**Pn**	**23 08 43.2**	**+1.8**
ARSB				⇑*i*S	**Sn**	**23 09 22.5**	**+1.3**
KK31	**Karatay Array**	**4.73**	**274**	⇑Pg	**Pg**	**23 09 16.1**	**-3.7**
	0.2nm,0.3s,baz=85,slow=16,SNR=5.9						
KK31				Lg	Lg	23 10 19.8	
	1.2nm,0.4s,baz=86,slow=30,SNR=9.8						
MK31	**Makanchi Array**	**5.40**	**43**	⇑Pn	**Pn**	**23 09 09.6**	**+0.3**
	baz=226,slow=15,SNR=5.0						
MK31				⇑Sn	**Sn**	**23 10 13.8**	**+2.6**
	0.3nm,0.5s,baz=220,slow=24,SNR=6.2						
MK31				⇑Lg	Lg	23 10 41.3	
	0.1nm,0.3s,baz=225,slow=24,SNR=3.5						

AFAD 05 23:12:49.3,37°.86N×29°.44E, h7km±2km**, ML0.9, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INCE	**Denizli-Bozkur**	**0.18**	**143**	P	Pg	23 12 53.1	+0.1
INCE				IAML		23 12 56.0	
	comp=E,114nm,0.4s						
INCE				S	Sg	23 12 56.6	+1.0
INCE				IAML		23 12 57.0	
	comp=N,80nm,0.2s						
DNIZ	**Denizli-Tavas-**	**0.39**	**234**	P	Pg	23 12 57.1	+0.2
DNIZ				S	Sb	23 13 03.6	-1.3
DNIZ				IAML		23 13 05.0	
	comp=N,40nm,0.3s						
DNIZ				IAML		23 13 06.0	
	comp=E,26nm,0.3s						
PASA	**Karahalli, USA**	**0.49**	**5**	P	Pg	23 12 58.5	-0.4
PASA				S	Sg	23 13 06.3	+0.9
PASA				IAML		23 13 07.0	
	comp=E,7.4nm,0.3s						
PASA				IAML		23 13 12.0	
	comp=N,5.0nm,0.3s						
BRDR	**BURDUR-Merkez**	**0.52**	**108**	P	Pg	23 12 59.4	0.0
BRDR				S	Sb	23 13 07.6	-0.9
BRDR				IAML		23 13 08.0	
	comp=N,7.4nm,0.6s						
BRDR				IAML		23 13 11.0	
	comp=E,6.3nm,0.5s						
SULTU	**Buldan**	**0.56**	**291**	P	Pg	23 13 00.6	+0.4
SULTU				IAML		23 13 10.0	
	comp=N,9.2nm,2.1s						
SULTU				S	Sb	23 13 10.6	+0.6
SULTU				IAML		23 13 15.0	
	comp=E,4.1nm,0.6s						
GOLH	**Golhisar**	**0.63**	**171**	P	Pg	23 13 00.8	-0.5
GOLH				IAML		23 13 10.0	
	comp=N,10nm,1.7s						
GOLH				S	Sb	23 13 11.2	-0.4
GOLH				IAML		23 13 12.0	
	comp=E,3.5nm,0.2s						

ISK 05 23:13:03.2,38°.92N×27°.85E, h18km**, ML0.7**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.05**	**215**	Pg	Pg	23 13 06.9	+0.4
AKS				Sg	Sg	23 13 09.2	+0.4
GORD	**Gordes-Manisa**	**0.26**	**92**	Pg	Pb	23 13 09.5	+0.3
GORD				Sg	Sb	23 13 13.8	+0.6
SOMA	**Soma-Manisa**	**0.34**	**314**	Pg	Pb	23 13 10.7	-0.1
ODEM	**Odemis-Izmir**	**0.67**	**165**	Pg	Pg	23 13 16.7	+0.3
KULA	**Kula-Manisa**	**0.75**	**122**	Pg	Pg	23 13 18.3	+0.3

*SOME **05** 23:19:04.6, 39°.40N×71°.75E, h5km*
*KRNET **05** 23:19:06.5±0.1, 39°.03N×70°.93E, h11km, mb3.7*
*NNC **05** 23:19:07.9±4.2, 39°.06N×70°.39E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=32.0km s-min=24.7km az=38.0*

ISC 05 23:19:07.4±1.0,**39°.03N**±0°.05×**70°.88E**±0°.04,**h10**km,**n30**, σ2°**72**/46,**9C-16D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.44**	**267**	⇓*i*P	**Pg**	**23 19 15.6**	**-0.5**
GAR				⇓*i*S	**Sg**	**23 19 22.6**	**+0.6**
BTK	**Batken**	**1.03**	**357**	⇓*i*P	**Pg**	**23 19 26.0**	**-1.3**
BTK				⇓*i*S	**Sg**	**23 19 40.3**	**-0.5**
CHGR	**Chuyangaron**	**1.40**	**255**	⇑*i*P	**Pn**	**23 19 33.3**	**+0.2**
CHGR				⇑*i*S	**Sn**	**23 19 53.1**	**+1.5**
OHH	**Osh**	**2.10**	**44**	⇓*e*P	**Pn**	**23 19 43.4**	**+0.7**
OHH				⇓*e*S	**Sb**	**23 20 11.7**	**0.0**
SFK	**Sufi-Kurgan**	**2.25**	**63**	⇓*i*P	**Pb**	**23 19 46.6**	**-1.8**
SFK				⇓*i*S	**Sb**	**23 20 15.5**	**-0.9**
ARSB	**Arslanbob**	**2.80**	**34**	⇑*i*P	**Pn**	**23 19 54.4**	**+1.9**
ARSB				⇑*i*S	**Sb**	**23 20 29.1**	**-3.1**
ARK	**Arkit**	**2.89**	**16**	⇓*i*P	**Pn**	**23 19 55.5**	**+1.8**
ARK				⇓*i*S	**Sb**	**23 20 31.4**	**-3.2**
IUG	**Iuzhnay**	**3.19**	**349**	Pg	**Pb**	**23 20 02.3**	**-1.9**
	117nm,0.4s						
IUG				Lg	Lg	23 20 44.2	
	276nm,0.6s						
IUG	**Iuzhnay**	**3.19**	**349**	*e*P	**Pb**	**23 20 02.3**	**-1.9**
	117nm,0.4s						
IUG				*e*S	**Sb**	**23 20 44.2**	**+1.1**
	276nm,0.6s						
CHM	**Chimkent**	**3.43**	**344**	*e*P	**Pb**	**23 20 06.2**	**-2.1**
	24nm,0.2s						
CHM				*e*S	**Sb**	**23 20 50.3**	**+0.2**
	92nm,0.5s						
DZA	**Taraz**	**3.88**	**5**	Pg	**Pn**	**23 20 10.3**	**+3.1**
	74nm,0.2s						
DZA				Lg	Lg	23 20 58.0	
	227nm,0.4s						
DZA	**Taraz**	**3.88**	**5**	*e*P	**Pn**	**23 20 10.3**	**+3.1**
	74nm,0.2s						
DZA				*e*S	**Sb**	**23 20 58.0**	**-5.0**
	227nm,0.4s						
KK31	**Karatay Array**	**4.08**	**356**	⇑Pn	**Pn**	**23 20 12.3**	**+2.4**
	5.6nm,0.3s,baz=174,slow=12,SNR=223						
KK31				⇓Sn	**Sn**	**23 21 01.7**	**+3.9**
	9.8nm,0.5s,baz=192,slow=27,SNR=4.3						
KK31				⇑Lg	Lg	23 21 15.2	
	11nm,0.4s,baz=175,slow=30,SNR=7.3						
MRKS	**Merke**	**4.12**	**25**	Pg	**Pn**	**23 20 13.5**	**+3.0**
	12nm,0.3s						
MRKS				Lg	Lg	23 21 03.2	
	26nm,0.3s						
UCH	**Uchtor**	**4.23**	**40**	P	**Pn**	**23 20 15.4**	**+3.1**
	SNR=47						
EKS2	**Erkin-Say**	**4.25**	**30**	P	**Pn**	**23 20 15.4**	**+3.1**
	SNR=20						
AAK	**Ala-Archa**	**4.53**	**36**	P	**Pn**	**23 20 19.6**	**+3.3**
	SNR=22						
AAK	**Ala-Archa**	**4.53**	**36**	⇑Pn	**Pn**	**23 20 20.2**	**+4.0**
	5.8nm,0.5s						
AAK				⇓Sn	**Sb**	**23 21 17.5**	**-4.4**
	5.6nm,0.7s						
NRN	**Naryn**	**4.60**	**57**	⇓*e*P	**Pn**	**23 20 18.9**	**+1.6**
NRN				⇓*e*S	**Sn**	**23 21 11.2**	**+0.3**
KBK	**Karagaybulak**	**4.76**	**39**	P	**Pn**	**23 20 23.6**	**+4.1**
	SNR=48						
CHMS	**Chumysh**	**4.93**	**35**	P	**Pn**	**23 20 24.9**	**+3.2**
	SNR=24						
USP	**Ospenovka**	**5.04**	**32**	P	**Pn**	**23 20 26.0**	**+2.9**
	SNR=24						
BOOM	**Boomskoye usch**	**5.17**	**46**	⇓*e*P	**Pn**	**23 20 26.8**	**+1.8**
BOOM				⇓*e*S	**Sn**	**23 21 25.5**	**+0.7**
ULHL	**Ulahol**	**5.19**	**50**	P	**Pn**	**23 20 29.6**	**+4.2**
	SNR=9.7						
SGDS	**Sogindy**	**5.25**	**31**	Pg	**Pn**	**23 20 28.5**	**+2.5**
	17nm,0.4s						
SGDS				Lg	Lg	23 21 29.2	
	7.8nm,0.7s						
TKM2	**Tokmak 2**	**5.28**	**41**	P	**Pn**	**23 20 29.5**	**+3.0**
	SNR=32						
KST	**Kastek**	**5.56**	**42**	Pg	**Pn**	**23 20 33.7**	**+3.4**
	3.0nm,0.3s						
KST				Lg	Lg	23 21 37.6	
	4.1nm,0.3s						
KST	**Kastek**	**5.56**	**42**	*e*P	**Pn**	**23 20 33.7**	**+3.4**
	3.0nm,0.3s						
KST				*e*S	**Sn**	**23 21 37.6**	**+3.4**
	4.1nm,0.3s						
KDJ	**Kajisay**	**5.71**	**55**	⇓*e*P	**Pn**	**23 20 34.8**	**+2.3**
KDJ				⇓*e*S	**Sn**	**23 21 38.5**	**+0.4**
MDOK	**Medeo**	**6.23**	**46**	Pg	**Pn**	**23 20 43.4**	**+3.9**
	6.0nm,0.4s						
MDOK				Lg	Lg	23 21 54.9	
	4.9nm,0.4s						

*IPEC **05** 23:24:12.4±0.2,51°.48N×16°.16E, h1km, ML2.3/7, Error ellipse: s-maj=1.3km s-min=0.9km az=34.0*
*DNK **05** 23:24:12.6±1.2,51°.33N×15°.85E, h40km±17km, ML2.0, Presumed earthquake*
*VIE **05** 23:24:13.4±0.6,51°.41N×16°.06E, h0km, mb2.4/7, ml2.7/14, Error ellipse: s-maj=5.1km s-min=3.6km az=17.0 75 km WNW of Wroclaw Suspected Mining induced.*
*PRU **05** 23:24:14.8,51°.39N×16°.12E, h0km*

ISC 05 23:24:11.0±0.8,**51°.55N**±0°.03×**16°.13E**±0°.02,**h0**km,**n48**, σ0°**82**/86,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**23 24 25.2**	**+0.4**
KSP				*e*Sg	**Sg**	**23 24 33.9**	**-0.2**
CHVC	**Chvalec**	**0.97**	**183**	*e*PG	**Pg**	**23 24 29.8**	**+0.3**
CHVC				*e*SG	**Sg**	**23 24 41.4**	**-0.6**
UPC	**Upice**	**1.05**	**184**	*e*PG	**Pb**	**23 24 31.8**	**-0.2**
UPC				*e*SG	**Sg**	**23 24 44.1**	**-0.6**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**23 24 34.2**	**0.0**
DPC				*e*SG	**Sg**	**23 24 48.1**	**-1.7**
PIVO	**Bartosovice**	**1.39**	**169**	*e*Pg	**Pg**	**23 24 37.5**	**-0.2**
	baz=350						
PIVO				*e*Sg	**Sg**	**23 24 53.7**	**-2.0**
	38nm,0.2s,baz=350						
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG	**Pg**	**23 24 38.4**	**+0.2**
PVCC				*e*SG	**Sn**	**23 24 57.5**	**0.0**
BRG	**Berggiesshubel**	**1.53**	**245**	Pg	**Pg**	**23 24 40.9**	**+0.5**
BRG				Sg	**Sn**	**23 25 00.9**	**+0.6**
BRG				Amp		23 25 01.9	
	comp=Z,32nm,0.4s						
KRLC	**Kraliky**	**1.54**	**164**	*e*PG	**Pg**	**23 24 40.5**	**+0.1**
KRLC				*e*SG	**Sg**	**23 24 59.0**	**-1.3**
ANAC	**Anensky vrch**	**1.68**	**151**	*e*Pn	**Pn**	**23 24 41.8**	**+0.1**
	baz=332						
ANAC				*e*Sg	**Sn**	**23 25 02.7**	**-1.2**
	comp=Z,21nm,0.1s,baz=332						
RYBC	**Ceska Rybna**	**1.75**	**181**	*e*Pn	**Pn**	**23 24 42.6**	**0.0**
	baz=2.1						
RYBC				*e*Sg	**Sn**	**23 25 04.8**	**-0.7**
	comp=Z,21nm,0.2s,baz=2.1						
PRU	**Pruhonice**	**1.86**	**213**	*e*SG	**Sn**	**23 25 08.8**	**+0.4**
STEB	**Steborice**	**1.93**	**147**	*e*PG	**Pb**	**23 24 47.3**	**+0.3**
STEB				*e*SG	**Sn**	**23 25 10.5**	**+0.5**
HSKC	**Hora Svate Kat**	**1.95**	**242**	*e*PG	**Pb**	**23 24 47.5**	**+0.1**
HSKC				*e*SG	**Sb**	**23 25 11.9**	**-0.3**
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**23 24 46.0**	**+0.3**
CLL				*e*Pg	**Pg**	**23 24 49.0**	**+0.2**
CLL				*e*Sg	**Sg**	**23 25 14.0**	**-0.3**
	comp=Z,15nm,0.4s				

comp=Z,3.1nm,0.4s
ARSA Arzberg 4.32 185 Pg **Pg** 23 25 34.2 +0.4
comp=Z,0.3nm,0.2s
ARSA Sg **Sg** 23 26 30.4 +0.6
comp=Z,3.1nm,0.4s
LUNU Lund 4.39 340 *i* P **Pn** 23 25 19.2 +0.4
SESA Seetaler Alpe, 4.56 194 *i* Pn **Pn** 23 25 22.1 +0.6
comp=Z,0.7nm,0.2s
LESA Schwarzleotal 4.70 210 *e*Pn **Pn** 23 25 23.2 -0.1
comp=Z,0.2nm,0.2s
LESA *e*Sn **Sn** 23 26 18.8 +0.2
comp=Z,0.6nm,0.3s
KOLS Kolonicke sedl 4.73 121 *e*PN **Pn** 23 25 24.6 +1.0
BLEU Blekinge 4.76 358 *i* P **Pn** 23 25 25.2 +1.3
KBA Koelnbreinsper 4.83 203 Sg **Sg** 23 26 46.0 -0.3
comp=Z,1.3nm,0.4s
BJUU Bjuv 4.89 339 *i* P **Pn** 23 25 26.1 +0.4
BJUU *e*P Pb 23 25 28.1 -9.3
DEL Delary 5.10 346 *i* P **Pn** 23 25 28.0 -0.7
DEL *i* S **Sn** 23 26 25.1 -3.1
DEL IAML 23 26 30.5
comp=Z,0.7nm,0.3s
OBKA Obir 5.15 192 *e*Sn **Sn** 23 26 30.6 +1.0
comp=Z,1.7nm,0.6s
OBKA Sg **Sg** 23 26 56.2 -0.3
comp=Z,2.2nm,0.6s
WTTA Wattenberg 5.20 216 *e*Pn **Pn** 23 25 30.6 +0.4
comp=Z,0.4nm,0.3s
ABTA Abfaltersbach 5.36 208 Sg **Sg** 23 27 01.9 -1.3
comp=Z,1.8nm,0.5s
RETA Reutte 5.36 223 *e*Pn **Pn** 23 25 32.5 +0.2
comp=Z,0.3nm,0.2s
RETA *e*Sn **Sn** 23 26 32.9 -1.9
comp=Z,0.8nm,0.3s

*SJA **05** 23:43:28.7±0.6,21°.37S×68°.70W,h121km±4km,ML3.5, MW3.6*
*GUC **05** 23:43:30.5±0.6,21°.36S×68°.70W,h113km±3km,ML3.6*
*IDC **05** 23:43:32.6±3.6,21°.30S×68°.34W,h125km±33km,mb3.6/4, mbtmp3.9/5,Error ellipse: s-maj=38.8km s-min=28.5km az=107.0*
ISC 05 23:43:30.1±0.8,21°.38S±0°.03×68°.75W±0°.05,h119km±7km, n38,σ1°35/55,5C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.62**	**228**	*e*P		**Pn**	**23 43 48.2**	**-0.8**
PB09				*e*S		**Sn**	**23 44 03.5**	**+0.3**
PB09				IAML			23 44 03.9	
	comp=Z,2μm,0.4s							
PB09	**IPOC Station P**	**0.62**	**228**	⇑*i*P		**Pn**	**23 43 48.9**	**-0.1**
PB09				*e*S		**Sn**	**23 44 03.1**	**-0.2**
PB09				IAML			23 44 04.5	
	comp=E,1μm,0.5s							
PB02	**IPOC Station P**	**1.07**	**273**	*e*P		**Pn**	**23 43 52.8**	**-0.1**
PB02				*e*S		**Sn**	**23 44 10.9**	**+0.8**
PB02				IAML			23 44 14.6	
	comp=Z,3μm,0.2s							
PB02	**IPOC Station P**	**1.07**	**273**	⇑*i*P		**Pn**	**23 43 52.8**	**-0.1**
PB02				*e*S		**Sn**	**23 44 10.0**	**-0.1**
PB02				IAML			23 44 12.1	
	comp=E,4μm,0.2s							
PB07	**IPOC Station P**	**1.11**	**252**	*e*P		**Pn**	**23 43 52.7**	**-0.7**
PB07				*e*S		**Sn**	**23 44 11.8**	**+0.7**
PB07				IAML			23 44 12.9	
	comp=Z,803nm,0.4s							
PB07	**IPOC Station P**	**1.11**	**252**	⇑*i*P		**Pn**	**23 43 53.4**	**0.0**
PB07				*e*S		**Sn**	**23 44 11.3**	**+0.2**
PB07				IAML			23 44 12.3	
	comp=E,1μm,0.3s							
PB08	**IPOC Station P**	**1.28**	**343**	*e*P		Pn	23 43 50.4	-5.1
PB08				*e*S		**Sn**	**23 44 14.9**	**+0.3**
PB08				IAML			23 44 16.3	
	comp=Z,336nm,0.4s							
PB08	**IPOC Station P**	**1.28**	**343**	⇓*i*P		**Pn**	**23 43 55.5**	**0.0**
PB08				*e*S		**Sn**	**23 44 14.3**	**-0.3**
PB08				IAML			23 44 16.2	
	comp=E,871nm,0.3s							
PB06	**IPOC Station P**	**1.53**	**210**	*e*P		**Pn**	**23 43 58.2**	**+0.2**
PB06				*e*S		**Sn**	**23 44 20.3**	**+1.1**
PB06				IAML			23 44 21.7	
	comp=Z,458nm,0.4s							
PB06	**IPOC Station P**	**1.53**	**210**	⇑*i*P		**Pn**	**23 43 58.2**	**+0.2**
PB06				*e*S		**Sn**	**23 44 19.5**	**+0.3**
PB06				IAML			23 44 21.8	
	comp=E,694nm,0.2s							
AF01	**San Pedro de A**	**1.66**	**161**	*e*P		**Pn**	**23 43 59.2**	**-0.4**
AF01				*e*S		**Sn**	**23 44 23.2**	**+1.1**
AF01				IAML			23 44 45.0	
	comp=Z,285nm,0.6s							
AF01	**San Pedro de A**	**1.66**	**161**	*e*P		**Pn**	**23 43 59.8**	**+0.1**
AF01				IAML			23 44 35.5	
	comp=E,514nm,0.7s							
TA02	**Huaiquique**	**1.70**	**310**	*e*P		Pn	23 43 48.8	-11
TA02				*e*S		**Sn**	**23 44 23.1**	**+0.6**
TA02				IAML			23 44 23.8	
	comp=Z,808nm,0.1s							
TA02	**Huaiquique**	**1.70**	**310**	*e*P		**Pn**	**23 43 59.4**	**-0.4**
GO01	**Chusmiza**	**1.75**	**346**	*e*P		**Pn**	**23 44 00.9**	**-0.1**
GO01				IAML			23 44 29.0	
	comp=Z,260nm,0.4s							
GO01	**Chusmiza**	**1.75**	**346**	*e*P		**Pn**	**23 44 00.5**	**-0.5**
GO01				*e*S		**Sn**	**23 44 23.8**	**-0.6**
GO01				IAML			23 44 27.8	
	comp=N,1μm,0.1s							
PB11	**IPOC Station P**	**1.82**	**332**	*e*P		**Pn**	**23 44 01.1**	**-0.3**
PB11				*e*S		**Sn**	**23 44 25.6**	**+0.2**
PB11				IAML			23 44 30.3	
	comp=Z,335nm,0.3s							
PB11	**IPOC Station P**	**1.82**	**332**	*e*P		**Pn**	**23 44 01.1**	**-0.3**
PB11				*e*S		**Sn**	**23 44 24.4**	**-0.9**
PB11				IAML			23 44 26.7	
	comp=N,1μm,0.2s							
PB05	**IPOC Station P**	**2.00**	**222**	*e*P		**Pn**	**23 44 03.6**	**+0.1**
PB05				*e*S		**Sn**	**23 44 22.7**	**-6.4**
PB05				IAML			23 44 37.4	
	comp=Z,147nm,0.2s							
PB05	**IPOC Station P**	**2.00**	**222**	*e*P		Pn	**23 44 03.2**	**-0.3**
PB05				IAML			23 44 38.1	
	comp=E,230nm,0.2s							
PSGCX	**Pisagua**	**2.19**	**324**	*e*P		**Pn**	**23 44 05.1**	**-0.9**
PSGCX				*e*S		**Sn**	**23 44 32.9**	**-0.6**
PSGCX				IAML			23 44 37.4	
	comp=Z,243nm,0.4s							
PSGCX	**Pisagua**	**2.19**	**324**	⇑*i*P		**Pn**	**23 44 05.1**	**-0.9**
PB10	**IPOC Station P**	**2.71**	**218**	*e*P		**Pn**	**23 44 12.7**	**+0.2**
PB10				*e*S		**Sn**	**23 44 42.8**	**-2.3**
PB10				IAML			23 45 06.7	
	comp=Z,69nm,0.3s							
PB10	**IPOC Station P**	**2.71**	**218**	*e*P		**Pn**	**23 44 12.4**	**-0.1**
PB10				IAML			23 44 57.2	
	comp=E,95nm,0.3s							
PB16	**IPOC Station P**	**3.11**	**347**	*e*P		**Pn**	**23 44 19.1**	**+0.7**
PB16				*e*S		**Sn**	**23 44 54.4**	**-1.1**
PB16				IAML			23 45 28.6	
	comp=Z,46nm,0.5s							
PB16	**IPOC Station P**	**3.11**	**347**	*e*P		**Pn**	**23 44 18.6**	**+0.2**
PB16				IAML			23 45 05.9	
	comp=N,111nm,0.9s							
YJA	**Yavi**	**3.11**	**105**	*e*P		**Pn**	**23 44 15.0**	**-3.3**
PB12	**IPOC Station P**	**3.12**	**331**	*e*P		**Pn**	**23 44 16.8**	**-1.4**
PB12				*e*S		Sn	23 44 42.6	-13
PB12				IAML			23 45 03.8	
	comp=Z,112nm,0.2s							
PB12	**IPOC Station P**	**3.12**	**331**	*e*P		**Pn**	**23 44 16.0**	**-2.1**
PB12				IAML			23 45 06.2	
	comp=E,187nm,0.4s							
PB14	**IPOC Station P**	**3.58**	**205**	*e*P		**Pn**	**23 44 24.3**	**0.0**
PB14				*e*S		Sn	23 45 19.1	+13
PB14				IAML			23 45 20.0	
	comp=Z,71nm,0.3s							
HJA	**Humahuaca**	**3.59**	**121**	*e*P		**Pn**	**23 44 25.9**	**+1.4**
LPAZ	**La Paz**	**5.09**	**7**	P		**Pn**	**23 44 46.2**	**+1.3**
	comp=Z,2.8nm,0.3s,baz=208,slow=4.5,SNR=27							
LPAZ				S		Sn	23 45 26.2	-17
	comp=Z,1.9nm,0.6s,baz=160,slow=2.8,SNR=1.1							
BDFB	**Brasilia**	**20.46**	**77**	P		**P**	**23 47 56.4**	**-2.2**
	comp=Z,1.1nm,0.4s,baz=254,slow=14,SNR=3.1							
	comp=Z,1.1nm,0.4s							
QSPA	**South Pole Qui**	**68.81**	**180**	P		**P**	**23 54 23.7**	**+2.3**
	comp=Z,1.0nm,0.5s,baz=136,slow=6.3,SNR=14							
	comp=Z,1.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**77.17**	**70**	P		**P**	**23 55 10.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=250,slow=5.5,SNR=7.1							
	comp=Z,0.6nm,0.6s							
YKA	**Yellowknife Ar**	**91.12**	**341**	P		**P**	**23 56 22.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=136,slow=5.7,SNR=4.1							
	comp=Z,0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**141.78**	**25**	PKP		**PKiKP**	**00 02 49.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=306,slow=5.0,SNR=1.8							
MKAR	**Makanchi Array**	**145.44**	**36**	PKPbc		**PKPab**	**00 02 55.5**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=316,slow=3.3,SNR=4.3							

*IDC **05** 23:43:41.9±2.1,7°.87S×128°.12E,h82km±22km,mb3.5/7, mbtmp4.0/13,Error ellipse: s-maj=19.9km s-min=18.1km az=85.0*
ISC 05 23:43:42.7±0.6,7°.91S±0°.05×128°.24E±0°.06,h100km,n26, σ2s82/29,mb3.6/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.75**	**26**	P		**Pn**	**23 44 36.4**	**-2.1**
SOEI	**Soe**	**4.33**	**245**	P		**Pn**	**23 44 48.9**	**+2.4**
BATI	**Baumata**	**5.06**	**243**	P		**Pn**	**23 44 55.4**	**-1.0**
	71nm,0.4s,baz=77,slow=3.9,SNR=28							
BATI				S		**Sn**	**23 45 50.9**	**-2.8**
	28nm,0.3s,baz=71,slow=11,SNR=1.5							
DRS	**Darwin Rock St**	**5.20**	**150**	P		**Pn**	**23 44 59.7**	**+1.5**
DRS	**Darwin Rock St**	**5.20**	**150**	S		**Sn**	**23 45 58.6**	**+1.6**
FAKI	**Fak Fak**	**6.36**	**39**	P		**Pn**	**23 45 12.7**	**-1.3**
FAKI	**Fak Fak**	**6.36**	**39**	S		**Sn**	**23 46 23.1**	**-2.2**
SIJI	**Sorong**	**7.61**	**23**	P		**Pn**	**23 45 31.0**	**0.0**
	8.2nm,0.3s,baz=207,slow=22,SNR=9.9							
SIJI				S		**Sn**	**23 46 52.2**	**-3.5**
	4.2nm,0.3s,baz=215,slow=22,SNR=1.5							
KAPI	**Kappang**	**8.91**	**288**	P		**Pn**	**23 45 46.2**	**-2.4**
	6.0nm,0.3s,baz=111,slow=17,SNR=1.6							
PLAI	**Plampang**	**10.39**	**264**	P		**Pn**	**23 46 09.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**10.44**	**194**	P		**Pn**	**23 46 08.2**	**-1.2**
	6.9nm,0.3s,baz=23,slow=11,SNR=65							
FITZ				S		**Sn**	**23 47 58.8**	**-5.7**
	13nm,0.4s,baz=300,slow=22,SNR=7.4							
FITZ	**Fitzroy Crossi**	**10.44**	**194**	P		**Pn**	**23 46 11.5**	**+2.0**
WRA	**Warramunga Arr**	**13.35**	**154**	P		**Pn**	**23 46 47.4**	**-0.8**
	0.8nm,0.4s,baz=330,slow=14,SNR=13							
WRA				S		Sn	23 49 06.1	-9.0
	3.7nm,0.4s,baz=5.2,slow=22,SNR=11							
MBWA	**Marble Bar**	**15.53**	**211**	P		**P**	**23 47 19.5**	**+1.1**
ASAR	**Alice Springs**	**16.59**	**162**	P		**P**	**23 47 30.0**	**-0.1**
	2.4nm,0.5s,baz=340,slow=11,SNR=22							
ASAR				S		**Sn**	**23 50 24.9**	**-8.6**
	1.7nm,0.6s,baz=327,slow=17,SNR=6.2							
AS01	**Alice Springs**	**16.60**	**161**	P		**P**	**23 47 32.5**	**+2.2**
QIS	**Mount Isa**	**16.71**	**140**	P		**P**	**23 47 34.2**	**+2.7**
MEEK	**Meekatharra**	**20.75**	**205**	P		Pn	23 48 20.8	+1.9
MORW	**Morawa**	**23.98**	**207**	P		**P**	**23 48 52.4**	**+4.4**
STKA	**Stephens Creek**	**26.90**	**154**	P		**P**	**23 49 17.3**	**+2.9**
	1.1nm,0.7s,baz=323,slow=10,SNR=1.9							
	1.1nm,0.7s							
USRK	**Ussuriysk Ar.**	**51.97**	**3**	P		**P**	**23 52 42.3**	**+0.8**
	0.9nm,0.4s,baz=185,slow=6.5,SNR=1.6							
	0.9nm,0.4s							
SONM	**Songino Array**	**58.77**	**343**	P		**P**	**23 53 31.2**	**+0.8**
	0.5nm,0.5s,baz=147,slow=8.1,SNR=2.9							
	0.5nm,0.5s							
PETK	**Petropavlovsk-**	**65.73**	**19**	P		**P**	**23 54 17.4**	**+0.7**
	3.5nm,0.9s,baz=198,slow=5.8,SNR=4.6							
	3.5nm,0.9s							
MKAR	**Makanchi Array**	**68.04**	**328**	P		**P**	**23 54 32.0**	**+0.6**
	0.4nm,0.5s,baz=125,slow=6.7,SNR=7.3							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**72.38**	**329**	P		**P**	**23 54 58.3**	**+0.5**
	0.4nm,0.5s,baz=128,slow=5.0,SNR=6.5							
	0.4nm,0.5s							
BVAR	**Borovoye Array**	**77.91**	**328**	P		**P**	**23 55 30.4**	**+0.9**
	0.3nm,0.4s,baz=132,slow=8.8,SNR=3.4							
	0.3nm,0.4s							

*SOME **05** 23:44:43.0,39°.95N×75°.30E,h5km*
*NNC **05** 23:44:45.1±0.9,40°.01N×75°.33E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=6.9km s-min=4.1km az=171.0*
*KRNET **05** 23:44:45.5±0.1,40°.03N×75°.24E,h19km,mb3.6*
ISC 05 23:44:47.1±1.0,40°.10N±0°.04×75°.19E±0°.03,h10km,n53, σ2s05/86,25C-24D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.30**	**267**	⇓*i*P		**Pg**	**23 45 11.1**	**-1.0**
SFK				*i*S		**Sg**	**23 45 29.6**	**+0.6**
NRN	**Naryn**	**1.47**	**24**	⇓*i*P		**Pb**	**23 45 13.9**	**-0.8**
NRN				⇓*i*S		**Sg**	**23 45 34.3**	**0.0**
OHH	**Osh**	**1.89**	**284**	⇑*i*P		**Pb**	**23 45 21.4**	**-0.3**
OHH				⇑*i*S		**Sg**	**23 45 48.1**	**+0.3**
UCH	**Uchtor**	**2.19**	**347**	P		**Pg**	**23 45 28.7**	**-0.3**
	SNR=20							
UCH	**Uchtor**	**2.19**	**347**	⇓*i*P		**Pb**	**23 45 26.5**	**-0.5**
UCH				⇓*i*S		**Sb**	**23 45 56.5**	**+2.1**
ULHL	**Ulahol**	**2.29**	**20**	P		**Pb**	**23 45 29.0**	**+0.4**
	SNR=12							
ULHL	**Ulahol**	**2.29**	**20**	⇑*i*P		**Pb**	**23 45 27.4**	**-1.1**
ULHL				⇑*i*S		**Sb**	**23 45 57.9**	**+1.0**
BOOM	**Boomskoye usch**	**2.45**	**13**	⇑*i*P		**Pb**	**23 45 29.8**	**-1.6**
BOOM				⇑*i*S		**Sb**	**23 46 02.2**	**+0.4**
KDJ	**Kajisay**	**2.52**	**36**	⇑*i*P		**Pb**	**23 45 30.3**	**-2.3**
KDJ				⇑*i*S		**Sb**	**23 46 03.1**	**-0.7**
KBK	**Karagaybulak**	**2.56**	**356**	P		**Pg**	**23 45 35.3**	**-0.9**
	SNR=33							
KBK	**Karagaybulak**	**2.56**	**356**	⇓*i*P		**Pb**	**23 45 31.5**	**-1.7**
KBK				⇓*i*S		**Sb**	**23 46 05.0**	**+0.1**
TARG	**Taragay, Kyrgy**	**2.56**	**50**	⇑*i*P		**Pb**	**23 45 30.8**	**-2.6**
TARG				⇑*i*S		**Sb**	**23 46 04.0**	**-1.1**
AAK	**Ala-Archa**	**2.59**	**348**	P		**Pg**	**23 45 35.7**	**-1.1**
	SNR=14							
AAK	**Ala-Archa**	**2.59**	**348**	⇓*i*P		**Pb**	**23 45 31.8**	**-1.9**
AAK				⇓*i*S		**Sb**	**23 46 05.7**	**0.0**
FRU1	**Bishkek**	**2.74**	**351**	⇑*i*P		**Pb**	**23 45 34.3**	**-1.9**
FRU1				⇑*i*S		**Sb**	**23 46 09.8**	**-0.1**
EKS2	**Erkin-Say**	**2.77**	**338**	P		**Pg**	**23 45 39.4**	**-0.9**
	SNR=11							
EKS2	**Erkin-Say**	**2.77**	**338**	⇑*i*P		**Pb**	**23 45 34.5**	**-2.3**
EKS2				⇑*i*S		**Sb**	**23 46 10.2**	**-0.7**
TKM2	**Tokmak 2**	**2.84**	**6**	P		**Pb**	**23 45 36.5**	**-1.4**
	SNR=16							
TKM2	**Tokmak 2**	**2.84**	**6**	⇑*i*P		**Pb**	**23 45 35.2**	**-2.7**
TKM2				⇑*i*S		**Sb**	**23 46 11.4**	**-1.4**
CHMS	**Chumysh**	**2.92**	**354**	P		**Pb**	**23 45 40.2**	**+1.1**
	SNR=7.6							
CHMS	**Chumysh**	**2.92**	**354**	⇑*i*P		**Pb**	**23 45 36.3**	**-2.9**
CHMS				⇑*i*S		**Sb**	**23 46 13.3**	**-1.6**
ARK	**Arkit**	**2.98**	**306**	⇑*i*P		**Pb**	**23 45 37.3**	**-3.0**
ARK				⇑*i*S		**Sb**	**23 46 14.9**	**-1.9**
KST	**Kastek**	**3.00**	**11**	Pg		**Pb**	**23 45 41.5**	**+0.9**
	15nm,0.3s							
KST				Lg		Lg	23 46 23.8	
	78nm,0.8s							
KST	**Kastek**	**3.00**	**11**	*e*P		**Pb**	**23 45 41.5**	**+0.9**
	15nm,0.3s							
KST				*e*S		**Sg**	**23 46 23.8**	**+0.5**
	78nm,0.8s							
MRKS	**Merke**	**3.03**	**331**	Pg		**Pb**	**23 45 42.0**	**+0.8**
	3.5nm,0.2s							
MRKS				Lg		Lg	23 46 25.2	
	30nm,0.2s							
MRKS	**Merke**	**3.03**	**331**	*e*P		**Pb**	**23 45 42.0**	**+0.8**
	3.5nm,0.2s							
MRKS				*e*S		**Sg**	**23 46 24.1**	**-0.3**
	30nm,0.2s							
MNAS	**Manas**	**3.13**	**321**	⇑*i*P		**Pb**	**23 45 39.5**	**-3.4**
MNAS				⇑*i*S		**Sb**	**23 46 18.9**	**-2.3**
USP	**Ospenovka**	**3.21**	**351**	P		**Pb**	**23 45 45.1**	**+0.9**
	SNR=9.7							
USP	**Ospenovka**	**3.21**	**351**	⇓*i*P		**Pn**	**23 45 40.3**	**+2.7**
USP				⇓*i*S		**Sb**	**23 46 20.4**	**-2.9**
TNSS	**Tian-Shan**	**3.22**	**24**	Pg		**Pb**	**23 45 45.1**	**+0.5**
	4.2nm,0.4s							
TNSS				Lg		Lg	23 46 29.7	
	16nm,0.5s							
TNSS	**Tian-Shan**	**3.22**	**24**	*e*P		**Pb**	**23 45 45.1**	**+0.5**
	4.2nm,0.4s							
TNSS				*e*S		**Sg**	**23 46 29.7**	**-0.7**
	16nm,0.5s							
ANVS	**Anan'yevo**	**3.26**	**34**	⇓*i*P		**Pn**	**23 45 40.7**	**+2.2**
ANVS				⇓*i*S		**Sb**	**23 46 21.0**	**-4.0**
BTK	**Batken**	**3.36**	**271**	⇓*i*P		**Pn**	**23 45 42.0**	**+2.3**
BTK				⇓*i*S		**Sb**	**23 46 23.2**	**-4.5**
MDOK	**Medeo**	**3.36**	**24**	Pg		**Pb**	**23 45 47.5**	**+0.6**
	14nm,0.4s							
MDOK				Lg		Lg	23 46 34.0	
	42nm,0.4s							
SGDS	**Sogindy**	**3.38**	**353**	Pg		**Pb**	**23 45 48.3**	**+1.2**
	5.3nm,0.6s							
SGDS				Lg		Lg	23 46 35.2	
	38nm,0.5s							
KNDC	**Almaty**	**3.39**	**22**	⇓Pg		**Pb**	**23 45 47.7**	**+0.5**
	23nm,0.5s							
KNDC				⇓Lg		Lg	23 46 34.8	
	90nm,0.5s							
PRZ	**Przheval'sk**	**3.39**	**44**	⇓*i*P		**Pn**	**23 45 42.5**	**+2.3**
PRZ				⇓*i*S		**Sb**	**23 46 24.1**	**-4.7**
TRKS	**Terek-Say**	**3.39**	**296**	⇑*i*P		**Pn**	**23 45 42.2**	**+2.0**
TRKS				⇑*i*S		**Sn**	**23 46 23.6**	**+3.0**
SATY	**Saty**	**3.81**	**38**	Pg		**Pb**	**23 45 55.3**	**+0.8**
	4.2nm,0.3s							
SATY				Lg		Lg	23 46 47.4	
	26nm,0.3s							
SATY	**Saty**	**3.81**	**38**	*e*P		**Pb**	**23 45 55.3**	**+0.8**
	4.2nm,0.3s							
SATY				*e*S		**Sg**	**23 46 47.4**	**-2.2**
	26nm,0.3s							
GAR	**Garm**	**3.93**	**255**	⇓*i*P		**Pn**	**23 45 49.5**	**+2.0**
GAR				⇓*i*S		**Sn**	**23 46 36.5**	**+2.8**
KURS	**Kuram**	**4.05**	**32**	Pg		**Pb**	**23 45 58.2**	**-0.3**
	4.1nm,0.3s							
KURS				Lg		Lg	23 46 53.1	
	11nm,0.6s							
KURS	**Kuram**	**4.05**	**32**	*e*P		**Pb**	**23 45 58.2**	**-0.3**
	4.1nm,0.3s							
KURS				*e*S		**Sb**	**23 46 52.0**	**+4.4**
	11nm,0.6s							
UZB	**Uzynbulak**	**4.18**	**42**	Pg		**Pb**	**23 46 01.2**	**+0.4**
	2.9nm,0.2s							
UZB				Lg		Lg	23 46 57.5	
	11nm,0.5s							
UZB	**Uzynbulak**	**4.18**	**42**	*e*P		**Pb**	**23 46 01.2**	**+0.4**
	2.9nm,0.2s							
UZB				*e*S		**Sg**	**23 46 57.5**	**-3.9**
	11nm,0.5s							
KPKS	**Kokpek**	**4.26**	**37**	Pg		**Pb**	**23 46 02.1**	**0.0**
	0.5nm,0.2s							
KPKS				Lg		Lg	23 46 59.3	
	32nm,0.5s							
KPKS	**Kokpek**	**4.26**	**37**	*e*P		**Pb**	**23 46 02.1**	**0.0**
	0.5nm,0.2s							
KPKS				*e*S		**Sg**	**23 46 59.3**	**-4.5**
	32nm,0.5s							
SHLS	**Shalkode**	**4.42**	**45**	Pg		**Pg**	**23 46 10.3**	**-1.5**
	8.1nm,0.4s							
SHLS				Lg		Lg	23 47 12.9	
	18nm,0.6s							
SHLS	**Shalkode**	**4.42**	**45**	*e*P		**Pg**	**23 46 10.3**	**-1.5**
	8.1nm,0.4s							
SHLS				*e*S		**Sg**	**23 47 12.9**	**+3.9**
	18nm,0.6s							
KK31	**Karatay Array**	**4.62**	**312**	Pn		**Pn**	**23 45 59.3**	**+2.3**
	0.2nm,0.2s,baz=129,slow=12,SNR=12							
KK31				Pg		**Pg**	**23 46 12.3**	**-3.2**
	2.3nm,0.6s,baz=134,slow=14,SNR=7.5							
KK31				⇑Lg		Lg	23 47 16.2	
	3.0nm,0.5s,baz=123,slow=29,SNR=6.4							
CHGR	**Chuyangaron**	**4.89**	**255**	⇓*i*P		**Pn**	**23 46 03.0**	**+2.2**
CHGR				⇓*i*S		**Sn**	**23 46 59.4**	**+1.9**
DJR	**Jarkent**	**5.43**	**37**	Pg		**Pb**	**23 46 23.8**	**+1.7**
	1.4nm,0.4s							
DJR				Lg		Lg	23 47 36.7	
	2.7nm,0.4s							
DJR	**Jarkent**	**5.43**	**37**	*e*P		**Pb**	**23 46 23.8**	**+1.7**
	1.4nm,0.4s							
DJR				*e*S		**Sg**	**23 47 36.8**	**-4.7**
	2.7nm,0.4s							

NOU 05 23:54:38.9,17°.20S×167°.74E,h0km,MLv4.1/15,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.67**	**141**	P		Pb	23 54 53.0	-0.6
RTV	**Rentapao**	**0.88**	**132**	P		Pg	23 54 55.5	-0.3
RTV	**Rentapao**	**0.88**	**132**	S		Sg	23 55 07.7	+0.5
SANVU	**Saraoutou**	**1.82**	**343**	P		Pn	23 55 10.5	-1.0
MARNC	**Mare, Loyalty**	**4.27**	**176**	P		Pn	23 55 44.8	-0.4
YATNC	**Mamie plateau,**	**4.90**	**189**	P		Pn	23 55 53.5	-0.4
OUENC	**Ouen Island, N**	**5.26**	**189**	P		Pn	23 55 59.4	+0.6

DJA 06 00:02:15.5±0.7,2°.5S±4°.×14°.0E±°,h10km,M3.6/6,MLv3.6/6, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.37**	**190**	P		Pb	00 02 24.6	+0.5
GENI				S		Sb	00 02 29.0	-0.9
JAY	**Jayapura**	**0.55**	**121**	P		Pb	00 02 27.8	+0.5
JAY				S		Sg	00 02 34.3	+0.7
BAKI	**Biak**	**4.25**	**284**	P		Pn	00 03 19.7	-0.6
MMPI	**Merauke**	**6.20**	**179**	P		Pn	00 03 48.1	+1.0

*IDC **06** 01:16:19.2±4.3,0°.74N×81°.47W,h0km,mb3.5

LITE1	Lita	1.88	74	⇑P		Pn	01 16 59.1	-1.5
TOMA	Boca Toma-Volc	1.89	114	P		Pn	01 17 02.1	+1.1
SRAM	San Ramn-Vol	1.89	122	⇓P		Pn	01 17 02.0	+1.0
SUCR	Mariscal Sucre	1.90	119	⇓P		Pn	01 17 02.4	+1.2
PPLP	Puerto Lpez	1.91	199	P		Pb	01 17 02.5	-0.6
PPLP	Puerto Lpez	1.91	199	P		Pn	01 17 01.8	+0.9
PPLP				S		Sg	01 17 29.3	-0.3
AOTA	Otavalo	1.91	91	P		Pb	01 17 03.3	0.0
URCU	Urcuqui	1.92	85	⇑P		Pn	01 17 02.0	+0.6
PITA	Cotopaxi Volc	1.92	116	⇑P		Pn	01 17 02.7	+1.3
NAS2	Nasa	1.93	118	⇑P		Pn	01 17 03.0	+1.4
BNAS	Cotopaxi Volca	1.93	119	⇓P		Pn	01 17 02.3	+0.7
SLOR	San Lorenzo -	1.94	121	P		Pb	01 17 03.3	-0.7
SLOR				S		Sn	01 17 24.0	-2.5
SLOR	San Lorenzo -	1.94	121	⇓P		Pn	01 17 03.3	-0.7
BREF	Cotopaxi Volca	1.96	119	⇓P		Pn	01 17 03.7	+1.5
IMBA	Imbabura, San	1.96	90	P		Pb	01 17 04.1	-0.4
IMBA				S		Sn	01 17 25.6	-1.4
IMBA	Imbabura, San	1.96	90	⇓P		Pb	01 17 04.0	-0.4
BMOR	Cotopaxi Volca	1.98	120	⇓P		Pn	01 17 03.6	+1.3
BVC2	Cotopaxi Volca	1.98	118	⇓P		Pn	01 17 03.9	+1.5
VC1	Cotopaxi 1	1.98	117	⇑P		Pn	01 17 03.9	+1.6
BRRN	Barrancas-Volc	1.99	122	⇑P		Pn	01 17 03.9	+1.5
BTAM	Cotopaxi Volca	2.00	118	⇓P		Pn	01 17 04.2	+1.5
TAMB	Tambo	2.04	118	⇓P		Pn	01 17 04.7	+1.6
ANTG	Antisana-Guama	2.06	112	⇓P		Pn	01 17 04.6	+1.2
VCES	Cotopaxi	2.07	121	P		Pn	01 17 05.2	+1.7
VCES				S		Sn	01 17 27.3	-2.3
VCES	Cotopaxi	2.07	121	⇓P		Pn	01 17 05.0	+1.5
YAHU	Yahuarcocha	2.10	87	⇑P		Pb	01 17 06.4	-0.2
ANTM	Antisana-La Mi	2.10	113	⇓P		Pn	01 17 05.3	+1.3
ANTI	Antisana	2.13	110	⇓P		Pn	01 17 05.4	+1.5
ANTS	Antisana-Sarah	2.14	111	P		Pn	01 17 06.1	+1.5
ANTS				S		Sn	01 17 30.2	-1.2
ANTS	Antisana-Sarah	2.14	111	⇓P		Pn	01 17 05.9	+1.3
CAYR	Refugio Cayamb	2.17	97	⇓P		Pn	01 17 06.7	+1.7
CHMA	Chilma	2.18	74	⇑P		Pn	01 17 03.8	-1.1
CHSH	Refugio Sur-Vo	2.18	144	P		Pn	01 17 06.5	+1.3
CHSH				S		Sn	01 17 31.6	-0.9
CHSH	Refugio Sur-Vo	2.18	144	⇓P		Pn	01 17 06.5	+1.3
LNGL	El Angel-Carch	2.21	78	⇑P		Pn	01 17 05.4	-0.1
PORT	Chimborazo Vol	2.22	141	⇑P		Pn	01 17 06.5	+0.8
PIS1	Pisayambo	2.22	127	⇓P		Pn	01 17 07.4	+1.8
ECEN	Cerro Negro	2.26	76	⇑P		Pn	01 17 06.8	+0.6
TAMH	Tambohuasha Ch	2.27	143	⇑P		Pn	01 17 07.4	+1.1
CHL1	Volcn Chiles	2.28	77	⇑P		Pn	01 17 06.8	+0.4
PIAT	Ana Tenorio	2.28	124	P		Pn	01 17 07.9	+1.6
PIAT	Ana Tenorio	2.28	124	P		Pn	01 17 08.1	+1.7
PIAT				S		Sb	01 17 37.6	-0.7
JSCH	Cashca Totoras	2.31	149	P		Pn	01 17 07.3	+0.7
CHL2	Volcn Chiles	2.31	77	⇑P		Pn	01 17 07.3	+0.4
IGUA	Igualata	2.32	139	P		Pn	01 17 08.8	+1.7
JUI6	Juive	2.39	135	P		Pn	01 17 09.8	+2.0
TULM	Tulcn-Chalpat	2.42	80	P		Pn	01 17 10.4	+2.0
TULM				S		Sn	01 17 38.6	+0.3
TULM	Tulcn-Chalpat	2.42	80	⇑P		Pb	01 17 10.8	-1.4
TULM	Tulcn-Chalpat	2.42	80	P		Pb	01 17 10.5	-1.6
TULM				S		Sg	01 17 45.9	-0.1
CMBC	Cumbal	2.43	74	P		Pn	01 17 10.0	+1.5
CMBC	Cumbal	2.43	74	P		Pn	01 17 10.0	+1.5
CMBC				S		Sb	01 17 43.5	+0.9
ARRY	Arrayan	2.46	136	⇑P		Pn	01 17 10.3	+1.6
BPAT	Tungurahua Vol	2.47	136	⇓P		Pn	01 17 11.5	+2.4
ATUL	Tulcn	2.49	79	P		Pb	01 17 12.1	-1.2
SALI	Salinas	2.58	199	P		Pb	01 17 14.2	-0.4
PUYO	Puyo, Santa Ro	2.77	129	P		Pb	01 17 17.2	-0.7
CASC	Dorado de Casc	2.83	93	P		Pb	01 17 18.1	-0.8
CASC	Dorado de Casc	2.83	93	P		Pb	01 17 18.1	-0.8
CASC				S		Sg	01 17 57.3	-1.9
SANGA	Volcan Sangay	2.92	142	P		Pn	01 17 18.3	+3.1
PKYU	Pakayacu	3.20	127	P		Pb	01 17 23.9	-1.4
ISPG	Isla Puna-Puer	3.22	180	P		Pb	01 17 24.3	-1.3
GR1C	Gorgona, Isla	3.37	36	P		Pb	01 17 26.7	-1.4
GR1C				S		Sg	01 18 16.7	+0.2
BBAC	Balboa, Cauca	3.40	59	P		Pn	01 17 21.3	-0.2
BBAC	Balboa, Cauca	3.40	59	P		Pn	01 17 21.4	-0.2
BBAC				S		Sn	01 18 02.5	+0.5
CRUC	La Cruz	3.46	68	P		Pn	01 17 24.1	+1.6
CRUC				S		Sb	01 18 12.6	+0.4
BOSC	San Juan Bosco	3.79	154	P		Pn	01 17 30.4	+3.5
POPC	Popayan, Colom	4.15	57	P		Pn	01 17 32.3	+0.4
POPC				S		Sn	01 18 22.6	+1.9
JAMC	Jamundi, Valle	4.55	50	P		Pn	01 17 37.1	-0.3
JAMC				S		Sn	01 18 27.5	-3.1
MCRA	Macar, Loja	4.62	177	P		Pn	01 17 43.2	+5.5
MCRA				S		Sn	01 18 36.5	+4.5
FLOC	Florencia	4.70	74	P		Pn	01 17 41.6	+2.4
FLOC				S		Sn	01 18 35.4	+1.5
FLOC	Florencia	4.70	74	P		Pn	01 17 40.7	+1.5
GARC	Garzon, Huila	5.04	68	P		Pn	01 17 45.6	+1.4
GARC				S		Sn	01 18 48.2	+5.5
BETC	Betania	5.29	63	P		Pn	01 17 53.6	+6.1
PTLC	Puerto Leguiza 2µm100nm,0.7s	5.37	91	P		Pn	01 17 50.7	+2.2
PLMC	San Jos del P	6.02	40	P		Pn	01 17 59.5	+2.0
PLMC				S		Sn	01 19 04.6	-1.9
ORTC	Ortega, Tolima 55nm,0.8s	6.10	54	P		Pn	01 18 00.6	+2.0
ORTC				S		Sn	01 19 13.3	+4.8
	55nm,0.8s							
PRAC	Prado	6.29	57	P		Pn	01 18 03.3	+2.2
PRAC				S		Sn	01 19 14.7	+1.6
PRAC	Prado 26nm,0.5s	6.29	57	P		Pn	01 18 02.7	+1.6
PRAC				S		Sb	01 19 28.4	-4.8
	26nm,0.5s							
URMC	La Uribe, Meta 55nm,0.6s	6.49	63	P		Pn	01 18 06.4	+2.4
GUY2C	Guyana, Caldas 10nm,0.6s	6.87	44	P		Pn	01 18 11.9	+2.4
CBOC	Ciudad Bolivar 18nm,0.6s	6.93	37	P		Pn	01 18 16.4	+6.3
ROSC	El Rosal 4.4nm,0.3s,baz=212,slow=19,SNR=7.2	7.39	52	Pn		Pn	01 18 22.0	+5.3
ROSC				Sn		Sn	01 19 52.6	+12
	1.2nm,0.3s,baz=270,slow=20,SNR=1.3 12nm,0.4s							
ROSC	El Rosal 20nm,0.5s	7.39	52	P		Pn	01 18 21.0	+4.3
CVER	Cruz Verde, Cu	7.40	55	P		Pn	01 18 21.3	+4.4
NORC	Norcasia 9.6nm,0.6s	7.45	45	P		Pn	01 18 21.9	+4.7
HELC	Santa Helena 13nm,0.9s	7.48	38	P		Pn	01 18 23.9	+6.1
VILC	Villavicencio,	7.51	59	P		Pn	01 18 20.8	+2.8
CHIC	Chingaza	7.75	56	P		Pn	01 18 25.1	+3.6
LPAZ	La Paz 1.9nm,0.8s,baz=343,slow=10,SNR=8.9	20.29	145	P		Pn	01 21 09.8	+2.8
LPAZ				LR		LR	01 31 13.9	
	comp=Z,35nm,18.2s,baz=344,slow=42 1.9nm,0.8s							
SJG	San Juan comp=Z,22nm,19.9s,baz=118,slow=40	22.45	37	LR		LR	01 31 43.3	
SIV	San Ignacio comp=Z,61nm,18.5s,baz=113,slow=39	24.83	131	LR		LR	01 33 13.2	
MDP	Montagnes des comp=Z,29nm,20.1s,baz=225,slow=36	27.90	80	LR		LR	01 33 52.4	
BDFB	Brasilia comp=Z,54nm,19.4s,baz=223,slow=37	35.47	118	LR		LR	01 39 02.4	
KDAK	Kodiak Island comp=Z,56nm,18.8s,baz=121,slow=35	80.46	329	LR		LR	02 03 05.9	
TORD	Torodi Ar. Bea 0.4nm,0.8s,baz=283,slow=6.6,SNR=6.3 0.4nm,0.8s	82.01	77	P		P	01 28 47.7	-1.6

*AZER **06** 01:32:48.0, 38˚.42N×46˚.85E, h9km, ml2.6*
*TEH **06** 01:32:50.1, 38˚.38N×46˚.88E, h13km±24km, ML2.9, Presumed earthquake*

ISC 06 01:32:49.5±1.0, 38˚.39N±0˚.03×46˚.84E±0˚.02, h14km±8km, n34, σ1°49/59, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IHRS	Heris	0.18	113	Pg		Pb	01 32 53.9	-0.7
IHRS				Sg		Sg	01 32 56.9	+0.1
ITBZ	Tabriz	0.56	254	Pg		Pg	01 33 00.7	+0.1
ORD	Ordubad	0.85	310	P		Pb	01 33 05.9	-0.2
ORD				S		Sb	01 33 17.9	+0.4
ISRB	Sarab	0.86	130	Pg		Pb	01 33 06.0	-0.4
GRMI	Germi	0.93	63	Pg		Pb	01 33 07.0	-0.5
IMRD	Marand	0.95	290	Pg		Pn	01 33 09.0	+0.4
ISHB	Shabestar	0.96	264	Pg		Pn	01 33 09.6	+0.7
IAZR	Azarshahr	0.98	224	Pg		Pn	01 33 09.3	+0.2
IHSH	Hashtrud	1.13	163	Pg		Pb	01 33 10.8	-0.3
QRD	Qoradiz	1.14	19	P		Pb	01 33 10.3	-0.6
QRD				S		Sn	01 33 27.1	+0.6
LRK	Lerik	1.21	77	P		Pg	01 33 12.3	-0.4
LRK				S		Sn	01 33 29.0	+0.6
YRD	Yardimli	1.22	64	P		Pg	01 33 12.7	-0.3
YRD				S		Sn	01 33 29.6	+0.8
NAX	Nakhchivan	1.31	307	P		Pg	01 33 14.5	-0.2
NAX				S		Sg	01 33 33.5	+1.7
SBZ	Shahbuz	1.42	316	P		Pg	01 33 16.3	-0.5
SBZ				S		Sg	01 33 36.5	+1.2
BLQ	Beylaqan	1.45	23	P		Pg	01 33 16.8	-0.5
BLQ				S		Sg	01 33 37.6	+1.6
GLBA	Clilabad	1.48	54	P		Pg	01 33 17.6	-0.5
GLBA				S		Sg	01 33 40.1	+2.8
ASTR	Astara	1.54	83	P		Pg	01 33 19.0	-0.2
ASTR				S		Sg	01 33 39.9	+0.7
LKRN	Lenkeran, Azer	1.56	77	P		Pg	01 33 18.9	-0.5
LKRN				S		Sg	01 33 40.6	+1.0
AGDM	Agdam	1.73	7	P		Pg	01 33 21.8	-0.9
AGDM				S		Sg	01 33 47.2	+2.0
ZRD	Zardab	2.00	19	P		Pb	01 33 25.8	+0.1
ZRD				S		Sg	01 33 54.3	+0.5
HYR	Heyderabad	2.04	311	P		Pn	01 33 23.6	+0.1
HYR				S		Sg	01 33 55.1	0.0
ZNJK	Zanjan	2.26	139	Pn		Pb	01 33 28.8	-1.4
GANJ	Ganja	2.29	350	P		Pb	01 33 29.3	-1.3
GANJ				S		Sb	01 33 59.7	+0.9
GDB	GEDABAY	2.48	341	P		Pb	01 33 31.6	-2.2
GDB				S		Sb	01 34 03.8	-0.5
IML	Ismayilli	2.62	23	P		Pb	01 33 34.1	-2.1
IML				S		Sb	01 34 07.1	-1.2
QBL	Gabala	2.67	16	S		Sb	01 34 09.6	-0.2
PQL	Pirkuli	2.75	29	P		Pn	01 33 35.1	+1.7
PQL				S		Sb	01 34 12.1	-0.2
SEKA	Sheki	2.83	6	P		Pn	01 33 36.2	+1.9
SEKA				S		Sb	01 34 14.1	-0.4
ATGJ	Altiaghaj	2.96	33	P		Pn	01 33 37.4	+1.2
ATGJ				S		Sb	01 34 16.7	-1.4
XNQ	Khinaliq	2.96	19	P		Pn	01 33 38.2	+2.0
XNQ				S		Sb	01 34 16.6	-1.6
SIZA	Siyzn	3.12	30	P		Pn	01 33 41.0	+2.6
SIZA				S		Sb	01 34 19.3	-3.5
QUBA	Quba, Azerbaij	3.23	23	P		Pn	01 33 40.9	+1.1
QUBA				S		Sb	01 34 22.3	-3.5
ZKTA	Zakatala	3.25	357	P		Pn	01 33 41.7	+1.6
ZKTA				S		Sb	01 34 24.0	-2.4
QSAR	Qusar	3.31	19	P		Pn	01 33 42.4	+1.5
QSAR				S		Sb	01 34 23.6	-4.5

*IDC **06** 01:58:51.2±0.9, 37˚.93N×77˚.79E, h0km, mb3.7/11, mbtmp3.7/15, ML3.2/4, Error ellipse: s-maj=19.4km s-min=15.3km az=63.0*
*NNC **06** 01:59:01.1±3.1, 38˚.32N×77˚.46E, h7km±10km, mb4.3, mpv4.0, Error ellipse: s-maj=22.0km s-min=14.7km az=153.0*

ISC 06 01:58:51.4±0.6, 37˚.63N±0˚.04×77˚.73E±0˚.06, h10km, n41, σ2°35/50, mb3.8/10, 10C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNLY	HANLEY	4.94	168	eP		Pb	02 00 16.1	-2.3
HNLY				eS		Sb	02 01 17.1	-1.0
TSSA	Tissa	4.95	196	eP		Pb	02 00 17.1	-1.2
TSSA				eS		Sb	02 01 19.9	+2.0
TSSA				IAML			02 01 23.0	
	comp=E,77nm,0.1s							
TSSA				IAML			02 01 26.5	
	comp=E,124nm,0.3s							
TNSS	Tian-Shan	5.44	354	Pg		Pb	02 00 26.7	0.0
	comp=E,11nm,0.7s							
TNSS				Lg		Lg	02 01 34.1	
	comp=E,14nm,1.0s							
DHRM	DHARAMSHALA	5.49	193	eP		Pb	02 00 23.5	-4.0
DHRM				eS		Sb	02 01 30.0	-3.5
DHRM				IAML			02 01 36.3	
	comp=N,47nm,0.5s							
DHRM				IAML			02 01 36.5	
	comp=E,44nm,0.5s							
MDOK	Medeo	5.55	355	Pg		Pb	02 00 29.0	+0.5
	comp=E,24nm,0.7s							
MDOK				Lg		Lg	02 01 38.4	
	comp=E,76nm,0.7s							
KST	Kastek	5.58	347	Pg		Pb	02 00 27.7	-1.2
	comp=E,12nm,0.6s							
KST				Lg		Lg	02 01 36.2	
	comp=E,43nm,1.0s							
AAK	Ala-Archa	5.58	335	Pn		Pn	02 00 16.1	+1.5
	comp=E,1.3nm,0.3s,baz=158,slow=6.3,SNR=7.1							
AAK				Pg		Pb	02 00 29.2	+0.2
	comp=E,2.1nm,0.3s,baz=147,slow=12,SNR=11							
AAK				Lg		Lg	02 01 38.9	
	comp=E,2.8nm,0.3s,baz=105,slow=20,SNR=3.8 comp=E,3.2nm,0.4s							
AAK	Ala-Archa	5.58	335	⇑Pn		Pn	02 00 16.0	+1.3
	comp=E,1.2nm,0.5s							
AAK				⇓Pg		Pb	02 00 29.7	+0.7
	comp=E,13nm,0.8s							
AAK				⇑Lg		Lg	02 01 32.8	
	comp=E,26nm,0.7s							
UZB	Uzynbulak	5.60	10	Pg		Pb	02 00 29.6	+0.3
	comp=E,11nm,0.8s							
UZB				Lg		Lg	02 01 39.2	
	comp=E,48nm,0.6s							
KNDC	Almaty	5.62	354	⇑Pg		Pb	02 00 29.8	+0.3
	comp=E,42nm,0.6s							
KNDC				⇓Lg		Lg	02 01 34.2	
	comp=E,143nm,0.7s							
SHLS	Shalkode	5.68	13	Pg		Pb	02 00 34.8	+4.1
	comp=E,40nm,0.5s							
SHLS				Lg		Lg	02 01 47.9	
	comp=E,140nm,0.8s							
PDGK	Podgornoye	5.85	13	⇓Pn		Pn	02 00 20.6	+2.2
	comp=E,8.3nm,0.5s							
PDGK				⇑Pg		Pb	02 00 37.2	+3.6
	comp=E,15nm,0.6s							
PDGK				⇑Sn		Sn	02 01 21.9	-3.6
	comp=E,26nm,0.7s							
PDGK				⇓Lg		Lg	02 01 46.6	
	comp=E,66nm,0.8s							
KURS	Kuram	5.87	3	Pg		Pb	02 00 36.0	+2.2
	comp=E,30nm,0.9s							
KURS				Lg		Lg	02 01 50.0	
	comp=E,45nm,1.0s							
KPKS	Kokpek	5.88	7	Pg		Pb	02 00 35.1	+1.0
	comp=E,23nm,0.8s							
KPKS				Lg		Lg	02 01 48.6	
	comp=E,66nm,0.6s							
KTBS	Karatobe	6.13	353	Pg		Pb	02 00 40.6	+2.3
	comp=E,9.6nm,0.9s							
KTBS				Lg		Lg	02 01 58.1	
	comp=E,44nm,0.8s							
MRKS	Merke	6.17	327	Pg		Pb	02 00 41.2	+2.3
	comp=E,13nm,0.6s							
MRKS				Lg		Lg	02 01 59.1	
	comp=E,12nm,0.7s							
SGDS	Sogindy	6.28	339	Pg		Pb	02 00 43.0	+2.2
	comp=E,8.7nm,0.8s							
SGDS				Lg		Lg	02 02 02.1	
	comp=E,12nm,0.6s							
KUU	Kurty	6.35	351	Pg		Pb	02 00 44.3	+2.4
	comp=E,3.7nm,0.1s							
KUU				Lg		Lg	02 02 04.5	
	comp=E,14nm,0.2s							
ARXS	Arharly	6.58	1	Pg		Pb	02 00 47.5	+1.5
	comp=E,13nm,0.8s							
ARXS				Lg		Lg	02 02 09.9	
	comp=E,35nm,0.8s							
DJR	Jarkent	6.88	12	Pg		Pb	02 00 55.1	+4.1
	comp=E,7.4nm,0.6s							
DJR				Lg		Lg	02 02 23.1	
	comp=E,12nm,0.8s							
UTK	UTTARKASHI	6.91	175	eP		Pb	02 00 41.9	-10
UTK				eS		Sb	02 02 00.8	-13
UTK				IAML			02 02 05.0	
	comp=N,54nm,0.2s							
UTK				IAML			02 02 05.0	
	comp=E,86nm,0.1s							
IUG	luzhnay	7.44	310	Pg		Pn	02 00 41.8	+1.7
	comp=E,30nm,0.5s							
IUG				P		Pb	02 01 05.0	+4.3
	comp=E,11nm,0.5s							
IUG				Lg		Lg	02 02 02.7	
	comp=E,62nm,0.8s							
KK31	Karatay Array	7.76	317	⇑Pn		Pn	02 00 45.3	+0.9
	comp=E,0.3nm,0.3s,baz=126,slow=12,SNR=14							
KK31				⇑Pg		Pb	02 01 09.3	+3.3
	comp=E,3.1nm,0.7s,baz=124,slow=18,SNR=3.7							
KK31				⇑Sn		Sn	02 02 06.1	-6.3
	comp=E,1.9nm,0.5s							
KK31				⇑Lg		Lg	02 02 43.3	
	comp=E,9.0nm,0.8s,baz=120,slow=28							
BRLS	Borolday	8.09	314	Pg		Pn	02 00 50.4	+1.5
	comp=E,1.5nm,0.1s							
BRLS				Lg		Lg	02 02 18.2	
	comp=E,0.4nm,0.2s							
MAKZ	Makanchi	9.70	18	⇑P		Pn	02 01 08.9	-2.1
	comp=E,1.8nm,0.6s							
MAKZ				⇓S			02 01 23.4	
	comp=E,3.8nm,0.2s							
MK31	Makanchi Array	9.76	19	⇓P		Pn	02 01 09.6	-2.3
	comp=E,0.2nm,0.2s,baz=300,slow=16,SNR=44							
MK31				⇓S			02 01 28.5	
	comp=E,0.6nm,0.2s,baz=309,slow=28,SNR=4.6							
MKAR	Makanchi Array	9.76	19	Pn		Pn	02 01 09.6	-2.3
	comp=E,1.1nm,0.3s,baz=193,slow=12,SNR=39							
MKAR				Sn		Sn	02 02 52.5	-9.0
	comp=E,0.6nm,0.3s,baz=191,slow=24,SNR=3.0 comp=E,1.9nm,0.3s							
KURBB	Kurchatov Arra	13.01	2	Pn		Pn	02 01 52.5	-3.6
	baz=187,slow=12,SNR=9.4							
KURBB				Lg		Lg	02 05 34.2	
	baz=182,slow=30,SNR=5.4 comp=E,0.8nm,0.7s							
BVAR	Borovoye Array	16.23	344	Pn		P	02 02 43.0	+0.5
	comp=E,0.1nm,0.3s,baz=145,slow=9.0,SNR=18							
BVAR				Lg		Lg	02 07 13.3	
	baz=169,slow=30,SNR=2.5							
ZALV	Zalesovo Beam	17.04	14	Pn		Pn	02 02 49.0	-0.6
	comp=E,0.3nm,0.3s,baz=209,slow=12,SNR=6.5 comp=E,1.3nm,0.4s							
SONM	Songino Array	23.28	55	P		P	02 03 58.8	-0.4
	comp=E,1.7nm,0.6s,baz=253,slow=10,SNR=11 comp=E,1.7nm,0.6s							
CMAR	Chiang Mai Arr	26.64	130	P		P	02 04 33.5	+3.2
	comp=E,0.5nm,0.4s,baz=326,slow=9.6,SNR=1.8 comp=E,0.5nm,0.4s							
BRTR	Keskin Array B	34.23	287	P		P	02 05 38.5	+1.1
	comp=E,0.3nm,0.8s,baz=91,slow=7.0,SNR=2.6 comp=E,0.3nm,0.8s							
ARCES	ARCESS Array B	42.26	336	P		P	02 06 44.2	-0.3
	comp=E,2.6nm,0.9s,baz=98,slow=8.7,SNR=5.7 comp=E,2.6nm,0.9s							
HFS	Hagfors	45.55	321	P		P	02 07 10.6	-0.4
	comp=E,3.1nm,0.8s,baz=76,slow=6.1,SNR=1.7 comp=E,3.1nm,0.8s							
GERES	GERESS Array B	46.68	305	P		P	02 07 20.4	+0.3
	comp=E,0.6nm,0.6s,baz=69,slow=7.3,SNR=7.2 comp=E,0.6nm,0.6s							
NOA	NORSAR Array B	46.76	322	P		P	02 07 20.7	+0.1
	comp=E,0.5nm,0.6s,baz=89,slow=7.8,SNR=1.5 comp=E,0.5nm,0.6s							
TORD	Torodi Ar. Bea	71.09	272	P		P	02 10 11.2	+1.0
	comp=E,0.3nm,0.4s,baz=49,slow=5.6,SNR=9.0 comp=E,0.3nm,0.4s							
ILAR	Eielson Array	72.12	18	P		P	02 10 14.6	-1.0
	comp=E,0.4nm,0.9s,baz=339,slow=6.1,SNR=2.5 comp=E,0.4nm,0.9s							
WRA	Warramunga Arr	78.17	127	P		P	02 10 52.9	+1.8
	comp=E,0.3nm,0.7s,baz=329,slow=5.6,SNR=1.5 comp=E,0.3nm,0.7s							
YKA	Yellowknife Ar	79.73	6	P		P	02 10 58.5	-0.6
	comp=E,0.6nm,0.4s,baz=346,slow=5.7,SNR=5.7 comp=E,0.6nm,0.4s							

*IDC **06** 02:07:56.3±0.6, 23˚.88S×69˚.55E, h0km, mb4.0/16, mbtmp4.0/16, MS3.6/19, Error ellipse: s-maj=25.9km s-min=16.5km az=70.0*
*NEIC **06** 02:07:58.6±1.9, 23˚.8S±0˚.1×69˚.5E±0˚.1, h10km±1km, mb4.5/11, Error ellipse: s-maj=28.1km s-min=8.8km az=221.0*

ISC 06 02:07:58.0±0.5, 23˚.9S±0˚.1×69˚.6E±0˚.2, h10km, n71, σ0°64/47, mb4.4/27, MS3.6/19, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H08S1	Diego Garcia H	16.36	10	T		T	02 28 34.4	
	baz=190,slow=76,SNR=221							
H08S2	Diego Garcia H	16.36	10	T		T	02 28 34.4	
	baz=190,slow=76,SNR=162							
H08S3	Diego Garcia H	16.38	10	T		T	02 28 35.5	
	baz=190,slow=76,SNR=192							
H04N2	CROZET ISLANDS	26.47	208	T		T	02 41 31.2	
	baz=41,slow=74,SNR=300							
H04N1	CROZET ISLANDS	26.48	208	T		T	02 41 30.9	
	baz=41,slow=74,SNR=383							
H04N3	CROZET ISLANDS	26.49	208	T		T	02 41 30.7	
	baz=41,slow=74,SNR=309							
PALK	Pallekele	32.80	21	LR		LR	02 24 11.9	
	comp=Z,144nm,20.9s,baz=199,slow=30							
MATP	Matopo	38.09	267	LR		LR	02 29 33.2	
	comp=Z,90nm,21.9s,baz=174,slow=34							
LSZ	Lusaka	39.78	275	LR		LR	02 30 46.7	
	comp=Z,134nm,18.1s,baz=140,slow=34							
LBTB	Lobatse	39.91	259	LR		LR	02

comp=Z,1.3nm,0.7s,baz=205,slow=8.9,SNR=4.1
comp=Z,1.3nm,0.7s
BR131 Keskin Array S 71.59 332 P **P** **02 19 19.3 -0.3**
BR131 IAmb IAmb 02 19 20.9
comp=Z,2.2nm,0.9s
BRTR Keskin Array B 71.59 332 P **P** **02 19 20.1 +0.5**
comp=Z,1.2nm,0.9s,baz=172,slow=7.1,SNR=7.0
comp=Z,1.2nm,0.9s
BRTR Keskin Array B 71.59 332 P **P** **02 19 19.4 -0.2**
IDI Anoyia 72.46 323 P **P** **02 19 23.3 -1.5**
AB31 Akbulak array 73.28 353 P **P** **02 19 28.5 -0.8**
AB31 IAmb IAmb 02 19 30.4
comp=Z,4.5nm,1.1s
ABKAR Akbulak array 73.28 353 P **P** **02 19 29.1 -0.2**
KURBB Kurchatov Arra 74.57 6 P **P** **02 19 37.0 +0.2**
comp=Z,1.1nm,0.9s,baz=200,slow=6.4,SNR=8.5
comp=Z,1.1nm,0.9s
KURK Kurchatov 74.67 6 P **P** **02 19 37.8 +0.4**
PMG Port Moresby 74.98 94 LR LR 02 49 05.8
comp=Z,29nm,21.2s,baz=154,slow=33
TORD Torodi Ar. Bea 75.80 291 P **P** **02 19 45.2 +0.5**
comp=Z,0.4nm,0.9s,baz=104,slow=6.1,SNR=1.7
comp=Z,0.4nm,0.9s
BVAR Borovoye Array 76.56 1 P **P** **02 19 48.5 +0.3**
comp=Z,1.3nm,0.9s,baz=188,slow=8.7,SNR=3.0
comp=Z,1.3nm,0.9s
ZAA0 Zalesovo Array 78.60 9 P **P** **02 19 59.3 -0.2**
ZAA0 IAmb IAmb 02 20 09.4
comp=Z,3.4nm,0.4s
ZALV Zalesovo Beam 78.60 9 P **P** **02 19 59.4 -0.2**
comp=Z,0.6nm,0.4s,baz=202,slow=7.4,SNR=4.4
ZALV LR LR 02 54 08.7
comp=Z,20nm,19.8s,baz=152,slow=35
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 78.60 9 P **P** **02 19 59.2 -0.3**
SONM Songino Array 78.67 24 P **P** **02 20 00.3 +0.1**
comp=Z,0.4nm,0.5s,baz=240,slow=5.0,SNR=4.9
comp=Z,0.4nm,0.5s
SONM Songino Array 78.67 24 P **P** **02 19 60.0 -0.3**
SONM IAmb IAmb 02 20 08.2
comp=Z,3.7nm,1.3s
TLY Talaya 80.94 21 LR LR 02 55 14.2
comp=Z,27nm,19.0s,baz=192,slow=35
AKASG Malin Array Be 82.33 335 P **P** **02 20 19.4 -0.2**
comp=Z,1.8nm,0.8s,baz=131,slow=4.3,SNR=5.9
comp=Z,1.8nm,0.8s
OBN Obninsk 83.56 342 LR LR 02 57 57.8
RONA Rosalia, Austr 85.79 327 *e*P **P** **02 20 36.4 -1.1**
comp=Z,3.2nm,1.1s
SESA Seetaler Alpe, 86.27 326 *e*P **P** **02 20 40.5 +0.5**
comp=Z,4.6nm,0.7s
MOA Molln 86.91 326 *i* P **P** **02 20 44.1 +1.2**
comp=Z,6.2nm,1.3s
BIOA Bad Ischl, Aus 87.13 326 *i* P **P** **02 20 46.1 +2.1**
comp=Z,3.1nm,1.0s
GERES GERESS Array B 87.85 327 P **P** **02 20 47.1 -0.4**
comp=Z,1.0nm,1.0s,baz=153,slow=6.6,SNR=5.3
comp=Z,1.0nm,1.0s
SQTA Sankt Quirin 88.09 325 *e*P **P** **02 20 48.9 +0.1**
comp=Z,2.1nm,0.7s
FETA Feichten 88.23 324 *i* P **P** **02 20 50.0 +0.5**
comp=Z,2.6nm,1.1s
MOTA Moosalm 88.23 325 *i* P **P** **02 20 49.6 +0.1**
comp=Z,3.4nm,1.1s
MJAR Matsushiro Arr 88.28 49 LR LR 02 58 19.8
comp=Z,15nm,21.4s,baz=212,slow=34
DAVA Damuels 88.85 324 *i* P **P** **02 20 52.9 +0.5**
comp=Z,5.4nm,0.7s
NRIK Noril'sk 93.84 6 LR LR 03 02 14.9
comp=Z,41nm,20.1s,baz=176,slow=35
DELO Deloro Mine 146.24 316 PKPdf **PKPdf** **02 27 37.9 +0.2**
L56A Greenwood 147.21 312 PKPbc **PKPbc** **02 27 42.1 +0.4**
FFC Flin Flon 148.53 351 PKPbc **PKPbc** **02 27 45.1 +0.4**
ULM Lac du Bonnet 151.31 340 PKPbc **PKPbc** **02 27 51.1 -0.6**
comp=Z,2.7nm,0.6s,baz=12,slow=4.1,SNR=6.4
P52A Corning 151.40 310 PKPbc **PKPbc** **02 27 52.5 +0.3**

IDC 06 03:11:34.8±2.1, 3°46'N×126°46'E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=130.0km s-min=26.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.44**	**182**	P	P	03 16 25.4	+0.7
	4.0nm,0.9s,baz=0.0,slow=10,SNR=1.7 4.0nm,0.9s						
WRA	**Warramunga Arr**	**24.51**	**162**	P	P	03 16 55.7	-0.4
	0.9nm,0.8s,baz=340,slow=11,SNR=6.5 0.9nm,0.8s						
ASAR	**Alice Springs**	**27.92**	**165**	P	P	03 17 27.3	+0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=1.7 0.2nm,0.3s						
MKAR	**Makanchi Array**	**57.62**	**325**	P	P	03 21 26.5	-0.3
	0.3nm,0.4s,baz=122,slow=8.0,SNR=4.6 0.3nm,0.4s						

*IDC **06** 03:22:51.3±2.6, 20°.34S×178°.26W, h514km±25km, mb3.1/8, mbtmp4.1/10, Error ellipse: s-maj=60.0km s-min=15.2km az=149.0*
*NEIC **06** 03:22:51.1±1.7, 20°.5S±0°.2×178°.11W±0°.09, h514km±9km, mb4.1/13, Error ellipse: s-maj=27.5km s-min=6.7km az=156.0*
ISC 06 03:22:49.8±0.7, 20°.5S±0°.2×178°.2W±0°.1, h500km, n39, σ1=9°03'/37, mb3.9/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.92**	**44**	P	P	**03 24 57.0**	**+1.1**
	41nm,0.7s,baz=237,slow=17,SNR=4.1						
AFI	**Afiamalu**	**8.92**	**44**	P	P	03 24 56.7	+0.8
MARNC	**Mare, Loyalty**	**12.94**	**263**	P	P	03 25 40.2	+1.9
DZM	**Mont Dzumac**	**14.44**	**261**	P	P	03 25 54.9	+0.6
	7.2nm,0.7s,baz=90,slow=14,SNR=3.1						
TOZ	**Tahuroa Road**	**18.08**	**196**	P	P	03 26 31.5	+0.8
HIZ	**Hauiti**	**18.98**	**197**	P	P	03 26 40.6	+1.6
TCW	**Tory Channel**	**21.67**	**196**	P	P	03 27 02.9	-0.5
EIDS	**Eidsvold**	**28.71**	**254**	P	P	03 28 06.3	+0.3
CTA	**Charters Tower**	**33.34**	**264**	P	P	03 28 46.2	+0.3
	1.5nm,0.4s,baz=79,slow=5.2,SNR=1.3 1.5nm,0.4s						
CTAO	**Charters Tower**	**33.34**	**264**	P	P	03 28 46.6	+0.7
CTAO				IAmb	IAmb	03 28 54.4	
	comp=Z,6.2nm,1.1s						
STKA	**Stephens Creek**	**37.67**	**244**	P	P	03 29 21.9	+0.1
	comp=Z,1.2nm,0.6s,baz=76,slow=10,SNR=4.5 comp=Z,1.2nm,0.6s						
BBOO	**Buckleboo**	**42.43**	**243**	P	P	03 29 59.5	-0.6
WR8	**Warramunga Arr**	**44.30**	**262**	P	P	03 30 14.8	-0.1
WR8				IAmb	IAmb	03 30 22.8	
	comp=Z,4.9nm,1.1s						
ASAR	**Alice Springs**	**44.38**	**257**	P	P	03 30 15.6	+0.1
	comp=Z,1.8nm,0.5s,baz=96,slow=8.0,SNR=19						
ASAR				PcP	**PcP**	03 31 47.9	-0.9
	comp=Z,0.4nm,0.6s,baz=106,slow=4.2,SNR=4.5 comp=Z,1.8nm,0.5s						
WB0	**Warramunga Arr**	**44.43**	**262**	P	P	03 30 15.0	-0.9
WB0				IAmb	IAmb	03 30 29.1	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**44.45**	**262**	P	P	03 30 15.7	-0.4
	comp=Z,0.6nm,0.3s,baz=97,slow=7.4,SNR=25 comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.45**	**262**	P	P	03 30 15.4	-0.6
ADK	**Adak**	**72.03**	**1**	P	P	03 33 22.0	-0.2
PETK	**Petropavlovsk-**	**76.19**	**345**	P	P	03 33 45.6	-0.2
	comp=Z,2.0nm,0.6s,baz=158,slow=5.4,SNR=3.6 comp=Z,2.0nm,0.6s						
PETK	**Petropavlovsk-**	**76.19**	**345**	P	P	03 33 47.3	+1.5
N14K	**Kuskokwak Cree**	**81.21**	**8**	P	P	03 34 13.3	+0.9
N14K				IAmb	IAmb	03 34 24.8	
	comp=Z,15nm,1.0s						
O16K	**Kokwok River B**	**81.43**	**10**	P	P	03 34 13.3	-0.3
N15K	**Kwethluk River**	**81.67**	**9**	P	P	03 34 15.6	+0.7
N15K				IAmb	IAmb	03 34 32.1	
	comp=Z,4.8nm,1.1s						
TXAR	**Lajitas Array**	**87.16**	**57**	P	P	03 34 44.2	+1.6
	comp=Z,0.2nm,0.6s,baz=226,slow=8.6,SNR=3.5 comp=Z,0.2nm,0.6s						
WRH	**Wood River Hil**	**87.79**	**13**	P	P	03 34 44.5	-0.1
WRH				IAmb	IAmb	03 34 45.7	
	comp=Z,3.1nm,1.1s						
CCB	**Clear Creek Bu**	**88.00**	**13**	P	P	03 34 45.1	-0.5
CCB				IAmb	IAmb	03 34 45.9	
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**88.30**	**13**	P	P	03 34 46.6	-0.4
	comp=Z,0.7nm,0.5s,baz=215,slow=5.5,SNR=17 comp=Z,0.7nm,0.5s						
ILAR	**Eielson Array**	**88.30**	**13**	P	P	**03 34 47.0**	**0.0**
PDAR	**Pinedale Array**	**89.03**	**43**	P	P	**03 34 50.8**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=206,slow=3.5,SNR=4.3 comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**118.94**	**320**	PKP	**PKPdf**	**03 40 39.6**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=156,slow=2.5,SNR=2.9						
HFS	**Hagfors**	**139.47**	**351**	PKhKP	PKPpre	03 41 10.4	
	comp=Z,1.8nm,0.7s,baz=35,slow=5.3,SNR=5.7						
AKASG	**Malin Array Be**	**142.90**	**331**	PKhKP	PKPpre	03 41 22.2	
	comp=Z,3.0nm,0.5s,baz=45,slow=4.3,SNR=24						
AKBB	**Malin Array Si**	**142.90**	**331**		PKPpre	03 41 21.9	
KIEV	**Kiev**	**142.91**	**331**		**PKPdf**	**03 41 22.5**	**-3.4**
BRTR	**Keskin Array B**	**146.69**	**312**	PKPbc	**PKPbc**	**03 41 34.6**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=108,slow=3.2,SNR=6.4						
BRTR	**Keskin Array B**	**146.69**	**312**		**PKPbc**	**03 41 34.2**	**-1.3**
MMAI	**Mount Meron Ar**	**147.66**	**300**	PKPbc	**PKPbc**	**03 41 37.3**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=132,slow=6.0,SNR=3.5						
CLL	**Collm**	**147.98**	**347**	*i* PKPbc	**PKPbc**	**03 41 37.8**	**-0.5**
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**150.11**	**344**	PKPbc	**PKPbc**	**03 41 43.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=360,slow=3.4,SNR=5.6						

*IDC **06** 03:28:36.4±1.0, 52°.25S×118°.67W, h0km, mb3.8/6, mbtmp3.8/6, MS3.6/16, Error ellipse: s-maj=46.1km s-min=27.5km az=149.0*
ISC 06 03:28:38.0±0.9, 52°.2S±0°.2×118°.6W±0°.2, h10km, n37, σ1=24°/8, mb3.8/6, MS3.7/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**33.82**	**73**	T	T	04 10 58.7	
	baz=222,slow=73,SNR=156						
H03S1	**Juan Fernandez**	**33.83**	**73**	T	T	04 10 59.9	
	baz=222,slow=73,SNR=172						
H03S3	**Juan Fernandez**	**33.84**	**73**	T	T	04 11 01.9	
	baz=222,slow=73,SNR=268						
H03N3	**Juan Fernandez**	**34.09**	**72**	T	T	04 11 16.5	
	baz=224,slow=72,SNR=358						
H03N2	**Juan Fernandez**	**34.10**	**72**	T	T	04 11 16.4	
	baz=224,slow=72,SNR=602						
H03N1	**Juan Fernandez**	**34.11**	**72**	T	T	04 11 15.4	
	baz=224,slow=72,SNR=324						
PLCA	**Paso Flores**	**34.44**	**90**	LR	LR	03 46 14.0	
	comp=Z,53nm,19.0s,baz=204,slow=31						
QSPA	**South Pole Qui**	**37.95**	**180**	P	P	**03 35 56.4**	**+0.9**
	1.7nm,1.5s,baz=108,slow=5.6,SNR=2.4 1.7nm,1.0s						
PPT	**Papeete**	**42.30**	**313**	LR	LR	03 48 38.0	
	comp=Z,37nm,20.3s,baz=143,slow=28						
URZ	**Urewera**	**45.85**	**261**	LR	LR	03 52 33.3	
	comp=Z,76nm,18.5s,baz=194,slow=31						
RPZ	**Rata Peaks**	**46.11**	**251**	LR	LR	03 52 27.8	
	comp=Z,11nm,19.7s,baz=214,slow=31						
CPUP	**Villa Florida**	**52.20**	**85**	P	P	**03 37 47.9**	**-1.0**
	1.0nm,0.7s,baz=223,slow=9.0,SNR=3.3						
CPUP				LR	LR	03 56 45.5	
	comp=Z,121nm,18.8s,baz=255,slow=32 1.0nm,0.7s						
LPAZ	**La Paz**	**53.46**	**67**	P	P	**03 37 59.6**	**+0.6**
	1.5nm,0.9s,baz=212,slow=10.0,SNR=4.2						
LPAZ				LR	LR	03 55 07.2	
	comp=Z,68nm,21.5s,baz=194,slow=30 1.5nm,0.9s						
ATAH	**Atahualpa**	**55.73**	**51**	LR	LR	03 56 32.4	
	comp=Z,62nm,18.1s,baz=198,slow=30						
BDFB	**Brasilia**	**65.93**	**85**	LR	LR	04 04 13.9	
	comp=Z,87nm,21.8s,baz=151,slow=32						
ROSC	**El Rosal**	**68.14**	**49**	LR	LR	04 05 00.4	
	comp=Z,64nm,18.5s,baz=86,slow=32						
JTS	**Las Juntas de**	**68.68**	**36**	LR	LR	04 02 27.5	
	comp=Z,58nm,21.4s,baz=146,slow=30						
STKA	**Stephens Creek**	**70.99**	**242**	LR	LR	04 04 45.9	
	comp=Z,77nm,20.2s,baz=206,slow=31						
CMIG	**Matias Romero**	**72.07**	**24**	LR	LR	04 04 29.1	
	comp=Z,26nm,19.3s,baz=145,slow=30						
SDV	**Santo Domingo**	**73.41**	**50**	LR	LR	04 07 41.2	
	comp=Z,31nm,20.4s,baz=146,slow=32						
MDP	**Montagnes des**	**79.66**	**68**	LR	LR	04 09 57.0	
	comp=Z,42nm,21.8s,baz=154,slow=31						
ASAR	**Alice Springs**	**81.63**	**242**	P	P	**03 40 54.4**	**-1.9**
	0.2nm,0.3s,baz=156,slow=4.8,SNR=3.3 0.2nm,0.3s						
H01W1	**Cape Leeuwin H**	**81.75**	**221**	T	T	05 11 26.9	
	baz=150,slow=75,SNR=9.6						
H01W2	**Cape Leeuwin H**	**81.76**	**221**	T	T	05 11 26.4	
	baz=150,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**81.77**	**221**	T	T	05 11 26.9	
	baz=150,slow=75,SNR=25						
SJG	**San Juan**	**83.54**	**49**	LR	LR	04 14 27.3	
	comp=Z,20nm,19.7s,baz=106,slow=33						
WRA	**Warramunga Arr**	**84.37**	**245**	P	P	**03 41 11.2**	**+0.6**
	0.9nm,0.9s,baz=141,slow=5.3,SNR=3.9 0.9nm,0.9s						
NVAR	**Mina Array Bea**	**90.30**	**0**	LR	LR	04 12 34.0	
	comp=Z,48nm,21.9s,baz=298,slow=29						
PDAR	**Pinedale Array**	**94.96**	**7**	P	P	**03 42 01.1**	**+0.9**
	0.1nm,0.3s,baz=169,slow=2.1,SNR=1.6 0.1nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**95.41**	**293**	T	T	05 28 30.5	
	baz=143,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**95.42**	**293**	T	T	05 28 31.5	
	baz=143,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**95.42**	**293**	T	T	05 28 33.1	
	baz=143,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**96.27**	**294**	T	T	05 29 37.9	
	baz=144,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**96.28**	**294**	T	T	05 29 36.4	
	baz=144,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**96.29**	**294**	T	T	05 29 39.2	
	baz=144,slow=76,SNR=10						
GERES	**GERESS Array B**	**149.95**	**77**	PKPbc	**PKPbc**	**03 48 26.9**	**-0.9**
	0.3nm,0.7s,baz=231,slow=3.1,SNR=4.4						
SONM	**Songino Array**	**151.11**	**279**	PKPbc	**PKiKP**	**03 48 31.0**	**-0.1**
	0.5nm,0.5s,baz=187,slow=3.0,SNR=3.8						

*IDC **06** 03:32:20.7±1.5, 5°.87N×123°.72E, h0km, mb3.5/3, mbtmp3.6/4, ML4.3/1, Error ellipse: s-maj=52.5km s-min=29.3km az=100.0*
*MAN **06** 03:32:36.0, 5°.93N×125°.33E, h93km, MS3.2*
ISC 06 03:32:35.6±1.0, 5°.9N±0°.1×125°.3E±0°.2, h100km, n8, σ1=05°/12, mb3.3/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.39**	**308**	*i* P	**Pn**	**03 32 51.2**	**+0.4**
GSPH				*i* S	**Sn**	**03 33 02.5**	**+0.2**
KCP	**Kidapawan**	**1.17**	**352**	*i* P	**Pn**	**03 32 58.6**	**+0.5**
DAV	**Davao City (W)**	**1.25**	**15**	Pn	**Pn**	**03 32 59.7**	**+0.7**
	87nm,0.3s,baz=240,slow=20,SNR=2.0						
DAV				Sn	**Sn**	**03 33 18.0**	**+1.4**
	153nm,0.3s,baz=307,slow=20,SNR=10 221nm,0.3s						
BIPH	**Bislig**	**2.57**	**25**	*e*P	**Pn**	**03 33 16.1**	**+0.5**
BIPH				*e*S	**Sn**	**03 33 45.0**	**-1.3**
WRA	**Warramunga Arr**	**27.14**	**161**	P	**P**	**03 38 09.8**	**+0.2**
	0.4nm,0.8s,baz=331,slow=11,SNR=1.6 0.4nm,0.8s						
ASAR	**Alice Springs**	**30.52**	**164**	P	**P**	**03 38 40.5**	**+0.9**
	0.3nm,0.5s,baz=342,slow=8.8,SNR=4.5						
ASAR				PcP	**PcP**	**03 41 36.5**	**+0.1**
	0.4nm,0.4s,baz=335,slow=2.4,SNR=4.2 0.3nm,0.5s						
ILAR	**Eielson Array**	**83.83**	**26**	P	**P**	**03 44 53.4**	**-0.5**
	0.3nm,0.6s,baz=255,slow=4.8,SNR=4.3 0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**120.86**	**289**	PKP	**PKPdf**	**03 51 15.3**	**-2.0**
	0.3nm,0.6s,baz=73,slow=2.8,SNR=2.0						

*IDC **06** 03:33:50.2±1.1, 28°.37N×100°.83E, h0km, mb3.8/7, mbtmp3.7/9, ML4.3/1, MS3.4/8, Error ellipse: s-maj=43.8km s-min=17.3km az=74.0*
*NEIC **06** 03:33:50.1±1.9, 28°.2N±0°.1×100°.9E±0°.1, h10km±2km, mb4.2/8, Error ellipse: s-maj=22.0km s-min=9.8km az=139.0*
ISC 06 03:33:50.9±0.7, 28°.37N±0°.09×100°.82E±0°.07, h10km, n27, σ1=29°/25, mb3.9/10, MS3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.60**	**45**	Pn	**Pb**	**03 34 56.0**	**+1.3**
CD2				Pg	**Pg**	**03 34 59.4**	**-0.5**
CD2				Sg	**Sg**	**03 35 48.0**	**+1.4**
CD2					smax	smax	
	comp=N,250nm,1.0s						
CD2					smax	smax	
	comp=E,330nm,1.2s						
ENH	**Enshi**	**7.80**	**74**	Pn	**Pn**	**03 35 43.4**	**-1.2**
SHL	**Shillong**	**8.44**	**253**	Pn	**Pn**	**03 35 52.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**10.01**	**190**	Pn	**Pn**	**03 36 16.2**	**+1.4**
	comp=E,0.7nm,0.3s,baz=18,slow=11,SNR=1.8						
CMAR				Pg		03 36 54.6	
	comp=E,0.1nm,0.3s,baz=6.8,slow=17,SNR=9.0						
CMAR				Lg	Lg	03 39 08.9	
	comp=E,0.6nm,0.3s,baz=343,slow=27,SNR=1.6						
CMAR				LR	LR	03 40 22.0	
	comp=E,126nm,19.4s,baz=0.0,slow=39 comp=E,0.6nm,0.3s						
EVN	**Everest**	**12.36**	**271**	Pn	**Pn**	**03 36 46.8**	**-0.8**
SONM	**Songino Array**	**19.92**	**11**	Pn	**Pn**	**03 38 24.9**	**+0.5**
	comp=E,0.4nm,0.3s,baz=195,slow=10,SNR=3.7						
ULN	**Ulaanbaatar**	**20.06**	**12**	P	**P**	**03 38 23.2**	**-1.2**
WUS	**Wushi**	**21.81**	**312**	P	**P**	**03 38 43.2**	**-0.1**
WUS				IAmb	IAmb	03 38 45.3	
	comp=Z,14nm,1.2s						
MKAR	**Makanchi Array**	**23.43**	**327**	P	**P**	**03 39 01.8**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=135,slow=10,SNR=8.4						
MKAR				LR	LR	03 49 10.7	
	comp=Z,38nm,19.8s,baz=148,slow=39 comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**23.43**	**327**	P	**P**	**03 39 01.3**	**+1.1**
NIL	**Nilore**	**24.17**	**289**	P	**P**	**03 39 05.8**	**-1.7**
NIL				IAmb	IAmb	03 39 32.8	
	comp=Z,5.6nm,0.8s						
KS19	**Wonju Array Si**	**24.39**	**61**	P	**P**	**03 39 06.2**	**-3.2**
KSRS	**Korea Array**	**24.43**	**61**	LR	LR	03 48 19.3	
	comp=Z,47nm,21.7s,baz=275,slow=36						
BOOM	**Boomskoye usch**	**24.58**	**312**	P	**P**	**03 39 12.1**	**+0.9**
AAK	**Ala-Archa**	**25.60**	**311**	LR	LR	03 51 02.8	
	comp=Z,68nm,18.8s,baz=155,slow=40						
AAK	**Ala-Archa**	**25.60**	**311**	P	**P**	**03 39 21.7**	**+1.2**
AAK				IAmb	IAmb	03 39 34.1	
	comp=Z,7.2nm,1.1s						
KURBB	**Kurchatov Arra**	**27.90**	**329**	P	**P**	**03 39 42.2**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=143,slow=9.1,SNR=10 comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**27.93**	**329**	P	**P**	**03 39 41.4**	**+0.2**
KURK				IAmb	IAmb	03 39 42.9	
	comp=Z,4.9nm,1.1s						
ZALV	**Zalesovo Beam**	**28.12**	**340**	P	**P**	**03 39 44.5**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=145,slow=11,SNR=4.1 comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**28.12**	**340**	P	**P**	**03 39 43.0**	**+0.2**
CHGR	**Chuyangaron**	**28.20**	**300**	P	**P**	**03 39 45.3**	**+1.4**
PALK	**Pallekele**	**28.31**	**226**	LR	LR	03 52 59.0	
	comp=Z,108nm,19.6s,baz=174,slow=41						
BVAR	**Borovoye Array**	**33.32**	**326**	P	**P**	**03 40 29.4**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=111,slow=7.9,SNR=2.1 comp=Z,0.6nm,0.4s						
AKASG	**Malin Array Be**	**57.20**	**314**	P	**P**	**03 43 37.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=80,slow=6.2,SNR=2.4						
AKASG				LR	LR	04 09 22.8	
	comp=Z,34nm,20.1s,baz=171,slow=37 comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**57.93**	**142**	P	**P**	**03 43 44.2**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=323,slow=7.1,SNR=9.2 comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**91.68**	**286**	P	**P**	**03 46 58.9**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=95,slow=2.9,SNR=1.8						
TORD				LR	LR	04 33 52.2	
	comp=Z,123nm,19.1s,baz=150,slow=39 comp=Z,0.4nm,0.9s						
SCHQ	**Schefferville**	**96.46**	**353**	LR	LR	04 34 07.9	
	comp=Z,31nm,18.0s,baz=229,slow=38						

*IDC **06** 04:10:56.6±1.7, 7°.25S×127°.81E, h0km, mb4.0/4, mbtmp4.0/6, ML4.1/2, MS3.2/2, Error ellipse: s-maj=257.4km s-min=28.7km az=65.0*
ISC 06 04:11:00.2±2.3, 6°.6S±0°.7×13°0E±°, h35km, n8, σ0°39/6, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.05**	**161**	Pn	**Pn**	**04 14 17.1**	**+0.2**
	1.2nm,0.3s,baz=328,slow=13,SNR=19						
WRA				Sn	Sn	04 16 40.0	-12
	2.3nm,0.3s,baz=328,slow=22,SNR=10 3.2nm,0.9s						
ASAR	**Alice Springs**	**17.47**	**167**	P	**Pn**	**04 15 00.8**	**-0.5**
	0.5nm,0.3s,baz=337,slow=11,SNR=21						
ASAR				S	Sn	04 17 58.5	-16
	1.1nm,0.5s,baz=326,slow=18,SNR=7.2 2.1nm,0.6s						
JOW	**Kunigami**	**33.26**	**358**	LR	LR	04 33 47.7	
	comp=Z,30nm,19.6s,baz=112,slow=40						
MKAR	**Makanchi Array**	**67.66**	**327**	P	**P**	**04 21 53.9**	**+0.2**
	0.4nm,0.5s,baz=116,slow=8.2,SNR=4.9 0.4nm,0.5s						
SHEM	**Shemya Is, Ala**	**70.13**	**27**	LR	LR	04 48 51.3	
	comp=Z,25nm,21.1s,baz=164,slow=32						
ZALV	**Zalesovo Beam**	**71.04**	**334**	P	**P**	**04 22 14.1**	**-0.4**
	2.3nm,1.0s,baz=126,slow=7.4,SNR=4.9 2.3nm,1.0s						
KURBB	**Kurchatov Arra**	**71.94**	**329**	P	**P**	**04 22 20.0**	**0.0**
	1.7nm,0.5s,baz=138,slow=5.2,SNR=7.7 1.7nm,0.5s						
BVAR	**Borovoye Array**	**77.50**	**328**	P	**P**	**04 22 52.1**	**-0.1**
	0.8nm,0.7s,baz=122,slow=5.4,SNR=4.4 0.8nm,0.7s						

*NEIC **06** 04:15:27.0±0.7, 19°.7S±0°.2×170°.2E±0°.2, h226km±10km, mb4.1/8, Error ellipse: s-maj=36.5km s-min=7.2km az=140.0*
*IDC **06** 04:15:38.9±7.9, 20°.02S×169°.05E, h256km±33km, mb3.7/3, mbtmp4.3/3, Error ellipse: s-maj=101.1km s-min=79.5km az=106.0*
*NOU **06** 04:16:02.0, 20°.93S×168°.12E, h0km, MLv3.7/8, Loyalty Islands*
ISC 06 04:15:31.8±1.7, 19°.84S±0°.10×169°.7E±0°.2, h250km, n23, σ1=67°/24, mb4.1/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.27**	**224**	P	**Pn**	**04 16 15.1**	**-1.7**
MARNC	**Mare, Loyalty**	**2.27**	**224**		**Pn**	**04 16 14.9**	**-1.8**
RTV	**Rentapao**	**2.38**	**329**	P	**S**	**04 16 52.3**	**-1.9**
DVP	**Devils Point**	**2.56**	**325**	P	**S**	**04 16 54.2**	**-3.2**
YATNC	**Mamie pl

mbtmp3.8/5,ML3.1/1,MS3.7/12,Error ellipse: s-maj=48.5km s-min=24.8km az=66.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**17.55**	**232**	LR	LR	04 36 29.2	
	comp=Z,227nm,20.2s,baz=90,slow=33						
SNAA	**Sanae**	**18.20**	**152**	P	P	04 30 59.9	0.0
	0.1nm,0.3s,baz=287,slow=10,SNR=4.7						
SNAA				S	S	04 34 19.0	-3.5
	0.8nm,0.9s,baz=162,slow=8.3,SNR=1.7						
	1.6nm,0.7s						
PLCA	**Paso Flores**	**30.57**	**286**	LR	LR	04 45 03.7	
	comp=Z,101nm,18.9s,baz=144,slow=36						
QSPA	**South Pole Qui**	**32.71**	**180**	P	P	04 33 17.9	+0.1
	0.5nm,0.9s,baz=162,slow=6.4,SNR=1.8						
	0.5nm,0.9s						
CPUP	**Villa Florida**	**36.55**	**317**	P	P	04 33 49.8	-1.2
	1.8nm,1.2s,baz=184,slow=19,SNR=1.9						
CPUP				LR	LR	04 49 09.7	
	comp=Z,36nm,19.6s,baz=95,slow=36						
	1.8nm,1.2s						
SUR	**Sutherland**	**42.76**	**77**	LR	LR	04 48 02.7	
	comp=Z,220nm,19.0s,baz=161,slow=30						
BDFB	**Brasilia**	**43.85**	**335**	P	P	04 34 52.7	+1.3
	0.9nm,0.4s,baz=190,slow=11,SNR=2.2						
	0.9nm,0.4s						
H04S2	**CROZET ISLANDS**	**48.58**	**115**	T	T	05 28 23.4	
	baz=227,slow=76,SNR=4.4						
H04S3	**CROZET ISLANDS**	**48.59**	**115**	T	T	05 28 23.4	
	baz=227,slow=76,SNR=5.5						
H04S1	**CROZET ISLANDS**	**48.60**	**115**	T	T	05 28 23.4	
	baz=227,slow=76,SNR=5.1						
LPAZ	**La Paz**	**49.85**	**310**	LR	LR	04 58 46.5	
	comp=Z,34nm,20.8s,baz=172,slow=38						
H10S2	**ASCENSION HYDR**	**49.99**	**21**	T	T	05 29 27.3	
	baz=190,slow=74,SNR=20						
H10S3	**ASCENSION HYDR**	**49.99**	**21**	T	T	05 29 27.5	
	baz=30,slow=74,SNR=20						
H10N1	**ASCENSION HYDR**	**51.11**	**21**	T	T	05 30 43.2	
	baz=190,slow=74						
H10N3	**ASCENSION HYDR**	**51.11**	**21**	T	T	05 30 43.6	
	baz=190,slow=74						
H10N2	**ASCENSION HYDR**	**51.12**	**21**	T	T	05 30 46.6	
	baz=190,slow=74						
LBTB	**Lobatse**	**51.16**	**75**	LR	LR	04 52 50.2	
	comp=Z,109nm,21.1s,baz=162,slow=30						
MATP	**Matopo**	**56.41**	**75**	LR	LR	04 56 30.6	
	comp=Z,104nm,19.3s,baz=156,slow=32						
LSZ	**Lusaka**	**60.59**	**71**	LR	LR	05 00 37.9	
	comp=Z,112nm,19.3s,baz=158,slow=33						
RPN	**Rapa Nui**	**61.65**	**264**	LR	LR	05 01 45.9	
	comp=Z,28nm,18.1s,baz=127,slow=34						
OPO	**Ambohidratompo**	**67.93**	**90**	LR	LR	05 01 11.1	
	comp=Z,164nm,20.2s,baz=88,slow=30						
ROSC	**El Rosal**	**71.51**	**313**	LR	LR	05 11 36.0	
	comp=Z,58nm,19.3s,baz=119,slow=38						
SDV	**Santo Domingo**	**73.85**	**318**	LR	LR	05 10 55.4	
	comp=Z,36nm,21.9s,baz=83,slow=36						
TORD	**Torodi Ar. Bea**	**75.26**	**32**	P	P	04 38 26.5	-0.3
	1.6nm,0.8s,baz=199,slow=6.0,SNR=7.8						
	1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**144.63**	**67**	PKP	PKPbc	04 46 18.0	+0.4
	0.7nm,0.6s,baz=238,slow=4.9,SNR=2.3						
ILAR	**Eielson Array**	**149.72**	**310**	PKPbc	PKPbc	04 46 31.1	-0.3
	0.5nm,1.0s,baz=129,slow=1.3,SNR=2.8						

*IDC **06** 04:55:00.0±1.1,1°.97N×126°.66E,h0km,mb3.6/7, mbtmp3.7/8,ML3.4/1,MS3.6/1,Error ellipse: s-maj=61.9km s-min=17.4km az=71.0*
*DJA **06** 04:55:04.6±0.3,2°.N±3°×12°.7E±°,h10km,M4.3/9,mB6.6/1, mb6.0/1,MLv3.4/9,Mw(mB)6.4/1*
ISC 06 04:55:07.0±0.7,2°.17N±0°.07×126°.70E±0°.06,h47km,n14, σ1$97/15,mb3.8/8,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.14**	**107**	P	**Pn**	**04 55 25.6**	**-1.0**
GAMI				S	**Sn**	**04 55 43.3**	**+2.2**
TNTI	**Ternate**	**1.54**	**154**	P	**Pn**	**04 55 34.4**	**+2.3**
SGSI	**Sangihe**	**1.91**	**322**	P	**Pn**	**04 55 37.0**	**-0.1**
MNI	**Manado**	**1.99**	**249**	P	**Pn**	**04 55 37.7**	**-0.6**
MNI				S	**Sn**	**04 56 04.5**	**+2.5**
FITZ	**Fitzroy Crossi**	**20.17**	**183**	P	**P**	**04 59 34.9**	**-2.8**
	0.1nm,0.3s,baz=16,slow=10,SNR=1.2						
	4.0nm,0.9s						
WRA	**Warramunga Arr**	**23.22**	**161**	P	**P**	**05 00 07.3**	**-2.9**
	1.9nm,0.6s,baz=341,slow=11,SNR=11						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**26.62**	**165**	P	**P**	**05 00 38.4**	**-2.9**
	0.3nm,0.7s,baz=348,slow=8.9,SNR=6.6						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.65**	**303**	P	**P**	**05 01 26.6**	**+0.5**
	0.5nm,0.3s,baz=104,slow=7.7,SNR=1.5						
	0.5nm,0.3s						
KSRS	**Korea Array**	**35.13**	**2**	P	**P**	**05 01 57.6**	**+1.5**
	0.6nm,0.5s,baz=181,slow=9.7,SNR=1.9						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**36.70**	**159**	LR	LR	05 17 26.1	
	comp=Z,96nm,20.4s,baz=205,slow=37						
GTA2	**Gaotai**	**44.50**	**330**	*e*P	**P**	**05 03 13.3**	**-0.8**
GTA2				pP	pP	05 03 18.2	-8.2
GTA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**48.76**	**342**	P	**P**	**05 03 48.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=142,slow=7.3,SNR=2.0						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**58.81**	**326**	P	**P**	**05 05 00.5**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=127,slow=6.4,SNR=4.5						
	comp=Z,0.8nm,0.9s						
KURBB	**Kurchatov Array**	**63.03**	**328**	P	**P**	**05 05 29.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=125,slow=5.6,SNR=6.1						
	comp=Z,0.4nm,0.3s						

*WEL **06** 05:08:22.0±0.3,44°.S±2°×17°.1E±°,h3km±1km,M3.3/12, ML3.1/15,MLv3.3/12,Error ellipse: s-maj=2.7km s-min=2.0km az=21.0*
*NOU **06** 05:08:23.4,43°.635×170°.66E,h3km,MLv3.6/8,South Island, New Zealand*
ISC 06 05:08:21.6±1.0,43°.57S±0°.02×170°.71E±0°.02,h9km±10km, n45,σ0$78/61,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**0.29**	**120**	P	**Pb**	**05 08 28.9**	**-0.1**
RPZ	**Rata Peaks**	**0.29**	**120**	P	**Pb**	**05 08 29.0**	**0.0**
RPZ				S	**Sb**	**05 08 33.6**	**-0.5**
GCSZ	**Gaunt Creek Bo**	**0.37**	**312**	P	**Pg**	**05 08 29.2**	**+0.2**
GCSZ				S	**Sg**	**05 08 33.2**	**-0.6**
GCSZ	**Gaunt Creek Bo**	**0.37**	**312**	P	**Pg**	**05 08 29.2**	**+0.2**
GCSZ				S	**Sg**	**05 08 33.6**	**-0.2**
WHFS	**Whataroa Fire**	**0.40**	**320**	P	**Pg**	**05 08 29.6**	**+0.2**
WHFS				S	**Sg**	**05 08 34.0**	**-0.5**
FJDS	**Franz Josef DO**	**0.42**	**295**	P	**Pg**	**05 08 29.9**	**+0.1**
FJDS				S	**Sg**	**05 08 35.3**	**0.0**
MCNS	**Mount Cook Ann**	**0.47**	**249**	P	**Pb**	**05 08 31.7**	**-0.4**
MCNS				S	**Sg**	**05 08 37.9**	**+0.9**
WVZ	**Waitaha Valley**	**0.49**	**3**	P	**Pg**	**05 08 30.9**	**-0.2**
WVZ				S	**Sg**	**05 08 36.3**	**-1.3**
WVAS	**Waitaha Valley**	**0.50**	**3**	P	**Pg**	**05 08 31.0**	**-0.2**
WVAS				S	**Sg**	**05 08 36.5**	**-1.2**
FGPS	**Fox Glacier Pa**	**0.51**	**282**	P	**Pg**	**05 08 32.3**	**+0.8**
FGPS				S	**Sg**	**05 08 38.6**	**+0.4**
ARCZ	**Arundel**	**0.51**	**138**	P	**Pb**	**05 08 33.0**	**+0.3**
ARCZ				S	**Sb**	**05 08 40.0**	**-0.3**
MSMC	**Mount Somers S**	**0.53**	**105**	P	**Pb**	**05 08 33.5**	**+0.5**
MSMC				S	**Sb**	**05 08 41.0**	**+0.3**
MHCZ	**Mount Hutt**	**0.63**	**87**	P	**Pb**	**05 08 34.7**	**-0.1**
FOZ	**Fox Glacier**	**0.65**	**273**	P	**Pg**	**05 08 34.7**	**+0.6**
TMZ	**Timaru**	**0.84**	**165**	P	**Pn**	**05 08 39.0**	**-0.7**
LBZ	**Lake Benmore**	**0.90**	**204**	P	**Pn**	**05 08 39.6**	**-0.9**
LBZ				S	**Sn**	**05 08 52.0**	**-1.6**
WACZ	**Wakanui South**	**0.90**	**115**	P	**Pn**	**05 08 40.6**	**+0.1**
WACZ				S	**Sn**	**05 08 52.6**	**-1.0**
OXZ	**Oxford**	**1.00**	**76**	P	**Pn**	**05 08 41.5**	**-0.3**
OXZ				S	**Sg**	**05 08 55.0**	**+1.2**
INZ	**Inchbonnie**	**1.00**	**33**	P	**Pb**	**05 08 39.6**	**-1.4**
RACZ	**Rakaia**	**1.05**	**99**	P	**Pn**	**05 08 42.9**	**+0.4**
LTZ	**Lake Taylor**	**1.39**	**56**	P	**Pb**	**05 08 47.7**	**0.0**
LTZ				S	**Sb**	**05 09 06.3**	**+0.7**
MQZ	**McQueen's Vall**	**1.42**	**96**	P	**Pb**	**05 08 47.7**	**-0.6**
AMCZ	**Amberley**	**1.47**	**75**	P	**Pb**	**05 08 49.0**	**-0.1**
ODZ	**Otahua Downs**	**1.48**	**182**	P	**Pg**	**05 08 49.3**	**-0.6**
ODZ	**Otahua Downs**	**1.48**	**182**	S	**Sg**	**05 09 08.8**	**-0.3**
PVAQ				P	**Pg**	**05 08 49.1**	**-0.8**
JCZ	**Jackson Bay**	**1.48**	**249**	P	**Pg**	**05 08 49.8**	**-0.2**
JCZ	**Jackson Bay**	**1.48**	**249**	S	**Sb**	**05 09 08.3**	**+0.1**
JCZ	**Jackson Bay**	**1.48**	**249**	P	**Pb**	**05 08 49.6**	**+0.3**
JCZ				S	**Sb**	**05 09 08.0**	**-0.2**
AKCZ	**Akaroa Harbour**	**1.63**	**102**	P	**Pb**	**05 08 51.5**	**-0.3**
OKCZ	**Okains Bay**	**1.72**	**96**	P	**Pn**	**05 08 52.2**	**+0.5**
WKZ	**Wanaka**	**1.75**	**223**	P	**Pb**	**05 08 52.9**	**-1.0**
GVZ	**Greta Valley S**	**1.81**	**71**	P	**Pn**	**05 08 53.7**	**+0.8**
EAZ	**Earnscleugh**	**1.94**	**211**	P	**Pn**	**05 08 55.2**	**+0.4**
DSZ	**Denniston Nort**	**1.99**	**24**	P	**Pn**	**05 08 55.5**	**0.0**
MSZ	**Milford Sound**	**2.29**	**240**	P	**Pb**	**05 09 02.5**	**-0.5**
HHSZ	**Highcliff Hill**	**2.32**	**182**	P	**Pg**	**05 09 06.3**	**+0.3**
KHZ	**Kahutara**	**2.38**	**62**	P	**Pn**	**05 09 02.4**	**+1.7**
THZ	**Tophouse**	**2.43**	**43**	P	**Pn**	**05 09 02.9**	**+1.4**
TUZ	**Tuapeka**	**2.51**	**197**	P	**Pn**	**05 09 03.5**	**+1.0**
MLZ	**Mavora Lakes**	**2.58**	**225**	P	**Pn**	**05 09 04.2**	**+0.6**
MRNZ	**Matariki Terra**	**2.65**	**36**	P	**Pn**	**05 09 06.1**	**+1.7**
QRZ	**Quartz Range**	**3.06**	**27**	P	**Pn**	**05 09 10.4**	**+0.3**
SYZ	**Scrubby Hill**	**3.17**	**200**	P	**Pn**	**05 09 13.7**	**+2.1**
SYZ	**Scrubby Hill**	**3.17**	**200**	S	**Sn**	**05 09 50.3**	**+0.8**

*IDC **06** 05:13:16.4±4.3,7°.07S×150°.92E,h200km±34km,mb3.3/5, mbtmp3.8/6,Error ellipse: s-maj=56.4km s-min=26.1km az=109.0*
ISC 06 05:13:16.1±1.3,7°.2S±0°.2×151°.0E±0°.2,h200km,n7, σ1$41/8,mb3.7/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.43**	**240**	P	**Pn**	**05 14 23.0**	**-0.4**
	8.8nm,0.3s,baz=49,slow=20,SNR=2.0						
PMG				S	**Sn**	**05 15 16.8**	**+0.5**
	25nm,0.3s,baz=107,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**20.58**	**230**	P	**P**	**05 17 38.5**	**-1.4**
	1.3nm,0.9s,baz=53,slow=11,SNR=12						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**23.23**	**223**	P	**P**	**05 18 06.6**	**+0.8**
	1.0nm,0.7s,baz=58,slow=9.1,SNR=16						
	1.0nm,0.7s						
STKA	**Stephens Creek**	**26.12**	**198**	P	**P**	**05 18 32.6**	**+0.9**
	1.8nm,0.9s,baz=18,slow=20,SNR=2.9						
	1.8nm,0.9s						
KURBB	**Kurchatov Arra**	**84.58**	**322**	P	**P**	**05 25 28.4**	**+1.5**
	1.2nm,0.2s,baz=101,slow=4.8,SNR=1.4						
	1.2nm,0.2s						
ILAR	**Eielson Array**	**85.00**	**22**	P	**P**	**05 25 28.3**	**-0.4**
	0.3nm,0.8s,baz=253,slow=5.6,SNR=5.0						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.26**	**284**	PKPbc	**PKPbc**	**05 32 40.2**	**-1.9**
	0.5nm,0.7s,baz=52,slow=2.3,SNR=2.2						

*IDC **06** 05:15:50.2±1.6,9°.46S×120°.83E,h0km,mb3.5/1, mbtmp3.5/3,ML3.6/2,Error ellipse: s-maj=163.6km s-min=31.0km az=50.0*
*DJA **06** 05:15:56.1±0.4,10°.S±3°×12°.1E±°,h23km±4km,M4.0/16, mb4.2/5,MLv3.9/16*
ISC 06 05:15:54.6±0.9,9°.94S±0°.08×120°.79E±0°.06,h35km,n18, σ2$10/20,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.56**	**299**	P	**Pn**	**05 16 06.1**	**0.0**
WSI				S	**Sn**	**05 16 13.2**	**-0.9**
WBSI	**Waikabubak, Su**	**1.41**	**282**	P	**Pn**	**05 16 17.4**	**-0.5**
LBFI	**Labuhan Bajo,**	**1.70**	**329**	P	**Pn**	**05 16 19.6**	**-2.3**
MMRI	**Maumere**	**1.93**	**48**	P	**Pn**	**05 16 24.1**	**-0.9**
DBNI	**Kabupaten Domp**	**2.83**	**300**	P	**Pn**	**05 16 37.2**	**-0.2**
BATI	**Baumata**	**2.84**	**96**	P	**Pn**	**05 16 40.1**	**+2.5**
PLAI	**Plampang**	**3.17**	**290**	P	**Pn**	**05 16 41.4**	**-0.7**
SOEI	**Soe**	**3.43**	**87**	P	**Pn**	**05 16 51.6**	**+5.8**
BSSI	**Bau Bau, Buton**	**3.79**	**356**	P	**Pn**	**05 16 52.7**	**+2.1**
TWSI	**Taliwang, Sumb**	**4.04**	**287**	P	**Pn**	**05 16 54.5**	**+0.5**
KLNI	**Mataram**	**4.88**	**288**	P	**Pn**	**05 17 05.8**	**+0.3**
KAPI	**Kappang**	**5.00**	**348**	P	**Pn**	**05 17 07.7**	**+0.4**
JAGI	**Jajag, Banyuwa**	**6.71**	**282**	P	**Pn**	**05 17 31.3**	**+0.5**
	40nm,1.6s						
SNJI	**Sawahan-Nganju**	**9.18**	**283**	P	**Pn**	**05 18 07.6**	**+2.8**
WRA	**Warramunga Arr**	**16.43**	**129**	Pn	**P**	**05 19 45.1**	**0.0**
	0.2nm,0.3s,baz=307,slow=11,SNR=5.6						
WRA				Sn	**Sn**	**05 22 39.5**	**-4.4**
	0.2nm,0.3s,baz=300,slow=20,SNR=6.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**18.52**	**139**	P	**Pn**	**05 20 12.9**	**+4.3**
	0.2nm,0.3s,baz=316,slow=11,SNR=6.9						
ASAR				S	**Sn**	**05 23 32.1**	**-2.6**
	0.4nm,0.7s,baz=312,slow=22,SNR=2.1						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**66.10**	**332**	P	**P**	**05 26 36.7**	**-1.5**
	0.4nm,0.7s,baz=145,slow=5.3,SNR=2.2						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**120.36**	**279**	PKP	**PKiKP**	**05 34 44.1**	**+0.7**
	0.3nm,0.5s,baz=102,slow=1.7,SNR=2.5						

*MDD **06** 05:26:26.2±1.8,36°.34N×9°.20W,h10km±5km,mb_Lg2.2/2, Error ellipse: s-maj=15.2km s-min=10.6km az=118.0*
*SFS **06** 05:26:26.2,36°.58N×9°.69W,h22km,ML2.8/7,ML2.9/7, MLv2.9/7*
*IGIL **06** 05:26:27.3,36°.63N×9°.67W,h16km,ML1.4*
*INMG **06** 05:26:27.6±1.4,36°.63N×9°.67W,h20km±5km,ML1.6,Error ellipse: s-maj=7.1km s-min=5.8km az=63.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*CNRM **06** 05:26:27.9,36°.40N×9°.24W,h22km*
ISC 06 05:26:24.0±2.1,36°.47N±0°.05×9°.64W±0°.09,h29km±13km, n35,σ1$50/59,2C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.93**	**44**	P	**Pb**	**05 26 42.1**	**+0.6**
PFVI				S	**Sb**	**05 26 53.7**	**+0.2**
PFVI	**Vila Bisbo**	**0.93**	**44**	*e*P	**Pb**	**05 26 42.6**	**+1.2**
PFVI				*e*S	**Sn**	**05 26 54.4**	**+1.0**
PFVI				*i* IAML		05 26 54.5	
PFVI				*i* IAML		05 26 54.7	
PFVI				*i* IAML		05 26 55.3	
PFVI	**Vila Bisbo**	**0.93**	**44**	P	**Pb**	**05 26 42.7**	**+1.2**
PFVI				S	**Sn**	**05 26 54.6**	**+1.3**
MORF	**Marmelete**	**1.15**	**43**	*e*P	**Pb**	**05 26 45.7**	**+0.5**
MORF				*e*S	**Sb**	**05 26 59.5**	**-0.2**
MORF				IAML		05 27 00.9	
	comp=N,11nm,0.2s						
MORF	**Marmelete**	**1.15**	**43**	*e*P	**Pb**	**05 26 45.8**	**+0.5**
MORF				*e*S	**Sb**	**05 26 59.6**	**-0.2**
MORF				*i* IAML		05 27 00.1	
MORF				*i* IAML		05 27 00.3	
MORF				*i* IAML		05 27 01.7	
PTEO	**Sao Teotonio**	**1.30**	**34**	*e*S	**Sn**	**05 27 02.7**	**+0.2**
PTEO				*i* IAML		05 27 03.4	
PTEO				*i* IAML		05 27 03.5	
PTEO				*i* IAML		05 27 05.2	
PBDV	**Barranco-do-Ve**	**1.57**	**60**	P	**Pn**	**05 26 51.7**	**+1.9**
PBDV				S	**Sb**	**05 27 10.2**	**-1.7**
PBDV	**Barranco-do-Ve**	**1.57**	**60**	*e*P	**Pb**	**05 26 52.1**	**-0.2**
PBDV				*e*S	**Sb**	**05 27 10.6**	**-1.3**
PBDV				*i* IAML		05 27 11.4	
PBDV				*i* IAML		05 27 11.8	
PCVE	**Castro Verde**	**1.73**	**47**	P	**Pn**	**05 26 53.6**	**+1.6**
PCVE				S	**Sn**	**05 27 13.7**	**+0.6**
PCVE	**Castro Verde**	**1.73**	**47**	*e*P	**Pn**	**05 26 54.1**	**+2.1**
PCVE				*e*S	**Sn**	**05 27 13.7**	**+0.6**
PCVE				*i* IAML		05 27 14.8	
PCVE				*i* IAML		05 27 15.0	
PCVE				*i* IAML		05 27 15.9	
MESJ	**Messejana**	**1.78**	**39**	*e*P	**Pn**	**05 26 54.2**	**+1.5**
MESJ				*e*S	**Sn**	**05 27 14.1**	**-0.2**
MESJ				IAML		05 27 16.8	
	comp=N,2.4nm,0.2s						
MESJ	**Messejana**	**1.78**	**39**	*e*P	**Pn**	**05 26 54.2**	**+1.5**
MESJ				*e*S	**Sn**	**05 27 14.4**	**+0.1**
MESJ				*i* IAML		05 27 15.7	
MESJ				*i* IAML		05 27 15.8	
MESJ				*i* IAML		05 27 16.3	
PVAQ	**Vaqueiros**	**1.80**	**58**	*e*P	**Pn**	**05 26 55.1**	**+2.1**
PVAQ				*e*S	**Sb**	**05 27 15.5**	**-2.8**
PVAQ				*i* IAML		05 27 16.8	
PVAQ				*i* IAML		05 27 17.9	
PVAQ				*i* IAML		05 27 18.4	
PVAQ	**Vaqueiros**	**1.80**	**58**	P	**Pn**	**05 26 54.0**	**+1.0**
PVAQ				S	**Sb**	**05 27 15.2**	**-3.2**
PLOUS	**Minas do Lousa**	**1.84**	**31**	*e*S	**Sn**	**05 27 15.1**	**-0.7**
PLOUS				*i* IAML		05 27 16.6	
PLOUS				*i* IAML		05 27 16.6	
PLOUS				*i* IAML		05 27 17.1	
EGRO	**El Granado**	**2.03**	**58**	P	**Pn**	**05 26 57.3**	**+1.2**
EGRO				S	**Sb**	**05 27 21.3**	**-3.6**
EGRO	**El Granado**	**2.03**	**58**	Pn	**Pn**	**05 26 56.6**	**+0.5**
EGRO				*i* IVmb_Lg		05 27 18.8	
EGRO				Sn	**Sn**	**05 27 20.1**	**-0.4**
MOE	**Montemor**	**2.29**	**26**	*e*S	**Sn**	**05 27 26.8**	**-0.2**
MOE				*i* IAML		05 27 27.8	
MOE				*i* IAML		05 27 28.1	
MOE				*i* IAML		05 27 32.2	
EVO	**Evora**	**2.43**	**32**	S	**Sn**	**05 27 28.9**	**-1.5**
EVO	**Evora**	**2.43**	**32**	*e*S	**Sn**	**05 27 29.0**	**-1.5**
EVO				*i* IAML		05 27 30.2	
EVO				*i* IAML		05 27 30.3	
EVO				*i* IAML		05 27 30.9	
PMAFR	**Mafra**	**2.50**	**6**	*e*S	**Sn**	**05 27 29.9**	**-2.2**
PARRA	**Arraiolos**	**2.66**	**28**	*e*P	**Pn**	**05 27 06.3**	**+1.4**
PARRA				*e*S	**Sn**	**05 27 34.5**	**-1.7**
PARRA				*i* IAML		05 27 36.5	
PARRA				*i* IAML		05 27 39.1	
PARRA				*i* IAML		05 27 50.7	
PBAR	**Barrancos**	**2.68**	**50**	P	**Pn**	**05 27 06.5**	**+1.4**
PBAR				S	**Sn**	**05 27 37.2**	**+0.6**
PBAR	**Barrancos**	**2.68**	**50**	*e*P	**Pn**	**05 27 06.8**	**+1.7**
PBAR				*e*S	**Sn**	**05 27 37.2**	**+0.6**
PBAR				*i* IAML		05 27 37.9	
PBAR				*i* IAML		05 27 38.1	
PBAR				*i* IAML		05 27 39.0	
PMTG	**Montargil**	**2.83**	**23**	*e*P	**Pn**	**05 27 08.2**	**+1.1**
PMTG				*e*S	**Sn**	**05 27 38.7**	**-1.5**
PMTG				*i* IAML		05 27 39.0	
PMTG				*i* IAML		05 27 39.1	
PMTG				*i* IAML		05 27 39.2	
PESTR	**Estremoz**	**2.89**	**34**	S	**Sn**	**05 27 41.0**	**-0.9**
PESTR	**Estremoz**	**2.89**	**34**	*e*S	**Sn**	**05 27 40.7**	**-1.2**
EBAD	**Badajoz**	**3.09**	**42**	S	**Sn**	**05 27 45.4**	**-1.3**
EBAD	**Badajoz**	**3.09**	**42**	*i* IVmb_Lg		05 27 47.5	
EBAD				Sn	**Sn**	**05 27 47.5**	**+0.8**
PSBE	**So Bento**	**3.11**	**12**	*e*S	**Sn**	**05 27 44.4**	**-2.9**
PMRV	**Marv??o**	**3.45**	**30**	*e*P	**Pn**	**05 27 17.2**	**+1.5**
PMRV				*e*S	**Sn**	**05 27 53.2**	**-2.3**
PMRV				*i* IAML		05 27 55.4	
PMRV				*i* IAML		05 27 55.7	
PMRV				*i* IAML		05 27 55.7	
ECAB	**El Cabril**	**3.73**	**63**	P	**Pn**	**05 27 20.8**	**+1.3**
ECAB				S	**Sn**	**05 28 01.3**	**-1.2**
EADA	**Adamuz**	**4.38**	**66**	P	**Pn**	**05 27 30.4**	**+1.9**
EADA				S	**Sn**	**05 28 17.6**	**-0.8**
MD31	**MD31**	**5.39**	**130**	P	**Pn**	**05 27 43.6**	**+1.1**
MD31				S	**Sn**	**05 28 42.2**	**-1.4**
MDT	**Midelt**	**5.52**	**130**	P	**Pn**	**05 27 45.6**	**+1.3**
MDT				S	**Sn**	**05 28 45.4**	**-1.4**

*KRNET **06** 05:37:05.0±0.1,42°.31N×69°.84E,mb2.6*
ISU 06 05:37:03,41°.87N×70°.30E,h9km,6C,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSK	**Pskem**	**0.08**	**44**	S	Sg	05 37 06.2	-0.8
PSK				S	Sg	05 37 06.9	-0.1
CHMG	**Chimgan**	**0.39**	**214**	P	Pg	05 37 10.9	+0.3
CHMG				S	Sg	05 37 16.5	+0.8
TVKS	**Tavaksay**	**0.57**	**239**	P	Pg	05 37 14.4	+0.4
TVKS				S	Sg	05 37 22.1	+0.7
TRKS	**Terek-Say**	**0.71**	**118**	↑*e*P	Pn	05 37 28.6	+9.1
TRKS				↑*e*S	Sn	05 37 45.9	+15
ARK	**Arkit**	**1.25**	**93**	↑*e*P	Pg	05 37 33.6	+6.7
ARK				↑*e*S	Sn	05 37 54.4	+11
MNAS	**Manas**	**1.75**	**69**	↑*e*P	Pg	05 37 38.0	+1.4
MNAS				↑*e*S	Sg	05 38 02.3	+3.0

*SDD **06** 05:42:57.8±2.4,17°.77N×71°.41W,h15km±999km,MD2.9, ML2.0,MW3.0,Presumed earthquake*
*OSPL **06** 05:43:02.3±1.4,18°.00N×71°.34W,h20km±8km,ML2.0, Presumed earthquake*
ISC 06 05:43:01.4±1.0,18°.02N±0°.03×71°.32W±0°.04,h18km±7km, n10,σ0$79/19,8C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOVI	**El Cajuil, Ovi**	**0.22**	**192**	*i* P	**Pb**	**05 43 06.7**	**-0.2**
LOVI				*e*S	**Sg**	**05 43 11.3**	**+1.1**
LOVI				IAML		05 43 12.4	
	comp=Z,295nm,0.4s						
LOBH	**Bahia de las A**	**0.34**	**243**	*i* P	**Pg**	**05 43 08.2**	**-0.4**
LOBH				*e*S	**Sb**	**05 43

ESAO	**Su ao**	**0.91**	**316**	*eP*	**Pb**	05 54 41.6	-0.3
ESAO				eS	**Sn**	05 54 53.5	-0.8
TWC	**Suao**	**0.93**	**318**	P	**Pb**	05 54 41.5	-0.8
TWC				eS	**Sb**	05 54 53.5	-0.8
TEGC	**Jichi Village**	**0.93**	**257**	eS	**Sb**	05 54 54.7	+0.5
ETM	**Tongmen**	**0.95**	**273**	P	**Pb**	05 54 41.8	-0.8
ETM				eS	**Sb**	05 54 54.7	-0.2
ETLH	**Xiulin Townshi**	**1.00**	**287**	*i* P	**Pb**	05 54 42.8	-0.8
ETLH				S	**Sb**	05 54 55.8	-0.6
LXIB	**Xiulin Townshi**	**1.03**	**276**	*eP*	**Pb**	05 54 43.0	-1.1
LXIB				eS	**Sb**	05 54 56.7	-0.5
NDS	**Dongshan**	**1.03**	**314**	P	**Pn**	05 54 43.7	0.0
NDS				S	**Sn**	05 54 57.7	+0.4
WARBT	**Fenglin Townsh**	**1.07**	**260**	*eP*	**Pb**	05 54 43.5	-0.7
WARBT				eS	**Sb**	05 54 57.7	-0.5
EGS		**1.07**	**330**	P	**Pb**	05 54 44.6	-0.2
EGS				S	**Sn**	05 54 59.0	+0.6
LATG	**Datong**	**1.10**	**304**	*eP*	**Pb**	05 54 45.0	-0.3
LATG				eS	**Sn**	05 55 00.5	+1.1
ILA	**Ilan**	**1.11**	**320**	*eP*	**Pb**	05 54 45.1	-0.2
ILA				eS	**Sn**	05 55 00.7	+1.4
TWE	**Neicheng**	**1.12**	**316**	P	**Pb**	05 54 45.4	-0.2
TWE				eS	**Sn**	05 55 00.6	+0.9
ENTT	**Nioudou**	**1.14**	**309**	P	**Pb**	05 54 45.7	-0.1
ENTT				S	**Sn**	05 54 59.7	-0.4
NDT	**Datong Townshi**	**1.15**	**306**	P	**Pb**	05 54 46.0	-0.1
NDT				S	**Sn**	05 55 01.5	+1.1
ECBN	**Changbin**	**1.16**	**239**	*eS*	**Sn**	05 54 59.6	-0.9
EHYH	**Wanrong**	**1.17**	**249**	P	**Pn**	05 54 45.4	-0.2
EHYH				S	**Sn**	05 55 00.9	+0.2
NNSB	**Datong**	**1.17**	**296**	P	**Pn**	05 54 45.7	0.0
NNSB				S	**Sn**	05 55 01.0	+0.1
IRIF	**Iriomote-Funau**	**1.17**	**69**	*eP*	**Pb**	05 54 46.6	-0.2
IRIF				eS	**Sn**	05 55 01.8	+1.0
HATJ	**Hateruma jima**	**1.17**	**83**	*eP*	**Pb**	05 54 46.3	-0.1
HATJ				eS	**Sn**	05 55 02.2	+1.4
NNS	**Nan Shan**	**1.18**	**296**	P	**Pn**	05 54 46.0	+0.1
NNS				S	**Sn**	05 55 01.2	0.0
WHF	**Hehuan Shan**	**1.18**	**281**	P	**Pn**	05 54 45.8	-0.4
WHF				eS	**Sb**	05 55 01.7	-0.2
EHY	**Hungye**	**1.18**	**250**	*eP*	**Pn**	05 54 45.4	-0.4
EHY				eS	**Sn**	05 55 00.3	-0.8
TWB1	**Santiao Chiao**	**1.19**	**336**	*eP*	**Pn**	05 54 44.3	-1.7
FUSB	**Fushanzhiwuyua**	**1.20**	**314**	P	**Pb**	05 54 46.7	-0.3
FUSB				eS	**Sn**	05 55 04.2	+2.5
FUSS	**Fushou**	**1.22**	**286**	P	**Pn**	05 54 46.6	+0.1
TIPB	**Shuangxi**	**1.23**	**329**	P	**Pb**	05 54 47.5	+0.1
TIPB				S	**Sb**	05 55 03.0	+0.1
OWD	**Renai**	**1.24**	**272**	P	**Pn**	05 54 46.5	-0.2
OWD				eS	**Sn**	05 55 01.1	-1.1
YULB	**Yu-li**	**1.25**	**245**	P	**Pn**	05 54 46.6	-0.1
YULB				eS	**Sn**	05 55 02.5	-0.2
EYUL	**Yuli**	**1.25**	**243**	*eS*	**Sn**	05 55 02.8	+0.1
TWF1	**Yuli**	**1.26**	**244**	P	**Pn**	05 54 46.9	-0.1
TWF1				S	**Sn**	05 55 03.4	+0.2
CHKH	**Chenggong**	**1.27**	**236**	*eP*	**Pn**	05 54 45.4	-1.6
CHKH				eS	**Sn**	05 55 01.7	-1.5
NWLT	**Wulai**	**1.27**	**313**	*eP*	**Pb**	05 54 47.9	-0.3
NWLT				eS	**Sb**	05 55 05.0	+1.0
TWT	**Tachien**	**1.28**	**285**	P	**Pb**	05 54 48.0	-0.5
TWT				eS	**Sb**	05 55 04.8	+0.2
YHNB	**Yeheng**	**1.29**	**306**	P	**Pn**	05 54 47.7	+0.3
YHNB				eS	**Sn**	05 55 03.5	-0.4
WUSB	**Renai**	**1.30**	**274**	P	**Pn**	05 54 47.4	-0.1
TDCB	**Techi**	**1.30**	**285**	P	**Pn**	05 54 47.7	+0.2
TDCB				eS	**Sn**	05 55 04.3	+0.1
NSK	**Sanguang**	**1.31**	**305**	P	**Pn**	05 54 47.8	+0.3
NSK				eS	**Sb**	05 55 05.4	+0.1
SXI1	**Grass Mountain**	**1.32**	**333**	P	**Pn**	05 54 47.6	-0.1
SXI1				S	**Sb**	05 55 05.7	+0.3
WFSB	**Wu-fen Shan**	**1.34**	**329**	P	**Pn**	05 54 48.0	+0.1
WFSB				S	**Sb**	05 55 06.9	+1.0
FULB	**Fuli**	**1.34**	**238**	*eS*	**Sn**	05 55 05.0	-0.1
CHKT	**Chengkung**	**1.34**	**233**	*eP*	**Pn**	05 54 48.3	+0.3
CHKT				eS	**Sn**	05 55 03.1	-2.0
TWA	**Mucha**	**1.37**	**321**	*eP*	**Pb**	05 54 49.7	0.0
TWA				S	**Sb**	05 55 08.0	+1.2
NHDH	**Xindian Distri**	**1.39**	**319**	*eS*	**Sb**	05 55 08.9	+1.5
TNOU	**National Taiwa**	**1.41**	**331**	*eP*	**Pn**	05 54 48.1	-0.8
TNOU				eS	**Sb**	05 55 07.9	-0.1
EHD	**Haiduan**	**1.44**	**238**	*eP*	**Pn**	05 54 49.0	-0.3
EHD				eS	**Sn**	05 55 06.9	-0.5
SSLB	**Suanglung**	**1.45**	**265**	*eP*	**Pn**	05 54 48.6	-0.9
SSLB				eS	**Sn**	05 55 08.5	+0.7
EDH	**Donghe**	**1.47**	**230**	*eS*	**Sn**	05 55 06.1	-2.0
NFF	**Wufeng Townshi**	**1.47**	**299**	*eP*	**Pb**	05 54 51.2	-0.3
NFF				eS	**Sb**	05 55 11.0	+1.1
WCS	**Beigang Elemen**	**1.49**	**276**	*eP*	**Pn**	05 54 50.8	+0.8
WCS				eS	**Sn**	05 55 09.3	+0.6
WHP	**Taichung City**	**1.49**	**284**	*eP*	**Pb**	05 54 52.3	+0.4
WHP				eS	**Sb**	05 55 10.2	-0.3
SMLT	**Sun Moon Lake**	**1.49**	**269**	*eP*	**Pn**	05 54 49.3	-0.9
SMLT				eS	**Sn**	05 55 09.6	+0.7
KSHI	**Guanxi Townshi**	**1.50**	**305**	*eP*	**Pb**	05 54 51.4	-0.7
YM01	**YM01**	**1.50**	**325**	*eP*	**Pb**	05 54 51.0	-1.1
YM01				eS	**Sb**	05 55 10.5	-0.3
YM08	**YM08**	**1.53**	**326**	*eP*	**Pb**	05 54 52.5	0.0
ZUZH	**Zhuzihu**	**1.53**	**324**	*eP*	**Pb**	05 54 51.8	-0.8
ZUZH				eS	**Sb**	05 55 10.4	-1.2
TYC	**Yuchr**	**1.53**	**270**	*eP*	**Pb**	05 54 53.8	+1.2
JIJ	**Ishigaki jima**	**1.54**	**73**	*eP*	**Pn**	05 54 51.6	+0.9
JIJ				eS	**Sb**	05 55 11.1	-0.7
WHYT	**Xinyi Township**	**1.55**	**262**	*eP*	**Pn**	05 54 51.4	+0.4
WHYT				eS	**Sn**	05 55 10.6	+0.2
LIOB	**Emei**	**1.56**	**298**	P	**Pb**	05 54 52.6	-0.5
LIOB				S	**Sb**	05 55 12.8	+0.3
ELDTW	**Lidau**	**1.57**	**243**	*eP*	**Pn**	05 54 50.8	-0.4
ELDTW				eS	**Sn**	05 55 07.6	-3.2
NSTT	**Nanjuang**	**1.57**	**297**	*i* P	**Pb**	05 54 52.6	-0.5
NSTT				S	**Sb**	05 55 12.2	-0.4
LDUT	**Ludao**	**1.58**	**218**	*eS*	**Sn**	05 55 08.5	-2.4
NTST	**Danshui**	**1.58**	**322**	*eS*	**Sb**	05 55 15.5	+2.5
TWY	**Chenhua**	**1.60**	**328**	*eP*	**Pb**	05 54 52.3	-1.4
TWY				eS	**Sb**	05 55 12.8	-0.6
ALS	**Alishan**	**1.63**	**256**	P	**Pn**	05 54 53.2	+0.9
ALS				S	**Sn**	05 55 13.2	+0.5
TWQ1	**Liyutan**	**1.66**	**285**	P	**Pb**	05 54 54.1	-0.7
TWQ1				S	**Sb**	05 55 15.9	+0.6
NMLH	**Miaoli**	**1.71**	**292**	*eP*	**Pb**	05 54 55.1	-0.3
TCU	**Taichung**	**1.71**	**278**	*eP*	**Pb**	05 54 55.8	-0.4
TCU				eS	**Sb**	05 55 17.4	+0.7
CHN5	**Tsauling**	**1.73**	**260**	*eS*	**Sb**	05 55 17.4	+0.1
JISG	**Ishigakijimahi**	**1.76**	**67**	*eS*	**Sn**	05 55 15.8	+0.6
PCYT	**Pengchaiyu**	**1.76**	**346**	*eP*	**Pn**	05 54 54.1	+0.4
STYH	**Taoyuan**	**1.77**	**246**	*eP*	**Pn**	05 54 54.8	+0.9
STYH				eS	**Sn**	05 55 16.0	+0.3
WCHH	**Zhanghua**	**1.81**	**276**	P	**Pb**	05 54 56.2	-1.1
WCHH				eS	**Sb**	05 55 20.1	+0.5
WGK	**Gukeng**	**1.82**	**263**	*eS*	**Sb**	05 55 21.8	+2.0
WDLH	**Douliu**	**1.84**	**263**	*eP*	**Pn**	05 54 56.2	+1.4
WDLH				eS	**Sb**	05 55 21.0	+0.6
TPUB	**Ta-pu**	**1.85**	**251**	S	**Sb**	05 55 20.1	-0.5
WTP	**Ta-pu**	**1.88**	**250**	*eP*	**Pn**	05 54 55.5	+0.1
WTP				eS	**Sb**	05 55 21.7	0.0
SLGT	**Liugui**	**1.96**	**242**	*eP*	**Pb**	05 55 00.9	+1.0
SLGT				eS	**Sb**	05 55 25.2	+1.3
SGST	**Jiashian**	**1.97**	**245**	P	**Pn**	05 54 58.7	+2.1
SGST				S	**Sb**	05 55 23.3	-1.0
WRL	**Guolierlin Hig**	**1.97**	**270**	P	**Pb**	05 54 58.8	-1.2
WRL				S	**Sb**	05 55 23.8	-0.4
WTK	**Tuku**	**1.98**	**264**	P	**Pb**	05 54 59.0	-1.1
WTK				S	**Sb**	05 55 24.1	-0.2
CHN1	**Nanshi**	**1.98**	**249**	P	**Pn**	05 54 58.4	+1.7
CHN1				S	**Sb**	05 55 24.4	0.0
TWK	**Hsinying**	**1.98**	**251**	*eP*	**Pn**	05 54 58.1	+1.2
TWK				S	**Sb**	05 55 24.2	-0.4
RLNB	**Erlin**	**1.99**	**270**	*eP*	**Pb**	05 54 59.0	-1.3
RLNB				S	**Sb**	05 55 24.2	-0.4
SSD	**Sandimen**	**2.10**	**237**	*eP*	**Pb**	05 55 01.4	-0.8
SSD				eS	**Sn**	05 55 26.2	+2.4
MASBT	**Mashibuluo**	**2.18**	**234**	*eS*	**Sb**	05 55 29.6	-0.5
SLIU	**Shizi**	**2.33**	**224**	*eP*	**Pn**	05 55 00.9	-0.7
SCZT	**Fangliau**	**2.34**	**229**	*eP*	**Pn**	05 55 02.5	+0.8
SCZT				eS	**Sn**	05 55 31.8	+2.2
SMST	**Manzhou Townsh**	**2.45**	**220**	*eP*	**Pn**	05 55 03.8	+0.5
SMST				eS	**Sn**	05 55 33.1	+0.7
WDGT	**Dungji**	**2.71**	**257**	P	**Pn**	05 55 08.0	+1.1
WDGT				eS	**Sn**	05 55 39.6	+0.7
PHUB	**P'eng-hu**	**2.74**	**262**	P	**Pn**	05 55 08.2	+1.0
PHUB				eS	**Sn**	05 55 40.2	+0.6
PNG	**Penghu**	**2.75**	**263**	*eP*	**Pn**	05 55 07.6	+0.3
PNG				eS	**Sn**	05 55 41.2	+1.4
VCHM	**Qimei**	**2.93**	**257**	P	**Pn**	05 55 11.5	+1.6
VCHM				S	**Sn**	05 55 45.4	+1.1
VWUC	**VWUC**	**3.00**	**291**	*eP*	**Pn**	05 55 10.6	-0.3
VWUC				eS	**Sn**	05 55 45.6	-0.5
PTMZ	**Houxiangcun**	**3.30**	**290**	P	**Pn**	05 55 14.8	-0.1
PTMZ				eS	**Sn**	05 55 52.0	-1.4
KNM	**Kinmen**	**3.78**	**278**	P	**Pn**	05 55 23.4	+1.9
KNMB	**Chin-men Tao**	**3.82**	**279**	P	**Pn**	05 55 22.2	+0.1
KNMB				eS	**Sn**	05 56 05.9	-0.4
MHZQ	**Yeshan**	**3.85**	**305**	*eP*	**Pn**	05 55 21.6	-0.9
MHZQ				eS	**Sn**	05 56 06.5	-0.4
AXDP	**Jialang**	**4.27**	**284**	P	**Pn**	05 55 28.5	+0.2

*ASRS **06** 06:00:06.0±0.8, 53.°67N×86.°82E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 06:00:10.2±2.8, 53.°73N×86.°51E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=24.0km s-min=14.4km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**283**	I	I	06 07 00.0	
	baz=100,slow=318,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.03**	**283**	Pg	Pb	06 00 31.1	+0.3
	0.3nm,0.3s,baz=104,slow=15,SNR=2.1						
ZALV				Lg	Lg	06 00 42.4	
	0.6nm,0.3s,baz=104,slow=31,SNR=1.9						
KURBB	**Kurchatov Arra**	**5.81**	**241**	Pn	Pn	06 01 38.9	+1.4
	0.1nm,0.3s,baz=57,slow=14,SNR=3.6						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**7.45**	**203**	Pn	Pn	06 02 00.3	+0.3
	0.1nm,0.3s,baz=24,slow=14,SNR=2.5						
	0.1nm,0.3s						

*TAP **06** 06:01:56.6, 22.°98N×120.°55E, h18km, ML3.8, B*
ISC 06 06:01:56.9±0.8, 22.°98N±0.°01×120.°54E±0.°01, h18km±2km, n124, σ0§87/213, 16C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGT	**Liugui**	**0.10**	**85**	⇓*i*P	**Pg**	06 02 01.1	+0.4
SLGT				eS	**Sg**	06 02 03.9	+0.7
SGST	**Jiashian**	**0.10**	**22**	⇓*i*P	**Pg**	06 02 00.3	-0.4
SGST				S	**Sg**	06 02 03.5	+0.2
SCST	**Cishan**	**0.11**	**204**	*i* P	**Pg**	06 02 01.2	+0.5
SCST				*i* S	**Sg**	06 02 04.9	+1.6
CHN3	**Shinhua**	**0.19**	**299**	⇑P	**Pg**	06 02 02.9	+1.2
CHN3				eS	**Sg**	06 02 07.2	+2.2
TWM1	**Shoushan**	**0.19**	**214**	⇓P	**Pg**	06 02 02.7	+0.9
TWM1				eS	**Sg**	06 02 08.0	+2.8
SSD	**Sandimen**	**0.25**	**161**	⇑P	**Pb**	06 02 02.9	0.0
SSD				S	**Sb**	06 02 07.2	+0.5
SGLT	**Jiouru**	**0.26**	**190**	*eP*	**Pn**	06 02 04.1	-1.8
SGLT				eS	**Sn**	06 02 10.2	-1.2
WTP	**Ta-pu**	**0.27**	**14**	⇓P	**Pb**	06 02 03.6	+0.4
WTP				S	**Sb**	06 02 08.8	+1.4
SSHA	**Shanhua**	**0.28**	**303**	*eP*	**Pb**	06 02 04.4	+1.1
SSHA				eS	**Sn**	06 02 10.3	-1.6
STYH	**Taoyuan**	**0.28**	**49**	⇑*i*P	**Pb**	06 02 03.8	+0.3
STYH				S	**Sb**	06 02 08.8	+1.0
TWK	**Hsinying**	**0.28**	**350**	⇑P	**Pb**	06 02 03.9	+0.4
TWK				eS	**Sb**	06 02 09.2	+1.2
TAI1	**Yung-k'ang**	**0.29**	**281**	*eP*	**Pb**	06 02 04.5	+0.9
TAI1				eS	**Sn**	06 02 10.5	-1.7
TSMG	**Majia**	**0.29**	**161**	P	**Pb**	06 02 03.5	-0.2
TSMG				S	**Sb**	06 02 08.4	+0.3
SNJT	**Kaohsiung City**	**0.30**	**220**	*eP*	**Pn**	06 02 04.8	-1.6
TPUB	**Ta-pu**	**0.33**	**14**	P	**Pg**	06 02 03.8	-0.2
TPUB	**Ta-pu**	**0.33**	**14**	P	**Pb**	06 02 04.2	-0.1
TPUB	**Ta-pu**	**0.33**	**14**	S	**Sb**	06 02 10.1	+0.9
TPUB	**Ta-pu**	**0.33**	**14**	⇓P	**Pb**	06 02 04.3	0.0
TPUB				S	**Sb**	06 02 09.9	+0.8
MASBT	**Mashibuluo**	**0.38**	**167**	⇑P	**Pb**	06 02 04.9	-0.3
MASBT				S	**Sb**	06 02 10.0	-0.8
WSSB	**Gushan**	**0.43**	**217**	*eP*	**Pb**	06 02 06.8	+0.8
WSSB				eS	**Sb**	06 02 12.7	+0.5
ICHU	**Yijhu**	**0.45**	**327**	*eP*	**Pb**	06 02 06.7	+0.4
ICHU				eS	**Sn**	06 02 14.8	-1.2
TSCK	**Chigu Township**	**0.45**	**291**	*eP*	**Pb**	06 02 06.4	+0.1
TSCK				eS	**Sb**	06 02 13.8	+1.0
WCKO	**Fanlu**	**0.46**	**7**	*eP*	**Pb**	06 02 06.8	+0.3
WCKO				eS	**Sb**	06 02 14.0	+1.0
CHN8	**Yiju**	**0.47**	**320**	*eP*	**Pb**	06 02 06.6	-0.2
CHN8				eS	**Sn**	06 02 15.3	-1.3
ELDTW	**Lidau**	**0.48**	**65**	⇑P	**Pb**	06 02 07.1	+0.1
ELDTW				eS	**Sb**	06 02 14.3	+0.5
TWG	**Pinlang**	**0.52**	**108**	⇑P	**Pb**	06 02 08.0	+0.5
TWG				eS	**Sn**	06 02 16.0	-1.7
CHY	**Chiayi**	**0.52**	**348**	*eP*	**Pb**	06 02 08.0	+0.4
CHY				eS	**Sb**	06 02 16.0	+1.2
TWGBT	**Beinan**	**0.52**	**108**	P	**Pb**	06 02 07.9	+0.2
TWGBT	**Beinan**	**0.52**	**108**	S	**Sn**	06 02 17.0	-0.9
TWGBT	**Beinan**	**0.52**	**108**	P	**Pb**	06 02 08.0	+0.4
TWGBT	**Beinan**	**0.52**	**108**	S	**Sn**	06 02 16.8	-1.1
TWGBT	**Beinan**	**0.52**	**108**	⇑P	**Pb**	06 02 08.0	+0.4
TWGBT				eS	**Sb**	06 02 15.8	+1.0
ECL	**Taimali**	**0.54**	**135**	*eP*	**Pb**	06 02 07.8	-0.1
ECL				eS	**Sb**	06 02 15.9	+0.6
LONT	**Longtian**	**0.55**	**98**	*eP*	**Pb**	06 02 08.4	+0.5
LONT				eS	**Sn**	06 02 16.7	-1.9
ALS	**Alishan**	**0.58**	**25**	⇑P	**Pb**	06 02 08.7	+0.1
ALS				eS	**Sb**	06 02 17.7	+1.1
TTN	**Taitung**	**0.60**	**112**	*eP*	**Pn**	06 02 10.2	-0.3
WSL	**Shuilin Townsh**	**0.61**	**332**	P	**Pg**	06 02 09.4	+0.3
WSL				S	**Sn**	06 02 19.3	-0.7
SCZT	**Fangliau**	**0.61**	**173**	⇑P	**Pg**	06 02 09.0	-0.2
SCZT				S	**Sn**	06 02 20.4	+0.2
CHN5	**Tsauling**	**0.62**	**12**	⇓P	**Pg**	06 02 09.5	+0.1
CHN5				eS	**Sn**	06 02 19.4	-1.1
ECS	**Chishang**	**0.63**	**80**	P	**Pn**	06 02 10.3	-0.7
ECS				S	**Sn**	06 02 19.9	-0.8
EHD	**Haiduan**	**0.63**	**75**	⇑P	**Pg**	06 02 09.7	+0.1
EHD				eS	**Sb**	06 02 18.9	+1.0
WLCH	**Liuqiu**	**0.65**	**193**	*eP*	**Pn**	06 02 11.8	+0.6
WLCH				eS	**Sn**	06 02 23.6	+2.6
TWP	**Hsiaoliuchiu**	**0.66**	**195**	*eP*	**Pn**	06 02 11.7	+0.4
TWP				eS	**Sn**	06 02 23.4	+2.2
EAST	**Anshuo**	**0.66**	**155**	*eP*	**Pn**	06 02 10.3	-1.1
EAST				eS	**Sn**	06 02 20.8	-0.6
WGK	**Gukeng**	**0.70**	**2**	*eP*	**Pn**	06 02 11.3	-0.6
WGK				eS	**Sn**	06 02 22.3	0.0
WDLH	**Douliu**	**0.70**	**360**	*eP*	**Pg**	06 02 11.1	+0.3
WDLH				eS	**Sn**	06 02 22.1	-0.3
EDH	**Donghe**	**0.70**	**91**	*eP*	**Pn**	06 02 11.1	-0.9
EDH				eS	**Sn**	06 02 22.0	-0.3
TAW	**Tawu**	**0.70**	**152**	*eP*	**Pg**	06 02 10.9	+0.1
TAW				eS	**Sn**	06 02 21.1	-1.2
WSF	**Szhu**	**0.71**	**336**	*eP*	**Pg**	06 02 11.1	+0.1
WSF				eS	**Sn**	06 02 22.2	-0.4
WTK	**Tuku**	**0.71**	**349**	*eP*	**Pg**	06 02 11.1	+0.1
WTK				eS	**Sn**	06 02 21.7	-0.9
FULB	**Fuli**	**0.72**	**73**	⇑P	**Pn**	06 02 11.9	-0.4
FULB				eS	**Sn**	06 02 22.9	-0.1
WHYT	**Xinyi Township**	**0.76**	**22**	*eP*	**Pg**	06 02 12.0	0.0
WHYT				eS	**Sn**	06 02 23.1	-0.8
CHKT	**Chengkung**	**0.77**	**81**	*eP*	**Pn**	06 02 12.6	-0.2
CHKT				eS	**Sn**	06 02 24.8	+0.9
TWF1	**Yuli**	**0.79**	**62**	⇑P	**Pg**	06 02 12.3	0.0
TWF1				eS	**Sg**	06 02 23.1	+0.3
SLIU	**Shizi**	**0.80**	**163**	*eP*	**Pg**	06 02 12.3	-0.3
SLIU				eS	**Sn**	06 02 24.4	-0.4
EYUL	**Yuli**	**0.80**	**63**	*eP*	**Pg**	06 02 12.6	-0.1
EYUL				eS	**Sg**	06 02 23.6	+0.3
YULB	**Yu-li**	**0.81**	**60**	P	**Pg**	06 02 12.4	-0.3
YULB	**Yu-li**	**0.81**	**60**	P	**Pg**	06 02 12.7	0.0
YULB	**Yu-li**	**0.81**	**60**	⇑P	**Pg**	06 02 12.4	-0.3
YULB				eS	**Sg**	06 02 23.2	-0.2
CHKH	**Chenggong**	**0.81**	**75**	*eP*	**Pn**	06 02 13.0	-0.5
WDGT	**Dungji**	**0.86**	**289**	⇓P	**Pb**	06 02 12.4	-0.8
WDGT				eS	**Sb**	06 02 23.2	-1.2
SSLB	**Suanglung**	**0.89**	**25**	P	**Pb**	06 02 13.7	0.0
SSLB	**Suanglung**	**0.89**	**25**	S	**Sn**	06 02 27.0	+0.1
SSLB	**Suanglung**	**0.89**	**25**	P	**Pb**	06 02 13.8	0.0
SSLB	**Suanglung**	**0.89**	**25**	S	**Sg**	06 02 25.8	-0.2
SSLB	**Suanglung**	**0.89**	**25**	⇓P	**Pg**	06 02 13.9	-0.4
SSLB				eS	**Sn**	06 02 26.3	-0.6
EHY	**Hungye**	**0.89**	**54**	⇑P	**Pg**	06 02 14.0	-0.3
EHY				eS	**Sg**	06 02 26.0	0.0
EHYH	**Wanrong**	**0.90**	**55**	*eP*	**Pg**	06 02 14.2	-0.2
EHYH				eS	**Sn**	06 02 26.7	-0.4
WNT	**Mingjian**	**0.90**	**8**	*eP*	**Pg**	06 02 14.3	-0.2
WNT				eS	**Sn**	06 02 27.4	+0.2
ECBN	**Changbin**	**0.90**	**68**	*eP*	**Pn**	06 02 15.4	+0.7
LDUT	**Ludao**	**0.91**	**110**	*eP*	**Pg**	06 02 14.1	-0.6
RLNB	**Erlin**	**0.92**	**350**	*eP*	**Pb**	06 02 12.2	-2.1
RLNB				eS	**Sg**	06 02 26.9	-0.1
WRL	**Guolierlin Hig**	**0.93**	**351**	*eP*	**Pb**	06 02 14.3	-0.1
WRL				eS	**Sg**	06 02 27.2	0.0
SMLT	**Sun Moon Lake**	**0.95**	**20**	*eP*	**Pg**	06 02 15.2	-0.3
SMLT				eS	**Sn**	06 02 29.0	+0.3
TYC	**Yuchr**	**0.96**	**18**	*eP*	**Pg**	06 02 15.4	-0.2
TYC				eS	**Sn**	06 02 29.5	+0.8
SMST	**Manzhou Townsh**	**1.00**	**164**	*eP*	**Pn**	06 02 15.6	-0.4
SMST				eS	**Sn**	06 02 30.6	+0.9
PHUB	**P'eng-hu**	**1.03**	**301**	⇓P	**Pb**	06 02 14.8	-1.5
PHUB				eS	**Sb**	06 02 28.2	-1.4
VCHM	**Qimei**	**1.05**	**283**	⇓P	**Pb**	06 02 15.0	-1.5
VCHM				eS	**Sb**	06 02 29.5	-0.4
TWK1	**Hengchun**	**1.06**	**167**	*eP*	**Pg**	06 02 17.6	0.0
TWK1				eS	**Sg**	06 02 32.1	+0.6
WARBT	**Fenglin Townsh**	**1.07**	**47**	⇑P	**Pg**	06 02 17.1	-0.5
WARBT				eS	**Sg**	06 02 31.4	-0.3
TWKBT	**Hengchun**	**1.07**	**166**	*eP*	**Pn**	06 02 16.8	-0.2
TWKBT				eS	**Sb**	06 02 29.2	-1.3
PNG	**Penghu**	**1.08**	**303**	*eP*	**Pb**	06 02 15.5	-1.5
PNG				eS	**Sb**	06 02 29.3	-1.4
WCHH	**Zhanghua**	**1.09**	**1**	*eP*	**Pb**	06 02 16.7	-0.6
WCHH				eS	**Sg**	06 02 32.8	+0.3
WCS	**Beigang Elemen**	**1.12**	**18**	*eP*	**Pg**	06 02 18.0	+0.7
WCS				eS	**Sg**	06 02 33.7	+0.3
OWD	**Renai**	**1.13**	**31**	*eP*	**Pg**	06 02 18.2	-0.6
OWD				eS	**Sg**	06 02 34.4	+0.8
TSEB	**Hengchuen, Pin**	**1.13**	**163**	*eS*	**Sg**	06 02 34.3	+0.7
WUSB	**Renai**	**1.13**	**28**	*eP*	**Pb**	06 02 18.1	0.0
WUSB				eS	**Sg**	06 02 34.4	+0.5
ESL	**Shilin**	**1.16**	**45**	*eP*	**Pg**	06 02 18.9	-0.6
ESL				eS	**Sg**	06 02 35.2	+0.4
TCU	**Taichung**	**1.16**	**6**	*eS*	**Sg**	06 02 34.4	-0.4
SHUL	**Shoufeng**	**1.23**	**49**	*eP*	**Pg**	06 02 20.5	-0.3
SHUL	

Q09A Sg Sb 06 13 23.5 -0.6
KVN Kaiserville 0.88 348 Pg 06 13 11.4 -0.8
KVN Sg 06 13 23.5 -0.2
KVN IAML 06 13 28.3
comp=E,5μm,0.7s
LCH Last Change Ra 0.97 169 Pg 06 13 13.6 -0.2
MCBM Casa Benchmark 0.98 237 Pg 06 13 13.9 -0.1
GMN Gold Mountain 1.01 151 Pg 06 13 14.4 -0.2
MDYM Dry Creek 1.05 240 Pg 06 13 15.2 -0.1
MDPB Devils Postpil 1.11 240 Pg 06 13 15.6 -0.9
MDPB IAML 06 13 31.1
comp=E,9μm,0.7s
MDPB IAML 06 13 31.1
comp=N,7μm,0.6s
TIN Tinemaha, Big 1.17 194 Pg 06 13 17.2 -0.4
TIN IAML 06 13 38.8
comp=E,9μm,0.8s
WAKR Walker 1.27 285 Pg 06 13 18.5 -1.2
WAKR IAML 06 13 42.0
comp=N,3μm,0.6s
KCC Kaiser Creek 1.44 234 Pn 06 13 21.5 -0.3
PNTR Pine Nut 1.63 304 Pn 06 13 23.8 -0.9
WCT Wildcat Mounta 1.71 144 Pn 06 13 25.3 -0.3
WCT IAML 06 13 52.0
comp=N,3μm,0.9s
WCT IAML 06 13 52.8
comp=E,4μm,0.6s
CWC Cottonwood Cre 1.75 186 Pn Pn 06 13 26.2 -0.1
S11A Rachel 1.76 107 Pn 06 13 26.2 -0.3
S11A IAML 06 13 59.2
comp=E,4μm,0.9s
TPNV Topopah Spring 1.78 133 Pn 06 13 26.3 -0.4
TPNV IAML 06 14 01.4
comp=E,4μm,1.4s
PAHR Pah Rah Range 1.93 323 Pn 06 13 28.2 -0.5
PAHR IAML 06 13 56.9
comp=N,2μm,0.7s
SDH Striped Hills 1.96 141 Pn 06 13 29.1 0.0
CMB Columbia Colle 1.99 266 Pn 06 13 28.7 -0.8
CMB IAML 06 14 03.4
comp=N,1μm,0.8s
MPK Martis Peak 2.02 304 Pn 06 13 29.3 -0.8
AMDNV Amargosa 2.14 143 Pn 06 13 32.0 +0.5
PEAR Peavine Mounta 2.17 312 Pn 06 13 32.0 -0.1
JRC2 Joshua Ridge 2.20 179 Pn 06 13 33.0 +0.5
GWY Greenwater Val 2.21 154 Pn 06 13 32.4 -0.2
GWY IAML 06 14 07.4
comp=E,2μm,1.1s
GWY IAML 06 14 20.2
comp=N,2μm,1.2s
DONR Donner Summit 2.24 302 Pn 06 13 33.9 +0.8
QSM Queen of Sheba 2.35 160 Pn 06 13 34.3 -0.1
QSM IAML 06 14 13.8
comp=N,988nm,0.8s
QSM IAML 06 14 17.0
comp=E,1μm,0.7s
PRN Pahroc Range 2.36 108 Pn Pn 06 13 34.4 -0.3
PRN IAML 06 14 20.1
comp=N,2μm,1.2s
PRN IAML 06 14 27.9
comp=E,2μm,0.8s
VES Vestal, Richgr 2.53 203 Pn 06 13 38.1 +1.3
VES IAML 06 13 51.6
comp=N,1μm,0.7s
VES IAML 06 14 23.0
comp=E,1μm,0.9s
AFDM Forest Hills D 2.55 288 Pn 06 13 36.8 -0.4
AFDM IAML 06 14 18.7
comp=E,658nm,0.6s
ISA Isabella, Lake 2.56 191 Pn 06 13 37.8 +0.4
BEKR Beckworth 2.57 312 Pn 06 13 37.6 +0.1
BEKR IAML 06 14 18.4
comp=N,684nm,0.7s
CCCA Chr Cany lake 2.69 171 Pn 06 13 39.2 +0.2
BBGB Big Mountain B 2.99 239 Pn Pn 06 13 44.0 +0.7
GSC Goldstone, Bar 3.00 163 IAML 06 14 37.6
comp=N,750nm,1.2s
GSC IAML 06 14 45.0
comp=E,812nm,0.9s
PKD Bear Valley Ra 3.09 225 Pn Pn 06 13 45.2 +0.6
PKD IAML 06 14 41.8
comp=E,1μm,1.1s
PKD IAML 06 14 42.8
comp=N,771nm,1.4s
MHC Mount Hamilton 3.11 255 Pn Pn 06 13 45.6 +0.7
MHC IAML 06 14 36.8
comp=N,1μm,1.6s
MHC IAML 06 14 39.2
comp=E,1μm,1.1s
ORV Oroville 3.15 297 Pn Pn 06 13 45.1 -0.3
ORV Pb 06 13 45.5 -6.1
PSUT Pine Spring 3.17 82 Pn Pn 06 13 48.2 +2.3
PSUT IAML 06 14 37.2
comp=N,727nm,0.5s
PSUT IAML 06 14 40.9
comp=E,1μm,0.5s
SAO San Andreas Ge 3.18 245 Pn Pn 06 13 45.8 0.0
SUTB Sutter Butte 3.24 290 Pn 06 13 46.6 0.0
SUTB IAML 06 14 39.7
comp=E,960nm,0.8s
SUTB IAML 06 14 47.2
comp=N,1μm,1.0s
ELK Elko 3.27 38 Pn Pn 06 13 47.0 -0.2
comp=N,12nm,0.3s,baz=145,slow=13,SNR=12
ELK Pg Pg 06 13 55.5 -2.3
comp=N,44nm,0.3s,baz=250,slow=11,SNR=10
ELK Sn Sn 06 14 26.7 +0.2
comp=N,43nm,0.3s,baz=276,slow=5.8,SNR=5.9
ELK Lg Lg 06 14 38.0
comp=N,140nm,0.3s,baz=236,slow=8.0,SNR=5.5
comp=N,36nm,0.4s
ELK Elko 3.27 38 Pn Pn 06 13 47.0 -0.2
MTPC Mountain Pass 3.27 145 Pn Pn 06 13 48.3 +1.1
MTPC IAML 06 14 43.9
comp=N,521nm,1.2s
MTPC IAML 06 14 48.4
comp=E,640nm,1.2s
ICU Indian Springs 3.30 107 Pn 06 13 47.2 -0.3
JRSC Jasper Ridge 3.55 259 IAML 06 14 48.1
comp=E,443nm,1.2s
JRSC IAML 06 15 14.6
comp=N,279nm,1.2s
CVS Carmenet Viney 3.62 274 Pn 06 13 51.1 -0.7
CVS IAML 06 14 50.8
comp=N,358nm,1.1s
CVS IAML 06 14 57.5
comp=E,286nm,1.1s
OSI Osito Audit: C 3.63 191 IAML 06 14 56.6
comp=E,378nm,1.1s
OSI IAML 06 15 02.2
comp=N,296nm,1.0s
O03E Paynes Creek 3.71 306 Pn 06 13 53.9 +0.8
O03E IAML 06 15 03.3
comp=N,557nm,1.2s
SZCU Shurtz Canyon 3.83 97 Pn 06 13 54.9 0.0
LCMT Little Creek M 3.85 106 Pn 06 13 54.9 -0.3
MCCM Marconi Confer 3.95 271 IAML 06 15 00.2
comp=E,326nm,1.8s
MCCM IAML 06 15 20.1
comp=N,443nm,1.1s
KNB Kanab 4.17 105 Pn 06 13 60.0 +0.4
N02D Trinity Center 4.66 308 IAML 06 15 32.7
comp=N,176nm,1.1s
N02D IAML 06 15 43.0
comp=E,161nm,1.1s
PFO Pinyon Flats O 4.70 166 Pn Pn 06 14 06.8 -0.1
comp=E,1.2nm,0.3s,baz=359,slow=13,SNR=11
PFO Pg Pb 06 14 17.3 -0.8
comp=E,2.9nm,0.3s,baz=328,slow=8.2,SNR=30
PFO Sn Sn 06 15 00.9 -0.9
comp=E,1.8nm,0.3s,baz=2.3,slow=4.2,SNR=3.9
PFO Lg Lg 06 15 22.2
comp=E,4.8nm,0.3s,baz=279,slow=19,SNR=7.9
comp=E,4.4nm,0.3s
PFO Pinyon Flats O 4.70 166 IAML 06 15 30.7
comp=E,180nm,1.9s
YBH Yreka Blue Hor 5.14 315 Pn Pn 06 14 13.8 +1.1
comp=E,1.1nm,0.3s,baz=115,slow=5.4,SNR=13
YBH Lg Lg 06 15 33.4
comp=E,0.6nm,0.3s,baz=263,slow=21,SNR=3.5
YBH LR LR 06 16 36.6
comp=E,277nm,20.9s,baz=142,slow=43
comp=E,6.3nm,0.7s
BLYC Blythe 5.19 148 IAML 06 15 46.9
comp=N,222nm,1.2s
PDAR Pinedale Array 7.81 52 Pn Pn 06 14 53.0 +3.4
comp=N,0.2nm,0.3s,baz=233,slow=12,SNR=8.8
PDAR Lg Lg 06 16 58.3
comp=N,1.4nm,0.3s,baz=208,slow=18,SNR=8.9
PDAR LR LR 06 17 54.8
comp=N,154nm,19.2s,baz=230,slow=38
comp=N,1.4nm,0.7s
ANMO Albuquerque 9.73 106 Pn Pn 06 15 18.7 +2.8
comp=N,0.1nm,0.3s,baz=297,slow=12,SNR=2.3
ANMO Pg 06 15 49.2
comp=N,0.1nm,0.3s,baz=291,slow=9.0,SNR=6.6
ANMO Lg Lg 06 18 01.8
comp=N,0.1nm,0.3s,baz=154,slow=22,SNR=1.8
ANMO LR LR 06 19 25.0
comp=N,277nm,18.3s,baz=286,slow=40
comp=N,0.6nm,0.6s
NEW Newport 10.09 3 Pn Pn 06 15 23.6 +2.9
comp=N,0.1nm,0.3s,baz=182,slow=13,SNR=6.7
NEW Lg Lg 06 18 07.0
comp=N,0.1nm,0.3s,baz=65,slow=6,SNR=1.5
NEW LR LR 06 19 38.9
comp=N,119nm,18.4s,baz=185,slow=40
comp=N,2.7nm,0.9s
TXAR Lajitas Array 14.73 123 Pn P 06 16 28.6 -1.9
baz=299,slow=8.5,SNR=9.8
TXAR Lg Lg 06 20 36.6
baz=274,slow=34,SNR=3.1
TXAR LR LR 06 22 45.3
comp=N,228nm,20.5s,baz=300,slow=40
comp=N,4.0nm,1.2s
EDM Edmonton 15.36 10 IAmb IAmb 06 16 39.2
comp=Z,10nm,0.9s
LPIG La Paz 15.45 153 LR LR 06 22 51.5
comp=Z,153nm,18.7s,baz=353,slow=39
OZNA Ozona 15.57 113 IAmb IAmb 06 16 43.2
comp=Z,13nm,1.0s
BBB Bella Bella 15.73 336 LR LR 06 22 52.7
comp=Z,153nm,20.3s,baz=72,slow=38
TUL3 Leonard 17.77 91 IAmb IAmb 06 17 38.3
comp=Z,7.9nm,0.3s
ULM Lac du Bonnet 19.76 45 P Pn 06 17 26.9 -0.4
comp=Z,0.2nm,0.3s,baz=224,slow=9.0,SNR=3.4
comp=Z,1.3nm,0.7s
MIAR Mount Ida 19.88 93 P P 06 17 25.9 -1.3
MIAR IAmb IAmb 06 17 32.0
comp=Z,17nm,1.4s
DLBC Dease Lake 21.75 343 P P 06 17 49.4 +2.1
comp=Z,0.5nm,0.5s,baz=142,slow=16,SNR=3.5
comp=Z,0.5nm,0.5s
YKA Yellowknife Ar 24.42 4 P P 06 18 15.5 +1.3
comp=Z,0.4nm,0.7s,baz=182,slow=8.5,SNR=6.2
comp=Z,0.4nm,0.7s
TKL Tuckaleechee C 27.29 85 LR LR 06 30 01.2
comp=Z,185nm,18.1s,baz=286,slow=38
CMIG Matias Romero 29.11 130 LR LR 06 32 48.9
comp=Z,99nm,18.4s,baz=319,slow=41
SADO Sadowa 29.54 65 LR LR 06 31 22.8
comp=Z,66nm,20.1s,baz=290,slow=38
INK Inuvik 31.39 349 LR LR 06 32 27.1
comp=Z,83nm,20.8s,baz=184,slow=37
ILAR Eielson Array 31.62 337 P P 06 19 20.2 +1.6
comp=Z,0.4nm,0.7s,baz=153,slow=7.7,SNR=9.5
ILAR LR LR 06 31 19.8
comp=Z,39nm,20.9s,baz=204,slow=35
comp=Z,0.4nm,0.7s
APG El Apazote 33.44 126 LR LR 06 33 37.4
comp=Z,7.0nm,20.5s,baz=98,slow=37
FRB Frobisher Bay 38.75 33 LR LR 06 37 31.5
comp=Z,70nm,20.5s,baz=285,slow=38
JTS Las Juntas Ie 40.51 125 LR LR 06 38 32.6
comp=Z,71nm,18.3s,baz=303,slow=38
SFJD Kangerlussuaq 46.70 30 LR LR 06 41 03.6
comp=Z,49nm,20.1s,baz=258,slow=36
SHEM Shemya Is, Ala 48.09 311 LR LR 06 38 50.2
comp=Z,23nm,21.4s,baz=152,slow=32
SDV Santo Domingo 51.45 112 LR LR 06 47 03.1
comp=Z,36nm,20.0s,baz=249,slow=40
BORG Borgarnes 58.83 30 LR LR 06 48 36.8
comp=Z,60nm,18.1s,baz=292,slow=36
SPITS Spitsbergen Ar 60.72 10 LR LR 06 49 50.8
comp=Z,42nm,18.8s,baz=298,slow=36
MDP Montagnes des 67.46 102 LR LR 06 56 12.7
comp=Z,39nm,20.1s,baz=176,slow=38
ARCES ARCESS Array B 69.28 13 LR LR 06 57 01.7
comp=Z,26nm,18.0s,baz=22,slow=38
NOA NORSAR Array B 72.78 23 LR LR 06 56 52.0
comp=Z,23nm,19.3s,baz=195,slow=36
BVAR Borovoye Array 88.88 355 P P 06 25 52.5 +2.3
comp=Z,0.4nm,0.5s,baz=22,slow=4.7,SNR=3.6
comp=Z,0.4nm,0.5s
HHC Hu-ho-hao-te 89.29 325 eP P 06 25 49.2 -3.3
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,58nm,4.8s
KURK Kurchatov 90.30 350 P P 06 25 59.4 +2.6
KURBB Kurchatov Arra 90.40 350 P P 06 25 59.4 +2.1
comp=Z,0.2nm,0.3s,baz=15,slow=5.0,SNR=1.9
comp=Z,0.2nm,0.3s
NJ2 Nanjing 92.41 315 eP P 06 26 06.1 -0.9
NJ2 pmax pmax
comp=Z,20nm,0.5s

*IDC **06** 06:21:18.3±1.3,3.17N×126.60E,h0km,mb3.9/8, mbtmp3.9/8,MS3.1/2,Error ellipse: s-maj=125.6km s-min=15.5km az=69.0*
*DJA **06** 06:21:23.8±1.2,3.7N±6.1×12.7E±.1°,h29km±18km,M4.2/12, mB5.7/2,mb4.6/6,MLv4.0/12,Mw(mB)5.2/2*
*NEIC **06** 06:21:24.2±0.5,3.2N±0.1×126.67E±0.09,h39km±9km, mb4.2/13,Error ellipse: s-maj=18.2km s-min=10.1km az=208.0*
ISC 06 06:21:23.4±0.8,3.20N±0.09×126.64E±0.08,h35km,n37, σ0.97/37,mb4.1/14,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.21**	**293**	P	**Pn**	**06 21 43.8**	**0.0**
SGSI				S	**Sn**	**06 21 58.6**	**-0.4**
GAMI	**Galela, Maluku**	**1.78**	**140**	P	**Pn**	**06 21 53.8**	**+2.2**
MNI	**Manado**	**2.51**	**226**	P	**Pn**	**06 22 03.3**	**+1.6**
TNTI	**Ternate**	**2.52**	**163**	Pn	**Pn**	**06 22 03.0**	**+1.1**
GTOI	**Gorontalo**	**4.43**	**235**	P	**Pn**	**06 22 29.4**	**+1.2**
SANI	**Sanana**	**5.26**	**187**	P	**Pn**	**06 22 41.2**	**+1.7**
	0.2nm49nm,0.8s						
TOLI2	**Tolitoli**	**6.21**	**251**		**Pn**	**06 22 53.1**	**+0.4**
FAKI	**Fak Fak**	**8.27**	**137**	Pn	**Pn**	**06 23 20.1**	**-0.8**
SAUI	**Saumlaki**	**12.04**	**157**	P	**Pn**	**06 24 13.8**	**+1.1**
MTN	**Manton Dam**	**16.55**	**164**	Pn	**Pn**	**06 25 12.7**	**-0.2**
MTN				IAmb	IAmb	06 25 50.6	
	comp=Z,46nm,1.4s						
GUMO	**Guam**	**20.76**	**59**	LR	LR	06 33 23.7	
	comp=Z,29nm,20.0s,baz=176,slow=35						
FITZ	**Fitzroy Crossi**	**21.19**	**183**	P	**P**	**06 26 05.3**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=0.0,slow=11,SNR=5.7						
	comp=Z,4.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.19**	**183**	P	**P**	**06 26 04.7**	**-1.2**
WB0	**Warramunga Arr**	**24.06**	**162**	P	**P**	**06 26 35.1**	**-0.5**
WRA	**Warramunga Arr**	**24.21**	**162**	P	**P**	**06 26 36.6**	**-0.4**
	comp=Z,4.4nm,0.6s,baz=342,slow=9.7,SNR=27						
	comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**24.21**	**162**	P	**P**	**06 26 35.4**	**-1.5**
WB2	**Warramunga Arr**	**24.22**	**162**	P	**P**	**06 26 36.5**	**-0.6**
WB2				IAmb	IAmb	06 26 53.2	
	comp=Z,11nm,1.1s						
WR8	**Warramunga Arr**	**24.27**	**162**	P	**P**	**06 26 36.9**	**-0.6**
WR8				IAmb	IAmb	06 27 11.6	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**27.63**	**166**	P	**P**	**06 27 05.9**	**-2.0**
ASAR	**Alice Springs**	**27.63**	**166**	P	**P**	**06 27 07.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=343,slow=7.6,SNR=11						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**27.63**	**166**	P	**P**	**06 27 06.1**	**-1.8**
FORT	**Forrest**	**33.82**	**178**	P	**P**	**06 28 01.1**	**-1.3**
BBOO	**Buckleboo**	**36.91**	**167**	P	**P**	**06 28 28.4**	**-0.6**
STKA	**Stephens Creek**	**37.67**	**159**	P	**P**	**06 28 35.5**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=327,slow=9.5,SNR=4.7						
	comp=Z,2.9nm,0.8s						
MK31	**Makanchi Array**	**57.94**	**325**	P	**P**	**06 31 12.4**	**+0.2**
MK31				IAmb	IAmb	06 31 46.3	
	comp=Z,2.5nm,1.4s						
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**06 31 12.3**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=120,slow=8.5,SNR=10						
MKAR				PcP	**PcP**	**06 32 04.7**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=108,slow=4.7,SNR=2.6						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**06 31 12.5**	**+0.2**
YAK	**Yakutsk**	**58.73**	**2**	LR	LR	06 56 45.8	
	comp=Z,35nm,21.4s,baz=204,slow=36						
ZAA0	**Zalesovo Array**	**61.01**	**333**	P	**P**	**06 31 32.6**	**-0.7**
ZAA0				IAmb	IAmb	06 31 47.9	
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**61.01**	**333**	P	**P**	**06 31 33.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=116,slow=6.6,SNR=2.2						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**61.01**	**333**	P	**P**	**06 31 33.6**	**+0.4**
KURBB	**Kurchatov Arra**	**62.13**	**328**	P	**P**	**06 31 40.9**	**0.0**
	comp=Z,1.1nm,0.6s,baz=128,slow=6.5,SNR=14						
	comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**62.13**	**328**	P	**P**	**06 31 40.9**	**0.0**
KURK				IAmb	IAmb	06 31 42.4	
	comp=Z,2.3nm,0.7s						
BVAR	**Borovoye Array**	**67.71**	**327**	P	**P**	**06 32 18.0**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=134,slow=6.2,SNR=5.1						
	comp=Z,0.9nm,0.6s						
AB31	**Akbulak array**	**72.50**	**321**	P	**P**	**06 32 46.5**	**-0.1**
AB31				IAmb	IAmb	06 32 47.6	
	comp=Z,1.0nm,0.8s						
ABKAR	**Akbulak array**	**72.50**	**321**	P	**P**	**06 32 46.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**123.00**	**288**	PKP	**PKiKP**	**06 40 17.6**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=45,slow=2.3,SNR=4.1						

*IDC **06** 06:41:12.4±6.6,24.70S×179.91W,h456km±68km,mb3.3/6, mbtmp4.2/7,Error ellipse: s-maj=41.3km s-min=24.9km az=38.0*
ISC 06 06:41:15.8±1.1,24.9S±0.1×180.0W±0.2,h496km,n9, σ1.9s29/10,mb3.6/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.53**	**190**	P	**P**	**06 44 10.8**	**+0.4**
	28nm,1.1s,baz=21,slow=11,SNR=2.6						
URZ				S	**S**	**06 46 32.2**	**-2.3**
	34nm,1.2s,baz=339,slow=5.4,SNR=1.5						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**06 47 21.1**	**+0.2**
	1.2nm,0.3s,baz=187,slow=16,SNR=4.6						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**41.92**	**262**	P	**P**	**06 48 22.2**	**-0.3**
	1.7nm,0.6s,baz=91,slow=7.3,SNR=36						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**42.39**	**267**	P	**P**	**06 48 25.6**	**-0.7**
	3.9nm,0.4s,baz=99,slow=6.8,SNR=87						
	3.9nm,0.4s						
QSPA	**South Pole Qui**	**65.17**	**180**	P	**P**	**06 51 08.5**	**+1.3**
	0.5nm,0.6s,baz=0.0,slow=1.0,SNR=5.2						
	0.5nm,0.6s						
MAW	**Mawson**	**76.82**	**200**	P	**P**	**06 52 16.8**	**+1.3**
	1.0nm,0.5s,baz=194,slow=4.2,SNR=2.4						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**90.93**	**58**	P	**P**	**06 53 25.5**	**-1.0**
	0.6nm,1.0s,baz=244,slow=5.1,SNR=1.2						
	0.6nm,1.0s						
HFS	**Hagfors**	**143.55**	**349**	PKP	**PKPdf**	**06 59 52.1**	**-1.0**
	1.4nm,0.4s,baz=64,slow=3.4,SNR=8.1						
AKASG	**Malin Array Be**	**145.84**	**326**	PKPbc	**PKPbc**	**06 59 59.3**	**+0.4**
	0.6nm,0.4s,baz=46,slow=4.2,SNR=7.0						

NNC 06 06:48:11.6±1.2,43.94N×87.63E,h5km±4km,mb3.8, mpv3.4,6C-2D,Error ellipse: s-maj=9.1km s-min=7.2km az=60.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**4.01**	**332**	Pg	Pn	06 49 14.5	+0.9
	11nm,0.3s						
ZSN				Lg	Lg	06 50 03.1	
	7.6nm,0.2s						
MK31	**Makanchi Array**	**4.72**	**309**	⇑Pn	Pn	06 49 23.6	+0.2
	0.6nm,0.5s,baz=122,slow=14,SNR=17						
MK31				⇓Pg	Pb	06 49 37.5	+2.7
	0.8nm,0.5s,baz=128,slow=17,SNR=5.3						
MK31				⇑Sn	Sn	06 50 19.4	+0.9
	1.9nm,0.7s,baz=30,slow=9.6,SNR=4.1						
MK31				⇓Lg	Lg	06 50 41.5	
	4.2nm,0.8s,baz=131,slow=25,SNR=4.2						
MAKZ	**Makanchi**	**4.91**	**308**	⇑Pn	Pn	06 49 26.1	+0.2
	1.5nm,0.5s						
MAKZ				⇑Lg	Lg	06 50 47.9	
	7.3nm,0.6s						
DJR	**Jarkent**	**5.65**	**277**	Pg	Pb	06 49 54.0	+3.3
	3.5nm,0.4s						
DJR				Lg	Lg	06 51 10.8	
	4.0nm,0.8s						
PDGK	**Podgornoye**	**5.94**	**267**	⇑Pn	Pn	06 49 40.1	0.0
	2.9nm,0.6s						
PDGK				⇑Lg	Lg	06 51 22.4	
	6.9nm,0.8s						
SHLS	**Shalkode**	**5.98**	**265**	Pg	Pb	06 49 55.1	-1.2
	5.2nm,0.2s						
SHLS				Lg	Lg	06 51 12.8	

*ASRS **06** 06:50:09.0±1.1,53.71N×88.08E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 06:50:11.1±4.0,53.68N×88.08E,h0km,mbtmp2.8/2, ML2.0/1,Error ellipse: s-maj=38.6km s-min=19.6km az=48.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.95**	**279**	I	I	07 02 20.0	
	0.2nm,1.0s,baz=94,slow=317,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.95**	**279**	Pg	Pb	06 50 46.8	-0.8
	0.7nm,0.3s,baz=99,slow=13,SNR=18						
ZALV				Lg	Lg	06 51 12.4	
	2.1nm,0.3s,baz=98,slow=27,SNR=13						
KURBB	**Kurchatov Arra**	**6.63**	**246**	Pn	Pn	06 51 51.1	+1.5
	baz=62,slow=14,SNR=3.3						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.83**	**211**	Pn	Pn	06 52 06.5	+0.3
	0.4nm,0.6s,baz=23,slow=12,SNR=0.7						

*ASRS **06** 07:00:17.0±2.1,54.29N×86.80E,h0km,M2.8(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 07:00:15.8±3.0,54.38N×87.09E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=25.8km s-min=20.4km az=37.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.41**	**253**	I	I	07 08 10.0	
	baz=72,slow=313,SNR=6.1						
ZALV	**Zalesovo Beam**	**1.41**	**253**	Pg	Pn	07 00 40.9	-1.7
	1.4nm,0.3s,baz=72,slow=17,SNR=12						
ZALV				Lg	Lg	07 01 00.8	
	1.9nm,0.3s,baz=75,slow=24,SNR=4.8						
KURBB	**Kurchatov Arra**	**6.44**	**238**	Pn	Pn	07 01 52.4	+0.6
	0.1nm,0.3s,baz=53,slow=14,SNR=7.9						
KURBB				Sn	Sn	07 03 05.8	-0.2
	baz=44,slow=20						
KURBB				Lg	Lg	07 03 39.7	
	baz=52,slow=30,SNR=4.4						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**8.18**	**204**	Pn	Pn	07 02 17.0	+1.2
	0.1nm,0.3s,baz=28,slow=12,SNR=5.2						
	0.2nm,0.3s						

*ASRS **06** 07:10:47.0±1.5,53.48N×87.37E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 07:10:49.7±3.7,53.44N×87.62E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=36.6km s-min=17.2km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.74**	**288**	I	I	07 20 50.0	
	baz=106,slow=318,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.74**	**288**	Pg	Pn	07 11 19.9	-1.3
	1.1nm,0.3s,baz=109,slow=14,SNR=8.0						
ZALV				Lg	Lg	07 11 45.5	
	0.8nm,0.3s,baz=108,slow=23,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.28**	**247**	Pn	Pn	07 12 24.5	+1.1
	baz=64,slow=14,SNR=2.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.48**	**209**	Pn	Pn	07 12 41.2	+1.1
	0.1nm,0.3s,baz=25,slow=13,SNR=3.6						
	0.5nm,0.7s						

*IDC **06** 07:33:27.7±2.1,15.89N×96.16W,h0km,mb3.5/5, mbtmp3.5/7,ML3.1/3,MS3.1/6,Error ellipse: s-maj=37.2km*

s-min=22.2km az=10.0
*MEX **06** 07:33:37.5±0.6, 16°.02N×95°.96W, h53^{km}±6^{km}, MD4.3*
ISC 06 07:33:35.5±0.8, 15°.99N±0°.04×95°.94W±0°.03, h56^{km}±9^{km}, n58, σ1^{s}68/88, mb3.6/5, MS3.3/5, 1D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.27**	**216**	*i P*	**Pn**	**07 33 45.2**	**+0.2**
HUIG				*eS*	**Sn**	**07 33 51.7**	**-0.1**
PEIG	**Puerto Escondi**	**1.16**	**270**	*eP*	**Pn**	**07 33 55.7**	**+0.1**
PEIG				*eS*	**Sn**	**07 34 10.6**	**+0.1**
OXLC	**Oaxaca**	**1.29**	**326**	*eP*	**Pn**	**07 33 57.3**	**-0.2**
OXLC				*eS*	**Sn**	**07 34 12.7**	**-1.3**
OXBJ	**Oaxaca**	**1.31**	**325**	*eP*	**Pn**	**07 33 57.4**	**-0.3**
OXBJ				*eS*	**Sn**	**07 34 13.3**	**-1.0**
VHO	**Vista Hermosa**	**1.32**	**325**	*eP*	**Pn**	**07 33 57.6**	**-0.3**
VHO				*eS*	**Sn**	**07 34 13.1**	**-1.4**
CMIG	**Matias Romero** 109nm,0.3s,baz=230,slow=14,SNR=1057	**1.49**	**43**	Pg	**Pn**	**07 33 59.0**	**-1.0**
CMIG				Lg	Lg	07 34 17.4	
	216nm,0.3s,baz=150,slow=20,SNR=18						
CMIG				LR	LR	07 34 44.6	
	comp=Z,400nm,19.5s,baz=178,slow=45						
CMIG	**Matias Romero**	**1.49**	**43**	*i P*	**Pn**	**07 33 59.1**	**-0.9**
CMIG				*eS*	**Sn**	**07 34 17.2**	**-1.3**
NEUV	**Arroyo Zacate**	**1.72**	**4**	*eP*	**Pn**	**07 34 02.7**	**-0.3**
NEUV				*eS*	**Sn**	**07 34 23.8**	**-0.1**
YOIG	**Yosondua**	**1.77**	**299**	*eP*	**Pn**	**07 34 04.9**	**+1.0**
YOIG				*eS*	**Sn**	**07 34 24.6**	**-0.9**
CARR	**Arriaga**	**1.97**	**82**	*eP*	**Pn**	**07 34 06.5**	**+0.1**
CARR				*eS*	**Sn**	**07 34 30.4**	**+0.4**
TXIG	**Tlaxiaco**	**2.15**	**306**	*eP*	**Pn**	**07 34 11.0**	**+1.7**
TXIG				*eS*	**Sn**	**07 34 34.4**	**-0.7**
TOIG	**Toxpalan**	**2.35**	**333**	*eP*	**Pn**	**07 34 13.4**	**+1.6**
TOIG				*eS*	**Sn**	**07 34 38.8**	**-0.9**
HLIG	**Huajuapan de L**	**2.56**	**316**	*eP*	**Pn**	**07 34 14.9**	**+0.2**
HLIG				*eS*	**Sn**	**07 34 44.3**	**-0.4**
TPIG	**Tehuac#an**	**2.77**	**331**	*eP*	**Pn**	**07 34 18.9**	**+1.3**
TPIG				*eS*	**Sn**	**07 34 50.7**	**+0.7**
TGIG		**2.82**	**73**	*eP*	**Pn**	**07 34 19.2**	**+1.0**
TGIG				*eS*	**Sn**	**07 34 52.3**	**+1.4**
FTIG	**Fresnillo de T**	**2.83**	**313**	*eP*	**Pn**	**07 34 20.1**	**+1.6**
FTIG				*eS*	**Sn**	**07 34 51.5**	**0.0**
TLIG	**Tlapa**	**2.96**	**302**	*eP*	**Pn**	**07 34 22.6**	**+2.4**
TLIG				*eS*	**Sn**	**07 34 53.8**	**-0.8**
CRIG	**Cruz Grande**	**3.15**	**284**	*eP*	**Pn**	**07 34 23.6**	**+0.9**
CRIG				*eS*	**Sn**	**07 34 55.9**	**-3.2**
PATR	**El Naranjo**	**3.68**	**103**	*eP*	**Pn**	**07 34 31.5**	**+1.4**
PATR				*eS*	**Sn**	**07 35 08.4**	**-3.9**
DAIG	**Los Arroyos**	**3.70**	**287**	*eP*	**Pn**	**07 34 31.2**	**+0.9**
DAIG				*eS*	**Sn**	**07 35 11.7**	**-1.0**
THIG		**3.70**	**106**	*eP*	**Pn**	**07 34 31.2**	**+1.0**
THIG				*eS*	**Sn**	**07 35 12.5**	**-0.2**
PAVE	**Pavencul**	**3.71**	**102**	*eP*	**Pn**	**07 34 32.9**	**+2.3**
PAVE				*eS*	**Sn**	**07 35 12.2**	**-1.0**
LVIG	**Laguna Verde**	**3.74**	**353**	*eP*	**Pn**	**07 34 30.9**	**+0.1**
LVIG				*eS*	**Sn**	**07 35 11.7**	**-1.8**
CHUJ	**Union Juarez**	**3.80**	**103**	*eP*	**Pn**	**07 34 32.9**	**+1.1**
CHUJ				*eS*	**Sn**	**07 35 14.0**	**-1.4**
MEIG	**Mezcala**	**4.01**	**299**	*eP*	**Pn**	**07 34 38.3**	**+3.7**
MEIG				*eS*	**Sn**	**07 35 20.2**	**-0.2**
YAIG	**Yautepec**	**4.13**	**314**	*eP*	**Pn**	**07 34 38.2**	**+1.9**
YAIG				*eS*	**Sn**	**07 35 24.1**	**+0.8**
PLIG	**Platanillo**	**4.16**	**306**	*eP*	**Pn**	**07 34 38.5**	**+1.9**
PLIG				*eS*	**Sn**	**07 35 23.5**	**-0.5**
CAIG	**El Cayaco**	**4.28**	**285**	*eP*	**Pn**	**07 34 38.1**	**-0.1**
CAIG				*eS*	**Sn**	**07 35 26.1**	**-0.8**
HUEH	**Huehuetenango**	**4.33**	**98**	*eP*	**Pn**	**07 34 41.5**	**+2.5**
HUEH				*eS*	**Sn**	**07 35 29.6**	**+1.3**
MPVM	**San Francisco**	**4.33**	**318**	*eP*	**Pn**	**07 34 42.4**	**+3.3**
RTAL	**Retalhuleu**	**4.35**	**109**	*eP*	**Pn**	**07 34 41.9**	**+2.8**
RTAL				*eS*	**Sn**	**07 35 30.1**	**+1.5**
THVM	**De Xico**	**4.39**	**319**	*eP*	**Pn**	**07 34 41.9**	**+2.0**
TLVM	**San Miguel Top**	**4.43**	**317**	*eP*	**Pn**	**07 34 43.6**	**+3.0**
XCVM	**Xochimilco**	**4.44**	**317**	*eP*	**Pn**	**07 34 43.7**	**+3.1**
MAVM	**Malinalco, Edo**	**4.50**	**312**	*eP*	**Pn**	**07 34 44.2**	**+2.9**
UNM	**Universidad Na**	**4.53**	**318**	*eP*	**Pn**	**07 34 42.1**	**+0.3**
UNM				*eS*	**Sn**	**07 35 32.6**	**-0.8**
PBVM	**Pinon**	**4.55**	**319**	*eP*	**Pn**	**07 34 45.0**	**+3.1**
AOVM	**Tlapan**	**4.58**	**316**	*eP*	**Pn**	**07 34 45.3**	**+2.5**
VTVM	**Tizayuca**	**4.63**	**325**	*eP*	**Pn**	**07 34 45.8**	**+2.6**
PTVM	**Pico Tres Padr**	**4.69**	**320**	*eP*	**Pn**	**07 34 44.6**	**+0.7**
AZVM	**Cuida Lopez Ma**	**4.79**	**319**	*eP*	**Pn**	**07 34 48.1**	**+2.8**
ARIG	**Puente Sto Nin**	**4.79**	**299**	*eP*	**Pn**	**07 34 45.6**	**+0.4**
ARIG				*eS*	**Sn**	**07 35 40.8**	**+1.4**
TOVM	**TOLUCA**	**4.84**	**313**	*eP*	**Pn**	**07 34 48.8**	**+2.7**
ZUVM	**ZUMPANGO**	**4.84**	**322**	*eP*	**Pn**	**07 34 49.2**	**+3.1**
DEIG	**Demacu**	**5.20**	**326**	*eP*	**Pn**	**07 34 52.0**	**+1.0**
DEIG				*eS*	**Sn**	**07 35 50.4**	**+0.6**
APG	**El Apazote** 0.1nm,0.3s,baz=335,slow=17,SNR=7.3	**5.37**	**100**	Pn	**Pn**	**07 34 53.1**	**-0.2**
APG				Sn	**Sn**	**07 35 52.6**	**-1.4**
	0.3nm,0.3s,baz=227,slow=20,SNR=3.9						
PETF	**Flores**	**5.90**	**80**	*eP*	**Pn**	**07 35 01.8**	**+1.4**
PETF				*eS*	**Sn**	**07 36 08.5**	**+1.8**
JTS	**Las Juntas de** 0.2nm,0.3s,baz=272,slow=14,SNR=2.9 5.0nm,0.9s	**12.11**	**117**	Pn	**Pn**	**07 36 22.2**	**-3.2**
TXAR	**Lajitas Array** baz=147,slow=11,SNR=4.2	**15.06**	**333**	Pn	**Pn**	**07 37 05.6**	**+0.5**
TXAR				LR	LR	07 43 31.5	
	comp=Z,44nm,20.2s,baz=252,slow=40 0.2nm,0.8s						
TKL	**Tuckaleechee C** comp=Z,26nm,18.3s,baz=330,slow=43	**22.40**	**27**	LR	LR	07 49 41.1	
SJG	**San Juan** comp=Z,20nm,18.8s,baz=131,slow=39	**28.55**	**81**	LR	LR	07 52 18.7	
PDAR	**Pinedale Array** 0.1nm,0.4s,baz=152,slow=6.5,SNR=2.4 0.1nm,0.4s	**29.12**	**339**	P	**P**	**07 39 31.4**	**0.0**
NVAR	**Mina Array Bea** 0.2nm,0.4s,baz=133,slow=6.7,SNR=5.7	**29.77**	**323**	P	**P**	**07 39 34.7**	**-2.4**
NVAR				LR	LR	07 52 37.0	
	comp=Z,74nm,18.7s,baz=239,slow=39 0.2nm,0.4s						
ULM	**Lac du Bonnet** 1.5nm,0.6s,baz=194,slow=8.3,SNR=4.9 1.5nm,0.6s	**34.17**	**0**	P	**P**	**07 40 13.8**	**-1.4**
NEW	**Newport** comp=Z,52nm,18.8s,baz=160,slow=36	**36.59**	**336**	LR	LR	07 55 09.3	
YKA	**Yellowknife Ar** 0.6nm,0.7s,baz=155,slow=7.3,SNR=5.9 0.6nm,0.7s	**48.27**	**349**	P	**P**	**07 42 10.6**	**-0.1**
FRB	**Frobisher Bay** comp=Z,38nm,20.9s,baz=42,slow=39	**51.32**	**15**	LR	LR	08 06 42.5	
ILAR	**Eielson Array** 0.3nm,0.6s,baz=131,slow=7.0,SNR=4.3 0.3nm,0.6s	**59.53**	**337**	P	**P**	**07 43 34.3**	**+1.5**

*IDC **06** 07:34:07.7±0.7, 3°.58N×126°.90E, h0^{km}, mb3.9/11, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=49.8km s-min=14.4km az=72.0*
*NEIC **06** 07:34:08.9±0.9, 3°.58N±0°.08×126°.98E±0°.06, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=15.3km s-min=9.0km az=207.0*
*DJA **06** 07:34:11.7±0.7, 4°.1N±10°×12°.7E±°, h10^{km}±13^{km}, M3.9/10, mb4.0/1, MLv3.9/10*
ISC 06 07:34:08.4±0.5, 3°.58N±0°.06×126°.98E±0°.06, h10^{km}, n48, σ0^{s}90/49, mb4.2/17, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.45**	**274**	P	**Pb**	**07 34 35.5**	**-0.1**
SGSI				S	**Sb**	**07 34 54.3**	**+0.2**
GAMI	**Galela, Maluku**	**1.91**	**155**	P	**Pb**	**07 34 43.3**	**-0.2**
TNTI	**Ternate**	**2.82**	**172**	Pn	**Pn**	**07 34 53.8**	**+0.1**
GTOI	**Gorontalo**	**4.93**	**234**	P	**Pn**	**07 35 24.2**	**+1.6**
SIJI	**Sorong** 2.7nm,0.3s,baz=338,slow=19,SNR=4.8 5.2nm,0.4s	**6.16**	**136**	Pn	**Pn**	**07 35 42.2**	**+2.7**
LUWI	**Luwuk**	**6.23**	**223**	Pn	**Pn**	**07 35 41.1**	**+0.6**
TOLI2	**Tolitoli**	**6.66**	**249**	Pn	**Pn**	**07 35 46.5**	**0.0**
FAKI	**Fak Fak**	**8.34**	**141**	Pn	**Pn**	**07 36 09.5**	**0.0**
KKM	**Kota Kinabalu**	**11.00**	**283**	Pn	**Pn**	**07 36 46.1**	**0.0**
KAPI	**Kappang**	**11.18**	**220**	Pn	**Pn**	**07 36 47.7**	**-0.9**
SAUI	**Saumlaki**	**12.27**	**159**	Pn	**Pn**	**07 37 02.7**	**-0.7**
MMRI	**Maumere**	**13.03**	**201**	Pn	**Pn**	**07 37 13.9**	**+0.2**
SOEI	**Soe**	**13.52**	**192**	Pn	**Pn**	**07 37 19.8**	**-0.9**
MTN	**Manton Dam**	**16.84**	**166**	Pn	**Pn**	**07 38 03.9**	**-0.5**
MTN				IAmb	IAmb	07 38 37.5	
	comp=Z,29nm,1.4s						
JAGI	**Jajag, Banyuwa**	**17.52**	**227**		**Pn**	**07 38 13.0**	**-0.1**
JAGI				IAmb	IAmb	07 38 17.2	
	comp=Z,49nm,1.1s						
KNRA	**Kununurra**	**19.22**	**175**	P	**P**	**07 38 32.3**	**-0.6**
KNRA				IAmb	IAmb	07 38 37.5	
	comp=Z,20nm,1.1s						
SMRI	**Semarang**	**19.60**	**237**	P	**P**	**07 38 37.1**	**0.0**
TPUB	**Ta-pu**	**20.54**	**343**	P	**P**	**07 38 47.0**	**-0.3**
TPUB				IAmb	IAmb	07 38 57.5	
	comp=Z,40nm,1.3s						
FITZ	**Fitzroy Crossi** comp=Z,3.0nm,0.6s,baz=8.8,slow=11,SNR=8.8 comp=Z,3.0nm,0.6s	**21.59**	**183**	P	**P**	**07 38 59.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**21.59**	**183**	P	**P**	**07 38 58.0**	**-0.5**
COEN	**Coen**	**23.70**	**138**	P	**P**	**07 39 20.5**	**-0.2**
WRA	**Warramunga Arr** comp=Z,4.1nm,0.7s,baz=343,slow=10,SNR=23 comp=Z,4.1nm,0.7s	**24.47**	**163**	P	**P**	**07 39 28.6**	**+0.6**
WRA	**Warramunga Arr**	**24.47**	**163**	P	**P**	**07 39 25.8**	**-2.1**
WB2	**Warramunga Arr**	**24.48**	**163**	P	**P**	**07 39 28.2**	**+0.3**
WB2				IAmb	IAmb	07 39 30.4	
	comp=Z,8.6nm,0.8s						
WR8	**Warramunga Arr**	**24.53**	**163**	P	**P**	**07 39 29.2**	**+0.7**
WR8				IAmb	IAmb	07 39 39.6	
	comp=Z,8.6nm,1.1s						
JCJ	**Chichijima**	**27.53**	**30**	P	**P**	**07 39 54.9**	**-0.6**
ASAR	**Alice Springs** comp=Z,0.3nm,0.3s,baz=341,slow=8.7,SNR=8.1 comp=Z,0.3nm,0.3s	**27.91**	**166**	P	**P**	**07 39 59.7**	**+0.7**
ASAR	**Alice Springs**	**27.91**	**166**	P	**P**	**07 39 59.0**	**0.0**
KSRS	**Korea Array** comp=Z,0.5nm,0.3s,baz=186,slow=11,SNR=4.4 comp=Z,0.5nm,0.3s	**33.72**	**1**	P	**P**	**07 40 52.2**	**+2.3**
MJAR	**Matsushiro Arr**	**34.39**	**16**	P	**P**	**07 40 54.8**	**-1.2**
MJB9	**Matsu-Tunnel**	**34.39**	**16**	P	**P**	**07 40 54.1**	**-1.8**
MJB9				IAmb	IAmb	07 41 25.3	
	comp=Z,6.4nm,0.9s						
JYT	**Yasato**	**34.70**	**19**	P	**P**	**07 40 58.8**	**+0.3**
BBOO	**Buckleboo**	**37.20**	**167**	P	**P**	**07 41 20.7**	**+0.6**
BBOO				IAmb	IAmb	07 41 55.7	
	comp=Z,15nm,1.4s						
STKA	**Stephens Creek** comp=Z,1.8nm,0.6s,baz=347,slow=10,SNR=7.9 comp=Z,1.8nm,0.6s	**37.91**	**160**	P	**P**	**07 41 27.1**	**+1.0**
SONM	**Songino Array** comp=Z,0.3nm,0.3s,baz=157,slow=7.8,SNR=1.6 comp=Z,0.3nm,0.3s	**47.51**	**341**	P	**P**	**07 42 45.0**	**+1.0**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.4s,baz=125,slow=8.4,SNR=6.8 comp=Z,0.7nm,0.4s	**57.82**	**325**	P	**P**	**07 44 01.6**	**+1.4**
MAKZ	**Makanchi**	**58.00**	**325**	P	**P**	**07 44 01.4**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.6s,baz=122,slow=6.7,SNR=1.2 comp=Z,1.0nm,0.6s	**61.99**	**327**	P	**P**	**07 44 29.1**	**+0.3**
KURK	**Kurchatov**	**62.00**	**327**	P	**P**	**07 44 29.1**	**+0.3**
KURK				IAmb	IAmb	07 44 50.3	
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**63.51**	**317**	P	**P**	**07 44 39.0**	**-0.1**
BVAR	**Borovoye Array** comp=Z,0.4nm,0.3s,baz=126,slow=7.4,SNR=2.4 comp=Z,0.4nm,0.3s	**67.58**	**327**	P	**P**	**07 45 05.3**	**+0.1**
AB31	**Akbulak array**	**72.42**	**321**	P	**P**	**07 45 35.0**	**0.0**
ABKAR	**Akbulak array**	**72.42**	**321**	P	**P**	**07 45 35.2**	**+0.2**
ARTI	**Arti**	**75.27**	**328**	P	**P**	**07 45 51.9**	**+0.3**
ARTI				IAmb	IAmb	07 45 53.6	
	comp=Z,8.6nm,1.3s						
VOI	**Vohitsoka**	**82.24**	**247**	P	**P**	**07 46 29.4**	**-1.4**
ILAR	**Eielson Array** comp=Z,0.1nm,0.7s,baz=272,slow=3.5,SNR=1.4 comp=Z,0.1nm,0.7s	**85.13**	**25**	P	**P**	**07 46 44.3**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,3.0nm,0.9s,baz=77,slow=5.0,SNR=3.6 comp=Z,3.0nm,0.9s	**90.67**	**340**	P	**P**	**07 47 10.9**	**-0.2**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.5s,baz=305,slow=5.1,SNR=1.8	**121.49**	**52**	PKP	**PKiKP**	**07 53 03.7**	**+0.4**

*IDC **06** 07:48:33.1±0.7, 0°.94N×28°.33W, h0^{km}, mb4.1/10, mbtmp4.1/11, ML4.2/1, MS3.4/7, Error ellipse: s-maj=36.5km s-min=15.0km az=143.0*
*NEIC **06** 07:48:35.5±1.5, 0°.93N±0°.09×28°.37W±0°.07, h10^{km}±1^{km}, mb4.7/34, Error ellipse: s-maj=16.9km s-min=8.8km az=147.0*
ISC 06 07:48:34.1±0.4, 0°.95N±0°.08×28°.35W±0°.07, h7^{km}, n58, σ0^{s}84/51, mb4.6/24, MS3.5/6, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo** 1.8nm,0.3s,baz=42,slow=20,SNR=29	**10.11**	**228**	Pn	**Pn**	**07 50 59.4**	**-0.4**
RCBR				Sn	Sn	07 52 42.3	-11
	0.2nm,0.3s,baz=318,slow=22,SNR=2.7						
RCBR				LR	LR	07 54 11.0	
	comp=Z,78nm,19.6s,baz=52,slow=33 3.2nm,0.3s						
SACV	**Santiago Islan**	**14.70**	**18**	Pn	**Pn**	**07 52 01.6**	**-1.1**
H10N3	**ASCENSION HYDR** baz=302,slow=74,SNR=171	**16.34**	**123**	T	T	08 09 11.6	
H10N2	**ASCENSION HYDR** baz=302,slow=74,SNR=116	**16.35**	**122**	T	T	08 09 02.5	
H10N1	**ASCENSION HYDR** baz=302,slow=74,SNR=265	**16.36**	**123**	T	T	08 09 11.8	
ASCN	**Ascension**	**16.51**	**123**	Pn	**Pn**	**07 52 24.9**	**-1.5**
H10S3	**ASCENSION HYDR** baz=304,slow=74,SNR=127	**16.82**	**126**	T	T	08 09 40.7	
H10S2	**ASCENSION HYDR** baz=276,slow=74,SNR=98	**16.84**	**126**	T	T	08 09 43.5	
DBIC	**Dimbokro** 3.3nm,0.8s,baz=270,slow=9.3,SNR=1.7 3.3nm,0.8s	**24.11**	**76**	P	**P**	**07 53 50.5**	**-0.3**
DBIC	**Dimbokro**	**24.11**	**76**	P	**P**	**07 53 51.0**	**+0.2**
DBIC				IAmb	IAmb	07 54 13.6	
	comp=Z,22nm,1.4s						
BDFB	**Brasilia**	**25.48**	**229**	P	**P**	**07 54 03.2**	**0.0**
	comp=Z,5.7nm,0.8s,baz=82,slow=11,SNR=11						
BDFB				LR	LR	08 03 03.4	
	comp=Z,114nm,20.1s,baz=124,slow=34 comp=Z,5.7nm,0.8s						
BDFB	**Brasilia**	**25.48**	**229**		**P**	**07 54 04.3**	**+1.0**
TORD	**Torodi Ar. Bea** comp=Z,2.1nm,0.8s,baz=257,slow=9.1,SNR=8.2 comp=Z,2.1nm,0.8s	**32.13**	**66**	P	**P**	**07 55 02.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**32.13**	**66**	P	**P**	**07 55 01.9**	**-0.6**
TORD				IAmb	IAmb	07 55 24.1	
	comp=Z,9.3nm,0.5s						
BOAV	**Boa Vista**	**32.19**	**273**	P	**P**	**07 55 02.7**	**-0.3**
BOAV				IAmb	IAmb	07 55 18.4	
	comp=Z,8.2nm,1.3s						
MACA	**Manacapuru-AM**	**32.57**	**263**	P	**P**	**07 55 05.7**	**-0.8**
PTLB	**Pontes e Lacer**	**34.51**	**241**	P	**P**	**07 55 25.0**	**+1.8**
SMRT	**St. Maarten**	**38.10**	**299**	P	**P**	**07 55 53.8**	**-0.1**
CPUP	**Villa Florida** comp=Z,2.8nm,0.9s,baz=29,slow=9.4,SNR=5.8	**38.95**	**224**	P	**P**	**07 56 00.5**	**-0.4**
CPUP				LR	LR	08 11 40.8	
	comp=Z,65nm,18.8s,baz=74,slow=36 comp=Z,2.8nm,0.9s						
CPUP	**Villa Florida**	**38.95**	**224**	P	**P**	**07 56 00.2**	**-0.7**
LPAZ	**La Paz** comp=Z,1.6nm,0.8s,baz=77,slow=7.1,SNR=5.5	**42.83**	**245**	P	**P**	**07 56 34.2**	**+0.4**
LPAZ				LR	LR	08 13 56.7	
	comp=Z,71nm,19.8s,baz=86,slow=36 comp=Z,1.6nm,0.8s						
LPAZ	**La Paz**	**42.83**	**245**	P	**P**	**07 56 32.9**	**-1.0**
ESDC	**Sonseca Array** comp=Z,0.8nm,0.8s,baz=214,slow=8.9,SNR=5.9 comp=Z,0.8nm,0.8s	**44.50**	**27**	P	**P**	**07 56 45.2**	**-1.1**
BANI	**BANI**	**44.71**	**295**	P	**P**	**07 56 48.8**	**+0.3**
PB09	**IPOC Station P**	**45.86**	**238**	P	**P**	**07 56 57.8**	**+0.2**
PB09				IAmb	IAmb	07 56 58.4	
	comp=Z,6.8nm,0.9s						
ROSC	**El Rosal** comp=Z,3.4nm,0.4s,baz=90,slow=19,SNR=4.0 comp=Z,3.4nm,0.4s	**46.06**	**276**	P	**P**	**07 57 00.5**	**+0.9**
ROSC	**El Rosal**	**46.06**	**276**	P	**P**	**07 56 59.5**	**-0.1**
ROSC				IAmb	IAmb	07 57 01.9	
	comp=Z,5.5nm,0.9s						
PB07	**IPOC Station P**	**46.38**	**238**	P	**P**	**07 57 02.3**	**+0.6**
PB07				IAmb	IAmb	07 57 42.7	
	comp=Z,18nm,1.4s						
PB06	**IPOC Station P**	**46.51**	**237**	P	**P**	**07 57 01.0**	**-1.7**
PB06				IAmb	IAmb	07 57 02.3	
	comp=Z,16nm,1.0s						
TRQA	**Tornquist**	**49.67**	**215**	P	**P**	**07 57 27.7**	**+0.9**
TRQA				IAmb	IAmb	07 57 28.6	
	comp=Z,16nm,1.5s						
MT01	**Popeta**	**53.10**	**225**	P	**P**	**07 57 51.1**	**-1.4**
GRTLG	**Ghanzi**	**53.24**	**118**	P	**P**	**07 57 54.1**	**+0.2**
GO05	**Hualane**	**54.18**	**224**	P	**P**	**07 58 00.4**	**0.0**
GO05				IAmb	IAmb	07 58 24.0	
	comp=Z,11nm,1.2s						
ML02	**Panimavida**	**54.23**	**223**	P	**P**	**07 58 01.1**	**+0.3**
ML02				PcP	**PcP**	**07 59 04.2**	**-1.0**
PIRO	**Carate, Puerto**	**55.25**	**280**	P	**P**	**07 58 07.7**	**-0.8**
GO06	**Currarehue**	**56.39**	**219**	P	**P**	**07 58 16.1**	**-0.3**
GO06				IAmb	IAmb	07 58 18.4	
	comp=Z,4.9nm,0.8s						
PLCA	**Paso Flores**	**56.48**	**218**	P	**P**	**07 58 17.2**	**+0.2**
PLCA				IAmb	IAmb	07 58 19.3	
	comp=Z,4.5nm,1.2s						
BATG	**Bathurst New B**	**56.59**	**330**	P	**P**	**07 58 18.0**	**+0.4**
BATG				IAmb	IAmb	07 58 46.7	
	comp=Z,16nm,1.2s						
PKME	**Peaks-Kenny Pk**	**56.97**	**326**	P	**P**	**07 58 20.9**	**+0.6**
PKME				IAmb	IAmb	07 58 51.2	
	comp=Z,20nm,1.4s						
GOGA	**Godfrey**	**60.83**	**308**	P	**P**	**07 58 47.0**	**-0.4**
GOGA				IAmb	IAmb	07 58 51.7	
	comp=Z,7.4nm,1.4s						
TKL	**Tuckaleechee C** comp=Z,29nm,18.6s,baz=80,slow=33	**61.86**	**311**	LR	LR	08 22 59.5	
SCHQ	**Schefferville** comp=Z,31nm,19.1s,baz=98,slow=34	**62.21**	**336**	LR	LR	08 23 40.1	
GO08	**Villa O'Higgin**	**62.30**	**212**	P	**P**	**07 58 56.1**	**-0.9**
GO08				IAmb	IAmb	07 59 23.2	
	comp=Z,4.9nm,1.1s						
SADO	**Sadowa** comp=Z,37nm,18.7s,baz=98,slow=32	**62.50**	**322**	LR	LR	08 21 43.5	
ORCD	**Orcadas**	**62.81**	**189**	P	**P**	**07 59 01.0**	**+0.9**
346A	**Big Creek Wild**	**65.06**	**304**	P	**P**	**07 59 16.1**	**+0.5**
346A				IAmb	IAmb	07 59 48.6	
	comp=Z,11nm,1.0s						
BRTR	**Keskin Array B** comp=Z,0.8nm,0.7s,baz=232,slow=6.1,SNR=5.0 comp=Z,0.8nm,0.7s	**68.13**	**47**	P	**P**	**07 59 37.1**	**+1.9**
BRTR	**Keskin Array B**	**68.13**	**47**	P	**P**	**07 59 35.6**	**+0.3**
AKASG	**Malin Array Be** comp=Z,2.1nm,0.7s,baz=245,slow=6.5,SNR=3.5 comp=Z,2.1nm,0.7s	**69.29**	**35**	P	**P**	**07 59 41.7**	**-0.3**
AKASG	**Malin Array Be**	**69.29**	**35**	P	**P**	**07 59 43.0**	**+1.0**
AKASG				IAmb	IAmb	07 59 57.4	
	comp=Z,3.4nm,1.1s						
L40A	**Anamosa**	**69.48**	**315**	P	**P**	**07 59 42.9**	**-0.5**
FINES	**FINESS Array B**	**72.91**	**24**	P	**P**	**08 00 05.6**	**+1.9**
BRDY	**Brady**	**73.01**	**302**	P	**P**	**08 00 05.4**	**+0.3**
SNAA	**Sanae** comp=Z,1.4nm,0.9s,baz=319,slow=4.9,SNR=4.3 comp=Z,1.4nm,0.9s	**74.34**	**172**	P	**P**	**08 00 12.8**	**+0.7**
SNAA	**Sanae**	**74.34**	**172**	P	**P**	**08 00 12.2**	**+0.1**
QSPA	**South Pole Qui**	**91.01**	**180**	P	**P**	**08 01 39.9**	**+0.9**
QSPA				IAmb	IAmb	08 01 58.4	
	comp=Z,9.4nm,1.5s						
BBOO	**Buckleboo**	**145.07**	**157**	PKPbc	**PKPbc**	**08 08 12.2**	**-0.2**
ASAR	**Alice Springs** comp=Z,0.5nm,0.6s,baz=216,slow=2.3,SNR=5.1	**151.61**	**144**	PKPbc	**PKPbc**	**08 08 29.8**	**-0.4**

*ASRS **06** 07:59:21.0±1.9, 55°.61N×86°.10E, h0^{km}, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 07:59:25.2±3.8, 55°.60N×86°.10E, h0^{km}, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=31.3km s-min=27.5km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=22,slow=323,SNR=3.7	**1.81**	**205**	I	I	08 10 50.0	
ZALV	**Zalesovo Beam** 4.6nm,0.3s,baz=25,slow=18,SNR=25	**1.81**	**205**	Pg	Pn	07 59 57.4	-0.3
ZALV				Lg	Lg	08 00 23.0	
	2.4nm,0.3s,baz=28,slow=28,SNR=8.8						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=45,slow=14,SNR=4.4 0.2nm,0.4s	**6.75**	**226**	Pn	Pn	08 01 05.2	-0.3
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=27,slow=12,SNR=2.2 0.4nm,0.7s	**9.13**	**197**	Pn	Pn	08 01 38.8	+0.6

*ASRS **06** 08:05:10.0±1.1, 53°.61N×87°.90E, h0^{km}, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 08:05:13.9±4.5, 53°.58N×88°.00E, h0^{km}, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=49.6km s-min=24.5km az=78.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA

comp=Z,39nm,18.3s,baz=352,slow=36
EIDS Eidsvold 35.02 247 P **P** **08 14 04.6 -0.1**
EIDS IAmb IAmb 08 14 26.3
comp=Z,10nm,1.3s
H11S2 WAKE ISLAND Hy 38.92 329 T T 08 55 00.3
baz=146,slow=76,SNR=20
H11S3 WAKE ISLAND Hy 38.93 329 T T 08 54 59.5
baz=146,slow=76,SNR=6.8
H11S1 WAKE ISLAND Hy 38.94 329 T T 08 54 59.1
baz=146,slow=76,SNR=21
H11N3 WAKE ISLAND Hy 39.86 330 T T 08 57 06.7
baz=149,slow=76,SNR=9.4
H11N1 WAKE ISLAND Hy 39.87 330 T T 08 57 16.5
baz=149,slow=76,SNR=6.8
H11N2 WAKE ISLAND Hy 39.88 330 T T 08 57 23.9
baz=149,slow=76,SNR=6.5
COEN Coen 42.30 266 P **P** **08 15 05.7 -0.3**
STKA Stephens Creek 44.42 240 P P 08 15 17.6 -5.3
comp=Z,1.9nm,0.9s,baz=85,slow=11,SNR=4.0
STKA LR LR 08 32 47.5
comp=Z,75nm,18.8s,baz=206,slow=35
comp=Z,1.9nm,0.9s
BBOO Buckleboo 49.19 240 P **P** **08 16 00.2 -0.1**
WR8 Warramunga Arr 50.04 257 P **P** **08 16 05.5 -1.4**
WR8 IAmb IAmb 08 16 13.7
comp=Z,11nm,1.3s
WRA Warramunga Arr 50.20 257 P **P** **08 16 03.9 -4.2**
comp=Z,0.8nm,0.6s,baz=91,slow=7.0,SNR=16
comp=Z,0.8nm,0.6s
WRA Warramunga Arr 50.20 257 P **P** **08 16 08.4 +0.3**
GUMO Guam 50.47 302 LR LR 08 32 19.6
comp=Z,20nm,21.8s,baz=110,slow=30
AS31 Alice Springs 50.47 252 P **P** **08 16 10.1 -0.1**
ASAR Alice Springs 50.47 252 P **P** **08 16 05.7 -4.6**
comp=Z,2.6nm,0.6s,baz=85,slow=8.0,SNR=34
comp=Z,2.6nm,0.6s
ASAR Alice Springs 50.47 252 P **P** **08 16 09.6 -0.6**
MTN Manton Dam 54.06 265 P **P** **08 16 36.6 -0.3**
SAUI Saumlaki 54.83 271 P **P** **08 16 41.3 -1.2**
FORT Forrest 55.79 243 P **P** **08 16 49.4 +0.1**
FORT IAmb IAmb 08 17 05.0
comp=Z,9.5nm,1.1s
KNRA Kununurra 55.90 261 P **P** **08 16 49.7 -0.5**
SIJI Sorong 56.72 279 LR LR 08 40 24.7
comp=Z,51nm,19.2s,baz=198,slow=36
RPN Rapa Nui 60.10 113 P **P** **08 17 19.9 +0.3**
JCJ Chichijima 60.41 314 LR LR 08 37 22.8
comp=Z,37nm,19.4s,baz=108,slow=30
VNDA Vanda 63.64 186 P **P** **08 17 42.3 -0.3**
comp=Z,0.7nm,0.6s,baz=20,slow=11,SNR=1.7
comp=Z,0.7nm,0.6s
VNDA Vanda 63.64 186 P **P** **08 17 43.5 +0.9**
SHEM Shemya Is, Ala 68.52 352 LR LR 08 42 58.1
comp=Z,78nm,19.2s,baz=124,slow=31
MAJO Matsushiro 68.96 320 P **P** **08 18 17.2 0.0**
MAJO IAmb IAmb 08 18 25.8
comp=Z,3.4nm,0.9s
MJB9 Matsu-Tunnel 68.96 320 P **P** **08 18 17.4 +0.1**
MJB9 IAmb IAmb 08 18 31.4
comp=Z,7.2nm,1.1s
AKUT Akutan 69.30 5 P **P** **08 18 19.2 +0.3**
CNBA Chernabura Isl 70.65 8 P **P** **08 18 27.4 +0.2**
CHNA Chernabura Isl 70.66 8 P **P** **08 18 27.3 +0.1**
baz=194
SDPT Sand Point 71.05 8 P **P** **08 18 29.2 -0.3**
baz=193
BBGB Big Mountain B 71.11 42 P **P** **08 18 30.2 -0.4**
DPP Dos Picos Cty 71.87 47 P **P** **08 18 35.5 +0.4**
DPP IAmb IAmb 08 18 39.1
comp=Z,7.0nm,1.3s
S14K Fog Glacier 72.08 8 P **P** **08 18 35.4 -0.6**
baz=194
CHIR Chirikof Islan 72.23 10 P **P** **08 18 36.4 -0.3**
baz=198
PETK Petropavlovsk- 72.50 342 LR LR 08 45 26.8
comp=Z,25nm,21.6s,baz=197,slow=32
PFO Pinyon Flats O 72.54 47 LR LR 08 44 26.3
comp=Z,55nm,20.9s,baz=235,slow=31
SII Sitkinak Islan 73.18 11 P **P** **08 18 42.6 +0.1**
baz=199
R17L Mt. Peulik Vol 73.84 9 P **P** **08 18 45.7 -0.5**
baz=197
NVAR Mina Array Bea 73.95 42 P **P** **08 18 49.7 +2.1**
comp=Z,0.8nm,0.7s,baz=225,slow=9.1,SNR=6.5
comp=Z,0.8nm,0.7s
NVAR Mina Array Bea 73.95 42 P **P** **08 18 46.9 -0.7**
NV11 Mina Array Sit 74.05 42 P **P** **08 18 48.0 -0.2**
NV11 IAmb IAmb 08 18 51.0
comp=Z,6.3nm,1.4s
Q17K Contact Creek 74.52 9 P **P** **08 18 49.4 -0.9**
baz=197
J04A Umpqua Nationa 74.52 36 P **P** **08 18 51.3 +0.5**
KDAK Kodiak Island 74.63 11 LR LR 08 48 19.4
comp=Z,81nm,18.3s,baz=208,slow=33
KDAK Kodiak Island 74.63 11 P **P** **08 18 49.9 -1.0**
baz=200
O14K Tigyukauivet M 74.78 6 P **P** **08 18 50.8 -0.8**
baz=192
Q16K King Salmon 74.80 9 P **P** **08 18 51.3 -0.5**
baz=196
O15K Ungalikthiuk R 74.86 7 P **P** **08 18 52.0 -0.2**
baz=193
QSPA South Pole Qui 74.88 180 P **P** **08 18 52.5 0.0**
comp=Z,4.3nm,0.9s,baz=353,slow=0.4,SNR=10
comp=Z,4.3nm,0.9s
QSPA South Pole Qui 74.88 180 P **P** **08 18 53.4 +0.9**
QSPA IAmb IAmb 08 18 54.9
comp=Z,6.7nm,1.1s
Q18K Katmai Hardscr 75.03 10 P **P** **08 18 52.8 -0.5**
baz=198
N14K Kuskokwak Cree 75.39 6 P **P** **08 18 54.9 -0.3**
baz=191
O16K Kokwok River B 75.48 8 P **P** **08 18 55.6 -0.2**
baz=195
M11K Mekoryuk 75.49 4 P **P** **08 18 55.7 0.0**
baz=187
PINE Pine Mountain 75.53 36 P **P** **08 18 57.0 +0.4**
P18K Big Mountain, 75.70 9 P **P** **08 18 57.1 0.0**
baz=198
M13K Dall Lake 75.72 5 P **P** **08 18 57.5 +0.4**
baz=190
O17K Koliganek Bris 75.79 8 P **P** **08 18 57.7 +0.2**
baz=196
N15K Kwethluk River 75.80 7 P **P** **08 18 57.8 +0.3**
baz=193
WVOR Wild Horse Val 76.06 38 P **P** **08 18 59.8 +0.2**
WVOR IAmb IAmb 08 19 02.4
comp=Z,4.3nm,1.0s
M14K Bethel 76.18 6 P **P** **08 18 59.8 +0.2**
M14K Bethel 76.18 6 P **P** **08 19 00.0 +0.4**
baz=191
KSRS Korea Array 76.21 315 P **P** **08 19 00.3 0.0**
comp=Z,0.3nm,0.3s,baz=160,slow=7.4,SNR=2.1
KSRS LR LR 08 46 33.5
comp=Z,17nm,21.8s,baz=95,slow=31
comp=Z,0.3nm,0.3s
M15K Kasigluk River 76.25 6 P **P** **08 19 00.5 +0.4**
baz=192
N16K Nishlik Lake 76.25 7 P **P** **08 19 00.1 -0.1**
baz=194
KS19 Wonju Array Si 76.27 315 P **P** **08 19 00.6 -0.2**
KS19 IAmb IAmb 08 19 12.1
comp=Z,12nm,1.4s
P19K Oil Pt 76.28 10 P **P** **08 19 00.3 0.0**
baz=200
HG4B Hotspring 76.33 25 P **P** **08 19 02.2 +1.5**
DIB Dawson Inlet, 76.51 24 P **P** **08 19 02.6 +0.9**
N17K Nushagak Hills 76.51 8 P **P** **08 19 01.5 -0.1**
baz=196
L14K Kuka Creek 76.70 5 P **P** **08 19 03.1 +0.5**
baz=190
M16K Timber Creek 76.77 7 P **P** **08 19 03.5 +0.5**
baz=194
BRSE Bradley Lake S 76.81 11 P **P** **08 19 03.7 +0.3**
baz=202
K13K Kusilvak Mount 77.13 4 P **P** **08 19 05.7 +0.7**
baz=188
L15K Ungalak Mounta 77.14 6 P **P** **08 19 05.7 +0.6**
baz=191
ELK Elko 77.21 41 **P** **08 19 07.8 +1.5**
CBB Campbell River 77.28 29 P **P** **08 19 07.8 +1.7**
CBB IAmb IAmb 08 19 08.7
comp=Z,7.3nm,1.2s
M17K Holitna River 77.32 8 P **P** **08 19 06.9 +0.7**
baz=195
L16K Owhat River 77.38 7 P **P** **08 19 07.1 +0.7**
baz=193
USRK Ussuriysk Ar. 77.38 323 LR LR 08 46 48.5
comp=Z,57nm,21.3s,baz=160,slow=31
G08A Pilot Rock 77.57 36 **P** **08 19 08.5 +0.5**
G08A IAmb IAmb 08 19 11.2
comp=Z,6.2nm,1.1s
M18K Stony River 77.62 8 P **P** **08 19 08.9 +1.0**
baz=197
O22K Cooper Landing 77.69 12 P **P** **08 19 08.9 +0.7**
baz=203
CRAG Craig 78.01 22 P **P** **08 19 12.2 +2.2**
CRAG IAmb IAmb 08 19 44.8
comp=Z,6.5nm,1.2s
CRAG Craig 78.01 22 P **P** **08 19 10.5 +0.5**
baz=219
BMO Blue Mountains 78.25 37 P **P** **08 19 12.9 +1.0**
MFID Camas Ranch 78.31 39 P **P** **08 19 13.3 +1.0**
MFID IAmb IAmb 08 19 14.6
comp=Z,5.3nm,1.0s
KAIM Kayak Island 78.34 14 P **P** **08 19 11.9 +0.1**
baz=208
EPH Ephrata 78.46 34 P **P** **08 19 13.4 +0.6**
EPH IAmb IAmb 08 19 14.9
comp=Z,5.3nm,1.1s
K17K Iditarod 78.49 7 P **P** **08 19 12.7 +0.1**
baz=194
SIT Sitka 78.50 20 P **P** **08 19 12.7 -0.1**
baz=217
EYAK Cordova Ski Ar 78.58 13 P **P** **08 19 13.4 +0.2**
baz=207
GLI Glacier Island 78.59 13 P **P** **08 19 13.3 0.0**
baz=206
HMU Henry Mountain 78.74 46 IAmb IAmb 08 19 18.4
comp=Z,7.3nm,1.3s
M22K Willow 78.80 11 P **P** **08 19 13.9 -0.3**
baz=202
J16K Anvik River 78.80 6 **P** **08 19 15.4 +1.1**
J16K Anvik River 78.80 6 P **P** **08 19 14.3 0.0**
baz=192
PMR Palmer 78.83 11 P **P** **08 19 15.4 +0.9**
PMR IAmb IAmb 08 19 16.4
comp=Z,7.4nm,1.1s
PMR Palmer 78.83 11 P **P** **08 19 14.5 0.0**
baz=204
F10A Beach Ranch, E 78.95 36 IAmb IAmb 08 19 17.5
comp=Z,4.7nm,0.8s
WRAK Wrangell Islan 79.02 22 IAmb IAmb 08 19 17.9
comp=Z,6.2nm,1.0s
WRAK Wrangell Islan 79.02 22 P **P** **08 19 15.7 +0.1**
baz=220
TMUT Trail Mountain 79.09 44 IAmb IAmb 08 19 20.3
comp=Z,7.6nm,1.1s
PLID Pearl Lake 79.15 37 P **P** **08 19 18.1 +1.1**
BMRM Bremner River 79.22 14 P **P** **08 19 17.2 +0.5**
baz=208
HVU Hansel Valley 79.33 41 P **P** **08 19 18.0 +0.1**
HVU IAmb IAmb 08 19 20.4
comp=Z,5.3nm,0.8s
CRQE Cirque 79.38 14 P **P** **08 19 18.6 +0.9**
baz=209
I17K Unalakleet 79.38 6 P **P** **08 19 18.6 +1.2**
baz=192
KLU Klutina 79.39 13 P **P** **08 19 18.1 +0.4**
baz=207
SCM Sheep Creek Mo 79.41 12 P **P** **08 19 17.9 +0.2**
baz=205
C09A Chrisman Ranch 79.44 34 P **P** **08 19 19.2 +0.9**
PPLA Purkeypile 79.51 10 P **P** **08 19 18.9 +0.6**
baz=200
PINM Pinnacle 79.54 16 P **P** **08 19 19.0 +0.5**
baz=212
GRNC Granite Creek 79.69 15 P **P** **08 19 19.9 +0.4**
GRNC IAmb IAmb 08 19 21.2
comp=Z,6.6nm,0.9s
VRDI Verde Repeater 79.71 14 P **P** **08 19 20.2 +0.6**
VRDI IAmb IAmb 08 19 21.1
comp=Z,6.6nm,1.0s
VHRN Van Horn 79.77 54 P **P** **08 19 22.6 +2.0**
N25K Chitina, Valde 79.78 13 P **P** **08 19 20.6 +0.8**
baz=208
GLB Gilahina Butte 79.82 14 IAmb IAmb 08 19 21.4
comp=Z,7.6nm,1.0s
P29M Windy Craggy 79.85 17 **P** **08 19 20.7 +0.6**
P29M IAmb IAmb 08 19 22.4
comp=Z,6.7nm,0.8s
P29M Windy Craggy 79.85 17 P **P** **08 19 21.1 +1.0**
baz=214
M24K Tolsona, Glenn 79.89 12 P **P** **08 19 21.2 +0.8**
baz=206
PV05 Paradox Valley 79.95 46 IAmb IAmb 08 19 24.9
comp=Z,6.4nm,1.0s
LOGN Logan Glacier 79.96 15 IAmb IAmb 08 19 22.6
comp=Z,7.2nm,1.0s
H16K Elim 79.99 5 P **P** **08 19 22.0 +1.2**
baz=191
WAT6 Susitna Watana 80.00 12 P **P** **08 19 21.4 +0.3**
baz=205
HWUT Hardware Ranch 80.02 42 P **P** **08 19 23.0 +1.3**
MA2 Magadan 80.03 342 LR LR 08 52 09.6
comp=Z,16nm,19.1s,baz=152,slow=34
WAT1 Susitna Watana 80.08 11 P **P** **08 19 22.6 +1.3**
baz=204
PLBC Pleasant Camp 80.11 18 P **P** **08 19 22.8 +1.3**
baz=216
O28M Mount Upton 80.13 16 P **P** **08 19 22.6 +0.6**
O28M IAmb IAmb 08 19 23.7
comp=Z,4.3nm,0.8s
O28M Mount Upton 80.13 16 P **P** **08 19 22.8 +0.9**
baz=212
PV10 Paradox Valley 80.13 46 IAmb IAmb 08 19 25.0
comp=Z,9.3nm,0.9s
PV19 Morning Glory 80.14 46 IAmb IAmb 08 19 25.3
comp=Z,9.3nm,1.0s
PV18 Skein Mesa, Pa 80.16 46 IAmb IAmb 08 19 25.3
comp=Z,8.1nm,1.0s
O29M Mount Kennedy 80.17 17 IAmb IAmb 08 19 23.6
comp=Z,4.1nm,0.8s
O29M Mount Kennedy 80.17 17 P **P** **08 19 22.9 +0.9**
baz=214
PV23 Carpenter Ridg 80.18 46 IAmb IAmb 08 19 26.1
comp=Z,9.2nm,0.9s
T35M Bob Quinn 80.20 22 P **P** **08 19 23.6 +1.5**
baz=222
G15K Niukluk 80.21 4 P **P** **08 19 23.4 +1.4**
baz=189
TX31 Lajitas Ar. Si 80.23 56 P **P** **08 19 23.1 +0.1**
TXAR Lajitas Array 80.23 56 P **P** **08 19 24.9 +1.9**
comp=Z,1.6nm,1.0s,baz=218,slow=7.1,SNR=14
comp=Z,1.6nm,1.0s
TXAR Lajitas Array 80.23 56 P **P** **08 19 23.6 +0.6**
PV04 Paradox Valley 80.23 46 IAmb IAmb 08 19 25.8
comp=Z,6.2nm,1.0s
PV02 Paradox Valley 80.26 46 P **P** **08 19 23.3 +0.2**
PV02 IAmb IAmb 08 19 26.0
comp=Z,6.5nm,1.0s
PV12 Saucer Basin, 80.26 46 IAmb IAmb 08 19 26.2
comp=Z,10nm,1.0s
NJ2 Nanjing 80.27 307 *e*P **P** **08 19 24.2 +1.2**
NJ2 pmax pmax
comp=Z,25nm,0.6s
ANMO Albuquerque 80.42 50 **P** **08 19 23.7 -0.3**
SKAG Skagway 80.42 18 P **P** **08 19 22.7 -0.5**
SKAG IAmb IAmb 08 19 25.7
comp=Z,4.0nm,0.8s
SKAG Skagway 80.42 18 P **P** **08 19 24.5 +1.3**
baz=217
PV07 Paradox Valley 80.43 46 P **P** **08 19 23.1 -0.9**
P30M Million Dollar 80.47 17 P **P** **08 19 24.7 +1.1**
baz=215
H17K Granite Mounta 80.49 6 P **P** **08 19 24.6 +1.1**
baz=193
KLR Kul'dur 80.49 327 LR LR 08 49 06.6
comp=Z,26nm,21.4s,baz=215,slow=31
PV15 Paradox Valley 80.50 46 P **P** **08 19 24.2 -0.2**
RND Reindeer 80.55 11 P **P** **08 19 24.5 +0.6**
RND IAmb IAmb 08 19 26.0
comp=Z,7.9nm,1.1s
S34M Telegraph Cree 80.59 21 IAmb IAmb 08 19 26.5
comp=Z,5.5nm,0.9s
S34M Telegraph Cree 80.59 21 P **P** **08 19 25.4 +1.3**
baz=221
ALPN Alpine 80.67 55 **P** **08 19 25.5 +0.1**
YUK8 Steele Glacier 80.67 16 P **P** **08 19 26.1 +1.2**
baz=212
YUK6 Outpost Mounta 80.76 16 P **P** **08 19 26.5 +1.2**
baz=214
RDMU Red Mountain 80.81 44 P **P** **08 19 26.9 +0.8**
GDL2 Guadalupe Moun 80.84 53 P **P** **08 19 26.2 -0.1**
H18K Honhosa River 80.85 6 P **P** **08 19 26.6 +1.2**
baz=194
HYT Haines Junctio 80.90 17 P **P** **08 19 27.3 +1.4**
HYT IAmb IAmb 08 19 28.7
comp=Z,6.5nm,1.1s
HYT Haines Junctio 80.90 17 P **P** **08 19 27.2 +1.3**
baz=215,SNR=6.5
YUK3 Moose Creek 80.91 15 P **P** **08 19 26.5 +0.4**
baz=212,SNR=6.5
BRWY Burwash Landin 80.94 16 P **P** **08 19 26.8 +0.8**
baz=213
I20K Naaghedeneel 80.97 8 P **P** **08 19 27.0 +1.0**
baz=198
G17K Kiwalik Mounta 80.97 5 P **P** **08 19 27.0 +1.0**
baz=192
Q32M Nakina River 81.00 20 P **P** **08 19 27.5 +0.9**
baz=220
YUK4 Talbot Arm 81.02 16 P **P** **08 19 27.2 +0.6**
baz=214
P32M Atlin 81.03 19 P **P** **08 19 27.2 +0.7**
baz=218
MENT Mentasta 81.16 13 IAmb IAmb 08 19 29.0
comp=Z,5.7nm,1.0s
O30N Mendenhall 81.25 17 P **P** **08 19 28.4 +0.7**
baz=216,SNR=8.2
MSO Missoula 81.31 37 IAmb IAmb 08 19 30.7
comp=Z,6.3nm,1.1s
DLMT Dillon 81.32 38 **P** **08 19 28.8 +0.2**
DLMT IAmb IAmb 08 19 31.1
comp=Z,4.6nm,0.8s
BVCY Beaver Creek 81.36 15 P **P** **08 19 28.8 +0.6**
baz=211
DLBC Dease Lake 81.37 21 P **P** **08 19 29.3 +0.9**
baz=222
H19K Roundabout Mou 81.43 7 P **P** **08 19 29.6 +1.2**
baz=196
LDM Libby Dam 81.44 35 P **P** **08 19 29.9 +0.9**
LDM IAmb IAmb 08 19 31.1
comp=Z,8.7nm,1.2s
SNOW Snow King Moun 81.47 41 IAmb IAmb 08 19 32.2
comp=Z,6.3nm,0.9s
WHY Whitehorse 81.52 18 P **P** **08 19 29.9 +0.7**
WHY IAmb IAmb 08 19 31.2
comp=Z,4.9nm,1.1s
WHY Whitehorse 81.52 18 P **P** **08 19 30.1 +0.9**
baz=217
N30M Aishikik Lake 81.54 17 P **P** **08 19 30.5 +1.2**
baz=215
G18K Tagagawik 81.55 6 P **P** **08 19 30.4 +1.3**
baz=194
H20K Anotleneega Mo 81.58 8 P **P** **08 19 30.6 +1.3**
baz=198
L27K Beaver Creek, 81.69 14 P **P** **08 19 30.7 +0.7**
baz=210
BCAR Beaver Creek A 81.70 14 P **P** **08 19 31.0 +0.9**
MNHN Monahans 81.74 54 IAmb IAmb 08 19 33.4
comp=Z,3.5nm,0.8s
R33M Jennings River 81.77 20 P **P** **08 19 31.3 +0.7**
baz=221
P33M Teslin, Yukon 81.80 19 P **P** **08 19 31.5 +0.8**
baz=219
F17K Baldwin Pennin 81.85 5 P **P** **08 19 31.8 +1.2**
baz=192
YHB Horse Butte 81.85 39 IAmb IAmb 08 19 34.7
comp=Z,7.4nm,0.9s
PD31 Pinedale Array 81.89 42 P **P** **08 19 31.9 +0.1**
PDAR Pinedale Array 81.89 42 P **P** **08 19 32.7 +1.0**
comp=Z,1.8nm,0.8s,baz=222,slow=3.7,SNR=18
comp=Z,1.8nm,0.8s
PDAR Pinedale Array 81.89 42 P **P** **08 19 31.5 -0.2**
N31M Braeburn, Yuko 81.92 17 **P** **08 19 32.6 +1.4**
N31M IAmb IAmb 08 19 33.3
comp=Z,5.4nm,1.0s
N31M Braeburn, Yuko 81.92 17 P **P** **08 19 32.1 +0.9**
baz=216
G19K Purcell Mounta 81.95 6 **P** **08 19 32.6 +1.4**
G19K Purcell Mounta 81.95 6 P **P** **08 19 32.4 +1.2**
baz=196
M29M Somme Creek 81.99 15 P **P** **08 19 32.5 +0.9**
baz=214
BOZ Bozeman (W) 82.02 39 P **P** **08 19 32.8 +0.5**
COLA College 82.08 11 P **P** **08 19 32.1 +0.2**
COLA College 82.08 11 P **P** **08 19 32.4 +0.6**
baz=204
F18K Selawik 82.14 5 P **P** **08 19 33.4 +1.3**
baz=193
IL31 82.16 11 **P** **08 19 32.7 +0.4**
ILAR Eielson Array 82.16 11 P **P** **08 19 31.9 -0.4**
comp=Z,1.4nm,0.8s,baz=215,slow=5.3,SNR=15
comp=Z,1.4nm,0.8s
ILAR Eielson Array 82.16 11 **P** **08 19 32.5 +0.1**
SDCO Great Sand Dun 82.33 48 P **P** **08 19 33.6 -0.6**
E17K Hotham Inlet 82.43 4 P **P** **08 19 34.9 +1.2**
baz=191
N32M Quiet Lake 82.45 18 P **P** **08 19 34.8 +0.8**
baz=219
128A Castleberry Fa 82.46 53 IAmb IAmb 08 19 37.3
comp=Z,3.9nm,0.8s
M30M Minto, Yukon 82.53 16 IAmb IAmb 08 19 36.0
comp=Z,3.8nm,1.0s
M30M Minto, Yukon 82.53 16 P **P** **08 19 34.8 +0.4**
baz=215,SNR=6.8
F19K Shaleruckim Mo 82.55 6 P **P** **08 19 34.7 +0.4**
F19K IAmb IAmb 08 19 35.6
comp=Z,3.1nm,0.8s
F19K Shaleruckik Mo 82.55 6 P **P** **08 19 35.4 +1.1**
baz=195
L29M L29M 82.63 15 **P** **08 19 35.3 +0.4**
L29M L29M 82.63 15 P **P** **08 19 35.6 +0.7**
baz=214,SNR=14
H23K Yukon River 82.67 10 P **P** **08 19 36.0 +1.0**
baz=203
YNE Yellowstone No 82.71 40 P **P** **08 19 35.2 -0.7**
YNE IAmb IAmb 08 19 38.9
comp=Z,4.8nm,0.9s
G21K Allakaket 82.74 8 P **P** **08 19 36.3 +1.0**
baz=198
E18K Tukpahlearik C 82.86 5 P **P** **08 19 36.9 +1.0**
baz=192
M31M Drury Creek, Y 82.89 17 P **P** **08 19 37.2 +1.0**
baz=217
D17K Noatak River 82.95 4 P **P** **08 19 37.5 +1.1**
baz=190
F20K Avaraart Lake 82.97 7 P **P** **08 19 37.6 +1.1**
baz=197
WTLY Watson Lake, Y 83.04 21 P **P** **08 19 37.8 +0.7**
baz=223
DAWY Dawson 83.12 14 **P** **08 19 37.9 +0.5**
DAWY IAmb IAmb 08 19 39.5
comp=Z,6.5nm,1.1s
DAWY Dawson 83.12 14 P **P** **08 19 38.1 +0.7**
baz=213,SNR=8.9
E19K Redstone River 83.21 6 IAmb IAmb 08 19 39.9
comp=Z,7.3nm,1.1s
E19K Redstone River 83.21 6 P **P** **08 19 38.7 +0.9**
baz=195,SNR=6.3
RLMT Red Lodge 83.22 40 **P** **08 19 38.5 -0.1**
RLMT IAmb IAmb 08 19 41.3
comp=Z,4.5nm,0.8s
RDOG Red Dog Mine 83.32 4 P **P** **08 19 39.3 +1.0**
baz=190
K29M Barlow Dome 83.39 15 IAmb IAmb 08 19 41.0
comp=Z,4.7nm,0.9s
K29M Barlow Dome 83.39 15 P **P** **08 19 39.6 +0.7**
baz=214,SNR=6.5
G22K Bettles 83.39 8 P **P** **08 19 39.9 +1.2**
baz=201
C16K Lisburne Hills 83.40 3 P **P** **08 19 39.8 +1.2**
baz=188
F21K Alatna River 83.41 8 P **P** **08 19 40.2 +1.4**
baz=199
G23K Bananza Creek 83.41 9 IAmb IAmb 08 19 40.7
comp=Z,6.0nm,1.4s
G23K Bananza Creek 83.41 9 P **P** **08 19 39.6 +0.7**
baz=202
LIRD Liard River Hi 83.48 22 P **P** **08 19 40.4 +1.0**
baz=225
C17K DeLong Mountai 83.72 4 P **P** **08 19 41.6 +1.3**
baz=190
RTBA Rita Blanca 83.79 50 IAmb IAmb 08 19 43.4
comp=Z,5.0nm,0.9s
K22A Casper 83.81 43 IAmb IAmb 08 19 44.5
comp=Z,6.3nm,1.2s
G24K Hadweenzic Riv 83.81 10 P **P** **08 19 41.8 +1.0**
baz=205
F22K John River 83.85 8 P **P** **08 19 41.6 +0.6**
baz=200

AMTX	**Amarillo**	**83.96**	**52**			**P**	**08 19 43.0**	**+0.5**
E20K	**Nigu River**	**84.09**	**6**	P		**P**	**08 19 43.1**	**+0.8**
	baz=196,SNR=5.8							
D19K	**Kuna River**	**84.13**	**5**	P		**P**	**08 19 43.1**	**+0.6**
	baz=194							
MMPY	**Sheldon Lake,**	**84.13**	**18**	IAmb		IAmb	08 19 44.3	
	comp=Z,3.6nm,0.9s							
MMPY	**Sheldon Lake,**	**84.13**	**18**	P		**P**	**08 19 43.0**	**+0.4**
	baz=220							
I28M	**Miner Creek**	**84.17**	**13**	P		**P**	**08 19 43.1**	**+0.3**
	baz=212							
J30M	**Hart River**	**84.29**	**15**	P		**P**	**08 19 44.2**	**+0.7**
	baz=215							
EGMT	**Eagleton**	**84.36**	**37**	P		**P**	**08 19 44.3**	**+0.1**
EGMT				IAmb		IAmb	08 19 46.2	
	comp=Z,5.0nm,0.9s							
D20K	**Etivluk River**	**84.48**	**6**	P		**P**	**08 19 45.2**	**+0.9**
	baz=196							
F24K	**Squaw Lake**	**84.49**	**9**	P		**P**	**08 19 45.0**	**+0.6**
	baz=204							
E22K	**Anaktuvuk Pass**	**84.49**	**8**	P		**P**	**08 19 44.7**	**+0.4**
	baz=201							
H27K	**Steamboat Moun**	**84.50**	**12**	IAmb		IAmb	08 19 46.6	
	comp=Z,4.6nm,1.2s							
H27K	**Steamboat Moun**	**84.50**	**12**	P		**P**	**08 19 45.2**	**+0.7**
	baz=210							
E21K	**Killik River**	**84.51**	**7**	P		**P**	**08 19 45.1**	**+0.7**
	baz=198							
APMT	**Aspermont**	**84.56**	**54**				**08 19 46.2**	**+0.7**
C19K	**Lookout Ridge**	**84.59**	**5**	P		**P**	**08 19 45.4**	**+0.5**
	baz=193							
G26K	**Porcupine Rive**	**84.69**	**11**	P		**P**	**08 19 46.3**	**+1.0**
	baz=208							
E23K	**Chandalar**	**84.72**	**9**	P		**P**	**08 19 46.6**	**+1.0**
	baz=203							
KOTAN	**Kotaneelee Air**	**84.73**	**22**	P		**P**	**08 19 46.4**	**+0.8**
	baz=227							
I30M	**Mount Dempster**	**84.81**	**15**	IAmb		IAmb	08 19 47.9	
	comp=Z,7.8nm,1.4s							
I30M	**Mount Dempster**	**84.81**	**15**	P		**P**	**08 19 46.9**	**+0.8**
	baz=215,SNR=6.1							
E24K	**Your Creek**	**84.91**	**9**	IAmb		IAmb	08 20 14.3	
	comp=Z,4.2nm,1.4s							
E24K	**Your Creek**	**84.91**	**9**	P		**P**	**08 19 47.2**	**+0.8**
	baz=204							
F25K	**Christian Rive**	**84.93**	**10**	P		**P**	**08 19 47.7**	**+1.2**
	baz=206							
G27K	**Doyon Strip**	**84.97**	**12**	P		**P**	**08 19 48.0**	**+1.2**
	baz=210							
C21K	**Knifeblade Rid**	**85.10**	**6**	P		**P**	**08 19 48.7**	**+1.4**
	baz=198							
H29M	**Whitestone**	**85.17**	**13**	IAmb		IAmb	08 19 49.0	
	comp=Z,4.1nm,0.9s							
H29M	**Whitestone**	**85.17**	**13**	P		**P**	**08 19 48.7**	**+1.0**
	baz=213							
F26K	**Sheenjek River**	**85.28**	**11**	P		**P**	**08 19 49.8**	**+1.5**
	baz=208							
E25K	**Arctic Village**	**85.41**	**10**	IAmb		IAmb	08 19 51.2	
	comp=Z,2.7nm,0.8s							
E25K	**Arctic Village**	**85.41**	**10**	P		**P**	**08 19 49.9**	**+0.9**
	baz=206,SNR=5.2							
D23K	**Nanushuk River**	**85.42**	**8**	P		**P**	**08 19 49.9**	**+1.0**
	baz=202							
A19K	**Wainwright**	**85.56**	**4**	P		**P**	**08 19 50.6**	**+1.0**
	baz=192							
B21K	**Ikpikpuk River**	**85.56**	**6**	P		**P**	**08 19 50.5**	**+0.9**
	baz=198							
EPYK	**Eagle Plains**	**85.67**	**14**	P		**P**	**08 19 50.5**	**+0.2**
	baz=215							
B20K	**Meade River**	**85.68**	**5**	P		**P**	**08 19 51.4**	**+1.2**
	baz=195							
H31M	**Peel River**	**85.78**	**15**	P		**P**	**08 19 51.7**	**+0.8**
	baz=217							
G29M	**Pine Creek**	**85.82**	**13**	P		**P**	**08 19 51.6**	**+0.5**
	baz=214							
D24K	**Happy Valley**	**85.85**	**8**	P		**P**	**08 19 51.9**	**+0.8**
	baz=203							
F28M	**Old Crow**	**86.03**	**12**	P		**P**	**08 19 52.7**	**+0.7**
	baz=212							
E27K	**Coleen River**	**86.18**	**11**	P		**P**	**08 19 53.3**	**+0.5**
	baz=210							
C23K	**Itkillik River**	**86.24**	**8**	P		**P**	**08 19 53.9**	**+0.9**
	baz=202							
G30M	**tAoh Zraii Nji**	**86.28**	**14**			**P**	**08 19 54.0**	**+0.7**
G30M				IAmb		IAmb	08 19 55.5	
	comp=Z,6.8nm,1.4s							
G30M	**tAoh Zraii Nji**	**86.28**	**14**	P		**P**	**08 19 54.1**	**+0.7**
	baz=215							
D25K	**Kavik River**	**86.37**	**9**	P		**P**	**08 19 54.2**	**+0.5**
	baz=206							
FW06	**Azle**	**86.44**	**55**	P		**P**	**08 19 53.8**	**-1.0**
G31M	**Satah River**	**86.69**	**14**	P		**P**	**08 19 56.1**	**+0.9**
	baz=217							
Z35A	**Perchaven, San**	**86.81**	**54**	P		**P**	**08 19 56.0**	**-0.6**
A22K	**Sinclair Lake**	**86.85**	**6**	P		**P**	**08 19 56.9**	**+1.0**
	baz=197							
F30M	**Barrier River**	**86.90**	**13**	P		**P**	**08 19 56.9**	**+0.6**
	baz=216							
E28M	**Babbage River**	**86.94**	**12**	P		**P**	**08 19 57.3**	**+0.9**
	baz=212							
C27K	**Jago River**	**87.07**	**10**	P		**P**	**08 19 57.9**	**+0.8**
	baz=208							
F31M	**Tsiigehtchic**	**87.23**	**14**	P		**P**	**08 19 58.7**	**+0.8**
	baz=218							
INK	**Inuvik**	**87.97**	**14**	P		**P**	**08 20 02.6**	**+1.2**
	baz=218							
MAW	**Mawson**	**88.11**	**199**	P		**P**	**08 20 03.3**	**+1.0**
HHC	**Hu-ho-hao-te**	**89.09**	**313**	*eP*		**P**	**08 20 08.6**	**+1.1**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,39nm,3.6s							
YKA	**Yellowknife Ar**	**89.76**	**23**	P		**P**	**08 20 10.6**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=235,slow=4.2,SNR=6.6							
	comp=Z,0.7nm,0.7s							
YKA	**Yellowknife Ar**	**89.76**	**23**	P		**P**	**08 20 11.2**	**+1.3**
C36M	**Paulatuk**	**91.05**	**16**	P		**P**	**08 20 17.1**	**+1.3**
	baz=227							
ELIB	**Princess Elisa**	**92.39**	**185**	*dP*		**P**	**08 20 22.5**	**+0.1**
	comp=Z,2.8nm,1.2s							
PZH	**PanZhiHua**	**92.44**	**297**	P		**P**	**08 20 24.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**92.83**	**288**	LR		LR	09 02 40.8	
	comp=Z,12nn,18.1s,baz=255,slow=36							
CLL	**Collm**	**143.62**	**354**	*e*PKiKP		**PKiKP**	**08 26 50.0**	**-0.2**
MLR	**Muntele Rosu**	**145.78**	**336**	PKPdf		**PKPdf**	**08 26 50.2**	**-0.7**
GEC2	**GERESS Array S**	**145.95**	**352**	PKPdf		**PKPdf**	**08 26 50.0**	**-1.0**
GERES	**GERESS Array B**	**145.95**	**352**	PKPbc		**PKPbc**	**08 26 51.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=90,slow=1.7,SNR=5.0							
GERES	**GERESS Array B**	**145.95**	**352**			**PKPdf**	**08 26 50.2**	**-0.9**
BR131	**Keskin Array S**	**146.17**	**321**	PKPdf		**PKPdf**	**08 26 50.7**	**-1.0**
BRTR	**Keskin Array B**	**146.17**	**321**	PKPbc		**PKPbc**	**08 26 52.5**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=111,slow=2.8,SNR=19							
BRTR	**Keskin Array B**	**146.17**	**321**	PKPdf		**PKPdf**	**08 26 50.6**	**-1.2**
MTUR	**Matau**	**146.34**	**337**	⇑P		**PKPdf**	**08 26 47.9**	**-3.9**

WEL **06** *08:07:47.6±1.2,* **31°S***±10°×* **18°0E***±1°6,* **h12***km,* **M4.9***/3,* **mB4.9***/2,* **ML4.6***/10,* **MLv4.9***/3,* **Mw(mB)4.2***/2,* **Error ellipse: s-maj=23.9km s-min=4.6km az=120.6, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.68**	**57**	P	Pn	08 08 27.4	-3.2
GLKZ				S	Sn	08 09 05.4	+2.5
OUZ	**Omahuta**	**6.67**	**227**	P	Pn	08 09 25.3	0.0
WMGZ	**Waiomatatini S**	**7.10**	**187**	P	Pn	08 09 32.2	+1.0
WMGZ				S	Sn	08 10 51.1	-0.8
HAZ	**Te Kaha**	**7.12**	**191**	P	Pn	08 09 33.4	+1.9
HAZ				S	Sn	08 10 58.2	+5.8
PKGZ	**Pakihiroa**	**7.19**	**189**	P	Pn	08 09 34.5	+2.0
PKGZ				S	Sn	08 10 53.6	-0.5
RUGZ	**Raukumara Rang**	**7.34**	**191**	P	Pn	08 09 35.5	+0.7
RUGZ				S	Sn	08 10 58.3	+0.2
PUZ	**Puketiti**	**7.37**	**188**	P	Pn	08 09 35.9	+1.0
PUZ				S	Sn	08 11 01.3	+2.8
MWZ	**Matawai**	**7.73**	**192**	P	Pn	08 09 39.8	-0.1
MWZ				S	Sn	08 11 08.0	+0.6
URZ	**Urewera**	**7.74**	**194**	P	Pn	08 09 38.7	-1.3
URZ				S	Sn	08 11 09.5	+2.0
CNGZ	**Carnagh Statio**	**7.78**	**188**	P	Pn	08 09 41.5	+0.9
MUGZ	**Murupara**	**8.02**	**196**	P	Pn	08 09 44.4	+0.5
RTZ	**Ruatahuna**	**8.11**	**194**	P	Pn	08 09 44.1	-1.1
RAHZ	**Arahi**	**8.38**	**193**	P	Pn	08 09 46.8	-2.0
RAHZ				S	Sn	08 11 24.0	+0.6
ARHZ	**Aropaoanui**	**8.73**	**193**	P	Pn	08 09 51.7	-1.9
ARHZ				S	Sn	08 11 32.9	+0.9

ASRS **06** *08:10:11.0±1.2,54°.26N×86°.85E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 08:10:10.7±3.6, 54°.38N×87°.22E, h0km, mbtmp2.8/2, ML2.2/2, Error ellipse: s-maj=31.6km s-min=20.0km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**254**	I	I	08 17 50.0	
	baz=72,slow=321,SNR=9.7						
ZALV	**Zalesovo Beam**	**1.48**	**254**	Pg	Pn	08 10 36.5	-2.1
	0.7nm,0.3s,baz=75,slow=16,SNR=8.8						
ZALV				Lg	Lg	08 10 58.5	
	0.7nm,0.3s,baz=73,slow=30,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.50**	**238**	Pn	Pn	08 11 47.4	-0.1
	baz=52,slow=14,SNR=2.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.22**	**204**	Pn	Pn	08 12 13.1	+2.0
	0.1nm,0.3s,baz=26,slow=14,SNR=2.8						
	0.4nm,0.7s						

NNC **06** *08:21:23.1±1.9,43°.61N×88°.05E,h0km,mb3.6,mpv3.7, Error ellipse: s-maj=14.2km s-min=12.3km az=85.0*
ASRS **06** *08:21:27.1±0.6,46°N±3°×9°0E±°,h9km,MLh3.6/8,Error ellipse: s-maj=7.6km s-min=5.7km az=87.1,confirmed*
ISC 06 08:21:22.7±2.3, 46°.01N±0°.08×89°.93E±0°.10, h10km,n19, σ1s71/35,6C,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.77**	**294**	Pg	**Pg**	**08 22 33.8**	**-1.1**
	8.1nm,0.2s						
ZSN				Lg	Lg	08 23 25.9	
	23nm,0.3s						
DGZ	**Jazzator, Alta**	**4.06**	**336**	Pn	**Pn**	**08 22 28.6**	**+3.6**
DGZ				Pg	**Pg**	**08 22 39.5**	**-0.8**
DGZ				Sg	**Sg**	**08 23 33.3**	**+0.4**
CUR	**Chagan-Uzun**	**4.23**	**346**	Pg	**Pg**	**08 22 41.9**	**-1.7**
CUR				Sg	**Sg**	**08 23 38.0**	**-0.4**
AKAR	**Aktash**	**4.58**	**341**	Pn	**Pn**	**08 22 34.2**	**+2.1**
AKAR				Pg	**Pg**	**08 22 50.0**	**-0.4**
AKAR				Sg	**Sg**	**08 23 51.2**	**+1.5**
CHBI	**Chibit, Altay**	**4.60**	**340**	Pn	**Pn**	**08 22 34.6**	**+2.3**
CHBI				Pg	**Pg**	**08 22 50.3**	**-0.5**
CHBI				Sg	**Sg**	**08 23 50.2**	**-0.2**
ULGR	**Ulagan, Altay**	**4.80**	**345**	Pg	**Pg**	**08 22 52.8**	**-1.8**
ULGR				Sg	**Sg**	**08 23 54.5**	**-2.2**
TUNR	**Tungur**	**4.80**	**331**	Sg	**Sg**	**08 23 57.7**	**+0.9**
TEL	**Teeli**	**5.02**	**2**	Pn	**Pn**	**08 22 39.1**	**+1.1**
TEL				Sg	**Sg**	**08 24 00.3**	**-3.4**
MK31	**Makanchi Array**	**5.34**	**281**	Pn	**Pn**	**08 22 41.2**	**-1.2**
	0.6nm,0.5s,baz=98,slow=14,SNR=10						
MK31				⇑Pg	**Pb**	**08 22 58.1**	**+2.0**
	0.7nm,0.4s,baz=88,slow=17,SNR=4.9						
MK31				⇑Sn	**Sn**	**08 23 42.9**	**-1.2**
	1.1nm,0.4s,baz=254,slow=38,SNR=6.7						
MK31				⇑Lg	Lg	08 24 08.8	
	1.8nm,0.3s,baz=93,slow=30,SNR=5.5						
MAKZ	**Makanchi**	**5.56**	**281**	⇑Pn	**Pn**	**08 22 44.1**	**-1.4**
	5.6nm,0.6s						
MAKZ				⇑Sn	**Sn**	**08 23 47.9**	**-1.5**
	1.2nm,0.3s						
MAKZ				⇑Lg	Lg	08 24 13.3	
	5.2nm,0.5s						
MAKZ	**Makanchi**	**5.56**	**281**	Sg	**Sg**	**08 24 19.1**	**-2.0**
ELDR	**Elanda**	**5.80**	**335**	Pn	**Pn**	**08 22 48.4**	**-0.3**
ELDR				Pg	**Pg**	**08 23 13.1**	**-0.6**
ELDR				Sg	**Sg**	**08 24 28.4**	**-0.4**
YALR	**Yailyu, Altay**	**5.96**	**346**	Pg	**Pg**	**08 23 13.6**	**-3.2**
YALR				Sg	**Sg**	**08 24 33.1**	**-0.9**
UKR	**Ust'-Kan**	**6.00**	**327**	Pn	**Pn**	**08 22 50.8**	**-0.8**
UKR				Pg	**Pg**	**08 23 16.6**	**-1.0**
UKR				Sg	**Sg**	**08 24 36.8**	**+1.5**
ARTR	**Artybash**	**6.05**	**344**	Sg	**Sg**	**08 24 37.6**	**+0.9**
DJR	**Jarkent**	**7.36**	**260**	Pg	**Pn**	**08 23 12.3**	**+2.0**
	1.3nm,0.2s						
DJR				Lg	Lg	08 24 31.9	
	2.8nm,0.5s						
SHLS	**Shalkode**	**8.00**	**253**	Pg	Pn	08 23 13.3	-5.8
	4.5nm,0.1s						
SHLS				Lg	Lg	08 24 33.4	
	16nm,0.5s						
UZB	**Uzynbulak**	**8.30**	**254**	Pg	**Pn**	**08 23 25.1**	**+1.9**
	3.5nm,0.0s						
UZB				Lg	Lg	08 24 54.1	
	4.3nm,0.4s						
KPKS	**Kokpek**	**8.40**	**256**	Pg	**Pn**	**08 23 26.2**	**+1.7**
	0.4nm,0.2s						
KPKS				Lg	Lg	08 24 55.6	
	26nm,0.3s						

ASRS **06** *08:29:27.0±1.0,54°.11N×86°.41E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 08:29:26.6±2.7, 54°.18N×86°.63E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=22.8km s-min=14.2km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.09**	**259**	I	I	08 35 50.0	
	baz=78,slow=319,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.09**	**259**	Pg	Pg	08 29 46.2	-1.3
	1.1nm,0.3s,baz=76,slow=17,SNR=10.0						
ZALV				Lg	Lg	08 30 02.5	
	2.4nm,0.3s,baz=76,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**6.10**	**238**	Pn	Pn	08 30 59.1	+1.2
	0.1nm,0.3s,baz=54,slow=13,SNR=8.6						
KURBB				Lg	Lg	08 32 42.6	
	baz=58,slow=31,SNR=4.1						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.89**	**202**	Pn	Pn	08 31 23.4	+0.8
	0.3nm,0.3s,baz=26,slow=14,SNR=11						
	0.4nm,0.3s						

JMA **06** *08:32:21.7±0.2,30°.N±2°×13°9E±°,h501km,MV3.9/41, NEAR TORISHIMA IS*
BJI **06** *08:32:23.7,30°.38N×138°.15E,h452km,mB4.4/9,mb4.8/49*
IDC **06** *08:32:23.3±0.6,30°.42N×138°.34E,h439km±6km,mb3.8/32, mbtmp4.6/38, Error ellipse: s-maj=9.8km s-min=7.1km az=72.0*
GFZ **06** *08:32:24.4±0.2,30°N±4°×13°8E±°,h448km,M4.4/40, mb4.5/40,confirmed*
NEIC **06** *08:32:24.5±1.3,30°.36N±0°.08×138°.3E±0°.1,h446km±6km, mb4.3/308, Error ellipse: s-maj=13.6km s-min=11.9km az=103.0*
ISC 06 08:32:23.8±0.5, 30°.38N±0°.04×138°.28E±0°.05, h443km±5km, n552, σ1s10/497, mb4.3/190, 1C-4D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.98**	**25**	*eP*	**P**	**08 33 32.4**	**+2.4**
JHJ	**Hachijo jima 2**	**3.02**	**25**	P	**P**	**08 33 29.8**	**-0.6**
	95nm,0.4s,baz=302,slow=23,SNR=17						
JHJ				S	**S**	**08 34 22.6**	**-2.0**
	250nm,0.5s,baz=65,slow=23,SNR=9.3						
JHJ2	**Mitsune**	**3.02**	**25**	P	**P**	**08 33 32.9**	**+2.6**
JHJ2				S	**S**	**08 34 26.4**	**+1.8**
JHJ2	**Mitsune**	**3.02**	**25**	P	**P**	**08 33 32.4**	**+2.0**
JIE	**Ise**	**4.22**	**342**	*eP*	P	08 33 44.7	+4.4
JSG	**Sagara**	**4.29**	**359**	P	**P**	**08 33 42.6**	**+1.6**
CBIJ	**Chichi jima**	**4.73**	**133**	P	**P**	**08 33 44.8**	**-0.5**
CBIJ				S	**S**	**08 34 48.5**	**-3.2**
JCJ	**Chichijima**	**4.73**	**133**	P	**P**	**08 33 43.7**	**-1.6**
	305nm,0.4s,baz=349,slow=15,SNR=150						
JCJ				S	**S**	**08 34 47.5**	**-4.2**
	776nm,0.5s,baz=122,slow=23,SNR=20						
JCJ	**Chichijima**	**4.73**	**133**	P	**P**	**08 33 45.0**	**-0.3**
JCJ	**Chichijima**	**4.73**	**133**	P	**P**	**08 33 44.9**	**-0.4**
BSO3	**Boso 3**	**4.80**	**22**	*eS*	**S**	**08 34 52.7**	**+0.6**
BSO1	**Boso 1**	**4.83**	**27**	P	**P**	**08 33 47.0**	**+1.5**
BSO1				*eS*	**S**	**08 34 53.1**	**+0.8**
BSO4	**Boso 4**	**4.92**	**20**	*eP*	**P**	**08 33 47.9**	**+1.1**
BSO4				S	**S**	**08 34 54.5**	**0.0**
JMN	**Monobe**	**5.02**	**313**	P	**P**	**08 33 47.3**	**-0.6**
INU	**Inuyama**	**5.07**	**348**	P	**P**	**08 33 50.1**	**+1.8**
JGF	**Kuroka**	**5.27**	**352**	P	**P**	**08 33 49.8**	**-0.6**
JTO	**Tosashimizu**	**5.29**	**299**	P	**P**	**08 33 54.4**	**+3.9**
JHU2	**Hanno**	**5.51**	**8**	*eP*	**P**	**08 33 53.3**	**+0.6**
JHU2				*eS*	**S**	**08 35 01.2**	**-4.2**
JRY	**Ryogami san**	**5.65**	**5**	P	**P**	**08 33 55.5**	**+1.4**
JAG	**Ashikaga**	**6.11**	**9**	P	**P**	**08 33 58.6**	**-0.2**
JAG				*eS*	**S**	**08 35 11.3**	**-5.4**
MJAR	**Matsushiro Arr**	**6.15**	**359**	P	**P**	**08 33 59.9**	**+0.6**
	14nm,0.6s,baz=174,slow=11,SNR=30						
MJAR				S	**S**	**08 35 12.7**	**-4.8**
	2.7nm,0.6s,baz=234,slow=0.8,SNR=4.3						
MJAR	**Matsushiro Arr**	**6.15**	**359**		**P**	**08 33 59.5**	**+0.2**
MAJO	**Matsushiro**	**6.15**	**359**	P	**P**	**08 34 00.4**	**+1.1**
MAJO	**Matsushiro**	**6.15**	**359**	P	**P**	**08 34 00.3**	**+1.1**
MJB9	**Matsu-Tunnel**	**6.16**	**359**	P	**P**	**08 34 00.2**	**+0.9**
JHO	**Hitachi**	**6.50**	**16**	*eP*	**P**	**08 34 02.8**	**-0.2**
JHO				*eS*	**S**	**08 35 20.3**	**-3.9**
JSU	**Suzuyama**	**6.82**	**282**	P	**P**	**08 34 07.2**	**+0.8**
JFK	**Kawauchi**	**7.30**	**16**	*eP*	**P**	**08 34 11.8**	**+0.3**
JFK				*eS*	**S**	**08 35 35.8**	**-3.9**
JSJ	**Shimokoshiki**	**7.47**	**282**	*eP*	**P**	**08 34 16.7**	**+3.3**
JMZ	**Minamidaito 2**	**7.71**	**236**	P	**P**	**08 34 16.4**	**+0.3**
JTM	**Tenmabayashi**	**10.63**	**12**		**P**	**08 34 49.2**	**+1.6**
JTM	**Tenmabayashi**	**10.63**	**12**	P	**P**	**08 34 49.2**	**+1.6**
TJN	**Taejon**	**10.91**	**306**		**P**	**08 34 52.2**	**+1.5**
KSRS	**Korea Array**	**11.13**	**312**	P	**P**	**08 34 54.8**	**+1.7**
	37nm,0.8s,baz=129,slow=11,SNR=136						
KSAR	**Wonju Array Be**	**11.14**	**312**		**P**	**08 34 54.6**	**+1.4**
KS19	**Wonju Array Si**	**11.19**	**312**	P	**P**	**08 34 55.1**	**+1.3**
INCN	**Inchon**	**11.99**	**309**	P	**P**	**08 35 03.1**	**+0.6**
JKA	**Kamikawa-asahi**	**14.14**	**13**		**P**	**08 35 27.3**	**+1.7**
JKA	**Kamikawa-asahi**	**14.14**	**13**	P	**P**	**08 35 27.6**	**+2.0**
USA0B	**Ussuriysk Arra**	**14.67**	**342**	P	**P**	**08 35 32.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**14.67**	**342**	P	**P**	**08 35 32.5**	**+1.1**
	17nm,0.6s,baz=149,slow=8.6,SNR=29						
USRK	**Ussuriysk Ar.**	**14.67**	**342**	P	**P**	**08 35 32.3**	**+0.9**
YOJ	**Yonaguni jima**	**14.78**	**250**	P	**P**	**08 35 33.0**	**+0.2**
MDJ	**Mudanjiang**	**15.79**	**337**	P	**P**	**08 35 44.3**	**+1.1**
MDJ				IAmb	IAmb	08 35 45.0	
	comp=Z,8.5nm,0.6s						
YHNB	**Yeheng**	**16.03**	**253**	P	**P**	**08 35 45.9**	**-0.3**
DL2	**Dalian**	**16.12**	**306**	P	**P**	**08 35 46.4**	**-0.4**
DL2				pmax	pmax		
	comp=Z,56nm,0.8s						
YULB	**Yu-li**	**16.66**	**249**	P	**P**	**08 35 52.3**	**-0.5**
SSLB	**Suanglung**	**16.76**	**251**		**P**	**08 35 53.8**	**0.0**
SSLB	**Suanglung**	**16.76**	**251**	P	**P**	**08 35 53.9**	**0.0**
YSS	**Yuzhno-Sakhali**	**16.91**	**11**		**P**	**08 35 56.1**	**+1.0**
YSS	**Yuzhno-Sakhali**	**16.91**	**11**	P	**P**	**08 35 56.0**	**+1.0**
BNX	**BinXian**	**17.54**	**334**	⇑P	**P**	**08 36 02.2**	**+0.4**
BNX				S	**S**	**08 39 00.1**	**-1.4**
BNX				pmax	pmax		
	comp=Z,26nm,0.9s						
TIA	**Tai'an**	**18.61**	**294**	P	**P**	**08 36 11.6**	**-1.1**
TIA				pmax	pmax		
	comp=Z,120nm,0.7s						
KLR	**Kul'dur**	**19.48**	**347**	P	**P**	**08 36 21.7**	**+1.2**
	comp=Z,4.5nm,0.7s,baz=164,slow=7.6,SNR=14						
KLR				S	**S**	**08 39 29.7**	**-3.9**
	comp=Z,1.0nm,0.7s,baz=268,slow=23,SNR=5.8						
BJT	**Baijiatuan**	**20.43**	**304**		**P**	**08 36 29.3**	**-0.1**
BJT	**Baijiatuan**	**20.43**	**304**	P	**P**	**08 36 29.2**	**-0.1**
WHN	**Wuhan**	**20.63**	**277**	P	**P**	**08 36 32.0**	**+0.7**
WHN				pmax	pmax		
	comp=Z,48nm,0.7s						
HNS	**HongShan**	**20.76**	**296**	⇓P	**P**	**08 36 32.1**	**-0.3**
HNS				pmax	pmax		
	comp=Z,44nm,1.0s						
HEH	**HeiHe**	**21.47**	**341**	*eP*	**P**	**08 36 39.4**	**+0.7**
HEH				pmax	pmax		
	comp=Z,12nm,0.7s						
LYN	**LuoYang**	**22.15**	**288**	P	**P**	**08 36 45.1**	**0.0**
LYN				pmax	pmax		
	comp=Z,49nm,0.5s						
HIA	**Hailar**	**23.53**	**329**	P	**P**	**08 36 57.8**	**+0.6**
HILR	**Hailar Array B**	**23.73**	**329**	P	**P**	**08 36 59.5**	**+0.4**
	comp=Z,5.2nm,0.6s,baz=136,slow=9.0,SNR=4.8						
	comp=Z,5.2nm,0.6s						
HHC	**Hu-ho-hao-te**	**24.02**	**303**	*eP*	**P**	**08 37 05.0**	**+3.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,61nm,5.1s						
ENH	**Enshi**	**24.83**	**277**		**P**	**08 37 08.8**	**-0.3**
ENH	**Enshi**	**24.83**	**277**	P	**P**	**08 37 09.2**	**0.0**
XAN	**Xi'an**	**25.07**	**286**	P	**P**	**08 37 11.2**	**-0.1**
XAN				pmax	pmax		
	comp=Z,76nm,0.8s						
PEA0B	**Petropavlovsk-**	**26.77**	**26**	P	**P**	**08 37 25.9**	**-0.1**
PETK	**Petropavlovsk-**	**26.77**	**26**	P	**P**	**08 37 26.1**	**0.0**
	comp=Z,4.9nm,0.7s,baz=204,slow=3.3,SNR=5.5						
	comp=Z,4.9nm,0.7s						
PETK	**Petropavlovsk-**	**26.77**	**26**	P	**P**	**08 37 26.2**	**+0.1**
LZH	**Lanzhou**	**29.27**	**290**	*eP*	**P**	**08 37 48.6**	**+0.2**
LZH	

comp=Z,3.0nm,0.5s
ZALV Zalesovo Beam 44.77 318 P P 08 39 55.5 -0.5
ZALV PcP PcP 08 41 28.2 -0.8
MKAR Makanchi Array 45.76 307 P P 08 40 03.6 -0.2
comp=Z,5.4nm,0.7s,baz=92,slow=9.1,SNR=33
MKAR pP pP 08 41 29.2 +1.5
comp=Z,0.8nm,0.5s,baz=81,slow=8.9,SNR=3.6
MKAR ScP ScP 08 44 40.1 -2.7
comp=Z,1.0nm,0.7s,baz=83,slow=5.0,SNR=4.4
comp=Z,5.4nm,0.7s
MAKZ Makanchi 45.98 307 P P 08 40 05.1 -0.4
MAKZ IAmb IAmb 08 40 44.1
comp=Z,7.3nm,0.8s
MAKZ Makanchi 45.98 307 P P 08 40 05.0 -0.4
AKUT Akutan 46.24 42 P P 08 40 08.1 +0.8
UGM Wanagama 46.47 220 P P 08 40 09.3 -0.4
KNRA Kununurra 46.69 193 P P 08 40 11.4 +0.2
KPJI Karang Pucung 46.89 222 P P 08 40 12.1 -0.7
SDSI Sungai Dareh 46.90 235 P P 08 40 13.1 +0.2
PDGK Podgornoye 47.88 303 P P 08 40 19.9 -0.2
GSI Gunungsitoli 48.22 241 P P 08 40 23.0 +0.1
GSI Gunungsitoli 48.22 241 P P 08 40 23.2 +0.3
KURK Kurchatov 48.25 313 P P 08 40 22.2 -0.4
KURK IAmb IAmb 08 40 22.9
comp=Z,12nm,0.9s
K13K Kusilvak Mount 48.27 32 P 08 40 23.9 +1.3
K13K IAmb IAmb 08 40 24.9
comp=Z,12nm,0.9s
K13K Kusilvak Mount 48.27 32 P P 08 40 23.8 +1.3
baz=256
WUS Wushi 48.29 300 P P 08 40 23.6 +0.3
WUS IAmb IAmb 08 40 25.3
comp=Z,5.6nm,0.7s
KURBB Kurchatov Arra 48.31 313 P P 08 40 22.5 -0.6
comp=Z,8.9nm,0.6s,baz=91,slow=7.9,SNR=118
comp=Z,8.9nm,0.6s
NRIK Noril'sk 48.35 338 P P 08 40 22.8 -0.3
comp=Z,3.6nm,0.7s,baz=92,slow=7.1,SNR=4.4
comp=Z,3.6nm,0.7s
NRIK Noril'sk 48.35 338 P P 08 40 23.6 +0.5
F14K Arctic Creek 48.54 27 P P 08 40 26.3 +1.7
baz=252
L14K Kuka Creek 49.07 33 P 08 40 30.2 +1.7
L14K IAmb IAmb 08 40 31.1
comp=Z,10nm,0.8s
L14K Kuka Creek 49.07 33 P P 08 40 29.8 +1.3
baz=259
F15K North Star Dit 49.28 27 P P 08 40 31.2 +1.2
F15K IAmb IAmb 08 40 32.3
comp=Z,19nm,1.1s
F15K North Star Dit 49.28 27 P P 08 40 31.5 +1.5
baz=253,SNR=7.3
TARG Taragay, Kyrgy 49.28 301 P 08 40 31.0 0.0
TARG IAmb IAmb 08 40 32.5
comp=Z,7.9nm,0.8s
TARG Taragay, Kyrgy 49.28 301 P P 08 40 31.6 +0.6
N14K Kuskokwak Cree 49.30 35 P P 08 40 31.4 +1.1
baz=261
M14K Bethel 49.30 34 P P 08 40 31.7 +1.4
M14K PcP PcP 08 41 46.2 +1.1
M14K Bethel 49.30 34 P P 08 40 31.5 +1.3
baz=260
G15K Niukluk 49.32 28 P P 08 40 31.4 +1.0
baz=254
O14K Tigyukauivet M 49.41 36 P P 08 40 32.1 +0.9
baz=262
SDPT Sand Point 49.42 41 P P 08 40 31.8 +0.5
KDJ Kajisay 49.69 301 P P 08 40 33.7 -0.1
L15K Ungalak Mounta 49.69 33 P P 08 40 34.0 +0.8
baz=260
FITZ Fitzroy Crossi 49.71 196 P P 08 40 33.0 -0.8
comp=Z,5.5nm,1.0s,baz=320,slow=6.5,SNR=3.3
comp=Z,5.5nm,1.0s
FITZ Fitzroy Crossi 49.71 196 P P 08 40 33.5 -0.3
C16K Lisburne Hills 49.82 24 P P 08 40 34.8 +0.8
C16K IAmb IAmb 08 40 35.8
comp=Z,13nm,0.8s
C16K Lisburne Hills 49.82 24 P P 08 40 34.8 +0.8
baz=250
CHNA Chernabura Isl 49.90 42 P P 08 40 34.9 +0.1
baz=267
M15K Kasigluk River 49.91 34 P P 08 40 35.6 +0.8
baz=261
H16K Elim 49.98 29 P P 08 40 36.1 +0.9
baz=256
WB0 Warramunga Arr 49.99 185 P P 08 40 36.4 +0.5
N15K Kwethluk River 50.13 35 P P 08 40 37.6 +1.1
baz=262
O15K Ungalikthiuk R 50.14 36 P P 08 40 37.5 +1.0
baz=263
WRA Warramunga Arr 50.17 185 P P 08 40 37.3 0.0
comp=Z,3.7nm,0.7s,baz=1.4,slow=7.7,SNR=36
WRA pP pwP 08 42 05.0 -4.4
comp=Z,3.0nm,1.0s,baz=4.2,slow=8.5,SNR=5.5
WRA PP PP 08 42 39.8 +1.5
comp=Z,2.0nm,0.9s,baz=11,slow=8.4,SNR=6.7
comp=Z,3.7nm,0.7s
WRA Warramunga Arr 50.17 185 P P 08 40 37.1 -0.2
WR8 Warramunga Arr 50.17 185 P P 08 40 37.3 0.0
WR8 IAmb IAmb 08 40 39.3
comp=Z,6.4nm,0.7s
ASAI AK-SAY(Kyrgyzs 50.35 300 P P 08 40 39.4 +0.6
J16K Anvik River 50.40 31 P P 08 40 39.4 +1.1
baz=259
D17K Noatak River 50.45 25 P P 08 40 39.9 +1.2
baz=253,SNR=10
I17K Unalakleet 50.47 30 P P 08 40 40.1 +1.2
baz=259
BOOM Boomskoye usch 50.56 302 P 08 40 40.2 +0.1
BOOM IAmb IAmb 08 40 41.2
comp=Z,7.2nm,0.6s
RDOG Red Dog Mine 50.62 25 P P 08 40 40.9 +0.9
RDOG IAmb IAmb 08 40 42.0
comp=Z,13nm,0.8s
RDOG Red Dog Mine 50.62 25 P P 08 40 40.8 +0.9
baz=253
L16K Owhat River 50.65 33 P P 08 40 41.0 +0.8
L16K IAmb IAmb 08 40 42.1
comp=Z,16nm,1.4s
L16K Owhat River 50.65 33 P P 08 40 40.8 +0.6
baz=262
C17K DeLong Mountai 50.65 24 P P 08 40 41.3 +1.2
baz=252
NRN Naryn 50.66 301 P P 08 40 40.7 -0.4
E17K Hotham Inlet 50.75 26 P P 08 40 41.9 +1.0
baz=255
CTAO Charters Tower 50.76 170 P P 08 40 40.9 -0.6
CTAO IAmb IAmb 08 41 15.6
comp=Z,21nm,1.4s
M16K Timber Creek 50.80 34 P P 08 40 42.4 +1.0
baz=263
F17K Baldwin Pennin 50.81 27 IAmb IAmb 08 40 43.3
comp=Z,20nm,1.2s
F17K Baldwin Pennin 50.81 27 P P 08 40 42.5 +1.2
baz=256,SNR=9.4
N16K Nishlik Lake 50.82 35 P P 08 40 42.8 +1.2
baz=263
G17K Kiwalik Mounta 50.83 28 P P 08 40 42.6 +1.1
baz=257
H17K Granite Mounta 51.01 29 P P 08 40 44.0 +1.1
baz=258
O16K Kokwok River B 51.06 36 P P 08 40 44.3 +1.0
baz=264
E18K Tukpahlearik C 51.30 26 P P 08 40 46.1 +1.2
baz=256,SNR=5.1
K17K Iditarod 51.34 32 P 08 40 46.7 +1.4
K17K IAmb IAmb 08 40 47.6
comp=Z,14nm,0.7s
K17K Iditarod 51.34 32 P P 08 40 46.6 +1.4
baz=262,SNR=9.0
KSH2 Kashi 51.36 298 P P 08 40 46.8 +0.7
KSH2 pmax pmax
comp=Z,13nm,0.7s
C18K Utukok River 51.40 24 IAmb IAmb 08 40 47.5
comp=Z,16nm,1.1s
C18K Utukok River 51.40 24 P P 08 40 46.4 +0.7
baz=254
F18K Selawik 51.47 27 P P 08 40 47.1 +0.9
baz=258,SNR=9.6
M17K Holitna River 51.57 34 IAmb IAmb 08 40 49.6
comp=Z,17nm,0.7s
M17K Holitna River 51.57 34 P P 08 40 48.3 +1.3
baz=264,SNR=6.7
O17K Koliganek Bris 51.58 36 P P 08 40 48.2 +1.1
baz=265
AAK Ala-Archa 51.59 302 P P 08 40 47.3 -0.4
comp=Z,6.2nm,0.8s,baz=151,slow=5.8,SNR=9.2
comp=Z,6.2nm,0.8s
AAK Ala-Archa 51.59 302 P P 08 40 47.7 0.0
AAK Ala-Archa 51.59 302 P P 08 40 47.8 0.0
N17K Nushagak Hills 51.60 35 P P 08 40 48.8 +1.5
baz=265,SNR=5.5
H18K Honhosa River 51.70 29 P P 08 40 48.7 +0.8
baz=260
G18K Tagagawik 51.72 28 IAmb IAmb 08 40 49.7
comp=Z,9.4nm,0.8s
G18K Tagagawik 51.72 28 P P 08 40 48.6 +0.6
baz=259,SNR=10
Q16K King Salmon 51.73 37 P P 08 40 49.0 +0.9
baz=266
C19K Lookout Ridge 52.08 24 IAmb IAmb 08 40 52.8
comp=Z,14nm,0.8s
C19K Lookout Ridge 52.08 24 P P 08 40 52.0 +1.3
baz=256,SNR=5.8
Q17K Contact Creek 52.11 38 P P 08 40 50.6 -0.5
baz=268
CHIR Chirikof Islan 52.19 41 P P 08 40 51.7 +0.1
baz=270
F19K Shaleruckik Mo 52.25 27 P P 08 40 52.0 +0.2
baz=259,SNR=5.2
M18K Stony River 52.35 34 P P 08 40 53.9 +1.2
baz=265
G19K Purcell Mounta 52.39 28 P P 08 40 53.4 +0.5
baz=260
ACHA Angle Creek He 52.41 38 P P 08 40 53.0 -0.2
D19K Kuna River 52.46 25 P P 08 40 54.2 +0.8
baz=258
P18K Big Mountain, 52.51 36 P P 08 40 54.5 +0.7
baz=267,SNR=6.2
H19K Roundabout Mou 52.55 28 IAmb IAmb 08 40 55.6
comp=Z,7.6nm,0.7s
H19K Roundabout Mou 52.55 28 P P 08 40 55.1 +1.1
baz=261,SNR=10
E19K Redstone River 52.57 26 IAmb IAmb 08 40 56.0
comp=Z,14nm,0.7s
E19K Redstone River 52.57 26 P P 08 40 55.1 +0.9
baz=259,SNR=23
Q18K Katmai Hardscr 52.59 37 P P 08 40 54.7 +0.2
baz=268
ARSB Arslanbob 52.92 301 P P 08 40 57.4 +0.1
ARSB IAmb IAmb 08 40 58.8
comp=Z,19nm,1.2s
SII Sitkinak Islan 53.00 40 P P 08 40 57.7 +0.3
baz=270
D20K Etivluk River 53.04 24 IAmb IAmb 08 40 59.3
comp=Z,11nm,0.7s
D20K Etivluk River 53.04 24 P P 08 40 58.3 +0.8
baz=259,SNR=11
F20K Avaraart Lake 53.08 27 P P 08 40 58.5 +0.8
baz=261
E20K Nigu River 53.11 25 P P 08 40 58.8 +0.7
baz=260,SNR=9.0
B20K Mede River 53.12 23 P P 08 40 59.1 +1.0
baz=257
H20K Anotleneega Mo 53.20 29 P P 08 40 59.7 +1.0
baz=263,SNR=9.3
I20K Naaghedeneel 53.28 30 P P 08 41 00.6 +1.3
baz=264,SNR=7.0
BVAR Borovoye Array 53.32 316 P P 08 40 59.5 -0.2
comp=Z,12nm,0.5s,baz=93,slow=7.3,SNR=64
comp=Z,12nm,0.5s
BORK Borovoye 53.36 316 P P 08 40 59.9 -0.1
BORK IAmb IAmb 08 41 00.5
comp=Z,11nm,0.5s
P19K Oil Pt 53.53 36 P P 08 41 01.8 +0.6
baz=269
C21K Kniveblade Rid 53.77 24 P P 08 41 03.8 +1.0
baz=260
RED Redoubt Volcan 53.78 35 P P 08 41 03.5 +0.5
KDAK Kodiak Island 53.86 38 P P 08 41 03.9 +0.3
KDAK Kodiak Island 53.86 38 P P 08 41 03.8 +0.3
baz=271
KDAK Kodiak Island 53.86 38 P P 08 41 03.7 +0.3
G21K Allakaket 53.88 27 P P 08 41 04.3 +0.8
baz=264,SNR=9.9
AS31 Alice Springs 53.90 185 P P 08 41 04.9 +0.7
ASAR Alice Springs 53.90 185 P P 08 41 04.7 +0.4
comp=Z,0.8nm,0.5s,baz=16,slow=13,SNR=20
comp=Z,0.8nm,0.5s
ASAR Alice Springs 53.90 185 P P 08 41 05.0 +0.8
B21K Ikpikpuk River 53.91 24 P P 08 41 04.9 +1.2
baz=260
E21K Killik River 53.95 25 P P 08 41 04.7 +0.6
baz=262
F21K Alatna River 53.97 27 P P 08 41 04.7 +0.5
baz=263,SNR=5.4
SPCR Spurr Chakacha 54.08 34 P P 08 41 06.1 +1.0
baz=269
PPLA Purkeypile 54.15 32 P P 08 41 07.1 +1.5
PPLA IAmb IAmb 08 41 07.5
comp=Z,9.8nm,0.7s
PPLA Purkeypile 54.15 32 P P 08 41 06.8 +1.2
baz=267
STLK Strandline Lak 54.27 34 P P 08 41 06.9 +0.5
KK31 Karatay Array 54.41 304 P 08 41 07.8 0.0
KK31 IAmb IAmb 08 41 08.5
comp=Z,17nm,0.9s
KKAR Karatay Array 54.41 304 P 08 41 07.5 -0.2
NIL Nilore 54.42 292 P 08 41 08.4 +0.5
NIL IAmb IAmb 08 41 09.3
comp=Z,19nm,0.8s
NIL Nilore 54.42 292 P P 08 41 08.5 +0.5
B22K Teshekpuk Lake 54.44 23 P P 08 41 08.1 +0.7
B22K IAmb IAmb 08 41 09.8
comp=Z,13nm,0.8s
B22K Teshekpuk Lake 54.44 23 P P 08 41 08.1 +0.7
baz=261
F22K John River 54.50 26 P P 08 41 08.8 +0.8
baz=264
MANEM Manem 54.69 297 P 08 41 10.4 +0.3
MANEM IAmb IAmb 08 41 11.6
comp=Z,27nm,0.6s
G22K Bettles 54.71 27 P P 08 41 10.0 +0.7
baz=265
E22K Anaktuvuk Pass 54.71 26 P P 08 41 10.4 +1.0
baz=264
BRLK Bradley Lake 54.72 36 P P 08 41 10.1 +0.5
BTK Batken 54.78 300 P P 08 41 09.9 -0.5
BTK Batken 54.78 300 P P 08 41 10.0 -0.5
BRSE Bradley Lake S 54.80 36 P P 08 41 11.0 +0.9
baz=271
M22K Willow 55.09 33 P P 08 41 12.7 +0.6
baz=270
D23K Nanushuk River 55.21 25 P 08 41 14.2 +1.3
D23K Nanushuk River 55.21 25 P P 08 41 14.2 +1.3
baz=264,SNR=9.0
G23K Bananza Creek 55.28 27 IAmb IAmb 08 41 15.2
comp=Z,6.7nm,0.7s
G23K Bananza Creek 55.28 27 P P 08 41 14.6 +1.1
baz=267,SNR=17
C23K Itkillik River 55.32 24 IAmb IAmb 08 41 15.7
comp=Z,14nm,0.9s
C23K Itkillik River 55.32 24 P P 08 41 14.8 +1.1
baz=264,SNR=6.6
GAR Garm 55.39 299 P 08 41 14.2 -0.6
GAR Garm 55.39 299 P P 08 41 14.5 -0.4
H23K Yukon River 55.43 28 P P 08 41 15.8 +1.3
baz=268
SEW Seward 55.44 35 P P 08 41 14.7 +0.1
baz=272
E23K Chandalar 55.52 26 P P 08 41 16.2 +1.0
baz=266,SNR=7.0
PMR Palmer 55.56 34 IAmb IAmb 08 41 16.4
comp=Z,17nm,1.1s
PMR Palmer 55.56 34 P P 08 41 15.5 0.0
baz=271,SNR=8.1
GHO Glory Hole Cre 55.66 33 P P 08 41 16.8 +0.6
GHO IAmb IAmb 08 41 18.5
comp=Z,11nm,0.8s
RND Reindeer 55.67 31 IAmb IAmb 08 41 17.2
comp=Z,14nm,0.6s
WAT1 Susitna Watana 55.81 32 P P 08 41 17.3 +0.1
baz=271
D24K Happy Valley 55.89 24 IAmb IAmb 08 41 19.7
comp=Z,16nm,1.0s
D24K Happy Valley 55.89 24 P P 08 41 18.7 +1.1
baz=266
E24K Your Creek 55.95 26 P P 08 41 19.3 +1.1
baz=267
COLA College 56.12 30 P P 08 41 20.3 +1.1
baz=270
COLA College 56.12 30 P P 08 41 20.4 +1.1
F24K Squaw Lake 56.15 26 IAmb IAmb 08 41 21.6
comp=Z,8.1nm,0.7s
F24K Squaw Lake 56.15 26 P P 08 41 20.8 +1.2
baz=268,SNR=18
WAT6 Susitna Watana 56.19 32 P P 08 41 20.2 +0.1
baz=272,SNR=7.1
G24K Hadweenzic Riv 56.29 27 P P 08 41 21.8 +1.3
baz=269,SNR=6.8
CHGR Chuyangaron 56.35 299 P P 08 41 21.6 +0.1
SCM Sheep Creek Mo 56.41 33 P P 08 41 22.2 +0.7
baz=272,SNR=9.7
IL31 56.53 30 P 08 41 21.7 -0.4
ILAR Eielson Array 56.53 30 P P 08 41 21.6 -0.6
comp=Z,1.7nm,0.5s,baz=242,slow=5.6,SNR=44
comp=Z,1.7nm,0.5s
ILAR Eielson Array 56.53 30 P 08 41 21.9 -0.2
GLI Glacier Island 56.57 34 P P 08 41 22.9 +0.4
baz=273,SNR=7.0
D25K Kavik River 56.77 24 P P 08 41 24.8 +1.0
baz=268
G25K Bearman Lake 56.84 27 P P 08 41 25.8 +1.6
baz=270
M24K Tolsona, Glenn 56.94 33 IAmb IAmb 08 41 27.1
comp=Z,14nm,0.7s
M24K Tolsona, Glenn 56.94 33 P P 08 41 26.4 +1.2
baz=273,SNR=5.9
F25K Christian Rive 57.01 26 P P 08 41 27.3 +1.7
baz=270,SNR=11
E25K Arctic Village 57.04 26 P P 08 41 27.3 +1.5
baz=270,SNR=8.9
KLU Klutina 57.10 34 IAmb IAmb 08 41 27.9
comp=Z,15nm,1.1s
KLU Klutina 57.10 34 P P 08 41 26.9 +0.6
baz=274,SNR=8.1
DIV Divide 57.20 34 IAmb IAmb 08 41 28.7
comp=Z,13nm,0.7s
EYAK Cordova Ski Ar 57.25 35 P P 08 41 27.9 +0.7
EYAK IAmb IAmb 08 41 28.5
comp=Z,4.8nm,0.6s
EYAK Cordova Ski Ar 57.25 35 P P 08 41 28.0 +0.7
baz=275
SHAA Shahritus 57.42 297 IAmb IAmb 08 41 30.0
comp=Z,28nm,0.6s
KBL Kabul 57.53 294 P 08 41 29.4 -0.5
KBL IAmb IAmb 08 41 30.3
comp=Z,5.7nm,0.7s
KBL Kabul 57.53 294 P P 08 41 29.3 -0.5
F26K Sheenjek River 57.59 26 IAmb IAmb 08 41 31.7
comp=Z,8.1nm,0.5s
F26K Sheenjek River 57.59 26 P P 08 41 31.2 +1.7
baz=271,SNR=19
C27K Jago River 57.71 24 IAmb IAmb 08 41 32.5
comp=Z,12nm,1.1s
C27K Jago River 57.71 24 P P 08 41 31.6 +1.4
baz=271,SNR=12
N25K Chitina, Valde 57.72 33 P P 08 41 31.3 +0.7
baz=275,SNR=5.6
G26K Porcupine Rive 57.75 27 P P 08 41 31.7 +1.2
baz=272
BMRM Bremner River 57.77 34 P 08 41 31.4 +0.5
BMRM Bremner River 57.77 34 P P 08 41 31.8 +0.9
baz=275,SNR=10
KAIM Kayak Island 57.97 35 P P 08 41 33.2 +1.1
baz=276
MENT Mentasta 58.02 32 IAmb IAmb 08 41 34.4
comp=Z,12nm,0.7s
GLB Gilahina Butte 58.11 34 P 08 41 34.0 +0.8
GLB IAmb IAmb 08 41 35.0
comp=Z,15nm,1.2s
VRDI Verde Repeater 58.31 34 P P 08 41 35.0 +0.3
CRQM Cirque 58.51 34 P P 08 41 36.5 +0.5
CRQM IAmb IAmb 08 41 37.9
comp=Z,9.5nm,0.8s
E27K Coleen River 58.53 26 IAmb IAmb 08 41 37.7
comp=Z,4.6nm,0.6s
E27K Coleen River 58.53 26 P P 08 41 37.2 +1.4
baz=273,SNR=9.3
CRQE Cirque 58.53 34 P P 08 41 36.8 +0.6
baz=277,SNR=6.3
G27K Doyon Strip 58.60 27 P P 08 41 37.6 +1.3
baz=274
K27K Chicken 58.66 30 IAmb IAmb 08 41 38.6
comp=Z,9.2nm,1.1s
H27K Steamboat Moun 58.69 28 P P 08 41 38.4 +1.4
baz=275,SNR=10
D27M Malcolm River 58.70 24 IAmb IAmb 08 41 38.8
comp=Z,4.9nm,0.6s
D27M Malcolm River 58.70 24 P P 08 41 38.3 +1.3
baz=273
L27K Beaver Creek, 58.87 32 P P 08 41 39.3 +1.1
L27K IAmb IAmb 08 41 40.1
comp=Z,6.4nm,0.8s
L27K PcP PcP 08 42 23.2 +1.1
L27K Beaver Creek, 58.87 32 P P 08 41 39.3 +1.1
baz=276,SNR=22
BCAR Beaver Creek A 58.89 32 P 08 41 39.3 +0.9
BCAR PcP PcP 08 42 23.6 +1.4
GRNC Granite Creek 59.19 34 IAmb IAmb 08 41 42.0
comp=Z,6.5nm,0.6s
BARN Barnard Glacie 59.19 34 IAmb IAmb 08 41 41.8
comp=Z,5.2nm,0.6s
F28M Old Crow 59.22 26 IAmb IAmb 08 41 42.8
comp=Z,11nm,1.2s
F28M Old Crow 59.22 26 P P 08 41 41.9 +1.3
baz=275,SNR=12
E28M Babbage River 59.26 25 IAmb IAmb 08 41 43.2
comp=Z,7.7nm,0.9s
E28M Babbage River 59.26 25 P P 08 41 42.2 +1.4
baz=275,SNR=14
BVCY Beaver Creek 59.39 32 P P 08 41 42.7 +0.9
baz=278,SNR=5.2
I28M Miner Creek 59.42 29 IAmb IAmb 08 41 43.9
comp=Z,12nm,1.0s
I28M Miner Creek 59.42 29 P P 08 41 43.0 +1.0
baz=277,SNR=20
D28M Stokes Point 59.48 24 P P 08 41 43.3 +1.2
baz=276
YUK3 Moose Creek 59.66 33 P P 08 41 44.7 +0.8
baz=278,SNR=12
DAWY Dawson 59.83 30 P 08 41 45.4 +0.7
DAWY Dawson 59.83 30 P P 08 41 45.3 +0.7
baz=278,SNR=8.1
ARTI Arti 59.84 321 P P 08 41 44.2 -0.6
comp=Z,11nm,0.5s,baz=85,slow=4.5,SNR=16
comp=Z,11nm,0.5s
ARTI Arti 59.84 321 P 08 41 44.2 -0.6
E29M Blow River 59.88 25 P P 08 41 46.1 +1.2
baz=277,SNR=8.5
O28M Mount Upton 59.94 34 P P 08 41 46.6 +0.8
baz=279
H29M Whitestone 59.97 28 P P 08 41 46.7 +1.2
baz=278,SNR=5.8
G29M Pine Creek 60.01 27 P P 08 41 47.4 +1.5
baz=277,SNR=22
PINM Pinnacle 60.02 35 P P 08 41 46.9 +0.8
baz=276
YUK8 Steele Glacier 60.07 33 P P 08 41 47.6 +1.0
baz=279
J29N Klondike Camp 60.28 30 P P 08 41 48.8 +1.1
baz=279
AB31 Akbulak array 60.36 312 P 08 41 48.1 -0.3
ABKAR Akbulak array 60.36 312 P 08 41 48.0 -0.4
BRWY Burwash Landin 60.40 33 P P 08 41 49.9 +1.3
baz=280
M29M Somme Creek 60.49 32 P 08 41 50.5 +1.3
M29M IAmb IAmb 08 41 51.6
comp=Z,12nm,1.0s
M29M Somme Creek 60.49 32 P P 08 41 50.7 +1.5
baz=280,SNR=16
L29M L29M 60.53 31 IAmb IAmb 08 41 52.0
comp=Z,16nm,0.9s
L29M L29M 60.53 31 P P 08 41 50.9 +1.5
baz=280,SNR=20
YUK4 Talbot Arm 60.59 33 P P 08 41 51.3 +1.2
baz=280
EPYK Eagle Plains 60.60 27 P P 08 41 50.4 +0.6
EPYK Eagle Plains 60.60 27 P P 08 41 50.8 +0.9
baz=279,SNR=31
K29M Barlow Dome 60.68 30 IAmb IAmb 08 41 52.5
comp=Z,12nm,0.8s
K29M Barlow Dome 60.68 30 P P 08 41 51.5 +1.0
baz=280,SNR=22
G30M tAoh Zrail Nji 60.71 27 P P 08 41 51.2 +0.7
baz=279,SNR=21
F30M Barrier River 60.77 26 P P 08 41 52.1 +1.2
baz=279,SNR=17
YUK6 Outpost Mounta 60.80 34 P P 08 41 52.7 +1.3
baz=280
O29M Mount Kennedy 60.81 34 IAmb IAmb 08 41 53.9

comp=Z,14nm,1.0s
O29M Mount Kennedy 60.81 34 P P 08 41 52.9 +1.5
baz=281,SNR=11
I30M Mount Dempster 60.93 29 IAmb IAmb 08 41 54.7
comp=Z,8.3nm,0.7s
I30M Mount Dempster 60.93 29 P P 08 41 52.9 +0.8
baz=280,SNR=24
J30M Hart River 61.06 29 P P 08 41 53.9 +0.9
baz=280,SNR=12
M30M Minto, Yukon 61.23 32 IAmb IAmb 08 41 55.7
comp=Z,5.2nm,0.7s
M30M Minto, Yukon 61.23 32 P P 08 41 55.2 +1.2
baz=281,SNR=16
HYT Haines Junctio 61.23 34 P 08 41 55.2 +1.0
HYT IAmb IAmb 08 41 56.5
comp=Z,8.8nm,0.8s
HYT Haines Junctio 61.23 34 P P 08 41 55.5 +1.3
baz=281,SNR=14
AKTO Aktyubinsk 61.30 314 P P 08 41 54.2 -0.5
comp=Z,10nm,0.6s,baz=73,slow=5.9,SNR=21
comp=Z,10nm,0.6s
N30M Aishikik Lake 61.30 33 P P 08 41 55.6 +1.0
baz=281,SNR=7.9
P29M Windy Craggy 61.35 35 IAmb IAmb 08 41 57.4
comp=Z,12nm,0.8s
P29M Windy Craggy 61.35 35 P P 08 41 56.3 +1.4
baz=282,SNR=7.7
G31M Satah River 61.47 27 P P 08 41 55.7 +0.2
baz=281,SNR=9.8
INK Inuvik 61.50 25 P 08 41 55.7 +0.1
INK IAmb IAmb 08 41 56.6
comp=Z,7.1nm,0.8s
INK Inuvik 61.50 25 P P 08 41 55.7 +0.1
baz=281,SNR=6.0
INK Inuvik 61.50 25 P P 08 41 55.3 -0.3
F31M Tsiigehtchic 61.58 26 P P 08 41 56.0 -0.2
baz=281
FORT Forrest 61.59 190 P P 08 41 56.1 -0.6
FORT IAmb IAmb 08 42 12.7
comp=Z,15nm,1.4s
P30M Million Dollar 61.64 35 P P 08 41 58.0 +1.3
baz=282
H31M Peel River 61.66 28 P P 08 41 57.7 +0.9
baz=281,SNR=17
N31M Braeburn, Yuko 61.91 33 P P 08 41 59.7 +1.2
baz=282,SNR=18
O30N Mendenhall 61.92 34 P P 08 41 59.5 +0.8
baz=282,SNR=7.0
STKA Stephens Creek 61.99 177 P P 08 41 59.6 +0.3
comp=Z,1.6nm,0.7s,baz=332,slow=9.1,SNR=4.9
comp=Z,1.6nm,0.7s
PLBC Pleasant Camp 62.07 35 P P 08 42 00.6 +1.1
baz=283
M31M Drury Creek, Y 62.40 32 P P 08 42 02.7 +1.0
baz=283,SNR=17
WHY Whitehorse 62.52 34 P 08 42 03.5 +0.9
WHY Whitehorse 62.52 34 P P 08 42 03.8 +1.1
baz=284,SNR=11
SKAG Skagway 62.59 35 P P 08 42 04.1 +1.2
baz=284
HRA Herat 62.92 296 P P 08 42 05.8 -0.1
HRA IAmb IAmb 08 42 06.8
comp=Z,6.8nm,1.1s
N32M Quiet Lake 63.26 33 P P 08 42 08.0 +0.7
baz=285
P32M Atlin 63.35 35 P P 08 42 08.7 +0.8
baz=285
A36M Sachs Harbour 63.39 20 P P 08 42 08.6 +0.7
baz=286
P33M Teslin, Yukon 63.63 34 IAmb IAmb 08 42 11.7
comp=Z,7.4nm,1.1s
P33M Teslin, Yukon 63.63 34 P P 08 42 10.8 +1.0
baz=285,SNR=5.7
MMPY Sheldon Lake, 63.71 31 IAmb IAmb 08 42 12.3
comp=Z,6.2nm,1.1s
MMPY Sheldon Lake, 63.71 31 P P 08 42 11.4 +1.2
baz=286,SNR=7.1
Q32M Nakina River 64.24 35 IAmb IAmb 08 42 16.0
comp=Z,4.5nm,0.9s
Q32M Nakina River 64.24 35 P P 08 42 15.1 +1.2
baz=286,SNR=5.8
C36M Paulatuk 64.56 23 P P 08 42 15.9 +0.5
baz=288,SNR=6.1
R33M Jennings River 64.75 34 IAmb IAmb 08 42 19.2
comp=Z,4.7nm,0.9s
R33M Jennings River 64.75 34 P P 08 42 18.3 +1.3
baz=287,SNR=6.7
CRAG Craig 64.81 39 P P 08 42 18.3 +1.1
baz=287
WRAK Wrangell Islan 64.94 38 P P 08 42 19.0 +0.9
baz=288
S34M Telegraph Cree 65.12 36 IAmb IAmb 08 42 21.5
comp=Z,5.7nm,0.8s
S34M Telegraph Cree 65.12 36 P P 08 42 20.3 +1.1
baz=288
DLBC Dease Lake 65.51 35 P P 08 42 23.1 +1.3
baz=288,SNR=7.5
WTLY Watson Lake, Y 65.58 33 IAmb IAmb 08 42 24.1
comp=Z,10nm,1.0s
WTLY Watson Lake, Y 65.58 33 P P 08 42 23.2 +1.1
baz=287,SNR=7.1
T35M Bob Quinn 65.86 37 IAmb IAmb 08 42 26.3
comp=Z,7.0nm,0.8s
T35M Bob Quinn 65.86 37 P P 08 42 25.4 +1.5
baz=289,SNR=5.5
BELG Belogornoye 66.95 318 P P 08 42 30.4 -0.3
comp=Z,14nm,0.6s,baz=117,slow=4.5,SNR=2.9
comp=Z,14nm,0.6s
LIRD Liard River Hi 67.10 34 P P 08 42 32.9 +1.2
baz=291
KOTAN Kotaneelee Air 67.80 32 P P 08 42 37.1 +1.2
baz=292
ARCES ARCESS Array B 69.31 340 P P 08 42 45.1 +0.3
comp=Z,1.0nm,0.4s,baz=65,slow=8.6,SNR=15
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 69.31 340 P P 08 42 45.2 +0.3
RES Resolute Bay 69.67 13 P P 08 42 46.4 -0.6
RES IAmb IAmb 08 43 11.6
comp=Z,13nm,1.3s
NIUE Niue 69.99 128 P P 08 42 48.9 -0.9
YKA Yellowknife Ar 70.88 28 P P 08 42 54.2 -0.2
comp=Z,4.2nm,0.7s,baz=304,slow=5.9,SNR=38
comp=Z,4.2nm,0.7s
YKA Yellowknife Ar 70.88 28 P P 08 42 53.9 -0.5
YKAW1 Yellowknife Wh 70.93 28 P P 08 42 54.8 +0.1
YKAW1 IAmb IAmb 08 42 55.2
comp=Z,5.9nm,0.6s
NLWA Neilton Lookou 73.20 45 IAmb IAmb 08 43 10.8
comp=Z,6.9nm,0.8s
KBZ Khabaz 73.28 311 P P 08 43 09.0 +0.3
comp=Z,9.5nm,0.8s,baz=104,slow=4.5,SNR=28
comp=Z,9.5nm,0.8s
KIV Kislovodsk 73.31 311 P P 08 43 10.0 +0.9
WISH Wishkah 73.39 45 IAmb IAmb 08 43 12.1
comp=Z,14nm,1.1s
FINES FINESS Array B 73.48 332 P P 08 43 09.2 -0.4
comp=Z,2.7nm,0.4s,baz=67,slow=5.2,SNR=30
comp=Z,2.7nm,0.4s
FINES FINESS Array B 73.48 332 P P 08 43 09.3 -0.3
A05A Maple Falls 73.54 43 P P 08 43 10.5 +0.4
A05A IAmb IAmb 08 43 11.8
comp=Z,8.2nm,1.3s
GNW Green Mountain 73.76 44 IAmb IAmb 08 43 13.8
comp=Z,6.3nm,1.0s
E03A Lebam 73.77 45 IAmb IAmb 08 43 14.9
comp=Z,11nm,1.1s
D05A Enumclaw 74.43 44 IAmb IAmb 08 43 17.7
comp=Z,8.0nm,0.9s
LTY Liberty 75.19 44 IAmb IAmb 08 43 20.9
comp=Z,5.5nm,0.8s
BUCK Buck Mountain 75.22 47 P P 08 43 21.1 +1.2
B08A Colville Reser 75.45 42 P P 08 43 21.2 +0.2
B08A IAmb IAmb 08 43 22.6
comp=Z,8.9nm,0.8s
H04A Detroit Lake 75.49 47 IAmb IAmb 08 43 23.1
comp=Z,6.8nm,0.8s
HOOD Mount Hood Mea 75.52 46 IAmb IAmb 08 43 23.6
comp=Z,9.5nm,0.8s
MXC Moxie City 75.75 44 IAmb IAmb 08 43 24.6
comp=Z,10.0nm,0.8s
I04A Tendick Farm, 75.77 47 IAmb IAmb 08 43 24.7
comp=Z,8.5nm,0.8s
EPH Ephrata 75.78 43 IAmb IAmb 08 43 24.2
comp=Z,8.6nm,0.7s
WIFE Three Sisters- 76.02 47 IAmb IAmb 08 43 26.6
comp=Z,7.9nm,0.8s
I05D Terrebonne, OR 76.19 47 P P 08 43 26.1 +0.9
I05D IAmb IAmb 08 43 27.1
comp=Z,6.4nm,0.9s
EDM Edmonton 76.22 36 IAmb IAmb 08 43 26.6
comp=Z,11nm,0.9s
ILON Igloolik, Nuna 76.34 14 IAmb IAmb 08 43 26.2
comp=Z,6.7nm,0.8s
E08A Dider Farm, El 76.53 44 IAmb IAmb 08 43 28.7
comp=Z,7.5nm,0.8s
L04D Klamath Falls 76.59 49 IAmb IAmb 08 43 29.5
comp=Z,7.6nm,0.7s
NEW Newport 76.77 42 IAmb IAmb 08 43 29.9
comp=Z,5.5nm,0.8s
NEW Newport 76.77 42 P P 08 43 28.8 +0.3
E09A Wood Farm, Sta 77.07 44 P P 08 43 30.9 +0.9
E09A IAmb IAmb 08 43 31.8
comp=Z,7.2nm,0.8s
KELT Kelkit 77.34 309 P P 08 43 31.7 -0.2
PABE Paberze 77.80 328 P P 08 43 33.5 -0.3
AKASG Malin Array Be 77.95 322 P P 08 43 33.8 -0.9
comp=Z,2.4nm,0.5s,baz=51,slow=5.7,SNR=14
comp=Z,2.4nm,0.5s
AKASG Malin Array Be 77.95 322 P P 08 43 34.9 +0.2
AKBB Malin Array Si 77.95 322 P P 08 43 34.2 -0.4
AKBB IAmb IAmb 08 43 34.6
comp=Z,6.7nm,0.9s
AK01 Malin Array Si 77.96 322 P P 08 43 33.7 -1.1
KIEV Kiev 77.96 322 P P 08 43 34.2 -0.5
KIEV IAmb IAmb 08 43 34.7
comp=Z,6.1nm,0.9s
KIEV Kiev 77.96 322 P P 08 43 33.8 -1.0
comp=Z,40nm,0.8s
KIEV Kiev 77.96 322 P P 08 43 33.5 -1.2
AK09 Malin Array Si 77.96 322 P P 08 43 33.6 -1.2
AK04 Malin Array Si 77.97 322 P P 08 43 33.8 -1.0
AK08 Malin Array Si 77.97 322 P P 08 43 33.9 -0.9
AK02 Malin Array Si 77.98 322 P P 08 43 34.0 -0.9
AK22 Malin Array Si 77.99 322 P P 08 43 34.3 -0.7
BMO Blue Mountains 78.42 45 P P 08 43 38.1 +0.5
BMO IAmb IAmb 08 43 39.1
comp=Z,4.0nm,0.7s
JTMT Jette 78.67 41 P P 08 43 38.9 0.0
WVOR Wild Horse Val 78.84 47 P P 08 43 40.3 +0.4
WVOR Wild Horse Val 78.84 47 P P 08 43 40.3 +0.4
BEKR Beckworth 79.03 50 IAmb IAmb 08 43 42.3
comp=Z,5.1nm,1.0s
HFS Hagfors 79.05 335 P P 08 43 39.7 -0.7
comp=Z,1.9nm,0.4s,baz=98,slow=3.0,SNR=16
comp=Z,1.9nm,0.4s
LUBAR Lubar, Ukraine 79.16 322 P P 08 43 40.7 -0.6
NB2 NORSAR Subarra 79.28 337 P P 08 43 41.1 -0.6
comp=Z,1.0nm,0.5s,baz=45,slow=5.3
NOA NORSAR Array B 79.28 337 P P 08 43 41.2 -0.6
comp=Z,1.8nm,0.7s,baz=44,slow=5.2,SNR=6.3
comp=Z,1.8nm,0.7s
RAYN Ar Rayn 80.72 292 P P 08 43 50.0 -0.1
RAYN IAmb IAmb 08 43 50.7
comp=Z,13nm,1.1s
RAYN Ar Rayn 80.72 292 P P 08 43 49.9 -0.1
FFC Flin Flon 80.73 31 P P 08 43 49.1 -0.3
FFC IAmb IAmb 08 43 50.2
comp=Z,6.9nm,0.8s
FFC Flin Flon 80.73 31 P P 08 43 49.3 -0.2
HLID Hailey 80.87 45 P P 08 43 51.2 +0.6
HLID Hailey 80.87 45 P P 08 43 51.7 +1.1
DLMT Dillon 80.95 42 IAmb IAmb 08 43 52.5
comp=Z,6.8nm,0.7s
EGMT Eagleton 81.03 39 P P 08 43 51.3 +0.1
EGMT IAmb IAmb 08 43 53.2
comp=Z,7.0nm,0.7s
BCYI Bear Canyon 81.06 44 P P 08 43 52.1 +0.4
MCMT McKenzie Canyo 81.11 43 P P 08 43 50.9 -1.0
NVAR Mina Array Bea 81.14 51 P P 08 43 52.5 +0.3
comp=Z,1.5nm,0.6s,baz=292,slow=5.4,SNR=12
comp=Z,1.5nm,0.6s
NVAR Mina Array Bea 81.14 51 P P 08 43 52.9 +0.7
NV11 Mina Array Sit 81.24 51 P P 08 43 51.6 -1.0
BR131 Keskin Array S 81.27 311 P P 08 43 52.6 -0.1
BR131 IAmb IAmb 08 43 53.4
comp=Z,7.2nm,0.9s
BRTR Keskin Array B 81.27 311 P P 08 43 52.6 -0.1
comp=Z,4.2nm,0.8s,baz=97,slow=4.0,SNR=21
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 81.27 311 P P 08 43 52.5 -0.2
BR104 Keskin Array S 81.28 311 P P 08 43 52.7 -0.1
comp=Z,51nmcomp=Z,7.0nm,1.0s
BR106 Keskin Array S 81.28 311 P P 08 43 52.7 -0.1
comp=Z,44nmcomp=Z,5.5nm,0.9s
BR105 Keskin Array S 81.29 311 P P 08 43 52.6 -0.3
comp=Z,50nmcomp=Z,6.7nm,0.9s
BOZ Bozeman (W) 81.38 42 P P 08 43 53.8 +0.6
BOZ IAmb IAmb 08 43 54.6
comp=Z,3.8nm,0.6s
TESR Tescani 81.73 320 P P 08 43 54.3 -0.5
BUR08 Bucovina Ar. S 81.86 321 P 08 43 55.7 +0.1
BUR08 IAmb IAmb 08 43 56.3
comp=Z,3.9nm,0.7s
BURAR Bucovina Array 81.87 321 P P 08 43 55.7 +0.1
BURAR IAmb IAmb 08 43 56.6
comp=Z,4.2nm,0.8s
ELK Elko 81.90 47 P P 08 43 56.8 +0.7
ELK IAmb IAmb 08 43 58.0
comp=Z,7.5nm,1.4s
DSP Deep Springs 81.92 51 IAmb IAmb 08 43 58.0
comp=Z,8.8nm,1.3s
QLMT Earthquake Lak 81.93 42 P P 08 43 57.3 +1.1
TPH Tonopah 82.05 50 IAmb IAmb 08 43 59.1
comp=Z,12nm,1.4s
VRI Vrincioaia 82.06 319 P P 08 43 56.3 -0.3
comp=Z,10nm,1.0s
YHL Hebgen Lake 82.07 42 P P 08 43 57.6 +0.6
YHB Horse Butte 82.12 42 IAmb IAmb 08 43 59.1
comp=Z,5.7nm,0.8s
GCMT Greycliff 82.39 41 P P 08 43 58.7 +0.3
GMN Gold Mountain 82.44 51 P P 08 43 59.7 +0.7
GMN IAmb IAmb 08 44 00.4
comp=Z,3.0nm,0.7s
YNE Yellowstone No 82.65 42 P P 08 43 59.0 -0.9
H17A Grant Village 82.68 42 IAmb IAmb 08 44 03.6
comp=Z,5.1nm,0.7s
FLWY Flagg Ranch 82.79 43 P P 08 44 01.2 +0.6
FLWY IAmb IAmb 08 44 03.2
comp=Z,7.3nm,0.9s
HVU Hansel Valley 82.87 45 P P 08 44 01.2 +0.3
RLMT Red Lodge 83.01 41 IAmb IAmb 08 44 03.3
comp=Z,4.3nm,0.5s
LOHW Long Hollow 83.12 43 P P 08 44 01.7 -0.5
BGU Big Grassy Mou 83.19 46 P P 08 44 03.2 +0.7
BGU IAmb IAmb 08 44 03.8
comp=Z,4.0nm,0.8s
TPNV Topopah Spring 83.31 51 P 08 44 03.8 +0.5
TPNV IAmb IAmb 08 44 04.5
comp=Z,6.5nm,0.8s
QSM Queen of Sheba 83.42 52 P P 08 44 03.8 +0.2
GWY Greenwater Val 83.44 52 IAmb IAmb 08 44 05.2
comp=Z,8.8nm,1.0s
ARR Arges 83.54 319 P P 08 44 05.0 +0.9
HWUT Hardware Ranch 83.71 45 P P 08 44 06.3 +1.1
DUG Dugway, Tooele 83.74 47 P P 08 44 06.0 +0.6
DUG IAmb IAmb 08 44 07.0
comp=Z,5.5nm,0.8s
DUG Dugway, Tooele 83.74 47 P P 08 44 06.2 +0.9
GSC Goldstone, Bar 83.83 53 P P 08 44 05.9 +0.2
GSC IAmb IAmb 08 44 07.1
comp=Z,4.6nm,0.9s
PSUT Pine Spring 84.02 49 IAmb IAmb 08 44 08.0
comp=Z,3.5nm,0.7s
TCUT Toone Canyon 84.09 45 IAmb IAmb 08 44 08.8
comp=Z,8.0nm,0.8s
CTU Camp Tracy 84.12 46 P P 08 44 08.1 +0.8
PDAR Pinedale Array 84.24 43 P P 08 44 07.7 -0.2
comp=Z,2.7nm,1.0s,baz=311,slow=1.5,SNR=14
comp=Z,2.7nm,1.0s
NLU North Lily Min 84.34 47 P P 08 44 08.5 +0.1
NLU IAmb IAmb 08 44 10.0
comp=Z,4.5nm,0.9s
MPU Maple Canyon 84.59 46 IAmb IAmb 08 44 11.2
comp=Z,4.2nm,0.8s
LCMT Little Creek M 85.27 50 IAmb IAmb 08 44 14.6
comp=Z,3.8nm,1.0s
P17A Butcher Ranch, 85.46 46 IAmb IAmb 08 44 15.5
comp=Z,4.7nm,0.8s
RDMU Red Mountain 85.54 45 IAmb IAmb 08 44 15.8
comp=Z,4.8nm,0.8s
KNB Kanab 85.55 49 IAmb IAmb 08 44 16.2
comp=Z,5.7nm,0.9s
P18A Preston Nutter 85.68 46 IAmb IAmb 08 44 17.4
comp=Z,2.6nm,0.7s
MDND Maddock 86.42 35 IAmb IAmb 08 44 18.9
comp=Z,7.5nm,0.8s
ULM Lac du Bonnet 86.51 31 P P 08 44 17.5 -0.9
comp=Z,1.1nm,0.4s,baz=356,slow=2.7,SNR=6.0
comp=Z,1.1nm,0.4s
RSSD Black Hills 86.56 40 P P 08 44 19.1 0.0
O20A White River Ci 86.61 45 P P 08 44 19.4 0.0
PV19 Morning Glory 87.26 47 IAmb IAmb 08 44 23.8
comp=Z,4.6nm,0.8s
PV16 Nyswonger Mesa 87.30 47 IAmb IAmb 08 44 28.1
comp=Z,6.6nm,1.4s
PV05 Paradox Valley 87.32 47 P P 08 44 22.9 +0.1
PV05 IAmb IAmb 08 44 23.7
comp=Z,3.5nm,0.9s
PV18 Skein Mesa, Pa 87.34 47 IAmb IAmb 08 44 24.8
comp=Z,9.0nm,1.4s
AGMN Agassiz Nation 87.91 33 P P 08 44 24.5 -0.5
ISCO Idaho Springs 88.40 44 P P 08 44 28.4 +0.5
F33A 5 Mile Ranch, 89.45 35 IAmb IAmb 08 44 33.5
comp=Z,6.9nm,1.0s
SDCO Great Sand Dun 89.77 45 P P 08 44 34.5 +0.2
DUN6 Lazy B Ranch 90.65 51 P P 08 44 38.4 +0.2
T25A Trinidad 90.82 45 P P 08 44 39.9 +0.8
T25A IAmb IAmb 08 44 40.6
comp=Z,2.8nm,0.8s
ANMO Albuquerque 90.92 48 P P 08 44 40.7 +1.2
comp=Z,2.5nm,0.8s,baz=256,slow=2.8,SNR=12
comp=Z,2.5nm,0.8s
ANMO Albuquerque 90.92 48 P P 08 44 40.6 +1.0
ANMO IAmb IAmb 08 44 41.7
comp=Z,2.2nm,0.8s
ANMO Albuquerque 90.92 48 P P 08 44 40.8 +1.2
LENM Lemitar 91.07 49 P P 08 44 40.8 +0.6
G40A Rib Lake 92.77 32 P P 08 44 47.9 +0.3
G40A IAmb IAmb 08 44 48.4
comp=Z,2.7nm,0.9s
I40A Norwalk 93.62 33 P P 08 44 51.6 0.0
I40A IAmb IAmb 08 45 26.6
comp=Z,2.7nm,1.1s
I42A Draeger Farm, 94.41 32 P P 08 44 55.2 0.0
TXAR Lajitas Array 96.29 51 P P 08 45 03.9 -0.2
comp=Z,0.5nm,0.6s,baz=288,slow=4.1,SNR=12
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 96.29 51 P P 08 45 03.7 -0.4
TROLL Troll, Antarti 132.11 197 ||SKPbc SKPbc 08 53 28.6 -1.0
comp=Z,55nm,0.5s
SNAA Sanae 133.64 196 ||SKPbc SKPbc 08 53 32.5 -2.1
comp=Z,46nm,0.9s
SNAA Sanae 133.64 196 SKPbc SKPbc 08 53 32.6 -2.0
comp=Z,1.9nm,0.8s,baz=115,slow=5.2,SNR=6.1
VNA2 Neumayer--Watz 135.22 195 ||SKPbc SKPbc 08 53 38.0 -1.5
comp=Z,2.3nm,0.7s,baz=115,slow=1.8
CZSB Cruzeiro do Su 143.27 59 PKPab 08 51 04.6 -0.2
ESPZ Base Esperanza 145.54 168 PKPdf PKPbc 08 51 11.0 +0.2
MACA Manacapuru-AM 147.53 37 PKPdf PKPdf 08 51 13.2 -1.3
MACA PKPbc PKPbc 08 51 17.3 -0.5
MACA PKPab PKiKP 08 51 20.9 +1.3
LPAZ La Paz 152.07 66 PKPbc PKPbc 08 51 29.2 -0.1
comp=Z,0.9nm,0.4s,baz=325,slow=2.9,SNR=6.2

*UCR **06** 08:38:35.7±1.0,8.89N×84.09W,h0km±2km,MW3.7, Presumed earthquake*
*UPA **06** 08:38:35.1±0.8,8.74N×84.13W,h0km±48km,MW3.6, Presumed earthquake*

ISC 06 08:38:35.1±1.6,**8.82N**±0.05×**84.13W**±0.04,**h3**km±11km,
n77,σ**0**°**68**/89,**4C-12D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time h m s	Res ISC
QUEP	**Quepos**	**0.61**	**357**	*eP*	**Pg**	**08 38 47.0**	**+0.3**
QUEP				*eS*	**Sb**	**08 38 56.8**	**-0.6**
EDPE	**Pejibaye, P**	**0.65**	**59**	*||iP*	**Pg**	**08 38 47.6**	**0.0**
PANP	**Palmar Norte**	**0.68**	**78**	*eP*	**Pg**	**08 38 48.9**	**+0.8**
PANP				*eS*	**Sb**	**08 38 58.9**	**-0.5**
ZEDO	**Perez Zeledon**	**0.69**	**40**	*eP*	**Pg**	**08 38 48.0**	**-0.4**
FIMO	**Fila Mora**	**0.79**	**78**	*eP*	**Pg**	**08 38 50.5**	**+0.4**
PICV	**PH. Pirrs**	**0.80**	**355**	*eP*	**Pg**	**08 38 50.7**	**+0.2**
PICV				*eS*	**Sb**	**08 39 02.9**	**-0.2**
SAJE	**San Jernim**	**0.81**	**50**	*eP*	**Pg**	**08 38 50.0**	**-0.6**
SAJE				*eS*	**Sg**	**08 39 01.4**	**+0.3**
PIEC	**Cerro El Cedra**	**0.81**	**12**	*eP*	**Pg**	**08 38 50.6**	**-0.2**
RAZU	**San Marcos de**	**0.84**	**7**	*eP*	**Pg**	**08 38 51.1**	**-0.1**
RAZU				*eS*	**Sg**	**08 39 03.4**	**+1.3**
PITB	**Pirrs, San**	**0.84**	**7**	*eP*	**Pg**	**08 38 51.3**	**+0.1**
BURE	**Buenos Aires**	**0.86**	**66**	*||iP*	**Pb**	**08 38 52.3**	**-0.3**
PIRO	**Carate, Puerto**	**0.89**	**118**	*eP*	**Pb**	**08 38 53.7**	**+0.6**
PIRO	**Carate, Puerto**	**0.89**	**118**	*eP*	**Pb**	**08 38 53.1**	**0.0**
PIRO				*eS*	**Sb**	**08 39 06.6**	**+1.3**
EDP2	**Potrero Grande**	**0.96**	**78**	*eP*	**Pg**	**08 38 53.5**	**-0.1**
EDAD	**Golfito**	**0.97**	**100**	*eP*	**Pb**	**08 38 54.2**	**-0.3**
ACOS	**Acosta**	**0.97**	**358**	*||iP*	**Pg**	**08 38 53.4**	**-0.3**
ACOS				*eS*	**Sg**	**08 39 06.8**	**+0.4**
FITO	**Golfito**	**0.98**	**101**	*eP*	**Pb**	**08 38 55.1**	**+0.4**
REPA	**Paraso**	**1.03**	**14**	*eP*	**Pg**	**08 38 54.3**	**-0.7**
TAGO	**Cartago**	**1.06**	**11**	*eP*	**Pg**	**08 38 54.8**	**-0.6**
TRIN	**Tres Rios**	**1.09**	**7**	*||iP*	**Pg**	**08 38 55.2**	**-0.7**
LUJA	**Lujan**	**1.10**	**3**	*||iP*	**Pg**	**08 38 55.7**	**-0.5**
SANTA	**Santa Ana**	**1.11**	**357**	*eP*	**Pg**	**08 38 55.8**	**-0.6**
ECI	**Escuela Centro**	**1.11**	**4**	*eP*	**Pg**	**08 38 56.0**	**-0.5**
PAVB	**Pavas, San Jos**	**1.11**	**1**	*eP*	**Pg**	**08 38 55.8**	**-0.7**
SJS3	**Mercedes San J**	**1.11**	**4**	*||iP*	**Pg**	**08 38 55.9**	**-0.5**
MEXI	**Barrio Mexico**	**1.11**	**2**	*eP*	**Pg**	**08 38 56.0**	**-0.5**
SJS	**Escuela Geolog**	**1.11**	**4**	*||iP*	**Pg**	**08 38 56.0**	**-0.5**
TRB2	**Turrubares**	**1.13**	**344**	*eP*	**Pg**	**08 38 56.4**	**-0.4**
VINA	**Juan Vinas**	**1.13**	**20**	*↑iP*	**Pg**	**08 38 56.3**	**-0.5**
PCAYA	**Pacayas**	**1.13**	**16**	*eP*	**Pg**	**08 38 56.3**	**-0.6**
BELE	**Belen**	**1.15**	**357**	*eP*	**Pg**	**08 38 56.6**	**-0.5**
CORON	**Coronado**	**1.15**	**6**	*eP*	**Pg**	**08 38 56.8**	**-0.4**
OROT	**Orotina**	**1.15**	**340**	*eP*	**Pg**	**08 38 56.5**	**-0.7**
DOMI	**Santo Domingo**	**1.16**	**2**	*eP*	**Pg**	**08 38 56.9**	**-0.4**
TURIB	**Turrialba**	**1.17**	**22**	*eP*	**Pg**	**08 38 56.6**	**-0.9**
HEME	**Heredia, Merce**	**1.17**	**360**	*eP*	**Pg**	**08 38 56.9**	**-0.6**
HDC	**Heredia**	**1.17**	**1**	*eP*	**Pg**	**08 38 57.0**	**-0.6**
RAFA	**San Farael, Vo**	**1.17**	**16**	*eP*	**Pg**	**08 38 57.1**	**-0.5**
ATEO	**Atenas**	**1.18**	**348**	*↑iP*	**Pg**	**08 38 57.3**	**-0.4**
NELY	**Ciudad Neily**	**1.18**	**98**	*eP*	**Pb**	**08 38 58.1**	**-0.1**
VICA	**Volcano Irazu**	**1.19**	**14**	*eP*	**Pg**	**08 38 57.0**	**-0.9**
UELA	**Alajuela**	**1.19**	**356**	*eP*	**Pg**	**08 38 57.4**	**-0.6**
VERB	**Verbena**	**1.20**	**21**	*eP*	**Pg**	**08 38 57.1**	**-0.9**
CVIMO	**Finca Echandi**	**1.21**	**9**	*eP*	**Pn**	**08 39 02.1**	**+3.0**
VTCV	**VTCV, Calle Va**	**1.22**	**19**	*eP*	**Pg**	**08 38 57.5**	**-1.1**
CVTQ	**Turrialba Volc**	**1.23**	**17**	*||eP*	**Pg**	**08 38 58.2**	**-0.5**
VTR0	**Volcan Turrial**	**1.24**	**17**	*||iP*	**Pg**	**08 38 58.5**	**-0.4**
ABRB	**Las Abras (San**	**1.25**	**19**	*||eP*	**Pg**	**08 38 58.5**	**-0.5**
CVTR	**Volcan Turrial**	**1.25**	**17**	*||iP*	**Pg**	**08 38 58.5**	**-0.5**
LAFE	**Finca La Fe, P**	**1.25**	**322**	*eP*	**Pg**	**08 38 58.1**	**-0.9**
GREC	**Grecia**	**1.26**	**352**	*eP*	**Pg**	**08 38 59.0**	**-0.2**
PALD	**Palmares**	**1.26**	**346**	*eP*	**Pg**	**08 38 58.5**	**-0.8**
ARZA	**Esparza**	**1.28**	**336**	*eP*	**Pg**	**08 38 58.4**	**-1.3**
SARCI	**Sarchi**	**1.28**	**350**	*eP*	**Pg**	**08 38 59.3**	**-0.4**
VBV1	**V. Barva**	**1.28**	**1**	*eP*	**Pg**	**08 38 59.1**	**-0.6**
NARAN	**Naranjo de Ala**	**1.29**	**349**	*eP*	**Pg**	**08 38 59.1**	**-0.8**
RESJ	**San Isidro (Tu**	**1.29**	**22**	*↑iP*	**Pg**	**08 38 59.3**	**-0.6**
SRA1	**San Ramn**	**1.30**	**345**	*||eP*	**Pg**	**08 38 59.5**	**-0.6**
LPPC	**Paso Canoas**	**1.31**	**103**	*eP*	**Pg**	**08 38 59.7**	**-0.5**
SCLRA	**Santa Clara, W**	**1.33**	**89**	*eP*	**Pg**	**08 38 59.8**	**-0.8**
VPS8	**V Poas**	**1.35**	**355**	*eP*	**Pg**	**08 39 00.7**	**-0.4**
CVTG	**V. Turrialba,**	**1.36**	**15**	*eP*	**Pg**	**08 39 00.8**	**-0.5**
ZARE	**Zarcero**	**1.38**	**349**	*eP*	**Pg**	**08 39 01.5**	**-0.1**
RVLA	**Villa Bonita**	**1.39**	**23**	*eP*	**Pg**	**08 39 00.5**	**-1.2**
IRES	**Siquirres**	**1.41**	**26**	*eP*	**Pn**	**08 39 00.8**	**-0.9**
BRU2	**Volcan**	**1.42**	**91**	*eP*	**Pg**	**08 39 01.4**	**-1.0**
BRU2	**Volcan**	**1.42**	**91**	*eP*	**Pg**	**08 39 01.5**	**-0.9**
BRU2				*eS*	**Sn**	**08 39 21.9**	**+0.5**
PILE	**Guapiles**	**1.43**	**14**	*eP*	**Pn**	**08 39 01.6**	**-0.3**
TAAN	**Batan**	**1.48**	**32**	*eP*	**Pn**	**08 39 02.4**	**-0.1**
CLLRA	**Cordillera,**	**1.50**	**93**	*↑iP*	**Pn**	**08 39 02.9**	**-0.1**
ARTO	**Ro Cuarto**	**1.52**	**357**	*eP*	**Pn**	**08 39 02.8**	**-0.4**
QUEU	**Ciudad Quesada**	**1.52**	**349**	*eP*	**Pn**	**08 39 04.1**	**+0.8**
PTAR3	**Potrerillos Ar**	**1.62**	**94**	*eP*	**Pn**	**08 39 04.1**	**-0.5**
PTAR3				*eS*	**Sn**	**08 39 26.3**	**+0.2**
ITAL	**Pital**	**1.63**	**355**	*eP*	**Pn**	**08 39 04.9**	**+0.2**
BQSF3	**Alto Boquete,**	**1.68**	**93**	*eP*	**Pn**	**08 39 05.1**	**-0.4**
BQSF3				*eS*	**Sn**	**08 39 27.6**	**0.0**
DVD	**David**	**1.70**	**103**	*eP*	**Pn**	**08 39 05.1**	**-0.6**
DVD				*eS*	**Sn**	**08 39 28.0**	**0.0**
CNI2	**El Empalme, Bo**	**1.75**	**70**	*eP*	**Pn**	**08 39 05.9**	**-0.4**
CNI2				*eS*	**Sn**	**08 39 28.9**	**-0.1**

IDC 06 08:41:59.6±21.0, 27°87'N×82°55'E, h0km, mb3.7/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=350.6km s-min=74.1km az=28.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.89**	**359**	P	P	08 46 21.5	-0.1
	0.2nm,0.3s,baz=180,slow=11,SNR=4.6 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**22.93**	**353**	P	P	08 47 04.8	-0.3
	1.2nm,0.7s,baz=178,slow=10.0,SNR=11 1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**26.11**	**3**	P	P	08 47 35.4	+0.4
	1.2nm,0.5s,baz=196,slow=6.8,SNR=5.1 1.2nm,0.5s						
SONM	**Songino Array**	**27.23**	**37**	P	P	08 47 45.2	-0.2
	0.3nm,0.4s,baz=232,slow=7.1,SNR=1.9 0.3nm,0.4s						

*IDC **06** 08:44:24.4±0.4, 36°.89N×33°.07W, h0km, mb4.5/37, mbtmp4.5/37, MS4.0/72, Error ellipse: s-maj=13.8km s-min=9.7km az=163.0*

*MOS **06** 08:44:24.6±0.9, 36°.97N×33°.02W, h10km, mb5.0/52, Error ellipse: s-maj=8.3km s-min=5.9km az=55.2*

*NEIC **06** 08:44:26.7±0.9, 36°.99N±0°.08×33°.0W±0°.1, h10km±1km, mb4.8/501, Error ellipse: s-maj=14.1km s-min=13.3km az=158.0*

*GCMT **06** 08:44:27.7±0.2, 36°.96N±0°.03×33°.03W±0°.02, h12km, MW4.8/104, Moment Tensor Solution. s26,c27; s104,c146; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.94±.05; Mθθ0.81±.06; Mφφ 1.13±.04; Mrθ0.40±.22; Mθφ0.92±.04; Mrφ0.46±.19; Best double couple: M₀2.01400×10¹⁶ NP1:φs40.00000°, δ36.00000°, λ-90.00000°. NP2:φs220.00000°, δ54.00000°, λ-90.00000°. Principal axes: T 1.9940, Plg9.0000°, Azm310.0000°; N 0.0400, Plg0.0000°, Azm40.0000°; P -2.0340, Plg81.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **06** 08:44:27.1±0.2, 37°N±6°×3°3W±°, h10km, M4.6/24, mb4.6/24*

ISC 06 08:44:26.1±0.8, 36°.93N±0°.05×33°.02W±0°.04, h10km±4km, n807, σ0°79/636, mb4.8/291, MS4.0/77, 14C, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOR	**Horta**	**3.83**	**64**	*i* LQ	LQ	08 46 11.6	
PICO	**Pico**	**3.96**	**65**	*i* LQ	LQ	08 46 14.0	
ROSA	**Rosais**	**4.18**	**63**	*i* LQ	LQ	08 46 19.6	
SRBC	**Serra Branca**	**4.46**	**60**	*i* LQ	LQ	08 46 39.4	
PGRA	**Graciosa**	**4.50**	**61**	*i* LQ	LQ	08 46 30.7	
ADH	**Angra Heroismo**	**4.89**	**68**	*i* LQ	LQ	08 46 41.0	
PAGU	**Agualva, Azore**	**4.97**	**67**	*i* LQ	LQ	08 46 39.4	
PSET	**Sete Cidades**	**5.88**	**79**	*i* LQ	LQ	08 47 09.5	
PDA	**Ponta Delgada**	**5.92**	**80**	*i* LQ	LQ	08 47 03.2	
CMLA	**Cha da Macela**	**6.03**	**80**	Pn	**Pn**	**08 45 53.3**	**-2.0**
CMLA	**Cha da Macela**	**6.03**	**80**	*i* LQ	LQ	08 47 06.3	
CMLA	**Cha da Macela**	**6.03**	**80**	P	**Pn**	**08 45 53.3**	**-2.0**
BART	**Pico Bartolome**	**6.31**	**80**	*i* LQ	LQ	08 47 23.8	
PSMN	**Pico do Norte,**	**6.37**	**87**	*eP*	**Pn**	**08 45 57.8**	**-2.1**
PSMN				*i* IAmb	IAmb	08 46 03.5	
	147nm,1.8s						
PSMN				*i* LQ	LQ	08 47 10.3	
PMOZ	**Porto Moniz, M**	**13.62**	**103**	Pn	**Pn**	**08 47 38.5**	**-0.9**
MACI	**Morro de la Ar**	**16.37**	**117**	Pn	**Pn**	**08 48 15.7**	**-0.5**
MACI				IAmb	IAmb	08 48 20.8	
	comp=Z,74nm,1.0s						
SFS	**San Fernando**	**21.48**	**83**	P	**P**	**08 49 13.7**	**-1.1**
SFS	**San Fernando**	**21.48**	**83**	P	**P**	**08 49 13.7**	**-1.1**
SFS				pmax	pmax		
	comp=Z,206nm,0.9s						
DRLN	**Deer Lake**	**21.60**	**312**		**P**	**08 49 15.2**	**-0.8**
TIO	**Tiouine**	**22.16**	**98**	P	**P**	**08 49 23.8**	**+1.5**
PAB	**San Pablo**	**22.63**	**75**		**P**	**08 49 27.4**	**+0.3**
PAB	**San Pablo**	**22.63**	**75**	P	**P**	**08 49 27.5**	**+0.3**
PAB				pmax	pmax		
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	**22.92**	**74**	P	**P**	**08 49 30.9**	**+0.7**
	comp=Z,3.0nm,1.1s,baz=280,slow=8.9,SNR=6.6						
ESDC				LR	LR	08 56 45.9	
	comp=Z,326nm,19.0s,baz=268,slow=32						
ESDC	**Sonseca Array**	**22.92**	**74**	P	**P**	**08 49 30.4**	**+0.2**
ESDC				IAmb	IAmb	08 49 52.1	
	comp=Z,60nm,1.7s						
ESBB	**Sonseca Array**	**22.93**	**74**	P	**P**	**08 49 29.7**	**-0.6**
GBN	**Guysborough**	**22.97**	**301**		**P**	**08 49 30.2**	**-0.3**
SACV	**Santiago Islan**	**23.42**	**157**	P	**P**	**08 49 35.6**	**+0.2**
SACV				IAmb	IAmb	08 49 37.3	
	comp=Z,42nm,1.0s						
SACV	**Santiago Islan**	**23.42**	**157**	P	**P**	**08 49 36.6**	**+1.1**
MD01	**Midelt array s**	**23.49**	**92**	P	**P**	**08 49 35.9**	**-0.3**
MD31	**MD31**	**23.49**	**92**	P	**P**	**08 49 35.6**	**-0.5**
MDT	**Midelt**	**23.63**	**92**	LR	LR	08 57 05.4	
	comp=Z,395nm,18.9s,baz=304,slow=32						
HAL	**Halifax**	**24.29**	**298**	P	**P**	**08 49 43.5**	**0.0**
HAL				IAmb	IAmb	08 49 53.8	
	comp=Z,29nm,1.4s						
HAL	**Halifax**	**24.29**	**298**	P	**P**	**08 49 43.5**	**0.0**
HAL				pmax	pmax		
	comp=Z,29nm,1.4s						
LMN	**Caledonia Moun**	**25.32**	**301**	P	**P**	**08 49 52.7**	**-0.1**
LMN				IAmb	IAmb	08 49 56.3	
	comp=Z,33nm,1.2s						
NRS	**Narsarsuaq**	**25.48**	**346**	P	**P**	**08 49 52.9**	**-1.2**
NRS	**Narsarsuaq**	**25.48**	**346**	P	**P**	**08 49 52.9**	**-1.2**
NRS				pmax	pmax		
	comp=Z,80nm,1.8s						
GGN	**Saint George**	**26.64**	**298**	P	**P**	**08 50 04.8**	**+0.1**
GGN				IAmb	IAmb	08 50 33.8	
	comp=Z,40nm,1.6s						
G65A	**Princeton**	**27.16**	**299**	P	**P**	**08 50 09.4**	**0.0**
G65A				IAmb	IAmb	08 50 14.9	
	comp=Z,20nm,1.1s						
EKA	**Eskdalemuir Ar**	**27.37**	**38**	P	**P**	**08 50 10.5**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=231,slow=9.0,SNR=3.6						
	comp=Z,1.8nm,0.7s						
F64A	**Sherman**	**27.77**	**300**		**P**	**08 50 15.4**	**+0.5**
D62A	**Allapoint, All**	**28.40**	**302**	P	**P**	**08 50 21.2**	**+0.7**
WVL	**Waterville**	**28.60**	**297**	P	**P**	**08 50 23.1**	**+0.8**
WVL				IAmb	IAmb	08 50 28.2	
	comp=Z,16nm,1.1s						
BORG	**Borgarnes**	**28.71**	**10**	LR	LR	08 58 31.5	
	comp=Z,298nm,19.9s,baz=219,slow=30						
SCHQ	**Schefferville**	**29.17**	**319**	LR	LR	09 01 02.5	
	comp=Z,1μm,20.1s,baz=124,slow=34						
I63A	**Otisfield**	**29.25**	**296**	P	**P**	**08 50 28.7**	**+0.6**
I63A				IAmb	IAmb	08 50 31.8	
	comp=Z,20nm,1.2s						
G62A	**West of Eustis**	**29.25**	**298**	P	**P**	**08 50 28.4**	**+0.2**
G62A				IAmb	IAmb	08 50 30.9	
	comp=Z,16nm,1.2s						
LMQ	**La Malbaie**	**29.33**	**303**	P	**P**	**08 50 29.5**	**+0.7**
LMQ				IAmb	IAmb	08 51 01.9	
	comp=Z,18nm,1.2s						
I62A	**Tamworth**	**29.79**	**296**	P	**P**	**08 50 33.0**	**+0.1**
I62A				IAmb	IAmb	08 51 23.3	
	comp=Z,29nm,1.6s						
K62A	**Royalston**	**30.47**	**293**	P	**P**	**08 50 38.5**	**-0.4**
SENIN	**Lac Senin/Sane**	**31.27**	**60**	P	**P**	**08 50 45.1**	**-1.2**
SENIN				IAmb	IAmb	08 50 46.7	
	comp=Z,38nm,1.9s						
FRNY	**Flat Rock**	**31.41**	**297**		**P**	**08 50 47.5**	**+0.3**
SFJD	**Kangerlussuaq**	**31.75**	**347**	LR	LR	09 00 53.5	
	comp=Z,548nm,18.7s,baz=164,slow=31						
SFJD	**Kangerlussuaq**	**31.75**	**347**	P	**P**	**08 50 48.1**	**-1.8**
SFJD				IAmb	IAmb	08 51 48.4	
	comp=Z,12nm,0.8s						
SFJD	**Kangerlussuaq**	**31.75**	**347**	P	**P**	**08 50 48.1**	**-1.8**
SFJD				pmax	pmax		
	comp=Z,12nm,0.8s						
NCB	**Newcomb**	**31.87**	**296**	P	**P**	**08 50 51.9**	**+0.5**
NCB				IAmb	IAmb	08 51 27.3	
	comp=Z,16nm,1.4s						
J59A	**Piesco**	**32.09**	**295**	P	**P**	**08 50 53.5**	**+0.2**
J59A				IAmb	IAmb	08 50 56.9	
	comp=Z,22nm,1.3s						
TRQ	**Mont Tremblant**	**32.11**	**300**		**P**	**08 50 53.7**	**+0.3**
TRQ				IAmb	IAmb	08 50 55.6	
	comp=Z,13nm,1.2s						
SMRT	**St. Maarten**	**32.42**	**243**	P	**P**	**08 50 56.3**	**-0.1**
L59A	**Walton**	**32.57**	**292**	P	**P**	**08 50 57.7**	**+0.2**
TUE	**Stuetta**	**32.69**	**60**		**P**	**08 50 58.7**	**0.0**
TUE	**Stuetta**	**32.69**	**60**	P	**P**	**08 50 58.0**	**-0.8**
STU	**Stuttgart**	**32.73**	**55**	P	**P**	**08 50 57.6**	**-1.1**
STU				IAmb	IAmb	08 50 57.9	
	comp=Z,18nm,1.0s						
STU	**Stuttgart**	**32.73**	**55**	P	**P**	**08 50 57.6**	**-1.1**
STU				pmax	pmax		
	comp=Z,18nm,1.0s						
DAVOX	**Davos/Dischmat**	**33.07**	**59**	LR	LR	09 02 02.2	
	comp=Z,146nm,20.7s,baz=258,slow=32						
KSPA	**Keystone Colle**	**33.18**	**291**	P	**P**	**08 51 03.6**	**+0.8**
KSPA				IAmb	IAmb	08 51 14.4	
	comp=Z,13nm,1.3s						
J57A	**Williamstown**	**33.18**	**295**	P	**P**	**08 51 03.5**	**+0.7**
BINY	**Binghamton**	**33.27**	**293**	P	**P**	**08 51 03.7**	**+0.1**
BINY				IAmb	IAmb	08 51 21.0	
	comp=Z,23nm,1.6s						
R61A	**Willards**	**33.33**	**286**	P	**P**	**08 51 04.4**	**+0.3**
K57A	**Scipio Center**	**33.61**	**294**	P	**P**	**08 51 07.3**	**+0.7**
MVL	**Millersville**	**33.82**	**289**	P	**P**	**08 51 08.5**	**+0.2**
PECO	**Prince Edward**	**33.87**	**296**	P	**P**	**08 51 08.9**	**+0.1**
PECO				IAmb	IAmb	08 51 10.2	
	comp=Z,7.7nm,0.8s						
VLDQ	**Val d'Or**	**34.16**	**303**	P	**P**	**08 51 12.8**	**+1.6**
DELO	**Deloro Mine**	**34.29**	**297**	P	**P**	**08 51 12.2**	**-0.2**
DELO				IAmb	IAmb	08 51 15.3	
	comp=Z,15nm,1.5s						
FRB	**Frobisher Bay**	**34.32**	**333**	LR	LR	09 02 22.9	
	comp=Z,258nm,19.0s,baz=89,slow=31						
SJG	**San Juan**	**34.61**	**246**	LR	LR	09 01 45.9	
	comp=Z,52nm,21.7s,baz=58,slow=30						
MMNY	**Mt. Morris Dam**	**34.63**	**294**		**P**	**08 51 15.9**	**+0.5**
MMNY				IAmb	IAmb	08 51 19.7	
	comp=Z,19nm,1.0s						
AOPR	**Arecibo Observ**	**34.91**	**247**	P	**P**	**08 51 18.4**	**+0.4**
CBN	**Corbin Frederi**	**34.93**	**286**	P	**P**	**08 51 18.4**	**+0.4**
CBN				IAmb	IAmb	08 52 25.9	
	comp=Z,24nm,1.4s						
CESX	**Cesi**	**35.17**	**66**	P	**P**	**08 51 20.7**	**+0.6**
CESX				IAmb	IAmb	08 51 42.6	
	comp=Z,14nm,1.3s						
SADO	**Sadowa**	**35.36**	**297**	LR	LR	09 06 01.6	
	comp=Z,244nm,18.1s,baz=111,slow=37						
SADO	**Sadowa**	**35.36**	**297**		**P**	**08 51 21.8**	**+0.1**
SADO				IAmb	IAmb	08 51 24.4	
	comp=Z,26nm,1.8s						
CLL	**Collm**	**35.41**	**51**	*i* P	**P**	**08 51 22.7**	**+0.7**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CLL	**Collm**	**35.41**	**51**	*i* P	**P**	**08 51 22.7**	**+0.7**
	comp=Z,9.0nm,1.2s						
KBA	**Koelnbreinsper**	**35.45**	**59**	P	**P**	**08 51 22.9**	**+0.3**
FDMO	**Fiordimonte**	**35.49**	**66**	P	**P**	**08 51 22.9**	**0.0**
BUKO	**Buck Lake**	**35.51**	**299**	P	**P**	**08 51 23.1**	**+0.2**
NRCA	**Norcia**	**35.54**	**66**	P	**P**	**08 51 22.6**	**-0.7**
KHC	**Kasperske Hory**	**35.63**	**55**	*i* P	**P**	**08 51 24.1**	**+0.1**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**35.70**	**55**	P	**P**	**08 51 25.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=263,slow=7.8,SNR=4.7						
	comp=Z,0.4nm,0.3s						
GERES	**GERESS Array B**	**35.70**	**55**	P	**P**	**08 51 23.9**	**-0.8**
GERES	**GERESS Array B**	**35.70**	**55**	P	**P**	**08 51 23.9**	**-0.8**
SUMG	**Summit**	**35.82**	**357**	P	**P**	**08 51 25.5**	**-0.3**
SUMG				IAmb	IAmb	08 51 37.0	
	comp=Z,16nm,1.3s						
SUMG	**Summit**	**35.82**	**357**	P	**P**	**08 51 25.5**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,16nm,1.3s						
SUMG	**Summit**	**35.82**	**357**	*i* P	**P**	**08 51 25.0**	**-0.7**
SUMG				IAmb	IAmb	08 51 27.6	
	comp=Z,8.7nm,1.1s						
TAM	**Tamanrasset**	**36.02**	**102**	P	**P**	**08 51 27.8**	**+0.1**
TAM	**Tamanrasset**	**36.02**	**102**	P	**P**	**08 51 27.8**	**+0.1**
TAM				pmax	pmax		
	comp=Z,80nm,0.2s						
TAM	**Tamanrasset**	**36.02**	**102**	P	**P**	**08 51 30.0**	**+2.3**
PAOC	**Oil Creek Stat**	**36.09**	**292**	P	**P**	**08 51 28.4**	**+0.4**
PAOC				IAmb	IAmb	08 51 31.8	
	comp=Z,20nm,1.5s						
ERPA	**Erie**	**36.24**	**293**	P	**P**	**08 51 29.5**	**+0.3**
S57A	**Dark Hollow, R**	**36.24**	**286**		**P**	**08 51 29.1**	**-0.2**
S57A				IAmb	IAmb	08 51 33.2	
	comp=Z,21nm,1.5s						
ALLY	**Alegheny Colle**	**36.42**	**292**	P	**P**	**08 51 31.6**	**+0.8**
ALLY				IAmb	IAmb	08 51 34.3	
	comp=Z,36nm,1.6s						
MDP	**Montagnes des**	**36.42**	**214**	LR	LR	09 03 39.5	
	comp=Z,66nm,18.1s,baz=38,slow=32						
JMIC	**Jan Mayen**	**36.47**	**13**	LR	LR	09 02 29.1	
	comp=Z,144nm,19.4s,baz=294,slow=30						
NBO00	**NORSAR Array S**	**36.47**	**35**	P	**P**	**08 51 30.6**	**-0.3**
NB2	**NORSAR Subarra**	**36.67**	**35**	P	**P**	**08 51 34.2**	**+1.5**
	comp=Z,4.3nm,0.8s,baz=251,slow=9.3						
NOA	**NORSAR Array B**	**36.67**	**35**	P	**P**	**08 51 33.9**	**+1.2**
	comp=Z,13nm,1.0s,baz=251,slow=8.7,SNR=15						
NOA				LR	LR	09 03 50.6	
	comp=Z,60nm,22.0s,baz=215,slow=32						
	comp=Z,13nm,1.0s						
NB201	**NORSAR Array S**	**36.71**	**35**	P	**P**	**08 51 31.9**	**-1.1**
NC602	**NORSAR Array S**	**36.72**	**35**	P	**P**	**08 51 32.3**	**-0.8**
NC303	**NORSAR Array S**	**36.81**	**34**	P	**P**	**08 51 33.0**	**-0.8**
O54A	**Avella**	**36.84**	**290**	P	**P**	**08 51 34.3**	**0.0**
R55A	**Marlinton**	**37.02**	**287**	P	**P**	**08 51 37.4**	**+1.3**
R55A				IAmb	IAmb	08 51 39.0	
	comp=Z,22nm,1.6s						
N53A	**Lisbon**	**37.07**	**291**	P	**P**	**08 51 36.5**	**+0.2**
M52A	**Chesterland**	**37.33**	**292**	P	**P**	**08 51 38.4**	**-0.1**
M52A				IAmb	IAmb	08 51 42.1	
	comp=Z,22nm,1.3s						
Q54A	**Coxs Mills**	**37.42**	**288**	P	**P**	**08 51 40.4**	**+1.1**
O53A	**New Philadelph**	**37.45**	**290**	P	**P**	**08 51 39.6**	**0.0**
O53A				IAmb	IAmb	08 51 43.7	
	comp=Z,32nm,1.6s						
VAE	**Valguarnera**	**37.47**	**74**	LR	LR	09 05 14.6	
	comp=Z,284nm,19.0s,baz=177,slow=33						
HFS	**Hagfors**	**37.54**	**37**	P	**P**	**08 51 40.5**	**+0.5**
	comp=Z,7.3nm,0.9s,baz=250,slow=17,SNR=4.5						
HFS				LR	LR	09 05 11.2	
	comp=Z,53nm,19.8s,baz=265,slow=33						
	comp=Z,7.3nm,0.9s						
VRAC	**Vranov**	**37.61**	**55**	LR	LR	09 05 35.5	
	comp=Z,62nm,19.7s,baz=260,slow=34						
P53A	**Whipple**	**37.73**	**289**	P	**P**	**08 51 42.1**	**+0.1**
SDDR	**Presa de Saban**	**37.93**	**252**	IAmb	IAmb	08 51 47.1	
	comp=Z,21nm,1.1s						
O52A	**Adamsville**	**37.95**	**290**	P	**P**	**08 51 44.9**	**+1.2**
O52A				IAmb	IAmb	08 51 47.8	
	comp=Z,18nm,1.1s						
S54A	**Dingess, Beckl**	**38.05**	**286**	P	**P**	**08 51 45.5**	**+0.8**
S54A				IAmb	IAmb	08 51 48.6	
	comp=Z,18nm,1.2s						
K50A	**Casco**	**38.08**	**295**	P	**P**	**08 51 45.8**	**+1.0**
K50A				IAmb	IAmb	08 51 48.2	
	comp=Z,36nm,1.5s						
N51A	**Ashland**	**38.20**	**292**	P	**P**	**08 51 46.1**	**+0.2**
N51A				IAmb	IAmb	08 51 49.6	
	comp=Z,37nm,1.4s						
BLY	**Banja Luka**	**38.26**	**62**	P	**P**	**08 51 46.0**	**-0.3**
P52A	**Corning**	**38.27**	**289**	P	**P**	**08 51 47.3**	**+0.8**
CSU	**Charleston Sou**	**38.46**	**278**	P	**P**	**08 51 47.9**	**-0.2**
V55A	**Taylorsville**	**38.48**	**283**	P	**P**	**08 51 48.9**	**+0.6**
KMSC	**Kings Mountain**	**38.78**	**282**	P	**P**	**08 51 51.8**	**+1.0**
ACSO	**Alum Creek Sta**	**38.78**	**291**		**P**	**08 51 50.9**	**+0.1**
E46A	**Sault Ste Mari**	**38.86**	**301**	P	**P**	**08 51 51.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**39.03**	**118**	P	**P**	**08 51 53.4**	**+0.3**
	comp=Z,5.4nm,1.0s,baz=313,slow=5.7,SNR=15						
TORD				LR	LR	09 07 11.2	
	comp=Z,352nm,18.7s,baz=340,slow=35						
	comp=Z,5.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**39.03**	**118**	P	**P**	**08 51 51.6**	**-1.4**
Q51A	**Peebles**	**39.32**	**289**	P	**P**	**08 51 54.8**	**-0.5**
KULLO	**Kullorsuaq**	**39.46**	**350**	P	**P**	**08 51 56.6**	**+0.5**
DBIC	**Dimbokro**	**39.58**	**133**	P	**P**	**08 51 57.3**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=335,slow=10,SNR=6.1						
DBIC				LR	LR	09 06 58.3	
	comp=Z,557nm,18.8s,baz=314,slow=34						
	comp=Z,5.3nm,0.7s						
DBIC	**Dimbokro**	**39.58**	**133**	P	**P**	**08 51 57.4**	**-0.3**
DBIC				IAmb	IAmb	08 52 39.1	
	comp=Z,32nm,1.5s						
V53A	**Saluda**	**39.78**	**284**	P	**P**	**08 51 59.3**	**+0.1**
V53A				IAmb	IAmb	08 52 03.1	
	comp=Z,28nm,1.4s						
HODGE	**Hodges**	**39.78**	**281**	P	**P**	**08 52 00.1**	**+0.9**
O49A	**Covington**	**39.80**	**291**	P	**P**	**08 52 00.2**	**+0.9**
O49A				IAmb	IAmb	08 52 02.7	
	comp=Z,26nm,1.4s						
S51A	**Beattyville**	**39.84**	**287**	P	**P**	**08 51 59.7**	**0.0**
BG3	**Lake Jocassee**	**40.08**	**283**	P	**P**	**08 52 02.2**	**+0.6**
TZTN	**Tazewell**	**40.10**	**285**	P	**P**	**08 52 03.7**	**+1.8**
O48B	**Farmland**	**40.40**	**291**		**P**	**08 52 04.5**	**+0.2**
TKL	**Tuckaleechee C**	**40.53**	**284**	P	**P**	**08 52 05.7**	**+0.2**
	comp=Z,10nm,1.1s,baz=83,slow=10,SNR=8.8						
TKL				LR	LR	09 06 07.0	
	comp=Z,234nm,20.8s,baz=72,slow=32						
	comp=Z,10nm,1.1s						
TKL	**Tuckaleechee C**	**40.53**	**284**		**P**	**08 52 06.1**	**+0.7**
P48A	**Milroy**	**40.79**	**290**		**P**	**08 52 07.8**	**+0.3**
GOGA	**Godfrey**	**41.00**	**281**	P	**P**	**08 52 09.1**	**-0.2**
GOGA	**Godfrey**	**41.00**	**281**	P	**P**	**08 52 09.1**	**-0.2**
GOGA				pmax	pmax		
	comp=Z,14nm,1.4s						
GOGA	**Godfrey**	**41.00**	**281**	P	**P**	**08 52 09.5**	**+0.2**
NEEM	**North Greenlan**	**41.37**	**354**	*i* P	**P**	**08 52 09.3**	**-2.9**
NEEM				IAmb	IAmb	08 52 15.5	
	comp=Z,21nm,1.3s						
BLO	**Bloomington**	**41.68**	**290**	P	**P**	**08 52 15.7**	**+0.9**
BLO				IAmb	IAmb	08 52 18.5	
	comp=Z,27nm,1.4s						
BLO	**Bloomington**	**41.68**	**290**	P	**P**	**08 52 15.7**	**+0.9**
BLO				pmax	pmax		
	comp=Z,27nm,1.4s						
ILON	**Igloolik, Nuna**	**41.71**	**336**	P	**P**	**08 52 14.8**	**+0.1**
X51A	**Calhoun**	**41.71**	**283**	IAmb	IAmb	08 52 18.2	
	comp=Z,37nm,1.6s						
WCI	**Wyandotte Cave**	**41.75**	**289**	P	**P**	**08 52 15.2**	**-0.2**
WCI				IAmb	IAmb	08 52 18.9	
	comp=Z,23nm,1.5s						
WCI	**Wyandotte Cave**	**41.75**	**289**	P	**P**	**08 52 15.2**	**-0.2**
WCI				pmax	pmax		
	comp=Z,23nm,1.5s						
WCI	**Wyandotte Cave**	**41.75**	**289**	P	**P**	**08 52 16.3**	**+0.9**
U49A	**Red Boiling Sp**	**41.83**	**286**	P	**P**	**08 52 16.5**	**+0.4**
NBPS	**Pedro II - PI**	**41.86**	**193**	*eP*	**P**	**08 52 15.1**	**-1.4**
PABE	**Paberze**	**42.23**	**45**	P	**P**	**08 52 19.1**	**0.0**
152A	**Waverly Hall**	**42.24**	**280**	P	**P**	**08 52 19.8**	**+0.3**
M44A	**Midewin, Midew**	**42.30**	**294**	P	**P**	**08 52 19.8**	**0.0**
FPAL	**Fort Paine**	**42.31**	**283**		**P**	**08 52 19.0**	**-1.1**
RCBR	**Riachuelo**	**42.62**	**184**	LR	LR	09 05 38.4	
	comp=Z,48nm,21.4s,baz=9.5,slow=30						
USIN	**University of**	**42.86**	**289**	IAmb	IAmb	08 52 27.8	
	comp=Z,23nm,1.1s						
OLIL	**Olney**	**42.98**	**290**	P	**P**	**08 52 25.4**	**-0.1**
OLIL				IAmb	IAmb	08 52 28.9	
	comp=Z,21nm,1.2s						
Y49A	**Blount Mountai**	**43.16**	**282**	P	**P**	**08 52 28.0**	**+1.0**
HDIL	**Hopedale**	**43.41**	**293**	IAmb	IAmb	08 52 32.4	
	comp=Z,33nm,1.5s						
RNPP8	**Varash**	**43.47**	**51**	P	**P**	**08 52 29.2**	**0.0**
RNPP9	**Sopachiv**	**43.48**	**51**	P	**P**	**08 52 29.3**	**0.0**
RNPP5	**Staryi Chortor**	**43.49**	**51**	P	**P**	**08 52 29.4**	**0.0**
WVT	**Waverly**	**43.53**	**286**		**P**	**08 52 30.7**	**+0.9**
WVT	**Waverly**	**43.53**	**286**	P	**P**	**08 52 30.7**	**+0.9**
WVT				pmax	pmax		
	comp=Z,11nm,1.3s						
WVT	**Waverly**	**43.53**	**286**	P	**P**	**08 52 30.9**	**+1.0**
Q44A	**Meyer Farm, Va**	**43.63**	**290**	IAmb	IAmb	08 52 34.0	
	comp=Z,18nm,1.1s						
250A	**Grady**	**43.72**	**280**	P	**P**	**08 52 32.5**	**+1.1**
250A				IAmb	IAmb	08 52 35.5	
	comp=Z,22nm,1.2s						
FINES	**FINESS Array B**	**43.74**	**37**	P	**P**	**08 52 31.5**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=264,slow=5.7,SNR=10						
FINES				LR	LR	09 09 44.8	
	comp=Z,88nm,18.6s,baz=30,slow=35						
	comp=Z,6.0nm,0.8s						
FINES	**FINESS Array B**	**43.74**	**37**	P	**P**	**08 52 31.0**	**-0.2**
FINES	**FINESS Array B**	**43.74**	**37**	P	**P**	**08 52 31.0**	**-0.2**
P43A	**Skaggs, Pawnee**	**43.81**	**292**	IAmb	IAmb	08 52 35.2	
	comp=Z,17nm,1.3s						
LRAL	**Lakeview Retre**	**43.91**	**282**		**P**	**08 52 33.8**	**+0.8**
SDV	**Santo Domingo**	**44.03**	**240**	LR	LR	09 07 43.3	
	comp=Z,63nm,20.1s,baz=64,slow=32						
SDV	**Santo Domingo**	**44.03**	**240**	P	**P**	**08 52 35.0**	**+0.8**
SDV				IAmb	IAmb	08 52 37.7	
	comp=Z,12nm,0.9s						
SDV	**Santo Domingo**	**44.03**	**240**	*eP*	**P**	**08 52 33.8**	**-0.4**
S44A	**Carbondale**	**44.15**	**289**	IAmb	IAmb	08 52 38.2	
	comp=Z,17nm,1.1s						
KMPD	**K-Podol'skiy**	**44.15**	**55**	P	**P**	**08 52 34.8**	**+0.1**
L40A	**Anamosa**	**44.46**	**295**	IAmb	IAmb	08 52 40.5	
	comp=Z,16nm,1.2s						
MNK	**Minsk**	**44.50**	**47**	*i* P	**P**	**08 52 37.2**	**-0.2**
	comp=E,29nm,0.7s						
MN

KBS pmax pmax
comp=Z,47nm,2.5s
HBAR Harrisburg 45.89 286 P **P** **08 52 48.4 -0.2**
SCIA State Center 45.94 296 P **P** **08 52 49.1 +0.1**
SCIA PcP **PcP** **08 54 26.3 +0.4**
LCAR Lake Charles 46.10 287 **P** **08 52 50.3 0.0**
ULM Lac du Bonnet 46.10 308 P **P** **08 52 49.0 -1.2**
comp=Z,3.8nm,0.8s,baz=79,slow=9.9,SNR=6.1
ULM LR LR 09 12 09.3
comp=Z,380nm,18.1s,baz=80,slow=36
comp=Z,3.8nm,0.8s
ULM Lac du Bonnet 46.10 308 *i* P **P** **08 52 50.1 -0.1**
SPITS Spitsbergen Ar 46.13 13 LR LR 09 07 08.8
comp=Z,130nm,21.4s,baz=258,slow=30
SPITS Spitsbergen Ar 46.13 13 P **P** **08 52 50.7 +0.6**
SPITS pmax pmax
comp=Z,40nm,1.1s
ITTB Itaituba 46.23 212 *eP* **P** **08 52 51.7 +0.1**
N38A Joes South For 46.24 294 P **P** **08 52 52.0 +0.5**
N38A IAmb IAmb 08 52 56.3
comp=Z,10nm,0.8s
AGMN Agassiz Nation 46.40 305 IAmb IAmb 08 52 55.6
comp=Z,9.6nm,1.1s
AGMN Agassiz Nation 46.40 305 P **P** **08 52 53.0 +0.4**
FCAR Ozark Folk Cen 46.90 287 P **P** **08 52 56.4 -0.2**
WHAR Wooly Hollow 47.23 287 **P** **08 52 59.0 -0.3**
WHAR IAmb IAmb 08 52 59.6
comp=Z,6.4nm,0.9s
CCAR Cane Creek 47.32 285 P **P** **08 53 00.4 +0.5**
RES Resolute Bay 47.38 341 LR LR 09 09 14.7
comp=Z,156nm,22.0s,baz=65,slow=31
SMTB Santa Maria do 47.56 200 *eP* **P** **08 53 01.6 -0.3**
ECSD EROS Data Cent 47.90 299 IAmb IAmb 08 53 06.9
comp=Z,16nm,1.2s
ECSD EROS Data Cent 47.90 299 P **P** **08 53 04.2 -0.1**
X40A Basin Creek Fa 47.93 286 IAmb IAmb 08 53 05.1
comp=Z,9.2nm,0.7s
HHAR Hobbs 48.15 289 P **P** **08 53 06.2 -0.2**
WLAR White Oak Lake 48.44 285 P **P** **08 53 08.7 +0.1**
WLAR IAmb IAmb 08 53 11.4
comp=Z,14nm,1.0s
WLAR PcP **PcP** **08 54 34.9 +0.1**
MIAR Mount Ida 48.48 286 P **P** **08 53 09.0 0.0**
FFC Flin Flon 49.14 314 P **P** **08 53 13.4 -0.3**
FFC Flin Flon 49.14 314 P **P** **08 53 13.4 -0.3**
FFC pmax pmax
comp=Z,5.0nm,1.0s
FFC Flin Flon 49.14 314 P **P** **08 53 13.8 +0.1**
KSU1 Kansas State U 49.22 293 P **P** **08 53 14.4 -0.2**
OBN Obninsk 49.44 45⇑ *eP* **P** **08 53 16.9 +0.9**
OBN *PP **sP** **08 53 20.0 +0.6**
OBN *e*SP **pwP** **08 53 22.6 +0.9**
OBN 08 54 41.0
OBN PPP PPP 08 56 06.0
OBN S **S** **09 00 24.0 +1.2**
OBN SSS SSS 09 05 20.0
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,81nm,15.0s
ROSC El Rosal 49.46 240 LR LR 09 12 02.7
comp=Z,125nm,21.9s,baz=59,slow=34
TUL3 Leonard 49.69 289 **P** **08 53 17.9 -0.2**
TUL3 IAmb IAmb 08 53 19.7
comp=Z,9.3nm,0.9s
T35A Sooner Cattle 49.88 290 IAmb IAmb 08 53 20.4
comp=Z,14nm,0.9s
E28A Huff 49.98 304 IAmb IAmb 08 53 23.7
comp=Z,14nm,1.0s
DEOK Depew 50.25 289 IAmb IAmb 08 53 25.1
comp=Z,13nm,1.1s
KLMR Klimovskoe 50.25 37 *eP* **P** **08 53 20.4 -1.7**
KLMR pmax pmax
comp=Z,23nm,1.5s
OK051 E0350 and S346 50.26 290 IAmb IAmb 08 53 23.0
comp=Z,12nm,1.0s
SDBA SAO DESIDERIO 50.34 195 *eP* **P** **08 53 22.7 -0.6**
OK052 Battle Ridge R 50.42 289 IAmb IAmb 08 53 24.1
comp=Z,8.8nm,0.8s
W35A Tecumseh 50.78 288 IAmb IAmb 08 53 28.8
comp=Z,16nm,1.3s
CROK Carrier 51.13 290 IAmb IAmb 08 53 29.8
comp=Z,18nm,1.0s
BR131 Keskin Array S 51.27 65 *i* P **P** **08 53 30.9 +0.7**
BRTR Keskin Array B 51.27 65 P **P** **08 53 30.4 +0.1**
comp=Z,1.7nm,1.0s,baz=295,slow=6.7,SNR=7.0
BRTR PcP **PcP** **08 54 45.4 +0.1**
comp=Z,0.8nm,0.6s,baz=314,slow=2.5,SNR=3.6
BRTR LR LR 09 14 13.0
comp=Z,71nm,21.5s,baz=282,slow=35
comp=Z,1.7nm,1.0s
BRTR Keskin Array B 51.27 65 P **P** **08 53 29.6 -0.6**
BRTR **PcP** **08 54 45.5 +0.1**
BRTR Keskin Array B 51.27 65 *i* P **P** **08 53 31.1 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
SNDB Serra Nova Dou 51.60 203 *eP* **P** **08 53 31.8 -0.8**
OK038 West end E0370 51.71 291 IAmb IAmb 08 53 34.4
comp=Z,11nm,0.9s
Z35A Perchaven, San 51.77 286 IAmb IAmb 08 53 36.7
comp=Z,11nm,0.9s
CLDB Colider 52.15 209 *eP* **P** **08 53 36.1 -0.8**
ANN Anapa 52.34 58 *eP* **P** **08 53 38.2 +0.3**
ANN pmax pmax
comp=Z,27nm,0.9s
ELIS Ellis County 52.37 290 IAmb IAmb 08 53 42.0
comp=Z,7.5nm,0.7s
WMOK Wichita Mounta 52.39 289 P **P** **08 53 38.4 -0.2**
WMOK Wichita Mounta 52.39 289 P **P** **08 53 38.4 -0.2**
WMOK pmax pmax
comp=Z,5.0nm,1.1s
WMOK Wichita Mounta 52.39 289 P **P** **08 53 38.0 -0.6**
OGNE Ogallala 52.56 297 IAmb IAmb 08 53 40.5
comp=Z,14nm,1.1s
BNN Bunyan 53.17 65 IAmb IAmb 08 53 46.4
comp=Z,16nm,1.2s
JTS Las Juntas de 53.67 254 LR LR 09 15 37.6
comp=Z,73nm,18.4s,baz=47,slow=35
BRDY Brady 53.95 285 IAmb IAmb 08 53 50.8
comp=Z,11nm,0.9s
ERBR Yeremizino-Bor 54.10 56 *eP* P 08 53 58.8 +7.8
ERBR pmax pmax
comp=Z,40nm,0.5s
BDFB Brasilia 54.17 198 P **P** **08 53 51.9 +0.2**
comp=Z,8.2nm,1.0s,baz=20,slow=12,SNR=7.1
BDFB LR LR 09 13 54.0
comp=Z,127nm,19.2s,baz=112,slow=33
comp=Z,8.2nm,1.0s
BDFB Brasilia 54.17 198 P **P** **08 53 53.0 +1.2**
BDFB IAmb IAmb 08 53 54.2
comp=Z,16nm,1.2s
YKAW1 Yellowknife Wh 54.19 326 IAmb IAmb 08 53 52.7
comp=Z,7.6nm,0.9s
YKAW3 Yellowknife Wh 54.23 326 **P** **08 53 52.2 +0.6**
YKA Yellowknife Ar 54.24 326 P **P** **08 53 51.6 -0.1**
comp=Z,4.5nm,0.8s,baz=78,slow=7.2,SNR=28
YKA PcP **PcP** **08 54 55.1 -0.7**
comp=Z,2.1nm,0.8s,baz=78,slow=4.3,SNR=8.7
YKA LR LR 09 16 13.4
comp=Z,178nm,18.9s,baz=72,slow=35
comp=Z,4.5nm,0.8s
YKA Yellowknife Ar 54.24 326 **P** **08 53 51.8 +0.1**
YKA PcP **PcP** **08 54 55.3 -0.6**
YKA Yellowknife Ar 54.24 326 *i* P **P** **08 53 52.0 +0.3**
YKA pmax pmax
comp=Z,5.0nm,0.9s
SOC Sochi 54.28 59 *eP* **P** **08 53 53.5 +1.2**
SOC *e*PPP PPP 08 57 04.0
SOC *e*S **S** **09 01 31.1 +1.3**
SOC *e*SS **SS** **09 05 15.2 +3.8**
SOC *e*SSS SSS 09 07 08.3
SOC pmax pmax
comp=Z,9.0nm,0.8s
SOC MLR MLR
comp=Z,92nm,20.0s
DKNS Dickens 54.44 288 IAmb IAmb 08 53 54.2
comp=Z,10nm,0.9s
AMTX Amarillo 54.53 290 **P** **08 53 54.8 +0.5**
AMTX IAmb IAmb 08 53 55.5
comp=Z,14nm,1.0s
LABN Labinsk 54.61 57 *eP* **P** **08 53 53.2 -1.5**
LABN pmax pmax
comp=Z,18nm,0.5s
MTO3 Montecristo 54.68 261 P **P** **08 53 56.0 +0.2**
MTO3 IAmb IAmb 08 53 59.8
comp=Z,14nm,1.0s
JCT Junction City 54.92 284 P **P** **08 53 57.4 +0.2**
JCT IAmb IAmb 08 53 57.9
comp=Z,9.6nm,0.9s
JCT Junction City 54.92 284 P **P** **08 53 57.4 +0.2**
JCT pmax pmax
comp=Z,10.0nm,0.9s
HNDO Hondo 54.94 283 **P** **08 53 57.8 +0.5**
K22A Casper 55.13 300 IAmb IAmb 08 54 01.2
comp=Z,19nm,1.4s
POST Post 55.13 288 IAmb IAmb 08 53 59.9
comp=Z,8.9nm,0.9s
ARAG Araguaiana, MT 55.27 202 *eP* **P** **08 53 58.7 -0.9**
SGCY Sterling City 55.33 286 IAmb IAmb 08 54 01.9
comp=Z,14nm,1.0s
EGMT Eagleton 55.47 308 IAmb IAmb 08 54 03.9
comp=Z,14nm,1.3s
ISCO Idaho Springs 55.52 297 P **P** **08 54 02.0 +0.3**
KIRV Kirov 55.60 39 P **P** **08 54 01.0 -0.6**
comp=Z,18nm,0.8s,baz=236,slow=3.6,SNR=8.2
KIRV LR LR 09 15 42.6
comp=Z,85nm,20.9s,baz=338,slow=34
comp=Z,18nm,0.8s
KIRV Kirov 55.60 39 *ce*P **P** **08 54 01.4 -0.2**
MSTX Muleshoe 55.72 289 P **P** **08 54 03.0 0.0**
MSTX IAmb IAmb 08 54 03.6
comp=Z,7.9nm,1.1s
VILB Vilhena 55.83 213 **P** **08 54 04.1 +0.4**
VILB IAmb IAmb 08 54 06.2
comp=Z,14nm,1.1s
VILB Vilhena 55.83 213 *eP* **P** **08 54 02.9 -0.8**
229A Bryant Ranch, 55.83 287 IAmb IAmb 08 54 05.2
comp=Z,5.8nm,0.8s
RLMT Red Lodge 56.12 304 **P** **08 54 05.5 -0.4**
RLMT IAmb IAmb 08 54 09.4
comp=Z,12nm,1.3s
KIV Kislovodsk 56.17 57 *eP* **P** **08 54 08.0 +1.9**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,27nm,17.0s
EIL Elat 56.20 76 LR LR 09 20 14.8
comp=Z,48nm,18.0s,baz=268,slow=38
SHA1 Shidzhatmaz 56.23 58 *ce*P **P** **08 54 08.1 +1.5**
C36M Paulatuk 56.35 335 P **P** **08 54 06.3 -0.4**
baz=74
KBZ Khabaz 56.40 58 P **P** **08 54 09.1 +1.6**
comp=Z,5.4nm,0.9s,baz=339,slow=5.1,SNR=12
comp=Z,5.4nm,0.9s
KBZ Khabaz 56.40 58 *ce*P **P** **08 54 08.8 +1.3**
KBZ pmax pmax
comp=Z,9.0nm,1.2s
PYA1 Pyatigorsk 56.41 57 *i* P **P** **08 54 08.9 +1.2**
BELG Belogornoye 56.45 47 P **P** **08 54 07.5 -0.3**
comp=Z,8.1nm,0.4s,baz=333,slow=2.3,SNR=2.0
comp=Z,8.1nm,0.4s
BELG Belogornoye 56.45 47 *i* P **P** **08 54 08.2 +0.4**
BELG pmax pmax
comp=Z,3.0nm,1.0s
IPMB Ipameri, GO 56.47 197 *eP* **P** **08 54 06.3 -2.0**
PMNB Patos De Minas 56.61 195 *eP* **P** **08 54 09.1 -0.1**
YNE Yellowstone No 56.66 304 P **P** **08 54 10.3 +0.6**
YNE IAmb IAmb 08 54 11.5
comp=Z,10nm,1.1s
SALV Santo Antonio 56.73 206 *eP* **P** **08 54 09.6 -0.5**
MNHN Monahans 56.84 286 IAmb IAmb 08 54 12.0
comp=Z,12nm,0.8s
YMP Mirror Lake Pl 56.85 304 IAmb IAmb 08 54 13.3
comp=Z,15nm,1.0s
SAND Sanderson 56.96 285 IAmb IAmb 08 54 12.4
comp=Z,8.4nm,0.8s
PD31 Pinedale Array 57.17 302 P **P** **08 54 13.1 -0.3**
PD31 IAmb IAmb 08 54 15.8
comp=Z,14nm,1.2s
PDAR Pinedale Array 57.17 302 P **P** **08 54 13.1 -0.3**
comp=Z,7.2nm,1.1s,baz=75,slow=6.3,SNR=26
PDAR LR LR 09 18 49.2
comp=Z,153nm,18.2s,baz=68,slow=36
comp=Z,7.2nm,1.1s
PDAR Pinedale Array 57.17 302 P **P** **08 54 13.0 -0.3**
BW06 Boulder Array 57.17 302 P **P** **08 54 13.2 -0.2**
BW06 IAmb IAmb 08 54 15.8
comp=Z,15nm,1.2s
FLWY Flagg Ranch 57.45 303 IAmb IAmb 08 54 27.0
comp=Z,9.7nm,1.1s
TPB05 Hovey Rd 57.45 286 IAmb IAmb 08 54 16.1
comp=Z,4.7nm,0.9s
YHB Horse Butte 57.53 304 P **P** **08 54 15.9 0.0**
YHB IAmb IAmb 08 54 18.1
comp=Z,7.4nm,1.0s
LOHW Long Hollow 57.56 303 IAmb IAmb 08 54 19.0
comp=Z,14nm,1.6s
CMIG Matias Romero 57.58 268 LR LR 09 15 17.3
comp=Z,164nm,21.8s,baz=65,slow=32
PTLB Pontes e Lacer 57.63 210 *eP* **P** **08 54 15.4 -1.0**
SNOW Snow King Moun 57.72 303 IAmb IAmb 08 54 18.7
comp=Z,10nm,1.1s
TPB01 Permian Basin 57.79 287 IAmb IAmb 08 54 18.5
comp=Z,3.1nm,0.7s
FXWY Fox Creek 57.84 303 **P** **08 54 18.4 +0.3**
WRGLY Wrigley 57.95 328 P **P** **08 54 18.4 +0.3**
baz=71
RDMU Red Mountain 58.02 299 IAmb IAmb 08 54 22.5
comp=Z,7.3nm,0.9s
ANMO Albuquerque 58.08 292 LR LR 09 17 36.7
comp=Z,308nm,19.9s,baz=59,slow=34
ANMO Albuquerque 58.08 292 P **P** **08 54 20.3 +0.5**
ANMO Albuquerque 58.08 292 *ce*P **P** **08 54 21.1 +1.3**
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 58.08 292 P **P** **08 54 21.3 +1.5**
AHID Auburn Hatcher 58.22 302 P **P** **08 54 21.1 +0.4**
AHID IAmb IAmb 08 54 22.4
comp=Z,11nm,0.9s
AHID Auburn Hatcher 58.22 302 P **P** **08 54 21.3 +0.6**
DLMT Dillon 58.23 305 IAmb IAmb 08 54 24.0
comp=Z,14nm,1.2s
PV21 Cone Mtn., Par 58.41 297 P **P** **08 54 22.5 +0.4**
PV21 IAmb IAmb 08 54 25.0
comp=Z,12nm,1.3s
TXAR Lajitas Array 58.44 285 P **P** **08 54 22.4 +0.1**
comp=Z,5.4nm,0.8s,baz=82,slow=7.2,SNR=63
TXAR LR LR 09 17 47.0
comp=Z,166nm,20.5s,baz=61,slow=34
comp=Z,5.4nm,0.8s
TX31 Lajitas Ar. Si 58.44 285 P **P** **08 54 22.6 +0.4**
TX31 IAmb IAmb 08 54 23.5
comp=Z,7.6nm,0.8s
PV23 Carpenter Ridg 58.48 297 IAmb IAmb 08 54 31.3
comp=Z,11nm,1.2s
MVCO Mesa Verde 58.62 295 IAmb IAmb 08 54 27.8
comp=Z,10nm,1.1s
MVCO Mesa Verde 58.62 295 P **P** **08 54 25.4 +1.8**
MNTX Cornudas Mount 58.68 288 P **P** **08 54 23.7 -0.2**
VHRN Van Horn 58.79 287 IAmb IAmb 08 54 26.9
comp=Z,8.5nm,0.9s
BSUT Blindstream Ca 58.87 300 IAmb IAmb 08 54 30.2
comp=Z,11nm,1.3s
P18A Preston Nutter 58.88 298 IAmb IAmb 08 54 26.8
comp=Z,6.7nm,1.0s
Y22A Socorro 58.89 291 IAmb IAmb 08 54 28.0
comp=Z,10nm,1.1s
HWUT Hardware Ranch 58.99 301 IAmb IAmb 08 54 27.3
comp=Z,10.0nm,0.9s
HWUT Hardware Ranch 58.99 301 P **P** **08 54 26.8 +0.6**
TCUT Toone Canyon 59.08 300 IAmb IAmb 08 54 35.8
comp=Z,6.1nm,0.8s
BCYI Bear Canyon 59.16 304 IAmb IAmb 08 54 29.8
comp=Z,8.4nm,1.3s
SRU San Rafael Swe 59.28 298 IAmb IAmb 08 54 29.2
comp=Z,6.0nm,1.0s
KOTAN Kotaneelee Air 59.29 324 P **P** **08 54 28.0 +0.4**
baz=69
MPU Maple Canyon 59.69 299 P **P** **08 54 31.9 +1.0**
MPU IAmb IAmb 08 54 33.0
comp=Z,7.4nm,1.0s
TMUT Trail Mountain 59.69 298 IAmb IAmb 08 54 33.8
comp=Z,8.3nm,1.0s
HVU Hansel Valley 59.75 302 IAmb IAmb 08 54 32.5
comp=Z,10nm,1.0s
BBSD Serra de San D 59.79 211 *eP* **P** **08 54 31.0 -0.5**
Q16A Castle Valley 59.82 298 IAmb IAmb 08 54 35.1
comp=Z,15nm,1.7s
INK Inuvik 59.93 335 LR LR 09 17 40.3
comp=Z,332nm,19.2s,baz=68,slow=33
INK Inuvik 59.93 335 P **P** **08 54 31.4 -0.5**
baz=66,SNR=6.7
INK Inuvik 59.93 335 P **P** **08 54 32.1 +0.3**
NEW Newport 59.99 310 P **P** **08 54 32.2 -0.5**
comp=Z,12nm,1.1s,baz=66,slow=6.1,SNR=16
NEW LR LR 09 20 07.5
comp=Z,501nm,18.5s,baz=70,slow=36
comp=Z,12nm,1.1s
NEW Newport 59.99 310 IAmb IAmb 08 54 34.3
comp=Z,12nm,1.0s
NEW Newport 59.99 310 P **P** **08 54 33.1 +0.4**
NLU North Lily Min 60.02 299 IAmb IAmb 08 54 35.0
comp=Z,8.1nm,0.9s
HLID Hailey 60.13 304 P **P** **08 54 34.4 +0.5**
BGU Big Grassy Mou 60.28 301 IAmb IAmb 08 54 36.2
comp=Z,7.5nm,1.0s
F31M Tsiigehtchic 60.37 334 P **P** **08 54 34.8 0.0**
baz=65
DUG Dugway, Tooele 60.44 300 P **P** **08 54 36.7 +0.7**
G31M Satah River 60.78 334 IAmb IAmb 08 54 40.7
comp=Z,14nm,1.2s
G31M Satah River 60.78 334 P **P** **08 54 37.1 -0.6**
baz=64,SNR=7.3
TCRU Three Creeks R 60.86 298 IAmb IAmb 08 54 43.1
comp=Z,8.2nm,0.9s
C09A Chrisman Ranch 60.88 310 IAmb IAmb 08 54 41.0
comp=Z,8.3nm,1.1s
ARTI Arti 60.90 40 P **P** **08 54 39.0 +0.3**
comp=Z,8.7nm,0.9s,baz=315,slow=3.6,SNR=11
ARTI LR LR 09 20 49.5
comp=Z,81nm,18.2s,baz=301,slow=36
comp=Z,8.7nm,0.9s
ARTI Arti 60.90 40 **P** **08 54 39.3 +0.5**
ARTI Arti 60.90 40 *c i*P **P** **08 54 39.2 +0.5**
ARTI 08 55 19.5
ARTI 08 56 50.0
ARTI S **S** **09 02 56.9 +0.6**
ARTI SS **SS** **09 06 52.8 -2.0**
ARTI pmax pmax
comp=Z,20nm,1.2s
F30M Barrier River 61.00 335 P **P** **08 54 39.1 -0.1**
baz=63,SNR=12
ATAH Atahualpa 61.00 234 LR LR 09 20 16.0
comp=Z,46nm,20.5s,baz=48,slow=35
HPIG 61.12 283 IAmb IAmb 08 54 44.8
comp=Z,6.7nm,1.1s
HPIG 61.12 283 P **P** **08 54 41.5 +0.5**
D28M Stokes Point 61.17 337 P **P** **08 54 40.5 +0.2**
baz=62
PKCU Pink Cliffs 61.27 297 IAmb IAmb 08 54 43.4
comp=Z,8.4nm,0.8s
H31M Peel River 61.30 333 IAmb IAmb 08 54 52.4
comp=Z,14nm,1.4s
H31M Peel River 61.30 333 P **P** **08 54 41.3 0.0**
baz=64,SNR=6.4
E29M Blow River 61.35 336 IAmb IAmb 08 54 42.6
comp=Z,7.5nm,1.1s
E29M Blow River 61.35 336 P **P** **08 54 41.0 -0.5**
baz=62,SNR=9.1
G30M tAoh Zraii Nji 61.44 334 IAmb IAmb 08 54 44.6
comp=Z,10nm,1.2s
G30M tAoh Zraii Nji 61.44 334 P **P** **08 54 41.5 -0.7**
baz=62,SNR=7.9
WUAZ Wupatki 61.45 295 IAmb IAmb 08 54 47.2
comp=Z,10nm,1.1s
WTLY Watson Lake, Y 61.48 325 IAmb IAmb 08 54 46.7
comp=Z,8.7nm,1.2s
WTLY Watson Lake, Y 61.48 325 P **P** **08 54 43.4 +0.8**
baz=65
MMPY Sheldon Lake, 61.48 329 IAmb IAmb 08 54 45.1
comp=Z,7.8nm,1.2s
MMPY Sheldon Lake, 61.48 329 P **P** **08 54 43.1 +0.4**
baz=64,SNR=8.4
BMO Blue Mountains 61.49 306 IAmb IAmb 08 54 45.5
comp=Z,5.5nm,1.0s
LNOR Lincton Mounta 61.69 308 IAmb IAmb 08 54 46.9
comp=Z,7.8nm,1.1s
U15A North Rim 61.70 296 IAmb IAmb 08 54 46.9
comp=Z,8.9nm,1.0s
E28M Babbage River 61.77 336 P **P** **08 54 44.6 +0.2**
baz=61,SNR=7.1
ELK Elko 61.87 301 P **P** **08 54 45.7 -0.2**
comp=Z,2.5nm,0.8s,baz=58,slow=5.6,SNR=11
ELK LR LR 09 20 13.4
comp=Z,202nm,21.9s,baz=66,slow=35
comp=Z,2.5nm,0.8s
EPYK Eagle Plains 61.90 334 P **P** **08 54 45.9 +0.6**
EPYK IAmb IAmb 08 54 46.7
comp=Z,12nm,1.1s
EPYK Eagle Plains 61.90 334 P **P** **08 54 45.3 0.0**
baz=62,SNR=8.0
D27M Malcolm River 61.90 337 P **P** **08 54 45.1 -0.3**
baz=60
CCUT Cedar City 61.97 297 IAmb IAmb 08 54 48.6
comp=Z,6.4nm,0.9s
G29M Pine Creek 62.10 334 IAmb IAmb 08 54 53.5
comp=Z,10nm,1.1s
G29M Pine Creek 62.10 334 P **P** **08 54 46.5 -0.1**
baz=61,SNR=7.5
I30M Mount Dempster 62.32 332 IAmb IAmb 08 54 49.8
comp=Z,5.7nm,1.1s
I30M Mount Dempster 62.32 332 P **P** **08 54 48.2 -0.1**
baz=62,SNR=8.3
F28M Old Crow 62.38 336 IAmb IAmb 08 54 49.4
comp=Z,9.8nm,1.0s
F28M Old Crow 62.38 336 P **P** **08 54 47.9 -0.6**
baz=60,SNR=13
LPAZ La Paz 62.44 219 P **P** **08 54 49.3 -0.9**
comp=Z,12nm,1.2s,baz=12,slow=7.0,SNR=12
LPAZ LR LR 09 18 55.5
comp=Z,96nm,21.0s,baz=46,slow=33
comp=Z,12nm,1.2s
LPAZ La Paz 62.44 219 P **P** **08 54 50.5 +0.3**
LPAZ La Paz 62.44 219 P **P** **08 54 50.5 +0.3**
LPAZ pmax pmax
comp=Z,23nm,1.5s
LPAZ La Paz 62.44 219 *eP* **P** **08 54 49.3 -0.9**
LPAZ La Paz 62.44 219 P **P** **08 54 50.4 +0.2**
C27K Jago River 62.53 338 P **P** **08 54 49.2 -0.3**
baz=58,SNR=10
H29M Whitestone 62.56 334 P **P** **08 54 49.7 0.0**
baz=60,SNR=8.9
LTY Liberty 62.59 310 IAmb IAmb 08 54 50.5
comp=Z,9.4nm,1.1s
J30M Hart River 62.61 332 IAmb IAmb 08 54 54.3
comp=Z,9.9nm,1.1s
J30M Hart River 62.61 332 P **P** **08 54 50.7 +0.4**
baz=61,SNR=12
E27K Coleen River 62.64 336 P **P** **08 54 50.7 +0.4**
E27K IAmb IAmb 08 54 51.5
comp=Z,11nm,1.2s
E27K Coleen River 62.64 336 P **P** **08 54 50.4 +0.1**
baz=59,SNR=12
MXC Moxie City 62.65 309 IAmb IAmb 08 54 53.6
comp=Z,7.8nm,1.1s
C26K Camden Bay 62.72 339 P **P** **08 54 51.6 +0.9**
baz=57
DLBC Dease Lake 62.78 324 LR LR 09 21 17.7
comp=Z,178nm,20.0s,baz=37,slow=35
DLBC Dease Lake 62.78 324 P **P** **08 54 51.6 +0.2**
baz=63
R33M Jennings River 62.78 325 P **P** **08 54 52.3 +0.8**
baz=63,SNR=13
N32M Quiet Lake 62.91 328 P **P** **08 54 52.7 +0.4**
baz=62
M31M Drury Creek, Y 62.97 329 P **P** **08 54 53.6 +1.0**
baz=62,SNR=7.2
AKTO Aktyubinsk 63.21 46 P **P** **08 54 54.4 +0.1**
comp=Z,4.4nm,0.6s,baz=298,slow=8.8,SNR=8.7
AKTO LR LR 09 20 38.9
comp=Z,100nm,21.4s,baz=176,slow=34
comp=Z,4.4nm,0.6s
PRN Pahroc Range 63.23 298 IAmb IAmb 08 54 57.2
comp=Z,10nm,1.0s
P33M Teslin, Yukon 63.24 327 IAmb IAmb 08 54 58.2
comp=Z,13nm,1.4s
P33M Teslin, Yukon 63.24 327 P **P** **08 54 54.6 +0.2**
baz=62,SNR=8.6
Y14A Wickenburg 63.36 294 IAmb IAmb 08 54 58.1
comp=Z,6.1nm,0.9s
J29N Klondike Camp 63.38 332 P **P** **08 54 56.3 +1.0**
baz=60
G27K Doyon Strip 63.39 335 **P** **08 54 55.0 -0.3**
G27K IAmb IAmb 08 54 56.5
comp=Z,7.1nm,1.1s
G27K Doyon Strip 63.39 335 P **P** **08 54 55.2 0.0**
baz=58,SNR=12
WVOR Wild Horse Val 63.41 304 IAmb IAmb 08 54 58.2
comp=Z,12nm,1.4s
WVOR Wild Horse Val 63.41 304 P **P** **08 54 57.4 +1.4**

K29M Barlow Dome 63.42 331 IAmb IAmb 08 54 58.0
comp=Z,13nm,1.2s
K29M Barlow Dome 63.42 331 P **P** **08 54 56.1 +0.4**
baz=60,SNR=12
W13A Hualapai Mount 63.46 295 IAmb IAmb 08 54 59.3
comp=Z,6.6nm,1.1s
D25K Kavik River 63.48 339 P **P** **08 54 56.0 +0.1**
baz=55
I28M Miner Creek 63.50 333 **P** **08 54 56.4 +0.2**
I28M IAmb IAmb 08 54 57.5
comp=Z,5.9nm,1.0s
I28M Miner Creek 63.50 333 P **P** **08 54 56.1 0.0**
baz=59,SNR=9.0
S34M Telegraph Cree 63.54 324 P **P** **08 54 56.8 +0.4**
baz=62
T35M Bob Quinn 63.55 323 P **P** **08 54 56.8 +0.4**
baz=62
Q32M Nakina River 63.58 325 IAmb IAmb 08 55 04.0
comp=Z,10.0nm,1.4s
Q32M Nakina River 63.58 325 P **P** **08 54 56.4 -0.4**
baz=62
H27K Steamboat Moun 63.65 335 IAmb IAmb 08 54 58.4
comp=Z,5.5nm,1.0s
H27K Steamboat Moun 63.65 335 P **P** **08 54 57.2 +0.2**
baz=58,SNR=9.7
F26K Sheenjek River 63.72 337 IAmb IAmb 08 55 01.3
comp=Z,9.7nm,1.2s
F26K Sheenjek River 63.72 337 P **P** **08 54 57.8 +0.3**
baz=56,SNR=9.8
M30M Minto, Yukon 63.77 330 **P** **08 54 59.0 +1.1**
M30M IAmb IAmb 08 55 00.2
comp=Z,8.5nm,1.1s
M30M Minto, Yukon 63.77 330 P **P** **08 54 58.3 +0.4**
baz=60,SNR=14
N31M Braeburn, Yuko 63.90 329 **P** **08 54 60.0 +1.2**
N31M Braeburn, Yuko 63.90 329 P **P** **08 54 59.2 +0.5**
baz=60,SNR=9.0
WHY Whitehorse 63.92 328 P **P** **08 54 59.5 +0.5**
baz=61,SNR=8.0
E25K Arctic Village 63.93 337 P **P** **08 54 59.8 +1.0**
E25K IAmb IAmb 08 55 00.6
comp=Z,8.6nm,1.1s
E25K Arctic Village 63.93 337 P **P** **08 54 59.0 +0.2**
baz=55,SNR=11
P32M Atlin 63.93 326 IAmb IAmb 08 55 00.7
comp=Z,7.6nm,1.2s
P32M Atlin 63.93 326 P **P** **08 54 59.1 +0.1**
baz=61
U35K Hyder 63.93 322 P **P** **08 54 58.9 0.0**
baz=62
I27K Kandik River 64.02 334 P **P** **08 54 59.4 -0.1**
baz=58,SNR=6.5
G26K Porcupine Rive 64.02 336 P **P** **08 54 59.4 0.0**
baz=56
DAWY Dawson 64.02 332 P **P** **08 54 59.6 +0.1**
baz=59,SNR=17
L29M L29M 64.03 331 P **P** **08 55 00.3 +0.8**
baz=59,SNR=31
HOOD Mount Hood Mea 64.06 308 **P** **08 55 00.7 +0.5**
F25K Christian Rive 64.25 337 IAmb IAmb 08 55 03.1
comp=Z,7.8nm,1.1s
F25K Christian Rive 64.25 337 P **P** **08 55 01.4 +0.4**
baz=55,SNR=12
D24K Happy Valley 64.29 339 P **P** **08 55 01.1 0.0**
baz=53
I05D Terrebonne, OR 64.31 307 IAmb IAmb 08 55 21.1
comp=Z,7.6nm,1.1s
C23K Itkillik River 64.38 340 P **P** **08 55 02.0 +0.4**
baz=52,SNR=5.7
O30N Mendenhall 64.38 328 IAmb IAmb 08 55 04.0
comp=Z,7.1nm,1.1s
O30N Mendenhall 64.38 328 P **P** **08 55 02.5 +0.5**
baz=60,SNR=11
N30M Aishikik Lake 64.45 329 P **P** **08 55 03.0 +0.6**
baz=59,SNR=12
113A Mohawk Valley, 64.48 293 IAmb IAmb 08 55 05.3
comp=Z,6.5nm,1.0s
MTPC Mountain Pass 64.49 296 P **P** **08 55 03.9 +0.7**
MTPC IAmb IAmb 08 55 05.4
comp=Z,9.4nm,1.0s
M29M Somme Creek 64.50 330 **P** **08 55 04.0 +1.2**
M29M Somme Creek 64.50 330 P **P** **08 55 03.1 +0.3**
baz=59,SNR=20
BLYC Blythe 64.56 294 IAmb IAmb 08 55 06.0
comp=Z,8.4nm,1.1s
G04A Mulino 64.63 309 P **P** **08 55 04.1 +0.4**
WCT Wildcat Mounta 64.63 298 P **P** **08 55 04.4 +0.3**
E03A Lebam 64.68 310 **P** **08 55 04.2 +0.1**
BBB Bella Bella 64.68 317 IAmb IAmb 08 55 06.6
comp=Z,9.9nm,1.2s
H04A Detroit Lake 64.69 308 IAmb IAmb 08 55 04.8
comp=Z,7.7nm,1.1s
B22K Teshekpuk Lake 64.80 341 P **P** **08 55 03.5 -0.9**
baz=50
TOLK Toolik Lake Re 64.82 339 P **P** **08 55 04.1 -0.5**
baz=52,SNR=6.2
IRM Iron Mountain 64.82 295 IAmb IAmb 08 55 07.7
comp=Z,7.9nm,1.2s
WRAK Wrangell Islan 64.83 323 P **P** **08 55 05.0 +0.2**
WRAK IAmb IAmb 08 55 07.2
comp=Z,6.7nm,1.2s
WRAK Wrangell Islan 64.83 323 P **P** **08 55 05.2 +0.3**
baz=61
GMN Gold Mountain 64.84 299 P **P** **08 55 05.7 +0.1**
E24K Your Creek 64.84 338 P **P** **08 55 04.9 0.0**
baz=53
AB31 Akbulak array 64.86 46 P **P** **08 55 04.3 -0.8**
ABKAR Akbulak array 64.86 46 P **P** **08 55 05.5 +0.3**
G25K Bearman Lake 64.88 336 P **P** **08 55 05.9 +1.0**
baz=54,SNR=5.4
NV11 Mina Array Sit 64.93 300 P **P** **08 55 06.3 +0.2**
NV11 IAmb IAmb 08 55 07.0
comp=Z,8.5nm,0.9s
D23K Nanushuk River 64.94 339 IAmb IAmb 08 55 07.4
comp=Z,8.7nm,1.1s
D23K Nanushuk River 64.94 339 P **P** **08 55 06.1 +0.8**
baz=52
R32K Eaglecrest 64.94 325 P **P** **08 55 05.7 +0.2**
baz=60
GWY Greenwater Val 64.95 297 IAmb IAmb 08 55 10.2
comp=Z,12nm,1.2s
HYT Haines Junctio 64.95 328 P **P** **08 55 07.0 +1.3**
HYT IAmb IAmb 08 55 13.0
comp=Z,6.1nm,1.1s
HYT Haines Junctio 64.95 328 P **P** **08 55 06.8 +1.0**
baz=59
FURC Furnace Creek, 64.95 298 IAmb IAmb 08 55 08.3
comp=Z,9.8nm,1.1s
F24K Squaw Lake 65.00 337 IAmb IAmb 08 55 08.2
comp=Z,8.7nm,1.2s
F24K Squaw Lake 65.00 337 P **P** **08 55 06.3 +0.5**
baz=53,SNR=8.5
V35K Ketchikan 65.00 321 P **P** **08 55 06.4 +0.5**
baz=61
NVAR Mina Array Bea 65.03 300 P **P** **08 55 07.0 +0.2**
comp=Z,3.9nm,0.9s,baz=70,slow=6.0,SNR=20
NVAR LR LR 09 23 44.1
comp=Z,217nm,18.6s,baz=35,slow=36
comp=Z,3.9nm,0.9s
NVAR Mina Array Bea 65.03 300 P **P** **08 55 06.4 -0.4**
P30M Million Dollar 65.09 328 P **P** **08 55 07.0 +0.4**
baz=59
YUK4 Talbot Arm 65.16 329 P **P** **08 55 07.0 -0.1**
baz=58
PLBC Pleasant Camp 65.17 327 P **P** **08 55 08.0 +1.0**
baz=59
PAHR Pah Rah Range 65.17 302 IAmb IAmb 08 55 09.0
comp=Z,9.2nm,1.0s
E23K Chandalar 65.19 338 P **P** **08 55 07.0 -0.1**
baz=52
QSM Queen of Sheba 65.20 297 IAmb IAmb 08 55 12.0
comp=Z,10nm,1.3s
YUK6 Outpost Mounta 65.25 329 P **P** **08 55 08.2 +0.4**
baz=58,SNR=11
BC3 Big Chuckawall 65.29 294 P **P** **08 55 09.0 +0.7**
BC3 IAmb IAmb 08 55 10.5
comp=Z,5.5nm,0.9s
BRWY Burwash Landin 65.30 329 P **P** **08 55 08.4 +0.5**
baz=58
DSP Deep Springs 65.31 299 P **P** **08 55 08.5 +0.2**
G24K Hadweenzic Riv 65.36 337 P **P** **08 55 08.7 +0.5**
baz=53,SNR=19
U33K Whale Pass 65.36 323 P **P** **08 55 08.8 +0.6**
baz=60
S32K Killisnoo 65.37 324 P **P** **08 55 08.9 +0.6**
baz=60
COR Corvallis 65.44 308 P **P** **08 55 09.8 +0.8**

COR Corvallis 65.44 308 P **P** **08 55 09.8 +0.8**
COR pmax pmax
comp=Z,15nm,1.0s
BCAR Beaver Creek A 65.46 332 **P** **08 55 09.7 +0.7**
BVCY Beaver Creek 65.47 331 P **P** **08 55 09.8 +0.9**
baz=57
GSC Goldstone, Bar 65.47 297 IAmb IAmb 08 55 11.9
comp=Z,8.7nm,1.3s
L27K Beaver Creek, 65.48 332 P **P** **08 55 09.6 +0.5**
baz=56
NRIK Noril'sk 65.50 20 P **P** **08 55 10.6 +1.6**
comp=Z,4.0nm,0.9s,baz=318,slow=3.4,SNR=8.7
NRIK LR LR 09 23 47.6
comp=Z,55nm,18.4s,baz=342,slow=36
comp=Z,4.0nm,0.9s
NRIK Noril'sk 65.50 20 P **P** **08 55 09.7 +0.7**
BELC Belle Mtn. Jos 65.52 295 IAmb IAmb 08 55 12.5
comp=Z,9.0nm,1.2s
B21K Ikpikpuk River 65.58 341 P **P** **08 55 08.5 -1.1**
baz=48
PNTR Pine Nut 65.61 301 IAmb IAmb 08 55 13.1
comp=Z,5.2nm,0.8s
YUK8 Steele Glacier 65.64 329 P **P** **08 55 10.2 -0.2**
baz=57
YUK3 Moose Creek 65.66 330 P **P** **08 55 10.4 0.0**
baz=57,SNR=16
P29M Windy Craggy 65.68 327 P **P** **08 55 10.4 0.0**
baz=58
O29M Mount Kennedy 65.68 328 IAmb IAmb 08 55 16.0
comp=Z,7.7nm,1.1s
O29M Mount Kennedy 65.68 328 P **P** **08 55 10.5 +0.1**
baz=58
CRAG Craig 65.68 322 P **P** **08 55 10.8 +0.5**
baz=60
BEKR Beckworth 65.76 303 **P** **08 55 11.5 +0.1**
BEKR IAmb IAmb 08 55 12.7
comp=Z,10nm,1.0s
SCRK Sand Creek 65.77 333 P **P** **08 55 11.0 +0.1**
baz=55,SNR=8.0
E22K Anaktuvuk Pass 65.78 339 P **P** **08 55 10.6 -0.3**
baz=50
CLC China Lake 65.79 297 IAmb IAmb 08 55 13.7
comp=Z,7.7nm,1.2s
BBOR Butler Butte 65.85 306 IAmb IAmb 08 55 11.8
comp=Z,7.1nm,1.0s
COLD Coldfoot 65.88 338 P **P** **08 55 11.9 +0.4**
baz=51,SNR=8.7
S31K Pelican 65.88 325 P **P** **08 55 12.2 +0.6**
baz=59
J25K Salcha River, 65.89 334 P **P** **08 55 12.0 +0.3**
baz=54,SNR=5.4
M27K Edge Creek, AK 65.89 331 P **P** **08 55 11.9 0.0**
baz=56,SNR=11
SIT Sitka 65.93 324 P **P** **08 55 11.9 0.0**
baz=59
C21K Knifeblade Rid 65.94 341 P **P** **08 55 12.4 +0.5**
baz=48
MDPB Devils Postpil 65.95 300 IAmb IAmb 08 55 14.9
comp=Z,8.6nm,1.1s
PMD Palm Desert 65.97 295 IAmb IAmb 08 55 15.0
comp=Z,6.5nm,1.0s
B20K Meade River 65.97 342 P **P** **08 55 12.4 +0.4**
baz=46
H24K Noodor Dome 66.01 336 P **P** **08 55 12.6 +0.1**
baz=53,SNR=7.9
PFO Pinyon Flats O 66.04 295 P **P** **08 55 14.5 +1.2**
comp=Z,5.3nm,0.9s,baz=72,slow=6.1,SNR=6.4
PFO LR LR 09 23 09.3
comp=Z,153nm,19.5s,baz=43,slow=35
comp=Z,5.3nm,0.9s
PFO Pinyon Flats O 66.04 295 P **P** **08 55 14.4 +1.1**
PFO IAmb IAmb 08 55 15.8
comp=Z,7.7nm,1.0s
PFO Pinyon Flats O 66.04 295 *i* P **P** **08 55 14.6 +1.3**
PFO pmax pmax
comp=Z,10.0nm,1.0s
L26K Log Cabin Wild 66.08 332 P **P** **08 55 12.3 -0.6**
baz=55,SNR=5.5
O28M Mount Upton 66.10 329 IAmb IAmb 08 55 15.6
comp=Z,12nm,1.2s
O28M Mount Upton 66.10 329 P **P** **08 55 12.5 -0.9**
baz=57
YUH Yuha Desert 66.12 294 IAmb IAmb 08 55 19.4
comp=Z,10nm,1.2s
G23K Bananza Creek 66.15 337 IAmb IAmb 08 55 15.3
comp=Z,7.0nm,1.0s
G23K Bananza Creek 66.15 337 P **P** **08 55 13.3 0.0**
baz=51,SNR=10
LPIG La Paz 66.17 283 LR LR 09 22 00.8
comp=Z,93nm,21.3s,baz=32,slow=34
E21K Killik River 66.19 340 P **P** **08 55 13.6 0.0**
baz=49
RIDG Independent Ri 66.21 333 P **P** **08 55 13.7 0.0**
baz=54,SNR=5.9
MENT Mentasta 66.27 332 IAmb IAmb 08 55 22.9
comp=Z,4.3nm,0.8s
F22K John River 66.30 338 P **P** **08 55 14.0 -0.2**
baz=50
POKR Poker Plat Res 66.30 335 P **P** **08 55 13.3 -0.9**
baz=53
M26K Nabesna, AK 66.30 331 P **P** **08 55 14.7 +0.4**
baz=55
ILAR Eielson Array 66.32 335 P **P** **08 55 14.8 +0.5**
comp=Z,1.4nm,0.9s,baz=50,slow=5.4,SNR=12
ILAR LR LR 09 21 49.4
comp=Z,209nm,18.2s,baz=72,slow=34
comp=Z,1.4nm,0.9s
LOGN Logan Glacier 66.40 329 P **P** **08 55 15.8 +0.6**
YBH Yreka Blue Hor 66.42 305 P **P** **08 55 14.3 -1.2**
comp=Z,2.1nm,0.9s,baz=83,slow=7.1,SNR=4.2
YBH LR LR 09 23 34.8
comp=Z,315nm,21.1s,baz=60,slow=35
comp=Z,2.1nm,0.9s
YBH Yreka Blue Hor 66.42 305 IAmb IAmb 08 55 35.9
comp=Z,6.8nm,1.3s
G22K Bettles 66.47 338 P **P** **08 55 15.6 +0.4**
baz=50
PINM Pinnacle 66.50 329 P **P** **08 55 15.6 -0.1**
baz=56
K24K Donnelly Dome 66.51 333 P **P** **08 55 14.7 -1.0**
baz=54
H23K Yukon River 66.56 336 P **P** **08 55 15.3 -0.6**
baz=51
HDA Harding Lake 66.56 334 P **P** **08 55 15.2 -0.7**
baz=53
K02D Willamette Mer 66.57 307 IAmb IAmb 08 55 18.0
comp=Z,12nm,1.2s
COLA College 66.59 335 P **P** **08 55 15.6 -0.5**
baz=52
AFDM Forest Hills D 66.62 302 IAmb IAmb 08 55 17.8
comp=Z,5.0nm,1.0s
BAR Barrett 66.66 294 IAmb IAmb 08 55 19.4
comp=Z,6.5nm,0.9s
CMB Columbia Colle 66.66 301 IAmb IAmb 08 55 18.7
comp=Z,6.0nm,0.8s
ORV Oroville 66.68 303 **P** **08 55 17.4 +0.3**
ORV IAmb IAmb 08 55 18.6
comp=Z,6.4nm,1.1s
ORV Oroville 66.68 303 P **P** **08 55 17.4 +0.3**
ORV pmax pmax
comp=Z,6.0nm,1.1s
CCB Clear Creek Bu 66.71 335 IAmb IAmb 08 55 18.2
comp=Z,9.9nm,1.2s
D20K Etivluk River 66.73 341 IAmb IAmb 08 55 24.3
comp=Z,9.4nm,1.2s
D20K Etivluk River 66.73 341 P **P** **08 55 15.2 -1.7**
baz=46
A19K Wainwright 66.78 343 P **P** **08 55 17.0 -0.1**
baz=48
L02F Cave Junction 66.79 306 IAmb IAmb 08 55 18.6
comp=Z,9.4nm,1.1s
F21K Alatna River 66.86 339 IAmb IAmb 08 55 19.5
comp=Z,8.9nm,1.2s
F21K Alatna River 66.86 339 P **P** **08 55 17.1 -0.8**
baz=49,SNR=10
MCARA McCarthy VSAT 66.89 331 P **P** **08 55 17.0 -1.1**
baz=55
WRH Wood River Hil 66.92 335 IAmb IAmb 08 55 19.6
comp=Z,8.6nm,1.1s
I23K Minto, Yukon-K 66.92 336 P **P** **08 55 17.5 -0.7**
baz=51,SNR=11
E20K Nigu River 66.93 340 P **P** **08 55 17.4 -0.8**
baz=47,SNR=12
CPUP Villa Florida 66.96 204 P **P** **08 55 17.9 -0.8**
CPUP LR LR 09 24 25.9
comp=Z,4.4nm,1.2s,baz=356,slow=5.3,SNR=3.5
comp=Z,31nm,18.1s,baz=82,slow=36
comp=Z,4.4nm,1.2s

CPUP Villa Florida 66.96 204 P **P** **08 55 18.9 +0.1**
CPUP Villa Florida 66.96 204 P **P** **08 55 18.9 +0.1**
CPUP pmax pmax
comp=Z,21nm,1.6s
H22K Ishtalitna Cre 67.10 337 P **P** **08 55 18.2 -1.1**
baz=50
HARP HAARP 67.12 332 P **P** **08 55 19.0 -0.6**
baz=54
VRDI Verde Repeater 67.15 331 IAmb IAmb 08 55 33.2
comp=Z,11nm,1.2s
NEA2 Nenana 67.17 335 P **P** **08 55 19.1 -0.7**
baz=51
C19K Lookout Ridge 67.22 342 P **P** **08 55 18.5 -1.6**
baz=44
D19K Kuna River 67.28 341 P **P** **08 55 19.8 -0.6**
baz=45
CRQE Cirque 67.29 330 P **P** **08 55 19.7 -1.1**
baz=54
G21K Allakaket 67.34 338 IAmb IAmb 08 55 22.2
comp=Z,6.0nm,1.0s
G21K Allakaket 67.34 338 P **P** **08 55 19.9 -0.9**
baz=48,SNR=5.8
N25K Chitina, Valde 67.38 331 P **P** **08 55 20.1 -1.2**
baz=54
MLY Manley 67.45 336 P **P** **08 55 21.0 -0.6**
baz=50,SNR=7.0
DHY Denali Highway 67.53 333 P **P** **08 55 21.3 -0.9**
baz=52
F20K Avaraart Lake 67.63 339 P **P** **08 55 21.7 -0.9**
baz=47
MCK McKinley 67.67 334 P **P** **08 55 21.1 -1.9**
baz=51
M24K Tolsona, Glenn 67.68 332 P **P** **08 55 21.9 -1.2**
baz=53
H21K Melozitna Rive 67.70 337 P **P** **08 55 23.3 +0.2**
baz=49,SNR=6.4
I21K Tanana 67.75 336 P **P** **08 55 23.6 +0.2**
baz=49,SNR=5.3
BMRM Bremner River 67.76 331 P **P** **08 55 22.1 -1.5**
baz=54
E19K Redstone River 67.77 340 IAmb IAmb 08 55 25.1
comp=Z,6.0nm,0.9s
E19K Redstone River 67.77 340 P **P** **08 55 24.1 +0.5**
baz=46,SNR=7.3
C18K Utukok River 67.95 342 P **P** **08 55 22.4 -2.3**
baz=43
KLU Klutina 67.95 332 P **P** **08 55 23.9 -1.0**
baz=53
WAT6 Susitna Watana 67.96 333 P **P** **08 55 24.3 -0.8**
baz=52,SNR=5.7
WAT1 Susitna Watana 68.10 333 P **P** **08 55 25.7 0.0**
baz=51
SCM Sheep Creek Mo 68.28 332 P **P** **08 55 26.1 -0.8**
baz=52
KAIM Kayak Island 68.31 330 P **P** **08 55 26.7 -0.3**
baz=53
TRF Thorofare Moun 68.31 335 P **P** **08 55 26.8 -0.4**
baz=50
F19K Shaleruckik Mo 68.36 340 IAmb IAmb 08 55 28.4
comp=Z,8.2nm,1.2s
F19K Shaleruckik Mo 68.36 340 P **P** **08 55 25.9 -1.3**
baz=45,SNR=6.8
H20K Anotleneega Mo 68.45 338 P **P** **08 55 28.2 +0.3**
baz=47,SNR=7.8
M23K Glacier View 68.45 332 P **P** **08 55 27.5 -0.4**
baz=51
EYAK Cordova Ski Ar 68.46 331 P **P** **08 55 27.6 -0.3**
baz=52
C17K DeLong Mountai 68.57 342 P **P** **08 55 28.1 -0.4**
baz=41
BVAR Borovoye Array 68.62 39 P **P** **08 55 29.6 +0.5**
comp=Z,3.8nm,0.9s,baz=289,slow=4.5,SNR=8.9
comp=Z,3.8nm,0.9s
G19K Purcell Mounta 68.65 339 IAmb IAmb 08 55 30.9
comp=Z,5.7nm,1.1s
G19K Purcell Mounta 68.65 339 P **P** **08 55 28.9 -0.2**
baz=45,SNR=5.9
SML Sawmill 68.67 333 P **P** **08 55 28.5 -0.8**
baz=51
E18K Tukpahlearik C 68.70 341 IAmb IAmb 08 55 31.1
comp=Z,6.6nm,1.2s
E18K Tukpahlearik C 68.70 341 P **P** **08 55 29.2 -0.2**
baz=43
CHUM Lake Minchumin 68.72 336 P **P** **08 55 27.3 -2.2**
baz=48
GLI Glacier Island 68.78 331 P **P** **08 55 26.8 -3.2**
baz=52
I20K Naaghedeneel 68.80 337 P **P** **08 55 28.0 -2.0**
baz=47
RDOG Red Dog Mine 68.82 342 P **P** **08 55 29.0 -1.1**
baz=41
H19K Roundabout Mou 68.90 338 IAmb IAmb 08 55 32.2
comp=Z,6.4nm,1.0s
H19K Roundabout Mou 68.90 338 P **P** **08 55 29.9 -0.7**
baz=46,SNR=6.8
CAST Castle Rocks 68.95 335 P **P** **08 55 28.7 -2.3**
baz=48
KNK Knik Glacier 68.96 332 P **P** **08 55 29.2 -1.9**
baz=51
F18K Selawik 69.05 340 P **P** **08 55 31.2 -0.3**
baz=43,SNR=8.1
L22K Petersville 69.08 334 P **P** **08 55 31.1 -0.8**
baz=49,SNR=6.9
PMR Palmer 69.10 333 IAmb IAmb 08 55 33.8
comp=Z,7.8nm,1.0s
PMR Palmer 69.10 333 P **P** **08 55 31.7 -0.1**
baz=50
J20K Nowinta River 69.12 336 P **P** **08 55 31.8 -0.2**
baz=47,SNR=7.3
D17K Noatak River 69.14 342 P **P** **08 55 31.8 -0.2**
baz=41
C16K Lisburne Hills 69.24 343 P **P** **08 55 31.6 -1.1**
baz=39
E17K Hotham Inlet 69.28 341 P **P** **08 55 31.8 -1.1**
baz=42,SNR=5.4
G18K Tagagawik 69.28 339 IAmb IAmb 08 55 34.8
comp=Z,18nm,1.8s
G18K Tagagawik 69.28 339 P **P** **08 55 31.3 -1.7**
baz=44
PPLA Purkeypile 69.33 335 P **P** **08 55 32.8 -0.7**
baz=48
Q23K Middleton Isla 69.39 330 P **P** **08 55 32.4 -1.3**
baz=52
P23K Montague Islan 69.45 331 P **P** **08 55 32.3 -1.8**
baz=51
GCSA Galena City Sc 69.58 338 P **P** **08 55 33.1 -1.6**
baz=45
F17K Baldwin Pennin 69.60 340 P **P** **08 55 34.4 -0.5**
baz=42
MBAR Mbarara 69.63 107 LR LR 09 24 47.3
comp=Z,181nm,19.5s,baz=165,slow=35
RC01 Rabbit Creek A 69.64 332 P **P** **08 55 34.8 -0.5**
baz=50
K20K Telida 69.65 336 P **P** **08 55 34.0 -1.3**
baz=47
SKT Skwentna 69.71 334 P **P** **08 55 35.0 -0.8**
baz=48
J19K Poorman 69.72 337 P **P** **08 55 35.1 -0.6**
baz=46
H18K Honhosa River 69.73 338 IAmb IAmb 08 55 38.5
comp=Z,12nm,1.4s
H18K Honhosa River 69.73 338 P **P** **08 55 34.5 -1.3**
baz=44
G17K Kiwalik Mounta 70.14 339 P **P** **08 55 37.3 -0.9**
baz=42
SEW Seward 70.18 332 P **P** **08 55 38.0 -0.5**
baz=50
H17K Granite Mounta 70.34 339 IAmb IAmb 08 55 41.5
comp=Z,6.7nm,1.0s
H17K Granite Mounta 70.34 339 P **P** **08 55 38.4 -1.1**
baz=43
CAPN Captain Cook N 70.38 333 P **P** **08 55 39.1 -0.7**
baz=48
L19K White Mountain 70.72 335 P **P** **08 55 40.4 -1.5**
baz=46
BRSE Bradley Lake S 70.91 332 P **P** **08 55 43.1 0.0**
baz=48
TIXI Tiksi 70.96 6 LR LR 09 23 43.6
comp=Z,43nm,18.2s,baz=354,slow=33
TIXI Tiksi 70.96 6 *ce* P **P** **08 55 43.6 +0.5**
TIXI pmax pmax
comp=Z,16nm,1.3s
F15K North Star Dit 71.06 341 P **P** **08 55 42.8 -1.2**
baz=39,SNR=5.3
J17K VABM Dome 71.22 337 P **P** **08 55 45.1 +0.2**
baz=43
H16K Elim 71.23 339 P **P** **08 55 45.1 +0.2**
baz=41

L18K	**Granite Mounta**	**71.31**	**336**	P		**P**	**08 55 45.5**	**0.0**
	baz=45								
I17K	**Unalakleet**	**71.35**	**338**	P		**P**	**08 55 45.3**	**-0.4**
	baz=42								
O20K	**Slope Mountain**	**71.38**	**333**	P		**P**	**08 55 45.4**	**-0.7**
	baz=47								
G15K	**Niukluk**	**71.46**	**340**	P		**P**	**08 55 45.5**	**-0.8**
	baz=40								
K17K	**Iditarod**	**71.48**	**337**	P		**P**	**08 55 46.4**	**0.0**
	baz=44								
BRZS	**Berezniki**	**71.52**	**41**	*e*P		**P**	**08 55 46.8**	**-0.2**
BRZS	**Berezniki**	**71.52**	**41**	*e*P		**P**	**08 55 46.8**	**-0.2**
M18K	**Stony River**	**71.54**	**335**	P		**P**	**08 55 46.3**	**-0.6**
	baz=45								
F14K	**Arctic Creek**	**71.68**	**341**	P		**P**	**08 55 48.2**	**+0.5**
	baz=38								
J16K	**Anvik River**	**71.77**	**338**	P		**P**	**08 55 47.8**	**-0.4**
	baz=42								
L17K	**Donlin**	**71.90**	**336**	P		**P**	**08 55 48.4**	**-0.6**
	baz=43								
P19K	**Oil Pt**	**71.90**	**333**	P		**P**	**08 55 48.7**	**-0.4**
	baz=47								
TNA	**Tin City**	**72.02**	**342**	P		**P**	**08 55 48.9**	**-0.7**
	baz=36								
N18K	**Kilae Creek**	**72.14**	**334**	P		**P**	**08 55 49.9**	**-0.6**
	baz=45								
ANM	**Nome**	**72.15**	**340**	P		**P**	**08 55 49.3**	**-1.2**
	baz=38								
O18K	**Koktuh Hills**	**72.48**	**333**	P		**P**	**08 55 51.8**	**-0.8**
	baz=45								
Q19K	**Cape Douglas,**	**72.55**	**332**	P		**P**	**08 55 52.4**	**-0.6**
	baz=46								
L16K	**Owhat River**	**72.59**	**336**	P		**P**	**08 55 52.9**	**-0.2**
	baz=42								
N17K	**Nushagak Hills**	**72.69**	**335**	P		**P**	**08 55 53.6**	**-0.2**
	baz=44								
P18K	**Big Mountain,**	**72.81**	**333**	P		**P**	**08 55 54.5**	**-0.1**
	baz=45								
M16K	**Timber Creek**	**72.93**	**336**	P		**P**	**08 55 55.1**	**0.0**
	baz=43								
KDAK	**Kodiak Island**	**72.94**	**331**	LR		LR	09 27 47.0		
	comp=Z,238nm,19.1s,baz=59,slow=36								
O17K	**Koliganek Bris**	**73.21**	**334**	P		**P**	**08 55 56.3**	**-0.6**
	baz=44								
Q18K	**Katmai Hardscr**	**73.26**	**332**	P		**P**	**08 55 56.0**	**-1.3**
	baz=45								
N16K	**Nishlik Lake**	**73.27**	**335**	P		**P**	**08 55 56.4**	**-0.8**
	baz=43								
P17K	**Kvichak River**	**73.39**	**333**	P		**P**	**08 55 56.6**	**-1.3**
	baz=44								
TSUM	**Tsumeb**	**73.44**	**130**	LR		LR	09 23 15.5		
	comp=Z,247nm,21.6s,baz=329,slow=32								
M15K	**Kasigluk River**	**73.74**	**336**	P		**P**	**08 55 58.2**	**-1.7**
	baz=41								
L14K	**Kuka Creek**	**73.88**	**337**	P		**P**	**08 55 59.2**	**-1.5**
	baz=40,SNR=7.5								
BRLS	**Borolday**	**73.97**	**48**	*e*P		**P**	**08 56 01.8**	**+0.1**
BRLS	**Borolday**	**73.97**	**48**	*e*P		**P**	**08 56 01.9**	**+0.1**
K13K	**Kusilvak Mount**	**74.02**	**338**	P		**P**	**08 56 00.6**	**-1.0**
	baz=38								
P16K	**Nushagak River**	**74.06**	**334**	P		**P**	**08 56 01.7**	**-0.2**
	baz=43								
KURK	**Kurchatov**	**74.10**	**38**	P		**P**	**08 56 02.1**	**-0.1**
KURK				IAmb		IAmb	08 56 03.3		
	comp=Z,10nm,1.1s								
KURK	**Kurchatov**	**74.10**	**38**	P		**P**	**08 56 02.1**	**-0.1**
KURK				pmax		pmax			
	comp=Z,10.0nm,1.1s								
M14K	**Bethel**	**74.11**	**337**	P		**P**	**08 56 01.5**	**-0.5**
	baz=40								
KURBB	**Kurchatov Arra**	**74.11**	**38**	P		**P**	**08 56 02.4**	**0.0**
	comp=Z,5.6nm,0.9s,baz=311,slow=6.2,SNR=39								
KURBB				LR		LR	09 27 43.7		
	comp=Z,51nm,19.9s,baz=168,slow=35								
	comp=Z,5.6nm,0.9s								
CHM	**Chimkent**	**74.25**	**49**	*e*P		**P**	**08 56 03.2**	**-0.1**
CHM				pmax		pmax			
	comp=Z,8.0nm,0.6s								
CHM	**Chimkent**	**74.25**	**49**	*e*P		**P**	**08 56 03.2**	**-0.1**
	comp=Z,8.0nm,0.6s								
KKAR	**Karatay Array**	**74.33**	**48**	P		**P**	**08 56 04.3**	**+0.5**
KKAR	**Karatay Array**	**74.33**	**48**	P		**P**	**08 56 04.3**	**+0.5**
R17L	**Mt. Peulik Vol**	**74.49**	**332**	P		**P**	**08 56 03.8**	**-0.6**
	baz=44								
O15K	**Ungalikthiuk R**	**74.59**	**335**	P		**P**	**08 56 04.0**	**-1.0**
	baz=42								
IUG	**Iuzhnay**	**74.61**	**49**	*e*P		**P**	**08 56 05.4**	**-0.1**
IUG				pmax		pmax			
	comp=Z,11nm,1.1s								
IUG	**Iuzhnay**	**74.61**	**49**	*e*P		**P**	**08 56 05.4**	**-0.1**
	comp=Z,11nm,1.1s								
ZAA0	**Zalesovo Array**	**74.85**	**33**			**P**	**08 56 06.2**	**-0.3**
ZAA0				IAmb		IAmb	08 57 36.5		
	comp=Z,5.4nm,0.7s								
ZALV	**Zalesovo Beam**	**74.85**	**33**	P		**P**	**08 56 06.8**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=312,slow=9.1,SNR=11								
ZALV				LR		LR	09 31 05.7		
	comp=Z,23nm,18.1s,baz=258,slow=37								
	comp=Z,4.0nm,1.0s								
ZALV	**Zalesovo Beam**	**74.85**	**33**	P		**P**	**08 56 06.5**	**0.0**
ZALV	**Zalesovo Beam**	**74.85**	**33**	*i* P		**P**	**08 56 06.8**	**+0.3**
ZALV				pmax		pmax			
	comp=Z,3.0nm,0.9s								
UOSS	**Minazif**	**74.88**	**70**	P		**P**	**08 56 06.9**	**-0.4**
UOSS				IAmb		IAmb	08 56 07.1		
	comp=Z,6.8nm,0.6s								
DZA	**Taraz**	**74.94**	**48**	*e*P		**P**	**08 56 07.2**	**-0.1**
DZA	**Taraz**	**74.94**	**48**	*e*P		**P**	**08 56 07.3**	**-0.1**
O14K	**Tigyukauivet M**	**75.02**	**335**	P		**P**	**08 56 05.5**	**-1.9**
	baz=40								
SEM	**Semipalatinsk**	**75.09**	**37**	*e*P		**P**	**08 56 08.0**	**-0.3**
SEM	**Semipalatinsk**	**75.09**	**37**	*e*P		**P**	**08 56 08.0**	**-0.3**
BTLS	**Baital**	**75.21**	**45**	*e*P		**P**	**08 56 08.7**	**-0.1**
BTLS	**Baital**	**75.21**	**45**	*e*P		**P**	**08 56 08.8**	**-0.1**
CHGR	**Chuyangaron**	**76.12**	**52**	*i* P		**P**	**08 56 15.0**	**+0.7**
CHGR				pmax		pmax			
	comp=Z,27nm,1.5s								
SGDS	**Sogindy**	**76.52**	**46**	*e*P		**P**	**08 56 16.2**	**-0.3**
ARSB	**Arslanbob**	**76.87**	**48**	P		**P**	**08 56 18.0**	**-0.5**
ARSB				IAmb		IAmb	08 56 20.4		
	comp=Z,11nm,1.0s								
ARSB	**Arslanbob**	**76.87**	**48**	P		**P**	**08 56 18.0**	**-0.5**
ARSB				pmax		pmax			
	comp=Z,11nm,1.0s								
AAK	**Ala-Archa**	**76.95**	**46**	P		**P**	**08 56 19.8**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=252,slow=4.2,SNR=5.8								
AAK				LR		LR	09 31 20.8		
	comp=Z,78nm,18.2s,baz=321,slow=37								
	comp=Z,2.4nm,0.6s								
AAK	**Ala-Archa**	**76.95**	**46**	P		**P**	**08 56 18.4**	**-0.5**
AAK	**Ala-Archa**	**76.95**	**46**	*ce*P		**P**	**08 56 20.4**	**+1.4**
AAK				pmax		pmax			
	comp=Z,9.0nm,1.7s								
LSZ	**Lusaka**	**77.54**	**120**	LR		LR	09 29 07.7		
	comp=Z,261nm,20.9s,baz=318,slow=35								
LSZ	**Lusaka**	**77.54**	**120**	P		**P**	**08 56 22.9**	**+0.4**
LSZ				IAmb		IAmb	08 56 26.6		
	comp=Z,14nm,1.3s								
LSZ	**Lusaka**	**77.54**	**120**	P		**P**	**08 56 22.9**	**+0.4**
LSZ				pmax		pmax			
	comp=Z,14nm,1.3s								
SDPT	**Sand Point**	**77.72**	**332**	P		**P**	**08 56 20.7**	**-2.0**
	baz=40								
AAA	**Alma-Ata**	**77.97**	**45**	*e*P		**P**	**08 56 24.3**	**-0.2**
AAA	**Alma-Ata**	**77.97**	**45**	*e*P		**P**	**08 56 24.3**	**-0.2**
MDOK	**Medeo**	**78.07**	**45**	*e*P		**P**	**08 56 25.2**	**0.0**
MDOK	**Medeo**	**78.07**	**45**	*e*P		**P**	**08 56 25.3**	**0.0**
TNSS	**Tian-Shan**	**78.10**	**45**	*e*P		**P**	**08 56 25.3**	**-0.3**
TNSS	**Tian-Shan**	**78.10**	**45**	*e*P		**P**	**08 56 25.4**	**-0.3**
MANEM	**Manem**	**78.38**	**52**	IAmb		IAmb	08 56 35.0		
	comp=Z,30nm,1.0s								
MK31	**Makanchi Array**	**78.50**	**39**	*i* P		**P**	**08 56 27.5**	**+0.1**
MKAR	**Makanchi Array**	**78.50**	**39**	P		**P**	**08 56 27.6**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=309,slow=5.8,SNR=14								
MKAR				LR		LR	09 31 30.5		
	comp=Z,76nm,18.6s,baz=216,slow=36								
	comp=Z,4.4nm,0.9s								
MKAR	**Makanchi Array**	**78.50**	**39**				**08 56 27.7**	**+0.3**
MKAR	**Makanchi Array**	**78.50**	**39**	P		**P**	**08 56 27.7**	**+0.3**
NRN	**Naryn**	**78.58**	**46**	P		**P**	**08 56 28.4**	**+0.2**
NRN				IAmb		IAmb	08 56 30.8		
	comp=Z,10nm,0.9s								
NRN	**Naryn**	**78.58**	**46**	P		**P**	**08 56 28.4**	**+0.2**
NRN				pmax		pmax			
	comp=Z,10.0nm,0.9s								
SATY	**Saty**	**78.90**	**44**	*e*P		**P**	**08 56 29.6**	**-0.1**
SATY				pmax		pmax			
	comp=Z,11nm,1.3s								
SATY	**Saty**	**78.90**	**44**	*e*P		**P**	**08 56 29.7**	**-0.1**
	comp=Z,11nm,1.3s								
DGZ	**Jazzator, Alta**	**78.97**	**35**	*i* P		**P**	**08 56 31.3**	**+1.2**
DGZ				pmax		pmax			
	comp=Z,7.0nm,1.0s								
UZB	**Uzynbulak**	**79.19**	**44**	*e*P		**P**	**08 56 31.2**	**-0.1**
UZB	**Uzynbulak**	**79.19**	**44**	*e*P		**P**	**08 56 31.2**	**-0.1**
SHLS	**Shalkode**	**79.42**	**43**	*e*P		**P**	**08 56 33.7**	**+1.1**
SHLS				pmax		pmax			
	comp=Z,13nm,0.9s								
SHLS	**Shalkode**	**79.42**	**43**	*e*P		**P**	**08 56 33.8**	**+1.1**
	comp=Z,13nm,0.9s								
TARG	**Taragay, Kyrgy**	**79.42**	**45**	IAmb		IAmb	08 56 36.0		
	comp=Z,14nm,1.3s								
KSH2	**Kashi**	**79.77**	**49**	P		**P**	**08 56 35.7**	**+1.1**
KSH2				pmax		pmax			
	comp=Z,18nm,1.0s								
SEY	**Seymchan**	**80.38**	**357**	*ce*P		**P**	**08 56 38.7**	**+1.5**
SEY				pmax		pmax			
	comp=Z,7.0nm,1.3s								
YAK	**Yakutsk**	**80.39**	**8**	LR		LR	09 30 23.8		
	comp=Z,28nm,18.0s,baz=346,slow=34								
YAK	**Yakutsk**	**80.39**	**8**	*ce*P		**P**	**08 56 38.6**	**+1.3**
YAK				pmax		pmax			
	comp=Z,14nm,0.6s								
UNV	**Unalaska Valle**	**81.07**	**334**	P		**P**	**08 56 40.3**	**-0.8**
	baz=36								
MATP	**Matopo**	**81.33**	**123**	LR		LR	09 31 29.8		
	comp=Z,243nm,19.0s,baz=10.0,slow=35								
KNGR	**Kungurtug, Tuv**	**82.57**	**29**	*i* P		**P**	**08 56 50.0**	**+0.7**
KNGR				pmax		pmax			
	comp=Z,8.0nm,1.0s								
LBTB	**Lobatse**	**82.70**	**129**	LR		LR	09 29 13.8		
	comp=Z,141nm,22.0s,baz=276,slow=32								
WMQ	**Urumqi**	**83.31**	**39**	*e*P		**P**	**08 56 54.8**	**+1.7**
MA2	**Magadan**	**83.79**	**358**	LR		LR	09 31 08.4		
	comp=Z,75nm,21.2s,baz=339,slow=33								
TLY	**Talaya**	**83.95**	**25**	LR		LR	09 34 39.9		
	comp=Z,39nm,18.4s,baz=298,slow=36								
GO06	**Curarrehue**	**83.96**	**209**			**P**	**08 56 56.7**	**+0.4**
GO06				IAmb		IAmb	08 56 57.1		
	comp=Z,5.4nm,0.8s								
PLCA	**Paso Flores**	**84.61**	**208**	P		**P**	**08 56 59.1**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=20,slow=4.3,SNR=6.1								
PLCA				LR		LR	09 31 51.4		
	comp=Z,61nm,21.7s,baz=118,slow=34								
	comp=Z,3.8nm,1.0s								
PLCA	**Paso Flores**	**84.61**	**208**			**P**	**08 57 00.6**	**+1.1**
PLCA				IAmb		IAmb	08 57 01.9		
	comp=Z,8.4nm,1.1s								
PLCA	**Paso Flores**	**84.61**	**208**	P		**P**	**08 57 00.6**	**+1.1**
PLCA				pmax		pmax			
	comp=Z,8.0nm,1.2s								
LR05	**Currie**	**84.72**	**209**	P		**P**	**08 57 01.0**	**+1.0**
SUR	**Sutherland**	**85.34**	**137**	LR		LR	09 29 53.6		
	comp=Z,166nm,21.0s,baz=141,slow=32								
SHEM	**Shemya Is, Ala**	**87.64**	**344**	LR		LR	09 37 13.7		
	comp=Z,25nm,18.9s,baz=235,slow=36								
SONM	**Songino Array**	**88.16**	**26**	P		**P**	**08 57 16.8**	**-0.4**
	comp=Z,2.3nm,1.0s,baz=321,slow=5.6,SNR=9.3								
	comp=Z,2.3nm,1.0s								
SONM	**Songino Array**	**88.16**	**26**	P		**P**	**08 57 17.6**	**+0.4**
SONM				IAmb		IAmb	08 57 18.6		
	comp=Z,4.3nm,1.1s								
SONM	**Songino Array**	**88.16**	**26**	P		**P**	**08 57 17.6**	**+0.4**
SONM				pmax		pmax			
	comp=Z,4.0nm,1.1s								
ULN	**Ulaanbaatar**	**88.36**	**26**	*ce*P		**P**	**08 57 19.4**	**+1.2**
ULN				pmax		pmax			
	comp=Z,9.0nm,2.5s								
PETK	**Petropavlovsk-**	**89.85**	**354**	LR		LR	09 35 04.9		
	comp=Z,96nm,21.8s,baz=351,slow=34								
GTA2	**Gaotai**	**92.42**	**35**	P		**P**	**08 57 36.6**	**-0.7**
GTA2				pmax		pmax			
	comp=Z,5.0nm,1.3s								
KLR	**Kul'dur**	**93.15**	**10**	LR		LR	09 37 49.6		
	comp=Z,53nm,19.2s,baz=352,slow=34								
BNX	**BinXian**	**95.83**	**14**	⇑P		**P**	**08 57 50.3**	**-2.3**
BNX				pmax		pmax			
	comp=Z,4.0nm,1.0s								
HHC	**Hu-ho-hao-te**	**96.06**	**26**	*e*P		**P**	**08 57 53.0**	**-0.9**
HHC				pmax		pmax			
	comp=Z,5.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,25nm,5.0s								
LZH	**Lanzhou**	**97.05**	**34**	*e*P		Pdif	08 57 59.5	+0.8	
LZH				sP		pwP	08 58 05.5	+1.3	
LZH				pmax		pmax			
	comp=Z,24nm,1.2s								
LZH				L		L			
	comp=Z,170nm,21.0s								
USRK	**Ussuriysk Ar.**	**98.11**	**11**	LR		LR	09 41 09.4		
	comp=Z,44nm,19.0s,baz=284,slow=35								
QSPA	**South Pole Qui**	**126.82**	**180**	PKP		**PKPdf**	**09 03 28.1**	**-0.9**
	comp=Z,2.5nm,0.9s,baz=190,slow=0.9,SNR=6.2								
QSPA	**South Pole Qui**	**126.82**	**180**			**PKPdf**	**09 03 28.9**	**-0.2**
VNDA	**Vanda**	**138.80**	**185**	PKP		**PKPdf**	**09 03 51.8**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=277,slow=1.7,SNR=4.1								
VNDA	**Vanda**	**138.80**	**185**			**PKPdf**	**09 03 52.0**	**+0.8**
VNDA	**Vanda**	**138.80**	**185**	PKIKP		**PKPdf**	**09 03 52.0**	**+0.8**
WRA	**Warramunga Arr**	**159.78**	**37**	PKPab		**PKPab**	**09 05 04.0**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=336,slow=3.9,SNR=9.9								
ASAR	**Alice Springs**	**162.64**	**44**	PKPab		**PKPab**	**09 05 16.8**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=317,slow=4.2,SNR=7.6								

JMA 06 09:02:12.0±0.1, 36.3N±0.5×137.6E±0.3, h4km±2km,
MV0.7/26, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.27**	**254**	S	Sg	09 02 21.2	+0.4
JNG	**Nsakai**	**0.39**	**74**	S	Sg	09 02 25.4	+0.6

IDC 06 09:04:35.9±53.0, 15.11S×171.61W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1037.0km s-min=196.8km az=78.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.68**	**240**	P	P	09 12 58.6	-0.1
	0.8nm,0.9s,baz=105,slow=12,SNR=1.3						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**51.59**	**256**	P	P	09 13 44.4	0.0
	0.4nm,0.7s,baz=93,slow=6.8,SNR=12						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**51.84**	**252**	P	P	09 13 46.1	-0.2
	1.7nm,0.5s,baz=89,slow=7.9,SNR=51						
	1.7nm,0.5s						

DJA 06 09:14:08.9±0.8, 12°S±7°×11°5E±°, h10km, M4.7/12, MLv4.7/12
NEIC 06 09:14:09.9±2.0, 11°47S±0°08×114°8E±0°1, h10km±1km, mb4.2/12, Error ellipse: s-maj=20.0km s-min=9.6km az=233.0
IDC 06 09:14:09.6±1.6, 11°14S×114°85E, h0km, mb3.9/9, mbtmp4.0/9, MS3.4/2, Error ellipse: s-maj=72.1km s-min=17.7km az=50.0
ISC 06 09:14:08.8±0.6, 11°60S±0°06×114°73E±0°06, h10km, n49, σ2.2s6/51, mb4.2/11, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**3.16**	**350**	P	**Pn**	**09 14 57.5**	**-1.2**
JAGI	**Jajag, Banyuwa**	**3.16**	**350**		**Pn**	**09 14 57.5**	**-1.2**
JAGI	**Jajag, Banyuwa**	**3.16**	**350**	P	**Pn**	**09 14 56.6**	**-2.1**
KHKI	**Kahang-Kahang**	**3.33**	**15**	P	**Pn**	**09 15 02.7**	**+1.8**
TWSI	**Taliwang, Sumb**	**3.54**	**37**	P	**Pn**	**09 15 05.6**	**+1.7**
TWSI				S	**Sn**	**09 15 45.2**	**-0.7**
PLAI	**Plampang**	**4.07**	**48**	P	**Pn**	**09 15 12.9**	**+1.7**
PLAI	**Plampang**	**4.07**	**48**	P	**Pn**	**09 15 12.2**	**+1.0**
DBNI	**Kabupaten Domp**	**4.68**	**49**	P	**Pn**	**09 15 21.4**	**+1.8**
SNJI	**Sawahan-Nganju**	**4.79**	**322**	P	**Pn**	**09 15 21.2**	**-0.1**
WBSI	**Waikabubak, Su**	**4.97**	**67**	P	**Sn**	**09 16 23.7**	**+2.4**
UGM	**Wanagama**	**5.53**	**311**	P	**Pn**	**09 15 31.3**	**0.0**
UGM	**Wanagama**	**5.53**	**311**	Pn	**Pn**	**09 15 31.2**	**-0.2**
BBJI	**Bungbulang**	**8.10**	**300**	P	**Pn**	**09 16 05.4**	**-1.3**
BBJI	**Bungbulang**	**8.10**	**300**	Pn	**Pn**	**09 16 07.2**	**+0.4**
MBWA	**Marble Bar**	**10.65**	**154**	P	**Pn**	**09 16 41.3**	**-0.2**
MBWA	**Marble Bar**	**10.65**	**154**		**Pn**	**09 16 41.6**	**0.0**
FITZ	**Fitzroy Crossi**	**12.36**	**123**	Pn	**Pn**	**09 17 06.0**	**+0.9**
	0.5nm,0.3s,baz=292,slow=7.6,SNR=16						
FITZ				Sn	Sn	09 19 15.3	-7.6
	1.3nm,0.3s,baz=19,slow=22,SNR=9.3						
FITZ	**Fitzroy Crossi**	**12.36**	**123**	P	**Pn**	**09 17 05.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**12.36**	**123**		**Pn**	**09 17 06.0**	**+0.9**
FITZ					**Sn**	**09 19 18.2**	**-4.8**
MEEK	**Meekatharra**	**15.40**	**167**	P	**Pn**	**09 17 47.1**	**+0.7**
MORW	**Morawa**	**17.43**	**176**	P	**P**	**09 18 14.6**	**+1.2**
BLDU	**Ballidu**	**19.02**	**175**	P	**Pn**	**09 18 32.6**	**+1.0**
WRA	**Warramunga Arr**	**20.60**	**116**	P	Pn	09 18 51.6	+1.1
	1.5nm,0.8s,baz=289,slow=12,SNR=9.4						
WRA				S	**S**	**09 22 31.3**	**-7.4**
	1.0nm,0.7s,baz=282,slow=25,SNR=5.5						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**20.60**	**116**		Pn	09 18 51.6	+1.1
WRA					**S**	**09 22 31.4**	**-7.4**
WRAB	**Tennant Creek**	**20.60**	**116**	P	**P**	**09 18 50.2**	**+1.9**
WR8	**Warramunga Arr**	**20.74**	**116**	P	**P**	**09 18 51.1**	**+1.2**
WR8				IAmb	IAmb	09 19 03.6	
	comp=Z,9.8nm,0.8s						
ASAR	**Alice Springs**	**21.83**	**126**	P	**P**	**09 19 06.3**	**+4.8**
	comp=Z,1.5nm,0.8s,baz=301,slow=10,SNR=18						
ASAR				S	**S**	**09 22 59.6**	**-3.5**
	comp=Z,1.5nm,0.8s,baz=296,slow=23,SNR=5.8						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**21.83**	**126**	P	**P**	**09 19 03.2**	**+1.6**
ASAR					**S**	**09 22 59.6**	**-3.5**
FORT	**Forrest**	**22.73**	**149**	P	**P**	**09 19 12.4**	**+1.3**
FORT				IAmb	IAmb	09 19 38.6	
	comp=Z,6.4nm,0.8s						
COEN	**Coen**	**27.83**	**98**	P	**P**	**09 19 58.3**	**-0.4**
CTA	**Charters Tower**	**31.43**	**110**	LR	LR	09 32 32.0	
	comp=Z,68nm,21.0s,baz=216,slow=35						
STKA	**Stephens Creek**	**31.94**	**133**	P	**P**	**09 20 38.8**	**+3.8**
	comp=Z,1.4nm,0.8s,baz=308,slow=6.3,SNR=4.0						
	comp=Z,1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**33.68**	**332**	P	**P**	**09 20 49.9**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=150,slow=8.7,SNR=4.3						
	comp=Z,0.9nm,0.3s						
TPUB	**Ta-pu**	**35.16**	**9**	P	**P**	**09 21 03.2**	**+0.2**
MJAR	**Matsushiro Arr**	**52.74**	**24**	P	**P**	**09 23 22.5**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=190,slow=8.2,SNR=4.9						
	comp=Z,1.8nm,0.7s						
MJAR	**Matsushiro Arr**	**52.74**	**24**	P	**P**	**09 23 22.5**	**-1.5**
MJAR				IAmb	IAmb	09 23 24.4	
	comp=Z,3.8nm,1.2s						
JTM	**Tenmabayashi**	**57.53**	**24**	P	**P**	**09 23 58.2**	**-0.3**
SONM	**Songino Array**	**59.63**	**353**	P	**P**	**09 24 13.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=180,slow=7.5,SNR=4.4						
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**59.63**	**353**	P	**P**	**09 24 13.0**	**-0.2**
SONM				IAmb	IAmb	09 24 13.5	
	comp=Z,1.1nm,0.7s						
PDGK	**Podgornoye**	**63.42**	**332**	P	**P**	**09 24 38.8**	**-0.1**
MKAR	**Makanchi Array**	**64.97**	**336**	P	**P**	**09 24 49.1**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=147,slow=7.4,SNR=30						
	comp=Z,3.7nm,0.5s						
MKAR	**Makanchi Array**	**64.97**	**336**	P	**P**	**09 24 48.9**	**0.0**
KURBB	**Kurchatov Arra**	**69.53**	**336**	P	**P**	**09 25 17.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=148,slow=5.5,SNR=4.2						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**69.57**	**336**	P	**P**	**09 25 17.1**	**-0.8**
KURK				IAmb	IAmb	09 25 29.5	
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**70.07**	**342**	P	**P**	**09 25 20.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=150,slow=6.8,SNR=4.4						
	comp=Z,0.9nm,0.4s						
SBA	**Scott Base**	**71.16**	**170**	P	**P**	**09 25 27.8**	**+0.5**
MA2	**Magadan**	**76.62**	**18**	LR	LR	10 00 54.0	
	comp=Z,27nm,19.8s,baz=234,slow=37						
AB31	**Akbulak array**	**77.33**	**327**	P	**P**	**09 26 02.9**	**-0.8**
AB31				IAmb	IAmb	09 26 04.2	
	comp=Z,2.0nm,1.1s						
ABKAR	**Akbulak array**	**77.33**	**327**	P	**P**	**09 26 03.6**	**-0.1**

NOU 06 09:22:02.3, 42°18S×173°52E, h113km, MLv3.7/7, South Island, New Zealand
WEL 06 09:22:02.4±0.4, 42°S±3°×17°4E±°, h10km±4km, M2.4/11, ML2.5/15, MLv2.4/11, Error ellipse: s-maj=3.9km s-min=2.8km az=155.8
ISC 06 09:22:02.9±0.9, 41.71S±0.03×174.20E±0.02, h15km±7km, n37, σ0.96/44, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.04**	**164**	P	**Pg

SJG	**San Juan**	**2.15 238**		**Pn**	**09 23 18.2**	**+1.7**
SJG	**San Juan**	**2.15 238**⇑	*eP*	**Pn**	**09 23 19.2**	**+2.7**
IGPR	**InterUniversit**	**2.20 234**		**Pb**	**09 23 20.3**	**-0.8**
IGPR				**Sn**	**09 23 43.1**	**-0.5**
IGPR	**InterUniversit**	**2.20 234**⇑	*eP*	**Pb**	**09 23 20.3**	**-0.8**
ECPR	**Experimental S**	**2.23 245**		**Pn**	**09 23 18.9**	**+1.3**
ECPR				**Sn**	**09 23 43.3**	**-1.0**
ECPR			IAML		09 23 54.3	
	comp=N,182nm,0.2s					
ECPR	**Experimental S**	**2.23 245**⇑	*eP*	**Pn**	**09 23 19.4**	**+1.9**
EMPR	**Esperanza - Ma**	**2.31 250**		**Pn**	**09 23 20.3**	**+1.6**
EMPR				**Sn**	**09 23 45.3**	**-1.1**
EMPR	**Esperanza - Ma**	**2.31 250**⇑	*eP*	**Pn**	**09 23 20.3**	**+1.6**
EMPR			*eS*	**Sn**	**09 23 45.3**	**-1.1**
CELP	**Cerrillos**	**2.52 242**		**Pn**	**09 23 23.3**	**+1.6**
CELP				**Sn**	**09 23 50.8**	**-0.8**
CELP	**Cerrillos**	**2.52 242**⇑	*iP*	**Pn**	**09 23 23.6**	**+2.0**
CELP			⇑*iS*	**Sn**	**09 23 50.5**	**-1.1**
CELP			IAML		09 23 59.6	
	comp=N,17nm,0.3s					
CELP	**Cerrillos**	**2.52 242**⇓	*eP*	**Pn**	**09 23 24.0**	**+2.4**
AOPR	**Arecibo Observ**	**2.56 249**		**Pn**	**09 23 23.2**	**+1.1**
AOPR				**Sn**	**09 23 51.2**	**-1.3**
AOPR			IAML		09 23 59.7	
	comp=N,135nm,0.4s					
AOPR	**Arecibo Observ**	**2.56 249**⇑	*iP*	**Pn**	**09 23 23.4**	**+1.3**
AOPR			⇑*iS*	**Sn**	**09 23 53.1**	**+0.5**
AOPR			IAML		09 23 59.6	
	comp=N,116nm,0.4s					
AOPR	**Arecibo Observ**	**2.56 249**⇑	*eP*	**Pn**	**09 23 25.2**	**+3.0**
OBIP	**Obispado Ponce**	**2.56 242**		**Pn**	**09 23 24.1**	**+1.9**
OBIP				**Sn**	**09 23 50.5**	**-2.0**
OBIP	**Obispado Ponce**	**2.56 242**⇑	*eP*	**Pn**	**09 23 24.6**	**+2.5**
OBIP			*eS*	**Sn**	**09 23 50.5**	**-2.0**
UUPR	**Utuado, UPR, P**	**2.56 247**		**Pn**	**09 23 23.4**	**+1.3**
UUPR				**Sn**	**09 23 50.8**	**-1.9**
UUPR	**Utuado, UPR, P**	**2.56 247**⇑	*eP*	**Pn**	**09 23 24.7**	**+2.5**
AGPR	**Aguadilla, PR**	**2.84 254**		**Pn**	**09 23 27.1**	**+1.2**
AGPR				**Sn**	**09 23 58.7**	**-0.7**
AGPR			IAML		09 24 11.8	
	comp=N,75nm,2.0s					
AGPR			IAML		09 25 22.4	
	comp=N,78nm,2.1s					
AGPR	**Aguadilla, PR**	**2.84 254**⇓	*iP*	**Pn**	**09 23 27.5**	**+1.5**
AGPR			⇑*iS*	**Sn**	**09 23 59.6**	**+0.2**
AGPR			IAML		09 24 11.8	
	comp=N,35nm,0.5s					
AGPR	**Aguadilla, PR**	**2.84 254**⇓	*eP*	**Pn**	**09 23 27.6**	**+1.6**
LSP	**Las Mesas**	**2.91 248**		**Pn**	**09 23 29.5**	**+2.4**
LSP				**Sn**	**09 23 60.0**	**-1.4**
LSP	**Las Mesas**	**2.91 248**⇑	*eP*	**Pn**	**09 23 29.5**	**+2.4**
LSP			*eS*	**Sn**	**09 23 60.0**	**-1.4**
MLPR	**Magueyes Islan**	**2.96 245**		**Pn**	**09 23 29.6**	**+1.9**
MLPR				**Sn**	**09 24 00.9**	**-1.6**
MLPR	**Magueyes Islan**	**2.96 245**⇑	*iP*	**Pn**	**09 23 29.8**	**+2.2**
MLPR			⇑*iS*	**Sn**	**09 24 01.3**	**-1.2**
MLPR			IAML		09 24 13.8	
	comp=N,7.2nm,0.4s					
MLPR	**Magueyes Islan**	**2.96 245**⇑	*eP*	**Pn**	**09 23 29.9**	**+2.2**
CRPR	**Cabo Rojo, PR**	**3.00 246**		**Pn**	**09 23 30.3**	**+2.1**
CRPR				**Sn**	**09 24 01.8**	**-1.6**
CRPR	**Cabo Rojo, PR**	**3.00 246**⇓	*eP*	**Pn**	**09 23 30.3**	**+2.1**
IDE	**Isla Desecheo**	**3.19 255**		**Pn**	**09 23 32.4**	**+1.5**
IDE				**Sn**	**09 24 06.0**	**-2.2**
IDE	**Isla Desecheo**	**3.19 255**⇑	*eP*	**Pn**	**09 23 32.4**	**+1.5**
IDE			*eS*	**Sn**	**09 24 06.0**	**-2.2**
DR12	**Loma Pena Alta**	**4.89 265**	Pn	**Pn**	**09 23 54.6**	**+0.3**
HATOM	**Hato Mayor del**	**4.89 265**⇓	*iP*	**Pn**	**09 23 56.0**	**+1.7**
HATOM			IAML		09 24 59.0	
	comp=N,13nm,2.2s					
SDDR	**Presa de Saban**	**6.67 269**	Pn	**Pn**	**09 24 19.7**	**+0.9**

*CATAC **06** 09:23:48.0±0.8, 10˚N±5˚×8˚0W±˚, h16km, M2.5/8, MLv2.5/8, Error ellipse: s-maj=14.5km s-min=6.0km az=47.3, confirmed*
*UPA **06** 09:23:49.2±0.8, 9˚.97N×79˚.76W, h10km±26km, MW3.4, Presumed earthquake*
ISC 06 09:23:46.1±2.4, 10˚.1N±0˚.1×79˚.81W±0˚.07, h13km±15km, n11, σ0°78/17, North of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FRIJ	**El Hiral**	**0.86 174**		*eP*		**Pb**		**09 24 03.9**	**+1.0**
BCIP	**Isla Barro Col**	**0.91 182**		P		**Pg**		**09 24 04.7**	**+0.9**
BCIP				S		**Sb**		**09 24 16.6**	**+0.7**
BCIP	**Isla Barro Col**	**0.91 182**		*eP*		**Pg**		**09 24 04.7**	**+0.9**
BCIP				*eS*		**Sb**		**09 24 16.0**	**+0.1**
GAMB1	**Gamboa**	**0.96 174**		*eP*		**Pg**		**09 24 05.2**	**+0.4**
GAMB1				*eS*		**Sb**		**09 24 17.6**	**+0.3**
ZANG	**Zanguenga, Cho**	**1.12 183**		*eP*		**Pg**		**09 24 07.6**	**-0.2**
ZANG				*eS*		**Sg**		**09 24 21.1**	**-1.3**
CHPO	**Chepo, Panama**	**1.14 143**		*eP*		**Pg**		**09 24 08.6**	**+0.5**
CHPO				*eS*		**Sb**		**09 24 22.2**	**-0.2**
CHOR3	**La Chorrera**	**1.18 178**		*eP*		**Pg**		**09 24 08.5**	**-0.4**
FLAM	**Flamenco Islan**	**1.20 167**		*eP*		**Pg**		**09 24 08.6**	**-0.6**
CNTA3	**Canitas, Panam**	**1.25 133**		*eP*		**Pb**		**09 24 10.4**	**+0.8**
CNTA3				*eS*		**Sb**		**09 24 24.8**	**-0.9**
RGM0	**Gandoca**	**2.80 260**		P		**Pn**		**09 24 30.3**	**-0.3**
BRU2	**Volcan**	**3.12 246**		P		**Pn**		**09 24 34.3**	**-0.8**

*GII **06** 09:24:48.4±0.0, 36˚.06N×17˚.03E, h0km, confirmed*
*GFZ **06** 09:24:50.7±0.6, 36˚N±4˚×1˚7E±˚, h10km, M4.4/18, mb4.8/18, MLv4.2/8, Error ellipse: s-maj=11.3km s-min=6.0km az=40.9, confirmed*
*IDC **06** 09:24:50.1±1.1, 36˚.01N×16˚.96E, h0km, mb4.0/13, mbtmp4.1/19, ML3.7/4, MS3.0/2, Error ellipse: s-maj=22.4km s-min=16.3km az=165.0*
*NEIC **06** 09:24:51.7±2.0, 35˚.95N±0˚.08×17˚.02E±0˚.06, h10km±1km, mb4.4/7, Error ellipse: s-maj=14.2km s-min=8.0km az=188.0*
*MCSM **06** 09:24:51.7±0.7, 36˚N±6˚×1˚7E±˚, h11km±4km, mb4.3, mB4.5, MLv4.3, Mw(mB)3.6*
*BEO **06** 09:24:54.6±0.6, 36˚.24N×16˚.93E, h12km±9km, ML4.5/11*
*PDG **06** 09:24:57.1±0.7, 36˚.07N×17˚.00E, h24km±1km, ML4.4/13, Error ellipse: s-maj=1.6km s-min=1.1km az=90.0*
ISC 06 09:24:53.6±3.3, 36˚.13N±0˚.06×17˚.00E±0˚.03, h24km±26km, n349, σ1°93/399, mb4.1/15, 17C-19D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HPAC	**Pachino**	**1.62 291**		⇓P		**Pn**		**09 25 20.9**	**+0.2**
HPAC				S		**Sn**		**09 25 41.3**	**+0.5**
HPAC				AML		AML			
	comp=E,5095μm,0.5s								
HPAC				AML		AML			
	comp=N,7605μm,0.3s								
HPAC				AML		AML			
	comp=N,7605μm,1.7s								
HPAC				AML		AML			
	comp=E,5520μm,0.6s								
HAGA	**Augusta**	**1.88 309**		P		**Pn**		**09 25 23.7**	**-0.5**
HAGA				S		**Sn**		**09 25 46.2**	**-1.0**
HAGA				AML		AML			
	comp=E,1915μm,0.5s								
HAGA				AML		AML			
	comp=N,2495μm,0.5s								
MEU	**Monte Lauro**	**1.93 301**		P		**Pn**		**09 25 25.3**	**+0.4**
MEU				S		**Sn**		**09 25 48.9**	**+0.4**
MEU				AML		AML			
	comp=N,5235μm,0.3s								
MEU				AML		AML			
	comp=N,5240μm,0.3s								
MEU				AML		AML			
	comp=E,4070μm,1.1s								
EPOZ	**Pozzillo**	**2.07 313**		P		**Pn**		**09 25 28.2**	**+1.4**
EPOZ				S		**Sn**		**09 25 53.6**	**+1.8**
EPOZ				AML		AML			
	comp=N,2080μm,0.3s								
EPOZ				AML		AML			
	comp=N,2285μm,0.2s								
EPOZ				AML		AML			
	comp=E,1930μm,0.2s								
EPOZ				AML		AML			
	comp=E,2040μm,0.2s								
SOI	**Samo**	**2.08 339**		P		**Pn**		**09 25 28.6**	**+1.5**
SOI				AML		AML			
	comp=N,694μm,0.3s								
SOI				AML		AML			
	comp=N,694μm,1.7s								
HLNI	**Lentini**	**2.10 306**		P		**Pn**		**09 25 26.9**	**-0.3**
HLNI				S		**Sn**		**09 25 51.9**	**-0.7**
HLNI				AML		AML			
	comp=E,10800μm,0.2s								
HLNI				AML		AML			
	comp=N,6465μm,0.2s								
CROCE	**Santa Croce Ca**	**2.11 290**		⇓P		**Pn**		**09 25 26.6**	**-0.7**
CROCE				S		**Sn**		**09 25 50.9**	**-1.9**
CROCE				AML		AML			
	comp=E,2110μm,0.7s								
CROCE				AML		AML			
	comp=N,2015μm,1.3s								
CROCE				AML		AML			
	comp=N,1715μm,1.3s								
CROCE				AML		AML			
	comp=E,2110μm,0.7s								
CROCE				AML		AML			
	comp=N,1715μm,0.7s								
CROCE				AML		AML			
	comp=E,1740μm,0.7s								
CROCE				AML		AML			
	comp=N,2015μm,0.7s								
MTTG	**Motta San Giov**	**2.14 331**		P		**Pn**		**09 25 29.1**	**+1.2**
MTTG				AML		AML			
	comp=N,1450μm,0.5s								
MTTG				AML		AML			
	comp=E,753μm,0.6s								
EVRN	**Santa Venerina**	**2.16 317**		P		**Pn**		**09 25 28.5**	**+0.4**
EVRN				AML		AML			
	comp=E,6470μm,1.4s								
EVRN				AML		AML			
	comp=N,8365μm,1.3s								
EVRN				AML		AML			
	comp=N,8790μm,1.3s								
EVRN				AML		AML			
	comp=E,6470μm,0.6s								
EVRN				AML		AML			
	comp=E,4880μm,1.4s								
ENIC	**Nicolosi**	**2.18 314**		P		**Pn**		**09 25 29.1**	**+0.6**
ENIC				AML		AML			
	comp=E,11010μm,1.2s								
ENIC				AML		AML			
	comp=N,14550μm,0.7s								
ENIC				AML		AML			
	comp=N,11300μm,1.1s								
ENIC				AML		AML			
	comp=E,11010μm,0.8s								
ENIC				AML		AML			
	comp=E,10120μm,0.2s								
ACATE	**Acate (RG)**	**2.20 295**		P		**Pn**		**09 25 28.2**	**-0.4**
ACATE				S		**Sn**		**09 25 53.7**	**-1.4**
GMB	**Gambarie**	**2.24 336**		P		**Pn**		**09 25 31.3**	**+1.9**
GMB				AML		AML			
	comp=E,10115μm,0.4s								
GMB				AML		AML			
	comp=N,7600μm,0.2s								
ESLN	**Serra La Nave**	**2.25 315**		P		**Pn**		**09 25 30.0**	**+0.5**
ESLN				AML		AML			
	comp=N,2885μm,1.0s								
ESLN				AML		AML			
	comp=N,2885μm,1.0s								
ESLN				AML		AML			
	comp=E,4085μm,0.8s								
ESML	**S. M. di Licod**	**2.26 312**		P		**Pn**		**09 25 29.4**	**-0.1**
ESML				AML		AML			
	comp=E,3070μm,0.2s								
ESML				AML		AML			
	comp=N,2480μm,0.9s								
ESML				AML		AML			
	comp=N,2480μm,1.1s								
EMCN	**Etna Monte Con**	**2.29 317**		P		**Pn**		**09 25 30.7**	**+0.6**
EMCN				AML		AML			
	comp=N,4105μm,0.7s								
EMCN				AML		AML			
	comp=E,3785μm,0.2s								
EMCN				AML		AML			
	comp=N,4105μm,1.3s								
CEL	**Celeste**	**2.30 338**				**Pn**		**09 25 32.6**	**+2.5**
CEL	**Celeste**	**2.30 338**		P		**Pn**		**09 25 31.7**	**+1.5**
CEL				AML		AML			
	comp=E,2670μm,0.3s								
CEL				AML		AML			
	comp=E,2740μm,0.3s								
CEL				AML		AML			
	comp=N,2205μm,0.6s								
CEL				AML		AML			
	comp=N,2160μm,0.6s								
CEL	**Celeste**	**2.30 338**		Pn		**Pn**		**09 25 32.5**	**+2.4**
CEL	**Celeste**	**2.30 338**		P		**Pn**		**09 25 32.7**	**+2.5**
AIO	**Antillo**	**2.32 323**		P		**Pn**		**09 25 30.7**	**+0.3**
AIO				AML		AML			
	comp=E,1885μm,1.3s								
AIO				AML		AML			
	comp=N,1830μm,1.2s								
AIO				AML		AML			
	comp=N,1830μm,0.8s								
AIO				AML		AML			
	comp=E,1885μm,0.7s								
EMSG	**Monte Spagnolo**	**2.35 316**		P		**Pn**		**09 25 32.1**	**+1.2**
EMSG				AML		AML			
	comp=E,4655μm,0.4s								
EMSG				AML		AML			
	comp=N,4725μm,0.3s								
PLAC	**Placanica**	**2.36 349**		P		**Pn**		**09 25 32.8**	**+1.9**
PLAC				AML		AML			
	comp=N,1200μm,0.4s								
PLAC				AML		AML			
	comp=E,1225μm,0.4s								
PLAC				AML		AML			
	comp=N,1460μm,0.5s								
PLAC				AML		AML			
	comp=N,1510μm,0.5s								
PLAC				AML		AML			
	comp=E,1225μm,1.6s								
PLAC				AML		AML			
	comp=N,1200μm,1.6s								
RAFF	**Raffo Rosso**	**2.38 298**				**Pn**		**09 25 31.6**	**+0.4**
RAFF	**Raffo Rosso**	**2.38 298**		⇓P		**Pn**		**09 25 31.6**	**+0.4**
RAFF				S		**Sn**		**09 25 59.4**	**-0.3**
RAFF				AML		AML			
	comp=N,2235μm,1.0s								
RAFF				AML		AML			
	comp=E,1995μm,0.3s								
MPNC	**Port Mandanici**	**2.41 327**		P		**Pn**		**09 25 33.0**	**+1.5**
MPNC				AML		AML			
	comp=E,2850μm,0.5s								
MPNC				AML		AML			
	comp=N,5315μm,0.5s								
EPZF	**Pizzo Felice**	**2.41 315**		P		**Pn**		**09 25 33.0**	**+1.3**
EPZF				AML		AML			
	comp=N,5570μm,0.8s								
EPZF				AML		AML			
	comp=E,3190μm,0.9s								
FERC	**Galatro**	**2.42 344**		P		**Pn**		**09 25 34.1**	**+2.4**
MSRU	**Castanea**	**2.44 331**		P		**Pn**		**09 25 33.3**	**+1.3**
MSRU				AML		AML			
	comp=E,3120μm,0.9s								
MSRU				AML		AML			
	comp=N,2645μm,0.5s								
VAE	**Valguarnera**	**2.47 304**		Pn		**Pn**		**09 25 33.9**	**+1.4**
	comp=N,104nm,0.5s,baz=122,slow=12,SNR=20								
VAE				Sn		**Sn**		**09 26 02.1**	**+0.1**
	comp=N,38nm,0.3s,baz=356,slow=5.8,SNR=7.1								
VAE	**Valguarnera**	**2.47 304**		P		**Pn**		**09 25 34.1**	**+1.6**
VAE				AML		AML			
	comp=E,510μm,0.7s								
VAE				AML		AML			
	comp=N,561μm,1.1s								
CAGR	**Agira**	**2.50 307**		P		**Pn**		**09 25 33.8**	**+1.0**
CAGR				AML		AML			
	comp=E,1385μm,1.2s								
CAGR				AML		AML			
	comp=N,1510μm,1.2s								
CAGR				AML		AML			
	comp=E,1385μm,0.8s								
GALF	**Gagliano Caste**	**2.51 310**		P		**Pn**		**09 25 34.3**	**+1.3**
GALF				AML		AML			
	comp=E,2725μm,0.6s								
GALF				AML		AML			
	comp=N,350μm,0.9s								
GALF				AML		AML			
	comp=E,2725μm,1.4s								
GALF				AML		AML			
	comp=E,315μm,0.4s								
GALF				AML		AML			
	comp=N,2600μm,0.4s								
MUCR	**Ucria**	**2.56 319**		P		**Pn**		**09 25 34.5**	**+0.9**
MUCR				AML		AML			
	comp=E,3305μm,0.4s								
MUCR				AML		AML			
	comp=N,2885μm,0.3s								
CPTP	**Pietraperzia**	**2.61 300**		P		**Pn**		**09 25 35.1**	**+0.7**
CPTP				AML		AML			
	comp=N,1000μm,0.6s								
CPTP				AML		AML			
	comp=E,1160μm,0.8s								
JOPP	**Joppolo**	**2.63 341**		P		**Pn**		**09 25 36.6**	**+2.0**
JOPP				AML		AML			
	comp=E,1070μm,0.4s								
JOPP				AML		AML			
	comp=N,1475μm,0.5s								
CLTA	**Licata**	**2.65 294**		P		**Pn**		**09 25 35.3**	**+0.5**
CLTA				AML		AML			
	comp=E,783μm,1.4s								
CLTA				AML		AML			
	comp=N,982μm,0.2s								
MSFR	**San Fratello**	**2.71 315**		⇓P		**Pn**		**09 25 36.9**	**+1.2**
MSFR				AML		AML			
	comp=E,548μm,0.8s								
MSFR				AML		AML			
	comp=N,448μm,0.5s								
GRI	**Girifalco**	**2.73 350**		P		**Pn**		**09 25 38.3**	**+2.3**
GRI				AML		AML			
	comp=E,1225μm,1.0s								
GRI				AML		AML			
	comp=E,1225μm,1.0s								
GRI				AML		AML			
	comp=N,1105μm,0.3s								
VPL	**Vulcano Piano**	**2.76 325**		P		**Pn**		**09 25 38.1**	**+1.7**
VPL				AML		AML			
	comp=N,4410μm,0.3s								
VPL				AML		AML			
	comp=E,4105μm,0.4s								
RESU	**Resuttano**	**2.80 304**		P		**Pn**		**09 25 37.0**	**0.0**
RESU				AML		AML			
	comp=E,638μm,1.5s								
RESU				AML		AML			
	comp=N,555μm,0.4s								
RESU				AML		AML			
	comp=E,638μm,0.5s								
ILOS	**Lipari Osserat**	**2.83 325**		P		**Pn**		**09 25 38.7**	**+1.3**
ILOS				AML		AML			
	comp=E,9815μm,0.5s								
ILOS				AML		AML			
	comp=E,9815μm,1.5s								
ILOS				AML		AML			
	comp=N,16600μm,0.6s								
SELL	**Sellia**	**2.87 354**		P		**Pn**		**09 25 40.0**	**+2.1**
PETRA	**Petralia Sopra**	**2.87 307**		P		**Pn**		**09 25 39.6**	**+1.6**
PETRA				AML		AML			
	comp=E,873μm,0.4s								
PETRA				AML		AML			
	comp=N,965μm,0.4s								
PETRA				AML		AML			
	comp=E,873μm,1.6s								
SERS	**Sersale**	**2.91 355**		P		**Pn**		**09 25 40.3**	**+1.7**
SERS				AML		AML			
	comp=E,810μm,0.4s								
SERS				AML		AML			
	comp=N,834μm,0.4s								
SERS				AML		AML			
	comp=E,890μm,0.4s								
SERS				AML		AML			
	comp=N,834μm,1.6s								
SERS				AML		AML			
	comp=N,848μm,0.3s								
PLLN	**Pollina**	**2.94 310**		P		**Pn**		**09 25 40.5**	**+1.6**
PLLN				AML		AML			
	comp=E,1840μm,0.6s								
PLLN				AML		AML			
	comp=N,2515μm,0.5s								
CSLB	**Castelbuono**	**2.97 308**		⇓P		**Pn**		**09 25 40.6**	**+1.4**
CSLB				AML		AML			
	comp=E,262μm,1.1s								
CSLB				AML		AML			
	comp=N,270μm,0.6s								
GIB	**Gibilmanna**	**3.02 309**		⇓P		**Pn**		**09 25 41.6**	**+1.6**
GIB				AML		AML			
	comp=E,852μm,0.5s								
GIB				AML		AML			
	comp=N,1126μm,0.5s								
TIP	**Timpagrande**	**3.05 357**		⇑P		**Pn**		**09 25 42.0**	**+1.6**
TIP				⇓S		**Sn**		**09 26 15.3**	**-1.0**
TIP	**Timpagrande**	**3.05 357**				**Pn**		**09 25 42.7**	**+2.3**
TIP	**Timpagrande**	**3.05 357**		P		**Pn**		**09 25 41.7**	**+1.2**
TIP				AML		AML			
	comp=E,1160μm,0.5s								
TIP				AML		AML			
	comp=N,568μm,0.4s								
TIP				AML		AML			
	comp=E,1165μm,0.5s								
TIP				AML		AML			
	comp=E,1165μm,1.5s								
TIP				AML		AML			
	comp=E,1160μm,1.5s								
TIP				AML		AML			
	comp=N,562μm,0.4s								
TIP	**Timpagrande**	**3.05 357**	Pn			**Pn**		**09 25 42.7**	**+2.3**
TIP	**Timpagrande**	**3.05 357**	P			**Pn**		**09 25 43.1**	**+2.6**
IFIL	**Filicudi I Eol**	**3.11 322**		P		**Pn**		**09 25 42.3**	**+1.1**
IFIL				AML		AML			
	comp=E,3680μm,0.3s								
IFIL				AML		AML			
	comp=N,1660μm,0.4s								
LADO	**San Nicola del**	**3.15 360**		P		**Pn**		**09 25 43.5**	**+1.7**
LADO				AML		AML			
	comp=N,200μm,1.2s								
LADO				AML		AML			
	comp=E,261μm,0.4s								
LADO				AML		AML			
	comp=N,200μm,0.8s								
SCIAR	**Sciara**	**3.17 306**		P		**Pn**		**09 25 43.3**	**+1.3**
SCIAR				AML		AML			
	comp=N,484μm,1.1s								
SCIAR				AML		AML			
	comp=E,361μm,0.3s								
SCIAR				AML		AML			
	comp=N,528μm,0.4s								
SCIAR				AML		AML			
	comp=E,446μm,0.7s								
SCIAR				AML		AML			
	comp=N,484μm,0.9s								
SCIAR				AML		AML			
	comp=E,361μm,1.7s								
SCIAR				AML		AML			
	comp=N,528μm,1.6s								
CAR1	**CAROLEI**	**3.18 349**		P		**Pn**		**09 25 44.1**	**+1.9**
CAR1				AML		AML			
	comp=E,3100μm,0.4s								
CAR1				AML		AML			
	comp=E,3325μm,0.4s								
CAR1				AML		AML			
	comp=N,2435μm,0.6s								
CAR1				AML		AML			
	comp=N,2810μm,0.6s								
CAR1				AML		AML			
	comp=E,3325μm,1.6s								
CAR1				AML		AML			
	comp=E,3100μm,1.6s								
IACL	**Alicudi**	**3.19 320**		P		**Pn**		**09 25 42.8**	**+0.5**
IACL				AML		AML			
	comp=E,718μm,0.4s								
IACL				AML		AML			
	comp=N,672μm,0.2s								
SPS2	**Spezzano della**	**3.20 351**		P		**Pn**		**09 25 44.6**	**+2.1**
SPS2				AML		AML			
	comp=E,572μm,0.4s								
SPS2				AML		AML			
	comp=N,622μm,1.4s								
CELI	**Celico**	**3.29 353**		P		**Pn**		**09 25 45.9**	**+2.1**
CELI				AML		AML			
	comp=E,560μm,0.6s								
CELI				AML		AML			
	comp=E,552μm,0.6s								
CELI				AML		AML			
	comp=E,560μm,1.4s								
CELI				AML		AML			
	comp=N,960μm,0.4s								
CELI				AML		AML			
	comp=N,951μm,0.4s								

CELI AML AML
comp=E,552µm,1.4s
CLTB Caltabellotta 3.36 297 P **Pn 09 25 46.3 +1.6**
LINA Linosa Island 3.36 267 P **Pn 09 25 43.1 -1.5**
LINA AML AML
comp=N,1525µm,0.3s
LINA AML AML
comp=N,1525µm,1.7s
LINA AML AML
comp=E,1540µm,0.4s
SOLUN Solunto 3.39 306 P **Pn 09 25 46.0 +1.0**
SOLUN AML AML
comp=E,612µm,0.7s
SOLUN AML AML
comp=N,341µm,1.1s
SOLUN AML AML
comp=N,341µm,0.9s
SOLUN AML AML
comp=E,612µm,1.3s
SCIAC Sciacca 3.42 295 P **Pn 09 25 44.4 -1.0**
SCIAC AML AML
comp=E,858µm,0.3s
SCIAC AML AML
comp=N,828µm,0.5s
DMLN Damoulianata-K 3.42 51 P **Pn 09 25 46.0 +0.6**
DMLN S **Sn 09 26 24.7 -0.6**
ORTH Orthonies,Zaky 3.42 59 P **Pn 09 25 46.0 +0.5**
ORTH S **Sn 09 26 23.3 -2.1**
LTHK Lithakia 3.46 62 P **Pn 09 25 46.1 +0.2**
LTHK S **Sn 09 26 23.8 -2.3**
VLS Valsamata 3.52 53 P **Pn 09 25 47.3 +0.4**
VLS S **Sn 09 26 26.7 -1.2**
VLS Valsamata 3.52 53 P **Pn 09 25 46.8 -0.1**
VLS AML AML
comp=E,1082µm,1.0s
VLS AML AML
comp=N,741µm,0.2s
TDS Terranova Siba 3.56 352 P **Pn 09 25 50.0 +2.6**
TDS AML AML
comp=N,438µm,0.5s
TDS AML AML
comp=E,452µm,0.7s
TDS AML AML
comp=N,438µm,1.5s
RTZL Ratzakli, Kefa 3.59 56 P **Pn 09 25 48.3 +0.6**
RTZL S **Sn 09 26 28.2 -1.2**
VSK1 VASILIKIADES 3.65 50 P **Pn 09 25 50.5 +2.0**
FSK Fiskardo 3.67 50 P **Pn 09 25 49.6 +0.6**
FSK S **Sn 09 26 29.7 -1.8**
SALB San Lorenzo Be 3.78 352 P **Pn 09 25 52.8 +2.3**
SALB AML AML
comp=N,720µm,0.9s
SALB AML AML
comp=E,1175µm,0.3s
SALB AML AML
comp=N,720µm,1.1s
DRAG Dragano-Lefkad 3.83 47 P **Pn 09 25 52.1 +1.1**
DRAG S **Sn 09 26 34.8 -0.4**
EVGI Lefkada island 3.83 48 P **Pn 09 25 52.3 +1.2**
EVGI S **Sn 09 26 34.2 -1.2**
MMN Mormanno 3.84 348 P **Pn 09 25 52.7 +1.6**
MMN AML AML
comp=E,1595µm,0.2s
MMN AML AML
comp=N,2455µm,0.3s
PYL PYLOS 3.90 77 P **Pn 09 25 51.5 -0.6**
NYDR Nydri-Lefkada 3.92 48 P **Pn 09 25 54.0 +1.7**
NYDR S **Sn 09 26 36.9 -0.6**
LKD2 Lefkada island 3.94 47 P **Pn 09 25 53.7 +1.1**
LKD2 Lefkada island 3.94 47 P **Pn 09 25 53.9 +1.3**
TSLK Tsoukalades, L 3.96 46 P **Pn 09 25 54.3 +1.4**
TSLK S **Sn 09 26 38.0 -0.6**
AMT Artemida-Makis 4.03 68 P **Pn 09 25 54.2 +0.3**
RLS Riolos of Patr 4.06 60 P **Pn 09 25 55.5 +1.3**
AXS Araxos 4.06 58 P **Pn 09 25 55.9 +1.7**
ITM Ithomi 4.10 74 **Pn 09 25 55.0 +0.2**
ITM Ithomi 4.10 74 P **Pn 09 25 55.0 +0.2**
ITM S **Sn 09 26 39.3 -2.8**
ITM Ithomi 4.10 74 P **Pn 09 25 54.7 -0.1**
ITM Ithomi 4.10 74 P **Pn 09 25 56.4 +1.6**
LFKM Lefkimmi 4.11 35 P **Pn 09 25 56.4 +1.5**
SIRI Monte Sirino - 4.14 348 P **Pn 09 25 56.5 +1.0**
SIRI AML AML
comp=N,1210µm,0.2s
SIRI AML AML
comp=E,1290µm,0.8s
SIRI AML AML
comp=N,1245µm,0.2s
SIRI AML AML
comp=E,1225µm,0.8s
BULG Bulgheria - Ca 4.15 343 P **Pn 09 25 57.1 +1.7**
BULG AML AML
comp=N,1855µm,0.4s
BULG AML AML
comp=E,1255µm,0.3s
BULG AML AML
comp=E,1210µm,0.3s
BULG AML AML
comp=N,1930µm,0.4s
MGR Morigerati 4.16 345 P **Pn 09 25 57.2 +1.6**
MGR AML AML
comp=E,1360µm,0.3s
MGR AML AML
comp=N,1060µm,0.9s
MGR AML AML
comp=E,1140µm,0.3s
MGR AML AML
comp=N,1102µm,0.4s
MGR AML AML
comp=E,1140µm,1.7s
MGR AML AML
comp=N,1060µm,1.1s
MGR AML AML
comp=E,1360µm,1.7s
MGR AML AML
comp=N,1102µm,1.6s
DRO Drossia 4.19 63 P **Pn 09 25 57.5 +1.5**
PLEV Plevrona-Mesol 4.19 56 P **Pn 09 25 57.8 +1.8**
PLEV S **Sn 09 26 42.1 -2.2**
KEK Kerkira 4.21 31 **Pn 09 25 55.7 -0.6**
KEK Kerkira 4.21 31 P **Pn 09 25 55.4 -0.9**
KEK AML AML
comp=E,978µm,1.5s
KEK AML AML
comp=N,1013µm,0.7s
KEK AML AML
comp=N,1013µm,1.3s
KEK AML AML
comp=E,978µm,0.5s
KEK Kerkira 4.21 31 P **Pn 09 25 55.7 -0.6**
CRAC Craco 4.25 354 P **Pn 09 25 58.4 +1.5**
CRAC AML AML
comp=E,1885µm,0.4s
CRAC AML AML
comp=N,1275µm,1.1s
MARCO Tramutola 4.27 348 P **Pn 09 26 00.0 +2.8**
IGT Igoumenitsa 4.30 37 P **Pn 09 25 58.3 +0.7**
IGT Igoumenitsa 4.30 37 *e*Pn **Pn 09 25 58.3 +0.7**
IGT *e*Sn **Sn 09 26 47.6 +0.6**
AMPL Ampelaki 4.36 49 P **Pn 09 25 59.9 +1.6**
PVO Paravola 4.38 54 P **Pn 09 26 00.5 +1.9**
SLCN Sala Consilina 4.39 346 P **Pn 09 25 59.6 +0.8**
SLCN AML AML
comp=N,942µm,0.4s
SLCN AML AML
comp=E,1175µm,0.4s
SLCN AML AML
comp=E,1345µm,0.4s
SLCN AML AML
comp=N,880µm,0.5s
CMPR Campora 4.39 343 P **Pn 09 26 00.3 +1.4**
CMPR AML AML
comp=E,678µm,0.6s
CMPR AML AML
comp=N,589µm,0.4s
TAR1 Taranto 4.40 3 P **Pn 09 25 59.2 +0.4**
TAR1 AML AML
comp=E,772µm,1.2s
TAR1 AML AML
comp=E,772µm,0.8s
TAR1 AML AML
comp=N,840µm,0.4s
SRN Sarande 4.43 31 P **Pn 09 25 59.7 +0.3**
PTRP Pietrapertosa 4.45 351 P **Pn 09 26 03.1 +3.5**
PTRP AML AML
comp=N,1095µm,0.5s
PTRP AML AML
comp=E,1002µm,0.4s
PTRP AML AML
comp=N,1095µm,1.5s
VLX Vlachokerasia 4.50 72 **Pn 09 26 00.2 -0.1**
MATE Matera 4.52 357 ⇑P **Pn 09 26 01.3 +0.8**
MATE ⇑S **Sn 09 26 51.0 -1.3**
MATE Matera 4.52 357 P **Pn 09 26 01.6 +1.1**
MATE AML AML
comp=E,966µm,0.3s
MATE AML AML
comp=N,906µm,0.6s
EFP Efpalio 4.54 58 P **Pn 09 26 02.8 +2.0**
EFP S **Sn 09 26 50.8 -1.9**
KLV Kalavryta, Ach 4.54 64 P **Pn 09 26 02.0 +1.1**
KLV Kalavryta, Ach 4.54 64 P **Pn 09 26 02.2 +1.3**
KLV AML AML
comp=E,196µm,1.4s
KLV AML AML
comp=N,264µm,0.5s
KLV AML AML
comp=N,264µm,1.5s
KLV AML AML
comp=E,196µm,0.6s
ANX Ano Chora 4.63 56 P **Pn 09 26 03.8 +1.6**
SERG Sergoula 4.64 59 P **Pn 09 26 03.7 +1.6**
GUR Goura 4.64 66 P **Pn 09 26 03.4 +1.0**
NOCI Noci 4.66 1 P **Pn 09 26 02.6 +0.2**
NOCI AML AML
comp=N,1174µm,0.5s
NOCI AML AML
comp=E,974µm,0.8s
JAN Janina 4.66 40 P **Pn 09 26 03.8 +1.3**
JAN S **Sn 09 26 55.2 -0.6**
TETR Tetrakomo, Epi 4.67 45 P **Pn 09 26 04.5 +1.8**
KALE Kalithea 4.68 60 P **Pn 09 26 04.3 +1.5**
VLO Vlora 4.76 24 P **Pn 09 26 06.3 +2.4**
MRLC Muro Lucano 4.77 346 P **Pn 09 26 07.0 +3.0**
MRLC AML AML
comp=N,454µm,0.3s
MRLC AML AML
comp=E,376µm,1.5s
MRLC AML AML
comp=N,454µm,1.7s
AMUR Altamura 4.78 356 P **Pn 09 26 04.7 +0.5**
AMUR AML AML
comp=E,1895µm,0.3s
AMUR AML AML
comp=N,1450µm,0.3s
VLI Velia 4.83 81 P **Pn 09 26 05.7 +0.9**
PALZ Palazzo San Ge 4.88 351 P **Pn 09 26 06.8 +1.3**
PALZ AML AML
comp=E,498µm,0.8s
PALZ AML AML
comp=E,498µm,1.2s
PALZ AML AML
comp=N,454µm,0.4s
KTHA Kythira Island 4.91 87 P **Pn 09 26 06.2 +0.3**
SNAL S. Angelo Dei 4.99 344 P **Pn 09 26 09.8 +2.7**
SNAL AML AML
comp=E,432µm,0.6s
SNAL AML AML
comp=N,357µm,1.1s
SNAL AML AML
comp=N,364µm,1.1s
SNAL AML AML
comp=N,357µm,0.9s
SNAL AML AML
comp=E,422µm,0.6s
SNAL AML AML
comp=N,364µm,0.9s
CAPA Cerignola FG 5.11 350 P **Pn 09 26 09.5 +0.9**
ANKY Antikythira Is 5.12 91 P **Pn 09 26 08.7 -0.1**
AGG Agios Georgios 5.13 54 P **Pn 09 26 10.5 +1.0**
AGG Agios Georgios 5.13 54 P **Pn 09 26 12.1 +3.2**
LTK Loutraki 5.13 67 P **Pn 09 26 09.3 +0.3**
PENT Pentalofos 5.21 38 P **Pn 09 26 12.0 +1.8**
THL Klokotos Trika 5.25 48 P **Pn 09 26 12.9 +2.4**
PAOL Paolisi 5.25 339 **Pn 09 26 13.8 +3.1**
NEST Nestorio 5.34 35 P **Pn 09 26 14.2 +2.3**
KBN Korca 5.39 32 P **Pn 09 26 13.8 +1.3**
KBN Korca 5.39 32 P **Pn 09 26 13.9 +1.4**
KBN Korca 5.39 32 P **Pn 09 26 14.5 +2.0**
LKR Lokris 5.40 60 P **Pn 09 26 13.7 +1.0**
ATAL Atalanti 5.44 60 P **Pn 09 26 14.0 +0.8**
VILL Villia 5.44 66 P **Pn 09 26 14.0 +0.7**
TYRN Tyrnavos 5.47 48 P **Pn 09 26 14.6 +1.0**
PIGN Pignataro Magg 5.52 337 P **Pn 09 26 16.8 +2.4**
KZN Kozani 5.62 41 P **Pn 09 26 17.6 +1.9**
SGG Gregorio Mates 5.64 340 P **Pn 09 26 18.2 +2.3**
TIR Tirana 5.67 22 P **Pn 09 26 17.0 +0.6**
SGRT San Giovanni R 5.70 351 P **Pn 09 26 17.6 +0.7**
VLY Voula,Athens 5.71 70 P **Pn 09 26 16.4 -0.4**
IMMV Iera Moni Meta 5.72 95 P **Pn 09 26 17.1 +0.1**
IMMV Iera Moni Meta 5.72 95 P **Pn 09 26 17.3 +0.3**
ATHU Athens Univers 5.73 69 P **Pn 09 26 17.1 -0.1**
APRC Apricena 5.74 349 P **Pn 09 26 18.1 +0.8**
OT13 Castello Viest 5.78 354 P **Pn 09 26 18.7 +0.9**
OHR Ohrid 5.80 30 *i* Pn **Pn 09 26 19.7 +1.5**
OHR *i* Sn **Sn 09 27 24.1 +0.1**
LIT Litokhoron 5.87 46 **Pn 09 26 21.0 +1.8**
LIT Litokhoron 5.87 46 P **Pn 09 26 21.1 +2.0**
LIT Litokhoron 5.87 46 P **Pn 09 26 21.0 +1.8**
DION Dionisos Attik 5.88 69 P **Pn 09 26 18.7 -0.5**
MIDA Miranda 5.91 340 P **Pn 09 26 22.4 +2.7**
ULC Ulcinj 6.08 16 ⇓*i*Pn **Pn 09 26 21.7 -0.4**
ULC *i* Sn **Sn 09 27 26.8 -4.1**
PHP Peshkopia 6.17 25 P **Pn 09 26 24.4 +1.2**
KEST Kesra 6.22 269 Pn **Pn 09 26 23.7 -0.3**
comp=N,0.8nm,0.3s,baz=200,slow=18,SNR=5.7
KEST Sn **Sn 09 27 30.0 -4.4**
comp=N,3.3nm,0.3s,baz=313,slow=23,SNR=11
comp=N,3.3nm,0.5s
KEST Kesra 6.22 269 **Pn 09 26 23.7 -0.3**
KEST **Sn 09 27 30.6 -3.8**
KARY Karystos 6.25 70 P **Pn 09 26 23.9 -0.3**
DRME Dracevica, Mon 6.29 15 *e*Pn **Pn 09 26 24.0 -0.8**
DRME Dracevica, Mon 6.29 15 ⇓*i*Pn **Pn 09 26 24.6 -0.2**
DRME *i* Sn **Sn 09 27 31.7 -4.1**
VVLD Villa Vallelon 6.31 336 P **Pn 09 26 28.3 +3.1**
BUM Brajici-Budva 6.34 13 ⇑*i*Pn **Pn 09 26 25.0 -0.6**
BUM *i* Sn **Sn 09 27 32.6 -4.6**
HCY Herceg Novi 6.42 10 *e*Pn **Pn 09 26 25.2 -1.4**
HCY Herceg Novi 6.42 10 ⇓*i*Pn **Pn 09 26 25.7 -0.9**
HCY *i* Sn **Sn 09 27 34.9 -4.2**
IDI Anoyia 6.48 95 Pn **Pn 09 26 27.9 +0.4**
comp=N,36nm,0.3s,baz=238,slow=13,SNR=140
IDI Sn **Sn 09 27 34.8 -5.9**
comp=N,28nm,0.3s,baz=294,slow=11,SNR=20
comp=N,81nm,0.4s
IDI Anoyia 6.48 95 **Pn 09 26 29.0 +1.5**
IDI **Sn 09 27 34.8 -5.9**
IDI Anoyia 6.48 95 P **Pn 09 26 27.6 +0.1**
PAIG Paliouri 6.50 52 P **Pn 09 26 28.6 +0.9**
PDG Podgorica 6.53 15 ⇓P **Pn 09 26 27.8 -0.4**
PDG Podgorica 6.53 15 **Pn 09 26 28.1 -0.1**
PDG Podgorica 6.53 15 *e*Pn **Pn 09 26 27.9 -0.3**
PDG *e*Sn **Sn 09 27 39.2 -2.7**
PDG Podgorica 6.53 15 *e*Pn Pn 09 26 26.2 -2.0
PDG Podgorica 6.53 15 ⇓*i*Pn **Pn 09 26 27.9 -0.3**
PDG *i* Sn **Sn 09 27 37.6 -4.3**
HORT Hortiatis 6.55 45 P **Pn 09 26 29.2 +0.7**
CEME Cevo 6.58 12 ⇑*i*Pn **Pn 09 26 28.3 -0.6**
CEME *i* Sn **Sn 09 27 39.2 -4.0**
PLG Polygyros 6.61 48 P **Pn 09 26 30.1 +0.7**
TREB Trebinje 6.66 9 *e*Pn **Pn 09 26 29.4 -0.6**
TREB Trebinje 6.66 9 *e*Pn **Pn 09 26 28.7 -1.3**
THR5 Thira Island, 6.75 85 P **Pn 09 26 31.1 -0.1**
STON Ston 6.76 4 *e*Pn **Pn 09 26 30.6 -0.6**
STON *e*Sn **Sn 09 27 42.7 -4.7**
STON Ston 6.76 4 P **Pn 09 26 30.5 -0.8**
VAY Valandovo 6.77 38 *i* Pn **Pn 09 26 32.1 +0.7**
VAY *i* Sn **Sn 09 27 45.3 -2.5**
SKO Skopje 6.78 29 *i* Pn **Pn 09 26 32.3 +0.7**
SKO *i* Sn **Sn 09 27 45.6 -2.5**
NKME Niksic 6.80 12 ⇑*i*Pn **Pn 09 26 31.9 0.0**
NKME *i* Sn **Sn 09 27 45.1 -3.5**
AQU L'Aquila 6.81 337 Pn **Pn 09 26 34.4 +2.3**
comp=N,0.1nmcomp=N,24nm,0.7s
KNT Kendrikon 6.83 41 P **Pn 09 26 31.7 -0.6**
KNT Kendrikon 6.83 41 P **Pn 09 26 32.6 +0.4**
SOH Sokhos 6.84 45 P **Pn 09 26 33.6 +1.1**
SOH Sokhos 6.84 45 P **Pn 09 26 33.4 +0.9**
PVY Plav 6.85 19 ⇑*i*Pn **Pn 09 26 32.7 0.0**
PVY *i* Sn **Sn 09 27 46.9 -3.1**
BRY Bratogost 6.87 10 *e*Pn **Pn 09 26 31.7 -1.3**
BRY Bratogost 6.87 10 ⇓*i*Pn **Pn 09 26 32.1 -0.9**
BRY *i* Sn **Sn 09 27 46.8 -3.6**
CGL Cagliari Serpe 6.90 300 P **Pn 09 26 33.1 -0.3**
VSL Villasalto 6.91 301 P **Pn 09 26 33.3 0.0**
OUR Ouranopolis 6.92 51 P **Pn 09 26 35.0 +1.5**
KOME Kolasin 6.99 15 ⇓*i*Pn **Pn 09 26 35.1 +0.5**
KOME *i* Sn **Sn 09 27 49.3 -4.0**
IVA Berane 7.10 17 ⇑*i*Pn **Pn 09 26 36.1 +0.1**
IVA *i* Sn **Sn 09 27 52.1 -3.9**
KLINJ Klinje 7.14 9 *e*Pn **Pn 09 26 34.8 -1.8**
SRS Serrai 7.17 44 *e*Pn **Pn 09 26 37.4 +0.4**
SRS *e*Sn **Sn 09 27 55.8 -1.9**
SRS Serrai 7.17 44 P **Pn 09 26 37.9 +0.9**
UPM Unac-Piva 7.22 11 *e*Pn **Pn 09 26 38.4 +0.6**
UPM Unac-Piva 7.22 11 ⇓*i*Pn **Pn 09 26 38.1 +0.3**
UPM *i* Sn **Sn 09 27 55.0 -4.1**
NRCA Norcia 7.34 337 **Pn 09 26 42.7 +3.4**
PLE Pljevlja 7.43 14 ⇑*i*Pn **Pn 09 26 40.7 +0.1**
PLE *i* Sn **Sn 09 28 00.3 -3.8**
SJES Sjenica 7.49 17 *e*Pn **Pn 09 26 42.4 +1.0**
SJES *e*Sn **Sn 09 28 03.9 -1.6**
SJES Sjenica 7.49 17 *e*Pn **Pn 09 26 42.2 +0.8**
FDMO Fiordimonte 7.53 338 Pn 09 26 46.5 +4.6
BARS Barje 7.65 28 *e*Pn **Pn 09 26 43.1 -0.4**
BARS *e*Sn **Sn 09 28 06.0 -3.4**
BOSS Bosilegrad 7.65 32 *e*Pn **Pn 09 26 43.2 -0.3**
BOSS *e*Sn **Sn 09 28 07.1 -2.3**
IVAS Ivanjica 7.83 17 *e*Pn **Pn 09 26 45.5 -0.5**
IVAS *e*Sn **Sn 09 28 11.0 -2.8**
BBLS Lazi&#263i 7.95 13 *e*Sn **Sn 09 28 13.0 -3.8**
BBLS Lazi&#263i 7.95 13 *e*Pn **Pn 09 26 47.6 -0.1**
GOCS Kraljevo Serbi 8.00 21 *e*Pn **Pn 09 26 48.0 -0.4**
GOCS *e*Sn **Sn 09 28 15.6 -2.6**
VTS Vitosha 8.08 35 *e*Pn **Pn 09 26 50.5 +0.9**
KARP Karpathos 8.28 91 **Pn 09 26 51.3 -0.9**
KARP Karpathos 8.28 91 Pn **Pn 09 26 51.0 -1.2**
BOVS Bovan 8.32 24 ⇓P **Pn 09 26 52.6 -0.2**
BOVS Bovan 8.32 24 *e*Pn **Pn 09 26 52.6 -0.2**
BOVS *e*Sn **Sn 09 28 21.3 -4.7**
RDO Rodhopi 8.35 51 **Pn 09 26 53.6 +0.5**
RDO Rodhopi 8.35 51 P **Pn 09 26 54.2 +1.0**
TRUS Trudelj 8.50 17 *e*Sn **Sn 09 28 26.3 -3.9**
ALN Alexandroupoli 8.54 53 **Pn 09 26 56.1 +0.3**
ALN Alexandroupoli 8.54 53 P **Pn 09 26 56.8 +1.0**
BLY Banja Luka 8.61 1 ⇑P **Pn 09 26 58.0 +1.3**
BLY Banja Luka 8.61 1 **Pn 09 26 59.1 +2.4**
BLY Banja Luka 8.61 1 *e*Pn **Pn 09 26 55.7 -1.0**
BLY Banja Luka 8.61 1 P Pn 09 27 01.5 +4.8
TEKS Tekeris 8.63 12 *e*Pn **Pn 09 26 56.6 -0.4**
TEKS *e*Sn **Sn 09 28 29.3 -4.3**
TEKS Tekeris 8.63 12 *e*Pn **Pn 09 26 57.3 +0.3**
ZAGS Zajecar 8.66 26 *e*Pn **Pn 09 26 58.1 +0.7**
ZAGS *e*Sn **Sn 09 28 30.0 -4.3**
BORS2 Bor- Borsko je 8.83 24 *e*Pn **Pn 09 26 58.2 -1.6**
BORS2 *e*Sn Sn 09 28 31.8 -6.7
ARG Arkhangelos 9.00 86 **Pn 09 27 01.4 -0.7**
BALY Balya 9.13 64 P **Pn 09 27 06.0 +2.1**
FRGS Fruska Gora 9.27 12 *e*Pn **Pn 09 27 04.1 -1.7**
MDVR Moldovita 9.36 21 ⇑P **Pn 09 27 06.4 -0.6**
RIY Rijeka 9.38 349 *e*Sn **Sn 09 28 45.7 -6.3**
BOJS Bojanci 9.46 353 *e*Pn **Pn 09 27 10.3 +2.0**
VRSS Vrsac 9.57 19 *e*Pn **Pn 09 27 10.5 +0.7**
HERR Herculane 9.67 24 ⇑P **Pn 09 27 11.5 +0.3**
BZS Buzias 10.10 19 ⇑P **Pn 09 27 16.6 -0.5**
MORH Mrgy, Hungar 10.15 6 *e*Pn **Pn 09 27 18.8 +1.0**
MORH Mrgy, Hungar 10.15 6 Pn **Pn 09 27 19.3 +1.5**
comp=N,3.1nm,1.8s
AKAS Kas 10.19 86 **Pn 09 27 18.0 -0.5**
GZR Gura Zlata 10.24 24 ⇑P **Pn 09 27 19.8 +0.7**
ELL Elmali 10.42 83 **Pn 09 27 22.1 +0.4**
OBKA Obir 10.53 351 *i* Pn **Pn 09 27 25.0 +1.9**
comp=N,1.5nm,0.2s
LOT Lotru 10.63 27 P **Pn 09 27 25.9 +1.5**
SOKA Soboth 10.64 353 *e*Pn **Pn 09 27 25.8 +1.1**
comp=N,0.9nm,0.2s
ARR Arges 10.89 30 ⇑P **Pn 09 27 27.5 -0.5**
ARR Arges 10.89 30 P **Pn 09 27 29.1 +1.1**
VOIR 11.12 31 ⇓P **Pn 09 27 32.0 +0.9**
VOIR 11.12 31 Pn **Pn 09 27 32.2 +1.1**
comp=N,11nm,0.9s
VOIR 11.12 31 P **Pn 09 27 32.5 +1.4**
ARSA Arzberg 11.17 355 *e*Pn **Pn 09 27 32.8 +1.1**
comp=N,4.8nm,0.3s
ISR Istrita 11.54 36 Pn **Pn 09 27 38.5 +1.7**
comp=N,26nm,1.0s
MLR Muntele Rosu 11.54 33 Pn **Pn 09 27 38.3 +1.3**
comp=N,4.5nm,0.3s,baz=26,slow=15,SNR=10
MLR Sn **Sn 09 29 41.4 -3.7**
comp=N,0.2nm,0.3s,baz=303,slow=18,SNR=1.8
MLR Muntele Rosu 11.54 33 ⇓P **Pn 09 27 37.9 +0.9**
MLR Muntele Rosu 11.54 33 **Pn 09 27 37.9 +0.9**
MLR **Sn 09 29 41.4 -3.7**
MLR Muntele Rosu 11.54 33 Pn **Pn 09 27 38.6 +1.6**
comp=N,15nm,0.8s
MLR Muntele Rosu 11.54 33 P **Pn 09 27 38.5 +1.5**
CONA Conrad Observa 11.82 356 *i* Pn **Pn 09 27 41.7 +0.9**
comp=N,3.0nm,0.4s
MOA Molln 11.89 351 P **Pn 09 27 43.8 +2.2**
DAVOX Davos/Dischmat 11.90 336 LR LR 09 32 19.8
comp=N,86nm,21.3s,baz=252,slow=38
MDUB Mudurnu 11.97 64 **Pn 09 27 44.6 +1.9**
PLOR Plostina 12.14 34 ⇑P **Pn 09 27 46.0 +1.0**
VRI Vrincioaia 12.18 34 ⇓P **Pn 09 27 46.6 +1.0**
VRI Vrincioaia 12.18 34 P **Pn 09 27 47.2 +1.6**
comp=N,24nm,0.7s
VRI Vrincioaia 12.18 34 P **Pn 09 27 48.0 +2.4**
GERES GERESS Array B 12.94 350 Pn **Pn 09 27 57.4 +1.4**
comp=N,0.1nm,0.3s,baz=174,slow=10,SNR=2.8
GERES Sn **Sn 09 30 11.1 -8.1**
comp=N,0.1nm,0.3s,baz=167,slow=24,SNR=9.5
BURAR Bucovina Array 13.00 25 ⇑P **Pn 09 27 57.9 +1.0**
BUR08 Bucovina Ar. S 13.02 25 **Pn 09 27 58.7 +1.5**
CSS Mathiatis 13.36 90 Pn 09 27 58.5 -3.2
CSS Mathiatis 13.36 90 P Pn 09 27 57.7 -4.0
BR105 Keskin Array S 13.60 70 P **Pn 09 28 06.1 +1.0**
comp=N,4.6nm,0.8s
BR106 Keskin Array S 13.61 70 P **Pn 09 28 06.3 +1.1**
comp=N,36nmcomp=N,3.5nm,0.8s
BR104 Keskin Array S 13.62 70 P **Pn 09 28 06.5 +1.2**
comp=N,50nmcomp=N,5.9nm,1.0s
BR131 Keskin Array S 13.62 70 **Pn 09 28 06.1 +0.7**
BRTR Keskin Array B 13.62 70 Pn **Pn 09 28 06.8 +1.5**
comp=N,0.4nm,0.3s,baz=259,slow=12,SNR=17
BRTR LR LR 09 34 04.0
comp=N,55nm,20.1s,baz=262,slow=40
comp=N,3.5nm,0.7s
BRTR Keskin Array B 13.62 70 **Pn 09 28 05.7 +0.4**
KMPD K-Podol'skiy 14.25 26 P **Pn 09 28 15.7 +2.0**
CY604 RAF Akrotiri, 14.43 92 Pn 09 28 12.7 -3.4
BNN Bunyan 15.21 74 Pn **Pn 09 28 27.4 +0.5**
BNN IAmb IAmb 09 28 34.9
comp=Z,17nm,1.4s
KZIT Kziot 15.41 105 P Pn 09 28 24.3 -5.3
KZIT Kziot 15.41 105 P **Pn 09 28 25.2 -4.3**
MMA0B Mount Meron ar 15.48 96 P **Pn 09 28 26.5 -3.9**
MMAI Mount Meron Ar 15.48 96 Pn Pn 09 28 24.9 -5.5
comp=Z,8.4nm,0.3s,baz=317,slow=13,SNR=9.6
MMAI Sn **Sn** 09 31 08.4 -13
comp=Z,6.1nm,0.3s,baz=288,slow=28,SNR=5.9
GEM Giv'at Ha'Em 15.63 95 P **Pn 09 28 28.1 -4.2**
MMLI Mount Malkishu 15.67 98 P **Pn 09 28 29.0 -3.8**
NATI Neve Ativ 15.68 95 P **Pn 09 28 29.0 -3.9**
RMNI Mount Ramon 15.83 105 P **Pn 09 28 30.9 -4.1**
RGMN Argaman 15.84 99 P **Pn 09 28 30.9 -4.1**
LUBAR Lubar, Ukraine 15.85 26 P **Pn 09 28 36.7 +1.7**
MZS Mizpe Shalem 15.95 101 P **Pn 09 28 32.1 -4.3**
MSBI Mazada 16.01 102 P **Pn 09 28 32.9 -4.3**
GHAJ Ghor Haditha 16.18 102 **Pn 09 28 36.5 -2.9**
GHAJ Ghor Haditha 16.18 102 P **Pn 09 28 36.3 -3.1**
GHAJ Ghor Haditha 16.18 102 P **Pn 09 28 35.1 -4.2**
HRFI Mount Harif 16.29 107 P **Pn 09 28 37.4 -3.4**
HRFI Mount Harif 16.29 107 P **Pn 09 28 36.7 -4.1**
HRFI Mount Harif 16.29 107 P **Pn 09 28 36.9 -3.9**
EIL2 Elat 16.39 108 P **Pn 09 28 37.7 -4.3**
EIL Elat 16.39 108 Pn **Pn 09 28 37.5 -4.6**
comp=Z,2.0nm,0.3s,baz=337,slow=4.5,SNR=13
EIL Sn **Sn** 09 31 28.1 -15
comp=Z,2.3nm,0.3s,baz=260,slow=23,SNR=4.9

EIL	**Elat**	**16.39**	**108**	P	**Pn**	**09 28 38.1**	**-4.0**
RNPP8	**Varash**	**16.48**	**20**	P	**Pn**	**09 28 45.1**	**+2.1**
ESBB	**Sonseca Array**	**16.91**	**288**	Pn	**Pn**	**09 28 48.1**	**-0.6**
ESDC	**Sonseca Array**	**16.91**	**288**	Pn	**Pn**	**09 28 45.7**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=96,slow=12,SNR=5.4						
AK06	**Malin Array Si**	**16.92**	**28**	P	**Pn**	**09 28 49.1**	**+0.4**
AK14	**Malin Array Si**	**16.93**	**27**	P	**Pn**	**09 28 49.1**	**+0.4**
ASF	**Jabal al Asfar**	**16.94**	**98**	Pn	**Pn**	**09 28 45.8**	**-3.3**
	comp=Z,3.4nm,0.3s,baz=282,slow=6.2,SNR=13						
ASF				Sn	Sn	09 31 44.9	-12
	comp=Z,0.6nm,0.3s,baz=317,slow=22,SNR=2.1						
AK10	**Malin Array Si**	**16.95**	**28**	P	**Pn**	**09 28 49.1**	**0.0**
AK19	**Malin Array Si**	**16.96**	**27**	P	**Pn**	**09 28 51.1**	**+1.9**
AK09	**Malin Array Si**	**16.98**	**28**	P	**Pn**	**09 28 50.4**	**+1.0**
AK18	**Malin Array Si**	**16.99**	**27**	P	**Pn**	**09 28 50.4**	**+0.9**
KIEV	**Kiev**	**17.02**	**27**	P	**Pn**	**09 28 51.7**	**+1.9**
	comp=Z,33nm,1.6s						
AKASG	**Malin Array Be**	**17.03**	**27**	P	**Pn**	**09 28 49.3**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=209,slow=12,SNR=5.8						
	comp=Z,1.6nm,0.6s						
AKBB	**Malin Array Si**	**17.03**	**27**	P	**Pn**	**09 28 51.4**	**+1.4**
NACGM	**Naroch**	**19.95**	**17**	*eP*	**P**	**09 29 25.3**	**+1.5**
	comp=Z,17nm,0.8s,baz=203						
KIV	**Kislovodsk**	**21.11**	**60**	P	**P**	**09 29 37.8**	**+1.3**
KIV				IAmb	IAmb	09 29 41.2	
	comp=Z,28nm,0.6s						
KIV	**Kislovodsk**	**21.11**	**60**	P	**P**	**09 29 38.2**	**+1.7**
	comp=Z,28nm,1.0s						
KIV	**Kislovodsk**	**21.11**	**60**	P	**P**	**09 29 39.2**	**+2.7**
KBZ	**Khabaz**	**21.21**	**61**	P	**P**	**09 29 39.9**	**+2.5**
	comp=Z,22nm,1.0s,baz=279,slow=7.5,SNR=35						
	comp=Z,22nm,1.0s						
EKA	**Eskdalemuir Ar**	**23.65**	**331**	P	**P**	**09 30 04.2**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=144,slow=11,SNR=1.3						
	comp=Z,0.8nm,0.5s						
HFS	**Hagfors**	**24.12**	**356**	P	**P**	**09 30 08.2**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=161,slow=6.3,SNR=5.1						
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	**25.20**	**353**	P	**P**	**09 30 18.2**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=167,slow=9.3,SNR=3.6						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**25.98**	**10**	P	**P**	**09 30 24.6**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=188,slow=9.3,SNR=3.5						
	comp=Z,1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**26.70**	**215**	P	**P**	**09 30 29.1**	**-2.0**
	comp=Z,1.9nm,0.8s,baz=27,slow=9.8,SNR=8.7						
	comp=Z,1.9nm,0.8s						
AKTO	**Aktyubinsk**	**32.66**	**51**	P	**P**	**09 31 24.1**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=270,slow=8.6,SNR=1.8						
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**33.79**	**5**	P	**P**	**09 31 34.0**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=187,slow=9.4,SNR=4.1						
	comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**33.79**	**5**	P	**P**	**09 31 34.0**	**+0.7**
ARCES				IAmb	IAmb	09 32 17.2	
	comp=Z,21nm,1.3s						
BVAR	**Borovoye Array**	**40.59**	**48**	P	**P**	**09 32 31.8**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=260,slow=6.0,SNR=7.9						
	comp=Z,1.8nm,0.5s						
KKAR	**Karatay Array**	**41.22**	**63**	P	**P**	**09 32 37.4**	**+0.9**
KURBB	**Kurchatov Arra**	**45.71**	**51**	P	**P**	**09 33 13.4**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=281,slow=8.6,SNR=11						
	comp=Z,1.4nm,0.7s						
KURK	**Kurchatov**	**45.76**	**51**	P	**P**	**09 33 13.4**	**+0.5**
KURK				IAmb	IAmb	09 33 14.7	
	comp=Z,2.6nm,1.1s						
MKAR	**Makanchi Array**	**48.78**	**56**	P	**P**	**09 33 37.5**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=270,slow=7.5,SNR=11						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**48.78**	**56**	P	**P**	**09 33 37.3**	**+0.8**
ZALV	**Zalesovo Beam**	**49.15**	**46**	P	**P**	**09 33 40.4**	**+1.1**
	comp=Z,2.6nm,0.6s,baz=282,slow=8.9,SNR=9.9						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**49.15**	**46**	P	**P**	**09 33 39.7**	**+0.5**
SONM	**Songino Array**	**63.93**	**49**	P	**P**	**09 35 26.1**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=263,slow=8.6,SNR=5.4						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**63.93**	**49**	P	**P**	**09 35 26.1**	**+1.4**
SONM				IAmb	IAmb	09 35 26.7	
	comp=Z,1.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**70.52**	**53**	*eP*	**P**	**09 36 06.2**	**-0.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,43nm,4.2s						
PZH	**PanZhiHua**	**70.92**	**71**	P	**P**	**09 36 10.2**	**+1.0**

JMA 06 09:34:28.1±0.3,25°N±1°×123°5E±0°3,h24km,MV1.4/9,
NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.57**	**157**	*eP*	Pb	09 34 39.2	-0.2
YOJ	**Yonaguni jima**	**0.58**	**228**	*eP*	Pb	09 34 39.4	-0.3
YOJ				*eS*	Sb	09 34 47.0	-0.5
JYNG	**Yonagunijimaku**	**0.64**	**230**	*eP*	Pb	09 34 40.4	-0.2
JIJ	**Ishigaki jima**	**0.78**	**129**	*eP*	Pb	09 34 42.4	-0.6
JIJ				*eS*	Sb	09 34 51.9	-1.2
JKRS	**Kuro-shima**	**0.78**	**142**	P	Pb	09 34 42.8	-0.2
JKRS				*eS*	Sb	09 34 53.1	-0.1
HATJ	**Hateruma jima**	**0.85**	**160**	*eP*	Pb	09 34 43.9	-0.3
JIKM	**Ikemajima**	**1.60**	**87**	*i* S	Sn	09 35 15.4	+0.6

TAP 06 09:35:11.3,24°12N×121°71E,h36km,ML2.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**298**	P	Pn	09 35 17.7	+0.2
ETL				S	Sn	09 35 22.2	+0.5
TWD	**Chiawan**	**0.11**	**252**	P	Pn	09 35 17.5	-4.7
TWD				S	Sn	09 35 22.1	-10
NACB	**Ninganchiao**	**0.12**	**299**	*i* P	Pn	09 35 17.6	-4.2
NACB				S	Sn	09 35 22.8	-9.0
EAHA	**Aohua**	**0.21**	**7**	*eP*	Pn	09 35 18.8	-0.8
EAHA				S	Sn	09 35 23.7	-3.4
ETLH	**Xiulin Townshi**	**0.23**	**294**	*i* P	Pn	09 35 18.6	-1.0
ETLH				*i* S	Sn	09 35 24.2	-2.7
ETM	**Tongmen**	**0.25**	**233**	*i* P	Pn	09 35 18.6	-0.7
ETM				S	Sn	09 35 23.8	-2.5
TEYL	**Yanliau Villag**	**0.27**	**203**	*eP*	Pn	09 35 19.5	+0.2
TEYL				S	Sn	09 35 25.4	-0.7
LXIB	**Xiulin Townshi**	**0.29**	**251**	*i* P	Pn	09 35 19.0	-0.5
LXIB				S	Sn	09 35 24.6	-1.7
EWUT	**Wuta**	**0.33**	**10**	P	Pn	09 35 19.7	+0.1
EWUT				*i* S	Sn	09 35 26.0	-0.1
SHUL	**Shoufeng**	**0.35**	**203**	*i* P	Pn	09 35 20.6	+0.9
SHUL				*eS*	Sn	09 35 26.7	+0.4
ESL	**Shilin**	**0.39**	**220**	P	Pn	09 35 20.9	+0.6
ESL				*eS*	Sn	09 35 26.4	-0.4
WHF	**Hehuan Shan**	**0.41**	**274**	*i* P	Pn	09 35 21.0	+0.1
WHF				*i* S	Sn	09 35 28.1	+0.1
NNSB	**Datong**	**0.43**	**316**	*i* P	Pn	09 35 21.2	+0.3
NNSB				S	Sn	09 35 28.4	+0.4
FUSS	**Fushou**	**0.45**	**287**	P	Pn	09 35 21.6	+0.3
FUSS				*i* S	Sn	09 35 29.1	+0.7
NNS	**Nan Shan**	**0.45**	**316**	P	Pn	09 35 21.3	+0.1
NNS				S	Sn	09 35 28.7	+0.5
LATG	**Datong**	**0.45**	**338**	*i* P	Pn	09 35 21.3	+0.1
LATG				*i* S	Sn	09 35 28.7	+0.4
WARBT	**Fenglin Townsh**	**0.49**	**217**	P	Pn	09 35 21.0	-0.9
WARBT				*i* S	Sn	09 35 28.4	-0.8
TWC	**Suao**	**0.51**	**14**	P	Pn	09 35 22.1	+0.1
TWC				*eS*	Sn	09 35 30.2	+0.7
TWT	**Tachien**	**0.51**	**286**	P	Pn	09 35 22.7	+0.5
TWT				*eS*	Sn	09 35 30.7	+0.9
NDS	**Dongshan**	**0.52**	**0**	*eS*	Sn	09 35 31.0	+1.3
OWD	**Renai**	**0.52**	**252**	P	Pn	09 35 22.1	-0.2
OWD				S	Sn	09 35 28.7	-0.2
NDT	**Datong Townshi**	**0.52**	**340**	*eS*	Sn	09 35 30.8	+1.0
TDCB	**Techi**	**0.52**	**285**	*eS*	Sn	09 35 30.7	+0.6
ENTT	**Nioudou**	**0.54**	**346**	P	Pn	09 35 22.6	+0.1
ENTT				S	Sn	09 35 30.9	+0.6
EOS4	**EOS4**	**0.55**	**89**	*eS*	Sn	09 35 30.4	+0.2
WUSB	**Renai**	**0.56**	**257**	*i* P	Pn	09 35 23.0	+0.1
WUSB				*i* S	Sn	09 35 31.8	+0.8
EOS2	**EOS2**	**0.56**	**57**	*eS*	Sn	09 35 30.0	-0.8
YHNB	**Yeheng**	**0.63**	**331**	P	Pn	09 35 24.1	+0.2
YHNB				S	Sn	09 35 32.7	-0.1
NSK	**Sanguang**	**0.65**	**330**	P	Pn	09 35 24.2	+0.2
NSK				S	Sn	09 35 33.0	0.0
FUSB	**Fushanzhiwuyua**	**0.65**	**350**	*eS*	Sn	09 35 33.8	+0.5
HGSD	**Ruisui**	**0.67**	**203**	*eP*	Pn	09 35 25.2	+0.9
HGSD				*eS*	Sn	09 35 36.2	+2.5
NWLT	**Wulai**	**0.69**	**344**	S	Sn	09 35 34.4	+0.4
WCS	**Beigang Elemen**	**0.73**	**266**	*eP*	Pn	09 35 25.6	+0.5
TIPB	**Shuangxi**	**0.86**	**7**	*eP*	Pn	09 35 28.2	+1.3
TIPB				*eS*	Sn	09 35 40.6	+2.3

*KNET **06** 09:41:49.4±0.2,42°.81N×74°.52E,h20km±3km,ml1.7,Error ellipse: s-maj=2.1km s-min=1.7km az=102.0*
*NNC **06** 09:41:50.3±0.3,42°.86N×74°.51E,h0km,mb3.1,mpv3.1, Error ellipse: s-maj=3.3km s-min=1.5km az=105.0*
*KRNET **06** 09:41:50.0±0.1,42°.81N×74°.53E,h25km,mb2.7*
*SOME **06** 09:41:50.3,42°.80N×74°.57E,h20km*
ISC 06 09:41:50.4±0.8, 42°.80N±0°.02×74°.50E±0°.02,h15km±6km, n38,σ0°73/71,33C-9D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRU1	**Bishkek**	**0.10**	**84**	⇑*iP*	**Pg**	**09 41 53.7**	**0.0**
FRU1				⇑*eS*	**Sg**	**09 41 56.1**	**+0.2**
AAK	**Ala-Archa**	**0.16**	**181**	⇑P	**Pb**	**09 41 54.8**	**-0.5**
AAK	261nm,0.1s,SNR=284			⇑S	**Sb**	**09 41 57.9**	**-0.7**
	276nm,0.2s						
AAK	**Ala-Archa**	**0.16**	**181**	⇑P	**Pb**	**09 41 54.8**	**-0.5**
AAK	12nm,0.3s			⇑S	**Sb**	**09 41 57.9**	**-0.7**
	17nm,0.3s						
AAK	**Ala-Archa**	**0.16**	**181**	⇓*eP*	**Pb**	**09 41 54.8**	**-0.5**
AAK				⇓*iS*	**Sg**	**09 41 58.1**	**+0.7**
CHMS	**Chumysh**	**0.27**	**43**	⇑P	**Pg**	**09 41 55.8**	**-0.5**
CHMS	11nm,0.1s,SNR=81			⇑S	**Sg**	**09 41 59.7**	**-0.5**
	195nm,0.1s						
CHMS	**Chumysh**	**0.27**	**43**	⇑*iP*	**Pg**	**09 41 55.8**	**-0.5**
CHMS				⇑*eS*	**Sg**	**09 41 59.9**	**-0.3**
KBK	**Karagaybulak**	**0.36**	**113**	⇑P	**Pg**	**09 41 57.9**	**+0.1**
KBK	SNR=21			⇑S	**Sg**	**09 42 03.2**	**+0.2**
	144nm,0.1s						
KBK	**Karagaybulak**	**0.36**	**113**	⇑*iP*	**Pg**	**09 41 57.4**	**-0.5**
KBK				⇑*iS*	**Sg**	**09 42 02.7**	**-0.2**
USP	**Ospenovka**	**0.47**	**0**	⇑P	**Pg**	**09 41 59.2**	**-0.6**
USP	25nm,0.1s,SNR=7.0			⇑S	**Sg**	**09 42 05.6**	**-0.5**
	64nm,0.2s						
USP	**Ospenovka**	**0.47**	**0**	⇑*iP*	**Pg**	**09 41 59.2**	**-0.6**
USP				⇑*eS*	**Sg**	**09 42 05.8**	**-0.3**
EKS2	**Erkin-Say**	**0.55**	**256**	⇑P	**Pg**	**09 42 01.4**	**+0.1**
EKS2	26nm,0.1s,SNR=116			⇑S	**Sg**	**09 42 09.4**	**+0.7**
	15nm,0.1s						
EKS2	**Erkin-Say**	**0.55**	**256**	⇓*eP*	**Pg**	**09 42 01.4**	**+0.1**
EKS2				⇓*eS*	**Sg**	**09 42 09.4**	**+0.7**
UCH	**Uchtor**	**0.57**	**179**	⇓P	**Pg**	**09 42 01.8**	**0.0**
UCH	15nm,0.1s,SNR=14			⇓S	**Sb**	**09 42 10.1**	**-0.5**
	9.5nm,0.1s						
UCH	**Uchtor**	**0.57**	**179**	⇑*iP*	**Pg**	**09 42 01.6**	**-0.3**
UCH				⇑*eS*	**Sg**	**09 42 09.8**	**+0.3**
SGDS	**Sogindy**	**0.66**	**8**	P	**Pg**	**09 42 02.6**	**-0.8**
SGDS	34nm,0.1s			S	**Sg**	**09 42 11.3**	**-0.8**
	46nm,0.1s						
TKM2	**Tokmak 2**	**0.82**	**81**	⇓P	**Pb**	**09 42 05.1**	**-1.4**
	9.7nm,0.1s,SNR=5.3						
TKM2				⇑S	**Sb**	**09 42 16.4**	**-1.0**
	34nm,0.1s						
TKM2	**Tokmak 2**	**0.82**	**81**	⇓*iP*	**Pb**	**09 42 05.3**	**-1.2**
TKM2				⇓*eS*	**Sb**	**09 42 16.1**	**-1.3**
MRKS	**Merke**	**0.94**	**267**	P	**Pb**	**09 42 07.7**	**-0.8**
MRKS	7.8nm,0.2s			S	**Sb**	**09 42 20.2**	**-0.6**
	10nm,0.1s						
MRKS	**Merke**	**0.94**	**267**	*eP*	**Pb**	**09 42 07.7**	**-0.8**
MRKS	7.8nm,0.2s			*eS*	**Sb**	**09 42 20.2**	**-0.6**
	10nm,0.1s						
KST	**Kastek**	**1.10**	**77**	P	**Pb**	**09 42 10.5**	**-0.9**
KST	4.3nm,0.2s			S	**Sb**	**09 42 25.2**	**-0.4**
	14nm,0.1s						
KST	**Kastek**	**1.10**	**77**	*eP*	**Pb**	**09 42 10.5**	**-0.9**
KST	4.3nm,0.2s			*eS*	**Sb**	**09 42 25.2**	**-0.4**
	14nm,0.1s						
BOOM	**Boomskoye usch**	**1.11**	**106**	⇑*eP*	**Pb**	**09 42 10.5**	**-1.0**
BOOM				⇑*iS*	**Sb**	**09 42 25.2**	**-0.6**
NRN	**Naryn**	**1.77**	**140**	⇑*eP*	**Pb**	**09 42 21.7**	**-1.0**
NRN				⇑*iS*	**Sb**	**09 42 44.6**	**-0.2**
TNSS	**Tian-Shan**	**1.81**	**82**	P	**Pb**	**09 42 22.9**	**-0.7**
TNSS	1.1nm,0.1s			S	**Sb**	**09 42 46.1**	**-0.3**
	2.0nm,0.2s						
TNSS	**Tian-Shan**	**1.81**	**82**	*eP*	**Pb**	**09 42 22.9**	**-0.7**
TNSS	1.1nm,0.1s			*eS*	**Sb**	**09 42 46.1**	**-0.3**
	2.0nm,0.2s						
KTBS	**Karatobe**	**1.84**	**60**	P	**Pb**	**09 42 23.5**	**-0.3**
KTBS	3.0nm,0.1s			S	**Sb**	**09 42 47.2**	**+0.6**
	25nm,0.4s						
KTBS	**Karatobe**	**1.84**	**60**	*eP*	**Pb**	**09 42 23.5**	**-0.3**
KTBS	3.0nm,0.1s			*eS*	**Sb**	**09 42 47.2**	**+0.6**
	25nm,0.4s						
MDOK	**Medeo**	**1.91**	**78**	Pg	**Pb**	**09 42 24.7**	**-0.3**
MDOK	6.5nm,0.1s			Lg	Lg	09 42 49.4	
	16nm,0.3s						
MDOK	**Medeo**	**1.91**	**78**	*eP*	**Pb**	**09 42 24.7**	**-0.3**
MDOK	6.5nm,0.1s			*eS*	**Sb**	**09 42 49.4**	**+0.6**
	16nm,0.3s						
JNKS	**Jany-Kuch**	**1.94**	**154**	⇑*eP*	**Pn**	**09 42 23.9**	**+0.8**
JNKS				⇑*eS*	**Sb**	**09 42 48.9**	**-0.9**
KDJ	**Kajisay**	**2.09**	**108**	⇑*eP*	**Pn**	**09 42 26.4**	**+1.2**
KDJ				⇑*eS*	**Sb**	**09 42 52.6**	**-1.6**
BTLS	**Baital**	**2.26**	**352**	Pg	**Pb**	**09 42 30.9**	**-0.2**
BTLS	1.1nm,0.2s			Lg	Lg	09 42 60.0	
	6.1nm,0.2s						
BTLS	**Baital**	**2.26**	**352**	*eP*	**Pb**	**09 42 30.9**	**-0.2**
BTLS	1.1nm,0.2s			*eS*	**Sb**	**09 42 60.0**	**+1.1**
	6.1nm,0.2s						
ANVS	**Anan'yevo**	**2.33**	**89**	⇑*iP*	**Pn**	**09 42 29.5**	**+1.0**
ANVS				⇑*eS*	**Sn**	**09 42 58.0**	**+1.0**
ARXS	**Arharly**	**2.80**	**59**	Pg	**Pb**	**09 42 40.5**	**+0.2**
ARXS	1.4nm,0.2s			Lg	Lg	09 43 16.1	
	7.0nm,0.5s						
ARXS	**Arharly**	**2.80**	**59**	*eP*	**Pb**	**09 42 40.5**	**+0.2**
	1.4nm,0.2s						
ARXS	7.0nm,0.5s			*eS*	**Sb**	**09 43 16.1**	**+1.6**
KK31	**Karatay Array**	**2.94**	**277**	Pg	**Pg**	**09 42 45.3**	**-1.5**
KK31	1.0nm,0.3s,baz=97,slow=16,SNR=16			Lg	Lg	09 43 25.6	
	1.6nm,0.5s,baz=91,slow=30,SNR=5.1						
UZB	**Uzynbulak**	**3.34**	**83**	Pg	**Pb**	**09 42 50.0**	**+0.6**
UZB	2.3nm,0.3s			Lg	Lg	09 43 32.7	
	2.2nm,0.2s						

*IDC **06** 09:46:37.9±2.0,8°.63S×68°.49E,h0km,mb4.0/9, mbtmp4.0/9,MS3.4/4,Error ellipse: s-maj=60.7km s-min=24.0km az=60.0*
*NEIC **06** 09:46:40.9±2.3,8°.6S±0°.2×68°.6E±0°.1,h10km±1km, mb4.5/6,Error ellipse: s-maj=28.3km s-min=20.8km az=323.0*
ISC 06 09:46:39.6±1.1,8°.7S±0°.1×68°.5E±0°.2,h10km,n25, σ0°79/22,mb4.2/12,MS3.5/3,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.09**	**73**	Pn	**Pn**	**09 47 41.9**	**-0.5**
PALK	**Pallekele**	**19.95**	**38**	LR	LR	09 56 38.0	
	comp=Z,127nm,21.1s,baz=202,slow=30						
HYB	**Hyderabad**	**27.74**	**21**	*eP*	**P**	**09 52 28.9**	**+0.3**
HYB				*epP*	**pwP**	**09 52 36.8**	**+1.4**
HYB				*eS*	**S**	**09 57 12.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**40.34**	**48**	P	**P**	**09 54 18.5**	**+0.7**
	0.9nm,0.3s,baz=244,slow=10,SNR=7.3						
CMAR				LR	LR	10 08 08.9	
	comp=Z,36nm,21.8s,baz=230,slow=32						
	0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.34**	**48**	P	**P**	**09 54 17.7**	**-0.1**
H01W3	**Cape Leeuwin H**	**49.19**	**129**	T	T	10 48 06.4	
	baz=292,slow=75,SNR=6.8						
H01W2	**Cape Leeuwin H**	**49.19**	**129**	T	T	10 48 05.4	
	baz=292,slow=75,SNR=6.0						
H01W1	**Cape Leeuwin H**	**49.21**	**129**	T	T	10 48 09.1	
	baz=292,slow=75,SNR=6.6						
AAK	**Ala-Archa**	**51.33**	**6**	LR	LR	10 15 59.5	
	comp=Z,50nm,19.1s,baz=176,slow=34						
MKAR	**Makanchi Array**	**56.55**	**11**	P	**P**	**09 56 21.5**	**-0.9**
	0.6nm,0.6s,baz=204,slow=8.3,SNR=6.4						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**59.67**	**7**	P	**P**	**09 56 42.9**	**-1.2**
	0.3nm,0.5s,baz=202,slow=6.8,SNR=4.2						
	0.3nm,0.5s						
KURK	**Kurchatov**	**59.77**	**7**	P	**P**	**09 56 42.9**	**-1.9**
KURK				IAmb	IAmb	09 56 56.7	
	comp=Z,3.8nm,1.3s						
BVAR	**Borovoye Array**	**61.46**	**1**	P	**P**	**09 56 55.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=161,slow=9.2,SNR=1.6						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**63.87**	**11**	P	**P**	**09 57 11.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=224,slow=4.0,SNR=1.3						
ZALV				LR	LR	10 23 39.1	
	comp=Z,33nm,18.7s,baz=216,slow=35						
	comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	**64.08**	**112**	P	**P**	**09 57 14.3**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=275,slow=5.9,SNR=23						
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**64.44**	**108**	P	**P**	**09 57 16.4**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=279,slow=6.0,SNR=16						
	comp=Z,4.1nm,0.9s						
WRA	**Warramunga Arr**	**64.44**	**108**	P	**P**	**09 57 17.3**	**+0.5**
WB0	**Warramunga Arr**	**64.49**	**108**	P	**P**	**09 57 17.0**	**-0.1**
WB0				IAmb	IAmb	09 57 17.8	
	comp=Z,6.6nm,0.9s						
WR8	**Warramunga Arr**	**64.59**	**108**	P	**P**	**09 57 17.6**	**-0.1**
SONM	**Songino Array**	**65.46**	**27**	P	**P**	**09 57 22.6**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=220,slow=7.6,SNR=6.9						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**65.46**	**27**	P	**P**	**09 57 22.6**	**-0.4**
SONM				IAmb	IAmb	09 57 27.2	
	comp=Z,2.7nm,1.1s						
KSRS	**Korea Array**	**71.95**	**46**	P	**P**	**09 58 03.8**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=224,slow=5.1,SNR=2.7						
	comp=Z,1.2nm,0.9s						
QSPA	**South Pole Qui**	**81.39**	**180**	P	**P**	**09 58 57.1**	**+0.5**
QSPA				IAmb	IAmb	09 59 23.2	
	comp=Z,6.6nm,1.5s						
PDAR	**Pinedale Array**	**145.98**	**357**	PKPbc	**PKPbc**	**10 06 20.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=131,slow=1.7,SNR=5.0						
NVAR	**Mina Array Bea**	**149.72**	**11**	PKPbc	**PKPbc**	**10 06 30.9**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=315,slow=0.2,SNR=4.6						

WEL 06 09:48:09.5±1.2,37°S±16°×177°7E±1°7,h227km±16km, M2.7/6,ML2.7/8,MLv2.7/6,Error ellipse: s-maj=26.4km s-min=15.4km az=131.9,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**1.22**	**158**	P	Pn	09 48 43.4	0.0
HAZ	**Te Kaha**	**1.22**	**158**	S	S	09 49 10.4	+0.4
RUGZ	**Raukumara Rang**	**1.39**	**165**	P	Pn	09 48 44.4	-0.5
RUGZ	**Raukumara Rang**	**1.39**	**165**	S	S	09 49 09.9	-2.7
PKGZ	**Pakihiroa**	**1.42**	**151**	P	Pn	09 48 45.5	+0.5
PKGZ	**Pakihiroa**	**1.42**	**151**	S	S	09 49 13.5	+0.7
MARZ	**Manawahe**	**1.42**	**197**	P	Pn	09 48 44.5	-0.5
WMGZ	**Waiomatatini S**	**1.53**	**142**	P	Pn	09 48 45.6	-0.2
WMGZ	**Waiomatatini S**	**1.53**	**142**	S	S	09 49 14.7	+0.4
URZ	**Urewera**	**1.63**	**183**	P	Pn	09 48 46.9	+0.2
URZ	**Urewera**	**1.63**	**183**	S	S	09 49 16.5	+0.6
TWGZ	**Tauwhareparae**	**1.66**	**159**	P	Pn	09 48 47.7	+0.7
TWGZ	**Tauwhareparae**	**1.66**	**159**	S	S	09 49 18.1	+1.7
PUZ	**Puketiti**	**1.67**	**150**	P	Pn	09 48 47.2	+0.2
PUZ	**Puketiti**	**1.67**	**150**	S	S	09 49 16.3	-0.1
MWZ	**Matawai**	**1.72**	**172**	P	Pn	09 48 48.1	+0.6
MWZ	**Matawai**	**1.72**	**172**	S	S	09 49 18.1	+0.8
MUGZ	**Murupara**	**1.88**	**191**	P	Pn	09 48 49.2	+0.3
CNGZ	**Carnagh Statio**	**2.02**	**157**	P	Pn	09 48 51.5	+1.3
RIGZ	**Rimuhau**	**2.12**	**168**	P	Pn	09 48 51.8	+0.6
SNGZ	**Shannon Statio**	**2.15**	**177**	P	Pn	09 48 51.9	+0.4
RAHZ	**Arahi**	**2.29**	**182**	P	Pn	09 48 53.3

comp=Z,130nm,1.5s
DZM Mont Dzumac 19.62 249 P **P 10 17 13.1 -0.1**
comp=Z,9.9nm,0.6s,baz=38,slow=19,SNR=9.0
ONTNC Ouen Toro 19.67 248 P **P 10 17 13.9 +0.2**
ONTNC IAmb IAmb 10 17 21.3
comp=Z,53nm,0.8s
NOUC Port Laguerre 19.75 249 P **Pn 10 17 16.4 -0.8**
OUZ Omahuta 22.29 208 P **P 10 17 42.5 +1.1**
OUZ Omahuta 22.29 208 P **P 10 17 42.8 +1.4**
WCZ Waipu Caves 22.57 206 P **P 10 17 46.3 +2.1**
HAZ Te Kaha 22.99 197 P **P 10 17 51.3 +3.0**
PUZ Puketiti 23.16 196 P **P 10 17 50.3 +0.4**
MWZ Matawai 23.60 197 P **P 10 17 54.8 +0.7**
URZ Urewera 23.65 198 P **P 10 17 53.5 -0.9**
comp=Z,8.6nm,0.3s,baz=248,slow=3.6,SNR=15
comp=Z,8.6nm,0.3s
URZ Urewera 23.65 198 P **P 10 17 55.3 +0.9**
URZ Urewera 23.65 198 P **P 10 17 52.8 -1.6**
TOZ Tahuroa Road 23.69 201 P **P 10 17 55.2 +0.4**
TOZ IAmb IAmb 10 17 57.6
comp=Z,23nm,1.2s
TOZ Tahuroa Road 23.69 201 P **P 10 17 55.9 +1.1**
NMHZ Naumai 24.52 198 P **P 10 18 04.0 +1.7**
HIZ Hauiti 24.62 202 P **P 10 18 04.3 +1.1**
HIZ Hauiti 24.62 202 P **P 10 18 04.2 +0.9**
BKZ Black Stump Fm 24.67 198 P **P 10 18 04.5 +0.7**
BKZ Black Stump Fm 24.67 198 P **P 10 18 03.8 0.0**
ETVZ East Tongariro 24.89 200 P **P 10 18 06.0 +0.2**
WNVZ Wahianoa 25.10 200 P **P 10 18 06.4 -1.4**
BHHZ Black Hill Sta 25.10 199 P **P 10 18 07.2 -0.5**
VRZ Vera Road 25.20 201 P **P 10 18 11.7 +3.2**
PNHZ Pukenui 25.45 198 P **P 10 18 11.7 +0.9**
TSZ Takapari Road 25.66 198 P **P 10 18 12.4 -0.2**
ANWZ Angora Road 25.88 197 P **P 10 18 18.7 +4.2**
BFZ Birch Farm 26.15 197 P **P 10 18 17.8 +0.8**
BFZ Birch Farm 26.15 197 P **P 10 18 17.3 +0.3**
MRZ Mangatainoka R 26.32 198 P **P 10 18 17.3 -1.3**
OGWZ Otaki Gorge 26.59 199 P **P 10 18 23.2 +2.2**
TATA Tatamba Isabel 26.81 283 P **P 10 18 23.9 +0.6**
TCW Tory Channel 27.23 200 P **P 10 18 27.1 +0.3**
TCW Tory Channel 27.23 200 P **P 10 18 29.6 +2.9**
QRZ Quartz Range 27.50 203 P **P 10 18 29.7 +0.5**
QRZ Quartz Range 27.50 203 P **P 10 18 29.4 +0.2**
TUWZ Tuamarina 27.54 200 P **P 10 18 29.9 +0.4**
NNZ Nelson 27.54 201 P **P 10 18 30.6 +1.1**
NNZ Nelson 27.54 201 P **P 10 18 30.7 +1.2**
MRNZ Matariki Terra 27.92 202 P **P 10 18 33.4 +0.5**
THZ Tophouse 28.19 201 P **P 10 18 34.9 -0.4**
KHZ Kahutara 28.56 200 P **P 10 18 39.0 +0.5**
KHZ Kahutara 28.56 200 P **P 10 18 37.7 -0.8**
RPZ Rata Peaks 30.56 202 P **P 10 18 56.0 -0.2**
comp=Z,2.5nm,0.8s,baz=38,slow=19,SNR=2.3
comp=Z,2.5nm,0.8s
JCZ Jackson Bay 31.71 204 P **P 10 19 07.0 +0.5**
EIDS Eidsvold 34.07 248 P **P 10 19 26.6 -0.5**
EIDS IAmb IAmb 10 19 49.3
comp=Z,10nm,1.2s
ARMA Armidale 34.72 239 P **P 10 19 32.3 -0.6**
ARMA IAmb IAmb 10 19 38.7
comp=Z,30nm,1.5s
CTAO Charters Tower 38.12 258 P **P 10 20 00.1 -1.6**
CTAO IAmb IAmb 10 20 22.5
comp=Z,28nm,1.4s
CAN Canberra 38.39 233 P **P 10 20 03.5 -0.4**
CAN IAmb IAmb 10 20 24.5
comp=Z,30nm,1.4s
PMG Port Moresby 38.55 275 P **P 10 20 04.3 -1.1**
TOO Toolangi 41.82 231 P **P 10 20 31.8 -0.3**
TOO IAmb IAmb 10 20 32.4
comp=Z,3.8nm,0.8s
STKA Stephens Creek 43.42 240 P **P 10 20 44.4 -0.7**
comp=Z,19nm,0.6s,baz=90,slow=9.6,SNR=52
comp=Z,19nm,0.6s
INKA Innaminka 43.55 246 **P 10 20 46.5 +0.3**
INKA IAmb IAmb 10 20 48.6
comp=Z,3.4nm,0.5s
BBOO Buckleboo 48.20 240 **P 10 21 22.0 -0.7**
WR8 Warramunga Arr 49.17 257 P **P 10 21 29.2 -1.0**
WR8 IAmb IAmb 10 21 30.8
comp=Z,23nm,1.4s
WB0 Warramunga Arr 49.28 257 P **P 10 21 30.6 -0.6**
WB0 IAmb IAmb 10 21 31.1
comp=Z,12nm,0.8s
WRAB Tennant Creek 49.31 257 **P 10 21 31.0 -0.4**
WRAB IAmb IAmb 10 21 31.8
comp=Z,38nm,1.4s
WRAB Tennant Creek 49.31 257 P **P 10 21 30.6 -0.8**
WRAB PcP **PcP 10 22 46.5 -6.0**
WRA Warramunga Arr 49.32 257 P **P 10 21 30.4 -1.1**
comp=Z,4.8nm,0.3s,baz=90,slow=7.9,SNR=136
comp=Z,4.8nm,0.3s
WRA Warramunga Arr 49.32 257 **P 10 21 30.6 -0.9**
AS31 Alice Springs 49.55 252 **P 10 21 32.4 -0.8**
AS31 IAmb IAmb 10 21 34.0
comp=Z,11nm,0.7s
ASAR Alice Springs 49.55 252 P **P 10 21 32.2 -1.0**
comp=Z,45nm,0.6s,baz=89,slow=7.4,SNR=474
ASAR Alice Springs 49.55 252 **P 10 21 32.4 -0.8**
MTN Manton Dam 53.27 266 P **P 10 21 60.0 -1.0**
MTN IAmb IAmb 10 22 01.3
comp=Z,19nm,1.1s
FORT Forrest 54.81 243 **P 10 22 10.8 -1.2**
FORT IAmb IAmb 10 22 11.5
comp=Z,14nm,0.7s
KNRA Kununurra 55.08 262 P **P 10 22 13.0 -1.1**
SIJI Sorong 56.13 280 P **P 10 22 21.4 -0.2**
comp=Z,46nm,0.8s,baz=88,slow=5.8,SNR=20
comp=Z,46nm,0.8s
FITZ Fitzroy Crossi 57.70 258 P **P 10 22 31.9 -0.7**
MBWA Marble Bar 62.82 254 P **P 10 23 07.3 -0.2**
MBWA Marble Bar 62.82 254 P **P 10 23 07.0 -0.5**
MBWA PcP **PcP 10 23 44.0 -0.9**
VNDA Vanda 62.83 186 P **P 10 23 07.3 +0.7**
comp=Z,1.8nm,0.9s,baz=23,slow=5.5,SNR=5.6
comp=Z,1.8nm,0.9s
VNDA Vanda 62.83 186 P **P 10 23 07.3 +0.7**
NWAO Narrogin (SRO) 64.01 241 P **P 10 23 14.8 -0.3**
MORW Morawa 65.29 245 P **P 10 23 23.1 -0.4**
MORW IAmb IAmb 10 23 26.5
comp=Z,31nm,1.5s
GIRL Giralia 67.67 252 P **P 10 23 39.0 +0.2**
MAJO Matsushiro 69.06 320 P **P 10 23 44.8 -2.3**
CASY Casey 69.78 205 P **P 10 23 51.1 0.0**
JOW Kunigami 70.44 307 LR LR 10 48 15.7
comp=Z,33nm,21.8s,baz=114,slow=30
PETK Petropavlovsk- 72.98 343 P **P 10 24 10.8 +0.4**
comp=Z,3.2nm,0.7s,baz=89,slow=7.7,SNR=7.8
comp=Z,3.2nm,0.7s
QSPA South Pole Qui 74.14 180 P **P 10 24 17.9 +0.6**
comp=Z,3.3nm,0.9s,baz=263,slow=0.8,SNR=12
comp=Z,3.3nm,0.9s
QSPA South Pole Qui 74.14 180 P **P 10 24 18.4 +1.1**
NVAR Mina Array Bea 74.98 42 P **P 10 24 23.6 +0.9**
comp=Z,2.1nm,0.8s,baz=229,slow=9.4,SNR=12
comp=Z,2.1nm,0.8s
KSRS Korea Array 76.22 316 P **P 10 24 30.1 +0.6**
comp=Z,1.4nm,1.0s,baz=132,slow=5.4,SNR=2.8
comp=Z,1.4nm,1.0s
PINE Pine Mountain 76.56 36 **P 10 24 32.0 +0.5**
PINE IAmb IAmb 10 24 33.7
comp=Z,5.6nm,1.0s
TUC Tucson 77.03 51 **P 10 24 35.1 +0.8**
TUC Tucson 77.03 51 P **P 10 24 35.5 +1.2**
NJ2 Nanjing 80.13 307 *eP* **P 10 24 51.8 +0.6**
NJ2 pmax pmax
comp=Z,22nm,0.6s
CN2 Changchun 81.20 320 P **P 10 24 58.9 +2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
TXAR Lajitas Array 81.24 56 P **P 10 24 58.0 +0.7**
comp=Z,1.1nm,0.7s,baz=221,slow=7.5,SNR=14
comp=Z,1.1nm,0.7s
ANMO Albuquerque 81.45 50 P **P 10 24 59.5 +1.1**
ANMO Albuquerque 81.45 50 P **P 10 24 59.3 +0.9**
PDAR Pinedale Array 82.92 42 P **P 10 25 06.1 +0.1**
comp=Z,3.0nm,0.7s,baz=210,slow=3.1,SNR=24
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 82.92 42 P **P 10 25 05.3 -0.7**
COLA College 82.94 11 P **P 10 25 05.5 +0.3**
ILAR Eielson Array 83.02 11 P **P 10 25 05.2 -0.5**
comp=Z,0.6nm,0.5s,baz=235,slow=6.7,SNR=11
comp=Z,0.6nm,0.5s
YNE Yellowstone No 83.74 40 P **P 10 25 10.5 +0.4**
I30M Mount Dempster 85.71 15 P **P 10 25 20.1 +0.7**

H29M Whitestone 86.06 14 P **P 10 25 21.4 +0.5**
H29M IAmb IAmb 10 25 32.0
comp=Z,5.8nm,1.3s
D23K Nanushuk River 86.25 8 P **P 10 25 22.5 +0.7**
D23K IAmb IAmb 10 25 25.6
comp=Z,4.8nm,1.4s
MAW Mawson 87.18 199 P **P 10 25 26.8 +0.3**
comp=Z,3.6nm,0.6s,baz=116,slow=5.7,SNR=6.8
comp=Z,3.6nm,0.6s
MAW Mawson 87.18 199 P **P 10 25 27.2 +0.7**
XAN Xi'an 88.59 306 *eP* P 10 25 26.5 -7.4
HHC Hu-ho-hao-te 89.06 313 *eP* **P 10 25 35.9 -0.1**
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,50nm,4.1s
ELIB Princess Elisa 91.59 185 *dP* **P 10 25 47.2 -0.1**
comp=Z,1.8nm,0.9s
PZH PanZhiHua 92.12 297 P **P 10 25 51.3 +0.7**
CMAR Chiang Mai Arr 92.37 288 P **P 10 25 53.0 +1.3**
comp=Z,0.7nm,0.4s,baz=92,slow=2.9,SNR=7.5
comp=Z,0.7nm,0.4s
CMAR Chiang Mai Arr 92.37 288 P **P 10 25 52.5 +0.7**
ARCES ARCESS Array B 125.05 352 PKP **PKPdf 10 31 39.6 -0.1**
comp=Z,1.6nm,0.6s,baz=22,slow=1.3,SNR=11
FINES FINESS Array B 132.34 347 PKP **PKPdf 10 31 53.2 -0.5**
comp=Z,2.4nm,0.9s,baz=57,slow=5.1,SNR=4.9
MORC Moravsky Berou 144.97 347 *ePKP* PKPbc 10 32 16.0 -0.8
VRAC Vranov 145.62 348 *ePKP* **PKPab 10 32 19.5 +0.3**
JAVC Velka Javorina 145.81 346 *ePKP* **PKPab 10 32 20.9 +0.9**
KRUC Moravsky 145.89 348 *ePKP* **PKPbc 10 32 19.6 0.0**
BRTR Keskin Array B 146.28 320 PKPbc **PKPbc 10 32 21.3 0.0**
comp=Z,5.8nm,1.0s,baz=106,slow=1.8,SNR=17
BRTR Keskin Array B 146.28 320 **PKPdf 10 32 20.1 +0.1**
GERES GERESS Array B 146.57 351 PKPbc **PKPbc 10 32 21.7 -0.1**
comp=Z,0.4nm,0.4s,baz=349,slow=2.0,SNR=2.9

*MAN **06** 10:22:17.0,8.˚89N×126.˚40E,h41km,MS4.4*
*NEIC **06** 10:22:17.5±2.2,8.˚85N±0.˚08×126.˚2E±0.˚1,h64km±6km, mb4.6/52,Error ellipse: s-maj=16.5km s-min=11.0km az=83.0*
*IDC **06** 10:22:19.6±1.4,8.˚89N×126.˚26E,h90km±12km,mb4.1/23, mbtmp4.4/24,MS3.2/16,Error ellipse: s-maj=18.9km s-min=9.4km az=83.0*
ISC 06 10:22:17.8±0.8,8.˚87N±0.˚03×126.˚43E±0.˚05,h73km±7km, n115,σ1s31/115,mb4.5/48,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.69**	**185**	*eP*		**Pn**		**10 22 32.0**	**-0.8**
BIPH				*eS*		**Sn**		**10 22 41.8**	**-2.0**
BUTP	**Butuan**	**0.80**	**277**	*i P*		**Pn**		**10 22 33.7**	**-0.3**
BUTP				*i S*		**Sn**		**10 22 46.5**	**+0.4**
CDOP	**Cateel, Davao**	**1.08**	**179**	*i P*		**Pn**		**10 22 37.1**	**-0.4**
CDOP				*eS*		**Sn**		**10 22 51.8**	**-0.2**
SCPH	**Surigao**	**1.29**	**314**	*eP*		**Pn**		**10 22 40.0**	**-0.1**
SCPH				*eS*		**Sn**		**10 22 57.6**	**+0.6**
CGP	**Cagayan de Oro**	**1.76**	**257**	*i P*		**Pn**		**10 22 46.1**	**-0.2**
CGP				*i S*		**Sn**		**10 23 07.3**	**-0.7**
DAV	**Davao City (W)**	**1.98**	**205**	P		**Pn**		**10 22 50.8**	**+1.6**
	295nm,0.3s,baz=32,slow=7.2,SNR=3.8								
DAV				S		**Sn**		**10 23 15.3**	**+2.2**
	2µm,0.7s,baz=298,slow=19,SNR=22								
DAV				LR		LR		10 23 34.6	
	comp=Z,1µm,19.3s,baz=8.5,slow=39								
DAV	**Davao City (W)**	**1.98**	**205**			**Pn**		**10 22 46.1**	**-3.1**
DAV						**Sn**		**10 23 15.3**	**+2.2**
DMPH	**Davao City--Mi**	**2.00**	**207**	*eP*		**Pn**		**10 22 50.5**	**+1.0**
DMPH				*i S*		**Sn**		**10 23 15.1**	**+1.5**
KCP	**Kidapawan**	**2.27**	**216**	*i P*		**Pn**		**10 22 53.4**	**+0.1**
KCP				*i S*		**Sn**		**10 23 20.7**	**+0.3**
TBP	**Tagbilaran**	**2.66**	**288**	*eP*		**Pn**		**10 22 59.0**	**+0.6**
TBP				*eS*		**Sn**		**10 23 30.0**	**+0.4**
PLP	**Palo**	**2.69**	**328**	*eP*		**Pn**		**10 22 59.0**	**+0.1**
PLP				*eS*		**Sn**		**10 23 31.7**	**+1.3**
CTBH	**Cotabato--PC H**	**2.71**	**233**	*eP*		**Pn**		**10 22 59.7**	**+0.5**
CTBH				*i S*		**Sn**		**10 23 32.5**	**+1.6**
LSIP	**Lazi, Siquijor**	**2.77**	**276**	*i P*		**Pn**		**10 23 00.5**	**+0.5**
LSIP				*i S*		**Sn**		**10 23 31.2**	**-1.2**
LLP	**Lapu-Lapu**	**2.82**	**301**	*eP*		**Pn**		**10 23 01.6**	**+1.0**
LLP				*i S*		**Sn**		**10 23 34.8**	**+1.2**
DCPH	**Dipolog City**	**3.05**	**265**	*eP*		**Pn**		**10 23 03.8**	**+0.1**
DCPH				*i S*		**Sn**		**10 23 38.7**	**-0.5**
GSPH	**General Santos**	**3.13**	**208**	*i P*		**Pn**		**10 23 07.0**	**+2.1**
GSPH				*i S*		**Sn**		**10 23 40.3**	**-1.0**
SNPH	**Sibulan**	**3.19**	**279**	*i P*		**Pn**		**10 23 06.8**	**+1.2**
SNPH				*i S*		**Sn**		**10 23 42.5**	**0.0**
MMPH	**Masbate**	**4.43**	**322**	*eP*		**Pn**		**10 23 19.1**	**-3.4**
MMPH				*eS*		**Sn**		**10 24 14.5**	**+1.7**
RCP	**Roxas**	**4.50**	**307**	*eP*		**Pn**		**10 23 26.2**	**+2.7**
RCP				*i S*		**Sn**		**10 24 14.7**	**+0.1**
LQP	**Lukban**	**7.08**	**318**	*eP*		Pn		10 24 05.1	+6.2
TNTI	**Ternate**	**8.10**	**173**			**Pn**		**10 24 11.2**	**-1.5**
LUWI	**Luwuk**	**10.50**	**200**		Pn	**Pn**		**10 24 44.2**	**-1.3**
SIJI	**Sorong**	**10.81**	**153**		P	**Pn**		**10 24 52.2**	**+2.5**
	13nm,0.8s,baz=107,slow=7.4,SNR=13								
SIJI					S	**Sn**		**10 26 44.7**	**-4.4**
	5.4nm,0.3s,baz=220,slow=23,SNR=9.3								
SIJI					LR	LR		10 29 48.6	
	comp=Z,42nm,20.4s,baz=5.5,slow=41								
FAKI	**Fak Fak**	**13.07**	**153**		Pn	**Pn**		**10 25 22.5**	**+1.9**
KAPI	**Kappang**	**15.31**	**206**		LR	LR		10 31 50.6	
	comp=Z,134nm,19.1s,baz=344,slow=37								
JOW	**Kunigami**	**17.95**	**5**		LR	LR		10 33 31.7	
	comp=Z,62nm,19.6s,baz=120,slow=37								
JAY	**Jayapura**	**18.18**	**128**		LR	LR		10 31 52.9	
	comp=Z,105nm,21.7s,baz=212,slow=31								
GUMO	**Guam**	**18.68**	**74**		LR	LR		10 34 43.7	
	comp=Z,28nm,19.1s,baz=270,slow=40								
MTN	**Manton Dam**	**22.07**	**168**			**P**		**10 27 07.2**	**+0.3**
MTN					IAmb	IAmb		10 27 10.0	
	comp=Z,19nm,0.6s								
JCJ	**Chichijima**	**23.47**	**37**		LR	LR		10 37 20.8	
	comp=Z,61nm,18.9s,baz=186,slow=38								
NJ2	**Nanjing**	**24.11**	**344**	*eP*		**P**		**10 27 28.4**	**+1.6**
NJ2					pmax	pmax			
	comp=Z,22nm,0.5s								
JNU	**Nakatsue**	**24.48**	**9**		LR	LR		10 35 59.0	
	comp=Z,53nm,21.8s,baz=195,slow=34								
KNRA	**Kununurra**	**24.50**	**175**			**P**		**10 27 31.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**26.81**	**182**			**P**		**10 27 51.8**	**+0.5**
COEN	**Coen**	**28.12**	**144**	P		**P**		**10 28 02.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**28.32**	**293**	P		**P**		**10 28 04.1**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=98,slow=7.1,SNR=12								
CMAR					PcP	**PcP**		**10 31 17.6**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=94,slow=1.7,SNR=5.3								
CMAR					LR	LR		10 39 05.2	
	comp=Z,32nm,18.3s,baz=100,slow=36								
	comp=Z,1.7nm,0.6s								
KSRS	**Korea Array**	**28.49**	**2**	P		**P**		**10 28 07.3**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=183,slow=9.8,SNR=6.7								
KSRS					LR	LR		10 40 37.0	
	comp=Z,32nm,19.2s,baz=175,slow=38								
	comp=Z,1.1nm,0.6s								
PZH	**PanZhiHua**	**29.24**	**310**	P		**P**		**10 28 14.3**	**+1.2**
WB0	**Warramunga Arr**	**29.52**	**165**	P		**P**		**10 28 15.3**	**-0.2**
WB0					IAmb	IAmb		10 28 16.4	
	comp=Z,8.7nm,0.8s								
MJAR	**Matsushiro Arr**	**29.56**	**19**	P		**P**		**10 28 15.0**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=189,slow=8.7,SNR=4.9								
MJAR					LR	LR		10 41 30.1	
	comp=Z,43nm,18.3s,baz=172,slow=39								
	comp=Z,2.0nm,0.8s								
MJAR	**Matsushiro Arr**	**29.56**	**19**	P		**P**		**10 28 15.0**	**-0.7**
WRA	**Warramunga Arr**	**29.67**	**165**	P		**P**		**10 28 16.3**	**-0.6**
	comp=Z,4.6nm,0.6s,baz=345,slow=9.4,SNR=37								
WRA					PcP	**PcP**		**10 31 20.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=342,slow=2.8,SNR=6.0								
	comp=Z,4.6nm,0.6s								
WRA	**Warramunga Arr**	**29.67**	**165**	P		**P**		**10 28 16.5**	**-0.3**
WRA						**PcP**		**10 31 20.1**	**+0.4**
WR8	**Warramunga Arr**	**29.73**	**165**	P		**P**		**10 28 16.9**	**-0.4**
WR8					IAmb	IAmb		10 28 46.2	
	comp=Z,16nm,1.4s								
AS31	**Alice Springs**	**33.15**	**167**			**P**		**10 28 47.2**	**-0.2**
ASAR	**Alice Springs**	**33.15**	**167**	P		**P**		**10 28 47.0**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=351,slow=6.9,SNR=63								
ASAR					PcP	**PcP**		**10 31 29.6**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=344,slow=2.6,SNR=14								
ASAR					ScP	**ScP**		**10 35 06.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=329,slow=1.9,SNR=5.3								
	comp=Z,3.1nm,0.5s								
ASAR	**Alice Springs**	**33.15**	**167**	P		**P**		**10 28 47.4**	**-0.1**

HHC Hu-ho-hao-te 34.48 340 *eP* P 10 29 03.8 +5.0
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,52nm,4.7s
CTAO Charters Tower 34.77 146 P **P 10 29 02.3 +0.8**
USA0B Ussuriysk Arra 35.53 7 P **P 10 29 09.0 +1.3**
USA0B IAmb IAmb 10 29 09.9
comp=Z,4.3nm,0.7s
USRK Ussuriysk Ar. 35.53 7 P **P 10 29 09.0 +1.3**
comp=Z,4.8nm,0.7s,baz=190,slow=7.7,SNR=22
USRK LR LR 10 43 28.9
comp=Z,32nm,20.7s,baz=185,slow=36
comp=Z,4.8nm,0.7s
SHL Shillong 36.78 301 **P 10 29 18.1 -0.8**
INKA Innaminka 38.95 160 **P 10 29 36.5 -0.2**
INKA IAmb IAmb 10 29 39.0
comp=Z,3.4nm,0.7s
FORT Forrest 39.45 178 **P 10 29 41.6 +0.6**
H11S3 WAKE ISLAND Hy 40.19 72 T T 11 12 53.4
baz=262,slow=75,SNR=113
H11S1 WAKE ISLAND Hy 40.20 72 T T 11 12 50.7
baz=262,slow=75,SNR=128
H11S2 WAKE ISLAND Hy 40.20 72 T T 11 12 48.7
baz=262,slow=75,SNR=128
HEH HeiHe 41.26 1 *eP* **P 10 29 56.6 +0.9**
EVN Everest 41.85 302 P **P 10 30 01.1 -0.5**
EVN IAmb IAmb 10 30 07.0
comp=Z,5.2nm,0.6s
BBOO Buckleboo 42.45 168 P **P 10 30 06.6 +1.0**
NWAO Narrogin (SRO) 42.48 191 P **P 10 30 06.1 +0.3**
STKA Stephens Creek 43.04 161 P **P 10 30 10.8 +0.5**
comp=Z,7.7nm,0.8s,baz=347,slow=7.2,SNR=15
STKA PP **PP 10 31 55.0 +3.3**
comp=Z,4.5nm,0.8s,baz=352,slow=9.7,SNR=5.3
comp=Z,7.7nm,0.8s
TOO Toolangi 49.52 160 P **P 10 31 02.3 +1.1**
TOO IAmb IAmb 10 31 30.9
comp=Z,5.6nm,1.4s
PEA0B Petropavlovsk- 50.84 24 P **P 10 31 12.7 +1.7**
PETK Petropavlovsk- 50.84 24 P **P 10 31 13.1 +2.1**
comp=Z,2.5nm,0.6s,baz=235,slow=3.3,SNR=8.8
comp=Z,2.5nm,0.6s
PETK Petropavlovsk- 50.84 24 P **P 10 31 12.7 +1.7**
MKAR Makanchi Array 53.23 323 P **P 10 31 28.3 -0.5**
comp=Z,2.8nm,0.7s,baz=117,slow=8.3,SNR=22
MKAR PcP **PcP 10 32 35.5 -0.3**
comp=Z,3.7nm,0.8s,baz=111,slow=5.3,SNR=7.9
comp=Z,2.8nm,0.7s
NIL Nilore 54.65 305 P **P 10 31 38.1 -1.3**
NIL IAmb IAmb 10 31 41.0
comp=Z,9.1nm,0.9s
ZALV Zalesovo Beam 55.92 332 P **P 10 31 46.9 -1.3**
comp=Z,1.8nm,0.7s,baz=118,slow=8.2,SNR=7.5
ZALV PcP **PcP 10 32 44.1 -1.9**
comp=Z,0.9nm,0.5s,baz=119,slow=1.9,SNR=4.3
comp=Z,1.8nm,0.7s
ZALV Zalesovo Beam 55.92 332 P **P 10 31 46.3 -1.8**
KURK Kurchatov 57.30 326 P **P 10 31 56.6 -1.4**
KURK IAmb IAmb 10 31 58.0
comp=Z,4.7nm,0.9s
KURBB Kurchatov Arra 57.31 326 P **P 10 31 56.8 -1.3**
comp=Z,1.3nm,0.5s,baz=128,slow=6.0,SNR=11
comp=Z,1.3nm,0.5s
SHEM Shemya Is, Ala 58.24 32 LR LR 10 57 31.9
comp=Z,26nm,18.6s,baz=148,slow=36
KK31 Karatay Array 59.34 315 P **P 10 32 11.3 -1.1**
KKAR Karatay Array 59.34 315 P **P 10 32 11.3 -1.1**
TIXI Tiksi 62.74 1 LR LR 11 00 11.8
comp=Z,35nm,20.6s,baz=200,slow=36
BVAR Borovoye Array 62.90 326 P **P 10 32 34.9 -1.4**
comp=Z,2.3nm,0.6s,baz=116,slow=8.6,SNR=9.3
comp=Z,2.3nm,0.6s
BORK Borovoye 62.95 326 P **P 10 32 35.5 -1.1**
BORK IAmb IAmb 10 32 37.6
comp=Z,3.9nm,0.8s
NRIK Noril'sk 65.40 346 P **P 10 32 51.1 -1.3**
comp=Z,5.5nm,0.6s,baz=103,slow=5.4,SNR=4.0
comp=Z,5.5nm,0.6s
NRIK Noril'sk 65.40 346 P **P 10 32 51.6 -0.7**
NRIK IAmb IAmb 10 32 52.9
comp=Z,6.0nm,0.6s
AB31 Akbulak array 68.03 320 P **P 10 33 08.6 -0.9**
ABKAR Akbulak array 68.03 320 P **P 10 33 08.4 -1.1**
CASY Casey 75.85 187 P **P 10 33 56.4 +0.6**
O18K Koktuh Hills 76.54 31 IAmb IAmb 10 34 03.2
comp=Z,9.9nm,0.9s
E19K Redstone River 76.62 23 IAmb IAmb 10 34 19.7
comp=Z,8.8nm,1.4s
H19K Roundabout Mou 76.64 25 P **P 10 34 01.1 +0.7**
H19K IAmb IAmb 10 34 03.4
comp=Z,4.4nm,0.8s
RAYN Ar Rayn 78.24 292 P **P 10 34 09.4 -0.9**
RAYN IAmb IAmb 10 34 10.7
comp=Z,9.3nm,0.7s
G23K Bananza Creek 79.36 24 IAmb IAmb 10 34 35.3
comp=Z,8.7nm,1.4s
ILAR Eielson Array 80.62 26 P **P 10 34 22.2 -0.1**
comp=Z,5.5nm,0.6s,baz=268,slow=4.3,SNR=13
comp=Z,0.5nm,0.6s
RIDG Independent Ri 81.55 27 IAmb IAmb 10 34 46.6
comp=Z,14nm,1.2s
K27K Chicken 82.75 26 IAmb IAmb 10 34 53.6
comp=Z,7.9nm,1.3s
I27K Kandik River 82.80 25 IAmb IAmb 10 34 37.0
comp=Z,3.3nm,0.7s
I28M Miner Creek 83.51 25 **P 10 34 39.7 +2.2**
I28M IAmb IAmb 10 34 40.8
comp=Z,6.5nm,0.7s
DAWY Dawson 83.92 26 P **P 10 34 41.7 +2.1**
DAWY IAmb IAmb 10 34 59.9
comp=Z,11nm,1.4s
O28M Mount Upton 83.98 30 IAmb IAmb 10 35 00.3
comp=Z,9.4nm,1.4s
H29M Whitestone 84.05 24 IAmb IAmb 10 34 42.9
comp=Z,4.2nm,0.7s
SPITS Spitsbergen Ar 85.41 349 P **P 10 34 46.5 -0.3**
comp=Z,4.1nm,0.8s,baz=79,slow=10,SNR=1.5
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 85.55 340 P **P 10 34 47.2 -0.4**
comp=Z,3.1nm,0.8s,baz=29,slow=2.8,SNR=4.6
comp=Z,3.1nm,0.8s
N31M Braeburn, Yuko 85.98 28 IAmb IAmb 10 34 53.7
comp=Z,5.2nm,1.2s
FINES FINESS Array B 87.19 332 P **P 10 34 54.7 -1.1**
comp=Z,1.2nm,0.5s,baz=61,slow=6.5,SNR=12
comp=Z,1.2nm,0.5s
N32M Quiet Lake 87.32 29 IAmb IAmb 10 35 01.7
comp=Z,2.5nm,0.7s
AKASG Malin Array Be 87.74 321 P **P 10 34 56.9 -1.8**
comp=Z,0.3nm,0.4s,baz=68,slow=4.6,SNR=2.2
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 87.74 321 P **P 10 34 56.9 -1.8**
MAW Mawson 88.44 200 P **P 10 35 01.0 -0.5**
comp=Z,4.2nm,0.8s,baz=79,slow=6.2,SNR=8.4
comp=Z,4.2nm,0.8s
MAW Mawson 88.44 200 P **P 10 35 01.0 -0.5**
VNDA Vanda 88.53 173 P **P 10 35 01.9 +0.1**
comp=Z,4.6nm,0.7s,baz=322,slow=5.4,SNR=21
comp=Z,4.6nm,0.7s
VNDA Vanda 88.53 173 P **P 10 35 02.6 +0.9**
VNDA IAmb IAmb 10 35 03.2
comp=Z,4.5nm,0.7s
BBB Bella Bella 92.38 36 LR LR 11 20 30.1
comp=Z,33nm,18.4s,baz=216,slow=38
HFS Hagfors 93.35 332 P **P 10 35 23.2 -1.5**
comp=Z,0.8nm,0.3s,baz=118,slow=8.3,SNR=1.6
comp=Z,0.8nm,0.3s
NOA NORSAR Array B 94.07 334 LR LR 11 20 51.8
comp=Z,15nm,20.2s,baz=310,slow=37
YKA Yellowknife Ar 94.96 24 P **P 10 35 32.3 +0.4**
comp=Z,0.7nm,0.7s,baz=302,slow=4.5,SNR=5.5
comp=Z,0.7nm,0.7s
VRAC Vranov 95.95 322 LR LR 11 22 58.0
comp=Z,28nm,18.4s,baz=264,slow=38
QSPA South Pole Qui 98.74 180 P Pdif 10 35 49.4 +0.4
comp=Z,1.6nm,1.0s,baz=273,slow=1.3,SNR=7.2
comp=Z,1.6nm,1.0s
QSPA South Pole Qui 98.74 180 P Pdif 10 35 49.4 +0.4
TORD Torodi Ar. Bea 120.92 291 PKP **PKPdf 10 41 02.1 -0.8**
comp=Z,0.5n

az=36.0

ISC 06 10:33:11.7±1.0, 6°4′**S±0.2**′**×106°02**′**E±0.09, h150km, n22, σ2.871/25, mb3.8/3, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNG	**Tangerang**	**0.68**	**66**	P	**Pn**	**10 33 36.6**	**+2.6**
DBJI	**Dramaga**	**0.73**	**99**	P	**Pn**	**10 33 37.3**	**+2.9**
DBJI				S	**Sn**	**10 33 56.5**	**+4.8**
SKJI	**Sukabumi**	**0.77**	**136**	P	**Pn**	**10 33 38.5**	**+3.8**
BLSI	**Bandar Lampung**	**1.32**	**324**	P	**Pn**	**10 33 41.6**	**+2.1**
LEM	**Lembang**	**1.63**	**104**	P	**Pn**	**10 33 46.1**	**+3.2**
LEM	112nm,0.7s,baz=136,slow=1.2,SNR=15			S	**Sn**	**10 34 11.2**	**+4.5**
LEM	32nm,0.4s,baz=6.9,slow=21,SNR=3.8 **Lembang**	**1.63**	**104**	P	**Pn**	**10 33 45.3**	**+2.5**
KASI	**Kota Agung**	**1.77**	**301**	P	**Pn**	**10 33 47.1**	**+2.9**
BBJI	**Bungbulang**	**1.91**	**122**	P	**Pn**	**10 33 47.6**	**+1.8**
KLSI		**2.17**	**323**	P	**Pn**	**10 33 50.2**	**+1.4**
LWLI	**Liwa**	**2.41**	**306**	P	**Pn**	**10 33 53.4**	**+1.5**
MNAI	**Manna**	**3.69**	**304**	P	**Pn**	**10 34 09.6**	**+1.6**
EGSI	**Enggano, Bengk**	**3.88**	**286**	P	**Pn**	**10 34 12.9**	**+2.5**
SMRI	**Semarang**	**4.43**	**98**	P	**Pn**	**10 34 19.0**	**+1.4**
UGM	**Wanagama**	**4.70**	**108**	P	**Pn**	**10 34 21.7**	**+0.5**
SNJI	**Sawahan-Nganju** 0.2nm54nm,0.7s	**5.84**	**103**	P	**Pn**	**10 34 38.1**	**+1.6**
PPSI	**Pulau Pagai**	**7.02**	**301**	P	**Pn**	**10 34 54.0**	**+1.9**
JAGI	**Jajag, Banyuwa** 54nm,1.0s	**8.31**	**105**	P	**Pn**	**10 35 10.5**	**+1.2**
BATI	**Baumata** 32nm,0.5s,baz=270,slow=2.0,SNR=2.9	**17.85**	**103**	P	**P**	**10 37 05.6**	**-3.9**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=311,slow=9.0,SNR=15	**30.59**	**119**	P	**P**	**10 39 10.0**	**-1.7**
WRA	0.3nm,0.5s,baz=316,slow=2.5,SNR=5.6			PcP	**PcP**	**10 42 04.0**	**-2.8**
ASAR	0.7nm,0.7s **Alice Springs** 1.1nm,0.7s,baz=301,slow=8.2,SNR=16	**31.80**	**126**	P	**P**	**10 39 20.4**	**-1.9**
STKA	1.1nm,0.7s **Stephens Creek** 4.4nm,0.4s,baz=314,slow=8.2,SNR=18	**41.73**	**132**	P	**P**	**10 40 46.3**	**+0.2**
TXAR	4.4nm,0.4s **Lajitas Array** 0.3nm,0.7s,baz=225,slow=1.4,SNR=4.0	**143.92**	**47**	PKP	**PKPab**	**10 52 25.4**	**-2.2**

*IDC **06** 10:35:39.9±1.2, 9°.43S×152°.60E, h0km, mb3.8/7, mbtmp3.9/7, MS3.3/8, Error ellipse: s-maj=49.7km s-min=25.4km az=112.0*

ISC 06 10:35:43.5±1.1, 9°.4S±0°.2×152°.6E±0°.3, h22km, n14, σ0.984/8, mb3.8/6, MS3.4/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.33**	**270**	LR	LR	10 39 20.6	
WRA	comp=Z,122nm,18.1s,baz=194,slow=41 **Warramunga Arr** 1.8nm,0.8s,baz=62,slow=10,SNR=5.5	**20.47**	**237**	P	**P**	**10 40 19.4**	**-0.5**
ASAR	1.8nm,0.8s **Alice Springs** 2.9nm,1.0s,baz=59,slow=9.2,SNR=13	**22.77**	**229**	P	**P**	**10 40 43.6**	**-1.0**
ASAR				LR	LR	10 48 29.7	
STKA	comp=Z,79nm,18.3s,baz=234,slow=34 2.9nm,1.0s **Stephens Creek** 2.4nm,0.9s,baz=8.1,slow=7.1,SNR=3.0	**24.55**	**203**	P	**P**	**10 41 02.7**	**+1.0**
STKA				LR	LR	10 50 28.7	
BATI	comp=Z,108nm,18.3s,baz=209,slow=36 2.4nm,0.9s **Baumata** comp=Z,289nm,18.8s,baz=170,slow=44	**28.48**	**266**	LR	LR	10 56 29.2	
JCJ	**Chichijima** comp=Z,22nm,19.8s,baz=167,slow=36	**37.67**	**345**	LR	LR	10 58 03.0	
RPZ	**Rata Peaks** comp=Z,18nm,19.2s,baz=36,slow=34	**37.76**	**158**	LR	LR	10 57 11.6	
KLR	**Kul'dur** comp=Z,34nm,19.9s,baz=192,slow=34	**61.20**	**345**	LR	LR	11 09 48.9	
SHEM	**Shemya Is, Ala** comp=Z,34nm,19.0s,baz=162,slow=34	**64.60**	**14**	LR	LR	11 11 53.7	
SONM	**Songino Array** 0.7nm,0.8s,baz=143,slow=5.2,SNR=3.6	**70.11**	**329**	P	**P**	**10 46 55.0**	**+0.8**
QSPA	0.7nm,0.8s **South Pole Qui** 2.0nm,1.0s,baz=326,slow=1.6,SNR=4.3	**80.56**	**180**	P	**P**	**10 47 53.8**	**-0.3**
MAW	2.0nm,1.0s **Mawson** 2.1nm,0.9s,baz=90,slow=12,SNR=3.1	**81.24**	**203**	P	**P**	**10 47 57.9**	**+0.5**
ILAR	2.1nm,0.9s **Eielson Array** 0.6nm,1.1s,baz=272,slow=5.7,SNR=4.1	**86.51**	**22**	P	**P**	**10 48 23.8**	**-0.6**
TORD	0.6nm,1.1s **Torodi Ar. Bea** 1.0nm,0.7s,baz=77,slow=2.2,SNR=5.6	**151.20**	**280**	PKPbc	**PKPbc**	**10 55 36.0**	**-0.3**

*IDC **06** 10:40:11.5±0.6, 24°.05N×142°.92E, h0km, mb4.1/22, mbtmp4.1/23, ML3.6/2, MS3.3/8, Error ellipse: s-maj=21.2km s-min=12.8km az=81.0*
*NEIC **06** 10:40:13.8±1.7, 24°.08N±0°.08×143°.0E±0°.1, h10km±1km, mb4.5/53, Error ellipse: s-maj=18.6km s-min=13.3km az=80.0*

ISC 06 10:40:13.1±0.6, 24°.03N±0°.07×143°.0E±0°.1, h10km, n76, σ0.977/49, mb4.5/45, MS3.3/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.15**	**346**	Pn	**Pn**	**10 41 02.0**	**-0.8**
JCJ	9.7nm,0.3s,baz=297,slow=23,SNR=13			Sn	**Sn**	**10 41 42.3**	**+1.8**
JHJ	28nm,0.3s,baz=292,slow=21,SNR=5.7 **Hachijo jima 2**	**9.50**	**343**	LR	LR	10 45 42.4	
JMZ	comp=Z,194nm,21.3s,baz=76,slow=35 **Minamidaito 2**	**10.86**	**282**	Pn	**Pn**	**10 42 50.6**	**+1.9**
JNU	**Nakatsue** comp=Z,70nm,20.7s,baz=125,slow=35	**13.99**	**313**	LR	LR	10 48 18.4	
KSRS	**Korea Array** 0.2nm,0.3s,baz=128,slow=13,SNR=9.7	**18.62**	**319**	P	**P**	**10 44 29.9**	**-0.8**
USRK	2.6nm,1.0s **Ussuriysk Ar.** 2.2nm,0.8s,baz=158,slow=12,SNR=4.6	**22.06**	**338**	P	**P**	**10 45 06.2**	**-1.9**
H11N1	2.2nm,0.8s **WAKE ISLAND Hy 22.55** baz=282,slow=74,SNR=7.3	**96**	T	T	11 08 36.4		
H11N2	**WAKE ISLAND Hy 22.55** baz=282,slow=74,SNR=7.7	**96**	T	T	11 08 30.6		
H11N3	**WAKE ISLAND Hy 22.56** baz=282,slow=74,SNR=7.6	**96**	T	T	11 08 36.6		
H11S3	**WAKE ISLAND Hy 22.71** baz=289,slow=75,SNR=15	**99**	T	T	11 08 45.5		
H11S1	**WAKE ISLAND Hy 22.72** baz=289,slow=75,SNR=12	**99**	T	T	11 08 47.9		
H11S2	**WAKE ISLAND Hy 22.73** baz=289,slow=75,SNR=8.6	**99**	T	T	11 08 47.2		
KLR	**Kul'dur** 2.8nm,0.9s,baz=138,slow=9.8,SNR=6.8	**26.68**	**343**	P	**P**	**10 45 50.9**	**-1.2**
KLR	comp=Z,60nm,19.0s,baz=168,slow=33 2.8nm,0.9s			LR	LR	10 54 50.1	
TLY	**Talaya** comp=Z,44nm,18.6s,baz=140,slow=37	**40.82**	**323**	LR	LR	11 05 15.0	
CHTO	**Chiang Mai**	**41.24**	**272**		**P**	**10 47 58.4**	**-0.3**
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=61,slow=8.4,SNR=11	**41.34**	**271**	P	**P**	**10 47 59.6**	**+0.2**
CMAR	comp=Z,19nm,21.1s,baz=205,slow=34 0.8nm,0.3s			LR	LR	11 03 43.1	
CTA	**Charters Tower** 5.2nm,0.7s,baz=2.0,slow=6.5,SNR=3.0	**43.96**	**176**	P	**P**	**10 48 20.4**	**-0.1**
CTAO	5.2nm,0.7s **Charters Tower**	**43.96**	**176**	P	**P**	**10 48 20.8**	**+0.2**
WB0	**Warramunga Arr**	**44.33**	**192**	P	**P**	**10 48 24.0**	**+0.4**
WB0	comp=Z,8.1nm,1.1s			IAmb	IAmb	10 48 24.9	
WR8	**Warramunga Arr**	**44.50**	**191**	P	**P**	**10 48 25.3**	**+0.5**
WRAB	**Tennant Creek**	**44.50**	**192**	P	**P**	**10 48 25.0**	**+0.1**
WRAB	comp=Z,7.5nm,0.8s			IAmb	IAmb	10 48 51.4	
WRA	**Warramunga Arr** comp=Z,2.6nm,0.4s,baz=6.6,slow=7.8,SNR=72 comp=Z,2.6nm,0.4s	**44.52**	**192**	P	**P**	**10 48 24.8**	**-0.2**
WRA	**Warramunga Arr**	**44.52**	**192**		**P**	**10 48 24.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**45.17**	**204**	P	**P**	**10 48 30.6**	**+0.4**
SHL	**Shillong**	**46.22**	**283**	P	**P**	**10 48 38.7**	**-0.2**
AS31	**Alice Springs**	**48.23**	**191**	P	**P**	**10 48 53.2**	**-1.0**
ASAR	**Alice Springs** comp=Z,0.7nm,0.8s,baz=23,slow=9.5,SNR=15	**48.23**	**191**	P	**P**	**10 48 53.6**	**-0.6**
	comp=Z,0.7nm,0.8s						
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.4s,baz=91,slow=7.4,SNR=5.0	**52.32**	**321**	P	**P**	**10 49 24.1**	**-0.8**
ZALV	comp=Z,0.5nm,0.3s,baz=122,slow=5.4,SNR=4.1			PcP	**PcP**	**10 50 35.1**	**-0.8**
ZALV	comp=Z,46nm,18.9s,baz=103,slow=36 comp=Z,0.8nm,0.4s			LR	LR	11 11 37.1	
MKAR	**Makanchi Array** comp=Z,0.7nm,0.4s,baz=87,slow=9.8,SNR=12 comp=Z,0.7nm,0.4s	**53.04**	**311**	P	**P**	**10 49 29.4**	**-1.0**
PDGK	**Podgornoye**	**54.96**	**307**		**P**	**10 49 44.5**	**-0.1**
STKA	**Stephens Creek** comp=Z,3.3nm,0.9s,baz=19,slow=7.9,SNR=5.6 comp=Z,3.3nm,0.9s	**55.60**	**181**	P	**P**	**10 49 49.0**	**0.0**
KURK	**Kurchatov**	**55.70**	**316**	P	**P**	**10 49 48.6**	**-1.0**
KURK	comp=Z,5.5nm,1.1s			IAmb	IAmb	10 49 58.6	
KURBB	**Kurchatov Arra** comp=Z,1.4nm,0.3s,baz=93,slow=7.9,SNR=16 comp=Z,1.4nm,0.3s	**55.75**	**316**	P	**P**	**10 49 49.2**	**-0.8**
NRIK	**Noril'sk** comp=Z,1.7nm,0.3s,baz=107,slow=7.8,SNR=3.8 comp=Z,1.7nm,0.3s	**55.78**	**339**	P	**P**	**10 49 50.2**	**+0.3**
NRIK	**Noril'sk**	**55.78**	**339**	P	**P**	**10 49 49.7**	**-0.1**
NRIK	comp=Z,6.5nm,1.1s			IAmb	IAmb	10 49 50.9	
KDAK	**Kodiak Island** comp=Z,51nm,20.4s,baz=200,slow=34	**56.38**	**35**	LR	LR	11 12 20.5	
D20K	**Etivluk River**	**57.18**	**22**	P	**P**	**10 50 00.4**	**+0.5**
AFI	**Afiamalu** comp=Z,24nm,21.4s,baz=125,slow=31	**58.06**	**126**	LR	LR	11 10 07.6	
SCM	**Sheep Creek Mo**	**59.51**	**31**	P	**P**	**10 50 17.2**	**+0.8**
C23K	**Itkillik River**	**59.54**	**22**		**P**	**10 50 16.9**	**+0.6**
ILAR	**Eielson Array** comp=Z,1.7nm,0.8s,baz=264,slow=5.6,SNR=19 comp=Z,1.7nm,0.8s	**60.05**	**28**	P	**P**	**10 50 19.6**	**-0.3**
BVAR	**Borovoye Array** comp=Z,2.7nm,0.4s,baz=86,slow=6.3,SNR=16 comp=Z,2.7nm,0.4s	**60.83**	**319**	P	**P**	**10 50 24.6**	**-0.8**
BORK	**Borovoye**	**60.87**	**319**		**P**	**10 50 25.7**	**0.0**
D25K	**Kavik River** comp=Z,3.4nm,0.8s	**60.90**	**23**	IAmb	IAmb	10 50 28.6	
SCRK	**Sand Creek** comp=Z,3.7nm,0.8s	**61.23**	**29**	IAmb	IAmb	10 50 29.4	
F26K	**Sheenjek River** comp=Z,2.8nm,1.1s	**61.49**	**25**	IAmb	IAmb	10 50 32.3	
C27K	**Jago River** comp=Z,4.3nm,1.1s	**61.87**	**22**	IAmb	IAmb	10 50 45.7	
H27K	**Steamboat Moun**	**62.40**	**26**		**P**	**10 50 36.8**	**+0.9**
H27K	comp=Z,2.2nm,0.8s			IAmb	IAmb	10 50 38.5	
D27M	**Malcolm River** comp=Z,3.6nm,0.8s	**62.80**	**23**	IAmb	IAmb	10 50 41.7	
E28M	**Babbage River** comp=Z,3.9nm,1.0s	**63.28**	**24**	IAmb	IAmb	10 50 45.1	
M29M	**Somme Creek** comp=Z,3.3nm,0.9s	**63.70**	**31**	IAmb	IAmb	10 50 47.9	
L29M	**L29M** comp=Z,2.6nm,0.8s	**63.83**	**30**	IAmb	IAmb	10 50 48.1	
HYT	**Haines Junctio** comp=Z,2.4nm,0.9s	**64.22**	**32**	IAmb	IAmb	10 50 51.2	
EPYK	**Eagle Plains** comp=Z,3.4nm,0.8s	**64.35**	**26**	IAmb	IAmb	10 50 51.4	
N30M	**Aishikik Lake** comp=Z,3.8nm,1.2s	**64.39**	**32**	IAmb	IAmb	10 50 53.5	
G30M	**tAoh Zraii Nji** comp=Z,4.2nm,1.1s	**64.53**	**25**	IAmb	IAmb	10 51 16.5	
F30M	**Barrier River** comp=Z,3.5nm,0.8s	**64.68**	**25**	IAmb	IAmb	10 50 53.7	
H31M	**Peel River** comp=Z,4.0nm,1.0s	**65.34**	**27**	IAmb	IAmb	10 50 57.2	
YKA	**Yellowknife Ar** comp=Z,1.7nm,0.8s,baz=295,slow=5.7,SNR=9.2 comp=Z,1.7nm,0.8s	**74.47**	**28**	P	**P**	**10 51 52.0**	**+0.6**
ARCES	**ARCESS Array B** comp=Z,5.2nm,1.1s,baz=64,slow=8.2,SNR=6.4 comp=Z,5.2nm,1.1s	**76.68**	**341**	P	**P**	**10 52 04.5**	**+0.5**
H04A	**Detroit Lake** comp=Z,4.5nm,1.0s	**76.74**	**47**	IAmb	IAmb	10 52 06.8	
I04A	**Tendick Farm,** comp=Z,6.6nm,1.2s	**76.90**	**48**	IAmb	IAmb	10 52 22.4	
WIFE	**Three Sisters-** comp=Z,4.7nm,0.9s	**77.21**	**47**	IAmb	IAmb	10 52 09.9	
BEKR	**Beckworth**	**79.78**	**51**		**P**	**10 52 23.0**	**+1.0**
BEKR	comp=Z,4.1nm,0.8s			IAmb	IAmb	10 52 23.9	
KBZ	**Khabaz** comp=Z,2.1nm,0.8s,baz=150,slow=9.7,SNR=5.1 comp=Z,2.1nm,0.8s	**80.66**	**314**	P	**P**	**10 52 26.1**	**-0.3**
FINES	**FINESS Array B** comp=Z,1.9nm,0.6s,baz=81,slow=3.4,SNR=8.9 comp=Z,1.9nm,0.6s	**81.03**	**334**	P	**P**	**10 52 27.4**	**-0.6**
NVAR	**Mina Array Bea** comp=Z,1.1nm,0.7s,baz=315,slow=5.0,SNR=1.4 comp=Z,1.1nm,0.7s	**81.81**	**52**	P	**P**	**10 52 33.7**	**+0.8**
RLMT	**Red Lodge** comp=Z,4.2nm,0.7s	**84.89**	**43**	IAmb	IAmb	10 52 51.0	
AKASG	**Malin Array Be** comp=Z,0.5nm,0.5s,baz=51,slow=4.3,SNR=4.9 comp=Z,0.5nm,0.5s	**85.54**	**324**	P	**P**	**10 52 51.0**	**-0.5**
AKASG	**Malin Array Be**	**85.54**	**324**	P	**P**	**10 52 51.0**	**-0.5**
AKASG	comp=Z,4.0nm,0.8s			IAmb	IAmb	10 53 28.3	
PDAR	**Pinedale Array** comp=Z,0.4nm,0.8s,baz=276,slow=2.8,SNR=4.3 comp=Z,0.4nm,0.8s	**85.85**	**45**	P	**P**	**10 52 53.4**	**-0.1**
NOA	**NORSAR Array B** comp=Z,1.9nm,0.8s,baz=40,slow=4.8,SNR=3.4 comp=Z,1.9nm,0.8s	**86.73**	**339**	P	**P**	**10 52 56.4**	**-0.8**
RAYN	**Ar Rayn**	**87.09**	**294**		**P**	**10 52 59.9**	**+0.2**
BRTR	**Keskin Array B** comp=Z,1.1nm,0.8s,baz=84,slow=3.8,SNR=5.6 comp=Z,1.1nm,0.8s	**88.65**	**313**	P	**P**	**10 53 06.7**	**-0.3**
LPAZ	**La Paz** comp=Z,2.4nm,0.8s,baz=332,slow=3.9,SNR=9.6	**149.80**	**81**	PKPbc	**PKiKP**	**11 00 06.2**	**+0.3**
LPAZ	**La Paz**	**149.80**	**81**		**PKPbc**	**11 00 05.4**	**+0.4**

*KRNET **06** 10:48:41.9±0.1, 42°.99N×72°.90E, h22km, mb2.2*
*NNC **06** 10:48:42.1±0.5, 43°.01N×72°.93E, h0km, mb2.2, mpv2.6, Error ellipse: s-maj=7.3km s-min=3.1km az=12.0*
*SOME **06** 10:48:42.0, 43°.02N×72°.90E, h15km*
*KNET **06** 10:48:44.1±0.4, 42°.98N×73°.02E, h23km±2km, ml1.2, Error ellipse: s-maj=3.1km s-min=2.6km az=43.0*

ISC 06 10:48:42.4±1.1, 43°.00N±0°.05×72°.90E±0°.03, h13km±9km, n23, σ0.960/44, 17C-15D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**0.35**	**137**	P	**Pg**	**10 48 49.9**	**+0.4**
MRKS	14nm,0.0s			S	**Sg**	**10 48 54.4**	**+0.1**
MRKS	59nm,0.2s **Merke**	**0.35**	**137**	*e*P	**Pg**	**10 48 49.9**	**+0.4**
MRKS	14nm,0.0s			*e*S	**Sg**	**10 48 54.5**	**+0.1**
MNAS	59nm,0.2s **Manas**	**0.59**	**210**	⇑*e*P	**Pg**	**10 48 53.3**	**-0.7**
MNAS				⇑*i*S	**Sg**	**10 49 01.4**	**-0.4**
EKS2	**Erkin-Say**	**0.73**	**117**	⇓P	**Pg**	**10 48 56.7**	**+0.1**
EKS2	2.0nm,0.1s			⇓S	**Sg**	**10 49 06.1**	**0.0**
EKS2	10nm,0.2s **Erkin-Say**	**0.73**	**117**	⇓*e*P	**Pg**	**10 48 56.0**	**-0.6**
EKS2				⇑*e*S	**Sg**	**10 49 06.2**	**0.0**
USP	**Ospenovka**	**1.20**	**77**	⇓P	**Pn**	**10 49 04.9**	**-0.1**
USP	2.6nm,0.1s			⇓S	**Sb**	**10 49 20.8**	**+0.3**
USP	4.9nm,0.3s **Ospenovka**	**1.20**	**77**	⇓*e*P	**Pn**	**10 49 04.0**	**-0.9**
USP				⇓*e*S	**Sb**	**10 49 20.2**	**-0.3**
AAK	**Ala-Archa**	**1.23**	**107**	⇓P	**Pn**	**10 49 05.3**	**-0.2**
AAK	2.6nm,0.2s			⇓S	**Sn**	**10 49 22.1**	**+0.1**
AAK	1.9nm,0.1s **Ala-Archa**	**1.23**	**107**	⇓P	**Pn**	**10 49 05.0**	**-0.4**
AAK	0.2nm,0.3s			⇓S	**Sb**	**10 49 21.3**	**0.0**
AAK	1.1nm,0.5s **Ala-Archa**	**1.23**	**107**	⇑*e*P	**Pn**	**10 49 04.6**	**-0.8**
AAK				⇑*e*S	**Sb**	**10 49 21.1**	**-0.3**
SGDS	**Sogindy**	**1.34**	**70**	P	**Pb**	**10 49 07.6**	**+0.1**
SGDS	1.3nm,0.1s			S	**Sb**	**10 49 24.0**	**-0.6**
CHMS	5.4nm,0.1s **Chumysh**	**1.36**	**89**	⇑P	**Pn**	**10 49 07.6**	**+0.5**
CHMS	1.8nm,0.2s			⇑S	**Sn**	**10 49 25.5**	**+0.5**
CHMS	3.4nm,0.1s **Chumysh**	**1.36**	**89**	⇑*i*P	**Pn**	**10 49 06.6**	**-0.5**
CHMS				⇑*e*S	**Sb**	**10 49 24.8**	**-0.2**
UCH	**Uchtor**	**1.42**	**122**	⇑*e*P	**Pn**	**10 49 07.9**	**-0.4**
UCH				⇑*e*S	**Sn**	**10 49 26.8**	**-0.3**
KBK	**Karagaybulak** 2.7nm,0.1s	**1.55**	**102**	⇓P	**Pb**	**10 49 11.2**	**+0.2**
KBK	8.0nm,0.2s			⇓S	**Sg**	**10 49 32.0**	**-0.2**
KBK	**Karagaybulak**	**1.55**	**102**	⇑*e*P	**Pn**	**10 49 09.8**	**0.0**
KBK				⇑*i*S	**Sn**	**10 49 30.2**	**+0.4**
KK31	**Karatay Array** 0.4nm,0.4s,baz=94,slow=15,SNR=9.3	**1.75**	**274**	⇓P	**Pb**	**10 49 14.7**	**+0.3**
KK31	0.8nm,0.3s,baz=94,slow=31,SNR=6.6			⇑S	**Sb**	**10 49 37.2**	**+0.8**
TKM2	**Tokmak 2** 0.7nm,0.1s	**1.98**	**91**	⇑P	**Pb**	**10 49 18.1**	**-0.4**
TKM2	4.8nm,0.1s			⇑S	**Sb**	**10 49 44.3**	**+1.2**
TKM2	**Tokmak 2**	**1.98**	**91**	⇓*i*P	**Pn**	**10 49 15.9**	**+0.1**
TKM2				⇓*e*S	**Sn**	**10 49 40.9**	**+0.3**
BTLS	**Baital** 0.7nm,0.1s	**2.20**	**22**	Pg	**Pb**	**10 49 23.3**	**+1.3**
BTLS	3.8nm,0.4s			Lg	Lg	10 49 51.6	
BTLS	**Baital** 0.7nm,0.1s	**2.20**	**22**	*e*P	**Pb**	**10 49 21.2**	**-0.8**
BTLS	3.8nm,0.4s			*e*S	**Sb**	**10 49 49.6**	**+0.4**
KST	**Kastek** 1.3nm,0.2s	**2.25**	**88**	Pg	**Pb**	**10 49 24.2**	**+1.3**
KST	3.8nm,0.3s			Lg	Lg	10 49 53.1	
KST	**Kastek** 1.3nm,0.2s	**2.25**	**88**	*e*P	**Pb**	**10 49 23.5**	**+0.5**
KST	3.8nm,0.3s			*e*S	**Sg**	**10 49 53.1**	**-1.5**

IDC 06 10:53:05.0±3.7, 22°.86S×178°.01W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=190.8km s-min=38.3km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.81**	**247**	P	P	11 00 14.8	0.0
ASAR	1.2nm,0.6s,baz=101,slow=16,SNR=2.9 1.2nm,0.6s **Alice Springs**	**44.02**	**259**	P	P	11 01 14.5	-0.2
WRA	2.2nm,1.0s,baz=96,slow=7.5,SNR=29 2.2nm,1.0s **Warramunga Arr**	**44.31**	**264**	P	P	11 01 16.9	-0.2
ARCES	1.2nm,0.4s,baz=96,slow=8.4,SNR=67 1.2nm,0.4s **ARCESS Array B**	**131.23**	**349**	PKP	PKiKP	11 12 19.0	-0.3
HFS	3.1nm,0.9s,baz=49,slow=1.9,SNR=3.9 **Hagfors**	**141.85**	**351**	PKP	PKPdf	11 12 36.1	-2.2
AKASG	1.9nm,0.3s,baz=64,slow=3.4,SNR=16 **Malin Array Be**	**145.05**	**329**	PKPbc	PKPbc	11 12 42.5	-1.0
BRTR	0.8nm,0.3s,baz=45,slow=4.2,SNR=6.0 **Keskin Array B**	**148.37**	**310**	PKPbc	PKPbc	11 12 53.0	-0.8
	1.0nm,0.6s,baz=114,slow=3.0,SNR=4.6						

WEL 06 11:05:04.4±1.6, 34°S±23°×17°8W±2°8, h12km, M4.1/2, MLv4.1/2, Error ellipse: s-maj=45.5km s-min=10.3km az=128.7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**4.89**	**221**	P	Pn	11 06 19.9	+2.3
WMGZ				S	Sn	11 07 17.2	+3.1
PKGZ	**Pakihiroa**	**5.11**	**223**	P	Pn	11 06 19.7	-1.0
PKGZ				S	Sn	11 07 21.6	+2.1
PUZ	**Puketiti**	**5.16**	**220**	P	Pn	11 06 20.1	-1.3
PUZ				S	Sn	11 07 22.5	+1.6
HAZ	**Te Kaha**	**5.20**	**225**	P	Pn	11 06 22.2	+0.3
HAZ				S	Sn	11 07 23.9	+2.1
TWGZ	**Tauwhareparae**	**5.38**	**221**	S	Sn	11 07 28.5	+2.0
RUGZ	**Raukumara Rang**	**5.40**	**224**	P	Pn	11 06 25.3	+0.4
RUGZ				S	Sn	11 07 28.4	+1.3
CNGZ	**Carnagh Statio**	**5.49**	**217**	P	Pn	11 06 25.1	-0.9
TKGZ	**Te Karaka**	**5.64**	**220**	S	Sn	11 07 34.6	+1.8
RIGZ	**Rimuhau**	**5.89**	**218**	S	Sn	11 07 41.1	+2.2
PRGZ	**Paritu Road**	**5.99**	**216**	S	Sn	11 07 41.7	+0.2
MHGZ	**Mahia Peninsul**	**6.16**	**215**	S	Sn	11 07 46.8	+1.3
SNGZ	**Shannon Statio**	**6.17**	**220**	S	Sn	11 07 46.6	+0.9
MUGZ	**Murupara**	**6.28**	**225**	S	Sn	11 07 47.0	-1.4
ARHZ	**Aropaoanui**	**6.70**	**219**	S	Sn	11 08 00.3	+1.4
BKZ	**Black Stump Fm**	**6.90**	**222**	S	Sn	11 08 03.1	-0.8
MCHZ	**McNeill Hill**	**6.99**	**220**	S	Sn	11 08 06.3	+0.3
KWHZ	**Kaweka Forest**	**7.12**	**221**	S	Sn	11 08 09.3	-0.1
KAHZ	**Kahuranaki**	**7.16**	**217**	S	Sn	11 08 10.7	+0.5
KRHZ	**Kereru**	**7.31**	**220**	S	Sn	11 08 12.3	-1.6

*JMA **06** 11:07:04.8±0.1, 24°.2N±1°.1×122°.5E±0°.4, h61km±2km, MV2.0/12, NW OFF ISHIGAKIJIMA IS*
*TAP **06** 11:07:05.2, 24°.21N×122°.53E, h61km, ML2.5, C*

ISC 06 11:07:05.2±1.3, 24°.18N±0°.04×122°.52E±0°.02, h64km±8km, n54, σ0.983/99, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.20**	**252**	*i* P	**Pn**	**11 07 14.6**	**0.0**
EOS4				*i* S	**Sn**	**11 07 22.1**	**+0.7**
EOS3	**EOS3**	**0.21**	**299**	*i* P	**Pn**	**11 07 15.1**	**+0.1**
EOS3				*i* S	**Sn**	**11 07 22.9**	**+0.9**
EOS2	**EOS2**	**0.35**	**312**	*i* P	**Pn**	**11 07 16.2**	**+0.3**
EOS2				S	**Sn**	**11 07 25.2**	**+1.4**
JYNG	**Yonagunijimaku**	**0.47**	**55**	P	**Pn**	**11 07 16.9**	**-0.2**
YOJ	**Yonaguni jima**	**0.53**	**58**	*i* P	**Pn**	**11 07 17.6**	**-0.1**
YOJ				*i* S	**Sn**	**11 07 26.7**	**-0.2**
TWC	**Suao**	**0.75**	**305**	*i* P	**Pn**	**11 07 19.9**	**-0.3**
TWC				*i* S	**Sn**	**11 07 30.5**	**-0.8**
NACB	**Ninganchiao**	**0.85**	**270**	P	**Pn**	**11 07 20.9**	**-0.6**
NACB				S	**Sn**	**11 07 32.7**	**-0.8**
TWD	**Chiawan**	**0.85**	**263**	*e*P	**Pn**	**11 07 20.9**	**-0.6**
TWD				*e*S	**Sn**	**11 07 32.4**	**-1.1**
NDS	**Dongshan**	**0.86**	**302**	P	**Pn**	**11 07 21.9**	**+0.2**
TEYL	**Yanliau Villag**	**0.90**	**250**	P	**Pn**	**11 07 21.8**	**-0.4**
TEYL				*e*S	**Sn**	**11 07 34.2**	**-0.3**
TWE	**Neicheng**	**0.95**	**305**	*e*P	**Pn**	**11 07 22.9**	**+0.2**
TWE				*e*S	**Sn**

HGSD	**Ruisui**	**1.22 236**	*e*P		**Pn**	**11 07 26.2**	**-0.1**
HGSD			*e*S		**Sn**	**11 07 41.6**	**-0.3**
OWD	**Renai**	**1.25 260**	P		**Pn**	**11 07 26.6**	**-0.2**
OWD			S		**Sn**	**11 07 41.6**	**-1.3**
EHYH	**Wanrong**	**1.28 238**	*e*P		**Pn**	**11 07 27.0**	**-0.1**
EHY	**Hungye**	**1.29 239**	*e*P		**Pn**	**11 07 26.5**	**-0.7**
EHY			*e*S		**Sn**	**11 07 41.0**	**-2.6**
WUSB	**Renai**	**1.30 262**	*e*P		**Pn**	**11 07 27.5**	**+0.1**
WUSB			*e*S		**Sn**	**11 07 43.5**	**-0.6**
JKRS	**Kuro-shima**	**1.36 87**	P		**Pn**	**11 07 28.6**	**+0.5**
JKRS			*e*S		**Sn**	**11 07 45.5**	**+0.2**
YULB	**Yu-li**	**1.37 235**	*i* P		**Pn**	**11 07 27.7**	**-0.6**
YULB			S		**Sn**	**11 07 44.8**	**-0.9**
EYUL	**Yuli**	**1.38 233**	*e*P		**Pn**	**11 07 28.4**	**0.0**
EYUL			*e*S		**Sn**	**11 07 45.7**	**-0.1**
TWF1	**Yuli**	**1.39 234**	*e*P		**Pn**	**11 07 27.2**	**-1.4**
TWF1			*e*S		**Sn**	**11 07 45.6**	**-0.6**
WCS	**Beigang Elemen**	**1.48 265**	*e*P		**Pn**	**11 07 30.0**	**+0.3**
SSLB	**Suanglung**	**1.49 255**	*e*P		**Pn**	**11 07 30.6**	**+0.8**
SSLB			*e*S		**Sn**	**11 07 49.0**	**+0.6**
JIJ	**Ishigaki jima**	**1.49 83**	P		**Pn**	**11 07 29.6**	**-0.3**
JIJ			S		**Sn**	**11 07 47.6**	**-0.8**
FULB	**Fuli**	**1.49 229**	P		**Pn**	**11 07 29.4**	**-0.5**
FULB			*e*S		**Sn**	**11 07 48.7**	**+0.2**
WHYT	**Xinyi Township**	**1.60 253**	*e*P		**Pn**	**11 07 32.2**	**+0.8**
WHYT			*e*S		**Sn**	**11 07 52.4**	**+1.2**
EDH	**Donghe**	**1.64 223**	P		**Pn**	**11 07 31.4**	**-0.5**
EDH			*e*S		**Sn**	**11 07 50.5**	**-1.6**
JISG	**Ishigakijimahi**	**1.68 76**	P		**Pn**	**11 07 32.2**	**-0.2**
JISG			S		**Sn**	**11 07 51.9**	**-1.1**
ELDTW	**Lidau**	**1.70 235**	P		**Pn**	**11 07 32.5**	**-0.3**
ELDTW			*e*S		**Sn**	**11 07 52.5**	**-1.1**
CHN5	**Tsauling**	**1.79 251**	P		**Pn**	**11 07 35.3**	**+1.4**
CHN5			*e*S		**Sn**	**11 07 57.5**	**+1.8**
STYH	**Taoyuan**	**1.89 238**	P		**Pn**	**11 07 36.2**	**+0.9**
STYH			*e*S		**Sn**	**11 07 58.8**	**+0.7**
STYT	**Tauyuan**	**1.91 238**	P		**Pn**	**11 07 36.6**	**+1.0**
STYT			*e*S		**Sn**	**11 07 59.7**	**+1.0**
TPUB	**Ta-pu**	**1.94 244**	*e*P		**Pn**	**11 07 37.8**	**+1.7**
TPUB			*e*S		**Sn**	**11 08 01.2**	**+1.8**
WTP	**Ta-pu**	**1.98 242**	*e*P		**Pn**	**11 07 38.4**	**+1.8**
WTP			*e*S		**Sn**	**11 08 02.6**	**+2.2**

IDC ***06*** *11:17:53.5±0.5, 1°.33N×126°.39E, h0km, mb4.4/22, mbtmp4.4/23, ML4.1/1, MS3.8/22, Error ellipse: s-maj=28.9km s-min=11.4km az=75.0*

NEIC ***06*** *11:17:55.4±1.1, 1°.48N±0°.06×126°.60E±0°.06, h11km±4km, mb4.9/91, Error ellipse: s-maj=9.9km s-min=7.5km az=223.0*

GFZ ***06*** *11:17:56.2±0.2, 1°.N±4°×12°.7E±°, h10km, M5.1/23, mb4.8/23, confirmed*

BJI ***06*** *11:17:57.4, 1°.76N×126°.20E, h8km, mB4.8/6, mb4.7/49, Ms4.2/12, Ms7 4.0/17*

DJA ***06*** *11:17:57.0±0.2, 1°.N±2°×12°.6E±°, h10km, M4.7/22, mB5.2/5, mb4.9/10, MLv4.6/22, Mw(mB)4.7/5, MwMwp4.3/2, Mwp4.7/2*

GCMT ***06*** *11:17:57.5±0.4, 1°.43N±0°.04×126°.33E±0°.03, h22km±1km, MW4.8/71, Moment Tensor Solution. s25,c25; s71,c86; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.26±.16; Mθθ0.67±.09; Mϕϕ 1.60±.10; Mrθ -0.21±.18; Mϕθ -0.29±.05; Mϕr~0.12±.16; Best double couple: M₀1.98200×10¹⁶ NP1:ϕs159.00000°, δ44.00000°, λ-97.00000°. NP2: ϕs349.00000°, δ46.00000°, λ-84.00000°. Principal axes: T 1.6850, Plg1.0000°, Azm74.0000°; N 0.6010, Plg5.0000°, Azm164.0000°; P -2.2800, Plg85.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 11:17:54.9±0.3, 1°.40N±0°.04×126°.56E±0°.05, h10km, n233, σ1§41/211, mb4.8/85, MS3.9/28, 1C-2D, Northern Moluccа Sea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02 128**		**Pn**	**11 18 16.9**	**+1.6**
TNTI	**Ternate**	**1.02 128**	P	**Pn**	**11 18 16.8**	**+1.4**
TNTI			S	**Sn**	**11 18 32.3**	**+2.5**
TNTI	**Ternate**	**1.02 128**	P	**Pn**	**11 18 17.1**	**+1.7**
MNI	**Manado**	**1.72 271**	P	**Pn**	**11 18 24.9**	**0.0**
SGSI	**Sangihe**	**2.49 336**	P	**Pn**	**11 18 37.3**	**+1.7**
SANI	**Sanana**	**3.47 189**	P	**Pn**	**11 18 50.7**	**+1.6**
GTOI	**Gorontalo**	**3.62 258**	P	**Pn**	**11 18 52.9**	**+1.7**
LUWI	**Luwuk**	**4.50 237**		**Pn**	**11 19 05.6**	**+2.5**
LUWI	**Luwuk**	**4.50 237**	P	**Pn**	**11 19 04.2**	**+1.1**
LUWI	**Luwuk**	**4.50 237**	P	**Pn**	**11 19 06.0**	**+2.8**
NLAI	**Namlea**	**4.64 173**	P	**Pn**	**11 19 07.7**	**+2.6**
SIJI	**Sorong**	**5.22 116**	Pn	**Pn**	**11 19 17.5**	**+4.4**
	1.3nm,0.3s,baz=322,slow=8.7,SNR=8.2					
SIJI			LR	LR	11 21 33.3	
	comp=Z,963nm,19.6s,baz=300,slow=41					
SIJI	**Sorong**	**5.22 116**	P	**Pn**	**11 19 17.7**	**+4.5**
APSI	**Ampana**	**5.42 245**	P	**Pn**	**11 19 18.1**	**+2.3**
DAV	**Davao City (W)**	**5.71 350**	Pn	**Pn**	**11 19 23.1**	**+3.2**
	13nm,0.3s,baz=250,slow=22,SNR=3.5					
DAV			Sn	**Sn**	**11 20 27.7**	**+2.0**
	66nm,0.3s,baz=305,slow=1.5,SNR=2.0					
DAV	**Davao City (W)**	**5.71 350**	Pn	**Pn**	**11 19 18.2**	**-1.7**
KCP	**Kidapawan**	**5.76 345**	*i* P	**Pn**	**11 19 24.9**	**+4.3**
TOLI2	**Tolitoli**	**5.78 267**		**Pn**	**11 19 20.9**	**+0.1**
TOLI2	**Tolitoli**	**5.78 267**	P	**Pn**	**11 19 22.8**	**+2.0**
KDI	**Kendari**	**6.62 216**	P	**Pn**	**11 19 33.9**	**+1.6**
	0.3nm74nm,0.8s					
BIPH	**Bislig**	**6.74 358**	*e*P	Pn	11 19 40.5	+6.5
BIPH			*e*S	Sn	11 21 00.7	+10
FAKI	**Fak Fak**	**7.13 127**		**Pn**	**11 19 38.3**	**-1.1**
CGP	**Cagayan de Oro**	**7.25 345**	*e*P	Pn	11 19 48.5	+7.5
KAPI	**Kappang**	**9.32 227**	Pn	**Pn**	**11 20 10.7**	**+1.3**
	4.2nm,0.3s,baz=78,slow=0.8,SNR=11					
KAPI			Sn	**Sn**	**11 21 53.1**	**-1.2**
	baz=212,slow=18					
KAPI	**Kappang**	**9.32 227**		**Pn**	**11 20 11.1**	**+1.7**
KKM	**Kota Kinabalu**	**11.30 294**	Pn	**Pn**	**11 20 35.9**	**-0.8**
KKM	**Kota Kinabalu**	**11.30 294**	P	**Pn**	**11 20 40.4**	**+3.7**
SOEI	**Soe**	**11.31 192**	Pn	**Pn**	**11 20 36.8**	**-0.1**
BATI	**Baumata**	**11.88 194**	LR	LR	11 26 31.8	
	comp=Z,218nm,21.0s,baz=25,slow=44					
LQP	**Lukban**	**13.57 339**	*e*P	**P**	**11 21 16.1**	**-0.9**
TGY	**Tagaytay City**	**13.79 337**	LR	LR	11 26 50.9	
	comp=Z,274nm,21.4s,baz=202,slow=39					
JAY	**Jayapura**	**14.67 105**	LR	LR	11 27 16.3	
	comp=Z,532nm,20.8s,baz=294,slow=38					
MTN	**Manton Dam**	**14.86 162**	Pn	**Pn**	**11 21 26.6**	**+1.2**
JAGI	**Jajag, Banyuwa**	**15.78 231**	Pn	**Pn**	**11 21 37.9**	**+0.4**
KNRA	**Kununurra**	**17.11 173**	Pn	**Pn**	**11 21 53.9**	**-0.5**
KNRA			IAmb	IAmb	11 21 57.4	
	comp=Z,157nm,1.9s					
FITZ	**Fitzroy Crossi**	**19.40 183**	P	**P**	**11 22 20.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=351,slow=7.6,SNR=20					
	comp=Z,7.0nm,0.7s					
FITZ	**Fitzroy Crossi**	**19.40 183**		**P**	**11 22 20.9**	**-0.3**
LEM	**Lembang**	**20.59 246**	LR	LR	11 32 14.9	
	comp=Z,306nm,18.6s,baz=57,slow=42					
BBJI	**Bungbulang**	**20.81 245**	P	**P**	**11 22 37.4**	**+0.6**
GUMO	**Guam**	**21.80 55**	LR	LR	11 30 33.7	
	comp=Z,106nm,20.1s,baz=226,slow=35					
GUMO	**Guam**	**21.80 55**	P	**P**	**11 22 44.0**	**-3.3**
WB0	**Warramunga Arr**	**22.40 160**	P	**P**	**11 22 53.8**	**+0.1**
WB0			IAmb	IAmb	11 22 57.7	
	comp=Z,34nm,0.7s					
YULB	**Yu-li**	**22.45 347**	P	**P**	**11 22 53.5**	**-0.8**
YULB			IAmb	IAmb	11 22 58.6	
	comp=Z,79nm,2.0s					
TPUB	**Ta-pu**	**22.52 346**	P	**P**	**11 22 54.0**	**-1.0**
TPUB	**Ta-pu**	**22.52 346**	P	**P**	**11 22 57.5**	**+2.5**
WRAB	**Tennant Creek**	**22.54 161**		**P**	**11 22 55.5**	**+0.3**
WRAB			IAmb	IAmb	11 23 01.8	
	comp=Z,53nm,0.8s					
WRAB	**Tennant Creek**	**22.54 161**	P	**P**	**11 22 56.0**	**+0.7**
WRA	**Warramunga Arr**	**22.54 161**	P	**P**	**11 22 55.0**	**-0.3**
	comp=Z,37nm,0.8s,baz=339,slow=11,SNR=107					
	comp=Z,37nm,0.8s					
WRA	**Warramunga Arr**	**22.54 161**	P	**P**	**11 22 54.8**	**-0.5**
WR8	**Warramunga Arr**	**22.61 160**	P	**P**	**11 22 56.0**	**-0.1**
WR8			IAmb	IAmb	11 22 59.2	
	comp=Z,46nm,0.8s					
MYKOM	**Kota Tinggi**	**22.70 271**	P	**P**	**11 22 57.5**	**+0.5**
MYKOM			IAmb	IAmb	11 23 01.5	
	comp=Z,71nm,1.4s					
MYKOM	**Kota Tinggi**	**22.70 271**	P	**P**	**11 22 59.6**	**+2.5**
SSLB	**Suanglung**	**22.91 347**	P	**P**	**11 22 58.6**	**-0.6**
SSLB			IAmb	IAmb	11 23 09.4	
	comp=Z,24nm,0.9s					
PMG	**Port Moresby**	**23.16 118**	LR	LR	11 34 57.7	
	comp=Z,431nm,18.7s,baz=274,slow=44					
MBWA	**Marble Bar**	**23.39 196**	P	**P**	**11 23 03.8**	**-0.3**
QIZ	**Qiongzhong**	**23.98 318**	P	**P**	**11 23 09.4**	**-0.5**
QIZ			L	L		
	comp=Z,250nm,13.7s					
QIZ			L	L		
	comp=Z,190nm,18.2s					
QIZ			L	L		
	comp=Z,350nm,20.7s					
QIS	**Mount Isa**	**25.29 150**	P	**P**	**11 23 23.0**	**+1.2**
BKNI	**Bangkinang**	**25.54 268**	P	**P**	**11 23 23.9**	**-0.2**
BKNI	**Bangkinang**	**25.54 268**	P	**P**	**11 23 26.0**	**+1.9**
AS31	**Alice Springs**	**25.92 164**		**P**	**11 23 27.8**	**+0.3**
ASAR	**Alice Springs**	**25.92 164**	P	**P**	**11 23 27.6**	**0.0**
	comp=Z,9.0nm,0.7s,baz=346,slow=8.0,SNR=83					
ASAR			PcP	**PcP**	**11 26 57.5**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=338,slow=2.4,SNR=4.7					
	comp=Z,9.0nm,0.7s					
ASAR	**Alice Springs**	**25.92 164**		**P**	**11 23 27.8**	**+0.3**
ASAR				**PcP**	**11 26 55.5**	**-1.0**
KRVT	**Keravat (AS076**	**26.08 103**	LR	LR	11 32 29.9	
	comp=Z,63nm,18.1s,baz=188,slow=33					
RPSI	**Rantau Prapat**	**27.64 273**	P	**P**	**11 23 42.7**	**-0.4**
RPSI			IAmb	IAmb	11 23 46.2	
	comp=Z,18nm,1.0s					
CTA	**Charters Tower**	**28.80 139**	LR	LR	11 37 30.3	
	comp=Z,227nm,18.3s,baz=328,slow=41					
SLVN	**Son La**	**29.67 313**	P	**P**	**11 23 60.0**	**-1.2**
SLVN			IAmb	IAmb	11 24 31.3	
	comp=Z,24nm,1.7s					
NJ2	**Nanjing**	**31.34 347**	*e*P	**P**	**11 24 16.6**	**+0.9**
NJ2			pmax	pmax		
	comp=Z,32nm,0.6s					
GYA	**Guiyang**	**31.41 324**	⇓P	**P**	**11 24 19.0**	**+2.5**
GYA			pmax	pmax		
	comp=Z,13nm,0.7s					
GYA			L	L		
	comp=Z,210nm,22.3s					
MORW	**Morawa**	**31.93 198**	P	**P**	**11 24 20.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**31.95 304**	P	**P**	**11 24 20.8**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=125,slow=6.8,SNR=6.1					
CMAR			LR	LR	11 39 20.1	
	comp=Z,70nm,18.2s,baz=105,slow=40					
	comp=Z,0.6nm,0.4s					
CMAR	**Chiang Mai Arr**	**31.95 304**	P	**P**	**11 24 20.5**	**-0.8**
FORT	**Forrest**	**32.03 178**	P	**P**	**11 24 21.5**	**-0.3**
FORT			IAmb	IAmb	11 24 23.3	
	comp=Z,8.4nm,0.7s					
JMN	**Monobe**	**32.88 11**	P	**P**	**11 24 26.4**	**-2.9**
KMI2	**Kunming**	**32.94 318**	P	**P**	**11 24 32.2**	**+2.0**
KMI2			pmax	pmax		
	comp=Z,12nm,1.1s					
KMI2			L	L		
	comp=Z,280nm,27.4s					
ENH	**Enshi**	**32.97 332**	P	**P**	**11 24 28.9**	**-1.3**
ENH			IAmb	IAmb	11 24 33.9	
	comp=Z,17nm,0.8s					
ENH	**Enshi**	**32.97 332**	P	**P**	**11 24 30.5**	**+0.3**
PZH	**PanZhiHua**	**34.52 318**	P	**P**	**11 24 46.3**	**+2.5**
HNR	**Honiara**	**34.96 109**	LR	LR	11 38 20.0	
	comp=Z,6.4nm,21.3s,baz=354,slow=35					
BBOO	**Buckleboo**	**35.19 166**	P	**P**	**11 24 49.4**	**0.0**
BBOO			IAmb	IAmb	11 24 51.4	
	comp=Z,13nm,0.7s					
NWAO	**Narrogin (SRO)**	**35.26 194**	P	**P**	**11 24 49.2**	**-0.7**
KSRS	**Korea Array**	**35.90 2**	P	**P**	**11 24 56.4**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=178,slow=10,SNR=12					
	comp=Z,1.8nm,0.8s					
KS19	**Wonju Array Si**	**35.95 2**	P	**P**	**11 24 55.5**	**-0.3**
KS19			IAmb	IAmb	11 26 04.5	
	comp=Z,14nm,1.3s					
STKA	**Stephens Creek**	**36.04 158**	P	**P**	**11 24 55.8**	**-0.9**
	comp=Z,8.5nm,0.7s,baz=330,slow=7.1,SNR=18					
	comp=Z,8.5nm,0.7s					
STKA	**Stephens Creek**	**36.04 158**	P	**P**	**11 24 57.5**	**+0.8**
XAN	**Xi'an**	**36.42 335**	P	**P**	**11 24 59.6**	**-0.3**
XAN			pmax	pmax		
	comp=Z,18nm,1.0s					
XAN			L	L		
	comp=Z,180nm,17.2s					
XAN			L	L		
	comp=Z,130nm,20.6s					
XAN			L	L		
	comp=Z,200nm,14.4s					
CD2	**Chengdu**	**36.44 326**	P	**P**	**11 24 59.8**	**-0.3**
CD2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
CD2			L	L		
	comp=Z,180nm,13.3s					
CD2			L	L		
	comp=Z,270nm,10.8s					
CD2			L	L		
	comp=Z,170nm,11.4s					
MJAR	**Matsushiro Arr**	**36.59 16**	P	**P**	**11 25 01.7**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=192,slow=10,SNR=6.8					
	comp=Z,3.7nm,0.9s					
MJAR	**Matsushiro Arr**	**36.59 16**	P	**P**	**11 25 00.2**	**-1.1**
HNS	**HongShan**	**37.45 344**	⇑P	**P**	**11 25 10.5**	**+2.0**
HNS			pmax	pmax		
	comp=Z,11nm,0.9s					
DL2	**Dalian**	**37.60 354**	P	**P**	**11 25 12.2**	**+2.4**
DL2			S	**S**	**11 31 05.9**	**+6.6**
DL2			pmax	pmax		
	comp=Z,53nm,0.9s					
DL2			L	L		
	comp=Z,130nm,14.7s					
DL2			L	L		
	comp=Z,170nm,15.5s					
DL2			L	L		
	comp=Z,280nm,15.5s					
BJI2	**Beijing**	**39.58 347**	P	**P**	**11 25 27.4**	**+0.9**
BJI2			pmax	pmax		
	comp=Z,4.0nm,1.2s					
BJT	**Baijiatuan**	**39.58 347**	P	**P**	**11 25 26.7**	**+0.2**
ARMA	**Armidale**	**39.65 145**	P	**P**	**11 25 27.3**	**0.0**
LZH	**Lanzhou**	**40.43 331**	*e*P	**P**	**11 25 33.0**	**-0.8**
LZH			sP	pwP	11 25 42.0	+3.1
LZH			pmax	pmax		
	comp=Z,23nm,1.3s					
SHL	**Shillong**	**41.15 309**	P	**P**	**11 25 39.0**	**-0.9**
HHC	**Hu-ho-hao-te**	**41.55 343**	*e*P	**P**	**11 25 44.1**	**+1.2**
HHC			pmax	pmax		
	comp=Z,4.0nm,0.6s					
HHC			pmax	pmax		
	comp=Z,67nm,4.5s					
BTO2	**Baotou**	**41.98 341**	*e*P	**P**	**11 25 47.3**	**+0.9**
BTO2			S	**S**	**11 32 07.1**	**+1.9**
BTO2			pmax	pmax		
	comp=Z,21nm,0.6s					
BTO2			pmax	pmax		
	comp=Z,140nm,4.4s					
BTO2			L	L		
	comp=Z,210nm,6.3s					
BTO2			L	L		
	comp=Z,160nm,6.5s					
BTO2			L	L		
	comp=Z,420nm,16.6s					
CAN	**Canberra**	**42.13 152**	P	**P**	**11 25 46.9**	**-0.7**
CAN			IAmb	IAmb	11 27 06.2	
	comp=Z,58nm,1.6s					
TOO	**Toolangi**	**42.56 158**	P	**P**	**11 25 50.8**	**-0.3**
KOUNC	**Koumac, New Ca**	**42.91 123**	P	**P**	**11 25 52.9**	**-1.2**
KOUNC			IAmb	IAmb	11 26 04.3	
	comp=Z,36nm,1.1s					
MDJ	**Mudanjiang**	**43.12 3**	P	**P**	**11 25 54.9**	**-0.5**
MDJ	**Mudanjiang**	**43.12 3**	P	**P**	**11 25 58.5**	**+3.0**
LSA	**Lhasa**	**43.87 313**	P	**P**	**11 26 01.2**	**-1.1**
BNX	**BinXian**	**44.16 1**	⇓P	**P**	**11 26 08.5**	**+4.7**
BNX			pmax	pmax		
	comp=Z,7.0nm,1.0s					
GTA2	**Gaotai**	**45.09 330**	*e*P	**P**	**11 26 11.4**	**-0.2**
GTA2			PcP	**PP**	**11 27 55.0**	**-2.1**
GTA2			pmax	pmax		
	comp=Z,4.0nm,1.0s					
GTA2			L	L		
	comp=Z,120nm,17.9s					
GTA2			L	L		
	comp=Z,120nm,17.9s					
GTA2			L	L		
	comp=Z,180nm,17.9s					
PALK	**Pallekele**	**46.07 279**	LR	LR	11 47 09.6	
	comp=Z,93nm,20.8s,baz=118,slow=38					
EVN	**Everest**	**46.26 308**		**P**	**11 26 20.3**	**-1.3**
EVN			IAmb	IAmb	11 26 25.2	
	comp=Z,15nm,1.3s					
EVN	**Everest**	**46.26 308**	P	**P**	**11 26 21.4**	**-0.2**
YSS	**Yuzhno-Sakhali**	**47.52 15**	P	**P**	**11 26 29.4**	**-1.0**
YSS			IAmb	IAmb	11 26 35.7	
	comp=Z,21nm,1.2s					
YSS	**Yuzhno-Sakhali**	**47.52 15**	P	**P**	**11 26 33.5**	**+3.2**
HIA	**Hailar**	**48.04 354**	P	**P**	**11 26 33.3**	**-1.1**
HILR	**Hailar Array B**	**48.33 354**	P	**P**	**11 26 37.5**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=162,slow=10,SNR=3.8					
	comp=Z,2.6nm,0.5s					
HEH	**HeiHe**	**48.68 1**	*e*P	**P**	**11 26 40.2**	**+1.0**
HEH			pmax	pmax		
	comp=Z,10.0nm,1.3s					
ULN	**Ulaanbaatar**	**49.27 343**	P	**P**	**11 26 43.8**	**-0.2**
ULN	**Ulaanbaatar**	**49.27 343**	P	**P**	**11 26 45.4**	**+1.4**
SONM	**Songino Array**	**49.44 342**	P	**P**	**11 26 46.1**	**+0.8**
	comp=Z,5.0nm,1.1s,baz=163,slow=8.7,SNR=9.6					
	comp=Z,5.0nm,1.1s					
SONM	**Songino Array**	**49.44 342**	P	**P**	**11 26 45.5**	**+0.2**
MSVF	**Nonsavu**	**54.14 113**	LR	LR	11 49 04.2	
	comp=Z,87nm,19.6s,baz=317,slow=34					
WMQ	**Urumqi**	**54.53 326**	*e*P	**P**	**11 27 25.2**	**+1.9**
WMQ			pmax	pmax		
	comp=Z,18nm,0.7s					
WMQ			L	L		
	comp=Z,110nm,21.7s					
PETK	**Petropavlovsk-**	**57.64 22**	P	**P**	**11 27 46.0**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=180,slow=3.6,SNR=10					
	comp=Z,2.2nm,0.6s					
PETK	**Petropavlovsk-**	**57.64 22**	P	**P**	**11 27 44.7**	**-0.5**
WUS	**Wushi**	**58.19 319**	P	**P**	**11 27 50.9**	**+1.4**
ZSN	**Zaisan**	**58.37 328**	*e*P	**P**	**11 27 50.9**	**+0.4**
SHLS	**Shalkode**	**59.03 321**	*e*P	**P**	**11 27 53.8**	**-1.6**
PDGK	**Podgornoye**	**59.10 321**		**P**	**11 27 55.7**	**-0.2**
UZB	**Uzynbulak**	**59.30 321**	*e*P	**P**	**11 27 57.6**	**+0.3**
MKAR	**Makanchi Array**	**59.37 326**	P	**P**	**11 27 57.5**	**0.0**
	comp=Z,2.6nm,0.4s,baz=120,slow=7.9,SNR=25					
MKAR			LR	LR	11 54 33.1	
	comp=Z,130nm,21.6s,baz=56,slow=37					
	comp=Z,2.6nm,0.4s					
MKAR	**Makanchi Array**	**59.37 326**	P	**P**	**11 27 57.7**	**+0.2**
TARG	**Taragay, Kyrgy**	**59.37 319**	P	**P**	**11 27 57.8**	**-0.3**
TARG			IAmb	IAmb	11 28 12.4	
	comp=Z,12nm,1.4s					
TARG	**Taragay, Kyrgy**	**59.37 319**	P	**P**	**11 27 60.0**	**+1.9**
MAKZ	**Makanchi**	**59.55 326**	P	**P**	**11 27 58.4**	**-0.3**
MAKZ			IAmb	IAmb	11 28 04.0	
	comp=Z,7.5nm,0.9s					
MAKZ	**Makanchi**	**59.55 326**	P	**P**	**11 27 58.9**	**+0.1**
SATY	**Saty**	**59.64 321**	*e*P	**P**	**11 27 59.8**	**+0.3**
	comp=Z,9.9nm,0.9s					
KPKS	**Kokpek**	**59.67 321**	*e*P	**P**	**11 28 00.0**	**+0.3**
KSH2	**Kashi**	**59.70 316**	P	**P**	**11 28 00.4**	**+0.4**
KSH2			pP	pwP	11 28 07.7	+2.4
KSH2			pmax	pmax		
	comp=Z,3.0nm,0.6s					
ASAI	**AK-SAY(Kyrgyzs**	**59.84 318**	P	**P**	**11 28 01.6**	**+0.4**
NRN	**Naryn**	**60.42 318**		**P**	**11 28 03.5**	**-1.7**
NRN			IAmb	IAmb	11 28 08.7	
	comp=Z,4.8nm,0.8s					
YAK	**Yakutsk**	**60.53 2**	P	**P**	**11 28 04.6**	**-0.4**
MDOK	**Medeo**	**60.56 320**	*e*P	**P**	**11 28 06.1**	**+0.2**
TNSS	**Tian-Shan**	**60.56 320**	*e*P	**P**	**11 28 06.4**	**+0.2**
TDK	**Taldyqorghan**	**60.64 323**	*e*P	**P**	**11 28 06.7**	**+0.5**
	comp=Z,7.7nm,0.8s					
AAA	**Alma-Ata**	**60.66 320**	*e*P	**P**	**11 28 07.0**	**+0.4**
AAK	**Ala-Archa**	**61.97 319**	P	**P**	**11 28 14.9**	**-0.6**
AAK			IAmb	IAmb	11 28 26.7	
	comp=Z,6.3nm,1.1s					
AAK	**Ala-Archa**	**61.97 319**	P	**P**	**11 28 16.6**	**+1.1**
SGDS	**Sogindy**	**62.25 320**	*e*P	**P**	**11 28 17.7**	**+0.4**
ARSB	**Arslanbob**	**62.41 317**	P	**P**	**11 28 18.1**	**-0.4**
ARSB			IAmb	IAmb	11 28 21.8	
	comp=Z,7.8nm,1.0s					
SEM	**Semipalatinsk**	**62.58 329**	*e*P	**P**	**11 28 19.7**	**+0.2**
ZAA0	**Zalesovo Array**	**62.58 334**	P	**P**	**11 28 18.7**	**-0.4**
ZAA0			IAmb	IAmb	11 28 20.9	
	comp=Z,7.2nm,1.1s					
ZALV	**Zalesovo Beam**	**62.58 334**	P	**P**	**11 28 18.4**	**-0.7**
	comp=Z,5.9nm,1.0s,baz=123,slow=5.5,SNR=10					
	comp=Z,5.9nm,1.0s					
ZALV	**Zalesovo Beam**	**62.58 334**	P	**P**	**11 28 18.1**	**-0.9**
KBL	**Kabul**	**62.81 308**	P	**P**	**11 28 20.4**	**-0.9**
KBL			IAmb	IAmb	11 28 23.7	
	comp=Z,5.5nm,0.8s					
AFI	**Afiamalu**	**62.94 106**	LR	LR	11 55 25.2	
	comp=Z,43nm,19.8s,baz=80,slow=36					
ARK	**Arkit**	**63.31 317**	P	**P**	**11 28 24.8**	**+0.5**
GAR	**Garm**	**63.38 314**	P	**P**	**11 28 24.0**	**-0.9**
GAR	**Garm**	**63.38 314**	P	**P**	**11 28 24.7**	**-0.2**
BTK	**Batken**	**63.41 315**		**P**	**11 28 24.5**	**-0.6**
BTK			IAmb	IAmb	11 28 29.9	
	comp=Z,7.8nm,1.0s					
BTK	**Batken**	**63.41 315**	P	**P**	**11 28 24.9**	**-0.2**
KURBB	**Kurchatov Arra**	**63.60 328**	P	**P**	**11 28 25.6**	**-0.3**
	comp=Z,9.5nm,0.8s,baz=126,slow=6.2,SNR=61					
	comp=Z,9.5nm,0.8s					
KURK	**Kurchatov**	**63.61 328**	P	**P**	**11 28 25.5**	**-0.5**
CHGR	**Chuyangaron**	**64.10 313**		**P**	**11 28 29.0**	**-0.5**
CHGR	**Chuyangaron**	**64.10 313**	P	**P**	**11 28 29.1**	**-0.5**
SHAA	**Shahritus**	**64.49 311**	P	**P**	**11 28 31.3**	**-0.9**
SHAA			IAmb	IAmb	11 28 57.

KBZ	**Khabaz**	**84.45**	**314**	P	**P**	**11 30 27.2**	**-0.7**
	comp=Z,5.9nm,0.9s,baz=134,slow=6.0,SNR=12						
	comp=Z,5.9nm,0.9s						
PPT	**Papeete**	**84.57**	**108**	LR	LR	12 07 53.9	
	comp=Z,44nm,18.1s,baz=274,slow=35						
PPT2	**Papeete2**	**84.57**	**108**	*e*LR	LR	11 57 05.4	
	comp=Z,72nm,22.8s						
GURO	**Guroymak-BITLI**	**84.84**	**308**	P	**P**	**11 30 29.4**	**-0.9**
TBI	**Tubuai**	**85.02**	**113**	*e*LR	LR	11 57 13.9	
	comp=Z,1µm,27.5s						
M22K	**Willow**	**85.60**	**28**	P	**P**	**11 30 32.6**	**-0.8**
E23K	**Chandalar**	**86.39**	**22**	IAmb	IAmb	11 30 44.9	
	comp=Z,5.1nm,0.9s						
KELT	**Kelkit**	**87.04**	**310**	P	**P**	**11 30 42.6**	**+1.3**
ILAR	**Eielson Array**	**87.27**	**25**	P	**P**	**11 30 41.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=253,slow=3.8,SNR=6.9						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**87.27**	**25**	P	**P**	**11 30 41.3**	**-0.3**
ASF	**Jabal al Asfar**	**88.97**	**302**	LR	LR	12 15 35.4	
	comp=Z,26nm,20.9s,baz=181,slow=39						
L27K	**Beaver Creek,**	**89.50**	**27**	IAmb	IAmb	11 33 54.3	
	comp=Z,3.9nm,0.8s						
BCAR	**Beaver Creek A**	**89.52**	**27**	P	**P**	**11 30 52.0**	**-0.4**
G29M	**Pine Creek**	**90.86**	**23**	IAmb	IAmb	11 31 02.6	
	comp=Z,4.9nm,1.1s						
L29M	**L29M**	**91.17**	**27**	IAmb	IAmb	11 31 06.7	
	comp=Z,6.0nm,1.1s						
QSPA	**South Pole Qui**	**91.32**	**180**	P	**P**	**11 30 59.4**	**-1.3**
	comp=Z,1.5nm,1.0s,baz=265,slow=1.2,SNR=8.6						
	comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**91.32**	**180**	P	**P**	**11 30 60.0**	**-0.8**
BRTR	**Keskin Array B**	**91.36**	**310**	P	**P**	**11 31 01.1**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=129,slow=4.0,SNR=6.6						
	comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	**91.36**	**310**	P	**P**	**11 31 00.8**	**-0.8**
M30M	**Minto, Yukon**	**91.84**	**27**	IAmb	IAmb	11 33 37.5	
	comp=Z,1.1nm,1.8s						
KKUL	**Konya-Kullu**	**91.95**	**309**	P	**P**	**11 31 04.7**	**+0.4**
ARCES	**ARCESS Array B**	**92.56**	**340**	P	**P**	**11 31 06.5**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=72,slow=4.0,SNR=4.3						
	comp=Z,2.6nm,0.9s						
ARCES	**ARCESS Array B**	**92.56**	**340**	P	**P**	**11 31 06.6**	**+0.3**
SPITS	**Spitsbergen Ar**	**92.72**	**349**	LR	LR	12 17 28.5	
	comp=Z,80nm,18.1s,baz=97,slow=38						
AKASG	**Malin Array Be**	**93.58**	**321**	P	**P**	**11 31 12.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=71,slow=3.6,SNR=4.3						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**93.58**	**321**	P	**P**	**11 31 09.6**	**-1.7**
N32M	**Quiet Lake**	**93.78**	**29**	IAmb	IAmb	11 31 16.9	
	comp=Z,4.2nm,0.8s						
FINES	**FINESS Array B**	**93.79**	**332**	P	**P**	**11 31 13.6**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=137,slow=4.9,SNR=4.7						
FINES				LR	LR	12 17 20.9	
	comp=Z,75nm,18.0s,baz=89,slow=38						
	comp=Z,2.4nm,0.8s						
FINES	**FINESS Array B**	**93.79**	**332**	P	**P**	**11 31 11.9**	**-0.1**
MMPY	**Sheldon Lake,**	**94.36**	**27**		**P**	**11 31 14.5**	**-0.3**
MMPY				IAmb	IAmb	11 31 21.7	
	comp=Z,5.3nm,1.3s						
MBAR	**Mbarara**	**95.83**	**270**	LR	LR	12 13 48.6	
	comp=Z,72nm,20.3s,baz=140,slow=35						
MLR	**Muntele Rosu**	**96.44**	**316**	LR	LR	12 21 49.9	
	comp=Z,114nm,18.1s,baz=72,slow=40						
BURAR	**Bucovina Array**	**96.61**	**318**	P	**P**	**11 31 24.5**	**-0.9**
BURAR				IAmb	IAmb	11 31 27.0	
	comp=Z,3.2nm,0.9s						
BUR08	**Bucovina Ar. S**	**96.62**	**318**	P	**P**	**11 31 23.8**	**-1.7**
BUR08				IAmb	IAmb	11 31 29.3	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**123.14**	**53**	PKP	**PKiKP**	**11 36 54.8**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=218,slow=0.3,SNR=4.6						
TORD	**Torodi Ar. Bea**	**123.44**	**287**	PKP	**PKiKP**	**11 36 54.1**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=56,slow=2.3,SNR=10						
MT03	**Universidad Ad**	**144.29**	**155**	PKPdf	**PKPab**	**11 37 29.9**	**0.0**
MT16	**CCHEN**	**144.34**	**155**	PKPdf	**PKPab**	**11 37 29.7**	**-0.4**
MT08	**Bocatoma Ro**	**144.53**	**156**	PKPdf	**PKPab**	**11 37 31.2**	**+0.1**
VA03	**San Esteban**	**144.90**	**154**	PKPdf	**PKPab**	**11 37 32.3**	**+0.1**
CO06	**Fray Jorge**	**146.16**	**151**	PKPdf	**PKPdf**	**11 37 34.2**	**-1.1**
JTS	**Las Juntas de**	**146.56**	**69**	PKPdf	**PKPdf**	**11 37 35.1**	**-1.2**
BILN	**Bilwi Airport**	**146.61**	**62**	PKPdf	**PKPdf**	**11 37 35.0**	**-1.4**
GO04	**Tololo Observa**	**146.98**	**152**	PKPdf	**PKPdf**	**11 37 35.2**	**-1.7**

*NEIC **06** 11:18:48.1±0.8, 19°41N±0°06×64°95W±0°05, h10km±2km, ML3.1/41, Error ellipse: s-maj=12.3km s-min=4.6km az=319.0*
*SDD **06** 11:18:56.6±0.7, 19°53N×65°56W, h48km±311km, MD3.8, ML2.6, MW2.6, Presumed earthquake*
ISC 06 11:18:46.9±1.9, 19°6N±0°1×65°16W±0°08, h23km, n24, σ1s28/25, 3C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.58**	**205**			**Pb**	**11 19 14.5**	**-1.0**
HUMP				Sn		**Sb**	**11 19 35.1**	**+0.1**
ECPR	**Experimental S**	**1.70**	**222**			**Pb**	**11 19 18.3**	**+0.7**
ECPR				Sn		**Sb**	**11 19 40.1**	**+1.6**
ECPR				IAML			11 19 41.0	
	171nm,0.2s							
ECPR				IAML			11 19 43.0	
	174nm,0.3s							
SJG	**San Juan**	**1.74**	**213**	Pn		**Pb**	**11 19 17.6**	**-0.6**
SJG	**San Juan**	**1.74**	**213**	↑*i*P		**Pb**	**11 19 20.1**	**+1.9**
PDPR	**Patillas Dam,**	**1.76**	**208**	Pn		**Pb**	**11 19 18.1**	**-0.5**
AOPR	**Arecibo Observ**	**1.95**	**231**	Pn		**Pb**	**11 19 22.0**	**+0.2**
AOPR				Sn		**Sb**	**11 19 46.9**	**+1.2**
AOPR				IAML			11 20 03.3	
	153nm,0.5s							
AOPR	**Arecibo Observ**	**1.95**	**231**	IAML			11 19 46.9	
	comp=E,340nm,0.2s							
AOPR				IAML			11 19 47.8	
	comp=N,120nm,0.7s							
UUPR	**Utuado, UPR, P**	**1.99**	**228**	Pn		**Pb**	**11 19 22.6**	**+0.2**
CELP	**Cerrillos**	**2.02**	**222**			**Pb**	**11 19 23.0**	**+0.1**
CELP				IAML			11 19 40.0	
	comp=N,127nm,0.1s							
CELP	**Cerrillos**	**2.02**	**222**	↑*i*P		**Pb**	**11 19 23.7**	**+0.8**
CELP				IAML			11 19 39.8	
	comp=E,17nm,0.1s							
CELP				↑*i*S		**Sn**	**11 19 43.0**	**-1.1**
	comp=N,31nm,0.2s							
CELP				IAML			11 19 43.2	
	comp=N,31nm,0.2s							
OBIP	**Obispado Ponce**	**2.06**	**222**			**Pb**	**11 19 22.3**	**-1.3**
AGPR	**Aguadilla, PR**	**2.16**	**239**	Pn		**Pb**	**11 19 25.3**	**0.0**
AGPR				IAML			11 19 57.5	
	comp=N,64nm,1.0s							
AGPR				IAML			11 20 10.8	
	comp=N,68nm,1.8s							
PRSN	**Puerto Rico Se**	**2.32**	**235**			**Pb**	**11 19 27.2**	**-1.0**
PRSN				IAML			11 20 02.7	
	comp=N,174nm,0.3s							
MLPR	**Magueyes Islan**	**2.40**	**228**	Pn		**Pb**	**11 19 28.0**	**-1.5**
MLPR				IAML			11 19 45.8	
	comp=N,74nm,0.5s							
MLPR				IAML			11 19 46.1	
	comp=N,74nm,0.3s							
MLPR	**Magueyes Islan**	**2.40**	**228**	IAML			11 19 46.1	
	comp=N,26nm,0.2s							
MLPR				IAML			11 19 46.2	
	comp=E,30nm,0.3s							
CRPR	**Cabo Rojo, PR**	**2.43**	**230**	Pn		**Pb**	**11 19 29.1**	**-0.8**
SMRT	**St. Maarten**	**2.49**	**127**	Pn		**Pn**	**11 19 26.3**	**+0.2**
SMRT				IAML			11 20 42.3	
	comp=N,140nm,0.8s							
SMRT				IAML			11 20 53.6	
	comp=E,277nm,0.1s							
SABA	**Saba**	**2.67**	**137**	Pn		**Pn**	**11 19 27.4**	**-1.1**
SABA				IAML			11 20 17.3	
	comp=N,125nm,1.1s							
SEUS	**St. Eustatius**	**2.93**	**135**	Pn		**Pn**	**11 19 30.9**	**-1.2**
PCDR	**Punta Cana, DR**	**3.23**	**251**	IAML			11 20 15.1	
	comp=N,66nm,2.0s							
HATOM	**Hato Mayor del**	**4.07**	**259**	↓*i*P		**Pn**	**11 19 49.6**	**+1.7**
HATOM				IAML			11 20 41.3	
	comp=N,13nm,1.9s							
HATOM				IAML			11 20 43.5	
	comp=E,12nm,0.4s							
SDDR	**Presa de Saban**	**5.82**	**265**	*e*P		**Pn**	**11 20 14.7**	**+2.7**
SDDR				*e*S		**Sn**	**11 21 16.3**	**-1.9**
SDDR				IAML			11 21 19.4	
	comp=E,16nm,0.3s							
SDDR				IAML			11 21 19.7	
	comp=E,10nm,0.3s							
QMBU	**Quimbuelo**	**9.11**	**275**	*e*P		**Pn**	**11 20 55.5**	**-1.6**
QMBU				*e*S		Sn	11 22 25.9	-13
RCC	**Rio Carpintero**	**9.93**	**274**	*e*P		Pn	11 21 24.1	+16

*UPA **06** 11:30:48.1±1.1, 9°93N×79°33W, h47km±21km, ML3.8, MW2.6, Presumed earthquake*
*CATAC **06** 11:30:49.2±1.0, 10°N±6°×8°0W±°, h32km±9km, M2.4/7, MLv2.4/7, Error ellipse: s-maj=19.7km s-min=13.4km az=88.3, confirmed*
ISC 06 11:30:46.8±3.5, 10°0N±0°2×79°33W±0°07, h33km±9km, n12, σ0s56/24, 1C-3D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHPO	**Chepo, Panama**	**0.83**	**165**	↓*e*P		**Pb**	**11 31 03.2**	**+0.4**
CHPO				*e*S		**Sb**	**11 31 13.9**	**+0.3**
FRIJ	**El Hiral**	**0.84**	**207**	↓*i*P		**Pn**	**11 31 02.6**	**+0.2**
FRIJ				AMP			11 31 02.7	
	comp=Z,3µm,0.1s							
FRIJ				*e*S		**Sb**	**11 31 13.8**	**-0.2**
GAMB1	**Gamboa**	**0.93**	**204**	↑*i*P		**Pn**	**11 31 03.8**	**+0.2**
GAMB1				*e*S		**Sn**	**11 31 15.2**	**-0.5**
BCIP	**Isla Barro Col**	**0.94**	**212**	P		**Pn**	**11 31 04.1**	**+0.3**
BCIP				S		**Sn**	**11 31 15.4**	**-0.8**
BCIP	**Isla Barro Col**	**0.94**	**212**	↓*i*P		**Pn**	**11 31 04.1**	**+0.3**
BCIP				*e*S		**Sn**	**11 31 15.9**	**-0.3**
ARRA3	**Arraijan, Pana**	**1.05**	**198**	*e*P		**Pn**	**11 31 06.0**	**+0.7**
ARRA3				*e*S		**Sb**	**11 31 19.8**	**-0.2**
FLAM	**Flamenco Islan**	**1.07**	**191**	*e*P		**Pb**	**11 31 06.9**	**0.0**
FLAM				*e*S		**Sb**	**11 31 20.0**	**-0.6**
ZANG	**Zanguenga, Cho**	**1.14**	**207**	*e*P		**Pn**	**11 31 07.1**	**+0.6**
ZANG				*e*S		**Sb**	**11 31 21.8**	**-0.8**
CHOR3	**La Chorrera**	**1.15**	**202**	*e*P		**Pn**	**11 31 07.3**	**+0.7**
CHOR3				*e*S		**Sn**	**11 31 21.8**	**+0.5**
TABO3	**Taboga, Panama**	**1.19**	**190**	*e*P		**Pn**	**11 31 08.2**	**+1.0**
TABO3				*e*S		**Sn**	**11 31 22.5**	**+0.2**
TOTI	**Torti**	**1.45**	**136**	*e*P		**Pn**	**11 31 10.2**	**-0.5**
TOTI				*e*S		**Sn**	**11 31 28.6**	**0.0**
AZU	**Azuero**	**2.36**	**203**	*e*P		**Pn**	**11 31 23.5**	**+0.3**
AZU				*e*S		**Sn**	**11 31 50.3**	**-0.8**

*CATAC **06** 11:38:04.4±0.5, 7°N±2°×7°3W±°, h161km±5km, M4.1/7, mb4.3/2, mB4.2/1, MLv4.0/7, Mw(mB)3.2/1, Error ellipse: s-maj=11.5km s-min=4.0km az=97.4, confirmed*
*IDC **06** 11:38:05.6±1.0, 6°89N×73°13W, h151km±46km, mb3.3/4, mbtmp3.8/6, MS3.0/3, Error ellipse: s-maj=105.8km s-min=8.3km az=133.0*
*NEIC **06** 11:38:06.5±1.2, 6°90N±0°07×73°13W±0°06, h152km±9km, mb4.2/40, Error ellipse: s-maj=10.6km s-min=8.4km az=146.0*
*RSNC **06** 11:38:06.5±0.0, 7°N±1°×7°3W±°, h149km±1km, M3.7, mB4.9, mb4.3, ML3.3, Mw(mB)4.1*
*FUNV **06** 11:38:08.0, 7°15N×73°16W, h5km, MW3.1, Presumed earthquake*
ISC 06 11:38:05.6±0.6, 6°89N±0°03×73°14W±0°04, h151km±5km, n97, σ1s26/134, mb4.2/21, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**188**	P		**Pn**	**11 38 26.7**	**+0.1**
BARC				S		**Sn**	**11 38 41.8**	**-0.8**
BRJC	**Barrancabermej**	**0.60**	**278**	P		**Pn**	**11 38 28.0**	**+0.7**
BRJC				S		**Sn**	**11 38 45.5**	**+1.1**
PAMC	**Pamplona, Colo**	**0.63**	**44**	P		**Pn**	**11 38 29.5**	**+1.1**
PAMC				S		**Sn**	**11 38 46.6**	**+0.9**
RUSC	**La Rusia**	**0.99**	**177**	P		**Pn**	**11 38 30.6**	**-0.4**
RUSC				S		**Sn**	**11 38 50.1**	**-0.2**
RUSC	**La Rusia**	**0.99**	**177**	P		**Pn**	**11 38 30.6**	**-0.4**
RUSC				S		**Sn**	**11 38 49.7**	**-0.6**
RUSC	**La Rusia**	**0.99**	**177**	*e*P		**Pn**	**11 38 30.7**	**-0.2**
RUSC				*e*S		**Sn**	**11 38 48.6**	**-1.7**
PTBC	**PUERTO BERRIO,**	**1.35**	**255**	P		**Pn**	**11 38 33.0**	**-0.7**
PTBC				S		**Sn**	**11 38 53.9**	**-1.3**
OCAC	**Ocana**	**1.36**	**353**	P		**Pn**	**11 38 34.8**	**+0.8**
OCAC				S		**Sn**	**11 38 56.7**	**+1.0**
SPBC	**San Pablo de B**	**1.53**	**217**	P		**Pn**	**11 38 35.5**	**-0.2**
SPBC				S		**Sn**	**11 38 58.0**	**-0.8**
CHIC	**Chingaza**	**2.32**	**195**	P		**Pn**	**11 38 44.6**	**-0.4**
CHIC				S		**Sn**	**11 39 14.1**	**-1.2**
ROSC	**El Rosal**	**2.34**	**210**	P		**Pn**	**11 38 46.7**	**+1.4**
	151nm,0.3s,baz=97,slow=14,SNR=30							
ROSC				S		**Sn**	**11 39 16.2**	**+0.4**
	170nm,0.3s,baz=119,slow=13,SNR=6.3							
ROSC	**El Rosal**	**2.34**	**210**			**Pn**	**11 38 46.3**	**+1.0**
ROSC				Sn		**Sn**	**11 39 16.7**	**+0.9**
ROSC	**El Rosal**	**2.34**	**210**	P		**Pn**	**11 38 46.3**	**+1.0**
ROSC				S		**Sn**	**11 39 15.7**	**-0.1**
UREC	**San Jos de Ur**	**2.52**	**290**	P		**Pn**	**11 38 46.5**	**-0.6**
UREC				S		**Sn**	**11 39 17.4**	**-1.7**
CVER	**Cruz Verde, Cu**	**2.52**	**202**	P		**Pn**	**11 38 48.1**	**+0.5**
CVER				S		**Sn**	**11 39 19.5**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.76**	**233**	P		**Pn**	**11 38 50.8**	**+0.4**
GUY2C				S		**Sn**	**11 39 27.5**	**+2.5**
VILC	**Villavicencio,**	**2.81**	**191**	P		**Pn**	**11 38 50.2**	**-0.6**
VILC				S		**Sn**	**11 39 24.1**	**-1.6**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P		**Pn**	**11 38 54.2**	**+0.7**
CBOC				S		**Sn**	**11 39 30.2**	**-0.4**
SDV	**Santo Domingo**	**3.18**	**51**	P		**Pn**	**11 38 56.3**	**+0.8**
	119nm,0.4s,baz=193,slow=3.8,SNR=95							
SDV				S		**Sn**	**11 39 33.8**	**-0.3**
	103nm,0.5s,baz=280,slow=20,SNR=13							
SDV	**Santo Domingo**	**3.18**	**51**			**Pn**	**11 38 56.3**	**+0.8**
SDV				Sn		**Sn**	**11 39 34.4**	**+0.3**
SDV	**Santo Domingo**	**3.18**	**51**	*e*P		**Pn**	**11 38 56.4**	**+0.9**
SDV				*e*S		**Sn**	**11 39 33.3**	**-0.8**
APAC	**Apartado, Choc**	**3.56**	**287**	P		**Pn**	**11 39 00.5**	**+0.4**
APAC				S		**Sn**	**11 39 41.7**	**-0.7**
PRAC	**Prado**	**3.60**	**209**	P		**Pn**	**11 39 00.6**	**-0.1**
PRAC				S		**Sn**	**11 39 43.6**	**+0.1**
PRAC	**Prado**	**3.60**	**209**	P		**Pn**	**11 39 00.1**	**-0.6**
PRAC				S		**Sn**	**11 39 42.1**	**-1.4**
SJCC	**San Jacinto, C**	**3.61**	**326**	P		**Pn**	**11 39 00.5**	**-0.4**
SJCC				S		**Sn**	**11 39 42.8**	**-1.0**
SJCC	**San Jacinto, C**	**3.61**	**326**	P		**Pn**	**11 39 00.2**	**-0.7**
SJCC				S		**Sn**	**11 39 42.9**	**-0.9**
SJCC	**San Jacinto, C**	**3.61**	**326**	*e*P		**Pn**	**11 39 00.5**	**-0.4**
SJCC				*e*S		**Sn**	**11 39 41.4**	**-2.4**
ORTC	**Ortega, Tolima**	**3.62**	**215**	P		**Pn**	**11 39 01.1**	**0.0**
PLMC	**San Jos del P**	**3.69**	**238**	P		**Pn**	**11 39 02.0**	**0.0**
PLMC				S		**Sn**	**11 39 43.3**	**-2.4**
LCBC	**Los crdobas,**	**3.75**	**302**	P		**Pn**	**11 38 59.8**	**-2.8**
LCBC				S		**Sn**	**11 39 46.9**	**0.0**
URMC	**La Uribe, Meta**	**3.82**	**199**	P		**Pn**	**11 39 03.9**	**+0.3**
URMC				S		**Sn**	**11 39 47.1**	**-1.6**
MACC	**Macarena, Meta**	**4.76**	**189**	P		**Pn**	**11 39 13.9**	**-2.0**
MACC				S		**Sn**	**11 40 05.1**	**-5.7**
URI	**Uribia**	**4.92**	**13**	P		**Pn**	**11 39 17.3**	**-0.6**
URI				S		**Sn**	**11 40 11.7**	**-2.7**
URIC	**Uribia, Colomb**	**4.92**	**13**	P		**Pn**	**11 39 17.0**	**-1.0**
URIC				S		**Sn**	**11 40 12.0**	**-2.5**
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*P		**Pn**	**11 39 17.2**	**-0.7**
URIC				*e*S		**Sn**	**11 40 10.2**	**-4.2**
JAMC	**Jamundi, Valle**	**5.07**	**224**	P		**Pn**	**11 39 19.7**	**-0.4**
	1µm20nm,0.4s							
JAMC				S		**Sn**	**11 40 17.7**	**-0.6**
	1µm20nm,0.4s							
GARC	**Garzon, Huila**	**5.22**	**207**	P		**Pn**	**11 39 20.4**	**-1.8**
GARC				S		**Sn**	**11 40 18.3**	**-3.8**
POPC	**Popayan, Colom**	**5.57**	**219**	P		**Pn**	**11 39 26.4**	**-0.4**
	18nm,0.5s							
POPC				S		**Sn**	**11 40 30.9**	**+0.6**
	18nm,0.5s							
FLOC	**Florencia**	**5.83**	**206**	P		**Pn**	**11 39 29.4**	**-0.7**
FLOC				S		**Sn**	**11 40 35.2**	**-1.1**
FLOC	**Florencia**	**5.83**	**206**	P		**Pn**	**11 39 29.2**	**-0.9**
	429nm33nm,0.8s							
FLOC				S		**Sn**	**11 40 35.6**	**-0.7**
	429nm33nm,0.8s							
GR1C	**Gorgona, Isla**	**6.32**	**233**	P		**Pn**	**11 39 35.2**	**-1.4**
BCIP	**Isla Barro Col**	**7.01**	**289**	P		**Pn**	**11 39 44.4**	**-1.4**
	26nm,2.6s							
OTAV	**Otavalo**	**8.46**	**219**	Pn		**Pn**	**11 40 06.9**	**+1.2**
PIRO	**Carate, Puerto**	**10.22**	**279**	Pn		**Pn**	**11 40 28.3**	**-0.2**
MTDJ	**Mount Denham**	**12.06**	**340**	Pn		**Pn**	**11 40 55.8**	**+3.1**
MTDJ	**Mount Denham**	**12.06**	**340**	P		**Pn**	**11 40 56.3**	**+3.6**
MTDJ				S		**Sn**	**11 43 05.7**	**-0.5**
SDDR	**Presa de Saban**	**12.16**	**8**	Pn		**Pn**	**11 40 53.8**	**-0.2**
MPOM	**Morne Pois Mar**	**14.21**	**57**	Pn		**Pn**	**11 41 19.9**	**-0.2**
MAGL	**Barre de l'ile**	**14.70**	**51**	Pn		**Pn**	**11 41 25.7**	**-0.6**
MACA	**Manacapuru-AM**	**15.95**	**128**	P		**Pn**	**11 41 42.7**	**+0.4**
MACA				IAmb		IAmb	11 42 08.9	
	comp=Z,8.3nm,0.7s							
TEIG	**Tepich**	**19.78**	**314**	LR		LR	11 50 33.8	
	comp=Z,20nm,18.9s,baz=219,slow=38							
MDP	**Montagnes des**	**20.46**	**94**	LR		LR	11 51 25.3	
	comp=Z,43nm,21.4s,baz=108,slow=39							
Y60A	**Bolivia**	**27.39**	**351**	P		**P**	**11 43 36.7**	**-0.2**
PB02	**IPOC Station P**	**28.21**	**174**	P		**P**	**11 43 44.7**	**+0.3**
JSC	**Jenkinsville**	**28.28**	**346**	P		**P**	**11 43 44.2**	**-0.5**
JSC				IAmb		IAmb	11 44 08.3	
	comp=Z,12nm,1.5s							
V48A	**Smith Brothers**	**31.34**	**338**	P		**P**	**11 44 11.3**	**-0.5**
V48A				IAmb		IAmb	11 44 14.4	
	comp=Z,3.1nm,0.7s							
HNVL	**Huntsville, TX**	**31.65**	**321**	P		**P**	**11 44 13.9**	**-0.7**
WVT	**Waverly**	**32.07**	**337**	P		**P**	**11 44 19.4**	**+1.2**
833A	**Chaparral WMA,**	**32.73**	**314**	P		**P**	**11 44 23.6**	**-0.4**
833A				IAmb		IAmb	11 44 27.7	
	comp=Z,4.5nm,1.1s							
PEBM	**Pemiscott Bayo**	**32.88**	**335**	P		**P**	**11 44 25.8**	**+0.6**
T45A	**Paducah**	**33.16**	**337**	P		**P**	**11 44 28.6**	**+1.0**
PARMO	**Parma**	**33.30**	**335**	P		**P**	**11 44 28.1**	**-0.7**
WHAR	**Wooly Hollow**	**33.30**	**331**	P		**P**	**11 44 29.8**	**+0.9**
WHAR				IAmb		IAmb	11 44 30.4	
	comp=Z,3.6nm,1.1s							
BDFB	**Brasilia**	**33.47**	**132**	P		**P**	**11 44 30.7**	**-0.1**
BDFB				IAmb		IAmb	11 44 44.5	
	comp=Z,7.1nm,1.3s							
FCAR	**Ozark Folk Cen**	**33.71**	**332**	P		**P**	**11 44 32.6**	**+0.2**
FCAR				IAmb		IAmb	11 44 33.3	
	comp=Z,4.3nm,1.5s							
SAND	**Sanderson**	**35.62**	**314**	P		**P**	**11 44 48.0**	**-1.0**
SFIN	**Lafayette**	**35.62**	**342**	P		**P**	**11 44 49.4**	**+0.6**
SFIN				IAmb		IAmb	11 44 50.4	
	comp=Z,4.2nm,0.5s							
R40A	**Maddies Statio**	**35.74**	**334**	P		**P**	**11 44 49.9**	**0.0**
R40A				IAmb		IAmb	11 44 50.9	
	comp=Z,1.7nm,0.4s							
TXAR	**Lajitas Array**	**36.40**	**312**	P		**P**	**11 44 55.8**	**0.0**
	comp=Z,0.4nm,0.7s,baz=129,slow=9.5,SNR=6.2							
	comp=Z,0.4nm,0.7s							
TXAR	**Lajitas Array**	**36.40**	**312**	P		**P**	**11 44 55.9**	**+0.2**
J55A	**Hilton**	**36.47**	**354**	P		**P**	**11 44 56.0**	**+0.1**
J55A				IAmb		IAmb	11 45 07.8	
	comp=Z,6.5nm,1.0s							
GO04	**Tololo Observa**	**36.91**	**177**	P		**P**	**11 44 59.7**	**-0.4**
P38A	**Dawn**	**37.40**	**334**	P		**P**	**11 45 04.2**	**+0.4**
P38A				IAmb		IAmb	11 45 04.5	
	comp=Z,2.9nm,0.5s							
LONY	**Lake Ozonia**	**37.61**	**358**	P		**P**	**11 45 05.2**	**-0.4**
LONY				IAmb		IAmb	11 45 33.6	
	comp=Z,5.1nm,1.2s							
ELIS	**Ellis County**	**37.71**	**324**	P		**P**	**11 45 05.0**	**-1.6**
G65A	**Princeton**	**38.48**	**6**	P		**P**	**11 45 13.5**	**+0.7**
G65A				IAmb		IAmb	11 45 14.7	
	comp=Z,8.6nm,1.2s							
MNTX	**Cornudas Mount**	**38.91**	**314**	P		**P**	**11 45 17.7**	**+1.0**
JFWS	**Jewell Farm**	**38.93**	**340**	P		**P**	**11 45 17.7**	**+1.1**
JFWS				IAmb		IAmb	11 45 41.7	
	comp=Z,2.5nm,0.7s							
LMN	**Caledonia Moun**	**39.49**	**9**	P		**P**	**11 45 20.8**	**-0.4**
LMN				IAmb		IAmb	11 45 32.8	
	comp=Z,8.9nm,1.3s							
BATG	**Bathurst New B**	**40.70**	**7**	P		**P**	**11 45 32.5**	**+1.3**
ECSD	**EROS Data Cent**	**42.08**	**334**	P		**P**	**11 45 42.6**	**+0.1**
ICQ	**Pointe Anglais**	**42.78**	**6**			**P**	**11 45 48.3**	**+0.3**
ICQ				IAmb		IAmb	11 45 53.4	
	comp=Z,10nm,0.9s							
EYMN	**Ely**	**43.80**	**342**	P		**P**	**11 45 56.4**	**+0.1**
EYMN				IAmb		IAmb	11 46 01.0	
	comp=Z,4.3nm,1.1s							
PV13	**Radium Mtn., P**	**44.84**	**319**	P		**P**	**11 46 06.4**	**+1.3**
PV18	**Skein Mesa, Pa**	**44.95**	**319**	P		**P**	**11 46 05.0**	**-0.8**
HMU	**Henry Mountain**	**45.98**	**318**	P		**P**	**11 46 14.0**	**-0.1**
ULM	**Lac du Bonnet**	**47.22**	**340**	P		**P**	**11 46 22.9**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=151,slow=6.8,SNR=5.1							
	comp=Z,1.2nm,0.4s							
ULM	**Lac du Bonnet**	**47.22**	**340**	P		**P**	**11 46 23.0**	**-0.1**
ULM				IAmb		IAmb	11 46 31.1	
	comp=Z,5.5n

ASAR	**Alice Springs**	**41.65**	**269**	P		**P**	**11 56 49.9**	**+0.1**
	0.5nm,0.5s,baz=107,slow=7.2,SNR=16							
	0.5nm,0.5s							
WRA	**Warramunga Arr**	**42.70**	**274**	P		**P**	**11 56 58.1**	**-0.2**
	0.6nm,0.3s,baz=111,slow=8.0,SNR=15							
	0.6nm,0.3s							
QSPA	**South Pole Qui**	**58.97**	**180**	P		**P**	**11 59 00.0**	**+1.5**
	11nm,0.8s,baz=216,slow=1.8,SNR=65							
	11nm,0.8s							
TROLL	**Troll, Antarti**	**77.12**	**181**	⇓P		**P**	**12 00 51.0**	**0.0**
	comp=Z,89nm,0.4s							
SNAA	**Sanae**	**77.44**	**179**	⇓P		**P**	**12 00 52.4**	**-0.3**
	comp=Z,16nm,0.4s							
SNAA	**Sanae**	**77.44**	**179**	P		**P**	**12 00 52.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=242,slow=7.9,SNR=3.7							
	comp=Z,0.5nm,0.4s							
VNA2	**Neumayer--Watz**	**78.07**	**177**	⇓P		**P**	**12 00 56.1**	**0.0**
	comp=Z,3.0nm,0.5s,baz=189,slow=3.8							
PETK	**Petropavlovsk-**	**86.19**	**347**	P		**P**	**12 01 36.3**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=175,slow=6.3,SNR=4.2							
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**145.33**	**338**	PKPbc		**PKPdf**	**12 08 30.6**	**-2.0**
	comp=Z,2.8nm,0.5s,baz=61,slow=4.1,SNR=21							

*MOS **06** 11:50:14.7±1.5,51.˚65N×104.˚56E,h12km,mb4.2/13,Error ellipse: s-maj=6.3km s-min=5.2km az=70.4*
MOS Felt (V) at Maksimikha; (IV-V) at Baykal'sk; (IV) at Angarsk, Baklashi, Barguzin, Bol'shoy Lug, Granovshchina, Irkutsk, Kuytun, Maksimovshchina, Mamony, Markova, Novaya Razvodnaya, Olkha, Pivovarikha, Podkamennaya, Rechka Vydrino, Suvo, Tankhoy, Uro, Ust'-Barguzin, Chistyye Klyuchi, Shelekhov; (III-IV) at Dobrolet, Zakamensk, Savvateyevka, Malaya Topka, Meget, Molodyozhnyy, Moty, Oyek, Pad' Mel'nichnaya,Patrony, Plishkino, Usol'ye-Sibirskoye, Utulik; (III) at Svirsk, Smolenshchina, Ulan-Ude, Ulekchin, Ust'-Ordynskiy; (II-III) at Onguren.
*IDC **06** 11:50:15.2±0.6,51.˚69N×104.˚63E,h0km,mb3.8/14, mbtmp3.9/22,ML4.0/7,MS3.5/18,Error ellipse: s-maj=12.4km s-min=7.4km az=5.0*
*NEIC **06** 11:50:15.5±1.4,51.˚73N±0.˚08×104.˚68E±0.˚06,h10km±1km, mb4.3/59,Error ellipse: s-maj=13.4km s-min=5.9km az=177.0*
*BYKL **06** 11:50:17.2±0.2,51.˚69N×104.˚55E,h19km±2km,FELT I=IV-V MSK at Baikalsk; IV at Irkutsk, Baklashi, Chistye Klyuchi, Angarsk, Vydrino, Shelekhov, Bolshoi Lug, Tankhoy, Kuytun (Republic of Buryatia), Granovshchina, Pivovarikha, Podkamennaya, Markova, Olkha, Maksimovshchina.*

ISC 06 11:50:16.4±0.6,51.˚74N±0.˚02×104.˚60E±0.˚02,h12km±4km, n210,σ1§80/256,mb4.3/46,MS3.5/15,13C-11D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IVK	**Ivanovka**	**0.13**	**299**	⇓*i*PG		**Pb**	**11 50 21.7**	**+0.8**
IVK				*e*S		**Sb**	**11 50 24.5**	**+2.4**
IVK	**Ivanovka**	**0.13**	**299**	⇓*i*Pg		**Pb**	**11 50 21.7**	**+0.8**
IVK				Pmax			11 50 22.1	
	6µm,0.1s							
IVK				*e*Sg		**Sb**	**11 50 24.5**	**+2.4**
IVK				Smax			11 50 25.1	
	75µm,0.2s							
LSTR	**Listvyanka**	**0.20**	**47**	⇓*i*PG		**Pb**	**11 50 23.1**	**+1.2**
LSTR				*e*S		**Sb**	**11 50 27.2**	**+3.6**
LSTR	**Listvyanka**	**0.20**	**47**	⇓*i*Pg		**Pb**	**11 50 23.1**	**+1.2**
LSTR				Pmax			11 50 23.7	
	13µm,0.6s							
LSTR				*e*Sg		**Sb**	**11 50 27.2**	**+3.6**
LSTR				Smax			11 50 28.1	
	12µm,0.4s							
IRK	**Irkutsk**	**0.55**	**338**	*e*PG		**Pn**	**11 50 28.9**	**-1.1**
IRK				*e*			11 50 36.6	
IRK				pmax	pmax			
	comp=Z,1µm,0.2s							
IRK				smax	smax			
	comp=E,147µm,0.5s							
IRK	**Irkutsk**	**0.55**	**338**	*e*Pg		**Pb**	**11 50 28.8**	**+0.9**
IRK				Pmax			11 50 32.2	
	comp=E,3µm,0.2s							
IRK				*e*Sg		**Sb**	**11 50 36.5**	**+0.8**
IRK				Smax			11 50 37.3	
	comp=E,148µm,0.5s							
BGT	**Bolshoye Golou**	**0.59**	**58**	⇓*i*PG		**Pb**	**11 50 29.5**	**+1.0**
BGT				*e*			11 50 38.1	
BGT				pmax	pmax			
	comp=Z,8µm,0.1s							
BGT				smax	smax			
	comp=N,26µm,0.4s							
BGT	**Bolshoye Golou**	**0.59**	**58**	⇓*i*Pg		**Pb**	**11 50 29.6**	**+1.0**
BGT				Pmax			11 50 29.8	
	comp=N,8µm,0.1s							
BGT				*e*Sg		**Sb**	**11 50 38.0**	**+1.1**
BGT				Smax			11 50 38.7	
	comp=N,19µm,0.2s							
TLY	**Talaya**	**0.60**	**265**	Pg		**Pg**	**11 50 28.2**	**+0.1**
	comp=N,1µm,0.3s,baz=107,slow=16,SNR=4552							
TLY				Lg	Lg		11 50 35.5	
	comp=N,514nm,0.3s,baz=161,slow=24,SNR=5.0							
TLY	**Talaya**	**0.60**	**265**	Pg		**Pg**	**11 50 28.4**	**+0.3**
TLY				Sg		**Sg**	**11 50 36.2**	**+0.3**
TLY	**Talaya**	**0.60**	**265**	*ce*PG		**Pg**	**11 50 28.1**	**+0.1**
TLY				pmax	pmax			
	comp=Z,9µm,1.3s							
TLY	**Talaya**	**0.60**	**265**	⇑*i*Pg		**Pg**	**11 50 28.4**	**+0.3**
TLY				Pmax			11 50 28.7	
	comp=Z,4µm,0.1s							
TLY				*e*Sg		**Sg**	**11 50 36.3**	**+0.3**
TLY				Smax			11 50 36.8	
	comp=Z,43µm,0.1s							
VBR	**Suhoy Ruchey**	**0.88**	**85**	*e*Pg		**Pn**	**11 50 35.0**	**+0.4**
VBR				*e*Sg		**Sn**	**11 50 47.8**	**+0.5**
KAB	**Kabansk**	**1.31**	**75**	*e*PG		**Pg**	**11 50 42.6**	**+1.1**
KAB				*e*			11 51 01.0	
KAB				pmax	pmax			
	comp=Z,2µm,0.6s							
KAB				smax	smax			
	comp=N,49µm,1.1s							
KAB	**Kabansk**	**1.31**	**75**	*e*Pg		**Pg**	**11 50 42.6**	**+1.1**
KAB				Pmax			11 50 43.0	
	comp=N,2µm,0.4s							
KAB				*e*Sg		**Sg**	**11 51 00.2**	**+1.6**
KAB				Smax			11 51 01.5	
	comp=N,36µm,0.3s							
ARS	**Arshan**	**1.36**	**279**	⇑*i*PG		**Pn**	**11 50 41.4**	**+0.1**
ARS				*e*			11 51 00.0	
ARS				pmax	pmax			
	comp=Z,4µm,0.2s							
ARS				smax	smax			
	comp=N,14µm,0.4s							
ARS	**Arshan**	**1.36**	**279**	⇑*i*Pg		**Pn**	**11 50 41.4**	**+0.1**
ARS				*e*Pb		**Pg**	**11 50 42.7**	**+0.1**
ARS				max			11 50 43.4	
	comp=N,4µm,0.2s							
ARS				*e*Sg		**Sb**	**11 50 59.3**	**0.0**
ARS				Smax			11 51 03.0	
	comp=N,14µm,0.4s							
FFNB	**Fofonovo**	**1.38**	**76**	*e*Pg		**Pg**	**11 50 43.5**	**+0.7**
FFNB				*e*Sg		**Sg**	**11 51 01.8**	**+1.1**
HRMR	**Khuramsha**	**1.47**	**93**	⇑*i*Pn		**Pb**	**11 50 43.9**	**+0.3**
HRMR				*e*Pg		**Pg**	**11 50 44.6**	**0.0**
HRMR				Pmax			11 50 44.9	
	comp=N,6µm,0.3s							
HRMR				*e*Sg		**Sg**	**11 51 04.3**	**+0.7**
HRMR				Smax			11 51 05.5	
	comp=N,53µm,0.5s							
TRG	**Tyrgan**	**1.48**	**46**	⇓*i*PN		**Pg**	**11 50 45.1**	**+0.2**
TRG				*e*			11 51 05.2	
TRG				pmax	pmax			
	comp=Z,4µm,0.4s							
TRG				smax	smax			
	comp=N,25µm,0.2s							
TRG	**Tyrgan**	**1.48**	**46**	⇓*i*Pg		**Pg**	**11 50 44.9**	**0.0**
TRG				Pmax			11 50 45.5	
	comp=N,4µm,0.2s							
TRG				*e*Sg		**Sg**	**11 51 04.9**	**+0.8**
TRG				Smax			11 51 06.2	
	comp=N,27µm,0.1s							
ZAK	**Zakamensk**	**1.59**	**212**	⇓*i*PN		**Pn**	**11 50 44.8**	**+0.4**
ZAK				*e*			11 51 05.2	
ZAK				pmax	pmax			
	comp=Z,4µm,0.2s							
ZAK				smax	smax			
	comp=N,7µm,0.3s							
ZAK	**Zakamensk**	**1.59**	**212**	⇑*i*Pg		**Pb**	**11 50 45.2**	**-0.6**
	comp=N,2µm,0.9s							
ZAK				⇑*i*Pg		**Pb**	**11 50 45.2**	**-0.6**
	comp=N,1µm,0.9s							
ZAK				⇓*i*Pg		**Pb**	**11 50 45.2**	**-0.6**
	comp=N,2µm,0.9s							
ZAK				Pmax			11 50 46.2	
	comp=N,4µm,0.2s							
ZAK				*e*Sg		**Sn**	**11 51 05.4**	**+0.4**
ZAK				Smax			11 51 08.4	
	comp=N,7µm,0.4s							
UUDB	**Ulan-Yde**	**1.91**	**85**	*e*Pn		**Pb**	**11 50 50.0**	**-1.1**
UUDB				*e*Pg		**Pg**	**11 50 52.1**	**-0.8**
UUDB				Pmax			11 50 58.1	
	comp=N,714nm,0.3s							
UUDB				*e*Sn		**Sb**	**11 51 13.9**	**-0.9**
UUDB				*e*Sg		**Sg**	**11 51 17.5**	**-0.1**
UUDB				Smax			11 51 20.6	
	comp=N,6µm,0.6s							
MOY	**Mondy**	**2.25**	**270**	*e*PN		**Pn**	**11 50 55.0**	**+1.5**
MOY				*e*			11 50 56.9	
MOY				*e*			11 51 26.5	
MOY				pmax	pmax			
	comp=Z,2µm,0.4s							
MOY				smax	smax			
	comp=N,9µm,0.5s							
MOY	**Mondy**	**2.25**	**270**	*e*Pn		**Pn**	**11 50 54.9**	**+1.5**
MOY				*e*Pg		**Pb**	**11 50 57.0**	**+0.1**
MOY				Pmax			11 50 57.7	
	comp=N,2µm,0.4s							
MOY				*e*Sg		**Sb**	**11 51 26.1**	**+1.4**
MOY				Smax			11 51 27.4	
	comp=N,8µm,0.5s							
KELR	**Kotokel**	**2.37**	**63**	*e*Pn		**Pb**	**11 50 57.1**	**-1.9**
KELR				*e*Pg		**Pg**	**11 51 00.5**	**-1.3**
KELR				*e*Sg		**Sg**	**11 51 31.3**	**-1.2**
KELR				*e*			11 51 35.3	
GORB	**Goryachinsk**	**2.58**	**60**	*e*Pn		**Pn**	**11 50 59.6**	**+1.6**
GORB				*e*Pg		**Pb**	**11 51 04.0**	**+1.4**
GORB				*e*Sg		**Sg**	**11 51 37.4**	**-1.9**
OGRR	**Ongureny**	**2.64**	**42**	*e*PN		**Pn**	**11 51 01.0**	**+2.3**
OGRR				*e*			11 51 05.9	
OGRR				*e*			11 51 39.0	
OGRR				pmax	pmax			
	comp=Z,1µm,0.6s							
OGRR				smax	smax			
	comp=E,4µm,0.6s							
OGRR	**Ongureny**	**2.64**	**42**	⇓*i*Pn		**Pn**	**11 51 01.1**	**+2.3**
OGRR				*e*Pg		**Pb**	**11 51 04.8**	**+1.2**
OGRR				*e*			11 51 06.6	
OGRR				max			11 51 07.5	
	comp=E,1µm,0.4s							
OGRR				*e*Sg		**Sg**	**11 51 39.3**	**-1.8**
OGRR				*e*SgSg		**SnSn**	**11 51 47.2**	**+5.6**
OGRR				max			11 51 50.1	
	comp=E,4µm,0.5s							
MXMB	**Maximikha**	**2.96**	**57**	*e*Pn		**Pn**	**11 51 04.7**	**+1.6**
MXMB				*e*Pg		**Pg**	**11 51 11.2**	**-1.8**
MXMB				*e*Sn		**Sn**	**11 51 40.1**	**+1.6**
MXMB				*e*Sg		**Sg**	**11 51 51.1**	**-0.2**
ORL	**Orlik**	**3.06**	**287**	*e*PN		**Pb**	**11 51 09.5**	**-1.3**
ORL				*e*			11 51 49.9	
ORL				pmax	pmax			
	comp=Z,1µm,0.9s							
ORL				smax	smax			
	comp=N,4µm,1.0s							
ORL	**Orlik**	**3.06**	**287**	*e*Pn		**Pn**	**11 51 07.2**	**+2.6**
ORL				*e*			11 51 09.4	
ORL				*e*Pg		**Pb**	**11 51 11.0**	**+0.2**
ORL				Pmax			11 51 12.4	
	comp=N,1µm,0.7s							
ORL				*e*Sg		**Sb**	**11 51 50.2**	**+2.1**
ORL				Smax			11 51 54.0	
	comp=N,4µm,0.7s							
SYVR	**Suvo**	**3.81**	**57**	*e*PN		**Pn**	**11 51 17.2**	**+2.4**
SYVR				*e*			11 51 26.1	
SYVR				*e*			11 52 16.8	
SYVR				pmax	pmax			
	comp=Z,338nm,0.6s							
SYVR				smax	smax			
	comp=E,1µm,1.4s							
SYVR	**Suvo**	**3.81**	**57**	*e*Pn		**Pn**	**11 51 16.5**	**+1.7**
SYVR				*e*Pg		**Pb**	**11 51 26.1**	**+2.7**
SYVR				Pmax			11 51 26.7	
	comp=E,331nm,0.4s							
SYVR				*e*Sn		**Sn**	**11 52 00.0**	**+0.6**
SYVR				*e*Sg		**Sg**	**11 52 16.6**	**-1.9**
SYVR				Smax			11 52 28.2	
	comp=E,900nm,0.5s							
SONM	**Songino Array**	**4.07**	**163**	Pn		**Pn**	**11 51 19.4**	**+0.8**
	comp=E,7.6nm,0.3s,baz=337,slow=13,SNR=58							
SONM				Lg	Lg		11 52 22.9	
	comp=E,247nm,0.3s,baz=335,slow=29,SNR=18							
SONM				LR	LR		11 53 16.1	
	comp=E,434nm,20.5s,baz=353,slow=45							
	comp=E,13nm,0.3s							
SONM	**Songino Array**	**4.07**	**163**	Pn		**Pn**	**11 51 19.3**	**+0.7**
ULN	**Ulaanbaatar**	**4.19**	**157**	Pn		**Pn**	**11 51 20.8**	**+0.7**
ULN	**Ulaanbaatar**	**4.19**	**157**	*ce*Pn		**Pn**	**11 51 21.1**	**+0.9**
ULN				pmax	pmax			
	comp=Z,13nm,0.7s							
ULN	**Ulaanbaatar**	**4.19**	**157**	*e*Pn		**Pn**	**11 51 21.2**	**+1.0**
ULN				*e*Pg		**Pb**	**11 51 31.3**	**+1.3**
ULN				Pmax			11 51 37.1	
	comp=Z,367nm,0.9s							
ULN				*e*Sg		**Sb**	**11 52 24.6**	**+4.0**
ULN				Smax			11 52 30.3	
	comp=Z,8µm,1.3s							
KNGR	**Kungurtug, Tuv**	**4.60**	**259**	*e*Pn		**Pn**	**11 51 26.8**	**+1.0**
KNGR				*e*Pg		**Pb**	**11 51 38.2**	**+1.2**
KNGR				*e*Sg		**Sb**	**11 52 37.8**	**+5.4**
NIZB	**Nizh Angarsk**	**4.99**	**34**	*e*PN		**Pn**	**11 51 32.4**	**+1.3**
NIZB				*e*			11 51 47.4	
NIZB				*e*S		**Sn**	**11 52 28.8**	**+0.1**
NIZB				*e*			11 52 51.1	
NIZB				pmax	pmax			
	comp=Z,199nm,0.4s							
NIZB				smax	smax			
	comp=N,1µm,0.6s							
NIZB	**Nizh Angarsk**	**4.99**	**34**	*e*Pn		**Pn**	**11 51 32.8**	**+1.7**
NIZB				*e*Pg		**Pb**	**11 51 47.3**	**+3.7**
NIZB				Pmax			11 51 50.6	
	comp=N,199nm,0.4s							
NIZB				*e*Sn		**Sn**	**11 52 29.0**	**+0.3**
NIZB				*e*Sg		**Sg**	**11 52 52.8**	**-3.7**
NIZB				Smax			11 53 06.9	
	comp=N,1µm,0.7s							
YLYR	**Ulyunkhan**	**5.04**	**49**	*e*Pn		**Pn**	**11 51 33.5**	**+1.8**
YLYR				*e*Pg		**Pg**	**11 51 48.9**	**-3.8**
YLYR				Pmax			11 51 53.0	
	comp=N,67nm,0.4s							
YLYR				*e*Sg		**Sg**	**11 52 54.1**	**-3.8**
YLYR				Smax			11 52 56.7	
	comp=N,823nm,1.2s							
KPC	**Khapcheranga**	**5.34**	**109**	*e*PN		**Pn**	**11 51 34.8**	**-1.1**
KPC				*e*			11 51 52.8	
KPC				*e*			11 53 03.8	
KPC				pmax	pmax			
	comp=Z,165nm,0.4s							
KPC				smax	smax			
	comp=N,868nm,1.2s							
KPC	**Khapcheranga**	**5.34**	**109**	*e*Pn		**Pn**	**11 51 35.3**	**-0.6**
KPC				*e*Pg		**Pb**	**11 51 52.9**	**+3.3**
KPC				Pmax			11 51 57.3	
	comp=N,165nm,0.3s							
KPC				*e*Sg		**Sg**	**11 53 02.1**	**-5.7**
KPC				Smax			11 53 26.0	
	comp=N,872nm,1.6s							
CIT	**Chita**	**5.55**	**84**	*e*PN		**Pn**	**11 51 40.8**	**+2.0**
CIT				*e*			11 51 56.8	
CIT				*e*S		**Sn**	**11 52 41.5**	**-1.0**
CIT				*e*			11 53 08.8	
CIT				pmax	pmax			
	comp=Z,168nm,0.7s							
CIT				smax	smax			
	comp=N,1µm,1.6s							
CIT	**Chita**	**5.55**	**84**	*e*Pg		**Pb**	**11 51 57.2**	**+4.0**
CIT				Pmax			11 51 59.0	
	comp=N,147nm,0.3s							
CIT				*e*Sg		**Sg**	**11 53 10.4**	**-4.1**
CIT				Smax			11 53 33.2	
	comp=N,1µm,1.0s							
KMO	**Kumora**	**5.71**	**41**	*e*PN		**Pn**	**11 51 43.0**	**+2.2**
KMO				*e*			11 52 00.8	
KMO				*e*			11 53 15.7	
KMO				pmax	pmax			
	comp=Z,205nm,0.4s							
KMO				smax	smax			
	comp=N,2µm,0.9s							
KMO	**Kumora**	**5.71**	**41**	*e*Pn		**Pn**	**11 51 43.1**	**+2.2**
KMO				*e*Pg		Pb	11 52 00.4	+4.6
KMO				Pmax			11 52 03.8	
	comp=N,206nm,1.0s							
KMO				*e*Sn		**Sn**	**11 52 46.0**	**-0.2**
KMO				*e*Sg		**Sg**	**11 53 14.6**	**-4.8**
KMO				Smax			11 53 40.9	
	comp=N,2µm,1.0s							
KZLR	**Kyzyl**	**6.31**	**274**	*e*Sg		**Sg**	**11 53 31.1**	**-7.6**
UKT	**Uakit**	**6.55**	**51**	*e*Pn		**Pn**	**11 51 55.1**	**+2.5**
UKT				*e*Pg		Pb	11 52 16.0	+5.7
UKT				Pmax			11 52 19.3	
	comp=N,51nm,0.8s							
UKT				*e*Sg		**Sg**	**11 53 41.7**	**-4.8**
UKT				Smax			11 53 55.0	
	comp=N,342nm,1.5s							
SVKR	**Severomuysk**	**6.87**	**47**	*e*Sg		**Sg**	**11 53 51.7**	**-5.0**
SVKR				Smax			11 54 07.6	
	comp=N,1µm,1.4s							
MINR	**Mina**	**6.99**	**301**	*e*Pg		Pg	11 52 24.2	-5.9
MINR				*e*Sg		**Sg**	**11 53 55.2**	**-5.3**
NLYR	**Nelyaty**	**8.07**	**50**	*e*Pn		**Pn**	**11 52 16.0**	**+2.7**
NLYR				max			11 52 48.0	
	comp=N,33nm,0.7s							
NLYR				*e*Sg		Sg	11 54 29.2	-6.0
NLYR				Smax			11 55 12.5	
	comp=N,464nm,1.2s							
BOD	**Bodaibo**	**8.16**	**38**	*e*PN		**Pn**	**11 52 14.6**	**+0.1**
BOD				*e*			11 52 43.6	
BOD				pmax	pmax			
	comp=Z,38nm,0.4s							
BOD	**Bodaibo**	**8.16**	**38**	*e*Pn		**Pn**	**11 52 15.5**	**+1.0**
BOD				*e*Pg		Pg	11 52 45.1	-7.3
BOD				Pmax			11 52 49.7	
	comp=Z,38nm,0.4s							
BOD				*e*Sn		**Sn**	**11 53 44.0**	**-2.5**
BOD				*e*Sg		Sg	11 54 30.9	-7.1
BOD				Smax			11 54 36.8	
	comp=Z,850nm,1.5s							
TUP	**Tupik**	**9.62**	**68**	*e*Pn		**Pn**	**11 52 35.7**	**+1.1**
TUP				*e*Sg		Sn	11 55 15.9	+53
TUP				Smax			11 55 38.8	
	comp=Z,635nm,1.1s							
HILR	**Hailar Array B**	**9.87**	**97**	Pn		**Pn**	**11 52 36.9**	**-1.1**
	baz=304,slow=9.7							
HILR				Lg	Lg		11 55 25.4	
	baz=270,slow=13							
	comp=Z,2.8nm,0.4s							
HIA	**Hailar**	**9.96**	**98**	Pn		**Pn**	**11 52 37.8**	**-1.4**
HIA	**Hailar**	**9.96**	**98**	P		**Pn**	**11 52 37.8**	**-1.4**
HIA	**Hailar**	**9.96**	**98**	*e*Sg		Sn	11 55 26.3	+55
DGZ	**Jazzator, Alta**	**11.08**	**266**	*i* P		**Pn**	**11 52 53.2**	**-1.4**
BTO2	**Baotou**	**11.58**	**160**	*e*P		**Pn**	**11 53 05.3**	**+3.8**
BTO2				S		**Sn**	**11 55 17.1**	**+6.3**
BTO2				pmax	pmax			
	comp=Z,12nm,0.8s							
BTO2				pmax	pmax			
	comp=Z,120nm,4.6s							
BTO2				LR	LR			
	comp=N,800nm,2.6s							
BTO2				LR	LR			
	comp=E,3µm,2.8s							
BTO2				LR	LR			
	comp=Z,510nm,2.7s							
ZAA0	**Zalesovo Array**	**12.16**	**288**	Pn		**Pn**	**11 53 09.4**	**+0.1**
ZALV	**Zalesovo Beam**	**12.16**	**288**	Pn		**Pn**	**11 53 10.2**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=116,slow=9.8,SNR=7.0							
ZALV				Lg	Lg		11 56 32.2	
	comp=Z,0.4nm,0.3s,baz=108,slow=28,SNR=6.2							
ZALV				LR	LR		11 57 54.0	
	comp=Z,294nm,20.0s,baz=99,slow=38							
ZALV	**Zalesovo Beam**	**12.16**	**288**	Pn		**Pn**	**11 53 08.0**	**-1.3**
GTA2	**Gaotai**	**12.71**	**197**	*e*P		**Pn**	**11 53 18.8**	**+1.9**
GTA2				sP	P		11 53 26.7	-1.5
GTA2				pmax	pmax			
	comp=Z,6.0nm,0.8s							
GTA2				LR	LR			
	comp=N,400nm,13.1s							
GTA2				LR	LR			
	comp=E,960nm,10.7s							
GTA2				LR	LR			
	comp=Z,620nm,14.1s							
BJT	**Baijiatuau**	**14.20**	**141**	Pn		**Pn**	**11 53 34.1**	**-3.0**
BJT	**Baijiatuau**	**14.20**	**141**	P		**Pn**	**11 53 34.1**	**-3.0**
MK31	**Makanchi Array**	**15.36**	**260**	Pn		**Pn**	**11 53 51.9**	**-0.9**
MK31	**Makanchi Array**	**15.36**	**260**	P		**Pn**	**11 53 51.9**	**-0.9**
MK31				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**15.36**	**260**	Pn		**Pn**	**11 53 54.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=69,slow=10.0,SNR=7.1							
MKAR				Lg	Lg		11 58 15.6	
	baz=58,slow=23,SNR=3.9							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**15.36**	**260**	Pn		**Pn**	**11 53 51.0**	**-1.8**
MKAR	**Makanchi Array**	**15.36**	**260**	*ce*P		**P**	**11 53 57.5**	**0.0**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MAKZ	**Makanchi**	**15.54**	**260**	Pn		**Pn**	**11 53 53.3**	**-1.9**
MAKZ	**Makanchi**	**15.54**	**260**	P		**Pn**	**11 53 53.3**	**-1.9**
MAKZ				pmax	pmax			
	comp=Z,10.0nm,1.5s							
LZH	**Lanzhou**	**15.65**	**182**	*e*P		**P**	**11 54 03.6**	**+2.6**
LZH				pP	sP		11 54 10.0	+3.9
LZH				pmax	pmax			
	comp=Z,21nm,1.4s							
LZH				LR	LR			
	comp=N,400nm,9.5s							
LZH				LR	LR			
	comp=E,1µm,9.6s							
LZH				LR	LR			
	comp=Z,240nm,8.6s							
LZDM	**Lanzhou Array**	**15.79**	**183**	Pn		**Pn**	**11 53 59.1**	**+0.4**
	baz=8.8,slow=14							
LZDM				Lg	Lg		11 58 34.2	
	baz=106,slow=38							
	comp=Z,1.3nm,0.3s							
KURK	**Kurchatov**	**16.28**	**277**			**Pn**	**11 54 04.9**	**+0.2**
KURK	**Kurchatov**	**16.28**	**277**	P		**Pn**	**11 54 04.9**	**+0.2**
KURK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KURBB	**Kurchatov Arra**	**16.36**	**276**	Pn		**Pn**	**11 54 05.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=80,slow=12,SNR=12							
KURBB				Lg	Lg		11 58 51.6	
	baz=80,slow=33							
KURBB				LR	LR		12 00 21.4	
	comp=Z,135nm,20.3s,baz=176,slow=37							
	comp=Z,5.6nm,0.9s							
YAK	**Yakutsk**	**17.02**	**43**	P		**P**	**11 54 15.9**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=185,slow=2.8,SNR=4.6							
YAK				Lg	Lg		11 59 08.5	
	comp=Z,2.9nm,0.3s,baz=143,slow=21,SNR=6

comp=E,42nm,25.0s
KLR Kul'dur 17.42 88 P **P** **11 54 21.4 +1.1**
comp=E,1.3nm,0.7s,baz=293,slow=7.5,SNR=4.2
KLR Lg Lg 11 59 26.0
comp=E,0.2nm,0.3s,baz=206,slow=12,SNR=15
KLR Kul'dur 17.42 88 *i* P **P** **11 54 21.9 +1.6**
MDJ Mudanjiang 18.07 103 **Pn** **11 54 25.5 -1.5**
NRIK Noril'sk 19.41 342 P **Pn** **11 54 43.0 -0.1**
comp=E,0.7nm,0.3s,baz=122,slow=14,SNR=5.8
NRIK S Sn 11 58 05.3 -15
comp=E,11nm,0.7s,baz=136,slow=13,SNR=4.3
NRIK Lg Lg 12 00 28.8
comp=E,0.3nm,0.3s,baz=236,slow=8.4,SNR=5.1
comp=E,3.1nm,0.3s
NRIK Noril'sk 19.41 342 P **P** **11 54 42.2 +0.2**
NRIK Noril'sk 19.41 342 *i* P **Pn** **11 54 42.9 -0.2**
NRIK pmax pmax
comp=Z,7.0nm,0.8s
USA0B Ussuriysk Arra 19.74 102 P **P** **11 54 44.4 -1.4**
USA0B Ussuriysk Arra 19.74 102 P **P** **11 54 44.4 -1.4**
USA0B pmax pmax
comp=Z,3.0nm,0.7s
USRK Ussuriysk Ar. 19.74 102 Lg Lg 12 00 42.6
comp=Z,0.2nm,0.3s,baz=293,slow=28,SNR=4.4
USRK Ussuriysk Ar. 19.74 102 P **P** **11 54 44.8 -1.0**
USRK Ussuriysk Ar. 19.74 102 P **P** **11 54 44.8 -1.0**
PRZ Przheval'sk 20.00 253 P **P** **11 54 47.7 -1.1**
PRZ IAmb IAmb 11 55 01.4
comp=Z,25nm,1.1s
PRZ Przheval'sk 20.00 253 P **P** **11 54 47.7 -1.1**
PRZ pmax pmax
comp=Z,25nm,1.1s
TARG Taragay, Kyrgy 20.81 252 P **P** **11 54 56.3 -1.6**
TARG Taragay, Kyrgy 20.81 252 P **P** **11 54 56.3 -1.6**
TARG pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 20.81 287 P **P** **11 54 56.9 -0.5**
comp=Z,7.4nm,0.8s,baz=90,slow=10,SNR=16
comp=Z,7.4nm,0.8s
CD2 Chengdu 20.82 182 P Pn 11 54 59.9 -0.2
CD2 pmax pmax
comp=Z,40nm,0.7s
BORK Borovoye 20.85 287 P **P** **11 54 58.1 +0.3**
BORK Borovoye 20.85 287 *e*P **P** **11 54 57.1 -0.7**
BORK pmax pmax
comp=Z,5.0nm,0.8s
KDJ Kajisay 20.93 253 P **P** **11 54 58.1 -0.8**
KDJ IAmb IAmb 11 55 25.3
comp=Z,13nm,1.0s
KDJ Kajisay 20.93 253 P **P** **11 54 58.2 -0.8**
KDJ pmax pmax
comp=Z,13nm,1.0s
KS19 Wonju Array Si 21.71 122 P **P** **11 55 05.2 -1.8**
KS19 IAmb IAmb 11 55 20.5
comp=Z,7.4nm,1.0s
ENH Enshi 21.75 169 P **P** **11 55 06.0 -1.6**
ENH IAmb IAmb 11 55 12.4
comp=Z,20nm,1.5s
KSAR Wonju Array Be 21.76 122 P **P** **11 55 05.1 -2.5**
KSAR Wonju Array Be 21.76 122 P **P** **11 55 05.1 -2.5**
KSRS Korea Array 21.77 122 P **P** **11 55 08.3 +0.6**
comp=Z,0.2nm,0.4s,baz=328,slow=12,SNR=15
KSRS LR LR 12 04 29.1
comp=Z,86nm,18.7s,baz=300,slow=39
comp=Z,0.2nm,0.4s
NRN Naryn 22.06 253 P **P** **11 55 11.9 +0.7**
NRN Naryn 22.06 253 P **P** **11 55 11.9 +0.7**
NRN pmax pmax
comp=Z,6.0nm,1.3s
AAK Ala-Archa 22.26 258 P **P** **11 55 10.9 -2.3**
AAK Ala-Archa 22.26 258 P **P** **11 55 10.9 -2.3**
AAK pmax pmax
comp=Z,3.0nm,1.1s
TJN Taejon 22.30 125 *i* P **P** **11 55 17.0 +3.6**
TIXI Tiksi 22.72 20 P **P** **11 55 19.2 +1.5**
comp=Z,3.2nm,0.3s,baz=238,slow=6.9,SNR=5.7
comp=Z,3.2nm,0.3s
TIXI Tiksi 22.72 20 P **P** **11 55 16.4 -1.2**
TIXI IAmb IAmb 11 55 37.6
comp=Z,9.1nm,0.6s
TIXI Tiksi 22.72 20 *i* P **P** **11 55 16.8 -0.9**
TIXI pmax pmax
comp=Z,16nm,1.4s
ARSB Arslanbob 23.94 257 P **P** **11 55 28.2 -2.1**
ARSB IAmb IAmb 11 55 48.4
comp=Z,9.0nm,0.6s
ARSB Arslanbob 23.94 257 P **P** **11 55 28.2 -2.1**
ARSB pmax pmax
comp=Z,9.0nm,0.6s
LSA Lhasa 24.18 210 P **P** **11 55 31.5 -1.5**
LSA IAmb IAmb 11 56 02.8
comp=Z,3.0nm,0.6s
LSA Lhasa 24.18 210 P **P** **11 55 31.5 -1.5**
LSA pmax pmax
comp=Z,3.0nm,0.6s
KK31 Karatay Array 24.44 263 P **P** **11 55 34.3 -0.5**
KK31 Karatay Array 24.44 263 P **P** **11 55 34.3 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 24.44 263 P **P** **11 55 34.5 -0.3**
KKAR Karatay Array 24.44 263 P **P** **11 55 34.5 -0.3**
YSS Yuzhno-Sakhali 25.11 86 P **P** **11 55 39.5 -1.2**
ASAJ Asahikawa 26.33 92 P **P** **11 55 50.4 -1.5**
ASAJ pmax pmax
comp=Z,22nm,1.5s
JKA Kamikawa-asahi 26.34 92 P **P** **11 55 50.4 -1.5**
MA2 Magadan 26.71 55 LR LR 12 06 06.7
comp=Z,38nm,19.7s,baz=234,slow=36
ARTI Arti 27.11 298 LR LR 12 07 58.9
comp=Z,90nm,21.3s,baz=146,slow=39
CHGR Chuyangaron 27.89 256 P **P** **11 56 05.4 -0.6**
CHGR Chuyangaron 27.89 256 P **P** **11 56 05.4 -0.6**
CHGR pmax pmax
comp=Z,8.0nm,0.6s
AB31 Akbulak array 28.18 283 P **P** **11 56 09.1 +0.6**
ABKAR Akbulak array 28.18 283 P **P** **11 56 08.6 +0.2**
MJAR Matsushiro Arr 28.19 109 LR LR 12 07 48.6
comp=Z,43nm,19.8s,baz=194,slow=37
AKTO Aktyubinsk 28.91 286 LR LR 12 08 10.0
comp=Z,117nm,19.0s,baz=193,slow=37
JOW Kunigami 30.63 135 LR LR 12 09 45.3
comp=Z,71nm,20.2s,baz=42,slow=38
JHJ2 Mitsune 31.55 112 P **P** **11 56 37.6 -0.7**
PETK Petropavlovsk- 31.80 66 LR LR 12 09 42.9
comp=Z,49nm,18.5s,baz=282,slow=37
CMAR Chiang Mai Arr 33.51 190 P **P** **11 56 55.8 +0.2**
comp=Z,1.5nm,0.8s,baz=358,slow=8.2,SNR=10.0
CMAR LR LR 12 12 00.2
comp=Z,120nm,18.4s,baz=215,slow=39
comp=Z,1.5nm,0.8s
CMAR Chiang Mai Arr 33.51 190 P **P** **11 56 54.7 -0.9**
CMAR Chiang Mai Arr 33.51 190 *ce*P **P** **11 56 56.7 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
HRA Herat 34.89 257 P **P** **11 57 06.5 -1.2**
HRA IAmb IAmb 11 57 40.7
comp=Z,3.1nm,0.6s
JCJ Chichijima 37.43 117 P **P** **11 57 27.6 -1.7**
ARCES ARCESS Array B 39.24 327 P **P** **11 57 43.8 -0.3**
comp=Z,1.2nm,0.6s,baz=76,slow=11,SNR=4.9
comp=Z,1.2nm,0.6s
ARCES ARCESS Array B 39.24 327 P **P** **11 57 44.3 +0.2**
ARCES IAmb IAmb 11 58 06.4
comp=Z,18nm,1.4s
ARCES ARCESS Array B 39.24 327 P **P** **11 57 44.3 +0.2**
ARCES pmax pmax
comp=Z,18nm,1.5s
SPITS Spitsbergen Ar 39.62 341 P **P** **11 57 46.2 -1.0**
SPITS pmax pmax
comp=Z,60nm,1.5s
FINES FINESS Array B 41.73 315 P **P** **11 58 05.2 +0.5**
comp=Z,1.1nm,0.4s,baz=64,slow=9.6,SNR=8.5
comp=Z,1.1nm,0.4s
FINES FINESS Array B 41.73 315 P **P** **11 58 05.6 +0.9**
FINES FINESS Array B 41.73 315 P **P** **11 58 05.6 +0.9**
C18K Utukok River 44.60 31 P **P** **11 58 27.6 -0.3**
AKASG Malin Array Be 45.23 300 P **P** **11 58 32.6 -0.4**
comp=Z,0.9nm,0.5s,baz=56,slow=9.0,SNR=2.4
AKASG LR LR 12 19 03.0
comp=Z,45nm,21.1s,baz=96,slow=38
comp=Z,0.9nm,0.5s
AKASG Malin Array Be 45.23 300 P **P** **11 58 32.7 -0.4**
AKASG IAmb IAmb 11 58 43.5
comp=Z,2.7nm,1.2s
AKASG Malin Array Be 45.23 300 P **P** **11 58 32.7 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,1.2s
AKBB Malin Array Si 45.23 300 P **P** **11 58 33.6 +0.6**
AKBB IAmb IAmb 11 58 58.1
comp=Z,4.4nm,1.1s
AKBB Malin Array Si 45.23 300 P **P** **11 58 33.7 +0.6**
AKBB pmax pmax
comp=Z,4.0nm,1.2s
E19K Redstone River 46.49 32 P **P** **11 58 42.3 -0.5**
E19K IAmb IAmb 11 58 55.4
comp=Z,4.9nm,1.4s
KKM Kota Kinabalu 46.55 164 P **P** **11 58 42.0 -1.9**
E21K Killik River 46.99 30 P **P** **11 58 46.6 -0.1**
E21K IAmb IAmb 11 58 53.9
comp=Z,4.9nm,1.3s
NOA NORSAR Array B 48.22 319 LR LR 12 21 02.9
comp=Z,118nm,19.2s,baz=65,slow=38
BRTR Keskin Array B 49.08 285 P **P** **11 59 04.7 +1.2**
comp=Z,0.8nm,0.7s,baz=85,slow=4.0,SNR=5.5
BRTR LR LR 12 20 43.7
comp=Z,50nm,19.2s,baz=88,slow=37
comp=Z,0.8nm,0.7s
BRTR Keskin Array B 49.08 285 P **P** **11 59 03.8 +0.3**
BRTR Keskin Array B 49.08 285 *ce*P **P** **11 59 05.0 +1.5**
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BUR08 Bucovina Ar. S 49.13 298 **P** **11 59 03.4 -0.3**
BUR08 IAmb IAmb 11 59 05.8
comp=Z,4.8nm,0.9s
BURAR Bucovina Array 49.14 298 P **P** **11 59 02.9 -0.9**
BURAR IAmb IAmb 11 59 06.1
comp=Z,3.1nm,0.9s
C27K Jago River 49.23 25 P **P** **11 59 03.2 -0.8**
C27K IAmb IAmb 11 59 15.4
comp=Z,2.1nm,0.9s
TIRR Tirgusor 49.24 293 P **P** **11 59 03.3 -1.0**
TIRR Tirgusor 49.24 293 P **P** **11 59 03.3 -1.0**
TIRR pmax pmax
comp=Z,7.0nm,0.9s
F24K Squaw Lake 49.39 29 P **P** **11 59 04.4 -0.9**
F24K IAmb IAmb 11 59 18.8
comp=Z,1.7nm,0.8s
E25K Arctic Village 49.69 28 P **P** **11 59 06.9 -0.6**
H23K Yukon River 49.93 31 P **P** **11 59 09.6 +0.1**
H23K IAmb IAmb 11 59 29.2
comp=Z,2.4nm,1.1s
D27M Malcolm River 50.21 25 P **P** **11 59 11.4 -0.2**
D27M IAmb IAmb 11 59 23.2
comp=Z,2.6nm,0.9s
CCB Clear Creek Bu 51.25 32 P **P** **11 59 19.1 -0.3**
CCB IAmb IAmb 11 59 31.2
comp=Z,2.8nm,1.0s
IL31 51.47 31 P **P** **11 59 20.6 -0.3**
IL31 IAmb IAmb 11 59 35.0
comp=Z,3.9nm,1.1s
ILAR Eielson Array 51.47 31 P **P** **11 59 23.0 +2.0**
comp=Z,0.8nm,0.9s,baz=305,slow=6.1,SNR=8.4
ILAR LR LR 12 23 59.7
comp=Z,63nm,19.7s,baz=193,slow=39
comp=Z,0.8nm,0.9s
ILAR Eielson Array 51.47 31 P **P** **11 59 20.4 -0.6**
CSS Mathiatis 52.36 281 P **P** **11 59 27.8 -0.2**
RAYN Ar Rayn 52.85 261 P **P** **11 59 31.2 -0.6**
RAYN IAmb IAmb 11 59 48.6
comp=Z,6.3nm,1.4s
RAYN Ar Rayn 52.85 261 P **P** **11 59 31.3 -0.6**
RAYN pmax pmax
comp=Z,6.0nm,1.5s
G30M tAoh Zraii Nji 53.07 25 P **P** **11 59 32.8 -0.1**
G30M IAmb IAmb 11 59 43.5
comp=Z,5.7nm,1.4s
CLL Collm 53.22 308 *i* P **P** **11 59 35.0 +0.8**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 53.22 308 *i* P **P** **11 59 35.0 +0.8**
comp=Z,5.0nm,0.8s
G31M Satah River 53.63 25 P **P** **11 59 36.5 -0.4**
G31M IAmb IAmb 11 59 48.1
comp=Z,4.0nm,0.9s
KDAK Kodiak Island 54.03 40 P **P** **11 59 39.2 -0.7**
KDAK Kodiak Island 54.03 40 P **P** **11 59 39.2 -0.7**
KDAK pmax pmax
comp=Z,32nm,1.5s
BCAR Beaver Creek A 54.28 31 P **P** **11 59 39.6 -2.2**
KHC Kasperske Hory 54.32 306 P **P** **11 59 41.9 -0.5**
KHC IAmb IAmb 11 59 46.9
comp=Z,5.5nm,1.4s
KHC Kasperske Hory 54.32 306 P **P** **11 59 41.9 -0.5**
KHC pmax pmax
comp=Z,6.0nm,1.4s
ARSA Arzberg 54.54 303 P **P** **11 59 43.7 -0.3**
L29M L29M 55.39 29 P **P** **11 59 50.5 +0.6**
L29M IAmb IAmb 12 00 02.9
comp=Z,4.2nm,1.2s
M31M Drury Creek, Y 57.21 29 P **P** **12 00 00.7 -2.2**
M31M IAmb IAmb 12 00 14.8
comp=Z,3.9nm,1.0s
N31M Braeburn, Yuko 57.34 30 P **P** **12 00 02.8 -1.0**
N31M IAmb IAmb 12 00 17.5
comp=Z,4.5nm,0.9s
EKA Eskdalemuir Ar 57.70 320 LR LR 12 25 31.1
comp=Z,100nm,18.6s,baz=10,slow=37
DAVOX Davos/Dischmat 57.74 306 LR LR 12 27 17.6
comp=Z,64nm,19.7s,baz=255,slow=38
MMPY Sheldon Lake, 57.79 27 P **P** **12 00 06.1 -0.8**
O30N Mendenhall 57.80 30 P **P** **12 00 06.4 -0.6**
O30N IAmb IAmb 12 00 10.2
comp=Z,3.5nm,1.1s
ILULI Ilulissat 58.05 350 P **P** **12 00 07.7 -0.8**
ILULI Ilulissat 58.05 350 P **P** **12 00 07.7 -0.8**
ILULI pmax pmax
comp=Z,21nm,1.3s
SFJD Kangerlussuaq 60.12 349 LR LR 12 26 32.9
comp=Z,41nm,19.8s,baz=34,slow=36
R33M Jennings River 60.46 29 P **P** **12 00 24.5 -1.1**
R33M IAmb IAmb 12 00 40.5
comp=Z,6.6nm,1.4s
YKA Yellowknife Ar 61.97 19 P **P** **12 00 36.1 +0.6**
comp=Z,0.9nm,0.7s,baz=329,slow=6.3,SNR=3.9
comp=Z,0.9nm,0.7s
YKA Yellowknife Ar 61.97 19 *ce*P **P** **12 00 37.0 +1.4**
YKA pmax pmax
comp=Z,1.0nm,1.0s
ESDC Sonseca Array 69.81 309 P **P** **12 01 27.1 +0.7**
comp=Z,1.3nm,0.8s,baz=39,slow=6.9,SNR=7.6
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 75.97 151 P **P** **12 02 02.8 -0.2**
comp=Z,0.5nm,0.6s,baz=346,slow=6.6,SNR=6.5
comp=Z,0.5nm,0.6s
WRA Warramunga Arr 75.97 151 *ce*P **P** **12 02 04.5 +1.5**
ASAR Alice Springs 79.36 153 P **P** **12 02 22.1 +0.2**
comp=Z,0.5nm,0.7s,baz=348,slow=5.8,SNR=7.1
comp=Z,0.5nm,0.7s
NVAR Mina Array Bea 82.70 33 P **P** **12 02 42.6 +2.6**
comp=Z,0.3nm,0.7s,baz=317,slow=7.0,SNR=2.6
comp=Z,0.3nm,0.7s
comp=Z,2.9nm,0.4s,baz=96,slow=6.8,SNR=74
comp=Z,2.9nm,0.4s
WRA Warramunga Arr 44.98 260 P **P** **12 03 33.5 -0.9**
WRA PcP **PcP** **12 05 02.1 -0.3**
AS31 Alice Springs 45.12 254 P **P** **12 03 35.0 -0.4**
AS31 IAmb IAmb 12 03 36.0
comp=Z,3.4nm,0.5s
ASAR Alice Springs 45.12 254 P **P** **12 03 34.9 -0.5**
comp=Z,5.8nm,0.4s,baz=91,slow=8.2,SNR=190
ASAR PcP **PcP** **12 05 02.2 -0.7**
comp=Z,1.0nm,0.4s,baz=106,slow=3.7,SNR=8.9
comp=Z,5.8nm,0.4s
ASAR Alice Springs 45.12 254 P **P** **12 03 34.6 -0.9**
ASAR **PcP** **12 05 02.3 -0.7**
FITZ Fitzroy Crossi 53.38 261 P **P** **12 04 35.8 -0.2**
MBWA Marble Bar 58.41 256 P **P** **12 05 10.0 -0.7**
MBWA IAmb IAmb 12 05 49.0
comp=Z,32nm,1.4s
MJAR Matsushiro Arr 68.17 323 P **P** **12 06 12.3 -0.2**
comp=Z,1.3nm,0.5s,baz=164,slow=5.5,SNR=5.1
comp=Z,1.3nm,0.5s
MJAR Matsushiro Arr 68.17 323 P **P** **12 06 12.3 -0.2**
MJAR IAmb IAmb 12 06 48.9
comp=Z,3.2nm,1.2s
MJB9 Matsu-Tunnel 68.17 323 P **P** **12 06 12.5 -0.1**
MJB9 IAmb IAmb 12 06 13.4
comp=Z,6.6nm,1.1s
ADK Adak 69.56 1 P **P** **12 06 20.5 +0.1**
JKA Kamikawa-asahi 71.50 331 P **P** **12 06 32.0 0.0**
JKA IAmb IAmb 12 06 33.6
comp=Z,19nm,1.4s
QSPA South Pole Qui 72.09 180 P **P** **12 06 35.6 +0.2**
SSLB Suanglung 72.57 303 P **P** **12 06 38.1 -0.6**
PETK Petropavlovsk- 73.83 345 P **P** **12 06 46.2 +1.0**
TXAR Lajitas Array 85.72 57 P **P** **12 07 48.3 +0.4**
comp=Z,0.4nm,0.7s,baz=216,slow=6.2,SNR=4.4
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 85.72 57 P **P** **12 07 46.8 -1.2**
ILAR Eielson Array 85.86 13 P **P** **12 07 46.9 -0.7**
comp=Z,0.3nm,0.4s,baz=220,slow=5.0,SNR=9.5
comp=Z,0.3nm,0.4s
ILAR Eielson Array 85.86 13 P **P** **12 07 47.8 +0.1**
F19K Shaleruckik Mo 85.89 8 P **P** **12 07 47.4 -0.3**
F19K IAmb IAmb 12 08 14.3
comp=Z,3.0nm,1.4s
CMAR Chiang Mai Arr 89.24 290 P **P** **12 08 05.7 +1.1**
comp=Z,0.6nm,0.5s,baz=86,slow=2.8,SNR=5.5
comp=Z,0.6nm,0.5s
CMAR Chiang Mai Arr 89.24 290 P **P** **12 08 05.0 +0.5**
BRTR Keskin Array B 145.08 315 PKPbc **PKPbc** **12 14 41.8 -0.5**
comp=Z,0.8nm,0.5s,baz=151,slow=4.4,SNR=4.7
BRTR Keskin Array B 145.08 315 **PKPbc** **12 14 41.9 -0.3**
CLL Collm 145.60 348 PKPbc **PKPbc** **12 14 42.8 -0.4**
GERES GERESS Array B 147.76 345 PKPbc **PKPbc** **12 14 47.4 -1.8**
comp=Z,0.6nm,0.2s,baz=320,slow=3.5,SNR=5.4
GERES GERESS Array B 147.76 345 PKPbc **PKPbc** **12 14 48.8 -0.4**

*IDC **06** 11:56:11.2±1.5, 17.°99S×177.°99W, h609km±15km, mb3.3/7, mbtmp4.3/9, Error ellipse: s-maj=46.7km s-min=16.2km az=147.0*
*NEIC **06** 11:56:11.4±1.5, 18.°0S±0.°2×178.°0W±0.°1, h605km±8km, mb4.1/11, Error ellipse: s-maj=23.5km s-min=17.5km az=151.0*
ISC 06 11:56:10.8±0.6, 18.°0S±0.°1×178.°0W±0.°1, h600km, n37, σ0°89/40, mb4.1/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTU	**Fugatoga**	**3.64**	**359**	P	**P**	**11 57 35.8**	**+1.8**
MSVF	**Nonsavu**	**3.74**	**273**	P	**P**	**11 57 36.9**	**+2.2**
	168nm,0.7s,baz=130,slow=4.6,SNR=169						
MSVF	**Nonsavu**	**3.74**	**273**	P	**P**	**11 57 37.0**	**+2.3**
AFI	**Afiamalu**	**7.24**	**57**	P	**P**	**11 58 02.8**	**-0.4**
	34nm,0.6s,baz=346,slow=3.6,SNR=6.5						
AFI	**Afiamalu**	**7.24**	**57**	P	**P**	**11 58 03.3**	**+0.1**
NIUE	**Niue**	**7.77**	**99**	P	**P**	**11 58 08.8**	**+0.9**
MARNC	**Mare, Loyalty**	**13.58**	**253**	P	**P**	**11 59 04.8**	**-0.8**
OUENC	**Ouen Island, N**	**14.88**	**250**	P	**P**	**11 59 17.4**	**-0.5**
STKA	**Stephens Creek**	**38.92**	**241**	P	**P**	**12 02 46.9**	**+0.2**
	3.8nm,0.5s,baz=87,slow=10,SNR=7.6						
	3.8nm,0.5s						
INKA	**Innaminka**	**39.06**	**248**	P	**P**	**12 02 48.8**	**+0.9**
INKA				IAmb	IAmb	12 02 48.9	
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**44.98**	**260**	P	**P**	**12 03 33.7**	**-0.6**

*NEIC **06** 12:28:23.6±1.4, 43.°85N±0.°09×128.°9W±0.°1, h10km±1km, mb3.9/71, ML3.3/56, Error ellipse: s-maj=20.4km s-min=9.9km az=232.0*
*IDC **06** 12:28:24.9±0.9, 43.°85N×128.°86W, h0km, mb4.0/10, mbtmp3.9/17, ML3.2/8, MS3.4/20, Error ellipse: s-maj=24.5km s-min=11.6km az=42.0*
*PGC **06** 12:28:27.6±0.0, 43.°93N×128.°42W, h10km, MLSn3.4/5, Mw4.1/5, mb3.9(NEIC), 427km west of Eugene, Oregon, Usa Off Coast Of Oregon*
ISC 06 12:28:25.9±0.7, 43.°93N±0.°06×128.°62W±0.°07, h13km, n214, σ1s55/208, mb4.0/17, MS3.4/13, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I02E	**Swisshome, OR**	**3.45**	**85**		**Pn**	**12 29 19.9**	**+0.7**
I02E				IAML		12 30 04.0	
	comp=E,46nm,0.3s						
I02E				IAML		12 30 07.4	
	comp=N,34nm,0.7s						
J01E	**Myrtle Point**	**3.49**	**101**		**Pn**	**12 29 20.4**	**+0.5**
J01E				IAML		12 30 06.2	
	comp=E,42nm,0.7s						
K02D	**Willamette Mer**	**3.82**	**107**		**Pn**	**12 29 25.2**	**+0.8**
K02D				IAML		12 30 13.4	
	comp=N,25nm,0.4s						
I03D	**Drain, OR**	**3.82**	**92**	Pn	**Pn**	**12 29 24.2**	**-0.1**
COR	**Corvallis**	**3.88**	**78**	Pn	**Pn**	**12 29 25.2**	**+0.1**
COR				IAML		12 30 14.2	
	comp=N,41nm,0.7s						
COR				IAML		12 30 21.1	
	comp=N,44nm,0.7s						
G03D	**McMinnville, O**	**4.04**	**70**		**Pn**	**12 29 29.1**	**+1.8**
G03D				IAML		12 30 19.8	
	comp=E,49nm,0.9s						
BUCK	**Buck Mountain**	**4.07**	**84**		**Pn**	**12 29 29.2**	**+1.4**
BUCK				IAML		12 30 24.5	
	comp=N,25nm,0.7s						
BUCK				IAML		12 30 37.8	
	comp=E,40nm,2.0s						
F03A	**Seaside**	**4.11**	**59**		**Pn**	**12 29 29.6**	**+1.2**
L02F	**Cave Junction**	**4.12**	**114**	Pn	**Pn**	**12 29 29.4**	**+1.0**
H04D	**Lebanon**	**4.27**	**80**		**Pn**	**12 29 32.2**	**+1.7**
H04D				IAML		12 30 42.4	
	comp=E,38nm,1.1s						
H04D				IAML		12 30 42.5	
	comp=N,29nm,0.9s						
E03A	**Lebam**	**4.43**	**52**	Pn	**Pn**	**12 29 34.5**	**+1.8**
BBOR	**Butler Butte**	**4.45**	**101**		**Pn**	**12 29 35.0**	**+1.8**
BBOR				IAML		12 30 38.2	
	comp=N,22nm,1.8s						
BBOR				IAML		12 30 40.6	
	comp=E,26nm,0.8s						
I04A	**Tendick Farm,**	**4.49**	**90**		**Pn**	**12 29 35.0**	**+1.4**
I04A				IAML		12 30 38.7	
	comp=E,28nm,1.8s						
F04D	**Rainier, OR**	**4.52**	**60**	Pn	**Pn**	**12 29 35.5**	**+1.5**
G04A	**Mulino**	**4.57**	**72**		**Pn**	**12 29 36.2**	**+1.5**
H04A	**Detroit Lake**	**4.68**	**78**		**Pn**	**12 29 38.2**	**+2.0**
H04A				IAML		12 30 39.6	
	comp=E,27nm,0.5s						
H04A				IAML		12 30 41.0	
	comp=N,22nm,0.5s						
NLWA	**Neilton Lookou**	**4.81**	**42**	Pn	**Pn**	**12 29 39.3**	**+1.4**
YBH	**Yreka Blue Hor**	**4.87**	**115**	Pn	**Pn**	**12 29 40.6**	**+1.8**
	comp=N,0.2nm,0.3s,baz=296,slow=14,SNR=3.7						
YBH				LR	LR	12 31 25.2	
	comp=N,138nm,19.7s,baz=304,slow=36						
YBH	**Yreka Blue Hor**	**4.87**	**115**		**Pn**	**12 29 39.5**	**+0.6**
NC89	**ODP889**	**4.90**	**14**	Pn	**Pn**	**12 29 40.6**	**+1.6**
WIFE	**Three Sisters-**	**4.91**	**86**		**Pn**	**12 29 40.7**	**+1.2**
WIFE				IAML		12 30 44.3	
	comp=E,25nm,1.0s						
WIFE				IAML		12 30 48.4	
	comp=N,13nm,0.6s						
C03A	**Quillayute Air**	**4.92**	**34**	Pn	**Pn**	**12 29 38.8**	**-0.6**
C03A				IAML		12 30 54.9	
	comp=N,29nm,3.2s						
C03A				IAML		12 31 38.9	
	comp=E,20nm,1.8s						
CPW	**Capitol Peak**	**4.92**	**50**	Pn	**Pn**	**12 29 40.9**	**+1.4**
L04D	**Klamath Falls**	**4.93**	**108**	Pn	**Pn**	**12 29 42.0**	**+2.2**
L04D				IAML		12 30 41.0	
	comp=N,21nm,1.1s						
HOOD	**Mount Hood Mea**	**5.16**	**72**		**Pn**	**12 29 44.2**	**+1.2**
OSD	**Olympics--Snow**	**5.19**	**40**	Pn	**Pn**	**12 29 43.0**	**-0.4**
I05D	**Terrebonne, OR**	**5.25**	**83**		**Pn**	**12 29 44.9**	**+0.7**
G05A	**Wamic**	**5.38**	**73**		**Pn**	**12 29 47.0**	**+1.2**
HDW	**Hoodsport**	**5.38**	**44**	Pn	**Pn**	**12 29 48.1**	**+2.1**
B012	**Ucluelet**	**5.43**	**22**	Pn	**Pn**	**12 29 48.5**	**+2.0**
B012				Sn	**Sn**	**12 30 47.6**	**-1.2**
GNW	**Green Mountain**	**5.45**	**46**	Pn	**Pn**	**12 29 48.3**	**+1.6**
GNW	**Green Mountain**	**5.45**	**46**	Pn	**Pn**	**12 29 48.4**	**+1.7**
STW	**Striped Peak**	**5.45**	**37**	Pn	**Pn**	**12 29 48.5**	**+1.7**
BFSB	**Bamfield**	**5.47**	**25**	Pn	**Pn**	**12 29 47.4**	**+0.4**
BFSB	**Bamfield**	**5.47**	**25**	Pn	**Pn**	**12 29 47.8**	**+0.8**
BFSB				Sn	**Sn**	**12 30 48.4**	**-1.2**
B928	**Bamfield**	**5.47**	**25**	Pn	**Pn**	**12 29 47.7**	**+0.8**
B928				Sn	**Sn**	**12 30 48.8**	**-0.9**
M03C	**McCloud**	**5.48**	**117**	Pn	**Pn**	**12 29 49.3**	**+2.1**
OZB	**Mount Ozzard**	**5.48**	**22**	Pn	**Pn**	**12 29 48.6**	**+1.4**
OZB				Sn	**Sn**	**12 30 48.7**	**-1.3**
PINE	**Pine Mountain**	**5.55**	**89**		**Pn**	**12 29 49.1**	**+0.7**
TOFB	**Tofino**	**5.55**	**19**	Pn	**Pn**	**12 29 49.5**	**+1.3**
TOFB				Sn	**Sn**	**12 30 50.7**	**-1.1**

LON	Longmire	5.57	57			Pn		12 29 50.2	+1.8
D05A	Enumclaw	5.68	53			Pn		12 29 51.0	+1.1
SYMB	Survey Mountai	5.71	34		Pn	Pn		12 29 51.4	+1.0
MGRB	Mount Grey	5.75	27		Pn	Pn		12 29 51.8	+0.8
MGRB					Sn	Sn		12 30 55.3	-1.6
B926	Mesachie Lake	5.80	31		Pn	Pn		12 29 52.4	+0.9
B926					Sn	Sn		12 30 56.5	-1.3
CLRS	Cowichan Lake	5.80	31		Pn	Pn		12 29 52.6	+1.2
CLRS					Sn	Sn		12 30 56.7	-1.1
VGZ	Gonzales	5.80	37		Pn	Pn		12 29 52.7	+1.1
NTKA	Nootka	5.83	13		Pn	Pn		12 29 53.6	+1.6
B927	Port Alberni	5.91	25		Sn	Sn		12 30 59.6	-0.9
PABB	Port Alberni	5.91	25		Sn	Sn		12 30 59.4	-1.1
B009	North Saanich	5.93	35		Sn	Sn		12 31 01.1	+0.1
B010	North Saanich	5.93	35		Sn	Sn		12 31 01.0	0.0
PGC	Sidney	5.93	35		Pn	Pn		12 29 54.5	+1.2
PGC					Sn	Sn		12 31 00.7	-0.3
B011	North Saanich	5.93	35		Sn	Sn		12 31 00.4	-0.6
EDB	Eliza Dome	6.04	9		Pn	Pn		12 29 56.4	+1.6
TAHB	Tahsis	6.12	12		Pn	Pn		12 29 57.2	+1.3
SNB	Saturna Island	6.14	36		Pn	Pn		12 29 58.2	+1.9
NLLB	Nanaimo Lost L	6.19	29		Pn	Pn		12 29 58.3	+1.5
NLLB					Sn	Sn		12 31 06.8	-0.7
FHBB	Fair Harbour	6.22	9		Pn	Pn		12 29 59.0	+1.7
FHBB					Sn	Sn		12 31 08.1	-0.2
BPEB	Brooks Peninsu	6.26	5		Pn	Pn		12 29 59.4	+1.5
JCW	Jim Creek	6.31	45		Pn	Pn		12 30 00.5	+1.9
WOSB	Woss	6.39	12		Pn	Pn		12 30 02.1	+2.3
TXDB	Texada	6.45	25		Pn	Pn		12 30 02.2	+1.8
CBB	Campbell River	6.50	19		Pn	Pn		12 30 03.4	+2.2
SHB	Sechelt	6.54	28		Pn	Pn		12 30 03.7	+1.9
PACB	Port Alice, BC	6.56	6		Pn	Pn		12 30 03.7	+1.8
NCSB	Newcastle Ridg	6.71	14		Pn	Pn		12 30 06.5	+2.3
WPB	Watts Point	6.83	31		Pn	Pn		12 30 07.6	+2.0
PHC	Port Hardy	6.83	6		Pn	Pn		12 30 08.0	+2.3
VDEB	Vedder Mountai	6.84	39		Pn	Pn		12 30 07.9	+2.1
BBB	Bella Bella	8.27	2		Pn	Pn		12 30 28.1	+2.7
	comp=N,0.5nm,0.3s,baz=182,slow=14,SNR=11								
BBB					LR	LR		12 33 04.7	
	comp=N,188nm,19.8s,baz=198,slow=34								
	comp=N,4.6nm,0.7s								
BBB	Bella Bella	8.27	2		Pn	Pn		12 30 28.7	+3.3
NEW	Newport	9.09	57		Pn	Pn		12 30 39.6	+2.9
	comp=N,0.4nm,0.3s,baz=240,slow=8.9,SNR=6.4								
NEW					LR	LR		12 34 12.1	
	comp=N,322nm,18.4s,baz=254,slow=37								
	comp=N,5.3nm,0.8s								
GRIB	Gribbell Islan	9.43	358		Pn	Pn		12 30 45.1	+3.8
NVAR	Mina Array Bea	9.52	122		Pn	Pn		12 30 46.9	+4.2
	comp=N,0.1nm,0.3s,baz=289,slow=15,SNR=4.4								
NVAR					LR	LR		12 34 27.9	
	comp=N,266nm,18.3s,baz=310,slow=37								
	comp=N,1.6nm,0.7s								
GRNB	Grenville Isla	9.97	355		Pn	Pn		12 30 51.8	+3.1
ELK	Elko	10.40	103		Pn	Pn		12 31 00.1	+5.1
	comp=N,0.1nm,0.3s,baz=292,slow=13,SNR=6.5								
ELK					LR	LR		12 35 15.1	
	comp=N,82nm,21.8s,baz=286,slow=39								
	comp=N,1.2nm,0.7s								
ELK	Elko	10.40	103			Pn		12 30 54.8	-0.2
MSO	Missoula	10.73	69		Pn	Pn		12 31 00.4	+1.2
CWC	Cottonwood Cre	10.99	129		Pn	Pn		12 31 02.5	-0.4
ISA	Isabella, Lake	11.35	133		Pn	Pn		12 31 07.4	-0.3
DLMT	Dillon	11.51	77		Pn	Pn		12 31 09.7	-0.2
LYMT	Lyon Mountain	11.87	69		Pn	Pn		12 31 15.3	+0.4
BOZ	Bozeman (W)	12.19	76		Pn	Pn		12 31 18.6	-0.7
GSC	Goldstone, Bar	12.52	129		Pn	Pn		12 31 22.7	-1.1
PASC	Pasadena Art C	12.66	137		Pn	Pn		12 31 24.4	-1.2
FXWY	Fox Creek	12.72	85		Pn	Pn		12 31 26.6	0.0
YHH	Holmes Hill	12.75	80		Pn	Pn		12 31 28.6	+1.5
YPP	Pitchstone Pla	12.81	82		Pn	Pn		12 31 27.5	-0.4
FLWY	Flagg Ranch	12.91	83		Pn	Pn		12 31 30.0	+0.9
MOOW	Moose Ponds	12.91	85		Pn	Pn		12 31 29.5	+0.3
LOHW	Long Hollow	13.03	85		Pn	Pn		12 31 31.6	+0.9
LKWY	Lake	13.08	81		Pn	Pn		12 31 33.0	+1.4
T35M	Bob Quinn	13.11	356		Pn	Pn		12 31 31.4	-0.2
CCUT	Cedar City	13.20	114		Pn	Pn		12 31 33.0	-0.1
SZCU	Shurtz Canyon	13.35	113		Pn	Pn		12 31 34.9	-0.4
GCMT	Greycliff	13.57	75		Pn	Pn		12 31 36.7	-1.4
BSUT	Blindstream Ca	13.66	98		Pn	Pn		12 31 40.6	+1.1
EDM	Edmonton	13.71	42		Pn	Pn		12 31 39.5	-0.4
EGMT	Eagleton	13.74	66		Pn	Pn		12 31 41.2	+0.9
TMUT	Trail Mountain	13.82	104		Pn	Pn		12 31 41.8	+0.2
BW06	Boulder Array	13.92	88		Pn	Pn		12 31 44.0	+1.0
PDAR	Pinedale Array	13.92	88		Pn	P		12 31 47.6	-3.6
	comp=N,0.2nm,0.3s,baz=293,slow=13,SNR=2.5								
PDAR					LR	LR		12 37 19.2	
	comp=N,176nm,18.9s,baz=272,slow=38								
BELC	Belle Mtn. Jos	13.93	131		Pn	Pn		12 31 41.4	-1.7
PKCU	Pink Cliffs	13.96	112		Pn	Pn		12 31 43.2	-0.3
PFO	Pinyon Flats O	13.98	133		Pn	P		12 31 48.2	-3.6
	comp=N,0.1nm,0.3s,baz=315,slow=7.1,SNR=3.9								
PFO					LR	LR		12 36 51.0	
	comp=N,178nm,19.0s,baz=322,slow=36								
	comp=N,2.5nm,0.9s								
PFO	Pinyon Flats O	13.98	133			Pn		12 31 42.4	-1.4
PMD	Palm Desert	14.00	133		Pn	Pn		12 31 42.0	-1.8
S34M	Telegraph Cree	14.09	354		Pn	Pn		12 31 44.6	-0.4
IRM	Iron Mountain	14.29	128		Pn	Pn		12 31 48.4	+0.5
P18A	Preston Nutter	14.36	101		Pn	Pn		12 31 50.3	+1.2
W13A	Hualapai Mount	14.37	123		Pn	Pn		12 31 50.4	+1.2
SRU	San Rafael Swe	14.38	103		Pn	Pn		12 31 51.2	+2.0
BC3	Big Chuckawall	14.49	131		Pn	Pn		12 31 50.8	+0.1
RDMU	Red Mountain	14.50	97		Pn	Pn		12 31 52.4	+1.5
U15A	North Rim	14.54	115		Pn	Pn		12 31 52.2	+0.6
DLBC	Dease Lake	14.56	357		Pn	P		12 31 54.5	-3.5
	baz=163,slow=9.0,SNR=6.0								
DLBC					LR	LR		12 36 44.3	
	comp=N,154nm,21.6s,baz=158,slow=34								
	comp=N,0.7nm,0.7s								
HMU	Henry Mountain	14.77	108		Pn	Pn		12 31 55.6	+1.0
BESE	Bessie Mountai	15.17	347		Pn	Pn		12 31 57.0	-2.7
BESE					IAmb	IAmb		12 32 11.8	
	comp=Z,5.4nm,1.0s								
Q32M	Nakina River	15.22	353		Pn	Pn		12 31 58.6	-1.9
CCX	Cicese	15.27	138		Pn	Pn		12 32 00.4	-0.7
GLA	Glamis	15.29	131		Pn	Pn		12 32 00.4	-1.0
GLA					IAmb	IAmb		12 32 11.8	
	comp=Z,3.9nm,0.8s								
ESJX	Sierra Juarez	15.52	136		Pn	Pn		12 32 03.9	-0.6
ESJX					IAmb	IAmb		12 32 10.1	
	comp=Z,12nm,1.1s								
R33M	Jennings River	15.56	356		Pn	Pn		12 32 03.4	-1.5
O20A	White River Ci	15.60	97		Pn	Pn		12 32 05.9	+0.3
O20A					IAmb	IAmb		12 32 17.0	
	comp=Z,11nm,0.9s								
WUAZ	Wupatki	15.68	117		Pn	Pn		12 32 06.4	-0.2
WUAZ					IAmb	IAmb		12 32 17.7	
	comp=Z,14nm,1.0s								
PV21	Cone Mtn., Par	15.71	103		Pn	Pn		12 32 07.1	+0.1
PV21					IAmb	IAmb		12 32 25.5	
	comp=Z,7.0nm,0.9s								
PV23	Carpenter Ridg	15.73	104		Pn	Pn		12 32 07.5	+0.2
PV10	Paradox Valley	15.74	104		Pn	Pn		12 32 08.2	+0.7
PV10					IAmb	IAmb		12 32 21.3	
	comp=Z,8.6nm,1.0s								
PV18	Skein Mesa, Pa	15.89	104		Pn	Pn		12 32 09.9	+0.5
PV18					IAmb	IAmb		12 32 24.4	
	comp=Z,11nm,1.1s								
P32M	Atlin	15.99	351		Pn	Pn		12 32 08.2	-2.2
113A	Mohawk Valley,	16.09	129		Pn	Pn		12 32 11.6	-0.1
113A					IAmb	IAmb		12 32 24.3	
	comp=Z,7.3nm,1.2s								
VTX	Valle De La Tr	16.09	137			Pn		12 32 12.4	+0.6
X16A	Lo Mia Camp, P	16.33	120			Pn		12 32 16.1	+1.2
X16A					IAmb	IAmb		12 32 24.8	
	comp=Z,9.6nm,1.0s								
P33M	Teslin, Yukon	16.51	353			Pn		12 32 16.8	-0.2
MVCO	Mesa Verde	16.67	107		Pn	Pn		12 32 19.9	+0.5
MVCO					IAmb	IAmb		12 32 37.6	
	comp=Z,7.4nm,0.8s								
WHY	Whitehorse	17.18	350			Pn		12 32 24.4	-1.1
WHY					IAmb	IAmb		12 32 27.2	
	comp=Z,3.1nm,0.5s								
X18A	Snowflake	17.21	117		Pn	Pn		12 32 26.0	-0.1
O30N	Mendenhall	17.46	348			Pn		12 32 27.4	-1.5
S22A	4UR Ranch, Cre	17.58	103			P		12 32 31.9	+0.1
ISCO	Idaho Springs	17.61	96			Pn		12 32 31.5	+0.3
PCA	Pinnacle	17.66	341			Pn		12 32 29.9	-1.6
PCA					IAmb	IAmb		12 32 38.1	
	comp=Z,5.8nm,0.9s								
RSSD	Black Hills	17.67	81			Pn		12 32 32.0	+0.2
HYT	Haines Junctio	17.75	346			Pn		12 32 31.4	-1.1
N31M	Braeburn, Yuko	18.10	349			Pn		12 32 34.6	-2.1
TUC	Tucson	18.16	124			Pn		12 32 36.2	-1.6
TUC					IAmb	IAmb		12 32 44.0	
	comp=Z,5.3nm,0.9s								
O28M	Mount Upton	18.24	342			Pn		12 32 37.6	-1.2
O28M					IAmb	IAmb		12 32 45.0	
	comp=Z,6.9nm,0.5s								
LOGN	Logan Glacier	18.48	341		P	P		12 32 38.9	-2.5
GRNC	Granite Creek	18.59	339		P	P		12 32 41.2	-1.5
BARN	Barnard Glacie	18.84	340		P	P		12 32 44.4	-1.1
BARN					IAmb	IAmb		12 32 50.2	
	comp=Z,9.5nm,1.0s								
TGL	Tana Glacier	18.89	338		P	P		12 32 44.1	-1.8
TGL					IAmb	IAmb		12 32 49.9	
	comp=Z,5.6nm,0.9s								
ANMO	Albuquerque	19.28	110		P	Pn		12 32 54.5	+3.1
	comp=Z,0.1nm,0.3s,baz=309,slow=9.8,SNR=8.4								
	comp=Z,2.3nm,0.9s								
ANMO	Albuquerque	19.28	110		P	P		12 32 50.3	-0.2
LENM	Lemitar	19.38	113		P	P		12 32 49.8	-1.7
MCARA	McCarthy VSAT	19.47	339		P	P		12 32 50.8	-1.3
MCARA					IAmb	IAmb		12 33 05.6	
	comp=Z,3.4nm,0.7s								
T25A	Trinidad	19.57	102		P	P		12 32 53.7	0.0
T25A					IAmb	IAmb		12 33 02.1	
	comp=Z,10nm,1.1s								
GLB	Gilahina Butte	19.72	338		P	P		12 32 54.3	-0.7
319A	Douglas	19.72	123		P	P		12 32 54.9	-0.3
E28A	Huff	19.80	73		P	Pn		12 32 56.8	-0.7
L29M	L29M	19.99	347		P	P		12 32 56.5	-1.4
YKA	Yellowknife Ar	20.32	19		P	Pn		12 33 03.7	+0.4
	comp=Z,4.5nm,0.8s,baz=211,slow=11,SNR=17								
YKA					LR	LR		12 39 32.4	
	comp=Z,42nm,20.3s,baz=210,slow=33								
	comp=Z,4.5nm,0.8s								
YKA	Yellowknife Ar	20.32	19		P	P		12 33 01.9	+0.5
FFC	Flin Flon	20.32	48		P	P		12 33 01.0	-0.5
YKAW1	Yellowknife Wh	20.34	19		P	P		12 33 01.2	-0.3
YKAW1					IAmb	IAmb		12 33 12.2	
	comp=Z,10nm,1.1s								
KDAK	Kodiak Island	20.37	321		P	Pn		12 33 03.0	-1.0
	comp=Z,7.8nm,0.9s,baz=123,slow=11,SNR=6.2								
KDAK					LR	LR		12 38 48.8	
	comp=Z,179nm,19.7s,baz=115,slow=31								
	comp=Z,7.8nm,0.9s								
YKAW3	Yellowknife Wh	20.38	19		P	P		12 33 01.2	-0.8
HSIG		20.51	131		P	P		12 33 02.1	-1.6
HSIG					IAmb	IAmb		12 33 11.1	
	comp=Z,6.9nm,1.0s								
BCAR	Beaver Creek A	20.63	343		P	P		12 33 02.4	-2.5
L27K	Beaver Creek,	20.64	343		P	P		12 33 02.2	-2.7
L27K					IAmb	IAmb		12 33 11.0	
	comp=Z,4.2nm,1.1s								
SLKM	Skilak Lake	21.07	330		P	P		12 33 08.1	-1.4
ECSD	EROS Data Cent	23.02	79			P		12 33 31.3	+0.9
AGMN	Agassiz Nation	23.02	67		P	P		12 33 31.1	+0.6
AGMN					IAmb	IAmb		12 33 38.2	
	comp=Z,5.3nm,1.1s								
ULM	Lac du Bonnet	23.04	63		P	P		12 33 33.3	+2.7
	comp=Z,4.6nm,0.8s,baz=264,slow=10.0,SNR=9.6								
ULM					LR	LR		12 42 38.8	
	comp=Z,154nm,18.6s,baz=227,slow=37								
	comp=Z,4.6nm,0.8s								
ULM	Lac du Bonnet	23.04	63			P		12 33 30.8	+0.1
ULM					IAmb	IAmb		12 33 34.3	
	comp=Z,5.1nm,0.9s								
R32A	Long Quarter,	23.10	93		P	P		12 33 31.1	-0.3
PECS	Pecos	23.16	114		P	P		12 33 31.5	-0.6
PECS					IAmb	IAmb		12 33 38.1	
	comp=Z,5.7nm,1.0s								
IL31		23.27	340		P	P		12 33 30.4	-2.4
IL31					IAmb	IAmb		12 33 39.1	
	comp=Z,3.4nm,1.1s								
ILAR	Eielson Array	23.27	340		P	P		12 33 33.8	+1.0
	comp=Z,1.1nm,0.9s,baz=159,slow=6.1,SNR=10								
ILAR					PcP	PcP		12 37 20.6	+0.8
	comp=Z,0.6nm,0.9s,baz=182,slow=2.7,SNR=4.3								
ILAR					LR	LR		12 41 03.3	
	comp=Z,144nm,21.6s,baz=126,slow=33								
	comp=Z,1.1nm,0.9s								
ILAR	Eielson Array	23.27	340		P	P		12 33 31.1	-1.7
N18K	Kilae Creek	23.38	325		P	P		12 33 33.0	-1.0
PPLA	Purkeypile	23.38	333		P	P		12 33 32.1	-2.0
CCB	Clear Creek Bu	23.40	339		P	P		12 33 31.4	-2.6
CCB					IAmb	IAmb		12 33 42.3	
	comp=Z,2.7nm,0.8s								
POST	Post	23.73	108		P	P		12 33 36.8	-0.9
POST					IAmb	IAmb		12 33 41.7	
	comp=Z,4.3nm,0.9s								
L19K	White Mountain	23.86	329		P	P		12 33 35.5	-3.2
K20K	Telida	24.33	332		P	P		12 33 41.7	-1.3
EPLO	Experimental L	24.41	64		P	P		12 33 42.5	-1.4
MLY	Manley	24.49	337		P	P		12 33 43.0	-1.5
INK	Inuvik	24.58	356		LR	LR		12 42 56.0	
	comp=Z,167nm,20.6s,baz=224,slow=35								
INK	Inuvik	24.58	356		P	P		12 33 41.5	-3.6
INK					IAmb	IAmb		12 33 56.0	
	comp=Z,2.1nm,0.8s								
TX31	Lajitas Ar. Si	24.63	118		P	P		12 33 45.2	-0.9
TX31					IAmb	IAmb		12 33 52.3	
	comp=Z,5.1nm,1.1s								
TXAR	Lajitas Array	24.63	118		P	P		12 33 49.5	+3.3
	comp=Z,2.0nm,0.8s,baz=298,slow=7.8,SNR=20								
	comp=Z,2.0nm,0.8s								
TXAR	Lajitas Array	24.63	118		P	P		12 33 45.0	-1.2
LPIG	La Paz	24.82	137		LR	LR		12 42 32.2	
	comp=Z,72nm,19.4s,baz=268,slow=34								
J20K	Nowinta River	24.90	333		P	P		12 33 46.1	-2.0
J20K					IAmb	IAmb		12 33 57.5	
	comp=Z,3.5nm,0.9s								
E28M	Babbage River	25.39	351		P	P		12 33 51.3	-1.2
E28M					IAmb	IAmb		12 34 00.8	
	comp=Z,3.7nm,0.9s								
SADO	Sadowa	34.95	71		LR	LR		12 49 39.9	
	comp=Z,116nm,19.3s,baz=360,slow=36								
TKL	Tuckaleechee C	35.07	88		LR	LR		12 50 16.3	
	comp=Z,211nm,18.6s,baz=312,slow=37								
FRB	Frobisher Bay	38.78	38		LR	LR		12 51 54.8	
	comp=Z,45nm,18.4s,baz=165,slow=36								
CMIG	Matias Romero	39.05	123		LR	LR		12 51 34.8	
	comp=Z,50nm,20.1s,baz=324,slow=36								
SCHQ	Schefferville	40.40	52		LR	LR		12 52 07.9	
	comp=Z,55nm,20.5s,baz=297,slow=35								
PETK	Petropavlovsk-	47.63	308		P	P		12 37 01.1	-0.3
	comp=Z,2.1nm,0.8s,baz=72,slow=9.3,SNR=2.5								
	comp=Z,2.1nm,0.8s								
SUMG	Summit	48.81	24	*i*	P	P		12 37 15.0	+4.3
H11N3	WAKE ISLAND Hy	58.32	267		T	T		13 41 11.8	
	baz=49,slow=75,SNR=1352								
H11N2	WAKE ISLAND Hy	58.32	267		T	T		13 41 12.0	
	baz=49,slow=75,SNR=782								
H11N1	WAKE ISLAND Hy	58.33	267		T	T		13 41 13.1	
	baz=49,slow=75,SNR=1216								
H11S1	WAKE ISLAND Hy	59.25	266		T	T		13 42 20.0	
	baz=50,slow=75,SNR=298								
H11S2	WAKE ISLAND Hy	59.26	266		T	T		13 42 21.2	
	baz=50,slow=75,SNR=172								
H11S3	WAKE ISLAND Hy	59.27	266		T	T		13 42 23.0	
	baz=50,slow=75,SNR=82								
JCJ	Chichijima	71.20	290		LR	LR		13 02 33.8	
	comp=Z,677nm,20.9s,baz=208,slow=29								
SONM	Songino Array	76.60	325		P	P		12 40 17.2	+1.2
	comp=Z,1.2nm,0.5s,baz=56,slow=5.6,SNR=4.3								
	comp=Z,1.2nm,0.5s								
ZALV	Zalesovo Beam	78.39	341		P	P		12 40 26.7	+0.9
	comp=Z,0.3nm,0.3s,baz=48,slow=4.8,SNR=3.8								
	comp=Z,0.3nm,0.3s								
LPAZ	La Paz	81.42	122		P	P		12 40 44.0	+0.6
	comp=Z,2.5nm,0.7s,baz=321,slow=5.1,SNR=8.9								
	comp=Z,2.5nm,0.7s								
KURBB	Kurchatov Arra	82.91	343		P	P		12 40 51.0	+0.9
	comp=Z,1.2nm,0.9s,baz=20,slow=4.8,SNR=7.6								
	comp=Z,1.2nm,0.9s								
KRVT	Keravat (AS076	85.32	260		LR	LR		13 13 07.8	
	comp=Z,34nm,19.4s,baz=265,slow=32								

UPA 06 12:46:23.7±0.4, 8°40N×83°05W, h31km±3km, ML3.3, MW2.8, 1C-1D, Presumed earthquake, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTPM	Petroterminale	0.26	138	*i*P	Pb	12 46 30.4	-0.3
PTPM				AMP		12 46 30.7	
	comp=Z,5μm,0.1s						
PTPM				*e*S	Sn	12 46 36.3	0.0
PIRO	Carate, Puerto	0.28	271	*e*P	Pb	12 46 30.9	-0.1
PIRO				*e*S	Sb	12 46 35.9	-0.1
LIMO3	Limones	0.35	148	*e*P	Pb	12 46 31.7	-0.3
LIMO3				AMP		12 46 31.9	
	comp=Z,1μm,0.1s						
BRU2	Volcan	0.53	42	*i*P	Pb	12 46 34.6	-0.2
BRU2				AMP		12 46 34.8	
	comp=Z,1μm,0.1s						
BRU2				*e*S	Sn	12 46 43.2	-0.1
BRU2	Volcan	0.53	42	*i*P	Pb	12 46 34.3	-0.5
BRU2				*e*S	Sb	12 46 42.7	+0.2
CLLRA	Cordillera,	0.55	52	*i*P	Pb	12 46 35.0	-0.2
DVD	David	0.60	86	*e*P	Pb	12 46 35.0	-0.7
DVD				AMP		12 46 35.2	
	comp=Z,2μm,0.1s						
DVD				*e*S	Sb	12 46 43.8	-0.2
PTAR3	Potrerillos Ar	0.62	62	*e*P	Pb	12 46 35.9	-0.4
PTAR3				*e*S	Sn	12 46 45.5	0.0
PBNVO	Pueblo Nuevo,	0.98	60	*i*P	Pn	12 46 40.7	-0.6
PBNVO				*e*S	Sn	12 46 53.9	-0.3
PBNVO				IAML		12 46 54.3	
	comp=Z,57nm,0.4s						
RBALA	Bur	1.01	62	*i*P	Pn	12 46 41.5	-0.3
RBALA				*e*S	Sn	12 46 54.1	-0.8

BJI ***06*** *12:58:01.9,21.°02N×144.°76E,h121km,mB5.1/40, mb5.1/74*

NEIC ***06*** *12:58:03.6,21.°04N×145.°39E,h140km, Moment Tensor Solution. Duration: 28 Moment tensor: Scale 10^{17}Nm; M_{rr}0.89; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$0.19; $M_{r\theta}$-1.81; $M_{r\phi}$0.07; $M_{\theta\phi}$0.82; Fault plane solution: $M_0$2.23000×10^{17} NP1:ϕ_s71.93000°, δ16.03000°, λ50.81000°. NP2:ϕ_s292.23000°, δ77.64000°, λ100.29000°. Principal axes: T 2.1921, Plg56.0000°, Azm215.0000°; N 0.0663, Plg10.0000°, Azm110.0000°; P -2.2584, Plg32.0000°, Azm14.0000°;*

NEIC ***06*** *12:58:03.1,21.°04N×144.°86E,h110km*

GFZ ***06*** *12:58:04.7±0.1,21.°N±2.°×14.°5E±.°,h128km,M5.1/79, mb5.2/79,confirmed*

IPGP ***06*** *12:58:04.0,21.°04N×144.°85E,h132km,Mw5.5, Fault plane solution: NP1:ϕ_s81.00000°, δ22.00000°, λ51.00000°. NP2:ϕ_s302.00000°, δ73.00000°, λ104.00000°.*

MOS ***06*** *12:58:04.3±1.0,20.°97N×144.°80E,h146km,mb5.1/66, MS4.3/6, Error ellipse: s-maj=8.0km s-min=3.9km az=115.4*

GFZ ***06*** *12:58:04.7,20.°96N×144.°79E,h122km,Mw5.5/119, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.61; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$0.57; $M_{r\theta}$-1.40; $M_{r\phi}$-0.32; $M_{\theta\phi}$0.77; Fault plane solution: $M_0$1.92045×10^{17} NP1:ϕ_s43.92766°, δ29.04336°, λ22.45742°. NP2:ϕ_s294.05951°, δ79.31272°, λ117.16631°. Principal axes: T 1.8942, Plg48.5317°, Azm233.2381°; N 0.0515, Plg26.6574°, Azm108.6231°; P -1.9457, Plg29.1474°, Azm2.3651°;*

NEIC ***06*** *12:58:04.3±1.5,21.°03N±0.°04×144.°86E±0.°09, h125km±1km,mb5.2/502,Mwb5.5/59,Mww5.5/24 Error ellipse: s-maj=14.9km s-min=3.3km az=247.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.39; $M_{r\theta}$-1.51; $M_{r\phi}$0.33; $M_{\theta\phi}$0.94; Fault plane solution: $M_0$2.05000×10^{17} NP1: ϕ_s301.95000°, δ75.39000°, λ89.78000°. NP2: ϕ_s122.84000°, δ14.61000°, λ90.86000°. Principal axes: T 2.1276, Plg60.0000°, Azm212.0000°; N -0.1761, Plg0.0000°, Azm302.0000°; P -1.9515, Plg30.0000°, Azm32.0000°;*

PTWC ***06*** *12:58:05,21.°10N×145.°00E,h124km,Mwp5.5/11, MARIANA ISLANDS REGION*

NEIC ***06*** *12:58:05.5,21.°04N×144.°86E,h136km*

IDC ***06*** *12:58:06.4±0.8,20.°96N×144.°

JGN	**Niukaw**	**16.52**	**338**	*e*P		**P**	**13 01 52.0**	**+3.5**
MJAR	**Matsushiro Arr**	**16.52**	**341**	P		**Pn**	**13 01 47.9**	**-0.5**
	comp=E,53nm,0.7s,baz=166,slow=10,SNR=96							
MJAR				ScP		**ScP**	**13 09 50.4**	**-2.4**
	comp=E,8.7nm,0.8s,baz=168,slow=3.3,SNR=11							
MJAR	**Matsushiro Arr**	**16.52**	**341**			**Pn**	**13 01 47.6**	**-0.8**
MAJO	**Matsushiro**	**16.52**	**341**	P		**P**	**13 01 49.2**	**+0.7**
MAJO	**Matsushiro**	**16.52**	**341**	P		**Pn**	**13 01 47.7**	**-0.7**
MAJO	**Matsushiro**	**16.52**	**341**	*e*P		**Pn**	**13 01 48.0**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,64nm,0.7s							
MAJO	**Matsushiro**	**16.52**	**341**	P		**P**	**13 01 48.9**	**+0.4**
MAJO	**Matsushiro**	**16.52**	**341**	P		**Pn**	**13 01 48.4**	**0.0**
MAT	**Matsushiro**	**16.52**	**341**	*e*P		**Pn**	**13 01 47.4**	**-1.0**
MJB9	**Matsu-Tunnel**	**16.53**	**341**	P		**Pn**	**13 01 47.6**	**-0.9**
MJB9	**Matsu-Tunnel**	**16.53**	**341**	P		**Pn**	**13 01 46.9**	**-1.5**
JSU	**Suzuyama**	**16.56**	**312**	P		**P**	**13 01 49.2**	**+0.2**
JSU	**Suzuyama**	**16.56**	**312**	P		**P**	**13 01 52.1**	**+3.1**
JSU	**Suzuyama**	**16.56**	**312**	P		**P**	**13 01 51.9**	**+2.9**
JAD	**Aida**	**16.75**	**328**	*e*P		**Pn**	**13 01 52.6**	**+1.6**
JAD				*e*S		**Sn**	**13 04 52.7**	**-5.2**
JMM	**Marumori**	**17.17**	**349**	P		**Pn**	**13 01 57.1**	**+1.0**
JYA	**Atsumi**	**18.08**	**347**	*e*P		**Pn**	**13 02 08.4**	**+1.4**
JMK	**Ichinoseki**	**18.16**	**351**	*e*P		**Pn**	**13 02 08.8**	**+0.8**
JOM	**Ohasama**	**18.66**	**352**	*e*P		**Pn**	**13 02 14.2**	**+0.4**
JTU	**Tsushima**	**19.13**	**318**	*e*P		**P**	**13 02 18.2**	**+1.2**
PATS	**Pohnpei**	**19.22**	**135**	P		**Pn**	**13 02 19.6**	**-1.1**
	comp=Z,302nm,1.1s							
PATS				S		**S**	**13 05 45.4**	**-3.3**
PATS	**Pohnpei**	**19.22**	**135**	P		**P**	**13 02 19.2**	**+1.0**
PATS	**Pohnpei**	**19.22**	**135**	P		**P**	**13 02 17.9**	**-0.3**
PATS	**Pohnpei**	**19.22**	**135**	P		**Pn**	**13 02 20.0**	**-0.6**
PATS	**Pohnpei**	**19.22**	**135**	P		**Pn**	**13 02 20.1**	**-0.6**
JTM	**Tenmabayashi**	**19.98**	**352**	P		**Pn**	**13 02 28.6**	**-0.7**
JTM	**Tenmabayashi**	**19.98**	**352**	S		**S**	**13 06 09.0**	**+5.7**
JTM	**Tenmabayashi**	**19.98**	**352**	P		**P**	**13 02 26.5**	**+0.3**
JTM	**Tenmabayashi**	**19.98**	**352**	P		**Pn**	**13 02 28.6**	**-0.7**
JTM	**Tenmabayashi**	**19.98**	**352**	*e*P		**Pn**	**13 02 28.1**	**-1.2**
YOJ	**Yonaguni jima**	**20.38**	**284**	P		**P**	**13 02 31.1**	**+0.6**
YOJ	**Yonaguni jima**	**20.38**	**284**	P		**P**	**13 02 31.1**	**+0.6**
JOT	**Ohata**	**20.57**	**352**	P		Pn	13 02 34.5	-1.8
WAKE	**Wake Island**	**20.60**	**91**	P		**P**	**13 02 31.6**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**20.76**	**93**	T		T	13 24 11.4	
	baz=280,slow=74,SNR=20							
H11N1	**WAKE ISLAND Hy**	**20.77**	**90**	P		Pn	13 02 37.7	-0.9
	baz=268,slow=13,SNR=7.3							
H11N1				T		T	13 24 15.5	
	baz=275,slow=75,SNR=26							
H11N2	**WAKE ISLAND Hy**	**20.77**	**90**	P		Pn	13 02 38.3	-0.3
	baz=268,slow=13,SNR=5.9							
H11N2				T		T	13 24 03.0	
	baz=275,slow=75,SNR=37							
H11S1	**WAKE ISLAND Hy**	**20.77**	**93**	T		T	13 24 12.1	
	baz=280,slow=74,SNR=20							
H11S2	**WAKE ISLAND Hy**	**20.78**	**93**	T		T	13 24 13.7	
	baz=280,slow=74,SNR=21							
H11N3	**WAKE ISLAND Hy**	**20.78**	**90**	P		Pn	13 02 39.9	+1.1
	baz=268,slow=13,SNR=6.2							
H11N3				T		T	13 24 05.2	
	baz=275,slow=75,SNR=38							
JEM	**Erimo**	**21.01**	**357**	P		**P**	**13 02 39.1**	**+2.0**
PLP	**Palo**	**21.37**	**246**	*e*P		**P**	**13 02 43.3**	**+2.0**
TJN	**Taejon**	**21.59**	**319**			**P**	**13 02 43.2**	**-0.3**
TJN	**Taejon**	**21.59**	**319**	*i* P		**P**	**13 02 42.6**	**-0.9**
NACB	**Ninganchiao**	**21.64**	**283**	P		**P**	**13 02 44.0**	**-0.1**
SCPH	**Surigao**	**21.66**	**242**	*e*P		**P**	**13 02 46.6**	**+2.2**
TATO	**Taipei**	**21.80**	**285**	P		**P**	**13 02 45.3**	**-0.5**
YULB	**Yu-li**	**21.87**	**281**	P		**P**	**13 02 46.8**	**+0.2**
BIPH	**Bislig**	**21.88**	**237**	*e*P		**P**	**13 02 47.6**	**+1.0**
YHNB	**Yeheng**	**21.88**	**284**	P		**P**	**13 02 47.2**	**+0.5**
KSRS	**Korea Array**	**21.98**	**322**	P		**P**	**13 02 49.0**	**+1.5**
	comp=Z,70nm,0.8s,baz=146,slow=8.6,SNR=196							
KSRS				S		**S**	**13 06 41.3**	**+0.7**
	comp=Z,13nm,1.0s,baz=147,slow=16,SNR=7.1							
KSRS				ScP		**ScP**	**13 10 03.4**	**-1.6**
	comp=Z,12nm,0.8s,baz=131,slow=2.7,SNR=27							
KSRS				LR		LR	13 11 07.8	
	comp=Z,378nm,19.8s,baz=135,slow=35							
	comp=Z,70nm,0.8s							
KSAR	**Wonju Array Be**	**21.99**	**322**			**P**	**13 02 48.3**	**+0.6**
KSAR	**Wonju Array Be**	**21.99**	**322**	P		**P**	**13 02 48.3**	**+0.6**
KS19	**Wonju Array Si**	**22.04**	**322**	P		**P**	**13 02 48.8**	**+0.6**
CDOP	**Cateel, Davao**	**22.06**	**236**	*i* P		**P**	**13 02 48.9**	**+0.4**
TWG	**Pinlang**	**22.07**	**279**	P		**P**	**13 02 49.1**	**+0.5**
SSLB	**Suanglung**	**22.20**	**282**			**P**	**13 02 51.0**	**+1.0**
SSLB	**Suanglung**	**22.20**	**282**	P		**P**	**13 02 51.2**	**+1.2**
TPUB	**Ta-pu**	**22.48**	**280**	P		**P**	**13 02 52.5**	**-0.3**
TPUB	**Ta-pu**	**22.48**	**280**	P		**P**	**13 02 52.7**	**0.0**
LLP	**Lapu-Lapu**	**22.65**	**245**	*e*P		**P**	**13 02 54.9**	**+0.5**
LLP				*e*S		**S**	**13 06 50.0**	**-2.1**
INCN	**Inchon**	**22.76**	**320**	P		**P**	**13 02 55.3**	**+0.1**
INCN	**Inchon**	**22.76**	**320**	P		**P**	**13 02 55.3**	**+0.1**
INCN	**Inchon**	**22.76**	**320**	S		**S**	**13 06 51.1**	**-2.3**
INCN	**Inchon**	**22.76**	**320**	P		**P**	**13 02 55.6**	**+0.4**
JMP	**Maruseppu**	**22.98**	**357**	P		**P**	**13 02 59.1**	**+1.9**
YUK	**Yuzh-Kuril'sk**	**23.00**	**2***d*	*i* P		**P**	**13 02 58.3**	**+1.0**
YUK				*e**SS		**sS**	**13 07 48.6**	**+4.8**
YUK				pmax		pmax		
	comp=Z,172nm,1.1s							
YUK				pmax		pmax		
	comp=N,80nm,1.2s							
YUK				pmax		pmax		
	comp=E,63nm,0.8s							
YUK				pmax		pmax		
	comp=Z,529nm,3.3s							
MANU	**Manus Island**	**23.03**	**173**	P		**P**	**13 02 57.2**	**-0.7**
CGP	**Cagayan de Oro**	**23.05**	**240**	*e*P		**P**	**13 02 59.0**	**+0.9**
TBP	**Tagbilaran**	**23.06**	**244**	*i* P		**P**	**13 02 58.6**	**+0.4**
JKA	**Kamikawa-asahi**	**23.13**	**356**			**P**	**13 03 00.3**	**+1.7**
JKA	**Kamikawa-asahi**	**23.13**	**356**	P		**P**	**13 03 00.9**	**+2.4**
ASAJ	**Asahikawa**	**23.13**	**356**	P		**P**	**13 03 00.3**	**+1.8**
ASAJ	**Asahikawa**	**23.13**	**356**	P		**P**	**13 03 00.8**	**+2.2**
DAV	**Davao City (W)**	**23.17**	**236**	LR		LR	13 14 59.6	
	comp=Z,335nm,18.1s,baz=63,slow=44							
DAV	**Davao City (W)**	**23.17**	**236**	P		**P**	**13 03 02.1**	**+2.9**
DAV	**Davao City (W)**	**23.17**	**236**	P		**P**	**13 03 01.8**	**+2.7**
LQP	**Lukban**	**23.18**	**257**	*e*P		**P**	**13 03 00.9**	**+1.4**
SZP	**Santa**	**23.21**	**266**	P		**P**	**13 03 01.2**	**+1.7**
SSE	**Sheshan**	**23.42**	**300**	P		**P**	**13 03 01.8**	**+0.4**
SSE				S		**S**	**13 07 07.0**	**+2.8**
SSE				pmax		pmax		
	comp=Z,22nm,0.9s							
SSE				pmax		pmax		
	comp=Z,190nm,3.5s							
SSE				L		L		
	comp=Z,590nm,22.7s							
SSE				L		L		
	comp=Z,390nm,23.0s							
IBAJ	**Ibajay, Aklan**	**23.51**	**251**	*i* P		**P**	**13 03 03.8**	**+1.6**
LSIP	**Lazi, Siquijor**	**23.55**	**243**	*i* P		**P**	**13 03 02.8**	**+0.1**
KCP	**Kidapawan**	**23.59**	**237**	*e*P		**P**	**13 03 03.7**	**+0.7**
BAKI	**Biak**	**23.63**	**202**	P		**P**	**13 03 04.9**	**+1.6**
	comp=Z,3µmcomp=Z,186nm,0.9s							
HJU	**Haeju**	**23.67**	**320**	P		**P**	**13 03 03.2**	**-0.3**
HJU				S		**S**	**13 07 09.4**	**+1.5**
HJU				AmB				
	comp=Z,87nm,0.9s							
JAY	**Jayapura**	**23.70**	**190**	P		**P**	**13 03 04.8**	**+0.8**
	comp=Z,5µmcomp=Z,3µmcomp=Z,150nm,1.2s							
SNPH	**Sibulan**	**23.77**	**244**	*e*P		**P**	**13 03 06.2**	**+1.5**
GENI	**Genyem**	**23.87**	**191**	P		**P**	**13 03 06.9**	**+1.4**
HHU	**Hamhung**	**23.95**	**326**	P		**P**	**13 03 04.9**	**-1.1**
HHU				S		**S**	**13 07 12.3**	**-0.1**
HHU				AmB				
	comp=Z,422nm,3.2s							
DCPH	**Dipolog City**	**24.08**	**242**	*i* P		**P**	**13 03 07.5**	**0.0**
MWPI	**Manokwari, Pap**	**24.19**	**207**	P		**P**	**13 03 09.6**	**+1.2**
	comp=Z,4µmcomp=Z,181nm,1.9s							
SRPI	**Serui, Papua**	**24.21**	**201**	P		**P**	**13 03 09.2**	**+0.6**
	comp=Z,3µmcomp=Z,119nm,1.1s							
KUR	**Kuril'sk**	**24.31**	**5**	P		**P**	**13 03 10.9**	**+1.7**
KUR				S		**S**	**13 07 20.2**	**+2.1**
KUR				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KUR				pmax		pmax		
	comp=Z,2µm,7.0s							
PYAG	**Pyongyang**	**24.31**	**322**	P		**P**	**13 03 08.5**	**-0.8**
PYAG				pP		**pwP**	**13 03 40.3**	**-0.4**
PYAG				S		**S**	**13 07 18.9**	**+0.6**
PYAG				AmB				
	comp=Z,120nm,0.9s							
MSHR	**Mys Shultsa**	**24.38**	**335**	*i* P		**P**	**13 03 11.5**	**+1.6**
MSHR				pmax		pmax		
	comp=Z,21nm,0.7s							
QZH2	**Quanzhou**	**24.41**	**284**	P		**P**	**13 03 10.3**	**-0.1**
QZH2				S		**S**	**13 07 21.0**	**+0.8**
QZH2				SS		**SnSn**	**13 08 18.4**	**-2.8**
QZH2				L		L		
	comp=Z,590nm,10.7s							
QZH2				L		L		
	comp=Z,570nm,10.8s							
QZH2				L		L		
	comp=Z,520nm,10.7s							
VLA	**Vladivostok**	**24.56**	**337**	*i* P		**P**	**13 03 12.6**	**+1.0**
VLA				pmax		pmax		
	comp=Z,38nm,0.6s							
KNMB	**Chin-men Tao**	**24.58**	**283**	P		**P**	**13 03 12.3**	**+0.4**
KNMB				lAmb		lAmb	13 03 47.2	
	comp=Z,114nm,1.4s							
PSTR	**Posyet**	**24.58**	**335**	*i* P		**P**	**13 03 12.7**	**+1.0**
WAMI	**Wamena**	**25.43**	**194**	P		**P**	**13 03 22.4**	**+2.7**
	comp=Z,4µmcomp=Z,4µmcomp=Z,134nm,0.9s							
SWI	**Sorong**	**25.43**	**213**	P		**P**	**13 03 21.1**	**+1.4**
SIJI	**Sorong**	**25.43**	**213**	P		**P**	**13 03 20.7**	**+0.9**
USA0B	**Ussuriysk Arra**	**25.47**	**338**	P		**P**	**13 03 19.8**	**0.0**
USA0B				lAmb		lAmb	13 03 55.0	
	comp=Z,58nm,0.8s							
USA0B	**Ussuriysk Arra**	**25.47**	**338**	P		**P**	**13 03 19.8**	**0.0**
USA0B				pmax		pmax		
	comp=Z,58nm,0.9s							
USRK	**Ussuriysk Ar.**	**25.47**	**338**	P		**P**	**13 03 21.4**	**+1.6**
	comp=Z,17nm,0.6s,baz=140,slow=8.6,SNR=36							
USRK				ScP		**ScP**	**13 10 12.3**	**-2.0**
	comp=Z,6.0nm,0.7s,baz=170,slow=2.2,SNR=10.0							
USRK				LR		LR	13 12 43.5	
	comp=Z,524nm,20.4s,baz=143,slow=34							
	comp=Z,17nm,0.6s							
USRK	**Ussuriysk Ar.**	**25.47**	**338**	P		**P**	**13 03 20.5**	**+0.7**
NJ2	**Nanjing**	**25.62**	**301**	*e*P		**P**	**13 03 22.1**	**+0.8**
NJ2				pP		**pP**	**13 03 46.4**	**-3.2**
NJ2				sS		**sS**	**13 08 27.6**	**-2.2**
NJ2				pmax		pmax		
	comp=Z,30nm,0.7s							
NJ2				pmax		pmax		
	comp=Z,360nm,3.8s							
SUJ	**Sinuiju**	**25.74**	**322**	P		**P**	**13 03 25.2**	**+2.9**
YSS	**Yuzhno-Sakhali**	**25.95**	**357**	P		**P**	**13 03 26.7**	**+2.6**
YSS	**Yuzhno-Sakhali**	**25.95**	**357**			**P**	**13 03 23.6**	**-0.5**
YSS	**Yuzhno-Sakhali**	**25.95**	**357**	*e*P		**P**	**13 03 24.8**	**+0.7**
YSS				*e*S		**S**	**13 07 42.9**	**-1.1**
YSS				pmax		pmax		
	comp=Z,30nm,0.5s							
YSS				pmax		pmax		
	comp=Z,400nm,7.2s							
YSS				pmax		pmax		
	comp=N,200nm,7.5s							
YSS				smax		smax		
	comp=N,500nm,7.6s							
YSS				smax		smax		
	comp=E,400nm,9.2s							
YSS				MLR		MLR		
	comp=Z,700nm,17.0s							
YSS				MLR		MLR		
	comp=N,700nm,18.0s							
YSS				MLR		MLR		
	comp=E,700nm,17.0s							
YSS	**Yuzhno-Sakhali**	**25.95**	**357**	P		**P**	**13 03 25.3**	**+1.2**
RABL	**Rabaul**	**26.05**	**163**	P		**P**	**13 03 24.4**	**-0.9**
RABL				lAmb		lAmb	13 03 58.5	
	comp=Z,76nm,0.8s							
TNTI	**Ternate**	**26.33**	**222**	P		**P**	**13 03 28.4**	**+0.6**
TNTI				lAmb		lAmb	13 03 31.1	
	comp=Z,170nm,1.6s							
TNTI	**Ternate**	**26.33**	**222**	P		**P**	**13 03 29.1**	**+1.3**
	comp=Z,69nm,1.2s							
TNTI	**Ternate**	**26.33**	**222**	P		**P**	**13 03 28.5**	**+0.7**
MDJ	**Mudanjiang**	**26.71**	**335**	P		**P**	**13 03 32.3**	**+1.4**
MDJ				pmax		pmax		
	comp=Z,22nm,1.0s							
MDJ	**Mudanjiang**	**26.71**	**335**	P		**P**	**13 03 32.5**	**+1.6**
DL2	**Dalian**	**26.73**	**317**	P		**P**	**13 03 33.5**	**+2.3**
DL2				pP		**pP**	**13 03 59.7**	**-0.2**
DL2				sP		**sP**	**13 04 13.7**	**-1.9**
DL2				PcP		**PcP**	**13 06 55.4**	**+4.4**
DL2				S		**S**	**13 08 00.3**	**+3.7**
DL2				pmax		pmax		
	comp=Z,36nm,0.5s							
DL2				pmax		pmax		
	comp=Z,190nm,4.1s							
FAKI	**Fak Fak**	**26.75**	**209**			**P**	**13 03 32.0**	**+0.4**
FAKI				lAmb		lAmb	13 03 38.5	
	comp=Z,63nm,0.9s							
FAKI	**Fak Fak**	**26.75**	**209**	P		**P**	**13 03 32.5**	**+0.9**
	comp=Z,3µmcomp=Z,82nm,1.2s							
FAKI	**Fak Fak**	**26.75**	**209**	P		**P**	**13 03 31.6**	**0.0**
MNI	**Manado**	**27.50**	**228**	P		**P**	**13 03 39.9**	**+1.6**
CN2	**Changchun**	**27.86**	**329**	P		**P**	**13 03 44.6**	**+3.4**
CN2				S		**S**	**13 08 17.5**	**+3.2**
CN2				SS		**SnSn**	**13 09 48.5**	**+3.9**
CN2				ScP		**SS**	**13 10 19.3**	**+1.6**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
CN2				pmax		pmax		
	comp=Z,200nm,3.0s							
UGL	**Uglegorsk**	**28.11**	**356**	*e*P		**P**	**13 03 45.2**	**+1.9**
UGL				*e*S		**S**	**13 08 18.9**	**+1.0**
UGL				pmax		pmax		
	comp=Z,50nm,1.1s							
TIA	**Tai'an**	**28.50**	**308**	P		**P**	**13 03 47.4**	**+0.4**
TIA				sP		**pwP**	**13 04 25.1**	**+4.9**
TIA				S		**S**	**13 08 22.8**	**-1.7**
TIA				ScP		**ScP**	**13 10 22.7**	**-1.0**
TIA				pmax		pmax		
	comp=Z,40nm,1.0s							
TIA				L		L		
	comp=Z,960nm,10.2s							
TIA				L		L		
	comp=Z,980nm,9.1s							
TIA				L		L		
	comp=Z,460nm,13.0s							
BNX	**BinXian**	**28.51**	**334**	⇑P		**P**	**13 03 48.5**	**+1.6**
BNX				pP		**pP**	**13 04 13.6**	**-2.2**
BNX				S		**S**	**13 08 28.2**	**+3.9**
BNX				sS		**sS**	**13 09 15.1**	**-0.2**
BNX				pmax		pmax		
	comp=Z,44nm,0.5s							
BNX				pmax		pmax		
	comp=Z,310nm,5.7s							
BNX				L		L		
	comp=Z,290nm,7.9s							
BNX				L		L		
	comp=Z,650nm,14.7s							
BNX				L		L		
	comp=Z,810nm,15.2s							
WHN	**Wuhan**	**28.93**	**295**	P		**P**	**13 03 51.5**	**+0.6**
WHN				S		**S**	**13 08 31.1**	**-0.3**
WHN				ScP		**ScP**	**13 10 24.9**	**-0.2**
WHN				L		L		
	comp=Z,7µm,22.8s							
WHN				L		L		
	comp=Z,2µm,15.7s							
WHN				L		L		
	comp=Z,2µm,15.7s							
GTOI	**Gorontalo**	**29.35**	**229**	P		**P**	**13 03 55.8**	**+1.1**
	comp=Z,3µmcomp=Z,144nm,1.2s							
NLAI	**Namlea**	**29.67**	**218**	P		**P**	**13 03 58.5**	**+1.0**
	comp=Z,1µmcomp=Z,62nm,1.1s							
TYV	**Tymovskoe**	**29.86**	**357**	*e*P		**P**	**13 03 59.0**	**+0.2**
TYV				*e*S		**S**	**13 08 46.7**	**+1.3**
TYV				pmax		pmax		
	comp=Z,20nm,0.9s							
TYV				pmax		pmax		
	comp=Z,300nm,3.4s							
TYV				smax		smax		
	comp=N,500nm,4.2s							
TYV				smax		smax		
	comp=E,600nm,4.2s							
TYV				smax		smax		
	comp=N,16nm,1.3s							
TYV				smax		smax		
	comp=E,16nm,1.3s							
KLR	**Kul'dur**	**30.04**	**343**	P		**P**	**13 04 01.2**	**+0.9**
	comp=E,60nm,0.4s,baz=154,slow=8.8,SNR=130							
KLR				ScP		**ScP**	**13 10 26.3**	**-2.0**
	comp=E,10nm,0.9s,baz=156,slow=1.1,SNR=8.0							
	comp=E,60nm,0.4s							
KLR	**Kul'dur**	**30.04**	**343**	*ce*P		**P**	**13 04 01.3**	**+0.9**
KLR				pmax		pmax		
	comp=Z,9.0nm,0.5s							
PMG	**Port Moresby**	**30.30**	**175**	*i* P		**P**	**13 04 01.7**	**-1.3**
PMG				pmax		pmax		
	comp=Z,57nm,1.7s							
GRNR	**Gornyy**	**30.44**	**349**	⇓*i* P		**P**	**13 04 05.6**	**+1.7**
GRNR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
TOLI2	**Tolitoli**	**30.65**	**233**	P		**P**	**13 04 07.8**	**+1.6**
LUWI	**Luwuk**	**30.71**	**227**	P		**P**	**13 04 06.1**	**-0.6**
	comp=Z,3µmcomp=Z,107nm,0.6s							
LUWI	**Luwuk**	**30.71**	**227**	P		**P**	**13 04 06.6**	**-0.1**
HNS	**HongShan**	**30.75**	**309**	⇑P		**P**	**13 04 07.4**	**+0.5**
HNS				ScP		**ScP**	**13 10 30.2**	**-0.7**
HNS				pmax		pmax		
	comp=Z,71nm,0.9s							
HNS				L		L		
	comp=Z,810nm,14.4s							
HNS				L		L		
	comp=Z,840nm,14.3s							
HNS				L		L		
	comp=Z,530nm,16.5s							
BJI2	**Beijing**	**30.90**	**314**	P		P	13 04 13.4	+5.3
BJI2				S		**S**	**13 09 00.2**	**-1.8**
BJI2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
SKR	**Severo-Kuril's**	**30.95**	**14**	*e*P		**P**	**13 04 06.2**	**-2.2**
SKR				*e*			13 04 41.2	
SKR				pmax		pmax		
	comp=Z,200nm,4.1s							
SKR				MLR		MLR		
	comp=Z,500nm,15.0s							
APSI	**Ampana**	**31.40**	**229**	P		**P**	**13 04 12.7**	**-0.1**
KKM	**Kota Kinabalu**	**31.42**	**246**	P		**P**	**13 04 14.7**	**+1.6**
KKM	**Kota Kinabalu**	**31.42**	**246**	P		**P**	**13 04 14.5**	**+1.4**
	comp=Z,2µmcomp=Z,131nm,1.0s							
KKM	**Kota Kinabalu**	**31.42**	**246**	P		**P**	**13 04 15.1**	**+2.0**
LYN	**LuoYang**	**31.47**	**302**	P		**P**	**13 04 14.0**	**+0.7**
LYN				pP		pP	13 04 40.1	-2.0
LYN				PP		**PnPn**	**13 05 22.0**	**-0.3**
LYN				S		**S**	**13 09 06.9**	**-4.2**
LYN				sS		sS	13 10 01.6	-0.7
LYN				ScP		**ScP**	**13 10 33.5**	**+0.1**
LYN				pmax		pmax		
	comp=Z,32nm,0.5s							
LYN				pmax		pmax		
	comp=Z,250nm,5.3s							
LYN				L		L		
	comp=Z,2µm,23.9s							
LYN				L		L		
	comp=Z,630nm,19.3s							
LYN				L		L		
	comp=Z,1µm,21.0s							
MPSI	**Mapaga**	**31.82**	**233**	P		**P**	**13 04 18.2**	**+1.8**
	comp=Z,2µmcomp=Z,1µmcomp=Z,50nm,0.6s							
GULI	**GuiLin**	**31.88**	**284**	P		**P**	**13 04 17.2**	**+0.2**
GULI				S		**S**	**13 09 14.8**	**-2.9**
GULI				pmax		pmax		
	comp=Z,22nm,0.8s							
GULI				L		L		
	comp=Z,860nm,12.0s							
GULI				L		L		
	comp=Z,260nm,18.6s							
GULI				L		L		
	comp=Z,670nm,22.2s							
HEH	**HeiHe**	**32.27**	**339**	*e*P		**P**	**13 04 20.8**	**+0.8**
HEH				pP		**pP**	**13 04 49.4**	**+0.3**
HEH				S		**S**	**13 09 21.8**	**-1.2**
HEH				sS		**sS**	**13 10 11.3**	**-3.0**
HEH				ScP		**ScP**	**13 10 33.9**	**-1.8**
HEH				pmax		pmax		
	comp=Z,36nm,0.6s							
PCI	**Palu**	**32.70**	**231**	P		**P**	**13 04 24.3**	**+0.2**
QIZ	**Qiongzhong**	**32.85**	**273**	P		**P**	**13 04 26.3**	**+0.8**
QIZ				S		**S**	**13 09 35.7**	**+2.9**
QIZ				sS		**sS**	**13 10 25.0**	**+0.8**
QIZ				L		L		
	comp=Z,290nm,15.9s							
QIZ				L		L		
	comp=Z,390nm,16.3s							
QIZ				L		L		
	comp=Z,380nm,15.1s							
KDI	**Kendari**	**32.97**	**224**	P		**P**	**13 04 28.0**	**+1.5**
	comp=Z,2µmcomp=Z,105nm,0.7s							
XLT	**XiLinHaoTe**	**33.01**	**320**	*e*P		**P**	**13 04 27.5**	**+0.8**
XLT				S		**S**	**13 09 33.8**	**-1.1**
XLT				ScP		**ScP**	**13 10 37.2**	**-1.4**
XLT				ScS		**ScS**	**13 14 38.1**	**-1.0**
XLT				pmax		pmax		
	comp=Z,13nm,1.1s							
XLT				pmax		pmax		
	comp=Z,71nm,4.0s							
XLT				L		L		
	comp=Z,630nm,12.3s							
XLT				L		L		
	comp=Z,650nm,16.5s							
ENH	**Enshi**	**33.03**	**293**	P		**P**	**13 04 26.6**	**-0.3**
SAVO	**Savo Central**	**33.40**	**152**	P		P	13 04 35.7	+5.5
PEA0B	**Petropavlovsk-**	**33.57**	**14**	P		**P**	**13 04 30.8**	**-0.5**
PEA0B				lAmb		lAmb	13 04 35.8	
	comp=Z,86nm,1.6s							
PEA0B	**Petropavlovsk-**	**33.57**	**14**	P		**P**	**13 04 30.8**	**-0.5**
PEA0B				pmax		pmax		
	comp=Z,86nm,1.6s							
PETK	**Petropavlovsk-**	**33.57**	**14**	P		**P**	**13 04 32.0**	**+0.7**
	comp=Z,6.2nm,0.7s,baz=152,slow=6.3,SNR=31							
PETK				ScP		**ScP**	**13 10 38.0**	**-2.2**
	comp=Z,4.4nm,0.6s,baz=155,slow=2.4,SNR=6.9							
PETK				LR		LR	13 17 23.3	
	comp=Z,748nm,19.5s,baz=200,slow=34							
	comp=Z,6.2nm,0.7s							
PETK	**Petropavlovsk-**	**33.57**	**14**	P		**P**	**13 04 31.

comp=Z,520nm,16.0s
HHC L L
comp=Z,350nm,16.8s
HIA Hailar 34.55 331 P P 13 04 39.5 -0.3
HIA Hailar 34.55 331 *i* P **P 13 04 39.6 -0.3**
HIA pmax pmax
comp=Z,15nm,0.6s
HIA Hailar 34.55 331 P P 13 04 40.4 +0.5
HIA pP **pP 13 05 07.8 -1.3**
HIA ScP **ScP 13 10 43.4 -0.5**
MMSI Mamuju 34.59 230 P P 13 04 40.4 -0.1
comp=Z,1µmcomp=Z,94nm,1.1s
HILR Hailar Array B 34.75 331 P P 13 04 42.4 +0.8
comp=Z,24nm,0.6s,baz=135,slow=10.0,SNR=16
HILR ScP **ScP 13 10 42.8 -1.7**
comp=Z,27nm,0.8s,baz=139,slow=7.7,SNR=14
HILR LR LR 13 18 47.6
comp=Z,546nm,18.5s,baz=305,slow=36
comp=Z,24nm,0.6s
COEN Coen 34.77 183 P P 13 04 42.8 +0.8
comp=Z,83nm,1.1s
COEN Coen 34.77 183 P P 13 04 41.5 -0.5
COEN IAmb IAmb 13 04 44.4
comp=Z,67nm,1.1s
SPSI Sidrap Palu 34.88 228 P P 13 04 44.2 +1.2
GYA Guiyang 35.23 286 ⇓P **P 13 04 47.2 +1.1**
GYA pP pP 13 05 16.8 +1.7
GYA PcP **PcP 13 07 16.8 +2.8**
GYA S **S 13 10 09.0 -0.6**
GYA ScP **ScP 13 10 47.0 +0.1**
GYA sS sS 13 10 59.6 -1.7
GYA pmax pmax
comp=Z,32nm,0.9s
GYA pmax pmax
comp=Z,200nm,7.4s
GYA L L
comp=Z,520nm,16.3s
GYA L L
comp=Z,460nm,19.8s
GYA L L
comp=Z,570nm,15.8s
ZEA Zeya 35.33 342 *e*P **P 13 04 47.1 +0.7**
ZEA *e* 13 05 14.6
ZEA *e*S **S 13 10 07.3 -2.9**
ZEA pmax pmax
comp=N,20nm,0.4s
ZEA pmax pmax
comp=E,20nm,0.4s
ZEA pmax pmax
comp=Z,70nm,0.5s
ZEA smax smax
comp=N,200nm,11.1s
ZEA MLR MLR
comp=E,100nm,14.0s
ZEA MLR MLR
comp=N,100nm,11.0s
ZEA MLR MLR
comp=Z,200nm,12.0s
BTO2 Baotou 35.53 312 *e*P **P 13 04 49.0 +0.5**
BTO2 pP pP 13 05 09.7 -8.1
BTO2 PP **PP 13 06 05.8 -6.2**
BTO2 S **S 13 10 15.6 +1.7**
BTO2 SS **SnSn 13 12 41.3 -9.0**
BTO2 pmax pmax
comp=Z,53nm,0.9s
BTO2 pmax pmax
comp=Z,200nm,4.6s
BTO2 L L
comp=Z,920nm,15.4s
BTO2 L L
comp=Z,830nm,16.3s
BTO2 L L
comp=Z,710nm,17.6s
KDU Kakadu 35.59 201 P P 13 04 48.6 -0.4
comp=Z,39nm,1.5s
KAPI Kappang 35.66 226 P P 13 04 51.1 +1.5
KAPI Kappang 35.66 226 P P 13 04 51.1 +1.5
KAPI pmax pmax
comp=Z,151nm,1.4s
KAPI Kappang 35.66 226 P P 13 04 51.1 +1.5
KAPI Kappang 35.66 226 P P 13 04 51.1 +1.5
comp=Z,49nm,1.1s
KAPI Kappang 35.66 226 P P 13 04 51.3 +1.7
KAPI Kappang 35.66 226 P P 13 04 51.1 +1.5
DLV Lat 35.88 261 P P 13 04 52.3 +0.4
DLV IAmb IAmb 13 04 55.6
comp=Z,31nm,0.8s
DLV Lat 35.88 261 P P 13 04 53.9 +2.1
BSSI Bau Bau, Buton 36.00 224 P P 13 04 53.0 +0.4
comp=Z,4µmcomp=Z,194nm,1.8s
MTN Manton Dam 36.20 203 P P 13 04 54.1 -0.1
comp=Z,116nm,1.1s,comp=Z,0.0nm
MTN Manton Dam 36.20 203 P P 13 04 54.1 -0.1
SOEI Soe 36.61 215 P P 13 04 59.1 +1.2
comp=Z,76nm,0.7s
MMRI Maumere 36.85 219 P P 13 05 01.5 +1.7
comp=Z,2µmcomp=Z,4µmcomp=Z,178nm,1.8s
MMRI Maumere 36.85 219 P P 13 05 01.5 +1.7
BATI Baumata 37.31 216 P P 13 05 01.3 -2.4
comp=Z,110nm,1.0s
CD2 Chengdu 38.01 294 P P 13 05 10.3 +0.8
CD2 S **S 13 10 46.5 -5.1**
CD2 sS sS 13 11 44.8 +1.1
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 L L
comp=Z,2µm,16.5s
CD2 L L
comp=Z,810nm,16.5s
CD2 L L
comp=Z,740nm,12.1s
SLVN Son La 38.05 278 P P 13 05 10.9 +0.9
LZH Lanzhou 38.68 302 *e*P **P 13 05 15.7 +0.5**
LZH pP pP 13 05 45.4 +0.5
LZH S **S 13 10 58.3 -3.6**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,200nm,4.8s
LZH L L
comp=Z,990nm,14.8s
LZH L L
comp=Z,510nm,14.4s
LZH L L
comp=Z,550nm,14.8s
LZDM Lanzhou Array 38.78 302 P P 13 05 17.4 +1.2
comp=Z,19nm,0.3s,baz=103,slow=8.7,SNR=36
comp=Z,19nm,0.3s
MA2 Magadan 38.78 5 P P 13 05 16.8 +1.3
comp=Z,16nm,0.6s,baz=177,slow=9.3,SNR=22
MA2 ScP **ScP 13 10 57.1 -2.1**
comp=Z,8.8nm,0.7s,baz=184,slow=3.8,SNR=5.1
MA2 LR LR 13 18 53.2
comp=Z,334nm,21.2s,baz=186,slow=32
comp=Z,16nm,0.6s
MA2 Magadan 38.78 5 P P 13 05 17.6 +2.1
MA2 Magadan 38.78 5 P P 13 05 15.8 +0.3
MA2 Magadan 38.78 5*ce*P **P 13 05 17.2 +1.7**
MA2 pmax pmax
comp=Z,100nm,2.5s
MA2 Magadan 38.78 5 P P 13 05 15.4 -0.1
comp=Z,49nm,1.2s
MA2 Magadan 38.78 5 P P 13 05 17.0 +1.5
MA2 Magadan 38.78 5 P P 13 05 16.2 +0.7
MA2 PcP **PcP 13 07 24.4 +0.4**
KMI2 Kunming 38.78 284 P P 13 05 16.3 0.0
KMI2 sP sP 13 06 00.9 -0.8
KMI2 ScP **ScP 13 11 00.5 +0.2**
KMI2 S **S 13 11 02.5 -1.2**
KMI2 ScS **ScS 13 15 12.3 +0.4**
KMI2 pmax pmax
comp=Z,16nm,0.5s
KMI2 pmax pmax
comp=Z,210nm,8.4s
KMI2 L L
comp=Z,340nm,16.6s
KMI2 L L
comp=Z,260nm,21.9s
KMI2 L L
comp=Z,390nm,21.7s
WSI Waingapu 38.83 221 P P 13 05 16.1 -0.3
MTSU Mount Surprise 38.89 181 P P 13 05 17.2 +0.4
comp=Z,30nm,0.9s
MTSU Mount Surprise 38.89 181 P P 13 05 17.2 +0.4
SHEM Shemya Is, Ala 38.90 28 P P 13 05 17.8 +1.2
comp=Z,20nm,0.6s,baz=226,slow=8.3,SNR=6.9
SHEM LR LR 13 21 34.1
comp=Z,536nm,18.6s,baz=266,slow=36
comp=Z,20nm,0.6s
SHEM Shemya Is, Ala 38.90 28 P P 13 05 15.7 -0.8
SHEM IAmb IAmb 13 06 27.2
comp=Z,80nm,1.1s
DBNI Kabupaten Domp 39.19 224 P P 13 05 20.3 +0.9
WBSI Waikabubak, Su 39.36 222 P P 13 05 20.5 -0.4
comp=Z,106nm,0.6s
KNRA Kununurra 39.69 205 P P 13 05 24.1 +0.6
comp=Z,251nm,1.4s
KNRA Kununurra 39.69 205 P P 13 05 24.1 +0.6
PLAI Plampang 39.78 225 P P 13 05 24.9 +0.6
PLAI Plampang 39.78 225 P P 13 05 22.7 -1.7
TWSI Taliwang, Sumb 40.31 226 P P 13 05 29.6 +1.0
comp=Z,2µmcomp=Z,2µmcomp=Z,103nm,1.6s
ULN Ulaanbaatar 40.45 321*ce*P **P 13 05 30.9 +1.2**
ULN pmax pmax
comp=Z,14nm,0.7s
ULN Ulaanbaatar 40.45 321 P P 13 05 30.7 +1.0
ULN S **S 13 11 27.7 -0.2**
ULN Ulaanbaatar 40.45 321 P P 13 05 30.1 +0.4
comp=Z,1µmcomp=Z,79nm,0.7s
ULN Ulaanbaatar 40.45 321 P P 13 05 31.1 +1.4
SONM Songino Array 40.83 320 P P 13 05 33.4 +0.7
comp=Z,14nm,0.4s,baz=136,slow=8.5,SNR=62
SONM ScP **ScP 13 11 06.1 -1.6**
comp=Z,7.0nm,0.7s,baz=146,slow=2.8,SNR=7.5
comp=Z,14nm,0.4s
SONM Songino Array 40.83 320 P P 13 05 33.3 +0.5
SONM Songino Array 40.83 320 P P 13 05 33.3 +0.5
SONM pmax pmax
comp=Z,15nm,0.6s
CTA Charters Tower 40.85 178 P P 13 05 33.2 +0.1
comp=Z,9.8nm,1.4s
KHKI Kahang-Kahang 40.90 227 P P 13 05 35.4 +1.9
comp=Z,3µmcomp=Z,161nm,2.0s
KMMI Kalianget 41.14 231 P P 13 05 39.0 +3.5
QIS Mount Isa 41.60 187 P P 13 05 39.5 +0.3
comp=Z,122nm,1.9s
QIS Mount Isa 41.60 187 P P 13 05 39.5 +0.3
WB0 Warramunga Arr 41.77 195 P P 13 05 41.2 +0.7
BLJI Banyuglugur 41.88 230 P P 13 05 45.3 +3.7
comp=Z,3µmcomp=Z,166nm,1.2s
WR8 Warramunga Arr 41.92 195 P P 13 05 42.5 +0.7
WRAB Tennant Creek 41.94 195 P P 13 05 42.2 +0.4
WRAB Tennant Creek 41.94 195 *i* P **P 13 05 41.8 -0.1**
WRAB pmax pmax
comp=Z,192nm,1.4s
WRAB Tennant Creek 41.94 195 P P 13 05 42.3 +0.4
WRAB Tennant Creek 41.94 195 P P 13 05 42.2 +0.4
WRA Warramunga Arr 41.95 195 P P 13 05 42.2 +0.2
comp=Z,58nm,0.5s,baz=16,slow=8.6,SNR=342
WRA ScP **ScP 13 11 11.6 -0.7**
comp=Z,4.3nm,0.8s,baz=7.0,slow=4.2,SNR=6.3
comp=Z,58nm,0.5s
WRA Warramunga Arr 41.95 195 P P 13 05 42.2 +0.2
JAGI Jajag, Banyuwa 41.99 229 P P 13 05 42.9 +0.4
SEY Seymchan 42.23 5 P P 13 05 44.6 +0.8
comp=Z,24nm,0.5s,baz=184,slow=7.7,SNR=78
SEY ScP **ScP 13 11 10.8 -2.0**
comp=Z,5.0nm,0.9s,baz=203,slow=3.7,SNR=3.5
comp=Z,24nm,0.5s
SEY Seymchan 42.23 5*ce*P **P 13 05 45.6 +1.8**
SEY pmax pmax
comp=Z,21nm,0.6s
YAK Yakutsk 42.32 349 P P 13 05 44.9 +0.5
comp=Z,99nm,0.6s,baz=149,slow=2.6,SNR=23
YAK ScP **ScP 13 11 11.6 -1.5**
comp=Z,50nm,0.8s,baz=156,slow=4.2,SNR=9.7
comp=Z,99nm,0.6s
YAK Yakutsk 42.32 349 P P 13 05 45.2 +0.8
YAK Yakutsk 42.32 349*d* *i* P **P 13 05 44.8 +0.3**
YAK *e**PP **pwP 13 06 19.8 +0.7**
YAK *e* 13 07 25.4
YAK *e* 13 07 34.5
YAK *e*PPP PPP 13 08 04.4
YAK *e*S **S 13 11 51.9 -2.8**
YAK pmax pmax
comp=Z,61nm,0.9s
YAK pmax pmax
comp=N,39nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,311nm,4.3s
YAK pmax pmax
comp=E,90nm,3.5s
YAK pmax pmax
comp=N,173nm,3.9s
YAK smax smax
comp=E,587nm,4.8s
YAK smax smax
comp=N,508nm,3.5s
YAK Yakutsk 42.32 349 P P 13 05 45.0 +0.5
YAK pP **pP 13 06 13.4 -1.0**
YAK Yakutsk 42.32 349 P P 13 05 44.6 +0.2
YAK pP **pP 13 06 13.7 -0.7**
YAK ScP **ScP 13 11 11.8 -1.3**
SANVU Saraoutou 42.38 147 P P 13 05 45.8 +0.4
SANVU IAmb IAmb 13 05 46.6
comp=Z,90nm,1.0s
GTA2 Gaotai 42.55 306 P P 13 05 47.5 +0.6
GTA2 pP pP 13 06 17.4 +0.4
GTA2 ScP **ScP 13 11 14.8 0.0**
GTA2 S **S 13 11 57.5 -1.6**
GTA2 SS **SS 13 15 13.4 -0.7**
GTA2 pmax pmax
comp=Z,40nm,0.8s
GTA2 L L
comp=Z,630nm,24.7s
GTA2 L L
comp=Z,390nm,21.0s
GTA2 L L
comp=Z,480nm,21.6s
CHTO Chiang Mai 43.05 275 P P 13 05 51.9 +0.9
CHTO Chiang Mai 43.05 275 P P 13 05 51.9 +0.9
CHTO pmax pmax
comp=Z,15nm,0.9s
CHTO Chiang Mai 43.05 275 P P 13 05 52.4 +1.3
CHTO S **S 13 12 12.1 +5.5**
CHTO Chiang Mai 43.05 275 P P 13 05 51.8 +0.9
CHTO Chiang Mai 43.05 275 P P 13 05 52.0 +1.0
CHTO Chiang Mai 43.05 275 P P 13 05 51.7 +0.7
CHTO ScP **ScP 13 11 18.1 +1.1**
BOD Bodaibo 43.07 336 *e*P **P 13 05 52.0 +1.4**
BOD pmax pmax
comp=Z,20nm,1.9s
CM31 Chiang Mai Arr 43.12 275 P P 13 05 53.3 +1.7
CM31 Chiang Mai Arr 43.12 275 P P 13 05 53.4 +1.8
SNR=5.9
CMAR Chiang Mai Arr 43.12 275 P P 13 05 52.9 +1.3
comp=Z,7.0nm,0.6s,baz=63,slow=7.1,SNR=58
CMAR ScP **ScP 13 11 16.5 -0.8**
comp=Z,0.8nm,0.7s,baz=89,slow=1.5,SNR=5.0
CMAR LR LR 13 25 17.7
comp=Z,223nm,19.0s,baz=85,slow=38
comp=Z,7.0nm,0.6s
CMAR Chiang Mai Arr 43.12 275 P P 13 05 52.8 +1.2
FITZ Fitzroy Crossi 43.14 207 P P 13 05 52.5 +0.9
comp=Z,32nm,1.3s
FITZ Fitzroy Crossi 43.14 207 P P 13 05 52.3 +0.7
FITZ Fitzroy Crossi 43.14 207 P P 13 05 52.5 +0.9
NGJI Ngawi 43.19 233 P P 13 06 03.0 +11
SNJI Sawahan-Nganju 43.24 232 P P 13 05 54.2 +1.4
comp=Z,133nm,1.2s
PCJI Pacitan 43.95 232 P P 13 06 00.5 +2.3
TPRI Tanjung Pinang 44.05 248 P P 13 06 01.7 +2.6
comp=Z,4µmcomp=Z,108nm,0.8s
TLY Talaya 44.21 324 LR LR 13 25 20.8
comp=Z,316nm,19.6s,baz=108,slow=37
TLY Talaya 44.21 324 *i* P **P 13 05 59.4 -0.4**
TLY pmax pmax
comp=Z,8.0nm,0.6s
TLY Talaya 44.21 324 S S 13 12 24.8 +2.2
MYKOM Kota Tinggi 44.22 250 IAmb IAmb 13 06 05.2
comp=Z,120nm,1.7s
MYKOM Kota Tinggi 44.22 250 P P 13 06 03.2 +2.8
MYKOM Kota Tinggi 44.22 250 P P 13 06 02.7 +2.3
UGM Wanagama 44.25 233 P P 13 06 01.4 +0.7
UGM Wanagama 44.25 233 P P 13 06 01.1 +0.5
comp=Z,284nm,1.5s
ATKA Atka Island 44.39 35 IAmb IAmb 13 06 55.0
comp=Z,28nm,0.8s
DSRI Dabo 44.71 247 P P 13 06 06.6 +2.3
KPJI Karang Pucung 45.08 235 P P 13 06 09.8 +2.6
comp=Z,99nm,1.7s
NPW Naypyitaw 45.48 277 P P 13 06 11.8 +1.5
KULM Kulim 45.54 256 P P 13 06 12.4 +1.6
KULM Kulim 45.54 256 P P 13 06 12.9 +2.1
comp=Z,43nm,0.7s
KULM Kulim 45.54 256 P P 13 06 13.1 +2.2
AS15 Alice Springs 45.60 194 P P 13 06 11.8 +0.6
comp=Z,59nm,0.5s
AS17 Alice Springs 45.62 194 P P 13 06 11.4 +0.2
comp=Z,35nm,0.6s
AS31 Alice Springs 45.63 194 P P 13 06 11.6 +0.1
ASAR Alice Springs 45.64 194 P P 13 06 11.8 +0.4
comp=Z,23nm,0.4s,baz=14,slow=6.9,SNR=700
ASAR ScP **ScP 13 11 26.3 -1.0**
comp=Z,1.1nm,0.7s,baz=15,slow=5.7,SNR=2.1
ASAR S **S 13 12 41.6 -2.1**
comp=Z,1.2nm,1.0s,baz=20,slow=17,SNR=4.8
ASAR LR LR 13 24 27.3
comp=Z,356nm,21.8s,baz=20,slow=35
comp=Z,23nm,0.4s
ASAR Alice Springs 45.64 194 P P 13 06 11.4 0.0
AS09 Alice Springs 45.66 194 P P 13 06 12.2 +0.5
comp=Z,38nm,0.6s
MOY Mondy 45.67 323 *e*P **P 13 06 12.7 +1.1**
MOY pmax pmax
comp=Z,8.0nm,1.8s
LEM Lembang 45.78 237 LR LR 13 23 19.5
comp=Z,213nm,21.3s,baz=86,slow=33
GOMU GeErMu 45.93 300 P P 13 06 13.8 -0.3
GOMU pmax pmax
comp=Z,23nm,0.6s
BBJI Bungbulang 46.15 236 P P 13 06 15.6 -0.1
BBJI IAmb IAmb 13 07 42.7
comp=Z,49nm,1.3s
DBJI Dramaga 46.30 238 P P 13 06 19.2 +2.4
comp=Z,4µmcomp=Z,103nm,2.6s
KOHI KOHIMA 46.54 286 *e*P **P 13 06 19.0 +0.2**
ZIRO ZIRO 46.63 288 *e*P **P 13 06 21.5 +2.0**
ZIRO IAmb IAmb 13 06 22.1
comp=Z,244nm,0.1s
KLSI 46.85 242 P P 13 06 22.4 +1.3
MDSI Maura Dua 47.19 242 P P 13 06 24.7 +1.0
KNGR Kungurtug, Tuv 47.27 320 *i* P **P 13 06 24.2 +0.2**
KNGR pmax pmax
comp=Z,12nm,0.7s
QLP Quilpie 47.30 181 P P 13 06 23.1 -1.1
comp=Z,48nm,0.8s
QLP Quilpie 47.30 181 P P 13 06 23.2 -1.1
TEZP TEZPUR 47.63 287 *e*P **P 13 06 28.0 +0.9**
TEZP IAmb IAmb 13 06 29.4
comp=Z,23nm,0.8s
PSI Prapat 48.14 254 P P 13 06 35.1 +3.8
PPI Padang Panjang 48.32 249 P P 13 06 30.2 -2.3
MNSI Mandailing Nat 48.45 251 P P 13 06 35.5 +2.0
comp=Z,62nm,0.7s
WRKA Warakurna 48.48 200 P P 13 06 33.3 -0.2
comp=Z,25nm,1.2s
PDSI Padang 48.49 249 P P 13 06 35.2 +1.4
comp=Z,38nm,0.8s
MBWA Marble Bar 48.52 212 P P 13 06 34.4 +0.6
comp=Z,77nm,2.1s
MBWA Marble Bar 48.52 212 P P 13 06 34.1 +0.3
MBWA Marble Bar 48.52 212 P P 13 06 34.5 +0.6
MBWA Marble Bar 48.52 212 P P 13 06 34.3 +0.6
SHL Shillong 48.55 286 IAmb IAmb 13 07 35.2
comp=Z,28nm,0.7s
SHL Shillong 48.55 286 P P 13 06 35.4 +1.0
SHL Shillong 48.55 286 *e*P **P 13 06 35.1 +0.8**
SHL IAmb IAmb 13 06 36.0
comp=Z,28nm,0.2s
INKA Innaminka 48.60 185 P P 13 06 34.3 0.0
INKA IAmb IAmb 13 06 35.5
comp=Z,36nm,0.9s
SPIA Saint Paul Isl 48.80 31 P P 13 06 36.6 +1.2
baz=241
KCSI Kotacane, Aceh 48.88 256 P P 13 06 45.3 +8.5
LSA Lhasa 48.88 292 P P 13 06 38.6 +1.5
LSA Lhasa 48.88 292 P P 13 06 38.5 +1.3
LSA Lhasa 48.88 292 P P 13 06 38.5 +1.3
LSA pmax pmax
comp=Z,18nm,0.7s
LSA Lhasa 48.88 292 P P 13 06 38.8 +1.6
BILL Bilibino 48.92 11 P P 13 06 37.2 +0.9
BILL Bilibino 48.92 11*ce*P **P 13 06 37.8 +1.5**
BILL pmax pmax
comp=Z,154nm,2.5s
BILL Bilibino 48.92 11 P P 13 06 37.2 +0.9
BILL pP **pP 13 07 08.8 +1.8**
UNV Unalaska Valle 49.29 36 P P 13 06 39.4 +0.2
baz=248
UNV S **S 13 13 34.8 +0.1**
baz=248
LVA Lava Point 49.66 36 P P 13 06 42.6 +0.4
GSI Gunungsitoli 50.01 253 P P 13 06 46.4 +1.1
comp=Z,60nm,0.9s
GSI Gunungsitoli 50.01 253 P P 13 06 46.2 +0.8
DHUB DHUBRI 50.19 287 *e*P **P 13 06 47.0 +0.4**
DHUB IAmb IAmb 13 06 48.1
comp=Z,9.7nm,0.9s
MSVF Nonsavu 50.44 137 P P 13 06 52.5 +4.0
MSVF Nonsavu 50.44 137 P P 13 06 48.7 +0.2
MSVF Nonsavu 50.44 137 *i* P **P 13 06 47.7 -0.8**
MSVF pmax pmax
comp=Z,79nm,1.7s
MSVF Nonsavu 50.44 137 P P 13 06 48.8 +0.2
TIXI Tiksi 51.51 354 P P 13 06 56.2 +0.5
TIXI Tiksi 51.51 354 *i* P **P 13 06 53.5 -2.1**
TIXI pmax pmax
comp=Z,12nm,0.8s
GAMB Gambell 51.67 23 P P 13 06 58.2 +1.2
baz=235
GAMB S **S 13 14 10.6 +3.2**
baz=235
M11K Mekoryuk 52.16 28 P P 13 07 01.3 +0.7
baz=243
WMQ Urumqi 52.18 310 ⇑P **P 13 07 02.8 +1.6**
WMQ pP pP 13 07 32.3 -0.5
WMQ PcP **PcP 13 08 09.3 -1.7**
WMQ ScP **ScP 13 11 55.6 +0.5**
WMQ S **S 13 14 14.7 -0.4**
WMQ ScS **ScS 13 16 35.4 -1.9**
WMQ pmax pmax
comp=Z,42nm,1.1s
WMQ pmax pmax
comp=Z,270nm,3.9s
WMQ L L
comp=Z,680nm,21.3s
WMQ L L
comp=Z,350nm,18.9s
WMQ L L
comp=Z,280nm,23.9s
WMQ Urumqi 52.18 310 P P 13 07 02.5 +1.3
WMQ pP **pP 13 07 33.5 +0.8**
WMQ ScP **ScP 13 11 56.4 +1.3**
CMSA Cobar Meteorol 52.24 179 P P 13 07 02.1 +0.6
comp=Z,26nm,1.0s
CMSA Cobar Meteorol 52.24 179 P P 13 07 02.1 +0.6
STKA Stephens Creek 52.66 183 P P 13 07 04.2 -0.4
comp=Z,13nm,0.4s,baz=12,slow=7.6,SNR=79
STKA LR LR 13 31 10.2
comp=Z,186nm,19.0s,baz=359,slow=38
comp=Z,13nm,0.4s
STKA Stephens Creek 52.66 183 *i* P **P 13 07 03.6 -1.0**
EVN Everest 52.81 290 P P 13 07 07.7 +0.9
EVN Everest 52.81 290 P P 13 07 07.8 +1.1
SDPT Sand Point 53.10 36 P P 13 07 07.6 0.0
baz=252
DGZ Jazzator, Alta 53.26 317 *i* P **P 13 07 09.9 +0.7**
DGZ pmax pmax
comp=Z,20nm,0.6s
CHNA Chernabura Isl 53.44 36 P P 13 07 10.2 0.0
baz=254
CHNA S **S 13 14 33.6 +2.0**
baz=254
M13K Dall Lake 53.45 29 P P 13 07 11.1 +1.0
baz=246
M13K S **S 13 14 34.7 +3.1**
baz=246
K13K Kusilvak Mount 53.52 27 IAmb IAmb 13 07 13.9
comp=Z,26nm,0.9s
K13K Kusilvak Mount 53.52 27 P P 13 07 11.9 +1.3
baz=244
K13K S **S 13 14 34.4 +1.9**
baz=244

MEEK Meekatharra 53.71 209 P **P** **13 07 12.0 -0.5**
comp=Z,47nm,0.7s
MEEK Meekatharra 53.71 209 P **P** **13 07 12.2 -0.3**
S14K Fog Glacier 53.88 35 P **P** **13 07 13.6 +0.2**
baz=253
FORT Forrest 53.92 198 P **P** **13 07 14.3 +0.4**
comp=Z,66nm,1.0s
O14K Tigyukauivet M 53.98 31 P **P** **13 07 14.1 +0.1**
baz=249
O14K S **S** **13 14 40.4 +1.6**
baz=249
TNA Tin City 54.02 22 P **P** **13 07 15.3 +1.1**
baz=238
TNA S **S** **13 14 40.9 +1.8**
baz=238
N14K Kuskokwak Cree 54.03 30 P **P** **13 07 15.0 +0.7**
baz=248
N14K S **S** **13 14 42.9 +3.6**
baz=248
L14K Kuka Creek 54.12 28 P **P** **13 07 16.0 +1.0**
baz=246
L14K S **S** **13 14 43.2 +2.6**
baz=246
BBOO Buckleboo 54.15 189 P **P** **13 07 15.7 +0.2**
comp=Z,43nm,1.5s
BBOO Buckleboo 54.15 189 P **P** **13 07 15.8 +0.2**
BBOO IAmb IAmb 13 07 17.0
comp=Z,80nm,1.4s
BBOO Buckleboo 54.15 189 P **P** **13 07 14.9 -0.6**
BOK Bokaro 54.20 285 *e*P **P** **13 07 17.6 +1.4**
M14K Bethel 54.21 29 P **P** **13 07 16.0 +0.3**
M14K Bethel 54.21 29 P **P** **13 07 16.6 +1.0**
baz=247
M14K S **S** **13 14 44.1 +2.2**
baz=247
HTT Hallett 54.41 186 P **P** **13 07 18.1 +0.6**
comp=Z,21nm,1.7s
ANM Nome 54.45 24 P **P** **13 07 18.4 +1.0**
baz=241
ANM S **S** **13 14 48.3 +3.4**
baz=241
F14K Arctic Creek 54.54 23 P **P** **13 07 19.3 +1.3**
baz=240,SNR=5.9
F14K S **S** **13 14 49.2 +3.0**
baz=240
ZSN Zaisan 54.59 314 *e*P **P** **13 07 19.7 +1.1**
ZSN pmax pmax
comp=Z,12nm,0.6s
ZSN Zaisan 54.59 314 *e*P **P** **13 07 19.8 +1.1**
comp=Z,12nm,0.6s
O15K Ungalikthiuk R 54.65 31 P **P** **13 07 19.6 +0.7**
baz=250
O15K S **S** **13 14 49.7 +1.9**
baz=250
M15K Kasigluk River 54.77 29 P **P** **13 07 20.5 +0.7**
baz=249
M15K S **S** **13 14 51.1 +1.8**
baz=249
L15K Ungalak Mounta 54.78 28 P **P** **13 07 20.3 +0.6**
baz=247
L15K S **S** **13 14 52.0 +2.5**
baz=247
N15K Kwethluk River 54.86 30 P **P** **13 07 21.3 +0.9**
baz=250
N15K S **S** **13 14 52.0 +1.4**
baz=250
AFI Afiamalu 54.99 125 LR LR 13 28 54.7
comp=Z,191nm,18.9s,baz=38,slow=34
G15K Niukluk 55.15 24 P **P** **13 07 23.2 +0.8**
baz=242
G15K S **S** **13 14 55.7 +1.3**
baz=242
F15K North Star Dit 55.27 23 IAmb IAmb 13 07 35.8
comp=Z,100nm,1.8s
F15K North Star Dit 55.27 23 P **P** **13 07 24.4 +1.2**
baz=241,SNR=5.4
F15K S **S** **13 14 58.2 +2.4**
baz=241
P16K Nushagak River 55.50 32 P **P** **13 07 25.7 +0.8**
baz=252
P16K S **S** **13 15 01.6 +2.5**
baz=252
N16K Nishlik Lake 55.58 30 P **P** **13 07 26.7 +1.1**
baz=251
N16K S **S** **13 15 03.1 +2.8**
baz=251
O16K Kokwok River B 55.62 31 P **P** **13 07 26.7 +0.8**
baz=252
O16K S **S** **13 15 02.8 +2.0**
baz=252
M16K Timber Creek 55.68 29 IAmb IAmb 13 08 06.5
comp=Z,58nm,1.4s
M16K Timber Creek 55.68 29 P **P** **13 07 27.3 +1.0**
baz=250
M16K S **S** **13 15 03.3 +1.8**
baz=250
H16K Elim 55.68 25 P **P** **13 07 26.7 +0.5**
baz=244
H16K S **S** **13 15 03.9 +2.5**
baz=244
L16K Owhat River 55.69 28 P **P** **13 07 26.4 +0.1**
L16K IAmb IAmb 13 08 12.8
comp=Z,27nm,1.2s
L16K Owhat River 55.69 28 P **P** **13 07 27.0 +0.7**
baz=249
L16K S **S** **13 15 02.5 +1.0**
baz=249
ZAA0 Zalesovo Array 55.69 322 P **P** **13 07 26.4 +0.1**
ZAA0 IAmb IAmb 13 07 28.2
comp=Z,22nm,0.6s
ZALV Zalesovo Beam 55.69 322 P **P** **13 07 26.4 0.0**
comp=Z,23nm,0.5s,baz=107,slow=8.0,SNR=94
ZALV ScP **ScP** **13 12 08.8 -1.3**
comp=Z,6.8nm,0.7s,baz=116,slow=4.6,SNR=7.7
ZALV LR LR 13 32 55.9
comp=Z,205nm,18.5s,baz=101,slow=38
comp=Z,23nm,0.5s
ZALV Zalesovo Beam 55.69 322 P **P** **13 07 26.2 -0.2**
J16K Anvik River 55.79 26 IAmb IAmb 13 08 14.4
comp=Z,27nm,1.1s
J16K Anvik River 55.79 26 P **P** **13 07 28.2 +1.3**
baz=247
J16K S **S** **13 15 07.0 +4.2**
baz=247
CHIR Chirikof Islan 55.88 36 P **P** **13 07 28.4 +0.6**
baz=257
R17L Mt. Peulik Vol 55.93 34 P **P** **13 07 27.9 -0.2**
baz=255
I17K Unalakleet 55.99 26 P **P** **13 07 29.5 +1.2**
baz=247
I17K S **S** **13 15 09.0 +3.6**
baz=247
Q16K King Salmon 56.06 32 P **P** **13 07 29.0 0.0**
baz=254
CAN Canberra 56.15 176 P **P** **13 07 30.8 +0.9**
comp=Z,32nm,1.3s
O17K Koliganek Bris 56.16 31 P **P** **13 07 30.3 +0.7**
baz=253
O17K S **S** **13 15 09.9 +2.0**
baz=253
MK31 Makanchi Array 56.27 313 *c*eP **P** **13 07 31.5 +0.8**
MKAR Makanchi Array 56.27 313 P **P** **13 07 31.6 +0.9**
comp=Z,39nm,0.6s,baz=90,slow=8.6,SNR=249
MKAR ScP **ScP** **13 12 12.1 -0.8**
comp=Z,12nm,0.9s,baz=89,slow=6.2,SNR=12
MKAR LR LR 13 33 15.3
comp=Z,285nm,18.3s,baz=80,slow=37
comp=Z,39nm,0.6s
C16K Lisburne Hills 56.31 20 IAmb IAmb 13 07 43.3
comp=Z,31nm,0.8s
C16K Lisburne Hills 56.31 20 P **P** **13 07 31.8 +1.3**
baz=239,SNR=14
C16K S **S** **13 15 11.3 +1.8**
baz=239
P17K Kvichak River 56.31 32 P **P** **13 07 30.9 +0.2**
baz=254
Q17K Contact Creek 56.34 33 P **P** **13 07 30.2 -0.9**
baz=255
Q17K S **S** **13 15 09.3 -1.2**
baz=255
N17K Nushagak Hills 56.34 30 P **P** **13 07 32.3 +1.4**
baz=252
N17K S **S** **13 15 13.6 +3.3**
baz=252
L17K Donlin 56.36 28 P **P** **13 07 32.6 +1.6**
baz=250,SNR=7.8
L17K S **S** **13 15 13.8 +3.4**
baz=250

J17K VABM Dome 56.47 27 IAmb IAmb 13 08 15.2
comp=Z,45nm,1.2s
J17K VABM Dome 56.47 27 P **P** **13 07 33.5 +1.7**
baz=248,SNR=6.7
J17K S **S** **13 15 14.7 +2.9**
baz=248
MAKZ Makanchi 56.48 313 P **P** **13 07 33.2 +1.0**
MAKZ Makanchi 56.48 313 P **P** **13 07 33.2 +1.0**
MAKZ pmax pmax
comp=Z,51nm,0.6s
MAKZ Makanchi 56.48 313 P **P** **13 07 33.4 +1.2**
MAKZ Makanchi 56.48 313 P **P** **13 07 33.2 +1.0**
MAKZ pP **pP** **13 08 03.3 -1.1**
MAKZ sP **sP** **13 08 16.7 -2.8**
MAKZ ScP **ScP** **13 12 13.1 -0.7**
M17K Holitna River 56.50 29 IAmb IAmb 13 07 45.7
comp=Z,24nm,0.8s
M17K Holitna River 56.50 29 P **P** **13 07 33.6 +1.6**
baz=251
M17K S **S** **13 15 16.1 +3.8**
baz=251
K17K Iditarod 56.55 28 P **P** **13 07 33.8 +1.4**
baz=250,SNR=16
K17K S **S** **13 15 16.7 +3.7**
baz=250
G17K Kiwalik Mounta 56.66 24 P **P** **13 07 34.5 +1.4**
baz=246,SNR=8.0
G17K S **S** **13 15 17.2 +2.9**
baz=246
H17K Granite Mounta 56.72 25 P **P** **13 07 35.1 +1.5**
baz=247,SNR=11
H17K S **S** **13 15 16.7 +1.6**
baz=247
D17K Noatak River 56.76 21 P **P** **13 07 35.5 +1.7**
baz=242,SNR=14
D17K S **S** **13 15 18.1 +2.5**
baz=242
SII Sitkinak Islan 56.83 35 P **P** **13 07 35.8 +1.3**
baz=258
SII S **S** **13 15 19.2 +2.4**
baz=258
F17K Baldwin Pennin 56.84 23 IAmb IAmb 13 08 13.0
comp=Z,24nm,0.8s
F17K Baldwin Pennin 56.84 23 P **P** **13 07 35.6 +1.3**
baz=244
F17K S **S** **13 15 18.9 +2.4**
baz=244
Q18K Katmai Hardscr 56.88 33 P **P** **13 07 34.5 -0.4**
baz=256,SNR=6.0
E17K Hotham Inlet 56.91 22 P **P** **13 07 36.5 +1.6**
baz=244,SNR=17
E17K S **S** **13 15 21.2 +3.7**
baz=244
P18K Big Mountain, 56.97 32 P **P** **13 07 35.1 -0.3**
baz=255
MORW Morawa 56.97 210 P **P** **13 07 36.2 +0.5**
comp=Z,70nm,0.6s
MORW Morawa 56.97 210 P **P** **13 07 36.1 +0.3**
MORW Morawa 56.97 210 P **P** **13 07 35.1 -0.7**
RDOG Red Dog Mine 56.99 21 P **P** **13 07 36.9 +1.5**
baz=242
RDOG S **S** **13 15 20.9 +2.3**
baz=242
N18K Kilae Creek 57.00 30 P **P** **13 07 36.9 +1.2**
baz=253
N18K S **S** **13 15 22.1 +3.1**
baz=253
L18K Granite Mounta 57.10 28 IAmb IAmb 13 08 23.9
comp=Z,43nm,1.3s
L18K Granite Mounta 57.10 28 P **P** **13 07 38.3 +2.0**
baz=252,SNR=7.9
L18K S **S** **13 15 23.5 +3.3**
baz=252
O18K Koktuh Hills 57.10 31 P **P** **13 07 37.6 +1.3**
baz=254,SNR=8.0
O18K S **S** **13 15 22.6 +2.4**
baz=254
C17K DeLong Mountai 57.10 20 P **P** **13 07 37.8 +1.5**
baz=241,SNR=7.8
C17K S **S** **13 15 22.1 +2.0**
baz=241
M18K Stony River 57.27 29 P **P** **13 07 39.2 +1.7**
baz=253,SNR=5.1
M18K S **S** **13 15 25.5 +3.1**
baz=253
H18K Honhosa River 57.41 25 P **P** **13 07 39.4 +1.0**
baz=248
H18K S **S** **13 15 26.3 +2.2**
baz=248
F18K Selawik 57.48 23 P **P** **13 07 40.1 +1.3**
baz=246,SNR=6.2
F18K S **S** **13 15 26.9 +1.9**
baz=246
E18K Tukpahlearik C 57.49 22 IAmb IAmb 13 07 51.6
comp=Z,93nm,1.8s
E18K Tukpahlearik C 57.49 22 P **P** **13 07 40.5 +1.5**
baz=244
E18K S **S** **13 15 27.2 +2.1**
baz=244
G18K Tagagawik 57.58 24 IAmb IAmb 13 08 22.3
comp=Z,32nm,1.1s
G18K Tagagawik 57.58 24 P **P** **13 07 40.6 +1.0**
baz=247,SNR=18
G18K S **S** **13 15 28.3 +2.0**
baz=247
O19K Port Alsworth 57.62 31 IAmb IAmb 13 08 20.7
comp=Z,39nm,0.9s
O19K Port Alsworth 57.62 31 P **P** **13 07 40.9 +1.0**
baz=255,SNR=6.1
O19K S **S** **13 15 28.0 +1.1**
baz=255
Q19K Cape Douglas, 57.64 33 P **P** **13 07 39.6 -0.6**
baz=257
N19K Bonanza Creek 57.70 30 IAmb IAmb 13 08 22.8
comp=Z,32nm,1.0s
N19K Bonanza Creek 57.70 30 P **P** **13 07 41.9 +1.2**
baz=255
N19K S **S** **13 15 30.6 +2.3**
baz=255
C18K Utukok River 57.83 20 P **P** **13 07 41.9 +0.5**
baz=243
GCSA Galena City Sc 57.85 26 P **P** **13 07 41.8 +0.4**
baz=250
GCSA S **S** **13 15 31.4 +1.6**
baz=250
L19K White Mountain 57.91 29 IAmb IAmb 13 08 29.1
comp=Z,20nm,1.0s
L19K White Mountain 57.91 29 P **P** **13 07 43.3 +1.3**
baz=253,SNR=5.3
L19K S **S** **13 15 32.8 +2.1**
baz=253
KDAK Kodiak Island 57.94 34 LR LR 13 30 00.4
comp=Z,205nm,21.3s,baz=237,slow=33
KDAK Kodiak Island 57.94 34 P **P** **13 07 42.7 +0.5**
baz=258
KDAK S **S** **13 15 31.7 +0.5**
baz=258
BLDU Ballidu 57.97 209 P **P** **13 07 43.3 +0.5**
comp=Z,97nm,0.8s
BLDU Ballidu 57.97 209 P **P** **13 07 43.3 +0.5**
P19K Oil Pt 58.02 32 P **P** **13 07 43.0 +0.2**
baz=256
P19K S **S** **13 15 32.0 -0.3**
baz=256
M19K Big River Lodg 58.04 29 IAmb IAmb 13 08 23.0
comp=Z,27nm,1.2s
M19K Big River Lodg 58.04 29 P **P** **13 07 44.1 +1.3**
baz=254
M19K S **S** **13 15 35.7 +3.2**
baz=254
PDGK Podgornoye 58.09 309 P **P** **13 07 44.8 +1.0**
PDGK Podgornoye 58.09 309 P **P** **13 07 44.8 +1.0**
SHLS Shalkode 58.11 308 *c*iP **P** **13 07 42.7 -1.2**
SHLS pmax pmax
comp=Z,23nm,0.9s
SHLS Shalkode 58.11 308⇑*i*P **P** **13 07 42.7 -1.2**
comp=Z,23nm,0.9s
J19K Poorman 58.12 27 IAmb IAmb 13 08 26.3
comp=Z,41nm,1.2s
J19K Poorman 58.12 27 P **P** **13 07 44.7 +1.3**
baz=252,SNR=20
J19K S **S** **13 15 36.0 +2.5**
baz=252
TOO Toolangi 58.25 179 P **P** **13 07 42.8 -1.9**
comp=Z,8.1nm,1.2s
TOO Toolangi 58.25 179 P **P** **13 07 45.1 +0.5**
TOO Toolangi 58.25 179 P **P** **13 07 45.1 +0.5**
TOO pmax pmax

comp=Z,34nm,1.9s
F19K Shaleruckik Mo 58.26 23 P **P** **13 07 45.0 +0.7**
baz=248,SNR=6.9
F19K S **S** **13 15 35.1 0.0**
baz=248
G19K Purcell Mounta 58.26 24 IAmb IAmb 13 08 22.6
comp=Z,21nm,1.0s
G19K Purcell Mounta 58.26 24 P **P** **13 07 45.2 +0.9**
baz=249,SNR=16
G19K S **S** **13 15 37.4 +2.1**
baz=249
H19K Roundabout Mou 58.29 25 P **P** **13 07 46.1 +1.6**
baz=250,SNR=26
H19K S **S** **13 15 39.1 +3.5**
baz=250
WUS Wushi 58.31 306 P **P** **13 07 46.9 +1.6**
WUS pP **pP** **13 08 17.5 0.0**
KLBR Kellerberrin 58.35 207 P **P** **13 07 45.7 +0.3**
comp=Z,84nm,0.7s
KLBR Kellerberrin 58.35 207 P **P** **13 07 45.7 +0.3**
O20K Slope Mountain 58.41 31 P **P** **13 07 45.6 0.0**
baz=257
UZB Uzynbulak 58.44 308⇑*i*P **P** **13 07 47.0 +0.9**
comp=Z,24nm,0.9s
C19K Lookout Ridge 58.55 20 P **P** **13 07 47.8 +1.4**
baz=245,SNR=13
C19K S **S** **13 15 40.5 +1.5**
baz=245
A19K Wainwright 58.58 19 P **P** **13 07 48.2 +1.7**
baz=242
A19K S **S** **13 15 42.2 +3.1**
baz=242
K20K Telida 58.59 28 IAmb IAmb 13 08 37.7
comp=Z,29nm,1.0s
K20K Telida 58.59 28 P **P** **13 07 48.4 +1.8**
baz=254,SNR=19
K20K S **S** **13 15 43.3 +3.8**
baz=254
M20K Styx River 58.61 29 IAmb IAmb 13 08 37.8
comp=Z,21nm,1.0s
M20K Styx River 58.61 29 P **P** **13 07 47.9 +1.0**
baz=255,SNR=6.8
M20K S **S** **13 15 42.8 +2.8**
baz=255
KPKS Kokpek 58.68 309 *e*P **P** **13 07 48.6 +0.8**
KPKS Kokpek 58.68 309 *e*P **P** **13 07 48.6 +0.8**
E19K Redstone River 58.69 22 P **P** **13 07 48.6 +1.3**
baz=248
E19K S **S** **13 15 41.9 +1.1**
baz=248
D19K Kuna River 58.79 21 IAmb IAmb 13 08 39.7
comp=Z,30nm,1.1s
D19K Kuna River 58.79 21 P **P** **13 07 49.2 +1.2**
baz=246
D19K S **S** **13 15 42.2 +0.1**
baz=246
J20K Nowinta River 58.79 27 P **P** **13 07 49.7 +1.7**
baz=253,SNR=25
J20K S **S** **13 15 44.5 +2.4**
baz=253
HOM Homer 58.80 32 P **P** **13 07 48.8 +0.6**
baz=258
I20K Naaghedeneel 58.84 26 P **P** **13 07 50.1 +1.8**
baz=252,SNR=8.7
I20K S **S** **13 15 46.2 +3.5**
baz=252
SPCR Spurr Chakacha 58.87 30 P **P** **13 07 49.5 +0.8**
baz=256
SATY Saty 58.89 308 *c*iP **P** **13 07 50.1 +0.9**
SATY pmax pmax
comp=Z,39nm,1.4s
SATY Saty 58.89 308⇑*i*P **P** **13 07 50.2 +0.9**
comp=Z,40nm,1.4s
TDK Taldyqorghan 58.89 311 *e*P **P** **13 07 50.0 +0.9**
TDK pmax pmax
comp=Z,19nm,0.8s
TDK Taldyqorghan 58.89 311 *e*P **P** **13 07 50.0 +0.9**
comp=Z,19nm,0.8s
H20K Anotleneega Mo 58.90 25 P **P** **13 07 50.3 +1.6**
baz=251,SNR=31
H20K S **S** **13 15 45.3 +1.8**
baz=251
PRZ Przheval'sk 58.90 308 P **P** **13 07 52.0 +2.6**
CNPM China Poot 58.98 32 IAmb IAmb 13 08 01.2
comp=Z,36nm,0.8s
KURK Kurchatov 59.00 317 P **P** **13 07 50.2 +0.5**
KURK Kurchatov 59.00 317 P **P** **13 07 50.2 +0.5**
KURK pmax pmax
comp=Z,41nm,0.8s
KURBB Kurchatov Arra 59.05 317 P **P** **13 07 50.4 +0.4**
comp=Z,60nm,0.5s,baz=92,slow=7.7,SNR=856
KURBB ScP **ScP** **13 12 23.6 -1.4**
comp=Z,4.6nm,1.1s,baz=105,slow=3.6,SNR=3.8
KURBB LR LR 13 35 33.1
comp=Z,356nm,18.7s,baz=176,slow=38
KURBB PKPPKP **P'P'df** **13 37 16.3 -7.4**
comp=Z,0.3nm,0.8s,baz=201,slow=5.0,SNR=2.1
KURBB PKP2bc **P'P'bc** **13 37 31.7 -2.8**
comp=Z,1.1nm,0.9s,baz=284,slow=3.6,SNR=7.6
comp=Z,60nm,0.5s
KURBB Kurchatov Arra 59.05 317 P **P** **13 07 49.9 -0.2**
F20K Avaraart Lake 59.09 23 IAmb IAmb 13 07 54.4
comp=Z,58nm,1.8s
F20K Avaraart Lake 59.09 23 P **P** **13 07 51.2 +1.2**
baz=250,SNR=15
F20K S **S** **13 15 47.3 +1.4**
baz=250
NRIK Noril'sk 59.17 340 P **P** **13 07 51.2 +0.6**
comp=Z,23nm,0.6s,baz=118,slow=7.7,SNR=24
NRIK ScP **ScP** **13 12 23.8 -1.5**
comp=Z,20nm,1.0s,baz=114,slow=4.4,SNR=9.1
NRIK S **S** **13 15 45.1 -1.8**
comp=Z,3.2nm,0.7s,baz=193,slow=18,SNR=8.2
NRIK LR LR 13 36 21.3
comp=Z,199nm,18.3s,baz=108,slow=39
comp=Z,23nm,0.6s
NRIK Noril'sk 59.17 340 IAmb IAmb 13 07 53.0
comp=Z,25nm,0.6s
BRLK Bradley Lake 59.20 32 P **P** **13 07 51.1 +0.1**
BRLK IAmb IAmb 13 08 02.4
comp=Z,23nm,0.9s
BRSE Bradley Lake S 59.27 32 P **P** **13 07 51.4 -0.1**
baz=259
BRSE S **S** **13 15 47.0 -1.4**
baz=259
CAPN Captain Cook N 59.28 31 P **P** **13 07 52.7 +1.3**
baz=258
PPLA Purkeypile 59.29 28 P **P** **13 07 52.6 +0.9**
baz=256,SNR=11
PPLA S **S** **13 15 51.0 +2.1**
baz=256
TARG Taragay, Kyrgy 59.36 307 P **P** **13 07 53.6 +0.7**
TARG Taragay, Kyrgy 59.36 307 P **P** **13 07 53.6 +0.7**
TARG pmax pmax
comp=Z,45nm,0.9s
TARG Taragay, Kyrgy 59.36 307 P **P** **13 07 54.9 +2.0**
TARG pP **pP** **13 08 25.3 0.0**
E20K Nigu River 59.36 22 P **P** **13 07 53.3 +1.4**
baz=249
E20K S **S** **13 15 51.0 +1.5**
baz=249
SKT Skwentna 59.37 29 IAmb IAmb 13 08 33.5
comp=Z,23nm,1.0s
SKT Skwentna 59.37 29 P **P** **13 07 52.4 +0.4**
baz=257,SNR=15
SKT S **S** **13 15 50.2 +0.5**
baz=257
D20K Etivluk River 59.38 21 P **P** **13 07 53.4 +1.3**
baz=248
D20K S **S** **13 15 51.0 +1.3**
baz=248
CAST Castle Rocks 59.47 28 IAmb IAmb 13 07 55.5
comp=Z,25nm,0.8s
CAST Castle Rocks 59.47 28 P **P** **13 07 54.0 +1.3**
baz=255,SNR=33
CAST S **S** **13 15 52.4 +1.5**
baz=255
CHUM Lake Minchumin 59.48 27 P **P** **13 07 54.3 +1.5**
baz=255,SNR=15
CHUM S **S** **13 15 54.7 +3.7**
baz=255
NIUE Niue 59.60 129 P **P** **13 07 53.3 -0.9**
B20K Meade River 59.70 20 P **P** **13 07 55.4 +1.2**
baz=247
B20K S **S** **13 15 56.1 +2.5**
baz=247
NWAO Narrogin (SRO) 59.73 207 P **P** **13 07 55.6 +0.7**
comp=Z,65nm,0.9s

NWAO	**Narrogin (SRO)**	**59.73**	**207**	P	**P**	**13 07 55.6**	**+0.7**
	comp=Z,105nm,0.9s									
NWAO	**Narrogin (SRO)**	**59.73**	**207**	P	**P**	**13 07 55.5**	**+0.7**
NWAO	**Narrogin (SRO)**	**59.73**	**207**	P	**P**	**13 07 55.5**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,337nm,2.0s						
NWAO	**Narrogin (SRO)**	**59.73**	**207**	P	**P**	**13 07 55.7**	**+0.8**
NWAO	**Narrogin (SRO)**	**59.73**	**207**	P	**P**	**13 07 55.5**	**+0.6**
G21K	**Allakaket**	**59.75**	**24**	P	**P**	**13 07 56.0**	**+1.4**
	baz=252						
G21K				S	**S**	**13 15 56.7**	**+2.3**
	baz=252						
H21K	**Melozitna Rive**	**59.77**	**25**	P	**P**	**13 07 55.2**	**+0.4**
H21K	**Melozitna Rive**	**59.77**	**25**	P	**P**	**13 07 56.0**	**+1.2**
	baz=253,SNR=30						
KDJ	**Kajisay**	**59.81**	**307**	P	**P**	**13 07 56.2**	**+0.5**
KDJ				IAmb	IAmb	13 07 58.3	
	comp=Z,43nm,0.9s						
KDJ	**Kajisay**	**59.81**	**307**	P	**P**	**13 07 56.2**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,43nm,0.9s						
KDJ	**Kajisay**	**59.81**	**307**	P	**P**	**13 07 57.2**	**+1.5**
KDJ				pP	**pP**	**13 08 27.8**	**-0.4**
L22K	**Petersville**	**59.84**	**29**	IAmb	IAmb	13 08 07.1	
	comp=Z,29nm,0.8s						
L22K	**Petersville**	**59.84**	**29**	P	**P**	**13 07 55.5**	**+0.2**
	baz=257,SNR=23						
L22K				S	**S**	**13 15 55.8**	**+0.1**
	baz=257						
MDOK	**Medeo**	**59.88**	**308**	*e*P	**P**	**13 07 57.1**	**+1.0**
MDOK	**Medeo**	**59.88**	**308**	*e*P	**P**	**13 07 57.1**	**+1.0**
TNSS	**Tian-Shan**	**59.96**	**308**	*e*P	**P**	**13 07 57.7**	**+0.8**
TNSS	**Tian-Shan**	**59.96**	**308**	*e*P	**P**	**13 07 57.8**	**+0.8**
I21K	**Tanana**	**59.97**	**26**	IAmb	IAmb	13 08 00.5	
	comp=Z,39nm,1.2s						
I21K	**Tanana**	**59.97**	**26**	P	**P**	**13 07 57.6**	**+1.5**
	baz=254,SNR=28						
I21K				S	**S**	**13 15 59.8**	**+2.6**
	baz=254						
M22K	**Willow**	**59.97**	**30**	S	**S**	**13 15 57.0**	**-0.3**
	baz=258						
SEW	**Seward**	**59.97**	**32**	IAmb	IAmb	13 08 44.6	
	comp=Z,41nm,1.0s						
SEW	**Seward**	**59.97**	**32**	P	**P**	**13 07 56.6**	**+0.5**
	baz=260,SNR=7.9						
SEW				S	**S**	**13 15 57.5**	**+0.1**
	baz=260						
AAA	**Alma-Ata**	**59.98**	**309**	*e*P	**P**	**13 07 57.6**	**+1.0**
AAA				pmax	pmax		
	comp=Z,32nm,0.8s						
AAA	**Alma-Ata**	**59.98**	**309**	*e*P	**P**	**13 07 57.6**	**+1.0**
	comp=Z,32nm,0.8s						
F21K	**Alatna River**	**59.98**	**23**	P	**P**	**13 07 57.3**	**+1.1**
	baz=252,SNR=9.1						
F21K				S	**S**	**13 15 58.7**	**+1.3**
	baz=252						
KTH	**Kantishna Hill**	**60.00**	**28**	IAmb	IAmb	13 08 36.4	
	comp=Z,47nm,1.2s						
RC01	**Rabbit Creek A**	**60.02**	**31**	IAmb	IAmb	13 08 08.4	
	comp=Z,25nm,0.8s						
RC01	**Rabbit Creek A**	**60.02**	**31**	P	**P**	**13 07 56.5**	**0.0**
	baz=259,SNR=6.6						
RC01				S	**S**	**13 15 56.1**	**-1.9**
	baz=259						
CUT	**Chulitna**	**60.04**	**29**	P	**P**	**13 07 56.8**	**+0.2**
	baz=258						
CUT				S	**S**	**13 15 57.8**	**-0.3**
	baz=258						
C21K	**Knifeblade Rid**	**60.16**	**21**	P	**P**	**13 07 59.1**	**+1.8**
	baz=250,SNR=9.3						
C21K				S	**S**	**13 16 01.8**	**+2.2**
	baz=250						
E21K	**Killik River**	**60.19**	**22**	P	**P**	**13 07 58.7**	**+1.1**
	baz=251						
E21K				S	**S**	**13 16 01.2**	**+1.1**
	baz=251						
TRF	**Thorofare Moun**	**60.26**	**28**	P	**P**	**13 07 58.5**	**+0.2**
	baz=257,SNR=30						
TRF				S	**S**	**13 16 00.9**	**-0.4**
	baz=257						
ASAI	**AK-SAY(Kyrgyzs**	**60.35**	**306**	P	**P**	**13 08 01.4**	**+1.8**
ASAI				pP	**pP**	**13 08 31.9**	**-0.2**
B21K	**Ikpikpuk River**	**60.38**	**21**	IAmb	IAmb	13 08 53.9	
	comp=Z,28nm,1.0s						
B21K	**Ikpikpuk River**	**60.38**	**21**	P	**P**	**13 07 59.1**	**+0.3**
	baz=249,SNR=6.3						
B21K				S	**S**	**13 16 04.6**	**+2.3**
	baz=249						
A21K	**Barrow**	**60.40**	**18**	P	**P**	**13 08 00.0**	**+1.2**
	baz=246						
A21K				S	**S**	**13 16 04.3**	**+1.9**
	baz=246						
H22K	**Ishtalitna Cre**	**60.40**	**25**	P	**P**	**13 08 00.6**	**+1.5**
	baz=255,SNR=15						
H22K				S	**S**	**13 16 06.0**	**+3.3**
	baz=255						
PMR	**Palmer**	**60.40**	**30**	P	**P**	**13 07 59.7**	**+0.6**
PMR	**Palmer**	**60.40**	**30**	P	**P**	**13 07 58.4**	**-0.7**
PMR				IAmb	IAmb	13 08 38.9	
	comp=Z,30nm,1.1s						
PMR	**Palmer**	**60.40**	**30**	P	**P**	**13 07 58.4**	**-0.7**
PMR				pmax	pmax		
	comp=Z,30nm,1.1s						
PMR	**Palmer**	**60.40**	**30**	P	**P**	**13 07 59.0**	**0.0**
	baz=259,SNR=18						
PMR				S	**S**	**13 16 00.9**	**-1.9**
	baz=259						
JHNI	**Jhansi**	**60.43**	**288**	*e*P	**P**	**13 07 59.4**	**-0.5**
MLY	**Manley**	**60.44**	**26**	IAmb	IAmb	13 08 53.4	
	comp=Z,25nm,1.1s						
MLY	**Manley**	**60.44**	**26**	P	**P**	**13 08 00.6**	**+1.3**
	baz=256,SNR=22						
MLY				S	**S**	**13 16 04.3**	**+1.0**
	baz=256						
GHO	**Glory Hole Cre**	**60.53**	**30**	P	**P**	**13 08 00.2**	**+0.2**
F22K	**John River**	**60.55**	**23**	P	**P**	**13 08 01.7**	**+1.7**
	baz=253						
F22K				S	**S**	**13 16 06.3**	**+1.8**
	baz=253						
G22K	**Bettles**	**60.63**	**24**	P	**P**	**13 08 01.7**	**+1.1**
	baz=254						
G22K				S	**S**	**13 16 07.2**	**+1.6**
	baz=254						
KNK	**Knik Glacier**	**60.69**	**30**	IAmb	IAmb	13 08 13.2	
	comp=Z,38nm,0.8s						
KNK	**Knik Glacier**	**60.69**	**30**	P	**P**	**13 08 01.7**	**+0.7**
	baz=260,SNR=9.5						
KNK				S	**S**	**13 16 06.9**	**+0.3**
	baz=260						
BOOM	**Boomskoye usch**	**60.72**	**308**	P	**P**	**13 08 02.6**	**+0.8**
BOOM	**Boomskoye usch**	**60.72**	**308**	P	**P**	**13 08 02.7**	**+0.8**
BOOM				pmax	pmax		
	comp=Z,74nm,0.9s						
BOOM	**Boomskoye usch**	**60.72**	**308**	P	**P**	**13 08 03.6**	**+1.8**
NRN	**Naryn**	**60.72**	**307**	P	**P**	**13 08 03.1**	**+1.0**
NRN				IAmb	IAmb	13 08 04.5	
	comp=Z,28nm,0.8s						
NRN	**Naryn**	**60.72**	**307**	P	**P**	**13 08 03.1**	**+1.0**
NRN				pmax	pmax		
	comp=Z,28nm,0.8s						
A22K	**Sinclair Lake**	**60.77**	**19**	P	**P**	**13 08 02.0**	**+0.6**
	baz=248						
A22K				S	**S**	**13 16 09.2**	**+2.0**
	baz=248						
SML	**Sawmill**	**60.81**	**30**	P	**P**	**13 08 01.9**	**0.0**
SML	**Sawmill**	**60.81**	**30**	P	**P**	**13 08 02.7**	**+0.7**
	baz=260,SNR=33						
SML				S	**S**	**13 16 08.6**	**+0.4**
	baz=260						
E22K	**Anaktuvuk Pass**	**60.86**	**23**	P	**P**	**13 08 03.9**	**+1.7**
	baz=253						
E22K				S	**S**	**13 16 09.2**	**+0.5**
	baz=253						
RND	**Reindeer**	**60.88**	**28**	IAmb	IAmb	13 09 30.8	
	comp=Z,19nm,1.0s						
WAT1	**Susitna Watana**	**60.90**	**29**	P	**P**	**13 08 03.0**	**+0.5**
	baz=259						
WAT1				S	**S**	**13 16 08.3**	**-1.0**
	baz=259						
MCK	**McKinley**	**60.91**	**28**	IAmb	IAmb	13 08 48.6	
	comp=Z,35nm,1.1s						
MCK	**McKinley**	**60.91**	**28**	P	**P**	**13 08 02.8**	**+0.3**
	baz=258,SNR=9.4						
MCK				S	**S**	**13 16 08.3**	**-1.0**
	baz=258						
TKM2	**Tokmak 2**	**60.95**	**308**	P	**P**	**13 08 05.2**	**+1.7**
	SNR=78						
P23K	**Montague Islan**	**60.97**	**32**	IAmb	IAmb	13 08 49.5	
	comp=Z,64nm,1.3s						
P23K	**Montague Islan**	**60.97**	**32**	P	**P**	**13 08 03.9**	**+1.0**
	baz=262						
P23K				S	**S**	**13 16 10.9**	**+0.7**
	baz=262						
B22K	**Teshekpuk Lake**	**61.01**	**20**	P	**P**	**13 08 02.9**	**-0.2**
B22K				IAmb	IAmb	13 08 41.7	
	comp=Z,36nm,1.1s						
B22K	**Teshekpuk Lake**	**61.01**	**20**	P	**P**	**13 08 04.0**	**+1.0**
	baz=250						
B22K				S	**S**	**13 16 11.4**	**+1.1**
	baz=250						
NEA2	**Nenana**	**61.03**	**27**	P	**P**	**13 08 04.1**	**+0.8**
	baz=258,SNR=23						
NEA2				S	**S**	**13 16 11.7**	**+0.9**
	baz=258						
I23K	**Minto, Yukon-K**	**61.03**	**26**	IAmb	IAmb	13 08 07.6	
	comp=Z,83nm,1.7s						
I23K	**Minto, Yukon-K**	**61.03**	**26**	P	**P**	**13 08 04.4**	**+1.1**
	baz=257,SNR=29						
I23K				S	**S**	**13 16 12.6**	**+1.8**
	baz=257						
M23K	**Glacier View**	**61.09**	**30**	P	**P**	**13 08 04.3**	**+0.5**
	baz=260,SNR=12						
H23K	**Yukon River**	**61.11**	**25**	IAmb	IAmb	13 08 08.4	
	comp=Z,92nm,1.9s						
H23K	**Yukon River**	**61.11**	**25**	P	**P**	**13 08 05.4**	**+1.5**
	baz=256						
H23K				S	**S**	**13 16 14.6**	**+2.7**
	baz=256						
G23K	**Bananza Creek**	**61.14**	**24**	IAmb	IAmb	13 08 16.7	
	comp=Z,51nm,1.4s						
G23K	**Bananza Creek**	**61.14**	**24**	P	**P**	**13 08 05.7**	**+1.6**
	baz=256,SNR=28						
G23K				S	**S**	**13 16 14.8**	**+2.6**
	baz=256						
KSH2	**Kashi**	**61.20**	**304**	P	**P**	**13 08 06.4**	**+1.3**
KSH2				pP	pP	13 08 36.8	-0.9
KSH2				S	**S**	**13 16 15.2**	**+1.1**
KSH2				pmax	pmax		
	comp=Z,74nm,0.8s						
KSH2				L	L		
	comp=Z,540nm,17.9s						
KSH2				L	L		
	comp=Z,300nm,15.5s						
KSH2				L	L		
	comp=Z,210nm,13.7s						
WAT6	**Susitna Watana**	**61.22**	**29**	P	**P**	**13 08 05.4**	**+0.6**
	baz=260,SNR=19						
WAT6				S	**S**	**13 16 14.0**	**+0.4**
	baz=260						
GLI	**Glacier Island**	**61.25**	**31**	IAmb	IAmb	13 08 06.9	
	comp=Z,29nm,0.6s						
GLI	**Glacier Island**	**61.25**	**31**	P	**P**	**13 08 05.6**	**+0.8**
	baz=262,SNR=6.5						
GLI				S	**S**	**13 16 15.4**	**+1.7**
	baz=262						
SCM	**Sheep Creek Mo**	**61.29**	**30**	P	**P**	**13 08 06.0**	**+0.8**
	baz=261,SNR=36						
SCM				S	**S**	**13 16 16.0**	**+1.7**
	baz=261						
DHRM	**DHARAMSHALA**	**61.35**	**296**	*e*P	**P**	**13 08 07.3**	**+1.1**
Q23K	**Middleton Isla**	**61.42**	**33**	P	**P**	**13 08 07.2**	**+1.2**
	baz=263						
Q23K				S	**S**	**13 16 17.4**	**+1.6**
	baz=263						
KBK	**Karagaybulak**	**61.44**	**308**	P	**P**	**13 08 08.3**	**+1.6**
	SNR=30						
HIN	**Hinchinbrook I**	**61.47**	**32**	IAmb	IAmb	13 09 05.8	
	comp=Z,26nm,0.9s						
DHY	**Denali Highway**	**61.47**	**29**	IAmb	IAmb	13 08 46.2	
	comp=Z,50nm,1.5s						
DHY	**Denali Highway**	**61.47**	**29**	P	**P**	**13 08 07.0**	**+0.5**
	baz=260,SNR=13						
DHY				S	**S**	**13 16 16.5**	**-0.2**
	baz=260						
D23K	**Nanushuk River**	**61.50**	**22**	IAmb	IAmb	13 08 58.6	
	comp=Z,61nm,1.3s						
D23K	**Nanushuk River**	**61.50**	**22**	P	**P**	**13 08 08.1**	**+1.7**
	baz=254,SNR=20						
D23K				S	**S**	**13 16 19.1**	**+2.5**
	baz=254						
FID	**Port Fidalgo**	**61.53**	**31**	P	**P**	**13 08 06.1**	**-0.6**
FID				IAmb	IAmb	13 08 18.6	
	comp=Z,33nm,0.8s						
RAO	**Raoul Island**	**61.55**	**143**	LR	LR	13 31 48.7	
	comp=Z,155nm,21.3s,baz=298,slow=33						
CHMS	**Chumysh**	**61.57**	**308**	P	**P**	**13 08 08.7**	**+1.3**
	SNR=5.7						
COLA	**College**	**61.60**	**27**	P	**P**	**13 08 09.7**	**+2.6**
COLA	**College**	**61.60**	**27**	P	**P**	**13 08 07.7**	**+0.6**
COLA				IAmb	IAmb	13 08 10.8	
	comp=Z,16nm,0.4s						
COLA	**College**	**61.60**	**27**	*i* P	**P**	**13 08 07.1**	**0.0**
COLA				pmax	pmax		
	comp=Z,12nm,0.7s						
COLA	**College**	**61.60**	**27**	P	**P**	**13 08 07.4**	**+0.3**
	baz=259						
COLA				S	**S**	**13 16 21.1**	**+3.2**
	baz=259						
COLA	**College**	**61.60**	**27**	P	**P**	**13 08 08.1**	**+1.0**
E23K	**Chandalar**	**61.63**	**23**	P	**P**	**13 08 09.5**	**+2.1**
	baz=255,SNR=50						
E23K				S	**S**	**13 16 21.4**	**+2.9**
	baz=255						
SGDS	**Sogindy**	**61.63**	**309**	↑ *i* P	**P**	**13 08 08.9**	**+1.0**
FRU1	**Bishkek**	**61.67**	**308**	P	**P**	**13 08 09.2**	**+1.1**
FRU1	**Bishkek**	**61.67**	**308**	P	**P**	**13 08 09.2**	**+1.1**
FRU1				pmax	pmax		
	comp=Z,52nm,0.9s						
GUNA	**GUNA**	**61.72**	**287**	*e*P	**P**	**13 08 09.4**	**+0.7**
USP	**Ospenovka**	**61.74**	**309**	P	**P**	**13 08 09.7**	**+1.2**
	SNR=16						
C23K	**Itkillik River**	**61.77**	**21**	P	**P**	**13 08 09.9**	**+1.8**
	baz=253,SNR=41						
C23K				S	**S**	**13 16 22.8**	**+2.9**
	baz=253						
AAK	**Ala-Archa**	**61.78**	**308**	LR	LR	13 35 41.4	
	comp=Z,149nm,19.7s,baz=90,slow=36						
AAK	**Ala-Archa**	**61.78**	**308**	P	**P**	**13 08 10.2**	**+1.3**
	SNR=14						
AAK	**Ala-Archa**	**61.78**	**308**	*i* P	**P**	**13 08 10.3**	**+1.3**
	SNR=17						
AAK	**Ala-Archa**	**61.78**	**308**	P	**P**	**13 08 10.1**	**+1.3**
AAK				IAmb	IAmb	13 08 11.1	
	comp=Z,24nm,0.9s						
AAK	**Ala-Archa**	**61.78**	**308**	*ce*P	**P**	**13 08 10.1**	**+1.2**
AAK				pmax	pmax		
	comp=Z,18nm,0.7s						
AAK	**Ala-Archa**	**61.78**	**308**	P	**P**	**13 08 10.2**	**+1.3**
AAK				S	**S**	**13 16 23.4**	**+2.1**
AAK	**Ala-Archa**	**61.78**	**308**	P	**P**	**13 08 10.3**	**+1.3**
AAK				pP	**pP**	**13 08 40.5**	**-1.2**
AAK	**Ala-Archa**	**61.78**	**308**	P	**P**	**13 08 10.0**	**+1.0**
AAK				pP	**pP**	**13 08 40.5**	**-1.2**
H24K	**Noodor Dome**	**61.78**	**26**	P	**P**	**13 08 09.0**	**+0.5**
H24K				IAmb	IAmb	13 08 11.7	
	comp=Z,16nm,0.8s						
H24K	**Noodor Dome**	**61.78**	**26**	P	**P**	**13 08 09.8**	**+1.4**
	baz=258,SNR=30						
H24K				S	**S**	**13 16 22.5**	**+2.1**
	baz=258						
UCH	**Uchtor**	**61.79**	**307**	P	**P**	**13 08 11.4**	**+2.1**
	SNR=59						
TOLK	**Toolik Lake Re**	**61.80**	**22**	P	**P**	**13 08 10.3**	**+1.8**
	baz=255,SNR=40						
TOLK				S	**S**	**13 16 23.1**	**+2.6**
	baz=255						
KUDL	**Kundal**	**61.82**	**291**	*e*P	**P**	**13 08 09.3**	**+0.1**
KUDL				IAmb	IAmb	13 08 10.5	
	comp=Z,21nm,0.8s						
POKR	**Poker Plat Res**	**61.82**	**26**	P	**P**	**13 08 08.7**	**+0.1**
	baz=259						
POKR				S	**S**	**13 16 19.7**	**-1.1**
	baz=259						
EYAK	**Cordova Ski Ar**	**61.86**	**32**	P	**P**	**13 08 11.2**	**+2.3**
EYAK	**Cordova Ski Ar**	**61.86**	**32**	P	**P**	**13 08 09.8**	**+0.9**
	baz=263,SNR=11						
EYAK				S	**S**	**13 16 23.1**	**+1.7**
	baz=263						
M24K	**Tolsona, Glenn**	**61.87**	**30**	IAmb	IAmb	13 08 59.9	
	comp=Z,43nm,0.8s						
M24K	**Tolsona, Glenn**	**61.87**	**30**	P	**P**	**13 08 10.2**	**+1.2**
	baz=262,SNR=10.0						
M24K				S	**S**	**13 16 23.3**	**+1.8**
	baz=262						
HDA	**Harding Lake**	**61.90**	**27**	P	**P**	**13 08 08.8**	**-0.3**
	baz=260,SNR=13						
HDA				S	**S**	**13 16 19.4**	**-2.3**
	baz=260						
KLU	**Klutina**	**61.90**	**31**	IAmb	IAmb	13 08 51.6	
	comp=Z,24nm,0.9s						
KLU	**Klutina**	**61.90**	**31**	P	**P**	**13 08 10.4**	**+1.0**
	baz=262,SNR=20						
DIV	**Divide**	**61.92**	**31**	IAmb	IAmb	13 08 21.7	
	comp=Z,16nm,0.7s						
BHPL	**Bhopal**	**61.93**	**286**	*e*P	**P**	**13 08 10.2**	**+0.1**
BHPL				*i* x	x	13 08 24.1	
BTLS	**Baital**	**61.98**	**311**	*e*P	**P**	**13 08 11.1**	**+1.1**
BTLS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTLS	**Baital**	**61.98**	**311**	*e*P	**P**	**13 08 11.2**	**+1.1**
	comp=Z,9.7nm,0.5s						
IL31		**61.99**	**27**	P	**P**	**13 08 09.1**	**-0.6**
IL31				IAmb	IAmb	13 09 02.1	
	comp=Z,22nm,0.9s						
ILAR	**Eielson Array**	**61.99**	**27**	P	**P**	**13 08 09.2**	**-0.6**
	comp=Z,14nm,0.8s,baz=259,slow=4.9,SNR=87						
ILAR				LR	LR	13 33 01.8	
	comp=Z,211nm,20.7s,baz=258,slow=34						
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**61.99**	**27**	P	**P**	**13 08 09.4**	**-0.3**
E24K	**Your Creek**	**62.05**	**23**	IAmb	IAmb	13 09 00.2	
	comp=Z,42nm,1.2s						
E24K	**Your Creek**	**62.05**	**23**	P	**P**	**13 08 11.7**	**+1.5**
	baz=256,SNR=37						
E24K				S	**S**	**13 16 26.5**	**+2.8**
	baz=256						
G24K	**Hadweenzic Riv**	**62.12**	**25**	P	**P**	**13 08 12.3**	**+1.6**
	baz=258,SNR=14						
G24K				S	**S**	**13 16 26.7**	**+2.2**
	baz=258						
F24K	**Squaw Lake**	**62.14**	**24**	IAmb	IAmb	13 08 24.3	
	comp=Z,39nm,1.4s						
F24K	**Squaw Lake**	**62.14**	**24**	P	**P**	**13 08 12.6**	**+1.8**
	baz=257,SNR=25						
F24K				S	**S**	**13 16 28.2**	**+3.4**
	baz=257						
D24K	**Happy Valley**	**62.19**	**22**	P	**P**	**13 08 12.6**	**+1.6**
	baz=255						
D24K				S	**S**	**13 16 28.2**	**+2.9**
	baz=255						
HYB	**Hyderabad**	**62.26**	**279**	*e*P	**P**	**13 08 12.7**	**+0.4**
HYB	**Hyderabad**	**62.26**	**279**	*e*P	**P**	**13 08 12.8**	**+0.4**
HYB				*e*pP	**pP**	**13 08 43.2**	**-1.7**
HYB				*e*PcP	**PcP**	**13 08 51.7**	**+0.7**
HYB				*e*S	**S**	**13 16 30.2**	**+2.5**
NRDN	**NARMADA NAGAR**	**62.27**	**285**	*ex*	x	13 08 17.7	
K24K	**Donnelly Dome**	**62.30**	**28**	IAmb	IAmb	13 09 02.5	
	comp=Z,23nm,0.8s						
K24K	**Donnelly Dome**	**62.30**	**28**	P	**P**	**13 08 12.1**	**+0.2**
	baz=261						
EKS2	**Erkin-Say**	**62.30**	**308**	P	**P**	**13 08 13.8**	**+1.4**
	SNR=12						
HARP	**HAARP**	**62.38**	**30**	P	**P**	**13 08 12.8**	**+0.3**
HARP	**HAARP**	**62.38**	**30**	P	**P**	**13 08 13.6**	**+1.1**
	baz=262,SNR=10						
KAIM	**Kayak Island**	**62.45**	**32**	IAmb	IAmb	13 08 16.4	
	comp=Z,38nm,0.8s						
KAIM	**Kayak Island**	**62.45**	**32**	P	**P**	**13 08 13.5**	**+0.6**
	baz=264						
BMRM	**Bremner River**	**62.47**	**31**	P	**P**	**13 08 14.2**	**+1.2**
	baz=264,SNR=14						
BMRM				S	**S**	**13 16 31.0**	**+1.9**
	baz=264						
N25K	**Chitina, Valde**	**62.55**	**31**	P	**P**	**13 08 14.8**	**+1.2**
	baz=263,SNR=18						
N25K				S	**S**	**13 16 31.9**	**+1.7**
	baz=263						
J25K	**Salcha River,**	**62.60**	**27**	P	**P**	**13 08 13.5**	**-0.4**
	baz=261,SNR=15						
J25K				S	**S**	**13 16 28.7**	**-2.0**
	baz=261						
G25K	**Bearman Lake**	**62.67**	**25**	P	**P**	**13 08 15.7**	**+1.5**
	baz=259,SNR=6.5						
G25K				S	**S**	**13 16 34.1**	**+2.8**
	baz=259						
PRP	**Porcupine Dome**	**62.68**	**26**	P	**P**	**13 08 14.6**	**+0.1**
	baz=260						
PRP				S	**S**	**13 16 29.0**	**-2.8**
	baz=260						
RIDG	**Independent Ri**	**62.70**	**28**	IAmb	IAmb	13 09 02.2	
	comp=Z,36nm,1.0s						
RIDG	**Independent Ri**	**62.70**	**28**	P	**P**	**13 08 15.1**	**+0.5**
	baz=262,SNR=27						
RIDG				S	**S**	**13 16 31.3**	**-0.7**
	baz=262						
H01W1	**Cape Leeuwin H**	**62.73**	**208**	P	**P**	**13 08 16.9**	**+2.1**
H01W3	**Cape Leeuwin H**	**62.73**	**208**	P	**P**	**13 08 16.5**	**+1.8**
H01W2	**Cape Leeuwin H**	**62.75**	**208**	P	**P**	**13 08 16.6**	**+1.8**
BRZS	**Berezniki**	**62.78**	**316**	*e*P	**P**	**13 08 16.3**	**+1.0**
BRZS	**Berezniki**	**62.78**	**316**	*e*P	**P**	**13 08 16.4**	**+1.0**
GLB	**Gilahina Butte**	**62.90**	**31**	IAmb	IAmb	13 09 08.0	
	comp=Z,35nm,1.1s						
F25K	**Christian Rive**	**63.00**	**24**	IAmb	IAmb	13 08 21.3	
	comp=Z,88nm,1.9s						
F25K	**Christian Rive**	**63.00**	**24**	P	**P**	**13 08 18.2**	**+1.7**
	baz=259,SNR=38						
F25K				S	**S**	**13 16 38.7**	**+3.1**
	baz=259						
D25K	**Kavik River**	**63.08**	**22**	IAmb	IAmb	13 08 20.1	
	comp=Z,31nm,0.7s						
D25K	**Kavik River**	**63.08**	**22**	P	**P**	**13 08 18.6**	**+1.6**
	baz=258,SNR=45						
D25K				S	**S**	**13 16 37.5**	**+1.0**
	baz=258						
MENT	**Mentasta**	**63.11**	**29**	P	**P**	**13 08 19.3**	**+2.1**
MENT	**Mentasta**	**63.11**	**29**	P	**P**	**13 08 16.8**	**-0.5**
SCRK	**Sand Creek**	**63.11**	**28**	IAmb	IAmb	13 08 57.1	
	comp=Z,43nm,1.1s						
SCRK	**Sand Creek**	**63.11**	**28**	P	**P**	**13 08 17.8**	**+0.5**
	baz=263,SNR=42						
SCRK				S	**S**	**13 16 36.1**	**-1.1**
	baz=263						
E25K	**Arctic Village**	**63.13**	**23**	IAmb	IAmb	13 08 56.3	
	comp=Z,34nm,1.1s						
E25K	**Arctic Village**	**63.13**	**23**	P	**P**	**13 08 19.2**	**+1.9**
	baz=259,SNR=26						
E25K				S	**S**	**13 16 39.5**	**+2.4**
	baz=259						
CRQM	**Cirque**	**63.16**	**32**	IAmb	IAmb	13 08 23.8	
	comp=Z,30nm,0.6s						
CRQE	**Cirque**	**63.19**	**32**	P	**P**	**13 08 19.0**	**+1.1**
	baz=265,SNR=21						
OHH	**Osh**	**63.22**	**306**	P	**P**	**13 08 18.5**	**0.0**
PALK	**Pallekele**	**63.26**	**268**	P	**P**	**13 08 21.8**	**+2.7**
MCARA	**McCarthy VSAT**	**63.27**	**31**	P	**P**	**13 08 19.2**	**+0.8**
MCARA				IAmb	IAmb	13 09 14.8	
	comp=Z,27nm,0.9s						
MCARA	**McCarthy VSAT**	**63.27**	**31**	P	**P**	**13 08 19.3**	**+0.9**
	baz=265,SNR=7.7						
MCARA				S	**S**	**13 16 39.8**	**+0.8**
	baz=265						
L26K	**Log Cabin Wild**	**63.28**	**29**	P	**P**	**13 08 19.2**	**+0.8**
	baz=264,SNR=11						
L26K				S	**S**	**13 16 39.8**	**+0.6**
	baz=264						
TGL	**Tana Glacier**	**63.31**	**32**	IAmb	IAmb	13 08 31.4	
	comp=Z,31nm,1.0s						

NIL	**Nilore**	**63.68**	**298**	P	**P**	**13 08 23.3 +1.7**
NIL	**Nilore**	**63.68**	**298**	P	**P**	**13 08 22.9 +1.4**
C26K	**Camden Bay**	**63.70**	**21**	P	**P**	**13 08 23.0 +2.1**
C26K	baz=259			S	**S**	**13 16 46.6 +2.6**
ARK	**Arkit**	**63.71**	**307**	P	**P**	**13 08 23.3 +1.5**
AJM	**Ajmer**	**63.76**	**290**	*e*P	**P**	**13 08 23.6 +1.4**
GRNC	**Granite Creek**	**63.84**	**32**	IAmb	IAmb	13 08 24.8
M27K	comp=Z,18nm,0.6s **Edge Creek, AK**	**63.90**	**30**	IAmb	IAmb	13 08 34.7
M27K	comp=Z,102nm,2.0s **Edge Creek, AK**	**63.90**	**30**	P	**P**	**13 08 23.2 +0.6**
M27K	baz=265,SNR=19			S	**S**	**13 16 47.5 +0.5**
BARN	baz=265 **Barnard Glacie**	**63.91**	**31**	IAmb	IAmb	13 09 20.6
K27K	comp=Z,75nm,2.0s **Chicken**	**63.95**	**28**	IAmb	IAmb	13 08 35.2
L27K	comp=Z,78nm,2.0s **Beaver Creek,**	**63.98**	**29**	IAmb	IAmb	13 09 03.3
L27K	comp=Z,55nm,1.6s **Beaver Creek,**	**63.98**	**29**	P	**P**	**13 08 24.0 +1.0**
L27K	baz=265,SNR=34			S	**S**	**13 16 48.6 +0.8**
BCAR	baz=265 **Beaver Creek A**	**64.00**	**29**	P	**P**	**13 08 23.6 +0.4**
C27K	**Jago River**	**64.06**	**22**	IAmb	IAmb	13 08 36.9
C27K	comp=Z,101nm,1.8s **Jago River**	**64.06**	**22**	P	**P**	**13 08 24.7 +1.4**
C27K	baz=260,SNR=26			S	**S**	**13 16 50.3 +1.8**
DZA	baz=260 **Taraz**	**64.08**	**308**	*e*P	**P**	**13 08 25.0 +1.0**
DZA	comp=Z,14nm,0.8s			pmax	pmax	
DZA	**Taraz**	**64.08**	**308**	*e*P	**P**	**13 08 25.1 +1.0**
BVAR	comp=Z,14nm,0.8s **Borovoye Array**	**64.17**	**320**	P	**P**	**13 08 25.0 +0.6**
BVAR	comp=Z,132nm,0.7s,baz=89,slow=7.5,SNR=240 **Borovoye Array**	**64.17**	**320**	P	**P**	**13 08 25.0 +0.6**
LOGN	comp=Z,132nm,0.7s **Logan Glacier**	**64.21**	**32**	IAmb	IAmb	13 08 28.6
BORK	comp=Z,68nm,1.8s **Borovoye**	**64.22**	**320**	P	**P**	**13 08 25.4 +0.7**
BORK	**Borovoye**	**64.22**	**320**	*c i*P	**P**	**13 08 25.1 +0.5**
BORK	comp=Z,68nm,0.6s			pmax	pmax	
I27K	**Kandik River**	**64.31**	**26**	P	**P**	**13 08 25.7 +0.6**
I27K	baz=264,SNR=14			S	**S**	**13 16 51.7 -0.1**
BVCY	baz=264 **Beaver Creek**	**64.37**	**30**	P	**P**	**13 08 26.4 +0.8**
BVCY	baz=266			S	**S**	**13 16 52.6 -0.1**
MANEM	baz=266 **Manem**	**64.41**	**303**	P	**P**	**13 08 27.9 +1.4**
MANEM	comp=Z,156nm,0.6s			IAmb	IAmb	13 08 30.0
H27K	**Steamboat Moun**	**64.41**	**26**	P	**P**	**13 08 27.1 +1.4**
H27K	baz=264,SNR=46			S	**S**	**13 16 55.4 +2.4**
G27K	baz=264 **Doyon Strip**	**64.42**	**25**	P	**P**	**13 08 27.2 +1.4**
G27K	baz=264,SNR=10.0			S	**S**	**13 16 55.7 +2.6**
YUK3	baz=264 **Moose Creek**	**64.52**	**31**	P	**P**	**13 08 27.9 +1.1**
YUK3	baz=267,SNR=6.8			S	**S**	**13 16 55.7 +0.8**
PCA	baz=267 **Pinnacle**	**64.55**	**32**	IAmb	IAmb	13 08 40.2
PINM	comp=Z,17nm,0.8s **Pinnacle**	**64.55**	**32**	P	**P**	**13 08 27.9 +1.1**
PINM	baz=268,SNR=5.1			S	**S**	**13 16 56.8 +1.8**
E27K	baz=268 **Coleen River**	**64.61**	**23**	P	**P**	**13 08 28.5 +1.5**
E27K	baz=263,SNR=17			S	**S**	**13 16 57.7 +2.3**
O28M	baz=263 **Mount Upton**	**64.61**	**32**	P	**P**	**13 08 28.5 +1.1**
O28M	baz=268,SNR=22			S	**S**	**13 16 58.0 +1.9**
KK31	baz=268 **Karatay Array**	**64.66**	**309**	P	**P**	**13 08 28.8 +1.0**
KK31	**Karatay Array**	**64.66**	**309**	P	**P**	**13 08 28.8 +1.0**
KK31	comp=Z,52nm,0.8s			pmax	pmax	
KKAR	**Karatay Array**	**64.66**	**309**	P	**P**	**13 08 28.7 +0.9**
KKAR	**Karatay Array**	**64.66**	**309**	P	**P**	**13 08 28.7 +0.9**
BTK	**Batken**	**64.76**	**305**	IAmb	IAmb	13 08 41.2
BTK	comp=Z,19nm,0.7s **Batken**	**64.76**	**305**	P	**P**	**13 08 29.6 +1.0**
YUK8	**Steele Glacier**	**64.83**	**31**	P	**P**	**13 08 30.3 +1.4**
YUK8	baz=268			S	**S**	**13 17 00.5 +1.7**
D27M	baz=268 **Malcolm River**	**64.97**	**22**	IAmb	IAmb	13 08 41.3
D27M	comp=Z,27nm,0.8s **Malcolm River**	**64.97**	**22**	P	**P**	**13 08 31.2 +1.9**
D27M	baz=263,SNR=40			S	**S**	**13 17 01.9 +2.2**
I28M	baz=263 **Miner Creek**	**64.99**	**26**	P	**P**	**13 08 30.6 +1.0**
I28M	baz=266,SNR=16			S	**S**	**13 17 00.8 +0.5**
IUG	baz=266 **Iuzhnay**	**65.11**	**308**	*e*P	**P**	**13 08 31.8 +1.0**
IUG	comp=Z,27nm,1.0s			pmax	pmax	
IUG	**Iuzhnay**	**65.11**	**308**	*e*P	**P**	**13 08 31.8 +1.0**
DAWY	comp=Z,27nm,1.0s **Dawson**	**65.14**	**28**	P	**P**	**13 08 31.4 +0.9**
DAWY	comp=Z,86nm,2.0s			IAmb	IAmb	13 08 34.7
DAWY	**Dawson**	**65.14**	**28**	P	**P**	**13 08 31.7 +1.2**
DAWY	baz=267,SNR=24			S	**S**	**13 17 03.1 +1.1**
BRLS	baz=267 **Borolday**	**65.16**	**309**	*c i*P	**P**	**13 08 32.7 +1.7**
BRLS	**Borolday**	**65.16**	**309**	*i*P	**P**	**13 08 32.7 +1.7**
BRWY	**Burwash Landin**	**65.19**	**31**	P	**P**	**13 08 32.8 +1.9**
BRWY	baz=268,SNR=10			S	**S**	**13 17 03.6 +0.9**
F28M	baz=268 **Old Crow**	**65.19**	**24**	P	**P**	**13 08 32.2 +1.4**
F28M	baz=265,SNR=22			S	**S**	**13 17 04.2 +1.7**
GAR	baz=265 **Garm**	**65.28**	**304**	P	**P**	**13 08 33.1 +1.1**
GAR	**Garm**	**65.28**	**304**	P	**P**	**13 08 33.1 +1.1**
YUK4	**Talbot Arm**	**65.38**	**31**	P	**P**	**13 08 34.1 +1.8**
O29M	baz=269 **Mount Kennedy**	**65.39**	**32**	P	**P**	**13 08 34.2 +1.9**
O29M	baz=269,SNR=19			S	**S**	**13 17 08.2 +2.8**
CHM	baz=269 **Chimkent**	**65.41**	**308**	*e*P	**P**	**13 08 33.5 +0.9**
CHM	comp=Z,23nm,0.7s			pmax	pmax	
CHM	**Chimkent**	**65.41**	**308**	*e*P	**P**	**13 08 33.5 +0.9**
E28M	comp=Z,23nm,0.7s **Babbage River**	**65.41**	**23**	P	**P**	**13 08 34.0 +1.8**
E28M	baz=265,SNR=42			S	**S**	**13 17 07.3 +2.2**
M29M	baz=265 **Somme Creek**	**65.49**	**30**	P	**P**	**13 08 34.6 +1.7**
M29M	baz=268,SNR=50			S	**S**	**13 17 08.2 +1.7**
YUK6	baz=268 **Outpost Mounta**	**65.51**	**31**	P	**P**	**13 08 34.8 +1.6**
YUK6	baz=269			S	**S**	**13 17 09.9 +2.9**
L29M	baz=269 **L29M**	**65.66**	**29**	IAmb	IAmb	13 08 47.4
L29M	comp=Z,36nm,1.0s **L29M**	**65.66**	**29**	P	**P**	**13 08 35.6 +1.8**
L29M	baz=268,SNR=41			S	**S**	**13 17 10.2 +1.8**
J29N	baz=268 **Klondike Camp**	**65.67**	**28**	P	**P**	**13 08 35.2 +1.3**
J29N	baz=268			S	**S**	**13 17 09.9 +1.4**
H29M	baz=268 **Whitestone**	**65.68**	**26**	IAmb	IAmb	13 09 14.1
	comp=Z,18nm,0.8s					
H29M	**Whitestone**	**65.68**	**26**	P	**P**	**13 08 35.6 +1.6**
H29M	baz=267,SNR=17			S	**S**	**13 17 10.4 +2.0**
D28M	baz=267 **Stokes Point**	**65.76**	**22**	P	**P**	**13 08 35.5 +1.2**
D28M	baz=265,SNR=6.5			S	**S**	**13 17 12.4 +3.2**
P29M	baz=265 **Windy Craggy**	**65.81**	**33**	IAmb	IAmb	13 08 48.5
P29M	comp=Z,26nm,0.9s **Windy Craggy**	**65.81**	**33**	P	**P**	**13 08 36.7 +1.8**
P29M	baz=270,SNR=15			S	**S**	**13 17 13.0 +2.7**
G29M	baz=270 **Pine Creek**	**65.86**	**25**	IAmb	IAmb	13 08 39.6
G29M	comp=Z,47nm,1.4s **Pine Creek**	**65.86**	**25**	P	**P**	**13 08 36.7 +1.7**
G29M	baz=267,SNR=21			S	**S**	**13 17 11.0 +0.4**
HYT	baz=267 **Haines Junctio**	**65.93**	**32**	IAmb	IAmb	13 08 49.3
HYT	comp=Z,27nm,1.0s **Haines Junctio**	**65.93**	**32**	P	**P**	**13 08 37.1 +1.4**
HYT	baz=270,SNR=27			S	**S**	**13 17 12.7 +0.9**
K29M	baz=270 **Barlow Dome**	**65.95**	**28**	IAmb	IAmb	13 08 49.0
K29M	comp=Z,34nm,1.2s **Barlow Dome**	**65.95**	**28**	P	**P**	**13 08 36.9 +1.1**
K29M	baz=269,SNR=26			S	**S**	**13 17 13.3 +1.2**
E29M	baz=269 **Blow River**	**66.00**	**23**	P	**P**	**13 08 37.4 +1.5**
E29M	baz=266,SNR=17			S	**S**	**13 17 13.0 +0.8**
N30M	baz=266 **Aishikik Lake**	**66.13**	**31**	IAmb	IAmb	13 08 50.3
N30M	comp=Z,25nm,1.1s **Aishikik Lake**	**66.13**	**31**	P	**P**	**13 08 38.3 +1.4**
N30M	baz=270,SNR=14			S	**S**	**13 17 15.3 +1.1**
P30M	baz=270 **Million Dollar**	**66.20**	**32**	P	**P**	**13 08 39.1 +1.7**
P30M	baz=271			S	**S**	**13 17 17.8 +2.8**
CHGR	baz=271 **Chuyangaron**	**66.22**	**304**	*c i*P	**P**	**13 08 38.8 +0.8**
CHGR	comp=Z,262nm,0.6s			pmax	pmax	
CHGR	**Chuyangaron**	**66.22**	**304**	P	**P**	**13 08 39.2 +1.2**
M30M	**Minto, Yukon**	**66.27**	**30**	IAmb	IAmb	13 08 49.4
M30M	comp=Z,75nm,1.9s **Minto, Yukon**	**66.27**	**30**	P	**P**	**13 08 39.3 +1.6**
M30M	baz=270,SNR=25			S	**S**	**13 17 16.7 +1.0**
POO	baz=270 **Poona**	**66.29**	**282**	*e*P	**P**	**13 08 38.7 +0.1**
URZ	**Urewera**	**66.30**	**153**	LR	LR	13 36 24.1
EPYK	comp=Z,96nm,18.7s,baz=328,slow=35 **Eagle Plains**	**66.36**	**26**	P	**P**	**13 08 38.5 +0.2**
EPYK	comp=Z,102nm,1.7s			IAmb	IAmb	13 08 42.1
EPYK	**Eagle Plains**	**66.36**	**26**	P	**P**	**13 08 39.4 +1.1**
EPYK	baz=268,SNR=22			S	**S**	**13 17 17.2 +0.6**
I30M	baz=268 **Mount Dempster**	**66.47**	**27**	P	**P**	**13 08 39.8 +0.7**
I30M	baz=269,SNR=12			S	**S**	**13 17 19.2 +0.9**
J30M	baz=269 **Hart River**	**66.48**	**28**	P	**P**	**13 08 40.0 +0.8**
J30M	baz=269,SNR=15			S	**S**	**13 17 19.2 +0.8**
PLBC	baz=269 **Pleasant Camp**	**66.52**	**33**	P	**P**	**13 08 40.6 +1.3**
PLBC	baz=272			S	**S**	**13 17 21.2 +2.5**
G30M	baz=272 **tAoh Zraii Nji**	**66.57**	**25**	IAmb	IAmb	13 08 51.5
G30M	comp=Z,108nm,1.8s **tAoh Zraii Nji**	**66.57**	**25**	P	**P**	**13 08 40.5 +0.9**
G30M	baz=268,SNR=18			S	**S**	**13 17 20.1 +0.8**
O30N	baz=268 **Mendenhall**	**66.62**	**32**	P	**P**	**13 08 41.4 +1.3**
O30N	baz=271,SNR=7.0			S	**S**	**13 17 22.9 +2.9**
S31K	baz=271 **Pelican**	**66.64**	**35**	P	**P**	**13 08 40.9 +0.8**
S31K	**Pelican**	**66.64**	**35**	P	**P**	**13 08 41.0 +0.9**
S31K	baz=272			S	**S**	**13 17 22.9 +2.7**
N31M	baz=272 **Braeburn, Yuko**	**66.75**	**31**	P	**P**	**13 08 41.2 +0.4**
N31M	**Braeburn, Yuko**	**66.75**	**31**	P	**P**	**13 08 42.4 +1.5**
F30M	baz=271,SNR=15 **Barrier River**	**66.76**	**24**	P	**P**	**13 08 42.2 +1.5**
F30M	baz=269,SNR=26			S	**S**	**13 17 22.4 +1.0**
KBL	baz=269 **Kabul**	**66.98**	**300**	P	**P**	**13 08 43.4 +0.4**
KBL	**Kabul**	**66.98**	**300**	P	**P**	**13 08 43.4 +0.4**
KBL	comp=Z,74nm,0.9s			pmax	pmax	
KBL	**Kabul**	**66.98**	**300**	P	**P**	**13 08 43.2 +0.2**
KBL	SNR=29			S	**S**	**13 17 24.9 -0.8**
KBL	**Kabul**	**66.98**	**300**	P	**P**	**13 08 44.0 +1.0**
SKAG	**Skagway**	**67.05**	**33**	P	**P**	**13 08 45.0 +2.4**
SKAG	**Skagway**	**67.05**	**33**	P	**P**	**13 08 44.0 +1.4**
SKAG	baz=272			S	**S**	**13 17 27.7 +2.7**
SIT	baz=272 **Sitka**	**67.18**	**36**	P	**P**	**13 08 44.7 +1.2**
SIT	baz=274			S	**S**	**13 17 30.6 +3.9**
SHAA	baz=274 **Shahritus**	**67.20**	**303**	IAmb	IAmb	13 08 47.4
WHY	comp=Z,273nm,0.7s **Whitehorse**	**67.22**	**32**	P	**P**	**13 08 44.4 +0.5**
WHY	comp=Z,47nm,1.1s			IAmb	IAmb	13 08 56.6
WHY	**Whitehorse**	**67.22**	**32**	P	**P**	**13 08 45.3 +1.4**
WHY	baz=272,SNR=7.6			S	**S**	**13 17 30.3 +2.9**
H31M	baz=272 **Peel River**	**67.32**	**26**	IAmb	IAmb	13 08 48.2
H31M	comp=Z,31nm,1.1s **Peel River**	**67.32**	**26**	P	**P**	**13 08 45.5 +1.1**
H31M	baz=271,SNR=21			S	**S**	**13 17 28.6 +0.3**
BESE	baz=271 **Bessie Mountai**	**67.34**	**34**	P	**P**	**13 08 45.4 +0.7**
BESE	comp=Z,71nm,1.5s			IAmb	IAmb	13 08 57.9
G31M	**Satah River**	**67.34**	**25**	P	**P**	**13 08 44.9 +0.5**
G31M	comp=Z,34nm,0.8s			IAmb	IAmb	13 08 55.5
G31M	**Satah River**	**67.34**	**25**	P	**P**	**13 08 45.4 +1.0**
G31M	baz=270,SNR=26			S	**S**	**13 17 27.7 -0.6**
M31M	baz=270 **Drury Creek, Y**	**67.39**	**30**	P	**P**	**13 08 45.1 +0.3**
M31M	**Drury Creek, Y**	**67.39**	**30**	P	**P**	**13 08 46.0 +1.2**
M31M	baz=272,SNR=21			S	**S**	**13 17 29.4 +0.2**
R32K	baz=272 **Eaglecrest**	**67.53**	**34**	IAmb	IAmb	13 08 59.2
R32K	comp=Z,39nm,1.5s **Eaglecrest**	**67.53**	**34**	P	**P**	**13 08 47.1 +1.3**
F31M	baz=274 **Tsiigehtchic**	**67.54**	**24**	P	**P**	**13 08 46.3 +0.6**
F31M	baz=271			S	**S**	**13 17 29.7 -1.0**
S32K	baz=271 **Killisnoo**	**67.56**	**35**	P	**P**	**13 08 47.0 +1.2**
S32K	baz=274,SNR=5.1			S	**S**	**13 17 33.4 +2.2**
JIS	baz=274 **Juneau Island**	**67.60**	**34**	P	**P**	**13 08 48.6 +2.5**
INK	**Inuvik**	**67.61**	**23**	IAmb	IAmb	13 08 57.3
INK	comp=Z,76nm,1.9s **Inuvik**	**67.61**	**23**	P	**P**	**13 08 46.8 +0.7**
INK	baz=270,SNR=16			S	**S**	**13 17 31.1 -0.4**
INK	baz=270 **Inuvik**	**67.61**	**23**	P	**P**	**13 08 46.7 +0.7**
P32M	**Atlin**	**67.86**	**33**	P	**P**	**13 08 49.3 +1.4**
P32M	baz=274,SNR=9.9			S	**S**	**13 17 36.5 +1.6**
N32M	baz=274 **Quiet Lake**	**68.07**	**31**	IAmb	IAmb	13 09 02.1
N32M	comp=Z,60nm,1.4s **Quiet Lake**	**68.07**	**31**	P	**P**	**13 08 50.3 +1.2**
N32M	baz=274			S	**S**	**13 17 38.5 +1.1**
P33M	baz=274 **Teslin, Yukon**	**68.27**	**32**	P	**P**	**13 08 51.7 +1.3**
P33M	baz=274,SNR=14			S	**S**	**13 17 41.4 +1.5**
U33K	baz=274 **Whale Pass**	**68.47**	**37**	P	**P**	**13 08 53.2 +1.6**
U33K	baz=276			S	**S**	**13 17 43.1 +1.0**
T33K	baz=276 **Petersburg**	**68.49**	**36**	P	**P**	**13 08 53.3 +1.6**
RAR	baz=276 **Rarotonga**	**68.50**	**124**	LR	LR	13 31 54.2
CRAG	comp=Z,178nm,21.8s,baz=200,slow=30 **Craig**	**68.53**	**37**	P	**P**	**13 08 54.3 +2.3**
CRAG	**Craig**	**68.53**	**37**	P	**P**	**13 08 53.7 +1.6**
CRAG	baz=276			S	**S**	**13 17 45.0 +2.2**
Q32M	baz=276 **Nakina River**	**68.65**	**34**	P	**P**	**13 08 54.7 +1.7**
Q32M	baz=275,SNR=9.5			S	**S**	**13 17 47.0 +2.4**
RPZ	baz=275 **Rata Peaks**	**68.76**	**160**	LR	LR	13 34 06.9
MMPY	comp=Z,53nm,21.9s,baz=162,slow=31 **Sheldon Lake,**	**68.82**	**30**	P	**P**	**13 08 54.0 +0.2**
MMPY	comp=Z,79nm,1.8s			IAmb	IAmb	13 09 05.7
MMPY	**Sheldon Lake,**	**68.82**	**30**	P	**P**	**13 08 55.4 +1.6**
MMPY	baz=275,SNR=14			S	**S**	**13 17 48.7 +2.5**
WRAK	baz=275 **Wrangell Islan**	**68.87**	**36**	P	**P**	**13 08 55.6 +1.6**
WRAK	baz=276			S	**S**	**13 17 50.4 +3.7**
H02S1	baz=276 **DAWSON INLET T**	**69.17**	**40**	P	**P**	**13 08 57.3 +1.3**
H02S2	SNR=15 **DAWSON INLET T**	**69.17**	**40**	P	**P**	**13 08 57.5 +1.4**
R33M	SNR=15 **Jennings River**	**69.27**	**33**	P	**P**	**13 08 58.5 +1.7**
R33M	baz=276,SNR=12			S	**S**	**13 17 54.4 +2.6**
S34M	baz=276 **Telegraph Cree**	**69.36**	**35**	P	**P**	**13 08 59.0 +1.9**
S34M	baz=277,SNR=8.5			S	**S**	**13 17 56.1 +3.6**
V35K	baz=277 **Ketchikan**	**69.40**	**37**	P	**P**	**13 08 58.7 +1.3**
V35K	baz=277			S	**S**	**13 17 55.5 +2.4**
SVE	baz=277 **Sverdlovsk**	**69.52**	**324**	*e*P	**P**	**13 08 59.0 +0.9**
SVE				*e*S	**S**	**13 17 53.2 -1.3**
SVE	comp=Z,49nm,1.7s			pmax	pmax	
DLBC	**Dease Lake**	**69.87**	**34**	LR	LR	13 36 31.2
DLBC	comp=Z,89nm,21.6s,baz=232,slow=33 **Dease Lake**	**69.87**	**34**	P	**P**	**13 09 02.6 +2.2**
DLBC	baz=277,SNR=15			S	**S**	**13 18 02.4 +3.6**
T35M	baz=277 **Bob Quinn**	**69.94**	**35**	P	**P**	**13 09 02.4 +1.7**
T35M	baz=278,SNR=6.5			S	**S**	**13 18 00.6 +1.1**
HG4B	baz=278 **Hotspring**	**70.07**	**41**	P	**P**	**13 09 01.8 +0.2**
A36M	**Sachs Harbour**	**70.21**	**19**	P	**P**	**13 09 03.0 +1.0**
A36M	baz=277			S	**S**	**13 18 02.1 +0.1**
U35K	baz=277 **Hyder**	**70.22**	**37**	P	**P**	**13 09 03.7 +1.4**
WTLY	baz=278 **Watson Lake, Y**	**70.28**	**32**	IAmb	IAmb	13 09 52.3
WTLY	comp=Z,41nm,1.2s **Watson Lake, Y**	**70.28**	**32**	P	**P**	**13 09 04.4 +1.6**
WTLY	baz=278,SNR=5.9			S	**S**	**13 18 04.9 +1.6**
RUBB	baz=278 **Prince Rupert**	**70.32**	**38**	P	**P**	**13 09 03.2 +0.1**
HMDM	**Hanimaadhoo**	**70.45**	**270**	P	**P**	**13 09 07.9 +3.3**
ARTI	**Arti**	**70.81**	**324**	S	**S**	**13 18 06.1 -3.5**
ARTI	comp=Z,4.0nm,0.8s,baz=310,slow=22,SNR=11 **Arti**	**70.81**	**324**	P	**P**	**13 09 05.9 -0.1**
ARTI	**Arti**	**70.81**	**324**	*d i*P	**P**	**13 09 06.1 +0.1**
ARTI				S	**S**	**13 18 08.1 -1.5**
ARTI				SS	**SS**	**13 22 41.9 -2.3**
ARTI	comp=Z,10.0nm,0.7s			pmax	pmax	
ARTI	**Arti**	**70.81**	**324**	P	**P**	**13 09 06.0 -0.1**
C36M	**Paulatuk**	**70.95**	**22**	IAmb	IAmb	13 09 10.0
C36M	comp=Z,107nm,1.9s **Paulatuk**	**70.95**	**22**	P	**P**	**13 09 07.4 +0.8**
C36M	baz=279			S	**S**	**13 18 08.0 -2.7**
AB31	baz=279 **Akbulak array**	**71.09**	**316**	P	**P**	**13 09 08.0 +0.1**
AB31				IAmb	IAmb	13 09 09.5
AB31	comp=Z,22nm,0.7s **Akbulak array**	**71.09**	**316**	*i*P	**P**	**13 09 07.9 +0.1**
ABKAR	**Akbulak array**	**71.09**	**316**	P	**P**	**13 09 08.1 +0.3**
LIRD	**Liard River Hi**	**71.73**	**33**	P	**P**	**13 09 12.5 +1.0**
LIRD	baz=280			S	**S**	**13 18 21.1 +1.0**
BBB	baz=280 **Bella Bella**	**71.96**	**40**	LR	LR	13 37 28.5
BBB	comp=Z,102nm,18.5s,baz=260,slow=33 **Bella Bella**	**71.96**	**40**	P	**P**	**13 09 14.8 +1.9**
AKTO	**Aktyubinsk**	**72.09**	**318**	S	**S**	**13 18 21.0 -3.5**
AKTO	comp=Z,1.2nm,0.5s,baz=3.4,slow=4.8,SNR=4.7			LR	LR	13 43 22.9
WRGLY	comp=Z,144nm,18.1s,baz=49,slow=38 **Wrigley**	**72.27**	**28**	P	**P**	**13 09 16.0 +1.4**
WRGLY	baz=281			S	**S**	**13 18 27.3 +1.3**
HRA	baz=281 **Herat**	**72.51**	**301**	P	**P**	**13 09 18.1 +1.2**
HRA	comp=Z,44nm,0.7s			IAmb	IAmb	13 09 19.7
KOTAN	**Kotaneelee Air**	**72.61**	**32**	P	**P**	**13 09 17.8 +1.1**
KOTAN	baz=282			S	**S**	**13 18 32.1 +2.1**
PPT	baz=282 **Papeete**	**74.88**	**116**	LR	LR	13 38 37.6
PPT2	comp=Z,170nm,18.0s,baz=309,slow=32 **Papeete2**	**74.89**	**116**	*e*P	**P**	**13 09 26.4 -4.3**
PPT2	comp=Z,75nm,24.2s			*e*S	**S**	**13 18 51.1 -5.9**
PPT2	comp=Z,138nm,26.5s			*e*SS	**SS**	**13 23 47.0 -1.6**
PPT2	comp=Z,227nm,25.0s			*e*LQ	LQ	13 28 58.6
PPT2	comp=Z,686nm,34.8s			*e*LR	LR	13 32 38.6
PPT2	comp=Z,552nm,27.8s			*e*LR	LR	13 32 44.2
KIRV	comp=Z,714nm,27.0s **Kirov**	**75.07**	**327**	LR	LR	13 43 59.0
KIRV	comp=Z,173nm,21.3s,baz=74,slow=37 **Kirov**	**75.07**	**327**	*ce*P	**P**	**13 09 31.7 +0.7**
PMOR	**Pomariorio Ree**	**75.14**	**113**	*e*T	T	14 31 24.5
ALE	comp=Z,4.2nm,0.2s **Alert**	**75.89**	**4**	P	**P**	**13 09 36.4 +1.1**
E03A	**Lebam**	**76.17**	**45**	IAmb	IAmb	13 10 32.4
F03A	comp=Z,33nm,0.9s **Seaside**	**76.34**	**46**	IAmb	IAmb	13 10 18.7
GNW	comp=Z,61nm,1.2s **Green Mountain**	**76.37**	**44**	IAmb	IAmb	13 10 19.6
DGAR	comp=Z,37nm,1.1s **Diego Garcia**	**76.37**	**256**	P	**P**	**13 09 41.2 +2.0**
YKA	**Yellowknife Ar**	**76.38**	**28**	P	**P**	**13 09 38.8 +0.5**
YKA	comp=Z,16nm,0.6s,baz=292,slow=5.5,SNR=63 comp=Z,190nm,20.0s,baz=282,slow=35 comp=Z,16nm,0.6s			LR	LR	13 43 00.0
YKA	**Yellowknife Ar**	**76.38**	**28**	*i*P	**P**	**13 09 38.7 +0.3**
YKA	comp=Z,17nm,0.6s			pmax	pmax	
SPA0	**Spitsbergen Ar**	**76.78**	**350**	*e*S	**S**	**13 19 15.1 -0.7**

SPITS **Spitsbergen Ar** 76.78 350 P **P** 13 09 40.3 -0.1
comp=Z,2.1nm,0.5s,baz=50,slow=6.3,SNR=5.0
comp=Z,2.1nm,0.5s
COR **Corvallis** 76.89 47 P **P** 13 09 42.1 +0.5
COR pP **pP** 13 10 14.6 -0.7
KBS **Kingsbay** 76.90 352 *e*S **S** 13 19 18.2 +1.1
KBS **Kingsbay** 76.90 352 *i* P **P** 13 09 40.4 -0.7
I03D **Drain, OR** 77.11 48 IAmb IAmb 13 10 22.9
comp=Z,78nm,1.8s
NOR **Nord** 77.17 357 *i* P **P** 13 09 42.2 -0.4
BUCK **Buck Mountain** 77.22 47 IAmb IAmb 13 10 38.7
comp=Z,60nm,1.1s
G04A **Mulino** 77.27 46 P **P** 13 09 43.4 -0.4
G04A IAmb IAmb 13 10 40.8
comp=Z,64nm,1.0s
H04D **Lebanon** 77.29 47 IAmb IAmb 13 10 34.3
comp=Z,36nm,1.2s
RES **Resolute Bay** 77.41 14 LR LR 13 48 59.7
comp=Z,108nm,18.9s,baz=312,slow=39
RES **Resolute Bay** 77.41 14 P **P** 13 09 45.1 +1.2
H04A **Detroit Lake** 77.62 47 IAmb IAmb 13 09 58.7
comp=Z,45nm,1.2s
KHMM **Horse Mountain** 77.65 51 IAmb IAmb 13 10 26.6
comp=Z,52nm,1.4s
I04A **Tendick Farm,** 77.73 48 P **P** 13 09 46.5 +0.1
TBI **Tubuai** 77.74 121 *e*S **S** 13 19 26.1 -1.7
comp=Z,2µm,29.5s
TBI *e*LQ LQ 13 30 20.6
comp=Z,2µm,35.8s
HOOD **Mount Hood Mea** 77.79 46 IAmb IAmb 13 10 32.7
comp=Z,43nm,1.1s
BELG **Belogornoye** 77.87 322 LR LR 13 46 25.0
comp=Z,217nm,18.4s,baz=89,slow=37
BELG **Belogornoye** 77.87 322 *i* P **P** 13 09 47.4 +0.5
BELG pmax pmax
comp=Z,16nm,0.9s
LVZ **Lovozero** 78.00 339 P **P** 13 09 48.1 +0.7
LVZ IAmb IAmb 13 10 51.4
comp=Z,62nm,1.4s
LVZ **Lovozero** 78.00 339 *i* P **P** 13 09 47.9 +0.5
LVZ pmax pmax
comp=Z,12nm,0.8s
LVZ **Lovozero** 78.00 339 P **P** 13 09 47.9 +0.5
comp=Z,22nm,1.6s
G05A **Wamic** 78.04 46 IAmb IAmb 13 10 58.9
comp=Z,99nm,1.7s
WIFE **Three Sisters-** 78.06 47 P **P** 13 09 48.8 +0.3
WIFE IAmb IAmb 13 10 28.4
comp=Z,64nm,1.4s
M02C **Callahan** 78.13 50 P **P** 13 09 48.8 +0.1
YBH **Yreka Blue Hor** 78.14 50 LR LR 13 36 16.1
comp=Z,80nm,20.9s,baz=283,slow=29
L04D **Klamath Falls** 78.28 49 P **P** 13 09 50.3 +0.7
L04D IAmb IAmb 13 10 29.2
comp=Z,108nm,1.8s
I05D **Terrebonne, OR** 78.30 47 P **P** 13 09 50.3 +0.7
I05D IAmb IAmb 13 10 40.2
comp=Z,47nm,1.4s
G06A **Carlson Farm,** 78.50 46 IAmb IAmb 13 10 30.5
comp=Z,50nm,1.6s
WBK **Wadi Bani Khal** 78.51 290 P **P** 13 09 52.7 +1.6
EPH **Ephrata** 78.53 44 P **P** 13 09 51.1 +0.4
EPH IAmb IAmb 13 10 29.3
comp=Z,13nm,0.8s
O02D **Mt. Diablo Mer** 78.55 51 P **P** 13 09 51.8 +0.7
APA **Apatity** 78.57 339‖ *e*P **P** 13 09 48.7 -1.8
APA *e* 13 09 59.1
APA *e**PP **pP** 13 10 21.3 -3.2
APA pmax pmax
comp=Z,41nm,0.7s
VADS **Vadso** 78.61 342 *e*P **P** 13 09 51.8 +1.1
VADS IAmb IAmb 13 09 53.2
comp=Z,446nm,2.7s
VADS *e*S **S** 13 19 34.9 -0.7
WSAR **Wadi Sarin** 78.62 291 P **P** 13 09 53.0 +1.4
WAH2 **Wahluke Slope** 78.73 44 P **P** 13 09 51.7 -0.1
WAH2 IAmb IAmb 13 10 47.4
comp=Z,46nm,1.1s
PINE **Pine Mountain** 78.75 47 IAmb IAmb 13 10 43.1
comp=Z,51nm,1.1s
BIDO **Bidbid** 78.97 291 P **P** 13 09 54.8 +1.3
KLMR **Klimovskoe** 79.04 331 *e*P **P** 13 09 51.5 -1.7
KLMR pmax pmax
comp=Z,20nm,1.2s
SMDO **Samad** 79.18 291 P **P** 13 09 56.2 +1.4
C09A **Chrisman Ranch** 79.23 43 IAmb IAmb 13 10 49.9
comp=Z,77nm,1.6s
O03E **Paynes Creek** 79.23 51 IAmb IAmb 13 10 35.4
comp=Z,33nm,1.1s
HATC **Hat Creek Radi** 79.31 50 IAmb IAmb 13 10 49.7
comp=Z,69nm,1.4s
KEV **Kevo** 79.50 342 P **P** 13 09 55.4 -0.1
KEV **Kevo** 79.50 342 P **P** 13 09 55.4 -0.1
KEV pmax pmax
comp=Z,24nm,0.9s
KEV **Kevo** 79.50 342 P **P** 13 09 55.3 -0.1
KEV pP **pP** 13 10 28.0 -1.5
HOQ **Hoqain** 79.66 291 P **P** 13 09 58.7 +1.4
SNR=6.4
BANOM **Banah** 79.80 294 S **S** 13 19 50.0 +0.1
NEW **Newport** 79.80 42 LR LR 13 40 53.8
comp=Z,103nm,19.5s,baz=286,slow=32
NEW **Newport** 79.80 42 P **P** 13 09 59.6 +2.0
SHME **Shamm** 79.89 294 *i* P **P** 13 09 59.8 +1.3
SNR=23
SHME **Shamm** 79.89 294 P **P** 13 10 00.6 +2.1
MHTO **MHTO** 79.90 289 P **P** 13 09 59.8 +1.2
SNR=5.4
HAMF **Hammerfest** 79.93 343 *e*P **P** 13 09 58.9 +1.1
HAMF *e*S **S** 13 19 47.0 -2.6
BSY **Bisya** 80.02 291 P **P** 13 10 00.5 +1.2
ARA0 **ARCESS Array S** 80.06 342 *e*P **P** 13 09 59.1 +0.5
ARA0 IAmb IAmb 13 10 00.4
comp=Z,22nm,0.7s
ARA0 *e*S **S** 13 19 47.8 -3.2
ARCES **ARCESS Array B** 80.06 342 P **P** 13 09 58.8 +0.3
comp=Z,18nm,0.6s,baz=66,slow=5.8,SNR=74
ARCES PKKPbc **PKKPbc** 13 28 41.1 -2.8
comp=Z,1.9nm,0.8s,baz=247,slow=1.9,SNR=9.9
ARCES LR LR 13 50 49.5
comp=Z,153nm,19.5s,baz=62,slow=40
comp=Z,18nm,0.6s
ARCES **ARCESS Array B** 80.06 342 P **P** 13 09 59.2 +0.6
ARCES **ARCESS Array B** 80.06 342 P **P** 13 09 59.2 +0.6
ARCES pmax pmax
comp=Z,27nm,1.0s
MASF **Masafi** 80.09 293 S **S** 13 19 53.0 0.0
MSFE **Esma-Masafi** 80.10 293 *i* P **P** 13 10 00.9 +1.3
SNR=13
SOHO **SOHO** 80.16 292 *i* P **P** 13 10 00.8 +0.8
SNR=19
UOSS **Minazif** 80.19 293 *i* P **P** 13 10 00.9 +0.8
SNR=8.9
UOSS **Minazif** 80.19 293 P **P** 13 10 01.1 +1.0
UOSS IAmb IAmb 13 10 01.7
comp=Z,32nm,0.8s
UOSS **Minazif** 80.19 293 P **P** 13 10 01.2 +1.1
UOSS **Minazif** 80.19 293 P **P** 13 10 01.4 +1.2
AFDM **Forest Hills D** 80.27 52 IAmb IAmb 13 10 39.9
comp=Z,44nm,1.4s
HATD **Hatta, Dubai** 80.29 293 *i* P **P** 13 10 01.8 +1.1
SNR=17
ASHO **Ashiyiah** 80.40 293 *i* P **P** 13 10 02.2 +0.9
SNR=18
ASHO **Ashiyiah** 80.40 293 P **P** 13 10 02.6 +1.3
BEKR **Beckworth** 80.42 51 IAmb IAmb 13 10 40.5
comp=Z,100nm,1.8s
ARQ **Araqi** 80.42 291 P **P** 13 10 02.7 +1.3
SNR=6.4
TULEG **Thule** 80.57 8 P **P** 13 10 02.5 +1.3
TULEG IAmb IAmb 13 11 05.8
comp=Z,46nm,1.1s
TULEG **Thule** 80.57 8 *i* P **P** 13 10 01.0 -0.1
TULEG IAmb IAmb 13 10 03.6
comp=Z,27nm,0.7s
DQM **DQM** 80.62 288 P **P** 13 10 03.9 +1.4
NAZ **Nazwa, Dubai** 80.64 293 *i* P **P** 13 10 03.5 +1.0
SNR=13
NAZ **Nazwa, Dubai** 80.64 293 P **P** 13 10 03.7 +1.1
FAQ **Al Faqa, Dubai** 80.78 293 *i* P **P** 13 10 03.9 +0.6
SNR=14
FAQ **Al Faqa, Dubai** 80.78 293 P **P** 13 10 04.5 +1.3
SNR=5.6
WVOR **Wild Horse Val** 80.78 48 IAmb IAmb 13 10 42.9
comp=Z,85nm,1.8s
WVOR **Wild Horse Val** 80.78 48 P **P** 13 10 04.0 +0.9

MPK **Martis Peak** 80.84 52 P **P** 13 10 04.6 +0.9
MPK IAmb IAmb 13 10 43.4
comp=Z,72nm,1.4s
ALNE **Al Ain** 80.86 292 *i* P **P** 13 10 05.0 +1.3
SNR=13
ALNE **Al Ain** 80.86 292 P **P** 13 10 05.1 +1.3
SNR=6.8
SGF **Sodankyl** 80.92 340 P **P** 13 10 03.0 -0.1
CMB **Columbia Colle** 81.00 53 IAmb IAmb 13 10 43.9
comp=Z,85nm,1.7s
KTK1 **Kautokeino** 81.02 342 *e*P **P** 13 10 04.1 +0.5
KTK1 *e*S **S** 13 19 58.1 -2.9
ASUD **Al Ashush, Dub** 81.04 293 *i* P **P** 13 10 06.1 +1.5
SNR=5.8
MAK **Makhachkala** 81.09 313 *c i* P **P** 13 10 01.6 -2.9
MAK *e**PP **pP** 13 10 36.6 -2.1
MAK *e*S **S** 13 19 57.2 -5.4
MAK *e*SSS SSS 13 28 43.0
MAK pmax pmax
comp=Z,201nm,1.1s
PAHR **Pah Rah Range** 81.18 51 IAmb IAmb 13 10 44.9
comp=Z,51nm,1.6s
NEEM **North Greenlan** 81.32 3 *i* P **P** 13 10 05.4 -0.1
NEEM IAmb IAmb 13 10 09.0
comp=Z,27nm,0.8s
AJN **Ajban** 81.36 293 *i* P **P** 13 10 07.2 +0.9
SNR=9.2
AJN **Ajban** 81.36 293 P **P** 13 10 07.6 +1.3
SNR=8.3
AKT **Akhty** 81.44 311 *e*P **P** 13 10 06.6 0.0
AKT *e**PP **pP** 13 10 39.4 -1.2
AKT *e*S **S** 13 20 05.6 -1.1
AKT pmax pmax
comp=Z,37nm,0.6s
AKT MLR MLR
comp=Z,205nm,18.0s
JETT **Jettan, Norway** 81.48 343 *e*P **P** 13 10 06.6 +0.4
JETT IAmb IAmb 13 10 08.1
comp=Z,29nm,0.6s
VRH **Novokhopyorsk** 81.72 322 *e*P **P** 13 10 05.6 -2.1
VRH *e*S **S** 13 20 06.0 -2.8
VRH pmax pmax
comp=Z,100nm,0.7s
VRH smax smax
comp=N,610nm,1.6s
TRO **Tromso** 81.84 343 *e*P **P** 13 10 07.9 0.0
TRO IAmb IAmb 13 10 09.1
comp=Z,11nm,0.6s
TRO *e*S **S** 13 20 05.9 -3.5
MOS **Moscow** 82.08 327 *e*P **P** 13 10 10.4 +0.9
MOS *e* 13 13 19.7
MOS *e*S **S** 13 20 10.2 -2.1
MOS *e**SS **pS** 13 20 58.7 +4.1
MOS *e*SSS SSS 13 28 53.8
MOS pmax pmax
comp=Z,38nm,0.6s
LHV **Little Huntoon** 82.32 52 IAmb IAmb 13 10 51.5
comp=Z,148nm,1.9s
KVN **Kaiserville** 82.34 51 IAmb IAmb 13 10 51.2
comp=Z,54nm,1.8s
MFID **Camas Ranch** 82.37 46 IAmb IAmb 13 10 51.2
comp=Z,68nm,1.4s
NVAR **Mina Array Bea** 82.41 52 P **P** 13 10 13.1 +1.2
comp=Z,12nm,0.7s,baz=269,slow=5.7,SNR=79
NVAR LR LR 13 44 02.9
comp=Z,141nm,18.8s,baz=292,slow=33
comp=Z,12nm,0.7s
NVAR **Mina Array Bea** 82.41 52 P **P** 13 10 12.8 +0.9
NV11 **Mina Array Sit** 82.52 52 P **P** 13 10 13.1 +0.7
NV11 IAmb IAmb 13 11 03.0
comp=Z,45nm,1.4s
VES **Vestal, Richgr** 82.73 55 IAmb IAmb 13 10 25.2
comp=Z,38nm,1.0s
LPSR **Galich'ya Gora** 82.73 324 *e*P **P** 13 10 11.1 -1.8
LPSR *e*S **S** 13 20 15.1 -4.0
LPSR pmax pmax
comp=Z,80nm,0.6s
LPSR smax smax
comp=N,140nm,1.4s
OBN **Obninsk** 82.89 327 *ce*P **P** 13 10 13.7 0.0
OBN *i* *PP **pP** 13 10 45.6 -2.4
OBN *i* S **S** 13 20 18.4 -2.2
OBN *i* *SS **pS** 13 21 05.0 +2.0
OBN *e* 13 21 41.5
OBN *e*SS **SS** 13 25 42.7 -3.2
OBN pmax pmax
comp=Z,34nm,1.3s
OBN MLR MLR
comp=Z,221nm,16.0s
OBN **Obninsk** 82.89 327 P **P** 13 10 14.3 +0.6
comp=Z,28nm,0.5s
TIN **Tinemaha, Big** 82.95 53 IAmb IAmb 13 10 53.6
comp=Z,58nm,1.0s
VORR **Voronezh** 82.97 323 *e*P **P** 13 10 13.7 -0.5
VORR pmax pmax
comp=Z,99nm,0.5s
BLKN **Baker Lake** 83.00 23 IAmb IAmb 13 10 52.4
comp=Z,31nm,1.2s
DSP **Deep Springs** 83.03 53 IAmb IAmb 13 10 55.0
comp=Z,126nm,1.9s
MZR **Muzera** 83.18 292 *i* P **P** 13 10 17.1 +1.2
SNR=40
MZR **Muzera** 83.18 292 P **P** 13 10 17.3 +1.5
SNR=9.5
VSR **Storozhevoye** 83.19 322 *e*P **P** 13 10 13.9 -1.4
VSR *e*S **S** 13 20 20.3 -3.4
VSR pmax pmax
comp=Z,50nm,0.5s
VSR smax smax
comp=N,430nm,1.3s
HLID **Hailey** 83.27 46 P **P** 13 10 18.2 +2.0
LYMT **Lyon Mountain** 83.32 42 P **P** 13 10 16.6 +0.2
TPH **Tonopah** 83.33 52 IAmb IAmb 13 10 56.4
comp=Z,92nm,1.8s
BUT **Butte** 83.53 43 IAmb IAmb 13 10 56.5
comp=Z,46nm,0.9s
GMN **Gold Mountain** 83.58 53 IAmb IAmb 13 10 58.3
comp=Z,22nm,0.8s
KULLO **Kullorsuaq** 83.61 6 P **P** 13 10 18.5 +1.5
KULLO **Kullorsuaq** 83.61 6 *i* P **P** 13 10 17.4 +0.4
KULLO IAmb IAmb 13 10 19.1
comp=Z,22nm,0.8s
BCYI **Bear Canyon** 83.65 45 IAmb IAmb 13 10 58.4
comp=Z,37nm,1.3s
MCMT **McKenzie Canyo** 83.81 44 P **P** 13 10 19.9 +0.9
KBZ **Khabaz** 83.93 314 P **P** 13 10 19.6 +0.4
comp=Z,16nm,0.8s,baz=77,slow=4.5,SNR=43
KBZ LR LR 13 51 57.2
comp=Z,213nm,19.3s,baz=64,slow=38
comp=Z,16nm,0.8s
KBZ **Khabaz** 83.93 314 *ce*P **P** 13 10 19.3 +0.1
KBZ pmax pmax
comp=Z,19nm,0.9s
ILON **Igloolik, Nuna** 83.94 15 P **P** 13 10 19.7 +0.9
ILON IAmb IAmb 13 11 06.6
comp=Z,24nm,0.9s
KVAR **Kislovodsk Arr** 83.97 315 LR LR 13 51 18.0
comp=Z,133nm,18.2s,baz=267,slow=38
KIV **Kislovodsk** 83.98 315 P **P** 13 10 21.0 +1.4
KIV IAmb IAmb 13 11 00.0
comp=Z,65nm,1.3s
KIV **Kislovodsk** 83.98 315 *e*P **P** 13 10 20.0 +0.4
KIV *e**PP **pP** 13 10 52.6 -1.4
KIV *e* 13 20 30.0
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,160nm,20.0s
KIV **Kislovodsk** 83.98 315 P **P** 13 10 20.4 +0.8
comp=Z,404nmcomp=Z,17nm,0.9s
KIV **Kislovodsk** 83.98 315 P **P** 13 10 21.3 +1.6
KIV pP **pP** 13 10 52.2 -1.8
STEI **Steigen** 83.98 343 *e*P **P** 13 10 18.9 -0.1
STEI IAmb IAmb 13 10 19.9
comp=Z,25nm,0.8s
GNI **Garni** 84.04 311 *i* P **P** 13 10 21.4 +1.3
GNI pmax pmax
comp=Z,29nm,1.0s
GNI **Garni** 84.04 311 P **P** 13 10 20.7 +0.6
comp=Z,594nmcomp=Z,26nm,1.0s
SHA1 **Shidzhatmaz** 84.08 315 *ce*P **P** 13 10 21.8 +1.4
CCCA **Chr Cany lake** 84.15 54 IAmb IAmb 13 10 29.9
comp=Z,24nm,0.7s
WCT **Wildcat Mounta** 84.24 53 IAmb IAmb 13 10 59.9
comp=Z,36nm,1.3s
FAUS **Fauske** 84.34 343 *e*P **P** 13 10 21.1 +0.2

FAUS IAmb IAmb 13 10 22.0
comp=Z,14nm,0.8s
FAUS *e*SKSac **SKSac** 13 20 32.7 +1.5
RBK **Rabkut** 84.41 287 P **P** 13 10 23.6 +1.3
GWY **Greenwater Val** 84.43 53 IAmb IAmb 13 11 00.8
comp=Z,30nm,1.0s
FIA1 **FINESS Array S** 84.45 335 P **P** 13 10 20.8 -0.7
FINES **FINESS Array B** 84.45 335 P **P** 13 10 20.6 -0.9
comp=Z,23nm,0.6s,baz=74,slow=4.5,SNR=99
FINES S **SKSac** 13 20 28.8 -3.3
comp=Z,6.0nm,0.9s,baz=127,slow=8.2,SNR=4.7
FINES LR LR 13 50 33.3
comp=Z,187nm,20.8s,baz=50,slow=37
comp=Z,23nm,0.6s
FINES **FINESS Array B** 84.45 335 P **P** 13 10 20.4 -1.1
TPNV **Topopah Spring** 84.46 53 IAmb IAmb 13 11 01.1
comp=Z,36nm,1.1s
WHFO **Wadi Hawf** 84.65 287 P **P** 13 10 24.1 +0.7
GSC **Goldstone, Bar** 84.66 54 IAmb IAmb 13 11 02.8
comp=Z,87nm,1.9s
SAKB **Bahrain** 84.67 296 P **P** 13 10 24.5 +1.1
YHB **Horse Butte** 84.92 44 IAmb IAmb 13 11 04.4
comp=Z,53nm,1.0s
HVU **Hansel Valley** 85.08 47 P **P** 13 10 25.9 +0.6
HVU IAmb IAmb 13 11 06.4
comp=Z,69nm,1.4s
HVU **Hansel Valley** 85.08 47 P **P** 13 10 25.9 +0.6
YMR **Madison River** 85.10 44 IAmb IAmb 13 11 05.5
comp=Z,55nm,0.9s
RAUS **Rausandaksla** 85.36 342 *e*P **P** 13 10 25.5 -0.5
RAUS IAmb IAmb 13 10 26.7
comp=Z,18nm,0.7s
RAUS *e*SKSac **SKSac** 13 20 38.8 +1.1
YPP **Pitchstone Pla** 85.37 44 IAmb IAmb 13 11 09.1
comp=Z,40nm,1.4s
MOR8 **Moi Rana** 85.43 342 *e*P **P** 13 10 24.8 -1.5
MOR8 IAmb IAmb 13 10 26.2
comp=Z,18nm,0.7s
MOR8 *e*SKSac **SKSac** 13 20 38.8 +0.6
FXWY **Fox Creek** 85.49 45 IAmb IAmb 13 11 07.0
comp=Z,32nm,1.1s
FLWY **Flagg Ranch** 85.52 44 IAmb IAmb 13 11 07.6
comp=Z,38nm,0.8s
PFO **Pinyon Flats O** 85.55 56 P **P** 13 10 28.5 +0.7
PFO **Pinyon Flats O** 85.55 56 P **P** 13 10 28.5 +0.7
PFO pmax pmax
comp=Z,15nm,1.0s
PMD **Palm Desert** 85.60 56 P **P** 13 10 28.4 +0.6
PSUT **Pine Spring** 85.61 50 IAmb IAmb 13 11 17.4
comp=Z,21nm,0.9s
FFC **Flin Flon** 85.63 32 P **P** 13 10 28.0 +0.5
FFC IAmb IAmb 13 11 06.6
comp=Z,46nm,1.0s
FFC **Flin Flon** 85.63 32 P **P** 13 10 28.0 +0.5
FFC pmax pmax
comp=Z,46nm,1.0s
FFC **Flin Flon** 85.63 32 P **P** 13 10 29.0 +1.5
FFC **Flin Flon** 85.63 32 P **P** 13 10 28.4 +0.9
FFC pP **pP** 13 11 02.1 +0.1
FFC x x 13 11 05.4
HEL **Helsinki** 85.63 334 P P 13 10 20.6 -6.8
HEL pmax pmax
comp=Z,23nm,0.8s
DUG **Dugway, Tooele** 85.69 49 IAmb IAmb 13 11 08.9
comp=Z,81nm,1.4s
DUG **Dugway, Tooele** 85.69 49 P **P** 13 10 30.1 +1.7
STOK **Stokkvaagen** 85.72 342 *e*P **P** 13 10 28.2 +0.4
STOK *e*SKSac **SKSac** 13 20 41.4 +1.5
BELC **Belle Mtn. Jos** 85.76 55 IAmb IAmb 13 11 09.0
comp=Z,50nm,1.8s
LOHW **Long Hollow** 85.78 45 IAmb IAmb 13 11 08.2
comp=Z,42nm,1.4s
HAKT **HAKKARI** 85.78 309 P **P** 13 10 29.2 +0.2
HAKT pP **pP** 13 11 00.1 -3.3
AHID **Auburn Hatcher** 85.81 46 IAmb IAmb 13 11 08.1
comp=Z,38nm,1.2s
AHID **Auburn Hatcher** 85.81 46 P **P** 13 10 30.1 +1.2
LEIR **Leirfjorden** 85.85 342 *e*SKSac **SKSac** 13 20 42.7 +1.9
HWUT **Hardware Ranch** 85.97 47 IAmb IAmb 13 11 08.9
comp=Z,44nm,1.0s
HWUT **Hardware Ranch** 85.97 47 P **P** 13 10 31.4 +1.6
SOC **Sochi** 86.09 315 *e*P **P** 13 10 30.0 -0.1
SOC *e* 13 13 54.8
SOC *e*PPP PPP 13 15 45.6
SOC *e*S **SKSac** 13 20 42.9 -0.3
SOC *e*SS **SS** 13 26 35.3 +1.7
SOC *e*SSS SSS 13 30 09.6
CTU **Camp Tracy** 86.22 48 IAmb IAmb 13 11 10.6
comp=Z,34nm,1.5s
TCUT **Toone Canyon** 86.28 47 IAmb IAmb 13 11 10.3
comp=Z,30nm,0.9s
BC3 **Big Chuckawall** 86.31 55 IAmb IAmb 13 11 10.3
comp=Z,34nm,1.3s
CCUT **Cedar City** 86.35 51 IAmb IAmb 13 11 12.1
comp=Z,42nm,1.3s
IRM **Iron Mountain** 86.36 55 IAmb IAmb 13 11 12.2
comp=Z,50nm,1.7s
JMIC **Jan Mayen** 86.39 352 LR LR 13 50 07.7
comp=Z,21nm,21.9s,baz=344,slow=36
SZCU **Shurtz Canyon** 86.54 51 IAmb IAmb 13 11 12.6
comp=Z,26nm,1.2s
ESJX **Sierra Juarez** 86.56 57 P **P** 13 10 32.9 +0.1
ESJX IAmb IAmb 13 11 11.6
comp=Z,87nm,1.9s
MPU **Maple Canyon** 86.58 48 IAmb IAmb 13 11 11.9
comp=Z,27nm,1.1s
TCRU **Three Creeks R** 86.59 50 IAmb IAmb 13 11 12.2
comp=Z,53nm,1.5s
GURO **Guroymak-BITLI** 86.60 310 IAmb IAmb 13 10 34.9
comp=Z,16nm,0.7s
SUMG **Summit** 86.64 1 IAmb IAmb 13 11 11.2
comp=Z,35nm,0.9s
SUMG **Summit** 86.64 1 P **P** 13 10 35.0 +2.3
SUMG **Summit** 86.64 1 *i* P **P** 13 10 34.0 +1.3
SUMG IAmb IAmb 13 10 35.8
comp=Z,8.3nm,0.8s
LCMT **Little Creek M** 86.66 52 IAmb IAmb 13 11 13.4
comp=Z,33nm,1.2s
PD31 **Pinedale Array** 86.83 45 P **P** 13 10 34.8 +0.8
PDAR **Pinedale Array** 86.83 45 P **P** 13 10 34.2 +0.2
comp=Z,2.6nm,0.7s,baz=261,slow=3.2,SNR=21
PDAR LR LR 13 43 56.4
comp=Z,49nm,21.6s,baz=296,slow=32
comp=Z,2.6nm,0.7s
PDAR **Pinedale Array** 86.83 45 P **P** 13 10 34.4 +0.3
W13A **Hualapai Mount** 86.94 54 IAmb IAmb 13 11 13.7
comp=Z,43nm,1.6s
BSUT **Blindstream Ca** 86.97 48 IAmb IAmb 13 11 26.8
comp=Z,26nm,1.2s
FCC **Fort Churchill** 87.01 27 P **P** 13 10 34.8 +0.7
FCC IAmb IAmb 13 11 16.0
comp=Z,38nm,1.1s
FCC **Fort Churchill** 87.01 27 P **P** 13 10 34.8 +0.7
FCC pmax pmax
comp=Z,38nm,1.1s
MTPU **Mount Pierson** 87.01 50 IAmb IAmb 13 11 14.7
comp=Z,51nm,1.7s
GLA **Glamis** 87.03 56 IAmb IAmb 13 11 13.9
comp=Z,39nm,1.4s
P17A **Butcher Ranch,** 87.44 49 P **P** 13 10 37.9 +1.0
MNK **Minsk** 87.55 329 *i* P **P** 13 10 36.7 -0.1
comp=E,19nm,0.7s
MNK *i* P **P** 13 10 36.7 -0.1
comp=N,26nm,0.8s
MNK *i* P **P** 13 10 36.7 -0.1
comp=Z,33nm,0.9s,baz=57
MNK *i* pP **pP** 13 11 10.0 -1.7
MNK *i* sP **sP** 13 11 24.0 -2.1
MNK *i* PP **PP** 13 14 04.6 +1.4
MNK *i* PPP PPP 13 16 00.3
MNK *i* S **SKSac** 13 20 51.8 0.0
MNK *i* sS **pS** 13 21 52.3 +2.2
MNK *i* SS **SS** 13 26 46.0 -8.2
MNK *i* SSS SSS 13 30 33.0
MNK *i* LR LR 13 46 14.8
MNK **Minsk** 87.55 329 *i* P **P** 13 10 36.7 -0.1
MNK *i* *PP **pP** 13 11 09.9 -1.7
MNK *i* 13 14 04.5
MNK *i* PPP PPP 13 16 00.3
MNK *i* S **SKSac** 13 20 51.7 0.0
MNK *i* SSS SSS 13 30 32.9
MNK pmax pmax
comp=N,26nm,0.8s
MNK pmax pmax
comp=Z,33nm,0.9s

MNK pmax pmax
comp=E,19nm,0.7s
U15A North Rim 87.59 52 IAmb IAmb 13 11 17.3
comp=Z,65nm,1.7s
P18A Preston Nutter 87.72 48 IAmb IAmb 13 11 17.4
comp=Z,97nm,2.0s
NACGM Naroch 87.86 329 ⇓*iP* **P 13 10 38.2 -0.2**
comp=Z,30nm,0.8s,baz=56
KELT Kelkit 87.88 312 P **P 13 10 39.4 +0.3**
113A Mohawk Valley, 87.96 56 IAmb IAmb 13 11 19.1
comp=Z,50nm,1.6s
Y14A Wickenburg 88.07 54 IAmb IAmb 13 11 19.1
comp=Z,40nm,1.2s
HMU Henry Mountain 88.09 50 IAmb IAmb 13 11 26.8
comp=Z,27nm,0.9s
SCO Scoresbysund 88.29 356 P **P 13 10 40.2 +0.1**
SCO IAmb IAmb 13 11 24.1
comp=Z,76nm,2.0s
SCO Scoresbysund 88.29 356 P **P 13 10 40.2 +0.1**
SCO pmax pmax
comp=Z,76nm,2.0s
SCO Scoresbysund 88.29 356 *i* P **P 13 10 39.9 -0.2**
SCO IAmb IAmb 13 10 42.2
comp=Z,3.6nm,0.8s
PABE Paberze 88.82 331 IAmb IAmb 13 10 44.2
comp=Z,27nm,0.7s
PABE Paberze 88.82 331 P **P 13 10 42.6 -0.2**
O20A White River Ci 88.88 47 IAmb IAmb 13 11 22.6
comp=Z,47nm,1.2s
K22A Casper 88.88 44 IAmb IAmb 13 11 23.6
comp=Z,42nm,1.4s
AKASG Malin Array Be 88.94 325 P **P 13 10 42.2 -1.3**
comp=Z,1.7nm,0.3s,baz=53,slow=4.8,SNR=17
AKASG PKKPbc **PKKPbc 13 28 21.3 -1.2**
comp=Z,1.1nm,0.5s,baz=258,slow=2.9,SNR=6.0
comp=Z,1.7nm,0.3s
AKASG Malin Array Be 88.94 325 P **P 13 10 44.5 +1.0**
AKASG Malin Array Be 88.94 325 P **P 13 10 44.5 +1.0**
AKASG pmax pmax
comp=Z,13nm,1.3s
AKBB Malin Array Si 88.94 325 *ce*P **P 13 10 41.7 -1.8**
AKBB pmax pmax
comp=Z,6.0nm,0.7s
KIEV Kiev 88.95 325 P **P 13 10 42.4 -1.2**
comp=Z,34nm,1.4s
KIEV Kiev 88.95 325 P **P 13 10 42.7 -0.9**
X16A Lo Mia Camp, P 89.06 53 IAmb IAmb 13 11 24.4
comp=Z,25nm,1.3s
PV23 Carpenter Ridg 89.09 49 P **P 13 10 45.3 +0.4**
PV13 Radium Mtn., P 89.36 49 IAmb IAmb 13 11 24.9
comp=Z,33nm,1.1s
PV15 Paradox Valley 89.52 49 IAmb IAmb 13 11 25.7
comp=Z,40nm,1.3s
RSSD Black Hills 89.77 42 P **P 13 10 48.4 +0.5**
RSSD IAmb IAmb 13 11 27.5
comp=Z,35nm,1.4s
RSSD Black Hills 89.77 42 P **P 13 10 48.4 +0.5**
RSSD pmax pmax
comp=Z,35nm,1.4s
RSSD Black Hills 89.77 42 P **P 13 10 48.7 +0.8**
RSSD Black Hills 89.77 42 P **P 13 10 48.4 +0.5**
RAYN Ar Rayn 89.83 295 *i* P **P 13 10 48.2 0.0**
SNR=14
RAYN Ar Rayn 89.83 295 P **P 13 10 48.1 -0.2**
RAYN Ar Rayn 89.83 295 P **P 13 10 48.1 -0.2**
RAYN pmax pmax
comp=Z,11nm,0.8s
RAYN Ar Rayn 89.83 295 P **P 13 10 48.3 0.0**
NC405 NORSAR Array S 89.91 339 P **P 13 10 47.0 -0.9**
NC405 IAmb IAmb 13 11 20.6
comp=Z,24nm,0.8s
HFS Hagfors 89.94 338 P **P 13 10 46.7 -1.3**
comp=Z,2.2nm,0.3s,baz=88,slow=4.1,SNR=18
HFS LR LR 13 54 08.6
comp=Z,147nm,18.6s,baz=44,slow=37
comp=Z,2.2nm,0.3s
MVCO Mesa Verde 90.01 50 P **P 13 10 50.5 +1.4**
SUW Suwalki 90.09 330 *eP* **P 13 10 48.3 -0.4**
X18A Snowflake 90.12 53 IAmb IAmb 13 11 29.2
comp=Z,39nm,1.5s
NB2 NORSAR Subarra 90.13 339 P **P 13 10 47.7 -1.2**
comp=Z,1.3nm,0.5s,baz=42,slow=5.1
NB2 NORSAR Subarra 90.13 339 P **P 13 10 47.7 -1.2**
NOA NORSAR Array B 90.13 339 P **P 13 10 47.8 -1.2**
comp=Z,1.9nm,0.7s,baz=47,slow=4.7,SNR=6.9
NOA LR LR 13 54 38.2
comp=Z,172nm,21.0s,baz=40,slow=38
comp=Z,1.9nm,0.7s
LUBAR Lubar, Ukraine 90.16 325 P **P 13 10 47.9 -1.3**
NBO00 NORSAR Array S 90.28 340 P **P 13 10 50.9 +1.3**
TUC Tucson 90.44 55 P **P 13 10 50.5 -0.6**
TUC IAmb IAmb 13 11 31.6
comp=Z,46nm,1.4s
TUC Tucson 90.44 55 P **P 13 10 50.5 -0.6**
TUC pmax pmax
comp=Z,46nm,1.5s
TUC Tucson 90.44 55 P **P 13 10 53.2 +2.1**
TUC pP **pP 13 11 26.1 +0.2**
BNN Bunyan 90.82 312 IAmb IAmb 13 10 53.4
comp=Z,12nm,0.8s
ISCO Idaho Springs 90.83 47 IAmb IAmb 13 11 32.6
comp=Z,38nm,1.4s
ISCO Idaho Springs 90.83 47 P **P 13 10 54.8 +1.8**
S22A 4UR Ranch, Cre 90.95 49 IAmb IAmb 13 11 34.6
comp=Z,47nm,1.5s
ANDN Andirin 91.06 311 P **P 13 10 53.9 +0.1**
ULM Lac du Bonnet 91.20 34 P **P 13 10 53.8 -0.3**
comp=Z,3.4nm,0.8s,baz=289,slow=5.1,SNR=6.7
ULM LR LR 13 50 56.5
comp=Z,145nm,20.9s,baz=326,slow=35
comp=Z,3.4nm,0.8s
ULM Lac du Bonnet 91.20 34 IAmb IAmb 13 11 32.6
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 91.52 6 LR LR 13 52 37.4
comp=Z,73nm,20.6s,baz=348,slow=36
FRB Frobisher Bay 91.62 14 LR LR 13 56 49.5
comp=Z,94nm,19.3s,baz=334,slow=38
SDCO Great Sand Dun 91.88 48 IAmb IAmb 13 11 37.0
comp=Z,16nm,1.2s
BR131 Keskin Array S 91.91 314 P **P 13 10 57.2 -0.5**
BR131 IAmb IAmb 13 10 58.1
comp=Z,8.0nm,0.7s
BR131 Keskin Array S 91.91 314 P **P 13 10 57.2 -0.5**
BR131 pmax pmax
comp=Z,8.0nm,0.7s
BR131 Keskin Array S 91.91 314 P **P 13 10 57.2 -0.5**
SNR=6.6
BRTR Keskin Array B 91.91 314 P **P 13 10 56.8 -1.0**
comp=Z,6.7nm,0.7s,baz=59,slow=5.0,SNR=34
comp=Z,6.7nm,0.7s
BRTR Keskin Array B 91.91 314 P **P 13 10 57.0 -0.7**
BRTR Keskin Array B 91.91 314 *i* P **P 13 10 57.0 -0.7**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BR104 Keskin Array S 91.91 314 P **P 13 10 56.8 -1.0**
comp=Z,68nmcomp=Z,9.3nm,0.8s
BR106 Keskin Array S 91.92 314 P **P 13 10 56.8 -1.0**
comp=Z,64nmcomp=Z,9.4nm,0.8s
BR105 Keskin Array S 91.92 314 P **P 13 10 56.8 -1.0**
comp=Z,89nmcomp=Z,12nm,0.8s
AGMN Agassiz Nation 92.34 36 P **P 13 10 59.7 +0.4**
AGMN IAmb IAmb 13 11 52.6
comp=Z,20nm,0.9s
AGMN Agassiz Nation 92.34 36 P **P 13 10 60.0 +0.6**
ANMO Albuquerque 92.51 51 LR LR 13 49 05.7
comp=Z,123nm,19.2s,baz=308,slow=33
ANMO Albuquerque 92.51 51 P **P 13 11 02.2 +1.5**
ANMO IAmb IAmb 13 11 40.7
comp=Z,34nm,1.3s
ANMO Albuquerque 92.51 51 P **P 13 11 02.2 +1.5**
ANMO pmax pmax
comp=Z,33nm,1.3s
ANMO Albuquerque 92.51 51 P **P 13 11 02.4 +1.7**
Y22A Socorro 92.60 52 IAmb IAmb 13 11 40.6
comp=Z,24nm,1.4s
EPLO Experimental L 92.66 34 IAmb IAmb 13 11 38.7
comp=Z,20nm,1.1s
BURAR Bucovina Array 92.85 324 P **P 13 11 01.1 -0.8**
VRI Vrincioaia 93.00 322 P **P 13 11 03.0 +0.5**
comp=Z,482nmcomp=Z,6.3nm,0.6s
ASF Jabal al Asfar 93.13 306 LR LR 13 57 47.9
comp=Z,51nm,19.7s,baz=43,slow=38
MLR Muntele Rosu 93.66 322 LR LR 13 57 05.4
comp=Z,106nm,18.3s,baz=54,slow=38
MMAI Mount Meron Ar 93.86 307 P **P 13 11 06.8 0.0**
comp=Z,0.6nm,0.3s,baz=88,slow=4.6,SNR=4.0
MMAI LR LR 13 58 07.7
comp=Z,89nm,20.2s,baz=64,slow=38
comp=Z,0.6nm,0.3s
LPIG La Paz 94.31 62 LR LR 13 51 17.2
comp=Z,79nm,18.4s,baz=332,slow=34
NIE Niedzica 94.35 327 P **P 13 11 09.4 +0.8**
comp=Z,2.6nm,0.9s
ARR Arges 94.49 322 P **P 13 11 09.1 -0.3**
ECSD EROS Data Cent 94.53 40 P **P 13 11 09.3 -0.2**
ECSD IAmb IAmb 13 11 48.7
comp=Z,25nm,1.4s
MNTX Cornudas Mount 94.82 54 P **P 13 11 10.0 -1.2**
MNTX IAmb IAmb 13 11 51.3
comp=Z,22nm,1.2s
MNTX Cornudas Mount 94.82 54 P **P 13 11 12.8 +1.6**
MNTX pP **pP 13 11 45.0 -1.1**
KSP Ksiaz 95.35 330 *eP* **P 13 11 13.1 -0.1**
KSP Ksiaz 95.35 330 P **P 13 11 13.0 -0.1**
comp=Z,8.5nm,0.9s
MORC Moravsky Berou 95.48 329 *eP* **P 13 11 14.5 +0.7**
VHRN Van Horn 95.55 54 P **P 13 11 14.8 +0.1**
DPC Dobruska-Polom 95.67 330 P **P 13 11 15.3 +0.6**
comp=Z,5.3nm,0.8s
EIL Elat 95.77 305 LR LR 14 02 53.9
comp=Z,75nm,18.2s,baz=74,slow=41
VRAC Vranov 96.25 329 LR LR 13 58 25.1
comp=Z,130nm,18.4s,baz=41,slow=38
VRAC Vranov 96.25 329 *eP* **P 13 11 16.9 -0.4**
BRG Berggiesshubel 96.41 331 SS SS 13 29 03.0 +1.9
KRUC Moravsky 96.51 329 *eP* **P 13 11 17.2 -1.3**
CLL Collm 96.52 332 *eP* **P 13 11 18.0 -0.4**
CLL Collm 96.52 332 *eP* **P 13 11 18.0 -0.4**
CLL *e*SKSac **SKSac 13 21 42.0 -0.1**
CLL *e*SP SP 13 23 42.0 -5.2
CLL *e*(PPS) 13 25 00.0
CLL *e*SS **SS 13 29 06.0 +3.4**
CLL AMS AMS 13 57 00.0
comp=Z,200nm,20.2s
MODS Modra-Piesok 96.54 328 *eP* **P 13 11 20.6 +2.0**
MODS Modra-Piesok 96.54 328 *e*PDIFF **P 13 11 20.6 +2.0**
TX31 Lajitas Ar. Si 97.24 55 P **P 13 11 21.2 -1.1**
TXAR Lajitas Array 97.24 55 P Pdif 13 11 23.1 +0.7
comp=Z,1.2nm,0.9s,baz=292,slow=3.3,SNR=12
TXAR LR LR 13 48 12.1
comp=Z,56nm,20.7s,baz=326,slow=31
comp=Z,1.2nm,0.9s
TXAR Lajitas Array 97.24 55 P **P 13 11 21.6 -0.7**
GERES GERESS Array B 97.95 330 P **P 13 11 23.9 -1.1**
comp=Z,0.4nm,0.5s,baz=39,slow=5.1,SNR=4.0
GERES LR LR 14 00 53.3
comp=Z,147nm,18.1s,baz=52,slow=38
comp=Z,0.4nm,0.5s
GERES GERESS Array B 97.95 330 P **P 13 11 24.5 -0.6**
GERES GERESS Array B 97.95 330 P **P 13 11 24.5 -0.6**
WMOK Wichita Mounta 98.08 48 IAmb IAmb 13 12 04.5
comp=Z,7.5nm,1.1s
WMOK Wichita Mounta 98.08 48 P Pdif 13 11 26.1 +0.2
VNDA Vanda 98.82 176 LR LR 13 55 13.7
comp=Z,198nm,19.6s,baz=336,slow=35
SCHQ Schefferville 99.78 18 LR LR 13 56 43.2
comp=Z,130nm,21.9s,baz=316,slow=35
QSPA South Pole Qui 110.79 180 PKiKP **PKiKP 13 16 19.5 -1.1**
comp=Z,2.7nm,0.8s,baz=8.7,slow=1.9,SNR=20
QSPA PKKPbc **PKKPbc 13 27 19.2 -3.0**
comp=Z,0.6nm,0.8s,baz=67,slow=1.2,SNR=5.5
QSPA South Pole Qui 110.79 180 PKiKP 13 16 20.7 +0.1
ELIB Princess Elisa 119.36 198 *d*PKPdf **PKPdf 13 16 36.8 -0.2**
ELIB *d*SKPdf **SKPdf 13 19 58.5 -1.1**
LSZ Lusaka 119.80 264 P **PKiKP 13 16 40.1 +0.6**
TROLL Troll, Antarti 124.62 193 ⇑PKiKP **PKPdf 13 16 47.1 0.0**
comp=Z,399nm,0.6s
TROLL ⇓SKPdf **SKiKP 13 20 10.2 -0.2**
comp=Z,241nm,0.7s
SNAA Sanae 125.98 192 ⇑PKiKP **PKPdf 13 16 49.1 -0.6**
comp=Z,111nm,0.6s
SNAA ⇓SKPdf **SKPdf 13 20 11.5 -0.6**
comp=Z,91nm,0.7s
SNAA Sanae 125.98 192 PKP **PKPdf 13 16 48.8 -0.8**
comp=Z,4.9nm,0.7s,baz=142,slow=2.3,SNR=22
VNA2 Neumayer--Watz 127.45 191 ⇑PKiKP **PKPdf 13 16 52.2 -0.2**
comp=Z,12nm,0.6s,baz=134,slow=2.0
VNA2 SKPdf **SKiKP 13 20 15.3 -0.6**
baz=122,slow=1.7
LCBC Los crdobas, 129.85 58 P SKPbc 13 20 07.6 -0.8
SJCC San Jacinto, C 130.16 56 P **SKPbc 13 20 08.7 -0.8**
APAC Apartado, Choc 130.25 59 P **SKPbc 13 20 10.0 +0.2**
TORD Torodi Ar. Bea 130.34 310 PKP **PKPdf 13 16 59.6 +0.1**
comp=Z,2.3nm,0.6s,baz=43,slow=1.1,SNR=19
TORD SKPbc **SKPab 13 20 08.2 -1.8**
comp=Z,20nm,1.1s,baz=34,slow=3.4,SNR=25
URMC San Jos de Ur 131.17 58 P **SKPbc 13 20 11.2 -2.0**
CBOC Ciudad Bolivar 131.88 61 P **SKPbc 13 20 15.0 -0.9**
PLMC San Jos del P 132.20 62 P **SKPbc 13 20 17.7 +0.8**
OCAC Ocana 132.62 56 P **SKPbc 13 20 18.5 0.0**
PTBC PUERTO BERRIO 132.75 59 P **SKPbc 13 20 16.6 -2.2**
GUY2C Guyana, Caldas 132.77 61 P **SKPbc 13 20 18.4 -1.0**
JAMC Jamundi, Valle 132.79 64 P **SKPbc 13 20 18.8 -0.4**
NORC Norcasia 132.98 60 P **SKPbc 13 20 17.3 -1.8**
BRJC Barrrabermej 133.06 58 P **SKPbc 13 20 18.8 -1.0**
POPC Popayan, Colom 133.15 65 P **SKPbc 13 20 19.6 -0.8**
ORTC Ortega, Tolima 133.61 62 P **SKPbc 13 20 20.9 -0.8**
PAMC Pamplona, Colo 133.65 57 P **SKPbc 13 20 22.4 0.0**
BARC Barichara 133.73 58 P **SKPbc 13 20 21.8 -0.5**
PRAC Prado 134.02 62 P **SKPbc 13 20 22.3 -0.8**
RUSC La Rusia 134.23 58 P **SKPbc 13 20 23.3 -1.0**
GARC Garzon, Huila 134.34 65 P **SKPbc 13 20 24.1 -0.3**
CHIC Chingaza 134.44 60 P **SKPbc 13 20 23.9 -1.0**
URMC La Uribe, Meta 134.69 62 P **SKPbc 13 20 25.1 -0.2**
H03S2 Juan Fernandez 139.43 118 T T 15 52 12.2
baz=260,slow=74
H03S3 Juan Fernandez 139.44 118 T T 15 52 37.2
baz=260
H03S1 Juan Fernandez 139.44 118 T T 15 52 17.4
baz=260,slow=74
DBIC Dimbokro 139.45 309 PKhKP PKPpre 13 17 05.6
comp=Z,2.2nm,0.5s,baz=64,slow=2.0,SNR=4.3
DBIC PKP **PKPdf 13 17 16.7 +0.1**
comp=Z,5.1nm,0.7s,baz=67,slow=1.3,SNR=5.0
DBIC SKPbc **SKPbc 13 20 36.9 -2.3**
comp=Z,17nm,0.7s,baz=54,slow=3.3,SNR=14
EFI East Falkland 144.57 155 PKPbc 13 17 23.5 0.0
EFI East Falkland 144.57 155 PKIKP PKPbc 13 17 23.5 0.0
BI02 San Fabin de 145.00 124 PKPbc 13 17 25.3 -0.2
MT01 Popeta 145.72 120 PKPdf **PKPdf 13 17 27.0 -0.1**
MT09 Talagante 145.95 120 PKPdf **PKPdf 13 17 27.1 -0.5**
BOAV Boa Vista 146.02 50 PKPdf **PKPdf 13 17 26.6 -1.6**
MT05 Renca 146.24 119 PKPdf **PKPdf 13 17 27.1 -0.9**
PEL Peldehue 146.33 119 PKPdf **PKPdf 13 17 27.9 -0.3**
PEL Peldehue 146.33 119 PKIKP **PKPdf 13 17 27.9 -0.3**
CO02 Combarbal 146.42 115 PKPdf **PKPdf 13 17 27.4 -1.1**
GO04 Tololo Observa 146.74 113 PKPdf **PKPdf 13 17 28.4 -0.8**
HOPE Hope Point 146.75 179 PKPdf **PKPdf 13 17 28.5 +0.4**
HOPE Hope Point 146.75 179 PKP2 **PKPdf 13 17 28.5 +0.4**
MT08 Bocatoma Ro 146.82 119 PKPdf **PKPdf 13 17 28.9 -0.4**
PB12 IPOC Station P 146.92 92 PKPdf **PKPdf 13 17 28.7 -1.0**
LCO Las Campanas 146.96 111 PKPdf **PKPdf 13 17 29.1 -0.6**
LCO **PKPbc 13 17 32.2 +0.4**
LCO Las Campanas 146.96 111 PKIKP **PKPdf 13 17 29.1 -0.6**
LCO 13 17 32.3
LPAZ La Paz 148.50 87 PKPbc **PKPdf 13 17 33.6 +0.7**
comp=Z,13nm,0.7s,baz=265,slow=2.4,SNR=19
BDFB Brasilia 166.74 68 PKP **PKPdf 13 17 54.6 0.0**
comp=Z,4.1nm,0.6s,baz=270,slow=0.6,SNR=5.2

RSPR 06 13:26:48.0, 18°03'N×66°75'W, h16km, MD2.7/12, 4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.13**	**248**	⇑*iP*	Pg	13 26 51.9	0.0
GBPR				*eS*	Sb	13 26 54.9	+0.1
OBIP	**Obispado Ponce**	**0.14**	**83**	⇓*iP*	Pg	13 26 51.8	-0.2
OBIP				*eS*	Sg	13 26 54.8	+0.2
CELP	**Cerrillos**	**0.17**	**73**	⇓*iP*	Pg	13 26 52.2	-0.2
UUPR	**Utuado, UPR, P**	**0.23**	**8**	⇑*iP*	Pg	13 26 53.2	-0.1
MLPR	**Magueyes Islan**	**0.28**	**259**	⇑*iP*	Pg	13 26 53.8	-0.4
AOPR	**Arecibo Observ**	**0.32**	**360**	⇑*iP*	Pg	13 26 54.5	-0.3
CRPR	**Cabo Rojo, PR**	**0.34**	**267**	⇓*iP*	Pg	13 26 54.7	-0.5
LSP	**Las Mesas**	**0.35**	**295**	⇑*iP*	Pg	13 26 55.1	-0.3
LSP				*eS*	Sg	13 27 00.5	+0.1
PRSN	**Puerto Rico Se**	**0.42**	**297**	⇑*iP*	Pg	13 26 56.3	-0.2
EMPR	**Esperanza - Ma**	**0.50**	**25**	⇑*iP*	Pg	13 26 57.9	-0.1
EMPR				*eS*	Sg	13 27 04.1	-0.6
AGPR	**Aguadilla, PR**	**0.56**	**322**	⇓*iP*	Pg	13 26 58.5	-0.6
IDE	**Isla Desecheo**	**0.78**	**298**	⇑*iP*	Pb	13 27 01.9	-1.3
IDE				*eS*	Sb	13 27 12.9	-0.6
HUMP	**Col San Antoni**	**0.87**	**82**	⇑*iP*	Pb	13 27 03.5	-1.2

*IDC **06** 13:31:43.6±3.3, 29°06'S×61°36'E, h0km, mb3.7/6, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=117.3km s-min=29.5km az=44.0*

ISC 06 13:31:45.2±2.5, 29°1'S±0'6×61°3'E±0'4, h11km, n13, σ0°60/7, mb3.7/6, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.63**	**306**	Pn	**Pn**	**13 35 38.6**	**0.0**
	baz=114,slow=16,SNR=1.3						
OPO				Sn	Sn	13 38 29.5	-14
	1.5nm,0.5s						
H04N2	**CROZET ISLANDS**	**18.59**	**201**	T	T	13 55 08.0	
	baz=29,slow=75,SNR=18						
H04N1	**CROZET ISLANDS**	**18.59**	**201**	T	T	13 55 07.6	
	baz=29,slow=75,SNR=19						
H04N3	**CROZET ISLANDS**	**18.60**	**201**	T	T	13 55 09.7	
	baz=29,slow=75,SNR=14						
H01W2	**Cape Leeuwin H**	**44.73**	**111**	T	T	14 27 37.8	
	baz=262,slow=75,SNR=10						
H01W3	**Cape Leeuwin H**	**44.74**	**111**	T	T	14 27 36.8	
	baz=262,slow=75,SNR=8.7						
H01W1	**Cape Leeuwin H**	**44.75**	**111**	T	T	14 27 47.1	
	baz=262,slow=75,SNR=10						
ASAR	**Alice Springs**	**64.32**	**104**	P	**P**	**13 42 21.4**	**+0.1**
	0.3nm,0.5s,baz=245,slow=5.9,SNR=9.6						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**66.14**	**100**	P	**P**	**13 42 33.1**	**0.0**
	0.3nm,0.7s,baz=243,slow=5.6,SNR=1.7						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**77.90**	**15**	P	**P**	**13 43 43.0**	**+0.2**
	0.5nm,0.7s,baz=194,slow=5.9,SNR=5.2						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**80.84**	**11**	P	**P**	**13 43 59.2**	**+0.5**
	0.4nm,0.7s,baz=206,slow=6.2,SNR=4.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**82.17**	**6**	P	**P**	**13 44 05.8**	**+0.1**
	0.7nm,0.5s,baz=182,slow=5.6,SNR=3.6						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**85.19**	**14**	P	**P**	**13 44 20.1**	**-1.0**
	0.7nm,0.5s,baz=194,slow=4.7,SNR=5.3						
	0.7nm,0.5s						

*NEIC **06** 14:09:46.9±1.1, 19°7'S±0'2×177°5'W±0'1, h541km±5km, mb4.1/16, Error ellipse: s-maj=24.1km s-min=13.6km az=164.0*

*IDC **06** 14:09:49.5±1.8, 19°47'S×177°72'W, h576km, 19km, mb3.1/4, mbtmp4.0/6, Error ellipse: s-maj=30.2km s-min=18.9km az=172.0*

ISC 06 14:09:46.8±0.6, 19°5'S±0'1×177°52'W±0'08, h550km, n29, σ1°18/36, mb3.9/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.56**	**292**	P	**P**	**14 11 16.1**	**+2.8**
	2.8nm,0.3s,baz=120,slow=20,SNR=20						
MSVF	**Nonsavu**	**4.56**	**292**	P	**P**	**14 11 15.8**	**+2.5**
NIUE	**Niue**	**7.18**	**88**	P	**P**	**14 11 36.2**	**-0.4**
AFI	**Afiamalu**	**7.84**	**45**	P	**P**	**14 11 43.8**	**+0.6**
	19nm,0.6s,baz=243,slow=9.0,SNR=5.4						
AFI				S	**S**	**14 13 16.2**	**-2.2**
	32nm,0.7s,baz=293,slow=18,SNR=4.7						
MARNC	**Mare, Loyalty**	**13.68**	**259**	P	**P**	**14 12 42.8**	**0.0**
DZM	**Mont Dzumac**	**15.21**	**258**	P	**P**	**14 12 58.3**	**-0.3**
	5.1nm,0.9s,baz=105,slow=20,SNR=2.1						
RAR	**Rarotonga**	**16.73**	**99**	P	**P**	**14 13 12.7**	**-0.4**
TOZ	**Tahuroa Road**	**19.14**	**197**	P	**P**	**14 13 34.8**	**-0.1**
CTAO	**Charters Tower**	**34.05**	**263**	P	**P**	**14 15 46.2**	**+0.3**
TOO	**Toolangi**	**36.84**	**233**	P	**P**	**14 16 09.0**	**+0.2**
TOO				IAmb	IAmb	14 16 09.8	
	comp=Z,2.5nm,0.8s						
INKA	**Innaminka**	**38.95**	**250**	P	**P**	**14 16 26.3**	**+0.2**
INKA				IAmb	IAmb	14 16 27.5	
	comp=Z,3.0nm,0.9s						
BBOO	**Buckleboo**	**43.39**	**243**	P	**P**	**14 17 01.1**	**-0.1**
WR8	**Warramunga Arr**	**45.04**	**261**	P	**P**	**14 17 13.5**	**-0.7**
WR8				IAmb	IAmb	14 17 46.9	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**45.16**	**261**	P	**P**	**14 17 14.5**	**-0.6**
WB0				IAmb	IAmb	14 17 27.1	
	comp=Z,14nm,1.5s						
AS31	**Alice Springs**	**45.19**	**256**	P	**P**	**14 17 14.9**	**-0.4**
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**14 17 15.1**	**-0.2**
	comp=Z,2.7nm,0.4s,baz=91,slow=7.7,SNR=117						
ASAR				PcP	**PcP**	**14 18 43.5**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=101,slow=3.9,SNR=5.6						
ASAR				S	**S**	**14 23 12.6**	**-2.8**
	comp=Z,0.4nm,0.6s,baz=95,slow=14,SNR=4.8						
	comp=Z,2.7nm,0.4s						
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**14 17 14.3**	**-0.9**
ASAR					**PcP**	**14 18 43.5**	**-0.4**
ASAR					**S**	**14 23 12.6**	**-2.8**
WRA	**Warramunga Arr**	**45.19**	**261**	P	**P**	**14 17 14.4**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=98,slow=7.8,SNR=22						
WRA				PcP	**PcP**	**14 18 43.7**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=94,slow=3.2,SNR=3.0						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**45.19**	**261**	P	**P**	**14 17 14.4**	**-0.9**
WRA					**PcP**	**14 18 43.7**	**-0.2**
FORT	**Forrest**	**50.10**	**246**	P	**P**	**14 17 51.3**	**-0.6**
FORT				IAmb	IAmb	14 18 14.8	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.61**	**262**	P	**P**	**14 18 17.3**	**0.0**
MBWA	**Marble Bar**	**58.51**	**257**	P	**P**	**14 18 50.5**	**-0.6**
MBWA				IAmb	IAmb	14 19 15.1	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**70.54**	**180**	P	**P**	**14 20 07.4**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=41,slow=1.6,SNR=12						
	comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**70.54**	**180**	P	**P**	**14 20 07.4**	**+0.9**
QSPA				IAmb	IAmb	14 20 14.6	
	comp=Z,5.4nm,1.4s						
BELA	**Belgrano 2**	**80.46**	**173**	P	**P**	**14 21 01.8**	**+0.6**
BELA				IAmb	IAmb	14 21 29.1	
	comp=Z,6.3nm,1.5s						
MAW	**Mawson**	**82.63**	**200**	P	**P**	**14 21 12.8**	**+0.5**
TXAR	**Lajitas Array**	**86.15**	**57**	P	**P**	**14 21 31.1**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=241,slow=5.7,SNR=4.3						
	comp=Z,0.3nm,0.7s						
MMAI	**Mount Meron Ar**	**147.71**	**301**	PKPbc	**PKPbc**	**14 28 29.1**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=61,slow=6.8,SNR=2.0						
GERES	**GERESS Array B**	**149.38**	**345**	PKPbc	**PKPbc**	**14 28 33.6**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=340,slow=2.3,SNR=3.1						

*NEIC **06** 14:19:39.4±1.0, 20°4'S±0'1×177°6'W±0'1, h517km±7km, mb4.5/42, Error ellipse: s-maj=18.9km s-min=15.3km az=122.0*

*IDC **06** 14:19:39.8±1.5, 20°46'S×177°78'W, h515km±15km, mb3.6/12, mbtmp4.5/16, Error ellipse: s-maj=17.9km s-min=13.5km az=116.0*

*NOU **06** 14:19:40.4, 20°40'S×177°68'W, h528km, mb4.4/24, Fiji Islands Region*

ISC 06 14:19:42.5±0.4, 20°47'S±0'08×177°83'W±0'07, h550km, n131, σ1°17/125, mb4.4/40, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.75**	**304**	P	**P**	**14 21 07.7**	**-2.7**
	38nm,0.5s,baz=240,slow=22,SNR=120						
MSVF	**Nonsavu**	**4.75**	**304**	P	**P**	**14 21 08.1**	**-2.3**
MSVF	**Nonsavu**	**4.75**	**304**		**P**	**14 21 07.9**	**-2.6**
FUTU	**Fugatoga**	**6.13**	**357**	P	**P**	14 21 17.1	-5.3
NIUE	**Niue**	**7.57**	**81**	P	**P**	**14 21 32.7**	**-3.3**
NIUE	**Niue**	**7.57**	**81**	P	**P**	14 21 30.8	-5.2
NIUE				S	**S**	**14 23 08.9**	**-0.1**
AFI	**Afiamalu**	**8.71**	**43**	P	**P**	14 21 42.0	-5.6
	24nm,0.4s,baz=141,slow=3.5,SNR=11						
AFI				S	S	14 23 18.5	-12
	36nm,0.3s,baz=105,slow=21,SNR=12						
AFI	**Afiamalu**	**8.71**	**43**	P	**P**	14 21 41.8	-5.8
AFI				S	S	14 23 19.6	-11
MARNC	**Mare, Loyalty**	**13.25**	**263**	P	**P**	**14 22 32.9**	**-1.1**
MARNC	**Mare, Loyalty**	**13.25**	**263**	P	**P**	**14 22 32.0**	**-1.9**
YATNC	**Mamie plateau

DZM	**Mont Dzumac**	**14.75 261**	P		**P**	**14 22 47.7**	**-1.8**
	5.7nm,0.7s,baz=96,slow=18,SNR=9.4						
ONTNC	**Ouen Toro**	**14.75 260**	P		**P**	**14 22 48.3**	**-1.2**
SANVU	**Saraoutou**	**15.09 287**	P		**P**	**14 22 53.2**	**+0.2**
OUZ	**Omahuta**	**16.53 205**	P		**P**	**14 23 07.4**	**+0.6**
OUZ	**Omahuta**	**16.53 205**	P		**P**	**14 23 08.0**	**+1.2**
KOUNC	**Koumac, New Ca**	**16.76 267**	P		**P**	**14 23 09.9**	**+0.8**
WCZ	**Waipu Caves**	**16.88 202**	P		**P**	**14 23 11.2**	**+1.3**
WMGZ	**Waiomatatini S**	**17.60 190**	P		**P**	**14 23 17.9**	**+1.4**
HAZ	**Te Kaha**	**17.65 192**	P		**P**	**14 23 16.5**	**-0.5**
HAZ			S		S	14 26 33.1	+21
PKGZ	**Pakihiroa**	**17.70 191**	P		**P**	**14 23 19.0**	**+1.5**
PKGZ			S		S	14 26 32.3	+20
RUGZ	**Raukumara Rang**	**17.87 192**	P		**P**	**14 23 19.6**	**+0.4**
RUGZ			S		S	14 26 38.7	+23
PUZ	**Puketiti**	**17.87 190**	P		**P**	**14 23 19.0**	**-0.1**
PUZ			S		S	14 26 37.1	+22
TGRZ	**Tauranga**	**17.95 195**	P		**P**	**14 23 20.9**	**+1.1**
TOZ	**Tahuroa Road**	**18.15 197**	P		**P**	**14 23 22.7**	**+1.1**
MWZ	**Matawai**	**18.25 192**	P		**P**	**14 23 21.6**	**-1.0**
URZ	**Urewera**	**18.27 193**	P		**P**	**14 23 20.2**	**-2.4**
	9.6nm,0.3s,baz=272,slow=2.7,SNR=22						
URZ	**Urewera**	**18.27 193**	P		**P**	**14 23 21.6**	**-1.0**
URZ	**Urewera**	**18.27 193**	P		**P**	**14 23 20.4**	**-2.2**
URZ			S		S	14 26 45.4	+24
MUGZ	**Murupara**	**18.55 193**	P		**P**	**14 23 23.6**	**-1.6**
RTZ	**Ruatahuna**	**18.64 193**	P		**P**	**14 23 27.2**	**+1.1**
PRRZ	**Plateau Road**	**18.65 194**	P		**P**	**14 23 26.0**	**-0.2**
KNZ	**Kokohu**	**18.90 191**	P		**P**	**14 23 27.8**	**-0.6**
HIZ	**Hauiti**	**19.07 198**	P		**P**	**14 23 30.6**	**+0.7**
BKZ	**Black Stump Fm**	**19.27 193**	P		**P**	**14 23 30.5**	**-1.3**
BKZ	**Black Stump Fm**	**19.27 193**	P		**P**	**14 23 29.0**	**-2.8**
BKZ			IAmb		IAmb	14 23 43.5	
	comp=Z,15nm,1.0s						
BKZ	**Black Stump Fm**	**19.27 193**	P		**P**	**14 23 30.3**	**-1.6**
MCHZ	**McNeill Hill**	**19.49 193**	P		**P**	**14 23 32.9**	**-0.9**
TSZ	**Takapari Road**	**20.24 194**	P		**P**	**14 23 39.1**	**-1.5**
BFZ	**Birch Farm**	**20.78 193**	P		**P**	**14 23 42.9**	**-2.5**
QRZ	**Quartz Range**	**21.89 200**	P		**P**	**14 23 55.9**	**+0.4**
NNZ	**Nelson**	**22.00 198**	P		**P**	**14 23 55.4**	**-0.9**
KHZ	**Kahutara**	**23.06 196**	P		**P**	**14 24 06.5**	**+0.7**
TATA	**Tatamba Isabel**	**24.73 296**	P		**P**	**14 24 20.3**	**-0.7**
EIDS	**Eidsvold**	**29.01 254**	P		**P**	**14 24 58.1**	**-0.4**
EIDS			IAmb		IAmb	14 25 17.0	
	comp=Z,19nm,1.5s						
ARMA	**Armidale**	**29.23 244**	P		**P**	**14 25 00.8**	**+0.4**
ARMA			IAmb		IAmb	14 25 18.2	
	comp=Z,24nm,1.4s						
CTAO	**Charters Tower**	**33.65 264**	P		**P**	**14 25 38.5**	**+0.3**
CTAO	**Charters Tower**	**33.65 264**	P		**P**	**14 25 38.2**	**0.0**
PMG	**Port Moresby**	**35.49 283**	P		**P**	**14 25 52.8**	**-0.8**
PMG			IAmb		IAmb	14 26 11.2	
	comp=Z,21nm,0.9s						
TOO	**Toolangi**	**36.05 234**	P		**P**	**14 25 58.2**	**+0.3**
STKA	**Stephens Creek**	**37.95 244**	P		**P**	**14 26 13.3**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=58,slow=9.9,SNR=4.2						
	comp=Z,2.6nm,0.5s						
INKA	**Innaminka**	**38.36 251**	P		**P**	**14 26 17.4**	**+0.4**
BBOO	**Buckleboo**	**42.70 243**	P		**P**	**14 26 51.3**	**-0.2**
BBOO			IAmb		IAmb	14 26 52.0	
	comp=Z,9.0nm,0.7s						
WR8	**Warramunga Arr**	**44.61 262**	P		**P**	**14 27 05.7**	**-0.8**
WR8			IAmb		IAmb	14 27 07.3	
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**44.68 257**			**P**	**14 27 06.9**	**-0.1**
AS31			IAmb		IAmb	14 27 07.5	
	comp=Z,5.8nm,0.6s						
ASAR	**Alice Springs**	**44.68 257**	P		**P**	**14 27 06.9**	**-0.2**
	comp=Z,19nm,0.5s,baz=90,slow=7.8,SNR=623						
ASAR			PcP		**PcP**	**14 28 37.7**	**0.0**
	comp=Z,1.0nm,0.6s,baz=94,slow=3.7,SNR=3.8						
ASAR			S		**S**	**14 33 02.9**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=94,slow=15,SNR=8.8						
	comp=Z,19nm,0.5s						
WB0	**Warramunga Arr**	**44.74 262**	P		**P**	**14 27 06.7**	**-0.8**
WB0			IAmb		IAmb	14 27 07.5	
	comp=Z,15nm,0.6s						
WRAB	**Tennant Creek**	**44.75 262**	P		**P**	**14 27 07.3**	**-0.3**
WRAB	**Tennant Creek**	**44.75 262**	P		**P**	**14 27 07.1**	**-0.5**
WRAB			IAmb		IAmb	14 27 07.5	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**44.76 262**	P		**P**	**14 27 06.9**	**-0.8**
	comp=Z,6.1nm,0.3s,baz=97,slow=7.5,SNR=156						
WRA			S		**S**	**14 33 03.6**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=100,slow=13,SNR=1.8						
	comp=Z,6.1nm,0.3s						
MTN	**Manton Dam**	**49.32 270**	P		**P**	**14 27 41.6**	**-0.4**
MTN			IAmb		IAmb	14 27 42.6	
	comp=Z,17nm,0.6s						
FORT	**Forrest**	**49.45 247**	P		**P**	**14 27 42.3**	**-0.4**
FORT			IAmb		IAmb	14 27 44.5	
	comp=Z,9.8nm,1.0s						
KNRA	**Kununurra**	**50.82 266**	P		**P**	**14 27 52.8**	**-0.2**
KNRA			IAmb		IAmb	14 27 58.1	
	comp=Z,32nm,1.4s						
FAKI	**Fak Fak**	**51.65 283**	P		**P**	**14 27 59.4**	**+0.4**
FAKI	**Fak Fak**	**51.65 283**	P		**P**	**14 27 58.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.19 262**	P		**P**	**14 28 10.0**	**+0.1**
SOEI	**Soe**	**56.66 272**	P		**P**	**14 28 35.9**	**+1.5**
SOEI	**Soe**	**56.66 272**	P		**P**	**14 28 35.6**	**+1.2**
MBWA	**Marble Bar**	**58.02 257**	P		**P**	**14 28 43.1**	**-0.3**
MBWA	**Marble Bar**	**58.02 257**	P		**P**	**14 28 42.8**	**-0.6**
MBWA			IAmb		IAmb	14 28 43.6	
	comp=Z,11nm,0.6s						
NWAO	**Narrogin (SRO)**	**58.53 243**	P		**P**	**14 28 47.1**	**+0.4**
MORW	**Morawa**	**59.99 248**	P		**P**	**14 28 56.3**	**-0.2**
MORW			IAmb		IAmb	14 29 00.7	
	comp=Z,30nm,1.4s						
PLAI	**Plampang**	**63.03 270**	P		**P**	**14 29 16.8**	**+0.2**
TOLI2	**Tolitoli**	**63.75 282**	P		**P**	**14 29 23.0**	**+1.8**
TOLI2	**Tolitoli**	**63.75 282**	P		**P**	**14 29 21.2**	**0.0**
TOLI2			IAmb		IAmb	14 29 51.7	
	comp=Z,13nm,1.1s						
CASY	**Casey**	**64.06 205**	P		**P**	**14 29 22.8**	**+0.6**
JAGI	**Jajag, Banyuwa**	**66.54 269**	P		**P**	**14 29 38.1**	**-0.6**
JHJ2	**Mitsune**	**66.89 322**	P		**P**	**14 29 40.9**	**+0.5**
QSPA	**South Pole Qui**	**69.60 180**	P		**P**	**14 29 57.8**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=309,slow=0.8,SNR=17						
	comp=Z,1.6nm,0.6s						
QSPA	**South Pole Qui**	**69.60 180**	P		**P**	**14 29 57.8**	**+1.3**
KKM	**Kota Kinabalu**	**69.91 285**	P		**P**	**14 29 59.9**	**+0.7**
UGM	**Wanagama**	**70.12 269**	P		**P**	**14 30 00.8**	**+0.3**
UGM	**Wanagama**	**70.12 269**	P		**P**	**14 30 00.3**	**-0.1**
MJAR	**Matsushiro Arr**	**70.28 324**	P		**P**	**14 30 00.8**	**0.0**
	comp=Z,4.1nm,0.5s,baz=152,slow=5.8,SNR=1.6						
	comp=Z,4.1nm,0.5s						
MJAR	**Matsushiro Arr**	**70.28 324**	P		**P**	**14 30 00.6**	**-0.2**
JTM	**Tenmabayashi**	**71.92 328**	P		**P**	**14 30 10.8**	**+0.4**
ADK	**Adak**	**72.04 1**	P		**P**	**14 30 10.1**	**-0.6**
JNU	**Nakatsue**	**72.36 317**	IAmb		IAmb	14 30 11.8	
	comp=Z,14nm,0.7s						
ATKA	**Atka Island**	**72.43 2**	P		**P**	**14 30 11.8**	**-1.1**
SSLB	**Suanglung**	**74.09 303**	P		**P**	**14 30 22.6**	**-0.6**
SSLB			IAmb		IAmb	14 30 24.9	
	comp=Z,19nm,1.2s						
PEA0B	**Petropavlovsk-**	**76.28 345**	P		**P**	**14 30 34.7**	**0.0**
PEA0B			IAmb		IAmb	14 30 55.6	
	comp=Z,20nm,1.2s						
PETK	**Petropavlovsk-**	**76.28 345**	P		**P**	**14 30 34.7**	**0.0**
	comp=Z,6.8nm,0.8s,baz=123,slow=8.6,SNR=17						
	comp=Z,6.8nm,0.8s						
KSRS	**Korea Array**	**76.97 318**	P		**P**	**14 30 39.9**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=129,slow=6.0,SNR=15						
	comp=Z,2.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**79.03 326**	P		**P**	**14 30 51.2**	**+1.5**
	comp=Z,7.8nm,0.7s,baz=145,slow=3.7,SNR=9.8						
	comp=Z,7.8nm,0.7s						
BELA	**Belgrano 2**	**79.57 173**	P		**P**	**14 30 52.1**	**-0.1**
BELA			IAmb		IAmb	14 30 56.5	
	comp=Z,6.3nm,0.5s						
NJ2	**Nanjing**	**79.98 310**	*e*P		**P**	**14 30 56.5**	**+1.5**
NJ2			pmax		pmax		
	comp=Z,19nm,0.6s						
MDJ	**Mudanjiang**	**80.58 325**	P		**P**	**14 30 59.2**	**+1.3**
MDJ			pmax		pmax		
	comp=Z,13nm,1.0s						
BNX	**BinXian**	**82.49 325**	⇑P		**P**	**14 31 08.2**	**+0.6**
BNX			pmax		pmax		
	comp=Z,11nm,0.4s						
KULM	**Kulim**	**83.92 278**	P		**P**	**14 31 15.6**	**+0.1**
KULM			IAmb		IAmb	14 31 19.9	
	comp=Z,24nm,1.4s						
SCM	**Sheep Creek Mo**	**85.56 14**	P		**P**	**14 31 21.9**	**-0.6**
HNS	**HongShan**	**85.64 312**	⇓P		**P**	**14 31 24.4**	**+1.1**
HNS			pmax		pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**86.77 300**	P		**P**	**14 31 32.2**	**+3.1**
GYA			pmax		pmax		
	comp=Z,11nm,0.5s						
TXAR	**Lajitas Array**	**86.90 57**	P		**P**	**14 31 31.4**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=204,slow=7.2,SNR=5.6						
	comp=Z,0.3nm,0.6s						
WRH	**Wood River Hil**	**87.73 12**	P		**P**	**14 31 32.2**	**-0.3**
CCB	**Clear Creek Bu**	**87.95 12**			**P**	**14 31 32.7**	**-0.8**
XAN	**Xi'an**	**88.24 307**	P		**P**	**14 31 37.2**	**+1.5**
XAN			sP		sP	14 34 20.3	-10
XAN			pmax		pmax		
	comp=Z,17nm,0.8s						
ILAR	**Eielson Array**	**88.25 13**	P		**P**	**14 31 34.4**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=213,slow=5.4,SNR=8.0						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**88.83 43**	P		**P**	**14 31 39.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=246,slow=5.6,SNR=2.5						
	comp=Z,0.3nm,0.5s						
M30M	**Minto, Yukon**	**88.89 18**	P		**P**	**14 31 37.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**89.44 314**	*e*P		**P**	**14 31 43.9**	**+2.7**
HHC			pmax		pmax		
	comp=Z,12nm,0.6s						
HHC			pmax		pmax		
	comp=Z,61nm,4.4s						
CM31	**Chiang Mai Arr**	**90.25 290**	P		**P**	**14 31 47.6**	**+2.3**
CM31			IAmb		IAmb	14 31 48.1	
	comp=Z,7.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.25 290**	P		**P**	**14 31 47.2**	**+1.9**
	comp=Z,3.5nm,0.8s,baz=123,slow=3.0,SNR=23						
	comp=Z,3.5nm,0.8s						
CHTO	**Chiang Mai**	**90.38 290**			**P**	**14 31 45.5**	**-0.4**
CHTO			IAmb		IAmb	14 31 48.3	
	comp=Z,6.4nm,0.7s						
PZH	**PanZhiHua**	**90.83 298**	P		**P**	**14 31 49.1**	**+1.1**
KURK	**Kurchatov**	**114.08 317**			PKPdf	14 37 18.3	-0.9
KURBB	**Kurchatov Arra**	**114.13 317**	PKiKP		PKPdf	14 37 18.3	-1.0
	comp=Z,0.6nm,0.7s,baz=92,slow=2.0,SNR=1.1						
BVAR	**Borovoye Array**	**119.16 320**	PKP		**PKPdf**	**14 37 28.6**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=111,slow=2.0,SNR=7.5						
ARCES	**ARCESS Array B**	**128.92 350**	PKP		**PKPdf**	**14 37 46.5**	**-0.7**
	comp=Z,4.3nm,1.1s,baz=33,slow=2.5,SNR=4.5						
HFS	**Hagfors**	**139.53 351**	PKhKP		PKPpre	14 37 59.2	
	comp=Z,3.0nm,0.9s,baz=34,slow=2.0,SNR=5.6						
AKASG	**Malin Array Be**	**143.06 331**	PKhKP		PKPpre	14 38 10.7	
	comp=Z,4.3nm,0.4s,baz=44,slow=4.3,SNR=36						
RNPP9	**Sopachiy**	**143.96 335**	PKP		PKPbc	14 38 13.4	-1.3
RNPP5	**Staryi Chortor**	**144.10 334**	PKP		PKPbc	14 38 13.5	-1.6
KMPD	**K-Podol'skiy**	**145.85 331**	PKP		**PKPdf**	**14 38 17.3**	**-1.4**
BRTR	**Keskin Array B**	**146.93 312**	PKPbc		**PKPbc**	**14 38 24.2**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=59,slow=3.3,SNR=9.6						
BRTR	**Keskin Array B**	**146.93 312**			**PKPbc**	**14 38 22.6**	**-1.3**
BUR08	**Bucovina Ar. S**	**147.10 331**			**PKiKP**	**14 38 26.1**	**+0.2**
KOLS	**Kolonicke sedl**	**147.35 335**	*e*PKP		**PKPab**	**14 38 28.8**	**+0.5**
MMAI	**Mount Meron Ar**	**147.94 300**	PKPbc		**PKiKP**	**14 38 27.4**	**-0.6**
	comp=Z,1.8nm,0.4s,baz=75,slow=3.2,SNR=6.3						
CLL	**Collm**	**148.06 347**	*i* PKPbc		**PKPbc**	**14 38 26.8**	**+0.6**
	comp=Z,6.0nm,0.7s						
CLL			*i* PKPab		**PKiKP**	**14 38 29.4**	**+1.9**
GERES	**GERESS Array B**	**150.21 345**	PKPbc		**PKPbc**	**14 38 32.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=45,slow=1.9,SNR=5.8						

*IDC **06** 14:28:57.7±3.3,29°.38S×177°.84W,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=88.5km s-min=36.2km az=36.0*

*NEIC **06** 14:29:09.7±1.0,29°.6S±0°.2×178°.1W±0°.2,h77km,9km, mb4.1/5,Error ellipse: s-maj=24.3km s-min=21.9km az=58.0*

ISC 06 14:29:09.5±0.9,29°.6S±0°.2×178°.2W±0°.2,h77km,n14, σ0s39/14,mb4.0/6,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.45**	**30**			Pn	**Pn**	**14 29 22.6**	**+0.1**
NIUE	**Niue**	**12.93**	**37**			Pn	**Pn**	**14 32 10.1**	**0.0**
AMCZ	**Amberley**	**15.38**	**206**			P	**P**	**14 32 44.6**	**-0.3**
STKA	**Stephens Creek**	**34.50**	**256**			P	**P**	**14 35 50.4**	**+0.1**
	2.3nm,0.7s,baz=96,slow=9.0,SNR=3.3								
	2.3nm,0.7s								
AS31	**Alice Springs**	**43.00**	**266**	P		P	**P**	**14 37 01.4**	**-0.1**
AS31				IAmb		IAmb	IAmb	14 37 10.4	
	comp=Z,1.1nm,1.1s								
ASAR	**Alice Springs**	**43.00**	**266**	P		P	**P**	**14 37 01.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=105,slow=7.3,SNR=16								
	comp=Z,0.4nm,0.5s								
ASAR	**Alice Springs**	**43.00**	**266**	P		P	**P**	**14 37 00.9**	**-0.6**
WR8	**Warramunga Arr**	**43.77**	**272**	P		P	**P**	**14 37 08.3**	**+0.5**
WR8				IAmb		IAmb	IAmb	14 37 46.0	
	comp=Z,9.5nm,1.3s								
WRA	**Warramunga Arr**	**43.92**	**271**	P		P	**P**	**14 37 08.9**	**0.0**
	comp=Z,0.6nm,0.3s,baz=111,slow=8.1,SNR=11								
	comp=Z,0.6nm,0.3s								
WRA	**Warramunga Arr**	**43.92**	**271**	P		P	**P**	**14 37 09.0**	**+0.1**
WB0	**Warramunga Arr**	**43.94**	**272**	P		P	**P**	**14 37 09.6**	**+0.5**
QSPA	**South Pole Qui**	**60.46**	**180**	P		P	**P**	**14 39 11.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=45,slow=5.7,SNR=6.5								
	comp=Z,0.9nm,0.7s								
QSPA	**South Pole Qui**	**60.46**	**180**	P		P	**P**	**14 39 11.4**	**+0.4**
QSPA				IAmb		IAmb	IAmb	14 39 24.5	
	comp=Z,2.5nm,1.2s								
FINES	**FINESS Array B**	**144.38**	**340**	PKP			**PKPab**	**14 48 33.8**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=53,slow=5.4,SNR=2.0								

NOU 06 14:36:40.5,16°.78S×167°.33E,h12km,MLv4.2/12, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.25**	**139**	P		P	Pn	14 37 03.4	-0.4
DVP	**Devils Point**	**1.25**	**139**	S		S	Sb	14 37 20.2	+0.2
RTV	**Rentapao**	**1.45**	**134**	P		P	Pn	14 37 06.6	0.0
KOUNC	**Koumac, New Ca**	**4.73**	**217**	P		P	Pn	14 37 52.3	+0.6
YATNC	**Mamie plateau,**	**5.27**	**184**	P		P	Pn	14 37 58.5	-0.6

*NEIC **06** 14:45:23.0±0.6,52°.00N±0°.07×166°.08W±0°.04,h10km±2km, ML3.2/6,ML2.9(AEIC),Error ellipse: s-maj=11.7km s-min=3.7km az=175.0*

*IDC **06** 14:45:23.2±1.7,52°.44N×165°.70W,h0km,mb3.8/4, mbtmp3.6/6,ML3.1/2,Error ellipse: s-maj=39.9km s-min=22.4km az=173.0*

*AEIC **06** 14:45:25.0±0.8,52°.02N±0°.08×166°.01W±0°.06,h10km±6km, Error ellipse: s-maj=11.7km s-min=4.3km az=167.0*

ISC 06 14:45:22.1±3.1,52°.09N±0°.07×165°.81W±0°.06,h7km±20km, n40,σ1s98/53,mb3.7/4,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.81**	**347**				**Pn**	**14 45 54.6**	**+1.0**
UNV							**Sn**	**14 46 18.3**	**+1.4**
MGOD	**Makushin Gods**	**1.83**	**340**				**Pn**	**14 45 55.0**	**+1.0**
MGOD							**Sn**	**14 46 18.3**	**+0.8**
OKFG	**Magazine Ridge**	**1.84**	**317**				**Pn**	**14 45 54.3**	**+0.1**
OKFG							**Sn**	**14 46 16.8**	**-0.9**
MAPS	**Pakushin South**	**1.86**	**339**				**Pn**	**14 45 55.4**	**+1.1**
MAPS							**Pb**	**14 45 55.6**	**-0.7**
MAPS							**Sn**	**14 46 19.2**	**+1.2**
MNAT	**Makushin Natee**	**1.88**	**344**				**Pn**	**14 45 55.8**	**+1.2**
MNAT							**Pb**	**14 45 56.0**	**-0.7**
MNAT							**Sb**	**14 46 20.4**	**0.0**
OKTU	**Okmok Mt. Tuli**	**1.88**	**315**				**Pn**	**14 45 54.8**	**+0.1**
OKSP	**Okmok Steeple**	**1.91**	**309**				**Pn**	**14 45 54.8**	**-0.3**
OKCE	**Okmok Cone E**	**1.96**	**314**				**Pn**	**14 45 56.2**	**+0.4**
ZRO	**Akutan Zero**	**2.01**	**357**				**Pn**	**14 45 58.1**	**+1.7**
ZRO							**Pb**	**14 45 58.4**	**-0.6**
ZRO							**Sb**	**14 46 24.4**	**+0.1**
AKBBA	**Akutan Broad B**	**2.02**	**358**				**Pn**	**14 45 58.0**	**+1.5**
AKBBA							**Sb**	**14 46 24.3**	**-0.1**
AHB	**Akutan Harbor**	**2.03**	**360**				**Pn**	**14 45 58.6**	**+1.8**
AHB							**Sb**	**14 46 25.1**	**+0.2**
AKV	**Akutan Volcano**	**2.05**	**357**				**Pn**	**14 45 58.8**	**+1.8**
AKV							**Sb**	**14 46 25.2**	**0.0**
AKUT	**Akutan**	**2.05**	**1**			Pn	**Pn**	**14 45 58.8**	**+1.8**
AKUT							**Sb**	**14 46 25.9**	**+0.5**
AKUT						IAML		14 46 26.9	
	comp=E,111nm,0.3s								
AKLV	**Akutan Long Va**	**2.08**	**358**				**Pn**	**14 45 58.9**	**+1.4**
AKLV							**Sn**	**14 46 25.6**	**+2.0**
LVA	**Lava Point**	**2.08**	**356**			Pn	**Pn**	**14 45 59.2**	**+1.8**
LVA						IAML		14 46 38.7	
	comp=E,152nm,0.5s								
LVA						IAML		14 46 39.7	
	comp=N,198nm,0.8s								
AKGG	**Akutan Green G**	**2.12**	**357**				**Pn**	**14 45 59.8**	**+1.9**
SSLS	**Shishaldin Sou**	**2.84**	**22**				**Pn**	**14 46 10.6**	**+2.7**
SSLS							**Pb**	**14 46 10.9**	**-2.3**
SSLS							**Sb**	**14 46 46.6**	**-1.6**
DT1	**Dutton Round H**	**3.69**	**33**				**Pn**	**14 46 21.5**	**+2.1**
DT1							Pb	14 46 22.3	-5.1
DT1							**Sn**	**14 47 04.9**	**+1.9**
SDPT	**Sand Point**	**4.55**	**42**	Pn			**Pn**	**14 46 34.7**	**+3.5**
SDPT				IAML				14 47 29.1	
	comp=E,31nm,1.1s								
CNBA	**Chernabura Isl**	**4.62**	**51**	Pn			**Pn**	**14 46 34.8**	**+2.6**
KOFP	**Korovin Flat P**	**5.11**	**275**				**Pn**	**14 46 37.9**	**-1.0**
ATKA	**Atka Island**	**5.17**	**275**	Pn			**Pn**	**14 46 37.9**	**-1.8**
ADK	**Adak**	**6.72**	**273**	Pn			**Pn**	**14 46 59.4**	**-1.8**
KIWB	**Kanaga Island**	**7.01**	**273**	Pn			**Pn**	**14 47 03.6**	**-1.6**
OHAK	**Old Harbor**	**8.89**	**50**	Pn			**Pn**	**14 47 33.6**	**+2.9**
KDAK	**Kodiak Island**	**9.50**	**48**	Pn			**Pn**	**14 47 41.1**	**+1.9**
	comp=E,0.2nm,0.3s,baz=275,slow=5.5,SNR=5.2								
KDAK				Sn			**Sn**	**14 49 21.4**	**-4.8**
	comp=E,0.1nm,0.3s,baz=359,slow=14,SNR=1.2								
	comp=E,2.0nm,0.8s								
KDAK	**Kodiak Island**	**9.50**	**48**	Pn			**Pn**	**14 47 41.7**	**+2.5**
KDAK							**Sn**	**14 49 21.4**	**-4.8**
CNPM	**China Poot**	**11.06**	**42**	Pn			**Pn**	**14 48 03.1**	**+2.6**
HIN	**Hinchinbrook I**	**13.54**	**45**	Pn			**Pn**	**14 48 36.3**	**+2.0**
ILAR	**Eielson Array**	**16.02**	**30**	Pn			**Pn**	**14 49 03.4**	**-4.2**
	comp=E,0.1nm,0.3s,baz=223,slow=13,SNR=2.2								
	comp=E,0.1nm,0.5s								
PETK	**Petropavlovsk-**	**22.05**	**287**	P			**P**	**14 50 19.2**	**+2.2**
	comp=E,1.4nm,0.8s,baz=84,slow=12,SNR=6.9								
	comp=E,1.4nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**38.68**	**224**	T			T	15 36 06.1	
	baz=24								
H11N3	**WAKE ISLAND Hy**	**38.69**	**224**	T			T	15 35 58.4	
	baz=24								
H11N1	**WAKE ISLAND Hy**	**38.70**	**224**	T			T	15 36 07.1	
	baz=24								
H11S1	**WAKE ISLAND Hy**	**39.85**	**223**	T			T	15 37 25.3	
	baz=23								
H11S2	**WAKE ISLAND Hy**	**39.87**	**223**	T			T	15 37 42.3	
	baz=23								
H11S3	**WAKE ISLAND Hy**	**39.87**	**223**	T			T	15 37 34.6	
	baz=23								
TXAR	**Lajitas Array**	**50.55**	**92**	P			**P**	**14 54 22.9**	**+1.6**
	comp=E,0.8nm,0.5s,baz=301,slow=5.9,SNR=16								
	comp=E,0.8nm,0.5s								
MKAR	**Makanchi Array**	**65.57**	**316**	P			**P**	**14 56 05.6**	**-0.6**
	comp=E,0.2nm,0.5s,baz=46,slow=8.3,SNR=2.6								
	comp=E,0.2nm,0.5s								
HFS	**Hagfors**	**68.13**	**0**	P			**P**	**14 56 23.3**	**+1.1**
	comp=E,7.4nm,1.1s,baz=354,slow=4.3,SNR=4.3								
	comp=E,7.4nm,1.1s								

*JMA **06** 15:16:45.7±0.2,30°.N±2°.×14°.1E±°.,h160km,MV3.5/26, NEAR TORISHIMA IS*

*NEIC **06** 15:16:46.5±1.4,30°.45N±0°.07×140°.4E±0°.1,h119km±6km, mb4.3/24,Error ellipse: s-maj=18.0km s-min=9.6km az=78.0*

*IDC **06** 15:16:46.0±0.9,30°.42N×140°.14E,h118km±8km,mb3.6/17, mbtmp4.0/20,Error ellipse: s-maj=19.1km s-min=7.4km az=73.0*

ISC 06 15:16:44.2±0.5,30°.41N±0°.04×140°.13E±0°.09,h100km,n71, σ1s89/83,mb4.2/28,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.71**	**354**			Pn	**Pn**	**15 17 29.2**	**+3.1**
JHJ	**Hachijo jima 2**	**2.72**	**354**			P	**Pn**	**15 17 28.9**	**+2.7**
	64nm,0.5s,baz=74,slow=22,SNR=6.9								
JHJ				S			**Sn**	**15 18 01.2**	**+2.7**
	99nm,0.5s,baz=67,slow=22,SNR=6.6								
CBIJ	**Chichi jima**	**3.76**	**151**	P			**Pn**	**15 17 42.9**	**+2.7**
CBIJ				S			**Sn**	**15 18 25.7**	**+2.2**

SKT					IAmb	IAmb	15 26 12.5		
	comp=Z,3.0nm,1.1s								
AS31	**Alice Springs**	**54.09**	**187**		P	**P**	**15 25 59.4**	**+0.7**	
AS31					IAmb	IAmb	15 26 01.2		
	comp=Z,1.4nm,0.5s								
ASAR	**Alice Springs**	**54.09**	**187**		P	**P**	**15 25 59.1**	**+0.4**	
	comp=Z,1.1nm,0.5s,baz=358,slow=5.3,SNR=59								
ASAR					ScP	**ScP**	**15 30 47.9**	**-3.3**	
	comp=Z,0.3nm,0.8s,baz=6.9,slow=4.7,SNR=4.4								
	comp=Z,1.1nm,0.5s								
BVAR	**Borovoye Array**	**54.40**	**316**		P	**P**	**15 26 00.3**	**-0.4**	
	comp=Z,1.0nm,0.5s,baz=93,slow=7.1,SNR=7.1								
	comp=Z,1.0nm,0.5s								
BORK	**Borovoye**	**54.44**	**316**		P	**P**	**15 26 01.1**	**+0.1**	
ILAR	**Eielson Array**	**55.71**	**30**		P	**P**	**15 26 09.6**	**-0.4**	
	comp=Z,0.5nm,0.7s,baz=266,slow=5.3,SNR=6.1								
	comp=Z,0.5nm,0.7s								
KKAR	**Karatay Array**	**55.72**	**304**		P	**P**	**15 26 10.6**	**+0.3**	
SCRK	**Sand Creek**	**56.98**	**31**		P	**P**	**15 26 19.2**	**+0.1**	
SCRK					IAmb	IAmb	15 26 19.7		
	comp=Z,3.3nm,1.3s								
GLB	**Gilahina Butte**	**57.21**	**34**		P	**P**	**15 26 20.5**	**-0.1**	
GLB					IAmb	IAmb	15 26 22.8		
	comp=Z,4.1nm,0.5s								
I28M	**Miner Creek**	**58.63**	**29**		P	**P**	**15 26 30.8**	**+0.2**	
G31M	**Satah River**	**60.73**	**27**		P	**P**	**15 26 45.2**	**+0.5**	
G31M					IAmb	IAmb	15 27 26.5		
	comp=Z,4.8nm,1.4s								
AB31	**Akbulak array**	**61.51**	**313**		P	**P**	**15 26 49.8**	**-0.5**	
AB31					IAmb	IAmb	15 26 50.8		
	comp=Z,1.2nm,0.5s								
ABKAR	**Akbulak array**	**61.51**	**313**		P	**P**	**15 26 49.8**	**-0.6**	
ARCES	**ARCESS Array B**	**69.83**	**340**		P	**P**	**15 27 43.4**	**0.0**	
	comp=Z,4.8nm,1.0s,baz=60,slow=7.2,SNR=3.6								
	comp=Z,4.8nm,1.0s								
FIA1	**FINESS Array S**	**74.19**	**333**		P	**P**	**15 28 09.5**	**-0.1**	
FINES	**FINESS Array B**	**74.19**	**333**		P	**P**	**15 28 09.3**	**-0.3**	
	comp=Z,2.2nm,0.4s,baz=64,slow=4.7,SNR=29								
	comp=Z,2.2nm,0.4s								
O02D	**Mt. Diablo Mer**	**76.00**	**52**		P	**P**	**15 28 19.5**	**-1.0**	
O02D					IAmb	IAmb	15 28 23.2		
	comp=Z,11nm,1.4s								
AKASG	**Malin Array Be**	**78.89**	**323**		P	**P**	**15 28 35.9**	**-0.4**	
	comp=Z,2.6nm,0.4s,baz=53,slow=5.6,SNR=16								
	comp=Z,2.6nm,0.4s								
AKASG	**Malin Array Be**	**78.89**	**323**		P	**P**	**15 28 35.9**	**-0.4**	
AKASG					IAmb	IAmb	15 28 36.7		
	comp=Z,4.5nm,1.4s								
AKBB	**Malin Array Si**	**78.89**	**323**		P	**P**	**15 28 36.2**	**-0.2**	
AKBB					IAmb	IAmb	15 28 36.7		
	comp=Z,5.5nm,0.6s								
NC405	**NORSAR Array S**	**79.65**	**337**		P	**P**	**15 28 40.4**	**0.0**	
HFS	**Hagfors**	**79.68**	**336**		P	**P**	**15 28 39.8**	**-0.7**	
	comp=Z,1.2nm,0.5s,baz=37,slow=3.7,SNR=7.0								
	comp=Z,1.2nm,0.5s								
NOA	**NORSAR Array B**	**79.87**	**337**		P	**P**	**15 28 41.1**	**-0.4**	
	comp=Z,0.6nm,0.5s,baz=44,slow=5.5,SNR=3.5								
	comp=Z,0.6nm,0.5s								
NVAR	**Mina Array Bea**	**79.89**	**51**		P	**P**	**15 28 43.0**	**+0.8**	
	comp=Z,0.9nm,0.7s,baz=281,slow=6.4,SNR=6.2								
	comp=Z,0.9nm,0.7s								
BRTR	**Keskin Array B**	**82.44**	**312**		P	**P**	**15 28 56.0**	**+0.3**	
	comp=Z,0.7nm,0.6s,baz=66,slow=3.0,SNR=4.0								
	comp=Z,0.7nm,0.6s								
BRTR	**Keskin Array B**	**82.44**	**312**		P	**P**	**15 28 55.6**	**-0.1**	
BURAR	**Bucovina Array**	**82.84**	**322**		P	**P**	**15 28 57.5**	**-0.1**	
PDAR	**Pinedale Array**	**83.12**	**44**		P	**P**	**15 28 58.7**	**-0.6**	
	comp=Z,0.2nm,0.3s,baz=305,slow=4.6,SNR=1.6								
	comp=Z,0.2nm,0.3s								
PDAR	**Pinedale Array**	**83.12**	**44**		P	**P**	**15 28 58.2**	**-1.0**	
CLL	**Collm**	**86.29**	**330**	*i*	P	**P**	**15 29 15.3**	**+0.6**	
TXAR	**Lajitas Array**	**95.03**	**52**		P	**P**	**15 29 57.2**	**+1.0**	
	comp=Z,0.4nm,0.9s,baz=316,slow=5.2,SNR=3.6								
	comp=Z,0.4nm,0.9s								

*IDC **06** 15:27:23.9±5.2,36˚.39N×71˚.31E,h186km±38km, mb3.5/7, mbtmp3.9/13,MS3.3/1, Error ellipse: s-maj=47.5km s-min=28.7km az=160.0*

*NEIC **06** 15:27:29.2±0.9,36˚.74N±0˚.07×71˚.3E±0˚.1,h220km±6km, mb4.4/10, Error ellipse: s-maj=12.4km s-min=9.5km az=81.0*

ISC 06 15:27:27.2±0.6,36˚.69N±0˚.06×71˚.26E±0˚.07,h200km,n59, σ1s77/64,mb4.0/11,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MANEM	**Manem**	**0.92**	**21**			**Pn**	**15 28 01.4**	**+4.7**
MANEM					Sn	**Sn**	**15 28 24.6**	**+4.8**
GAR	**Garm**	**2.43**	**342**			**Pn**	**15 28 13.4**	**+3.0**
CHGR	**Chuyangaron**	**2.58**	**320**			**Pn**	**15 28 14.8**	**+2.7**
SHAA	**Shahritus**	**2.66**	**290**			**Pn**	**15 28 15.6**	**+2.7**
KBL	**Kabul**	**2.80**	**221**			**Pn**	**15 28 18.0**	**+3.2**
BTK	**Batken**	**3.38**	**354**			**Pn**	**15 28 24.3**	**+2.9**
NIL	**Nilore**	**3.44**	**151**			**Pn**	**15 28 26.0**	**+3.8**
ARSB	**Arslanbob**	**4.82**	**16**			**Pn**	**15 28 40.8**	**+1.4**
TSSA	**Tissa**	**5.56**	**132**	*eP*		**Pn**	**15 28 51.5**	**+2.5**
TSSA				*eS*		**Sn**	**15 29 53.1**	**-0.5**
THN	**Thein Dam**	**5.63**	**138**	*eS*		**Sn**	**15 29 56.0**	**+1.1**
THN					IAML		15 29 56.9	
	comp=E,71nm,0.8s							
THN					IAML		15 29 57.6	
	comp=N,76nm,0.6s							
NRN	**Naryn**	**6.00**	**36**			**Pn**	**15 28 55.0**	**+0.3**
DHRM	**DHARAMSHALA**	**6.07**	**135**	*eP*		**Pn**	**15 28 59.1**	**+3.4**
DHRM				*eS*		**Sn**	**15 30 05.4**	**-0.2**
UCH	**Uchtor**	**6.08**	**23**	P		**Pn**	**15 28 57.8**	**+2.0**
	SNR=41							
EKS2	**Erkin-Say**	**6.27**	**17**	P		**Pn**	**15 28 59.9**	**+1.9**
	SNR=8.8							
KK31	**Karatay Array**	**6.43**	**355**			**Pn**	**15 29 00.9**	**+0.9**
KK31	**Karatay Array**	**6.43**	**355**	⇓Pn		**Pn**	**15 29 01.0**	**+1.0**
	comp=N,0.8nm,0.3s,baz=175,slow=13,SNR=24							
KK31				⇑Sn		**Sn**	**15 30 09.7**	**-3.9**
	comp=N,13nm,0.5s,baz=27,slow=85,SNR=4.1							
KKAR	**Karatay Array**	**6.43**	**355**			**Pn**	**15 29 01.1**	**+1.1**
AAK	**Ala-Archa**	**6.44**	**22**	P		**Pn**	**15 29 01.9**	**+1.7**
	comp=N,6.1nm,0.3s,baz=202,slow=6.2,SNR=11							
AAK				S		**Sn**	**15 30 14.4**	**+0.4**
	comp=N,8.0nm,0.5s,baz=140,slow=22,SNR=17							
AAK	**Ala-Archa**	**6.44**	**22**	P		**Pn**	**15 29 02.4**	**+2.1**
	SNR=7.6							
AAK	**Ala-Archa**	**6.44**	**22**			**Pn**	**15 29 01.6**	**+1.3**
AAK	**Ala-Archa**	**6.44**	**22**	⇑Pn		**Pn**	**15 29 01.3**	**+1.0**
	comp=N,0.6nm,0.3s							
AAK				⇑Sn		**Sn**	**15 30 14.2**	**+0.2**
	comp=N,7.6nm,0.7s							
KBK	**Karagaybulak**	**6.60**	**24**	P		**Pn**	**15 29 04.8**	**+2.5**
	SNR=8.7							
BOOM	**Boomskoye usch**	**6.83**	**30**			**Pn**	**15 29 06.5**	**+1.2**
CHMS	**Chumysh**	**6.85**	**22**	P		**Pn**	**15 29 07.6**	**+2.1**
	SNR=6.3							
TKM2	**Tokmak 2**	**7.06**	**27**	P		**Pn**	**15 29 10.2**	**+1.9**
	SNR=34							
KDJ	**Kajisay**	**7.11**	**38**	Pn		**Pn**	**15 29 10.3**	**+1.4**
TARG	**Taragay, Kyrgy**	**7.15**	**43**	Pn		**Pn**	**15 29 11.0**	**+1.3**
WUS	**Wushi**	**7.66**	**52**	Pn		**Pn**	**15 29 17.2**	**+1.1**
KLP	**Kalpa**	**7.74**	**130**	*eS*		**Sn**	**15 30 43.8**	**-1.3**
KLP					IAML		15 30 45.5	
	comp=N,35nm,0.4s							
KLP					IAML		15 30 45.9	
	comp=E,52nm,0.1s							
PDGK	**Podgornoye**	**9.15**	**41**			**Pn**	**15 29 35.5**	**0.0**
MAKZ	**Makanchi**	**12.88**	**35**			**Pn**	**15 30 23.1**	**0.0**
MKAR	**Makanchi Array**	**13.01**	**36**	P		**Pn**	**15 30 25.5**	**+0.7**
	comp=E,0.8nm,0.6s,baz=218,slow=15,SNR=10							
MKAR	**Makanchi Array**	**13.01**	**36**			**Pn**	**15 30 25.1**	**+0.4**
KURBB	**Kurchatov Arra**	**14.88**	**18**	P		**Pn**	**15 30 47.3**	**-0.4**
	comp=E,0.4nm,0.5s,baz=206,slow=10,SNR=1.6							
AB31	**Akbulak array**	**15.02**	**330**			**Pn**	**15 30 49.2**	**-0.3**
ABKAR	**Akbulak array**	**15.02**	**330**			**Pn**	**15 30 49.2**	**-0.3**
EVN	**Everest**	**15.75**	**119**	P		**P**	**15 30 58.5**	**-0.6**
BVAR	**Borovoye Array**	**16.35**	**358**	P		**Pn**	**15 31 06.2**	**+0.7**
	comp=E,0.9nm,0.5s,baz=178,slow=12,SNR=5.3							
AKTO	**Aktyubinsk**	**16.73**	**329**	P		**P**	**15 31 09.6**	**+0.7**
	comp=E,1.9nm,0.3s,baz=128,slow=8.0,SNR=8.6							
ZALV	**Zalesovo Beam**	**19.66**	**24**	P		**P**	**15 31 40.9**	**+0.3**
	comp=E,0.7nm,0.3s,baz=224,slow=9.8,SNR=5.8							
ZALV	**Zalesovo Beam**	**19.66**	**24**	P		**P**	**15 31 40.6**	**-0.1**
OBN	**Obninsk**	**29.93**	**319**	LR		LR	15 49 07.3	
	comp=E,60nm,19.5s,baz=180,slow=43							
AKASG	**Malin Array Be**	**32.99**	**309**	P		**P**	**15 33 43.2**	**+0.1**
	comp=E,0.5nm,0.4s,baz=83,slow=7.3,SNR=5.2							
	comp=E,0.5nm,0.4s							

FINES	**FINESS Array B**	**37.45**	**326**		P	**P**	**15 34 20.9**	**0.0**	
	comp=E,2.1nm,0.8s,baz=106,slow=8.4,SNR=6.7								
	comp=E,2.1nm,0.8s								
ARCES	**ARCESS Array B**	**41.05**	**337**		P	**P**	**15 34 51.1**	**+0.5**	
	comp=E,0.8nm,0.4s,baz=110,slow=7.5,SNR=11								
	comp=E,0.8nm,0.4s								
HFS	**Hagfors**	**43.05**	**322**		P	**P**	**15 35 06.9**	**0.0**	
	comp=E,2.4nm,0.5s,baz=113,slow=10,SNR=10								
	comp=E,2.4nm,0.5s								
NC303	**NORSAR Array S**	**44.30**	**323**		P	**P**	**15 35 16.9**	**+0.1**	
NC303					IAmb	IAmb	15 35 52.4		
	comp=Z,19nm,1.2s								
NB201	**NORSAR Array S**	**44.32**	**323**		P	**P**	**15 35 17.1**	**0.0**	
NB201					IAmb	IAmb	15 35 47.0		
	comp=Z,27nm,1.2s								
NB2	**NORSAR Subarra**	**44.36**	**323**		P	**P**	**15 35 17.0**	**-0.4**	
	comp=Z,1.6nm,0.6s,baz=96,slow=7.9								
NOA	**NORSAR Array B**	**44.36**	**323**		P	**P**	**15 35 17.2**	**-0.2**	
	comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=4.1								
	comp=Z,0.9nm,0.6s								
BBJI	**Bungbulang**	**55.60**	**135**		P	**P**	**15 36 41.8**	**-0.6**	
TORD	**Torodi Ar. Bea**	**65.93**	**269**		P	**P**	**15 37 49.5**	**-2.6**	
	comp=Z,0.6nm,0.5s,baz=46,slow=6.1,SNR=3.7								
	comp=Z,0.6nm,0.5s								
D19K	**Kuna River**	**68.90**	**17**		P	**P**	**15 38 09.7**	**-0.3**	
D19K					IAmb	IAmb	15 38 09.7		
	comp=Z,8.4nm,1.4s								
LBTB	**Lobatse**	**74.96**	**222**		P	**P**	**15 38 46.3**	**-0.2**	
LBTB					IAmb	IAmb	15 39 15.0		
	comp=Z,11nm,1.4s								
M30M	**Minto, Yukon**	**78.53**	**13**		P	**P**	**15 39 06.0**	**+0.1**	
BLKN	**Baker Lake**	**78.83**	**354**		P	**P**	**15 39 07.2**	**-0.2**	
YKAW3	**Yellowknife Wh**	**80.98**	**3**		P	**P**	**15 39 18.9**	**-0.1**	
YKAW3					IAmb	IAmb	15 40 00.3		
	comp=Z,7.9nm,1.1s								
YKA	**Yellowknife Ar**	**81.05**	**3**		P	**P**	**15 39 19.2**	**-0.2**	
	comp=Z,1.0nm,0.5s,baz=353,slow=5.5,SNR=6.9								
	comp=Z,1.0nm,0.5s								
BBB	**Bella Bella**	**89.89**	**12**		P	**P**	**15 40 02.5**	**-0.7**	

*IDC **06** 15:30:26.8±0.5,11˚.04N×138˚.69E,h0km,mb4.5/28, mbtmp4.5/30,ML4.2/2,MS4.0/57, Error ellipse: s-maj=18.5km s-min=12.9km az=89.0*

*BJI **06** 15:30:27.3,11˚.07N×138˚.89E,h13km,mB5.1/26,mb4.8/61, Ms4.5/51,Ms7 4.3/52*

*MOS **06** 15:30:27.6±0.9,11˚.08N×138˚.76E,h15km,mb5.0/48, MS4.2/8, Error ellipse: s-maj=9.1km s-min=5.1km az=115.4*

*GFZ **06** 15:30:28.9±0.2,11˚N±3˚×13˚9E±˚,h10km,M5.0/39, mb5.0/39, Error ellipse: s-maj=8.0km s-min=6.9km az=112.9,confirmed*

*NEIC **06** 15:30:29.8±1.9,11˚.07N±0˚.08×138˚.61E±0˚.09,h10km±1km, mb5.0/164, Error ellipse: s-maj=15.5km s-min=13.1km az=126.0*

*GCMT **06** 15:30:31.8±0.2,11˚.04N±0˚.02×138˚.61E±0˚.02,h21km±1km, MW5.0/104, Moment Tensor Solution. s30,c38; s104,c158; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.37±.18; Mθθ0.00±.10; Mϕϕ-2.37±.12; Mrθ-0.30±.19; Mθϕ-1.79±.07; Mϕr2.17±.19; Best double couple: Mo3.67600×10¹⁶ NP1:ϕs235.00000°,δ35.00000°, λ135.00000°. NP2:ϕs4.00000°,δ66.00000°,λ64.00000°. Principal axes: T 3.4900, Plg60.0000°, Azm235.0000°; N 0.3760, Plg24.0000°, Azm16.0000°; P -3.8630, Plg17.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **06** 15:30:33.9±0.9,11˚N±4˚×13˚8E±˚,h34km±8km, M4.8/48, mB5.4/27, mb5.0/48, MLv5.0/1, Mw(mB)4.8/27*

ISC 06 15:30:29.9±0.5,10˚.98N±0˚.04×138˚.76E±0˚.04,h18km±1km, h17km:pP-P,n612,σ1s47/540,mb4.9/182,MS4.1/78, 11C-3D,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.51**	**66**	Pn		**Pn**	**15 32 06.0**	**+1.2**
	24nm,0.3s,baz=292,slow=1.4,SNR=17							
GUMO				Sn		**Sn**	**15 33 15.0**	**-3.6**
	28nm,0.3s,baz=180,slow=21,SNR=4.8							
GUMO				LR		LR	15 34 25.9	
	comp=Z,3µm,18.5s,baz=256,slow=36							
	84nm,0.4s							
GUMO	**Guam**	**6.51**	**66**			**Pn**	**15 32 06.3**	**+1.5**
GUMO	**Guam**	**6.51**	**66**	P		**Pn**	**15 32 06.3**	**+1.5**
GUMO							15 33 15.0	
GUMO	**Guam**	**6.51**	**66**	P		**Pn**	**15 32 05.7**	**+0.9**
DPSS	**Saipan**	**8.05**	**57**	Pn		**Pn**	**15 32 28.6**	**+2.7**
SRPI	**Serui, Papua**	**13.01**	**191**	P		**Pn**	**15 33 37.3**	**+3.4**
	73nm,0.9s							
JAY	**Jayapura**	**13.54**	**172**	Pn		**Pn**	**15 33 43.7**	**+2.4**
	4.3nm,0.3s,baz=162,slow=23,SNR=22							
JAY				Sn		**Sn**	**15 36 08.6**	**-2.8**
	3.2nm,0.3s,baz=92,slow=20,SNR=10							
JAY				LR		LR	15 37 39.6	
	comp=Z,512nm,20.1s,baz=357,slow=32							
GENI	**Genyem**	**13.55**	**174**	P		**P**	**15 33 48.0**	**-2.4**
	2µm100nm,0.8s							
DAV	**Davao City (W)**	**13.59**	**255**	LR		LR	15 37 56.7	
	comp=Z,932nm,21.4s,baz=125,slow=33							
DAV	**Davao City (W)**	**13.59**	**255**	P		**Pn**	**15 33 44.5**	**+2.6**
SIJI	**Sorong**	**13.93**	**213**	Pn		**Pn**	**15 33 47.5**	**+0.9**
	0.3nm,0.3s,baz=23,slow=13,SNR=1.5							
SIJI				LR		LR	15 38 06.8	
	comp=Z,2µm,18.8s,baz=52,slow=33							
	2.2nm,0.5s							
SIJI	**Sorong**	**13.93**	**213**	P		**P**	**15 33 59.2**	**+4.6**
TNTI	**Ternate**	**15.20**	**229**	P		**P**	**15 34 09.7**	**+1.1**
TNTI	**Ternate**	**15.20**	**229**	P		**Pn**	**15 34 03.9**	**+0.1**
FAKI	**Fak Fak**	**15.25**	**206**			**P**	**15 34 10.1**	**+0.8**
FAKI					IAmb	IAmb	15 34 11.8	
	comp=Z,71nm,1.0s							
FAKI	**Fak Fak**	**15.25**	**206**	P		**P**	**15 34 10.8**	**+1.5**
	comp=Z,1µmcomp=Z,159nm,0.9s							
JCJ	**Chichijima**	**16.36**	**11**	LR		LR	15 39 04.2	
	comp=Z,409nm,21.2s,baz=181,slow=32							
TGY	**Tagaytay City**	**17.67**	**282**	LR		LR	15 40 32.9	
	comp=Z,946nm,19.1s,baz=90,slow=34							
SANI	**Sanana**	**18.14**	**225**	P		**P**	**15 34 41.5**	**+0.3**
	comp=Z,1µmcomp=Z,65nm,1.6s							
SANI	**Sanana**	**18.14**	**225**	P		**P**	**15 34 41.9**	**+0.6**
JOW	**Kunigami**	**18.61**	**329**	LR		LR	15 40 30.1	
	comp=Z,493nm,19.6s,baz=124,slow=33							
SZP	**Santa**	**18.90**	**292**	P		**Pn**	**15 34 51.3**	**+1.0**
PATS	**Pohnpei**	**19.75**	**100**	P		**Pn**	**15 35 00.6**	**+0.2**
LUWI	**Luwuk**	**19.89**	**234**	P		**P**	**15 34 59.6**	**-0.9**
LUWI	**Luwuk**	**19.89**	**234**	P		**P**	**15 35 00.7**	**+0.3**
	comp=Z,2µmcomp=Z,148nm,0.8s							
LUWI	**Luwuk**	**19.89**	**234**	P		**P**	**15 35 01.3**	**+0.8**
KRVT	**Keravat (AS076**	**20.12**	**138**	LR		LR	15 41 28.2	
	comp=Z,82nm,20.6s,baz=252,slow=33							
RABL	**Rabaul**	**20.12**	**138**	P		Pn	15 35 04.5	-0.4
TOLI2	**Tolitoli**	**20.37**	**242**			**P**	**15 35 05.1**	**-0.6**
TOLI2					IAmb	IAmb	15 35 09.9	
	comp=Z,90nm,1.1s							
TOLI2	**Tolitoli**	**20.37**	**242**	P		Pn	15 35 07.8	0.0
APSI	**Ampana**	**20.71**	**236**	P		Pn	15 35 11.6	-0.2
	comp=Z,2µmcomp=Z,168nm,1.2s							
YULB	**Yu-li**	**20.73**	**309**	P		Pn	15 35 11.7	-0.2
TPUB	**Ta-pu**	**21.19**	**308**	P		**P**	**15 35 13.6**	**-1.0**
TPUB					IAmb	IAmb	15 35 23.2	
	comp=Z,102nm,1.1s							
KDI	**Kendari**	**21.87**	**228**	P		**P**	**15 35 26.0**	**+4.1**
	comp=Z,58nm,1.2s							
PMG	**Port Moresby**	**21.91**	**157**	LR		LR	15 43 03.8	
	comp=Z,794nm,18.5s,baz=340,slow=34							
KKM	**Kota Kinabalu**	**22.82**	**259**	P		**P**	**15 35 34.2**	**+2.0**
	comp=Z,822nmcomp=Z,42nm,1.0s							
KKM	**Kota Kinabalu**	**22.82**	**259**	P		**P**	**15 35 32.8**	**+0.6**
JNU	**Nakatsue**	**23.20**	**343**	LR		LR	15 44 14.4	
	comp=Z,220nm,19.6s,baz=82,slow=36							
KAPI	**Kappang**	**24.71**	**231**	LR		LR	15 43 06.6	
	comp=Z,159nm,21.9s,baz=46,slow=31							
KAPI	**Kappang**	**24.71**	**231**	*i* P		**P**	**15 35 52.5**	**+2.3**
KAPI				pmax		pmax		
	comp=Z,22nm,1.0s							
MTN	**Manton Dam**	**24.85**	**198**			**P**	**15 35 51.0**	**-0.4**
MJAR	**Matsushiro Arr**	**25.46**	**359**	P		**P**	**15 35 55.5**	**-1.3**
	comp=Z,2.5nm,0.9s,baz=172,slow=10,SNR=4.5							
MJAR				LR		LR	15 45 44.9	
	comp=Z,319nm,18.7s,baz=156,slow=36							
	comp=Z,2.5nm,0.9s							
MJAR	**Matsushiro Arr**	**25.46**	**359**	P		**P**	**15 35 55.5**	**-1.3**

MAJO	**Matsushiro**	**25.46**	**359**	*i* P		**P**	**15 35 55.7**	**-1.1**	
MAJO				pmax		pmax			
	comp=Z,22nm,1.8s								
BATI	**Baumata**	**25.85**	**216**	LR		LR	15 45 32.0		
	comp=Z,400nm,21.6s,baz=68,slow=35								
BATI	**Baumata**	**25.85**	**216**	P		**P**	**15 35 59.7**	**-0.9**	
NJ2	**Nanjing**	**27.88**	**322**	*eP*		**P**	**15 36 18.1**	**-0.6**	
NJ2				pmax		pmax			
	comp=Z,15nm,0.5s								
H11S3	**WAKE ISLAND Hy**	**27.99**	**71**	T		T	16 06 18.3		
	baz=253,slow=74								
H11S1	**WAKE ISLAND Hy**	**28.01**	**71**	T		T	16 06 19.0		
	baz=253								
H11S2	**WAKE ISLAND Hy**	**28.01**	**71**	T		T	16 06 12.8		
	baz=253,slow=74								
KSRS	**Korea Array**	**28.11**	**341**	P		**P**	**15 36 19.8**	**-0.9**	
	comp=Z,2.2nm,0.7s,baz=167,slow=10,SNR=13								
KSRS				PcP		**PcP**	**15 39 35.7**	**+0.9**	
	comp=Z,1.2nm,0.9s,baz=164,slow=1.5,SNR=4.4								
KSRS				LR		LR	15 47 06.1		
	comp=Z,310nm,19.1s,baz=160,slow=36								
	comp=Z,2.2nm,0.7s								
H11N1	**WAKE ISLAND Hy**	**28.45**	**69**	T		T	16 06 56.5		
	baz=254,slow=75								
H11N2	**WAKE ISLAND Hy**	**28.46**	**69**	T		T	16 06 46.2		
	baz=254,slow=75								
H11N3	**WAKE ISLAND Hy**	**28.46**	**69**	T		T	16 06 59.2		
	baz=254,slow=75								
QIZ	**Qiongzhong**	**29.02**	**289**	P		**P**	**15 36 28.6**	**-0.5**	
QIZ				S		**S**	**15 41 18.1**	**-1.7**	
QIZ				L		L			
	comp=Z,210nm,15.0s								
QIZ				L		L			
	comp=Z,340nm,18.4s								
QIZ				L		L			
	comp=Z,440nm,19.9s								
HNR	**Honiara**	**29.24**	**133**	LR		LR	15 47 38.5		
	comp=Z,18nm,19.3s,baz=26,slow=35								
WHN	**Wuhan**	**29.88**	**314**	P		**P**	**15 36 37.8**	**+1.3**	
WHN				pmax		pmax			
	comp=Z,300nm,2.1s								
WHN				L		L			
	comp=Z,780nm,9.1s								
WHN				L		L			
	comp=Z,660nm,8.3s								
WHN				L		L			
	comp=Z,2µm,19.4s								
WRAB	**Tennant Creek**	**31.02**	**188**	*ce*P		**P**	**15 36 50.1**	**+3.4**	
WRAB				pmax		pmax			
	comp=Z,15nm,1.7s								
WRAB	**Tennant Creek**	**31.02**	**188**	P		**P**	**15 36 46.9**	**+0.2**	
WR8	**Warramunga Arr**	**31.02**	**188**	P		**P**	**15 36 46.6**	**-0.1**	
WRA	**Warramunga Arr**	**31.03**	**188**	P		**P**	**15 36 45.9**	**-0.9**	
	comp=Z,4.3nm,1.0s,baz=2.1,slow=9.4,SNR=18								
WRA				PcP		**PcP**	**15 39 43.2**	**+0.6**	
	comp=Z,1.4nm,0.8s,baz=356,slow=2.7,SNR=4.2								
	comp=Z,4.3nm,1.0s								
WRA	**Warramunga Arr**	**31.03**	**188**			**P**	**15 36 46.3**	**-0.5**	
WRA						**PcP**	**15 39 43.2**	**+0.6**	
WRA	**Warramunga Arr**	**31.03**	**188**	P		**P**	**15 36 46.3**	**-0.5**	
WRA							15 39 43.2		
	comp=Z,1.0nm,1.0s								
WRA				pmax		pmax			
FITZ	**Fitzroy Crossi**	**31.66**	**204**	LR		LR	15 49 59.0		
	comp=Z,266nm,20.6s,baz=3.0,slow=37								
FITZ	**Fitzroy Crossi**	**31.66**	**204**	P		**P**	**15 36 51.2**	**-1.1**	
DL2	**Dalian**	**31.74**	**334**	P		**P**	**15 36 52.8**	**0.0**	
DL2				S		**S**	**15 42 01.6**	**-0.2**	
DL2				pmax		pmax			
	comp=Z,14nm,0.8s								
DL2				pmax		pmax			
	comp=Z,130nm,4.2s								
DL2				L		L			
	comp=Z,290nm,14.2s								
DL2

comp=Z,730nm,19.9s
LEM Lembang 35.69 242 LR LR 15 54 09.5
comp=Z,261nm,18.4s,baz=358,slow=40
BBJI Bungbulang 35.98 241 P **P** **15 37 27.2 -2.9**
BBJI Bungbulang 35.98 241 P **P** **15 37 27.2 -2.2**
BBJI Bungbulang 35.98 241 P **P** **15 37 27.2 -2.9**
BNX BinXian 35.98 346 ⇓P **P** **15 37 30.1 +0.5**
BNX pP **pP** **15 37 33.1 -1.0**
BNX sP **sP** **15 37 34.1 -0.6**
BNX S **S** **15 43 09.9 +2.6**
BNX sS **sS** **15 43 16.9 +2.7**
BNX pmax pmax
comp=Z,14nm,0.9s
BNX pmax pmax
comp=Z,90nm,4.3s
BNX L L
comp=Z,150nm,20.1s
BNX L L
comp=Z,220nm,15.7s
BNX L L
comp=Z,230nm,18.8s
YSS Yuzhno-Sakhali 36.02 5 *e*P **P** **15 37 30.0 +0.1**
YSS *e*S **S** **15 43 10.4 +2.6**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=N,200nm,17.0s
YSS MLR MLR
comp=Z,200nm,17.0s
YSS MLR MLR
comp=E,200nm,16.0s
KMI2 Kunming 36.89 297 ⇑P **P** **15 37 39.1 +1.1**
KMI2 sP pwP 15 37 45.2 -3.1
KMI2 pmax pmax
comp=E,17nm,0.9s
KMI2 pmax pmax
comp=E,200nm,4.3s
KMI2 L L
comp=E,210nm,21.0s
KMI2 L L
comp=E,400nm,18.6s
KMI2 L L
comp=E,540nm,18.2s
CD2 Chengdu 38.00 307 P **P** **15 37 47.9 +0.8**
CD2 S **S** **15 43 39.0 +0.3**
CD2 pmax pmax
comp=E,20nm,0.7s
CD2 pmax pmax
comp=E,460nm,4.1s
CD2 L L
comp=E,370nm,12.7s
CD2 L L
comp=E,320nm,9.5s
CD2 L L
comp=E,300nm,15.2s
KULM Kulim 38.12 265 P **P** **15 37 47.7 -0.6**
KULM Kulim 38.12 265 P **P** **15 37 47.2 -1.0**
PZH PanZhiHua 38.14 299 P **P** **15 37 49.3 +0.9**
PZH pmax pmax
comp=E,10.0nm,1.2s
HHC Hu-ho-hao-te 38.20 326 *e*P **P** **15 37 49.5 +0.8**
HHC PP **PP** **15 39 22.9 +6.7**
HHC S **S** **15 43 46.9 +5.3**
HHC pmax pmax
comp=E,7.0nm,0.6s
HHC pmax pmax
comp=E,73nm,4.2s
HHC L L
comp=E,250nm,15.1s
HHC L L
comp=E,350nm,16.8s
HHC L L
comp=E,320nm,19.4s
XLT XiLinHaoTe 38.22 333 *e*P **P** **15 37 49.2 +0.4**
XLT S **S** **15 43 41.4 -0.3**
XLT SS **SnSn** **15 46 19.4 -6.9**
XLT pmax pmax
comp=E,23nm,0.9s
XLT L L
comp=E,24nm,16.7s
XLT L L
comp=E,190nm,17.5s
XLT L L
comp=E,260nm,19.7s
INKA Innaminka 38.54 177 P **P** **15 37 52.3 +0.9**
KLR Kul'dur 38.58 353 LR LR 15 51 11.6
comp=E,156nm,21.1s,baz=170,slow=32
KLR Kul'dur 38.58 353 *ce*P **P** **15 37 52.0 +0.4**
KLR pmax pmax
comp=Z,4.0nm,1.0s
BTO2 Baotou 39.08 324 *e*P **P** **15 37 56.6 +0.5**
BTO2 sP **pwP** **15 38 03.8 -2.2**
BTO2 S **S** **15 43 56.8 +1.9**
BTO2 SS **SnSn** **15 46 38.3 -9.0**
BTO2 pmax pmax
comp=Z,22nm,0.6s
BTO2 pmax pmax
comp=Z,280nm,3.8s
BTO2 L L
comp=Z,330nm,8.9s
BTO2 L L
comp=Z,410nm,11.0s
BTO2 L L
comp=Z,560nm,15.7s
CM31 Chiang Mai Arr 39.16 286 P **P** **15 37 57.9 +0.9**
CM31 IAmb IAmb 15 37 59.2
comp=Z,32nm,0.8s
CMAR Chiang Mai Arr 39.16 286 P **P** **15 37 57.5 +0.5**
comp=Z,21nm,0.8s,baz=93,slow=6.7,SNR=147
CMAR PcP **PcP** **15 40 06.7 +0.3**
comp=Z,2.3nm,1.0s,baz=99,slow=1.9,SNR=4.1
CMAR LR LR 15 52 38.4
comp=Z,198nm,21.2s,baz=95,slow=34
comp=Z,21nm,0.8s
CHTO Chiang Mai 39.19 286 **P** **P** **15 37 57.3 +0.1**
CHTO Chiang Mai 39.19 286 P **P** **15 37 57.3 +0.1**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 39.19 286 P **P** **15 37 58.0 +0.8**
comp=Z,296nmcomp=Z,12nm,1.1s
CHTO Chiang Mai 39.19 286 P **P** **15 37 57.6 +0.4**
GRNR Gornyy 39.72 358 *e*P **P** **15 38 02.1 +0.9**
GRNR MLR MLR
comp=E,90nm,10.0s
GRNR MLR MLR
comp=N,120nm,15.0s
GRNR MLR MLR
comp=Z,180nm,14.0s
TYV Tymovskoe 39.90 4 *e*P P 15 38 11.2 +8.6
TYV pmax pmax
comp=Z,200nm,5.4s
TYV pmax pmax
comp=Z,7.0nm,0.9s
LZH Lanzhou 40.26 314 *e*P **P** **15 38 08.4 +2.3**
LZH sP pwP 15 38 15.4 -0.7
LZH S **S** **15 44 14.6 +1.8**
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,170nm,4.1s
LZH L L
comp=Z,330nm,14.1s
LZH L L
comp=Z,360nm,15.1s
LZH L L
comp=Z,590nm,14.4s
HEH HeiHe 40.26 349 *e*P **P** **15 38 05.5 -0.1**
HEH pP **sP** **15 38 10.9 +0.1**
HEH sP **pwP** **15 38 13.8 -1.1**
HEH PcP **PcP** **15 40 08.8 -0.4**
HEH S **S** **15 44 15.3 +3.2**
HEH pmax pmax
comp=Z,23nm,0.7s
HEH pmax pmax
comp=Z,97nm,5.5s
HEH L L
comp=Z,190nm,16.3s
HEH L L
comp=Z,160nm,16.4s
HEH L L
comp=Z,350nm,19.3s
PSI Prapat 40.33 261 P **P** **15 38 06.5 -0.4**
PSI pmax pmax
comp=Z,27nm,0.8s
PSI Prapat 40.33 261 P **P** **15 38 05.7 -1.2**
comp=Z,631nmcomp=Z,39nm,0.9s

RPSI Rantau Prapat 40.36 261 P **P** **15 38 06.5 -0.5**
RPSI IAmb IAmb 15 38 06.8
comp=Z,26nm,0.8s
TNCH TengChong 40.57 296 ⇑P **P** **15 38 09.0 +0.2**
TNCH pP pP 15 38 11.8 -1.4
TNCH sP sP 15 38 14.2 -0.2
TNCH pmax pmax
comp=Z,37nm,0.8s
TNCH pmax pmax
comp=Z,170nm,2.4s
KCSI Kotacane, Aceh 41.29 263 P **P** **15 38 12.7 -2.0**
HILR Hailar Array B 41.57 341 P **P** **15 38 15.3 -1.2**
comp=Z,3.9nm,0.7s,baz=148,slow=8.6,SNR=4.7
comp=Z,3.9nm,0.7s
GSI Gunungsitoli 42.01 260 P **P** **15 38 18.2 -2.3**
GSI IAmb IAmb 15 38 19.3
comp=Z,29nm,1.0s
GSI Gunungsitoli 42.01 260 P **P** **15 38 17.7 -2.8**
STKA Stephens Creek 42.70 176 P **P** **15 38 25.7 -0.1**
comp=Z,5.0nm,1.1s,baz=359,slow=9.7,SNR=5.0
STKA LR LR 15 55 43.6
comp=Z,206nm,21.6s,baz=10,slow=36
comp=Z,5.0nm,1.1s
STKA Stephens Creek 42.70 176 P **P** **15 38 26.5 +0.7**
FORT Forrest 42.77 194 **P** **P** **15 38 26.6 +0.2**
CMSA Cobar Meteorol 42.79 171 P **P** **15 38 25.0 -1.6**
BBOO Buckleboo 43.62 183 P **P** **15 38 34.1 +0.8**
BBOO IAmb IAmb 15 38 34.9
comp=Z,21nm,1.1s
ZEA Zeya 43.63 350 *e*P **P** **15 38 33.1 0.0**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=N,100nm,21.0s
ZEA MLR MLR
comp=Z,100nm,21.0s
MORE Moreh 44.19 293 IAmb IAmb 15 38 39.8
comp=Z,10nm,0.9s
KOHI KOHIMA 44.62 296 *e*P **P** **15 38 41.2 -0.5**
KOHI IAmb IAmb 15 38 50.9
comp=Z,28nm,1.4s
PETK Petropavlovsk- 44.69 16 P **P** **15 38 40.1 -1.5**
comp=Z,1.3nm,0.7s,baz=205,slow=5.3,SNR=4.7
PETK LR LR 15 57 37.0
comp=Z,130nm,19.2s,baz=198,slow=36
comp=Z,1.3nm,0.7s
GTA2 Gaotai 44.74 316 P **P** **15 38 42.5 +0.1**
GTA2 pP sP 15 38 48.5 +0.6
GTA2 PcP **PcP** **15 40 25.5 +0.9**
GTA2 S **S** **15 45 22.9 +4.3**
GTA2 pmax pmax
comp=Z,19nm,0.9s
GTA2 L L
comp=Z,160nm,16.5s
GTA2 L L
comp=Z,240nm,19.2s
GTA2 L L
comp=Z,330nm,19.6s
PET Petropavlovsk 44.88 17 *e*P P 15 38 48.9 +5.8
PET *e*S **S** **15 45 25.9 +5.9**
PET *e* 15 48 42.3
PET pmax pmax
comp=Z,22nm,1.1s
PET pmax pmax
comp=Z,200nm,7.6s
PET MLR MLR
comp=Z,100nm,14.0s
PET MLR MLR
comp=Z,200nm,13.0s
PET Petropavlovsk 44.88 17 P **P** **15 38 43.2 +0.1**
comp=Z,23nm,1.4s
ZIRO ZIRO 45.21 298 IAmb IAmb 15 38 51.9
comp=Z,17nm,0.9s
ULN Ulaanbaatar 45.38 330 *ce*P **P** **15 38 48.1 +0.6**
ULN pmax pmax
comp=Z,17nm,1.7s
ULN Ulaanbaatar 45.38 330 P **P** **15 38 47.9 +0.5**
comp=Z,52nm,1.1s
ULN Ulaanbaatar 45.38 330 P **P** **15 38 48.1 +0.6**
SONM Songino Array 45.69 330 P **P** **15 38 49.2 -0.6**
comp=Z,4.2nm,0.8s,baz=137,slow=8.4,SNR=22
SONM PcP **PcP** **15 40 27.5 -0.2**
comp=Z,1.2nm,0.7s,baz=148,slow=3.2,SNR=2.5
SONM LR LR 15 58 47.1
comp=Z,183nm,19.5s,baz=128,slow=37
comp=Z,4.2nm,0.8s
SONM Songino Array 45.69 330 P **P** **15 38 49.6 -0.2**
SONM **PcP** **15 40 27.5 -0.2**
TEZP TEZPUR 45.94 296 *e*P **P** **15 38 50.5 -1.5**
TEZP IAmb IAmb 15 38 53.7
comp=Z,22nm,0.9s
BRDH Bariadhala 46.40 291 LR LR 15 57 49.4
comp=Z,272nm,20.4s,baz=111,slow=36
SHL Shillong 46.57 295 IAmb IAmb 15 38 58.5
comp=Z,15nm,0.8s
GOMU GeErMu 46.91 310 P **P** **15 38 58.4 -1.6**
GOMU pmax pmax
comp=Z,3.0nm,0.3s
LSA Lhasa 47.99 300 P **P** **15 39 10.5 +1.9**
MSVF Nonsavu 48.16 126 LR LR 15 56 29.2
comp=Z,627nm,21.6s,baz=310,slow=32
MSVF Nonsavu 48.16 126 P **P** **15 39 11.1 +1.6**
MSVF Nonsavu 48.16 126 *i* P **P** **15 39 09.8 +0.3**
MSVF pmax pmax
comp=Z,13nm,0.7s
NWAO Narrogin (SRO) 48.25 204 LR LR 16 00 38.1
comp=Z,136nm,20.2s,baz=60,slow=38
MA2 Magadan 49.33 8 LR LR 16 00 28.1
comp=Z,47nm,21.1s,baz=192,slow=37
TLY Talaya 49.60 332 LR LR 16 00 22.6
comp=Z,178nm,21.0s,baz=128,slow=36
TLY Talaya 49.60 332 P **P** **15 39 20.1 +0.1**
TLY Talaya 49.60 332 *ce*P **P** **15 39 21.3 +1.3**
TLY pmax pmax
comp=Z,12nm,1.7s
TLY Talaya 49.60 332 P **P** **15 39 20.4 +0.4**
IRK Irkutsk 49.70 333 *e*P **P** **15 39 17.6 -3.1**
IRK pmax pmax
comp=Z,34nm,2.4s
SHEM Shemya Is, Ala 50.41 27 LR LR 15 58 24.6
comp=Z,144nm,21.4s,baz=242,slow=33
YAK Yakutsk 51.39 355 LR LR 16 01 23.2
comp=Z,114nm,18.3s,baz=164,slow=36
YAK Yakutsk 51.39 355 *e*P **P** **15 39 31.6 -1.7**
YAK *e* 15 40 45.7
YAK *e* 15 41 27.9
YAK *e*PPP PPP 15 42 30.9
YAK *e*S **S** **15 46 48.1 -3.7**
YAK *e**SS sS 15 47 12.0 +14
YAK *e* 15 49 16.1
YAK *e*SS **SS** **15 50 26.3 -1.4**
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=Z,56nm,3.3s
YAK pmax pmax
comp=N,30nm,3.2s
YAK pmax pmax
comp=E,42nm,4.6s
YAK smax smax
comp=E,36nm,2.0s
YAK smax smax
comp=N,29nm,2.7s
EVN Everest 51.41 297 P **P** **15 39 34.5 -0.4**
EVN IAmb IAmb 15 39 40.6
comp=Z,9.4nm,0.7s
EVN Everest 51.41 297 P **P** **15 39 35.8 +0.9**
BOK Bokaro 51.77 292 *e*P **P** **15 39 36.6 -0.2**
BOK IAmb IAmb 15 39 39.8
comp=Z,14nm,1.0s
KNGR Kungurtug, Tuv 51.95 328 *i* P **P** **15 39 37.7 -0.2**
KNGR pmax pmax
comp=Z,12nm,1.0s
GAYA Gaya 52.45 293 *e*P **P** **15 39 41.3 -0.6**
SEY Seymchan 52.78 8 *i* P **P** **15 39 43.6 -0.1**
SEY pmax pmax
comp=Z,6.0nm,0.6s
RAGD RAYAGADA 53.84 286 *e*P **P** **15 39 53.1 +0.9**
WMQ Urumqi 54.75 316 *e*P **P** **15 40 00.2 +1.7**
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ pmax pmax

comp=Z,49nm,3.8s
WMQ L L
comp=Z,110nm,23.1s
AFI Afiamalu 54.93 116 LR LR 15 59 04.1
comp=Z,394nm,21.1s,baz=321,slow=31
ATKA Atka Island 55.88 33 P **P** **15 40 06.2 -0.2**
DGZ Jazzator, Alta 57.16 323 *i* P **P** **15 40 16.2 +0.4**
DGZ pmax pmax
comp=Z,12nm,1.1s
PALK Pallekele 57.37 272 LR LR 16 04 24.8
comp=Z,87nm,21.1s,baz=98,slow=36
PTH Pithoragarh 57.38 298 *e*P **P** **15 40 17.8 +0.1**
ZSN Zaisan 57.88 320 *e*P **P** **15 40 21.2 +0.5**
ZSN Zaisan 57.88 320 *e*P **P** **15 40 21.2 +0.5**
JHNI Jhansi 58.48 293 *e*P **P** **15 40 24.9 -0.4**
HYB Hyderabad 58.53 284 *e*P **P** **15 40 25.1 -0.7**
HYB *e*S **S** **15 48 28.6 -0.5**
NIUE Niue 58.73 120 P **P** **15 40 26.4 -0.6**
MK31 Makanchi Array 59.33 318 *ce*P **P** **15 40 31.1 +0.2**
MKAR Makanchi Array 59.33 318 P **P** **15 40 30.9 0.0**
comp=Z,14nm,0.7s,baz=102,slow=8.7,SNR=130
MKAR LR LR 16 07 55.4
comp=Z,140nm,18.5s,baz=96,slow=38
comp=Z,14nm,0.7s
MKAR Makanchi Array 59.33 318 P **P** **15 40 30.7 -0.2**
BHPL Bhopal 59.51 291 *e*P **P** **15 40 32.6 +0.1**
BHPL IAmb IAmb 15 40 34.2
comp=Z,18nm,1.1s
MAKZ Makanchi 59.54 318 P **P** **15 40 32.1 -0.2**
MAKZ Makanchi 59.54 318 P **P** **15 40 32.1 -0.2**
MAKZ pmax pmax
comp=Z,18nm,1.0s
MAKZ Makanchi 59.54 318 P **P** **15 40 32.4 +0.1**
NRDN NARMADA NAGAR 59.74 290 *ex* x 15 40 39.0
NRDN IAmb IAmb 15 40 40.0
comp=Z,11nm,0.6s
BILL Bilibino 59.81 12 *i* P **P** **15 40 32.8 -0.9**
BILL pmax pmax
comp=Z,16nm,1.7s
WUS Wushi 60.02 311 P **P** **15 40 37.0 +1.1**
SHLS Shalkode 60.28 314 *e*P **P** **15 40 36.0 -1.6**
SHLS pmax pmax
comp=Z,13nm,1.1s
SHLS Shalkode 60.28 314 *e*P **P** **15 40 36.0 -1.6**
comp=Z,13nm,1.1s
PDGK Podgornoye 60.30 314 P **P** **15 40 37.1 -0.6**
SPIA Saint Paul Isl 60.31 29 P **P** **15 40 38.9 +1.5**
baz=242
ZAA0 Zalesovo Array 60.38 327 IAmb IAmb 15 40 38.6
comp=Z,11nm,1.1s
ZALV Zalesovo Beam 60.38 327 P **P** **15 40 37.0 -0.9**
comp=Z,6.1nm,0.7s,baz=105,slow=6.5,SNR=31
ZALV LR LR 16 08 05.5
comp=Z,197nm,19.1s,baz=126,slow=38
comp=Z,6.1nm,0.7s
ZALV Zalesovo Beam 60.38 327 P **P** **15 40 36.6 -1.2**
ZALV Zalesovo Beam 60.38 327 *i* P **P** **15 40 37.2 -0.7**
ZALV pmax pmax
comp=Z,9.0nm,0.9s
KUDL Kundal 60.51 296 *e*P **P** **15 40 38.6 -0.6**
KUDL IAmb IAmb 15 40 40.3
comp=Z,7.4nm,1.1s
UZB Uzynbulak 60.59 313 *e*P **P** **15 40 40.1 +0.4**
UZB pmax pmax
comp=Z,8.0nm,1.0s
UZB Uzynbulak 60.59 313 *e*P **P** **15 40 40.1 +0.4**
comp=Z,8.2nm,1.0s
URZ Urewera 60.69 146 LR LR 16 03 58.7
comp=Z,130nm,19.1s,baz=282,slow=33
UNV Unalaska Valle 60.77 34 P **P** **15 40 41.9 +1.4**
baz=247
KPKS Kokpek 60.90 314 *e*P **P** **15 40 42.3 +0.5**
KPKS Kokpek 60.90 314 *e*P **P** **15 40 42.3 +0.5**
TIXI Tiksi 60.93 356 LR LR 16 06 38.9
comp=Z,111nm,20.3s,baz=181,slow=36
TIXI Tiksi 60.93 356 *i* P **P** **15 40 39.3 -2.0**
TIXI pmax pmax
comp=Z,11nm,1.1s
DHRM DHARAMSHALA 60.98 301 *e*P **P** **15 40 42.2 -0.4**
SATY Saty 61.01 313 *e*P **P** **15 40 43.0 +0.5**
SATY pmax pmax
comp=Z,9.0nm,0.8s
SATY Saty 61.01 313 *e*P **P** **15 40 43.1 +0.5**
comp=Z,9.0nm,0.8s
TSSA Tissa 61.16 301 *e*P **P** **15 40 43.8 -0.1**
TSSA IAmb IAmb 15 40 51.0
comp=Z,11nm,0.8s
TARG Taragay, Kyrgy 61.17 312 P **P** **15 40 45.3 +1.3**
KIP Kipapa 61.26 72 *ce*P **P** **15 40 43.6 -0.8**
KIP pmax pmax
comp=Z,114nm,1.7s
TDK Taldyqorghan 61.45 315 *e*P **P** **15 40 46.2 +0.8**
TDK pmax pmax
comp=Z,13nm,0.9s
TDK Taldyqorghan 61.45 315 *e*P **P** **15 40 46.2 +0.8**
comp=Z,13nm,0.9s
KDJ Kajisay 61.70 312 P **P** **15 40 48.9 +1.5**
ASAI AK-SAY(Kyrgyzs 61.96 311 P **P** **15 40 50.3 +1.0**
MDOK Medeo 62.00 313 *e*P **P** **15 40 50.0 +0.7**
MDOK Medeo 62.00 313 *e*P **P** **15 40 50.0 +0.7**
TNSS Tian-Shan 62.05 313 *e*P **P** **15 40 50.1 +0.2**
TNSS Tian-Shan 62.05 313 *e*P **P** **15 40 50.2 +0.2**
AAA Alma-Ata 62.11 313 *e*P **P** **15 40 50.5 +0.6**
AAA pmax pmax
comp=Z,5.0nm,0.5s
AAA Alma-Ata 62.11 313 *e*P **P** **15 40 50.5 +0.6**
comp=Z,5.2nm,0.5s
KSH2 Kashi 62.40 308 P **P** **15 40 53.2 +1.1**
KSH2 pP pP 15 40 55.2 -1.6
KSH2 pmax pmax
comp=Z,15nm,0.8s
NRN Naryn 62.44 311 IAmb IAmb 15 40 54.4
comp=Z,15nm,1.1s
KURK Kurchatov 62.82 322 P **P** **15 40 53.5 -0.8**
KURK Kurchatov 62.82 322 P **P** **15 40 53.6 -0.8**
KURK pmax pmax
comp=Z,26nm,0.8s
KURK Kurchatov 62.82 322 P **P** **15 40 54.0 -0.4**
KURBB Kurchatov Arra 62.84 322 P **P** **15 40 53.8 -0.8**
comp=Z,15nm,0.8s,baz=104,slow=6.9,SNR=74
comp=Z,15nm,0.8s
KURBB Kurchatov Arra 62.84 322 P **P** **15 40 53.9 -0.7**
UDPR Udaipur 62.91 292 *e*P **P** **15 40 55.9 +0.3**
UDPR IAmb IAmb 15 40 56.9
comp=Z,21nm,1.3s
TKM2 Tokmak 2 63.00 313 P **P** **15 40 56.6 +0.5**
SNR=7.0
GAMB Gambell 63.09 22 P **P** **15 40 57.9 +2.0**
baz=237
KBK Karagaybulak 63.42 312 P **P** **15 40 59.5 +0.7**
SNR=7.1
CHMS Chumysh 63.62 313 P **P** **15 41 00.3 +0.4**
SNR=11
NIL Nilore 63.65 302 P **P** **15 41 00.8 +0.5**
NIL Nilore 63.65 302 P **P** **15 41 00.8 +0.5**
NIL pmax pmax
comp=Z,40nm,0.9s
NIL Nilore 63.65 302 P **P** **15 41 01.2 +0.9**
M11K Mekoryuk 63.66 27 P **P** **15 41 00.6 +0.8**
baz=244
UCH Uchtor 63.67 312 P **P** **15 41 02.0 +1.1**
SNR=14
AAK Ala-Archa 63.75 312 P **P** **15 41 01.0 0.0**
AAK Ala-Archa 63.75 312 *ce*P **P** **15 41 02.0 +1.0**
AAK pmax pmax
comp=Z,13nm,2.5s
AAK Ala-Archa 63.75 312 P **P** **15 41 01.5 +0.5**
SGDS Sogindy 63.79 313 *e*P **P** **15 41 01.3 +0.2**
USP Ospenovka 63.85 313 P **P** **15 41 02.1 +0.6**
SNR=5.4
EKS2 Erkin-Say 64.28 312 P **P** **15 41 08.3 +3.9**
SNR=5.3
BTLS Baital 64.48 315 *e*P **P** **15 41 06.2 +0.7**
BTLS Baital 64.48 315 *e*P **P** **15 41 06.3 +0.7**
SDPT Sand Point 64.58 33 P **P** **15 41 07.3 +1.4**
baz=252
ARSB Arslanbob 64.67 311 IAmb IAmb 15 41 08.9
comp=Z,16nm,1.1s
OHH Osh 64.71 310 P **P** **15 41 06.6 -0.6**
CHNA Chernabura Isl 64.91 34 P **P** **15 41 09.1 +1.1**
baz=253
M13K Dall Lake 64.96 28 P **P** **15 41 10.2 +1.9**
baz=247
K13K Kusilvak Mount 65.01 26 P **P** **15 41 10.8 +2.1**
baz=245

MANEM **Manem** 65.24 306 IAmb IAmb 15 41 13.1
comp=Z,65nm,0.7s
S14K **Fog Glacier** 65.37 33 P P 15 41 12.9 +1.7
baz=252
TNA **Tin City** 65.41 22 P P 15 41 12.9 +1.8
baz=240
ARK **Arkit** 65.49 311 P P 15 41 13.3 +1.0
O14K **Tigyukauivet M** 65.50 29 P P 15 41 13.6 +1.8
baz=249
N14K **Kuskokwak Cree** 65.54 28 P P 15 41 14.0 +1.9
baz=249
L14K **Kuka Creek** 65.62 27 P P 15 41 14.5 +1.9
baz=247
M14K **Bethel** 65.72 28 P P 15 41 15.4 +2.1
baz=248
ANM **Nome** 65.88 23 P P 15 41 15.6 +1.4
baz=243
F14K **Arctic Creek** 65.95 22 P P 15 41 16.5 +1.9
baz=242
DZA **Taraz** 66.09 312 eP P 15 41 16.5 +0.5
DZA pmax pmax
comp=Z,5.0nm,0.6s
DZA **Taraz** 66.09 312 eP P 15 41 16.5 +0.5
comp=Z,4.7nm,0.6s
BTK **Batken** 66.15 309 IAmb IAmb 15 41 24.0
comp=Z,16nm,1.2s
BTK **Batken** 66.15 309 P P 15 41 17.4 +0.8
O15K **Ungalikthiuk R** 66.16 30 P P 15 41 17.9 +1.7
baz=251
M15K **Kasigluk River** 66.28 28 P P 15 41 18.4 +1.5
baz=249
L15K **Ungalak Mounta** 66.28 27 P P 15 41 18.8 +2.0
baz=248
BRZS **Berezniki** 66.33 320 eP P 15 41 17.6 +0.2
BRZS **Berezniki** 66.33 320 eP P 15 41 17.7 +0.2
N15K **Kwethluk River** 66.37 29 P P 15 41 19.0 +1.5
baz=250
GAR **Garm** 66.44 308 P P 15 41 19.2 +0.7
G15K **Niukluk** 66.59 23 P P 15 41 19.8 +1.1
baz=244
F15K **North Star Dit** 66.68 22 IAmb IAmb 15 41 27.4
comp=Z,17nm,1.1s
F15K **North Star Dit** 66.68 22 P P 15 41 20.9 +1.6
baz=243
KK31 **Karatay Array** 66.71 312 IAmb IAmb 15 41 21.6
comp=Z,16nm,1.6s
KK31 **Karatay Array** 66.71 312 *i* P P 15 41 18.8 -1.2
KKAR **Karatay Array** 66.71 312 P P 15 41 19.5 -0.5
KKAR **Karatay Array** 66.71 312 P P 15 41 19.5 -0.5
NRIK **Noril'sk** 66.72 342 P P 15 41 18.9 -0.6
comp=Z,4.0nm,0.7s,baz=101,slow=7.4,SNR=6.8
NRIK LR LR 16 11 29.3
comp=Z,123nm,18.5s,baz=143,slow=37
comp=Z,4.0nm,0.7s
NRIK **Noril'sk** 66.72 342 P P 15 41 18.6 -0.9
NRIK IAmb IAmb 15 41 20.3
comp=Z,7.9nm,1.0s
NRIK **Noril'sk** 66.72 342 P P 15 41 18.6 -0.9
NRIK pmax pmax
comp=Z,8.0nm,1.0s
IUG **luzhnay** 66.96 311 eP P 15 41 22.3 +0.6
IUG pmax pmax
comp=Z,5.0nm,0.6s
IUG **luzhnay** 66.96 311 eP P 15 41 22.4 +0.6
comp=Z,4.7nm,0.6s
P16K **Nushagak River** 67.01 30 P P 15 41 22.6 +1.1
baz=252
N16K **Nishlik Lake** 67.10 28 P P 15 41 23.7 +1.6
baz=251
H16K **Elim** 67.13 24 P P 15 41 23.6 +1.4
baz=246
O16K **Kokwok River B** 67.14 30 P P 15 41 24.0 +1.6
baz=252
KBL **Kabul** 67.19 303 P P 15 41 23.6 +0.1
M16K **Timber Creek** 67.19 28 P P 15 41 23.9 +1.3
baz=251
L16K **Owhat River** 67.19 27 P P 15 41 24.2 +1.5
baz=250
BRLS **Boroldaу** 67.20 312 eP P 15 41 23.9 +0.8
BRLS **Boroldaу** 67.20 312 eP P 15 41 23.9 +0.8
J16K **Anvik River** 67.27 25 P P 15 41 25.2 +2.1
baz=248
CHM **Chimkent** 67.29 311 eP P 15 41 24.5 +0.8
CHM pmax pmax
comp=Z,5.0nm,0.6s
CHM **Chimkent** 67.29 311 eP P 15 41 24.6 +0.8
comp=Z,4.7nm,0.6s
CHGR **Chuyangaron** 67.32 307 *i* P P 15 41 23.3 -0.7
CHGR pmax pmax
comp=Z,36nm,1.2s
CHGR **Chuyangaron** 67.32 307 P P 15 41 24.8 +0.7
CHIR **Chirikof Islan** 67.36 34 P P 15 41 25.6 +1.8
baz=256
R17L **Mt. Peulik Vol** 67.43 32 P P 15 41 25.8 +1.5
baz=254
I17K **Unalakleet** 67.46 25 P P 15 41 25.4 +1.1
baz=248
Q16K **King Salmon** 67.57 31 P P 15 41 26.2 +1.1
baz=254
C16K **Lisburne Hills** 67.63 19 P P 15 41 26.7 +1.4
baz=242
O17K **Koliganek Bris** 67.67 29 P P 15 41 26.9 +1.2
baz=253
P17K **Kvichak River** 67.83 30 P P 15 41 28.0 +1.3
baz=254
Q17K **Contact Creek** 67.85 31 P P 15 41 27.8 +0.8
baz=255
N17K **Nushagak Hills** 67.86 29 P P 15 41 28.4 +1.5
baz=253
L17K **Donlin** 67.86 27 P P 15 41 28.2 +1.3
baz=251
J17K **VABM Dome** 67.95 25 P P 15 41 29.0 +1.6
baz=250
M17K **Holitna River** 68.01 28 P P 15 41 29.1 +1.3
baz=252
K17K **Iditarod** 68.05 26 P P 15 41 29.4 +1.3
baz=251
SHAA **Shahritus** 68.06 306 IAmb IAmb 15 41 30.4
comp=Z,18nm,0.8s
G17K **Kiwalik Mounta** 68.10 23 P P 15 41 29.6 +1.3
baz=247
D17K **Noatak River** 68.12 20 P P 15 41 29.4 +1.0
baz=244
H17K **Granite Mounta** 68.17 24 IAmb IAmb 15 41 40.9
comp=Z,7.4nm,0.9s
H17K **Granite Mounta** 68.17 24 P P 15 41 29.6 +0.8
baz=248
F17K **Baldwin Pennin** 68.24 22 P P 15 41 29.5 +0.3
baz=246
E17K **Hotham Inlet** 68.30 21 P P 15 41 29.3 -0.2
baz=246
RAR **Rarotonga** 68.31 118 LR LR 16 05 07.8
comp=Z,232nm,20.7s,baz=252,slow=30
SII **Sitkinak Islan** 68.31 33 P P 15 41 31.5 +1.6
baz=257
BVA0 **Borovoye Array** 68.32 323 *i* P P 15 41 26.4 -3.6
BVAR **Borovoye Array** 68.32 323 P P 15 41 29.4 -0.5
comp=Z,20nm,0.8s,baz=101,slow=7.7,SNR=65
comp=Z,20nm,0.8s
RDOG **Red Dog Mine** 68.34 20 P P 15 41 31.2 +1.4
baz=244
BORK **Borovoye** 68.37 323 P P 15 41 29.2 -1.0
BORK **Borovoye** 68.37 323 *i* P P 15 41 29.2 -1.0
BORK pmax pmax
comp=Z,29nm,1.0s
Q18K **Katmai Hardscr** 68.39 31 P P 15 41 32.0 +1.6
baz=255
C17K **DeLong Mountai** 68.44 20 P P 15 41 31.7 +1.3
baz=244
P18K **Big Mountain,** 68.48 30 P P 15 41 32.2 +1.3
baz=255
N18K **Kilae Creek** 68.51 29 P P 15 41 32.8 +1.7
baz=254
L18K **Granite Mounta** 68.60 27 P P 15 41 33.6 +2.0
baz=252
O18K **Koktuh Hills** 68.61 30 P P 15 41 33.0 +1.3
baz=255
M18K **Stony River** 68.78 28 P P 15 41 33.9 +1.2
baz=254
H18K **Honhosa River** 68.86 24 P P 15 41 34.8 +1.7
baz=250
E18K **Tukpahlearik C** 68.87 21 P P 15 41 34.8 +1.7
baz=247
F18K **Selawik** 68.90 22 P P 15 41 34.9 +1.6
baz=248
OHAK **Old Harbor** 68.94 33 P P 15 41 35.3 +1.6
baz=257

G18K **Tagagawik** 69.01 23 IAmb IAmb 15 41 42.6
comp=Z,12nm,1.1s
G18K **Tagagawik** 69.01 23 P P 15 41 35.3 +1.2
baz=249
Q19K **Cape Douglas,** 69.15 31 P P 15 41 36.5 +1.4
baz=256
C18K **Utukok River** 69.17 20 P P 15 41 36.8 +1.7
baz=246
N19K **Bonanza Creek** 69.22 29 P P 15 41 36.7 +1.2
N19K IAmb IAmb 15 41 44.5
comp=Z,8.3nm,0.8s
N19K **Bonanza Creek** 69.22 29 P P 15 41 36.6 +1.1
baz=255
GCSA **Galena City Sc** 69.32 24 P P 15 41 37.2 +1.3
baz=251
L19K **White Mountain** 69.41 27 P P 15 41 38.1 +1.5
baz=254
KDAK **Kodiak Island** 69.44 32 P P 15 41 37.1 +0.3
comp=Z,4.2nm,0.7s,baz=258,slow=6.1,SNR=4.1
KDAK LR LR 16 07 59.6
comp=Z,132nm,21.4s,baz=244,slow=32
comp=Z,4.2nm,0.7s
KDAK **Kodiak Island** 69.44 32 P P 15 41 37.1 +0.3
KDAK **Kodiak Island** 69.44 32 P P 15 41 37.9 +1.1
baz=258
P19K **Oil Pt** 69.53 30 P P 15 41 38.9 +1.5
baz=256
M19K **Big River Lodg** 69.55 28 P P 15 41 39.1 +1.6
baz=255
J19K **Poorman** 69.60 25 P P 15 41 38.7 +1.0
baz=253
F19K **Shaleruckik Mo** 69.68 22 P P 15 41 39.6 +1.5
baz=250
G19K **Purcell Mounta** 69.70 23 P P 15 41 39.9 +1.7
baz=251,SNR=16
Q20K **Shuyak Island** 69.71 31 P P 15 41 39.9 +1.5
baz=258
H19K **Roundabout Mou** 69.74 24 P P 15 41 40.2 +1.7
baz=251,SNR=17
A19K **Wainwright** 69.86 18 P P 15 41 40.9 +1.7
baz=245
C19K **Lookout Ridge** 69.89 20 P P 15 41 41.2 +1.7
baz=247
O20K **Slope Mountain** 69.93 30 P P 15 41 41.0 +1.1
baz=257
K20K **Telida** 70.08 26 P P 15 41 41.7 +1.0
baz=254
E19K **Redstone River** 70.09 22 P P 15 41 42.2 +1.5
baz=250
M20K **Styx River** 70.12 28 P P 15 41 42.2 +1.2
baz=256
D19K **Kuna River** 70.15 20 P P 15 41 41.3 +0.3
baz=249
J20K **Nowinta River** 70.28 25 IAmb IAmb 15 41 49.7
comp=Z,11nm,0.9s
J20K **Nowinta River** 70.28 25 P P 15 41 43.4 +1.6
baz=254
I20K **Naaghedeneel** 70.31 25 P P 15 41 43.3 +1.3
baz=254
HOM **Homer** 70.32 30 P P 15 41 43.3 +1.2
baz=258
H20K **Anotleneega Mo** 70.35 24 P P 15 41 44.0 +1.6
baz=253
SPCR **Spur Chakacha** 70.38 29 P P 15 41 44.3 +1.7
baz=257
CNPM **China Poot** 70.49 31 P P 15 41 43.4 +0.1
F20K **Avaraart Lake** 70.51 22 P P 15 41 44.0 +0.8
baz=252,SNR=5.8
E20K **Nigu River** 70.74 21 P P 15 41 45.6 +0.9
baz=251
D20K **Etivluk River** 70.74 20 P P 15 41 46.1 +1.4
baz=250
BRSE **Bradley Lake S** 70.78 30 P P 15 41 46.5 +1.4
baz=259
PPLA **Purkeypile** 70.79 27 P P 15 41 46.7 +1.5
baz=256
SKT **Skwentna** 70.88 28 P P 15 41 46.5 +0.9
baz=257
CAST **Castle Rocks** 70.96 26 IAmb IAmb 15 41 53.3
comp=Z,8.8nm,0.8s
CAST **Castle Rocks** 70.96 26 P P 15 41 47.5 +1.4
baz=256
CHUM **Lake Minchumin** 70.98 26 P P 15 41 47.8 +1.7
baz=256
B20K **Meade River** 71.02 19 P P 15 41 47.9 +1.7
baz=249
G21K **Allakaket** 71.19 23 P P 15 41 49.1 +1.7
baz=254
H21K **Melozitna Rive** 71.23 24 IAmb IAmb 15 41 55.3
comp=Z,14nm,1.0s
H21K **Melozitna Rive** 71.23 24 P P 15 41 49.4 +1.7
baz=255
L22K **Petersville** 71.34 27 IAmb IAmb 15 41 56.2
comp=Z,12nm,0.8s
L22K **Petersville** 71.34 27 P P 15 41 50.0 +1.6
baz=258
F21K **Alatna River** 71.40 22 IAmb IAmb 15 42 05.9
comp=Z,21nm,1.9s
F21K **Alatna River** 71.40 22 P P 15 41 50.3 +1.6
baz=254
I21K **Tanana** 71.44 25 IAmb IAmb 15 41 56.6
comp=Z,14nm,1.0s
I21K **Tanana** 71.44 25 P P 15 41 50.2 +1.3
baz=256
SEW **Seward** 71.49 30 P P 15 41 50.8 +1.5
baz=260
C21K **Knifeblade Rid** 71.52 20 P P 15 41 50.9 +1.6
baz=252
RC01 **Rabbit Creek A** 71.53 29 P P 15 41 50.7 +1.2
baz=259
E21K **Killik River** 71.58 21 P P 15 41 51.0 +1.2
baz=253
B21K **Ikpikpuk River** 71.72 20 P P 15 41 51.2 +0.8
baz=252
TRF **Thorofare Moun** 71.76 27 IAmb IAmb 15 41 57.5
comp=Z,8.5nm,0.9s
TRF **Thorofare Moun** 71.76 27 P P 15 41 51.9 +0.8
baz=258
H22K **Ishtalitna Cre** 71.86 24 IAmb IAmb 15 42 00.7
comp=Z,13nm,1.1s
H22K **Ishtalitna Cre** 71.86 24 P P 15 41 52.6 +1.1
baz=256
MLY **Manley** 71.91 25 IAmb IAmb 15 42 01.1
comp=Z,11nm,0.8s
MLY **Manley** 71.91 25 P P 15 41 53.0 +1.2
baz=257
PMR **Palmer** 71.92 29 IAmb IAmb 15 41 59.0
comp=Z,8.1nm,0.6s
PMR **Palmer** 71.92 29 P P 15 41 53.0 +1.2
baz=260
F22K **John River** 71.96 22 P P 15 41 53.1 +1.0
baz=255
GHO **Glory Hole Cre** 72.05 28 IAmb IAmb 15 42 00.7
comp=Z,9.3nm,0.8s
G22K **Bettles** 72.06 23 P P 15 41 54.1 +1.5
baz=256
KNK **Knik Glacier** 72.20 29 P P 15 41 54.7 +1.1
baz=260
E22K **Anaktuvuk Pass** 72.26 22 P P 15 41 54.6 +0.8
baz=255
SML **Sawmill** 72.33 28 IAmb IAmb 15 42 02.6
comp=Z,11nm,0.8s
SML **Sawmill** 72.33 28 P P 15 41 55.4 +1.1
baz=260
B22K **Teshekpuk Lake** 72.33 19 P P 15 41 54.7 +0.5
baz=253
RND **Reindeer** 72.38 27 P P 15 41 55.9 +1.2
RND **Reindeer** 72.38 27 P P 15 41 55.9 +1.2
RND pmax pmax
comp=Z,9.0nm,1.0s
MCK **McKinley** 72.41 26 IAmb IAmb 15 42 01.3
comp=Z,18nm,1.0s
MCK **McKinley** 72.41 26 P P 15 41 56.0 +1.2
baz=259
WAT1 **Susitna Watana** 72.41 27 P P 15 41 55.9 +1.1
baz=260
P23K **Montague Islan** 72.48 30 P P 15 41 56.3 +1.0
baz=262
I23K **Minto, Yukon-K** 72.51 25 IAmb IAmb 15 42 04.2
comp=Z,9.3nm,0.8s
I23K **Minto, Yukon-K** 72.51 25 P P 15 41 56.3 +1.0
baz=258
NEA2 **Nenana** 72.52 26 P P 15 41 56.1 +0.7
baz=259
H23K **Yukon River** 72.58 24 IAmb IAmb 15 42 03.4
comp=Z,12nm,0.9s
H23K **Yukon River** 72.58 24 P P 15 41 56.7 +0.9
baz=258

G23K **Bananza Creek** 72.58 23 IAmb IAmb 15 42 03.6
comp=Z,10nm,0.9s
G23K **Bananza Creek** 72.58 23 P P 15 41 57.2 +1.4
baz=257
M23K **Glacier View** 72.61 29 P P 15 41 57.1 +1.1
baz=261
COLD **Coldfoot** 72.63 23 IAmb IAmb 15 42 03.8
comp=Z,9.5nm,1.0s
COLD **Coldfoot** 72.63 23 P P 15 41 56.9 +0.9
baz=257,SNR=10.0
WAT6 **Susitna Watana** 72.73 28 P P 15 41 57.4 +0.5
baz=260
GLI **Glacier Island** 72.77 30 P P 15 41 58.3 +1.3
baz=262
HRA **Herat** 72.80 303 IAmb IAmb 15 41 59.3
comp=Z,14nm,1.0s
SCM **Sheep Creek Mo** 72.80 29 IAmb IAmb 15 42 04.3
comp=Z,16nm,0.9s
SCM **Sheep Creek Mo** 72.80 29 P P 15 41 58.1 +0.9
baz=261
D23K **Nanushuk River** 72.88 21 P P 15 41 58.6 +1.1
baz=256
WRH **Wood River Hil** 72.91 26 IAmb IAmb 15 42 04.0
comp=Z,8.9nm,1.0s
Q23K **Middleton Isla** 72.94 31 P P 15 41 58.9 +1.0
baz=263
DHY **Denali Highway** 72.98 27 P P 15 41 59.2 +0.8
baz=261
E23K **Chandalar** 73.04 22 IAmb IAmb 15 42 06.6
comp=Z,19nm,1.1s
E23K **Chandalar** 73.04 22 P P 15 41 59.8 +1.3
baz=257,SNR=12
FID **Port Fidalgo** 73.05 30 IAmb IAmb 15 42 07.0
comp=Z,13nm,0.8s
COLA **College** 73.08 25 *i* P P 15 42 00.4 +1.7
COLA pmax pmax
comp=Z,6.0nm,0.8s
C23K **Itkillik River** 73.12 20 P P 15 41 59.9 +1.1
baz=256
TOLK **Toolik Lake Re** 73.19 21 P P 15 42 00.6 +1.2
baz=257
H24K **Noodor Dome** 73.25 24 IAmb IAmb 15 42 17.8
comp=Z,13nm,1.2s
H24K **Noodor Dome** 73.25 24 P P 15 42 00.9 +1.1
baz=259
POKR **Poker Flat Res** 73.30 25 P P 15 42 01.1 +1.0
baz=260
EYAK **Cordova Ski Ar** 73.38 30 P P 15 42 01.7 +1.2
baz=263
M24K **Tolsona, Glenn** 73.38 28 P P 15 42 01.1 +0.5
baz=262
HDA **Harding Lake** 73.39 26 P P 15 42 01.6 +1.0
baz=261
KLU **Klutina** 73.42 29 IAmb IAmb 15 42 09.7
comp=Z,8.0nm,0.8s
KLU **Klutina** 73.42 29 P P 15 42 01.9 +1.0
baz=262
E24K **Your Creek** 73.46 22 IAmb IAmb 15 42 09.4
comp=Z,17nm,1.6s
E24K **Your Creek** 73.46 22 P P 15 42 02.1 +1.1
baz=258
ILAR **Eielson Array** 73.47 25 P P 15 42 00.2 -0.8
comp=Z,1.6nm,0.5s,baz=245,slow=5.9,SNR=15
ILAR LR LR 16 14 35.5
comp=Z,108nm,19.2s,baz=258,slow=36
comp=Z,1.6nm,0.5s
D24K **Happy Valley** 73.57 21 IAmb IAmb 15 42 10.8
comp=Z,14nm,0.8s
D24K **Happy Valley** 73.57 21 P P 15 42 02.2 +0.7
baz=258
F24K **Squaw Lake** 73.57 23 P P 15 42 02.3 +0.6
baz=259
G24K **Hadweenzic Riv** 73.57 23 P P 15 42 02.0 +0.4
baz=260
K24K **Donnelly Dome** 73.80 27 P P 15 42 03.9 +0.9
baz=262
HARP **HAARP** 73.89 28 P P 15 42 04.4 +0.9
baz=263
KAIM **Kayak Island** 73.97 31 P P 15 42 04.9 +0.9
baz=264
BMRM **Bremner River** 73.98 30 IAmb IAmb 15 42 13.6
comp=Z,12nm,0.9s
BMRM **Bremner River** 73.98 30 P P 15 42 05.3 +1.1
baz=264,SNR=6.1
N25K **Chitina, Valde** 74.06 29 P P 15 42 05.4 +0.8
baz=264
J25K **Salcha River,** 74.09 26 P P 15 42 05.8 +1.0
baz=262
G25K **Bearman Lake** 74.12 23 P P 15 42 05.8 +1.0
baz=261
PRP **Porcupine Dome** 74.16 25 P P 15 42 06.2 +0.9
baz=262
RIDG **Independent Ri** 74.20 27 IAmb IAmb 15 42 12.2
comp=Z,23nm,1.2s
RIDG **Independent Ri** 74.20 27 P P 15 42 06.4 +1.0
baz=263
SVE **Sverdlovsk** 74.39 326 eP P 15 42 06.2 -0.3
SVE pmax pmax
comp=Z,15nm,1.2s
GLB **Gilahina Butte** 74.42 29 IAmb IAmb 15 42 14.0
comp=Z,12nm,1.0s
F25K **Christian Rive** 74.43 23 P P 15 42 07.5 +0.8
baz=261,SNR=8.7
D25K **Kavik River** 74.46 21 IAmb IAmb 15 42 14.9
comp=Z,22nm,1.6s
D25K **Kavik River** 74.46 21 P P 15 42 07.0 +0.3
baz=260
AB31 **Akbulak array** 74.47 318 IAmb IAmb 15 42 08.1
comp=Z,15nm,1.1s
AB31 **Akbulak array** 74.47 318 *i* P P 15 42 06.3 -0.9
ABKAR **Akbulak array** 74.47 318 P P 15 42 06.2 -1.0
E25K **Arctic Village** 74.54 22 P P 15 42 08.7 +1.4
baz=261
SCRK **Sand Creek** 74.61 27 P P 15 42 09.1 +1.3
baz=264
MENT **Mentasta** 74.61 28 IAmb IAmb 15 42 20.3
comp=Z,11nm,1.0s
CRQE **Cirque** 74.70 30 P P 15 42 09.7 +1.3
baz=265
MCARA **McCarthy VSAT** 74.79 29 IAmb IAmb 15 42 25.8
comp=Z,13nm,1.0s
L26K **Log Cabin Wild** 74.79 28 IAmb IAmb 15 42 16.1
comp=Z,9.3nm,0.8s
L26K **Log Cabin Wild** 74.79 28 P P 15 42 10.1 +1.3
baz=264
M26K **Nabesna, AK** 74.89 28 P P 15 42 10.7 +1.2
baz=265
F26K **Sheenjek River** 75.01 23 IAmb IAmb 15 42 19.5
comp=Z,10nm,0.9s
F26K **Sheenjek River** 75.01 23 P P 15 42 11.5 +1.5
baz=262,SNR=10
G26K **Porcupine Rive** 75.05 23 IAmb IAmb 15 42 27.7
comp=Z,19nm,1.5s
G26K **Porcupine Rive** 75.05 23 P P 15 42 11.7 +1.5
baz=263
GRNC **Granite Creek** 75.35 30 IAmb IAmb 15 42 21.3
comp=Z,12nm,0.9s
M27K **Edge Creek, AK** 75.41 28 IAmb IAmb 15 42 20.0
comp=Z,11nm,0.9s
M27K **Edge Creek, AK** 75.41 28 P P 15 42 13.5 +1.0
baz=266
C27K **Jago River** 75.43 21 P P 15 42 14.0 +1.6
baz=262
L27K **Beaver Creek,** 75.49 28 P P 15 42 14.4 +1.5
baz=266
BCAR **Beaver Creek A** 75.50 28 P P 15 42 13.9 +0.9
ARTI **Arti** 75.61 326 P P 15 42 11.4 -2.2
comp=Z,6.0nm,0.6s,baz=110,slow=2.3,SNR=11
comp=Z,6.0nm,0.6s
ARTI **Arti** 75.61 326 P P 15 42 12.1 -1.5
ARTI IAmb IAmb 15 42 13.3
comp=Z,10nm,0.6s
ARTI **Arti** 75.61 326 *c i* P P 15 42 13.1 -0.5
ARTI S S 15 51 52.0 -1.7
ARTI pmax pmax
comp=Z,13nm,1.2s
AKTO **Aktyubinsk** 75.73 319 P P 15 42 13.2 -1.3
comp=Z,4.3nm,0.8s,baz=92,slow=6.5,SNR=14
AKTO LR LR 16 17 39.2
comp=Z,126nm,18.6s,baz=272,slow=37
comp=Z,4.3nm,0.8s
I27K **Kandik River** 75.78 25 P P 15 42 16.0 +1.5
baz=265
G27K **Doyon Strip** 75.88 24 P P 15 42 16.0 +1.0
baz=265
H27K **Steamboat Moun** 75.88 24 P P 15 42 16.2 +1.2
baz=265
BVCY **Beaver Creek** 75.89 28 P P 15 42 16.7 +1.6

baz=267
E27K Coleen River 76.03 22 P P 15 42 16.9 +1.1
baz=265
YUK3 Moose Creek 76.04 29 P P 15 42 17.1 +0.9
baz=267,SNR=15
PINM Pinnacle 76.06 31 P P 15 42 16.4 +0.2
baz=268
O28M Mount Upton 76.12 30 P P 15 42 17.5 +0.7
baz=268,SNR=6.7
PPT2 Papeete2 76.24 111 eS S 15 52 01.1 -1.0
comp=Z,91nm,27.5s
PPT2 eSS SS 15 56 55.9 -0.4
comp=Z,65nm,24.2s
PPT2 eLR LR 16 05 44.6
comp=Z,394nm,22.0s
PPT2 eLR LR 16 05 47.8
comp=Z,402nm,28.8s
YUK8 Steele Glacier 76.35 29 P P 15 42 18.9 +0.8
baz=268
D27M Malcolm River 76.36 21 IAmb IAmb 15 42 26.1
comp=Z,29nm,1.8s
D27M Malcolm River 76.36 21 P P 15 42 18.5 +0.8
baz=265
I28M Miner Creek 76.47 25 IAmb IAmb 15 42 26.0
comp=Z,17nm,1.3s
I28M Miner Creek 76.47 25 P P 15 42 19.2 +0.7
baz=267
F28M Old Crow 76.63 23 P P 15 42 20.8 +1.6
baz=266,SNR=7.4
DAWY Dawson 76.64 27 P P 15 42 20.6 +1.2
baz=268
BRWY Burwash Landin 76.71 29 P P 15 42 21.1 +1.2
baz=269
E28M Babbage River 76.82 22 P P 15 42 21.4 +1.1
baz=266
YUK4 Talbot Arm 76.89 29 P P 15 42 22.4 +1.3
baz=269
O29M Mount Kennedy 76.91 30 P P 15 42 21.9 +0.9
baz=269
M29M Somme Creek 77.00 28 IAmb IAmb 15 42 29.6
comp=Z,13nm,1.1s
M29M Somme Creek 77.00 28 P P 15 42 22.7 +1.2
baz=269
YUK6 Outpost Mounta 77.02 30 P P 15 42 22.3 +0.5
baz=269
H29M Whitestone 77.15 24 P P 15 42 24.0 +1.8
baz=268
J29N Klondike Camp 77.16 26 P P 15 42 23.9 +1.5
baz=269
L29M L29M 77.17 28 IAmb IAmb 15 42 32.0
comp=Z,13nm,1.1s
L29M L29M 77.17 28 P P 15 42 23.6 +1.2
baz=269
G29M Pine Creek 77.31 24 P P 15 42 24.4 +1.3
baz=268
P29M Windy Craggy 77.32 31 P P 15 42 24.5 +1.2
baz=270
E29M Blow River 77.41 22 P P 15 42 24.2 +0.6
baz=268
HYT Haines Junctio 77.44 30 IAmb IAmb 15 42 32.1
comp=Z,13nm,1.1s
HYT Haines Junctio 77.44 30 P P 15 42 24.9 +0.9
baz=270
K29M Barlow Dome 77.45 27 IAmb IAmb 15 42 33.4
comp=Z,11nm,1.1s
K29M Barlow Dome 77.45 27 P P 15 42 25.0 +0.9
baz=269
N30M Aishikik Lake 77.64 29 IAmb IAmb 15 42 33.0
comp=Z,13nm,1.1s
N30M Aishikik Lake 77.64 29 P P 15 42 26.0 +0.9
baz=270
P30M Million Dollar 77.71 31 P P 15 42 26.5 +0.9
baz=271
M30M Minto, Yukon 77.78 28 IAmb IAmb 15 42 33.7
comp=Z,12nm,1.2s
M30M Minto, Yukon 77.78 28 P P 15 42 26.8 +1.0
baz=270
EPYK Eagle Plains 77.82 24 IAmb IAmb 15 42 33.4
comp=Z,26nm,1.5s
EPYK Eagle Plains 77.82 24 P P 15 42 26.7 +0.8
baz=270
I30M Mount Dempster 77.96 25 P P 15 42 28.2 +1.4
baz=270
J30M Hart River 77.98 26 P P 15 42 28.4 +1.4
baz=270
TBI Tubuai 78.02 117 eLR LR 16 06 30.9
comp=Z,2µm,33.5s
G30M tAoh Zrail Nji 78.02 24 P P 15 42 28.8 +1.7
baz=270
PLBC Pleasant Camp 78.03 31 P P 15 42 28.6 +1.5
baz=271
S31K Pelican 78.13 33 P P 15 42 29.2 +1.5
baz=272
O30N Mendenhall 78.14 30 P P 15 42 28.9 +1.0
baz=271
F30M Barrier River 78.19 23 P P 15 42 29.5 +1.6
baz=270
N31M Braeburn, Yuko 78.27 29 IAmb IAmb 15 42 39.8
comp=Z,16nm,1.1s
N31M Braeburn, Yuko 78.27 29 P P 15 42 30.3 +1.7
baz=272
SKAG Skagway 78.55 31 P P 15 42 31.3 +1.2
baz=272
SIT Sitka 78.66 34 P P 15 42 32.0 +1.4
baz=273
WHY Whitehorse 78.73 30 P P 15 42 32.4 +1.2
baz=272
G31M Satah River 78.79 24 IAmb IAmb 15 42 39.5
comp=Z,13nm,1.0s
G31M Satah River 78.79 24 P P 15 42 32.6 +1.4
baz=272
H31M Peel River 78.80 25 IAmb IAmb 15 42 39.2
comp=Z,32nm,1.9s
H31M Peel River 78.80 25 P P 15 42 32.8 +1.5
baz=272
M31M Drury Creek, Y 78.91 28 P P 15 42 33.7 +1.7
baz=273
F31M Tsiigehtchic 78.98 23 P P 15 42 33.8 +1.6
baz=272
R32K Eaglecrest 79.03 33 P P 15 42 33.8 +1.1
baz=273
INK Inuvik 79.03 22 P P 15 42 32.6 +0.1
comp=Z,1.3nm,0.3s,baz=279,slow=5.2,SNR=3.3
INK LR LR 16 19 00.1
comp=Z,56nm,18.6s,baz=236,slow=37
comp=Z,1.3nm,0.3s
INK Inuvik 79.03 22 P P 15 42 33.5 +0.9
baz=272
INK Inuvik 79.03 22 P P 15 42 33.3 +0.7
S32K Killisnoo 79.04 33 P P 15 42 33.8 +1.0
baz=273
P32M Atlin 79.37 31 P P 15 42 36.0 +1.3
baz=274
N32M Quiet Lake 79.58 30 P P 15 42 37.2 +1.4
baz=274
P33M Teslin, Yukon 79.78 30 P P 15 42 38.2 +1.3
baz=274
U33K Whale Pass 79.93 35 P P 15 42 38.4 +0.8
baz=275
CRAG Craig 79.98 35 P P 15 42 39.4 +1.4
baz=275
Q32M Nakina River 80.16 32 P P 15 42 39.8 +0.7
baz=275
MMPY Sheldon Lake, 80.33 28 IAmb IAmb 15 42 47.9
comp=Z,22nm,1.8s
MMPY Sheldon Lake, 80.33 28 P P 15 42 41.1 +1.3
baz=275
KIRV Kirov 80.38 328 i P P 15 42 39.7 -0.3
R33M Jennings River 80.78 31 P P 15 42 43.8 +1.4
baz=276
V35K Ketchikan 80.85 35 P P 15 42 43.9 +1.3
baz=276
DLBC Dease Lake 81.37 32 P P 15 42 45.3 -0.2
comp=Z,0.9nm,0.5s,baz=274,slow=6.3,SNR=6.3
DLBC LR LR 16 18 27.8
comp=Z,65nm,18.1s,baz=226,slow=35
comp=Z,0.9nm,0.5s
DLBC Dease Lake 81.37 32 P P 15 42 46.6 +1.1
baz=277
T35M Bob Quinn 81.43 34 P P 15 42 47.3 +1.5
baz=277
A36M Sachs Harbour 81.49 18 P P 15 42 46.9 +1.2
baz=279
WTLY Watson Lake, Y 81.79 30 IAmb IAmb 15 42 57.4
comp=Z,12nm,1.0s
WTLY Watson Lake, Y 81.79 30 P P 15 42 49.4 +1.8
baz=278
BELG Belogornoye 82.09 322 i P P 15 42 48.2 -1.0
BELG pmax pmax
comp=Z,7.0nm,0.9s
C36M Paulatuk 82.33 21 P P 15 42 51.8 +1.6
baz=281
TAOE Nuku Hiva Isla 83.03 100 eLR LR 16 08 57.3
comp=Z,186nm,21.9s
BBB Bella Bella 83.33 38 P P 15 42 55.5 -0.2
comp=Z,2.4nm,0.9s,baz=276,slow=5.0,SNR=4.1
comp=Z,2.4nm,0.9s
MAK Makhachkala 83.53 312 eP P 15 42 54.3 -2.6
MAK eS S 15 53 13.4 -4.7
MAK eSSS SSS 16 02 06.4
MAK pmax pmax
comp=Z,235nm,1.3s
MAK MLR MLR
comp=Z,157nm,20.0s
AKT Akhty 83.59 311 eP P 15 42 57.3 -0.2
AKT e 15 43 01.5
AKT pmax pmax
comp=Z,17nm,1.4s
AKT MLR MLR
comp=Z,182nm,19.0s
KOTAN Kotaneelee Air 84.13 30 P P 15 43 01.2 +1.6
baz=282
KLMR Klimovskoe 84.97 331 eP P 15 43 03.1 -0.7
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KLMR MLR MLR
comp=Z,320nm,19.0s
SPITS Spitsbergen Ar 85.60 350 LR LR 16 21 41.9
comp=Z,92nm,20.4s,baz=44,slow=36
KBZ Khabaz 86.70 314 P P 15 42 12.7 -0.2
comp=Z,4.2nm,0.9s,baz=76,slow=5.2,SNR=9.1
comp=Z,4.2nm,0.9s
KBZ Khabaz 86.70 314 i P P 15 43 12.1 -0.7
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KVAR Kislovodsk Arr 86.79 314 LR LR 16 25 59.3
comp=Z,86nm,19.7s,baz=284,slow=38
KIV Kislovodsk 86.80 314 eP P 15 43 13.0 -0.5
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,59nm,20.0s
NLWA Neilton Lookou 86.95 42 IAmb IAmb 15 43 22.3
comp=Z,11nm,0.9s
GNW Green Mountain 87.60 42 P P 15 43 17.9 +0.8
GNW IAmb IAmb 15 43 25.1
comp=Z,12nm,1.0s
ARCES ARCESS Array B 87.66 341 P P 15 43 15.6 -1.4
comp=Z,3.9nm,0.8s,baz=60,slow=4.8,SNR=6.9
ARCES LR LR 16 26 28.7
comp=Z,90nm,19.6s,baz=68,slow=38
comp=Z,3.9nm,0.8s
YKA Yellowknife Ar 87.88 26 P P 15 43 19.1 +0.9
comp=Z,2.4nm,0.7s,baz=292,slow=5.1,SNR=5.7
YKA LR LR 16 22 38.3
comp=Z,161nm,19.7s,baz=290,slow=36
comp=Z,2.4nm,0.7s
YKA Yellowknife Ar 87.88 26 i P P 15 43 19.2 +1.1
YKA pmax pmax
comp=Z,2.0nm,0.7s
OBN Obninsk 87.95 326 LR LR 16 23 53.8
comp=Z,160nm,20.7s,baz=146,slow=36
OBN Obninsk 87.95 326 eP P 15 43 16.7 -1.9
OBN *PP pP 15 43 22.0 -1.7
OBN *SP sP 15 43 25.0 +0.9
OBN S SKSac 15 53 49.0 +2.9
OBN i PPS PPS 15 55 24.4
OBN pmax pmax
comp=Z,6.0nm,0.4s
OBN MLR MLR
comp=Z,164nm,21.0s
RES Resolute Bay 88.41 12 LR LR 16 25 04.3
comp=Z,32nm,19.2s,baz=3.5,slow=37
RAYN Ar Rayn 88.63 294 P P 15 43 22.2 -0.4
RAYN Ar Rayn 88.63 294 P P 15 43 22.2 -0.4
RAYN pmax pmax
comp=Z,16nm,0.8s
RAYN Ar Rayn 88.63 294 P P 15 43 22.4 -0.2
YBH Yreka Blue Hor 89.06 48 LR LR 16 17 41.5
comp=Z,160nm,20.1s,baz=248,slow=32
WIFE Three Sisters- 89.13 45 P P 15 43 25.6 +0.9
WIFE IAmb IAmb 15 43 32.5
comp=Z,9.6nm,1.0s
PINE Pine Mountain 89.81 45 IAmb IAmb 15 43 35.3
comp=Z,8.5nm,0.9s
K05A Summer Lake 90.12 46 P P 15 43 30.4 +1.0
K05A IAmb IAmb 15 43 37.2
comp=Z,6.7nm,0.9s
FINES FINESS Array B 90.92 334 P P 15 43 30.8 -1.6
comp=Z,5.1nm,0.7s,baz=81,slow=4.8,SNR=10
FINES LR LR 16 28 18.4
comp=Z,101nm,18.1s,baz=60,slow=38
comp=Z,5.1nm,0.7s
FINES FINESS Array B 90.92 334 i P P 15 43 31.1 -1.3
FINES pmax pmax
comp=Z,5.0nm,0.7s
NEW Newport 91.10 40 LR LR 16 18 10.7
comp=Z,139nm,20.5s,baz=298,slow=31
NVAR Mina Array Bea 93.18 50 P P 15 43 44.6 +0.9
comp=Z,0.7nm,0.7s,baz=262,slow=4.6,SNR=3.9
NVAR LR LR 16 21 39.0
comp=Z,100nm,18.7s,baz=272,slow=33
comp=Z,0.7nm,0.7s
HLID Hailey 94.40 44 P P 15 43 50.8 +1.6
BRTR Keskin Array B 94.42 312 P P 15 43 46.9 -2.4
comp=Z,0.6nm,0.7s,baz=70,slow=4.2,SNR=2.4
comp=Z,0.6nm,0.7s
ELK Elko 94.74 47 IAmb IAmb 15 43 59.2
comp=Z,14nm,2.0s
PFO Pinyon Flats O 96.02 54 LR LR 16 23 56.8
comp=Z,70nm,18.6s,baz=250,slow=33
EIL Elat 96.36 302 LR LR 16 29 27.1
comp=Z,81nm,22.0s,baz=84,slow=37
PDAR Pinedale Array 98.00 44 LR LR 16 23 01.7
comp=Z,46nm,21.6s,baz=301,slow=32
TORD Torodi Ar. Bea 131.11 298 PKP PKPdf 15 49 40.9 -0.9
comp=Z,1.5nm,0.9s,baz=50,slow=3.1,SNR=6.2

NEIC ***06*** *15:33:33.3±0.7, 17°.91N±0°.04×67°.10W±0°.02, h17km±3km, ML3.6/37, Md3.7/14(RSPR), Error ellipse: s-maj=5.7km s-min=2.0km az=204.0*
SDD ***06*** *15:33:34.2±0.6, 17°.91N×67°.10W, h12km±2km, MD3.2, ML3.2, Presumed earthquake*
RSPR ***06*** *15:33:34.5, 17°.94N×67°.08W, h12km, MD3.7/14*
OSPL ***06*** *15:33:35.5±1.4, 17°.93N×67°.05W, h12km±51km, ML3.6, Presumed earthquake*

ISC 06 15:33:33.7±1.0, 17°.93N±0°.05×67°.07W±0°.03, h18km±4km, n52, σ0°68/79, 12C-16D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.05**	**28**		**Pg**	**15 33 36.6**	**-0.3**
MLPR					**Sg**	**15 33 38.5**	**-0.6**
MLPR				IAML		15 33 39.1	
	16µm,0.2s						
MLPR	**Magueyes Islan**	**0.05**	**28**	**ePg**	**Pg**	**15 33 36.6**	**-0.3**
MLPR				**eSg**	**Sg**	**15 33 38.4**	**-0.6**
MLPR				IAML		15 33 38.6	
	comp=E,5µm,0.1s						
MLPR				IAML		15 33 38.6	
	comp=N,3µm,0.2s						
MLPR	**Magueyes Islan**	**0.05**	**28**	**eP**	**Pg**	**15 33 36.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.09**	**334**		**Pg**	**15 33 36.8**	**-0.3**
CRPR					**Sg**	**15 33 38.9**	**-0.7**
CRPR				IAML		15 33 39.1	
	comp=N,14µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.09**	**334**	**iP**	**Pg**	**15 33 36.9**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.19**	**75**		**Pg**	**15 33 38.8**	**+0.4**
GBPR					**Sg**	**15 33 42.3**	**+0.7**
GBPR	**Guanica, Bosqu**	**0.19**	**75**	**eP**	**Pg**	**15 33 38.8**	**+0.4**
GBPR				eS	**Sg**	**15 33 42.3**	**+0.7**
LSP	**Las Mesas**	**0.25**	**356**		**Pg**	**15 33 39.5**	**+0.1**
LSP					**Sg**	**15 33 43.6**	**+0.3**
LSP	**Las Mesas**	**0.25**	**356**	**eP**	**Pg**	**15 33 39.5**	**+0.1**
LSP				eS	**Sg**	**15 33 43.6**	**+0.3**
PRSN	**Puerto Rico Se**	**0.30**	**346**		**Pg**	**15 33 40.1**	**-0.1**
PRSN					**Sg**	**15 33 44.1**	**-0.5**
PRSN	**Puerto Rico Se**	**0.30**	**346**	**ePg**	**Pg**	**15 33 40.2**	**-0.1**
PRSN				IAML		15 33 46.2	
	comp=E,10µm,0.2s						
PRSN				IAML		15 33 47.1	
	comp=N,12µm,0.2s						
PRSN	**Puerto Rico Se**	**0.30**	**346**	**iP**	**Pg**	**15 33 40.3**	**+0.1**
OBIP	**Obispado Ponce**	**0.46**	**75**		**Pg**	**15 33 43.2**	**+0.2**
OBIP					**Sg**	**15 33 49.9**	**+0.7**
OBIP	**Obispado Ponce**	**0.46**	**75**	**iP**	**Pg**	**15 33 43.2**	**+0.2**
OBIP				eS	**Sg**	**15 33 50.1**	**+0.9**
OBIP				IAML		15 33 50.5	
	comp=E,14µm,0.1s						
OBIP	**Obispado Ponce**	**0.46**	**75**	**iP**	**Pg**	**15 33 43.2**	**+0.2**
OBIP				eS	**Sg**	**15 33 50.1**	**+0.9**
UUPR	**Utuado, UPR, P**	**0.46**	**45**		**Pg**	**15 33 43.1**	**0.0**
UUPR					**Sg**	**15 33 49.8**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.46**	**45**	**iP**	**Pg**	**15 33 43.2**	**+0.1**
CELP	**Cerrillos**	**0.49**	**72**		**Pg**	**15 33 43.8**	**+0.2**
CELP					**Sg**	**15 33 51.0**	**+0.8**
CELP				IAML		15 33 51.9	
	comp=Z,3µm,0.2s						
CELP	**Cerrillos**	**0.49**	**72**	**ePg**	**Pg**	**15 33 43.7**	**+0.2**
CELP				**eSg**	**Sg**	**15 33 50.9**	**+0.8**
CELP				IAML		15 33 51.4	
	comp=E,632nm,0.2s						
CELP				IAML		15 33 51.8	
	comp=N,1µm,0.2s						
CELP	**Cerrillos**	**0.49**	**72**	**iP**	**Pg**	**15 33 43.8**	**+0.2**
AOPR	**Arecibo Observ**	**0.51**	**36**		**Pg**	**15 33 43.9**	**-0.1**
AOPR				IAML		15 33 51.5	
	comp=N,7µm,0.2s						
AOPR					**Sg**	**15 33 51.0**	**0.0**
AOPR	**Arecibo Observ**	**0.51**	**36**	**ePg**	**Pg**	**15 33 44.0**	**-0.1**
AOPR				**eSg**	**Sg**	**15 33 51.3**	**+0.3**
AOPR				IAML		15 33 51.3	
	comp=E,11µm,0.3s						
AOPR				IAML		15 33 51.4	
	comp=N,6µm,0.2s						
AOPR	**Arecibo Observ**	**0.51**	**36**	**iP**	**Pg**	**15 33 44.1**	**0.0**
AGPR	**Aguadilla, PR**	**0.54**	**356**		**Pg**	**15 33 44.3**	**-0.2**
AGPR					**Sg**	**15 33 51.6**	**-0.2**
AGPR				IAML		15 33 52.1	
	comp=N,6µm,0.4s						
AGPR				IAML		15 33 53.0	
	comp=N,3µm,0.4s						
AGPR	**Aguadilla, PR**	**0.54**	**356**	**ePg**	**Pg**	**15 33 44.3**	**-0.2**
AGPR				**eSg**	**Sg**	**15 33 51.9**	**+0.1**
AGPR				IAML		15 33 52.0	
	comp=N,5µm,0.4s						
AGPR				IAML		15 33 52.0	
	comp=E,2µm,0.3s						
AGPR	**Aguadilla, PR**	**0.54**	**356**	**iP**	**Pg**	**15 33 44.4**	**-0.1**
IDE	**Isla Desecheo**	**0.60**	**320**		**Pg**	**15 33 45.0**	**-0.6**
IDE					**Sg**	**15 33 53.0**	**-0.6**
IDE	**Isla Desecheo**	**0.60**	**320**	**eP**	**Pg**	**15 33 45.0**	**-0.6**
IDE				eS	**Sg**	**15 33 53.0**	**-0.6**
EMPR	**Esperanza - Ma**	**0.75**	**43**		**Pg**	**15 33 48.3**	**-0.1**
EMPR					**Sg**	**15 33 58.1**	**-0.3**
EMPR	**Esperanza - Ma**	**0.75**	**43**	**eP**	**Pg**	**15 33 48.3**	**-0.1**
EMPR				eS	**Sg**	**15 33 58.1**	**-0.3**
ECPR	**Experimental S**	**0.78**	**60**		**Pg**	**15 33 48.4**	**-0.5**
ECPR					**Sg**	**15 33 58.0**	**-1.2**
ECPR				IAML		15 33 59.6	
	comp=E,3µm,0.3s						
ECPR				IAML		15 34 06.4	
	comp=E,2µm,0.2s						
ECPR	**Experimental S**	**0.78**	**60**	**eP**	**Pg**	**15 33 48.4**	**-0.5**
SJG	**San Juan**	**0.89**	**78**		**Pg**	**15 33 50.3**	**-0.8**
SJG	**San Juan**	**0.89**	**78**	**ePg**	**Pg**	**15 33 50.5**	**-0.6**
SJG	**San Juan**	**0.89**	**78**	**iP**	**Pg**	**15 33 50.4**	**-0.8**
SJG				eS	**Sg**	**15 34 02.2**	**-0.7**
SJG	**San Juan**	**0.89**	**78**	**eP**	**Pg**	**15 33 50.6**	**-0.4**
IGPR	**InterUniversit**	**0.92**	**87**		**Pg**	**15 33 50.8**	**-0.7**
IGPR					**Sg**	**15 34 03.3**	**-0.3**
IGPR	**InterUniversit**	**0.92**	**87**	**eP**	**Pg**	**15 33 50.8**	**-0.7**
PDPR	**Patillas Dam,**	**1.00**	**85**	Pn	**Pb**	**15 33 52.3**	**-0.2**
PDPR					**Sb**	**15 34 04.6**	**-0.7**
PDPR				IAML		15 34 09.2	
	comp=E,2µm,0.6s						
PDPR	**Patillas Dam,**	**1.00**	**85**	**iP**	**Pb**	**15 33 52.4**	**-0.2**
HUMP	**Col San Antoni**	**1.18**	**79**		**Pn**	**15 33 54.9**	**-0.4**
HUMP					**Sb**	**15 34 10.5**	**0.0**
HUMP				IAML		15 34 14.0	
	comp=E,921nm,0.4s						
HUMP				IAML		15 34 15.5	
	comp=E,1µm,0.4s						
HUMP	**Col San Antoni**	**1.18**	**79**	**eP**	**Pn**	**15 33 54.9**	**-0.4**
PCDR	**Punta Cana, DR**	**1.38**	**295**		**Pn**	**15 33 57.5**	**-0.5**
PCDR	**Punta Cana, DR**	**1.38**	**295**	**ePg**	**Pn**	**15 33 58.1**	**0.0**
PCDR				IAML		15 34 23.2	
	comp=N,210nm,0.5s						
PCDR				IAML		15 34 24.9	
	comp=E,86nm,0.6s						
PCDR	**Punta Cana, DR**	**1.38**	**295**	**iP**	**Pn**	**15 33 58.1**	**0.0**
PCDR				IAML		15 34 22.2	
	comp=Z,125nm,1.1s						
HIDR	**Higuey Centro**	**1.70**	**293**	**ePg**	**Pn**	**15 34 03.3**	**+0.8**
HIDR				IAML		15 34 32.7	
	comp=N,208nm,0.2s						
HIDR				IAML		15 34 37.2	
	comp=E,231nm,0.2s						
HATOM	**Hato Mayor del**	**2.36**	**292**	**ePg**	**Pn**	**15 34 14.7**	**+3.1**
HATOM				IAML		15 34 53.9	
	comp=E,96nm,0.6s						
HATOM				IAML		15 34 55.2	
	comp=N,83nm,0.7s						
SMDR	**Samana, DR**	**2.42**	**304**	**ePg**	**Pn**	**15 34 14.9**	**+2.4**
SC01	**Santiago de lo**	**3.78**	**294**	Pn	**Pn**	**15 34 30.8**	**-0.3**
SDDR	**Presa de Saban**	**4.14**	**285**	Pn	**Pn**	**15 34 36.1**	**0.0**
LOBH	**Bahia de las A**	**4.35**	**270**	**iP**	**Pn**	**15 34 40.6**	**+1.6**
LOBH				IAML		15 35 32.4	
	comp=Z,41nm,2.0s						
GRTK	**Grand Turk**	**5.23**	**314**	**iP**	**Pn**	**15 34 52.0**	**+0.9**
GRTK				IAML		15 35 18.9	
	comp=Z,47nm,2.9s						

IDC ***06*** *15:35:19.5±0.9, 53°.34N×160°.73W, h0km, mb4.1/17, mbtmp4.1/21, ML3.9/4, Error ellipse: s-maj=24.0km s-min=14.5km az=175.0*
NEIC ***06*** *15:35:21.5±1.7, 53°.46N±0°.03×160°.53W±0°.06, h10km±1km, mb4.1/42, ML3.7/18, ML3.7(AEIC), Error ellipse: s-maj=5.9km s-min=5.4km az=238.0*
AEIC ***06*** *15:35:22.7±1.5, 53°.19N±0°.09×160°.37W±0°.09, h4km±5km, Error ellipse: s-maj=12.6km s-min=8.0km az=172.0*

ISC 06 15:35:19.8±2.9, 53°.35N±0°.06×160°.52W±0°.04, h5km±18km, n142, σ1°30/144, mb4.2/25, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**1.57**	**20**		**Pn**	**15 35 48.2**	**-0.1**
CNBA					**Sn**	**15 36 08.3**	**-0.7**
CHNA	**Chernabura Isl**	**1.58**	**20**	P	**Pn**	**15 35 48.3**	**-0.2**
DOL	**Dolgoi Island**	**1.97**	**337**		**Pn**	**15 35 54.3**	**+0.4**
DOL					**Sn**	**15 36 18.1**	**-0.8**
SDPT	**Sand Point**	**2.01**	**1**	P	**Pn**	**15 35 54.7**	**+0.5**
SDPT	**Sand Point**	**2.01**	**1**	Pn	**Pn**	**15 35 54.8**	**+0.5**
SDPT					**Sn**	**15 36 19.6**	**-0.1**
SDPT				IAML		15 36 24.4	
	comp=E,527nm,0.4s						
DT1	**Dutton Round H**	**2.04**	**330**		**Pn**	**15 35 55.2**	**+0.3**
DT1					**Sn**	**15 36 20.8**	**+0.1**
DTNA	**Dutton South F**	**2.07**	**331**		**Pn**	**15 35 55.8**	**+0.6**
DTNA					**Sn**	**15 36 22.1**	**+0.6**
PS4A	**Pavlof South-4**	**2.15**	**339**		**Pn**	**15 35 57.0**	**+0.7**
PS4A					**Pb**	**15 35 57.2**	**-2.0**
PS4A					**Sn**	**15 36 24.6**	**+1.3**
PS1A	**Pavlof South-1**	**2.20**	**341**		**Pn**	**15 35 57.9**	**+1.0**
PS1A					**Sn**	**15 36 25.5**	**+1.0**
PN7A	**Pavlof North-7**	**2.26**	**338**		**Pn**	**15 35 59.3**	**+1.4**
PN7A					**Pb**	**15 35 59.7**	**-1.5**
ISNN	**Isanotski Nort**	**2.43**	**309**		**Pn**	**15 36 00.8**	**+0.6**
ISNN					**Sn**	**15 36 30.2**	**0.0**
SSBA	**Shishaldin**	**2.56**	**305**		**Pn**	**15 36 02.3**	**+0.3**
SSBA					**Sn**	**15 36 32.4**	**-1.1**
VNKR	**Veniaminof 5**	**2.77**	**13**		**Pn**	**15 36 06.1**	**+1.3**
VNHG	**Veniaminof 1**	**2.98**	**15**		**Pn**	**15 36 09.3**	**+1.5**
VNFG	**Fog Glacier, M**	**3.00**	**10**		**Pn**	**15 36 09.5**	**+1.5**
AKSA	**Akutan Strait**	**3.17**	**286**		**Pn**	**15 36 10.2**	**-0.1**
AKSA					**Sn**	**15 36 46.3**	**-2.2**
CHGN	**Chignik**	**3.20**	**21**		**Pn**	**15 36 11.5**	**+0.8**
CHGN				IAML		15 36 54.4	
	comp=E,249nm,0.5s						
CHGN				IAML		15 36 55.5	
	comp=N,187nm,0.7s						
AKUT	**Akutan**	**3.22**	**286**	P	**Pn**	**15 36 10.8**	**-0.1**
AKUT	**Akutan**	**3.22**	**286**		**Pn**	**15 36 10.9**	**0.0**

AKUT IAML 15 36 51.0
comp=N,232nm,0.6s
AKUT IAML 15 36 51.4
comp=E,271nm,0.5s
AHB Akutan Harbor 3.24 286 Sn 15 36 48.5 -1.7
AKV Akutan Volcano 3.33 286 Pn 15 36 12.3 -0.2
ZRO Akutan Zero 3.33 285 Sn 15 36 50.1 -2.2
LVA Lava Point 3.38 286 Pn 15 36 13.0 -0.1
LVA Sn 15 36 51.6 -1.9
LVA IAML 15 36 57.6
comp=E,307nm,0.6s
AKRB Akutan Reef Bi 3.39 286 Pn 15 36 13.2 -0.1
UNV Unalaska Valle 3.60 280 P **Pn 15 36 15.6 -0.6**
UNV Unalaska Valle 3.60 280 Pn 15 36 15.5 -0.6
UNV Sn **15 36 54.9 -4.1**
UNV IAML 15 36 57.0
comp=N,133nm,0.5s
UNV IAML 15 36 57.6
comp=E,118nm,0.6s
CHIR Chirikof Islan 3.78 47 P **Pn 15 36 18.2 -0.4**
CHIR Chirikof Islan 3.78 47 Pn **Pn 15 36 18.1 -0.4**
CHIR IAML 15 37 01.8
comp=N,115nm,0.7s
OKFG Magazine Ridge 4.43 274 Pn 15 36 27.2 -0.3
OKTU Okmok Mt. Tuli 4.51 273 Pn 15 36 28.4 -0.2
SII Sitkinak Islan 4.87 46 Pn 15 36 33.1 -0.5
SII IAML 15 37 44.4
comp=N,112nm,0.7s
R17L Mt. Peulik Vol 4.90 27 Pn 15 36 35.7 +1.7
PLK1 Peulik 1 4.99 25 Pn 15 36 36.4 +1.2
CAHL Cahill 5.56 30 Pn 15 36 43.6 +0.5
Q17K Contact Creek 5.58 26 Pn 15 36 44.1 +0.7
OHAK Old Harbor 5.67 44 P **Pn 15 36 43.9 -0.7**
OHAK Old Harbor 5.67 44 Pn 15 36 44.0 -0.5
MGLS Mageik Landsli 5.67 30 Pn 15 36 44.9 +0.3
KABU Katmai Buttres 5.75 29 Pn 15 36 46.6 +0.8
O15K Ungalikthiuk R 5.86 4 Pn 15 36 48.2 +1.1
P16K Nushagak River 5.87 13 Pn 15 36 48.4 +1.1
O14K Tigyukauivet M 5.94 356 Pn 15 36 49.3 +1.0
Q18K Katmai Hardscr 6.15 28 Pn 15 36 51.6 +0.4
KDAK Kodiak Island 6.32 42 Pn **Pn 15 36 52.7 -0.9**
comp=N,1.0nm,0.3s,baz=191,slow=2.2,SNR=71
KDAK Sn **Sn 15 38 01.0 -5.1**
comp=N,3.2nm,0.3s,baz=28,slow=16,SNR=8.5
comp=N,3.6nm,0.2s
O16K Kokwok River B 6.41 11 Pn **Pn 15 36 56.1 +1.4**
N14K Kuskokwak Cree 6.62 355 Pn 15 36 59.2 +1.5
O17K Koliganek Bris 6.71 15 Pn 15 37 00.1 +1.2
P18K Big Mountain, 6.73 24 Pn 15 37 00.0 +0.8
Q19K Cape Douglas, 6.78 32 Pn 15 37 00.7 +0.8
N15K Kwethluk River 6.84 2 Pn 15 37 02.0 +1.3
O18K Koktuh Hills 7.15 22 Pn 15 37 05.9 +1.0
N16K Nishlik Lake 7.21 7 Pn 15 37 06.9 +1.2
M15K Kasigluk River 7.37 359 Pn 15 37 08.6 +0.7
N17K Nushagak Hills 7.42 13 Pn 15 37 10.4 +1.7
M14K Bethel 7.47 355 Pn 15 37 10.6 +1.4
M11K Mekoryuk 7.71 338 Pn 15 37 13.7 +1.2
M16K Timber Creek 7.74 6 Pn 15 37 14.3 +1.3
CNPM China Poot 8.04 36 Pn 15 37 17.3 +0.1
L14K Kuka Creek 8.10 353 Pn 15 37 18.9 +1.0
M17K Holitna River 8.24 10 Pn 15 37 21.0 +1.1
KOSE Korovin Southe 8.26 268 Pn 15 37 20.4 +0.3
KOKL Mount Kliuchef 8.35 268 Pn 15 37 21.8 +0.4
L15K Ungalak Mounta 8.37 357 Pn 15 37 22.3 +0.7
KOWE Korovin West 8.37 269 Pn 15 37 21.9 +0.2
ATKA Atka Island 8.38 268 P **Pn 15 37 21.5 -0.2**
L16K Owhat River 8.41 3 Pn 15 37 22.9 +0.8
M18K Stony River 8.55 15 Pn 15 37 25.5 +1.5
K13K Kusilvak Mount 8.89 347 Pn 15 37 30.1 +1.4
SLKM Skilak Lake 9.11 34 Pn 15 37 32.5 +0.7
L18K Granite Mounta 9.13 11 Pn 15 37 33.1 +1.1
GSIG Igitkin Island 9.46 268 Pn 15 37 36.0 -0.6
K17K Iditarod 9.47 6 Pn 15 37 37.5 +0.8
GSMY Great Sitkin M 9.53 268 Pn 15 37 36.8 -0.7
GSTD Great Sitkin T 9.58 269 Pn 15 37 37.8 -0.4
ETKA Kagalaska Isla 9.78 268 Pn 15 37 40.4 -0.6
ADK Adak 9.94 268 P **Pn 15 37 42.9 -0.3**
ILAR Eielson Array 13.39 26 Pn **Pn 15 38 27.3 -2.9**
comp=N,0.2nm,0.3s,baz=221,slow=13,SNR=9.4
ILAR Sn **Sn 15 40 51.2 -8.0**
comp=N,0.1nm,0.3s,baz=216,slow=28,SNR=2.6
comp=N,0.6nm,0.5s
L29M L29M 15.23 41 Pn **Pn 15 38 56.1 +0.9**
L29M IAmb IAmb 15 39 05.1
comp=Z,12nm,0.8s
C18K Utukok River 15.36 359 Pn **Pn 15 38 58.2 +1.2**
E21K Killik River 15.46 9 Pn 15 38 58.7 +0.4
E21K IAmb IAmb 15 39 06.1
comp=Z,4.1nm,0.8s
M30M Minto, Yukon 15.52 44 Pn **Pn 15 38 58.6 -0.5**
M30M IAmb IAmb 15 39 08.0
comp=Z,4.6nm,0.8s
WHY Whitehorse 15.69 52 Pn **Pn 15 39 00.9 -0.5**
WHY IAmb IAmb 15 39 09.9
comp=Z,4.8nm,0.9s
E24K Your Creek 15.85 17 P **P 15 39 06.6 -0.6**
I28M Miner Creek 15.92 32 Pn **Pn 15 39 03.8 -0.5**
I28M IAmb IAmb 15 39 13.3
comp=Z,14nm,0.7s
F25K Christian Rive 15.98 21 P **P 15 39 08.7 0.0**
D23K Nanushuk River 16.34 13 Pn **Pn 15 39 10.1 +0.5**
P33M Teslin, Yukon 16.57 54 IAmb IAmb 15 39 20.9
comp=Z,6.2nm,0.9s
J30M Hart River 16.66 38 IAmb IAmb 15 39 25.3
comp=Z,6.8nm,0.6s
D24K Happy Valley 16.77 15 IAmb IAmb 15 39 20.6
comp=Z,8.9nm,0.7s
H29M Whitestone 16.91 32 Pn **Pn 15 39 16.3 -0.6**
H29M IAmb IAmb 15 39 25.2
comp=Z,15nm,0.7s
C23K Itkillik River 17.16 12 IAmb IAmb 15 39 30.7
comp=Z,32nm,1.4s
G29M Pine Creek 17.46 30 IAmb IAmb 15 39 31.1
comp=Z,22nm,0.8s
DLBC Dease Lake 17.74 61 P **P 15 39 30.1 +1.8**
comp=Z,0.2nm,0.3s,baz=249,slow=16,SNR=3.8
comp=Z,1.1nm,0.5s
MMPY Sheldon Lake, 17.92 47 IAmb IAmb 15 39 42.4
comp=Z,5.1nm,0.9s
H31M Peel River 18.02 36 Pn 15 39 30.4 -0.3
H31M IAmb IAmb 15 39 51.5
comp=Z,9.7nm,0.9s
G30M tAoh Zraii Nji 18.06 31 Pn 15 39 30.7 -0.5
G30M IAmb IAmb 15 39 36.6
comp=Z,16nm,0.8s
WTLY Watson Lake, Y 18.53 56 IAmb IAmb 15 39 58.6
comp=Z,8.2nm,0.5s
G31M Satah River 18.65 33 P 15 39 37.5 -0.6
G31M IAmb IAmb 15 39 42.9
comp=Z,14nm,1.0s
INK Inuvik 19.68 30 P **Pn 15 39 51.1 +0.4**
comp=Z,1.1nm,0.3s,baz=233,slow=12,SNR=13
comp=Z,5.7nm,0.5s
INK Inuvik 19.68 30 IAmb IAmb 15 39 52.6
comp=Z,6.3nm,0.6s
LLLB Lillooet 23.76 81 P **P 15 40 33.9 +1.0**
LLLB IAmb IAmb 15 40 45.9
comp=Z,4.5nm,0.8s
PEA0B Petropavlovsk- 24.76 286 P **P 15 40 41.5 -0.6**
PEA0B IAmb IAmb 15 41 17.7
comp=Z,8.0nm,0.8s
PETK Petropavlovsk- 24.76 286 P **P 15 40 41.8 -0.3**
comp=Z,5.3nm,0.6s,baz=83,slow=14,SNR=30
comp=Z,5.3nm,0.6s
YKA Yellowknife Ar 25.51 51 P **P 15 40 50.7 +2.0**
comp=Z,1.7nm,0.8s,baz=269,slow=7.8,SNR=4.3
comp=Z,1.7nm,0.8s
MA2 Magadan 27.09 303 P **P 15 41 03.0 -0.1**
NVAR Mina Array Bea 32.42 100 P **P 15 41 53.0 +2.3**
comp=Z,0.5nm,0.7s,baz=298,slow=8.0,SNR=8.2
comp=Z,0.5nm,0.7s
YHL Hebgen Lake 32.81 85 P **P 15 41 55.0 +0.8**
YHL IAmb IAmb 15 42 05.3
comp=Z,2.7nm,0.9s
YAK Yakutsk 36.54 312 P 15 42 25.2 -0.6
H11N2 WAKE ISLAND Hy 41.89 229 T T 16 29 16.6
baz=27,slow=76,SNR=9.9
H11N3 WAKE ISLAND Hy 41.89 229 T T 16 29 14.4
baz=27,slow=76,SNR=6.6
H11N1 WAKE ISLAND Hy 41.90 229 T T 16 29 15.6
baz=27,slow=76,SNR=5.6
HEH HeiHe 42.93 296 *e*P **P 15 43 18.4 -0.7**
HEH pmax pmax
comp=Z,6.0nm,0.8s

H11S1 WAKE ISLAND Hy 43.04 229 T T 16 30 53.6
baz=26,slow=76,SNR=17
H11S2 WAKE ISLAND Hy 43.06 229 T T 16 31 01.0
baz=26,slow=76,SNR=8.2
H11S3 WAKE ISLAND Hy 43.06 229 T T 16 31 01.5
baz=26,slow=76,SNR=6.4
TX31 Lajitas Ar. Si 47.44 97 P 15 43 56.0 +0.7
TXAR Lajitas Array 47.44 97 P **P 15 43 56.2 +0.9**
comp=Z,0.9nm,0.7s,baz=296,slow=5.7,SNR=15
comp=Z,0.9nm,0.7s
TXAR Lajitas Array 47.44 97 P 15 43 56.0 +0.7
NRIK Noril'sk 48.03 334 P **P 15 43 59.8 +0.6**
comp=Z,6.8nm,0.8s,baz=60,slow=5.2,SNR=6.4
comp=Z,6.8nm,0.8s
KSRS Korea Array 50.54 282 P **P 15 44 16.7 -2.1**
comp=Z,1.3nm,1.0s,baz=60,slow=7.2,SNR=3.3
comp=Z,1.3nm,1.0s
SONM Songino Array 55.27 305 P **P 15 44 54.0 +0.1**
comp=Z,1.6nm,0.6s,baz=51,slow=7.1,SNR=9.7
comp=Z,1.6nm,0.6s
SONM Songino Array 55.27 305 P **P 15 44 54.0 +0.1**
SONM IAmb IAmb 15 44 55.7
comp=Z,2.9nm,1.1s
HHC Hu-ho-hao-te 57.45 296 *e*P **P 15 45 09.8 +0.3**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,61nm,4.3s
ZALV Zalesovo Beam 60.15 322 P **P 15 45 28.6 +0.7**
comp=Z,0.7nm,0.4s,baz=42,slow=7.0,SNR=3.9
comp=Z,0.7nm,0.4s
GTA2 Gaotai 64.62 302 *e*P **P 15 45 58.9 +0.7**
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 65.02 323 P **P 15 46 01.4 +1.0**
KURBB Kurchatov Arra 65.13 323 P **P 15 46 01.4 +0.3**
comp=Z,1.0nm,0.2s,baz=22,slow=6.4,SNR=4.8
comp=Z,1.0nm,0.2s
FINES FINESS Array B 65.44 357 P **P 15 46 02.8 -0.1**
comp=Z,1.2nm,0.7s,baz=27,slow=7.6,SNR=0.8
comp=Z,1.2nm,0.7s
BVAR Borovoye Array 65.83 329 P **P 15 46 06.3 +0.6**
comp=Z,5.6nm,0.6s,baz=43,slow=6.5,SNR=21
comp=Z,5.6nm,0.6s
BORK Borovoye 65.83 329 P 15 46 06.1 +0.5
HFS Hagfors 66.78 3 P **P 15 46 11.6 0.0**
comp=Z,2.1nm,0.8s,baz=5.2,slow=6.3,SNR=1.6
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 66.84 318 P **P 15 46 12.0 -0.3**
comp=Z,0.7nm,0.7s,baz=50,slow=6.7,SNR=6.3
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 66.84 318 P **P 15 46 12.0 -0.3**
WMQ Urumqi 66.97 313 *e*P **P 15 46 15.0 +1.8**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,100nm,17.7s
AB31 Akbulak array 72.20 333 P 15 46 45.8 +0.5
ABKAR Akbulak array 72.20 333 P 15 46 45.9 +0.6
KSH2 Kashi 75.93 318 P **P 15 47 09.1 +1.6**
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 76.00 354 P **P 15 47 07.4 0.0**
comp=Z,0.8nm,0.5s,baz=11,slow=6.0,SNR=5.1
comp=Z,0.8nm,0.5s
AKASG Malin Array Be 76.00 354 P **P 15 47 07.4 0.0**
AKASG IAmb IAmb 15 47 26.2
comp=Z,1.8nm,1.1s
CMAR Chiang Mai Arr 81.50 289 P **P 15 47 38.2 0.0**
comp=Z,1.6nm,0.8s,baz=15,slow=5.3,SNR=14
comp=Z,1.6nm,0.8s
ESDC Sonseca Array 85.16 18 P **P 15 47 57.0 +0.2**
comp=Z,0.7nm,0.7s,baz=342,slow=3.8,SNR=5.1
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 86.50 349 P **P 15 48 04.2 +0.6**
comp=Z,1.8nm,0.8s,baz=29,slow=2.8,SNR=8.3
comp=Z,1.8nm,0.8s

FUNV ***06*** *15:42:18.1, 7˚.20N×73˚.35W, h0km, MW2.8, Presumed earthquake*
RSNC ***06*** *15:42:18.5±0.0, 7˚N±2˚×7˚.3W±˚, h148km±2km, M2.3, ML2.0*
ISC 06 15:42:16.2±1.6, **6˚.92N**±0˚.04×**73˚.15W**±0˚.06, **h159**km±9km, **n21**,σ1^{s}**74**/40, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.32**	**185**	P		**Pn**	**Pn**	**15 42 38.3**	**0.0**
BARC				P		**Pn**	**Pn**	**15 42 38.3**	**0.0**
BARC				S		**Sn**	**Sn**	**15 42 53.8**	**-1.3**
BRJC	**Barrancabermej**	**0.59**	**276**	P		**Pn**	**Pn**	**15 42 40.0**	**+0.9**
BRJC				S		**Sn**	**Sn**	**15 42 57.4**	**+0.9**
PAMC	**Pamplona, Colo**	**0.62**	**47**	P		**Pn**	**Pn**	**15 42 41.2**	**+1.4**
PAMC				S		**Sn**	**Sn**	**15 42 58.1**	**+0.2**
RUSC	**La Rusia**	**1.02**	**176**	P		**Pn**	**Pn**	**15 42 42.2**	**-0.4**
RUSC				S		**Sn**	**Sn**	**15 43 00.9**	**-2.0**
RUSC	**La Rusia**	**1.02**	**176**	*e*P		**Pn**	**Pn**	**15 42 42.6**	**0.0**
RUSC				*e*S		**Sn**	**Sn**	**15 43 00.6**	**-2.2**
OCAC	**Ocana**	**1.32**	**353**	P		**Pn**	**Pn**	**15 42 46.9**	**+1.9**
OCAC				S		**Sn**	**Sn**	**15 43 09.2**	**+2.1**
PTBC	**PUERTO BERRIO,**	**1.35**	**254**	P		**Pn**	**Pn**	**15 42 45.0**	**0.0**
PTBC				S		**Sn**	**Sn**	**15 43 06.1**	**-1.0**
SPBC	**San Pablo de B**	**1.55**	**216**	P		**Pn**	**Pn**	**15 42 47.1**	**-0.1**
SPBC				S		**Sn**	**Sn**	**15 43 09.4**	**-1.6**
NORC	**Norcasia**	**2.17**	**232**	P		**Pn**	**Pn**	**15 42 54.1**	**+0.1**
NORC				S		**Sn**	**Sn**	**15 43 23.4**	**+0.3**
CHIC	**Chingaza**	**2.34**	**194**	P		**Pn**	**Pn**	**15 42 56.4**	**0.0**
CHIC				S		**Sn**	**Sn**	**15 43 26.1**	**-1.3**
ROSC	**El Rosal**	**2.37**	**209**	P		**Pn**	**Pn**	**15 42 58.2**	**+1.6**
ROSC				S		**Sn**	**Sn**	**15 43 28.5**	**+0.7**
HELC	**Santa Helena**	**2.47**	**253**	P		**Pn**	**Pn**	**15 42 58.6**	**+0.8**
HELC				S		**Sn**	**Sn**	**15 43 31.7**	**+1.9**
HELC	**Santa Helena**	**2.47**	**253**	*e*P		**Pn**	**Pn**	**15 42 58.0**	**+0.2**
HELC				*e*S		**Sn**	**Sn**	**15 43 27.6**	**-2.2**
GUY2C	**Guyana, Caldas**	**2.77**	**233**	P		**Pn**	**Pn**	**15 43 04.2**	**+2.6**
GUY2C				S		**Sn**	**Sn**	**15 43 37.8**	**+1.2**
VILC	**Villavicencio,**	**2.84**	**191**	P		**Pn**	**Pn**	**15 43 01.5**	**-0.6**
SDV	**Santo Domingo**	**3.17**	**52**	*e*S		**Sn**	**Sn**	**15 43 45.9**	**+0.7**
APAC	**Apartado, Choc**	**3.54**	**286**	P		**Pn**	**Pn**	**15 43 11.5**	**+0.7**
SJCC	**San Jacinto, C**	**3.58**	**326**	P		**Pn**	**Pn**	**15 43 12.5**	**+1.1**
SJCC				S		**Sn**	**Sn**	**15 43 54.5**	**+0.3**
SJCC	**San Jacinto, C**	**3.58**	**326**	*e*P		**Pn**	**Pn**	**15 43 09.2**	**-2.2**
SJCC				*e*S		**Sn**	**Sn**	**15 43 47.1**	**-7.1**
PRAC	**Prado**	**3.62**	**209**	P		**Pn**	**Pn**	**15 43 12.1**	**+0.2**
PRAC				S		**Sn**	**Sn**	**15 43 55.0**	**-0.2**
ORTC	**Ortega, Tolima**	**3.64**	**215**	P		**Pn**	**Pn**	**15 43 13.2**	**+1.0**
ORTC				S		**Sn**	**Sn**	**15 43 56.9**	**+1.2**

NEIC ***06*** *16:01:17.9±1.8, 24˚.23S±0˚.09×180˚.0E±0˚.1, h504km±2km, mb4.7/273, Error ellipse: s-maj=13.8km s-min=12.9km az=116.0*
IDC ***06*** *16:01:18.7±0.8, 24˚.18S×179˚.79E, h512km±8km, mb4.0/21, mbtmp4.9/22, Error ellipse: s-maj=9.4km s-min=8.8km az=161.0*
NOU ***06*** *16:01:18.5, 24˚.21S×179˚.70W, h545km, mb4.7/16, South of Fiji Islands*
GFZ ***06*** *16:01:19.1±0.6, 24˚S±4˚×18˚0E±˚, h506km±7km, M4.8/25, mb4.8/25*
ISC 06 16:01:18.1±0.4, **24˚.23S**±0˚.04×**179˚.93E**±0˚.05, **h511**km±4km, **h511**km:**pP-P**, **n676**,σ1^{s}**06**/610, **mb4.7**/161, **31C-30D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.35**	**160**	P		**P**	**P**	**16 02 50.7**	**+1.9**
RAO	**Raoul Island**	**5.36**	**159**	P		**P**	**P**	**16 02 49.8**	**+0.9**
	887nm,0.3s,baz=26,slow=19,SNR=7.8								
RAO				S		**S**	**S**	**16 04 00.9**	**-2.2**
	315nm,0.3s,baz=30,slow=20,SNR=1.5								
RAO	**Raoul Island**	**5.36**	**159**			**P**	**P**	**16 02 47.7**	**-1.2**
RAO						**S**	**S**	**16 04 00.9**	**-2.2**
RAO	**Raoul Island**	**5.36**	**159**	P		**P**	**P**	**16 02 50.7**	**+1.8**
GLKZ	**Green Lake**	**5.37**	**160**	P		**P**	**P**	**16 02 50.7**	**+1.8**
GLKZ				S		**S**	**S**	**16 04 03.5**	**+0.3**
MSVF	**Nonsavu**	**6.70**	**344**	P		**P**	**P**	**16 03 01.8**	**-0.1**
	38nm,0.3s,baz=198,slow=22,SNR=153								
MSVF				S		**S**	**S**	**16 04 25.7**	**-1.0**
	40nm,1.1s,baz=335,slow=21,SNR=5.0								
MSVF	**Nonsavu**	**6.70**	**344**			**P**	**P**	**16 03 02.2**	**+0.3**
MSVF						**S**	**S**	**16 04 25.7**	**-1.0**
MSVF	**Nonsavu**	**6.70**	**344**	P		**P**	**P**	**16 03 02.4**	**+0.5**
NIUE	**Niue**	**10.73**	**63**			**P**	**P**	**16 03 42.0**	**-1.3**

NIUE Niue 10.73 63 P **P 16 03 43.2 -0.1**
NIUE S **S 16 05 45.1 +2.2**
MARNC Mare, Loyalty 11.31 282 P 16 03 50.6 +1.2
OUENC Ouen Island, N 12.16 276 P 16 04 00.8 +2.4
OUZ Omahuta 12.26 205 P **P 16 04 01.5 +2.3**
ONTNC Ouen Toro 12.54 276 P 16 04 04.3 +2.0
GRZ Great Barrier 12.59 197 P **P 16 04 04.0 +1.4**
DZM Mont Dzumac 12.59 277 P **P 16 04 04.8 +1.8**
78nm,0.8s,baz=90,slow=15,SNR=48
WCZ Waipu Caves 12.63 201 P **P 16 04 05.8 +2.7**
AFI Afiamalu 12.91 39 P **P 16 04 02.1 -4.3**
34nm,0.7s,baz=195,slow=2.5,SNR=15
AFI S S 16 06 14.0 -11
36nm,0.5s,baz=82,slow=18,SNR=7.6
AFI Afiamalu 12.91 39 P 16 04 03.1 -3.3
AFI Afiamalu 12.91 39 P **P 16 04 03.1 -3.3**
AFI S S 16 06 15.7 -9.5
HAZ Te Kaha 13.61 187 P **P 16 04 12.7 -0.7**
HAZ S **S 16 06 36.3 -1.6**
WMGZ Waiomatatini S 13.61 185 P **P 16 04 13.1 -0.3**
WMGZ S **S 16 06 37.8 -0.2**
PKGZ Pakihiroa 13.69 186 P **P 16 04 14.4 +0.1**
PKGZ S **S 16 06 36.5 -3.0**
TGRZ Tauranga 13.82 192 P **P 16 04 17.7 +2.0**
RUGZ Raukumara Rang 13.83 187 P **P 16 04 15.8 -0.1**
RUGZ S **S 16 06 39.3 -3.1**
PUZ Puketiti 13.88 186 P **P 16 04 15.0 -1.2**
PUZ S **S 16 06 37.6 -5.5**
TOZ Tahuroa Road 13.98 195 P **P 16 04 18.7 +1.3**
TWGZ Tauwhareparae 14.01 186 P **P 16 04 17.0 -0.7**
TWGZ S **S 16 06 46.8 +1.1**
LIRZ Lichensteins R 14.06 192 P **P 16 04 16.1 -2.1**
EDRZ Edgecumbe 14.10 190 P **P 16 04 20.5 +1.9**
URZ Urewera 14.20 189 P **P 16 04 16.5 -3.0**
192nm,0.5s,baz=18,slow=2.0,SNR=116
URZ S **S 16 06 46.0 -3.1**
156nm,0.8s,baz=45,slow=19,SNR=9.7
URZ Urewera 14.20 189 P **P 16 04 17.0 -2.6**
URZ S **S 16 06 46.6 -2.5**
URZ Urewera 14.20 189 P **P 16 04 20.1 +0.6**
MWZ Matawai 14.21 188 P **P 16 04 18.3 -1.5**
MWZ S **S 16 06 49.7 +0.1**
MUGZ Murupara 14.46 190 P **P 16 04 20.8 -1.5**
MUGZ S **S 16 06 53.6 -0.7**
RIGZ Rimuhau 14.55 187 P **P 16 04 22.5 -0.9**
RIGZ S **S 16 06 53.1 -3.0**
RTZ Ruatahuna 14.56 189 P **P 16 04 19.5 -4.0**
KNZ Kokohu 14.88 187 P **P 16 04 26.0 -0.6**
KNZ S **S 16 06 59.7 -2.5**
HIZ Hauiti 14.88 196 P **P 16 04 29.4 +2.6**
KOUNC Koumac, New Ca 14.92 281 P **P 16 04 28.5 +1.0**
BKZ Black Stump Fm 15.18 190 P 16 04 26.4 -3.4
BKZ Black Stump Fm 15.18 190 P **P 16 04 28.1 -1.8**
BKZ Black Stump Fm 15.18 190 P **P 16 04 29.6 -0.3**
NGZ Ngauruhoe 15.35 193 P **P 16 04 31.3 -0.5**
PXZ Pawanui 15.97 189 P **P 16 04 37.3 -0.7**
WAZ Wanganui 16.04 194 P **P 16 04 38.1 -0.7**
TSZ Takapari Road 16.14 191 P **P 16 04 37.7 -2.1**
BFZ Birch Farm 16.70 190 P **P 16 04 42.2 -3.3**
BFZ Birch Farm 16.70 190 P **P 16 04 43.2 -2.3**
MRZ Mangatainoka R 16.79 192 P 16 04 42.2 -4.2
MRZ Mangatainoka R 16.79 192 P **P 16 04 42.1 -4.3**
MSWZ Moikau Station 17.58 192 P **P 16 04 50.2 -3.7**
TKNZ Takaka Hill 17.75 198 P **P 16 04 54.0 -1.4**
GVZ Greta Valley S 19.54 195 P **P 16 05 10.4 -1.4**
LTZ Lake Taylor 19.56 197 P 16 05 10.6 -1.4
OXZ Oxford 20.13 197 P **P 16 05 16.3 -0.9**
RPZ Rata Peaks 20.76 198 P **P 16 05 22.0 -0.9**
6.4nm,0.4s,baz=10,slow=4.1,SNR=23
6.4nm,0.4s
HNR Honiara 24.08 304 P **P 16 05 52.0 -1.0**
HNR Honiara 24.08 304 P **P 16 05 52.3 -0.7**
ARMA Armidale 25.85 250 P **P 16 06 08.5 -0.2**
EIDS Eidsvold 26.20 261 P **P 16 06 11.6 0.0**
EIDS Eidsvold 26.20 261 P **P 16 06 12.3 +0.7**
CAN Canberra 28.92 240 P **P 16 06 36.2 +0.7**
CAN IAmb IAmb 16 06 37.4
comp=Z,19nm,1.0s
AULRC Lightning Ridg 28.93 253 P **P 16 06 36.9 +1.4**
CMSA Cobar Meteorol 31.04 249 P **P 16 06 54.6 +0.9**
CTA Charters Tower 31.41 271 P **P 16 06 57.5 +0.3**
comp=Z,101nm,0.3s,baz=92,slow=11,SNR=94
CTA ScP **ScP 16 12 30.8 +0.9**
comp=Z,5.3nm,1.1s,baz=102,slow=4.0,SNR=3.8
CTA Charters Tower 31.41 271 P **P 16 06 58.1 +0.9**
CTAO Charters Tower 31.41 271 P **P 16 06 58.1 +0.9**
CTAO Charters Tower 31.41 271 P **P 16 06 58.3 +1.1**
TOO Toolangi 32.22 237 P **P 16 07 04.2 +0.4**
QLP Quilpie 32.27 258 P **P 16 07 05.1 +0.7**
TAU Tasmania Unive 32.67 227 P **P 16 07 08.3 +0.8**
MTSU Mount Surprise 33.69 273 P **P 16 07 17.6 +1.0**
MTSU Mount Surprise 33.69 273 P **P 16 07 17.8 +1.2**
PMG Port Moresby 34.54 290 P **P 16 07 24.1 +0.4**
PMG Port Moresby 34.54 290 P **P 16 07 24.0 +0.4**
PMG Port Moresby 34.54 290 P 16 07 23.4 -0.3
PMG Port Moresby 34.54 290 P **P 16 07 24.1 +0.4**
PMG Port Moresby 34.54 290 P **P 16 07 24.5 +0.8**
STKA Stephens Creek 34.54 249 P **P 16 07 24.2 +0.7**
comp=Z,9.3nm,0.5s,baz=88,slow=8.4,SNR=57
STKA PcP **PcP 16 09 43.5 -0.5**
comp=Z,4.8nm,0.6s,baz=86,slow=8.8,SNR=4.5
STKA S **S 16 12 13.4 -2.5**
comp=Z,3.2nm,1.1s,baz=100,slow=18,SNR=3.2
comp=Z,9.3nm,0.5s
INKA Innaminka 35.30 256 P **P 16 07 30.5 +0.6**
MGBR Mount Gambier 36.06 239 P **P 16 07 34.1 -2.0**
COEN Coen 36.10 280 P **P 16 07 38.0 +1.2**
COEN Coen 36.10 280 P **P 16 07 36.6 -0.1**
COEN Coen 36.10 280 P **P 16 07 36.4 -0.3**
AUMBR Murray Bridge 36.72 243 P **P 16 07 41.7 +0.1**
QIS Mount Isa 37.38 267 P **P 16 07 48.4 +1.2**
QIS Mount Isa 37.38 267 P **P 16 07 47.8 +0.6**
BBOO Buckleboo 39.26 247 P **P 16 08 02.0 -0.3**
AS01 Alice Springs 41.88 261 P **P 16 08 23.7 +0.2**
AS31 Alice Springs 41.92 261 P **P 16 08 23.8 +0.1**
AS31 IAmb IAmb 16 08 27.2
comp=Z,8.7nm,0.3s
ASAR Alice Springs 41.92 261 P **P 16 08 23.9 +0.1**
comp=Z,7.4nm,0.4s,baz=97,slow=7.2,SNR=435
ASAR PcP **PcP 16 10 07.6 0.0**
comp=Z,2.5nm,0.7s,baz=97,slow=7.0,SNR=2.6
ASAR ScP **ScP 16 13 09.8 +0.7**
comp=Z,6.9nm,0.9s,baz=108,slow=3.8,SNR=15
ASAR S **S 16 14 01.8 -3.2**
comp=Z,4.2nm,0.8s,baz=97,slow=15,SNR=14
ASAR PKiKP **PKiKP 16 17 10.3 -1.7**
comp=Z,0.4nm,0.5s,baz=99,slow=1.6,SNR=6.3
comp=Z,7.4nm,0.4s
AUALC St Philip's Co 41.93 261 P **P 16 08 24.3 +0.4**
WR8 Warramunga Arr 42.17 267 P **P 16 08 25.4 -0.4**
WR8 IAmb IAmb 16 08 25.9
comp=Z,18nm,0.5s
WRAB Tennant Creek 42.31 267 P **P 16 08 26.7 -0.2**
WRAB Tennant Creek 42.31 267 P **P 16 08 26.5 -0.4**
WRAB Tennant Creek 42.31 267 P **P 16 08 26.6 -0.2**
WB0 Warramunga Arr 42.32 267 P **P 16 08 26.4 -0.5**
WRA Warramunga Arr 42.32 267 P **P 16 08 26.5 -0.4**
comp=Z,23nm,0.4s,baz=100,slow=8.3,SNR=164
WRA PcP **PcP 16 10 09.2 +0.3**
comp=Z,1.5nm,0.6s,baz=100,slow=2.8,SNR=4.5
WRA ScP **ScP 16 13 12.3 +1.5**
comp=Z,11nm,0.9s,baz=100,slow=4.3,SNR=17
WRA S **S 16 14 07.9 -2.9**
comp=Z,11nm,1.2s,baz=101,slow=15,SNR=9.5
WRA PKiKP **PKiKP 16 17 10.9 -1.5**
comp=Z,0.5nm,0.5s,baz=62,slow=0.1,SNR=5.9
comp=Z,23nm,0.4s
WRA Warramunga Arr 42.32 267 P **P 16 08 26.5 -0.4**
WRA **PcP 16 10 09.2 +0.3**
JAY Jayapura 43.59 294 P **P 16 08 37.0 0.0**
comp=Z,38nm,0.7s,baz=139,slow=3.9,SNR=20
comp=Z,38nm,0.7s
GENI Genyem 43.99 293 P **P 16 08 40.6 +0.5**
FORT Forrest 46.14 250 P 16 08 55.7 -0.7
MTN Manton Dam 47.42 275 P **P 16 09 05.4 -0.9**
MTN IAmb IAmb 16 09 06.5
comp=Z,20nm,1.0s
SRPI Serui, Papua 47.70 291 P **P 16 09 08.7 +0.3**
comp=Z,36nm,0.5s
KNRA Kununurra 48.62 270 P **P 16 09 15.4 +0.1**
FITZ Fitzroy Crossi 50.74 266 P **P 16 09 31.1 +0.3**
SIJI Sorong 52.48 289 P **P 16 09 43.0 -0.5**
comp=Z,60nm,0.6s,baz=114,slow=5.2,SNR=38

	comp=Z,60nm,0.6s								
SIJI	**Sorong**	**52.48**	**289**	P	**P**	**16 09 43.3**	**-0.2**		
	comp=Z,647nmcomp=Z,76nm,0.8s								
SBA	**Scott Base**	**54.05**	**183**	P	**P**	**16 09 55.1**	**+1.5**		
SBA				IAmb	IAmb	16 09 57.7			
	comp=Z,34nm,0.9s								
VNDA	**Vanda**	**54.05**	**185**	P	**P**	**16 09 55.1**	**+1.5**		
	comp=Z,4.9nm,0.7s,baz=3.0,slow=8.0,SNR=25								
VNDA				PcP	**PcP**	**16 10 51.8**	**+1.2**		
	comp=Z,5.5nm,0.7s,baz=14,slow=4.2,SNR=8.3								
	comp=Z,4.9nm,0.7s								
VNDA	**Vanda**	**54.05**	**185**	P	**P**	**16 09 55.2**	**+1.5**		
VNDA					**PcP**	**16 10 51.8**	**+1.2**		
KLBR	**Kellerberrin**	**54.80**	**247**	P	**P**	**16 09 59.6**	**-0.1**		
MBWA	**Marble Bar**	**55.26**	**260**	P	**P**	**16 10 02.4**	**-0.6**		
CASY	**Casey**	**59.79**	**206**	P	**P**	**16 10 33.1**	**-0.1**		
CASY	**Casey**	**59.79**	**206**	P	**P**	**16 10 33.4**	**+0.2**		
GTOI	**Gorontalo**	**60.41**	**286**	P	**P**	**16 10 38.9**	**+0.7**		
	comp=Z,32nm,0.8s								
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**16 10 52.3**	**-0.2**		
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**16 10 51.8**	**-0.7**		
TOLI2				IAmb	IAmb	16 10 54.2			
	comp=Z,14nm,0.7s								
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**16 10 52.1**	**-0.4**		
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**16 11 13.8**	**+1.3**		
	comp=Z,48nm,0.7s,baz=352,slow=0.5,SNR=391								
	comp=Z,48nm,0.7s								
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**16 11 14.0**	**+1.4**		
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**16 11 14.4**	**+1.8**		
MJAR	**Matsushiro Arr**	**72.13**	**326**	P	**P**	**16 11 50.1**	**-0.4**		
	comp=Z,1.7nm,0.7s,baz=156,slow=6.9,SNR=4.3								
	comp=Z,1.7nm,0.7s								
MJAR	**Matsushiro Arr**	**72.13**	**326**	P	**P**	**16 11 50.1**	**-0.4**		
BELA	**Belgrano 2**	**76.12**	**173**	P	**P**	**16 12 12.9**	**+0.3**		
MAW	**Mawson**	**77.42**	**200**	P	**P**	**16 12 20.9**	**+1.1**		
	comp=Z,21nm,0.6s,baz=132,slow=6.1,SNR=65								
	comp=Z,21nm,0.6s								
MAW	**Mawson**	**77.42**	**200**	P	**P**	**16 12 20.7**	**+0.9**		
KSRS	**Korea Array**	**78.45**	**320**	P	**P**	**16 12 26.2**	**+0.4**		
	comp=Z,1.4nm,0.7s,baz=135,slow=5.6,SNR=9.3								
	comp=Z,1.4nm,0.7s								
UNV	**Unalaska Valle**	**78.63**	**8**	P	**P**	**16 12 25.4**	**-0.9**		
	baz=193								
PETK	**Petropavlovsk-**	**79.40**	**347**	P	**P**	**16 12 30.8**	**+0.3**		
	comp=Z,3.6nm,0.6s,baz=119,slow=6.6,SNR=12								
	comp=Z,3.6nm,0.6s								
CHNA	**Chernabura Isl**	**80.68**	**12**	P	**P**	**16 12 36.5**	**-0.5**		
	baz=199								
NJ2	**Nanjing**	**80.83**	**311**	*e*P	**P**	**16 12 40.9**	**+2.5**		
NJ2				pmax	pmax				
	comp=Z,20nm,0.5s								
USRK	**Ussuriysk Ar.**	**81.00**	**327**	P	**P**	**16 12 39.7**	**+0.6**		
	comp=Z,8.7nm,1.2s,baz=152,slow=4.6,SNR=5.9								
	comp=Z,8.7nm,1.2s								
USRK	**Ussuriysk Ar.**	**81.00**	**327**	P	**P**	**16 12 40.1**	**+1.1**		
SDPT	**Sand Point**	**81.01**	**11**	P	**P**	**16 12 38.7**	**-0.1**		
	baz=198								
SPIA	**Saint Paul Isl**	**81.51**	**5**	P	**P**	**16 12 40.7**	**-0.6**		
	baz=189								
S14K	**Fog Glacier**	**82.06**	**11**	P	**P**	**16 12 43.3**	**-1.1**		
	baz=199								
MHC	**Mount Hamilton**	**82.27**	**43**	IAmb	IAmb	16 12 48.6			
	comp=Z,26nm,1.0s								
CHIR	**Chirikof Islan**	**82.40**	**14**	P	**P**	**16 12 45.9**	**0.0**		
	baz=202								
CBX	**Cerro Bola**	**82.59**	**50**	IAmb	IAmb	16 12 49.8			
	comp=Z,15nm,0.7s								
VTX	**Valle De La Tr**	**82.69**	**51**	IAmb	IAmb	16 12 51.0			
	comp=Z,19nm,1.1s								
MG02	**Cerro Sombrero**	**82.72**	**145**	P	**P**	**16 12 49.0**	**+1.2**		
ELIB	**Princess Elisa**	**82.73**	**187**	*d*P	**P**	**16 12 47.8**	**+0.1**		
	comp=Z,25nm,0.7s								
DPP	**Dos Picos Cty**	**82.78**	**49**	IAmb	IAmb	16 12 50.9			
	comp=Z,22nm,0.9s								
ESJX	**Sierra Juarez**	**82.92**	**50**	IAmb	IAmb	16 12 52.5			
	comp=Z,25nm,1.2s								
SLBS	**Sierra La Lagu**	**83.02**	**60**	P	**P**	**16 12 52.0**	**+2.1**		
KHMM	**Horse Mountain**	**83.24**	**39**	IAmb	IAmb	16 12 53.8			
	comp=Z,19nm,0.9s								
ISA	**Isabella, Lake**	**83.29**	**46**	IAmb	IAmb	16 12 53.5			
	comp=Z,21nm,0.8s								
YUH	**Yuha Desert**	**83.29**	**50**	IAmb	IAmb	16 12 53.8			
	comp=Z,22nm,1.2s								
BORC	**Borrego Spring**	**83.30**	**49**	IAmb	IAmb	16 12 53.8			
	comp=Z,26nm,1.1s								
SUTB	**Sutter Butte**	**83.35**	**42**	IAmb	IAmb	16 12 52.7			
	comp=Z,17nm,0.7s								
SII	**Sitkinak Islan**	**83.40**	**14**	P	**P**	**16 12 50.3**	**-0.7**		
	baz=204								
KHBM	**Hayfork Bally**	**83.40**	**40**	IAmb	IAmb	16 12 54.4			
	comp=Z,18nm,0.9s								
CMB	**Columbia Colle**	**83.48**	**43**	P	**P**	**16 12 52.4**	**+0.5**		
CMB				IAmb	IAmb	16 12 54.1			
	comp=Z,16nm,0.9s								
GSI	**Gunungsitoli**	**83.56**	**274**	P	**P**	**16 12 52.8**	**0.0**		
GSI				IAmb	IAmb	16 12 54.3			
	comp=Z,15nm,0.5s								
AFDM	**Forest Hills D**	**83.68**	**42**	IAmb	IAmb	16 12 55.0			
	comp=Z,15nm,0.9s								
ORV	**Oroville**	**83.73**	**42**	IAmb	IAmb	16 12 55.3			
	comp=Z,16nm,0.9s								
N02D	**Trinity Center**	**83.90**	**40**	IAmb	IAmb	16 12 57.1			
	comp=Z,34nm,1.4s								
R17L	**Mt. Peulik Vol**	**83.93**	**13**	P	**P**	**16 12 53.0**	**-0.6**		
	baz=202								
CCCA	**Chr Cany lake**	**83.95**	**47**	IAmb	IAmb	16 12 56.8			
	comp=Z,21nm,1.0s								
CLC	**China Lake**	**83.96**	**46**	IAmb	IAmb	16 12 56.7			
	comp=Z,17nm,0.9s								
BELC	**Belle Mtn. Jos**	**84.00**	**49**	IAmb	IAmb	16 12 57.4			
	comp=Z,20nm,0.9s								
TROLL	**Troll, Antarti**	**84.01**	**181**	⇑P	**P**	**16 12 54.3**	**+0.2**		
	comp=Z,5µm,0.8s								
O03E	**Paynes Creek**	**84.01**	**41**	P	**P**	**16 12 55.3**	**+0.8**		
O03E				IAmb	IAmb	16 12 56.8			
	comp=Z,25nm,1.1s								
M02C	**Callahan**	**84.08**	**39**	IAmb	IAmb	16 12 58.0			
	comp=Z,14nm,0.8s								
CN2	**Changchun**	**84.11**	**324**	P	**P**	**16 12 55.3**	**+0.5**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.8s								
L02F	**Cave Junction**	**84.13**	**39**	IAmb	IAmb	16 12 58.1			
	comp=Z,18nm,1.3s								
OHAK	**Old Harbor**	**84.21**	**14**	P	**P**	**16 12 54.6**	**-0.3**		
	baz=204								
SNAA	**Sanae**	**84.34**	**179**	⇑P	**P**	**16 12 55.4**	**-0.2**		
	comp=Z,223nm,0.5s								
SNAA	**Sanae**	**84.34**	**179**	P	**P**	**16 12 55.5**	**-0.2**		
	comp=Z,8.6nm,0.5s,baz=177,slow=5.0,SNR=63								
	comp=Z,8.6nm,0.5s								
SNAA	**Sanae**	**84.34**	**179**	P	**P**	**16 12 55.3**	**-0.4**		
SNAA				IAmb	IAmb	16 12 56.0			
	comp=Z,11nm,0.6s								
SNAA	**Sanae**	**84.34**	**179**	P	**P**	**16 12 55.6**	**-0.1**		
WAKR	**Walker**	**84.36**	**43**	IAmb	IAmb	16 12 59.1			
	comp=Z,14nm,0.9s								
TIA	**Tai'an**	**84.41**	**314**	P	**P**	**16 12 57.9**	**+1.4**		
TIA				pmax	pmax				
	comp=Z,13nm,0.8s								
PIX	**Pinacate**	**84.44**	**52**	IAmb	IAmb	16 12 59.3			
	comp=Z,22nm,1.1s								
MPK	**Martis Peak**	**84.47**	**42**	IAmb	IAmb	16 13 00.1			
	comp=Z,22nm,0.9s								
QSM	**Queen of Sheba**	**84.53**	**47**	IAmb	IAmb	16 12 59.4			
	comp=Z,21nm,1.5s								
O14K	**Tigyukauivet M**	**84.61**	**10**	P	**P**	**16 12 56.6**	**-0.3**		
	baz=197								
PNTR	**Pine Nut**	**84.61**	**43**	IAmb	IAmb	16 13 00.1			
	comp=Z,20nm,0.9s								
Q17K	**Contact Creek**	**84.62**	**13**	P	**P**	**16 12 56.9**	**-0.1**		
	baz=202								
DSP	**Deep Springs**	**84.62**	**45**	IAmb	IAmb	16 13 00.1			
	comp=Z,20nm,1.5s								
IRM	**Iron Mountain**	**84.67**	**49**	IAmb	IAmb	16 13 00.8			
	comp=Z,34nm,1.3s								
COYC	**Coyhaique**	**84.70**	**138**	P	**P**	**16 13 00.1**	**+2.3**		
Q16K	**King Salmon**	**84.85**	**12**	P	**P**	**16 12 58.1**	**+0.1**		
	baz=201								
113A	**Mohawk Valley,**	**84.88**	**51**	IAmb	IAmb	16 13 01.7			
	comp=Z,16nm,1.1s								
KDAK	**Kodiak Island**	**84.88**	**14**	P	**P**	**16 12 58.1**	**-0.1**		
	baz=205								
BLYC	**Blythe**	**84.88**	**50**	IAmb	IAmb	16 13 01.7			
	comp=Z,16nm,1.0s								
L04D	**Klamath Falls**	**84.92**	**39**	IAmb	IAmb	16 13 01.5			
	comp=Z,17nm,0.9s								
P16K	**Nushagak River**	**84.94**	**11**	P	**P**	**16 12 58.4**	**-0.1**		
	baz=200								
HSIG		**84.95**	**55**	P	**P**	**16 13 00.0**	**+0.8**		
HSIG				IAmb	IAmb	16 13 01.8			
	comp=Z,22nm,0.8s								
VNA2	**Neumayer--Watz**	**84.97**	**178**	⇑P	**P**	**16 12 58.7**	**+0.1**		
	comp=Z,40nm,0.6s,baz=180,slow=4.6								
NVAR	**Mina Array Bea**	**85.03**	**44**	P	**P**	**16 13 00.8**	**+1.0**		
	comp=Z,5.0nm,0.8s,baz=223,slow=8.1,SNR=25								
	comp=Z,5.0nm,0.8s								
M11K	**Mekoryuk**	**85.06**	**7**	P	**P**	**16 12 59.4**	**+0.5**		
	baz=193								
Q18K	**Katmai Hardscr**	**85.15**	**13**	P	**P**	**16 12 59.3**	**-0.4**		
	baz=203								
N14K	**Kuskokwak Cree**	**85.19**	**9**	P	**P**	**16 12 59.8**	**+0.2**		
	baz=197								
VNA1	**Neumayer--Stat**	**85.21**	**177**	⇑P	**P**	**16 12 60.0**	**+0.2**		
	comp=Z,26nm,1.1s								
I03D	**Drain, OR**	**85.27**	**37**	IAmb	IAmb	16 13 02.6			
	comp=Z,13nm,0.7s								
P17K	**Kvichak River**	**85.38**	**12**	P	**P**	**16 13 01.2**	**+0.6**		
	baz=202								
M13K	**Dall Lake**	**85.43**	**8**	P	**P**	**16 13 01.3**	**+0.5**		
	baz=195								
O16K	**Kokwok River B**	**85.45**	**11**	P	**P**	**16 13 02.0**	**+1.0**		
	baz=200								
TPNV	**Topopah Spring**	**85.50**	**46**	IAmb	IAmb	16 13 03.8			
	comp=Z,8.9nm,0.7s								
TPH	**Tonopah**	**85.51**	**45**	IAmb	IAmb	16 13 04.1			
	comp=Z,12nm,0.8s								
N15K	**Kwethluk River**	**85.67**	**10**	P	**P**	**16 13 02.9**	**+1.0**		
N15K				IAmb	IAmb	16 13 04.1			
	comp=Z,21nm,1.0s								
N15K	**Kwethluk River**	**85.67**	**10**	P	**P**	**16 13 02.8**	**+0.8**		
	baz=198								
Q19K	**Cape Douglas,**	**85.69**	**13**	P	**P**	**16 13 02.2**	**+0.1**		
Q19K				IAmb	IAmb	16 13 03.2			
	comp=Z,20nm,0.9s								
Q19K	**Cape Douglas,**	**85.69**	**13**	P	**P**	**16 13 02.4**	**+0.2**		
	baz=204								
BUCK	**Buck Mountain**	**85.79**	**37**	IAmb	IAmb	16 13 06.0			
	comp=Z,26nm,1.1s								
P18K	**Big Mountain,**	**85.79**	**12**	P	**P**	**16 13 02.7**	**0.0**		
	baz=203								
O17K	**Koliganek Bris**	**85.80**	**11**	P	**P**	**16 13 03.3**	**+0.7**		
	baz=201								
I04A	**Tendick Farm,**	**85.86**	**38**	IAmb	IAmb	16 13 05.6			
	comp=Z,27nm,1.4s								
M14K	**Bethel**	**85.95**	**9**	P	**P**	**16 13 04.0**	**+0.7**		
	baz=196								
K05A	**Summer Lake**	**86.05**	**39**	IAmb	IAmb	16 13 07.3			
	comp=Z,18nm,0.9s								
M15K	**Kasigluk River**	**86.08**	**9**	P	**P**	**16 13 04.5**	**+0.6**		
	baz=198								
N16K	**Nishlik Lake**	**86.17**	**10**	P	**P**	**16 13 05.1**	**+0.7**		
	baz=199								
S11A	**Rachel**	**86.22**	**46**	IAmb	IAmb	16 13 07.4			
	comp=Z,9.9nm,0.7s								
O18K	**Koktuh Hills**	**86.22**	**12**	P	**P**	**16 13 04.3**	**-0.3**		
O18K	**Koktuh Hills**	**86.22**	**12**	P	**P**	**16 13 05.2**	**+0.5**		
	baz=203								
WIFE	**Three Sisters-**	**86.36**	**38**	IAmb	IAmb	16 13 08.4			
	comp=Z,13nm,0.8s								
L14K	**Kuka Creek**	**86.42**	**8**	P	**P**	**16 13 05.8**	**+0.4**		
	baz=196								
P19K	**Oil Pt**	**86.44**	**13**	P	**P**	**16 13 05.9**	**+0.2**		
	baz=204								
N17K	**Nushagak Hills**	**86.49**	**11**	P	**P**	**16 13 05.8**	**0.0**		
	baz=201								
H04A	**Detroit Lake**	**86.54**	**37**	IAmb	IAmb	16 13 08.8			
	comp=Z,27nm,1.3s								
PRN	**Pahroc Range**	**86.55**	**46**	IAmb	IAmb	16 13 09.7			
	comp=Z,15nm,1.0s								
M16K	**Timber Creek**	**86.66**	**10**	P	**P**	**16 13 06.6**	**0.0**		
	baz=199								
O19K	**Port Alsworth**	**86.72**	**13**	P	**P**	**16 13 07.1**	**+0.2**		
	baz=203								
K13K	**Kusilvak Mount**	**86.75**	**7**	P	**P**	**16 13 07.5**	**+0.5**		
	baz=194								
CNPM	**China Poot**	**86.76**	**14**	IAmb	IAmb	16 13 08.6			
	comp=Z,15nm,0.9s								
TUC	**Tucson**	**86.77**	**52**	P	**P**	**16 13 10.4**	**+2.4**		
N18K	**Kilae Creek**	**86.86**	**12**	P	**P**	**16 13 07.9**	**+0.2**		
	baz=202								
L15K	**Ungalak Mounta**	**86.90**	**9**	P	**P**	**16 13 08.1**	**+0.3**		
	baz=197								
O20K	**Slope Mountain**	**86.96**	**13**	P	**P**	**16 13 07.6**	**-0.6**		
	baz=205								
BRSE	**Bradley Lake S**	**87.06**	**14**	P	**P**	**16 13 08.7**	**+0.1**		
	baz=206								
WVOR	**Wild Horse Val**	**87.20**	**41**	IAmb	IAmb	16 13 12.3			
	comp=Z,22nm,1.1s								
WVOR	**Wild Horse Val**	**87.20**	**41**	P	**P**	**16 13 11.5**	**+1.6**		
L16K	**Owhat River**	**87.23**	**10**	P	**P**	**16 13 09.5**	**+0.2**		
	baz=199								
N19K	**Bonanza Creek**	**87.25**	**12**	P	**P**	**16 13 09.5**	**-0.1**		
	baz=203								
M17K	**Holitna River**	**87.26**	**11**	P	**P**	**16 13 09.0**	**-0.5**		
	baz=200								
NLWA	**Neilton Lookou**	**87.38**	**34**	IAmb	IAmb	16 13 13.3			
	comp=Z,9.3nm,1.0s								
X16A	**Lo Mia Camp, P**	**87.39**	**50**	IAmb	IAmb	16 13 14.0			
	comp=Z,11nm,1.0s								
DIB	**Dawson Inlet,**	**87.45**	**26**	IAmb	IAmb	16 13 13.4			
	comp=Z,18nm,1.1s								
LCMT	**Little Creek M**	**87.53**	**47**	IAmb	IAmb	16 13 14.1			
	comp=Z,10.0nm,1.0s								
M18K	**Stony River**	**87.63**	**11**	P	**P**	**16 13 10.4**	**-0.8**		
	baz=202								
SEW	**Seward**	**87.68**	**15**	P	**P**	**16 13 11.5**	**0.0**		
	baz=208								
BFSB	**Bamfield**	**87.69**	**33**	IAmb	IAmb	16 13 14.2			
	comp=Z,13nm,0.9s								
G06A	**Carlson Farm,**	**87.75**	**38**	IAmb	IAmb	16 13 14.6			
	comp=Z,19nm,1.0s								
L17K	**Donlin**	**87.81**	**10**	P	**P**	**16 13 11.2**	**-0.8**		
	baz=200								
Q23K	**Middleton Isla**	**87.86**	**16**	P	**P**	**16 13 12.3**	**0.0**		
	baz=210								
CAPN	**Captain Cook N**	**87.89**	**14**	P	**P**	**16 13 12.6**	**+0.2**		
	baz=206								
GAMB	**Gambell**	**87.95**	**4**	P	**P**	**16 13 12.8**	**+0.2**		
	baz=188								
O22K	**Cooper Landing**	**87.96**	**14**	P	**P**	**16 13 12.9**	**+0.2**		
	baz=207								
SZCU	**Shurtz Canyon**	**87.96**	**47**	IAmb	IAmb	16 13 16.4			
	comp=Z,8.2nm,0.8s								
HPIG		**87.98**	**59**	P	**P**	**16 13 15.5**	**+1.5**		
WUAZ	**Wupatki**	**88.02**	**50**	IAmb	IAmb	16 13 16.6			
	comp=Z,13nm,1.1s								
GNW	**Green Mountain**	**88.03**	**35**	IAmb	IAmb	16 13 15.9			
	comp=Z,14nm,0.8s								
LON	**Longmire**	**88.05**	**36**	IAmb	IAmb	16 13 15.5			
	comp=Z,9.1nm,0.8s								
P23K	**Montague Islan**	**88.08**	**16**	IAmb	IAmb	16 13 14.5			
	comp=Z,11nm,0.9s								
P23K	**Montague Islan**	**88.08**	**16**	P	**P**	**16 13 13.2**	**-0.1**		
	baz=210								
PLCA	**Paso Flores**	**88.08**	**134**	P	**P**	**16 13 15.9**	**+1.8**		
	comp=Z,4.6nm,0.8s,baz=224,slow=7.5,SNR=9.3								
	comp=Z,4.6nm,0.8s								
PLCA	**Paso Flores**	**88.08**	**134**	P	**P**	**16 13 14.8**	**+0.6**		
PLCA	**Paso Flores**	**88.08**	**134**	P	**P**	**16 13 16.2**	**+2.0**		
L18K	**Granite Mounta**	**88.16**	**11**	P	**P**	**16 13 13.4**	**-0.3**		
	baz=201								
CLRS	**Cowichan Lake**	**88.18**	**33**	IAmb	IAmb	16 13 16.5			
	comp=Z,14nm,0.9s								
M19K	**Big River Lodg**	**88.28**	**12**	P	**P**	**16 13 13.1**	**-1.1**		
	baz=203								
ELK	**Elko**	**88.30**	**43**	IAmb	IAmb	16 13 17.2			
	comp=Z,14nm,1.4s								
K17K	**Iditarod**	**88.36**	**10**	P	**P**	**16 13 14.1**	**-0.5**		
	baz=200								
CBB	**Campbell River**	**88.38**	**32**	IAmb	IAmb	16 13 17.6			
	comp=Z,21nm,1.2s								
L19K	**White Mountain**	**88.45**	**12**	IAmb	IAmb	16 13 16.6			
	comp=Z,16nm,1.0s								
L19K	**White Mountain**	**88.45**	**12**	P	**P**	**16 13 15.1**	**0.0**		
	baz=203,SNR=9.9								
RC01	**Rabbit Creek A**	**88.49**	**14**	P	**P**	**16 13 15.2**	**-0.1**		
	baz=207								
M20K	**Styx River**	**88.50**	**12**	P	**P**	**16 13 15.4**	**0.0**		
	baz=204								
X18A	**Snowflake**	**88.50**	**51**	IAmb	IAmb	16 13 18.9			
	comp=Z,7.0nm,0.7s								
ZAIG	**Zacatecas**	**88.55**	**64**	IAmb	IAmb	16 13 19.8			
	comp=Z,10nm,1.0s								
J16K	**Anvik River**	**88.56**	**9**	P	**P**	**16 13 15.7**	**+0.2**		
	baz=198								
BBB	**Bella Bella**	**88.58**	**29**	IAmb	IAmb	16 13 18.2			
	comp=Z,15nm,0.8s								
BBB	**Bella Bella**	**88.58**	**29**	P	**P**	**16 13 15.3**	**-0.5**		
G08A	**Pilot Rock**	**88.72**	**38**	IAmb	IAmb	16 13 19.9			
	comp=Z,17nm,1.0s								
MXC	**Moxie City**	**88.76**	**37**	IAmb	IAmb	16 13 19.2			
	comp=Z,13nm,0.9s								
KAIM	**Kayak Island**	**88.79**	**17**	P	**P**	**16 13 16.6**	**0.0**		
	baz=212								
MTPU	**Mount Pierson**	**88.80**	**47**	IAmb	IAmb	16 13 21.0			
	comp=Z,18nm,1.1s								
CRAG	**Craig**	**88.88**	**25**	P	**P**	**16 13 17.0**	**-0.2**		
	baz=222								
J17K	**VABM Dome**	**88.89**	**9**	P	**P**	**16 13 16.9**	**-0.2**		
	baz=199								
XAN	**Xi'an**	**88.89**	**308**	P	**P**	**16 13 19.2**	**+1.3**		
XAN				pmax	pmax				
	comp=Z,10.0nm,0.8s								
SKT	**Skwentna**	**88.91**	**13**	P	**P**	**16 13 16.7**	**-0.5**		
	baz=206								
GLI	**Glacier Island**	**88.93**	**15**	P	**P**	**16 13 17.5**	**+0.2**		
	baz=210,SNR=9.3								
EYAK	**Cordova Ski Ar**	**88.97**	**16**	P	**P**	**16 13 17.8**	**+0.3**		
	baz=211								
LTY	**Liberty**	**88.98**	**36**	IAmb	IAmb	16 13 19.9			
	comp=Z,13nm,1.1s								
M22K	**Willow**	**89.00**	**14**	P	**P**	**16 13 17.8**	**+0.3**		
	baz=207								
HAWA	**Hanford**	**89.07**	**37**	IAmb	IAmb	16 13 20.8			
	comp=Z,18nm,1.1s								
121A	**Cookes Peak, D**	**89.07**	**54**	IAmb	IAmb	16 13 22.0			
	comp=Z,17nm,1.3s								
KNK	**Knik Glacier**	**89.07**	**15**	IAmb	IAmb	16 13 19.2			
	comp=Z,12nm,0.8s								
KNK	**Knik Glacier**	**89.07**	**15**	P	**P**	**16 13 18.4**	**+0.4**		
	baz=208								
PMR	**Palmer**	**89.08**	**14**	P	**P**	**16 13 18.3**	**+0.4**		
	baz=208								
RAGM	**Ragged Mountai**	**89.11**	**17**	IAmb	IAmb	16 13 19.9			
	comp=Z,16nm,1.1s								
I17K	**Unalakleet**	**89.13**	**8**	P	**P**	**16 13 19.2**	**+1.1**		
	baz=198								
ANM	**Nome**	**89.24**	**6**	P	**P**	**16 13 19.2**	**+0.5**		
	baz=193								
SIT	**Sitka**	**89.28**	**23**	P	**P**	**16 13 19.3**	**+0.3**		
	baz=220								
V35K	**Ketchikan**	**89.36**	**25**	IAmb	IAmb	16 13 22.0			
	comp=Z,16nm,1.0s								
V35K	**Ketchikan**	**89.36**	**25**	P	**P**	**16 13 19.7**	**+0.3**		
	baz=223,SNR=10								
U33K	**Whale Pass**	**89.37**	**24**	P	**P**	**16 13 19.8**	**+0.4**		
	baz=222,SNR=9.0								
SML	**Sawmill**	**89.45**	**14**	P	**P**	**16 13 19.7**	**-0.1**		
	baz=209								
DUG	**Dugway, Tooele**	**89.54**	**45**	P	**P**	**16 13 21.8**	**+0.9**		
CUT	**Chulitna**	**89.55**	**13**	P	**P**	**16 13 20.6**	**+0.5**		
	baz=207								
L22K	**Petersville**	**89.56**	**13**	IAmb	IAmb	16 13 20.6			
	comp=Z,11nm,0.8s								
L22K	**Petersville**	**89.56**	**13**	P	**P**	**16 13 20.2**	**-0.1**		
	baz=206,SNR=10								
M23K	**Glacier View**	**89.57**	**15**	P	**P**	**16 13 20.5**	**+0.2**		
	baz=209								
CMAR	**Chiang Mai Arr**	**89.58**	**290**	P	**P**	**16 13 23.0**	**+1.6**		
	comp=Z,2.5nm,0.9s,baz=107,slow=5.1,SNR=4.4								
CMAR				PKKPbc	**PKKPbc**	**16 30 52.4**	**+0.3**		
	comp=Z,1.4nm,0.7s,baz=282,slow=4.4,SNR=7.8								
	comp=Z,2.5nm,0.9s								
PPLA	**Purkeypile**	**89.61**	**12**	P	**P**	**16 13 20.9**	**+0.3**		
	baz=205								
EPH	**Ephrata**	**89.61**	**36**	IAmb	IAmb	16 13 22.9			
	comp=Z,11nm,1.2s								
BMRM	**Bremner River**	**89.63**	**16**	IAmb	IAmb	16 13 22.1			
	comp=Z,12nm,1.0s								
BMRM	**Bremner River**	**89.63**	**16**	P	**P**	**16 13 21.5**	**+0.9**		
	baz=212,SNR=6.4								
BI02	**San Fabin de**	**89.65**	**130**	P	**P**	**16 13 22.0**	**+0.4**		
H16K	**Elim**	**89.65**	**8**	P	**P**	**16 13 21.4**	**+0.9**		
	baz=196								
S31K	**Pelican**	**89.67**	**22**

HHC **Hu-ho-hao-te** **90.60 315** *e*P **P** **16 13 27.2 +1.5**
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,28nm,5.6s
H18K Honhosa River **90.66 9** P **P** **16 13 25.7 +0.5**
baz=200
TXAR Lajitas Array **90.66 58** P **P** **16 13 27.9 +1.6**
comp=Z,9.8nm,0.7s,baz=213,slow=6.4,SNR=92
TXAR PKKPbc **PKKPbc** **16 30 50.0 0.0**
comp=Z,0.5nm,0.6s,baz=85,slow=3.7,SNR=7.5
comp=Z,9.8nm,0.7s
O28M Mount Upton **90.67 18** IAmb IAmb 16 13 27.3
comp=Z,7.3nm,0.9s
O28M Mount Upton **90.67 18** P **P** **16 13 25.8 +0.1**
baz=216,SNR=6.0
G17K Kiwalik Mounta **90.68 8** P **P** **16 13 25.6 +0.3**
baz=198
HARP HAARP **90.71 15** P **P** **16 13 25.5 -0.1**
baz=211
RND Reindeer **90.74 13** IAmb IAmb 16 13 26.6
comp=Z,10nm,0.9s
O29M Mount Kennedy **90.77 19** P **P** **16 13 25.6 -0.4**
baz=217
DHY Denali Highway **90.78 14** P **P** **16 13 26.0 0.0**
baz=210
PZH PanZhiHua **90.78 299** P **P** **16 13 28.2 +1.3**
PLBC Pleasant Camp **90.79 21** P **P** **16 13 25.4 -0.5**
baz=219
PV05 Paradox Valley **90.90 48** IAmb IAmb 16 13 29.7
comp=Z,5.7nm,0.9s
P18A Preston Nutter **90.92 46** IAmb IAmb 16 13 29.6
comp=Z,6.7nm,0.9s
I20K Naaghedeneel **90.93 11** P **P** **16 13 26.7 +0.3**
baz=203
BO02 Sierra Bellavi **90.94 129** IAmb IAmb 16 13 29.4
comp=Z,9.8nm,0.8s
MCK McKinley **91.02 13** P **P** **16 13 26.9 -0.1**
baz=208
T35M Bob Quinn **91.09 25** P **P** **16 13 27.4 -0.1**
baz=224
PV10 Paradox Valley **91.09 48** IAmb IAmb 16 13 29.3
comp=Z,6.8nm,0.7s
HWUT Hardware Ranch **91.09 44** IAmb IAmb 16 13 29.7
comp=Z,6.7nm,0.7s
HWUT Hardware Ranch **91.09 44** P **P** **16 13 28.9 +0.9**
PV19 Morning Glory **91.09 48** IAmb IAmb 16 13 30.0
comp=Z,6.8nm,1.0s
P30M Million Dollar **91.12 20** P **P** **16 13 27.6 +0.1**
baz=218
PV04 Paradox Valley **91.19 48** IAmb IAmb 16 13 30.4
comp=Z,5.0nm,0.8s
YUK8 Steele Glacier **91.21 18** P **P** **16 13 27.9 -0.2**
baz=216,SNR=7.5
ANMO Albuquerque **91.21 52** P **P** **16 13 29.4 +0.6**
PV02 Paradox Valley **91.21 48** IAmb IAmb 16 13 30.5
comp=Z,7.8nm,0.9s
PV12 Saucer Basin, **91.22 48** IAmb IAmb 16 13 30.2
comp=Z,7.3nm,0.9s
PV21 Cone Mtn., Par **91.23 48** IAmb IAmb 16 13 30.8
comp=Z,6.8nm,0.9s
M26K Nabesna, AK **91.25 16** P **P** **16 13 28.1 -0.1**
baz=213
H19K Roundabout Mou **91.29 10** P **P** **16 13 28.2 +0.2**
baz=201
G18K Tagagawik **91.32 9** P **P** **16 13 28.1 -0.1**
baz=199
YUK6 Outpost Mounta **91.34 19** P **P** **16 13 28.0 -0.8**
baz=217
YUK3 Moose Creek **91.41 18** P **P** **16 13 28.4 -0.6**
baz=216,SNR=22
S34M Telegraph Cree **91.43 24** P **P** **16 13 29.2 +0.2**
baz=223
PV15 Paradox Valley **91.45 48** IAmb IAmb 16 13 31.5
comp=Z,5.5nm,0.9s
BRWY Burwash Landin **91.49 18** P **P** **16 13 29.6 +0.4**
baz=217
H20K Anotleneega Mo **91.50 10** P **P** **16 13 29.2 +0.1**
baz=203
HYT Haines Junctio **91.50 19** P **P** **16 13 29.5 +0.1**
baz=218
M27K Edge Creek, AK **91.51 17** IAmb IAmb 16 13 31.1
comp=Z,7.4nm,0.9s
M27K Edge Creek, AK **91.51 17** P **P** **16 13 29.1 -0.3**
baz=214,SNR=8.1
YUK4 Talbot Arm **91.58 19** P **P** **16 13 30.4 +0.6**
baz=217
TPB05 Hovey Rd **91.65 57** IAmb IAmb 16 13 33.3
comp=Z,8.9nm,0.8s
I21K Tanana **91.72 11** P **P** **16 13 30.5 +0.4**
baz=205
NEA2 Nenana **91.75 13** P **P** **16 13 30.9 +0.6**
baz=208
P32M Atlin **91.76 22** P **P** **16 13 31.1 +0.6**
baz=221
K24K Donnelly Dome **91.77 14** IAmb IAmb 16 13 31.5
comp=Z,9.1nm,0.9s
K24K Donnelly Dome **91.77 14** P **P** **16 13 30.2 -0.2**
baz=211
G19K Purcell Mounta **91.77 9** P **P** **16 13 30.9 +0.6**
baz=201
Q32M Nakina River **91.79 23** P **P** **16 13 31.1 +0.3**
baz=222
MLY Manley **91.81 12** P **P** **16 13 31.6 +1.0**
baz=206
BVCY Beaver Creek **91.82 17** P **P** **16 13 30.9 +0.2**
baz=215,SNR=12
RDMU Red Mountain **91.85 46** IAmb IAmb 16 13 32.9
comp=Z,6.0nm,0.8s
F18K Selawik **91.86 8** P **P** **16 13 30.5 -0.2**
baz=198
O30N Mendenhall **91.89 20** P **P** **16 13 31.0 -0.1**
baz=219
RIDG Independent Ri **91.93 15** P **P** **16 13 31.2 -0.1**
baz=212
H21K Melozitna Rive **92.00 11** P **P** **16 13 31.5 +0.1**
baz=205
HDA Harding Lake **92.03 14** IAmb IAmb 16 13 33.2
comp=Z,8.6nm,1.4s
HDA Harding Lake **92.03 14** P **P** **16 13 31.1 -0.5**
baz=210
E17K Hotham Inlet **92.06 7** P **P** **16 13 31.9 +0.2**
baz=197
L27K Beaver Creek, **92.10 16** P **P** **16 13 32.3 +0.3**
baz=214
N30M Aishikik Lake **92.13 19** P **P** **16 13 32.3 +0.1**
baz=218
I23K Minto, Yukon-K **92.18 12** P **P** **16 13 32.5 +0.3**
baz=208
WHY Whitehorse **92.19 20** P **P** **16 13 32.4 -0.1**
baz=220
DLBC Dease Lake **92.22 24** P **P** **16 13 32.5 -0.2**
baz=224
S22A 4UR Ranch, Cre **92.30 49** IAmb IAmb 16 13 36.1
comp=Z,11nm,1.1s
F19K Shaleruckik Mo **92.32 9** P **P** **16 13 32.8 0.0**
baz=200
SCRK Sand Creek **92.33 15** P **P** **16 13 33.6 +0.4**
baz=212
ILAR Eielson Array **92.36 14** P **P** **16 13 32.2 -0.9**
comp=Z,1.4nm,0.8s,baz=199,slow=4.9,SNR=11
comp=Z,1.4nm,0.8s
H22K Ishtalitna Cre **92.47 11** P **P** **16 13 33.5 -0.1**
baz=206
M29M Somme Creek **92.51 18** P **P** **16 13 34.0 0.0**
baz=217,SNR=7.5
D17K Noatak River **92.52 6** P **P** **16 13 33.6 -0.1**
baz=195
E18K Tukpahlearik C **92.52 7** P **P** **16 13 33.6 -0.1**
baz=198
P33M Teslin, Yukon **92.53 22** P **P** **16 13 34.0 -0.1**
baz=222
N31M Braeburn, Yuko **92.55 20** P **P** **16 13 33.7 -0.4**
baz=220
POKR Poker Plat Res **92.55 13** P **P** **16 13 34.3 +0.4**
baz=210
J25K Salcha River, **92.56 14** P **P** **16 13 34.7 +0.6**
baz=211
R33M Jennings River **92.56 23** P **P** **16 13 34.6 +0.2**
baz=224
LDM Libby Dam **92.59 37** IAmb IAmb 16 13 36.1
comp=Z,6.7nm,0.9s
G21K Allakaket **92.67 10** P **P** **16 13 35.4 +1.0**
baz=204
H23K Yukon River **92.75 12** P **P** **16 13 35.0 +0.1**
baz=208
F20K Avaraart Lake **92.82 9** P **P** **16 13 35.3 +0.2**
baz=202
C16K Lisburne Hills **92.86 5** P **P** **16 13 35.8 +0.5**
baz=193
PDAR Pinedale Array **92.97 44** P **P** **16 13 37.3 +0.6**
comp=Z,2.5nm,0.8s,baz=213,slow=2.9,SNR=21
comp=Z,2.5nm,0.8s
E19K Redstone River **92.98 9** P **P** **16 13 36.3 +0.4**
baz=201
H24K Noodor Dome **93.09 13** P **P** **16 13 36.8 +0.3**
baz=209
M30M Minto, Yukon **93.09 19** IAmb IAmb 16 13 37.8
comp=Z,10nm,1.4s
M30M Minto, Yukon **93.09 19** P **P** **16 13 36.7 +0.2**
baz=219
L29M L29M **93.13 18** IAmb IAmb 16 13 38.5
comp=Z,6.5nm,0.8s
L29M L29M **93.13 18** P **P** **16 13 36.8 +0.1**
baz=218,SNR=8.1
N32M Quiet Lake **93.14 21** P **P** **16 13 36.8 0.0**
baz=222
C17K DeLong Mountai **93.26 6** P **P** **16 13 37.3 +0.2**
baz=195
PRP Porcupine Dome **93.30 14** P **P** **16 13 37.5 -0.1**
baz=211
F21K Alatna River **93.32 10** P **P** **16 13 37.7 +0.2**
baz=204
OZNA Ozona **93.33 58** IAmb IAmb 16 13 40.0
comp=Z,5.6nm,0.9s
G22K Bettles **93.38 11** P **P** **16 13 38.3 +0.6**
baz=206
G23K Bananza Creek **93.45 12** P **P** **16 13 38.8 +0.8**
baz=207
M31M Drury Creek, Y **93.52 20** P **P** **16 13 38.6 +0.1**
baz=221
DAWY Dawson **93.56 17** P **P** **16 13 39.1 +0.4**
baz=216
LZDM Lanzhou Array **93.57 308** P **P** **16 13 41.3 +1.5**
comp=Z,1.5nm,0.3s,baz=111,slow=4.9,SNR=2.2
comp=Z,1.5nm,0.3s
C18K Utukok River **93.63 7** P **P** **16 13 39.6 +0.7**
baz=197
F22K John River **93.79 10** P **P** **16 13 39.9 +0.3**
baz=205
D19K Kuna River **93.85 8** P **P** **16 13 39.7 -0.1**
baz=200
WTLY Watson Lake, Y **93.85 23** P **P** **16 13 40.4 +0.3**
baz=226
E20K Nigu River **93.88 9** P **P** **16 13 39.9 -0.2**
baz=202
COLD Coldfoot **93.88 11** P **P** **16 13 39.9 -0.1**
baz=207
K29M Barlow Dome **93.88 17** IAmb IAmb 16 13 41.8
comp=Z,4.2nm,0.9s
K29M Barlow Dome **93.88 17** P **P** **16 13 40.1 -0.1**
baz=218
G24K Hadweenzic Riv **93.92 12** P **P** **16 13 40.5 +0.3**
baz=210
D20K Etivluk River **94.25 8** P **P** **16 13 41.2 -0.5**
baz=201
C19K Lookout Ridge **94.25 7** P **P** **16 13 41.2 -0.5**
baz=199
G25K Berman Lake **94.25 13** P **P** **16 13 41.7 0.0**
baz=211
I27K Kandik River **94.26 15** P **P** **16 13 41.7 -0.1**
baz=215
E21K Killik River **94.37 9** P **P** **16 13 42.3 +0.1**
baz=204
E22K Anaktuvuk Pass **94.42 10** P **P** **16 13 42.3 -0.2**
baz=206
I28M Miner Creek **94.54 16** P **P** **16 13 42.4 -0.8**
baz=216
F24K Squaw Lake **94.56 12** P **P** **16 13 42.7 -0.4**
baz=209
E23K Chandalar **94.72 11** P **P** **16 13 43.4 -0.5**
baz=208
J30M Hart River **94.78 17** P **P** **16 13 44.3 0.0**
baz=219
H27K Steamboat Moun **94.80 15** P **P** **16 13 44.7 +0.4**
baz=215
MMPY Sheldon Lake, **94.81 20** P **P** **16 13 44.9 +0.5**
baz=224
G26K Porcupine Rive **94.89 14** P **P** **16 13 44.5 0.0**
baz=213
C21K Knifeblade Rid **94.91 9** P **P** **16 13 44.8 +0.2**
baz=203
E24K Your Creek **94.94 11** P **P** **16 13 45.3 +0.4**
baz=209
F25K Christian Rive **95.06 13** P **P** **16 13 45.6 +0.2**
baz=211
G27K Doyon Strip **95.24 14** P **P** **16 13 46.2 0.0**
baz=215
TOLK Toolik Lake Re **95.25 11** P **P** **16 13 46.2 0.0**
baz=208
I30M Mount Dempster **95.27 17** P **P** **16 13 46.9 +0.4**
baz=219
D23K Nanushuk River **95.36 10** P **P** **16 13 47.3 +0.6**
baz=207
B21K Ikpikpuk River **95.36 9** P **P** **16 13 47.0 +0.3**
baz=203
B20K Meade River **95.39 8** P **P** **16 13 47.1 +0.3**
baz=201
F26K Sheenjek River **95.45 13** P **P** **16 13 47.3 +0.2**
baz=212
E25K Arctic Village **95.53 12** P **P** **16 13 47.6 +0.1**
baz=211
H29M Whitestone **95.54 16** IAmb IAmb 16 13 48.8
comp=Z,3.7nm,0.8s
H29M Whitestone **95.54 16** P **P** **16 13 47.9 +0.3**
baz=218
D24K Happy Valley **95.83 11** P **P** **16 13 48.7 -0.1**
baz=208
EPYK Eagle Plains **96.08 16** P **P** **16 13 50.1 +0.1**
baz=219
C23K Itkillik River **96.15 10** P **P** **16 13 50.4 +0.3**
baz=207
G29M Pine Creek **96.18 15** P **P** **16 13 49.9 -0.5**
baz=218
B22K Teshekpuk Lake **96.19 9** P **P** **16 13 49.7 -0.6**
baz=204
H31M Peel River **96.27 17** P **P** **16 13 50.3 -0.6**
baz=221
F28M Old Crow **96.31 14** P **P** **16 13 51.7 +0.7**
baz=216
E27K Coleen River **96.39 14** P **P** **16 13 52.3 +0.9**
baz=215
D25K Kavik River **96.41 11** P **P** **16 13 51.8 +0.4**
baz=211
G30M tAoh Zraii Nji **96.67 16** IAmb IAmb 16 13 53.6
comp=Z,4.9nm,0.9s
G30M tAoh Zraii Nji **96.67 16** P **P** **16 13 52.9 +0.2**
baz=220
G31M Satah River **97.13 17** P Pdif 16 13 54.8 +0.2
baz=221
C27K Jago River **97.17 12** P Pdif 16 13 54.9 +0.2
baz=213
E28M Babbage River **97.18 14** IAmb IAmb 16 13 56.2
comp=Z,2.3nm,0.8s
E28M Babbage River **97.18 14** P Pdif 16 13 54.8 -0.1
baz=217
F30M Barrier River **97.27 16** P Pdif 16 13 55.3 0.0
baz=220
SONM Songino Array **97.31 319** PKKPbc PKKPbc 16 30 32.3 -1.1
comp=Z,1.5nm,0.9s,baz=287,slow=3.6,SNR=4.7
E29M Blow River **97.38 15** P Pdif 16 13 55.4 -0.3
baz=218
D27M Malcolm River **97.39 13** P **P** **16 13 56.5 +0.6**
baz=215
F31M Tsiigehtchic **97.66 16** P **P** **16 13 57.5 +0.6**
baz=222
D28M Stokes Point **97.93 14** P Pdif 16 13 58.0 -0.2
baz=217
C36M Paulatuk **101.56 17** P **Pdif** **16 14 14.7 +0.4**
baz=230
ZALV Leesovo Beam **112.16 321** PKiKP **PKiKP** **16 18 53.7 -1.2**
comp=Z,2.2nm,0.4s,baz=124,slow=1.3,SNR=12
ZALV PKKPbc **PKKPbc** **16 29 47.8 -1.0**
comp=Z,0.6nm,0.4s,baz=239,slow=3.2,SNR=4.4
MKAR Makanchi Array **112.33 313** PKiKP **PKiKP** **16 18 54.6 -0.9**
comp=Z,2.3nm,0.7s,baz=219,slow=1.4,SNR=18
MKAR SKP **SKPdf** **16 21 42.4 0.0**
comp=Z,0.3nm,0.4s,baz=52,slow=2.0,SNR=4.0
MKAR PKKPbc **PKKPbc** **16 29 48.0 -0.1**
comp=Z,1.3nm,0.7s,baz=289,slow=4.4,SNR=10
MKAR PKKPab **PKKPab** **16 29 57.8 +1.5**
comp=Z,2.1nm,0.7s,baz=282,slow=4.1,SNR=11
KURBB Kurchatov Arra **115.44 316** PKP **PKPdf** **16 19 00.1 -1.2**
comp=Z,4.4nm,0.7s,baz=98,slow=1.9,SNR=26
KURBB PP **PP** **16 20 11.4 -1.1**
comp=Z,1.0nm,1.0s,baz=96,slow=6.2,SNR=4.1
KURBB SKP **SKPdf** **16 21 48.2 +0.1**
comp=Z,0.7nm,0.7s,baz=82,slow=2.6,SNR=4.2
KURBB PKKPbc **PKKPbc** **16 29 38.0 +0.3**
comp=Z,1.2nm,0.6s,baz=278,slow=4.3,SNR=9.9
KURBB PKKPab **PKKPab** **16 29 42.9 +0.5**
comp=Z,1.2nm,0.8s,baz=288,slow=5.2,SNR=7.7
KSH2 Kashi **115.64 303** PKP **PKPdf** **16 19 01.9 -0.4**
AAK Ala-Archa **117.05 307** PKP **PKPdf** **16 19 03.9 -1.0**
comp=Z,1.3nm,0.3s,baz=141,slow=3.7,SNR=4.3
BDFB Brasilia **118.68 125** PKP **PKPdf** **16 19 08.1 -0.7**
comp=Z,5.0nm,0.6s,baz=225,slow=1.8,SNR=6.5
BVAR Borovoye Array **120.64 319** PKP **PKPdf** **16 19 10.5 -0.8**
NEEM North Greenlan **121.59 12** *i* P **PKPdf** **16 19 10.4 -2.4**
KULLO Kullorsuaq **121.71 15** *i* P **PKPdf** **16 19 10.8 -1.9**
NOR Nord **122.16 3** *i* P **PKPdf** **16 19 10.3 -3.1**
SCHQ Schefferville **122.77 39** PKP **PKPdf** **16 19 14.2 -1.1**
comp=Z,3.9nm,0.9s,baz=268,slow=5.9,SNR=5.4
UPNV Upernavik **122.77 17** *i* P **PKPdf** **16 19 13.2 -1.6**
SPITS Spitsbergen Ar **125.44 356** PKP **PKPdf** **16 19 19.4 -0.4**
comp=Z,9.9nm,0.7s,baz=21,slow=2.4,SNR=6.9
ILULI Ilulissat **125.88 20** *i* P **PKPdf** **16 19 20.0 -0.8**
SUMG Summit **127.21 14** *i* P **PKPdf** **16 19 21.3 -2.5**
AKTO Aktyubinsk **128.49 316** PKP **PKPdf** **16 19 26.2 -0.1**
comp=Z,6.8nm,0.7s,baz=82,slow=2.0,SNR=14
IVI Ivigtut **130.71 28** *i* P **PKPdf** **16 19 28.6 -1.6**
SCO Scoresbysund **131.99 10** *i* P **PKPdf** **16 19 31.4 -1.0**
ARA0 ARCESS Array S **132.19 348** *e*P **PKPdf** **16 19 32.4 -0.5**
ARCES ARCESS Array B **132.19 348** PKP **PKPdf** **16 19 32.6 -0.3**
comp=Z,10.0nm,0.8s,baz=34,slow=1.7,SNR=24
ARCES SKPbc **SKPbc** **16 22 12.2 +0.8**
comp=Z,12nm,1.0s,baz=350,slow=6.2,SNR=7.9
FINES FINESS Array B **138.73 341** PKHKP PKPpre 16 19 35.1
comp=Z,1.0nm,0.4s,baz=48,slow=2.8,SNR=7.9
FINES PKP **PKPdf** **16 19 45.2 0.0**
comp=Z,3.9nm,0.6s,baz=39,slow=2.7,SNR=6.4
FINES SKPbc **SKPbc** **16 22 32.3 +0.6**
comp=Z,8.9nm,0.7s,baz=35,slow=4.7,SNR=14
NB2 NORSAR Subarra **142.39 351** PKP **PKPdf** **16 19 47.6 -4.3**
comp=Z,3.3nm,0.9s,baz=10,slow=3.2
NB2 SKPa 16 22 41.9
comp=Z,1.5nm,0.8s,baz=18,slow=2.7
NOA NORSAR Array B **142.39 351** PKHKP PKPpre 16 19 48.2
comp=Z,5.7nm,0.9s,baz=16,slow=4.7,SNR=10
NOA SKPbc **SKPbc** **16 22 41.5 +0.2**
comp=Z,2.2nm,0.8s,baz=15,slow=4.1,SNR=5.2
NC602 NORSAR Array S **142.64 351** *e*P **PKPdf** **16 19 47.8 -4.4**
HFS Hagfors **142.85 349** PKHKP PKPpre 16 19 49.6
comp=Z,24nm,0.4s,baz=34,slow=2.0,SNR=153
ASK Askoy **143.58 356** *e*P PKPab 16 19 52.1 -0.3
BER Bergen **143.67 355** *e*P PKPab 16 19 52.0 -0.8
KONO Kongsberg **143.96 352** *e*P PKPbc 16 19 53.8 0.0
LRW Lerwick **144.10 1** *e*P PKPbc 16 19 53.9 -0.3
AK03 Malin Array Si **145.19 327** PKP **PKPdf** **16 19 57.4 +0.4**
AKASG Malin Array Be **145.21 327** PKPbc **PKPdf** **16 19 56.2 -0.8**
comp=Z,15nm,0.6s,baz=45,slow=3.8,SNR=48
AKASG SKPbc **SKiKP** **16 22 48.9 +0.3**
comp=Z,6.1nm,0.6s,baz=46,slow=2.7,SNR=16
AKBB Malin Array Si **145.21 327** PKP **PKPdf** **16 19 57.2 +0.2**
AK23 Malin Array Si **145.22 327** PKP **PKPdf** **16 19 57.2 +0.2**
AK09 Malin Array Si **145.23 327** PKP **PKPdf** **16 19 57.3 +0.3**
AK15 Malin Array Si **145.26 327** PKP **PKPdf** **16 19 57.3 +0.2**
AK06 Malin Array Si **145.29 327** PKP **PKPdf** **16 19 57.4 +0.3**
AK13 Malin Array Si **145.35 327** PKP **PKPdf** **16 19 57.4 +0.2**
HOMB Homborsund **145.44 352** *e*P **PKPbc** **16 19 58.5 +0.2**
SUW Suwalki **145.53 336** *e*PKP **PKPbc** **16 19 58.7 -0.1**
SUW Suwalki **145.53 336** **PKPdf** **16 19 58.1 +0.7**
MCD Coleburn Disti **146.59 3** *e*P **PKPbc** **16 20 00.9 -0.7**
KPL Plockton **146.67 6** *e*P **PKPbc** **16 20 00.9 -0.9**
BZK Bozkurt **146.70 310** ⇑P **PKPbc** **16 20 03.2 +0.8**
SORM Soroca **147.23 324** ⇓P **PKPbc** **16 20 03.8 +0.2**
DRUM Mains of Drumt **147.30 2** *e*P **PKPbc** **16 20 02.4 -1.1**
KIRS Kirsehir-Merke **147.70 306** ⇓P **PKPbc** **16 20 05.8 +0.5**
INVG Invergeldie, C **147.70 4** *e*P **PKPbc** **16 20 03.4 -1.2**
BRTR Keskin Array B **147.72 307** PKPbc **PKPbc** **16 20 04.8 -0.6**
comp=Z,6.2nm,0.7s,baz=139,slow=3.7,SNR=14
MMAI Mount Meron Ar **147.78 294** PKPbc **PKPbc** **16 20 06.1 +0.5**
comp=Z,24nm,0.7s,baz=79,slow=2.9,SNR=33
EAB Aberfoyle **147.92 4** *e*P **PKPbc** **16 20 03.6 -1.5**
BEL Belsk **148.14 335** *e*PKP **PKiKP** **16 20 06.8 -0.4**
GKP Gorka Klasztor **148.19 340** *e*PKP **PKPbc** **16 20 05.8 -0.1**
EKA Eskdalemuir Ar **148.84 3** PKPbc **PKPbc** **16 20 07.0 -0.5**
comp=Z,4.9nm,0.4s,baz=343,slow=2.6,SNR=3.5
ESK Eskdalemuir **148.86 3** *e*P **PKPbc** **16 20 06.3 -1.2**
GIRR Girov **148.94 324** ⇓P **PKPbc** **16 20 08.6 +0.6**
GHRR **148.97 321** ⇓P **PKiKP** **16 20 09.6 +0.6**
NEWG New Galloway **148.99 5** *e*P **PKPbc** **16 20 06.3 -1.5**
KWP Kalwaria Pacia **149.02 331** *e*PKP **PKPbc** **16 20 08.6 +0.4**
CFR Carcaliu **149.04 319** ⇑P **PKPbc** **16 20 08.5 +0.3**
TPGR Topolog **149.04 319** ⇓P **PKiKP** **16 20 09.1 -0.2**
IZVR Izvoarele **149.05 320** ⇑P **PKiKP** **16 20 09.0 -0.2**
TESR Tescani **149.13 323** ⇓P **PKPbc** **16 20 08.9 +0.4**
BURAR Bucovina Array **149.20 326** ⇑P **PKiKP** **16 20 09.8 +0.2**
TIRR Tirgusor **149.26 318** ⇓P **PKPbc** **16 20 08.9 +0.1**
SAHE Sakarya_HENDEK **149.31 310** ⇑P **PKPbc** **16 20 09.2 0.0**
BSEG Bad Segeberg **149.32 348** *e*PKPbc **PKiKP** **16 20 09.4 -0.1**
comp=Z,22,slow=2.2
ONER Baraj Valea Uz **149.37 323** ⇑P **PKiKP** **16 20 10.0 +0.1**
EDMD Edmundbyers **149.40 2** *e*P **PKPbc** **16 20 08.2 -0.6**
TLBR Topalu **149.43 318** ⇓P **PKiKP** **16 20 10.2 +0.1**
VRI Vrincioaia **149.47 322** ⇓P **PKPbc** **16 20 09.6 +0.3**
MANR Mangalia **149.48 317** ⇓P **PKiKP** **16 20 10.1 0.0**
PLOR Plostina **149.52 322** ⇓P **PKPbc** **16 20 09.7 +0.2**
SAHR Sahastru **149.57 321** ⇑P **PKPbc** **16 20 10.0 +0.4**
KOLS Kolonicke sedl **149.72 330** *e*PKP **PKiKP** **16 20 10.8 +0.3**
KOLS *e* 16 20 18.6
COVR Voineasa-Covas **149.77 322** ⇓P **PKPbc** **16 20 10.2 +0.1**
OJC Ojcow **149.80 334** *e*PKP **PKPbc** **16 20 10.4 +0.5**
STHS Stebnicka Huta **149.82 332** *e*PKP **PKPbc** **16 20 10.1 0.0**
RUE Ruedersdorf **149.88 343** *e*PKPbc **PKiKP** **16 20 10.8 +0.1**
comp=Z,22,slow=2.2
ISR Istrita **150.00 321** ⇓P **PKPbc** **16 20 11.0 +0.3**
GORT1 Trebel **150.01 346** *e*PKPbc **PKiKP** **16 20 11.1 +0.3**
comp=Z,22,slow=2.2
SILT Sile **150.03 311** ⇓P **PKiKP** **16 20 11.4 0.0**
MLR Muntele Rosu **150.13 322** ⇓P **PKPbc** **16 20 11.1 +0.1**
DOPR Dopca **150.15 323** ⇓P **PKiKP** **16 20 12.0 +0.5**
NIE Niedzica **150.22 333** *e*PKP **PKiKP** **16 20 12.3 +0.7**
KSP Ksiaz **150.57 339** *e*PKP **PKiKP** **16 20 12.6 +0.4**
MDB Medias **150.59 324** ⇓P **PKiKP** **16 20 13.0 +0.6**
CJR Cluj-Napoca **150.63 326** ⇓P **PKiKP** **16 20 12.7 +0.2**
FLTG Flechtingen **150.64 346** *e*PKPbc **PKiKP** **16 20 12.3 +0.1**
comp=Z,22,slow=2.2
FLTG *e*pPKPbc **pPKPab** **16 22 16.9 +1.6**
baz=22,slow=2.4
RETH Rethem/Aller, **150.64 348** *e*PKPbc **PKiKP** **16 20 12.5 +0.3**
baz=22,slow=2.2
MESR Meseseni **150.66 327** ⇓P **PKiKP** **16 20 12.9 +0.4**
VOIR **150.66 322** ⇓P **PKPbc** **16 20 12.6 +0.3**
OKC Ostrava-Krasne **150.75 336** ⇑*e*PKP **PKiKP** **16 20 12.9 +0.3**
OKC *e*PKPAB **PKPab** **16 20 21.9 +0.4**
LANS Liptovska Anna **150.77 333** *e*PKP **PKiKP** **16 20 14.1 +1.4**
OSTC Ostas **150.84 338** ⇑*e*PKP **PKiKP** **16 20 13.1 +0.3**
LBWR Ladybower, Pea **150.84 2** *e*P **PKPbc** **16 20 11.7 -0.5**
CHVC Chvalec **150.86 339** ⇑*e*PKP **PKiKP** **16 20 13.2 +0.3**
MARR Marisel-Cluj **150.90 326** ⇑P **PKPbc** **16 20 13.0 +0.2**
ARR Arges **150.94 323** ⇓P **PKiKP** **16 20 14.5 +1.2**
UPC Upice **150.95 339** ⇑*e*PKP **PKiKP** **16 20 13.0 0.0**
ASSE Asse, Remlinge **150.95 346** *e*PKPbc **PKiKP** **16 20 13.2 +0.3**
baz=22,slow=2.2
DPC Dobruska-Polom **150.98 338** ⇑*e*PKP **PKiKP** **16 20 13.5 +0.4**
MORC Moravsky Berou **151.02 336** ⇑P **PKiKP** **16 20 13.4 +0.1**
MORC Moravsky Berou **151.02 336** *e*PKP **PKPbc** **16 20 13.0 +0.1**
MORC *e* 16 22 11.6
DRGR **151.03 327** ⇓P **PKiKP** **16 20 13.4 +0.1**
KRLC Kraliky **151.05 337** ⇑*e*PKP **PKiKP** **16 20 13.4 +0.1**
KRLC *e*PKPAB **PKPab** **16 20 23.9 +1.1**
CLL Collm **151.15 343** *e*PKPbc **PKiKP** **16 20 13.6 +0.3**
baz=22,slow=2.2
CLL *e*pPKPbc **pPKPab** **16 22 18.4 +0.9**
baz=22,slow=2.4
CLL Collm **151.15 343** *e*PKPdf **PKPdf** **16 20 08.0 +1.4**
CLL ⇑*i*PKPbc **PKPbc** **16 20 13.2 +0.2**
comp=Z,52nm,0.8s
CLL *e*PKPab **PKPab** **16 20 23.0 -0.1**
CLL *i* pPKPab **pPKPab** **16 22 17.8 +0.4**
CLL *i* x x 16 22 24.5
BRG Berggiesshubel **151.27 341** *e*PKPbc **PKiKP** **16 20 14.1 +0.4**
baz=22,slow=2.2
BRG *e*pPKPbc **pPKPab** **16 22 19.0 +1.0**
baz=22,slow=2.4
BRG Berggiesshubel **151.27 341** ⇓*e*PKPf 16 20 07.1
BRG Amp 16 20 08.1
comp=Z,3.3nm,0.8s

BRG				⇑PKPb			16 20 13.8		
BRG				Amp			16 20 14.4		
	comp=Z,25nm,0.6s								
BRG				PKPab	**PKPab**		**16 20 21.0**	**-2.6**	
BRG				Amp			16 20 22.5		
	comp=Z,7.9nm,0.9s								
BRG				pPKP	pPKPab		16 22 18.6	+0.7	
BRG				Amp			16 22 19.4		
	comp=Z,9.7nm,1.0s								
FOEL	**Foel Wylfa**	**151.28**	**4**	*e*P	**PKPbc**		**16 20 12.5**	**-0.8**	
CLZ	**Clausthal**	**151.29**	**346**	*e*PKPbc	**PKiKP**		**16 20 14.3**	**+0.5**	
	baz=22,slow=2.2								
CLZ				*ep*PKPbc	**pPKPab**		**16 22 19.0**	**+0.7**	
	baz=22,slow=2.4								
IBBN	**Ibbenburen**	**151.33**	**350**	*e*PKPbc	**PKiKP**		**16 20 14.0**	**+0.3**	
	baz=22,slow=2.2								
LOT	**Lotru**	**151.36**	**324**	⇓P	**PKPbc**		**16 20 13.7**	**-0.2**	
PVCC	**Panska Ves**	**151.39**	**340**	⇑*e*PKP	**PKiKP**		**16 20 14.5**	**+0.6**	
RICC	**Richard**	**151.52**	**341**	⇑*e*PKP	**PKiKP**		**16 20 14.7**	**+0.5**	
PSZ	**Piszkesteto**	**151.54**	**331**	⇓P	**PKiKP**		**16 20 14.5**	**+0.1**	
NEUB	**Neuenburg**	**151.56**	**344**	*e*PKPbc	**PKiKP**		**16 20 14.6**	**+0.4**	
	baz=22,slow=2.2								
GTTG	**Gottingen**	**151.65**	**347**	*e*PKPbc	**PKiKP**		**16 20 14.8**	**+0.4**	
	baz=22,slow=2.2								
HSKC	**Hora Svate Kat**	**151.66**	**342**	⇑*e*PKP	**PKiKP**		**16 20 14.6**	**+0.1**	
HLM1	**Long Mynd**	**151.67**	**4**	*e*P	**PKPbc**		**16 20 13.0**	**-1.2**	
JAVC	**Velka Javorina**	**151.72**	**335**	*e*PKP	**PKiKP**		**16 20 15.4**	**+0.7**	
VRAC	**Vranov**	**151.76**	**337**	*e*PKP	**PKPbc**		**16 20 14.2**	**-0.3**	
VRAC				*e*			16 22 13.9		
PRU	**Pruhonice**	**151.87**	**340**	⇑*e*PKP	**PKPbc**		**16 20 14.9**	**+0.2**	
SIRR	**Siria**	**151.91**	**327**	⇓P	**PKiKP**		**16 20 15.6**	**+0.5**	
GZR	**Gura Zlata**	**151.93**	**324**	⇑P	**PKPbc**		**16 20 15.0**	**-0.1**	
KRUC	**Moravsky**	**152.03**	**337**	*e*PKP	**PKiKP**		**16 20 15.5**	**+0.2**	
KRUC				*e*			16 22 15.3		
TANN	**Tannenbergstha**	**152.10**	**343**	*e*PKPbc	**PKiKP**		**16 20 15.8**	**+0.3**	
	baz=22,slow=2.2								
TANN				*ep*PKPbc	**pPKPab**		**16 22 20.8**	**-0.7**	
	baz=22,slow=2.4								
MOX	**Moxa**	**152.11**	**344**	*e*PKPbc	**PKiKP**		**16 20 15.7**	**+0.3**	
	baz=22,slow=2.2								
MOX				*ep*PKPbc	**pPKPab**		**16 22 20.7**	**-0.8**	
	baz=22,slow=2.4								
PLN	**Plauen**	**152.12**	**343**	*e*PKPbc	**PKiKP**		**16 20 15.8**	**+0.3**	
	baz=22,slow=2.2								
PLN				*ep*PKPbc	**pPKPab**		**16 22 20.9**	**-0.6**	
	baz=22,slow=2.4								
TREC	**Trest**	**152.16**	**338**	⇑*e*PKP	**PKPbc**		**16 20 15.5**	**+0.1**	
MCH1	**Michaelchurch**	**152.18**	**4**	*e*P	**PKPbc**		**16 20 14.2**	**-1.1**	
BUG	**Bochum--Univer**	**152.25**	**350**	*e*PKPbc	**PKiKP**		**16 20 15.7**	**+0.1**	
	baz=22,slow=2.2								
MODS	**Modra-Piesok**	**152.27**	**335**	*e*PKP	**PKiKP**		**16 20 16.4**	**+0.6**	
KASTN	**Kahler Asten**	**152.28**	**348**	*e*PKPbc	**PKiKP**		**16 20 16.2**	**+0.4**	
	baz=22,slow=2.2								
KASTN				*ep*PKPbc	**pPKPab**		**16 22 21.2**	**-1.0**	
	baz=22,slow=2.4								
MONM	**Monmouth**	**152.35**	**4**	*e*P	**PKPbc**		**16 20 14.4**	**-1.2**	
BZS	**Buzias**	**152.38**	**326**	⇓P	**PKiKP**		**16 20 16.3**	**+0.1**	
HERR	**Herculane**	**152.46**	**324**	⇑P	**PKPbc**		**16 20 15.9**	**-0.3**	
ZVC	**Zvikov**	**152.46**	**340**	⇑*e*PKP	**PKPbc**		**16 20 16.0**	**0.0**	
ROTZ	**Rotzenmuhle**	**152.76**	**342**	*e*PKPbc	**PKiKP**		**16 20 17.1**	**+0.3**	
	baz=22,slow=2.2								
ROTZ				*ep*PKPbc	**pPKPab**		**16 22 22.2**	**-1.9**	
	baz=22,slow=2.4								
MDVR	**Moldovita**	**152.90**	**325**	⇑P	**PKPbc**		**16 20 17.1**	**-0.1**	
KHC	**Kasperske Hory**	**152.93**	**340**	⇑*e*PKP	**PKiKP**		**16 20 17.3**	**+0.1**	
KHC				*e*PKPAB	**PKPab**		**16 20 31.8**	**+1.0**	
GRF	**Grafenberg Arr**	**153.09**	**344**	*e*PKPbc	**PKiKP**		**16 20 17.9**	**+0.4**	
	baz=22,slow=2.2								
GEC2	**GERESS Array S**	**153.14**	**340**	*e*PKPbc	**PKiKP**		**16 20 17.9**	**+0.2**	
	baz=22,slow=2.2								
GERES	**GERESS Array B**	**153.14**	**340**	PKP	**PKPdf**		**16 20 09.5**	**-0.2**	
	comp=Z,0.5nm,0.7s,baz=53,slow=1.2,SNR=6.0								
GERES				PKPbc	**PKPbc**		**16 20 16.8**	**-0.8**	
	comp=Z,3.0nm,0.7s,baz=17,slow=1.4,SNR=18								
GERES				PKPab	**PKPab**		**16 20 32.0**	**+0.2**	
	comp=Z,0.7nm,0.6s,baz=48,slow=2.0,SNR=3.4								
TNS	**Taunus Mts**	**153.22**	**348**	*e*PKPbc	**PKiKP**		**16 20 18.2**	**+0.4**	
	baz=22,slow=2.2								
BOVS	**Bovan**	**153.66**	**323**	⇓P	**PKiKP**		**16 20 18.9**	**+0.1**	
BMRD	**Maredsous**	**153.70**	**353**	*d*PKP	**PKiKP**		**16 20 19.0**	**+0.3**	
WLF	**Walferdange**	**154.15**	**351**	*e*PKPbc	**PKiKP**		**16 20 20.6**	**+1.0**	
	baz=22,slow=2.2								
BFO	**Black Forest**	**155.04**	**347**	*e*PKPbc	PKPdf		16 20 21.8	+9.5	
	baz=22,slow=2.2								
DBIC	**Dimbokro**	**161.95**	**164**	PKP	**PKPdf**		**16 20 21.1**	**-0.4**	
	comp=Z,6.7nm,1.0s,baz=82,slow=3.6,SNR=3.9								
DBIC				PKPab	**PKPab**		**16 21 11.5**	**+0.9**	
	comp=Z,9.5nm,0.8s,baz=211,slow=6.6,SNR=6.6								
MTE	**Manteigas**	**162.69**	**20**	*e*PKPdf	**PKPdf**		**16 20 22.1**	**+0.6**	
PCBR	**Castelo Branco**	**163.22**	**20**	*e*PKPdf	**PKPdf**		**16 20 22.8**	**+0.9**	
EVO	**Evora**	**164.22**	**23**	*e*PKPdf	**PKPdf**		**16 20 24.1**	**+1.3**	
ESDC	**Sonseca Array**	**164.25**	**11**	PKPab	**PKPab**		**16 21 19.1**	**-1.2**	
	comp=Z,4.3nm,1.1s,baz=332,slow=4.2,SNR=11								
PLOUS	**Minas do Lousa**	**164.50**	**25**	*e*PKPdf	**PKPdf**		**16 20 24.6**	**+1.5**	
PBEJ	**Beja**	**164.72**	**24**	*e*PKPdf	**PKPdf**		**16 20 23.8**	**+0.5**	
MESJ	**Messejana**	**164.75**	**25**	*e*PKPdf	**PKPdf**		**16 20 24.7**	**+1.4**	
PBAR	**Barrancos**	**164.88**	**22**	*e*PKPdf	**PKPdf**		**16 20 24.2**	**+0.8**	
PBDV	**Barranco-do-Ve**	**165.38**	**26**	*e*PKPdf	**PKPdf**		**16 20 25.4**	**+1.5**	
TORD	**Torodi Ar. Bea**	**168.85**	**189**	PKP	**PKPdf**		**16 20 26.3**	**-0.7**	
	comp=Z,6.7nm,1.0s,baz=117,slow=0.6,SNR=14								
TORD				PKPab	**PKPab**		**16 21 41.3**	**+0.3**	
	comp=Z,9.9nm,0.7s,baz=180,slow=3.4,SNR=28								
TORD				PP	**PP**		**16 25 30.5**	**+0.5**	
	comp=Z,2.4nm,1.0s,baz=184,slow=4.4,SNR=5.2								

WEL 06 16:04:07.0±1.2,35°S±19″×17°9E±2″1,h229km±26km, M3.8/6,MLv3.8/6,Error ellipse: s-maj=30.3km s-min=20.2km az=126.9,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
WMGZ	**Waiomatatini S**	**2.71**	**187**	P		Pn	16 04 55.2	+0.2
WMGZ				S		S	16 05 34.1	+1.3
HAZ	**Te Kaha**	**2.76**	**197**	P		Pn	16 04 56.0	+0.5
HAZ				S		S	16 05 34.5	+0.8
PKGZ	**Pakihiroa**	**2.81**	**192**	P		Pn	16 04 56.2	+0.2
PKGZ				S		S	16 05 34.1	-0.5
PUZ	**Puketiti**	**2.98**	**189**	P		Pn	16 04 58.1	+0.1
PUZ				S		S	16 05 38.0	-0.1
RUGZ	**Raukumara Rang**	**2.99**	**198**	P		Pn	16 04 58.0	-0.2
RUGZ				S		S	16 05 38.2	-0.2
TWGZ	**Tauwhareparae**	**3.13**	**192**	S		S	16 05 42.3	+1.2
OPRZ	**Ohinepanea**	**3.27**	**213**	P		Pn	16 05 01.6	+0.3
MWZ	**Matawai**	**3.37**	**198**	P		Pn	16 05 02.7	+0.3
MWZ				S		S	16 05 46.5	+0.4
CNGZ	**Carnagh Statio**	**3.40**	**188**	P		Pn	16 05 02.3	-0.3
TKGZ	**Te Karaka**	**3.41**	**193**	P		Pn	16 05 03.3	+0.5
TKGZ				S		S	16 05 47.5	+0.8
URZ	**Urewera**	**3.42**	**203**	P		Pn	16 05 02.5	-0.5
URZ				S		S	16 05 48.3	+1.2
RIGZ	**Rimuhau**	**3.68**	**193**	P		Pn	16 05 05.9	-0.1
RIGZ				S		S	16 05 53.1	+0.5
MUGZ	**Murupara**	**3.73**	**206**	P		Pn	16 05 06.6	-0.1
MUGZ				S		S	16 05 54.0	+0.3
KNZ	**Kokohu**	**4.00**	**193**	P		Pn	16 05 09.7	-0.2
KNZ				S		S	16 06 00.1	+0.7
PXZ	**Pawanui**	**5.14**	**197**	P		Pn	16 05 22.8	-1.1
PXZ				S		S	16 06 23.7	-1.1
TSZ	**Takapari Road**	**5.43**	**204**	P		Pn	16 05 25.5	-1.9
BFZ	**Birch Farm**	**5.91**	**199**	P		Pn	16 05 32.4	-1.2
BFZ				S		S	16 06 39.7	-2.7
MRZ	**Mangatainoka R**	**6.10**	**204**	P		Pn	16 05 33.5	-2.4
MRZ				S		S	16 06 43.1	-3.5

*IDC **06** 16:06:20.9±0.7,34.4′N×69.07′E,h0km,mb4.0/20, mbtmp4.0/25,ML3.9/4,MS3.7/12,Error ellipse: s-maj=16.9km s-min=12.8km az=12.0*

*MOS **06** 16:06:22.0±1.1,34.57′N×69.03′E,h16km,mb4.4/12,Error ellipse: s-maj=7.5km s-min=4.3km az=80.0*

*NNC **06** 16:06:22.5±3.7,34.61′N×69.13′E,h0km,mb4.6,mpv4.5, Error ellipse: s-maj=39.1km s-min=32.0km az=132.0*

*GFZ **06** 16:06:23.4±0.3,34°N±3′×6°9E±1′,h10km,M4.6/18, mb4.6/18*

*NEIC **06** 16:06:23.6±1.6,34.59N±0.06×69.04E±0.05,h10km±4km, mb4.4/19,Error ellipse: s-maj=9.6km s-min=5.5km az=169.0*

*BJI **06** 16:06:25.5,34.77N×69.38E,h10km,mB4.7/6,mb4.6/29, Ms3.9/9,Ms7 3.6/9*

ISC 06 16:06:23.0±0.7,34.50N±0.05×69.02E±0.04,h12km±3km,
n172,σ1§57/180,mb4.3/34,MS3.7/12,13C-2D,
Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KBL	**Kabul**	**0.05**	**20**			**Pg**	**16 06 25.6**	**-0.1**
KBL				Sg		**Sg**	**16 06 27.2**	**-0.3**
KBL	**Kabul**	**0.05**	**20**	P		**Pg**	**16 06 25.6**	**-0.1**
KBL	**Kabul**	**0.05**	**20**	P		**Pg**	**16 06 25.3**	**-0.3**
SHAA	**Shahritus**	**3.15**	**347**			**Pn**	**16 07 13.8**	**+1.4**
NIL	**Nilore**	**3.61**	**102**			**Pn**	**16 07 20.5**	**+1.8**
NIL	**Nilore**	**3.61**	**102**	P		**Pn**	**16 07 20.5**	**+1.8**
NIL	**Nilore**	**3.61**	**102**	P		**Pn**	**16 07 20.5**	**+1.8**
MANEM	**Manem**	**3.73**	**35**			**Pn**	**16 07 22.8**	**+2.2**
CHGR	**Chuyangaron**	**4.15**	**1**			**Pn**	**16 07 26.2**	**-0.1**
CHGR	**Chuyangaron**	**4.15**	**1**	P		**Pn**	**16 07 26.2**	**-0.1**
CHGR	**Chuyangaron**	**4.15**	**1**	P		**Pn**	**16 07 27.6**	**+1.3**
GAR	**Garm**	**4.61**	**13**			**Pn**	**16 07 32.0**	**-0.6**
GAR	**Garm**	**4.61**	**13**	P		**Pn**	**16 07 35.0**	**+2.4**
JMU	**Jammu**	**5.14**	**108**	*e*P		**Pn**	**16 07 41.7**	**+2.0**
JMU				*e*S		**Sn**	**16 08 37.4**	**-1.5**
JMU				IAML			16 09 08.8	
	comp=E,1μm,0.3s							
JMU				IAML			16 09 09.5	
	comp=N,1μm,0.9s							
HRA	**Herat**	**5.60**	**271**			**Pn**	**16 07 48.5**	**+2.2**
BTK	**Batken**	**5.73**	**14**			**Pn**	**16 07 48.1**	**+0.1**
BTK	**Batken**	**5.73**	**14**	P		**Pn**	**16 07 48.1**	**+0.1**
BTK	**Batken**	**5.73**	**14**	P		**Pn**	**16 07 51.4**	**+3.5**
DHRM	**DHARAMSHALA**	**6.49**	**108**	*e*P		**Pn**	**16 07 59.0**	**+0.6**
DHRM				*i* x		x	16 08 27.6	
DHRM				*e*S		**Sn**	**16 09 11.6**	**-0.9**
DHRM				IAML			16 09 19.1	
	comp=N,474nm,0.5s							
DHRM				IAML			16 09 20.6	
	comp=E,819nm,0.8s							
DHRM				*ex*		x	16 09 53.4	
OHH	**Osh**	**6.72**	**25**	P		**Pn**	**16 08 02.3**	**+0.8**
OHH	**Osh**	**6.72**	**25**	P		**Pn**	**16 08 02.3**	**+0.8**
ALCI	**Alchi Leh**	**6.76**	**90**	*e*S		**Sn**	**16 09 16.8**	**-2.6**
ALCI				IAML			16 09 19.7	
	comp=N,135nm,0.6s							
ALCI				IAML			16 09 20.4	
	comp=E,138nm,0.6s							
BHK	**Bhakra**	**6.91**	**115**	*ex*		Pn	16 08 10.1	+6.0
BHK				*ex*		**Sn**	**16 09 20.5**	**-2.3**
BHK				IAML			16 10 07.2	
	comp=E,442nm,0.6s							
BHK				IAML			16 10 08.1	
	comp=N,560nm,0.6s							
KSH2	**Kashi**	**7.00**	**47**	Pn		**Pn**	**16 08 08.8**	**+3.3**
KSH2				Sn		**Sn**	**16 09 27.6**	**+2.5**
KSH2				smax		smax		
	comp=N,270nm,0.7s							
KSH2				smax		smax		
	comp=E,150nm,0.7s							
TRKS	**Terek-Say**	**7.22**	**13**	P		**Pn**	**16 08 08.7**	**+0.3**
ARSB	**Arslanbob**	**7.50**	**23**			**Pn**	**16 08 11.4**	**-0.8**
ARSB	**Arslanbob**	**7.50**	**23**	P		**Pn**	**16 08 11.4**	**-0.8**
ARK	**Arkit**	**7.65**	**17**	P		**Pn**	**16 08 15.4**	**+1.1**
ARK	**Arkit**	**7.65**	**17**	P		**Pn**	**16 08 15.4**	**+1.1**
KK31	**Karatay Array**	**8.67**	**7**			**Pn**	**16 08 27.5**	**-0.7**
KK31	**Karatay Array**	**8.67**	**7**	⇑P		**Pn**	**16 08 28.9**	**+0.7**
	comp=E,11nm,0.5s,baz=192,slow=7.3,SNR=110							
KK31				⇑S		**Sn**	**16 10 05.2**	**-0.8**
	comp=E,21nm,0.7s,baz=200,slow=24,SNR=3.6							
KK31	**Karatay Array**	**8.67**	**7**	P		**Pn**	**16 08 28.6**	**+0.4**
KK31				S		**Sn**	**16 10 05.1**	**-0.8**
KKAR	**Karatay Array**	**8.67**	**7**			**Pn**	**16 08 27.5**	**-0.7**
KKAR	**Karatay Array**	**8.67**	**7**	P		**Pn**	**16 08 27.5**	**-0.7**
UCH	**Uchtor**	**8.84**	**28**	P		**Pn**	**16 08 32.0**	**+1.1**
	SNR=31							
NRN	**Naryn**	**8.85**	**36**			**Pn**	**16 08 30.1**	**-0.8**
NRN	**Naryn**	**8.85**	**36**	P		**Pn**	**16 08 30.1**	**-0.8**
EKS2	**Erkin-Say**	**8.96**	**23**	P		Pn	16 08 38.0	+5.7
	SNR=16							
AAK	**Ala-Archa**	**9.19**	**26**	Pn		**Pn**	**16 08 37.5**	**+2.1**
	comp=E,3.7nm,0.3s,baz=203,slow=7.3,SNR=27							
AAK				Sn		**Sn**	**16 10 17.1**	**-1.7**
	comp=E,4.5nm,0.3s,baz=316,slow=20,SNR=11							
	comp=E,24nm,0.5s							
AAK	**Ala-Archa**	**9.19**	**26**	P		**Pn**	**16 08 37.6**	**+2.2**
	SNR=22							
AAK	**Ala-Archa**	**9.19**	**26**			**Pn**	**16 08 35.5**	**+0.1**
AAK						**Sn**	**16 10 17.1**	**-1.7**
AAK	**Ala-Archa**	**9.19**	**26**	⇓P		**Pn**	**16 08 37.3**	**+1.9**
	comp=E,11nm,0.5s							
AAK				⇑S		**Sn**	**16 10 19.0**	**+0.3**
	comp=E,143nm,1.3s							
AAK	**Ala-Archa**	**9.19**	**26**	*ce*P		**Pn**	**16 08 37.6**	**+2.2**
AAK				pmax		pmax		
	comp=Z,28nm,0.7s							
AAK	**Ala-Archa**	**9.19**	**26**	P		**Pn**	**16 08 36.5**	**+1.1**
KBK	**Karagaybulak**	**9.37**	**28**	P		**Pn**	**16 08 41.4**	**+3.4**
	SNR=12							
AJM	**Ajmer**	**9.38**	**148**	*e*P		**Pn**	**16 08 37.8**	**-0.2**
AJM				IAML			16 11 35.3	
	comp=E,72nm,0.7s							
AJM				IAML			16 11 35.5	
	comp=N,29nm,0.2s							
FRU1	**Bishkek**	**9.38**	**26**	P		**Pn**	**16 08 39.3**	**+1.2**
FRU1	**Bishkek**	**9.38**	**26**	P		**Pn**	**16 08 39.3**	**+1.2**
ULHL	**Ulahol**	**9.59**	**34**	P		Pn	16 08 47.4	+6.5
	SNR=5.2							
CHMS	**Chumysh**	**9.59**	**26**	P		**Pn**	**16 08 43.5**	**+2.7**
	SNR=20							
BOOM	**Boomskoye usch**	**9.64**	**32**			**Pn**	**16 08 41.8**	**+0.1**
BOOM	**Boomskoye usch**	**9.64**	**32**	P		**Pn**	**16 08 41.8**	**+0.1**
BOOM	**Boomskoye usch**	**9.64**	**32**	P		**Pn**	**16 08 42.4**	**+0.7**
USP	**Ospenovka**	**9.74**	**24**	P		**Pn**	**16 08 46.4**	**+3.5**
	SNR=7.9							
TKM2	**Tokmak 2**	**9.85**	**29**	P		**Pn**	**16 08 47.0**	**+2.4**
	SNR=38							
KDJ	**Kajisay**	**9.95**	**38**	P		**Pn**	**16 08 46.5**	**+0.5**
TARG	**Taragay, Kyrgy**	**10.00**	**41**			**Pn**	**16 08 46.5**	**-0.2**
TARG	**Taragay, Kyrgy**	**10.00**	**41**	P		**Pn**	**16 08 46.5**	**-0.2**
TARG	**Taragay, Kyrgy**	**10.00**	**41**	P		**Pn**	**16 08 46.9**	**+0.1**
WUS	**Wushi**	**10.47**	**47**	P		**Pn**	**16 08 53.5**	**+0.5**
ANVS	**Anan'yevo**	**10.68**	**37**	P		**Pn**	**16 08 55.3**	**-0.6**
ANVS	**Anan'yevo**	**10.68**	**37**	P		**Pn**	**16 08 55.3**	**-0.6**
PDGK	**Podgornoye**	**12.00**	**40**			**Pn**	**16 09 13.3**	**-0.5**
PDGK	**Podgornoye**	**12.00**	**40**	⇑P		**Pn**	**16 09 11.3**	**-2.6**
	comp=N,11nm,1.1s							
PDGK	**Podgornoye**	**12.00**	**40**	P		**Pn**	**16 09 13.4**	**-0.5**
MAKZ	**Makanchi**	**15.72**	**35**			**Pn**	**16 10 03.7**	**-0.5**
MAKZ				IAmb		IAmb	16 10 11.5	
	comp=Z,20nm,0.8s							
MAKZ	**Makanchi**	**15.72**	**35**	⇓P		**Pn**	**16 10 02.0**	**-2.1**
	comp=Z,15nm,0.7s							
MAKZ	**Makanchi**	**15.72**	**35**	P		**Pn**	**16 10 03.7**	**-0.5**
MAKZ				pmax		pmax		
	comp=Z,20nm,0.8s							
MAKZ	**Makanchi**	**15.72**	**35**	P		**Pn**	**16 10 02.2**	**-2.0**
MK31	**Makanchi Array**	**15.86**	**35**	⇑P		**Pn**	**16 10 04.5**	**-1.4**
	comp=Z,5.9nm,0.8s,baz=213,slow=9.8,SNR=10							
MK31	**Makanchi Array**	**15.86**	**35**	*ce*P		**Pn**	**16 10 05.8**	**-0.1**
MKAR	**Makanchi Array**	**15.86**	**35**	Pn		**Pn**	**16 10 05.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=220,slow=7.3,SNR=24							
	comp=Z,5.9nm,0.8s							
MKAR	**Makanchi Array**	**15.86**	**35**			**Pn**	**16 10 05.6**	**-0.3**
AB31	**Akbulak array**	**16.20**	**338**			**Pn**	**16 10 09.1**	**-1.3**
AB31				IAmb		IAmb	16 10 29.7	
	comp=Z,6.7nm,0.6s							
AB31	**Akbulak array**	**16.20**	**338**	P		**Pn**	**16 10 09.1**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=154,slow=12,SNR=56							
AB31	**Akbulak array**	**16.20**	**338**	*e*P		**Pn**	**16 10 09.0**	**-1.3**
ABKAR	**Akbulak array**	**16.20**	**338**			**Pn**	**16 10 08.9**	**-1.4**
EVN	**Everest**	**16.55**	**108**	Pn		**Pn**	**16 10 11.8**	**-3.7**
EVN				IAmb		IAmb	16 10 23.7	
	comp=Z,22nm,0.6s							
EVN	**Everest**	**16.55**	**108**	P		**Pn**	**16 10 11.6**	**-3.9**
WMQ	**Urumqi**	**17.18**	**52**	*e*P		**P**	**16 10 25.1**	**+0.6**
WMQ				L		L		
	comp=Z,440nm,8.3s							
WMQ				L		L		
	comp=Z,300nm,9.7s							
WMQ				L		L		
	comp=Z,130nm,16.5s							
KURBB	**Kurchatov Arra**	**17.55**	**20**	P		**Pn**	**16 10 25.6**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=211,slow=11,SNR=14							
	comp=Z,1.5nm,0.5s							
KURBB	**Kurchatov Arra**	**17.55**	**20**	⇑P		**Pn**	**16 10 25.1**	**-2.1**
	comp=Z,11nm,0.7s							
KURK	**Kurchatov**	**17.66**	**20**	Pn		**Pn**	**16 10 26.0**	**-2.6**
KURK	**Kurchatov**	**17.66**	**20**	P		**Pn**	**16 10 26.0**	**-2.6**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.8s							
AKTO	**Aktyubinsk**	**17.85**	**337**	P		**Pn**	**16 10 31.2**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=139,slow=17,SNR=7.5							
AKTO				S		**Sn**	**16 13 48.7**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=28,slow=16,SNR=1.1							
	comp=Z,2.2nm,0.5s							
AKTO	**Aktyubinsk**	**17.85**	**337**	⇑P		**P**	**16 10 31.8**	**+0.1**
	comp=Z,6.9nm,0.8s							
AKT	**Akhty**	**18.15**	**299**	*e*P		**Pn**	**16 10 33.3**	**-1.6**
AKT				*e*S		**Sn**	**16 13 55.9**	**-1.5**
AKT				pmax		pmax		
	comp=Z,7.0nm,0.6s							
BVAR	**Borovoye Array**	**18.55**	**3**	P		**P**	**16 10 39.2**	**-0.1**
	comp=Z,2.4nm,0.6s							
BVAR				S		**Sn**	**16 14 02.6**	**-4.1**
BORK	**Borovoye**	**18.57**	**2**	P		**P**	**16 10 38.9**	**-0.6**
BORK	**Borovoye**	**18.57**	**2**	P		**P**	**16 10 38.9**	**-0.6**
BORK				pmax		pmax		
	comp=Z,5.0nm,0.6s							
MAK	**Makhachkala**	**18.76**	**303**	*e*P		**P**	**16 10 37.5**	**-4.2**
MAK				*e*S		**Sn**	**16 14 08.1**	**-3.8**
MAK				pmax		pmax		
	comp=Z,177nm,1.1s							
MAK				MLR		MLR		
	comp=Z,246nm,15.0s							
LSA	**Lhasa**	**19.34**	**98**			**Pn**	**16 10 49.9**	**+0.1**
LSA				IAmb		IAmb	16 11 00.9	
	comp=Z,14nm,0.9s							
LSA	**Lhasa**	**19.34**	**98**	P		**Pn**	**16 10 49.9**	**+0.1**
LSA				pmax		pmax		
	comp=Z,14nm,0.9s							
LSA	**Lhasa**	**19.34**	**98**	P		**P**	**16 10 49.2**	**+0.5**
GNI	**Garni**	**20.09**	**293**	P		**P**	**16 10 55.1**	**-1.4**
	comp=Z,3.3nm,0.3s,baz=106,slow=22,SNR=1.8							
	comp=Z,3.3nm,0.3s							
GNI	**Garni**	**20.09**	**293**	P		**P**	**16 10 55.1**	**-1.4**
GNI				IAmb		IAmb	16 11 06.0	
	comp=Z,23nm,1.1s							
DGZ	**Jazzator, Alta**	**20.35**	**36**	*i* P		**P**	**16 10 59.1**	**-0.1**
DGZ				pmax		pmax		
	comp=Z,13nm,0.6s							
HAKT	**HAKKARI**	**20.68**	**286**	P		**P**	**16 11 02.9**	**-0.2**
GOMU	**GeErMu**	**21.09**	**78**	P		**P**	**16 11 08.9**	**+1.3**
SHL	**Shillong**	**21.66**	**108**	P		**P**	**16 11 13.2**	**-0.4**
SHL	**Shillong**	**21.66**	**108**	P		**P**	**16 11 13.2**	**-0.4**
SHL				pmax		pmax		
	comp=Z,38nm,0.7s							
KBZ	**Khabaz**	**22.20**	**302**	P		**P**	**16 11 18.2**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=106,slow=9.8,SNR=2.0							
	comp=Z,0.7nm,0.4s							
KBZ	**Khabaz**	**22.20**	**302**	*i* P		**P**	**16 11 17.8**	**-1.2**
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SHA1	**Shidzhatmaz**	**22.36**	**302**	*i* P		**P**	**16 11 18.4**	**-2.7**
KIV	**Kislovodsk**	**22.40**	**303**	P		**P**	**16 11 20.7**	**-0.6**
KIV	**Kislovodsk**	**22.40**	**303**	*e*P		**P**	**16 11 22.1**	**+0.7**
K

ZEA	**Zeya**	**44.61**	**46**	*e*P		**P**		**16 14 38.4**	**+3.5**
HEH	**HeiHe**	**44.75**	**51**	*e*P		**P**		**16 14 38.7**	**+2.6**
HEH				pmax		pmax			
	comp=Z,6.0nm,0.9s								
NB2	**NORSAR Subarra**	**45.04**	**324**	P		**P**		**16 14 39.5**	**+1.2**
	comp=Z,3.5nm,1.0s,baz=103,slow=8.6								
NOA	**NORSAR Array B**	**45.04**	**324**	P		**P**		**16 14 38.4**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=100,slow=8.0,SNR=4.0								
	comp=Z,0.9nm,0.9s								
YAK	**Yakutsk**	**46.53**	**34**	LR		LR		16 34 27.3	
	comp=Z,73nm,19.7s,baz=246,slow=36								
YAK	**Yakutsk**	**46.53**	**34**	P		**P**		**16 14 50.8**	**+0.8**
YAK	**Yakutsk**	**46.53**	**34**	*e*P		**P**		**16 14 51.5**	**+1.6**
YAK				*e**PP		**sP**		**16 14 57.2**	**+1.0**
YAK				*e*				16 16 25.2	
YAK				*e*				16 16 38.7	
YAK				*e*PPP		PPP		16 17 23.1	
YAK				*e*S		**S**		**16 21 41.2**	**+3.3**
YAK				*e*SSS		SSS		16 26 01.9	
YAK				pmax		pmax			
	comp=Z,11nm,0.9s								
YAK				pmax		pmax			
	comp=N,1.0nm,0.9s								
YAK				pmax		pmax			
	comp=E,2.0nm,1.1s								
YAK				pmax		pmax			
	comp=Z,96nm,5.1s								
YAK				pmax		pmax			
	comp=N,29nm,3.8s								
YAK				pmax		pmax			
	comp=E,25nm,4.4s								
YAK				smax		smax			
	comp=E,45nm,4.0s								
YAK				smax		smax			
	comp=N,36nm,4.3s								
YAK	**Yakutsk**	**46.53**	**34**	P		**P**		**16 14 51.7**	**+1.7**
KSRS	**Korea Array**	**47.09**	**69**	P		**P**		**16 14 54.0**	**-0.6**
KSRS				LR		LR		16 38 11.9	
	comp=N,1.9nm,0.8s,baz=280,slow=6.2,SNR=10								
	comp=N,34nm,18.1s,baz=280,slow=41								
	comp=N,1.9nm,0.8s								
SENIN	**Lac Senin/Sane**	**47.34**	**304**	P		**P**		**16 14 57.2**	**+0.4**
SENIN				IAmb		IAmb		16 14 58.6	
	comp=Z,6.4nm,0.8s								
KLR	**Kul'dur**	**47.64**	**52**	LR		LR		16 37 19.8	
	comp=Z,45nm,18.5s,baz=243,slow=39								
KLR	**Kul'dur**	**47.64**	**52**	*ce*P		**P**		**16 14 59.4**	**+0.6**
KLR				pmax		pmax			
	comp=Z,2.0nm,2.5s								
TIXI	**Tiksi**	**48.23**	**22**	*i* P		**P**		**16 15 01.4**	**-1.6**
TIXI				pmax		pmax			
	comp=Z,14nm,1.3s								
USRK	**Ussuriysk Ar.**	**48.57**	**59**	LR		LR		16 37 01.2	
	comp=Z,71nm,19.4s,baz=218,slow=38								
JOW	**Kunigami**	**50.92**	**82**	LR		LR		16 37 16.6	
	comp=Z,118nm,18.6s,baz=144,slow=36								
MJAR	**Matsushiro Arr**	**55.21**	**66**	P		**P**		**16 15 57.3**	**+1.6**
	comp=Z,4.7nm,1.0s,baz=292,slow=7.6,SNR=6.5								
	comp=Z,4.7nm,1.0s								
MJAR	**Matsushiro Arr**	**55.21**	**66**	P		**P**		**16 15 57.3**	**+1.6**
MJAR				IAmb		IAmb		16 16 03.8	
	comp=Z,6.4nm,1.5s								
ESDC	**Sonseca Array**	**56.98**	**298**	P		**P**		**16 16 08.7**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=46,slow=6.5,SNR=6.2								
	comp=Z,0.8nm,0.7s								
BORG	**Borgarnes**	**59.53**	**330**	LR		LR		16 46 17.4	
	comp=Z,48nm,18.1s,baz=71,slow=40								
TORD	**Torodi Ar. Bea**	**64.05**	**268**	P		**P**		**16 16 56.3**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=57,slow=6.0,SNR=10								
	comp=Z,2.2nm,0.8s								
RES	**Resolute Bay**	**70.58**	**356**	LR		LR		16 53 18.0	
	comp=Z,46nm,18.4s,baz=16,slow=40								
SHEM	**Shemya Is, Ala**	**71.53**	**38**	LR		LR		16 52 10.2	
	comp=Z,51nm,18.8s,baz=124,slow=38								
ILAR	**Eielson Array**	**77.14**	**15**	P		**P**		**16 18 15.7**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=286,slow=4.6,SNR=5.9								
	comp=Z,0.2nm,0.5s								
WRA	**Warramunga Arr**	**82.34**	**120**	P		**P**		**16 18 44.1**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=324,slow=4.8,SNR=9.4								
	comp=Z,0.4nm,0.6s								
WRA	**Warramunga Arr**	**82.34**	**120**	P		**P**		**16 18 44.1**	**-0.8**
YKA	**Yellowknife Ar**	**83.30**	**2**	P		**P**		**16 18 49.3**	**0.0**
	comp=Z,0.9nm,0.7s,baz=358,slow=5.3,SNR=2.6								
	comp=Z,0.9nm,0.7s								
ASAR	**Alice Springs**	**84.47**	**123**	P		**P**		**16 18 54.7**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=309,slow=5.3,SNR=11								
	comp=Z,0.6nm,0.5s								

*NEIC **06** 16:19:03.0±2.1, 19.°11N±0.°09×146.°0E±0.°2, h207km±9km, mb4.4/20, Error ellipse: s-maj=25.6km s-min=12.3km az=81.0*

*IDC **06** 16:19:05.5±3.2, 18.°95N×145.°89E, h232km±24km, mb3.5/8, mbtmp4.1/10, Error ellipse: s-maj=72.4km s-min=12.7km az=82.0*

ISC 06 16:19:02.0±0.7, 19.°05N±0.°06×145.°9E±0.°2, h200km, n38, σ1s52/43, mb4.1/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.79**	**182**	Pn		**Pn**		**16 20 04.5**	**+3.2**
GUMO	**Guam**	**5.53**	**191**	P		**Pn**		**16 20 26.2**	**+3.0**
	12nm,0.3s,baz=189,slow=20,SNR=1.5								
GUMO				S		**Sn**		**16 21 25.6**	**-1.8**
	30nm,0.3s,baz=177,slow=23,SNR=6.2								
GUMO	**Guam**	**5.53**	**191**	Pn		**Pn**		**16 20 26.6**	**+3.4**
GUMO						**Sn**		**16 21 25.6**	**-1.8**
JCJ	**Chichijima**	**8.72**	**337**	P		**Pn**		**16 21 08.8**	**+4.3**
	28nm,0.6s,baz=165,slow=20,SNR=1.6								
JCJ				S		**Sn**		**16 22 42.0**	**-0.4**
	20nm,0.5s,baz=82,slow=24,SNR=2.1								
JHJ2	**Mitsune**	**15.04**	**340**	P		**Pn**		**16 22 21.7**	**-2.9**
MAJO	**Matsushiro**	**18.70**	**340**	P		**P**		**16 23 03.1**	**-2.3**
MAJO				IAmb		IAmb		16 23 16.7	
	comp=Z,17nm,1.5s								
WAKE	**Wake Island**	**19.57**	**86**	P		**P**		**16 23 13.8**	**-1.1**
MANU	**Manus Island**	**21.01**	**176**	P		**P**		**16 23 28.7**	**-1.5**
MANU				IAmb		IAmb		16 23 57.1	
	comp=Z,24nm,0.9s								
TWG	**Pinlang**	**23.51**	**284**	P		**P**		**16 23 51.1**	**-3.0**
USA0B	**Ussuriysk Arra**	**27.66**	**338**	P		**P**		**16 24 30.7**	**-0.5**
USA0B				IAmb		IAmb		16 24 33.3	
	comp=Z,5.0nm,1.2s								
COEN	**Coen**	**32.91**	**185**	P		**P**		**16 25 17.6**	**0.0**
MTN	**Manton Dam**	**34.89**	**206**	P		**P**		**16 25 33.9**	**-0.8**
KNRA	**Kununurra**	**38.43**	**207**	P		**P**		**16 26 04.2**	**-0.3**
CTAO	**Charters Tower**	**38.90**	**180**	P		**P**		**16 26 08.7**	**+0.3**
CTAO				IAmb		IAmb		16 26 20.9	
	comp=Z,29nm,1.4s								
WB0	**Warramunga Arr**	**40.20**	**197**	P		**P**		**16 26 19.0**	**-0.2**
WB0				IAmb		IAmb		16 26 23.1	
	comp=Z,13nm,1.1s								
WR8	**Warramunga Arr**	**40.35**	**197**	P		**P**		**16 26 20.3**	**-0.1**
WR8				IAmb		IAmb		16 26 22.3	
	comp=Z,14nm,1.4s								
WB2	**Warramunga Arr**	**40.38**	**197**	P		**P**		**16 26 20.5**	**-0.2**
WB2				IAmb		IAmb		16 26 21.0	
	comp=Z,5.8nm,0.7s								
WRA	**Warramunga Arr**	**40.39**	**197**	P		**P**		**16 26 20.6**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=18,slow=9.0,SNR=35								
WRA				PcP		**PcP**		**16 28 20.0**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=22,slow=3.6,SNR=1.9								
	comp=Z,2.8nm,0.5s								
WRA	**Warramunga Arr**	**40.39**	**197**	P		**P**		**16 26 19.4**	**-1.3**
WRA						**PcP**		**16 28 20.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**41.96**	**210**	P		**P**		**16 26 32.8**	**-0.7**
	comp=Z,1.7nm,0.2s,baz=26,slow=7.9,SNR=33								
	comp=Z,1.7nm,0.2s								
FITZ	**Fitzroy Crossi**	**41.96**	**210**	P		**P**		**16 26 33.0**	**-0.4**
AS31	**Alice Springs**	**44.05**	**196**	P		**P**		**16 26 49.8**	**-0.4**
ASAR	**Alice Springs**	**44.05**	**196**	P		**P**		**16 26 49.7**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=12,slow=6.6,SNR=48								
	comp=Z,1.1nm,0.5s								
STKA	**Stephens Creek**	**50.81**	**185**	P		**P**		**16 27 41.1**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=2.6,slow=8.8,SNR=1.5								
	comp=Z,0.9nm,0.7s								
FORT	**Forrest**	**52.44**	**199**	P		**P**		**16 27 54.0**	**-0.2**
FORT				IAmb		IAmb		16 28 29.6	
	comp=Z,21nm,1.5s								
MORW	**Morawa**	**55.87**	**212**	P		**P**		**16 28 19.0**	**0.0**
MORW				IAmb		IAmb		16 28 40.4	
	comp=Z,24nm,1.4s								
MGBR	**Mount Gambier**	**56.70**	**185**	P		**P**		**16 28 25.7**	**+1.1**
MKAR	**Makanchi Array**	**58.38**	**314**	P		**P**		**16 28 37.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=92,slow=7.1,SNR=4.2								
	comp=Z,0.3nm,0.6s								
MKAR	**Makanchi Array**	**58.38**	**314**	P		**P**		**16 28 37.0**	**+0.6**
MAKZ	**Makanchi**	**58.60**	**314**	P		**P**		**16 28 38.9**	**+1.0**
MAKZ				IAmb		IAmb		16 28 40.3	
	comp=Z,2.3nm,1.0s								
PDGK	**Podgornoye**	**60.15**	**310**	P		**P**		**16 28 49.1**	**+0.3**
KURK	**Kurchatov**	**61.16**	**318**	P		**P**		**16 28 56.1**	**+0.8**
KURBB	**Kurchatov Arra**	**61.21**	**318**	P		**P**		**16 28 56.1**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.2,SNR=9.6								
	comp=Z,0.6nm,0.5s								
BVAR	**Borovoye Array**	**66.35**	**320**	P		**P**		**16 29 29.8**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=101,slow=6.4,SNR=3.4								
	comp=Z,1.3nm,0.5s								
AB31	**Akbulak array**	**73.23**	**317**	P		**P**		**16 30 11.4**	**+0.2**
ABKAR	**Akbulak array**	**73.23**	**317**	P		**P**		**16 30 11.1**	**-0.1**
FINES	**FINESS Array B**	**86.66**	**335**	P		**P**		**16 31 22.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=61,slow=4.4,SNR=9.5								
	comp=Z,0.6nm,0.3s								
FINES	**FINESS Array B**	**86.66**	**335**	P		**P**		**16 31 23.4**	**+0.6**

*SJA **06** 16:40:14.7±0.6, 24.°28S×67.°26W, h195km, ML3.8, MW3.6*
*GUC **06** 16:40:18.6±0.7, 24.°13S×67.°61W, h208km±10km, ML3.9*

ISC 06 16:40:13.8±1.8, 24.°24S±0.°04×67.°24W±0.°05, h206km±15km, n33, σ1s79/54, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.82**	**89**	*e*P		**Pn**		**16 40 42.6**	**-1.0**
AF01	**San Pedro de A**	**1.54**	**326**	*e*P		**Pn**		**16 40 50.4**	**+1.6**
AF01				*e*S		**S**		**16 41 17.7**	**+2.2**
SLA	**San Lorenzo**	**1.65**	**107**	*e*P		**Pn**		**16 40 50.7**	**+1.1**
SLA	**San Lorenzo**	**1.65**	**107**	*e*P		**Pn**		**16 40 50.3**	**+0.7**
PB06	**IPOC Station P**	**2.63**	**305**	*e*P		**Pn**		**16 41 00.4**	**+0.8**
PB06				*e*S		**S**		**16 41 34.5**	**-0.3**
PB06				IAML				16 41 35.1	
	comp=Z,212nm,0.3s								
PB06	**IPOC Station P**	**2.63**	**305**	*e*P		**Pn**		**16 41 01.2**	**+1.5**
PB06				*e*S		**S**		**16 41 33.2**	**-1.6**
PB06				IAML				16 41 36.8	
	comp=E,325nm,0.2s								
PB14	**IPOC Station P**	**2.91**	**262**	*e*P		**Pn**		**16 41 04.5**	**+1.5**
PB14				*e*S		**S**		**16 41 40.3**	**-0.5**
PB14				IAML				16 41 42.2	
	comp=Z,87nm,0.2s								
PB14	**IPOC Station P**	**2.91**	**262**	*e*P		**Pn**		**16 41 04.4**	**+1.4**
PB05	**IPOC Station P**	**3.05**	**296**	*e*P		**Pn**		**16 41 05.7**	**+1.3**
PB05				*e*S		**S**		**16 41 43.7**	**+0.3**
PB05	**IPOC Station P**	**3.05**	**296**	*e*P		**Pn**		**16 41 05.8**	**+1.3**
PB05				IAML				16 41 45.5	
	comp=N,111nm,0.2s								
PB09	**IPOC Station P**	**3.05**	**322**	*e*P		**Pn**		**16 41 06.0**	**+1.4**
PB09				*e*S		**S**		**16 41 43.8**	**+0.2**
PB09				IAML				16 41 44.2	
	comp=Z,278nm,0.4s								
PB09	**IPOC Station P**	**3.05**	**322**	*e*P		**Pn**		**16 41 06.4**	**+1.9**
PB09				*e*S		**S**		**16 41 42.9**	**-0.7**
PB09				IAML				16 41 44.3	
	comp=N,311nm,0.4s								
AHML	**Horco Molle**	**3.07**	**146**	*e*P		**Pn**		**16 41 05.0**	**+0.4**
AHML				*e*S		**S**		**16 41 42.8**	**-1.1**
AC02	**Maricunga**	**3.10**	**213**	*e*P		**Pn**		**16 41 07.2**	**+1.8**
AC02				*e*S		**S**		**16 41 42.6**	**-2.6**
AC02	**Maricunga**	**3.10**	**213**	*e*P		**Pn**		**16 41 07.7**	**+2.3**
PB10	**IPOC Station P**	**3.12**	**283**	*e*P		**Pn**		**16 41 06.3**	**+1.2**
PB10				*e*S		**S**		**16 41 46.1**	**+1.4**
PB10				IAML				16 41 48.8	
	comp=Z,90nm,0.3s								
PB10	**IPOC Station P**	**3.12**	**283**	*e*P		**Pn**		**16 41 06.0**	**+0.9**
PB10				*e*S		**S**		**16 41 37.8**	**-6.9**
PB10				IAML				16 41 49.6	
	comp=E,104nm,0.5s								
PB03	**IPOC Station P**	**3.18**	**313**	*e*P		**Pn**		**16 41 07.3**	**+1.3**
PB03				*e*S		**S**		**16 41 45.7**	**-0.6**
PB03				IAML				16 41 48.7	
	comp=Z,257nm,0.3s								
PB03	**IPOC Station P**	**3.18**	**313**	*e*P		**Pn**		**16 41 07.4**	**+1.3**
PB03				*e*S		**S**		**16 41 44.4**	**-1.9**
PB03				IAML				16 41 45.9	
	comp=E,283nm,0.3s								
PB07	**IPOC Station P**	**3.49**	**315**	*e*P		**Pn**		**16 41 11.0**	**+1.2**
PB07				*e*S		**S**		**16 41 51.5**	**-1.5**
PB07				IAML				16 41 52.8	
	comp=Z,308nm,0.4s								
PB07	**IPOC Station P**	**3.49**	**315**	*e*P		**Pn**		**16 41 11.0**	**+1.2**
PB07				*e*S		**S**		**16 41 50.7**	**-2.4**
PB07				IAML				16 41 52.7	
	comp=E,382nm,0.5s								
AC01	**Pan de Azucar**	**3.59**	**237**	*e*P		**Pn**		**16 41 11.6**	**+0.9**
AC01				*e*S		**S**		**16 41 53.2**	**-1.8**
AC01				IAML				16 41 55.0	
	comp=Z,120nm,0.2s								
AC01	**Pan de Azucar**	**3.59**	**237**	*e*P		**Pn**		**16 41 11.5**	**+0.7**
PB02	**IPOC Station P**	**3.80**	**319**	*e*P		**Pn**		**16 41 14.4**	**+1.0**
PB02				*e*S		**S**		**16 41 57.2**	**-2.5**
PB02				IAML				16 42 01.0	
	comp=Z,333nm,0.3s								
PB02	**IPOC Station P**	**3.80**	**319**	*e*P		**Pn**		**16 41 14.3**	**+0.9**
TINO	**Tinogasta**	**3.82**	**184**	*e*P		**Pn**		**16 41 16.6**	**+2.9**
GO03	**Copiapo**	**4.30**	**218**	*e*P		**Pn**		**16 41 20.4**	**+0.9**
GO03				*e*S		**S**		**16 42 10.3**	**-0.5**
GO03	**Copiapo**	**4.30**	**218**	*e*P		**Pn**		**16 41 20.1**	**+0.6**
PB08	**IPOC Station P**	**4.44**	**336**	*e*P		**Pn**		**16 41 23.4**	**+1.7**
PB08				*e*S		**S**		**16 42 14.2**	**-0.5**
PB08				IAML				16 42 15.8	
	comp=Z,46nm,0.4s								
PB11	**IPOC Station P**	**4.98**	**333**	*e*P		**Pn**		**16 41 29.0**	**+0.7**
PB11				*e*S		**S**		**16 42 23.5**	**-3.2**
PB11				IAML				16 42 25.0	
	comp=Z,60nm,0.4s								
ACLC	**CERRO LA CRUZ**	**5.18**	**177**	*e*P		**Pn**		**16 41 32.5**	**+1.8**
AC04	**Llanos de Chal**	**5.24**	**220**	*e*P		**Pn**		**16 41 31.8**	**+0.4**
AC04				*e*S		**S**		**16 42 30.9**	**-1.5**
AC04				IAML				16 42 32.9	
	comp=Z,28nm,1.2s								
AC05	**El Transito**	**5.33**	**210**	*e*P		**Pn**		**16 41 33.7**	**+1.1**
AC05				*e*S		S		16 42 21.6	-13

*IDC **06** 17:09:24.2±2.9, 47.°53N×92.°70W, h0km, mb2.7/1, mbtmp3.1/2, ML1.0/1, Error ellipse: s-maj=35.8km s-min=13.6km az=82.0*

*NEIC **06** 17:09:25.8±1.3, 47.°57N±0.°03×92.°72W±0.°02, h0km±2km, mb_Lg3.0/35, Error ellipse: s-maj=4.5km s-min=3.0km az=21.0*

*OTT **06** 17:09:27.7±0.2, 47.°58N×92.°66W, h0km, MN2.8/8, Blast, Minnesota, U.S. 126km southeast from Fort Frances, On Mining explosion.*

ISC 06 17:09:23.5±0.7, 47.°61N±0.°03×92.°87W±0.°03, h0km, n42, σ1s29/44, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.99**	**69**				**Pg**	**17 09 42.0**	**-0.5**
EYMN						Sg	**Sb**	**17 09 56.3**	**-0.8**
E38A	**The Farm, Brul**	**1.34**	**138**				**Pg**	**17 09 47.9**	**-1.4**
ATKO	**Atikokan Iron**	**1.48**	**34**	PG		**Pb**		**17 09 53.1**	**+1.1**
ATKO				SG		**Sn**		**17 10 12.3**	**+0.8**
ATKO				Trac				17 10 17.9	
	comp=Z,35nm,0.2s								
AGMN	**Agassiz Nation**	**2.13**	**290**				**Pb**	**17 10 03.6**	**+0.6**
EPLO	**Experimental L**	**2.15**	**345**				**Pg**	**17 10 04.7**	**+0.1**
EPLO	**Experimental L**	**2.15**	**345**	PN		**Pg**		**17 10 05.1**	**+0.4**
EPLO				SN		**Sg**		**17 10 33.0**	**+0.5**
EPLO				Trac				17 10 38.1	
	comp=Z,32nm,0.4s								
SPMN	**Marine on St.**	**2.38**	**179**				**Pn**	**17 10 05.2**	**+1.3**
SPMN				IAmb_Lg				17 10 40.9	
	comp=Z,40nm,0.7s								
SOLO	**Sioux Lookout**	**2.47**	**12**	PN		**Pb**		**17 10 08.8**	**0.0**
SOLO				SN		**Sb**		**17 10 39.3**	**-0.5**
SOLO				Trac				17 10 56.9	
	comp=Z,14nm,0.2s								
TBO	**Thunder Bay**	**2.54**	**65**				**Pb**	**17 10 09.6**	**-0.4**
TBO	**Thunder Bay**	**2.54**	**65**	PN		**Pb**		**17 10 08.9**	**-1.1**
TBO				SN		**Sn**		**17 10 37.8**	**+0.2**
TBO				Trac				17 10 43.7	
	comp=Z,41nm,0.3s								
F33A	**5 Mile Ranch,**	**2.95**	**234**				**Pn**	**17 10 12.9**	**+1.4**
G40A	**Rib Lake**	**2.98**	**141**				**Pn**	**17 10 12.3**	**+0.3**
G40A				IAmb_Lg				17 11 03.5	
	comp=Z,38nm,0.9s								

ULM	**Lac du Bonnet**	**3.31**	**324**	Pn		**Pn**		**17 10 16.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=157,slow=7.7,SNR=1.9								
ULM				Pg		**Pg**		**17 10 25.6**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=146,slow=17,SNR=11								
ULM				Sn		**Sn**		**17 10 58.0**	**+1.5**
	comp=Z,1.3nm,0.3s,baz=166,slow=6.6,SNR=5.2								
ULM				Lg		Lg		17 11 10.6	
	comp=Z,5.2nm,0.3s,baz=213,slow=21,SNR=5.3								
ULM	**Lac du Bonnet**	**3.31**	**324**			**Pn**		**17 10 16.8**	**+0.3**
ULM						**Pg**		**17 10 26.9**	**0.0**
ULM	**Lac du Bonnet**	**3.31**	**324**	PN		**Pb**		**17 10 21.4**	**-1.7**
ULM				SN		**Sb**		**17 11 01.6**	**-2.2**
ULM				Trac				17 11 12.8	
	comp=Z,12nm,0.2s								
I10CA	**LAC DU BONNET**	**3.33**	**322**	I		I		17 29 50.0	
	comp=Z,0.1nm,0.9s,baz=141,slow=313,SNR=14								
I37A	**Lemond, Waseca**	**3.61**	**186**	Pn		**Pn**		**17 10 21.9**	**+1.1**
F42A	**Maple Grove Fa**	**3.75**	**118**	IAmb_Lg				17 11 27.4	
	comp=Z,27nm,0.7s								
I40A	**Norwalk**	**4.04**	**156**			**Pn**		**17 10 26.2**	**-0.4**
I40A				IAmb_Lg				17 11 38.2	
	comp=Z,34nm,0.8s								
PKLO	**Pickle Lake**	**4.23**	**22**	PN		**Pn**		**17 10 30.9**	**+1.7**
PKLO				SN		**Sn**		**17 11 20.0**	**+0.8**
PKLO				Trac				17 11 27.4	
	comp=Z,1.7nm,0.1s								
GTOO	**Geraldton**	**4.46**	**59**	PN		Pn		17 10 37.5	+5.1
GTOO				SN		**Sn**		**17 11 23.4**	**-1.6**
GTOO				Trac				17 11 34.3	
	comp=Z,3.2nm,0.1s								
PNPO	**Pukaskwa Natio**	**4.52**	**75**	PN		**Pn**		**17 10 34.6**	**+1.4**
PNPO				SN		**Sn**		**17 11 25.4**	**-1.1**
PNPO				Trac				17 11 44.4	
	comp=Z,15nm,0.4s								
ECSD	**EROS Data Cent**	**4.68**	**216**			**Pn**		**17 10 36.2**	**+0.8**
H43A	**Windswept, Lux**	**4.74**	**130**	IAmb_Lg				17 11 57.3	
	comp=Z,48nm,0.9s								
JFWS	**Jewell Farm**	**5.04**	**158**			**Pb**		**17 10 54.1**	**+1.5**
SUSD	**Miller**	**5.29**	**236**	IAmb_Lg				17 12 14.2	
	comp=Z,24nm,0.7s								
E28A	**Huff**	**5.44**	**262**	Pn		**Pn**		**17 10 47.1**	**+1.1**
E28A				Pg		**Pg**		**17 11 04.8**	**-3.1**
E28A				IAmb_Lg				17 12 22.6	
	comp=Z,40nm,0.9s								
L40A	**Anamosa**	**5.67**	**167**	Pn		**Pn**		**17 10 48.9**	**-0.1**
L40A				IAmb_Lg				17 12 22.7	
	comp=Z,28nm,0.9s								
SCIA	**State Center**	**5.70**	**183**	Pn		**Pn**		**17 10 49.5**	**+0.1**
SCIA				IAmb_Lg				17 12 41.2	
	comp=Z,20nm,0.7s								
K43A	**Burlington**	**5.86**	**145**	IAmb_Lg				17 12 24.5	
	comp=Z,34nm,0.9s								
L42A	**Oliver, Polo**	**6.05**	**157**	Pn		**Pn**		**17 10 52.5**	**-1.7**
L42A						**Pb**		**17 11 13.6**	**+3.9**
L42A				IAmb_Lg				17 12 35.4	
	comp=Z,26nm,0.7s								
L34A	**Svendsen Farm,**	**6.17**	**205**	IAmb_Lg				17 12 48.4	
	comp=Z,30nm,0.7s								
N38A	**Joes South For**	**6.82**	**182**	IAmb_Lg				17 12 59.9	
	comp=Z,20nm,0.8s								
K30B	**Basset**	**6.86**	**226**	Pn		**Pn**		**17 11 05.8**	**+0.4**
K30B				IAmb_Lg				17 13 01.5	
	comp=Z,25nm,1.0s								
N35A	**Tabor**	**7.03**	**197**	IAmb_Lg				17 13 23.9	
	comp=Z,20nm,0.8s								
N41A	**Harden Midland**	**7.05**	**167**	Pn		**Pn**		**17 11 07.2**	**-0.7**
BGNE	**Belgrade**	**7.25**	**213**	Pn		**Pn**		**17 11 09.4**	**-1.4**
BGNE				IAmb_Lg				17 13 33.7	
	comp=Z,20nm,0.9s								
FFC	**Flin Flon**	**9.13**	**325**	IAmb_Lg				17 14 16.8	
	comp=Z,12nm,0.8s								
OLIL	**Olney**	**9.53**	**157**	IAmb_Lg				17 14 42.1	
	comp=Z,21nm,1.2s								
PDAR	**Pinedale Array**	**12.72**	**254**	Pn		**Pn**		**17 12 25.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=75,slow=13,SNR=6.7								
PDAR				Lg		Lg		17 15 59.6	
	baz=72,slow=30,SNR=1.3								
I56US	**NEWPORT INFRAS**	**16.26**	**281**	I		I		18 49 45.9	
	baz=83,slow=312,SNR=4.1								
TXAR	**Lajitas

51nm,0.3s,baz=230,slow=9.4,SNR=54
RPZ Sn **Sn** **17 39 16.0 -6.4**
17nm,0.3s,baz=184,slow=22,SNR=6.6
RPZ Lg Lg 17 39 25.4
30nm,0.3s,baz=99,slow=19,SNR=12
38nm,0.4s
RPZ Rata Peaks 2.09 75 P **Pn** **17 38 55.5 -0.3**
RPZ Rata Peaks 2.09 75 P **Pn** **17 38 55.5 -0.3**
ARCZ Arundel 2.12 82 P **Pn** **17 38 56.4 +0.2**
WVZ Waitaha Valley 2.16 57 P **Pn** **17 38 55.2 -1.5**
PYZ Puysegur Point 2.19 210 P **Pn** **17 38 57.5 +0.4**
PYZ Puysegur Point 2.19 210 S **Sn** **17 39 26.5 +1.7**
PYZ Puysegur Point 2.19 210 P **Pn** **17 38 57.6 +0.5**
HHSZ Highcliff Hill 2.29 135 P **Pn** **17 38 59.0 +0.5**
SYZ Scrubby Hill 2.33 165 P **Pn** **17 38 59.2 +0.2**
SYZ Scrubby Hill 2.33 165 S **Sn** **17 39 29.9 +1.7**
SYZ Scrubby Hill 2.33 165 P **Pn** **17 38 59.6 +0.6**
MHCZ Mount Hutt 2.50 73 P **Pn** **17 39 01.2 -0.3**
APZ The Paps 2.55 184 P **Pn** **17 39 01.7 -0.4**
WACZ Wakanui South 2.59 83 P **Pn** **17 39 01.6 -1.0**
INZ Inchbonnie 2.79 57 P **Pn** **17 39 04.2 -1.2**
RACZ Rakaia 2.85 80 P **Pn** **17 39 05.8 -0.4**
OXZ Oxford 2.89 72 P **Pn** **17 39 05.6 -1.2**
MQZ McQueen's Vall 3.22 81 P **Pn** **17 39 10.1 -1.1**
LTZ Lake Taylor 3.28 64 P **Pn** **17 39 11.1 -1.1**
AMCZ Amberley 3.36 72 P **Pn** **17 39 12.6 -0.7**
AKCZ Akaroa Harbour 3.37 84 P **Pn** **17 39 12.8 -0.5**
OKCZ Okains Bay 3.50 82 P **Pn** **17 39 15.5 +0.3**
DSZ Denniston Nort 3.63 47 P **Pn** **17 39 15.8 -1.2**
GVZ Greta Valley S 3.70 71 P **Pn** **17 39 16.9 -1.1**
THZ Tophouse 4.24 55 P **Pn** **17 39 24.6 -0.7**
KHZ Kahutara 4.27 66 P **Pn** **17 39 25.1 -0.7**
MRNZ Matariki Terra 4.39 50 P **Pn** **17 39 27.0 -0.4**
QRZ Quartz Range 4.68 44 P **Pn** **17 39 30.8 -0.6**
QRZ Quartz Range 4.68 44 P **Pn** **17 39 30.2 -1.1**
TKNZ Takaka Hill 4.75 48 P **Pn** **17 39 31.6 -0.7**
BSWZ Blackbirch Sta 4.85 60 P **Pn** **17 39 36.6 +2.9**
NNZ Nelson 4.86 52 P **Pn** **17 39 33.9 +0.1**
CMWZ Cape Campbell 5.04 62 P Pn 17 39 41.4 +5.0
TUWZ Tuamarina 5.06 57 P **Pn** **17 39 38.2 +1.6**
TCW Tory Channel 5.39 57 P **Pn** **17 39 41.2 +0.1**
DUWZ D'Urville Isla 5.44 52 P **Pn** **17 39 41.7 -0.1**
SNZO South Karori 5.59 60 P **Pn** **17 39 44.0 +0.1**
WEL Wellington 5.65 60 P **Pn** **17 39 48.8 +4.2**
MSWZ Moikau Station 5.88 63 P **Pn** **17 39 46.1 -1.7**
CAW Cannon Point 5.93 60 P **Pn** **17 39 47.3 -1.2**
KIW Kapiti Island 5.98 57 P **Pn** **17 39 49.6 +0.3**
PAWZ Paruwai Farm 6.01 64 P **Pn** **17 39 50.8 +1.1**
OGWZ Otaki Gorge 6.17 58 P **Pn** **17 39 50.3 -1.4**
HOWZ Holdsworth Sta 6.33 60 P **Pn** **17 39 53.9 -0.1**
TMWZ Te Maipa 6.45 63 P Pn 17 40 01.6 +5.9
MRZ Mangatainoka R 6.51 59 P **Pn** **17 40 01.2 +4.7**
NBEZ Newall Road No 6.53 42 P **Pn** **17 39 55.8 -1.0**
KHEZ Kahui Hut 6.58 43 P **Pn** **17 39 57.8 +0.2**
KHEZ Kahui Hut 6.58 43 S **Sn** **17 41 13.9 +0.6**
PREZ Palmer Road 6.62 44 P **Pn** **17 39 58.5 +0.4**
LREZ Lake Rotokare 6.65 46 P **Pn** **17 40 00.1 +1.7**
WAZ Wanganui 6.75 50 P **Pn** **17 40 01.5 +1.7**
CPWZ Castlepoint 6.76 63 P **Pn** **17 40 00.4 +0.5**
POWZ Post Office Ro 6.78 58 P Pn 17 40 00.2 +5.9
BFZ Birch Farm 6.91 61 P **Pn** **17 40 01.3 -0.7**
BFZ Birch Farm 6.91 61 P **Pn** **17 40 06.5 +4.5**
VRZ Vera Road 7.08 45 P **Pn** **17 40 04.3 -0.1**
TSZ Takapari Road 7.11 56 P **Pn** **17 40 08.6 +3.8**
PNHZ Pukenui 7.34 56 P **Pn** **17 40 08.6 +0.7**
WNVZ Wahianoa 7.38 50 P **Pn** **17 40 11.1 +2.4**
FWVZ Far West T-bar 7.41 50 P **Pn** **17 40 10.9 +1.8**
WHVZ Whangaehu Hut 7.41 50 P **Pn** **17 40 11.1 +2.0**
MOVZ Moawhango 7.42 51 P **Pn** **17 40 10.7 +1.6**
COVZ Chateau Observ 7.44 49 P **Pn** **17 40 10.4 +1.0**
WTVZ West Tongariro 7.53 49 P **Pn** **17 40 12.3 +1.7**
BHHZ Black Hill Sta 7.54 53 P **Pn** **17 40 10.4 -0.2**
KRVZ Karewarewa 7.57 49 P **Pn** **17 40 13.2 +2.0**
ETVZ East Tongariro 7.58 50 P **Pn** **17 40 13.5 +2.1**
TMVZ Te Maari 7.59 50 P **Pn** **17 40 13.6 +2.1**
HIZ Hauiti 7.60 43 P **Pn** **17 40 11.3 -0.2**
HIZ Hauiti 7.60 43 P **Pn** **17 40 11.2 -0.3**
KRHZ Kereru 7.61 55 P **Pn** **17 40 15.1 +3.7**
BKZ Black Stump Fm 8.00 53 P **Pn** **17 40 17.4 +0.4**
URZ Urewera 8.97 51 Pn **Pn** **17 40 30.1 -0.2**
1.8nm,0.3s,baz=228,slow=9.6,SNR=6.5
URZ Sn **Sn** **17 42 03.4 -8.6**
3.1nm,0.3s,baz=163,slow=17,SNR=8.5
12nm,0.8s
URZ Urewera 8.97 51 P **Pn** **17 40 30.0 -0.3**
OUZ Omahuta 9.94 26 P **Pn** **17 40 42.9 -0.7**
STKA Stephens Creek 24.27 292 LR LR 17 51 53.0
comp=Z,91nm,18.2s,baz=206,slow=34
ASAR Alice Springs 34.79 295 P **P** **17 45 12.8 +0.9**
0.7nm,0.9s,baz=130,slow=8.3,SNR=6.2
0.7nm,0.9s
WRA Warramunga Arr 37.20 300 P **P** **17 45 32.5 -0.1**
1.2nm,0.9s,baz=136,slow=7.9,SNR=5.7
1.2nm,0.9s
QSPA South Pole Qui 45.83 180 P **P** **17 46 44.9 +2.0**
4.9nm,0.9s,baz=12,slow=5.8,SNR=14
4.9nm,0.9s
SNAA Sanae 64.17 183 P **P** **17 48 55.3 0.0**
0.8nm,0.6s,baz=180,slow=10,SNR=3.4
0.8nm,0.6s
CMAR Chiang Mai Arr 88.76 297 P **P** **17 51 16.1 +0.9**
1.2nm,0.9s,baz=124,slow=4.2,SNR=8.3
1.2nm,0.9s
BRTR Keskin Array B 146.31 278 PKPbc **PKPdf** **17 58 01.0 +0.3**
0.8nm,0.7s,baz=126,slow=3.8,SNR=4.9
TORD Torodi Ar. Bea 146.90 204 PKPbc **PKPdf** **17 58 02.7 +0.5**
2.4nm,1.0s,baz=159,slow=3.3,SNR=5.9

IDC 06 17:52:08.1±2.6, 35°70N×88°40E, h0km, mb3.2/2, mbtmp3.3/5, ML2.7/3, MS3.1/3, Error ellipse: s-maj=155.1km s-min=26.7km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.00**	**339**	Pn	Pn	Pn	17 54 58.9	-1.5
	0.2nm,0.3s,baz=159,slow=13,SNR=8.2							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**16.54**	**337**	Pn	Pn	Pn	17 55 59.8	-1.5
	baz=144,slow=13,SNR=2.3							
	0.2nm,0.3s							
SONM	**Songino Array**	**18.04**	**42**	LR	LR	LR	18 03 14.5	
	comp=Z,40nm,20.1s,baz=232,slow=37							
ZALV	**Zalesovo Beam**	**18.42**	**353**	P	Pn	Pn	17 56 23.9	-0.8
	0.1nm,0.3s,baz=157,slow=12,SNR=3.9							
	0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**19.55**	**149**	LR	LR	LR	18 05 14.3	
	comp=Z,46nm,18.5s,baz=205,slow=40							
BVAR	**Borovoye Array**	**21.48**	**329**	P	P	P	17 56 57.6	-0.5
	0.3nm,0.5s,baz=132,slow=10,SNR=3.5							
	0.3nm,0.5s							
KVAR	**Kislovodsk Arr**	**35.67**	**298**	LR	LR	LR	18 16 08.7	
	comp=Z,57nm,18.0s,baz=356,slow=40							
WRA	**Warramunga Arr**	**70.39**	**134**	P	P	P	18 03 24.2	+0.1
	0.5nm,0.8s,baz=318,slow=6.5,SNR=2.3							
	0.5nm,0.8s							

IDC 06 17:52:40.9±1.5, 35°55N×88°28E, h0km, mb3.4/3, mbtmp3.4/8, ML3.1/5, Error ellipse: s-maj=62.0km s-min=19.4km az=64.0

ISC 06 17:52:45.1±1.3, 35°6N±0°2×88°2E±0°2, h35km, n8, σ1s07/8, mb3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.02**	**340**	Pn	**Pn**	**Pn**	**17 55 32.7**	**-1.1**
	0.4nm,0.3s,baz=154,slow=14,SNR=9.9							
	0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**16.55**	**338**	Pn	**Pn**	**Pn**	**17 56 33.8**	**-0.6**
	baz=146,slow=12,SNR=6.4							
	0.5nm,0.5s							
SONM	**Songino Array**	**18.24**	**42**	P	**Pn**	**Pn**	**17 56 55.7**	**+0.2**
	0.1nm,0.3s,baz=233,slow=12,SNR=3.9							
	0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**18.49**	**354**	P	**Pn**	**Pn**	**17 56 58.4**	**+0.1**
	0.1nm,0.3s,baz=178,slow=11,SNR=5.7							
	1.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**19.57**	**148**	P	**Pn**	**Pn**	**17 57 11.2**	**-0.3**
	baz=313,slow=11,SNR=4.8							
	0.4nm,0.9s							
BVAR	**Borovoye Array**	**21.46**	**330**	P	**P**	**P**	**17 57 31.8**	**+1.4**
	1.1nm,0.6s,baz=144,slow=12,SNR=6.8							
	1.1nm,0.6s							
WRA	**Warramunga Arr**	**70.47**	**134**	P	**P**	**P**	**18 03 55.2**	**-1.0**
	0.5nm,0.8s,baz=330,slow=6.0,SNR=2.1							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**73.14**	**137**	P	**P**	**P**	**18 04 13.1**	**+1.0**
	0.3nm,0.8s,baz=332,slow=5.8,SNR=1.6							
	0.3nm,0.8s							

LDG 06 17:56:32.3±0.0, 45°60N×6°69E, h2km, Md1.3/2, Error ellipse: s-maj=7.8km s-min=0.9km az=66.0, France

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LPL	**La Plagne**	**0.09**	**159**	*e*Pg	Pg		17 56 34.3	+0.3
LPL				*e*Sg	Sg		17 56 35.5	+0.3
	11nm,0.6s							
LPG	**La Plagne**	**0.11**	**156**	*e*Pg	Pg		17 56 34.8	+0.4
LPG				*e*Sg	Sg		17 56 36.2	+0.3
	4.7nm,0.3s							

JMA 06 18:04:59.5±0.2, 24°9N±0°8×123°4E±0°3, h25km, MV2.9/9, NW OFF ISHIGAKIJIMA IS

ISC 06 18:04:58.5±2.3, 24°9N±0°1×123°44E±0°04, h10km±20km, n10, σ0s27/15, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**219**	P	**Pg**		**18 05 10.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.62**	**219**	P	**Pg**		**18 05 10.6**	**+0.1**
YOJ				S	**Sg**		**18 05 18.0**	**-0.6**
IRIF	**Iriomote-Funau**	**0.66**	**156**	P	**Pg**		**18 05 11.4**	**+0.1**
IRIF				S	**Sg**		**18 05 20.3**	**+0.4**
JYNG	**Yonagunijimaku**	**0.66**	**223**	P	**Pg**		**18 05 11.5**	**+0.1**
JYNG				S	**Sg**		**18 05 20.0**	**0.0**
JIJ	**Ishigaki jima**	**0.86**	**132**	P	**Pg**		**18 05 14.8**	**-0.2**
JISG	**Ishigakijimahi**	**0.87**	**114**	P	**Pg**		**18 05 15.3**	**+0.1**
JISG				*e*S	**Sg**		**18 05 26.6**	**+0.1**
JKRS	**Kuro-shima**	**0.87**	**143**	*i* P	**Pg**		**18 05 15.2**	**-0.1**
JKRS				*e*S	**Sg**		**18 05 26.3**	**-0.3**
NACB	**Ninganchiao**	**1.84**	**246**	P	**Pn**		**18 05 30.4**	**+0.1**
YHNB	**Yeheng**	**1.90**	**262**	P	**Pn**		**18 05 31.0**	**-0.1**
YULB	**Yu-li**	**2.49**	**232**	P	**Pn**		**18 05 39.2**	**0.0**

IDC 06 18:10:47.8±3.5, 33°52S×178°31W, h0km, mb3.8/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=78.6km s-min=38.4km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.01**	**217**	Pn	Pn		18 12 17.5	-0.5
	0.6nm,0.3s,baz=36,slow=14,SNR=2.0							
URZ				Sn	Sn		18 13 28.7	+1.2
	1.7nm,0.3s,baz=75,slow=20,SNR=7.8							
	14nm,1.0s							
ASAR	**Alice Springs**	**42.77**	**270**	P	P		18 18 47.5	+0.2
	1.0nm,0.6s,baz=111,slow=7.2,SNR=20							
	1.0nm,0.6s							
WRA	**Warramunga Arr**	**44.04**	**276**	P	P		18 18 57.1	-0.5
	0.3nm,0.3s,baz=117,slow=7.6,SNR=7.4							
	0.3nm,0.3s							
FINES	**FINESS Array B**	**147.96**	**338**	PKPbc	PKPbc		18 30 33.6	-0.6
	11nm,0.7s,baz=60,slow=3.4,SNR=0.9							

MOS 06 18:16:17.6±0.9, 12°04N×140°32E, h19km, mb6.0/70, MS5.8/27, Error ellipse: s-maj=8.7km s-min=5.1km az=116.6
NEIC 06 18:16:18.4±1.9, 12°08N±0°07×140°25E±0°07, h10km±1km, mb5.9/522, Ms_20 6.1/722, Mwb6.1/189, Mww6.2/29, Error ellipse: s-maj=12.2km s-min=10.5km az=219.0, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr=0.10; Mθθ=0.80; Mϕϕ=0.90; Mrθ=0.37; Mϕr=1.47; Mθr=0.16; Fault plane solution: M0 1.75000×10^18 NP1: ϕs=254.94000°, δ=89.27000°, λ=13.33000°. NP2: ϕs=164.77000°, δ=76.67000°, λ=179.25000°. Principal axes: T 1.8051, Plg=10.0000°, Azm=121.0000°; N -0.1180, Plg=77.0000°, Azm=258.0000°; P -1.6871, Plg=9.0000°, Azm=29.0000°;
IPGP 06 18:16:18.0, 12°05N×140°25E, h11km, Mw6.4, Fault plane solution: NP1:ϕs=165.00000°, δ=77.00000°, λ=178.00000°. NP2:ϕs=255.00000°, δ=88.00000°, λ=13.00000°.
NEIC 06 18:16:18.3, 12°06N×140°24E, h10km
NEIC 06 18:16:18.4, 12°08N×140°25E, h10km
ISC-PP 06 18:16:18, 12°08N×140°25E, h10km, Mwppsm6.5, Moment Tensor Solution. s48 Moment tensor: Scale 10^18 Nm; Mrr=0.20±.15; Mθθ=-0.45±.29; Mϕϕ=0.57±.14; Mrθ=-0.25±.23; Mθϕ=-0.20±.12; Mϕr=0.34±.13; Fault plane solution: M0 5.89000×10^18 NP1:ϕs=244.00000°, δ=82.40000°, λ=27.90000°. NP2:ϕs=149.90000°, δ=62.30000°, λ=171.40000°.
GFZ 06 18:16:18.9, 12°08N×140°35E, h14km, Mw6.2/63, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr=0.36; Mθθ=0.83; Mϕϕ=1.19; Mrθ=-0.24; Mϕr=1.98; Mθr=0.29; Fault plane solution: M0 2.27183×10^18 NP1: ϕs=167.10955°, δ=83.66563°, λ=-169.99344°. NP2: ϕs=75.99429°, δ=80.05515°, λ=-6.43140°. Principal axes: T 2.4047, Plg=2.5277°, Azm=301.2986°; N -0.2944, Plg=78.1743°, Azm=199.1272°; P -2.1102, Plg=11.5447°, Azm=31.8153°;
GFZ 06 18:16:19.7±0.2, 12°N±2°×14°0E±°, h10km, M6.1/41, mb5.7/41
BJI 06 18:16:20.2, 12°07N×140°29E, h20km, mB6.3/72, mb5.4/82, Ms6.3/84, Ms7 6.1/81
PTWC 06 18:16:20, 12°00N×140°30E, h15km, Mwp6.3/6, PALAU REGION
GCMT 06 18:16:22.4±0.0, 12°07N×140°14E, h12km, MW6.2/176, Moment Tensor Solution. s159,c360; s176,c687; Duration: 3s0 Moment tensor: Scale 10^18 Nm; Mrr=0.25±.01; Mθθ=0.96±.01; Mϕϕ=1.20±.01; Mrθ=-0.02±.03; Mθϕ=0.05±.01; Mϕr=0.36±.03; Best double couple: M0 2.34400×10^18 NP1:ϕs=76.00000°, δ=81.00000°, λ=0.00000°. NP2:ϕs=346.00000°, δ=90.00000°, λ=171.00000°. Principal axes: T 2.4700, Plg=6.0000°, Azm=301.0000°; N -0.2580, Plg=81.0000°, Azm=165.0000°; P -2.2170, Plg=6.0000°, Azm=32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
IDC 06 18:16:22.5±2.6, 12°07N×140°27E, h39km±22km, mb5.0/30, mbtmp5.2/37, ML4.7/5, MS5.8/76 Error ellipse: s-maj=14.2km s-min=9.0km az=72.0
NEIC 06 18:16:24.7, 12°06N×140°34E, h14km, Moment Tensor Solution. Duration: 6s3 Moment tensor: Scale 10^18 Nm; Mrr=0.09; Mθθ=0.91; Mϕϕ=1.00; Mrθ=-0.12; Mϕθ=1.98; Mϕr=0.15; Fault plane solution: M0 2.21000×10^18 NP1:ϕs=77.04000°, δ=85.31000°, λ=-2.48000°. NP2:ϕs=167.24000°, δ=87.52000°, λ=-175.31000°. Principal axes: T 2.2486, Plg=2.0000°, Azm=302.0000°; N -0.0802, Plg=85.0000°, Azm=195.0000°; P -2.1683, Plg=5.0000°, Azm=32.0000°;

ISC 06 18:16:19.8±0.5, 12°04N±0°03×140°30E±0°03, h19km±1km, h19km:pP-P, n1757, σ1s83/1660, mb5.9/429, MS6.1/495, 68C-36D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.71**	**70**	Pn	**Pn**		**18 17 31.5**	**+1.5**
	60nm,0.3s,baz=203,slow=11,SNR=39							
	874nm,0.6s							
GUMO	**Guam**	**4.71**	**70**	P	**Pn**		**18 17 32.3**	**+2.3**
GUMO	**Guam**	**4.71**	**70**		**Pn**		**18 17 30.7**	**+0.7**
GUMO	**Guam**	**4.71**	**70**	P	**Pn**		**18 17 30.7**	**+0.7**
GUMO	**Guam**	**4.71**	**70**	P	**Pn**		**18 17 31.7**	**+1.7**
GUMO	**Guam**	**4.71**	**70**	∥P	**Pn**		**18 17 31.1**	**+1.0**
GUMO	**Guam**	**4.71**	**70**	P	**Pn**		**18 17 31.8**	**+1.8**
FLX	**Saipan**	**6.21**	**59**	P	**Pn**		**18 17 52.1**	**+1.5**
DPSS	**Saipan**	**6.21**	**59**		**Pn**		**18 17 51.1**	**+0.5**
DPSS	**Saipan**	**6.21**	**59**	P	**Pn**		**18 17 52.2**	**+1.6**
BAKI	**Biak**	**13.79**	**198**	P	**Pn**		**18 19 37.4**	**+2.9**
BIPH	**Bislig**	**14.25**	**256**	*e*P	**P**		**18 19 46.9**	**-1.0**
CDOP	**Cateel, Davao**	**14.29**	**254**	*i* P	**P**		**18 19 48.8**	**+0.3**
MWPI	**Manokwari, Pap**	**14.31**	**206**	P	**Pn**		**18 19 43.2**	**+1.6**
SRPI	**Serui, Papua**	**14.40**	**197**	P	**Pn**		**18 19 45.7**	**+2.9**
	80µm31µm677nm,1.7s							
JAY	**Jayapura**	**14.47**	**178**	Pn	**Pn**		**18 19 46.3**	**+2.4**
	10nm,0.3s,baz=328,slow=2.7,SNR=68							
JAY				Sn	**Sn**		**18 22 24.9**	**+1.0**
	4.0nm,0.3s,baz=87,slow=20,SNR=6.8							
JAY				LR	LR		18 24 31.4	
	comp=Z,28µm,18.5s,baz=7.0,slow=34							
	102nm,0.7s							
JAY	**Jayapura**	**14.47**	**178**	P	**Pn**		**18 19 43.5**	**-0.3**
JAY	**Jayapura**	**14.47**	**178**	P	**P**		**18 19 47.7**	**-2.8**
	41µm16µm350nm,0.8s							
GENI	**Genyem**	**14.54**	**181**	P	**Pn**		**18 19 47.1**	**+2.3**
GENI	**Genyem**	**14.54**	**181**	P	**Pn**		**18 19 46.1**	**+1.3**
GENI	**Genyem**	**14.54**	**181**	⇑P	**Pn**		**18 19 46.7**	**+1.9**
GENI	**Genyem**	**14.54**	**181**	P	**Pn**		**18 19 47.8**	**+3.0**
	68µm37µm1µm,2.1s							
GENI	**Genyem**	**14.54**	**181**	P	**Pn**		**18 19 48.1**	**+3.3**
SCPH	**Surigao**	**14.71**	**263**	*e*P	**Pn**		**18 19 47.4**	**+0.2**
PLP	**Palo**	**15.03**	**268**	*e*P	**Pn**		**18 19 50.0**	**-1.4**
JCJ	**Chichijima**	**15.08**	**6**	Pn	**Pn**		**18 19 51.4**	**-0.6**
	2.4nm,0.3s,baz=169,slow=7.2,SNR=9.2							
JCJ				LR	LR		18 24 57.4	
	comp=Z,22µm,19.0s,baz=178,slow=34							
	160nm,0.8s							
JCJ	**Chichijima**	**15.08**	**6**	P	**Pn**		**18 19 54.5**	**+2.5**
JCJ	**Chichijima**	**15.08**	**6**		**Pn**		**18 19 50.9**	**-1.1**
JCJ	**Chichijima**	**15.08**	**6**	∥P	**Pn**		**18 19 51.2**	**-0.8**
JCJ	**Chichijima**	**15.08**	**6**	P	**Pn**		**18 19 52.7**	**+0.7**
DAV	**Davao City (W)**	**15.33**	**253**	Pn	**Pn**		**18 19 56.4**	**+1.0**
	151nm,0.4s,baz=82,slow=4.9,SNR=13							
DAV	**Davao City (W)**	**15.33**	**253**	P	**P**		**18 19 58.6**	**-1.4**
DAV	**Davao City (W)**	**15.33**	**253**	Pn	**Pn**		**18 19 55.2**	**-0.2**
DAV				lAmb	lAmb		18 20 00.1	
	comp=Z,2µm,1.9s							
DAV	**Davao City (W)**	**15.33**	**253**	P	**P**		**18 19 58.8**	**-1.2**
DAV				P	**P**		**18 19 58.8**	**-1.2**
DAV				S	**Sn**		**18 22 49.8**	**+4.9**
DAV				S	**Sn**		**18 22 49.8**	**+4.9**
DAV	**Davao City (W)**	**15.33**	**253**	P	**P**		**18 19 59.1**	**-0.9**
DAV	**Davao City (W)**	**15.33**	**253**	P	**P**		**18 20 00.1**	**+0.1**
BUKP	**Musuan**	**15.56**	**256**	*i* P	**P**		**18 20 03.3**	**+0.6**
BUKP				*i* S	**S**		**18 23 01.5**	**-4.5**
SWI	**Sorong**	**15.65**	**216**	Pn	**Pn**		**18 20 01.1**	**+1.5**
	comp=Z,87µmcomp=Z,43µmcomp=Z,1µm,2.8s							
SIJI	**Sorong**	**15.65**	**216**	Pn	**Pn**		**18 20 00.4**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=26,slow=12,SNR=59							
SIJI				LR	LR		18 24 44.7	
	comp=Z,76µm,20.8s,baz=39,slow=32							
	comp=Z,109nm,1.1s							
SIJI	**Sorong**	**15.65**	**216**	P	**Pn**		**18 20 01.1**	**+1.5**
	comp=Z,73µmcomp=Z,35µmcomp=Z,769nm,2.9s							
MANU	**Manus Island**	**15.66**	**153**		**Pn**		**18 19 59.9**	**+0.2**
MANU	**Manus Island**	**15.66**	**153**	P	**Pn**		**18 20 00.7**	**+1.0**
MANU	**Manus Island**	**15.66**	**153**	⇑P	**Pn**		**18 20 00.6**	**+0.9**
CGP	**Cagayan de Oro**	**15.76**	**258**	*i* P	**Pn**		**18 20 02.2**	**+1.2**
KCP	**Kidapawan**	**15.81**	**253**	*i* P	**Pn**		**18 20 01.8**	**+0.1**
KCP				*i* S	**S**		**18 23 11.2**	**+0.2**
WAMI	**Wamena**	**15.90**	**186**	P	**P**		**18 20 09.0**	**+2.6**
	comp=Z,52µmcomp=Z,823nm,1.2s							
LLP	**Lapu-Lapu**	**16.12**	**266**	*e*P	**Pn**		**18 20 04.6**	**-1.0**
LLP				*e*S	Sn		18 22 48.6	-15
JMZ	**Minamidaito 2**	**16.16**	**329**	P	**P**		**18 20 09.2**	**0.0**
JMZ	**Minamidaito 2**	**16.16**	**329**	Pn	**Pn**		**18 20 05.4**	**-0.6**
JMZ	**Minamidaito 2**	**16.16**	**329**	⇑P	**Pn**		**18 20 06.7**	**+0.7**
JMZ	**Minamidaito 2**	**16.16**	**329**	P	**P**		**18 20 11.0**	**+1.8**
TBP	**Tagbilaran**	**16.31**	**263**	*e*P	**Pn**		**18 20 07.5**	**-0.6**
LSIP	**Lazi, Siquijor**	**16.64**	**262**	*i* P	**Pn**		**18 20 09.0**	**-3.2**
LSIP				*i* S	**Sn**		**18 23 16.1**	**-0.5**
SGSI	**Sangihe**	**16.81**	**242**	P	**P**		**18 20 15.8**	**-0.7**
	comp=Z,39µmcomp=Z,23µmcomp=Z,2µm,1.8s							
FAKI	**Fak Fak**	**16.88**	**209**	P	**P**		**18 20 19.2**	**+2.0**
FAKI	**Fak Fak**	**16.88**	**209**		**Pn**		**18 20 15.2**	**-0.1**
FAKI	**Fak Fak**	**16.88**	**209**	P	**Pn**		**18 20 15.2**	**-0.1**
FAKI	**Fak Fak**	**16.88**	**209**	⇓P	**Pn**		**18 20 15.9**	**+0.6**
FAKI	**Fak Fak**	**16.88**	**209**	P	**P**		**18 20 18.8**	**+1.6**
	comp=Z,78µmcomp=Z,1µm,2.0s							
FAKI	**Fak Fak**	**16.88**	**209**	P	**P**		**18 20 17.6**	**+0.3**
KMPI	**Kaimana, Papua**	**16.92**	**203**	P	**P**		**18 20 22.3**	**+4.6**
	comp=Z,66µmcomp=Z,42µmcomp=Z,1µm,2.0s							
SNPH	**Sibulan**	**16.98**	**263**	*e*P	**Pn**		**18 20 15.2**	**-1.4**
DCPH	**Dipolog City**	**17.02**	**260**	*i* P	**Pn**		**18 20 15.3**	**-1.7**
DCPH				*i* S	**S**		**18 23 35.6**	**0.0**
TNTI	**Ternate**	**17.03**	**230**	P	**P**		**18 20 19.4**	**+0.5**
TNTI	**Ternate**	**17.03**	**230**	P	**Pn**		**18 20 17.0**	**-0.1**
TNTI	**Ternate**	**17.03**	**230**	P	**Pn**		**18 20 18.0**	**+0.9**
TNTI	**Ternate**	**17.03**	**230**	P	**P**		**18 20 18.2**	**-0.7**
	comp=Z,40µmcomp=Z,16µmcomp=Z,609nm,2.1s							
TNTI	**Ternate**	**17.03**	**230**	P	**Pn**		**18 20 18.1**	**+0.9**
IBAJ	**Ibajay, Aklan**	**17.74**	**271**	*i* P	**Pn**		**18 20 25.3**	**-0.7**
LQP	**Lukban**	**18.39**	**278**	*e*P	**P**		**18 20 32.3**	**-1.9**
PATS	**Pohnpei**	**18.50**	**105**	P	**P**		**18 20 34.8**	**-0.4**
	comp=Z,815nm,1.4s,comp=Z,0.0nm							
PATS	**Pohnpei**	**18.50**	**105**	P	**Pn**		**18 20 37.0**	**+1.6**
PATS	**Pohnpei**	**18.50**	**105**	P	**P**		**18 20 34.2**	**-1.0**
PATS	**Pohnpei**	**18.50**	**105**	P	**Pn**		**18 20 37.0**	**+1.6**
JOW	**Kunigami**	**18.55**	**324**	P	**P**		**18 20 35.0**	**-0.7**
	comp=Z,1.9nm,0.3s,baz=147,slow=9.6,SNR=10							
JOW				LR	LR		18 26 26.3	
	comp=Z,34µm,21.5s,baz=144,slow=33							
	comp=Z,63nm,1.0s							
JOW	**Kunigami**	**18.55**	**324**	P	**Pn**		**18 20 38.0**	**+2.1**
JOW	**Kunigami**	**18.55**	**324**	P	**Pn**		**18 20 37.3**	**+1.4**
JOW	**Kunigami**	**18.55**	**324**	⇑P	**

TPUB	**Ta-pu**	**21.80**	**304**	P	**P**	**18**	**21**	**10.5 -0.6**
TPUB				IAMs_20	IAMs_20	18	28	04.8
	comp=Z,87µm,19.0s							
TPUB	**Ta-pu**	**21.80**	**304**	P	**P**	**18**	**21**	**11.9 +0.9**
YHNB	**Yeheng**	**21.88**	**308**	P	**P**	**18**	**21**	**14.1 +2.2**
YHNB	**Yeheng**	**21.88**	**308**	IAMs_20	IAMs_20	18	27	31.9
	comp=Z,85µm,22.0s							
YHNB	**Yeheng**	**21.88**	**308**	P	**P**	**18**	**21**	**13.9 +2.0**
TATO	**Taipei**	**21.95**	**308**	P	**P**	**18**	**21**	**15.1 +2.5**
TATO	**Taipei**	**21.95**	**308**	P	**P**	**18**	**21**	**11.8 -0.9**
TATO				IAmb	IAmb	18	21	29.0
	comp=Z,1µm,1.4s							
TATO	**Taipei**	**21.95**	**308**	IAMs_20	IAMs_20	18	28	36.7
	comp=Z,73µm,20.0s							
TATO	**Taipei**	**21.95**	**308**	P	**P**	**18**	**21**	**13.3 +0.7**
TATO				P	**P**	**18**	**21**	**13.3 +0.7**
TATO				P	**P**	**18**	**21**	**13.3 +0.7**
TATO				S	**S**	**18**	**25**	**12.0 -2.5**
TATO				S	**S**	**18**	**25**	**12.0 -2.5**
TATO				S	**S**	**18**	**25**	**12.0 -2.5**
TOLI2	**Tolitoli**	**22.20**	**242**	P	**P**	**18**	**21**	**16.0 +0.7**
TOLI2	**Tolitoli**	**22.20**	**242**		**P**	**18**	**21**	**14.5 -0.8**
TOLI2	**Tolitoli**	**22.20**	**242**	P	**P**	**18**	**21**	**15.8 +0.4**
JMN	**Monobe**	**22.37**	**346**	P	**P**	**18**	**21**	**18.6 +1.5**
PMG	**Port Moresby**	**22.37**	**162**	P	**P**	**18**	**21**	**17.6 +0.4**
PMG	**Port Moresby**	**22.37**	**162**	P	**P**	**18**	**21**	**17.3 +0.2**
PMG	**Port Moresby**	**22.37**	**162**		**P**	**18**	**21**	**15.7 -1.4**
PMG				IAmb	IAmb	18	21	33.0
	comp=Z,437nm,1.1s							
PMG	**Port Moresby**	**22.37**	**162**	*i* P	**P**	**18**	**21**	**16.2 -1.0**
PMG				pmax	pmax			
	comp=Z,417nm,1.1s							
PMG				MLR	MLR			
	comp=Z,41µm,16.0s							
PMG	**Port Moresby**	**22.37**	**162**	⇑P	**P**	**18**	**21**	**16.1 -1.1**
PMG	**Port Moresby**	**22.37**	**162**	P	**P**	**18**	**21**	**18.1 +0.9**
	comp=Z,20µmcomp=Z,11µmcomp=Z,361nm,1.0s							
PMG	**Port Moresby**	**22.37**	**162**	P	**P**	**18**	**21**	**17.4 +0.2**
APSI	**Ampana**	**22.55**	**236**	P	**P**	**18**	**21**	**18.6 -0.5**
JNU	**Nakatsue**	**22.69**	**339**	LR	LR	18	27	41.5
	comp=Z,31µm,21.2s,baz=132,slow=30							
JGF	**Kuroka**	**23.61**	**354**	P	**P**	**18**	**21**	**30.9 +1.1**
KDI	**Kendari**	**23.70**	**229**	P	**P**	**18**	**21**	**31.6 +0.8**
	comp=Z,32µmcomp=Z,24µmcomp=Z,604nm,2.2s							
PCI	**Palu**	**24.05**	**239**	P	**P**	**18**	**21**	**34.2 0.0**
	comp=Z,18µmcomp=Z,11µmcomp=Z,341nm,1.8s							
TARAI	**Tarakan**	**24.11**	**251**	P	**P**	**18**	**21**	**38.7 +4.0**
	comp=Z,12µmcomp=Z,19µmcomp=Z,799nm,1.6s							
KNMB	**Chin-men Tao**	**24.15**	**304**	P	**P**	**18**	**21**	**33.8 -1.2**
QZH2	**Quanzhou**	**24.21**	**305**	⇑*i* P	**P**	**18**	**21**	**34.9 -0.6**
QZH2				PP	**PnPn**	**18**	**22**	**07.2 +1.9**
QZH2				S	**S**	**18**	**25**	**52.8 -0.3**
QZH2				pmax	pmax			
	comp=Z,460nm,2.2s							
QZH2				pmax	pmax			
	comp=Z,12µm,5.2s							
QZH2				L	L			
	comp=Z,40µm,19.3s							
QZH2				L	L			
	comp=Z,29µm,19.6s							
QZH2				L	L			
	comp=Z,40µm,20.4s							
MAJO	**Matsushiro**	**24.47**	**356**	P	**P**	**18**	**21**	**37.3 -0.5**
KKM	**Kota Kinabalu**	**24.51**	**258**	P	**P**	**18**	**21**	**39.9 +1.4**
KKM	**Kota Kinabalu**	**24.51**	**258**	P	**P**	**18**	**21**	**36.9 -1.6**
KKM				IAmb	IAmb	18	21	48.7
	comp=Z,677nm,1.4s							
KKM	**Kota Kinabalu**	**24.51**	**258**	⇑P	**P**	**18**	**21**	**35.5 -3.0**
KKM	**Kota Kinabalu**	**24.51**	**258**	P	**P**	**18**	**21**	**38.6 +0.1**
	comp=Z,12µmcomp=Z,7µmcomp=Z,351nm,1.6s							
KKM	**Kota Kinabalu**	**24.51**	**258**	P	**P**	**18**	**21**	**38.6 +0.1**
KKSI	**Kolaka, Sulawe**	**24.56**	**230**	P	**P**	**18**	**21**	**39.7 +0.9**
	comp=Z,22µmcomp=Z,11µmcomp=Z,352nm,1.4s							
KDU	**Kakadu**	**25.77**	**198**	P	**P**	**18**	**21**	**50.5 +0.8**
	comp=Z,151nm,1.9s,comp=Z,0.0nm							
MMSI	**Mamuju**	**25.81**	**237**	P	**P**	**18**	**21**	**49.9 -0.3**
	comp=Z,12µmcomp=Z,5µmcomp=Z,130nm,1.4s							
SSE	**Sheshan**	**25.91**	**320**	P	**P**	**18**	**21**	**51.4 +0.5**
SSE				S	**S**	**18**	**26**	**23.7 +3.5**
SSE				pmax	pmax			
	comp=Z,100nm,1.0s							
SSE				pmax	pmax			
	comp=Z,3µm,5.9s							
COEN	**Coen**	**25.99**	**174**	P	**P**	**18**	**21**	**49.9 -1.8**
	comp=Z,65nm,0.7s							
COEN	**Coen**	**25.99**	**174**	P	**P**	**18**	**21**	**53.0 +1.3**
COEN	**Coen**	**25.99**	**174**	P	**P**	**18**	**21**	**50.2 -1.5**
COEN	**Coen**	**25.99**	**174**	⇑P	**P**	**18**	**21**	**52.5 +0.8**
COEN	**Coen**	**25.99**	**174**	P	**P**	**18**	**21**	**51.0 -0.7**
DRS	**Darwin Rock St**	**26.04**	**201**	P	**P**	**18**	**21**	**53.1 +0.9**
MTN	**Manton Dam**	**26.34**	**200**	P	**P**	**18**	**21**	**54.8 -0.1**
	comp=Z,162nm,0.9s,comp=Z,0.0nm							
MTN	**Manton Dam**	**26.34**	**200**	P	**P**	**18**	**21**	**53.4 -1.5**
KAPI	**Kappang**	**26.54**	**231**	LR	LR	18	31	36.4
	comp=Z,14µm,19.6s,baz=40,slow=34							
KAPI	**Kappang**	**26.54**	**231**	P	**P**	**18**	**21**	**58.3 +1.5**
KAPI	**Kappang**	**26.54**	**231**	P	**P**	**18**	**21**	**55.5 -1.3**
KAPI				IAmb	IAmb	18	22	23.5
	comp=Z,370nm,1.4s							
KAPI	**Kappang**	**26.54**	**231**	*i* P	**P**	**18**	**21**	**56.8 0.0**
KAPI				pmax	pmax			
	comp=Z,194nm,1.1s							
KAPI				MLR	MLR			
	comp=Z,11µm,16.0s							
KAPI	**Kappang**	**26.54**	**231**	P	**P**	**18**	**22**	**00.3 +3.5**
KAPI				P	**P**	**18**	**22**	**00.3 +3.5**
KAPI				S	**S**	**18**	**26**	**35.1 +4.6**
KAPI				S	**S**	**18**	**26**	**35.1 +4.6**
KAPI	**Kappang**	**26.54**	**231**	⇓P	**P**	**18**	**21**	**56.6 -0.2**
KAPI	**Kappang**	**26.54**	**231**	P	**P**	**18**	**21**	**56.7 0.0**
KAPI	**Kappang**	**26.54**	**231**	P	**P**	**18**	**21**	**56.8 0.0**
BSSI	**Bau Bau, Buton**	**26.73**	**229**	P	**P**	**18**	**21**	**59.6 +1.1**
	comp=Z,13µmcomp=Z,9µmcomp=Z,295nm,1.2s							
BKB	**Balikpapan**	**26.74**	**242**	P	**P**	**18**	**21**	**59.8 +1.2**
SOEI	**Soe**	**26.88**	**217**	P	**P**	**18**	**22**	**02.1 +2.1**
SOEI	**Soe**	**26.88**	**217**	P	**P**	**18**	**21**	**56.9 -3.1**
SOEI	**Soe**	**26.88**	**217**	IAMs_20	IAMs_20	18	31	02.2
	comp=Z,61µm,22.0s							
SOEI	**Soe**	**26.88**	**217**	P	**P**	**18**	**22**	**02.0 +2.1**
SOEI	**Soe**	**26.88**	**217**	P	**P**	**18**	**22**	**02.6 +2.6**
HKPS	**Hong Kong Po S**	**26.94**	**296**	P	**P**	**18**	**22**	**01.9 +1.5**
HKPS	**Hong Kong Po S**	**26.94**	**296**	IAMs_20	IAMs_20	18	29	48.0
	comp=Z,43µm,21.0s							
HKPS	**Hong Kong Po S**	**26.94**	**296**	P	**P**	**18**	**22**	**04.5 +4.2**
MMRI	**Maumere**	**27.28**	**222**	P	**P**	**18**	**22**	**03.7 +0.3**
MMRI	**Maumere**	**27.28**	**222**	⇓P	**P**	**18**	**22**	**02.6 -0.8**
MMRI	**Maumere**	**27.28**	**222**	P	**P**	**18**	**22**	**02.8 -0.6**
	comp=Z,14µmcomp=Z,912nm,2.1s							
MMRI	**Maumere**	**27.28**	**222**	P	**P**	**18**	**22**	**02.8 -0.6**
MCO	**Taipa Grande**	**27.41**	**295**	P	**P**	**18**	**22**	**05.0 +0.4**
BATI	**Baumata**	**27.60**	**217**	LR	LR	18	32	50.7
	comp=Z,18µm,19.7s,baz=58,slow=36							
BATI	**Baumata**	**27.60**	**217**	P	**P**	**18**	**22**	**01.9 -4.4**
	comp=Z,14µmcomp=Z,11µmcomp=Z,463nm,1.2s							
KSRS	**Korea Array**	**27.63**	**338**	P	**P**	**18**	**22**	**06.6 +0.3**
	comp=Z,27nm,1.1s,baz=143,slow=12,SNR=4.8							
KSRS				ScP	**ScP**	**18**	**29**	**03.9 +0.4**
	comp=Z,4.9nm,1.0s,baz=160,slow=4.0,SNR=7.3							
KSRS				LR	LR	18	31	22.3
	comp=Z,23µm,21.6s,baz=150,slow=33							
	comp=Z,27nm,1.1s							
GZH2	**Guangzhou**	**27.81**	**298**	P	**P**	**18**	**22**	**09.4 +1.3**
GZH2				pP	**sP**	**18**	**22**	**15.8 +1.1**
GZH2				S	**S**	**18**	**26**	**52.8 +2.4**
GZH2				pmax	pmax			
	comp=Z,82nm,1.1s							
GZH2				pmax	pmax			
	comp=Z,6µm,6.0s							
GZH2				L	L			
	comp=Z,12µm,11.0s							
GZH2				L	L			
	comp=Z,25µm,16.3s							
GZH2				L	L			
	comp=Z,39µm,17.0s							
NJ2	**Nanjing**	**28.03**	**319**	⇓P	**P**	**18**	**22**	**09.1 -0.9**
NJ2				sP	**pwP**	**18**	**22**	**18.9 -0.7**
NJ2				PP	**PP**	**18**	**23**	**05.8 -7.7**
NJ2				S	**S**	**18**	**26**	**56.7 +3.0**
NJ2				pmax	pmax			
	comp=Z,64nm,1.5s							
NJ2				pmax	pmax			
	comp=Z,8µm,5.3s							
NJ2				L	L			
	comp=Z,128µm,13.3s							
NJ2				L	L			
	comp=Z,96µm,13.8s							
NJ2				L	L			
	comp=Z,110µm,13.9s							
TATA	**Tatamba Isabel**	**28.07**	**135**	P	**P**	**18**	**22**	**11.4 +0.9**
INCN	**Inchon**	**28.14**	**337**	S	**S**	**18**	**26**	**51.1 -4.2**
SAVO	**Savo Central**	**28.63**	**136**	P	**P**	**18**	**22**	**15.3 -0.2**
LBFI	**Labuhan Bajo,**	**28.76**	**226**	P	**P**	**18**	**22**	**14.7 -2.0**
HNR	**Honiara**	**28.92**	**137**	LR	LR	18	32	35.9
	comp=Z,1µm,21.4s,baz=46,slow=34							
HNR	**Honiara**	**28.92**	**137**	P	**P**	**18**	**22**	**19.5 +1.4**
HNR	**Honiara**	**28.92**	**137**	P	**P**	**18**	**22**	**16.8 -1.3**
HNR	**Honiara**	**28.92**	**137**	P	**P**	**18**	**22**	**16.8 -1.3**
HNR				pmax	pmax			
	comp=Z,517nm,1.0s							
HNR				MLR	MLR			
	comp=Z,27µm,22.0s							
HNR	**Honiara**	**28.92**	**137**	⇑P	**P**	**18**	**22**	**17.2 -0.9**
HNR	**Honiara**	**28.92**	**137**	P	**P**	**18**	**22**	**17.5 -0.6**
HJU	**Haeju**	**28.98**	**336**	P	**P**	**18**	**22**	**22.4 +4.1**
HJU				S	**S**	**18**	**27**	**12.1 +3.6**
HJU				AmB				
	comp=Z,5µm,6.1s							
HJU				AMS	AMS			
	comp=Z,28µm,22.0s							
KNRA	**Kununurra**	**29.81**	**203**	P	**P**	**18**	**22**	**24.9 -1.1**
	comp=Z,237nm,2.1s,comp=Z,0.0nm							
KNRA	**Kununurra**	**29.81**	**203**	IAmb	IAmb	18	22	35.3
	comp=Z,200nm,1.0s							
PYAG	**Pyongyang**	**29.84**	**337**	P	**P**	**18**	**22**	**29.7 +3.7**
PYAG				S	**S**	**18**	**27**	**25.8 +3.8**
PYAG				AmB				
	comp=Z,1µm,2.9s							
PYAG				AMS	AMS			
	comp=Z,28µm,25.1s							
WBSI	**Waikabubak, Su**	**29.93**	**225**	P	**P**	**18**	**22**	**23.7 -3.4**
	comp=Z,11µmcomp=Z,2µmcomp=Z,109nm,0.8s							
HHU	**Hamhung**	**29.98**	**340**	P	**P**	**18**	**22**	**31.3 +4.1**
HHU				S	**S**	**18**	**27**	**28.0 +3.8**
HHU				AmB				
	comp=Z,2µm,3.4s							
HHU				AMS	AMS			
	comp=Z,16µm,14.6s							
QIZ	**Qiongzhong**	**30.12**	**287**	IAMs_20	IAMs_20	18	31	54.1
	comp=Z,38µm,22.0s							
QIZ	**Qiongzhong**	**30.12**	**287**	P	**P**	**18**	**22**	**28.5 -0.2**
QIZ				S	**S**	**18**	**27**	**26.4 -0.5**
QIZ				pmax	pmax			
	comp=Z,150nm,2.0s							
QIZ				pmax	pmax			
	comp=Z,1µm,5.9s							
QIZ				L	L			
	comp=Z,7µm,16.6s							
QIZ				L	L			
	comp=Z,23µm,21.5s							
QIZ				L	L			
	comp=Z,39µm,23.0s							
CNSH	**ChangSha**	**30.20**	**306**	⇓P	**P**	**18**	**22**	**27.1 -2.2**
CNSH				S	**S**	**18**	**27**	**28.4 +0.6**
CNSH				pmax	pmax			
	comp=Z,29nm,1.5s							
CNSH				L	L			
	comp=Z,18µm,14.2s							
CNSH				L	L			
	comp=Z,17µm,11.4s							
CNSH				L	L			
	comp=Z,22µm,15.3s							
MTSU	**Mount Surprise**	**30.25**	**172**	P	**P**	**18**	**22**	**30.2 +0.4**
	comp=Z,27nm,1.0s							
MTSU	**Mount Surprise**	**30.25**	**172**	P	**P**	**18**	**22**	**30.9 +1.1**
MTSU	**Mount Surprise**	**30.25**	**172**	P	**P**	**18**	**22**	**31.0 +1.2**
WHN	**Wuhan**	**30.26**	**311**	⇑*i* P	**P**	**18**	**22**	**30.5 +0.7**
WHN				sP	**pwP**	**18**	**22**	**39.3 -0.2**
WHN				PP	**PnPn**	**18**	**23**	**26.8 -1.0**
WHN				S	**S**	**18**	**27**	**28.4 -0.4**
WHN				pmax	pmax			
	comp=Z,860nm,1.9s							
WHN				pmax	pmax			
	comp=Z,6µm,5.1s							
WHN				L	L			
	comp=Z,97µm,15.5s							
WHN				L	L			
	comp=Z,50µm,15.2s							
WHN				L	L			
	comp=Z,124µm,16.6s							
DLV	**Lat**	**31.11**	**273**	P	**P**	**18**	**22**	**39.6 +1.9**
TWSI	**Taliwang, Sumb**	**31.11**	**229**	P	**P**	**18**	**22**	**37.1 -0.4**
	comp=Z,9µmcomp=Z,2µmcomp=Z,49nm,0.9s							
GULI	**GuiLin**	**31.18**	**299**	⇑P	**P**	**18**	**22**	**38.0 0.0**
GULI				S	**S**	**18**	**27**	**44.3 +0.9**
GULI				pmax	pmax			
	comp=Z,49nm,1.4s							
GULI				pmax	pmax			
	comp=Z,3µm,5.1s							
GULI				L	L			
	comp=Z,11µm,12.2s							
GULI				L	L			
	comp=Z,26µm,24.3s							
GULI				L	L			
	comp=Z,44µm,23.7s							
SUJ	**Sinuiju**	**31.24**	**336**	P	P	18	22	43.4 +5.1
DL2	**Dalian**	**31.48**	**331**	P	**P**	**18**	**22**	**41.1 +0.6**
DL2				PP	**PP**	**18**	**23**	**48.0 -3.7**
DL2				S	**S**	**18**	**27**	**47.5 -0.3**
DL2				pmax	pmax			
	comp=Z,77nm,1.0s							
DL2				pmax	pmax			
	comp=Z,4µm,6.2s							
DL2				L	L			
	comp=Z,36µm,23.2s							
DL2				L	L			
	comp=Z,44µm,22.3s							
DL2				L	L			
	comp=Z,41µm,17.5s							
VLA	**Vladivostok**	**31.81**	**348**	*i* P	**P**	**18**	**22**	**43.1 -0.2**
VLA				pmax	pmax			
	comp=Z,171nm,1.4s							
VLA				MLR	MLR			
	comp=Z,8µm,15.0s							
KHKI	**Kahang-Kahang**	**31.84**	**232**	P	**P**	**18**	**22**	**44.2 +0.4**
	comp=Z,8µmcomp=Z,5µmcomp=Z,156nm,1.4s							
TIA	**Tai'an**	**31.87**	**323**	P	**P**	**18**	**22**	**43.7 -0.3**
TIA				PP	**PnPn**	**18**	**23**	**48.9 +0.1**
TIA				S	**S**	**18**	**27**	**56.5 +2.6**
TIA				pmax	pmax			
	comp=Z,51nm,1.0s							
TIA				pmax	pmax			
	comp=Z,4µm,9.0s							
TIA				L	L			
	comp=Z,23µm,11.7s							
TIA				L	L			
	comp=Z,25µm,18.0s							
TIA				L	L			
	comp=Z,34µm,17.3s							
AUAYR	**Ayr State High**	**32.19**	**167**	P	**P**	**18**	**22**	**48.2 +1.3**
WRAB	**Tennant Creek**	**32.31**	**191**	P	**P**	**18**	**22**	**49.5 +1.5**
WRAB	**Tennant Creek**	**32.31**	**191**	P	**P**	**18**	**22**	**46.3 -1.6**
WRAB	**Tennant Creek**	**32.31**	**191**	IAMs_20	IAMs_20	18	35	50.5
	comp=Z,36µm,19.0s							
WRAB	**Tennant Creek**	**32.31**	**191**	*i* P	**P**	**18**	**22**	**47.3 -0.6**
WRAB				pmax	pmax			
	comp=Z,216nm,2.2s							
WRAB				MLR	MLR			
	comp=Z,34µm,19.0s							
WRAB	**Tennant Creek**	**32.31**	**191**	P	**P**	**18**	**22**	**49.4 +1.5**
WRA	**Warramunga Arr**	**32.32**	**191**	P	**P**	**18**	**22**	**47.4 -0.7**
	comp=Z,20nm,0.9s,baz=4.8,slow=9.6,SNR=52							
WRA				PcP	**PcP**	**18**	**25**	**35.4 -0.6**
	comp=Z,6.9nm,1.0s,baz=15,slow=3.2,SNR=2.3							
WRA				LR	LR	18	36	02.2
	comp=Z,38µm,19.4s,baz=19,slow=36							
	comp=Z,20nm,0.9s							
WRA	**Warramunga Arr**	**32.32**	**191**	P	**P**	**18**	**22**	**45.9 -2.1**
WRA					**PcP**	**18**	**25**	**35.4 -0.6**
WRA	**Warramunga Arr**	**32.32**	**191**	P	**P**	**18**	**22**	**45.9 -2.1**
WRA						18	25	35.4
WRA				pmax	pmax			
	comp=Z,15nm,1.5s							
QIS	**Mount Isa**	**32.40**	**181**	P	**P**	**18**	**22**	**48.3 -0.4**
	comp=Z,123nm,2.6s,comp=Z,0.0nm							
QIS	**Mount Isa**	**32.40**	**181**	P	**P**	**18**	**22**	**49.9 +1.2**
QIS	**Mount Isa**	**32.40**	**181**	P	**P**	**18**	**22**	**48.9 +0.2**
CTA	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**50.0 +0.8**
	comp=Z,50nm,1.0s,comp=Z,0.0nm							
CTA	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**49.6 +0.3**
	comp=Z,94nm,0.9s,baz=338,slow=9.4,SNR=46							
CTA				LR	LR	18	34	22.1
	comp=Z,17µm,20.4s,baz=346,slow=33							
	comp=Z,94nm,0.9s							
CTA	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**50.7 +1.4**
CTAO	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**50.7 +1.4**
CTAO	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**49.1 -0.1**
CTAO	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**49.1 -0.1**
CTAO				pmax	pmax			
	comp=Z,706nm,2.0s							
CTAO				MLR	MLR			
	comp=Z,19µm,20.0s							
CTAO	**Charters Tower**	**32.46**	**170**	⇑P	**P**	**18**	**22**	**50.2 +1.0**
CTAO	**Charters Tower**	**32.46**	**170**	P	**P**	**18**	**22**	**50.5 +1.2**
USA0B	**Ussuriysk Arra**	**32.83**	**349**	*i* P	**P**	**18**	**22**	**50.4 -1.9**
JAGI	**Jajag, Banyuwa**	**33.03**	**233**	P	**P**	**18**	**22**	**54.1 -0.2**
JAGI	**Jajag, Banyuwa**	**33.03**	**233**	IAmb	IAmb	18	23	22.8
	comp=Z,281nm,1.5s							
JAGI	**Jajag, Banyuwa**	**33.03**	**233**	⇑P	**P**	**18**	**22**	**52.9 -1.5**
JAGI	**Jajag, Banyuwa**	**33.03**	**233**	P	**P**	**18**	**22**	**53.9 -0.4**
	comp=Z,8µmcomp=Z,127nm,1.5s							
JAGI	**Jajag, Banyuwa**	**33.03**	**233**	P	**P**	**18**	**22**	**53.1 -1.3**
FITZ	**Fitzroy Crossi**	**33.26**	**206**	P	**P**	**18**	**22**	**54.3 -1.9**
FITZ	**Fitzroy Crossi**	**33.26**	**206**	P	**P**	**18**	**22**	**54.5 -1.7**
	comp=Z,32nm,1.1s,baz=34,slow=12,SNR=28							
FITZ				LR	LR	18	35	37.5
	comp=Z,5µm,21.1s,baz=26,slow=35							
	comp=Z,32nm,1.1s							
KUR	**Kuril'sk**	**33.70**	**10**	P	**P**	**18**	**22**	**59.2 -0.6**
KUR				*e*		18	25	40.0
KUR				S	**S**	**18**	**28**	**20.8 -1.3**
KUR				*e*SSS	SSS	18	30	45.1
KUR				pmax	pmax			
	comp=Z,3µm,6.4s							
KUR				MLR	MLR			
	comp=Z,7µm,12.0s							
LYN	**LuoYang**	**33.79**	**316**	P	**P**	**18**	**22**	**59.7 -1.1**
LYN				PP	**PP**	**18**	**24**	**15.6 -1.8**
LYN				S	**S**	**18**	**28**	**23.3 -0.5**
LYN				pmax	pmax			
	comp=Z,110nm,1.4s							
LYN				pmax	pmax			
	comp=Z,6µm,5.1s							
LYN				L	L			
	comp=Z,56µm,16.5s							
LYN				L	L			
	comp=Z,19µm,13.3s							
LYN				L	L			
	comp=Z,71µm,22.7s							
HNS	**HongShan**	**34.10**	**322**	⇓P	**P**	**18**	**23**	**03.3 -0.1**
HNS				S	**S**	**18**	**28**	**33.8 +5.3**
HNS				L	L			
	comp=Z,23µm,18.2s							
HNS				L	L			
	comp=Z,34µm,17.2s							
HNS				L	L			
	comp=Z,36µm,16.4s							
CN2	**Changchun**	**34.14**	**341**	P	**P**	**18**	**22**	**59.1 -4.6**
CN2				S	**S**	**18**	**28**	**26.0 -3.0**
CN2				pmax	pmax			
	comp=Z,40nm,1.0s							
CN2				pmax	pmax			
	comp=Z,2µm,7.0s							
CN2				LR	LR			
	comp=N,35µm,18.0s							
CN2				LR	LR			
	comp=E,41µm,18.0s							
CN2				LR	LR			
	comp=Z,23µm,17.0s							
SNJI	**Sawahan-Nganju**	**34.54**	**237**	P	**P**	**18**	**23**	**07.9 +0.2**
	comp=Z,8µmcomp=Z,5µmcomp=Z,213nm,2.1s							
GYA	**Guiyang**	**34.71**	**299**	⇑P	**P**	**18**	**23**	**11.3 +2.3**
GYA				PP	**PP**	**18**	**24**	**28.4 +0.6**
GYA				S	**S**	**18**	**28**	**37.9 -0.6**
GYA				pmax	pmax			
	comp=Z,89nm,1.6s							
GYA				pmax	pmax			
	comp=Z,5µm,5.2s							
GYA				L	L			
	comp=Z,21µm,16.9s							
GYA				L	L			
	comp=Z,24µm,24.5s							
GYA				L	L			
	comp=Z,41µm,23.4s							
YSS	**Yuzhno-Sakhali**	**34.86**	**3**	*e*P	**P**	**18**	**23**	**08.8 -1.0**
YSS				*e*		18	24	29.9
YSS				*e*S	**S**	**18**	**28**	**38.8 -1.2**
YSS				*e*SS	**SS**	**18**	**31**	**19.9 +8.3**
YSS				pmax	pmax			
	comp=Z,1µm,4.8s							
YSS				pmax	pmax			
	comp=Z,2µm,13.2s							
YSS				pmax	pmax			
	comp=N,2µm,10.0s							
YSS				smax	smax			
	comp=N,5µm,12.0s							
YSS				MLR	MLR			
	comp=Z,14µm,17.0s							
YSS				MLR	MLR			
	comp=N,8µm,15.0s							
BJI2	**Beijing**	**35.07**	**327**	P	**P**	**18**	**23**	**12.1 +0.3**
BJI2				PP	**PP**	**18**	**24**	**31.9 +0.4**
BJI2				S	**S**	**18**	**28**	**46.0 +2.5**
BJI2				pmax	pmax			
	comp=N,69nm,0.7s							
BJI2				pmax	pmax			
	comp=N,2µm,5.2s							
BJI2				L	L			
	comp=N,11µm,19.2s							
BJI2				L	L			
	comp=N,10µm,18.2s							
BJI2				L	L			
	comp=N,12µm,17.5s							
SMRI	**Semarang**	**35.23**	**239**	P	**P**	**18**	**23**	**14.9 +1.4**
SMRI	**Semarang**	**35.23**	**239**	IAmb	IAmb	18	23	27.8
	comp=Z,338nm,1.2s							
SMRI	**Semarang**	**35.23**	**239**	P	P	18	23	18.4 +4.9
	comp=Z,10µmcomp=Z,7µmcomp=Z,276nm,2.1s							
SMRI	**Semarang**	**35.23**	**239**	P	**P**	**18**	**23**	**14.0 +0.5**
BNX	**BinXian**	**35.33**	**344**	⇑P	**P**	**18**	**23**	**14.2 +0.2**
BNX				PP	**PP**	**18**	**24**	**34.4 +0.1**
BNX				S	**S**	**18**	**28**	**50.0 +2.7**
BNX				pmax

comp=Z,31µm,19.4s
XAN L L
comp=Z,30µm,19.9s
AS15 Alice Springs 36.00 190 P P 18 23 20.1 +0.1
comp=Z,85nm,0.9s
AS17 Alice Springs 36.02 190 P P 18 23 20.5 +0.3
comp=Z,61nm,1.1s
AS01 Alice Springs 36.03 190 P P 18 23 22.1 +1.9
ASAR Alice Springs 36.04 190 P P 18 23 20.4 +0.1
comp=Z,5.8nm,0.7s,baz=20,slow=12,SNR=72
ASAR PP PP 18 24 43.7 +1.2
comp=Z,20nm,0.9s,baz=16,slow=10,SNR=5.5
ASAR PcP PcP 18 25 45.2 -1.4
comp=Z,7.2nm,0.8s,baz=5.7,slow=3.7,SNR=1.5
ASAR LR LR 18 38 16.7
comp=Z,27µm,18.0s,baz=17,slow=36
comp=Z,5.8nm,0.7s
ASAR Alice Springs 36.04 190 P P 18 23 19.0 -1.3
ASAR **PcP 18 25 45.2 -1.4**
AS09 Alice Springs 36.06 190 P P 18 23 21.4 +1.0
comp=Z,49nm,0.8s
AUALC St Philip's Co 36.06 190 P P 18 23 22.8 +2.3
AUNRC North Rockhamp 36.57 164 P P 18 23 24.9 +0.1
UGL Uglegorsk 36.95 2 eP P 18 23 27.5 -0.2
UGL *e*S **S 18 29 10.5 -1.5**
UGL pmax pmax
comp=Z,3µm,6.5s
UGL smax smax
comp=E,5µm,7.3s
UGL smax smax
comp=N,6µm,13.0s
UGL MLR MLR
comp=E,9µm,19.0s
UGL MLR MLR
comp=N,11µm,15.0s
UGL MLR MLR
comp=Z,8µm,16.0s
GD1S Gladstone Soft 37.21 163 P P 18 23 32.0 +1.8
LEM Lembang 37.52 242 LR LR 18 40 03.5
comp=Z,10µm,21.8s,baz=56,slow=38
MYKOM Kota Tinggi 37.54 257 P P 18 23 34.7 +1.5
MYKOM Kota Tinggi 37.54 257 P P 18 23 34.5 +1.3
MYKOM Kota Tinggi 37.54 257 P P 18 23 32.7 -0.5
DSRI Dabo 37.58 253 P P 18 23 31.8 -1.8
KLR Kul'dur 37.75 351 LR LR 18 35 53.4
comp=Z,7µm,21.2s,baz=167,slow=31
KLR Kul'dur 37.75 351 *i* **P P 18 23 35.0 +0.5**
KLR pmax pmax
comp=Z,134nm,0.9s
KLR MLR MLR
comp=Z,9µm,17.0s
KMI2 Kunming 37.77 296 ⇑P **P P 18 23 37.0 +1.7**
KMI2 pmax pmax
comp=Z,110nm,1.7s
KMI2 pmax pmax
comp=Z,3µm,4.9s
KMI2 L L
comp=Z,19µm,21.2s
KMI2 L L
comp=Z,15µm,26.9s
KMI2 L L
comp=Z,28µm,26.1s
BBJI Bungbulang 37.81 241 P P 18 23 34.0 -1.5
BBJI Bungbulang 37.81 241 P P 18 23 32.3 -3.2
BBJI Bungbulang 37.81 241 P P 18 23 33.3 -2.2
comp=Z,110nm,1.1s
BBJI Bungbulang 37.81 241 P P 18 23 33.3 -2.2
DBJI Dramaga 38.14 243 P P 18 23 38.3 0.0
comp=Z,6µmcomp=Z,7µmcomp=Z,267nm,2.1s
SANVU Saraoutou 38.15 135 P P 18 23 40.0 +1.7
SANVU Saraoutou 38.15 135 P P 18 23 37.5 -0.7
SANVU IAmb IAmb 18 24 03.6
comp=Z,431nm,1.2s
SANVU IAMs_20 IAMs_20 18 37 36.4
comp=Z,28µm,21.0s
SANVU Saraoutou 38.15 135 ⇑P **P 18 23 39.0 +0.7**
SANVU Saraoutou 38.15 135 P P 18 23 39.1 +0.9
HHC Hu-ho-hao-te 38.21 324 ⇑*i*P **P 18 23 39.6 +0.9**
HHC pP sP 18 23 44.3 -0.9
HHC S **S 18 29 26.7 -4.8**
HHC pmax pmax
comp=Z,140nm,0.9s
HHC pmax pmax
comp=Z,2µm,3.8s
HHC L L
comp=Z,6µm,15.1s
HHC L L
comp=Z,11µm,17.7s
HHC L L
comp=Z,12µm,16.8s
QLP Quilpie 38.58 174 P P 18 23 40.7 -1.0
comp=Z,217nm,1.6s
QLP Quilpie 38.58 174 P P 18 23 43.0 +1.2
QLP Quilpie 38.58 174 ⇑P **P 18 23 41.6 -0.1**
QLP Quilpie 38.58 174 P P 18 23 41.9 +0.1
CD2 Chengdu 38.60 305 ⇑P **P 18 23 42.6 +0.5**
CD2 S **S 18 29 38.6 +0.9**
CD2 SS **SnSn 18 32 23.4 -2.4**
CD2 pmax pmax
comp=Z,160nm,0.9s
CD2 pmax pmax
comp=Z,6µm,5.4s
CD2 L L
comp=Z,24µm,12.1s
CD2 L L
comp=Z,24µm,15.9s
CD2 L L
comp=Z,26µm,18.4s
EIDS Eidsvold 38.64 164 P P 18 23 41.3 -1.0
comp=Z,85nm,2.0s,comp=Z,0.0nm
EIDS Eidsvold 38.64 164 P P 18 23 42.9 +0.6
EIDS Eidsvold 38.64 164 ⇑P **P 18 23 41.6 -0.7**
EIDS Eidsvold 38.64 164 P P 18 23 41.8 -0.5
WRKA Warakurna 38.67 198 P P 18 23 41.9 -0.7
comp=Z,68nm,1.9s,comp=Z,0.0nm
MBWA Marble Bar 38.69 212 P P 18 23 41.3 -1.5
comp=Z,67nm,2.0s,comp=Z,0.0nm
MBWA Marble Bar 38.69 212 P P 18 23 42.5 -0.3
MBWA Marble Bar 38.69 212 P P 18 23 41.1 -1.7
MBWA Marble Bar 38.69 212 P P 18 23 46.4 +3.7
MBWA Marble Bar 38.69 212 P P 18 23 40.2 -2.6
GRNR Gornyy 38.75 356 eP P 18 23 43.4 +0.5
TYV Tymovskoe 38.76 2 eP P 18 23 43.5 +0.5
TYV *e*S **S 18 29 41.0 +1.7**
TYV pmax pmax
comp=Z,90nm,0.8s
TYV pmax pmax
comp=Z,2µm,4.2s
TYV smax smax
comp=N,2µm,4.2s
TYV smax smax
comp=E,3µm,4.2s
TYV MLR MLR
comp=Z,12µm,19.0s
PZH PanZhiHua 38.97 297 P P 18 23 48.0 +2.7
PZH S **S 18 29 43.0 -0.4**
PZH pmax pmax
comp=Z,3µm,6.5s
PZH L L
comp=Z,9µm,15.7s
PZH L L
comp=Z,11µm,16.9s
PZH L L
comp=Z,12µm,15.8s
KLI Kotabumi 39.04 247 P P 18 23 45.2 -0.6
comp=Z,3µmcomp=Z,158nm,1.1s
KLSI 39.08 247 P P 18 23 45.3 -0.9
BTO2 Baotou 39.13 322 eP P 18 23 46.9 +0.5
BTO2 **sP 18 23 53.9 +0.9**
BTO2 PP **PnPn 18 25 25.3 +6.5**
BTO2 S **S 18 29 46.0 +0.5**
BTO2 SS **SnSn 18 32 25.9 -12**
BTO2 pmax pmax
comp=Z,200nm,1.1s
BTO2 pmax pmax
comp=Z,9µm,5.1s
BTO2 L L
comp=Z,45µm,12.9s
BTO2 L L
comp=Z,31µm,12.6s
BTO2 L L
comp=Z,33µm,13.3s
RMQ Roma 39.17 168 P P 18 23 46.7 0.0
comp=Z,38nm,1.6s
HEH HeiHe 39.55 347 eP P 18 23 49.5 -0.1
HEH S **S 18 29 51.1 -0.1**

HEH pmax pmax
comp=Z,160nm,1.0s
HEH pmax pmax
comp=Z,4µm,7.4s
KASI Kota Agung 39.65 246 P P 18 23 49.8 -1.1
comp=Z,83nm,1.0s
KULM Kulim 39.73 264 P P 18 23 52.3 +0.7
KULM Kulim 39.73 264 ⇑P **P 18 23 51.1 -0.6**
KULM Kulim 39.73 264 P P 18 23 51.9 +0.3
comp=Z,2µmcomp=Z,129nm,1.1s
KOUNC Koumac, New Ca 40.07 144 P P 18 23 56.3 +2.0
KOUNC Koumac, New Ca 40.07 144 P P 18 23 53.4 -0.9
KOUNC Koumac, New Ca 40.07 144 ⇑P **P 18 23 55.7 +1.4**
CM31 Chiang Mai Arr 40.34 284 IAmb IAmb 18 24 10.4
comp=Z,315nm,1.2s
CM31 Chiang Mai Arr 40.34 284 P P 18 23 58.4 +1.7
SNR=104
CM31 P P **18 23 58.4 +1.7**
SNR=104
CMAR Chiang Mai Arr 40.34 284 P **P 18 23 57.1 +0.5**
comp=Z,46nm,0.9s,baz=88,slow=6.5,SNR=181
CMAR LR LR 18 38 31.2
comp=Z,17µm,21.7s,baz=95,slow=33
comp=Z,46nm,0.9s
CMAR Chiang Mai Arr 40.34 284 *i* P **P 18 23 57.9 +1.2**
CMAR pmax pmax
comp=Z,50nm,0.9s
CHTO Chiang Mai 40.36 285 P P 18 23 58.3 +1.5
CHTO Chiang Mai 40.36 285 P P 18 23 55.7 -1.1
CHTO Chiang Mai 40.36 285 P P 18 23 55.7 -1.1
CHTO pmax pmax
comp=Z,209nm,1.6s
CHTO MLR MLR
comp=Z,22µm,22.0s
CHTO Chiang Mai 40.36 285 P P 18 23 58.1 +1.3
CHTO P **P 18 23 58.1 +1.3**
CHTO P **P 18 23 58.1 +1.3**
CHTO S **S 18 30 00.7 -3.5**
CHTO S **S 18 30 00.7 -3.5**
CHTO S **S 18 30 00.7 -3.5**
CHTO Chiang Mai 40.36 285 P P 18 23 58.1 +1.3
CHTO Chiang Mai 40.36 285 P P 18 23 57.5 +0.6
CHTO S **S 18 30 08.5 +4.2**
CHTO Chiang Mai 40.36 285 P P 18 23 57.6 +0.8
DVP Devils Point 40.41 137 P P 18 23 58.8 +1.7
AUBSH Beerwah State 40.58 162 P P 18 23 59.5 +1.1
LZH Lanzhou 40.63 312 *e*P **P 18 23 59.9 +0.9**
LZH sP pwP 18 24 09.9 +1.1
LZH S **S 18 30 03.1 -5.1**
LZH SS **SS 18 33 02.6 -6.0**
LZH pmax pmax
comp=Z,34nm,1.2s
LZH pmax pmax
comp=Z,4µm,4.8s
LZH L L
comp=Z,17µm,14.8s
LZH L L
comp=Z,30µm,14.4s
LZH L L
comp=Z,42µm,13.7s
SKR Severo-Kuril's 40.65 15 *e*P P 18 23 44.2 -15
SKR pmax pmax
comp=Z,2µm,5.6s
SKR MLR MLR
comp=Z,13µm,16.0s
BKNI Bangkinang 40.66 256 P P 18 24 00.6 +1.3
BKNI Bangkinang 40.66 256 P P 18 23 57.6 -1.8
BKNI Bangkinang 40.66 256 P P 18 23 56.8 -2.5
BKNI Bangkinang 40.66 256 P P 18 23 59.4 +0.1
comp=Z,2µmcomp=Z,131nm,1.1s
BKNI Bangkinang 40.66 256 P P 18 23 58.8 -0.6
LZDM Lanzhou Array 40.68 312 P P 18 24 00.1 +0.4
comp=Z,1.9nm,0.3s,baz=114,slow=9.9,SNR=5.6
LZDM LR LR 18 39 51.4
comp=Z,29µm,21.4s,baz=100,slow=35
comp=Z,1.9nm,0.3s
TW1H Toowoomba 1 Ha 40.95 164 P P 18 24 02.9 +1.4
AUTOO Toowoomba Stat 40.95 164 P P 18 24 02.9 +1.3
NKL Nikolayevsk 41.00 0 eP P 18 24 00.9 -0.7
NKL pmax pmax
comp=E,138nm,1.2s
NKL pmax pmax
comp=N,95nm,1.0s
NKL pmax pmax
comp=Z,422nm,1.0s
NKL MLR MLR
comp=N,11µm,13.0s
NKL MLR MLR
comp=E,46µm,16.0s
NKL MLR MLR
comp=Z,44µm,16.0s
HILR Hailar Array B 41.07 340 LR LR 18 40 44.9
comp=Z,12µm,18.6s,baz=100,slow=36
TNCH TengChong 41.49 294 ⇑*i*P **P 18 24 07.2 +0.9**
TNCH PP **PP 18 25 45.1 +2.8**
TNCH S **S 18 30 22.1 +0.7**
TNCH pmax pmax
comp=Z,130nm,1.1s
TNCH pmax pmax
comp=Z,1µm,4.1s
TNCH L L
comp=Z,11µm,16.3s
TNCH L L
comp=Z,16µm,17.4s
TNCH L L
comp=Z,49µm,19.8s
PPI Padang Panjang 41.51 255 P **P 18 24 05.3 -1.1**
comp=Z,3µmcomp=Z,153nm,1.8s
PDSI Padang 41.60 255 P **P 18 24 05.1 -2.0**
comp=Z,3µmcomp=Z,66nm,1.0s
AULRC Lightning Ridg 41.89 170 P P 18 24 09.9 +0.7
GC1S Gold Coast 1 S 41.96 162 P P 18 24 10.8 +1.0
PSI Prapat 41.99 261 P P 18 24 11.9 +1.5
PSI Prapat 41.99 261 P P 18 24 08.8 -1.6
PSI pmax pmax
comp=Z,142nm,0.9s
PSI Prapat 41.99 261 P P 18 24 09.8 -0.6
comp=Z,3µmcomp=Z,173nm,1.0s
RPSI Rantau Prapat 42.01 261 P P 18 24 08.8 -1.7
NOUC Port Laguerre 42.45 143 P P 18 24 15.8 +2.0
DZM Mont Dzumac 42.51 143 P P 18 24 15.6 +1.2
comp=Z,259nm,0.9s,baz=320,slow=5.5,SNR=108
DZM LR LR 18 39 42.0
comp=Z,34µm,21.7s,baz=316,slow=33
comp=Z,259nm,0.9s
ONTNC Ouen Toro 42.70 143 P P 18 24 17.8 +1.9
ONTNC Ouen Toro 42.70 143 P P 18 24 16.3 +0.4
ONTNC IAMs_20 IAMs_20 18 39 35.8
comp=Z,33µm,20.0s
ONTNC Ouen Toro 42.70 143 ⇑P **P 18 24 16.6 +0.8**
YATNC Mamie plateau, 42.77 142 P P 18 24 18.3 +1.9
OUENC Ouen Island, N 43.01 143 P P 18 24 19.7 +1.3
MARNC Mare, Loyalty 43.03 141 P P 18 24 20.0 +1.4
MARNC Mare, Loyalty 43.03 141 IAmb IAmb 18 24 30.9
comp=Z,335nm,1.2s
MARNC Mare, Loyalty 43.03 141 ⇓P **P 18 24 19.9 +1.4**
NPW Naypyitaw 43.06 286 P P 18 24 21.4 +2.4
LHMI Lhok Sumawe 43.35 265 P P 18 24 22.9 +1.6
LHMI Lhok Sumawe 43.35 265 IAmb IAmb 18 24 32.1
comp=Z,338nm,1.0s
LHMI Lhok Sumawe 43.35 265 ⇑P **P 18 24 21.9 +0.6**
LHMI Lhok Sumawe 43.35 265 P P 18 24 22.9 +1.6
LHMI Lhok Sumawe 43.35 265 P P 18 24 23.0 +1.7
PET Petropavlovsk 43.44 16 eP P 18 24 22.2 +0.7
PET *e* 18 26 06.5
PET *e*S **S 18 30 50.2 +1.3**
PET pmax pmax
comp=Z,86nm,1.5s
PET pmax pmax
comp=Z,2µm,5.8s
PET pmax pmax
comp=Z,2µm,8.5s
TPTI 43.56 262 P P 18 24 22.1 -0.9
comp=Z,4µmcomp=Z,114nm,1.1s
ARMA Armidale 43.60 166 P P 18 24 22.3 -0.8
comp=Z,98nm,2.5s,comp=Z,0.0nm
ARMA Armidale 43.60 166 P P 18 24 23.9 +0.7
ARMA Armidale 43.60 166 ⇑P **P 18 24 23.0 -0.2**
ARMA Armidale 43.60 166 P P 18 24 23.4 +0.2
CMSA Cobar Meteorol 43.64 173 P P 18 24 23.0 -0.4
comp=Z,276nm,2.2s
CMSA Cobar Meteorol 43.64 173 P P 18 24 24.3 +1.0
CMSA Cobar Meteorol 43.64 173 P P 18 24 24.1 +0.8
GSI Gunungsitoli 43.68 259 P P 18 24 24.7 +0.7
GSI Gunungsitoli 43.68 259 P P 18 24 22.2 -1.8

GSI IAmb IAmb 18 24 32.0
comp=Z,181nm,1.0s
GSI Gunungsitoli 43.68 259 ⇑P **P 18 24 22.5 -1.5**
GSI Gunungsitoli 43.68 259 P P 18 24 23.1 -1.0
comp=Z,3µmcomp=Z,200nm,1.1s
GSI Gunungsitoli 43.68 259 P P 18 24 23.0 -1.0
STKA Stephens Creek 43.69 178 P P 18 24 22.8 -0.9
comp=Z,994nm,1.3s,comp=Z,0.0nm
STKA Stephens Creek 43.69 178 P P 18 24 23.6 -0.1
comp=Z,89nm,1.1s,baz=350,slow=8.2,SNR=58
STKA LR LR 18 43 45.2
comp=Z,17µm,19.8s,baz=359,slow=38
comp=Z,89nm,1.1s
STKA Stephens Creek 43.69 178 P P 18 24 24.1 +0.4
STKA Stephens Creek 43.69 178 *i* P **P 18 24 23.4 -0.3**
MEEK Meekatharra 43.84 209 P P 18 24 23.7 -1.4
comp=Z,72nm,1.7s,comp=Z,0.0nm
MEEK Meekatharra 43.84 209 P P 18 24 26.1 +1.0
MLSI Meulaboh, Aceh 44.08 264 P P 18 24 29.2 +2.0
comp=Z,4µmcomp=Z,4µmcomp=Z,155nm,1.2s
AUPHS Peel High Scho 44.08 167 P P 18 24 28.0 +1.1
FORT Forrest 44.17 195 P P 18 24 26.9 -0.7
comp=Z,133nm,0.9s,comp=Z,0.0nm
FORT Forrest 44.17 195 P P 18 24 26.1 -1.5
LKP Lekhapani 44.28 297 *ex* x 18 24 02.7
LKP IAMs_20 IAMs_20 18 43 51.9
comp=Z,9µm,9.7s
SNSI Sinabang, Aceh 44.59 261 P P 18 24 39.3 +8.0
AUDCS Dubbo College 44.74 170 P P 18 24 31.6 -0.5
BBOO Buckleboo 44.78 185 P P 18 24 32.9 +0.4
comp=Z,148nm,2.9s,comp=Z,0.0nm
BBOO Buckleboo 44.78 185 P P 18 24 34.7 +2.2
BBOO Buckleboo 44.78 185 P P 18 24 31.9 -0.6
BBOO IAmb IAmb 18 24 43.2
comp=Z,522nm,2.0s
BSI Banda Aceh 44.90 266 P P 18 24 33.5 -0.3
comp=Z,5µmcomp=Z,2µmcomp=Z,105nm,1.1s
AUJCS Jamestown Cent 45.02 182 P P 18 24 35.7 +1.3
GTA2 Gaotai 45.04 315 P P 18 24 34.9 +0.2
GTA2 sP pwP 18 24 45.0 +0.5
GTA2 PP **PP 18 26 25.4 +5.3**
GTA2 S **S 18 31 06.8 -6.1**
GTA2 SS **ScS 18 34 23.3 -8.1**
GTA2 pmax pmax
comp=Z,64nm,1.0s
GTA2 pmax pmax
comp=Z,3µm,5.2s
GTA2 L L
comp=Z,24µm,18.2s
GTA2 L L
comp=Z,13µm,21.3s
GTA2 L L
comp=Z,29µm,24.1s
MORE Moreh 45.17 292 IAmb IAmb 18 24 46.7
comp=Z,841nm,1.9s
MORE IAMs_20 IAMs_20 18 41 55.8
comp=Z,27µm,20.0s
HTT Hallett 45.24 182 P P 18 24 36.4 +0.2
comp=Z,55nm,1.7s
HTT Hallett 45.24 182 P P 18 24 36.9 +0.7
HTT Hallett 45.24 182 ⇑P **P 18 24 36.2 +0.1**
ULN Ulaanbaatar 45.24 329 IAMs_20 IAMs_20 18 41 36.4
comp=Z,19µm,22.0s
ULN Ulaanbaatar 45.24 329 P P 18 24 33.7 -2.5
ULN P **P 18 24 33.7 -2.5**
ULN P **P 18 24 33.7 -2.5**
ULN S **S 18 31 12.1 -3.5**
ULN S **S 18 31 12.1 -3.5**
ULN S **S 18 31 12.1 -3.5**
CIT Chita 45.35 337 P P 18 24 36.8 -0.1
CIT PCP **PcP 18 26 16.8 +0.6**
CIT *e* 18 26 59.6
CIT S S 18 31 25.9 +9.1
KOHI KOHIMA 45.54 294 *e*P **P 18 24 38.7 -0.2**
KOHI IAmb IAmb 18 24 40.2
comp=Z,46nm,0.5s
KOHI IAMs_20 IAMs_20 18 43 37.6
comp=Z,20µm,21.7s
SONM Songino Array 45.55 328 LR LR 18 44 10.1
comp=Z,18µm,18.9s,baz=124,slow=37
ZIRO ZIRO 46.06 297 *e*P **P 18 24 44.6 +1.6**
ZIRO IAmb IAmb 18 24 46.0
comp=Z,290nm,0.2s
ZIRO IAMs_20 IAMs_20 18 42 12.6
comp=Z,18µm,14.2s
MGCD Mangrove Creek 46.16 167 P P 18 24 45.0 +1.6
DGPR DIGLIPUR 46.19 277 *ex* x 18 25 20.0
DGPR IAmb IAmb 18 25 22.5
comp=Z,86nm,0.9s
AUCAS Cummins Area S 46.25 185 P P 18 24 45.4 +1.3
PBA Port Blair 46.50 275 P P 18 24 47.1 +0.7
SILR SILCHAR 46.59 293 *e*P **P 18 24 49.6 +2.6**
SILR IAmb IAmb 18 24 58.6
comp=Z,184nm,0.5s
SILR IAMs_20 IAMs_20 18 42 48.6
comp=Z,19µm,18.7s
SYDH Sydney Hard Ro 46.62 168 P P 18 24 48.1 +1.1
KMBL Kambalda 46.64 202 P P 18 24 47.1 -0.1
comp=Z,92nm,2.7s,comp=Z,0.0nm
AUMAR Marden Senior 46.70 182 P P 18 24 48.9 +1.3
GHSS Government Hou 46.73 182 P P 18 24 49.3 +1.5
TEZP TEZPUR 46.84 295 *e*P **P 18 24 50.0 +1.0**
TEZP IAMs_20 IAMs_20 18 42 31.4
comp=Z,13µm,20.2s
AUMBR Murray Bridge 46.93 181 P P 18 24 50.6 +1.3
MORW Morawa 47.11 209 P P 18 24 50.4 -0.5
comp=Z,142nm,2.3s,comp=Z,0.0nm
MORW Morawa 47.11 209 P P 18 24 51.8 +0.9
MORW Morawa 47.11 209 P P 18 24 50.2 -0.7
MORW Morawa 47.11 209 ⇑P **P 18 24 50.4 -0.5**
WOLH Wollongong Har 47.27 168 P P 18 24 53.0 +0.9
GOMU GeErMu 47.42 308 P P 18 24 51.2 -2.6
GOMU S **S 18 31 46.8 -0.8**
BRDH Bariadhala 47.44 290 LR LR 18 43 31.6
comp=Z,10µm,21.8s,baz=119,slow=34
SHL Shillong 47.51 294 P P 18 24 55.5 +1.1
SNR=38
SHL Shillong 47.51 294 *eP* **P 18 24 55.1 +0.7**
SHL IAMs_20 IAMs_20 18 43 55.2
comp=Z,11µm,18.0s
MSVF Nonsavu 47.59 128 P P 18 24 55.1 +0.2
comp=Z,193nm,0.8s,baz=270,slow=6.8,SNR=87
MSVF LR LR 18 42 32.0
comp=Z,25µm,20.1s,baz=312,slow=33
comp=Z,193nm,0.8s
MSVF Nonsavu 47.59 128 P P 18 24 56.0 +1.1
MSVF Nonsavu 47.59 128 P P 18 24 54.4 -0.6
MSVF Nonsavu 47.59 128 *i* P **P 18 24 55.0 +0.1**
MSVF pmax pmax
comp=Z,249nm,0.9s
MSVF MLR MLR
comp=Z,14µm,16.0s
MSVF Nonsavu 47.59 128 ⇓P **P 18 24 55.5 +0.5**
GUWA GUWAHATI 47.76 294 *eP* **P 18 24 57.1 +1.0**
GUWA IAmb IAmb 18 25 06.1
comp=Z,312nm,1.8s
GUWA IAMs_20 IAMs_20 18 43 51.9
comp=Z,3µm,21.7s
AUDAR Daramalan Coll 47.77 170 P P 18 24 57.5 +1.5
AUMTS Mt Stromlo 47.82 170 P P 18 24 58.4 +2.0
CAN Canberra 47.82 170 P P 18 24 56.7 +0.3
comp=Z,170nm,1.7s,comp=Z,0.0nm
CAN Canberra 47.82 170 P P 18 24 57.8 +1.4
CAN Canberra 47.82 170 IAmb IAmb 18 25 13.4
comp=Z,230nm,1.3s
CAN IAMs_20 IAMs_20 18 46 12.7
comp=Z,18µm,18.0s
CAN Canberra 47.82 170 ⇑P **P 18 24 57.3 +0.9**
AUMHS Melrose High S 47.87 170 P P 18 24 58.1 +1.3
AGT Agartala 47.91 291 *eP* **P 18 25 00.3 +3.0**
AGT IAmb IAmb 18 25 09.2
comp=Z,669nm,1.3s
AGT IAMs_20 IAMs_20 18 44 55.5
comp=Z,40µm,19.5s
AUMAG Moama Anglican 48.06 175 P P 18 24 59.5 +1.3
MA2 Magadan 48.09 7 LR LR 18 41 56.8
comp=Z,3µm,21.5s,baz=190,slow=32
MA2 Magadan 48.09 7 *i* P **P 18 24 57.5 -0.6**
MA2 pmax pmax
comp=Z,126nm,1.0s
BLDU Ballidu 48.10 208 P P 18 24 57.4 -1.2
comp=Z,184nm,1.9s
BLDU Ballidu 48.10 208 P P 18 24 58.6 0.0
KLBR Kellerberrin 48.47 206 P P 18 24 59.9 -1.6
comp=Z,369nm,0.9s

KLBR Kellerberrin 48.47 206 P P 18 25 01.5 0.0
SHEM Shemya Is, Ala 48.78 27 LR LR 18 43 01.8
comp=Z,16µm,21.5s,baz=222,slow=33
SMY Shemya 48.78 27 P P 18 25 04.8 +1.3
LSA Lhasa 48.78 299 P P 18 25 05.7 +1.1
LSA Lhasa 48.78 299 IAmb IAmb 18 25 22.6
comp=Z,335nm,1.8s
LSA IAMs_20 IAMs_20 18 44 35.5
comp=Z,17µm,21.0s
FUTU Fugatoga 48.82 121 IAMs_20 IAMs_20 18 40 52.3
comp=Z,19µm,20.0s
AUSMG Snowy Mountain 48.83 171 P P 18 25 05.2 +1.0
AUKUL Kulin High Sch 49.24 205 P P 18 25 07.4 +0.1
DHUB DHUBRI 49.26 294 eP P 18 25 08.4 +0.8
DHUB IAmb IAmb 18 25 18.2
comp=Z,120nm,0.2s
DHUB IAMs_20 IAMs_20 18 44 47.7
comp=Z,5µm,20.2s
TLY Talaya 49.40 331 LR LR 18 46 32.3
comp=Z,13µm,19.9s,baz=124,slow=37
TLY Talaya 49.40 331 P P 18 25 06.4 -2.0
TLY P P 18 25 06.4 -2.0
TLY P P 18 25 06.4 -2.0
TLY S S 18 32 12.9 -1.5
TLY S S 18 32 12.9 -1.5
TLY S S 18 32 12.9 -1.5
BRAT Ballarat 49.45 176 P P 18 25 09.9 +1.1
IRK Irkutsk 49.46 332 eP P 18 25 03.3 -5.5
IRK eS S 18 32 18.7 +3.4
IRK pmax pmax
comp=Z,789nm,2.5s
MUN Mundaring 49.48 207 P P 18 25 08.9 -0.2
comp=Z,219nm,1.2s,comp=Z,0.0nm
MUN Mundaring 49.48 207 P P 18 25 09.9 +0.7
MGBR Mount Gambier 49.50 180 IAmb IAmb 18 25 22.4
comp=Z,310nm,1.4s
MILA Mila 49.54 171 P P 18 25 10.3 +0.7
comp=Z,43nm,1.3s
MILA Mila 49.54 171 ⇓P P 18 25 10.9 +1.3
TOO Toolangi 49.59 175 P P 18 25 10.3 +0.3
comp=Z,90nm,2.0s,comp=Z,0.0nm
TOO Toolangi 49.59 175 P P 18 25 10.2 +0.3
TOO Toolangi 49.59 175 P P 18 25 10.2 +0.3
TOO pmax pmax
comp=Z,125nm,1.3s
TOO Toolangi 49.59 175 ⇑P P 18 25 11.3 +1.3
COBR COOCHBEHAR 49.76 294 eP P 18 25 12.9 +1.4
NWAO Narrogin (SRO) 49.85 206 P P 18 25 11.8 -0.1
comp=Z,215nm,1.7s,comp=Z,0.0nm
NWAO Narrogin (SRO) 49.85 206 P P 18 25 12.7 +0.7
comp=Z,29nm,0.5s,baz=34,slow=7.8,SNR=21
NWAO LR LR 18 49 22.0
comp=Z,9µm,18.1s,baz=30,slow=40
comp=Z,29nm,0.5s
NWAO Narrogin (SRO) 49.85 206 P P 18 25 13.6 +1.7
NWAO Narrogin (SRO) 49.85 206 P P 18 25 11.9 -0.1
NWAO Narrogin (SRO) 49.85 206 P P 18 25 16.7 +4.7
NWAO P P 18 25 16.7 +4.7
AUHPC Hawkesdale P12 49.92 178 P P 18 25 14.8 +2.4
AMKA Amchitka 50.36 31 P P 18 25 15.5 -0.1
AMKA IAmb IAmb 18 25 17.7
comp=Z,194nm,1.0s
YAK Yakutsk 50.50 354 P P 18 25 16.3 -0.2
comp=Z,265nm,0.8s,baz=203,slow=3.8,SNR=5.0
YAK LR LR 18 44 56.3
comp=Z,7µm,19.7s,baz=162,slow=34
comp=Z,265nm,0.8s
YAK Yakutsk 50.50 354 P P 18 25 16.3 -0.2
YAK Yakutsk 50.50 354 IAMs_20 IAMs_20 18 43 35.7
comp=Z,15µm,20.0s
YAK Yakutsk 50.50 354 d iP P 18 25 15.8 -0.7
YAK e*PP pP 18 25 18.9 -2.1
YAK e 18 26 32.5
YAK e 18 27 11.4
YAK ePPP PPP 18 28 08.1
YAK eS S 18 32 31.1 +1.8
YAK e 18 35 02.8
YAK eSS SS 18 36 00.5 -2.8
YAK eSSS SSS 18 37 33.1
YAK pmax pmax
comp=Z,344nm,1.0s
YAK pmax pmax
comp=N,106nm,1.3s
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=N,369nm,2.9s
YAK pmax pmax
comp=Z,912nm,3.9s
YAK pmax pmax
comp=E,216nm,3.1s
YAK smax smax
comp=E,4µm,10.2s
YAK smax smax
comp=N,4µm,11.1s
RKGY Rocky Gully 51.41 205 P P 18 25 22.4 -1.3
comp=Z,361nm,1.9s,comp=Z,0.0nm
SEY Seymchan 51.54 7 LR LR 18 50 13.4
comp=Z,3µm,18.4s,baz=194,slow=39
SEY Seymchan 51.54 7 i P P 18 25 24.9 +0.6
SEY pmax pmax
comp=Z,81nm,1.1s
SEY MLR MLR
comp=Z,4µm,16.0s
KNGR Kungurtug, Tuv 51.88 327 i P P 18 25 27.7 +0.4
KNGR pmax pmax
comp=Z,164nm,1.2s
KNGR MLR MLR
comp=Z,6µm,15.0s
KIWB Kanaga Island 52.44 32 P P 18 25 30.7 -0.5
KIWB IAmb IAmb 18 25 32.8
comp=Z,163nm,1.0s
JMUI Jamui 52.55 292 eP P 18 25 33.3 +0.8
ADK Adak 52.70 32 P P 18 25 33.7 +0.6
ADK Adak 52.70 32 P P 18 25 32.5 -0.6
ADK IAmb IAmb 18 25 56.6
comp=Z,186nm,1.1s
ADK Adak 52.70 32 IAMs_20 IAMs_20 18 43 30.1
comp=Z,16µm,22.0s
ADK Adak 52.70 32 P P 18 25 32.5 -0.6
ADK pmax pmax
comp=Z,186nm,1.2s
ADK MLR MLR
comp=Z,16µm,22.0s
ADK Adak 52.70 32 ⇑P P 18 25 33.0 -0.2
BWNR Bhubaneshwar 52.77 286 eP P 18 25 35.7 +1.5
BWNR i x S 18 33 11.3 +9.4
BOK Bokaro 52.80 291 eP P 18 25 36.0 +1.7
BOK IAmb IAmb 18 25 37.9
comp=Z,78nm,1.0s
BOK i x x 18 25 45.1
GSTR Great Sitkin T 53.14 32 IAmb IAmb 18 26 01.0
comp=Z,139nm,0.8s
GAYA Gaya 53.45 292 eP P 18 25 39.6 +0.5
GAYA i x S 18 33 19.7 +8.7
AFI Afiamalu 54.05 117 LR LR 18 46 15.3
comp=Z,7µm,20.3s,baz=290,slow=33
ATKA Atka Island 54.17 33 P P 18 25 44.1 +0.2
ATKA Atka Island 54.17 33 IAmb IAmb 18 25 56.5
comp=Z,169nm,0.9s
ATKA Atka Island 54.17 33 ⇓P P 18 25 43.5 -0.4
RAGD RAYAGADA 55.01 285 i x x 18 27 30.4
WMQ Urumqi 55.03 315 ⇑P P 18 25 51.9 +1.4
WMQ sP pwP 18 26 00.4 +0.1
WMQ S S 18 33 32.5 +0.4
WMQ ScS ScS 18 35 40.2 +1.1
WMQ SS SS 18 37 14.5 -1.4
WMQ pmax pmax
comp=Z,83nm,1.5s
WMQ pmax pmax
comp=Z,960nm,3.7s
WMQ L L
comp=Z,19µm,18.7s
WMQ L L
comp=Z,12µm,23.3s
WMQ L L
comp=Z,16µm,23.9s
TAU Tasmania Unive 55.06 174 P P 18 25 51.8 +1.4
TAU Tasmania Unive 55.06 174 IAMs_20 IAMs_20 18 51 58.3
comp=Z,20µm,18.0s
BLSP Bilaspur 56.17 289 eP P 18 26 00.2 +1.3
BLSP i x x 18 27 28.6
ALBI Allahabad 56.57 292 eP P 18 26 02.7 +1.0
ALBI IAmb IAmb 18 26 04.0
comp=Z,45nm,0.8s

OUZ Omahuta 56.60 147 IAMs_20 IAMs_20 18 47 47.9
comp=Z,17µm,19.0s
OUZ Omahuta 56.60 147 ⇑P P 18 26 04.1 +2.4
DGZ Jazzator, Alta 57.24 322 i P P 18 26 06.8 +0.5
DGZ pmax pmax
comp=Z,365nm,1.0s
DGZ MLR MLR
comp=Z,18µm,19.0s
RAO Raoul Island 57.54 136 LR LR 18 49 11.8
comp=Z,11µm,19.4s,baz=312,slow=34
RAO Raoul Island 57.54 136 IAMs_20 IAMs_20 18 48 59.8
comp=Z,12µm,18.0s
VJD Vijayawada 57.81 282 IAmb IAmb 18 26 30.0
comp=Z,63nm,0.4s
BNDA BANDA 57.91 293 eP P 18 26 12.2 +1.0
BNDA i x S 18 34 15.3 +4.7
ZSN Zaisan 58.07 319 c iP P 18 26 12.6 +0.7
ZSN eS S 18 34 14.5 +2.5
ZSN pmax pmax
comp=Z,456nm,2.7s
ZSN Zaisan 58.07 319 ⇑i P 18 26 12.7 +0.7
comp=Z,456nm,2.7s
ZSN eS S 18 34 14.6 +2.5
PTH Pithoragarh 58.22 297 eP P 18 26 14.5 +1.0
PTH i x x 18 27 22.2
LGTI Lohaghat 58.31 297 eP P 18 26 14.2 0.0
LGTI i x x 18 27 23.8
SPIA Saint Paul Isl 58.65 29 IAMs_20 IAMs_20 18 48 56.5
comp=Z,14µm,21.0s
SPIA Saint Paul Isl 58.65 29 P P 18 26 16.3 +0.5
baz=240
SPIA S S 18 34 20.6 +1.4
baz=240
MALK Mahakanadarawa 58.83 273 P P 18 26 17.8 0.0
JOSI Joshimath 58.85 298 eP P 18 26 18.6 +0.7
PALK Pallekele 58.85 271 LR LR 18 50 52.5
comp=Z,5µm,20.6s,baz=78,slow=35
PALK Pallekele 58.85 271 S S 18 34 26.3 +3.0
UNV Unalaska Valle 59.05 34 P P 18 26 19.4 +0.8
UNV Unalaska Valle 59.05 34 IAmb IAmb 18 26 41.3
comp=Z,136nm,1.3s
UNV IAMs_20 IAMs_20 18 47 49.3
comp=Z,12µm,21.0s
UNV Unalaska Valle 59.05 34 P P 18 26 18.4 -0.2
baz=246,SNR=10
UNV S S 18 34 24.3 -0.2
baz=246
NGP Nagpur 59.09 288 eP P 18 26 20.6 +1.0
NGP i x x 18 27 51.0
JHNI Jhansi 59.46 292 eP P 18 26 22.0 -0.1
TOZ Tahuroa Road 59.50 148 IAMs_20 IAMs_20 18 48 34.7
comp=Z,17µm,19.0s
MK31 Makanchi Array 59.55 317 i P P 18 26 22.1 -0.2
MK31 pmax pmax
comp=Z,105nm,0.8s
MKAR Makanchi Array 59.55 317 P P 18 26 22.1 -0.2
comp=Z,20nm,0.9s,baz=101,slow=6.3,SNR=100
MKAR LR LR 18 52 19.2
comp=Z,9µm,20.8s,baz=90,slow=36
MKAR PKPPKP P'P'df 18 55 53.6 -1.2
comp=Z,0.6nm,0.8s,baz=259,slow=2.5,SNR=3.6
comp=Z,20nm,0.9s
AKUT Akutan 59.57 33 P P 18 26 23.4 +1.2
AKUT Akutan 59.57 33 ⇑P P 18 26 21.8 -0.4
HYB Hyderabad 59.75 283 eP P 18 26 24.7 +0.5
HYB i x x 18 26 33.6
HYB Hyderabad 59.75 283 eP P 18 26 23.2 -0.9
HYB ePcP PcP 18 27 09.7 -1.2
HYB eS S 18 34 34.4 -0.4
HYB eScS ScS 18 36 13.8 -0.5
MAKZ Makanchi 59.77 317 P P 18 26 23.1 -0.6
MAKZ IAMs_20 IAMs_20 18 52 03.8
comp=Z,12µm,21.0s
MAKZ Makanchi 59.77 317 P P 18 26 23.1 -0.6
MAKZ pmax pmax
comp=Z,394nm,1.5s
MAKZ MLR MLR
comp=Z,12µm,21.0s
MAKZ Makanchi 59.77 317 ⇑P P 18 26 24.1 +0.3
UTK UTTARKASHI 59.82 299 eP P 18 26 26.8 +2.3
UTK i x x 18 27 30.2
TIXI Tiksi 59.98 356 IAMs_20 IAMs_20 18 49 40.9
comp=Z,14µm,20.0s
TIXI Tiksi 59.98 356 i P P 18 26 24.0 -0.7
TIXI pmax pmax
comp=Z,34nm,0.9s
KLP Kalpa 60.04 299 eP P 18 26 27.5 +1.3
KLP IAmb IAmb 18 26 38.1
comp=Z,348nm,1.2s
KLP i x x 18 27 29.5
UGON Onchagaon 60.16 296 eP P 18 26 24.6 -2.2
UGON i x x 18 27 36.8
ASOR Ausora 60.30 296 ex x 18 26 36.6
ZAA0 Zalesovo Array 60.34 326 P P 18 26 26.1 -1.4
ZALV Zalesovo Beam 60.34 326 P P 18 26 27.1 -0.4
comp=Z,20nm,0.8s,baz=104,slow=6.3,SNR=34
ZALV LR LR 18 53 56.3
comp=Z,11µm,18.5s,baz=109,slow=37
ZALV PKPPKP P'P'df 18 55 52.1 -1.1
comp=Z,0.5nm,0.5s,baz=256,slow=3.1,SNR=4.3
comp=Z,20nm,0.8s
ZALV Zalesovo Beam 60.34 326 P P 18 26 26.5 -1.0
ZALV Zalesovo Beam 60.34 326 i P P 18 26 27.8 +0.3
ZALV pmax pmax
comp=Z,21nm,0.8s
QRZ Quartz Range 60.46 152 P P 18 26 29.6 +1.1
QRZ Quartz Range 60.46 152 IAMs_20 IAMs_20 18 50 22.9
comp=Z,13µm,18.0s
WUS Wushi 60.46 311 IAMs_20 IAMs_20 18 53 57.0
comp=Z,12µm,20.0s
BHPL Bhopal 60.55 290 eP P 18 26 30.0 +0.4
BHPL i x S 18 34 41.5 -3.5
BISR Bishrakh 60.58 296 ex x 18 27 41.3
GUNA GUNA 60.62 292 eP P 18 26 30.0 -0.1
SHLS Shalkode 60.65 313 c iP P 18 26 28.5 -1.5
SHLS eS S 18 34 44.1 -1.7
SHLS pmax pmax
comp=Z,336nm,2.1s
SHLS Shalkode 60.65 313 ⇑i P 18 26 28.6 -1.5
comp=Z,336nm,2.1s
SHLS eS S 18 34 44.2 -1.7
PDGK Podgornoye 60.66 313 P P 18 26 27.9 -2.2
URZ Urewera 60.74 147 LR LR 18 50 59.0
comp=Z,9µm,18.7s,baz=316,slow=34
URZ Urewera 60.74 147 ⇓P P 18 26 31.2 +0.8
NDI New Delhi 60.78 296 i x x 18 27 42.2
NRDN NARMADA NAGAR 60.80 289 eP P 18 26 36.5 +5.3
NRDN i x x 18 28 02.5
NPLP NPLP New Delhi 60.82 296 eP P 18 26 30.5 -0.8
NPLP i x x 18 27 42.2
AYAN Aya Nagar 60.86 296 eP P 18 26 36.6 +5.1
MXZ Matakaoa Point 60.88 146 IAMs_20 IAMs_20 18 49 00.1
comp=Z,13µm,20.0s
SONA Sohna 60.91 296 eP P 18 26 31.6 -0.3
SONA i x x 18 27 44.4
UZB Uzunbulak 60.97 313 c iP P 18 26 32.7 +0.5
UZB eS S 18 34 52.1 +2.2
UZB pmax pmax
comp=Z,268nm,1.9s
UZB Uzunbulak 60.97 313 ⇑i P 18 26 32.8 +0.5
comp=Z,268nm,1.9s
UZB eS S 18 34 52.1 +2.2
KHLH Kahului Airpor 61.00 73 P P 18 26 32.6 0.0
BKZ Black Stump Fm 61.09 148 P P 18 26 33.2 +0.3
BKZ Black Stump Fm 61.09 148 P P 18 26 32.4 -0.5
BKZ IAMs_20 IAMs_20 18 48 22.8
comp=Z,11µm,22.0s
ALCI Alchi Leh 61.14 302 eP P 18 26 37.4 +3.6
ALCI i x x 18 28 07.0
NNZ Nelson 61.16 152 IAMs_20 IAMs_20 18 50 55.5
comp=Z,12µm,19.0s
KKR Kurukshetra 61.18 298 i x x 18 27 41.8
CGRH CHANDIGARH 61.25 298 eP P 18 26 35.1 +0.9
KPKS Kokpek 61.27 313 eP P 18 26 34.6 +0.4
KPKS Kokpek 61.27 313 eP P 18 26 34.6 +0.4
THZ Tophouse 61.38 153 IAMs_20 IAMs_20 18 51 01.2
comp=Z,14µm,18.0s
SATY Saty 61.39 313 eP P 18 26 35.6 +0.6
SATY pmax pmax
comp=Z,159nm,1.9s
SATY Saty 61.39 313 eP P 18 26 35.6 +0.6
comp=Z,159nm,1.9s
KUDL Kundal 61.41 296 eP P 18 26 35.6 +0.4
KUDL IAmb IAmb 18 26 46.5
comp=Z,3µm,2.8s
KUDL i x x 18 27 47.8
FOZ Fox Glacier 61.52 156 IAMs_20 IAMs_20 18 52 24.7
comp=Z,15µm,20.0s
INZ Inchbonnie 61.52 154 IAMs_20 IAMs_20 18 49 35.9
comp=Z,15µm,19.0s
GAMB Gambell 61.54 22 ⇑P P 18 26 36.0 +0.5
GAMB Gambell 61.54 22 P P 18 26 36.2 +0.7
baz=236,SNR=7.8
GAMB S S 18 34 58.9 +2.8
baz=236
KOD Kodaikanal 61.56 275 eP P 18 26 38.2 +1.3
BHK Bhakra 61.62 299 eP P 18 26 37.2 +0.6
BHK IAmb IAmb 18 26 39.3
comp=Z,119nm,0.7s
BHK i x x 18 27 41.2
DHRM DHARAMSHALA 61.74 300 eP P 18 26 38.3 +0.6
DHRM IAmb IAmb 18 26 42.9
comp=Z,65nm,0.8s
TDK Taldyqorghan 61.77 315 c iP P 18 26 38.1 +0.7
TDK eS S 18 35 02.2 +2.5
TDK pmax pmax
comp=Z,115nm,1.1s
TDK MLR MLR
comp=Z,8µm,16.0s
TDK Taldyqorghan 61.77 315 ⇑iP P 18 26 38.2 +0.7
comp=Z,115nm,1.1s
TDK eS S 18 35 02.2 +2.5
TDK LR LR 18 53 48.7
comp=Z,8µm,16.3s
DAH Dandelion 61.79 74 P P 18 26 37.4 -1.0
TSSA Tissa 61.90 301 eP P 18 26 39.1 +0.3
TSSA i x x 18 27 39.2
LTZ Lake Taylor 61.92 154 IAMs_20 IAMs_20 18 51 00.5
comp=Z,16µm,20.0s
TLWR Talawar 62.02 300 i x x 18 27 42.9
M11K Mekoryuk 62.03 27 IAMs_20 IAMs_20 18 51 59.8
comp=Z,11µm,21.0s
M11K Mekoryuk 62.03 27 P P 18 26 38.9 0.0
baz=243
M11K S S 18 35 05.7 +3.2
baz=243
BFZ Birch Farm 62.12 150 P P 18 26 41.3 +1.6
BFZ Birch Farm 62.12 150 IAmb IAmb 18 26 49.9
comp=Z,98nm,1.0s
KDJ Kajisay 62.12 311 IAmb IAmb 18 27 20.4
comp=Z,115nm,0.9s
RPZ Rata Peaks 62.17 155 LR LR 18 50 12.2
comp=Z,3µm,21.8s,baz=325,slow=33
THN Thein Dam 62.21 300 eP P 18 26 41.5 +0.8
THN i x x 18 27 42.4
PUH Pauahi 62.21 74 IAmb IAmb 18 26 41.9
comp=Z,125nm,1.0s
KNHH Kane Nui o Ham 62.26 74 P P 18 26 40.9 -0.3
OXZ Oxford 62.26 154 IAMs_20 IAMs_20 18 49 58.5
comp=Z,13µm,20.0s
WKZ Wanaka 62.30 157 IAMs_20 IAMs_20 18 50 04.3
comp=Z,14µm,20.0s
LBZ Lake Benmore 62.38 156 IAMs_20 IAMs_20 18 51 26.5
comp=Z,16µm,20.0s
MDOK Medeo 62.39 312 eP P 18 26 42.7 +0.9
MDOK eS S 18 35 10.1 +2.2
MDOK Medeo 62.39 312 eP P 18 26 42.8 +0.9
MDOK eS S 18 35 10.2 +2.2
MDOK LR LR 18 54 12.8
JOKA Jonika Flow 62.41 74 IAmb IAmb 18 26 43.1
comp=Z,94nm,0.8s
TNSS Tian-Shan 62.44 312 eP P 18 26 42.9 +0.4
TNSS Tian-Shan 62.44 312 eP P 18 26 42.9 +0.4
XMAS Kiritimati 62.45 94 P P 18 26 43.2 +0.7
XMAS Kiritimati 62.45 94 P P 18 26 42.2 -0.3
KNDC Almaty 62.46 313 P P 18 26 42.7 +0.5
AAA Alma-Ata 62.49 313 eP P 18 26 43.2 +0.8
AAA pmax pmax
comp=Z,83nm,1.7s
AAA Alma-Ata 62.49 313 eP P 18 26 43.3 +0.8
comp=Z,83nm,1.7s
WHZ Wether Hill Ro 62.81 159 P P 18 26 43.5 -0.8
WHZ IAmb IAmb 18 28 14.3
comp=Z,174nm,1.3s
ULHL Ulahol 62.83 311 P P 18 26 45.8 +0.9
SNR=8.9
MQZ McQueen's Vall 62.83 154 IAMs_20 IAMs_20 18 50 33.6
comp=Z,10µm,19.0s
SDPT Sand Point 62.87 33 P P 18 26 46.8 +2.3
SDPT Sand Point 62.87 33 P P 18 26 43.9 -0.7
baz=251
SDPT S S 18 35 12.5 -0.6
baz=251
KURK Kurchatov 62.93 321 P P 18 26 44.2 -0.8
KURK Kurchatov 62.93 321 IAMs_20 IAMs_20 18 53 44.0
comp=Z,14µm,19.0s
KURK Kurchatov 62.93 321 P P 18 26 45.2 +0.1
KSH2 Kashi 62.93 308 P P 18 26 46.5 +1.0
KSH2 sP pwP 18 26 56.2 +0.8
KSH2 S S 18 35 10.3 -4.6
KSH2 SS SS 18 39 24.0 +3.7
KSH2 pmax pmax
comp=Z,35nm,1.0s
KSH2 pmax pmax
comp=Z,2µm,5.2s
KSH2 L L
comp=Z,10µm,15.8s
KSH2 L L
comp=Z,10µm,19.6s
KSH2 L L
comp=Z,16µm,21.6s
KURBB Kurchatov Arra 62.96 321 P P 18 26 45.2 0.0
comp=Z,53nm,0.8s,baz=103,slow=7.1,SNR=177
KURBB PKPPKP P'P'df 18 55 47.0 -2.1
comp=Z,2.0nm,0.9s,baz=268,slow=3.6,SNR=10.0
KURBB LR LR 18 56 43.0
comp=Z,10µm,18.1s,baz=104,slow=38
comp=Z,53nm,0.8s
JMU Jammu 63.01 301 eP P 18 26 45.9 0.0
AJM Ajmer 63.05 294 eP P 18 26 47.0 +0.6
AJM IAmb IAmb 18 26 56.8
comp=Z,189nm,1.4s
BOOM Boomskoye usch 63.09 312 IAmb IAmb 18 27 26.7
comp=Z,83nm,0.6s
ODZ Otahua Downs 63.11 156 IAMs_20 IAMs_20 18 50 56.8
comp=Z,13µm,18.0s
CHNA Chernabura Isl 63.18 34 P P 18 26 46.3 -0.3
baz=252
CHNA S S 18 35 17.1 0.0
baz=252
M13K Dall Lake 63.32 28 P P 18 26 48.0 +0.6
baz=246
M13K S S 18 35 21.8 +3.2
baz=246
K13K Kusilvak Mount 63.40 26 IAmb IAmb 18 27 08.4
comp=Z,80nm,1.1s
K13K IAMs_20 IAMs_20 18 50 14.9
comp=Z,14µm,21.0s
K13K Kusilvak Mount 63.40 26 P P 18 26 48.4 +0.5
baz=244,SNR=20
K13K S S 18 35 22.9 +3.3
baz=244
TKM2 Tokmak 2 63.40 312 P P 18 26 49.1 +0.5
SNR=17
S14K Fog Glacier 63.66 33 P P 18 26 49.8 -0.1
baz=251
VNFG Fog Glacier, M 63.66 33 IAMs_20 IAMs_20 18 53 16.2
comp=Z,11µm,19.0s
KBK Karagaybulak 63.84 312 P P 18 26 51.9 +0.4
SNR=12
O14K Tigyukauivet M 63.84 29 P P 18 26 51.3 +0.4
baz=248
O14K S S 18 35 25.2 +0.1
baz=248
TNA Tin City 63.88 21 IAmb IAmb 18 26 53.0
comp=Z,95nm,1.1s
TNA Tin City 63.88 21 P P 18 26 51.7 +0.7
baz=239
TNA S S 18 35 28.2 +2.9
baz=239
N14K Kuskokwak Cree 63.89 28 IAmb IAmb 18 27 15.8
comp=Z,94nm,0.7s
N14K IAMs_20 IAMs_20 18 52 29.9
comp=Z,18µm,21.0s
N14K Kuskokwak Cree 63.89 28 P P 18 26 51.4 +0.2
baz=248
N14K S S 18 35 27.4 +1.7
baz=248
UDPR Udaipur 63.92 292 IAmb IAmb 18 27 04.5
comp=Z,2µm,2.9s

L14K	**Kuka Creek**	**64.00**	**27**	IAmb	IAmb	18 27 14.2		
	comp=Z,147nm,1.2s							
L14K	**Kuka Creek**	**64.00**	**27**	P	**P**	**18 26 52.6**	**+0.7**	
	baz=246,SNR=22							
L14K				S	**S**	**18 35 29.7**	**+2.6**	
	baz=246							
CHMS	**Chumysh**	**64.03**	**312**	P	**P**	**18 26 52.6**	**0.0**	
	SNR=24							
M14K	**Bethel**	**64.09**	**27**	P	**P**	**18 26 53.0**	**+0.6**	
	baz=247,SNR=9.3							
M14K				S	**S**	**18 35 30.6**	**+2.4**	
	baz=247							
UCH	**Uchtor**	**64.10**	**311**	P	**P**	**18 26 54.4**	**+0.9**	
	SNR=38							
POO	**Poona**	**64.13**	**285**	*e*P	**P**	**18 26 54.5**	**+0.9**	
AAK	**Ala-Archa**	**64.17**	**312**	LR	LR	18 56 46.0		
	comp=Z,6µm,19.0s,baz=99,slow=38							
AAK	**Ala-Archa**	**64.17**	**312**	P	**P**	**18 26 54.2**	**+0.6**	
	SNR=6.6							
AAK	**Ala-Archa**	**64.17**	**312**	*i* P	**P**	**18 26 53.4**	**-0.2**	
	SNR=7.2							
AAK	**Ala-Archa**	**64.17**	**312**	P	**P**	**18 26 53.0**	**-0.7**	
AAK	**Ala-Archa**	**64.17**	**312**	IAMs_20	IAMs_20	18 56 25.4		
	comp=Z,9µm,18.0s							
AAK	**Ala-Archa**	**64.17**	**312**	*i* P	**P**	**18 26 52.8**	**-0.8**	
AAK				pmax	pmax			
	comp=Z,100nm,1.9s							
AAK				MLR	MLR			
	comp=Z,9µm,17.0s							
AAK	**Ala-Archa**	**64.17**	**312**	P	**P**	**18 26 54.4**	**+0.8**	
AAK				P	**P**	**18 26 54.4**	**+0.8**	
AAK				P	**P**	**18 26 54.4**	**+0.8**	
AAK				S	**S**	**18 35 27.4**	**-2.7**	
AAK				S	**S**	**18 35 27.4**	**-2.7**	
AAK				S	**S**	**18 35 27.4**	**-2.7**	
AAK	**Ala-Archa**	**64.17**	**312**	⇑P	**P**	**18 26 54.2**	**+0.6**	
AAK	**Ala-Archa**	**64.17**	**312**	P	**P**	**18 26 53.8**	**+0.2**	
AAK				S	**S**	**18 35 30.2**	**0.0**	
SGDS	**Sogindy**	**64.18**	**313**	⇑ *i*P	**P**	**18 26 54.2**	**+0.7**	
	comp=Z,178nm,2.7s							
SGDS				*e*S	**S**	**18 35 32.6**	**+2.5**	
USP	**Ospenovka**	**64.25**	**312**	P	**P**	**18 26 54.1**	**+0.2**	
	SNR=14							
CHGN	**Chignik**	**64.27**	**33**	P	**P**	**18 26 53.4**	**-0.4**	
	baz=252							
ANM	**Nome**	**64.32**	**23**	P	**P**	**18 26 54.9**	**+0.9**	
	baz=242							
ANM				S	**S**	**18 35 34.6**	**+3.6**	
	baz=242							
NIL	**Nilore**	**64.37**	**302**	P	**P**	**18 26 55.1**	**+0.1**	
NIL	**Nilore**	**64.37**	**302**	IAMs_20	IAMs_20	18 56 27.7		
	comp=Z,12µm,20.0s							
NIL	**Nilore**	**64.37**	**302**	P	**P**	**18 26 55.1**	**+0.1**	
NIL				pmax	pmax			
	comp=Z,369nm,0.8s							
NIL				MLR	MLR			
	comp=Z,12µm,20.0s							
NIL	**Nilore**	**64.37**	**302**	P	**P**	**18 26 56.3**	**+1.4**	
NIL				P	**P**	**18 26 56.3**	**+1.4**	
NIL	**Nilore**	**64.37**	**302**	⇑P	**P**	**18 26 55.7**	**+0.8**	
F14K	**Arctic Creek**	**64.41**	**22**	P	**P**	**18 26 55.6**	**+1.0**	
	baz=241,SNR=15							
F14K				S	**S**	**18 35 35.5**	**+3.5**	
	baz=241							
O15K	**Ungalikthiuk R**	**64.50**	**30**	IAMs_20	IAMs_20	18 50 23.1		
	comp=Z,17µm,22.0s							
O15K	**Ungalikthiuk R**	**64.50**	**30**	P	**P**	**18 26 55.4**	**+0.1**	
	baz=250,SNR=5.0							
O15K				S	**S**	**18 35 34.5**	**+1.2**	
	baz=250							
M15K	**Kasigluk River**	**64.64**	**28**	P	**P**	**18 26 56.3**	**+0.2**	
	baz=248							
M15K				S	**S**	**18 35 36.1**	**+1.0**	
	baz=248							
L15K	**Ungalak Mounta**	**64.66**	**27**	P	**P**	**18 26 56.3**	**+0.1**	
	baz=247							
L15K				S	**S**	**18 35 36.2**	**+0.9**	
	baz=247							
EKS2	**Erkin-Say**	**64.69**	**312**	P	**P**	**18 26 57.9**	**+0.9**	
	SNR=16							
N15K	**Kwethluk River**	**64.72**	**28**	P	**P**	**18 26 57.1**	**+0.4**	
	baz=249,SNR=6.0							
N15K				S	**S**	**18 35 38.2**	**+2.0**	
	baz=249							
BTLS	**Baital**	**64.82**	**314**	*e*P	**P**	**18 26 58.2**	**+0.6**	
BTLS				pmax	pmax			
	comp=Z,157nm,1.9s							
BTLS	**Baital**	**64.82**	**314**	*e*P	**P**	**18 26 58.2**	**+0.6**	
	comp=Z,157nm,1.9s							
G15K	**Niukluk**	**65.03**	**23**	P	**P**	**18 26 58.8**	**+0.2**	
	baz=243							
G15K				S	**S**	**18 35 42.0**	**+2.4**	
	baz=243							
F15K	**North Star Dit**	**65.13**	**22**	IAmb	IAmb	18 27 15.3		
	comp=Z,71nm,0.8s							
F15K	**North Star Dit**	**65.13**	**22**	P	**P**	**18 27 00.1**	**+0.9**	
	baz=242,SNR=25							
F15K				S	**S**	**18 35 44.3**	**+3.3**	
	baz=242							
P16K	**Nushagak River**	**65.34**	**30**	IAMs_20	IAMs_20	18 51 11.4		
	comp=Z,11µm,21.0s							
P16K	**Nushagak River**	**65.34**	**30**	P	**P**	**18 27 01.3**	**+0.6**	
	baz=252							
P16K				S	**S**	**18 35 44.7**	**+1.0**	
	baz=252							
N16K	**Nishlik Lake**	**65.45**	**28**	P	**P**	**18 27 02.0**	**+0.6**	
	baz=250,SNR=8.2							
N16K				S	**S**	**18 35 47.6**	**+2.5**	
	baz=250							
O16K	**Kokwok River B**	**65.47**	**29**	IAmb	IAmb	18 27 28.9		
	comp=Z,58nm,0.8s							
O16K				IAMs_20	IAMs_20	18 53 18.9		
	comp=Z,14µm,20.0s							
O16K	**Kokwok River B**	**65.47**	**29**	P	**P**	**18 27 02.0**	**+0.4**	
	baz=251,SNR=6.6							
O16K				S	**S**	**18 35 47.8**	**+2.4**	
	baz=251							
M16K	**Timber Creek**	**65.55**	**28**	IAmb	IAmb	18 27 26.8		
	comp=Z,63nm,0.8s							
M16K				IAMs_20	IAMs_20	18 53 33.8		
	comp=Z,13µm,21.0s							
M16K	**Timber Creek**	**65.55**	**28**	P	**P**	**18 27 02.5**	**+0.4**	
	baz=250,SNR=6.3							
M16K				S	**S**	**18 35 48.2**	**+2.0**	
	baz=250							
H16K	**Elim**	**65.56**	**24**	P	**P**	**18 27 02.4**	**+0.3**	
	baz=245,SNR=6.5							
H16K				S	**S**	**18 35 48.3**	**+2.1**	
	baz=245							
L16K	**Owhat River**	**65.56**	**27**	IAmb	IAmb	18 27 26.1		
	comp=Z,126nm,1.3s							
L16K	**Owhat River**	**65.56**	**27**	P	**P**	**18 27 02.2**	**+0.1**	
	baz=249,SNR=10							
L16K				S	**S**	**18 35 47.7**	**+1.4**	
	baz=249							
CHIR	**Chirikof Islan**	**65.64**	**34**	P	**P**	**18 27 03.0**	**+0.3**	
	baz=255							
CHIR				S	**S**	**18 35 47.9**	**+0.4**	
	baz=255							
J16K	**Anvik River**	**65.67**	**25**	IAMs_20	IAMs_20	18 51 12.8		
	comp=Z,12µm,22.0s							
J16K	**Anvik River**	**65.67**	**25**	P	**P**	**18 27 03.8**	**+1.0**	
	baz=247,SNR=7.8							
J16K				S	**S**	**18 35 51.2**	**+3.6**	
	baz=247							
R17L	**Mt. Peulik Vol**	**65.74**	**32**	P	**P**	**18 27 02.4**	**-1.0**	
	baz=254							
R17L				S	**S**	**18 35 48.5**	**-0.2**	
	baz=254							
MANEM	**Manem**	**65.84**	**306**	IAmb	IAmb	18 27 58.1		
	comp=Z,707nm,0.9s							
I17K	**Unalakleet**	**65.87**	**25**	IAmb	IAmb	18 27 22.2		
	comp=Z,124nm,1.3s							
I17K	**Unalakleet**	**65.87**	**25**	P	**P**	**18 27 04.8**	**+0.8**	
	baz=247,SNR=5.8							
I17K				S	**S**	**18 35 53.4**	**+3.5**	
	baz=247							
Q16K	**King Salmon**	**65.89**	**31**	P	**P**	**18 27 04.2**	**-0.1**	
	baz=253							
O17K	**Koliganek Bris**	**66.01**	**29**	P	**P**	**18 27 05.3**	**+0.3**	
	baz=252,SNR=21							
O17K				S	**S**	**18 35 53.7**	**+1.9**	
	baz=252							
C16K	**Lisburne Hills**	**66.13**	**19**	P	**P**	**18 27 06.1**	**+0.5**	
	baz=240							
C16K				S	**S**	**18 35 56.4**	**+3.3**	
	baz=240							

P17K	**Kvichak River**	**66.16**	**30**	IAMs_20	IAMs_20	18 51 12.9		
	comp=Z,14µm,22.0s							
P17K	**Kvichak River**	**66.16**	**30**	P	**P**	**18 27 05.3**	**-0.7**	
	baz=253							
P17K				S	**S**	**18 35 53.7**	**+0.1**	
	baz=253							
Q17K	**Contact Creek**	**66.16**	**31**	P	**P**	**18 27 05.0**	**-1.2**	
	baz=254							
Q17K				S	**S**	**18 35 54.4**	**+0.4**	
	baz=254							
NRIK	**Noril'sk**	**66.17**	**342**	LR	LR	18 57 25.1		
	comp=Z,7µm,18.8s,baz=124,slow=37							
NRIK	**Noril'sk**	**66.17**	**342**	*i* P	**P**	**18 27 05.4**	**-0.5**	
NRIK				pmax	pmax			
	comp=Z,173nm,0.9s							
NRIK				MLR	MLR			
	comp=Z,8µm,17.0s							
N17K	**Nushagak Hills**	**66.21**	**29**	IAmb	IAmb	18 27 33.8		
	comp=Z,119nm,1.1s							
N17K	**Nushagak Hills**	**66.21**	**29**	P	**P**	**18 27 07.1**	**+0.8**	
	baz=252,SNR=6.0							
N17K				S	**S**	**18 35 57.5**	**+3.2**	
	baz=252							
L17K	**Donlin**	**66.23**	**27**	P	**P**	**18 27 07.5**	**+1.1**	
	baz=250,SNR=14							
L17K				S	**S**	**18 35 57.7**	**+3.1**	
	baz=250							
J17K	**VABM Dome**	**66.35**	**25**	IAMs_20	IAMs_20	18 51 55.8		
	comp=Z,10µm,22.0s							
J17K	**VABM Dome**	**66.35**	**25**	P	**P**	**18 27 08.2**	**+1.0**	
	baz=249,SNR=14							
J17K				S	**S**	**18 35 58.4**	**+2.5**	
	baz=249							
M17K	**Holitna River**	**66.37**	**28**	IAMs_20	IAMs_20	18 53 38.5		
	comp=Z,13µm,21.0s							
M17K	**Holitna River**	**66.37**	**28**	P	**P**	**18 27 08.4**	**+1.0**	
	baz=251,SNR=17							
M17K				S	**S**	**18 36 00.1**	**+3.9**	
	baz=251							
JASL	**Jaisalmer**	**66.38**	**294**	*e*P	**P**	**18 27 05.3**	**-2.7**	
ACHA	**Angle Creek He**	**66.43**	**31**	IAmb	IAmb	18 27 38.2		
	comp=Z,88nm,1.3s							
K17K	**Iditarod**	**66.44**	**26**	IAmb	IAmb	18 27 24.1		
	comp=Z,124nm,1.1s							
K17K				IAMs_20	IAMs_20	18 52 00.1		
	comp=Z,10µm,21.0s							
K17K	**Iditarod**	**66.44**	**26**	P	**P**	**18 27 08.7**	**+1.0**	
	baz=250,SNR=20							
K17K				S	**S**	**18 35 58.9**	**+2.0**	
	baz=250							
BRZS	**Berezniki**	**66.50**	**319**	*c i*P	**P**	**18 27 08.8**	**+0.4**	
BRZS	**Berezniki**	**66.50**	**319**	⇑ *i*P	**P**	**18 27 08.8**	**+0.4**	
DZA	**Taraz**	**66.51**	**312**	*e*P	**P**	**18 27 09.3**	**+0.7**	
DZA	**Taraz**	**66.51**	**312**	*e*P	**P**	**18 27 09.4**	**+0.7**	
G17K	**Kiwalik Mounta**	**66.53**	**23**	P	**P**	**18 27 09.2**	**+0.9**	
	baz=246,SNR=31							
G17K				S	**S**	**18 36 00.5**	**+2.4**	
	baz=246							
H17K	**Granite Mounta**	**66.59**	**24**	P	**P**	**18 27 09.9**	**+1.2**	
	baz=247,SNR=25							
H17K				S	**S**	**18 36 02.1**	**+3.3**	
	baz=247							
SII	**Sitkinak Islan**	**66.60**	**33**	P	**P**	**18 27 10.4**	**+1.5**	
SII	**Sitkinak Islan**	**66.60**	**33**	IAMs_20	IAMs_20	18 55 12.9		
	comp=Z,13µm,20.0s							
SII	**Sitkinak Islan**	**66.60**	**33**	P	**P**	**18 27 08.7**	**-0.2**	
	baz=256							
SII				S	**S**	**18 36 01.6**	**+2.4**	
	baz=256							
D17K	**Noatak River**	**66.61**	**20**	P	**P**	**18 27 09.9**	**+1.2**	
	baz=243,SNR=34							
D17K				S	**S**	**18 36 01.6**	**+2.7**	
	baz=243							
F17K	**Baldwin Pennin**	**66.70**	**22**	IAmb	IAmb	18 27 22.6		
	comp=Z,104nm,0.8s							
F17K	**Baldwin Pennin**	**66.70**	**22**	P	**P**	**18 27 10.3**	**+1.0**	
	baz=245,SNR=18							
F17K				S	**S**	**18 36 02.8**	**+2.8**	
	baz=245							
Q18K	**Katmai Hardscr**	**66.71**	**31**	P	**P**	**18 27 08.6**	**-1.1**	
	baz=254,SNR=9.2							
Q18K				S	**S**	**18 35 59.1**	**-1.5**	
	baz=254							
E17K	**Hotham Inlet**	**66.77**	**21**	P	**P**	**18 27 11.0**	**+1.2**	
	baz=244,SNR=32							
E17K				S	**S**	**18 36 04.5**	**+3.7**	
	baz=244							
P18K	**Big Mountain,**	**66.81**	**30**	P	**P**	**18 27 09.7**	**-0.5**	
	baz=254							
P18K				S	**S**	**18 36 00.4**	**-1.3**	
	baz=254							
RDOG	**Red Dog Mine**	**66.83**	**20**	IAmb	IAmb	18 27 12.3		
	comp=Z,109nm,1.1s							
RDOG	**Red Dog Mine**	**66.83**	**20**	P	**P**	**18 27 10.9**	**+0.8**	
	baz=243,SNR=18							
RDOG				S	**S**	**18 36 04.6**	**+3.0**	
	baz=243							
N18K	**Kilae Creek**	**66.86**	**29**	P	**P**	**18 27 11.4**	**+0.9**	
	baz=253,SNR=7.4							
N18K				S	**S**	**18 36 05.4**	**+3.2**	
	baz=253							
C17K	**DeLong Mountai**	**66.93**	**20**	P	**P**	**18 27 11.0**	**+0.2**	
	baz=242,SNR=12							
C17K				S	**S**	**18 36 05.9**	**+3.0**	
	baz=242							
O18K	**Koktuh Hills**	**66.95**	**30**	IAmb	IAmb	18 27 42.0		
	comp=Z,54nm,0.8s							
O18K				IAMs_20	IAMs_20	18 51 37.8		
	comp=Z,15µm,22.0s							
O18K	**Koktuh Hills**	**66.95**	**30**	P	**P**	**18 27 11.4**	**+0.3**	
	baz=254,SNR=15							
O18K				S	**S**	**18 36 04.7**	**+1.4**	
	baz=254							
L18K	**Granite Mounta**	**66.97**	**27**	IAmb	IAmb	18 27 51.4		
	comp=Z,180nm,1.8s							
L18K				IAMs_20	IAMs_20	18 55 15.4		
	comp=Z,11µm,21.0s							
L18K	**Granite Mounta**	**66.97**	**27**	P	**P**	**18 27 12.2**	**+1.0**	
	baz=251,SNR=20							
L18K				S	**S**	**18 36 06.8**	**+3.3**	
	baz=251							
KK31	**Karatay Array**	**67.13**	**312**	*i* P	**P**	**18 27 12.3**	**-0.3**	
KKAR	**Karatay Array**	**67.13**	**312**	P	**P**	**18 27 12.3**	**-0.2**	
KKAR	**Karatay Array**	**67.13**	**312**	P	**P**	**18 27 12.4**	**-0.2**	
M18K	**Stony River**	**67.14**	**28**	P	**P**	**18 27 13.0**	**+0.8**	
	baz=252,SNR=11							
M18K				S	**S**	**18 36 08.4**	**+3.0**	
	baz=252							
OHAK	**Old Harbor**	**67.24**	**33**	P	**P**	**18 27 14.0**	**+1.1**	
OHAK	**Old Harbor**	**67.24**	**33**	IAmb	IAmb	18 27 47.4		
	comp=Z,74nm,1.0s							
OHAK	**Old Harbor**	**67.24**	**33**	P	**P**	**18 27 12.9**	**0.0**	
	baz=256							
OHAK				S	**S**	**18 36 06.3**	**-0.5**	
	baz=256							
H18K	**Honhosa River**	**67.29**	**24**	IAmb	IAmb	18 27 33.3		
	comp=Z,76nm,1.0s							
H18K	**Honhosa River**	**67.29**	**24**	P	**P**	**18 27 13.6**	**+0.5**	
	baz=249							
H18K				S	**S**	**18 36 10.0**	**+2.8**	
	baz=249							
E18K	**Tukpahlearik C**	**67.34**	**21**	P	**P**	**18 27 14.5**	**+1.1**	
	baz=246,SNR=48							
E18K				S	**S**	**18 36 10.6**	**+2.9**	
	baz=246							
F18K	**Selawik**	**67.35**	**22**	P	**P**	**18 27 14.1**	**+0.7**	
	baz=247,SNR=11							
F18K				S	**S**	**18 36 10.4**	**+2.6**	
	baz=247							
IUG	**Iuzhnay**	**67.41**	**311**	*c i*P	**P**	**18 27 15.0**	**+0.6**	
IUG				*e*S	**S**	**18 36 11.9**	**+2.3**	
IUG				pmax	pmax			
	comp=Z,187nm,2.0s							
IUG	**Iuzhnay**	**67.41**	**311**	⇑ *i*P	**P**	**18 27 15.1**	**+0.6**	
	comp=Z,187nm,2.0s							
IUG				*e*S	**S**	**18 36 11.9**	**+2.3**	
G18K	**Tagagawik**	**67.45**	**23**	IAmb	IAmb	18 27 44.5		
	comp=Z,114nm,1.1s							
G18K	**Tagagawik**	**67.45**	**23**	P	**P**	**18 27 14.9**	**+0.7**	
	baz=248							
G18K				S	**S**	**18 36 12.6**	**+3.4**	
	baz=248							
O19K	**Port Alsworth**	**67.47**	**29**	IAMs_20	IAMs_20	18 51 53.6		
	comp=Z,15µm,22.0s							
O19K	**Port Alsworth**	**67.47**	**29**	P	**P**	**18 27 14.7**	**+0.4**	
	baz=254							
O19K				S	**S**	**18 36 10.5**	**+1.1**	
	baz=254							

Q19K	**Cape Douglas,**	**67.47**	**31**	IAmb	IAmb	18 27 25.1		
	comp=Z,79nm,0.7s							
Q19K				IAMs_20	IAMs_20	18 52 28.7		
	comp=Z,15µm,22.0s							
Q19K	**Cape Douglas,**	**67.47**	**31**	P	**P**	**18 27 13.2**	**-1.2**	
	baz=256,SNR=9.2							
Q19K				S	**S**	**18 36 08.0**	**-1.6**	
	baz=256							
RAR	**Rarotonga**	**67.49**	**119**	LR	LR	18 54 16.4		
	comp=Z,3µm,19.0s,baz=292,slow=34							
N19K	**Bonanza Creek**	**67.56**	**29**	IAmb	IAmb	18 27 46.2		
	comp=Z,186nm,1.6s							
N19K	**Bonanza Creek**	**67.56**	**29**	P	**P**	**18 27 15.9**	**+0.9**	
	baz=254,SNR=18							
N19K				S	**S**	**18 36 14.2**	**+3.4**	
	baz=254							
BRLS	**Boroldav**	**67.61**	**312**	*c i*P	**P**	**18 27 16.7**	**+1.1**	
BRLS				pmax	pmax			
	comp=Z,273nm,2.9s							
BRLS	**Boroldav**	**67.61**	**312**	⇑ *i*P	**P**	**18 27 16.8**	**+1.1**	
	comp=Z,273nm,2.9s							
C18K	**Utukok River**	**67.66**	**20**	IAmb	IAmb	18 27 30.8		
	comp=Z,117nm,0.9s							
C18K	**Utukok River**	**67.66**	**20**	P	**P**	**18 27 15.9**	**+0.4**	
	baz=244,SNR=20							
C18K				S	**S**	**18 36 13.6**	**+1.9**	
	baz=244							
GCSA	**Galena City Sc**	**67.73**	**24**	P	**P**	**18 27 16.6**	**+0.7**	
	baz=250,SNR=5.7							
GCSA				S	**S**	**18 36 14.4**	**+1.9**	
	baz=250							
CHM	**Chimkent**	**67.73**	**311**	*e*P	**P**	**18 27 17.1**	**+0.7**	
CHM				pmax	pmax			
	comp=Z,186nm,2.5s							
CHM				MLR	MLR			
	comp=Z,4µm,18.0s							
CHM	**Chimkent**	**67.73**	**311**	*e*P	**P**	**18 27 17.2**	**+0.7**	
	comp=Z,186nm,2.5s							
CHM				LR	LR	18 57 28.7		
	comp=Z,4µm,18.0s							
KDAK	**Kodiak Island**	**67.74**	**32**	LR	LR	18 52 58.1		
	comp=Z,6µm,21.8s,baz=241,slow=32							
KDAK	**Kodiak Island**	**67.74**	**32**	P	**P**	**18 27 15.8**	**-0.3**	
KDAK	**Kodiak Island**	**67.74**	**32**	IAMs_20	IAMs_20	19 01 32.9		
	comp=Z,9µm,18.0s							
KDAK	**Kodiak Island**	**67.74**	**32**	P	**P**	**18 27 15.8**	**-0.3**	
KDAK				pmax	pmax			
	comp=Z,114nm,0.7s							
KDAK				MLR	MLR			
	comp=Z,9µm,18.0s							
KDAK	**Kodiak Island**	**67.74**	**32**	⇓P	**P**	**18 27 15.9**	**-0.1**	
KDAK	**Kodiak Island**	**67.74**	**32**	P	**P**	**18 27 16.5**	**+0.4**	
	baz=257							
KDAK				S	**S**	**18 36 13.5**	**+0.7**	
	baz=257							
L19K	**White Mountain**	**67.78**	**27**	IAmb	IAmb	18 27 42.7		
	comp=Z,196nm,1.6s							
L19K				IAMs_20	IAMs_20	18 55 15.7		
	comp=Z,13µm,21.0s							
L19K	**White Mountain**	**67.78**	**27**	P	**P**	**18 27 17.2**	**+0.9**	
	baz=253,SNR=19							
L19K				S	**S**	**18 36 16.3**	**+3.0**	
	baz=253							
P19K	**Oil Pt**	**67.86**	**30**	P	**P**	**18 27 16.4**	**-0.4**	
	baz=256,SNR=6.7							
P19K				S	**S**	**18 36 14.9**	**+0.6**	
	baz=256							
CHGR	**Chuyangaron**	**67.88**	**307**	*i* P	**P**	**18 27 17.1**	**-0.4**	
CHGR				pmax	pmax			
	comp=Z,806nm,2.3s							
CHGR				MLR	MLR			
	comp=Z,30µm,19.0s							
KBL	**Kabul**	**67.88**	**302**	P	**P**	**18 27 17.0**	**-0.7**	
KBL	**Kabul**	**67.88**	**302**	P	**P**	**18 27 17.0**	**-0.7**	
KBL				pmax	pmax			
	comp=Z,133nm,0.9s							
KBL	**Kabul**	**67.88**	**302**	P	**P**	**18 27 18.0**	**+0.3**	
	SNR=38							
KBL				P	**P**	**18 27 18.0**	**+0.3**	
	SNR=38							
KBL				S	**S**	**18 36 12.2**	**-3.6**	
KBL				S	**S**	**18 36 12.2**	**-3.6**	
M19K	**Big River Lodg**	**67.91**	**28**	IAMs_20	IAMs_20	18 54 58.0		
	comp=Z,16µm,21.0s							
M19K	**Big River Lodg**	**67.91**	**28**	P	**P**	**18 27 17.9**	**+0.8**	
	baz=254							
M19K				S	**S**	**18 36 16.1**	**+1.3**	
	baz=254							
J19K	**Poorman**	**68.00**	**25**	IAmb	IAmb	18 27 40.9		
	comp=Z,154nm,1.5s							
J19K				IAMs_20	IAMs_20	18 53 32.4		
	comp=Z,10µm,21.0s							
J19K	**Poorman**	**68.00**	**25**	P	**P**	**18 27 18.3**	**+0.6**	
	baz=252,SNR=24							
J19K				S	**S**	**18 36 18.3**	**+2.5**	
	baz=252							
F19K	**Shaleruckik Mo**	**68.13**	**22**	P	**P**	**18 27 19.0**	**+0.6**	
	baz=248,SNR=25							
F19K				S	**S**	**18 36 18.1**	**+0.9**	
	baz=248							
G19K	**Purcell Mounta**	**68.14**	**23**	IAmb	IAmb	18 27 20.5		
	comp=Z,120nm,1.1s							
G19K	**Purcell Mounta**	**68.14**	**23**	P	**P**	**18 27 19.4**	**+0.9**	
	baz=249,SNR=75							
G19K				S	**S**	**18 36 20.3**	**+3.0**	
	baz=249							
H19K	**Roundabout Mou**	**68.17**	**24**	IAmb	IAmb	18 27 49.5		
	comp=Z,136nm,1.1s							
H19K	**Roundabout Mou**	**68.17**	**24**	P	**P**	**18 27 19.6**	**+0.9**	
	baz=250,SNR=81							
H19K				S	**S**	**18 36 21.2**	**+3.5**	
	baz=250							
O20K	**Slope Mountain**	**68.26**	**30**	P	**P**	**18 27 19.2**	**-0.3**	
	baz=256							
O20K				S	**S**	**18 36 18.6**	**-0.5**	
	baz=256							
A19K	**Wainwright**	**68.38**	**18**	P	**P**	**18 27 21.5**	**+1.6**	
	baz=244,SNR=5.3							
A19K				S	**S**	**18 36 23.4**	**+3.4**	
	baz=244							
C19K	**Lookout Ridge**	**68.39**	**20**	P	**P**	**18 27 21.3**	**+1.3**	
	baz=246,SNR=44							
C19K				S	**S**	**18 36 21.9**	**+1.6**	
	baz=246							
BVAR	**Borovoye Array**	**68.40**	**322**	P	**P**	**18 27 20.3**	**-0.1**	
	comp=Z,56nm,0.8s,baz=103,slow=7.3,SNR=122							
	comp=Z,56nm,0.8s							
BORK	**Borovoye**	**68.44**	**322**	P	**P**	**18 27 19.9**	**-0.7**	
BORK				IAMs_20	IAMs_20	18 56 29.2		
	comp=Z,16µm,22.0s							
BORK	**Borovoye**	**68.44**	**322**	*i* P	**P**	**18 27 20.3**	**-0.3**	
BORK				pmax	pmax			
	comp=Z,364nm,1.6s							
K20K	**Telida**	**68.47**	**26**	IAmb	IAmb	18 27 45.9		
	comp=Z,111nm,1.0s							
K20K				IAMs_20	IAMs_20	18 53 11.8		
	comp=Z,11µm,22.0s							
K20K	**Telida**	**68.47**	**26**	P	**P**	**18 27 21.5**	**+0.9**	
	baz=253,SNR=28							
K20K				S	**S**	**18 36 24.9**	**+3.5**	
	baz=253							
**M20K

	baz=253								
I20K	**Naaghedeneel**	**68.72**	**25**	P	**P**	**18 27 23.1**	**+1.0**		
	baz=252,SNR=26								
I20K				S	**S**	**18 36 29.0**	**+4.8**		
	baz=252								
SPCR	**Spurr Chakacha**	**68.73**	**29**	P	**P**	**18 27 22.0**	**-0.4**		
	baz=256								
SPCR				S	**S**	**18 36 24.7**	**0.0**		
	baz=256								
H20K	**Anotleneega Mo**	**68.78**	**24**	P	**P**	**18 27 23.3**	**+0.8**		
	baz=252,SNR=47								
H20K				S	**S**	**18 36 28.1**	**+3.1**		
	baz=252								
CNPM	**China Poot**	**68.82**	**31**	IAmb	IAmb	18 27 55.2			
	comp=Z,88nm,0.7s								
CNPM				IAMs_20	IAMs_20	18 53 34.2			
	comp=Z,10µm,22.0s								
F20K	**Avaraart Lake**	**68.96**	**22**	IAmb	IAmb	18 27 54.4			
	comp=Z,72nm,1.1s								
F20K	**Avaraart Lake**	**68.96**	**22**	P	**P**	**18 27 24.6**	**+1.0**		
	baz=250,SNR=53								
F20K				S	**S**	**18 36 29.6**	**+2.5**		
	baz=250								
BRLK	**Bradley Lake**	**69.04**	**30**	IAmb	IAmb	18 27 55.6			
	comp=Z,55nm,0.7s								
BRLK				IAMs_20	IAMs_20	18 52 54.9			
	comp=Z,14µm,22.0s								
BRSE	**Bradley Lake S**	**69.11**	**30**	P	**P**	**18 27 24.4**	**-0.2**		
	baz=258,SNR=5.5								
BRSE				S	**S**	**18 36 28.3**	**-0.8**		
	baz=258								
CAPN	**Captain Cook N**	**69.13**	**29**	S	**S**	**18 36 30.0**	**+0.8**		
	baz=257								
PPLA	**Purkeypile**	**69.17**	**27**	IAMs_20	IAMs_20	18 56 23.3			
	comp=Z,11µm,21.0s								
PPLA	**Purkeypile**	**69.17**	**27**	P	**P**	**18 27 25.5**	**+0.4**		
	baz=255,SNR=12								
PPLA				S	**S**	**18 36 31.5**	**+1.5**		
	baz=255								
E20K	**Nigu River**	**69.21**	**21**	P	**P**	**18 27 26.2**	**+1.0**		
	baz=250								
E20K				S	**S**	**18 36 32.0**	**+1.9**		
	baz=250								
D20K	**Etivluk River**	**69.23**	**20**	P	**P**	**18 27 26.0**	**+0.8**		
	baz=249								
D20K				S	**S**	**18 36 31.8**	**+1.6**		
	baz=249								
SKT	**Skwentna**	**69.24**	**28**	IAmb	IAmb	18 27 52.9			
	comp=Z,90nm,1.2s								
SKT	**Skwentna**	**69.24**	**28**	P	**P**	**18 27 24.7**	**-0.7**		
	baz=256,SNR=16								
SKT				S	**S**	**18 36 31.0**	**+0.4**		
	baz=256								
CAST	**Castle Rocks**	**69.35**	**26**	IAmb	IAmb	18 27 52.3			
	comp=Z,144nm,1.2s								
CAST				IAMs_20	IAMs_20	18 57 00.0			
	comp=Z,10µm,20.0s								
CAST	**Castle Rocks**	**69.35**	**26**	P	**P**	**18 27 26.2**	**+0.1**		
	baz=255,SNR=46								
CAST				S	**S**	**18 36 33.2**	**+1.4**		
	baz=255								
CHUM	**Lake Minchumin**	**69.37**	**26**	P	**P**	**18 27 27.2**	**+1.0**		
	baz=255,SNR=24								
CHUM				S	**S**	**18 36 34.3**	**+2.3**		
	baz=255								
SLKM	**Skilak Lake**	**69.52**	**30**	IAmb	IAmb	18 27 51.4			
	comp=Z,174nm,1.2s								
SLKM				IAMs_20	IAMs_20	18 53 21.9			
	comp=Z,11µm,22.0s								
B20K	**Meade River**	**69.53**	**19**	P	**P**	**18 27 28.1**	**+1.1**		
	baz=248,SNR=29								
B20K				S	**S**	**18 36 35.5**	**+1.9**		
	baz=248								
G21K	**Allakaket**	**69.62**	**23**	IAmb	IAmb	18 27 49.3			
	comp=Z,165nm,1.4s								
G21K				IAMs_20	IAMs_20	18 56 04.9			
	comp=Z,10µm,22.0s								
G21K	**Allakaket**	**69.62**	**23**	P	**P**	**18 27 28.8**	**+1.1**		
	baz=253								
G21K				S	**S**	**18 36 37.4**	**+2.4**		
	baz=253								
H21K	**Melozitna Rive**	**69.65**	**24**	IAmb	IAmb	18 27 50.4			
	comp=Z,93nm,1.0s								
H21K				IAMs_20	IAMs_20	18 53 49.9			
	comp=Z,9µm,21.0s								
H21K	**Melozitna Rive**	**69.65**	**24**	P	**P**	**18 27 28.9**	**+1.0**		
	baz=254,SNR=71								
H21K				S	**S**	**18 36 38.2**	**+2.9**		
	baz=254								
L22K	**Petersville**	**69.71**	**27**	IAmb	IAmb	18 27 56.5			
	comp=Z,77nm,0.8s								
L22K				IAMs_20	IAMs_20	18 55 32.7			
	comp=Z,16µm,21.0s								
L22K	**Petersville**	**69.71**	**27**	P	**P**	**18 27 27.8**	**-0.6**		
	baz=257,SNR=32								
L22K				S	**S**	**18 36 34.5**	**-1.7**		
	baz=257								
O22K	**Cooper Landing**	**69.76**	**30**	IAMs_20	IAMs_20	18 53 19.1			
	comp=Z,15µm,22.0s								
O22K	**Cooper Landing**	**69.76**	**30**	P	**P**	**18 27 28.2**	**-0.4**		
	baz=258,SNR=8.3								
O22K				S	**S**	**18 36 36.7**	**0.0**		
	baz=258								
SEW	**Seward**	**69.82**	**30**	IAmb	IAmb	18 27 59.2			
	comp=Z,145nm,1.1s								
SEW	**Seward**	**69.82**	**30**	P	**P**	**18 27 28.9**	**-0.1**		
	baz=259,SNR=11								
SEW				S	**S**	**18 36 37.4**	**0.0**		
	baz=259								
M22K	**Willow**	**69.84**	**28**	IAMs_20	IAMs_20	18 55 47.1			
	comp=Z,13µm,21.0s								
M22K	**Willow**	**69.84**	**28**	P	**P**	**18 27 28.2**	**-0.8**		
	baz=258,SNR=5.6								
M22K				S	**S**	**18 36 36.2**	**-1.3**		
	baz=258								
F21K	**Alatna River**	**69.85**	**22**	P	**P**	**18 27 29.6**	**+0.5**		
	baz=252,SNR=48								
F21K				S	**S**	**18 36 39.7**	**+2.1**		
	baz=252								
I21K	**Tanana**	**69.85**	**25**	IAmb	IAmb	18 27 50.9			
	comp=Z,89nm,1.0s								
I21K	**Tanana**	**69.85**	**25**	P	**P**	**18 27 30.2**	**+1.1**		
	baz=255,SNR=71								
I21K				S	**S**	**18 36 41.0**	**+3.4**		
	baz=255								
RC01	**Rabbit Creek A**	**69.88**	**29**	IAmb	IAmb	18 27 59.0			
	comp=Z,280nm,1.8s								
RC01				IAMs_20	IAMs_20	18 55 49.2			
	comp=Z,14µm,20.0s								
RC01	**Rabbit Creek A**	**69.88**	**29**	P	**P**	**18 27 28.6**	**-0.8**		
	baz=258								
RC01				S	**S**	**18 36 36.8**	**-1.3**		
	baz=258								
KTH	**Kantishna Hill**	**69.89**	**26**	IAmb	IAmb	18 27 56.8			
	comp=Z,115nm,1.1s								
KTH				IAMs_20	IAMs_20	18 57 07.3			
	comp=Z,10µm,20.0s								
CUT	**Chulitna**	**69.91**	**28**	IAmb	IAmb	18 28 19.6			
	comp=Z,169nm,1.3s								
CUT				IAMs_20	IAMs_20	18 56 01.1			
	comp=Z,12µm,21.0s								
CUT	**Chulitna**	**69.91**	**28**	P	**P**	**18 27 28.7**	**-0.8**		
	baz=257								
CUT				S	**S**	**18 36 42.4**	**+4.0**		
	baz=257								
C21K	**Kniveblade Rid**	**70.00**	**20**	P	**P**	**18 27 31.0**	**+1.0**		
	baz=251,SNR=25								
C21K				S	**S**	**18 36 41.9**	**+2.6**		
	baz=251								
E21K	**Killik River**	**70.05**	**21**	IAmb	IAmb	18 27 49.3			
	comp=Z,119nm,0.8s								
E21K	**Killik River**	**70.05**	**21**	P	**P**	**18 27 30.9**	**+0.6**		
	baz=252,SNR=66								
E21K				S	**S**	**18 36 41.9**	**+1.9**		
	baz=252								
TRF	**Thorofare Moun**	**70.14**	**27**	IAmb	IAmb	18 27 50.5			
	comp=Z,84nm,1.0s								
TRF	**Thorofare Moun**	**70.14**	**27**	P	**P**	**18 27 30.6**	**-0.6**		
	baz=257,SNR=29								
TRF				S	**S**	**18 36 41.5**	**+0.1**		
	baz=257								
A21K	**Barrow**	**70.19**	**18**	P	**P**	**18 27 31.7**	**+0.7**		
	baz=248								
A21K				S	**S**	**18 36 42.1**	**+0.8**		
	baz=248								
B21K	**Ikpikpuk River**	**70.22**	**20**	P	**P**	**18 27 32.1**	**+0.9**		
	baz=251,SNR=28								
B21K				S	**S**	**18 36 43.5**	**+1.8**		
	baz=251								
PMR	**Palmer**	**70.27**	**29**	P	**P**	**18 27 32.2**	**+0.5**		
PMR	**Palmer**	**70.27**	**29**	IAmb	IAmb	18 28 00.0			
	comp=Z,109nm,1.4s								
PMR	**Palmer**	**70.27**	**29**	P	**P**	**18 27 31.1**	**-0.6**		
	baz=259								
PMR				S	**S**	**18 36 42.0**	**-0.6**		
	baz=259								
H22K	**Ishtalitna Cre**	**70.28**	**24**	P	**P**	**18 27 32.7**	**+0.9**		
	baz=255,SNR=42								
H22K				S	**S**	**18 36 45.8**	**+3.1**		
	baz=255								
MLY	**Manley**	**70.32**	**25**	IAmb	IAmb	18 28 07.0			
	comp=Z,112nm,1.0s								
MLY	**Manley**	**70.32**	**25**	P	**P**	**18 27 32.8**	**+0.7**		
	baz=256,SNR=126								
MLY				S	**S**	**18 36 45.1**	**+1.9**		
	baz=256								
GHO	**Glory Hole Cre**	**70.40**	**28**	IAMs_20	IAMs_20	18 56 26.9			
	comp=Z,13µm,20.0s								
F22K	**John River**	**70.41**	**22**	P	**P**	**18 27 33.6**	**+1.1**		
	baz=254,SNR=81								
F22K				S	**S**	**18 36 47.0**	**+2.7**		
	baz=254								
G22K	**Bettles**	**70.50**	**23**	P	**P**	**18 27 33.9**	**+0.8**		
	baz=254								
G22K				S	**S**	**18 36 48.1**	**+2.9**		
	baz=254								
KNK	**Knik Glacier**	**70.55**	**29**	P	**P**	**18 27 33.5**	**0.0**		
	baz=259,SNR=9.2								
KNK				S	**S**	**18 36 46.2**	**+0.2**		
	baz=259								
A22K	**Sinclair Lake**	**70.57**	**18**	P	**P**	**18 27 34.0**	**+0.7**		
	baz=250								
A22K				S	**S**	**18 36 47.9**	**+2.1**		
	baz=250								
SML	**Sawmill**	**70.68**	**28**	IAmb	IAmb	18 27 54.0			
	comp=Z,90nm,1.0s								
SML				IAMs_20	IAMs_20	18 56 05.4			
	comp=Z,15µm,20.0s								
SML	**Sawmill**	**70.68**	**28**	P	**P**	**18 27 34.2**	**-0.1**		
	baz=259,SNR=21								
SML				S	**S**	**18 36 48.0**	**+0.4**		
	baz=259								
RND	**Reindeer**	**70.76**	**27**	IAMs_20	IAMs_20	18 57 02.3			
	comp=Z,13µm,20.0s								
WAT1	**Susitna Watana**	**70.78**	**27**	P	**P**	**18 27 34.2**	**-0.7**		
	baz=259								
WAT1				S	**S**	**18 36 47.6**	**-1.0**		
	baz=259								
MCK	**McKinley**	**70.79**	**26**	IAmb	IAmb	18 28 01.5			
	comp=Z,141nm,1.2s								
MCK				IAMs_20	IAMs_20	18 57 36.2			
	comp=Z,12µm,20.0s								
MCK	**McKinley**	**70.79**	**26**	P	**P**	**18 27 34.4**	**-0.5**		
	baz=258,SNR=19								
MCK				S	**S**	**18 36 47.7**	**-1.1**		
	baz=258								
P23K	**Montague Islan**	**70.81**	**30**	IAMs_20	IAMs_20	18 54 36.0			
	comp=Z,14µm,22.0s								
P23K	**Montague Islan**	**70.81**	**30**	P	**P**	**18 27 35.5**	**+0.4**		
	baz=261,SNR=16								
P23K				S	**S**	**18 36 49.7**	**+0.7**		
	baz=261								
B22K	**Teshekpuk Lake**	**70.84**	**19**	IAmb	IAmb	18 27 37.0			
	comp=Z,153nm,0.9s								
B22K	**Teshekpuk Lake**	**70.84**	**19**	P	**P**	**18 27 35.5**	**+0.5**		
	baz=252,SNR=14								
B22K				S	**S**	**18 36 50.8**	**+1.8**		
	baz=252								
NEA2	**Nenana**	**70.92**	**26**	IAmb	IAmb	18 28 01.6			
	comp=Z,174nm,1.2s								
NEA2	**Nenana**	**70.92**	**26**	P	**P**	**18 27 35.6**	**-0.1**		
	baz=258,SNR=23								
NEA2				S	**S**	**18 36 50.3**	**+0.2**		
	baz=258								
I23K	**Minto, Yukon-K**	**70.92**	**25**	IAMs_20	IAMs_20	18 53 53.4			
	comp=Z,10µm,22.0s								
I23K	**Minto, Yukon-K**	**70.92**	**25**	P	**P**	**18 27 36.2**	**+0.6**		
	baz=257,SNR=57								
I23K				S	**S**	**18 36 50.6**	**+0.6**		
	baz=257								
M23K	**Glacier View**	**70.96**	**29**	P	**P**	**18 27 35.8**	**-0.2**		
	baz=260,SNR=9.3								
M23K				S	**S**	**18 36 49.7**	**-1.1**		
	baz=260								
H23K	**Yukon River**	**71.00**	**24**	IAmb	IAmb	18 27 57.4			
	comp=Z,84nm,0.9s								
H23K	**Yukon River**	**71.00**	**24**	P	**P**	**18 27 36.9**	**+0.7**		
	baz=257								
H23K				S	**S**	**18 36 53.0**	**+1.9**		
	baz=257								
G23K	**Bananza Creek**	**71.02**	**23**	IAmb	IAmb	18 27 52.8			
	comp=Z,169nm,1.1s								
G23K	**Bananza Creek**	**71.02**	**23**	P	**P**	**18 27 37.5**	**+1.2**		
	baz=256,SNR=80								
G23K				S	**S**	**18 36 54.1**	**+2.8**		
	baz=256								
COLD	**Coldfoot**	**71.08**	**23**	IAmb	IAmb	18 27 53.0			
	comp=Z,136nm,1.1s								
COLD				IAMs_20	IAMs_20	18 57 01.5			
	comp=Z,8µm,21.0s								
COLD	**Coldfoot**	**71.08**	**23**	P	**P**	**18 27 37.5**	**+0.9**		
	baz=256,SNR=47								
COLD				S	**S**	**18 36 54.7**	**+2.8**		
	baz=256								
WAT6	**Susitna Watana**	**71.10**	**28**	P	**P**	**18 27 36.6**	**-0.4**		
	baz=260,SNR=40								
WAT6				S	**S**	**18 36 51.7**	**-0.9**		
	baz=260								
GLI	**Glacier Island**	**71.10**	**30**	IAmb	IAmb	18 28 08.3			
	comp=Z,112nm,1.1s								
GLI				IAMs_20	IAMs_20	18 59 03.7			
	comp=Z,9µm,21.0s								
GLI	**Glacier Island**	**71.10**	**30**	P	**P**	**18 27 36.8**	**-0.1**		
	baz=261,SNR=9.4								
GLI				S	**S**	**18 36 53.4**	**+0.9**		
	baz=261								
SCM	**Sheep Creek Mo**	**71.15**	**29**	IAMs_20	IAMs_20	18 56 50.9			
	comp=Z,14µm,21.0s								
SCM	**Sheep Creek Mo**	**71.15**	**29**	P	**P**	**18 27 37.5**	**+0.2**		
	baz=260,SNR=39								
SCM				S	**S**	**18 36 54.0**	**+0.8**		
	baz=260								
Q23K	**Middleton Isla**	**71.25**	**31**	P	**P**	**18 27 38.2**	**+0.5**		
	baz=262								
Q23K				S	**S**	**18 36 55.9**	**+1.8**		
	baz=262								
MID	**Middleton Isla**	**71.26**	**31**	IAMs_20	IAMs_20	18 54 48.8			
	comp=Z,10µm,21.0s								
HIN	**Hinchinbrook I**	**71.32**	**30**	IAmb	IAmb	18 28 11.2			
	comp=Z,172nm,1.0s								
DHY	**Denali Highway**	**71.35**	**27**	IAmb	IAmb	18 28 22.5			
	comp=Z,245nm,1.7s								
DHY				IAMs_20	IAMs_20	18 56 57.1			
	comp=Z,13µm,21.0s								
DHY	**Denali Highway**	**71.35**	**27**	P	**P**	**18 27 38.1**	**-0.4**		
	baz=260,SNR=23								
DHY				S	**S**	**18 36 56.4**	**+0.9**		
	baz=260								
D23K	**Nanushuk River**	**71.35**	**21**	P	**P**	**18 27 39.9**	**+1.7**		
	baz=255,SNR=63								
D23K				S	**S**	**18 36 57.6**	**+2.6**		
	baz=255								
FID	**Port Fidalgo**	**71.38**	**30**	IAMs_20	IAMs_20	18 57 38.4			
	comp=Z,14µm,21.0s								
CCB	**Clear Creek Bu**	**71.46**	**26**	IAmb	IAmb	18 28 10.7			
	comp=Z,174nm,1.6s								
COLA	**College**	**71.48**	**25**	P	**P**	**18 27 39.3**	**+0.3**		
COLA	**College**	**71.48**	**25**	P	**P**	**18 27 38.4**	**-0.6**		
COLA				IAmb	IAmb	18 28 06.0			
	comp=Z,96nm,1.1s								
COLA	**College**	**71.48**	**25**	IAMs_20	IAMs_20	18 54 31.4			
	comp=Z,11µm,22.0s								
COLA	**College**	**71.48**	**25**	*i* P	**P**	**18 27 37.8**	**-1.2**		
COLA				pmax	pmax				
	comp=Z,51nm,1.1s								
COLA	**College**	**71.48**	**25**	P	**P**	**18 27 38.4**	**-0.6**		
COLA	**College**	**71.48**	**25**	P	**P**	**18 27 38.3**	**-0.7**		
COLA	baz=259			S	**S**	**18 36 59.7**	**+3.1**		
	baz=259								
E23K	**Chandalar**	**71.50**	**22**	P	**P**	**18 27 40.6**	**+1.3**		
	baz=256,SNR=185								
E23K				S	**S**	**18 37 00.4**	**+3.5**		
	baz=256								
C23K	**Itkillik River**	**71.61**	**20**	IAmb	IAmb	18 27 42.0			
	comp=Z,154nm,0.9s								
C23K	**Itkillik River**	**71.61**	**20**	P	**P**	**18 27 40.8**	**+1.0**		
	baz=254,SNR=72								
C23K				S	**S**	**18 37 00.1**	**+2.2**		
	baz=254								
TOLK	**Toolik Lake Re**	**71.66**	**21**	P	**P**	**18 27 41.2**	**+1.1**		
	baz=256,SNR=61								
TOLK				S	**S**	**18 37 01.1**	**+2.4**		
	baz=256								
H24K	**Noodor Dome**	**71.67**	**24**	IAmb	IAmb	18 28 10.9			
	comp=Z,157nm,1.3s								
H24K	**Noodor Dome**	**71.67**	**24**	P	**P**	**18 27 40.8**	**+0.6**		
	baz=258,SNR=62								
H24K				S	**S**	**18 37 00.5**	**+1.6**		
	baz=258								
POKR	**Poker Plat Res**	**71.71**	**25**	P	**P**	**18 27 39.9**	**-0.5**		
	baz=259								
POKR				S	**S**	**18 36 59.5**	**+0.2**		
	baz=259								
EYAK	**Cordova Ski Ar**	**71.71**	**30**	P	**P**	**18 27 42.0**	**+1.5**		
EYAK	**Cordova Ski Ar**	**71.71**	**30**	P	**P**	**18 27 40.7**	**+0.3**		
	baz=262,SNR=6.2								
EYAK				S	**S**	**18 36 59.8**	**+0.5**		
	baz=262								
M24K	**Tolsona, Glenn**	**71.74**	**28**	IAmb	IAmb	18 28 44.8			
	comp=Z,120nm,1.1s								
M24K				IAMs_20	IAMs_20	18 57 09.3			
	comp=Z,14µm,21.0s								
M24K	**Tolsona, Glenn**	**71.74**	**28**	P	**P**	**18 27 40.9**	**+0.1**		
	baz=261,SNR=8.1								
M24K				S	**S**	**18 36 59.4**	**-0.5**		
	baz=261								
KLU	**Klutina**	**71.76**	**29**	IAmb	IAmb	18 28 17.8			
	comp=Z,155nm,1.4s								
KLU				IAMs_20	IAMs_20	18 57 00.0			
	comp=Z,13µm,20.0s								
KLU	**Klutina**	**71.76**	**29**	P	**P**	**18 27 41.5**	**+0.6**		
	baz=262,SNR=29								
KLU				S	**S**	**18 36 59.5**	**-0.7**		
	baz=262								
HDA	**Harding Lake**	**71.78**	**26**	IAMs_20	IAMs_20	18 55 36.3			
	comp=Z,9µm,22.0s								
HDA	**Harding Lake**	**71.78**	**26**	P	**P**	**18 27 39.9**	**-0.9**		
	baz=260,SNR=18								
HDA				S	**S**	**18 36 57.7**	**-2.4**		
	baz=260								
DIV	**Divide**	**71.78**	**29**	IAmb	IAmb	18 28 15.2			
	comp=Z,96nm,1.2s								
DIV				IAMs_20	IAMs_20	18 54 45.5			
	comp=Z,12µm,22.0s								
ILAR	**Eielson Array**	**71.87**	**26**	P	**P**	**18 27 40.0**	**-1.4**		
	comp=Z,16nm,0.6s,baz=245,slow=6.1,SNR=147								
ILAR				LR	LR	18 54 53.7			
	comp=Z,6µm,22.0s,baz=241,slow=32								
ILAR				PKPPKP	PKPPKP	**P'P'df**			
	comp=Z,1.5nm,1.2s,baz=18,slow=1.1,SNR=4.4								
	comp=Z,16nm,0.6s								
ILAR	**Eielson Array**	**71.87**	**26**	P	**P**	**18 27 39.7**	**-1.7**		
ILAR	**Eielson Array**	**71.87**	**26**	P	**P**	**18 27 39.7**	**-1.7**		
E24K	**Your Creek**	**71.92**	**22**	IAmb	IAmb	18 27 58.2			
	comp=Z,98nm,1.1s								
E24K				IAMs_20	IAMs_20	18 58 53.4			
	comp=Z,8µm,20.0s								
E24K	**Your Creek**	**71.92**	**22**	P	**P**	**18 27 42.7**	**+1.0**		
	baz=257,SNR=65								
E24K				S	**S**	**18 37 04.8**	**+3.1**		
	baz=257								
G24K	**Hadweenzic Riv**	**72.00**	**23**	IAmb	IAmb	18 28 08.1			
	comp=Z,146nm,1.1s								
G24K	**Hadweenzic Riv**	**72.00**	**23**	P	**P**	**18 27 43.1**	**+0.9**		
	baz=258,SNR=70								
G24K				S	**S**	**18 37 05.3**	**+2.7**		
	baz=258								
F24K	**Squaw Lake**	**72.02**	**23**	IAmb	IAmb	18 28 05.9			
	comp=Z,92nm,0.7s								
F24K				IAMs_20	IAMs_20	18 57 31.1			
	comp=Z,10µm,21.0s								
F24K	**Squaw Lake**	**72.02**	**23**	P	**P**	**18 27 43.4**	**+1.1**		
	baz=258,SNR=85								
F24K				S	**S**	**18 37 05.7**	**+2.9**		
	baz=258								
D24K	**Happy Valley**	**72.05**	**21**	P	**P**	**18 27 43.6**	**+1.2**		
	baz=256								
D24K				S	**S**	**18 37 05.9**	**+2.9**		
	baz=256								
K24K	**Donnelly Dome**	**72.18**	**27**	IAmb	IAmb	18 28 03.5			
	comp=Z,108nm,1.0s								
K24K				IAMs_20	IAMs_20	18 58 50.0			
	comp=Z,13µm,20.0s								
K24K	**Donnelly Dome**	**72.18**	**27**	P	**P**	**18 27 43.3**	**-0.1**		
	baz=261,SNR=17								
K24K				S	**S**	**18 37 04.2**	**-0.6**		
	baz=261								
RAGM	**Ragged Mountai**	**72.22**	**30**	IAmb	IAmb	18 28 18.6			
	comp=Z,196nm,1.2s								
RAGM				IAMs_20	IAMs_20	18 57 16.1			
	comp=Z,12µm,20.0s								
HARP	**HAARP**	**72.25**	**28**	IAmb	IAmb	18 28 19.0			
	comp=Z,154nm,1.0s								
HARP				IAMs_20	IAMs_20	18 54 46.9			
	comp=Z,13µm,22.0s								
HARP	**HAARP**	**72.25**	**28**	P	**P**	**18 27 44.4**	**+0.6**		
	baz=262,SNR=11								
HARP				S	**S**	**18 37 03.7**	**-1.9**		
	baz=262								
KAIM	**Kayak Island**	**72.29**	**31**	IAmb	IAmb	18 28 19.1			
	comp=Z,103nm,0.8s								
KAIM	**Kayak Island**	**72.29**	**31**	P	**P**	**18 27 45.5**	**+1.5**		
	baz=263,SNR=11								
KAIM				S	**S**	**18 37 08.0**	**+1.9**		
	baz=263								
BMRM	**Bremner River**	**72.32**	**30**	P	**P**	**18 27 44.7**	**+0.4**		
	baz=263,SNR=25								
BMRM				S	**S**	**18 37 06.3**	**-0.2**		
	baz=263								
N25K	**Chitina, Valde**	**72.41**	**29**	P	**P**	**18 27 45.2**	**+0.5**		
	baz=263,SNR=11								
N25K				S	**S**	**18 37 07.4**	**-0.1**		
	baz=263								
J25K	**Salcha River,**	**72.49**	**26**	IAmb	IAmb	18 28 28.3			
	comp=Z,157nm,1.8s								
J25K				IAMs_20	IAMs_20	19 00 14.0			
	comp=Z,9µm,20.0s								
J25K	**Salcha River,**	**72.49**	**26**	P	**P**	**18 27 44.2**	**-1.0**		
	baz=261,SNR=19								
J25K				S	**S**	**18 37 07.0**	**-1.4**		
	baz=261								
G25K	**Bearman Lake**	**72.55**	**24**	P	**P**	**18 27 46.5**	**+1.1**		
	baz=260,SNR=15								
G25K				S	**S**	**18 37 10.2**	**+1.3**		
	baz=260								
PRP	**Porcupine Dome**	**72.57**	**25**	IAMs_20	IAMs_20	18 54 53.1			
	comp=Z,9µm,22.0s								
PRP	**Porcupine Dome**	**72.57**	**25**	P	**P**	**18 27 44.4**	**-1.3**		
	baz=261,SNR=11								
PRP				S	**S**	**18 37 08.1**	**-1.3**		
	baz=261								
RIDG	**Independent Ri**	**72.58**	**27**	IAmb	IAmb	18 28 06.1			
	comp=Z,129nm,1.0s						

MENT IAmb IAmb 18 28 19.0
comp=Z,82nm,0.8s
SCRK Sand Creek 72.99 27 IAmb IAmb 18 28 18.4
comp=Z,188nm,1.5s
SCRK IAMs_20 IAMs_20 18 58 54.3
comp=Z,12µm,20.0s
SCRK Sand Creek 72.99 27 P **P** **18 27 48.1 -0.1**
baz=262,SNR=48
SCRK S **S** **18 37 13.4 -0.9**
baz=262
E25K Arctic Village 73.00 22 P **P** **18 27 49.4 +1.3**
baz=260,SNR=72
E25K S **S** **18 37 15.9 +1.9**
baz=260
CRQM Cirque 73.01 30 IAMs_20 IAMs_20 18 59 02.7
comp=Z,10µm,20.0s
CRQE Cirque 73.03 30 P **P** **18 27 48.8 +0.2**
baz=264,SNR=8.0
MCARA McCarthy VSAT 73.13 29 IAMs_20 IAMs_20 18 55 52.2
comp=Z,11µm,22.0s
MCARA McCarthy VSAT 73.13 29 P **P** **18 27 49.9 +0.9**
baz=264,SNR=10
MCARA S **S** **18 37 15.8 +0.1**
baz=264
L26K Log Cabin Wild 73.16 28 IAMs_20 IAMs_20 18 57 52.9
comp=Z,11µm,21.0s
L26K Log Cabin Wild 73.16 28 P **P** **18 27 49.8 +0.6**
baz=263,SNR=21
L26K S **S** **18 37 15.7 -0.3**
baz=263
TGL Tana Glacier 73.16 30 IAMs_20 IAMs_20 18 59 17.1
comp=Z,11µm,20.0s
M26K Nabesna, AK 73.25 28 IAMs_20 IAMs_20 18 58 19.3
comp=Z,14µm,21.0s
M26K Nabesna, AK 73.25 28 P **P** **18 27 50.4 +0.7**
baz=264,SNR=8.4
M26K S **S** **18 37 18.4 +1.3**
baz=264
F26K Sheenjek River 73.46 23 IAmb IAmb 18 28 16.2
comp=Z,84nm,0.8s
F26K Sheenjek River 73.46 23 P **P** **18 27 51.9 +1.1**
baz=261,SNR=129
F26K S **SKiKP** **18 37 22.4 +1.6**
baz=261
G26K Porcupine Rive 73.48 23 IAmb IAmb 18 28 07.7
comp=Z,112nm,1.1s
G26K Porcupine Rive 73.48 23 P **P** **18 27 52.2 +1.2**
baz=262,SNR=24
G26K S **SKiKP** **18 37 22.3 +1.4**
baz=262
HRA Herat 73.50 302 IAmb IAmb 18 28 53.6
comp=Z,98nm,0.7s
C26K Camden Bay 73.55 20 P **P** **18 27 52.4 +1.1**
baz=260
C26K S **S** **18 37 21.1 +1.0**
baz=260
GRNC Granite Creek 73.69 30 IAMs_20 IAMs_20 18 55 57.9
comp=Z,14µm,22.0s
BARN Barnard Glacie 73.76 30 IAMs_20 IAMs_20 18 59 15.8
comp=Z,10µm,20.0s
M27K Edge Creek, AK 73.76 28 P **P** **18 27 53.5 +0.6**
baz=265,SNR=18
M27K S **S** **18 37 23.0 -0.1**
baz=265
K27K Chicken 73.83 27 IAMs_20 IAMs_20 18 58 59.5
comp=Z,13µm,20.0s
L27K Beaver Creek, 73.85 28 IAMs_20 IAMs_20 18 57 41.9
comp=Z,11µm,21.0s
L27K Beaver Creek, 73.85 28 P **P** **18 27 54.0 +0.7**
baz=265,SNR=27
L27K S **S** **18 37 24.4 +0.6**
baz=265
BCAR Beaver Creek A 73.87 28 P **P** **18 27 52.9 -0.5**
C27K Jago River 73.91 21 P **P** **18 27 54.4 +1.0**
baz=261,SNR=27
C27K S **S** **18 37 26.3 +2.1**
baz=261
LOGN Logan Glacier 74.06 30 IAMs_20 IAMs_20 18 56 42.8
comp=Z,14µm,22.0s
I27K Kandik River 74.19 25 IAmb IAmb 18 28 11.7
comp=Z,137nm,1.4s
I27K Kandik River 74.19 25 P **P** **18 27 55.8 +0.6**
baz=264,SNR=38
I27K S **S** **18 37 28.0 +0.3**
baz=264
BVCY Beaver Creek 74.24 28 P **P** **18 27 56.3 +0.8**
baz=266,SNR=14
BVCY S **S** **18 37 29.5 +1.3**
baz=266
H27K Steamboat Moun 74.29 24 IAmb IAmb 18 28 17.3
comp=Z,143nm,0.9s
H27K IAMs_20 IAMs_20 18 56 31.5
comp=Z,12µm,22.0s
H27K Steamboat Moun 74.29 24 P **P** **18 27 56.9 +1.1**
baz=264,SNR=101
H27K S **S** **18 37 29.8 +1.1**
baz=264
G27K Doyon Strip 74.30 24 P **P** **18 27 56.9 +1.1**
baz=264,SNR=29
G27K S **S** **18 37 31.1 +2.3**
baz=264
SVE Sverdlovsk 74.36 326 *ce*P **P** **18 27 56.4 +0.2**
SVE *e*S **S** **18 37 28.8 -0.8**
SVE *e*SS **SS** **18 42 15.9 +0.4**
SVE pmax pmax
comp=Z,133nm,0.9s
SVE MLR MLR
comp=E,10µm,20.0s
SVE MLR MLR
comp=Z,13µm,18.0s
PCA Pinnacle 74.38 31 IAmb IAmb 18 28 34.5
comp=Z,117nm,0.9s
PCA IAMs_20 IAMs_20 18 56 13.5
comp=Z,12µm,21.0s
YUK3 Moose Creek 74.38 29 P **P** **18 27 57.1 +0.5**
baz=266,SNR=20
YUK3 S **S** **18 37 31.0 +0.7**
baz=266
PINM Pinnacle 74.39 31 P **P** **18 27 57.2 +0.7**
baz=267
PINM S **S** **18 37 30.7 +0.7**
baz=267
O28M Mount Upton 74.45 30 IAmb IAmb 18 28 32.7
comp=Z,107nm,1.1s
O28M Mount Upton 74.45 30 P **P** **18 27 57.9 +0.8**
baz=267,SNR=16
O28M S **S** **18 37 33.0 +1.8**
baz=267
E27K Coleen River 74.48 22 IAmb IAmb 18 28 22.2
comp=Z,71nm,0.8s
E27K Coleen River 74.48 22 P **P** **18 27 57.9 +1.1**
baz=264,SNR=36
E27K S **S** **18 37 32.8 +2.0**
baz=264
YUK8 Steele Glacier 74.69 30 P **P** **18 27 59.5 +1.1**
baz=267,SNR=19
YUK8 S **S** **18 37 35.0 +1.2**
baz=267
AB31 Akbulak array 74.69 318 IAmb IAmb 18 28 33.7
comp=Z,85nm,0.5s
AB31 Akbulak array 74.69 318 *i*P **P** **18 27 57.6 -0.8**
ABKAR Akbulak array 74.69 318 P **P** **18 27 57.6 -0.8**
D27M Malcolm River 74.82 21 IAMs_20 IAMs_20 18 59 52.2
comp=Z,9µm,20.0s
D27M Malcolm River 74.82 21 P **P** **18 27 59.9 +1.1**
baz=264,SNR=17
D27M S **S** **18 37 36.6 +2.0**
baz=264
I28M Miner Creek 74.87 25 IAmb IAmb 18 28 20.4
comp=Z,106nm,1.0s
I28M IAMs_20 IAMs_20 18 56 27.1
comp=Z,9µm,22.0s
I28M Miner Creek 74.87 25 P **P** **18 28 00.1 +0.9**
baz=266,SNR=81
I28M S **S** **18 37 36.9 +1.6**
baz=266
DAWY Dawson 75.01 27 IAmb IAmb 18 28 25.7
comp=Z,181nm,1.4s
DAWY Dawson 75.01 27 P **P** **18 28 00.8 +0.8**
baz=267,SNR=24
DAWY S **S** **18 37 38.4 +1.5**
baz=267
BRWY Burwash Landin 75.04 29 P **P** **18 28 01.4 +1.2**
baz=268,SNR=12
BRWY S **S** **18 37 38.6 +1.3**
baz=268
F28M Old Crow 75.07 23 IAmb IAmb 18 28 21.7
comp=Z,110nm,0.9s
F28M Old Crow 75.07 23 P **P** **18 28 01.1 +0.9**
baz=265,SNR=105
F28M S **S** **18 37 40.3 +2.9**
baz=265
PPT Papeete 75.22 112 P **P** **18 28 02.3 +0.4**
comp=Z,42nm,0.7s,baz=273,slow=10,SNR=4.4
PPT LR LR 18 57 57.3
comp=Z,3µm,19.0s,baz=272,slow=33
comp=Z,42nm,0.7s
PPT2 Papeete2 75.23 112 *e*P **P** **18 28 04.3 +2.2**
comp=Z,220nm,1.5s
PPT2 *e*PP **PP** **18 30 50.4 -0.4**
comp=Z,350nm,23.0s
PPT2 *e*S **S** **18 37 43.6 +2.8**
comp=Z,7µm,27.8s
PPT2 *e*SS **SS** **18 42 31.8 +1.0**
comp=Z,2µm,26.0s
PPT2 *e*SS SS 18 42 34.6 +3.8
comp=Z,1µm,24.0s
PPT2 *e*LQ LQ 18 47 38.5
comp=Z,18µm,29.2s
PPT2 *e*LR LR 18 50 55.0
comp=Z,53µm,31.0s
PPT2 *e*LR LR 18 51 05.1
comp=Z,28µm,30.2s
YUK4 Talbot Arm 75.23 30 P **P** **18 28 02.9 +1.4**
baz=268,SNR=20
O29M Mount Kennedy 75.23 31 IAmb IAmb 18 28 39.0
comp=Z,138nm,1.0s
O29M IAMs_20 IAMs_20 18 57 27.7
comp=Z,14µm,21.0s
O29M Mount Kennedy 75.23 31 P **P** **18 28 02.2 +0.8**
baz=268,SNR=8.0
O29M S **S** **18 37 41.9 +2.3**
baz=268
PPTF Pamatai, Papee 75.24 112 P **P** **18 28 03.0 +0.9**
PAE Paea 75.25 112 *e*P **P** **18 28 04.2 +2.1**
comp=Z,224nm,1.2s
PAE *e*LR LR 18 50 59.9
comp=Z,29µm,29.5s
E28M Babbage River 75.28 22 IAmb IAmb 18 28 18.0
comp=Z,126nm,1.1s
E28M Babbage River 75.28 22 P **P** **18 28 02.6 +1.2**
baz=265,SNR=92
E28M S **S** **18 37 40.8 +1.2**
baz=265
YUK6 Outpost Mounta 75.36 30 P **P** **18 28 03.4 +1.1**
baz=268,SNR=12
YUK6 S **S** **18 37 42.6 +1.4**
baz=268
M29M Somme Creek 75.36 28 P **P** **18 28 03.2 +1.1**
baz=268,SNR=20
M29M S **S** **18 37 42.6 +1.7**
baz=268
TIAR Tiarei 75.43 112 *e*P **P** **18 28 05.1 +2.0**
comp=Z,348nm,0.9s
TIAR *e*LR LR 18 51 04.0
comp=Z,75µm,30.2s
L29M L29M 75.53 28 P **P** **18 28 04.3 +1.3**
baz=268,SNR=30
L29M S **S** **18 37 44.5 +1.8**
baz=268
J29N Klondike Camp 75.55 26 IAmb IAmb 18 28 24.7
comp=Z,81nm,0.8s
J29N IAMs_20 IAMs_20 19 00 43.7
comp=Z,12µm,20.0s
J29N Klondike Camp 75.55 26 P **P** **18 28 04.1 +1.0**
baz=268
J29N S **S** **18 37 44.6 +1.8**
baz=268
H29M Whitestone 75.57 24 IAMs_20 IAMs_20 18 56 48.0
comp=Z,9µm,22.0s
H29M Whitestone 75.57 24 P **P** **18 28 03.9 +0.9**
baz=267,SNR=46
H29M S **S** **18 37 44.1 +1.2**
baz=267
TVO Taravao 75.58 112 *e*P **P** **18 28 06.3 +2.2**
comp=Z,254nm,1.3s
TVO *e*LR LR 18 51 10.0
comp=Z,19µm,28.0s
ARTI Arti 75.59 325 LR LR 19 03 07.4
comp=Z,23µm,19.7s,baz=90,slow=37
ARTI Arti 75.59 325 P **P** **18 28 02.6 -0.8**
ARTI Arti 75.59 325 *i*P **P** **18 28 03.1 -0.3**
ARTI pmax pmax
comp=Z,156nm,1.4s
ARTI MLR MLR
comp=Z,21µm,18.0s
ARTI Arti 75.59 325 ⇓P **P** **18 28 02.8 -0.6**
D28M Stokes Point 75.62 21 P **P** **18 28 04.4 +1.1**
baz=266
D28M S **S** **18 37 44.3 +1.1**
baz=266
P29M Windy Craggy 75.64 31 IAmb IAmb 18 28 42.6
comp=Z,148nm,1.0s
P29M IAMs_20 IAMs_20 18 57 20.6
comp=Z,8µm,22.0s
P29M Windy Craggy 75.64 31 P **P** **18 28 04.7 +1.1**
baz=269,SNR=9.3
P29M S **S** **18 37 45.8 +1.9**
baz=269
G29M Pine Creek 75.74 24 IAMs_20 IAMs_20 18 57 16.8
comp=Z,8µm,21.0s
G29M Pine Creek 75.74 24 P **P** **18 28 05.2 +1.1**
baz=267,SNR=62
G29M S **S** **18 37 46.9 +2.2**
baz=267
HYT Haines Junctio 75.77 30 P **P** **18 28 05.7 +1.1**
baz=269,SNR=32
HYT S **S** **18 37 46.2 +0.7**
baz=269
K29M Barlow Dome 75.83 27 IAmb IAmb 18 28 17.8
comp=Z,81nm,0.8s
K29M IAMs_20 IAMs_20 18 59 37.3
comp=Z,11µm,22.0s
K29M Barlow Dome 75.83 27 P **P** **18 28 05.8 +1.0**
baz=268,SNR=47
K29M S **S** **18 37 46.2 +0.1**
baz=268
E29M Blow River 75.86 22 IAmb IAmb 18 28 31.3
comp=Z,128nm,1.3s
E29M Blow River 75.86 22 P **P** **18 28 05.5 +0.8**
baz=267,SNR=20
E29M S **S** **18 37 46.7 +0.6**
baz=267
AKTO Aktyubinsk 75.91 319 LR LR 19 03 21.8
comp=Z,7µm,19.5s,baz=84,slow=37
AKTO Aktyubinsk 75.91 319 P **P** **18 28 03.2 -2.2**
N30M Aishikik Lake 75.98 29 P **P** **18 28 06.3 +0.7**
baz=269,SNR=12
N30M S **S** **18 37 50.2 +2.5**
baz=269
PMOR Pomariorio Ree 76.00 109 *e*P **P** **18 28 07.7 +1.3**
comp=Z,172nm,1.1s
PMOR *e*LR LR 18 51 32.5
comp=Z,18µm,25.9s
P30M Million Dollar 76.03 31 P **P** **18 28 06.9 +0.9**
baz=270
P30M S **S** **18 37 49.6 +1.3**
baz=270
M30M Minto, Yukon 76.13 28 IAMs_20 IAMs_20 18 59 37.4
comp=Z,12µm,20.0s
M30M Minto, Yukon 76.13 28 P **P** **18 28 07.2 +0.8**
baz=269,SNR=19
M30M S **S** **18 37 50.1 +0.8**
baz=269
EPYK Eagle Plains 76.24 24 P **P** **18 28 07.5 +0.5**
baz=269,SNR=33
EPYK S **S** **18 37 51.0 +0.7**
baz=269
VAH Vaihoa 76.32 109 *e*LR LR 18 51 40.8
comp=Z,22µm,26.3s
PLBC Pleasant Camp 76.34 31 P **P** **18 28 08.0 +0.5**
baz=271
PLBC S **S** **18 37 52.3 +0.7**
baz=271
I30M Mount Dempster 76.36 26 IAmb IAmb 18 28 29.4
comp=Z,102nm,1.2s
I30M IAMs_20 IAMs_20 19 00 52.2
comp=Z,9µm,20.0s
I30M Mount Dempster 76.36 26 P **P** **18 28 08.2 +0.4**
baz=269,SNR=49
I30M S **S** **18 37 52.6 +0.8**
baz=269
J30M Hart River 76.36 26 IAMs_20 IAMs_20 19 01 49.2
comp=Z,11µm,20.0s
J30M Hart River 76.36 26 P **P** **18 28 08.5 +0.7**
baz=269,SNR=36
J30M S **S** **18 37 53.9 +2.0**
baz=269
S31K Pelican 76.43 33 IAmb IAmb 18 28 49.8
comp=Z,114nm,1.2s
S31K Pelican 76.43 33 P **P** **18 28 08.8 +0.7**
baz=271,SNR=6.6
S31K S **S** **18 37 54.3 +1.9**
baz=271
G30M tAoh Zraii Nji 76.45 24 IAmb IAmb 18 28 24.6
comp=Z,185nm,1.1s
G30M tAoh Zraii Nji 76.45 24 P **P** **18 28 08.4 +0.3**
baz=269,SNR=76
G30M S **S** **18 37 53.2 +0.5**
baz=269
O30N Mendenhall 76.47 30 IAMs_20 IAMs_20 19 01 01.2
comp=Z,10µm,20.0s
O30N Mendenhall 76.47 30 P **P** **18 28 08.9 +0.5**
baz=270
O30N S **S** **18 37 55.2 +2.1**
baz=270
N31M Braeburn, Yuko 76.61 29 IAmb IAmb 18 28 45.8
comp=Z,107nm,0.9s
N31M Braeburn, Yuko 76.61 29 P **P** **18 28 09.9 +0.7**
baz=271,SNR=9.4
N31M S **S** **18 37 56.6 +2.1**
baz=271
F30M Barrier River 76.63 23 IAmb IAmb 18 28 37.3
comp=Z,90nm,0.8s
F30M Barrier River 76.63 23 P **P** **18 28 09.8 +0.7**
baz=269,SNR=42
F30M S **S** **18 37 55.4 +0.9**
baz=269
R31K City Hall, Gus 76.68 33 P **P** **18 28 10.0 +0.5**
baz=271
SKAG Skagway 76.87 31 P **P** **18 28 11.6 +1.0**
SKAG Skagway 76.87 31 IAmb IAmb 18 28 55.0
comp=Z,163nm,1.6s
SKAG Skagway 76.87 31 P **P** **18 28 12.1 +1.6**
baz=271,SNR=7.8
SKAG S **S** **18 37 57.1 -0.1**
baz=271
SIT Sitka 76.94 34 P **P** **18 28 12.3 +1.3**
SIT Sitka 76.94 34 P **P** **18 28 11.8 +0.8**
baz=272
SIT S **S** **18 37 59.4 +1.3**
baz=272
WHY Whitehorse 77.06 30 P **P** **18 28 12.8 +0.9**
baz=272,SNR=24
WHY S **S** **18 38 00.4 +0.7**
baz=272
TBI Tubuai 77.16 117 *e*P P 18 28 07.5 -5.3
comp=Z,2µm,25.8s
TBI *e*PP **PP** **18 31 07.7 +0.8**
comp=Z,2µm,23.5s
TBI *e*S **S** **18 38 05.6 +4.0**
comp=Z,21µm,35.2s
TBI *e*SS **SS** **18 42 55.0 -4.7**
comp=Z,11µm,28.8s
TBI *e*LQ LQ 18 48 40.4
comp=Z,37µm,31.8s
TBI *e*LR LR 18 51 50.5
comp=Z,29µm,31.0s
TBI *e*LR LR 18 52 02.9
comp=Z,155µm,32.0s
H31M Peel River 77.20 25 IAMs_20 IAMs_20 19 03 02.4
comp=Z,8µm,20.0s
H31M Peel River 77.20 25 P **P** **18 28 13.0 +0.6**
baz=271,SNR=42
H31M S **S** **18 38 02.4 +1.6**
baz=271
JLN Jalan Bani Buh 77.21 290 P **P** **18 28 13.3 +0.1**
SNR=5.7
JLN S **S** **18 37 59.3 -3.1**
G31M Satah River 77.22 24 IAmb IAmb 18 28 28.1
comp=Z,163nm,1.1s
G31M IAMs_20 IAMs_20 19 02 50.7
comp=Z,8µm,20.0s
G31M Satah River 77.22 24 P **P** **18 28 12.7 +0.3**
baz=271,SNR=45
G31M S **S** **18 38 01.2 +0.4**
baz=271
M31M Drury Creek, Y 77.26 29 IAmb IAmb 18 28 48.4
comp=Z,72nm,0.8s
M31M Drury Creek, Y 77.26 29 P **P** **18 28 13.5 +0.8**
baz=272,SNR=40
M31M S **S** **18 38 00.2 -1.3**
baz=272
R32K Eaglecrest 77.33 33 P **P** **18 28 13.9 +0.7**
baz=272,SNR=16
R32K S **S** **18 38 03.2 +0.8**
baz=272
S32K Killisnoo 77.33 33 P **P** **18 28 14.2 +1.1**
baz=273,SNR=19
S32K S **S** **18 38 02.2 -0.1**
baz=273
F31M Tsiigehtchic 77.42 23 IAmb IAmb 18 28 30.6
comp=Z,127nm,1.4s
F31M IAMs_20 IAMs_20 18 58 32.1
comp=Z,8µm,22.0s
F31M Tsiigehtchic 77.42 23 P **P** **18 28 13.4 -0.1**
baz=271
F31M S **S** **18 38 03.3 +0.3**
baz=271
INK Inuvik 77.48 22 LR LR 19 04 15.7
comp=Z,2µm,18.9s,baz=260,slow=37
INK Inuvik 77.48 22 IAmb IAmb 18 28 41.1
comp=Z,138nm,1.4s
INK Inuvik 77.48 22 ⇑P **P** **18 28 13.5 -0.4**
INK Inuvik 77.48 22 P **P** **18 28 14.1 +0.2**
baz=271,SNR=20
INK S **S** **18 38 02.7 -1.0**
baz=271
WBK Wadi Bani Khal 77.55 291 P **P** **18 28 16.1 +0.9**
P32M Atlin 77.68 31 P **P** **18 28 16.1 +0.9**
baz=273,SNR=13
P32M S **S** **18 38 08.0 +1.6**
baz=273
WSAR Wadi Sarin 77.78 291 LR LR 19 03 23.6
comp=Z,15nm,21.5s,baz=103,slow=36
WSAR Wadi Sarin 77.78 291 P **P** **18 28 15.6 -0.8**
SNR=5.8
N32M Quiet Lake 77.92 30 IAmb IAmb 18 28 34.4
comp=Z,114nm,0.8s
N32M Quiet Lake 77.92 30 P **P** **18 28 17.4 +0.9**
baz=273,SNR=14
N32M S **S** **18 38 08.6 -0.2**
baz=273
P33M Teslin, Yukon 78.10 31 IAmb IAmb 18 28 57.0
comp=Z,128nm,1.5s
P33M Teslin, Yukon 78.10 31 P **P** **18 28 18.4 +0.8**
baz=273,SNR=12
P33M S **S** **18 38 11.5 +0.6**
baz=273
BIDO Bidbid 78.20 292 P **P** **18 28 19.1 +0.3**
SNR=16
BIDO S **S** **18 38 08.9 -4.1**
U33K Whale Pass 78.20 35 IAmb IAmb 18 29 04.1
comp=Z,211nm,1.7s
U33K Whale Pass 78.20 35 P **P** **18 28 19.5 +1.4**
baz=274,SNR=9.1
U33K S **S** **18 38 14.3 +2.5**
baz=274
CRAG Craig 78.25 35 P **P** **18 28 19.7 +1.4**
CRAG Craig 78.25 35 IAmb IAmb 18 29 06.0
comp=Z,151nm,1.6s
CRAG Craig 78.25 35 P **P** **18 28 19.3 +1.0**
baz=274,SNR=5.6
CRAG S **S** **18 38 13.0 +0.6**
baz=274
T33K Petersburg 78.25 34 P **P** **18 28 19.3 +1.0**
baz=274
SMDO Samad 78.33 291 P **P** **18 28 20.3 +0.6**
SNR=5.5
SMDO S **S** **18 38 13.2 -1.6**
JMDO Jabal Madar 78.38 291 P **P** **18 28 20.2 +0.4**
SNR=5.7
JMDO P **P** **18 28 20.2 +0.4**
SNR=5.7
Q32M Nakina River 78.46 32 IAmb IAmb 18 29 24.4
comp=Z,160nm,1.6s
Q32M Nakina River 78.46 32 P **P** **18 28 20.6 +0.9**
baz=274,SNR=12
Q32M S **S** **18 38 15.4 +0.4**
baz=274
WRAK Wrangell Islan 78.61 34 P **P** **18 28 21.2 +0.8**
baz=275
WRAK S **S** **18 38 18.8 +2.5**
baz=275

MMPY **Sheldon Lake,** 78.69 28 IAmb IAmb 18 28 57.3
comp=Z,207nm,1.6s
MMPY **Sheldon Lake,** 78.69 28 P **P** **18 28 22.1 +1.4**
baz=274,SNR=25
MMPY S **S** **18 38 18.5 +1.5**
baz=274
MHTO **MHTO** 78.71 289 P **P** **18 28 21.5 -0.1**
SNR=10
HOQ **Hoqain** 78.93 292 P **P** **18 28 22.4 -0.4**
SNR=17
HOQ S **S** **18 38 18.1 -2.8**
R33M **Jennings River** 79.10 31 P **P** **18 28 24.2 +1.1**
baz=275,SNR=32
R33M S **S** **18 38 21.4 -0.3**
baz=275
V35K **Ketchikan** 79.12 36 P **P** **18 28 23.6 +0.5**
baz=275
V35K S **S** **18 38 22.2 +0.5**
baz=275
S34M **Telegraph Cree** 79.14 33 P **P** **18 28 24.4 +1.2**
baz=275,SNR=13
S34M S **S** **18 38 22.9 +1.0**
baz=275
BSY **Bisya** 79.15 291 P **P** **18 28 24.4 +0.4**
SNR=8.6
BANOM **Banah** 79.50 294 S **S** **18 38 24.8 -2.2**
SOHO **SOHO** 79.55 293 *i* P **P** **18 28 25.7 -0.5**
SNR=13
SOHO **SOHO** 79.55 293 P **P** **18 28 26.0 -0.1**
SOHO S **S** **18 38 22.7 -4.7**
MDH **Madha** 79.59 294 P **P** **18 28 26.2 -0.1**
MDH P **P** **18 28 26.2 -0.1**
MDH S **S** **18 38 23.5 -4.4**
MDH S **S** **18 38 23.5 -4.4**
SHME **Shamm** 79.62 295 *i* P **P** **18 28 27.2 +0.7**
SNR=5.4
SHME **Shamm** 79.62 295 P **P** **18 28 25.4 -1.1**
SHME P **P** **18 28 25.4 -1.1**
SHME S **S** **18 38 24.0 -4.2**
SHME S **S** **18 38 24.0 -4.2**
DLBC **Dease Lake** 79.67 32 LR LR 18 59 50.5
comp=Z,6μm,21.9s,baz=273,slow=33
DLBC **Dease Lake** 79.67 32 P **P** **18 28 27.2 +0.9**
baz=276,SNR=23
DLBC S **S** **18 38 27.7 0.0**
baz=276
ARQ **Araqi** 79.68 292 P **P** **18 28 26.4 -0.5**
SNR=20
ARQ P **P** **18 28 26.4 -0.5**
SNR=20
MASF **Masafi** 79.71 294 P **P** **18 28 27.1 0.0**
SNR=6.6
MASF P **P** **18 28 27.1 0.0**
SNR=6.6
MASF S **S** **18 38 24.7 -4.5**
MASF S **S** **18 38 24.7 -4.5**
MSFE **Esma-Masafi** 79.71 294 *i* P **P** **18 28 27.7 +0.6**
SNR=8.0
T35M **Bob Quinn** 79.71 34 P **P** **18 28 27.2 +0.7**
baz=276,SNR=14
T35M S **S** **18 38 29.8 +1.7**
baz=276
UOSS **Minazif** 79.73 293 P **P** **18 28 27.5 +0.4**
UOSS **Minazif** 79.73 293 P **P** **18 28 26.4 -0.7**
UOSS **Minazif** 79.73 293 P **P** **18 28 27.0 -0.2**
UOSS **Minazif** 79.73 293 ⇓P **P** **18 28 27.6 +0.4**
UOSS **Minazif** 79.73 293 P **P** **18 28 27.5 +0.4**
HATD **Hatta, Dubai** 79.81 293 *i* P **P** **18 28 28.2 +0.6**
SNR=6.2
ASHO **Ashiyiah** 79.90 293 P **P** **18 28 28.5 +0.4**
ASHO **Ashiyiah** 79.90 293 P **P** **18 28 28.0 -0.1**
ASHO S **S** **18 38 27.5 -3.7**
U35K **Hyder** 79.95 35 IAMs_20 IAMs_20 19 03 05.0
comp=Z,7μm,19.0s
U35K **Hyder** 79.95 35 P **P** **18 28 28.1 +0.5**
baz=277
U35K S **S** **18 38 32.0 +1.5**
baz=277
A36M **Sachs Harbour** 80.02 18 P **P** **18 28 28.1 +0.4**
baz=278
A36M S **S** **18 38 30.7 0.0**
baz=278
WTLY **Watson Lake, Y** 80.11 31 IAmb IAmb 18 28 41.5
comp=Z,134nm,1.0s
WTLY **Watson Lake, Y** 80.11 31 P **P** **18 28 29.2 +0.6**
baz=277,SNR=9.2
WTLY S **S** **18 38 33.8 +1.6**
baz=277
TGTN **Hyland Airport** 80.20 29 P **P** **18 28 30.1 +1.1**
baz=277
TGTN S **S** **18 38 34.6 +1.5**
baz=277
ALNE **Al Ain** 80.27 293 *i* P **P** **18 28 31.0 +0.9**
SNR=9.2
ALNE **Al Ain** 80.27 293 P **P** **18 28 30.2 +0.1**
SNR=24
ALNE P **P** **18 28 30.2 +0.1**
SNR=24
ALNE S **S** **18 38 30.7 -4.4**
ALNE S **S** **18 38 30.7 -4.4**
KIRV **Kirov** 80.29 328 LR LR 19 06 47.9
comp=Z,19μm,18.7s,baz=81,slow=38
KIRV **Kirov** 80.29 328 *i* P **P** **18 28 29.1 -0.3**
FAQ **Al Faqa, Dubai** 80.31 293 *i* P **P** **18 28 30.6 +0.4**
SNR=7.6
FAQ **Al Faqa, Dubai** 80.31 293 P **P** **18 28 30.7 +0.4**
SNR=6.8
FAQ S **S** **18 38 32.0 -3.4**
ASUD **Al Ashush, Dub** 80.56 293 *i* P **P** **18 28 32.0 +0.4**
SNR=8.2
ASUD **Al Ashush, Dub** 80.56 293 P **P** **18 28 32.4 +0.8**
SNR=11
ASUD P **P** **18 28 32.4 +0.8**
SNR=11
C36M **Paulatuk** 80.81 21 P **P** **18 28 32.0 0.0**
baz=280,SNR=10.0
C36M S **S** **18 38 37.7 -1.3**
baz=280
AJN **Ajban** 80.88 293 *i* P **P** **18 28 33.5 +0.2**
SNR=8.5
AJN **Ajban** 80.88 293 P **P** **18 28 34.1 +0.8**
SNR=18
AJN P **P** **18 28 34.1 +0.8**
SNR=18
AJN S **S** **18 38 36.9 -4.6**
AJN S **S** **18 38 36.9 -4.6**
UMZA **Um Al Zommool** 81.02 291 P **P** **18 28 37.1 +3.0**
CASY **Casey** 81.14 192 P **P** **18 28 32.5 -1.2**
CASY IAmb IAmb 18 28 45.6
comp=Z,213nm,1.5s
CASY **Casey** 81.14 192 IAMs_20 IAMs_20 19 02 14.1
comp=Z,7μm,19.0s
CASY **Casey** 81.14 192 ⇓P **P** **18 28 33.8 +0.1**
LIRD **Liard River Hi** 81.56 31 P **P** **18 28 37.2 +1.0**
baz=279,SNR=6.8
LIRD S **S** **18 38 46.2 -1.1**
baz=279
BBB **Bella Bella** 81.57 38 LR LR 18 58 23.6
comp=Z,10μm,21.9s,baz=277,slow=31
TAOE **Nuku Hiva Isla** 81.74 101 *eP* **P** **18 28 34.6 -3.6**
comp=Z,556nm,23.5s
TAOE *eS* **S** **18 38 47.1 -3.8**
comp=Z,2μm,29.0s
TAOE *eSS* **SS** **18 44 08.5 -0.6**
comp=Z,2μm,24.9s
TAOE *eS* **SKKPbc** **18 50 44.1 -2.4**
comp=Z,12μm,25.7s
TAOE *eLR* LR 18 53 59.5
comp=Z,11μm,29.9s
TAOE *eT* T 19 58 33.2
comp=Z,32nm,0.2s
MZWR **Madinat Zayed** 82.01 293 P **P** **18 28 39.7 +0.4**
MZWR S **S** **18 38 48.2 -5.0**
WRGLY **Wrigley** 82.15 27 IAmb IAmb 18 29 00.4
comp=Z,82nm,0.9s
WRGLY **Wrigley** 82.15 27 P **P** **18 28 39.7 +0.5**
baz=281
WRGLY S **S** **18 38 55.5 +2.4**
baz=281
BELG **Belogornoye** 82.19 322 LR LR 19 05 15.1
comp=Z,7μm,20.5s,baz=74,slow=36
BELG **Belogornoye** 82.19 322 *i* P **P** **18 28 39.3 -0.4**
BELG pmax pmax
comp=Z,68nm,1.5s
BELG MLR MLR
comp=Z,1μm,20.0s

KOTAN **Kotaneelee Air** 82.46 30 P **P** **18 28 41.5 +0.5**
baz=281,SNR=5.4
KOTAN S **S** **18 38 57.2 +0.7**
baz=281
MZR **Muzera** 82.50 292 *i* P **P** **18 28 42.0 +0.1**
SNR=6.5
MZR **Muzera** 82.50 292 P **P** **18 28 42.9 +1.0**
SNR=17
MZR P **P** **18 28 42.9 +1.0**
SNR=17
JRN **Qarnain Island** 82.73 294 P **P** **18 28 43.1 +0.1**
JRN P **P** **18 28 43.1 +0.1**
SLWR **Sila** 83.93 293 P **P** **18 28 48.7 -0.5**
SLWR S **SKSac** **18 39 06.9 -5.1**
MAK **Makhachkala** 83.93 312 *eP* **P** **18 28 46.2 -2.7**
MAK *e* 18 32 04.3
MAK *ePPP* PPP 18 33 51.8
MAK *eS* **SKSac** **18 39 05.7 -5.6**
MAK *eSS* **SS** **18 44 40.5 +0.8**
MAK pmax pmax
comp=Z,467nm,1.8s
MAK MLR MLR
comp=Z,9μm,17.0s
AKT **Akhty** 84.04 311 *eP* **P** **18 28 49.7 0.0**
AKT *e* 18 32 04.5
AKT *ePPP* PPP 18 33 57.7
AKT *eS* **SKSac** **18 39 11.0 -1.4**
AKT *eSS* **SS** **18 44 45.2 +3.5**
AKT pmax pmax
comp=Z,323nm,2.2s
AKT MLR MLR
comp=Z,11μm,20.0s
HOPEN **Hopen** 84.07 348 *eP* **P** **18 28 49.3 +0.4**
HOPEN IVmB_BB 18 28 56.7
comp=Z,1μm,1.7s
HOPEN *eS* **SKSac** **18 39 12.8 +1.8**
HOPEN *eSS* **SS** **18 44 42.3 +2.2**
SAKB **Bahrain** 84.61 295 P **P** **18 28 52.7 0.0**
SAKB S **SKSac** **18 39 11.7 -4.7**
CLRS **Cowichan Lake** 84.67 41 IAmb IAmb 18 29 52.5
comp=Z,193nm,1.9s
LVZ **Lovozero** 84.72 339 P **P** **18 28 51.6 -0.8**
LVZ IAmb IAmb 18 29 03.6
comp=Z,70nm,0.9s
LVZ **Lovozero** 84.72 339 *i* P **P** **18 28 52.0 -0.5**
LVZ pmax pmax
comp=Z,53nm,0.8s
LVZ **Lovozero** 84.72 339 P **P** **18 28 51.3 -1.2**
comp=Z,3μmcomp=Z,103nm,0.8s
KLMR **Klimovskoe** 84.77 331 *c i* P **P** **18 28 52.8 0.0**
KLMR S **SKSac** **18 39 16.9 +0.9**
KLMR pmax pmax
comp=Z,134nm,1.5s
KLMR MLR MLR
comp=Z,15μm,18.0s
SPA0 **Spitsbergen Ar** 84.82 350 *eP* **P** **18 28 52.8 0.0**
SPA0 *eSKSac* **SKSac** **18 39 14.1 -1.9**
SPITS **Spitsbergen Ar** 84.82 350 P **P** **18 28 52.5 -0.2**
comp=Z,79nm,1.2s,baz=90,slow=8.3,SNR=12
comp=Z,79nm,1.2s
SPITS **Spitsbergen Ar** 84.82 350 P **P** **18 28 52.6 -0.2**
SPITS pmax pmax
comp=Z,172nm,1.1s
KBS **Kingsbay** 85.07 351 P **P** **18 28 53.8 -0.1**
KBS IAmb IAmb 18 29 06.4
comp=Z,96nm,1.1s
KBS **Kingsbay** 85.07 351 P **P** **18 28 53.8 -0.1**
KBS pmax pmax
comp=Z,96nm,1.1s
KBS MLR MLR
comp=Z,4μm,20.0s
KBS **Kingsbay** 85.07 351 *eP* **P** **18 28 54.3 +0.3**
KBS IVmB_BB 18 29 05.5
comp=Z,1μm,2.6s
KBS *eS* **SKSac** **18 39 21.6 +4.2**
KBS IVMs_BB IVMs_BB 19 00 59.5
comp=Z,2μm,23.9s
KBS **Kingsbay** 85.07 351 ⇑P **P** **18 28 54.2 +0.3**
KBS **Kingsbay** 85.07 351 *i* P **P** **18 28 53.6 -0.4**
NLWA **Neilton Lookou** 85.15 43 IAmb IAmb 18 29 20.4
comp=Z,100nm,1.3s
NLWA IAMs_20 IAMs_20 18 59 17.1
comp=Z,7μm,20.0s
NLWA **Neilton Lookou** 85.15 43 ⇓P **P** **18 28 56.1 +1.1**
WISH **Wishkah** 85.28 43 IAmb IAmb 18 29 30.9
comp=Z,125nm,1.1s
APA **Apatity** 85.28 338 ⇓*eP* **P** **18 28 53.6 -1.6**
APA *e* 18 32 11.4
APA *eS* **SKSac** **18 39 20.3 +1.3**
APA pmax pmax
comp=Z,69nm,1.1s
APA MLR MLR
comp=Z,5μm,31.0s
HSPB **Hornsund (broa** 85.66 349 *eP* **P** **18 28 56.5 -0.4**
F03A **Seaside** 85.68 44 IAmb IAmb 18 29 23.4
comp=Z,138nm,1.1s
VADS **Vadso** 85.69 341 *eP* **P** **18 28 56.8 -0.4**
VADS *eSKSac* **SKSac** **18 39 22.0 +0.5**
GNW **Green Mountain** 85.80 42 IAmb IAmb 18 29 15.0
comp=Z,74nm,1.1s
NOR **Nord** 85.83 357 *i* P **P** **18 28 57.1 -0.6**
NOR IAmb IAmb 18 29 18.1
comp=Z,71nm,1.2s
A05A **Maple Falls** 85.95 41 IAmb IAmb 18 29 37.3
comp=Z,100nm,1.4s
VRH **Novokhopyorsk** 86.02 321 *eP* **P** **18 28 56.8 -2.4**
VRH *eS* **SKSac** **18 39 24.8 +0.5**
VRH pmax pmax
comp=Z,20nm,0.8s
VRH smax smax
comp=N,2μm,5.7s
VRH MLR MLR
comp=Z,7μm,18.0s
J01E **Myrtle Point** 86.03 47 IAmb IAmb 18 29 17.1
comp=Z,71nm,1.0s
G03D **McMinnville, O** 86.04 45 IAmb IAmb 18 29 42.7
comp=Z,97nm,1.3s
YKAW3 **Yellowknife Wh** 86.23 27 IAmb IAmb 18 29 20.2
comp=Z,120nm,1.4s
YKA **Yellowknife Ar** 86.26 27 P **P** **18 28 59.9 -0.3**
comp=Z,6.5nm,0.5s,baz=294,slow=4.9,SNR=25
YKA LR LR 19 07 17.7
comp=Z,10μm,20.2s,baz=286,slow=35
comp=Z,6.5nm,0.5s
YKA **Yellowknife Ar** 86.26 27 P **P** **18 28 59.4 -0.8**
YKA **Yellowknife Ar** 86.26 27 *i* P **P** **18 29 00.3 +0.2**
YKA pmax pmax
comp=Z,7.0nm,0.5s
YKAW1 **Yellowknife Wh** 86.31 27 IAmb IAmb 18 29 20.6
comp=Z,156nm,1.4s
I03D **Drain, OR** 86.32 46 IAmb IAmb 18 30 09.6
comp=Z,83nm,1.1s
BJO1 **Bjornoya** 86.39 347 *eP* **P** **18 29 01.6 +1.0**
BJO1 *e* 18 39 36.1
D05A **Enumclaw** 86.44 43 IAmb IAmb 18 29 30.4
comp=Z,94nm,1.0s
BUCK **Buck Mountain** 86.46 46 IAmb IAmb 18 29 34.7
comp=Z,97nm,0.9s
JCC **Jacoby Creek,** 86.47 49 IAMs_20 IAMs_20 18 59 23.6
comp=Z,9μm,21.0s
KMPM **Mount Pierce** 86.49 50 IAmb IAmb 18 30 16.1
comp=Z,86nm,1.3s
L02F **Cave Junction** 86.52 48 IAmb IAmb 18 29 59.4
comp=Z,107nm,1.7s
GNI **Garni** 86.53 310 LR LR 19 12 28.6
comp=Z,6μm,18.8s,baz=74,slow=39
GNI **Garni** 86.53 310 P **P** **18 29 02.1 -0.1**
GNI **Garni** 86.53 310 P **P** **18 29 00.8 -1.4**
GNI **Garni** 86.53 310 IAMs_20 IAMs_20 19 12 17.9
comp=Z,6μm,20.0s
GNI **Garni** 86.53 310 *i* P **P** **18 29 01.6 -0.6**
GNI pmax pmax
comp=Z,164nm,1.5s
GNI **Garni** 86.53 310 P **P** **18 29 02.8 +0.5**
GNI P **P** **18 29 02.8 +0.5**
KEV **Kevo** 86.58 341 P **P** **18 29 00.7 -0.9**
KEV IAmb IAmb 18 29 12.8
comp=Z,59nm,0.9s
KEV IAMs_20 IAMs_20 19 10 25.7
comp=Z,6μm,19.0s
KEV **Kevo** 86.58 341 P **P** **18 29 00.7 -0.9**
KEV **Kevo** 86.58 341 ⇑P **P** **18 29 01.1 -0.5**
KEV **Kevo** 86.58 341 P **P** **18 29 00.3 -1.3**
KEV S **S** **18 39 35.5 -1.7**
NCK **Nalchik** 86.61 314 *i* P **P** **18 29 02.6 +0.2**

NCK pmax pmax
comp=Z,34nm,1.0s
NCK MLR MLR
comp=Z,7μm,20.0s
GOF **Gofitskoye** 86.64 315 *ceP* P 18 29 11.7 +9.3
H04A **Detroit Lake** 86.91 45 IAmb IAmb 18 30 10.5
comp=Z,108nm,1.2s
I04A **Tendick Farm,** 86.96 46 IAmb IAmb 18 30 12.1
comp=Z,151nm,1.4s
RES **Resolute Bay** 87.05 13 LR LR 19 07 56.1
comp=Z,1μm,21.7s,baz=312,slow=36
KBZ **Khabaz** 87.05 314 LR LR 19 11 35.7
comp=Z,8μm,19.8s,baz=68,slow=38
KBZ **Khabaz** 87.05 314 *i* P **P** **18 29 03.9 -0.5**
KBZ pmax pmax
comp=Z,52nm,1.9s
KBZ MLR MLR
comp=Z,8μm,20.0s
KCPM **Cahto Peak** 87.06 50 IAmb IAmb 18 30 20.5
comp=Z,181nm,1.4s
KCPM IAMs_20 IAMs_20 19 00 57.3
comp=Z,8μm,20.0s
KHBM **Hayfork Bally** 87.10 49 IAmb IAmb 18 29 44.0
comp=Z,137nm,1.8s
HOOD **Mount Hood Mea** 87.12 44 IAmb IAmb 18 29 43.5
comp=Z,114nm,1.2s
KVAR **Kislovodsk Arr** 87.14 314 LR LR 19 12 50.7
comp=Z,3μm,18.2s,baz=280,slow=39
KIV **Kislovodsk** 87.15 314 *i* P **P** **18 29 03.9 -1.1**
SNR=13
KIV **Kislovodsk** 87.15 314 P **P** **18 29 03.0 -2.0**
KIV IAMs_20 IAMs_20 19 14 10.9
comp=Z,7μm,19.0s
KIV **Kislovodsk** 87.15 314 *eP* **P** **18 29 03.8 -1.3**
KIV *e* 18 32 27.9
KIV *e* 18 39 30.0
KIV *eSS* SS 18 45 28.7 +1.6
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,5μm,20.0s
KIV **Kislovodsk** 87.15 314 P **P** **18 29 05.8 +0.7**
KIV P **P** **18 29 05.8 +0.7**
KIV S **SKSac** **18 39 28.1 -3.7**
KIV S **SKSac** **18 39 28.1 -3.7**
KIV **Kislovodsk** 87.15 314 P **P** **18 29 04.3 -0.7**
ARA0 **ARCESS Array S** 87.15 341 *eP* **P** **18 29 04.0 -0.4**
ARA0 *eSKSac* **SKSac** **18 39 30.0 -0.7**
ARCES **ARCESS Array B** 87.15 341 P **P** **18 29 03.7 -0.7**
comp=Z,6.4nm,0.4s,baz=75,slow=7.9,SNR=73
ARCES LR LR 19 13 31.7
comp=Z,4μm,18.4s,baz=66,slow=39
comp=Z,6.4nm,0.4s
ARCES **ARCESS Array B** 87.15 341 P **P** **18 29 03.5 -0.9**
ARCES IAmb IAmb 18 29 29.9
comp=Z,70nm,0.8s
ARCES **ARCESS Array B** 87.15 341 P **P** **18 29 03.5 -0.9**
ARCES pmax pmax
comp=Z,70nm,0.9s
MOS **Moscow** 87.16 326 *eP* **P** **18 29 03.8 -0.9**
MOS *e* 18 32 29.3
MOS *ePPP* PPP 18 34 25.0
MOS *eS* **SKSac** **18 39 27.8 -3.4**
MOS *eSS* **SS** **18 45 30.3 +3.9**
MOS *eSSS* SSS 18 49 02.6
MOS pmax pmax
comp=Z,162nm,1.4s
MOS pmax pmax
comp=Z,300nm,1.7s
MOS smax smax
comp=E,2μm,5.0s
MOS smax smax
comp=N,2μm,5.3s
MOS MLR MLR
comp=Z,11μm,19.0s
HAMF **Hammerfest** 87.17 343 *eP* **P** **18 29 04.7 +0.2**
HAMF IVmB_BB 18 29 17.5
comp=Z,1μm,3.3s
HAMF *eSKSac* **SKSac** **18 39 31.6 +0.9**
HAMF *eSS* **SS** **18 45 30.3 +4.4**
M02C **Callahan** 87.20 48 IAmb IAmb 18 29 51.0
comp=Z,200nm,1.9s
M02C IAMs_20 IAMs_20 18 59 29.0
comp=Z,11μm,22.0s
SHA1 **Shidzhatmaz** 87.22 314 *i* P **P** **18 29 04.7 -0.9**
YBH **Yreka Blue Hor** 87.23 48 LR LR 18 59 40.6
comp=Z,7μm,22.0s,baz=280,slow=30
YBH **Yreka Blue Hor** 87.23 48 IAmb IAmb 18 30 17.3
comp=Z,157nm,1.6s
LTY **Liberty** 87.30 42 IAmb IAmb 18 29 29.9
comp=Z,84nm,1.2s
J04A **Umpqua Nationa** 87.30 46 IAmb IAmb 18 29 22.4
comp=Z,139nm,1.2s
WIFE **Three Sisters-** 87.31 46 IAmb IAmb 18 29 22.6
comp=Z,123nm,1.2s
LPSR **Galich'ya Gora** 87.33 323 *eP* **P** **18 29 03.3 -2.3**
LPSR *eS* **SKSac** **18 39 34.3 +2.0**
LPSR pmax pmax
comp=Z,50nm,1.0s
LPSR smax smax
comp=N,1μm,4.4s
LPSR MLR MLR
comp=Z,13μm,21.0s
N02D **Trinity Center** 87.41 49 IAmb IAmb 18 29 45.7
comp=Z,208nm,1.8s
VORR **Voronezh** 87.42 322 *eP* **P** **18 29 03.9 -2.1**
VORR pmax pmax
comp=Z,20nm,0.9s
VORR MLR MLR
comp=Z,14μm,20.0s
O02D **Mt. Diablo Mer** 87.54 50 IAmb IAmb 18 29 23.4
comp=Z,134nm,1.6s
VORD **Divnogorie** 87.56 322 *eP* **P** **18 29 04.7 -2.0**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORD MLR MLR
comp=Z,5μm,20.0s
VSR **Storozhevoye** 87.57 322 *eP* **P** **18 29 06.6 -0.2**
VSR *eS* **SKSac** **18 39 41.0 +7.1**
VSR pmax pmax
comp=Z,40nm,1.1s
VSR smax smax
comp=N,1μm,5.2s
VSR MLR MLR
comp=Z,9μm,21.0s
HOPS **Hopland Field** 87.60 51 IAMs_20 IAMs_20 19 03 19.7
comp=Z,8μm,20.0s
B08A **Colville Reser** 87.88 41 IAmb IAmb 18 29 24.5
comp=Z,65nm,1.1s
J05D **Fort Rock, OR** 87.91 46 IAmb IAmb 18 29 38.7
comp=Z,90nm,1.2s
OBN **Obninsk** 87.92 326 LR LR 19 10 30.0
comp=Z,16μm,19.7s,baz=68,slow=37
OBN **Obninsk** 87.92 326 P **P** **18 29 06.6 -1.8**
OBN **Obninsk** 87.92 326 *d i* P **P** **18 29 07.1 -1.2**
OBN *i* *SP **pP** **18 29 12.2 -1.1**
OBN *i* 18 29 16.6
OBN *e* 18 32 38.3
OBN *i* S **SKSac** **18 39 33.2 -2.6**
OBN *i* 18 39 47.5
OBN *i* PPS PPS 18 41 13.4
OBN *i* SS **SS** **18 45 43.9 +6.4**
OBN pmax pmax
comp=Z,218nm,1.5s
OBN MLR MLR
comp=Z,18μm,21.0s
MCCM **Marconi Confer** 87.94 52 IAMs_20 IAMs_20 19 02 49.9
comp=Z,7μm,20.0s
EPH **Ephrata** 87.98 42 IAmb IAmb 18 29 24.9
comp=Z,57nm,1.1s
PINE **Pine Mountain** 87.99 46 IAmb IAmb 18 29 42.0
comp=Z,96nm,1.0s
KTK1 **Kautokeino** 88.11 341 *eP* **P** **18 29 08.1 -0.9**
KTK1 *eSKSac* **SKSac** **18 39 34.1 -2.4**
CVS **Carmenet Viney** 88.22 51 IAMs_20 IAMs_20 19 02 58.2
comp=Z,5μm,19.0s
ERBR **Yeremizino-Bor** 88.22 316 *eP* **P** **18 29 09.0 -1.0**
ERBR *e* 18 39 37.5
ERBR pmax pmax
comp=Z,76nm,1.6s
O03E **Paynes Creek** 88.24 49 IAmb IAmb 18 29 30.9
comp=Z,73nm,0.9s
O03E IAMs_20 IAMs_20 19 00 30.6
comp=Z,8μm,22.0s
HAWA **Hanford** 88.28 43 IAMs_20 IAMs_20 19 06 45.9
comp=Z,6μm,19.0s

LABN	**Labinsk**	**88.34**	**315**	*e*P		**P**		**18 29 09.6**	**-1.0**
LABN				*e*				18 39 39.3	
LABN					pmax	pmax			
	comp=Z,14nm,0.5s								
HATC	**Hat Creek Radi**	**88.36**	**49**		IAMs_20	IAMs_20		19 00 37.8	
	comp=Z,9μm,22.0s								
D08A	**Wollman Farm,**	**88.50**	**42**		IAmb	IAmb		18 30 15.6	
	comp=Z,144nm,1.7s								
ORV	**Oroville**	**88.65**	**50**		IAmb	IAmb		18 30 27.3	
	comp=Z,90nm,1.4s								
JETT	**Jettan, Norway**	**88.69**	**342**	*e*P		**P**		**18 29 11.7**	**-0.2**
C09A	**Chrisman Ranch**	**88.72**	**41**		IAmb	IAmb		18 30 14.7	
	comp=Z,106nm,1.5s								
GUZR	**Guzeripl'**	**88.93**	**315**	*i* P		**P**		**18 29 12.0**	**-1.5**
GUZR					pmax	pmax			
	comp=Z,91nm,1.3s								
G08A	**Pilot Rock**	**88.96**	**44**		IAmb	IAmb		18 29 44.4	
	comp=Z,123nm,1.8s								
MHC	**Mount Hamilton**	**89.09**	**52**		IAmb	IAmb		18 30 02.4	
	comp=Z,156nm,1.9s								
MHC					IAMs_20	IAMs_20		19 02 45.3	
	comp=Z,5μm,19.0s								
TRO	**Tromso**	**89.09**	**343**	*e*P		**P**		**18 29 13.6**	**0.0**
TRO				*e*SKSac		**SKSac**		**18 39 41.1**	**-1.1**
TRO					IVMs_BB	IVMs_BB		19 13 32.2	
	comp=Z,3μm,19.5s								
VSLR	**Vesyoloye**	**89.13**	**314**	*i* P		**P**		**18 29 13.8**	**-0.6**
VSLR					pmax	pmax			
	comp=Z,85nm,1.2s								
FORD	**Fort Ord Natur**	**89.14**	**53**		IAMs_20	IAMs_20		19 16 42.8	
	comp=Z,5μm,18.0s								
E09A	**Wood Farm, Sta**	**89.17**	**43**		IAmb	IAmb		18 30 19.1	
	comp=Z,146nm,1.7s								
AFDM	**Forest Hills D**	**89.20**	**50**		IAmb	IAmb		18 29 53.5	
	comp=Z,83nm,1.5s								
NEW	**Newport**	**89.32**	**41**		LR	LR		19 03 17.9	
	comp=Z,12μm,20.5s,baz=288,slow=32								
SOC	**Sochi**	**89.32**	**314**	*e*P		**P**		**18 29 13.2**	**-2.0**
SOC				*e*				18 32 45.0	
SOC				*e*PPP		PPP		18 34 39.6	
SOC				*e*S		**SKSac**		**18 39 42.3**	**-2.4**
SOC				*e*SS		**SS**		**18 46 01.4**	**+2.8**
SOC				*e*SSS		SSS		18 49 34.6	
SOC					pmax	pmax			
	comp=Z,17nm,1.1s								
SOC					MLR	MLR			
	comp=Z,6μm,22.0s								
BEKR	**Beckworth**	**89.42**	**49**		IAmb	IAmb		18 29 45.5	
	comp=Z,70nm,1.1s								
PUL	**Pulkovo**	**89.44**	**332**	*i* P		**P**		**18 29 15.0**	**-0.4**
PUL					pmax	pmax			
	comp=Z,49nm,1.0s								
PUL					MLR	MLR			
	comp=Z,11μm,18.0s								
RAYN	**Ar Rayn**	**89.59**	**294**	*i* P		**P**		**18 29 16.6**	**-0.4**
	SNR=5.3								
RAYN	**Ar Rayn**	**89.59**	**294**	P		**P**		**18 29 15.2**	**-1.8**
RAYN	**Ar Rayn**	**89.59**	**294**	P		**P**		**18 29 15.2**	**-1.8**
RAYN					pmax	pmax			
	comp=Z,114nm,0.6s								
RAYN					MLR	MLR			
	comp=Z,4μm,18.0s								
RAYN	**Ar Rayn**	**89.59**	**294**	P		**P**		**18 29 18.0**	**+1.1**
RAYN				S		**SKSac**		**18 39 42.5**	**-4.6**
KOPT	**Kop Dagi**	**89.72**	**311**	IAmb		IAmb		18 30 16.5	
	comp=Z,104nm,1.1s								
CMB	**Columbia Colle**	**89.88**	**51**		IAMs_20	IAMs_20		19 04 20.1	
	comp=Z,6μm,20.0s								
TULEG	**Thule**	**89.93**	**7**	*i* P		**P**		**18 29 18.6**	**+1.2**
WVOR	**Wild Horse Val**	**89.98**	**47**	IAmb		IAmb		18 30 03.9	
	comp=Z,92nm,1.4s								
WVOR	**Wild Horse Val**	**89.98**	**47**	⇓P		**P**		**18 29 19.0**	**+0.5**
EDM	**Edmonton**	**90.00**	**35**	IAmb		IAmb		18 30 13.9	
	comp=Z,76nm,1.1s								
PNTR	**Pine Nut**	**90.19**	**50**	IAmb		IAmb		18 29 36.6	
	comp=Z,98nm,1.3s								
BMO	**Blue Mountains**	**90.21**	**44**	IAmb		IAmb		18 30 26.7	
	comp=Z,163nm,2.0s								
BMO					IAMs_20	IAMs_20		19 03 25.1	
	comp=Z,7μm,21.0s								
BMO	**Blue Mountains**	**90.21**	**44**	⇓P		**P**		**18 29 19.8**	**+0.3**
VNDA	**Vanda**	**90.25**	**175**	P		**P**		**18 29 18.5**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=317,slow=5.3,SNR=13								
VNDA					PP	**PP**		**18 32 53.0**	**+0.2**
	comp=Z,6.0nm,1.3s,baz=336,slow=3.3,SNR=2.1								
VNDA					LR	LR		19 08 19.3	
	comp=Z,6μm,20.5s,baz=346,slow=34								
	comp=Z,2.8nm,0.8s								
VNDA	**Vanda**	**90.25**	**175**	P		**P**		**18 29 18.4**	**-0.3**
VNDA				IAmb		IAmb		18 29 37.9	
	comp=Z,134nm,2.0s								
LDM	**Libby Dam**	**90.41**	**40**	IAmb		IAmb		18 29 51.0	
	comp=Z,108nm,1.9s								
NEEM	**North Greenlan**	**90.43**	**2**	*i* P		**P**		**18 29 19.1**	**-1.1**
NEEM				IAmb		IAmb		18 29 34.9	
	comp=Z,301nm,2.2s								
WAKR	**Walker**	**90.47**	**51**	IAmb		IAmb		18 30 00.3	
	comp=Z,180nm,1.9s								
DAG	**Danmarks Havn**	**90.49**	**355**	⇓P		**P**		**18 29 18.9**	**-1.2**
DAG	**Danmarks Havn**	**90.49**	**355**	*i* P		**P**		**18 29 18.6**	**-1.5**
ANN	**Anapa**	**90.55**	**316**	*e*P		**P**		**18 29 18.6**	**-2.3**
ANN				*e*				18 32 50.4	
ANN				*e*				18 39 49.1	
ANN				*e*SS		SS		18 46 29.1	+13
ANN					pmax	pmax			
	comp=Z,71nm,1.0s								
ANN					MLR	MLR			
	comp=Z,7μm,20.0s								
FINES	**FINESS Array B**	**90.63**	**334**	P		**P**		**18 29 19.9**	**-1.1**
	comp=Z,18nm,0.5s,baz=64,slow=5.3,SNR=161								
FINES					LR	LR		19 13 16.6	
	comp=Z,10μm,19.9s,baz=64,slow=38								
	comp=Z,18nm,0.5s								
FINES	**FINESS Array B**	**90.63**	**334**	P		**P**		**18 29 19.5**	**-1.5**
SBA	**Scott Base**	**90.98**	**175**	P		**P**		**18 29 22.4**	**+0.3**
SBA	**Scott Base**	**90.98**	**175**	P		**P**		**18 29 22.4**	**+0.3**
SBA					pmax	pmax			
	comp=Z,361nm,2.0s								
STEI	**Steigen**	**91.17**	**342**	*e*P		**P**		**18 29 22.5**	**-0.8**
LHV	**Little Huntoon**	**91.25**	**51**	IAmb		IAmb		18 30 04.0	
	comp=Z,95nm,1.5s								
NVAR	**Mina Array Bea**	**91.35**	**50**	P		**P**		**18 29 24.8**	**-0.3**
	comp=Z,7.1nm,0.8s,baz=262,slow=6.1,SNR=34								
NVAR					LR	LR		19 04 08.9	
	comp=Z,4μm,20.8s,baz=276,slow=31								
	comp=Z,7.1nm,0.8s								
FAUS	**Fauske**	**91.49**	**342**	*e*P		**P**		**18 29 23.5**	**-1.3**
FAUS				*e*SKSac		**SKSac**		**18 39 55.1**	**-1.1**
LOF	**Lofoten**	**91.56**	**343**	*e*P		**P**		**18 29 24.5**	**-0.6**
LOF				*e*SKSac		**SKSac**		**18 39 53.6**	**-3.0**
LOF					IVMs_BB	IVMs_BB		19 10 12.0	
	comp=Z,2μm,15.5s								
ARPR	**Arapgir-MALATY**	**91.58**	**310**		IAMs_20	IAMs_20		19 14 51.6	
	comp=Z,7μm,20.0s								
MFID	**Camas Ranch**	**91.66**	**45**	IAmb		IAmb		18 30 15.4	
	comp=Z,137nm,1.8s								
MFID					IAMs_20	IAMs_20		19 13 37.6	
	comp=Z,6μm,18.0s								
VSU	**Vasula**	**91.67**	**331**	*i* P		**P**		**18 29 25.4**	**-0.4**
VSU					pmax	pmax			
	comp=Z,35nm,1.0s								
TIN	**Tinemaha, Big**	**91.79**	**52**		IAMs_20	IAMs_20		19 11 58.8	
	comp=Z,5μm,19.0s								
MSO	**Missoula**	**91.82**	**41**		IAMs_20	IAMs_20		19 04 45.4	
	comp=Z,9μm,21.0s								
POIN	**Pond Inlet**	**91.83**	**11**	IAmb		IAmb		18 30 02.3	
	comp=Z,60nm,1.4s								
DSP	**Deep Springs**	**91.90**	**51**	IAmb		IAmb		18 30 12.1	
	comp=Z,58nm,1.3s								
ISA	**Isabella, Lake**	**91.99**	**53**		IAMs_20	IAMs_20		19 06 47.3	
	comp=Z,5μm,19.0s								
CWC	**Cottonwood Cre**	**92.08**	**52**		IAMs_20	IAMs_20		19 03 55.5	
	comp=Z,6μm,21.0s								
OSI	**Osito Audit: C**	**92.09**	**54**		IAMs_20	IAMs_20		19 09 49.9	
	comp=Z,6μm,19.0s								
TPO	**Tropico Hills**	**92.41**	**54**	IAmb		IAmb		18 30 52.9	
	comp=Z,83nm,1.3s								
RAUS	**Rausandaksla**	**92.45**	**341**	*e*P		**P**		**18 29 28.0**	**-1.3**
RAUS					IVmB_BB			18 29 39.0	
	comp=Z,691nm,0.9s								
RAUS				*e*SKSac		**SKSac**		**18 40 01.3**	**-0.4**
RAUS					IVMs_BB	IVMs_BB		19 14 14.3	
	comp=Z,3μm,19.2s								
MOR8	**Moi Rana**	**92.49**	**341**	*e*P		**P**		**18 29 27.1**	**-2.4**
MOR8				*e*SKSac		**SKSac**		**18 40 00.6**	**-1.4**
MOR8					IVMs_BB	IVMs_BB		19 12 51.9	
	comp=Z,3μm,22.6s								
VAGH	**Vaagaholmen**	**92.51**	**341**	*e*P		**P**		**18 29 28.6**	**-1.0**
VAGH				*e*SKSac		**SKSac**		**18 40 00.9**	**-1.1**
HLID	**Hailey**	**92.59**	**45**		IAMs_20	IAMs_20		19 08 44.1	
	comp=Z,7μm,19.0s								
HLID	**Hailey**	**92.59**	**45**	⇓P		**P**		**18 29 31.2**	**+0.5**
PASC	**Pasadena Art C**	**92.64**	**54**		IAMs_20	IAMs_20		19 10 05.5	
	comp=Z,6μm,19.0s								
LRMC	**Laurel Mtn Rad**	**92.66**	**53**	IAmb		IAmb		18 30 10.0	
	comp=Z,77nm,1.6s								
KONS	**Konsvik**	**92.70**	**341**	*e*P		**P**		**18 29 32.4**	**+1.9**
KONS					IVMs_BB	IVMs_BB		19 15 39.7	
	comp=Z,3μm,23.3s								
MWC	**Mount Wilson**	**92.72**	**54**		IAMs_20	IAMs_20		19 10 17.8	
	comp=Z,7μm,19.0s								
SIM	**Simferopol'**	**92.73**	**317**	*e*P		**P**		**18 29 33.7**	**+2.6**
SIM				*e*				18 33 20.0	
SIM				*e*S		**S**		**18 40 38.0**	**+2.6**
SIM					pmax	pmax			
	comp=Z,90nm,0.6s								
MNK	**Minsk**	**92.82**	**327**	*i* P		**P**		**18 29 30.5**	**-0.7**
	comp=E,17nm,0.8s								
MNK				*i* P		**P**		**18 29 30.5**	**-0.7**
	comp=N,30nm,1.0s								
MNK				*i* P		**P**		**18 29 30.5**	**-0.7**
	comp=Z,24nm,1.1s,baz=65								
MNK				*i* S		**SKSac**		**18 40 04.1**	**-0.1**
MNK				*i* LR		LR		19 11 29.9	
MNK	**Minsk**	**92.82**	**327**	*i* P		**P**		**18 29 30.5**	**-0.7**
MNK				*i* S		**SKSac**		**18 40 04.1**	**-0.1**
MNK					pmax	pmax			
	comp=E,17nm,0.8s								
MNK					pmax	pmax			
	comp=Z,24nm,1.1s								
MNK					pmax	pmax			
	comp=N,30nm,1.0s								
MNK					MLR	MLR			
	comp=N,10μm,19.0s								
MNK					MLR	MLR			
	comp=Z,12μm,17.0s								
STOK	**Stokkvaagen**	**92.84**	**341**	*e*P		**P**		**18 29 30.5**	**-0.6**
STOK				*e*SKSac		**SKSac**		**18 40 00.9**	**-3.0**
STOK					IVMs_BB	IVMs_BB		19 15 45.4	
	comp=Z,2μm,17.9s								
KULLO	**Kullorsuaq**	**92.86**	**5**	*i* P		**P**		**18 29 29.5**	**-1.5**
CCCA	**Chr Cany lake**	**92.90**	**53**	IAmb		IAmb		18 30 53.2	
	comp=Z,71nm,1.4s								
ELK	**Elko**	**92.92**	**47**	LR		LR		19 04 22.8	
	comp=Z,9μm,21.9s,baz=278,slow=31								
ELK	**Elko**	**92.92**	**47**		IAMs_20	IAMs_20		19 04 00.1	
	comp=Z,9μm,22.0s								
LEIR	**Leirfjorden**	**92.95**	**341**	*e*P		**P**		**18 29 30.4**	**-1.2**
LEIR				*e*SKSac		**SKSac**		**18 40 00.9**	**-3.6**
LEIR					IVMs_BB	IVMs_BB		19 12 15.4	
	comp=Z,2μm,21.2s								
GAZ	**Gaziantep**	**92.99**	**309**	IAmb		IAmb		18 30 35.2	
	comp=Z,76nm,0.9s								
FURC	**Furnace Creek,**	**93.01**	**52**	IAmb		IAmb		18 30 52.2	
	comp=Z,130nm,1.7s								
BFSC	**Mount Baldy Ra**	**93.04**	**54**		IAMs_20	IAMs_20		19 10 01.1	
	comp=Z,6μm,19.0s								
DLMT	**Dillon**	**93.20**	**42**	IAmb		IAmb		18 30 40.0	
	comp=Z,126nm,1.5s								
DLMT					IAMs_20	IAMs_20		19 04 31.1	
	comp=Z,6μm,22.0s								
GWY	**Greenwater Val**	**93.25**	**52**	IAmb		IAmb		18 30 54.4	
	comp=Z,41nm,1.1s								
TPNV	**Topopah Spring**	**93.34**	**51**	IAmb		IAmb		18 30 53.1	
	comp=Z,152nm,1.9s								
TPNV	**Topopah Spring**	**93.34**	**51**	⇑P		**P**		**18 29 35.2**	**+0.9**
GSC	**Goldstone, Bar**	**93.40**	**53**	IAmb		IAmb		18 30 13.2	
	comp=Z,59nm,1.5s								
ILON	**Igloolik, Nuna**	**93.63**	**14**	IAmb		IAmb		18 29 46.1	
	comp=Z,76nm,1.6s								
AKASG	**Malin Array Be**	**93.65**	**324**	P		**P**		**18 29 33.3**	**-1.9**
	comp=Z,1.7nm,0.7s,baz=56,slow=4.3,SNR=14								
AKASG					LR	LR		19 12 24.2	
	comp=Z,11μm,22.0s,baz=62,slow=36								
	comp=Z,1.7nm,0.7s								
AKASG	**Malin Array Be**	**93.65**	**324**	P		**P**		**18 29 33.1**	**-2.0**
AKASG	**Malin Array Be**	**93.65**	**324**	*i* P		**P**		**18 29 33.4**	**-1.8**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.7s								
AKBB	**Malin Array Si**	**93.65**	**324**	*i* P		**P**		**18 29 32.6**	**-2.6**
AKBB					pmax	pmax			
	comp=Z,32nm,1.2s								
AKBB					MLR	MLR			
	comp=Z,15μm,21.0s								
AKBB	**Malin Array Si**	**93.65**	**324**	P		**P**		**18 29 33.3**	**-1.9**
AK08	**Malin Array Si**	**93.66**	**323**	P		**P**		**18 29 33.2**	**-2.0**
KIEV	**Kiev**	**93.67**	**324**	P		**P**		**18 29 32.8**	**-2.4**
KIEV	**Kiev**	**93.67**	**324**	P		**P**		**18 29 32.8**	**-2.4**
KIEV	**Kiev**	**93.67**	**324**	P		**P**		**18 29 32.8**	**-2.4**
KIEV					pmax	pmax			
	comp=Z,161nm,0.8s								
KIEV					MLR	MLR			
	comp=Z,13μm,21.0s								
BOZ	**Bozeman (W)**	**93.75**	**42**	IAmb		IAmb		18 30 42.4	
	comp=Z,82nm,1.7s								
BOZ	**Bozeman (W)**	**93.75**	**42**	⇓P		**P**		**18 29 36.4**	**+0.4**
PFO	**Pinyon Flats O**	**94.17**	**55**	LR		LR		19 05 25.3	
	comp=Z,21.6s,baz=276,slow=31								
PFO	**Pinyon Flats O**	**94.17**	**55**	P		**P**		**18 29 36.1**	**-2.0**
PFO	**Pinyon Flats O**	**94.17**	**55**	IAMs_20		IAMs_20		19 05 45.3	
	comp=Z,7μm,22.0s								
PFO	**Pinyon Flats O**	**94.17**	**55**	*i* P		**P**		**18 29 35.8**	**-2.4**
PFO					pmax	pmax			
	comp=Z,47nm,1.4s								
PFO					MLR	MLR			
	comp=Z,7μm,18.0s								
PMD	**Palm Desert**	**94.23**	**54**	IAmb		IAmb		18 31 02.1	
	comp=Z,45nm,1.1s								
BAR	**Barrett**	**94.28**	**55**	IAmb		IAmb		18 31 03.2	
	comp=Z,72nm,1.6s								
BAR					IAMs_20	IAMs_20		19 08 51.0	
	comp=Z,7μm,19.0s								
YHL	**Hebgen Lake**	**94.32**	**43**	IAmb		IAmb		18 30 09.7	
	comp=Z,55nm,1.2s								
HVU	**Hansel Valley**	**94.33**	**46**	IAmb		IAmb		18 30 50.7	
	comp=Z,102nm,1.8s								
NSS	**Namsos**	**94.33**	**340**	*e*P		**P**		**18 29 38.1**	**+0.2**
NSS					IVMs_BB	IVMs_BB		19 19 10.4	
	comp=Z,4μm,17.9s								
YHB	**Horse Butte**	**94.35**	**43**	IAmb		IAmb		18 30 15.5	
	comp=Z,76nm,1.3s								
PABE	**Paberze**	**94.38**	**329**		IAMs_20	IAMs_20		19 12 38.4	
	comp=Z,7μm,19.0s								
CBX	**Cerro Bola**	**94.39**	**56**	IAmb		IAmb		18 31 04.5	
	comp=Z,86nm,1.7s								
BELC	**Belle Mtn. Jos**	**94.42**	**54**		IAMs_20	IAMs_20		19 11 03.8	
	comp=Z,8μm,19.0s								
JNW	**Jan Mayen West**	**94.45**	**350**	*e*P		**P**		**18 29 40.6**	**+2.2**
JNW					IVmB_BB			18 29 56.9	
	comp=Z,4μm,2.4s								
JNW				*i*				18 39 25.7	
JNE	**Jan Mayen East**	**94.46**	**350**	*e*P		**P**		**18 29 42.2**	**+3.7**
JNE					IVmB_BB			18 29 51.1	
	comp=Z,2μm,2.0s								
JMIC	**Jan Mayen**	**94.50**	**350**	LR		LR		19 12 38.1	
	comp=Z,1μm,20.6s,baz=40,slow=36								
JMIC	**Jan Mayen**	**94.50**	**350**	*e*P		**P**		**18 29 40.9**	**+2.2**
JMI	**Jan Mayen**	**94.59**	**350**	*e*P		**P**		**18 29 39.3**	**+0.2**
ASF	**Jabal al Asfar**	**94.73**	**304**	LR		LR		19 17 38.0	
	comp=Z,3μm,20.1s,baz=66,slow=39								
ATD	**Arta Tunnel**	**94.77**	**283**	LR		LR		19 12 55.6	
	comp=Z,54nm,19.1s,baz=57,slow=36								
BR131	**Keskin Array S**	**94.84**	**312**	*i* P		**P**		**18 29 40.1**	**-1.0**
BR131	**Keskin Array S**	**94.84**	**312**	P		**P**		**18 29 42.0**	**+0.9**
	SNR=5.2								
BR131				P		**P**		**18 29 42.0**	**+0.9**
	SNR=5.2								
BRTR	**Keskin Array B**	**94.84**	**312**	P		**P**		**18 29 39.9**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=104,slow=5.2,SNR=6.9								
BRTR					LR	LR		19 16 38.8	
	comp=Z,3μm,20.6s,baz=76,slow=38								
	comp=Z,1.0nm,0.6s								
BRTR	**Keskin Array B**	**94.84**	**312**	P		**P**		**18 29 39.5**	**-1.6**
BRTR	**Keskin Array B**	**94.84**	**312**	*i* P		**P**		**18 29 39.7**	**-1.4**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
DUG	**Dugway, Tooele**	**94.84**	**47**	IAmb		IAmb		18 30 55.2	
	comp=Z,129nm,1.8s								
DUG					IAMs_20	IAMs_20		19 04 39.1	
	comp=Z,8μm,22.0s								
DUG	**Dugway, Tooele**	**94.84**	**47**	⇓P		**P**		**18 29 41.3**	**+0.2**
FLWY	**Flagg Ranch**	**94.92**	**43**	IAmb		IAmb		18 30 20.4	
	comp=Z,58nm,1.2s								
BC3	**Big Chuckawall**	**94.96**	**54**	IAmb		IAmb		18 30 30.5	
	comp=Z,114nm,2.0s								
MOOW	**Moose Ponds**	**95.02**	**43**		IAMs_20	IAMs_20		19 07 05.3	
	comp=Z,6μm,21.0s								
IRM	**Iron Mountain**	**95.05**	**54**		IAMs_20	IAMs_20		19 11 44.3	
	comp=Z,7μm,18.0s								
ESJX	**Sierra Juarez**	**95.06**	**56**	IAmb		IAmb		18 30 30.2	
	comp=Z,62nm,1.6s								
AHID	**Auburn Hatcher**	**95.14**	**44**		IAMs_20	IAMs_20		19 08 40.6	
	comp=Z,6μm,20.0s								
HWUT	**Hardware Ranch**	**95.23**	**46**	IAmb		IAmb		18 30 55.1	
	comp=Z,76nm,1.3s								
HWUT					IAMs_20	IAMs_20		19 06 57.3	
	comp=Z,6μm,20.0s								
HWUT	**Hardware Ranch**	**95.23**	**46**	⇓P		**P**		**18 29 43.1**	**+0.2**
NLU	**North Lily Min**	**95.46**	**47**	IAmb		IAmb		18 30 58.1	
	comp=Z,82nm,1.8s								
FFC	**Flin Flon**	**95.46**	**31**	P		**P**		**18 29 43.2**	**-0.2**
FFC	**Flin Flon**	**95.46**	**31**		IAMs_20	IAMs_20		19 09 03.6	
	comp=Z,8μm,21.0s								
FFC	**Flin Flon**	**95.46**	**31**	P		**P**		**18 29 43.2**	**-0.2**
FFC					pmax	pmax			
	comp=Z,12nm,0.9s								
FFC					MLR	MLR			
	comp=Z,8μm,21.0s								
RLMT	**Red Lodge**	**95.47**	**42**		IAMs_20	IAMs_20		19 09 57.2	
	comp=Z,6μm,21.0s								
RLMT	**Red Lodge**	**95.47**	**42**	⇓P		**P**		**18 29 44.9**	**+0.9**
SUW	**Suwalki**	**95.50**	**328**	*e*P		**P**		**18 29 41.5**	**-2.0**
TCUT	**Toone Canyon**	**95.52**	**46**	IAmb		IAmb		18 30 56.8	
	comp=Z,157nm,1.9s								
SUMG	**Summit**	**95.57**	**360**	P		**P**		**18 29 43.4**	**-0.7**
SUMG	**Summit**	**95.57**	**360**	⇑P		**P**		**18 29 44.6**	**+0.6**
SUMG	**Summit**	**95.57**	**360**	*i* P		**P**		**18 29 43.4**	**-0.7**
GLA	**Glamis**	**95.65**	**55**	IAmb		IAmb		18 31 08.7	
	comp=Z,54nm,1.5s								
MMAI	**Mount Meron Ar**	**95.67**	**305**	LR		LR		19 16 58.7	
	comp=Z,6μm,21.1s,baz=62,slow=38								
KNB	**Kanab**	**95.92**	**50**	IAmb		IAmb		18 31 04.6	
	comp=Z,70nm,1.4s								
MTPU	**Mount Pierson**	**96.04**	**49**	IAmb		IAmb		18 31 04.0	
	comp=Z,88nm,1.8s								
PD31	**Pinedale Array**	**96.19**	**44**	IAmb		IAmb		18 30 58.1	
	comp=Z,21nm,1.2s								
PDAR	**Pinedale Array**	**96.19**	**44**	P		**P**		**18 29 46.9**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=116,slow=1.0,SNR=7.9								
	comp=Z,0.8nm,0.5s								
PDAR	**Pinedale Array**	**96.19**	**44**	P		**P**		**18 29 45.8**	**-1.6**
MAW	**Mawson**	**96.31**	**202**	P		**P**		**18 29 46.8**	**0.0**
	comp=Z,2.6nm,0.7s,baz=94,slow=2.9,SNR=7.2								
MAW					PP	**PP**		**18 33 39.8**	**-0.7**
	comp=Z,5.7nm,1.0s,baz=72,slow=5.3,SNR=4.6								
MAW					LR	LR		19 10 40.4	
	comp=Z,2μm,18.3s,baz=72,slow=34								
	comp=Z,2.6nm,0.7s								
MAW	**Mawson**	**96.31**	**202**	P		**P**		**18 29 47.9**	**+1.1**
MAW	**Mawson**	**96.31**	**202**	P		**P**		**18 29 47.9**	**+1.1**
MAW					pmax	pmax			
	comp=Z,8.0nm,1.6s								
HFS	**Hagfors**	**96.46**	**336**	P		**P**		**18 29 46.2**	**-1.6**
	comp=Z,2.3nm,0.6s,baz=132,slow=2.2,SNR=9.2								
HFS					LR	LR		19 18 05.7	
	comp=Z,12μm,18.3s,baz=46,slow=38								
	comp=Z,2.3nm,0.6s								
CSS	**Mathiatis**	**96.67**	**308**		IAMs_20	IAMs_20		19 16 44.6	
	comp=Z,6μm,21.0s								
TIRR	**Tirgusor**	**96.69**	**318**		IAMs_20	IAMs_20		19 12 57.1	
	comp=Z,6μm,22.0s								
SCO	**Scoresbysund**	**96.77**	**354**	*i* P		**P**		**18 29 48.7**	**-0.3**
LAO	**LASA Array**	**96.77**	**39**	⇑P		**P**		**18 29 50.5**	**+0.9**
NOA	**NORSAR Array B**	**96.84**	**338**	P		**P**		**18 29 48.0**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=56,slow=4.5,SNR=2.8								
NOA					LR	LR		19 16 11.9	
	comp=Z,6μm,21.8s,baz=50,slow=37								
	comp=Z,0.7nm,0.6s								
P18A	**Preston Nutter**	**96.89**	**47**	IAmb		IAmb		18 31 05.2	
	comp=Z,64nm,1.4s								
NC602	**NORSAR Array S

CHVC Chvalec 101.02 328 AMS AMS 19 19 00.0
comp=Z,13μm,17.8s
SDCO Great Sand Dun 101.04 47 IAMs_20 IAMs_20 19 08 01.2
comp=Z,8μm,22.0s
UPC Upice 101.09 327 AMS AMS 19 19 00.0
comp=Z,14μm,17.5s
JAVC Velka Javorina 101.11 325 *e*PDIFF **Pdif** **18 30 09.9 +0.9**
JAVC *e* 18 30 34.3
VRAC Vranov 101.45 326 *e*PDIFF **Pdif** **18 30 09.8 -0.7**
VRAC *e* 18 30 36.2
VRAC *e*PP **PP** **18 34 23.0 +3.4**
ANMO Albuquerque 101.48 50 IAMs_20 IAMs_20 19 08 24.0
comp=Z,5μm,21.0s
ANMO Albuquerque 101.48 50 *i* P **Pdif** **18 30 08.5 -2.6**
ANMO MLR MLR
comp=Z,3μm,18.0s
ALQ Albuquerque 101.48 50 IAMs_20 IAMs_20 19 08 23.7
comp=Z,5μm,21.0s
ALQ Albuquerque 101.48 50 IAMs_20 IAMs_20 19 08 23.7
comp=Z,5μm,21.0s
KRUC Moravsky 101.70 326 *e*PDIFF **Pdif** **18 30 10.4 -1.1**
KRUC *e* 18 30 37.2
KRUC *e*PP **PP** **18 34 23.7 +2.2**
PVCC Panska Ves 101.83 328 AMS AMS 19 20 10.0
comp=Z,10μm,17.9s
QSPA South Pole Qui 101.89 180 P **Pdif** **18 30 12.7 +0.7**
comp=Z,2.7nm,0.8s,baz=268,slow=1.5,SNR=12
QSPA PP **PP** **18 34 23.1 +0.1**
comp=Z,4.1nm,1.0s,baz=340,slow=5.5,SNR=3.7
QSPA PKIKP **PKiKP** **18 34 34.4 -0.4**
comp=Z,5.9nm,0.9s,baz=19,slow=3.6,SNR=3.4
QSPA South Pole Qui 101.89 180 **Pdif** **18 30 12.3 +0.3**
BRG Berggiesshubel 101.95 329 ⇓*e*Pif 18 30 12.6
BRG Amp 18 30 15.6
comp=Z,4.9nm,1.0s
BRG Berggiesshubel 101.95 329 P **Pdif** **18 30 21.5 +8.9**
BRG Amp 18 30 27.6
comp=Z,8.8nm,1.0s
BRG Berggiesshubel 101.95 329 P **PKiKP** **18 34 36.1 +0.8**
BRG Amp 18 34 38.5
comp=Z,24nm,1.3s
BRG Berggiesshubel 101.95 329 PS PS 18 43 30.0 +1.3
BRG Berggiesshubel 101.95 329 SS SS 18 49 02.0 +5.1
OGNE Ogallala 102.05 43 IAMs_20 IAMs_20 19 15 15.4
comp=Z,5μm,20.0s
TREC Trest 102.06 327 AMS AMS 19 20 00.0
comp=Z,15μm,17.9s
RICC Richard 102.07 328 AMS AMS 19 21 10.0
comp=Z,10μm,16.7s
T25A Trinidad 102.08 48 IAMs_20 IAMs_20 19 12 55.8
comp=Z,6μm,20.0s
PRU Pruhonice 102.16 328 AMS AMS 19 19 10.0
comp=Z,14μm,20.5s
CLL Collm 102.16 329 *e*P **Pdif** **18 30 12.0 -1.5**
CLL *e* 18 34 26.0
CLL MLR MLR
comp=Z,13μm,18.0s
CLL Collm 102.16 329 *e*Pdif **Pdif** **18 30 12.0 -1.5**
CLL *ex* x 18 30 15.0
CLL *ex* x 18 30 19.0
CLL *e*PP **PP** **18 34 26.0 +1.2**
CLL *e*Sdif Sdif 18 41 54.0 -1.8
CLL *e*PS PS 18 43 29.0 -1.9
CLL *e*PPS PPS 18 44 18.0
CLL *ex* x 18 46 06.0
CLL *e*SS **SS** **18 49 00.0 +0.2**
CLL *e*SSS SSS 18 52 56.0
CLL *e*SSSS 18 56 18.0
CLL AMS AMS 19 21 00.0
CLL AMS AMS 19 21 00.0
comp=Z,13μm,18.0s
HSKC Hora Svate Kat 102.37 329 AMS AMS 19 19 00.0
comp=Z,12μm,20.5s
KSCO Kaye Shedlock' 102.53 45 IAMs_20 IAMs_20 19 12 09.3
comp=Z,6μm,20.0s
ZVC Zvikov 102.67 327 AMS AMS 19 19 30.0
comp=Z,13μm,20.0s
EPT El Paso 102.68 53 IAMs_20 IAMs_20 19 09 56.4
comp=Z,5μm,21.0s
K30B Basset 102.81 41 IAMs_20 IAMs_20 19 15 40.1
comp=Z,5μm,20.0s
NKC Novy Kostel 103.10 329 AMS AMS 19 21 50.0
comp=Z,14μm,17.1s
KHC Kasperske Hory 103.17 327 *e*P **Pdif** **18 30 18.5 +0.4**
KHC MLR MLR
comp=Z,15μm,19.4s
KHC Kasperske Hory 103.17 327 *e*PDIFF **Pdif** **18 30 18.5 +0.4**
KHC AMS AMS 19 19 50.0
comp=Z,15μm,19.4s
GERES GERESS Array B 103.28 327 Pdiff **Pdif** **18 30 17.1 -1.5**
comp=Z,0.6nm,0.6s,baz=46,slow=5.8,SNR=5.2
GERES PKKPbc **PKKPbc** **18 46 13.6 -1.4**
comp=Z,0.8nm,0.8s,baz=200,slow=2.7,SNR=4.2
PDG Podgorica 103.54 319 IAMs_20 IAMs_20 19 19 49.3
comp=Z,7μm,20.0s
MNTX Cornudas Mount 103.59 53 IAMs_20 IAMs_20 19 14 22.4
comp=Z,4μm,19.0s
BLY Banja Luka 103.61 322 IAMs_20 IAMs_20 19 20 25.1
comp=Z,8μm,22.0s
BGNE Belgrade 104.39 41 IAMs_20 IAMs_20 19 11 34.0
comp=Z,6μm,22.0s
CBKS Cedar Bluff 104.61 44 IAMs_20 IAMs_20 19 18 25.4
comp=Z,5μm,19.0s
MSTX Muleshoe 104.65 50 IAMs_20 IAMs_20 19 18 02.0
comp=Z,6μm,19.0s
SYO Syowa Base 105.00 202 ⇓*e*P **PKiKP** **18 34 43.2 +3.0**
AMTX Amarillo 105.06 49 IAMs_20 IAMs_20 19 16 49.7
comp=Z,5μm,21.0s
L34A Svendsen Farm, 105.23 40 IAMs_20 IAMs_20 19 16 48.2
comp=Z,6μm,21.0s
R32A Long Quarter, 105.51 44 IAMs_20 IAMs_20 19 10 23.0
comp=Z,5μm,22.0s
TXAR Lajitas Array 105.90 55 Pdiff **Pdif** **18 30 30.4 -0.4**
comp=Z,0.6nm,1.0s,baz=258,slow=3.5,SNR=3.6
ESK Eskdalemuir 106.23 339 IAMs_20 IAMs_20 19 24 39.2
comp=Z,6μm,20.0s
N35A Tabor 106.29 41 IAMs_20 IAMs_20 19 17 05.2
comp=Z,6μm,20.0s
WLF Walferdange 106.57 331 PP **PP** **18 35 03.4 +5.8**
KSU1 Kansas State U 106.58 43 IAMs_20 IAMs_20 19 14 38.3
comp=Z,5μm,22.0s
TIP Timpagrande 106.84 317 IAMs_20 IAMs_20 19 25 25.8
comp=Z,5μm,19.0s
NRS Narsarsuaq 106.90 3 IAMs_20 IAMs_20 19 24 35.8
comp=Z,4μm,19.0s
SCIA State Center 107.23 39 IAMs_20 IAMs_20 19 13 34.0
comp=Z,7μm,21.0s
ABTX Abilene, Hawle 107.59 50 IAMs_20 IAMs_20 19 15 24.0
comp=Z,4μm,20.0s
OK048 Pawnee Station 107.72 45 IAMs_20 IAMs_20 19 16 13.8
comp=Z,7μm,21.0s
OK051 E0350 and S346 107.75 45 IAMs_20 IAMs_20 19 16 23.6
comp=Z,7μm,20.0s
T35A Sooner Cattle 107.77 45 IAMs_20 IAMs_20 19 23 47.0
comp=Z,5μm,20.0s
F42A Maple Grove Fa 107.84 33 IAMs_20 IAMs_20 19 20 06.4
comp=Z,7μm,20.0s
N38A Joes South For 107.85 40 IAMs_20 IAMs_20 19 19 42.5
comp=Z,5μm,20.0s
P38A Dawn 108.31 41 IAMs_20 IAMs_20 19 16 41.9
comp=Z,5μm,21.0s
TUL3 Leonard 108.78 45 IAMs_20 IAMs_20 19 17 03.9
comp=Z,7μm,20.0s
Z35A Perchaven, San 109.03 48 IAMs_20 IAMs_20 19 25 47.8
comp=Z,4μm,18.0s
P40A Paris 109.32 40 IAMs_20 IAMs_20 19 20 30.3
comp=Z,5μm,21.0s
U38A Gravette 109.48 44 IAMs_20 IAMs_20 19 15 56.1
comp=Z,5μm,21.0s
S39A Bolivar 109.52 43 IAMs_20 IAMs_20 19 20 02.9
comp=Z,5μm,21.0s
WHTX Lake Whitney, 109.53 50 IAMs_20 IAMs_20 19 20 41.1
comp=Z,6μm,20.0s
R40A Maddies Statio 109.88 42 IAMs_20 IAMs_20 19 21 14.3
comp=Z,7μm,19.0s
CCM Cathedral Cave 110.67 41 IAMs_20 IAMs_20 19 18 34.1
comp=Z,6μm,20.0s
Z38A Mt. Pleasant 110.71 47 IAMs_20 IAMs_20 19 17 39.2
comp=Z,5μm,21.0s
735A Kenedy 110.72 53 IAMs_20 IAMs_20 19 18 40.2
comp=Z,4μm,19.0s
KVTX Kingsville 111.25 54 IAMs_20 IAMs_20 19 19 46.4
comp=Z,4μm,20.0s
T42A Van Buren 111.36 42 IAMs_20 IAMs_20 19 17 04.6
comp=Z,6μm,21.0s
VSL Villasalto 111.38 321 IAMs_20 IAMs_20 19 23 33.6
comp=Z,4μm,21.0s

Q44A Meyer Farm, Va 111.59 40 IAMs_20 IAMs_20 19 21 07.3
comp=Z,5μm,21.0s
NATX Nacogdoches 111.71 49 IAMs_20 IAMs_20 19 23 56.4
comp=Z,5μm,18.0s
T45A Paducah 112.95 41 IAMs_20 IAMs_20 19 22 58.7
comp=Z,5μm,19.0s
EJON La Jonquera 113.18 327 PP **PP** **18 35 45.9 +0.3**
441A DeRidder 113.31 49 IAMs_20 IAMs_20 19 21 25.1
comp=Z,4μm,20.0s
VA02 Isla de Pascua 113.33 114 IAMs_20 IAMs_20 19 16 27.0
comp=Z,4μm,18.0s
NVL N'lazarevskaya 113.41 196 *e*SS SS 18 51 11.9 -20
UNM Universidad Na 113.64 63 IAMs_20 IAMs_20 19 14 25.7
comp=Z,4μm,20.0s
WVT Waverly 114.01 41 IAMs_20 IAMs_20 19 20 56.7
comp=Z,5μm,20.0s
MAHO Mahon 114.16 324 PP **PP** **18 35 51.6 -0.9**
ERPA Erie 114.63 32 IAMs_20 IAMs_20 19 22 27.7
comp=Z,4μm,20.0s
V48A Smith Brothers 114.90 41 IAMs_20 IAMs_20 19 21 31.2
comp=Z,6μm,21.0s
TROLL Troll, Antarti 114.97 193 PKPdf **PKiKP** **18 34 58.9 -0.3**
LONY Lake Ozonia 115.34 27 IAMs_20 IAMs_20 19 24 12.0
comp=Z,4μm,22.0s
X48A Hartselle 115.53 42 IAMs_20 IAMs_20 19 18 27.2
comp=Z,6μm,22.0s
D62A Allapoint, All 115.56 22 IAMs_20 IAMs_20 19 22 43.2
comp=Z,6μm,20.0s
Z47A Carrollton 115.59 44 IAMs_20 IAMs_20 19 24 48.9
comp=Z,5μm,21.0s
L56A Greenwood 115.84 30 IAMs_20 IAMs_20 19 26 12.8
comp=Z,6μm,20.0s
K57A Scipio Center 115.91 29 IAMs_20 IAMs_20 19 22 02.3
comp=Z,6μm,21.0s
W50A Signal Mountai 116.20 41 IAMs_20 IAMs_20 19 25 15.5
comp=Z,4μm,20.0s
J59A Piesco 116.28 28 IAMs_20 IAMs_20 19 25 24.0
comp=Z,5μm,20.0s
Y49A Blount Mountai 116.31 43 IAMs_20 IAMs_20 19 26 06.8
comp=Z,4μm,19.0s
SNAA Sanae 116.38 192 ⇓PKPdf **PKPdf** **18 35 01.1 -0.7**
comp=Z,52nm,0.6s
SNAA ⇑PKKPbc **PKKPbc** **18 45 33.1 -0.1**
comp=Z,44nm,1.2s
SNAA Sanae 116.38 192 PKP **PKPdf** **18 35 00.4 -1.4**
comp=Z,3.7nm,1.0s,baz=176,slow=0.8,SNR=8.5
SNAA Sanae 116.38 192 PKIKP **PKPdf** **18 35 00.6 -1.2**
SNAA MLR MLR
comp=Z,7μm,21.0s
EIBI Ibiza 116.40 325 PP PP 18 36 10.6 +2.3
LRAL Lakeview Retre 116.41 44 IAMs_20 IAMs_20 19 23 29.5
comp=Z,5μm,20.0s
G62A West of Eustis 116.56 24 IAMs_20 IAMs_20 19 25 19.8
comp=Z,4μm,20.0s
M57A Sunshine Farm, 116.66 31 IAMs_20 IAMs_20 19 24 52.3
comp=Z,6μm,20.0s
LBNH Lisbon 116.79 25 IAMs_20 IAMs_20 19 23 55.9
comp=Z,4μm,20.0s
H62A Milan 116.84 25 IAMs_20 IAMs_20 19 25 03.3
comp=Z,5μm,21.0s
F64A Sherman 116.85 22 IAMs_20 IAMs_20 19 20 29.4
comp=Z,5μm,22.0s
X51A Calhoun 116.89 41 IAMs_20 IAMs_20 19 25 37.8
comp=Z,5μm,20.0s
PKME Peaks-Kenny Pk 117.00 23 IAMs_20 IAMs_20 19 26 30.5
comp=Z,5μm,21.0s
HNH Hanover 117.07 26 IAMs_20 IAMs_20 19 22 19.7
comp=Z,5μm,22.0s
W52A Murphy 117.14 40 IAMs_20 IAMs_20 19 22 36.4
comp=Z,7μm,21.0s
N58A Sunbury 117.23 31 IAMs_20 IAMs_20 19 24 59.6
comp=Z,6μm,20.0s
TRY Troy 117.24 28 IAMs_20 IAMs_20 19 26 51.3
comp=Z,5μm,20.0s
J61A Chester 117.24 26 IAMs_20 IAMs_20 19 22 01.3
comp=Z,5μm,22.0s
WVL Waterville 117.44 24 IAMs_20 IAMs_20 19 26 37.3
comp=Z,4μm,18.0s
I63A Otisfield 117.50 25 IAMs_20 IAMs_20 19 25 21.9
comp=Z,4μm,20.0s
250A Grady 117.54 44 IAMs_20 IAMs_20 19 22 42.5
comp=Z,5μm,21.0s
G65A Princeton 117.70 22 IAMs_20 IAMs_20 19 21 40.9
comp=Z,6μm,22.0s
Y52A Lilburn 117.84 41 IAMs_20 IAMs_20 19 24 04.0
comp=Z,5μm,20.0s
VNA2 Neumayer--Watz 117.88 191 ⇓PKPdf **PKPdf** **18 35 04.4 -0.2**
comp=Z,9.7nm,0.7s,baz=125,slow=1.4
L61B Northampton 117.90 27 IAMs_20 IAMs_20 19 24 48.9
comp=Z,4μm,20.0s
K62A Royalston 117.93 27 IAMs_20 IAMs_20 19 31 15.5
comp=Z,3μm,20.0s
152A Waverly Hall 118.16 43 IAMs_20 IAMs_20 19 22 15.7
comp=Z,4μm,22.0s
EMMW East Machias 118.16 22 IAMs_20 IAMs_20 19 21 53.2
comp=Z,5μm,22.0s
VNA1 Neumayer--Stat 118.27 191 ⇓PKPdf **PKPdf** **18 35 05.1 -0.3**
comp=Z,7.5nm,0.8s
HRV Adam Dziewonsk 118.35 26 IAMs_20 IAMs_20 19 27 36.2
comp=Z,4μm,19.0s
PAL Palisades 118.48 29 IAMs_20 IAMs_20 19 26 10.3
comp=Z,6μm,21.0s
GOGA Godfrey 118.51 41 IAMs_20 IAMs_20 19 20 13.8
comp=Z,6μm,22.0s
WES Weston 118.55 26 IAMs_20 IAMs_20 19 27 51.9
comp=Z,4μm,19.0s
KMSC Kings Mountain 118.72 38 IAMs_20 IAMs_20 19 21 55.8
comp=Z,6μm,21.0s
CART Cartagena 118.72 326 IAMs_20 IAMs_20 19 29 16.7
comp=Z,6μm,21.0s
N62A Caumsett State 118.74 29 IAMs_20 IAMs_20 19 21 51.3
comp=Z,6μm,22.0s
352A Blakely 118.75 44 IAMs_20 IAMs_20 19 28 12.5
comp=Z,4μm,20.0s
ESDC Sonseca Array 118.75 329 PKP **PKPdf** **18 35 07.3 -0.1**
comp=Z,0.4nm,0.7s,baz=357,slow=2.8,SNR=2.3
ESDC PKKPbc **PKKPab** **18 45 26.4 -0.7**
comp=Z,1.7nm,1.0s,baz=224,slow=3.5,SNR=4.5
M63A Gales Ferry 119.02 27 IAMs_20 IAMs_20 19 26 37.5
comp=Z,6μm,21.0s
P61A Hamonton 119.08 31 IAMs_20 IAMs_20 19 26 23.4
comp=Z,5μm,21.0s
L64A Middleborough 119.13 26 IAMs_20 IAMs_20 19 26 39.1
comp=Z,4μm,22.0s
M65A Busby, Falmout 119.51 26 IAMs_20 IAMs_20 19 26 39.3
comp=Z,5μm,21.0s
TIGA Tifton 119.67 43 IAMs_20 IAMs_20 19 30 03.8
comp=Z,5μm,20.0s
553A Crawfordville 119.87 45 IAMs_20 IAMs_20 19 22 25.3
comp=Z,5μm,20.0s
656A Willston 121.67 44 IAMs_20 IAMs_20 19 26 02.0
comp=Z,5μm,21.0s
TEIG Tepich 122.45 57 IAMs_20 IAMs_20 19 25 29.4
comp=Z,4μm,22.0s
IFR Ifrane 123.99 325 PP PP 18 36 58.7 -1.9
TSUM Tsumeb 124.57 255 IAMs_20 IAMs_20 19 26 04.1
comp=Z,3μm,19.0s
PMSA Palmer Station 124.70 168 IAMs_20 IAMs_20 19 25 27.6
comp=Z,4μm,21.0s
AVE Averroes 125.41 327 PP PP 18 37 11.5 +1.7
TIO Tiouine 127.12 325 PP PP 18 37 22.6 +1.1
EDA Edea 128.01 285 IAMs_20 IAMs_20 19 35 19.6
comp=Z,4μm,22.0s
PAYG Puerto Ayora 128.57 81 IAMs_20 IAMs_20 19 21 24.9
comp=Z,4μm,20.0s
CMLA Cha da Macela 128.70 346 IAMs_20 IAMs_20 19 35 54.4
comp=Z,4μm,21.0s
BBSR BB Station 129.78 28 IAMs_20 IAMs_20 19 32 05.2
comp=Z,3μm,20.0s
HDC Hedia 130.73 65 *e*P **PKPdf** **18 35 27.9 -3.1**
MG03 Isla Dawson 131.69 156 IAMs_20 IAMs_20 19 23 32.8
comp=Z,3μm,20.0s
TORD Torodi Ar. Bea 131.91 300 PKP **PKPdf** **18 35 31.7 -1.4**
comp=Z,2.5nm,1.1s,baz=94,slow=1.8,SNR=3.7
MG05 Puerto Natales 132.39 153 IAMs_20 IAMs_20 19 23 40.7
comp=Z,3μm,22.0s
GTBY Guantanamo Bay 132.84 48 IAMs_20 IAMs_20 19 31 24.3
comp=Z,6μm,22.0s
GO08 Villa O'Higgin 134.56 150 IAMs_20 IAMs_20 19 26 56.5
comp=Z,3μm,21.0s
GRTK Grand Turk 134.56 43 IAMs_20 IAMs_20 19 34 19.2
comp=Z,4μm,21.0s
LL07 Hotel Espejo d 137.61 143 IAMs_20 IAMs_20 19 23 29.1
comp=Z,4μm,22.0s
EFI East Falkland 137.76 163 IAMs_20 IAMs_20 19 36 03.7
comp=Z,4μm,22.0s
LL02 Futaleuf 138.34 144 IAMs_20 IAMs_20 19 25 54.3
comp=Z,4μm,21.0s
LL05 Los Muermos 138.44 141 IAMs_20 IAMs_20 19 23 45.3
comp=Z,4μm,21.0s
LR04 Corral 139.33 139 IAMs_20 IAMs_20 19 24 52.0
comp=Z,4μm,21.0s
OTAV Otavalo 139.65 75 IAMs_20 IAMs_20 19 26 57.0
comp=Z,3μm,21.0s
LR05 Currie 140.03 140 IAMs_20 IAMs_20 19 43 18.4
comp=Z,3μm,20.0s
LR03 Panguipulli 140.16 139 IAMs_20 IAMs_20 19 26 04.9
comp=Z,3μm,22.0s
SJG San Juan 140.26 42 IAMs_20 IAMs_20 19 37 19.0
comp=Z,3μm,22.0s
PLCA Paso Flores 140.62 142 PKP **PKPdf** **18 35 47.4 -1.2**
comp=Z,2.4nm,0.9s,baz=244,slow=4.7,SNR=5.3
PLCA Paso Flores 140.62 142 **PKPdf** **18 35 45.7 -2.9**
PLCA Paso Flores 140.62 142 PKIKP **PKPdf** **18 35 45.7 -2.9**
PLCA Paso Flores 140.62 142 *e*P **PKPdf** **18 35 46.2 -2.4**
DBIC Dimbokro 140.68 296 PKhKP PKPpre 18 35 44.0
comp=Z,3.7nm,0.6s,baz=124,slow=2.9,SNR=5.0
DBIC PKP **PKPdf** **18 35 50.0 +0.6**
comp=Z,7.6nm,0.7s,baz=39,slow=1.9,SNR=4.8
GO06 Curarrehue 140.74 140 IAMs_20 IAMs_20 19 26 02.2
comp=Z,4μm,22.0s
BI05 Punta Hualpn 141.15 135 IAMs_20 IAMs_20 19 42 46.7
comp=Z,3μm,18.0s
ATAH Atahualpa 141.56 86 PKP **PKPdf** **18 35 50.4 -1.1**
comp=Z,8.5nm,0.9s,baz=108,slow=4.4,SNR=4.0
SDV Santo Domingo 142.88 57 **PKPdf** **18 35 49.9 -3.7**
SDV Santo Domingo 142.88 57 *e*P **PKPdf** **18 35 48.9 -4.7**
ML02 Panimavida 142.88 135 IAMs_20 IAMs_20 19 26 54.7
comp=Z,3μm,22.0s
ANWB Willy Bob 143.30 37 IAMs_20 IAMs_20 19 39 08.6
comp=Z,4μm,20.0s
NNA Nana 143.69 94 PKP PKPbc 18 35 53.1 +0.8
comp=Z,29nm,0.9s,baz=340,slow=2.3,SNR=4.9
NNA Nana 143.69 94 IAMs_20 IAMs_20 19 26 40.4
comp=Z,3μm,20.0s
BO02 Sierra Bellavi 143.83 134 PKPab 18 35 51.4 -0.2
MT02 Curacav 144.34 131 IAMs_20 IAMs_20 19 34 17.7
comp=Z,3μm,19.0s
GDHS Morne Mazeau, 144.40 38 IAMs_20 IAMs_20 19 43 09.6
comp=Z,4μm,20.0s
MT05 Renca 144.57 132 IAMs_20 IAMs_20 19 52 59.7
comp=Z,2μm,18.0s
MAGL Barre de l'ile 144.94 38 IAMs_20 IAMs_20 19 34 25.2
comp=Z,5μm,22.0s
CO06 Fray Jorge 145.14 127 IAMs_20 IAMs_20 19 30 55.3
comp=Z,4μm,21.0s
CO02 Combarbal 145.40 128 IAMs_20 IAMs_20 19 30 23.1
comp=Z,4μm,20.0s
CO03 El Pedregal 145.80 128 IAMs_20 IAMs_20 19 31 37.8
comp=Z,3μm,20.0s
GO04 Tololo Observa 146.00 127 IAMs_20 IAMs_20 19 31 26.3
comp=Z,3μm,20.0s
LCO Las Campanas 146.56 125 IAMs_20 IAMs_20 19 29 11.4
comp=Z,2μm,20.0s
AC04 Llanos de Chal 146.58 123 IAMs_20 IAMs_20 19 30 22.9
comp=Z,3μm,21.0s
CO01 Juntas del Tor 146.64 127 IAMs_20 IAMs_20 19 31 27.1
comp=Z,3μm,20.0s
AC05 El Transito 146.98 125 IAMs_20 IAMs_20 19 34 33.3
comp=Z,3μm,20.0s
CZSB Cruzeiro do Su 147.22 86 *e*P **PKPdf** **18 35 57.5 -3.3**
CFA Coronel Fontan 147.29 131 PKPbc **PKPbc** **18 36 01.7 -1.1**
comp=Z,4.8nm,0.5s,baz=251,slow=3.6,SNR=12
TRQA Tornquist 147.34 146 PKPbc **PKPdf** **18 36 01.3 +0.9**
TRQA IAMs_20 IAMs_20 19 36 04.0
comp=Z,4μm,20.0s
TRQA Tornquist 147.34 146 PKP2 **PKPdf** **18 36 01.3 +0.9**
TRQA MLR MLR
comp=Z,4μm,20.0s
TRQA Tornquist 147.34 146 PKP **PKPbc** **18 36 02.0 -0.8**
GRGR Grenville 147.57 43 IAMs_20 IAMs_20 19 41 55.8
comp=Z,3μm,21.0s
AC01 Pan de Azucar 147.71 120 IAMs_20 IAMs_20 19 33 48.3
comp=Z,4μm,20.0s
PB14 IPOC Station P 148.37 118 **PKPbc** **18 36 06.0 -0.3**
PB14 IAMs_20 IAMs_20 19 28 56.0
comp=Z,3μm,20.0s
PB10 IPOC Station P 148.56 116 **PKPbc** **18 36 06.9 +0.5**
PB10 IAMs_20 IAMs_20 19 35 25.2
comp=Z,4μm,20.0s
AC02 Maricunga 148.69 122 **PKPbc** **18 36 06.7 -0.6**
AC02 IAMs_20 IAMs_20 19 32 02.1
comp=Z,4μm,21.0s
SACV Santiago Islan 148.79 329 IAMs_20 IAMs_20 19 56 05.4
comp=Z,2μm,19.0s
PB05 IPOC Station P 149.04 114 IAMs_20 IAMs_20 19 30 19.2
comp=Z,4μm,22.0s
PB06 IPOC Station P 149.65 114 IAMs_20 IAMs_20 19 31 00.1
comp=Z,3μm,22.0s
PB03 IPOC Station P 149.65 113 IAMs_20 IAMs_20 19 30 03.4
comp=Z,4μm,22.0s
PB02 IPOC Station P 149.69 112 IAMs_20 IAMs_20 19 31 30.6
comp=Z,3μm,22.0s
PB12 IPOC Station P 149.78 106 **PKPdf** **18 36 02.1 -2.8**
PB12 IAMs_20 IAMs_20 19 35 33.3
comp=Z,2μm,19.0s
PB09 IPOC Station P 150.17 113 IAMs_20 IAMs_20 19 30 06.2
comp=Z,3μm,21.0s
SGC2 Sao Gabriel da 150.46 68 *e*P **PKPdf** **18 36 02.7 -3.4**
PB08 IPOC Station P 150.62 110 IAMs_20 IAMs_20 19 31 45.3
comp=Z,3μm,22.0s
PB18 Visviri 150.71 104 IAMs_20 IAMs_20 19 42 49.1
comp=Z,3μm,20.0s
AF01 San Pedro de A 150.81 116 IAMs_20 IAMs_20 19 33 38.9
comp=Z,3μm,20.0s
LPAZ La Paz 152.13 102 PKPbc **PKPbc** **18 36 16.0 +0.1**
comp=Z,26nm,0.7s,baz=228,slow=3.7,SNR=7.5
LPAZ PP **PP** **18 39 56.5 -1.2**
comp=Z,4.7nm,0.5s,baz=334,slow=3.6,SNR=4.2
LPAZ La Paz 152.13 102 PKP **PKPdf** **18 36 10.0 +0.7**
LPAZ La Paz 152.13 102 *e*P **PKPdf** **18 36 05.3 -3.9**
TEFE Tefe 153.91 73 *e*P **PKPdf** **18 36 07.8 -3.5**
BOAV Boa Vista 154.82 57 PKP **PKPbc** **18 36 17.4 -3.7**
BOAV Boa Vista 154.82 57 *e*P **PKPdf** **18 36 09.1 -3.4**
PSAL Palomas, Salto 154.84 142 *e*P **PKPdf** **18 36 08.5 -3.5**
MACA Manaapuru-AM 157.43 69 *e*P **PKPdf** **18 36 12.8 -3.2**
CPUP Villa Florida 158.15 133 PKP **PKPdf** **18 36 16.3 -0.2**
comp=Z,1.6nm,0.8s,baz=223,slow=8.5,SNR=2.9
SIV San Ignacio 158.90 103 PKP **PKPdf** **18 36 17.9 +0.2**
comp=Z,3.8nm,0.8s,baz=262,slow=0.2,SNR=10
SIV PKPab **PKPab** **18 36 53.4 -0.4**
comp=Z,11nm,0.9s,baz=262,slow=4.0,SNR=9.2
BBSD Serra de San D 159.14 107 *e*P **PKPdf** **18 36 14.7 -3.2**
VILB Vilhena 159.97 95 *e*P **PKPdf** **18 36 15.5 -3.5**
MURT Porto Murtinho 160.39 122 *e*P **PKPdf** **18 36 16.6 -2.6**
PTLB Pontes e Lacer 160.82 102 PKP **PKPdf** **18 36 26.1 +6.3**
PTLB Pontes e Lacer 160.82 102 *e*P **PKPdf** **18 36 16.9 -2.9**
COIM Forte Coimbra 160.94 117 *e*P **PKPdf** **18 36 16.3 -3.5**
AMBA Amambai (Brazi 161.86 129 *e*P **PKPdf** **18 36 17.9 -2.9**
ITTB Itaituba 162.40 66 *e*P **PKPdf** **18 36 18.7 -2.9**
AQDB Aquidauana 162.51 121 *e*P **PKPdf** **18 36 18.8 -2.7**
PTGB Pitanga 162.80 139 *e*P **PKPdf** **18 36 19.2 -2.6**
NPGB Novo Progresso 163.78 74 PKP **PKPdf** **18 36 25.9 +3.0**
NPGB Novo Progresso 163.78 74 *e*P **PKPdf** **18 36 20.0 -2.9**
SALV Santo Antonio 164.01 106 PKP **PKPdf** **18 36 28.6 +5.7**
SALV Santo Antonio 164.01 106 *e*P **PKPdf** **18 36 18.3 -4.6**
CLDB Colider 164.18 87 PKP **PKPdf** **18 36 27.9 +4.7**
CLDB Colider 164.18 87 *e*P **PKPdf** **18 36 18.4 -4.8**
PP1B Ponte de Pedra 164.32 112 *e*P **PKPdf** **18 36 20.3 -2.9**
ATM1 UHE Belo Monte 164.85 56 PKP **PKPdf** **18 36 26.6 +2.7**
TUC4 UHE Tucurui 167.57 52 PKP **PKPdf** **18 36 30.1 +4.1**
ARAG Araguaiana, MT 167.69 109 *e*P **PKPdf** **18 36 23.5 -2.5**
PRPB Parauapebas 168.44 61 *e*P **PKPdf** **18 36 23.1 -3.5**
SNDB Serra Nova Dou 168.66 91 *e*P **PKPdf** **18 36 22.8 -3.8**
IPMB Ipameri, GO 169.88 127 *e*P **PKPdf** **18 36 22.8 -4.6**
CAM01 Campos-RJ 170.09 169 PKP **PKPdf** **18 36 30.0 +2.7**
PAL01 Palmeiras do T 170.57 56 PKP **PKPdf** **18 36 32.3 +4.4**
PMNB Patos De Minas 170.84 136 PKP **PKPdf** **18 36 32.0 +4.1**
PMNB Patos De Minas 170.84 136 *e*P **PKPdf** **18 36 24.6 -3.3**
BDFB Brasilia 171.17 115 PKP **PKPdf** **18 36 28.4 +0.2**
comp=Z,2.4nm,0.5s,baz=105,slow=1.8,SNR=4.0
ALF01 Guarapari-ES 171.42 174 PKP **PKPdf** **18 36 30.0 +1.9**
SMTB Santa Maria do 171.62 69 PKP **PKPdf** **18 36 33.6 +5.2**
SMTB Santa Maria do 171.62 69 *e*P **PKPdf** **18 36 25.3 -3.1**
RIB01 Linhares ES 172.74 175 *e*P **PKPdf** **18 36 25.9 -2.8**
NBMA Muriti-CE 175.26 349 PKP **PKPdf** **18 36 34.0 +4.2**
CMC01 Camacan, BA 176.70 183 PKP **PKPdf** **18 36 33.8 +3.8**
NBPN Ponto Novo - B 178.72 22 PKP **PKPdf** **18 36 34.9 +4.5**

BJI ***06*** *18:19:07.6, 31°.55N×138°.02E, h375km, mB5.7/14, mb5.4/56*

*MOS **06** 18:19:07.8±0.7,31°.49N×138°.16E, h390km, mb5.5/66, Error ellipse: s-maj=7.0km s-min=4.0km az=111.7*
*JMA **06** 18:19:08.7±0.3,32°.2N×13°.8E±°, h406km±3km, MD5.5/37, MV5.1/37, NEAR TORISHIMA IS*
JMA Felt I J1 at NEAR TORISHIMA IS .
*NIED **06** 18:19:08.7,31°.56N×138°.36E, h406km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.87; $M_{\theta\theta}$0.99; $M_{\phi\phi}$-0.08; $M_{r\theta}$-1.81; $M_{\theta r}$-1.69; Fault plane solution: M_o2.96000×10^{17} NP1: ϕ_s105.00000°,δ40.00000°,λ-140.00000°. NP2: ϕ_s342.00000°,δ65.00000°,λ-57.00000°.*
*NEIC **06** 18:19:10.0±1.4,31°.53N±0°.06×138°.13E±0°.08, h389km±4km, mb5.3/206, Mww5.7/19 Error ellipse: s-maj=11.9km s-min=6.6km az=52.0*
*NEIC **06** 18:19:09.9,31°.52N×138°.12E, h388km*
*IDC **06** 18:19:09.3±0.4,31°.49N×138°.12E, h387km±4km, mb4.7/42, mbtmp5.4/48, Error ellipse: s-maj=8.3km s-min=5.0km az=83.0*
*NEIC **06** 18:19:10.5,31°.52N×138°.36E, h400km, Moment Tensor Solution. Duration: 3s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.60; $M_{\theta\theta}$2.09; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.36; $M_{\theta\phi}$-1.89; $M_{\phi r}$-2.73; Fault plane solution: M_o3.84000×10^{17} NP1:ϕ_s83.98000°, δ40.46000°,λ-154.95000°. NP2:ϕ_s334.40000°, δ74.05000°,λ-52.31000°. Principal axes: T 3.6815, Plg20.0000°, Azm37.0000°; N 0.2987, Plg36.0000°, Azm142.0000°; P -3.9801, Plg47.0000°, Azm284.0000°;*
*GFZ **06** 18:19:10.5±0.3,32°.N±4°×13°.8E±°, h396km±2km, M5.3/95, mb5.3/95, Mw6.2/19*
*BGR **06** 18:19:15.2,31°.90N×138°.40E, h419km±2km, mb5.4, mB_BB5.9*
ISC 06 18:19:09.7±0.3,31°.47N±0°.03×138°.17E±0°.03, h393km±2km, h393km:pP-P,n1226,σ1§41/1225, mb5.2/295, 68C-65D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.68**	**53**	*i* P		**Pn**	**18 20 03.0**	**-0.1**
JAOM				A		A	18 20 03.0	
	comp=N,94nm,5.8s,comp=E,226nm,2.5s							
JAOM				*e*S		**S**	**18 20 45.6**	**-0.7**
JHCJ	**Hachijojimakas**	**2.11**	**40**	*i* P		**Pn**	**18 20 05.2**	**-0.5**
JHCJ				A		A	18 20 05.2	
	comp=N,60nm,3.5s,comp=E,85nm,2.4s							
JHCJ				S		**S**	**18 20 49.4**	**-1.5**
JHJ	**Hachijo jima 2**	**2.14**	**39**	P		**Pn**	**18 20 05.4**	**-0.5**
	comp=E,2μm,0.4s,baz=334,slow=14,SNR=281							
JHJ				S		**S**	**18 20 50.2**	**-1.0**
	comp=E,3μm,0.3s,baz=70,slow=20,SNR=23							
JHJ2	**Mitsune**	**2.15**	**40**	P		**Pn**	**18 20 05.3**	**-0.6**
JHJ2	**Mitsune**	**2.15**	**40**	S		**S**	**18 20 50.5**	**-0.9**
JHJ2	**Mitsune**	**2.15**	**40**	Pn		**Pn**	**18 20 05.2**	**-0.8**
JHJ2				S		Sn	**18 20 48.3**	**-3.1**
JHJ2	**Mitsune**	**2.15**	**40**	P		**Pn**	**18 20 05.5**	**-0.4**
JHJ2	**Mitsune**	**2.15**	**40**	⇓*i* P		**Pn**	**18 20 05.4**	**-0.6**
JHJ2				A		A	18 20 05.4	
	comp=N,66nm,3.5s,comp=E,120nm,2.8s							
JHJ2				⇓S		**S**	**18 20 49.3**	**-2.1**
TTO1	**TONANKAI O.B.S**	**2.44**	**332**	⇓P		**Pn**	**18 20 08.8**	**+1.2**
JMKN	**Mikurajimanish**	**2.70**	**26**	P		**Pn**	**18 20 08.7**	**-1.1**
JMKN				A		A	18 20 08.7	
	comp=N,52nm,3.8s,comp=E,32nm,2.8s							
TTO5	**TONANKAI O.B.S**	**2.80**	**352**	A		A	18 20 10.7	
	comp=N,41nm,2.8s,comp=E,45nm,3.1s							
JKO	**Kozu shima**	**2.83**	**17**	P		**Pn**	**18 20 10.4**	**-0.5**
JKO				A		A	18 20 10.4	
	comp=N,54nm,2.4s,comp=E,78nm,3.5s							
JMYK	**Miyake Tsubota**	**2.83**	**24**	P		**Pn**	**18 20 09.9**	**-1.1**
JMYK				A		A	18 20 09.9	
	comp=N,70nm,3.3s,comp=E,47nm,2.8s							
JWKM	**Wakayamakushim**	**2.84**	**315**	A		A	18 20 11.9	
	comp=N,6.0nm,3.5s,comp=E,26nm,3.2s							
JMMH	**Miemihama**	**2.96**	**323**	A		A	18 20 12.6	
	comp=N,5.0nm,4.6s,comp=E,11nm,3.1s							
JNIO	**Nijimaoohara**	**3.02**	**18**	A		A	18 20 11.9	
	comp=N,44nm,4.9s,comp=E,95nm,2.8s							
JIE	**Ise**	**3.16**	**338**	⇓*i* P		**Pn**	**18 20 14.4**	**+0.8**
JIE				A		A	18 20 14.4	
	comp=N,9.0nm,3.0s,comp=E,7.0nm,4.4s							
JIE				⇓S		**S**	**18 21 06.2**	**+0.7**
JTNC	**Tanabenakahech**	**3.18**	**318**	⇓*i* P		**Pn**	**18 20 14.4**	**+0.5**
JTHY	**Toshimahigashi**	**3.19**	**17**	A		A	18 20 13.2	
	comp=N,67nm,4.1s,comp=E,42nm,4.4s							
JKN2	**Miekihoku**	**3.19**	**331**	⇓P		**Pn**	**18 20 14.3**	**+0.4**
JKN2				⇓S		**S**	**18 21 06.3**	**+0.5**
JSG	**Sagara**	**3.20**	**0**	P		**Pn**	**18 20 14.1**	**+0.2**
JSG	**Sagara**	**3.20**	**0**	S		**S**	**18 21 06.2**	**+0.2**
JSG	**Sagara**	**3.20**	**0**	Pn		**Pn**	**18 20 14.3**	**-0.6**
JSG	**Sagara**	**3.20**	**0**	P		**Pn**	**18 20 14.9**	**+1.0**
JSG	**Sagara**	**3.20**	**0**	A		A	18 20 13.7	
	comp=N,66nm,3.1s,comp=E,51nm,2.8s							
JAA	**Atsumi**	**3.27**	**345**	A		A	18 20 14.7	
	comp=N,18nm,3.0s,comp=E,4.0nm,8.1s							
JKKS	**Kakegawashinom**	**3.28**	**357**	A		A	18 20 14.3	
	comp=N,45nm,4.6s,comp=E,46nm,4.2s							
JIZS	**Izushimoda**	**3.29**	**10**	A		A	18 20 14.2	
	comp=N,21nm,3.3s,comp=E,41nm,6.0s							
JHMK	**Hamakita**	**3.35**	**354**	P		**Pn**	**18 20 15.4**	**+0.2**
JWM	**Minabe**	**3.35**	**316**	A		A	18 20 16.2	
	comp=N,9.0nm,3.4s,comp=E,11nm,3.3s							
HMMJ	**Hamamatsu 2**	**3.40**	**354**	P		**Pn**	**18 20 16.0**	**+0.3**
HMMJ				A		A	18 20 16.0	
	comp=N,16nm,4.9s,comp=E,12nm,2.6s							
HMMJ				*e*S		**S**	**18 21 08.5**	**-0.6**
JIM2	**Oshima 3**	**3.41**	**18**	A		A	18 20 15.0	
	comp=N,70nm,2.3s,comp=E,46nm,4.2s							
JHTM	**Izuhatsuma**	**3.55**	**11**	A		A	18 20 16.4	
	comp=N,55nm,2.0s,comp=E,66nm,3.8s							
SHZ3	**Shizuoka 3**	**3.59**	**1**	A		A	18 20 17.0	
	comp=N,25nm,2.9s,comp=E,34nm,2.8s							
JFNN	**Fujinakano**	**3.74**	**7**	A		A	18 20 18.2	
	comp=N,21nm,4.6s,comp=E,28nm,4.1s							
TATJ	**Tateyama 2**	**3.83**	**22**	A		A	18 20 18.7	
	comp=N,29nm,2.0s,comp=E,45nm,1.9s							
JOD2	**Odawara 2**	**3.86**	**11**	A		A	18 20 19.2	
	comp=N,17nm,5.2s,comp=E,24nm,3.6s							
JAO	**Obara**	**3.86**	**349**	A		A	18 20 19.8	
	comp=N,26nm,3.6s,comp=E,6.0nm,2.6s							
JNY	**Yasuok**	**3.89**	**356**	A		A	18 20 19.8	
	comp=N,30nm,2.4s,comp=E,31nm,2.5s							
JEG	**Eigenji**	**3.95**	**338**	A		A	18 20 20.9	
	comp=N,9.0nm,3.6s,comp=E,3.0nm,3.1s							
JYO	**Yokosk**	**3.95**	**18**	A		A	18 20 19.8	
	comp=N,26nm,2.0s,comp=E,30nm,4.4s							
JICN	**Ichinomiyachia**	**3.98**	**344**	A		A	18 20 21.0	
	comp=N,22nm,3.2s,comp=E,8.0nm,3.5s							
INU	**Inuyama**	**3.99**	**346**	P		**Pn**	**18 20 21.7**	**+0.6**
INU	**Inuyama**	**3.99**	**346**	S		**S**	**18 21 19.2**	**+0.1**
INU	**Inuyama**	**3.99**	**346**	Pn		**Pn**	**18 20 21.4**	**+0.3**
INU	**Inuyama**	**3.99**	**346**	P		**Pn**	**18 20 21.8**	**+0.7**
JYN	**Shimob**	**4.03**	**4**	A		A	18 20 20.9	
	comp=N,13nm,2.9s,comp=E,16nm,3.8s							
JKUC	**kamogawauchiur**	**4.05**	**24**	A		A	18 20 20.7	
	comp=N,32nm,1.8s,comp=E,52nm,1.7s							
JGF	**Kuroka**	**4.18**	**351**	P		**Pn**	**18 20 23.1**	**+0.1**
JGF	**Kuroka**	**4.18**	**351**	S		**S**	**18 21 22.5**	**0.0**
JGF	**Kuroka**	**4.18**	**351**	Pn		**Pn**	**18 20 22.9**	**-0.1**
JGF	**Kuroka**	**4.18**	**351**	P		**Pn**	**18 20 23.1**	**+0.1**
JGF	**Kuroka**	**4.18**	**351**	A		A	18 20 22.7	
	comp=N,20nm,4.7s,comp=E,8.0nm,4.1s							
JSGW	**Sagamiharawaka**	**4.21**	**12**	A		A	18 20 22.4	
	comp=N,12nm,7.1s,comp=E,15nm,5.0s							
JMIK	**Miki**	**4.23**	**323**	A		A	18 20 24.1	
	comp=N,7.0nm,6.4s,comp=E,6.0nm,4.3s							
JMN	**Monobe**	**4.26**	**303**	P		**Pn**	**18 20 25.1**	**+1.2**
JMN	**Monobe**	**4.26**	**303**	S		**S**	**18 21 24.4**	**+0.3**
JMN	**Monobe**	**4.26**	**303**	P		**Pn**	**18 20 25.2**	**+1.4**
JMN	**Monobe**	**4.26**	**303**	A		A	18 20 25.0	
	comp=N,13nm,4.7s,comp=E,7.0nm,3.2s							
JCCN	**Chibachonan**	**4.27**	**23**	A		A	18 20 22.7	
	comp=N,38nm,5.3s,comp=E,62nm,2.7s							
JYTA	**Yamagatataniai**	**4.28**	**344**	A		A	18 20 23.9	
	comp=N,10.0nm,5.4s,comp=E,7.0nm,5.3s							
JNT	**Takato**	**4.39**	**360**	A		A	18 20 24.5	
	comp=N,14nm,11.2s,comp=E,12nm,4.0s							
TOK	**Tokyo**	**4.41**	**17**	A		A	18 20 24.2	
	comp=N,34nm,4.3s,comp=E,30nm,2.2s							
JKHR	**Kochiharuno**	**4.44**	**299**	A		A	18 20 26.8	
	comp=N,15nm,4.4s,comp=E,5.0nm,3.8s							
JFM	**Mihama**	**4.44**	**336**	A		A	18 20 25.7	
	comp=N,7.0nm,7.5s,comp=E,4.0nm,2.4s							
JHU2	**Hanno**	**4.46**	**12**	A		A	18 20 24.8	
	comp=N,12nm,5.0s,comp=E,13nm,4.8s							
JRY	**Ryogami san**	**4.58**	**7**	A		A	18 20 26.1	
	comp=N,17nm,4.0s,comp=E,18nm,3.9s							
JJS	**Sakaide**	**4.59**	**310**	A		A	18 20 28.0	
	comp=N,8.0nm,4.7s,comp=E,3.0nm,3.0s							
JGN	**Niukaw**	**4.79**	**352**	A		A	18 20 28.8	
	comp=N,11nm,6.9s,comp=E,3.0nm,6.7s							
JCAJ	**Choshiashikaji**	**4.80**	**27**	A		A	18 20 27.8	
	comp=N,31nm,2.8s,comp=E,38nm,4.2s							
JKY	**Yasaka**	**4.87**	**329**	A		A	18 20 30.2	
	comp=N,6.0nm,3.5s,comp=E,6.0nm,5.3s							
JIHU	**Itakohorinouch**	**4.90**	**23**	A		A	18 20 28.9	
	comp=N,37nm,1.8s,comp=E,59nm,4.7s							
JNG	**Nsakai**	**4.92**	**359**	A		A	18 20 29.9	
	comp=N,11nm,6.2s,comp=E,13nm,3.0s							
UWA2	**Uwa jima 2**	**5.00**	**292**	A		A	18 20 32.8	
	comp=N,11nm,5.8s,comp=E,8.0nm,3.5s							
JKG	**Kaga**	**5.03**	**343**	A		A	18 20 31.5	
	comp=N,20nm,3.7s,comp=E,8.0nm,6.0s							
JYT	**Yasato**	**5.04**	**19**	A		A	18 20 30.5	
	comp=N,17nm,1.2s,comp=E,28nm,0.4s							
JKSM	**Kasumi**	**5.04**	**325**	A		A	18 20 32.2	
	comp=N,4.0nm,3.7s,comp=E,4.0nm,5.8s							
JAG	**Ashikaga**	**5.06**	**12**	A		A	18 20 30.9	
	comp=N,10.0nm,2.3s,comp=E,13nm,3.3s							
MJAR	**Matsushiro Arr**	**5.06**	**0**	P		**Pn**	**18 20 30.5**	**-1.4**
	comp=E,600nm,0.4s,baz=174,slow=11,SNR=1911							
MJAR				S		**S**	**18 21 36.8**	**-1.9**
	comp=E,48nm,0.5s,baz=172,slow=12,SNR=4.2							
MAJO	**Matsushiro**	**5.06**	**0**	P		**Pn**	**18 20 30.7**	**-1.2**
MAJO	**Matsushiro**	**5.06**	**0**	Pn		**Pn**	**18 20 30.8**	**-1.1**
MAJO	**Matsushiro**	**5.06**	**0**	*i* P		**Pn**	**18 20 30.4**	**-1.5**
MAJO	**Matsushiro**	**5.06**	**0**	P		**Pn**	**18 20 31.0**	**-0.9**
MJB9	**Matsu-Tunnel**	**5.06**	**0**	Pn		**Pn**	**18 20 31.8**	**-0.2**
JGK	**Kuni**	**5.09**	**4**	A		A	18 20 31.5	
	comp=N,13nm,5.1s,comp=E,10.0nm,5.3s							
JTT	**Ttatey**	**5.17**	**353**	A		A	18 20 32.6	
	comp=N,24nm,4.3s,comp=E,9.0nm,3.6s							
JNA	**Nagahama**	**5.24**	**295**	A		A	18 20 35.1	
	comp=N,11nm,4.9s,comp=E,7.0nm,3.9s							
JHYU	**Hitachinakayam**	**5.26**	**22**	A		A	18 20 32.7	
	comp=N,29nm,2.6s,comp=E,36nm,4.2s							
JJG	**Jouge**	**5.26**	**308**	A		A	18 20 35.0	
	comp=N,11nm,4.4s,comp=E,2.0nm,4.5s							
JKR	**Kurayoshi**	**5.33**	**318**	A		A	18 20 35.4	
	comp=N,9.0nm,3.5s,comp=E,10.0nm,4.5s							
JKT	**Kashina**	**5.36**	**9**	A		A	18 20 34.1	
	comp=N,11nm,1.7s,comp=E,10.0nm,1.4s							
JSKE	**Saikikamae**	**5.48**	**286**	A		A	18 20 37.9	
	comp=N,10.0nm,4.0s,comp=E,7.0nm,3.7s							
JHO	**Hitachi**	**5.50**	**21**	A		A	18 20 35.2	
	comp=N,13nm,3.1s,comp=E,19nm,5.1s							
JJH	**Hakui**	**5.56**	**348**	A		A	18 20 36.8	
	comp=N,10.0nm,8.7s,comp=E,8.0nm,6.1s							
CBIJ	**Chichi jima**	**5.59**	**140**	A		A	18 20 37.2	
	comp=N,41nm,1.2s,comp=E,58nm,1.0s							
JCJ	**Chichijima**	**5.59**	**140**	P		Pn	18 20 32.9	-4.9
	comp=E,862nm,0.4s,baz=86,slow=23,SNR=185							
JCJ				S		**S**	**18 21 40.8**	**-8.5**
	comp=E,12μm,0.4s,baz=118,slow=23,SNR=48							
JCJ	**Chichijima**	**5.59**	**140**	P		**Pn**	**18 20 35.7**	**-2.1**
JCJ	**Chichijima**	**5.59**	**140**	Pn		**Pn**	**18 20 34.1**	**-3.6**
JCJ						**S**	**18 21 40.8**	**-8.5**
JJN	**Nakama**	**5.62**	**360**	A		A	18 20 37.1	
	comp=N,14nm,5.7s,comp=E,7.0nm,4.4s							
JHHC	**Hyugahichiya**	**5.62**	**282**	A		A	18 20 39.6	
	comp=N,10.0nm,4.6s,comp=E,5.0nm,2.9s							
JUS	**Usuki**	**5.66**	**288**	A		A	18 20 39.8	
	comp=N,12nm,4.1s,comp=E,9.0nm,3.8s							
JSB	**Shiboa**	**5.67**	**14**	A		A	18 20 37.2	
	comp=N,25nm,4.9s,comp=E,28nm,4.4s							
JTSN	**Tsuno**	**5.72**	**280**	A		A	18 20 40.6	
	comp=N,8.0nm,3.8s,comp=E,8.0nm,6.2s							
JUON	**Uonuma**	**5.77**	**7**	A		A	18 20 38.5	
	comp=N,7.0nm,4.0s,comp=E,8.0nm,5.0s							
JHT	**Toyohira**	**5.78**	**305**	A		A	18 20 40.6	
	comp=N,8.0nm,3.8s,comp=E,3.0nm,7.0s							
JNAR	**Kushima--Naru**	**5.89**	**272**	A		A	18 20 42.6	
	comp=N,12nm,4.6s,comp=E,14nm,4.1s							
JKD	**Kudamatsu**	**5.89**	**298**	A		A	18 20 42.1	
	comp=N,13nm,4.6s,comp=E,11nm,4.2s							
JGT2	**ShimaneMisato**	**5.94**	**309**	A		A	18 20 42.2	
	comp=N,18nm,4.0s,comp=E,9.0nm,2.9s							
JFFD	**Fukushimafurud**	**5.95**	**19**	A		A	18 20 40.0	
	comp=N,28nm,2.8s,comp=E,18nm,4.5s							
JHH2	**Haha-jima-NKT2**	**5.96**	**143**	A		A	18 20 41.2	
	comp=N,60nm,0.3s,comp=E,56nm,0.5s							
JKI	**Kunimi**	**5.97**	**293**	A		A	18 20 43.1	
	comp=N,19nm,3.9s,comp=E,15nm,4.5s							
JISK	**Izumosakaura**	**5.99**	**314**	A		A	18 20 42.6	
	comp=N,8.0nm,6.7s,comp=E,11nm,4.7s							
JBEP	**Beppuamama**	**6.01**	**290**	A		A	18 20 43.5	
	comp=N,23nm,3.9s,comp=E,11nm,22.3s							
ONAJ	**Iwakimizuishiy**	**6.03**	**20**	A		A	18 20 40.9	
	comp=N,28nm,2.4s,comp=E,29nm,3.8s							
JTZ	**Takazaki**	**6.05**	**276**	A		A	18 20 44.2	
	comp=N,13nm,7.8s,comp=E,14nm,4.1s							
JFY	**Yanaizu**	**6.06**	**12**	A		A	18 20 41.4	
	comp=N,8.0nm,3.1s,comp=E,11nm,2.4s							
JIZZ	**Izumozaki**	**6.06**	**4**	A		A	18 20 41.6	
	comp=N,16nm,4.2s,comp=E,13nm,2.7s							
JHIK	**Hikimi**	**6.07**	**302**	A		A	18 20 43.8	
	comp=N,7.0nm,7.2s,comp=E,7.0nm,4.0s							
JFK	**Kawauchi**	**6.29**	**20**	A		A	18 20 43.8	
	comp=N,31nm,2.3s,comp=E,27nm,3.6s							
JOTO	**OTAMA OYAMA**	**6.33**	**16**	A		A	18 20 44.2	
	comp=N,24nm,2.0s,comp=E,26nm,2.3s							
JIU3	**Izumi3**	**6.34**	**282**	A		A	18 20 47.2	
	comp=N,12nm,5.2s,comp=E,16nm,4.8s							
JNU	**Nakatsue**	**6.39**	**287**	A		A	18 20 47.8	
	comp=N,9.0nm,4.5s,comp=E,10.0nm,5.1s							
JNS	**Sasagawa**	**6.40**	**0**	A		A	18 20 45.2	
	comp=N,8.0nm,4.2s,comp=E,5.0nm,5.1s							
JHG	**Hegura jima**	**6.45**	**351**	A		A	18 20 46.2	
	comp=N,11nm,3.1s,comp=E,4.0nm,7.9s							
JZO	**Okuchi**	**6.48**	**278**	A		A	18 20 49.0	
	comp=N,7.0nm,4.8s,comp=E,17nm,4.6s							
JSU	**Suzuyama**	**6.59**	**272**	P		**P**	**18 20 50.1**	**+0.8**
JTY	**Toyota**	**6.59**	**297**	A		A	18 20 49.8	
	comp=N,8.0nm,4.4s,comp=E,7.0nm,4.8s							
JYAR	**Yonezawaarcadi**	**6.63**	**14**	A		A	18 20 47.6	
	comp=N,16nm,2.2s,comp=E,11nm,2.7s							
JTA	**Tamana**	**6.64**	**285**	A		A	18 20 50.6	
	comp=N,6.0nm,5.6s,comp=E,12nm,5.2s							
JMM	**Marumori**	**6.74**	**18**	A		A	18 20 48.7	
	comp=N,20nm,3.4s,comp=E,11nm,2.1s							
JHGM	**Hagimishima**	**6.76**	**301**	A		A	18 20 51.4	
	comp=N,10.0nm,5.6s,comp=E,15nm,4.6s							
JFI	**Itaya**	**6.86**	**289**	A		A	18 20 53.0	
	comp=N,7.0nm,4.5s,comp=E,8.0nm,4.3s							
JHD	**Hondo**	**6.90**	**280**	A		A	18 20 53.6	
	comp=N,10.0nm,4.0s,comp=E,12nm,4.2s							
JYS	**Shirataka**	**6.91**	**13**	A		A	18 20 50.8	
	comp=N,20nm,5.6s,comp=E,18nm,1.8s							
JOU	**Okura**	**7.18**	**16**	A		A	18 20 53.7	
	comp=N,18nm,2.3s,comp=E,24nm,2.5s							
JYA	**Atsumi**	**7.22**	**10**	A		A	18 20 54.2	
	comp=N,10.0nm,2.2s,comp=E,7.0nm,2.6s							
JIKH	**Ishinomakikobu**	**7.34**	**21**	A		A	18 20 55.4	
	comp=N,8.0nm,5.1s,comp=E,6.0nm,2.3s							
JOFO	**Osakifurukawao**	**7.46**	**17**	A		A	18 20 56.9	
	comp=N,48nm,3.3s,comp=E,45nm,2.2s							
JYK	**Kaneyama**	**7.64**	**13**	A		A	18 20 59.0	
	comp=N,12nm,2.4s,comp=E,6.0nm,2.7s							
JYYZ	**Yamagatayuza**	**7.67**	**10**	A		A	18 20 59.2	
	comp=N,24nm,2.6s,comp=E,23nm,3.4s							
JTB	**Tobi-shima**	**7.79**	**8**	A		A	18 21 00.8	
	comp=N,10.0nm,3.6s,comp=E,8.0nm,10.3s							
JKMT	**Kesennumamotoy**	**7.81**	**19**	A		A	18 21 00.7	
	comp=N,6.0nm,4.2s,comp=E,7.0nm,11.9s							
JTU	**Tsushima**	**7.97**	**295**	P		**P**	**18 21 05.0**	**+0.3**
JTU	**Tsushima**	**7.97**	**295**	S		**S**	**18 22 38.7**	**+0.8**
JTU	**Tsushima**	**7.97**	**295**	P		**P**	**18 21 05.7**	**+1.0**
JTU	**Tsushima**	**7.97**	**295**	A		A	18 21 05.3	
	comp=N,4.0nm,5.8s,comp=E,5.0nm,3.6s							
OFUJ	**Ofunato**	**8.11**	**20**	A		A	18 21 04.2	
	comp=N,7.0nm,2.5s,comp=E,11nm,2.3s							
JRG	**Rokugo**	**8.16**	**14**	A		A	18 21 04.8	
	comp=N,13nm,2.7s,comp=E,10.0nm,3.4s							
JMZ	**Minamidaito 2**	**8.30**	**229**	P		**P**	**18 21 10.2**	**+1.5**
JOM	**Ohasama**	**8.38**	**17**	A		A	18 21 07.2	
	comp=N,8.0nm,2.5s,comp=E,10.0nm,2.9s							
JSZI	**Iwateshizukuis**	**8.56**	**15**	A		A	18 21 09.3	
	comp=N,42nm,2.2s,comp=E,30nm,2.3s							
JNTW	**Noshirotokiwa**	**8.93**	**10**	A		A	18 21 13.8	
	comp=N,23nm,4.0s,comp=E,20nm,3.0s							
JKEN	**Kujiedanarisaw**	**9.18**	**17**	A		A	18 21 16.5	
	comp=N,11nm,1.8s,comp=E,15nm,1.7s							
JIW	**Iwasaki**	**9.22**	**9**	A		A	18 21 17.3	
	comp=N,6.0nm,10.4s,comp=E,3.0nm,5.1s							
JANG	**Nango**	**9.29**	**16**	A		A	18 21 17.8	
	comp=N,8.0nm,2.6s,comp=E,14nm,2.2s							
JHHS	**Hirosakihyakuz**	**9.33**	**10**	A		A	18 21 18.5	
	comp=N,17nm,6.6s,comp=E,15nm,6.1s							
JTM	**Tenmabayashi**	**9.59**	**13**	P		**P**	**18 21 20.8**	**-2.0**
JTM	**Tenmabayashi**	**9.59**	**13**	S		**S**	**18 23 09.7**	**-2.3**
JTM	**Tenmabayashi**	**9.59**	**13**			**P**	**18 21 21.8**	**-1.0**
JTM	**Tenmabayashi**	**9.59**	**13**	P		**P**	**18 21 21.7**	**-1.0**
JTM	**Tenmabayashi**	**9.59**	**13**	A		A	18 21 21.4	
	comp=N,12nm,5.1s,comp=E,14nm,3.6s							
JOW	**Kunigami**	**9.80**	**244**	P		**Pn**	**18 21 26.2**	**+0.7**
	comp=E,175nm,0.5s,baz=13,slow=6.1,SNR=18							
JOW				S		**S**	**18 23 14.0**	**-2.8**
	comp=E,36nm,0.9s,baz=47,slow=15,SNR=1.1							
JOW	**Kunigami**	**9.80**	**244**	P		**Pn**	**18 21 27.5**	**+2.0**
JOW	**Kunigami**	**9.80**	**244**	S		**S**	**18 23 17.7**	**+0.9**
JOW	**Kunigami**	**9.80**	**244**	P		**P**	**18 21 25.1**	**-0.3**
JOW				S		**S**	**18 23 14.0**	**-2.8**
JARK	**Aomorirokkasho**	**9.86**	**14**	A		A	18 21 24.5	
	comp=N,13nm,2.4s,comp=E,5.0nm,4.2s							
JAHD	**Aomorihigashid**	**10.10**	**14**	A		A	18 21 27.3	
	comp=N,13nm,4.3s,comp=E,7.0nm,2.7s							
JOT	**Ohata**	**10.16**	**12**	A		A	18 21 28.0	
	comp=N,4.0nm,4.0s,comp=E,9.0nm,3.2s							
JSR	**Shiriuchi**	**10.20**	**10**	A		A	18 21 28.6	
	comp=N,7.0nm,3.8s,comp=E,7.0nm,5.2s							
TJN	**Taejon**	**10.22**	**302**	P		**Pn**	**18 21 30.3**	**0.0**
TJN	**Taejon**	**10.22**	**302**	S		**S**	**18 23 26.7**	**+1.6**
TJN	**Taejon**	**10.22**	**302**			**P**	**18 21 29.8**	**-0.1**
TJN	**Taejon**	**10.22**	**302**	*i* P		**Pn**	**18 21 30.2**	**0.0**
KSRS	**Korea Array**	**10.35**	**308**	P		**Pn**	**18 21 31.5**	**-0.2**
	comp=E,74nm,0.6s,baz=123,slow=11,SNR=293							
KSRS				S		**S**	**18 23 25.6**	**-2.1**
	comp=E,4.0nm,0.8s,baz=318,slow=47,SNR=1.5							
KSRS				ScP		**ScP**	**18 29 53.6**	**+1.1**
	comp=E,3.2nm,0.8s,baz=216,slow=0.2,SNR=7.5							
KSAR	**Wonju Array Be**	**10.37**	**308**	P		**P**	**18 21 31.4**	**-0.1**
KSAR	**Wonju Array Be**	**10.37**	**308**	P		**P**	**18 21 31.4**	**-0.1**
KS19	**Wonju Array Si**	**10.41**	**308**	P		**P**	**18 21 31.9**	**-0.1**
JYM2	**Yakumo 2**	**10.77**	**9**	A		A	18 21 35.3	
	comp=N,13nm,2.7s,comp=E,7.0nm,2.6s							
JHST	**Hiyamasetana**	**11.02**	**7**	A		A	18 21 38.2	
	comp=N,13nm,2.8s,comp=E,12nm,3.1s							
INCN	**Inchon**	**11.25**	**305**	P		**Pn**	**18 21 41.9**	**-0.3**
INCN	**Inchon**	**11.25**	**305**	S		**S**	**18 23 46.7**	**+0.4**
INCN	**Inchon**

CN2 S **S** **18 25 16.8 -2.4**
CN2 PcP **PcP** **18 27 05.5 +0.5**
CN2 ScP **ScP** **18 30 01.2 -0.2**
CN2 ScS **ScS** **18 33 40.3 0.0**
CN2 pmax pmax
comp=E,90nm,1.4s
CN2 pmax pmax
comp=E,1µm,3.0s
TATO Taipei 16.05 250 P **P** **18 22 34.0 +0.1**
TATO Taipei 16.05 250 P **P** **18 22 33.0 -0.9**
YHNB Yeheng 16.29 250 P **P** **18 22 36.2 -0.3**
YHNB Yeheng 16.29 250 P **P** **18 22 35.6 0.9**
NACB Ninganchiao 16.35 248 P **P** **18 22 36.7 -0.4**
NACB Ninganchiao 16.35 248 S **S** **18 25 30.6 +1.8**
NJ2 Nanjing 16.44 277 ⇑P **P** **18 22 37.4 -0.6**
NJ2 pmax pmax
comp=E,160nm,0.8s
BNX BinXian 16.52 333 ⇑P **P** **18 22 37.9 -0.7**
BNX S **S** **18 25 29.5 -2.1**
BNX pmax pmax
comp=E,420nm,1.1s
YULB Yu-li 16.99 246 P **P** **18 22 43.9 0.0**
YULB Yu-li 16.99 246 P **P** **18 22 42.7 -1.3**
SSLB Suanglung 17.05 248 P **P** **18 22 44.8 +0.2**
TWGBT Beinan 17.46 245 P **P** **18 22 48.5 -0.5**
TWGBT Beinan 17.46 245 S **S** **18 25 51.6 +1.0**
TWG Pinlang 17.47 245 P **P** **18 22 48.1 -0.9**
TPUB Ta-pu 17.56 247 P **P** **18 22 50.6 +0.6**
TPUB Ta-pu 17.56 247 P **P** **18 22 49.2 -0.8**
UGL Uglegorsk 17.83 8⇑*e*P **P** **18 22 52.9 +0.4**
UGL *e*S **S** **18 25 57.6 +0.6**
UGL pmax pmax
comp=Z,2µm,4.5s
UGL pmax pmax
comp=Z,355nm,0.9s
UGL smax smax
comp=E,9µm,9.7s
UGL smax smax
comp=N,7µm,9.5s
TIA Tai'an 18.10 291 P **P** **18 22 53.8 -1.8**
TIA pmax pmax
comp=N,130nm,1.3s
KLR Kul'dur 18.39 347 P **P** **18 22 57.5 -1.0**
comp=N,46nm,0.6s,baz=159,slow=9.7,SNR=62
KLR S **S** **18 26 04.4 -2.9**
comp=N,11nm,0.8s,baz=188,slow=5.4,SNR=1.3
KLR Kul'dur 18.39 347*ce*P **P** **18 22 57.0 -1.5**
KLR pmax pmax
comp=Z,31nm,1.7s
KNMB Chin-men Tao 18.80 253 P **P** **18 23 01.8 -1.3**
GRNR Gornyy 19.33 357⇑*i*P **P** **18 23 07.7 -0.4**
GRNR pmax pmax
comp=Z,40nm,0.7s
TYV Tymovskoe 19.66 8 *e*P **P** **18 23 11.5 +0.3**
TYV *e*S **S** **18 26 25.7 -3.1**
TYV pmax pmax
comp=Z,2µm,3.9s
TYV pmax pmax
comp=Z,155nm,1.1s
TYV smax smax
comp=N,2µm,4.9s
TYV smax smax
comp=E,1µm,4.9s
TYV smax smax
comp=N,65nm,1.8s
TYV smax smax
comp=E,49nm,1.8s
BJI2 Beijing 19.75 302 P **P** **18 23 10.3 -1.9**
BJI2 S **S** **18 26 31.3 +0.7**
BJI2 pmax pmax
comp=E,27nm,0.7s
BJI2 pmax pmax
comp=E,690nm,3.2s
BJT Baijiatuan 19.75 302 P **P** **18 23 10.6 -1.6**
BJT Baijiatuan 19.75 302 P **P** **18 23 10.8 -1.4**
BJT Baijiatuan 19.75 302 S **S** **18 26 31.5 +0.9**
BJT Baijiatuan 19.75 302 lAmb lAmb 18 23 16.2
comp=Z,162nm,1.1s
BJT Baijiatuan 19.75 302 pmax pmax
comp=Z,162nm,1.1s
BJT Baijiatuan 19.75 302 P **P** **18 23 10.2 -2.1**
BJT Baijiatuan 19.75 302 MLR MLR
comp=Z,16µm,20.0s
BJT Baijiatuan 19.75 302 P **P** **18 23 10.2 -2.1**
HEH HeiHe 20.41 340 *e*P **P** **18 23 17.6 -0.6**
HEH S **S** **18 26 39.0 -2.0**
HEH pmax pmax
comp=Z,150nm,1.7s
HEH pmax pmax
comp=Z,1µm,5.0s
WHN Wuhan 20.43 274 P **P** **18 23 18.2 -0.4**
WHN S **S** **18 26 46.0 +4.2**
WHN pmax pmax
comp=Z,980nm,1.6s
LYN LuoYang 21.75 285 P **P** **18 23 26.9 -3.7**
LYN S **S** **18 26 55.9 -7.1**
LYN pmax pmax
comp=Z,180nm,1.6s
HIA Hailar 22.55 327 P **P** **18 23 37.9 +0.2**
HILR Hailar Array B 22.75 328 P **P** **18 23 39.7 +0.2**
comp=Z,213nm,0.8s,baz=129,slow=11,SNR=90
HILR ScP **ScP** **18 30 17.8 +0.6**
comp=Z,5.7nm,0.6s,baz=123,slow=5.5,SNR=4.0
comp=Z,213nm,0.8s
HHC Hu-ho-hao-te 23.36 301 *e*P **P** **18 23 43.0 -2.2**
HHC pmax pmax
comp=Z,140nm,0.9s
HHC pmax pmax
comp=Z,1µm,4.5s
ZEA Zeya 23.61 344 *e*P **P** **18 23 47.3 +0.2**
ZEA *e* 18 34 05.5
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,60nm,1.0s
BTO2 Baotou 24.57 300 *e*P **P** **18 23 56.3 +0.2**
BTO2 sP **sP** **18 25 48.6 -3.1**
BTO2 pmax pmax
comp=Z,580nm,0.9s
BTO2 pmax pmax
comp=Z,5µm,4.4s
ENH Enshi 24.62 275 P **P** **18 23 55.5 -1.0**
XAN Xi'an 24.69 284 P **P** **18 23 56.6 -0.6**
XAN sP sP 18 25 43.8 -9.0
XAN S **S** **18 27 50.3 +0.6**
XAN pmax pmax
comp=Z,150nm,1.4s
PEA0B Petropavlovsk- 25.85 28*ce*P **P** **18 24 07.7 +0.6**
PETK Petropavlovsk- 25.85 28 P **P** **18 24 07.6 +0.5**
comp=Z,48nm,1.0s,baz=225,slow=6.5,SNR=42
PETK ScP **ScP** **18 30 24.8 -0.9**
comp=Z,5.3nm,0.6s,baz=200,slow=2.0,SNR=10
comp=Z,48nm,1.0s
PET Petropavlovsk 26.17 29 P **P** **18 24 10.3 +0.4**
PET Petropavlovsk 26.17 29*ce*P **P** **18 24 10.4 +0.5**
PET pmax pmax
comp=Z,262nm,1.7s
PET Petropavlovsk 26.17 29 P **P** **18 24 09.3 -0.6**
comp=Z,4µmcomp=Z,145nm,1.6s
PET Petropavlovsk 26.17 29 P **P** **18 24 10.0 +0.1**
CIT Chita 27.32 326 *e*P **P** **18 24 20.3 +0.1**
CIT *e* 18 25 32.5
CIT *e* 18 34 18.9
CIT pmax pmax
comp=Z,1µm,3.4s
ULN Ulaanbaatar 28.76 314 lAmb lAmb 18 24 34.7
comp=Z,198nm,1.0s
ULN Ulaanbaatar 28.76 314 *i* P **P** **18 24 32.5 -0.6**
ULN pmax pmax
comp=Z,140nm,1.3s
ULN Ulaanbaatar 28.76 314 ⇓P **P** **18 24 33.2 +0.1**
ULN Ulaanbaatar 28.76 314 P **P** **18 24 33.0 -0.1**
ULN Ulaanbaatar 28.76 314 P **P** **18 24 32.9 -0.2**
LZH Lanzhou 28.81 289 *e*P **P** **18 24 33.1 -0.6**
LZH sP sP 18 26 27.8 -2.4
LZH pmax pmax
comp=Z,120nm,1.2s
LZDM Lanzhou Array 28.93 288 P **P** **18 24 33.6 -1.4**
comp=Z,64nm,0.8s,baz=123,slow=5.5,SNR=13
LZDM ScP **ScP** **18 30 36.4 +0.5**
comp=Z,11nm,0.6s,baz=132,slow=2.1,SNR=6.3
comp=Z,64nm,0.8s
SONM Songino Array 29.15 313 P **P** **18 24 36.5 -0.1**
comp=Z,76nm,0.7s,baz=118,slow=7.8,SNR=318
SONM PcP **PcP** **18 27 32.7 +0.1**
comp=Z,12nm,0.6s,baz=129,slow=2.2,SNR=7.9
SONM ScP **ScP** **18 30 36.2 +0.1**
comp=Z,11nm,0.9s,baz=136,slow=4.3,SNR=8.3
comp=Z,76nm,0.7s
SONM Songino Array 29.15 313 lAmb lAmb 18 24 38.0
comp=Z,96nm,0.9s
SONM Songino Array 29.15 313 P **P** **18 24 36.5 -0.1**
SONM Songino Array 29.15 313 P **P** **18 24 36.0 -0.5**
SONM pmax pmax
comp=Z,96nm,0.9s
SONM Songino Array 29.15 313 P **P** **18 24 36.0 -0.5**
MA2 Magadan 29.36 13 P **P** **18 24 38.3 +0.4**
comp=Z,175nm,0.7s,baz=199,slow=8.2,SNR=89
comp=Z,175nm,0.7s
MA2 Magadan 29.36 13 P **P** **18 24 37.9 -0.1**
MA2 Magadan 29.36 13 S **S** **18 29 03.3 +1.3**
MA2 Magadan 29.36 13 P **P** **18 24 37.9 -0.1**
MA2 Magadan 29.36 13*ce*P **P** **18 24 38.8 +0.8**
MA2 pmax pmax
comp=Z,216nm,0.7s
MA2 Magadan 29.36 13 P **P** **18 24 37.2 -0.8**
comp=Z,3µmcomp=Z,312nm,1.1s
MA2 Magadan 29.36 13 P **P** **18 24 38.3 +0.4**
CD2 Chengdu 29.37 278 P **P** **18 24 38.7 +0.1**
CD2 pmax pmax
comp=Z,170nm,0.6s
YAK Yakutsk 31.07 352 P **P** **18 24 52.1 -0.7**
comp=Z,31nm,0.7s,baz=149,slow=1.9,SNR=33
comp=Z,31nm,0.7s
YAK Yakutsk 31.07 352 P **P** **18 24 51.5 -1.3**
YAK Yakutsk 31.07 352 *e*P **P** **18 24 50.8 -2.0**
YAK *e* 18 26 18.8
YAK *e* 18 27 33.4
YAK *e*S **S** **18 29 24.1 -4.3**
YAK *e**SS **SS** **18 31 51.8 -10**
YAK *e* 18 34 36.2
YAK pmax pmax
comp=Z,45nm,1.0s
YAK pmax pmax
comp=N,20nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,1µm,5.8s
YAK pmax pmax
comp=N,1µm,6.2s
YAK pmax pmax
comp=E,260nm,3.2s
YAK smax smax
comp=E,1µm,5.9s
YAK smax smax
comp=N,544nm,3.3s
YAK Yakutsk 31.07 352 P **P** **18 24 52.2 -0.6**
YAK Yakutsk 31.07 352 PcP **PcP** **18 27 35.8 -1.4**
YAK ScP **ScP** **18 30 41.7 -0.3**
BOD Bodaibo 31.12 335 *e*P **P** **18 24 52.2 -1.2**
BOD pmax pmax
comp=Z,161nm,2.8s
GTA2 Gaotai 32.09 295 P **P** **18 25 02.1 -0.1**
GTA2 pmax pmax
comp=Z,160nm,0.8s
PZH PanZhiHua 32.15 271 P **P** **18 25 03.2 +0.4**
SLVN Son La 32.19 260 P **P** **18 25 03.3 +0.1**
SLVN Son La 32.19 260 S **S** **18 29 48.6 +1.6**
SLVN Son La 32.19 260 P **P** **18 25 03.5 +0.3**
SLVN lAmb lAmb 18 25 08.3
comp=Z,236nm,2.0s
TNTI Ternate 32.20 201 P **P** **18 25 02.9 -0.3**
TNTI Ternate 32.20 201 S **S** **18 29 49.0 +2.0**
TNTI Ternate 32.20 201 P **P** **18 25 01.8 -1.4**
TNTI lAmb lAmb 18 25 05.4
comp=Z,119nm,1.1s
TLY Talaya 32.35 319 P **P** **18 25 04.4 +0.3**
comp=Z,40nm,0.7s,baz=123,slow=8.1,SNR=32
comp=Z,40nm,0.7s
TLY Talaya 32.35 319*ce*P **P** **18 25 05.1 +1.0**
TLY pmax pmax
comp=Z,53nm,0.7s
TLY Talaya 32.35 319 ⇑P **P** **18 25 04.7 +0.6**
TLY Talaya 32.35 319 P **P** **18 25 04.7 +0.6**
TLY PcP **PcP** **18 27 42.1 +1.1**
TLY ScP **ScP** **18 30 47.2 +0.6**
TLY Talaya 32.35 319 P **P** **18 25 04.5 +0.5**
SEY Seymchan 32.77 12*ce*P **P** **18 25 08.3 +0.8**
SEY pmax pmax
comp=Z,59nm,1.7s
SIJI Sorong 32.82 193 P **P** **18 25 08.5 0.0**
comp=Z,69nm,0.9s,baz=359,slow=15,SNR=15
SIJI ScP **ScP** **18 30 49.4 +0.6**
comp=Z,15nm,0.7s,baz=76,slow=2.0,SNR=6.4
comp=Z,69nm,0.9s
SIJI Sorong 32.82 193 P **P** **18 25 07.8 -0.8**
comp=Z,105nm,1.0s
DLV Lat 33.56 241 P **P** **18 25 15.2 +0.1**
MOY Mondy 33.85 318 *e*P **P** **18 25 17.1 0.0**
MOY pmax pmax
comp=Z,579nm,3.3s
JAY Jayapura 33.88 175 P **P** **18 25 18.1 +0.5**
comp=Z,31nm,0.6s,baz=14,slow=4.4,SNR=8.0
comp=Z,31nm,0.6s
TOLI2 Tolitoli 34.38 212 P **P** **18 25 20.9 -0.9**
TOLI2 Tolitoli 34.38 212 P **P** **18 25 21.1 -0.8**
FAKI Fak Fak 34.66 190 P **P** **18 25 23.5 -0.7**
FAKI Fak Fak 34.66 190 S **S** **18 30 25.7 +1.1**
SANI Sanana 35.29 201 P **P** **18 25 29.1 -0.4**
TNCH TengChong 35.37 270 ⇓P **P** **18 25 30.3 -0.1**
TNCH sP sP 18 27 29.0 +1.7
TNCH S **S** **18 30 38.1 +2.5**
TNCH sS sS 18 32 43.4 -4.6
TNCH pmax pmax
comp=Z,250nm,1.8s
TNCH L L
comp=Z,8µm,10.6s
TNCH L L
comp=Z,16µm,19.0s
TNCH L L
comp=Z,48µm,20.2s
LUWI Luwuk 35.48 207 P **P** **18 25 30.5 -0.6**
LUWI Luwuk 35.48 207 P **P** **18 25 29.4 -1.7**
CHTO Chiang Mai 37.48 260 P **P** **18 25 47.8 -0.1**
CHTO Chiang Mai 37.48 260 P **P** **18 25 47.7 -0.1**
CHTO Chiang Mai 37.48 260 P **P** **18 25 47.7 -0.1**
CHTO pmax pmax
comp=Z,69nm,0.8s
CHTO Chiang Mai 37.48 260 P **P** **18 25 47.7 -0.1**
comp=Z,118nm,0.8s
CHTO Chiang Mai 37.48 260 P **P** **18 25 48.2 +0.3**
CHTO Chiang Mai 37.48 260 P **P** **18 25 47.5 -0.4**
CHTO PcP **PcP** **18 27 56.6 0.0**
CHTO ScP **S** **18 31 06.8 -0.3**
CM31 Chiang Mai Arr 37.65 259 P **P** **18 25 49.2 0.0**
CMAR Chiang Mai Arr 37.65 259 P **P** **18 25 49.4 +0.2**
comp=Z,22nm,0.7s,baz=58,slow=6.5,SNR=14
CMAR PcP **PcP** **18 27 57.0 -0.2**
comp=Z,4.9nm,0.5s,baz=38,slow=2.1,SNR=10
CMAR ScP **ScP** **18 31 07.8 +1.3**
comp=Z,2.3nm,0.5s,baz=51,slow=2.8,SNR=9.1
comp=Z,22nm,0.7s
BILL Bilibino 40.11 16 **P** **18 26 08.9 +0.2**
BILL lAmb lAmb 18 26 26.5
comp=Z,198nm,1.0s
BILL Bilibino 40.11 16*ce*P **P** **18 26 09.3 +0.6**
BILL pmax pmax
comp=Z,351nm,1.7s
BILL Bilibino 40.11 16 P **P** **18 26 09.2 +0.6**
KAPI Kappang 40.31 209 P **P** **18 26 10.6 -0.3**
comp=Z,70nm,0.7s,baz=75,slow=7.3,SNR=10
KAPI PcP **PcP** **18 28 05.8 +0.2**
comp=Z,18nm,0.6s,baz=331,slow=2.0,SNR=2.6
comp=Z,70nm,0.7s
KAPI Kappang 40.31 209 **P** **18 26 10.6 -0.3**
KAPI lAmb lAmb 18 26 13.6
comp=Z,206nm,1.1s
KAPI **PcP** **18 28 05.8 +0.2**
KAPI Kappang 40.31 209 P **P** **18 26 11.0 0.0**
TIXI Tiksi 40.55 355 **P** **18 26 11.6 -0.6**
TIXI Tiksi 40.55 355*ce*P **P** **18 26 12.2 +0.1**
TIXI pmax pmax
comp=Z,18nm,1.0s
SHL Shillong 40.86 274 P **P** **18 26 14.7 -0.9**
SHL lAmb lAmb 18 26 15.6
comp=Z,100nm,0.6s
SHL Shillong 40.86 274 P **P** **18 26 14.7 -0.9**
SHL pmax pmax
comp=Z,100nm,0.6s
WMQ Urumqi 41.23 302 *e*P **P** **18 26 18.9 +0.7**
WMQ PcP **PcP** **18 28 08.4 0.0**
WMQ pmax pmax
comp=Z,280nm,1.5s
WMQ L L
comp=Z,19µm,19.9s
WMQ L L
comp=Z,12µm,23.9s
WMQ L L
comp=Z,21µm,24.0s
PMG Port Moresby 41.55 167 P **P** **18 26 20.8 0.0**
comp=Z,22nm,0.6s,baz=70,slow=5.0,SNR=11
comp=Z,22nm,0.6s
PMG Port Moresby 41.55 167 P **P** **18 26 20.8 0.0**
PMG Port Moresby 41.55 167 P **P** **18 26 20.4 -0.5**
PMG Port Moresby 41.55 167 P **P** **18 26 20.8 0.0**
BRDH Baridhala 42.09 270 P **P** **18 26 25.0 -0.2**
comp=Z,370nm,0.5s,baz=79,slow=8.7,SNR=8.5
comp=Z,370nm,0.5s
MMRI Maumere 42.70 204 P **P** **18 26 30.5 +0.5**
SOEI Soe 43.10 200 P **P** **18 26 33.4 0.0**
SOEI Soe 43.10 200 P **P** **18 26 32.4 -1.0**
SOEI lAmb lAmb 18 26 50.2
comp=Z,180nm,1.2s
ZSN Zaisan 43.27 307 *e*P **P** **18 26 34.6 +0.3**
ZSN *e*S **S** **18 32 30.9 -0.5**
ZSN Zaisan 43.27 307 *e*P **P** **18 26 34.7 +0.4**
ZSN *e*S **S** **18 32 31.0 -0.5**
BATI Baumata 43.71 201 P **P** **18 26 34.3 -3.8**
comp=Z,137nm,0.5s,baz=74,slow=5.7,SNR=18
BATI PcP **PcP** **18 28 14.6 -2.4**
comp=Z,39nm,0.5s,baz=226,slow=3.1,SNR=2.9
KULM Kulim 43.74 241 P **P** **18 26 39.1 +0.7**
KULM Kulim 43.74 241 P **P** **18 26 38.2 -0.1**
MYKOM Kota Tinggi 43.82 234 P **P** **18 26 40.4 +1.4**
MYKOM Kota Tinggi 43.82 234 P **P** **18 26 39.9 +0.9**
comp=Z,71nm,0.9s
MYKOM Kota Tinggi 43.82 234 P **P** **18 26 40.3 +1.4**
ZAA0 Zalesovo Array 43.90 317 P **P** **18 26 39.0 -0.1**
ZAA0 lAmb lAmb 18 26 39.7
comp=Z,168nm,1.2s
ZALV Zalesovo Beam 43.90 317 P **P** **18 26 38.9 -0.2**
comp=Z,31nm,0.4s,baz=100,slow=6.2,SNR=6.4
ZALV PcP **PcP** **18 28 16.6 -0.5**
comp=Z,52nm,0.6s,baz=104,slow=3.5,SNR=12
ZALV ScP **ScP** **18 31 30.2 -0.4**
comp=Z,5.5nm,0.5s,baz=121,slow=3.9,SNR=7.0
comp=Z,31nm,0.4s
DBNI Kabupaten Domp 44.06 209 P **P** **18 26 39.4 -1.4**
comp=Z,26µmcomp=Z,105nm,1.5s
DRS Darwin Rock St 44.20 190 P **P** **18 26 42.7 +0.8**
EVN Everest 44.41 279 P **P** **18 26 44.0 -0.2**
EVN lAmb lAmb 18 26 45.6
comp=Z,102nm,0.7s
PLAI Plampang 44.57 209 P **P** **18 26 44.3 -0.5**
PLAI Plampang 44.57 209 P **P** **18 26 42.4 -2.4**
comp=Z,140nm,1.1s
PLAI Plampang 44.57 209 P **P** **18 26 43.0 -1.9**
MTN Manton Dam 44.57 190 P **P** **18 26 44.4 -0.3**
comp=Z,0.0nmcomp=Z,106nm,2.1s
MTN Manton Dam 44.57 190 **P** **18 26 44.1 -0.7**
TATA Tatamba Isabel 44.72 149 P **P** **18 26 46.0 +0.1**
TPI Tanjungpandan 44.73 226 P **P** **18 26 46.5 +0.5**
comp=Z,3µmcomp=Z,264nm,0.5s
TWSI Taliwang, Sumb 44.87 211 P **P** **18 26 45.5 -1.7**
comp=Z,122nm,1.1s
MK31 Makanchi Array 45.02 306*ce*P **P** **18 26 49.1 +1.1**
MKAR Makanchi Array 45.02 306 P **P** **18 26 47.8 -0.3**
comp=Z,139nm,0.8s,baz=77,slow=11,SNR=245
MKAR PcP **PcP** **18 28 21.0 -0.3**
comp=Z,12nm,0.5s,baz=181,slow=1.2,SNR=5.2
MKAR ScP **ScP** **18 31 35.5 +0.1**
comp=Z,4.7nm,0.5s,baz=80,slow=5.1,SNR=10.0
comp=Z,139nm,0.8s
KHKI Kahang-Kahang 45.11 212 P **P** **18 26 50.5 +1.5**
comp=Z,30µmcomp=Z,303nm,1.4s
PPBI Pangkal Pinang 45.22 228 P **P** **18 26 50.9 +1.0**
MAKZ Makanchi 45.24 307 P **P** **18 26 49.6 -0.1**
MAKZ lAmb lAmb 18 26 53.5
comp=Z,427nm,2.0s
MAKZ Makanchi 45.24 307 P **P** **18 26 49.6 -0.1**
MAKZ pmax pmax
comp=Z,427nm,2.0s
MAKZ Makanchi 45.24 307 P **P** **18 26 49.5 -0.1**
MAKZ PcP **PcP** **18 28 21.6 -0.4**
COEN Coen 45.42 173 P **P** **18 26 51.6 +0.2**
COEN Coen 45.42 173 P **P** **18 26 51.4 0.0**
JAGI Jajag, Banyuwa 45.89 214 P **P** **18 26 54.8 -0.2**
PBA Port Blair 46.23 255 P **P** **18 26 58.0 +0.3**
PBA lAmb lAmb 18 27 34.5
comp=Z,183nm,1.2s
PBA Port Blair 46.23 255 *ex* **P** **18 26 57.7 0.0**
SNJI Sawahan-Nganju 46.49 217 P **P** **18 26 59.7 -0.1**
comp=Z,215nm,0.5s
PDGK Podgornoye 47.21 302 P **P** **18 27 04.5 -0.5**
PDGK Podgornoye 47.21 302 P **P** **18 27 04.5 -0.5**
SHLS Shalkode 47.25 302 *e*P **P** **18 27 02.7 -2.6**
SHLS pmax pmax
comp=Z,61nm,0.5s
SHLS Shalkode 47.25 302 *e*P **P** **18 27 02.8 -2.6**
comp=Z,61nm,0.5s
UGM Wanagama 47.25 219 P **P** **18 27 05.7 +0.2**
UGM Wanagama 47.25 219 P **P** **18 27 04.8 -0.8**
UGM Wanagama 47.25 219 P **P** **18 27 04.7 -0.8**
UGM Wanagama 47.25 219 P **P** **18 27 05.0 -0.6**
NRIK Noril'sk 47.30 338 P **P** **18 27 04.8 -0.3**
baz=112,slow=8.8,SNR=62
KURK Kurchatov 47.44 312 P **P** **18 27 06.5 0.0**
KURK lAmb lAmb 18 27 10.0
comp=Z,101nm,0.8s
KURK **PcP** **18 28 29.7 0.0**
KURK **ScP** **18 31 45.0 -0.4**
KURK Kurchatov 47.44 312 P **P** **18 27 06.5 0.0**
KURK 18 28 29.7
KURBB Kurchatov Arra 47.50 312 P **P** **18 27 06.5 -0.4**
comp=Z,57nm,0.4s,baz=101,slow=6.6,SNR=5.2
KURBB PcP **PcP** **18 28 29.7 -0.2**
comp=Z,14nm,0.6s,baz=100,slow=3.7,SNR=2.0
KURBB ScP **ScP** **18 31 45.0 -0.6**
comp=Z,5.3nm,0.7s,baz=94,slow=4.5,SNR=6.2
comp=Z,57nm,0.4s
UZB Uzynbulak 47.57 302 *e*P **P** **18 27 07.5 -0.2**
UZB pmax pmax
comp=Z,65nm,0.6s
UZB Uzynbulak 47.57 302 *e*P **P** **18 27 07.6 -0.2**
comp=Z,64nm,0.6s
NGOA Tingoa Renbel 47.66 150 P **P** **18 27 08.1 -0.4**
WUS Wushi 47.66 299 P **P** **18 27 08.6 +0.1**
KNRA Kununurra 47.74 192 P **P** **18 27 09.2 +0.2**
comp=Z,0.0nmcomp=Z,112nm,0.6s
KNRA Kununurra 47.74 192 lAmb lAmb 18 27 10.4
comp=Z,78nm,0.7s
ANM Nome 47.74 29 lAmb lAmb 18 27 12.0
comp=Z,257nm,1.5s
TDK Taldyqorghan 47.83 304 *e*P **P** **18 27 09.8 +0.3**
TDK *e*S **S** **18 33 35.3 -0.6**
TDK pmax pmax
comp=Z,60nm,0.5s
TDK Taldyqorghan 47.83 304 *e*P **P** **18 27 09.9 +0.3**
comp=Z,60nm,0.5s
TDK *e*S **S** **18 33 35.3 -0.6**
SATY Saty 48.02 302 *e*P **P** **18 27 11.3 +0.1**
SATY Saty 48.02 302 *e*P **P** **18 27 11.3 +0.1**
KLSI 48.05 228 P **P** **18 27 11.4 -0.1**
KLI Kotabumi 48.10 227 P **P** **18 27 11.6 -0.3**
BBJI Bungbulang 48.48 222 P **P** **18 27 14.0 -0.8**
GSI Gunungsitoli 48.67 240 P **P** **18 27 16.3 +0.1**
GSI Gunungsitoli 48.67 240 P **P** **18 27 15.9 -0.3**
GSI Gunungsitoli 48.67 240 P **P** **18 27 15.9 -0.3**
comp=Z,7µmcomp=Z,417nm,1.3s
GSI Gunungsitoli 48.67 240 P **P** **18 27 16.8 +0.5**
MNAI Manna 48.94 230 P **P** **18 27 18.1 -0.1**
MNAI Manna 48.94 230 P **P** **18 27 17.4 -0.8**
MDOK Medeo 49.00 302 *e*P **P** **18 27 18.8 +0.3**
MDOK *e*S **S** **18 33 51.9 -0.6**
MDOK Medeo 49.00 302 *e*P **P** **18 27 18.9 +0.3**
MDOK *e*S **S** **18 33 52.0 -0.6**
KDJ Kajisay 49.05 301 P **P** **18 27 18.9 -0.1**
KDJ Kajisay 49.05 301 P **P** **18 27 18.9 -0.1**
KDJ pmax pmax
comp=Z,115nm,0.9s
AAA Alma-Ata 49.09 302 *e*P **P** **18 27 19.3 +0.2**
comp=Z,202nm,0.6s

TNSS **Tian-Shan** 49.09 302 *e*P **P** **18 27 19.7 +0.2**
TNSS **Tian-Shan** 49.09 302 *e*P **P** **18 27 19.7 +0.2**
CHNA **Chernabura Isl** 49.16 43 P **P** **18 27 19.8 +0.5**
CNBA **Chernabura Isl** 49.16 43 **P** **18 27 18.9 -0.5**
CNBA IAmb IAmb 18 27 20.0
comp=Z,128nm,0.9s
MTSU **Mount Surprise** 49.67 172 P **P** **18 27 24.4 +0.8**
comp=Z,9.4nm,0.8s
MTSU **Mount Surprise** 49.67 172 P **P** **18 27 25.7 +2.1**
NRN **Naryn** 50.02 300 P **P** **18 27 26.2 -0.2**
NRN IAmb IAmb 18 27 27.3
comp=Z,96nm,0.7s
NRN **Naryn** 50.02 300 P **P** **18 27 26.2 -0.2**
NRN pmax pmax
comp=Z,96nm,0.7s
SGDS **Sogindy** 50.70 303 *e*P **P** **18 27 31.1 0.0**
SGDS *e*S **S** **18 34 15.0 -0.7**
FITZ **Fitzroy Crossi** 50.73 195 P **P** **18 27 31.3 -0.1**
comp=Z,0.0nmcomp=Z,11nm,1.1s
FITZ **Fitzroy Crossi** 50.73 195 P **P** **18 27 31.9 +0.5**
comp=Z,24nm,0.8s,baz=16,slow=8.0,SNR=32
comp=Z,24nm,0.8s
FITZ **Fitzroy Crossi** 50.73 195 P **P** **18 27 32.4 +1.0**
KSH2 **Kashi** 50.77 297 P **P** **18 27 32.2 +0.4**
KSH2 pmax pmax
comp=Z,260nm,0.8s
KSH2 L L
comp=Z,2µm,16.5s
KSH2 L L
comp=Z,3µm,18.6s
KSH2 L L
comp=Z,5µm,23.0s
FRU1 **Bishkek** 50.81 302 P **P** **18 27 32.0 +0.1**
FRU1 IAmb IAmb 18 27 33.3
comp=Z,162nm,1.0s
FRU1 **Bishkek** 50.81 302 P **P** **18 27 32.0 +0.1**
FRU1 pmax pmax
comp=Z,162nm,1.0s
BTLS **Baital** 50.89 305 *e*P **P** **18 27 32.6 +0.3**
BTLS **Baital** 50.89 305 *e*P **P** **18 27 32.7 +0.3**
AAK **Ala-Archa** 50.93 302 *i* P **P** **18 27 32.9 0.0**
SNR=9.2
AAK **Ala-Archa** 50.93 302 P **P** **18 27 32.7 -0.2**
AAK **Ala-Archa** 50.93 302 *ce*P **P** **18 27 33.4 +0.5**
AAK pmax pmax
comp=Z,70nm,0.7s
AAK **Ala-Archa** 50.93 302 P **P** **18 27 33.0 0.0**
P17K **Kvichak River** 51.06 37 IAmb IAmb 18 27 34.8
comp=Z,97nm,0.7s
WRAB **Tennant Creek** 51.24 185 P **P** **18 27 35.4 +0.2**
WRAB **Tennant Creek** 51.24 185 P **P** **18 27 33.6 -1.5**
WRAB **Tennant Creek** 51.24 185 *ce*P **P** **18 27 36.6 +1.4**
WRAB pmax pmax
comp=Z,82nm,1.7s
WRA **Warramunga Arr** 51.25 185 P **P** **18 27 34.7 -0.5**
comp=Z,33nm,0.6s,baz=360,slow=7.7,SNR=119
WRA PcP **PcP** **18 28 44.0 -0.1**
comp=Z,15nm,0.5s,baz=356,slow=4.1,SNR=9.5
WRA ScP **ScP** **18 32 02.2 +0.1**
comp=Z,2.6nm,0.8s,baz=6.8,slow=3.7,SNR=2.0
WRA S **S** **18 34 18.2 -5.1**
comp=Z,17nm,0.9s,baz=2.9,slow=13,SNR=15
comp=Z,33nm,0.6s
BRZS **Berezniki** 51.27 311 *e*P **P** **18 27 35.0 -0.1**
BRZS **Berezniki** 51.27 311 *e*P **P** **18 27 34.1 -1.0**
CHIR **Chirikof Islan** 51.44 41 P **P** **18 27 36.3 +0.1**
QIS **Mount Isa** 51.75 178 P **P** **18 27 38.5 -0.4**
comp=Z,33nm,1.1s
QIS **Mount Isa** 51.75 178 P **P** **18 27 38.8 -0.1**
CTA **Charters Tower** 51.85 170 P **P** **18 27 39.8 +0.2**
comp=Z,14nm,0.8s,baz=348,slow=7.5,SNR=15
comp=Z,14nm,0.8s
CTAO **Charters Tower** 51.85 170 P **P** **18 27 40.0 +0.4**
O19K **Port Alsworth** 52.17 36 IAmb IAmb 18 27 43.1
comp=Z,128nm,0.7s
ARSB **Arslanbob** 52.28 300 P **P** **18 27 42.9 +0.1**
ARSB IAmb IAmb 18 27 44.6
comp=Z,332nm,1.2s
ARSB **Arslanbob** 52.28 300 P **P** **18 27 42.9 +0.1**
ARSB pmax pmax
comp=Z,332nm,1.2s
BVAR **Borovoye Array** 52.47 315 P **P** **18 27 44.0 +0.2**
comp=Z,154nm,0.5s,baz=102,slow=9.1,SNR=81
BVAR PcP **PcP** **18 28 48.2 0.0**
comp=Z,51nm,0.7s,baz=117,slow=2.5,SNR=7.8
BVAR ScP **ScP** **18 32 06.8 -0.2**
comp=Z,22nm,0.6s,baz=98,slow=3.7,SNR=14
comp=Z,154nm,0.5s
BORK **Borovoye** 52.51 315 P **P** **18 27 44.0 0.0**
BORK **Borovoye** 52.51 315 *i* P **P** **18 27 43.0 -1.0**
BORK pmax pmax
comp=Z,184nm,0.7s
OHAK **Old Harbor** 52.70 40 P **P** **18 27 45.4 +0.1**
RED **Redoubt Volcan** 52.95 35 P **P** **18 27 47.5 +0.3**
RED IAmb IAmb 18 27 48.4
comp=Z,74nm,0.8s
KDAK **Kodiak Island** 53.07 39 *i* P **P** **18 27 47.1 -0.9**
KDAK pmax pmax
comp=Z,155nm,0.7s
DZA **Taraz** 53.18 302 *e*P **P** **18 27 49.2 +0.1**
DZA **Taraz** 53.18 302 *e*P **P** **18 27 49.3 +0.1**
KK31 **Karatay Array** 53.73 303 P **P** **18 27 52.7 -0.3**
KK31 IAmb IAmb 18 27 53.7
comp=Z,197nm,0.6s
KK31 **Karatay Array** 53.73 303 P **P** **18 27 52.7 -0.3**
KK31 pmax pmax
comp=Z,197nm,0.6s
KKAR **Karatay Array** 53.73 303 P **P** **18 27 52.8 -0.2**
KKAR **Karatay Array** 53.73 303 P **P** **18 27 52.8 -0.2**
NIL **Nilore** 53.94 291 P **P** **18 27 54.9 +0.2**
NIL **Nilore** 53.94 291 P **P** **18 27 54.9 +0.2**
NIL pmax pmax
comp=Z,369nm,0.8s
BTK **Batken** 54.16 299 P **P** **18 27 56.0 -0.2**
BTK IAmb IAmb 18 28 05.7
comp=Z,108nm,0.9s
BTK **Batken** 54.16 299 P **P** **18 27 56.0 -0.2**
BTK pmax pmax
comp=Z,108nm,0.9s
BRLS **Boroldaу** 54.23 303 *e*P **P** **18 27 58.2 +1.6**
BRLS **Boroldaу** 54.23 303 *e*P **P** **18 27 58.2 +1.6**
IUG **Iuzhnay** 54.27 302 *e*P **P** **18 27 57.5 +0.5**
IUG pmax pmax
comp=Z,184nm,0.7s
IUG **Iuzhnay** 54.27 302 *e*P **P** **18 27 57.6 +0.5**
comp=Z,184nm,0.7s
CHM **Chimkent** 54.55 302 *e*P **P** **18 27 59.3 +0.5**
CHM pmax pmax
comp=Z,189nm,1.2s
CHM **Chimkent** 54.55 302 *e*P **P** **18 27 59.4 +0.5**
comp=Z,189nm,1.2s
GAR **Garm** 54.79 298 P **P** **18 28 00.7 -0.1**
GAR IAmb IAmb 18 28 01.9
comp=Z,427nm,0.7s
AS15 **Alice Springs** 54.94 185 P **P** **18 28 02.1 +0.3**
comp=Z,42nm,0.6s
AS17 **Alice Springs** 54.97 185 P **P** **18 28 02.0 +0.1**
comp=Z,32nm,0.7s
AS01 **Alice Springs** 54.97 185 P **P** **18 28 01.4 -0.6**
ASAR **Alice Springs** 54.98 185 P **P** **18 28 01.9 -0.2**
comp=Z,14nm,0.6s,baz=19,slow=12,SNR=45
ASAR PcP **PcP** **18 28 59.5 +1.3**
comp=Z,4.0nm,0.6s,baz=356,slow=3.0,SNR=2.0
ASAR ScP **ScP** **18 32 18.9 +0.6**
comp=Z,2.4nm,0.7s,baz=3.5,slow=5.3,SNR=2.4
ASAR S **S** **18 35 11.4 -1.6**
comp=Z,8.1nm,0.8s,baz=20,slow=20,SNR=15
comp=Z,14nm,0.6s
AS09 **Alice Springs** 55.01 185 P **P** **18 28 02.4 +0.2**
comp=Z,29nm,0.6s
COLA **College** 55.22 30 *i* P **P** **18 28 03.6 +0.4**
COLA pmax pmax
comp=Z,68nm,0.9s
MBWA **Marble Bar** 55.23 201 P **P** **18 28 03.9 0.0**
comp=Z,46nm,0.8s
MBWA **Marble Bar** 55.23 201 P **P** **18 28 03.8 0.0**
MBWA **Marble Bar** 55.23 201 P **P** **18 28 03.5 -0.4**
HYB **Hyderabad** 55.45 270 *e*P **P** **18 28 05.3 -0.3**
HYB *e*PcP **PcP** **18 28 59.9 -0.5**
HYB *e*S **S** **18 35 19.5 -0.1**
ILAR **Eielson Array** 55.63 30 P **P** **18 28 06.2 +0.1**
comp=Z,18nm,0.7s,baz=272,slow=6.7,SNR=3.7
ILAR PcP **PcP** **18 28 59.8 -0.4**
comp=Z,7.3nm,0.8s,baz=277,slow=3.4,SNR=1.1
comp=Z,18nm,0.7s
CHGR **Chuyangaron** 55.75 298 P **P** **18 28 07.5 0.0**
CHGR **Chuyangaron** 55.75 298 *i* P **P** **18 28 06.4 -1.1**
CHGR pmax pmax
comp=Z,2µm,0.7s
SHAA **Shahritus** 56.83 297 P **P** **18 28 15.0 -0.1**
SHAA IAmb IAmb 18 28 16.3
comp=Z,570nm,0.7s
WRKA **Warakurna** 56.98 191 P **P** **18 28 16.6 +0.6**
comp=Z,19nm,1.5s
KBL **Kabul** 57.01 293 P **P** **18 28 16.0 -0.5**
KBL IAmb IAmb 18 28 17.3
comp=Z,133nm,0.8s
KBL **Kabul** 57.01 293 P **P** **18 28 16.0 -0.5**
KBL pmax pmax
comp=Z,133nm,0.9s
KBL **Kabul** 57.01 293 P **P** **18 28 16.5 0.0**
EIDS **Eidsvold** 57.85 166 P **P** **18 28 23.3 +1.4**
comp=Z,34nm,1.3s
EIDS **Eidsvold** 57.85 166 P **P** **18 28 23.4 +1.4**
EIDS **Eidsvold** 57.85 166 P **P** **18 28 21.8 -0.2**
QLP **Quilpie** 58.02 174 P **P** **18 28 22.7 -0.4**
comp=Z,38nm,1.3s
QLP **Quilpie** 58.02 174 P **P** **18 28 23.1 0.0**
PALK **Pallekele** 58.59 259 P **P** **18 28 27.2 -0.2**
comp=Z,32nm,0.6s,baz=54,slow=9.0,SNR=27
comp=Z,32nm,0.6s
PALK **Pallekele** 58.59 259 **P** **18 28 26.9 -0.5**
PALK **Pallekele** 58.59 259 P **P** **18 28 26.9 -0.5**
PALK pmax pmax
comp=Z,40nm,0.7s
PALK **Pallekele** 58.59 259 P **P** **18 28 27.2 -0.2**
PALK PcP **PcP** **18 29 13.5 +0.6**
PALK pP **pP** **18 29 48.6 +0.1**
KHLH **Kahului Airpor** 58.89 83 P **P** **18 28 26.9 -2.4**
INKA **Innaminka** 58.93 177 P **P** **18 28 29.6 +0.3**
ARTI **Arti** 58.93 320 P **P** **18 28 28.2 -0.8**
ARTI **Arti** 58.93 320 *ce*P **P** **18 28 28.4 -0.6**
ARTI pmax pmax
comp=Z,445nm,2.5s
PCA **Pinnacle** 59.18 35 P **P** **18 28 31.6 +0.9**
AB31 **Akbulak array** 59.55 312 P **P** **18 28 32.9 -0.4**
ABKAR **Akbulak array** 59.55 312 P **P** **18 28 32.8 -0.5**
EPYK **Eagle Plains** 59.69 28 P **P** **18 28 35.1 +1.1**
EPYK IAmb IAmb 18 28 36.2
comp=Z,169nm,0.6s
NOUC **Port Laguerre** 59.70 150 P **P** **18 28 36.6 +2.0**
F30M **Barrier River** 59.84 26 P **P** **18 28 36.6 +1.6**
YATNC **Mamie plateau,** 59.92 149 P **P** **18 28 38.5 +2.4**
O29M **Mount Kennedy** 59.97 35 P **P** **18 28 37.4 +1.2**
POHA **Pohakuloa** 60.13 84 P **P** **18 28 40.2 +2.2**
POHA **Pohakuloa** 60.13 84 P **P** **18 28 39.0 +1.0**
MLOA **Mauna Loa Obse** 60.19 84 P **P** **18 28 41.0 +2.4**
MWH **Mokuaweoweo** 60.19 84 IAmb IAmb 18 28 42.1
comp=Z,156nm,1.1s
OVEH **Oceanview Est** 60.19 85 IAmb IAmb 18 28 41.3
comp=Z,357nm,1.5s
OUENC **Ouen Island, N** 60.22 149 P **P** **18 28 40.4 +2.3**
HYT **Haines Junctio** 60.38 34 P **P** **18 28 40.4 +1.6**
HYT IAmb IAmb 18 28 41.6
comp=Z,86nm,0.9s
F31M **Tsiigehtchic** 60.64 26 P **P** **18 28 41.2 +0.9**
MEEK **Meekatharra** 60.72 200 P **P** **18 28 41.1 -0.3**
H31M **Peel River** 60.74 28 P **P** **18 28 42.1 +1.1**
H31M IAmb IAmb 18 28 43.0
comp=Z,145nm,0.8s
HRA **Herat** 62.36 295 P **P** **18 28 52.7 +0.1**
FORT **Forrest** 62.65 190 P **P** **18 28 54.5 +0.6**
comp=Z,66nm,0.6s
ARMA **Armidale** 62.86 167 P **P** **18 28 56.7 +1.2**
CMSA **Cobar Meteorol** 63.07 173 P **P** **18 28 56.8 +0.1**
comp=Z,44nm,1.2s
CMSA **Cobar Meteorol** 63.07 173 P **P** **18 28 56.8 +0.1**
STKA **Stephens Creek** 63.09 177 P **P** **18 28 57.5 +0.7**
comp=Z,225nm,1.4s
STKA **Stephens Creek** 63.09 177 P **P** **18 28 56.9 +0.1**
comp=Z,32nm,0.5s,baz=350,slow=6.4,SNR=37
comp=Z,32nm,0.5s
STKA **Stephens Creek** 63.09 177 P **P** **18 28 57.4 +0.6**
STKA **Stephens Creek** 63.09 177 *i* P **P** **18 28 55.8 -1.0**
MORW **Morawa** 63.78 202 P **P** **18 29 01.3 -0.1**
comp=Z,74nm,2.1s
MORW **Morawa** 63.78 202 P **P** **18 29 01.1 -0.3**
MORW **Morawa** 63.78 202 **P** **18 29 01.0 -0.3**
MORW IAmb IAmb 18 29 02.7
comp=Z,172nm,1.6s
BBOO **Buckleboo** 63.96 182 P **P** **18 29 03.1 +0.7**
comp=Z,57nm,1.2s
BBOO **Buckleboo** 63.96 182 P **P** **18 29 02.8 +0.3**
BBOO **Buckleboo** 63.96 182 **P** **18 29 02.5 +0.1**
BBOO IAmb IAmb 18 29 04.1
comp=Z,131nm,1.5s
CRAG **Craig** 64.02 39 P **P** **18 29 03.7 +1.1**
PTPS **Port Pirie** 64.30 180 P **P** **18 29 06.1 +1.6**
S34M **Telegraph Cree** 64.30 36 P **P** **18 29 05.9 +1.5**
HTT **Hallett** 64.56 179 P **P** **18 29 07.8 +1.5**
comp=Z,20nm,1.1s
HTT **Hallett** 64.56 179 P **P** **18 29 05.7 -0.6**
BLDU **Ballidu** 65.02 200 P **P** **18 29 08.9 -0.4**
MOBC **Moresby Island** 65.42 41 P **P** **18 29 12.2 +0.5**
MOBC IAmb IAmb 18 29 13.5
comp=Z,84nm,1.5s
SPITS **Spitsbergen Ar** 65.45 349 P **P** **18 29 11.6 +0.1**
comp=Z,76nm,0.9s,baz=72,slow=6.2,SNR=7.6
comp=Z,76nm,0.9s
MGCD **Mangrove Creek** 65.48 168 P **P** **18 29 08.4 -3.7**
comp=Z,90nm,1.2s
KLBR **Kellerberrin** 65.63 199 P **P** **18 29 13.8 +0.6**
BELG **Belogornoye** 66.07 318 *i* P **P** **18 29 12.3 -3.4**
BELG pmax pmax
comp=Z,65nm,0.9s
ADZR **Andozero** 66.34 332 *e*P **P** **18 29 16.4 -0.8**
ADZR pmax pmax
comp=Z,190nm,0.8s
MUN **Mundaring** 66.44 200 P **P** **18 29 18.3 +0.1**
APA **Apatity** 66.66 336 *ij* *e*P **P** **18 29 18.1 -1.1**
APA *e* 18 29 43.0
APA *e**PP **pP** **18 30 42.5 -0.7**
APA *e* 18 31 49.4
APA pmax pmax
comp=Z,69nm,1.1s
APA MLR MLR
comp=Z,5µm,27.3s
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 22.0 +0.2**
comp=Z,101nm,1.2s
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 22.1 +0.2**
comp=Z,164nm,1.3s
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 21.8 -0.1**
comp=Z,48nm,0.5s,baz=22,slow=4.9,SNR=47
comp=Z,48nm,0.5s
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 22.1 +0.2**
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 22.2 +0.3**
NWAO **Narrogin (SRO)** 67.04 199 **P** **18 29 21.8 -0.1**
NWAO **Narrogin (SRO)** 67.04 199 P **P** **18 29 21.8 -0.1**
CAN **Canberra** 67.21 170 P **P** **18 29 23.1 +0.1**
KEV **Kevo** 67.69 339 P **P** **18 29 25.7 +0.2**
KEV IAmb IAmb 18 29 26.8
comp=Z,41nm,0.9s
KEV **Kevo** 67.69 339 P **P** **18 29 25.7 +0.2**
KEV pmax pmax
comp=Z,41nm,0.9s
ARCES **ARCESS Array B** 68.25 340 P **P** **18 29 29.3 +0.3**
comp=Z,59nm,0.8s,baz=64,slow=8.2,SNR=12
comp=Z,59nm,0.8s
ARCES **ARCESS Array B** 68.25 340 P **P** **18 29 29.3 +0.3**
BRAT **Ballarat** 68.87 175 P **P** **18 29 33.5 +0.4**
MILA **Mila** 68.94 171 P **P** **18 29 34.8 +1.1**
comp=Z,23nm,1.5s
KTK1 **Kautokeino** 69.22 340 *e*P **P** **18 29 35.3 +0.4**
JETT **Jettan, Norway** 69.72 341 *e*P **P** **18 29 38.4 +0.4**
VRH **Novokhopyorsk** 69.91 318 *e*P **P** **18 29 36.2 -3.2**
VRH pmax pmax
comp=Z,130nm,0.8s
YKA **Yellowknife Ar** 69.96 28 P **P** **18 29 39.9 +0.4**
comp=Z,11nm,0.6s,baz=303,slow=6.1,SNR=6.0
comp=Z,11nm,0.6s
TRO **Tromso** 70.09 341 *e*P **P** **18 29 40.2 +0.1**
MOS **Moscow** 70.12 324 *e*P **P** **18 29 40.9 +0.4**
MOS *e* 18 30 01.5
MOS *e**PP **pwP** **18 31 08.5 -2.2**
MOS *e* 18 32 21.3
MOS *e*PPP PPP 18 34 05.6
MOS *e*S **S** **18 38 17.2 -1.7**
MOS pmax pmax
comp=Z,337nm,1.3s
MOS pmax pmax
comp=N,51nm,0.6s
MOS smax smax
comp=E,200nm,1.8s
MOS smax smax
comp=N,800nm,3.5s
AKT **Akhty** 70.25 307 *e*P **P** **18 29 41.5 -0.3**
AKT *e* 18 30 01.7
AKT *e**PP **pwP** **18 31 10.9 -1.4**
AKT *e*S **S** **18 38 18.9 -2.3**
AKT pmax pmax
comp=Z,291nm,0.6s
SHME **Shamm** 70.52 289 *i* P **P** **18 29 44.3 +0.8**
SNR=18
MSFE **Esma-Masafi** 70.81 288 P **P** **18 29 45.5 +0.3**
LPSR **Galich'ya Gora** 70.85 320 *d* *i*P **P** **18 29 44.6 -0.4**
LPSR pmax pmax
comp=Z,253nm,1.0s
TULEG **Thule** 70.94 6 *i* P **P** **18 29 43.6 -1.5**
TULEG IAmb IAmb 18 29 46.1
comp=Z,52nm,0.9s
OBN **Obninsk** 70.94 323 *d* *i*P **P** **18 29 45.2 -0.3**
OBN 18 30 05.0
OBN *e**PP **pwP** **18 31 16.0 +0.5**
OBN *i*S **S** **18 38 26.2 -2.1**
OBN *e* 18 38 52.4
OBN pmax pmax
comp=Z,252nm,1.0s
OBN **Obninsk** 70.94 323 P **P** **18 29 45.2 -0.3**
UOSS **Minazif** 70.95 288 *i* P **P** **18 29 45.9 -0.2**
SNR=9.2
SOHO **SOHO** 71.05 287 *i* P **P** **18 29 46.1 -0.5**
SNR=14
DAG **Danmarks Havn** 71.06 355 *i* P **P** **18 29 44.0 -1.8**
DAG IAmb IAmb 18 29 46.8
comp=Z,39nm,0.9s
HATD **Hatta, Dubai** 71.06 288 *i* P **P** **18 29 46.9 +0.1**
SNR=7.3
VORR **Voronezh** 71.12 319 *e*P **P** **18 29 46.1 -0.5**
VORR pmax pmax
comp=Z,237nm,0.8s
ASHO **Ashiyiah** 71.19 288 *i* P **P** **18 29 47.3 -0.2**
SNR=16
NEEM **North Greenlan** 71.19 2 *i* P **P** **18 29 47.4 +0.4**
NEEM IAmb IAmb 18 29 48.0
comp=Z,35nm,0.7s
VSR **Storozhevoye** 71.35 319 *d* *i*P **P** **18 29 47.9 0.0**
VSR pmax pmax
comp=Z,341nm,0.9s
VORD **Divnogorie** 71.39 319 *e*P **P** **18 29 46.9 -1.3**
VORD pmax pmax
comp=Z,120nm,0.9s
FAQ **Al Faqa, Dubai** 71.54 288 *i* P **P** **18 29 49.3 -0.3**
SNR=6.9
ALNE **Al Ain** 71.72 287 *i* P **P** **18 29 50.5 -0.2**
SNR=7.6
ASUD **Al Ashush, Dub** 71.81 288 *i* P **P** **18 29 51.2 +0.1**
SNR=31
C03A **Quillayute Air** 71.83 45 IAmb IAmb 18 29 53.7
comp=Z,56nm,1.0s
AJN **Ajban** 72.11 288 *i* P **P** **18 29 52.4 -0.5**
SNR=9.4
STEI **Steigen** 72.22 341 *e*P **P** **18 29 52.6 -0.1**
FIA1 **FINESS Array S** 72.47 332 P **P** **18 29 54.0 -0.3**
FIA1 IAmb IAmb 18 29 54.7
comp=Z,234nm,0.8s
FINES **FINESS Array B** 72.47 332 P **P** **18 29 54.0 -0.3**
comp=Z,52nm,0.5s,baz=34,slow=8.0,SNR=26
comp=Z,52nm,0.5s
FINES **FINESS Array B** 72.47 332 P **P** **18 29 54.0 -0.3**
FINES **FINESS Array B** 72.47 332 P **P** **18 29 54.0 -0.3**
KBZ **Khabaz** 72.49 311 P **P** **18 29 55.4 +0.6**
comp=Z,168nm,0.8s,baz=93,slow=4.6,SNR=62
KBZ **Khabaz** 72.49 311 *i* P **P** **18 29 54.8 +0.1**
KBZ pmax pmax
comp=Z,234nm,0.9s
KIV **Kislovodsk** 72.52 311 *i* P **P** **18 29 55.8 +0.7**
SNR=14
KIV **Kislovodsk** 72.52 311 *e*P **P** **18 29 54.3 -0.8**
KIV *e*S **S** **18 38 45.1 -1.7**
KIV pmax pmax
comp=Z,216nm,1.0s
KIV pmax pmax
comp=Z,349nm,4.2s
KIV **Kislovodsk** 72.52 311 P **P** **18 29 54.3 -0.8**
comp=Z,271nm,0.9s
KIV **Kislovodsk** 72.52 311 P **P** **18 29 55.4 +0.3**
KIV PcP **PcP** **18 30 09.3 -1.1**
FAUS **Fauske** 72.56 340 *e*P **P** **18 29 54.6 -0.1**
SHA1 **Shidzhatmaz** 72.64 311 *i* P **P** **18 29 55.0 -1.0**
GLAD **Gladstone** 72.66 172 P **P** **18 29 56.6 +1.0**
GNI **Garni** 72.87 307 *i* P **P** **18 29 56.3 -1.0**
GNI pmax pmax
comp=Z,270nm,1.7s
ERBR **Yeremizino-Bor** 73.11 313 *e*P **P** **18 29 57.2 -1.1**
ERBR *e**PP **pP** **18 31 24.4 +0.8**
ERBR pmax pmax
comp=Z,104nm,0.8s
LABN **Labinsk** 73.45 312 *e*P **P** **18 29 59.1 -1.3**
LABN *e**PP **pP** **18 31 27.7 +1.9**
LABN pmax pmax
comp=Z,60nm,1.0s
DBG **Daneborg** 73.52 354 *i* P **P** **18 29 57.5 -2.7**
DBG IAmb IAmb 18 29 59.9
comp=Z,195nm,2.1s
RAUS **Rausandaksla** 73.56 340 *e*P **P** **18 30 00.5 -0.1**
MOR8 **Moi Rana** 73.62 339 *e*P **P** **18 29 59.7 -1.2**
KULLO **Kullorsuaq** 73.73 4 *i* P **P** **18 29 59.5 -1.9**
KULLO IAmb IAmb 18 30 02.4
comp=Z,84nm,1.4s
STOK **Stokkvaagen** 73.94 340 *e*P **P** **18 30 02.5 -0.2**
MZR **Muzera** 74.05 287 *i* P **P** **18 30 03.4 -0.8**
SNR=7.8
LEIR **Leirfjorden** 74.06 340 *e*P **P** **18 30 03.8 +0.4**
VSLR **Vesyoloye** 74.45 312 *i* P **P** **18 30 05.7 -0.4**
VSLR pmax pmax
comp=Z,184nm,0.7s
TAU **Tasmania Unive** 74.49 173 P **P** **18 30 07.2 +1.1**
TAU IAmb IAmb 18 32 14.1
comp=Z,140nm,1.6s
TAU **Tasmania Unive** 74.49 173 P **P** **18 30 07.2 +1.1**
TAU pmax pmax
comp=Z,140nm,1.6s
SOC **Sochi** 74.60 312 *e*P **P** **18 30 05.8 -1.1**
SOC *e**PP **pP** **18 31 35.2 +2.6**
SOC *e**SP **sP** **18 32 16.3 +2.6**
SOC *e* 18 32 56.8
SOC *e*PPP PPP 18 34 46.8
SOC *e*S **S** **18 39 07.0 -2.6**
SOC *e*SS **SS** **18 44 05.7 +0.2**
SOC *e*SSS SSS 18 47 25.0
SOC pmax pmax
comp=Z,81nm,0.6s
GEVA **Gevas** 74.88 306 P **P** **18 30 09.1 +0.2**
MTSE **Matsula** 74.97 331 P **P** **18 30 09.1 +0.4**
ANN **Anapa** 75.43 314 *e*P **P** **18 30 11.4 -0.2**
ANN *e**PP **pwP** **18 31 42.5 -0.8**
ANN *e*S **S** **18 39 17.3 -1.3**
ANN pmax pmax
comp=Z,148nm,0.8s
NSS **Namsos** 75.51 339 *e*P **P** **18 30 11.9 +0.3**
BLKN **Baker Lake** 75.55 21 P **P** **18 30 12.1 +0.3**
BLKN IAmb IAmb 18 30 14.1
comp=Z,50nm,1.1s
UPNV **Upernavik** 75.56 4 *i* P **P** **18 30 11.0 -0.8**
UPNV IAmb IAmb 18 30 12.8
comp=Z,17nm,0.4s
MNK **Minsk** 75.57 326 *i* P **P** **18 30 11.6 -0.6**
comp=E,70nm,1.0s
MNK *i* P **P** **18 30 11.6 -0.6**
comp=N,102nm,1.1s
MNK *i* P **P** **18 30 11.6 -0.6**
comp=Z,174nm,0.9s,baz=56
MNK *i* pP **pP** **18 31 39.2 +1.0**
MNK *i* sP **sP** **18 32 24.7 +5.4**
MNK *i* PP **PP** **18 33 07.9 +0.5**
MNK *i* PPP PPP 18 34 56.3
MNK *i* S **S** **18 39 20.2 +0.9**
MNK *i* sS **sS** **18 41 49.2 -5.7**
MNK *i* SS **SS** **18 44 26.7 +7.1**
MNK *i* SSS SSS 18 46 58.4
MNK *i* LR LR 19 03 24.9
MNK *i* LRM MLR 19 06 32.8
MNK **Minsk** 75.57 326 *i* P **P** **18 30 11.5 -0.6**
MNK *i* *PP **pP** **18 31 39.2 +1.0**

MNK *i* 18 33 07.8
MNK *i* PPP PPP 18 34 56.3
MNK *i* S **S** **18 39 20.6 +0.9**
MNK *i* SS **SS** **18 44 26.6 +7.1**
MNK pmax pmax
comp=E,70nm,1.0s
MNK pmax pmax
comp=Z,174nm,0.9s
MNK pmax pmax
comp=N,102nm,1.1s
KTUT Trabzon 75.82 309 ⇑P **P** **18 30 14.4 +0.5**
SUMG Summit 76.21 359 *i* P **P** **18 30 15.1 -0.8**
SUMG IAmb IAmb 18 30 18.2
comp=Z,34nm,0.7s
PABE Paberze 76.82 328 **P** **18 30 19.1 0.0**
PABE IAmb IAmb 18 30 20.4
comp=Z,210nm,0.7s
PABE Paberze 76.82 328 P P **18 30 19.7 +0.6**
AK03 Malin Array Si 77.01 322 P **P** **18 30 19.7 -0.6**
AKASG Malin Array Be 77.03 322 P **P** **18 30 19.7 -0.6**
comp=Z,121nm,0.7s,baz=52,slow=5.4,SNR=161
AKASG PP **PP** **18 33 18.7 -0.8**
comp=Z,4.8nm,0.8s,baz=50,slow=9.3,SNR=3.7
comp=Z,121nm,0.7s
AKASG Malin Array Be 77.03 322 P P **18 30 19.6 -0.8**
AKASG **PP** **18 33 18.7 -0.8**
AKASG Malin Array Be 77.03 322 P **P** **18 30 19.6 -0.8**
AKASG 18 33 18.7
AKASG pmax pmax
comp=Z,145nm,0.9s
AKBB Malin Array Si 77.03 322 P **P** **18 30 19.7 -0.6**
AKBB IAmb IAmb 18 30 21.1
comp=Z,191nm,0.8s
AKBB Malin Array Si 77.03 322 *i* P **P** **18 30 18.8 -1.6**
AKBB pmax pmax
comp=Z,193nm,0.8s
KIEV Kiev 77.04 322 *i* P **P** **18 30 19.9 -0.5**
SNR=20
KIEV Kiev 77.04 322 P **P** **18 30 19.9 -0.5**
KIEV Kiev 77.04 322 P **P** **18 30 19.9 -0.5**
KIEV pmax pmax
comp=Z,161nm,0.8s
KIEV Kiev 77.04 322 P **P** **18 30 19.9 -0.5**
KIEV Kiev 77.04 322 P **P** **18 30 19.6 -0.8**
KIEV PcP **PcP** **18 30 29.7 +0.1**
AK23 Malin Array Si 77.04 322 P **P** **18 30 19.8 -0.6**
F10A Beach Ranch, E 77.17 44 P **P** **18 30 22.7 +1.3**
SCO Scoresbysund 77.34 353 P **P** **18 30 22.8 +1.1**
SCO Scoresbysund 77.34 353 P **P** **18 30 22.8 +1.1**
SCO pmax pmax
comp=Z,64nm,1.1s
SCO Scoresbysund 77.34 353 *i* P **P** **18 30 19.3 -2.4**
SCO IAmb IAmb 18 30 23.7
comp=Z,73nm,1.2s
SIM Simferopol' 77.38 315 *e*P **P** **18 30 20.9 -1.6**
SIM *e* 18 30 31.0
SIM *e* 18 33 23.0
SIM pmax pmax
comp=Z,178nm,0.9s
HIZ Hauiti 77.56 151 P **P** **18 30 24.6 +1.3**
HIZ Hauiti 77.56 151 P **P** **18 30 25.2 +1.9**
ARPR Arapgir-MALATY 77.72 308 P **P** **18 30 25.9 +1.3**
BMO Blue Mountains 77.72 45 P **P** **18 30 24.9 +0.5**
BMO Blue Mountains 77.72 45 P **P** **18 30 24.9 +0.5**
BMO pmax pmax
comp=Z,163nm,2.0s
HFS Hagfors 78.01 335 P **P** **18 30 25.0 -0.6**
comp=Z,49nm,0.7s,baz=65,slow=7.4,SNR=66
HFS PP **PP** **18 33 26.2 -1.3**
comp=Z,7.8nm,0.8s,baz=64,slow=5.1,SNR=2.6
comp=Z,49nm,0.7s
NC405 NORSAR Array S 78.02 336 IAmb IAmb 18 30 26.1
comp=Z,83nm,0.8s
NC303 NORSAR Array S 78.06 337 IAmb IAmb 18 30 26.9
comp=Z,81nm,1.1s
HAZ Te Kaha 78.17 149 P **P** **18 30 26.4 -0.2**
DOMB Dombas 78.22 338 *e*P **P** **18 30 26.6 -0.2**
NC204 NORSAR Array S 78.22 337 IAmb IAmb 18 30 27.8
comp=Z,87nm,0.9s
NB2 NORSAR Subarra 78.24 337 P **P** **18 30 26.4 -0.5**
comp=Z,88nm,1.0s,baz=45,slow=5.6
NB2 PP **PP** **18 33 29.3 -0.1**
comp=Z,2.6nm,0.8s,baz=44,slow=7.9
NB2 NORSAR Subarra 78.24 337 P **P** **18 30 26.4 -0.5**
NOA NORSAR Array B 78.24 337 P **P** **18 30 26.3 -0.5**
comp=Z,27nm,0.7s,baz=44,slow=5.4,SNR=38
NOA PP **PP** **18 33 29.1 -0.3**
comp=Z,8.0nm,1.0s,baz=44,slow=8.3,SNR=4.4
comp=Z,27nm,0.7s
LUBAR Lubar, Ukraine 78.24 322 P **P** **18 30 25.9 -1.1**
URZ Urewera 78.30 150 P **P** **18 30 27.7 +0.4**
URZ Urewera 78.30 150 P **P** **18 30 26.8 -0.5**
MOL Molde 78.30 339 *e*P **P** **18 30 27.4 +0.3**
RUGZ Raukumara Rang 78.30 149 P **P** **18 30 26.5 -1.0**
RNPP9 Sopachiv 78.34 324 P **P** **18 30 26.9 -0.6**
NC602 NORSAR Array S 78.35 336 IAmb IAmb 18 30 28.0
comp=Z,86nm,1.4s
NC602 NORSAR Array S 78.35 336 *e*P **P** **18 30 26.7 -0.7**
NBO00 NORSAR Array S 78.39 337 P **P** **18 30 27.3 -0.3**
NBO00 IAmb IAmb 18 30 28.1
comp=Z,46nm,0.8s
RNPP8 Varash 78.40 324 P **P** **18 30 27.3 -0.6**
NAO01 NORSAR Array S 78.49 337 P **P** **18 30 27.7 -0.5**
NAO01 NORSAR Array S 78.49 337 P **P** **18 30 27.7 -0.5**
TWGZ Tauwhareparae 78.61 149 P **P** **18 30 29.4 +0.3**
PUZ Puketiti 78.64 149 P **P** **18 30 30.4 +1.2**
AKN Aaknes 78.76 339 *e*P **P** **18 30 29.9 +0.3**
BKZ Black Stump Fm 78.79 151 P **P** **18 30 29.8 -0.2**
SNGZ Shannon Statio 78.83 150 P **P** **18 30 30.7 +0.4**
RAHZ Arahi 78.83 150 P **P** **18 30 31.2 +0.9**
SORM Soroca 78.95 320 ⇓P **P** **18 30 30.7 -0.2**
SORM Soroca 78.95 320 P **P** **18 30 30.6 -0.2**
TKNZ Takaka Hill 78.98 154 P **P** **18 30 31.2 +0.2**
TKNZ Takaka Hill 78.98 154 P **P** **18 30 31.4 +0.4**
BZK Bozkurt 79.04 313 ⇓P **P** **18 30 31.8 +0.4**
DUWZ D'Urville Isla 79.15 153 P **P** **18 30 31.7 -0.2**
OSL Oslo 79.21 336 *e*P **P** **18 30 32.1 +0.1**
SKAR Skarsfja 79.47 337 *e*P **P** **18 30 33.9 +0.4**
BNN Bunyan 79.50 309 **P** **18 30 34.2 0.0**
BNN IAmb IAmb 18 30 35.9
comp=Z,79nm,1.0s
MRZ Mangatainoka R 79.68 152 IAmb IAmb 18 27 27.6
comp=Z,185nm,1.3s
STRU Stroemstad 79.70 335 *i* P **P** **18 30 33.6 -1.0**
KMPD K-Podol'skiy 79.73 321 P **P** **18 30 33.9 -1.1**
HYA Hoyanger 79.79 339 *e*P **P** **18 30 35.2 +0.2**
BLEU Blekinge 79.84 331 *i* P **P** **18 30 33.8 -1.6**
IASR Iasi 79.93 320 ⇑P **P** **18 30 36.4 +0.3**
VASR Vaslui 80.12 319 ⇓P **P** **18 30 37.6 +0.4**
R9F13 Warsaw-Wawer 80.17 326 *e*P **P** **18 30 37.9 +0.6**
RAYN Ar Rayn 80.23 292 *i* P **P** **18 30 38.2 0.0**
SNR=36
RAYN Ar Rayn 80.23 292 P **P** **18 30 38.2 0.0**
RAYN Ar Rayn 80.23 292 P **P** **18 30 38.2 0.0**
RAYN pmax pmax
comp=Z,114nm,0.6s
RAYN Ar Rayn 80.23 292 P **P** **18 30 38.6 +0.4**
RAYN Ar Rayn 80.23 292 P **P** **18 30 38.0 -0.2**
LTZ Lake Taylor 80.25 155 P **P** **18 30 38.8 +1.1**
LTZ IAmb IAmb 18 31 04.8
comp=Z,167nm,1.8s
TJOU Tjoern 80.26 334 *i* P **P** **18 30 36.8 -0.8**
TLCR 80.38 317 ⇑P **P** **18 30 38.5 0.0**
TLCR 80.38 317 P **P** **18 30 38.5 0.0**
VLDR Vladesti 80.42 318 ⇑P **P** **18 30 39.2 +0.4**
BIR Birlad 80.44 319 ⇑P **P** **18 30 39.4 +0.6**
BIR Birlad 80.44 319 P **P** **18 30 39.4 +0.6**
BR131 Keskin Array S 80.48 311 P **P** **18 30 39.5 +0.2**
BR131 Keskin Array S 80.48 311 P **P** **18 30 39.5 +0.2**
BR131 pmax pmax
comp=Z,79nm,0.8s
BRTR Keskin Array B 80.48 311 P **P** **18 30 39.6 +0.1**
comp=Z,54nm,0.7s,baz=104,slow=4.2,SNR=72
BRTR PKKPbc **PKKPbc** **18 49 17.3 +0.6**
comp=Z,0.6nm,0.4s,baz=204,slow=3.8,SNR=4.3
comp=Z,54nm,0.7s
BRTR Keskin Array B 80.48 311 P **P** **18 30 39.4 0.0**
BRTR Keskin Array B 80.48 311 P **P** **18 30 39.4 0.0**
BR104 Keskin Array S 80.49 311 P **P** **18 30 39.4 0.0**
comp=Z,746nmcomp=Z,101nm,0.7s
BR106 Keskin Array S 80.49 311 P **P** **18 30 39.6 +0.2**
comp=Z,644nmcomp=Z,81nm,0.8s
BR105 Keskin Array S 80.50 311 P **P** **18 30 39.5 0.0**
DEL Delary 80.50 332 *i* P **P** **18 30 37.5 -1.4**
DEL IAmb IAmb 18 30 39.0
comp=Z,25nm,0.8s
VARL Varlezi 80.52 318 ⇑P **P** **18 30 39.6 +0.4**
NVAR Mina Array Bea 80.53 51 P **P** **18 30 41.0 +1.2**
comp=Z,7.0nm,0.8s,baz=301,slow=5.6,SNR=3.6
comp=Z,7.0nm,0.8s
PRAR RASCA 80.56 320 ⇑P **P** **18 30 39.3 -0.2**
SCTR Scanteiesti 80.57 318 ⇓P **P** **18 30 39.9 +0.4**
FABU Falkenberg 80.58 333 *i* P **P** **18 30 37.3 -2.0**
BEL Belsk 80.58 326 P **P** **18 30 40.1 +0.6**
JURR Jurilovca 80.59 317 ⇑P **P** **18 30 39.6 0.0**
ONAU Onsala 80.61 334 *i* P **P** **18 30 38.0 -1.4**
KIRS Kirsehir-Merke 80.62 310 ⇑P **P** **18 30 40.2 +0.1**
GIRR Girov 80.66 320 ⇓P **P** **18 30 40.4 +0.4**
GHRR 80.68 319 P **P** **18 30 40.9 +0.8**
GVZ Greta Valley S 80.69 155 P **P** **18 30 40.4 +0.5**
NEGRR Negrea 80.72 318 ⇓P **P** **18 30 41.0 +0.7**
SCHL Schela 80.77 318 ⇑P **P** **18 30 41.4 +0.9**
IZVR Izvoarele 80.78 318 ⇓P **P** **18 30 41.2 +0.6**
CFR Carcaliu 80.78 318 ⇓P **P** **18 30 40.5 -0.1**
CFR Carcaliu 80.78 318 P **P** **18 30 40.5 -0.1**
SCHLR Schela 80.78 318 ⇓P **P** **18 30 41.3 +0.6**
TPGR Topolog 80.80 317 ⇓P **P** **18 30 41.0 +0.1**
TESR Tescani 80.84 319 ⇑P **P** **18 30 40.9 0.0**
TESR Tescani 80.84 319 P **P** **18 30 41.3 +0.3**
PANC Panciu 80.94 319 ⇑P **P** **18 30 42.3 +0.9**
BUR08 Bucovina Ar. S 80.95 321 IAmb IAmb 18 30 43.4
comp=Z,143nm,1.4s
BURAR Bucovina Array 80.96 321 ⇑P **P** **18 30 42.0 +0.2**
BURAR Bucovina Array 80.96 321 P **P** **18 30 41.9 +0.2**
BSD Bornholm Skovb 81.03 331 *i* P **P** **18 30 40.4 -1.3**
BSD IAmb IAmb 18 30 42.0
comp=Z,127nm,1.0s
BLS5 Blasjo 81.04 337 *e*P **P** **18 30 42.6 +0.9**
TIRR Tirgusor 81.04 317 ⇓P **P** **18 30 42.4 +0.4**
TIRR Tirgusor 81.04 317 IAmb IAmb 18 30 42.8
comp=Z,45nm,0.9s
TIRR Tirgusor 81.04 317 P **P** **18 30 42.4 +0.4**
TIRR Tirgusor 81.04 317 P **P** **18 30 42.2 +0.3**
ODBI Odobesti 81.05 319 ⇑P **P** **18 30 43.2 +1.2**
ONER Baraj Valea Uz 81.08 319 ⇑P **P** **18 30 42.9 +0.6**
BJUU Bjuv 81.12 332 *i* P **P** **18 30 41.4 -0.8**
VRI Vrincioaia 81.18 319 ⇑P **P** **18 30 43.6 +0.8**
VRI Vrincioaia 81.18 319 P **P** **18 30 43.5 +0.8**
VRI Vrincioaia 81.18 319 P **P** **18 30 43.5 +0.7**
TLBR Topalu 81.20 317 ⇓P **P** **18 30 43.4 +0.6**
HOMB Homborsund 81.21 336 *i* P **P** **18 30 40.8 -1.7**
PLOR Plostina 81.23 319 ⇓P **P** **18 30 44.3 +1.3**
PLOR Plostina 81.23 319 P **P** **18 30 44.3 +1.3**
LUNU Lund 81.26 332 *i* P **P** **18 30 41.6 -1.3**
SAHR Sahastru 81.28 319 ⇑P **P** **18 30 44.3 +1.0**
TURR Turia 81.46 319 ⇓P **P** **18 30 45.7 +1.4**
COVR Voineasa-Covas 81.48 319 ⇑P **P** **18 30 44.8 +0.4**
OZUR 81.56 319 ⇑P **P** **18 30 45.7 +0.9**
AMRR Amara 81.57 318 ⇓P **P** **18 30 46.0 +1.3**
AMRR Amara 81.57 318 P **P** **18 30 46.0 +1.3**
ICOR Ion Corvin 81.59 317 ⇑P **P** **18 30 45.8 +0.9**
SNART Snartemo 81.61 336 *e*P **P** **18 30 44.6 0.0**
SNART Snartemo 81.61 336 *i* P **P** **18 30 44.2 -0.4**
SFJD Kangerlussuaq 81.62 3 P **P** **18 30 45.3 +0.7**
SFJD IAmb IAmb 18 30 45.4
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 81.62 3 P **P** **18 30 45.3 +0.7**
SFJD pmax pmax
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 81.62 3 *i* P **P** **18 30 43.6 -1.0**
SFJD IAmb IAmb 18 30 45.0
comp=Z,30nm,0.8s
BOSR Bodos 81.65 319 ⇓P **P** **18 30 46.5 +1.3**
NEHR Nehoiu 81.68 319 ⇓P **P** **18 30 46.1 +0.7**
KOLS Kolonicke sedl 81.69 323 *e*P **P** **18 30 45.6 +0.2**
KOLS pmax pmax
comp=Z,49nm,1.0s
KOLS Kolonicke sedl 81.69 323 *e*P **P** **18 30 45.6 +0.2**
ISR Istrita 81.72 318 ⇑P **P** **18 30 46.6 +0.9**
ISR Istrita 81.72 318 P **P** **18 30 46.5 +0.9**
ARCR ARCALIA 81.75 321 ⇑P **P** **18 30 46.8 +1.1**
MLR Muntele Rosu 81.84 319 ⇑P **P** **18 30 46.8 +0.4**
MLR Muntele Rosu 81.84 319 **P** **18 30 46.3 0.0**
MLR Muntele Rosu 81.84 319 P **P** **18 30 46.3 0.0**
MLR pmax pmax
comp=Z,162nm,1.4s
MLR Muntele Rosu 81.84 319 P **P** **18 30 46.7 +0.4**
BMR Baia Mare 81.84 322 ⇓P **P** **18 30 46.9 +0.8**
BMR Baia Mare 81.84 322 P **P** **18 30 46.9 +0.8**
BMR Baia Mare 81.84 322 P **P** **18 30 47.2 +1.0**
DOPR Dopca 81.86 319 ⇑P **P** **18 30 47.2 +0.9**
STHS Stebnicka Huta 81.91 324 *e*P **P** **18 30 47.1 +0.6**
STHS pmax pmax
comp=Z,42nm,0.8s
STHS Stebnicka Huta 81.91 324 *e*P **P** **18 30 47.1 +0.6**
LEHL Lehliu 81.95 318 ⇓P **P** **18 30 47.6 +0.9**
TGMR Targu Mures 82.00 320 ⇑P **P** **18 30 47.9 +1.0**
TRPA Tarpa 82.06 322 P **P** **18 30 48.0 +0.8**
SULR 82.15 318 ⇓P **P** **18 30 48.6 +0.8**
SULR 82.15 318 P **P** **18 30 47.7 0.0**
SILT Sile 82.21 314 ⇑P **P** **18 30 48.7 +0.6**
MDB Medias 82.31 320 ⇓P **P** **18 30 50.0 +1.4**
MDB Medias 82.31 320 P **P** **18 30 50.0 +1.4**
MUD Monsted U'grnd 82.32 334 *i* P **P** **18 30 47.3 -1.1**
MUD IAmb IAmb 18 30 49.0
comp=Z,92nm,1.0s
VOIR 82.38 319 ⇓P **P** **18 30 49.2 +0.2**
VOIR 82.38 319 P **P** **18 30 49.1 +0.2**
VOIR 82.38 319 P **P** **18 30 49.3 +0.2**
CJR Cluj-Napoca 82.39 321 ⇓P **P** **18 30 49.9 +0.9**
CJR Cluj-Napoca 82.39 321 P **P** **18 30 49.9 +0.9**
PRD Provadia 82.39 316 P **P** **18 30 49.8 +0.8**
NEF NEVSHA 82.40 316 P **P** **18 30 49.3 +0.2**
LNIZ Loecknitz 82.45 330 P **P** **18 30 49.7 +0.6**
MTUR Matau 82.50 319 ⇑P **P** **18 30 49.6 -0.1**
MTUR Matau 82.50 319 P **P** **18 30 49.5 -0.1**
SGRR Singureni 82.59 318 ⇑P **P** **18 30 50.3 +0.3**
ABAH Abaujker 82.63 323 P **P** **18 30 49.8 +0.7**
ARR Arges 82.65 319 ⇓P **P** **18 30 51.2 +0.8**
ARR Arges 82.65 319 P **P** **18 30 51.6 +1.2**
MARR Marisel-Cluj 82.67 321 ⇑P **P** **18 30 50.8 +0.3**
RAZG Razgrad 82.67 317 ⇓P **P** **18 30 51.1 +0.6**
TNR Turnu Rosu 82.67 320 ⇑P **P** **18 30 51.6 +1.2**
TNR Turnu Rosu 82.67 320 P **P** **18 30 51.6 +1.2**
BORG Borgarnes 82.76 351 P **P** **18 30 52.1 +1.7**
BORG IAmb IAmb 18 30 53.5
comp=Z,53nm,0.8s
BORG Borgarnes 82.76 351 P **P** **18 30 52.1 +1.7**
BORG pmax pmax
comp=Z,53nm,0.9s
BORG Borgarnes 82.76 351 P **P** **18 30 52.5 +2.0**
BORG Borgarnes 82.76 351 P **P** **18 30 52.7 +2.2**
FRB Frobisher Bay 82.77 12 P **P** **18 30 50.9 +0.4**
DRGR 82.81 321 ⇓P **P** **18 30 51.1 -0.2**
DRGR 82.81 321 P **P** **18 30 51.0 -0.2**
DRGR 82.81 321 P **P** **18 30 51.6 +0.3**
CY604 RAF Akrotiri, 82.83 306 P **P** **18 30 51.3 +0.2**
QSM Queen of Sheba 82.83 52 IAmb IAmb 18 30 54.2
comp=Z,57nm,1.1s
KECS Kecovo 82.89 324 *e*P **P** **18 30 51.7 +0.2**
KECS pmax pmax
comp=Z,26nm,0.9s
KECS Kecovo 82.89 324 *e*P **P** **18 30 51.7 +0.2**
MMAI Mount Meron Ar 82.93 304 P **P** **18 30 52.3 +0.2**
comp=Z,53nm,0.7s,baz=5.0,slow=6.7,SNR=59
comp=Z,53nm,0.7s
HUMR Humele 82.97 319 P **P** **18 30 51.6 -0.4**
LANS Liptovska Anna 82.97 325 *e*P **P** **18 30 52.6 +0.7**
LANS pmax pmax
comp=Z,21nm,0.8s
LANS Liptovska Anna 82.97 325 *e*P **P** **18 30 52.6 +0.7**
HWUT Hardware Ranch 83.01 45 P **P** **18 30 54.4 +1.9**
DUG Dugway, Tooele 83.07 47 P **P** **18 30 54.0 +1.2**
COPA Copaceanca 83.07 318 ⇓P **P** **18 30 52.3 -0.1**
LOT Lotru 83.08 320 ⇑P **P** **18 30 53.0 +0.4**
LOT Lotru 83.08 320 P **P** **18 30 52.8 +0.1**
OKC Ostrava-Krasne 83.16 326 *e*P **P** **18 30 52.7 -0.1**
OKC Ostrava-Krasne 83.16 326 *e*P **P** **18 30 52.7 -0.1**
OKC *e*PP PP 18 34 19.7 +10
OKC *ex* x 18 40 54.2
OKC *e*PKKP PKKPdf 18 48 34.2 -26
OKC Ostrava-Krasne 83.16 326 P **P** **18 30 53.2 +0.4**
ANGG Ammassalik, Gr 83.18 358 *i* P **P** **18 30 51.2 -1.3**
ANGG IAmb IAmb 18 30 52.9
comp=Z,38nm,0.9s
DEV Deva 83.28 320 ⇓P **P** **18 30 54.3 +0.8**
DEV Deva 83.28 320 P **P** **18 30 54.2 +0.8**
DEV Deva 83.28 320 P **P** **18 30 54.0 +0.5**
CSS Mathiatis 83.30 307 P **P** **18 30 53.5 -0.3**
JMB Yambol 83.31 316 P **P** **18 30 52.8 -0.9**
RUE Ruedersdorf 83.35 329 *e*P **P** **18 30 54.1 +0.5**
comp=Z,84nm,0.9s,baz=43,slow=4.8
MORC Moravsky Berou 83.49 326 ⇓P **P** **18 30 54.8 +0.2**
MORC Moravsky Berou 83.49 326 **P** **18 30 54.5 0.0**
MORC IAmb IAmb 18 30 55.2
comp=Z,30nm,0.7s
MORC Moravsky Berou 83.49 326 P **P** **18 30 54.5 0.0**
MORC pmax pmax
comp=Z,30nm,0.7s
MORC Moravsky Berou 83.49 326 *e*P **P** **18 30 54.2 -0.3**
MORC *e* 18 32 30.2
MORC Moravsky Berou 83.49 326 P **P** **18 30 54.8 +0.2**
PDAR Pinedale Array 83.51 43 P **P** **18 30 55.6 +0.5**
comp=Z,6.4nm,0.9s,baz=270,slow=3.0,SNR=11
comp=Z,6.4nm,0.9s
PSZ Piszkesteto 83.56 323 ⇑P **P** **18 30 55.5 +0.5**
PSZ Piszkesteto 83.56 323 IAmb IAmb 18 30 56.4
comp=Z,72nm,1.2s
PSZ Piszkesteto 83.56 323 P **P** **18 30 55.5 +0.5**
PSZ Piszkesteto 83.56 323 P **P** **18 30 55.3 +0.4**
OSTC Ostas 83.59 327 *e*P **P** **18 30 55.0 0.0**
OSTC *e*S **S** **18 40 51.2 +7.9**
OSTC Ostas 83.59 327 *e*P **P** **18 30 55.0 0.0**
OSTC *e*PP PP 18 34 25.2 +12
OSTC *e*S **S** **18 40 51.2 +7.9**
OSTC *e*PKKP PKKPdf 18 48 43.8 -16
VLAD Vladila 83.62 318 ⇑P **P** **18 30 55.8 +0.6**
BAND Balkesir-Ban 83.63 314 ⇑P **P** **18 30 55.6 +0.2**
CHVC Chvalec 83.64 327 *e*P **P** **18 30 55.1 -0.2**
CHVC *e*S **S** **18 40 46.4 +2.6**
CHVC Chvalec 83.64 327 *e*P **P** **18 30 55.1 -0.2**
CHVC *e*PP PP 18 34 25.8 +12
CHVC *e*S **S** **18 40 46.4 +2.6**
CHVC *e*PKKP **PKKPdf** **18 48 56.7 -2.7**
KRLC Kraliky 83.65 326 *e*P **P** **18 30 55.4 +0.1**
KRLC *e*S **S** **18 40 45.2 +1.2**
KRLC Kraliky 83.65 326 *e*P **P** **18 30 55.4 +0.1**
KRLC *e*PP PP 18 34 24.0 +10
KRLC *e*S **S** **18 40 45.2 +1.2**
KRLC *e*PKKP PKKPdf 18 48 43.3 -16
GZR Gura Zlata 83.66 320 ⇓P **P** **18 30 56.2 +0.7**
GZR Gura Zlata 83.66 320 P **P** **18 30 56.2 +0.7**
DPC Dobruska-Polom 83.68 327 *e*P **P** **18 30 55.5 0.0**
DPC *e*S **S** **18 40 44.2 0.0**
DPC Dobruska-Polom 83.68 327 *e*P **P** **18 30 55.5 0.0**
DPC *e*PP PP 18 34 26.1 +12
DPC *e*S **S** **18 40 44.2 0.0**
DPC *e*PKKP PKKPdf 18 48 45.0 -14
DPC Dobruska-Polom 83.68 327 P **P** **18 30 56.1 +0.6**
SIRR Siria 83.71 321 ⇑P **P** **18 30 56.1 +0.5**
UPC Upice 83.72 327 *e*P **P** **18 30 55.7 +0.1**
UPC *e*S **S** **18 40 45.0 +0.5**
UPC Upice 83.72 327 *e*P **P** **18 30 55.7 +0.1**
UPC *e*PP PP 18 34 26.1 +12
UPC *e*S **S** **18 40 45.0 +0.5**
UPC *e*PKKP **PKKPdf** **18 48 56.5 -2.7**
UPC Upice 83.72 327 P **P** **18 30 55.7 +0.1**
ELS Elsinore Mount 83.73 54 IAmb IAmb 18 30 57.9
comp=Z,66nm,1.6s
GHAJ Ghor Haditha 83.74 303 P **P** **18 30 56.1 0.0**
GHAJ Ghor Haditha 83.74 303 P **P** **18 30 56.5 +0.5**
BSEG Bad Segeberg 83.75 332 *e*P **P** **18 30 55.9 +0.3**
comp=Z,42nm,1.0s,baz=43,slow=4.8
BSEG Bad Segeberg 83.75 332 P **P** **18 30 55.8 +0.3**
PLVB Pleven 83.87 318 ⇑P **P** **18 30 56.7 +0.2**
SRE Strehaia 83.88 319 ⇓P **P** **18 30 57.4 +0.9**
SRE Strehaia 83.88 319 P **P** **18 30 57.4 +0.9**
MSBI Mazada 83.89 303 P **P** **18 30 57.0 +0.3**
MPU Maple Canyon 83.91 46 IAmb IAmb 18 30 59.3
comp=Z,102nm,1.7s
GORT1 Trebel 84.03 331 *e*P **P** **18 30 57.3 +0.3**
comp=Z,114nm,1.5s,baz=43,slow=4.8
JAVC Velka Javorina 84.05 325 *e*P **P** **18 30 58.4 +1.0**
JAVC Velka Javorina 84.05 325 P **P** **18 30 58.3 +1.0**
BZS Buzias 84.15 321 ⇑P **P** **18 30 57.2 -0.7**
BZS Buzias 84.15 321 P **P** **18 30 57.1 -0.7**
BZS Buzias 84.15 321 P **P** **18 30 57.5 -0.4**
HERR Herculane 84.18 320 ⇑P **P** **18 30 57.4 -0.6**
VRAC Vranov 84.26 326 ⇑P **P** **18 30 58.5 +0.1**
VRAC Vranov 84.26 326 P **P** **18 30 58.4 +0.1**
VRAC Vranov 84.26 326 *e*P **P** **18 30 58.2 -0.2**
VRAC *e* 18 32 34.2
VRAC Vranov 84.26 326 P **P** **18 30 58.8 +0.4**
DNR Dunn Ranch,Anz 84.33 54 IAmb IAmb 18 31 02.3
comp=Z,49nm,0.9s
NUUK Nuuk 84.35 4 *i* P **P** **18 30 55.3 -3.1**
NUUK IAmb IAmb 18 30 59.7
comp=Z,33nm,0.8s
PVCC Panska Ves 84.37 328 *e*P **P** **18 30 58.8 0.0**
PVCC Panska Ves 84.37 328 *e*P **P** **18 30 58.8 0.0**
PVCC *e*PP PP 18 34 31.4 +12
MPCC Panska Ves 84.37 328 P **P** **18 30 59.2 +0.4**
MPEP Malo Peshtene 84.40 318 P **P** **18 30 59.2 +0.1**
SMOL Smolenice 84.40 325 *e*P **P** **18 30 59.7 +0.7**
SMOL pmax pmax
comp=Z,22nm,1.0s
BRG Berggiesshubel 84.41 328 *e*P **P** **18 30 59.2 +0.2**
comp=Z,35nm,0.8s,baz=43,slow=4.8
BRG Berggiesshubel 84.41 328 P **P** **18 30 59.0 0.0**
BRG Berggiesshubel 84.41 328 ⇓*i*P **P** **18 30 58.9 0.0**
BRG Amp 18 30 59.5
comp=Z,35nm,0.8s
BRG pP **pwP** **18 32 34.7 +2.0**
BRG Amp 18 32 36.7
comp=Z,6.4nm,0.9s
BRG Berggiesshubel 84.41 328 S **S** **18 40 51.0 -0.2**
PFO Pinyon Flats O 84.42 54 P **P** **18 30 60.0 +0.4**
PFO Pinyon Flats O 84.42 54 P **P** **18 31 00.0 +0.4**
PFO pmax pmax
comp=Z,33nm,1.1s
PFO Pinyon Flats O 84.42 54 P **P** **18 31 00.3 +0.7**
PFO pP **pP** **18 32 30.9 +2.0**
MANT Manisa 84.44 312 **P** **18 30 59.1 -0.6**
CLL Collm 84.52 329 IAmb IAmb 18 31 00.2
comp=Z,49nm,0.9s
CLL Collm 84.52 329 *i* P **P** **18 30 59.1 -0.4**
CLL *i* *PP **pwP** **18 32 33.9 +0.6**
CLL *e*S **S** **18 40 51.0 -1.3**
CLL pmax pmax
comp=Z,61nm,0.9s
CLL Collm 84.52 329 *e*P **P** **18 30 59.4 -0.2**
comp=Z,45nm,0.8s,baz=43,slow=4.8
CLL *e*pP **pwP** **18 32 34.7 +1.4**
baz=40,slow=5.1
CLL Collm 84.52 329 *i* P **P** **18 30 59.1 -0.4**
comp=Z,61nm,0.9s
CLL *i* pPcP 18 32 33.9
CLL *e*PP **PP** **18 34 22.0 +1.3**
CLL *e*S **S** **18 40 51.0 -1.3**
CLL Collm 84.52 329 P **P** **18 30 59.3 -0.2**
KRUC Moravsky 84.53 326 *e*P **P** **18 30 59.3 -0.4**
KRUC *e* 18 32 35.1
KRUC Moravsky 84.53 326 P **P** **18 30 59.8 +0.1**
FLTG Flechtingen 84.54 330 *e*P **P** **18 30 59.2 -0.4**
comp=Z,38nm,0.8s,baz=43,slow=4.8
FLTG *e*pP **pwP** **18 32 34.4 +1.0**
baz=40,slow=5.1
MODS Modra-Piesok 84.57 325 *e*P **P** **18 31 00.3 +0.4**
MODS pmax pmax
comp=Z,117nm,1.4s
MODS Modra-Piesok 84.57 325 P **P** **18 31 00.5 +0.6**
MODS Modra-Piesok 84.57 325 *e*P **P** **18 31 00.3 +0.4**
RICC Richard 84.57 328 *e*P **P** **18 30 59.7 -0.1**
RICC *e*PP PP 18 34 33.4 +12
RICC *e*PKKP **PKKPbc** **18 49 09.6 +1.8**
MDVR Moldovita 84.63 320 ⇑P **P** **18 30 59.7 -0.6**
RDO Rodhopi 84.71 316 IAmb IAmb 18 31 02.0
comp=Z,39nm,0.9s
PRU Pruhonice 84.76 327 *e*P **P** **18 31 00.7 -0.1**
PRU *e* 18 34 31.5
PRU *e*S **S** **18 40 55.0 +0.3**
PRU Pruhonice 84.76 327 *e*P **P** **18 31 00.7 -0.1**
PRU *e*PP PP 18 34 31.5 +8.8
PRU *e*S **S** **18 40 55.0 +0.3**
PRU *e*PKKP **PKKPbc** **18 49 03.6 -3.7**
P17A Butcher Ranch, 84.78 46 IAmb IAmb 18 31 03.7
comp=Z,30nm,0.8s

TREC **Trest** 84.80 326 eP P 18 31 00.6 -0.4
TREC e 18 34 29.0
TREC Trest 84.80 326 eP **P** 18 31 00.6 -0.4
TREC ePP **PP** 18 34 29.0 +5.9
TREC ePKKP **PKKPbc** 18 49 10.8 +3.6
HSKC Hora Svate Kat 84.83 328 eP **P** 18 31 00.8 -0.3
HSKC ePP PP 18 34 35.1 +12
HSKC eS **S** 18 40 54.2 -1.2
HSKC ePKKP **PKKPbc** 18 49 07.0 -0.2
Q16A Castle Valley 84.85 47 IAmb IAmb 18 31 04.3
comp=Z,107nm,1.7s
RZN Rozhen 84.85 316 P **P** 18 31 02.0 +0.4
ASSE Asse, Remlinge 84.93 331 eP **P** 18 31 01.3 -0.1
comp=Z,17nm,1.0s,baz=43,slow=4.8
WIMM Wimmelburg 85.02 330 P **P** 18 31 01.5 -0.4
RETH Rethem/Aller, 85.02 332 eP **P** 18 31 02.1 +0.1
comp=Z,94nm,1.5s,baz=43,slow=4.8
RETH Rethem/Aller, 85.02 332 P **P** 18 31 02.2 +0.3
EIL Elat 85.08 302 P **P** 18 31 01.1 -1.6
NEUB Neuenburg 85.13 329 eP **P** 18 31 02.5 -0.1
comp=Z,37nm,0.8s,baz=43,slow=4.8
NEUB Neuenburg 85.13 329 P **P** 18 31 02.7 +0.1
SRU San Rafael Swe 85.14 47 P **P** 18 31 03.5 +0.4
SRU IAmb IAmb 18 31 05.0
comp=Z,20nm,0.8s
SRU San Rafael Swe 85.14 47 P **P** 18 31 03.5 +0.4
SRU pmax pmax
comp=Z,20nm,0.8s
VTS Vitosha 85.15 318 P **P** 18 31 02.1 -0.9
MPLH Magyarpolny 85.25 324 P **P** 18 31 03.3 +0.1
CLZ Clausthal 85.27 331 eP **P** 18 31 03.5 +0.2
comp=Z,26nm,0.9s,baz=43,slow=4.8
CLZ epP **pwP** 18 32 38.8 +1.6
baz=40,slow=5.1
CLZ Clausthal 85.27 331 P **P** 18 31 03.2 -0.1
ZVC Zvikov 85.31 327 eP **P** 18 31 03.6 +0.1
ZVC ePP PP 18 34 38.2 +11
ZVC ePKKP **PKKPbc** 18 49 11.5 +5.5
MORH Mrgy, Hungar 85.33 323 ⇑P **P** 18 31 03.4 -0.3
MORH Mrgy, Hungar 85.33 323 ⇓P **P** 18 31 02.5 -1.1
BOVS Bovan 85.37 319 ⇑P **P** 18 31 03.9 0.0
TANN Tannenbergstha 85.40 329 eP **P** 18 31 04.0 0.0
comp=Z,17nm,1.1s,baz=43,slow=4.8
TANN epP **pwP** 18 32 39.5 +1.5
baz=40,slow=5.1
FRGS Fruska Gora 85.41 321 eP **P** 18 31 03.6 -0.5
PLN Plauen 85.48 329 eP **P** 18 31 04.4 +0.1
comp=Z,5.6nm,1.1s,baz=43,slow=4.8
PLN epP **pwP** 18 32 39.9 +1.6
baz=40,slow=5.1
RONA Rosalia, Austr 85.51 325 eP **P** 18 31 04.5 -0.1
comp=Z,22nm,0.9s,SNR=6.7
RONA ePP **PP** 18 34 30.1 +1.2
comp=Z,592nm,4.9s
MCD Coleburn Disti 85.53 340 eP **P** 18 31 04.1 -0.3
MCD IAmb IAmb 18 31 05.2
comp=Z,27nm,0.8s
NKC Novy Kostel 85.53 328 eP **P** 18 31 04.6 0.0
NKC e 18 34 35.3
NKC eS **S** 18 41 00.7 -1.6
NKC Novy Kostel 85.53 328 eP **P** 18 31 04.6 0.0
NKC ePP **PP** 18 34 35.3 +6.4
NKC eS **S** 18 41 00.7 -1.6
NKC ePKKP PKKPbc 18 49 27.5 +22
NKC Novy Kostel 85.53 328 P **P** 18 31 04.4 -0.2
CONA Conrad Observa 85.56 325 *i* P **P** 18 31 04.9 0.0
comp=Z,31nm,1.2s
CONA ePP **PP** 18 34 29.2 -0.1
comp=Z,954nm,5.6s
MOX Moxa 85.61 329 eP **P** 18 31 04.9 0.0
comp=Z,19nm,1.1s,baz=43,slow=4.8
MOX epP **pwP** 18 32 40.4 +1.5
baz=40,slow=5.1
MOX Moxa 85.61 329 P **P** 18 31 04.7 -0.3
ULM Lac du Bonnet 85.63 31 P **P** 18 31 04.8 -0.2
comp=Z,4.0nm,0.6s,baz=307,slow=4.3,SNR=5.6
comp=Z,4.0nm,0.6s
ULM Lac du Bonnet 85.63 31 P **P** 18 31 05.5 +0.5
ULM Lac du Bonnet 85.63 31 P **P** 18 31 05.5 +0.5
ULM pmax pmax
comp=Z,12nm,0.9s
GTTG Gottingen 85.66 331 eP **P** 18 31 05.1 0.0
comp=Z,52nm,1.5s,baz=43,slow=4.8
KKB Krupnik 85.70 317 P **P** 18 31 02.8 -2.8
RSSD Black Hills 85.79 40 P **P** 18 31 08.0 +1.7
KHC Kasperske Hory 85.81 327 IAmb IAmb 18 31 06.2
comp=Z,23nm,0.8s
KHC Kasperske Hory 85.81 327 eP **P** 18 31 05.6 -0.4
KHC e 18 34 36.8
KHC eS **S** 18 41 04.2 -0.8
KHC Kasperske Hory 85.81 327 eP **P** 18 31 05.6 -0.4
KHC ePP **PP** 18 34 36.8 +5.6
KHC eS **S** 18 41 04.2 -0.8
KHC ePKKP PKKPbc 18 49 23.8 +19
GEC2 GERESS Array S 85.95 327 eP **P** 18 31 06.4 -0.4
comp=Z,19nm,0.9s,baz=43,slow=4.8
GERES GERESS Array B 85.95 327 P **P** 18 31 05.8 -1.0
comp=Z,10nm,0.7s,baz=37,slow=4.2,SNR=41
GERES PKKPbc **PKKPbc** 18 49 04.0 -0.6
comp=Z,0.4nm,0.5s,baz=224,slow=3.7,SNR=3.8
comp=Z,10nm,0.7s
GERES GERESS Array B 85.95 327 P **P** 18 31 05.7 -1.1
TEKS Tekeris 85.97 321 ⇓P **P** 18 31 05.8 -1.0
ROTZ Rotzenmuhle 85.98 328 eP **P** 18 31 07.1 +0.3
comp=Z,12nm,1.3s,baz=43,slow=4.8
ROTZ epP **pwP** 18 32 42.8 +1.9
baz=40,slow=5.1
IBBN Ibbenburen 85.99 332 eP **P** 18 31 06.6 -0.1
comp=Z,48nm,1.1s,baz=43,slow=4.8
IBBN epP **pwP** 18 32 41.9 +1.1
baz=40,slow=5.1
IBBN Ibbenburen 85.99 332 P **P** 18 31 06.2 -0.5
BEHE Becsehely 86.11 324 eP P 18 31 12.3 +4.9
WET Wettzell 86.12 328 eP **P** 18 31 07.6 +0.1
comp=Z,16nm,1.1s,baz=43,slow=4.8
WET epP **pwP** 18 32 43.5 +1.8
baz=40,slow=5.1
WET Wettzell 86.12 328 P **P** 18 31 07.2 -0.3
UBBA Unterbreizbach 86.18 330 eP **P** 18 31 07.7 +0.2
comp=Z,6.8nm,0.7s,baz=43,slow=4.8
UBBA epP **pwP** 18 32 43.0 +1.3
baz=40,slow=5.1
ARSA Arzberg 86.20 325 IAmb IAmb 18 31 08.9
comp=Z,65nm,1.8s
ARSA Arzberg 86.20 325 eP **P** 18 31 07.4 -0.5
comp=Z,14nm,0.9s,SNR=6.7
ARSA ePP **PP** 18 34 36.6 +2.3
comp=Z,237nm,4.1s
ARSA Arzberg 86.20 325 P **P** 18 31 07.7 -0.2
VAY Valandovo 86.35 317 *i* P **P** 18 31 08.1 -0.6
GRA3 Grafenberg Arr 86.38 329 P **P** 18 31 08.9 +0.2
MOA Molln 86.39 326 *i* P **P** 18 31 08.5 -0.3
comp=Z,19nm,1.1s
MOA *i* PP **PP** 18 34 36.6 +0.8
comp=Z,1µm,5.6s
KPL Plockton 86.42 341 eP **P** 18 31 08.7 +0.1
KPL IAmb IAmb 18 31 09.9
comp=Z,61nm,0.7s
GRA2 Grafenberg Arr 86.44 329 P **P** 18 31 05.7 -3.3
GRA1 Grafenberg Arr 86.47 329 P **P** 18 31 09.5 +0.4
GRF Grafenberg Arr 86.47 329 eP **P** 18 31 09.4 +0.3
comp=Z,144nm,1.7s,baz=43,slow=4.8
GRF epP **pwP** 18 32 45.1 +1.7
baz=40,slow=5.1
GRFO Grafenberg 86.47 329 P **P** 18 31 09.5 +0.4
BBLS Lazi&#263i 86.48 321 ⇓P **P** 18 31 08.8 -0.6
KASTN Kahler Asten 86.56 331 eP **P** 18 31 09.4 -0.2
comp=Z,28nm,1.5s,baz=43,slow=4.8
SJES Sjenica 86.57 320 eP **P** 18 31 08.4 -1.5
PV04 Paradox Valley 86.58 46 IAmb IAmb 18 31 13.3
comp=Z,64nm,1.5s
SKO Skopje 86.59 318 *i* P **P** 18 31 09.5 -0.3
PV16 Nyswonger Mesa 86.62 47 IAmb IAmb 18 31 13.5
comp=Z,68nm,1.6s
PV05 Paradox Valley 86.65 47 IAmb IAmb 18 31 12.7
comp=Z,52nm,1.5s
PV11 David Mesa, Pa 86.65 47 IAmb IAmb 18 34 16.5
comp=Z,61nm,1.4s
PV03 Paradox Valley 86.70 47 IAmb IAmb 18 34 38.3
comp=Z,89nm,1.7s
INVG Invergeldie, C 86.75 340 eP **P** 18 31 10.1 -0.1
INVG IAmb IAmb 18 31 12.0
comp=Z,20nm,0.6s
SESA Seetaler Alpe, 86.76 325 *i* P **P** 18 31 10.3 -0.5
comp=Z,60nm,0.8s,SNR=6.1

BIOA Bad Ischl, Aus 86.80 326 *i* P **P** 18 31 10.1 -0.6
comp=Z,14nm,0.7s,SNR=5.7
BIOA ePP **PP** 18 34 39.9 +0.8
comp=Z,667nm,3.9s
PERS Pernice 86.83 325 *i* P **P** 18 31 10.2 -0.7
SOKA Soboth 86.84 325 *i* P **P** 18 31 10.3 -0.7
comp=Z,32nm,1.0s,SNR=10
SOKA ePP **PP** 18 34 39.8 +0.3
comp=Z,279nm,3.4s
BUG Bochum-Univer 86.85 332 epP pP 18 32 45.9 +6.2
baz=40,slow=5.1
GRC3 Grafenberg Arr 86.89 328 P **P** 18 31 10.7 -0.4
EPLO Experimental L 87.00 31 P **P** 18 31 11.3 -0.3
EAB Aberfoyle 87.04 340 eP **P** 18 31 11.4 -0.2
EAB IAmb IAmb 18 31 12.6
comp=Z,14nm,0.9s
BLY Banja Luka 87.07 322 **P** 18 31 11.6 -0.4
BLY IAmb IAmb 18 31 12.7
comp=Z,108nm,1.7s
BLY Banja Luka 87.07 322 ⇓*i*P **P** 18 31 11.4 -0.7
BLY Banja Luka 87.07 322 P **P** 18 31 11.7 -0.4
KARP Karpathos 87.08 310 IAmb IAmb 18 31 12.4
comp=Z,66nm,1.0s
LIT Litokhoron 87.17 316 IAmb IAmb 18 31 12.3
comp=Z,51nm,0.9s
OBKA Obir 87.19 325 *i* P **P** 18 31 11.7 -1.1
comp=Z,9.7nm,0.7s
OBKA ePP **PP** 18 34 42.9 +0.6
comp=Z,237nm,3.3s
OBKA Obir 87.19 325 P **P** 18 31 11.8 -0.9
CRES Cresnjevec Ost 87.22 324 *i* P **P** 18 31 11.8 -1.0
TNS Taunus Mts 87.28 330 eP **P** 18 31 12.8 -0.2
comp=Z,7.7nm,0.9s,baz=43,slow=4.8
TNS epP **pwP** 18 32 48.7 +1.2
baz=40,slow=5.1
KBA Koelnbreinsper 87.38 326 *i* P **P** 18 31 12.8 -0.9
comp=Z,13nm,0.7s
KBA ePP **PP** 18 34 44.3 +0.5
comp=Z,784nm,4.3s
KBA Koelnbreinsper 87.38 326 P **P** 18 31 13.3 -0.4
VNDS Vrh nad Dolski 87.41 324 *i* P **P** 18 31 12.5 -1.1
EKA Eskdalemuir Ar 87.41 339 P **P** 18 31 12.9 -0.5
comp=Z,4.1nm,0.6s,baz=42,slow=3.9,SNR=18
EKA PP **PP** 18 34 43.5 -0.1
comp=Z,14nm,1.0s,baz=28,slow=9.7,SNR=7.2
comp=Z,4.1nm,0.6s
EKA Eskdalemuir Ar 87.41 339 P **P** 18 31 12.4 -1.0
EKA pmax pmax
comp=Z,56nm,1.6s
ESK Eskdalemuir 87.44 339 eP **P** 18 31 13.5 -0.1
ESK IAmb IAmb 18 31 14.8
comp=Z,11nm,1.0s
LESA Schwarzleotal 87.45 326 *i* P **P** 18 31 13.2 -0.7
comp=Z,28nm,0.8s,SNR=6.5
LESA ePP **PP** 18 34 45.4 +1.1
comp=Z,1µm,6.4s
OHR Ohrid 87.51 318 *i* P **P** 18 31 13.5 -0.8
IVI Ivigtut 87.51 3 IAmb IAmb 18 32 15.4
comp=Z,51nm,1.3s
PDG Podgorica 87.51 320 IAmb IAmb 18 31 14.4
comp=Z,28nm,0.8s
PDG Podgorica 87.51 320 eP **P** 18 31 13.0 -1.2
PDG Podgorica 87.51 320 P **P** 18 31 13.5 -0.6
LJU Ljubljana 87.53 325 *i* P **P** 18 31 13.2 -1.0
MYKA Terra Mystica 87.55 325 *i* P **P** 18 31 13.0 -1.4
comp=Z,11nm,0.6s,SNR=5.3
MYKA ePP **PP** 18 34 46.0 +0.8
comp=Z,481nm,3.9s
FUR Furstenfeldbru 87.56 328 eP **P** 18 31 14.6 +0.2
comp=Z,59nm,0.7s,baz=43,slow=4.8
FUR Furstenfeldbru 87.56 328 P **P** 18 31 14.4 +0.1
BRY Bratogost 87.59 320 eP **P** 18 31 12.6 -2.1
ACOM Acomizza, Ital 87.67 325 P **P** 18 31 13.9 -1.2
ISCO Idaho Springs 87.69 44 P **P** 18 31 17.4 +1.9
DRME Dracevica, Mon 87.72 319 eP **P** 18 31 13.4 -1.7
CADS Cadrg 87.79 325 *i* P **P** 18 31 13.5 -2.0
HCY Herceg Novi 87.92 320 eP **P** 18 31 12.3 -3.8
MEM Membach 88.00 332 *d*P **P** 18 31 16.1 -0.2
comp=Z,7.8nm,1.3s
ABTA Abfaltersbach 88.01 326 *i* P **P** 18 31 14.8 -1.8
comp=Z,51nm,1.1s,SNR=9.1
ABTA ePP **PP** 18 34 48.5 -0.3
comp=Z,287nm,3.3s
FUSE Fusea 88.02 326 P **P** 18 31 14.8 -1.7
WATA Walderalm 88.03 327 *i* P **P** 18 31 15.7 -1.0
comp=Z,25nm,1.0s
WATA ePP **PP** 18 34 50.1 +1.1
comp=Z,746nm,4.3s
SABO M.te Sabotino 88.03 325 **P** 18 31 14.8 -1.9
SABO IAmb IAmb 18 31 16.1
comp=Z,52nm,1.2s
STU Stuttgart 88.05 329 eP **P** 18 31 16.5 -0.1
comp=Z,72nm,1.0s,baz=43,slow=4.8
STU Stuttgart 88.05 329 P **P** 18 31 16.2 -0.3
WTTA Wattenberg 88.05 327 *i* P **P** 18 31 16.0 -0.9
comp=Z,19nm,0.8s
WTTA ePP **PP** 18 34 50.3 +1.1
comp=Z,732nm,3.3s
WTTA Wattenberg 88.05 327 P **P** 18 31 16.2 -0.7
BSTI Sart Tilman 88.19 332 *d*P **P** 18 31 16.7 -0.5
comp=Z,3.3nm,0.8s
BHOU Houvegnez 88.19 332 *d*P **P** 18 31 16.7 -0.5
MOTA Moosalm 88.24 327 *i* P **P** 18 31 16.8 -0.9
comp=Z,26nm,1.0s,SNR=6.9
MOTA ePP **PP** 18 34 51.4 +0.7
comp=Z,590nm,3.3s
STAL STALIGIAL 88.27 326 IAmb IAmb 18 31 16.8
comp=Z,40nm,0.9s
SQTA Sankt Quirin 88.28 327 *i* P **P** 18 31 16.1 -1.8
comp=Z,25nm,0.9s,SNR=7.1
SQTA *i* PP **PP** 18 34 51.7 +0.7
comp=Z,853nm,4.0s
RETA Reutte 88.30 327 *i* P **P** 18 31 17.3 -0.6
comp=Z,34nm,1.0s,SNR=9.1
RETA ePP **PP** 18 34 53.0 +2.0
comp=Z,0.1nm,0.1s
BCLA Clavier 88.43 332 *d*P **P** 18 31 17.4 -0.9
comp=Z,7.6nm,1.0s
CLGH Cloghs, Cushen 88.50 340 eP **P** 18 31 17.7 -0.8
CLGH IAmb IAmb 18 31 19.8
comp=Z,37nm,0.8s
UCC Uccle 88.50 333 *d*P **P** 18 31 17.8 -0.8
ATD Ata Tunnel 88.54 283 IAmb IAmb 18 31 21.4
comp=Z,33nm,1.1s
BGES Gesves 88.54 332 *d*P **P** 18 31 18.1 -0.7
comp=Z,6.7nm,0.9s
LBWR Ladybower, Pea 88.58 337 P **P** 18 31 18.8 -0.2
LBWR Ladybower, Pea 88.58 337 eP **P** 18 31 19.0 +0.1
LBWR IAmb IAmb 18 31 20.2
comp=Z,39nm,0.9s
FETA Feichten 88.65 327 *i* P **P** 18 31 18.9 -0.8
comp=Z,38nm,0.8s,SNR=9.7
FETA ePP **PP** 18 34 54.5 +0.5
comp=Z,347nm,3.2s
RCHB Rochefort 88.66 332 *d*P **P** 18 31 18.3 -1.1
comp=Z,12nm,0.8s
WLF Walferdange 88.67 331 *d*P **P** 18 31 19.4 0.0
WLF Walferdange 88.67 331 eP **P** 18 31 19.7 +0.2
comp=Z,15nm,1.0s,baz=43,slow=4.8
WLF epP **pwP** 18 32 55.6 +1.5
baz=40,slow=5.1
IDI Anoyia 88.71 311 IAmb IAmb 18 31 24.1
comp=Z,75nm,1.6s
BMRD Maredsous 88.73 332 *d*P **P** 18 31 18.9 -0.8
comp=Z,11nm,0.8s
BMRD *d*PP **PP** 18 34 53.5 -0.7
BFO Black Forest 88.76 329 **P** 18 31 19.4 -0.5
BFO IAmb IAmb 18 31 20.3
comp=Z,27nm,0.8s
BFO Black Forest 88.76 329 P **P** 18 31 19.4 -0.5
BFO pmax pmax
comp=Z,27nm,0.8s
BFO Black Forest 88.76 329 eP **P** 18 31 19.7 -0.3
comp=Z,28nm,0.9s,baz=43,slow=4.8
BFO Black Forest 88.76 329 P **P** 18 31 19.2 -0.7
DAVA Damuels 88.85 328 *i* P **P** 18 31 20.0 -0.6
comp=Z,61nm,0.9s,SNR=13
DAVA ePP **PP** 18 34 57.1 +1.6
comp=Z,683nm,3.6s
DAVA Damuels 88.85 328 P **P** 18 31 20.1 -0.4
STBN Sutton Boningt 88.89 337 eP **P** 18 31 20.1 -0.3
STBN IAmb IAmb 18 31 21.3
comp=Z,59nm,0.7s
IDGL Inch Island, C 88.90 341 P **P** 18 31 20.6 +0.2
DOU Dourbes 88.96 332 *d*P **P** 18 31 20.1 -0.7
CGRP Cima Grappa 88.98 326 P **P** 18 31 19.9 -1.4

CWF Charnwood Fore 89.00 337 eP **P** 18 31 20.3 -0.6
CWF IAmb IAmb 18 31 21.7
comp=Z,31nm,0.8s
SLE Schleitheim 89.12 329 P **P** 18 31 20.9 -0.8
FUORN Ofenpass-Fuorn 89.17 327 **P** 18 31 21.5 -0.6
FUORN Ofenpass-Fuorn 89.17 327 P **P** 18 31 22.1 -0.1
EYMN Ely 89.27 31 P **P** 18 31 22.1 -0.2
ECH Echery 89.36 330 P **P** 18 31 22.4 -0.3
ECH Echery 89.36 330 P **P** 18 31 22.2 -0.5
TEOL Teolo 89.42 325 IAmb IAmb 18 31 23.3
comp=Z,56nm,0.9s
ILTH Belurgan, Co L 89.48 340 P **P** 18 31 23.1 0.0
FOEL Foel Wylfa 89.50 338 P **P** 18 31 23.6 +0.4
FOEL Foel Wylfa 89.50 338 eP **P** 18 31 23.0 -0.2
FOEL IAmb IAmb 18 31 24.1
comp=Z,47nm,0.7s
WLF1 Llynfaes 89.53 339 eP **P** 18 31 22.5 -0.8
WLF1 IAmb IAmb 18 31 24.1
comp=Z,58nm,0.8s
TUE Stuetta 89.70 327 **P** 18 31 24.2 -0.4
TUE IAmb IAmb 18 31 25.1
comp=Z,42nm,0.9s
TUE Stuetta 89.70 327 P **P** 18 31 24.2 -0.4
HLM1 Long Mynd 89.70 337 eP **P** 18 31 23.4 -0.8
HLM1 IAmb IAmb 18 31 24.8
comp=Z,15nm,0.7s
BNALP Bannalp 89.82 328 P **P** 18 31 24.5 -0.6
SGRT San Giovanni R 89.89 321 IAmb IAmb 18 31 25.5
comp=Z,75nm,1.3s
ECSD EROS Data Cent 89.96 36 P **P** 18 31 26.4 +0.8
STRD Stroud 90.09 337 eP **P** 18 31 25.6 -0.4
STRD IAmb IAmb 18 31 27.1
comp=Z,72nm,0.8s
DSB Dublin 90.18 340 P **P** 18 31 26.0 -0.4
DSB Dublin 90.18 340 IAmb IAmb 18 31 26.7
comp=Z,33nm,0.7s
MCH1 Michaelchurch 90.18 337 eP **P** 18 31 25.7 -0.7
MCH1 IAmb IAmb 18 31 27.1
comp=Z,65nm,0.7s
SWN1 Swindon 90.19 336 eP **P** 18 31 26.3 -0.2
SWN1 IAmb IAmb 18 31 27.8
comp=Z,58nm,0.8s
MONM Monmouth 90.25 337 eP **P** 18 31 26.3 -0.5
MONM IAmb IAmb 18 31 27.7
comp=Z,65nm,0.7s
ANMO Albuquerque 90.26 48 *i* P **P** 18 31 27.0 -0.4
ANMO pmax pmax
comp=Z,15nm,1.5s
ANMO Albuquerque 90.26 48 P **P** 18 31 29.2 +1.7
MURB Monte Urbino 90.51 324 IAmb IAmb 18 31 29.7
comp=Z,37nm,0.9s
NRCA Norcia 90.52 323 IAmb IAmb 18 31 29.1
comp=Z,44nm,1.0s
Y22A Socorro 90.58 49 IAmb IAmb 18 34 40.9
comp=Z,82nm,1.9s
SENIN Lac Senin/Sane 90.71 328 IAmb IAmb 18 31 29.5
comp=Z,50nm,1.4s
AQU L'Aquila 90.71 322 IAmb IAmb 18 31 30.1
comp=Z,47nm,0.9s
AQU L'Aquila 90.71 322 eP **P** 18 31 27.9 -1.3
AQU L'Aquila 90.71 322 P **P** 18 31 29.5 +0.3
IGLA Glengowla, Co 90.88 341 P **P** 18 31 29.9 +0.3
IWEX Carrickbyrne, 91.05 339 P **P** 18 31 30.0 -0.4
TIP Timpagrande 91.10 318 **P** 18 31 30.6 -0.4
TIP IAmb IAmb 18 31 31.9
comp=Z,98nm,1.7s
TIP Timpagrande 91.10 318 P **P** 18 31 31.0 0.0
SCHQ Schefferville 91.39 14 P **P** 18 31 32.2 +0.3
comp=Z,9.5nm,0.9s,baz=346,slow=4.6,SNR=13
SCHQ PKKPbc **PKKPbc** 18 48 49.4 -2.3
comp=Z,2.4nm,0.6s,baz=128,slow=3.3,SNR=7.4
comp=Z,9.5nm,0.9s
CLF Chambon-Foret 91.54 332 IAmb IAmb 18 31 33.3
comp=Z,41nm,0.9s
CLF Chambon-Foret 91.54 332 P **P** 18 31 32.9 +0.1
RTBA Rita Blanca 91.60 45 IAmb IAmb 18 31 36.4
comp=Z,39nm,1.5s
DYA Yadsworthy 91.82 337 eP **P** 18 31 32.9 -1.1
DYA IAmb IAmb 18 31 34.3
comp=Z,16nm,0.7s
BNI Bardonecchia 92.00 328 P **P** 18 31 34.4 -0.7
VAL Valentia 92.44 341 P **P** 18 31 37.2 +0.4
SSB Saint Sauveur 92.77 329 IAmb IAmb 18 31 38.8
comp=Z,26nm,0.8s
SSB Saint Sauveur 92.77 329 P **P** 18 31 38.1 -0.4
MNTX Cornudas Mount 93.03 50 P **P** 18 31 41.5 +1.6
AMTX Amarillo 93.27 45 IAmb IAmb 18 31 44.0
comp=Z,19nm,0.9s
VHRN Van Horn 93.87 50 IAmb IAmb 18 35 13.3
comp=Z,31nm,1.5s
128A Castleberry Fa 94.28 48 IAmb IAmb 18 35 25.3
comp=Z,7.0nm,1.1s
DKNS Dickens 94.56 46 IAmb IAmb 18 35 34.5
comp=Z,80nm,1.9s
SN07 Snyder 07 94.96 46 IAmb IAmb 18 35 14.1
comp=Z,37nm,1.7s
TXAR Lajitas Array 95.68 51 P **P** 18 31 53.5 +1.3
comp=Z,2.7nm,0.8s,baz=298,slow=2.7,SNR=8.6
comp=Z,2.7nm,0.8s
TXAR Lajitas Array 95.68 51 **P** 18 31 52.2 0.0
KEST Kesra 97.69 320 P **P** 18 32 00.2 -0.9
comp=Z,4.7nm,0.6s,baz=318,slow=3.1,SNR=4.9
comp=Z,4.7nm,0.6s
KEST Kesra 97.69 320 IAmb IAmb 18 32 01.8
comp=Z,36nm,1.6s
UCM Universidad Co 100.14 331 PP **PP** 18 36 21.7 -0.5
PBRG Braganca 100.24 334 ePP **PP** 18 36 29.1 +6.3
PGAV Gavieira, Arco 100.66 335 ePP **PP** 18 36 32.0 +6.0
PCAB Cabril 100.79 335 ePP **PKiKP** 18 36 38.6 +0.4
MVO Moncorvo 100.90 334 ePP **PKiKP** 18 36 33.7 -4.7
ESDC Sonseca Array 100.97 331 P **Pdif** 18 32 14.8 -0.9
comp=Z,0.6nm,0.7s,baz=21,slow=4.7,SNR=6.1
POLO Lamas de Olo 101.00 335 ePP **PP** 18 36 33.1 +4.4
PVRL Vila Real 101.06 334 ePP **PKiKP** 18 36 36.1 -2.6
CART Cartagena 101.42 328 PP **PP** 18 36 30.6 -1.2
PVIS Viseu 101.61 334 ePP **PKiKP** 18 36 39.6 -0.1
MTE Manteigas 101.76 334 ePP **PKiKP** 18 36 42.0 +2.0
PCBR Castelo Branco 102.22 334 ePP **PKiKP** 18 36 43.0 +2.3
PCAS Casmilo, Conde 102.42 334 ePP **PKiKP** 18 36 44.3 +3.1
PMRV Marv??o 102.54 333 ePP **PP** 18 36 39.2 -0.9
PSARD Sardoal 102.69 334 ePP **PKiKP** 18 36 42.3 +0.6
PSBE So Bento 103.00 334 ePP **PP** 18 36 44.6 +1.2
PESTR Estremoz 103.11 333 ePP **PP** 18 36 47.3 +3.1
PMTG Montargil 103.17 334 ePP **PP** 18 36 51.0 +6.3
PARRA Arraiolos 103.32 333 ePP **PP** 18 36 49.4 +3.6
PBAR Barrancos 103.49 332 ePP **PP** 18 36 48.4 +1.3
EVO Evora 103.56 333 PP **PKiKP** 18 36 49.4 +6.1
EVO Evora 103.56 333 ePP **PP** 18 36 51.0 +3.4
PMAFR Mafra 103.67 334 ePP **PP** 18 36 51.8 +3.4
MOE Montemor 103.70 334 ePP **PP** 18 36 53.1 +4.6
LIS Lisbon 103.83 334 ePP **PP** 18 36 53.2 +3.7
PBEJ Beja 103.94 333 ePP **PP** 18 36 57.9 +7.5
PLOUS Minas do Lousa 104.15 333 ePP **PP** 18 36 56.6 +4.7
MESJ Messejana 104.24 333 ePP **PP** 18 36 57.8 +5.2
PCVE Castro Verde 104.35 333 ePP **PP** 18 36 57.3 +3.9
PVAQ Vaqueiros 104.43 333 ePP **PP** 18 36 56.5 +2.5
SFS San Fernando 104.62 331 PP PKiKP 18 36 54.2 +8.9
PBDV Barranco-do-Ve 104.65 333 ePP **PP** 18 36 54.5 -1.1
PTEO Sao Teotonio 104.69 333 ePP **PP** 18 37 01.2 +5.3
MORF Marmelete 104.88 333 ePP **PP** 18 36 59.9 +2.6
PFVI Vila Bisbo 105.09 333 ePP **PP** 18 37 05.1 +6.2
VNDA Vanda 109.68 175 PKiKP **PKiKP** 18 36 53.2 -0.1
comp=Z,0.6nm,0.6s,baz=305,slow=3.1,SNR=5.1
VNDA PKKPbc **PKKPbc** 18 47 59.1 -1.5
comp=Z,0.8nm,0.5s,baz=115,slow=9.2,SNR=2.4
PMPST Porto Santo, M 111.43 337 ePP **PP** 18 37 44.8 +0.4
PMPS Porto Santo 111.45 337 ePP PP 18 37 52.6 +8.0
PMAR Madeira 111.94 337 ePP **PP** 18 37 49.2 +0.9
PMOZ Porto Moniz, M 111.95 338 ePP **PP** 18 37 52.1 +3.9
FUL Funchal 112.01 337 ePP **PP** 18 37 54.1 +5.6
MAW Mawson 113.37 204 PKiKP **PKiKP** 18 37 00.5 0.0
comp=Z,2.1nm,0.6s,baz=160,slow=3.0,SNR=6.1
MAW PP **PP** 18 37 58.6 -0.4
comp=Z,6.2nm,1.1s,baz=77,slow=7.9,SNR=4.7
SOOWA Sowa 118.73 262 P **PKiKP** 18 37 12.9 +0.4
TORD Torodi Ar. Bea 119.08 310 PKP **PKPdf** 18 37 12.3 -0.9
comp=Z,11nm,0.5s,baz=46,slow=1.0,SNR=47
TORD PP **PP** 18 38 36.0 -2.7
comp=Z,4.7nm,0.8s,baz=40,slow=8.0,SNR=3.9
TORD SKP **SKPdf** 18 40 10.4 -0.2
comp=Z,1.2nm,0.8s,baz=29,slow=1.5,SNR=1.3
TORD PKKPbc **PKKPbc** 18 47 26.6 -0.8
comp=Z,0.7nm,0.7s,baz=231,slow=2.4,SNR=4.6
KHWEE KHWEE 119.96 261 P **PKiKP** 18 37 15.6 +0.7

LBTB	Lobatse	121.06	258		PKPdf	18 37 16.8	-0.1
LBTB	Lobatse	121.06	258	PKIKP	PKPdf	18 37 16.8	-0.1
LBTB	Lobatse	121.06	258	P	PKiKP	18 37 17.0	+0.1
QSPA	South Pole Qui	121.23	180	PKP	PKPdf	18 37 15.2	-0.7
	comp=Z,10nm,0.5s,baz=275,slow=1.1,SNR=92						
QSPA				PKKPab	PKKPab	18 47 18.5	+0.1
	comp=Z,1.8nm,0.6s,baz=180,slow=1.2,SNR=9.1						
MAKGR	Makgori	122.03	257	P	PKPdf	18 37 18.7	0.0
SKOMA	Sekoma	122.27	259	P	PKPdf	18 37 19.1	0.0
KGCAE	Kacgae	123.07	262		PKPdf	18 37 20.7	-0.3
KGCAE	Kacgae	123.07	262	P	PKiKP	18 37 21.4	+0.3
GRTLG	Ghanzi	123.31	264	P	PKiKP	18 37 21.8	+0.2
KOOLE	Kule	124.83	262	P	PKiKP	18 37 24.8	+0.3
TSUM	Tsumeb	125.50	268	P	PKiKP	18 37 26.1	+0.1
DBIC	Dimbokro	128.18	311	PKP	PKPdf	18 37 30.6	-0.1
	comp=Z,17nm,0.5s,baz=56,slow=2.2,SNR=21						
DBIC	Dimbokro	128.18	311		PKPdf	18 37 30.5	-0.2
NVL	N'lazarevskaya	131.14	201	*i* P	Pdif	18 34 31.8	+3.1
NVL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TROLL	Troll, Antarti	133.13	197	⇑PKPdf	PKiKP	18 37 39.3	-0.4
	comp=Z,628nm,0.4s						
TROLL				⇑SKPbc	SKPbc	18 40 29.5	+0.8
	comp=Z,1μm,0.6s						
SNAA	Sanae	134.66	196	⇓SKPbc	SKPbc	18 40 33.9	+0.2
	comp=Z,194nm,0.8s						
SNAA	Sanae	134.66	196	SKPbc	SKPbc	18 40 33.7	0.0
	comp=Z,6.5nm,0.7s,baz=63,slow=2.3,SNR=10						
VNA2	Neumayer--Watz	136.25	196	⇓PKPdf	PKPdf	18 37 44.1	-0.1
	comp=Z,26nm,0.6s,baz=113,slow=1.7						
VNA2				⇑PKiKP	PKiKP	18 37 46.3	+0.4
	comp=Z,26nm,0.6s,baz=115,slow=1.7						
VNA2				⇓SKPbc	SKPbc	18 40 38.7	+0.2
	comp=Z,19nm,0.6s,baz=126,slow=2.2						
VNA1	Neumayer--Stat	136.64	196	SKPbc	SKPbc	18 40 40.2	+0.6
	comp=Z,12nm,1.0s						
ESPZ	Base Esperanza	146.63	168		PKPbc	18 38 05.7	+0.7
MACA	Manacapuru-AM	146.71	36		PKPbc	18 38 06.5	-0.4
USHA	Ushuaia	149.97	149	PKPbc	PKPbc	18 38 14.0	+0.2
	comp=Z,74nm,0.8s,baz=240,slow=2.8,SNR=8.0						
LPAZ	La Paz	151.70	64	PKPbc	PKiKP	18 38 20.5	+0.4
	comp=Z,14nm,0.6s,baz=197,slow=1.2,SNR=8.3						
COYC	Coyhaique	152.65	130		PKiKP	18 38 20.9	+0.5
PLCA	Paso Flores	155.11	120	PKP	PKPdf	18 38 16.5	0.0
	comp=Z,2.1nm,0.9s,baz=34,slow=3.6,SNR=2.3						
PLCA				PKPab	PKPab	18 38 44.4	+0.8
	comp=Z,5.3nm,0.8s,baz=229,slow=3.7,SNR=5.8						

WEL ***06*** *18:25:42.2, 43.˚59S×172.˚74E, ML3.8, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; M_{rr}0.79; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-1.11; $M_{r\theta}$0.90; $M_{\theta\phi}$-1.84; $M_{r\phi}$0.02; Fault plane solution: $M_0$2.27000×10¹⁴ NP1:ϕ$_s$75.00000°, δ75.00000°, λ.149.00000°. NP2:ϕ$_s$173.00000°, δ60.00000°, λ18.00000°. Principal axes: T 2.0210, Plg32.0000°, Azm30.0000°; N 0.4390, Plg56.0000°, Azm231.0000°; P -2.4600, Plg9.0000°, Azm127.0000°; Stations used: GVZ INZ KHZ LTZ MQZ OXZ WVZ OBLIQUE-REVERSE FAULTING*

WEL ***06*** *18:25:42.2±0.4, 44˚S±2˚×17˚3E±˚, h7km±2km, M3.9/11, ML3.8/11, MLv3.9/11 Error ellipse: s-maj=2.8km s-min=2.3km az=87.4*

ISC 06 18:25:41.8±0.8, 43.˚58S±0.˚03×172.˚79E±0.˚03, h11km±4km, n76, σ0˚878/91, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GODS	Godley Drive	0.01	274	P	Pg	18 25 44.2	+0.5
SUMS	Sumner	0.02	295	P	Pg	18 25 44.2	+0.4
SUMS				S	Sg	18 25 45.1	-0.1
PARS	Panorama Road	0.03	294	P	Pg	18 25 44.2	+0.4
MTPS	Mount Pleasant	0.04	263	P	Pg	18 25 44.2	+0.2
MTPS				S	Sg	18 25 45.6	+0.1
HVSC	Heathcote Vall	0.06	269	P	Pg	18 25 44.2	+0.2
HVSC				S	Sg	18 25 45.2	-0.4
MENS	Menlo Terrace	0.06	291	P	Pg	18 25 44.2	+0.2
MENS				S	Sg	18 25 45.5	-0.2
LPDS	Lyttelton Port	0.06	244	P	Pg	18 25 44.2	+0.1
LPDS				S	Sg	18 25 45.4	-0.3
DHSS	Diamond Harbou	0.07	220	P	Pg	18 25 44.3	+0.2
DHSS				S	Sg	18 25 45.6	-0.3
OPWS	Opawa School	0.09	285	P	Pg	18 25 44.5	+0.1
OPWS				S	Sg	18 25 46.2	-0.1
PRPC	Pages Road Pum	0.09	305	P	Pg	18 25 45.0	+0.6
PRPC				S	Sg	18 25 47.3	+1.1
HUNS	Huntsbury	0.09	270	P	Pg	18 25 44.5	+0.1
NNBS	New Brighton	0.10	329	P	Pg	18 25 45.2	+0.8
DALS	Dallington	0.11	309	P	Pg	18 25 45.2	+0.6
CHCC	Christchurch C	0.11	292	P	Pg	18 25 44.9	+0.3
CHCC				S	Sg	18 25 46.9	+0.3
GOVS	Living Springs	0.13	236	P	Pg	18 25 45.0	0.0
MNZS	Menzies Bay Ba	0.15	113	P	Pg	18 25 46.6	+1.4
HALL	Halswell Schoo	0.16	266	P	Pg	18 25 45.6	+0.2
MQZ	McQueen's Vall	0.16	217	P	Pg	18 25 45.5	+0.1
MQZ				S	Sg	18 25 47.6	-0.3
TOKS	Te Oka Bay Roa	0.24	181	P	Pg	18 25 47.7	+0.8
OKCZ	Okains Bay	0.24	126	P	Pb	18 25 48.4	+0.1
AKSS	Akaroa School	0.27	151	P	Pg	18 25 48.2	+1.0
AKCZ	Akaroa Harbour	0.31	163	P	Pg	18 25 49.0	+0.9
RACZ	Rakaia	0.49	252	P	Pb	18 25 51.8	-0.7
RACZ				S	Sg	18 25 58.1	+0.1
OXZ	Oxford	0.60	295	P	Pg	18 25 53.6	+0.1
OXZ				S	Sb	18 26 02.2	-0.7
WACZ	Wakanui South	0.78	242	P	Pb	18 25 57.3	-0.1
WACZ				S	Sb	18 26 07.3	-0.6
LTZ	Lake Taylor	0.88	335	P	Pb	18 25 59.2	+0.4
LTZ				S	Sb	18 26 11.6	+0.7
MHCZ	Mount Hutt	0.89	273	P	Pb	18 25 59.0	-0.3
MHCZ				S	Sb	18 26 10.7	-0.4
ARCZ	Arundel	1.22	252	P	Pb	18 26 05.0	0.0
RPZ	Rata Peaks	1.27	263	P	Pb	18 26 04.5	-1.1
KHZ	Kahutara	1.29	26	P	Pn	18 26 04.8	-0.9
INZ	Inchbonnie	1.30	311	P	Pn	18 26 06.4	+0.4
TMZ	Timaru	1.52	237	P	Pn	18 26 08.6	-0.3
WVZ	Waitaha Valley	1.58	288	P	Pn	18 26 10.5	+0.8
GCSZ	Gaunt Creek Bo	1.81	278	P	Pn	18 26 13.9	+1.0
THZ	Tophouse	1.82	3	P	Pn	18 26 12.6	-0.5
DSZ	Denniston Nort	1.97	338	P	Pn	18 26 15.7	+0.5
BSWZ	Blackbirch Sta	2.03	24	P	Pn	18 26 15.8	-0.2
LBZ	Lake Benmore	2.04	246	P	Pn	18 26 15.6	-0.6
CMWZ	Cape Campbell	2.11	30	P	Pn	18 26 17.4	+0.3
ODZ	Otahua Downs	2.12	226	P	Pn	18 26 17.7	+0.5
FOZ	Fox Glacier	2.16	270	P	Pn	18 26 18.5	+0.8
MRNZ	Matariki Terra	2.18	359	P	Pn	18 26 18.3	+0.3
TUWZ	Tuamarina	2.31	22	P	Pn	18 26 19.7	-0.2
NNZ	Nelson	2.40	11	P	Pn	18 26 21.3	+0.2
TKNZ	Takaka Hill	2.55	3	P	Pn	18 26 23.7	+0.6
TCW	Tory Channel	2.61	26	P	Pn	18 26 22.9	-1.1
PLWZ	Palliser	2.71	43	P	Pn	18 26 24.1	-1.3
QRZ	Quartz Range	2.76	356	P	Pn	18 26 26.8	+0.8
HHSZ	Highcliff Hill	2.78	213	P	Pn	18 26 25.7	-0.6
MSWZ	Moikau Station	2.83	41	P	Pn	18 26 25.6	-1.3
DUWZ	D'Urville Isla	2.90	17	P	Pn	18 26 28.2	+0.2
JCZ	Jackson Bay	2.94	259	P	Pg	18 26 38.3	+0.2
JCZ	Jackson Bay	2.94	259	P	Pn	18 26 29.0	+0.4
PAWZ	Paruwai Farm	2.94	43	P	Pn	18 26 27.1	-1.4
EAZ	Earnscleugh	2.99	235	P	Pn	18 26 28.3	-0.8
CAW	Cannon Point	2.99	35	P	Pn	18 26 28.1	-1.1
TRWZ	Traveller	3.06	46	P	Pn	18 26 28.8	-1.3
KIW	Kapiti Island	3.14	31	P	Pn	18 26 30.7	-0.6
MTW	Mount Morrison	3.15	41	P	Pn	18 26 29.7	-1.6
TUZ	Tuapeka	3.27	222	P	Pn	18 26 33.4	+0.5
OGWZ	Otaki Gorge	3.28	33	P	Pn	18 26 32.4	-0.8
HOWZ	Holdsworth Sta	3.36	38	P	Pn	18 26 33.8	-0.4
MRZ	Mangatainoka R	3.58	36	P	Pn	18 26 35.7	-1.6
MRZ	Mangatainoka R	3.58	36	P	Pn	18 26 35.9	-1.4
MSZ	Milford Sound	3.67	251	P	Pn	18 26 37.7	-0.7
MLZ	Mavora Lakes	3.79	240	P	Pn	18 26 41.0	+0.9
PRWZ	Pori Road	3.84	39	P	Pn	18 26 39.4	-1.5
BFZ	Birch Farm	3.87	43	P	Pn	18 26 39.1	-2.2
SYZ	Scrubby Hill	3.93	220	P	Pn	18 26 43.1	+1.1
WHZ	Wether Hill Ro	4.15	234	P	Pn	18 26 44.6	-0.5
NBEZ	Newall Road No	4.38	11	P	Pn	18 26 49.9	+1.6
VRZ	Vera Road	4.69	19	P	Pn	18 26 54.1	+1.6
APZ	The Paps	4.70	225	P	Pn	18 26 53.3	+0.7
WNVZ	Wahianoa	4.75	27	P	Pn	18 26 54.5	+1.0
HIZ	Hauiti	5.30	18	P	Pn	18 27 01.2	+0.3
AWAZ	Awhitu Peninsu	6.66	13	P	Pn	18 27 20.1	+0.5

ATH 06 18:28:15.6, 37.˚24N×20.˚44E, h6km, ML2.6/14, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.57	34	P	Pg	18 28 25.9	-0.6
LTHK				S	Sg	18 28 33.6	-0.3
ORTH	Orthonies,Zaky	0.64	19	P	Pg	18 28 27.0	-1.0
ORTH				S	Sg	18 28 36.7	+0.3
KYPS	Kipseli, Zakin	0.65	28	P	Pg	18 28 28.1	-0.1
KYPS				S	Sg	18 28 37.3	+0.6
RTZL	Ratzakli, Kefa	0.88	18	P	Pg	18 28 32.5	+0.1
RTZL				S	Sb	18 28 44.6	-0.6
VLS	Valsamata	0.94	7	P	Pg	18 28 32.0	-1.7
VLS				S	Sg	18 28 45.9	-0.1
DMLN	Damoulianata-K	1.00	357	P	Pg	18 28 34.7	0.0
AMT	Artemida-Makis	1.05	74	P	Pg	18 28 35.9	+0.1
AMT				S	Sb	18 28 50.1	-0.2
PYL1	Pylos	1.06	108	P	Pb	18 28 36.2	-0.1
PYL	PYLOS	1.10	108	P	Pg	18 28 36.2	-0.5
RLS	Riolos of Patr	1.16	45	P	Pg	18 28 37.6	-0.1
RLS				S	Sg	18 28 52.2	-0.5
ITM	Ithomi	1.19	92	P	Pg	18 28 38.3	-0.1
AXS	Araxos	1.21	38	P	Pg	18 28 38.8	-0.1
FSK	Fiskardo	1.22	5	P	Pg	18 28 38.1	-1.0
DRO	Drossia	1.24	55	P	Pg	18 28 38.5	-0.8
PLEV	Plevrona-Mesol	1.40	33	P	Pb	18 28 42.3	+0.1
KLV	Kalavryta, Ach	1.58	59	P	Pn	18 28 44.3	+0.1
PVO	Paravola	1.62	32	P	Pn	18 28 45.2	+0.5
EFP	Efpalio	1.66	44	P	Pn	18 28 45.6	+0.4
GUR	Goura	1.67	65	P	Pn	18 28 45.5	+0.1
KALE	Kalithea	1.77	49	P	Pn	18 28 47.4	+0.5
AMPL	Ampelaki	1.79	20	P	Pn	18 28 47.9	+0.8
ANX	Ano Chora	1.79	41	P	Pb	18 28 48.2	-0.7

NNC 06 18:46:54.2±2.1, 38.˚15N×77.˚92E, h10km±7km, mb3.8, mpv3.5, 5C-6D, Error ellipse: s-maj=14.3km s-min=10.0km az=168.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	4.92	4	Pg	Pg	18 48 24.7	-3.7
	9.6nm,0.6s						
SATY				Lg	Lg	18 49 34.3	
	22nm,0.9s						
TNSS	Tian-Shan	4.94	352	Pg	Pb	18 48 23.3	+2.3
	2.4nm,0.4s						
TNSS				Lg	Lg	18 49 32.0	
	5.3nm,0.8s						
MDOK	Medeo	5.05	353	Pg	Pb	18 48 25.1	+2.3
	6.6nm,0.6s						
MDOK				Lg	Lg	18 49 35.5	
	23nm,0.6s						
UZB	Uzymbulak	5.06	9	Pg	Pg	18 48 27.9	-3.3
	3.1nm,0.5s						
UZB				Lg	Lg	18 49 35.7	
	17nm,1.0s						
KST	Kastek	5.11	344	Pg	Pb	18 48 26.8	+3.0
	3.5nm,0.8s						
KST				Lg	Lg	18 49 36.2	
	13nm,0.8s						
SHLS	Shalkode	5.14	13	Pg	Pg	18 48 29.3	-3.4
	9.6nm,0.5s						
SHLS				Lg	Lg	18 49 38.6	
	39nm,0.5s						
AAK	Ala-Archa	5.19	331	⇑Pn	Pn	18 48 13.3	+1.2
	3.4nm,1.1s						
AAK				⇓Pg	Pg	18 48 29.4	-4.2
	4.2nm,0.8s						
AAK				⇓Lg	Lg	18 49 38.2	
	6.6nm,0.7s						
PDGK	Podgornoye	5.31	13	⇓Pn	Pn	18 48 14.0	+0.3
	3.4nm,0.6s						
PDGK				⇑Pg	Pg	18 48 32.1	-3.8
	4.6nm,0.6s						
PDGK				⇑Lg	Lg	18 49 41.0	
	19nm,0.8s						
KTBS	Karatobe	5.64	351	Pg	Pb	18 48 36.8	+4.2
	0.3nm,0.2s						
KTBS				Lg	Lg	18 49 51.5	
	14nm,0.6s						
MRKS	Merke	5.82	324	Pg	Pg	18 48 42.7	-3.0
	4.5nm,0.4s						
MRKS				Lg	Lg	18 49 57.8	
	5.5nm,0.5s						
SGDS	Sogindy	5.86	336	Pg	Pb	18 48 41.0	+4.6
	2.0nm,0.3s						
SGDS				Lg	Lg	18 49 58.7	
	4.9nm,0.7s						
KK31	Karatay Array	7.50	314	⇓Pn	Pn	18 48 40.8	-2.7
	0.3nm,0.4s,baz=0.0,slow=0.1,SNR=7.3						
KK31				⇑Pg	Pb	18 49 10.3	+6.0
	0.8nm,0.6s						
KK31				⇑Sn	Sn	18 50 10.7	+2.1
	0.7nm,0.6s						
KK31				⇓Lg	Lg	18 50 51.4	
	2.4nm,0.8s						
MK31	Makanchi Array	9.22	19	Pn	Pn	18 49 06.5	-0.7
	0.3nm,0.3s,baz=185,slow=12,SNR=37						
MK31				⇓Sn	Sn	18 50 51.4	+0.4
	1.3nm,0.8s,baz=189,slow=26,SNR=2.6						

IDC ***06*** *18:55:27.2±0.5, 12.˚15N×140.˚40E, h0km, mb4.3/19, mbtmp4.3/21, ML4.5/2, MS4.3/4, Error ellipse: s-maj=20.2km s-min=12.4km az=80.0*

NEIC ***06*** *18:55:29.4±2.2, 12.˚21N±0.˚08×140.˚32E±0.˚10, h10km±1km, mb5.0/166, Error ellipse: s-maj=16.3km s-min=13.4km az=281.0*

ISC 06 18:55:30.5±0.8, 12.˚13N±0.˚06×140.˚29E±0.˚08, h20km±9km, n360, σ0˚93/298, mb4.9/105, MS4.2/4, 1D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.70	72	Pn	Pn	18 56 39.4	-0.9
	5.7nm,0.3s,baz=180,slow=19,SNR=4.3						
	65nm,0.9s						
GUMO	Guam	4.70	72		Pn	18 56 37.9	-2.4
JAY	Jayapura	14.56	178	Pn	Pn	18 58 56.0	+0.4
	9.7nm,0.3s,baz=34,slow=10,SNR=50						
JAY				Sn	Sn	19 01 36.4	-0.2
	0.5nm,0.3s,baz=208,slow=17,SNR=1.0						
	31nm,0.5s						
RABL	Rabaul	20.06	143	P	Pn	19 00 04.2	-0.4
KRVT	Keravat (AS076	20.07	144	LR	LR	19 07 51.4	
	comp=Z,194nm,18.9s,baz=300,slow=37						
LUWI	Luwuk	21.77	234	P	P	19 00 19.9	-1.3
LUWI				IAmb	IAmb	19 00 36.4	
	comp=Z,70nm,0.8s						
TOLI2	Tolitoli	22.23	242		P	19 00 26.2	0.0
MJAR	Matsushiro Arr	24.38	356	P	P	19 00 47.4	-0.1
	comp=Z,3.7nm,1.3s,baz=170,slow=11,SNR=5.0						
	comp=Z,3.7nm,1.3s						
MJAR	Matsushiro Arr	24.38	356	P	P	19 00 47.4	-0.1
MAJO	Matsushiro	24.38	356	P	P	19 00 48.1	+0.6
KSRS	Korea Array	27.54	338	P	P	19 01 15.5	-0.5
	comp=Z,1.0nm,0.8s,baz=149,slow=10.0,SNR=5.7						
KSRS				LR	LR	19 10 40.2	
	comp=Z,393nm,19.5s,baz=190,slow=33						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	32.41	190	P	P	19 01 58.6	-0.6
	comp=Z,2.8nm,1.0s,baz=9.2,slow=9.8,SNR=11						
WRA				PcP	PcP	19 04 46.9	+0.2
	comp=Z,1.3nm,0.9s,baz=358,slow=2.8,SNR=6.2						
WRA				LR	LR	19 15 34.6	
	comp=Z,2μm,18.5s,baz=48,slow=37						
	comp=Z,2.8nm,1.0s						
WRA	Warramunga Arr	32.41	190	P	P	19 01 57.7	-1.6
WRA					PcP	19 04 46.9	+0.2
BNX	BinXian	35.24	344	⇓P	P	19 02 24.7	+1.1
BNX				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ASAR	Alice Springs	36.12	190	P	P	19 02 31.1	-0.4
	comp=Z,0.7nm,0.7s,baz=19,slow=12,SNR=12						
ASAR				PcP	PcP	19 04 57.6	+0.3
	comp=Z,1.0nm,0.9s,baz=24,slow=3.7,SNR=2.6						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	36.12	190	P	P	19 02 30.5	-0.9
ASAR					PcP	19 04 57.6	+0.3
HEH	HeiHe	39.45	347	*e*P	P	19 03 00.1	+0.8
HEH				pmax	pmax		
	comp=Z,19nm,0.6s						
INKA	Innaminka	39.64	179		P	19 03 00.5	-0.5

CM31	Chiang Mai Arr	40.30	284	P	P	19 03 07.1	+0.2
CMAR	Chiang Mai Arr	40.30	284	P	P	19 03 07.9	+1.1
	comp=Z,3.4nm,0.9s,baz=83,slow=6.5,SNR=21						
CMAR				PcP	PcP	19 05 11.4	+1.0
	comp=Z,0.5nm,0.6s,baz=90,slow=2.5,SNR=4.3						
	comp=Z,3.4nm,0.9s						
CMAR	Chiang Mai Arr	40.30	284		P	19 03 08.4	+1.6
CMAR					PcP	19 05 10.4	0.0
MIDW	Midway	42.60	61	P	P	19 03 26.0	+0.5
PETK	Petropavlovsk-	43.18	15	P	P	19 03 29.2	-0.7
	comp=Z,6.7nm,1.2s,baz=112,slow=3.5,SNR=4.2						
	comp=Z,6.7nm,1.2s						
PETK	Petropavlovsk-	43.18	15	P	P	19 03 28.8	-1.1
STKA	Stephens Creek	43.78	178	P	P	19 03 34.8	-0.2
	comp=Z,7.6nm,0.9s,baz=342,slow=11,SNR=8.5						
	comp=Z,7.6nm,0.9s						
FORT	Forrest	44.26	195	P	P	19 03 39.2	+0.5
FORT				IAmb	IAmb	19 03 49.4	
	comp=Z,26nm,1.1s						
GTA2	Gaotai	44.97	315	P	P	19 03 45.3	+0.7
GTA2				sP	pwP	19 03 54.1	-0.7
GTA2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULN	Ulaanbaatar	45.15	329	P	P	19 03 47.1	+1.1
SONM	Songino Array	45.47	328	P	P	19 03 48.6	+0.1
	comp=Z,1.0nm,0.7s,baz=140,slow=7.7,SNR=9.5						
SONM				PcP	PcP	19 05 27.1	-0.2
	comp=Z,1.6nm,0.8s,baz=154,slow=3.8,SNR=4.8						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	45.47	328	P	P	19 03 48.7	+0.2
SONM					PcP	19 05 26.5	-0.8
SHL	Shillong	47.47	294	P	P	19 04 04.6	0.0
MSVF	Nonsavu	47.65	128	P	P	19 04 06.6	+0.7
MA2	Magadan	48.00	7	P	P	19 04 07.3	-0.6
MA2				IAmb	IAmb	19 04 09.4	
	comp=Z,28nm,1.5s						
LSA	Lhasa	48.73	299	P	P	19 04 12.2	-2.4
TOO	Toolangi	49.68	175	P	P	19 04 23.0	+1.9
YAK	Yakutsk	50.41	354		P	19 04 26.3	0.0
SEY	Seymchan	51.45	7	LR	LR	19 24 25.8	
	comp=Z,420nm,21.9s,baz=270,slow=34						
BILL	Bilibino	58.39	11	P	P	19 05 24.3	+0.1
BILL				IAmb	IAmb	19 05 25.6	
	comp=Z,28nm,1.4s						
UNV	Unalaska Valle	58.98	34	P	P	19 05 28.3	-0.3
	baz=246						
MKAR	Makanchi Array	59.48	317	P	P	19 05 32.9	+0.6
	comp=Z,1.3nm,0.4s,baz=98,slow=9.5,SNR=31						
	comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	59.48	317		P	19 05 32.2	-0.1
MAKZ	Makanchi	59.69	317		P	19 05 33.8	+0.1
MAKZ				IAmb	IAmb	19 05 35.7	
	comp=Z,13nm,1.2s						
HYB	Hyderabad	59.72	283	*e*P	P	19 05 33.9	-0.5
HYB				*e*S	S	19 13 45.8	+1.1
ZAA0	Zalesovo Array	60.26	326		P	19 05 36.2	-1.2
ZALV	Zalesovo Beam	60.26	326	P	P	19 05 37.2	-0.2
	comp=Z,1.5nm,0.5s,baz=107,slow=6.0,SNR=9.3						
ZALV				PcP	PcP	19 06 21.4	-1.3
	comp=Z,1.5nm,0.5s,baz=112,slow=3.9,SNR=4.9						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	60.26	326		P	19 05 36.2	-1.2
ZALV					PcP	19 06 21.4	-1.3
PDGK	Podgornoye	60.59	313	P	P	19 05 40.4	+0.3
M11K	Mekoryuk	61.96	27	P	P	19 05 49.4	+0.6
	baz=243						
SDPT	Sand Point	62.80	33	P	P	19 05 54.7	+0.2
	baz=251						
KURK	Kurchatov	62.85	321	P	P	19 05 54.5	-0.5
KURBB	Kurchatov Arra	62.88	321	P	P	19 05 55.5	+0.3
	comp=Z,6.9nm,0.6s,baz=104,slow=6.9,SNR=12						
	comp=Z,6.9nm,0.6s						
CHNA	Chernabura Isl	63.12	34	P	P	19 05 57.5	+0.9
	baz=252						
M13K	Dall Lake	63.25	28	P	P	19 05 58.0	+0.6
	baz=246						
K13K	Kusilvak Mount	63.33	26	P	P	19 05 59.0	+1.1
	baz=244						
N14K	Kuskokwak Cree	63.82	28	P	P	19 06 01.8	+0.6
	baz=248						
L14K	Kuka Creek	63.93	27	P	P	19 06 02.3	+0.5
L14K	Kuka Creek	63.93	27	P	P	19 06 03.0	+1.1
	baz=246,SNR=5.8						
M14K	Bethel	64.01	28	P	P	19 06 03.4	+0.9
	baz=247						
CHGN	Chignik	64.20	33	P	P	19 06 04.9	+1.2
	baz=252						
NIL	Nilore	64.31	302	P	P	19 06 04.4	-0.6
NIL				IAmb	IAmb	19 06 06.8	
	comp=Z,17nm,1.1s						
F14K	Arctic Creek	64.33	22	P	P	19 06 05.9	+1.4
	baz=241						
O15K	Ungalikthiuk R	64.43	30	P	P	19 06 05.1	-0.2
	baz=250						
M15K	Kasigluk River	64.57	28	P	P	19 06 06.3	+0.2
	baz=248						
L15K	Ungalak Mounta	64.59	27	P	P	19 06 06.4	+0.2
	baz=247						
N15K	Kwethluk River	64.65	29	P	P	19 06 07.0	+0.3
	baz=249						
G15K	Inukluk	64.95	23	P	P	19 06 09.8	+1.3
	baz=243					

KKAR	Karatay Array	67.06	312			P	19 06 22.0	-0.6
M18K	Stony River baz=252	67.06	28	P		P	19 06 22.6	+0.4
OHAK	Old Harbor baz=256	67.17	33	P		P	19 06 23.2	+0.3
H18K	Honhosa River comp=Z,13nm,1.0s	67.21	24	IAmb		IAmb	19 06 24.6	
H18K	Honhosa River baz=249,SNR=7.6	67.21	24	P		P	19 06 23.9	+0.8
E18K	Tukpahlearik C baz=246,SNR=6.0	67.26	21	P		P	19 06 24.5	+1.1
F18K	Selawik baz=247	67.27	22	P		P	19 06 24.0	+0.6
G18K	Tagagawik baz=248	67.37	23	P		P	19 06 24.9	+0.8
Q19K	Cape Douglas, baz=256	67.40	31	P		P	19 06 24.0	-0.5
N19K	Bonanza Creek comp=Z,8.2nm,0.8s	67.49	29	IAmb		IAmb	19 06 35.8	
N19K	Bonanza Creek baz=254	67.49	29	P		P	19 06 25.9	+0.9
C18K	Utukok River baz=244	67.58	20	P		P	19 06 26.1	+0.6
GCSA	Galena City Sc baz=250	67.65	24	P		P	19 06 27.0	+1.1
KDAK	Kodiak Island baz=257	67.67	32	P		P	19 06 26.6	+0.5
L19K	White Mountain comp=Z,11nm,1.2s	67.71	27	IAmb		IAmb	19 06 28.0	
L19K	White Mountain baz=253	67.71	27	P		P	19 06 26.8	+0.5
P19K	Oil Pt baz=256	67.78	30	P		P	19 06 26.9	0.0
M19K	Big River Lodg baz=254	67.83	28	P		P	19 06 28.2	+1.0
J19K	Poorman comp=Z,9.1nm,1.1s	67.92	25	IAmb		IAmb	19 06 29.3	
J19K	Poorman baz=252,SNR=5.5	67.92	25	P		P	19 06 28.8	+1.2
F19K	Shaleruckik Mo comp=Z,13nm,1.4s	68.05	22	IAmb		IAmb	19 06 29.7	
F19K	Shaleruckik Mo baz=248	68.05	22	P		P	19 06 29.4	+1.1
G19K	Purcell Mounta baz=249,SNR=15	68.06	23	P		P	19 06 29.1	+0.7
H19K	Roundabout Mou baz=250,SNR=15	68.09	24	P		P	19 06 29.9	+1.3
A19K	Wainwright baz=244	68.30	18	P		P	19 06 30.9	+1.1
C19K	Lookout Ridge baz=246,SNR=6.2	68.30	20	P		P	19 06 31.6	+1.7
BVAR	Borovoye Array comp=Z,9.4nm,0.9s,baz=101,slow=7.7,SNR=34 comp=Z,9.4nm,0.9s	68.32	322	P		P	19 06 30.5	+0.2
BORK	Borovoye BORK comp=Z,10.0nm,0.9s	68.36	322		IAmb	IAmb	19 06 30.0 19 06 32.0	-0.6
K20K	Telida comp=Z,15nm,1.1s	68.39	26	IAmb		IAmb	19 06 32.7	
K20K	Telida baz=253,SNR=8.4	68.39	26	P		P	19 06 31.7	+1.1
M20K	Styx River baz=255	68.40	28	P		P	19 06 32.2	+1.4
E19K	Redstone River baz=249	68.47	22	P		P	19 06 32.4	+1.4
D19K	Kuna River baz=248	68.55	20	P		P	19 06 33.1	+1.5
J20K	Nowinta River comp=Z,14nm,0.9s	68.60	25	IAmb		IAmb	19 06 34.0	
J20K	Nowinta River baz=253,SNR=13	68.60	25	P		P	19 06 33.2	+1.4
I20K	Naaghedeneel baz=252	68.64	25	P		P	19 06 33.4	+1.4
H20K	Anotleneega Mo baz=252,SNR=9.3	68.70	24	P		P	19 06 33.7	+1.2
F20K	Avaraart Lake comp=Z,11nm,1.1s	68.88	22	IAmb		IAmb	19 06 35.7	
F20K	Avaraart Lake baz=250,SNR=9.4	68.88	22	P		P	19 06 34.6	+1.1
BRSE	Bradley Lake S baz=258	69.03	30	P		P	19 06 34.9	+0.3
PPLA	Purkeypile baz=255	69.09	27	P		P	19 06 35.3	+0.2
E20K	Nigu River baz=250,SNR=16	69.13	21	P		P	19 06 36.1	+1.0
SKT	Skwentna baz=256	69.16	28	P		P	19 06 35.1	-0.4
CAST	Castle Rocks comp=Z,11nm,0.8s	69.27	26	IAmb		IAmb	19 06 46.5	
CAST	Castle Rocks baz=255,SNR=13	69.27	26	P		P	19 06 36.4	+0.3
CHUM	Lake Minchumin baz=255	69.29	26	P		P	19 06 36.8	+0.7
B20K	Meade River baz=248	69.44	19	P		P	19 06 38.2	+1.2
G21K	Allakaket comp=Z,20nm,1.2s	69.55	23	IAmb		IAmb	19 06 39.7	
G21K	Allakaket baz=253	69.55	23	P		P	19 06 38.7	+1.0
H21K	Melozitna Rive comp=Z,15nm,1.0s	69.57	24	IAmb		IAmb	19 06 39.9	
H21K	Melozitna Rive baz=254,SNR=16	69.57	24	P		P	19 06 39.2	+1.3
L22K	Petersville baz=257,SNR=9.3	69.64	27	P		P	19 06 38.2	-0.2
SEW	Seward baz=259	69.74	30	P		P	19 06 39.5	+0.6
F21K	Alatna River baz=252,SNR=9.2	69.77	22	P		P	19 06 40.0	+0.9
I21K	Tanana comp=Z,17nm,1.0s	69.77	25	IAmb		IAmb	19 06 41.1	
I21K	Tanana baz=255,SNR=15	69.77	25	P		P	19 06 40.2	+1.1
RC01	Rabbit Creek A baz=258	69.80	29	P		P	19 06 39.9	+0.6
KTH	Kantishna Hill comp=Z,18nm,1.0s	69.81	26	IAmb		IAmb	19 06 41.0	
C21K	Knifeblade Rid baz=251	69.92	20	P		P	19 06 41.5	+1.6
E21K	Killik River baz=252,SNR=7.6	69.97	21	P		P	19 06 41.0	+0.7
TRF	Thorofare Moun comp=Z,9.4nm,0.8s	70.06	27	IAmb		IAmb	19 06 50.7	
TRF	Thorofare Moun baz=257,SNR=5.4	70.06	27	P		P	19 06 40.6	-0.5
B21K	Ikpikpuk River baz=251	70.13	20	P		P	19 06 43.1	+1.9
H22K	Ishtalitna Cre comp=Z,13nm,1.2s	70.20	24	IAmb		IAmb	19 06 43.8	
H22K	Ishtalitna Cre baz=255,SNR=9.3	70.20	24	P		P	19 06 43.2	+1.4
MLY	Manley comp=Z,17nm,1.0s	70.24	25	IAmb		IAmb	19 06 43.7	
MLY	Manley baz=256,SNR=28	70.24	25	P		P	19 06 42.6	+0.5
GHO	Glory Hole Cre comp=Z,9.4nm,1.0s	70.32	28	IAmb		IAmb	19 06 54.2	
F22K	John River baz=254,SNR=36	70.33	22	P		P	19 06 43.8	+1.2
G22K	Bettles baz=254	70.42	23	P		P	19 06 44.1	+1.0
KNK	Knik Glacier baz=259	70.47	29	P		P	19 06 44.0	+0.5
A22K	Sinclair Lake baz=250	70.49	18	P		P	19 06 44.2	+0.9
SML	Sawmill baz=259,SNR=7.3	70.61	28	P		P	19 06 44.9	+0.5
WAT1	Susitna Watana baz=259	70.70	27	P		P	19 06 44.8	-0.1
MCK	McKinley baz=258,SNR=7.7	70.71	26	P		P	19 06 44.8	-0.2
P23K	Montague Islan baz=261	70.74	30	P		P	19 06 45.4	+0.3
B22K	Teshekpuk Lake baz=252	70.76	19	P		P	19 06 46.0	+1.0
NEA2	Nenana baz=258,SNR=5.3	70.84	26	P		P	19 06 46.9	+1.2
I23K	Minto, Yukon-K baz=257,SNR=19	70.84	25	P		P	19 06 46.2	+0.6
M23K	Glacier View baz=260	70.89	29	P		P	19 06 46.6	+0.6
H23K	Yukon River comp=Z,16nm,1.0s	70.92	24	IAmb		IAmb	19 06 48.1	
H23K	Yukon River baz=257	70.92	24	P		P	19 06 46.8	+0.7
G23K	Bananza Creek baz=256,SNR=22	70.94	23	P		P	19 06 47.5	+1.3
COLD	Coldfoot	71.00	23	P		P	19 06 47.7	+1.1
WAT6	Susitna Watana baz=256,SNR=21 baz=260,SNR=9.7	71.02	28	P		P	19 06 46.6	-0.3
GLI	Glacier Island baz=261	71.03	30	P		P	19 06 47.0	+0.1
SCM	Sheep Creek Mo baz=260,SNR=14	71.08	29	P		P	19 06 47.6	+0.3
WRH	Wood River Hil comp=Z,13nm,1.0s	71.23	26	IAmb		IAmb	19 06 48.5	
D23K	Nanushuk River baz=255,SNR=11	71.27	21	P		P	19 06 49.2	+1.1
DHY	Denali Highway comp=Z,14nm,1.4s	71.27	27	IAmb		IAmb	19 06 49.5	
DHY	Denali Highway baz=260,SNR=5.7	71.27	27	P		P	19 06 48.8	+0.3
CCB	Clear Creek Bu comp=Z,20nm,1.4s	71.38	26	IAmb		IAmb	19 06 50.0	
E23K	Chandalar baz=256,SNR=39	71.42	22	P		P	19 06 50.6	+1.4
C23K	Itkillik River baz=254,SNR=12	71.53	20	P		P	19 06 50.6	+1.0
TOLK	Toolik Lake Re baz=256,SNR=13	71.58	21	P		P	19 06 51.3	+1.2
H24K	Noodor Dome baz=258,SNR=16	71.59	24	P		P	19 06 51.2	+1.0
POKR	Poker Plat Res baz=259	71.63	25	P		P	19 06 51.3	+0.9
EYAK	Cordova Ski Ar baz=262	71.63	30	P		P	19 06 51.3	+0.8
M24K	Tolsona, Glenn baz=261	71.66	28	P		P	19 06 51.3	+0.5
KLU	Klutina comp=Z,9.0nm,0.8s	71.69	29	IAmb		IAmb	19 07 01.3	
KLU	Klutina baz=262,SNR=7.5	71.69	29	P		P	19 06 51.5	+0.6
HDA	Harding Lake comp=Z,8.4nm,0.9s	71.70	26	IAmb		IAmb	19 07 01.0	
HDA	Harding Lake baz=260	71.70	26	P		P	19 06 50.8	0.0
ILAR	Eielson Array comp=Z,3.4nm,0.6s,baz=247,slow=6.0,SNR=34 comp=Z,3.4nm,0.6s	71.79	26	P		P	19 06 50.3	-1.1
ILAR	Eielson Array	71.79	26			P	19 06 49.3	-2.1
E24K	Your Creek comp=Z,22nm,1.3s	71.83	22	IAmb		IAmb	19 06 53.8	
E24K	Your Creek baz=257,SNR=18	71.83	22	P		P	19 06 52.6	+1.0
G24K	Hadweenzic Riv comp=Z,20nm,1.1s	71.92	23	IAmb		IAmb	19 06 54.3	
G24K	Hadweenzic Riv baz=258,SNR=20	71.92	23	P		P	19 06 53.1	+1.0
F24K	Squaw Lake comp=Z,18nm,1.2s	71.94	23	IAmb		IAmb	19 06 54.7	
F24K	Squaw Lake baz=258,SNR=14	71.94	23	P		P	19 06 53.5	+1.2
D24K	Happy Valley baz=256	71.96	21	P		P	19 06 53.0	+0.7
K24K	Donnelly Dome comp=Z,12nm,0.8s	72.11	27	IAmb		IAmb	19 07 03.3	
K24K	Donnelly Dome baz=261	72.11	27	P		P	19 06 53.3	-0.1
HARP	HAARP baz=262	72.17	28	P		P	19 06 54.1	+0.3
KAIM	Kayak Island baz=263	72.21	31	P		P	19 06 55.0	+1.0
BMRM	Bremner River comp=Z,19nm,1.1s	72.25	30	IAmb		IAmb	19 06 55.5	
BMRM	Bremner River baz=263,SNR=10.0	72.25	30	P		P	19 06 54.4	+0.2
N25K	Chitina, Valde baz=263	72.33	29	P		P	19 06 55.0	+0.2
J25K	Salcha River, comp=Z,18nm,1.6s	72.41	26	IAmb		IAmb	19 06 55.4	
J25K	Salcha River, baz=261,SNR=7.3	72.41	26	P		P	19 06 54.7	-0.5
G25K	Bearman Lake baz=260	72.47	24	P		P	19 06 56.4	+1.0
PRP	Porcupine Dome baz=261	72.49	25	P		P	19 06 55.1	-0.6
RIDG	Independent Ri baz=262,SNR=15	72.50	27	P		P	19 06 55.6	-0.1
GLB	Gilahina Butte comp=Z,15nm,1.1s	72.69	29	IAmb		IAmb	19 06 58.1	
F25K	Christian Rive comp=Z,12nm,0.9s	72.80	23	IAmb		IAmb	19 06 59.9	
F25K	Christian Rive baz=260,SNR=16	72.80	23	P		P	19 06 58.8	+1.4
D25K	Kavik River comp=Z,19nm,1.1s	72.85	21	IAmb		IAmb	19 06 59.7	
D25K	Kavik River baz=259,SNR=13	72.85	21	P		P	19 06 58.5	+0.8
SCRK	Sand Creek baz=262,SNR=14	72.92	27	P		P	19 06 58.4	+0.2
E25K	Arctic Village baz=260,SNR=22	72.92	22	P		P	19 06 59.0	+0.9
CRQE	Cirque baz=264	72.96	30	P		P	19 06 59.4	+0.8
MCARA	McCarthy VSAT baz=264	73.06	29	P		P	19 06 60.0	+1.0
L26K	Log Cabin Wild comp=Z,14nm,1.0s	73.08	28	IAmb		IAmb	19 07 09.7	
L26K	Log Cabin Wild baz=263	73.08	28	P		P	19 07 00.2	+1.0
M26K	Nabesna, AK baz=264	73.17	28	P		P	19 07 00.7	+1.0
F26K	Sheenjek River comp=Z,14nm,0.9s	73.38	23	IAmb		IAmb	19 07 03.4	
F26K	Sheenjek River baz=261,SNR=31	73.38	23	P		P	19 07 02.2	+1.4
G26K	Porcupine Rive comp=Z,28nm,1.4s	73.41	23	IAmb		IAmb	19 07 03.4	
G26K	Porcupine Rive baz=262,SNR=8.2	73.41	23	P		P	19 07 02.7	+1.8
GRNC	Granite Creek comp=Z,9.2nm,0.8s	73.61	30	IAmb		IAmb	19 07 03.9	
M27K	Edge Creek, AK comp=Z,13nm,1.2s	73.69	28	IAmb		IAmb	19 07 04.5	
M27K	Edge Creek, AK baz=265,SNR=13	73.69	28	P		P	19 07 04.2	+1.3
K27K	Chicken comp=Z,17nm,1.3s	73.76	27	IAmb		IAmb	19 07 05.2	
L27K	Beaver Creek, baz=265	73.78	28	P		P	19 07 04.3	+1.0
BCAR	Beaver Creek A	73.80	28			P	19 07 02.6	-0.8
C27K	Jago River baz=261	73.83	21	P		P	19 07 04.3	+0.9
LOGN	Logan Glacier comp=Z,8.8nm,0.7s	73.99	30	IAmb		IAmb	19 07 15.4	
I27K	Kandik River comp=Z,14nm,1.2s	74.11	25	IAmb		IAmb	19 07 06.7	
I27K	Kandik River baz=264,SNR=11	74.11	25	P		P	19 07 06.2	+1.0
BVCY	Beaver Creek baz=266	74.17	28	P		P	19 07 06.7	+1.1
H27K	Steamboat Moun baz=264,SNR=35	74.21	24	P		P	19 07 06.8	+1.0
G27K	Dyson Strip baz=264,SNR=6.1	74.22	24	P		P	19 07 07.6	+1.8
YUK3	Moose Creek baz=266,SNR=20	74.31	29	P		P	19 07 07.3	+0.6
PINM	Pinnacle baz=267	74.31	31	P		P	19 07 07.4	+0.9
O28M	Mount Upton baz=267,SNR=9.0	74.38	30	P		P	19 07 07.8	+0.7
E27K	Coleen River comp=Z,15nm,1.1s	74.40	22	IAmb		IAmb	19 07 09.0	
E27K	Coleen River baz=264,SNR=12	74.40	22	P		P	19 07 07.9	+1.1
YUK8	Steele Glacier baz=267,SNR=16	74.61	30	P		P	19 07 09.6	+1.1
ABKAR	Akbulak array	74.62	318			P	19 07 07.0	-1.4
D27M	Malcolm River comp=Z,17nm,1.2s	74.74	21	IAmb		IAmb	19 07 11.1	
D27M	Malcolm River baz=264,SNR=5.1	74.74	21	P		P	19 07 09.8	+0.9
I28M	Miner Creek comp=Z,14nm,1.1s	74.80	25	IAmb		IAmb	19 07 11.0	
I28M	Miner Creek baz=266,SNR=21	74.80	25	P		P	19 07 09.8	+0.6
DAWY	Dawson comp=Z,18nm,1.1s	74.94	27	IAmb		IAmb	19 07 11.8	
DAWY	Dawson baz=267,SNR=23	74.94	27	P		P	19 07 10.8	+0.7
BRWY	Burwash Landin baz=268	74.97	29	P		P	19 07 11.2	+1.0
F28M	Old Crow comp=Z,15nm,0.8s	74.99	23	IAmb		IAmb	19 07 21.4	
F28M	Old Crow	74.99	23	P		P	19 07 11.3	+1.0
YUK4	Talbot Arm baz=265,SNR=19 baz=268,SNR=12	75.16	30	P		P	19 07 13.1	+1.5
O29M	Mount Kennedy baz=268,SNR=7.8	75.16	31	P		P	19 07 12.8	+1.3
E28M	Babbage River baz=265,SNR=22	75.20	22	P		P	19 07 12.5	+1.1
M29M	Somme Creek comp=Z,14nm,0.9s	75.28	28	IAmb		IAmb	19 07 23.4	
M29M	Somme Creek baz=268,SNR=26	75.28	28	P		P	19 07 13.2	+1.0
YUK6	Outpost Mounta baz=268,SNR=7.3	75.28	30	P		P	19 07 13.3	+1.0
L29M	L29M comp=Z,15nm,0.8s	75.46	28	IAmb		IAmb	19 07 15.4	
L29M	L29M baz=268,SNR=24	75.46	28	P		P	19 07 14.3	+1.3
J29N	Klondike Camp baz=268	75.47	26	P		P	19 07 14.6	+1.5
H29M	Whitestone comp=Z,12nm,0.9s	75.49	24	IAmb		IAmb	19 07 23.6	
H29M	Whitestone baz=267,SNR=8.1	75.49	24	P		P	19 07 13.9	+0.8
ARTI	Arti ARTI comp=Z,14nm,1.3s	75.51	325	P	IAmb	P IAmb	19 07 13.0 19 07 14.2	-0.4
D28M	Stokes Point baz=266	75.54	21	P		P	19 07 14.9	+1.6
P29M	Windy Craggy baz=269	75.57	31	P		P	19 07 14.9	+1.2
G29M	Pine Creek baz=267,SNR=23	75.66	24	P		P	19 07 15.2	+1.1
HYT	Haines Junctio comp=Z,17nm,1.1s	75.70	30	IAmb		IAmb	19 07 17.1	
HYT	Haines Junctio baz=269,SNR=22	75.70	30	P		P	19 07 15.5	+1.0
K29M	Barlow Dome comp=Z,12nm,0.8s	75.75	27	IAmb		IAmb	19 07 26.0	
K29M	Barlow Dome baz=268,SNR=16	75.75	27	P		P	19 07 15.8	+1.0
E29M	Blow River baz=267,SNR=7.2	75.78	22	P		P	19 07 15.6	+0.9
N30M	Aishikik Lake comp=Z,11nm,0.9s	75.91	29	IAmb		IAmb	19 07 26.8	
N30M	Aishikik Lake baz=269,SNR=11	75.91	29	P		P	19 07 16.6	+1.0
P30M	Million Dollar baz=270	75.96	31	P		P	19 07 17.2	+1.2
M30M	Minto, Yukon baz=269,SNR=17	76.06	28	P		P	19 07 17.4	+0.9
EPYK	Eagle Plains baz=268,SNR=12	76.16	24	P		P	19 07 17.5	+0.5
PLBC	Pleasant Camp baz=271	76.27	31	P		P	19 07 18.6	+1.0
I30M	Mount Dempster comp=Z,18nm,1.2s	76.28	26	IAmb		IAmb	19 07 19.4	
I30M	Mount Dempster baz=269,SNR=18	76.28	26	P		P	19 07 18.2	+0.4
J30M	Hart River comp=Z,12nm,0.9s	76.29	26	IAmb		IAmb	19 07 29.8	
J30M	Hart River baz=269,SNR=14	76.29	26	P		P	19 07 18.8	+0.9
S31K	Pelican baz=271	76.36	33	P		P	19 07 18.9	+0.8
G30M	tAoh Zraii Nji baz=269,SNR=26	76.37	24	P		P	19 07 18.3	+0.1
O30N	Mendenhall comp=Z,16nm,1.6s	76.39	30	IAmb		IAmb	19 07 29.2	
O30N	Mendenhall baz=270	76.39	30	P		P	19 07 19.5	+1.1
N31M	Braeburn, Yuko comp=Z,18nm,1.0s	76.54	29	IAmb		IAmb	19 07 21.9	
N31M	Braeburn, Yuko baz=271,SNR=7.2	76.54	29	P		P	19 07 20.6	+1.4
F30M	Barrier River baz=269,SNR=12	76.55	23	P		P	19 07 20.1	+1.0
SKAG	Skagway baz=272	76.80	31	P		P	19 07 21.9	+1.3
SIT	Sitka baz=272	76.87	34	P		P	19 07 21.8	+0.8
WHY	Whitehorse baz=272,SNR=13	76.99	30	P		P	19 07 22.7	+0.9
BESE	Bessie Mountai comp=Z,11nm,0.9s	77.07	32	IAmb		IAmb	19 07 24.1	
H31M	Peel River comp=Z,25nm,1.2s	77.12	25	IAmb		IAmb	19 07 24.0	
H31M	Peel River baz=271,SNR=13	77.12	25	P		P	19 07 23.2	+0.8
G31M	Satah River baz=271,SNR=14	77.14	24	P		P	19 07 23.5	+1.1
R32K	Eaglecrest baz=272	77.26	33	P		P	19 07 24.0	+0.7
S32K	Killisnoo baz=273,SNR=7.5	77.26	34	P		P	19 07 24.2	+1.0
INK	Inuvik comp=Z,14nm,1.2s	77.41	22	IAmb		IAmb	19 07 24.9	
INK	Inuvik baz=271,SNR=6.5	77.41	22	P		P	19 07 24.3	+0.4
P32M	Atlin baz=273,SNR=5.6	77.61	31	P		P	19 07 26.1	+0.7
N32M	Quiet Lake baz=273	77.85	30	P		P	19 07 27.1	+0.5
P33M	Teslin, Yukon baz=273	78.03	31	P		P	19 07 28.1	+0.5
U33K	Whale Pass baz=274	78.14	35	P		P	19 07 28.9	+0.8
CRAG	Craig baz=274	78.18	36	P		P	19 07 29.6	+1.2
Q32M	Nakina River comp=Z,16nm,1.6s	78.39	32	IAmb		IAmb	19 07 41.1	
Q32M	Nakina River baz=274	78.39	32	P		P	19 07 30.8	+1.0
MMPY	Sheldon Lake, baz=274,SNR=9.4	78.61	28	P		P	19 07 32.2	+1.4
DIB	Dawson Inlet, comp=Z,18nm,1.5s	78.74	38	IAmb		IAmb	19 07 44.0	
R33M	Jennings River baz=275,SNR=12	79.02	31	P		P	19 07 34.1	+0.9
V35K	Ketchikan baz=276	79.05	36	P		P	19 07 34.2	+1.0
S34M	Telegraph Cree S34M comp=Z,9.8nm,0.8s	79.08	33		IAmb	P IAmb	19 07 33.8 19 07 35.3	+0.5
S34M	Telegraph Cree baz=275	79.08	33	P		P	19 07 34.4	+1.0
DLBC	Dease Lake baz=276,SNR=8.9	79.60	32	P		P	19 07 37.3	+1.0
T35M	Bob Quinn baz=276,SNR=5.4	79.64	34	P		P	19 07 37.6	+1.1
WTLY	Watson Lake, Y baz=277,SNR=5.8	80.04	31	P		P	19 07 39.8	+1.2
TGTN	Hyland Airport baz=277	80.12	29	P		P	19 07 40.3	+1.2
C36M	Paulatuk baz=280	80.73	21	P		P	19 07 42.5	+0.4
KOTAN	Kotaneelee Air baz=281	82.39	30	P		P	19 07 51.9	+0.8
GNW	Green Mountain comp=Z,12nm,1.2s	85.74	42	IAmb		IAmb	19 08 10.0	
YKA	Yellowknife Ar comp=Z,2.6nm,0.5s,baz=291,slow=5.0,SNR=12 comp=Z,2.6nm,0.5s	86.18	27	P		P	19 08 10.1	-0.1
YKA	Yellowknife Ar	86.18	27			P	19 08 10.0	-0.2
BUCK	Buck Mountain comp=Z,14nm,1.0s	86.41	46	IAmb		IAmb	19 08 22.7	
LON	Longmire	86.61	43	P		P	19 08 12.2	-0.6
I04A	Tendick Farm, comp=Z,8.9nm,1.1s	86.90	46	IAmb		IAmb	19 08 15.1	
ARCES	ARCESS Array B comp=Z,0.7nm,0.5s,baz=78,slow=7.9,SNR=24 comp=Z,0.7nm,0.5s	87.06	341	P		P	19 08 15.6	+1.2
ARCES	ARCESS Array B	87.06	341	P		P	19 08 14.2	-0.2
LTY	Liberty LTY comp=Z,15nm,1.4s	87.24	42	P	IAmb	P IAmb	19 08 15.2 19 08 16.7	-0.7
WIFE	Three Sisters- comp=Z,12nm,1.0s	87.25	46	IAmb		IAmb	19 08 26.7	
EPH	Ephrata comp=Z,20nm,1.5s	87.92	42	IAmb		IAmb	19 08 19.9	
PINE	Pine Mountain comp=Z,13nm,1.1s	87.94	46	IAmb		IAmb	19 08 20.9	
K05A	Summer Lake comp=Z,11nm,1.0s	88.24	47	IAmb		IAmb	19 08 31.4	
BEKR	Beckworth BEKR comp=Z,8.5nm,1.1s	89.37	49		IAmb	P IAmb	19 08 24.7 19 08 27.2	-1.6
RAYN	Ar Rayn RAYN	89.54	294		IAmb	P IAmb	19 08 26.0 19 08 28.9	-1.3

comp=Z,13nm,1.6s
WVOR **Wild Horse Val** 89.92 47 IAmb IAmb 19 08 40.1
comp=Z,16nm,1.8s
VNDA **Vanda** 90.34 175 P P 19 08 30.7 +1.1
comp=Z,1.2nm,1.1s,baz=316,slow=5.4,SNR=3.0
comp=Z,1.2nm,1.1s
VNDA **Vanda** 90.34 175 P P 19 08 30.7 +1.1
FIA1 **FINESS Array S** 90.55 334 P P 19 08 29.8 -1.2
FINES **FINESS Array B** 90.55 334 P P 19 08 29.8 -1.2
comp=Z,5.9nm,0.5s,baz=65,slow=5.0,SNR=72
comp=Z,5.9nm,0.5s
FINES **FINESS Array B** 90.55 334 P P 19 08 29.4 -1.6
KVN **Kaiserville** 91.27 50 IAmb IAmb 19 09 55.6
comp=Z,3.7nm,0.5s
NVAR **Mina Array Bea** 91.30 50 P P 19 08 35.3 0.0
comp=Z,0.3nm,0.3s,baz=286,slow=6.6,SNR=5.2
comp=Z,0.3nm,0.3s
TORD **Torodi Ar. Bea** 131.86 300 PKP PKPdf 19 14 42.6 -0.9
comp=Z,0.8nm,0.8s,baz=60,slow=3.0,SNR=4.2
LPAZ **La Paz** 152.16 102 PKPbc PKPbc 19 15 26.4 -0.1
comp=Z,2.6nm,0.5s,baz=296,slow=2.6,SNR=11
LPAZ PKPab sPKPbc 19 15 34.4 +0.7
comp=Z,5.4nm,0.7s,baz=0.6,slow=1.7,SNR=13
LPAZ **La Paz** 152.16 102 PKPdf 19 15 18.2 -1.6
LPAZ sPKPbc 19 15 34.4 +0.7

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*IDC **06** 19:14:08.4±0.7, 1°.97N×97°.72W, h0km, mb4.2/13, mbtmp4.2/14, ML2.9/2, Error ellipse: s-maj=34.0km s-min=14.2km az=63.0*

*NEIC **06** 19:14:11.2±1.5, 2°.06N±0°.04×97°.7W±0°.1, h10km±1km, mb4.7/195, Error ellipse: s-maj=19.5km s-min=6.6km az=268.0*

ISC 06 19:14:10.2±0.5, 2°.03N±0°.07×97°.68W±0°.09, h10km, n342, σ0s78/275, mb4.7/101, 1C, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**14.73**	**29**	Pn	**Pn**	**19 17 41.5**	**+2.5**
	baz=202,slow=13,SNR=5.6						
CMIG	**Matias Romero**	**15.22**	**10**	Pn	**Pn**	**19 17 46.4**	**+1.0**
	0.1nm,0.3s,baz=196,slow=12,SNR=6.0						
	0.1nm,0.4s						
TLIG	**Tlapa**	**15.46**	**357**	P	**P**	**19 17 51.7**	**-1.6**
BOAB	**BOACO BROADBAN**	**16.78**	**48**	P	**P**	**19 17 55.9**	**-0.8**
BOAB				IAmb	IAmb	19 18 04.6	
	comp=Z,58nm,1.2s						
BRU2	**Volcan**	**16.36**	**65**	Pn	**Pn**	**19 17 57.0**	**-3.4**
SIUN	**Universidad Ur**	**17.26**	**47**	Pn	**Pn**	**19 18 11.5**	**0.0**
SLOR	**San Lorenzo -**	**19.38**	**98**		**Pn**	**19 18 40.8**	**+2.8**
ZAIG	**Zacatecas**	**21.16**	**347**		**P**	**19 18 58.1**	**+2.1**
ZAIG				IAmb	IAmb	19 19 02.4	
	comp=Z,38nm,1.3s						
ATAH	**Atahualpa**	**21.29**	**115**	P	**P**	**19 18 56.4**	**-1.3**
	comp=Z,4.9nm,0.8s,baz=344,slow=15,SNR=3.9						
	comp=Z,4.9nm,0.8s						
ROSC	**El Rosal**	**23.49**	**83**	P	**P**	**19 19 22.5**	**+1.6**
ROSC				IAmb	IAmb	19 19 35.4	
	comp=Z,36nm,1.3s						
SLBS	**Sierra La Lagu**	**24.59**	**332**	P	**P**	**19 19 30.7**	**-0.1**
SLBS				IAmb	IAmb	19 19 59.1	
	comp=Z,24nm,1.5s						
HBVL	**Hebbronville**	**24.91**	**358**	P	**P**	**19 19 35.2**	**+1.6**
HPIG		**25.92**	**344**	P	**P**	**19 19 42.7**	**-0.3**
833A	**Chaparral WMA,**	**26.20**	**357**	P	**P**	**19 19 45.0**	**-0.3**
CZSB	**Cruzeiro do Su**	**26.74**	**112**	P	**P**	**19 19 50.4**	**+0.1**
CAIB	**Caibarien**	**26.96**	**40**	P	**P**	**19 19 52.5**	**+0.3**
CAIB				IAmb	IAmb	19 20 12.4	
	comp=Z,26nm,1.4s						
HNDO	**Hondo**	**27.39**	**357**	P	**P**	**19 19 55.8**	**-0.2**
HNDO				IAmb	IAmb	19 20 00.1	
	comp=Z,10nm,1.0s						
TXAR	**Lajitas Array**	**27.75**	**349**	P	**P**	**19 20 00.2**	**+1.0**
	comp=Z,3.0nm,1.0s,baz=165,slow=11,SNR=18						
	comp=Z,3.0nm,1.0s						
TXAR	**Lajitas Array**	**27.75**	**349**		**P**	**19 19 59.8**	**+0.5**
TX31	**Lajitas Ar. Si**	**27.75**	**349**	P	**P**	**19 20 00.1**	**+0.8**
SDV	**Santo Domingo**	**27.76**	**75**	P	**P**	**19 19 59.1**	**-0.6**
SDV				IAmb	IAmb	19 20 12.7	
	comp=Z,24nm,1.5s						
SAND	**Sanderson**	**28.09**	**352**		**P**	**19 20 03.3**	**+0.9**
SAND				IAmb	IAmb	19 20 04.2	
	comp=Z,13nm,1.0s						
JCT	**Junction City**	**28.37**	**356**	P	**P**	**19 20 03.9**	**-0.8**
JCT				IAmb	IAmb	19 20 12.3	
	comp=Z,25nm,1.3s						
ALPN	**Alpine**	**28.75**	**349**	P	**P**	**19 20 08.6**	**+0.3**
OZNA	**Ozona**	**28.92**	**354**	P	**P**	**19 20 09.6**	**-0.1**
OZNA				IAmb	IAmb	19 20 13.1	
	comp=Z,13nm,1.5s						
BRDY	**Brady**	**29.13**	**358**	P	**P**	**19 20 12.0**	**+0.5**
VHRN	**Van Horn**	**29.43**	**347**		**P**	**19 20 15.1**	**+0.7**
VHRN				IAmb	IAmb	19 20 17.7	
	comp=Z,12nm,1.4s						
MNHN	**Monahans**	**29.55**	**351**	P	**P**	**19 20 15.6**	**+0.3**
PECS	**Pecos**	**29.76**	**349**	P	**P**	**19 20 16.3**	**-0.9**
WHTX	**Lake Whitney,**	**29.80**	**0**	P	**P**	**19 20 16.7**	**-0.8**
WHTX				IAmb	IAmb	19 20 19.5	
	comp=Z,19nm,1.4s						
SGCY	**Sterling City**	**29.90**	**354**		**P**	**19 20 18.2**	**-0.2**
SGCY				IAmb	IAmb	19 20 19.5	
	comp=Z,10nm,1.0s						
ODSA	**Odessa**	**30.28**	**352**		**P**	**19 20 21.4**	**-0.4**
MNTX	**Cornudas Mount**	**30.39**	**347**	P	**P**	**19 20 22.4**	**-0.3**
ABTX	**Abilene, Hawle**	**30.49**	**357**	P	**P**	**19 20 23.6**	**0.0**
ABTX				IAmb	IAmb	19 20 25.4	
	comp=Z,17nm,1.3s						
PLPT	**Palo Pinto**	**30.63**	**359**	P	**P**	**19 20 22.9**	**-1.9**
PLPT				IAmb	IAmb	19 20 26.1	
	comp=Z,6.4nm,0.9s						
GDL2	**Guadalupe Moun**	**30.66**	**349**	P	**P**	**19 20 25.6**	**+0.3**
POST	**Post**	**31.08**	**354**	IAmb	IAmb	19 20 29.8	
	comp=Z,15nm,1.0s						
APMT	**Aspermont**	**31.22**	**356**		**P**	**19 20 30.6**	**+0.6**
APMT				IAmb	IAmb	19 20 32.9	
	comp=Z,15nm,1.4s						
DKNS	**Dickens**	**31.62**	**355**	IAmb	IAmb	19 20 34.6	
	comp=Z,9.9nm,1.0s						
121A	**Cookes Peak, D**	**31.80**	**344**	P	**P**	**19 20 36.2**	**+1.0**
121A				IAmb	IAmb	19 20 37.3	
	comp=Z,12nm,1.1s						
MSTX	**Muleshoe**	**32.13**	**352**	IAmb	IAmb	19 20 39.4	
	comp=Z,9.8nm,0.9s						
LRAL	**Lakeview Retre**	**32.44**	**17**	P	**P**	**19 20 41.0**	**+0.4**
LRAL				IAmb	IAmb	19 20 41.8	
	comp=Z,12nm,1.4s						
MIAR	**Mount Ida**	**32.58**	**6**	P	**P**	**19 20 42.1**	**+0.2**
MIAR				IAmb	IAmb	19 20 42.9	
	comp=Z,6.9nm,1.1s						
CRNM	**Carthage**	**32.87**	**346**	P	**P**	**19 20 44.6**	**0.0**
AMTX	**Amarillo**	**32.90**	**354**	P	**P**	**19 20 44.6**	**-0.2**
AMTX				IAmb	IAmb	19 20 46.3	
	comp=Z,20nm,1.5s						
SBM	**South Baldy**	**33.00**	**345**	P	**P**	**19 20 44.3**	**-1.8**
LENM	**Lemitar**	**33.13**	**346**	P	**P**	**19 20 46.8**	**-0.1**
PH02	**Texas Public H**	**33.43**	**354**	P	**P**	**19 20 49.8**	**+0.3**
PH02				IAmb	IAmb	19 20 50.9	
	comp=Z,15nm,1.1s						
WHAR	**Wooly Hollow**	**33.47**	**8**		**P**	**19 20 49.5**	**-0.2**
WHAR				IAmb	IAmb	19 20 53.3	
	comp=Z,19nm,1.4s						
X48A	**Hartselle**	**33.75**	**16**	P	**P**	**19 20 52.1**	**-0.1**
X48A				IAmb	IAmb	19 20 53.0	
	comp=Z,11nm,1.3s						
ANMO	**Albuquerque**	**33.76**	**347**	P	**P**	**19 20 52.5**	**+0.1**
ELIS	**Ellis County**	**33.91**	**357**	P	**P**	**19 20 54.5**	**+1.0**
ELIS				IAmb	IAmb	19 21 03.0	
	comp=Z,8.8nm,0.6s						
113A	**Mohawk Valley,**	**34.11**	**335**		**P**	**19 20 55.7**	**+0.4**
113A				IAmb	IAmb	19 20 57.9	
	comp=Z,10nm,1.3s						
X18A	**Snowflake**	**34.30**	**342**	IAmb	IAmb	19 21 01.8	
	comp=Z,12nm,1.5s						
U38A	**Gravette**	**34.38**	**5**	P	**P**	**19 20 56.2**	**-1.4**
LPAZ	**La Paz**	**34.40**	**123**	P	**P**	**19 20 58.9**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=287,slow=6.8,SNR=5.1						
	comp=Z,1.7nm,0.8s						
LPAZ	**La Paz**	**34.40**	**123**		**P**	**19 21 00.2**	**+1.5**
NOKA	**Waynoka**	**34.45**	**358**	P	**P**	**19 20 56.8**	**-1.4**
NOKA				IAmb	IAmb	19 20 59.6	
	comp=Z,14nm,1.1s						
RTBA	**Rita Blanca**	**34.56**	**353**	IAmb	IAmb	19 21 03.5	
	comp=Z,23nm,1.5s						
X16A	**Lo Mia Camp, P**	**34.69**	**340**	P	**P**	**19 21 01.0**	**+0.5**
V48A	**Smith Brothers**	**35.02**	**15**	P	**P**	**19 21 02.7**	**-0.5**
V48A				IAmb	IAmb	19 21 04.2	
	comp=Z,14nm,1.4s						
BC3	**Big Chuckawall**	**35.59**	**334**	IAmb	IAmb	19 21 11.8	
	comp=Z,15nm,1.4s						
IRM	**Iron Mountain**	**35.88**	**335**	IAmb	IAmb	19 21 13.6	
	comp=Z,15nm,1.4s						
V53A	**Saluda**	**36.21**	**21**	IAmb	IAmb	19 21 20.1	
	comp=Z,9.9nm,1.3s						
MVCO	**Mesa Verde**	**36.40**	**345**	IAmb	IAmb	19 21 16.9	
	comp=Z,12nm,1.2s						
R40A	**Maddies Statio**	**36.43**	**7**	IAmb	IAmb	19 21 18.8	
	comp=Z,29nm,1.4s						
U15A	**North Rim**	**36.80**	**340**	IAmb	IAmb	19 21 27.7	
	comp=Z,12nm,1.3s						
V55A	**Taylorsville**	**36.96**	**23**	IAmb	IAmb	19 21 21.9	
	comp=Z,21nm,1.4s						
BOAV	**Boa Vista**	**37.13**	**89**		**P**	**19 21 21.6**	**+0.1**
BOAV				IAmb	IAmb	19 21 23.0	
	comp=Z,13nm,1.0s						
R50A	**Paris**	**38.10**	**17**	IAmb	IAmb	19 21 41.5	
	comp=Z,19nm,1.5s						
LRMC	**Laurel Mtn Rad**	**38.11**	**333**	IAmb	IAmb	19 21 33.6	
	comp=Z,19nm,1.4s						
QSM	**Queen of Sheba**	**38.16**	**334**	IAmb	IAmb	19 21 32.1	
	comp=Z,12nm,1.3s						
CLC	**China Lake**	**38.36**	**334**	IAmb	IAmb	19 21 34.7	
	comp=Z,15nm,1.4s						
T59A	**Dole "B" Far**	**39.42**	**26**	IAmb	IAmb	19 21 41.5	
	comp=Z,13nm,1.0s						
H03N2	**Juan Fernandez**	**39.47**	**155**	T	T	20 03 52.1	
	baz=331,slow=77,SNR=37						
H03N1	**Juan Fernandez**	**39.48**	**155**	T	T	20 03 46.3	
	baz=331,slow=77,SNR=44						
H03N3	**Juan Fernandez**	**39.48**	**155**	T	T	20 03 49.6	
	baz=331,slow=77,SNR=36						
O49A	**Covington**	**39.87**	**16**	IAmb	IAmb	19 21 45.2	
	comp=Z,35nm,1.4s						
Q54A	**Coxs Mills**	**39.87**	**21**	IAmb	IAmb	19 21 55.7	
	comp=Z,24nm,1.4s						
O52A	**Adamsville**	**40.55**	**19**	P	**P**	**19 21 49.0**	**-0.8**
O52A				IAmb	IAmb	19 22 01.0	
	comp=Z,24nm,1.2s						
NVAR	**Mina Array Bea**	**40.85**	**335**	P	**P**	**19 21 54.0**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=155,slow=8.6,SNR=9.9						
	comp=Z,2.3nm,0.8s						
NVAR	**Mina Array Bea**	**40.85**	**335**	P	**P**	**19 21 53.2**	**+0.6**
HWUT	**Hardware Ranch**	**41.34**	**344**	IAmb	IAmb	19 21 59.0	
	comp=Z,20nm,1.4s						
HVU	**Hansel Valley**	**41.84**	**343**	IAmb	IAmb	19 22 02.3	
	comp=Z,19nm,1.3s						
PTLB	**Pontes e Lacer**	**41.89**	**116**		**P**	**19 22 01.9**	**+0.7**
PTLB				IAmb	IAmb	19 22 02.8	
	comp=Z,11nm,1.0s						
PDAR	**Pinedale Array**	**41.93**	**347**	P	**P**	**19 22 01.7**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=156,slow=8.1,SNR=6.2						
	comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**41.93**	**347**	P	**P**	**19 22 00.7**	**-0.7**
L56A	**Greenwood**	**43.83**	**22**	P	**P**	**19 22 16.9**	**+0.3**
L56A				IAmb	IAmb	19 22 17.8	
	comp=Z,18nm,1.2s						
MSO	**Missoula**	**46.82**	**345**	IAmb	IAmb	19 22 41.1	
	comp=Z,11nm,1.4s						
G08A	**Pilot Rock**	**46.98**	**339**	IAmb	IAmb	19 22 43.6	
	comp=Z,15nm,1.5s						
WIFE	**Three Sisters-**	**47.01**	**336**	IAmb	IAmb	19 22 43.1	
	comp=Z,6.0nm,1.1s						
G06A	**Carlson Farm,**	**47.54**	**338**	IAmb	IAmb	19 23 19.5	
	comp=Z,7.1nm,1.3s						
EPLO	**Experimental L**	**47.59**	**3**	P	**P**	**19 22 45.3**	**-0.9**
ULM	**Lac du Bonnet**	**48.07**	**2**	P	**P**	**19 22 49.0**	**-0.9**
	comp=Z,4.2nm,0.9s,baz=178,slow=13,SNR=4.2						
	comp=Z,4.2nm,0.9s						
ULM	**Lac du Bonnet**	**48.07**	**2**	IAmb	IAmb	19 22 59.0	
	comp=Z,8.9nm,1.2s						
CPUP	**Villa Florida**	**48.09**	**129**	P	**P**	**19 22 50.3**	**-0.1**
	comp=Z,2.7nm,1.0s,baz=314,slow=10.0,SNR=3.6						
	comp=Z,2.7nm,1.0s						
CPUP	**Villa Florida**	**48.09**	**129**	P	**P**	**19 22 49.8**	**-0.6**
CPUP				IAmb	IAmb	19 23 02.3	
	comp=Z,5.9nm,1.2s						
LDM	**Libby Dam**	**48.68**	**344**		**P**	**19 22 54.7**	**0.0**
LDM				IAmb	IAmb	19 22 55.9	
	comp=Z,12nm,1.1s						
PLCA	**Paso Flores**	**49.23**	**153**	P	**P**	**19 22 57.9**	**-1.2**
	comp=Z,1.6nm,1.0s,baz=337,slow=8.3,SNR=3.0						
	comp=Z,1.6nm,1.0s						
BDFB	**Brasilia**	**52.14**	**112**	P	**P**	**19 23 21.2**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=34,slow=3.6,SNR=1.7						
	comp=Z,1.9nm,0.4s						
BDFB	**Brasilia**	**52.14**	**112**	P	**P**	**19 23 20.7**	**-0.8**
DES	**Desert**	**58.95**	**291**	P	**P**	**19 24 09.9**	**-0.5**
WOH	**Wood Valley**	**59.04**	**291**	P	**P**	**19 24 09.3**	**-1.8**
KHU	**Kahuku**	**59.15**	**291**	P	**P**	**19 24 11.0**	**-1.0**
QVEH	**Oceanview Est**	**59.27**	**291**	P	**P**	**19 24 13.1**	**+0.3**
V35K	**Ketchikan**	**59.82**	**338**	P	**P**	**19 24 16.5**	**+0.8**
	baz=140						
T35M	**Bob Quinn**	**60.62**	**340**	P	**P**	**19 24 21.6**	**+0.4**
	baz=142						
LIRD	**Liard River Hi**	**61.33**	**344**	P	**P**	**19 24 27.1**	**+1.2**
	baz=147						
KOTAN	**Kotaneelee Air**	**61.40**	**345**	P	**P**	**19 24 27.5**	**+1.0**
	baz=150						
YKA	**Yellowknife Ar**	**61.64**	**351**	P	**P**	**19 24 27.0**	**-1.0**
	comp=Z,2.0nm,1.0s,baz=150,slow=7.1,SNR=4.1						
	comp=Z,2.0nm,1.0s						
YKA	**Yellowknife Ar**	**61.64**	**351**	P	**P**	**19 24 27.6**	**-0.4**
S34M	**Telegraph Cree**	**61.65**	**340**	P	**P**	**19 24 29.6**	**+1.5**
	baz=141						
DLBC	**Dease Lake**	**61.70**	**341**	P	**P**	**19 24 30.1**	**+1.5**
	baz=143						
BLKN	**Baker Lake**	**62.17**	**1**	P	**P**	**19 24 30.3**	**-1.1**
BLKN				IAmb	IAmb	19 24 32.3	
	comp=Z,8.0nm,1.3s						
S32K	**Killisnoo**	**62.52**	**339**	P	**P**	**19 24 34.5**	**+0.6**
	baz=138						
WTLY	**Watson Lake, Y**	**62.68**	**343**	P	**P**	**19 24 36.1**	**+1.0**
	baz=144						
R33M	**Jennings River**	**62.76**	**342**	P	**P**	**19 24 36.6**	**+0.9**
	baz=142						
Q32M	**Nakina River**	**62.84**	**341**	P	**P**	**19 24 36.5**	**+0.2**
Q32M	**Nakina River**	**62.84**	**341**	P	**P**	**19 24 37.7**	**+1.3**
	baz=140						
R32K	**Eaglecrest**	**63.10**	**339**	P	**P**	**19 24 39.4**	**+1.6**
	baz=138						
BESE	**Bessie Mountai**	**63.44**	**339**		**P**	**19 24 40.2**	**0.0**
S31K	**Pelican**	**63.49**	**338**	P	**P**	**19 24 41.6**	**+1.3**
	baz=136						
TGTN	**Hyland Airport**	**63.70**	**344**	P	**P**	**19 24 43.1**	**+1.3**
	baz=146						
P32M	**Atlin**	**63.81**	**341**	IAmb	IAmb	19 24 44.3	
	comp=Z,8.1nm,1.1s						
P32M	**Atlin**	**63.81**	**341**	P	**P**	**19 24 43.3**	**+0.8**
	baz=139						
P33M	**Teslin, Yukon**	**63.99**	**341**	P	**P**	**19 24 44.6**	**+0.9**
	baz=140						
SKAG	**Skagway**	**64.26**	**340**	P	**P**	**19 24 46.2**	**+0.8**
	baz=137						
PLBC	**Pleasant Camp**	**64.62**	**339**	P	**P**	**19 24 48.9**	**+1.2**
	baz=136						
N32M	**Quiet Lake**	**64.80**	**342**	P	**P**	**19 24 49.9**	**+0.9**
	baz=140						
WHY	**Whitehorse**	**65.00**	**341**	P	**P**	**19 24 51.3**	**+0.9**
	baz=138						
P29M	**Windy Craggy**	**65.23**	**339**	IAmb	IAmb	19 24 53.5	
	comp=Z,7.8nm,1.1s						
P29M	**Windy Craggy**	**65.23**	**339**	P	**P**	**19 24 52.7**	**+0.8**
	baz=135						
P30M	**Million Dollar**	**65.31**	**340**	P	**P**	**19 24 53.4**	**+1.0**
	baz=136						
MMPY	**Sheldon Lake,**	**65.41**	**344**	P	**P**	**19 24 54.0**	**+1.0**
	baz=143,SNR=7.2						
O30N	**Mendenhall**	**65.48**	**340**	IAmb	IAmb	19 24 55.2	
	comp=Z,8.2nm,1.2s						
O30N	**Mendenhall**	**65.48**	**340**	P	**P**	**19 24 54.5**	**+1.1**
	baz=137,SNR=5.2						
N31M	**Braeburn, Yuko**	**65.91**	**341**	P	**P**	**19 24 56.8**	**+0.6**
	baz=138						
HYT	**Haines Junctio**	**66.00**	**340**	IAmb	IAmb	19 25 00.8	
	comp=Z,9.6nm,1.4s						
HYT	**Haines Junctio**	**66.00**	**340**	P	**P**	**19 24 58.0**	**+1.1**
	baz=136,SNR=5.8						
O29M	**Mount Kennedy**	**66.00**	**339**	P	**P**	**19 24 56.9**	**0.0**
	baz=134						
N30M	**Aishikik Lake**	**66.32**	**341**	IAmb	IAmb	19 25 00.7	
	comp=Z,8.7nm,1.2s						
N30M	**Aishikik Lake**	**66.32**	**341**	P	**P**	**19 24 59.9**	**+1.1**
	baz=136						
YUK6	**Outpost Mounta**	**66.38**	**340**	P	**P**	**19 25 00.4**	**+1.0**
	baz=135,SNR=7.9						
PINM	**Pinnacle**	**66.47**	**338**	P	**P**	**19 25 01.1**	**+1.2**
	baz=132						
YUK4	**Talbot Arm**	**66.76**	**340**	P	**P**	**19 25 03.4**	**+1.5**
	baz=135,SNR=7.9						
M30M	**Minto, Yukon**	**67.03**	**342**	IAmb	IAmb	19 25 07.4	
	comp=Z,8.0nm,1.5s						
M30M	**Minto, Yukon**	**67.03**	**342**	P	**P**	**19 25 03.8**	**+0.4**
	baz=137,SNR=5.5						
YUK8	**Steele Glacier**	**67.11**	**339**	P	**P**	**19 25 04.8**	**+0.6**
	baz=133						
M29M	**Somme Creek**	**67.48**	**341**	P	**P**	**19 25 07.1**	**+0.8**
	baz=135,SNR=6.1						
YUK3	**Moose Creek**	**67.69**	**340**	P	**P**	**19 25 08.0**	**+0.3**
	baz=133						
L29M	**L29M**	**67.84**	**341**	P	**P**	**19 25 09.1**	**+0.5**
	baz=136,SNR=18						
KAIM	**Kayak Island**	**67.95**	**337**	P	**P**	**19 25 10.0**	**+0.8**
	baz=128						
CRQE	**Cirque**	**67.97**	**338**	P	**P**	**19 25 10.1**	**+0.7**
	baz=130						
K29M	**Barlow Dome**	**68.18**	**342**	IAmb	IAmb	19 25 11.9	
	comp=Z,6.0nm,1.1s						
K29M	**Barlow Dome**	**68.18**	**342**	P	**P**	**19 25 11.7**	**+1.0**
	baz=136,SNR=6.1						
BVCY	**Beaver Creek**	**68.26**	**340**	P	**P**	**19 25 12.3**	**+1.1**
	baz=133						
MCARA	**McCarthy VSAT**	**68.35**	**338**	P	**P**	**19 25 12.2**	**+0.5**
	baz=130						
J30M	**Hart River**	**68.37**	**343**	P	**P**	**19 25 12.2**	**+0.3**
	baz=138						
Q23K	**Middleton Isla**	**68.43**	**336**	P	**P**	**19 25 12.9**	**+0.7**
	baz=126						
M27K	**Edge Creek, AK**	**68.58**	**340**	IAmb	IAmb	19 25 14.1	
	comp=Z,2.7nm,0.7s						
M27K	**Edge Creek, AK**	**68.58**	**340**	P	**P**	**19 25 13.6**	**+0.4**
	baz=132						
BMRM	**Bremner River**	**68.68**	**338**	P	**P**	**19 25 14.0**	**+0.3**
	baz=128,SNR=5.8						
H31M	**Peel River**	**68.75**	**345**	P	**P**	**19 25 14.6**	**+0.4**
	baz=140,SNR=5.8						
EYAK	**Cordova Ski Ar**	**68.86**	**337**	P	**P**	**19 25 15.0**	**+0.2**
	baz=127						
I30M	**Mount Dempster**	**68.86**	**344**	P	**P**	**19 25 14.8**	**-0.2**
	baz=138						
DAWY	**Dawson**	**68.92**	**342**	IAmb	IAmb	19 25 16.2	
	comp=Z,7.5nm,1.1s						
DAWY	**Dawson**	**68.92**	**342**	P	**P**	**19 25 15.3**	**0.0**
	baz=135,SNR=5.5						
M26K	**Nabesna, AK**	**69.00**	**339**	P	**P**	**19 25 15.8**	**0.0**
	baz=130						
BCAR	**Beaver Creek A**	**69.02**	**340**		**P**	**19 25 15.5**	**-0.3**
L27K	**Beaver Creek,**	**69.03**	**340**	IAmb	IAmb	19 25 27.7	
	comp=Z,6.6nm,1.4s						
L27K	**Beaver Creek,**	**69.03**	**340**	P	**P**	**19 25 16.0**	**+0.1**
	baz=132						
N25K	**Chitina, Valde**	**69.07**	**338**	P	**P**	**19 25 16.8**	**+0.5**
	baz=129,SNR=5.3						
P23K	**Montague Islan**	**69.20**	**336**	P	**P**	**19 25 16.5**	**-0.4**
	baz=125						
G31M	**Satah River**	**69.60**	**345**	P	**P**	**19 25 20.0**	**+0.7**
	baz=141						
EPYK	**Eagle Plains**	**69.81**	**344**	P	**P**	**19 25 21.1**	**+0.4**
	baz=138,SNR=5.2						
F31M	**Tsiigehtchic**	**69.87**	**346**	P	**P**	**19 25 21.2**	**+0.3**
	baz=141						
I28M	**Miner Creek**	**70.06**	**343**	P	**P**	**19 25 22.1**	**-0.2**
	baz=134						
SEW	**Seward**	**70.11**	**335**	P	**P**	**19 25 22.7**	**+0.2**
	baz=123						
G30M	**tAoh Zraii Nji**	**70.14**	**345**	P	**P**	**19 25 22.7**	**0.0**
	baz=139						
H29M	**Whitestone**	**70.16**	**344**	IAmb	IAmb	19 25 34.2	
	comp=Z,9.9nm,1.4s						
H29M	**Whitestone**	**70.16**	**344**	P	**P**	**19 25 23.0**	**+0.2**
	baz=136						
SCRK	**Sand Creek**	**70.36**	**340**	P	**P**	**19 25 23.6**	**-0.6**
	baz=130						
BRSE	**Bradley Lake S**	**70.46**	**335**	P	**P**	**19 25 24.6**	**-0.2**
	baz=122						
INK	**Inuvik**	**70.50**	**347**	P	**P**	**19 25 25.4**	**+0.6**
	baz=142,SNR=10						
RIDG	**Independent Ri**	**70.50**	**340**	P	**P**	**19 25 25.3**	**+0.3**
	baz=129						
F30M	**Barrier River**	**70.50**	**345**	P	**P**	**19 25 25.0**	**+0.1**
	baz=139						
G29M	**Pine Creek**	**70.56**	**344**	P	**P**	**19 25 25.7**	**+0.4**
	baz=137,SNR=11						
SML	**Sawmill**	**70.62**	**337**	P	**P**	**19 25 26.0**	**+0.3**
	baz=125						
I27K	**Kandik River**	**70.68**	**342**	P	**P**	**19 25 26.3**	**+0.2**
	baz=133,SNR=14						
RC01	**Rabbit Creek A**	**70.77**	**336**	P	**P**	**19 25 27.0**	**+0.4**
	baz=123						
CHIR	**Chirikof Islan**	**70.83**	**330**	P	**P**	**19 25 27.4**	**+0.4**
	baz=116						
WAT6	**Susitna Watana**	**70.84**	**338**	P	**P**	**19 25 26.9**	**-0.3**
	baz=126						
DHY	**Denali Highway**	**71.00**	**338**	P	**P**	**19 25 28.2**	**+0.1**
	baz=126						
H27K	**Steamboat Moun**	**71.08**	**343**	IAmb	IAmb	19 25 30.4	
	comp=Z,11nm,1.4s						
H27K	**Steamboat Moun**	**71.08**	**343**	P	**P**	**19 25 28.8**	**+0.3**
	baz=133,SNR=5.9						
J25K	**Salcha River,**	**71.23**	**340**	P	**P**	**19 25 29.5**	**+0.1**
	baz=129						
Q19K	**Cape Douglas,**	**71.33**	**333**	P	**P

G25K	Bearman Lake baz=128	72.82 342	P	P	19 25 39.2	+0.5
H24K	Noodor Dome baz=126,SNR=9.6	72.82 341	P	P	19 25 39.2	+0.3
F26K	Sheenjek River comp=Z,12nm,1.4s	72.83 343	IAmb	IAmb	19 25 40.1	
F26K	Sheenjek River baz=131,SNR=7.8	72.83 343	P	P	19 25 39.5	+0.6
I23K	Minto, Yukon-K baz=125,SNR=9.0	72.92 340	P	P	19 25 39.7	+0.3
CAST	Castle Rocks baz=122,SNR=11	72.96 338	P	P	19 25 39.2	-0.6
D27M	Malcolm River baz=134	73.01 345	P	P	19 25 40.1	+0.1
M19K	Big River Lodg baz=119	73.10 336	P	P	19 25 40.5	-0.1
SDPT	Sand Point baz=112	73.15 328	P	P	19 25 41.1	+0.1
N18K	Kilae Creek baz=118	73.16 334	P	P	19 25 40.5	-0.5
SMAI	San Martin Ant	73.16 169	P	P	19 25 42.1	+1.4
F25K	Christian Rive comp=Z,8.6nm,1.1s	73.20 343	IAmb	IAmb	19 25 42.7	
F25K	Christian Rive baz=129,SNR=12	73.20 343	P	P	19 25 42.0	+0.8
G24K	Hadweenzic Riv baz=127,SNR=6.0	73.21 341	P	P	19 25 41.6	+0.5
O17K	Koliganek Bris baz=116	73.28 333	P	P	19 25 42.1	+0.5
CHUM	Lake Minchumin baz=122	73.29 338	P	P	19 25 41.0	-0.6
MLY	Manley comp=Z,12nm,1.2s	73.33 339	IAmb	IAmb	19 25 42.7	
MLY	Manley baz=124,SNR=9.1	73.33 339	P	P	19 25 41.6	-0.3
H23K	Yukon River baz=125	73.37 340	P	P	19 25 41.4	-0.8
P16K	Nushagak River baz=115	73.38 332	P	P	19 25 42.6	+0.4
L19K	White Mountain comp=Z,9.4nm,1.2s	73.43 336	IAmb	IAmb	19 25 43.6	
L19K	White Mountain baz=119	73.43 336	P	P	19 25 42.5	0.0
M18K	Stony River baz=116	73.50 335	P	P	19 25 42.6	-0.4
E25K	Arctic Village comp=Z,8.9nm,1.3s	73.51 343	IAmb	IAmb	19 25 44.5	
E25K	Arctic Village baz=129	73.51 343	P	P	19 25 42.9	-0.1
O16K	Kokwok River B baz=115	73.66 333	P	P	19 25 44.2	+0.3
K20K	Telida baz=120,SNR=6.7	73.69 337	P	P	19 25 44.2	+0.1
F24K	Squaw Lake baz=127	73.83 342	P	P	19 25 45.0	+0.2
I21K	Tanana comp=Z,9.8nm,1.0s	73.86 339	IAmb	IAmb	19 25 45.6	
I21K	Tanana baz=122,SNR=7.9	73.86 339	P	P	19 25 45.2	+0.2
C27K	Jago River baz=132	73.98 345	P	P	19 25 45.8	+0.1
H22K	Ishtalitna Cre baz=123	74.03 340	P	P	19 25 45.8	-0.2
G23K	Bananza Creek comp=Z,7.3nm,1.1s	74.04 341	IAmb	IAmb	19 25 46.9	
G23K	Bananza Creek baz=125,SNR=7.6	74.04 341	P	P	19 25 46.3	+0.3
J20K	Nowinta River baz=120	74.13 338	P	P	19 25 46.4	-0.2
M17K	Holitna River baz=116	74.16 334	P	P	19 25 46.9	+0.1
L18K	Granite Mounta baz=117	74.20 335	P	P	19 25 47.2	+0.1
O15K	Ungalikthiuk R baz=113	74.30 332	P	P	19 25 47.9	+0.2
E24K	Your Creek baz=126	74.35 342	P	P	19 25 48.1	+0.2
COLD	Coldfoot baz=125,SNR=5.2	74.39 341	P	P	19 25 49.0	+1.0
H21K	Melozitna Rive baz=122	74.40 339	P	P	19 25 48.2	0.0
C26K	Camden Bay baz=130	74.49 345	P	P	19 25 48.9	+0.4
D25K	Kavik River baz=129,SNR=9.5	74.50 344	P	P	19 25 49.0	+0.2
I20K	Naaghedeneel baz=120	74.57 338	P	P	19 25 49.0	-0.1
J19K	Poorman comp=Z,7.2nm,1.2s	74.61 337	IAmb	IAmb	19 25 49.6	
J19K	Poorman baz=119	74.61 337	P	P	19 25 49.1	-0.3
G22K	Bettles baz=123	74.64 341	P	P	19 25 49.8	+0.3
E23K	Chandalar baz=125,SNR=6.8	74.68 342	P	P	19 25 50.7	+0.8
N15K	Kwethluk River baz=113	74.82 333	P	P	19 25 51.3	+0.6
L17K	Donlin baz=116	74.84 335	P	P	19 25 51.0	+0.2
TOLK	Toolik Lake Re baz=126	75.01 343	P	P	19 25 51.7	0.0
H20K	Anotleneega Mo baz=120	75.06 339	P	P	19 25 52.0	0.0
G21K	Allakaket baz=121	75.10 340	P	P	19 25 52.3	+0.1
K17K	Iditarod baz=116	75.10 335	P	P	19 25 52.6	+0.3
L16K	Owhat River baz=114	75.17 334	P	P	19 25 53.0	+0.3
F22K	John River baz=123	75.18 341	P	P	19 25 53.0	+0.3
M15K	Kasigluk River baz=113	75.30 333	P	P	19 25 53.9	+0.5
F21K	Alatna River comp=Z,10nm,1.1s	75.46 341	IAmb	IAmb	19 25 55.6	
F21K	Alatna River baz=121,SNR=10.0	75.46 341	P	P	19 25 54.8	+0.5
D23K	Nanushuk River comp=Z,15nm,1.4s	75.53 343	IAmb	IAmb	19 25 56.3	
D23K	Nanushuk River baz=124	75.53 343	P	P	19 25 55.2	+0.6
H19K	Roundabout Mou baz=118	75.65 338	P	P	19 25 55.7	+0.3
J17K	VABM Dome baz=115	75.71 336	P	P	19 25 56.1	+0.4
M14K	Bethel baz=112	75.90 333	P	P	19 25 57.4	+0.6
C23K	Itkillik River baz=125	76.00 343	P	P	19 25 57.4	+0.1
L15K	Ungalak Mounta baz=112	76.04 334	P	P	19 25 58.2	+0.6
F20K	Avaraart Lake comp=Z,7.8nm,1.0s	76.13 340	IAmb	IAmb	19 25 59.3	
F20K	Avaraart Lake baz=119,SNR=7.0	76.13 340	P	P	19 25 58.7	+0.7
G19K	Purcell Mounta comp=Z,7.0nm,1.4s	76.17 339	IAmb	IAmb	19 26 02.1	
G19K	Purcell Mounta baz=118	76.17 339	P	P	19 25 59.2	+0.9
H18K	Honhosa River baz=116	76.19 338	P	P	19 25 59.3	+0.8
E21K	Killik River baz=121,SNR=5.9	76.25 342	P	P	19 25 58.7	-0.1
J16K	Anvik River baz=114	76.29 336	P	P	19 25 59.1	0.0
M13K	Dall Lake baz=110	76.42 332	P	P	19 26 01.0	+1.3
L14K	Kuka Creek baz=111	76.44 333	P	P	19 26 00.9	+0.9
G18K	Tagagawik comp=Z,5.1nm,1.1s	76.63 338	IAmb	IAmb	19 26 02.1	
G18K	Tagagawik baz=116	76.63 338	P	P	19 26 01.7	+0.8
E19K	Redstone River baz=118	76.84 340	P	P	19 26 02.8	+0.7
E20K	Nigu River baz=119	76.87 341	P	P	19 26 03.2	+0.8
C21K	Knifeblade Rid baz=120	76.87 342	P	P	19 26 02.8	+0.5
G17K	Kiwalik Mounta baz=114	77.21 338	P	P	19 26 04.8	+0.5
D20K	Etivluk River baz=119	77.23 341	P	P	19 26 04.6	+0.3
D19K	Kuna River baz=117	77.61 341	P	P	19 26 06.9	+0.4
F17K	Baldwin Pennin baz=114	77.82 338	P	P	19 26 08.3	+0.7
E18K	Tukpahlearik C	77.99 339	P	P	19 26 09.3	+0.7
	baz=114					
B20K	Meade River baz=118	78.02 342	P	P	19 26 09.3	+0.7
E17K	Hotham Inlet baz=113	78.28 339	P	P	19 26 11.0	+0.9
G15K	Niukluk baz=111	78.33 337	P	P	19 26 11.9	+1.4
C19K	Lookout Ridge baz=116	78.37 341	P	P	19 26 10.9	+0.2
ANM	Nome baz=110	78.72 336	P	P	19 26 13.7	+1.0
F15K	North Star Dit baz=110	78.83 337	P	P	19 26 13.9	+0.7
D17K	Noatak River baz=112	78.97 339	P	P	19 26 14.6	+0.7
C17K	DeLong Mountai baz=112	79.30 340	P	P	19 26 15.9	+0.1
C16K	Lisburne Hills baz=110	79.98 340	P	P	19 26 19.0	-0.4
QSPA	South Pole Qui comp=Z,4.8nm,1.0s,baz=128,slow=2.3,SNR=9.1 comp=Z,4.8nm,1.0s	92.05 180	P	P	19 27 20.4	+1.0
QSPA	South Pole Qui	92.05 180		P	19 27 21.2	+1.8
SNAA	Sanae	93.44 162	P	P	19 27 26.3	+0.5
SNAA	Sanae comp=Z,2.9nm,1.1s,baz=314,slow=1.3,SNR=5.8 comp=Z,2.9nm,1.1s	93.44 162	P	P	19 27 25.5	-0.2
SNAA	Sanae	93.44 162	P	P	19 27 25.1	-0.7
SNAA	comp=Z,3.6nm,1.0s		IAmb	IAmb	19 27 27.5	
H11N3	WAKE ISLAND Hy baz=86,slow=75,SNR=7.3	94.41 290	T	T	21 12 08.9	
H11N2	WAKE ISLAND Hy baz=86,slow=75,SNR=5.9	94.42 290	T	T	21 12 13.9	
H11N1	WAKE ISLAND Hy baz=86,slow=75,SNR=8.4	94.43 290	T	T	21 12 09.5	
H11S2	WAKE ISLAND Hy baz=86,slow=74,SNR=9.0	94.68 289	T	T	21 12 40.1	
H11S1	WAKE ISLAND Hy baz=86,slow=74,SNR=9.3	94.69 289	T	T	21 12 42.4	
H11S3	WAKE ISLAND Hy baz=86,slow=74,SNR=9.3	94.70 289	T	T	21 12 39.2	
TROLL	Troll, Antarti comp=Z,201nm,1.0s	95.08 162	⇑P	P	19 27 33.0	-0.3
BVAR	Borovoye Array comp=Z,0.5nm,0.6s,baz=248,slow=3.3,SNR=2.6	124.24 9	PKP	PKPdf	19 33 08.8	-0.6
ASAR	Alice Springs comp=Z,1.2nm,1.1s,baz=96,slow=1.7,SNR=5.0	125.69 242	PKP	PKPdf	19 33 11.9	-1.2
ASAR	Alice Springs	125.69 242		PKPdf	19 33 11.7	-1.4
WRA	Warramunga Arr comp=Z,1.1nm,0.9s,baz=66,slow=1.5,SNR=5.4	126.19 247	PKP	PKPdf	19 33 12.7	-1.3
WRA	Warramunga Arr	126.19 247		PKPdf	19 33 13.5	-0.5
KURK	Kurchatov	127.36 3		PKPdf	19 33 14.8	-0.7
KURBB	Kurchatov Arra comp=Z,0.9nm,0.9s,baz=328,slow=3.3,SNR=4.2	127.45 3	PKP	PKPdf	19 33 14.8	-0.8
CMAR	Chiang Mai Arr comp=Z,1.3nm,1.0s,baz=338,slow=2.7,SNR=6.0	153.88 322	PKP	PKPdf	19 34 03.2	+0.2
CMAR	Chiang Mai Arr	153.88 322		PKPdf	19 34 01.0	-2.0

*IDC **06** 19:23:19.2±1.3,33.˚75S×178.˚79W,h0km,mb3.7/5, mbtmp3.7/6,ML3.7/1,Error ellipse: s-maj=33.4km s-min=27.7km az=135.0*
*WEL **06** 19:23:22.5±1.3,34.˚S-26.˚×17.˚9W-4.˚0,h12km,M4.2/6, mB5.0/2,ML4.2/9,MLv4.2/6,Mw(mB)4.4/2,Error ellipse: s-maj=61.8km s-min=9.8km az=122.0*

ISC 06 19:23:21.5±1.2,33.˚7S±0.˚1×178.˚9W±0.˚2,h10km,n18, σ1§06/28,mb3.4/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	4.67	208	P	Pn	19 24 31.8	-0.1
WMGZ				S	Sn	19 25 27.3	+1.1
PKGZ	Pakihiroa	4.84	210	P	Pn	19 24 33.1	-1.3
PKGZ				S	Sn	19 25 31.1	+0.5
HAZ	Te Kaha	4.88	213	P	Pn	19 24 35.7	+0.8
HAZ				S	Sn	19 25 34.1	+2.7
PUZ	Puketiti	4.95	208	P	Pn	19 24 36.7	+0.9
PUZ				S	Sn	19 25 32.8	-0.3
RUGZ	Raukumara Rang	5.10	213	P	Pn	19 24 37.6	-0.4
RUGZ				S	Sn	19 25 37.7	+0.6
TWGZ	Tauwhareparae	5.15	209	P	Pn	19 24 39.0	+0.4
TWGZ				S	Sn	19 25 37.7	-0.4
CNGZ	Carnagh Statio	5.33	206	P	Pn	19 24 41.8	+0.8
MWZ	Matawai	5.47	211	P	Pn	19 24 43.6	+0.5
MWZ				S	Sn	19 25 45.8	-0.3
URZ	Urewera 2.1nm,0.3s,baz=241,slow=3.4,SNR=20	5.60	215	Pn	Pn	19 24 42.6	-2.1
URZ				Sn	Sn	19 25 47.7	-1.5
	5.6nm,0.3s,baz=268,slow=23,SNR=14 4.8nm,0.2s						
URZ	Urewera	5.60	215	P	Pn	19 24 44.0	-0.7
URZ				S	Sn	19 25 48.0	-1.1
SNGZ	Shannon Statio	5.92	210	P	Pn	19 24 49.6	+0.3
SNGZ				S	Sn	19 25 57.0	-0.3
MHGZ	Mahia Peninsul	6.03	205	P	Pn	19 24 49.9	-0.8
STKA	Stephens Creek 1.1nm,0.8s,baz=354,slow=15,SNR=7.6 1.1nm,0.8s	33.17	262	P	P	19 29 59.8	+1.6
ASAR	Alice Springs 0.2nm,0.3s,baz=112,slow=7.8,SNR=8.0 0.2nm,0.3s	42.33	271	P	P	19 31 15.2	-0.6
WRA	Warramunga Arr 0.3nm,0.5s,baz=118,slow=7.8,SNR=6.8 0.3nm,0.5s	43.61	276	P	P	19 31 25.2	-1.0
VNDA	Vanda 0.5nm,0.3s,baz=78,slow=14,SNR=5.9 0.5nm,0.3s	44.74	186	P	P	19 31 33.8	-0.7
TXAR	Lajitas Array 0.1nm,0.7s,baz=281,slow=6.1,SNR=4.4 0.1nm,0.7s	94.77	58	P	P	19 36 43.3	-0.2
FINES	FINESS Array B 7.0nm,1.1s,baz=45,slow=4.1,SNR=6.9	147.96	338	PKPbc	PKPdf	19 43 03.9	+0.8

*IDC **06** 19:24:25.1±0.7,33.˚12N×73.˚69E,h0km,mb4.0/16, mbtmp4.0/19,ML4.0/3,Error ellipse: s-maj=17.8km s-min=13.9km az=51.0*
*NEIC **06** 19:24:27.5±2.3,33.˚06N±0.˚06×73.˚62E±0.˚08,h10km±1km, mb4.1/13,Error ellipse: s-maj=13.9km s-min=7.1km az=51.0*
*NDI **06** 19:24:28.6±2.3,32.˚99N×73.˚58E,h10km,ML4.1,MW3.8, Presumed earthquake*
*NNC **06** 19:24:31.2±3.5,33.˚56N×73.˚33E,h0km,mb4.4,Error ellipse: s-maj=39.9km s-min=32.0km az=125.0*

ISC 06 19:24:27.6±1.2,33.˚02N±0.˚04×73.˚56E±0.˚04,h19km±6km, n88,σ2§22/106,mb4.0/16,2C-6D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	0.68	338		Pg	19 24 40.3	-0.7
JMU	Jammu	1.10	102	eP	Pg	19 24 47.3	-1.5
JMU				eS	Sg	19 25 02.0	-1.2
JMU	comp=E,2μm,0.7s			IAML		19 25 05.8	
JMU	comp=N,1μm,0.7s			IAML		19 25 07.6	
SRNI	Srinagar	1.46	45	eP	Pn	19 24 55.4	+2.4
SRNI				eS	Sg	19 25 16.7	+1.9
THN	Thein Dam	1.94	107	eP	Pn	19 25 02.5	+2.9
THN				eS	Sb	19 25 28.2	+2.1
THN	comp=N,5μm,0.3s			IAML		19 25 29.4	
THN	comp=E,5μm,0.6s			IAML		19 25 29.4	
TSSA	Tissa	2.19	94	eP	Pn	19 25 05.3	+2.2
TSSA				eS	Sn	19 25 32.6	+2.9
TSSA	comp=E,2μm,0.4s			IAML		19 25 34.9	
TLWR	Talawar	2.29	117	eP	Pn	19 25 07.3	+3.0
TLWR				eS	Sn	19 25 34.0	+2.0
TLWR	comp=N,294nm,0.7s			IAML		19 25 39.3	
DHRM	DHARAMSHALA	2.44	108	eP	Pn	19 25 09.0	+2.5
DHRM				eS	Sn	19 25 37.9	+2.0
DHRM	comp=N,4μm,0.5s			IAML		19 25 43.8	
DHRM	comp=E,5μm,0.5s			IAML		19 25 44.1	
BHK	Bhakra	2.89	123	eP	Pn	19 25 14.7	+2.1
BHK				eS	Sb	19 25 52.3	-1.1
ALCI	Alchi Leh	3.25	68	eP	Pn	19 25 20.2	+2.4
ALCI				eS	Sn	19 25 57.1	+0.9
ALCI	comp=N,567nm,0.4s			IAML		19 26 07.0	
ALCI	comp=E,325nm,0.5s			IAML		19 26 07.1	
KBL	Kabul	4.05	293		Pn	19 25 30.4	+1.7
KLP	Kalpa	4.24	109	eP	Pn	19 25 33.3	+1.8
KLP				eS	Sn	19 26 21.0	+0.5
KLP	comp=N,350nm,0.5s			IAML		19 26 24.6	
KLP	comp=E,317nm,0.5s			IAML		19 26 25.3	
UTK	UTTARKASHI	4.74	118	eP	Pn	19 25 39.0	+0.8
UTK				eS	Sn	19 26 33.2	+0.5
MANEM	Manem	4.76	342		Pn	19 25 42.9	+4.3
KUDL	Kundal	5.48	152	eP	Pn	19 25 49.1	+0.9
SONA	Sohna	5.64	147	eP	Pn	19 25 51.5	+1.2
KSH2	Kashi	6.32	14	Pn	Pn	19 26 03.3	+3.5
KSH2				Sn	Sn	19 27 11.5	-0.1
KSH2	comp=N,67nm,0.7s			smax	smax		
KSH2	comp=E,78nm,0.6s			smax	smax		
SHAA	Shahritus	6.34	317		Pn	19 26 01.4	+1.3
GAR	Garm	6.52	337		Pn	19 26 05.0	+2.5
AJM	Ajmer	6.64	172	eP	Pn	19 26 05.9	+1.8
CHGR	Chuyangaron	6.66	329		Pn	19 26 05.3	+0.9
BTK	Batken	7.36	343		Pn	19 26 14.3	+0.3
ARSB	Arslanbob	8.30	357		Pn	19 26 28.1	+1.2
NRN	Naryn	8.62	12		Pn	19 26 33.0	+1.5
JHNI	Jhansi	8.74	148	eP	Pn	19 26 32.5	-0.4
JHNI				eS	Sn	19 28 05.9	-4.9
JHNI	comp=E,388nm,0.3s			IAML		19 28 10.1	
JHNI	comp=N,375nm,0.5s			IAML		19 28 10.8	
UCH	Uchtor SNR=40	9.22	4	P	Pn	19 26 41.5	+1.6
TARG	Taragay, Kyrgy	9.32	20		Pn	19 26 42.8	+1.6
WUS	Wushi	9.32	27		Pn	19 26 41.1	+0.1
KDJ	Kajisay	9.53	16		Pn	19 26 44.3	+0.4
EKS2	Erkin-Say SNR=16	9.62	1	P	Pn	19 26 47.8	+2.7
AAK	Ala-Archa comp=N,3.6nm,0.3s,baz=181,slow=12,SNR=34	9.63	4	Pn	Pn	19 26 45.8	+0.6
AAK	comp=N,0.4nm,0.3s,baz=35,slow=22,SNR=2.1 comp=N,12nm,0.5s			Sn	Sn	19 28 29.9	-3.0
AAK	Ala-Archa SNR=20	9.63	4	P	Pn	19 26 48.1	+2.9
AAK	Ala-Archa	9.63	4		Pn	19 26 46.6	+1.5
AAK					Sn	19 28 29.9	-3.0
AAK	Ala-Archa comp=N,6.4nm,0.6s	9.63	4	⇑P	Pn	19 26 47.4	+2.2
AAK				S	Sn	19 28 27.1	-5.7
BOOM	Boomskoye usch	9.64	11		Pn	19 26 46.6	+1.3
KBK	Karagaybulak SNR=51	9.68	6	P	Pn	19 26 48.8	+2.8
FRU1	Bishkek	9.81	5		Pn	19 26 49.1	+1.5
CHMS	Chumysh SNR=12	10.00	5	P	Pn	19 26 51.9	+1.7
TKM2	Tokmak 2 SNR=7.1	10.01	9	P	Pn	19 26 52.6	+2.1
PRZ	Przheval'sk	10.19	21		Pn	19 26 55.7	+2.8
USP	Ospenovka SNR=9.1	10.25	4	P	Pn	19 26 55.8	+2.1
KK31	Karatay Array	10.35	347		Pn	19 26 55.7	+0.8
KK31	Karatay Array comp=N,9.7nm,0.3s,baz=163,slow=12,SNR=319	10.35	347	⇓P	Pn	19 26 55.0	+0.1
KK31				⇓S	Sn	19 28 45.2	-5.1
KKAR	Karatay Array	10.35	347		Pn	19 26 55.4	+0.5
PDGK	Podgornoye	11.29	23		Pn	19 27 08.6	+0.7
PDGK	Podgornoye comp=N,9.2nm,0.6s	11.29	23	⇓P	Pn	19 27 08.5	+0.5
EVN	Everest	12.49	110		Pn	19 27 21.1	-3.9
MAKZ	Makanchi	15.19	23		Pn	19 27 58.0	-3.0
MAKZ	comp=Z,9.9nm,0.8s			IAmb	IAmb	19 28 03.2	
MAKZ	Makanchi comp=Z,12nm,1.1s	15.19	23	⇑P	Pn	19 27 58.9	-2.1
MK31	Makanchi Array comp=Z,3.9nm,1.1s,baz=203,slow=10,SNR=44	15.28	23	⇓P	Pn	19 28 02.1	-0.1
MKAR	Makanchi Array comp=Z,0.7nm,0.3s,baz=194,slow=11,SNR=30	15.28	23	Pn	Pn	19 28 00.5	-1.7
MKAR	baz=195,slow=27			Sn	Sn	19 30 43.8	-7.1
MKAR	comp=Z,9.9nm,0.8s			Lg	Lg	19 32 26.0	
MKAR	Makanchi Array comp=Z,1.9nm,0.5s baz=199,slow=29,SNR=1.1	15.28	23		Pn	19 27 59.7	-2.5
MKAR					Sn	19 30 43.8	-7.1
KURBB	Kurchatov Arra comp=Z,0.2nm,0.3s,baz=195,slow=12,SNR=48 comp=Z,5.5nm,0.7s	17.96	10	P	Pn	19 28 33.3	-2.7
KURBB	Kurchatov Arra comp=Z,8.0nm,0.6s	17.96	10	⇓P	Pn	19 28 35.9	-0.2
KURK	Kurchatov	18.07	10	P	Pn	19 28 34.2	-3.1
KURK	comp=Z,9.3nm,0.8s			IAmb	IAmb	19 28 38.6	
AB31	Akbulak array comp=Z,3.4nm,0.7s	19.14	332	IAmb	IAmb	19 28 57.1	
AB31	Akbulak array comp=Z,2.2nm,0.6s,baz=141,slow=12,SNR=44	19.14	332	P	P	19 28 48.8	-0.6
ABKAR	Akbulak array	19.14	332		P	19 28 48.2	-1.2
BVAR	Borovoye Array comp=Z,4.9nm,0.6s,baz=160,slow=11,SNR=20 comp=Z,4.9nm,0.6s	20.12	354	P	P	19 29 00.4	+0.2
BORK	Borovoye	20.15	354		P	19 29 00.4	0.0
BORK	comp=Z,5.6nm,0.8s			IAmb	IAmb	19 29 17.3	
AKTO	Aktyubinsk comp=Z,15nm,0.7s,baz=144,slow=6.9,SNR=60	20.84	331	P	P	19 29 08.0	0.0
AKTO	comp=Z,0.1nm,0.3s,baz=8.6,slow=23,SNR=1.5 comp=Z,15nm,0.7s			Sn	S	19 32 55.3	-4.1
AKTO	Aktyubinsk comp=Z,12nm,0.8s	20.84	331	⇓P	P	19 29 07.7	-0.3
GTA2	Gaotai	22.05	66	eP	P	19 29 21.6	+0.4
GTA2				sP	sP	19 29 28.4	-1.0
GTA2	comp=Z,2.0nm,0.8s			pmax	pmax		
ZAA0	Zalesovo Array comp=Z,8.2nm,0.8s	22.40	18		P	19 29 23.4	-1.2
ZAA0				IAmb	IAmb	19 29 35.1	
ZALV	Zalesovo Beam comp=Z,5.3nm,0.5s,baz=208,slow=10,SNR=28	22.40	18	P	P	19 29 23.6	-1.1
ZALV				Sn	S	19 33 34.9	+5.2
	comp=Z,0.1nm,0.3s,baz=233,slow=16,SNR=1.9 comp=Z,5.3nm,0.5s						
ZALV	Zalesovo Beam	22.40	18		P	19 29 23.2	-1.5
ZALV					S	19 33 34.9	+5.2
KBZ	Khabaz comp=Z,0.7nm,0.5s,baz=128,slow=7.9,SNR=3.5 comp=Z,0.7nm,0.5s	26.17	303	P	P	19 30 02.1	+1.5
CHTO	Chiang Mai	26.77	116	P	P	19 30 06.1	-0.2
CHTO	comp=Z,2.1nm,0.7s			IAmb	IAmb	19 30 15.8	
CM31	Chiang Mai Arr	26.98	116	P	P	19 30 07.2	-1.0
CMAR	Chiang Mai Arr comp=Z,2.9nm,0.7s,baz=295,slow=9.6,SNR=33 comp=Z,2.9nm,0.7s	26.98	116	P	P	19 30 08.8	+0.6
CMAR	Chiang Mai Arr	26.98	116	P	P	19 30 07.7	-0.6
SONM	Songino Array comp=Z,0.3nm,0.5s,baz=258,slow=7.2,SNR=4.4 comp=Z,0.3nm,0.5s	28.79	49	P	P	19 30 24.4	+0.1
SONM	Songino Array	28.79	49	P	P	19 30 24.4	+0.1
BRTR	Keskin Array B comp=Z,0.7nm,0.7s,baz=134,slow=12,SNR=5.5 comp=Z,0.7nm,0.7s	32.63	293	P	P	19 31 00.2	+2.0
NRIK	Noril'sk comp=Z,2.5nm,0.6s,baz=162,slow=9.6,SNR=3.5 comp=Z,2.5nm,0.6s	37.21	8	P	P	19 31 35.8	-1.4
NRIK	Noril'sk	37.21	8	P	P	19 31 35.8	-1.4
NRIK	comp=Z,3.4nm,0.8s			IAmb	IAmb	19 31 38.7	
BURAR	Bucovina Array	38.99	307	P	P	19 31 54.5	+1.8
ARCES	ARCESS Array B comp=Z,1.4nm,0.6s,baz=112,slow=8.0,SNR=8.2 comp=Z,1.4nm,0.6s	45.15	338	P	P	19 32 42.6	+0.1
GERES	GERESS Array B comp=Z,0.2nm,0.4s,baz=98,slow=8.4,SNR=3.5 comp=Z,0.2nm,0.4s	46.70	308	P	P	19 32 57.2	+2.1
HFS	Hagfors comp=Z,3.3nm,0.6s,baz=108,slow=7.7,SNR=9.9 comp=Z,3.3nm,0.6s	47.10	324	P	P	19 32 57.9	0.0
TIXI	Tiksi	48.25	20	P	P	19 33 08.5	+1.9
NB2	NORSAR Subarra	48.42	325	P	P	19 33 08.0	-0.3

comp=Z,1.7nm,0.7s,baz=96,slow=7.9
NOA NORSAR Array B 48.42 325 P P 19 33 08.3 +0.1
comp=Z,1.4nm,0.7s,baz=96,slow=7.5,SNR=5.5
comp=Z,1.4nm,0.7s
ESDC Sonseca Array 60.99 300 P P 19 34 40.8 +1.1
comp=Z,0.5nm,0.7s,baz=55,slow=7.0,SNR=5.0
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 67.83 272 P P 19 35 24.8 0.0
comp=Z,0.9nm,0.7s,baz=49,slow=5.7,SNR=7.3
comp=Z,0.9nm,0.7s
TORD Torodi Ar. Bea 67.83 272 P P 19 35 24.8 0.0
WRA Warramunga Arr 78.35 123 P P 19 36 27.4 +0.5
comp=Z,0.8nm,0.5s,baz=323,slow=5.1,SNR=20
comp=Z,0.8nm,0.5s
WRA Warramunga Arr 78.35 123 P P 19 36 27.4 +0.5
ASAR Alice Springs 80.52 126 P P 19 36 39.0 +0.4
σ0.7nm,0.6s,baz=306,slow=5.1,SNR=13
comp=Z,0.7nm,0.6s

IDC 06 19:30:51.2±1.6, 12°.18N×141°.10E, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=47.9km s-min=32.9km az=88.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.31**	**191**	P	P	19 37 56.8	-0.1
	0.4nm,0.9s,baz=22,slow=12,SNR=1.8						
	0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.06**	**284**	P	P	19 38 36.9	0.0
	0.3nm,0.6s,baz=97,slow=8.1,SNR=2.0						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.98**	**317**	P	P	19 40 58.7	-1.0
	0.2nm,0.7s,baz=97,slow=10,SNR=1.7						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**63.35**	**321**	P	P	19 41 22.6	+0.4
	0.5nm,0.9s,baz=104,slow=7.1,SNR=12						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**71.41**	**25**	P	P	19 42 13.1	0.0
	0.2nm,0.8s,baz=249,slow=6.0,SNR=1.4						
	0.2nm,0.8s						

*IDC **06** 19:41:36.1±2.5, 24°.14S×175°.32W, h0km, mb4.2/4, mbtmp4.2/4, ML5.2/1, MS4.1/1, Error ellipse: s-maj=71.7km s-min=35.4km az=130.0*
*NEIC **06** 19:41:37.7±0.9, 24°.3S±0°.2×175°.2W±0°.2, h10km±2km, mb4.6/13, Error ellipse: s-maj=44.3km s-min=13.1km az=131.0*
ISC 06 19:41:37.5±1.9, 24°.3S±0°.2×175°.2W±0°.3, h10km, n21, σ0s95/20, mb4.4/8, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.53**	**205**	Pn	Pn	19 42 59.6	-0.4
	78nm,0.3s,baz=129,slow=22,SNR=2.0						
RAO	**Raoul Island**	**5.53**	**205**		Pn	19 42 59.3	-0.6
URZ	**Urewera**	**15.41**	**203**	LR	LR	19 50 43.2	
	comp=Z,645nm,18.1s,baz=291,slow=35						
EIDS	**Eidsvold**	**30.55**	**261**	P	P	19 47 50.7	-0.7
EIDS				IAmb	IAmb	19 48 26.6	
	comp=Z,9.7nm,1.2s						
CTAO	**Charters Tower**	**35.83**	**269**	P	P	19 48 36.7	-0.9
STKA	**Stephens Creek**	**38.65**	**249**	P	P	19 49 02.6	+1.3
	comp=Z,1.4nm,0.4s,baz=85,slow=10,SNR=5.7						
	comp=Z,1.4nm,0.4s						
INKA	**Innaminka**	**39.57**	**255**	P	P	19 49 10.5	+1.4
MGBR	**Mount Gambier**	**39.85**	**240**	P	P	19 49 12.9	+1.6
BBOO	**Buckleboo**	**43.32**	**247**	P	P	19 49 40.3	+0.4
BBOO				IAmb	IAmb	19 49 49.6	
	comp=Z,31nm,1.4s						
AS31	**Alice Springs**	**46.27**	**260**	P	P	19 50 02.7	-0.8
AS31				IAmb	IAmb	19 50 05.5	
	comp=Z,1.9nm,1.1s						
ASAR	**Alice Springs**	**46.27**	**260**	P	P	19 50 02.2	-1.3
	comp=Z,1.1nm,0.4s,baz=92,slow=7.4,SNR=78						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**46.27**	**260**	P	P	19 50 02.5	-1.1
WR0	**Warramunga Arr**	**46.54**	**265**	P	P	19 50 04.5	-1.1
WR8	**Warramunga Arr**	**46.58**	**265**	P	P	19 50 05.3	-0.7
WB0	**Warramunga Arr**	**46.72**	**265**	P	P	19 50 06.4	-0.7
WRA	**Warramunga Arr**	**46.73**	**265**	P	P	19 50 06.3	-0.8
	comp=Z,3.8nm,0.4s,baz=105,slow=7.8,SNR=79						
	comp=Z,3.8nm,0.4s						
WRA	**Warramunga Arr**	**46.73**	**265**	P	P	19 50 06.3	-0.8
FORT	**Forrest**	**50.27**	**249**	P	P	19 50 34.5	+0.2
FORT				IAmb	IAmb	19 50 38.1	
	comp=Z,10nm,0.9s						
KNRA	**Kununurra**	**53.04**	**268**	P	P	19 50 55.5	+0.3
MORW	**Morawa**	**60.84**	**249**	P	P	19 51 50.5	+0.1
ILAR	**Eielson Array**	**91.42**	**12**	P	P	19 54 43.1	-0.1
	comp=Z,0.5nm,0.9s,baz=204,slow=2.0,SNR=4.6						
	comp=Z,0.5nm,0.9s						

*THE **06** 19:54:02.8, 38°.0N±1°.0×22°.9E±0°.5, h4km±1km, M3.4/14, MLh3.4/14*
*ATH **06** 19:54:02.6, 38°.07N×22°.92E, h12km, ML3.3/25, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*IDC **06** 19:54:07.2±1.5, 37°.97N×22°.95E, h49km±18km, mb3.3/9, mbtmp3.5/13, ML2.9/3, Error ellipse: s-maj=17.5km s-min=12.1km az=76.0*
ISC 06 19:54:02.8±0.7, 38.04N±0°.02×22°.92E±0°.01, h10km±4km, n100, σ1s09/134, mb3.7/7, 2C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.04**	**113**	P	Pg	19 54 04.2	-0.5
LTK				S	Sg	19 54 05.2	-0.9
LTK	**Loutraki**	**0.04**	**113**	P	Pg	19 54 04.2	-0.5
KIAA	**Kiato**	**0.14**	**260**	P	Pb	19 54 06.7	+0.8
KIAA				S	Sg	19 54 09.1	+1.0
VIL2	**Platees**	**0.32**	**58**	P	Pg	19 54 09.0	-0.2
VIL2				S	Sg	19 54 13.8	+0.2
VILL	**Villia**	**0.33**	**68**	P	Pg	19 54 09.3	-0.1
VILL				S	Sg	19 54 14.4	+0.6
ARS1	**Argos**	**0.43**	**201**	P	Pb	19 54 12.2	-0.3
ARS1				S	Sb	19 54 18.3	-0.7
GUR	**Goura**	**0.47**	**258**	S	Sg	19 54 18.5	+0.3
GUR	**Goura**	**0.47**	**258**	P	Pg	19 54 12.0	+0.1
GUR				S	Sg	19 54 18.2	0.0
MAGU	**Magoula**	**0.47**	**85**	P	Pg	19 54 11.6	-0.4
MAGU				S	Sg	19 54 18.6	+0.5
MAGU	**Magoula**	**0.47**	**85**	S	Pg	19 54 11.7	-0.2
MAGU				S	Sg	19 54 18.2	+0.1
ELFA	**Athens-Elefsin**	**0.49**	**89**	P	Pg	19 54 12.0	-0.3
ELFA				S	Sg	19 54 19.1	+0.4
STFN	**Stefani**	**0.51**	**74**	P	Pg	19 54 12.5	-0.2
STFN				S	Sg	19 54 20.0	+0.6
STFN	**Stefani**	**0.51**	**74**	P	Pg	19 54 12.9	+0.1
STFN				S	Sg	19 54 19.4	-0.1
MET2	**Kameni Chora,**	**0.53**	**143**	P	Pg	19 54 13.5	+0.3
MET5	**Makryloggos,Me**	**0.54**	**140**	P	Pb	19 54 13.7	-0.6
MET4	**Agioí Theodoro**	**0.56**	**137**	P	Pb	19 54 14.1	-0.6
MET6	**Megalochori,Me**	**0.56**	**142**	P	Pb	19 54 14.2	-0.6
MET1	**Methana Town,**	**0.59**	**141**	P	Pb	19 54 14.6	-0.6
MET1				S	Sb	19 54 22.9	-0.6
KLV	**Kalavryta, Ach**	**0.61**	**271**	P	Pg	19 54 14.4	-0.2
KLV				S	Sb	19 54 23.2	-1.0
LKR	**Lokris**	**0.61**	**6**	P	Pg	19 54 14.2	-0.5
ATH	**Athens Observa**	**0.63**	**96**	P	Pg	19 54 14.8	-0.2
ATH				S	Sb	19 54 24.2	-0.5
ATH	**Athens Observa**	**0.63**	**96**	S	Pg	19 54 14.3	-0.7
ATH				S	Sb	19 54 24.5	-0.3
NOAC	**Athens-Thissio**	**0.63**	**96**	P	Pg	19 54 14.5	-0.5
KLV1	**Kalavrita**	**0.64**	**270**	P	Pb	19 54 15.7	-0.4
ATH5	**Athens Parliam**	**0.65**	**95**	P	Pg	19 54 14.2	-1.1
PSARO	**Psaromita, Dor**	**0.66**	**297**	P	Pg	19 54 15.2	-0.3
ATAL	**Atalanti**	**0.66**	**7**	P	Pg	19 54 15.0	-0.6
ATAL				S	Sb	19 54 24.9	-0.7
ATAL	**Atalanti**	**0.66**	**7**	P	Pg	19 54 14.7	-0.8
ATAL				S	Sb	19 54 24.9	-0.7
ATHP	**Athens-Neo Psi**	**0.67**	**93**	P	Pg	19 54 15.8	0.0
ATHP				S	Sg	19 54 25.0	+0.4
ATHU	**Athens Univers**	**0.69**	**96**	P	Pg	19 54 15.8	-0.2
ATHU				S	Sb	19 54 26.0	-0.4
ATHU	**Athens Univers**	**0.69**	**96**	P	Pg	19 54 15.6	-0.4
ATHU				S	Sg	19 54 24.5	-0.5
KALE	**Kalithea**	**0.71**	**300**	P	Pg	19 54 16.3	-0.2
KALE				S	Sb	19 54 26.8	-0.4
KALE	**Kalithea**	**0.71**	**300**	P	Pg	19 54 16.1	-0.3
KALE				S	Sg	19 54 25.7	-0.1
AGEO	**AgiosGiorgios,**	**0.71**	**289**	P	Pg	19 54 16.3	-0.3
VLY	**Voula,Athens**	**0.71**	**105**	P	Pg	19 54 16.3	-0.2
VLY	**Voula,Athens**	**0.71**	**105**	P	Pg	19 54 16.1	-0.5
VLY				S	Sb	19 54 26.6	-0.6
PTL	**Penteli**	**0.74**	**89**	P	Pg	19 54 16.8	-0.4
PTL	**Penteli**	**0.74**	**89**	P	Pg	19 54 16.8	-0.4
PTL				S	Sg	19 54 27.1	+0.2
AXAR	**Agios Charalam**	**0.76**	**344**	P	Pg	19 54 16.9	-0.5
SERG	**Sergoula**	**0.78**	**299**	P	Pg	19 54 17.5	-0.2
DION	**Dionisos Attik**	**0.80**	**87**	P	Pg	19 54 17.8	-0.4
DION	**Dionisos Attik**	**0.80**	**87**	P	Pg	19 54 17.9	-0.3
DION				S	Sg	19 54 28.9	+0.2
PYRG	**Pyrgos, Dorida**	**0.80**	**298**	P	Pg	19 54 18.0	-0.3
MG00	**Magoula, Dorid**	**0.85**	**296**	P	Pb	19 54 19.3	-0.4
MG00				S	Sg	19 54 29.6	-0.7
EFP	**Efpalio**	**0.89**	**296**	P	Pb	19 54 19.6	-0.3
UPR	**University Cam**	**0.93**	**286**	P	Pb	19 54 20.9	-0.1
DRO	**Drossia**	**0.96**	**265**	P	Pg	19 54 20.9	-0.4
DRO				S	Sb	19 54 33.6	-0.7
ANX	**Ano Chora**	**0.96**	**305**	P	Pg	19 54 20.9	-0.4
ANX				S	Sb	19 54 34.2	-0.2
AGRP	**Agrapidokambos**	**1.01**	**291**	P	Pb	19 54 22.1	-0.2
AGRP				S	Sb	19 54 35.2	-0.5
AMT	**Artemida-Makis**	**1.08**	**243**	P	Pg	19 54 23.1	-0.5
KYMI	**Kymi, Euboea I**	**1.10**	**57**	P	Pb	19 54 22.7	-1.2
KYMI				S	Sb	19 54 37.6	-0.7
VALY	**Valyra**	**1.15**	**221**	P	Pn	19 54 25.1	+0.2
VALY				S	Sb	19 54 38.6	-1.0
RLS	**Riolos of Patr**	**1.15**	**271**	P	Pb	19 54 24.0	-0.7
ITM	**Ithomi**	**1.17**	**223**	P	Pn	19 54 25.1	-0.1
KARY	**Karystos**	**1.20**	**90**	P	Pn	19 54 24.8	-0.7
AXS	**Araxos**	**1.23**	**278**	P	Pn	19 54 25.6	-0.4
EVR	**Evrytania**	**1.24**	**315**	P	Pb	19 54 26.1	-0.2
PVO	**Paravola**	**1.24**	**298**	P	Pg	19 54 26.9	+0.3
PLEV	**Plevrona-Mesol**	**1.25**	**288**	P	Pg	19 54 26.5	-0.3
NEO	**Neokhori**	**1.29**	**10**	P	Pn	19 54 26.3	-0.6
VLI	**Veliai**	**1.32**	**179**	P	Pg	19 54 27.6	-0.4
AOS2	**Alonissos-2**	**1.32**	**33**	P	Pn	19 54 26.4	-0.9
PYL	**PYLOS**	**1.48**	**220**	P	Pb	19 54 30.1	-0.2
SKY	**Skiros Island**	**1.53**	**56**	P	Pb	19 54 30.8	-0.4
THL	**Klokotos Trika**	**1.68**	**335**	P	Pn	19 54 32.4	+0.2
TYRN	**Tyrnavos**	**1.75**	**342**	P	Pn	19 54 32.8	-0.5
ORTH	**Orthonies,Zaky**	**1.77**	**265**	P	Pn	19 54 32.6	-0.9
TETR	**Tetrakomo, Epi**	**1.83**	**316**	P	Pb	19 54 35.3	-1.2
VLS	**Valsamata**	**1.84**	**275**	P	Pn	19 54 34.9	+0.4
TNSA	**Tinos**	**1.84**	**105**	P	Pn	19 54 34.7	+0.2
LIT	**Litokhoron**	**2.09**	**351**	P	Pn	19 54 37.7	-0.1
ANKY	**Antikythira Is**	**2.19**	**172**	P	Pn	19 54 39.7	+0.5
PLG	**Polygyros**	**2.37**	**10**	P	Pn	19 54 41.2	-0.5
OUR	**Ouranopolis**	**2.44**	**19**	P	Pn	19 54 42.1	-0.5
CHOS	**Chios island**	**2.49**	**81**	P	Pn	19 54 42.8	-0.6
IDI	**Anoyia**	**3.17**	**149**	P	Pn	19 54 54.1	+1.3
	14nm,0.3s,baz=337,slow=18,SNR=26						
IDI				S	Sn	19 55 29.6	-1.0
	13nm,0.4s,baz=298,slow=17,SNR=4.3						
VAY	**Valandovo**	**3.29**	**355**	*e*Pn	Pn	19 54 56.0	+1.7
VAY				*i* Sn	Sn	19 55 33.0	-0.5
OHR	**Ohrid**	**3.48**	**333**	*e*Pn	Pn	19 54 58.8	+1.8
OHR				*i* Sn	Sb	19 55 42.4	-4.5
TIP	**Timpagrande**	**4.96**	**285**	⇑P	Pn	19 55 19.3	+1.9
BOVS	**Bovan**	**5.67**	**351**	⇓P	Pn	19 55 32.4	+5.5
SAHE	**Sakarya_HENDEK**	**6.75**	**63**	⇓P	Pn	19 55 43.5	+1.5
MDVR	**Moldovita**	**6.80**	**353**	⇓P	Pn	19 55 44.5	+1.9
ARR	**Arges**	**7.43**	**9**	⇓P	Pn	19 55 52.6	+1.2
VOIR		**7.56**	**11**	⇓P	Pn	19 55 54.3	+1.2
MLR	**Muntele Rosu**	**7.78**	**16**	P	Pn	19 55 59.0	+2.9
	0.3nm,0.3s,baz=146,slow=9.4,SNR=5.7						
MLR				S	Sn	19 57 26.6	+2.2
	0.8nm,0.5s,baz=268,slow=19,SNR=1.4						
	1.9nm,0.6s						
MLR	**Muntele Rosu**	**7.78**	**16**	⇓P	Pn	19 56 00.5	+4.3
PLOR	**Plostina**	**8.29**	**18**	⇑P	Pn	19 56 06.4	+3.4
VRI	**Vrincioaia**	**8.32**	**19**	⇓P	Pn	19 56 07.3	+3.9
BRTR	**Keskin Array B**	**8.53**	**75**	P	Pn	19 56 08.3	+1.9
	0.1nm,0.3s,baz=248,slow=12,SNR=3.2						
	0.4nm,0.5s						
GERES	**GERESS Array B**	**12.70**	**331**	P	Pn	19 57 07.3	+3.8
	baz=155,slow=9.7,SNR=5.1						
	0.1nm,0.6s						
ESDC	**Sonseca Array**	**20.98**	**283**	P	P	19 58 46.4	+0.2
	0.3nm,0.6s,baz=88,slow=11,SNR=2.1						
	0.3nm,0.6s						
HFS	**Hagfors**	**22.88**	**348**	P	P	19 59 06.8	+0.6
	4.5nm,1.1s,baz=192,slow=9.7,SNR=1.4						
	4.5nm,1.1s						
EKA	**Eskdalemuir Ar**	**24.66**	**323**	P	P	19 59 23.9	+0.5
	1.2nm,0.6s,baz=121,slow=9.5,SNR=5.0						
	1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.17**	**223**	P	P	20 00 21.7	-0.3
	0.5nm,0.6s,baz=28,slow=9.2,SNR=5.5						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**40.79**	**54**	P	P	20 01 43.9	-0.2
	0.4nm,0.6s,baz=281,slow=8.8,SNR=5.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**43.76**	**59**	P	P	20 02 08.4	+0.1
	0.3nm,0.5s,baz=267,slow=7.2,SNR=5.2						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.37**	**48**	P	P	20 02 11.9	-1.2
	0.4nm,0.4s,baz=282,slow=7.0,SNR=4.7						
	0.4nm,0.4s						
SONM	**Songino Array**	**59.08**	**51**	P	P	20 04 01.8	-1.4
	0.5nm,1.0s,baz=270,slow=8.5,SNR=2.5						
	0.5nm,1.0s						
SCHQ	**Schefferville**	**59.84**	**318**	P	P	20 04 07.0	-1.2
	1.1nm,0.5s,baz=36,slow=7.2,SNR=4.3						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**120.28**	**98**	PKP	PKPdf	20 12 54.1	-0.3
	0.6nm,1.0s,baz=298,slow=1.5,SNR=3.1						

*NEIC **06** 19:58:15.2±1.2, 45°.02N±0°.03×106°.76W±0°.05, h0km±1km, ML3.0/30, Error ellipse: s-maj=6.7km s-min=5.1km az=121.0*
*IDC **06** 19:58:17.4±1.5, 45°.06N×107°.07W, h0km, mbtmp3.4/2, ML2.0/1, Error ellipse: s-maj=56.8km s-min=8.6km az=134.0*
ISC 06 19:58:15.7±1.0, 45°.04N±0°.05×106°.84W±0°.05, h0km, n25, σ1s56/25, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**1.70**	**15**		Pb	19 58 47.0	-0.9
LAO					Sb	19 59 08.8	-1.1
LAO				IAML		19 59 13.6	
	159nm,1.1s						
LAO				IAML		19 59 18.1	
	142nm,0.8s						
RLMT	**Red Lodge**	**1.72**	**273**		Pg	19 58 48.8	+0.2
RLMT				IAML		19 59 21.6	
	138nm,0.8s						
RLMT				IAML		19 59 21.7	
	117nm,1.0s						
GCMT	**Greycliff**	**2.12**	**292**		Pb	19 58 54.4	-0.8
RSSD	**Black Hills**	**2.21**	**114**		Pn	19 58 53.7	-0.2
RSSD				IAML		19 59 29.5	
	134nm,0.7s						
RSSD				IAML		19 59 34.7	
	81nm,0.7s						
YNE	**Yellowstone No**	**2.24**	**270**		Pn	19 58 54.4	0.0
YNE				IAML		19 59 30.4	
	comp=E,100nm,0.6s						
YNE				IAML		19 59 31.8	
	comp=N,100nm,0.5s						
YMP	**Mirror Lake Pl**	**2.37**	**264**		Pb	19 58 58.4	-1.1
K22A	**Casper**	**2.40**	**174**		Pn	19 58 56.9	+0.4
K22A				IAML		19 59 32.3	
	comp=N,92nm,0.4s						
YHH	**Holmes Hill**	**2.86**	**266**		Pn	19 59 03.4	+0.6
FLWY	**Flagg Ranch**	**2.92**	**252**		Pb	19 59 08.1	-0.6
FLWY				IAML		20 00 23.5	
	comp=N,49nm,1.1s						
YPP	**Pitchstone Pla**	**2.93**	**256**		Pn	19 59 03.2	-0.6
YPP				IAML		20 00 55.7	
	comp=N,23nm,0.0s						
BW06	**Boulder Array**	**3.00**	**222**		Pb	19 59 08.4	-1.9
BW06				IAML		19 59 52.0	
	comp=N,24nm,0.6s						
PD31	**Pinedale Array**	**3.00**	**222**		Pb	19 59 08.3	-1.9
PDAR	**Pinedale Array**	**3.00**	**222**	Pn	Pb	19 59 08.3	-1.9
	comp=N,2.9nm,0.3s,baz=46,slow=16,SNR=38						
PDAR				Lg	Lg	19 59 47.9	
	comp=N,4.7nm,0.3s,baz=45,slow=28,SNR=14						
PDAR	**Pinedale Array**	**3.00**	**222**		Pb	19 59 07.9	-2.4
LOHW	**Long Hollow**	**3.05**	**243**		Pb	19 59 10.0	-1.1
MOOW	**Moose Ponds**	**3.08**	**247**	Pn	Pn	19 59 05.4	-0.4
YHL	**Hebgen Lake**	**3.09**	**268**		Pb	19 59 09.9	-1.7
YHL				IAML		20 00 11.0	
	comp=N,43nm,0.9s						
EGMT	**Eagleton**	**3.59**	**327**		Pn	19 59 15.4	+2.7
BCYI	**Bear Canyon**	**4.74**	**263**		Pb	19 59 41.8	+2.0
HWUT	**Hardware Ranch**	**4.86**	**227**		Pn	19 59 32.0	+1.7
HWUT				IAML		20 01 06.9	
	comp=N,11nm,1.0s						
RDMU	**Red Mountain**	**4.90**	**205**	Pn	Pn	19 59 33.4	+2.6
RDMU				IAML		20 01 17.4	
	comp=E,12nm,1.2s						
RDMU				IAML		20 01 21.5	
	comp=N,9.2nm,1.2s						
PV07	**Paradox Valley**	**6.74**	**192**		Pn	19 59 57.6	+1.5
PV18	**Skein Mesa, Pa**	**6.97**	**194**		Pn	20 00 01.1	+1.9
I56US	**NEWPORT INFRAS**	**7.77**	**298**	I	I	20 43 10.0	
	baz=109,slow=305,SNR=1.7						
ULM	**Lac du Bonnet**	**9.05**	**51**	Pn	Pn	20 00 28.3	+0.8
	comp=N,0.3nm,0.3s,baz=233,slow=12,SNR=3.0						
ULM				Lg	Lg	20 03 01.7	
	comp=N,0.4nm,0.3s,baz=320,slow=18,SNR=3.8						
	comp=N,1.7nm,0.5s						

IDC 06 20:00:34.4±2.4, 17°.64S×178°.82W, h589km±21km, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=120.3km s-min=28.9km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.98**	**268**	P	P	20 01 52.7	0.0
	15nm,0.6s,baz=119,slow=12,SNR=8.5						
STKA	**Stephens Creek**	**38.42**	**241**	P	P	20 07 07.0	0.0
	1.6nm,0.8s,baz=77,slow=6.4,SNR=5.3						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**44.30**	**259**	P	P	20 07 53.0	-0.4
	0.4nm,0.4s,baz=95,slow=7.2,SNR=12						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**44.49**	**254**	P	P	20 07 55.0	0.0
	5.6nm,0.6s,baz=93,slow=7.8,SNR=112						
	5.6nm,0.6s						
TXAR	**Lajitas Array**	**86.18**	**58**	P	P	20 12 14.7	-0.1
	0.2nm,0.5s,baz=235,slow=4.1,SNR=1.7						
	0.2nm,0.5s						

*NNC **06** 20:03:00.4±13.0, 37°.94N×80°.06E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=115.3km s-min=76.0km az=176.0*
*IDC **06** 20:03:04.1±4.1, 38°.47N×78°.35E, h0km, mb3.1/1, mbtmp3.2/5, ML2.8/4, Error ellipse: s-maj=47.1km s-min=25.1km az=30.0*
ISC 06 20:03:04.1±2.7, 38°.3N±0°.2×78°.7E±0°.1, h10km, n9, σ2s16/14, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**5.08**	**7**	⇓Pn	Pn	20 04 21.2	+0.9
	3.3nm,0.6s						
PDGK				⇑Pg	Pg	20 04 38.3	-3.0
	4.7nm,0.6s						
PDGK				⇓Lg	Lg	20 05 53.6	
	16nm,0.7s						
AAK	**Ala-Archa**	**5.38**	**325**	Pn	Pn	20 04 24.7	+0.2
	0.6nm,0.3s,baz=193,slow=14,SNR=4.5						
AAK				Pg	Pb	20 04 36.8	-1.4
	1.4nm,0.3s,baz=147,slow=8.4,SNR=5.6						
AAK				Lg	Lg	20 05 44.3	
	1.0nm,0.3s,baz=351,slow=19,SNR=6.8						
	0.9nm,0.3s						
AAK	**Ala-Archa**	**5.38**	**325**	⇑Pn	Pb	20 04 36.8	-1.4
	2.3nm,0.7s						
AAK				⇑Sn	Sb	20 05 46.8	+4.0
	4.2nm,0.6s						
MK31	**Makanchi Array**	**8.91**	**16**	Pn	Pn	20 05 14.0	+1.1
	0.1nm,0.2s,baz=190,slow=14,SNR=32						
MK31				⇑Sn	Sn	20 06 56.6	+3.3
	0.5nm,0.6s,baz=181,slow=25,SNR=4.2						
MKAR	**Makanchi Array**	**8.91**	**16**	Pn	Pn	20 05 14.1	+1.2
	0.5nm,0.3s,baz=194,slow=12,SNR=18						
MKAR				Sn	Sn	20 06 50.9	-2.4
	0.2nm,0.3s,baz=187,slow=24,SNR=4.2						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**12.33**	**360**	Pn	Pn	20 05 59.1	-0.5
	baz=191,slow=12,SNR=2.4						
KURBB				Lg	Lg	20 09 30.9	
	baz=186,slow=30,SNR=1.6						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**15.81**	**341**	Pn	Pn	20 06 46.8	+0.1
	baz=146,slow=9.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**16.23**	**13**	Pn	Pn	20 06 52.5	+0.5
	0.2nm,0.3s,baz=206,slow=9.5,SNR=2.9						
	0.5nm,0.3s						
SONM	**Songino Array**	**22.30**	**56**	P	P	20 08 03.1	+1.5
	0.5nm,0.6s,baz=245,slow=9.0,SNR=4.2						
	0.5nm,0.6s						

DJA 06 20:11:30.2±0.6, 3°N±4°×12°8E±°, h25km±4km, M3.8/13, mB5.0/1, mb4.5/7, MLv3.4/13, Mw(mB)4.4/1, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.93**	**205**	P	Pn	20 12 01.4	0.0
SIJI	**Sorong**	**4.57**	**138**	P	Pn	20 12 37.1	-0.8
DAV	**Davao City (W)**	**5.20**	**330**	P	Pn	20 12 46.4	-0.1
GTOI	**Gorontalo**	**5.50**	**250

*IDC **06** 20:16:36.5±0.8, 13°.96N×144°.88E, h156km±4km, mb3.2/6, mbtmp3.7/6, Error ellipse: s-maj=52.9km s-min=18.0km az=92.0*

*NEIC **06** 20:16:37.9±1.0, 13°.91N±0°.10×144°.6E±0°.2, h151km±6km, mb4.5/13, Error ellipse: s-maj=25.7km s-min=10.9km az=114.0*

ISC 06 20:16:36.4±0.7, 13°.98N±0°.08×144°.4E±0°.1, h144km, n23, σ1§16/25, mb4.1/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.61**	**130**	P	**Pn**	**20 16 59.5**	**+1.8**
	204nm,0.4s,baz=138,slow=4.7,SNR=33						
GUMO				S	**Sn**	**20 17 15.7**	**+1.8**
	300nm,0.3s,baz=311,slow=19,SNR=22						
GUMO	**Guam**	**0.61**	**130**		**Pn**	**20 16 59.0**	**+1.3**
GUMO	**Guam**	**0.61**	**130**		**Sn**	**20 17 14.6**	**+0.7**
DPSS	**Saipan**	**1.84**	**47**	Pn	**Pn**	**20 17 10.0**	**+0.7**
DPSS				Sn	**Sn**	**20 17 34.3**	**-0.3**
JOW	**Kunigami**	**19.76**	**313**	P	**P**	**20 20 55.4**	**+0.1**
FAKI	**Fak Fak**	**20.66**	**217**	P	**P**	**20 21 04.8**	**-0.2**
CTAO	**Charters Tower**	**33.91**	**177**	P	**P**	**20 23 03.8**	**-2.1**
CTAO				IAmb	IAmb	20 23 35.1	
	comp=Z,19nm,1.3s						
WB0	**Warramunga Arr**	**34.95**	**197**	P	**P**	**20 23 14.6**	**-0.2**
WB0				IAmb	IAmb	20 23 24.1	
	comp=Z,8.8nm,1.1s						
WR8	**Warramunga Arr**	**35.10**	**196**	P	**P**	**20 23 16.0**	**-0.1**
WR8				IAmb	IAmb	20 23 30.2	
	comp=Z,5.9nm,1.0s						
WRA	**Warramunga Arr**	**35.13**	**197**	P	**P**	**20 23 15.8**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=21,slow=9.6,SNR=15						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**35.13**	**197**	P	**P**	**20 23 15.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**36.85**	**211**	P	**P**	**20 23 31.6**	**+0.6**
FITZ				IAmb	IAmb	20 23 46.4	
	comp=Z,4.7nm,1.4s						
ASAR	**Alice Springs**	**38.80**	**195**	P	**P**	**20 23 47.6**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=16,slow=13,SNR=7.7						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**38.80**	**195**	P	**P**	**20 23 47.4**	**+0.1**
EIDS	**Eidsvold**	**39.66**	**170**	P	**P**	**20 23 53.6**	**-0.7**
EIDS				IAmb	IAmb	20 24 21.2	
	comp=Z,18nm,1.3s						
INKA	**Innaminka**	**41.63**	**185**	P	**P**	**20 24 10.1**	**-0.4**
STKA	**Stephens Creek**	**45.68**	**183**	P	**P**	**20 24 41.6**	**-1.2**
	comp=Z,6.1nm,1.3s,baz=353,slow=10,SNR=3.7						
	comp=Z,6.1nm,1.3s						
BBOO	**Buckleboo**	**47.21**	**190**	P	**P**	**20 24 54.5**	**-0.3**
BBOO				IAmb	IAmb	20 25 18.2	
	comp=Z,28nm,1.4s						
KURK	**Kurchatov**	**63.98**	**320**	P	**P**	**20 26 55.4**	**+1.0**
KURBB	**Kurchatov Arra**	**64.02**	**320**	P	**P**	**20 26 55.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=101,slow=7.1,SNR=4.3						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**68.41**	**25**	P	**P**	**20 27 19.5**	**-2.8**
	comp=Z,0.2nm,0.5s,baz=258,slow=6.4,SNR=2.2						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**69.33**	**322**	P	**P**	**20 27 29.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=120,slow=7.1,SNR=2.5						
	comp=Z,0.3nm,0.5s						
L26K	**Log Cabin Wild**	**69.60**	**28**	P	**P**	**20 27 31.4**	**+1.6**

*IDC **06** 20:18:54.2±1.7, 2°.15N×97°.97W, h0km, mb3.8/5, mbtmp3.8/5, ML2.5/1, Error ellipse: s-maj=60.5km s-min=31.7km az=91.0*

*NEIC **06** 20:18:56.0±1.7, 2°.13N±0°.06×98°.0W±0°.3, h10km±2km, mb4.3/6, Error ellipse: s-maj=47.9km s-min=9.2km az=85.0*

ISC 06 20:18:55.8±1.3, 2°.2N±0°.2×97°.9W±0°.2, h10km, n23, σ0§75/14, mb4.3/7, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**14.71**	**29**	Pn	**Pn**	**20 22 24.8**	**+0.4**
	baz=206,slow=16,SNR=1.1						
MTO3	**Montecristo**	**14.79**	**34**	Pn	**Pn**	**20 22 24.9**	**-0.6**
TEIG	**Tepich**	**20.26**	**27**	P	**P**	**20 23 32.4**	**+0.8**
	baz=59,slow=24,SNR=3.1						
ZAIG	**Zacatecas**	**20.99**	**348**	P	**P**	**20 23 39.3**	**-0.5**
ZAIG				IAmb	IAmb	20 23 50.8	
	comp=Z,14nm,1.5s						
TXAR	**Lajitas Array**	**27.58**	**349**	P	**P**	**20 24 41.9**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=145,slow=6.0,SNR=6.2						
	comp=Z,0.4nm,0.8s						
SAND	**Sanderson**	**27.94**	**352**	P	**P**	**20 24 46.6**	**0.0**
H03N2	**Juan Fernandez**	**39.66**	**155**	T	T	21 08 40.9	
	baz=334,slow=78,SNR=8.9						
H03N1	**Juan Fernandez**	**39.67**	**155**	T	T	21 08 40.5	
	baz=334,slow=78,SNR=10						
H03N3	**Juan Fernandez**	**39.68**	**155**	T	T	21 08 39.0	
	baz=334,slow=78,SNR=10.0						
NVAR	**Mina Array Bea**	**40.66**	**335**	P	**P**	**20 26 37.8**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=204,slow=8.7,SNR=2.4						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**41.76**	**347**	P	**P**	**20 26 45.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=151,slow=4.5,SNR=4.9						
	comp=Z,0.2nm,0.3s						
IL31		**71.66**	**340**	P	**P**	**20 30 17.1**	**-0.4**
IL31				IAmb	IAmb	20 30 17.9	
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**71.66**	**340**	P	**P**	**20 30 16.9**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=150,slow=5.2,SNR=24						
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**71.66**	**340**	P	**P**	**20 30 17.0**	**-0.5**
D25K	**Kavik River**	**74.33**	**344**	P	**P**	**20 30 33.4**	**+0.1**
D25K				IAmb	IAmb	20 30 34.9	
	comp=Z,2.9nm,0.9s						
QSPA	**South Pole Qui**	**92.17**	**180**	P	**P**	**20 32 05.6**	**0.0**
	comp=Z,1.7nm,0.9s,baz=90,slow=3.0,SNR=5.2						
	comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**92.17**	**180**	P	**P**	**20 32 05.6**	**0.0**
H11N3	**WAKE ISLAND Hy**	**94.19**	**290**	T	T	22 16 58.0	
	baz=88,slow=74						
H11N2	**WAKE ISLAND Hy**	**94.20**	**290**	T	T	22 17 11.4	
	baz=88						
H11N1	**WAKE ISLAND Hy**	**94.20**	**290**	T	T	22 16 58.9	
	baz=88,slow=74						
H11S2	**WAKE ISLAND Hy**	**94.46**	**289**	T	T	22 17 13.1	
	baz=86,slow=75,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**94.46**	**289**	T	T	22 17 25.3	
	baz=86,slow=75,SNR=7.5						
H11S3	**WAKE ISLAND Hy**	**94.48**	**289**	T	T	22 17 24.8	
	baz=86,slow=75,SNR=5.1						

IDC 06 20:22:58.9±2.0, 11°.84N×140°.98E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=65.5km s-min=35.5km az=4.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**41.03**	**285**	P	P	20 30 43.6	-0.8
	0.1nm,0.3s,baz=97,slow=8.1,SNR=6.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**60.16**	**317**	P	P	20 33 10.0	+1.5
	0.3nm,0.8s,baz=90,slow=5.8,SNR=2.2						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**63.54**	**321**	P	P	20 33 30.8	-0.4
	0.4nm,0.7s,baz=103,slow=6.9,SNR=7.2						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**68.97**	**322**	P	P	20 34 06.1	+0.1
	0.5nm,0.7s,baz=105,slow=9.5,SNR=5.9						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**71.77**	**25**	P	P	20 34 22.4	-0.5
	0.6nm,0.7s,baz=261,slow=6.0,SNR=7.0						
	0.6nm,0.7s						
LPAZ	**La Paz**	**151.43**	**102**	PKPbc	PKPbc	20 42 56.7	+0.1
	0.9nm,0.5s,baz=252,slow=4.8,SNR=3.8						

*NDI **06** 20:23:27.4±2.1, 29°.09N×96°.13E, h10km, ML3.6, MW3.5, Presumed earthquake*

ISC 06 20:23:30.1±3.4, 28°.8N±0°.2×96°.06E±0°.09, h10km, n6, σ1§73/13, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIRO	**ZIRO**	**2.35**	**237**	*e*P	**Pn**	**20 24 09.8**	**+0.9**
ZIRO				*e*S	**Sn**	**20 24 39.4**	**+1.5**
ZIRO				IAML		20 24 46.1	
	comp=E,1μm,0.2s						
ZIRO				IAML		20 24 48.9	
	comp=E,2μm,0.7s						
KOHI	**KOHIMA**	**3.56**	**210**	*e*P	**Pn**	**20 24 27.2**	**+1.7**
KOHI				*e*S	**Sn**	**20 25 09.1**	**+1.4**
KOHI				IAML		20 25 14.1	
	comp=E,177nm,0.8s						
KOHI				IAML		20 25 33.7	
	comp=E,220nm,0.7s						
KOHI				IAML		20 25 35.7	
	comp=E,119nm,0.4s						
TEZP	**TEZPUR**	**3.64**	**233**	*e*P	**Pn**	**20 24 26.2**	**-0.3**
TEZP				*e*S	**Sn**	**20 25 08.9**	**-0.6**
TEZP				IAML		20 25 25.6	
	comp=E,469nm,0.2s						
TEZP				IAML		20 25 28.8	
	comp=E,456nm,0.2s						
TNCH	**TengChong**	**4.38**	**149**	Pg	**Pg**	**20 24 55.0**	**+1.0**
TNCH				Sn	**Sn**	**20 25 27.3**	**-0.7**
TNCH				Sg	**Sg**	**20 25 49.0**	**-1.7**
TNCH				smax	smax		
	comp=N,30nm,0.8s						
TNCH				smax	smax		
	comp=E,32nm,1.2s						
GUWA	**GUWAHATI**	**4.69**	**237**	*i* x	x	20 24 39.6	
GUWA				*e*P	**Pn**	**20 24 39.7**	**-1.2**
GUWA				IAML		20 25 35.5	
	comp=E,19nm,0.1s						
GUWA				*e*S	**Sn**	**20 25 36.6**	**+1.2**
GUWA				IAML		20 25 40.4	
	comp=E,28nm,0.4s						
SHL	**Shillong**	**4.94**	**230**	*e*P	**Pn**	**20 24 43.6**	**-1.0**
SHL				*e*S	**Sn**	**20 25 38.4**	**-3.6**

*IDC **06** 20:31:56.1±0.9, 0°.44S×120°.08E, h0km, mb3.7/7, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=73.1km s-min=17.1km az=63.0*

*DJA **06** 20:31:58.0±0.3, 1°.5S±2°.×12°.0E±°, h10km, M4.0/13, MLv4.0/13*

ISC 06 20:31:57.7±1.0, 0°.56S±0°.07×119°.8E±0°.1, h10km, n12, σ1§24/13, mb3.8/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.35**	**175**	P	**Pg**	**20 32 04.2**	**-0.4**
PCI				S	**Sg**	**20 32 09.5**	**+0.3**
APSI	**Ampana**	**1.88**	**101**	P	**Pn**	**20 32 30.3**	**+0.5**
MMSI	**Mamuju**	**2.30**	**203**	P	**Pn**	**20 32 35.5**	**-0.2**
GTOI	**Gorontalo**	**3.42**	**70**	P	Pn	20 32 48.7	-2.3
KAPI	**Kappang**	**4.43**	**181**	Pn	**Pn**	**20 33 07.8**	**+2.8**
	3.9nm,0.3s,baz=329,slow=7.4,SNR=8.2						
KAPI				Sn	**Sn**	**20 33 55.1**	**-1.4**
	0.8nm,0.3s,baz=347,slow=22,SNR=1.1						
	20nm,0.5s						
WRA	**Warramunga Arr**	**23.95**	**144**	P	**P**	**20 37 10.9**	**-1.4**
	1.5nm,0.9s,baz=323,slow=11,SNR=6.3						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**26.74**	**150**	P	**P**	**20 37 37.5**	**-0.1**
	0.3nm,0.5s,baz=322,slow=9.5,SNR=13						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.89**	**314**	P	**P**	**20 37 47.3**	**-0.7**
	0.3nm,0.3s,baz=128,slow=8.4,SNR=1.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**57.46**	**330**	P	**P**	**20 41 48.3**	**+1.4**
	0.6nm,0.6s,baz=125,slow=8.6,SNR=7.2						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**61.55**	**337**	P	**P**	**20 42 14.9**	**0.0**
	0.8nm,0.6s,baz=141,slow=7.6,SNR=5.6						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**61.89**	**332**	P	**P**	**20 42 17.7**	**+0.4**
	0.5nm,0.6s,baz=140,slow=6.4,SNR=3.2						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**67.34**	**330**	P	**P**	**20 42 52.7**	**-0.2**
	0.8nm,0.7s,baz=109,slow=7.8,SNR=6.2						
	0.8nm,0.7s						

*NEIC **06** 20:38:22.9±1.6, 12°.08S±0°.04×166°.5E±0°.2, h140km±6km, mb4.2/18, Error ellipse: s-maj=25.8km s-min=5.5km az=87.0*

*IDC **06** 20:38:23.0±4.5, 12°.04S×166°.55E, h145km±38km, mb3.7/13, mbtmp4.1/14, MS4.3/2, Error ellipse: s-maj=26.6km s-min=16.5km az=78.0*

ISC 06 20:38:23.5±0.5, 12°.12S±0°.06×166°.5E±0°.1, h150km, n72, σ0§80/74, mb4.1/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.38**	**169**		**Pn**	**20 39 15.3**	**-0.4**
KOUNC	**Koumac, New Ca**	**8.65**	**194**	Pn	**Pn**	**20 40 24.5**	**-1.1**
MARNC	**Mare, Loyalty**	**9.43**	**171**	Pn	**Pn**	**20 40 34.8**	**-1.1**
DZM	**Mont Dzumac**	**9.90**	**180**	P	**Pn**	**20 40 44.0**	**+1.7**
	8.3nm,0.4s,baz=19,slow=22,SNR=5.2						
DZM				S	**Sn**	**20 42 29.7**	**-2.3**
	2.8nm,0.4s,baz=166,slow=22,SNR=2.3						
ONTNC	**Ouen Toro**	**10.13**	**180**	Pn	**Pn**	**20 40 46.1**	**+0.8**
OUENC	**Ouen Island, N**	**10.25**	**178**	Pn	**Pn**	**20 40 46.6**	**-0.2**
PATS	**Pohnpei**	**20.52**	**336**	P	**P**	**20 42 48.8**	**-1.3**
ARMA	**Armidale**	**22.84**	**215**	P	**P**	**20 43 13.5**	**-0.5**
ARMA				IAmb	IAmb	20 43 40.0	
	comp=Z,20nm,1.4s						
BKZ	**Black Stump Fm**	**28.36**	**164**	P	**P**	**20 44 04.0**	**+0.5**
KNZ	**Kokohu**	**28.57**	**162**	P	**P**	**20 44 05.9**	**+0.5**
KRHZ	**Kereru**	**28.77**	**164**	P	**P**	**20 44 07.7**	**+0.6**
PNHZ	**Pukenui**	**28.98**	**165**	P	**P**	**20 44 09.9**	**+0.8**
TSZ	**Takapari Road**	**29.06**	**165**	P	**P**	**20 44 10.2**	**+0.5**
DVHZ	**Dannevirke**	**29.34**	**165**	P	**P**	**20 44 12.4**	**+0.2**
PRHZ	**Porangahau**	**29.43**	**164**	P	**P**	**20 44 13.3**	**+0.4**
MRZ	**Mangatainoka R**	**29.53**	**166**	P	**P**	**20 44 14.6**	**+0.8**
OGWZ	**Otaki Gorge**	**29.59**	**167**	P	**P**	**20 44 14.4**	**+0.1**
BFZ	**Birch Farm**	**29.72**	**165**	P	**P**	**20 44 15.4**	**-0.1**
HOWZ	**Holdsworth Sta**	**29.74**	**166**	P	**P**	**20 44 15.5**	**-0.2**
TCW	**Tory Channel**	**29.77**	**168**	P	**P**	**20 44 16.4**	**+0.5**
TUWZ	**Tuamarina**	**29.92**	**169**	P	**P**	**20 44 17.9**	**+0.7**
TUWZ	**Tuamarina**	**29.92**	**169**	P	**P**	**20 44 18.3**	**+1.1**
MTW	**Mount Morrison**	**29.99**	**166**	P	**P**	**20 44 17.6**	**-0.3**
THZ	**Tophouse**	**30.06**	**170**	P	**P**	**20 44 19.8**	**+1.2**
MSWZ	**Moikau Station**	**30.18**	**167**	P	**P**	**20 44 19.2**	**-0.3**
PAWZ	**Paruwai Farm**	**30.18**	**167**	P	**P**	**20 44 19.4**	**-0.2**
STKA	**Stephens Creek**	**30.21**	**225**	P	**P**	**20 44 21.0**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=56,slow=11,SNR=3.8						
	comp=Z,1.8nm,0.7s						
TRWZ	**Traveller**	**30.26**	**166**	P	**P**	**20 44 20.6**	**+0.4**
PLWZ	**Palliser**	**30.32**	**167**	P	**P**	**20 44 21.1**	**+0.2**
LTZ	**Lake Taylor**	**30.96**	**172**	P	**P**	**20 44 27.6**	**+1.2**
LTZ	**Lake Taylor**	**30.96**	**172**	P	**P**	**20 44 27.7**	**+1.2**
RPZ	**Rata Peaks**	**31.73**	**174**	P	**P**	**20 44 34.6**	**+1.5**
WRA	**Warramunga Arr**	**31.84**	**252**	P	**P**	**20 44 33.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=81,slow=8.5,SNR=4.8						
WRA				PcP	**PcP**	**20 47 22.5**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=72,slow=3.1,SNR=2.3						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**31.84**	**252**	P	**P**	**20 44 33.9**	**-0.6**
WRA				PcP	**PcP**	**20 47 22.5**	**+0.5**
ASAR	**Alice Springs**	**33.00**	**245**	P	**P**	**20 44 43.5**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=67,slow=10,SNR=9.0						
ASAR				PcP	**PcP**	**20 47 25.3**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=67,slow=3.0,SNR=8.3						
	comp=Z,0.4nm,0.7s						
JHJ	**Hachijo jima 2**	**51.71**	**331**	LR	LR	21 05 40.8	
	comp=Z,398nm,21.6s,baz=72,slow=32						
MJAR	**Matsushiro Arr**	**55.26**	**332**	P	**P**	**20 47 40.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=170,slow=8.1,SNR=4.1						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	**55.26**	**332**	P	**P**	**20 47 40.6**	**-0.7**
MJAR				IAmb	IAmb	20 48 05.4	
	comp=Z,7.4nm,1.5s						
MAJO	**Matsushiro**	**55.26**	**332**	P	**P**	**20 47 40.7**	**-0.6**
LEM	**Lembang**	**58.24**	**269**	LR	LR	21 18 42.0	
	comp=Z,228nm,18.4s,baz=194,slow=42						
KSRS	**Korea Array**	**61.18**	**325**	P	**P**	**20 48 22.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=138,slow=6.5,SNR=7.2						
	comp=Z,1.3nm,0.7s						
KIWB	**Kanaga Island**	**65.26**	**11**	P	**P**	**20 48 49.1**	**+0.2**
VNDA	**Vanda**	**65.44**	**181**	P	**P**	**20 48 50.7**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=344,slow=6.9,SNR=5.9						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**65.44**	**181**	P	**P**	**20 48 50.2**	**+0.4**
CASY	**Casey**	**65.66**	**202**	P	**P**	**20 48 51.4**	**+0.1**
CASY				IAmb	IAmb	20 49 34.1	
	comp=Z,9.8nm,1.4s						
SBA	**Scott Base**	**65.73**	**180**	P	**P**	**20 48 52.7**	**+1.1**
SBA				IAmb	IAmb	20 48 58.9	
	comp=Z,2.8nm,1.2s						
CMAR	**Chiang Mai Arr**	**73.23**	**294**	P	**P**	**20 49 40.2**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=120,slow=4.6,SNR=9.1						
	comp=Z,1.2nm,0.5s						
QSPA	**South Pole Qui**	**77.89**	**180**	P	**P**	**20 50 05.1**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=300,slow=3.3,SNR=31						
	comp=Z,2.3nm,0.5s						
QSPA	**South Pole Qui**	**77.89**	**180**	P	**P**	**20 50 05.0**	**+0.5**
QSPA				IAmb	IAmb	20 50 05.9	
	comp=Z,3.3nm,0.9s						
SONM	**Songino Array**	**79.97**	**324**	P	**P**	**20 50 16.7**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=145,slow=5.8,SNR=18						
	comp=Z,1.3nm,0.4s						
SONM	**Songino Array**	**79.97**	**324**	P	**P**	**20 50 16.6**	**+0.5**
J20K	**Nowinta River**	**81.73**	**16**	P	**P**	**20 50 25.8**	**+0.8**
J20K				IAmb	IAmb	20 50 27.0	
	comp=Z,4.8nm,1.4s						
F19K	**Shaleruckik Mo**	**82.96**	**13**	P	**P**	**20 50 32.0**	**+0.8**
F19K				IAmb	IAmb	20 50 32.4	
	comp=Z,5.8nm,1.4s						
G21K	**Allakaket**	**83.73**	**15**	P	**P**	**20 50 35.8**	**+0.5**
G21K				IAmb	IAmb	20 51 00.9	
	comp=Z,2.5nm,1.2s						
C18K	**Utukok River**	**83.76**	**11**	P	**P**	**20 50 35.2**	**-0.2**
C18K				IAmb	IAmb	20 50 35.9	
	comp=Z,8.1nm,1.4s						
MAW	**Mawson**	**84.02**	**202**	P	**P**	**20 50 37.3**	**+0.5**
ILAR	**Eielson Array**	**84.29**	**18**	P	**P**	**20 50 37.0**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=241,slow=4.9,SNR=11						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**94.81**	**317**	P	**P**	**20 51 28.4**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=90,slow=6.3,SNR=40						
	comp=Z,3.3nm,0.6s						
MKAR	**Makanchi Array**	**94.81**	**317**		**P**	**20 51 28.6**	**+0.3**
ZALV	**Zalesovo Beam**	**94.86**	**324**	P	**P**	**20 51 27.3**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=131,slow=4.1,SNR=4.0						
	comp=Z,0.8nm,0.8s						
TROLL	**Troll, Antarti**	**95.39**	**185**	P	**P**	**20 51 30.2**	**-0.4**
	comp=Z,102nm,0.6s						
KURK	**Kurchatov**	**97.94**	**320**	P	**P**	**20 51 41.4**	**-0.9**
KURK				IAmb	IAmb	20 51 41.9	
	comp=Z,0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**97.98**	**320**	P	**P**	**20 51 41.4**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=97,slow=5.4,SNR=4.1						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**117.55**	**346**	PKP	**PKPdf**	**20 56 50.5**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=67,slow=2.2,SNR=19						
FINES	**FINESS Array B**	**123.04**	**339**	PKP	**PKPdf**	**20 57 00.9**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=113,slow=2.5,SNR=8.6						
NOA	**NORSAR Array B**	**127.92**	**345**	PKP	**PKPdf**	**20 57 10.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=30,slow=3.0,SNR=2.0						
HFS	**Hagfors**	**128.02**	**343**	PKP	**PKPdf**	**20 57 11.1**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=103,slow=6.4,SNR=1.5						
GERES	**GERESS Array B**	**136.99**	**334**	PKP	**PKPdf**	**20 57 28.2**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=282,slow=1.9,SNR=3.6						
KEST	**Kesra**	**148.72**	**323**	PKPbc	**PKPbc**	**20 57 53.9**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=166,slow=4.2,SNR=4.1						
ESDC	**Sonseca Array**	**151.29**	**345**	PKPbc	**PKPbc**	**20 57 58.9**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=10,slow=2.6,SNR=8.5						
ESDC	**Sonseca Array**	**151.29**	**345**		**PKPdf**	**20 57 53.6**	**0.0**
TORD	**Torodi Ar Bea**	**165.15**	**276**	PKP	**PKPdf**	**20 58 10.9**	**0.0**
	comp=Z,2.1nm,1.1s,baz=67,slow=0.6,SNR=5.1						

IDC 06 20:42:14.7±4.9, 5°.85S×129°.12E, h256km±46km, mb2.9/2, mbtmp3.6/5, Error ellipse: s-maj=104.5km s-min=15.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.64**	**195**	P	Pn	20 45 04.3	-1.9
	3.9nm,1.1s,baz=305,slow=22,SNR=1.8						
FITZ				S	S	20 47 31.2	+4.4
	3.4nm,1.1s,baz=270,slow=23,SNR=1.3						
WRA	**Warramunga Arr**	**14.90**	**161**	P	P	20 45 32.2	-1.1
	0.3nm,0.4s,baz=348,slow=11,SNR=4.9						
WRA				S	S	20 48 07.3	-11
	0.4nm,0.5s,baz=344,slow=21,SNR=5.4						
ASAR	**Alice Springs**	**18.31**	**166**	P	P	20 46 11.1	+0.6
	1.0nm,0.7s,baz=353,slow=11,SNR=12						
ASAR				S	S	20 49 27.0	+0.8
	0.2nm,0.8s,baz=339,slow=15,SNR=1.4						
MKAR	**Makanchi Array**	**66.79**	**327**	P	P	20 52 39.2	+0.3
	0.3nm,0.4s,baz=115,slow=8.1,SNR=6.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**71.08**	**329**	P	P	20 53 05.0	-0.2
	0.3nm,0.7s,baz=129,slow=5.8,SNR=4.6						
	0.3nm,0.7s						

IDC 06 20:51:51.6±5.6, 23°.36S×179°.54W, h0km, mb3.5/2, mbtmp3.5/2, MS4.3/1, Error ellipse: s-maj=286.4km s-min=65.9km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.54**	**260**	P	P	20 59 48.8	-0.6
	0.6nm,0.9s,baz=100,slow=7.1,SNR=5.0						
	0.6nm,0.9s

PMSA PcP **PcP** **21 01 54.4 +0.6**
comp=Z,9.2nm,0.5s,baz=39,slow=2.8,SNR=7.7
PMSA LR LR 21 03 40.1
comp=Z,1µm,20.1s,baz=64,slow=33
comp=Z,46nm,0.7s
PMSA Palmer Station 18.89 235 Pn 20 57 31.6 +1.1
PMSA **Sn 21 01 00.4 -0.3**
PMSA **PcP 21 01 54.4 +0.6**
PMSA Palmer Station 18.89 235 *eP* **Pn 20 57 32.3 +1.8**
BELA Belgrano 2 19.41 186 P **P 20 57 35.3 +0.1**
EFI East Falkland 19.67 277 Pn 20 57 40.0 0.0
SMAI San Martin Ant 20.33 226 P **P 20 57 45.1 -0.2**
SMAI IAmb IAmb 20 58 02.9
comp=Z,57nm,0.7s
USHA Ushuaia 23.46 261 P **P 20 58 19.1 +0.7**
comp=Z,67nm,0.7s,baz=239,slow=0.9,SNR=36
USHA LR LR 21 05 30.3
comp=Z,2µm,20.5s,baz=124,slow=31
comp=Z,67nm,0.7s
MG02 Cerro Sombrero 24.88 265 P **P 20 58 30.4 -1.0**
MG02 Cerro Sombrero 24.88 265 P **P 20 58 31.1 -0.3**
MG03 Isla Dawson 24.98 262 P 20 58 32.5 +0.3
GO10 Punta Arenas 25.63 263 P **P 20 58 38.5 +0.2**
GO10 IAmb IAmb 20 59 04.3
comp=Z,98nm,0.8s
GO10 Punta Arenas 25.63 263 P **P 20 58 37.8 -0.4**
MG05 Puerto Natales 27.17 264 P **P 20 58 51.0 -1.1**
MG05 IAmb IAmb 20 58 51.8
comp=Z,44nm,0.7s
MG05 Puerto Natales 27.17 264 P **P 20 58 51.5 -0.6**
GO08 Villa O'Higgin 29.10 270 P 20 59 09.5 +0.1
GO08 Villa O'Higgin 29.10 270 P **P 20 59 10.3 +1.0**
TRQA Tornquist 31.23 295 P 20 59 28.2 0.0
TRQA IAmb IAmb 20 59 51.9
comp=Z,39nm,1.0s
QSPA South Pole Qui 31.45 180 P **P 20 59 31.1 +0.9**
comp=Z,28nm,0.6s,baz=208,slow=2.0,SNR=364
QSPA PcP **PcP** **21 02 22.4 +0.3**
comp=Z,14nm,0.7s,baz=245,slow=2.1,SNR=3.6
QSPA PKiKP **PKiKP** **21 09 49.4 -1.2**
comp=Z,0.6nm,0.6s,baz=4.8,slow=1.6,SNR=5.7
QSPA LR LR 21 11 52.2
comp=Z,570nm,20.2s,baz=186,slow=36
comp=Z,28nm,0.6s
QSPA South Pole Qui 31.45 180 P 20 59 31.1 +0.9
QSPA IAmb IAmb 20 59 32.0
comp=Z,30nm,0.7s
QSPA **PcP 21 02 22.4 +0.3**
QSPA ScS 21 09 49.4 -8.9
QSPA South Pole Qui 31.45 180 P **P 20 59 31.6 +1.5**
QSPA PcP **PcP** **21 02 22.4 +0.3**
LL02 Futaleuf 32.26 278 P 20 59 36.7 -0.6
LL02 Futaleuf 32.26 278 P **P 20 59 37.5 +0.2**
PLCA Paso Flores 33.38 283 P **P 20 59 46.9 -0.3**
comp=Z,16nm,0.8s,baz=140,slow=7.3,SNR=49
PLCA LR LR 21 13 30.6
comp=Z,434nm,18.1s,baz=142,slow=36
comp=Z,16nm,0.8s
PLCA Paso Flores 33.38 283 P 20 59 46.9 -0.3
PLCA Paso Flores 33.38 283 *eP* **P 20 59 47.0 -0.1**
PLCA Paso Flores 33.38 283 P **P 20 59 47.1 0.0**
PLCA Paso Flores 33.38 283 P **P 20 59 47.0 -0.1**
GO06 Curarrehue 34.71 283 P **P 20 59 59.6 +0.9**
BI02 San Fabin de 36.85 286 P 21 00 15.8 -1.2
BI02 IAmb IAmb 21 00 34.5
comp=Z,28nm,1.2s
BI02 San Fabin de 36.85 286 P **P 21 00 16.2 -0.8**
MAW Mawson 37.45 141 P **P 21 00 21.7 0.0**
comp=Z,3.9nm,1.1s
MAW Mawson 37.45 141 P **P 21 00 21.6 0.0**
comp=Z,6.6nm,0.6s,baz=233,slow=8.3,SNR=24
MAW PcP **PcP** **21 02 39.8 +0.7**
comp=Z,6.3nm,0.7s,baz=246,slow=4.3,SNR=4.1
MAW LR LR 21 13 35.7
comp=Z,736nm,21.2s,baz=262,slow=32
comp=Z,6.6nm,0.6s
MAW Mawson 37.45 141 P **P 21 00 21.4 -0.3**
MAW **PcP 21 02 39.8 +0.7**
MAW Mawson 37.45 141 P **P 21 00 22.7 +1.0**
ML02 Panimavida 37.63 287 P **P 21 00 23.2 -0.4**
BI05 Punta Hualpn 37.75 284 P **P 21 00 24.7 +0.2**
BO02 Sierra Bellavi 38.09 289 P 21 00 26.2 -1.3
BO02 IAmb IAmb 21 00 39.0
comp=Z,28nm,0.7s
BO02 Sierra Bellavi 38.09 289 P **P 21 00 26.6 -0.9**
GO05 Hualane 38.48 287 P **P 21 00 30.3 -0.4**
GO05 IAmb IAmb 21 00 57.4
comp=Z,51nm,0.9s
GO05 Hualane 38.48 287 P **P 21 00 30.6 -0.2**
BO04 La Punta 38.65 290 IAmb IAmb 21 00 52.5
comp=Z,52nm,0.8s
CAM01 Campos-RJ 38.69 336 *eP* **P 21 00 33.4 +0.9**
MT08 Bocatoma Ro 38.80 291 P 21 00 33.6 -0.1
MT08 IAmb IAmb 21 00 37.7
comp=Z,44nm,0.8s
PTGB Pitanga 38.83 320 *eP* **P 21 00 32.8 -1.0**
BO03 Pichilemu 38.91 288 P **P 21 00 34.5 +0.3**
MT09 Talagante 39.00 290 P **P 21 00 34.9 -0.3**
CPUP Villa Florida 39.27 312 P **P 21 00 35.5 -1.9**
comp=Z,4.2nm,0.7s,baz=164,slow=7.8,SNR=10
CPUP LR LR 21 17 13.0
comp=Z,215nm,19.4s,baz=154,slow=37
comp=Z,4.2nm,0.7s
CPUP Villa Florida 39.27 312 P **P 21 00 34.8 -2.6**
PEL Peldehue 39.37 291 P **P 21 00 39.1 +0.9**
PEL pP **pwP** **21 00 54.4 +1.8**
PEL Peldehue 39.37 291 P **P 21 00 37.5 -0.7**
PEL x x 21 00 54.0
CFA Coronel Fontan 39.45 295 LR LR 21 16 35.4
comp=Z,494nm,21.2s,baz=173,slow=36
VA03 San Esteban 39.61 291 P **P 21 00 41.0 +0.7**
VA03 pP **pwP** **21 00 56.1 +1.5**
ALF01 Guarapari-ES 39.67 338 *eP* **P 21 00 41.9 +1.2**
CO04 Los Peladeros 40.40 291 P **P 21 00 47.1 0.0**
CO04 IAmb IAmb 21 01 07.1
comp=Z,44nm,0.8s
CO04 Los Peladeros 40.40 291 P **P 21 00 48.7 +1.6**
SUR Sutherland 40.65 70 LR LR 21 13 36.8
comp=Z,769nm,20.9s,baz=190,slow=30
RIB01 Linhares ES 40.87 338 *eP* **P 21 00 51.6 +0.9**
CO02 Combarbal 41.10 292 P **P 21 00 53.3 +0.6**
CO02 IAmb IAmb 21 01 12.4
comp=Z,39nm,0.7s
CO02 Combarbal 41.10 292 P **P 21 00 52.7 0.0**
BB19B Bebedouro 41.15 326 *eP* **P 21 00 53.1 +0.2**
CO03 El Pedregal 41.26 293 IAmb IAmb 21 01 11.2
comp=Z,47nm,1.2s
CO03 El Pedregal 41.26 293 P **P 21 00 54.0 +0.1**
AMBA Amambai (Brazi 41.49 317 *eP* **P 21 00 55.0 -0.8**
SJMB Sao Joao De Ma 41.62 337 *eP* **P 21 00 57.2 +0.4**
CO01 Juntas del Tor 41.69 294 IAmb IAmb 21 01 18.6
comp=Z,29nm,0.7s
CO01 Juntas del Tor 41.69 294 P **P 21 00 59.3 +1.7**
CO06 Fray Jorge 41.85 292 IAmb IAmb 21 01 25.2
comp=Z,113nm,1.6s
DIAM Diamantina, MG 42.55 334 *eP* **P 21 01 03.8 -0.8**
AC05 El Transito 42.73 295 P **P 21 01 06.0 +0.1**
LCO Las Campanas 42.78 294 P **P 21 01 06.7 +0.1**
LCO IAmb IAmb 21 01 24.1
comp=Z,32nm,0.8s
PMNB Patos De Minas 42.98 330 *eP* **P 21 01 08.2 +0.1**
PMNB Patos De Minas 42.98 330 P **P 21 01 08.4 +0.3**
SBA Scott Base 43.40 184 P **P 21 01 12.2 +1.5**
SBA IAmb IAmb 21 01 14.6
comp=Z,105nm,1.9s
GUA01 Guaratinga, BA 43.43 340 *eP* **P 21 01 12.3 +0.8**
AC04 Llanos de Chal 43.63 294 P **P 21 01 12.2 -1.0**
VNDA Vanda 43.87 182 P **P 21 01 15.8 +1.4**
comp=Z,26nm,0.6s,baz=186,slow=7.0,SNR=138
VNDA PcP **PcP** **21 02 59.1 -0.7**
comp=Z,5.7nm,0.6s,baz=239,slow=3.5,SNR=2.9
VNDA LR LR 21 17 51.1
comp=Z,308nm,21.4s,baz=186,slow=34
comp=Z,26nm,0.6s
VNDA Vanda 43.87 182 P **P 21 01 16.0 +1.6**
VNDA IAmb IAmb 21 01 17.1
comp=Z,26nm,0.6s
VNDA **PcP 21 02 59.1 -0.7**
VNDA Vanda 43.87 182 P **P 21 01 16.1 +1.6**
VNDA x x 21 01 30.6
VNDA x x 21 01 39.2
AC02 Maricunga 43.88 297 IAmb IAmb 21 01 39.1
comp=Z,103nm,1.8s
AC02 Maricunga 43.88 297 P **P 21 01 14.6 -1.1**

IPMB Ipameri, GO 43.98 328 *eP* **P 21 01 16.1 +0.1**
CMC01 Camacan, BA 44.57 341 *eP* **P 21 01 21.2 +0.5**
CCD Concordia, Ant 44.82 169 P **P 21 01 23.0 +0.5**
COIM Forte Coimbra 45.27 315 *eP* **P 21 01 24.7 -1.5**
H04S2 CROZET ISLANDS 45.72 111 T T 21 51 45.6
baz=225,slow=75,SNR=212
H04S3 CROZET ISLANDS 45.73 111 T T 21 51 55.3
baz=225,slow=75,SNR=166
H04S1 CROZET ISLANDS 45.73 111 T T 21 51 46.7
baz=225,slow=75,SNR=198
JANB Januaria 45.82 334 *eP* **P 21 01 30.7 0.0**
BDFB Brasilia 46.17 329 P **P 21 01 33.5 +0.1**
comp=Z,8.3nm,0.4s,baz=169,slow=6.4,SNR=13
BDFB LR LR 21 18 06.4
comp=Z,235nm,20.7s,baz=153,slow=32
comp=Z,8.3nm,0.4s
BDFB Brasilia 46.17 329 P **P 21 01 34.0 +0.5**
PP1B Ponte de Pedra 46.38 320 *eP* **P 21 01 33.9 -1.2**
KOOLE Kule 48.24 62 IAmb IAmb 21 02 06.5
comp=Z,28nm,1.1s
KOOLE Kule 48.24 62 P **P 21 01 50.2 +0.6**
SKOMA Sekoma 48.70 67 P **P 21 01 54.0 +1.0**
BBSD Serra de San D 48.81 313 *eP* **P 21 01 52.2 -1.7**
LBTB Lobatse 49.08 69 LR LR 21 18 35.4
comp=Z,685nm,21.1s,baz=194,slow=31
LBTB Lobatse 49.08 69 IAmb IAmb 21 02 25.7
comp=Z,26nm,1.2s
KGCAE Kacgae 49.29 64 P **P 21 01 58.3 +0.6**
KGCAE IAmb IAmb 21 02 21.6
comp=Z,46nm,1.1s
KGCAE Kacgae 49.29 64 P **P 21 01 58.3 +0.6**
TA02 Huaiquique 50.01 301 P **P 21 02 04.7 +1.7**
SIV San Ignacio 50.08 313 LR LR 21 23 23.5
comp=Z,223nm,19.7s,baz=132,slow=36
GRTLG Ghanzi 50.12 62 IAmb IAmb 21 02 06.0
comp=Z,15nm,1.0s
GRTLG Ghanzi 50.12 62 P **P 21 02 04.4 +0.5**
GO01 Chusmiza 50.12 302 IAmb IAmb 21 02 20.1
comp=Z,61nm,1.8s
TSUM Tsumeb 50.37 57 LR LR 21 18 28.7
comp=Z,576nm,21.9s,baz=191,slow=30
TSUM Tsumeb 50.37 57 P **P 21 02 06.6 +0.8**
TSUM IAmb IAmb 21 02 33.7
comp=Z,31nm,1.4s
TSUM Tsumeb 50.37 57 P **P 21 02 07.0 +1.1**
TSUM Tsumeb 50.37 57 P **P 21 02 07.0 +1.1**
TSUM Tsumeb 50.37 57 P **P 21 02 06.6 +0.8**
H10S2 ASCENSION HYDR 50.42 14 T T 21 56 34.0
baz=187,slow=74,SNR=846
H10S3 ASCENSION HYDR 50.43 14 T T 21 56 34.2
baz=33,slow=74,SNR=493
CASY Casey 51.04 159 P **P 21 02 10.6 +0.5**
CASY IAmb IAmb 21 02 37.0
comp=Z,21nm,1.2s
CASY Casey 51.04 159 P **P 21 02 09.2 -0.9**
H10N1 ASCENSION HYDR 51.54 14 T T 21 58 02.2
baz=181,slow=71,SNR=33
H10N3 ASCENSION HYDR 51.54 14 T T 21 57 57.6
baz=181,slow=71,SNR=224
H10N2 ASCENSION HYDR 51.56 14 T T 21 57 56.3
baz=181,slow=71,SNR=182
NBMA Muriti-CE 52.29 343 *eP* **P 21 02 20.4 +0.2**
LPAZ La Paz 52.66 305 P **P 21 02 22.6 -0.9**
comp=Z,6.4nm,0.6s,baz=157,slow=7.1,SNR=24
LPAZ LR LR 21 26 59.3
comp=Z,193nm,19.9s,baz=146,slow=38
comp=Z,6.4nm,0.6s
LPAZ La Paz 52.66 305 *eP* **P 21 02 22.4 -1.1**
LPAZ La Paz 52.66 305 P **P 21 02 23.3 -0.3**
LPAZ La Paz 52.66 305 P **P 21 02 23.0 -0.5**
NBPV Pedro Velho 52.78 348 *eP* **P 21 02 24.0 +0.3**
SOOWA Sowa 53.16 67 P **P 21 02 27.3 +0.7**
RCBR Riachuelo 53.43 347 LR LR 21 20 33.3
comp=Z,67nm,21.4s,baz=212,slow=31
MATP Matop 54.38 69 LR LR 21 21 35.2
comp=Z,750nm,20.9s,baz=251,slow=31
DRV Dumont d'Urvil 54.40 173 P **P 21 02 35.3 +0.3**
DRV PcP **PcP** **21 03 38.3 +0.3**
KSANE Kasane 55.03 64 IAmb IAmb 21 02 42.3
comp=Z,22nm,0.9s
KSANE Kasane 55.03 64 P **P 21 02 41.0 +0.7**
NBPS Pedro II - PI 55.63 341 *eP* **P 21 02 44.8 +0.2**
NBMO Morrinhos-CE 56.47 343 *eP* **P 21 02 50.8 +0.3**
LSZ Lusaka 58.65 66 LR LR 21 25 05.9
comp=Z,716nm,19.8s,baz=202,slow=33
LSZ Lusaka 58.65 66 P **P 21 03 06.0 +0.1**
LSZ IAmb IAmb 21 03 07.3
comp=Z,13nm,0.7s
LSZ Lusaka 58.65 66 P **P 21 03 06.3 +0.4**
LSZ Lusaka 58.65 66 P **P 21 03 06.7 +0.7**
LSZ Lusaka 58.65 66 P **P 21 03 06.4 +0.4**
NNA Nana 60.31 299 LR LR 21 27 22.9
comp=Z,280nm,21.5s,baz=155,slow=34
ATAH Atahualpa 65.30 300 LR LR 21 31 32.4
comp=Z,194nm,21.4s,baz=168,slow=35
OPO Ambohidratompo 65.40 85 LR LR 21 27 05.0
comp=Z,201nm,20.8s,baz=70,slow=31
MDP Montagnes des 67.25 331 LR LR 21 30 38.1
comp=Z,189nm,21.6s,baz=166,slow=33
DBIC Dimbokro 67.35 22 P **P 21 04 03.9 +0.4**
DBIC LR LR 21 26 46.5
comp=Z,125nm,18.9s,baz=162,slow=30
comp=Z,21nm,0.7s
DBIC Dimbokro 67.35 22 P **P 21 04 03.8 +0.4**
DBIC IAmb IAmb 21 04 29.2
comp=Z,26nm,0.8s
DBIC Dimbokro 67.35 22 P **P 21 04 04.2 +0.8**
DBIC Dimbokro 67.35 22 P **P 21 04 03.9 +0.4**
MBAR Mbarara 72.70 61 LR LR 21 33 25.4
comp=Z,275nm,19.2s,baz=194,slow=33
MBAR Mbarara 72.70 61 P **P 21 04 40.2 +3.7**
MBAR Mbarara 72.70 61 P **P 21 04 39.4 +2.9**
APZ The Paps 74.14 190 P **P 21 04 45.2 +0.7**
KIBK Kibwezi 74.61 68 P **P 21 04 51.1 +3.4**
TORD Torodi Ar. Bea 75.06 28 P **P 21 04 50.8 +0.8**
comp=Z,29nm,0.7s,baz=194,slow=6.2,SNR=158
comp=Z,29nm,0.7s
TORD Torodi Ar. Bea 75.06 28 P 21 04 50.8 +0.8
TORD IAmb IAmb 21 04 51.8
comp=Z,17nm,0.7s
WHZ Wether Hill Ro 75.08 190 P **P 21 04 49.9 -0.1**
KMBO Kilima Mbogo 75.28 67 P **P 21 04 54.7 +3.0**
baz=70,slow=12
KMBO LR LR 21 35 11.5
comp=Z,530nm,18.8s,baz=191,slow=33
MLZ Mavora Lakes 75.59 190 P **P 21 04 52.6 -0.3**
EAZ Earnscleugh 75.61 191 P **P 21 04 49.9 -3.0**
ODZ Otahua Downs 75.66 192 P **P 21 04 54.5 +1.2**
MSZ Milford Sound 76.29 190 P **P 21 04 57.2 +0.4**
LBZ Lake Benmore 76.36 192 P **P 21 04 57.7 +0.5**
SDV Santo Domingo 76.54 314 LR LR 21 37 57.3
comp=Z,428nm,22.0s,baz=150,slow=35
SDV Santo Domingo 76.54 314 P **P 21 04 58.7 -0.1**
SDV Santo Domingo 76.54 314 *eP* **P 21 04 57.5 -1.3**
MQZ McQueen's Vall 76.75 194 P **P 21 05 00.1 +0.7**
JCZ Jackson Bay 76.81 191 P **P 21 05 00.4 +0.5**
WVZ Waitaha Valley 77.59 192 P **P 21 05 05.6 +1.4**
LTZ Lake Taylor 77.71 193 P **P 21 05 05.9 +1.0**
KHZ Kahutara 77.91 194 P **P 21 05 06.4 +0.5**
LODK Lodwar 78.37 63 P **P 21 05 13.2 +4.3**
PLWZ Palliser 78.51 196 P **P 21 05 09.8 +0.5**
BSWZ Blackbirch Sta 78.55 195 P **P 21 05 10.7 +1.1**
THZ Tophouse 78.63 194 P **P 21 05 10.5 +0.5**
THZ Tophouse 78.63 194 P **P 21 05 10.7 +0.6**
MSWZ Moikau Station 78.66 196 P **P 21 05 10.6 +0.5**
PAWZ Paruwai Farm 78.67 196 P **P 21 05 10.8 +0.6**
DSZ Denniston Nort 78.78 193 P **P 21 05 10.2 -0.7**
TUWZ Tuamarina 78.83 195 P **P 21 05 14.2 +3.1**
SNZO South Karori 78.84 195 P **P 21 05 11.8 +0.8**
MTW Mount Morrison 78.88 196 P **P 21 05 12.0 +0.7**
TCW Tory Channel 79.00 195 P **P 21 05 12.5 +0.5**
MRNZ Matariki Terra 79.01 194 P **P 21 05 12.3 +0.2**
NNZ Nelson 79.11 194 P **P 21 05 13.1 +0.5**
HOWZ Holdsworth Sta 79.13 196 P **P 21 05 13.4 +0.7**
BFZ Birch Farm 79.23 197 P **P 21 05 14.0 +0.7**
KIW Kapiti Island 79.25 196 P **P 21 05 14.3 +0.9**
TKNZ Takaka Hill 79.34 194 P **P 21 05 13.5 -0.4**
MRZ Mangatainoka R 79.35 196 P **P 21 05 14.5 +0.6**
DUWZ D'Urville Isla 79.44 195 P **P 21 05 15.0 +0.6**
QRZ Quartz Range 79.60 194 P **P 21 05 13.8 -1.5**
DVHZ Dannevirke 79.62 197 P **P 21 05 16.3 +0.9**
TRVZ Turoa 80.69 196 P **P 21 05 22.4 +0.9**
PKVZ Pokaka 80.73 196 P **P 21 05 22.0 +0.5**

FWVZ Far West T-bar 80.73 197 P **P 21 05 22.6 +0.9**
PUZ Puketiti 81.46 199 P **P 21 05 24.7 -0.6**
URZ Urewera 81.47 198 LR LR 21 38 46.9
comp=Z,109nm,18.9s,baz=200,slow=34
URZ Urewera 81.47 198 P **P 21 05 26.1 +0.8**
HIZ Hauiti 81.56 196 P **P 21 05 25.6 -0.3**
SJG San Juan 83.53 322 LR LR 21 42 12.6
comp=Z,117nm,21.3s,baz=114,slow=35
TOO Toolangi 83.71 173 P **P 21 05 37.2 +0.1**
comp=Z,4.8nm,0.7s
MUN Mundaring 84.14 148 P **P 21 05 39.1 -0.2**
comp=Z,47nm,2.1s
WCZ Waipu Caves 84.16 196 P **P 21 05 38.9 -0.5**
MILA Mila 84.41 176 P **P 21 05 40.1 -0.6**
comp=Z,19nm,1.0s
OUZ Omahuta 84.98 196 P **P 21 05 43.6 +0.2**
TAM Tamanrasset 85.27 29 P **P 21 05 46.8 +1.8**
CAN Canberra 86.13 176 P **P 21 05 49.5 +0.3**
HTT Hallett 87.22 167 P **P 21 05 55.0 +0.4**
comp=Z,11nm,1.2s
BBOO Buckleboo 87.47 165 P **P 21 05 53.3 -2.4**
comp=Z,26nm,0.7s
BBOO Buckleboo 87.47 165 P **P 21 05 55.3 -0.5**
BBOO IAmb IAmb 21 05 56.3
comp=Z,13nm,0.7s
FORT Forrest 88.11 158 P **P 21 05 59.1 +0.3**
comp=Z,26nm,0.8s
FORT Forrest 88.11 158 P **P 21 05 58.9 +0.1**
FORT IAmb IAmb 21 06 00.0
comp=Z,17nm,0.7s
ATD Arta Tunnel 88.98 66 LR LR 21 44 11.6
comp=Z,18nm,18.7s,baz=177,slow=34
STKA Stephens Creek 89.05 169 P **P 21 06 03.6 +0.4**
comp=Z,89nm,0.8s
STKA Stephens Creek 89.05 169 P **P 21 06 03.3 0.0**
comp=Z,14nm,0.7s,baz=151,slow=4.3,SNR=33
STKA LR LR 21 44 32.1
comp=Z,313nm,19.2s,baz=228,slow=34
comp=Z,14nm,0.7s
STKA Stephens Creek 89.05 169 P **P 21 06 03.5 +0.2**
CMSA Cobar Meteorol 89.72 173 P **P 21 06 07.0 +0.6**
comp=Z,32nm,0.9s
CMSA Cobar Meteorol 89.72 173 P **P 21 06 06.9 +0.5**
MDT Midelt 92.93 18 LR LR 21 42 02.6
comp=Z,120nm,20.9s,baz=164,slow=32
WRKA Warakurna 93.72 156 P **P 21 06 25.5 +0.4**
comp=Z,6.9nm,0.7s
CMIG Matias Romero 94.19 296 LR LR 21 44 08.0
comp=Z,126nm,20.4s,baz=179,slow=32
AS09 Alice Springs 96.09 161 P **P 21 06 35.8 -0.2**
comp=Z,12nm,0.7s
ASAR Alice Springs 96.11 161 P **P 21 06 35.4 -0.7**
comp=Z,9.0nm,0.6s,baz=183,slow=4.1,SNR=160
ASAR PKKPbc **PKKPbc** **21 23 21.7 +1.8**
comp=Z,2.7nm,0.5s,baz=11,slow=2.2,SNR=40
ASAR LR LR 21 47 14.6
comp=Z,226nm,20.1s,baz=218,slow=34
comp=Z,9.0nm,0.6s
ASAR Alice Springs 96.11 161 P **P 21 06 35.5 -0.5**
AS31 Alice Springs 96.11 161 P **P 21 06 35.4 -0.6**
AS31 IAmb IAmb 21 06 36.4
comp=Z,3.8nm,0.7s
AS13 Alice Springs 96.12 161 P **P 21 06 35.8 -0.3**
comp=Z,14nm,0.7s
AS17 Alice Springs 96.13 161 P **P 21 06 35.9 -0.2**
comp=Z,15nm,0.7s
AS15 Alice Springs 96.14 161 P **P 21 06 36.0 -0.2**
comp=Z,15nm,0.7s
KEST Kesra 98.58 28 LR LR 21 46 55.0
comp=Z,110nm,18.9s,baz=274,slow=33
ESDC Sonseca Array 99.75 17 P **Pdif 21 06 52.4 +0.7**
comp=Z,0.5nm,0.7s,baz=194,slow=4.8,SNR=4.9
ESDC PKKPbc **PKKPbc** **21 23 12.3 +1.0**
comp=Z,0.5nm,0.9s,baz=13,slow=3.1,SNR=4.8
ESDC LR LR 21 46 35.4
comp=Z,101nm,21.0s,baz=168,slow=32
comp=Z,0.5nm,0.7s
ESDC Sonseca Array 99.75 17 Pdif 21 06 52.4 +0.7
ESDC IAmb IAmb 21 07 01.8
comp=Z,22nm,1.9s
FITZ Fitzroy Crossi 99.83 152 LR LR 21 50 02.1
comp=Z,147nm,19.5s,baz=168,slow=34
WRA Warramunga Arr 99.83 161 P **Pdif 21 06 51.7 -1.1**
comp=Z,1.2nm,0.5s,baz=192,slow=4.5,SNR=13
WRA PKKPbc **PKKPbc** **21 23 11.0 +1.3**
comp=Z,2.0nm,0.6s,baz=359,slow=3.2,SNR=10
comp=Z,1.2nm,0.5s
WRA Warramunga Arr 99.83 161 Pdif 21 06 51.7 -1.1
TXAR Lajitas Array 108.78 296 PKiKP **PKiKP** **21 11 35.8 -1.1**
comp=Z,0.2nm,0.6s,baz=278,slow=2.1,SNR=3.9
TXAR PP **PP** **21 12 02.6 -1.9**
comp=Z,0.4nm,0.7s,baz=188,slow=3.2,SNR=3.4
BRTR Keskin Array B 109.76 45 PP **PP** **21 12 08.5 -3.1**
comp=Z,1.0nm,0.8s,baz=199,slow=4.5,SNR=4.8
BRTR PKKPbc **PKKPbc** **21 22 41.4 +0.6**
comp=Z,1.0nm,0.7s,baz=83,slow=3.0,SNR=6.5
GERES GERESS Array B 112.01 27 PKiKP **PKiKP** **21 11 41.8 -0.6**
comp=Z,0.4nm,0.6s,baz=207,slow=2.0,SNR=6.1
GERES PP **PP** **21 12 28.7 +1.1**
comp=Z,0.6nm,0.8s,baz=189,slow=5.5,SNR=3.5
MLR Muntele Rosu 112.28 37 PKiKP **PKiKP** **21 11 41.8 -1.2**
comp=Z,1.5nm,0.6s,baz=276,slow=6.7,SNR=8.5
KMPD K-Podol'skiy 115.19 35 P **Pdif 21 08 01.3 +1.3**
EKA Eskdalemuir Ar 115.19 14 PKP **PKPdf** **21 11 47.6 -0.5**
comp=Z,0.7nm,0.7s,baz=140,slow=3.6,SNR=2.2
EKA PKKPbc **PKKPbc** **21 22 22.6 -0.3**
comp=Z,1.3nm,0.6s,baz=11,slow=2.7,SNR=6.8
KBZ Khabaz 116.73 49 PKP **PKPdf** **21 11 49.8 -1.6**
comp=Z,1.0nm,0.5s,baz=129,slow=4.5,SNR=4.0
KVAR Kislovodsk Arr 116.84 49 PKP **PKPdf** **21 11 49.6 -2.2**
comp=Z,1.8nm,0.8s,baz=306,slow=12,SNR=2.4
RNPP8 Varash 117.48 34 P **Pdif 21 08 11.5 +1.4**
AKASG Malin Array Be 117.92 36 PKP **PKPdf** **21 11 52.5 -0.9**
comp=Z,2.6nm,0.5s,baz=236,slow=1.3,SNR=9.1
AKASG PP **PP** **21 13 10.2 +1.2**
comp=Z,0.6nm,0.6s,baz=215,slow=6.2,SNR=4.0
AKBB Malin Array Si 117.92 36 PKPdf 21 11 52.8 -0.7
SCHQ Schefferville 118.02 334 PKP **PKPdf** **21 11 53.0 -0.6**
comp=Z,8.9nm,0.7s,baz=83,slow=1.7,SNR=22
SCHQ Schefferville 118.02 334 PKPdf 21 11 52.8 -0.8
CLC China Lake 120.80 289 PKiKP 21 11 60.0 +0.2
RSSD Black Hills 121.13 304 PKPdf 21 11 59.5 -0.8
PDAR Pinedale Array 122.49 300 PKP **PKPdf** **21 12 02.2 -0.7**
comp=Z,1.1nm,0.5s,baz=127,slow=4.8,SNR=8.5
PDAR Pinedale Array 122.49 300 PKPdf 21 12 01.9 -1.0
HFS Hagfors 122.51 22 PKP **PKPdf** **21 11 59.4 -2.7**
comp=Z,2.3nm,0.6s,baz=199,slow=3.1,SNR=7
HFS PKKPbc **PKKPbc** **21 21 56.1 0.0**
comp=Z,1.7nm,0.4s,baz=60,slow=3.5,SNR=16
ULM Lac du Bonnet 122.80 314 PKP **PKPdf** **21 12 01.5 -1.4**
comp=Z,14nm,0.6s,baz=134,slow=2.4,SNR=25
NB2 NORSAR Subarra 122.89 20 PKPdf **PKPdf** **21 12 02.4 -0.4**
comp=Z,1.1nm,0.7s,baz=198,slow=1.8
NOA NORSAR Array B 122.89 20 PKP **PKPdf** **21 12 01.1 -1.7**
comp=Z,2.4nm,0.8s,baz=193,slow=1.5,SNR=5.1
SHAA Shahritus 123.04 71 PKiKP 21 12 04.5 +0.4
NVAR Mina Array Bea 123.20 290 PKP **PKiKP** **21 12 05.2 +0.5**
comp=Z,2.6nm,0.6s,baz=141,slow=3.5,SNR=11
NVAR Mina Array Bea 123.20 290 PKPdf 21 12 04.5 +0.1
CMAR Chiang Mai Arr 123.30 111 PKP **PKPdf** **21 12 04.8 -0.1**
comp=Z,8.1nm,0.7s,baz=229,slow=3.8,SNR=53
CMAR Chiang Mai Arr 123.30 111 PKPdf 21 12 04.3 -0.6
CHTO Chiang Mai 123.61 111 PKPdf 21 12 05.0 -0.4
OBN Obninsk 124.00 38 PKP **PKPdf** **21 12 04.6 -0.4**
comp=Z,1.1nm,0.4s,baz=289,slow=2.3,SNR=5.4
OBN Obninsk 124.00 38 PKPdf 21 12 03.5 -1.5
NUUK Nuuk 124.25 347 *i* P **PKPdf 21 12 03.5 -1.8**
SHL Shillong 125.70 99 *eP* **PKPdf 21 12 09.1 -0.4**
FINES FINESS Array B 126.41 28 PKP **PKPdf** **21 12 09.1 -0.4**
comp=Z,8.1nm,0.5s,baz=163,slow=2.3,SNR=65
FINES FINESS Array B 126.41 28 PKPdf 21 12 09.0 -0.5
SOEG Soedalen 126.76 357 *i* P **PKPdf 21 12 08.6 -1.4**
KOHI KOHIMA 126.97 101 *eP* **PKPdf 21 12 12.0 +0.1**
TEZP TEZPUR 127.03 99 *eP* **PKPdf 21 12 11.2 -0.6**
KSH2 Kashi 127.97 75 PKP **PKiKP** **21 12 14.2 +0.2**
AKTO Aktyubinsk 128.27 54 PKP **PKPdf** **21 12 13.2 -0.3**
comp=Z,13nm,0.8s,baz=129,slow=0.7,SNR=32
KKAR Karatay Array 128.46 68 PKPpre 21 12 03.3
TNCH TengChong 128.63 106 PKP **PKPdf** **21 12 15.3 +0.1**
TNCH sPKP sPKPdf 21 12 38.3 +4.6
FCC Fort Churchill 128.98 321 PKPdf 21 12 13.3 -1.1
SCO Scoresbysund 129.01 2 *i* P **PKPdf 21 12 13.7 -0.5**
FAUS Fauske 129.42 19 *eP* **PKPdf 21 12 15.1 +0.1**
AAK Ala-Archa 130.06 72 PKPdf 21 12 17.1 -0.2
KIRV Kirov 131.06 42 PKP **PKPdf** **21 12 18.5 +0.2**
comp=Z,9.1nm,0.5s,baz=234,slow=2.0,SNR=8.1

SUMG	Summit	131.38	355	*i* P		PKiKP	21 12 20.0	-0.1	
PZH	PanZhiHua	131.46	108	PKP		PKiKP	21 12 21.3	-0.1	
TRO	Tromso	132.05	19	*e*P		PKPdf	21 12 19.7	-0.2	
JETT	Jettan, Norway	132.24	20	*e*P		PKPdf	21 12 20.0	-0.4	
KTK1	Kautokeino	132.30	22	*e*P		PKPdf	21 12 20.5	+0.1	
ARTI	Arti	132.78	49	PKP		PKPdf	21 12 21.7	0.0	
	comp=Z,2.4nm,0.6s,baz=202,slow=1.9,SNR=5.5								
ARTI	Arti	132.78	49			PKPdf	21 12 21.3	-0.5	
ARA0	ARCESS Array S	133.18	22	*e*P		PKPdf	21 12 22.1	0.0	
ARCES	ARCESS Array B	133.18	22	PP		PP	21 14 48.4	-2.0	
	comp=Z,3.5nm,1.0s,baz=206,slow=6.0,SNR=2.2								
ARCES	ARCESS Array B	133.18	22			PKPdf	21 12 20.9	-1.3	
ARCES						PP	21 14 48.5	-2.0	
BLKN	Baker Lake	133.81	325			PKPdf	21 12 22.6	-0.8	
GYA	Guiyang	133.82	113	PKP		PKPdf	21 12 25.1	+0.2	
VADS	Vadso	134.43	23	*e*P		PKiKP	21 12 25.3	-0.5	
KULLO	Kullorsuaq	134.75	349	*i* P		PKiKP	21 12 26.1	-0.3	
DAG	Danmarks Havn	135.38	2	*i* P		PKPdf	21 12 24.5	-1.6	
BVAR	Borovoye Array	135.50	59	PKP		PKPdf	21 12 27.5	+0.5	
	comp=Z,6.2nm,0.5s,baz=193,slow=2.3,SNR=4.2								
MKAR	Makanchi Array	136.91	73	PKP		PKPdf	21 12 29.6	-0.3	
	comp=Z,4.1nm,0.8s,baz=187,slow=0.5,SNR=6.9								
MKAR	Makanchi Array	136.91	73			PKPdf	21 12 29.4	-0.5	
WMQ	Urumqi	137.58	80	*e*PKP		PKiKP	21 12 32.4	-0.8	
WMQ				L		L			
	comp=Z,140nm,24.1s								
KURBB	Kurchatov Arra	137.66	67	PKP		PKPdf	21 12 31.9	+0.8	
	comp=Z,5.4nm,0.7s,baz=232,slow=2.4,SNR=11								
KURBB				PP		PP	21 15 20.5	+1.5	
	comp=Z,1.0nm,0.9s,baz=238,slow=6.7,SNR=4.5								
KURK	Kurchatov	137.77	66			PKPdf	21 12 31.3	+0.1	
TULEG	Thule	137.82	346	*i* P		PKPdf	21 12 30.6	0.0	
YKA	Yellowknife Ar	138.75	315	PKhKP		PKPpre	21 12 22.8		
	comp=Z,1.2nm,0.5s,baz=123,slow=3.3,SNR=6.5								
YKA				PKP		PKPdf	21 12 32.4	-0.2	
	comp=Z,34nm,0.6s,baz=133,slow=2.4,SNR=17								
YKA	Yellowknife Ar	138.75	315			PKPdf	21 12 32.2	-0.4	
SPITS	Spitsbergen Ar	139.08	12	PKP		PKPdf	21 12 33.0	0.0	
	comp=Z,2.4nm,0.5s,baz=145,slow=5.3,SNR=5.2								
LZH	Lanzhou	140.24	102	*e*PKP		PKPdf	21 12 37.6	+1.1	
GTA2	Gaotai	140.71	95	*e*PKP		PKPdf	21 12 36.7	-0.5	
XAN	Xi'an	141.16	109	PKP		PKiKP	21 12 40.4	-0.4	
XAN				sPKP		sPKPdf	21 13 02.2	+5.6	
LIRD	Liard River Hi	141.45	306	P		PKPdf	21 12 37.4	-0.2	
	baz=125								
V35K	Ketchikan	141.50	298	P		PKPdf	21 12 37.3	-0.6	
	baz=127								
T35M	Bob Quinn	141.85	301	P		PKPdf	21 12 38.0	-0.5	
	baz=126								
CRAG	Craig	142.28	297	P		PKPdf	21 12 39.0	-0.2	
	baz=126								
WRAK	Wrangell Islan	142.47	299	P		PKPdf	21 12 39.2	-0.3	
	baz=125								
DLBC	Dease Lake	142.59	303	PKP		PKPdf	21 12 39.1	-0.7	
	comp=Z,2.0nm,0.4s,baz=85,slow=2.2,SNR=9.6								
DLBC	Dease Lake	142.59	303	P		PKPdf	21 12 39.9	0.0	
	baz=124								
U33K	Whale Pass	142.65	298	P		PKPdf	21 12 40.0	+0.1	
	baz=125								
ZALV	Zalesovo Beam	142.76	66	PKhKP		PKPpre	21 12 35.8		
	comp=Z,2.8nm,0.5s,baz=231,slow=4.3,SNR=10								
ZALV	Zalesovo Beam	142.76	66			PKPpre	21 12 36.0		
LYN	LuoYang	143.30	113	*e*PKP		PKPab	21 12 36.7	-1.1	
TGTN	Hyland Airport	143.51	308	P		PKPdf	21 12 41.9	+0.5	
	baz=121								
R33M	Jennings River	143.52	304	P		PKPdf	21 12 41.5	0.0	
	baz=122								
Q32M	Nakina River	143.85	303			PKPdf	21 12 42.4	+0.2	
Q32M	Nakina River	143.85	303	P		PKPdf	21 12 42.2	0.0	
	baz=122								
S32K	Killisnoo	144.08	299	P		PKPdf	21 12 42.2	-0.1	
	baz=123								
NJ2	Nanjing	144.17	123	*e*PKP		PKiKP	21 12 46.4	-0.5	
SIT	Sitka	144.19	298	P		PKPdf	21 12 42.8	+0.2	
	baz=123								
R32K	Eaglecrest	144.48	301	P		PKPbc	21 12 42.0	+0.2	
	baz=122								
P33M	Teslin, Yukon	144.74	304	P		PKPbc	21 12 42.7	0.0	
	baz=121								
P32M	Atlin	144.81	303	P		PKPbc	21 12 43.0	+0.1	
	baz=121								
S31K	Pelican	145.09	299	P		PKPab	21 12 43.8	0.0	
	baz=122								
R31K	City Hall, Gus	145.10	300	P		PKPbc	21 12 43.8	+0.1	
	baz=121								
MMPY	Sheldon Lake,	145.28	309	P		PKPbc	21 12 44.2	-0.1	
	baz=118								
N32M	Quiet Lake	145.33	306	P		PKPdf	21 12 44.6	+0.1	
	baz=119								
SKAG	Skagway	145.46	302	P		PKPbc	21 12 44.9	0.0	
	baz=120								
C36M	Paulatuk	145.62	322			PKPdf	21 12 44.5	-0.2	
C36M	Paulatuk	145.62	322	P		PKPdf	21 12 44.6	-0.1	
	baz=114								
WHY	Whitehorse	145.86	304	P		PKPbc	21 12 46.1	-0.2	
	baz=119								
PLBC	Pleasant Camp	145.91	302	P		PKPbc	21 12 46.1	-0.2	
	baz=120								
M31M	Drury Creek, Y	146.37	307	P		PKPbc	21 12 47.3	-0.3	
	baz=117								
O30N	Mendenhall	146.43	304	P		PKPbc	21 12 47.6	-0.3	
	baz=118								
P30M	Million Dollar	146.50	302	P		PKPbc	21 12 47.9	-0.2	
	baz=119								
P29M	Windy Craggy	146.61	301	P		PKPbc	21 12 48.5	+0.1	
	baz=119								
N31M	Braeburn, Yuko	146.63	305	P		PKPbc	21 12 48.5	0.0	
	baz=117								
HNS	HongShan	146.67	112	⇑PKPbc		PKPbc	21 12 49.5	+0.3	
BTO2	Baotou	146.85	103	*e*PKPbc		PKPdf	21 12 48.1	+0.2	
BTO2				PKPab		PKiKP	21 12 53.9	+1.5	
BTO2				SKS		SKSdf	21 19 52.5	0.0	
BTO2				L		L			
	comp=Z,150nm,9.7s								
TIA	Tai'an	146.86	116	PKPbc		PKPbc	21 12 49.9	+0.1	
TIA				sPKP		sPKPbc	21 13 12.7	+4.4	
A36M	Sachs Harbour	146.98	326			PKPbc	21 12 49.2	+0.1	
A36M	Sachs Harbour	146.98	326	P		PKPbc	21 12 49.4	+0.4	
	baz=110								
HYT	Haines Junctio	147.07	303	P		PKPbc	21 12 50.1	+0.3	
	baz=117								
N30M	Aishikik Lake	147.18	304	P		PKPbc	21 12 49.7	-0.3	
	baz=117								
JCJ	Chichijima	147.19	160	PKPbc		PKPdf	21 12 48.7	0.0	
	comp=Z,59nm,0.4s,baz=63,slow=4.5,SNR=5.5								
O29M	Mount Kennedy	147.30	302	P		PKPbc	21 12 50.4	-0.1	
	baz=118								
YUK6	Outpost Mounta	147.50	303	P		PKPbc	21 12 50.6	-0.6	
	baz=117								
M30M	Minto, Yukon	147.54	306	P		PKPbc	21 12 50.9	0.0	
	baz=115								
HHC	Hu-ho-hao-te	147.78	105	*e*PKPbc		PKiKP	21 12 53.4	-0.9	
YUK4	Talbot Arm	147.80	304	P		PKPbc	21 12 51.4	-0.5	
	baz=116								
H31M	Peel River	147.86	313	P		PKPbc	21 12 51.3	-0.4	
	baz=112,SNR=30								
PINM	Pinnacle	147.95	301	P		PKPbc	21 12 51.8	-0.3	
	baz=117,SNR=6.1								
J30M	Hart River	148.17	310	P		PKPbc	21 12 52.5	-0.2	
	baz=113,SNR=9.1								
M29M	Somme Creek	148.19	306	P		PKPbc	21 12 52.5	-0.2	
	baz=115,SNR=53								
O28M	Mount Upton	148.22	302	P		PKPbc	21 12 52.6	-0.6	
	baz=116,SNR=5.4								
F31M	Tsiigehtchic	148.23	316	P		PKPbc	21 12 52.5	0.0	
	baz=110								
G31M	Satah River	148.24	315	P		PKPbc	21 12 52.8	+0.3	
	baz=110,SNR=58								
YUK8	Steele Glacier	148.26	303	P		PKPbc	21 12 53.3	+0.1	
	baz=116,SNR=12								
L29M	L29M	148.32	307	P		PKPbc	21 12 53.3	+0.3	
	baz=114,SNR=45								
K29M	Barlow Dome	148.36	308	P		PKPbc	21 12 53.5	+0.4	
	baz=113,SNR=8.7								
I30M	Mount Dempster	148.43	311	P		PKPbc	21 12 53.3	0.0	
	baz=112								
INK	Inuvik	148.44	317	PKPbc		PKPbc	21 12 52.4	-0.6	
	comp=Z,38nm,0.7s,baz=74,slow=2.7,SNR=56								
INK	Inuvik	148.44	317	P		PKPbc	21 12 53.5	+0.5	
	baz=109								
YUK3	Moose Creek	148.77	304	P		PKPbc	21 12 54.1	-0.3	
	baz=114,SNR=10								
J29N	Klondike Camp	148.88	309	P		PKPbc	21 12 54.4	0.0	
	baz=112								
EPYK	Eagle Plains	148.97	313	P		PKPbc	21 12 54.4	-0.2	
	baz=110								
G30M	tAoh Zraii Nji	148.98	314	P		PKPbc	21 12 54.6	0.0	
	baz=109								
F30M	Barrier River	149.02	316	P		PKPbc	21 12 55.0	+0.4	
	baz=108,SNR=57								
BVCY	Beaver Creek	149.20	305	P		PKPbc	21 12 55.3	+0.1	
	baz=113,SNR=5.6								
DAWY	Dawson	149.21	308	P		PKPbc	21 12 55.2	0.0	
	baz=112								
CRQE	Cirque	149.51	301	P		PKPbc	21 12 56.1	-0.1	
	baz=115								
H29M	Whitestone	149.55	312	P		PKPbc	21 12 55.9	-0.1	
	baz=109								
M27K	Edge Creek, AK	149.62	304	P		PKPbc	21 12 56.6	+0.2	
	baz=113								
G29M	Pine Creek	149.63	314	P		PKPbc	21 12 56.4	+0.3	
	baz=108,SNR=41								
MCARA	McCarthy VSAT	149.73	302	P		PKPbc	21 12 56.7	+0.1	
	baz=114								
KAIM	Kayak Island	149.76	299			PKPbc	21 12 57.0	+0.4	
KAIM	Kayak Island	149.76	299	P		PKPbc	21 12 56.8	+0.2	
	baz=115								
L27K	Beaver Creek,	149.86	306	P		PKPbc	21 12 56.6	-0.2	
	baz=112								
I28M	Miner Creek	149.91	311	P		PKPbc	21 12 57.0	+0.1	
	baz=109								
SONM	Songino Array	149.96	90	PKP		PKPdf	21 12 51.5	-1.2	
	comp=Z,1.3nm,0.7s,baz=242,slow=2.4,SNR=6.7								
SONM				PKPbc		PKPbc	21 12 57.6	-0.1	
	comp=Z,23nm,0.9s,baz=223,slow=3.2,SNR=42								
SONM	Songino Array	149.96	90			PKPdf	21 12 52.0	-0.7	
SONM						PKPbc	21 12 57.6	-0.1	
E29M	Blow River	150.01	317	P		PKPbc	21 12 57.0	+0.1	
	baz=106,SNR=46								
M26K	Nabesna, AK	150.12	304	P		PKPbc	21 12 57.2	-0.3	
	baz=112								
BMRM	Bremner River	150.27	301	P		PKPbc	21 12 58.2	+0.4	
	baz=113								
ULN	Ulaanbaatar	150.32	91			PKPbc	21 12 58.0	-0.6	
Q23K	Middleton Isla	150.44	297	P		PKPbc	21 12 57.9	-0.2	
	baz=115								
L26K	Log Cabin Wild	150.49	305	P		PKPbc	21 12 58.4	+0.1	
	baz=111								
N25K	Chitina, Valde	150.51	302	P		PKPbc	21 12 58.6	+0.1	
	baz=112								
F28M	Old Crow	150.52	315	P		PKPbc	21 12 58.4	+0.2	
	baz=105								
D28M	Stokes Point	150.54	318	P		PKiKP	21 12 58.7	-0.2	
	baz=103								
NRIK	Noril'sk	150.56	42	PKPbc		PKPbc	21 12 58.4	+0.1	
	comp=Z,12nm,0.7s,baz=322,slow=0.7,SNR=10								
NRIK	Noril'sk	150.56	42			PKPbc	21 12 57.1	-1.1	
EYAK	Cordova Ski Ar	150.62	299	P		PKiKP	21 12 59.1	-0.2	
	baz=114								
I27K	Kandik River	150.62	310	P		PKPbc	21 12 58.6	0.0	
	baz=108,SNR=12								
E28M	Babbage River	150.65	317	P		PKPbc	21 12 58.1	-0.4	
	baz=104								
H27K	Steamboat Moun	150.77	312	P		PKPbc	21 12 58.8	-0.1	
	baz=106,SNR=53								
TLY	Talaya	150.84	82			PKPbc	21 12 59.5	0.0	
G27K	Doyon Strip	150.98	313	P		PKPbc	21 12 59.4	0.0	
	baz=105,SNR=11								
HARP	HAARP	151.05	303	P		PKPbc	21 12 59.7	+0.1	
	baz=111								
KLU	Klutina	151.06	301	P		PKPbc	21 12 59.7	0.0	
	baz=112								
SCRK	Sand Creek	151.08	307	P		PKPbc	21 12 59.7	-0.1	
	baz=109,SNR=31								
DL2	Dalian	151.12	119	PKPbc		PKPbc	21 13 00.1	-0.4	
P23K	Montague Islan	151.16	298	P		PKPbc	21 12 59.8	-0.1	
	baz=114								
D27M	Malcolm River	151.30	318	P		PKiKP	21 13 00.6	0.0	
	baz=102,SNR=34								
E27K	Coleen River	151.30	316	P		PKPbc	21 13 00.2	+0.1	
	baz=103,SNR=16								
GLI	Glacier Island	151.36	300	P		PKPbc	21 13 00.6	+0.2	
	baz=112								
RIDG	Independent Ri	151.37	306	P		PKiKP	21 13 00.9	0.0	
	baz=109								
M24K	Tolsona, Glenn	151.40	302	P		PKiKP	21 13 00.9	0.0	
	baz=111								
K24K	Donnelly Dome	151.78	306	P		PKiKP	21 13 01.7	+0.1	
	baz=108								
SCM	Sheep Creek Mo	151.81	301	P		PKPbc	21 13 01.6	+0.1	
	baz=110								
G26K	Porcupine Rive	151.83	313	P		PKiKP	21 13 01.5	-0.1	
	baz=104								
J25K	Salcha River,	151.85	308	P		PKiKP	21 13 01.8	0.0	
	baz=107								
M23K	Glacier View	151.97	301	P		PKiKP	21 13 02.1	0.0	
	baz=110								
INCN	Inchon	152.12	128			PKPbc	21 13 02.8	-0.1	
F26K	Sheenjek River	152.13	314	P		PKiKP	21 13 02.5	+0.2	
	baz=102,SNR=41								
SEW	Seward	152.15	297	P		PKiKP	21 13 02.3	-0.1	
	baz=112								
PRP	Porcupine Dome	152.16	309	P		PKiKP	21 13 02.7	+0.1	
	baz=105								
KNK	Knik Glacier	152.17	300	P		PKiKP	21 13 02.5	0.0	
	baz=111								
DHY	Denali Highway	152.24	304	P		PKPbc	21 13 02.5	0.0	
	baz=108								
WAT6	Susitna Watana	152.24	303	P		PKPbc	21 13 02.6	+0.1	
	baz=109								
SML	Sawmill	152.25	301	P		PKiKP	21 13 02.6	-0.1	
	baz=110								
C27K	Jago River	152.32	318	P		PKiKP	21 13 02.9	+0.3	
	baz=99								
O22K	Cooper Landing	152.41	298	P		PKPbc	21 13 02.9	+0.1	
	baz=112								
HDA	Harding Lake	152.45	307	P		PKiKP	21 13 03.2	+0.2	
	baz=106								
ILAR	Eielson Array	152.52	307	PKPbc		PKPbc	21 13 02.9	0.0	
	comp=Z,8.1nm,0.5s,baz=137,slow=3.3,SNR=81								
ILAR	Eielson Array	152.52	307			PKPbc	21 13 02.5	-0.4	
KSAR	Wonju Array Be	152.59	130			PKPbc	21 13 03.2	-0.7	
KSAR						PKPab	21 13 14.8	+0.2	
BRSE	Bradley Lake S	152.61	296	P		PKPbc	21 13 03.0	-0.3	
	baz=112								
KSRS	Korea Array	152.62	130	PKP		PKPdf	21 12 54.1	-2.7	
	comp=Z,0.6nm,0.5s,baz=201,slow=1.7,SNR=2.9								
KSRS				PKPbc		PKPbc	21 13 04.0	+0.1	
	comp=Z,4.0nm,0.6s,baz=195,slow=2.2,SNR=19								
RC01	Rabbit Creek A	152.63	299	P		PKPbc	21 13 03.4	+0.1	
	baz=110								
F25K	Christian Rive	152.67	314	P		PKiKP	21 13 03.4	0.0	
	baz=101,SNR=26								
G25K	Bearman Lake	152.68	312	P		PKiKP	21 13 03.6	+0.2	
	baz=102								
KDAK	Kodiak Island	152.70	291			PKPbc	21 13 03.2	-0.4	
KDAK	Kodiak Island	152.70	291	P		PKPbc	21 13 03.1	-0.4	
	baz=115								
E25K	Arctic Village	152.74	315	P		PKPbc	21 13 03.3	0.0	
	baz=100								
OHAK	Old Harbor	152.81	290	P		PKPbc	21 13 03.2	-0.5	
	baz=116								
POKR	Poker Plat Res	152.84	308	P		PKPbc	21 13 03.7	+0.1	
	baz=104								
SII	Sitkinak Islan	152.96	288	P		PKPbc	21 13 03.4	-0.7	
	baz=117								
MCK	McKinley	153.10	305	P		PKPbc	21 13 04.0	-0.3	
	baz=106								
H24K	Noodor Dome	153.19	310	P		PKPbc	21 13 04.0	-0.4	
	baz=103								
G24K	Hadweenzic Riv	153.20	311	P		PKPbc	21 13 04.3	0.0	
	baz=101								
D25K	Kavik River	153.21	317	P		PKPbc	21 13 04.1	-0.3	
	baz=97								
CUT	Chulitna	153.30	302	P		PKPbc	21 13 04.2	-0.5	
	baz=108								
NEA2	Nenana	153.38	307	P		PKPbc	21 13 04.4	-0.4	
	baz=104								
F24K	Squaw Lake	153.51	313	P		PKPbc	21 13 04.9	-0.2	
	baz=99								
L22K	Petersville	153.56	302	P		PKPbc	21 13 05.3	0.0	
	baz=107								
TRF	Thorofare Moun	153.61	304	P		PKPbc	21 13 05.1	-0.4	
	baz=106								
I23K	Minto, Yukon-K	153.64	308	P		PKiKP	21 13 05.4	+0.1	
	baz=103								
Q19K	Cape Douglas,	153.68	293	P		PKPbc	21 13 05.1	-0.6	
	baz=112								
SKT	Skwentna	153.74	300	P		PKPbc	21 13 05.5	-0.2	
	baz=108								
P19K	Oil Pt	153.75	295	P		PKPbc	21 13 05.4	-0.4	
	baz=111								
E24K	Your Creek	153.81	314	P		PKPbc	21 13 05.7	0.0	
	baz=98								
H23K	Yukon River	153.85	309	P		PKiKP	21 13 06.0	+0.1	
	baz=102								
D24K	Happy Valley	154.06	317	P		PKiKP	21 13 06.5	+0.3	
	baz=95								
G23K	Bananza Creek	154.20	311	P		PKiKP	21 13 06.7	0.0	
	baz=99								
E23K	Chandalar	154.23	314	P		PKPbc	21 13 06.5	-0.2	
	baz=97								
TOLK	Toolik Lake Re	154.28	316	P		PKiKP	21 13 07.1	+0.3	
	baz=96								
PPLA	Purkeypile	154.29	302	P		PKPbc	21 13 06.8	-0.2	
	baz=106								
COLD	Coldfoot	154.35	312	P		PKiKP	21 13 07.1	+0.2	
	baz=98								
CAST	Castle Rocks	154.38	303	P		PKiKP	21 13 07.1	+0.1	
	baz=104								
M20K	Styx River	154.43	299	P		PKPbc	21 13 07.0	-0.3	
	baz=107								
R17L	Mt. Peulik Vol	154.49	289	P		PKiKP	21 13 07.6	+0.2	
	baz=114								
Q17K	Contact Creek	154.51	290	P		PKPbc	21 13 07.1	-0.4	
	baz=113								
CHUM	Lake Minchumin	154.59	304	P		PKPbc	21 13 07.0	-0.3	
	baz=104								
H22K	Ishtalitna Cre	154.61	309	P		PKPbc	21 13 07.4	0.0	
	baz=100								
P18K	Big Mountain,	154.61	293	P		PKPbc	21 13 07.4	-0.2	
	baz=111								
D23K	Nanushuk River	154.71	316	P		PKiKP	21 13 07.7	+0.2	
	baz=94								
I21K	Tanana	154.73	307	P		PKiKP	21 13 07.7	+0.1	
	baz=101								
C23K	Itkillik River	154.73	318	P		PKiKP	21 13 07.9	+0.3	
	baz=92								
O18K	Koktuh Hills	154.76	294	P		PKPbc	21 13 07.2	-0.7	
	baz=110								
G22K	Bettles	154.81	311	P		PKiKP	21 13 07.9	+0.1	
	baz=98								
M19K	Big River Lodg	155.01	299	P		PKPdf	21 13 08.8	+9.2	
	baz=106								
Q16K	King Salmon	155.04	291	P		PKPdf	21 13 09.2	+10	
	baz=112								
F22K	John River	155.14	313	P		PKPdf	21 13 09.4	+10	
	baz=96								
K20K	Telida	155.24	303	P		PKPdf	21 13 09.9	+10	
	baz=103								
MJAR	Matsushiro Arr	155.35	147	PKP		PKPdf	21 13 01.4	+0.5	
	comp=Z,0.6nm,0.4s,baz=165,slow=2.8,SNR=4.9								
MJAR				PKPbc		pPKPdf	21 13 09.4	-5.1	
	comp=Z,2.3nm,0.7s,baz=165,slow=2.8,SNR=4.5								
MJAR				PKPab		PKPab	21 13 25.5	-0.9	
	comp=Z,1.7nm,0.7s,baz=173,slow=4.3,SNR=4.0								
MJAR	Matsushiro Arr	155.35	147			PKPdf	21 13 01.5	+0.7	
MJAR						pPKPdf	21 13 09.8	-4.7	
CN2	Changchun	156.75	117	PKP		PKPdf	21 13 03.2	+0.8	
HILR	Hailar Array B	157.96	100	PKPab		PKPab	21 13 38.0	+0.6	
	comp=Z,8.6nm,0.6s,baz=242,slow=3.1,SNR=7.0								
BNX	BinXian	159.13	117	⇓PKP		PKPdf	21 13 03.5	-1.8	
USRK	Ussuriysk Ar.	159.95	127	PKPab		PKPab	21 13 46.2	+0.1	
	comp=Z,2.3nm,0.5s,baz=190,slow=4.4,SNR=7.4								
PETK	Petropavlovsk-	174.01	200	PKP		PKPdf	21 13 15.7	-0.7	
	comp=Z,2.5nm,0.8s,baz=160,slow=6.2,SNR=3.9								
PETK				PKPab		PKPab	21 14 47.3	-0.5	
	comp=Z,6.4nm,0.8s,baz=166,slow=5.7,SNR=10								

IDC ***06*** *21:01:05.7±0.5, 12°.24N×140°.37E, h0km, mb4.4/25, mbtmp4.5/27, ML4.4/2, MS4.2/2/27, Error ellipse: s-maj=17.5km s-min=11.0km az=75.0*

BJI ***06*** *21:01:06.7, 12°.24N×140°.58E, h22km, mB5.0/10, mb4.5/37, Ms4.5/22, Ms7 4.4/23*

NEIC ***06*** *21:01:08.7±2.0, 12°.35N±0°.06×140°.40E±0°.09, h10km±1km, mb5.1/131, Error ellipse: s-maj=14.5km s-min=10.9km az=274.0*

GCMT ***06*** *21:01:10.7±0.3, 12°.14N±0°.03×140°.21E±0°.02, h18km±1km, MW5.0/85, Moment Tensor Solution. s6,c6; s85,c122; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.51±.41; Mθθ 0.08±.23; Mϕϕ 2.43±.24; Mrθ=0.68±.55; Mϕϕ 2.36±.12; Mθr 0.20±.42; Best double couple: M0 3.36400×10^16 NP1:φs 188.00000°, δ49.00000°, λ=-124.00000°. NP2: φs 54.00000°, δ52.00000°, λ=-57.00000°. Principal axes: T 3.8970, Plg2.0000°, Azm122.0000°; N -1.0650, Plg25.0000°, Azm213.0000°; P -2.8320, Plg65.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***06*** *21:01:17.7±1.2, 13°N±13°×14°0E±1°0, h95km±37km, M4.7/6, mB5.3/6, mb5.0/6, MLv4.6/1, Mw(mB)4.7/6*

ISC 06 21:01:11.6±0.3, 12°.23N±0°.04×140°.43E±0°.06, h35km, n360, σ1§42/306, mb4.9/101, MS4.2/35, 3C, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	Guam	4.53	72	Pn			Pn	21

comp=Z,280nm,17.5s
QIZ L L
comp=Z,490nm,22.0s
QIZ L L
comp=Z,550nm,22.9s
WHN Wuhan 30.24 311 P P 21 07 25.5 +6.3
WB0 Warramunga Arr 32.35 191 P **P** **21 07 39.3 +1.5**
WB0 IAmb IAmb 21 07 52.3
comp=Z,31nm,1.6s
WR8 Warramunga Arr 32.51 190 P **P** **21 07 41.0 +1.7**
WRA Warramunga Arr 32.53 191 P **P** **21 07 36.8 -2.6**
comp=Z,1.0nm,0.7s,baz=7.6,slow=8.7,SNR=4.7
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 32.53 191 P **P** **21 07 37.8 -1.6**
CTA Charters Tower 32.62 170 P **P** **21 07 39.5 -0.7**
comp=Z,6.8nm,0.9s,baz=349,slow=10,SNR=3.5
comp=Z,6.8nm,0.9s
CTAO Charters Tower 32.62 170 P **P** **21 07 44.1 +3.9**
CTAO IAmb IAmb 21 07 48.1
comp=Z,18nm,0.9s
FITZ Fitzroy Crossi 33.48 206 P **P** **21 07 49.6 +1.9**
HNS HongShan 34.04 322 ⇑P **P** **21 07 52.2 -0.2**
HNS *e*S **S** **21 13 22.0 +6.4**
HNS pmax pmax
comp=Z,13nm,0.8s
HNS L L
comp=Z,350nm,18.6s
HNS L L
comp=Z,450nm,18.4s
HNS L L
comp=Z,540nm,18.4s
GYA Guiyang 34.74 299 ⇑P **P** **21 08 01.3 +2.5**
GYA pmax pmax
comp=Z,8.0nm,1.2s
GYA pmax pmax
comp=Z,150nm,4.4s
GYA L L
comp=Z,320nm,12.7s
GYA L L
comp=Z,590nm,19.4s
GYA L L
comp=Z,530nm,24.8s
BJI2 Beijing 34.99 327 P **P** **21 08 00.2 -0.4**
BJI2 pmax pmax
comp=Z,2.0nm,0.8s
BJI2 L L
comp=Z,190nm,20.8s
BJI2 L L
comp=Z,150nm,18.2s
BJI2 L L
comp=Z,290nm,18.0s
BJT Baijiatuau 34.99 327 P **P** **21 08 00.2 -0.4**
BNX BinXian 35.19 344 ⇑P **P** **21 08 02.9 +0.6**
BNX pP **pP** **21 08 05.9 -5.5**
BNX PP **PnPn** **21 09 17.1 -3.5**
BNX S **S** **21 13 38.0 +4.8**
BNX sS **sS** **21 13 43.2 -4.7**
BNX pmax pmax
comp=Z,6.0nm,0.7s
BNX pmax pmax
comp=Z,190nm,7.1s
BNX L L
comp=Z,310nm,15.2s
BNX L L
comp=Z,300nm,12.5s
BNX L L
comp=Z,230nm,15.2s
XAN Xi'an 35.97 312 P **P** **21 08 08.1 -1.1**
XAN L L
comp=Z,180nm,16.5s
XAN L L
comp=Z,560nm,20.6s
XAN L L
comp=Z,690nm,18.8s
AS31 Alice Springs 36.24 190 P **P** **21 08 13.3 +1.7**
ASAR Alice Springs 36.24 190 P **P** **21 08 10.6 -1.0**
comp=Z,0.6nm,0.6s,baz=24,slow=11,SNR=6.6
ASAR PcP **PcP** **21 10 38.3 +1.9**
comp=Z,0.6nm,0.7s,baz=11,slow=1.9,SNR=1.7
ASAR LR LR 21 22 39.6
comp=Z,576nm,19.9s,baz=242,slow=36
comp=Z,0.6nm,0.6s
HHC Hu-ho-hao-te 38.13 324 *e*P **P** **21 08 27.3 -0.3**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,46nm,5.9s
CD2 Chengdu 38.60 305 P **P** **21 08 31.4 -0.2**
CD2 S **S** **21 14 29.0 +3.2**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 L L
comp=Z,340nm,8.3s
CD2 L L
comp=Z,380nm,13.3s
CD2 L L
comp=Z,450nm,17.1s
PZH PanZhiHua 38.99 297 P **P** **21 08 36.8 +1.8**
BTO2 Baotou 39.06 322 *e*P **P** **21 08 36.1 +0.7**
BTO2 sP **pP** **21 08 43.2 -1.2**
BTO2 PP **PnPn** **21 10 10.3 +2.4**
BTO2 S **S** **21 14 35.4 +2.9**
BTO2 pmax pmax
comp=Z,20nm,0.6s
BTO2 pmax pmax
comp=Z,330nm,4.5s
BTO2 L L
comp=Z,510nm,12.4s
BTO2 L L
comp=Z,440nm,12.4s
BTO2 L L
comp=Z,710nm,13.3s
HEH HeiHe 39.39 347 *e*P **P** **21 08 38.0 +0.2**
HEH pmax pmax
comp=Z,18nm,0.8s
HEH L L
comp=Z,220nm,20.9s
HEH L L
comp=Z,450nm,20.3s
HEH L L
comp=Z,290nm,20.6s
CM31 Chiang Mai Arr 40.42 284 P **P** **21 08 46.9 +0.1**
CMAR Chiang Mai Arr 40.42 284 P **P** **21 08 45.9 -0.9**
comp=Z,1.9nm,0.8s,baz=87,slow=6.9,SNR=14
CMAR PcP **PcP** **21 10 48.5 -1.1**
comp=Z,0.2nm,0.3s,baz=100,slow=3.5,SNR=1.4
CMAR LR LR 21 23 31.2
comp=Z,235nm,21.7s,baz=70,slow=33
comp=Z,1.9nm,0.8s
CMAR Chiang Mai Arr 40.42 284 P **P** **21 08 46.7 -0.2**
LZDM Lanzhou Array 40.65 312 LR LR 21 25 39.1
comp=Z,283nm,19.6s,baz=130,slow=36
DZM Mont Dzumac 42.58 143 P **P** **21 09 04.1 -0.5**
comp=Z,8.0nm,0.9s,baz=339,slow=16,SNR=3.7
comp=Z,8.0nm,0.9s
STKA Stephens Creek 43.87 179 P **P** **21 09 13.3 -1.3**
comp=Z,3.3nm,0.9s,baz=348,slow=8.1,SNR=8.2
comp=Z,3.3nm,0.9s
BBOO Buckleboo 44.98 185 P **P** **21 09 25.2 +1.7**
BBOO IAmb IAmb 21 10 48.7
comp=Z,32nm,1.5s
GTA2 Gaotai 45.00 314 P **P** **21 09 23.2 -0.7**
GTA2 sP pP 21 09 31.3 -1.7
GTA2 pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 45.15 328 P **P** **21 09 23.6 -1.3**
SONM Songino Array 45.47 328 P **P** **21 09 27.6 +0.1**
comp=Z,1.0nm,0.7s,baz=136,slow=4.0,SNR=6.5
SONM PcP **PcP** **21 11 05.4 -0.7**
comp=Z,1.1nm,0.8s,baz=132,slow=2.1,SNR=2.4
SONM LR LR 21 29 36.6
comp=Z,333nm,19.1s,baz=102,slow=38
comp=Z,1.0nm,0.7s
SONM Songino Array 45.47 328 P **P** **21 09 25.7 -1.7**
MORW Morawa 47.34 209 P P 21 09 46.7 +4.6
GOMU GeErMu 47.40 308 P **P** **21 09 42.0 -1.2**
GOMU pP pP 21 09 45.9 -6.4
GOMU pmax pmax
comp=Z,5.0nm,0.4s
MSVF Nonsavu 47.60 128 P **P** **21 09 44.8 +0.3**
comp=Z,3.7nm,0.3s,baz=271,slow=12,SNR=5.5
MSVF LR LR 21 27 45.5
comp=Z,246nm,19.3s,baz=275,slow=34
comp=Z,3.7nm,0.3s
MSVF Nonsavu 47.60 128 P **P** **21 09 45.8 +1.3**
MSVF IAmb IAmb 21 10 22.6
comp=Z,38nm,1.4s

SHEM Shemya Is, Ala 48.56 27 P **P** **21 09 50.8 -0.5**
comp=Z,24nm,0.6s,baz=315,slow=2.9,SNR=2.0
SHEM LR LR 21 27 57.0
comp=Z,158nm,21.4s,baz=178,slow=33
comp=Z,24nm,0.6s
SHEM Shemya Is, Ala 48.56 27 P **P** **21 09 50.5 -0.8**
TLY Talaya 49.30 331 LR LR 21 31 58.8
comp=Z,163nm,18.5s,baz=113,slow=38
TLY Talaya 49.30 331 P **P** **21 09 57.4 +0.3**
NWAO Narrogin (SRO) 50.07 206 P **P** **21 10 05.6 +2.4**
YAK Yakutsk 50.33 353 P **P** **21 10 04.3 -0.4**
KIWB Kanaga Island 52.21 32 P **P** **21 10 19.0 0.0**
KIWB IAmb IAmb 21 10 20.8
comp=Z,26nm,0.9s
ATKA Atka Island 53.95 33 P **P** **21 10 31.7 0.0**
ATKA IAmb IAmb 21 10 32.9
comp=Z,28nm,0.8s
AFI Afiamalu 54.02 117 LR LR 21 31 18.9
comp=Z,165nm,19.1s,baz=7.5,slow=34
WMQ Urumqi 54.99 315 *e*P **P** **21 10 41.7 +2.1**
WMQ L L
comp=Z,240nm,21.5s
UNV Unalaska Valle 58.83 34 P **P** **21 11 07.1 +0.6**
baz=246
MKAR Makanchi Array 59.51 317 P **P** **21 11 11.1 -0.3**
comp=Z,2.6nm,0.9s,baz=99,slow=7.4,SNR=17
MKAR LR LR 21 37 28.3
comp=Z,138nm,20.4s,baz=48,slow=37
comp=Z,2.6nm,0.9s
MKAR Makanchi Array 59.51 317 P **P** **21 11 10.9 -0.5**
MAKZ Makanchi 59.72 317 P **P** **21 11 10.9 -1.9**
HYB Hyderabad 59.83 283 *e*P **P** **21 11 13.6 -0.6**
HYB *e*S **S** **21 19 25.8 +2.0**
ZALV Zalesovo Beam 60.26 326 P **P** **21 11 15.0 -1.4**
comp=Z,2.0nm,0.5s,baz=114,slow=5.7,SNR=10
ZALV LR LR 21 38 34.1
comp=Z,181nm,18.5s,baz=115,slow=37
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 60.26 326 P **P** **21 11 15.0 -1.4**
PDGK Podgornoye 60.63 313 P **P** **21 11 18.9 -0.5**
M11K Mekoryuk 61.81 27 P **P** **21 11 27.8 +1.0**
baz=243
SDPT Sand Point 62.64 33 P **P** **21 11 33.1 +0.7**
baz=251
KURK Kurchatov 62.87 321 P **P** **21 11 33.4 -0.6**
KURK IAmb IAmb 21 11 42.6
comp=Z,8.9nm,0.8s
KURBB Kurchatov Arra 62.90 321 P **P** **21 11 33.9 -0.4**
comp=Z,5.4nm,0.6s,baz=105,slow=7.0,SNR=63
comp=Z,5.4nm,0.6s
KSH2 Kashi 62.92 308 P P 21 11 42.1 +7.3
KSH2 pmax pmax
comp=Z,3.0nm,0.5s
M13K Dall Lake 63.10 28 P **P** **21 11 36.9 +1.5**
baz=246
K13K Kusilvak Mount 63.18 26 P **P** **21 11 36.5 +0.6**
K13K IAmb IAmb 21 11 38.0
comp=Z,7.8nm,0.8s
K13K Kusilvak Mount 63.18 26 P **P** **21 11 37.1 +1.2**
baz=244
O14K Tigyukauivet M 63.61 29 P **P** **21 11 39.8 +1.0**
baz=248
TNA Tin City 63.66 21 P **P** **21 11 40.2 +1.2**
baz=239
N14K Kuskokwak Cree 63.67 28 P **P** **21 11 38.8 -0.3**
N14K Kuskokwak Cree 63.67 28 P **P** **21 11 40.2 +1.1**
baz=248
L14K Kuka Creek 63.78 27 P **P** **21 11 40.1 +0.3**
L14K IAmb IAmb 21 11 41.9
comp=Z,10nm,0.8s
L14K Kuka Creek 63.78 27 P **P** **21 11 40.9 +1.0**
baz=246
F14K Arctic Creek 64.18 22 P **P** **21 11 43.3 +0.9**
baz=241
O15K Ungalikthiuk R 64.27 30 P **P** **21 11 44.2 +1.0**
baz=250
NIL Nilore 64.38 301 P **P** **21 11 43.7 -0.8**
NIL IAmb IAmb 21 12 03.2
comp=Z,28nm,1.3s
M15K Kasigluk River 64.42 28 P **P** **21 11 45.0 +0.9**
baz=248
L15K Ungalak Mounta 64.44 27 P **P** **21 11 45.1 +0.9**
baz=247
N15K Kwethluk River 64.50 28 P **P** **21 11 46.0 +1.3**
baz=249
F15K North Star Dit 64.91 22 P **P** **21 11 48.5 +1.3**
baz=242
ARSB Arslanbob 65.11 310 P **P** **21 11 48.4 -0.8**
P16K Nushagak River 65.12 30 P **P** **21 11 49.7 +1.1**
baz=252
O16K Kokwok River B 65.25 29 P **P** **21 11 50.3 +0.8**
baz=251
M16K Timber Creek 65.33 28 P **P** **21 11 50.7 +0.7**
baz=250
L16K Owhat River 65.34 27 P **P** **21 11 50.5 +0.5**
baz=249
H16K Elim 65.34 24 P **P** **21 11 50.7 +0.7**
baz=245
J16K Anvik River 65.45 25 P **P** **21 11 50.0 -0.8**
J16K IAmb IAmb 21 12 01.8
comp=Z,36nm,1.6s
J16K Anvik River 65.45 25 P **P** **21 11 51.7 +1.0**
baz=247
I17K Unalakleet 65.65 25 P **P** **21 11 53.0 +1.0**
baz=247
Q16K King Salmon 65.67 31 P **P** **21 11 53.4 +1.2**
baz=253
O17K Koliganek Bris 65.79 29 P **P** **21 11 53.9 +0.9**
baz=252
MANEM Manem 65.84 306 P **P** **21 11 52.8 -1.3**
MANEM IAmb IAmb 21 12 08.4
comp=Z,18nm,0.7s
C16K Lisburne Hills 65.91 19 P **P** **21 11 54.4 +0.8**
baz=240
P17K Kvichak River 65.93 30 P **P** **21 11 54.3 +0.4**
baz=253
Q17K Contact Creek 65.94 31 P **P** **21 11 54.9 +0.8**
baz=254
N17K Nushagak Hills 65.98 29 P **P** **21 11 55.1 +0.9**
baz=252
L17K Donlin 66.01 27 P **P** **21 11 55.7 +1.3**
baz=250
NRIK Noril'sk 66.04 342 P **P** **21 11 54.5 +0.1**
comp=Z,5.6nm,0.9s,baz=37,slow=3.5,SNR=4.2
NRIK LR LR 21 42 22.2
comp=Z,155nm,18.1s,baz=134,slow=38
comp=Z,5.6nm,0.9s
NRIK Noril'sk 66.04 342 P **P** **21 11 54.5 +0.1**
NRIK IAmb IAmb 21 12 59.3
comp=Z,14nm,0.8s
J17K VABM Dome 66.13 25 IAmb IAmb 21 11 58.2
comp=Z,11nm,1.0s
J17K VABM Dome 66.13 25 P **P** **21 11 56.6 +1.4**
baz=249
M17K Holitna River 66.15 28 IAmb IAmb 21 11 57.5
comp=Z,12nm,0.9s
M17K Holitna River 66.15 28 P **P** **21 11 56.8 +1.5**
baz=251
K17K Iditarod 66.21 26 P **P** **21 11 55.6 -0.1**
K17K IAmb IAmb 21 11 57.5
comp=Z,9.3nm,0.9s
K17K Iditarod 66.21 26 P **P** **21 11 57.0 +1.3**
baz=250
G17K Kiwalik Mounta 66.31 23 P **P** **21 11 57.8 +1.5**
baz=246,SNR=6.0
H17K Granite Mounta 66.37 24 IAmb IAmb 21 11 58.9
comp=Z,9.4nm,0.9s
H17K Granite Mounta 66.37 24 P **P** **21 11 57.9 +1.2**
baz=247
D17K Noatak River 66.39 20 P **P** **21 11 57.8 +1.1**
baz=243
F17K Baldwin Pennin 66.48 22 P **P** **21 11 59.0 +1.7**
baz=245
E17K Hotham Inlet 66.55 21 P **P** **21 11 58.9 +1.2**
baz=244
P18K Big Mountain, 66.58 30 P **P** **21 11 59.1 +1.0**
baz=254
RDOG Red Dog Mine 66.61 20 P **P** **21 11 59.2 +1.1**
baz=243
N18K Kilae Creek 66.64 29 P **P** **21 11 59.4 +1.0**
baz=253
C17K DeLong Mountai 66.71 20 P **P** **21 11 59.9 +1.0**
baz=243
O18K Koktuh Hills 66.72 30 IAmb IAmb 21 12 00.6
comp=Z,8.1nm,0.8s
O18K Koktuh Hills 66.72 30 P **P** **21 12 00.1 +1.1**
baz=254

L18K Granite Mounta 66.75 27 P **P** **21 12 00.2 +1.1**
baz=252
M18K Stony River 66.91 28 P **P** **21 12 01.3 +1.1**
baz=253
OHAK Old Harbor 67.01 33 P **P** **21 12 01.9 +1.1**
baz=257
H18K Honhosa River 67.06 24 P **P** **21 12 01.8 +0.7**
baz=249
E18K Tukpahlearik C 67.12 21 P **P** **21 12 01.7 +0.3**
E18K IAmb IAmb 21 12 03.9
comp=Z,9.7nm,0.9s
E18K Tukpahlearik C 67.12 21 P **P** **21 12 03.5 +2.1**
baz=246,SNR=6.7
F18K Selawik 67.13 22 P **P** **21 12 02.7 +1.2**
baz=247
G18K Tagagawik 67.23 23 IAmb IAmb 21 12 04.1
comp=Z,12nm,0.9s
G18K Tagagawik 67.23 23 P **P** **21 12 03.1 +1.0**
baz=248,SNR=10
O19K Port Alsworth 67.24 29 P **P** **21 12 03.1 +0.8**
baz=255
Q19K Cape Douglas, 67.25 31 P **P** **21 12 02.5 +0.1**
baz=256
N19K Bonanza Creek 67.34 29 IAmb IAmb 21 12 05.2
comp=Z,6.7nm,0.8s
N19K Bonanza Creek 67.34 29 P **P** **21 12 03.8 +0.8**
baz=254
C18K Utukok River 67.44 20 P **P** **21 12 04.3 +0.8**
baz=245
RAR Rarotonga 67.47 119 LR LR 21 35 35.6
comp=Z,89nm,20.2s,baz=276,slow=31
GCSA Galena City Sc 67.51 24 P **P** **21 12 04.8 +0.9**
baz=250
KDAK Kodiak Island 67.51 32 LR LR 21 38 18.0
comp=Z,80nm,21.0s,baz=224,slow=33
KDAK Kodiak Island 67.51 32 P **P** **21 12 04.8 +0.7**
baz=257
L19K White Mountain 67.56 27 P **P** **21 12 04.9 +0.6**
baz=253
P19K Oil Pt 67.63 30 P **P** **21 12 05.5 +0.6**
baz=256
M19K Big River Lodg 67.69 28 P **P** **21 12 05.6 +0.5**
baz=254
J19K Poorman 67.78 25 P **P** **21 12 05.5 -0.1**
J19K Poorman 67.78 25 P **P** **21 12 07.0 +1.4**
baz=252,SNR=6.0
F19K Shaleruckik Mo 67.91 22 P **P** **21 12 06.9 +0.5**
baz=249
G19K Purcell Mounta 67.91 23 IAmb IAmb 21 12 08.5
comp=Z,16nm,0.8s
G19K Purcell Mounta 67.91 23 P **P** **21 12 07.7 +1.2**
baz=250,SNR=17
H19K Roundabout Mou 67.95 24 IAmb IAmb 21 12 09.8
comp=Z,12nm,0.8s
H19K Roundabout Mou 67.95 24 P **P** **21 12 08.0 +1.4**
baz=250,SNR=12
O20K Slope Mountain 68.03 30 P **P** **21 12 08.3 +0.9**
baz=256
A19K Wainwright 68.17 18 P **P** **21 12 08.9 +1.0**
baz=244
C19K Lookout Ridge 68.17 20 P **P** **21 12 09.7 +1.6**
baz=246,SNR=5.0
K20K Telida 68.24 26 P **P** **21 12 10.3 +1.7**
baz=254,SNR=5.1
M20K Styx River 68.25 28 P **P** **21 12 10.0 +1.2**
baz=255
BVAR Borovoye Array 68.33 322 P **P** **21 12 09.1 -0.2**
comp=Z,5.4nm,0.7s,baz=101,slow=7.7,SNR=22
comp=Z,5.4nm,0.7s
E19K Redstone River 68.33 22 IAmb IAmb 21 12 11.4
comp=Z,10nm,0.8s
E19K Redstone River 68.33 22 P **P** **21 12 10.4 +1.4**
baz=249,SNR=11
BORK Borovoye 68.37 322 P **P** **21 12 08.6 -1.0**
BORK IAmb IAmb 21 12 12.7
comp=Z,7.0nm,0.8s
D19K Kuna River 68.41 20 IAmb IAmb 21 12 11.7
comp=Z,12nm,0.9s
D19K Kuna River 68.41 20 P **P** **21 12 10.8 +1.2**
baz=248,SNR=7.8
HOM Homer 68.42 30 P **P** **21 12 11.4 +1.7**
baz=257
J20K Nowinta River 68.45 25 IAmb IAmb 21 12 11.7
comp=Z,8.7nm,0.8s
J20K Nowinta River 68.45 25 P **P** **21 12 11.3 +1.4**
baz=253,SNR=10
I20K Naaghedeneel 68.50 25 P **P** **21 12 11.6 +1.5**
baz=253
SPCR Spurr Chakacha 68.51 29 P **P** **21 12 11.7 +1.4**
baz=256
H20K Anotleneega Mo 68.55 24 P **P** **21 12 11.8 +1.3**
baz=252,SNR=7.3
F20K Avaraart Lake 68.74 22 P **P** **21 12 13.0 +1.5**
baz=251,SNR=6.0
BRSE Bradley Lake S 68.88 30 P **P** **21 12 13.5 +0.9**
baz=258
PPLA Purkeypile 68.94 27 P **P** **21 12 13.6 +0.5**
baz=256
E20K Nigu River 68.99 21 P **P** **21 12 14.6 +1.4**
baz=250,SNR=9.4
D20K Etivluk River 69.01 20 P **P** **21 12 14.2 +1.0**
D20K IAmb IAmb 21 12 15.0
comp=Z,17nm,0.8s
D20K Etivluk River 69.01 20 P **P** **21 12 14.6 +1.3**
baz=249,SNR=11
SKT Skwentna 69.01 28 P **P** **21 12 13.8 +0.4**
baz=256
CAST Castle Rocks 69.12 26 IAmb IAmb 21 12 15.7
comp=Z,8.4nm,0.8s
CAST Castle Rocks 69.12 26 P **P** **21 12 14.8 +0.7**
baz=255,SNR=15
CHUM Lake Minchumin 69.14 26 P **P** **21 12 15.6 +1.5**
baz=255,SNR=5.1
B20K Meade River 69.31 19 P **P** **21 12 16.2 +1.2**
baz=248
G21K Allakaket 69.40 23 P **P** **21 12 16.9 +1.2**
baz=253
H21K Melozitna Rive 69.43 24 P **P** **21 12 17.3 +1.4**
baz=254,SNR=9.8
L22K Petersville 69.49 27 IAmb IAmb 21 13 07.1
comp=Z,11nm,0.6s
L22K Petersville 69.49 27 P **P** **21 12 16.2 -0.2**
baz=257,SNR=7.2
O22K Cooper Landing 69.53 30 P **P** **21 12 17.8 +1.2**
baz=259
SEW Seward 69.59 30 P **P** **21 12 18.1 +1.2**
baz=259
F21K Alatna River 69.62 22 P **P** **21 12 18.4 +1.3**
baz=253,SNR=6.5
I21K Tanana 69.63 25 IAmb IAmb 21 12 19.4
comp=Z,10nm,0.9s
I21K Tanana 69.63 25 P **P** **21 12 18.9 +1.8**
baz=255,SNR=10
CUT Chulitna 69.69 28 P **P** **21 12 19.0 +1.5**
baz=257
C21K Knifeblade Rid 69.78 20 P **P** **21 12 19.3 +1.3**
baz=251
E21K Killik River 69.83 21 IAmb IAmb 21 13 12.6
comp=Z,7.3nm,0.8s
E21K Killik River 69.83 21 P **P** **21 12 19.5 +1.2**
baz=252,SNR=7.2
TRF Thorofare Moun 69.91 27 IAmb IAmb 21 13 06.6
comp=Z,9.8nm,0.9s
TRF Thorofare Moun 69.91 27 P **P** **21 12 19.8 +0.7**
baz=257
A21K Barrow 69.97 18 P **P** **21 12 20.5 +1.4**
baz=248
B21K Ikpikpuk River 70.00 20 P **P** **21 12 20.1 +0.9**
baz=251
PMR Palmer 70.04 29 P **P** **21 12 20.6 +0.9**
baz=259
H22K Ishtalitna Cre 70.06 24 P **P** **21 12 20.1 +0.3**
H22K Ishtalitna Cre 70.06 24 P **P** **21 12 21.2 +1.4**
baz=255,SNR=7.9
MLY Manley 70.10 25 IAmb IAmb 21 12 21.5
comp=Z,8.5nm,0.7s
MLY Manley 70.10 25 P **P** **21 12 21.1 +1.0**
baz=256,SNR=18
F22K John River 70.19 22 P **P** **21 12 22.1 +1.5**
baz=254,SNR=21
G22K Bettles 70.28 23 P **P** **21 12 22.1 +1.1**
baz=255,SNR=6.9
KNK Knik Glacier 70.32 29 P **P** **21 12 22.2 +0.8**
baz=260
SML Sawmill 70.45 29 IAmb IAmb 21 13 31.8
comp=Z,13nm,0.8s
SML Sawmill 70.45 29 P **P** **21 12 23.2 +0.8**
baz=259

RND	**Reindeer**	**70.53**	**27**	IAmb	IAmb	21 13 05.6
	comp=Z,14nm,0.7s					
WAT1	**Susitna Watana**	**70.55**	**27**	P	**P**	**21 12 23.4 +0.5**
	baz=259					
MCK	**McKinley**	**70.56**	**26**	P	**P**	**21 12 22.7 -0.2**
MCK				IAmb	IAmb	21 13 06.1
	comp=Z,16nm,0.6s					
MCK	**McKinley**	**70.56**	**26**	P	**P**	**21 12 23.7 +0.7**
	baz=258					
P23K	**Montague Islan**	**70.58**	**30**	P	**P**	**21 12 24.3 +1.3**
	baz=261					
B22K	**Teshekpuk Lake**	**70.62**	**19**	P	**P**	**21 12 23.7 +0.7**
	baz=252					
NEA2	**Nenana**	**70.69**	**26**	IAmb	IAmb	21 13 05.6
	comp=Z,9.3nm,0.6s					
NEA2	**Nenana**	**70.69**	**26**	P	**P**	**21 12 24.6 +1.0**
	baz=258					
I23K	**Minto, Yukon-K**	**70.69**	**25**	IAmb	IAmb	21 12 25.1
	comp=Z,12nm,1.1s					
I23K	**Minto, Yukon-K**	**70.69**	**25**	P	**P**	**21 12 25.0 +1.4**
	baz=257,SNR=9.4					
M23K	**Glacier View**	**70.73**	**29**	P	**P**	**21 12 25.0 +1.0**
	baz=260					
H23K	**Yukon River**	**70.77**	**24**	P	**P**	**21 12 25.4 +1.3**
	baz=257					
G23K	**Bananza Creek**	**70.79**	**23**	IAmb	IAmb	21 13 08.8
	comp=Z,10nm,0.7s					
G23K	**Bananza Creek**	**70.79**	**23**	P	**P**	**21 12 25.8 +1.5**
	baz=256,SNR=14					
COLD	**Coldfoot**	**70.85**	**23**	P	**P**	**21 12 25.2 +0.6**
COLD				IAmb	IAmb	21 13 08.7
	comp=Z,12nm,0.8s					
COLD	**Coldfoot**	**70.85**	**23**	P	**P**	**21 12 26.1 +1.6**
	baz=256,SNR=18					
WAT6	**Susitna Watana**	**70.87**	**28**	P	**P**	**21 12 25.2 +0.2**
	baz=260,SNR=6.3					
GLI	**Glacier Island**	**70.88**	**30**	IAmb	IAmb	21 13 36.2
	comp=Z,24nm,1.3s					
GLI	**Glacier Island**	**70.88**	**30**	P	**P**	**21 12 25.5 +0.7**
	baz=261					
SCM	**Sheep Creek Mo**	**70.93**	**29**	IAmb	IAmb	21 13 27.0
	comp=Z,17nm,0.9s					
SCM	**Sheep Creek Mo**	**70.93**	**29**	P	**P**	**21 12 26.5 +1.2**
	baz=260,SNR=8.3					
DHY	**Denali Highway**	**71.12**	**27**	IAmb	IAmb	21 13 22.1
	comp=Z,12nm,0.8s					
DHY	**Denali Highway**	**71.12**	**27**	P	**P**	**21 12 27.4 +0.9**
	baz=260					
D23K	**Nanushuk River**	**71.13**	**21**	IAmb	IAmb	21 12 28.6
	comp=Z,11nm,0.9s					
D23K	**Nanushuk River**	**71.13**	**21**	P	**P**	**21 12 27.8 +1.5**
	baz=255,SNR=7.6					
FID	**Port Fidalgo**	**71.16**	**30**	P	**P**	**21 12 26.0 -0.5**
FID				IAmb	IAmb	21 13 01.1
	comp=Z,15nm,0.6s					
CCB	**Clear Creek Bu**	**71.23**	**26**	IAmb	IAmb	21 13 04.5
	comp=Z,14nm,0.6s					
E23K	**Chandalar**	**71.28**	**22**	P	**P**	**21 12 27.7 +0.4**
E23K				IAmb	IAmb	21 12 30.0
	comp=Z,20nm,0.8s					
E23K	**Chandalar**	**71.28**	**22**	P	**P**	**21 12 29.1 +1.8**
	baz=256,SNR=26					
C23K	**Itkillik River**	**71.39**	**20**	P	**P**	**21 12 29.1 +1.4**
	baz=254,SNR=11					
TOLK	**Toolik Lake Re**	**71.44**	**21**	P	**P**	**21 12 29.6 +1.4**
	baz=256,SNR=13					
H24K	**Noodor Dome**	**71.44**	**24**	P	**P**	**21 12 30.2 +1.9**
	baz=258,SNR=7.7					
EYAK	**Cordova Ski Ar**	**71.48**	**30**	P	**P**	**21 12 30.0 +1.5**
	baz=262					
M24K	**Tolsona, Glenn**	**71.51**	**28**	P	**P**	**21 12 30.1 +1.4**
	baz=261					
KLU	**Klutina**	**71.53**	**29**	P	**P**	**21 12 29.9 +0.9**
	baz=262,SNR=6.4					
HDA	**Harding Lake**	**71.55**	**26**	IAmb	IAmb	21 13 04.8
	comp=Z,10nm,0.8s					
HDA	**Harding Lake**	**71.55**	**26**	P	**P**	**21 12 28.2 -0.6**
	baz=260,SNR=6.5					
IL31		**71.65**	**26**	IAmb	IAmb	21 13 06.6
	comp=Z,14nm,0.9s					
ILAR	**Eielson Array**	**71.65**	**26**	P	**P**	**21 12 28.4 -1.0**
	comp=Z,5.2nm,0.7s,baz=253,slow=5.8,SNR=55					
	comp=Z,5.2nm,0.7s					
ILAR	**Eielson Array**	**71.65**	**26**	P	**P**	**21 12 28.3 -1.1**
E24K	**Your Creek**	**71.69**	**22**	IAmb	IAmb	21 13 07.7
	comp=Z,12nm,0.6s					
E24K	**Your Creek**	**71.69**	**22**	P	**P**	**21 12 31.1 +1.4**
	baz=257,SNR=8.8					
G24K	**Hadweenzic Riv**	**71.78**	**23**	IAmb	IAmb	21 13 06.5
	comp=Z,17nm,0.8s					
G24K	**Hadweenzic Riv**	**71.78**	**23**	P	**P**	**21 12 31.6 +1.4**
	baz=259,SNR=13					
F24K	**Squaw Lake**	**71.79**	**23**	IAmb	IAmb	21 13 21.0
	comp=Z,10nm,0.8s					
F24K	**Squaw Lake**	**71.79**	**23**	P	**P**	**21 12 31.9 +1.6**
	baz=258,SNR=12					
D24K	**Happy Valley**	**71.83**	**21**	P	**P**	**21 12 31.7 +1.3**
	baz=256,SNR=14					
K24K	**Donnelly Dome**	**71.96**	**27**	P	**P**	**21 12 32.0 +0.6**
	baz=261					
HARP	**HAARP**	**72.03**	**28**	P	**P**	**21 12 32.5 +0.7**
	baz=262					
KAIM	**Kayak Island**	**72.06**	**31**	P	**P**	**21 12 32.9 +0.9**
	baz=264					
BMRM	**Bremner River**	**72.09**	**30**	IAmb	IAmb	21 13 31.2
	comp=Z,24nm,1.0s					
BMRM	**Bremner River**	**72.09**	**30**	P	**P**	**21 12 32.9 +0.6**
	baz=263					
N25K	**Chitina, Valde**	**72.18**	**29**	P	**P**	**21 12 33.2 +0.4**
	baz=263					
J25K	**Salcha River,**	**72.26**	**26**	IAmb	IAmb	21 13 03.3
	comp=Z,12nm,0.7s					
J25K	**Salcha River,**	**72.26**	**26**	P	**P**	**21 12 33.9 +0.7**
	baz=261					
G25K	**Bearman Lake**	**72.33**	**24**	P	**P**	**21 12 34.6 +1.1**
	baz=260					
PRP	**Porcupine Dome**	**72.34**	**25**	P	**P**	**21 12 33.8 0.0**
	baz=261					
RIDG	**Independent Ri**	**72.36**	**27**	P	**P**	**21 12 33.3 -0.5**
RIDG	**Independent Ri**	**72.36**	**27**	P	**P**	**21 12 34.6 +0.8**
	baz=262,SNR=9.7					
GLB	**Gilahina Butte**	**72.53**	**29**	IAmb	IAmb	21 13 29.9
	comp=Z,30nm,1.4s					
F25K	**Christian Rive**	**72.65**	**23**	IAmb	IAmb	21 13 05.3
	comp=Z,18nm,0.8s					
F25K	**Christian Rive**	**72.65**	**23**	P	**P**	**21 12 37.4 +1.9**
	baz=260,SNR=15					
D25K	**Kavik River**	**72.71**	**21**	P	**P**	**21 12 35.3 -0.5**
D25K				IAmb	IAmb	21 13 05.0
	comp=Z,19nm,0.8s					
D25K	**Kavik River**	**72.71**	**21**	P	**P**	**21 12 37.1 +1.3**
	baz=259					
SCRK	**Sand Creek**	**72.77**	**27**	P	**P**	**21 12 37.1 +0.8**
	baz=263					
E25K	**Arctic Village**	**72.78**	**22**	P	**P**	**21 12 37.6 +1.5**
	baz=260,SNR=7.0					
CRQE	**Cirque**	**72.81**	**30**	P	**P**	**21 12 37.6 +1.0**
	baz=264					
MCARA	**McCarthy VSAT**	**72.90**	**29**	P	**P**	**21 12 38.1 +1.1**
	baz=264					
L26K	**Log Cabin Wild**	**72.93**	**28**	IAmb	IAmb	21 12 59.8
	comp=Z,14nm,0.6s					
L26K	**Log Cabin Wild**	**72.93**	**28**	P	**P**	**21 12 38.3 +1.1**
	baz=264					
M26K	**Nabesna, AK**	**73.02**	**28**	P	**P**	**21 12 39.1 +1.4**
	baz=264					
F26K	**Sheenjek River**	**73.23**	**23**	P	**P**	**21 12 40.6 +1.7**
	baz=261,SNR=17					
G26K	**Porcupine Rive**	**73.26**	**23**	P	**P**	**21 12 40.4 +1.5**
	baz=262					
GRNC	**Granite Creek**	**73.46**	**30**	IAmb	IAmb	21 12 56.1
	comp=Z,14nm,0.7s					
M27K	**Edge Creek, AK**	**73.54**	**28**	P	**P**	**21 12 40.7 -0.2**
M27K				IAmb	IAmb	21 12 57.5
	comp=Z,19nm,0.7s					
M27K	**Edge Creek, AK**	**73.54**	**28**	P	**P**	**21 12 42.2 +1.3**
	baz=265					
L27K	**Beaver Creek,**	**73.62**	**28**	IAmb	IAmb	21 12 58.1
	comp=Z,19nm,0.7s					
L27K	**Beaver Creek,**	**73.62**	**28**	P	**P**	**21 12 42.6 +1.3**
	baz=265					
BCAR	**Beaver Creek A**	**73.64**	**28**	P	**P**	**21 12 41.2 -0.2**
C27K	**Jago River**	**73.69**	**21**	P	**P**	**21 12 42.5 +0.9**
	baz=261					
I27K	**Kandik River**	**73.97**	**25**	IAmb	IAmb	21 13 16.2
	comp=Z,28nm,0.9s					
I27K	**Kandik River**	**73.97**	**25**	P	**P**	**21 12 44.2 +0.9**
	baz=264					

BVCY	**Beaver Creek**	**74.02**	**28**	P	**P**	**21 12 44.5 +1.0**
	baz=266					
H27K	**Steamboat Moun**	**74.07**	**24**	P	**P**	**21 12 45.5 +1.7**
	baz=264					
G27K	**Doyon Strip**	**74.08**	**24**	P	**P**	**21 12 45.1 +1.3**
	baz=264					
YUK3	**Moose Creek**	**74.16**	**29**	P	**P**	**21 12 45.7 +1.1**
	baz=266					
PINM	**Pinnacle**	**74.16**	**31**	P	**P**	**21 12 45.7 +1.2**
	baz=267					
O28M	**Mount Upton**	**74.23**	**30**	IAmb	IAmb	21 12 56.1
	comp=Z,17nm,0.7s					
O28M	**Mount Upton**	**74.23**	**30**	P	**P**	**21 12 46.4 +1.2**
	baz=267					
E27K	**Coleen River**	**74.25**	**22**	P	**P**	**21 12 46.5 +1.6**
	baz=264					
YUK8	**Steele Glacier**	**74.46**	**30**	P	**P**	**21 12 47.6 +1.1**
	baz=267					
D27M	**Malcolm River**	**74.60**	**21**	P	**P**	**21 12 47.9 +1.0**
	baz=264					
I28M	**Miner Creek**	**74.65**	**25**	P	**P**	**21 12 48.5 +1.2**
	baz=266					
DAWY	**Dawson**	**74.79**	**27**	P	**P**	**21 12 48.5 +0.4**
DAWY				IAmb	IAmb	21 12 56.0
	comp=Z,19nm,1.0s					
DAWY	**Dawson**	**74.79**	**27**	P	**P**	**21 12 49.5 +1.5**
	baz=267					
BRWY	**Burwash Landin**	**74.82**	**29**	P	**P**	**21 12 49.7 +1.4**
	baz=268					
F28M	**Old Crow**	**74.85**	**23**	P	**P**	**21 12 49.6 +1.3**
	baz=265					
E28M	**Babbage River**	**75.06**	**22**	P	**P**	**21 12 50.5 +1.0**
	baz=266					
PPT2	**Papeete2**	**75.18**	**112**	eLR	LR	21 35 56.0
	comp=Z,524nm,27.5s					
PPT2				eLR	LR	21 35 58.1
	comp=Z,336nm,29.2s					
ARTI	**Arti**	**75.51**	**325**	P	**P**	**21 12 50.8 -1.5**
	comp=Z,4.2nm,0.9s,baz=94,slow=1.5,SNR=5.0					
ARTI				LR	LR	21 48 04.5
	comp=Z,307nm,19.3s,baz=113,slow=37					
	comp=Z,4.2nm,0.9s					
G29M	**Pine Creek**	**75.52**	**24**	P	**P**	**21 12 52.6 +0.5**
SKAG	**Skagway**	**76.64**	**31**	P	**P**	**21 13 00.3 +1.6**
	baz=272					
WHY	**Whitehorse**	**76.83**	**30**	P	**P**	**21 13 01.0 +1.1**
	baz=272					
TBI	**Tubuai**	**77.13**	**118**	eLQ	LQ	21 33 35.5
	comp=Z,2µm,26.5s					
TBI				eLR	LR	21 36 50.3
	comp=Z,2µm,27.0s					
P32M	**Atlin**	**77.46**	**31**	P	**P**	**21 13 04.6 +1.3**
	baz=273					
U33K	**Whale Pass**	**77.98**	**35**	P	**P**	**21 13 07.8 +1.7**
	baz=274					
CRAG	**Craig**	**78.02**	**36**	P	**P**	**21 13 07.7 +1.3**
	baz=274					
Q32M	**Nakina River**	**78.24**	**32**	P	**P**	**21 13 08.7 +0.8**
	baz=274					
WRAK	**Wrangell Islan**	**78.39**	**35**	P	**P**	**21 13 09.4 +1.0**
	baz=275					
MMPY	**Sheldon Lake,**	**78.46**	**28**	P	**P**	**21 13 09.7 +0.9**
	baz=274					
R33M	**Jennings River**	**78.87**	**31**	P	**P**	**21 13 12.3 +1.0**
	baz=275					
S34M	**Telegraph Cree**	**78.92**	**33**	P	**P**	**21 13 12.4 +1.1**
	baz=276					
DLBC	**Dease Lake**	**79.45**	**32**	P	**P**	**21 13 15.6 +1.2**
	baz=276					
T35M	**Bob Quinn**	**79.48**	**34**	P	**P**	**21 13 15.4 +0.9**
	baz=276					
KIRV	**Kirov**	**80.20**	**328**	LR	LR	21 51 44.9
	comp=Z,290nm,18.4s,baz=108,slow=38					
LIRD	**Liard River Hi**	**81.34**	**31**	P	**P**	**21 13 25.3 +0.9**
	baz=280					
TAOE	**Nuku Hiva Isla**	**81.65**	**101**	eLR	LR	21 38 15.2
	comp=Z,555nm,24.4s					
BELG	**Belogornoye**	**82.13**	**322**	P	**P**	**21 13 28.1 -0.5**
	comp=Z,11nm,0.8s,baz=131,slow=0.9,SNR=4.2					
	comp=Z,11nm,0.8s					
YKA	**Yellowknife Ar**	**86.03**	**27**	P	**P**	**21 13 48.4 +0.1**
	comp=Z,3nm,0.8s,baz=286,slow=4.6,SNR=4.1					
	comp=Z,3.3nm,0.8s					
YKA	**Yellowknife Ar**	**86.03**	**27**	P	**P**	**21 13 47.6 -0.8**
GNI	**Garni**	**86.51**	**310**	LR	LR	21 57 25.2
	comp=Z,105nm,18.7s,baz=159,slow=39					
ARCES	**ARCESS Array B**	**87.01**	**341**	P	**P**	**21 13 51.7 -1.3**
	comp=Z,3.5nm,0.8s,baz=65,slow=6.1,SNR=2.8					
	comp=Z,3.5nm,0.8s					
KBZ	**Khabaz**	**87.02**	**314**	LR	LR	21 56 24.4
	comp=Z,166nm,20.4s,baz=102,slow=38					
WIFE	**Three Sisters-**	**87.09**	**46**	P	**P**	**21 13 54.2 -0.1**
PINE	**Pine Mountain**	**87.77**	**46**	P	**P**	**21 13 57.8 +0.3**
PINE				IAmb	IAmb	21 14 24.3
	comp=Z,6.3nm,0.9s					
OBN	**Obninsk**	**87.84**	**326**	LR	LR	21 54 58.5
	comp=Z,260nm,20.4s,baz=360,slow=37					
FINES	**FINESS Array B**	**90.52**	**334**	P	**P**	**21 14 08.0 -1.8**
	comp=Z,6.8nm,0.7s,baz=62,slow=4.8,SNR=11					
FINES				LR	LR	21 58 52.7
	comp=Z,138nm,18.4s,baz=76,slow=38					
	comp=Z,6.8nm,0.7s					
NVAR	**Mina Array Bea**	**91.13**	**50**	P	**P**	**21 14 12.7 -0.7**
	comp=Z,0.7nm,0.7s,baz=251,slow=3.8,SNR=2.2					
	comp=Z,0.7nm,0.7s					
AKASG	**Malin Array Be**	**93.58**	**324**	LR	LR	21 57 35.0
	comp=Z,194nm,21.9s,baz=72,slow=36					
HFS	**Hagfors**	**96.34**	**336**	LR	LR	22 01 37.3
	comp=Z,210nm,19.8s,baz=60,slow=38					
NOA	**NORSAR Array B**	**96.72**	**338**	LR	LR	22 03 02.1
	comp=Z,85nm,18.4s,baz=50,slow=38					
PLCA	**Paso Flores**	**140.69**	**142**	PKP	**PKPdf**	**21 20 37.7 -0.3**
	comp=Z,1.0nm,0.9s,baz=207,slow=2.3,SNR=3.0					

*IDC **06** 21:05:01.7±1.3,4.°88S×130.°21E,h0km,mb3.9/3, mbtmp3.9/6,ML3.7/3, Error ellipse: s-maj=63.5km s-min=21.5km az=79.0*

ISC 06 21:05:04.7±0.9,5.°01S±0.°06×130.°6E±0.°2,h35km,n7, σ3$69/11,mb3.8/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.17**	**9**	Pn	**Pn**	**21 06 05.5**	**-0.4**
	2.9nm,0.3s,baz=160,slow=15,SNR=28						
SIJI				Sn	**Sn**	**21 06 49.9**	**-3.5**
	3.2nm,0.3s,baz=105,slow=20,SNR=7.1						
	6.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**13.88**	**200**	Pn	**Pn**	**21 08 18.1**	**-1.0**
	0.2nm,0.3s,baz=103,slow=4.9,SNR=3.3						
FITZ				Sn	**Sn**	**21 10 49.7**	**-2.3**
	0.1nm,0.3s,baz=317,slow=7.7,SNR=2.6						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**15.28**	**167**	Pn	**Pn**	**21 08 38.7**	**+0.7**
	0.3nm,0.3s,baz=342,slow=13,SNR=6.2						
WRA				Sn	**Sn**	**21 11 20.4**	**-5.8**
	0.5nm,0.3s,baz=349,slow=23,SNR=9.1						
ASAR	**Alice Springs**	**18.82**	**171**	P	**Pn**	**21 09 26.2**	**+4.0**
	0.5nm,0.3s,baz=349,slow=10,SNR=19						
ASAR				S	**Sn**	**21 12 47.2**	**-4.8**
	1.0nm,0.8s,baz=357,slow=28,SNR=2.7						
	2.9nm,0.6s						
STKA	**Stephens Creek**	**28.65**	**160**	P	**P**	**21 11 02.2**	**+4.1**
	1.4nm,0.6s,baz=348,slow=11,SNR=1.8						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**66.91**	**326**	P	**P**	**21 15 54.3**	**+0.8**
	0.3nm,0.4s,baz=115,slow=7.9,SNR=6.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**71.14**	**328**	P	**P**	**21 16 20.0**	**+0.3**
	0.7nm,0.8s,baz=124,slow=5.4,SNR=4.1						
	0.7nm,0.8s						

*IDC **06** 21:16:40.8±2.9, 11.°90N×140.°66E,h192km±31km, mb3.3/8, mbtmp3.8/9,MS3.6/5, Error ellipse: s-maj=26.7km s-min=16.8km az=85.0*

ISC 06 21:16:21.3±0.8,12.°0N±0.°1×140.°6E±0.°1,h10km,n12, σ1$85/9,mb3.7/8,MS3.6/3,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.47**	**68**	P	**Pg**	**21 17 47.8**	**+0.8**
	18nm,0.3s,baz=1.6,slow=20,SNR=1.4						
JOW	**Kunigami**	**18.79**	**324**	LR	LR	21 27 49.0	
	comp=Z,272nm,19.0s,baz=138,slow=35						
KRVT	**Keravat (AS076**	**19.76**	**144**	LR	LR	21 28 23.6	
	comp=Z,41nm,20.7s,baz=167,slow=36						
KSRS	**Korea Array**	**27.81**	**338**	P	**P**	**21 22 13.3**	**+2.5**
	1.7nm,1.0s,baz=163,slow=8.9,SNR=5.8						
KSRS				LR	LR	21 31 45.8	
	comp=Z,155nm,21.6s,baz=155,slow=32						
	1.7nm,1.0s						
WRA	**Warramunga Arr**	**32.30**	**191**	P	**P**	**21 22 51.5**	**+0.8**
	0.3nm,0.7s,baz=6.1,slow=9.1,SNR=6.1						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**40.64**	**284**	P	**P**	**21 24 02.5**	**+0.5**
	0.3nm,0.3s,baz=89,slow=9.0,SNR=14						
CMAR				LR	LR	21 38 53.5	
	comp=Z,87nm,21.9s,baz=200,slow=33						
	0.3nm,0.3s						
STKA	**Stephens Creek**	**43.60**	**179**	P	**P**	**21 24 25.7**	**-0.2**
	1.5nm,0.9s,baz=18,slow=13,SNR=3.2						
	1.5nm,0.9s						
SONM	**Songino Array**	**45.78**	**328**	P	**P**	**21 24 43.7**	**+0.4**
	0.2nm,0.4s,baz=133,slow=9.4,SNR=8.1						
	0.2nm,0.4s						
TLY	**Talaya**	**49.61**	**331**	LR	LR	21 45 52.3	
	comp=Z,130nm,21.7s,baz=126,slow=35						
KURBB	**Kurchatov Arra**	**63.21**	**321**	P	**P**	**21 26 50.4**	**+0.6**
	0.6nm,0.3s,baz=104,slow=7.4,SNR=4.4						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**71.81**	**25**	P	**P**	**21 27 42.2**	**-1.8**
	0.4nm,0.7s,baz=258,slow=6.0,SNR=5.4						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**90.83**	**334**	P	**P**	**21 29 21.9**	**-2.9**
	2.5nm,0.8s,baz=46,slow=4.0,SNR=2.5						
	2.5nm,0.8s						

*IDC **06** 21:22:59.0±1.1,12.°47N×139.°67E,h0km,mb3.6/6, mbtmp3.7/7,ML4.0/2,MS3.8/3,Error ellipse: s-maj=29.9km s-min=25.3km az=80.0*

ISC 06 21:23:00.8±0.8,12.°5N±0.°1×139.°7E±0.°1,h10km,n11, σ0$96/8,mb3.7/6,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.20**	**77**	Pn	**Pn**	**21 24 18.8**	**+0.2**
	5.5nm,0.3s,baz=169,slow=5.2,SNR=1.4						
	18nm,0.3s						
JCJ	**Chichijima**	**14.75**	**9**	LR	LR	21 30 15.7	
	comp=Z,127nm,20.1s,baz=137,slow=30						
JAY	**Jayapura**	**14.91**	**176**	Pn	**Pn**	**21 26 32.2**	**+0.4**
	0.5nm,0.3s,baz=35,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**36.34**	**189**	P	**P**	**21 30 04.4**	**-0.7**
	0.6nm,1.0s,baz=14,slow=7.6,SNR=7.1						
	0.6nm,1.0s						
LEM	**Lembang**	**37.17**	**241**	LR	LR	21 48 00.5	
	comp=Z,151nm,18.5s,baz=196,slow=40						
CMAR	**Chiang Mai Arr**	**39.64**	**284**	P	**P**	**21 30 33.9**	**+0.8**
	0.5nm,0.9s,baz=94,slow=8.1,SNR=4.9						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**58.83**	**317**	P	**P**	**21 32 58.8**	**-0.8**
	0.6nm,0.8s,baz=92,slow=8.0,SNR=1.8						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**62.25**	**321**	P	**P**	**21 33 21.3**	**-1.6**
	0.5nm,0.8s,baz=102,slow=7.1,SNR=1.2						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**67.69**	**322**	P	**P**	**21 33 58.7**	**+0.5**
	1.7nm,1.0s,baz=111,slow=7.9,SNR=1.4						
	1.7nm,1.0s						
ILAR	**Eielson Array**	**71.77**	**26**	P	**P**	**21 34 23.0**	**-0.2**
	0.4nm,0.8s,baz=254,slow=5.9,SNR=5.4						
	0.4nm,0.8s						
YKA	**Yellowknife Ar**	**86.16**	**27**	LR	LR	22 09 20.1	
	comp=Z,96nm,21.7s,baz=100,slow=32						

*IDC **06** 21:23:00.6±0.7,44.°61N×93.°04E,h0km,mb3.8/12, mbtmp3.8/20,ML3.7/7,MS3.6/2, Error ellipse: s-maj=15.7km s-min=9.8km az=27.0*
*BJI **06** 21:23:01.6,44.°64N×93.°06E,h7km,mb4.1/5,ML4.5/10, Ms3.9/5,Ms7 3.8/6*
*NEIC **06** 21:23:02.3±1.7,44.°67N±0.°09×93.°12E±0.°10,h10km±2km, mb4.0/11,Error ellipse: s-maj=15.3km s-min=11.5km az=181.0*
*NNC **06** 21:23:06.4±7.0,45.°44N×92.°81E,h0km,mb4.4,mpv4.0, Error ellipse: s-maj=63.3km s-min=50.6km az=150.0*

ISC 06 21:23:02.2±0.5,44.°56N±0.°05×93.°07E±0.°04,h10km,n56, σ1$57/66,mb3.8/12,3C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.94**	**261**	Pn	**Pb**	**21 24 09.6**	**-2.1**
WMQ				Sn	**Sb**	**21 24 59.4**	**0.0**
WMQ				smax	smax		
	comp=N,1µm,1.7s						
WMQ				smax	smax		
	comp=E,780nm,1.7s						
GTA2	**Gaotai**	**7.11**	**133**	Pn	**Pn**	**21 24 47.1**	**+0.8**
GTA2				Pg	Pb	21 25 11.6	+5.9
GTA2				Sg	**Sg**	**21 26 45.8**	**-4.4**
GTA2				SMN			
	comp=E,190nm,0.7s						
GTA2				SME			
	comp=E,190nm,0.8s						
GTA2				L	L		
	comp=E,860nm,8.9s						
GTA2				L	L		
	comp=E,1µm,8.9s						
GTA2				L	L		
	comp=E,900nm,12.4s						
MK31	**Makanchi Array**	**7.87**	**290**	Pn	**Pn**	**21 24 55.9**	**-0.9**
	comp=E,1.1nm,0.3s,baz=98,slow=15,SNR=198						
MK31				⇑Pg	**Pb**	**21 25 22.5**	**+3.9**
	comp=E,11nm,0.8s,baz=102,slow=16,SNR=4.1						
MK31				⇑Sn	**Sn**	**21 26 23.0**	**-2.9**
	comp=E,23nm,0.8s						
MK31				Lg	Lg	21 27 05.2	
	comp=E,35nm,0.7s,baz=93,slow=31,SNR=4.3						
MKAR	**Makanchi Array**	**7.87**	**290**	Pn	**Pn**	**21 24 56.1**	**-0.7**
	comp=E,0.9nm,0.3s,baz=97,slow=15,SNR=37						
MKAR				Pg	**Pb**	**21 25 21.2**	**+2.6**
	comp=E,1.5nm,0.3s,baz=106,slow=15,SNR=6.8						
MKAR				Sn	**Sn**	**21 26 23.9**	**-1.9**
	comp=E,1.9nm,0.3s,baz=100,slow=24,SNR=3.8						
MKAR				Lg	Lg	21 27 08.8	
	comp=E,7.0nm,0.3s,baz=93,slow=26,SNR=5.7						
MKAR				LR	LR	21 27 20.6	
	comp=E,116nm,21.9s,baz=6.5,slow=33						
	comp=E,0.9nm,0.3s						
MKAR	**Makanchi Array**	**7.87**	**290**	Pn	**Pn**	**21 24 56.2**	**-0.6**
MAKZ	**Makanchi**	**8.09**	**290**	Pn	**Pn**	**21 24 59.7**	**0.0**
MAKZ	**Makanchi**	**8.09**	**290**	⇓Pn	**Pn**	**21 24 59.3**	**-0.4**
	comp=E,11nm,0.7s						
GOMU	**GeErMu**	**8.46**	**170**	P	**Pn**	**21 25 05.3**	**+0

ZALV	**Zalesovo Beam**	**10.82**	**333**	Pn	**Pn**	**21 25 34.8**	**-2.2**
PRZ	**Przheval'sk**	**10.86**	**264**	Pn	**Pn**	**21 25 41.0**	**+3.2**
TARG	**Taragay, Kyrgy**	**11.51**	**261**	Pn	**Pn**	**21 25 48.8**	**+2.0**
KURK	**Kurchatov**	**11.52**	**307**	Pn	**Pn**	**21 25 45.6**	**-1.0**
KURBB	**Kurchatov Arra**	**11.53**	**307**	Pn	**Pn**	**21 25 44.9**	**-1.9**
	comp=E,0.1nm,0.3s,baz=113,slow=14,SNR=9.4						
KURBB				Sn	**Sn**	**21 27 52.6**	**-2.9**
	comp=E,0.2nm,0.3s,baz=97,slow=15,SNR=5.0						
KURBB				Lg	Lg	21 29 02.7	
	comp=E,0.4nm,0.3s,baz=113,slow=31,SNR=11						
	comp=E,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**11.53**	**307**	⇓Pn	**Pn**	**21 25 46.4**	**-0.3**
	comp=E,4.7nm,0.9s						
LZDM	**Lanzhou Array**	**11.81**	**133**	Pn	**Pn**	**21 25 50.3**	**-0.7**
	baz=82,slow=26						
LZDM				Lg	Lg	21 29 16.3	
	baz=341,slow=13						
	comp=E,1.0nm,0.3s						
KDJ	**Kajisay**	**11.82**	**264**	Pn	**Pn**	**21 25 51.5**	**+0.5**
BOOM	**Boomskoye usch**	**12.61**	**267**	Pn	**Pn**	**21 26 04.1**	**+2.4**
NRN	**Naryn**	**12.88**	**262**	Pn	**Pn**	**21 26 07.8**	**+2.3**
AAK	**Ala-Archa**	**13.60**	**268**	Pn	**Pn**	**21 26 14.2**	**-1.0**
	comp=E,0.4nm,0.3s,baz=94,slow=4.3,SNR=8.6						
AAK				Lg	Lg	21 30 10.0	
	comp=E,0.2nm,0.3s,baz=272,slow=15,SNR=1.7						
	comp=E,0.6nm,0.3s						
AAK	**Ala-Archa**	**13.60**	**268**	Pn	**Pn**	**21 26 15.0**	**-0.3**
ARSB	**Arslanbob**	**15.06**	**265**	Pn	**Pn**	**21 26 35.2**	**+0.1**
ARSB				IAmb	IAmb	21 26 48.6	
	comp=Z,12nm,0.8s						
KK31	**Karatay Array**	**16.34**	**273**	Pn	**Pn**	**21 26 51.8**	**+0.2**
KKAR	**Karatay Array**	**16.34**	**273**	Pn	**Pn**	**21 26 52.0**	**+0.4**
BTK	**Batken**	**17.05**	**262**		**P**	**21 27 01.5**	**-1.0**
BTK				IAmb	IAmb	21 27 08.7	
	comp=Z,8.0nm,0.9s						
BVAR	**Borovoye Array**	**17.12**	**308**	P	**Pn**	**21 26 59.4**	**-2.0**
	baz=109,slow=15,SNR=10						
BVAR				Lg	Lg	21 32 01.2	
	baz=108,slow=25,SNR=1.4						
	comp=Z,2.3nm,0.7s						
BORK	**Borovoye**	**17.17**	**308**	Pn	**Pn**	**21 27 00.0**	**-2.0**
EVN	**Everest**	**17.31**	**199**	Pn	**Pn**	**21 27 05.0**	**+0.5**
EVN				IAmb	IAmb	21 27 12.8	
	comp=Z,9.8nm,1.2s						
MANEM	**Manem**	**17.56**	**254**		**P**	**21 27 08.2**	**-0.1**
MANEM				IAmb	IAmb	21 27 17.8	
	comp=Z,22nm,0.8s						
GAR	**Garm**	**17.83**	**260**		**P**	**21 27 11.2**	**-0.1**
GAR				IAmb	IAmb	21 27 17.4	
	comp=Z,13nm,0.9s						
CHGR	**Chuyangaron**	**18.80**	**260**	P	**P**	**21 27 21.3**	**-0.5**
TNCH	**TengChong**	**19.98**	**165**	*e*P	**Pn**	**21 27 38.8**	**+2.2**
TNCH				sP	sP	21 27 45.1	+5.7
TNCH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AB31	**Akbulak array**	**23.00**	**294**	P	**P**	**21 28 05.1**	**-1.8**
AB31				IAmb	IAmb	21 28 12.9	
	comp=Z,3.6nm,1.1s						
ABKAR	**Akbulak array**	**23.00**	**294**	P	**P**	**21 28 04.7**	**-2.2**
AKTO	**Aktyubinsk**	**24.24**	**297**	P	**P**	**21 28 18.4**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=88,slow=9.2,SNR=4.0						
	comp=Z,0.9nm,0.6s						
ARTI	**Arti**	**24.76**	**311**	P	**P**	**21 28 24.2**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=177,slow=4.7,SNR=3.9						
	comp=Z,1.1nm,0.4s						
ARTI	**Arti**	**24.76**	**311**	P	**P**	**21 28 22.8**	**-0.9**
ARTI				IAmb	IAmb	21 28 33.1	
	comp=Z,4.8nm,0.6s						
NRIK	**Noril'sk**	**25.00**	**355**	P	**P**	**21 28 26.1**	**+0.3**
	comp=Z,7.0nm,1.0s,baz=166,slow=8.3,SNR=4.4						
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**26.49**	**167**	P	**P**	**21 28 41.1**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=347,slow=9.5,SNR=7.1						
	comp=Z,0.9nm,0.8s						
KSRS	**Korea Array**	**27.09**	**93**	P	**P**	**21 28 44.5**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=278,slow=9.8,SNR=5.9						
	comp=Z,1.2nm,0.8s						
FINES	**FINESS Array B**	**41.62**	**318**	P	**P**	**21 30 50.1**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=89,slow=7.4,SNR=7.1						
	comp=Z,1.7nm,0.7s						
FINES	**FINESS Array B**	**41.62**	**318**	P	**P**	**21 30 50.3**	**+0.2**
AKASG	**Malin Array Be**	**42.26**	**302**	P	**P**	**21 30 54.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=73,slow=7.7,SNR=1.8						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**47.83**	**318**	P	**P**	**21 31 39.5**	**0.0**
	comp=Z,3.0nm,0.8s,baz=90,slow=10,SNR=4.2						
	comp=Z,3.0nm,0.8s						
NOA	**NORSAR Array B**	**48.69**	**320**	P	**P**	**21 31 46.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=67,slow=7.0,SNR=1.7						
	comp=Z,0.7nm,0.7s						
JAY	**Jayapura**	**63.21**	**124**	LR	LR	21 59 09.1	
	comp=Z,232nm,21.9s,baz=236,slow=34						
WRA	**Warramunga Arr**	**74.43**	**140**	P	**P**	**21 34 39.9**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=329,slow=5.9,SNR=4.7						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**77.48**	**142**	P	**P**	**21 34 57.5**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=348,slow=8.2,SNR=3.9						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.88**	**280**	P	**P**	**21 35 22.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=46,slow=5.0,SNR=6.1						
	comp=Z,0.4nm,0.6s						

NEIC ***06*** *21:31:09.6±1.1, 17°.88N±0°.03×66°.98W±0°.01, h18km±1km, ML3.4/37, Md3.5/12(RSPR), Error ellipse: s-maj=4.7km s-min=1.5km az=191.0*

OSPL ***06*** *21:31:10.7±0.3, 17°.79N×66°.95W, h0km±10km, ML3.1, Presumed earthquake*

RSPR ***06*** *21:31:11.2, 17°.95N×66°.96W, h7km, MD3.5/12*

SDD ***06*** *21:31:11.3±0.9, 17°.91N×66°.97W, h13km±9km, MD3.0, ML3.1, MW3.2, Presumed earthquake*

ISC 06 21:31:10.1±0.8, 18°.05N±0°.05×66°.94W±0°.02, h15km±6km, n47, σ0°.80/72, 10C-15D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**139**			**Pg**	**21 31 13.3**	**0.0**
GBPR						**Sg**	**21 31 15.2**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.09**	**139**	⇑*i*	P	**Pg**	**21 31 13.3**	**0.0**
GBPR				*e*	S	**Sg**	**21 31 15.2**	**-0.3**
MLPR	**Magueyes Islan**	**0.12**	**231**			**Pg**	**21 31 13.5**	**-0.2**
MLPR				Sg		**Sg**	**21 31 15.3**	**-0.7**
MLPR				IAML			21 31 15.6	
	14µm,0.3s							
MLPR	**Magueyes Islan**	**0.12**	**231**	⇑*e*	P	**Pg**	**21 31 13.5**	**-0.2**
MLPR				IAML			21 31 15.5	
	comp=E,5µm,0.3s							
MLPR				IAML			21 31 15.6	
	comp=N,14µm,0.3s							
MLPR	**Magueyes Islan**	**0.12**	**231**	⇑*e*	P	**Pb**	**21 31 13.6**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.16**	**256**	Pg		**Pb**	**21 31 14.7**	**0.0**
CRPR				Sg		**Sg**	**21 31 17.2**	**+0.2**
CRPR				IAML			21 31 17.9	
	comp=N,9µm,0.6s							
CRPR				IAML			21 31 17.9	
	comp=N,11µm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.16**	**256**	⇑*e*	P	**Pb**	**21 31 14.7**	**0.0**
PRSN	**Puerto Rico Se**	**0.26**	**312**	Pg		**Pn**	**21 31 17.8**	**-1.5**
PRSN				Sg		**Sn**	**21 31 23.5**	**-1.4**
PRSN	**Puerto Rico Se**	**0.26**	**312**	⇑*e*	Pg	**Pn**	**21 31 17.8**	**-1.5**
PRSN				IAML			21 31 24.1	
	comp=N,6µm,0.3s							
PRSN				IAML			21 31 25.6	
	comp=E,5µm,0.2s							
PRSN	**Puerto Rico Se**	**0.26**	**312**	⇑*e*	P	**Pn**	**21 31 17.9**	**-1.4**
UUPR	**Utuado, UPR, P**	**0.30**	**46**	Pg		**Pn**	**21 31 18.4**	**-1.4**
UUPR				Sg		**Sn**	**21 31 24.2**	**-1.8**
UUPR	**Utuado, UPR, P**	**0.30**	**46**	⇓*e*	P	**Pn**	**21 31 18.6**	**-1.2**
OBIP	**Obispado Ponce**	**0.32**	**91**	Pg		**Pb**	**21 31 17.9**	**+0.4**
OBIP				Sg		**Sb**	**21 31 23.6**	**+1.1**
OBIP	**Obispado Ponce**	**0.32**	**91**	*i*	P	**Pb**	**21 31 18.0**	**+0.6**
OBIP				*e*	S	**Sb**	**21 31 23.6**	**+1.1**
OBIP				IAML			21 31 24.1	
	comp=Z,5µm,0.2s							
OBIP	**Obispado Ponce**	**0.32**	**91**	⇓*i*	P	**Pb**	**21 31 18.0**	**+0.6**
OBIP				*e*	S	**Sb**	**21 31 22.8**	**+0.3**
CELP	**Cerrillos**	**0.35**	**85**	Pg		**Pb**	**21 31 18.5**	**+0.6**
CELP				Sg		**Sb**	**21 31 24.6**	**+1.4**
CELP	**Cerrillos**	**0.35**	**85**	⇓*e*	Pg	**Pb**	**21 31 18.6**	**+0.7**
CELP				IAML			21 31 26.2	
	comp=N,427nm,0.2s							
CELP				IAML			21 31 26.5	
	comp=E,246nm,0.2s							
CELP	**Cerrillos**	**0.35**	**85**	⇓*e*	P	**Pb**	**21 31 18.8**	**+0.8**
AOPR	**Arecibo Observ**	**0.35**	**31**	Pg		**Pn**	**21 31 19.8**	**-0.8**
AOPR				Sg		**Sn**	**21 31 26.2**	**-1.1**
AOPR				IAML			21 31 28.1	
	comp=E,4µm,0.3s							
AOPR	**Arecibo Observ**	**0.35**	**31**	⇓*e*	Pg	**Pn**	**21 31 19.8**	**-0.8**
AOPR				⇓*e*	Sg	**Sn**	**21 31 26.4**	**-0.9**
AOPR				IAML			21 31 26.5	
	comp=N,4µm,0.2s							
AOPR				IAML			21 31 26.6	
	comp=E,14µm,0.2s							
AOPR	**Arecibo Observ**	**0.35**	**31**	⇓*e*	P	**Pn**	**21 31 19.9**	**-0.8**
AGPR	**Aguadilla, PR**	**0.45**	**339**	Pg		**Pn**	**21 31 21.7**	**-0.2**
AGPR				Sg		**Sn**	**21 31 29.5**	**-0.2**
AGPR				IAML			21 31 30.2	
	comp=E,3µm,0.4s							
AGPR				IAML			21 31 34.9	
	comp=E,1µm,0.5s							
AGPR	**Aguadilla, PR**	**0.45**	**339**	⇑*e*	Pg	**Pn**	**21 31 21.7**	**-0.2**
AGPR				⇓*e*	Sg	**Sn**	**21 31 29.7**	**0.0**
AGPR				IAML			21 31 30.1	
	comp=N,2µm,0.4s							
AGPR				IAML			21 31 34.8	
	comp=E,1µm,0.3s							
AGPR	**Aguadilla, PR**	**0.45**	**339**	⇑*i*	P	**Pn**	**21 31 21.8**	**-0.2**
EMPR	**Esperanza - Ma**	**0.58**	**43**			**Pn**	**21 31 24.1**	**+0.4**
EMPR						**Sn**	**21 31 32.7**	**-0.2**
EMPR	**Esperanza - Ma**	**0.58**	**43**	⇑*e*	P	**Pn**	**21 31 24.1**	**+0.4**
EMPR				*e*	S	**Sn**	**21 31 32.7**	**-0.2**
IDE	**Isla Desecheo**	**0.61**	**304**			**Pn**	**21 31 23.8**	**-0.4**
IDE						**Sb**	**21 31 31.9**	**+1.2**
IDE	**Isla Desecheo**	**0.61**	**304**	⇑*e*	P	**Pn**	**21 31 23.8**	**-0.4**
IDE				*e*	S	**Sb**	**21 31 31.9**	**+1.2**
ECPR	**Experimental S**	**0.61**	**64**	Pg		**Pn**	**21 31 23.7**	**-0.6**
ECPR				Sg		**Sn**	**21 31 33.4**	**-0.5**
ECPR				IAML			21 31 34.3	
	comp=E,2µm,0.2s							
ECPR				IAML			21 31 38.5	
	comp=E,1µm,0.2s							
ECPR	**Experimental S**	**0.61**	**64**	⇓*e*	P	**Pn**	**21 31 23.8**	**-0.4**
SJG	**San Juan**	**0.76**	**85**	Pg		**Pn**	**21 31 25.2**	**-1.0**
SJG				Sg		**Sb**	**21 31 35.5**	**+0.5**
SJG				IAML			21 31 38.6	
	comp=E,704nm,0.6s							
SJG	**San Juan**	**0.76**	**85**	⇓*e*	P	**Pn**	**21 31 25.4**	**-0.8**
SJG				⇓*e*	Sg	**Sn**	**21 31 36.8**	**-0.5**
SJG	**San Juan**	**0.76**	**85**	*i*	P	**Pn**	**21 31 25.5**	**-0.6**
SJG				*e*	S	**Sn**	**21 31 36.5**	**-0.8**
SJG	**San Juan**	**0.76**	**85**	⇓*e*	P	**Pn**	**21 31 25.6**	**-0.5**
IGPR	**InterUniversit**	**0.80**	**96**			**Pn**	**21 31 26.0**	**-0.7**
IGPR						**Sn**	**21 31 37.7**	**-0.7**
IGPR	**InterUniversit**	**0.80**	**96**	⇓*e*	P	**Pn**	**21 31 26.0**	**-0.7**
PDPR	**Patillas Dam,**	**0.88**	**92**	Pg		**Pb**	**21 31 26.7**	**-0.2**
PDPR						**Sb**	**21 31 38.8**	**+0.3**
PDPR	**Patillas Dam,**	**0.88**	**92**	⇓*e*	P	**Pn**	**21 31 27.3**	**-0.5**
HUMP	**Col San Antoni**	**1.04**	**85**			**Pn**	**21 31 29.8**	**-0.2**
HUMP						**Sn**	**21 31 44.8**	**+0.3**
HUMP	**Col San Antoni**	**1.04**	**85**	⇑*e*	P	**Pn**	**21 31 29.9**	**-0.2**
PCDR	**Punta Cana, DR**	**1.44**	**289**			**Pg**	**21 31 37.2**	**-0.7**
PCDR				IAML			21 32 11.1	
	comp=N,209nm,0.7s							
PCDR	**Punta Cana, DR**	**1.44**	**289**	⇓*e*	Pg	**Pb**	**21 31 37.0**	**+0.4**
PCDR				IAML			21 32 10.4	
	comp=E,44nm,0.5s							
PCDR				IAML			21 32 15.4	
	comp=N,115nm,1.0s							
PCDR	**Punta Cana, DR**	**1.44**	**289**	*i*	P	**Pg**	**21 31 37.4**	**-0.5**
PCDR				IAML			21 32 00.4	
	comp=Z,87nm,1.6s							
DR12	**Loma Pena Alta**	**2.43**	**288**	Pn		**Pn**	**21 31 50.8**	**+1.6**
HATOM	**Hato Mayor del**	**2.43**	**288**	⇑*e*	Pg	**Pb**	**21 31 53.5**	**0.0**
HATOM				IAML			21 32 32.3	
	comp=N,50nm,0.6s							
HATOM				IAML			21 32 33.0	
	comp=E,55nm,0.4s							
BANI	**BANI**	**3.26**	**277**	Pn		**Pn**	**21 32 01.5**	**+0.7**
SDDR	**Presa de Saban**	**4.23**	**283**	Pn		**Pn**	**21 32 15.5**	**+1.5**

IDC 06 21:42:04.2±2.5, 3°.08S×129°.65E, h0km, mb3.3/2, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=177.5km s-min=28.1km az=70.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.37**	**165**	P	Pn	21 46 07.0	-1.2
	baz=345,slow=11,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**20.88**	**169**	P	P	21 46 48.6	+0.6
	0.6nm,0.8s,baz=346,slow=11,SNR=5.8						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**64.79**	**326**	P	P	21 52 44.7	0.0
	0.4nm,0.5s,baz=141,slow=7.7,SNR=8.3						
	0.4nm,0.5s						

SNET ***06*** *21:44:47.0±0.8, 12°.03N×86°.85W, h86km, ML3.8, Presumed earthquake*

CATAC ***06*** *21:44:48.0±0.2, 12°.N±2°×.8°7W±°, h65km±2km, M3.9/43, MLv3.9/43, Error ellipse: s-maj=5.2km s-min=1.8km az=37.1, confirmed*

UCR ***06*** *21:44:48.5±1.4, 11°.91N×86°.80W, h17km±391km, MW3.7, Presumed earthquake*

ISC 06 21:44:47.6±1.2, 12°.01N±0°.04×86°.87W±0°.04, h87km±8km, n81, σ0°.68/126, 5C-14D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
SAPS	**Ciudad Sandino**	**0.48**	**71**	⇓P		**Pn**	**21 45 02.0**	**+0.1**
SAPS						**Sn**	**21 45 12.7**	**+0.2**
AMTN	**Mateare**	**0.49**	**62**	P		**Pn**	**21 45 01.6**	**-0.3**
AMTN				S		**Sn**	**21 45 13.1**	**+0.5**
MACN	**El Madrono**	**0.49**	**23**	⇓P		**Pn**	**21 45 01.8**	**-0.2**
MACN				S		**Sn**	**21 45 12.8**	**0.0**
CNGA	**AI SSO del Vol**	**0.51**	**19**	⇓P		**Pn**	**21 45 01.9**	**-0.3**
MOMN	**Momotombo**	**0.51**	**39**	P		**Pn**	**21 45 01.6**	**-0.7**
MOMN				S		**Sn**	**21 45 12.7**	**-0.3**
CNGN	**Cerro Negro**	**0.52**	**19**	⇓P		**Pn**	**21 45 01.8**	**-0.4**
CNGN				S		**Sn**	**21 45 13.2**	**+0.1**
APYN	**Apoyeque**	**0.56**	**66**	P		**Pn**	**21 45 02.6**	**+0.1**
APYN				S		**Sn**	**21 45 14.4**	**+0.7**
ABCN	**Banco Central**	**0.56**	**78**	P		**Pn**	**21 45 02.6**	**0.0**
ABCN				S		**Sn**	**21 45 14.2**	**+0.5**
APQ2	**Apoyeque**	**0.57**	**71**	P		**Pn**	**21 45 01.4**	**-1.1**
APQ2				S		**Sn**	**21 45 14.2**	**+0.4**
QUEN	**AI S del Volca**	**0.58**	**2**	⇓P		**Pn**	**21 45 02.7**	**-0.1**
QUEN				S		**Sn**	**21 45 14.7**	**+0.7**
PLRN	**Geotermica Pol**	**0.58**	**10**	P		**Pn**	**21 45 02.5**	**-0.3**
PLRN				S		**Sn**	**21 45 14.2**	**+0.2**
UNAN	**Cigeo UNAN**	**0.60**	**80**	P		**Pn**	**21 45 02.9**	**0.0**
UNAN				S		**Sn**	**21 45 14.6**	**+0.4**
ALLN	**Telcor Managua**	**0.60**	**76**	P		**Pn**	**21 45 02.9**	**0.0**
ALLN				S		**Sn**	**21 45 14.7**	**+0.4**
MGAN	**Managua**	**0.63**	**77**	P		**Pn**	**21 45 03.0**	**-0.1**
MGAN				S		**Sn**	**21 45 15.2**	**+0.5**
MAS3	**AI N del Volca**	**0.68**	**89**	P		**Pn**	**21 45 03.6**	**0.0**
MAS3				S		**Sn**	**21 45 15.9**	**+0.2**
AERN	**Aeropuerto Man**	**0.70**	**79**	S		**Sn**	**21 45 16.2**	**+0.2**
MASN	**Masaya**	**0.71**	**92**	S		**Sn**	**21 45 16.3**	**+0.1**
CRIN	**San Cristobal**	**0.71**	**346**	⇓P		**Pn**	**21 45 03.9**	**-0.1**
CRIN				S		**Sn**	**21 45 17.1**	**+0.8**
NANN	**Nandasmo**	**0.74**	**95**	⇓P		**Pn**	**21 45 05.2**	**+1.0**
NANN				S		**Sn**	**21 45 17.0**	**+0.3**
NADN	**Granada**	**0.86**	**107**	⇓P		**Pn**	**21 45 04.9**	**-0.6**
NADN				S		**Sn**	**21 45 18.5**	**-0.4**
NADN	**Granada**	**0.86**	**107**	*e*P		**Pn**	**21 45 04.8**	**-0.6**
AESN	**El Sauce Leon**	**0.93**	**20**	P		**Pn**	**21 45 05.9**	**-0.5**
AESN				S		**Sn**	**21 45 19.9**	**-0.5**
LIMN	**Finca el Limon**	**1.16**	**25**	⇑P		**Pn**	**21 45 08.9**	**-0.2**
LIMN				S		**Sn**	**21 45 24.9**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.26**	**69**	⇓P		**Pn**	**21 45 10.0**	**-0.2**
BOAB				S		**Sn**	**21 45 26.9**	**-0.3**
JAPN	**AI SSO del Vol**	**1.26**	**112**	P		**Pn**	**21 45 07.0**	**-3.2**
JAPN				S		**Sn**	**21 45 26.2**	**-1.1**
JAPN	**AI SSO del Vol**	**1.26**	**112**	*e*P		**Pn**	**21 45 06.6**	**-3.7**
MORN	**AI O del Volca**	**1.28**	**111**	P		**Pn**	**21 45 10.4**	**-0.1**
MORN				S		**Sn**	**21 45 28.1**	**+0.3**
MATN	**Matagalpa**	**1.30**	**45**	⇓P		**Pn**	**21 45 10.7**	**-0.1**
MATN				S		**Sn**	**21 45 28.2**	**-0.1**
LCRUZ	**La Cruz**	**1.53**	**127**	*e*P		**Pn**	**21 45 13.8**	**+0.2**
LCRUZ				*e*S		**Sn**	**21 45 33.3**	**+0.1**
CARN	**Rivas**	**1.55**	**121**	P		**Pn**	**21 45 13.6**	**-0.3**
CARN				S		**Sn**	**21 45 33.7**	**-0.1**
CARN	**Rivas**	**1.55**	**121**	*e*P		**Pn**	**21 45 12.6**	**-1.3**
CARN				*e*S		**Sn**	**21 45 33.7**	**-0.1**
CNCH	**Conchagua**	**1.57**	**323**	⇓P		**Pn**	**21 45 13.7**	**-0.6**
CNCH				S		**Sn**	**21 45 34.3**	**-0.1**
CNCH	**Conchagua**	**1.57**	**323**	*e*P		**Pn**	**21 45 13.6**	**-0.6**
RCON	**San Juan de Ri**	**1.63**	**25**	⇑P		**Pn**	**21 45 15.2**	**+0.3**
LCND	**La Caada**	**1.63**	**323**	P		**Pn**	**21 45 14.3**	**-0.6**
LCND	**La Caada**	**1.63**	**323**	*e*P		**Pn**	**21 45 14.1**	**-0.7**
INTP	**Intipuca**	**1.65**	**316**	*e*P		**Pn**	**21 45 14.8**	**-0.3**
INTP				*e*S		**Sn**	**21 45 35.6**	**-0.5**
OCON	**Estacion meteo**	**1.66**	**13**	⇓P		**Pn**	**21 45 15.5**	**+0.1**
ACON	**Acoyapa**	**1.66**	**91**	P		**Pn**	**21 45 15.0**	**-0.2**
ACON				S		**Sn**	**21 45 36.4**	**+0.1**
RCPN	**Sur Rio San Ju**	**1.69**	**27**	⇑P		**Pn**	**21 45 16.1**	**+0.4**
RCVN	**Varillal2**	**1.70**	**23**	⇑P		**Pn**	**21 45 16.2**	**+0.2**
LAPC	**Finca la Perla**	**1.87**	**131**	*e*P		**Pn**	**21 45 18.4**	**+0.3**
LAPC				*e*S		**Sn**	**21 45 40.1**	**-1.2**
BUAI	**Buenos Aires**	**1.88**	**126**	*e*P		**Pn**	**21 45 18.2**	**0.0**
BUAI				*e*S		**Sn**	**21 45 41.3**	**-0.2**
PEJA	**Penjamo Buenos**	**1.89**	**126**	*e*P		**Pn**	**21 45 17.8**	**-0.4**
VRLE	**La Escondida,**	**1.91**	**129**	*e*P		**Pn**	**21 45 18.4**	**-0.2**
VRLE				*e*S		**Sn**	**21 45 41.5**	**-0.8**
ALIBA	**Liberia Airpor**	**1.92**	**137**	*e*P		**Pn**	**21 45 19.3**	**+0.7**
ALIBA				*e*S		**Sn**	**21 45 43.7**	**+1.5**
GPS2	**Hotel Rincn d**	**1.94**	**130**	*e*P		**Pn**	**21 45 19.4**	**+0.4**
BLLM	**Bellamira**	**1.95**	**317**	*e*P		**Pn**	**21 45 19.1**	**0.0**
LCY	**Lacayo**	**1.98**	**316**	*e*P		**Pn**	**21 45 19.5**	**0.0**
RANC	**El Ranchito**	**1.98**	**316**	⇑P		**Pn**	**21 45 19.6**	**0.0**
RANC				S		**Sn**	**21 45 43.9**	**0.0**
RANC	**El Ranchito**	**1.98**	**316**	*e*P		**Pn**	**21 45 19.6**	**0.0**
PACA	**Pacayal**	**2.03**	**316**	⇓P		**Pn**	**21 45 20.1**	**-0.1**
PACA				S		**Sn**	**21 45 45.7**	**+0.7**
PACA	**Pacayal**	**2.03**	**316**	*e*P		**Pn**	**21 45 20.1**	**-0.1**
MESS	**Mesas**	**2.07**	**127**	⇓*e*P		**Pn**	**21 45 20.5**	**-0.2**
MESS				*e*S		**Sn**	**21 45 46.5**	**+0.5**
VMAR	**Armenia, Volca**	**2.09**	**124**	*e*P		**Pn**	**21 45 21.0**	**0.0**
VMAR				*e*S		**Sn**	**21 45 46.3**	**-0.2**
HORNC	**Hornillas**	**2.10**	**128**	*e*P		**Pn**	**21 45 21.0**	**-0.1**
HORNC				*e*S		**Sn**	**21 45 46.7**	**-0.1**
UPAL	**Upala**	**2.13**	**121**	S		**Sn**	**21 45 48.0**	**+0.7**
TECA	**Tecapa**	**2.17**	**313**	*e*P		**Pn**	**21 45 22.3**	**+0.2**
PLVR	**Palo Verde**	**2.23**	**138**	*e*P		**Pn**	**21 45 23.5**	**+0.6**
JUD3	**Juan Diaz 3**	**2.25**	**144**	*e*P		**Pn**	**21 45 23.5**	**+0.4**
TENO	**El Achiote**	**2.27**	**125**	*e*P		**Pn**	**21 45 23.7**	**+0.4**
TIMP	**Tierras Morena**	**2.31**	**128**	*e*P		**Pn**	**21 45 24.2**	**+0.4**
QUEB	**Quebradon, Cot**	**2.38**	**125**	*e*P		**Pn**	**21 45 24.4**	**-0.4**
TECO	**Alcaldia de Te**	**2.40**	**309**	P		**Pn**	**21 45 24.8**	**-0.3**
TECO				S		**Sn**	**21 45 53.0**	**-0.8**
TECO	**Alcaldia de Te**	**2.40**	**309**	*e*P		**Pn**	**21 45 24.6**	**-0.5**
CMARA	**Lajas Hojancha**	**2.44**	**144**	P		**Pn**	**21 45 26.1**	**+0.5**
CMARA				S		**Sn**	**21 45 53.4**	**-1.2**
CMARA	**Lajas Hojancha**	**2.44**	**144**	*e*P		**Pn**	**21 45 25.6**	**+0.1**
COEG	**Centro de Oper**	**2.53**	**310**	P		**Pn**	**21 45 26.7**	**-0.1**
COEG				S		**Sn**	**21 45 56.2**	**-0.7**
JTS	**Las Juntas de**	**2.54**	**132**	P		**Pn**	**21 45 27.1**	**+0.2**
JTS				S		**Sn**	**21 45 57.5**	**+0.4**
JTS	**Las Juntas de**	**2.54**	**132**	*e*P		**Pn**	**21 45 26.5**	**-0.4**

JOB Onbets 4.14 252 P **Pn** 22 18 07.4 +1.9
JOB eS **Sn** 22 18 51.9 -0.8
JCH Churui 4.58 250 eP **Pn** 22 18 13.4 +1.9
JCH eS **Sn** 22 19 03.5 +0.1
JKK2 Kamakawa 2 4.66 266 eP Pn 22 18 17.5 +4.9
JKA Kamikawa-asahi 4.74 270 **Pn** 22 18 14.7 +1.0
ASAJ Asahikawa 4.74 270 PN **Pn** 22 18 14.7 +0.9
JNBK Urakawa-nobuka 5.13 249 P **Pn** 22 18 19.7 +0.7
YSS Yuzhno-Sakhali 5.21 302 ePN **Pn** 22 18 22.9 +2.7
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS MLR MLR
comp=E,200nm,17.0s
YSS Yuzhno-Sakhali 5.21 302 eP **Pn** 22 18 21.0 +0.8
YSS eS **Sn** 22 19 17.1 -1.8
JANG Nango 6.93 238 eP **Pn** 22 18 43.1 -0.7
JANG eS **Sn** 22 19 55.6 -5.7
JTM Tenmabayashi 6.97 242 Pn **Pn** 22 18 44.1 -0.2
JTH Tanohata 7.00 234 eS **Sn** 22 19 55.9 -7.1
TYV Tymovskoe 7.87 328 eP **Pn** 22 18 59.0 +2.3
PEA0B Petropavlovsk- 10.41 30 Pn **Pn** 22 19 30.1 -1.4
PEA0B Petropavlovsk- 10.41 30 PN **Pn** 22 19 30.1 -1.4
PETK Petropavlovsk- 10.41 30 P **Pn** 22 19 31.3 -0.2
comp=E,0.7nm,0.3s,baz=216,slow=11,SNR=18
comp=E,4.4nm,0.5s
PETK Petropavlovsk- 10.41 30 Pn **Pn** 22 19 31.0 -0.5
MJAR Matsushiro Arr 11.42 231 P **Pn** 22 19 49.2 +3.8
baz=29,slow=13,SNR=4.0
comp=E,1.1nm,0.6s
USA0B Ussuriysk Arra 12.33 275 Pn **Pn** 22 19 59.9 +2.2
USA0B Ussuriysk Arra 12.33 275 PN **Pn** 22 19 59.9 +2.2
USRK Ussuriysk Ar. 12.33 275 P **Pn** 22 20 02.2 +4.5
comp=E,1.2nm,0.7s,baz=84,slow=15,SNR=1.2
USRK Ussuriysk Ar. 12.33 275 Pn **Pn** 22 19 58.7 +1.0
USRK Ussuriysk Ar. 12.33 275 PN **Pn** 22 19 58.7 +1.0
USRK Ussuriysk Ar. 12.33 275 eP **Pn** 22 19 58.7 +1.0
KLR Kul'dur 12.90 298 P **P** 22 20 10.8 -4.5
comp=E,1.9nm,0.9s,baz=100,slow=12,SNR=4.0
KLR LR LR 22 26 00.5
comp=E,106nm,20.0s,baz=240,slow=42
KLR Kul'dur 12.90 298 eP **Pn** 22 20 07.3 +1.8
MA2 Magadan 15.29 3 P **Pn** 22 20 37.2 -0.3
comp=E,5.1nm,0.5s,baz=196,slow=18,SNR=1.6
KSRS Korea Array 17.46 254 P **P** 22 21 07.9 +1.9
baz=58,slow=12,SNR=1.3
comp=E,0.3nm,0.3s
JNU Nakatsue 18.11 238 P **Pn** 22 21 10.7 -2.5
JNU IAmb IAmb 22 21 11.7
comp=Z,14nm,0.8s
SHEM Shemya Is, Ala 18.43 54 P **Pn** 22 21 20.0 +3.0
SMY Shemya 18.43 54 P **Pn** 22 21 19.3 +2.3
SMY Shemya 18.43 54 P **Pn** 22 21 19.3 +2.3
SMY pmax pmax
comp=Z,86nm,1.1s
SEY Seymchan 18.72 5 P **P** 22 21 18.2 -1.4
comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=13
comp=Z,9.7nm,0.9s
HILR Hailar Array B 20.68 295 P **P** 22 21 40.5 -0.7
comp=Z,0.9nm,0.3s,baz=88,slow=10,SNR=2.2
comp=Z,0.9nm,0.3s
YAK Yakutsk 21.07 334 eP **P** 22 21 42.9 -2.3
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,0.7s
YAK Yakutsk 21.07 334 eP **P** 22 21 42.9 -2.3
HHC Hu-ho-hao-te 27.75 276 eP **P** 22 22 53.5 +3.8
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,39nm,4.9s
H11N2 WAKE ISLAND Hy 28.64 143 T T 22 53 50.6
baz=334,slow=76,SNR=208
H11N1 WAKE ISLAND Hy 28.66 143 T T 22 53 53.7
baz=334,slow=76,SNR=147
H11N3 WAKE ISLAND Hy 28.66 143 T T 22 53 57.7
baz=334,slow=76,SNR=204
TIXI Tiksi 29.09 347 iP **P** 22 23 03.3 +2.2
TIXI pmax pmax
comp=Z,13nm,1.3s
TIXI Tiksi 29.09 347 eP **P** 22 23 03.3 +2.2
ULN Ulaanbaatar 29.16 292 iP **P** 22 23 01.1 -1.1
ULN pmax pmax
comp=Z,1.0nm,1.0s
ULN Ulaanbaatar 29.16 292 eP **P** 22 23 01.1 -1.1
SONM Songino Array 29.60 292 P **P** 22 23 06.1 0.0
comp=Z,0.6nm,0.6s,baz=99,slow=8.9,SNR=4.7
comp=Z,0.6nm,0.6s
SONM Songino Array 29.60 292 P **P** 22 23 05.0 -1.0
SONM Songino Array 29.60 292 P **P** 22 23 05.0 -1.0
SONM pmax pmax
comp=Z,1.0nm,1.1s
H11S1 WAKE ISLAND Hy 29.65 145 T T 22 55 03.6
baz=334,slow=76,SNR=168
H11S3 WAKE ISLAND Hy 29.66 145 T T 22 55 04.0
baz=334,slow=76,SNR=119
H11S2 WAKE ISLAND Hy 29.67 145 T T 22 55 14.4
baz=334,slow=76,SNR=212
GUMO Guam 30.87 188 LR LR 22 34 22.6
comp=Z,20nm,20.8s,baz=86,slow=33
O14K Tigyukauivet M 33.20 46 P **P** 22 23 37.7 +0.3
baz=266
J16K Anvik River 34.02 38 P **P** 22 23 45.3 +0.9
baz=260
D17K Noatak River 34.10 30 P **P** 22 23 45.7 +0.6
baz=251
L16K Owhat River 34.31 41 P **P** 22 23 46.7 -0.3
baz=264
E17K Hotham Inlet 34.38 32 P **P** 22 23 48.2 +0.7
baz=253
F17K Baldwin Pennin 34.43 33 P **P** 22 23 49.8 +1.9
F17K Baldwin Pennin 34.43 33 P **P** 22 23 48.3 +0.4
baz=255
G17K Kiwalik Mounta 34.44 34 P **P** 22 23 48.5 +0.5
baz=257
M16K Timber Creek 34.49 43 P **P** 22 23 49.2 +0.7
M16K IAmb IAmb 22 23 51.1
comp=Z,10nm,1.2s
M16K Timber Creek 34.49 43 P **P** 22 23 48.8 +0.2
baz=265
N16K Nishlik Lake 34.55 44 P **P** 22 23 49.1 +0.1
baz=266
J17K VABM Dome 34.71 38 P **P** 22 23 50.8 +0.3
baz=262
P16K Nushagak River 34.88 46 P **P** 22 23 52.4 +0.5
baz=269
L17K Donlin 34.91 41 P **P** 22 23 52.3 +0.1
baz=264
K17K Iditarod 34.97 40 P **P** 22 23 53.1 +0.4
baz=263
C18K Ulukok River 35.08 29 P **P** 22 23 53.4 -0.2
baz=252
M17K Holitna River 35.26 42 P **P** 22 23 55.8 +0.7
baz=266
H18K Honhosa River 35.30 35 P **P** 22 23 56.2 +0.7
H18K Honhosa River 35.30 35 P **P** 22 23 56.0 +0.4
baz=260
G18K Tagagawik 35.33 34 P **P** 22 23 56.4 +0.6
G18K IAmb IAmb 22 23 57.3
comp=Z,4.5nm,0.9s
G18K Tagagawik 35.33 34 P **P** 22 23 56.3 +0.6
baz=258
LZDM Lanzhou Array 35.38 272 P **P** 22 23 58.1 +1.1
comp=Z,1.1nm,0.3s,baz=55,slow=5.5,SNR=2.0
comp=Z,1.1nm,0.3s
L18K Granite Mounta 35.67 41 P **P** 22 23 59.4 +0.7
baz=266
C19K Lookout Ridge 35.77 29 P **P** 22 23 59.6 0.0
C19K IAmb IAmb 22 24 02.8
comp=Z,5.0nm,0.9s
C19K Lookout Ridge 35.77 29 P **P** 22 24 00.7 +1.1
baz=253
G19K Purcell Mounta 36.00 34 P **P** 22 24 02.1 +0.6
baz=260
M18K Stony River 36.04 42 P **P** 22 24 02.1 +0.3
baz=267
D19K Kuna River 36.12 30 P **P** 22 24 02.5 -0.1
D19K IAmb IAmb 22 24 06.9
comp=Z,5.0nm,0.8s
D19K Kuna River 36.12 30 P **P** 22 24 03.6 +1.1
baz=255
H19K Roundabout Mou 36.16 35 P **P** 22 24 03.8 +1.0
baz=261,SNR=14
E19K Redstone River 36.20 32 P **P** 22 24 03.7 +0.5
E19K IAmb IAmb 22 24 13.4
comp=Z,4.9nm,0.8s
E19K Redstone River 36.20 32 P **P** 22 24 04.3 +1.1
baz=258,SNR=6.0
P18K Big Mountain, 36.30 45 P **P** 22 24 04.8 +0.7
baz=271
J19K Poorman 36.31 38 P **P** 22 24 04.6 +0.4
J19K IAmb IAmb 22 24 13.1
comp=Z,8.8nm,1.3s
J19K Poorman 36.31 38 P **P** 22 24 04.7 +0.5
baz=264
L19K White Mountain 36.53 41 P **P** 22 24 05.9 -0.1
baz=267
GTA2 Gaotai 36.65 280 eP **P** 22 24 08.8 +1.3
GTA2 sP pwP 22 24 20.7 -0.7
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
N19K Bonanza Creek 36.67 43 P **P** 22 24 06.5 -0.8
baz=269
F20K Avaraart Lake 36.70 33 P **P** 22 24 07.4 0.0
baz=260
D20K Etivluk River 36.71 30 P **P** 22 24 08.5 +1.0
baz=257
E20K Nigu River 36.76 31 P **P** 22 24 08.9 +0.9
baz=258,SNR=11
H20K Anoteneega Mo 36.80 35 P **P** 22 24 09.0 +0.7
baz=263,SNR=6.6
B20K Meade River 36.84 28 P **P** 22 24 09.6 +1.0
baz=254
K20K Telida 36.95 39 P **P** 22 24 11.0 +1.3
baz=266
J20K Nowinta River 36.98 37 P **P** 22 24 10.4 +0.6
J20K IAmb IAmb 22 24 11.7
comp=Z,3.5nm,0.8s
J20K Nowinta River 36.98 37 P **P** 22 24 11.0 +1.1
baz=265
C21K Knifeblade Rid 37.45 29 P **P** 22 24 15.0 +1.2
baz=258
G21K Allakaket 37.49 34 P **P** 22 24 14.6 +0.4
G21K IAmb IAmb 22 24 16.4
comp=Z,4.7nm,0.8s
G21K Allakaket 37.49 34 P **P** 22 24 15.1 +0.9
baz=263,SNR=7.3
F21K Alatna River 37.59 33 P **P** 22 24 15.6 +0.5
baz=262
O20K Slope Mountain 37.60 44 P **P** 22 24 15.6 +0.3
baz=272
E21K Killik River 37.60 30 P **P** 22 24 15.4 +0.2
baz=260
B21K Ikpikpuk River 37.60 28 P **P** 22 24 15.9 +0.8
baz=258
H21K Melozitna Rive 37.68 35 P **P** 22 24 15.4 -0.4
H21K IAmb IAmb 22 24 17.6
comp=Z,3.9nm,0.9s
H21K Melozitna Rive 37.68 35 P **P** 22 24 16.3 +0.5
baz=265,SNR=6.2
PPLA Purkeypile 37.79 40 P **P** 22 24 17.3 +0.4
baz=269
A22K Sinclair Lake 37.81 26 P **P** 22 24 17.4 +0.7
baz=256
CAST Castle Rocks 37.85 39 P **P** 22 24 18.3 +1.1
CAST Castle Rocks 37.85 39 P **P** 22 24 17.5 +0.2
baz=268
I21K Tanana 37.98 36 P **P** 22 24 18.9 +0.5
I21K IAmb IAmb 22 24 23.7
comp=Z,6.5nm,1.3s
I21K Tanana 37.98 36 P **P** 22 24 18.8 +0.5
baz=266
F22K John River 38.13 32 P **P** 22 24 20.1 +0.5
baz=263
H22K Ishtalitna Cre 38.28 35 P **P** 22 24 21.5 +0.6
H22K IAmb IAmb 22 24 22.9
comp=Z,5.2nm,1.1s
H22K Ishtalitna Cre 38.28 35 P **P** 22 24 21.8 +0.9
baz=266
MLY Manley 38.50 36 P **P** 22 24 23.4 +0.7
baz=267
D23K Nanushuk River 38.87 30 P **P** 22 24 26.6 +0.8
baz=262
G23K Bananza Creek 38.89 34 P **P** 22 24 26.1 +0.2
G23K IAmb IAmb 22 24 28.5
comp=Z,6.7nm,1.5s
G23K Bananza Creek 38.89 34 P **P** 22 24 26.7 +0.7
baz=266
C23K Itkillik River 39.02 29 P **P** 22 24 27.2 +0.3
baz=261
H23K Yukon River 39.03 35 P **P** 22 24 27.9 +0.7
baz=267
I23K Minto, Yukon-K 39.09 36 P **P** 22 24 28.1 +0.5
baz=268
E23K Chandalar 39.16 31 P **P** 22 24 28.7 +0.5
baz=265
SEW Seward 39.18 44 P **P** 22 24 27.9 -0.5
baz=275
NEA2 Nenana 39.20 37 P **P** 22 24 29.1 +0.6
baz=269
TOLK Toolik Lake Re 39.23 31 P **P** 22 24 29.3 +0.5
baz=264
NRIK Noril'sk 39.45 331 iP **P** 22 24 29.8 -0.7
NRIK pmax pmax
comp=Z,2.0nm,1.0s
D24K Happy Valley 39.55 30 P **P** 22 24 32.1 +0.7
baz=264
E24K Your Creek 39.58 31 P **P** 22 24 32.8 +1.0
E24K IAmb IAmb 22 24 35.9
comp=Z,8.0nm,1.1s
E24K Your Creek 39.58 31 P **P** 22 24 32.5 +0.7
baz=266,SNR=9.8
SML Sawmill 39.61 41 P **P** 22 24 32.8 +0.8
baz=274
H24K Noodor Dome 39.72 35 P **P** 22 24 34.1 +1.1
H24K Noodor Dome 39.72 35 P **P** 22 24 33.6 +0.7
baz=269
F24K Squaw Lake 39.77 32 P **P** 22 24 33.8 +0.4
F24K Squaw Lake 39.77 32 P **P** 22 24 33.8 +0.4
baz=267
WAT6 Susitna Watana 39.84 40 P **P** 22 24 34.0 -0.1
baz=273
POKR Poker Plat Res 39.90 36 P **P** 22 24 34.8 +0.4
baz=270
G24K Hadweenzic Riv 39.90 34 P **P** 22 24 36.0 +1.6
G24K IAmb IAmb 22 24 36.6
comp=Z,4.2nm,0.8s
G24K Hadweenzic Riv 39.90 34 P **P** 22 24 35.1 +0.7
baz=268,SNR=6.2
HDA Harding Lake 40.12 37 P **P** 22 24 36.0 -0.2
baz=272
ILAR Eielson Array 40.14 37 P **P** 22 24 35.9 -0.5
comp=Z,1.8nm,1.0s,baz=280,slow=8.6,SNR=18
comp=Z,1.8nm,1.0s
ILAR Eielson Array 40.14 37 P **P** 22 24 36.3 0.0
ILAR Eielson Array 40.14 37 P **P** 22 24 36.3 0.0
D25K Kavik River 40.44 30 P **P** 22 24 39.1 +0.3
D25K IAmb IAmb 22 24 41.9
comp=Z,7.8nm,0.8s
D25K Kavik River 40.44 30 P **P** 22 24 39.6 +0.8
baz=266,SNR=10
G25K Bearman Lake 40.45 34 P **P** 22 24 39.6 +0.8
baz=270
F25K Christian Rive 40.64 32 P **P** 22 24 40.9 +0.4
baz=269
E25K Arctic Village 40.68 31 P **P** 22 24 42.1 +1.3
baz=268
PRP Porcupine Dome 40.70 35 P **P** 22 24 41.9 +0.8
baz=272
J25K Salcha River, 40.80 37 P **P** 22 24 41.6 -0.2
baz=273
RIDG Independent Ri 41.08 38 P **P** 22 24 45.3 +1.1
baz=274
F26K Sheenjek River 41.21 32 P **P** 22 24 46.2 +1.0
F26K Sheenjek River 41.21 32 P **P** 22 24 46.2 +1.0
baz=276
G26K Porcupine Rive 41.36 33 P **P** 22 24 47.4 +1.1
baz=271
C27K Jago River 41.39 29 P **P** 22 24 48.0 +1.4
baz=268
SCRK Sand Creek 41.44 38 P **P** 22 24 47.7 +0.5
baz=275
ZALV Zalesovo Beam 41.81 307 PcP **PcP** 22 26 46.0 +0.4
comp=Z,0.5nm,0.6s,baz=90,slow=3.5,SNR=1.6
PZH PanZhiHua 41.93 261 P **P** 22 24 53.8 +2.2
M26K Nabesna, AK 42.05 40 P **P** 22 24 52.8 +0.7
E27K Coleen River 42.16 31 P **P** 22 24 54.1 +1.1
E27K Coleen River 42.16 31 P **P** 22 24 53.7 +0.7
baz=272
G27K Doyon Strip 42.21 33 P **P** 22 24 53.7 +0.4
baz=274
H27K Steamboat Moun 42.30 34 P **P** 22 24 55.4 +1.2
H27K Steamboat Moun 42.30 34 P **P** 22 24 55.1 +0.9
baz=274
I27K Kandik River 42.31 35 P **P** 22 24 54.3 0.0
baz=275
L27K Beaver Creek, 42.50 39 P **P** 22 24 57.2 +1.4
baz=277
BCAR Beaver Creek A 42.52 39 P **P** 22 24 57.3 +1.4
M27K Edge Creek, AK 42.57 40 P **P** 22 24 57.4 +0.9
baz=278
F28M Old Crow 42.85 32 P **P** 22 24 59.6 +1.1
baz=274
GRNC Granite Creek 42.89 42 P **P** 22 24 59.7 +0.5
GRNC IAmb IAmb 22 25 14.2
comp=Z,3.6nm,0.7s
E28M Babbage River 42.91 31 P **P** 22 25 00.1 +1.1
baz=273
I28M Miner Creek 43.03 35 P **P** 22 25 01.6 +1.6
I28M Miner Creek 43.03 35 P **P** 22 25 01.4 +1.4
baz=276,SNR=7.6
WMQ Urumqi 43.24 292 eP **P** 22 25 05.1 +3.0
WMQ LR LR
comp=Z,67nm,18.9s
E29M Blow River 43.52 31 P **P** 22 25 04.2 +0.2
E29M IAmb IAmb 22 25 06.4
comp=Z,5.3nm,0.9s
E29M Blow River 43.52 31 P **P** 22 25 05.4 +1.5
baz=275,SNR=8.1
H29M Whitestone 43.58 34 P **P** 22 25 05.9 +1.5
baz=277
G29M Pine Creek 43.63 33 P **P** 22 25 05.8 +0.9
baz=277
L29M L29M 44.15 39 P **P** 22 25 10.3 +1.1
L29M L29M 44.15 39 P **P** 22 25 10.2 +1.1
baz=280
EPYK Eagle Plains 44.22 34 P **P** 22 25 10.4 +0.9
baz=278
G30M tAoh Zraii Nji 44.32 33 P **P** 22 25 11.9 +1.5
baz=278
F30M Barrier River 44.40 32 P **P** 22 25 12.9 +1.9
baz=278,SNR=8.1
I30M Mount Dempster 44.54 35 P **P** 22 25 13.2 +1.0
I30M IAmb IAmb 22 25 14.7
comp=Z,6.2nm,1.1s
I30M Mount Dempster 44.54 35 P **P** 22 25 13.3 +1.0
baz=280,SNR=11
J30M Hart River 44.67 36 P **P** 22 25 13.8 +0.4
baz=280
HYT Haines Junctio 44.91 42 P **P** 22 25 16.2 +0.9
baz=283
P29M Windy Craggy 45.08 43 P **P** 22 25 17.6 +1.0
baz=284
G31M Satah River 45.09 33 P **P** 22 25 17.7 +1.3
baz=280
INK Inuvik 45.15 31 P **P** 22 25 17.6 +0.8
baz=279
H31M Peel River 45.27 34 P **P** 22 25 18.2 +0.3
H31M IAmb IAmb 22 25 23.0
comp=Z,3.1nm,0.8s
H31M Peel River 45.27 34 P **P** 22 25 18.9 +1.0
baz=281
P30M Million Dollar 45.34 43 P **P** 22 25 19.2 +0.5
baz=284
N31M Braebu'n, Yuko 45.57 40 P **P** 22 25 21.5 +1.1
baz=284
MK31 Makanchi Array 45.61 298 ceP **P** 22 25 20.7 -0.2
MKAR Makanchi Array 45.61 298 P **P** 22 25 20.9 0.0
comp=Z,1.6nm,0.9s,baz=75,slow=10,SNR=8.7
MKAR PcP **PcP** 22 26 58.8 +0.1
comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=1.6
MKAR LR LR 22 46 11.9
comp=Z,71nm,19.2s,baz=16,slow=38
comp=Z,1.6nm,0.9s
MKAR Makanchi Array 45.61 298 P **P** 22 25 20.4 -0.5
MKAR Makanchi Array 45.61 298 ceP **P** 22 25 21.1 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.9s
M31M Drury Creek, Y 46.03 39 P **P** 22 25 24.8 +0.8
baz=284
S31K Pelican 46.29 45 P **P** 22 25 27.1 +1.1
baz=287
KURK Kurchatov 46.41 304 P **P** 22 25 26.6 -0.5
KURK Kurchatov 46.41 304 P **P** 22 25 26.6 -0.5
KURK pmax pmax
comp=Z,2.0nm,1.1s
KURK Kurchatov 46.41 304 eP **P** 22 25 26.6 -0.5
KURBB Kurchatov Arra 46.50 304 P **P** 22 25 27.0 -0.8
comp=Z,0.7nm,0.2s,baz=73,slow=8.9,SNR=1.6
KURBB PcP **PcP** 22 27 01.5 -0.1
comp=Z,0.4nm,0.5s,baz=76,slow=3.2,SNR=2.6
comp=Z,0.7nm,0.2s
SIT Sitka 47.03 46 P **P** 22 25 32.0 +0.2
baz=288
TARG Taragay, Kyrgy 50.70 294 P **P** 22 26 01.5 +0.8
TARG IAmb IAmb 22 26 19.0
comp=Z,5.5nm,1.2s
TARG Taragay, Kyrgy 50.70 294 P **P** 22 26 01.5 +0.8
TARG pmax pmax
comp=Z,6.0nm,1.2s
KDJ Kajisay 50.92 294 P **P** 22 26 02.8 +0.7
KDJ Kajisay 50.92 294 P **P** 22 26 02.8 +0.7
KDJ pmax pmax
comp=Z,13nm,1.1s
BOOM Boomskoye usch 51.55 295 P **P** 22 26 07.5 +0.7
BOOM IAmb IAmb 22 26 10.7
comp=Z,8.1nm,1.0s
BOOM Boomskoye usch 51.55 295 P **P** 22 26 07.6 +0.7
BOOM pmax pmax
comp=Z,8.0nm,1.0s
AAK Ala-Archa 52.42 296 ceP **P** 22 26 10.9 -2.3
AAK pmax pmax
comp=Z,7.0nm,2.5s
AAK Ala-Archa 52.42 296 eP **P** 22 26 10.9 -2.3
ARSB Arslanbob 54.05 295 P **P** 22 26 25.7 +0.5
ARSB Arslanbob 54.05 295 P **P** 22 26 25.7 +0.5
ARSB pmax pmax
comp=Z,9.0nm,1.0s
YKA Yellowknife Ar 54.49 35 P **P** 22 26 25.8 -2.1
comp=Z,1.6nm,0.9s,baz=298,slow=6.6,SNR=3.5
comp=Z,1.6nm,0.9s
KKAR Karatay Array 54.73 298 P **P** 22 26 30.3 +0.3
KKAR Karatay Array 54.73 298 P **P** 22 26 30.3 +0.3
AB31 Akbulak array 57.83 309 P **P** 22 26 52.1 +0.2
AB31 IAmb IAmb 22 26 52.7
comp=Z,2.4nm,0.7s
ABKAR Akbulak array 57.83 309 P **P** 22 26 52.0 +0.1
BLKN Baker Lake 60.28 27 P **P** 22 27 08.5 -0.1
BLKN IAmb IAmb 22 27 09.5
comp=Z,6.3nm,1.1s
ILON Igloolik, Nuna 60.57 18 P **P** 22 27 09.8 -0.7
FINES FINESS Array B 65.00 334 P **P** 22 27 38.1 -2.1
comp=Z,3.2nm,1.1s,baz=29,slow=5.9,SNR=4.3
comp=Z,3.2nm,1.1s
WRA Warramunga Arr 65.40 195 P **P** 22 27 43.2 0.0
comp=Z,0.4nm,0.6s,baz=15,slow=6.8,SNR=2.0
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 65.40 195 P **P** 22 27 42.8 -0.4
VRH Novokhopyorsk 66.05 319 eP **P** 22 27 44.8 -2.3
VRH pmax pmax
comp=Z,5.0nm,0.9s
LPSR Galich'ya Gora 66.39 321 eP **P** 22 27 47.7 -1.6
LPSR pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 67.23 320 eP **P** 22 27 51.8 -2.8
VSR pmax pmax
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 68.40 51 P **P** 22 28 02.4 -0.1
comp=Z,0.2nm,0.4s,baz=307,slow=7.5,SNR=4.3
comp=Z,0.2nm,0.4s
ASAR Alice Springs 69.11 195 P **P** 22 28 08.4 +1.8
comp=Z,0.4nm,0.8s,baz=12,slow=6.1,SNR=1.9
comp=Z,0.4nm,0.8s
NC303 NORSAR Array S 69.37 340 P **P** 22 28 06.5 -1.3
NC405 NORSAR Array S 69.38 339 P **P** 22 28 07.2 -0.8
NB201 NORSAR Array S 69.54 340 P **P** 22 28 08.2 -0.8
NB2 NORSAR Subarra 69.57 340 P **P** 22 28 08.7 -0.4
comp=Z,1.1nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 69.57 340 P **P** 22 28 08.2 -0.9
comp=Z,1.7nm,0.6s,baz=32,slow=6.6,SNR=7.1
comp=Z,1.7nm,0.6s
HFS Hagfors 69.70 338 P **P** 22 28 09.0 -0.9
comp=Z,3.0nm,0.6s,baz=37,slow=3.7,SNR=9.2
comp=Z,3.0nm,0.6s
KIV Kislovodsk 70.45 313 eP **P** 22 28 14.8 -0.1

KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 70.45 313 *eP* **P 22 28 14.8 -0.1**
KBZ Khabaz 70.49 312 P **P 22 28 15.6 +0.5**
comp=Z,4.7nm,0.9s,baz=53,slow=3.4,SNR=10.0
comp=Z,4.7nm,0.9s
KBZ Khabaz 70.49 312*ceP* **P 22 28 16.9 +1.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 70.49 312 *eP* **P 22 28 16.9 +1.9**
AKSG Malin Array Be 71.96 325 P **P 22 28 23.1 -0.6**
comp=Z,2.3nm,0.6s,baz=38,slow=6.1,SNR=11
comp=Z,2.3nm,0.6s
AKSG Malin Array Be 71.96 325*ceP* **P 22 28 23.5 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 71.96 325*ceP* **P 22 28 24.5 +0.7**
AKBB pmax pmax
comp=Z,4.0nm,1.0s
LANS Liptovska Anna 77.04 329 *eP* **P 22 28 55.1 +1.7**
LANS Liptovska Anna 77.04 329 *eP* **P 22 28 55.0 +1.7**
MORC Moravsky Berou 77.22 330 *eP* **P 22 28 55.2 +0.8**
JAVC Velka Javorina 77.94 330 *eP* **P 22 28 59.4 +1.0**
VRAC Vranov 77.95 330 *eP* **P 22 28 59.4 +1.0**
EKA Eskdalemuir Ar 77.97 344 P **P 22 28 58.4 +0.1**
comp=Z,1.7nm,0.7s,baz=20,slow=5.5,SNR=3.6
comp=Z,1.7nm,0.7s
BRTR Keskin Array B 78.18 315 P **P 22 29 00.5 +0.4**
comp=Z,0.5nm,0.6s,baz=94,slow=3.7,SNR=3.8
comp=Z,0.5nm,0.6s
BRTR Keskin Array B 78.18 315 P **P 22 28 59.3 -0.7**
BRTR Keskin Array B 78.18 315*ceP* **P 22 29 00.9 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
KRUC Moravsky 78.22 330 *eP* **P 22 29 00.0 +0.1**
SMOL Smolenice 78.31 330 *eP* **P 22 29 02.2 +1.8**
KHC Kasperske Hory 79.14 332*ceP* **P 22 29 06.4 +1.4**
KHC pmax pmax
comp=Z,9.0nm,2.5s
GERES GERESS Array B 79.34 332 P **P 22 29 06.4 +0.2**
comp=Z,0.3nm,0.4s,baz=40,slow=5.5,SNR=6.6
comp=Z,0.3nm,0.4s
GERES GERESS Array B 79.34 332 P **P 22 29 06.2 0.0**
OBKA Obir 81.05 330 *i* P **P 22 29 16.0 +0.6**
comp=Z,2.8nm,1.0s
TXAR Lajitas Array 81.10 58 P **P 22 29 16.9 +0.9**
comp=Z,0.5nm,0.6s,baz=304,slow=4.0,SNR=8.8
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 81.10 58 P **P 22 29 16.4 +0.5**
WATA Walderalm 81.36 332 *eP* **P 22 29 18.2 +1.1**
comp=Z,4.2nm,0.8s
WTTA Wattenberg 81.41 332 *i* P **P 22 29 17.6 +0.2**
comp=Z,4.4nm,1.1s
MOTA Moosalm 81.51 333 *eP* **P 22 29 19.0 +1.0**
comp=Z,4.0nm,1.1s
SQTA Sankt Quirin 81.58 333 *eP* **P 22 29 18.9 +0.6**
comp=Z,2.6nm,0.7s
DAVA Damuels 81.96 333 *i* P **P 22 29 21.7 +1.4**
comp=Z,4.6nm,0.9s
BELA Belgrano 2 146.32 179 PKPdf **PKPab 22 36 40.3 -0.2**
CO04 Los Peladeros 146.46 82 PKPdf **PKPdf 22 36 39.8 -0.4**
PLCA Paso Flores 150.70 97 PKPbc **PKiKP 22 36 53.4 +0.5**
comp=Z,0.6nm,0.5s,baz=188,slow=7.4,SNR=1.8

DJA 06 22:35:05.2±0.2, 1°S±3°×10°1E±°, h86km±3km, M3.7/29, mB5.1/1, mb3.8/7, MLv3.6/29, Mw(mB)4.4/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
PDSI	**Padang**	**0.05**	**306**	P		Pn	22 35 18.1	+0.7
PDSI				S		Sn	22 35 28.4	+2.0
PPI	**Padang Panjang**	**0.49**	**348**	P		Pn	22 35 20.2	+0.7
BKNI	**Bangkinang**	**1.37**	**23**	P		Pn	22 35 28.7	-0.4
PPSI	**Pulau Pagai**	**1.88**	**195**	P		Pn	22 35 35.0	-0.7
PBSI	**Pulau Batu**	**2.39**	**292**	P		Pn	22 35 43.1	+0.7
GSI	**Gunungsitoli**	**3.68**	**307**	P		Pn	22 36 00.4	+0.6
MNAI	**Manna**	**4.19**	**144**	P		Pn	22 36 05.8	-1.0
TPTI		**5.33**	**322**	P		Pn	22 36 22.6	+0.3
	0.1nm23nm,1.3s							
SNSI	**Sinabang, Aceh**	**5.34**	**309**	P		Pn	22 36 22.7	+0.3
KLSI		**5.63**	**131**	P		Pn	22 36 26.6	+0.1
KULM	**Kulim**	**6.19**	**1**	P		Pn	22 36 34.2	+0.1
	0.1nm6.1nm,0.9s							
BSI	**Banda Aceh**	**8.24**	**321**	P		Pn	22 36 59.9	-2.2

*PTWC **06** 22:54:45,6.00S×110.70E,h569km,Mwp6.4/4*
*IPGP **06** 22:54:46.0,5.64S×110.68E,h536km,Mw6.8,Fault plane solution: NP1:ϕ93.00000°,δ37.00000°,λ-121.00000°. NP2:ϕ310.00000°,δ59.00000°,λ-69.00000°.*
*MOS **06** 22:54:46.2±0.7,5.60S×110.67E,h543km,mb6.0/67, MS5.8/4, Error ellipse: s-maj=6.8km s-min=4.2km az=113.9*
*GFZ **06** 22:54:46.7,5.63S×110.64E,h532km,Mw6.6/170, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; Mrr-0.87; Mθθ0.86; Mφφ0.01; Mrθ0.20; Mθφ-0.41; Mφr-0.50; Fault plane solution: M0 1.09859×10^{19} NP1:ϕ90.64245°, δ38.30303°,λ-125.22917°. NP2:ϕ312.62627°, δ59.58223°,λ-65.50519°. Principal axes: T 1.1009, Plg11.3551°, Azm25.2271°; N -0.0046, Plg20.9493°, Azm119.6365°; P -1.0963, Plg65.9102°, Azm268.5379°;*
*DJA **06** 22:54:46.7±0.1,6°S±1°×11°1E±°, h536km±1km, M6.1/196, mB6.3/182, mb6.2/196, MLv6.8/60, Mw6.7/269, Mw(mB)6.1/182, MwMwp6.0/160, Mwp6.1/160*
*GFZ **06** 22:54:47.3±0.1,6°S±2°×11°1E±°, h536km±1km, M6.1/251, mB6.3/224, mb6.0/251, Mw(mB)6.0/224, MwMwp6.1/193, Mwp6.1/193*
*IDC **06** 22:54:47.1±0.2,5.64S×110.68E, h539km±2km, mb5.5/43, mbtmp6.4/47, Error ellipse: s-maj=5.8km s-min=4.3km az=74.0*
*BJI **06** 22:54:47.1,5.75S×110.65E, h530km, mB6.0/68, mb5.8/96*
*NEIC **06** 22:54:47.1,5.63S×110.68E, h531km*
*NEIC **06** 22:54:47.5±2.4,5.60S±0.08×110.69E±0.08, h534km±2km, mb6.1/267, Mwb6.7/196, Mww6.6/31, Error ellipse: s-maj=11.6km s-min=11.0km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; Mrr-0.97; Mθθ0.93; Mφφ0.04; Mrθ0.24; Mθφ-0.43; Mφr-0.62; Fault plane solution: M0 1.24000×10^{19} NP1:ϕ90.91000°, δ37.35000°,λ-127.11000°. NP2:ϕ314.50000°, δ61.07000°,λ-65.27000°. Principal axes: T 1.2069, Plg13.0000°, Azm27.0000°; N 0.0569, Plg21.0000°, Azm122.0000°; P -1.2639, Plg65.0000°, Azm268.0000°;*
*NEIC **06** 22:54:48,5.60S×110.69E, h540km*
*GCMT **06** 22:54:48.5±0.1,5.69S×110.55E, h535km, MW6.7/177, Moment Tensor Solution. s177,c472; s167,c360; Duration: 5±3 Moment tensor: Scale 10^{19}Nm; Mrr-1.03±.00; Mθθ1.00±.01; Mφφ0.02±.01; Mrθ0.26±.01; Mθφ-0.49±.01; Mφr-0.59±.01; Best double couple: M0 1.29700×10^{19} NP1:ϕ92.00000°,δ37.00000°, λ-124.00000°. NP2:ϕ313.00000°,δ60.00000°, λ-67.00000°. Principal axes: T 1.3020, Plg12.0000°, Azm26.0000°; N -0.0130, Plg20.0000°, Azm121.0000°; P -1.2930, Plg66.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*
*NEIC **06** 22:54:51.1,5.90S×110.59E, h520km, Moment Tensor Solution. Duration: 10±9 Moment tensor: Scale 10^{19}Nm; Mrr-1.05; Mθθ1.00; Mφφ0.05; Mrθ0.24; Mθφ-0.30; Mφr-0.40; Fault plane solution: M0 1.17000×10^{19} NP1:ϕ91.18000°, δ37.96000°,λ-114.46000°. NP2:ϕ301.16000°, δ55.95000°,λ-72.10000°. Principal axes: T 1.1435, Plg9.0000°, Azm18.0000°; N 0.0497, Plg15.0000°, Azm111.0000°; P -1.1932, Plg72.0000°, Azm257.0000°;*

ISC 06 22:54:46.7±0.1, 5.67S±0.02×110.59E±0.02, h538km±1km, h540km: pP-P, n2489, σ1§65/3377, mb6.1/317, 157C-138D, Java Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SMRI	**Semarang**	**1.38**	**186**	P		**P**	**22 55 53.9**	**+0.9**
SMRI	**Semarang**	**1.38**	**186**	S		**S**	**22 56 47.5**	**+0.8**
SMRI	**Semarang**	**1.38**	**186**	P		**P**	**22 55 53.1**	**+0.2**
SMRI	**Semarang**	**1.38**	**186**	⇓P		**P**	**22 55 53.6**	**+0.7**
SMRI	**Semarang**	**1.38**	**186**	P		**P**	**22 55 53.6**	**+0.7**
SMRI				S		**S**	**22 56 48.1**	**+1.4**
SMRI	**Semarang**	**1.38**	**186**	P		**P**	**22 55 53.8**	**+0.9**
YOGI	**Yogyakarta**	**2.15**	**188**	P		**P**	**22 55 55.5**	**-0.6**
YOGI				S		**S**	**22 56 50.1**	**-2.4**
UGM	**Wanagama**	**2.23**	**182**	P		**P**	**22 55 56.8**	**+0.3**
UGM	**Wanagama**	**2.23**	**182**			**P**	**22 55 55.8**	**-0.7**
UGM	**Wanagama**	**2.23**	**182**	P		**P**	**22 55 56.1**	**-0.4**
UGM	**Wanagama**	**2.23**	**182**	P		**P**	**22 55 56.0**	**-0.4**
UGM				S		**S**	**22 56 51.0**	**-2.2**
UGM	**Wanagama**	**2.23**	**182**	P		**P**	**22 55 56.2**	**-0.4**
SNJI	**Sawahan-Nganju**	**2.40**	**151**	P		**P**	**22 55 58.0**	**+0.5**
SNJI				S		**S**	**22 56 54.4**	**-0.6**
LEM	**Lembang**	**3.17**	**249**	P		**P**	**22 56 03.5**	**+1.3**
	33µm,0.8s,baz=57,slow=7.3,SNR=1352							
LEM				S		**S**	**22 57 03.9**	**+0.5**
	31µm,0.7s,baz=182,slow=23,SNR=12							
LEM	**Lembang**	**3.17**	**249**	P		**P**	**22 56 02.9**	**+0.8**
LEM	**Lembang**	**3.17**	**249**	P		**P**	**22 56 02.8**	**+0.7**
BBJI	**Bungbulang**	**3.42**	**238**	P		**P**	**22 56 03.4**	**-0.3**
BBJI	**Bungbulang**	**3.42**	**238**	S		**S**	**22 57 05.3**	**-1.0**
BBJI	**Bungbulang**	**3.42**	**238**	P		**P**	**22 56 03.0**	**-0.7**
BBJI	**Bungbulang**	**3.42**	**238**	P		**P**	**22 56 03.2**	**-0.5**
BBJI	**Bungbulang**	**3.42**	**238**	P		**P**	**22 56 03.2**	**-0.5**
DBJI	**Dramaga**	**3.92**	**257**	P		**P**	**22 56 07.4**	**+0.2**
TNG	**Tangerang**	**3.96**	**263**	P		**P**	**22 56 08.1**	**+0.6**
TPI	**Tanjungpandan**	**4.12**	**314**	P		**P**	**22 56 10.0**	**+1.3**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	P		**P**	**22 56 11.1**	**-0.6**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	S		**S**	**22 57 17.5**	**-3.5**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	P		**P**	**22 56 10.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	P		**P**	**22 56 10.2**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	⇓P		**P**	**22 56 10.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	P		**P**	**22 56 10.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**4.50**	**128**	P		**P**	**22 56 10.3**	**-1.4**
DNP	**Denpasar**	**5.47**	**123**	P		**P**	**22 56 19.5**	**-0.5**
IGBI	**Denpasar**	**5.49**	**125**	P		**P**	**22 56 18.4**	**-1.8**
	252nm233µm253µm11µm,0.9s							
PPBI	**Pangkal Pinang**	**5.65**	**308**	P		**P**	**22 56 23.7**	**+2.1**
KHKI	**Kahang-Kahang**	**5.65**	**119**	P		**P**	**22 56 21.6**	**0.0**
KLI	**Kotabumi**	**5.77**	**278**	P		**P**	**22 56 23.1**	**+0.4**
	158nm82µm98µm11µm,0.7s							
KLSI		**5.92**	**279**	P		**P**	**22 56 24.2**	**+0.1**
KASI	**Kota Agung**	**6.07**	**271**	P		**P**	**22 56 25.3**	**-0.2**
PMBI	**Palembang**	**6.41**	**295**	P		**P**	**22 56 31.9**	**+3.2**
PMBI	**Palembang**	**6.41**	**295**	P		**P**	**22 56 30.8**	**+2.1**
PMBI	**Palembang**	**6.41**	**295**	P		**P**	**22 56 31.8**	**+3.1**
PMBI	**Palembang**	**6.41**	**295**	⇑P		**P**	**22 56 31.2**	**+2.5**
PMBI	**Palembang**	**6.41**	**295**	P		**P**	**22 56 31.0**	**+2.3**
	117nm100µm10µm,1.0s							
PMBI	**Palembang**	**6.41**	**295**	P		**P**	**22 56 31.4**	**+2.7**
XMI	**Christmas Isla**	**6.79**	**225**	P		**P**	**22 56 33.1**	**+0.8**
XMI	**Christmas Isla**	**6.79**	**225**	S		**S**	**22 57 59.0**	**+0.3**
XMI	**Christmas Isla**	**6.79**	**225**	P		**P**	**22 56 32.6**	**+0.3**
XMI	**Christmas Isla**	**6.79**	**225**	⇑P		**P**	**22 56 32.5**	**+0.3**
TWSI	**Taliwang, Sumb**	**6.94**	**116**	P		**P**	**22 56 31.8**	**-1.9**
	51nm157µm116µm7µm,0.8s							
BKB	**Balikpapan**	**7.66**	**55**	P		**P**	**22 56 40.5**	**-0.3**
BKB	**Balikpapan**	**7.66**	**55**	P		**P**	**22 56 43.4**	**+2.5**
BKB	**Balikpapan**	**7.66**	**55**	P		**P**	**22 56 44.3**	**+3.5**
BKB	**Balikpapan**	**7.66**	**55**	⇑P		**P**	**22 56 43.5**	**+2.7**
BKB	**Balikpapan**	**7.66**	**55**	P		**P**	**22 56 43.7**	**+2.9**
	78nm166µm118µm8µm,1.1s							
BKB	**Balikpapan**	**7.66**	**55**	P		**P**	**22 56 44.4**	**+3.5**
MNAI	**Manna**	**7.72**	**279**	P		**P**	**22 56 42.3**	**+0.9**
MNAI	**Manna**	**7.72**	**279**	P		**P**	**22 56 40.7**	**-0.7**
MNAI	**Manna**	**7.72**	**279**	P		**P**	**22 56 41.7**	**+0.3**
MNAI	**Manna**	**7.72**	**279**	P		**P**	**22 56 41.4**	**0.0**
MNAI	**Manna**	**7.72**	**279**	P		**P**	**22 56 41.6**	**+0.3**
PLAI	**Plampang**	**7.79**	**114**	P		**P**	**22 56 39.7**	**-2.3**
PLAI	**Plampang**	**7.79**	**114**	P		**P**	**22 56 39.3**	**-2.7**
	78nm111µm60µm4µm,0.8s							
PLAI	**Plampang**	**7.79**	**114**	P		**P**	**22 56 40.0**	**-2.1**
DSRI	**Dabo**	**7.91**	**310**	P		**P**	**22 56 45.2**	**+1.9**
	13nm19µm2µm,1.3s							
JMBI	**JAMBI**	**8.01**	**300**	P		**P**	**22 56 46.5**	**+2.2**
	25µm49µm4µm,0.9s							
DBNI	**Kabupaten Domp**	**8.16**	**111**	P		**P**	**22 56 43.1**	**-2.7**
	87µm36µm3µm,1.1s							
KSI	**Kapahiang**	**8.22**	**284**	P		**P**	**22 56 46.7**	**+0.2**
	214µm124µm9µm,1.0s							
MMSI	**Mamuju**	**8.80**	**71**	P		**P**	**22 56 52.7**	**+0.4**
	43µm40µm4µm,1.5s							
KAPI	**Kapang**	**9.14**	**86**	P		**P**	**22 56 55.3**	**-0.4**
	2µm,0.8s,baz=261,slow=10,SNR=383							
KAPI				S		**S**	**22 58 40.1**	**-1.5**
	129nm,0.5s,baz=292,slow=19,SNR=6.2							
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 55.4**	**-0.4**
KAPI	**Kappang**	**9.14**	**86**	S		**S**	**22 58 41.0**	**-0.6**
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 54.4**	**-1.4**
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 54.7**	**-1.0**
KAPI				P		**P**	**22 56 54.7**	**-1.0**
KAPI				S		**S**	**22 58 40.2**	**-1.5**
KAPI				S		**S**	**22 58 40.2**	**-1.5**
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 55.6**	**-0.2**
KAPI	**Kappang**	**9.14**	**86**	⇓P		**P**	**22 56 54.8**	**-1.0**
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 54.7**	**-1.0**
	1µm,0.9s							
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 54.6**	**-1.0**
KAPI				S		**S**	**22 58 39.4**	**-2.3**
KAPI	**Kappang**	**9.14**	**86**	P		**P**	**22 56 55.5**	**-0.2**
WBSI	**Waikabubak, Su**	**9.57**	**115**	P		**P**	**22 56 56.3**	**-3.9**
	50µm80µm9µm,0.7s							
BTDF	**Bukit Timah Da**	**9.75**	**316**	P		**P**	**22 57 05.0**	**+2.9**
BTDF	**Bukit Timah Da**	**9.75**	**316**	S		**S**	**22 58 55.6**	**+2.4**
BTDF	**Bukit Timah Da**	**9.75**	**316**	P		**P**	**22 57 04.9**	**+2.9**
BTDF	**Bukit Timah Da**	**9.75**	**316**	P		**P**	**22 57 04.4**	**+2.4**
BSSI	**Bau Bau, Buton**	**9.86**	**93**	P		**P**	**22 57 02.0**	**-1.1**
	35µm24µm3µm,0.8s							
MYKOM	**Kota Tinggi**	**10.01**	**318**	P		**P**	**22 57 06.7**	**+2.0**
MYKOM	**Kota Tinggi**	**10.01**	**318**	S		**S**	**22 59 01.1**	**+3.1**
MYKOM	**Kota Tinggi**	**10.01**	**318**	P		**P**	**22 57 05.9**	**+1.2**
MYKOM	**Kota Tinggi**	**10.01**	**318**	⇓P		**P**	**22 57 06.4**	**+1.7**
MYKOM	**Kota Tinggi**	**10.01**	**318**	P		**P**	**22 57 06.5**	**+1.8**
	29µm22µm3µm,0.8s							
MYKOM	**Kota Tinggi**	**10.01**	**318**	P		**P**	**22 57 06.6**	**+2.0**
PCI	**Palu**	**10.37**	**63**	P		**P**	**22 57 09.4**	**+1.0**
	141µm188µm8µm,1.4s							
PPSI	**Pulau Pagai**	**10.94**	**285**	P		**P**	**22 57 14.2**	**-0.1**
	36µm122µm10µm,1.0s							
KKSI	**Kolaka, Sulawe**	**11.12**	**83**	P		**P**	**22 57 16.5**	**+0.3**
PDSI	**Padang**	**11.16**	**295**	P		**P**	**22 57 15.1**	**-1.6**
	28µm36µm3µm,0.6s							
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 19.4**	**+1.9**
BKNI	**Bangkinang**	**11.24**	**302**	S		**S**	**22 59 23.8**	**+2.3**
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 18.9**	**+1.4**
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 18.6**	**+1.1**
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 19.1**	**+1.6**
BKNI	**Bangkinang**	**11.24**	**302**	⇓P		**P**	**22 57 18.9**	**+1.4**
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 18.8**	**+1.4**
	54µm74µm8µm,0.7s							
BKNI	**Bangkinang**	**11.24**	**302**	P		**P**	**22 57 19.1**	**+1.6**
TARAI	**Tarakan**	**11.33**	**38**	P		**P**	**22 57 20.2**	**+1.8**
	13µm,1.2s							
PPI	**Padang Panjang**	**11.42**	**297**	P		**P**	**22 57 18.3**	**-1.0**
	33µm21µm2µm,0.8s							
MMRI	**Maumere**	**11.92**	**105**	P		**P**	**22 57 21.9**	**-2.6**
MMRI	**Maumere**	**11.92**	**105**	P		**P**	**22 57 20.6**	**-4.0**
MMRI	**Maumere**	**11.92**	**105**	P		**P**	**22 57 21.1**	**-3.4**
MMRI	**Maumere**	**11.92**	**105**	⇓P		**P**	**22 57 20.9**	**-3.6**
MMRI	**Maumere**	**11.92**	**105**	P		**P**	**22 57 20.8**	**-3.7**
	17µm1µm,0.5s							
MMRI	**Maumere**	**11.92**	**105**	P		**P**	**22 57 21.1**	**-3.4**
APSI	**Ampana**	**12.00**	**67**	P		**P**	**22 57 25.6**	**+0.2**
	83µm64µm3µm,1.2s							
KDI	**Kendari**	**12.10**	**82**	P		**P**	**22 57 27.1**	**+0.7**
	41µm19µm2µm,0.9s							
TOLI2	**Tolitoli**	**12.20**	**57**	P		**P**	**22 57 27.8**	**+0.3**
TOLI2	**Tolitoli**	**12.20**	**57**	S		**S**	**22 59 39.9**	**+0.2**
TOLI2	**Tolitoli**	**12.20**	**57**	P		**P**	**22 57 27.2**	**-0.2**
TOLI2	**Tolitoli**	**12.20**	**57**	P		**P**	**22 57 27.7**	**+0.3**
TOLI2	**Tolitoli**	**12.20**	**57**	P		**P**	**22 57 27.8**	**+0.3**
MNSI	**Mandailing Nat**	**12.73**	**300**	P		**P**	**22 57 32.0**	**-1.0**
	2µm,0.7s							
KKM	**Kota Kinabalu**	**12.92**	**26**	P		**P**	**22 57 34.6**	**-0.4**
KKM	**Kota Kinabalu**	**12.92**	**26**	S		**S**	**22 59 53.4**	**-0.1**
KKM	**Kota Kinabalu**	**12.92**	**26**	P		**P**	**22 57 34.3**	**-0.7**
KKM	**Kota Kinabalu**	**12.92**	**26**	⇑P		**P**	**22 57 34.0**	**-1.0**
KKM	**Kota Kinabalu**	**12.92**	**26**	P		**P**	**22 57 34.3**	**-0.7**
	68µm3µm,1.1s							
KKM	**Kota Kinabalu**	**12.92**	**26**	P		**P**	**22 57 34.3**	**-0.7**
LUWI	**Luwuk**	**12.99**	**70**	P		**P**	**22 57 35.6**	**-0.1**
LUWI	**Luwuk**	**12.99**	**70**	S		**S**	**22 59 53.5**	**-1.3**
LUWI	**Luwuk**	**12.99**	**70**	P		**P**	**22 57 35.2**	**-0.5**
LUWI	**Luwuk**	**12.99**	**70**	P		**P**	**22 57 34.9**	**-0.7**
LUWI	**Luwuk**	**12.99**	**70**	⇑P		**P**	**22 57 35.0**	**-0.7**
LUWI	**Luwuk**	**12.99**	**70**	P		**P**	**22 57 35.1**	**-0.5**
	92µm42µm3µm,0.7s							
LUWI	**Luwuk**	**12.99**	**70**	P		**P**	**22 57 36.0**	**+0.3**
PBSI	**Pulau Batu**	**13.50**	**294**	P		**P**	**22 57 39.4**	**-1.5**
	39µm40µm3µm,0.6s							
BATI	**Baumata**	**13.71**	**110**	P		**P**	**22 57 37.6**	**-5.5**
	474nm,0.3s,baz=310,slow=1.9,SNR=50							
BATI				S			**22 59 57.6**	**-11**
	6µm,0.6s,baz=310,slow=17,SNR=12							
BATI	**Baumata**	**13.71**	**110**	P		**P**	**22 57 36.8**	**-6.3**
	19µm602nm,0.5s							
GTOI	**Gorontalo**	**13.89**	**64**	P		**P**	**22 57 42.3**	**-2.7**
	88µm38µm1µm,0.5s							
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 44.6**	**-3.1**
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 43.9**	**-3.9**
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 43.9**	**-3.9**
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 44.6**	**-3.1**
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 44.1**	**-3.6**
	15µm1µm,1.1s							
SOEI	**Soe**	**14.14**	**108**	P		**P**	**22 57 44.6**	**-3.1**
RPSI	**Rantau Prapat**	**14.31**	**305**	P		**P**	**22 57 49.5**	**+0.1**
PSI	**Prapat**	**14.37**	**306**	P		**P**	**22 57 50.6**	**+0.5**
PSI	**Prapat**	**14.37**	**306**	P		**P**	**22 57 49.5**	**-0.6**
PSI	**Prapat**	**14.37**	**306**	P		**P**	**22 57 49.6**	**-0.6**
	68µm36µm2µm,0.8s							
GSI	**Gunungsitoli**	**14.73**	**298**	P		**P**	**22 57 53.2**	**-0.5**
GSI	**Gunungsitoli**	**14.73**	**298**	P		**P**	**22 57 51.6**	**-2.1**
GSI	**Gunungsitoli**	**14.73**	**298**	⇓P		**P**	**22 57 51.4**	**-2.4**
GSI	**Gunungsitoli**	**14.73**	**298**	P		**P**	**22 57 51.7**	**-2.0**
	46µm16µm965nm,0.7s							
GSI	**Gunungsitoli**	**14.73**	**298**	P		**P**	**22 57 51.7**	**-2.0**
KULM	**Kulim**	**14.73**	**317**	P		**P**	**22 57 54.0**	**+0.3**
KULM	**Kulim**	**14.73**	**317**	S		**S**	**23 00 30.5**	**+2.5**
KULM	**Kulim**	**14.73**	**317**	P		**P**	**22 57 53.5**	**-0.2**
KULM	**Kulim**	**14.73**	**317**	⇓P		**P**	**22 57 53.8**	**+0.1**
KULM	**Kulim**	**14.73**	**317**	P		**P**	**22 57 53.8**	**+0.1**
	21µm23µm2µm,1.0s							
KULM	**Kulim**	**14.73**	**317**	P		**P**	**22 57 54.1**	**+0.3**
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 59.0**	**+2.0**
COCO	**West Island**	**15.05**	**244**	S		**S**	**23 00 38.0**	**+4.2**
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 57.5**	**+0.5**
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 57.5**	**+0.5**
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 59.3**	**+2.3**
COCO				P		**P**	**22 57 59.3**	**+2.3**
COCO				S		**S**	**23 00 37.3**	**+3.5**
COCO				S		**S**	**23 00 37.3**	**+3.5**
COCO	**West Island**	**15.05**	**244**	⇑P		**P**	**22 57 58.2**	**+1.2**
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 57.3**	**+0.3**
	22µm18µm2µm,1.1s							
COCO	**West Island**	**15.05**	**244**	P		**P**	**22 57 58.4**	**+1.4**
SANI	**Sanana**	**15.77**	**77**	P		**P**	**22 58 04.5**	**0.0**
SANI	**Sanana**	**15.77**	**77**	S		**S**	**23 00 46.5**	**-0.1**
SANI	**Sanana**	**15.77**	**77**	P		**P**	**22 58 03.6**	**-0.9**
SANI	**Sanana**	**15.77**	**77**	⇑P		**P**	**22 58 01.9**	**-2.5**
SANI	**Sanana**	**15.77**	**77**	P		**P**	**22 58 03.7**	**-0.8**
	72µm37µm2µm,0.9s							
SANI	**Sanana**	**15.77**	**77**	P		**P**	**22 58 04.1**	**-0.4**
MNI	**Manado**	**15.88**	**64**	P		**P**	**22 58 02.8**	**-2.8**
TPTI		**16.07**	**303**	P		**P**	**22 58 06.2**	**-1.2**
	67µm48µm4µm,0.7s							
SNSI	**Sinabang, Aceh**	**16.35**	**299**	P		**P**	**22 58 09.8**	**-0.3**
	92µm90µm6µm,0.8s							
NLAI	**Namlea**	**16.63**	**82**	P		**P**	**22 58 12.6**	**-0.1**
	47µm26µm3µm,0.8s							
GIRL	**Giralia**	**17.24**	**169**	P		**P**	**22 58 19.1**	**+0.9**
MLSI	**Meulaboh, Aceh**	**17.27**	**305**	P		**P**	**22 58 18.7**	**+0.1**
LHMI	**Lhok Sumawe**	**17.40**	**308**	P		**P**	**22 58 21.2**	**+1.4**
LHMI	**Lhok Sumawe**	**17.40**	**308**	S		**S**	**23 01 17.7**	**+4.1**
LHMI	**Lhok Sumawe**	**17.40**	**308**	P		**P**	**22 58 20.8**	**+1.0**
LHMI	**Lhok Sumawe**	**17.40**	**308**	⇓P		**P**	**22 58 20.6**	**+0.8**
LHMI	**Lhok Sumawe**	**17.40**	**308**	P		**P**	**22 58 21.0**	**+1.1**
LHMI	**Lhok Sumawe**	**17.40**	**308**	P		**P**	**22 58 21.0**	**+1.1**
**

MEEK	Meekatharra	22.21	161		P		P		22 59 03.6	+0.2
MEEK	Meekatharra	22.21	161		P		P		22 59 03.9	+0.5
LQP	Lukban	22.45	29	*eP*	P		P		22 59 05.5	-0.4
KMPI	Kaimana, Papua	23.12	86		P		P		22 59 11.4	-0.2
	20µm19µm766nm,1.1s									
MORW	Morawa	23.84	168		P		P		22 59 18.3	+0.5
MORW	Morawa	23.84	168		S		S		23 02 58.1	+2.2
MORW	Morawa	23.84	168		P		P		22 59 17.6	-0.2
MORW	Morawa	23.84	168		⇓P		P		22 59 18.1	+0.2
MORW	Morawa	23.84	168		P		P		22 59 18.8	+1.0
MWPI	Manokwari, Pap	23.87	79		P		P		22 59 19.4	+1.1
	12µm651nm,0.8s									
QIZ	Qiongzhong	24.55	358		P		P		22 59 25.4	+1.2
QIZ	Qiongzhong	24.55	358		P		P		22 59 25.8	+1.6
QIZ					sP		sP		23 01 53.5	+1.2
QIZ					S		S		23 03 10.2	+2.8
QIZ					pmax		pmax			
	comp=Z,200nm,1.9s									
QIZ					pmax		pmax			
	comp=Z,7µm,5.0s									
PBA	Port Blair	24.73	314		P		P		22 59 25.7	-0.2
PBA	Port Blair	24.73	314		P		P		22 59 25.2	-0.6
	SNR=9.6									
PBA	Port Blair	24.73	314		⇑P		P		22 59 25.3	-0.6
PBA	Port Blair	24.73	314		P		P		22 59 27.1	+1.3
PBA	Port Blair	24.73	314	*ex*	P		P		22 59 24.8	-1.1
PBA					IAmb		IAmb		22 59 29.3	
	comp=Z,644nm,0.7s									
SZP	Santa	25.04	23		P		P		22 59 30.7	+2.2
SIPP	Brgy, Tapao	25.38	22	*eP*	P		P		22 59 32.3	+0.8
SIPP				*eS*	S		S		23 03 23.4	+3.0
BLDU	Ballidu	25.47	168		P		P		22 59 32.7	+0.4
BLDU	Ballidu	25.47	168		S		S		23 03 23.6	+2.0
BLDU	Ballidu	25.47	168		P		P		22 59 33.0	+0.7
BAKI	Biak	25.85	81		P		P		22 59 36.4	+0.6
	comp=Z,19µmcomp=Z,8µmcomp=Z,619nm,0.8s									
SRPI	Serui, Papua	25.86	83		P		P		22 59 35.8	-0.1
	comp=Z,16µmcomp=Z,6µmcomp=Z,355nm,0.7s									
MTKN	Mount Kenneth	26.58	170		P		P		22 59 44.0	+2.1
CM31	Chiang Mai Arr	26.58	335		P		P		22 59 43.5	+1.3
CM31	Chiang Mai Arr	26.58	335		P		P		22 59 44.1	+1.9
	SNR=484									
CM31					P		P		22 59 44.1	+1.9
	SNR=484									
CM31					S		S		23 03 39.4	+0.1
CM31					S		S		23 03 39.4	+0.1
CMAR	Chiang Mai Arr	26.58	335		P		P		22 59 43.8	+1.6
	comp=Z,1µm,0.9s,baz=167,slow=7.1,SNR=344									
CMAR					PcP		PcP		23 02 49.4	+0.7
	comp=Z,120nm,1.0s,baz=188,slow=3.3,SNR=5.6									
CMAR					ScP		ScP		23 05 37.9	-0.1
	comp=Z,23nm,0.6s,baz=196,slow=3.3,SNR=5.1									
CMAR					PKiKP		PKiKP		23 10 26.6	0.0
	comp=Z,6.7nm,0.9s,baz=285,slow=1.4,SNR=7.2									
CMAR					P3KPbc				23 32 07.5	
	comp=Z,1.1nm,0.3s,baz=349,slow=4.3,SNR=4.6									
CMAR					P3KP				23 33 05.5	
	comp=Z,0.7nm,0.3s,baz=264,slow=4.3,SNR=4.8									
	comp=Z,1µm,0.9s									
KLBR	Kellerberrin	26.65	166		P		P		22 59 42.8	+0.2
KLBR	Kellerberrin	26.65	166		P		P		22 59 43.1	+0.5
MUN	Mundaring	26.70	169		P		P		22 59 43.8	+0.8
CHTO	Chiang Mai	26.90	335		P		P		22 59 46.3	+1.3
CHTO	Chiang Mai	26.90	335		S		S		23 03 46.7	+2.5
CHTO	Chiang Mai	26.90	335		P		P		22 59 45.8	+0.8
CHTO	Chiang Mai	26.90	335		P		P		22 59 45.8	+0.8
CHTO	Chiang Mai	26.90	335		P		P		22 59 46.5	+1.5
CHTO					P		P		22 59 46.5	+1.5
CHTO					S		S		23 03 43.8	-0.4
CHTO					S		S		23 03 43.8	-0.4
CHTO	Chiang Mai	26.90	335	⇓	P		P		22 59 46.3	+1.3
CHTO	Chiang Mai	26.90	335		P		P		22 59 46.2	+1.3
	comp=Z,20µmcomp=Z,8µmcomp=Z,489nm,1.0s									
CHTO	Chiang Mai	26.90	335		P		P		22 59 47.0	+2.0
CHTO					S		S		23 03 37.0	-7.2
CHTO	Chiang Mai	26.90	335		P		P		22 59 46.5	+1.5
WRA	Warramunga Arr	27.10	124		P		P		22 59 46.5	-0.2
	comp=Z,202nm,0.8s,baz=306,slow=8.7,SNR=435									
WRA					sP		sP		23 02 19.2	+2.1
	comp=Z,135nm,0.9s,baz=293,slow=11,SNR=2.0									
WRA					PcP		PcP		23 02 50.5	+0.4
	comp=Z,75nm,0.7s,baz=312,slow=2.8,SNR=2.8									
WRA					S		S		23 03 46.7	-0.7
	comp=Z,254nm,1.1s,baz=296,slow=17,SNR=5.2									
WRA					ScP		ScP		23 05 38.3	-1.4
	comp=Z,83nm,1.0s,baz=336,slow=2.5,SNR=4.9									
WRA					P3KPbc				23 32 04.9	
	comp=Z,19nm,1.0s,baz=121,slow=3.8,SNR=37									
WRA					P3KP				23 33 05.8	
	comp=Z,5.1nm,1.1s,baz=210,slow=3.1,SNR=4.6									
	comp=Z,202nm,0.8s									
WRA	Warramunga Arr	27.10	124		P		P		22 59 46.0	-0.8
WRAB	Tennant Creek	27.10	124		P		P		22 59 46.4	-0.3
WRAB	Tennant Creek	27.10	124		P		P		22 59 46.5	-0.3
WRAB	Tennant Creek	27.10	124	*ceP*			P		22 59 46.3	-0.5
WRAB					pmax		pmax			
	comp=Z,327nm,1.0s									
WRAB	Tennant Creek	27.10	124		P		P		22 59 46.7	-0.1
WB1	Warramunga Ar.	27.11	124		P		P		22 59 46.1	-0.8
SLVN	Son La	27.62	346		P		P		22 59 53.3	+1.9
AUHAR	St Anne's Scho	27.73	170		P		P		22 59 53.5	+1.5
MCO	Taipa Grande	27.77	6		P		P		22 59 54.0	+1.5
AUKUL	Kulin High Sch	27.77	166		P		P		22 59 53.0	+0.5
AUKUL	Kulin High Sch	27.77	166		S		S		23 03 57.6	+0.1
NWAO	Narrogin (SRO)	27.82	168		P		P		22 59 53.3	+0.5
NWAO	Narrogin (SRO)	27.82	168		S		S		23 04 00.0	+1.8
NWAO	Narrogin (SRO)	27.82	168		P		P		22 59 52.9	+0.1
NWAO	Narrogin (SRO)	27.82	168		P		P		22 59 52.9	+0.1
NWAO	Narrogin (SRO)	27.82	168		P		P		22 59 53.4	+0.5
NWAO					P		P		22 59 53.4	+0.5
NWAO					S		S		23 03 58.9	+0.7
NWAO					S		S		23 03 58.9	+0.7
HKPS	Hong Kong Po S	27.99	7		P		P		22 59 56.0	+1.5
HKPS	Hong Kong Po S	27.99	7		S		S		23 04 02.3	+1.2
HKPS	Hong Kong Po S	27.99	7		P		P		22 59 56.2	+1.8
AUALC	St Philip's Co	28.70	131		P		P		23 00 00.2	-0.5
AUALC	St Philip's Co	28.70	131		S		S		23 04 12.9	+0.7
ASAR	Alice Springs	28.70	131		P		P		23 00 00.8	+0.1
	comp=Z,174nm,0.8s,baz=303,slow=8.0,SNR=431									
ASAR					PcP		PcP		23 02 54.1	+0.1
	comp=Z,212nm,1.1s,baz=292,slow=2.0,SNR=7.3									
ASAR					S		S		23 04 11.4	-0.8
	comp=Z,46nm,0.6s,baz=307,slow=17,SNR=6.1									
ASAR					ScP		ScP		23 05 43.8	-0.8
	comp=Z,29nm,0.5s,baz=314,slow=2.2,SNR=4.3									
ASAR					P3KPbc				23 31 56.2	
	comp=Z,0.6nm,0.5s,baz=126,slow=4.2,SNR=4.2									
ASAR					P3KP				23 32 59.4	
	comp=Z,5.2nm,1.0s,baz=197,slow=2.9,SNR=7.0									
	comp=Z,174nm,0.8s									
ASAR	Alice Springs	28.70	131		P		P		23 00 00.3	-0.5
AS01	Alice Springs	28.73	131		P		P		23 00 00.4	-0.6
NPW	Naypyitaw	29.01	331		P		P		23 00 04.9	+1.5
H01W3	Cape Leeuwin H	29.26	174		P		P		23 00 06.7	+1.6
	baz=18,slow=3.8,SNR=17									
H01W1	Cape Leeuwin H	29.27	174		P		P		23 00 06.6	+1.4
	baz=18,slow=3.8,SNR=30									
H01W2	Cape Leeuwin H	29.27	174		P		P		23 00 06.5	+1.3
	baz=18,slow=3.8,SNR=19									
GZH2	Guangzhou	29.29	6		P		P		23 00 07.5	+1.7
GZH2					sP		sP		23 02 39.0	+1.4
GZH2					S		S		23 04 23.4	+2.1
GZH2					pmax		pmax			
	comp=Z,500nm,1.3s									
GZH2					pmax		pmax			
	comp=Z,10µm,8.4s									
GENI	Genyem	29.65	85		P		P		23 00 08.2	-0.9
GENI	Genyem	29.65	85	⇑	P		P		23 00 08.5	-0.6
GENI	Genyem	29.65	85		P		P		23 00 08.2	-0.9
	comp=Z,24µmcomp=Z,7µmcomp=Z,405nm,0.9s									
GENI	Genyem	29.65	85		P		P		23 00 08.6	-0.6
MMPI	Merauke	29.69	97		P		P		23 00 09.1	-0.3
FORT	Forrest	29.89	149		P		P		23 00 11.2	+0.3
FORT					IAmb		IAmb		23 00 15.7	
	comp=Z,376nm,0.8s									
AUALB	St Joseph's Co	29.96	168		P		P		23 00 12.7	+1.3
TWG	Pinlang	30.11	20		P		P		23 00 13.6	+0.7
TWGBT	Beinan	30.11	20		P		P		23 00 13.7	+0.8
TWGBT	Beinan	30.11	20		S		S		23 04 35.6	+1.7
JAY	Jayapura	30.19	85		P		P		23 00 12.9	-0.9
	comp=Z,360nm,0.8s									
TPUB	Ta-pu	30.41	18		P		P		23 00 16.2	+0.7
TPUB	Ta-pu	30.41	18		S		S		23 04 40.2	+1.5
TPUB	Ta-pu	30.41	18		P		P		23 00 16.9	+1.4
YULB	Yu-li	30.72	20		P		P		23 00 17.6	-0.5
YULB	Yu-li	30.72	20		S		S		23 04 44.7	+1.4
YULB	Yu-li	30.72	20		IAmb		IAmb		23 00 24.9	
	comp=Z,680nm,0.8s									
YULB	Yu-li	30.72	20		P		P		23 00 18.2	+0.1
GULI	GuiLin	30.77	360	⇑	P		P		23 00 20.2	+1.7
GULI					S		S		23 04 46.5	+2.4
GULI					pmax		pmax			
	comp=Z,280nm,1.5s									
GULI					pmax		pmax			
	comp=Z,7µm,11.7s									
KNMB	Chin-men Tao	30.90	14		IAmb		IAmb		23 00 24.2	
	comp=Z,731nm,1.0s									
SSLB	Suanglung	30.97	19		P		P		23 00 20.6	+0.3
SSLB	Suanglung	30.97	19		S		S		23 04 48.5	+1.3
SSLB	Suanglung	30.97	19		P		P		23 00 21.3	+0.9
SSLB	Suanglung	30.97	19		P		P		23 00 21.4	+1.1
QZH2	Quanzhou	31.41	14	⇑	iP		P		23 00 24.3	+0.3
QZH2					PP		PP		23 01 56.5	-8.5
QZH2					sP		sP		23 02 55.9	-0.6
QZH2					S		S		23 04 53.2	-0.6
QZH2					SS		SS		23 07 47.3	-17
QZH2					pmax		pmax			
	comp=Z,430nm,0.9s									
QZH2					pmax		pmax			
	comp=Z,11µm,5.7s									
NACB	Ninganchiao	31.54	19		P		P		23 00 24.5	-0.6
NACB	Ninganchiao	31.54	19		S		S		23 04 56.3	+0.5
NACB	Ninganchiao	31.54	19		P		P		23 00 24.5	-0.6
NACB					IAmb		IAmb		23 00 32.9	
	comp=Z,1µm,1.2s									
NACB	Ninganchiao	31.54	19		P		P		23 00 25.1	0.0
KMI	Kunming	31.55	346		P		P		23 00 29.1	+3.7
KMI					pP		pP		23 02 00.1	+4.4
KMI					sP		PcP		23 03 00.1	-1.7
KMI2	Kunming	31.57	346	⇓	P		P		23 00 28.7	+3.1
KMI2					sP		PcP		23 03 00.5	-1.3
KMI2					S		S		23 04 57.1	+0.4
KMI2					pmax		pmax			
	comp=Z,560nm,1.0s									
KMI2					pmax		pmax			
	comp=Z,2.0nm,2.9s									
QIS	Mount Isa	31.81	120		P		P		23 00 27.0	-0.5
QIS	Mount Isa	31.81	120		S		S		23 05 00.9	+0.7
QIS	Mount Isa	31.81	120		P		P		23 00 27.0	-0.5
YHNB	Yeheng	31.93	19		P		P		23 00 28.8	+0.3
YHNB	Yeheng	31.93	19		S		S		23 05 01.9	-0.1
YHNB	Yeheng	31.93	19		P		P		23 00 29.3	+0.7
HALK	Hakmana	32.06	291	⇑	P		P		23 00 30.1	+0.3
HALK	Hakmana	32.06	291		P		P		23 00 31.1	+1.4
GYA	Guiyang	32.16	353	⇑	P		P		23 00 32.9	+2.4
GYA					PP		PP		23 02 07.9	-4.1
GYA					sP		PcP		23 03 04.3	+1.0
GYA					PcP		sP		23 03 05.6	+2.3
GYA					S		S		23 05 07.2	+1.7
GYA					ScP		ScP		23 05 57.4	+1.3
GYA					ScS		ScS		23 09 57.1	+0.3
GYA					pmax		pmax			
	comp=Z,290nm,0.7s									
GYA					pmax		pmax			
	comp=Z,5µm,4.7s									
TATO	Taipei	32.25	19		P		P		23 00 31.2	0.0
TATO	Taipei	32.25	19		S		S		23 05 06.5	-0.2
TATO	Taipei	32.25	19		P		P		23 00 31.8	+0.7
TATO	Taipei	32.25	19		P		P		23 00 30.2	-1.0
TATO					P		P		23 00 30.2	-1.0
TATO					S		S		23 05 04.1	-2.6
TATO					S		S		23 05 04.1	-2.6
YOJ	Yonaguni jima	32.30	22		P		P		23 00 32.2	+0.6
YOJ	Yonaguni jima	32.30	22		S		S		23 05 08.5	+1.1
YOJ	Yonaguni jima	32.30	22	⇓	P		P		23 00 31.8	+0.2
YOJ	Yonaguni jima	32.30	22		P		P		23 00 32.5	+0.9
PALK	Pallekele	32.48	293		P		P		23 00 34.6	+1.2
	comp=Z,649nm,0.9s,baz=106,slow=7.8,SNR=113									
PALK					PcP		PcP		23 03 05.2	+0.8
	comp=Z,168nm,0.9s,baz=98,slow=4.7,SNR=4.4									
PALK					ScP		ScP		23 05 57.2	-0.2
	comp=Z,42nm,0.9s,baz=110,slow=2.3,SNR=5.4									
	comp=Z,649nm,0.9s									
PALK	Pallekele	32.48	293	*i*	P		P		23 00 34.1	+0.8
	SNR=34									
PALK	Pallekele	32.48	293		P		P		23 00 33.4	+0.1
PALK					IAmb		IAmb		23 00 36.7	
	comp=Z,607nm,0.8s									
PALK	Pallekele	32.48	293	*d*	iP		P		23 00 34.0	+0.7
PALK					pmax		pmax			
	comp=Z,812nm,0.9s									
PALK	Pallekele	32.48	293		P		P		23 00 34.3	+0.9
PALK					S		S		23 05 09.9	-0.7
PALK					S		S		23 05 10.5	-0.1
PALK	Pallekele	32.48	293		P		P		23 00 33.8	+0.5
	comp=Z,20µmcomp=Z,7µmcomp=Z,391nm,0.9s									
PALK	Pallekele	32.48	293		P		P		23 00 34.1	+0.8
PALK					S		S		23 05 09.8	-0.7
PALK	Pallekele	32.48	293		P		P		23 00 34.5	+1.2
TNCH	TengChong	32.70	339	⇓	P		P		23 00 36.7	+1.5
TNCH					sP		PcP		23 03 05.7	+0.7
TNCH					S		S		23 05 11.0	-2.8
TNCH					sS		sS		23 08 04.2	+1.7
TNCH					SS		SS		23 08 10.6	-15
TNCH					ScS		ScS		23 09 59.9	+0.2
TNCH					pmax		pmax			
	comp=Z,2µm,1.0s									
MALK	Mahakanadarawa	33.06	295		P		P		23 00 38.5	+0.2
MALK	Mahakanadarawa	33.06	295	⇓	P		P		23 00 38.5	+0.2
MALK	Mahakanadarawa	33.06	295		P		P		23 00 39.4	+1.1
COEN	Coen	33.11	107		P		P		23 00 38.2	-0.4
COEN	Coen	33.11	107		S		S		23 05 19.5	-0.6
COEN	Coen	33.11	107	⇓	P		P		23 00 37.7	-0.9
COEN	Coen	33.11	107		P		P		23 00 38.3	-0.3
PZH	PanZhiHua	33.11	345		P		P		23 00 40.5	+1.9
PZH					S		S		23 05 22.4	+2.4
PZH					SS		SS		23 08 21.8	-10
PZH					pmax		pmax			
	comp=Z,300nm,0.9s									
PZH					pmax		pmax			
	comp=Z,1µm,5.0s									
JMJ	Miyako jima 2	33.51	25		P		P		23 00 43.6	+1.8
JMJ	Miyako jima 2	33.51	25		S		S		23 05 27.2	+1.4
MORE	Moreh	33.70	333		IAmb		IAmb		23 00 47.6	
	comp=Z,5µm,1.4s									
CNSH	ChangSha	33.73	4		P		P		23 00 45.8	+2.2
CNSH					pP		pP		23 02 17.4	+2.4
CNSH					sP		sP		23 03 17.8	+0.8
CNSH					S		S		23 05 32.2	+3.2
CNSH					sS		sS		23 08 19.0	+0.7
CNSH					pmax		pmax			
	comp=Z,440nm,1.3s									
AGT	Agartala	34.92	328	*eP*			P		23 00 55.5	+1.9
MTSU	Mount Surprise	35.17	114		P		P		23 00 55.9	0.0
MTSU	Mount Surprise	35.17	114		S		S		23 05 50.0	-1.2
MTSU	Mount Surprise	35.17	114		P		P		23 00 56.3	+0.4
MDRS	Chennai	35.43	302	*eP*			P		23 00 58.8	+0.8
BWNR	Bhubaneshwar	35.45	317	⇓	iP		P		23 00 59.0	+0.9
ENH	Enshi	35.75	358		IAmb		IAmb		23 01 04.9	
	comp=Z,299nm,0.7s									
ENH	Enshi	35.75	358		P		P		23 01 01.2	+0.7
ENH	Enshi	35.75	358		P		P		23 01 01.1	+0.7
ENH					sP		sP		23 03 34.4	-0.4
BBOO	Buckleboo	35.95	142		P		P		23 01 01.6	-0.6
BBOO	Buckleboo	35.95	142		S		S		23 06 01.5	-0.9
BBOO	Buckleboo	35.95	142		P		P		23 01 01.5	-0.6
BBOO					IAmb		IAmb		23 01 05.6	
	comp=Z,285nm,0.7s									
BBOO	Buckleboo	35.95	142		P		P		23 01 02.3	+0.1
SHL	Shillong	35.98	330		P		P		23 01 03.5	+0.8
	SNR=650									
SHL	Shillong	35.98	330	*eP*			P		23 01 03.3	+0.6
SHL					IVmB_BB				23 01 07.1	
	comp=Z,23µm,0.8s									
WHN	Wuhan	36.19	5	⇑	iP		P		23 01 05.6	+1.6
WHN					pP		pP		23 02 40.0	+3.2
WHN					PP		PP		23 02 42.7	-4.2
WHN					sP		sP		23 03 40.0	+1.5
WHN					S		S		23 06 06.2	+0.3
WHN					ScP		ScP		23 06 11.8	+1.5
WHN					PcS		PcS		23 07 05.4	+1.9
WHN					sS		sS		23 08 57.8	+1.0
WHN					SS		SS		23 09 09.8	-7.3
WHN					pmax		pmax			
	comp=Z,2µm,1.1s									
WHN					pmax		pmax			
	comp=Z,32µm,6.7s									
PMG	Port Moresby	36.43	98		P		P		23 01 06.8	+0.5
PMG	Port Moresby	36.43	98		S		S		23 06 09.9	-0.1
PMG	Port Moresby	36.43	98		P		P		23 01 06.4	+0.1
PMG					IAmb		IAmb		23 01 12.6	
	comp=Z,541nm,0.9s									
PMG	Port Moresby	36.43	98	*d*	iP		P		23 01 07.0	+0.6
PMG					pmax		pmax			
	comp=Z,478nm,0.9s									
PMG	Port Moresby	36.43	98	⇓	P		P		23 01 07.0	+0.6
PMG	Port Moresby	36.43	98		P		P		23 01 06.5	+0.2
	comp=Z,19µmcomp=Z,7µmcomp=Z,668nm,1.0s									
PMG	Port Moresby	36.43	98		P		P		23 01 07.1	+0.8
RAGD	RAYAGADA	36.43	313	⇓	iP		P		23 01 06.9	+0.6
RAGD					IAmb		IAmb		23 01 09.3	
	comp=Z,547nm,1.1s									
TEZP	TEZPUR	36.43	333	*eP*			P		23 01 06.7	+0.5
JOW	Kunigami	36.56	27		P		P		23 01 08.2	+0.9
	comp=Z,1µm,0.9s,baz=221,slow=5.9,SNR=47									
JOW					pP		pP		23 02 41.6	+1.4
	comp=Z,94nm,0.9s,baz=222,slow=7.3,SNR=1.6									
JOW					S		S		23 06 11.2	-0.5
	comp=Z,123nm,1.1s,baz=90,slow=6.1,SNR=8.3									
	comp=Z,1µm,0.9s									
JOW	Kunigami	36.56	27		P		P		23 01 08.0	+0.7
JOW	Kunigami	36.56	27		S		S		23 06 13.1	+1.4
JOW	Kunigami	36.56	27	⇓	P		P		23 01 08.0	+0.7
JOW	Kunigami	36.56	27		P		P		23 01 08.6	+1.3
KOD	Kodaikanal	36.58	295	⇓	iP		P		23 01 08.8	+0.8
GUWA	GUWAHATI	36.60	331	*eP*			P		23 01 08.6	+1.1
AUCAS	Cummins Area S	36.75	144		P		P		23 01 09.6	+0.9
ZIRO	ZIRO	36.76	335	*eP*			P		23 01 10.2	+1.2
MANU	Manus Island	36.86	86	⇑	P		P		23 01 10.8	+0.9
VJD	Vijayawada	36.92	307	⇓	ix		P		23 01 17.1	+6.8
CD2	Chengdu	36.95	350		P		P		23 01 11.4	+0.9
CD2					PP		PP		23 02 49.0	-3.4
CD2					sP		sP		23 03 46.5	+1.3
CD2					S		S		23 06 18.1	+0.6
CD2					ScS		ScS		23 10 23.1	+0.4
CD2					pmax		pmax			
	comp=Z,1µm,1.1s									
CD2					pmax		pmax			
	comp=Z,3µm,4.9s									
JMZ	Minamidaito 2	37.16	32		P		P		23 01 13.2	+1.0
JMZ	Minamidaito 2	37.16	32		S		S		23 06 20.8	+0.3
JMZ	Minamidaito 2	37.16	32	⇓	P		P		23 01 12.8	+0.6
JMZ	Minamidaito 2	37.16	32		P		P		23 01 13.8	+1.6
DHUB	DHUBRI	37.31	329	*eP*			P		23 01 14.2	+0.8
PTPS	Port Pirie	37.40	141		P		P		23 01 15.7	+1.7
CTA	Charters Tower	37.49	116		P		P		23 01 15.2	+0.2
CTA	Charters Tower	37.49	116		S		S		23 06 25.2	-0.5
CTAO	Charters Tower	37.49	116		P		P		23 01 15.2	+0.2
CTAO	Charters Tower	37.49	116		S		S		23 06 26.4	+0.7
CTAO	Charters Tower	37.49	116		P		P		23 01 15.1	+0.1
CTAO	Charters Tower	37.49	116		P		P		23 01 15.1	+0.1
CTAO					pmax		pmax			
	comp=Z,359nm,1.2s									
CTAO	Charters Tower	37.49	116	⇓	P		P		23 01 15.4	+0.4
CTAO	Charters Tower	37.49	116		P		P		23 01 15.7	+0.6
AUJCS	Jamestown Cent	37.81	140		P		P		23 01 17.6	+0.2
COBR	COOCHBEHAR	37.81	328	*eP*			P		23 01 18.9	+1.5
H08S2	Diego Garcia H	37.89	265		P		P		23 01 19.1	+1.1
	baz=54,slow=9.4,SNR=58									
H08S3	Diego Garcia H	37.90	265		P		P		23 01 18.5	+0.3
	baz=54,slow=9.4,SNR=46									
H08S1	Diego Carcia H	37.91	265		P		P		23 01 19.2	+1.0
	baz=54,slow=9.4,SNR=36									
DGAR	Diego Garcia	37.92	265		P		P		23 01 19.5	+0.9
DGAR					IAmb		IAmb		23 01 22.1	
	comp=Z,753nm,0.8s									
DGAR	Diego

comp=Z,2μm,0.9s
LSA Lhasa 39.81 333 P P 23 01 35.8 +1.6
MNGI Mangalore 40.00 298 *eP* **P 23 01 35.9 +0.6**
MNGI IAmb IAmb 23 01 37.6
comp=Z,358nm,1.0s
LYN LuoYang 40.04 2 ⇑P **P 23 01 36.0 +0.6**
LYN sP sP 23 04 12.8 +1.3
LYN ScP **ScP 23 06 26.6 +1.5**
LYN S **S 23 07 02.7 +0.1**
LYN ScS **ScS 23 10 42.9 +2.3**
LYN pmax pmax
comp=Z,500nm,1.0s
LYN pmax pmax
comp=Z,5μm,11.1s
STMR SITAMARHI 40.50 324 *eP* **P 23 01 39.8 +0.7**
EVN Everest 40.55 327 P **P 23 01 41.9 +1.5**
EVN Everest 40.55 327 ⇓P **P 23 01 41.0 +0.7**
EVN Everest 40.55 327 P **P 23 01 41.2 +0.9**
VAR Varanasi 40.81 320 *eP* **P 23 01 42.1 +0.5**
NGP Nagpur 40.85 312 *eP* **P 23 01 41.3 -0.8**
JSU Suzuyama 41.54 26 P **P 23 01 48.4 +1.0**
JSU Suzuyama 41.54 26 S **S 23 07 24.7 +0.1**
JSU Suzuyama 41.54 26 P **P 23 01 47.2 -0.2**
JSU IAmb IAmb 23 01 51.7
comp=Z,697nm,1.0s
JSU Suzuyama 41.54 26 ⇑P **P 23 01 47.4 0.0**
JSU Suzuyama 41.54 26 P **P 23 01 48.6 +1.2**
GKPR Gorakhpur 41.59 322 *eP* **P 23 01 48.6 +0.9**
ALBI Allahabad 41.60 319 *eP* **P 23 01 48.2 +0.2**
ALBI IAmb IAmb 23 01 50.3
comp=Z,817nm,0.8s
CMSA Cobar Meteorol 41.73 132 P **P 23 01 49.2 +0.3**
CMSA Cobar Meteorol 41.73 132 S **S 23 07 27.6 +0.3**
CMSA Cobar Meteorol 41.73 132 P **P 23 01 49.3 +0.3**
RMQ Roma 41.86 124 P **P 23 01 51.0 +1.0**
RMQ Roma 41.86 124 P **P 23 01 51.8 +1.8**
LZDM Lanzhou Array 41.91 352 P **P 23 01 52.2 +1.7**
comp=Z,304nm,0.6s,baz=184,slow=12,SNR=126
LZDM PcP **PcP 23 03 34.3 +0.7**
comp=Z,212nm,1.0s,baz=177,slow=5.8,SNR=4.7
LZDM ScP **ScP 23 06 32.4 -0.6**
comp=Z,75nm,0.7s,baz=188,slow=9.0,SNR=4.4
LZDM S **S 23 07 31.6 +1.4**
comp=Z,63nm,1.1s,baz=140,slow=11,SNR=2.1
comp=Z,304nm,0.6s
MGBR Mount Gambier 41.99 144 P **P 23 01 52.2 +1.4**
LZH Lanzhou 42.01 352 *eP* **P 23 01 53.1 +1.9**
LZH pP PcP 23 03 34.3 +0.5
LZH sP sP 23 04 29.9 +1.7
LZH S **S 23 07 32.6 +1.1**
LZH pmax pmax
comp=Z,1μm,1.4s
LZH pmax pmax
comp=Z,2μm,4.1s
GOA Goa 42.05 300 *eP* **P 23 01 52.4 +0.7**
TIA Tai'an 42.11 8 P **P 23 01 51.0 -0.7**
TIA pP **pP 23 03 27.8 -0.4**
TIA PcP **PcP 23 03 35.8 +1.9**
TIA PP **PP 23 03 43.5 +0.8**
TIA ScP **ScP 23 06 35.2 +1.9**
TIA S **S 23 07 31.8 -0.7**
TIA ScS **ScS 23 10 54.4 +1.1**
TIA pmax pmax
comp=Z,450nm,0.9s
TIA pmax pmax
comp=Z,4μm,8.5s
AKL Akola 42.12 309 *eP* **P 23 01 52.4 +0.2**
AUNRC North Rockhamp 42.27 119 P **P 23 01 52.9 -0.4**
AUNRC North Rockhamp 42.27 119 S **S 23 07 35.5 +0.2**
AULRC Lightning Ridg 42.46 128 P **P 23 01 54.9 +0.2**
KAD Karad 42.60 303 ⇓*i*P **P 23 01 55.9 -0.1**
KAD IAmb IAmb 23 01 59.9
comp=Z,365nm,0.6s
BNDA BANDA 42.70 318 ⇓*i*P **P 23 01 55.7 -0.9**
GD1S Gladstone Soft 42.98 119 P **P 23 01 59.8 +1.0**
HNS HongShan 43.02 5 ⇑P **P 23 01 59.4 +0.6**
HNS pP **PcP 23 03 38.5 +1.6**
HNS sP **sP 23 04 36.9 +0.6**
HNS ScP **ScP 23 06 38.5 +1.6**
HNS S **S 23 07 40.4 -5.0**
HNS ScS **ScS 23 11 00.0 +1.1**
HNS SS **SS 23 11 15.9 +1.9**
HNS pmax pmax
comp=Z,98nm,1.1s
HNS pmax pmax
comp=Z,3μm,13.0s
NRDN NARMADA NAGAR 43.18 312 ⇓*i*P **P 23 02 01.8 +1.4**
TIY Taiyuan 43.19 2 *eP* **P 23 02 01.3 +1.0**
TIY pP **PcP 23 03 38.5 +0.9**
TIY sP **sP 23 04 36.8 -1.1**
TIY S **S 23 07 46.6 -1.5**
TIY ScS **ScS 23 11 03.1 +2.8**
TIY SS **SS 23 11 18.5 +1.4**
TIY pmax pmax
comp=Z,110nm,0.9s
TIY pmax pmax
comp=Z,3μm,7.8s
LKN LUCKNOW 43.21 320 *eP* **P 23 02 00.6 0.0**
AUHPC Hawkesdale P12 43.28 143 P **P 23 02 01.9 +1.0**
BHPL Bhopal 43.30 313 ⇓*i*P **P 23 02 01.0 -0.4**
BHPL IAmb IAmb 23 02 03.2
comp=Z,1μm,1.1s
BHPL *ex* x 23 04 36.3
BRCI Bahraich 43.31 321 ⇓*i*P **P 23 02 01.6 +0.2**
EIDS Eidsvold 43.40 121 P **P 23 02 02.2 +0.1**
EIDS Eidsvold 43.40 121 P **P 23 02 01.9 -0.2**
EIDS IAmb IAmb 23 02 07.1
comp=Z,599nm,1.6s
EIDS Eidsvold 43.40 121 ⇓P **P 23 02 02.2 +0.1**
EIDS Eidsvold 43.40 121 P **P 23 02 02.8 +0.7**
POO Poona 43.48 304 *eP* **P 23 02 02.1 -0.8**
POO *i* x x 23 07 47.6
JTU Tsushima 43.74 23 P **P 23 02 05.4 +0.9**
JTU Tsushima 43.74 23 ⇑P **P 23 02 04.2 -0.4**
JTU Tsushima 43.74 23 P **P 23 02 05.9 +1.4**
JHNI Jhansi 43.85 316 *eP* **P 23 02 04.9 -0.7**
BRAT Ballarat 43.92 141 P **P 23 02 06.9 +1.0**
GOMU GeErMu 44.20 342 P **P 23 02 09.9 +1.4**
GOMU S **S 23 08 07.3 +4.3**
GOMU pmax pmax
comp=Z,270nm,1.0s
GUNA GUNA 44.23 314 *eP* **P 23 02 08.3 -0.3**
AUDCS Dubbo College 44.24 132 P **P 23 02 08.8 +0.3**
JCJ Chichijima 44.66 42 P **P 23 02 10.9 -0.9**
JCJ Chichijima 44.66 42 P **P 23 02 09.3 -2.5**
JCJ Chichijima 44.66 42 ⇑P **P 23 02 09.4 -2.4**
JCJ Chichijima 44.66 42 P **P 23 02 09.7 -2.1**
TJN Taejon 44.68 19 P **P 23 02 11.6 -0.1**
TJN Taejon 44.68 19 P **P 23 02 11.9 +0.2**
TJN Taejon 44.68 19 P **P 23 02 11.9 +0.2**
TJN pmax pmax
comp=Z,946nm,0.8s
MLBS Spotswood, Mel 44.69 141 P **P 23 02 14.2 +2.3**
TW1H Toowoomba 1 Ha 44.91 124 P **P 23 02 15.5 +1.6**
AUTOO Toowoomba Stat 44.91 124 P **P 23 02 15.3 +1.5**
JMN Monobe 44.96 28 P **P 23 02 14.1 +0.1**
JMN Monobe 44.96 28 IAmb IAmb 23 02 18.4
comp=Z,473nm,1.0s
JMN Monobe 44.96 28 ⇑P **P 23 02 14.3 +0.3**
JMN Monobe 44.96 28 P **P 23 02 14.8 +0.7**
AUPHS Peel High Scho 45.45 129 P **P 23 02 18.6 +0.7**
INCN Inchon 45.46 18 P **P 23 02 17.8 0.0**
INCN Inchon 45.46 18 P **P 23 02 17.5 -0.2**
INCN Inchon 45.46 18 P **P 23 02 17.5 -0.2**
INCN pmax pmax
comp=Z,353nm,1.1s
INCN Inchon 45.46 18 P **P 23 02 16.7 -1.1**
INCN P **P 23 02 16.7 -1.1**
INCN S **S 23 08 17.3 -2.8**
INCN S **S 23 08 17.3 -2.8**
INCN Inchon 45.46 18 P **P 23 02 18.1 +0.4**
DL2 Dalian 45.51 12 P **P 23 02 17.9 -0.2**
DL2 PcP **PcP 23 03 46.0 +0.4**
DL2 pP **pP 23 03 58.3 +1.6**
DL2 sP **sP 23 04 57.0 +0.3**
DL2 ScP **ScP 23 06 45.3 -1.9**
DL2 PcS **PcS 23 07 40.9 +0.3**
DL2 S **S 23 08 16.9 -3.8**
DL2 ScS **ScS 23 11 13.1 -1.9**
DL2 pmax pmax
comp=Z,140nm,0.6s
DL2 pmax pmax
comp=Z,4μm,7.5s
PTH Pithoragarh 45.61 322 ⇓*i*P **P 23 02 18.6 -0.6**
PTH IAmb IAmb 23 02 21.8
comp=Z,1μm,0.7s
HJU Haeju 45.71 17 P **P 23 02 19.1 -0.5**
HJU S **S 23 08 20.2 -3.3**
HJU AmB
comp=Z,1μm,1.5s
ARMA Armidale 45.74 128 P **P 23 02 21.6 +1.4**
ARMA Armidale 45.74 128 P **P 23 02 21.7 +1.5**
ARMA Armidale 45.74 128 ⇓P **P 23 02 21.0 +0.8**
ARMA Armidale 45.74 128 P **P 23 02 22.3 +2.0**
BJT Baijiatuau 45.75 6 P **P 23 02 20.9 +1.0**
BJT Baijiatuau 45.75 6 P **P 23 02 20.8 +1.0**
BJT PcP **PcP 23 03 47.3 +0.9**
BJT sP **sP 23 04 58.0 -0.6**
BJT ScP **ScP 23 06 42.5 -5.7**
BJI2 Beijing 45.75 6 P **P 23 02 20.8 +0.9**
BJI2 PcP **PcP 23 03 47.4 +1.0**
BJI2 pP **pP 23 03 57.2 -1.5**
BJI2 S **S 23 08 24.4 +0.4**
BJI2 sS **sS 23 11 20.3 -2.6**
BJI2 pmax pmax
comp=Z,53nm,0.7s
BJI2 pmax pmax
comp=Z,1μm,6.3s
KSAR Wonju Array Be 45.82 19 P **P 23 02 20.4 -0.1**
KSAR Wonju Array Be 45.82 19 P **P 23 02 20.4 -0.1**
KSRS Korea Array 45.84 19 P **P 23 02 20.9 +0.2**
comp=Z,144nm,0.9s,baz=199,slow=7.6,SNR=132
KSRS PcP **PcP 23 03 47.2 +0.4**
comp=Z,73nm,1.0s,baz=199,slow=3.9,SNR=10
KSRS S **S 23 08 25.1 -0.2**
comp=Z,12nm,1.1s,baz=205,slow=7.5,SNR=1.6
KSRS PKPPKP **P'P'df 23 33 33.6 -3.3**
comp=Z,3.0nm,1.0s,baz=342,slow=2.7,SNR=4.9
KSRS PKP2ab **P'P'ab 23 34 40.7 -0.6**
comp=Z,0.9nm,0.7s,baz=24,slow=3.4,SNR=4.6
comp=Z,144nm,0.9s
GTA2 Gaotai 46.03 348 P **P 23 02 23.5 +1.3**
GTA2 PcP **PcP 23 03 49.6 +2.0**
GTA2 pP pP 23 04 05.1 +4.0
GTA2 sP sP 23 05 04.5 +3.6
GTA2 ScP **ScP 23 06 50.8 +1.2**
GTA2 PcS **PcS 23 07 43.4 +0.3**
GTA2 S **S 23 08 27.6 -0.6**
GTA2 ScS **ScS 23 11 17.9 -0.9**
GTA2 SS **SS 23 12 03.0 +0.4**
GTA2 pmax pmax
comp=Z,410nm,1.0s
GTA2 pmax pmax
comp=Z,3μm,6.5s
AUMTS Mt Stromlo 46.04 135 P **P 23 02 22.8 +0.5**
CAN Canberra 46.04 135 P **P 23 02 22.8 +0.5**
CAN Canberra 46.04 135 ⇑P **P 23 02 22.8 +0.5**
CAN Canberra 46.04 135 P **P 23 02 23.3 +1.0**
AUDAR Daramalan Coll 46.10 135 P **P 23 02 23.1 +0.3**
AUMHS Melrose High S 46.12 135 P **P 23 02 23.3 +0.4**
TKRD Thakurdwara 46.15 320 *eP* **P 23 02 22.5 -0.6**
TKRD IAmb IAmb 23 02 25.6
comp=Z,3μm,0.8s
BTO2 Baotou 46.19 359 *eP* **P 23 02 24.2 +0.8**
BTO2 pP **pP 23 04 04.9 +2.5**
BTO2 sP **sP 23 05 03.1 +0.9**
BTO2 S **S 23 08 31.9 +1.5**
BTO2 pmax pmax
comp=Z,260nm,1.0s
BTO2 pmax pmax
comp=Z,5μm,4.8s
HHC Hu-ho-hao-te 46.30 1 *eP* **P 23 02 25.0 +0.8**
HHC pP pP 23 04 06.4 +3.1
HHC sP sP 23 05 06.2 +3.2
HHC S **S 23 08 33.0 +1.2**
HHC SS **SS 23 12 07.5 +0.7**
HHC pmax pmax
comp=Z,170nm,0.9s
AUSMG Snowy Mountain 46.34 137 P **P 23 02 25.8 +1.2**
GC1S Gold Coast 1 S 46.41 124 P **P 23 02 26.5 +1.4**
SYDH Sydney Hard Ro 46.53 132 P **P 23 02 27.0 +1.0**
MGCD Mangrove Creek 46.55 131 P **P 23 02 28.0 +1.9**
ASOR Ausora 46.58 319 ⇓*i*P **P 23 02 27.1 +0.7**
ASOR IAmb IAmb 23 02 28.8
comp=Z,9μm,1.0s
PYAG Pyongyang 46.66 16 P **P 23 02 26.7 -0.1**
PYAG S **S 23 08 33.8 -2.8**
PYAG AmB
comp=Z,2μm,2.0s
BISR Bishrakh 46.67 319 *eP* **P 23 02 25.5 -1.6**
BISR IAmb IAmb 23 02 29.3
comp=Z,7μm,0.6s
BISR *i* x x 23 08 28.0
BISR *ex* x 23 11 43.0
JOSI Joshimath 46.69 322 *eP* **P 23 02 26.0 -1.5**
SONA Sohna 46.71 318 ⇓*i*P **P 23 02 25.7 -1.7**
JMIU JAMIA UNIVERSI 46.77 318 *eP* **P 23 02 26.6 -1.3**
AYAN Aya Nagar 46.82 318 ⇓*i*P **P 23 02 26.5 -1.8**
LDR Lodi Road 46.83 318 *eP* **P 23 02 27.4 -0.8**
UDPR Udaipur 46.83 311 *eP* **P 23 02 27.9 -0.5**
AUKHS Kincumber High 46.86 132 P **P 23 02 29.8 +1.3**
NPLP NPLP New Delhi 46.90 318 *eP* **P 23 02 27.5 -1.3**
NPLP IAmb IAmb 23 02 32.3
comp=Z,2μm,1.4s
NDI New Delhi 46.90 319 *eP* **P 23 02 27.5 -1.3**
WOLH Wollongong Har 46.93 133 P **P 23 02 30.0 +1.0**
KUDL Kundal 47.03 317 *eP* **P 23 02 28.0 -1.8**
NRLA Narela 47.04 319 *eP* **P 23 02 28.6 -1.3**
BHGR Bahadurgarh 47.08 318 *eP* **P 23 02 30.0 -0.2**
BHGR IAmb IAmb 23 02 33.4
comp=Z,1μm,0.8s
AUUHS Ulladulla High 47.10 134 P **P 23 02 30.6 +0.4**
JHJR Jhajjar 47.23 318 *eP* **P 23 02 30.4 -0.9**
AJM Ajmer 47.25 314 ⇓*i*P **P 23 02 31.1 -0.4**
AJM IAmb IAmb 23 02 34.0
comp=Z,1μm,1.2s
GNR GANAUR 47.32 319 *eP* **P 23 02 31.0 -1.0**
JHJ Hachijo jima 2 47.49 34 P **P 23 02 31.6 -1.6**
comp=Z,222nm,0.3s,baz=252,slow=9.6,SNR=15
comp=Z,222nm,0.3s
UTK UTTARKASHI 47.49 322 *eP* **P 23 02 31.9 -1.6**
JHJ2 Mitsune 47.50 34 P **P 23 02 33.0 -0.2**
JHJ2 Mitsune 47.50 34 IAmb IAmb 23 02 36.4
comp=Z,686nm,1.0s
JHJ2 Mitsune 47.50 34 ⇑P **P 23 02 31.5 -1.7**
INU Inuyama 47.78 29 P **P 23 02 34.0 -1.3**
INU Inuyama 47.78 29 P **P 23 02 34.1 -1.2**
INU IAmb IAmb 23 02 38.5
comp=Z,491nm,1.2s
INU Inuyama 47.78 29 ⇓P **P 23 02 34.0 -1.3**
INU Inuyama 47.78 29 P **P 23 02 34.3 -1.0**
ROCAM Rodrigues Isla 47.97 249 P **P 23 02 39.4 +2.4**
ROCAM Rodrigues Isla 47.97 249 ⇓P **P 23 02 39.1 +2.1**
HHU Hamhung 47.98 18 P **P 23 02 36.5 -0.2**
HHU pP **pP 23 04 18.4 +1.5**
HHU S **S 23 08 52.6 -2.3**
HHU AmB
comp=Z,1μm,1.2s
KKR Kurukshetra 48.00 320 *eP* **P 23 02 36.5 -0.6**
JGF Kuroka 48.14 30 P **P 23 02 36.8 -1.3**
JGF Kuroka 48.14 30 IAmb IAmb 23 02 41.4
comp=Z,694nm,1.5s
JGF Kuroka 48.14 30 ⇓P **P 23 02 36.5 -1.6**
JGF Kuroka 48.14 30 P **P 23 02 37.1 -1.0**
KLP Kalpa 48.17 322 *eP* **P 23 02 38.0 -0.7**
CORO Coronation Par 48.27 143 P **P 23 02 39.9 +1.1**
GLAD Gladstone 48.51 142 P **P 23 02 42.3 +1.6**
CGRH CHANDIGARH 48.54 320 ⇓*i*P **P 23 02 40.2 -0.9**
SNY Shenyang 48.73 13 ⇑P **P 23 02 41.7 -0.5**
SNY pP **pP 23 04 23.7 +0.8**
SNY sP **sP 23 05 24.8 +2.6**
SNY pmax pmax
comp=Z,95nm,1.0s
SNY pmax pmax
comp=Z,2μm,11.9s
TATA Tatamba Isabel 48.89 96 P **P 23 02 43.2 -0.8**
MOO Moorlands 48.90 144 P **P 23 02 44.5 +0.9**
MOO Moorlands 48.90 144 P **P 23 02 44.5 +0.9**
SAVO Savo Central 48.90 97 P **P 23 02 43.1 -1.0**
HNR Honiara 49.04 98 P **P 23 02 45.1 +0.1**
HNR Honiara 49.04 98 P **P 23 02 44.0 -1.0**
HNR IAmb IAmb 23 02 49.0
comp=Z,469nm,0.8s
HNR Honiara 49.04 98 P **P 23 02 44.0 -1.0**
HNR pmax pmax
comp=Z,469nm,0.8s
HNR Honiara 49.04 98 ⇓P **P 23 02 44.6 -0.4**
HNR Honiara 49.04 98 P **P 23 02 44.8 -0.2**
BKNR BIKANER 49.16 315 ⇓*i*P **P 23 02 44.7 -1.0**
BKNR IAmb IAmb 23 02 47.2
comp=Z,1μm,1.0s
NGOA Tingoa Renbel 49.21 100 P **P 23 02 45.9 -0.4**
PATS Pohnpei 49.22 76 P **P 23 02 45.8 -0.6**
PATS IAmb IAmb 23 04 39.8
comp=Z,775nm,1.6s
PATS Pohnpei 49.22 76 P **P 23 02 47.7 +1.4**
BHK Bhakra 49.24 321 *eP* **P 23 02 45.7 -0.6**
BHUJ Bhuj 49.24 307 *eP* **P 23 02 45.4 -0.9**
BHUJ IAmb IAmb 23 02 49.9
comp=Z,618nm,0.9s
BHUJ *i* x x 23 04 04.0
BHUJ *ex* x 23 04 28.6
TAU Tasmania Unive 49.26 145 P **P 23 02 47.4 +1.2**
TAU Tasmania Unive 49.26 145 P **P 23 02 47.4 +1.2**
TAU Tasmania Unive 49.26 145 P **P 23 02 47.4 +1.2**
TAU pmax pmax
comp=Z,445nm,1.5s
TAU Tasmania Unive 49.26 145 ⇑P **P 23 02 47.3 +1.0**
TAU Tasmania Unive 49.26 145 P **P 23 02 47.5 +1.3**
AUTAR Taroona High S 49.30 145 P **P 23 02 48.1 +1.6**
MAJO Matsushiro 49.31 29 P **P 23 02 45.0 -1.7**
MAJO Matsushiro 49.31 29 P **P 23 02 44.8 -1.9**
MAJO Matsushiro 49.31 29 *d*P **P 23 02 45.4 -1.3**
MAJO pmax pmax
comp=Z,286nm,1.1s
MAJO Matsushiro 49.31 29 ⇑P **P 23 02 45.0 -1.7**
MAJO Matsushiro 49.31 29 P **P 23 02 45.1 -1.7**
MAJO S **S 23 09 13.6 +0.3**
MAJO Matsushiro 49.31 29 P **P 23 02 45.5 -1.3**
MAJO Matsushiro 49.31 29 P **P 23 02 45.4 -1.3**
MAJO PcP **PcP 23 04 00.1 +0.7**
MAJO pP **pP 23 04 27.9 +0.4**
MJAR Matsushiro Arr 49.31 29 P **P 23 02 45.0 -1.7**
comp=Z,330nm,0.9s,baz=204,slow=7.8,SNR=173
MJAR PcP **PcP 23 03 59.8 +0.4**
comp=Z,52nm,0.9s,baz=204,slow=3.4,SNR=6.2
MJAR pP **pP 23 04 28.0 +0.4**
comp=Z,160nm,0.9s,baz=194,slow=7.3,SNR=7.7
MJAR sP **sP 23 05 25.6 -1.2**
comp=Z,36nm,0.9s,baz=206,slow=8.1,SNR=1.9
MJAR PKPPKP **P'P'df 23 33 31.9 -1.1**
comp=Z,10nm,1.1s,baz=347,slow=1.7,SNR=7.4
MJAR PKP2ab **P'P'ab 23 34 29.2 +2.3**
comp=Z,1.6nm,0.5s,baz=29,slow=4.3,SNR=4.3
comp=Z,330nm,0.9s
MJAR Matsushiro Arr 49.31 29 P **P 23 02 45.2 -1.5**
MJAR IAmb IAmb 23 02 49.6
comp=Z,419nm,1.0s
XLT XiLinHaoTe 49.59 5 *eP* **P 23 02 50.3 +1.6**
XLT PcP **PcP 23 04 02.6 +2.2**
XLT S **S 23 09 16.2 -0.7**
XLT ScS **ScS 23 11 42.0 -0.5**
XLT pmax pmax
comp=Z,180nm,1.1s
XLT pmax pmax
comp=Z,2μm,8.9s
DHRM DHARAMSHALA 49.87 321 *eP* **P 23 02 50.5 -0.6**
DHRM IAmb IAmb 23 02 53.9
comp=Z,5μm,1.4s
DHRM *ep*P **pP 23 04 31.3 -1.0**
DHRM *i* sP **sP 23 05 30.1 -1.3**
DHRM *eS* **S 23 09 18.0 -3.5**
SRGN SRI GANGA NAGA 49.91 317 *i* x x 23 02 47.9
JASL Jaisalmer 50.24 312 *eP* **P 23 02 53.0 -0.7**
THN Thein Dam 50.33 321 *eP* **P 23 02 53.3 -1.0**
TSSA Tissa 50.36 322 *eP* **P 23 02 53.6 -1.1**
ALCI Alchi Leh 50.69 324 *eP* **P 23 02 56.9 -0.4**
HURO Huro Makira 50.98 99 P **P 23 02 59.6 +0.3**
CN2 Changchun 51.04 14 P **P 23 02 58.4 -0.7**
CN2 PcP **PcP 23 04 07.2 +1.5**
CN2 pP pP 23 04 41.9 +0.8
CN2 S **S 23 09 38.1 +1.7**
CN2 ScS **ScS 23 11 52.7 +0.4**
CN2 pmax pmax
comp=Z,70nm,0.7s
CN2 pmax pmax
comp=Z,2μm,8.0s
JMU Jammu 51.14 321 *eP* **P 23 02 59.8 -0.3**
PSTR Posyet 51.48 19 *d*P **P 23 03 03.4 +1.0**
MSHR Mys Shultsa 51.53 19 *i*P **P 23 03 03.4 +0.7**
SRNI Srinagar 52.01 322 *eP* **P 23 03 06.2 -0.3**
VLA Vladivostok 52.26 20 *d*P **P 23 03 08.5 +0.6**
VLA pmax pmax
comp=Z,333nm,1.1s
NIL Nilore 52.71 321 P **P 23 03 10.9 -0.6**
NIL IAmb IAmb 23 03 14.1
comp=Z,1μm,0.8s
NIL Nilore 52.71 321 P **P 23 03 10.9 -0.6**
NIL pmax pmax
comp=Z,1μm,0.9s
NIL Nilore 52.71 321 P **P 23 03 10.9 -0.6**
NIL Nilore 52.71 321 ⇓P **P 23 03 10.3 -1.2**
NIL Nilore 52.71 321 P **P 23 03 10.5 -1.0**
MDJ Mudanjiang 52.89 17 P **P 23 03 12.0 -0.5**
MDJ ScS ScS 23 12 04.5 -0.9
MDJ pmax pmax
comp=Z,54nm,0.9s
MDJ Mudanjiang 52.89 17 P **P 23 03 12.0 -0.5**
USA0B Ussuriysk Arra 53.25 19 *c*P **P 23 03 15.4 +0.4**
USRK Ussuriysk Ar. 53.25 19 P **P 23 03 14.4 -0.6**
comp=Z,215nm,0.8s,baz=192,slow=7.8,SNR=108
USRK PcP **PcP 23 04 07.3 -6.8**
comp=Z,87nm,0.8s,baz=208,slow=4.9,SNR=6.5
USRK pP **pP 23 04 58.3 +0.1**
comp=Z,26nm,0.6s,baz=207,slow=5.5,SNR=1.6
USRK S **S 23 10 03.8 -2.1**
comp=Z,4.2nm,0.7s,baz=137,slow=44,SNR=1.7
USRK PKP2ab **P'P'ab 23 34 11.4 +1.9**
comp=Z,2.7nm,0.7s,baz=57,slow=5.3,SNR=4.3
comp=Z,215nm,0.8s
BNX BinXian 53.34 15 ⇑P **P 23 03 14.8 -0.8**
BNX sP **sP 23 06 02.4 +5.1**
BNX S **S 23 10 05.4 -1.5**
BNX sS **sS 23 13 17.6 +5.1**
BNX pmax pmax
comp=Z,440nm,0.8s
BNX pmax pmax
comp=Z,3μm,9.1s
ULN Ulaanbaatar 53.40 357 P **P 23 03 16.5 +0.2**
ULN Ulaanbaatar 53.40 357 *ce*P **P 23 03 16.4 +0.2**
ULN pmax pmax
comp=Z,277nm,0.8s
ULN Ulaanbaatar 53.40 357 P **P 23 03 16.6 +0.4**
ULN S **S 23 10 07.9 -0.1**
ULN Ulaanbaatar 53.40 357 ⇓P **P 23 03 16.3 +0.1**
ULN Ulaanbaatar 53.40 357 P **P 23 03 16.6 +0.4**
comp=Z,19μmcomp=Z,10μmcomp=Z,2μm,0.9s
ULN Ulaanbaatar 53.40 357 P **P 23 03 16.4 +0.2**
ULN Ulaanbaatar 53.40 357 P **P 23 03 16.7 +0.5**
ULN PcP **PcP 23 04 12.8 -2.0**
ULN pP **pP 23 05 00.6 +1.2**
SONM Songino Array 53.40 356 P **P 23 03 16.3 0.0**
comp=Z,177nm,0.6s,baz=174,slow=7.9,SNR=368
SONM PcP **PcP 23 04 15.7 +1.0**
comp=Z,178nm,1.0s,baz=183,slow=3.0,SNR=11
SONM pP **pP 23 05 00.2 +0.7**
comp=Z,109nm,1.1s,baz=176,slow=11,SNR=3.0
SONM ScP **ScP 23 07 20.3 -0.8**
comp=Z,29nm,0.6s,baz=175,slow=4.7,SNR=4.4
SONM PKPPKP P'P'ab 23 33 25.2 -44
comp=Z,4.7nm,1.2s,baz=280,slow=1.6,SNR=3.8
SONM PKP2ab 23 34 07.6
comp=Z,1.4nm,0.9s,baz=5.7,slow=2.9,SNR=1.0
SONM P4KPbc 23 40 30.3
comp=Z,3.7nm,0.9s,baz=161,slow=3.7,SNR=12
comp=Z,177nm,0.6s
SONM Songino Array 53.40 356 P **P 23 03 17.0 +0.8**
WMQ Urumqi 53.42 339 *eP* **P 23 03 17.8 +1.4**
WMQ PcP **PcP 23 04 18.6 +3.7**
WMQ pP pP 23 05 01.7 +2.1
WMQ sP sP 23 05 58.8 +0.7
WMQ S **S 23 10 09.1 +0.7**
WMQ ScS **ScS 23 12 09.8 +0.4**
WMQ sS sS 23 13 11.1 -2.9
WMQ pmax pmax
comp=Z,65nm,0.9s
WMQ pmax pmax
comp=Z,4μm,3.6s
JTM Tenmabayashi 54.03 28 P **P 23 03 19.8 -0.8**

JTM	**Tenmabayashi**	**54.03**	**28**	IAmb	IAmb	23 03 24.2			
	comp=Z,916nm,1.0s								
JTM	**Tenmabayashi**	**54.03**	**28**	⇑P	**P**	**23 03 19.6**	**-1.0**		
JTM	**Tenmabayashi**	**54.03**	**28**	P	**P**	**23 03 19.9**	**-0.7**		
KOUNC	**Koumac, New Ca**	**54.09**	**111**	P	**P**	**23 03 22.3**	**+0.8**		
KOUNC	**Koumac, New Ca**	**54.09**	**111**	P	**P**	**23 03 22.6**	**+1.1**		
KOUNC	**Koumac, New Ca**	**54.09**	**111**	⇑P	**P**	**23 03 21.9**	**+0.4**		
WUS	**Wushi**	**54.77**	**331**	P	**P**	**23 03 26.6**	**+0.5**		
MSEY	**Mahe Island**	**54.88**	**268**	*i* P	**P**	**23 03 27.5**	**+0.3**		
	SNR=15								
MSEY	**Mahe Island**	**54.88**	**268**	P	**P**	**23 03 27.8**	**+0.6**		
MSEY	**Mahe Island**	**54.88**	**268**	P	**P**	**23 03 27.8**	**+0.6**		
MSEY				pmax	pmax				
	comp=Z,278nm,0.9s								
MSEY	**Mahe Island**	**54.88**	**268**	P	**P**	**23 03 27.8**	**+0.6**		
MSEY				S	**S**	**23 10 28.4**	**0.0**		
MSEY	**Mahe Island**	**54.88**	**268**	P	**P**	**23 03 28.2**	**+1.0**		
KSH2	**Kashi**	**55.11**	**327**	P	**P**	**23 03 27.6**	**-0.8**		
KSH2				PcP	**PcP**	**23 04 23.0**	**+1.3**		
KSH2				pP	pP	23 05 13.0	+0.4		
KSH2				sP	sP	23 06 10.1	-0.7		
KSH2				SS	SS	23 14 33.4	+7.5		
KSH2				pmax	pmax				
	comp=Z,340nm,1.2s								
KSH2				pmax	pmax				
	comp=Z,5μm,4.7s								
RER	**Riviere de l'E**	**55.25**	**248**	IAmb	IAmb	23 03 35.0			
	comp=Z,2μm,1.0s								
RER	**Riviere de l'E**	**55.25**	**248**	⇓P	**P**	**23 03 31.3**	**+1.6**		
RER	**Riviere de l'E**	**55.25**	**248**	P	**P**	**23 03 31.7**	**+2.0**		
PAF	**Port-aux-Franc**	**55.25**	**211**	P	**P**	**23 03 30.6**	**+1.6**		
PAF				IAmb	IAmb	23 03 34.7			
	comp=Z,905nm,1.0s								
PAF	**Port-aux-Franc**	**55.25**	**211**	P	**P**	**23 03 30.6**	**+1.6**		
PAF				pmax	pmax				
	comp=Z,905nm,1.0s								
PAF	**Port-aux-Franc**	**55.25**	**211**	⇑P	**P**	**23 03 31.2**	**+2.2**		
PAF	**Port-aux-Franc**	**55.25**	**211**	P	**P**	**23 03 31.6**	**+2.6**		
HIA	**Hailar**	**55.29**	**7**	P	**P**	**23 03 29.9**	**+0.6**		
HIA	**Hailar**	**55.29**	**7**	P	**P**	**23 03 29.7**	**+0.4**		
HIA				PcP	**PcP**	**23 04 21.8**	**-0.2**		
HIA				pP	**pP**	**23 05 14.0**	**+0.4**		
HIA				sP	**sP**	**23 06 10.9**	**-1.0**		
HILR	**Hailar Array B**	**55.57**	**7**	P	**P**	**23 03 31.1**	**-0.2**		
	comp=Z,65nm,0.4s,baz=187,slow=8.8,SNR=51								
HILR				PcP	**PcP**	**23 04 23.9**	**+0.9**		
	comp=Z,80nm,0.9s,baz=168,slow=8.5,SNR=7.5								
HILR				pP	**pP**	**23 05 16.3**	**+0.6**		
	comp=Z,37nm,0.7s,baz=178,slow=12,SNR=2.7								
HILR				S	**S**	**23 10 37.3**	**+1.1**		
	comp=Z,4.0nm,0.6s,baz=191,slow=15,SNR=1.8								
HILR				PKPPKP	**P'P'df**	**23 33 26.5**	**+3.2**		
	comp=Z,1.6nm,0.3s,baz=142,slow=5.6,SNR=4.7								
	comp=Z,65nm,0.4s								
TARG	**Taragay, Kyrgy**	**55.86**	**331**	P	**P**	**23 03 35.1**	**+1.1**		
JEM	**Erimo**	**55.97**	**29**	P	**P**	**23 03 34.5**	**+0.4**		
KBL	**Kabul**	**55.98**	**319**	P	**P**	**23 03 34.2**	**-0.5**		
KBL				IAmb	IAmb	23 03 37.9			
	comp=Z,2μm,1.4s								
KBL	**Kabul**	**55.98**	**319**	P	**P**	**23 03 34.2**	**-0.5**		
KBL				pmax	pmax				
	comp=Z,2μm,1.4s								
KBL	**Kabul**	**55.98**	**319**	P	**P**	**23 03 33.7**	**-1.0**		
	SNR=378								
KBL				P	**P**	**23 03 33.7**	**-1.0**		
	SNR=378								
KBL				S	**S**	**23 10 39.7**	**-2.7**		
KBL				S	**S**	**23 10 39.7**	**-2.7**		
KBL	**Kabul**	**55.98**	**319**	P	**P**	**23 03 33.5**	**-1.2**		
PRZ	**Przheval'sk**	**56.15**	**332**	IAmb	IAmb	23 03 40.7			
	comp=Z,1μm,1.1s								
PRZ	**Przheval'sk**	**56.15**	**332**	P	**P**	**23 03 37.6**	**+1.9**		
NOUC	**Port Laguerre**	**56.17**	**113**	P	**P**	**23 03 36.6**	**+0.6**		
SHLS	**Shalkode**	**56.19**	**333**	*e*P	**P**	**23 03 34.9**	**-0.9**		
SHLS				*e*S	**S**	**23 10 43.1**	**-1.4**		
SHLS				pmax	pmax				
	comp=Z,544nm,0.8s								
SHLS	**Shalkode**	**56.19**	**333**	*e*P	**P**	**23 03 34.9**	**-0.9**		
	comp=Z,544nm,0.8s								
SHLS				*e*S	**S**	**23 10 43.2**	**-1.4**		
MANEM	**Manem**	**56.22**	**323**	IAmb	IAmb	23 03 39.8			
	comp=Z,3μm,1.0s								
ONTNC	**Ouen Toro**	**56.34**	**113**	P	**P**	**23 03 38.0**	**+0.9**		
ONTNC	**Ouen Toro**	**56.34**	**113**	P	**P**	**23 03 37.3**	**+0.1**		
ONTNC	**Ouen Toro**	**56.34**	**113**	⇑P	**P**	**23 03 37.6**	**+0.5**		
SANVU	**Saraoutou**	**56.35**	**105**	P	**P**	**23 03 38.4**	**+1.2**		
SANVU	**Saraoutou**	**56.35**	**105**	P	**P**	**23 03 38.5**	**+1.2**		
UZB	**Uzynbulak**	**56.38**	**333**	*e*P	**P**	**23 03 37.5**	**+0.4**		
UZB				*e*S	**S**	**23 10 48.0**	**+1.0**		
UZB				pmax	pmax				
	comp=Z,233nm,0.6s								
UZB	**Uzynbulak**	**56.38**	**333**	*e*P	**P**	**23 03 37.5**	**+0.4**		
	comp=Z,233nm,0.6s								
UZB				*e*S	**S**	**23 10 48.1**	**+1.0**		
KDJ	**Kajisay**	**56.47**	**331**	IAmb	IAmb	23 03 42.9			
	comp=Z,1μm,0.9s								
KDJ	**Kajisay**	**56.47**	**331**	P	**P**	**23 03 39.1**	**+1.3**		
NRN	**Naryn**	**56.54**	**329**	IAmb	IAmb	23 03 42.1			
	comp=Z,697nm,0.9s								
SATY	**Saty**	**56.59**	**332**	*e*P	**P**	**23 03 38.9**	**+0.3**		
SATY				*e*S	**S**	**23 10 50.3**	**+0.5**		
SATY				pmax	pmax				
	comp=Z,542nm,1.3s								
SATY	**Saty**	**56.59**	**332**	*e*P	**P**	**23 03 39.0**	**+0.3**		
	comp=Z,542nm,1.3s								
SATY				*e*S	**S**	**23 10 50.4**	**+0.6**		
YATNC	**Mamie plateau,**	**56.71**	**113**	P	**P**	**23 03 40.7**	**+1.0**		
OUENC	**Ouen Island, N**	**56.71**	**113**	P	**P**	**23 03 40.8**	**+1.1**		
KPKS	**Kokpek**	**56.78**	**333**	*e*P	**P**	**23 03 40.2**	**+0.4**		
KPKS				*e*S	**S**	**23 10 52.9**	**+0.8**		
KPKS	**Kokpek**	**56.78**	**333**	*e*P	**P**	**23 03 40.2**	**+0.4**		
KPKS				*e*S	**S**	**23 10 52.1**	**0.0**		
ULHL	**Ulahol**	**57.02**	**330**	P	**P**	**23 03 42.1**	**+0.4**		
	SNR=154								
KNGR	**Kungurtug, Tuv**	**57.17**	**350**	*i* P	**P**	**23 03 43.6**	**+1.2**		
KNGR				pmax	pmax				
	comp=Z,69nm,0.8s								
JLN	**Jalan Bani Buh**	**57.21**	**301**	P	**P**	**23 03 42.8**	**-0.3**		
	SNR=55								
JLN				P	**P**	**23 03 42.8**	**-0.3**		
	SNR=55								
JLN				S	**S**	**23 10 55.4**	**-2.8**		
JLN				S	**S**	**23 10 55.4**	**-2.8**		
TNSS	**Tian-Shan**	**57.27**	**331**	*e*P	**P**	**23 03 43.6**	**0.0**		
TNSS	**Tian-Shan**	**57.27**	**331**	*e*P	**P**	**23 03 43.6**	**0.0**		
MDOK	**Medeo**	**57.31**	**331**	*e*P	**P**	**23 03 43.9**	**+0.3**		
MDOK				*e*S	**S**	**23 11 00.2**	**+1.1**		
MDOK	**Medeo**	**57.31**	**331**	*e*P	**P**	**23 03 43.9**	**+0.3**		
MDOK				*e*S	**S**	**23 11 00.2**	**+1.1**		
JKA	**Kamikawa-asahi**	**57.33**	**27**	P	**P**	**23 03 43.4**	**-0.1**		
BOOM	**Boomskoye usch**	**57.35**	**330**	IAmb	IAmb	23 03 47.9			
	comp=Z,818nm,1.0s								
BOOM	**Boomskoye usch**	**57.35**	**330**	P	**P**	**23 03 44.1**	**+0.2**		
AAA	**Alma-Ata**	**57.41**	**331**	*e*P	**P**	**23 03 44.6**	**+0.5**		
AAA				pmax	pmax				
	comp=Z,592nm,0.8s								
AAA	**Alma-Ata**	**57.41**	**331**	*e*P	**P**	**23 03 44.7**	**+0.5**		
	comp=Z,592nm,0.8s								
TLY	**Talaya**	**57.43**	**355**	P	**P**	**23 03 43.6**	**-0.5**		
	comp=Z,32nm,0.4s,baz=180,slow=7.0,SNR=25								
TLY				PcP	**PcP**	**23 04 31.0**	**+0.6**		
	comp=Z,45nm,0.8s,baz=197,slow=3.8,SNR=8.0								
TLY				pP	**pP**	**23 05 31.3**	**+1.9**		
	comp=Z,64nm,1.1s,baz=172,slow=7.6,SNR=3.1								
	comp=Z,32nm,0.4s								
TLY	**Talaya**	**57.43**	**355**	P	**P**	**23 03 45.5**	**+1.5**		
TLY	**Talaya**	**57.43**	**355**	*d* iP	**P**	**23 03 44.9**	**+0.9**		
TLY				pmax	pmax				
	comp=Z,163nm,1.5s								
TLY	**Talaya**	**57.43**	**355**	P	**P**	**23 03 44.1**	**+0.1**		
TLY				P	**P**	**23 03 44.1**	**+0.1**		
TLY				S	**S**	**23 10 59.1**	**-0.9**		
TLY				S	**S**	**23 10 59.1**	**-0.9**		
TLY	**Talaya**	**57.43**	**355**	⇓P	**P**	**23 03 44.4**	**+0.3**		
TLY	**Talaya**	**57.43**	**355**	P	**P**	**23 03 46.2**	**+2.1**		
CIT	**Chita**	**57.52**	**2**	*e*P	**P**	**23 03 46.8**	**+2.1**		
CIT				pmax	pmax				
	comp=Z,307nm,1.9s								
ZSN	**Zaisan**	**57.56**	**340**	*e*P	**P**	**23 03 45.6**	**+0.6**		
ZSN				*e*S	**S**	**23 11 03.3**	**+1.5**		
ZSN	**Zaisan**	**57.56**	**340**	*e*P	**P**	**23 03 45.7**	**+0.7**		
ZSN				*e*S	**S**	**23 11 03.4**	**+1.6**		
HEH	**HeiHe**	**57.57**	**13**	*e*P	**P**	**23 03 44.4**	**-0.5**		
HEH				S	**S**	**23 10 56.6**	**-5.1**		
HEH				pmax	pmax				
	comp=Z,190nm,0.9s								
HEH				pmax	pmax				
	comp=Z,2μm,6.3s								
OHH	**Osh**	**57.60**	**326**	P	**P**	**23 03 44.0**	**-1.5**		
MARNC	**Mare, Loyalty**	**57.68**	**112**	P	**P**	**23 03 47.3**	**+1.0**		
MARNC	**Mare, Loyalty**	**57.68**	**112**	⇓P	**P**	**23 03 47.0**	**+0.7**		
MOY	**Mondy**	**57.70**	**353**	*e*P	**P**	**23 03 46.6**	**+0.6**		
MOY				*e*		23 04 32.3			
MOY				*e*		23 05 33.9			
MOY				pmax	pmax				
	comp=Z,282nm,1.3s								
KLR	**Kul'dur**	**57.70**	**16**	P	**P**	**23 03 45.2**	**-0.7**		
	comp=Z,208nm,0.5s,baz=208,slow=5.6,SNR=162								
KLR				pP	**pP**	**23 05 32.6**	**+1.2**		
	comp=Z,140nm,1.0s,baz=219,slow=6.2,SNR=7.2								
KLR				S	**S**	**23 11 02.7**	**-0.8**		
	comp=Z,6.1nm,1.0s,baz=22,slow=23,SNR=1.6								
	comp=Z,208nm,0.5s								
WBK	**Wadi Bani Khal**	**57.76**	**301**	P	**P**	**23 03 47.1**	**+0.2**		
	SNR=42								
WBK				P	**P**	**23 03 47.1**	**+0.2**		
	SNR=42								
WBK				S	**S**	**23 11 02.4**	**-2.9**		
WBK				S	**S**	**23 11 02.4**	**-2.9**		
TKM2	**Tokmak 2**	**57.84**	**330**	P	**P**	**23 03 47.4**	**+0.1**		
	SNR=1274								
UCH	**Uchtor**	**57.88**	**329**	P	**P**	**23 03 48.1**	**+0.3**		
	SNR=366								
IRK	**Irkutsk**	**57.94**	**355**	*e*P	**P**	**23 03 48.2**	**+0.8**		
IRK				*e*		23 04 33.3			
IRK				*e*S	**S**	**23 11 07.2**	**+0.8**		
IRK				pmax	pmax				
	comp=Z,224nm,1.5s								
MK31	**Makanchi Array**	**57.95**	**337**	*ce*P	**P**	**23 03 47.7**	**+0.1**		
MKAR	**Makanchi Array**	**57.95**	**337**	P	**P**	**23 03 47.7**	**0.0**		
	comp=Z,728nm,0.6s,baz=150,slow=6.9,SNR=1133								
MKAR				pP	**pP**	**23 05 33.9**	**+0.6**		
	comp=Z,153nm,0.9s,baz=151,slow=7.7,SNR=5.5								
MKAR				S	**S**	**23 11 07.7**	**+1.0**		
	comp=Z,6.3nm,0.4s,baz=152,slow=7.0,SNR=14								
MKAR				PKPPKP	**P'P'df**	**23 33 18.7**	**-1.6**		
	comp=Z,4.9nm,1.0s,baz=281,slow=2.0,SNR=5.7								
MKAR				P4KPbc		23 40 50.6			
	comp=Z,3.1nm,0.9s,baz=135,slow=5.9,SNR=11								
	comp=Z,728nm,0.6s								
MKAR	**Makanchi Array**	**57.95**	**337**	P	**P**	**23 03 47.9**	**+0.2**		
KBK	**Karagaybulak**	**57.97**	**330**	P	**P**	**23 03 48.5**	**+0.5**		
	SNR=1347								
GAR	**Garm**	**57.99**	**324**	IAmb	IAmb	23 03 51.5			
	comp=Z,1μm,1.2s								
GAR	**Garm**	**57.99**	**324**	P	**P**	**23 03 47.0**	**-1.2**		
MHTO	**MHTO**	**58.02**	**299**	P	**P**	**23 03 48.2**	**-0.5**		
	SNR=74								
MHTO				P	**P**	**23 03 48.2**	**-0.5**		
	SNR=74								
MHTO				S	**S**	**23 11 06.0**	**-2.5**		
MHTO				S	**S**	**23 11 06.0**	**-2.5**		
DQM	**DQM**	**58.03**	**298**	P	**P**	**23 03 48.8**	**+0.2**		
	SNR=55								
DQM				S	**S**	**23 11 06.7**	**-1.9**		
ARSB	**Arslanbob**	**58.05**	**327**	IAmb	IAmb	23 03 52.9			
	comp=Z,1μm,1.0s								
MAKZ	**Makanchi**	**58.08**	**337**	P	**P**	**23 03 49.0**	**+0.5**		
MAKZ	**Makanchi**	**58.08**	**337**	P	**P**	**23 03 49.0**	**+0.5**		
MAKZ				pmax	pmax				
	comp=Z,260nm,0.8s								
MAKZ	**Makanchi**	**58.08**	**337**	⇑P	**P**	**23 03 48.3**	**-0.2**		
MAKZ	**Makanchi**	**58.08**	**337**	P	**P**	**23 03 48.3**	**-0.2**		
TDK	**Taldyqorghan**	**58.10**	**334**	*e*P	**P**	**23 03 49.3**	**+0.6**		
TDK				*e*S	**S**	**23 11 10.0**	**+1.2**		
TDK				pmax	pmax				
	comp=Z,1μm,1.2s								
TDK	**Taldyqorghan**	**58.10**	**334**	*e*P	**P**	**23 03 49.3**	**+0.6**		
	comp=Z,1μm,1.2s								
TDK				*e*S	**S**	**23 11 10.1**	**+1.2**		
AAK	**Ala-Archa**	**58.19**	**329**	P	**P**	**23 03 50.0**	**+0.4**		
	SNR=560								
AAK	**Ala-Archa**	**58.19**	**329**	*i* P	**P**	**23 03 49.7**	**+0.1**		
	SNR=631								
AAK	**Ala-Archa**	**58.19**	**329**	P	**P**	**23 03 50.5**	**+1.0**		
AAK				IAmb	IAmb	23 03 53.9			
	comp=Z,759nm,1.0s								
AAK	**Ala-Archa**	**58.19**	**329**	*ce*P	**P**	**23 03 49.9**	**+0.4**		
AAK				pmax	pmax				
	comp=Z,892nm,1.1s								
AAK	**Ala-Archa**	**58.19**	**329**	P	**P**	**23 03 50.1**	**+0.6**		
AAK				S	**S**	**23 11 09.0**	**-1.3**		
AAK	**Ala-Archa**	**58.19**	**329**	P	**P**	**23 03 50.0**	**+0.4**		
AAK	**Ala-Archa**	**58.19**	**329**	P	**P**	**23 03 50.3**	**+0.7**		
AAK				PcP	**PcP**	**23 04 34.3**	**+0.5**		
AAK				pP	**pP**	**23 05 36.3**	**+1.0**		
AAK				sP	**sP**	**23 06 33.0**	**0.0**		
FRU1	**Bishkek**	**58.24**	**329**	IAmb	IAmb	23 03 54.0			
	comp=Z,984nm,0.9s								
WSAR	**Wadi Sarin**	**58.30**	**302**	P	**P**	**23 03 50.5**	**0.0**		
	SNR=89								
WSAR				S	**S**	**23 11 11.1**	**-0.9**		
CHMS	**Chumysh**	**58.32**	**330**	P	**P**	**23 03 50.1**	**-0.2**		
	SNR=44								
BTK	**Batken**	**58.39**	**325**	P	**P**	**23 03 50.7**	**-0.1**		
SHAA	**Shahritus**	**58.41**	**321**	IAmb	IAmb	23 03 52.0			
	comp=Z,941nm,1.0s								
JMDO	**Jabal Madar**	**58.41**	**300**	P	**P**	**23 03 50.9**	**-0.3**		
	SNR=65								
JMDO				P	**P**	**23 03 50.9**	**-0.3**		
	SNR=65								
CHGR	**Chuyangaron**	**58.46**	**323**	*d* iP	**P**	**23 03 50.3**	**-1.1**		
CHGR				pmax	pmax				
	comp=Z,2μm,1.1s								
EKS2	**Erkin-Say**	**58.57**	**329**	P	**P**	**23 03 52.6**	**+0.5**		
	SNR=1635								
USP	**Ospenovka**	**58.64**	**330**	P	**P**	**23 03 52.4**	**-0.1**		
	SNR=531								
DGZ	**Jazzator, Alta**	**58.70**	**343**	*i* P	**P**	**23 03 52.8**	**0.0**		
DGZ				pmax	pmax				
	comp=Z,1μm,0.9s								
SGDS	**Sogindy**	**58.71**	**330**	*e*P	**P**	**23 03 53.4**	**+0.4**		
SGDS				*e*S	**S**	**23 11 17.9**	**+1.2**		
SMDO	**Samad**	**58.72**	**301**	P	**P**	**23 03 53.4**	**-0.1**		
	SNR=43								
SMDO				P	**P**	**23 03 53.4**	**-0.1**		
	SNR=43								
SMDO				S	**S**	**23 11 15.8**	**-1.8**		
SMDO				S	**S**	**23 11 15.8**	**-1.8**		
YUK	**Yuzh-Kuril'sk**	**58.80**	**29**	*c* iP	**P**	**23 03 52.9**	**-0.4**		
YUK				*i* *PP	**pP**	**23 05 39.6**	**+0.2**		
YUK				*i*		23 06 13.0			
YUK				*i* S	**S**	**23 11 15.0**	**-2.5**		
YUK				*i*		23 12 48.3			
YUK				*i* SS	**SS**	**23 15 20.6**	**-2.5**		
YUK				pmax	pmax				
	comp=Z,962nm,2.1s								
YUK				pmax	pmax				
	comp=Z,408nm,1.0s								
YUK				pmax	pmax				
	comp=E,129nm,1.1s								
YUK				pmax	pmax				
	comp=N,193nm,1.0s								
BIDO	**Bidbid**	**58.83**	**302**	P	**P**	**23 03 54.3**	**+0.3**		
	SNR=146								
BIDO				P	**P**	**23 03 54.3**	**+0.3**		
	SNR=146								
BIDO				S	**S**	**23 11 19.2**	**+0.5**		
BIDO				S	**S**	**23 11 19.2**	**+0.5**		
ARK	**Arkit**	**58.93**	**327**	P	**P**	**23 03 54.5**	**0.0**		
SHAO	**Shalim**	**59.11**	**295**	*i* P	**P**	**23 03 56.0**	**0.0**		
	SNR=18								
SHAO	**Shalim**	**59.11**	**295**	P	**P**	**23 03 56.2**	**+0.2**		
	SNR=15								
SHAO				P	**P**	**23 03 56.2**	**+0.2**		
	SNR=15								
SHAO				S	**S**	**23 11 20.4**	**-1.9**		
SHAO				S	**S**	**23 11 20.4**	**-1.9**		
BSY	**Bisya**	**59.33**	**301**	P	**P**	**23 03 57.5**	**+0.1**		
	SNR=32								
BSY				P	**P**	**23 03 57.5**	**+0.1**		
	SNR=32								
BSY				S	**S**	**23 11 25.8**	**+0.7**		
BSY				S	**S**	**23 11 25.8**	**+0.7**		
HOQ	**Hoqain**	**59.55**	**301**	P	**P**	**23 03 59.0**	**+0.1**		
	SNR=70								
HOQ				P	**P**	**23 03 59.0**	**+0.1**		
	SNR=70								
HOQ				S	**S**	**23 11 26.6**	**-1.2**		
HOQ				S	**S**	**23 11 26.6**	**-1.2**		
YSS	**Yuzhno-Sakhali**	**59.63**	**25**	P	**P**	**23 03 58.7**	**-0.1**		
YSS	**Yuzhno-Sakhali**	**59.63**	**25**	P	**P**	**23 03 58.5**	**-0.4**		
YSS	**Yuzhno-Sakhali**	**59.63**	**25**	*ce*P	**P**	**23 03 59.0**	**+0.1**		
YSS				*e*		23 04 40.4			
YSS				*e**PP	**pP**	**23 05 42.5**	**-2.9**		
YSS				*e*		23 06 13.9			
YSS				*e**SP	**sP**	**23 06 38.8**	**-4.1**		
YSS				*e*		23 07 51.4			
YSS				*e*S	**S**	**23 11 24.5**	**-3.3**		
YSS				*e*		23 12 54.6			
YSS				*e*SS	**SS**	**23 15 36.0**	**+0.1**		
YSS				pmax	pmax				
	comp=Z,2μm,3.7s								
YSS				pmax	pmax				
	comp=N,800nm,3.8s								
YSS				pmax	pmax				
	comp=E,900nm,2.4s								
YSS				pmax	pmax				
	comp=Z,510nm,1.0s								
YSS				smax	smax				
	comp=N,11μm,13.7s								
YSS				smax	smax				
	comp=E,6μm,13.3s								
YSS				MLR	MLR				
	comp=Z,5μm,18.0s								
YSS				MLR	MLR				
	comp=N,3μm,16.0s								
YSS	**Yuzhno-Sakhali**	**59.63**	**25**	⇑P	**P**	**23 03 59.0**	**+0.1**		
YSS	**Yuzhno-Sakhali**	**59.63**	**25**	P	**P**	**23 03 59.1**	**+0.3**		
DMTO	**DMTO**	**59.63**	**294**	P	**P**	**23 03 59.4**	**-0.1**		
	SNR=18								
DMTO				P	**P**	**23 03 59.4**	**-0.1**		
	SNR=18								
DMTO				S	**S**	**23 11 27.1**	**-1.8**		
DMTO				S	**S**	**23 11 27.1**	**-1.8**		
DZA	**Taraz**	**60.02**	**328**	*e*P	**P**	**23 04 01.9**	**+0.3**		
DZA	**Taraz**	**60.02**	**328**	*e*P	**P**	**23 04 01.9**	**+0.3**		
ARQ	**Araqi**	**60.13**	**301**	P	**P**	**23 04 02.5**	**-0.2**		
	SNR=25								
ARQ				P	**P**	**23 04 02.5**	**-0.2**		
	SNR=25								
ARQ				S	**S**	**23 11 33.7**	**-1.3**		
ARQ				S	**S**	**23 11 33.7**	**-1.3**		
IUG	**Iuzhnay**	**60.22**	**326**	*e*P	**P**	**23 04 03.4**	**+0.4**		
IUG				pmax	pmax				
	comp=Z,1μm,1.1s								
IUG	**Iuzhnay**	**60.22**	**326**	*e*P	**P**	**23 04 03.5**	**+0.4**		
	comp=Z,1μm,1.1s								
RBK	**Rabkut**	**60.24**	**294**	P	**P**	**23 04 03.5**	**-0.1**		
	SNR=44								
RBK				P	**P**	**23 04 03.5**	**-0.1**		
	SNR=44								
H11S3	**WAKE ISLAND Hy**	**60.27**	**65**	P	**P**	**23 04 03.4**	**-0.1**		
	baz=246,slow=5.3,SNR=6.8								
H11S2	**WAKE ISLAND Hy**	**60.29**	**65**	P	**P**	**23 04 03.8**	**+0.2**		
	baz=246,slow=5.3,SNR=7.8								
H11S1	**WAKE ISLAND Hy**	**60.29**	**65**	P	**P**	**23 04 02.9**	**-0.7**		
	baz=246,slow=5.3,SNR=8.5								
SOHO	**SOHO**	**60.41**	**302**	*i* P	**P**	**23 04 04.0**	**-0.5**		
	SNR=22								
SOHO	**SOHO**	**60.41**	**302**	P	**P**	**23 04 04.3**	**-0.3**		
SOHO				P	**P**	**23 04 04.3**	**-0.3**		
SOHO				S	**S**	**23 11 37.5**	**-1.0**		
SOHO				S	**S**	**23 11 37.5**	**-1.0**		
GRNR	**Gornyy**	**60.46**	**19**	⇑*i* P	**P**	**23 04 05.0**	**+0.6**		
GRNR				pmax	pmax				
	comp=N,10.0nm,0.9s								
GRNR				pmax	pmax				
	comp=Z,20nm,1.2s								
WAKE	**Wake Island**	**60.49**	**64**	P	**P**	**23 04 05.5**	**+0.4**		
WAKE	**Wake Island**	**60.49**	**64**	P	**P**	**23 04 04.6**	**-0.5**		
WAKE	**Wake Island**	**60.49**	**64**	⇓P	**P**	**23 04 05.4**	**+0.4**		
WAKE	**Wake Island**	**60.49**	**64**	P	P	23 03 60.0	-5.1		
CASY	**Casey**	**60.51**	**180**	P	**P**	**23 04 04.9**	**+0.5**		
CASY	**Casey**	**60.51**	**180**	⇓P	**P**	**23 04 04.4**	**+0.1**		
CASY	**Casey**	**60.51**	**180**	P	**P**	**23 04 04.9**	**+0.5**		
HRA	**Herat**	**60.54**	**315**	P	**P**	**23 04 04.7**	**-0.8**		
KK31	**Karatay Array**	**60.60**	**327**	P	**P**	**23 04 05.1**	**-0.4**		
KK31	**Karatay Array**	**60.60**	**327**	P	**P**	**23 04 05.1**	**-0.4**		
KK31				pmax	pmax				
	comp=Z,395nm,0.9s								
KKAR	**Karatay Array**	**60.60**	**327**	P	**P**	**23 04 05.2**	**-0.2**		
KKAR	**Karatay Array**	**60.60**	**327**	P	**P**	**23 04 05.2**	**-0.2**		
KUR	**Kuril'sk**	**60.65**	**29**	*e*P	**P**	**23 04 06.3**	**+0.6**		
KUR				*e*		23 04 43.8			
KUR				*i* *PP	**pP**	**23 05 52.6**	**-0.1**		
KUR				*e*		23 06 28.0			
KUR				*e**SP	**

UGL					pmax	pmax				
	comp=Z,2µm,3.8s									
UGL					pmax	pmax				
	comp=Z,300nm,0.9s									
UGL					smax	smax				
	comp=E,16µm,6.1s									
UGL					smax	smax				
	comp=N,21µm,7.3s									
ALNE	**Al Ain**	**61.05 301**	*i*	P	**P**		**23 04 08.7**	**0.0**		
	SNR=88									
ALNE	**Al Ain**	**61.05 301**		P	**P**		**23 04 08.4**	**-0.4**		
	SNR=78									
ALNE				S	**S**		**23 11 45.5**	**-0.9**		
MDH	**Madha**	**61.05 303**	*i*	P	**P**		**23 04 07.5**	**-1.2**		
	SNR=106									
MDH	**Madha**	**61.05 303**		P	**P**		**23 04 07.5**	**-1.2**		
	SNR=24									
MDH				P	**P**		**23 04 07.5**	**-1.2**		
	SNR=24									
MDH				S	**S**		**23 11 44.3**	**-2.1**		
MDH				S	**S**		**23 11 44.3**	**-2.1**		
UMZA	**Um Al Zommool**	**61.07 300**		P	**P**		**23 04 08.4**	**-0.5**		
UMZA				P	**P**		**23 04 08.4**	**-0.5**		
UMZA				S	**S**		**23 11 44.4**	**-2.3**		
UMZA				S	**S**		**23 11 44.4**	**-2.3**		
MSFE	**Esma-Masafi**	**61.19 303**	*i*	P	**P**		**23 04 10.7**	**+0.9**		
	SNR=82									
MASF	**Masafi**	**61.20 303**		P	**P**		**23 04 09.3**	**-0.4**		
	SNR=36									
MASF				P	**P**		**23 04 09.3**	**-0.4**		
	SNR=36									
MASF				S	**S**		**23 11 47.8**	**-0.5**		
MASF				S	**S**		**23 11 47.8**	**-0.5**		
BANOM	**Banah**	**61.29 304**	*i*	P	**P**		**23 04 12.0**	**+1.6**		
	SNR=10									
BANOM	**Banah**	**61.29 304**		P	**P**		**23 04 10.5**	**+0.1**		
BANOM				S	**S**		**23 11 47.8**	**-1.7**		
FAQ	**Al Faqa, Dubai**	**61.44 302**	*i*	P	**P**		**23 04 11.0**	**-0.3**		
	SNR=451									
FAQ	**Al Faqa, Dubai**	**61.44 302**		P	**P**		**23 04 11.1**	**-0.2**		
	SNR=217									
FAQ				P	**P**		**23 04 11.1**	**-0.2**		
	SNR=217									
FAQ				S	**S**		**23 11 49.4**	**-1.8**		
FAQ				S	**S**		**23 11 49.4**	**-1.8**		
NAZ	**Nazwa, Dubai**	**61.47 302**	*i*	P	**P**		**23 04 11.2**	**-0.3**		
	SNR=126									
NAZ	**Nazwa, Dubai**	**61.47 302**		P	**P**		**23 04 11.3**	**-0.2**		
	SNR=66									
NAZ				P	**P**		**23 04 11.3**	**-0.2**		
	SNR=66									
NAZ				S	**S**		**23 11 50.2**	**-1.4**		
NAZ				S	**S**		**23 11 50.2**	**-1.4**		
SHME	**Shamm**	**61.47 304**	*i*	P	**P**		**23 04 11.3**	**-0.1**		
	SNR=96									
SHME	**Shamm**	**61.47 304**		P	**P**		**23 04 11.4**	**-0.1**		
	SNR=44									
SHME				P	**P**		**23 04 11.4**	**-0.1**		
	SNR=44									
SHME				S	**S**		**23 11 49.6**	**-2.0**		
SHME				S	**S**		**23 11 49.6**	**-2.0**		
ASUD	**Al Ashush, Dub**	**61.61 302**	*i*	P	**P**		**23 04 12.2**	**-0.2**		
	SNR=78									
ASUD	**Al Ashush, Dub**	**61.61 302**		P	**P**		**23 04 13.1**	**+0.6**		
	SNR=192									
ASUD				P	**P**		**23 04 13.1**	**+0.6**		
	SNR=192									
ASUD				S	**S**		**23 11 53.1**	**-0.3**		
ASUD				S	**S**		**23 11 53.1**	**-0.3**		
UMQ	**Umm Al-Quwin**	**61.67 303**	*i*	P	**P**		**23 04 13.1**	**+0.3**		
	SNR=6.5									
UMQ	**Umm Al-Quwin**	**61.67 303**		P	**P**		**23 04 13.3**	**+0.6**		
	SNR=50									
UMQ				P	**P**		**23 04 13.3**	**+0.6**		
	SNR=50									
AJN	**Ajban**	**61.88 302**	*i*	P	**P**		**23 04 13.4**	**-0.8**		
	SNR=228									
AJN	**Ajban**	**61.88 302**		P	**P**		**23 04 13.6**	**-0.6**		
	SNR=150									
AJN				P	**P**		**23 04 13.6**	**-0.6**		
	SNR=150									
AJN				S	**S**		**23 11 54.8**	**-1.9**		
AJN				S	**S**		**23 11 54.8**	**-1.9**		
MCQ	**Macquarie Isla**	**62.27 150**		P	**P**		**23 04 17.6**	**+1.5**		
MCQ	**Macquarie Isla**	**62.27 150**		P	**P**		**23 04 17.6**	**+1.5**		
MCQ				pmax	pmax					
	comp=Z,389nm,1.2s									
KURBB	**Kurchatov Arra**	**62.51 338**		P	**P**		**23 04 17.8**	**+0.1**		
	comp=Z,360nm,0.8s,baz=147,slow=5.2,SNR=278									
KURBB				PcP	**PcP**		**23 04 51.2**	**+0.3**		
	comp=Z,92nm,0.8s,baz=152,slow=3.1,SNR=4.4									
KURBB				pP	**pP**		**23 06 06.8**	**+1.1**		
	comp=Z,77nm,0.9s,baz=149,slow=5.8,SNR=4.6									
KURBB				PP	**PP**		**23 06 45.9**	**+1.5**		
	comp=Z,76nm,1.0s,baz=162,slow=4.9,SNR=4.4									
KURBB				S	**S**		**23 12 04.2**	**+0.8**		
	comp=Z,4.8nm,0.8s,baz=172,slow=14,SNR=4.4									
KURBB				PKPPKP			23 33 11.4			
	comp=Z,7.7nm,1.0s,baz=293,slow=3.6,SNR=8.8									
KURBB				P4KPbc			23 41 11.5			
	comp=Z,6.8nm,1.0s,baz=146,slow=3.5,SNR=30									
	comp=Z,360nm,0.8s									
MZWR	**Madinat Zayed**	**62.54 300**		P	**P**		**23 04 17.8**	**-0.7**		
MZWR				P	**P**		**23 04 17.8**	**-0.7**		
MZWR				S	**S**		**23 12 02.5**	**-2.2**		
MZWR				S	**S**		**23 12 02.5**	**-2.2**		
KURK	**Kurchatov**	**62.55 338**		P	**P**		**23 04 18.1**	**+0.2**		
KURK				IAmb	IAmb		23 04 21.6			
	comp=Z,565nm,0.7s									
KURK	**Kurchatov**	**62.55 338**		P	**P**		**23 04 17.8**	**-0.2**		
KURK							23 04 51.2			
KURK				*PP	**pP**		**23 06 06.8**	**+0.9**		
KURK				S	**S**		**23 12 04.2**	**+0.3**		
MZR	**Muzera**	**62.63 299**	*i*	P	**P**		**23 04 18.7**	**-0.3**		
	SNR=130									
MZR	**Muzera**	**62.63 299**		P	**P**		**23 04 19.1**	**0.0**		
	SNR=78									
MZR				P	**P**		**23 04 19.1**	**0.0**		
	SNR=78									
MZR				S	**S**		**23 12 03.5**	**-2.4**		
MZR				S	**S**		**23 12 03.5**	**-2.4**		
TARA	**Tarawa**	**62.63 86**		P	**P**		**23 04 20.6**	**+1.3**		
TARA	**Tarawa**	**62.63 86**		P	**P**		**23 04 20.5**	**+1.2**		
TYV	**Tymovskoe**	**62.70 22**	*eP*		**P**		**23 04 21.0**	**+2.0**		
TYV			*eS*		**S**		**23 12 06.1**	**+0.4**		
TYV				pmax	pmax					
	comp=Z,53nm,1.2s									
TYV				pmax	pmax					
	comp=Z,1µm,3.8s									
TYV				smax	smax					
	comp=N,13µm,7.8s									
TYV				smax	smax					
	comp=E,15µm,7.8s									
TYV				smax	smax					
	comp=N,29nm,2.6s									
TYV				smax	smax					
	comp=E,36nm,2.6s									
PYZ	**Puysegur Point**	**62.84 140**		P	**P**		**23 04 21.0**	**+1.0**		
PYZ	**Puysegur Point**	**62.84 140**		P	**P**		**23 04 20.5**	**+0.5**		
PYZ	**Puysegur Point**	**62.84 140**		P	**P**		**23 04 20.9**	**+0.8**		
DCZ	**Deep Cove**	**62.89 139**		P	**P**		**23 04 20.7**	**+0.3**		
DCZ	**Deep Cove**	**62.89 139**		P	**P**		**23 04 21.1**	**+0.7**		
ABPO	**Ambohimpanom**	**63.01 252**		P	**P**		**23 04 22.6**	**+0.9**		
ABPO				IAmb	IAmb		23 04 27.1			
	comp=Z,576nm,1.1s									
ABPO	**Ambohimpanom**	**63.01 252**		P	**P**		**23 04 22.7**	**+0.9**		
ABPO				pmax	pmax					
	comp=Z,576nm,1.1s									
ABPO	**Ambohimpanom**	**63.01 252**		P	**P**		**23 04 22.7**	**+0.9**		
ABPO	**Ambohimpanom**	**63.01 252**		P	**P**		**23 04 22.1**	**+0.3**		
ABPO				sP	**sP**		**23 07 04.0**	**-3.1**		
MSZ	**Milford Sound**	**63.13 138**		P	**P**		**23 04 23.1**	**+1.2**		
ZAA0	**Zalesovo Array**	**63.22 343**		P	**P**		**23 04 21.4**	**-0.8**		
ZAA0				IAmb	IAmb		23 04 25.1			
	comp=Z,621nm,1.0s									
ZALV	**Zalesovo Beam**	**63.22 343**		P	**P**		**23 04 22.1**	**-0.1**		
	comp=Z,405nm,0.4s,baz=157,slow=4.6,SNR=372									
ZALV				PcP	**PcP**		**23 04 53.1**	**-0.6**		
	comp=Z,76nm,0.7s,baz=132,slow=4.2,SNR=3.9									
ZALV				pP	**pP**		**23 06 11.7**	**+1.2**		
	comp=Z,307nm,0.9s,baz=134,slow=4.3,SNR=8.6									
ZALV				S	**S**		**23 12 10.9**	**-0.9**		
	comp=Z,27nm,0.9s,baz=116,slow=6.8,SNR=5.7									
ZALV				PKPPKP	**P'P'df**		**23 33 10.2**	**-1.5**		
	comp=Z,7.3nm,0.9s,baz=290,slow=4.3,SNR=6.9									
ZALV				P4KPbc			23 41 12.9			
	comp=Z,0.4nm,0.4s,baz=309,slow=9.1,SNR=3.8									
	comp=Z,405nm,0.4s									
ZALV	**Zalesovo Beam**	**63.22 343**		P	**P**		**23 04 22.3**	**+0.1**		
BOD	**Bodaibo**	**63.34 2**	*eP*		**P**		**23 04 22.7**	**-0.2**		
BOD				pmax	pmax					
	comp=Z,382nm,1.5s									
GHWR	**Ruwais**	**63.47 300**		S	**S**		**23 12 13.3**	**-2.8**		
MLZ	**Mavora Lakes**	**63.49 138**		P	**P**		**23 04 24.4**	**+0.1**		
JCZ	**Jackson Bay**	**63.51 137**		P	**P**		**23 04 25.0**	**+0.5**		
JCZ	**Jackson Bay**	**63.51 137**		P	**P**		**23 04 24.8**	**+0.4**		
WHZ	**Wether Hill Ro**	**63.57 139**		P	**P**		**23 04 24.6**	**-0.1**		
VOI	**Vohitsoka**	**63.61 248**		P	**P**		**23 04 25.9**	**+0.3**		
VOI	**Vohitsoka**	**63.61 248**		P	**P**		**23 04 26.3**	**+0.7**		
	SNR=77									
VOI	**Vohitsoka**	**63.61 248**	⇑	P	**P**		**23 04 25.6**	**-0.1**		
VOI	**Vohitsoka**	**63.61 248**		P	**P**		**23 04 26.4**	**+0.8**		
FOMA	**Nahampoana Res**	**63.73 245**		P	**P**		**23 04 27.0**	**+0.9**		
FOMA				IAmb	IAmb		23 04 30.9			
	comp=Z,459nm,0.9s									
FOMA	**Nahampoana Res**	**63.73 245**	⇓	P	**P**		**23 04 27.1**	**+0.9**		
FOMA	**Nahampoana Res**	**63.73 245**		P	**P**		**23 04 27.4**	**+1.3**		
JRN	**Qarnain Island**	**63.83 301**		P	**P**		**23 04 26.2**	**-0.5**		
	SNR=97									
JRN				S	**S**		**23 12 17.3**	**-3.1**		
NKL	**Nikolayevsk**	**63.88 20**	*eP*		**P**		**23 04 26.3**	**-0.1**		
NKL			*eS*		**S**		**23 12 20.5**	**+0.7**		
NKL			*eSS*		**SS**		**23 16 41.2**	**-0.4**		
NKL				pmax	pmax					
	comp=E,92nm,0.8s									
NKL				pmax	pmax					
	comp=N,210nm,1.0s									
NKL				pmax	pmax					
	comp=Z,684nm,0.9s									
NKL				smax	smax					
	comp=E,4µm,4.4s									
NKL				smax	smax					
	comp=N,4µm,8.7s									
NKL				MLR	MLR					
	comp=E,10µm,16.0s									
NKL				MLR	MLR					
	comp=N,10µm,14.0s									
NKL				MLR	MLR					
	comp=Z,12µm,14.0s									
WKZ	**Wanaka**	**63.91 138**		P	**P**		**23 04 27.1**	**+0.1**		
APZ	**The Paps**	**63.93 140**		P	**P**		**23 04 27.5**	**+0.4**		
FOZ	**Fox Glacier**	**64.04 136**		P	**P**		**23 04 27.0**	**-0.8**		
EAZ	**Earnscleugh**	**64.24 138**		P	**P**		**23 04 28.8**	**-0.2**		
BRZS	**Berezniki**	**64.41 334**	*eP*		**P**		**23 04 30.4**	**+0.5**		
BRZS	**Berezniki**	**64.41 334**	*eP*		**P**		**23 04 30.5**	**+0.5**		
SLWR	**Sila**	**64.53 300**		P	**P**		**23 04 30.9**	**-0.3**		
SLWR				P	**P**		**23 04 30.9**	**-0.3**		
SLWR				S	**S**		**23 12 26.2**	**-2.6**		
SLWR				S	**S**		**23 12 26.2**	**-2.6**		
WVZ	**Waitaha Valley**	**64.55 135**		P	**P**		**23 04 30.7**	**-0.2**		
LBZ	**Lake Benmore**	**64.56 137**		IAmb	IAmb		23 04 34.9			
	comp=Z,718nm,1.5s									
LBZ	**Lake Benmore**	**64.56 137**		P	**P**		**23 04 30.5**	**-0.6**		
SYZ	**Scrubby Hill**	**64.57 139**		P	**P**		**23 04 32.6**	**+1.6**		
SYZ	**Scrubby Hill**	**64.57 139**		P	**P**		**23 04 31.1**	**+0.1**		
H04N2	**CROZET ISLANDS**	**64.60 221**		P	**P**		**23 04 34.1**	**+3.1**		
	baz=56,slow=5.3,SNR=12									
H04N1	**CROZET ISLANDS**	**64.61 221**		P	**P**		**23 04 33.9**	**+2.8**		
	baz=56,slow=5.3,SNR=12									
H04N3	**CROZET ISLANDS**	**64.62 221**		P	**P**		**23 04 34.3**	**+3.2**		
	baz=56,slow=5.3,SNR=14									
CRZF	**Crozet Islands**	**64.65 221**		P	**P**		**23 04 32.6**	**+1.1**		
TUZ	**Tuapeka**	**64.69 139**		P	**P**		**23 04 32.2**	**+0.4**		
OUZ	**Omahuta**	**64.77 126**		P	**P**		**23 04 34.4**	**+1.9**		
DSZ	**Denniston Nort**	**64.93 134**		P	**P**		**23 04 33.0**	**-0.5**		
DSZ				IAmb	IAmb		23 04 37.9			
	comp=Z,570nm,1.4s									
DSZ	**Denniston Nort**	**64.93 134**		P	**P**		**23 04 33.3**	**-0.2**		
INZ	**Inchbonnie**	**64.94 135**		IAmb	IAmb		23 04 37.1			
	comp=Z,451nm,1.2s									
RPZ	**Rata Peaks**	**64.95 136**		P	**P**		**23 04 33.8**	**+0.2**		
RPZ	**Rata Peaks**	**64.95 136**		P	**P**		**23 04 33.5**	**-0.1**		
ODZ	**Otahua Downs**	**65.08 137**		P	**P**		**23 04 34.8**	**+0.5**		
TMZ	**Timaru**	**65.12 137**		P	**P**		**23 04 34.3**	**-0.3**		
QRZ	**Quartz Range**	**65.22 132**		P	**P**		**23 04 36.2**	**+0.9**		
QRZ	**Quartz Range**	**65.22 132**		IAmb	IAmb		23 04 40.2			
	comp=Z,500nm,1.1s									
QRZ	**Quartz Range**	**65.22 132**		P	**P**		**23 04 36.0**	**+0.7**		
QRZ	**Quartz Range**	**65.22 132**		P	**P**		**23 04 36.2**	**+0.9**		
HHSZ	**Highcliff Hill**	**65.31 138**		P	**P**		**23 04 37.5**	**+1.8**		
WCZ	**Waipu Caves**	**65.51 127**		P	**P**		**23 04 38.5**	**+1.3**		
MRNZ	**Matariki Terra**	**65.53 133**		P	**P**		**23 04 37.3**	**+0.1**		
OXZ	**Oxford**	**65.53 135**		P	**P**		**23 04 38.1**	**+0.9**		
LTZ	**Lake Taylor**	**65.54 135**		P	**P**		**23 04 36.2**	**-1.2**		
TKNZ	**Takaka Hill**	**65.58 133**		P	**P**		**23 04 38.2**	**+0.6**		
THZ	**Tophouse**	**65.73 133**		IAmb	IAmb		23 04 40.0			
	comp=Z,1µm,1.7s									
THZ	**Tophouse**	**65.73 133**		P	**P**		**23 04 38.3**	**-0.2**		
AMCZ	**Amberley**	**65.92 135**		P	**P**		**23 04 40.1**	**+0.6**		
NNZ	**Nelson**	**65.94 133**		P	**P**		**23 04 39.3**	**-0.4**		
NNZ				IAmb	IAmb		23 04 43.4			
	comp=Z,1µm,1.8s									
NNZ	**Nelson**	**65.94 133**		P	**P**		**23 04 39.3**	**-0.4**		
KHEZ	**Kahui Hut**	**65.96 131**		P	**P**		**23 04 41.5**	**+1.5**		
NEZ	**North Egmont**	**66.01 131**		P	**P**		**23 04 42.6**	**+2.2**		
MQZ	**McQueen's Vall**	**66.06 135**		P	**P**		**23 04 41.1**	**+0.6**		
DREZ	**Durham Road**	**66.08 130**		P	**P**		**23 04 42.4**	**+1.8**		
GVZ	**Greta Valley S**	**66.14 135**		IAmb	IAmb		23 04 45.2			
	comp=Z,776nm,1.6s									
GVZ	**Greta Valley S**	**66.14 135**		P	**P**		**23 04 40.6**	**-0.4**		
MHEZ	**Mangahewa**	**66.14 130**		P	**P**		**23 04 45.4**	**+4.3**		
SAKB	**Bahrain**	**66.15 301**		P	**P**		**23 04 41.0**	**-0.3**		
SAKB				S	**S**		**23 12 44.8**	**-3.2**		
DUWZ	**D'Urville Isla**	**66.23 132**		P	**P**		**23 04 41.5**	**-0.1**		
LREZ	**Lake Rotokare**	**66.29 131**		P	**P**		**23 04 43.8**	**+1.8**		
KHZ	**Kahutara**	**66.35 134**		P	**P**		**23 04 42.2**	**-0.1**		
KHZ	**Kahutara**	**66.35 134**		P	**P**		**23 04 41.9**	**-0.4**		
KHZ	**Kahutara**	**66.35 134**		P	**P**		**23 04 42.2**	**-0.1**		
TUWZ	**Tuamarina**	**66.40 133**		P	**P**		**23 04 42.7**	**+0.1**		
BSWZ	**Blackbirch Sta**	**66.42 133**		P	**P**		**23 04 42.4**	**-0.3**		
HIZ	**Hauiti**	**66.43 130**		IAmb	IAmb		23 04 48.4			
	comp=Z,761nm,1.1s									
HIZ	**Hauiti**	**66.43 130**		P	**P**		**23 04 44.1**	**+1.3**		
HIZ	**Hauiti**	**66.43 130**		P	**P**		**23 04 44.8**	**+1.9**		
GRZ	**Great Barrier**	**66.46 127**		P	**P**		**23 04 45.0**	**+2.0**		
VRZ	**Vera Road**	**66.48 130**		P	**P**		**23 04 44.5**	**+1.3**		
TCW	**Tory Channel**	**66.59 133**		P	**P**		**23 04 43.2**	**-0.6**		
CMWZ	**Cape Campbell**	**66.67 133**		P	**P**		**23 04 44.5**	**+0.2**		
TOZ	**Tahuroa Road**	**66.77 129**		IAmb	IAmb		23 04 50.4			
	comp=Z,572nm,1.5s									
TOZ	**Tahuroa Road**	**66.77 129**		P	**P**		**23 04 46.8**	**+1.8**		
WAZ	**Wanganui**	**66.79 131**		P	**P**		**23 04 46.2**	**+1.1**		
MSVF	**Nonsavu**	**66.84 107**		P	**P**		**23 04 46.7**	**+0.9**		
MSVF	**Nonsavu**	**66.84 107**	*d*	*iP*	**P**		**23 04 46.0**	**+0.2**		
MSVF				pmax	pmax					
	comp=Z,294nm,1.4s									
MSVF	**Nonsavu**	**66.84 107**		P	**P**		**23 04 47.1**	**+1.2**		
SNZO	**South Karori**	**66.93 133**		P	**P**		**23 04 46.0**	**+0.2**		
SNZO	**South Karori**	**66.93 133**		P	**P**		**23 04 44.9**	**-1.0**		
SNZO	**South Karori**	**66.93 133**		P	**P**		**23 04 44.2**	**-1.6**		
SNZO	**South Karori**	**66.93 133**		P	**P**		**23 04 45.7**	**-0.2**		
PKVZ	**Pokaka**	**66.97 130**		P	**P**		**23 04 47.1**	**+0.8**		
KIW	**Kapiti Island**	**66.98 132**		P	**P**		**23 04 45.6**	**-0.6**		
TWVZ	**Taurewa**	**66.99 130**		P	**P**		**23 04 47.2**	**+0.8**		
MTVZ	**Mangateitei**	**67.08 130**		P	**P**		**23 04 47.4**	**+0.4**		
COVZ	**Chateau Observ**	**67.10 130**		P	**P**		**23 04 47.7**	**+0.6**		
WTVZ	**West Tongariro**	**67.11 130**		P	**P**		**23 04 47.9**	**+0.7**		
FWVZ	**Far West T-bar**	**67.12 130**		P	**P**		**23 04 47.8**	**+0.4**		
TRVZ	**Turoa**	**67.12 130**		P	**P**		**23 04 47.7**	**+0.2**		
MAVZ	**Matarangi**	**67.12 130**		P	**P**		**23 04 48.1**	**+0.5**		
NGZ	**Ngauruhoe**	**67.14 130**		P	**P**		**23 04 48.3**	**+0.9**		
WHVZ	**Whangaehu Hut**	**67.15 130**		P	**P**		**23 04 47.9**	**+0.3**		
CAW	**Cannon Point**	**67.15 132**		P	**P**		**23 04 46.7**	**-0.5**		
OGWZ	**Otaki Gorge**	**67.16 132**		P	**P**		**23 04 47.2**	**-0.1**		
WNVZ	**Wahianoa**	**67.17 130**		P	**P**		**23 04 47.8**	**+0.2**		
RITZ	**Rihia Road**	**67.29 130**		P	**P**		**23 04 49.0**	**+0.8**		
MOVZ	**Moawhango**	**67.30 130**		P	**P**		**23 04 47.9**	**-0.4**		
MSWZ	**Moikau Station**	**67.35 133**		P	**P**		**23 04 47.8**	**-0.8**		
TGRZ	**Tauranga**	**67.36 128**		P	**P**		**23 04 50.1**	**+1.5**		
PLWZ	**Palliser**	**67.39 133**		P	**P**		**23 04 48.3**	**-0.4**		
MRZ	**Mangatainoka R**	**67.43 132**		IAmb	IAmb		23 04 50.8			
	comp=Z,959nm,1.7s									
MRZ	**Mangatainoka R**	**67.43 132**		P	**P**		**23 04 49.1**	**+0.1**		
HOWZ	**Holdsworth Sta**	**67.43 132**		P	**P**		**23 04 49.1**	**0.0**		
HSRZ	**Hossack Road**	**67.46 129**		P	**P**		**23 04 51.9**	**+2.7**		
PAWZ	**Paruwai Farm**	**67.47 132**		P	**P**		**23 04 49.4**	**+0.1**		
MTW	**Mount Morrison**	**67.48 132**		P	**P**		**23 04 49.9**	**+0.6**		
POWZ	**Post Office Ro**	**67.51 131**		P	**P**		**23 04 49.8**	**+0.3**		
BHHZ	**Black Hill Sta**	**67.55 130**		P	**P**		**23 04 50.4**	**+0.5**		
ALRZ	**Allen Road**	**67.58 129**		P	**P**		**23 04 50.6**	**+0.6**		
TSZ	**Takapari Road**	**67.59 131**		P	**P**		**23 04 49.9**	**-0.2**		
BVAR	**Borovoye Array**	**67.61 335**		P	**P**		**23 04 49.6**	**-0.2**		
	comp=Z,471nm,0.8s,baz=140,slow=7.9,SNR=277									
BVAR				pP	**pP**		**23 06 41.2**	**+1.2**		
	comp=Z,460nm,0.9s,baz=142,slow=7.5,SNR=17									
BVAR				PKPPKP	**P'P'df**		**23 33 04.9**	**+0.1**		
	comp=Z,3.1nm,0.8s,baz=270,slow=0.3,SNR=5.3									
BVAR				P4KPbc			23 41 31.4			
	comp=Z,3.5nm,0.9s,baz=142,slow=5.1,SNR=4.4									
	comp=Z,471nm,0.8s									
OPRZ	**Ohinepanea**	**67.61 129**		P	**P**		**23 04 50.9**	**+0.8**		
BORK	**Borovoye**	**67.65 335**		P	**P**		**23 04 49.9**	**-0.1**		
BORK				IAmb	IAmb		23 06 43.8			
	comp=Z,520nm,0.9s									
BORK	**Borovoye**	**67.65 335**	*d*	*iP*	**P**		**23 04 50.0**	**0.0**		
BORK				pmax	pmax					
	comp=Z,369nm,0.8s									
TRWZ	**Traveller**	**67.67 132**		P	**P**		**23 04 50.6**	**+0.2**		
TIWZ	**Tintock**	**67.68 132**		P	**P**		**23 04 51.0**	**+0.4**		
PRWZ	**Pori Road**	**67.70 132**		P	**P**		**23 04 50.7**	**0.0**		
PNHZ	**Pukenui**	**67.74 131**		P	**P**		**23 04 51.3**	**+0.3**		
TMWZ	**Te Maipa**	**67.76 132**		P	**P**		**23 04 51.4**	**+0.3**		
DVHZ	**Dannevirke**	**67.79 131**		P	**P**		**23 04 51.5**	**+0.2**		
BKZ	**Black Stump Fm**	**67.81 130**		P	**P**		**23 04 51.3**	**-0.1**		
BKZ	**Black Stump Fm**	**67.81 130**		IAmb	IAmb		23 04 55.3			
	comp=Z,538nm,1.2s									
BKZ	**Black Stump Fm**	**67.81 130**		P	**P**		**23 04 51.0**	**-0.4**		
BKZ	**Black Stump Fm**	**67.81 130**		P	**P**		**23 04 51.3**	**-0.1**		
KRHZ	**Kereru**	**67.81 130**		P	**P**		**23 04 52.0**	**+0.6**		
MUGZ	**Murupara**	**67.90 129**		P	**P**		**23 04 52.8**	**+1.0**		
BFZ	**Birch Farm**	**67.93 132**		P	**P**		**23 04 52.4**	**+0.4**		
BFZ	**Birch Farm**	**67.93 132**		IAmb	IAmb		23 04 56.2			
	comp=Z,622nm,1.1s									
BFZ	**Birch Farm**	**67.93 132**		P	**P**		**23 04 52.1**	**0.0**		
BFZ	**Birch Farm**	**67.93 132**		P	**P**		**23 04 52.1**	**0.0**		
CPWZ	**Castlepoint**	**67.94 132**		P	**P**		**23 04 53.0**	**+0.9**		
WPHZ	**Waipukurau**	**67.95 131**		P	**P**		**23 04 52.7**	**+0.5**		
MTHZ	**Maungataniwha**	**68.02 130**		P	**P**		**23 04 52.5**	**-0.2**		
NMHZ	**Naumai**	**68.04 130**		P	**P**		**23 04 53.7**	**+0.9**		
ANWZ	**Angora Road**	**68.06 131**		P	**P**		**23 04 53.5**	**+0.7**		
FUNA	**Funafuti**	**68.06 97**		P	**P**		**23 04 55.6**	**+2.3**		
FUNA	**Funafuti**	**68.06 97**		P	**P**		**23 04 53.2**	**-0.1**		
FUNA				IAmb	IAmb		23 04 56.4			
	comp=Z,553nm,1.3s									
FUNA	**Funafuti**	**68.06 97**	⇑	P	**P**		**23 04 55.3**	**+1.9**		
FUNA	**Funafuti**	**68.06 97**		P	**P**		**23 04 55.1**	**+1.8**		
RTZ	**Ruatahuna**	**68.08 129**		IAmb	IAmb		23 04 56.7			
	comp=Z,671nm,0.9s									
RTZ	**Ruatahuna**	**68.08 129**		P	**P**		**23 04 53.7**

comp=Z,700nm,14.6s
PET Petropavlovsk 71.12 28 P **P** **23 05 10.4 -0.3**
comp=Z,3μmcomp=Z,169nm,0.5s
PET Petropavlovsk 71.12 28 P **P** **23 05 11.1 +0.3**
AKTO Aktyubinsk 71.86 328 P **P** **23 05 15.7 +0.5**
comp=Z,344nm,0.7s,baz=127,slow=4.3,SNR=222
AKTO pP **pP** **23 07 08.1 +0.9**
comp=Z,219nm,1.0s,baz=126,slow=5.7,SNR=6.1
comp=Z,344nm,0.7s
MA2 Magadan 72.39 20 P **P** **23 05 18.5 +0.5**
MA2 IAmb IAmb 23 07 14.1
comp=Z,567nm,1.3s
MA2 Magadan 72.39 20 *ce*P **P** **23 05 19.3 +1.3**
MA2 pmax pmax
comp=Z,248nm,1.7s
MA2 Magadan 72.39 20 P **P** **23 05 17.9 -0.1**
comp=Z,2μmcomp=Z,179nm,1.1s
MA2 Magadan 72.39 20 P **P** **23 05 18.8 +0.7**
MA2 Magadan 72.39 20 P **P** **23 05 18.6 +0.6**
MA2 pP **pP** **23 07 10.3 -0.1**
MA2 sP **sP** **23 08 06.1 -0.2**
KIBK Kibwezi 72.41 269 P **P** **23 05 19.3 0.0**
KIBK Kibwezi 72.41 269 IAmb IAmb 23 05 24.0
comp=Z,607nm,0.9s
KIBK Kibwezi 72.41 269 P **P** **23 05 19.9 +0.7**
SNR=66
KIBK Kibwezi 72.41 269 P **P** **23 05 20.4 +1.2**
KMBO Kilima Mbogo 73.31 271 P **P** **23 05 25.3 +0.7**
baz=63,slow=7.4
AKT Akhty 73.96 316 *e*P **P** **23 05 27.5 -0.1**
AKT *e* 23 05 39.0
AKT *e**PP **pP** **23 07 24.7 +4.2**
AKT *e**SP **PP** **23 08 23.6 +1.2**
AKT *e*S **S** **23 14 13.2 -3.5**
AKT *e* 23 14 45.1
AKT pmax pmax
comp=Z,601nm,1.0s
SVE Sverdlovsk 74.33 334 *ce*P **P** **23 05 29.5 +0.3**
SVE *i* S **S** **23 14 17.9 -2.0**
SVE pmax pmax
comp=Z,481nm,0.9s
MAK Makhachkala 74.69 317 *d* iP **P** **23 05 32.3 +0.8**
MAK *e**PP **pP** **23 07 25.1 +0.4**
MAK *e**SP **sP** **23 08 18.8 -1.6**
MAK *e* 23 08 23.7
MAK *e*PPP PPP 23 10 19.7
MAK *e*S **S** **23 14 22.6 -1.7**
MAK *e*SS **SS** **23 19 24.8 -2.1**
MAK pmax pmax
comp=Z,590nm,0.7s
ARTI Arti 75.07 333 P **P** **23 05 33.6 +0.3**
ARTI IAmb IAmb 23 05 36.5
comp=Z,610nm,0.7s
ARTI Arti 75.07 333 *ce*P **P** **23 05 32.9 -0.4**
ARTI pmax pmax
comp=Z,690nm,1.0s
ARTI Arti 75.07 333 P **P** **23 05 33.2 -0.1**
ARTI pP **pP** **23 07 25.2 -1.5**
SEY Seymchan 75.39 18 *ce*P **P** **23 05 35.7 +0.7**
SEY pmax pmax
comp=Z,312nm,1.7s
HAKT HAKKARI 75.47 311 P **P** **23 05 36.2 0.0**
GNI Garni 75.58 314 P **P** **23 05 36.1 -0.6**
GNI Garni 75.58 314 P **P** **23 05 36.2 -0.6**
GNI Garni 75.58 314 *ce*P **P** **23 05 37.2 +0.5**
GNI pmax pmax
comp=Z,405nm,1.0s
GNI Garni 75.58 314 P **P** **23 05 36.6 -0.1**
GNI Garni 75.58 314 P **P** **23 05 36.9 +0.2**
comp=Z,9μmcomp=Z,499nm,0.9s
GNI Garni 75.58 314 P **P** **23 05 37.0 +0.3**
LODK Lodwar 75.68 275 P **P** **23 05 38.6 +0.9**
SNR=159
LODK Lodwar 75.68 275 P **P** **23 05 38.5 +0.7**
GEVA Gevas 76.20 312 IAmb IAmb 23 05 44.5
comp=Z,882nm,1.1s
NRIK Noril'sk 76.51 352 P **P** **23 05 41.0 0.0**
comp=Z,331nm,1.1s,baz=156,slow=5.1,SNR=142
NRIK pP **pP** **23 07 35.4 +0.5**
comp=Z,154nm,1.2s,baz=162,slow=4.7,SNR=3.6
NRIK S **S** **23 14 42.5 -0.3**
comp=Z,9.1nm,1.0s,baz=173,slow=17,SNR=6.3
NRIK PKPPKP **P'P'df** **23 32 45.7 -2.9**
comp=Z,0.6nm,0.3s,baz=342,slow=3.7,SNR=3.7
comp=Z,331nm,1.1s
VNDA Vanda 76.63 170 P **P** **23 05 41.5 -0.1**
comp=Z,132nm,0.6s,baz=315,slow=5.8,SNR=700
VNDA pP **pP** **23 07 36.4 +0.9**
comp=Z,52nm,0.9s,baz=292,slow=4.9,SNR=3.0
VNDA S **S** **23 14 44.1 +0.1**
comp=Z,2.7nm,0.9s,baz=75,slow=17,SNR=8.5
VNDA PKPPKP **P'P'df** **23 32 45.6 -3.6**
comp=Z,6.9nm,1.2s,baz=157,slow=2.1,SNR=5.9
comp=Z,132nm,0.6s
VNDA Vanda 76.63 170 P **P** **23 05 41.9 +0.3**
VNDA Vanda 76.63 170 P **P** **23 05 41.9 +0.3**
VNDA pmax pmax
comp=Z,300nm,1.0s
DIGO Kars 76.65 314 P **P** **23 05 43.6 +0.8**
AFI Afiamalu 76.68 103 P **P** **23 05 44.3 +1.1**
AFI IAmb IAmb 23 05 49.6
comp=Z,1μm,1.5s
AFI Afiamalu 76.68 103 P **P** **23 05 44.3 +1.1**
AFI pmax pmax
comp=Z,1μm,1.5s
AFI Afiamalu 76.68 103 P **P** **23 05 44.9 +1.7**
GURO Guroymak-BITLI 77.04 312 IAmb IAmb 23 05 48.9
comp=Z,724nm,0.7s
EPOS Posof 77.47 315 P **P** **23 05 47.9 +0.8**
NCK Nalchik 77.54 317 *d* iP **P** **23 05 48.2 +0.9**
NCK pmax pmax
comp=Z,765nm,0.8s
POGA Pongola 77.56 243 IAmb IAmb 23 05 52.4
comp=Z,1μm,0.9s
POGA Pongola 77.56 243 P **P** **23 05 48.3 +0.6**
POGA pP **pP** **23 07 42.9 +0.8**
POGA sP **sP** **23 08 35.5 -2.1**
POGA Pongola 77.56 243 P **P** **23 05 48.6 +0.9**
SBA Scott Base 77.69 170 P **P** **23 05 48.8 +1.4**
SBA IAmb IAmb 23 05 53.1
comp=Z,680nm,1.3s
SBA Scott Base 77.69 170 P **P** **23 05 48.8 +1.4**
SBA pmax pmax
comp=Z,680nm,1.3s
SYO Syowa Base 77.98 200 ⇓ *i* P **P** **23 05 49.1 +0.1**
SYO Syowa Base 77.98 200 ⇑ *i* P **P** **23 05 53.2 +4.2**
TIXI Tiksi 78.10 6 P **P** **23 05 48.8 -0.8**
TIXI Tiksi 78.10 6 *ce*P **P** **23 05 49.3 -0.3**
TIXI pmax pmax
comp=Z,325nm,0.9s
KBZ Khabaz 78.10 317 P **P** **23 05 50.9 +0.7**
comp=Z,752nm,0.9s,baz=98,slow=3.7,SNR=245
KBZ pP **pP** **23 07 46.1 +1.5**
comp=Z,271nm,0.9s,baz=140,slow=5.3,SNR=8.2
KBZ S **S** **23 15 01.4 +0.9**
comp=Z,3.9nm,0.9s,baz=236,slow=23,SNR=6.0
KBZ PKKPbc **PKKPbc** **23 24 45.5 -0.9**
comp=Z,7.5nm,0.9s,baz=292,slow=0.6,SNR=9.2
KBZ PKPPKP **P'P'df** **23 32 47.3 -0.2**
comp=Z,2.7nm,1.0s,baz=45,slow=1.4,SNR=5.3
comp=Z,752nm,0.9s
BATM Batumi 78.24 314 ⇑ P **P** **23 05 51.3 +0.3**
BATM Batumi 78.24 314 P **P** **23 05 51.3 +0.3**
NIUE Niue 78.25 108 P **P** **23 05 54.5 +3.0**
SHA1 Shidzhatmaz 78.27 317 *ce*P **P** **23 05 52.0 +0.6**
KIV Kislovodsk 78.32 317 ⇑ P **P** **23 05 52.4 +0.9**
KIV Kislovodsk 78.32 317 *i* P **P** **23 05 51.5 0.0**
SNR=337
KIV Kislovodsk 78.32 317 P **P** **23 05 52.4 +0.9**
KIV IAmb IAmb 23 05 56.0
comp=Z,850nm,0.9s
KIV Kislovodsk 78.32 317 *e*P **P** **23 05 51.8 +0.3**
KIV *e**PP **pP** **23 07 44.9 -1.2**
KIV *e*PPP PPP 23 10 49.2
KIV *e*S **S** **23 15 02.4 -0.7**
KIV *e*SS **SS** **23 20 17.5 -3.8**
KIV *e*SSS SSS 23 23 41.5
KIV pmax pmax
comp=Z,719nm,1.1s
KIV pmax pmax
comp=Z,1μm,3.5s
KIV Kislovodsk 78.32 317 P **P** **23 05 52.0 +0.4**
KIV S **S** **23 15 01.5 -1.7**
KIV Kislovodsk 78.32 317 P **P** **23 05 51.4 0.0**
KIV S **S** **23 15 01.4 -1.7**

KIV Kislovodsk 78.32 317 P **P** **23 05 51.5 0.0**
comp=Z,9μmcomp=Z,719nm,1.2s
KIV Kislovodsk 78.32 317 P **P** **23 05 51.6 0.0**
GOF Gofitskoye 78.45 318 *d* iP **P** **23 05 52.7 +0.6**
GOF *e*S **S** **23 15 00.1 -4.2**
PILG Pilgrimsrest, 78.47 246 *e*P **P** **23 05 52.7 -0.2**
BELG Belogornoye 78.48 326 P **P** **23 05 51.8 -0.2**
comp=Z,1μm,0.9s,baz=324,slow=0.8,SNR=161
BELG pP **pP** **23 07 47.5 +0.8**
comp=Z,711nm,1.0s,baz=355,slow=2.8,SNR=6.8
comp=Z,1μm,0.9s
PMBG Pietermaritzbu 78.61 241 *e*P **P** **23 05 52.0 -1.4**
KOPT Kop Dagi 78.62 313 IAmb IAmb 23 06 04.0
comp=Z,612nm,0.8s
KTUT Trabzon 79.44 313 ⇑ P **P** **23 05 58.5 +1.1**
KELT Kelkit 79.57 312 P **P** **23 05 59.2 +0.8**
MBAR Mbarara 79.85 270 P **P** **23 06 01.4 +1.1**
MBAR Mbarara 79.85 270 *ce*P **P** **23 06 00.8 +0.4**
MBAR pmax pmax
comp=Z,2μm,1.0s
MBAR Mbarara 79.85 270 P **P** **23 06 00.6 +0.3**
MBAR S **S** **23 15 18.9 -1.3**
MBAR Mbarara 79.85 270 P **P** **23 06 01.0 +0.6**
MBAR pP **pP** **23 07 56.9 +1.4**
MBAR sP **sP** **23 08 48.2 -2.5**
MBAR x x 23 18 44.1
MBAR Mbarara 79.85 270 P **P** **23 06 01.0 +0.6**
MBAR Mbarara 79.85 270 P **P** **23 06 01.5 +1.1**
MBAR pP **pP** **23 07 55.5 0.0**
LABN Labinsk 79.88 317 *e*P **P** **23 05 59.3 -0.3**
LABN *e**PP **pP** **23 07 55.0 +0.2**
LABN *e* 23 09 11.0
LABN *e*S **S** **23 15 18.6 -0.4**
LABN pmax pmax
comp=Z,1μm,0.9s
ARPR Arapgir-MALATY 79.96 311 P **P** **23 06 01.3 +0.9**
VSLR Vesyoloye 79.98 316 *i* P **P** **23 06 00.3 +0.1**
VSLR pmax pmax
comp=Z,3μm,0.9s
SOC Sochi 80.24 316 *e*P **P** **23 06 00.3 -1.2**
SOC *e**PP **pP** **23 07 54.9 -2.0**
SOC *e**SP **sP** **23 08 50.0 -2.0**
SOC *e* 23 09 12.7
SOC *e*PPP PPP 23 11 08.2
SOC *i* S **S** **23 15 18.4 -4.3**
SOC *e*SS **SS** **23 20 55.1 +5.6**
SOC *e*SSS SSS 23 24 20.8
SOC pmax pmax
comp=Z,1μm,0.8s
GHAJ Ghor Haditha 80.25 303 P **P** **23 06 02.7 +0.9**
GAZ Gaziantep 80.31 309 IAmb IAmb 23 06 07.1
comp=Z,1μm,1.2s
KIRV Kirov 80.34 332 *ce*P **P** **23 06 01.5 -0.2**
ERBR Yeremizino-Bor 80.37 318 *e*P **P** **23 06 02.5 +0.3**
ERBR *e**PP **pP** **23 07 58.6 +1.0**
ERBR *e* 23 09 14.4
ERBR *e*S **S** **23 15 21.3 -2.7**
ERBR pmax pmax
comp=Z,887nm,1.0s
EIL Elat 80.42 301 P **P** **23 06 03.4 +0.6**
HRFI Mount Harif 80.42 302 P **P** **23 06 04.2 +1.3**
MSBI Mazada 80.43 303 P **P** **23 06 04.1 +1.4**
UJAP Al Uja 80.48 304 P **P** **23 06 04.3 +1.3**
BEIL Beino 80.48 306 *e*P **P** **23 06 03.9 +0.9**
RCY Rachaya 80.52 305 *e*P **P** **23 06 04.6 +1.1**
SHBL Chebaa 80.56 305 *e*P **P** **23 06 04.8 +1.1**
ZAHL Zahle 80.56 306 *e*P **P** **23 06 05.3 +1.6**
HWQ Hawqa 80.61 306 *e*P **P** **23 06 04.5 +0.7**
MMLI Mount Malkishu 80.62 304 P **P** **23 06 05.7 +1.8**
QRWL Qaraoun 80.66 305 *e*P **P** **23 06 05.8 +1.7**
BHL Bhannes 80.76 306 *e*P **P** **23 06 05.5 +0.9**
MMAI Mount Meron Ar 80.76 305 P **P** **23 06 06.1 +1.5**
comp=Z,2μm,1.1s,baz=69,slow=9.9,SNR=209
MMAI pP **pP** **23 08 00.8 +0.7**
comp=Z,54nm,1.0s,baz=157,slow=7.8,SNR=3.7
MMAI PKKPbc **PKKPbc** **23 24 40.5 +0.3**
comp=Z,1.8nm,0.6s,baz=47,slow=6.1,SNR=5.3
MMAI PKPPKP **P'P'df** **23 32 43.6 -0.1**
comp=Z,9.2nm,1.1s,baz=330,slow=5.5,SNR=4.4
comp=Z,2μm,1.1s
DQRL Deir Qamar 80.78 305 *e*P **P** **23 06 06.0 +1.3**
SNKL Senekal, Frees 81.03 242 *e*P **P** **23 06 06.7 +0.4**
ANDN Andirin 81.08 309 P **P** **23 06 06.9 +0.7**
KZIT Kziot 81.14 302 P **P** **23 06 07.2 +0.7**
LEPH Lephalale, Lim 81.16 247 *e*P **P** **23 06 06.8 -0.1**
HRAO HartRAO 81.18 245 *e*P **P** **23 06 07.1 +0.1**
LSZ Lusaka 81.22 255 P **P** **23 06 07.8 +0.4**
LSZ Lusaka 81.22 255 P **P** **23 06 07.8 +0.4**
LSZ pmax pmax
comp=Z,2μm,1.7s
LSZ Lusaka 81.22 255 P **P** **23 06 08.2 +0.8**
LSZ S **S** **23 15 30.1 -3.9**
LSZ Lusaka 81.22 255 *e*P **P** **23 06 07.6 +0.2**
LSZ Lusaka 81.22 255 P **P** **23 06 07.9 +0.5**
LSZ pP **pP** **23 08 03.9 +0.8**
LSZ sP **sP** **23 08 55.0 -3.1**
LSZ x x 23 19 03.0
LSZ Lusaka 81.22 255 P **P** **23 06 07.7 +0.4**
VRH Novokhopyorsk 81.41 324 *e*P **P** **23 06 06.4 -1.0**
VRH *e**PP **pP** **23 08 01.8 -1.3**
VRH pmax pmax
comp=Z,940nm,1.0s
TOKA Tokat 81.66 312 IAmb IAmb 23 06 13.6
comp=Z,1μm,1.0s
BNN Bunyan 81.77 310 IAmb IAmb 23 06 14.5
comp=Z,1μm,1.3s
CY604 RAF Akrotiri, 81.78 306 P **P** **23 06 10.8 +1.4**
JOHN Johnston Islan 81.98 72 P **P** **23 06 11.6 +0.6**
GRHM Grahamstown, E 82.09 237 IAmb IAmb 23 06 16.8
comp=Z,702nm,1.0s
GRHM Grahamstown, E 82.09 237 *e*P **P** **23 06 12.8 +1.4**
ANN Anapa 82.16 317 *e*P **P** **23 06 10.9 -0.5**
ANN *e**PP **pP** **23 08 08.1 +0.7**
ANN *e* 23 09 30.4
ANN *e*S **SKSac** **23 15 38.3 -2.3**
ANN pmax pmax
comp=Z,784nm,1.0s
VORD Divnogorie 82.78 323 *e*P **P** **23 06 13.0 -1.3**
VORD *e**PP **pP** **23 08 09.6 -1.0**
VORD pmax pmax
comp=Z,680nm,1.0s
SOOWA Sowa 82.78 250 P **P** **23 06 15.8 +0.6**
SOOWA pP **pP** **23 08 12.2 +0.7**
SOOWA sP **sP** **23 09 03.5 -2.9**
CSS Mathiatis 82.86 306 P **P** **23 06 15.4 +0.2**
comp=Z,20μmcomp=Z,2μm,1.0s
CSS Mathiatis 82.86 306 P **P** **23 06 16.3 +1.1**
VSR Storozhevoye 82.93 323 *d* iP **P** **23 06 14.5 -0.6**
VSR *e**PP **pP** **23 08 10.4 -1.0**
VSR *i* S **SKSac** **23 15 40.4 -5.0**
VSR *e*SP **SPn** **23 16 39.4 -5.2**
VSR pmax pmax
comp=Z,1μm,0.8s
VORR Voronezh 83.05 324 *e*P **P** **23 06 15.2 -0.5**
VORR *e**PP **pP** **23 08 11.1 -0.9**
VORR pmax pmax
comp=Z,860nm,1.0s
BILL Bilibino 83.10 18 P **P** **23 06 15.7 +0.1**
BILL Bilibino 83.10 18 *ce*P **P** **23 06 15.5 -0.1**
BILL pmax pmax
comp=Z,125nm,1.8s
LBTB Lobatse 83.11 246 IAmb IAmb 23 06 20.7
comp=Z,405nm,0.9s
LBTB Lobatse 83.11 246 *e*P **P** **23 06 15.8 -1.0**
LBTB Lobatse 83.11 246 P **P** **23 06 16.6 -0.2**
LBTB pP **pP** **23 08 13.5 +0.3**
LBTB sP **sP** **23 09 04.1 -3.9**
LBTB x x 23 19 21.9
LBTB Lobatse 83.11 246 P **P** **23 06 17.6 +0.8**
KIRS Kirsehir-Merke 83.30 310 ⇓ P **P** **23 06 18.1 +0.7**
KHWEE KHWEE 83.42 249 P **P** **23 06 18.4 0.0**
KHWEE pP **pP** **23 08 13.5 -1.4**
KHWEE sP **sP** **23 09 06.2 -3.5**
KHWEE x x 23 19 25.7
LPSR Galich'ya Gora 83.50 324 *d* iP **P** **23 06 17.8 -0.1**
LPSR *e**PP **pP** **23 08 14.6 +0.2**
LPSR *i* S **SKSac** **23 15 46.1 -2.8**
LPSR pmax pmax
comp=Z,1μm,0.7s
KROM Kromhout 83.52 236 *e*P **P** **23 06 19.2 +0.7**
KIWB Kanaga Island 83.62 36 IAmb IAmb 23 08 20.6
comp=Z,422nm,1.2s

BR104 Keskin Array S 83.63 311 P **P** **23 06 18.9 -0.2**
comp=Z,4μmcomp=Z,610nm,1.0s
BR131 Keskin Array S 83.64 311 *d* iP **P** **23 06 18.8 -0.3**
BR131 Keskin Array S 83.64 311 S **SKSac** **23 15 45.5 -5.3**
BRTR Keskin Array B 83.64 311 P **P** **23 06 19.2 +0.1**
comp=Z,484nm,0.9s,baz=134,slow=6.9,SNR=315
BRTR pP **pP** **23 08 15.4 -0.3**
comp=Z,135nm,1.0s,baz=120,slow=7.3,SNR=7.8
BRTR PKKPbc **PKKPbc** **23 24 34.4 +0.3**
comp=Z,5.3nm,1.0s,baz=195,slow=2.4,SNR=11
BRTR PKPPKP **P'P'df** **23 32 36.5 -1.6**
comp=Z,2.2nm,1.1s,baz=297,slow=0.6,SNR=4.9
comp=Z,484nm,0.9s
BRTR Keskin Array B 83.64 311 P **P** **23 06 18.6 -0.6**
BRTR Keskin Array B 83.64 311 *i* P **P** **23 06 18.6 -0.6**
BRTR pmax pmax
comp=Z,484nm,0.9s
BR105 Keskin Array S 83.65 311 P **P** **23 06 19.0 -0.2**
comp=Z,5μmcomp=Z,681nm,1.0s
BR106 Keskin Array S 83.66 311 P **P** **23 06 19.0 -0.2**
comp=Z,5μmcomp=Z,593nm,1.0s
GRAF Camdeboo Natio 83.72 238 *e*P **P** **23 06 20.3 +0.7**
MAKGR Makgori 83.78 245 IAmb IAmb 23 06 23.8
comp=Z,297nm,0.8s
MAKGR Makgori 83.78 245 P **P** **23 06 20.9 +0.7**
MAKGR pP **pP** **23 08 16.7 -0.1**
MAKGR sP **sP** **23 09 08.7 -2.9**
MAKGR x x 23 19 28.1
ELIB Princess Elisa 83.79 198 *d*P **P** **23 06 19.9 +0.7**
comp=Z,226nm,1.2s
ELIB *d*pP **pP** **23 08 18.6 +2.7**
ELIB *d*sP **sP** **23 09 05.0 -5.8**
BZK Bozkurt 83.87 313 ⇓ P **P** **23 06 20.8 +0.8**
BZK Bozkurt 83.87 313 P **P** **23 06 20.0 0.0**
comp=Z,30μmcomp=Z,4μm,1.0s
ADK Adak 83.90 37 P **P** **23 06 19.5 -0.4**
ADK IAmb IAmb 23 08 18.9
comp=Z,936nm,1.7s
ADK Adak 83.90 37 P **P** **23 06 19.5 -0.4**
ADK pmax pmax
comp=Z,936nm,1.7s
ADK Adak 83.90 37 P **P** **23 06 20.0 +0.1**
KSANE Kasane 83.95 253 P **P** **23 06 22.2 +1.1**
KSANE pP **pP** **23 08 17.2 -0.6**
KSANE sP **sP** **23 09 10.7 -1.8**
KKUL Konya-Kulu 84.07 310 P **P** **23 06 21.4 +0.2**
QSPA South Pole Qui 84.31 180 P **P** **23 06 21.8 -0.1**
comp=Z,480nm,0.8s,baz=194,slow=0.3,SNR=986
QSPA pP **pP** **23 08 19.1 +0.3**
comp=Z,255nm,1.1s,baz=321,slow=4.6,SNR=6.2
QSPA S **SKSac** **23 15 52.6 -1.4**
comp=Z,37nm,1.0s,baz=286,slow=23,SNR=17
QSPA PKKPbc **PKKPbc** **23 24 30.2 -3.9**
comp=Z,26nm,1.0s,baz=270,slow=1.1,SNR=16
QSPA PKPPKP 23 32 25.2
comp=Z,6.7nm,1.0s,baz=175,slow=1.9,SNR=6.4
comp=Z,480nm,0.8s
QSPA South Pole Qui 84.31 180 P **P** **23 06 22.1 +0.2**
QSPA South Pole Qui 84.31 180 P **P** **23 06 22.5 +0.6**
GSTR Great Sitkin T 84.33 36 IAmb IAmb 23 08 21.2
comp=Z,1μm,1.8s
KHAM Kharkiv 84.36 321 P **P** **23 06 22.2 -0.1**
SIM Simferopol' 84.48 316 *e*P **P** **23 06 23.1 +0.1**
SIM *e* 23 09 48.0
SIM *e*S **S** **23 16 04.0 -0.9**
SIM pmax pmax
comp=Z,162nm,1.1s
ROOI Rooidraai Farm 84.50 238 *e*P **P** **23 06 23.3 -0.2**
CIDE Kastamonu/Cide 84.62 313 ⇓ P **P** **23 06 24.6 +0.9**
SKOMA Sekoma 84.65 246 P **P** **23 06 25.3 +0.9**
SKOMA pP **pP** **23 08 21.5 +0.2**
SKOMA sP **sP** **23 09 13.9 -2.1**
BRAK Brakfontein 85.10 239 *e*P **P** **23 06 27.6 +1.2**
MOS Moscow 85.19 327 *e*P **P** **23 06 26.5 +0.4**
MOS *e**PP **pP** **23 08 22.0 -1.2**
MOS *e* 23 09 53.1
MOS *e*PPP PPP 23 11 51.9
MOS *e*S **SKSac** **23 15 59.8 +0.4**
MOS *e*SS **SS** **23 21 59.0 -2.2**
MOS pmax pmax
comp=Z,2μm,1.1s
MOS pmax pmax
comp=E,485nm,1.0s
MOS pmax pmax
comp=N,676nm,1.0s
MOS pmax pmax
comp=Z,2μm,0.9s
MOS pmax pmax
comp=N,800nm,1.2s
MOS pmax pmax
comp=E,700nm,1.0s
MOS smax smax
comp=N,11μm,5.8s
MOS smax smax
comp=E,9μm,5.7s
ATKA Atka Island 85.47 37 IAmb IAmb 23 08 27.3
comp=Z,444nm,1.1s
OBN Obninsk 85.58 326 P **P** **23 06 28.2 +0.1**
comp=Z,2μm,0.6s,baz=64,slow=2.0,SNR=203
OBN pP **pP** **23 08 25.2 -0.1**
comp=Z,188nm,1.0s,baz=237,slow=15,SNR=3.3
comp=Z,2μm,0.6s
OBN Obninsk 85.58 326 ⇓ P **P** **23 06 28.6 +0.5**
OBN Obninsk 85.58 326 P **P** **23 06 28.5 +0.5**
OBN Obninsk 85.58 326 *d* iP **P** **23 06 27.6 -0.4**
OBN *i* *PP **pP** **23 08 24.8 -0.5**
OBN *e**SP **sP** **23 09 21.4 +1.5**
OBN *e* 23 09 59.4
OBN *i* PPP PPP 23 11 58.0
OBN *i* S **SKSac** **23 15 58.4 -3.4**
OBN *i* 23 16 12.9
OBN *e* 23 17 24.0
OBN *i* SS **SS** **23 22 03.8 -3.2**
OBN *e*SSS SSS 23 25 44.2
OBN pmax pmax
comp=Z,3μm,1.0s
OBN Obninsk 85.58 326 P **P** **23 06 28.1 +0.1**
comp=Z,24μmcomp=Z,3μm,0.9s
OBN Obninsk 85.58 326 P **P** **23 06 27.9 -0.1**
OBN Obninsk 85.58 326 P **P** **23 06 28.3 +0.3**
OBN pP **pP** **23 08 23.9 -1.4**
GRAN Grantham 85.68 238 *e*P **P** **23 06 29.7 +0.5**
I43RU DUBNA INFRASON 85.69 328 P **P** **23 06 29.2 +0.7**
baz=110,slow=7.9,SNR=6.0
KLMR Klimovskoe 85.84 332 *d* iP **P** **23 06 29.9 +0.7**
KLMR *e**PP **pP** **23 08 25.6 -0.9**
KLMR *e* 23 09 58.4
KLMR pmax pmax
comp=Z,2μm,1.1s
ELL Elmali 85.93 307 IAmb IAmb 23 06 47.0
comp=Z,724nm,1.2s
SAHE Sakarya_HENDEK 85.95 312 ⇑ P **P** **23 06 30.3 0.0**
AKAS Kas 86.08 307 IAmb IAmb 23 06 33.8
comp=Z,716nm,1.1s
AKAS Kas 86.08 307 P **P** **23 06 30.7 -0.3**
MERW Merweville 86.20 238 *e*P **P** **23 06 32.8 +1.1**
KGCAE Kacgae 86.35 248 P **P** **23 06 33.4 +0.7**
KGCAE pP **pP** **23 08 29.3 -0.8**
KGCAE sP **sP** **23 09 22.3 -2.4**
FRAZ Fraserburg 86.35 238 *e*P **P** **23 06 34.0 +1.5**
UPI Upington 86.76 242 *e*P **P** **23 06 35.2 +0.8**
SUR Sutherland 86.82 238 P **P** **23 06 36.8 +2.0**
SUR Sutherland 86.82 238 P **P** **23 06 35.0 +0.2**
SUR Sutherland 86.82 238 *e*P **P** **23 06 33.0 -1.8**
SUR Sutherland 86.82 238 P **P** **23 06 36.6 +1.8**
SUR sP **sP** **23 09 23.9 -3.1**
SUR Sutherland 86.82 238 P **P** **23 06 37.5 +2.7**
SILT Sile 86.91 312 ⇓ P **P** **23 06 36.1 +1.4**
MATJ Matjiesfontein 86.94 237 *e*P **P** **23 06 36.4 +1.1**
NE56 Odesa 87.05 317 P **P** **23 06 34.0 -1.2**
ARG Arkhangelos 87.26 307 P **P** **23 06 37.3 +0.9**
MANT Manisa 87.28 309 IAmb IAmb 23 06 41.4
comp=Z,736nm,1.2s
ADZR Andozero 87.39 335 *d* iP **P** **23 06 36.0 -0.4**
ADZR *PP **pP** **23 08 32.0 -2.3**
ADZR S **SKSac** **23 16 12.3 -0.1**
ADZR *SS 23 17 36.7
ADZR pmax pmax
comp=Z,462nm,0.6s
GRTLG Ghanzi 87.39 249 P **P** **23 06 38.5 +1.0**
GRTLG pP **pP** **23 08 35.3 -0.2**
GRTLG sP **sP** **23 09 27.3 -2.6**
GRTLG x x 23 16 32.5
NVL N'lazarevskaya 87.57 199 ⇓ *i* P **P** **23 06 36.1 -1.1**

NVL *e**PP **pP** **23 08 37.3 +2.1**
NVL *e*S **SKSac** **23 16 10.2 -3.2**
NVL *e*SS **SS** **23 22 36.1 +1.5**
NVL *e*SSS SSS 23 26 24.0
NVL pmax pmax
comp=Z,410nm,0.7s
RAR Rarotonga 87.64 111 P **P** **23 06 41.4 +2.9**
AYDN Tasoluk 87.68 308 P **P** **23 06 39.8 +1.3**
CVNA Calvinia 87.79 239 P **P** **23 06 41.0 +1.8**
BAND Balkesir-Ban 87.93 311 ⇑P **P** **23 06 40.7 +1.1**
KARP Karpathos 87.94 306 P **P** **23 06 40.1 +0.4**
comp=Z,32µmcomp=Z,3µm,1.0s
KARP Karpathos 87.94 306 P **P** **23 06 40.7 +1.1**
BALB Balikesir 87.99 310 IAmb IAmb 23 06 44.0
comp=Z,504nm,1.0s
CER Ceres 88.01 237 *e*P **P** **23 06 41.9 +1.8**
CER Ceres 88.01 237 P **P** **23 06 42.2 +2.1**
JURR Jurilovca 88.09 315 ⇑P **P** **23 06 40.3 +0.2**
MANR Mangalia 88.14 314 ⇑P **P** **23 06 40.2 -0.1**
EFOR EFORIE 88.15 314 ⇑P **P** **23 06 40.7 +0.3**
BAL3X Bal3x, Balta 88.16 318 P **P** **23 06 39.1 -1.3**
KOOLE Kule 88.18 247 P **P** **23 06 42.5 +1.3**
KOOLE sP **sP** **23 09 31.4 -2.4**
BALY Balya 88.20 310 P **P** **23 06 41.1 +0.3**
PRTV Porterville,We 88.20 237 *e*P **P** **23 06 41.2 +0.2**
TLCR 88.21 316 ⇑P **P** **23 06 40.7 0.0**
TLCR 88.21 316 P **P** **23 06 40.6 0.0**
TIRR Tirgusor 88.37 315 ⇑P **P** **23 06 41.8 +0.3**
TIRR Tirgusor 88.37 315 IAmb IAmb 23 08 43.4
comp=Z,388nm,1.0s
TIRR Tirgusor 88.37 315 P **P** **23 06 41.7 +0.3**
TIRR Tirgusor 88.37 315 P **P** **23 06 41.1 -0.3**
comp=Z,5µmcomp=Z,300nm,0.9s
TIRR Tirgusor 88.37 315 P **P** **23 06 41.5 +0.1**
TPGR Topolog 88.43 315 ⇑P **P** **23 06 41.9 +0.1**
PSN Preselentsi 88.43 314 *i*P **P** **23 06 41.7 0.0**
KIS Kishinev 88.52 317 ⇑P **P** **23 06 41.6 -0.4**
KIS Kishinev 88.52 317 P **P** **23 06 41.6 -0.4**
CVDA Cernavoda 88.61 315 ⇑P **P** **23 06 43.3 +0.7**
ZKR Zakros 88.64 305 P **P** **23 06 44.5 +1.6**
TLBR Topalu 88.64 315 ⇓P **P** **23 06 42.8 +0.1**
CFR Carcaliu 88.68 315 ⇑P **P** **23 06 42.4 -0.4**
CFR Carcaliu 88.68 315 P **P** **23 06 42.4 -0.4**
GIUM Giurgiulesti 88.68 316 ⇑P **P** **23 06 43.0 +0.2**
ICOR Ion Corvin 88.75 314 ⇓P **P** **23 06 43.6 +0.4**
TATR Tatarca 88.81 316 ⇓P **P** **23 06 44.0 +0.5**
VLDR Vladesti 88.83 316 ⇑P **P** **23 06 44.1 +0.6**
AK09 Malin Array Si 88.84 321 P **P** **23 06 42.7 -0.8**
SCTR Scanteiesti 88.86 316 ⇓P **P** **23 06 44.5 +0.8**
AK10 Malin Array Si 88.86 321 P **P** **23 06 42.8 -0.8**
AK08 Malin Array Si 88.87 321 P **P** **23 06 42.8 -0.8**
SPIA Saint Paul Isl 88.87 32 P **P** **23 06 44.5 +1.0**
baz=258
SPIA S **S** **23 16 44.7 -0.9**
baz=258
AK07 Malin Array Si 88.88 321 P **P** **23 06 42.7 -1.0**
AK06 Malin Array Si 88.89 321 P **P** **23 06 42.7 -1.0**
AKASG Malin Array Be 88.90 321 P **P** **23 06 43.2 -0.5**
comp=Z,167nm,0.6s,baz=86,slow=4.7,SNR=306
AKASG pP **pP** **23 08 42.1 0.0**
comp=Z,128nm,0.9s,baz=87,slow=4.7,SNR=9.9
AKASG PP **PP** **23 10 20.1 -3.0**
comp=Z,76nm,0.9s,baz=87,slow=6.8,SNR=6.2
AKASG PKiKP **PKiKP** **23 11 39.8 +0.5**
comp=Z,3.7nm,0.5s,baz=78,slow=2.3,SNR=5.2
AKASG PKKP **PKKPdf** **23 24 15.3 -0.8**
comp=Z,0.9nm,0.3s,baz=274,slow=3.5,SNR=5.7
AKASG PKPPKP **P'P'df** **23 32 27.6 +0.1**
comp=Z,1.2nm,0.8s,baz=271,slow=3.0,SNR=4.3
comp=Z,167nm,0.6s
AKASG Malin Array Be 88.90 321 P **P** **23 06 42.9 -0.9**
AKBB Malin Array Si 88.90 321 *ce*P **P** **23 06 42.8 -0.9**
AKBB Malin Array Si 88.90 321 P **P** **23 06 42.9 -0.8**
KIEV Kiev 88.91 321 ⇑P **P** **23 06 43.6 -0.2**
KIEV Kiev 88.91 321 *i*P **P** **23 06 42.9 -0.8**
SNR=228
KIEV Kiev 88.91 321 P **P** **23 06 43.0 -0.8**
KIEV Kiev 88.91 321 P **P** **23 06 43.6 -0.2**
KIEV Kiev 88.91 321 P **P** **23 06 42.7 -1.1**
comp=Z,23µmcomp=Z,2µm,1.2s
KIEV Kiev 88.91 321 P **P** **23 06 43.0 -0.7**
KIEV Kiev 88.91 321 P **P** **23 06 43.0 -0.7**
KIEV pP **pP** **23 08 39.8 -2.4**
NEGRR Negrea 88.92 316 ⇑P **P** **23 06 43.9 -0.1**
AK04 Malin Array Si 88.94 321 P **P** **23 06 42.6 -1.3**
NEF NEVSHA 88.99 313 *i*P **P** **23 06 45.1 +0.7**
IZVR Izvoarele 89.00 316 ⇑P **P** **23 06 45.3 +1.0**
VARL Varlezi 89.00 316 ⇑P **P** **23 06 45.1 +0.8**
SORM Soroca 89.02 318 ⇑P **P** **23 06 44.2 -0.2**
SORM Soroca 89.02 318 P **P** **23 06 44.1 -0.2**
TUDR 89.07 316 ⇑P **P** **23 06 45.4 +0.8**
VASR Vaslui 89.15 317 ⇑P **P** **23 06 45.3 +0.2**
AMRR Amara 89.15 315 ⇑P **P** **23 06 45.9 +0.9**
AMRR Amara 89.15 315 P **P** **23 06 45.9 +0.9**
BIR Birlad 89.20 316 ⇑P **P** **23 06 46.0 +0.7**
BIR Birlad 89.20 316 P **P** **23 06 46.0 +0.7**
CHOS Chios island 89.21 309 P **P** **23 06 46.4 +0.7**
CICN Ciocanesti 89.31 314 ⇓P **P** **23 06 47.0 +1.2**
GHRR 89.32 316 ⇓P **P** **23 06 47.0 +1.1**
GHRR 89.32 316 P **P** **23 06 45.8 0.0**
GHRR 89.32 316 P **P** **23 06 46.7 +0.9**
COSR Cosmesti PH 89.36 316 ⇓P **P** **23 06 47.1 +1.1**
IASR Iasi 89.38 317 ⇓P **P** **23 06 45.8 -0.2**
JMB Yambol 89.42 313 *i*P **P** **23 06 46.4 0.0**
JMB *i*P **P** **23 06 46.4 0.0**
CAVK Edirne/Enez-Ca 89.44 311 ⇑P **P** **23 06 46.8 +0.3**
LEHL Lehliu 89.50 315 ⇑P **P** **23 06 47.5 +0.9**
ODBI Odobesti 89.52 316 ⇓P **P** **23 06 48.1 +1.3**
ALN Alexandroupoli 89.56 311 IAmb IAmb 23 06 50.2
comp=Z,160nm,1.0s
ALN Alexandroupoli 89.56 311 P **P** **23 06 46.9 -0.1**
RAZG Razgrad 89.59 314 ⇑P **P** **23 06 47.5 +0.3**
GAMB Gambell 89.64 26 IAmb IAmb 23 08 51.3
comp=Z,505nm,1.2s
GAMB Gambell 89.64 26 P **P** **23 06 48.1 +1.3**
baz=256,SNR=13
GAMB pP **pP** **23 08 46.2 +0.8**
baz=256
GAMB S **S** **23 16 52.8 +0.6**
baz=256
LUBAR Lubar, Ukraine 89.69 320 P **P** **23 06 46.7 -0.8**
IDI Anoyia 89.74 305 P **P** **23 06 48.6 +0.5**
comp=Z,62nm,0.4s,baz=70,slow=7.0,SNR=58
comp=Z,62nm,0.4s
IDI Anoyia 89.74 305 P **P** **23 06 47.8 -0.3**
IDI Anoyia 89.74 305 IAmb IAmb 23 08 49.6
comp=Z,350nm,1.2s
VRI Vrincioaia 89.76 316 ⇑P **P** **23 06 48.6 +0.6**
VRI Vrincioaia 89.76 316 P **P** **23 06 48.5 +0.6**
VRI Vrincioaia 89.76 316 P **P** **23 06 47.9 0.0**
comp=Z,5µmcomp=Z,379nm,1.1s
VRI Vrincioaia 89.76 316 P **P** **23 06 48.4 +0.4**
SAHR Sahastru 89.77 316 ⇑P **P** **23 06 48.9 +0.9**
ISR Istrita 89.78 315 ⇑P **P** **23 06 47.9 -0.3**
ISR Istrita 89.78 315 P **P** **23 06 47.8 -0.3**
PLOR Plostina 89.82 316 ⇑P **P** **23 06 48.6 +0.4**
PLOR Plostina 89.82 316 P **P** **23 06 48.6 +0.4**
MI28 Mi28,Pidlybu 89.91 321 P **P** **23 06 46.7 -1.7**
TESR Tescani 89.91 317 ⇑P **P** **23 06 48.4 -0.2**
TESR Tescani 89.91 317 P **P** **23 06 47.9 -0.7**
comp=Z,6µmcomp=Z,374nm,1.0s
TESR Tescani 89.91 317 P **P** **23 06 48.1 -0.5**
SULR 89.93 315 ⇑P **P** **23 06 49.7 +1.0**
SULR 89.93 315 P **P** **23 06 49.4 +0.8**
SZH Strazhitsa 89.93 313 *i*P **P** **23 06 48.6 -0.1**
LVZ Lovozero 89.96 338 P **P** **23 06 47.4 -0.9**
LVZ IAmb IAmb 23 06 51.2
comp=Z,269nm,1.3s
LVZ Lovozero 89.96 338 *ce*P **P** **23 06 48.5 +0.1**
LVZ pmax pmax
comp=Z,184nm,1.0s
LVZ Lovozero 89.96 338 P **P** **23 06 48.2 -0.2**
RDO Rodhopi 89.97 311 IAmb IAmb 23 08 49.0
comp=Z,235nm,1.1s
RDO Rodhopi 89.97 311 P **P** **23 06 48.8 -0.2**
PUL Pulkovo 89.97 330 *ce*P **P** **23 06 49.4 +0.9**
PUL pmax pmax
comp=Z,1µm,1.0s
PUL Pulkovo 89.97 330 P **P** **23 06 49.5 +1.0**
NEHR Nehoiu 90.00 316 ⇑P **P** **23 06 49.8 +0.7**
ONER Baraj Valea Uz 90.06 316 ⇓P **P** **23 06 49.3 0.0**
SGRR Singureni 90.06 314 ⇑P **P** **23 06 50.2 +0.9**

GIRR Girov 90.08 317 ⇑P **P** **23 06 49.6 +0.3**
COVR Voineasa-Covas 90.12 316 ⇑P **P** **23 06 49.4 -0.3**
TROLL Troll, Antarti 90.15 197 ⇓P **P** **23 06 50.8 +1.4**
comp=Z,15µm,1.0s
TROLL ⇑pP **pP** **23 08 51.9 +3.9**
comp=Z,5µm,0.9s
TROLL ⇓S **S** **23 16 56.8 -0.3**
comp=N,286nm,1.0s
TROLL ⇑PKKPbc **PKKPdf** **23 24 16.6 +2.9**
comp=Z,50nm,0.3s
TROLL SKKPdf SKKPdf 23 26 22.2 -35
comp=Z,385nm,0.9s
DRBR Darabani 90.18 318 ⇑P **P** **23 06 49.2 -0.5**
MLR Muntele Rosu 90.25 316 P **P** **23 06 49.8 -0.6**
comp=Z,133nm,0.9s,baz=135,slow=1.3,SNR=67
MLR pP **pP** **23 08 50.1 +1.1**
comp=Z,118nm,1.1s,baz=89,slow=3.4,SNR=6.3
comp=Z,133nm,0.9s
MLR Muntele Rosu 90.25 316 ⇑P **P** **23 06 50.7 +0.4**
MLR Muntele Rosu 90.25 316 P **P** **23 06 49.8 -0.6**
MLR IAmb IAmb 23 08 51.0
comp=Z,362nm,1.3s
MLR Muntele Rosu 90.25 316 P **P** **23 06 50.4 +0.1**
comp=Z,3µmcomp=Z,179nm,1.0s
MLR Muntele Rosu 90.25 316 P **P** **23 06 50.4 +0.1**
TURR Turia 90.28 316 ⇑P **P** **23 06 50.6 +0.2**
PRAR RASCA 90.32 317 ⇑P **P** **23 06 50.5 +0.1**
KMPD K-Podol'skiy 90.33 319 P **P** **23 06 48.8 -1.6**
APA Apatity 90.34 338 ⇓*i*P **P** **23 06 48.5 -1.5**
APA *i* *PP **pP** **23 08 46.9 -1.8**
APA *i* **23 10 34.4**
APA *i* S **S** **23 16 50.5 -7.9**
APA *i* SS **SS** **23 23 15.7 +0.9**
APA pmax pmax
comp=Z,73nm,1.2s
APA MLR MLR
comp=Z,6µm,17.0s
GVD Gavdhos 90.34 305 P **P** **23 06 52.1 +1.2**
MNK Minsk 90.35 325 *i*P **P** **23 06 50.5 +0.1**
comp=E,81nm,0.9s
MNK *i*P **P** **23 06 50.5 +0.1**
comp=N,255nm,1.0s
MNK *i*P **P** **23 06 50.5 +0.1**
comp=Z,555nm,0.9s,baz=99
MNK *i* pP **pP** **23 08 48.2 -0.8**
MNK *i* sP **sP** **23 09 41.1 -2.1**
MNK *i* PP **PP** **23 10 34.7 +0.4**
MNK *i* PPP PPP 23 12 38.5
MNK *i* SKS 23 15 32.6
MNK *i* S **SKSac** **23 16 30.4 +0.4**
MNK *i* SP **SPn** **23 18 05.8 -6.0**
MNK *i* sS sS 23 20 15.4 -16
MNK *i* SS SS 23 22 58.6 -17
MNK *i* SSS SSS 23 26 51.3
MNK *i* LR LR 23 46 50.5
MNK Minsk 90.35 325 *i*P **P** **23 06 50.5 +0.1**
MNK *i* *PP **pP** **23 08 48.2 -0.8**
MNK *i* *SP **sP** **23 09 41.1 -2.1**
MNK *i* 23 10 34.6
MNK *i* PPP PPP 23 12 38.4
MNK *i* S **SKSac** **23 16 30.4 +0.4**
MNK pmax pmax
comp=N,255nm,1.0s
MNK pmax pmax
comp=Z,555nm,0.9s
MNK pmax pmax
comp=E,81nm,0.9s
UNV Unalaska Valle 90.35 36 IAmb IAmb 23 06 52.5
comp=Z,325nm,1.5s
UNV Unalaska Valle 90.35 36 P **P** **23 06 50.4 0.0**
baz=261
UNV pP **pP** **23 08 46.8 -2.2**
baz=261
UNV S **S** **23 16 55.6 -3.5**
baz=261
OZUR 90.45 316 ⇑P **P** **23 06 50.9 -0.2**
IMMV Iera Moni Meta 90.50 305 P **P** **23 06 53.3 +1.8**
BOSR Bodos 90.53 316 ⇑P **P** **23 06 51.7 +0.2**
COPA Copaceanca 90.59 314 ⇑P **P** **23 06 51.9 +0.1**
RZN Rozhen 90.64 312 *i*P **P** **23 06 52.0 -0.3**
LVA Lava Point 90.68 36 IAmb IAmb 23 06 54.0
comp=Z,238nm,1.1s
PLD Plovdiv 90.69 312 *i*P P 23 06 44.7 -7.5
DOPR Dopca 90.70 316 ⇑P **P** **23 06 52.4 +0.2**
HUMR Humele 90.81 315 ⇑P **P** **23 06 52.7 -0.1**
HUMR Humele 90.81 315 P **P** **23 06 52.3 -0.5**
AKUT Akutan 90.83 36 IAmb IAmb 23 06 56.4
comp=Z,237nm,0.7s
MTUR Matau 90.84 315 ⇑P **P** **23 06 52.9 -0.2**
MTUR Matau 90.84 315 P **P** **23 06 52.8 -0.2**
VOIR 90.87 315 ⇑P **P** **23 06 53.2 +0.1**
VOIR 90.87 315 P **P** **23 06 53.2 +0.1**
VOIR 90.87 315 P **P** **23 06 52.2 -0.9**
comp=Z,2µmcomp=Z,68nm,1.1s
VOIR 90.87 315 P **P** **23 06 52.2 -0.9**
PLVB Pleven 90.93 313 ⇑P **P** **23 06 53.7 +0.4**
TSUM Tsumeb 90.99 251 P **P** **23 06 55.0 +0.7**
TSUM IAmb IAmb 23 06 59.0
comp=Z,206nm,1.3s
TSUM Tsumeb 90.99 251 *e*P **P** **23 06 53.8 -0.5**
TSUM Tsumeb 90.99 251 P **P** **23 06 55.3 +1.0**
TSUM pP **pP** **23 08 53.8 +0.7**
TSUM sP **sP** **23 09 44.4 -2.8**
TSUM Tsumeb 90.99 251 P **P** **23 06 55.2 +0.9**
BURAR Bucovina Array 91.03 318 ⇑P **P** **23 06 54.8 +0.9**
BURAR Bucovina Array 91.03 318 P **P** **23 06 54.1 +0.3**
BURAR IAmb IAmb 23 06 58.0
comp=Z,189nm,0.9s
BURAR Bucovina Array 91.03 318 P **P** **23 06 54.7 +0.9**
BUR08 Bucovina Ar. S 91.05 318 IAmb IAmb 23 06 57.8
comp=Z,177nm,0.9s
RNPP5 Staryi Chortor 91.06 321 P **P** **23 06 53.2 -0.6**
WIN Windhoek 91.07 247 IAmb IAmb 23 06 59.9
comp=Z,245nm,1.0s
RNPP2 Kostyukhnivka 91.08 321 P **P** **23 06 54.1 +0.3**
RNPP9 Sopachiv 91.09 321 P **P** **23 06 53.2 -0.6**
RNPP8 Varash 91.10 321 P **P** **23 06 53.6 -0.3**
ARR Arges 91.16 315 ⇑P **P** **23 06 54.4 0.0**
ARR Arges 91.16 315 P **P** **23 06 54.1 -0.4**
VLAD Vladila 91.16 314 ⇑P **P** **23 06 54.7 +0.3**
PAIG Paliouri 91.23 310 P **P** **23 06 55.3 +0.5**
KTHA Kythira Island 91.33 306 P **P** **23 06 56.2 +0.9**
MMB Musomishta 91.36 311 *i*P **P** **23 06 54.5 -0.9**
TGMR Targu Mures 91.37 316 ⇓P **P** **23 06 56.3 +0.9**
MDB Medias 91.42 316 ⇑P **P** **23 06 56.5 +0.9**
MDB Medias 91.42 316 P **P** **23 06 56.4 +0.9**
SRS Serrai 91.43 311 P **P** **23 06 55.0 -0.8**
TNR Turnu Rosu 91.44 316 ⇑P **P** **23 06 57.2 +1.5**
TNR Turnu Rosu 91.44 316 P **P** **23 06 57.2 +1.5**
M11K Mekoryuk 91.53 30 IAmb IAmb 23 06 59.8
comp=Z,276nm,1.4s
M11K Mekoryuk 91.53 30 P **P** **23 06 57.0 +1.3**
baz=261
M11K pP **pP** **23 08 54.5 +0.1**
baz=261
M11K S **S** **23 17 08.9 -0.3**
baz=261
ARCR ARCALIA 91.55 317 ⇑P **P** **23 06 56.8 +0.6**
MPEP Malo Peshtene 91.56 313 *i*P **P** **23 06 56.7 +0.4**
VSU Vasula 91.58 328 *ce*P **P** **23 06 55.5 -0.4**
VSU pmax pmax
comp=Z,659nm,0.8s
VSU Vasula 91.58 328 P **P** **23 06 55.3 -0.6**
SOH Sokhos 91.58 311 P **P** **23 06 55.7 -0.8**
TNA Tin City 91.60 24 P **P** **23 06 56.7 +0.8**
baz=260
TNA pP **pP** **23 08 54.9 +0.3**
baz=260
TNA S **S** **23 17 08.4 -1.2**
baz=260
MSF Maaselka 91.69 336 P **P** **23 06 55.8 -0.5**
PLNA Plana 91.70 312 *i*P **P** **23 06 56.6 -0.5**
HORT Hortiatis 91.75 310 P **P** **23 06 56.2 -1.0**
LOT Lotru 91.77 315 ⇓P **P** **23 06 57.0 -0.4**
LOT Lotru 91.77 315 P **P** **23 06 56.9 -0.4**
SNAA Sanae 91.84 197 ⇓P **P** **23 06 58.2 +1.2**
comp=Z,4µm,1.0s
SNAA ⇑pP **pP** **23 08 58.5 +2.6**
comp=Z,4µm,1.1s
SNAA ⇑SKSac **SKSac** **23 16 36.7 -1.4**
comp=N,203nm,0.9s
SNAA ⇑S **S** **23 17 11.7 -0.2**
comp=N,177nm,1.3s
SNAA ⇑PKKPbc **PKKPdf** **23 24 11.3 +0.6**
comp=Z,22nm,0.3s
SNAA ⇑SKKPdf SKKPdf 23 26 17.2 -37
comp=Z,319nm,0.9s
SNAA Sanae 91.84 197 P **P** **23 06 57.5 +0.4**
comp=Z,214nm,1.0s,baz=187,slow=4.7,SNR=282
SNAA pP **pP** **23 08 56.9 +0.9**
comp=Z,250nm,1.1s,baz=117,slow=4.0,SNR=14
SNAA PKKP **PKKPdf** **23 24 10.9 +0.2**
comp=Z,12nm,1.0s,baz=248,slow=5.7,SNR=13
SNAA PKPPKP 23 32 15.5
comp=Z,2.2nm,0.9s,baz=130,slow=2.0,SNR=3.9
comp=Z,214nm,1.0s
SNAA Sanae 91.84 197 P **P** **23 06 56.7 -0.4**
SNAA IAmb IAmb 23 07 02.2
comp=Z,217nm,0.9s
SNAA Sanae 91.84 197 *ce*P **P** **23 06 58.1 +1.0**
SNAA pmax pmax
comp=Z,268nm,1.0s
SNAA Sanae 91.84 197 *e*P **P** **23 06 57.0 -0.1**
SNAA Sanae 91.84 197 P **P** **23 06 58.3 +1.2**
THE Thessaloniki 91.85 310 P **P** **23 06 57.4 -0.2**
KKB Krupnik 91.85 312 *i*P **P** **23 06 57.5 -0.2**
BAIL Bailesti 91.92 314 ⇑P **P** **23 06 58.3 +0.5**
KNT Kendrikon 91.95 311 P **P** **23 06 56.0 -2.1**
CJR Cluj-Napoca 92.02 317 ⇑P **P** **23 06 59.2 +0.8**
CJR Cluj-Napoca 92.02 317 P **P** **23 06 59.1 +0.8**
ARBE Arbavere 92.09 329 P **P** **23 06 59.0 +0.7**
XMAS Kiritimati 92.15 88 P **P** **23 07 00.8 +1.2**
XMAS IAmb IAmb 23 09 06.3
comp=Z,532nm,1.6s
XMAS Kiritimati 92.15 88 P **P** **23 07 01.9 +2.3**
LIT Litokhoron 92.16 310 P **P** **23 06 58.4 -0.7**
AGG Agios Georgios 92.18 309 P **P** **23 06 58.2 -1.1**
BMR Baia Mare 92.19 318 ⇑P **P** **23 06 58.9 -0.1**
BMR Baia Mare 92.19 318 P **P** **23 06 58.9 -0.1**
BMR Baia Mare 92.19 318 P **P** **23 06 59.3 +0.3**
VAY Valandovo 92.22 311 ⇓*i*P **P** **23 06 58.6 -0.7**
F14K Arctic Creek 92.24 24 P **P** **23 07 00.3 +1.4**
baz=261
F14K pP **pP** **23 08 58.7 +1.1**
baz=261
F14K S **S** **23 17 15.1 -0.2**
baz=261
PUNG Punghina 92.24 314 ⇑P **P** **23 06 60.0 +0.6**
VADS Vadso 92.31 340 *e*P **P** **23 06 58.1 -0.9**
VADS IVmB_BB 23 07 01.4
comp=Z,2µm,2.5s
VADS *e*pP **pP** **23 08 56.2 -1.7**
VADS *e*SKSac **SKSac** **23 16 39.5 -0.8**
VADS *e*SP SPn 23 18 34.0 +0.1
VADS *e*SS **SS** **23 23 44.8 +2.1**
FINES FINESS Array B 92.31 331 P **P** **23 06 59.0 -0.2**
comp=Z,124nm,0.7s,baz=118,slow=6.0,SNR=236
FINES pP **pP** **23 08 58.8 +0.8**
comp=Z,27nm,0.9s,baz=84,slow=5.9,SNR=3.3
FINES PP **PP** **23 10 52.0 +2.6**
comp=Z,49nm,0.9s,baz=89,slow=9.7,SNR=4.0
FINES PKiKP **PKiKP** **23 11 45.3 +0.6**
comp=Z,7.0nm,0.4s,baz=114,slow=3.6,SNR=8.9
FINES PKKP **PKKPdf** **23 24 08.4 -1.9**
comp=Z,2.4nm,0.5s,baz=238,slow=1.7,SNR=10
comp=Z,124nm,0.7s
FINES FINESS Array B 92.31 331 *i*P **P** **23 06 59.2 -0.1**
FINES pmax pmax
comp=Z,125nm,0.7s
ITM Ithomi 92.32 307 IAmb IAmb 23 09 00.1
comp=Z,258nm,1.2s
ITM Ithomi 92.32 307 P **P** **23 06 59.5 -0.4**
MARR Marisel-Cluj 92.35 316 ⇑P **P** **23 06 59.5 -0.4**
DEV Deva 92.42 316 ⇓P **P** **23 07 00.5 +0.4**
DEV Deva 92.42 316 P **P** **23 07 00.4 +0.4**
DEV Deva 92.42 316 P **P** **23 07 00.6 +0.4**
GZR Gura Zlata 92.46 315 ⇑P **P** **23 07 00.9 +0.4**
GZR Gura Zlata 92.46 315 P **P** **23 07 00.8 +0.4**
K13K Kusilvak Mount 92.49 28 IAmb IAmb 23 09 03.8
comp=Z,128nm,1.0s
K13K Kusilvak Mount 92.49 28 P **P** **23 07 01.2 +1.1**
baz=263
K13K pP **pP** **23 08 59.3 +0.5**
baz=263
K13K S **S** **23 17 18.3 +0.7**
baz=263
MESR Meseseni 92.51 317 ⇑P **P** **23 07 01.0 +0.5**
ANM Nome 92.51 25 P **P** **23 07 01.2 +1.1**
baz=262
ANM pP **pP** **23 08 59.7 +0.7**
baz=262
ANM S **S** **23 17 17.2 -0.6**
baz=262
DRGR 92.64 317 ⇑P **P** **23 07 01.3 0.0**
DRGR 92.64 317 P **P** **23 07 01.2 0.0**
DRGR 92.64 317 P **P** **23 07 01.0 -0.3**
HERR Herculane 92.67 315 ⇓P **P** **23 07 01.1 -0.1**
PABE Paberze 92.71 325 P **P** **23 07 01.5 +0.3**
OUL Oulu 92.86 335 P **P** **23 07 01.6 -0.1**
TRPA Tarpa 92.88 318 P **P** **23 07 01.9 -0.2**
KWP Kalwaria Pacla 92.90 319 *e*P **P** **23 07 03.3 +1.0**
KWP *e*PP **PP** **23 10 54.3 0.0**
KWP Kalwaria Pacla 92.90 319 P **P** **23 07 02.3 0.0**
comp=Z,4µmcomp=Z,237nm,1.1s
SGF Sodankyl 92.91 337 P **P** **23 07 02.0 +0.1**
M13K Dall Lake 92.94 30 IAmb IAmb 23 09 05.1
comp=Z,120nm,1.1s
M13K Dall Lake 92.94 30 P **P** **23 07 02.7 +0.6**
baz=264
M13K pP **pP** **23 09 01.3 +0.3**
baz=264
M13K S **S** **23 17 18.6 -2.8**
baz=264
F15K North Star Dit 92.96 24 IAmb IAmb 23 09 03.8
comp=Z,504nm,1.8s
F15K North Star Dit 92.96 24 P **P** **23 07 03.5 +1.3**
baz=263
F15K pP **pP** **23 09 01.8 +0.8**
baz=263
F15K S **S** **23 17 20.9 -0.8**
baz=263
SUW Suwalki 93.02 324 *e*P **P** **23 07 02.7 0.0**
SUW *e*S **S** **23 17 21.1 -1.4**
C16K Lisburne Hills 93.02 22 P **P** **23 07 03.4 +1.0**
baz=262,SNR=38
C16K pP **pP** **23 09 01.7 +0.5**
baz=262
C16K S **S** **23 17 20.7 -1.2**
baz=262
KEV Kevo 93.05 340 P **P** **23 07 01.8 -0.7**
KEV Kevo 93.05 340 P **P** **23 07 01.8 -0.7**
KEV pmax pmax
comp=Z,73nm,0.8s
KEV Kevo 93.05 340 P **P** **23 07 00.6 -1.9**
KEV Kevo 93.05 340 P **P** **23 07 02.6 +0.1**
BOVS Bovan 93.06 313 ⇑P **P** **23 07 02.8 -0.4**
UZHM Uzhgorod 93.09 318 P **P** **23 07 03.1 0.0**
SKO Skopje 93.12 312 ⇓*i*P **P** **23 07 02.3 -1.2**
KOLS Kolonicke sedl 93.12 319 P **P** **23 07 04.4 +1.0**
KOLS Kolonicke sedl 93.12 319 *e*PDIFF **P** **23 07 04.6 +1.3**
KOLS *e* 23 09 03.7
MTSE Matsula 93.12 329 P **P** **23 07 03.8 +0.8**
G15K Niukluk 93.13 25 P **P** **23 07 03.3 +0.4**
baz=263
G15K pP **pP** **23 09 01.8 0.0**
baz=263
G15K S **S** **23 17 21.2 -1.9**
baz=263
MDVR Moldovita 93.16 315 ⇑P **P** **23 07 03.8 +0.2**
BZS Buzias 93.29 315 ⇑P **P** **23 07 04.1 -0.1**
BZS Buzias 93.29 315 P **P** **23 07 04.0 -0.1**
BZS Buzias 93.29 315 P **P** **23 07 03.7 -0.5**
BORR Bors 93.30 317 ⇑P **P** **23 07 05.1 +1.0**
SIRR Siria 93.31 316 ⇑P **P** **23 07 04.2 -0.1**
L14K Kuka Creek 93.36 29 IAmb IAmb 23 09 09.4
comp=Z,150nm,1.1s
L14K Kuka Creek 93.36 29 P **P** **23 07 05.0 +1.0**
baz=264
L14K pP **pP** **23 09 03.0 +0.1**
baz=264
L14K S **S** **23 17 23.9 -1.2**
baz=264
LKD2 Lefkada island 93.46 308 P **P** **23 07 05.1 0.0**
VNA2 Neumayer--Watz 93.49 197 ⇓P **P** **23 07 05.6 +1.0**
comp=Z,105nm,0.6s,baz=112,slow=4.5
VNA2 ⇑SKSac **SKSac** **23 16 45.3 -1.6**
comp=N,12nm,0.9s,baz=125,slow=6.2
VNA2 ⇑S **S** **23 17 26.2 0.0**
slow=7.1

VNA2 SKKPdf SKKPbc 23 26 12.7 -46
comp=Z,10.0nm,1.0s
VNA2 Neumayer--Watz 93.49 197 P P 23 07 05.6 +1.0
KBN Korca 93.50 310 P P 23 07 04.5 -0.8
OHR Ohrid 93.53 311 ⇓*iP* P 23 07 04.9 -0.6
ARA0 ARCESS Array S 93.55 339 *eP* **P 23 07 04.0 -0.8**
ARA0 IVmB_BB 23 07 08.4
comp=Z,1μm,3.4s
ARA0 *ep*P **pP 23 09 01.5 -2.2**
ARA0 *e*SKSac **SKSac 23 16 47.9 +0.7**
ARA0 *e*SP **SP 23 18 48.0 +3.2**
ARCES ARCESS Array B 93.55 339 P **P 23 07 04.2 -0.6**
comp=Z,52nm,0.7s,baz=94,slow=4.0,SNR=66
ARCES pP **pP 23 09 04.5 +0.8**
comp=Z,43nm,1.1s,baz=100,slow=6.3,SNR=4.2
ARCES PP **PP 23 11 00.5 +1.8**
comp=Z,31nm,1.0s,baz=94,slow=7.3,SNR=4.2
ARCES PKKP **PKKPdf 23 24 07.1 -1.3**
comp=Z,0.9nm,0.3s,baz=266,slow=3.0,SNR=6.3
comp=Z,52nm,0.7s
ARCES ARCESS Array B 93.55 339 P P 23 07 04.0 -0.8
TIM Timisoara 93.58 315 ⇑P P 23 07 06.6 +1.1
TIM Timisoara 93.58 315 P P 23 07 06.5 +1.1
M14K Bethel 93.65 29 P P 23 07 06.4 +1.0
baz=265,SNR=20
M14K pP **pP 23 09 04.3 0.0**
baz=265
M14K S **S 23 17 26.0 -1.7**
baz=265
N14K Kuskokwak Cree 93.72 30 IAmb IAmb 23 09 09.8
comp=Z,300nm,1.1s
N14K Kuskokwak Cree 93.72 30 P P 23 07 06.5 +0.8
baz=265,SNR=7.1
N14K S **S 23 17 28.0 -0.3**
baz=265
D17K Noatak River 93.80 22 P P 23 07 07.6 +1.6
baz=264,SNR=74
D17K S **S 23 17 27.6 -1.2**
baz=264
SLIT Slitere, Latvi 93.83 327 P P 23 07 06.7 +0.4
STHS Stebnicka Huta 93.84 319 *eP* **P 23 07 07.4 +0.8**
STHS *e* 23 09 05.8
STHS Stebnicka Huta 93.84 319 *e*PDIFF **P 23 07 07.4 +0.8**
STHS *e* 23 09 05.8
PHP Peshkopia 93.84 311 P P 23 07 06.4 -0.4
C17K DeLong Mountai 93.84 22 P P 23 07 07.5 +1.3
baz=264,SNR=25
C17K S **S 23 17 27.8 -1.4**
baz=264
H16K Elim 93.86 26 P P 23 07 07.3 +1.0
baz=265,SNR=8.8
H16K S **S 23 17 27.8 -1.6**
baz=265
O14K Tigyukauivet M 93.88 31 P P 23 07 06.9 +0.4
baz=265
O14K S **S 23 17 27.9 -1.9**
baz=265
VNA1 Neumayer--Stat 93.88 197 ⇓P P 23 07 07.5 +1.2
comp=Z,144nm,1.1s
VNA1 PKKPbc **PKKPbc 23 24 08.4 -1.5**
comp=Z,12nm,0.8s
VNA1 SKKPdf SKKPdf 23 26 12.0 -38
comp=Z,24nm,1.0s
RDOG Red Dog Mine 93.90 22 IAmb IAmb 23 09 09.7
comp=Z,334nm,1.2s
RDOG Red Dog Mine 93.90 22 P P 23 07 07.6 +1.1
baz=265,SNR=15
RDOG S **S 23 17 27.6 -2.1**
baz=265
PBUR Paburge 93.91 326 P P 23 07 07.4 +0.7
L15K Ungalak Mounta 93.96 29 P P 23 07 07.6 +0.8
baz=265
L15K S **S 23 17 27.8 -2.5**
baz=265
AMBH Ambrzfalva 93.97 316 ⇑P P 23 07 08.2 +1.0
AMBH Ambrzfalva 93.97 316 P P 23 07 08.3 +1.2
SDPT Sand Point 94.01 35 P P 23 07 06.7 -0.5
baz=266
SDPT S **S 23 17 27.2 -3.8**
baz=266
SRN Sarande 94.05 310 P P 23 07 07.2 -0.5
R9F13 Warsaw-Wawer 94.10 322 *eP* **P 23 07 08.4 +0.8**
R9F13 *ep*P **pP 23 09 07.2 +0.6**
R9F13 *e*PP **PP 23 10 56.2 -7.2**
R9F13 *e*SKS **SKSac 23 16 48.4 -2.3**
R9F13 *e*S **S 23 17 29.4 -2.6**
R9F13 *es*S sS 23 21 16.9 +11
R9F13 *e* 23 23 00.9
KEK Kerkira 94.19 309 IAmb IAmb 23 07 10.0
comp=Z,164nm,0.8s
KEK Kerkira 94.19 309 P P 23 07 07.1 -1.3
E17K Hotham Inlet 94.23 23 P P 23 07 09.4 +1.5
baz=266,SNR=14
E17K S **S 23 17 31.6 -1.0**
baz=266
M15K Kasigluk River 94.27 30 P P 23 07 08.8 +0.6
baz=266,SNR=24
M15K S **S 23 17 31.7 -1.4**
baz=266
KECS Kecovo 94.27 318 P P 23 07 08.7 +0.1
HAMF Hammerfest 94.28 340 *eP* **P 23 07 07.5 -0.5**
HAMF IVmB_BB 23 07 11.5
comp=Z,1μm,3.4s
HAMF *ep*P **pP 23 09 06.0 -1.0**
HAMF *e*SKSac **SKSac 23 16 53.8 +2.9**
HAMF *e*SP **SP 23 18 54.2 +1.5**
HAMF *es*S **SS 23 24 08.7 -1.6**
BEL Belsk 94.29 322 *eP* **P 23 07 09.3 +0.8**
BEL Belsk 94.29 322 P P 23 07 09.0 +0.5
SJES Sjenica 94.29 313 ⇓*iP* P 23 07 07.9 -1.0
KTK1 Kautokeino 94.30 339 *eP* **P 23 07 07.1 -1.1**
KTK1 IVmB_BB 23 07 11.1
comp=Z,1μm,11.8s
KTK1 *ep*P **pP 23 09 04.9 -2.3**
KTK1 *e*SKSac **SKSac 23 16 53.8 +2.7**
KTK1 *e*SP SP 23 18 54.4 +1.4
BELA Belgrano 2 94.41 187 IAmb IAmb 23 07 12.9
comp=Z,158nm,1.1s
F17K Baldwin Pennin 94.41 24 IAmb IAmb 23 09 13.8
comp=Z,470nm,1.8s
F17K Baldwin Pennin 94.41 24 P P 23 07 09.8 +1.1
baz=266,SNR=11
F17K S **S 23 17 33.2 -0.8**
baz=266
HOPEN Hopen 94.44 346 *eP* **P 23 07 05.4 -3.2**
HOPEN *ep*P **pP 23 09 06.0 -1.6**
HOPEN *e*SKSac **SKSac 23 16 53.8 +2.2**
HOPEN *e*SP SP 23 18 54.4 +0.2
HOPEN *e*PS **PS 23 20 07.5 +1.0**
HOPEN *es*S **SS 23 24 16.0 +3.6**
NIE Niedzica 94.45 319 *eP* **P 23 07 09.6 +0.2**
NIE *e*PP **PP 23 11 07.1 +0.8**
NIE Niedzica 94.45 319 P P 23 07 09.4 0.0
comp=Z,844nmcomp=Z,45nm,1.2s
VLO Vlora 94.47 310 P P 23 07 10.6 +1.0
I17K Unalakleet 94.48 26 P P 23 07 10.5 +1.4
baz=266
I17K S **S 23 17 33.5 -1.2**
baz=266
J16K Anvik River 94.48 27 P P 23 07 10.2 +1.0
J16K Anvik River 94.48 27 P P 23 07 10.4 +1.2
baz=266,SNR=23
J16K S **S 23 17 33.5 -1.3**
baz=266
CHNA Chernabura Isl 94.48 35 P P 23 07 08.8 -0.5
baz=266
CHNA S **S 23 17 31.0 -4.2**
baz=266
FRGS Fruska Gora 94.53 315 ⇓*iP* P 23 07 08.8 -1.0
N15K Kwethluk River 94.53 30 IAmb IAmb 23 09 13.2
comp=Z,267nm,1.1s
N15K Kwethluk River 94.53 30 P P 23 07 10.4 +0.9
baz=266,SNR=16
N15K S **S 23 17 33.3 -2.1**
baz=266
C18K Utukok River 94.58 22 IAmb IAmb 23 09 12.8
comp=Z,308nm,1.2s
C18K Utukok River 94.58 22 P P 23 07 10.8 +1.1
baz=266
C18K S **S 23 17 32.3 -3.3**
baz=266
S14K Fog Glacier 94.59 34 P P 23 07 10.1 +0.1
baz=267
S14K S **S 23 17 34.8 -1.5**
baz=267

G17K Kiwalik Mounta 94.60 25 P P 23 07 10.6 +1.0
baz=266,SNR=34
G17K S **S 23 17 33.6 -2.1**
baz=266
O15K Ungalikthiuk R 94.61 31 P P 23 07 10.3 +0.5
baz=267
O15K S **S 23 17 36.1 0.0**
baz=267
PSZ Piszkesteto 94.63 318 ⇑P P 23 07 10.1 -0.3
PSZ Piszkesteto 94.63 318 P P 23 07 10.0 -0.3
PSZ Piszkesteto 94.63 318 P P 23 07 10.0 -0.3
TEKS Tekeris 94.69 314 ⇓*iP* P 23 07 08.8 -1.8
A19K Wainwright 94.73 20 P P 23 07 11.5 +1.4
baz=266
A19K S **S 23 17 35.1 -1.6**
baz=266
E18K Tukpahlearik C 94.73 23 IAmb IAmb 23 09 15.0
comp=Z,209nm,1.1s
E18K Tukpahlearik C 94.73 23 P P 23 07 11.4 +1.2
baz=267,SNR=50
E18K S **S 23 17 36.3 -0.5**
baz=267
BBLS Lazi&#263i 94.74 313 ⇓*iP* P 23 07 09.8 -1.1
PDG Podgorica 94.77 312 ⇑P P 23 07 10.5 -0.4
PDG Podgorica 94.77 312 ⇓*iP* P 23 07 09.9 -1.0
PDG Podgorica 94.77 312 P P 23 07 10.4 -0.6
DRME Dracevica, Mon 94.81 312 ⇓*iP* P 23 07 09.8 -1.3
OJC Ojcow 94.82 320 *eP* **P 23 07 11.4 +0.4**
OJC Ojcow 94.82 320 P P 23 07 11.0 0.0
comp=Z,2μmcomp=Z,83nm,0.9s
OJC Ojcow 94.82 320 P P 23 07 11.1 0.0
H17K Granite Mounta 94.88 25 IAmb IAmb 23 09 15.1
comp=Z,234nm,0.9s
H17K Granite Mounta 94.88 25 P P 23 07 12.3 +1.4
baz=267,SNR=33
H17K S **S 23 17 37.4 -0.8**
baz=267
L16K Owhat River 94.92 29 IAmb IAmb 23 09 14.3
comp=Z,193nm,1.0s
L16K Owhat River 94.92 29 P P 23 07 12.1 +1.0
baz=267,SNR=29
L16K S **S 23 17 35.5 -3.2**
baz=267
LANS Liptovska Anna 94.98 319 *eP* **P 23 07 12.6 +0.8**
LANS *e* 23 09 11.1
LANS *e* 23 11 10.5
LANS Liptovska Anna 94.98 319 *e*PDIFF **P 23 07 12.6 +0.8**
LANS Liptovska Anna 94.98 319 *e* 23 09 11.1
LANS Liptovska Anna 94.98 319 *e*PP **PP 23 11 10.5 +0.2**
F18K Selawik 95.06 24 P P 23 07 12.9 +1.2
baz=267,SNR=27
F18K S **S 23 17 39.9 +0.2**
baz=267
UPM Unac-Piva 95.07 313 *eP* **P 23 07 11.3 -1.2**
M16K Timber Creek 95.13 29 P P 23 07 13.0 +0.8
M16K IAmb IAmb 23 09 15.8
comp=Z,205nm,1.1s
M16K Timber Creek 95.13 29 P P 23 07 13.0 +0.8
baz=268,SNR=22
M16K S **S 23 17 39.3 -1.2**
baz=268
J17K VABM Dome 95.17 27 IAmb IAmb 23 09 20.3
comp=Z,145nm,1.0s
J17K VABM Dome 95.17 27 P P 23 07 13.3 +1.1
baz=268,SNR=15
J17K S **S 23 17 38.7 -2.1**
baz=268
C19K Lookout Ridge 95.19 21 P P 23 07 13.8 +1.5
baz=268
C19K S **S 23 17 38.8 -2.1**
baz=268
BUD Budapest 95.20 317 P P 23 07 12.9 +0.1
N16K Nishlik Lake 95.20 30 P P 23 07 13.8 +1.3
baz=268,SNR=34
N16K S **S 23 17 38.8 -2.4**
baz=268
CHGN Chignik 95.22 34 P P 23 07 13.5 +0.8
baz=268
CHGN S **S 23 17 37.2 -4.2**
baz=268
KLINJ Klinje 95.30 313 *eP* **P 23 07 13.7 +0.2**
BRY Bratogost 95.32 312 ⇓*iP* P 23 07 12.2 -1.4
HCY Herceg Novi 95.33 312 *eP* **P 23 07 12.0 -1.5**
JETT Jettan, Norway 95.33 339 *eP* **P 23 07 12.1 -0.8**
JETT IVmB_BB 23 07 16.1
comp=Z,1μm,2.9s
JETT *ep*P **pP 23 09 10.1 -1.9**
JETT *e*SKSac **SKSac 23 16 56.1 -0.5**
MORH Mrgy, Hungar 95.40 316 ⇓*iP* P 23 07 12.7 -1.0
G18K Tagagawik 95.44 24 P P 23 07 14.3 +0.8
baz=268,SNR=16
G18K S **S 23 17 42.4 -0.7**
baz=268
TREB Trebinje 95.45 312 *eP* **P 23 07 12.2 -1.8**
L17K Donlin 95.49 28 P P 23 07 15.1 +1.3
baz=268,SNR=13
L17K S **S 23 17 43.8 +0.3**
baz=268
K17K Iditarod 95.50 28 P P 23 07 14.9 +1.1
baz=268,SNR=30
K17K S **S 23 17 43.5 -0.2**
baz=268
O16K Kokwok River B 95.51 31 IAmb IAmb 23 09 17.4
comp=Z,158nm,1.1s
O16K Kokwok River B 95.51 31 P P 23 07 14.4 +0.5
baz=268,SNR=14
O16K S **S 23 17 43.9 +0.1**
baz=268
H18K Honhosa River 95.54 25 IAmb IAmb 23 09 17.7
comp=Z,138nm,1.1s
H18K Honhosa River 95.54 25 P P 23 07 14.6 +0.7
baz=268,SNR=20
H18K S **S 23 17 42.8 -1.1**
baz=268
P16K Nushagak River 95.55 31 P P 23 07 14.2 +0.2
baz=268
P16K S **S 23 17 43.7 -0.5**
baz=268
D19K Kuna River 95.71 22 P P 23 07 15.5 +0.8
baz=269,SNR=55
D19K S **S 23 17 43.2 -2.1**
baz=269
DOB Doboj 95.72 314 *eP* **P 23 07 16.4 +1.2**
F19K Shaleruckik Mo 95.82 23 IAmb IAmb 23 09 19.6
comp=Z,275nm,1.8s
F19K Shaleruckik Mo 95.82 23 P P 23 07 16.1 +1.0
baz=269,SNR=36
F19K S **S 23 17 44.1 -2.1**
baz=269
BJO1 Bjornoya 95.85 344 *eP* **P 23 07 15.7 +0.6**
BJO1 *ep*P **pP 23 09 14.1 0.0**
BJO1 *e*SKSac **SKSac 23 16 58.7 -0.3**
BJO1 *es*S **SS 23 24 36.8 +4.7**
TRO Tromso 95.86 339 *eP* **P 23 07 14.3 -0.9**
TRO IVmB_BB 23 07 18.7
comp=Z,965nm,8.2s
TRO *ep*P **pP 23 09 12.4 -1.9**
TRO *e*PP **PP 23 11 16.2 0.0**
TRO *e*SKSac **SKSac 23 16 58.0 -1.2**
TRO *e*SP **SP 23 19 14.2 +4.4**
OKC Ostrava-Krasne 95.87 319 *eP* **P 23 07 16.6 +0.9**
OKC *e**PP **pP 23 09 14.9 +0.1**
OKC *e* 23 11 17.6
OKC *eS* **S 23 17 45.0 -2.3**
OKC *eSS* **SS 23 24 30.4 -3.3**
OKC Ostrava-Krasne 95.87 319 *eP* **P 23 07 16.6 +0.9**
OKC *ep*P **pP 23 09 14.9 +0.1**
OKC *e*PP **PP 23 11 17.6 +0.6**
OKC *eS* **S 23 17 45.0 -2.3**
OKC *eSS* **SS 23 24 30.4 -3.3**
OKC Ostrava-Krasne 95.87 319 P **P 23 07 17.0 +1.2**
M17K Holitna River 95.88 29 IAmb IAmb 23 09 20.2
comp=Z,219nm,1.1s
M17K Holitna River 95.88 29 P P 23 07 16.7 +1.1
baz=269,SNR=11
M17K S **S 23 17 45.6 -1.4**
baz=269
N17K Nushagak Hills 95.99 30 IAmb IAmb 23 09 20.7
comp=Z,162nm,1.1s
N17K Nushagak Hills 95.99 30 P P 23 07 17.1 +1.0
baz=269,SNR=14
N17K S **S 23 17 45.2 -2.7**
baz=269
O17K Koliganek Bris 96.02 31 P P 23 07 16.9 +0.7
baz=269,SNR=8.4
O17K S **S 23 17 46.2 -2.0**
baz=269
E19K Redstone River 96.03 23 P P 23 07 16.5 +0.4
E19K IAmb IAmb 23 09 22.2
comp=Z,189nm,1.1s
E19K Redstone River 96.03 23 P P 23 07 17.2 +1.1
baz=270,SNR=77
E19K S **S 23 17 45.8 -2.2**
baz=270
B20K Meade River 96.06 20 P P 23 07 17.2 +1.1
baz=270,SNR=11
B20K S **S 23 17 46.8 -1.2**
baz=270
G19K Purcell Mounta 96.08 24 IAmb IAmb 23 09 21.0
comp=Z,113nm,1.1s
G19K Purcell Mounta 96.08 24 P P 23 07 17.5 +1.1
baz=270,SNR=62
G19K S **S 23 17 47.7 -0.8**
baz=270
JAVC Velka Javorina 96.15 318 *e*PDIFF **P 23 07 17.7 +0.6**
JAVC *ep*P **pP 23 09 15.7 -0.5**
JAVC Velka Javorina 96.15 318 P P 23 07 17.9 +0.8
GCSA Galena City Sc 96.17 26 P P 23 07 17.5 +0.8
baz=270
GCSA S **S 23 17 47.7 -1.5**
baz=270
A21K Barrow 96.23 19 P P 23 07 17.6 +0.8
baz=271
A21K S **S 23 17 46.7 -2.7**
baz=271
Q16K King Salmon 96.23 32 S S 23 17 47.9 -2.0
baz=269
L18K Granite Mounta 96.25 28 P P 23 07 18.3 +1.2
baz=270,SNR=24
L18K S **S 23 17 48.4 -1.5**
baz=270
D20K Etivluk River 96.26 22 P P 23 07 17.7 +0.6
baz=270
D20K S **S 23 17 46.9 -3.1**
baz=270
MORC Moravsky Berou 96.26 319 ⇑P P 23 07 18.1 +0.5
MORC Moravsky Berou 96.26 319 P P 23 07 18.0 +0.5
MORC Moravsky Berou 96.26 319 *e*PDIFF **P 23 07 17.4 -0.2**
MORC *ep*P **pP 23 09 16.0 -0.7**
MORC *e*PP **PP 23 11 19.1 -0.9**
MORC *e* 23 17 03.3
MORC *e* 23 24 02.0
MORC Moravsky Berou 96.26 319 P P 23 07 17.8 +0.2
SMOL Smolenice 96.30 318 *eP* **P 23 07 18.2 +0.5**
SMOL *e* 23 09 16.2
SMOL *e* 23 11 15.6
H19K Roundabout Mou 96.35 25 P P 23 07 18.8 +1.3
baz=270,SNR=63
H19K S **S 23 17 49.3 -1.4**
baz=270
P17K Kvichak River 96.35 31 P P 23 07 17.9 +0.2
baz=270,SNR=7.5
P17K S **S 23 17 49.3 -1.6**
baz=270
BLY Banja Luka 96.37 314 ⇓P P 23 07 19.2 +1.1
BLY Banja Luka 96.37 314 IAmb IAmb 23 07 21.2
comp=Z,88nm,0.9s
BLY Banja Luka 96.37 314 ⇓*iP* P 23 07 16.3 -1.8
BLY Banja Luka 96.37 314 P P 23 07 17.9 -0.2
SPA0 Spitsbergen Ar 96.38 348 *eP* **P 23 07 16.8 -0.7**
SPA0 IVmB_BB 23 07 20.7
comp=Z,3μm,2.9s
SPA0 *ep*P **pP 23 09 15.3 -1.4**
SPA0 *e*PP **PP 23 11 22.1 +2.0**
SPA0 *e*SKSac **SKSac 23 17 03.3 +1.5**
SPA0 *e*SP **SP 23 19 18.5 +3.3**
SPA0 *e*SS **SS 23 24 43.0 +3.5**
SPITS Spitsbergen Ar 96.38 348 P **P 23 07 16.7 -0.8**
comp=Z,142nm,0.6s,baz=108,slow=8.0,SNR=76
SPITS pP **pP 23 09 16.8 +0.1**
comp=Z,61nm,0.9s,baz=101,slow=13,SNR=5.1
SPITS PKiKP **PKiKP 23 11 52.3 +0.8**
comp=Z,9.1nm,0.8s,baz=98,slow=3.2,SNR=5.0
SPITS PKKP **PKKPdf 23 24 00.0 -3.3**
comp=Z,3.6nm,0.5s,baz=151,slow=3.7,SNR=10
comp=Z,142nm,0.6s
SPITS Spitsbergen Ar 96.38 348 P P 23 07 17.0 -0.5
SPITS pmax pmax
comp=Z,538nm,1.2s
R17L Mt. Peulik Vol 96.38 33 P P 23 07 18.1 +0.2
baz=270
R17L S **S 23 17 46.1 -5.3**
baz=270
MODS Modra-Piesok 96.40 318 *eP* **P 23 07 18.7 +0.5**
MODS *e* 23 09 16.4
MODS *e* 23 11 20.6
MODS Modra-Piesok 96.40 318 P P 23 07 18.1 -0.1
MODS Modra-Piesok 96.40 318 *e*PDIFF **P 23 07 18.7 +0.5**
MODS *e* 23 09 16.3
MODS *e*PP **PP 23 11 20.6 -0.5**
E20K Nigu River 96.42 22 P P 23 07 18.9 +1.0
baz=271,SNR=37
E20K S **S 23 17 48.0 -3.4**
baz=271
GKP Gorka Klasztor 96.51 323 *eP* **P 23 07 19.3 +0.8**
GKP *e*PP **PP 23 11 20.9 -0.8**
TIP Timpagrande 96.52 309 ⇓P P 23 07 19.9 +0.9
TIP Timpagrande 96.52 309 IAmb IAmb 23 07 24.7
comp=Z,120nm,1.6s
TIP Timpagrande 96.52 309 P P 23 07 19.1 +0.1
comp=Z,2μmcomp=Z,46nm,2.0s
TIP Timpagrande 96.52 309 P P 23 07 19.2 +0.2
MATE Matera 96.61 310 ⇓P P 23 07 20.5 +1.3
MATE Matera 96.61 310 P P 23 07 19.8 +0.6
F20K Avaraart Lake 96.62 23 IAmb IAmb 23 09 22.1
comp=Z,92nm,1.1s
F20K Avaraart Lake 96.62 23 Pdiff **P 23 07 19.6 +0.9**
baz=271
F20K S **S 23 17 52.2 -0.7**
baz=271
HSPB Hornsund (broa 96.63 347 *eP* **P 23 07 19.2 +0.7**
HSPB Hornsund (broa 96.63 347 P P 23 07 19.5 +0.9
N18K Kilae Creek 96.63 30 IAmb IAmb 23 09 22.8
comp=Z,93nm,1.1s
N18K Kilae Creek 96.63 30 Pdiff **P 23 07 19.6 +0.7**
baz=270
N18K S **S 23 17 49.3 -4.1**
baz=270
Q17K Contact Creek 96.64 32 Pdiff **P 23 07 19.9 +0.8**
baz=270
Q17K S **S 23 17 48.5 -5.2**
baz=270
M18K Stony River 96.66 29 Pdiff **P 23 07 20.1 +1.1**
baz=270
M18K S **S 23 17 50.2 -3.2**
baz=270
BEHE Becsehely 96.70 316 IAmb IAmb 23 07 23.0
comp=Z,69nm,0.8s
BEHE Becsehely 96.70 316 ⇓*iP* P 23 07 19.8 +0.2
J19K Poorman 96.72 26 Pdiff **P 23 07 20.1 +0.8**
baz=271
J19K S **S 23 17 53.4 -0.5**
baz=271
KRLC Kraliky 96.76 320 *eP* **P 23 07 20.8 +1.0**
KRLC *e**PP **pP 23 09 18.6 -0.4**
KRLC *e* 23 11 20.2
KRLC *eS* **S 23 17 53.4 -1.6**
KRLC *eSS* **SS 23 24 39.9 -6.2**
KRLC Kraliky 96.76 320 *eP* **P 23 07 20.8 +1.0**
KRLC *ep*P **pP 23 09 18.6 -0.4**
KRLC *e*PP **PP 23 11 20.2 -3.6**
KRLC *eS* **S 23 17 53.4 -1.6**
KRLC *eSS* **SS 23 24 39.9 -6.2**
KRLC Kraliky 96.76 320 P P 23 07 20.3 +0.5
A22K Sinclair Lake 96.77 19 Pdiff **P 23 07 20.4 +1.1**
baz=272
A22K S **S 23 17 52.0 -2.0**
baz=272
CHIR Chirikof Islan 96.78 35 Pdiff **P 23 07 20.2 +0.6**
baz=270
CHIR S **S 23 17 52.4 -2.3**
baz=270
TBI Tubuai 96.85 114 *eP* P 23 07 11.2 -10
comp=Z,4μm,28.5s
TBI *ep*P pP 23 09 12.6 -7.3
comp=Z,7μm,27.2s
TBI *eS* S 23 17 47.6 -9.2
comp=Z,14μm,30.5s
TBI *es*S sS 23 21 27.1 -3.7
comp=Z,38μm,28.8s
TBI *e*LR LR 23 39 33.1
comp=Z,12μm,26.2s

TBI eLR LR 23 39 37.7
comp=Z,3µm,26.5s
VRAC Vranov 96.87 319 ⇑P **P** **23 07 21.0 +0.7**
VRAC Vranov 96.87 319 P **P** **23 07 20.9 +0.7**
VRAC Vranov 96.87 319 ePDIFF **P** **23 07 20.3 0.0**
VRAC epP **pP** **23 09 19.0 -0.4**
VRAC ePP **PP** **23 11 23.4 -1.2**
VRAC e 23 17 05.8
VRAC e 23 23 59.9
VRAC Vranov 96.87 319 P **P** **23 07 21.2 +0.9**
C21K Knifeblade Rid 96.91 21 Pdiff **P** **23 07 21.0 +1.0**
baz=272
C21K S **S** **23 17 52.6 -2.7**
baz=272
ACHA Angle Creek He 96.93 32 IAmb IAmb 23 09 25.0
comp=Z,67nm,1.0s
B21K Ikpikpuk River 96.95 21 Pdiff **P** **23 07 21.2 +1.1**
baz=272
B21K S **S** **23 17 52.4 -3.2**
baz=272
P18K Big Mountain, 96.97 31 Pdiff **P** **23 07 20.2 -0.3**
baz=271
P18K S **S** **23 17 53.3 -3.0**
baz=271
O18K Koktuh Hills 96.98 30 IAmb IAmb 23 09 24.8
comp=Z,180nm,1.1s
O18K Koktuh Hills 96.98 30 Pdiff **P** **23 07 21.1 +0.6**
baz=271
O18K S **S** **23 17 54.6 -1.8**
baz=271
KRUC Moravsky 97.00 319 ePDIFF **P** **23 07 20.7 -0.1**
KRUC epP **pP** **23 09 19.1 -0.9**
KRUC ePP **PP** **23 11 21.5 -4.0**
KRUC e 23 17 06.3
KRUC e 23 24 00.6
KRUC Moravsky 97.00 319 P **P** **23 07 20.7 -0.1**
H20K Anotleneega Mo 97.00 25 Pdiff Pdif 23 07 21.7 +1.2
baz=272
H20K S **S** **23 17 55.1 -1.2**
baz=272
RONA Rosalia, Austr 97.05 317 ePdiff **P** **23 07 20.5 -0.6**
comp=Z,13nm,1.2s
RONA epP **pP** **23 09 19.1 -1.2**
comp=Z,0.1nm,0.2s
RONA ePP **PP** **23 11 25.8 -0.3**
comp=Z,2µm,5.2s
DPC Dobruska-Polom 97.06 320 eP Pdif 23 07 21.8 +0.7
DPC e*PP pP 23 09 20.8 +0.5
DPC e 23 11 20.8
DPC eS **S** **23 17 55.4 -2.1**
DPC Dobruska-Polom 97.06 320 eP Pdif 23 07 21.8 +0.7
DPC epP pP 23 09 20.8 +0.5
DPC ePP **PP** **23 11 20.8 -5.2**
DPC eS **S** **23 17 55.4 -2.1**
DPC eSS **SS** **23 24 41.4 -8.9**
DPC Dobruska-Polom 97.06 320 P Pdif 23 07 21.3 +0.2
KSP Ksiaz 97.08 320 eP Pdif 23 07 21.4 +0.2
KSP eS **SKSac** **23 17 06.7 +0.4**
KSP Ksiaz 97.08 320 P Pdif 23 07 21.3 +0.2
comp=Z,2µmcomp=Z,63nm,1.8s
Q18K Katmai Hardscr 97.10 32 Pdiff **P** **23 07 20.5 -0.6**
baz=271
Q18K S **S** **23 17 52.6 -5.0**
baz=271
L19K White Mountain 97.11 28 Pdiff Pdif 23 07 22.3 +1.2
baz=271
L19K S **S** **23 17 56.4 -1.0**
baz=271
OSTC Ostas 97.12 320 eP Pdif 23 07 22.5 +1.1
OSTC e*PP pP 23 09 20.7 +0.1
OSTC eS **S** **23 17 57.4 -0.6**
OSTC eSS **SS** **23 24 48.3 -2.9**
OSTC Ostas 97.12 320 eP Pdif 23 07 22.5 +1.1
OSTC epP pP 23 09 20.7 +0.1
OSTC ePP **PP** **23 11 21.4 -5.1**
OSTC eS **S** **23 17 57.4 -0.6**
OSTC eSS **SS** **23 24 48.3 -2.9**
KBS Kingsbay 97.19 349 P Pdif 23 07 20.3 -0.8
KBS IAmb IAmb 23 07 23.6
comp=Z,102nm,0.9s
KBS Kingsbay 97.19 349 ceP **P** **23 07 22.2 +1.1**
KBS pmax pmax
comp=Z,156nm,1.3s
KBS Kingsbay 97.19 349 ePdif **P** **23 07 22.2 +1.1**
KBS IVmB_BB 23 07 23.4
comp=Z,1µm,2.1s
KBS epP **pP** **23 09 18.2 -2.1**
KBS eSKSac **SKSac** **23 17 07.9 +2.1**
KBS eSP SP 23 19 25.7 +1.8
KBS eSS **SS** **23 24 54.6 +3.9**
KBS Kingsbay 97.19 349 P **P** **23 07 21.3 +0.2**
KBS Kingsbay 97.19 349 *i* P Pdif 23 07 20.1 -1.0
I20K Naaghedeneel 97.20 25 Pdiff **P** **23 07 22.3 +1.0**
baz=272
I20K S **S** **23 17 57.2 -0.6**
baz=272
WINA Alland / Wiene 97.20 318 *i* Pdiff Pdif 23 07 21.6 -0.1
comp=Z,16nm,1.4s,SNR=7.0
CHVC Chvalec 97.23 320 eP **P** **23 07 22.3 +0.4**
CHVC e*PP **pP** **23 09 17.9 -3.2**
CHVC e 23 11 23.4
CHVC eS **S** **23 17 56.4 -2.5**
CHVC eSS **SS** **23 24 49.8 -2.8**
CHVC Chvalec 97.23 320 eP **P** **23 07 22.3 +0.4**
CHVC epP **pP** **23 09 17.9 -3.2**
CHVC ePP **PP** **23 11 23.4 -3.9**
CHVC eS **S** **23 17 56.4 -2.5**
CHVC eSS **SS** **23 24 49.8 -2.8**
STEI Steigen 97.23 338 ePdif **P** **23 07 22.6 +1.2**
STEI IVmB_BB 23 07 23.5
comp=Z,1µm,2.2s
STEI epP **pP** **23 09 20.1 -0.5**
STEI ePP **PP** **23 11 27.6 +0.9**
STEI eSKSac **SKSac** **23 17 06.3 0.0**
STEI eScS **S** **23 17 59.1 +1.1**
STEI eSP SP 23 19 26.5 +1.9
STEI eSS **SS** **23 24 54.4 +2.7**
E21K Killik River 97.24 22 Pdiff **P** **23 07 22.4 +0.8**
baz=273
E21K S **S** **23 17 55.3 -2.9**
baz=273
FAUS Fauske 97.24 337 ePdif **P** **23 07 22.6 +1.2**
FAUS IVmB_BB 23 07 23.6
comp=Z,1µm,1.8s
FAUS epP **pP** **23 09 13.3 -7.3**
FAUS eSP **sP** **23 10 15.5 +0.7**
FAUS ePP **PP** **23 11 28.6 +1.8**
FAUS eSKSac **SKSac** **23 17 12.1 +5.7**
FAUS eScS **S** **23 17 59.6 +1.5**
FAUS eSS **SS** **23 24 56.2 +4.4**
UPC Upice 97.25 320 eP **P** **23 07 23.0 +1.1**
UPC e*PP **pP** **23 09 21.1 -0.1**
UPC eS **S** **23 17 58.4 -0.6**
UPC eSS **SS** **23 24 50.8 -2.1**
UPC Upice 97.25 320 eP **P** **23 07 23.0 +1.1**
UPC epP **pP** **23 09 21.1 -0.1**
UPC ePP **PP** **23 11 21.9 -5.5**
UPC eS **S** **23 17 58.4 -0.6**
UPC eSS **SS** **23 24 50.8 -2.1**
UPC Upice 97.25 320 P **P** **23 07 23.3 +1.3**
MARCO Tramutola 97.28 310 P **P** **23 07 22.5 +0.1**
N19K Bonanza Creek 97.32 29 Pdiff **P** **23 07 22.6 +0.5**
baz=272
B22K Teshekpuk Lake 97.32 20 Pdiff **P** **23 07 22.6 +0.9**
baz=274
M19K Big River Lodg 97.33 28 Pdiff **P** **23 07 23.0 +1.0**
baz=272
BLEU Blekinge 97.33 326 *i* P Pdif 23 07 21.7 -0.4
CONA Conrad Observa 97.34 317 *i* Pdiff Pdif 23 07 22.3 -0.2
comp=Z,15nm,1.2s,SNR=6.8
CONA epP pP 23 09 20.4 -1.3
comp=Z,558nm,4.6s
CONA ePP **PP** **23 11 27.8 -0.5**
comp=Z,1µm,3.2s
J20K Nowinta River 97.36 26 Pdiff **P** **23 07 22.9 +0.8**
baz=272
O19K Port Alsworth 97.42 30 Pdiff **P** **23 07 22.4 0.0**
baz=272
K20K Telida 97.43 27 Pdiff **P** **23 07 23.2 +0.7**
baz=272
F21K Alatna River 97.49 23 IAmb IAmb 23 09 25.7
comp=Z,97nm,1.4s
F21K Alatna River 97.49 23 Pdiff **P** **23 07 23.4 +0.7**
baz=273

G21K Allakaket 97.52 24 IAmb IAmb 23 09 27.5
comp=Z,80nm,0.9s
G21K Allakaket 97.52 24 Pdiff **P** **23 07 23.5 +0.7**
baz=273
ARSA Arzberg 97.57 317 *i* Pdiff Pdif 23 07 23.4 -0.1
comp=Z,21nm,1.1s,SNR=12
ARSA *i* pP pP 23 09 21.3 -1.5
comp=Z,446nm,4.2s
ARSA ePP **PP** **23 11 29.6 -0.4**
comp=Z,2µm,4.9s
ARSA Arzberg 97.57 317 P **P** **23 07 24.0 +0.5**
SII Sitkinak Islan 97.58 34 Pdiff **P** **23 07 23.3 0.0**
baz=271
TREC Trest 97.59 319 eP **P** **23 07 24.3 +0.8**
TREC e*PP **pP** **23 09 22.6 -0.2**
TREC e 23 11 27.4
TREC eS **S** **23 18 00.4 -1.6**
TREC Trest 97.59 319 eP **P** **23 07 24.3 +0.8**
TREC epP **pP** **23 09 22.6 -0.2**
TREC ePP **PP** **23 11 27.4 -2.7**
TREC eS **S** **23 18 00.4 -1.6**
TREC eSS **SS** **23 24 50.8 -7.0**
TREC Trest 97.59 319 P **P** **23 07 24.5 +0.9**
PPT2 Papeete2 97.62 109 eP Pdif 23 07 15.2 -9.2
comp=Z,880nm,27.2s
PPT2 epP pP 23 09 11.6 -12
comp=Z,2µm,26.5s
PPT2 eS S 23 17 54.1 -10
comp=Z,5µm,26.2s
PPT2 esS sS 23 21 33.9 -4.1
comp=Z,14µm,24.8s
PPT2 eLR LR 23 39 56.2
comp=Z,3µm,27.2s
PPT2 eLR LR 23 39 56.9
comp=Z,4µm,26.0s
MOR8 Moi Rana 97.64 336 ePdif **P** **23 07 23.9 +0.5**
MOR8 IVmB_BB 23 07 25.0
comp=Z,981nm,1.8s
MOR8 epP **pP** **23 09 20.7 -1.9**
MOR8 eSKSac **SKSac** **23 17 08.4 -0.1**
MOR8 e 23 17 52.3
MOR8 eSP **SP** **23 19 31.0 +1.8**
BOJS Bojanci 97.75 315 *i* Pdiff Pdif 23 07 23.9 -0.3
BOJS epP pP 23 09 22.4 -1.2
BOJS ePP **PP** **23 11 30.8 -0.5**
RAUS Rausandaksla 97.79 336 ePdif **P** **23 07 25.0 +1.0**
RAUS IVmB_BB 23 07 27.7
comp=Z,1µm,5.1s
RAUS epP **pP** **23 09 20.7 -2.6**
RAUS eSKSac **SKSac** **23 17 12.1 +2.9**
RAUS e 23 17 55.9
RAUS eSP **SP** **23 19 31.0 +0.3**
Q19K Cape Douglas, 97.80 31 IAmb IAmb 23 09 29.3
comp=Z,146nm,1.1s
Q19K Cape Douglas, 97.80 31 Pdiff **P** **23 07 25.4 +1.1**
baz=272
H21K Melozitna Rive 97.86 25 Pdiff **P** **23 07 25.6 +1.3**
baz=274
LOF Lofoten 97.86 338 ePdif **P** **23 07 25.4 +1.2**
LOF IVmB_BB 23 07 26.0
comp=Z,964nm,2.6s
LOF epP **pP** **23 09 20.7 -2.8**
LOF e 23 17 52.3
LOF eSP SP 23 19 31.0 -0.4
BSD Bornholm Skovb 97.87 325 *i* P **P** **23 07 24.6 +0.1**
BSD IAmb IAmb 23 07 26.8
comp=Z,69nm,1.0s
SOKA Soboth 97.91 316 *i* Pdiff Pdif 23 07 24.7 -0.3
comp=Z,27nm,1.1s,SNR=18
SOKA epP pP 23 09 23.0 -1.4
comp=Z,1µm,6.3s
SOKA ePP **PP** **23 11 32.5 -0.1**
comp=Z,3µm,5.9s
M20K Styx River 97.93 28 Pdiff **P** **23 07 25.3 +0.5**
baz=273
PDKS Podkum 97.93 316 *i* Pdiff Pdif 23 07 24.8 -0.3
PDKS epP pP 23 09 23.4 -1.0
F22K John River 97.97 23 Pdiff **P** **23 07 26.2 +1.4**
baz=274
P19K Oil Pt 97.98 31 Pdiff Pdif 23 07 24.5 -0.5
baz=272
OHAK Old Harbor 98.05 33 Pdiff **P** **23 07 25.9 +0.6**
baz=272
VAGH Vaagaholmen 98.07 337 ePdif **P** **23 07 26.3 +1.1**
VAGH IVmB_BB 23 07 30.5
comp=Z,1µm,2.8s
VAGH epP **pP** **23 09 23.7 -0.8**
VAGH ePP **PP** **23 11 33.0 -0.1**
VAGH eSKSac **SKSac** **23 17 11.0 +0.4**
VAGH e 23 17 59.5
VAGH eSP **SP** **23 19 36.5 +2.8**
VAGH eSS **SS** **23 25 05.7 +2.3**
KONS Konsvik 98.15 336 ePdif **P** **23 07 26.6 +1.1**
KONS IVmB_BB 23 07 28.7
comp=Z,982nm,3.6s
KONS epP **pP** **23 09 20.7 -4.2**
KONS eSP **sP** **23 10 19.1 +0.3**
KONS eSKSac **SKSac** **23 17 12.1 +1.1**
KONS eSP SP 23 19 38.3 +3.7
KONS ePS PS 23 20 44.0 -1.0
PVCC Panska Ves 98.17 320 eP **P** **23 07 27.2 +1.1**
PVCC e*PP **pP** **23 09 25.2 -0.1**
PVCC eS **S** **23 18 05.9 -0.9**
PVCC Panska Ves 98.17 320 eP **P** **23 07 27.2 +1.1**
PVCC epP **pP** **23 09 25.2 -0.1**
PVCC ePP **PP** **23 11 29.8 -4.6**
PVCC eS **S** **23 18 05.9 -0.9**
PVCC eSS **SS** **23 24 55.3 -10**
PVCC Panska Ves 98.17 320 P **P** **23 07 27.4 +1.3**
CHUM Lake Minchumin 98.18 26 Pdiff **P** **23 07 26.5 +0.7**
baz=274
LEIR Leirfjorden 98.18 336 ePdif **P** **23 07 26.8 +1.1**
LEIR IVmB_BB 23 07 28.3
comp=Z,1µm,1.2s
LEIR epP **pP** **23 09 20.7 -4.3**
LEIR ePP **PP** **23 11 35.9 +1.9**
LEIR eSKSac **SKSac** **23 17 12.1 +0.9**
LEIR e 23 17 59.6
LEIR eSP SP 23 19 38.3 +3.4
PRU Pruhonice 98.20 320 eP **P** **23 07 27.6 +1.4**
PRU e*PP **pP** **23 09 25.4 -0.1**
PRU e 23 11 30.5
PRU eS **S** **23 18 05.9 -1.1**
PRU Pruhonice 98.20 320 eP **P** **23 07 27.6 +1.4**
PRU epP **pP** **23 09 25.4 -0.1**
PRU ePP **PP** **23 11 30.5 -4.1**
PRU eS **S** **23 18 05.9 -1.1**
PRU eSS **SS** **23 24 57.2 -8.9**
PRU Pruhonice 98.20 320 P **P** **23 07 27.2 +1.0**
STOK Stokkvaagen 98.20 336 ePdif Pdif 23 07 25.4 -0.3
STOK IVmB_BB 23 07 29.5
comp=Z,865nm,6.4s
STOK epP pP 23 09 22.7 -2.4
STOK ePP **PP** **23 11 34.4 +0.3**
STOK eSKSac **SKSac** **23 17 12.8 +1.6**
STOK e 23 17 53.0
STOK eSP **SP** **23 19 39.1 +4.0**
SESA Seetaler Alpe, 98.22 317 *i* Pdiff Pdif 23 07 25.8 -0.8
SNR=10
SESA ePP **PP** **23 11 34.7 -0.4**
SNR=5.3
I21K Tanana 98.23 25 Pdiff **P** **23 07 27.0 +1.1**
baz=274
OBKA Obir 98.24 316 ePdiff Pdif 23 07 25.6 -0.9
comp=Z,21nm,1.0s,SNR=14
OBKA *i* pP pP 23 09 24.8 -1.1
comp=Z,849nm,6.0s
OBKA ePP **PP** **23 11 34.9 -0.2**
comp=Z,2µm,5.2s
OBKA Obir 98.24 316 P **P** **23 07 27.2 +0.6**
LJU Ljubljana 98.26 316 *i* Pdiff Pdif 23 07 26.3 -0.2
LJU ePP **PP** **23 11 34.7 -0.5**
LJU eSdiff **S** **23 18 04.4 -3.3**
LJU eSP **SP** **23 19 34.8 -2.1**
LJU e 23 24 59.6
O20K Slope Mountain 98.27 30 Pdiff Pdif 23 07 25.9 -0.4
baz=273
G22K Bettles 98.28 23 Pdiff **P** **23 07 27.0 +0.8**
baz=275
PPLA Purkeypile 98.31 27 Pdiff **P** **23 07 26.7 +0.2**
baz=274
CAST Castle Rocks 98.32 27 Pdiff **P** **23 07 27.1 +0.6**
baz=274
VAE Valguarnera 98.32 307 P **P** **23 07 27.7 +0.6**

comp=Z,15nm,1.0s,baz=27,slow=6.8,SNR=7.8
VAE pP **pP** **23 09 27.8 +1.4**
comp=Z,9.2nm,0.7s,baz=135,slow=15,SNR=1.6
VAE PP **PP** **23 11 37.6 +1.6**
comp=Z,53nm,0.9s,baz=29,slow=11,SNR=5.0
comp=Z,15nm,1.0s
C23K Itkillik River 98.32 20 Pdiff **P** **23 07 27.3 +1.0**
baz=276
HFS Hagfors 98.32 330 P Pdif 23 07 26.3 -0.2
comp=Z,200nm,0.9s,baz=87,slow=3.1,SNR=64
HFS pP pP 23 09 26.6 +0.8
comp=Z,59nm,0.9s,baz=108,slow=3.3,SNR=7.1
HFS PP **PP** **23 11 36.4 +1.2**
comp=Z,100nm,1.0s,baz=102,slow=12,SNR=3.9
HFS PKKP **PKKPbc** **23 23 53.2 -4.5**
comp=Z,7.1nm,1.1s,baz=249,slow=4.1,SNR=6.5
comp=Z,200nm,0.9s
D23K Nanushuk River 98.39 21 Pdiff **P** **23 07 27.7 +1.0**
baz=276
KDAK Kodiak Island 98.41 33 Pdiff **P** **23 07 27.6 +0.7**
baz=273
KDAK Kodiak Island 98.41 33 P **P** **23 07 28.7 +1.8**
SPCR Spurr Chakacha 98.41 29 Pdiff **P** **23 07 27.0 0.0**
baz=274
DEL Delary 98.41 326 *i* P Pdif 23 07 26.0 -0.9
DEL *i* P **PcP** **23 07 26.8 0.0**
MOA Molln 98.42 317 *i* Pdiff Pdif 23 07 26.9 -0.4
comp=Z,13nm,1.0s,SNR=7.7
MOA *i* pP pP 23 09 25.4 -1.2
comp=Z,784nm,6.9s
MOA ePP **PP** **23 11 35.0 -1.4**
comp=Z,914nm,3.8s,SNR=5.0
MOA Molln 98.42 317 P Pdif 23 07 26.5 -0.7
H22K Ishtalitna Cre 98.43 24 Pdiff **P** **23 07 27.9 +1.0**
baz=275
ZVC Zvikov 98.44 319 eP **P** **23 07 28.6 +1.3**
ZVC epP **pP** **23 09 25.8 -0.8**
ZVC ePP **PP** **23 11 31.2 -5.2**
ZVC eS **S** **23 18 07.4 -1.7**
ZVC eSS **SS** **23 25 01.3 -8.1**
RICC Richard 98.47 320 eP **P** **23 07 29.3 +1.9**
RICC epP **pP** **23 09 24.8 -1.9**
RICC ePP **PP** **23 11 31.4 -5.2**
RICC eS **S** **23 18 06.9 -2.4**
RICC eSS **SS** **23 25 03.3 -6.5**
BRG Berggiesshubel 98.56 320 ePdiff **P** **23 07 28.6 +0.8**
baz=87,slow=4.4
BRG ePP **PP** **23 11 37.3 +0.1**
baz=87,slow=7.3
BRG Berggiesshubel 98.56 320 P **P** **23 07 28.6 +0.8**
BRG Berggiesshubel 98.56 320⇓ePif 23 07 28.7
BRG Amp 23 07 31.3
comp=Z,42nm,0.8s
BRG Berggiesshubel 98.56 320 P P 23 07 37.1 +9.3
BRG Amp 23 07 38.8
comp=Z,28nm,0.8s
BRG Berggiesshubel 98.56 320 pP **pP** **23 09 28.0 +0.9**
BRG Amp 23 09 31.8
comp=Z,13nm,0.9s
BRG PP **PP** **23 11 33.5 -3.8**
BRG Amp 23 11 34.3
comp=Z,25nm,0.9s
BRG Berggiesshubel 98.56 320 Amp 23 11 38.5
comp=Z,62nm,0.9s
BRG P **PP** **23 11 37.7 +0.4**
BRG Berggiesshubel 98.56 320⇓Sif 23 18 07.0
BRG Berggiesshubel 98.56 320 sS **sS** **23 21 43.0 -2.2**
BRG PKKP 23 23 56.5
BRG Amp 23 23 57.5
comp=Z,13nm,1.3s
BRG Berggiesshubel 98.56 320 SS SS 23 25 02.0 -9.0
RUE Ruedersdorf 98.62 322 ePdiff **P** **23 07 28.8 +0.8**
baz=87,slow=4.4
RUE Ruedersdorf 98.62 322 P **P** **23 07 29.2 +1.3**
SKT Skwentna 98.68 28 Pdiff Pdif 23 07 27.5 -0.5
baz=274
LUNU Lund 98.69 325 *i* P **P** **23 07 29.0 +0.8**
VOJS Vojsko 98.71 316 epP pP 23 09 26.4 -1.6
COLD Coldfoot 98.76 23 Pdiff **P** **23 07 29.2 +0.9**
baz=276
MLY Manley 98.77 25 Pdiff **P** **23 07 29.4 +0.9**
baz=275
GEC2 GERESS Array S 98.77 318 ePdiff **P** **23 07 29.5 +0.6**
baz=87,slow=4.4
GEC2 epP **pP** **23 09 28.4 +0.2**
GERES GERESS Array B 98.77 318 P **P** **23 07 29.4 +0.4**
comp=Z,11nm,1.0s,baz=97,slow=3.2,SNR=62
GERES pP **pP** **23 09 28.0 -0.2**
comp=Z,6.1nm,0.9s,baz=76,slow=5.6,SNR=4.2
GERES PP **PP** **23 11 39.9 +0.9**
comp=Z,22nm,0.9s,baz=95,slow=5.6,SNR=5.7
GERES PKKPbc **PKKPbc** **23 23 54.6 -1.5**
comp=Z,0.6nm,0.5s,baz=228,slow=2.8,SNR=4.2
GERES PKPPKP 23 32 09.4
comp=Z,0.4nm,0.8s,baz=188,slow=6.3,SNR=4.3
comp=Z,11nm,1.0s
GERES GERESS Array B 98.77 318 Pdif 23 07 28.2 -0.7
HOM Homer 98.79 31 Pdiff **P** **23 07 28.9 +0.3**
baz=274
NSS Namsos 98.80 334 ePdif Pdif 23 07 27.9 -0.6
NSS IVmB_BB 23 07 31.2
comp=Z,1µm,1.7s
NSS epP pP 23 09 20.7 -7.2
NSS eSKSac **SKSac** **23 17 15.7 +1.5**
NSS e 23 18 06.9
NSS eSP SP 23 19 45.6 +4.0
TOLK Toolik Lake Re 98.83 21 Pdiff **P** **23 07 29.5 +0.8**
baz=277
BIOA Bad Ischl, Aus 98.84 317 *i* Pdiff Pdif 23 07 28.3 -0.8
comp=Z,16nm,1.1s,SNR=8.9
BIOA *i* pP pP 23 09 26.8 -1.7
comp=Z,619nm,6.1s
BIOA ePP **PP** **23 11 38.7 -0.8**
comp=Z,3µm,7.9s
BIOA eSKS **SKSac** **23 17 15.4 +0.1**
comp=Z,20nm,2.1s
KHC Kasperske Hory 98.85 319 eP **P** **23 07 30.3 +1.1**
KHC e*PP **pP** **23 09 28.3 -0.2**
KHC e 23 11 35.0
KHC eS **S** **23 18 08.9 -3.8**
KHC Kasperske Hory 98.85 319 eP **P** **23 07 30.3 +1.1**
KHC epP **pP** **23 09 28.3 -0.2**
KHC ex x 23 10 36.0
KHC ePP **PP** **23 11 35.0 -4.5**
KHC eS **S** **23 18 08.9 -3.8**
KHC eSS **SS** **23 25 05.8 -9.3**
KHC Kasperske Hory 98.85 319 P Pdif 23 07 28.9 -0.2
comp=Z,891nmcomp=Z,14nm,0.9s
KHC Kasperske Hory 98.85 319 P **P** **23 07 29.9 +0.7**
MYKA Terra Mystica 98.86 316 *i* Pdiff Pdif 23 07 28.2 -1.1
comp=Z,15nm,1.0s
MYKA epP pP 23 09 27.5 -1.2
comp=Z,926nm,6.9s
MYKA ePP **PP** **23 11 38.6 -1.2**
comp=Z,2µm,6.1s
E23K Chandalar 98.89 22 Pdiff **P** **23 07 30.2 +1.1**
baz=277
G23K Bananza Creek 98.89 23 Pdiff **P** **23 07 30.2 +1.2**
baz=276
HSKC Hora Svate Kat 98.90 320 eP **P** **23 07 30.5 +1.1**
HSKC epP **pP** **23 09 28.6 -0.1**
HSKC ePP **PP** **23 11 34.5 -5.3**
HSKC eS **S** **23 18 11.3 -1.7**
HSKC eSS **SS** **23 25 06.8 -8.9**
HSKC Hora Svate Kat 98.90 320 P **P** **23 07 30.4 +1.0**
ACOM Acomizza, Ital 98.95 316 P **P** **23 07 30.1 +0.2**
L22K Petersville 98.99 28 Pdiff Pdif 23 07 29.3 -0.1
baz=275
FABU Falkenberg 99.02 327 *i* P **Pdif** **23 07 30.3 +0.7**
D24K Happy Valley 99.03 21 Pdiff **Pdif** **23 07 30.5 +1.1**
baz=278
KBA Koelnbreinsper 99.06 317 *i* Pdiff **Pdif** **23 07 29.5 -0.8**
comp=Z,21nm,1.1s
KBA epP **pP** **23 09 27.6 -2.0**
comp=Z,223nm,3.7s
KBA ePP **PP** **23 11 40.4 -0.9**
comp=Z,934nm,3.6s
KBA *i* SKS **SKSac** **23 17 17.5 +0.8**
comp=Z,14nm,1.1s
KBA Koelnbreinsper 99.06 317 P **Pdif** **23 07 30.3 0.0**
AQU L'Aquila 99.10 312 P **Pdif** **23 07 28.9 -1.6**
AQU L'Aquila 99.10 312⇓*i*P **Pdif** **23 07 29.2 -1.2**
AQU L'Aquila 99.10 312 P **Pdif** **23 07 30.3 -0.1**
comp=Z,776nmcomp=Z,42nm,1.0s
AQU L'Aquila 99.10 312 P **Pdif** **23 07 30.9 +0.4**

TRF	**Thorofare Moun**	**99.12**	**27**	Pdiff	**Pdif**	**23 07 30.4**	**+0.2**
	baz=276								
H23K	**Yukon River**	**99.18**	**24**	Pdiff	**Pdif**	**23 07 31.3**	**+1.0**
	baz=277								
CUT	**Chulitna**	**99.23**	**28**	Pdiff	**Pdif**	**23 07 30.4**	**0.0**
	baz=275								
BRSE	**Bradley Lake S**	**99.24**	**30**	Pdiff	**Pdif**	**23 07 30.0**	**-0.6**
	baz=275								
E24K	**Your Creek**	**99.31**	**22**	Pdiff	**Pdif**	**23 07 31.4**	**+0.6**
	baz=278								
WET	**Wettzell**	**99.31**	**319**	*e*Pdiff	**Pdif**	**23 07 32.0**	**+0.9**
	baz=87,slow=4.4								
WET				*e*pP	**pP**	**23 09 30.9**	**+0.4**
WET	**Wettzell**	**99.31**	**319**	P	**Pdif**	**23 07 31.3**	**+0.1**
FUSE	**Fusea**	**99.31**	**316**	P	**Pdif**	**23 07 31.2**	**0.0**
I23K	**Minto, Yukon-K**	**99.34**	**25**	Pdiff	**Pdif**	**23 07 31.2**	**+0.4**
	baz=277								
NC602	**NORSAR Array S**	**99.34**	**331**	*e*Pdif	**Pdif**	**23 07 30.7**	**-0.3**
NC602				IVmB_BB		23 07 33.0	
	comp=Z,2μm,3.8s								
NC602				*e*pP	**pP**	**23 09 27.2**	**-3.2**
NC602				*e*PP	**PP**	**23 11 42.6**	**-0.2**
NC602				*e*SKSac	**SKSac**	**23 17 17.1**	**0.0**
NC602				*e*		23 18 10.4	
NC602				*e*SP	**SP**	**23 19 46.9**	**-0.7**
NC602				*e*		23 23 16.1	
NC602				*e*SS	**SS**	**23 25 23.4**	**+2.2**
M22K	**Willow**	**99.36**	**28**	Pdiff	**Pdif**	**23 07 30.5**	**-0.5**
	baz=275								
NB2	**NORSAR Subarra**	**99.48**	**331**	P	**Pdif**	**23 07 31.1**	**-0.5**
	comp=Z,34nm,0.8s,baz=83,slow=4.3								
NB2				PP	**PP**	**23 11 45.1**	**+1.3**
	comp=Z,71nm,1.2s,baz=81,slow=7.9								
NB2				PKKP	**PKKPbc**	**23 23 52.3**	**-2.3**
	comp=Z,39nm,1.7s,baz=264,slow=2.4								
NB2	**NORSAR Subarra**	**99.48**	**331**	P	**Pdif**	**23 07 31.1**	**-0.5**
NOA	**NORSAR Array B**	**99.48**	**331**	P	**Pdif**	**23 07 31.8**	**+0.1**
	comp=Z,38nm,0.9s,baz=83,slow=4.5,SNR=43								
NOA				pP	**pP**	**23 09 30.9**	**-0.2**
	comp=Z,15nm,1.0s,baz=80,slow=4.5,SNR=8.8								
NOA				PP	**PP**	**23 11 41.3**	**-2.5**
	comp=Z,11nm,0.8s,baz=86,slow=7.2,SNR=5.2								
NOA				PKKPbc	**PKKPbc**	**23 23 51.7**	**-2.8**
	comp=Z,1.5nm,0.9s,baz=260,slow=4.5,SNR=6.4								
	comp=Z,38nm,0.9s								
LESA	**Schwarzleotal**	**99.50**	**317**	*e*Pdiff	**Pdif**	**23 07 31.0**	**-1.2**
	comp=Z,10nm,0.5s,SNR=6.6								
LESA				*i* pP	**pP**	**23 09 29.6**	**-2.0**
	comp=Z,723nm,7.1s								
LESA				*e*PP	**PP**	**23 11 42.8**	**-1.7**
	comp=Z,2μm,5.7s								
LESA				*e*SKS	**SKSac**	**23 17 19.5**	**+0.8**
	comp=Z,26nm,1.3s								
LESA				*i* P'P'	**P'P'df**	**23 32 10.3**	**+2.4**
	comp=Z,2.4nm,1.0s								
TANN	**Tannenbergstha**	**99.52**	**320**	*e*Pdiff	**Pdif**	**23 07 32.8**	**+0.7**
	baz=87,slow=4.4								
TANN				*e*PP	**PP**	**23 11 44.7**	**+0.1**
	baz=87,slow=7.3								
TANN	**Tannenbergstha**	**99.52**	**320**	P	**Pdif**	**23 07 33.1**	**+1.0**
NEA2	**Nenana**	**99.53**	**25**	Pdiff	**Pdif**	**23 07 31.7**	**0.0**
	baz=277								
TJOU	**Tjoern**	**99.53**	**328**	*i* P	**Pdif**	**23 07 32.6**	**+0.8**
TJOU				*e*		23 07 33.6	
NKC	**Novy Kostel**	**99.54**	**320**	*e*P	**Pdif**	**23 07 34.1**	**+1.9**
NKC				*e**PP	**pP**	**23 09 31.5**	**-0.1**
NKC				*e*		23 11 41.2	
NKC				*e*S	**S**	**23 18 17.3**	**-1.3**
NKC	**Novy Kostel**	**99.54**	**320**	*e*P	**Pdif**	**23 07 34.1**	**+1.9**
NKC				*e*pP	**pP**	**23 09 31.5**	**-0.1**
NKC				*e*PP	**PP**	**23 11 41.2**	**-3.4**
NKC				*e*S	**S**	**23 18 17.3**	**-1.3**
NKC				*e*SS	**SS**	**23 25 15.7**	**-8.9**
NKC	**Novy Kostel**	**99.54**	**320**	P	**Pdif**	**23 07 32.9**	**+0.7**
RC01	**Rabbit Creek A**	**99.61**	**29**	Pdiff	**Pdif**	**23 07 31.9**	**-0.3**
	baz=276								
F24K	**Squaw Lake**	**99.61**	**22**	Pdiff	**Pdif**	**23 07 33.5**	**+1.4**
	baz=278								
ABTA	**Abfaltersbach**	**99.64**	**316**	*e*Pdiff	**Pdif**	**23 07 31.8**	**-1.0**
	comp=Z,16nm,1.0s,SNR=13								
ABTA				*e*pP	**pP**	**23 09 29.7**	**-2.5**
	comp=Z,624nm,7.3s								
ABTA				*e*PP	**PP**	**23 11 43.7**	**-1.8**
	comp=Z,2μm,5.7s								
ABTA				*e*SKS	**SKSac**	**23 17 18.7**	**-0.6**
	comp=Z,12nm,1.1s								
ABTA				*e*P'P'	**P'P'df**	**23 32 07.4**	**-0.4**
	comp=Z,7.7nm,1.6s								
NAO01	**NORSAR Array S**	**99.66**	**331**	P	**Pdif**	**23 07 33.3**	**+0.9**
O22K	**Cooper Landing**	**99.68**	**30**	Pdiff	**Pdif**	**23 07 32.4**	**-0.1**
	baz=276								
STRU	**Stroemstad**	**99.68**	**329**	*i* P	**Pdif**	**23 07 33.1**	**+0.7**
MCK	**McKinley**	**99.69**	**26**	Pdiff	**Pdif**	**23 07 32.4**	**-0.1**
	baz=277								
PLN	**Plauen**	**99.72**	**320**	*e*Pdiff	**Pdif**	**23 07 33.7**	**+0.8**
	baz=87,slow=4.4								
PLN				*e*PP	**PP**	**23 11 45.9**	**0.0**
	baz=87,slow=7.3								
ROTZ	**Rotzenmuhle**	**99.72**	**319**	*e*Pdiff	**Pdif**	**23 07 33.9**	**+1.0**
	baz=87,slow=4.4								
ROTZ				*e*pP	**pP**	**23 09 33.0**	**+0.6**
OSL	**Oslo**	**99.83**	**330**	*e*Pdif	**Pdif**	**23 07 33.4**	**+0.3**
OSL				IVmB_BB		23 07 37.3	
	comp=Z,2μm,4.3s								
OSL				*e*		23 18 17.9	
OSL				*e*SP	SP	23 19 52.9	+0.2
OSL				*e*		23 23 21.2	
OSL				*e*SS	**SS**	**23 25 25.4**	**-2.4**
PMR	**Palmer**	**99.85**	**29**	Pdiff	**Pdif**	**23 07 33.2**	**+0.1**
	baz=276								
SEW	**Seward**	**99.85**	**30**	Pdiff	**Pdif**	**23 07 33.2**	**0.0**
	baz=276								
H24K	**Noodor Dome**	**99.86**	**24**	Pdiff	**Pdif**	**23 07 34.1**	**+0.9**
	baz=278								
D25K	**Kavik River**	**99.87**	**21**	Pdiff	**Pdif**	**23 07 34.0**	**+0.7**
	baz=280								
G24K	**Hadweenzic Riv**	**99.89**	**23**	Pdiff	**Pdif**	**23 07 34.4**	**+1.0**
	baz=279								
NEUB	**Neuenburg**	**99.92**	**321**	*e*Pdiff	**Pdif**	**23 07 34.4**	**+0.7**
	baz=87,slow=4.4								
NEUB				*e*PP	**PP**	**23 11 47.5**	**+0.1**
	baz=87,slow=7.3								
NEUB	**Neuenburg**	**99.92**	**321**	P	**Pdif**	**23 07 34.7**	**+1.0**
WAT1	**Susitna Watana**	**99.97**	**27**	Pdiff	**Pdif**	**23 07 33.7**	**-0.1**
	baz=277								
GRB3	**Grafenberg Arr**	**100.00**	**319**	P	**Pdif**	**23 07 35.4**	**+1.2**
COLA	**College**	**100.01**	**25**	Pdiff	**Pdif**	**23 07 33.7**	**-0.1**
	baz=278								
MOX	**Moxa**	**100.05**	**320**	*e*Pdiff	**Pdif**	**23 07 35.2**	**+0.8**
	baz=87,slow=4.4								
MOX				*e*PP	**PP**	**23 11 48.8**	**+0.4**
	baz=87,slow=7.3								
MOX	**Moxa**	**100.05**	**320**	P	**Pdif**	**23 07 35.4**	**+1.0**
WIMM	**Wimmelburg**	**100.07**	**321**	P	**Pdif**	**23 07 34.3**	**-0.1**
GORT1	**Trebel**	**100.09**	**323**	*e*Pdiff	**Pdif**	**23 07 35.5**	**+1.1**
	baz=87,slow=4.4								
GRB2	**Grafenberg Arr**	**100.09**	**319**	P	**Pdif**	**23 07 35.6**	**+1.0**
GRB5	**Grafenberg Arr**	**100.10**	**319**	P	**Pdif**	**23 07 35.7**	**+1.1**
GRB1	**Grafenberg Arr**	**100.10**	**319**	P	**Pdif**	**23 07 35.8**	**+1.1**
POKR	**Poker Plat Res**	**100.15**	**25**	Pdiff	**Pdif**	**23 07 34.8**	**+0.3**
	baz=278								
GRB4	**Grafenberg Arr**	**100.15**	**319**	P	**Pdif**	**23 07 36.0**	**+1.2**
CGRP	**Cima Grappa**	**100.17**	**315**	P	**Pdif**	**23 07 35.9**	**+0.6**
GRC3	**Grafenberg Arr**	**100.17**	**319**	P	**Pdif**	**23 07 35.6**	**+0.7**
FLTG	**Flechtingen**	**100.18**	**322**	*e*Pdiff	**Pdif**	**23 07 35.0**	**+0.1**
	baz=87,slow=4.4								
FLTG				*e*PP	**PP**	**23 11 49.1**	**-0.2**
	baz=87,slow=7.3								
KNK	**Knik Glacier**	**100.19**	**29**	Pdiff	**Pdif**	**23 07 35.3**	**+0.5**
	baz=277								
GRC4	**Grafenberg Arr**	**100.20**	**319**	P	**Pdif**	**23 07 35.9**	**+0.8**
SML	**Sawmill**	**100.20**	**28**	Pdiff	**Pdif**	**23 07 35.3**	**+0.5**
	baz=277								
GRC1	**Grafenberg Arr**	**100.20**	**319**	P	**Pdif**	**23 07 35.8**	**+0.7**
WTTA	**Wattenberg**	**100.22**	**317**	*i* Pdiff	**Pdif**	**23 07 34.5**	**-0.9**
	comp=Z,31nm,0.9s,SNR=19								
WTTA				*e*pP	**pPdif**	**23 09 32.8**	**-1.9**
	comp=Z,532nm,4.7s								
WTTA				*e*PP	**PP**	**23 11 47.7**	**-2.2**
	comp=Z,1μm,5.0s								
WTTA				*i* P'P'	**P'P'df**	**23 32 09.8**	**+3.1**
	comp=Z,12nm,1.4s								
WTTA	**Wattenberg**	**100.22**	**317**	P	**Pdif**	**23 07 35.4**	**0.0**
WATA	**Walderalm**	**100.25**	**317**	*e*Pdiff	**Pdif**	**23 07 34.5**	**-1.1**
	comp=Z,26nm,0.9s,SNR=15								
WATA				*i* pPdiff	**pPdif**	**23 09 32.6**	**-2.2**
	comp=Z,103nm,3.5s								
WATA				*e*PP	**PP**	**23 11 47.9**	**-2.3**
	comp=Z,2μm,6.3s								
WATA				*e*SKS	**SKSac**	**23 17 21.6**	**-0.8**
	comp=Z,14nm,1.5s								
WATA				*i* P'P'	**P'P'df**	**23 32 09.4**	**+2.8**
	comp=Z,12nm,1.6s								
C26K	**Camden Bay**	**100.26**	**20**	Pdiff	**Pdif**	**23 07 35.6**	**+0.7**
	baz=282								
GRA2	**Grafenberg Arr**	**100.27**	**319**	P	**Pdif**	**23 07 36.5**	**+1.1**
GRA3	**Grafenberg Arr**	**100.29**	**319**	P	**Pdif**	**23 07 36.9**	**+1.4**
GRC2	**Grafenberg Arr**	**100.31**	**319**	P	**Pdif**	**23 07 36.0**	**+0.4**
GRA1	**Grafenberg Arr**	**100.36**	**319**	P	**Pdif**	**23 07 37.1**	**+1.3**
GRF	**Grafenberg Arr**	**100.36**	**319**	*e*Pdiff	**Pdif**	**23 07 36.8**	**+1.0**
	baz=87,slow=4.4								
GRF				*e*PP	**PP**	**23 11 50.2**	**-0.5**
	baz=87,slow=7.3								
GRFO	**Grafenberg**	**100.36**	**319**	P	**Pdif**	**23 07 37.1**	**+1.3**
WAT6	**Susitna Watana**	**100.38**	**27**	Pdiff	**Pdif**	**23 07 35.9**	**+0.1**
	baz=278								
E25K	**Arctic Village**	**100.38**	**22**	Pdiff	**Pdif**	**23 07 36.6**	**+1.1**
	baz=281								
DOMB	**Dombas**	**100.39**	**332**	*e*Pdif	**Pdif**	**23 07 36.2**	**+0.5**
DOMB				*e*PP	**PP**	**23 11 50.5**	**-0.1**
DOMB				*e*		23 18 17.9	
DOMB				*e*SP	SP	23 20 00.2	+1.7
DOMB				*e*SS	**SS**	**23 25 40.1**	**+4.5**
FUR	**Furstenfeldbru**	**100.41**	**318**	*e*Pdiff	**Pdif**	**23 07 36.4**	**+0.3**
	baz=87,slow=4.4								
FUR	**Furstenfeldbru**	**100.41**	**318**	P	**Pdif**	**23 07 36.8**	**+0.7**
G25K	**Bearman Lake**	**100.42**	**23**	Pdiff	**Pdif**	**23 07 36.7**	**+1.1**
	baz=280								
KONO	**Kongsberg**	**100.42**	**330**	*e*Pdif	**Pdif**	**23 07 36.7**	**+0.9**
KONO				*e*PP	**PP**	**23 11 48.4**	**-2.4**
KONO				*e*		23 18 24.2	
KONO				*e*SP	SP	23 20 00.2	+1.2
KONO				*e*		23 23 28.5	
KONO				*e*SS	**SS**	**23 25 35.4**	**-0.7**
KONO	**Kongsberg**	**100.42**	**330**	P	**Pdif**	**23 07 34.0**	**-1.8**
ILAR	**Eielson Array**	**100.43**	**25**	P	**Pdif**	**23 07 35.5**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=297,slow=4.0,SNR=11								
ILAR				pP	**pPdif**	**23 09 33.9**	**-1.2**
	comp=Z,7.1nm,0.9s,baz=280,slow=4.3,SNR=10								
ILAR				PP	**PP**	**23 11 51.1**	**+0.3**
	comp=Z,15nm,1.0s,baz=282,slow=5.4,SNR=9.2								
ILAR				PKiKP	**PKiKP**	**23 11 59.4**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=252,slow=2.8,SNR=4.6								
ILAR				PKKPbc	**PKKPbc**	**23 23 49.6**	**-2.3**
	comp=Z,18nm,0.8s,baz=105,slow=1.6,SNR=26								
ILAR				PKPPKP		23 32 03.9			
	comp=Z,2.3nm,1.1s,baz=129,slow=0.8,SNR=5.3								
ILAR	**Eielson Array**	**100.43**	**25**		**Pdif**	**23 07 34.4**	**-1.3**
F25K	**Christian Rive**	**100.45**	**22**	Pdiff	**Pdif**	**23 07 35.9**	**0.0**
	baz=281								
HDA	**Harding Lake**	**100.46**	**26**	Pdiff	**Pdif**	**23 07 35.7**	**-0.2**
	baz=279								
DHY	**Denali Highway**	**100.47**	**27**	Pdiff	**Pdif**	**23 07 36.5**	**+0.4**
	baz=278								
M23K	**Glacier View**	**100.49**	**28**	Pdiff	**Pdif**	**23 07 36.2**	**+0.1**
	baz=278								
SQTA	**Sankt Quirin**	**100.51**	**317**	*i* Pdiff	**Pdif**	**23 07 35.8**	**-0.9**
	comp=Z,13nm,0.7s,SNR=14								
SQTA				*e*pPdiff	**pPdif**	**23 09 34.3**	**-1.6**
	comp=Z,722nm,7.0s								
SQTA				*e*PP	**PP**	**23 11 50.2**	**-1.9**
	comp=Z,1μm,5.8s								
SQTA				*i* P'P'	**P'P'df**	**23 32 09.1**	**+3.0**
	comp=Z,12nm,1.6s								
ASSE	**Asse, Remlinge**	**100.54**	**322**	*e*Pdiff	**Pdif**	**23 07 37.2**	**+0.8**
	baz=87,slow=4.4								
ASSE	**Asse, Remlinge**	**100.54**	**322**	P	**Pdif**	**23 07 37.6**	**+1.2**
MOTA	**Moosalm**	**100.57**	**317**	*e*Pdiff	**Pdif**	**23 07 35.9**	**-1.1**
	comp=Z,36nm,1.0s,SNR=18								
MOTA				*e*pPdiff	**pPdif**	**23 09 34.4**	**-1.8**
	comp=Z,330nm,4.5s								
MOTA				*i* PP	**PP**	**23 11 50.2**	**-2.4**
	comp=Z,746nm,3.7s								
MOTA				*e*SKS	**SKSac**	**23 17 23.8**	**-0.2**
	comp=Z,34nm,1.9s								
MOTA				*i* P'P'	**P'P'df**	**23 32 08.9**	**+2.9**
	comp=Z,14nm,1.7s								
BSEG	**Bad Segeberg**	**100.61**	**324**	*e*Pdiff	**Pdif**	**23 07 37.9**	**+1.2**
	baz=87,slow=4.4								
BSEG	**Bad Segeberg**	**100.61**	**324**	P	**Pdif**	**23 07 38.4**	**+1.7**
SCM	**Sheep Creek Mo**	**100.67**	**28**	Pdiff	**Pdif**	**23 07 38.1**	**+1.1**
	baz=278								
NOR	**Nord**	**100.70**	**353**	P	**Pdif**	**23 07 37.0**	**+0.3**
NOR	**Nord**	**100.70**	**353**	*i* P	**Pdif**	**23 07 36.5**	**-0.2**
NOR				IAmb	IAmb	23 07 39.7	
	comp=Z,14nm,0.5s								
C27K	**Jago River**	**100.73**	**20**	Pdiff	**Pdif**	**23 07 38.5**	**+1.5**
	baz=283								
CLZ	**Clausthal**	**100.75**	**322**	*e*Pdiff	**Pdif**	**23 07 38.6**	**+1.1**
	baz=87,slow=4.4								
CLZ				*e*PP	**PP**	**23 11 53.6**	**+0.1**
	baz=87,slow=7.3								
CLZ	**Clausthal**	**100.75**	**322**	P	**Pdif**	**23 07 38.4**	**+0.9**
RETA	**Reutte**	**100.80**	**317**	*e*Pdiff	**Pdif**	**23 07 37.1**	**-0.8**
	comp=Z,24nm,0.9s,SNR=11								
RETA				*e*pPdiff	**pPdif**	**23 09 35.2**	**-1.9**
	comp=Z,816nm,7.4s								
RETA				*e*PP	**PP**	**23 11 52.1**	**-2.1**
	comp=Z,1μm,4.5s								
RETA				*e*SKS	**SKSac**	**23 17 25.8**	**+0.9**
	comp=Z,24nm,2.3s								
RETA				*i* P'P'	**P'P'df**	**23 32 06.7**	**+1.3**
	comp=Z,8.9nm,2.5s								
FETA	**Feichten**	**100.85**	**317**	*e*Pdiff	**Pdif**	**23 07 37.7**	**-0.5**
	comp=Z,24nm,1.0s,SNR=17								
FETA				*i* pPdiff	**pPdif**	**23 09 36.1**	**-1.4**
	comp=Z,419nm,4.5s								
FETA				*e*PP	**PP**	**23 11 52.5**	**-2.2**
	comp=Z,903nm,4.6s								
FETA				*e*SKS	**SKSac**	**23 17 24.7**	**-0.6**
	comp=Z,12nm,1.3s								
FETA				*i* P'P'	**P'P'df**	**23 32 07.0**	**+1.5**
	comp=Z,10nm,1.4s								
SSRD	**Sdr. Stenderup**	**100.86**	**325**	*i* P	**Pdif**	**23 07 35.5**	**-2.3**
PRP	**Porcupine Dome**	**100.88**	**24**	Pdiff	**Pdif**	**23 07 38.1**	**+0.2**
	baz=280								
P23K	**Montague Islan**	**100.88**	**30**	Pdiff	**Pdif**	**23 07 38.4**	**+0.6**
	baz=278								
GLI	**Glacier Island**	**100.92**	**29**	Pdiff	**Pdif**	**23 07 38.8**	**+0.8**
	baz=278								
SKAR	**Skarslia**	**100.93**	**331**	*e*Pdif	**Pdif**	**23 07 39.0**	**+0.8**
SKAR				IVmB_BB		23 07 41.1	
	comp=Z,2μm,3.5s								
SKAR				*e*PP	**PP**	**23 11 57.8**	**+3.1**
SKAR				*e*		23 18 28.8	
SKAR				*e*SP	SP	23 20 07.5	+3.1
SKAR				*e*SS	**SS**	**23 25 43.7**	**+0.6**
F26K	**Sheenjek River**	**100.99**	**22**	Pdiff	**Pdif**	**23 07 39.0**	**+0.8**
	baz=282								
MOL	**Molde**	**101.01**	**333**	*e*Pdif	**Pdif**	**23 07 34.7**	**-3.6**
MOL				*e*PP	**PP**	**23 11 54.1**	**-0.9**
MOL				*e*		23 18 21.5	
MOL				*e*SP	SP	23 20 07.5	+2.5
MUD	**Monsted U'grnd**	**101.01**	**326**	*i* P	**Pdif**	**23 07 40.0**	**+1.6**
MUD				IAmb	IAmb	23 07 45.6	
	comp=Z,44nm,0.9s								
GTTG	**Gottingen**	**101.03**	**321**	*e*Pdiff	**Pdif**	**23 07 39.6**	**+0.9**
	baz=87,slow=4.4								
GTTG				*e*PP	**PP**	**23 11 55.9**	**+0.3**
	baz=87,slow=7.3								
GTTG	**Gottingen**	**101.03**	**321**	P	**Pdif**	**23 07 39.8**	**+1.1**
UBBA	**Unterbreizbach**	**101.06**	**321**	*e*Pdiff	**Pdif**	**23 07 39.6**	**+0.9**
	baz=87,slow=4.4								
UBBA	**Unterbreizbach**	**101.06**	**321**	P	**Pdif**	**23 07 39.4**	**+0.6**
K24K	**Donnelly Dome**	**101.07**	**26**	Pdiff	**Pdif**	**23 07 38.9**	**+0.3**
	baz=280								
J25K	**Salcha River,**	**101.10**	**25**	Pdiff	**Pdif**	**23 07 38.9**	**0.0**
	baz=280								
HOMB	**Homborsund**	**101.15**	**328**	*e*Pdif	**Pdif**	**23 07 38.3**	**-0.7**
HOMB				*e*PP	**PP**	**23 11 54.1**	**-2.1**
HOMB				*e*		23 18 28.8	
HOMB				*e*SP	SP	23 20 07.5	+0.8
HOMB				*e*		23 23 39.5	
HOMB				*e*SS	**SS**	**23 25 47.4**	**+1.3**
M24K	**Tolsona, Glenn**	**101.17**	**28**	Pdiff	**Pdif**	**23 07 40.1**	**+0.9**
	baz=279								
FUORN	**Ofenpass-Fuorn**	**101.19**	**316**	P	**Pdif**	**23 07 40.8**	**+0.9**
VLC	**Villacollemand**	**101.25**	**314**	P	**Pdif**	**23 07 37.7**	**-2.2**
VLC	**Villacollemand**	**101.25**	**314**	P	**Pdif**	**23 07 40.2**	**+0.3**
G26K	**Porcupine Rive**	**101.29**	**23**	Pdiff	**Pdif**	**23 07 40.4**	**+0.9**
	baz=282								
RETH	**Rethem/Aller,**	**101.29**	**323**	*e*Pdif	**Pdif**	**23 07 40.9**	**+1.1**
	baz=87,slow=4.4								
RETH				*e*PP	**PP**	**23 11 58.2**	**+0.7**
	baz=87,slow=7.3								
RETH	**Rethem/Aller,**	**101.29**	**323**	P	**Pdif**	**23 07 41.0**	**+1.3**
AKN	**Aaknes**	**101.33**	**332**	*e*Pdif	**Pdif**	**23 07 40.8**	**+1.0**
AKN				IVmB_BB		23 07 43.8	
	comp=Z,2μm,3.1s								
AKN				*e*PP	**PP**	**23 11 56.5**	**-1.0**
AKN				*e*		23 18 33.3	
AKN				*e*SP	SP	23 20 11.7	+3.4
AKN				*e*SS	**SS**	**23 25 51.2**	**+2.9**
KLU	**Klutina**	**101.39**	**28**	Pdiff	**Pdif**	**23 07 41.1**	**+0.9**
	baz=279								
DAVA	**Damuels**	**101.41**	**317**	*e*Pdiff	**Pdif**	**23 07 40.7**	**0.0**
	comp=Z,45nm,1.0s,SNR=17								
DAVA				*e*pPdiff	**pPdif**	**23 09 39.1**	**-0.9**
	comp=Z,588nm,5.1s								
DAVA				*e*PP	**PP**	**23 11 56.9**	**-1.9**
	comp=Z,1μm,3.2s								
DAVA				*e*SKS	**SKSac**	**23 17 27.6**	**-0.4**
	comp=Z,12nm,1.1s								
DAVA	**Damuels**	**101.41**	**317**	P	**Pdif**	**23 07 40.6**	**-0.2**
RIDG	**Independent Ri**	**101.49**	**26**	Pdiff	**Pdif**	**23 07 41.2**	**+0.6**
	baz=281								
Q23K	**Middleton Isla**	**101.49**	**31**	Pdiff	**Pdif**	**23 07 41.3**	**+0.8**
	baz=278								
HARP	**HAARP**	**101.59**	**27**	Pdiff	**Pdif**	**23 07 41.9**	**+0.9**
	baz=280								
EYAK	**Cordova Ski Ar**	**101.62**	**29**	Pdiff	**Pdif**	**23 07 41.8**	**+0.7**
	baz=279								
STU	**Stuttgart**	**101.75**	**319**	P	**Pdif**	**23 07 42.7**	**+0.7**
D27M	**Malcolm River**	**101.76**	**20**	Pdiff	**Pdif**	**23 07 42.1**	**+0.4**
	baz=285								
E27K	**Coleen River**	**101.82**	**21**	Pdiff	**Pdif**	**23 07 42.0**	**+0.1**
	baz=284								
SCRK	**Sand Creek**	**101.82**	**26**	Pdiff	**Pdif**	**23 07 42.2**	**+0.1**
	baz=281								
SNART	**Snartemo**	**101.82**	**328**	*e*Pdif	**Pdif**	**23 07 42.4**	**+0.4**
SNART				*e*PP	**PKiKP**	**23 12 02.3**	**+0.6**
SNART				*e*		23 18 34.7	
SNART				*e*SP	SP	23 20 15.2	+1.5
ODD1	**Odda**	**101.87**	**330**	*e*Pdif	**Pdif**	**23 07 38.3**	**-4.0**
ODD1				*e*PP	**PP**	**23 12 01.5**	**-0.2**
ODD1				*e*		23 18 36.1	
ODD1				*e*SP	SP	23 20 18.5	+4.2
ODD1				*e*SS	**SS**	**23 25 54.7**	**-1.3**
HYA	**Hoyanger**	**101.88**	**331**	*e*Pdif	**Pdif**	**23 07 42.0**	**-0.2**
HYA				*e*PP	**PP**	**23 12 01.5**	**-0.1**
HYA				*e*SKSac	**SKSac**	**23 17 23.1**	**-6.1**
HYA				*e*		23 18 32.5	
HYA				*e*SP	**SP**	**23 20 18.5**	**+4.3**
HYA				*e*PS	PS	23 21 20.6	-2.5
N25K	**Chitina, Valde**	**101.99**	**28**	Pdiff	**Pdif**	**23 07 43.8**	**+1.0**
	baz=280								
KASTN	**Kahler Asten**	**102.02**	**321**	*e*Pdif	**Pdif**	**23 07 44.0**	**+0.8**
	baz=87,slow=4.4								
BLS5	**Blasjo**	**102.04**	**330**	*e*Pdif	**Pdif**	**23 07 44.4**	**+1.3**
BLS5				IVmB_BB		23 07 46.0	
	comp=Z,2μm,3.2s								
BLS5				*e*PP	**PKiKP**	**23 12 01.5**	**-0.6**
BLS5				*e*SP	SP	23 20 18.5	+2.5
BLS5				*e*SS	**SS**	**23 25 58.3**	**+0.1**
BMRM	**Bremner River**	**102.10**	**29**	Pdiff	**Pdif**	**23 07 44.0**	**+0.7**
	baz=280								
TNS	**Taunus Mts**	**102.10**	**320**	*e*Pdiff	**Pdif**	**23 07 44.6**	**+1.0**
	baz=87,slow=4.4								
TNS	**Taunus Mts**	**102.10**	**320**	P	**Pdif**	**23 07 44.8**	**+1.2**
G27K	**Doyon Strip**	**102.14**	**23**	Pdiff	**Pdif**	**23 07 44.5**	**+1.1**
	baz=284								
L26K	**Log Cabin Wild**	**102.29**	**27**	Pdiff	**Pdif**	**23 07 45.4**	**+1.3**
	baz=282								
IBBN	**Ibbenburen**	**102

comp=Z,12nm,1.0s
WLF dPP PP 23 12 14.3 -0.6
WLF Walferdange 103.64 320 P **Pdif** 23 07 50.8 +0.4
BHOU Houvegnez 103.64 320 dPdif **Pdif** 23 07 51.5 +1.1
DAWY Dawson 103.76 25 Pdiff **Pdif** 23 07 51.2 +0.6
baz=286
BNI Bardonecchia 103.82 315 P **Pdif** 23 07 54.3 +2.8
YUK3 Moose Creek 103.88 28 Pdiff **Pdif** 23 07 51.5 0.0
baz=284
BSTI Sart Tilman 103.89 321 dPP **PP** 23 12 15.8 -0.9
DAG Danmarks Havn 103.91 349 P **Pdif** 23 07 51.1 +0.2
DAG Danmarks Havn 103.91 349 *i* P **Pdif** 23 07 51.2 +0.2
DAG IAmb IAmb 23 07 54.2
comp=Z,65nm,1.3s
BCLA Clavier 104.08 320 dPdif **Pdif** 23 07 52.7 +0.4
comp=Z,8.1nm,1.1s
BCLA dPKP **PKiKP** 23 12 07.6 +1.6
BCLA dPP **PP** 23 12 16.7 -1.5
F30M Barrier River 104.09 21 Pdiff **Pdif** 23 07 52.8 +0.9
baz=290
G30M tAoh Zraii Nji 104.14 22 Pdiff **Pdif** 23 07 52.5 +0.2
baz=289
J29N Klondike Camp 104.14 25 Pdiff **Pdif** 23 07 52.8 +0.5
baz=287
EPYK Eagle Plains 104.15 23 Pdiff **Pdif** 23 07 52.6 +0.3
baz=289
RCHB Rochefort 104.17 320 dPdif **Pdif** 23 07 53.2 +0.6
comp=Z,6.9nm,0.9s
BGES Gesves 104.22 320 dPdif **Pdif** 23 07 53.8 +0.8
comp=Z,11nm,1.0s
O28M Mount Upton 104.25 29 Pdiff **Pdif** 23 07 54.3 +1.1
baz=284
YUK8 Steele Glacier 104.33 28 Pdiff **Pdif** 23 07 54.8 +1.3
baz=285
PINM Pinnacle 104.39 29 Pdiff **Pdif** 23 07 54.9 +1.3
baz=284
BMRD Maredsous 104.44 320 dPdif **Pdif** 23 07 54.6 +0.8
comp=Z,12nm,1.2s
JNE Jan Mayen East 104.49 343 *e*Pdif **Pdif** 23 07 53.0 -0.7
JNE *e* 23 09 49.9
JNE *e*PP **PP** 23 12 19.7 -0.7
JNE *i* 23 14 53.2
JNE *e*SKSac **SKSac** 23 17 41.3 +0.5
JNE *e*SP **SP** 23 20 44.0 +3.3
JNE *e*SS **SKKPbc** 23 26 31.2 -0.4
JNW Jan Mayen West 104.51 343 *e*Pdif **Pdif** 23 07 49.3 -4.5
JNW *e*PP **PP** 23 12 19.7 -0.9
JNW *e*SKSac **SKSac** 23 17 41.3 +0.4
JNW *e*SP **SP** 23 20 40.4 -0.5
JNW *e*PS PS 23 21 46.2 -2.0
JNW *e*SS **SKKPbc** 23 26 34.9 +3.3
JMIC Jan Mayen 104.56 343 *e*Pdif **Pdif** 23 07 55.7 +1.8
JMIC *e*PP **PP** 23 12 19.4 -1.6
JMIC *e*SKSac **SKSac** 23 17 41.6 +0.5
JMIC *e*SP **SP** 23 20 45.3 +4.0
JMIC *e*SS **SS** 23 26 34.2 +2.6
L29M L29M 104.57 26 Pdiff **Pdif** 23 07 55.7 +1.4
baz=287
DOU Dourbes 104.58 320 dPdif **Pdif** 23 07 54.9 +0.4
comp=Z,11nm,1.2s
DOU dPKP **PKiKP** 23 12 08.3 +1.4
DOU dPP **PP** 23 12 21.5 -0.2
M29M Somme Creek 104.61 27 Pdiff **Pdif** 23 07 55.1 +0.6
baz=286
K29M Barlow Dome 104.62 25 Pdiff **Pdif** 23 07 55.2 +0.6
baz=287
UCC Uccle 104.62 321 dPdif **Pdif** 23 07 56.5 +1.8
comp=Z,10nm,1.1s
INK Inuvik 104.63 20 Pdiff **Pdif** 23 07 54.8 +0.5
baz=292
INK Inuvik 104.63 20 P **Pdif** 23 07 55.4 +1.1
BRWY Burwash Landin 104.64 28 Pdiff **Pdif** 23 07 55.1 +0.5
baz=285
JMI Jan Mayen 104.65 343 *e*Pdif **Pdif** 23 07 53.0 -1.4
JMI *e*SP SP 23 20 44.0 +1.7
I30M Mount Dempster 104.66 24 Pdiff **Pdif** 23 07 55.0 +0.3
baz=289
YUK4 Talbot Arm 104.83 28 Pdiff **Pdif** 23 07 56.1 +0.4
baz=286
G31M Satah River 104.88 22 Pdiff **Pdif** 23 07 55.9 +0.4
baz=291
F31M Tsiigehtchic 104.88 21 Pdiff **Pdif** 23 07 55.7 +0.2
baz=292
J30M Hart River 104.89 24 Pdiff **Pdif** 23 07 56.3 +0.5
baz=289
YUK6 Outpost Mounta 105.07 28 Pdiff **Pdif** 23 07 57.0 +0.2
baz=286
O29M Mount Kennedy 105.15 29 Pdiff **Pdif** 23 07 56.8 -0.2
baz=286
H31M Peel River 105.26 23 Pdif **Pdif** 23 07 59.8 +2.5
H31M Peel River 105.26 23 Pdiff **Pdif** 23 07 58.2 +0.9
baz=291
M30M Minto, Yukon 105.31 26 Pdiff **Pdif** 23 07 58.8 +1.3
baz=288
A36M Sachs Harbour 105.49 15 Pdiff **Pdif** 23 07 59.6 +1.5
baz=301
HYT Haines Junctio 105.51 28 Pdiff **Pdif** 23 07 59.8 +1.2
baz=287
N30M Aishikik Lake 105.52 27 Pdiff **Pdif** 23 07 60.0 +1.4
baz=287
LRW Lerwick 105.64 331 *e*P **Pdif** 23 07 59.1 +0.1
P29M Windy Craggy 105.74 29 Pdiff **Pdif** 23 07 59.8 +0.3
baz=286
P30M Million Dollar 105.97 29 Pdiff **Pdif** 23 08 01.8 +1.2
baz=287
N31M Braeburn, Yuko 106.11 27 Pdiff **Pdif** 23 08 02.2 +1.1
baz=288
MAHO Mahon 106.14 310 PKP **PKiKP** 23 12 04.0 -6.2
O30N Mendenhall 106.19 28 Pdif **Pdif** 23 08 02.5 +1.0
O30N Mendenhall 106.19 28 Pdiff **Pdif** 23 08 02.2 +0.6
baz=288
ELMS Elmsett, Ipswi 106.45 323 *e*P **Pdif** 23 07 58.6 -4.2
PLBC Pleasant Camp 106.46 29 Pdiff **Pdif** 23 08 03.4 +0.8
baz=287
WACR West Acre 106.53 323 *e*P **Pdif** 23 07 58.4 -4.7
ELSH Elham, Standar 106.56 322 *e*P **Pdif** 23 07 58.7 -4.5
WHY Whitehorse 106.79 28 Pdiff **Pdif** 23 08 05.0 +0.7
baz=289
EJON La Jonquera 106.86 313 PKP **PKiKP** 23 12 07.9 -3.6
S31K Pelican 106.96 31 Pdiff **Pdif** 23 08 05.7 +0.8
baz=287
R31K City Hall, Gus 107.08 30 Pdiff **Pdif** 23 08 06.5 +1.1
baz=288
C36M Paulatuk 107.21 18 Pdiff **Pdif** 23 08 07.3 +1.5
baz=302
DRUM Mains of Drumt 107.22 328 *e*P **Pdif** 23 08 05.3 -0.7
MCD Coleburn Disti 107.42 329 *e*P **Pdif** 23 08 07.6 +0.6
N32M Quiet Lake 107.45 27 Pdiff **Pdif** 23 08 07.9 +0.8
baz=291
EDMD Edmundbyers 107.51 326 *e*P **Pdif** 23 08 06.8 -0.6
HPK Haverah Park 107.55 325 *e*P **Pdif** 23 08 06.9 -0.7
NEEM North Greenlan 107.60 356 *i* P **Pdif** 23 08 08.4 +0.6
NEEM IAmb IAmb 23 08 11.7
comp=Z,52nm,0.9s
CWF Charnwood Fore 107.67 324 *e*P **Pdif** 23 08 04.3 -3.9
P32M Atlin 107.69 29 Pdiff **Pdif** 23 08 09.1 +0.9
baz=290
MMPY Sheldon Lake, 107.70 25 Pdiff **Pdif** 23 08 09.1 +0.9
baz=293
R32K Eaglecrest 107.73 30 Pdiff **Pdif** 23 08 10.0 +1.6
baz=289
EDI Edinburgh 107.88 327 *e*P **Pdif** 23 08 06.4 -2.6
P33M Teslin, Yukon 107.90 28 Pdiff **Pdif** 23 08 10.3 +1.1
baz=291
S32K Killisnoo 107.96 31 Pdiff **Pdif** 23 08 10.4 +1.1
baz=288
WOL Wolverton 107.97 322 *e*P **Pdif** 23 08 04.7 -4.8
TAOE Nuku Hiva Isla 108.02 101 *e*S Sdif 23 19 08.3 -22
comp=Z,4µm,29.4s
TAOE *e*SS **SS** 23 27 15.5 -5.9
comp=Z,5µm,25.4s
TAOE *e*LR LR 23 44 49.7
comp=Z,4µm,26.4s
EKA Eskdalemuir Ar 108.03 327 Pdiff **Pdif** 23 08 10.2 +0.5
comp=Z,19nm,0.9s,baz=91,slow=5.4,SNR=19
EKA pP **pPdif** 23 10 09.7 +0.7
comp=Z,6.6nm,1.0s,baz=99,slow=6.2,SNR=3.3
EKA PKiKP **PKiKP** 23 12 13.9 +0.7
comp=Z,1.5nm,0.3s,baz=43,slow=2.6,SNR=15
EKA PKKPbc **PKKPbc** 23 23 27.6 -1.5
comp=Z,0.8nm,0.3s,baz=250,slow=2.9,SNR=5.1
ESK Eskdalemuir 108.06 327 *e*P **Pdif** 23 08 07.2 -2.7
KESW Keswick, Cumbr 108.22 326 *e*P **Pdif** 23 08 11.7 +1.2
LINV Loch Inver, As 108.23 330 *e*P **Pdif** 23 08 09.8 -0.7
EAB Aberfoyle 108.41 328 *e*P **Pdif** 23 08 12.2 +0.8

STRD Stroud 108.42 323 *e*P **Pdif** 23 08 07.0 -4.6
SCO Scoresbysund 108.58 345 *i* P **Pdif** 23 08 14.9 +3.0
Q32M Nakina River 108.61 29 Pdiff **Pdif** 23 08 13.1 +0.6
baz=291
HLM1 Long Mynd 108.66 324 *e*P **Pdif** 23 08 10.7 -1.9
NEWG New Galloway 108.68 327 *e*P **Pdif** 23 08 12.6 0.0
FOEL Foel Wylfa 108.74 324 *e*P **Pdif** 23 08 12.6 -0.4
MONM Monmouth 108.79 323 *e*P **Pdif** 23 08 09.8 -3.4
MCH1 Michaelchurch 108.87 323 *e*P **Pdif** 23 08 08.4 -5.1
LAWE Loch Awe, Argy 108.95 328 *e*P **Pdif** 23 08 14.0 +0.2
T33K Petersburg 109.01 31 Pdiff **Pdif** 23 08 14.4 +0.4
baz=290
JSA Saint Aubin 109.07 320 *e*P **Pdif** 23 08 14.3 -0.2
R33M Jennings River 109.07 28 Pdiff **Pdif** 23 08 15.5 +1.0
baz=292
IOMK Kirk Michael 109.13 326 *e*P **Pdif** 23 08 09.5 -5.1
U33K Whale Pass 109.16 32 Pdiff **Pdif** 23 08 16.2 +1.6
baz=289
TULEG Thule 109.18 360 *i* P **Pdif** 23 08 16.0 +1.6
TULEG IAmb IAmb 23 08 18.0
comp=Z,8.4nm,0.6s
WLF1 Llynfaes 109.32 325 *e*P **Pdif** 23 08 12.3 -3.2
CRAG Craig 109.36 33 Pdiff **Pdif** 23 08 15.9 +0.2
baz=289
WRAK Wrangell Islan 109.46 32 Pdiff **Pdif** 23 08 17.9 +1.9
baz=290
S34M Telegraph Cree 109.55 30 Pdiff **Pdif** 23 08 15.3 -1.2
baz=292
TORD Torodi Ar. Bea 109.64 282 Pdiff **Pdif** 23 08 18.1 +0.2
comp=Z,3.6nm,0.9s,baz=120,slow=1.5,SNR=12
TORD PKiKP **PKiKP** 23 12 16.9 -0.5
comp=Z,38nm,0.6s,baz=57,slow=1.8,SNR=68
TORD PP **PP** 23 12 58.8 -0.6
comp=Z,20nm,0.9s,baz=70,slow=6.8,SNR=4.0
TORD PKKPbc **PKKPbc** 23 23 21.8 -1.0
comp=Z,3.3nm,0.4s,baz=302,slow=3.7,SNR=13
CLGH Cloghs, Cushen 109.72 327 *e*P **Pdif** 23 08 14.0 -3.3
DLBC Dease Lake 109.89 29 PKKPbc PKKPbc 23 23 22.3 -1.1
comp=Z,15nm,1.0s,baz=106,slow=4.7,SNR=9.0
DLBC Dease Lake 109.89 29 Pdiff **Pdif** 23 08 17.2 -0.8
baz=293
V35K Ketchikan 110.22 33 Pdiff **Pdif** 23 08 20.0 +0.5
baz=290
T35M Bob Quinn 110.34 31 Pdiff **Pdif** 23 08 18.5 -1.6
baz=292
SUMG Summit 110.53 350 *i* P **Pdif** 23 08 23.1 +2.1
SUMG IAmb IAmb 23 08 27.0
comp=Z,22nm,1.0s
WRGLY Wrigley 110.61 23 Pdiff **Pdif** 23 08 21.3 +0.2
baz=301
KULLO Kullorsuaq 110.78 357 *i* P **Pdif** 23 08 27.1 +5.5
KULLO *i* 23 08 27.3
KULLO IAmb IAmb 23 08 30.6
comp=Z,15nm,1.0s
LIRD Liard River Hi 111.33 27 Pdiff **Pdif** 23 08 25.1 +0.7
baz=297
ENIJ Nijar 111.57 307 PKP **PKiKP** 23 12 18.1 -2.4
UCM Universidad Co 111.76 311 PKP **PKiKP** 23 12 20.2 -0.7
KOTAN Kotaneelee Air 111.91 26 Pdiff **Pdif** 23 08 26.0 -0.9
baz=299
BORG Borgarnes 111.95 340 PKKPbc PKKPbc 23 23 16.4 -0.4
comp=Z,23nm,0.4s,baz=259,slow=16,SNR=4.9
ESDC Sonseca Array 112.43 311 PKiKP **PKiKP** 23 12 22.7 +0.5
comp=Z,24nm,0.9s,baz=24,slow=2.7,SNR=46
ESDC PP **PP** 23 13 19.5 +1.1
comp=Z,12nm,0.9s,baz=84,slow=6.6,SNR=6.1
ESDC PKKPbc **PKKPbc** 23 23 14.2 -0.3
comp=Z,11nm,1.2s,baz=278,slow=3.4,SNR=9.6
ESDC PKKPab **PKKPab** 23 23 23.6 -0.3
comp=Z,9.5nm,1.2s,baz=270,slow=4.3,SNR=13
BBB Bella Bella 113.30 35 PKKPbc PKKPbc 23 23 10.3 -1.7
comp=Z,8.2nm,0.9s,baz=278,slow=2.1,SNR=3.9
PBRG Braganca 114.00 313 *e*Pdif **Pdif** 23 08 37.0 +0.3
PBRG *e*PKPdf **PKiKP** 23 12 25.8 +0.7
PBRG *e*PP **PP** 23 13 29.4 +0.2
YKA Yellowknife Ar 114.36 21 PKP **PKiKP** 23 12 25.1 0.0
comp=Z,40nm,0.9s,baz=303,slow=2.1,SNR=39
YKA pPKP 23 14 31.3
comp=Z,32nm,1.0s,baz=297,slow=2.2,SNR=10
YKA SKP **SKPdf** 23 15 08.1 -1.5
comp=Z,6.6nm,0.5s,baz=337,slow=1.9,SNR=6.9
YKA PKKPbc **PKKPbc** 23 23 07.1 -1.7
comp=Z,16nm,0.9s,baz=128,slow=4.0,SNR=10.0
YKA PKKP **PKKPdf** 23 23 29.5 -0.1
comp=Z,1.9nm,0.5s,baz=139,slow=2.0,SNR=5.3
YKA Yellowknife Ar 114.36 21 PKPdf 23 12 24.5 -0.6
MVO Moncorvo 114.37 313 *e*Pdif **Pdif** 23 08 45.5 +7.1
MVO *e*PKPdf **PiKiKP** 23 12 26.9 +1.1
MVO *e*PP **PP** 23 13 30.4 -1.4
IFR Ifrane 114.50 304 PKP PKPdf 23 12 26.3 -0.1
POLO Lamas de Olo 114.88 313 *e*Pdif **Pdif** 23 08 48.5 +7.8
POLO *e*PKPdf **PiKiKP** 23 12 27.5 +0.7
POLO *e*PP **PP** 23 13 36.1 +0.7
MTE Manteigas 114.94 312 PKPdf **PiKiKP** 23 12 28.7 +1.7
MTE Manteigas 114.94 312 *e*Pdif **Pdif** 23 08 46.4 +5.4
MTE *e*PKPdf **PiKiKP** 23 12 27.5 +0.5
MTE *e*PP **PP** 23 13 37.5 +1.6
PCAB Cabril 114.96 314 *e*PKPdf **PiKiKP** 23 12 27.8 +0.9
PCAB *e*PP **PP** 23 13 35.1 -0.7
PCBR Castelo Branco 115.03 311 *e*PKPdf **PiKiKP** 23 12 27.9 +0.8
PCBR *e*PP **PP** 23 13 28.8 -7.6
PGAV Gavieira, Arco 115.06 314 *e*Pdif **Pdif** 23 08 49.3 +7.8
PGAV *e*PKPdf **PiKiKP** 23 12 27.8 +0.6
PGAV *e*PP **PP** 23 13 37.4 +0.8
PMRV Marv??o 115.07 311 *e*Pdif **Pdif** 23 08 47.0 +5.6
PMRV *e*PKPdf **PiKiKP** 23 12 27.7 +0.5
PMRV *e*PP **PP** 23 13 37.0 +0.3
PBAR Barrancos 115.10 310 *e*Pdif **Pdif** 23 08 49.5 +8.0
PBAR *e*PKPdf **PiKiKP** 23 12 28.0 +0.8
PBAR *e*PP **PP** 23 13 36.5 -0.4
PVIS Viseu 115.12 312 *e*Pdif **Pdif** 23 08 45.5 +3.8
PVIS *e*PKPdf **PiKiKP** 23 12 28.2 +1.0
PVIS *e*PP **PP** 23 13 36.7 -0.4
PESTR Estremoz 115.36 310 *e*Pdif **Pdif** 23 08 47.4 +4.7
PESTR *e*PKPdf **PiKiKP** 23 12 29.6 +1.8
PESTR *e*PP **PP** 23 13 38.8 +0.1
PTO Porto 115.53 313 *e*PKPdf **PiKiKP** 23 12 28.6 +0.6
PTO *e*PP **PP** 23 13 41.8 +2.0
PSARD Sardoal 115.61 311 *e*Pdif **Pdif** 23 08 52.0 +8.2
PSARD *e*PKPdf **PiKiKP** 23 12 29.0 +0.8
PSARD *e*PP **PP** 23 13 42.2 +1.8
PARRA Arraiolos 115.71 310 *e*PKPdf **PiKiKP** 23 12 29.3 +0.9
PARRA *e*PP **PP** 23 13 41.2 +0.1
PCAS Casmilo, Conde 115.74 312 *e*Pdif **Pdif** 23 08 47.8 +3.4
PCAS *e*PKPdf **PiKiKP** 23 12 29.2 +0.7
PCAS *e*PP **PP** 23 13 44.6 +3.3
EVO Evora 115.76 310 PKP **PKPdf** 23 12 28.3 -0.2
EVO Evora 115.76 310 *e*Pdif **Pdif** 23 08 49.2 +4.7
EVO *e*PKPdf **PiKiKP** 23 12 29.6 +1.1
EVO *e*PP **PP** 23 13 38.7 -2.7
PBEJ Beja 115.77 310 *e*PKPdf **PiKiKP** 23 12 29.5 +0.9
PBEJ *e*PP **PP** 23 13 33.2 -8.3
PMTG Montargil 115.79 311 *e*Pdif **Pdif** 23 08 51.2 +6.6
PMTG *e*PKPdf **PiKiKP** 23 12 28.9 +0.4
PMTG *e*PP **PP** 23 13 41.9 +0.2
PVAQ Vaqueiros 115.80 309 *e*Pdif **Pdif** 23 08 50.9 +6.2
PVAQ *e*PKPdf **PiKiKP** 23 12 29.5 +0.9
PVAQ *e*PP **PP** 23 13 41.9 +0.2
DBIC Dimbokro 115.86 275 Pdiff **Pdif** 23 08 47.0 +1.5
comp=Z,8.7nm,1.0s,baz=138,slow=6.7,SNR=5.1
DBIC PKP **PKPdf** 23 12 29.2 -0.1
comp=Z,187nm,1.0s,baz=97,slow=1.7,SNR=64
DBIC PP **PP** 23 13 38.2 -4.8
comp=Z,34nm,1.0s,baz=110,slow=5.5,SNR=4.4
DBIC PKKPbc **PKKPbc** 23 23 00.7 -1.5
comp=Z,4.3nm,0.8s,baz=303,slow=3.0,SNR=2.0
DBIC PKKPab **PKKPab** 23 23 08.6 -0.4
comp=Z,4.4nm,0.4s,baz=283,slow=4.7,SNR=12
DBIC Dimbokro 115.86 275 PKPdf **PKPdf** 23 12 29.0 -0.3
PCVE Castro Verde 115.99 309 *e*Pdif **Pdif** 23 08 51.3 +5.7
PCVE *e*PKPdf **PiKiKP** 23 12 30.1 +1.1
PCVE *e*PP **PP** 23 13 43.8 +0.7
PBDV Barranco-do-Ve 116.00 309 *e*Pdif **Pdif** 23 08 51.9 +6.2
PBDV *e*PKPdf **PiKiKP** 23 12 30.2 +1.2
PBDV *e*PP **PP** 23 13 43.5 +0.3
MOE Montemor 116.02 310 *e*Pdif **Pdif** 23 08 52.4 +6.7
MOE *e*PKPdf **PiKiKP** 23 12 29.8 +0.7
MOE *e*PP **PP** 23 13 43.7 +0.5
MESJ Messejana 116.08 309 *e*PKPdf **PiKiKP** 23 12 29.7 +0.5
MESJ *e*PP **PP** 23 13 44.5 +0.7
MESJ Messejana 116.08 309 *e*Pdif **Pdif** 23 08 52.2 +6.2
MESJ *e*PKPdf **PiKiKP** 23 12 30.1 +1.0
MESJ *e*PP **PP** 23 13 44.4 +0.6

PSBE So Bento 116.10 311 *e*Pdif **Pdif** 23 08 52.3 +6.2
PSBE *e*PKPdf **PiKiKP** 23 12 29.6 +0.4
PSBE *e*PP **PP** 23 13 43.7 -0.1
PLOUS Minas do Lousa 116.19 310 *e*Pdif **Pdif** 23 08 51.8 +5.4
PLOUS *e*PKPdf **PiKiKP** 23 12 30.2 +0.9
PLOUS *e*PP **PP** 23 13 44.2 -0.3
BFSB Bamfield 116.35 38 PKPdf **PiKiKP** 23 12 29.6 +0.3
AVE Averroes 116.42 304 PKP **PKPdf** 23 12 29.3 -0.7
PTEO Sao Teotonio 116.54 309 *e*Pdif **Pdif** 23 08 51.3 +3.3
PTEO *e*PKPdf **PiKiKP** 23 12 31.5 +1.5
PTEO *e*PP **PP** 23 13 47.5 +0.7
MORF Marmelete 116.55 309 *e*PKPdf **PiKiKP** 23 12 30.8 +0.7
MORF *e*PP **PP** 23 13 47.7 +0.7
MORF Marmelete 116.55 309 *e*Pdif **Pdif** 23 08 52.7 +4.6
MORF *e*PKPdf **PiKiKP** 23 12 31.4 +1.2
MORF *e*PP **PP** 23 13 47.2 +0.3
LIS Lisbon 116.57 311 *e*PKPdf **PiKiKP** 23 12 30.6 +0.5
LIS *e*PP **PP** 23 13 47.9 +0.8
LIS Lisbon 116.57 311 *e*PKPdf **PiKiKP** 23 12 32.9 +2.8
LIS *e*PP **PP** 23 13 47.1 +0.1
PMAFR Mafra 116.61 311 *e*Pdif **Pdif** 23 08 53.4 +5.0
PMAFR *e*PKPdf **PiKiKP** 23 12 31.1 +0.9
PMAFR *e*PP **PP** 23 13 47.9 +0.6
PFVI Vila Bisbo 116.72 309 *e*PKPdf **PiKiKP** 23 12 31.4 +1.0
PFVI *e*PP **PP** 23 13 48.6 +0.5
TIO Tiouine 116.73 302 PKP **PiKiKP** 23 12 31.2 +0.4
CLRS Cowichan Lake 116.97 37 PKPdf **PiKiKP** 23 12 31.2 +0.7
SFJD Kangerlussuaq 117.42 352 pPKP **pPKPdf** 23 14 38.1 +1.0
comp=Z,56nm,0.9s,baz=82,slow=3.3,SNR=5.0
SFJD PKPbc **PKKPbc** 23 22 57.4 -1.0
comp=Z,7.6nm,0.6s,baz=178,slow=2.8,SNR=1.8
SFJD Kangerlussuaq 117.42 352 PKPdf **PKPdf** 23 12 30.3 -0.5
SFJD Kangerlussuaq 117.42 352 PKIKP **PKPdf** 23 12 30.3 -0.5
D05A Enumclaw 118.96 38 PKPdf **PiKiKP** 23 12 35.0 +0.6
H04D Lebanon 119.58 41 PKPdf **PiKiKP** 23 12 36.1 +0.3
USHA Ushuaia 119.71 181 PKKPbc PKKPbc 23 22 49.1 -1.2
comp=Z,23nm,0.7s,baz=54,slow=0.4,SNR=2.5
I05D Terrebonne, OR 120.57 41 PKPdf **PKPdf** 23 12 37.4 -0.3
YBH Yreka Blue Hor 120.67 44 PKKPbc PKKPbc 23 22 45.4 -0.7
comp=Z,18nm,1.1s,baz=135,slow=5.7,SNR=8.1
YBH SKKP **SKKPdf** 23 26 02.0 +0.1
comp=Z,3.4nm,1.0s,baz=278,slow=2.2,SNR=3.5
K04D Chiloquin, OR 120.99 43 PKPdf **PiKiKP** 23 12 39.2 +0.4
NEW Newport 121.36 35 PKKPbc PKKPbc 23 22 41.7 -2.1
comp=Z,7.9nm,0.8s,baz=281,slow=2.0,SNR=5.3
NEW SKKP **SKKPdf** 23 26 05.0 +4.4
comp=Z,3.7nm,0.7s,baz=108,slow=5.4,SNR=3.0
I07A Izee 121.88 41 PKPdf **PiKiKP** 23 12 40.6 +0.2
FRB Frobisher Bay 122.03 360 pPKP **pPKPdf** 23 14 46.0 -0.1
comp=Z,82nm,1.1s,baz=332,slow=3.7,SNR=8.6
FRB PKKPbc **PKKPab** 23 22 39.4 -1.9
comp=Z,2.9nm,0.4s,baz=37,slow=1.5,SNR=4.9
BEKR Beckworth 123.03 45 PKPdf **PiKiKP** 23 12 42.9 -0.1
H10N1 ASCENSION HYDR 123.59 257 PKP **PiKiKP** 23 12 46.7 +2.5
baz=128,slow=2.0,SNR=5.4
H10N2 ASCENSION HYDR 123.60 257 PKP **PiKiKP** 23 12 46.1 +1.9
baz=128,slow=2.0,SNR=5.4
H10N3 ASCENSION HYDR 123.61 257 PKP **PiKiKP** 23 12 46.7 +2.5
baz=128,slow=2.0,SNR=5.6
PMPST Porto Santo, M 123.73 306 *e*Pdif **Pdif** 23 09 25.6 +5.5
PMPST *e*PKPdf **PiKiKP** 23 12 46.9 +2.6
PMPST *e*PP **PP** 23 14 36.6 +1.2
PMPS Porto Santo 123.74 306 *e*PKPdf **PiKiKP** 23 12 45.4 +1.1
PMPS *e*PP **PP** 23 14 38.0 +2.5
PMAR Madeira 124.30 306 *e*PKPdf **PiKiKP** 23 12 47.2 +1.5
PMAR *e*PP **PP** 23 14 39.1 -0.4
FUL Funchal 124.31 306 *e*PKPdf **PiKiKP** 23 12 48.0 +2.5
FUL *e*PP **PP** 23 14 36.5 -2.7
PMOZ Porto Moniz, M 124.50 306 *e*PKPdf **PiKiKP** 23 12 47.5 +1.5
PMOZ *e*PP **PP** 23 14 40.1 -0.6
FFC Flin Flon 124.50 22 PKPdf **PKPdf** 23 12 44.6 -0.2
FFC Flin Flon 124.50 22 PKIKP **PKPdf** 23 12 44.6 -0.2
NVAR Mina Array Bea 125.07 46 PKhKP PKPpre 23 12 36.2
comp=Z,1.4nm,0.6s,baz=265,slow=2.0,SNR=7.0
NVAR PKP **PiKiKP** 23 12 48.2 +1.1
comp=Z,79nm,1.0s,baz=237,slow=1.8,SNR=59
NVAR pPKP pPKPdf 23 14 54.0 +0.9
comp=Z,35nm,0.9s,baz=270,slow=2.2,SNR=8.9
NVAR PKKPbc **PKKPab** 23 22 29.0 +0.2
comp=Z,36nm,0.9s,baz=127,slow=4.3,SNR=31
NVAR SKKP **SKKPdf** 23 25 54.2 +0.6
comp=Z,10nm,1.1s,baz=130,slow=2.4,SNR=4.5
NVAR Mina Array Bea 125.07 46 PKPdf **PiKiKP** 23 12 47.7 +0.6
MACI Morro de la Ar 125.16 301 PKPdf **PiKiKP** 23 12 48.0 +0.4
ELK Elko 126.20 42 PKKPbc PKKPbc 23 22 25.4 +0.2
comp=Z,6.1nm,0.8s,baz=193,slow=1.9,SNR=6.3
ELK SKKP **SKKPdf** 23 25 51.6 +0.1
comp=Z,2.2nm,0.8s,baz=133,slow=1.9,SNR=3.2
ELK Elko 126.20 42 PKPdf **PKPdf** 23 12 48.3 -0.5
ELK Elko 126.20 42 PKIKP **PKPdf** 23 12 48.3 -0.5
WCT Wildcat Mounta 126.95 47 PKPdf **PiKiKP** 23 12 51.3 +0.6
DUG Dugway, Tooele 128.09 42 PKPpre PKPpre 23 12 41.5
DUG **PiKiKP** 23 12 54.2 +1.2
DUG Dugway, Tooele 128.09 42 PKHKP PKPpre 23 12 41.5
PFO Pinyon Flats O 128.31 51 SKKP **SKKPdf** 23 25 45.7 -1.6
comp=Z,5.6nm,0.8s,baz=177,slow=3.0,SNR=4.0
BART Pico Bartolome 128.67 315 *e*PKP **PiKiKP** 23 12 59.9 +5.8
BART *e*PP **PP** 23 15 12.6 +5.1
PDAR Pinedale Array 128.79 38 PKhKP PKPpre 23 12 38.5
comp=Z,0.3nm,0.3s,baz=306,slow=5.5,SNR=5.2
PDAR PKP **PiKiKP** 23 12 54.8 +0.3
comp=Z,25nm,1.0s,baz=0.0,slow=0.1,SNR=23
PDAR pPKP pPKPdf 23 15 00.3 +0.3
comp=Z,62nm,1.2s,baz=90,slow=1.5,SNR=7.1
PDAR SKPbc SKiKP 23 15 24.6 -15
comp=Z,26nm,0.8s,baz=97,slow=1.1,SNR=9.6
PDAR PKKPbc PKKPbc 23 22 13.7
comp=Z,2.6nm,0.5s,baz=118,slow=6.4,SNR=11
PDAR SKKPbc **SKKPbc** 23 25 12.1 -3.7
comp=Z,1.5nm,0.6s,baz=92,slow=1.3,SNR=2.3
PDAR SKKP **SKKPdf** 23 25 49.5 +2.8
comp=Z,15nm,1.1s,baz=107,slow=5.0,SNR=6.5
PDAR Pinedale Array 128.79 38 PKPdf **PiKiKP** 23 12 54.9 +0.4
PGRON Lagoa das Cont 128.82 315 *e*PP PP 23 15 26.1 +18
CMLA Cha da Macela 128.93 315 *e*PKP **PiKiKP** 23 12 59.9 +5.4
CMLA *e*PP **PP** 23 15 14.0 +5.0
PSMN Pico do Norte, 128.94 314 *e*PKP **PiKiKP** 23 12 55.1 +0.5
PSMN *e*PP **PP** 23 15 11.2 +1.9
CCUT Cedar City 128.97 45 PKPdf **PiKiKP** 23 12 55.8 +0.9
PSET Sete Cidades 129.03 315 *e*PP **PP** 23 15 09.0 -0.8
PSCM Serra do Cume 129.58 317 *e*PP **PP** 23 15 16.9 +3.7
PAGU Agualva, Azore 129.59 317 *e*PKP **PiKiKP** 23 12 59.4 +3.5
PAGU *e*PP **PP** 23 15 16.9 +3.6
W1UA Hualapai Mount 129.67 48 PKPdf **PiKiKP** 23 12 57.1 +1.7
ADH Angra Heroismo 129.68 317 *e*PP **PP** 23 15 15.4 +1.7
PSBA Serra de Santa 129.69 317 *e*PKP **PiKiKP** 23 12 57.9 +1.9
PSBA *e*PP PP 23 15 26.1 +12
PGRA Graciosa 130.00 318 *e*PKP **PiKiKP** 23 12 57.4 +0.7
PGRA *e*PP **PP** 23 15 16.9 +1.1
SRBC Serra Branca 130.03 318 *e*PKP **PiKiKP** 23 12 57.6 +0.9
SRBC *e*PP PP 23 15 28.3 +12
PMAN Manadas 130.27 317 *e*PKP **PiKiKP** 23 12 58.5 +1.3
PMAN *e*PP **PP** 23 15 21.1 +3.6
ULM Lac du Bonnet 130.33 22 PKhKP PKPpre 23 12 40.6
comp=Z,2.3nm,0.4s,baz=175,slow=1.9,SNR=4.7
ULM PKP **PiKiKP** 23 12 56.5 -0.5
comp=Z,56nm,0.9s,baz=342,slow=2.3,SNR=36
ULM pPKP pPKPdf 23 15 01.9 -0.5
comp=Z,139nm,1.1s,baz=335,slow=2.8,SNR=11
ULM SKPbc **SKPbc** 23 15 29.2 -0.1
comp=Z,276nm,0.9s,baz=315,slow=4.0,SNR=29
ULM SKKPbc **SKKPbc** 23 25 06.6 -3.9
comp=Z,4.2nm,0.7s,baz=173,slow=5.9,SNR=1.9
ULM SKKP **SKKPdf** 23 25 42.1 -1.3
comp=Z,14nm,1.0s,baz=264,slow=1.0,SNR=4.2
ROSA Rosais 130.33 318 *e*PKP **PiKiKP** 23 12 57.1 -0.3
PPNO Prainha do Nor 130.47 317 *e*PKP **PiKiKP** 23 12 58.5 +0.8
PPNO *e*PP **PP** 23 15 23.3 +4.4
PICO Pico 130.56 317 *e*PKP **PiKiKP** 23 13 00.2 +2.3
PICO *e*PP **PP** 23 15 22.6 +3.0
PCAN Candelaria 130.62 317 *e*PKP **PiKiKP** 23 12 59.9 +2.0
PCAN *e*PP **PP** 23 15 21.1 +1.3
PCED Cedros 130.69 318 *e*PP **PP** 23 15 24.7 +4.5
HOR Horta 130.69 318 *e*PP **PP** 23 15 21.1 +1.0
SCHQ Schefferville 130.94 358 PKhKP PKPpre 23 12 41.0
comp=Z,2.2nm,0.5s,baz=306,slow=4.8,SNR=8.6
SCHQ PKP **PKPdf** 23 12 57.5 +0.4
comp=Z,36nm,0.4s,baz=360,slow=1.5,SNR=42
SCHQ pPKP pPKPdf 23 15 03.2 -0.3
comp=Z,98nm,1.1s,baz=32,slow=3.5,SNR=13
SCHQ SKPbc **SKPbc** 23 15 31.3 -0.2
comp=

comp=Z,1.5nm,0.4s,baz=143,slow=10,SNR=1.4
SCHQ SKKPbc **SKKPbc** **23 25 05.8 -2.7**
comp=Z,5.5nm,0.9s,baz=172,slow=5.8,SNR=3.1
SCHQ SKKP **SKKPdf** **23 25 42.2 -0.2**
comp=Z,11nm,1.0s,baz=216,slow=7.2,SNR=5.3
RSSD Black Hills 131.13 33 PKPpre PKPpre 23 12 43.2
RSSD PKPdf **PKPdf** **23 12 57.9 -0.2**
RSSD Black Hills 131.13 33 PKHKP PKPpre 23 12 43.2
RSSD 23 12 57.9
PV03 Paradox Valley 131.72 42 PKPdf **PKPdf** **23 12 59.3 -0.1**
TUC Tucson 133.20 50 PKPpre PKPpre 23 12 49.0
TUC PKPdf **PKiKP** **23 13 03.6 +0.2**
TUC Tucson 133.20 50 PKHKP PKPpre 23 12 49.0
TUC 23 13 03.6
PLCA Paso Flores 133.81 179 PKhKP PKPpre 23 12 48.0
comp=Z,6.1nm,0.7s,baz=261,slow=0.7,SNR=6.5
PLCA PKP **PKiKP** **23 13 04.2 -0.3**
comp=Z,67nm,1.2s,baz=160,slow=1.1,SNR=13
PLCA pPKP pPKPdf 23 15 09.9 +0.5
comp=Z,20nm,1.1s,baz=211,slow=1.3,SNR=4.1
PLCA SKPbc **SKPbc** **23 15 41.6 -0.2**
comp=Z,57nm,1.1s,baz=183,slow=5.6,SNR=6.9
PLCA PKKP **PKKPdf** **23 22 51.8 -0.1**
comp=Z,6.5nm,1.0s,baz=256,slow=1.9,SNR=5.0
PLCA SKKPbc **SKKPbc** **23 24 53.5 -3.6**
comp=Z,1.6nm,0.7s,baz=20,slow=3.7,SNR=4.0
PLCA Paso Flores 133.81 179 PKP **PKPdf** **23 13 03.0 0.0**
ANMO Albuquerque 135.11 45 PKPpre PKPpre 23 12 55.6
ANMO PKPdf **PKPdf** **23 13 06.5 +0.8**
ANMO Albuquerque 135.11 45 PKHKP PKPpre 23 12 55.6
ANMO 23 13 06.5
TRQA Tornquist 135.95 188 PKPpre PKPpre 23 12 53.8
TRQA PKPdf **PKPdf** **23 13 07.3 +0.2**
TRQA Tornquist 135.95 188 PKHKP PKPpre 23 12 53.8
TRQA 23 13 07.3
SLBS Sierra La Lagu 137.10 61 PKPpre PKPpre 23 12 59.2
SLBS PKPdf **PKPdf** **23 13 08.7 -0.9**
PECS Pecos 138.82 47 PKPpre PKPpre 23 13 04.3
PECS PKPdf **PKPdf** **23 13 13.3 +0.8**
129A Stewart Farms, 139.57 44 PKPpre PKPpre 23 13 07.2
TXAR Lajitas Array 140.00 50 PKhKP PKPpre 23 13 08.3
comp=Z,3.3nm,0.4s,baz=223,slow=1.3,SNR=46
TXAR PKP **PKPdf** **23 13 13.6 -1.2**
comp=Z,20nm,0.7s,baz=326,slow=2.6,SNR=34
TXAR pPKP pPKPdf 23 15 20.4 -0.9
comp=Z,19nm,0.8s,baz=259,slow=1.3,SNR=4.2
TXAR SKPbc **SKPbc** **23 15 58.6 -1.7**
comp=Z,24nm,0.8s,baz=298,slow=1.2,SNR=4.9
TXAR SKKPbc **SKKPbc** **23 24 32.0 -1.8**
comp=Z,4.4nm,1.0s,baz=152,slow=8.3,SNR=4.2
TXAR Lajitas Array 140.00 50 PKPpre PKPpre 23 13 07.7
WBO Williamsburg 140.49 7 PKPpre PKPpre 23 13 08.1
OKCSW OKLAHOMA CITY 140.73 37 PKPpre PKPpre 23 13 10.2
CPSB Cacapava Do Su 141.00 202 PKP **PKPdf** **23 13 13.6 -2.9**
CPSB Cacapava Do Su 141.00 202 *eP* **PKPdf** **23 13 12.8 -3.7**
W35A Tecumseh 141.24 37 PKPpre PKPpre 23 13 11.5
CAM01 Campos-RJ 141.45 224 PKP PKPpre 23 13 10.6
CAM01 Campos-RJ 141.45 224 *eP* **PKPdf** **23 13 13.9 -3.6**
ALF01 Guarapari-ES 141.58 226 PKP PKPpre 23 13 09.7
ALF01 Guarapari-ES 141.58 226 *eP* **PKPdf** **23 13 14.2 -3.5**
PSAL Palomas, Salto 141.75 196 *eP* **PKPdf** **23 13 15.0 -2.8**
DUB01 Friburgo-RJ 141.77 223 PKP PKPpre 23 13 12.7
DUB01 Friburgo-RJ 141.77 223 *eP* **PKPdf** **23 13 15.4 -2.7**
RIB01 Linhares ES 142.15 228 PKP PKPpre 23 13 12.8
RIB01 Linhares ES 142.15 228 *eP* **PKPdf** **23 13 16.5 -2.3**
SIM2 UHE Simplicio 142.18 223 PKP **PKPdf** **23 13 15.3 -3.5**
Z35A Perchaven, San 142.22 40 PKPpre PKPpre 23 13 13.9
BSFB Barra de Sao F 142.79 228 PKP PKPpre 23 13 14.1
BSFB Barra de Sao F 142.79 228 *eP* **PKPdf** **23 13 17.6 -2.3**
CFA Coronel Fontan 142.92 182 PKP **PKPdf** **23 13 18.1 -1.8**
comp=Z,485nm,0.9s,baz=179,slow=2.9,SNR=324
CFA pPKP **pPKPdf** **23 15 24.8 -1.6**
comp=Z,116nm,1.2s,baz=124,slow=7.1,SNR=3.3
K62A Royalston 143.07 3 PKPbc PKPbc 23 13 18.1 +0.3
SJMB Sao Joao De Ma 143.12 228 PKP PKPab 23 13 16.4 -1.7
SJMB Sao Joao De Ma 143.12 228 *eP* PKPab 23 13 18.3 +0.2
PET01 Itanhaem-SP 143.23 215 PKP PKPbc 23 13 17.5 -0.9
PET01 Itanhaem-SP 143.23 215 *eP* PKPbc 23 13 19.6 +0.8
ITAB Concordia 143.27 206 PKP PKPab 23 13 17.7 -0.7
ITAB Concordia 143.27 206 *eP* PKPbc 23 13 19.3 +0.4
GUA01 Guaratinga, BA 143.31 232 PKP PKPab 23 13 18.2 -0.7
GUA01 Guaratinga, BA 143.31 232 *eP* PKPbc 23 13 19.5 +0.3
TIJ01 Guaruva-PR 143.36 212 PKP PKPab 23 13 16.8 -2.2
MIAR Mount Ida 143.59 35 PKPdf PKPbc 23 13 20.2 +0.6
MIAR Mount Ida 143.59 35 PKIKP PKPbc 23 13 20.2 +0.6
NBAN Anadia - AL 143.64 245 PKP PKPab 23 13 19.4 -0.9
CMC01 Camacan, BA 143.76 234 PKP PKPab 23 13 20.1 -0.5
CMC01 Camacan, BA 143.76 234 *eP* PKPbc 23 13 20.8 +0.1
ZAIG Zacatecas 143.78 59 **PKPdf** **23 13 21.6 -0.3**
SPB Sao Paulo 143.86 216 *eP* **PKPdf** **23 13 21.6 -0.1**
NBPV Pedro Velho 143.89 251 PKP PKPbc 23 13 20.8 -0.4
NBPV Pedro Velho 143.89 251 *eP* PKPbc 23 13 21.1 0.0
VAO Valinhos 144.04 217 *eP* **PKPdf** **23 13 22.1 0.0**
VABB Valinhos 144.04 217 PKP **PKPab** **23 13 21.6 0.0**
BSCB Bom Sucesso 144.13 222 PKP PKPbc 23 13 21.5 -0.3
BSCB Bom Sucesso 144.13 222 *eP* PKPbc 23 13 21.5 -0.3
WCI Wyandotte Cave 144.14 23 PKPbc 23 13 20.8 -0.5
WCI Wyandotte Cave 144.14 23 PKIKP PKPbc 23 13 20.8 -0.4
NBLA Lagarto - SE 144.44 242 PKP PKPbc 23 13 21.0 -1.9
PAL Palisades 144.59 6 PKPdf **PKPdf** **23 13 21.8 -0.6**
PAL Palisades 144.59 6 PKIKP **PKPdf** **23 13 21.8 -0.6**
RCBR Riachuelo 144.66 252 PKP **PKPab** **23 13 24.0 -0.2**
comp=Z,363nm,1.0s,baz=104,slow=8.4,SNR=83
RCBR pPKP **pPKPdf** **23 15 29.0 -0.9**
comp=Z,78nm,1.0s,baz=100,slow=6.7,SNR=6.3
RCBR Riachuelo 144.66 252 PKPdf **PKPdf** **23 13 23.5 +0.1**
RCBR **pPKPdf** **23 15 29.0 -0.9**
RCBR Riachuelo 144.66 252 PKP **PKPdf** **23 13 23.2 -0.1**
RCBR Riachuelo 144.66 252 *eP* PKPbc 23 13 23.9 +0.3
RCLB Rio Claro- Sao 144.82 217 PKP **PKPdf** **23 13 23.5 +0.1**
RCLB Rio Claro- Sao 144.82 217 *eP* **PKPdf** **23 13 23.1 -0.4**
ARCA Araçuai, MG 144.83 230 PKP **PKPdf** **23 13 23.2 -0.3**
DIAM Diamantina, MG 145.19 226 PKP **PKPdf** **23 13 24.3 0.0**
DIAM Diamantina, MG 145.19 226 *eP* **PKPbc** **23 13 25.0 -0.2**
WVT Waverly 145.28 27 PKPdf **PKPdf** **23 13 23.7 0.0**
WVT Waverly 145.28 27 PKIKP **PKPdf** **23 13 23.7 0.0**
HKT Hockley 145.31 43 PKPdf **PKPbc** **23 13 25.1 +0.2**
HKT Hockley 145.31 43 PKP2 **PKPbc** **23 13 25.1 +0.2**
PTGB Pitanga 145.40 209 PKP **PKPdf** **23 13 24.3 -0.1**
PTGB Pitanga 145.40 209 *eP* **PKPdf** **23 13 24.8 +0.4**
NBTA Tacaratu-PE 145.48 245 PKP **PKPdf** **23 13 24.7 0.0**
LCO Las Campanas 145.50 178 PKP **PKPdf** **23 13 24.7 0.0**
LCO Las Campanas 145.50 178 PKIKP **PKPdf** **23 13 24.7 0.0**
NBPA Parau_RN 145.82 251 PKP **PKPdf** **23 13 25.0 -0.3**
CPUP Villa Florida 146.10 200 PKP **PKPdf** **23 13 24.8 -0.7**
comp=Z,608nm,1.2s,baz=150,slow=1.8,SNR=385
CPUP PKPbc **PKPbc** **23 13 28.2 +0.8**
comp=Z,205nm,0.5s,baz=149,slow=1.7,SNR=202
CPUP pPKPbc **pPKPdf** **23 15 31.9 -0.1**
comp=Z,260nm,0.9s,baz=152,slow=3.7,SNR=12
CPUP SKKPbc SKKPbc 23 24 07.1 -1.5
comp=Z,4.0nm,1.0s,baz=329,slow=6.5,SNR=3.9
CPUP Villa Florida 146.10 200 PKP **PKPdf** **23 13 25.6 +0.2**
CPUP Villa Florida 146.10 200 *eP* **PKPdf** **23 13 26.0 +0.6**
JQT1 Jequitai-MG 146.38 227 PKP **PKPdf** **23 13 26.0 -0.1**
MC01 Montes Claros 146.41 228 PKP **PKPdf** **23 13 26.4 +0.1**
BB19B Bebedouro 146.45 217 PKP **PKPdf** **23 13 26.3 +0.1**
BB19B Bebedouro 146.45 217 *eP* **PKPdf** **23 13 27.3 +1.1**
NBPN Ponto Novo - B 146.61 241 PKP **PKPdf** **23 13 26.6 0.0**
NBMA Muriti-CE 146.80 247 PKP **PKPdf** **23 13 26.6 -0.3**
NBMA Muriti-CE 146.80 247 *eP* **PKPdf** **23 13 27.1 +0.1**
CBN Corbin Frederi 146.81 12 PKPdf **PKPdf** **23 13 27.1 +0.8**
PMNB Patos De Minas 146.96 223 PKP **PKPdf** **23 13 26.9 -0.3**
PMNB Patos De Minas 146.96 223 *eP* **PKPdf** **23 13 25.6 -1.6**
TRCB Terra Rica 147.30 210 PKP **PKPdf** **23 13 26.5 -1.1**
TRCB Terra Rica 147.30 210 *eP* **PKPdf** **23 13 27.4 -0.2**
AC02 Maricunga 147.69 180 PKPdf **PKPdf** **23 13 29.4 +0.7**
JANB Januaria 147.71 230 PKP **PKPdf** **23 13 28.3 -0.2**
JANB Januaria 147.71 230 *eP* **PKPdf** **23 13 28.6 +0.2**
NBPB Pedra_Branca-C 148.21 250 PKP **PKPdf** **23 13 29.1 -0.2**
SFA1 Serra Facao 148.21 222 PKP **PKPdf** **23 13 29.3 +0.1**
AMBA Amambai (Brazi 148.28 206 *eP* **PKPdf** **23 13 28.5 -0.7**
IPMB Ipameri, GO 148.54 221 PKP **PKPdf** **23 13 29.6 -0.2**
IPMB Ipameri, GO 148.54 221 *eP* **PKPdf** **23 13 29.2 -0.5**
ITU3 Corumbazu 148.79 220 PKP **PKPdf** **23 13 29.5 -0.6**
PAULI Pauline 148.81 20 PKPdf **PKPdf** **23 13 29.9 +0.3**
NBMO Morrinhos-CE 149.34 254 PKP **PKPdf** **23 13 30.8 -0.3**
NBMO Morrinhos-CE 149.34 254 *eP* **PKPdf** **23 13 28.8 -2.3**
SBBR Sobral 149.44 253 PKP **PKPdf** **23 13 31.0 -0.2**
SDBA SAO DESIDERIO 149.74 234 PKP **PKPdf** **23 13 31.4 -0.3**
SDBA SAO DESIDERIO 149.74 234 *eP* **PKPdf** **23 13 31.8 +0.1**
PB14 IPOC Station P 149.87 178 PKP **PKPdf** **23 13 34.0 +2.0**

BDFB Brasilia 150.05 225 PKP **PKPdf** **23 13 32.0 -0.2**
comp=Z,73nm,1.0s,baz=51,slow=2.0,SNR=37
BDFB PKPbc **PKiKP** **23 13 38.6 +0.2**
comp=Z,987nm,0.9s,baz=54,slow=2.8,SNR=73
BDFB pPKPbc **pPKPbc** **23 15 42.9 -0.3**
comp=Z,146nm,0.9s,baz=168,slow=3.1,SNR=3.0
BDFB Brasilia 150.05 225 **PKPdf** **23 13 32.8 +0.6**
BDFB **PKiKP** **23 13 38.3 -0.2**
BDFB Brasilia 150.05 225 PKIKP **PKPdf** **23 13 32.8 +0.6**
NBPS Pedro II - PI 150.34 251 PKP **PKPdf** **23 13 31.5 -1.2**
NBPS Pedro II - PI 150.34 251 *eP* **PKPdf** **23 13 31.3 -1.5**
MURT Porto Murtinho 150.48 203 *eP* **PKPdf** **23 13 32.2 -0.4**
AQDB Aquidauana 150.74 207 PKP **PKPdf** **23 13 32.3 -0.7**
AQDB Aquidauana 150.74 207 *eP* **PKPdf** **23 13 32.8 -0.2**
C2SB Chapadao do Su 150.74 214 PKP **PKPdf** **23 13 33.6 +0.6**
C2SB Chapadao do Su 150.74 214 *eP* **PKPdf** **23 13 32.0 -1.1**
CAN3 Cana Brava 151.93 228 PKP **PKPdf** **23 13 35.4 +0.4**
COIM Forte Coimbra 152.13 204 *eP* **PKPdf** **23 13 34.9 -0.2**
NTVB Natividade 152.34 231 PKP **PKPdf** **23 13 34.6 -1.0**
ARAG Araguaiana, MT 152.53 219 *eP* **PKPdf** **23 13 36.4 +0.6**
CMIG Matias Romero 152.61 63 PKP **PKPdf** **23 13 35.5 -0.3**
comp=Z,59nm,1.0s,baz=256,slow=1.2,SNR=22
CMIG PKPbc **PKiKP** **23 13 44.3 +0.8**
comp=Z,112nm,0.8s,baz=203,slow=1.8,SNR=16
CMIG pPKPbc **pPKPbc** **23 15 47.8 -1.4**
comp=Z,112nm,0.9s,baz=101,slow=1.6,SNR=12
PP1B Ponte de Pedra 152.79 212 PKP **PKPdf** **23 13 35.6 -0.6**
PP1B Ponte de Pedra 152.79 212 *eP* **PKPdf** **23 13 34.9 -1.3**
LAJE UHE Lajeado 153.87 234 PKP **PKPdf** **23 13 37.3 -0.5**
SMTB Santa Maria do 153.90 237 PKP **PKPdf** **23 13 37.4 -0.5**
SMTB Santa Maria do 153.90 237 *eP* **PKPdf** **23 13 38.7 +0.9**
PB08 IPOC Station P 154.35 181 PKP **PKPdf** **23 13 39.2 +0.4**
SALV Santo Antonio 154.63 212 PKP **PKPdf** **23 13 37.5 -1.3**
SALV Santo Antonio 154.63 212 *eP* **PKPdf** **23 13 38.7 0.0**
SNDB Serra Nova Dou 154.87 226 PKP **PKPdf** **23 13 38.5 -0.6**
SNDB Serra Nova Dou 154.87 226 *eP* **PKPdf** **23 13 37.7 -1.5**
DWPF Disney Wildern 154.93 26 PKPdf **PKPdf** **23 13 38.6 -0.2**
PAL01 Palmeiras do T 155.00 241 PKP **PKPdf** **23 13 38.7 -0.7**
BBSD Serra de San D 155.68 201 *eP* **PKPdf** **23 13 39.5 -0.7**
PTLB Pontes e Lacer 156.68 206 PKPdf **PKPdf** **23 13 40.8 -0.6**
PTLB **PKPab** **23 14 14.5 +0.6**
PTLB Pontes e Lacer 156.68 206 PKP **PKPdf** **23 13 40.5 -1.0**
PTLB Pontes e Lacer 156.68 206 *eP* **PKPdf** **23 13 41.7 +0.3**
SIV San Ignacio 156.95 201 PKP **PKPdf** **23 13 42.4 +0.6**
comp=Z,86nm,1.0s,baz=167,slow=1.2,SNR=93
SIV PKPab **PKPab** **23 14 15.6 +0.5**
comp=Z,47nm,0.4s,baz=179,slow=5.8,SNR=28
SIV pPKP **pPKPdf** **23 15 48.2 -0.8**
comp=Z,74nm,1.1s,baz=184,slow=2.6,SNR=5.5
SIV pPKPab **pPKPab** **23 16 17.4 +2.1**
comp=Z,180nm,1.0s,baz=130,slow=6.8,SNR=2.3
PRPB Parauapebas 157.18 239 PKP **PKPdf** **23 13 41.2 -1.0**
PRPB Parauapebas 157.18 239 *eP* **PKPdf** **23 13 40.9 -1.3**
APG El Apazote 157.32 64 PKP **PKPdf** **23 13 42.5 -0.1**
comp=Z,9.4nm,1.0s,baz=165,slow=10,SNR=27
APG pPKP **pPKPdf** **23 15 49.4 -0.3**
comp=Z,4.9nm,1.0s,baz=167,slow=10,SNR=7.9
LPAZ La Paz 158.15 183 PKP **PKPdf** **23 13 43.9 -0.1**
comp=Z,64nm,1.0s,baz=91,slow=1.2,SNR=77
LPAZ PKPab **PKPab** **23 14 21.1 +0.1**
comp=Z,54nm,0.6s,baz=95,slow=2.3,SNR=12
LPAZ pPKP **pPKPdf** **23 15 51.4 +0.2**
comp=Z,43nm,1.1s,baz=351,slow=3.3,SNR=2.6
LPAZ pPKPab **pPKPab** **23 16 22.0 +0.7**
comp=Z,46nm,1.1s,baz=200,slow=3.1,SNR=2.8
LPAZ La Paz 158.15 183 PKP **PKPdf** **23 13 44.4 +0.3**
LPAZ La Paz 158.15 183 *eP* **PKPdf** **23 13 43.3 -0.7**
CLDB Colider 158.70 220 PKP **PKPdf** **23 13 43.5 -0.5**
CLDB Colider 158.70 220 *eP* **PKPdf** **23 13 42.7 -1.3**
CAMR Camarioca 159.21 33 *eP* **PKPdf** **23 13 45.8 +1.5**
VILB Vilhena 159.36 206 PKP **PKPdf** **23 13 44.5 -0.2**
VILB Vilhena 159.36 206 *eP* **PKPdf** **23 13 44.4 -0.4**
BMO1 UHE Belo Monte 160.31 244 PKP **PKPdf** **23 13 48.8 -1.0**
CAIB Caibarion 160.65 29 *eP* **PKPdf** **23 13 45.9 0.0**
ATM1 UHE Belo Monte 160.67 243 PKP **PKPdf** **23 13 45.2 -1.0**
MGV Manicaragua 160.72 31 *eP* **PKPdf** **23 13 46.5 +0.5**
NNA Nana 160.97 157 PKP **PKPdf** **23 13 46.7 +0.1**
comp=Z,263nm,1.2s,baz=297,slow=1.3,SNR=14
NNA PKPab **PKPab** **23 14 34.0 +1.3**
comp=Z,119nm,1.1s,baz=212,slow=3.9,SNR=4.4
NNA pPKP **pPKPdf** **23 15 53.7 -0.1**
comp=Z,47nm,1.0s,baz=221,slow=2.8,SNR=4.7
NNA pPKPab **pPKPab** **23 16 33.9 +1.4**
comp=Z,74nm,1.2s,baz=226,slow=7.6,SNR=1.8
NPGB Novo Progresso 161.13 228 PKP **PKPdf** **23 13 45.6 -1.1**
NPGB Novo Progresso 161.13 228 *eP* **PKPdf** **23 13 46.7 0.0**
CCCC Cccc 162.56 27 *eP* **PKPdf** **23 13 48.6 +0.7**
ITTB Itaituba 163.09 234 PKP **PKPdf** **23 13 47.7 -1.0**
ITTB Itaituba 163.09 234 *eP* **PKPdf** **23 13 48.6 -0.1**
MDP Montagnes des 163.30 269 PKP **PKPdf** **23 13 48.8 -0.1**
comp=Z,101nm,0.9s,baz=164,slow=0.4,SNR=25
MDP PKPab **PKPab** **23 14 44.0 +0.7**
comp=Z,138nm,0.9s,baz=98,slow=5.2,SNR=13
MDP pPKP **pPKPdf** **23 15 56.1 -0.2**
comp=Z,50nm,1.1s,baz=357,slow=1.1,SNR=2.8
MDP pPKPab **pPKPab** **23 16 42.0 -1.0**
comp=Z,41nm,1.1s,baz=109,slow=4.7,SNR=3.4
MDP PP **PP** **23 18 29.9 -0.6**
comp=Z,24nm,0.9s,baz=116,slow=4.5,SNR=3.6
HLGC Holguin 163.55 22 *eP* **PKPdf** **23 13 49.5 +0.7**
LMGC Las Mercedes 163.90 27 *eP* **PKPdf** **23 13 48.6 -0.5**
YAR Yar 163.90 24 *eP* **PKPdf** **23 13 49.5 +0.3**
JTS Las Juntas de 163.94 72 PKP **PKPdf** **23 13 48.7 -0.7**
comp=Z,76nm,1.0s,baz=306,slow=1.9,SNR=19
JTS PKPab **PKPab** **23 14 45.3 -0.8**
comp=Z,11nm,0.5s,baz=300,slow=11,SNR=5.4
JTS pPKP **pPKPdf** **23 15 55.7 -1.2**
comp=Z,44nm,1.1s,baz=253,slow=5.9,SNR=4.7
JTS pPKPab **pPKPab** **23 16 45.0 -0.8**
comp=Z,40nm,1.1s,baz=10,slow=9.7,SNR=1.8
JTS Las Juntas de 163.94 72 **PKPdf** **23 13 48.1 -1.3**
JTS **PKPab** **23 14 46.2 +0.1**
PINC Pinares de May 164.02 22 *eP* **PKPdf** **23 13 49.5 +0.2**
MOAC Moa 164.15 19 *eP* **PKPdf** **23 13 50.6 +1.3**
CHIV Chivirico 164.23 25 *eP* **PKPdf** **23 13 49.6 +0.1**
NMDO Nuevo Mundo 164.24 20 *eP* **PKPdf** **23 13 49.6 +0.2**
MARVS Santiago de Cu 164.42 23 *eP* **PKPdf** **23 13 49.3 -0.3**
ATAH Atahualpa 164.44 145 PKP **PKPdf** **23 13 49.6 -0.7**
comp=Z,114nm,1.0s,baz=297,slow=1.2,SNR=52
ATAH PKPab **PKPab** **23 14 49.7 +1.2**
comp=Z,52nm,1.1s,baz=230,slow=2.7,SNR=2.7
ATAH pPKP **pPKPdf** **23 15 57.7 -0.2**
comp=Z,14nm,0.9s,baz=231,slow=6.2,SNR=1.9
ATAH pPKPab **pPKPab** **23 16 48.2 0.0**
comp=Z,104nm,1.2s,baz=233,slow=3.6,SNR=5.4
RCC Rio Carpintero 164.50 23 *eP* **PKPdf** **23 13 49.8 +0.1**
QMBU Quimbuelo 164.63 20 *eP* **PKPdf** **23 13 50.0 +0.2**
HDC Heredia 164.81 73 *eP* **PKPdf** **23 13 50.2 -0.1**
MASC Masc 164.84 18 *eP* **PKPdf** **23 13 49.6 -0.4**
MTDJ Mount Denham 165.21 32 *eP* **PKPdf** **23 13 50.4 -0.1**
ANWB Willy Bob 165.94 329 *eP* **PKPdf** **23 13 50.3 -0.6**
SMRT St. Maarten 166.23 334 *eP* **PKPdf** **23 13 51.6 +0.5**
CZSB Cruzeiro do Su 166.29 166 PKP **PKPdf** **23 13 50.8 -0.6**
CZSB Cruzeiro do Su 166.29 166 *eP* **PKPdf** **23 13 50.8 -0.6**
SDDR Presa de Saban 166.64 8 *eP* **PKPdf** **23 13 50.5 -1.0**
SABA Saba 166.68 334 *eP* **PKPdf** **23 13 51.6 0.0**
SKI Saint Kitts 166.70 331 *eP* **PKPdf** **23 13 52.6 +1.0**
MBWH Windy Hill 166.92 328 *eP* **PKPdf** **23 13 51.9 +0.2**
DHSZ Broadband at M 167.07 325 *eP* **PKPdf** **23 13 52.1 +0.3**
MMLZ Guadeloupe Bro 167.20 324 *eP* **PKPdf** **23 13 51.9 0.0**
SJG San Juan 167.23 346 PKP **PKPdf** **23 13 51.8 -0.1**
comp=Z,151nm,1.0s,baz=34,slow=2.1,SNR=23
SJG PKPab **PKPab** **23 15 01.6 +1.5**
comp=Z,15nm,0.4s,baz=4.2,slow=4.6,SNR=1.4
SJG pPKP **pPKPdf** **23 15 58.3 -1.2**
comp=Z,35nm,0.8s,baz=333,slow=2.8,SNR=2.6
SJG PP **PP** **23 18 48.2 +0.1**
comp=Z,3.6nm,0.2s,baz=0.3,slow=14,SNR=1.8
SJG San Juan 167.23 346 **PKPdf** **23 13 51.3 -0.6**
SJG San Juan 167.23 346 *eP* **PKPdf** **23 13 51.6 -0.3**
PDPR Patillas Dam, 167.29 345 **PKPdf** **23 13 51.7 -0.3**
PDPR PKPab **PKPab** **23 14 59.3 -1.0**
TBG Guadaloupe-3 167.33 324 *eP* **PKPdf** **23 13 52.7 +0.7**
DWS Wesley 167.35 322 *eP* **PKPdf** **23 13 54.1 +2.1**
CELP Cerrillos 167.36 348 PKPdf **PKPdf** **23 13 51.5 -0.5**
CELP PKPab **PKPab** **23 14 59.6 -1.0**
DSLB Salisbury 167.52 322 *eP* **PKPdf** **23 13 52.1 0.0**
MACA Manacapuru-AM 167.64 225 PKP **PKPdf** **23 13 51.6 -0.8**
MACA Manacapuru-AM 167.64 225 *eP* **PKPdf** **23 13 51.6 -0.8**
SVN Savane Anatole 167.81 319 *eP* **PKPdf** **23 13 52.4 0.0**
FDFM Morne la Roset 167.88 319 PKPab **PKPab** **23 15 01.2 -2.0**
BIM Bigot 167.98 318 PKPab **PKPab** **23 15 04.6 +0.9**
BIM Bigot 167.98 318 *eP* **PKPdf** **23 13 52.9 +0.3**

SLBI Saint Lucia, B 168.26 316 *eP* **PKPdf** **23 13 52.4 -0.3**
SLAC Saint Lucia, A 168.29 315 *eP* **PKPdf** **23 13 52.2 -0.5**
GCMP Grenada, Carri 169.61 311 *eP* **PKPdf** **23 13 52.7 -0.8**
TEFE Tefe 169.71 208 PKP **PKPdf** **23 13 52.6 -1.1**
TEFE Tefe 169.71 208 *eP* **PKPdf** **23 13 53.2 -0.5**
GRGR Grenville 170.01 311 *eP* **PKPdf** **23 13 50.5 -3.3**
BOAV Boa Vista 170.56 250 PKPdf **PKPdf** **23 13 53.4 -0.7**
BOAV PKPab **PKPab** **23 15 15.8 +0.4**
BOAV Boa Vista 170.56 250 PKP **PKPdf** **23 13 52.6 -1.5**
BOAV Boa Vista 170.56 250 *eP* **PKPdf** **23 13 53.8 -0.4**
TRN Trinidad (W) 170.66 302 *eP* **PKPdf** **23 13 54.7 +0.5**
SGC2 Sao Gabriel da 173.73 203 PKP **PKPdf** **23 13 54.2 -1.3**
SGC2 Sao Gabriel da 173.73 203 *eP* **PKPdf** **23 13 54.6 -1.0**
ROSC El Rosal 175.04 99 PKP **PKPdf** **23 13 55.8 -0.7**
comp=Z,117nm,1.1s,baz=218,slow=0.6,SNR=71
ROSC PKPab **PKPab** **23 15 35.4 -0.5**
comp=Z,13nm,0.5s,baz=300,slow=16,SNR=1.6
ROSC pPKP **pPKPdf** **23 16 04.2 -0.1**
comp=Z,98nm,1.2s,baz=11,slow=3.5,SNR=3.7
ROSC pPKPab **pPKPab** **23 17 36.8 +1.4**
comp=Z,5.9nm,0.3s,baz=128,slow=8.6,SNR=3.7
ROSC PP **PP** **23 19 29.6 +0.4**
comp=Z,15nm,1.0s,baz=143,slow=15,SNR=1.5
ROSC El Rosal 175.04 99 **PKPdf** **23 13 55.7 -0.7**
ROSC **PKPab** **23 15 35.9 0.0**
SDV Santo Domingo 176.58 21 PKP **PKPdf** **23 13 56.1 -0.4**
comp=Z,93nm,1.0s,baz=308,slow=0.9,SNR=60
SDV PKPab **PKPab** **23 15 42.3 +0.4**
comp=Z,43nm,0.8s,baz=246,slow=2.1,SNR=6.2
SDV pPKP **pPKPdf** **23 16 04.4 0.0**
comp=Z,83nm,1.1s,baz=181,slow=2.2,SNR=3.9
SDV pPKPab **pPKPab** **23 17 40.1 -1.3**
comp=Z,105nm,1.2s,baz=343,slow=4.5,SNR=6.2
SDV Santo Domingo 176.58 21 PKPdf **PKPdf** **23 13 54.8 -1.8**
SDV Santo Domingo 176.58 21 PKP **PKPdf** **23 13 54.7 -1.8**
SDV Santo Domingo 176.58 21 *eP* **PKPdf** **23 13 55.4 -1.1**

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*AFAD **06** 22:54:41.1, 35°.38**N**×40°.60**E**, h6^{km}, 3^{km}, MW4.6*
*ISK **06** 22:54:43.4, 35°.52**N**×40°.60**E**, h2^{km}, ML4.6/9*
*IDC **06** 22:54:45.3±0.9, 35°.65**N**×40°.62**E**, h0^{km}, mb4.1/10, mbtmp4.0/22, ML3.8/11, MS3.0/7, Error ellipse: s-maj=17.5km s-min=8.8km az=134.0*
*DSN **06** 22:54:46.9±3.1, 35°.41**N**×40°.72**E**, h10^{km}, mb4.5/15, Error ellipse: s-maj=49.2km s-min=8.3km az=82.0*
*GII **06** 22:54:47.1±0.0, 35°.684**N**±0°.003×40°.748**E**±0°.001, h0^{km}, Mws4.5, confirmed*
*GRAL **06** 22:54:47.9±0.3, 36°.20**N**×40°.63**E**, h50^{km}±999^{km}, MD4.9*
*NEIC **06** 22:54:47.3±1.7, 35°.65**N**±0°.06×40°.54**E**±0°.07, h10^{km}±1^{km}, mb4.3/38, Error ellipse: s-maj=10.8km s-min=8.9km az=160.0*

ISC 06 22:54:46.8±1.4, **35°.66N**±0°.03×**40°.64E**±0°.03, **h10**^{km}±9^{km}, **n186**, σ1**$44/222**, **mb4.2**/43, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIDY	**Mardin/Midyat-**	**1.85**	**19**	P	**Pn**	**22 55 19.7**	**+1.1**
MIDY				S	**Sb**	**22 55 43.7**	**-0.2**
SANL	**SANLIURFA_Merk**	**2.01**	**319**	P	**Pn**	**22 55 21.2**	**+0.4**
SANL				S	**Sb**	**22 55 48.0**	**-0.5**
SURC	**SANLIURFA_SURC**	**2.04**	**307**	P	**Pn**	**22 55 21.4**	**+0.2**
SURC				S	**Sb**	**22 55 48.5**	**-0.8**
BTMN	**Batman**	**2.29**	**13**	P	**Pn**	**22 55 25.8**	**+1.2**
DIYA	**Diyarbakir**	**2.30**	**350**	P	**Pn**	**22 55 25.9**	**+1.1**
DIYA				S	**Sn**	**22 55 54.4**	**+1.3**
URFA	**Urfa**	**2.30**	**321**	Pn	**Pn**	**22 55 24.9**	**+0.1**
URFA				Sn	**Sn**	**22 55 55.3**	**+2.0**
DYBB	**Diyarbakir**	**2.33**	**350**	Pn	**Pn**	**22 55 26.1**	**+1.0**
DYBB				Sn	**Sb**	**22 55 56.9**	**-0.7**
SIRN	**Sırnak**	**2.33**	**37**	P	**Pn**	**22 55 26.7**	**+1.5**
SIRN				S	**Sb**	**22 55 58.8**	**+1.1**
HANM	**anlurfa/Hi**	**2.38**	**324**	P	**Pn**	**22 55 25.8**	**-0.1**
HANM				S	**Sb**	**22 55 58.0**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.53**	**10**	Pn	**Pn**	**22 55 28.9**	**+1.0**
SVAN				Sn	**Sb**	**22 56 02.3**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.53**	**10**	P	**Pn**	**22 55 28.9**	**+1.0**
SRTM	**Siirt_Merkez**	**2.55**	**24**	P	**Pn**	**22 55 29.7**	**+1.5**
SRTM				S	**Sb**	**22 56 06.5**	**+2.4**
ATAB	**Bozova**	**2.61**	**315**	P	**Pn**	**22 55 29.8**	**+0.8**
ATAB				S	**Sb**	**22 56 05.9**	**+0.1**
NARI	**Adyaman-Kaht**	**2.68**	**326**	P	**Pn**	**22 55 32.8**	**-2.2**
NARI				S	**Sb**	**22 56 07.5**	**-0.5**
PERV	**Siirt/Pervari-**	**2.75**	**33**	P	**Pn**	**22 55 33.0**	**+2.0**
PERV				S	**Sb**	**22 56 10.4**	**+0.5**
MDNT	**Maden**	**2.83**	**345

299nm145µm20µm,0.7s
MMLI Mount Malkishu 5.39 235 P **Pn** **22 56 07.8 +0.6**
MMLI S **Sn** **22 57 11.5 +2.2**
RGMN Argaman 5.49 232 P **Pn** **22 56 10.4 +1.9**
GNI Garni 5.54 35 Pn **Pn** **22 56 10.6 +1.3**
1.1nm,0.3s,baz=300,slow=8.1,SNR=5.6
GNI Pg **Pb** **22 56 21.9 -1.7**
2.3nm,0.3s,baz=190,slow=19,SNR=11
GNI Lg Lg 22 57 41.0
0.4nm,0.3s,baz=277,slow=20,SNR=1.3
GNI LR LR 22 58 39.0
comp=Z,227nm,18.1s,baz=222,slow=42
3.7nm,0.3s
GNI Garni 5.54 35 P **Pn** **22 56 12.0 +2.6**
GNI Garni 5.54 35 Pn **Pn** **22 56 10.7 +1.4**
UJAP Al Uja 5.67 231 P **Pn** **22 56 14.3 +3.3**
TOKA Tokat 5.70 326 Pn **Pn** **22 56 12.2 +0.7**
YITV Yitav 5.70 231 P **Pn** **22 56 12.8 +1.3**
SALP Salfit 5.77 233 P **Pn** **22 56 15.6 +3.1**
2.7nm99nm,0.7s
ALMO Almog 5.78 230 P **Pn** **22 56 13.4 +0.9**
ALMO S **Sn** **22 57 20.5 +1.5**
SWQJ Swaqa 5.83 222 P **Pn** **22 56 14.3 +1.0**
1.1nm363nm23nm,0.6s
MZS Mizpe Shalem 5.97 228 P **Pn** **22 56 16.1 +0.9**
CSS Mathiatis 6.01 265 Pn **Pn** **22 56 15.6 -0.1**
GHAJ Ghor Haditha 6.06 226 Pn **Pn** **22 56 15.9 -0.6**
GHAJ Ghor Haditha 6.06 226 P **Pn** **22 56 17.1 +0.7**
4.1nm3µm107nm,0.4s
GHAJ Ghor Haditha 6.06 226 P **Pn** **22 56 16.5 +0.1**
MSBI Mazada 6.18 227 P **Pn** **22 56 19.1 +1.1**
AMAZ Amatzia 6.30 231 P **Pn** **22 56 22.6 +2.9**
3.8nm2µm57nm,1.2s
AMAZ Amatzia 6.30 231 P **Pn** **22 56 20.5 +0.8**
AMAZ S **Sn** **22 57 33.5 +1.8**
BR131 Keskin Array S 6.87 308 Pn **Pn** **22 56 27.6 -0.1**
BRTR Keskin Array B 6.87 308 Pn **Pn** **22 56 28.8 +1.1**
0.5nm,0.3s,baz=139,slow=18,SNR=11
BRTR Pg **Pb** **22 56 49.5 +3.2**
0.7nm,0.3s,baz=140,slow=18,SNR=7.6
BRTR Lg Lg 22 58 26.9
0.6nm,0.3s,baz=118,slow=29,SNR=3.9
BRTR LR LR 22 59 41.5
comp=Z,138nm,19.0s,baz=116,slow=43
0.9nm,0.4s
BRTR Keskin Array B 6.87 308 Pn **Pn** **22 56 29.0 +1.3**
KZIT Kziot 7.05 230 P **Pn** **22 56 30.8 +0.8**
1.9nm893nm28nm,0.8s
KZIT Kziot 7.05 230 P **Pn** **22 56 31.8 +1.8**
HRFI Mount Harif 7.32 222 P **Pn** **22 56 35.2 +1.5**
1.5nm1µm26nm,0.7s
HRFI Mount Harif 7.32 222 P **Pn** **22 56 34.1 +0.3**
EIL Elat 7.65 220 Pn **Pn** **22 56 37.8 -0.5**
1.0nm,0.3s,baz=4.3,slow=9.3,SNR=11
EIL Pg Pb 22 57 05.8 +6.2
4.7nm,0.3s,baz=28,slow=13,SNR=8.3
EIL Lg Lg 22 58 47.5
10nm,0.3s,baz=72,slow=19,SNR=11
EIL LR LR 22 59 41.9
comp=Z,115nm,18.8s,baz=38,slow=39
7.6nm,0.7s
EIL Elat 7.65 220 P **Pn** **22 56 40.0 +1.7**
1.2nm1µm20nm,0.7s
EIL Elat 7.65 220 P **Pn** **22 56 38.6 +0.4**
KBZ Khabaz 8.25 12 Pn **Pn** **22 56 48.4 +2.0**
0.3nm,0.3s,baz=190,slow=6.1,SNR=5.5
KBZ LR LR 23 00 25.6
comp=Z,237nm,20.2s,baz=174,slow=41
0.5nm,0.3s
KVAR Kislovodsk Arr 8.44 10 Pn **Pn** **22 56 52.2 +3.1**
baz=167,slow=16
KVAR LR LR 23 00 38.9
comp=Z,157nm,21.2s,baz=99,slow=42
1.6nm,0.5s
ELL Elmali 8.74 280 Pn **Pn** **22 56 54.8 +1.5**
KARP Karpathos 10.97 273 Pn **Pn** **22 57 22.1 -1.7**
RAYN Ar Rayn 12.81 159 Pn **Pn** **22 57 47.2 -1.8**
IDI Anoyia 12.84 273 Pn **Pn** **22 57 49.8 +0.4**
3.6nm,0.6s,baz=78,slow=9.3,SNR=1.5
IDI Anoyia 12.84 273 Pn **Pn** **22 57 47.6 -1.8**
MLR Muntele Rosu 14.85 316 Pn **Pn** **22 58 17.3 +0.5**
0.2nm,0.3s,baz=114,slow=20,SNR=1.5
0.8nm,0.4s
ITM Ithomi 15.14 281 Pn **Pn** **22 58 20.7 0.0**
ITM IAmb IAmb 22 58 55.9
comp=Z,20nm,1.3s
SHME Shamm 16.38 121 P **Pn** **22 58 35.4 -1.4**
BURAR Bucovina Array 16.56 321 P **P** **22 58 42.0 +0.4**
AJN Ajban 16.61 128 *i* P **Pn** **22 58 38.6 -1.0**
SNR=7.0
NAZ Nazwa, Dubai 16.75 125 *i* P **Pn** **22 58 39.4 -2.1**
SNR=25
ASUD Al Ashush, Dub 16.78 127 *i* P **Pn** **22 58 39.8 -2.1**
SNR=6.5
MZR Muzera 16.84 135 *i* P **Pn** **22 58 39.9 -2.7**
SNR=15
FAQ Al Faqa, Dubai 16.87 126 P **Pn** **22 58 39.7 -3.3**
UOSS Minazif 17.14 124 P **Pn** **22 58 43.6 -2.9**
UOSS Minazif 17.14 124 Pn **Pn** **22 58 45.5 -1.0**
UOSS IAmb IAmb 22 58 47.4
comp=Z,29nm,0.8s
AKASG Malin Array Be 17.15 335 P **Pn** **22 58 45.9 -0.5**
comp=Z,0.4nm,0.3s,baz=147,slow=12,SNR=4.9
comp=Z,0.2nm,0.2s
HATD Hatta, Dubai 17.18 125 *i* P **Pn** **22 58 44.3 -2.6**
SNR=6.0
ASHO Ashiyiah 17.22 125 *i* P **Pn** **22 58 44.7 -2.8**
SNR=9.7
BELG Belogornoye 17.45 14 P **Pn** **22 58 50.7 +0.6**
comp=Z,0.5nm,0.3s,baz=239,slow=5.5,SNR=3.8
comp=Z,14nm,0.9s
ALNE Al Ain 17.46 127 *i* P **Pn** **22 58 48.0 -2.3**
SNR=18
HRA Herat 17.75 88 Pn **Pn** **22 58 53.8 -0.3**
SOHO SOHO 17.91 126 P **Pn** **22 58 54.7 -1.3**
TIP Timpagrande 19.27 288 P **P** **22 59 11.3 -0.3**
AKTO Aktyubinsk 19.41 35 P **P** **22 59 13.2 +0.3**
comp=Z,0.4nm,0.3s,baz=219,slow=7.1,SNR=13
comp=Z,4.5nm,0.7s
AB31 Akbulak array 19.61 40 P **P** **22 59 15.5 +0.4**
ABKAR Akbulak array 19.61 40 P **P** **22 59 15.6 +0.6**
BLY Banja Luka 20.03 304 P **P** **22 59 18.5 -1.1**
SGRT San Giovanni R 20.32 295 P **P** **22 59 22.3 -0.7**
SGRT IAmb IAmb 22 59 24.2
comp=Z,15nm,0.8s
RAFF Raffo Rosso 21.18 282 P **P** **22 59 32.5 +0.3**
RONA Rosalia, Austr 21.70 311 *i* P **P** **22 59 39.2 +1.4**
comp=Z,2.8nm,0.7s
ARSA Arzberg 22.00 309 *i* P **P** **22 59 41.7 +0.8**
comp=Z,3.6nm,1.4s
CONA Conrad Observa 22.06 311 *i* P **P** **22 59 43.3 +1.6**
comp=Z,6.0nm,1.3s
SOKA Soboth 22.10 308 *i* P **P** **22 59 42.8 +0.7**
comp=Z,5.6nm,1.1s
SHAA Shahritus 22.12 77 P **P** **22 59 42.5 +0.1**
SHAA IAmb IAmb 22 59 57.2
comp=Z,15nm,0.9s
AQU L'Aquila 22.14 296 P **P** **22 59 41.1 -1.5**
AQU IAmb IAmb 22 59 57.6
comp=Z,8.4nm,0.9s
OBKA Obir 22.35 307 *e*P **P** **22 59 45.9 +1.0**
comp=Z,8.3nm,1.1s
NRCA Norcia 22.42 297 P **P** **22 59 43.8 -1.8**
FDMO Fiordimonte 22.48 297 P **P** **22 59 45.0 -1.1**
FDMO IAmb IAmb 22 59 48.3
comp=Z,9.3nm,0.9s
CESX Cesi 22.78 296 P **P** **22 59 48.0 -1.3**
CESX IAmb IAmb 22 59 50.0
comp=Z,8.9nm,0.7s
SABO M.te Sabotino 22.81 305 P **P** **22 59 48.0 -1.6**
SABO IAmb IAmb 23 00 11.5
comp=Z,14nm,1.2s
MURB Monte Urbino 22.92 298 P **P** **22 59 50.1 -0.7**
MURB IAmb IAmb 22 59 53.5
comp=Z,23nm,1.4s
PRED Cave del Predi 22.98 306 P **P** **22 59 51.0 -0.5**
MYKA Terra Mystica 22.98 307 *i* P **P** **22 59 52.0 +0.5**
comp=Z,13nm,1.4s
MOA Molln 23.01 310 *i* P **P** **22 59 52.8 +1.1**
comp=Z,9.1nm,0.9s
KBA Koelnbreinsper 23.32 308 *i* P **P** **22 59 55.5 +0.4**
comp=Z,5.1nm,0.7s
GEC2 GERESS Array S 23.75 312 P **P** **22 59 58.6 -0.6**
GEC2 IAmb IAmb 23 00 00.3
comp=Z,6.7nm,0.9s
GERES GERESS Array B 23.75 312 P **P** **22 59 59.4 +0.2**
comp=Z,3.6nm,0.7s,baz=120,slow=8.4,SNR=38
comp=Z,3.6nm,0.7s
GERES GERESS Array B 23.75 312 P **P** **22 59 58.5 -0.7**
ABTA Abfaltersbach 23.76 306 *i* P **P** **22 59 59.2 -0.1**
comp=Z,3.9nm,0.9s
LESA Schwarzleotal 23.87 308 *e*P **P** **23 00 00.7 +0.4**
comp=Z,6.8nm,1.2s
TEOL Teolo 23.95 303 P **P** **23 00 01.3 +0.3**
TEOL IAmb IAmb 23 00 02.5
comp=Z,12nm,0.8s
ARTI Arti 23.98 25 P **P** **23 00 02.1 +0.9**
BTK Batken 24.17 70 P **P** **23 00 04.5 +1.2**
BTK IAmb IAmb 23 00 31.5
comp=Z,8.0nm,1.4s
KK31 Karatay Array 24.17 63 P **P** **23 00 03.0 -0.1**
KK31 IAmb IAmb 23 00 07.7
comp=Z,6.6nm,0.7s
KKAR Karatay Array 24.17 63 P **P** **23 00 03.8 +0.7**
WTTA Wattenberg 24.49 307 *i* P **P** **23 00 06.3 +0.1**
comp=Z,9.8nm,1.3s
WATA Walderalm 24.55 307 *i* P **P** **23 00 06.7 0.0**
comp=Z,4.6nm,1.0s
SQTA Sankt Quirin 24.75 307 *e*P **P** **23 00 08.6 +0.1**
comp=Z,2.5nm,0.7s
MOTA Moosalm 24.86 307 *e*P **P** **23 00 10.1 +0.6**
comp=Z,11nm,1.2s
MANEM Manem 24.94 76 P **P** **23 00 11.2 +0.7**
MANEM IAmb IAmb 23 00 18.6
comp=Z,13nm,0.6s
FETA Feichten 25.01 306 *i* P **P** **23 00 11.8 +0.9**
comp=Z,8.0nm,1.2s
RETA Reutte 25.12 307 *i* P **P** **23 00 13.1 +1.3**
comp=Z,4.9nm,1.1s
DAVA Damuels 25.64 306 *i* P **P** **23 00 17.1 +0.6**
comp=Z,6.0nm,1.1s
ARSB Arslanbob 25.85 68 P **P** **23 00 20.2 +1.7**
SENIN Lac Senin/Sane 27.15 303 P **P** **23 00 29.6 -0.7**
SENIN IAmb IAmb 23 00 34.0
comp=Z,3.1nm,0.7s
FINES FINESS Array B 27.41 345 P **P** **23 00 31.6 -0.5**
comp=Z,2.2nm,0.8s,baz=138,slow=8.2,SNR=6.2
comp=Z,2.2nm,0.8s
NRN Naryn 28.12 67 P **P** **23 00 39.1 0.0**
NRN IAmb IAmb 23 00 44.2
comp=Z,4.8nm,1.0s
TARG Taragay, Kyrgy 29.48 67 P **P** **23 00 53.7 +2.4**
TARG IAmb IAmb 23 01 26.2
comp=Z,3.9nm,1.1s
HFS Hagfors 30.03 333 P **P** **23 00 55.5 0.0**
comp=Z,3.9nm,0.8s,baz=133,slow=6.5,SNR=5.6
comp=Z,3.9nm,0.8s
PDGK Podgornoye 30.73 64 P **P** **23 01 02.8 +0.7**
KURBB Kurchatov Arra 31.05 49 P **P** **23 01 05.2 +0.5**
comp=Z,0.5nm,0.3s,baz=263,slow=9.1,SNR=5.1
comp=Z,0.5nm,0.3s
KURK Kurchatov 31.13 49 P **P** **23 01 04.3 -1.0**
MAKZ Makanchi 32.67 57 P **P** **23 01 20.0 +1.0**
MAKZ IAmb IAmb 23 01 24.1
comp=Z,4.1nm,0.7s
MKAR Makanchi Array 32.89 57 P **P** **23 01 22.4 +1.5**
comp=Z,2.9nm,0.7s,baz=260,slow=7.0,SNR=19
comp=Z,2.9nm,0.7s
MKAR Makanchi Array 32.89 57 P **P** **23 01 22.1 +1.3**
ARCES ARCESS Array B 34.94 351 P **P** **23 01 38.9 +0.5**
comp=Z,2.6nm,1.0s,baz=152,slow=7.9,SNR=4.3
comp=Z,2.6nm,1.0s
ARCES ARCESS Array B 34.94 351 P **P** **23 01 38.6 +0.2**
ZALV Zalesovo Beam 35.58 45 P **P** **23 01 42.9 -1.2**
comp=Z,0.3nm,0.4s,baz=278,slow=11,SNR=1.8
comp=Z,0.3nm,0.4s
ZALV Zalesovo Beam 35.58 45 P **P** **23 01 43.6 -0.5**
EKA Eskdalemuir Ar 35.69 317 P **P** **23 01 46.4 +1.4**
comp=Z,4.0nm,1.0s,baz=118,slow=8.8,SNR=2.9
comp=Z,4.0nm,1.0s
TORD Torodi Ar. Bea 41.57 247 P **P** **23 02 34.2 -0.5**
comp=Z,1.3nm,0.8s,baz=57,slow=6.8,SNR=7.3
comp=Z,1.3nm,0.8s
TORD Torodi Ar. Bea 41.57 247 P **P** **23 02 33.3 -1.4**
TORD IAmb IAmb 23 02 47.4
comp=Z,4.5nm,0.6s
SPITS Spitsbergen Ar 43.87 353 P **P** **23 02 53.5 +0.7**
comp=Z,9.4nm,1.0s,baz=235,slow=11,SNR=1.8
comp=Z,9.4nm,1.0s
PZH PanZhiHua 52.40 82 P **P** **23 04 01.7 +2.2**
HHC Hu-ho-hao-te 54.55 62 *e*P **P** **23 04 12.5 -2.6**
XLT XiLinHaoTe 56.71 57 *e*P **P** **23 04 34.4 +3.9**
XLT ScP **ScP** **23 09 20.9 -5.2**
XLT S **S** **23 12 22.4 -0.7**
XLT sS sS 23 12 28.6 0.0
XLT XiLinHaoTe 56.71 57 SS **SS** **23 16 07.2 -3.3**
XLT pmax pmax
comp=Z,220nm,1.2s
XLT pmax pmax
comp=Z,3µm,9.5s
C27K Jago River 74.98 2 P **P** **23 06 29.1 +1.4**
D25K Kavik River 75.20 3 P **P** **23 06 30.5 +1.4**
D25K IAmb IAmb 23 07 03.5
comp=Z,3.9nm,1.1s
E24K Your Creek 76.36 4 P **P** **23 06 37.8 +2.1**
E24K IAmb IAmb 23 06 49.5
comp=Z,2.3nm,1.1s
G19K Purcell Mounta 77.60 7 P **P** **23 06 43.7 +1.0**
H29M Whitestone 78.44 360 P **P** **23 06 48.6 +1.3**
J20K Nowinta River 79.81 7 P **P** **23 06 56.0 +1.2**
CAST Castle Rocks 80.74 6 P **P** **23 07 00.6 +0.7**

*AEIC **06** 23:16:03.5±2.0,52°.65N±0°.07×168°.07W±0°.08,h32km±8km, Error ellipse: s-maj=10.3km s-min=6.7km az=164.0*
NEIC 06 23:16:03.6±1.8,52°.75N±0°.04×168°.04W±0°.10, h28km±10km, ML3.6/16, ML3.3(AEIC)**, Error ellipse: s-maj=9.4km s-min=4.3km az=116.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**0.53**	**344**		Pb	23 16 14.7	+0.3
OKTU	**Okmok Mt. Tuli**	**0.64**	**0**		Pn	23 16 16.6	-0.2
OKFG	**Magazine Ridge**	**0.67**	**7**		Pb	23 16 16.8	+0.1
OKFG					Sn	23 16 26.8	0.0
OKCE	**Okmok Cone E**	**0.69**	**354**		Pb	23 16 17.2	+0.2
OKNC	**Okmok New Cone**	**0.71**	**356**		Pn	23 16 17.9	+0.1
OKNC					Sn	23 16 29.9	+2.0
MAPS	**Pakushin South**	**1.25**	**31**		Pn	23 16 24.4	-0.8
MAPS					Sb	23 16 42.2	0.0
MGOD	**Makushin Gods**	**1.26**	**33**		Pn	23 16 24.5	-1.0
MGOD					Pb	23 16 24.8	-1.9
MGOD					Sb	23 16 42.8	+0.2
MNAT	**Makushin Natee**	**1.40**	**35**		Pn	23 16 26.9	-0.4
UNV	**Unalaska Valle**	**1.44**	**39**		Pn	23 16 27.2	-0.6
UNV					Sn	23 16 46.3	+0.6
UNV				IAML		23 16 47.4	
comp=N,443nm,0.3s							
AKRB	**Akutan Reef Bi**	**1.82**	**40**		Pn	23 16 33.4	+0.4
ZRO	**Akutan Zero**	**1.83**	**42**		Sn	23 16 56.9	+1.5
AKBBA	**Akutan Broad B**	**1.85**	**42**		Pn	23 16 33.5	+0.1
LVA	**Lava Point**	**1.86**	**40**		Pn	23 16 34.0	+0.4
LVA				IAML		23 17 01.9	
comp=E,557nm,0.5s							
LVA				IAML		23 17 03.2	
comp=N,828nm,0.6s							
AKV	**Akutan Volcano**	**1.86**	**41**		Pn	23 16 33.9	+0.2
AKV					Sb	23 16 59.3	-0.4
AKLV	**Akutan Long Va**	**1.89**	**41**		Pn	23 16 34.2	+0.2
AHB	**Akutan Harbor**	**1.91**	**43**		Pn	23 16 34.2	-0.1
AHB					Sn	23 16 58.9	+1.5
AKUT	**Akutan**	**1.94**	**43**		Pn	23 16 34.7	0.0
AKSA	**Akutan Strait**	**1.98**	**44**		Pn	23 16 34.8	-0.4
SSBA	**Shishaldin**	**3.09**	**47**		Pn	23 16 50.6	+0.1
SSBA					Pb	23 16 51.0	-6.8
SSLN	**Shishaldin Nor**	**3.17**	**48**		Pn	23 16 52.0	+0.4
SSLN					Pb	23 16 52.2	-7.0
KOFP	**Korovin Flat P**	**3.73**	**265**		Pn	23 16 58.7	-0.6
ATKA	**Atka Island**	**3.80**	**264**	Pn	Pn	23 16 59.4	-0.8
ATKA				IAML		23 17 58.5	
comp=N,65nm,1.2s							
DTNA	**Dutton South F**	**4.18**	**53**		Pn	23 17 05.5	0.0
SPIA	**Saint Paul Isl**	**4.62**	**345**	Pn	Pn	23 17 11.8	+0.4
SPIA				IAML		23 18 52.9	
comp=E,86nm,1.2s							
GSIG	**Igitkin Island**	**4.89**	**264**		Pn	23 17 14.0	-1.2
GSTR	**Great Sitkin T**	**4.95**	**266**	Pn	Pn	23 17 15.8	-0.2
SDPT	**Sand Point**	**5.16**	**57**	Pn	Pn	23 17 19.8	+0.9
SDPT				IAML		23 18 03.0	
comp=N,27nm,1.1s							
SDPT				IAML		23 18 38.2	
comp=E,32nm,1.1s
ETKA Kagalaska Isla 5.21 264 Pn **Pn** **23 17 18.3 -1.2**
ADK Adak 5.37 264 Pn **Pn** **23 17 21.6 -0.2**
ADK Adak 5.37 264 Pn **Pn** **23 17 21.1 -0.7**
ADK IAML **23 18 26.4**
comp=E,51nm,0.3s
ADK IAML **23 18 27.1**
comp=E,60nm,0.3s
CNBA Chernabura Isl 5.42 64 Pn **Pn** **23 17 22.1 -0.4**
KIWB Kanaga Island 5.66 265 Pn **Pn** **23 17 25.2 -0.6**
KIMD Kanaga Island 5.73 264 Pn **Pn** **23 17 25.9 -0.8**
TAFL Tanaga Flats 6.13 265 Pn **Pn** **23 17 31.6 -0.7**
TASE Tanaga Southea 6.20 265 Pn **Pn** **23 17 32.5 -0.7**
CHGN Chignik 6.64 54 Pn **Pn** **23 17 39.8 +0.6**
GANE Gareloi Northe 6.65 266 Pn **Pn** **23 17 38.3 -1.1**
GAKI Gareloi-Kavalg 6.74 264 Pn **Pn** **23 17 39.3 -1.2**
O14K Tigyukauivet M 7.54 28 Pn **Pn** **23 17 53.3 +1.8**
CEPE Semis' Perret 7.58 269 Pn **Pn** **23 17 51.5 -0.6**
M11K Mekoryuk 7.72 7 Pn **Pn** **23 17 54.2 +0.2**
O15K Ungalikthiuk R 7.92 32 Pn **Pn** **23 17 57.3 +0.6**
AMKA Amchitka 7.92 265 Pn **Pn** **23 17 55.7 -1.1**
N14K Kuskokwak Cree 8.01 24 Pn **Pn** **23 17 59.6 +1.7**
N15K Kwethluk River 8.64 27 Pn **Pn** **23 18 07.8 +1.2**
M14K Bethel 8.89 20 Pn **Pn** **23 18 08.5 +1.3**
O16K Kokwok River B 8.82 35 Pn **Pn** **23 18 10.2 +1.2**
L14K Kuka Creek 9.09 17 Pn **Pn** **23 18 13.2 +0.5**
P17K Kvichak River 9.16 41 Pn **Pn** **23 18 14.7 +1.0**
K13K Kusilvak Mount 9.39 10 Pn **Pn** **23 18 18.6 +1.7**
OHAK Old Harbor 9.59 56 Pn **Pn** **23 18 18.1 -1.4**
M16K Timber Creek 9.66 27 Pn **Pn** **23 18 21.0 +0.4**
N17K Nushagak Hills 9.81 33 Pn **Pn** **23 18 22.4 -0.3**
O18K Koktuh Hills 10.06 40 Pn **Pn** **23 18 26.2 0.0**
L16K Owhat River 10.10 24 Pn **Pn** **23 18 26.1 -0.5**
KDAK Kodiak Island 10.15 54 Pn **Pn** **23 18 26.0 -1.3**
Q19K Cape Douglas, 10.18 47 Pn **Pn** **23 18 27.1 -0.7**
N19K Bonanza Creek 10.96 37 Pn **Pn** **23 18 39.6 +1.1**
K17K Iditarod 11.25 24 Pn **Pn** **23 18 44.2 +1.9**
J17K VABM Dome 11.67 20 Pn **Pn** **23 18 49.4 +1.3**
SLKM Skilak Lake 12.48 44 Pn **Pn** **23 18 59.4 +0.2**
SEW Seward 12.62 47 Pn **Pn** **23 19 00.1 -1.0**

*IDC **06** 23:31:06.6±0.9,36°.93N×33°.01W,h0km,mb3.8/12, mbtmp3.8/12,Error ellipse: s-maj=30.8km s-min=19.2km az=150.0*
ISC 06 23:31:08.5±0.8,37°.1N±0°.1×33°.0W±0°.1,h10km,n13, σ1§15/14,mb3.8/11,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**2.69**	**31**	Pn	**Pn**	**23 31 52.1**	**+0.2**
H07S1				Sn	**Sn**	**23 32 21.9**	**-2.7**
H07S1				T	T	23 34 47.2	
GERES	**GERESS Array B**	**35.60**	**56**	P	**P**	**23 38 06.6**	**+0.4**
0.3nm,0.7s,baz=265,slow=9.8,SNR=3.0							
0.3nm,0.7s							
NOA	**NORSAR Array B**	**36.54**	**35**	P	**P**	**23 38 14.4**	**+0.3**
1.1nm,0.8s,baz=252,slow=8.7,SNR=3.5							
1.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**39.07**	**118**	P	**P**	**23 38 34.8**	**-1.1**
0.8nm,0.9s,baz=305,slow=6.2,SNR=3.2							
0.8nm,0.9s							
FINES	**FINESS Array B**	**43.61**	**37**	P	**P**	**23 39 13.9**	**+1.2**
3.7nm,0.8s,baz=241,slow=7.8,SNR=4.8							
3.7nm,0.8s							
AKASG	**Malin Array Be**	**45.54**	**52**	P	**P**	**23 39 28.5**	**+0.3**
0.2nm,0.4s,baz=278,slow=7.6,SNR=2.0							
0.2nm,0.4s							
KBZ	**Khabaz**	**56.30**	**58**	P	**P**	**23 40 50.6**	**+1.4**
1.7nm,0.9s,baz=284,slow=8.8,SNR=3.6							
1.7nm,0.9s							
PDAR	**Pinedale Array**	**57.12**	**301**	P	**P**	**23 40 55.4**	**-0.1**
0.2nm,0.4s,baz=63,slow=2.7,SNR=3.7							
0.2nm,0.4s							
TXAR	**Lajitas Array**	**58.43**	**285**	P	**P**	**23 41 04.8**	**+0.1**
1.0nm,0.8s,baz=81,slow=7.7,SNR=5.5							
1.0nm,0.8s							
LPAZ	**La Paz**	**62.56**	**219**	P	**P**	**23 41 32.2**	**-1.3**
1.6nm,1.0s,baz=16,slow=1.6,SNR=4.2							
1.6nm,1.0s							
KURBB	**Kurchatov Arra**	**73.98**	**38**	P	**P**	**23 42 44.6**	**+0.6**
1.2nm,0.9s,baz=308,slow=6.4,SNR=7.8							
1.2nm,0.9s							
ZALV	**Zalesovo Beam**	**74.71**	**33**	P	**P**	**23 42 48.7**	**+0.5**
0.8nm,0.8s,baz=344,slow=4.7,SNR=2.0							
0.8nm,0.8s							
MKAR	**Makanchi Array**	**78.37**	**39**	P	**P**	**23 43 09.0**	**-0.2**
0.6nm,0.8s,baz=311,slow=4.5,SNR=4.4							
0.6nm,0.8s							

*SJA **06** 23:52:14.1±0.7,24°.04S×68°.59W,h132km,ML3.6,MW3.7*
*GUC **06** 23:52:18.5±0.8,23°.87S×68°.80W,h112km±5km,ML3.7*
ISC 06 23:52:13.7±1.5,23°.92S±0°.03×68°.65W±0°.04, h154km±13km,n35,σ2§48/57,5D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.06**	**24**	*e*P	**Pn**	**23 52 41.4**	**+1.6**
AF01				*e*S	**Sn**	**23 52 59.3**	**-0.4**
AF01				IAML		23 53 06.8	
comp=Z,914nm,0.7s							
AF01	**San Pedro de A**	**1.06**	**24**	*e*P	**Pn**	**23 52 41.4**	**+1.6**
AF01				*e*S	**Sn**	**23 52 58.9**	**-0.7**
AF01				IAML		23 53 00.3	
comp=E,6µm,0.3s							
PB06	**IPOC Station P**	**1.48**	**325**	*e*P		**23 52 44.8**	**+1.2**
PB06				IAML		23 53 11.7	
comp=Z,407nm,0.3s							
PB06	**IPOC Station P**	**1.48**	**325**	*i*P	**Pn**	**23 52 44.8**	**+1.2**
PB06				*e*S	**Sn**	**23 53 04.7**	**-1.8**
PB06				IAML		23 53 05.6	
comp=N,2µm,0.3s							
PB14	**IPOC Station P**	**1.75**	**246**	*e*P	**Pn**	**23 52 47.9**	**+1.3**
PB14				*e*S	**Sn**	**23 53 10.5**	**-1.3**
PB14				IAML		23 53 13.9	
comp=Z,314nm,0.7s							
PB14	**IPOC Station P**	**1.75**	**246**	*e*P	**Pn**	**23 52 47.8**	**+1.2**
PB14				*e*S	**Sn**	**23 53 10.2**	**-1.7**
PB14				IAML		23 53 11.0	
comp=E,251nm,0.4s							
PB05	**IPOC Station P**	**1.78**	**306**	*e*P	**Pn**	**23 52 47.8**	**+1.0**
PB05				*e*S	**Sn**	**23 53 10.7**	**-1.4**
PB05				IAML		23 53 15.8	
comp=Z,243nm,0.4s							
PB05	**IPOC Station P**	**1.78**	**306**	*i*P	**Pn**	**23 52 48.0**	**+1.2**
PB05				*e*S	**Sn**	**23 53 09.9**	**-2.2**
PB05				IAML		23 53 12.0	
comp=N,380nm,0.3s							
PB10	**IPOC Station P**	**1.79**	**283**	*e*P	**Pn**	**23 52 48.0**	**+1.2**
PB10				*e*S	**Sn**	**23 53 10.5**	**-1.7**
PB10				IAML		23 53 12.6	
comp=Z,331nm,0.3s							
PB10	**IPOC Station P**	**1.79**	**283**	*e*P	**Pn**	**23 52 48.0**	**+1.2**
PB10				*e*S	**Sn**	**23 53 10.0**	**-2.1**
PB10				IAML		23 53 14.8	
comp=N,415nm,0.3s							
PB03	**IPOC Station P**	**2.12**	**331**	*e*P	**Pn**	**23 52 52.4**	**+1.6**
PB03				IAML		23 53 22.9	
comp=Z,480nm,0.3s							
PB03	**IPOC Station P**	**2.12**	**331**	*i*P	**Pn**	**23 52 52.5**	**+1.6**
PB03				*e*S	**Sn**	**23 53 18.6**	**-0.7**
PB03				IAML		23 53 20.6	
comp=N,627nm,0.3s							
SALTA		**2.13**	**99**	*e*P	**Pn**	**23 52 48.6**	**-2.6**
SALTA				*e*S		23 52 49.1	
SALTA				*e*P		23 52 50.2	
PB09	**IPOC Station P**	**2.19**	**345**	*e*P	**Pn**	**23 52 54.0**	**+2.5**
PB09				IAML		23 53 31.2	
comp=Z,385nm,0.6s							
PB09	**IPOC Station P**	**2.19**	**345**	*i*P	**Pn**	**23 52 54.1**	**+2.5**
PB09				*e*S	**Sn**	**23 53 21.7**	**+1.1**
PB09				IAML		23 53 22.8	
comp=N,580nm,0.2s							
PB07	**IPOC Station P**	**2.46**	**332**	*e*P	**Pn**	**23 52 56.5**	**+1.6**
PB07				IAML		23 53 32.4	
comp=Z,291nm,0.8s							
PB07	**IPOC Station P**	**2.46**	**332**	*i*P	**Pn**	**23 52 56.5**	**+1.6**
PB07				*e*S	**Sn**	**23 53 26.1**	**-0.5**
PB07				IAML		23 53 27.6	
comp=E,493nm,0.3s							
AC01	**Pan de Azucar**	**2.83**	**218**	*e*P	**Pn**	**23 53 00.6**	**+1.4**
AC01				*e*S	**Sn**	**23 53 30.8**	**-3.7**
AC01				IAML		23 53 38.2	
comp=Z,98nm,0.6s							

PB02	**IPOC Station P**	**2.83**	**336**	*eP*	**Pn**	**23 53 01.1**	**+1.7**
PB02				*eS*	**Sn**	**23 53 26.7**	**-7.9**
PB02				IAML		23 53 47.0	
	comp=Z,525nm,0.3s						
PB02	**IPOC Station P**	**2.83**	**336**	*eP*	**Pn**	**23 53 01.0**	**+1.7**
PB02				*eS*	**Sn**	**23 53 34.2**	**-0.4**
PB02				IAML		23 53 42.7	
	comp=E,496nm,0.3s						
AC02	**Maricunga**	**2.93**	**188**	*eP*	**Pn**	**23 53 04.6**	**+3.7**
AC02				*eS*	**Sn**	**23 53 34.7**	**-2.7**
AC02				IAML		23 53 44.2	
	comp=Z,82nm,0.2s						
AC02	**Maricunga**	**2.93**	**188**	*eP*	**Pn**	**23 53 04.4**	**+3.5**
AC02				*eS*	**Sn**	**23 53 40.4**	**+3.0**
SLA	**San Lorenzo**	**2.98**	**106**	*eP*	**Pn**	**23 53 02.1**	**+1.0**
HJA	**Humahuaca**	**3.06**	**77**	*eP*	**Pn**	**23 53 03.1**	**+0.7**
FSA	**Cafayete**	**3.26**	**133**	*eP*	**Pn**	**23 53 04.2**	**-0.6**
PB08	**IPOC Station P**	**3.79**	**353**	*eP*	**Pn**	**23 53 14.0**	**+2.1**
PB08				IAML		23 54 28.3	
	comp=Z,48nm,0.5s						
GO03	**Copiapo**	**3.92**	**201**	*eP*	**Pn**	**23 53 14.9**	**+1.7**
GO03				*eS*	**Sn**	**23 54 00.2**	**+0.8**
GO03				IAML		23 54 02.0	
	comp=Z,90nm,0.4s						
GO03	**Copiapo**	**3.92**	**201**	*eP*	**Pn**	**23 53 14.6**	**+1.4**
GO03				*eS*	**Sn**	**23 54 00.1**	**+0.6**
AHML	**Horco Molle**	**4.14**	**134**	*eP*	**Pn**	**23 53 15.0**	**-0.9**
TINO	**Tinogasta**	**4.24**	**167**	*eP*	**Pn**	**23 53 16.1**	**-1.2**
TINO				*eS*	**Sn**	**23 54 13.9**	**+7.0**
PB11	**IPOC Station P**	**4.25**	**347**	*eP*	**Pn**	**23 53 18.9**	**+1.4**
PB11				IAML		23 54 15.2	
	comp=Z,76nm,0.5s						
GO01	**Chusmiza**	**4.26**	**353**	*eP*	**Pn**	**23 53 20.4**	**+2.3**
GO01				IAML		23 54 21.5	
	comp=Z,42nm,0.8s						
VCA	**Vinchina**	**4.81**	**175**	*eP*	Pn	23 53 30.0	+5.1
VCA				*eS*	**Sn**	**23 54 19.8**	**-0.6**
AC05	**El Transito**	**5.11**	**196**	*eP*	**Pn**	**23 53 30.4**	**+1.6**
AC05				*eS*	**Sn**	**23 54 22.4**	**-4.9**
AC05				IAML		23 54 30.9	
	comp=Z,40nm,1.1s						
LCO	**Las Campanas**	**5.39**	**199**	*eP*	**Pn**	**23 53 33.4**	**+0.8**
LCO				*eS*	**Sn**	**23 54 28.7**	**-5.6**
LCO				IAML		23 54 40.8	
	comp=Z,70nm,0.4s						

*IDC **07** 00:18:59.9±6.2, 12°.21S×167°.29E, h318km±49km, mb3.3/6, mbtmp4.0/7, Error ellipse: s-maj=52.5km s-min=26.5km az=35.0*
ISC 07 00:19:00.0±1.9, **12°.2S**±0°.2×**167°.3E**±0°.3, **h317**km, **n7**, σ0$75/7, **mb3.6**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.83**	**185**	P	**Pn**	**00 21 16.0**	**-0.1**
	3.6nm,0.7s,baz=360,slow=19,SNR=6.0						
STKA	**Stephens Creek**	**30.68**	**226**	P	**P**	**00 24 47.2**	**+1.1**
	2.7nm,0.6s,baz=52,slow=8.9,SNR=6.3						
	2.7nm,0.6s						
WRA	**Warramunga Arr**	**32.53**	**252**	P	**P**	**00 25 01.5**	**-0.8**
	0.3nm,0.4s,baz=81,slow=9.0,SNR=1.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**33.65**	**246**	P	**P**	**00 25 11.5**	**-0.5**
	0.5nm,0.5s,baz=72,slow=9.3,SNR=8.8						
	0.5nm,0.5s						
VNDA	**Vanda**	**65.36**	**181**	P	**P**	**00 29 08.5**	**0.0**
	0.4nm,0.5s,baz=355,slow=7.5,SNR=3.3						
	0.4nm,0.5s						
QSPA	**South Pole Qui**	**77.79**	**180**	P	**P**	**00 30 22.3**	**-0.3**
	3.7nm,0.7s,baz=348,slow=0.8,SNR=22						
	3.7nm,0.7s						
MKAR	**Makanchi Array**	**95.40**	**317**	P	**P**	**00 31 49.1**	**+0.3**
	0.7nm,0.8s,baz=84,slow=7.6,SNR=5.2						
	0.7nm,0.8s						

*IDC **07** 00:36:46.2±4.5, 8°.87S×124°.33E, h61km±47km, mb3.5/2, mbtmp4.2/5, ML4.4/3, Error ellipse: s-maj=39.2km s-min=30.6km az=16.0*
ISC 07 00:36:43.8±1.2, **8°.87S**±0°.09×**124°.6E**±0°.1, **h35**km, **n7**, σ2$59/11, **Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.61**	**215**	P	**Pn**	**00 37 11.1**	**+1.3**
	191nm,0.4s,baz=290,slow=4.2,SNR=7.8						
BATI				S	**Sn**	**00 37 29.2**	**-0.3**
	588nm,0.4s,baz=337,slow=21,SNR=14						
FITZ	**Fitzroy Crossi**	**9.23**	**174**	P	**Pn**	**00 38 56.8**	**+2.3**
	7.4nm,0.3s,baz=0.1,slow=8.7,SNR=139						
FITZ				S	**Sn**	**00 40 33.9**	**-3.2**
	19nm,0.4s,baz=128,slow=9.0,SNR=11						
	19nm,0.2s						
WRA	**Warramunga Arr**	**14.49**	**140**	P	**Pn**	**00 40 09.1**	**+2.7**
	1.1nm,0.3s,baz=313,slow=15,SNR=25						
WRA				S	**Sn**	**00 42 43.9**	**-2.0**
	1.0nm,0.4s,baz=306,slow=22,SNR=7.0						
	2.9nm,0.5s						
ASAR	**Alice Springs**	**17.20**	**150**	P	**P**	**00 40 45.3**	**+2.5**
	1.3nm,0.3s,baz=322,slow=11,SNR=51						
ASAR				S	**Sn**	**00 43 48.2**	**-3.6**
	1.9nm,0.6s,baz=315,slow=18,SNR=6.1						
	5.3nm,0.6s						
MKAR	**Makanchi Array**	**66.99**	**330**	P	**P**	**00 47 32.0**	**-1.1**
	0.8nm,0.6s,baz=130,slow=8.2,SNR=9.2						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**71.42**	**331**	P	**P**	**00 47 58.8**	**-1.5**
	0.4nm,0.5s,baz=139,slow=5.5,SNR=6.0						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**123.88**	**280**	PKP	**PKPdf**	**00 55 37.8**	**-1.4**
	0.4nm,0.5s,baz=95,slow=2.3,SNR=5.6						

*SJA **07** 00:50:13.4±0.7, 32°.36S×69°.88W, h114km±3km, ML3.3, MW3.5*
*GUC **07** 00:50:15.4±0.9, 32°.42S×70°.03W, h118km±4km, ML3.6*
ISC 07 00:50:13.9±1.2, **32°.40S**±0°.02×**69°.83W**±0°.03, **h115**km±7km, **n58**, σ1$49/101, **7C-8D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA03	**San Esteban**	**0.70**	**239**	*eP*	**Pn**	**00 50 32.8**	**-0.1**
VA03				*eS*	**Sn**	**00 50 47.4**	**+0.2**
VA03				IAML		00 50 49.5	
	comp=Z,1μm,0.4s						
VA03	**San Esteban**	**0.70**	**239**↓	*eP*	**Pn**	**00 50 32.9**	**+0.1**
VA03				*eS*	**Sn**	**00 50 46.6**	**-0.6**
VA03				IAML		00 50 49.0	
	comp=E,4μm,0.2s						
RTLS	**Leoncito**	**0.76**	**37**	*eP*	**Pn**	**00 50 33.7**	**+0.2**
RTLS				*eS*	**Sn**	**00 50 48.2**	**0.0**
RTLS				IAML		00 50 49.4	
	comp=Z,1μm,0.2s						
ARCO	**CERRO ARCO**	**0.88**	**120**	*eP*	**Pn**	**00 50 35.3**	**+0.8**
ARCO				*eS*	**Sn**	**00 50 51.4**	**+1.4**
ARCO				IAML		00 50 55.5	
	comp=Z,799nm,0.3s						
PEL	**Peldehue**	**1.03**	**224**	*eP*	**Pn**	**00 50 36.0**	**+0.1**
PEL				*eS*	**Sn**	**00 50 52.5**	**+0.1**
PEL				IAML		00 50 52.7	
	comp=Z,477nm,0.6s						
PEL	**Peldehue**	**1.03**	**224**↓	*eP*	**Pn**	**00 50 35.8**	**0.0**
PEL				*eS*	**Sn**	**00 50 51.9**	**-0.5**
PEL				IAML		00 50 53.1	
	comp=E,826nm,0.4s						
CO04	**Los Peladeros**	**1.03**	**290**↑	*eP*	**Pn**	**00 50 35.7**	**-0.4**
CO04				*eS*	**Sn**	**00 50 51.7**	**-1.2**
CO04				IAML		00 50 52.6	
	comp=N,4μm,0.1s						
MT08	**Bocatoma Ro**	**1.05**	**188**	*eP*	**Pn**	**00 50 36.8**	**+0.5**
MT08				*eS*	Sn	00 51 07.0	+14
MT08	**Bocatoma Ro**	**1.05**	**188**↓	*eP*	**Pn**	**00 50 37.3**	**+1.1**
MT08				*eS*	**Sn**	**00 50 53.5**	**+0.3**
MT08				IAML		00 51 00.3	
	comp=N,291nm,0.8s						
MT10	**Hacienda Santa**	**1.05**	**214**↓	*eP*	**Pn**	**00 50 36.8**	**+0.7**
MT10				*eS*	**Sn**	**00 50 52.7**	**-0.3**
MT10				IAML		00 50 55.9	
	comp=N,602nm,0.2s						
AAGR	**Agrelo**	**1.09**	**129**	*eP*	**Pn**	**00 50 37.8**	**+1.4**
AAGR				IAML		00 50 58.6	
	comp=Z,825nm,0.5s						
ROCH	**El Roble**	**1.14**	**240**↑	*eP*	**Pn**	**00 50 37.1**	**-0.1**
ROCH				*eS*	**Sn**	**00 50 53.4**	**-1.4**
ROCH				IAML		00 50 57.4	
	comp=N,2μm,0.2s						
MT14	**Cerro Cal¡n**	**1.15**	**211**	*eP*	**Pn**	**00 50 37.0**	**-0.1**
MT14				*eS*	**Sn**	**00 50 53.6**	**-1.2**
MT14				IAML		00 50 57.1	
	comp=E,1μm,0.5s						
MT14				IAML		00 50 58.1	
	comp=N,1μm,0.2s						
MT16	**CCHEN**	**1.18**	**209**↓	*eP*	**Pn**	**00 50 38.0**	**+0.7**
MT16				*eS*	**Sn**	**00 50 54.3**	**-0.9**
MT16				IAML		00 50 58.4	
	comp=N,383nm,0.1s						
MT03	**Universidad Ad**	**1.23**	**207**	*eP*	**Pn**	**00 50 38.3**	**+0.3**
MT03				*eS*	**Sn**	**00 50 58.1**	**+1.9**
MT03				IAML		00 50 59.1	
	comp=Z,869nm,0.2s						
MT03	**Universidad Ad**	**1.23**	**207**	*eP*	**Pn**	**00 50 38.3**	**+0.3**
MT03				*eS*	**Sn**	**00 50 54.5**	**-1.8**
MT03				IAML		00 51 02.3	
	comp=E,2μm,0.2s						
MT05	**Renca**	**1.25**	**217**	*eP*	**Pn**	**00 50 38.0**	**-0.1**
MT05				*eS*	**Sn**	**00 50 57.8**	**+1.2**
MT05				IAML		00 50 59.8	
	comp=Z,676nm,0.4s						
MT05	**Renca**	**1.25**	**217**↓	*eP*	**Pn**	**00 50 38.7**	**+0.6**
MT05				*eS*	**Sn**	**00 50 55.3**	**-1.2**
MT05				IAML		00 50 58.2	
	comp=E,3μm,0.2s						
ZON	**Zonda**	**1.30**	**49**	*eP*	**Pn**	**00 50 39.0**	**+0.3**
ZON				*eS*	**Sn**	**00 50 58.1**	**+0.5**
ZON				IAML		00 50 58.7	
	comp=Z,204nm,0.3s						
SJA	**San Juan**	**1.39**	**51**	*eP*	Pn	00 50 31.2	-8.6
SJA				*eS*	Sn	00 50 44.0	-15
SJA				IAML		00 50 44.6	
	comp=Z,287nm,0.3s						
MT02	**Curacav**	**1.39**	**232**	*eP*	**Pn**	**00 50 39.7**	**-0.1**
MT02				*eS*	**Sn**	**00 50 59.5**	**+0.1**
MT02				IAML		00 51 03.5	
	comp=Z,224nm,0.4s						
MT02	**Curacav**	**1.39**	**232**↑	*eP*	**Pn**	**00 50 39.6**	**-0.1**
MT02				*eS*	**Sn**	**00 50 57.9**	**-1.4**
MT02				IAML		00 51 00.4	
	comp=E,319nm,0.2s						
MT12	**Pirque**	**1.46**	**204**	*i* P	**Pn**	**00 50 41.2**	**+0.7**
MT12				*eS*	**Sn**	**00 51 00.8**	**0.0**
MT12				IAML		00 51 05.2	
	comp=E,1μm,0.2s						
LMEL	**Las Melosas**	**1.47**	**192**	*eP*	**Pn**	**00 50 41.8**	**+0.9**
LMEL				*eS*	**Sn**	**00 51 02.0**	**+0.7**
LMEL				IAML		00 51 11.8	
	comp=E,2μm,0.1s						
AVIZ	**Vizcacheras**	**1.54**	**134**	*eP*	**Pn**	**00 50 42.8**	**+1.3**
AVIZ				*eS*	**Sn**	**00 50 58.8**	**-3.7**
CO02	**Combarbal**	**1.56**	**320**	*eP*	**Pn**	**00 50 41.8**	**0.0**
CO02				*eS*	**Sn**	**00 51 03.8**	**+0.8**
CO02				IAML		00 51 06.8	
	comp=Z,479nm,0.3s						
CO02	**Combarbal**	**1.56**	**320**↓	*eP*	**Pn**	**00 50 41.8**	**0.0**
CO02				*eS*	**Sn**	**00 51 03.0**	**+0.1**
CO02				IAML		00 51 05.5	
	comp=E,2μm,0.2s						
CFA	**Coronel Fontan**	**1.57**	**60**	*eP*	**Pn**	**00 50 42.1**	**+0.2**
CFA				*eS*	**Sn**	**00 51 03.1**	**-0.1**
CFA				IAML		00 51 03.2	
	comp=Z,189nm,0.5s						
RTLL	**Cerro Villicun**	**1.57**	**48**	*eP*	**Pn**	**00 50 42.0**	**+0.1**
RTLL				*eS*	**Sn**	**00 50 58.1**	**-5.2**
RTLL				*eS*		00 51 03.6	
RTLL				IAML		00 51 03.8	
	comp=Z,302nm,0.5s						
VA01	**Torpederas**	**1.65**	**248**	*eP*	**Pn**	**00 50 42.6**	**-0.1**
VA01				IAML		00 51 13.6	
	comp=Z,220nm,0.3s						
VA01	**Torpederas**	**1.65**	**248**	*eP*	**Pn**	**00 50 42.3**	**-0.4**
VA01				*eS*	**Sn**	**00 51 02.5**	**-2.2**
VA01				IAML		00 51 11.5	
	comp=N,862nm,0.4s						
MT09	**Talagante**	**1.68**	**215**↓	*eP*	**Pn**	**00 50 43.6**	**+0.3**
MT09				*eS*	**Sn**	**00 51 04.4**	**-1.2**
MT09				IAML		00 51 06.6	
	comp=E,1μm,0.2s						
MT01	**Popeta**	**1.88**	**219**	*eP*	**Pn**	**00 50 45.5**	**-0.1**
MT01				*eS*	**Sn**	**00 51 10.3**	**+0.5**
MT01				IAML		00 51 18.0	
	comp=Z,193nm,0.2s						
MT01	**Popeta**	**1.88**	**219**	*eP*	**Pn**	**00 50 45.5**	**-0.1**
MT01				*eS*	**Sn**	**00 51 08.2**	**-1.6**
MT01				IAML		00 51 15.8	
	comp=E,447nm,0.1s						
ACCO	**Cerro Coronel**	**1.93**	**20**	*eP*	**Pn**	**00 50 47.4**	**+0.9**
ACCO				*eS*	**Sn**	**00 51 11.4**	**+0.1**
ACCO				IAML		00 51 13.9	
	comp=Z,90nm,0.3s						
ACAN	**Cantantal**	**2.24**	**87**	*eP*	**Pn**	**00 50 50.0**	**-0.2**
AROD	**Rodeo**	**2.25**	**8**	*eP*	**Pn**	**00 50 52.2**	**+1.6**
AROD				*eS*	**Sn**	**00 51 21.7**	**+3.0**
ACDV	**Cuesta del Vie**	**2.31**	**16**	*eP*	**Pn**	**00 50 54.3**	**+3.1**
ACDV				*eS*	**Sn**	**00 51 17.0**	**-2.7**
ACDV				IAML		00 51 25.6	
	comp=Z,64nm,0.5s						
GO04	**Tololo Observa**	**2.37**	**339**	*eP*	**Pn**	**00 50 52.1**	**+0.1**
GO04				*eS*	**Sn**	**00 51 22.9**	**+1.5**
GO04				IAML		00 51 25.4	
	comp=Z,264nm,0.2s						
GO04	**Tololo Observa**	**2.37**	**339**↑	*eP*	**Pn**	**00 50 51.9**	**-0.2**
GO04				*eS*	**Sn**	**00 51 21.0**	**-0.3**
GO04				IAML		00 51 24.5	
	comp=N,1μm,0.4s						
CO01	**Juntas del Tor**	**2.43**	**355**	*eP*	**Pn**	**00 50 54.2**	**+1.4**
CO01				*eS*	**Sn**	**00 51 26.3**	**+3.7**
CO01				IAML		00 51 31.2	
	comp=Z,51nm,0.5s						
BO02	**Sierra Bellavi**	**2.51**	**198**	*eP*	**Pn**	**00 50 54.3**	**+0.7**
BO02				*eS*	**Sn**	**00 51 22.9**	**-1.3**
BO02				IAML		00 51 36.0	
	comp=Z,162nm,0.2s						
BO02	**Sierra Bellavi**	**2.51**	**198**↑	*eP*	**Pn**	**00 50 54.8**	**+1.1**
BO02				*eS*	**Sn**	**00 51 23.9**	**-0.4**
BO02				IAML		00 51 33.1	
	comp=N,299nm,0.2s						
AVFE	**Valle Fertil**	**2.67**	**50**	*eP*	Pn	00 50 52.1	-3.6
AVFE				*eP*		00 50 56.8	
AVFE				IAML		00 51 28.9	
	comp=Z,84nm,0.4s						
BO03	**Pichilemu**	**2.74**	**220**↑	*eP*	**Pn**	**00 50 55.5**	**-1.1**
BO03				*eS*	**Sn**	**00 51 26.7**	**-2.8**
BO03				IAML		00 51 38.8	
	comp=N,105nm,0.6s						
ACHE	**Chepes**	**2.97**	**66**	*eP*	Pn	00 50 55.6	-4.2
GO05	**Hualane**	**3.13**	**213**	*eP*	**Pn**	**00 51 01.3**	**-0.4**
GO05				*eS*	**Sn**	**00 51 41.7**	**+3.0**
GO05				IAML		00 51 47.0	
	comp=Z,54nm,0.5s						
EDS3	**Malargue**	**3.38**	**174**	*eP*	**Pn**	**00 51 07.1**	**+1.9**
EDS3				*eS*	**Sn**	**00 51 47.7**	**+3.0**
LCO	**Las Campanas**	**3.46**	**347**	*eP*	**Pn**	**00 51 05.8**	**-0.6**
LCO				*eS*	**Sn**	**00 51 46.8**	**-0.2**
LCO				IAML		00 51 51.0	
	comp=Z,199nm,0.3s						
MRA	**San Martin**	**3.48**	**91**	*eP*	Pn	00 51 03.0	-3.4
MRA				*eS*	Sn	00 51 35.6	-11
MRA				IAML		00 52 07.0	
	comp=Z,85nm,0.5s						
AC05	**El Transito**	**3.58**	**354**	*eP*	**Pn**	**00 51 08.2**	**+0.5**
AC05				*eS*	**Sn**	**00 51 50.1**	**+0.6**
AC05				IAML		00 51 57.3	
	comp=Z,52nm,0.9s						
ACLC	**CERRO LA CRUZ**	**3.87**	**41**	*eP*	**Pn**	**00 51 12.7**	**+1.0**
ACLC				*eS*	**Sn**	**00 51 58.4**	**+2.0**
ACLC				IAML		00 51 59.6	
	comp=Z,26nm,0.5s						
AC04	**Llanos de Chal**	**4.32**	**345**	*eP*	**Pn**	**00 51 17.3**	**-0.3**
AC04				IAML		00 52 20.0	
	comp=Z,51nm,1.1s						
BI02	**San Fabin de**	**4.41**	**195**	*eP*	**Pn**	**00 51 21.1**	**+2.2**
BI02				IAML		00 52 18.2	
	comp=Z,11nm,0.8s						
TCA	**Tanti**	**4.58**	**78**	*eP*	**Pn**	**00 51 21.0**	**-0.2**
TCA				*eS*	Sn	00 52 05.8	-7.6
TCA				*eS*		00 52 11.8	
TCA				IAML		00 52 27.1	
	comp=Z,42nm,0.8s						
TCA	**Tanti**	**4.58**	**78**↑	*eP*	**Pn**	**00 51 20.7**	**-0.5**
TCA				*i* S	**Sn**	**00 52 08.1**	**-5.4**
TINO	**Tinogasta**	**4.75**	**25**	*eP*	**Pn**	**00 51 24.7**	**+1.2**
TINO				*eS*	**Sn**	**00 52 14.6**	**-3.0**
TINO				IAML		00 52 27.7	
	comp=Z,21nm,0.8s						
GO03	**Copiapo**	**4.81**	**356**	*eP*	**Pn**	**00 51 24.4**	**+0.1**
GO03				*eS*	**Sn**	**00 52 18.1**	**-0.8**
GO03				IAML		00 52 29.5	
	comp=Z,19nm,0.5s						

*IDC **07** 00:50:25.0±4.6, 19°.77S×69°.69W, h0km, mb3.7/1, mbtmp3.7/2, ML3.3/1, Error ellipse: s-maj=141.3km s-min=61.4km az=98.0*
*GUC **07** 00:50:28.3±0.7, 19°.74S×69°.36W, h96km±3km, ML3.4*
ISC 07 00:50:31.2±1.1, **19°.77S**±0°.03×**69°.46W**±0°.08, **h82**km±7km, **n26**, σ1$60/26, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.18**	**273**	*eP*	**Pn**	**00 50 43.0**	**-0.4**
PB11				*eS*	**Sn**	**00 50 54.2**	**+1.9**
PB11				IAML		00 50 55.8	
	comp=E,3μm,0.3s						
GO01	**Chusmiza**	**0.27**	**68**	*eP*	**Pn**	**00 50 42.8**	**-1.4**
GO01				*eS*	**Sn**	**00 50 53.9**	**+0.2**
PB08	**IPOC Station P**	**0.47**	**142**	*eP*	**Pn**	**00 50 44.2**	**-1.2**
PB08				*eS*	**Sn**	**00 50 56.0**	**+0.2**
PB08				IAML		00 50 57.2	
	comp=N,5μm,0.1s						
PX02	**IPOC Station P**	**1.06**	**319**	*eP*	**Pn**	**00 50 49.5**	**-1.7**
PX02				*eS*	**Sn**	**00 51 06.1**	**-0.1**
PB12	**IPOC Station P**	**1.41**	**324**	*eP*	**Pn**	**00 50 54.1**	**-1.4**
PB12				*eS*	**Sn**	**00 51 13.6**	**-0.3**
PB12				IAML		00 51 17.7	
	comp=N,379nm,0.2s						
PB16	**IPOC Station P**	**1.43**	**358**	*eP*	**Pn**	**00 50 54.7**	**-1.6**
PB16				*eS*	**Sn**	**00 51 14.6**	**-0.5**
PB02	**IPOC Station P**	**1.59**	**195**	*eP*	**Pn**	**00 50 56.8**	**-1.2**
PB02				*eS*	**Sn**	**00 51 19.1**	**+0.9**
PB02				IAML		00 51 25.4	
	comp=N,934nm,0.3s						
PB07	**IPOC Station P**	**1.99**	**191**	*i* P	**Pn**	**00 51 01.5**	**-1.7**
PB07				*i* S	**Sn**	**00 51 28.3**	**+0.8**
PB07				IAML		00 51 35.4	
	comp=N,457nm,0.4s						
PB09	**IPOC Station P**	**2.03**	**174**	*i* P	**Pn**	**00 51 02.3**	**-1.4**
PB09				*i* S	**Sn**	**00 51 28.6**	**+0.2**
PB09				IAML		00 51 33.2	
	comp=N,479nm,0.6s						
PB18	**Visviri**	**2.17**	**360**	*eP*	**Pn**	**00 51 05.8**	**-0.2**
PB18				IAML		00 51 46.0	
	comp=E,122nm,0.4s						
PB03	**IPOC Station P**	**2.28**	**187**	*eP*	**Pn**	**00 51 05.1**	**-2.1**
PB03				IAML		00 51 42.3	
	comp=E,279nm,0.2s						
PB06	**IPOC Station P**	**2.92**	**182**	*i* P	**Pn**	**00 51 13.2**	**-2.5**
PB06				*i* S	**Sn**	**00 51 51.2**	**+1.3**
PB05	**IPOC Station P**	**3.14**	**193**	*eP*	**Pn**	**00 51 16.4**	**-2.3**
PB05				IAML		00 52 10.4	
	comp=N,114nm,0.5s						
LPAZ	**La Paz**	**3.69**	**20**	Pn	**Pn**	**00 51 24.8**	**-1.7**
	comp=N,1.4nm,0.3s,baz=199,slow=6.9,SNR=88						
	comp=N,14nm,0.6s						
H03N1	**Juan Fernandez**	**16.01**	**210**	T	T	01 10 07.7	
	baz=33,SNR=0.8						
H03N2	**Juan Fernandez**	**16.02**	**210**	T	T	01 10 07.9	
	baz=33,SNR=3.7						
H03N3	**Juan Fernandez**	**16.03**	**210**	T	T	01 10 08.9	
	baz=33,SNR=4.0						
TORD	**T orodi Ar. Bea**	**77.28**	**71**	P	P	01 02 23.0	+5.8
	comp=N,0.4nm,0.6s,baz=244,slow=5.5,SNR=4.9						
	comp=N,0.4nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**27.13**	**279**	T	T	03 28 54.8	
	baz=101,slow=74,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**27.14**	**279**	T	T	03 28 53.2	
	baz=101,slow=74,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**27.14**	**279**	T	T	03 28 54.8	
	baz=101,slow=74,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**27.16**	**280**	T	T	03 28 59.3	
	baz=108						
H11N2	**WAKE ISLAND Hy**	**27.18**	**280**	T	T	03 29 00.4	
	baz=108						
H11N1	**WAKE ISLAND Hy**	**27.18**	**280**	T	T	03 28 59.3	
	baz=108						
KURBB	**Kurchatov Arra**	**140.17**	**32**	PKP	**PKiKP**	**01 09 53.5**	**+0.7**
	comp=N,0.7nm,0.5s,baz=302,slow=3.1,SNR=12						
ZALV	**Zalesovo Beam**	**140.60**	**24**	PKP	**PKiKP**	**01 09 57.1**	**+3.5**
	comp=N,1.8nm,0.5s,baz=295,slow=2.3,SNR=8.3						

*IDC **07** 01:01:27.3±1.0, 10°.12N×126°.51E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=42.9km s-min=20.4km az=69.0*
*MAN **07** 01:01:29.0, 10°.06N×126°.38E, h1km, MS3.4*
*NEIC **07** 01:01:33.2±1.5, 10°.2N±0°.1×126°.3E±0°.2, h35km±2km, mb4.5/19, Error ellipse: s-maj=30.1km s-min=19.1km az=254.0*
ISC 07 01:01:28.1±1.7, **10°.16N**±0°.04×**126°.38E**±0°.06, **h4**km±10km, **n49**, σ1$20/53, **mb4.2**/19, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.96**	**247**	*i* P	**Pn**	**01 01 47.9**	**-0.3**
SCPH				*i* S	**Sb**	**01 02 00.8**	**+0.6**
TSSP	**Tandag City**	**1.13**	**189**	*eP*	**Pg**	**01 01 50.0**	**+0.3**
TSSP				*eS*	**Sn**	**01 02 06.0**	**-0.5**
PLP	**Palo**	**1.70**	**306**	*eP*	**Pg**	**01 02 00.6**	**-0.2**
PLP				*eS*	**Sg**	**01 02 24.9**	**+2.1**
BIPH	**Bislig**	**1.96**	**181**	*eP*	**Pb**	**01 02 03.6**	**-0.8**
BIPH				*eS*	**Sb**	**01 02 27.9**	**-1.4**
CGP	**Cagayan de Oro**	**2.38**	**225**	*eP*	**Pb**	**01 02 10.2**	**-1.2**
CGP				*i* S	**Sb**	**01 02 39.8**	**-1.4**
LLP	**Lapu-Lapu**	**2.38**	**274**	*i* P	**Pb**	**01

MKAR				PcP	**PcP**	**01 11 51.8**	**+0.1**	
ZALV	**Zalesovo Beam**	**54.77**	**331**	P	**P**	**01 10 58.7**	**-0.1**	
	comp=Z,0.4nm,0.3s,baz=119,slow=4.4,SNR=2.3							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**	**56.22**	**326**	P	**P**	**01 11 09.6**	**+0.3**	
KURK				IAmb	IAmb	01 11 21.1		
	comp=Z,1.5nm,0.8s							
KURBB	**Kurchatov Arra**	**56.22**	**325**	P	**P**	**01 11 09.4**	**+0.1**	
	comp=Z,0.6nm,0.5s,baz=124,slow=6.8,SNR=8.5							
	comp=Z,0.6nm,0.5s							
AB31	**Akbulak array**	**67.03**	**319**	P	**P**	**01 12 20.8**	**-1.6**	
ABKAR	**Akbulak array**	**67.03**	**319**	P	**P**	**01 12 21.8**	**-0.5**	
BKZ	**Black Stump Fm**	**67.63**	**140**	P	**P**	**01 12 27.1**	**+0.7**	
N15K	**Kwethluk River**	**73.06**	**30**	P	**P**	**01 12 58.8**	**-0.4**	
N15K				IAmb	IAmb	01 13 00.6		
	comp=Z,11nm,1.1s							
J17K	**VABM Dome**	**74.06**	**27**	P	**P**	**01 13 05.2**	**+0.2**	
J17K				IAmb	IAmb	01 13 12.6		
	comp=Z,8.4nm,1.4s							
C18K	**Utukok River**	**74.22**	**21**	P	**P**	**01 13 05.9**	**0.0**	
C18K				IAmb	IAmb	01 13 15.4		
	comp=Z,3.3nm,1.1s							
C19K	**Lookout Ridge**	**74.88**	**21**	P	**P**	**01 13 10.4**	**+0.7**	
C19K				IAmb	IAmb	01 13 16.2		
	comp=Z,14nm,1.3s							
O18K	**Koktuh Hills**	**75.45**	**31**	P	**P**	**01 13 14.2**	**+1.0**	
O18K				IAmb	IAmb	01 13 22.8		
	comp=Z,6.7nm,1.2s							
H22K	**Ishtalitna Cre**	**77.62**	**25**	P	**P**	**01 13 25.0**	**-0.3**	
H22K				IAmb	IAmb	01 13 37.1		
	comp=Z,3.1nm,1.5s							
C23K	**Itkillik River**	**78.11**	**21**	P	**P**	**01 13 29.0**	**+1.1**	
C23K				IAmb	IAmb	01 13 34.1		
	comp=Z,9.7nm,1.5s							
RC01	**Rabbit Creek A**	**78.22**	**30**	P	**P**	**01 13 28.0**	**-0.7**	
E23K	**Chandalar**	**78.40**	**22**	P	**P**	**01 13 31.7**	**+2.0**	
KLU	**Klutina**	**80.05**	**29**	P	**P**	**01 13 38.7**	**-0.2**	
DIV	**Divide**	**80.14**	**29**	P	**P**	**01 13 39.0**	**-0.4**	
ARCES	**ARCESS Array B**	**84.33**	**340**	P	**P**	**01 14 00.7**	**-0.3**	
	comp=Z,1.8nm,0.9s,baz=88,slow=4.0,SNR=5.8							
	comp=Z,1.8nm,0.9s							
ARCES	**ARCESS Array B**	**84.33**	**340**	P	**P**	**01 14 01.5**	**+0.4**	
ARCES				IAmb	IAmb	01 14 15.1		
	comp=Z,12nm,1.5s							

SJA ***07*** *01:04:32.4±0.8, 37.°72S×71.°58W, h550km±93km, ML4.5, MW3.6*

ISC 07 01:05:02.2±1.5, 37.°57S±0.°05×70.°7W±0.°1, h35km, n12, σ4.5 27/14, Southern Argentina

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BI02	**San Fabin de**	**1.01**	**333**	*e*P		**Pn**	**01 05 16.3**	**-3.6**
BI02				*i* S		**Sn**	**01 05 37.7**	**+4.7**
BI02				IAML			01 05 42.6	
	comp=N,202nm,0.6s							
LC01	**Cunco**	**1.61**	**214**	*e*P		**Pn**	**01 05 27.7**	**-0.5**
ML02	**Panimavida**	**1.89**	**342**	*e*P		**Pn**	**01 05 27.9**	**-4.1**
ML02				*i* S		**Sn**	**01 05 59.5**	**+4.9**
ML02				IAML			01 06 04.7	
	comp=E,113nm,0.5s							
GO06	**Curarrehue**	**2.10**	**196**	*e*P		**Pn**	**01 05 31.7**	**-3.3**
BI05	**Punta Hualpn**	**2.14**	**292**	*e*P		Pn	01 05 36.9	+1.4
GO05	**Hualane**	**2.74**	**339**	*e*P		**Pn**	**01 05 40.9**	**-2.8**
BO02	**Sierra Bellavi**	**2.77**	**359**	*e*P		Pn	01 05 36.9	-7.3
BO02				*e*S		**Sn**	**01 06 16.2**	**-0.3**
BO02				IAML			01 06 25.9	
	comp=N,42nm,0.3s							
BO03	**Pichilemu**	**3.23**	**341**	*e*P		**Pn**	**01 05 46.2**	**-4.2**
BO03				*i* S		**Sn**	**01 06 30.9**	**+3.3**
AUSP	**Uspallata**	**5.44**	**12**	*e*P		Pn	01 06 13.4	-7.7
AUSP				*e*S		**Sn**	**01 07 29.0**	**+6.3**
RTLS	**Leoncito**	**5.87**	**12**	*e*P		Pn	01 06 18.5	-8.6
RTLS				*e*S		**Sn**	**01 07 37.4**	**+4.1**
RTLS				IAML			01 07 53.0	
	comp=Z,51nm,1.0s							
ACAN	**Cantantal**	**6.02**	**30**	*e*P		Pn	01 06 21.1	-7.8
ACAN				*e*S		**Sn**	**01 07 41.1**	**+4.5**
ACAN				IAML			01 07 49.1	
	comp=Z,116nm,0.8s							
ZON	**Zonda**	**6.24**	**16**	*e*P		Pn	01 06 22.0	-10
ZON				*e*S		**Sn**	**01 07 42.0**	**+0.1**
ZON				IAML			01 07 56.6	
	comp=Z,12nm,0.8s							

BJI ***07*** *01:10:32.6, 25.°93N×58.°06E, h27km, mB5.1/10, mb4.8/52, Ms4.6/16, Ms7 4.3/17*

MOS ***07*** *01:10:32.9±1.2, 25.°90N×58.°44E, h15km, mb5.1/52, Error ellipse: s-maj=5.2km s-min=3.4km az=99.2*

OMAN ***07*** *01:10:33.7±0.4, 25.°68N×58.°35E, h10km, mb4.8/12, ml4.7/27, Error ellipse: s-maj=3.7km s-min=3.5km az=88.0*

NEIC ***07*** *01:10:33.5±1.9, 25.°82N±0.°08×58.°35E±0.°07, h10km±1km, mb4.9/157, Error ellipse: s-maj=14.9km s-min=9.0km az=150.0*

TEH ***07*** *01:10:34.0, 25.°71N×58.°41E, h70km, ML4.8, Presumed earthquake*

GFZ ***07*** *01:10:34.6±0.4, 26°N±5°×5°8E±°, h10km, M4.7/25, mb5.0/25*

THR ***07*** *01:10:34.0±0.0, 25.°95N×58.°38E, h18km±440km, ML4.7, Presumed earthquake*

BGR ***07*** *01:10:35.3, 25.°82N×58.°49E, h21km, mb4.6*

DSN ***07*** *01:10:36.0±0.7, 25.°77N×58.°38E, h30km, mb5.4/5, ML4.3/19, Error ellipse: s-maj=11.5km s-min=7.2km az=138.0*

IDC ***07*** *01:10:38.2±3.8, 25.°89N×58.°41E, h39km±32km, mb4.5/34, mbtmp4.7/36, ML4.6/2, MS4.1/3, Error ellipse: s-maj=15.5km s-min=9.9km az=172.0*

ISC 07 01:10:33.8±0.5, 25.°78N±0.°03×58.°39E±0.°03, h12km±2km, h12km:pP-P, n843, σ1.9 13/851, mb5.0/255, MS4.2/16, 54C-37D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JASK	**Jask - Hormozg**	**0.48**	**281**	Pg		**Pn**	**01 10 46.9**	**+0.5**
BANOM	**Banah**	**1.89**	**275**	*e*P		**Pn**	**01 11 05.6**	**-0.2**
	SNR=30							
BANOM	**Banah**	**1.89**	**275**	P		**Pn**	**01 11 06.1**	**+0.3**
CHBR	**Chabahar**	**1.90**	**95**	*e*Pn		**Pg**	**01 11 09.8**	**-0.4**
CHBR	**Chabahar**	**1.90**	**95**	Pn		**Pn**	**01 11 05.1**	**-0.8**
MDH	**Madha**	**1.95**	**256**	*e*P		**Pn**	**01 11 06.1**	**-0.5**
	SNR=179							
MDH	**Madha**	**1.95**	**256**	P		**Pn**	**01 11 06.3**	**-0.3**
	SNR=72							
MDH				S		**Sn**	**01 11 29.8**	**-1.2**
SHME	**Shamm**	**2.04**	**278**	*e*P		**Pn**	**01 11 08.0**	**0.0**
	SNR=165							
SHME	**Shamm**	**2.04**	**278**	P		**Pn**	**01 11 07.9**	**0.0**
	SNR=36							
MASF	**Masafi**	**2.05**	**259**	P		**Pn**	**01 11 07.7**	**-0.4**
	SNR=22							
MASF				S		**Sn**	**01 11 32.7**	**-1.0**
MSFE	**Esma-Masafi**	**2.05**	**259**	*e*P		**Pn**	**01 11 07.2**	**-1.0**
	SNR=22							
MSFE				S		**Sn**	**01 11 32.2**	**-1.5**
UOSS	**Minazif**	**2.14**	**248**	*e*P		**Pn**	**01 11 08.4**	**-0.9**
	SNR=71							
UOSS	**Minazif**	**2.14**	**248**			**Pn**	**01 11 08.5**	**-0.8**
UOSS	**Minazif**	**2.14**	**248**	P		**Pn**	**01 11 08.5**	**-0.8**
UOSS				S		**Sn**	**01 11 34.2**	**-1.6**
UOSS	**Minazif**	**2.14**	**248**	Pn		**Pn**	**01 11 08.6**	**-0.8**
UOSS	**Minazif**	**2.14**	**248**	P		**Pn**	**01 11 08.8**	**-0.5**
KHNJ	**Kahnooj**	**2.25**	**344**	Pn		**Pn**	**01 11 10.7**	**-0.1**
HATD	**Hatta, Dubai**	**2.25**	**246**	*e*P		**Pn**	**01 11 10.1**	**-0.7**
	SNR=49							
HATD	**Hatta, Dubai**	**2.25**	**246**	P		**Pn**	**01 11 10.5**	**-0.3**
HATD				S		**Sn**	**01 11 37.4**	**-1.1**
BIDO	**Bidbid**	**2.26**	**186**	P		**Pn**	**01 11 10.5**	**-0.4**
	SNR=59							
BIDO				S		**Sn**	**01 11 37.7**	**-0.9**
	SNR=7.1							
SOHO	**SOHO**	**2.34**	**226**	*e*P		**Pn**	**01 11 11.6**	**-0.5**
	SNR=474							
SOHO	**SOHO**	**2.34**	**226**	P		**Pn**	**01 11 11.6**	**-0.5**
IBND	**Bandar-abas**	**2.35**	**316**	Pn		**Pn**	**01 11 13.2**	**+1.1**
ASHO	**Ashiyiah**	**2.37**	**243**	*e*P		**Pn**	**01 11 13.0**	**+0.4**
	SNR=114							
ASHO	**Ashiyiah**	**2.37**	**243**	P		**Pn**	**01 11 13.0**	**+0.4**
	SNR=114							
HOQ	**Hoqain**	**2.39**	**204**	P		**Pn**	**01 11 12.5**	**-0.3**
	SNR=1005							
HOQ				S		**Sn**	**01 11 40.8**	**-1.2**
	SNR=6.1							
UMQ	**Umm Al-Quwin**	**2.47**	**265**	P		**Pn**	**01 11 15.2**	**+1.4**
NGCH	**Negor - Chabah**	**2.52**	**99**	Pn		**Pn**	**01 11 13.7**	**-0.8**
WSAR	**Wadi Sarin**	**2.54**	**175**	P		**Pn**	**01 11 15.3**	**+0.6**
BNDS	**Bandar-Abbas**	**2.56**	**310**	*e*Pn		**Pn**	**01 11 15.3**	**+0.1**
BNDS				IAML			01 12 32.9	
	comp=Z,2μm,1.0s							
GENO	**Geno**	**2.56**	**310**	Pn		**Pn**	**01 11 15.7**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.59**	**253**	*e*P		**Pn**	**01 11 17.0**	**+1.6**
	SNR=367							
NAZ	**Nazwa, Dubai**	**2.59**	**253**	P		**Pn**	**01 11 17.7**	**+2.3**
	SNR=14							
SMDO	**Samad**	**2.72**	**187**	P		**Pn**	**01 11 17.6**	**+0.2**
	SNR=249							
SMDO				S		**Sn**	**01 11 48.3**	**-2.0**
FAQ	**Al Faqa, Dubai**	**2.73**	**249**	*e*P		**Pn**	**01 11 20.0**	**+2.6**
	SNR=126							
FAQ	**Al Faqa, Dubai**	**2.73**	**249**	P		**Pn**	**01 11 20.0**	**+2.6**
	SNR=36							
ALNE	**Al Ain**	**2.94**	**235**	*e*P		**Pn**	**01 11 22.9**	**+2.6**
	SNR=66							
ALNE	**Al Ain**	**2.94**	**235**	P		**Pn**	**01 11 22.4**	**+2.1**
	SNR=66							
ALNE				S		**Sn**	**01 11 54.0**	**-1.6**
ARQ	**Araqi**	**2.96**	**215**	P		**Pn**	**01 11 22.7**	**+2.1**
	SNR=748							
ARQ				S		**Sn**	**01 11 54.5**	**-1.7**
ASUD	**Al Ashush, Dub**	**3.00**	**248**	*e*P		**Pn**	**01 11 24.1**	**+3.0**
	SNR=56							
ASUD	**Al Ashush, Dub**	**3.00**	**248**	P		**Pn**	**01 11 23.3**	**+2.2**
	SNR=56							
WBK	**Wadi Bani Khal**	**3.20**	**170**	P		**Pn**	**01 11 23.8**	**0.0**
	SNR=469							
WBK				S		**Sn**	**01 12 00.4**	**-1.5**
BSY	**Bisya**	**3.21**	**200**	P		**Pn**	**01 11 25.9**	**+1.9**
	SNR=295							
AJN	**Ajban**	**3.31**	**249**	*i* P		**Pn**	**01 11 27.0**	**+1.7**
	SNR=9.2							
AJN	**Ajban**	**3.31**	**249**	P		**Pn**	**01 11 27.3**	**+1.9**
	SNR=9.2							
KBAM	**BAM**	**3.35**	**1**	Pn		**Pn**	**01 11 26.5**	**+0.5**
JMDO	**Jabal Madar**	**3.40**	**184**	P		**Pn**	**01 11 27.4**	**+0.7**
	SNR=62							
JMDO				S		**Sn**	**01 12 06.2**	**-0.7**
	SNR=5.9							
JLN	**Jalan Bani Buh**	**3.73**	**165**	P		**Pn**	**01 11 31.0**	**-0.2**
	SNR=30							
SRVN	**Saravan**	**3.94**	**65**	*e*Pn		**Pn**	**01 11 35.0**	**+0.8**
SRVN				IAML			01 13 16.1	
	comp=Z,540nm,1.0s							
SRVN	**Saravan**	**3.94**	**65**	Pn		**Pn**	**01 11 34.0**	**-0.2**
NGRK	**Negar Kerman**	**4.12**	**340**	Pn		**Pn**	**01 11 37.9**	**+1.0**
CHMN	**Cheshme madani**	**4.14**	**350**	Pn		**Pn**	**01 11 37.9**	**+0.9**
UMZA	**Um Al Zommool**	**4.24**	**225**	P		**Pn**	**01 11 39.0**	**+0.8**
ZHSF	**Zahedan**	**4.37**	**28**	*e*Pn		**Pn**	**01 11 39.4**	**-0.7**
ZHSF				IAML			01 12 42.6	
	comp=Z,150nm,1.0s							
ZHSF	**Zahedan**	**4.37**	**28**	Pn		**Pn**	**01 11 39.2**	**-0.9**
MZWR	**Madinat Zayed**	**4.56**	**245**	P		**Pn**	**01 11 43.7**	**+1.1**
MHTO	**MHTO**	**4.78**	**185**	P		**Pn**	**01 11 46.7**	**+1.1**
MHTO				S		**Sn**	**01 12 40.9**	**-0.1**
KHL1	**Khalili_Fars**	**4.91**	**293**	Pn		**Pn**	**01 11 47.3**	**-0.2**
LMD1	**Lamerd**	**4.93**	**290**	*e*Pn		**Pn**	**01 11 48.8**	**+1.1**
LMD1				IAML			01 13 23.2	
	comp=Z,600nm,1.0s							
LMD1	**Lamerd**	**4.93**	**290**	Pn		**Pn**	**01 11 47.6**	**-0.1**
MZR	**Muzera**	**5.26**	**239**	*i* P		**Pn**	**01 11 52.9**	**+0.7**
	SNR=19							
MZR	**Muzera**	**5.26**	**239**	P		**Pn**	**01 11 52.5**	**+0.3**
	SNR=7.7							
MZR				S		**Sn**	**01 12 51.8**	**-0.9**
GHWR	**Ruwais**	**5.32**	**251**	P		**Pn**	**01 11 52.9**	**-0.2**
GHIR	**Ghir-Karzin**	**5.43**	**299**	*e*Pn		**Pn**	**01 11 55.0**	**+0.4**
GHIR				IAML			01 13 33.8	
	comp=Z,34nm,1.0s							
NHDN	**Nehbandan**	**5.78**	**14**	Pn		**Pn**	**01 11 59.7**	**+0.2**
DQM	**DQM**	**5.87**	**188**	P		**Pn**	**01 12 00.4**	**-0.2**
DQM				S		**Sn**	**01 13 06.4**	**-1.5**
BSRN	**Basiran**	**6.20**	**6**	*e*Pn		**Pn**	**01 12 04.9**	**-0.4**
BSRN				IAML			01 14 12.1	
	comp=Z,180nm,1.0s							
IBAF	**Bafgh**	**6.30**	**338**	Pn		**Pn**	**01 12 07.2**	**+0.5**
SLWR	**Sila**	**6.31**	**256**	P		**Pn**	**01 12 06.3**	**-0.3**
IMEH	**Mehriz**	**6.50**	**330**	Pn		**Pn**	**01 12 10.1**	**+0.6**
IKOO	**Kooshah**	**6.65**	**5**	Pn		**Pn**	**01 12 12.2**	**+0.7**
IDAH	**Dahanechah**	**7.06**	**10**	Pn		**Pn**	**01 12 17.3**	**+0.1**
SAKB	**Bahrain**	**7.07**	**273**	P		**Pn**	**01 12 17.4**	**+0.3**
SAKB				S		**Sn**	**01 13 37.3**	**-0.2**
YZKH	**Yazd**	**7.38**	**334**	*e*Pn		**Pn**	**01 12 22.3**	**+0.9**
YZKH				IAML			01 14 35.3	
	comp=Z,45nm,1.0s							
KLNJ	**Kolanjah**	**7.94**	**313**	*e*Pn		**Pn**	**01 12 28.3**	**-1.0**
KLNJ				IAML			01 14 06.2	
	comp=Z,440nm,1.0s							
SHRT	**Shahrakht**	**8.02**	**11**	*e*Pn		**Pn**	**01 12 30.6**	**+0.5**
SHRT				IAML			01 14 49.9	
	comp=Z,30nm,1.0s							
SHAO	**Shalim**	**8.13**	**199**	P		**Pn**	**01 12 31.9**	**+0.2**
SHAO	**Shalim**	**8.13**	**199**	P		**Pn**	**01 12 31.7**	**+0.1**
	SNR=11							
SHAO				S		**Sn**	**01 14 01.1**	**-2.4**
	SNR=5.8							
NASN	**Na'in**	**8.53**	**326**	*e*Pn		**Pn**	**01 12 37.3**	**0.0**
NASN				IAML			01 12 41.8	
	comp=Z,27nm,0.7s							
DMTO	**DMTO**	**8.63**	**202**	P		**Pn**	**01 12 38.4**	**-0.2**
WHFO	**Wadi Hawf**	**8.91**	**210**	P		**Pn**	**01 12 41.8**	**-0.7**
	SNR=43							
RBK	**Rabkut**	**9.10**	**206**	P		**Pn**	**01 12 44.3**	**-0.7**
HRA	**Herat**	**9.21**	**20**			**Pn**	**01 12 46.1**	**-0.5**
GTMR	**Gotvand**	**10.50**	**312**	IAML_BB			01 13 15.5	
	comp=Z,930nm,1.0s							
SBZV	**Sabzevar**	**10.60**	**357**	*e*Pn		**Pn**	**01 13 06.1**	**+0.4**
SBZV				IAML_BB			01 13 08.2	
	comp=Z,890nm,1.0s							
KHMZ	**Khomeyn**	**10.79**	**319**	*i* P		**Pn**	**01 13 07.8**	**-0.5**
KHMZ				IAML_BB			01 13 08.4	
	comp=Z,1μm,1.0s							
ASAO	**Ashtian**	**11.34**	**322**	*i* P		**Pn**	**01 13 15.7**	**-0.2**
ASAO				IAML_BB			01 13 17.8	
	comp=Z,550nm,1.0s							
RAYN	**Ar Rayn**	**11.93**	**262**	*i* P		**Pn**	**01 13 21.0**	**-2.8**
	SNR=54							
RAYN	**Ar Rayn**	**11.93**	**262**	Pn		**Pn**	**01 13 20.7**	**-3.1**
RAYN	**Ar Rayn**	**11.93**	**262**	P		**Pn**	**01 13 20.7**	**-3.1**
RAYN	**Ar Rayn**	**11.93**	**262**	P		**Pn**	**01 13 21.3**	**-2.5**
RAYN	**Ar Rayn**	**11.93**	**262**	P		**Pn**	**01 13 21.3**	**-2.5**
KBL	**Kabul**	**12.69**	**44**			**Pn**	**01 13 33.0**	**-1.3**
KBL	**Kabul**	**12.69**	**44**	P		**Pn**	**01 13 33.0**	**-1.3**
KBL	**Kabul**	**12.69**	**44**	P		**Pn**	**01 13 34.9**	**+0.6**
KBL	**Kabul**	**12.69**	**44**	P		**Pn**	**01 13 35.7**	**+1.4**
SHAA	**Shahritus**	**14.37**	**33**			**Pn**	**01 13 56.0**	**-1.1**
NIL	**Nilore**	**15.10**	**55**	Pn		**Pn**	**01 14 05.2**	**-1.8**
NIL				IAmb	IAmb		01 14 06.8	
	comp=Z,30nm,0.6s							
NIL	**Nilore**	**15.10**	**55**	P		**Pn**	**01 14 05.2**	**-1.8**
NIL				pmax	pmax			
	comp=Z,30nm,0.6s							
NIL	**Nilore**	**15.10**	**55**	P		**Pn**	**01 14 05.8**	**-1.2**
NIL	**Nilore**	**15.10**	**55**	P		**Pn**	**01 14 05.7**	**-1.3**
CHGR	**Chuyangaron**	**15.73**	**33**	Pn		**Pn**	**01 14 12.9**	**-2.3**
CHGR				IAmb	IAmb		01 14 18.8	
	comp=Z,58nm,1.1s							
CHGR	**Chuyangaron**	**15.73**	**33**	*i* P		**Pn**	**01 14 12.2**	**-3.1**
MANEM	**Manem**	**16.28**	**41**			**Pn**	**01 14 21.6**	**-0.8**
MANEM				IAmb	IAmb		01 14 27.6	
	comp=Z,234nm,1.1s							
GAR	**Garm**	**16.57**	**34**			**Pn**	**01 14 23.0**	**-3.0**
GAR	**Garm**	**16.57**	**34**	P		**Pn**	**01 14 23.1**	**-2.9**
HAKT	**HAKKARI**	**17.12**	**317**	P		**Pn**	**01 14 31.7**	**-1.5**
BTK	**Batken**	**17.63**	**33**			**Pn**	**01 14 36.1**	**-3.2**
BTK	**Batken**	**17.63**	**33**	P		**Pn**	**01 14 36.1**	**-3.2**
BTK				pmax	pmax			
	comp=Z,60nm,1.4s							
AKT	**Akhty**	**17.98**	**333**	*e*P		**Pn**	**01 14 43.8**	**+0.2**
AKT				S		**Sn**	**01 18 01.1**	**-2.9**
AKT				pmax	pmax			
	comp=Z,120nm,0.9s							
AKT				MLR	MLR			
	comp=Z,383nm,21.0s							
GEVA	**Gevas**	**18.00**	**318**			**Pn**	**01 14 41.8**	**-2.1**
GNI	**Garni**	**18.31**	**325**	P	P	**Pn**	**01 14 48.5**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=276,slow=2.2,SNR=17							
	comp=Z,30nm,1.0s							
GNI	**Garni**	**18.31**	**325**	P	**P**	**Pn**	**01 14 48.7**	**+0.9**
GNI	**Garni**	**18.31**	**325**	P	**P**	**Pn**	**01 14 49.5**	**+1.7**
GURO	**Guroymak-BITLI**	**18.78**	**317**	P	**P**	**Pn**	**01 14 51.6**	**-1.3**
CHM	**Chimkent**	**18.91**	**26**	*e*P	**P**	**Pn**	**01 14 53.5**	**-0.7**
CHM	**Chimkent**	**18.91**	**26**	*e*P	**P**	**Pn**	**01 14 53.6**	**-0.7**
IUG	**Iuzhnay**	**18.94**	**28**	*e*P	**P**	**Pn**	**01 14 53.8**	**-0.9**
IUG	**Iuzhnay**	**18.94**	**28**	*e*P	**P**	**Pn**	**01 14 53.8**	**-0.9**
DIGO	**Kars**	**19.23**	**323**	P	P	**Pn**	**01 15 00.2**	**+1.3**
MAK	**Makhachkala**	**19.32**	**335**	*e*P	**P**	**Pn**	**01 14 55.7**	**-3.0**
MAK				*e*S	**Sn**		**01 18 32.4**	**-3.9**
MAK				pmax	pmax			
	comp=Z,90nm,0.8s							
MAK				MLR	MLR			
	comp=Z,362nm,18.0s							
KSH2	**Kashi**	**19.65**	**43**	P	**P**	**01 15 02.1**	**-0.4**	
KSH2				sP	sP	01 15 11.3	+3.6	
KSH2				pmax	pmax			
	comp=Z,15nm,1.2s							
KSH2				L	L			
	comp=Z,710nm,12.4s							
KSH2				L	L			
	comp=Z,850nm,11.7s							
KSH2				L	L			
	comp=Z,1μm,14.1s							
ASF	**Jabal al Asfar**	**19.84**	**294**	P	**Pn**	**01 15 06.6**	**+0.5**	
	comp=Z,2.2nm,0.3s,baz=92,slow=6.9,SNR=77							
ASF				S	S	01 18 33.9	-14	
	comp=Z,3.1nm,0.5s,baz=292,slow=23,SNR=2.1							
	comp=Z,37nm,0.7s							
KK31	**Karatay Array**	**19.93**	**27**	P	**P**	**01 15 02.6**	**-2.8**	
KK31	**Karatay Array**	**19.93**	**27**	P	**P**	**01 15 02.6**	**-2.8**	
KK31				pmax	pmax			
	comp=Z,21nm,1.0s							
KKAR	**Karatay Array**	**19.93**	**27**	P	**P**	**01 15 03.5**	**-1.9**	
KKAR	**Karatay Array**	**19.93**	**27**	P	**P**	**01 15 03.5**	**-1.9**	
DZA	**Taraz**	**20.10**	**29**	*e*P	**P**	**01 15 06.6**	**-0.7**	
DZA	**Taraz**	**20.10**	**29**	*e*P	**P**	**01 15 06.7**	**-0.7**	
EPOS	**Posof**	**20.34**	**324**	P	Pn	01 15 12.0	-0.1	
ATD	**Arta Tunnel**	**20.40**	**229**	P	Pn	01 15 13.5	+0.6	
	comp=Z,1.8nm,0.8s,baz=350,slow=6.2,SNR=26							
ATD	**Arta Tunnel**	**20.40**	**229**	P	Pn	01 15 12.3	-0.5	
ATD				IAmb	IAmb	01 15 21.1		
	comp=Z,106nm,1.3s							
ATD	**Arta Tunnel**	**20.40**	**229**	P	Pn	01 15 12.5	-0.3	
ATD	**Arta Tunnel**	**20.40**	**229**	P	Pn	01 15 14.1	+1.2	
HYB	**Hyderabad**	**20.49**	**110**	*e*P	**P**	**01 15 12.0**	**+0.3**	
HYB				*e*S	**S**	**01 19 02.5**	**+1.4**	
KOPT	**Kop Dagi**	**20.62**	**318**	P	Pn	01 15 15.1	-0.4	
KOPT				IAmb	IAmb	01 15 24.4		
	comp=Z,53nm,0.8s							
GHAJ	**Ghor Haditha**	**20.78**	**291**	P	Pn	01 15 16.1	-1.0	
GHAJ				IAmb	IAmb	01 15 21.2		
	comp=Z,70nm,0.8s							
GHAJ	**Ghor Haditha**	**20.78**	**291**	P	Pn	01 15 16.8	-0.3	
MSBI	**Mazada**	**20.95**	**291**	P	Pn	01 15 18.8	-0.3	
BATM	**Batumi**	**20.97**	**323**	⇑P	Pn	01 15 18.2	-1.1	
BATM	**Batumi**	**20.97**	**323**	P	Pn	01 15 18.1	-1.2	
UJAP	**Al Uja**	**20.98**	**292**	P	Pn	01 15 18.9	-0.5	
RCY	**Rachaya**	**21.03**	**297**	*e*P	**P**	**01 15 19.6**	**+2.0**	
EKS2	**Erkin-Say**	**21.05**	**33**	P	**P**	**01 15 17.9**	**+0.1**	
	SNR=79							
HRFI	**Mount Harif**	**21.06**	**287**	P	**P**	**01 15 19.9**	**+2.1**	
BEIL	**Beino**	**21.06**	**300**	*e*P	P	01 15 27.1	+9.3	
SHBL	**Chebaa**	**21.07**	**296**	*e*P	**P**	**01 15 19.8**	**+1.8**	
EIL	**Elat**	**21.10**	**286**	P	**P**	**01 15 19.9**	**+1.7**	
	comp=Z,40nm,0.7s,baz=116,slow=3.5,SNR=20							
	comp=Z,40nm,0.7s							
EIL	**Elat**	**21.10**	**286**	P	**P**	**01 15 20.1**	**+1.9**	
UCH	**Uchtor**	**21.11**	**35**	P	**P**	**01 15 17.9**	**-0.8**	
	SNR=13							
MMLI	**Mount Malkishu**	**21.11**	**294**	P	**P**	**01 15 20.4**	**+2.0**	
HWQ	**Hawqa**	**21.16**	**299**	*e*P	**P**	**01 15 21.1**	**+2.1**	
MMAI	**Mount Meron Ar**	**21.26**	**295**	P	**P**	**01 15 21.6**	**+1.7**	
	comp=Z,32nm,0.8s,baz=77,slow=12,SNR=34							
MMAI				LR	LR	01 25 33.9		
	comp=Z,290nm,18.3s,baz=82,slow=42							
	comp=Z,32nm,0.8s							
GAZ	**Gaziantep**	**21.29**	**307**	P	**P**	**01 15 19

AAA	**Alma-Ata**	**23.06**	**36**	*e*P		**P**	**01 15 38.0**	**-1.0**
AAA				pmax		pmax			
	comp=Z,75nm,1.1s								
AAA	**Alma-Ata**	**23.06**	**36**	*e*P		**P**	**01 15 38.1**	**-1.0**
	comp=Z,76nm,1.1s								
MDOK	**Medeo**	**23.10**	**37**	*e*P		**P**	**01 15 38.8**	**-0.8**
MDOK	**Medeo**	**23.10**	**37**	*e*P		**P**	**01 15 38.8**	**-0.8**
WUS	**Wushi**	**23.12**	**43**	P		**P**	**01 15 38.5**	**-1.3**
VSLR	**Vesyoloye**	**23.14**	**324**	P		**P**	**01 15 40.6**	**+0.8**
VSLR				pmax		pmax			
	comp=Z,46nm,1.0s								
TOKA	**Tokat**	**23.32**	**314**	P		**P**	**01 15 40.9**	**-0.8**
TOKA				IAmb		IAmb	01 15 45.3		
	comp=Z,51nm,1.2s								
SOC	**Sochi**	**23.39**	**324**	*c i*P		**P**	**01 15 40.7**	**-1.6**
SOC				*e*PPP		PPP	01 16 16.1		
SOC				*e*S		**S**	**01 19 53.8**	**-1.3**
SOC				*e*SS		**SnSn**	**01 20 32.0**	**+1.8**
SOC				*e*SSS		SSS	01 20 48.1		
SOC				pmax		pmax			
	comp=Z,18nm,0.8s								
SOC				MLR		MLR			
	comp=Z,252nm,14.0s								
CSS	**Mathiatis**	**23.43**	**299**	P		**P**	**01 15 44.4**	**+1.5**
AB31	**Akbulak array**	**23.47**	**3**	P		**P**	**01 15 42.6**	**-0.5**
AB31	**Akbulak array**	**23.47**	**3**	*e*P		**P**	**01 15 42.4**	**-0.7**
ABKAR	**Akbulak array**	**23.47**	**3**	P		**P**	**01 15 42.5**	**-0.6**
LABN	**Labinsk**	**23.63**	**327**	*e*P		**P**	**01 15 45.3**	**+0.6**
LABN				*e**PP		**pP**	**01 15 47.6**	**-0.7**
LABN				*e*S		**S**	**01 20 00.4**	**+1.5**
LABN				pmax		pmax			
	comp=Z,21nm,0.6s								
LABN				MLR		MLR			
	comp=N,434nm,12.0s								
LABN				MLR		MLR			
	comp=Z,156nm,14.0s								
SATY	**Saty**	**23.77**	**38**	*e*P		**P**	**01 15 45.5**	**-0.8**
SATY	**Saty**	**23.77**	**38**	*e*P		**P**	**01 15 45.5**	**-0.8**
UZB	**Uzynbulak**	**24.18**	**39**	*e*P		**P**	**01 15 49.4**	**-0.7**
UZB	**Uzynbulak**	**24.18**	**39**	*e*P		**P**	**01 15 49.4**	**-0.7**
KPKS	**Kokpek**	**24.19**	**38**	*e*P		**P**	**01 15 49.2**	**-1.0**
KPKS	**Kokpek**	**24.19**	**38**	*e*P		**P**	**01 15 49.2**	**-1.0**
SHLS	**Shalkode**	**24.44**	**40**	*e*P		**P**	**01 15 54.2**	**+1.8**
SHLS	**Shalkode**	**24.44**	**40**	*e*P		**P**	**01 15 54.2**	**+1.8**
KIRS	**Kirsehir-Merke**	**24.48**	**309**	⇓P		**P**	**01 15 54.5**	**+1.7**
ERBR	**Yeremizino-Bor**	**24.53**	**329**	*e*P		**P**	**01 15 53.4**	**+0.3**
ERBR				*e**PP		**pP**	**01 15 56.8**	**-0.1**
ERBR				*e*S		**S**	**01 20 14.9**	**+1.5**
ERBR				pmax		pmax			
	comp=Z,31nm,1.1s								
ERBR				MLR		MLR			
	comp=Z,190nm,19.0s								
PDGK	**Podgornoye**	**24.56**	**39**			**P**	**01 15 52.1**	**-1.5**
PDGK	**Podgornoye**	**24.56**	**39**	P		**P**	**01 15 52.0**	**-1.5**
AKTO	**Aktyubinsk**	**24.62**	**359**	P		**P**	**01 15 53.0**	**-0.9**
BR104	**Keskin Array S**	**24.92**	**310**	P		**P**	**01 15 57.3**	**+0.4**
	comp=Z,316nmcomp=Z,23nm,0.8s								
BR131	**Keskin Array S**	**24.93**	**310**			**P**	**01 15 56.0**	**-1.0**
BR131				IAmb		IAmb	01 16 00.4		
	comp=Z,21nm,0.8s								
BR131				PcP		**PcP**	**01 19 32.5**	**+0.2**
BR131	**Keskin Array S**	**24.93**	**310**	*i* P		**P**	**01 15 57.5**	**+0.5**
BR131	**Keskin Array S**	**24.93**	**310**	P		**P**	**01 15 58.8**	**+1.8**
BRTR	**Keskin Array B**	**24.93**	**310**	P		**P**	**01 15 58.6**	**+1.7**
	comp=Z,18nm,0.8s,baz=128,slow=8.0,SNR=78								
BRTR				PcP		**PcP**	**01 19 33.0**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=143,slow=5.3,SNR=4.6								
	comp=Z,18nm,0.8s								
BRTR	**Keskin Array B**	**24.93**	**310**	P		**P**	**01 15 56.1**	**-0.9**
BRTR						**PcP**	**01 19 31.9**	**-0.5**
BRTR	**Keskin Array B**	**24.93**	**310**	P		**P**	**01 15 56.1**	**-0.9**
BRTR							01 19 31.9		
BR105	**Keskin Array S**	**24.94**	**310**	P		**P**	**01 15 57.7**	**+0.6**
	comp=Z,488nmcomp=Z,31nm,0.8s								
BR106	**Keskin Array S**	**24.95**	**310**	P		**P**	**01 15 57.8**	**+0.7**
	comp=Z,430nmcomp=Z,28nm,0.8s								
TDK	**Taldyqorghan**	**25.07**	**35**	*e*P		**P**	**01 15 57.6**	**-0.4**
TDK				pmax		pmax			
	comp=Z,43nm,1.2s								
TDK	**Taldyqorghan**	**25.07**	**35**	*e*P		**P**	**01 15 57.6**	**-0.4**
	comp=Z,43nm,1.2s								
KKUL	**Konya-Kulu**	**25.20**	**308**	P		**P**	**01 16 01.2**	**+1.9**
ANN	**Anapa**	**25.42**	**324**	*e*P		**P**	**01 16 00.8**	**-0.3**
ANN				*e**PP		**pP**	**01 16 05.4**	**+0.5**
ANN				*e*S		**S**	**01 20 27.8**	**+0.2**
ANN				pmax		pmax			
	comp=Z,20nm,0.8s								
ANN				MLR		MLR			
	comp=Z,314nm,17.0s								
ANN				MLR		MLR			
	comp=E,158nm,13.0s								
ANN				MLR		MLR			
	comp=N,68nm,11.0s								
EVN	**Everest**	**25.43**	**79**	P		**P**	**01 16 01.4**	**-0.8**
EVN				IAmb		IAmb	01 16 30.1		
	comp=Z,15nm,0.8s								
BRZS	**Berezniki**	**26.58**	**21**	*e*P		**P**	**01 16 11.4**	**-0.2**
BRZS	**Berezniki**	**26.58**	**21**	*e*P		**P**	**01 16 11.5**	**-0.2**
ELL	**Elmali**	**26.59**	**301**			**P**	**01 16 11.1**	**-1.0**
ELL				IAmb		IAmb	01 16 14.4		
	comp=Z,23nm,0.7s								
ELL	**Elmali**	**26.59**	**301**	P		**P**	**01 16 11.1**	**-1.0**
ELL				pmax		pmax			
	comp=Z,23nm,0.7s								
AKAS	**Kas**	**26.69**	**300**	P		**P**	**01 16 12.8**	**-0.2**
AKAS				IAmb		IAmb	01 16 22.4		
	comp=Z,32nm,0.7s								
MDUB	**Mudurnu**	**26.94**	**310**			**P**	**01 16 13.8**	**-1.3**
MDUB				IAmb		IAmb	01 16 55.4		
	comp=Z,26nm,0.9s								
SIM	**Simferopol'**	**27.36**	**321**	*e*P		**P**	**01 16 19.0**	**+0.4**
SIM				pmax		pmax			
	comp=Z,80nm,3.1s								
BELG	**Belogornoye**	**27.80**	**346**	*i* P		**P**	**01 16 21.0**	**-1.5**
BELG				pmax		pmax			
	comp=Z,4.0nm,0.8s								
MAKZ	**Makanchi**	**28.13**	**36**	P		**P**	**01 16 25.2**	**-0.4**
MAKZ	**Makanchi**	**28.13**	**36**	P		**P**	**01 16 25.2**	**-0.4**
MAKZ				pmax		pmax			
	comp=Z,11nm,0.9s								
MAKZ	**Makanchi**	**28.13**	**36**	P		**P**	**01 16 25.5**	**-0.1**
MANT	**Manisa**	**28.13**	**304**			**P**	**01 16 23.6**	**-2.3**
MANT				IAmb		IAmb	01 16 28.0		
	comp=Z,16nm,1.1s								
MK31	**Makanchi Array**	**28.29**	**36**	*i* P		**P**	**01 16 26.4**	**-0.6**
MK31				pmax		pmax			
	comp=Z,3.0nm,0.6s								
MKAR	**Makanchi Array**	**28.29**	**36**	P		**P**	**01 16 26.5**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=235,slow=8.0,SNR=21								
MKAR				PcP		**PcP**	**01 19 39.8**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=222,slow=1.6,SNR=3.5								
MKAR				LR		LR	01 29 09.5		
	comp=Z,479nm,18.3s,baz=324,slow=39								
	comp=Z,1.3nm,0.5s								
MKAR	**Makanchi Array**	**28.29**	**36**	P		**P**	**01 16 26.2**	**-0.8**
MKAR						**PcP**	**01 19 39.2**	**-0.8**
VRH	**Novokhopyorsk**	**28.41**	**338**	*e*P		**P**	**01 16 25.4**	**-2.5**
VRH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KARP	**Karpathos**	**28.47**	**298**			**P**	**01 16 28.1**	**-0.7**
KARP	**Karpathos**	**28.47**	**298**	P		**P**	**01 16 30.7**	**+2.0**
BVAR	**Borovoye Array**	**28.67**	**15**	P		**P**	**01 16 30.2**	**-0.1**
	comp=Z,11nm,0.9s,baz=190,slow=7.5,SNR=45								
BVAR				PcP		**PcP**	**01 19 41.5**	**+0.7**
	comp=Z,8.2nm,0.8s,baz=254,slow=1.4,SNR=11								
	comp=Z,11nm,0.9s								
BORK	**Borovoye**	**28.67**	**15**	P		**P**	**01 16 29.5**	**-0.8**
BORK				PcP		**PcP**	**01 19 40.3**	**-0.4**
BORK	**Borovoye**	**28.67**	**15**	*i* P		**P**	**01 16 28.9**	**-1.4**
BORK				pmax		pmax			
	comp=Z,13nm,1.1s								
KURBB	**Kurchatov Arra**	**29.24**	**27**	P		**P**	**01 16 35.3**	**0.0**
	comp=Z,11nm,0.8s,baz=224,slow=8.5,SNR=153								
KURBB				LR		LR	01 29 47.2		
	comp=Z,552nm,18.2s,baz=132,slow=40								
	comp=Z,11nm,0.8s								
KURBB	**Kurchatov Arra**	**29.24**	**27**	P		**P**	**01 16 33.7**	**-1.7**
VSR	**Storozhevoye**	**29.34**	**335**	*e*P		**P**	**01 16 35.3**	**-1.0**
VSR				pmax		pmax			
	comp=Z,27nm,0.7s								
KURK	**Kurchatov**	**29.35**	**27**	P		**P**	**01 16 34.5**	**-1.8**
KURK	**Kurchatov**	**29.35**	**27**	P		**P**	**01 16 34.5**	**-1.8**
KURK				pmax		pmax			
	comp=Z,13nm,1.0s								
VORR	**Voronezh**	**29.69**	**336**	*e*P		**P**	**01 16 37.1**	**-2.2**
VORR				pmax		pmax			
	comp=Z,40nm,0.9s								
WMQ	**Urumqi**	**29.83**	**45**	*e*P		**P**	**01 16 42.5**	**+1.7**
WMQ				sP		sP	01 16 50.6	+4.4	
WMQ				pmax		pmax			
	comp=Z,21nm,0.9s								
ZSN	**Zaisan**	**30.07**	**37**	*e*P		**P**	**01 16 42.4**	**-0.4**
ZSN	**Zaisan**	**30.07**	**37**	*e*P		**P**	**01 16 42.5**	**-0.4**
IDI	**Anoyia**	**30.25**	**296**			**P**	**01 16 42.4**	**-2.2**
LPSR	**Galich'ya Gora**	**30.54**	**336**	*e*P		**P**	**01 16 46.1**	**-0.8**
LPSR				pmax		pmax			
	comp=Z,36nm,0.7s								
TIRR	**Tirgusor**	**30.55**	**315**	⇓P		**P**	**01 16 47.8**	**+0.7**
TIRR	**Tirgusor**	**30.55**	**315**	P		**P**	**01 16 45.3**	**-1.7**
TIRR	**Tirgusor**	**30.55**	**315**	P		**P**	**01 16 45.3**	**-1.7**
TIRR				pmax		pmax			
	comp=Z,7.0nm,0.8s								
ARTI	**Arti**	**30.59**	**360**	P		**P**	**01 16 46.3**	**-0.9**
ARTI				IAmb		IAmb	01 16 56.7		
	comp=Z,13nm,0.9s								
ARTI	**Arti**	**30.59**	**360**	*d i*P		**P**	**01 16 48.0**	**+0.8**
ARTI							01 17 47.6		
ARTI							01 19 42.2		
ARTI				S		**S**	**01 21 51.6**	**+2.9**
ARTI				SS		**ScP**	**01 23 29.8**	**+1.8**
ARTI				pmax		pmax			
	comp=Z,17nm,1.4s								
TPGR	**Topolog**	**30.73**	**316**	⇓P		**P**	**01 16 49.7**	**+1.0**
ICOR	**Ion Corvin**	**30.79**	**314**	⇑P		**P**	**01 16 50.4**	**+1.2**
SVE	**Sverdlovsk**	**31.07**	**2**	*e*P		**P**	**01 16 51.8**	**+0.3**
SVE				pmax		pmax			
	comp=Z,20nm,1.0s								
SVE				MLR		MLR			
	comp=Z,516nm,16.0s								
RDO	**Rodhopi**	**31.18**	**308**	P		**P**	**01 16 50.7**	**-2.0**
RDO	**Rodhopi**	**31.18**	**308**	P		**P**	**01 16 53.7**	**+1.1**
CICN	**Ciocanesti**	**31.32**	**314**	⇑P		**P**	**01 16 55.3**	**+1.5**
LODK	**Lodwar**	**31.35**	**229**	P		**P**	**01 16 53.6**	**-0.9**
LODK				IAmb		IAmb	01 17 07.6		
	comp=Z,12nm,1.1s								
LODK	**Lodwar**	**31.35**	**229**	P		**P**	**01 16 55.1**	**+0.6**
LODK	**Lodwar**	**31.35**	**229**	P		**P**	**01 16 58.2**	**+3.8**
RAZG	**Razgrad**	**31.40**	**313**	⇓P		**P**	**01 16 56.2**	**+1.7**
SULR		**32.03**	**314**	P		**P**	**01 17 02.1**	**+2.0**
VRI	**Vrincioaia**	**32.26**	**317**	⇑P		**P**	**01 17 03.6**	**+1.5**
VRI	**Vrincioaia**	**32.26**	**317**	P		**P**	**01 17 03.6**	**+1.5**
PLOR	**Plostina**	**32.30**	**317**	⇓P		**P**	**01 17 03.7**	**+1.2**
PLOR	**Plostina**	**32.30**	**317**	P		**P**	**01 17 03.7**	**+1.2**
NEHR	**Nehoiu**	**32.33**	**316**	⇓P		**P**	**01 17 04.3**	**+1.6**
COPA	**Copaceanca**	**32.48**	**313**	⇓P		**P**	**01 17 05.6**	**+1.6**
SRS	**Serrai**	**32.57**	**307**	P		**P**	**01 17 06.3**	**+1.4**
COVR	**Voineasa-Covas**	**32.57**	**316**	⇓P		**P**	**01 17 06.6**	**+1.7**
MLR	**Muntele Rosu**	**32.58**	**316**	⇓P		**P**	**01 17 06.4**	**+1.3**
MLR	**Muntele Rosu**	**32.58**	**316**			**P**	**01 17 02.9**	**-2.2**
MLR				IAmb		IAmb	01 17 17.1		
	comp=Z,15nm,0.9s								
MLR	**Muntele Rosu**	**32.58**	**316**	P		**P**	**01 17 02.9**	**-2.2**
MLR				pmax		pmax			
	comp=Z,15nm,0.9s								
MLR	**Muntele Rosu**	**32.58**	**316**	P		**P**	**01 17 03.7**	**-1.4**
	comp=Z,19nm,0.9s								
MLR	**Muntele Rosu**	**32.58**	**316**	P		**P**	**01 17 07.7**	**+2.7**
PLVB	**Pleven**	**32.60**	**311**	⇑P		**P**	**01 17 06.0**	**+0.9**
TESR	**Tescani**	**32.61**	**318**	⇑P		**P**	**01 17 06.1**	**+0.9**
TESR	**Tescani**	**32.61**	**318**	P		**P**	**01 17 04.0**	**-1.2**
	comp=Z,13nm,0.8s								
TESR	**Tescani**	**32.61**	**318**	P		**P**	**01 17 06.0**	**+0.8**
ONER	**Baraj Valea Uz**	**32.68**	**317**	⇑P		**P**	**01 17 06.8**	**+1.0**
DGZ	**Jazzator, Alta**	**32.78**	**36**	*i* P		**P**	**01 17 06.6**	**-0.2**
DGZ				pmax		pmax			
	comp=Z,10.0nm,1.4s								
TURR	**Turia**	**32.79**	**316**	⇑P		**P**	**01 17 08.3**	**+1.6**
HUMR	**Humele**	**32.80**	**313**	⇓P		**P**	**01 17 08.5**	**+1.7**
OZUR		**32.95**	**316**	⇓P		**P**	**01 17 10.3**	**+2.1**
VLAD	**Vladila**	**32.97**	**312**	⇑P		**P**	**01 17 09.5**	**+1.2**
MTUR	**Matau**	**33.03**	**315**	⇑P		**P**	**01 17 10.9**	**+1.9**
MTUR	**Matau**	**33.03**	**315**	P		**P**	**01 17 10.8**	**+1.9**
VOIR		**33.12**	**315**	⇑P		**P**	**01 17 11.6**	**+1.8**
VOIR		**33.12**	**315**	P		**P**	**01 17 11.6**	**+1.8**
VOIR		**33.12**	**315**	P		**P**	**01 17 09.0**	**-0.8**
	comp=Z,448nmcomp=Z,34nm,1.1s								
DOPR	**Dopca**	**33.14**	**316**	⇑P		**P**	**01 17 11.3**	**+1.5**
AK09	**Malin Array Si**	**33.36**	**326**	P		**P**	**01 17 10.3**	**-1.3**
AK09				pP		**pP**	**01 17 14.0**	**-1.4**
AK07	**Malin Array Si**	**33.36**	**326**	P		**P**	**01 17 10.5**	**-1.1**
ARR	**Arges**	**33.36**	**315**	⇑P		**P**	**01 17 12.9**	**+1.0**
AK10	**Malin Array Si**	**33.37**	**326**	P		**P**	**01 17 10.1**	**-1.6**
VAY	**Valandovo**	**33.37**	**307**	⇑*i*P		P	01 17 23.3	+11
KIRV	**Kirov**	**33.39**	**351**	*ce*P		**P**	**01 17 12.3**	**+0.5**
OBN	**Obninsk**	**33.40**	**337**	⇑P		**P**	**01 17 12.9**	**+1.0**
OBN	**Obninsk**	**33.40**	**337**	P		**P**	**01 17 10.7**	**-1.2**
OBN	**Obninsk**	**33.40**	**337**	*ce*P		**P**	**01 17 11.9**	**0.0**
OBN				*e**PP		**pP**	**01 17 16.1**	**+0.5**
OBN				*e*			01 18 23.6		
OBN				*e*PPP		PPP	01 18 35.0		
OBN				*e*S		**S**	**01 22 33.4**	**+0.9**
OBN				*e*SS		**SnSn**	**01 24 31.4**	**-2.4**
OBN				*e*SSS		SSS	01 24 51.4		
OBN				pmax		pmax			
	comp=Z,79nm,1.0s								
OBN				MLR		MLR			
	comp=Z,207nm,21.0s								
OBN	**Obninsk**	**33.40**	**337**	P		**P**	**01 17 10.8**	**-1.1**
	comp=Z,82nm,1.0s								
AK05	**Malin Array Si**	**33.40**	**326**	P		**P**	**01 17 10.8**	**-1.2**
AK02	**Malin Array Si**	**33.42**	**326**	P		**P**	**01 17 11.1**	**-1.1**
AKASG	**Malin Array Be**	**33.44**	**326**	P		**P**	**01 17 11.6**	**-0.8**
	comp=Z,4.9nm,0.6s,baz=133,slow=8.3,SNR=34								
	comp=Z,4.9nm,0.6s								
AKASG	**Malin Array Be**	**33.44**	**326**	P		**P**	**01 17 11.4**	**-0.9**
AKASG	**Malin Array Be**	**33.44**	**326**	P		**P**	**01 17 11.4**	**-0.9**
AKASG				pmax		pmax			
	comp=Z,36nm,1.2s								
AKBB	**Malin Array Si**	**33.44**	**326**			**P**	**01 17 11.0**	**-1.3**
AKBB				IAmb		IAmb	01 17 12.5		
	comp=Z,16nm,0.7s								
AKBB	**Malin Array Si**	**33.44**	**326**	*ce*P		**P**	**01 17 11.8**	**-0.5**
AKBB				pmax		pmax			
	comp=Z,14nm,0.6s								
AKBB	**Malin Array Si**	**33.44**	**326**	P		**P**	**01 17 10.9**	**-1.4**
KIEV	**Kiev**	**33.44**	**326**	*i* P		**P**	**01 17 11.7**	**-0.7**
	SNR=11								
KIEV	**Kiev**	**33.44**	**326**			**P**	**01 17 11.7**	**-0.7**
KIEV	**Kiev**	**33.44**	**326**	P		**P**	**01 17 11.7**	**-0.7**
KIEV	**Kiev**	**33.44**	**326**	P		**P**	**01 17 11.2**	**-1.2**
	comp=Z,98nm,1.1s								
AK04	**Malin Array Si**	**33.48**	**326**	P		**P**	**01 17 11.2**	**-1.5**
MOS	**Moscow**	**33.54**	**339**	*e*P		**P**	**01 17 14.4**	**+1.3**
MOS				*e*			01 18 27.6		
MOS				*e*S		**S**	**01 22 33.4**	**-1.4**
MOS				pmax		pmax			
	comp=Z,31nm,1.0s								
KMBO	**Kilima Mbogo**	**33.66**	**221**	*i* P		**P**	**01 17 15.8**	**+0.9**
KMPD	**K-Podol'skiy**	**33.73**	**321**	P		**P**	**01 17 13.5**	**-1.4**
LUBAR	**Lubar, Ukraine**	**33.75**	**324**	P		**P**	**01 17 13.8**	**-1.3**
MDB	**Medias**	**33.85**	**316**	⇓P		**P**	**01 17 17.1**	**+1.1**
MDB	**Medias**	**33.85**	**316**	P		**P**	**01 17 17.0**	**+1.1**
LOT	**Lotru**	**33.95**	**314**	⇓P		**P**	**01 17 17.8**	**+0.8**
MI29	**MI29, Kamyanyy**	**33.98**	**324**	P		**P**	**01 17 15.7**	**-1.4**
	comp=Z,72nm,1.0s								
BURAR	**Bucovina Array**	**33.99**	**319**	⇓P		**P**	**01 17 18.0**	**+0.7**
BURAR	**Bucovina Array**	**33.99**	**319**	P		**P**	**01 17 16.6**	**-0.7**
BURAR	**Bucovina Array**	**33.99**	**319**	P		**P**	**01 17 18.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**34.02**	**319**			**P**	**01 17 15.8**	**-1.8**
SRE	**Strehaia**	**34.02**	**313**	⇓P		**P**	**01 17 18.6**	**+1.1**
SRE	**Strehaia**	**34.02**	**313**	P		**P**	**01 17 18.6**	**+1.1**
PUNG	**Punghina**	**34.06**	**312**	⇓P		**P**	**01 17 19.5**	**+1.7**
ZAA0	**Zalesovo Array**	**34.30**	**28**	P		**P**	**01 17 19.3**	**-0.5**
ZALV	**Zalesovo Beam**	**34.30**	**28**	P		**P**	**01 17 19.1**	**-0.6**
	comp=Z,21nm,0.5s,baz=234,slow=10.0,SNR=107								
	comp=Z,21nm,0.5s								
SKO	**Skopje**	**34.36**	**307**	⇑*i*P		**P**	**01 17 21.5**	**+1.0**
MI28	**MI28,Pidlybu**	**34.37**	**325**	P		**P**	**01 17 18.4**	**-1.5**
GZR	**Gura Zlata**	**34.57**	**314**	⇑P		**P**	**01 17 22.7**	**+0.3**
GZR	**Gura Zlata**	**34.57**	**314**	P		**P**	**01 17 22.6**	**+0.3**
OHR	**Ohrid**	**34.60**	**306**	⇑*i*P		**P**	**01 17 23.8**	**+1.2**
HERR	**Herculane**	**34.62**	**313**	⇓P		**P**	**01 17 23.7**	**+1.0**
BOVS	**Bovan**	**34.67**	**310**	⇓P		**P**	**01 17 24.5**	**+1.4**
MARR	**Marisel-Cluj**	**34.86**	**316**	⇓P		**P**	**01 17 26.1**	**+1.2**
MDVR	**Moldovita**	**35.05**	**312**	⇑P		**P**	**01 17 27.7**	**+1.2**
DRGR		**35.17**	**316**	⇓P		**P**	**01 17 28.7**	**+1.2**
DRGR		**35.17**	**316**	P		**P**	**01 17 28.7**	**+1.2**
BZS	**Buzias**	**35.41**	**314**	⇑P		**P**	**01 17 30.1**	**+0.5**
BZS	**Buzias**	**35.41**	**314**	P		**P**	**01 17 30.0**	**+0.5**
RNPP5	**Staryi Chortor**	**35.47**	**324**	P		**P**	**01 17 28.6**	**-1.3**
RNPP8	**Varash**	**35.54**	**325**	P		**P**	**01 17 29.4**	**-1.1**
RNPP9	**Sopachiv**	**35.57**	**325**	P		**P**	**01 17 29.2**	**-1.5**
SIRR	**Siria**	**35.63**	**315**	⇑P		**P**	**01 17 32.5**	**+1.1**
BANR	**Banloc**	**35.65**	**313**	⇑P		**P**	**01 17 33.1**	**+1.6**
SJES	**Sjenica**	**35.76**	**309**	⇑*i*P		**P**	**01 17 32.2**	**-0.5**
DRME	**Dracevica, Mon**	**36.04**	**307**	⇑*i*P		**P**	**01 17 34.4**	**-0.5**
PDG	**Podgorica**	**36.05**	**307**	⇑*i*P		**P**	**01 17 33.5**	**-1.5**
BBLS	**Lazi&#263i**	**36.33**	**310**	⇑*i*P		**P**	**01 17 37.3**	**-0.2**
KOLS	**Kolonicke sedl**	**36.35**	**319**	*e*P		**P**	**01 17 38.8**	**+1.3**
KOLS				pmax		pmax			
	comp=Z,26nm,0.9s								
KOLS	**Kolonicke sedl**	**36.35**	**319**	*e*P		**P**	**01 17 38.8**	**+1.3**
KWP	**Kalwaria Pacla**	**36.41**	**320**	*e*P		**P**	**01 17 38.5**	**+0.5**
KWP	**Kalwaria Pacla**	**36.41**	**320**	P		**P**	**01 17 36.9**	**-1.1**
	comp=Z,10nm,0.8s								
MNK	**Minsk**	**36.45**	**330**	*e*P		**P**	**01 17 37.0**	**-1.2**
TEKS	**Tekeris**	**36.45**	**311**	⇑*i*P		**P**	**01 17 38.6**	**+0.1**
FRGS	**Fruska Gora**	**36.45**	**312**	⇑*i*P		**P**	**01 17 39.2**	**+0.7**
UPM	**Unac-Piva**	**36.50**	**309**	⇑*i*P		**P**	**01 17 39.1**	**0.0**
HCY	**Herceg Novi**	**36.60**	**307**	⇑*i*P		**P**	**01 17 37.7**	**-2.0**
BRY	**Bratogost**	**36.68**	**308**	⇑*i*P		**P**	**01 17 39.8**	**-0.8**
KLINJ	**Klinje**	**36.71**	**308**	*e*P		**P**	**01 17 40.9**	**+0.1**
TREB	**Trebinje**	**36.77**	**308**	⇑*i*P		**P**	**01 17 39.7**	**-1.5**
GTA2	**Gaotai**	**37.11**	**58**	P		**P**	**01 17 45.7**	**+1.5**
GTA2					pP	sP	01 17 52.4	+2.8	
GTA2				pmax		pmax			
	comp=Z,22nm,1.2s								
TIP	**Timpagrande**	**37.26**	**301**	⇓P		**P**	**01 17 45.9**	**+0.4**
TIP	**Timpagrande**	**37.26**	**301**			**P**	**01 17 44.7**	**-0.7**
TIP				IAmb		IAmb	01 17 48.5		
	comp=Z,32nm,1.3s								
KLMR	**Klimovskoe**	**37.37**	**345**	*e*P		**P**	**01 17 43.9**	**-2.0**
KLMR				*e*			01 19 08.7		
KLMR				pmax		pmax			
	comp=Z,31nm,1.2s								
PSZ	**Piszkesteto**	**37.37**	**316**	⇓P		**P**	**01 17 47.4**	**+1.0**
PSZ	**Piszkesteto**	**37.37**	**316**			**P**	**01 17 44.7**	**-1.6**
PSZ	**Piszkesteto**	**37.37**	**316**	P		**P**	**01 17 44.7**	**-1.6**
PSZ				pmax		pmax			
	comp=Z,7.0nm,0.9s								
DOB	**Doboj**	**37.48**	**311**	*e*P		**P**	**01 17 50.5**	**+3.3**
MORH	**Mrgy, Hungar**	**37.57**	**313**	⇑*i*P		**P**	**01 17 48.5**	**+0.6**
CHTO	**Chiang Mai**	**38.05**	**92**	P		**P**	**01 17 52.4**	**+0.1**
CHTO	**Chiang Mai**	**38.05**	**92**	P		**P**	**01 17 52.4**	**+0.1**
CHTO				pmax		pmax			
	comp=Z,26nm,2.0s								
CHTO	**Chiang Mai**	**38.05**	**92**	P		**P**	**01 17 52.7**	**+0.4**
BLY	**Banja Luka**	**38.11**	**310**	⇑P		**P**	**01 17 53.4**	**+0.9**
BLY	**Banja Luka**	**38.11**	**310**			**P**	**01 17 51.5**	**-1.0**
BLY				IAmb		IAmb	01 17 54.4		
	comp=Z,16nm,0.8s

FDMO Fiordimonte 40.62 307 P 01 18 11.5 -2.0
FDMO IAmb IAmb 01 18 15.8
comp=Z,38nm,1.4s
KSP Ksiaz 40.66 319 P P 01 18 12.6 -1.1
comp=Z,5.1nm,1.4s
CHVC Chvalec 40.70 319 eP P 01 18 14.4 +0.3
CHVC Chvalec 40.70 319 eP P 01 18 14.4 +0.3
CADS Cadrg 40.84 312 i P P 01 18 15.8 +0.5
SABO M.te Sabotino 40.87 311 P P 01 18 14.3 -1.2
CESX Cesi 40.91 306 P 01 18 13.2 -2.7
CESX IAmb IAmb 01 18 17.9
comp=Z,16nm,0.7s
MOA Molln 40.92 314 i P P 01 18 16.1 +0.2
comp=Z,8.0nm,0.5s,SNR=7.6
MYKA Terra Mystica 41.00 312 i P P 01 18 17.1 +0.4
comp=Z,10nm,0.6s
PRED Cave del Predi 41.01 312 P 01 18 14.8 -1.9
PRED IAmb IAmb 01 18 26.9
comp=Z,26nm,0.9s
MURB Monte Urbino 41.06 307 P P 01 18 15.3 -1.9
MURB IAmb IAmb 01 18 20.1
comp=Z,35nm,1.0s
MOY Mondy 41.26 40 eP P 01 18 19.6 +0.8
MOY pmax pmax
comp=Z,11nm,2.0s
BIOA Bad Ischl, Aus 41.28 314 i P P 01 18 19.3 +0.4
comp=Z,12nm,0.5s,SNR=12
KBA Koelnbreinsper 41.31 313 i P P 01 18 19.8 +0.5
comp=Z,29nm,0.9s
ZVC Zvikov 41.44 317 eP P 01 18 20.5 +0.3
STAL STALIGIAL 41.53 312 P P 01 18 20.1 -0.9
GEC2 GERESS Array S 41.57 316 P 01 18 20.5 -0.8
GERES GERESS Array B 41.57 316 P P 01 18 21.6 +0.2
comp=Z,5.1nm,0.8s,baz=120,slow=7.4,SNR=42
comp=Z,5.1nm,0.8s
GERES GERESS Array B 41.57 316 P P 01 18 20.8 -0.6
KHC Kasperske Hory 41.73 316 P 01 18 21.3 -1.3
KHC IAmb IAmb 01 18 24.4
comp=Z,18nm,0.9s
KHC Kasperske Hory 41.73 316 ceP P 01 18 22.9 +0.3
KHC pmax pmax
comp=Z,26nm,1.3s
KHC Kasperske Hory 41.73 316 eP P 01 18 22.5 -0.1
KHC epP **pP 01 18 26.7 +0.2**
KHC Kasperske Hory 41.73 316 P P 01 18 21.4 -1.2
comp=Z,22nm,0.9s
ABTA Abfaltersbach 41.78 312 i P P 01 18 23.6 +0.5
comp=Z,69nm,1.1s,SNR=18
FIA1 FINESS Array S 41.80 337 P P 01 18 21.8 -1.1
FINES FINESS Array B 41.80 337 P P 01 18 23.1 +0.2
comp=Z,24nm,0.6s,baz=134,slow=9.8,SNR=115
comp=Z,24nm,0.6s
FINES FINESS Array B 41.80 337 P P 01 18 22.1 -0.8
LESA Schwarzleotal 41.84 313 i P P 01 18 23.5 -0.1
comp=Z,15nm,0.4s,SNR=12
BRG Berggiesshubel 42.06 319 eP P 01 18 25.5 +0.3
BRG Amp 01 18 26.1
comp=Z,4.7nm,0.9s
ZAK Zakamensk 42.17 42 eP P 01 18 25.7 -0.5
ZAK pmax pmax
comp=Z,6.0nm,2.1s
WTTA Wattenberg 42.49 313 i P P 01 18 28.7 -0.2
comp=Z,110nm,1.1s,SNR=30
WATA Walderalm 42.54 313 i P P 01 18 28.8 -0.6
comp=Z,83nm,1.2s,SNR=25
SQTA Sankt Quirin 42.76 313 i P P 01 18 30.7 -0.4
comp=Z,60nm,0.6s,SNR=24
MOTA Moosalm 42.86 313 i P P 01 18 31.6 -0.3
comp=Z,84nm,1.1s,SNR=26
SALO Salr 42.89 310 P P 01 18 32.8 +0.7
KEST Kesra 42.92 296 P P 01 18 34.1 +1.6
comp=Z,5.2nm,0.7s,baz=318,slow=1.3,SNR=5.2
comp=Z,5.2nm,0.7s
FETA Feichten 43.04 312 i P P 01 18 33.5 +0.1
comp=Z,99nm,1.0s,SNR=47
RETA Reutte 43.12 313 i P P 01 18 33.4 -0.5
comp=Z,35nm,0.9s,SNR=13
FUORN Ofenpass-Fuorn 43.27 312 IAmb IAmb 01 18 37.1
comp=Z,32nm,1.0s
GRA1 Grafenberg Arr 43.37 316 IAmb IAmb 01 18 38.5
comp=Z,26nm,0.9s
GRF Grafenberg Arr 43.37 316 eP P 01 18 36.2 +0.3
comp=Z,12nm,0.9s,baz=112,slow=9.0
GRF epP **sP 01 18 41.7 +0.4**
baz=112,slow=9.0
GRFO Grafenberg 43.37 316 P P 01 18 36.5 +0.6
GRFO IAmb IAmb 01 18 38.4
comp=Z,23nm,0.9s
GRFO Grafenberg 43.37 316 P P 01 18 36.5 +0.6
GRFO pmax pmax
comp=Z,23nm,0.9s
SONM Songino Array 43.45 47 P P 01 18 38.1 +1.4
comp=Z,20nm,0.8s,baz=255,slow=8.8,SNR=106
comp=Z,20nm,0.8s
SONM Songino Array 43.45 47 P P 01 18 38.2 +1.6
SONM IAmb IAmb 01 18 39.1
comp=Z,24nm,0.9s
SONM Songino Array 43.45 47 P P 01 18 38.3 +1.6
SONM pmax pmax
comp=Z,24nm,0.9s
DAVA Damuels 43.66 312 eP P 01 18 38.3 -0.1
comp=Z,134nm,0.6s,SNR=44
TUE Stuetta 43.86 311 P P 01 18 39.0 -1.1
comp=Z,175nm,0.8s
ULN Ulaanbaatar 43.89 47 P P 01 18 41.7 +1.5
ULN IAmb IAmb 01 18 42.4
comp=Z,28nm,1.1s
ULN Ulaanbaatar 43.89 47 ceP P 01 18 41.4 +1.1
ULN pmax pmax
comp=Z,46nm,1.7s
ULN Ulaanbaatar 43.89 47 P P 01 18 41.4 +1.1
XAN Xi'an 44.20 67 P P 01 18 43.0 +0.1
XAN pmax pmax
comp=Z,28nm,1.0s
XAN L L
comp=Z,220nm,19.2s
XAN L L
comp=Z,220nm,19.2s
XAN L L
comp=Z,320nm,17.9s
APA Apatity 44.52 347 ⇓eP P 01 18 43.3 -1.5
APA pmax pmax
comp=Z,10.0nm,0.8s
APA MLR MLR
comp=Z,428nm,12.8s
LVZ Lovozero 44.55 347 ceP P 01 18 47.1 +2.0
LVZ pmax pmax
comp=Z,19nm,1.7s
BFO Black Forest 44.90 314 P P 01 18 48.1 -0.1
BFO IAmb IAmb 01 18 59.1
comp=Z,8.5nm,0.8s
BFO Black Forest 44.90 314 P P 01 18 48.1 -0.1
BFO pmax pmax
comp=Z,9.0nm,0.8s
BTO2 Baotou 44.95 57 eP P 01 18 48.5 -0.3
BTO2 S **S 01 25 27.8 +0.8**
BTO2 pmax pmax
comp=Z,7.0nm,0.5s
BTO2 pmax pmax
comp=Z,170nm,5.0s
BTO2 L L
comp=Z,180nm,7.6s
BTO2 L L
comp=Z,440nm,8.1s
BTO2 L L
comp=Z,380nm,13.9s
HFS Hagfors 45.95 331 P P 01 18 55.1 -1.2
comp=Z,6.9nm,0.4s,baz=130,slow=8.1,SNR=52
comp=Z,6.9nm,0.4s
HHC Hu-ho-hao-te 46.23 57 eP P 01 18 59.1 +0.1
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,80nm,4.0s
WLF Walferdange 46.56 315 dP P 01 19 01.4 +0.1
comp=Z,16nm,0.8s
BTNL Ternell 46.76 316 dP P 01 19 03.0 +0.2
comp=Z,8.5nm,0.9s
BHOU Houvegnez 46.79 316 dP P 01 19 03.8 +0.7
comp=Z,8.7nm,1.0s
MEM Membach 46.84 316 dP P 01 19 04.4 +1.0
comp=Z,12nm,0.9s
NRIK Noril'sk 46.86 14 P P 01 19 02.7 -0.6
comp=Z,10nm,0.8s,baz=207,slow=5.2,SNR=15
comp=Z,10nm,0.8s
NRIK Noril'sk 46.86 14 P P 01 19 03.3 -0.1
NRIK Noril'sk 46.86 14 i P P 01 19 02.3 -1.0
NRIK pmax pmax
comp=Z,25nm,1.2s
LYN LuoYang 47.10 66 P P 01 19 07.0 +1.3
LYN pmax pmax
comp=Z,15nm,0.8s
LYN L L
comp=Z,480nm,16.1s
LYN L L
comp=Z,440nm,13.4s
LYN L L
comp=Z,840nm,20.6s
NC602 NORSAR Array S 47.18 331 eP P 01 19 05.8 -0.2
OSL Oslo 47.20 330 eP P 01 19 06.0 -0.1
OSL IAmb IAmb 01 19 07.0
comp=Z,52nm,1.3s
RCHB Rochefort 47.24 315 dP P 01 19 07.3 +0.8
comp=Z,15nm,1.0s
BCLA Clavier 47.24 316 dP P 01 19 07.5 +0.9
comp=Z,10nm,0.9s
NC405 NORSAR Array S 47.27 331 P P 01 19 05.7 -1.0
NC405 IAmb IAmb 01 19 07.1
comp=Z,19nm,0.9s
BGES Geses 47.38 316 dP P 01 19 08.5 +0.9
comp=Z,9.8nm,0.9s
NB2 NORSAR Subarra 47.46 331 P P 01 19 07.2 -1.0
comp=Z,12nm,0.8s,baz=117,slow=7.9
NB2 NORSAR Subarra 47.46 331 P P 01 19 07.2 -1.0
NOA NORSAR Array B 47.46 331 P P 01 19 07.2 -1.0
comp=Z,9.3nm,0.8s,baz=116,slow=7.8,SNR=24
comp=Z,9.3nm,0.8s
VADS Vadso 47.46 347 eP P 01 19 08.2 +0.2
VADS IAmb IAmb 01 19 08.7
comp=Z,224nm,2.1s
BMRD Maredsous 47.56 316 dP P 01 19 09.9 +0.9
comp=Z,13nm,0.9s
DOU Dourbes 47.63 315 dP P 01 19 10.0 +0.4
comp=Z,14nm,1.0s
ARA0 ARCESS Array S 47.84 345 eP P 01 19 11.1 +0.2
ARCES ARCESS Array B 47.84 345 P P 01 19 10.1 -0.9
comp=Z,9.6nm,0.7s,baz=136,slow=8.7,SNR=43
comp=Z,9.6nm,0.7s
ARCES ARCESS Array B 47.84 345 P P 01 19 11.1 +0.1
ARCES IAmb IAmb 01 19 11.6
comp=Z,11nm,0.8s
ARCES ARCESS Array B 47.84 345 P P 01 19 11.1 +0.1
ARCES pmax pmax
comp=Z,11nm,0.8s
UCC Uccle 47.91 316 dP P 01 19 12.2 +0.5
KTK1 Kautokeino 48.01 344 eP P 01 19 12.3 0.0
KTK1 IAmb IAmb 01 19 12.4
comp=Z,25nm,1.0s
TAM Tamanrasset 48.02 278 P P 01 19 12.9 -0.3
TAM Tamanrasset 48.02 278 P P 01 19 12.9 -0.3
TAM pmax pmax
comp=Z,107nm,0.2s
SKAR Skarslia 48.61 330 eP P 01 19 17.5 +0.5
MOR8 Moi Rana 48.78 338 eP P 01 19 17.7 -0.5
MOR8 IAmb IAmb 01 19 18.9
comp=Z,47nm,1.5s
NSS Namsos 48.80 335 eP P 01 19 18.3 0.0
NSS IAmb IAmb 01 19 18.9
comp=Z,71nm,1.6s
DOMB Dombas 48.82 332 eP P 01 19 18.7 0.0
RAUS Rausandaksla 49.06 338 eP P 01 19 20.4 0.0
RAUS IAmb IAmb 01 19 21.4
comp=Z,21nm,0.8s
HAMF Hammerfest 49.09 345 eP P 01 19 20.6 +0.1
HAMF IAmb IAmb 01 19 20.9
comp=Z,29nm,0.7s
JETT Jettan, Norway 49.11 343 eP P 01 19 20.8 0.0
JETT IAmb IAmb 01 19 21.8
comp=Z,50nm,0.9s
WHN Wuhan 49.15 71 ⇓P P 01 19 22.8 +1.2
WHN pmax pmax
comp=Z,52nm,1.1s
FAUS Fauske 49.20 340 eP P 01 19 21.4 0.0
FAUS IAmb IAmb 01 19 21.9
comp=Z,16nm,0.9s
LEIR Leirfjorden 49.20 338 eP P 01 19 21.2 -0.2
STOK Stokkvaagen 49.35 338 eP P 01 19 22.6 0.0
STOK IAmb IAmb 01 19 23.2
comp=Z,36nm,1.0s
KONS Konsvik 49.41 338 eP P 01 19 23.0 0.0
KONS IAmb IAmb 01 19 24.1
comp=Z,39nm,1.0s
VAGH Vaagaholmen 49.48 338 eP P 01 19 23.7 +0.1
VAGH IAmb IAmb 01 19 24.3
comp=Z,55nm,1.1s
STEI Steigen 49.53 340 eP P 01 19 23.7 -0.2
TRO Tromso 49.55 343 eP P 01 19 24.2 +0.2
TRO IAmb IAmb 01 19 24.7
comp=Z,59nm,1.2s
XLT XiLinHaoTe 49.67 53 eP P 01 19 27.4 +1.9
XLT pP sP 01 19 31.8 +0.8
XLT pmax pmax
comp=Z,9.0nm,1.0s
BER Bergen 49.87 329 eP P 01 19 27.1 +0.5
LOF Lofoten 50.17 340 IAmb IAmb 01 19 28.1
comp=Z,14nm,0.7s
LOF eP P **01 19 28.1 -0.7**
BOD Bodaibo 50.37 35 eP P 01 19 29.8 -0.7
BOD pmax pmax
comp=Z,40nm,0.8s
CWF Charnwood Fore 51.68 318 eP P 01 19 39.8 -0.6
CWF IAmb IAmb 01 19 41.3
comp=Z,9.2nm,0.7s
STRD Stroud 52.10 317 eP P 01 19 43.3 -0.2
STRD IAmb IAmb 01 19 44.5
comp=Z,44nm,0.7s
EDMD Edmundbyers 52.35 321 eP P 01 19 45.1 -0.3
EDMD IAmb IAmb 01 19 46.1
comp=Z,24nm,0.7s
HILR Hailar Array B 52.44 46 P P 01 19 46.5 +0.3
comp=Z,9.1nm,0.8s,baz=238,slow=5.1,SNR=8.1
comp=Z,9.1nm,0.8s
MONM Monmouth 52.50 317 eP P 01 19 46.2 -0.3
MONM IAmb IAmb 01 19 47.3
comp=Z,47nm,0.7s
HLM1 Long Mynd 52.61 318 eP P 01 19 47.2 -0.2
HLM1 IAmb IAmb 01 19 48.5
comp=Z,25nm,0.8s
MCH1 Michaelchurch 52.63 317 eP P 01 19 47.2 -0.3
MCH1 IAmb IAmb 01 19 48.4
comp=Z,47nm,0.7s
NJ2 Nanjing 52.71 68 eP P 01 19 49.2 +0.8
NJ2 pmax pmax
comp=Z,38nm,0.5s
FOEL Foel Wylfa 52.84 318 eP P 01 19 49.3 +0.2
FOEL IAmb IAmb 01 19 50.2
comp=Z,39nm,0.6s
KESW Keswick, Cumbr 52.98 320 eP P 01 19 49.6 -0.4
KESW IAmb IAmb 01 19 50.9
comp=Z,18nm,0.8s
EKA Eskdalemuir Ar 53.10 321 P P 01 19 50.6 -0.3
comp=Z,1.7nm,0.3s,baz=101,slow=8.0,SNR=34
comp=Z,1.7nm,0.3s
EKA Eskdalemuir Ar 53.10 321 P P 01 19 49.6 -1.3
EKA pmax pmax
comp=Z,49nm,2.0s
DYA Yadsworthy 53.10 315 eP P 01 19 50.7 -0.3
DYA IAmb IAmb 01 19 53.1
comp=Z,21nm,0.8s
ESDC Sonseca Array 53.28 301 P P 01 19 52.5 -0.1
comp=Z,2.9nm,0.9s,baz=72,slow=6.9,SNR=18
comp=Z,2.9nm,0.9s
MCD Coleburn Disti 53.48 324 eP P 01 19 53.5 -0.2
MCD IAmb IAmb 01 19 54.7
comp=Z,28nm,0.8s
HTL Hartland 53.49 316 eP P 01 19 53.8 -0.1
HTL IAmb IAmb 01 19 55.0
comp=Z,21nm,0.8s
PAB San Pablo 53.59 301 P P 01 19 55.1 +0.2
PAB IAmb IAmb 01 19 57.3
comp=Z,29nm,1.6s
PAB San Pablo 53.59 301 P P 01 19 55.1 +0.2
PAB pmax pmax
comp=Z,29nm,1.7s
WLF1 Llynfaes 53.60 318 eP P 01 19 54.5 -0.1
WLF1 IAmb IAmb 01 19 56.3
comp=Z,22nm,0.7s
NEWG New Galloway 53.68 321 eP P 01 19 55.1 -0.1
NEWG IAmb IAmb 01 19 55.9
comp=Z,15nm,0.6s
INVG Invergeldie, C 53.74 322 eP P 01 19 55.1 -0.5
INVG IAmb IAmb 01 19 56.5
comp=Z,20nm,0.7s
EAB Aberfoyle 53.87 322 eP P 01 19 56.4 -0.1
EAB IAmb IAmb 01 19 57.5
comp=Z,18nm,0.8s
DL2 Dalian 54.04 59 P P 01 19 57.8 -0.2
DL2 pmax pmax
comp=Z,16nm,1.2s
KSANE Kasane 54.04 220 P P 01 20 00.1 +1.7
KSANE IAmb IAmb 01 20 00.9
comp=Z,8.1nm,0.7s
LAWE Loch Awe, Argy 54.47 322 eP P 01 20 00.6 -0.3
LAWE IAmb IAmb 01 20 01.6
comp=Z,27nm,0.7s
TORD Torodi Ar. Bea 54.55 268 P P 01 20 02.0 -0.1
comp=Z,8.7nm,0.5s,baz=62,slow=7.5,SNR=97
comp=Z,8.7nm,0.5s
TORD Torodi Ar. Bea 54.55 268 P P 01 19 60.0 -2.1
TORD IAmb IAmb 01 20 47.8
comp=Z,12nm,0.8s
KPL Plockton 54.73 323 eP P 01 20 02.4 -0.4
KPL IAmb IAmb 01 20 03.8
comp=Z,26nm,0.7s
DSB Dublin 54.78 318 P P 01 20 02.7 -0.5
MD01 Midelt array s 54.80 293 P P 01 20 03.7 -0.3
ILTH Belurgan, Co L 54.81 319 P P 01 20 02.9 -0.5
IWEX Carrickbyrne, 54.98 317 P P 01 20 04.7 0.0
PBRG Braganca 55.20 304 eP P 01 20 07.4 +0.9
PBRG IAmb IAmb 01 20 10.0
comp=Z,32nm,2.3s
MVO Moncorvo 55.47 304 eP P 01 20 09.5 +0.9
MVO IAmb IAmb 01 20 15.2
comp=Z,42nm,0.9s
IDGL Inch Island, C 55.56 320 P P 01 20 08.7 -0.1
PBAR Barrancos 55.83 300 eP P 01 20 11.6 +0.6
PBAR IAmb IAmb 01 20 17.8
comp=Z,24nm,2.0s
SPA0 Spitsbergen Ar 55.85 350 eP P 01 20 11.0 +0.4
SPITS Spitsbergen Ar 55.85 350 P P 01 20 11.1 +0.4
comp=Z,8.4nm,0.5s,baz=124,slow=11,SNR=17
comp=Z,8.4nm,0.5s
PMRV Marv??o 55.94 302 eP P 01 20 12.4 +0.5
PMRV IAmb IAmb 01 20 15.1
comp=Z,28nm,1.5s
MTE Manteigas 55.94 303 eP P 01 20 12.9 +0.9
MTE IAmb IAmb 01 20 15.6
comp=Z,37nm,1.1s
PCBR Castelo Branco 55.95 302 eP P 01 20 13.2 +1.3
PCBR IAmb IAmb 01 20 18.4
comp=Z,43nm,1.4s
PVRL Vila Real 55.98 304 eP P 01 20 13.3 +1.1
PVRL IAmb IAmb 01 20 15.0
comp=Z,46nm,1.6s
POLO Lamas de Olo 56.03 304 eP P 01 20 13.5 +1.0
POLO IAmb IAmb 01 20 19.1
comp=Z,20nm,1.5s
PCAB Cabril 56.16 304 eP P 01 20 15.2 +1.7
PVIS Viseu 56.17 303 eP P 01 20 14.9 +1.4
PGAV Gavieira, Arco 56.32 305 eP P 01 20 15.8 +1.2
PGAV IAmb IAmb 01 20 25.4
comp=Z,60nm,1.9s
CN2 Changchun 56.44 53 P P 01 20 16.0 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.8s
PBEJ Beja 56.49 300 eP P 01 20 16.8 +1.0
PSARD Sardoal 56.51 302 eP P 01 20 16.7 +0.8
EVO Evora 56.54 301 eP P 01 20 17.0 +0.9
EVO IAmb IAmb 01 20 21.8
comp=Z,27nm,1.3s
IGLA Glengowla, Co 56.59 318 P P 01 20 16.1 0.0
PTO Porto 56.66 304 eP P 01 20 18.3 +1.4
PTO IAmb IAmb 01 20 21.1
comp=Z,61nm,1.9s
PCVE Castro Verde 56.69 299 eP P 01 20 18.0 +0.8
PCAS Casmilo, Conde 56.71 302 eP P 01 20 18.4 +1.1
PCAS IAmb IAmb 01 20 29.5
comp=Z,45nm,1.6s
PLOUS Minas do Lousa 56.92 300 eP P 01 20 20.0 +1.2
PSBE So Bento 57.01 302 eP P 01 20 20.7 +1.3
KBS Kingsbay 57.01 350 ceP P 01 20 19.7 +0.9
KBS pmax pmax
comp=Z,65nm,2.5s
KBS Kingsbay 57.01 350 eP P 01 20 19.2 +0.4
KBS IAmb IAmb 01 20 19.6
comp=Z,333nm,2.5s
KBS Kingsbay 57.01 350 i P P 01 20 18.2 -0.6
VAL Valentia 57.11 317 P P 01 20 20.5 +0.6
MORF Marmelete 57.22 299 eP P 01 20 21.1 +0.1
HEH HeiHe 57.40 45 eP P 01 20 22.1 +0.1
HEH pmax pmax
comp=Z,13nm,0.7s
PMAFR Mafra 57.46 301 eP P 01 20 23.9 +1.3
BNX BinXian 57.67 51 ⇓P P 01 20 23.0 -1.0
BNX pmax pmax
comp=Z,7.0nm,1.0s
YAK Yakutsk 58.82 31 eP P 01 20 30.7 -1.0
YAK e*PP **pP 01 20 35.9 +0.2**
YAK e 01 21 20.3
YAK e 01 22 39.5
YAK eS **S 01 28 35.4 -1.3**
YAK e*SS **sS 01 28 43.9 +0.7**
YAK e 01 30 19.7
YAK eSS **SS 01 32 29.7 +0.1**
YAK eSSS SSS 01 34 58.8
YAK pmax pmax
comp=Z,33nm,1.1s
YAK pmax pmax
comp=N,1.0nm,0.7s
YAK pmax pmax
comp=E,11nm,1.8s
YAK pmax pmax
comp=Z,131nm,4.8s
YAK pmax pmax
comp=N,219nm,12.8s
YAK pmax pmax
comp=E,255nm,15.6s
YAK smax smax
comp=E,70nm,5.2s
YAK smax smax
comp=N,68nm,6.2s
YAK MLR MLR
comp=Z,251nm,20.0s
YAK MLR MLR
comp=N,119nm,17.0s
YAK MLR MLR
comp=E,77nm,18.0s
GRTLG Ghanzi 59.13 221 P P 01 20 36.3 +1.7
GRTLG IAmb IAmb 01 20 43.5
comp=Z,7.9nm,0.8s
KSRS Korea Array 59.15 60 P P 01 20 34.4 -0.1
comp=Z,5.8nm,0.6s,baz=275,slow=7.1,SNR=29
comp=Z,5.8nm,0.6s
LBTB Lobatse 59.61 215 IAmb IAmb 01 20 44.6
comp=Z,11nm,0.8s
KGCAE Kacgae 59.72 219 P P 01 20 39.9 +1.3
MAKGR Makgori 60.68 215 P P 01 20 45.9 +0.8
MAKGR IAmb IAmb 01 20 51.1
comp=Z,11nm,0.7s
KOOLE Kule 60.98 221 P P 01 20 48.7 +1.4
KOOLE IAmb IAmb 01 21 33.2
comp=Z,16nm,1.2s
NOR Nord 62.49 351 i P P 01 20 56.5 0.0
NOR IAmb IAmb 01 20 56.6
comp=Z,12nm,1.1s
SCO Scoresbysund 62.73 338 P P 01 20 59.2 +1.0
SCO IAmb IAmb 01 21 00.1
comp=Z,11nm,0.9s
SCO Scoresbysund 62.73 338 P P 01 20 59.2 +1.0
SCO pmax pmax
comp=Z,11nm,0.9s
SCO Scoresbysund 62.73 338 i P P 01 20 58.4 +0.2
SCO IAmb IAmb 01 20 60.0
comp=Z,12nm,0.9s
DBIC Dimbokro 63.06 264 P P 01 21 01.5 +0.2
comp=Z,5.8nm,0.7s,baz=70,slow=7.2,SNR=6.1
comp=Z,5.8nm,0.7s
DBIC Dimbokro 63.06 264 P P 01 21 00.7 -0.6
DBIC Dimbokro 63.06 264 P P 01 21 00.7 -0.6
DBIC pmax pmax
comp=Z,51nm,1.8s
PMAR Madeira 64.81 296 eP P 01 21 13.7 +0.8
MJAR Matsushiro Arr 67.38 59 P P 01 21 28.4 -0.7
comp=Z,2.7nm,0.8s,baz=265,slow=8.0,SNR=6.6
comp=Z,2.7nm,0.8s
MJAR Matsushiro Arr 67.38 59 P P 01 21 28.2 -0.9
MJAR Matsushiro Arr 67.38 59 P P 01 21 28.2 -0.9
MJAR pmax pmax

comp=Z,7.0nm,1.5s
SUMG Summit 67.66 341 P **P** **01 21 31.4 +0.7**
SUMG Summit 67.66 341 P **P** **01 21 31.4 +0.7**
SUMG pmax pmax
comp=Z,19nm,0.7s
SUMG Summit 67.66 341 *i* P **P** **01 21 30.5 -0.2**
SUMG IAmb IAmb 01 21 32.3
comp=Z,18nm,0.7s
YSS Yuzhno-Sakhali 67.93 47 *ce* P **P** **01 21 32.9 +0.5**
YSS pmax pmax
comp=Z,25nm,1.3s
NEEM North Greenlan 69.13 347 *i* P **P** **01 21 39.2 -0.5**
NEEM IAmb IAmb 01 21 40.1
comp=Z,10nm,0.9s
SEY Seymchan 69.16 29 *ce* P **P** **01 21 40.1 +0.4**
SEY pmax pmax
comp=Z,8.0nm,0.8s
KULLO Kullorsuaq 71.79 345 *i* P **P** **01 21 54.1 -1.5**
SAATT Saattut 72.17 341 *i* P **P** **01 21 56.2 -1.7**
UPNV Upernavik 72.46 343 *i* P **P** **01 21 59.2 -0.4**
UPNV IAmb IAmb 01 22 00.4
comp=Z,16nm,0.8s
ILULI Ilulissat 72.75 339 *i* P **P** **01 22 00.9 -0.5**
ILULI IAmb IAmb 01 22 01.7
comp=Z,12nm,0.5s
BILL Bilibino 72.75 22 *ce* P **P** **01 22 02.2 +0.7**
BILL pmax pmax
comp=Z,6.0nm,1.3s
TULEG Thule 72.98 349 *i* P **P** **01 22 01.6 -1.0**
TULEG IAmb IAmb 01 22 02.9
comp=Z,29nm,1.0s
NRS Narsarsuaq 74.10 331 P **P** **01 22 09.5 0.0**
NRS IAmb IAmb 01 22 10.8
comp=Z,22nm,1.0s
NRS Narsarsuaq 74.10 331 P **P** **01 22 09.5 0.0**
NRS pmax pmax
comp=Z,22nm,1.0s
NRS Narsarsuaq 74.10 331 *i* P **P** **01 22 08.9 -0.6**
NRS IAmb IAmb 01 22 10.1
comp=Z,19nm,0.9s
MORW Morawa 77.69 131 P **P** **01 22 27.6 -2.9**
comp=Z,27nm,2.3s
A22K Sinclair Lake 80.67 11 P **P** **01 22 45.6 -0.5**
baz=330
ILON Igloolik, Nuna 80.86 347 IAmb IAmb 01 22 47.9
comp=Z,12nm,1.0s
C16K Lisburne Hills 80.86 15 P **P** **01 22 46.4 -0.8**
baz=321
B20K Meade River 81.15 12 P **P** **01 22 48.2 -0.6**
baz=328
C17K DeLong Mountai 81.20 14 P **P** **01 22 48.8 -0.3**
baz=323
C19K Lookout Ridge 81.45 13 P **P** **01 22 50.2 -0.2**
baz=326
C18K Utukok River 81.49 14 P **P** **01 22 50.5 -0.1**
baz=325
B22K Teshekpuk Lake 81.51 10 P **P** **01 22 50.3 -0.3**
baz=331
RDOG Red Dog Mine 81.60 15 P **P** **01 22 50.5 -0.6**
baz=323
D17K Noatak River 81.84 15 P **P** **01 22 51.8 -0.6**
baz=323
B21K Ikpikpuk River 81.94 11 P **P** **01 22 52.4 -0.5**
baz=330
D19K Kuna River 82.25 13 IAmb IAmb 01 23 04.4
comp=Z,10nm,1.1s
D19K Kuna River 82.25 13 P **P** **01 22 53.9 -0.8**
baz=327
TNA Tin City 82.29 18 P **P** **01 22 54.8 0.0**
baz=319
C21K Knifeblade Rid 82.32 11 P **P** **01 22 54.7 -0.2**
baz=330
D20K Etivluk River 82.36 12 P **P** **01 22 55.1 -0.1**
baz=329
C23K Itkillik River 82.40 10 P **P** **01 22 55.5 +0.2**
baz=334
E18K Tukpahlearik C 82.63 14 IAmb IAmb 01 23 09.1
comp=Z,27nm,1.9s
E18K Tukpahlearik C 82.63 14 P **P** **01 22 56.1 -0.5**
baz=325
E17K Hotham Inlet 82.63 15 P **P** **01 22 56.3 -0.3**
baz=324
E20K Nigu River 82.83 12 P **P** **01 22 57.4 -0.3**
baz=329
F15K North Star Dit 83.04 17 P **P** **01 22 58.6 -0.2**
baz=322
C26K Camden Bay 83.12 8 P **P** **01 22 58.4 -0.6**
baz=339
D23K Nanushuk River 83.18 10 P **P** **01 22 58.8 -0.6**
baz=334
E19K Redstone River 83.31 13 IAmb IAmb 01 23 01.0
comp=Z,3.7nm,0.7s
E19K Redstone River 83.31 13 P **P** **01 22 59.7 -0.4**
baz=328,SNR=5.1
D25K Kavik River 83.48 9 IAmb IAmb 01 23 02.7
comp=Z,27nm,1.8s
D25K Kavik River 83.48 9 P **P** **01 23 01.2 +0.2**
baz=338
F18K Selawik 83.52 14 P **P** **01 23 00.9 -0.3**
baz=326
C27K Jago River 83.54 8 P **P** **01 23 01.4 +0.1**
baz=340
TOLK Toolik Lake Re 83.65 10 P **P** **01 23 02.0 +0.2**
baz=335
F19K Shaleruckim Mo 83.73 14 P **P** **01 23 01.6 -0.6**
baz=328
E22K Anaktuvuk Pass 83.74 11 P **P** **01 23 02.2 -0.2**
baz=333
F20K Avaraart Lake 83.97 13 IAmb IAmb 01 23 05.0
comp=Z,7.1nm,1.4s
F20K Avaraart Lake 83.97 13 P **P** **01 23 03.0 -0.5**
baz=330,SNR=5.7
E23K Chandalar 84.17 10 IAmb IAmb 01 23 12.8
comp=Z,6.9nm,1.1s
E23K Chandalar 84.17 10 P **P** **01 23 04.6 0.0**
baz=335
G17K Kiwalik Mounta 84.20 15 P **P** **01 23 04.6 -0.1**
baz=325
D27M Malcolm River 84.22 7 P **P** **01 23 04.3 -0.5**
baz=343
F22K John River 84.23 11 P **P** **01 23 04.8 0.0**
baz=333
F21K Alatna River 84.25 12 P **P** **01 23 04.6 -0.4**
baz=332
E24K Your Creek 84.33 10 IAmb IAmb 01 23 09.3
comp=Z,6.6nm,1.1s
E24K Your Creek 84.33 10 P **P** **01 23 05.1 -0.3**
baz=336
G18K Tagagawik 84.33 14 P **P** **01 23 04.7 -0.7**
baz=327
G19K Purcell Mounta 84.47 14 P **P** **01 23 05.8 -0.2**
baz=328
E25K Arctic Village 84.71 9 P **P** **01 23 07.6 +0.3**
baz=338
COLD Coldfoot 84.83 11 IAmb IAmb 01 23 19.6
comp=Z,4.8nm,0.9s
COLD Coldfoot 84.83 11 P **P** **01 23 07.9 +0.1**
baz=334
H17K Granite Mounta 84.84 15 P **P** **01 23 07.2 -0.8**
baz=326
G21K Allakaket 84.87 12 P **P** **01 23 07.5 -0.5**
baz=332,SNR=5.3
F24K Squaw Lake 84.93 10 P **P** **01 23 07.9 -0.5**
baz=336
E28M Babbage River 84.98 7 P **P** **01 23 08.5 -0.1**
baz=344
H18K Honhosa River 85.02 15 P **P** **01 23 08.4 -0.5**
baz=327
H19K Roundabout Mou 85.13 14 P **P** **01 23 08.6 -0.8**
baz=329
C36M Paulatuk 85.14 1 P **P** **01 23 08.8 -0.5**
baz=358
E27K Coleen River 85.16 7 P **P** **01 23 09.5 0.0**
baz=342
F25K Christian Rive 85.20 9 IAmb IAmb 01 23 11.9
comp=Z,15nm,1.6s
F25K Christian Rive 85.20 9 P **P** **01 23 09.9 +0.1**
baz=338
F26K Sheenjek River 85.31 8 P **P** **01 23 10.3 0.0**
baz=340
G23K Bananza Creek 85.33 11 P **P** **01 23 10.2 -0.2**
G23K Bananza Creek 85.33 11 P **P** **01 23 10.3 -0.1**
baz=335
E29M Blow River 85.35 6 IAmb IAmb 01 23 11.8
comp=Z,14nm,1.6s
E29M Blow River 85.35 6 P **P** **01 23 10.4 0.0**
baz=345
H20K Anotleneega Mo 85.49 13 P **P** **01 23 11.1 -0.2**
baz=330
G24K Hadweenzic Riv 85.75 10 P **P** **01 23 12.8 +0.3**
baz=337,SNR=7.5
H21K Melozitna Rive 85.76 12 IAmb IAmb 01 23 13.2
comp=Z,4.4nm,0.7s
H21K Melozitna Rive 85.76 12 P **P** **01 23 12.4 -0.1**
baz=332,SNR=5.8
INK Inuvik 85.79 4 P **P** **01 23 12.2 -0.4**
baz=349
H22K Ishtalitna Cre 85.82 12 IAmb IAmb 01 23 13.9
comp=Z,4.3nm,0.7s
H22K Ishtalitna Cre 85.82 12 P **P** **01 23 13.5 +0.6**
baz=333,SNR=8.0
F28M Old Crow 85.90 7 P **P** **01 23 13.5 +0.2**
baz=344
K13K Kusilvak Mount 86.02 19 P **P** **01 23 13.5 -0.3**
baz=322
J16K Anvik River 86.04 17 P **P** **01 23 14.3 +0.3**
baz=326
G26K Porcupine Rive 86.06 9 P **P** **01 23 14.1 +0.2**
baz=340
H23K Yukon River 86.21 11 P **P** **01 23 14.8 0.0**
baz=335
F30M Barrier River 86.30 5 IAmb IAmb 01 23 15.6
comp=Z,5.4nm,0.7s
F30M Barrier River 86.30 5 P **P** **01 23 15.1 -0.1**
baz=347
J17K VABM Dome 86.33 16 P **P** **01 23 15.3 -0.1**
baz=327
I21K Tanana 86.35 12 IAmb IAmb 01 23 16.0
comp=Z,20nm,1.8s
I21K Tanana 86.35 12 P **P** **01 23 15.4 0.0**
baz=333,SNR=5.3
G27K Doyon Strip 86.47 8 IAmb IAmb 01 23 17.9
comp=Z,21nm,1.9s
G27K Doyon Strip 86.47 8 P **P** **01 23 16.3 +0.2**
baz=342,SNR=6.1
H24K Noodor Dome 86.48 11 P **P** **01 23 16.0 -0.1**
baz=337
WRA Warramunga Arr 86.60 114 P **P** **01 23 17.6 +0.1**
comp=Z,3.3nm,0.7s,baz=312,slow=4.1,SNR=38
comp=Z,3.3nm,0.7s
WRA Warramunga Arr 86.60 114 P **P** **01 23 18.2 +0.7**
WRA Warramunga Arr 86.60 114 P **P** **01 23 18.2 +0.7**
WRA pmax pmax
comp=Z,3.0nm,1.8s
F31M Tsiigehtchic 86.62 5 P **P** **01 23 16.9 +0.2**
baz=349
J19K Poorman 86.64 14 P **P** **01 23 17.1 +0.2**
baz=330
MLY Manley 86.72 12 P **P** **01 23 17.3 0.0**
baz=334,SNR=5.9
G29M Pine Creek 86.77 6 P **P** **01 23 17.5 0.0**
baz=345
J20K Nwinta River 86.80 14 P **P** **01 23 17.5 -0.2**
baz=331
I23K Minto, Yukon-K 86.86 11 P **P** **01 23 17.8 -0.1**
baz=335
G30M tAoh Zraii Nji 86.88 6 P **P** **01 23 17.6 -0.5**
baz=347,SNR=5.8
SCHQ Schefferville 87.03 332 P **P** **01 23 19.5 +0.5**
comp=Z,2.4nm,0.8s,baz=50,slow=5.5,SNR=5.1
comp=Z,2.4nm,0.8s
SCHQ Schefferville 87.03 332 IAmb IAmb 01 26 22.9
comp=Z,13nm,1.8s
H27K Steamboat Moun 87.03 8 P **P** **01 23 19.1 +0.2**
baz=342,SNR=10
L14K Kuka Creek 87.06 18 P **P** **01 23 19.1 +0.1**
baz=324
G31M Satah River 87.10 5 P **P** **01 23 17.5 -1.5**
G31M Satah River 87.10 5 P **P** **01 23 19.0 0.0**
baz=349
K17K Iditad 87.10 16 P **P** **01 23 19.2 +0.1**
baz=328
L15K Ungalak Mounta 87.13 18 P **P** **01 23 19.4 +0.1**
baz=325
PRP Porcupine Dome 87.15 10 P **P** **01 23 19.2 -0.4**
baz=339
POKR Poker Plat Res 87.22 11 P **P** **01 23 20.0 +0.2**
baz=337
H29M Whitestone 87.41 7 IAmb IAmb 01 23 20.9
comp=Z,20nm,1.7s
H29M Whitestone 87.41 7 P **P** **01 23 20.5 -0.1**
baz=345,SNR=5.1
NEA2 Nenana 87.42 11 P **P** **01 23 20.3 -0.4**
baz=336
EPYK Eagle Plains 87.43 6 IAmb IAmb 01 23 32.8
comp=Z,10nm,1.2s
EPYK Eagle Plains 87.43 6 P **P** **01 23 20.1 -0.6**
baz=346
CHUM Lake Minchumin 87.44 13 P **P** **01 23 20.6 -0.1**
baz=333
K20K Telida 87.53 14 IAmb IAmb 01 23 23.5
comp=Z,21nm,1.8s
K20K Telida 87.53 14 P **P** **01 23 21.2 -0.1**
baz=331
L17K Donlin 87.59 16 P **P** **01 23 21.5 0.0**
baz=328
M13K Dall Lake 87.62 19 P **P** **01 23 21.7 0.0**
baz=323
I27K Kandik River 87.62 8 IAmb IAmb 01 23 23.1
comp=Z,26nm,2.0s
I27K Kandik River 87.62 8 P **P** **01 23 21.2 -0.5**
baz=342
ILAR Eielson Array 87.63 11 P **P** **01 23 20.4 -1.4**
comp=Z,1.5nm,0.6s,baz=320,slow=4.4,SNR=17
ILAR PP **PP** **01 26 49.2 +3.1**
comp=Z,0.8nm,0.9s,baz=334,slow=6.6,SNR=5.1
comp=Z,1.5nm,0.6s
L16K Owhat River 87.64 17 P **P** **01 23 21.6 -0.1**
baz=326
CAST Castle Rocks 87.90 13 IAmb IAmb 01 23 23.8
comp=Z,6.1nm,0.9s
CAST Castle Rocks 87.90 13 P **P** **01 23 22.8 -0.2**
baz=333
HDA Harding Lake 87.96 11 P **P** **01 23 22.2 -1.1**
baz=337
I28M Miner Creek 87.98 8 P **P** **01 23 23.0 -0.4**
I28M IAmb IAmb 01 23 24.3
comp=Z,3.1nm,0.7s
I28M Miner Creek 87.98 8 P **P** **01 23 22.9 -0.6**
baz=344,SNR=6.3
BLKN Baker Lake 88.00 349 IAmb IAmb 01 23 24.2
comp=Z,4.7nm,0.9s
J25K Salcha River, 88.02 10 P **P** **01 23 23.3 -0.4**
baz=339
AS15 Alice Springs 88.04 117 P **P** **01 23 23.5 -0.9**
comp=Z,9.9nm,1.0s
AS31 Alice Springs 88.05 117 P **P** **01 23 24.6 +0.2**
ASAR Alice Springs 88.05 117 P **P** **01 23 24.6 +0.2**
comp=Z,5.7nm,0.8s,baz=306,slow=5.0,SNR=34
comp=Z,5.7nm,0.8s
ASAR Alice Springs 88.05 117 P **P** **01 23 24.4 0.0**
AS09 Alice Springs 88.09 117 P **P** **01 23 23.1 -1.5**
comp=Z,11nm,1.0s
AS17 Alice Springs 88.11 117 P **P** **01 23 23.4 -1.3**
comp=Z,4.4nm,0.8s
M15K Kasigluk River 88.16 18 P **P** **01 23 23.8 -0.5**
baz=326
H31M Peel River 88.19 5 IAmb IAmb 01 23 54.8
comp=Z,5.8nm,1.1s
H31M Peel River 88.19 5 P **P** **01 23 23.9 -0.5**
baz=349
MCK McKinley 88.23 12 P **P** **01 23 24.5 -0.1**
baz=336
TRF Thorofare Moun 88.23 12 P **P** **01 23 24.3 -0.5**
baz=334
PPLA Purkeypile 88.34 13 P **P** **01 23 24.7 -0.6**
baz=333
M16K Timber Creek 88.36 17 P **P** **01 23 24.9 -0.3**
baz=327
L19K White Mountain 88.39 15 P **P** **01 23 24.9 -0.5**
baz=330
I30M Mount Dempster 88.58 6 IAmb IAmb 01 23 26.6
comp=Z,3.2nm,0.7s
I30M Mount Dempster 88.58 6 P **P** **01 23 25.9 -0.4**
baz=347,SNR=8.8
K24K Donnelly Dome 88.71 10 P **P** **01 23 26.4 -0.5**
baz=338
M18K Stony River 88.76 16 P **P** **01 23 27.1 0.0**
baz=330
SCRK Sand Creek 88.83 10 P **P** **01 23 27.6 +0.1**
baz=340
N16K Nishlik Lake 88.87 17 P **P** **01 23 27.8 +0.1**
baz=327
L22K Petersville 88.97 13 P **P** **01 23 27.5 -0.6**
baz=334
M20K Styx River 89.04 14 P **P** **01 23 28.2 -0.3**
baz=332
K27K Chicken 89.06 9 IAmb IAmb 01 23 43.3
comp=Z,6.1nm,1.2s
DHY Denali Highway 89.12 11 P **P** **01 23 28.3 -0.7**
baz=337
J30M Hart River 89.22 6 P **P** **01 23 29.4 0.0**
baz=347
N17K Nushagak Hills 89.24 17 P **P** **01 23 29.5 +0.1**
baz=328
SKT Skwentna 89.30 14 P **P** **01 23 29.8 +0.1**
baz=333
DAWY Dawson 89.38 8 P **P** **01 23 30.2 +0.1**
baz=344
WAT6 Susitna Watana 89.51 12 P **P** **01 23 30.9 +0.1**
baz=337
O15K Ungalikthiuk R 89.66 19 P **P** **01 23 31.9 +0.5**
baz=326
K29M Barlow Dome 89.81 7 P **P** **01 23 32.3 +0.1**
baz=346
L27K Beaver Creek, 90.02 9 P **P** **01 23 33.2 +0.1**
baz=342
M24K Tolsona, Glenn 90.23 11 P **P** **01 23 33.6 -0.5**
baz=338
O18K Koktuh Hills 90.33 16 P **P** **01 23 34.1 -0.4**
baz=330
M27K Edge Creek, AK 90.68 9 P **P** **01 23 36.6 +0.3**
baz=342
Q16K King Salmon 90.97 17 P **P** **01 23 36.8 -0.7**
baz=329
P19K Oil Pt 90.99 15 P **P** **01 23 36.7 -0.9**
baz=332
YKA Yellowknife Ar 91.86 357 P **P** **01 23 41.4 -0.1**
comp=Z,1.5nm,0.8s,baz=358,slow=4.9,SNR=4.0
comp=Z,1.5nm,0.8s
YKA Yellowknife Ar 91.86 357 P **P** **01 23 40.9 -0.6**
YKA Yellowknife Ar 91.86 357 *i* P **P** **01 23 44.5 +3.0**
YKA pmax pmax
comp=Z,1.0nm,0.9s
P23K Montague Islan 91.95 13 P **P** **01 23 42.0 0.0**
baz=337
S14K Fog Glacier 92.15 20 P **P** **01 23 42.6 -0.5**
baz=326
KDAK Kodiak Island 92.81 16 P **P** **01 23 45.6 -0.4**
baz=332
OHAK Old Harbor 93.12 17 P **P** **01 23 46.8 -0.6**
baz=332
MAW Mawson 93.15 178 P **P** **01 23 48.1 +1.1**
comp=Z,2.5nm,0.7s,baz=279,slow=4.5,SNR=4.2
comp=Z,2.5nm,0.7s
MAW Mawson 93.15 178 P **P** **01 23 47.2 +0.1**
MAW Mawson 93.15 178 P **P** **01 23 47.2 +0.1**
MAW pmax pmax
comp=Z,2.0nm,1.5s
SII Sitkinak Islan 93.47 17 P **P** **01 23 48.1 -1.1**
baz=331
CHIR Chirikof Islan 93.71 18 P **P** **01 23 49.6 -0.6**
baz=330
NVAR Mina Array Bea 116.06 357 PKP **PKPdf** **01 29 18.1 +0.8**
comp=Z,0.9nm,0.6s,baz=259,slow=0.3,SNR=5.3
CPUP Villa Florida 122.81 254 PKP **PKPdf** **01 29 29.7 -0.4**
comp=Z,0.9nm,0.6s,baz=61,slow=6.6,SNR=3.9
LPAZ La Paz 129.48 270 PKP **PKPdf** **01 29 44.0 +0.1**
comp=Z,1.0nm,0.7s,baz=11,slow=4.6,SNR=5.5
LPAZ La Paz 129.48 270 PKIKP **PKPdf** **01 29 44.0 +0.1**
PLCA Paso Flores 135.38 237 PKP **PKiKP** **01 29 54.9 -0.3**
comp=Z,1.1nm,0.8s,baz=322,slow=1.4,SNR=3.1

*IDC **07** 01:20:51.9±0.7, 12°.16N×140°.42E, h0km, mb4.1/14, mbtmp4.1/16, ML4.4/2, MS3.9/5, Error ellipse: s-maj=23.3km s-min=15.6km az=85.0*
*NEIC **07** 01:20:54.8±0.9, 12°.2N±0°.1×140°.3E±0°.1, h10km±1km, mb4.7/88, Error ellipse: s-maj=20.9km s-min=16.4km az=118.0*

ISC 07 01:20:56.7±0.5, **12°.11N**±0°.07×**140°.37E**±0°.09, **h30**km, **n330**, σ0.87/324, **mb4.6**/62, **MS4.1**/5, **1D**, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.63**	**71**	Pn	**Pn**	**01 22 02.9**	**-1.7**
	15nm,0.3s,baz=177,slow=23,SNR=1.4						
	44nm,0.3s						
GUMO	**Guam**	**4.63**	**71**		**Pn**	**01 22 04.6**	**0.0**
JAY	**Jayapura**	**14.53**	**179**	Pn	**Pn**	**01 24 21.5**	**+1.1**
	1.7nm,0.3s,baz=356,slow=10,SNR=5.5						
	6.0nm,0.5s						
SIJI	**Sorong**	**15.74**	**216**	LR	LR	01 29 28.9	
	comp=Z,327nm,18.4s,baz=292,slow=33						
TOLI2	**Tolitoli**	**22.29**	**242**		**P**	**01 25 49.5**	**-2.3**
NJ2	**Nanjing**	**28.03**	**318**	*eP*	**P**	**01 26 45.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,37nm,0.5s						
WRA	**Warramunga Arr**	**32.40**	**191**	P	**P**	**01 27 22.9**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=5.7,slow=10.0,SNR=4.8						
	comp=Z,1.1nm,0.8s						
WRA	**Warramunga Arr**	**32.40**	**191**	P	**P**	**01 27 22.6**	**-1.3**
CTAO	**Charters Tower**	**32.51**	**170**	P	**P**	**01 27 26.3**	**+1.3**
BNX	**BinXian**	**35.29**	**344**	⇓P	**P**	**01 27 50.1**	**+1.3**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN	**Xi'an**	**36.00**	**313**	*eP*	P	01 27 47.6	-7.6
ASAR	**Alice Springs**	**36.11**	**190**	P	**P**	**01 27 56.4**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=12,slow=13,SNR=5.0						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**36.11**	**190**	P	**P**	**01 27 56.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**38.19**	**324**	*eP*	**P**	**01 28 14.4**	**+0.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,53nm,3.6s						
PZH	**PanZhiHua**	**38.99**	**297**	P	**P**	**01 28 20.6**	**-0.2**
HEH	**HeiHe**	**39.50**	**347**	*eP*	**P**	**01 28 24.4**	**0.0**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.39**	**284**	P	**P**	**01 28 33.6**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=91,slow=6.4,SNR=7.4						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.39**	**284**	P	**P**	**01 28 30.9**	**-1.4**
PETK	**Petropavlovsk-**	**43.19**	**15**	P	**P**	**01 28 54.0**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=158,slow=5.3,SNR=28						
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**43.19**	**15**	P	**P**	**01 28 52.6**	**-2.1**
STKA	**Stephens Creek**	**43.75**	**178**	P	**P**	**01 28 59.0**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=331,slow=12,SNR=5.6						
	comp=Z,3.1nm,0.7s						
GTA2	**Gaotai**	**45.04**	**315**	*eP*	**P**	**01 29 12.8**	**+2.8**
GTA2				pP	pP	01 29 17.3	-0.4
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**45.53**	**328**	P	**P**	**01 29 11.5**	**-2.3**
	comp=Z,3.3nm,0.3s,baz=180,slow=7.4,SNR=4.8						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**45.53**	**328**	P	**P**	**01 29 11.0**	**-2.7**
WMQ	**Urumqi**	**55.03**	**315**	*eP*	**P**	**01 30 27.4**	**+1.7**
WMQ				LR	LR		
	comp=Z,190nm,22.7s						
SPIA	**Saint Paul Isl**	**58.56**	**29**	P	**P**	**01 30 50.6**	**+0.3**
	baz=241						
UNV	**Unalaska Valle**	**58.96**	**34**	P	**P**	**01 30 53.3**	**+0.1**
	baz=246						
MKAR	**Makanchi Array**	**59.55**	**317**	P	**P**	**01 30 57.5**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=98,slow=8.8,SNR=10.0						
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**59.55**	**317**	P	**P**	**01 30 57.4**	**-0.1**
MAKZ	**Makanchi**	**59.76**	**317**	P	**P**	**01 30 59.2**	**+0.3**
ZALV	**Zalesovo Beam**	**60.32**	**326**	P	**P**	**01 31 02.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=72,slow=4.8,SNR=3.6						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**60.32**	**326**	P	**P**	**01 31 00.7**	**-1.8**
PDGK	**Podgoroye**	**60.67**	**313**	P	**P**	**01 31 05.4**	**0.0**
M11K	**Mekoryuk**	**61.95**	**27**	P	**P**	**01 31 14.3**	**+0.9**
	baz=243						
SDPT	**Sand Point**	**62.77**	**33**	P	**P**	**01 31 19.2**	**+0.1**
	baz=251						
KURK	**Kurchatov**	**62.92**	**321**	P	**P**	**01 31 20.1**	**-0.1**
KURBB	**Kurchatov Arra**	**62.95**	**321**	P	**P**	**01 31 20.1**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=103,slow=7.0,SNR=21						
	comp=Z,4.3nm,0.9s						
M13K	**Dall Lake**	**63.23**	**28**	P	**P**	**01 31 22.4**	**+0.3**
	baz=246						
K13K	**Kusilvak Mount**	**63.31**	**26**	P	**P**	**01 31 23.3**	**+0.8**
	baz=244						
S14K	**Fog Glacier**	**63.57**	**33**	P	**P**	**01 31 24.8**	**+0.3**
	baz=251						
O14K	**Tigyukauivet M**	**63.75**	**29**	P	**P**	**01 31 25.8**	**+0.3**
	baz=248						

L14K	Kuka Creek	63.91	27	P		P	01 31 27.5 +1.0
	baz=246						
M14K	Bethel	64.00	27	P		P	01 31 28.0 +0.9
	baz=247						
CHGN	Chignik	64.18	33	P		P	01 31 29.4 +1.0
	baz=252						
O15K	Ungalikthiuk R	64.41	30	P		P	01 31 30.8 +1.0
	baz=250						
M15K	Kasigluk River	64.55	28	P		P	01 31 31.7 +1.0
	baz=248						
L15K	Ungalak Mounta	64.57	27	P		P	01 31 31.5 +0.6
	baz=247						
N15K	Kwethluk River	64.64	28	P		P	01 31 32.1 +0.8
	baz=249						
G15K	Niukluk	64.94	23	P		P	01 31 34.0 +0.8
	baz=243						
F15K	North Star Dit	65.05	22	P		P	01 31 34.7 +0.8
	baz=242						
P16K	Nushagak River	65.25	30	P		P	01 31 36.2 +0.9
	baz=252						
N16K	Nishlik Lake	65.36	28	P		P	01 31 36.3 +0.2
	baz=250						
O16K	Kokwok River B	65.39	29	P		P	01 31 36.4 +0.3
	baz=251						
M16K	Timber Creek	65.46	28	P		P	01 31 37.0 +0.4
	baz=250						
L16K	Owhat River	65.47	27	P		P	01 31 37.0 +0.3
	baz=249						
H16K	Elim	65.47	24	P		P	01 31 37.0 +0.3
	baz=245						
CHIR	Chirikof Islan	65.55	34	P		P	01 31 37.8 +0.5
	baz=255						
J16K	Anvik River	65.58	25	P		P	01 31 37.8 +0.4
	baz=247						
R17L	Mt. Peulik Vol	65.65	32	P		P	01 31 38.4 +0.5
	baz=254						
I17K	Unalakleet	65.78	25	P		P	01 31 39.0 +0.4
	baz=247						
O17K	Koliganek Bris	65.92	29	P		P	01 31 40.1 +0.5
	baz=252						
C16K	Lisburne Hills	66.05	19	P		P	01 31 40.6 +0.3
	baz=240						
P17K	Kvichak River	66.06	30	P		P	01 31 40.8 +0.3
	baz=253						
Q17K	Contact Creek	66.07	31	P		P	01 31 41.7 +0.9
	baz=254						
N17K	Nushagak Hills	66.12	29	P		P	01 31 41.6 +0.7
	baz=252						
NRIK	Noril'sk	66.13	342	P		P	01 31 40.7 -0.1
	comp=Z,3.7nm,0.9s,baz=117,slow=7.3,SNR=4.1						
	comp=Z,3.7nm,0.9s						
NRIK	Noril'sk	66.13	342			P	01 31 41.1 +0.3
NRIK				IAmb		IAmb	01 31 53.2
	comp=Z,6.7nm,1.1s						
L17K	Donlin	66.15	27	P		P	01 31 41.9 +0.8
	baz=250						
J17K	VABM Dome	66.26	25	P		P	01 31 42.7 +0.9
	baz=249						
M17K	Holitna River	66.28	28	P		P	01 31 43.0 +1.0
	baz=251						
K17K	Iditarod	66.35	26	P		P	01 31 42.8 +0.5
K17K	Iditarod	66.35	26	P		P	01 31 43.4 +1.0
	baz=250						
G17K	Kiwalik Mounta	66.45	23	P		P	01 31 44.2 +1.3
	baz=246						
H17K	Granite Mounta	66.51	24	P		P	01 31 44.6 +1.3
	baz=247						
SII	Sitkinak Islan	66.51	33	P		P	01 31 44.3 +0.8
	baz=256						
D17K	Noatak River	66.52	20	P		P	01 31 44.1 +0.7
	baz=243						
F17K	Baldwin Pennin	66.61	22	P		P	01 31 44.3 +0.4
	baz=245						
Q18K	Katmai Hardscr	66.62	31	P		P	01 31 44.5 +0.2
	baz=254						
E17K	Hotham Inlet	66.68	21	P		P	01 31 45.0 +0.6
	baz=244						
P18K	Big Mountain,	66.72	30	P		P	01 31 45.2 +0.4
	baz=254						
N18K	Kilae Creek	66.77	29	P		P	01 31 46.0 +0.9
	baz=253						
C17K	DeLong Mountai	66.85	20	P		P	01 31 46.2 +0.8
	baz=243						
O18K	Koktuh Hills	66.86	30	P		P	01 31 46.4 +0.8
	baz=254						
L18K	Granite Mounta	66.89	27	P		P	01 31 46.6 +0.8
	baz=251						
M18K	Stony River	67.05	28	P		P	01 31 47.7 +0.9
	baz=253						
KK31	Karatay Array	67.13	312	P		P	01 31 46.9 -0.8
KKAR	Karatay Array	67.13	312	P		P	01 31 48.1 +0.3
OHAK	Old Harbor	67.15	33	P		P	01 31 47.8 +0.3
	baz=257						
H18K	Honhosa River	67.20	24	P		P	01 31 48.9 +1.1
	baz=249						
E18K	Tukpahlearik C	67.26	21	P		P	01 31 48.8 +0.8
	baz=246						
F18K	Selawik	67.26	22	P		P	01 31 48.4 +0.4
	baz=247						
G18K	Tagagawik	67.36	23	P		P	01 31 49.8 +1.0
G18K				IAmb		IAmb	01 31 50.8
	comp=Z,7.7nm,1.0s						
G18K	Tagagawik	67.36	23	P		P	01 31 49.4 +0.7
	baz=248						
Q19K	Cape Douglas,	67.38	31	P		P	01 31 49.7 +0.6
	baz=256						
N19K	Bonanza Creek	67.47	29	P		P	01 31 50.2 +0.6
	baz=254						
C18K	Utukok River	67.58	20	P		P	01 31 50.5 +0.4
	baz=244						
KDAK	Kodiak Island	67.65	32	P		P	01 31 51.5 +0.8
	baz=257						
L19K	White Mountain	67.69	27	P		P	01 31 51.6 +0.6
	baz=253						
P19K	Oil Pt	67.77	30	P		P	01 31 52.0 +0.5
	baz=256						
J19K	Poorman	67.91	25	P		P	01 31 52.9 +0.7
	baz=252						
F19K	Shaleruckik Mo	68.04	22	P		P	01 31 53.9 +0.9
	baz=249						
G19K	Purcell Mounta	68.05	23			P	01 31 54.2 +1.1
G19K	Purcell Mounta	68.05	23	P		P	01 31 54.1 +1.1
	baz=250,SNR=7.8						
H19K	Roundabout Mou	68.08	24			P	01 31 54.2 +1.0
H19K	Roundabout Mou	68.08	24	P		P	01 31 54.4 +1.2
	baz=250,SNR=6.7						
O20K	Slope Mountain	68.17	30	P		P	01 31 54.5 +0.5
	baz=256						
C19K	Lookout Ridge	68.30	20	P		P	01 31 55.4 +0.7
	baz=246						
K20K	Telida	68.38	26	P		P	01 31 56.1 +0.9
K20K				IAmb		IAmb	01 31 57.0
	comp=Z,6.8nm,1.2s						
K20K	Telida	68.38	26	P		P	01 31 56.0 +0.8
	baz=254						
BVAR	Borovoye Array	68.39	322	P		P	01 31 55.8 +0.4
	comp=Z,2.7nm,0.6s,baz=106,slow=8.3,SNR=12						
	comp=Z,2.7nm,0.6s						
M20K	Styx River	68.39	28	P		P	01 31 55.9 +0.6
	baz=255						
BORK	Borovoye	68.43	322	P		P	01 31 55.0 -0.7
BORK				IAmb		IAmb	01 32 24.4
	comp=Z,4.0nm,0.7s						
E19K	Redstone River	68.47	22			P	01 31 57.5 +1.8
E19K	Redstone River	68.47	22	P		P	01 31 56.7 +1.0
	baz=249,SNR=8.7						
D19K	Kuna River	68.55	20			P	01 31 57.3 +1.1
D19K	Kuna River	68.55	20	P		P	01 31 56.9 +0.7
	baz=248						
J20K	Nowinta River	68.59	25			P	01 31 58.0 +1.5
J20K				IAmb		IAmb	01 31 58.4
	comp=Z,5.6nm,1.0s						
J20K	Nowinta River	68.59	25	P		P	01 31 57.5 +1.0
	baz=253,SNR=5.1						
I20K	Naaghedeneel	68.64	25	P		P	01 31 57.7 +0.9
	baz=252						
H20K	Anotleneega Mo	68.69	24	P		P	01 31 57.9 +0.8
	baz=252						
F20K	Avaraart Lake	68.87	22			P	01 31 58.9 +0.8
F20K				IAmb		IAmb	01 32 00.8
	comp=Z,7.2nm,1.2s						
F20K	Avaraart Lake	68.87	22	P		P	01 31 59.1 +0.9
	baz=250						
BRSE	Bradley Lake S	69.02	30	P		P	01 31 59.5 +0.3
	baz=258						
PPLA	Purkeypile	69.08	27	P		P	01 32 00.1 +0.4
	baz=255						
E20K	Nigu River	69.12	21	P		P	01 32 00.6 +0.8
	baz=250,SNR=8.4						
D20K	Etivluk River	69.14	20			P	01 32 01.1 +1.2
D20K	Etivluk River	69.14	20	P		P	01 32 00.7 +0.8
	baz=249,SNR=8.3						
SKT	Skwentna	69.15	28	P		P	01 32 00.9 +0.9
	baz=256						
CAST	Castle Rocks	69.26	26			P	01 32 01.0 +0.4
CAST				IAmb		IAmb	01 32 02.4
	comp=Z,5.2nm,0.8s						
CAST	Castle Rocks	69.26	26	P		P	01 32 01.1 +0.4
	baz=255,SNR=6.8						
CHUM	Lake Minchumin	69.28	26	P		P	01 32 01.4 +0.7
	baz=255						
B20K	Meade River	69.44	19	P		P	01 32 02.7 +1.1
	baz=248						
G21K	Allakaket	69.54	23	P		P	01 32 03.5 +1.2
G21K				IAmb		IAmb	01 32 40.9
	comp=Z,7.6nm,1.3s						
G21K	Allakaket	69.54	23	P		P	01 32 02.9 +0.5
	baz=253						
H21K	Melozitna Rive	69.56	24	P		P	01 32 03.3 +0.8
H21K				IAmb		IAmb	01 32 04.3
	comp=Z,5.3nm,1.0s						
H21K	Melozitna Rive	69.56	24	P		P	01 32 03.3 +0.8
	baz=254						
L22K	Petersville	69.62	27	P		P	01 32 02.4 -0.6
L22K				IAmb		IAmb	01 32 03.6
	comp=Z,5.0nm,0.9s						
L22K	Petersville	69.62	27	P		P	01 32 03.2 +0.2
	baz=257,SNR=5.2						
F21K	Alatna River	69.76	22			P	01 32 04.6 +0.9
F21K	Alatna River	69.76	22	P		P	01 32 04.2 +0.5
	baz=253						
I21K	Tanana	69.76	25	P		P	01 32 05.4 +1.6
I21K				IAmb		IAmb	01 32 06.1
	comp=Z,7.9nm,1.0s						
I21K	Tanana	69.76	25	P		P	01 32 04.5 +0.8
	baz=255,SNR=7.4						
RC01	Rabbit Creek A	69.79	29	P		P	01 32 04.8 +0.9
	baz=258						
KTH	Kantishna Hill	69.80	26			P	01 32 04.7 +0.6
KTH				IAmb		IAmb	01 32 05.3
	comp=Z,6.8nm,1.0s						
C21K	Knifeblade Rid	69.92	20	P		P	01 32 05.4 +0.7
	baz=251						
E21K	Killik River	69.96	21	P		P	01 32 05.6 +0.6
	baz=252						
TRF	Thorofare Moun	70.05	27	P		P	01 32 06.2 +0.5
TRF				IAmb		IAmb	01 32 10.3
	comp=Z,6.4nm,1.0s						
TRF	Thorofare Moun	70.05	27	P		P	01 32 06.5 +0.8
	baz=257						
H22K	Ishtalitna Cre	70.19	24	P		P	01 32 07.0 +0.6
	baz=255						
MLY	Manley	70.23	25	P		P	01 32 07.3 +0.6
MLY				IAmb		IAmb	01 32 08.6
	comp=Z,7.4nm,1.1s						
MLY	Manley	70.23	25	P		P	01 32 07.6 +0.9
	baz=256,SNR=11						
F22K	John River	70.33	22	P		P	01 32 07.7 +0.5
	baz=254						
G22K	Bettles	70.42	23	P		P	01 32 08.5 +0.8
	baz=255						
KNK	Knik Glacier	70.46	29	P		P	01 32 08.8 +0.7
	baz=259						
SML	Sawmill	70.59	28	P		P	01 32 09.3 +0.4
	baz=259						
E22K	Anktuvuk Pass	70.64	22	P		P	01 32 09.8 +0.7
	baz=254						
RND	Reindeer	70.67	27	P		P	01 32 10.3 +0.9
RND				IAmb		IAmb	01 32 21.2
	comp=Z,4.3nm,0.8s						
WAT1	Susitna Watana	70.69	27	P		P	01 32 09.6 +0.1
	baz=259						
MCK	McKinley	70.70	26	P		P	01 32 09.8 +0.3
	baz=258						
NEA2	Nenana	70.83	26	P		P	01 32 11.0 +0.7
NEA2	Nenana	70.83	26	P		P	01 32 10.9 +0.6
	baz=258						
I23K	Minto, Yukon-K	70.83	25	P		P	01 32 10.9 +0.7
I23K	Minto, Yukon-K	70.83	25	P		P	01 32 10.4 +0.2
	baz=257,SNR=5.2						
H23K	Yukon River	70.91	24	P		P	01 32 11.6 +0.9
H23K				IAmb		IAmb	01 32 28.2
	comp=Z,6.9nm,1.1s						
H23K	Yukon River	70.91	24	P		P	01 32 11.8 +1.1
	baz=257						
G23K	Bananza Creek	70.93	23			P	01 32 11.8 +0.8
G23K				IAmb		IAmb	01 32 13.4
	comp=Z,7.3nm,1.0s						
G23K	Bananza Creek	70.93	23	P		P	01 32 11.6 +0.7
	baz=256,SNR=9.2						
COLD	Coldfoot	70.99	23	P		P	01 32 12.4 +1.2
COLD	Coldfoot	70.99	23	P		P	01 32 11.9 +0.7
	baz=256						
WAT6	Susitna Watana	71.01	28	P		P	01 32 11.6 0.0
	baz=260,SNR=6.9						
GLI	Glacier Island	71.01	30	P		P	01 32 12.0 +0.5
	baz=261						
SCM	Sheep Creek Mo	71.06	29	P		P	01 32 12.7 +0.9
SCM	Sheep Creek Mo	71.06	29	P		P	01 32 12.0 +0.2
	baz=260						
Q23K	Middleton Isla	71.16	31	P		P	01 32 13.0 +0.7
	baz=262						
WRH	Wood River Hil	71.22	26	P		P	01 32 13.2 +0.6
WRH				IAmb		IAmb	01 32 13.4
	comp=Z,5.2nm,1.0s						
DHY	Denali Highway	71.26	27	P		P	01 32 13.5 +0.4
	baz=260						
D23K	Nanushuk River	71.27	21	P		P	01 32 13.7 +0.8
	baz=255,SNR=6.2						
CCB	Clear Creek Bu	71.37	26	IAmb		IAmb	01 32 14.4
	comp=Z,8.6nm,1.4s						
CCB						P	01 32 14.4 +0.8
E23K	Chandalar	71.41	22			P	01 32 14.5 +0.6
E23K	Chandalar	71.41	22	P		P	01 32 14.7 +0.8
	baz=256,SNR=21						
C23K	Itkillik River	71.52	20	P		P	01 32 14.8 +0.4
	baz=254						
TOLK	Toolik Lake Re	71.57	21	P		P	01 32 15.5 +0.8
	baz=256						
H24K	Noodor Dome	71.58	24			P	01 32 15.5 +0.7
H24K	Noodor Dome	71.58	24	P		P	01 32 15.6 +0.8
	baz=258,SNR=7.6						
EYAK	Cordova Ski Ar	71.62	30	P		P	01 32 16.2 +1.1
	baz=262						
M24K	Tolsona, Glenn	71.65	28	P		P	01 32 16.2 +0.9
	baz=261						
KLU	Klutina	71.67	29	P		P	01 32 16.4 +0.8
KLU				IAmb		IAmb	01 32 30.1
	comp=Z,8.7nm,1.2s						
KLU	Klutina	71.67	29	P		P	01 32 16.0 +0.5
	baz=262						
IL31		71.78	26			P	01 32 15.6 -0.3
ILAR	Eielson Array	71.78	26	P		P	01 32 15.4 -0.6
	comp=Z,1.9nm,0.7s,baz=248,slow=6.1,SNR=22						
	comp=Z,1.9nm,0.7s						
E24K	Your Creek	71.83	22			P	01 32 17.5 +1.2
E24K				IAmb		IAmb	01 32 28.3
	comp=Z,8.5nm,1.2s						
E24K	Your Creek	71.83	22	P		P	01 32 16.9 +0.5
	baz=257,SNR=7.4						
G24K	Hadweenzic Riv	71.92	23			P	01 32 17.8 +1.0
G24K				IAmb		IAmb	01 32 28.4
	comp=Z,10nm,1.2s						
G24K	Hadweenzic Riv	71.92	23	P		P	01 32 17.8 +1.0
	baz=258,SNR=6.0						
F24K	Squaw Lake	71.93	23			P	01 32 17.9 +0.9
F24K				IAmb		IAmb	01 32 19.1
	comp=Z,5.1nm,1.0s						
F24K	Squaw Lake	71.93	23	P		P	01 32 17.4 +0.4
	baz=258,SNR=6.4						
D24K	Happy Valley	71.96	21	P		P	01 32 18.4 +1.4
D24K	Happy Valley	71.96	21	P		P	01 32 18.2 +1.2
	baz=256,SNR=6.4						
K24K	Donnelly Dome	72.09	27	P		P	01 32 18.1 +0.1
	baz=261						
HARP	HAARP	72.16	28	P		P	01 32 19.1 +0.7
	baz=262						
KAIM	Kayak Island	72.20	31	P		P	01 32 19.3 +0.7
	baz=264						
BMRM	Bremner River	72.23	30	P		P	01 32 19.8 +0.9
	baz=263						
N25K	Chitina, Valde	72.31	29	P		P	01 32 20.4 +1.0
	baz=263						
J25K	Salcha River,	72.40	26	P		P	01 32 20.2 +0.3
J25K	Salcha River,	72.40	26	P		P	01 32 20.6 +0.7
	baz=261						
G25K	Bearman Lake	72.46	24	P		P	01 32 20.8 +0.8
	baz=260						
RIDG	Independent Ri	72.49	27	P		P	01 32 21.3 +0.9
RIDG				IAmb		IAmb	01 32 21.8
	comp=Z,8.4nm,1.0s						
RIDG	Independent Ri	72.49	27	P		P	01 32 21.5 +1.1
	baz=262						
GLB	Gilahina Butte	72.67	29			P	01 32 22.1 +0.6
GLB				IAmb		IAmb	01 32 23.1
	comp=Z,6.8nm,1.1s						
F25K	Christian Rive	72.79	23	P		P	01 32 23.3 +1.2
F25K	Christian Rive	72.79	23	P		P	01 32 22.9 +0.9
	baz=260,SNR=5.7						
D25K	Kavik River	72.85	21	P		P	01 32 23.4 +1.0
D25K				IAmb		IAmb	01 32 33.2
	comp=Z,7.1nm,1.0s						
D25K	Kavik River	72.85	21	P		P	01 32 23.4 +1.0
	baz=259						
SCRK	Sand Creek	72.90	27	P		P	01 32 23.4 +0.5
SCRK	Sand Creek	72.90	27	P		P	01 32 23.2 +0.3
	baz=263						
E25K	Arctic Village	72.91	22	P		P	01 32 23.2 +0.5
E25K	Arctic Village	72.91	22	P		P	01 32 23.8 +1.0
	baz=260,SNR=7.3						
CRQE	Cirque	72.94	30	P		P	01 32 24.1 +0.9
	baz=264						
MCARA	McCarthy VSAT	73.04	29	P		P	01 32 24.7 +1.1
	baz=264						
M26K	Nabesna, AK	73.16	28	P		P	01 32 25.6 +1.2
	baz=264						
F26K	Sheenjek River	73.37	23			P	01 32 26.0 +0.5
F26K				IAmb		IAmb	01 32 28.3
	comp=Z,14nm,1.4s						
F26K	Sheenjek River	73.37	23	P		P	01 32 26.6 +1.1
	baz=261,SNR=10						
G26K	Porcupine Rive	73.40	23			P	01 32 26.3 +0.7
G26K				IAmb		IAmb	01 32 30.0
	comp=Z,14nm,1.4s						
G26K	Porcupine Rive	73.40	23	P		P	01 32 26.8 +1.2
	baz=262						
M27K	Edge Creek, AK	73.67	28	P		P	01 32 27.7 +0.2
M27K	Edge Creek, AK	73.67	28	P		P	01 32 28.1 +0.6
	baz=265						
K27K	Chicken	73.75	27	P		P	01 32 28.1 +0.4
L27K	Beaver Creek,	73.76	28	P		P	01 32 28.8 +0.9
L27K	Beaver Creek,	73.76	28	P		P	01 32 29.0 +1.1
	baz=265						
C27K	Jago River	73.83	21	P		P	01 32 29.3 +1.2
	baz=261						
LOGN	Logan Glacier	73.97	30	P		P	01 32 30.0 +0.7
LOGN				IAmb		IAmb	01 32 31.1
	comp=Z,4.2nm,0.7s						
I27K	Kandik River	74.10	25			P	01 32 30.6 +0.7
I27K				IAmb		IAmb	01 32 40.9
	comp=Z,12nm,1.5s						
I27K	Kandik River	74.10	25	P		P	01 32 31.1 +1.2
	baz=264						
BVCY	Beaver Creek	74.15	28	P		P	01 32 31.1 +1.0
	baz=266						
H27K	Steamboat Moun	74.20	24			P	01 32 31.1 +0.7
H27K	Steamboat Moun	74.20	24	P		P	01 32 31.1 +0.7
	baz=264,SNR=12						
G27K	Doyon Strip	74.21	24	P		P	01 32 31.4 +1.0
	baz=264						
YUK3	Moose Creek	74.29	29	P		P	01 32 32.1 +0.8
	baz=266,SNR=7.6						
PINM	Pinnacle	74.30	31	P		P	01 32 32.3 +1.2
	baz=267						
O28M	Mount Upton	74.36	30	P		P	01 32 32.2 +0.5
O28M	Mount Upton	74.36	30	P		P	01 32 32.5 +0.8
	baz=267						
E27K	Coleen River	74.39	22			P	01 32 32.5 +1.0
E27K				IAmb		IAmb	01 32 33.9
	comp=Z,6.2nm,1.1s						
E27K	Coleen River	74.39	22	P		P	01 32 32.4 +1.0
	baz=264						
YUK8	Steele Glacier	74.60	30	P		P	01 32 33.8 +0.7
	baz=267						
AB31	Akbulak array	74.69	318	P		P	01 32 31.6 -1.8
ABKAR	Akbulak array	74.69	318	P		P	01 32 32.5 -0.9
D27M	Malcolm River	74.74	21	P		P	01 32 34.2 +0.7
	baz=264						
I28M	Miner Creek	74.78	25			P	01 32 34.7 +0.8
I28M				IAmb		IAmb	01 32 38.3
	comp=Z,8.0nm,1.1s						
I28M	Miner Creek	74.78	25	P		P	01 32 34.5 +0.7
	baz=266,SNR=11						
DAWY	Dawson	74.92	27	P		P	01 32 35.4 +0.7
DAWY				IAmb		IAmb	01 32 54.2
	comp=Z,9.1nm,1.2s						
DAWY	Dawson	74.92	27	P		P	01 32 35.7 +1.1
	baz=267,SNR=6.6						
F28M	Old Crow	74.98	23			P	01 32 35.6 +0.8
F28M				IAmb		IAmb	01 32 37.3
	comp=Z,7.6nm,0.9s						
F28M	Old Crow	74.98	23	P		P	01 32 36.0 +1.1
	baz=265,SNR=8.4						
YUK4	Talbot Arm	75.14	30	P		P	01 32 37.2 +1.1
	baz=268						
O29M	Mount Kennedy	75.14	31	P		P	01 32 37.3 +1.2
	baz=268						
E28M	Babbage River	75.19	22			P	01 32 36.4 +0.4
E28M				IAmb		IAmb	01 32 38.6
	comp=Z,11nm,1.1s						
E28M	Babbage River	75.19	22	P		P	01 32 36.9 +0.9
	baz=265,SNR=6.6						
YUK6	Outpost Mounta	75.26	30	P		P	01 32 37.5 +0.6
	baz=268						
M29M	Somme Creek	75.27	28			P	01 32 37.6 +1.0
M29M				IAmb		IAmb	01 32 39.2
	comp=Z,7.0nm,1.1s						
M29M	Somme Creek	75.27	28	P		P	01 32 37.7 +1.0
	baz=268,SNR=8.6						
L29M	L29M	75.44	28			P	01 32 38.1 +0.5
L29M				IAmb		IAmb	01 32 50.4
	comp=Z,6.0nm,0.9s						
L29M	L29M	75.44	28	P		P	01 32 38.8 +1.2
	baz=268,SNR=10						
H29M	Whitestone	75.48	24			P	01 32 38.5 +0.8
H29M				IAmb		IAmb	01 33 00.4
	comp=Z,8.1nm,1.1s						
H29M	Whitestone	75.48	24	P		P	01 32 38.5 +0.8
	baz=267						
D28M	Stokes Point	75.53	21	P		P	01 32 38.8 +0.8
	baz=266						
P29M	Windy Craggy	75.55	31	P		P	01 32 39.5 +1.2
	baz=269						
ARTI	Arti	75.58	325	LR		LR	02 07 41.2
	comp=Z,143nm,19.3s,baz=73,slow=37						
G29M	Pine Creek	75.65	24			P	01 32 39.5 +0.8
G29M	Pine Creek	75.65	24	P		P	01 32 39.8 +1.1
	baz=267,SNR=9.5						
HYT	Haines Junctio	75.68	30			P	01 32 39.2 +0.1
HYT	Haines Junctio	75.68	30	P		P	01 32 40.1 +1.0
	baz=269,SNR=5.9						
K29M	Barlow Dome	75.74	27			P	01 32 39.8 +0.4
K29M				IAmb		IAmb	01 32 41.8
	comp=Z,5.0nm,0.8s						
K29M	Barlow Dome	75.74	27	P		P	01 32 40.2 +0.7
	baz=268,SNR=8.7						
E29M	Blow River	75.78	22	P		P	01 32 40.1 +0.7
	baz=267						
N30M	Aishikik Lake	75.89	29	P		P	01 32 41.0 +0.7
N30M	Aishikik Lake	75.89	29	P		P	01 32 40.7 +0.5
	baz=270						
P30M	Million Dollar	75.94	31	P		P	01 32 41.5 +0.9
	baz=270						
M30M	Minto, Yukon	76.04	28			P	01 32 41.4 +0.4
M30M	Minto, Yukon	76.04	28	P		P	01 32 41.9 +0.8
	baz=270,SNR=5.5						
EPYK	Eagle Plains	76.15	24	P		P	01 32 42.4 +0.8
	baz=269						
PLBC	Pleasant Camp	76.25	31	P		P	01 32 43.7 +1.5
	baz=271						
I30M	Mount Dempster	76.27	26			P	01 32 42.5 +0.1
I30M				IAmb		IAmb	01 32 44.5
	comp=Z,11nm,1.5s						
I30M	Mount Dempster	76.27	26	P		P	01 32 43.2 +0.8
	baz=269,SNR=6.3						
J30M	Hart River	76.28	26			P	01 32 42.7 +0.2
J30M				IAmb		IAmb	01 32 54.2
	comp=Z,5.8nm,1.0s						
J30M	Hart River	76.28	26	P		P	01 32 43.6 +1.1
	baz=269						
S31K	Pelican

G30M	tAoh Zrail Nji	76.36	24		P		01 32 43.4 +0.5
G30M	tAoh Zrail Nji	76.36	24	P	P		01 32 43.8 +1.0
	baz=269						
O30N	Mendenhall	76.37	30	P	P		01 32 44.0 +1.0
	baz=271						
N31M	Braeburn, Yuko	76.52	29		P		01 32 44.3 +0.5
N31M				IAmb	IAmb		01 32 46.3
	comp=Z,10nm,1.2s						
N31M	Braeburn, Yuko	76.52	29	P	P		01 32 44.5 +0.7
	baz=271,SNR=5.1						
F30M	Barrier River	76.55	23		P		01 32 44.6 +0.8
F30M	Barrier River	76.55	23	P	P		01 32 44.4 +0.6
	baz=269						
SIT	Sitka	76.85	34	P	P		01 32 46.7 +1.1
	baz=272						
WHY	Whitehorse	76.97	30		P		01 32 46.6 +0.1
WHY	Whitehorse	76.97	30	P	P		01 32 47.4 +1.0
	baz=272						
H31M	Peel River	77.11	25		P		01 32 47.8 +0.8
H31M				IAmb	IAmb		01 32 49.1
	comp=Z,7.9nm,1.1s						
H31M	Peel River	77.11	25	P	P		01 32 47.7 +0.6
	baz=271						
G31M	Satah River	77.13	24		P		01 32 47.1 +0.1
G31M	Satah River	77.13	24	P	P		01 32 47.5 +0.5
	baz=271						
M31M	Drury Creek, Y	77.17	29	P	P		01 32 47.4 0.0
M31M				IAmb	IAmb		01 33 00.1
	comp=Z,6.5nm,1.2s						
M31M	Drury Creek, Y	77.17	29	P	P		01 32 48.1 +0.7
	baz=272						
R32K	Eaglecrest	77.23	33	P	P		01 32 48.2 +0.4
R32K	Eaglecrest	77.23	33	P	P		01 32 48.7 +0.9
	baz=272						
S32K	Killisnoo	77.24	34	P	P		01 32 48.5 +0.7
	baz=273						
F31M	Tsiigehtchic	77.33	23	P	P		01 32 48.7 +0.6
	baz=271						
INK	Inuvik	77.40	22	P	P		01 32 48.9 +0.3
	baz=271						
P32M	Atlin	77.59	31	P	P		01 32 50.6 +0.7
	baz=273						
P33M	Teslin, Yukon	78.01	31	P	P		01 32 53.1 +0.9
	baz=274						
U33K	Whale Pass	78.11	35	P	P		01 32 53.7 +1.0
	baz=274						
CRAG	Craig	78.16	36	P	P		01 32 54.3 +1.3
	baz=274						
Q32M	Nakina River	78.37	32	P	P		01 32 55.4 +1.0
	baz=274						
WRAK	Wrangell Islan	78.52	34	P	P		01 32 55.8 +0.8
	baz=275						
MMPY	Sheldon Lake,	78.60	28	P	P		01 32 56.2 +0.8
	baz=274						
R33M	Jennings River	79.00	31		P		01 32 58.6 +0.8
R33M	Jennings River	79.00	31	P	P		01 32 58.3 +0.6
	baz=275						
S34M	Telegraph Cree	79.05	33	P	P		01 32 58.8 +0.9
	baz=275						
DLBC	Dease Lake	79.58	32	P	P		01 33 01.4 +0.5
	baz=276						
T35M	Bob Quinn	79.62	34	P	P		01 33 01.9 +0.8
T35M	Bob Quinn	79.62	34	P	P		01 33 02.0 +0.9
	baz=276						
KIRV	Kirov	80.27	328	LR	LR		02 11 58.2
	comp=Z,102nm,18.1s,baz=132,slow=38						
C36M	Paulatuk	80.72	21	P	P		01 33 06.9 +0.3
	baz=280						
YKA	Yellowknife Ar	86.17	27	P	P		01 33 35.1 +0.3
	comp=Z,1.3nm,0.6s,baz=300,slow=5.6,SNR=3.9						
	comp=Z,1.3nm,0.6s						
YKA	Yellowknife Ar	86.17	27	P	P		01 33 33.5 -1.3
FINES	FINESS Array B	90.60	334	P	P		01 33 54.4 -1.5
	comp=Z,2.6nm,0.7s,baz=95,slow=4.6,SNR=6.6						
	comp=Z,2.6nm,0.7s						
FINES	FINESS Array B	90.60	334	P	P		01 33 55.2 -0.8
AKASG	Malin Array Be	93.64	324	LR	LR		02 17 21.8
	comp=Z,66nm,21.7s,baz=67,slow=36						
NOA	NORSAR Array B	96.80	338	LR	LR		02 21 42.1
	comp=Z,31nm,19.9s,baz=205,slow=38						
LPAZ	La Paz	152.07	102	PKPbc	PKiKP		01 40 51.5 +0.4
	comp=Z,1.4nm,0.7s,baz=242,slow=1.4,SNR=6.8						
LPAZ	La Paz	152.07	102		PKPbc		01 40 49.8 -1.1

*IDC **07** 01:34:14.8±2.8, 14°.77N×93°.02W, h0km, mb3.7/4, mbtmp3.8/6, ML3.5/3, Error ellipse: s-maj=70.3km s-min=18.9km az=26.0*

*MEX **07** 01:34:14.5±0.9, 14°.20N×93°.07W, h20km±56km, MD4.4*

*CATAC **07** 01:34:15.2±0.7, 14°N±4°×9°3W±°, h26km±5km, M4.5/13, mb4.8/2, mB5.0/1, MLv4.3/13, Mw(mB)4.4/1, Error ellipse: s-maj=10.0km s-min=3.9km az=37.9, confirmed*

*GCG **07** 01:34:17.0±1.3, 14°.40N×92°.86W, h41km±89km, MD5.0, Presumed earthquake*

*NEIC **07** 01:34:18.1±1.8, 14°.49N±0°.07×93°.02W±0°.04, h35km±2km, mb4.1/29, Md4.3/32(MEX), Error ellipse: s-maj=11.9km s-min=7.2km az=180.0*

ISC 07 01:34:16.5±2.4, 14°.40N±0°.06×93°.03W±0°.03, h32km±20km, n108, σ1s69/137, mb4.1/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.90	56		Pn	01 34 31.1	-1.9
THIG					Sn	01 34 44.5	-0.4
THIG		0.90	56	eP	Pn	01 34 31.1	-1.9
THIG				eS	Sn	01 34 43.4	-1.5
THIG		0.90	56	*i* P	Pn	01 34 31.3	-1.7
PATR	El Naranjo	1.05	47		Pn	01 34 33.1	-2.2
PATR					Sn	01 34 47.6	-1.5
PATR	El Naranjo	1.05	47	eP	Pn	01 34 33.1	-2.2
PATR				eS	Sn	01 34 47.6	-1.5
CHUJ	Union Juarez	1.13	52	eP	Pn	01 34 34.5	-1.9
CHUJ				eS	Sn	01 34 49.7	-1.2
PAVE	Pavencul	1.15	46		Pn	01 34 34.5	-2.1
PAVE					Sn	01 34 49.4	-1.9
PAVE	Pavencul	1.15	46	eP	Pn	01 34 34.5	-2.1
PAVE				eS	Sn	01 34 49.4	-1.9
RTAL	Retalhuleu	1.30	84	Pn	Pn	01 34 37.0	-1.5
QUEO	Labor Ovalle	1.54	72	*i* P	Pn	01 34 41.1	-1.0
QUEO				*i* S	Sn	01 34 60.0	-1.3
STG8	El Palmar, Qui	1.63	88	*i* P	Pn	01 34 38.7	-4.6
STG5	El Palmar, Qui	1.63	90	*i* P	Pn	01 34 38.6	-4.6
STG5				*i* S	Sn	01 34 54.3	-8.8
HUEH	Huehuetenango	1.74	58	Pn	Pn	01 34 44.4	-0.4
ESSG	Sabana Grande	2.13	90	*i* P	Pn	01 34 48.6	-1.4
TGIG		2.37	358		Pn	01 34 53.1	-0.2
TGIG					Sn	01 35 22.3	+1.0
TGIG		2.37	358	eP	Pn	01 34 53.1	-0.2
TGIG				eS	Sn	01 35 22.3	+1.0
TGIG		2.37	358	*i* P	Pn	01 34 53.6	+0.3
FG8	Yepocapa, Chim	2.40	93	*i* P	Pn	01 34 47.2	-6.6
FG16	Alotenango, Sa	2.45	93	*i* P	Pn	01 34 48.4	-6.1
FG16				*i* S	Sn	01 35 13.1	-10
APG	El Apazote	2.56	76	Pn	Pn	01 34 56.3	+0.2
	1.7nm,0.3s,baz=192,slow=12,SNR=59						
APG				Sn	Sb	01 35 30.9	-2.1
	3.2nm,0.3s,baz=68,slow=21,SNR=13						
APG	El Apazote	2.56	76	*i* P	Pn	01 34 56.2	+0.2
FAME	Alcaldia de Sa	2.98	100	P	Pn	01 35 00.2	-1.5
FAME				S	Sn	01 35 31.9	-4.4
SLOZ	Alcaldia de Sa	3.17	96	P	Pn	01 35 03.9	-0.4
SLOZ				S	Sn	01 35 41.9	+0.8
LOAL	Lomas de Alarc	3.18	97	S	Sn	01 35 40.7	-0.6
CMIG	Matias Romero	3.22	327	Pn	Pn	01 35 03.3	-1.5
	13nm,0.3s,baz=173,slow=12,SNR=64						
CMIG				Sn	Sn	01 35 41.2	-0.9
	21nm,0.3s,baz=122,slow=14,SNR=7.9						
	23nm,0.3s						
CMIG	Matias Romero	3.22	327		Pn	01 35 03.7	-1.2
CMIG					Sn	01 35 40.5	-1.7
CMIG	Matias Romero	3.22	327	eP	Pn	01 35 03.8	-1.2
CMIG				eS	Sn	01 35 41.6	-0.5
HUIG	Huatulco	3.27	295		Pn	01 35 04.0	-1.6
HUIG					Sn	01 35 39.4	-4.0
HUIG	Huatulco	3.27	295	eP	Pn	01 35 04.0	-1.6
HUIG				eS	Sn	01 35 39.4	-4.0
CEVE	Cerro Verde	3.36	99	S	Sn	01 35 45.6	-0.3
JAYA	Jayaque - finc	3.56	102	P	Pn	01 35 09.9	+0.2
JAYA				S	Sn	01 35 47.5	-3.3
JAYA	Jayaque - finc	3.56	102	*i* P	Pn	01 35 07.7	-2.0
MTO3	Montecristo	3.56	90		Pn	01 35 08.8	-1.0
MTO3	Montecristo	3.56	90	P	Pn	01 35 10.2	+0.4
MTO3	Montecristo	3.56	90	*i* P	Pn	01 35 08.4	-1.3
ESQI	Esquipulas	3.58	87	Pn	Pn	01 35 10.5	+0.5
PMON	Piamonte	3.67	100	P	Pn	01 35 10.2	-1.1
PMON				S	Sn	01 35 55.2	+1.7
PETF	Flores	3.95	50	Pn	Pn	01 35 15.2	+0.3
PAVA	Las Pavas	4.03	99	P	Pn	01 35 15.8	-0.4
COEG	Centro de Oper	4.10	100	P	Pn	01 35 16.7	-0.5
COEG				S	Sn	01 36 05.6	+1.4
SARH	Santa Rosa de	4.15	84	P	Pn	01 35 17.2	-0.7
TECO	Alcaldia de Te	4.22	101	S	Sn	01 36 07.5	+0.7
NEUV	Arroyo Zacate	4.24	321		Pn	01 35 20.4	+1.5
NEUV	Arroyo Zacate	4.24	321	eP	Pn	01 35 20.4	+1.5
NEUV				eS	Sn	01 36 07.0	-0.3
PEIG	Puerto Escondi	4.28	292	eP	Pn	01 35 12.5	-7.0
PEIG				eS	Sn	01 36 02.9	-5.5
SCIG	Sabancuy	4.88	21	eP	Pn	01 35 27.8	+0.1
SCIG				eS	Sn	01 36 20.2	-2.9
YOIG	Yosondua	4.99	300		Pn	01 35 30.9	+1.4
YOIG					Sn	01 36 25.1	-1.1
YOIG	Yosondua	4.99	300	eP	Pn	01 35 30.9	+1.4
YOIG				eS	Sn	01 36 25.1	-1.1
LCND	La Caada	5.11	102	P	Pn	01 35 30.7	-0.3
CNCH	Conchagua	5.17	102	P	Pn	01 35 33.1	+1.2
CNCH				S	Sn	01 36 32.0	+1.4
TOIG	Toxpalan	5.34	314		Pn	01 35 32.5	-1.7
TOIG					Sn	01 36 34.5	-0.2
TOIG	Toxpalan	5.34	314	eP	Pn	01 35 32.5	-1.7
TOIG				eS	Sn	01 36 34.5	-0.2
TXIG	Tlaxiaco	5.37	303		Pn	01 35 35.0	+0.3
TXIG					Sn	01 36 35.1	-0.6
TXIG	Tlaxiaco	5.37	303	eP	Pn	01 35 35.0	+0.3
TXIG				eS	Sn	01 36 35.1	-0.6
HLIG	Huajuapan de L	5.71	307		Pn	01 35 35.0	-4.4
HLIG					Sn	01 36 43.7	-0.4
HLIG	Huajuapan de L	5.71	307	eP	Pn	01 35 35.0	-4.4
HLIG				eS	Sn	01 36 43.7	-0.4
TPIG	Tehuac#an	5.76	314	eP	Pn	01 35 37.8	-2.3
TPIG				eS	Sn	01 36 50.9	+5.6
FTIG	Fresnillo de T	6.02	306		Pn	01 35 44.9	+1.4
FTIG					Sn	01 36 50.7	-0.6
FTIG	Fresnillo de T	6.02	306	eP	Pn	01 35 44.9	+1.4
FTIG				eS	Sn	01 36 50.7	-0.6
CRIN	San Cristobal	6.06	105	Pn	Pn	01 35 43.5	-0.6
MGIG	Malinaltepec	6.08	298	eP	Pn	01 35 36.6	-7.9
MGIG				eS	Sn	01 36 52.9	-0.2
TLIG	Tlapa	6.18	301	Pn	Pn	01 35 45.8	0.0
YAIG	Yautepec	7.29	308	eP	Pn	01 35 55.8	-5.3
YAIG				eS	Sn	01 37 15.5	-7.3
PLIG	Platanillo	7.37	303	eP	Pn	01 36 04.7	+2.6
PLIG				eS	Sn	01 37 22.1	-2.5
ARIG	Puente Sto Nin	8.01	300	eP	Pn	01 36 11.7	+0.9
ARIG				eS	Sn	01 37 42.8	+2.4
JUD3	Juan Diaz 3	8.45	119	Pn	Pn	01 36 17.6	+0.8
JTS	Las Juntas de	8.89	116	Pn	Pn	01 36 28.5	+5.7
	1.2nm,0.3s,baz=336,slow=17,SNR=4.6						
	2.2nm,0.3s						
JTS	Las Juntas de	8.89	116		Pn	01 36 24.8	+2.0
PIRO	Carate, Puerto	11.21	121	Pn	Pn	01 36 58.2	+3.5
RGM0	Gandoca	11.26	114	Pn	Pn	01 36 58.8	+3.5
SOR	Soroa	12.64	47	Pn	Pn	01 37 13.4	-0.8
SOR	Soroa	12.64	47	eP	Pn	01 37 13.3	-0.9
CAMR	Camarioca	14.00	50	eP	Pn	01 37 24.0	-8.8
MGV	Manicaragua	14.57	56	eP	P	01 37 45.1	-1.5
SAND	Sanderson	17.61	333		Pn	01 38 19.2	-0.4
TXAR	Lajitas Array	17.82	328	P	Pn	01 38 22.5	+0.2
	16nm,0.3s,baz=145,slow=11,SNR=12						
TX31	Lajitas Ar. Si	17.82	328		Pn	01 38 22.1	-0.2
SGCY	Sterling City	18.94	338	P	P	01 38 34.3	-0.7
SGCY				IAmb	IAmb	01 38 36.9	
	comp=Z,5.9nm,0.6s						
MNHN	Monahans	19.08	334		P	01 38 37.0	+0.4
MNHN				IAmb	IAmb	01 38 40.6	
	comp=Z,6.8nm,0.7s						
ABTX	Abilene, Hawle	19.12	343		Pn	01 38 38.4	+0.4
ABTX				IAmb	IAmb	01 38 44.8	
	comp=Z,4.3nm,0.6s						
APMT	Aspermont	19.91	342		Pn	01 38 47.1	-0.3
APMT				IAmb	IAmb	01 38 52.3	
	comp=Z,7.1nm,0.5s						
SN07	Snyder 07	19.94	340	P	P	01 38 46.8	+0.9
SN07				IAmb	IAmb	01 38 47.9	
	comp=Z,4.9nm,0.6s						
MIAR	Mount Ida	20.07	359		P	01 38 46.8	-0.5
CLNB	Carlsbad	20.36	333	P	P	01 38 50.8	+0.3
DKNS	Dickens	20.48	341	P	P	01 38 51.4	-0.4
GDL2	Guadalupe Moun	20.52	332	P	P	01 38 52.6	+0.3
MNTX	Cornudas Mount	20.60	329	P	P	01 38 53.4	+0.3
FNO	Franklin	21.14	350	P	P	01 38 59.0	+0.1
FNO				IAmb	IAmb	01 39 02.1	
	comp=Z,8.3nm,0.5s						
AMTX	Amarillo	21.84	341		P	01 39 05.4	-1.0
121A	Cookes Peak, D	22.51	326		P	01 39 13.2	-0.6
RTBA	Rita Blanca	23.60	340		P	01 39 24.3	-0.5
RTBA				IAmb	IAmb	01 39 25.7	
	comp=Z,5.7nm,0.8s						
T25A	Trinidad	24.82	338	P	P	01 39 35.7	-0.4
T25A				IAmb	IAmb	01 39 40.0	
	comp=Z,5.8nm,0.7s						
S22A	4UR Ranch, Cre	26.29	335		P	01 39 49.6	+0.1
PV05	Paradox Valley	27.55	332	P	P	01 40 00.7	-0.2
PV05				IAmb	IAmb	01 40 04.8	
	comp=Z,2.9nm,0.7s						
PV18	Skein Mesa, Pa	27.60	332	P	P	01 40 01.8	+0.6
PV18				IAmb	IAmb	01 40 05.0	
	comp=Z,4.3nm,0.7s						
PV12	Saucer Basin,	27.61	333	P	P	01 40 03.7	+2.3
PV23	Carpenter Ridg	27.82	332	P	P	01 40 04.0	+0.8
PV23				IAmb	IAmb	01 40 07.6	
	comp=Z,6.1nm,0.8s						
PDAR	Pinedale Array	31.65	336	P	P	01 40 37.6	+0.5
	comp=Z,0.3nm,0.5s,baz=140,slow=8.5,SNR=1.9						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	31.65	336	P	P	01 40 36.8	-0.3
SNOW	Snow King Moun	32.71	336	P	P	01 40 46.7	+0.2
NVAR	Mina Array Bea	32.74	322	P	P	01 40 47.5	+0.7
	comp=Z,1.3nm,0.7s,baz=130,slow=9.5,SNR=7.9						
	comp=Z,1.3nm,0.7s						
LOHW	Long Hollow	32.77	336	P	P	01 40 47.0	+0.1
LOHW				IAmb	IAmb	01 40 49.6	
	comp=Z,2.4nm,0.6s						
MCMT	McKenzie Canyo	34.68	335	P	P	01 41 04.0	+0.5
F10A	Beach Ranch, E	37.49	332		P	01 41 27.8	+0.4
YKA	Yellowknife Ar	50.41	347	P	P	01 43 09.6	-1.1
	comp=Z,1.1nm,0.6s,baz=152,slow=6.8,SNR=4.4						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	50.41	347	P	P	01 43 11.2	+0.5
ILAR	Eielson Array	62.08	337	P	P	01 44 34.1	+0.2
	comp=Z,0.6nm,0.8s,baz=143,slow=5.0,SNR=7.1						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	62.08	337	P	P	01 44 34.5	+0.5

*IDC **07** 02:07:18.1±1.1, 6°.95S×155°.60E, h0km, mb3.7/7, mbtmp3.7/7, MS3.3/1, Error ellipse: s-maj=38.7km s-min=28.7km az=112.0*

ISC 07 02:07:24.8±1.0, 7°.0S±0°.2×155°.7E±0°.2, h50km, n13, σ1s07/9, mb3.6/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.88	214	LR	LR	02 16 30.9	
	comp=Z,119nm,20.6s,baz=218,slow=35						
WRA	Warramunga Arr	24.35	236	P	P	02 12 38.1	-0.2
	0.2nm,0.5s,baz=57,slow=8.8,SNR=4.9						
	0.4nm,0.5s						
ASAR	Alice Springs	26.66	229	P	P	02 12 58.0	-1.2
	0.2nm,0.5s,baz=51,slow=9.5,SNR=1.7						
	0.2nm,0.5s						
H11S3	WAKE ISLAND Hy	27.58	23	T	T	02 41 17.7	
	baz=204,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	27.59	23	T	T	02 41 18.0	
	baz=204,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	27.60	23	T	T	02 41 20.3	
	baz=204,slow=75,SNR=9.8						
CMAR	Chiang Mai Arr	61.38	295	P	P	02 17 36.6	+0.3
	1.5nm,0.4s,baz=121,slow=5.7,SNR=4.9						
	1.5nm,0.4s						
SONM	Songino Array	69.71	327	P	P	02 18 30.9	+1.3
	0.4nm,0.5s,baz=124,slow=7.2,SNR=2.2						
	0.4nm,0.5s						
QSPA	South Pole Qui	82.96	180	P	P	02 19 45.7	+1.3
	0.5nm,0.6s,baz=294,slow=12,SNR=1.4						
	0.5nm,0.6s						
ILAR	Eielson Array	83.15	21	P	P	02 19 44.5	-0.7
	0.2nm,0.5s,baz=243,slow=5.5,SNR=5.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	83.85	319	P	P	02 19 48.6	-0.6
	0.3nm,0.4s,baz=110,slow=3.8,SNR=1.7						
	0.3nm,0.4s						
BDFB	Brasilia	147.50	134	PKPbc	PKPab	02 27 06.2	-0.4
	1.4nm,0.5s,baz=218,slow=1.4,SNR=4.4						
TORD	Torodi Ar. Bea	153.66	285	PKPbc	PKPbc	02 27 18.4	-0.9
	0.2nm,0.4s,baz=99,slow=2.6,SNR=4.1						

IDC 07 02:54:33.1±8.4, 21°.98S×148°.07E, h0km, mbtmp3.1/2, ML3.2/2, Error ellipse: s-maj=101.4km s-min=63.7km az=176.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	11.42	209	Lg	Lg	03 00 32.1	
	baz=262,slow=19						
WRA	Warramunga Arr	12.99	276	Pn	Pn	02 57 37.8	-1.3
	0.2nm,0.3s,baz=100,slow=12,SNR=6.8						
WRA				Lg	Lg	03 01 25.5	
	0.1nm,0.3s,baz=104,slow=29,SNR=5.1						
	0.4nm,0.8s						
ASAR	Alice Springs	13.17	260	Pn	Pn	02 57 42.9	+1.3
	0.1nm,0.3s,baz=96,slow=13,SNR=2.2						
ASAR				Lg	Lg	03 01 32.1	
	0.5nm,0.3s,baz=81,slow=25,SNR=6.6						
	0.2nm,0.3s						
I22FR	PORTLAGUERRE I	17.40	94	I	I	04 36 40.0	
	baz=265,slow=307,SNR=1.1						

*NEIC **07** 02:58:01.9±1.1, 24°.24N±0°.08×143°.8E±0°.2, h10km±1km, mb4.7/17, Error ellipse: s-maj=25.1km s-min=10.5km az=71.0*

*IDC **07** 02:58:02.4±1.1, 24°.11N×143°.02E, h0km, mb4.0/10, mbtmp4.0/10, ML3.3/1, MS3.5/2, Error ellipse: s-maj=35.6km s-min=18.2km az=85.0*

ISC 07 02:58:04.9±0.6, 24°.19N±0°.07×143°.7E±0°.1, h35km, n41, σ1s01/40, mb4.5/19, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	3.21	335	Pn	Pn	02 58 53.8	+0.9
	3.8nm,0.3s,baz=258,slow=23,SNR=1.7						
JCJ				Sn	Sn	02 59 30.4	+0.6
	15nm,0.3s,baz=252,slow=23,SNR=6.1						
JCJ	Chichijima	3.21	335		Pn	02 58 53.5	+0.7
JCJ					Sn	02 59 31.1	+1.2
DPSS	Saipan	9.11	167	Pn	Pn	03 00 14.3	+0.4
JMN	Monobe	12.82	320	Pn	Pn	03 01 04.3	-0.3
JKA	Kamikawa-asahi	19.90	358	P	P	03 02 32.9	-0.4
CMAR	Chiang Mai Arr	41.97	271	P	P	03 05 50.5	-2.3
	1.3nm,0.3s,baz=61,slow=8.4,SNR=4.2						
	1.3nm,0.3s						
CMAR	Chiang Mai Arr	41.97	271	P	P	03 05 52.7	0.0
CTA	Charters Tower	44.08	177	LR	LR	03 24 57.9	
	comp=Z,61nm,18.9s,baz=41,slow=37						
CTAO	Charters Tower	44.08	177	P	P	03 06 09.7	+0.1
WR0	Warramunga Arr	44.78	192	P	P	03 06 15.4	+0.1
WR0				IAmb	IAmb	03 06 33.4	
	comp=Z,12nm,1.4s						
WR8	Warramunga Arr	44.79	192	P	P	03 06 16.0	+0.6
WR8				IAmb	IAmb	03 06 28.6	
	comp=Z,9.1nm,1.2s						
WB2	Warramunga Arr	44.80	193	P	P	03 06 15.9	+0.4
WB2				IAmb	IAmb	03 06 34.8	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	44.80	193	P	P	03 06 16.5	+1.0
	comp=Z,1.1nm,0.3s,baz=5.8,slow=9.3,SNR=31						
	comp=Z,1.1nm,0.3s						
WRA	Warramunga Arr	44.80	193	P	P	03 06 13.5	-2.0
ASAR	Alice Springs	48.51	192	P	P	03 06 45.8	+1.3
	comp=Z,0.2nm,0.4s,baz=10.0,slow=6.2,SNR=4.5						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	48.51	192	P	P	03 06 45.5	+1.0
ZALV	Zalesovo Beam	52.59	320	P	P	03 07 15.6	+0.6
	comp=Z,0.6nm,0.5s,baz=97,slow=12,SNR=2.0						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	52.59	320	P	P	03 07 13.9	-1.1
MKAR	Makanchi Array	53.41	311	P	P	03 07 20.4	-0.8
	comp=Z,0.5nm,0.5s,baz=87,slow=10,SNR=8.1						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	53.41	311	P	P	03 07 20.6	-0.5
I17K	Unalakleet	53.57	27	P	P	03 07 21.8	-0.3
ARMA	Armidale	54.82	172	P	P	03 07 32.2	+0.6
KDAK	Kodiak Island	55.89	35	LR	LR	03 30 36.9	
	comp=Z,40nm,19.6s,baz=161,slow=35						
KURK	Kurchatov	56.02	316	P	P	03 07 40.1	+0.1
KURBB	Kurchatov Arra	56.07	316	P	P	03 07 39.9	-0.4
	comp=Z,1.7nm,0.6s,baz=93,slow=7.9,SNR=22						
	comp=Z,1.7nm,0.6s						
STLK	Strandline Lak	56.88	31	P	P	03 07 45.6	-0.4
STLK				IAmb	IAmb	03 07 57.1	
	comp=Z,3.2nm,0.7s						
SKT	Skwentna	57.10	31	P	P	03 07 47.7	+0.2
SKT				IAmb	IAmb	03 07 52.0	
	comp=Z,7.7nm,0.7s						
DHY	Denali Highway	59.18	30	P	P	03 08 01.7	-0.5
DHY				IAmb	IAmb	03 08 23.7	
	comp=Z,3.0nm,0.5s						
ILAR	Eielson Array	59.61	28	P	P	03 08 10.4	+5.4
	comp=Z,0.5nm,0.8s,baz=257,slow=6.2,SNR=8.0						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	59.61	28	P	P	03 08 05.2	+0.2
BVAR	Borovoye Array	61.12	319	P	P	03 08 16.0	+0.5
	comp=Z,3.1nm,0.5s,baz=77,slow=6.0,SNR=13						
	comp=Z,3.1nm,0.5s						
O29M	Mount Kennedy	63.24	33	P	P	03 08 27.1	-2.7

TCA	**Tanti**	**6.19**	**129**	*eP*	Pn	03 22 51.6	-1.7

IDC 07 03:29:26.8±7.8, 20°41S×179°29E, h643km±32km, mb2.7/3, mbtmp3.6/4, Error ellipse: s-maj=247.9km s-min=30.3km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.91**	**336**	P	P	03 30 49.1	-0.2
	4.1nm,0.4s,baz=268,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**42.06**	**257**	P	P	03 36 24.7	-0.4
	1.3nm,0.7s,baz=95,slow=8.2,SNR=13						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**42.09**	**263**	P	P	03 36 25.8	+0.5
	0.5nm,0.3s,baz=96,slow=7.9,SNR=16						
	0.5nm,0.3s						
ILAR	**Eielson Array**	**88.82**	**14**	P	P	03 41 13.9	+0.3
	0.2nm,0.9s,baz=205,slow=3.9,SNR=1.9						
	0.2nm,0.9s						
AKASG	**Malin Array Be**	**141.68**	**329**	PKP	PKPdf	03 47 43.6	-2.8
	0.3nm,0.3s,baz=43,slow=3.9,SNR=4.8						

*SOME **07** 03:32:45.8, 49°.08N×84°.65E, h20km*
*MOS **07** 03:32:45.5±1.9, 49°.21N×84°.16E, h10km, mb4.2/2, Error ellipse: s-maj=13.2km s-min=7.2km az=62.2*
*NNC **07** 03:32:48.8±0.9, 49°.15N×84°.21E, h8km±5km, mb4.2, mpv3.8, Error ellipse: s-maj=7.6km s-min=3.5km az=78.0*

ISC 07 03:32:47.1±0.7, 49°06N±0°.03×84°38E±0°.04, h10km, n40, σ2s21/48, 11C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**1.64**	**168**	P	**Pb**	**03 33 17.9**	**+0.5**
	113nm,0.2s						
ZSN				S	**Sg**	**03 33 41.1**	**+1.3**
	769nm,0.5s						
ZSN	**Zaisan**	**1.64**	**168**	*eP*	**Pb**	**03 33 17.9**	**+0.5**
	113nm,0.2s						
ZSN				*eS*	**Sg**	**03 33 41.1**	**+1.3**
	769nm,0.5s						
TUNR	**Tungur**	**1.68**	**48**	PN	**Pn**	**03 33 14.3**	**-2.3**
TUNR						03 33 35.5	
UKR	**Ust'-Kan**	**1.90**	**7**	PN	**Pn**	**03 33 18.4**	**-1.2**
UKR						03 33 40.8	
DGZ	**Jazzator, Alta**	**2.10**	**71**	PN	**Pn**	**03 33 22.0**	**-0.4**
DGZ						03 33 47.4	
CHBI	**Chibit, Altay**	**2.39**	**57**	PN	**Pn**	**03 33 27.0**	**+0.7**
CHBI						03 33 56.4	
ELDR	**Elanda**	**2.43**	**26**	PN	**Pn**	**03 33 27.1**	**+0.3**
ELDR						03 33 56.2	
AKAR	**Aktash**	**2.45**	**58**	PN	**Pn**	**03 33 27.5**	**+0.2**
AKAR						03 33 57.7	
MK31	**Makanchi Array**	**2.67**	**213**	⇓Pn	**Pb**	**03 33 33.3**	**-1.6**
	2.1nm,0.4s,baz=29,slow=14,SNR=691						
MK31				⇓Pg	**Pg**	**03 33 37.7**	**-0.5**
	5.6nm,0.2s,baz=29,slow=17,SNR=8.8						
MK31				⇑Lg	Lg	03 34 12.5	
	49nm,0.5s,baz=25,slow=28						
MK31	**Makanchi Array**	**2.67**	**213**	*i* PN	**Pb**	**03 33 32.9**	**-2.0**
MKAR	**Makanchi Array**	**2.67**	**213**	*i* PN	**Pb**	**03 33 33.5**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,22nm,0.3s						
MAKZ	**Makanchi**	**2.77**	**217**	Pn	**Pb**	**03 33 33.8**	**-2.9**
	comp=Z,8.1nm,0.5s						
MAKZ				⇓Pg	**Pg**	**03 33 39.8**	**-0.4**
	comp=Z,23nm,0.3s						
MAKZ				⇑Lg	Lg	03 34 16.7	
	comp=Z,85nm,0.5s						
CUR	**Chagan-Uzun**	**2.79**	**66**	PN	**Pn**	**03 33 32.0**	**+0.1**
CUR						03 34 07.7	
ULGR	**Ulagan, Altay**	**2.80**	**55**	PN	**Pn**	**03 33 32.2**	**+0.2**
ULGR						03 34 07.4	
SEM	**Semipalatinsk**	**3.00**	**298**	Pg	Pg	03 33 48.4	+3.8
	comp=Z,120nm,0.3s						
SEM				Lg	Lg	03 34 33.1	
	comp=Z,245nm,0.4s						
SEM	**Semipalatinsk**	**3.00**	**298**	*eP*	**Pg**	**03 33 45.0**	**+0.4**
	comp=Z,120nm,0.3s						
SEM				*eS*	**Sg**	**03 34 28.2**	**+4.7**
	comp=Z,245nm,0.4s						
ARTR	**Artybash**	**3.31**	**33**	PN	**Pb**	**03 33 43.7**	**-2.2**
ARTR						03 34 24.5	
KURK	**Kurchatov**	**4.08**	**296**	⇑Pn	**Pn**	**03 33 48.9**	**-0.5**
	comp=Z,1.4nm,0.5s						
KURK				⇑Pg	**Pb**	**03 33 59.7**	**+0.8**
	comp=Z,3.9nm,0.4s						
KURK				⇑Lg	Lg	03 34 53.9	
	comp=Z,62nm,0.6s						
KURK	**Kurchatov**	**4.08**	**296**	*i* PN	**Pn**	**03 33 46.3**	**-3.2**
KURBB	**Kurchatov Arra**	**4.10**	**295**	⇓Pn	**Pn**	**03 33 49.3**	**-0.4**
	comp=Z,5.3nm,0.5s,baz=106,slow=13						
KURBB				⇑Pg	**Pb**	**03 33 59.9**	**+0.6**
	comp=Z,23nm,0.4s						
KURBB				⇑Lg	Lg	03 34 54.5	
	comp=Z,254nm,0.6s,baz=113,slow=32						
ZAA0	**Zalesovo Array**	**4.91**	**3**	Pn	**Pn**	**03 34 02.8**	**+2.0**
ZAA0				Lg	Lg	03 35 22.3	
ZALV	**Zalesovo Beam**	**4.91**	**3**	*i* PN	**Pn**	**03 33 57.5**	**-3.3**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
DJR	**Jarkent**	**5.68**	**215**	Pg	**Pg**	**03 34 34.7**	**-1.1**
	comp=Z,8.9nm,0.3s						
DJR				Lg	Lg	03 35 54.0	
	comp=Z,20nm,0.9s						
DJR	**Jarkent**	**5.68**	**215**	*eP*	**Pg**	**03 34 34.8**	**-1.1**
	comp=Z,8.9nm,0.3s						
DJR				*eS*	**Sg**	**03 35 54.0**	**+4.5**
	comp=Z,20nm,0.9s						
WMQ	**Urumqi**	**5.71**	**155**	Pn	**Pn**	**03 34 11.8**	**-0.2**
WMQ				Sn	**Sn**	**03 35 16.4**	**-1.3**
WMQ				smax	smax		
	comp=N,37nm,0.9s						
WMQ				smax	smax		
	comp=E,37nm,1.1s						
ARXS	**Arharly**	**6.62**	**225**	Pg	**Pg**	**03 34 51.7**	**-2.1**
	comp=E,5.2nm,0.6s						
ARXS				Lg	Lg	03 36 21.1	
	comp=E,35nm,0.4s						
PDGK	**Podgornoye**	**6.66**	**212**	⇓Pn	**Pn**	**03 34 27.3**	**+2.2**
	comp=E,12nm,0.5s						
PDGK				⇓Sn	**Sn**	**03 35 44.9**	**+3.9**
	comp=E,7.0nm,0.5s						
PDGK				⇓Lg	Lg	03 36 21.1	
	comp=E,21nm,0.6s						
SATY	**Saty**	**7.30**	**217**	Pg	**Pg**	**03 35 03.5**	**-3.2**
	comp=E,5.0nm,0.6s						
SATY				Lg	Lg	03 36 42.6	
	comp=E,18nm,1.0s						
BTLS	**Baital**	**8.12**	**244**	Pg	**Pg**	**03 35 17.7**	**-4.7**
	comp=E,2.1nm,0.2s						
BTLS				Lg	Lg	03 37 05.9	
	comp=E,19nm,0.5s						
KNGR	**Kungurtug, Tuv**	**8.63**	**75**	*i* P	**Pn**	**03 34 52.9**	**+0.8**
AAK	**Ala-Archa**	**9.42**	**231**	⇑Lg	Lg	03 37 52.8	
	comp=E,5.6nm,0.8s						
AAK	**Ala-Archa**	**9.42**	**231**	*i* P	**Pn**	**03 35 01.0**	**-1.9**
BVA0	**Borovoye Array**	**9.66**	**300**	⇑Lg	Lg	03 37 52.8	
	comp=E,14nm,0.9s						
BORK	**Borovoye**	**9.71**	**300**	*i* P	**Pn**	**03 35 04.8**	**-1.9**
KK31	**Karatay Array**	**11.32**	**243**	⇑Pn	**Pn**	**03 35 30.1**	**+1.4**
	comp=E,0.8nm,0.5s,baz=53,slow=13,SNR=9.4						
KK31				⇑Sn	**Sn**	**03 37 35.8**	**+0.6**
	comp=E,1.0nm,0.5s						
KK31				⇓Lg	Lg	03 38 49.6	
	comp=E,5.1nm,0.6s						
CHGR	**Chuyangaron**	**15.09**	**232**	*i* P	**Pn**	**03 36 21.9**	**+1.5**
ARTI	**Arti**	**17.30**	**305**	*i* P	**Pn**	**03 36 44.8**	**-3.6**
NRIK	**Noril'sk**	**20.41**	**3**	*i* P	**P**	**03 37 23.9**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LYN	**LuoYang**	**25.28**	**114**	P	**P**	**03 38 18.6**	**+5.2**
LYN				pmax	pmax		
	comp=Z,18nm,1.2s						
OBN	**Obninsk**	**29.51**	**300**	*eP*	**P**	**03 38 49.6**	**-1.6**
OBN				*e*		03 39 44.1	
OBN				*e*PPP	PPP	03 39 52.6	
OBN				*e*		03 41 59.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						

*FUNV **07** 03:35:14.3, 10°.18N×61°.75W, h104km, MW3.6, Presumed earthquake*

TRN 07 03:35:10.8, 10°.22N×62°.34W, h14km, MD3.6, Gulf of Paria., Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.91**	**59**	*eP*	Pb	03 35 28.1	-0.2
DMDM				*eS*	Sg	03 35 41.1	+0.8
PSGH	**Port of Spain**	**0.93**	**62**	*eP*	Pb	03 35 28.5	-0.1
PSGH				*eS*	Sn	03 35 43.0	+0.6
TRN	**Trinidad (W)**	**1.01**	**65**	*eP*	Pg	03 35 30.2	-0.1
TRN				*eS*	Sb	03 35 43.2	-0.1
TRN	**Trinidad (W)**	**1.01**	**65**	*eP*	Pn	03 35 30.5	-0.1
TRN				*eS*	Sn	03 35 44.6	+0.1
GRFF	**Grenada Fort F**	**1.91**	**18**	*eS*	Sn	03 36 07.4	+0.7
GRGR	**Grenville**	**2.01**	**19**	*eP*	Pn	03 35 45.3	+0.9
GRGR				*eS*	Sn	03 36 09.5	+0.2
GRGR	**Grenville**	**2.01**	**19**	*eP*	Pn	03 35 45.2	+0.9
GRGR				*eS*	Sn	03 36 09.9	+0.7
GCMP	**Grenada, Carri**	**2.42**	**22**	*eP*	Pn	03 35 50.7	+0.8
GCMP				*eS*	Sn	03 36 16.3	-3.0
GCMP	**Grenada, Carri**	**2.42**	**22**	*eP*	Pn	03 35 51.2	+1.3
GCMP				*eS*	Sn	03 36 18.4	-0.9
SLBI	**Saint Lucia, B**	**4.00**	**19**	*eP*	Pn	03 36 12.0	+0.3
SLBI				*eS*	Sn	03 36 57.7	-0.8
BIM	**Bigot**	**4.44**	**16**	*eP*	Pn	03 36 17.7	-0.1

*IDC **07** 03:43:19.3±0.9, 12°.01N×140°.37E, h0km, mb3.9/15, mbtmp3.9/15, MS3.6/21, Error ellipse: s-maj=37.8km s-min=16.4km az=84.0*
*NEIC **07** 03:43:22.7±1.2, 12°.05N±0°.09×140°.2E±0°.1, h10km±1km, mb4.6/29, Error ellipse: s-maj=19.2km s-min=12.6km az=230.0*

ISC 07 03:43:22.1±0.7, 12°0N±0°.1×140°2E±0°.1, h10km, n67, σ0s82/52, mb4.4/29, MS3.6/17, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.81**	**71**	Pn	**Pn**	**03 44 34.0**	**-0.6**
	24nm,0.3s,baz=237,slow=8.3,SNR=3.6						
GUMO	**Guam**	**4.81**	**71**		**Pn**	**03 44 36.1**	**+1.5**
JAY	**Jayapura**	**14.45**	**178**	LR	LR	03 51 16.9	
	comp=Z,274nm,20.6s,baz=272,slow=33						
JCJ	**Chichijima**	**15.11**	**7**	LR	LR	03 51 57.5	
	comp=Z,119nm,18.2s,baz=104,slow=34						
SIJI	**Sorong**	**15.58**	**215**	LR	LR	03 51 43.2	
	comp=Z,148nm,20.1s,baz=31,slow=32						
TGY	**Tagaytay City**	**18.89**	**278**	LR	LR	03 55 29.5	
	comp=Z,138nm,18.2s,baz=78,slow=38						
SSLB	**Suanglung**	**21.71**	**305**		**P**	**03 48 12.7**	**-0.9**
TPUB	**Ta-pu**	**21.74**	**304**	P	**P**	**03 48 14.3**	**+0.5**
YHNB	**Yeheng**	**21.82**	**308**	P	**P**	**03 48 16.1**	**+1.3**
YHNB				IAmb	IAmb	03 48 23.9	
	comp=Z,36nm,1.0s						
TOLI2	**Tolitoli**	**22.11**	**242**		**P**	**03 48 18.6**	**+0.8**
MJAR	**Matsushiro Arr**	**24.48**	**356**	LR	LR	03 57 34.3	
	comp=Z,103nm,18.2s,baz=176,slow=35						
KSRS	**Korea Array**	**27.62**	**339**	P	**P**	**03 49 09.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=159,slow=9.6,SNR=7.4						
KSRS				LR	LR	03 59 12.1	
	comp=Z,63nm,21.5s,baz=155,slow=34						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**32.28**	**190**	P	P	03 49 48.6	-2.6
	comp=Z,1.1nm,0.9s,baz=6.0,slow=9.5,SNR=4.8						
	comp=Z,1.1nm,0.9s						
WRA	**Warramunga Arr**	**32.28**	**190**	P	**P**	**03 49 49.9**	**-1.4**
USRK	**Ussuriysk Ar.**	**32.84**	**349**	P	**P**	**03 49 55.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=160,slow=10,SNR=2.2						
USRK				LR	LR	04 02 05.7	
	comp=Z,76nm,18.4s,baz=186,slow=34						
	comp=Z,0.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**32.84**	**349**	P	**P**	**03 49 56.7**	**+0.8**
ASAR	**Alice Springs**	**36.00**	**190**	P	**P**	**03 50 23.1**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=19,slow=13,SNR=6.6						
ASAR				LR	LR	04 04 50.4	
	comp=Z,178nm,19.8s,baz=348,slow=36						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**36.00**	**190**	P	**P**	**03 50 26.2**	**+2.7**
CMAR	**Chiang Mai Arr**	**40.26**	**284**	P	**P**	**03 50 59.9**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=101,slow=5.5,SNR=0.7						
CMAR				LR	LR	04 06 22.2	
	comp=Z,54nm,21.0s,baz=105,slow=34						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.26**	**284**	P	**P**	**03 50 59.6**	**+0.1**
LZDM	**Lanzhou Array**	**40.63**	**312**	LR	LR	04 07 51.7	
	comp=Z,66nm,20.1s,baz=140,slow=36						
PETK	**Petropavlovsk-**	**43.31**	**15**	LR	LR	04 05 49.2	
	comp=Z,39nm,20.8s,baz=181,slow=31						
STKA	**Stephens Creek**	**43.67**	**178**	P	**P**	**03 51 26.8**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=323,slow=11,SNR=3.6						
STKA				LR	LR	04 09 52.4	
	comp=Z,118nm,18.2s,baz=296,slow=36						
	comp=Z,2.1nm,0.9s						
SONM	**Songino Array**	**45.53**	**328**	P	**P**	**03 51 41.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=134,slow=10,SNR=6.2						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**45.53**	**328**	P	**P**	**03 51 43.2**	**+1.1**
YAK	**Yakutsk**	**50.51**	**354**	LR	LR	04 12 17.5	
	comp=Z,36nm,20.8s,baz=177,slow=34						
MKAR	**Makanchi Array**	**59.51**	**318**	P	**P**	**03 53 25.1**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=93,slow=9.7,SNR=4.0						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.51**	**318**	P	**P**	**03 53 25.4**	**-0.2**
ZAA0	**Zalesovo Array**	**60.30**	**326**	P	**P**	**03 53 31.2**	**+0.3**
ZALV	**Zalesovo Beam**	**60.30**	**326**	P	**P**	**03 53 31.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=114,slow=8.4,SNR=7.0						
ZALV				LR	LR	04 19 53.3	
	comp=Z,42nm,19.8s,baz=152,slow=36						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**60.30**	**326**	P	**P**	**03 53 31.4**	**+0.5**
PDGK	**Podgornoye**	**60.62**	**313**	P	**P**	**03 53 33.3**	**-0.1**
KURK	**Kurchatov**	**62.89**	**321**	P	**P**	**03 53 48.9**	**+0.5**
KURBB	**Kurchatov Arra**	**62.92**	**321**	P	**P**	**03 53 47.8**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=103,slow=7.1,SNR=11						
	comp=Z,1.2nm,0.8s						
NRIK	**Noril'sk**	**66.17**	**342**	P	**P**	**03 54 10.4**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=112,slow=5.5,SNR=4.3						
	comp=Z,1.7nm,0.5s						
NRIK	**Noril'sk**	**66.17**	**342**	P	**P**	**03 54 09.3**	**-0.2**
NRIK				IAmb	IAmb	03 54 26.9	
	comp=Z,6.0nm,1.1s						
RAR	**Rarotonga**	**67.56**	**119**	LR	LR	04 18 27.1	
	comp=Z,43nm,21.8s,baz=318,slow=31						
G19K	**Purcell Mounta**	**68.19**	**23**		**P**	**03 54 21.9**	**-0.5**
BVAR	**Borovoye Array**	**68.36**	**322**	P	**P**	**03 54 23.4**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=116,slow=6.9,SNR=4.9						
	comp=Z,1.1nm,0.7s						
K20K	**Telida**	**68.53**	**26**	P	**P**	**03 54 23.9**	**-0.7**
K20K				IAmb	IAmb	03 54 39.3	
	comp=Z,7.3nm,1.3s						
CAST	**Castle Rocks**	**69.41**	**26**		**P**	**03 54 30.1**	**0.0**
CAST				IAmb	IAmb	03 54 51.5	
	comp=Z,3.2nm,0.8s						
H21K	**Melozitna Rive**	**69.71**	**24**	P	**P**	**03 54 32.2**	**+0.3**
H21K				IAmb	IAmb	03 54 40.9	
	comp=Z,6.1nm,1.1s						
MLY	**Manley**	**70.38**	**25**	P	**P**	**03 54 36.3**	**+0.2**
MLY				IAmb	IAmb	03 54 44.7	
	comp=Z,6.1nm,1.1s						
E22K	**Anaktuvuk Pass**	**70.78**	**22**	P	**P**	**03 54 38.8**	**+0.3**
E22K				IAmb	IAmb	03 54 48.1	
	comp=Z,5.0nm,0.9s						
COLD	**Coldfoot**	**71.13**	**23**	P	**P**	**03 54 40.9**	**+0.3**
COLD				IAmb	IAmb	03 54 50.3	
	comp=Z,6.6nm,0.9s						
H24K	**Noodor Dome**	**71.72**	**24**		**P**	**03 54 44.7**	**+0.4**
H24K				IAmb	IAmb	03 54 55.5	
	comp=Z,5.3nm,1.2s						
ILAR	**Eielson Array**	**71.93**	**26**	P	**P**	**03 54 43.9**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=246,slow=6.0,SNR=11						
ILAR				LR	LR	04 23 03.2	
	comp=Z,38nm,21.7s,baz=252,slow=33						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**71.93**	**26**	P	**P**	**03 54 45.2**	**-0.2**
F25K	**Christian Rive**	**72.93**	**23**	P	**P**	**03 54 52.1**	**+0.7**
L27K	**Beaver Creek,**	**73.91**	**28**	P	**P**	**03 54 57.4**	**+0.1**
H27K	**Steamboat Moun**	**74.35**	**24**		**P**	**03 54 60.0**	**+0.2**
H27K				IAmb	IAmb	03 55 09.5	
	comp=Z,5.4nm,0.9s						
DAWY	**Dawson**	**75.08**	**27**	P	**P**	**03 55 03.9**	**-0.1**
DAWY				IAmb	IAmb	03 55 15.2	
	comp=Z,4.4nm,1.0s						
E28M	**Babbage River**	**75.33**	**22**		**P**	**03 55 05.0**	**-0.4**
E28M				IAmb	IAmb	03 55 14.6	
	comp=Z,5.3nm,0.9s						
L29M	**L29M**	**75.59**	**28**		**P**	**03 55 07.1**	**+0.1**
L29M				IAmb	IAmb	03 55 18.1	
	comp=Z,3.6nm,0.8s						
G29M	**Pine Creek**	**75.80**	**24**		**P**	**03 55 08.2**	**+0.1**
HYT	**Haines Junctio**	**75.84**	**30**	P	**P**	**03 55 08.2**	**-0.4**
K29M	**Barlow Dome**	**75.89**	**27**		**P**	**03 55 08.3**	**-0.5**
K29M				IAmb	IAmb	03 55 20.1	
	comp=Z,3.5nm,0.9s						
M30M	**Minto, Yukon**	**76.20**	**28**		**P**	**03 55 10.2**	**-0.2**
M30M				IAmb	IAmb	03 55 25.2	
	comp=Z,5.7nm,1.5s						
G30M	**tAoh Zraii Nji**	**76.51**	**24**		**P**	**03 55 11.6**	**-0.6**
YKA	**Yellowknife Ar**	**86.32**	**27**	LR	LR	04 33 50.2	
	comp=Z,38nm,20.3s,baz=312,slow=35						
ARCES	**ARCESS Array B**	**87.14**	**341**	P	P	03 56 06.0	-2.1
	comp=Z,3.0nm,1.0s,baz=64,slow=5.9,SNR=5.7						
ARCES				LR	LR	04 37 51.7	
	comp=Z,39nm,21.2s,baz=63,slow=38						
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**87.14**	**341**	P	**P**	**03 56 06.6**	**-1.5**
YBH	**Yreka Blue Hor**	**87.31**	**48**	LR	LR	04 28 28.7	
	comp=Z,35nm,21.0s,baz=79,slow=31						
FINES	**FINESS Array B**	**90.61**	**334**	P	**P**	**03 56 22.6**	**-1.9**
	comp=Z,4.0nm,0.9s,baz=201,slow=10,SNR=6.5						
	comp=Z,4.0nm,0.9s						
FINES	**FINESS Array B**	**90.61**	**334**	P	**P**	**03 56 24.1**	**-0.5**
HFS	**Hagfors**	**96.44**	**336**	LR	LR	04 43 28.9	
	comp=Z,44nm,19.6s,baz=150,slow=37						
NOA	**NORSAR Array B**	**96.83**	**338**	LR	LR	04 43 00.5	
	comp=Z,36nm,20.0s,baz=60,slow=37						

*SJA **07** 03:50:33.7±1.2, 20°.49S×70°.41W, h18km±5km, ML4.1, MW3.8*
*NEIC **07** 03:50:36.7±1.9, 20°.53S±0°.01×70°.45W±0°.07, h35km±2km, mb4.3/15, Mwr4.1/17, Mwr4.2(GUC), Error ellipse: s-maj=11.4km s-min=3.0km az=82.0*
*NEIC **07** 03:50:36.7, 20°.53S×70°.46W, h35km*
*GUC **07** 03:50:37.8±0.5, 20°.52S×70°.37W, h34km±2km, ML3.9*
*IDC **07** 03:50:45.7±3.5, 20°.70S×69°.60W, h89km±29km, mb3.4/5, mbtmp3.8/8, MS3.2/2, Error ellipse: s-maj=34.5km s-min=24.1km az=69.0*

ISC 07 03:50:36.5±0.7, 20°50S±0°.03×70°45W±0°.06, h38km±1km, n84, σ1s52/90, mb4.1/7, 2C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.38**	**52**	⇓*i* P	**Pn**	**03 50 45.0**	**-0.3**
TA02				*i* S	**Sn**	**03 50 50.7**	**-1.4**
TA02				IAML		03 50 51.3	
	comp=N,23μm,0.1s						
PSGCX	**Pisagua**	**0.95**	**19**	Pn	**Pn**	**03 50 53.6**	**+0.2**
PSGCX				Sn	**Sn**	**03 51 06.2**	**+0.4**
PB02	**IPOC Station P**	**0.96**	**148**		**Pn**	**03 50 52.9**	**-0.7**
PB02				Sn	**Sn**	**03 51 05.6**	**-0.5**
PB02	**IPOC Station P**	**0.96**	**148**	⇓*i* P	**Pn**	**03 50 53.5**	**0.0**
PB02				*i* S	**Sn**	**03 51 05.9**	**-0.2**
PB11	**IPOC Station P**	**1.05**	**45**		**Pn**	**03 50 55.2**	**+0.4**
PB11				Sn	**Sn**	**03 51 08.4**	**+0.1**
PB11	**IPOC Station P**	**1.05**	**45**	⇓*i* P	**Pn**	**03 50 55.2**	**+0.4**
PB11				*i* S	**Sn**	**03 51 08.8**	**+0.5**
PB11				IAML		03 51 12.1	
	comp=N,10μm,0.4s						
PB08	**IPOC Station P**	**1.27**	**74**		**Pn**	**03 50 58.5**	**+0.4**
PB08	**IPOC Station P**	**1.27**	**74**	⇓*i* P	**Pn**	**03 50 58.7**	**+0.7**
PB08				*i* S	**Sn**	**03 51 14.9**	**+0.9**
PB08				IAML		03 51 15.6	
	comp=E,3μm,0.5s						
PB07	**IPOC Station P**	**1.32**	**157**		**Pn**	**03 50 59.1**	**+0.5**
PB07	**IPOC Station P**	**1.32**	**157**	*eP*	**Pn**	**03 50 59.4**	**+0.8**
PB07				*eS*	**Sn**	**03 51 16.7**	**+1.5**
PB07				IAML		03 51 21.3	
	comp=Z,4μm,0.4s						
GO01	**Chusmiza**	**1.44**	**55**		**Pn**	**03 51 01.2**	**+0.7**
GO01	**Chusmiza**	**1.44**	**55**	*eP*	**Pn**	**03 51 01.4**	**+0.9**
GO01				*eS*	**Sn**	**03 51 20.3**	**+1.9**
GO01				IAML		03 51 22.7	
	comp=Z,2μm,0.3s						
GO01	**Chusmiza**	**1.44**	**55**	⇓*i* P	**Pn**	**03 51 01.5**	**+1.0**
GO01				*i* S	**Sn**	**03 51 20.2**	**+1.7**
PX02	**IPOC Station P**	**1.55**	**9**	*eP*	**Pn**	**03 51 02.3**	**+0.7**
PX02				*i* S	**Sn**	**03 51 22.0**	**+1.4**
PX02				IAML		03 51 24.9	
	comp=N,2μm,0.4s						
PB03	**IPOC Station P**	**1.67**	**157**		**Pn**	**03 51 04.2**	**+0.8**
PB03	**IPOC Station P**	**1.67**	**157**	*eP*	**Pn**	**03 51 04.2**	**+0.8**
PB03				*eS*	**Sn**	**03 51 27.3**	**+3.8**
PB03				IAML		03 51 31.5	
	comp=Z,2μm,0.4s						
PB03	**IPOC Station P**	**1.67**	**157**	*eP*	**Pn**	**03 51 04.5**	**+1.2**
PB03				*i* S	**Sn**	**03 51 25.4**	**+1.8**
PB09	**IPOC Station P**	**1.71**	**139**		**Pn**	**03 51 05.4**	**+1.5**
PB09	**IPOC Station P**	**1.71**	**139**	*eP*	**Pn**	**03 51 05.1**	**+1.2**
PB09				*eS*	**Sn**	**03 51 27.9**	**+3.3**
PB09				IAML		03 51 31.0	
	comp=Z,4μm,0.4s						
PB09	**IPOC Station P**	**1.71**	**139**	*eP*	**Pn**	**03 51 05.8**	**+1.9**
PB09				*i* S	**Sn**	**03 51 28.1**	**+3.5**
PB09				IAML		03 51 31.2	
	comp=E,4μm,0.5s						
PB12	**IPO

BDFB	**Brasilia**	**21.86**	**81**	P		**P**	**03 55 25.4**	**-0.9**	
BDFB				IAmb		IAmb	03 55 48.1		
	comp=Z,12nm,1.3s								
VAO	**Valinhos**	**21.95**	**101**	P		**P**	**03 55 25.8**	**-1.3**	
VAO				IAmb		IAmb	03 55 49.3		
	comp=Z,15nm,1.3s								
BOAV	**Boa Vista**	**24.75**	**24**	P		**P**	**03 55 53.1**	**-1.6**	
BOAV				IAmb		IAmb	03 55 56.4		
	comp=Z,5.3nm,0.9s								
MDP	**Montagnes des**	**30.88**	**36**	LR		LR	04 08 49.1		
	comp=Z,91nm,19.9s,baz=158,slow=35								
PIRO	**Carate, Puerto**	**31.40**	**335**	P		**P**	**03 56 52.8**	**-1.3**	
TXAR	**Lajitas Array**	**59.00**	**326**	P		P	04 00 41.6	+9.0	
	comp=Z,0.2nm,0.7s,baz=151,slow=6.2,SNR=2.5								
	comp=Z,0.2nm,0.7s								
TXAR	**Lajitas Array**	**59.00**	**326**	P		**P**	**04 00 32.3**	**-0.3**	
SNAA	**Sanae**	**63.69**	**161**	P		**P**	**04 01 04.5**	**+0.8**	
	comp=Z,0.8nm,0.6s,baz=234,slow=8.7,SNR=2.0								
	comp=Z,0.8nm,0.6s								
SNAA	**Sanae**	**63.69**	**161**	P		**P**	**04 01 03.9**	**+0.1**	
SNAA				IAmb		IAmb	04 01 33.9		
	comp=Z,8.0nm,1.5s								
G62A	**West of Eustis**	**65.41**	**360**	P		**P**	**04 01 16.9**	**+1.8**	
QSPA	**South Pole Qui**	**69.68**	**180**	P		**P**	**04 01 44.3**	**+2.2**	
	comp=Z,0.4nm,0.6s,baz=303,slow=11,SNR=1.4								
	comp=Z,0.4nm,0.6s								
QSPA	**South Pole Qui**	**69.68**	**180**	P		**P**	**04 01 42.8**	**+0.7**	
ICQ	**Pointe Anglais**	**69.77**	**2**	P		**P**	**04 01 43.9**	**+1.4**	
ICQ				IAmb		IAmb	04 01 53.3		
	comp=Z,7.5nm,1.1s								
DBIC	**Dimbokro**	**69.84**	**74**	P		**P**	**04 01 42.0**	**-1.8**	
TPO	**Tropico Hills**	**71.36**	**320**	P		**P**	**04 01 52.7**	**+0.1**	
TORD	**Torodi Ar. Bea**	**78.39**	**71**	P		**P**	**04 02 33.4**	**-0.2**	
	comp=Z,1.4nm,0.5s,baz=250,slow=5.2,SNR=26								
	comp=Z,1.4nm,0.5s								
YBH	**Yreka Blue Hor**	**78.55**	**323**	P		**P**	**04 02 35.0**	**+0.9**	
H11S2	**WAKE ISLAND Hyl**	**26.32**	**278**	T		T	06 28 54.5		
	baz=102,slow=74,SNR=392								
H11S1	**WAKE ISLAND Hyl**	**26.33**	**278**	T		T	06 28 45.9		
	baz=102,slow=74,SNR=176								
H11S3	**WAKE ISLAND Hyl**	**26.33**	**278**	T		T	06 28 49.8		
	baz=102,slow=74,SNR=208								
H11N3	**WAKE ISLAND Hyl**	**26.38**	**280**	T		T	06 28 56.2		
	baz=102,slow=75,SNR=75								
H11N2	**WAKE ISLAND Hyl**	**26.39**	**280**	T		T	06 28 57.2		
	baz=102,slow=75,SNR=58								
H11N1	**WAKE ISLAND Hyl**	**26.39**	**280**	T		T	06 28 54.6		
	baz=102,slow=75,SNR=57								
ZALV	**Zalesovo Beam**	**141.64**	**23**	PKP		**PKiKP**	**04 10 05.4**	**-1.0**	
	comp=Z,0.8nm,0.6s,baz=205,slow=5.0,SNR=4.4								
ZALV	**Zalesovo Beam**	**141.64**	**23**			**PKPdf**	**04 10 04.4**	**+0.9**	
MKAR	**Makanchi Array**	**145.65**	**34**	PKPbc		**PKPab**	**04 10 12.6**	**+1.2**	
	comp=Z,1.3nm,0.7s,baz=314,slow=3.2,SNR=13								
MKAR	**Makanchi Array**	**145.65**	**34**			**PKPab**	**04 10 11.8**	**+0.3**	
WMQ	**Urumqi**	**150.46**	**33**	*e*PKPbc		**PKPdf**	**04 10 17.1**	**-1.8**	
WMQ				LR		LR			
	comp=Z,160nm,23.9s								
SONM	**Songino Array**	**152.62**	**5**	PKPbc		**PKiKP**	**04 10 31.0**	**+1.6**	
	comp=Z,0.4nm,0.4s,baz=298,slow=3.1,SNR=1.9								
SONM	**Songino Array**	**152.62**	**5**			**PKiKP**	**04 10 30.3**	**+0.9**	
HHC	**Hu-ho-hao-te**	**159.65**	**356**	*e*P		**PKPdf**	**04 10 31.0**	**-0.5**	

*BGR **07** 03:56:32.9, 17˚.845S×177˚.37W, h600km*
*IDC **07** 03:56:33.6±1.6, 17˚.93S×178˚.52W, h611km±17km, mb3.6/17, mbtmp4.5/19, Error ellipse: s-maj=16.9km s-min=12.7km az=133.0*
*NEIC **07** 03:56:33.3±1.8, 17˚.8S±0˚.1×178˚.6W±0˚.1, h599km±6km, mb4.2/142, Error ellipse: s-maj=21.0km s-min=13.2km az=144.0*

ISC 07 03:56:32.9±0.6, 17˚.86S±0˚.09×178˚.49W±0˚.08, h606km±6km, n428, σ0s68/383, mb4.2/91, 13C-17D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.30**	**272**	P		**P**	**03 57 54.9**	**+0.5**
	103nm,0.6s,baz=138,slow=2.5,SNR=93							
MSVF				S		**S**	**03 59 03.6**	**+2.8**
	12nm,0.8s,baz=309,slow=23,SNR=7.1							
MSVF	**Nonsavu**	**3.30**	**272**			**P**	**03 57 55.4**	**+1.0**
FUTU	**Fugatoga**	**3.55**	**6**	P		**P**	**03 57 55.0**	**-1.0**
NIUE	**Niue**	**8.21**	**100**	P		**P**	**03 58 35.3**	**+0.8**
FUNA	**Funafuti**	**9.55**	**346**	P		**P**	**03 58 43.8**	**-3.7**
MARNC	**Mare, Loyalty**	**13.20**	**252**	P		**P**	**03 59 22.6**	**-1.1**
OUENC	**Ouen Island, N**	**14.50**	**249**	P		**P**	**03 59 38.0**	**+1.7**
DZM	**Mont Dzumac**	**14.77**	**251**	P		**P**	**03 59 38.6**	**-0.3**
	3.6nm,0.6s,baz=66,slow=23,SNR=2.2							
KOUNC	**Koumac, New Ca**	**16.49**	**258**	P		**P**	**03 59 55.9**	**+1.4**
TOO	**Toolangi**	**37.14**	**231**	P		**P**	**04 02 54.2**	**+0.2**
TOO				IAmb		IAmb	04 03 35.8	
	comp=Z,8.3nm,1.4s							
STKA	**Stephens Creek**	**38.59**	**241**	P		**P**	**04 03 06.3**	**+0.6**
	comp=Z,4.4nm,0.7s,baz=98,slow=11,SNR=8.1							
STKA				PcP		**PcP**	**04 05 02.5**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=43,slow=3.5,SNR=3.0							
	comp=Z,4.4nm,0.7s							
BBOO	**Buckleboo**	**43.36**	**241**	P		**P**	**04 03 43.4**	**0.0**
BBOO				PcP		**PcP**	**04 05 17.9**	**-0.1**
MLH	**Mauna Loa**	**43.51**	**33**	P		**P**	**04 03 43.8**	**-1.2**
WR8	**Warramunga Arr**	**44.41**	**259**	P		**P**	**04 03 51.0**	**-0.7**
WR8				PcP		**PcP**	**04 05 21.2**	**-0.7**
WRA	**Warramunga Arr**	**44.57**	**259**	P		**P**	**04 03 52.5**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=96,slow=7.0,SNR=64							
WRA				PcP		**PcP**	**04 05 22.6**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=86,slow=3.8,SNR=8.1							
	comp=Z,2.3nm,0.5s							
WRA	**Warramunga Arr**	**44.57**	**259**			**P**	**04 03 52.2**	**-0.6**
WRA				PcP		**PcP**	**04 05 21.9**	**-0.6**
AS31	**Alice Springs**	**44.73**	**254**	P		**P**	**04 03 54.0**	**-0.1**
AS31				IAmb		IAmb	04 03 54.9	
	comp=Z,4.5nm,0.5s							
ASAR	**Alice Springs**	**44.73**	**254**	P		**P**	**04 03 54.0**	**-0.2**
	comp=Z,15nm,0.6s,baz=88,slow=8.4,SNR=195							
ASAR				PcP		**PcP**	**04 05 23.1**	**0.0**
	comp=Z,2.3nm,0.5s,baz=102,slow=4.0,SNR=9.9							
ASAR				S		**S**	**04 09 46.5**	**-1.8**
	comp=Z,1.9nm,0.9s,baz=88,slow=15,SNR=10.0							
	comp=Z,15nm,0.6s							
ASAR	**Alice Springs**	**44.73**	**254**	P		**P**	**04 03 53.6**	**-0.6**
ASAR				PcP		**PcP**	**04 05 23.3**	**+0.3**
FORT	**Forrest**	**49.96**	**245**	P		**P**	**04 04 32.2**	**-0.7**
FORT				IAmb		IAmb	04 04 42.3	
	comp=Z,8.4nm,0.9s							
SIJI	**Sorong**	**52.15**	**283**	P		**P**	**04 04 49.0**	**-0.1**
	comp=Z,14nm,0.6s,baz=109,slow=6.3,SNR=7.5							
	comp=Z,14nm,0.6s							
FITZ	**Fitzroy Crossi**	**52.96**	**261**	P		**P**	**04 04 54.8**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=95,slow=5.7,SNR=7.1							
	comp=Z,1.5nm,0.5s							
FITZ	**Fitzroy Crossi**	**52.96**	**261**	P		**P**	**04 04 54.8**	**+0.1**
MBWA	**Marble Bar**	**58.01**	**256**	P		**P**	**04 05 28.9**	**-0.7**
MBWA				IAmb		IAmb	04 05 38.4	
	comp=Z,24nm,1.3s							
MORW	**Morawa**	**60.43**	**246**	P		**P**	**04 05 45.1**	**-0.5**
MORW				IAmb		IAmb	04 05 57.5	
	comp=Z,28nm,1.4s							
GIRL	**Giralia**	**62.84**	**253**	P		**P**	**04 06 01.0**	**-0.2**
CASY	**Casey**	**66.15**	**205**	P		**P**	**04 06 21.6**	**+0.3**
MJAR	**Matsushiro Arr**	**67.83**	**323**	P		**P**	**04 06 32.0**	**0.0**
	comp=Z,3.0nm,0.5s,baz=166,slow=6.4,SNR=9.2							
	comp=Z,3.0nm,0.5s							
MJAR	**Matsushiro Arr**	**67.83**	**323**	P		**P**	**04 06 32.0**	**0.0**
ADK	**Adak**	**69.47**	**1**	P		**P**	**04 06 41.2**	**-0.3**
ATKA	**Atka Island**	**69.87**	**3**	P		**P**	**04 06 43.5**	**-0.3**
UNV	**Unalaska Valle**	**72.15**	**7**	P		**P**	**04 06 56.5**	**-0.7**
UNV	**Unalaska Valle**	**72.15**	**7**	P		**P**	**04 06 57.0**	**-0.2**
	baz=192							
QSPA	**South Pole Qui**	**72.19**	**180**	P		**P**	**04 06 57.7**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=337,slow=0.7,SNR=16							
	comp=Z,2.3nm,0.7s							
QSPA	**South Pole Qui**	**72.19**	**180**	P		**P**	**04 06 57.8**	**+0.2**
AKUT	**Akutan**	**72.53**	**8**	P		**P**	**04 06 58.5**	**-0.8**
PEA0B	**Petropavlovsk-**	**73.62**	**345**	P		**P**	**04 07 06.4**	**+0.8**
PEA0B				IAmb		IAmb	04 07 07.7	
	comp=Z,12nm,1.1s							
PETK	**Petropavlovsk-**	**73.62**	**345**	P		**P**	**04 07 06.0**	**+0.5**
	comp=Z,4.8nm,0.6s,baz=131,slow=5.7,SNR=13							
	comp=Z,4.8nm,0.6s							
SDPT	**Sand Point**	**74.51**	**11**	P		**P**	**04 07 09.9**	**-0.6**
	baz=198							
KSRS	**Korea Array**	**74.62**	**318**	P		**P**	**04 07 13.0**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=129,slow=6.5,SNR=6.5							
	comp=Z,0.8nm,0.4s							
S14K	**Fog Glacier**	**75.56**	**11**	P		**P**	**04 07 15.9**	**-0.6**
	baz=199							
USRK	**Ussuriysk Ar.**	**76.53**	**326**	P		**P**	**04 07 24.2**	**+2.3**
	comp=Z,1.0nm,0.5s,baz=142,slow=2.8,SNR=4.2							
	comp=Z,1.0nm,0.5s							
R17L	**Mt. Peulik Vol**	**77.43**	**12**	P		**P**	**04 07 26.0**	**-0.5**
	baz=202							
OHAK	**Old Harbor**	**77.71**	**14**	P		**P**	**04 07 28.4**	**+0.4**
OHAK				IAmb		IAmb	04 08 08.3	
	comp=Z,20nm,1.4s							
OHAK	**Old Harbor**	**77.71**	**14**	P		**P**	**04 07 27.3**	**-0.7**
	baz=205							
CMB	**Columbia Colle**	**77.86**	**43**	P		**P**	**04 07 30.2**	**+0.9**
BORC	**Borrego Spring**	**78.04**	**49**	P		**P**	**04 07 31.3**	**+0.9**
Q17K	**Contact Creek**	**78.11**	**12**	P		**P**	**04 07 29.5**	**-0.8**
	baz=202							
O14K	**Tigyukauivet M**	**78.12**	**9**	P		**P**	**04 07 29.5**	**-0.7**
	baz=197							
O15K	**Ungalikthiuk R**	**78.27**	**10**	P		**P**	**04 07 30.5**	**-0.5**
	baz=198							
KDAK	**Kodiak Island**	**78.38**	**14**	P		**P**	**04 07 31.3**	**-0.2**
	baz=205							
MDPB	**Devils Postpil**	**78.50**	**44**			**P**	**04 07 34.5**	**+1.4**
Q18K	**Katmai Hardscr**	**78.65**	**12**	P		**P**	**04 07 32.4**	**-0.7**
	baz=203							
N14K	**Kuskokwak Cree**	**78.71**	**9**	P		**P**	**04 07 33.0**	**-0.2**
	baz=196							
P17K	**Kvichak River**	**78.88**	**11**	P		**P**	**04 07 34.0**	**-0.2**
	baz=202							
O16K	**Kokwok River B**	**78.95**	**10**	P		**P**	**04 07 33.9**	**-0.7**
	baz=200							
M13K	**Dall Lake**	**78.96**	**8**	P		**P**	**04 07 34.2**	**-0.3**
	baz=195							
DSP	**Deep Springs**	**79.09**	**45**	P		**P**	**04 07 36.9**	**+1.1**
N15K	**Kwethluk River**	**79.18**	**9**	P		**P**	**04 07 35.4**	**-0.4**
	baz=198							
Q19K	**Cape Douglas,**	**79.19**	**13**	P		**P**	**04 07 35.3**	**-0.6**
	baz=204							
P18K	**Big Mountain,**	**79.29**	**12**	P		**P**	**04 07 35.8**	**-0.6**
	baz=203							
O17K	**Koliganek Bris**	**79.30**	**11**	P		**P**	**04 07 35.9**	**-0.4**
	baz=201							
NVAR	**Mina Array Bea**	**79.44**	**44**	P		**P**	**04 07 39.1**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=227,slow=8.3,SNR=16							
	comp=Z,2.6nm,0.7s							
NVAR	**Mina Array Bea**	**79.44**	**44**	P		**P**	**04 07 38.9**	**+0.9**
M14K	**Bethel**	**79.47**	**8**	P		**P**	**04 07 37.0**	**-0.2**
	baz=196							
M15K	**Kasigluk River**	**79.59**	**9**	P		**P**	**04 07 37.9**	**0.0**
	baz=197							
N16K	**Nishlik Lake**	**79.67**	**10**	P		**P**	**04 07 38.3**	**-0.1**
	baz=199							
O18K	**Koktuh Hills**	**79.72**	**12**	P		**P**	**04 07 38.4**	**-0.3**
	baz=203							
KVN	**Kaiserville**	**79.91**	**43**			**P**	**04 07 41.6**	**+1.2**
P19K	**Oil Pt**	**79.94**	**13**	P		**P**	**04 07 40.0**	**+0.2**
	baz=204							
L14K	**Kuka Creek**	**79.94**	**8**	P		**P**	**04 07 39.8**	**+0.1**
	baz=195							
I04A	**Tendick Farm,**	**79.94**	**38**			**P**	**04 07 41.2**	**+1.0**
I04A				IAmb		IAmb	04 07 41.4	
	comp=Z,13nm,1.5s							
N17K	**Nushagak Hills**	**79.99**	**11**	P		**P**	**04 07 40.2**	**+0.2**
	baz=201							
BNX	**BinXian**	**80.02**	**325**	⇓P		**P**	**04 07 41.5**	**+1.0**
BNX				pmax		pmax		
	comp=Z,9.0nm,0.9s							
M16K	**Timber Creek**	**80.17**	**10**	P		**P**	**04 07 42.3**	**+1.4**
M16K				IAmb		IAmb	04 07 43.2	
	comp=Z,8.8nm,1.0s							
M16K	**Timber Creek**	**80.17**	**10**	P		**P**	**04 07 41.1**	**+0.2**
	baz=199							
K05A	**Summer Lake**	**80.21**	**39**			**P**	**04 07 43.5**	**+1.7**
K05A				IAmb		IAmb	04 07 44.2	
	comp=Z,9.6nm,1.0s							
O19K	**Port Alsworth**	**80.21**	**12**	P		**P**	**04 07 41.2**	**0.0**
	baz=203							
K13K	**Kusilvak Mount**	**80.28**	**7**	P		**P**	**04 07 42.0**	**+0.6**
	baz=194							
J05D	**Fort Rock, OR**	**80.33**	**39**	P		**P**	**04 07 44.1**	**+1.7**
N18K	**Kilae Creek**	**80.36**	**11**	P		**P**	**04 07 41.9**	**-0.1**
	baz=202							
L15K	**Ungalak Mounta**	**80.42**	**8**	P		**P**	**04 07 42.5**	**+0.3**
	baz=196							
O20K	**Slope Mountain**	**80.46**	**13**	P		**P**	**04 07 42.8**	**+0.2**
	baz=205							
BRSE	**Bradley Lake S**	**80.56**	**14**	P		**P**	**04 07 43.2**	**+0.2**
	baz=207							
H04A	**Detroit Lake**	**80.60**	**37**			**P**	**04 07 44.5**	**+0.9**
H04A				IAmb		IAmb	04 07 44.7	
	comp=Z,6.4nm,0.5s							
L16K	**Owhat River**	**80.74**	**9**	P		**P**	**04 07 44.1**	**+0.2**
	baz=198							
N19K	**Bonanza Creek**	**80.75**	**12**	P		**P**	**04 07 44.0**	**0.0**
	baz=203							
M17K	**Holitna River**	**80.77**	**10**	P		**P**	**04 07 44.2**	**+0.2**
	baz=200							
PINE	**Pine Mountain**	**80.80**	**38**			**P**	**04 07 46.4**	**+1.6**
PINE				IAmb		IAmb	04 07 47.3	
	comp=Z,8.8nm,0.9s							
M18K	**Stony River**	**81.13**	**11**	P		**P**	**04 07 46.1**	**+0.2**
	baz=202							
L17K	**Donlin**	**81.32**	**9**	P		**P**	**04 07 47.0**	**+0.2**
	baz=200							
Q23K	**Middleton Isla**	**81.36**	**16**	P		**P**	**04 07 47.7**	**+0.6**
	baz=211							
CAPN	**Captain Cook N**	**81.39**	**13**	P		**P**	**04 07 47.6**	**+0.4**
	baz=206							
P23K	**Montague Islan**	**81.59**	**15**	P		**P**	**04 07 48.3**	**+0.1**
	baz=210							
L18K	**Granite Mounta**	**81.66**	**10**	P		**P**	**04 07 49.4**	**+0.8**
	baz=201,SNR=6.0							
K17K	**Iditarod**	**81.87**	**9**	P		**P**	**04 07 50.6**	**+1.0**
	baz=200							
STLK	**Strandline Lak**	**81.91**	**13**	P		**P**	**04 07 48.7**	**-1.2**
STLK				IAmb		IAmb	04 07 49.8	
	comp=Z,5.3nm,0.8s							
L19K	**White Mountain**	**81.95**	**11**	P		**P**	**04 07 50.9**	**+0.8**
	baz=203							
RC01	**Rabbit Creek A**	**81.99**	**14**	P		**P**	**04 07 50.8**	**+0.5**
	baz=208							
M20K	**Styx River**	**82.00**	**12**	P		**P**	**04 07 50.7**	**+0.3**
	baz=204							
J16K	**Anvik River**	**82.08**	**8**	P		**P**	**04 07 51.1**	**+0.4**
	baz=197							
LCMT	**Little Creek M**	**82.16**	**47**	P		**P**	**04 07 52.6**	**+0.7**
X16A	**Lo Mia Camp, P**	**82.21**	**50**			**P**	**04 07 53.8**	**+1.5**
KAIM	**Kayak Island**	**82.30**	**17**	P		**P**	**04 07 52.1**	**+0.2**
	baz=213							
CCUT	**Cedar City**	**82.33**	**47**			**P**	**04 07 53.4**	**+0.5**
J17K	**VABM Dome**	**82.40**	**9**	P		**P**	**04 07 52.4**	**+0.1**
	baz=199							
SKT	**Skwentna**	**82.41**	**12**	P		**P**	**04 07 52.1**	**-0.3**
	baz=206							
GLI	**Glacier Island**	**82.43**	**15**	P		**P**	**04 07 51.9**	**-0.5**
GLI	**Glacier Island**	**82.43**	**15**	P		**P**	**04 07 52.4**	**-0.1**
	baz=210,SNR=6.7							
KNB	**Kanab**	**82.45**	**47**	P		**P**	**04 07 54.4**	**+1.0**
PSUT	**Pine Spring**	**82.48**	**46**	P		**P**	**04 07 53.9**	**+0.3**
M22K	**Willow**	**82.50**	**13**	P		**P**	**04 07 52.5**	**-0.2**
M22K	**Willow**	**82.50**	**13**	P		**P**	**04 07 53.0**	**+0.3**
	baz=207							
U15A	**North Rim**	**82.54**	**48**			**P**	**04 07 53.8**	**-0.2**
U15A				IAmb		IAmb	04 07 56.5	
	comp=Z,7.5nm,0.8s							
KNK	**Knik Glacier**	**82.57**	**14**	P		**P**	**04 07 53.0**	**-0.2**
	baz=209							
PMR	**Palmer**	**82.58**	**14**			**P**	**04 07 53.0**	**-0.2**
PMR				IAmb		IAmb	04 07 53.8	
	comp=Z,13nm,1.3s							
PMR	**Palmer**	**82.58**	**14**	P		**P**	**04 07 53.3**	**+0.1**
	baz=208,SNR=5.3							
I17K	**Unalakleet**	**82.65**	**8**	P		**P**	**04 07 53.5**	**0.0**
	baz=197							
ELK	**Elko**	**82.67**	**43**			**P**	**04 07 54.7**	**+0.1**
GHO	**Glory Hole Cre**	**82.78**	**14**	P		**P**	**04 07 54.5**	**+0.2**
G08A	**Pilot Rock**	**82.82**	**38**	P		**P**	**04 07 55.0**	**0.0**
G08A				IAmb		IAmb	04 07 56.9	
	comp=Z,10.0nm,1.3s							
SML	**Sawmill**	**82.95**	**14**	P		**P**	**04 07 54.9**	**-0.2**
	baz=209							
DIV	**Divide**	**82.97**	**15**	P		**P**	**04 07 55.4**	**+0.1**
DIV				IAmb		IAmb	04 07 56.1	
	comp=Z,7.7nm,0.8s							
V35K	**Ketchikan**	**83.00**	**25**	P		**P**	**04 07 55.5**	**+0.1**
	baz=225							
PKCU	**Pink Cliffs**	**83.02**	**47**			**P**	**04 07 56.3**	**-0.1**
PKCU				IAmb		IAmb	04 07 59.4	
	comp=Z,6.3nm,1.0s							
CUT	**Chulitna**	**83.05**	**13**	P		**P**	**04 07 55.5**	**0.0**
	baz=207							
L22K	**Petersville**	**83.05**	**13**	P		**P**	**04 07 55.0**	**-0.6**
L22K				IAmb		IAmb	04 07 55.9	
	comp=Z,6.7nm,1.0s							
L22K	**Petersville**	**83.05**	**13**	P		**P**	**04 07 55.3**	**-0.4**
	baz=207,SNR=6.1							
M23K	**Glacier View**	**83.07**	**14**	P		**P**	**04 07 55.4**	**-0.3**
	baz=210							
PPLA	**Purkeypile**	**83.10**	**12**	P		**P**	**04 07 56.1**	**+0.1**
	baz=205							
BMRM	**Bremner River**	**83.13**	**16**			**P**	**04 07 55.7**	**-0.4**
BMRM				IAmb		IAmb	04 07 56.6	
	comp=Z,6.8nm,0.6s							
BMRM	**Bremner River**	**83.13**	**16**	P		**P**	**04 07 56.1**	**0.0**
	baz=212							
K20K	**Telida**	**83.17**	**11**	P		**P**	**04 07 56.3**	**+0.1**
	baz=204,SNR=8.7							
SCM	**Sheep Creek Mo**	**83.20**	**14**	P		**P**	**04 07 56.6**	**+0.2**
SCM	**Sheep Creek Mo**	**83.20**	**14**	P		**P**	**04 07 56.5**	**+0.1**
	baz=210,SNR=13							
S31K	**Pelican**	**83.23**	**21**	P		**P**	**04 07 56.6**	**+0.1**
	baz=220							
CRQM	**Cirque**	**83.35**	**17**	IAmb		IAmb	04 07 58.5	
	comp=Z,6.8nm,0.8s							
CRQE	**Cirque**	**83.36**	**17**	P		**P**	**04 07 57.2**	**-0.1**
	baz=214							
MTPU	**Mount Pierson**	**83.39**	**47**			**P**	**04 08 00.0**	**+1.7**
WRAK	**Wrangell Islan**	**83.50**	**24**	IAmb		IAmb	04 07 59.7	
	comp=Z,5.5nm,0.8s							
WRAK	**Wrangell Islan**	**83.50**	**24**	P		**P**	**04 07 58.0**	**+0.1**
	baz=224							
J19K	**Poorman**	**83.50**	**10**	P		**P**	**04 07 57.4**	**-0.4**
	baz=202							
CAST	**Castle Rocks**	**83.60**	**12**	P		**P**	**04 07 57.3**	**-1.0**
	baz=205,SNR=16							
EPH	**Ephrata**	**83.63**	**36**	IAmb		IAmb	04 08 00.4	
	comp=Z,5.5nm,0.8s							
VRDI	**Verde Repeater**	**83.66**	**16**	IAmb		IAmb	04 07 59.8	
	comp=Z,4.3nm,0.8s							
N25K	**Chitina, Valde**	**83.68**	**16**	P		**P**	**04 07 59.1**	**+0.3**
	baz=212,SNR=10							
GRNC	**Granite Creek**	**83.71**	**17**	IAmb		IAmb	04 08 00.4	
	comp=Z,7.0nm,1.0s							
M24K	**Tolsona, Glenn**	**83.71**	**15**	P		**P**	**04 07 59.2**	**+0.2**
	baz=211,SNR=5.0							
H17K	**Granite Mounta**	**83.76**	**8**	P		**P**	**04 07 58.9**	**-0.2**
	baz=198							
WAT6	**Susitna Watana**	**83.76**	**14**	P		**P**	**04 07 58.6**	**-0.7**
	baz=210,SNR=6.9							
WAT1	**Susitna Watana**	**83.80**	**13**	P		**P**	**04 07 58.4**	**-0.9**
	baz=209							
D08A	**Wollman Farm,**	**83.84**	**36**	IAmb		IAmb	04 08 01.8	
	comp=Z,4.7nm,1.0s							
MCARA	**McCarthy VSAT**	**83.90**	**16**	P		**P**	**04 07 59.2**	**-0.6**
	baz=214							
J20K	**Nowinta River**	**83.92**	**10**	IAmb		IAmb	04 08 01.0	
	comp=Z,4.2nm,0.8s							
J20K	**Nowinta River**	**83.92**	**10**	P		**P**	**04 07 59.7**	**-0.1**
	baz=203							
KTH	**Kantishna Hill**	**83.95**	**12**	IAmb		IAmb	04 08 00.3	
	comp=Z,6.3nm,0.8s							
CHUM	**Lake Minchumin**	**83.98**	**11**	P		**P**	**04 07 59.5**	**-0.6**
	baz=205,SNR=5.5							
TRF	**Thorofare Moun**	**83.98**	**12**	P		**P**	**04 07 59.8**	**-0.5**
	baz=207,SNR=16							
LOGN	**Logan Glacier**	**84.00**	**17**	IAmb		IAmb	04 08 01.8	
	comp=Z,7.7nm,1.1s							
P29M	**Windy Craggy**	**84.03**	**19**	IAmb		IAmb	04 08 02.3	
	comp=Z,6.2nm,0.7s							
P29M	**Windy Craggy**	**84.03**	**19**	P		**P**	**04 08 00.5**	**0.0**
	baz=219							
R32K	**Eaglecrest**	**84.07**	**22**	P		**P**	**04 08 00.8**	**+0.2**
	baz=222							
H18K	**Honhosa River**	**84.17**	**8**	P		**P**	**04 08 01.3**	**+0.3**
	baz=199							
O28M	**Mount Upton**	**84.19**	**18**	P		**P**	**04 08 01.2**	**-0.4**
	baz=217							
F10A	**Beach Ranch, E**	**84.21**	**38**	IAmb		IAmb	04 08 03.7	
	comp=Z,8.1nm,0.9s							
HARP	**

baz=210,SNR=5.1
CCB Clear Creek Bu 85.56 13 IAmb IAmb 04 08 07.5
comp=Z,4.5nm,0.6s
E17K Hotham Inlet 85.59 6 P **P 04 08 07.7 -0.1**
baz=196
L27K Beaver Creek, 85.61 16 P **P 04 08 08.3 +0.2**
baz=215
N30M Aishikik Lake 85.66 19 P **P 04 08 08.5 +0.1**
baz=219
I23K Minto, Yukon-K 85.68 12 P **P 04 08 08.5 +0.2**
baz=208
WHY Whitehorse 85.74 20 P **P 04 08 09.0 +0.1**
baz=221
DLBC Dease Lake 85.82 23 P **P 04 08 09.8 +0.6**
baz=226
SCRK Sand Creek 85.84 15 P **P 04 08 09.9 +0.7**
baz=213
F19K Shaleruckik Mo 85.84 8 IAmb IAmb 04 08 10.7
comp=Z,2.6nm,0.7s
F19K Shaleruckik Mo 85.84 8 P **P 04 08 09.9 +0.9**
baz=200
IL31 85.86 13 IAmb IAmb 04 08 09.6
comp=Z,3.6nm,0.7s
ILAR Eielson Array 85.86 13 P **P 04 08 08.5 -0.7**
comp=Z,1.9nm,0.4s,baz=222,slow=5.0,SNR=56
comp=Z,1.9nm,0.4s
ILAR Eielson Array 85.86 13 P 04 08 08.7 -0.4
H22K Ishtalitna Cre 85.97 11 P **P 04 08 10.1 +0.4**
baz=206
M29M Somme Creek 86.03 17 IAmb IAmb 04 08 11.1
comp=Z,2.8nm,0.8s
M29M Somme Creek 86.03 17 P **P 04 08 10.8 +0.6**
baz=218,SNR=7.8
TX31 Lajitas Ar. Si 86.03 58 P 04 08 11.4 +0.4
TX31 IAmb IAmb 04 08 13.9
comp=Z,4.9nm,0.8s
TXAR Lajitas Array 86.03 58 P **P 04 08 12.8 +1.9**
comp=Z,3.9nm,0.8s,baz=218,slow=6.0,SNR=57
comp=Z,3.9nm,0.8s
TXAR Lajitas Array 86.03 58 P 04 08 13.1 +2.1
POKR Poker Plat Res 86.05 13 P **P 04 08 10.2 +0.2**
baz=210
E18K Tukpahlearik C 86.06 7 P **P 04 08 10.4 +0.4**
baz=197
J25K Salcha River, 86.06 14 P **P 04 08 10.2 0.0**
baz=212,SNR=10.0
N31M Braeburn, Yuko 86.08 19 IAmb IAmb 04 08 12.0
comp=Z,6.0nm,1.0s
N31M Braeburn, Yuko 86.08 19 P **P 04 08 11.0 +0.7**
baz=220,SNR=5.2
P33M Teslin, Yukon 86.09 21 P **P 04 08 11.1 +0.6**
baz=223
R33M Jennings River 86.15 22 IAmb IAmb 04 08 13.0
comp=Z,7.0nm,1.3s
R33M Jennings River 86.15 22 P **P 04 08 11.1 +0.3**
baz=225,SNR=5.0
XAN Xi'an 86.17 307 P **P 04 08 13.2 +1.8**
XAN pP pP 04 10 15.8 -5.1
XAN pmax pmax
comp=Z,12nm,0.9s
G21K Allakaket 86.18 10 IAmb IAmb 04 08 11.7
comp=Z,3.1nm,0.8s
G21K Allakaket 86.18 10 P **P 04 08 11.3 +0.6**
baz=204
H23K Yukon River 86.25 12 P **P 04 08 11.5 +0.5**
baz=208
F20K Avaraart Lake 86.33 9 P **P 04 08 11.4 +0.1**
baz=202
ALPN Alpine 86.46 57 IAmb IAmb 04 08 15.4
comp=Z,9.2nm,1.4s
E19K Redstone River 86.51 8 IAmb IAmb 04 08 13.2
comp=Z,3.8nm,0.7s
E19K Redstone River 86.51 8 P **P 04 08 12.6 +0.4**
baz=200
TPB01 Permian Basin 86.57 56 IAmb IAmb 04 08 16.4
comp=Z,2.3nm,0.9s
H24K Noodor Dome 86.59 12 P **P 04 08 13.0 +0.3**
baz=209
M30M Minto, Yukon 86.61 18 IAmb IAmb 04 08 14.1
comp=Z,4.9nm,0.8s
M30M Minto, Yukon 86.61 18 P **P 04 08 13.2 +0.3**
baz=220,SNR=13
L29M L29M 86.65 17 IAmb IAmb 04 08 14.9
comp=Z,10nm,1.3s
L29M L29M 86.65 17 P **P 04 08 13.0 0.0**
baz=218,SNR=7.3
N32M Quiet Lake 86.69 20 P **P 04 08 13.3 +0.1**
baz=223
PRP Porcupine Dome 86.80 13 P **P 04 08 13.7 0.0**
baz=211
C17K DeLong Mountai 86.81 6 P **P 04 08 14.1 +0.5**
baz=195
F21K Alatna River 86.83 9 P **P 04 08 13.6 -0.1**
baz=204
G22K Bettles 86.88 10 P **P 04 08 14.4 +0.5**
baz=206
G23K Bananza Creek 86.95 11 P **P 04 08 14.2 -0.1**
baz=207
M31M Drury Creek, Y 87.06 19 P **P 04 08 15.5 +0.6**
baz=222
DAWY Dawson 87.06 16 IAmb IAmb 04 08 16.3
comp=Z,8.6nm,1.4s
DAWY Dawson 87.06 16 P **P 04 08 15.2 +0.3**
baz=217
HHC Hu-ho-hao-te 87.19 314 *e*P **P 04 08 16.1 0.0**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,59nm,4.2s
FLWY Flagg Ranch 87.24 42 IAmb IAmb 04 08 18.9
comp=Z,5.7nm,1.1s
F22K John River 87.30 10 P **P 04 08 16.3 +0.4**
baz=205
YHL Hebgen Lake 87.30 41 IAmb IAmb 04 08 19.5
comp=Z,5.9nm,1.0s
PD31 Pinedale Array 87.37 43 IAmb IAmb 04 08 18.4
comp=Z,2.6nm,0.7s
PDAR Pinedale Array 87.37 43 P **P 04 08 17.9 +0.7**
comp=Z,2.2nm,0.6s,baz=223,slow=3.4,SNR=20
comp=Z,2.2nm,0.6s
PDAR Pinedale Array 87.37 43 P 04 08 17.9 +0.8
D19K Kuna River 87.37 7 P **P 04 08 16.3 0.0**
baz=200
BOZ Bozeman (W) 87.38 40 IAmb IAmb 04 08 19.1
comp=Z,4.5nm,1.4s
COLD Coldfoot 87.38 11 IAmb IAmb 04 08 17.8
comp=Z,3.6nm,0.9s
COLD Coldfoot 87.38 11 P **P 04 08 17.1 +0.8**
baz=207
K29M Barlow Dome 87.39 17 IAmb IAmb 04 08 19.0
comp=Z,2.4nm,0.7s
K29M Barlow Dome 87.39 17 P **P 04 08 17.1 +0.6**
baz=219,SNR=6.6
E20K Nigu River 87.40 8 P **P 04 08 16.8 +0.4**
baz=201
G24K Hadweenzic Riv 87.42 12 P **P 04 08 17.1 +0.6**
baz=210
SAND Sanderson 87.51 58 IAmb IAmb 04 08 19.7
comp=Z,2.8nm,0.8s
I27K Kandik River 87.76 14 P **P 04 08 18.8 +0.6**
baz=215
D20K Etivluk River 87.77 8 P **P 04 08 18.3 +0.2**
baz=201
E22K Anaktuvuk Pass 87.93 10 IAmb IAmb 04 08 20.0
comp=Z,4.0nm,1.0s
E22K Anaktuvuk Pass 87.93 10 P **P 04 08 19.7 +0.8**
baz=206
I28M Miner Creek 88.04 15 IAmb IAmb 04 08 20.4
comp=Z,3.7nm,0.9s
I28M Miner Creek 88.04 15 P **P 04 08 20.2 +0.7**
baz=217
F24K Squaw Lake 88.06 11 IAmb IAmb 04 08 20.8
comp=Z,3.6nm,0.8s
F24K Squaw Lake 88.06 11 P **P 04 08 20.2 +0.7**
baz=209
YNE Yellowstone No 88.11 41 IAmb IAmb 04 08 22.9
comp=Z,3.8nm,1.0s
E23K Chandalar 88.23 10 P **P 04 08 20.8 +0.5**
baz=208
J30M Hart River 88.29 17 P **P 04 08 20.8 +0.1**
baz=220
H27K Steamboat Moun 88.30 14 P **P 04 08 20.8 +0.2**
baz=215
MMPY Sheldon Lake, 88.36 20 P **P 04 08 21.4 +0.4**
baz=225
G26K Porcupine Rive 88.39 13 P **P 04 08 21.7 +0.8**
baz=213
C21K Knifeblade Rid 88.43 8 P **P 04 08 21.6 +0.5**
baz=203
E24K Your Creek 88.44 11 P **P 04 08 21.4 +0.1**
baz=209
F25K Christian Rive 88.56 12 P **P 04 08 22.5 +0.6**
baz=211
A19K Wainwright 88.68 6 P **P 04 08 23.0 +0.8**
baz=197
129A Stewart Farms, 88.72 55 IAmb IAmb 04 08 25.7
comp=Z,4.0nm,1.1s
G27K Doyon Strip 88.74 14 P **P 04 08 23.0 +0.3**
baz=215
TOLK Toolik Lake Re 88.75 10 P **P 04 08 22.8 +0.1**
baz=208
I30M Mount Dempster 88.78 16 IAmb IAmb 04 08 24.1
comp=Z,4.1nm,1.1s
I30M Mount Dempster 88.78 16 P **P 04 08 23.4 +0.4**
baz=220
CMAR Chiang Mai Arr 88.80 290 P **P 04 08 25.6 +1.6**
comp=Z,1.2nm,0.3s,baz=105,slow=2.4,SNR=7.9
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 88.80 290 P 04 08 23.1 -0.9
D23K Nanushuk River 88.86 10 P **P 04 08 23.3 +0.1**
baz=206
B21K Ikpikpuk River 88.88 8 P **P 04 08 23.7 +0.5**
baz=203
B20K Meade River 88.92 7 P **P 04 08 23.8 +0.4**
baz=200
F26K Sheenjek River 88.95 12 P **P 04 08 23.7 +0.1**
baz=213
E25K Arctic Village 89.03 12 P **P 04 08 24.3 +0.3**
baz=211
H29M Whitestone 89.05 15 P **P 04 08 24.5 +0.5**
baz=218
PZH PanZhiHua 89.07 298 P **P 04 08 26.8 +1.5**
ELIB Princess Elisa 89.20 187 *d*P **P 04 08 24.4 -0.6**
comp=Z,3.8nm,0.7s
ELIB *d*pP **pP 04 10 32.6 -2.4**
D24K Happy Valley 89.34 10 P **P 04 08 25.6 +0.3**
baz=208
EPYK Eagle Plains 89.58 16 P **P 04 08 26.5 0.0**
baz=220
C23K Itkillik River 89.66 9 P **P 04 08 27.4 +0.6**
baz=207
G29M Pine Creek 89.68 15 P **P 04 08 27.0 0.0**
baz=218
B22K Teshekpuk Lake 89.71 8 P **P 04 08 27.3 +0.3**
baz=204
H31M Peel River 89.78 17 P **P 04 08 27.5 0.0**
baz=222
F28M Old Crow 89.80 14 P **P 04 08 27.4 -0.1**
baz=217
G30M tAoh Zraii Nji 90.18 15 P **P 04 08 29.2 -0.2**
baz=220
TROLL Troll, Antarti 90.35 180 ⇑P **P 04 08 29.7 -0.7**
comp=Z,152nm,0.7s
G31M Satah River 90.64 16 P **P 04 08 31.7 +0.4**
baz=222
SNAA Sanae 90.64 179 P **P 04 08 30.5 -1.1**
comp=Z,20nm,0.4s
SNAA Sanae 90.64 179 P **P 04 08 30.7 -1.0**
comp=Z,1.0nm,0.6s,baz=216,slow=11,SNR=7.2
comp=Z,1.0nm,0.6s
SNAA Sanae 90.64 179 P 04 08 30.9 -0.7
C27K Jago River 90.67 12 P **P 04 08 31.6 +0.1**
baz=213
E28M Babbage River 90.68 13 P **P 04 08 32.0 +0.4**
baz=217
F30M Barrier River 90.77 15 P **P 04 08 32.5 +0.4**
baz=220
E29M Blow River 90.88 14 P **P 04 08 32.7 +0.2**
baz=218
D27M Malcolm River 90.89 13 P **P 04 08 32.7 +0.1**
baz=216
VNA2 Neumayer--Watz 91.23 177 ⇑P **P 04 08 33.5 -0.7**
comp=Z,2.9nm,0.7s,baz=185,slow=4.0
VNA1 Neumayer--Stat 91.46 177 P **P 04 08 35.2 0.0**
comp=Z,3.5nm,0.7s
INK Inuvik 91.86 15 P **P 04 08 37.1 +0.1**
baz=222
YKA Yellowknife Ar 94.32 25 P **P 04 08 48.4 0.0**
comp=Z,0.9nm,0.5s,baz=230,slow=4.5,SNR=5.5
comp=Z,0.9nm,0.5s
C36M Paulatuk 95.07 17 P **P 04 08 51.5 -0.1**
baz=231
MKAR Makanchi Array 109.05 314 PKiKP **PKiKP 04 13 53.7 -1.1**
comp=Z,0.7nm,0.5s,baz=216,slow=1.1,SNR=8.9
KURBB Kurchatov Arra 111.80 318 PKiKP **PKiKP 04 13 58.8 -1.0**
comp=Z,0.9nm,0.6s,baz=89,slow=1.8,SNR=9.9
BVAR Borovoye Array 116.76 321 PKP **PKPdf 04 14 08.6 -0.7**
comp=Z,2.6nm,0.4s,baz=109,slow=2.7,SNR=10.0
ARCES ARCES Array B 126.26 350 PKP **PKPdf 04 14 26.2 -0.9**
comp=Z,9.5nm,1.2s,baz=4.1,slow=1.7,SNR=8.1
FINES FINESS Array B 133.12 344 PKP **PKPdf 04 14 39.1 -1.1**
comp=Z,5.7nm,1.0s,baz=106,slow=6.2,SNR=6.6
FINES FINESS Array B 133.12 344 PKPdf 04 14 40.1 -0.1
HFS Hagfors 136.88 351 PKhKP PKPpre 04 14 39.4
comp=Z,3.6nm,0.9s,baz=79,slow=3.2,SNR=8.9
AKASG Malin Array Be 140.49 332 PKhKP PKPpre 04 14 47.6
comp=Z,0.3nm,0.3s,baz=48,slow=3.6,SNR=6.3
AKASG PKP **PKPdf 04 14 55.2 +1.1**
comp=Z,1.0nm,0.4s,baz=45,slow=2.9,SNR=7.0
EKA Eskdalemuir Ar 142.43 4 PKhKP PKPpre 04 14 54.4
comp=Z,1.7nm,0.8s,baz=300,slow=0.7,SNR=5.3
SORM Soroca 142.71 330 ⇓P **PKPdf 04 14 55.8 -2.4**
KMPD K-Podol'skiy 143.28 332 PKP PKPab 04 14 56.7 -0.8
BNN Bunyan 143.57 312 PKPdf 04 14 59.9 -0.2
TLCR 144.49 326 ⇓P **PKPab 04 15 03.0 +0.7**
BURAR Bucovina Array 144.54 332 ⇓P **PKPab 04 15 02.8 +0.2**
BURAR Bucovina Array 144.54 332 PKPab 04 15 02.4 -0.1
RETH Rethem/Aller, 144.66 352 *e*PKPbc **PKPab 04 15 02.4 -0.2**
baz=15,slow=2.7
TESR Tescani 144.68 330 ⇓P **PKPab 04 15 02.8 -0.2**
BR131 Keskin Array S 144.70 315 PKPdf 04 15 01.9 -0.2
BRTR Keskin Array B 144.70 315 PKP **PKPdf 04 15 01.5 -0.6**
comp=Z,4.0nm,0.7s,baz=128,slow=4.2,SNR=24
BRTR Keskin Array B 144.70 315 PKPbc 04 15 02.7 +0.1
KOLS Kolonicke sedl 144.73 336 *e*PKP **PKPab 04 15 03.4 +0.3**
NEGRR Negrea 144.75 327 ⇓P **PKPab 04 15 04.4 +1.1**
FLTG Flechtingen 144.76 350 *e*PKPbc **PKPab 04 15 02.6 -0.4**
baz=15,slow=2.7
KIRS Kirsehir-Merke 144.79 314 ⇑P PKPbc 04 15 03.2 +0.3
CFR Carcaliu 144.86 327 ⇑P PKPbc 04 15 03.1 +0.4
TPGR Topolog 144.92 326 ⇓P **PKPab 04 15 03.9 -0.2**
ONER Baraj Valea Uz 144.93 330 ⇓P **PKPab 04 15 04.2 +0.2**
ASSE Asse, Remlinge 145.05 350 *e*PKPbc **PKPbc 04 15 03.4 +0.4**
baz=15,slow=2.7
VRI Vrinceioaia 145.10 329 ⇓P **PKPbc 04 15 04.0 +0.5**
PLOR Plostina 145.15 329 ⇓P **PKPab 04 15 04.3 -0.6**
IBBN Ibbenburen 145.28 353 *e*PKPbc **PKPbc 04 15 04.3 +0.6**
baz=15,slow=2.7
OSTC Ostas 145.33 343 *e*PKP **PKPbc 04 15 04.2 +0.2**
CHVC Chvalec 145.34 344 *e*PKP **PKPbc 04 15 04.5 +0.5**
CLZ Clausthal 145.38 350 *e*PKPbc **PKPab 04 15 04.9 -0.7**
baz=15,slow=2.7
STEB Steborice 145.44 341 *e*PKP **PKPbc 04 15 04.5 +0.2**
DPC Dobruska-Polom 145.48 343 *e*PKP **PKPbc 04 15 04.6 +0.1**
LANS Liptovska Anna 145.57 339 *e*PKP **PKPab 04 15 06.2 -0.2**
KRLC Kraliky 145.60 343 *e*PKP **PKPbc 04 15 05.4 +0.6**
BRG Berggiesshubel 145.60 346 *e*PKPbc **PKPab 04 15 05.6 -0.9**
baz=15,slow=2.7
BRG Berggiesshubel 145.60 346 *i* PKP **PKPbc 04 15 05.5 +0.7**
BRG Amp 04 15 05.8
comp=Z,6.2nm,0.8s
MORC Moravsky Berou 145.64 342 ⇓P **PKPbc 04 15 05.8 +0.8**
MORC Moravsky Berou 145.64 342 *e*PKP **PKPbc 04 15 05.1 +0.1**
DOPR Dopca 145.68 330 ⇓P **PKPbc 04 15 05.9 +0.8**
GTTG Gottingen 145.73 351 *e*PKPbc **PKPbc 04 15 05.7 +0.7**
baz=15,slow=2.7
NEUB Neuenburg 145.74 349 *e*PKPbc **PKPab 04 15 06.1 -0.9**
baz=15,slow=2.7
MLR Muntele Rosu 145.75 329 ⇑P **PKPbc 04 15 05.9 +0.4**
MAUC Maruska 145.92 341 *e*PKP **PKPbc 04 15 06.2 +0.5**
SAHE Sakarya_HENDEK 145.94 318 ⇓P **PKPdf 04 15 03.6 -0.4**
MMAI Mount Meron Ar 146.06 303 PKPbc **PKPbc 04 15 06.4 -0.3**
comp=Z,2.9nm,0.5s,baz=76,slow=7.7,SNR=6.6
MARR Marisel-Cluj 146.18 333 ⇑P **PKPbc 04 15 07.0 +0.4**
VOIR 146.23 330 ⇑P **PKPbc 04 15 07.5 +0.7**
DRGR 146.26 333 ⇑P **PKPbc 04 15 07.2 +0.4**
PRU Pruhonice 146.28 345 *e*PKP **PKPbc 04 15 06.5 -0.1**
KASTN Kahler Asten 146.28 352 *e*PKPbc **PKPbc 04 15 07.2 +0.6**
baz=15,slow=2.7
MOX Moxa 146.31 348 *e*PKPbc **PKPbc 04 15 07.3 +0.6**
baz=15,slow=2.7
VRAC Vranov 146.34 342 *e*PKP **PKPbc 04 15 07.3 +0.4**
PLN Plauen 146.36 348 *e*PKPbc **PKPbc 04 15 07.6 +0.8**
baz=15,slow=2.7
TANN Tannenbergstha 146.36 347 *e*PKPbc **PKPbc 04 15 07.7 +0.7**
baz=15,slow=2.7
JAVC Velka Javorina 146.41 341 *e*PKP **PKiKP 04 15 08.6 -0.7**
PSZ Piszkesteto 146.46 337 ⇓P **PKPbc 04 15 08.1 +0.8**
ARR Arges 146.48 330 ⇓P **PKiKP 04 15 08.8 -0.8**
KRUC Moravsky 146.62 342 *e*PKP **PKPbc 04 15 08.0 +0.4**
ZVC Zvikov 146.88 345 *e*PKP **PKPdf 04 15 06.1 +0.8**
MODS Modra-Piesok 146.97 341 *e*PKP **PKiKP 04 15 09.6 -0.8**
ROTZ Rotzenmuhle 147.03 347 *e*PKPbc **PKPbc 04 15 09.4 +0.8**
baz=15,slow=2.7
TNS Taunus Mts 147.24 352 *e*PKPbc **PKiKP 04 15 10.1 -0.9**
baz=15,slow=2.7
KHC Kasperske Hory 147.31 345 PKPbc 04 15 10.1 +0.6
KHC Kasperske Hory 147.31 345 *e*PKP **PKPbc 04 15 09.2 -0.3**
GZR Gura Zlata 147.32 332 ⇑P **PKPbc 04 15 09.7 +0.1**
GEC2 GERESS Array S 147.55 345 *e*PKPbc **PKPbc 04 15 10.8 +0.6**
baz=15,slow=2.7
GERES GERESS Array B 147.55 345 PKPbc **PKPbc 04 15 10.4 +0.3**
comp=Z,5.0nm,0.5s,baz=5.7,slow=2.7,SNR=36
WINA Alland / Wiene 147.57 342 *e*PKP **PKiKP 04 15 10.9 -0.7**
comp=Z,6.1nm,0.6s
BZS Buzias 147.66 333 ⇑P **PKPbc 04 15 10.2 -0.2**
CONA Conrad Observa 147.80 342 *e*PKP **PKiKP 04 15 11.5 -0.7**
comp=Z,7.2nm,0.7s
RONA Rosalia, Austr 147.87 341 *e*PKP **PKPbc 04 15 11.5 +0.5**
comp=Z,6.5nm,0.7s
HERR Herculane 147.88 332 ⇑P **PKPbc 04 15 11.1 +0.1**
WLF Walferdange 148.06 354 *e*PKPbc **PKiKP 04 15 12.5 0.0**
baz=15,slow=2.7
MDVR Moldovita 148.27 332 ⇑P **PKPbc 04 15 12.2 +0.2**
STU Stuttgart 148.54 350 *e*PKPbc **PKPbc 04 15 12.6 +0.1**
baz=15,slow=2.7
BIOA Bad Ischl, Aus 148.63 344 *e*PKP **PKPbc 04 15 13.1 +0.3**
comp=Z,3.3nm,0.7s
FUR Furstenfeldbru 148.74 347 *e*PKPbc **PKiKP 04 15 13.8 -0.3**
baz=15,slow=2.7
SESA Seetaler Alpe, 148.91 343 *e*PKP **PKPbc 04 15 13.5 -0.3**
comp=Z,25nm,1.0s
BFO Black Forest 149.11 351 PKPbc 04 15 13.8 -0.2
BFO Black Forest 149.11 351 *e*PKPbc **PKiKP 04 15 14.5 -0.3**
baz=15,slow=2.7
LESA Schwarzleotal 149.12 345 *e*PKP **PKPbc 04 15 13.9 -0.2**
comp=Z,3.2nm,0.6s
BOVS Bovan 149.16 331 ⇑P **PKPbc 04 15 13.9 -0.3**
WATA Walderalm 149.46 346 *e*PKP **PKPbc 04 15 14.9 -0.1**
comp=Z,8.3nm,0.6s
RETA Reutte 149.49 348 *e*PKP **PKPbc 04 15 15.2 +0.3**
comp=Z,4.0nm,0.6s
WTTA Wattenberg 149.52 346 *i* PKP **PKPbc 04 15 15.3 +0.2**
comp=Z,11nm,0.6s,SNR=6.8
MOTA Moosalm 149.56 347 *e*PKP **PKPbc 04 15 15.1 -0.1**
comp=Z,6.2nm,0.8s
MYKA Terra Mystica 149.61 343 *e*PKP **PKPbc 04 15 14.8 -0.5**
comp=Z,4.5nm,0.5s
SQTA Sankt Quirin 149.65 347 *e*PKP **PKPbc 04 15 15.4 0.0**
comp=Z,7.6nm,0.6s
ABTA Abfaltersbach 149.79 345 *i* PKP **PKPbc 04 15 14.9 -0.8**
comp=Z,13nm,0.7s,SNR=9.0
DAVA Damuels 149.86 349 *e*PKP **PKPbc 04 15 16.0 +0.1**
comp=Z,9.5nm,1.0s
FETA Feichten 149.94 347 *i* PKP **PKiKP 04 15 16.4 -0.4**
comp=Z,7.0nm,0.8s,SNR=5.1
FUORN Ofenpass-Fuorn 150.42 348 PKiKP 04 15 17.9 +0.1
TORD Torodi Ar. Bea 175.31 182 PKP **PKPdf 04 15 33.7 -1.4**
comp=Z,1.4nm,1.0s,baz=275,slow=1.0,SNR=5.3

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*NOU **07** 04:21:05.6, 18˚.58S×176˚.98W, h482km, mb5.0/34, Fiji Islands Region*
*BJI **07** 04:21:10.2, 17˚.84S×177˚.35W, h491km, mB4.7/4, mb4.8/29*
*BGR **07** 04:21:11.5, 18˚.55S×177˚.50W, h497km*
*GFZ **07** 04:21:11.7±0.4, 18˚S±.5˚×17˚8W±˚, h492km±4km, M4.8/24, mb5.0/24*
*NEIC **07** 04:21:11.6±1.5, 18˚.08S±0˚.10×177˚.79W±0˚.10, h489km±5km, mb4.5/368, Error ellipse: s-maj=14.4km s-min=12.7km az=145.0*
*IDC **07** 04:21:11.3±0.6, 18˚.10S×177˚.80W, h488km±6km, mb4.2/24, mbtmp5.1/26, Error ellipse: s-maj=10.6km s-min=9.3km az=152.0*

ISC 07 04:21:11.5±0.4, 18˚16S±0˚.06×177˚.76W±0˚.05, h498km±4km, h499km; pP-P, n774, ⍬s87/641, mb4.5/240, 32C-22D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTU	**Fugatoga**	**3.84**	**355**	P	**P**	**04 22 26.6**	**-2.1**
FUTU	**Fugatoga**	**3.84**	**355**	S	**S**	**04 23 31.7**	**+0.4**
FUTU	**Fugatoga**	**3.84**	**355**	P	**P**	**04 22 28.1**	**-0.6**
FUTU	**Fugatoga**	**3.84**	**355**	P	**P**	**04 22 28.4**	**-0.3**
MSVF	**Nonsavu**	**4.01**	**275**	P	**P**	**04 22 30.5**	**+0.5**
	656nm,0.9s,baz=123,slow=8.6,SNR=211						
MSVF				S	**S**	**04 23 35.1**	**+1.2**
	316nm,1.1s,baz=117,slow=22,SNR=14						
MSVF	**Nonsavu**	**4.01**	**275**	P	**P**	**04 22 31.0**	**+1.0**
MSVF	**Nonsavu**	**4.01**	**275**	P	**S**	**04 23 38.1**	**+4.2**
MSVF	**Nonsavu**	**4.01**	**275**	P	**P**	**04 22 31.1**	**+1.0**
MSVF					**S**	**04 23 32.4**	**-1.6**
MSVF	**Nonsavu**	**4.01**	**275**	P	**P**	**04 22 31.3**	**+1.2**
AFI	**Afiamalu**	**7.13**	**55**	P	**P**	**04 22 56.0**	**-3.2**
	220nm,0.6s,baz=126,slow=1.4,SNR=17						
AFI				S	S	04 24 17.9	-9.4
	208nm,0.5s,baz=93,slow=21,SNR=8.4						
AFI	**Afiamalu**	**7.13**	**55**	P	**P**	**04 22 56.0**	**-3.2**
AFI	**Afiamalu**	**7.13**	**55**	P	**P**	**04 22 56.1**	**-3.1**
NIUE	**Niue**	**7.48**	**98**	P	**P**	**04 23 02.4**	**-0.2**
FUNA	**Funafuti**	**10.02**	**342**	P	**P**	**04 23 27.3**	**-1.9**
FUNA	**Funafuti**	**10.02**	**342**	P	**P**	**04 23 28.8**	**-0.5**
MARNC	**Mare, Loyalty**	**13.78**	**254**		**P**	**04 24 07.1**	**-1.9**
OUENC	**Ouen Island, N**	**15.06**	**251**	P	**P**	**04 24 23.8**	**+1.4**
OUENC	**Ouen Island, N**	**15.06**	**251**		**P**	**04 24 21.2**	**-1.3**
DZM	**Mont Dzumac**	**15.34**	**253**	P	**P**	**04 24 23.4**	**-2.1**
	23nm,0.6s,baz=83,slow=21,SNR=16						
NOUC	**Port Laguerre**	**15.47**	**253**	P	**P**	**04 24 27.8**	**+1.0**
KOUNC	**Koumac, New Ca**	**17.11**	**259**		**P**	**04 24 42.0**	**-1.8**
URZ	**Urewera**	**20.52**	**192**	P	**P**	**04 25 12.1**	**-2.8**
	26nm,0.3s,baz=280,slow=1.4,SNR=8.1						
URZ				S	**S**	**04 28 26.8**	**-5.8**
	19nm,0.8s,baz=80,slow=20,SNR=6.4						
PPT	**Papeete**	**26.82**	**93**	P	**P**	**04 26 11.6**	**+0.2**
	40nm,0.9s,baz=29,slow=7.3,SNR=4.7						
	40nm,0.9s						
PPTF	**Pamatai, Papee**	**26.83**	**93**	P	**P**	**04 26 12.3**	**+0.7**
XMAS	**Kiritimati**	**28.34**	**47**		**P**	**04 26 23.3**	**-1.5**
XMAS	**Kiritimati**	**28.34**	**47**	P	**P**	**04 26 24.8**	**0.0**
MLZ	**Mavora Lakes**	**29.58**	**200**		**P**	**04 26 35.9**	**+0.7**
EIDS	**Eidsvold**	**29.77**	**251**	P	**P**	**04 26 36.7**	**-0.4**
EIDS				IAmb	IAmb	04 26 37.9	
	comp=Z,9.3nm,0.8s						
WHZ	**Wether Hill Ro**	**30.10**	**200**	P	**P**	**04 26 40.4**	**+0.7**
ARMA	**Armidale**	**30.36**	**241**	P	**P**	**04 26 42.7**	**+0.4**
ARMA				IAmb	IAmb	04 26 43.6	
	comp=Z,11nm,0.7s						
CTA	**Charters Tower**	**34.02**	**261**	P	**P**	**04 27 13.4**	**-0.2**
	comp=Z,13nm,1.1s						
CTA	**Charters Tower**	**34.02**	**261**	P	**P**	**04 27 13.1**	**-0.4**
	comp=Z,18nm,0.6s,baz=90,slow=11,SNR=20						
CTA				PcP	**PcP**	**04 29 37.6**	**+0.1**
	comp=Z,9.4nm,0.9s,baz=275,slow=2.1,SNR=4.1						
	comp=Z,18nm,0.6s						
CTA	**Charters Tower**	**34.02**	**261**	P	**P**	**04 27 14.4**	**+0.8**
CTAO	**Charters Tower**	**34.02**	**261**	P	**P**	**04 27 13.9**	**+0.3**
CTAO	**Charters Tower**	**34.02**	**261**	P	**P**	**04 27 13.2**	**-0.4**
CAN	**Canberra**	**34.05**	**233**	P	**P**	**04 27 14.2**	**+0.6**
CAN				IAmb	IAmb	04 27 15.2	
	comp=Z,21nm,1.0s						
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**04 27 22.8**	**0.0**
	comp=Z,35nm,0.9s,baz=117,slow=8.5,SNR=5.7						
	comp=Z,35nm,0.9s						
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**04 27 22.1**	**-0.8**
CMSA	**Cobar Meteorol**	**35.57**	**241**	P	**P**	**04 27 26.7**	**+0.3**
	comp=Z,36nm,0.9s						
CMSA	**Cobar Meteorol**	**35.57**	**241**	P	**P**	**04 27 24.3**	**-2.1**
CMSA	**Cobar Meteorol**	**35.57**	**241**	P	**P**	**04 27 26.6**	**+0.2**
MTSU	**Mount Surprise**	**36.00**	**264**	P	**P**	**04 27 30.0**	**-0.2**
QLP	**Quilpie**	**36.03**	**250**	P	**P**	**04 27 29.0**	**-1.3**
	comp=Z,55nm,0.6s						
QLP	**Quilpie**	**36.03**	**250**	P	**P**	**04 27 29.6**	**-0.7**
TOO	**Toolangi**	**37.50**	**231**	P	**P**	**04 27 43.0**	**+0.6**
	comp=Z,17nm,1.0s						
TOO	**Toolangi**	**37.50**	**231**	P	**P**	**04 27 43.1**	**+0.8**
TOO				IAmb	IAmb	04 27 44.3	
	comp=Z,25nm,1.2s						

COEN **Coen** 37.73 271 P P 04 27 44.7 +0.3
comp=Z,52nm,0.8s
COEN **Coen** 37.73 271 P P 04 27 46.4 +1.9
COEN **Coen** 37.73 271 P 04 27 44.2 -0.2
COEN **Coen** 37.73 271 P P 04 27 44.7 +0.3
STKA **Stephens Creek** 39.06 242 P P 04 27 55.5 +0.5
comp=Z,34nm,0.7s,baz=90,slow=9.2,SNR=60
STKA PcP PcP 04 29 53.3 +0.5
comp=Z,11nm,0.7s,baz=42,slow=2.6,SNR=7.0
comp=Z,34nm,0.7s
INKA **Innaminka** 39.23 248 P 04 27 55.6 -0.9
INKA IAmb IAmb 04 27 58.0
comp=Z,12nm,1.1s
ARPS **Mount Arapiles** 40.01 234 P P 04 27 58.9 -3.7
QIS **Mount Isa** 40.22 259 P P 04 28 04.4 -0.2
comp=Z,6.9nm,2.0s
MGBR **Mount Gambier** 41.24 233 P P 04 28 12.8 +0.3
HTT **Hallett** 41.56 240 P P 04 28 15.0 -0.2
comp=Z,57nm,0.8s
HTT **Hallett** 41.56 240 P P 04 28 15.7 +0.5
comp=Z,23nm,0.8s
AUMBR **Murray Bridge** 41.60 237 P P 04 28 13.6 -1.8
AUJCS **Jamestown Cent** 41.77 240 P P 04 28 15.0 -1.8
AUMAR **Marden Senior** 42.07 238 P P 04 28 16.5 -2.6
OVEH **Oceanview Est** 42.91 31 P P 04 28 26.6 +0.6
OVEH IAmb IAmb 04 28 33.8
comp=Z,90nm,1.2s
JAY **Jayapura** 43.57 286 P P 04 28 31.6 +0.4
comp=Z,56nm,0.7s,baz=165,slow=5.8,SNR=25
comp=Z,56nm,0.7s
JAY **Jayapura** 43.57 286 P P 04 28 31.8 +0.5
comp=Z,72nm,0.7s
BBOO **Buckleboo** 43.83 241 P P 04 28 33.2 +0.2
comp=Z,77nm,1.1s
BBOO **Buckleboo** 43.83 241 P P 04 28 31.0 -2.0
BBOO **Buckleboo** 43.83 241 P 04 28 33.1 +0.2
BBOO **Buckleboo** 43.83 241 P P 04 28 33.1 +0.2
GENI **Genyem** 44.03 286 P P 04 28 36.7 +1.9
GENI **Genyem** 44.03 286 P P 04 28 35.9 +1.1
comp=Z,2µmcomp=Z,125nm,0.7s
GENI **Genyem** 44.03 286 P P 04 28 35.9 +1.1
WR8 **Warramunga Arr** 45.05 260 P P 04 28 41.9 -0.7
WR8 IAmb IAmb 04 28 44.7
comp=Z,15nm,0.8s
WRAB **Tennant Creek** 45.19 260 P P 04 28 44.0 +0.3
WRAB **Tennant Creek** 45.19 260 P P 04 28 42.6 -1.1
WRA **Warramunga Arr** 45.20 260 P P 04 28 42.5 -1.3
comp=Z,12nm,0.6s,baz=98,slow=7.0,SNR=80
WRA PcP PcP 04 30 14.2 +0.5
comp=Z,14nm,0.8s,baz=90,slow=3.7,SNR=14
WRA S S 04 34 44.3 -2.7
comp=Z,1.8nm,0.8s,baz=92,slow=13,SNR=4.6
comp=Z,12nm,0.6s
WRA **Warramunga Arr** 45.20 260 P P 04 28 42.5 -1.3
WRA PcP PcP 04 30 13.5 -0.2
AS17 **Alice Springs** 45.24 254 P P 04 28 43.9 -0.2
comp=Z,201nm,0.7s
AS01 **Alice Springs** 45.28 254 P P 04 28 44.3 -0.1
AS09 **Alice Springs** 45.29 254 P P 04 28 44.2 -0.2
comp=Z,140nm,0.7s
AS15 **Alice Springs** 45.32 254 P P 04 28 44.4 -0.3
comp=Z,188nm,0.7s
AS31 **Alice Springs** 45.32 254 P 04 28 44.5 -0.2
AS31 PcP PcP 04 30 14.3 +0.2
ASAR **Alice Springs** 45.32 254 P P 04 28 44.4 -0.4
comp=Z,104nm,0.6s,baz=89,slow=8.3,SNR=828
ASAR PcP PcP 04 30 14.4 +0.3
comp=Z,18nm,0.5s,baz=100,slow=3.8,SNR=19
ASAR S S 04 34 44.6 -4.1
comp=Z,5.8nm,1.0s,baz=88,slow=15,SNR=16
comp=Z,104nm,0.6s
ASAR **Alice Springs** 45.32 254 P P 04 28 44.5 -0.2
ASAR PcP PcP 04 30 14.3 +0.2
AUALC **St Philip's Co** 45.34 254 P P 04 28 44.6 -0.2
KDU **Kakadu** 48.17 269 P P 04 29 06.1 -0.2
comp=Z,48nm,0.7s
GUMO **Guam** 48.52 308 P P 04 29 09.7 +0.9
comp=Z,62nm,0.3s,baz=200,slow=22,SNR=5.5
comp=Z,62nm,0.3s
GUMO **Guam** 48.52 308 P P 04 29 08.2 -0.7
MTN **Manton Dam** 49.41 268 P P 04 29 15.2 -0.4
comp=Z,71nm,0.8s
MTN **Manton Dam** 49.41 268 P P 04 29 15.0 -0.6
WRKA **Warakurna** 50.36 252 P P 04 29 22.4 -0.1
comp=Z,42nm,1.1s
FORT **Forrest** 50.46 245 P P 04 29 22.7 -0.4
comp=Z,43nm,0.8s
FORT **Forrest** 50.46 245 P P 04 29 22.7 -0.4
FORT IAmb IAmb 04 29 23.2
comp=Z,24nm,0.7s
KNRA **Kununurra** 51.08 264 P P 04 29 27.6 -0.3
comp=Z,99nm,0.7s
KNRA **Kununurra** 51.08 264 P P 04 29 27.5 -0.3
SIJI **Sorong** 52.90 283 P P 04 29 41.2 +0.2
comp=Z,123nm,0.8s,baz=88,slow=5.9,SNR=56
comp=Z,123nm,0.8s
SIJI **Sorong** 52.90 283 P P 04 29 40.8 -0.2
comp=Z,1µmcomp=Z,137nm,0.8s
SOEI **Soe** 56.69 270 P P 04 30 08.5 +0.7
SOEI **Soe** 56.69 270 P 04 30 08.0 +0.2
SOEI **Soe** 56.69 270 P P 04 30 09.2 +1.4
comp=Z,190nm,1.0s
SOEI **Soe** 56.69 270 P P 04 30 09.5 +1.7
TNTI **Ternate** 57.12 283 P P 04 30 11.7 +1.1
MBWA **Marble Bar** 58.62 256 P P 04 30 20.3 -0.3
comp=Z,57nm,0.7s
MBWA **Marble Bar** 58.62 256 P P 04 30 20.2 -0.5
MBWA **Marble Bar** 58.62 256 P P 04 30 20.2 -0.5
MBWA **Marble Bar** 58.62 256 P P 04 30 20.3 -0.3
AUKUL **Kulin High Sch** 58.88 242 P P 04 30 20.2 -2.1
MEEK **Meekatharra** 58.93 249 P P 04 30 21.7 -1.0
comp=Z,56nm,0.9s
MEEK **Meekatharra** 58.93 249 P P 04 30 21.1 -1.6
MEEK **Meekatharra** 58.93 249 P P 04 30 21.7 -1.0
KLBR **Kellerberrin** 59.27 244 P P 04 30 24.7 -0.2
comp=Z,151nm,0.7s
KLBR **Kellerberrin** 59.27 244 P P 04 30 22.9 -2.0
KLBR **Kellerberrin** 59.27 244 P P 04 30 24.4 -0.5
SBA **Scott Base** 60.21 184 P P 04 30 33.1 +2.8
VNDA **Vanda** 60.25 185 P P 04 30 32.3 +1.7
comp=Z,5.6nm,0.5s,baz=360,slow=7.8,SNR=60
comp=Z,5.6nm,0.5s
VNDA **Vanda** 60.25 185 P P 04 30 32.5 +1.9
VNDA IAmb IAmb 04 30 34.0
comp=Z,19nm,1.2s
MUN **Mundaring** 60.56 243 P P 04 30 33.8 +0.3
comp=Z,52nm,0.9s
MORW **Morawa** 60.95 246 P P 04 30 35.8 -0.4
comp=Z,38nm,2.1s
GTOI **Gorontalo** 61.12 281 P P 04 30 38.9 +1.4
comp=Z,55nm,0.8s
DBNI **Kabupaten Domp** 62.69 270 P P 04 30 46.8 -0.9
PLAI **Plampang** 63.11 269 P P 04 30 50.1 -0.3
PLAI **Plampang** 63.11 269 P P 04 30 50.5 0.0
comp=Z,98nm,0.9s
PLAI **Plampang** 63.11 269 P P 04 30 50.4 0.0
TOLI2 **Tolitoli** 63.37 281 P P 04 30 53.1 +1.0
TOLI2 **Tolitoli** 63.37 281 P P 04 30 52.4 +0.3
TOLI2 **Tolitoli** 63.37 281 P P 04 30 51.9 -0.2
TWSI **Taliwang, Sumb** 63.99 269 P P 04 30 55.8 -0.2
comp=Z,104nm,0.9s
CASY **Casey** 66.17 205 P P 04 31 09.3 +0.5
CASY **Casey** 66.17 205 P P 04 31 09.3 +0.5
JAGI **Jajag, Banyuwa** 66.66 268 P P 04 31 12.7 -0.1
JAGI **Jajag, Banyuwa** 66.66 268 P P 04 31 11.8 -1.1
JAGI **Jajag, Banyuwa** 66.66 268 P P 04 31 12.2 -0.6
comp=Z,118nm,0.7s
JAGI **Jajag, Banyuwa** 66.66 268 P P 04 31 12.0 -0.9
MJAR **Matsushiro Arr** 68.48 323 P P 04 31 23.3 -0.3
comp=Z,8.9nm,0.8s,baz=159,slow=6.2,SNR=15
comp=Z,8.9nm,0.8s
MJAR **Matsushiro Arr** 68.48 323 P P 04 31 22.4 -1.2
MAJO **Matsushiro** 68.48 323 P P 04 31 23.4 -0.2
MAJO IAmb IAmb 04 31 23.7
comp=Z,9.1nm,0.6s
MJB9 **Matsu-Tunnel** 68.48 323 P P 04 31 24.2 +0.6
MJB9 IAmb IAmb 04 31 24.7
comp=Z,8.7nm,0.6s
SNJI **Sawahan-Nganju** 69.12 268 P P 04 31 29.5 +1.4
KKM **Kota Kinabalu** 69.40 284 P P 04 31 30.1 +0.4
KKM **Kota Kinabalu** 69.40 284 P P 04 31 29.8 +0.1
KKM **Kota Kinabalu** 69.40 284 P P 04 31 30.2 +0.4
KKM **Kota Kinabalu** 69.40 284 P P 04 31 30.1 +0.4
ADK **Adak** 69.75 1 P P 04 31 30.4 -0.3
ATKA **Atka Island** 70.13 2 P P 04 31 32.4 -0.6

UGM **Wanagama** 70.26 268 P P 04 31 34.8 +0.1
JKA **Kamikawa-asahi** 71.79 331 P 04 31 43.3 +0.2
JKA IAmb IAmb 04 31 45.2
comp=Z,12nm,0.7s
QSPA **South Pole Qui** 71.90 180 P P 04 31 44.7 +1.1
comp=Z,26nm,0.6s,baz=251,slow=0.6,SNR=238
comp=Z,26nm,0.6s
QSPA **South Pole Qui** 71.90 180 P P 04 31 44.7 +1.1
UNV **Unalaska Valle** 72.36 7 P P 04 31 45.2 -0.9
baz=191
YULB **Yu-li** 72.42 303 P P 04 31 46.8 -0.4
YULB IAmb IAmb 04 31 48.1
comp=Z,17nm,0.8s
NACB **Ninganchiao** 72.57 303 P P 04 31 48.3 +0.2
NACB **Ninganchiao** 72.57 303 P P 04 31 48.3 +0.2
SSLB **Suanglung** 72.89 303 P P 04 31 50.1 +0.1
SSLB **Suanglung** 72.89 303 P P 04 31 49.2 -0.8
SSLB **Suanglung** 72.89 303 P P 04 31 49.4 -0.6
TPUB **Ta-pu** 72.92 302 P P 04 31 49.7 -0.4
TPUB **Ta-pu** 72.92 302 P P 04 31 48.7 -1.4
TPUB **Ta-pu** 72.92 302 P P 04 31 49.7 -0.4
BBJI **Bungbulang** 73.11 268 P P 04 31 51.3 -0.2
BBJI **Bungbulang** 73.11 268 P P 04 31 50.8 -0.7
BBJI **Bungbulang** 73.11 268 P P 04 31 51.1 -0.4
comp=Z,54nm,0.7s
BBJI **Bungbulang** 73.11 268 P P 04 31 51.1 -0.4
PEA0B **Petropavlovsk-** 74.08 345 P P 04 31 56.1 0.0
PEA0B IAmb IAmb 04 31 56.9
comp=Z,18nm,0.9s
PETK **Petropavlovsk-** 74.08 345 P P 04 31 55.5 -0.5
comp=Z,12nm,0.8s,baz=126,slow=6.7,SNR=23
comp=Z,12nm,0.8s
PETK **Petropavlovsk-** 74.08 345 P P 04 31 55.9 -0.1
SDPT **Sand Point** 74.67 10 P P 04 31 58.6 -0.7
baz=197
KSRS **Korea Array** 75.30 318 P P 04 32 04.2 +1.0
comp=Z,1.5nm,0.5s,baz=132,slow=6.6,SNR=12
comp=Z,1.5nm,0.5s
S14K **Fog Glacier** 75.72 10 P P 04 32 04.6 -0.7
baz=198
CHIR **Chirikof Islan** 76.03 13 P P 04 32 06.4 -0.5
baz=202
KASI **Kota Agung** 76.67 268 P P 04 32 10.7 -0.7
comp=Z,91nm,0.9s
USRK **Ussuriysk Ar.** 77.17 325 P P 04 32 13.9 +0.5
comp=Z,1.8nm,0.6s,baz=129,slow=3.8,SNR=7.5
comp=Z,1.8nm,0.6s
USRK **Ussuriysk Ar.** 77.17 325 P P 04 32 13.4 0.0
DPP **Dos Picos Cty** 77.19 49 P P 04 32 14.3 +0.5
ISA **Isabella, Lake** 77.54 46 P P 04 32 17.3 +1.5
R17L **Mt. Peulik Vol** 77.58 12 P P 04 32 15.0 -0.4
baz=201
BORC **Borrego Spring** 77.70 49 P P 04 32 17.5 +0.9
AFDM **Forest Hills D** 77.75 42 P P 04 32 15.5 -1.2
ORV **Oroville** 77.77 41 P 04 32 16.8 0.0
OHAK **Old Harbor** 77.83 13 P P 04 32 16.4 -0.3
baz=204
MDPB **Devils Postpil** 78.22 44 P 04 32 20.1 +0.5
MDPB IAmb IAmb 04 32 22.0
comp=Z,8.8nm,0.8s
CLC **China Lake** 78.22 46 P P 04 32 20.2 +0.7
Q17K **Contact Creek** 78.26 12 P P 04 32 18.7 -0.4
baz=201
O14K **Tigyukauivet M** 78.31 9 P P 04 32 18.9 -0.3
baz=196
YBH **Yreka Blue Hor** 78.33 39 P P 04 32 20.8 +0.9
BELC **Belle Mtn. Jos** 78.38 48 P 04 32 20.7 +0.2
M03C **McCloud** 78.40 39 P P 04 32 20.9 +0.6
M03C IAmb IAmb 04 32 23.4
comp=Z,25nm,1.4s
O15K **Ungalikthiuk R** 78.44 9 P P 04 32 19.5 -0.4
baz=197
WAKR **Walker** 78.48 43 P P 04 32 22.9 +1.9
WAKR IAmb IAmb 04 32 23.5
comp=Z,8.5nm,0.8s
J01E **Myrtle Point** 78.49 37 P P 04 32 21.7 +1.1
J01E IAmb IAmb 04 32 23.1
comp=Z,30nm,1.4s
KDAK **Kodiak Island** 78.50 13 P P 04 32 20.0 -0.3
baz=204
Q16K **King Salmon** 78.50 11 P P 04 32 20.0 -0.2
baz=200
NJ2 **Nanjing** 78.58 309 eP P 04 32 23.3 +2.0
NJ2 pmax pmax
comp=Z,43nm,0.6s
DLV **Lat** 78.66 287 P P 04 32 21.9 -0.5
DLV IAmb IAmb 04 32 24.5
comp=Z,26nm,0.9s
DLV **Lat** 78.66 287 P P 04 32 23.6 +1.2
BEKR **Beckworth** 78.67 41 P P 04 32 23.6 +1.7
PNTR **Pine Nut** 78.70 42 P P 04 32 22.6 +0.5
PNTR IAmb IAmb 04 32 24.6
comp=Z,15nm,0.8s
MDJ **Mudanjiang** 78.75 325 P P 04 32 21.4 -0.6
MDJ IAmb IAmb 04 32 24.9
comp=Z,22nm,1.0s
MDJ **Mudanjiang** 78.75 325 P P 04 32 23.4 +1.5
MDJ pmax pmax
comp=Z,21nm,0.9s
Q18K **Katmai Hardscr** 78.79 12 P P 04 32 21.6 -0.4
baz=202
DSP **Deep Springs** 78.81 45 P 04 32 23.9 +1.4
M11K **Mekoryuk** 78.82 6 P P 04 32 21.7 -0.2
baz=191
L04D **Klamath Falls** 78.86 39 P P 04 32 24.5 +1.7
L04D IAmb IAmb 04 32 25.1
comp=Z,9.6nm,0.8s
N14K **Kuskokwak Cree** 78.89 8 P 04 32 22.9 +0.6
N14K **Kuskokwak Cree** 78.89 8 P P 04 32 22.1 -0.2
baz=196,SNR=5.5
LHV **Little Huntoon** 78.94 44 P P 04 32 23.6 +0.5
PIX **Pinacate** 79.01 52 P P 04 32 23.4 -0.2
P17K **Kvichak River** 79.03 11 P P 04 32 22.7 -0.4
P17K **Kvichak River** 79.03 11 P P 04 32 22.6 -0.5
baz=201
O16K **Kokwok River B** 79.12 10 P P 04 32 22.7 -0.9
baz=199
I03D **Drain, OR** 79.16 37 P P 04 32 24.4 +0.3
I03D IAmb IAmb 04 32 26.5
comp=Z,16nm,1.2s
M13K **Dall Lake** 79.16 7 P P 04 32 22.9 -0.8
baz=194
NVAR **Mina Array Bea** 79.17 44 P P 04 32 26.1 +1.5
comp=Z,4.3nm,0.6s,baz=224,slow=8.6,SNR=26
comp=Z,4.3nm,0.6s
NVAR **Mina Array Bea** 79.17 44 P P 04 32 25.8 +1.1
PAHR **Pah Rah Range** 79.19 42 P 04 32 25.1 +0.4
GMN **Gold Mountain** 79.25 45 P P 04 32 25.0 -0.1
NV11 **Mina Array Sit** 79.27 44 P P 04 32 25.3 +0.1
BLYC **Blythe** 79.31 49 P P 04 32 25.6 +0.4
Q19K **Cape Douglas,** 79.32 12 IAmb IAmb 04 32 26.0
comp=Z,19nm,0.9s
Q19K **Cape Douglas,** 79.32 12 P P 04 32 24.3 -0.5
baz=203
N15K **Kwethluk River** 79.36 9 P P 04 32 24.5 -0.3
baz=197
113A **Mohawk Valley,** 79.37 50 P 04 32 25.7 +0.2
P18K **Big Mountain,** 79.44 12 P P 04 32 24.9 -0.4
baz=202
O17K **Koliganek Bris** 79.46 10 P P 04 32 24.9 -0.4
baz=200
J04A **Umpqua Nationa** 79.59 38 P P 04 32 27.0 +0.3
KVN **Kaiserville** 79.65 43 P 04 32 27.4 +0.2
M14K **Bethel** 79.66 8 IAmb IAmb 04 32 28.9
comp=Z,13nm,0.8s
M14K **Bethel** 79.66 8 P P 04 32 26.1 -0.2
baz=195
BUCK **Buck Mountain** 79.67 37 P 04 32 27.4 +0.5
BUCK IAmb IAmb 04 32 29.4
comp=Z,21nm,1.1s
TPH **Tonopah** 79.69 44 P P 04 32 27.8 +0.4
TPNV **Topopah Spring** 79.75 46 P P 04 32 28.6 +0.9
M15K **Kasigluk River** 79.78 8 P P 04 32 26.4 -0.6
baz=196,SNR=5.3
N16K **Nishlik Lake** 79.85 9 P P 04 32 27.3 -0.1
baz=198
O18K **Koktuh Hills** 79.87 11 P 04 32 28.0 +0.4
O18K **Koktuh Hills** 79.87 11 P P 04 32 27.3 -0.3
baz=202
K05A **Summer Lake** 80.00 39 P 04 32 29.2 +0.3
K05A IAmb IAmb 04 32 31.5
comp=Z,18nm,1.1s
P19K **Oil Pt** 80.07 12 P P 04 32 28.3 -0.3
baz=204
G03D **McMinnville, O** 80.14 36 IAmb IAmb 04 32 31.6

comp=Z,32nm,1.4s
L14K **Kuka Creek** 80.14 7 P P 04 32 29.0 +0.1
L14K IAmb IAmb 04 32 30.6
comp=Z,9.1nm,0.8s
L14K **Kuka Creek** 80.14 7 P P 04 32 29.1 +0.2
baz=195
N17K **Nushagak Hills** 80.15 10 P P 04 32 28.7 -0.3
baz=200
M16K **Timber Creek** 80.34 9 P P 04 32 30.6 +0.6
baz=198,SNR=12
O19K **Port Alsworth** 80.36 12 P P 04 32 29.6 -0.4
baz=203
CNPM **China Poot** 80.38 13 IAmb IAmb 04 32 31.2
comp=Z,16nm,1.0s
HOM **Homer** 80.41 13 P P 04 32 30.2 -0.1
baz=205
H04A **Detroit Lake** 80.42 37 IAmb IAmb 04 32 32.1
comp=Z,6.8nm,0.6s
K13K **Kusilvak Mount** 80.50 6 P P 04 32 30.8 0.0
baz=193
N18K **Kilae Creek** 80.52 11 P P 04 32 30.6 -0.4
baz=201
O20K **Slope Mountain** 80.59 12 P P 04 32 31.0 -0.4
baz=204
PINE **Pine Mountain** 80.60 38 IAmb IAmb 04 32 34.7
comp=Z,24nm,1.2s
L15K **Ungalak Mounta** 80.62 8 P P 04 32 31.7 +0.3
baz=196
BNX **BinXian** 80.66 325 ⇑P P 04 32 32.1 +0.1
BNX pmax pmax
comp=Z,18nm,0.9s
BRLK **Bradley Lake** 80.67 13 IAmb IAmb 04 32 32.6
comp=Z,11nm,0.7s
BRSE **Bradley Lake S** 80.68 13 P P 04 32 31.8 0.0
baz=206
SMAI **San Martin Ant** 80.70 159 P P 04 32 32.6 +0.7
SMAI IAmb IAmb 04 32 33.4
comp=Z,8.5nm,0.9s
PRN **Pahroc Range** 80.80 46 IAmb IAmb 04 32 36.0
comp=Z,9.6nm,0.9s
E03A **Lebam** 80.80 35 IAmb IAmb 04 32 35.0
comp=Z,20nm,1.1s
N19K **Bonanza Creek** 80.90 11 IAmb IAmb 04 32 33.3
comp=Z,8.7nm,0.8s
N19K **Bonanza Creek** 80.90 11 P P 04 32 32.5 -0.6
baz=202
L16K **Owhat River** 80.92 9 IAmb IAmb 04 32 34.8
comp=Z,21nm,1.1s
L16K **Owhat River** 80.92 9 P P 04 32 33.5 +0.5
baz=198,SNR=9.1
M17K **Holitna River** 80.94 10 P P 04 32 33.6 +0.5
baz=200,SNR=6.0
DIB **Dawson Inlet,** 81.08 26 IAmb IAmb 04 32 35.6
comp=Z,7.7nm,0.9s
NLWA **Neilton Lookou** 81.17 34 IAmb IAmb 04 32 37.1
comp=Z,12nm,1.1s
WVOR **Wild Horse Val** 81.20 40 IAmb IAmb 04 32 37.4
comp=Z,15nm,1.1s
WVOR **Wild Horse Val** 81.20 40 P P 04 32 36.6 +1.5
WHN **Wuhan** 81.25 306 ⇑P P 04 32 36.8 +1.4
WHN pmax pmax
comp=Z,100nm,1.5s
M18K **Stony River** 81.29 10 P P 04 32 35.3 +0.4
baz=201
SEW **Seward** 81.30 14 P P 04 32 35.0 +0.1
baz=207
TUC **Tucson** 81.36 52 P P 04 32 36.6 +0.6
TUC IAmb IAmb 04 32 39.4
comp=Z,10nm,0.8s
TUC **Tucson** 81.36 52 P P 04 32 38.5 +2.4
L17K **Donlin** 81.50 9 P P 04 32 37.1 +1.1
baz=199,SNR=14
I07A **Izee** 81.61 38 IAmb IAmb 04 32 39.6
comp=Z,12nm,0.9s
P23K **Montague Islan** 81.69 15 IAmb IAmb 04 32 38.3
comp=Z,25nm,1.3s
P23K **Montague Islan** 81.69 15 P P 04 32 37.0 0.0
baz=209
SPCR **Spurr Chakacha** 81.70 12 P P 04 32 37.2 +0.1
baz=204
SPU **Mount Spurr** 81.71 12 IAmb IAmb 04 32 38.4
comp=Z,6.5nm,0.7s
GAMB **Gambell** 81.80 3 P P 04 32 38.1 +0.7
baz=186
L18K **Granite Mounta** 81.83 10 IAmb IAmb 04 32 39.6
comp=Z,15nm,0.7s
L18K **Granite Mounta** 81.83 10 P P 04 32 38.4 +0.8
baz=200,SNR=15
CCUT **Cedar City** 82.03 46 IAmb IAmb 04 32 42.4
comp=Z,7.0nm,0.8s
STLK **Strandline Lak** 82.05 12 IAmb IAmb 04 32 38.7
comp=Z,11nm,0.9s
K17K **Iditarod** 82.05 9 IAmb IAmb 04 32 40.6
comp=Z,36nm,1.5s
K17K **Iditarod** 82.05 9 P P 04 32 39.1 +0.4
baz=199,SNR=5.6
319A **Douglas** 82.07 53 IAmb IAmb 04 32 43.1
comp=Z,17nm,0.9s
CBB **Campbell River** 82.10 31 IAmb IAmb 04 32 41.4
comp=Z,10nm,1.1s
L19K **White Mountain** 82.11 11 P P 04 32 39.3 +0.2
baz=202
RC01 **Rabbit Creek A** 82.12 13 P P 04 32 39.0 -0.2
baz=207
KNB **Kanab** 82.14 47 IAmb IAmb 04 32 42.8
comp=Z,7.8nm,0.8s
M20K **Styx River** 82.14 11 P P 04 32 39.7 +0.3
baz=204
U15A **North Rim** 82.22 48 IAmb IAmb 04 32 43.6
comp=Z,16nm,0.7s
HIN **Hinchinbrook I** 82.26 15 IAmb IAmb 04 32 40.7
comp=Z,18nm,1.3s
J16K **Anvik River** 82.28 8 P P 04 32 40.8 +0.8
baz=196,SNR=7.7
KAIM **Kayak Island** 82.39 16 P P 04 32 41.0 +0.5
baz=212
WUAZ **Wupatki** 82.44 49 IAmb IAmb 04 32 44.5
comp=Z,10nm,1.1s
GLI **Glacier Island** 82.53 15 P P 04 32 40.9 -0.4
baz=209,SNR=13
SKT **Skwentna** 82.54 12 P P 04 32 41.2 -0.1
baz=205
FID **Port Fidalgo** 82.57 15 IAmb IAmb 04 32 42.0
comp=Z,17nm,1.3s
EYAK **Cordova Ski Ar** 82.58 15 P P 04 32 41.5 0.0
baz=211
J17K **VABM Dome** 82.59 8 IAmb IAmb 04 32 43.1
comp=Z,12nm,0.7s
J17K **VABM Dome** 82.59 8 P P 04 32 42.3 +0.8
baz=198,SNR=7.9
G08A **Pilot Rock** 82.63 38 IAmb IAmb 04 32 44.5
comp=Z,20nm,1.2s
M22K **Willow** 82.63 13 P P 04 32 41.3 -0.4
baz=206,SNR=6.4
KNK **Knik Glacier** 82.69 14 P P 04 32 41.9 -0.2
baz=208
PMR **Palmer** 82.70 13 IAmb IAmb 04 32 42.7
comp=Z,20nm,1.4s
PMR **Palmer** 82.70 13 P P 04 32 41.7 -0.4
baz=207,SNR=6.4
PKCU **Pink Cliffs** 82.71 47 IAmb IAmb 04 32 46.6
comp=Z,16nm,0.9s
RAGM **Ragged Mountai** 82.71 16 IAmb IAmb 04 32 44.0
comp=Z,10nm,0.9s
LTY **Liberty** 82.81 35 IAmb IAmb 04 32 44.7
comp=Z,9.5nm,1.1s
SIT **Sitka** 82.88 22 P P 04 32 43.5 +0.4
baz=220
HAWA **Hanford** 82.94 36 IAmb IAmb 04 32 45.9
comp=Z,20nm,1.1s
U33K **Whale Pass** 82.97 23 P P 04 32 43.8 +0.3
baz=222
V35K **Ketchikan** 82.97 25 P P 04 32 43.8 +0.3
baz=224
ANM **Nome** 83.01 5 P P 04 32 43.3 -0.3
baz=192
SML **Sawmill** 83.07 14 P P 04 32 43.9 -0.1
baz=208
DIV **Divide** 83.07 15 IAmb IAmb 04 32 44.9
comp=Z,16nm,0.8s
MTPU **Mount Pierson** 83.08 46 IAmb IAmb 04 32 48.2
comp=Z,8.3nm,0.8s
CUT **Chulitna** 83.18 13 P P 04 32 44.3 -0.2
baz=206,SNR=5.9
M23K **Glacier View** 83.19 14 P P 04 32 44.1 -0.5
baz=209
L22K **Petersville** 83.19 12 IAmb IAmb 04 32 44.7
comp=Z,17nm,1.0s

L22K	Petersville baz=206,SNR=15	83.19	12	P	P	04 32 43.8	-0.8
BMRM	Bremner River comp=Z,16nm,0.9s	83.23	16	IAmb	IAmb	04 32 45.8	
BMRM	Bremner River baz=212,SNR=7.0	83.23	16	P	P	04 32 44.5	-0.3
PPLA	Purkeypile baz=204	83.25	11	P	P	04 32 44.3	-0.7
E08A	Dider Farm, El comp=Z,9.2nm,0.7s	83.26	36	IAmb	IAmb	04 32 47.3	
S31K	Pelican comp=Z,14nm,1.1s	83.26	21	IAmb	IAmb	04 32 46.8	
S31K	Pelican baz=219,SNR=6.1	83.26	21	P	P	04 32 45.5	+0.6
SCM	Sheep Creek Mo baz=209,SNR=15	83.32	14	P	P	04 32 45.2	-0.1
K20K	Telida baz=203,SNR=17	83.33	11	P	P	04 32 45.2	-0.1
KLU	Klutina comp=Z,9.2nm,1.1s	83.35	15	IAmb	IAmb	04 32 46.4	
KLU	Klutina baz=210	83.35	15	P	P	04 32 45.3	-0.1
H16K	Elim baz=195	83.39	7	P	P	04 32 45.7	+0.2
CRQE	Cirque baz=213	83.44	16	P	P	04 32 46.1	+0.1
S32K	Killisnoo baz=221	83.45	22	P	P	04 32 46.1	+0.2
EPH	Ephrata comp=Z,10nm,0.9s	83.46	36	IAmb	IAmb	04 32 48.1	
MFID	Camas Ranch comp=Z,9.0nm,1.0s	83.46	40	IAmb	IAmb	04 32 48.7	
WRAK	Wrangell Islan comp=Z,7.8nm,0.9s	83.49	23	IAmb	IAmb	04 32 48.1	
WRAK	Wrangell Islan baz=223	83.49	23	P	P	04 32 46.5	+0.3
G15K	Niukluk baz=193	83.56	6	P	P	04 32 46.4	+0.1
D08A	Wollman Farm, comp=Z,11nm,1.0s	83.66	36	IAmb	IAmb	04 32 49.4	
J19K	Poorman comp=Z,7.9nm,0.9s	83.67	10	IAmb	IAmb	04 32 48.3	
J19K	Poorman baz=201,SNR=8.2	83.67	10	P	P	04 32 47.2	+0.3
PCA	Pinnacle comp=Z,9.3nm,0.8s	83.69	18	IAmb	IAmb	04 32 48.9	
PINM	Pinnacle baz=216	83.69	18	P	P	04 32 47.3	+0.1
VRDI	Verde Repeater comp=Z,9.8nm,0.8s	83.75	16	IAmb	IAmb	04 32 48.6	
CAST	Castle Rocks baz=204,SNR=34	83.75	11	P	P	04 32 46.0	-1.4
N25K	Chitina, Valde baz=212,SNR=23	83.78	15	P	P	04 32 47.6	0.0
GRNC	Granite Creek comp=Z,17nm,1.0s	83.79	17	IAmb	IAmb	04 32 49.0	
TNA	Tin City baz=189	83.79	4	P	P	04 32 47.7	+0.3
M24K	Tolsona, Glenn baz=210	83.82	14	P	P	04 32 48.0	+0.3
F14K	Arctic Creek baz=191	83.83	5	P	P	04 32 47.9	+0.3
GLB	Gilahina Butte comp=Z,13nm,0.7s	83.83	16	IAmb	IAmb	04 32 48.8	
MAW	Mawson comp=Z,8.5nm,0.6s,baz=136,slow=5.4,SNR=18 comp=Z,8.5nm,0.6s	83.83	200	P	P	04 32 48.7	+0.9
MAW	Mawson	83.83	200	P	P	04 32 48.8	+0.9
MAW	Mawson	83.83	200	P	P	04 32 46.9	-0.9
WAT6	Susitna Watana baz=209,SNR=14	83.88	13	P	P	04 32 47.9	-0.3
WAT1	Susitna Watana baz=208	83.92	13	P	P	04 32 48.3	0.0
H17K	Granite Mounta baz=197	83.96	8	P	P	04 32 48.2	-0.1
MCARA	McCarthy VSAT comp=Z,13nm,1.0s	83.99	16	IAmb	IAmb	04 32 49.8	
MCARA	McCarthy VSAT baz=213	83.99	16	P	P	04 32 48.8	+0.3
F10A	Beach Ranch, E comp=Z,14nm,0.9s	84.02	38	IAmb	IAmb	04 32 50.9	
U35K	Hyder baz=225	84.03	25	P	P	04 32 48.9	+0.1
LOGN	Logan Glacier comp=Z,15nm,0.9s	84.07	17	IAmb	IAmb	04 32 50.4	
P29M	Windy Craggy comp=Z,15nm,0.8s	84.08	19	IAmb	IAmb	04 32 50.9	
P29M	Windy Craggy baz=218,SNR=9.8	84.08	19	P	P	04 32 49.6	+0.6
J20K	Nowinta River comp=Z,12nm,0.7s	84.08	10	IAmb	IAmb	04 32 50.0	
J20K	Nowinta River baz=202,SNR=16	84.08	10	P	P	04 32 49.0	+0.1
R32K	Eaglecrest baz=221	84.08	21	P	P	04 32 49.3	+0.3
KTH	Kantishna Hill comp=Z,14nm,0.9s	84.09	12	IAmb	IAmb	04 32 48.9	
G16K	Koyuk River baz=195	84.12	6	P	P	04 32 49.4	+0.3
TRF	Thorofare Moun baz=206,SNR=29	84.12	12	P	P	04 32 48.6	-0.8
CHUM	Lake Minchumin baz=204,SNR=7.1	84.13	11	P	P	04 32 48.3	-0.9
HNS	HongShan	84.15	312	⇑P	P	04 32 51.1	+1.2
HNS	comp=Z,12nm,0.7s			pmax	pmax		
B08A	Colville Reser comp=Z,7.6nm,0.8s	84.19	35	IAmb	IAmb	04 32 51.2	
F15K	North Star Dit baz=193	84.20	5	P	P	04 32 49.5	0.0
PLID	Pearl Lake comp=Z,8.2nm,1.1s	84.25	39	IAmb	IAmb	04 32 53.3	
O28M	Mount Upton comp=Z,13nm,0.8s	84.26	18	IAmb	IAmb	04 32 51.5	
O28M	Mount Upton baz=216,SNR=15	84.26	18	P	P	04 32 50.4	+0.1
HARP	HAARP baz=211	84.32	15	P	P	04 32 50.2	0.0
O29M	Mount Kennedy baz=217	84.35	18	P	P	04 32 50.8	+0.3
TMUT	Trail Mountain comp=Z,18nm,1.4s	84.36	46	IAmb	IAmb	04 32 54.0	
H18K	Honhosa River baz=198	84.36	8	P	P	04 32 50.6	+0.3
PLBC	Pleasant Camp baz=219,SNR=9.9	84.38	20	P	P	04 32 50.9	+0.4
DHY	Denali Highway comp=Z,5.5nm,0.7s	84.40	13	IAmb	IAmb	04 32 50.9	
DHY	Denali Highway baz=209,SNR=8.4	84.40	13	P	P	04 32 50.3	-0.4
G17K	Kiwalik Mounta baz=196	84.41	7	P	P	04 32 50.7	+0.1
HLID	Hailey	84.41	41	P	P	04 32 53.0	+1.7
C09A	Chrisman Ranch comp=Z,7.7nm,0.9s	84.45	36	IAmb	IAmb	04 32 52.9	
LYN	LuoYang	84.47	309	P	P	04 32 53.5	+2.0
LYN	comp=Z,36nm,0.8s			pmax	pmax		
MCK	McKinley baz=207,SNR=9.2	84.65	12	P	P	04 32 51.4	-0.4
T35M	Bob Quinn baz=225	84.70	24	P	P	04 32 52.8	+0.6
P30M	Million Dollar baz=219	84.71	19	P	P	04 32 52.8	+0.6
SKAG	Skagway baz=220	84.72	20	P	P	04 32 52.8	+0.7
SRU	San Rafael Swe comp=Z,5.5nm,0.7s	84.74	46	IAmb	IAmb	04 32 55.0	
YUK8	Steele Glacier baz=216,SNR=19	84.80	17	P	P	04 32 53.1	+0.3
M26K	Nabesna, AK baz=213,SNR=17	84.85	15	P	P	04 32 53.5	+0.7
YUK6	Outpost Mounta baz=217	84.93	18	P	P	04 32 53.8	+0.3
H19K	Roundabout Mou baz=200	84.98	9	P	P	04 32 53.5	+0.2
YUK3	Moose Creek baz=215,SNR=30	85.00	17	P	P	04 32 54.1	+0.3
S34M	Telegraph Cree comp=Z,16nm,0.9s	85.03	23	IAmb	IAmb	04 32 55.9	
S34M	Telegraph Cree baz=224,SNR=7.9	85.03	23	P	P	04 32 54.7	+1.0
G18K	Tagagawik baz=198	85.03	8	P	P	04 32 54.0	+0.4
BRWY	Burwash Landin baz=217,SNR=17	85.08	18	P	P	04 32 54.4	+0.5
HYT	Haines Junctio comp=Z,7.6nm,0.9s	85.09	19	IAmb	IAmb	04 32 55.8	
HYT	Haines Junctio baz=218,SNR=12	85.09	19	P	P	04 32 54.6	+0.5
M27K	Edge Creek, AK baz=214,SNR=26	85.11	16	P	P	04 32 54.7	+0.5
MENT	Mentasta comp=Z,9.7nm,1.0s	85.13	15	IAmb	IAmb	04 32 55.4	
YUK4	Talbot Arm baz=217,SNR=13	85.17	18	P	P	04 32 55.3	+0.7
H20K	Anotleneega Mo baz=202,SNR=5.5	85.19	9	P	P	04 32 54.9	+0.6
MNTX	Cornudas Mount	85.21	55	P	P	04 32 57.1	+1.8
L26K	Log Cabin Wild comp=Z,9.1nm,1.0s	85.29	15	IAmb	IAmb	04 32 56.2	
L26K	Log Cabin Wild baz=213,SNR=9.6	85.29	15	P	P	04 32 55.3	+0.4
GSI	Gunungsitoli comp=Z,4µmcomp=Z,75nm,1.1s	85.33	273	P	P	04 32 58.2	+1.9
GSI	Gunungsitoli	85.33	273	P	P	04 32 57.8	+1.5
P32M	Atlin comp=Z,6.6nm,0.8s	85.35	21	IAmb	IAmb	04 32 57.1	
P32M	Atlin baz=222	85.35	21	P	P	04 32 55.5	+0.2
I21K	Tanana comp=Z,19nm,1.3s	85.38	11	IAmb	IAmb	04 32 56.1	
I21K	Tanana baz=204,SNR=12	85.38	11	P	P	04 32 55.0	-0.2
Q32M	Nakina River comp=Z,7.6nm,0.8s	85.38	22	IAmb	IAmb	04 32 57.5	
Q32M	Nakina River baz=223,SNR=11	85.38	22	P	P	04 32 56.5	+0.8
K24K	Donnelly Dome baz=210,SNR=16	85.39	14	P	P	04 32 55.7	+0.3
NEA2	Nenana baz=207	85.39	12	P	P	04 32 55.1	-0.2
BVCY	Beaver Creek baz=215,SNR=22	85.42	16	P	P	04 32 56.0	+0.4
BCYI	Bear Canyon comp=Z,12nm,1.5s	85.42	40	IAmb	IAmb	04 32 58.8	
PV10	Paradox Valley comp=Z,7.4nm,0.7s	85.42	47	IAmb	IAmb	04 32 57.7	
PV19	Morning Glory comp=Z,6.4nm,0.7s	85.43	47	IAmb	IAmb	04 32 59.1	
PV20	West Nyswonger comp=Z,8.6nm,0.7s	85.46	47	IAmb	IAmb	04 33 00.2	
MLY	Manley comp=Z,5.7nm,0.8s	85.46	11	IAmb	IAmb	04 32 56.4	
MLY	Manley baz=206,SNR=17	85.46	11	P	P	04 32 54.8	-0.9
G19K	Purcell Mounta baz=200	85.48	8	P	P	04 32 55.4	-0.3
PV23	Carpenter Ridg comp=Z,9.3nm,0.7s	85.48	47	IAmb	IAmb	04 32 58.7	
O30N	Mendenhall comp=Z,9.9nm,0.8s	85.48	19	IAmb	IAmb	04 32 57.6	
O30N	Mendenhall baz=219,SNR=18	85.48	19	P	P	04 32 56.4	+0.5
RIDG	Independent Ri comp=Z,10nm,0.8s	85.55	14	IAmb	IAmb	04 32 57.1	
RIDG	Independent Ri baz=211,SNR=12	85.55	14	P	P	04 32 56.0	-0.2
PV21	Cone Mtn., Par comp=Z,5.0nm,0.7s	85.56	47	IAmb	IAmb	04 32 60.0	
PV12	Saucer Basin, comp=Z,7.8nm,0.6s	85.56	47	IAmb	IAmb	04 32 59.9	
F18K	Selawik baz=197	85.58	7	P	P	04 32 56.0	-0.2
TX31	Lajitas Ar. Si	85.60	57	P	P	04 32 59.9	+2.5
TXAR	Lajitas Array comp=Z,10nm,0.8s,baz=220,slow=6.0,SNR=131	85.61	57	P	P	04 32 59.6	+2.3
TXAR				pP	pP	04 34 47.0	+0.6
TXAR	comp=Z,0.1nm,0.3s,baz=209,slow=2.7,SNR=1.7 comp=Z,0.1nm,0.5s,baz=144,slow=2.4,SNR=5.6 comp=Z,10nm,0.8s			PKKPbc	PKKPbc	04 50 58.0	+0.5
TXAR	Lajitas Array	85.61	57	P	P	04 32 59.7	+2.4
HDA	Harding Lake baz=209,SNR=14	85.66	13	P	P	04 32 56.3	-0.3
H21K	Melozitna Rive baz=204	85.67	10	P	P	04 32 56.8	+0.1
L27K	Beaver Creek, baz=214,SNR=10	85.70	16	P	P	04 32 57.2	+0.3
N30M	Aishikik Lake baz=218,SNR=6.3	85.72	18	P	P	04 32 57.3	+0.2
BCAR	Beaver Creek A	85.72	16	P	P	04 32 57.3	+0.3
ANMO	Albuquerque	85.77	51	P	P	04 32 59.1	+1.0
WHY	Whitehorse comp=Z,13nm,0.9s	85.78	20	IAmb	IAmb	04 32 59.1	
WHY	Whitehorse baz=220,SNR=7.7	85.78	20	P	P	04 32 57.8	+0.3
DLBC	Dease Lake baz=225	85.82	23	P	P	04 32 58.0	+0.4
I23K	Minto, Yukon-K comp=Z,13nm,1.4s	85.83	12	IAmb	IAmb	04 32 57.8	
I23K	Minto, Yukon-K baz=207,SNR=5.5	85.83	12	P	P	04 32 57.1	-0.3
COLA	College	85.88	12	P	P	04 32 56.9	-0.7
COLA	College baz=208	85.88	12	P	P	04 32 57.3	-0.3
COLA	College	85.88	12	P	P	04 32 57.1	-0.6
SCRK	Sand Creek comp=Z,5.5nm,0.8s	85.95	14	IAmb	IAmb	04 32 59.3	
SCRK	Sand Creek baz=212,SNR=10	85.95	14	P	P	04 32 58.2	0.0
IL31	comp=Z,13nm,1.1s	85.99	13	IAmb	IAmb	04 32 58.6	
ILAR	Eielson Array comp=Z,8.0nm,1.0s,baz=229,slow=5.3,SNR=46	85.99	13	P	P	04 32 57.5	-0.7
ILAR	comp=Z,1.1nm,0.9s,baz=228,slow=5.8,SNR=4.4 comp=Z,8.0nm,1.0s			pP	pP	04 34 45.5	-2.1
ILAR	Eielson Array	85.99	13	P	P	04 32 57.3	-0.9
F19K	Shalerucki̇n Mo comp=Z,4.2nm,0.7s	86.04	8	IAmb	IAmb	04 32 58.6	
F19K	Shalerucki̇n Mo baz=199,SNR=6.4	86.04	8	P	P	04 32 58.2	-0.1
ALPN	Alpine comp=Z,9.1nm,1.0s	86.04	56	IAmb	IAmb	04 33 02.3	
M29M	Somme Creek comp=Z,7.0nm,0.8s	86.10	17	IAmb	IAmb	04 33 00.3	
M29M	Somme Creek baz=217,SNR=16	86.10	17	P	P	04 32 59.2	+0.2
P33M	Teslin, Yukon comp=Z,5.9nm,0.8s	86.12	21	IAmb	IAmb	04 33 00.5	
P33M	Teslin, Yukon baz=222	86.12	21	P	P	04 32 59.1	+0.1
H22K	Ishtalitna Cre comp=Z,5.6nm,0.7s	86.13	11	IAmb	IAmb	04 32 59.3	
H22K	Ishtalitna Cre baz=205	86.13	11	P	P	04 32 58.6	-0.3
N31M	Braeburn, Yuko comp=Z,12nm,0.9s	86.13	19	IAmb	IAmb	04 33 00.7	
N31M	Braeburn, Yuko baz=220,SNR=12	86.13	19	P	P	04 32 59.3	+0.3
TPB01	Permian Basin comp=Z,19nm,1.5s	86.16	56	IAmb	IAmb	04 33 02.7	
R33M	Jennings River comp=Z,16nm,1.4s	86.16	22	IAmb	IAmb	04 33 01.3	
R33M	Jennings River baz=224,SNR=8.9	86.16	22	P	P	04 32 59.9	+0.6
J25K	Salcha River, comp=Z,14nm,1.2s	86.18	13	IAmb	IAmb	04 33 00.0	
J25K	Salcha River, baz=211,SNR=12	86.18	13	P	P	04 32 58.9	-0.3
POKR	Poker Flat Res baz=209	86.18	12	P	P	04 32 58.1	-1.0
E18K	Tukpahlearik C comp=Z,4.7nm,0.8s	86.27	7	IAmb	IAmb	04 33 00.4	
E18K	Tukpahlearik C baz=196	86.27	7	P	P	04 32 59.1	-0.4
D17K	Noatak River baz=194	86.29	6	P	P	04 32 59.5	-0.1
G21K	Allakaket comp=Z,6.5nm,0.8s	86.35	9	IAmb	IAmb	04 33 00.8	
G21K	Allakaket baz=203,SNR=9.9	86.35	9	P	P	04 32 59.9	0.0
H23K	Yukon River baz=207	86.40	11	P	P	04 33 00.1	-0.1
K27K	Chicken comp=Z,8.0nm,1.1s	86.45	15	IAmb	IAmb	04 33 02.2	
DLMT	Dillon comp=Z,9.9nm,0.9s	86.45	40	IAmb	IAmb	04 33 03.4	
LDM	Libby Dam comp=Z,17nm,1.1s	86.46	36	IAmb	IAmb	04 33 02.8	
TPB05	Hovey Rd comp=Z,14nm,1.2s	86.51	56	IAmb	IAmb	04 33 04.7	
F20K	Avaraart Lake baz=201	86.52	8	P	P	04 33 00.3	-0.3
C16K	Lisburne Hills	86.66	5	P	P	04 33 01.0	-0.3
M30M	Minto, Yukon comp=Z,13nm,0.9s	86.68	18	IAmb	IAmb	04 33 02.9	
M30M	Minto, Yukon baz=219,SNR=32	86.68	18	P	P	04 33 01.8	+0.2
E19K	Redstone River comp=Z,8.3nm,0.7s	86.70	8	IAmb	IAmb	04 33 02.4	
E19K	Redstone River baz=200,SNR=18	86.70	8	P	P	04 33 01.5	0.0
L29M	L29M comp=Z,15nm,0.9s	86.72	17	IAmb	IAmb	04 33 03.6	
L29M	L29M baz=217,SNR=18	86.72	17	P	P	04 33 02.3	+0.5
N32M	Quiet Lake comp=Z,8.7nm,0.9s	86.73	20	IAmb	IAmb	04 33 03.7	
N32M	Quiet Lake baz=222	86.73	20	P	P	04 33 02.0	+0.1
LOHW	Long Hollow comp=Z,9.6nm,1.4s	86.83	42	IAmb	IAmb	04 33 05.2	
XAN	Xi'an	86.90	307	P	P	04 33 04.9	+1.6
XAN	comp=Z,32nm,1.3s			pmax	pmax		
PRP	Porcupine Dome baz=210	86.93	13	P	P	04 33 02.4	-0.4
FLWY	Flagg Ranch comp=Z,12nm,1.0s	87.00	42	IAmb	IAmb	04 33 06.5	
F21K	Alatna River baz=203	87.01	9	P	P	04 33 03.0	-0.1
YHB	Horse Butte comp=Z,13nm,0.9s	87.01	41	IAmb	IAmb	04 33 06.7	
C17K	DeLong Mountai baz=194	87.04	5	P	P	04 33 03.3	+0.2
G22K	Bettles baz=205	87.05	10	P	P	04 33 03.4	+0.3
SAND	Sanderson comp=Z,8.9nm,0.9s	87.08	57	IAmb	IAmb	04 33 06.7	
PDAR	Pinedale Array comp=Z,2.7nm,0.7s,baz=205,slow=2.6,SNR=30	87.11	43	P	P	04 33 05.2	+0.8
PDAR				PKKPbc	PKKPbc	04 50 53.8	-0.9
	comp=Z,0.5nm,0.7s,baz=107,slow=1.5,SNR=4.9 comp=Z,2.7nm,0.7s						
PDAR	Pinedale Array	87.11	43	P	P	04 33 04.7	+0.3
M31M	Drury Creek, Y baz=221,SNR=5.0	87.11	19	P	P	04 33 03.5	-0.1
G23K	Bananza Creek baz=206	87.11	11	P	P	04 33 03.6	+0.1
YMR	Madison River comp=Z,10.0nm,0.8s	87.11	41	IAmb	IAmb	04 33 07.2	
MNHN	Monahans comp=Z,6.7nm,1.2s	87.11	56	IAmb	IAmb	04 33 06.8	
DAWY	Dawson comp=Z,11nm,1.2s	87.16	16	IAmb	IAmb	04 33 05.1	
DAWY	Dawson baz=216	87.16	16	P	P	04 33 04.3	+0.5
BOZ	Bozeman (W) comp=Z,6.6nm,0.9s	87.16	40	IAmb	IAmb	04 33 06.8	
H17A	Grant Village comp=Z,7.5nm,0.9s	87.22	41	IAmb	IAmb	04 33 08.3	
I26K	Coal Creek Min comp=Z,12nm,1.4s	87.27	14	IAmb	IAmb	04 33 05.5	
I26K	Coal Creek Min baz=213	87.27	14	P	P	04 33 04.4	+0.2
C18K	Utukok River baz=196	87.39	6	P	P	04 33 05.0	+0.1
F22K	John River baz=204	87.47	10	P	P	04 33 05.2	0.0
K29M	Barlow Dome comp=Z,10nm,1.1s	87.47	17	IAmb	IAmb	04 33 07.0	
K29M	Barlow Dome baz=218,SNR=14	87.47	17	P	P	04 33 05.5	+0.1
COLD	Coldfoot comp=Z,7.9nm,0.7s	87.54	10	IAmb	IAmb	04 33 06.8	
COLD	Coldfoot baz=206,SNR=12	87.54	10	P	P	04 33 05.7	+0.2
G24K	Hadweenzic Riv baz=209	87.57	12	P	P	04 33 05.3	-0.3
D19K	Kuna River comp=Z,5.4nm,0.7s	87.58	7	IAmb	IAmb	04 33 06.3	
D19K	Kuna River baz=199	87.58	7	P	P	04 33 05.4	-0.3
E20K	Nigu River baz=200,SNR=18	87.59	8	P	P	04 33 05.7	-0.1
128A	Castleberry Fa comp=Z,4.1nm,0.7s	87.83	55	IAmb	IAmb	04 33 10.0	
I27K	Kandik River baz=214	87.87	14	P	P	04 33 07.1	-0.1
YNE	Yellowstone No comp=Z,13nm,1.2s	87.87	41	IAmb	IAmb	04 33 10.6	
HHC	Hu-ho-hao-te	87.89	314	eP	P	04 33 10.1	+2.2
HHC	comp=Z,9.0nm,0.7s			pmax	pmax		
HHC	comp=Z,56nm,4.5s			pmax	pmax		
G25K	Bearman Lake baz=210	87.89	12	P	P	04 33 07.2	+0.1
D20K	Etivluk River comp=Z,9.8nm,0.9s	87.97	8	IAmb	IAmb	04 33 08.5	
D20K	Etivluk River baz=200,SNR=5.2	87.97	8	P	P	04 33 07.4	-0.1
C19K	Lookout Ridge baz=197	88.00	6	P	P	04 33 07.7	+0.1
E21K	Killik River baz=203	88.06	9	P	P	04 33 07.8	-0.1
E22K	Anaktuvuk Pass comp=Z,10nm,0.9s	88.10	9	IAmb	IAmb	04 33 09.2	
E22K	Anaktuvuk Pass baz=205	88.10	9	P	P	04 33 08.2	0.0
MSTX	Muleshoe comp=Z,7.5nm,0.6s	88.14	53	IAmb	IAmb	04 33 10.7	
I28M	Miner Creek comp=Z,4.7nm,0.8s	88.14	15	IAmb	IAmb	04 33 09.3	
I28M	Miner Creek baz=216,SNR=7.1	88.14	15	P	P	04 33 08.5	0.0
F24K	Squaw Lake comp=Z,7.3nm,0.7s	88.21	11	IAmb	IAmb	04 33 09.9	
F24K	Squaw Lake baz=208,SNR=13	88.21	11	P	P	04 33 08.9	+0.2
OZNA	Ozona comp=Z,9.0nm,0.9s	88.25	57	IAmb	IAmb	04 33 12.0	
129A	Stewart Farms, comp=Z,5.9nm,0.9s	88.32	55	IAmb	IAmb	04 33 12.2	
J30M	Hart River baz=219,SNR=6.5	88.38	17	P	P	04 33 09.8	+0.2
RLMT	Red Lodge comp=Z,6.4nm,0.9s	88.39	41	IAmb	IAmb	04 33 12.8	
E23K	Chandalar comp=Z,5.7nm,0.8s	88.39	10	IAmb	IAmb	04 33 10.7	
E23K	Chandalar baz=207,SNR=6.7	88.39	10	P	P	04 33 09.7	+0.1
MMPY	Sheldon Lake, baz=224,SNR=22	88.40	20	P	P	04 33 10.4	+0.7
H27K	Steamboat Moun comp=Z,4.4nm,0.9s	88.41	14	IAmb	IAmb	04 33 11.1	
H27K	Steamboat Moun baz=214,SNR=7.8	88.41	14	P	P	04 33 09.9	+0.2
KMI2	Kunming	88.50	297	⇓P	P	04 33 12.7	+1.5
KMI2	comp=Z,27nm,1.4s			pmax	pmax		
G26K	Porcupine Rive comp=Z,14nm,1.1s	88.52	13	IAmb	IAmb	04 33 11.6	
G26K	Porcupine Rive baz=212	88.52	13	P	P	04 33 10.6	+0.5
E24K	Your Creek comp=Z,3.3nm,0.7s	88.60	11	IAmb	IAmb	04 33 11.2	
E24K	Your Creek baz=208	88.60	11	P	P	04 33 11.0	+0.5
TGTN	Hyland Airport baz=226	88.61	21	P	P	04 33 11.0	+0.3
C21K	Knifeblade Rid baz=202,SNR=6.2	88.62	8	P	P	04 33 10.9	+0.4
SGCY	Sterling City comp=Z,6.2nm,1.1s	88.62	56	IAmb	IAmb	04 33 14.2	
F25K	Christian Rive comp=Z,4.4nm,0.9s	88.70	12	IAmb	IAmb	04 33 12.5	
F25K	Christian Rive baz=210,SNR=6.7	88.70	12	P	P	04 33 11.4	+0.4
POST	Post comp=Z,8.0nm,0.7s	88.77	55	IAmb	IAmb	04 33 13.7	
BSI	Banda Aceh	88.80	276	P	P	04 33 13.4	+0.8
G27K	Doyon Strip baz=214,SNR=5.0	88.86	13	P	P	04 33 12.0	+0.2
I30M	Mount Dempster comp=Z,5.8nm,0.9s	88.87	16	IAmb	IAmb	04 33 13.0	
I30M	Mount Dempster baz=219,SNR=10	88.87	16	P	P	04 33 12.1	+0.2
TOLK	Toolik Lake Re baz=207	88.92	10	P	P	04 33 12.5	+0.6
ELIB	Princess Elisa	88.98	186	dP	P	04 33 12.7	+0.2

	comp=Z,27nm,0.9s							
D23K	**Nanushuk River**	**89.04**	**9**	IAmb	IAmb	04 33 13.5		
	comp=Z,8.8nm,0.8s							
D23K	**Nanushuk River**	**89.04**	**9**	P	**P**	**04 33 13.0**	**+0.6**	
	baz=206,SNR=8.1							
B21K	**Ikpikpuk River**	**89.08**	**8**	P	**P**	**04 33 13.0**	**+0.5**	
	baz=202							
F26K	**Sheenjek River**	**89.08**	**12**	IAmb	IAmb	04 33 14.4		
	comp=Z,4.8nm,0.9s							
F26K	**Sheenjek River**	**89.08**	**12**	P	**P**	**04 33 13.2**	**+0.4**	
	baz=212							
JCT	**Junction City**	**89.14**	**58**	IAmb	IAmb	04 33 15.8		
	comp=Z,6.7nm,0.8s							
H29M	**Whitestone**	**89.15**	**15**	IAmb	IAmb	04 33 14.2		
	comp=Z,11nm,0.8s							
H29M	**Whitestone**	**89.15**	**15**	P	**P**	**04 33 13.2**	**+0.2**	
	baz=217,SNR=14							
E25K	**Arctic Village**	**89.17**	**12**	IAmb	IAmb	04 33 15.1		
	comp=Z,10nm,1.4s							
E25K	**Arctic Village**	**89.17**	**12**	P	**P**	**04 33 13.4**	**+0.3**	
	baz=210							
SN07	**Snyder 07**	**89.25**	**55**	IAmb	IAmb	04 33 15.7		
	comp=Z,4.8nm,0.8s							
AMTX	**Amarillo**	**89.33**	**53**	IAmb	IAmb	04 33 16.4		
	comp=Z,11nm,1.2s							
D24K	**Happy Valley**	**89.50**	**10**	P	**P**	**04 33 15.1**	**+0.5**	
	baz=207							
CMAR	**Chiang Mai Arr**	**89.55**	**289**	P	**P**	**04 33 17.7**	**+1.7**	
	comp=Z,16nm,0.8s,baz=111,slow=2.8,SNR=70							
	comp=Z,16nm,0.8s							
CMAR	**Chiang Mai Arr**	**89.55**	**289**	P	**P**	**04 33 17.4**	**+1.4**	
CHTO	**Chiang Mai**	**89.67**	**290**	P	**P**	**04 33 17.9**	**+1.3**	
EPYK	**Eagle Plains**	**89.68**	**15**	P	**P**	**04 33 15.7**	**+0.2**	
	baz=219							
G29M	**Pine Creek**	**89.79**	**15**	IAmb	IAmb	04 33 17.4		
	comp=Z,7.7nm,0.9s							
G29M	**Pine Creek**	**89.79**	**15**	P	**P**	**04 33 16.2**	**+0.2**	
	baz=217,SNR=7.6							
PZH	**PanZhiHua**	**89.82**	**298**	P	**P**	**04 33 17.6**	**+0.4**	
C23K	**Itkillik River**	**89.84**	**9**	P	**P**	**04 33 16.3**	**+0.2**	
	baz=206							
H31M	**Peel River**	**89.86**	**16**	IAmb	IAmb	04 33 17.1		
	comp=Z,9.1nm,1.1s							
H31M	**Peel River**	**89.86**	**16**	P	**P**	**04 33 16.4**	**+0.1**	
	baz=221,SNR=5.8							
B22K	**Teshekpuk Lake**	**89.90**	**8**	P	**P**	**04 33 16.4**	**0.0**	
	baz=203							
F28M	**Old Crow**	**89.92**	**14**	IAmb	IAmb	04 33 17.9		
	comp=Z,4.7nm,1.0s							
F28M	**Old Crow**	**89.92**	**14**	P	**P**	**04 33 16.7**	**+0.1**	
	baz=216,SNR=5.5							
APMT	**Aspermont**	**89.94**	**55**	IAmb	IAmb	04 33 19.3		
	comp=Z,7.4nm,0.8s							
E27K	**Coleen River**	**90.02**	**13**	P	**P**	**04 33 17.4**	**+0.4**	
	baz=214							
TROLL	**Troll, Antarti**	**90.06**	**180**	⇓P	**P**	**04 33 17.7**	**+0.2**	
	comp=Z,508nm,0.5s							
D25K	**Kavik River**	**90.07**	**11**	P	**P**	**04 33 16.9**	**-0.4**	
	baz=210							
BRDY	**Brady**	**90.08**	**57**	IAmb	IAmb	04 33 20.1		
	comp=Z,6.3nm,1.0s							
G30M	**tAoh Zraii Nji**	**90.28**	**15**	P	**P**	**04 33 18.2**	**-0.1**	
	baz=219,SNR=16							
SNAA	**Sanae**	**90.33**	**178**	⇓P	**P**	**04 33 18.5**	**-0.3**	
	comp=Z,138nm,0.7s							
SNAA	**Sanae**	**90.33**	**178**	P	**P**	**04 33 18.4**	**-0.3**	
	comp=Z,4.6nm,0.6s,baz=200,slow=6.1,SNR=23							
	comp=Z,4.6nm,0.6s							
SNAA	**Sanae**	**90.33**	**178**	P	**P**	**04 33 18.7**	**0.0**	
A21K	**Barrow**	**90.43**	**7**	P	**P**	**04 33 18.4**	**-0.4**	
	baz=200							
GO06	**Curarrehue**	**90.54**	**132**	P	**P**	**04 33 21.0**	**+0.6**	
GO06				IAmb	IAmb	04 33 23.2		
	comp=Z,8.3nm,0.9s							
G31M	**Satah River**	**90.73**	**16**	P	**P**	**04 33 20.2**	**0.0**	
	baz=221,SNR=14							
E28M	**Babbage River**	**90.80**	**13**	IAmb	IAmb	04 33 21.9		
	comp=Z,10.0nm,1.1s							
E28M	**Babbage River**	**90.80**	**13**	P	**P**	**04 33 20.8**	**+0.1**	
	baz=216							
C27K	**Jago River**	**90.81**	**11**	P	**P**	**04 33 20.8**	**+0.1**	
	baz=212							
F30M	**Barrier River**	**90.88**	**15**	IAmb	IAmb	04 33 23.1		
	comp=Z,5.9nm,0.9s							
F30M	**Barrier River**	**90.88**	**15**	P	**P**	**04 33 21.8**	**+0.8**	
	baz=220,SNR=6.2							
VNA2	**Neumayer--Watz**	**90.90**	**177**	⇓P	**P**	**04 33 21.2**	**0.0**	
	comp=Z,17nm,0.6s,baz=177,slow=4.9							
E29M	**Blow River**	**90.99**	**14**	IAmb	IAmb	04 33 22.2		
	comp=Z,4.5nm,1.0s							
E29M	**Blow River**	**90.99**	**14**	P	**P**	**04 33 21.6**	**+0.1**	
	baz=218,SNR=5.5							
VNA1	**Neumayer--Stat**	**91.12**	**177**	P	**P**	**04 33 22.8**	**+0.6**	
	comp=Z,18nm,0.8s							
F31M	**Tsiigehtchic**	**91.26**	**16**	P	**P**	**04 33 22.8**	**+0.1**	
	baz=221							
RSSD	**Black Hills**	**91.31**	**44**	P	**P**	**04 33 24.0**	**+0.1**	
RSSD				IAmb	IAmb	04 33 25.4		
	comp=Z,10nm,1.1s							
INK	**Inuvik**	**91.96**	**15**	P	**P**	**04 33 26.1**	**+0.2**	
	baz=222							
SONM	**Songino Array**	**94.14**	**319**	P	**P**	**04 33 36.4**	**-0.2**	
	comp=Z,0.7nm,0.6s,baz=142,slow=6.6,SNR=4.0							
	comp=Z,0.7nm,0.6s							
SONM	**Songino Array**	**94.14**	**319**	P	**P**	**04 33 35.3**	**-1.3**	
YKA	**Yellowknife Ar**	**94.30**	**25**	P	**P**	**04 33 36.7**	**-0.1**	
	comp=Z,2.8nm,0.7s,baz=244,slow=4.5,SNR=9.7							
	comp=Z,2.8nm,0.7s							
YKA	**Yellowknife Ar**	**94.30**	**25**	P	**P**	**04 33 36.0**	**-0.8**	
MORE	**Moreh**	**95.47**	**294**	IAmb	IAmb	04 33 52.1		
	comp=Z,98nm,0.4s							
MKAR	**Makanchi Array**	**109.75**	**314**	PKiKP	**PKiKP**	**04 38 44.6**	**-1.0**	
	comp=Z,0.7nm,0.5s,baz=175,slow=0.3,SNR=5.5							
MKAR				PKKPbc	**PKKPbc**	**04 49 50.5**	**-1.1**	
	comp=Z,0.5nm,0.6s,baz=268,slow=3.6,SNR=5.7							
KURBB	**Kurchatov Arra**	**112.48**	**318**	PKiKP	**PKiKP**	**04 38 49.7**	**-0.8**	
	comp=Z,1.4nm,0.7s,baz=95,slow=1.6,SNR=7.3							
BVAR	**Borovoye Array**	**117.43**	**321**	PKP	**PKPdf**	**04 38 59.6**	**-0.4**	
	comp=Z,2.2nm,0.5s,baz=102,slow=2.8,SNR=10.0							
ARTI	**Arti**	**123.51**	**326**	PKP	**PKPdf**	**04 39 11.1**	**-0.5**	
	comp=Z,2.5nm,0.5s,baz=223,slow=0.6,SNR=7.0							
ARTI	**Arti**	**123.51**	**326**		**PKPdf**	**04 39 10.9**	**-0.7**	
AB31	**Akbulak array**	**124.53**	**318**		**PKPdf**	**04 39 13.1**	**-0.7**	
ARCES	**ARCESS Array B**	**126.67**	**350**	PKP	**PKPdf**	**04 39 17.4**	**+0.1**	
	comp=Z,3.6nm,0.7s,baz=32,slow=1.2,SNR=18							
ARCES	**ARCESS Array B**	**126.67**	**350**		**PKPdf**	**04 39 16.1**	**-1.2**	
MAKGR	**Makgori**	**131.10**	**207**		**PKiKP**	**04 39 27.9**	**-0.4**	
FINES	**FINESS Array B**	**133.59**	**344**	PKhKP	PKPpre	04 39 23.0		
	comp=Z,2.2nm,0.9s,baz=38,slow=3.4,SNR=6.0							
NOA	**NORSAR Array B**	**136.69**	**354**	PKP	**PKPdf**	**04 39 36.8**	**+0.3**	
	comp=Z,1.3nm,0.7s,baz=13,slow=3.8,SNR=3.4							
AKASG	**Malin Array Be**	**141.07**	**333**	PKhKP	PKPpre	04 39 38.3		
	comp=Z,1.1nm,0.5s,baz=46,slow=3.9,SNR=8.2							
AK10	**Malin Array Si**	**141.13**	**333**	PKP	**PKPdf**	**04 39 44.2**	**-0.6**	
LAWE	**Loch Awe, Argy**	**141.53**	**7**	*e*P	**PKPdf**	**04 39 40.3**	**-5.0**	
EKA	**Eskdalemuir Ar**	**142.66**	**5**	PKhKP	PKPpre	04 39 43.4		
	comp=Z,1.7nm,0.5s,baz=306,slow=3.0,SNR=13							
SORM	**Soroca**	**143.31**	**330**	⇓P	PKPab	04 39 46.4	-0.3	
IGLA	**Glengowla, Co**	**143.66**	**12**	*e*P	PKPab	04 39 46.8	-1.0	
BSEG	**Bad Segeberg**	**143.75**	**352**	*e*PKPbc	PKPbc	04 39 48.4	+0.3	
	baz=15,slow=2.8							
KMPD	**K-Podol'skiy**	**143.86**	**332**	PKP	PKPbc	04 39 47.6	-1.1	
HPK	**Haverah Park**	**144.14**	**4**	*e*P	PKPbc	04 39 48.7	-0.7	
GORT1	**Trebel**	**144.52**	**351**	*e*PKPbc	**PKPab**	**04 39 51.3**	**+0.4**	
	baz=15,slow=2.8							
KWP	**Kalwaria Pacla**	**144.54**	**337**	*e*PKP	**PKPab**	**04 39 51.4**	**+0.1**	
WLF1	**Llynfaes**	**144.56**	**7**	*e*P	PKPbc	04 39 50.0	-0.7	
RUE	**Ruedersdorf**	**144.57**	**348**	*e*PKPbc	**PKPab**	**04 39 51.1**	**-0.1**	
	baz=15,slow=2.8							
VASR	**Vaslui**	**144.64**	**329**	⇑P	**PKPab**	**04 39 51.9**	**+0.2**	
LBWR	**Ladybower, Pea**	**144.69**	**4**	*e*P	**PKPdf**	**04 39 50.5**	**-0.5**	
RETH	**Rethem/Aller,**	**145.04**	**352**	*e*PKPbc	**PKPab**	**04 39 52.7**	**-0.2**	
	baz=15,slow=2.8							
OJC	**Ojcow**	**145.06**	**340**	*e*PKP	**PKPbc**	**04 39 52.6**	**+0.2**	
OJC	**Ojcow**	**145.06**	**340**	PKP	**PKPdf**	**04 39 51.0**	**-0.7**	
FOEL	**Foel Wylfa**	**145.08**	**6**	*e*P	**PKPdf**	**04 39 51.3**	**-0.4**	
BURAR	**Bucovina Array**	**145.12**	**332**	⇑P	**PKPab**	**04 39 53.9**	**+0.2**	
BURAR	**Bucovina Array**	**145.12**	**332**		**PKPbc**	**04 39 53.0**	**+0.1**	
TLCR		**145.12**	**326**	⇑P	**PKPbc**	**04 39 53.0**	**+0.3**	
IWEX	**Carrickbyrne,**	**145.13**	**10**	*e*P	**PKPdf**	**04 39 52.1**	**+0.4**	
FLTG	**Flechtingen**	**145.17**	**350**	*e*PKPbc	**PKPbc**	**04 39 52.9**	**+0.2**	
	baz=15,slow=2.8							
GHRR		**145.24**	**329**	⇑P	**PKPab**	**04 39 54.5**	**+0.5**	
STHS	**Stebnicka Huta**	**145.25**	**338**	*e*PKP	**PKPab**	**04 39 53.6**	**-0.4**	
KOLS	**Kolonicke sedl**	**145.28**	**337**	*e*PKP	**PKPab**	**04 39 53.8**	**-0.3**	
TESR	**Tescani**	**145.29**	**330**	⇓P	**PKPbc**	**04 39 53.2**	**0.0**	
CWF	**Charnwood Fore**	**145.38**	**4**	*e*P	**PKPdf**	**04 39 52.6**	**+0.4**	
BR131	**Keskin Array S**	**145.40**	**315**		**PKPbc**	**04 39 53.4**	**-0.5**	
BRTR	**Keskin Array B**	**145.40**	**315**	PKPbc	**PKPbc**	**04 39 53.9**	**-0.1**	
	comp=Z,6.6nm,0.7s,baz=139,slow=4.9,SNR=37							
BRTR	**Keskin Array B**	**145.40**	**315**		**PKPdf**	**04 39 53.1**	**+0.3**	
ASSE	**Asse, Remlinge**	**145.46**	**351**	*e*PKPbc	**PKPbc**	**04 39 53.9**	**+0.5**	
	baz=15,slow=2.8							
HLM1	**Long Mynd**	**145.48**	**6**	*e*P	**PKPdf**	**04 39 52.9**	**+0.5**	
KSP	**Ksiaz**	**145.52**	**344**	*e*PKP	**PKPbc**	**04 39 53.7**	**0.0**	
ONER	**Baraj Valea Uz**	**145.54**	**330**	⇓P	**PKPab**	**04 39 55.0**	**-0.2**	
TPGR	**Topolog**	**145.55**	**326**	⇑P	**PKPab**	**04 39 55.1**	**-0.2**	
NIE	**Niedzica**	**145.58**	**339**	*e*PKP	**PKPab**	**04 39 54.8**	**-0.5**	
IBBN	**Ibnbburen**	**145.65**	**354**	*e*PKPbc	**PKPbc**	**04 39 54.6**	**+0.6**	
	baz=15,slow=2.8							
VRI	**Vrincioaia**	**145.71**	**329**	⇑P	**PKPbc**	**04 39 54.4**	**0.0**	
PLOR	**Plostina**	**145.76**	**329**	⇓P	**PKPab**	**04 39 55.4**	**-0.7**	
CLZ	**Clausthal**	**145.78**	**351**	*e*PKPbc	**PKPbc**	**04 39 55.2**	**+0.7**	
	baz=15,slow=2.8							
OSTC	**Ostas**	**145.80**	**344**	⇑*e*PKP	**PKPab**	**04 39 55.5**	**-0.6**	
TIRR	**Tirgusor**	**145.82**	**326**		**PKPdf**	**04 39 52.7**	**-0.5**	
UPC	**Upice**	**145.90**	**344**	⇑*e*PKP	**PKPbc**	**04 39 55.4**	**+0.6**	
STEB	**Steborice**	**145.93**	**342**	⇑*e*PKP	**PKPbc**	**04 39 55.5**	**+0.6**	
DPC	**Dobruska-Polom**	**145.96**	**344**	⇑*e*PKP	**PKPbc**	**04 39 55.9**	**+0.8**	
MCH1	**Michaelchurch**	**145.98**	**6**	*e*P	**PKPbc**	**04 39 54.4**	**-0.5**	
OZUR		**146.00**	**330**	⇑P	**PKPbc**	**04 39 55.9**	**+0.6**	
BRG	**Berggiesshubel**	**146.05**	**347**	*e*PKPbc	**PKPbc**	**04 39 55.9**	**+0.7**	
	baz=15,slow=2.8							
BRG	**Berggiesshubel**	**146.05**	**347**	*i* PKP	**PKPbc**	**04 39 55.7**	**+0.5**	
BRG				Amp		04 39 56.6		
	comp=Z,14nm,0.7s							
KRLC	**Kraliky**	**146.09**	**343**	⇑*e*PKP	**PKPbc**	**04 39 55.5**	**+0.1**	
LANS	**Liptovska Anna**	**146.09**	**340**	*e*PKP	**PKPab**	**04 39 56.9**	**-0.4**	
GTTG	**Gottingen**	**146.13**	**351**	*e*PKPbc	**PKPbc**	**04 39 56.1**	**+0.6**	
	baz=15,slow=2.8							
MORC	**Moravsky Berou**	**146.14**	**342**	⇓P	**PKPbc**	**04 39 56.1**	**+0.5**	
MORC	**Moravsky Berou**	**146.14**	**342**	*e*PKP	**PKPbc**	**04 39 55.6**	**0.0**	
MORC				*ep*PKP	pPKPab	04 41 50.9	-0.2	
MONM	**Monmouth**	**146.16**	**6**	*e*P	**PKPbc**	**04 39 54.6**	**-0.8**	
NEUB	**Neuenburg**	**146.16**	**349**	*e*PKPbc	**PKPbc**	**04 39 56.2**	**+0.7**	
	baz=15,slow=2.8							
PVCC	**Panska Ves**	**146.23**	**346**	⇑*e*PKP	**PKPbc**	**04 39 56.3**	**+0.5**	
MBAR	**Mbarara**	**146.34**	**239**		**PKPdf**	**04 39 55.5**	**+0.3**	
MLR	**Muntele Rosu**	**146.36**	**329**	⇑P	**PKPbc**	**04 39 56.8**	**+0.3**	
HSKC	**Hora Svate Kat**	**146.41**	**347**	⇑*e*PKP	**PKPbc**	**04 39 56.8**	**+0.5**	
CJR	**Cluj-Napoca**	**146.52**	**333**	⇑P	**PKPbc**	**04 39 56.9**	**+0.2**	
SAHE	**Sakarya_HENDEK**	**146.62**	**319**	⇑P	**PKPbc**	**04 39 56.8**	**-0.4**	
KASTN	**Kahler Asten**	**146.67**	**353**	*e*PKPbc	**PKPbc**	**04 39 57.5**	**+0.5**	
	baz=15,slow=2.8							
MOX	**Moxa**	**146.73**	**349**	*e*PKPbc	**PKPbc**	**04 39 57.7**	**+0.5**	
	baz=15,slow=2.8							
PRU	**Pruhonice**	**146.74**	**345**	⇑*e*PKP	**PKPbc**	**04 39 57.3**	**+0.1**	
MARR	**Marisel-Cluj**	**146.76**	**333**	⇓P	**PKPbc**	**04 39 57.8**	**+0.3**	
PLN	**Plauen**	**146.79**	**348**	*e*PKPbc	**PKPbc**	**04 39 57.9**	**+0.6**	
	baz=15,slow=2.8							
TANN	**Tannenbergstha**	**146.79**	**348**	*e*PKPbc	**PKPbc**	**04 39 58.1**	**+0.7**	
	baz=15,slow=2.8							
TANN				*ep*PKPbc	pPKPab	04 41 53.9	+0.7	
MMAI	**Mount Meron Ar**	**146.80**	**303**	PKPbc	**PKPbc**	**04 39 58.9**	**+0.9**	
	comp=Z,8.0nm,0.5s,baz=49,slow=5.6,SNR=16							
MMAI				pPKPbc	**pPKPdf**	**04 41 52.2**	**-0.9**	
	comp=Z,0.7nm,0.3s,baz=42,slow=5.1,SNR=2.2							
UBBA	**Unterbreizbach**	**146.83**	**351**	*e*PKPbc	**PKPbc**	**04 39 57.7**	**+0.5**	
	baz=15,slow=2.8							
VOIR		**146.83**	**330**	⇓P	**PKPbc**	**04 39 58.5**	**+0.9**	
VRAC	**Vranov**	**146.83**	**343**	PKPbc	**PKPbc**	**04 39 57.9**	**+0.4**	
	comp=Z,6.0nm,0.6s,baz=44,slow=6.8,SNR=4.6							
VRAC	**Vranov**	**146.83**	**343**	⇑P	**PKPbc**	**04 39 57.7**	**+0.3**	
VRAC	**Vranov**	**146.83**	**343**	*e*PKP	**PKPbc**	**04 39 57.8**	**+0.3**	
VRAC				*ep*PKP	pPKPab	04 41 53.5	-0.1	
DRGR		**146.84**	**334**	⇓P	**PKPbc**	**04 39 57.9**	**+0.3**	
JAVC	**Velka Javorina**	**146.92**	**341**	*e*PKP	**PKiKP**	**04 39 59.1**	**-0.7**	
JAVC				*ep*PKP	pPKPab	04 41 54.7	+0.7	
NKC	**Novy Kostel**	**146.97**	**348**	⇑*e*PKP	**PKPbc**	**04 39 58.1**	**+0.3**	
PSZ	**Piszkesteto**	**147.00**	**338**		**PKPdf**	**04 39 55.5**	**+0.3**	
ARR	**Arges**	**147.08**	**330**	⇑P	**PKiKP**	**04 39 59.6**	**-0.6**	
KRUC	**Moravsky**	**147.11**	**343**	*e*PKP	**PKPbc**	**04 39 58.5**	**+0.3**	
KRUC				*ep*PKP	**pPKPab**	**04 41 54.3**	**-0.3**	
TREC	**Trest**	**147.15**	**344**	⇑*e*PKP	**PKPbc**	**04 39 58.4**	**+0.1**	
ZVC	**Zvikov**	**147.34**	**345**	⇑*e*PKP	**PKPbc**	**04 39 59.1**	**+0.3**	
UCC	**Uccle**	**147.39**	**358**	*d*PKP	**PKPbc**	**04 39 59.1**	**+0.3**	
ROTZ	**Rotzenmuhle**	**147.46**	**348**	*e*PKPbc	**PKPbc**	**04 39 59.9**	**+0.8**	
	baz=15,slow=2.8							
MODS	**Modra-Piesok**	**147.47**	**341**	*e*PKP	**PKiKP**	**04 40 00.5**	**-0.4**	
MODS				*e*		04 40 04.1		
MEM	**Membach**	**147.48**	**356**	*d*P	**PKPbc**	**04 39 59.5**	**+0.3**	
BSTI	**Sart Tilman**	**147.54**	**356**	*d*PKP	**PKPbc**	**04 39 59.9**	**+0.6**	
TNS	**Taunus Mts**	**147.63**	**353**	*e*PKPbc	**PKPbc**	**04 40 00.2**	**+0.7**	
	baz=15,slow=2.8							
GRF	**Grafenberg Arr**	**147.72**	**349**	*e*PKPbc	**PKiKP**	**04 40 00.6**	**-0.7**	
	baz=15,slow=2.8							
BHOU	**Houvegnez**	**147.74**	**355**	*d*PKP	**PKPbc**	**04 40 00.4**	**+0.6**	
BGES	**Gesves**	**147.77**	**357**	*d*PKP	**PKPbc**	**04 39 59.8**	**0.0**	
KHC	**Kasperske Hory**	**147.77**	**346**		**PKPbc**	**04 39 59.7**	**-0.2**	
KHC	**Kasperske Hory**	**147.77**	**346**	⇑*e*PKP	**PKPbc**	**04 39 59.1**	**-0.9**	
KHC				*e*PKPAB	**PKPab**	**04 40 04.7**	**+0.6**	
BMRD	**Maredsous**	**147.87**	**357**	*d*PKP	**PKPbc**	**04 40 00.2**	**+0.2**	
GZR	**Gura Zlata**	**147.91**	**332**	⇑P	**PKPbc**	**04 40 00.1**	**-0.3**	
WET	**Wettzell**	**147.91**	**347**	*e*PKPbc	**PKPbc**	**04 40 00.9**	**+0.6**	
	baz=15,slow=2.8							
RCHB	**Rochefort**	**147.99**	**356**	*d*PKP	**PKPbc**	**04 40 00.5**	**+0.1**	
GEC2	**GERESS Array S**	**148.01**	**346**	*e*PKPbc	**PKPbc**	**04 40 01.2**	**+0.6**	
	baz=15,slow=2.8							
GEC2				*ep*PKPbc	**pPKPab**	**04 41 57.7**	**-0.4**	
GERES	**GERESS Array B**	**148.01**	**346**	PKPbc	**PKPbc**	**04 40 00.8**	**+0.1**	
	comp=Z,8.0nm,0.6s,baz=123,slow=4.9,SNR=57							
GERES				pPKPbc	**pPKPdf**	**04 41 55.2**	**+0.7**	
	comp=Z,0.8nm,0.8s,baz=94,slow=2.0,SNR=2.4							
GERES	**GERESS Array B**	**148.01**	**346**		**PKPbc**	**04 40 00.3**	**-0.4**	
WINA	**Alland / Wiene**	**148.07**	**342**	*e*PKP	**PKPbc**	**04 40 01.2**	**+0.5**	
	comp=Z,7.9nm,0.6s							
DOU	**Dourbes**	**148.08**	**357**	*d*PKP	**PKPbc**	**04 40 00.9**	**+0.3**	
BZS	**Buzias**	**148.23**	**334**	⇑P	**PKPbc**	**04 40 01.3**	**+0.1**	
CONA	**Conrad Observa**	**148.29**	**342**	*i* PKP	**PKPbc**	**04 40 01.9**	**+0.6**	
	comp=Z,11nm,0.7s,SNR=6.8							
CONA				*ep*PKiKP	**pPKiKP**	**04 41 59.6**	**-0.1**	
	comp=Z,8.7nm,1.0s							
RONA	**Rosalia, Austr**	**148.37**	**342**	*e*PKP	**PKPbc**	**04 40 01.9**	**+0.4**	
	comp=Z,11nm,0.6s							
RONA				*ep*PKiKP	**pPKiKP**	**04 42 00.1**	**+0.3**	
	comp=Z,7.3nm,0.9s							
WLF	**Walferdange**	**148.41**	**355**	*d*PKP	**PKiKP**	**04 40 02.4**	**-0.4**	
WLF	**Walferdange**	**148.41**	**355**	*e*PKPbc	**PKiKP**	**04 40 02.8**	**0.0**	
	baz=15,slow=2.8							
HERR	**Herculane**	**148.47**	**332**	⇑P	PKPdf	04 39 46.5	-11	
MOA	**Molln**	**148.80**	**344**	*e*PKP	**PKPbc**	**04 40 02.9**	**+0.3**	
	comp=Z,10nm,1.2s							
JSA	**Saint Aubin**	**148.84**	**6**	*e*P	**PKPbc**	**04 40 02.3**	**-0.2**	
MDVR	**Moldovita**	**148.85**	**333**	⇑P	**PKPbc**	**04 40 03.2**	**+0.3**	
STU	**Stuttgart**	**148.94**	**351**	*e*PKPbc	**PKiKP**	**04 40 03.5**	**-0.3**	
	baz=15,slow=2.8							
ARSA	**Arzberg**	**149.00**	**342**	*e*PKP	**PKiKP**	**04 40 03.8**	**-0.3**	
	comp=Z,2.4nm,0.6s							
BIOA	**Bad Ischl, Aus**	**149.10**	**345**	*e*PKP	**PKPbc**	**04 40 03.4**	**+0.1**	
	comp=Z,3.1nm,0.4s							
FUR	**Furstenfeldbru**	**149.18**	**348**	*e*PKPbc	**PKiKP**	**04 40 04.3**	**-0.1**	
	baz=15,slow=2.8							
SESA	**Seetaler Alpe,**	**149.39**	**343**	*i* PKP	**PKPbc**	**04 40 04.2**	**0.0**	
	comp=Z,38nm,0.6s,SNR=7.0							
BFO	**Black Forest**	**149.50**	**352**		**PKPbc**	**04 40 04.0**	**-0.2**	
BFO	**Black Forest**	**149.50**	**352**	*e*PKPbc	**PKiKP**	**04 40 04.7**	**-0.4**	
	baz=15,slow=2.8							
LESA	**Schwarzleotal**	**149.58**	**346**	*e*PKP	**PKPbc**	**04 40 04.8**	**+0.2**	
	comp=Z,6.2nm,0.5s							
SOKA	**Soboth**	**149.66**	**342**	*e*PKP	**PKPbc**	**04 40 04.5**	**-0.3**	
	comp=Z,12nm,1.0s							
KBA	**Koelnbreinsper**	**149.75**	**345**	*e*PKP	**PKPbc**	**04 40 05.2**	**+0.1**	
	comp=Z,10nm,0.5s							
BOVS	**Bovan**	**149.76**	**331**	⇑P	**PKPbc**	**04 40 04.7**	**-0.3**	
AKAS	**Kas**	**149.89**	**312**		**PKPbc**	**04 40 04.7**	**-1.0**	
WATA	**Walderalm**	**149.91**	**347**	*e*PKP	**PKPbc**	**04 40 05.0**	**-0.5**	
	comp=Z,9.5nm,0.6s							
RETA	**Reutte**	**149.93**	**348**	*e*PKP	**PKPbc**	**04 40 05.2**	**-0.2**	
	comp=Z,4.5nm,0.6s							
WTTA	**Wattenberg**	**149.96**	**347**	*i* PKP	**PKPbc**	**04 40 05.4**	**-0.2**	
	comp=Z,12nm,0.6s,SNR=9.5							
MOTA	**Moosalm**	**150.00**	**348**	*e*PKP	**PKPbc**	**04 40 05.2**	**-0.4**	
	comp=Z,12nm,0.9s							
MOTA				*ep*PKiKP	**pPKiKP**	**04 42 03.4**	**+0.1**	
	comp=Z,14nm,1.6s							
MYKA	**Terra Mystica**	**150.09**	**344**	*e*PKP	**PKPbc**	**04 40 05.4**	**-0.4**	
	comp=Z,11nm,0.5s							
SQTA	**Sankt Quirin**	**150.09**	**348**	*e*PKP	**PKPbc**	**04 40 05.6**	**-0.2**	
	comp=Z,16nm,0.6s							
ABTA	**Abfaltersbach**	**150.26**	**346**	*i* PKP	**PKPbc**	**04 40 05.7**	**-0.5**	
	comp=Z,21nm,0.6s,SNR=5.9							
DAVA	**Damuels**	**150.28**	**349**	*e*PKP	**PKiKP**	**04 40 06.8**	**0.0**	
	comp=Z,14nm,0.7s							
DAVA				*ep*PKiKP	**pPKiKP**	**04 42 03.9**	**0.0**	
	comp=Z,8.4nm,1.4s							
FETA	**Feichten**	**150.38**	**348**	*e*PKP	**PKPbc**	**04 40 06.1**	**-0.4**	
	comp=Z,13nm,0.8s							
FETA				*ep*PKiKP	**pPKPbc**	**04 42 03.5**	**+0.4**	
	comp=Z,5.6nm,1.0s							
LJU	**Ljubljana**	**150.38**	**343**	*i* PKPbc	**PKiKP**	**04 40 06.7**	**-0.3**	
BOJS	**Bojanci**	**150.66**	**341**	*i* PKPdf	**PKiKP**	**04 40 07.7**	**+0.2**	
ESDC	**Sonseca Array**	**157.89**	**13**	PKPab	**PKPab**	**04 40 45.9**	**-1.3**	
	comp=Z,2.4nm,0.9s,baz=347,slow=4.6,SNR=9.8							
KEST	**Kesra**	**161.40**	**342**	PKPab	**PKPab**	**04 41 02.3**	**-0.4**	
	comp=Z,3.4nm,0.8s,baz=42,slow=7.4,SNR=4.3							
DBIC	**Dimbokro**	**166.65**	**148**	PKPab	**PKPab**	**04 41 26.4**	**+0.2**	
	comp=Z,5.8nm,0.9s,baz=221,slow=6.4,SNR=4.1							
DBIC	**Dimbokro**	**166.65**	**148**		**PKPab**	**04 41 25.0**	**-1.2**	
TORD	**Torodi Ar. Bea**	**174.99**	**174**	PKP	**PKPdf**	**04 40 23.6**	**-1.1**	
	comp=Z,2.3nm,0.8s,baz=349,slow=1.0,SNR=12							
TORD				PKPab	**PKPab**	**04 42 03.1**	**0.0**	
	comp=Z,1.0nm,0.6s,baz=180,slow=3.3,SNR=5.1							

AFAD ***07*** *04:25:57.8, 35.97N×31.44E, h20km±2km, ML2.4*
*ISK

s-min=5.0km az=41.0
DJA ***07*** *04:44:13.3±0.1, 7°S±2°×10°6E±°, h102km±1km, M5.4/105, mB5.8/59, mb5.5/105, MLv5.7/63, Mw5.1/51, Mw(mB)5.3/59, MwMwp4.9/3, Mwp5.2/3*
GFZ ***07*** *04:44:14.8±0.3, 6°S±2°×10°6E±°, h117km±2km, M5.3/99, mb5.5/99*
GFZ ***07*** *04:44:14.8, 6°.35S×106°.25E, h110km, Mw5.0/41, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr4.38; Mθθ-0.57; Mφφ-3.80; Mrθ2.14; Mθφ 1.24; Mφr0.26; Fault plane solution: M₀4.81166×10¹⁶ NP1: φs140.52173°, δ51.90846°, λ62.56683°. NP2:φs0.59949°, δ45.69129°, λ120.44482°. Principal axes: T 5.2242, Plg68.4596°, Azm347.9872°; N -0.9743, Plg21.2596°, Azm158.2786°; P -4.2500, Plg3.3080°, Azm249.5671°;*
GCMT ***07*** *04:44:15.6±0.3, 6°.64S±0°.02×106°.29E±0°.02, h99km±2km, MW5.2/102, Moment Tensor Solution. s42,c56; s102,c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.60±.20; Mθθ-3.35±.25; Mφφ-2.25±.27; Mrθ-0.90±.17; Mθφ-4.84±.18; Mφr0.76±.20; Best double couple: M₀6.81400×10¹⁶ NP1:φs32.00000°, δ47.00000°, λ67.00000°. NP2:φs244.00000°, δ48.00000°, λ113.00000°. Principal axes: T 5.9550, Plg73.0000°, Azm226.0000°; N 1.7180, Plg17.0000°, Azm49.0000°; P -7.6730, Plg1.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 04:44:13.2±0.3, **6°.40S**±0°.03×**106°.21E**±0°.03, **h110**km±1km, **h110km:pP-P, n1152**, σ1°**35**/1244, **mb5.3**/226, **54C-21D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.70**	**150**	P	**Pn**	**04 44 30.4**	**-1.1**
SKJI				S	**Sn**	**04 44 42.6**	**-2.7**
LEM	**Lembang**	**1.46**	**107**	P	**Pn**	**04 44 40.9**	**+1.1**
	11μm,0.5s,baz=241,slow=4.3,SNR=523						
LEM				LR	LR	04 44 56.5	
	comp=Z,810nm,19.4s,baz=195,slow=29						
LEM				S	**Sn**	**04 45 00.9**	**+1.1**
	20μm,0.6s,baz=78,slow=21,SNR=17						
LEM	**Lembang**	**1.46**	**107**	P	**Pn**	**04 44 40.7**	**+1.0**
BBJI	**Bungbulang**	**1.78**	**127**	P	**Pn**	**04 44 42.4**	**-1.1**
BBJI	**Bungbulang**	**1.78**	**127**		**Pn**	**04 44 42.3**	**-1.1**
BBJI					**Sn**	**04 45 04.4**	**-2.2**
BBJI	**Bungbulang**	**1.78**	**127**	P	**Pn**	**04 44 42.3**	**-1.2**
BBJI	**Bungbulang**	**1.78**	**127**	P	**Pn**	**04 44 42.5**	**-1.0**
KASI	**Kota Agung**	**1.91**	**297**	P	**Pn**	**04 44 47.0**	**+1.9**
KLI	**Kotabumi**	**2.03**	**318**	P	**Pn**	**04 44 49.7**	**+3.1**
KLSI		**2.25**	**319**	P	**Pn**	**04 44 52.7**	**+3.3**
LWLI	**Liwa**	**2.54**	**303**	P	**Pn**	**04 44 55.6**	**+2.3**
PMBI	**Palembang**	**3.73**	**337**	P	**Pn**	**04 45 13.2**	**+4.2**
PMBI	**Palembang**	**3.73**	**337**		**Pn**	**04 45 10.8**	**+1.8**
PMBI	**Palembang**	**3.73**	**337**	P	**Pn**	**04 45 13.7**	**+4.7**
PMBI	**Palembang**	**3.73**	**337**	P	Pn	04 45 14.1	+5.1
MNAI	**Manna**	**3.82**	**302**	P	**Pn**	**04 45 11.5**	**+1.3**
MNAI	**Manna**	**3.82**	**302**	S	**Sn**	**04 45 55.8**	**+1.5**
MNAI	**Manna**	**3.82**	**302**		**Pn**	**04 45 12.4**	**+2.2**
MNAI	**Manna**	**3.82**	**302**	P	**Pn**	**04 45 12.4**	**+2.2**
MNAI	**Manna**	**3.82**	**302**	P	**Pn**	**04 45 12.6**	**+2.4**
TPI	**Tanjungpandan**	**3.89**	**22**	P	**Pn**	**04 45 14.5**	**+3.4**
EGSI	**Enggano, Bengk**	**4.05**	**285**	P	**Pn**	**04 45 14.6**	**+1.4**
PPBI	**Pangkal Pinang**	**4.21**	**359**	P	Pn	04 45 20.4	+5.0
SMRI	**Semarang**	**4.25**	**99**	P	**Pn**	**04 45 17.6**	**+1.6**
SMRI	**Semarang**	**4.25**	**99**		**Pn**	**04 45 15.2**	**-0.8**
SMRI	**Semarang**	**4.25**	**99**	P	**Pn**	**04 45 17.4**	**+1.4**
SMRI	**Semarang**	**4.25**	**99**	P	**Pn**	**04 45 17.8**	**+1.8**
YOGI	**Yogyakarta**	**4.29**	**109**	P	**Pn**	**04 45 16.7**	**+0.2**
KSI	**Kapahiang**	**4.52**	**307**	P	**Pn**	**04 45 22.3**	**+2.7**
UGM	**Wanagama**	**4.54**	**110**	P	**Pn**	**04 45 20.1**	**+0.3**
UGM	**Wanagama**	**4.54**	**110**	S	**Sn**	**04 46 13.0**	**+1.4**
UGM	**Wanagama**	**4.54**	**110**		**Pn**	**04 45 19.6**	**-0.2**
UGM	**Wanagama**	**4.54**	**110**	P	**Pn**	**04 45 19.8**	**0.0**
UGM	**Wanagama**	**4.54**	**110**	P	**Pn**	**04 45 19.9**	**+0.1**
SNJI	**Sawahan-Nganju**	**5.68**	**104**	P	**Pn**	**04 45 37.0**	**+1.6**
	4.5nm12μm1μm,0.9s						
DSRI	**Dabo**	**6.10**	**344**	P	**Pn**	**04 45 45.6**	**+4.6**
	2.8nm846nm,0.8s						
PPSI	**Pulau Pagai**	**7.16**	**300**	P	**Pn**	**04 45 55.3**	**0.0**
PDSI	**Padang**	**7.91**	**313**	P	**Pn**	**04 46 04.7**	**-0.9**
	8μm376nm,0.5s						
JAGI	**Jajag, Banyuwa**	**8.14**	**105**	P	**Pn**	**04 46 09.2**	**+0.5**
JAGI	**Jajag, Banyuwa**	**8.14**	**105**	S	**Sn**	**04 47 41.3**	**+2.2**
JAGI	**Jajag, Banyuwa**	**8.14**	**105**		**Pn**	**04 46 09.1**	**+0.4**
JAGI	**Jajag, Banyuwa**	**8.14**	**105**	P	**Pn**	**04 46 09.2**	**+0.5**
JAGI	**Jajag, Banyuwa**	**8.14**	**105**	P	**Pn**	**04 46 09.3**	**+0.7**
PPI	**Padang Panjang**	**8.27**	**315**	P	**Pn**	**04 46 11.0**	**+0.5**
	3μm215nm,0.7s						
BKNI	**Bangkinang**	**8.44**	**322**	P	**Pn**	**04 46 14.4**	**+1.7**
BKNI	**Bangkinang**	**8.44**	**322**		**Pn**	**04 46 14.6**	**+1.9**
BKNI	**Bangkinang**	**8.44**	**322**	P	**Pn**	**04 46 14.7**	**+2.0**
MYKOM	**Kota Tinggi**	**8.47**	**344**	P	**Pn**	**04 46 17.3**	**+4.2**
MYKOM	**Kota Tinggi**	**8.47**	**344**		**Pn**	**04 46 14.0**	**+1.0**
MYKOM	**Kota Tinggi**	**8.47**	**344**	P	**Pn**	**04 46 17.0**	**+4.0**
	3μm354nm,1.0s						
MYKOM	**Kota Tinggi**	**8.47**	**344**	P	**Pn**	**04 46 17.1**	**+4.0**
SISI	**Saibi**	**8.71**	**305**	P	**Pn**	**04 46 15.2**	**-1.1**
IGBI	**Denpasar**	**9.18**	**106**	P	**Pn**	**04 46 21.6**	**-1.1**
	15μm1μm,1.2s						
KHKI	**Kahang-Kahang**	**9.52**	**102**	P	**Pn**	**04 46 27.9**	**+0.5**
	4μm487nm,0.7s						
MNSI	**Mandailing Nat**	**9.74**	**317**	P	**Pn**	**04 46 30.3**	**0.0**
	218nm,0.7s						
KLNI	**Mataram**	**10.01**	**102**	P	**Pn**	**04 46 32.5**	**-1.5**
	4μm220nm,0.8s						
PBSI	**Pulau Batu**	**10.12**	**308**	P	**Pn**	**04 46 33.5**	**-1.9**
TWSI	**Taliwang, Sumb**	**10.83**	**103**	P	**Pn**	**04 46 42.8**	**-2.4**
	3μm233nm,0.7s						
GSI	**Gunungsitoli**	**11.52**	**311**		**Pn**	**04 46 51.4**	**-3.1**
GSI	**Gunungsitoli**	**11.52**	**311**	P	**Pn**	**04 46 51.3**	**-3.1**
RPSI	**Rantau Prapat**	**11.60**	**321**		**Pn**	**04 46 53.8**	**-1.6**
PSI	**Prapat**	**11.68**	**321**	P	**Pn**	**04 46 57.1**	**+0.5**
PSI	**Prapat**	**11.68**	**321**	P	**Pn**	**04 46 53.8**	**-2.8**
PSI	**Prapat**	**11.68**	**321**	P	**Pn**	**04 46 53.6**	**-3.0**
PLAI	**Plampang**	**11.72**	**103**	P	**Pn**	**04 46 53.9**	**-3.1**
	4μm380nm,1.2s						
PLAI	**Plampang**	**11.72**	**103**	P	**Pn**	**04 46 54.4**	**-2.6**
DBNI	**Kabupaten Domp**	**12.18**	**101**	P	**Pn**	**04 47 00.3**	**-2.9**
	201nm,0.8s						
KULM	**Kulim**	**12.87**	**334**	P	**Pn**	**04 47 14.6**	**+2.5**
KULM	**Kulim**	**12.87**	**334**		**Pn**	**04 47 13.1**	**+0.9**
KULM	**Kulim**	**12.87**	**334**	P	**Pn**	**04 47 13.4**	**+1.2**
	87nm,1.1s						
KULM	**Kulim**	**12.87**	**334**	P	**Pn**	**04 47 13.4**	**+1.2**
KAPI	**Kappang**	**13.54**	**85**	P	**Pn**	**04 47 20.7**	**-0.3**
	14nm,0.7s,baz=277,slow=9.1,SNR=6.9						
KAPI				LR	LR	04 53 06.1	
	comp=Z,392nm,18.2s,baz=252,slow=39						
KAPI	**Kappang**	**13.54**	**85**	P	**P**	**04 47 24.0**	**-2.2**
KAPI	**Kappang**	**13.54**	**85**		**P**	**04 47 24.0**	**-2.2**
KAPI	**Kappang**	**13.54**	**85**	*i* P	**Pn**	**04 47 21.2**	**+0.2**
KAPI	**Kappang**	**13.54**	**85**	P	**Pn**	**04 47 20.6**	**-0.3**
KAPI	**Kappang**	**13.54**	**85**	P	**Pn**	**04 47 23.5**	**+2.5**
KAPI	**Kappang**	**13.54**	**85**	P	**P**	**04 47 24.8**	**-1.4**
BSSI	**Bau Bau, Buton**	**14.20**	**90**	P	**P**	**04 47 31.7**	**-1.8**
	189nm,0.9s						
KKM	**Kota Kinabalu**	**15.89**	**39**	P	**P**	**04 47 55.1**	**+2.8**
KKM	**Kota Kinabalu**	**15.89**	**39**		**Pn**	**04 47 50.4**	**-0.4**
KKM	**Kota Kinabalu**	**15.89**	**39**	P	**P**	**04 47 55.9**	**+3.6**
	122nm,0.7s						
KKM	**Kota Kinabalu**	**15.89**	**39**	P	**P**	**04 47 54.9**	**+2.6**
MMRI	**Maumere**	**16.05**	**99**	P	**P**	**04 47 54.6**	**+0.6**
MMRI	**Maumere**	**16.05**	**99**		**Pn**	**04 47 51.9**	**-0.7**
MMRI	**Maumere**	**16.05**	**99**	P	**P**	**04 47 54.1**	**+0.1**
	5μm496nm,0.9s						
MMRI	**Maumere**	**16.05**	**99**	P	**Pn**	**04 47 52.5**	**-0.2**
TOLI2	**Tolitoli**	**16.35**	**63**	P	**P**	**04 48 00.4**	**+3.1**
TOLI2	**Tolitoli**	**16.35**	**63**		**Pn**	**04 47 55.6**	**-0.8**
TOLI2	**Tolitoli**	**16.35**	**63**	P	**P**	**04 48 00.1**	**+2.8**
KDI	**Kendari**	**16.52**	**82**	P	**P**	**04 48 01.6**	**+2.4**
BATI	**Baumata**	**17.68**	**104**	P	**P**	**04 48 06.6**	**-5.4**
	195nm,0.3s,baz=257,slow=2.6,SNR=28						
BATI				S	**Sn**	**04 51 23.9**	**-6.1**
	234nm,0.4s,baz=129,slow=19,SNR=7.8						
BATI	**Baumata**	**17.68**	**104**	P	**P**	**04 48 09.7**	**-2.3**
	5μm508nm,1.0s						
GIRL	**Giralia**	**17.91**	**155**	P	**P**	**04 48 14.6**	**+0.1**
	comp=Z,152nm,0.9s						
GIRL	**Giralia**	**17.91**	**155**	P	**P**	**04 48 14.5**	**0.0**
GTOI	**Gorontalo**	**18.17**	**68**	P	**Pn**	**04 48 18.5**	**0.0**
SOEI	**Soe**	**18.18**	**102**	P	**Pn**	**04 48 19.2**	**+0.3**
SOEI	**Soe**	**18.18**	**102**	P	**P**	**04 48 15.6**	**-2.1**
SOEI	**Soe**	**18.18**	**102**	P	**P**	**04 48 16.5**	**-1.2**
	comp=Z,5μmcomp=Z,581nm,0.8s						
SOEI	**Soe**	**18.18**	**102**	P	**P**	**04 48 18.1**	**+0.4**
DLV	**Lat**	**18.36**	**7**	P	**Pn**	**04 48 23.7**	**+2.7**
MBWA	**Marble Bar**	**19.67**	**140**	P	**P**	**04 48 33.6**	**0.0**
	comp=Z,105nm,1.3s						
MBWA	**Marble Bar**	**19.67**	**140**	P	**P**	**04 48 33.5**	**-0.2**
MBWA	**Marble Bar**	**19.67**	**140**	P	**P**	**04 48 34.0**	**+0.3**
MBWA	**Marble Bar**	**19.67**	**140**	P	**P**	**04 48 32.8**	**-0.9**
MBWA	**Marble Bar**	**19.67**	**140**	P	**P**	**04 48 34.1**	**+0.5**
NLAI	**Namlea**	**21.05**	**82**	P	**P**	**04 48 50.8**	**+2.2**
	comp=Z,149nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.24**	**123**	P	**P**	**04 49 00.6**	**-0.6**
	comp=Z,15nm,1.2s						
FITZ	**Fitzroy Crossi**	**22.24**	**123**	P	**P**	**04 49 00.6**	**-0.6**
	comp=Z,35nm,0.7s,baz=309,slow=6.6,SNR=48						
	comp=Z,35nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.24**	**123**	P	**P**	**04 49 00.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**22.24**	**123**	P	**P**	**04 49 00.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**22.24**	**123**	P	**P**	**04 49 00.9**	**-0.3**
TNTI	**Ternate**	**22.29**	**72**	P	**P**	**04 49 03.4**	**+1.6**
TNTI	**Ternate**	**22.29**	**72**	P	**P**	**04 49 01.8**	**+0.1**
TNTI	**Ternate**	**22.29**	**72**	P	**P**	**04 49 03.3**	**+1.6**
GAMI	**Galela, Maluku**	**23.04**	**70**	P	**P**	**04 49 10.2**	**+0.9**
	comp=Z,6μmcomp=Z,449nm,0.8s						
MEEK	**Meekatharra**	**23.34**	**151**	P	**P**	**04 49 12.9**	**+1.0**
	comp=Z,66nm,0.8s						
MEEK	**Meekatharra**	**23.34**	**151**	P	**P**	**04 49 11.4**	**-0.6**
MEEK	**Meekatharra**	**23.34**	**151**	P	**P**	**04 49 13.2**	**+1.3**
DAV	**Davao City (W)**	**23.50**	**56**	LR	LR	05 00 49.1	
	comp=Z,173nm,18.6s,baz=172,slow=42						
TBP	**Tagbilaran**	**23.76**	**48**	*eP*	**P**	**04 49 17.7**	**+1.9**
KNRA	**Kununurra**	**23.96**	**115**	P	**P**	**04 49 17.2**	**-0.2**
	comp=Z,181nm,0.8s						
KNRA	**Kununurra**	**23.96**	**115**	P	**P**	**04 49 17.3**	**-0.2**
LLP	**Lapu-Lapu**	**24.26**	**47**	*eP*	**P**	**04 49 15.7**	**-4.5**
MORW	**Morawa**	**24.39**	**159**	P	**P**	**04 49 20.5**	**-0.8**
	comp=Z,45nm,0.9s						
MORW	**Morawa**	**24.39**	**159**	P	**P**	**04 49 20.8**	**-0.5**
MORW	**Morawa**	**24.39**	**159**	P	**P**	**04 49 20.9**	**-0.4**
MORW	**Morawa**	**24.39**	**159**	P	**P**	**04 49 21.4**	**+0.1**
DRS	**Darwin Rock St**	**25.07**	**106**	P	**P**	**04 49 29.2**	**+1.5**
MTN	**Manton Dam**	**25.38**	**106**	P	**P**	**04 49 28.7**	**-1.8**
	comp=Z,65nm,0.4s						
MTN	**Manton Dam**	**25.38**	**106**	P	**P**	**04 49 30.2**	**-0.3**
LQP	**Lukban**	**25.43**	**37**	*eP*	**P**	**04 49 31.4**	**+0.2**
QIZ	**Qiongzhong**	**25.52**	**8**	P	**P**	**04 49 34.6**	**+2.9**
QIZ				pP	**pP**	**04 49 59.2**	**+3.6**
QIZ				S	**S**	**04 53 53.0**	**+1.8**
QIZ				L	L		
	comp=Z,260nm,13.5s						
QIZ				L	L		
	comp=Z,230nm,13.3s						
QIZ				L	L		
	comp=Z,320nm,12.6s						
SIJI	**Sorong**	**25.59**	**79**	P	**P**	**04 49 32.0**	**-0.5**
	comp=Z,26nm,0.7s,baz=129,slow=23,SNR=9.1						
	comp=Z,26nm,0.7s						
SIJI	**Sorong**	**25.59**	**79**	P	**P**	**04 49 32.0**	**-0.5**
	comp=Z,2μmcomp=Z,62nm,0.8s						
CM31	**Chiang Mai Arr**	**25.72**	**344**	P	**P**	**04 49 34.0**	**+0.5**
CM31	**Chiang Mai Arr**	**25.72**	**344**	P	**P**	**04 49 33.5**	**+0.1**
	SNR=6.6						
CMAR	**Chiang Mai Arr**	**25.72**	**344**	P	**P**	**04 49 33.3**	**-0.2**
	comp=Z,13nm,0.5s,baz=180,slow=8.4,SNR=58						
CMAR				PcP	**PcP**	**04 53 02.9**	**+1.8**
	comp=Z,7.9nm,0.6s,baz=200,slow=2.8,SNR=10						
CMAR				ScP	**ScP**	**04 56 31.1**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=198,slow=3.7,SNR=9.0						
	comp=Z,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**25.72**	**344**	P	**P**	**04 49 33.2**	**-0.2**
CMAR					**PcP**	**04 53 02.0**	**+0.9**
CMAR					**ScP**	**04 56 30.7**	**0.0**
BLDU	**Ballidu**	**26.03**	**159**	P	**P**	**04 49 32.0**	**-4.2**
	comp=Z,45nm,1.4s						
BLDU	**Ballidu**	**26.03**	**159**	P	**P**	**04 49 35.9**	**-0.3**
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 37.2**	**+0.7**
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 36.8**	**+0.3**
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 36.8**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,51nm,1.4s						
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 36.3**	**-0.3**
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 36.6**	**+0.1**
CHTO	**Chiang Mai**	**26.05**	**344**	P	**P**	**04 49 36.8**	**+0.3**
FAKI	**Fak Fak**	**26.18**	**84**	P	**P**	**04 49 38.2**	**+0.5**
FAKI	**Fak Fak**	**26.18**	**84**	P	**P**	**04 49 37.5**	**-0.3**
FAKI				IAmb	IAmb	04 49 55.9	
	comp=Z,234nm,1.7s						
FAKI	**Fak Fak**	**26.18**	**84**	P	**P**	**04 49 37.7**	**-0.1**
	comp=Z,76nm,1.4s						
KDU	**Kakadu**	**26.63**	**106**	P	**P**	**04 49 41.3**	**-0.4**
	comp=Z,50nm,0.9s						
MUN	**Mundaring**	**27.11**	**161**	P	**P**	**04 49 45.7**	**-0.2**
	comp=Z,97nm,1.1s						
MUN	**Mundaring**	**27.11**	**161**	P	**P**	**04 49 45.9**	**0.0**
KLBR	**Kellerberrin**	**27.29**	**158**	P	**P**	**04 49 47.3**	**-0.3**
	comp=Z,86nm,0.6s						
KLBR	**Kellerberrin**	**27.29**	**158**	P	**P**	**04 49 47.1**	**-0.5**
KLBR	**Kellerberrin**	**27.29**	**158**	P	**P**	**04 49 47.4**	**-0.1**
WRKA	**Warakurna**	**28.12**	**134**	P	**P**	**04 49 55.4**	**+0.4**
	comp=Z,6.5nm,1.0s						
NWAO	**Narrogin (SRO)**	**28.32**	**160**	P	**P**	**04 49 56.1**	**-0.6**
	comp=Z,104nm,0.8s						
NWAO	**Narrogin (SRO)**	**28.32**	**160**	P	**P**	**04 49 54.5**	**-2.2**
	comp=Z,63nm,0.8s						
NWAO	**Narrogin (SRO)**	**28.32**	**160**	P	**P**	**04 49 56.8**	**+0.1**
	comp=Z,23nm,0.6s,baz=322,slow=9.9,SNR=20						
NWAO				LR	LR	04 59 33.7	
	comp=Z,199nm,21.6s,baz=326,slow=32						
	comp=Z,23nm,0.6s						
NWAO	**Narrogin (SRO)**	**28.32**	**160**	P	**P**	**04 49 56.0**	**-0.7**
NWAO	**Narrogin (SRO)**	**28.32**	**160**	P	**P**	**04 49 54.5**	**-2.2**
KMBL	**Kambalda**	**28.85**	**151**	P	**P**	**04 50 00.8**	**-0.6**
	comp=Z,14nm,1.1s						
H01W3	**Cape Leeuwin H**	**29.28**	**167**	T	T	05 20 35.4	
	baz=342,SNR=16						
H01W1	**Cape Leeuwin H**	**29.29**	**167**	T	T	05 20 36.7	
	baz=342,slow=74,SNR=75						
H01W2	**Cape Leeuwin H**	**29.29**	**167**	T	T	05 20 36.6	
	baz=342,slow=74,SNR=15						
RKGY	**Rocky Gully**	**29.79**	**162**	P	**P**	**04 50 10.4**	**+0.8**
	comp=Z,128nm,0.9s						
WB0	**Warramunga Arr**	**30.43**	**119**	P	**P**	**04 50 14.9**	**-0.7**
WRA	**Warramunga Arr**	**30.45**	**119**	P	**P**	**04 50 15.6**	**-0.1**
	comp=Z,11nm,0.6s,baz=291,slow=10,SNR=147						
WRA				PcP	**PcP**	**04 53 13.1**	**+0.3**
	comp=Z,18nm,0.5s,baz=298,slow=2.1,SNR=21						
WRA				S	**S**	**04 55 05.8**	**-3.2**
	comp=Z,7.1nm,0.8s,baz=294,slow=18,SNR=5.7						
WRA				P3KPbc		05 22 06.4	
	comp=Z,1.0nm,0.9s,baz=107,slow=4.2,SNR=7.0						
	comp=Z,11nm,0.6s						
WRA	**Warramunga Arr**	**30.45**	**119**	P	**P**	**04 50 15.8**	**+0.1**
WRA					**PcP**	**04 53 12.7**	**-0.1**
WRA	**Warramunga Arr**	**30.45**	**119**	P	**P**	**04 50 15.8**	**+0.1**
WRA						04 53 12.7	
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRAB	**Tennant Creek**	**30.45**	**119**	P	**P**	**04 50 15.8**	**0.0**
WRAB	**Tennant Creek**	**30.45**	**119**	*ce*P	**P**	**04 50 16.1**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,14nm,0.6s						
WRAB	**Tennant Creek**	**30.45**	**119**	P	**P**	**04 50 15.9**	**+0.1**
WR8	**Warramunga Arr**	**30.59**	**119**	P	**P**	**04 50 17.5**	**+0.5**
KMI2	**Kunming**	**31.54**	**354**	P	**P**	**04 50 27.0**	**+1.6**
KMI2				pP	pP	04 50 53.3	+3.6
KMI2				PcP	**PcP**	**04 53 17.4**	**+1.6**
KMI2				S	**S**	**04 55 26.3**	**+0.2**
KMI2				sS	sS	04 56 12.1	+3.6
KMI2				ScP	**ScP**	**04 56 49.5**	**+0.4**
KMI2				pmax	pmax		
	comp=Z,11nm,0.7s						
KMI2				L	L		
	comp=Z,490nm,11.3s						
KMI2				L	L		
	comp=Z,240nm,14.8s						
KMI2				L	L		
	comp=Z,490nm,12.6s						
AS15	**Alice Springs**	**31.67**	**126**	P	**P**	**04 50 26.9**	**+0.5**
	comp=Z,18nm,0.5s						
AUALC	**St Philip's Co**	**31.67**	**126**	P	**P**	**04 50 26.9**	**+0.5**
ASAR	**Alice Springs**	**31.68**	**126**	P	**P**	**04 50 26.7**	**+0.2**
	comp=Z,10nm,0.4s,baz=297,slow=8.1,SNR=142						
ASAR				PP	**PnPn**	**04 51 31.7**	**-3.2**
	comp=Z,10.0nm,0.7s,baz=306,slow=12,SNR=4.8						
ASAR				PcP	**PcP**	**04 53 16.6**	**+0.5**
	comp=Z,19nm,0.8s,baz=304,slow=2.2,SNR=20						
ASAR				S	**S**	**04 55 25.2**	**-2.9**
	comp=Z,56nm,0.9s,baz=292,slow=16,SNR=44						
ASAR				PKiKP	**PKiKP**	**05 00 44.0**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=300,slow=0.6,SNR=4.9						
ASAR				LR	LR	05 03 59.0	
	comp=Z,154nm,22.0s,baz=302,slow=37						
ASAR				P3KPbc		05 21 59.4	
	comp=Z,0.4nm,0.7s,baz=141,slow=4.1,SNR=4.5						
	comp=Z,10nm,0.4s						
ASAR	**Alice Springs**	**31.68**	**126**	P	**P**	**04 50 26.8**	**+0.3**
ASAR					**PcP**	**04 53 15.6**	**-0.5**
ASAR	**Alice Springs**	**31.68**	**126**	P	**P**	**04 50 26.8**	**+0.3**
ASAR						04 53 15.6	
AS31	**Alice Springs**	**31.68**	**126**	P	**P**	**04 50 26.5**	**0.0**
AS01	**Alice Springs**	**31.71**	**126**	P	**P**	**04 50 27.2**	**+0.4**
AS09	**Alice Springs**	**31.72**	**126**	P	**P**	**04 50 27.1**	**+0.2**
	comp=Z,30nm,0.8s						
AS17	**Alice Springs**	**31.75**	**126**	P	**P**	**04 50 27.5**	**+0.4**
	comp=Z,25nm,0.7s						
AS17	**Alice Springs**	**31.75**	**126**	P	**PcP**	**04 53 16.9**	**+0.7**
FORT	**Forrest**	**31.76**	**143**	P	**P**	**04 50 26.6**	**-0.5**
	comp=Z,12nm,0.8s						
FORT	**Forrest**	**31.76**	**143**	P	**P**	**04 50 27.0**	**-0.1**
TNCH	**TengChong**	**32.12**	**347**	P	**P**	**04 50 31.3**	**+0.8**
TNCH				pP	pP	04 50 57.7	+2.9
TNCH				sP	sP	04 51 13.5	+6.0
TNCH				pmax	pmax		
	comp=Z,140nm,4.3s						
BRDH	**Bariadhala**	**32.22**	**334**	LR	LR	05 06 40.3	
	comp=Z,308nm,18.5s,baz=136,slow=42						
TPUB	**Ta-pu**	**32.71**	**25**	P	**P**	**04 50 39.2**	**+3.8**
PZH	**PanZhiHua**	**32.99**	**353**	P	P	04 50 42.8	+4.8
H08S2	**Diego Garcia H**	**33.48**	**266**	T	T	05 26 24.5	
	baz=91,slow=75,SNR=21						
H08S3	**Diego Garcia H**	**33.49**	**266**	T	T	05 26 24.8	
	baz=91,slow=75,SNR=23						
H08S1	**Diego Garcia H**	**33.50**	**266**	T	T	05 26 25.5	
	baz=91,slow=75,SNR=14						
JAY	**Jayapura**	**34.60**	**85**	P	**P**	**04 50 50.5**	**-1.6**
	comp=Z,10nm,0.6s,baz=217,slow=23,SNR=7.7						
JAY				pP	**pP**	**04 51 14.3**	**-2.3**
	comp=Z,14nm,0.8s,baz=64,slow=13,SNR=2.7						
	comp=Z,10nm,0.6s						
JAY	**Jayapura**	**34.60**	**85**	P	**P**	**04 50 50.0**	**-2.0**
	comp=Z,20nm,0.8s						
SHL	**Shillong**	**34.69**	**337**	P	**P**	**04 50 52.0**	**-0.8**
SHL	**Shillong**	**34.69**	**337**	P	**P**	**04 50 52.0**	**-0.8**
SHL				pmax	pmax		
	comp=Z,25nm,1.0s						
SHL	**Shillong**	**34.69**	**337**	P	**P**	**04 50 51.7**	**-1.1**
YOJ	**Yonaguni jima**	**34.77**	**28**	P	**P**	**04 50 56.7**	**+3.5**
QIS	**Mount Isa**	**35.29**	**117**	P	**P**	**04 50 58.1**	**+0.2**
	comp=Z,35nm,0.5s						
QIS	**Mount Isa**	**35.29**	**117**	P	**P**	**04 50 58.1**	**+0.2**
QIS	**Mount Isa**	**35.29**	**117**	P	**P**	**04 50 58.3**	**+0.4**
COEN	**Coen**	**37.11**	**105**	P	**P**	**04 51 13.5**	**+0.1**
	comp=Z,61nm,0.7s						
COEN	**Coen**	**37.11**	**105**	P	**P**	**04 51 13.6**	**+0.1**
COEN	**Coen**	**37.11**	**105**	P	**P**	**04 51 13.4**	**-0.1**
COEN				lAmb	lAmb	04 51

comp=Z,1μm,0.8s
STKA Stephens Creek 41.62 132 P P 04 51 51.5 +0.8
comp=Z,223nm,0.6s,baz=304,slow=8.1,SNR=419
STKA PcP PcP **04 53 46.3 +0.4**
comp=Z,23nm,0.6s,baz=325,slow=4.2,SNR=3.5
STKA S S **04 57 58.6 -0.5**
comp=Z,20nm,1.1s,baz=168,slow=20,SNR=8.6
STKA LR LR 05 09 11.4
comp=Z,198nm,21.7s,baz=307,slow=36
STKA Stephens Creek 41.62 132 P P 04 51 51.1 +0.4
STKA Stephens Creek 41.62 132 P P 04 51 51.7 +0.9
AUMBR Murray Bridge 41.76 138 P P 04 51 52.3 +0.6
LZDM Lanzhou Array 42.19 357 P P 04 51 56.4 +0.8
comp=Z,3.9nm,0.5s,baz=187,slow=10,SNR=6.2
LZDM PcP PcP **04 53 48.7 +0.7**
comp=Z,19nm,0.7s,baz=187,slow=6.0,SNR=11
LZDM ScP ScP **04 57 28.3 -0.3**
comp=Z,4.2nm,0.5s,baz=189,slow=8.4,SNR=5.5
comp=Z,3.9nm,0.5s
LZH Lanzhou 42.32 357 eP P 04 51 57.4 +1.0
LZH pP pP 04 52 24.4 +2.7
LZH PcP PcP **04 53 49.6 +1.4**
LZH ScP ScP **04 57 28.7 -0.2**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH L L
comp=Z,160nm,13.7s
LZH L L
comp=Z,230nm,12.4s
LZH L L
comp=Z,230nm,12.4s
UDPR Udaipur 44.16 315 eP P 04 52 12.4 +1.1
HNS HongShan 44.28 10 ⇑P P 04 52 12.5 +0.5
HNS pP pP **04 52 39.2 +1.8**
HNS ScP ScP **04 57 35.9 -0.7**
HNS S S **04 58 39.0 +1.3**
HNS pmax pmax
comp=Z,13nm,0.7s
HNS L L
comp=Z,100nm,13.0s
HNS L L
comp=Z,160nm,14.0s
HNS L L
comp=Z,190nm,15.5s
ARPS Mount Arapiles 44.39 138 P P 04 52 14.1 +1.2
comp=Z,23nm,0.9s
SONA Sohna 44.46 322 eP P 04 52 12.5 -1.1
SONA IAmb IAmb 04 52 12.9
comp=Z,76nm,0.3s
CMSA Cobar Meteorol 44.55 129 P P 04 52 15.7 +1.3
comp=Z,199nm,0.8s
CMSA Cobar Meteorol 44.55 129 P P 04 52 15.4 +1.1
CMSA Cobar Meteorol 44.55 129 P P 04 52 15.5 +1.2
AYAN Aya Nagar 44.60 322 eP P 04 52 13.4 -1.2
AYAN IAmb IAmb 04 52 16.1
comp=Z,25nm,0.4s
NPLP NPLP New Delhi 44.68 323 eP P 04 52 13.8 -1.5
NPLP IAmb IAmb 04 52 14.7
comp=Z,22nm,0.5s
NDI New Delhi 44.69 323 eP P 04 52 14.2 -1.2
NDI IAmb IAmb 04 52 14.9
comp=Z,27nm,0.5s
KUDL Kundal 44.74 322 eP P 04 52 14.9 -0.9
KUDL IAmb IAmb 04 52 17.2
comp=Z,41nm,0.8s
GTA2 Gaotai 46.04 353 P P 04 52 26.7 +0.7
GTA2 pP pP 04 52 52.8 +1.2
GTA2 PcP PcP **04 54 02.2 +1.4**
GTA2 ScP ScP **04 57 42.9 -1.1**
GTA2 S S **04 59 05.3 +2.0**
GTA2 ScS ScS **05 02 06.6 -4.2**
GTA2 pmax pmax
comp=Z,29nm,0.8s
GTA2 L L
comp=Z,160nm,14.8s
GTA2 L L
comp=Z,150nm,16.5s
GTA2 L L
comp=Z,230nm,19.9s
BRAT Ballarat 46.21 138 P P 04 52 28.0 +0.7
JTU Tsushima 46.22 27 P P 04 52 30.2 +2.8
HNLY HANLEY 46.78 328 eP P 04 52 31.8 -0.7
HNLY IAmb IAmb 04 52 33.3
comp=Z,11nm,0.4s
EIDS Eidsvold 46.81 119 P P 04 52 33.6 +1.4
comp=Z,30nm,1.4s
EIDS Eidsvold 46.81 119 P P 04 52 33.3 +1.1
EIDS Eidsvold 46.81 119 P P 04 52 32.9 +0.7
EIDS IAmb IAmb 04 52 34.2
comp=Z,58nm,1.5s
EIDS Eidsvold 46.81 119 P P 04 52 33.0 +0.7
BTO2 Baotou 47.03 4 eP P 04 52 34.5 +0.8
BTO2 pP pP **04 53 00.3 +0.9**
BTO2 PP PP **04 54 27.0 +1.5**
BTO2 S S **04 59 18.0 +0.7**
BTO2 pmax pmax
comp=Z,51nm,0.9s
BTO2 pmax pmax
comp=Z,200nm,4.7s
BTO2 L L
comp=Z,250nm,9.4s
BTO2 L L
comp=Z,470nm,15.8s
BTO2 L L
comp=Z,200nm,10.9s
BJT Baijiatuau 47.09 10 P P 04 52 35.0 +0.9
BJT PcP PcP **04 54 05.0 +0.8**
BJT Baijiatuau 47.09 10 P P 04 52 35.0 +0.9
BJT 04 54 05.0
BJT pmax pmax
comp=Z,18nm,0.8s
BJT Baijiatuau 47.09 10 P P 04 52 34.9 +0.8
BJT Baijiatuau 47.09 10 P P 04 52 34.6 +0.6
BJT pP pP **04 53 00.4 +0.6**
BJT PcP PcP **04 54 05.6 +1.3**
BJT ScP ScP **04 57 46.8 -1.4**
BJI2 Beijing 47.09 10 P P 04 52 34.8 +0.8
BJI2 pP pP **04 53 01.5 +1.8**
BJI2 PcP PcP **04 54 05.9 +1.6**
BJI2 ScP ScP **04 57 46.4 -1.8**
BJI2 S S **04 59 19.9 +2.0**
BJI2 sS sS **05 00 05.8 +3.6**
BJI2 pmax pmax
comp=Z,7.0nm,0.7s
BJI2 pmax pmax
comp=Z,29nm,4.2s
BJI2 L L
comp=Z,62nm,15.7s
BJI2 L L
comp=Z,59nm,13.5s
BJI2 L L
comp=Z,82nm,16.9s
HHC Hu-ho-hao-te 47.27 6 eP P 04 52 39.0 +3.4
HHC pmax pmax
comp=Z,19nm,0.6s
HHC pmax pmax
comp=Z,67nm,4.2s
TOO Toolangi 47.28 137 P P 04 52 37.7 +2.1
comp=Z,12nm,1.3s
TOO Toolangi 47.28 137 P P 04 52 37.8 +2.1
TOO PcP PcP **04 54 05.8 +0.7**
TOO Toolangi 47.28 137 P P 04 52 37.8 +2.1
TOO 04 54 05.8
DL2 Dalian 47.29 16 P P 04 52 38.3 +2.7
DL2 pmax pmax
comp=Z,19nm,0.7s
DHRM DHARAMSHALA 47.84 325 eP P 04 52 38.2 -2.1
DHRM IAmb IAmb 04 52 40.9
comp=Z,14nm,0.6s
DHRM eS S **04 59 27.1 -2.3**
KSRS Korea Array 48.10 23 P P 04 52 42.0 0.0
comp=Z,3.4nm,0.6s,baz=213,slow=7.9,SNR=19
KSRS pP pP **04 53 07.2 -0.5**
comp=Z,12nm,0.7s,baz=213,slow=8.6,SNR=14
KSRS ScP ScP **04 57 49.9 -2.7**
comp=Z,3.0nm,0.8s,baz=219,slow=4.2,SNR=8.1
comp=Z,3.4nm,0.6s
TW1H Toowoomba 1 Ha 48.20 121 P P 04 52 44.1 +1.1
THN Thein Dam 48.29 325 eP P 04 52 42.6 -0.9
CAN Canberra 48.69 132 P P 04 52 48.2 +1.6
comp=Z,62nm,1.0s
CAN Canberra 48.69 132 P P 04 52 47.4 +0.8
CAN Canberra 48.69 132 P P 04 52 47.6 +1.0
CAN IAmb IAmb 04 52 48.4
comp=Z,34nm,0.7s
CAN PcP PcP **04 54 10.8 +0.5**
CAN Canberra 48.69 132 P P 04 52 48.1 +1.6
CAN Canberra 48.69 132 P P 04 52 48.0 +1.3
CAN PcP PcP **04 54 10.9 +0.6**
ARMA Armidale 48.83 125 P P 04 52 49.9 +2.1
comp=Z,23nm,1.3s
ARMA Armidale 48.83 125 P P 04 52 48.8 +1.0
ARMA Armidale 48.83 125 P P 04 52 49.8 +2.0
ARMA IAmb IAmb 04 52 50.9
comp=Z,46nm,1.4s
MGCD Mangrove Creek 49.42 129 P P 04 52 53.1 +1.0
MSEY Mahe Island 50.51 269 P P 04 53 03.4 +2.7
MSEY Mahe Island 50.51 269 P P 04 53 02.8 +2.1
NIL Nilore 50.61 324 P P 04 52 59.9 -1.2
XLT XiLinHaoTe 50.85 9 eP P 04 53 03.5 +0.7
XLT pP pP 04 53 29.8 +0.9
XLT sP sP 04 53 44.6 +3.5
XLT ScP ScP **04 58 03.2 -1.1**
XLT S S **05 00 10.8 +0.1**
XLT ScS ScS **05 02 43.7 +1.0**
XLT pmax pmax
comp=Z,19nm,0.5s
MJAR Matsushiro Arr 52.18 33 P P 04 53 11.0 -1.8
comp=Z,2.2nm,0.5s,baz=209,slow=9.1,SNR=4.5
MJAR pP pP **04 53 37.2 -1.7**
comp=Z,8.3nm,0.9s,baz=212,slow=7.6,SNR=6.6
MJAR ScP ScP **04 58 08.6 -1.5**
comp=Z,5.4nm,0.9s,baz=219,slow=5.1,SNR=7.3
MJAR LR LR 05 15 01.1
comp=Z,43nm,20.5s,baz=204,slow=36
comp=Z,2.2nm,0.5s
MJAR Matsushiro Arr 52.18 33 P P 04 53 11.5 -1.3
WMQ Urumqi 52.72 343 eP P 04 53 17.1 +0.5
WMQ pP pP 04 53 43.0 +0.1
WMQ PcP PcP **04 54 25.7 +0.7**
WMQ pmax pmax
comp=Z,24nm,1.3s
WMQ L L
comp=Z,150nm,20.3s
CN2 Changchun 52.91 17 P P 04 53 17.9 -0.1
CN2 pP pP 04 53 44.6 +0.4
CN2 S S **05 00 36.9 -1.8**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,110nm,4.0s
CN2 L L
comp=Z,280nm,18.0s
CN2 L L
comp=Z,220nm,18.0s
CN2 L L
comp=Z,180nm,18.0s
SAVO Savo Central 53.14 97 P P 04 53 21.3 +1.0
TATA Tatamba Isabel 53.15 96 P P 04 53 20.0 -0.3
WUS Wushi 53.44 335 P P 04 53 21.3 -0.8
WUS IAmb IAmb 04 53 22.5
comp=Z,27nm,0.8s
WUS Wushi 53.44 335 P P 04 53 21.6 -0.5
WUS Wushi 53.44 335 P P 04 53 21.4 -0.8
WUS PcP PcP **04 54 28.9 +1.0**
KSH2 Kashi 53.46 330 P P 04 53 21.0 -1.3
KSH2 PcP PcP **04 54 28.9 +0.9**
KSH2 pmax pmax
comp=Z,10.0nm,0.6s
KBL Kabul 53.75 322 P P 04 53 24.7 +0.1
KBL Kabul 53.75 322 P P 04 53 24.7 +0.1
KBL pmax pmax
comp=Z,13nm,1.0s
KBL Kabul 53.75 322 P P 04 53 24.8 +0.1
KBL Kabul 53.75 322 P P 04 53 24.6 +0.1
JLN Jalan Bani Buh 53.90 303 P P 04 53 27.3 +1.7
SONM Songino Array 54.00 0 P P 04 53 26.1 +0.1
comp=Z,15nm,0.7s,baz=174,slow=8.7,SNR=42
SONM pP pP **04 53 51.7 -0.6**
comp=Z,14nm,0.8s,baz=178,slow=8.5,SNR=7.9
SONM PcP PcP **04 54 29.9 0.0**
comp=Z,8.3nm,0.6s,baz=183,slow=4.4,SNR=7.1
SONM ScP ScP **04 58 16.7 -1.3**
comp=Z,4.9nm,0.7s,baz=180,slow=3.9,SNR=9.1
SONM LR LR 05 19 17.9
comp=Z,137nm,18.6s,baz=137,slow=39
comp=Z,15nm,0.7s
SONM Songino Array 54.00 0 P P 04 53 26.6 +0.6
SONM IAmb IAmb 04 53 54.4
comp=Z,28nm,1.1s
SONM PcP PcP **04 54 29.4 -0.4**
SONM ScP ScP **04 58 16.6 -1.3**
ULN Ulaanbaatar 54.03 1 P P 04 53 27.0 +0.7
ULN IAmb IAmb 04 53 27.5
comp=Z,19nm,0.7s
ULN Ulaanbaatar 54.03 1 *i* P P 04 53 25.9 -0.4
ULN pmax pmax
comp=Z,16nm,0.6s
ULN Ulaanbaatar 54.03 1 P P 04 53 26.8 +0.5
ULN Ulaanbaatar 54.03 1 P P 04 53 26.8 +0.5
comp=Z,101nm,0.8s
ULN Ulaanbaatar 54.03 1 P P 04 53 26.9 +0.5
ULN Ulaanbaatar 54.03 1 P P 04 53 26.6 +0.3
ULN pP pP **04 53 53.1 +0.5**
ULN ScP ScP **04 58 16.1 -2.0**
MANEM Manem 54.29 326 P P 04 53 28.4 -0.2
MANEM IAmb IAmb 04 53 30.9
comp=Z,49nm,0.8s
ASAI AK-SAY(Kyrgyzs 54.40 333 P P 04 53 28.8 -0.5
WBK Wadi Bani Khal 54.46 304 P P 04 53 31.4 +1.6
TARG Taragay, Kyrgy 54.48 334 IAmb IAmb 04 54 34.8
comp=Z,24nm,0.6s
TARG Taragay, Kyrgy 54.48 334 P P 04 53 29.7 -0.3
DQM DQM 54.55 300 P P 04 53 31.9 +1.5
MHTO MHTO 54.61 301 P P 04 53 31.7 +0.9
MDJ Mudanjiang 54.97 20 P P 04 53 32.7 -0.2
MDJ pmax pmax
comp=Z,11nm,0.8s
MDJ Mudanjiang 54.97 20 P P 04 53 32.9 0.0
SHLS Shalkode 54.97 336 *d* iP P 04 53 31.2 -1.9
SHLS pmax pmax
comp=Z,9.0nm,0.7s
SHLS Shalkode 54.97 336 ⇓ iP P 04 53 31.3 -1.9
comp=Z,9.2nm,0.7s
WSAR Wadi Sarin 55.02 304 P P 04 53 35.5 +1.7
NRN Naryn 55.05 333 IAmb IAmb 04 54 36.2
comp=Z,60nm,0.9s
KDJ Kajisay 55.08 334 P P 04 53 33.8 -0.2
KDJ IAmb IAmb 04 54 35.8
comp=Z,20nm,0.7s
KDJ Kajisay 55.08 334 P P 04 53 33.8 -0.2
KDJ pmax pmax
comp=Z,20nm,0.7s
KDJ Kajisay 55.08 334 P P 04 53 33.8 -0.2
JMDO Jabal Madar 55.08 303 P P 04 53 35.6 +1.4
PDGK Podgornoye 55.10 336 P P 04 53 33.6 -0.5
PDGK Podgornoye 55.10 336 P P 04 53 33.6 -0.5
UZB Uzynbulak 55.14 336 *d* iP P 04 53 33.5 -0.9
UZB Uzynbulak 55.14 336 ⇓ iP P 04 53 33.5 -0.9
LHI Lord Howe Isla 55.24 124 P P 04 53 44.5 +9.3
comp=Z,62nm,1.1s
BNX BinXian 55.25 18 ⇓P P 04 53 35.3 +0.3
BNX pP pP **04 54 01.4 0.0**
BNX sP sP **04 54 11.2 -2.3**
BNX PP PP **04 55 38.2 -1.6**
BNX S S **05 01 11.4 +1.2**
BNX sS sS **05 01 52.3 -3.3**
BNX pmax pmax
comp=Z,29nm,0.8s
BNX pmax pmax
comp=Z,230nm,2.6s
BNX L L
comp=Z,120nm,19.5s
SATY Saty 55.32 335 *d* iP P 04 53 34.6 -1.0
SATY Saty 55.32 335 ⇓ iP P 04 53 34.7 -1.0
SMDO Samad 55.42 304 P P 04 53 38.3 +1.6
SNR=6.2
USA0B Ussuriysk Arra 55.47 22 P P 04 53 36.5 -0.1
USA0B IAmb IAmb 04 54 05.0
comp=Z,28nm,0.9s
USA0B Ussuriysk Arra 55.47 22 eP P 04 53 36.5 -0.1
USRK Ussuriysk Ar. 55.47 22 P P 04 53 36.4 -0.2
USRK pP pP **04 54 03.3 +0.3**
comp=Z,4.7nm,0.4s,baz=200,slow=5.7,SNR=37
comp=Z,24nm,0.8s,baz=209,slow=6.9,SNR=14
comp=Z,4.7nm,0.4s
USRK Ussuriysk Ar. 55.47 22 P P 04 53 36.8 +0.2
SHAO Shalim 55.50 297 P P 04 53 39.2 +2.0
SQUM Sultan Qaboos 55.55 304 P P 04 53 39.5 +2.0
BIDO Bidbid 55.56 304 P P 04 53 39.7 +2.1
SNR=14
OHH Osh 55.90 330 P P 04 53 37.8 -2.1
TNSS Tian-Shan 55.91 334 eP P 04 53 39.3 -0.9
TNSS Tian-Shan 55.91 334 eP P 04 53 39.4 -0.9
BOOM Boomskoye usch 55.92 333 IAmb IAmb 04 54 39.3
comp=Z,18nm,0.6s
BOOM Boomskoye usch 55.92 333 P P 04 53 39.2 -0.8
MDOK Medeo 55.97 335 eP P 04 53 39.7 -0.6
MDOK Medeo 55.97 335 eP P 04 53 39.8 -0.6
DMTO DMTO 55.99 296 P P 04 53 41.7 +1.0
BSY Bisya 56.00 303 P P 04 53 42.3 +1.5
AAA Alma-Ata 56.07 334 eP P 04 53 40.4 -0.5
AAA pmax pmax
comp=Z,13nm,0.4s
AAA Alma-Ata 56.07 334 eP P 04 53 40.5 -0.5
comp=Z,13nm,0.4s
GAR Garm 56.08 327 P P 04 53 39.5 -1.7
HOQ Hoqain 56.26 304 P P 04 53 44.4 +1.8
SNR=5.2
CHGR Chuyangaron 56.48 326 *i* P P 04 53 41.3 -2.7
CHGR pmax pmax
comp=Z,19nm,0.7s
CHGR Chuyangaron 56.48 326 P P 04 53 41.9 -2.2
BTK Batken 56.57 328 IAmb IAmb 04 54 41.8
comp=Z,26nm,0.6s
BTK Batken 56.57 328 P P 04 53 43.6 -1.0
RBK Rabkut 56.58 296 P P 04 53 46.9 +1.8
ZAK Zakamensk 56.60 358 eP P 04 53 44.1 -0.5
ZAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 56.69 332 P P 04 53 45.0 -0.6
comp=Z,1.9nm,0.4s,baz=178,slow=3.9,SNR=4.8
AAK PcP PcP **04 54 41.7 +1.3**
comp=Z,38nm,0.6s,baz=161,slow=4.6,SNR=34
AAK LR LR 05 20 13.0
comp=Z,81nm,21.9s,baz=151,slow=38
comp=Z,1.9nm,0.4s
AAK Ala-Archa 56.69 332 P PcP 04 54 41.8 +1.3
SNR=14
AAK Ala-Archa 56.69 332 P P 04 53 44.6 -0.9
AAK PcP **04 54 41.1 +0.7**
AAK IAmb IAmb 04 54 42.5
comp=Z,40nm,0.7s
AAK Ala-Archa 56.69 332 *ce* P P 04 53 45.5 0.0
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 56.69 332 P P 04 53 44.9 -0.6
AAK Ala-Archa 56.69 332 P P 04 53 44.9 -0.6
ARQ Araqi 56.81 303 P P 04 53 48.0 +1.4
ZSN Zaisan 56.84 343 eP P 04 53 45.6 -0.6
ZSN Zaisan 56.84 343 eP P 04 53 45.7 -0.6
HILR Hailar Array B 56.96 10 P P 04 53 46.5 -0.6
comp=Z,23nm,0.6s,baz=191,slow=10.0,SNR=22
HILR pP **pP 04 54 13.1 -0.6**
comp=Z,13nm,0.5s,baz=187,slow=10,SNR=4.1
HILR ScP ScP **04 58 30.0 -0.8**
comp=Z,8.7nm,0.7s,baz=165,slow=6.2,SNR=7.9
comp=Z,23nm,0.6s
MK31 Makanchi Array 57.06 341 *ce* P P 04 53 46.7 -1.1
MKAR Makanchi Array 57.06 341 P P 04 53 46.9 -1.0
comp=Z,9.7nm,0.6s,baz=145,slow=7.6,SNR=88
MKAR ScP ScP **04 58 30.6 -0.7**
comp=Z,2.5nm,0.9s,baz=157,slow=6.6,SNR=4.3
MKAR S S **05 01 32.3 -1.9**
comp=Z,1.8nm,0.9s,baz=160,slow=16,SNR=6.4
MKAR LR LR 05 21 31.7
comp=Z,83nm,21.8s,baz=155,slow=39
comp=Z,9.7nm,0.6s
MKAR Makanchi Array 57.06 341 P P 04 53 46.7 -1.1
MKAR **ScP 04 58 29.6 -1.7**
WHFO Wadi Hawf 57.11 296 P P 04 53 49.8 +1.0
SOHO SOHO 57.14 304 *i* P P 04 53 49.7 +0.9
SNR=13
SOHO SOHO 57.14 304 P P 04 53 49.9 +1.1
MAKZ Makanchi 57.17 340 P P 04 53 47.1 -1.5
MAKZ Makanchi 57.17 340 P P 04 53 47.1 -1.5
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 57.17 340 P P 04 53 47.4 -1.2
ARK Arkit 57.26 330 P P 04 53 48.5 -1.0
SGDS Sogindy 57.27 333 eP P 04 53 48.8 -0.6
KNGR Kungurtug, Tuv 57.27 353 *i* P P 04 53 48.5 -0.8
KNGR pmax pmax
comp=Z,3.0nm,0.3s
UMZA Um Al Zommool 57.70 302 P P 04 53 53.8 +1.1
ALNE Al Ain 57.76 304 *i* P P 04 53 54.6 +1.5
SNR=13
ALNE Al Ain 57.76 304 P P 04 53 54.8 +1.7
SNR=8.4
UOSS Minazif 57.76 305 *i* P P 04 53 54.3 +1.1
SNR=8.6
UOSS Minazif 57.76 305 P P 04 53 54.1 +0.9
UOSS IAmb IAmb 04 53 56.8
comp=Z,26nm,0.7s
UOSS Minazif 57.76 305 P P 04 53 54.1 +0.9
UOSS Minazif 57.76 305 P P 04 53 54.5 +1.3
UOSS Minazif 57.76 305 P P 04 53 53.7 +0.6
UOSS x x 04 54 29.0
ASHO Ashiyiah 57.77 304 *i* P P 04 53 54.6 +1.3
SNR=20
ASHO Ashiyiah 57.77 304 P P 04 53 54.8 +1.5
SNR=5.8
HATD Hatta, Dubai 57.77 305 *i* P P 04 53 54.6 +1.4
SNR=20
HATD Hatta, Dubai 57.77 305 P P 04 53 54.8 +1.6
SNR=5.6
MDH Madha 57.84 305 *i* P P 04 53 53.8 0.0
SNR=11
MDH Madha 57.84 305 P P 04 53 53.7 0.0
TLY Talaya 57.89 358 P P 04 53 52.1 -1.4
comp=Z,4.9nm,0.8s,baz=51,slow=16,SNR=3.4
TLY LR LR 05 20 37.9
comp=Z,124nm,18.8s,baz=158,slow=38
comp=Z,4.9nm,0.8s
TLY Talaya 57.89 358 P P 04 53 53.5 0.0
TLY Talaya 57.89 358 *i* P P 04 53 52.6 -1.0
TLY pmax pmax
comp=Z,4.0nm,0.6s
KOUNC Koumac, New Ca 57.92 110 P P 04 53 55.3 +0.9
KOUNC Koumac, New Ca 57.92 110 IAmb IAmb 04 53 56.5
comp=Z,69nm,1.0s
MSFE Esma-Masafi 57.98 305 *i* P P 04 53 56.1 +1.4
SNR=17
MASF Masafi 57.98 305 P P 04 53 56.2 +1.5
BANOM Banah 58.11 306 P P 04 53 56.7 +1.0
FAQ Al Faqa, Dubai 58.18 304 *i* P P 04 53 57.4 +1.3
SNR=26
FAQ Al Faqa, Dubai 58.18 304 P P 04 53 57.4 +1.3
SNR=18
DGZ Jazzator, Alta 58.21 346 *i* P P 04 53 55.8 -0.2
DGZ pmax pmax
comp=Z,22nm,0.6s
NAZ Nazwa, Dubai 58.22 304 *i* P P 04 53 57.5 +1.1
SNR=29
NAZ Nazwa, Dubai 58.22 304 P P 04 53 57.8 +1.4
SNR=9.2
SHME Shamm 58.30 306 *i* P P 04 53 58.0 +1.1
SNR=13
SHME Shamm 58.30 306 P P 04 53 58.2 +1.3
ASUD Al Ashush, Dub 58.34 304 *i* P P 04 53 58.8 +1.5
SNR=16
ASUD Al Ashush, Dub 58.34 304 P P 04 53 59.0 +1.8
SNR=9.4
DZA Taraz 58.39 330 eP P 04 53 56.9 -0.3
DZA Taraz 58.39 330 eP P 04 53 56.9 -0.3
IUG Iuzhnay 58.49 329 eP P 04 53 57.3 -0.8
IUG pmax pmax
comp=Z,7.0nm,0.4s
IUG Iuzhnay 58.49 329 eP P 04 53 57.3 -0.8
comp=Z,7.5nm,0.4s
AJN Ajban 58.60 304 *i* P P 04 53 59.8 +0.8
SNR=6.2
AJN Ajban 58.60 304 P P 04 53 59.9 +0.8
SNR=9.5
ABPO Ambohimpanom 58.64 252 P P 04 54 01.8 +2.2
ABPO Ambohimpanom 58.64 252 P P 04 54 01.8 +2.2
ABPO pmax pmax
comp=Z,101nm,1.4s
ABPO Ambohimpanom 58.64 252 P P 04 54 01.9 +2.2
ABPO Ambohimpanom 58.64 252 P P 04 54 01.9 +2.2
BTLS Baital 58.77 334 eP P 04 53 59.2 -0.6
BTLS Baital 58.77 334 eP P 04 53 59.3 -0.6
CHM Chimkent 58.84 329 eP P 04 53 59.7 -0.6
CHM pmax pmax

comp=Z,8.0nm,0.4s
CHM Chimkent 58.84 329 *e*P P **04 53 59.8 -0.6**
comp=Z,8.4nm,0.4s
KKAR Karatay Array 58.95 330 P P **04 53 59.4 -1.7**
KKAR Karatay Array 58.95 330 P P **04 53 59.4 -1.7**
MZR Muzera 59.23 301 *i* P P **04 54 04.8 +1.3**
SNR=15
MZR Muzera 59.23 301 P P **04 54 04.7 +1.3**
SNR=6.4
BRLS Borolday 59.23 330 *e*P P **04 54 01.6 -1.5**
BRLS Borolday 59.23 330 *e*P P **04 54 01.6 -1.5**
VOI Vohitsoka 59.29 248 P P **04 54 06.2 +2.1**
VOI Vohitsoka 59.29 248 P P **04 54 06.1 +2.1**
VOI Vohitsoka 59.29 248 P P **04 54 06.1 +2.1**
VOI Vohitsoka 59.29 248 P P **04 54 06.1 +2.1**
CASY Casey 59.86 178 P P **04 54 07.7 +0.8**
CASY Casey 59.86 178 P P **04 54 07.7 +0.8**
NOUC Port Laguerre 59.94 112 P P **04 54 09.1 +0.8**
NOUC Port Laguerre 59.94 112 P P **04 54 08.7 +0.4**
NOUC x x 04 54 30.9
ONTNC Ouen Toro 60.10 112 P P **04 54 10.2 +0.8**
GHWR Ruwais 60.12 302 P P **04 54 10.6 +1.1**
SANVU Saraoutou 60.39 104 P P **04 54 12.6 +1.1**
SANVU Saraoutou 60.39 104 P P **04 54 11.8 +0.3**
OUENC Ouen Island, N 60.46 112 P P **04 54 13.1 +1.2**
OUENC Ouen Island, N 60.46 112 P P **04 54 12.7 +0.8**
YATNC Mamie plateau, 60.48 112 P P **04 54 13.3 +1.3**
JRN Qarnain Island 60.53 303 P P **04 54 13.0 +0.8**
H04N2 CROZET ISLANDS 61.21 220 T T 06 00 24.1
baz=67,slow=75,SNR=97
H04N1 CROZET ISLANDS 61.22 220 T T 06 00 25.4
baz=67,slow=75,SNR=95
H04N3 CROZET ISLANDS 61.23 220 T T 06 00 21.7
baz=67,slow=75,SNR=112
SKRH Sakahara 61.28 248 P P **04 54 19.2 +1.7**
H04S1 CROZET ISLANDS 61.40 219 T T 06 00 34.9
baz=66,slow=74,SNR=13
H04S3 CROZET ISLANDS 61.42 219 T T 06 00 27.0
baz=66,slow=74,SNR=11
H04S2 CROZET ISLANDS 61.42 219 T T 06 00 28.4
baz=66,SNR=13
MARNC Mare, Loyalty 61.48 111 P P **04 54 19.9 +1.1**
MARNC Mare, Loyalty 61.48 111 P P **04 54 19.3 +0.5**
KURBB Kurchatov Arra 61.62 340 P P **04 54 17.7 -1.4**
comp=Z,13nm,0.7s,baz=155,slow=6.0,SNR=67
KURBB PcP **PcP** **04 54 59.9 +0.3**
comp=Z,6.7nm,0.5s,baz=149,slow=3.6,SNR=15
KURBB S **S** **05 02 32.5 -0.2**
comp=Z,1.4nm,1.1s,baz=148,slow=14,SNR=6.4
KURBB PKPPKP **P'P'df** **05 23 33.5 +4.4**
comp=Z,1.5nm,0.2s,baz=315,slow=2.5,SNR=4.5
KURBB LR LR 05 24 22.7
comp=Z,75nm,19.0s,baz=171,slow=39
comp=Z,13nm,0.7s
KURK Kurchatov 61.67 340 P P **04 54 18.5 -0.8**
KURK Kurchatov 61.67 340 *ce*P P **04 54 18.6 -0.8**
KURK pmax pmax
comp=Z,18nm,0.7s
KURK Kurchatov 61.67 340 P P **04 54 18.6 -0.8**
KURK Kurchatov 61.67 340 P P **04 54 18.9 -0.6**
KURK Kurchatov 61.67 340 P P **04 54 18.2 -1.2**
KURK pP **pP** **04 54 44.8 -1.6**
KURK PcP **PcP** **04 55 00.6 +0.8**
KURK ScP **ScP** **04 58 50.9 -0.7**
YSS Yuzhno-Sakhali 62.20 27 *ce*P P **04 54 23.3 +0.2**
YSS pmax pmax
comp=Z,18nm,1.0s
ZEA Zeya 62.48 14 *e*P P **04 54 25.3 +0.5**
ZEA *e* 04 54 52.6
ZEA pmax pmax
comp=Z,20nm,0.7s
ZALV Zalesovo Beam 62.76 346 P P **04 54 25.1 -1.6**
comp=Z,4.3nm,0.3s,baz=156,slow=5.9,SNR=22
ZALV S **S** **05 02 42.6 -4.3**
comp=Z,1.2nm,0.7s,baz=156,slow=15,SNR=4.4
ZALV PKPPKP **P'P'df** **05 23 25.7 -1.4**
comp=Z,1.5nm,0.8s,baz=339,slow=6.3,SNR=3.8
ZALV LR LR 05 24 10.4
comp=Z,104nm,19.6s,baz=164,slow=38
comp=Z,4.3nm,0.3s
ZALV Zalesovo Beam 62.76 346 P P **04 54 25.3 -1.3**
ZALV Zalesovo Beam 62.76 346 *i* P P **04 54 25.0 -1.6**
ZALV pmax pmax
comp=Z,5.0nm,0.4s
SAKB Bahrain 62.85 303 P P **04 54 28.5 +0.7**
BRZS Berezniki 63.24 336 *e*P P **04 54 29.3 -0.6**
BRZS Berezniki 63.24 336 *e*P P **04 54 29.3 -0.6**
BOD Bodaibo 64.31 5 *e*P P **04 54 36.0 -0.8**
BOD pmax pmax
comp=Z,9.0nm,0.9s
DRV Dumont d'Urvil 64.50 166 P P **04 54 38.2 +0.3**
DCZ Deep Cove 65.27 137 P P **04 54 44.4 +1.1**
DCZ IAmb IAmb 04 54 50.3
comp=Z,114nm,1.4s
MSZ Milford Sound 65.57 136 P P **04 54 47.1 +1.8**
JCZ Jackson Bay 66.00 136 P P **04 54 49.1 +0.9**
APZ The Paps 66.23 139 P P **04 54 50.7 +1.2**
RAYN Ar Rayn 66.27 299 *i* P P **04 54 50.9 +0.7**
SNR=23
RAYN Ar Rayn 66.27 299 P P **04 54 50.2 0.0**
RAYN IAmb IAmb 04 54 51.7
comp=Z,45nm,1.1s
RAYN Ar Rayn 66.27 299 P P **04 54 50.2 0.0**
RAYN pmax pmax
comp=Z,45nm,1.2s
RAYN Ar Rayn 66.27 299 P P **04 54 50.9 +0.7**
RAYN Ar Rayn 66.27 299 P P **04 54 50.9 +0.7**
RAYN Ar Rayn 66.27 299 P P **04 54 50.6 +0.4**
RAYN pP **pP** **04 55 17.4 0.0**
KBD Kabd 66.41 306 P P **04 54 51.7 +0.8**
BVAR Borovoye Array 66.51 337 P P **04 54 49.6 -1.5**
comp=Z,10nm,0.5s,baz=145,slow=8.6,SNR=41
BVAR S **S** **05 03 29.1 -3.9**
comp=Z,0.9nm,0.5s,baz=119,slow=12,SNR=3.7
BVAR PKPPKP **P'P'df** **05 23 21.2 0.0**
comp=Z,1.2nm,0.7s,baz=313,slow=3.3,SNR=4.1
comp=Z,10nm,0.5s
BORK Borovoye 66.55 337 P P **04 54 50.4 -0.9**
BORK Borovoye 66.55 337 *i* P P **04 54 50.1 -1.2**
BORK pmax pmax
comp=Z,16nm,0.9s
LBZ Lake Benmore 67.06 136 P P **04 54 54.7 -0.1**
TUZ Tuapeka 67.08 137 P P **04 54 55.3 +0.5**
WVZ Waitaha Valley 67.14 134 P P **04 54 55.4 +0.1**
RPZ Rata Peaks 67.51 135 P P **04 54 58.2 +0.6**
RPZ Rata Peaks 67.51 135 P P **04 54 58.4 +0.8**
RPZ Rata Peaks 67.51 135 P P **04 54 58.3 +0.6**
INZ Inchbonnie 67.57 134 P P **04 54 57.4 -0.7**
MAW Mawson 67.72 197 P P **04 55 00.0 +1.6**
comp=Z,28nm,1.0s
MAW Mawson 67.72 197 P P **04 54 59.9 +1.6**
comp=Z,91nm,0.6s,baz=51,slow=6.0,SNR=123
MAW PKPPKP **P'P'df** **05 23 20.8 +1.0**
comp=Z,5.3nm,0.8s,baz=311,slow=4.8,SNR=7.8
comp=Z,91nm,0.6s
MAW Mawson 67.72 197 P P **04 55 00.1 +1.6**
MAW Mawson 67.72 197 P P **04 55 00.1 +1.6**
MAW pmax pmax
comp=Z,17nm,0.7s
MAW Mawson 67.72 197 P P **04 55 00.1 +1.6**
QRZ Quartz Range 67.98 131 P P **04 55 01.5 +0.8**
QRZ Quartz Range 67.98 131 P P **04 55 01.5 +0.8**
KIBK Kibwezi 68.05 270 P P **04 55 03.7 +2.0**
KIBK IAmb IAmb 04 55 04.5
comp=Z,63nm,0.7s
KIBK Kibwezi 68.05 270 P P **04 55 03.6 +1.9**
KIBK Kibwezi 68.05 270 P P **04 55 03.7 +2.0**
OXZ Oxford 68.12 134 IAmb IAmb 04 55 03.1
comp=Z,36nm,0.5s
OXZ Oxford 68.12 134 P P **04 55 01.6 +0.1**
THZ Tophouse 68.43 132 P P **04 55 03.9 +0.3**
THZ IAmb IAmb 04 55 05.5
comp=Z,74nm,0.7s
THZ Tophouse 68.43 132 P P **04 55 03.7 +0.2**
AB31 Akbulak array 68.50 329 P P **04 55 03.0 -0.6**
AB31 IAmb IAmb 04 55 04.8
comp=Z,38nm,0.7s
ABKAR Akbulak array 68.50 329 P P **04 55 02.9 -0.7**
MQZ McQueen's Vall 68.64 134 P P **04 55 05.8 +1.1**
NNZ Nelson 68.68 132 P P **04 55 04.9 -0.1**
KMBO Kilima Mbogo 68.97 271 P P **04 55 08.8 +1.2**
KMBO Kilima Mbogo 68.97 271 *i* P P **04 55 09.4 +1.8**
KHZ Kahutara 69.02 133 P P **04 55 07.3 +0.2**
KHZ Kahutara 69.02 133 P P **04 55 06.7 -0.4**

CCD Concordia, Ant 69.35 175 P P **04 55 10.6 +1.6**
CCD PcP **pP** **04 55 38.4 +1.8**
HIZ Hauiti 69.36 129 P P **04 55 09.7 +0.4**
HIZ Hauiti 69.36 129 P P **04 55 10.9 +1.7**
SNZO South Karori 69.68 132 P P **04 55 11.0 -0.2**
TRVZ Turoa 70.01 129 P P **04 55 14.2 +0.6**
MAVZ Mataranga 70.01 129 P P **04 55 14.4 +0.7**
WHVZ Whangaehu Hut 70.03 129 P P **04 55 14.2 +0.5**
AKTO Aktyubinsk 70.21 330 P P **04 55 13.4 -0.7**
comp=Z,6.8nm,0.5s,baz=122,slow=5.9,SNR=24
AKTO S **S** **05 04 12.7 -4.3**
comp=Z,1.3nm,0.5s,baz=325,slow=16,SNR=7.8
comp=Z,6.8nm,0.5s
MRZ Mangatainoka R 70.23 131 P P **04 55 15.5 +0.9**
TSZ Takapari Road 70.43 130 P P **04 55 16.3 +0.5**
YAK Yakutsk 70.60 11 LR LR 05 27 24.6
comp=Z,75nm,20.6s,baz=191,slow=37
YAK Yakutsk 70.60 11 P P **04 55 16.0 -0.3**
YAK IAmb IAmb 04 55 17.4
comp=Z,41nm,0.6s
YAK Yakutsk 70.60 11 *e*P P **04 55 14.9 -1.4**
YAK *e* 04 55 41.4
YAK *e**PP **sP** **04 55 51.3 -4.4**
YAK *e* 04 57 50.7
YAK *e*PPP PPP 04 59 35.4
YAK *e*S **S** **05 04 16.2 -4.8**
YAK *e* 05 05 02.4
YAK *e*SS **SS** **05 08 50.8 -4.1**
YAK pmax pmax
comp=Z,30nm,0.8s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK pmax pmax
comp=Z,146nm,5.1s
YAK pmax pmax
comp=N,93nm,6.7s
YAK pmax pmax
comp=E,69nm,6.6s
YAK smax smax
comp=E,65nm,2.3s
YAK smax smax
comp=N,52nm,4.0s
YAK Yakutsk 70.60 11 P P **04 55 14.5 -1.8**
BKZ Black Stump Fm 70.71 129 P P **04 55 18.0 +0.3**
BKZ Black Stump Fm 70.71 129 P P **04 55 17.7 0.0**
BKZ Black Stump Fm 70.71 129 P P **04 55 17.9 +0.3**
BFZ Birch Farm 70.74 131 P P **04 55 18.3 +0.7**
BFZ Birch Farm 70.74 131 IAmb IAmb 04 55 18.9
comp=Z,91nm,0.8s
BFZ Birch Farm 70.74 131 P P **04 55 17.9 +0.3**
BFZ Birch Farm 70.74 131 P P **04 55 18.4 +0.7**
MSVF Nonsavu 70.81 106 P P **04 55 19.9 +1.3**
MSVF Nonsavu 70.81 106 P P **04 55 19.7 +1.1**
MSVF Nonsavu 70.81 106 *i* P P **04 55 18.9 +0.3**
MSVF pmax pmax
comp=Z,24nm,0.7s
RTZ Ruatahuna 71.02 129 P P **04 55 19.5 0.0**
URZ Urewera 71.08 128 P P **04 55 20.1 +0.3**
URZ Urewera 71.08 128 P P **04 55 20.7 +0.9**
PXZ Pawanui 71.11 130 P P **04 55 20.4 +0.5**
SNGZ Shannon Statio 71.32 129 P P **04 55 21.0 -0.2**
LODK Lodwar 71.40 276 P P **04 55 23.4 +1.1**
LODK IAmb IAmb 04 55 25.8
comp=Z,81nm,1.5s
LODK Lodwar 71.40 276 P P **04 55 24.7 +2.4**
SNR=5.8
LODK Lodwar 71.40 276 P P **04 55 24.9 +2.6**
MWZ Matawai 71.41 128 P P **04 55 21.8 -0.1**
AKT Akhty 71.50 318 ⇑P P **04 55 22.8 +0.5**
AKT *e* 04 55 42.0
AKT *e**PP **pP** **04 55 49.0 -0.9**
AKT *e**SP **sP** **04 56 01.1 -0.7**
AKT *e*S **S** **05 04 29.4 -3.1**
AKT pmax pmax
comp=Z,49nm,0.7s
HAZ Te Kaha 71.55 128 P P **04 55 22.1 -0.5**
KNZ Kokohu 71.61 129 P P **04 55 23.4 +0.5**
PUZ Puketiti 71.96 128 P P **04 55 24.6 -0.5**
HAKT HAKKARI 72.69 312 P P **04 55 29.9 +0.2**
GNI Garni 72.97 315 P P **04 55 31.7 +0.5**
GNI Garni 72.97 315 *ce*P P **04 55 32.2 +1.0**
GNI pmax pmax
comp=Z,29nm,1.0s
GNI Garni 72.97 315 P P **04 55 31.9 +0.7**
GNI Garni 72.97 315 P P **04 55 31.9 +0.7**
comp=Z,549nmcomp=Z,31nm,0.8s
GNI Garni 72.97 315 P P **04 55 32.0 +0.7**
SVE Sverdlovsk 73.14 336 *e*P P **04 55 31.8 +0.2**
SVE *e*S **S** **05 04 48.4 -2.0**
SVE pmax pmax
comp=Z,28nm,0.8s
POGA Pongola 73.33 243 P P **04 55 35.6 +2.1**
POGA Pongola 73.33 243 P P **04 55 35.7 +2.3**
PEA0B Petropavlovsk- 73.45 29 P P **04 55 33.3 -0.3**
PEA0B Petropavlovsk- 73.45 29 P P **04 55 33.3 -0.3**
PEA0B pmax pmax
comp=Z,17nm,0.6s
PETK Petropavlovsk- 73.45 29 P P **04 55 32.3 -1.2**
comp=Z,13nm,0.6s,baz=156,slow=1.3,SNR=59
PETK pP **pP** **04 55 59.0 -2.2**
comp=Z,7.4nm,0.7s,baz=222,slow=4.5,SNR=6.1
comp=Z,13nm,0.6s
PETK Petropavlovsk- 73.45 29 P P **04 55 33.4 -0.1**
PETK pP **pP** **04 55 59.6 -1.6**
PETK Petropavlovsk- 73.45 29 P P **04 55 33.4 -0.1**
PETK *PP **pP** **04 55 59.6 -1.6**
ARTI Arti 73.79 335 P P **04 55 35.0 -0.4**
comp=Z,33nm,0.6s,baz=132,slow=3.5,SNR=44
comp=Z,33nm,0.6s
ARTI Arti 73.79 335 P P **04 55 35.2 -0.2**
ARTI Arti 73.79 335 *ce*P P **04 55 35.1 -0.4**
ARTI pmax pmax
comp=Z,21nm,0.6s
ARTI Arti 73.79 335 P P **04 55 34.9 -0.4**
ARTI PcP **PcP** **04 55 50.7 +0.2**
ARTI x x 04 56 01.2
PET Petropavlovsk 73.87 30 P P **04 55 37.9 +2.0**
PET Petropavlovsk 73.87 30 *ce*P P **04 55 36.6 +0.7**
PET pmax pmax
comp=Z,27nm,1.3s
PET Petropavlovsk 73.87 30 P P **04 55 35.9 0.0**
comp=Z,904nmcomp=Z,80nm,0.6s
DIGO Kars 74.04 315 P P **04 55 37.2 -0.4**
MA2 Magadan 74.62 22 P P **04 55 39.9 -0.3**
comp=Z,13nm,0.7s,baz=200,slow=3.1,SNR=7.7
comp=Z,13nm,0.7s
MA2 Magadan 74.62 22 *ce*P P **04 55 40.3 +0.1**
MA2 pmax pmax
comp=Z,13nm,0.7s
MA2 Magadan 74.62 22 P P **04 55 40.2 +0.1**
comp=Z,26nm,0.8s
EPOS Posof 74.92 316 P P **04 55 43.5 +1.1**
MBAR Mbarara 75.50 271 LR LR 05 23 47.4
comp=Z,105nm,19.0s,baz=154,slow=31
MBAR Mbarara 75.50 271 P P **04 55 47.3 +0.9**
MBAR IAmb IAmb 04 55 49.6
comp=Z,78nm,0.8s
MBAR Mbarara 75.50 271 *i* P P **04 55 49.1 +2.7**
MBAR pmax pmax
comp=Z,87nm,0.8s
MBAR Mbarara 75.50 271 P P **04 55 48.6 +2.2**
MBAR Mbarara 75.50 271 P P **04 55 48.6 +2.2**
MBAR Mbarara 75.50 271 P P **04 55 48.7 +2.2**
MBAR Mbarara 75.50 271 P P **04 55 48.4 +2.0**
MBAR x x 04 56 13.7
BATM Batumi 75.67 316 ⇑P P **04 55 47.1 +0.5**
BATM Batumi 75.67 316 P P **04 55 47.1 +0.5**
KBZ Khabaz 75.68 318 P P **04 55 47.1 +0.6**
comp=Z,69nm,0.9s,baz=118,slow=5.2,SNR=118
KBZ pP **pP** **04 56 13.6 -0.8**
comp=Z,57nm,0.9s,baz=140,slow=3.6,SNR=7.9
comp=Z,69nm,0.9s
KBZ Khabaz 75.68 318 *ce*P P **04 55 47.2 +0.6**
KBZ pmax pmax
comp=Z,76nm,0.9s
PYA1 Pyatigorsk 75.68 318 *i* P P **04 55 46.8 +0.1**
SYO Syowa Base 75.80 200 ⇑*i*P P **04 55 48.0 +1.2**
SYO Syowa Base 75.80 200 ⇑*e*P **PcP** **04 55 57.2 -1.7**
SHA1 Shidzhatmaz 75.84 318 *ce*P P **04 55 48.6 +0.8**
KIV Kislovodsk 75.91 318 ⇓P P **04 55 48.4 +0.4**
KIV Kislovodsk 75.91 318 *i* P P **04 55 48.4 +0.4**
SNR=11

KIV Kislovodsk 75.91 318 P P **04 55 48.3 +0.3**
KIV IAmb IAmb 04 55 50.3
comp=Z,74nm,0.7s
KIV Kislovodsk 75.91 318 *e*P P **04 55 48.2 +0.2**
KIV *e**PP **pP** **04 56 14.9 -1.0**
KIV *e*S **S** **05 05 20.6 -1.4**
KIV pmax pmax
comp=Z,51nm,0.9s
KIV Kislovodsk 75.91 318 P P **04 55 48.7 +0.6**
KIV Kislovodsk 75.91 318 P P **04 55 48.2 +0.2**
comp=Z,432nmcomp=Z,58nm,0.8s
KIV Kislovodsk 75.91 318 P P **04 55 48.7 +0.6**
KOPT Kop Dagi 75.93 314 IAmb IAmb 04 56 16.8
comp=Z,51nm,1.1s
NRIK Noril'sk 76.66 353 P P **04 55 50.6 -1.0**
comp=Z,6.7nm,0.4s,baz=149,slow=3.9,SNR=9.7
NRIK LR LR 05 33 58.4
comp=Z,78nm,18.8s,baz=146,slow=39
comp=Z,6.7nm,0.4s
VNDA Vanda 76.70 169 P P **04 55 52.7 +1.0**
comp=Z,51nm,0.9s,baz=314,slow=6.0,SNR=311
comp=Z,51nm,0.9s
VNDA Vanda 76.70 169 P P **04 55 52.8 +1.0**
VNDA IAmb IAmb 04 55 53.7
comp=Z,80nm,1.1s
VNDA Vanda 76.70 169 P P **04 55 52.8 +1.0**
VNDA pmax pmax
comp=Z,80nm,1.1s
BELG Belogornoye 76.70 327 *i* P P **04 55 52.1 -0.1**
BELG pmax pmax
comp=Z,7.0nm,0.9s
LSZ Lusaka 76.82 256 P P **04 55 55.6 +1.8**
LSZ IAmb IAmb 04 55 56.4
comp=Z,74nm,0.7s
LSZ Lusaka 76.82 256 P P **04 55 55.6 +1.8**
LSZ pmax pmax
comp=Z,74nm,0.7s
LSZ Lusaka 76.82 256 P P **04 55 55.4 +1.6**
LSZ Lusaka 76.82 256 *e*P P **04 55 52.7 -1.1**
LSZ Lusaka 76.82 256 P P **04 55 55.6 +1.8**
LSZ Lusaka 76.82 256 P P **04 55 55.6 +1.8**
LSZ Lusaka 76.82 256 P P **04 55 55.3 +1.5**
LSZ pP **pP** **04 56 23.2 +1.5**
SNKL Senekal, Frees 76.83 243 *e*P P **04 55 52.3 -1.4**
LEPH Lephalale, Lim 76.86 247 *e*P P **04 55 54.8 +0.9**
KELT Kelkit 76.87 314 P P **04 55 54.6 +0.9**
HRAO HartRAO 76.93 245 *e*P P **04 55 55.2 +0.9**
GHAJ Ghor Haditha 77.01 304 IAmb IAmb 04 55 56.7
comp=Z,115nm,1.1s
GHAJ Ghor Haditha 77.01 304 P P **04 55 55.6 +1.2**
EIL Elat 77.09 302 LR LR 05 31 36.3
comp=Z,69nm,19.4s,baz=138,slow=37
EIL Elat 77.09 302 P P **04 55 56.3 +1.4**
HRFI Mount Harif 77.11 303 P P **04 55 56.6 +1.5**
WDLM Western Deep L 77.16 244 *e*P P **04 55 55.7 +0.1**
ARPR Arapgir-MALATY 77.19 312 IAmb IAmb 04 56 24.2
comp=Z,85nm,1.2s
ARPR Arapgir-MALATY 77.19 312 P P **04 55 56.4 +0.9**
GAZ Gaziantep 77.41 310 IAmb IAmb 04 56 25.2
comp=Z,59nm,0.9s
SEY Seymchan 77.50 20 P P **04 55 56.2 -0.2**
comp=Z,7.3nm,0.7s,baz=235,slow=3.2,SNR=4.1
SEY pP **pP** **04 56 23.3 -1.1**
comp=Z,3.6nm,0.6s,baz=264,slow=5.8,SNR=2.1
comp=Z,7.3nm,0.7s
SEY Seymchan 77.50 20 *ce*P P **04 55 56.8 +0.4**
SEY pmax pmax
comp=Z,4.0nm,0.8s
VSLR Vesyoloye 77.50 317 *i* P P **04 55 56.9 0.0**
VSLR pmax pmax
comp=Z,122nm,0.8s
MMAI Mount Meron Ar 77.61 306 P P **04 55 59.1 +1.3**
comp=Z,20nm,0.6s,baz=67,slow=8.6,SNR=22
MMAI pP **pP** **04 56 25.6 -0.2**
comp=Z,8.2nm,0.7s,baz=98,slow=10,SNR=2.5
comp=Z,20nm,0.6s
SOC Sochi 77.76 317 *e*P P **04 55 56.8 -1.5**
SOC *e**PP **pP** **04 56 24.7 -1.6**
SOC *e* 04 58 53.1
SOC *e*PPP PPP 05 00 40.9
SOC *e*S **S** **05 05 37.0 -4.9**
SOC *e**SS **sS** **05 06 28.7 -1.3**
SOC *e*SS **SS** **05 10 39.7 -4.9**
SOC pmax pmax
comp=Z,84nm,0.7s
SBA Scott Base 77.78 169 P P **04 55 59.8 +2.0**
SBA IAmb IAmb 04 56 00.6
comp=Z,62nm,0.8s
SBA Scott Base 77.78 169 P P **04 55 59.8 +2.0**
SBA pmax pmax
comp=Z,62nm,0.8s
KZIT Kziot 77.87 303 P P **04 56 00.6 +1.4**
GRHM Grahamstown, E 78.03 237 P P **04 56 02.5 +2.3**
GRHM IAmb IAmb 04 56 03.6
comp=Z,68nm,0.9s
GRHM Grahamstown, E 78.03 237 *e*P P **04 56 01.9 +1.7**
ANDN Andirin 78.19 310 P P **04 56 01.7 +0.7**
SOOWA Sowa 78.44 250 P P **04 56 04.4 +1.7**
CY604 RAF Akrotiri, 78.69 307 P P **04 56 05.1 +1.9**
CY604 IAmb IAmb 04 56 05.9
comp=Z,87nm,0.7s
LBTB Lobatse 78.84 246 IAmb IAmb 04 56 07.2
comp=Z,67nm,0.7s
LBTB Lobatse 78.84 246 *e*P P **04 56 05.5 +0.7**
LBTB Lobatse 78.84 246 P P **04 56 06.4 +1.6**
LBTB Lobatse 78.84 246 P P **04 56 06.4 +1.6**
LBTB Lobatse 78.84 246 P P **04 56 06.2 +1.4**
LBTB PcP **PcP** **04 56 15.5 +2.3**
LBTB pP **pP** **04 56 33.8 +0.9**
TOKA Tokat 78.94 313 IAmb IAmb 04 56 07.8
comp=Z,31nm,0.5s
KIRV Kirov 79.00 333 *ce*P P **04 56 05.4 +0.7**
TIXI Tiksi 79.31 7 P P **04 56 04.7 -1.5**
TIXI Tiksi 79.31 7 *ce*P P **04 56 05.0 -1.2**
TIXI pmax pmax
comp=Z,11nm,1.0s
VRH Novokhopyorsk 79.44 325 *e*P P **04 56 05.5 -1.8**
VRH *e**PP **pP** **04 56 32.0 -3.4**
VRH pmax pmax
comp=Z,80nm,0.8s
MAKGR Makgori 79.53 245 IAmb IAmb 04 56 10.7
comp=Z,51nm,0.8s
MAKGR Makgori 79.53 245 P P **04 56 09.9 +1.3**
KSANE Kasane 79.57 253 P P **04 56 11.0 +2.0**
ANN Anapa 79.72 318 *e*P P **04 56 08.9 -0.1**
ANN *e*S **S** **05 06 01.1 -1.6**
ANN pmax pmax
comp=Z,24nm,0.6s
CSS Mathiatis 79.80 307 IAmb IAmb 04 56 11.7
comp=Z,95nm,0.9s
CSS Mathiatis 79.80 307 P P **04 56 10.6 +0.9**
comp=Z,887nmcomp=Z,123nm,0.9s
CSS Mathiatis 79.80 307 P P **04 56 10.9 +1.3**
BFON Badsfontein, M 80.32 239 *e*P P **04 56 13.7 +0.9**
SKOMA Sekoma 80.37 246 P P **04 56 14.7 +1.6**
KIRS Kirsehir-Merke 80.47 311 ⇑P P **04 56 13.6 +0.3**
VORD Divnogorie 80.75 324 *e*P P **04 56 12.7 -1.7**
VORD *e**PP **pP** **04 56 40.1 -2.5**
VORD pmax pmax
comp=Z,40nm,0.9s
AFI Afiamalu 80.76 103 P P **04 56 16.2 +0.9**
BR104 Keskin Array S 80.84 312 P P **04 56 15.1 -0.2**
comp=Z,406nmcomp=Z,45nm,0.8s
BRTR Keskin Array B 80.84 312 P P **04 56 15.3 -0.1**
comp=Z,28nm,0.6s,baz=139,slow=7.0,SNR=181
BRTR pP **pP** **04 56 41.6 -1.9**
comp=Z,33nm,0.9s,baz=126,slow=6.4,SNR=12
BRTR S **S** **05 06 10.8 -4.3**
comp=Z,0.7nm,0.8s,baz=101,slow=13,SNR=3.7
BRTR PKKPbc **PKKPbc** **05 14 54.6 -0.3**
comp=Z,0.7nm,0.6s,baz=344,slow=3.2,SNR=4.8
comp=Z,28nm,0.6s
BRTR Keskin Array B 80.84 312 *ce*P P **04 56 15.3 -0.1**
BRTR pmax pmax
comp=Z,29nm,0.6s
BR131 Keskin Array S 80.84 312 IAmb IAmb 04 56 16.3
comp=Z,41nm,0.7s
BR131 Keskin Array S 80.84 312 *i* P P **04 56 15.6 +0.2**
BR131 Keskin Array S 80.84 312 P P **04 56 15.2 -0.1**
SNR=25
BR105 Keskin Array S 80.86 312 P P **04 56 15.2 -0.2**
comp=Z,407nmcomp=Z,44nm,0.8s
BR106 Keskin Array S 80.86 312 P P **04 56 15.5 +0.1**
comp=Z,367nmcomp=Z,42nm,0.8s
VSR Storozhevoye 80.92 324 *e*P P **04 56 13.2 -2.1**

VSR e*PP **pP** 04 56 40.4 -3.1
VSR pmax pmax
comp=Z,70nm,0.8s
BRAK Brakfontein 81.00 239 eP **P** 04 56 17.7 +1.4
VORR Voronezh 81.07 325 eP **P** 04 56 14.0 -2.1
VORR e*PP **pP** 04 56 41.8 -2.4
VORR pmax pmax
comp=Z,70nm,0.9s
BZK Bozkurt 81.21 314 ⇑P **P** 04 56 18.0 +1.0
BZK Bozkurt 81.21 314 P **P** 04 56 17.7 +0.7
comp=Z,1µmcomp=Z,124nm,0.9s
KKUL Konya-Kulu 81.23 311 P **P** 04 56 18.0 +0.7
LPSR Galich'ya Gora 81.58 325 eP **P** 04 56 17.4 -1.3
LPSR e*PP **pP** 04 56 45.1 -1.8
LPSR pmax pmax
comp=Z,80nm,0.8s
GRAN Grantham 81.59 238 eP **P** 04 56 21.5 +2.1
ELIB Princess Elisa 81.74 198 dP **P** 04 56 21.4 +1.9
comp=Z,81nm,0.9s
SIM Simferopol' 82.01 317 eP **P** 04 56 22.0 +0.8
SIM e*PP **pP** 04 56 48.7 -0.8
SIM eS **S** 05 06 24.0 -2.5
SIM pmax pmax
comp=Z,90nm,0.6s
SIM pmax pmax
comp=Z,124nm,1.0s
SIM smax smax
comp=E,60nm,1.6s
KGCAE Kacgae 82.04 248 P **P** 04 56 23.8 +1.8
MERW Merweville 82.12 238 eP **P** 04 56 22.1 -0.1
FRAZ Fraserburg 82.25 239 eP **P** 04 56 24.9 +1.9
UPI Upington 82.57 242 eP **P** 04 56 25.9 +1.3
SUR Sutherland 82.74 238 P **P** 04 56 27.9 +2.3
SUR IAmb IAmb 04 56 29.0
comp=Z,82nm,0.9s
SUR Sutherland 82.74 238 P **P** 04 56 27.8 +2.3
SUR Sutherland 82.74 238 eP **P** 04 56 26.2 +0.6
SUR Sutherland 82.74 238 P **P** 04 56 28.2 +2.7
SUR Sutherland 82.74 238 P **P** 04 56 25.7 +0.1
MATJ Matjiesfontein 82.88 237 eP **P** 04 56 27.4 +1.2
GRTLG Ghanzi 83.06 249 IAmb IAmb 04 56 29.1
comp=Z,30nm,0.7s
GRTLG Ghanzi 83.06 249 P **P** 04 56 28.8 +1.4
MOS Moscow 83.46 328 eP **P** 04 56 28.7 +0.3
MOS e 04 56 56.0
MOS eS **SKSac** 05 06 36.6 -4.0
MOS pmax pmax
comp=Z,64nm,0.7s
MOS pmax pmax
comp=Z,56nm,0.7s
QSPA South Pole Qui 83.59 180 P **P** 04 56 29.8 +0.6
comp=Z,82nm,1.0s,baz=282,slow=0.7,SNR=256
QSPA PKKPbc **PKKPbc** 05 14 46.5 -3.3
comp=Z,3.2nm,0.8s,baz=191,slow=2.2,SNR=8.9
comp=Z,82nm,1.0s
QSPA South Pole Qui 83.59 180 P **P** 04 56 29.7 +0.6
QSPA IAmb IAmb 04 56 30.8
comp=Z,67nm,0.9s
QSPA South Pole Qui 83.59 180 P **P** 04 56 29.8 +0.6
CVNA Calvinia 83.68 239 P **P** 04 56 32.7 +2.4
OBN Obninsk 83.80 327 ceP **P** 04 56 30.7 +0.6
OBN i *PP **pP** 04 56 57.3 -1.2
OBN e 04 59 44.2
OBN ePPP PPP 05 01 36.6
OBN i S **SKSac** 05 06 39.6 -3.2
OBN eSS **SS** 05 12 11.1 -2.9
OBN pmax pmax
comp=Z,90nm,0.8s
OBN MLR MLR
comp=Z,49nm,16.0s
OBN Obninsk 83.80 327 P **P** 04 56 30.7 +0.6
comp=Z,955nmcomp=Z,106nm,0.7s
OBN Obninsk 83.80 327 P **P** 04 56 31.2 +1.0
KOOLE Kule 83.88 248 IAmb IAmb 04 56 33.5
comp=Z,60nm,0.7s
KOOLE Kule 83.88 248 P **P** 04 56 33.1 +1.6
PRTV Porterville,We 84.14 237 eP **P** 04 56 33.1 +0.5
ARG Arkhangelos 84.21 307 IAmb IAmb 04 57 02.1
comp=Z,93nm,1.3s
ARG Arkhangelos 84.21 307 P **P** 04 56 34.2 +1.4
MANT Manisa 84.36 310 IAmb IAmb 04 57 02.8
comp=Z,32nm,0.9s
KLMR Klimovskoe 84.49 333 eP **P** 04 56 32.7 -0.8
KLMR pmax pmax
comp=Z,40nm,1.3s
NE56 Odesa 84.65 318 P **P** 04 56 34.5 -0.1
AYDN Tasoluk 84.71 309 P **P** 04 56 36.8 +1.5
KARP Karpathos 84.84 306 P **P** 04 56 37.0 +1.0
comp=Z,2µmcomp=Z,318nm,0.9s
KARP Karpathos 84.84 306 P **P** 04 56 37.3 +1.4
BILL Bilibino 85.18 19 ceP **P** 04 56 36.5 -0.4
BILL pmax pmax
comp=Z,3.0nm,0.7s
BALY Balya 85.35 311 P **P** 04 56 39.2 +0.8
NVL N'lazarevskaya 85.45 199 eP **P** 04 56 38.2 -0.1
NVL eS **SKSac** 05 06 50.0 -3.0
NVL pmax pmax
comp=Z,39nm,0.9s
NVL MLR MLR
comp=Z,296nm,15.0s
TLCR 85.69 316 ⇑P **P** 04 56 41.3 +1.3
TLCR 85.69 316 P **P** 04 56 41.2 +1.3
TIRR Tirgusor 85.80 315 ⇑P **P** 04 56 41.3 +0.9
TIRR Tirgusor 85.80 315 IAmb IAmb 04 57 09.3
comp=Z,52nm,0.9s
TIRR Tirgusor 85.80 315 P **P** 04 56 41.3 +0.9
TIRR Tirgusor 85.80 315 P **P** 04 56 40.9 +0.4
comp=Z,854nmcomp=Z,75nm,1.1s
TIRR Tirgusor 85.80 315 P **P** 04 56 41.4 +0.9
PSN Preselentsi 85.81 315 i P **P** 04 56 41.2 +0.6
TPGR Topolog 85.89 316 ⇑P **P** 04 56 41.8 +0.8
TLBR Topalu 86.08 315 ⇓P **P** 04 56 43.2 +1.4
CFR Carcaliu 86.16 316 ⇑P **P** 04 56 43.1 +0.9
CFR Carcaliu 86.16 316 P **P** 04 56 43.1 +0.9
NEF NEVSHA 86.34 314 i P **P** 04 56 44.3 +1.1
VLDR Vladesti 86.34 317 ⇓P **P** 04 56 44.6 +1.5
IDI Anoyia 86.61 306 IAmb IAmb 04 56 47.0
comp=Z,28nm,0.7s
TSUM Tsumeb 86.64 251 P **P** 04 56 47.3 +1.9
TSUM Tsumeb 86.64 251 eP **P** 04 56 44.1 -1.3
TSUM Tsumeb 86.64 251 P **P** 04 56 47.1 +1.8
TSUM Tsumeb 86.64 251 P **P** 04 56 47.2 +1.9
AK09 Malin Array Si 86.68 322 P **P** 04 56 44.4 -0.2
SORM Soroca 86.68 319 ⇑P **P** 04 56 45.0 +0.3
SORM Soroca 86.68 319 P **P** 04 56 45.0 +0.3
AK10 Malin Array Si 86.70 322 P **P** 04 56 44.5 -0.2
AK08 Malin Array Si 86.70 322 P **P** 04 56 44.5 -0.2
AK07 Malin Array Si 86.71 321 P **P** 04 56 44.6 -0.2
VASR Vaslui 86.72 317 ⇓P **P** 04 56 46.4 +1.4
JMB Yambol 86.72 313 i P **P** 04 56 45.9 +0.9
AK06 Malin Array Si 86.72 322 P **P** 04 56 44.6 -0.3
AK05 Malin Array Si 86.73 322 P **P** 04 56 44.6 -0.3
AKASG Malin Array Be 86.74 322 P **P** 04 56 44.6 -0.3
comp=Z,39nm,0.7s,baz=87,slow=4.8,SNR=106
AKASG pP **pP** 04 57 11.2 -2.3
comp=Z,26nm,0.8s,baz=86,slow=4.9,SNR=9.1
AKASG S **SKSac** 05 07 04.5 +2.8
comp=Z,0.2nm,0.4s,baz=101,slow=9.8,SNR=4.3
comp=Z,39nm,0.7s
AKASG Malin Array Be 86.74 322 P **P** 04 56 45.0 +0.1
AKASG IAmb IAmb 04 56 45.6
comp=Z,56nm,0.8s
AKASG Malin Array Be 86.74 322 P **P** 04 56 45.0 +0.1
AKASG pmax pmax
comp=Z,56nm,0.8s
AKBB Malin Array Si 86.74 322 ceP **P** 04 56 44.8 -0.2
AKBB pmax pmax
comp=Z,63nm,0.7s
AKBB Malin Array Si 86.74 322 P **P** 04 56 44.7 -0.2
AK02 Malin Array Si 86.74 322 P **P** 04 56 44.7 -0.2
AK01 Malin Array Si 86.74 322 P **P** 04 56 44.7 -0.2
AK03 Malin Array Si 86.75 322 P **P** 04 56 44.7 -0.2
KIEV Kiev 86.75 322 i P **P** 04 56 44.8 -0.2
SNR=44
KIEV Kiev 86.75 322 P **P** 04 56 44.9 0.0
KIEV Kiev 86.75 322 P **P** 04 56 44.9 0.0
KIEV Kiev 86.75 322 P **P** 04 56 44.7 -0.2
comp=Z,3µmcomp=Z,311nm,0.7s
KIEV Kiev 86.75 322 P **P** 04 56 44.9 -0.2
KIEV Kiev 86.75 322 P **P** 04 56 44.8 -0.2
KIEV x x 04 57 11.4
ALN Alexandroupoli 86.76 312 IAmb IAmb 04 56 46.3
comp=Z,21nm,0.7s
ALN Alexandroupoli 86.76 312 P **P** 04 56 46.0 +0.7

WIN Windhoek 86.76 248 IAmb IAmb 04 56 49.0
comp=Z,44nm,1.0s
AK12 Malin Array Si 86.77 322 P **P** 04 56 44.8 -0.3
AK11 Malin Array Si 86.77 322 P **P** 04 56 44.8 -0.3
AK04 Malin Array Si 86.78 322 P **P** 04 56 44.9 -0.2
AK14 Malin Array Si 86.79 322 P **P** 04 56 44.9 -0.3
AK15 Malin Array Si 86.80 322 P **P** 04 56 45.0 -0.2
AK16 Malin Array Si 86.80 322 P **P** 04 56 45.0 -0.2
AK23 Malin Array Si 86.81 322 P **P** 04 56 45.0 -0.3
AK13 Malin Array Si 86.82 322 P **P** 04 56 45.1 -0.2
AK17 Malin Array Si 86.84 322 P **P** 04 56 45.2 -0.2
AK18 Malin Array Si 86.84 322 P **P** 04 56 45.2 -0.2
AK22 Malin Array Si 86.85 322 P **P** 04 56 45.2 -0.3
GHRR 86.85 317 ⇓P **P** 04 56 47.4 +1.8
GHRR 86.85 317 P **P** 04 56 47.3 +1.7
GHRR 86.85 317 P **P** 04 56 47.6 +2.0
AK21 Malin Array Si 86.87 322 P **P** 04 56 45.3 -0.2
AK19 Malin Array Si 86.87 322 P **P** 04 56 45.3 -0.3
AK20 Malin Array Si 86.88 322 P **P** 04 56 45.4 -0.2
RAZG Razgrad 86.95 314 ⇑P **P** 04 56 47.2 +1.1
ADK Adak 87.10 37 P **P** 04 56 47.8 +1.2
RDO Rodhopi 87.19 312 IAmb IAmb 04 57 16.1
comp=Z,43nm,1.3s
ISR Istrita 87.25 316 ⇓P **P** 04 56 48.9 +1.3
ISR Istrita 87.25 316 P **P** 04 56 48.9 +1.3
ISR Istrita 87.25 316 P **P** 04 56 49.2 +1.6
comp=Z,1µmcomp=Z,80nm,1.8s
SAHR Sahastru 87.27 316 ⇑P **P** 04 56 49.3 +1.5
VRI Vrincioaia 87.27 317 ⇑P **P** 04 56 49.1 +1.4
VRI Vrincioaia 87.27 317 P **P** 04 56 49.0 +1.4
VRI Vrincioaia 87.27 317 P **P** 04 56 48.7 +1.0
comp=Z,2µmcomp=Z,258nm,1.1s
VRI Vrincioaia 87.27 317 P **P** 04 56 49.2 +1.4
PLOR Plostina 87.32 317 ⇑P **P** 04 56 49.2 +1.2
PLOR Plostina 87.32 317 P **P** 04 56 49.1 +1.2
SULR 87.36 315 P **P** 04 56 49.7 +1.7
TESR Tescani 87.46 317 P **P** 04 56 49.3 +0.8
comp=Z,3µmcomp=Z,246nm,1.2s
TESR Tescani 87.46 317 P **P** 04 56 49.7 +1.2
LUBAR Lubar, Ukraine 87.47 321 P **P** 04 56 47.8 -0.7
NEHR Nehoiu 87.48 316 ⇑P **P** 04 56 50.4 +1.7
MI29 MI29, Kamyanyy 87.52 321 P **P** 04 56 48.8 +0.1
comp=Z,668nm,0.7s
ONER Baraj Valea Uz 87.60 317 ⇓P **P** 04 56 51.0 +1.8
COVR Voineasa-Covas 87.63 316 ⇑P **P** 04 56 50.1 +0.7
MLR Muntele Rosu 87.73 316 P **P** 04 56 51.1 +1.1
comp=Z,54nm,0.6s,baz=322,slow=0.9,SNR=64
MLR pP **pP** 04 57 18.1 -0.5
comp=Z,119nm,1.0s,baz=49,slow=3.3,SNR=7.7
MLR Muntele Rosu 87.73 316 ⇑P **P** 04 56 51.1 +1.1
MLR Muntele Rosu 87.73 316 pP 04 57 18.1 -0.5
MLR Muntele Rosu 87.73 316 P **P** 04 56 51.0 +1.0
comp=Z,2µmcomp=Z,195nm,1.2s
MLR Muntele Rosu 87.73 316 P **P** 04 56 51.3 +1.3
MI28 Mi28,Pidlybu 87.75 322 P **P** 04 56 48.5 -1.3
TURR Turia 87.80 317 ⇓P **P** 04 56 51.5 +1.3
RZN Rozhen 87.88 312 i P **P** 04 56 51.7 +0.8
PRAR RASCA 87.92 318 ⇑P **P** 04 56 51.0 +0.3
OZUR 87.96 317 ⇓P **P** 04 56 51.8 +0.8
KMPD K-Podol'skiy 88.01 319 P **P** 04 56 50.4 -0.6
TROLL Troll, Antarti 88.16 198 ⇑P **P** 04 56 53.4 +1.8
comp=Z,2µm,0.8s
HUMR Humele 88.22 315 P **P** 04 56 52.9 +0.7
VOIR 88.34 316 P **P** 04 56 52.9 +0.1
comp=Z,412nmcomp=Z,22nm,0.6s
VOIR 88.34 316 P **P** 04 56 53.1 +0.3
PGB Panagyurishte 88.44 313 i P **P** 04 56 53.9 +0.6
MMB Musomishta 88.58 312 i P **P** 04 56 54.3 +0.3
ARR Arges 88.62 316 ⇑P **P** 04 56 54.8 +0.7
ARR Arges 88.62 316 P **P** 04 56 54.9 +0.7
SRS Serrai 88.63 311 P **P** 04 56 54.4 +0.2
BURAR Bucovina Array 88.64 318 ⇑P **P** 04 56 55.8 +1.5
BURAR Bucovina Array 88.64 318 P **P** 04 56 56.1 +1.9
BURAR Bucovina Array 88.64 318 P **P** 04 56 55.7 +1.5
BUR08 Bucovina Ar. S 88.65 318 IAmb IAmb 04 57 23.9
comp=Z,55nm,0.9s
SOH Sokhos 88.75 311 P **P** 04 56 55.2 +0.3
MPEP Malo Peshtene 88.89 314 i P **P** 04 56 56.4 +1.0
HORT Hortiatis 88.91 311 P **P** 04 56 56.0 +0.4
RNPP5 Staryi Chortor 88.91 322 P **P** 04 56 55.1 -0.2
TNR Turnu Rosu 88.92 316 ⇑P **P** 04 56 57.2 +1.7
TNR Turnu Rosu 88.92 316 P **P** 04 56 57.1 +1.7
RNPP9 Sopachiv 88.95 322 P **P** 04 56 55.5 +0.1
RNPP8 Varash 88.95 322 P **P** 04 56 55.6 +0.2
PLNA Plana 88.97 313 i P **P** 04 56 56.8 +0.9
KKB Krupnik 89.09 312 i P **P** 04 56 56.7 +0.3
VTS Vitosha 89.14 313 i P **P** 04 57 01.0 +4.3
KNT Kendrikon 89.15 311 P **P** 04 56 55.7 -0.9
VALD Valchedram 89.17 314 i P **P** 04 56 57.4 +0.8
AGG Agios Georgios 89.25 309 P **P** 04 56 56.8 -0.4
ITM Ithomi 89.28 307 IAmb IAmb 04 56 59.9
comp=Z,31nm,0.7s
ITM Ithomi 89.28 307 P **P** 04 56 58.1 +0.7
LIT Litokhoron 89.29 310 P **P** 04 56 57.6 +0.3
APA Apatity 89.39 338 eP **P** 04 56 56.1 -1.1
APA e*PP **pP** 04 57 26.7 +0.9
APA e 05 00 30.1
APA pmax pmax
comp=Z,7.0nm,1.2s
APA MLR MLR
comp=Z,294nm,31.4s
SNAA Sanae 89.86 197 ⇑P **P** 04 57 01.2 +1.8
comp=Z,956nm,0.8s
SNAA Sanae 89.86 197 P **P** 04 57 01.3 +1.8
comp=Z,36nm,0.8s,baz=127,slow=3.9,SNR=129
SNAA PKKPbc **PKKPdf** 05 14 29.9 +1.1
comp=Z,4.5nm,0.8s,baz=324,slow=8.6,SNR=9.7
comp=Z,36nm,0.8s
SNAA Sanae 89.86 197 eP **P** 04 57 00.8 +1.3
SNAA Sanae 89.86 197 P **P** 04 57 01.5 +2.0
MARR Marisel-Cluj 89.88 317 ⇓P **P** 04 57 01.4 +1.3
DEV Deva 89.90 316 P **P** 04 57 01.8 +1.7
GZR Gura Zlata 89.91 316 ⇑P **P** 04 57 01.1 +0.9
GZR Gura Zlata 89.91 316 P **P** 04 57 01.0 +0.9
VSU Vasula 89.93 329 ceP **P** 04 56 59.8 0.0
VSU pmax pmax
comp=Z,120nm,1.7s
VSU Vasula 89.93 329 P **P** 04 56 59.1 -0.7
HERR Herculane 90.08 315 ⇑P **P** 04 57 02.0 +1.1
DRGR 90.18 317 P **P** 04 57 02.3 +0.9
BOVS Bovan 90.40 314 ⇑P **P** 04 57 02.9 +0.5
TRPA Tarpa 90.50 318 P **P** 04 57 03.4 +0.6
LKD2 Lefkada island 90.50 309 P **P** 04 57 04.5 +1.5
MDVR Moldovita 90.56 315 ⇑P **P** 04 57 04.1 +0.9
BZS Buzias 90.75 316 ⇑P **P** 04 57 04.6 +0.6
BZS Buzias 90.75 316 P **P** 04 57 04.6 +0.6
BZS Buzias 90.75 316 P **P** 04 57 04.7 +0.7
KOLS Kolonicke sedl 90.80 319 eP **P** 04 57 05.4 +1.2
KOLS pmax pmax
comp=Z,39nm,0.8s
KOLS Kolonicke sedl 90.80 319 P **P** 04 57 05.5 +1.2
KOLS Kolonicke sedl 90.80 319 eP **P** 04 57 05.4 +1.2
KOLS epP **pP** 04 57 32.1 -0.8
SIRR Siria 90.81 316 ⇑P **P** 04 57 04.4 +0.1
PABE Paberze 90.84 326 P **P** 04 57 04.7 +0.6
FINES FINESS Array B 90.87 332 P **P** 04 57 04.8 +0.6
comp=Z,17nm,0.7s,baz=116,slow=5.6,SNR=50
FINES pP **pP** 04 57 31.6 -1.3
comp=Z,8.3nm,0.8s,baz=120,slow=7.5,SNR=4.4
FINES PKiKP **PKiKP** 05 01 57.6 +0.5
comp=Z,2.2nm,0.8s,baz=45,slow=3.0,SNR=3.6
FINES PKKPbc **PKKPdf** 05 14 29.5 +1.8
comp=Z,9.4nm,1.2s,baz=288,slow=7.8,SNR=4.9
comp=Z,17nm,0.7s
SUW Suwalki 91.04 324 eP **P** 04 57 05.0 -0.1
VNA2 Neumayer--Watz 91.51 198 ⇑P **P** 04 57 08.7 +1.7
comp=Z,40nm,0.7s,baz=100,slow=4.5
VNA2 Neumayer--Watz 91.51 198 P **P** 04 57 08.9 +1.9
VADS Vadso 91.53 341 eP **P** 04 57 07.2 +0.2
STHS Stebnicka Huta 91.54 319 eP **P** 04 57 07.5 -0.1
STHS pmax pmax
comp=Z,20nm,0.8s
STHS Stebnicka Huta 91.54 319 eP **P** 04 57 07.5 -0.1
SPIA Saint Paul Isl 91.83 33 P **P** 04 57 09.3 +0.7
baz=261
VNA1 Neumayer--Stat 91.89 198 ⇑P **P** 04 57 10.7 +1.9
comp=Z,39nm,1.0s
PDG Podgorica 92.02 312 ⇑P **P** 04 57 11.0 +1.0
PDG Podgorica 92.02 312 P **P** 04 57 08.7 -1.3
NIE Niedzica 92.15 319 eP **P** 04 57 11.5 +1.0
NIE Niedzica 92.15 319 P **P** 04 57 10.8 +0.4
comp=Z,7.0nm,1.1s
BEL Belsk 92.15 322 eP **P** 04 57 11.4 +1.1

GAMB Gambell 92.20 26 P **P** 04 57 11.1 +0.9
baz=260
PSZ Piszkesteto 92.23 318 ⇓P **P** 04 57 11.5 +0.6
PSZ Piszkesteto 92.23 318 P **P** 04 57 11.5 +0.6
PSZ Piszkesteto 92.23 318 P **P** 04 57 11.3 +0.4
OJC Ojcow 92.57 320 eP **P** 04 57 13.1 +0.8
OJC Ojcow 92.57 320 P **P** 04 57 12.7 +0.4
comp=Z,10nm,1.5s
ARAG ARCESS Array S 92.70 340 eP **P** 04 57 12.9 +0.4
ARCES ARCESS Array B 92.70 340 P **P** 04 57 12.1 -0.4
comp=Z,8.3nm,0.8s,baz=100,slow=4.8,SNR=18
ARCES LR LR 05 43 27.4
comp=Z,69nm,18.5s,baz=100,slow=38
comp=Z,8.3nm,0.8s
BELA Belgrano 2 93.14 188 IAmb IAmb 04 57 15.9
comp=Z,18nm,0.8s
KTK1 Kautokeino 93.41 339 eP **P** 04 57 14.9 -0.8
UNV Unalaska Valle 93.51 36 P **P** 04 57 17.0 +0.5
baz=264
TIP Timpagrande 93.57 309 ⇓P **P** 04 57 18.6 +1.3
BLY Banja Luka 93.76 314 ⇓P **P** 04 57 19.0 +1.1
BLY Banja Luka 93.76 314 IAmb IAmb 04 57 47.4
comp=Z,23nm,1.1s
BLY Banja Luka 93.76 314 P **P** 04 57 17.1 -0.8
JAVC Velka Javorina 93.81 319 eP **P** 04 57 19.2 +1.1
JAVC epP **pP** 04 57 45.8 -1.0
STEB Steborice 93.84 320 eP **P** 04 57 16.9 -1.3
MORC Moravsky Berou 93.97 319 IAmb IAmb 04 57 20.4
comp=Z,16nm,1.2s
MORC Moravsky Berou 93.97 319 eP **P** 04 57 19.1 +0.3
MORC epP **pP** 04 57 45.7 -1.9
MORC Moravsky Berou 93.97 319 P **P** 04 57 18.9 +0.1
MODS Modra-Piesok 94.02 318 eP **P** 04 57 18.9 +0.8
MODS pmax pmax
comp=Z,14nm,0.9s
MODS Modra-Piesok 94.02 318 eP **P** 04 57 19.9 +0.8
TNA Tin City 94.06 25 P **P** 04 57 19.4 +0.6
baz=264
M11K Mekoryuk 94.32 30 P **P** 04 57 20.6 +0.5
baz=265
JETT Jettan, Norway 94.48 339 eP **P** 04 57 20.5 -0.2
JETT IAmb IAmb 04 57 21.0
comp=Z,17nm,0.7s
KRLC Kraliky 94.49 320 eP **P** 04 57 18.6 -2.6
KRLC Kraliky 94.49 320 eP **P** 04 57 18.6 -2.6
KRLC Kraliky 94.49 320 P **P** 04 57 19.5 -1.7
VRAC Vranov 94.55 319 eP **P** 04 57 22.1 +0.6
KRUC Moravsky 94.66 319 eP **P** 04 57 21.9 -0.1
KRUC epP **pP** 04 57 48.4 -2.3
DPC Dobruska-Polom 94.80 320 eP **P** 04 57 23.4 +0.8
DPC Dobruska-Polom 94.80 320 eP **P** 04 57 23.4 +0.8
DPC Dobruska-Polom 94.80 320 P **P** 04 57 23.3 +0.7
comp=Z,8.6nm,1.0s
DPC Dobruska-Polom 94.80 320 P **P** 04 57 23.6 +1.0
KSP Ksiaz 94.86 320 eP **P** 04 57 23.5 +0.7
KSP Ksiaz 94.86 320 P **P** 04 57 23.1 +0.3
SOKA Soboth 95.41 316 eP **P** 04 57 26.5 +1.0
comp=Z,9.2nm,1.2s
F15K North Star Dit 95.43 25 P **P** 04 57 26.2 +1.2
baz=266
L14K Kuka Creek 96.10 29 P **P** 04 57 28.8 +0.6
baz=268
SPITS Spitsbergen Ar 96.18 348 P **P** 04 57 27.3 -1.0
comp=Z,9.9nm,0.8s,baz=141,slow=17,SNR=4.7
comp=Z,9.9nm,0.8s
FAUS Fauske 96.21 337 eP **P** 04 57 28.3 -0.2
FAUS IAmb IAmb 04 57 28.9
comp=Z,24nm,0.7s
STEI Steigen 96.25 338 eP **P** 04 57 28.2 -0.5
STEI IAmb IAmb 04 57 29.3
comp=Z,37nm,0.6s
H16K Elim 96.40 26 P **P** 04 57 29.9 +0.4
baz=269
GERES GERESS Array B 96.42 318 P **P** 04 57 30.4 +0.3
comp=Z,1.6nm,0.6s,baz=84,slow=4.2,SNR=12
GERES pP **pP** 04 57 57.0 -1.9
comp=Z,2.3nm,0.9s,baz=88,slow=4.5,SNR=3.6
comp=Z,1.6nm,0.6s
GERES GERESS Array B 96.42 318 P **P** 04 57 29.6 -0.5
GERES pP **pP** 04 57 56.9 -1.9
M14K Bethel 96.43 30 P **P** 04 57 30.0 +0.3
baz=268
KHC Kasperske Hory 96.51 319 eP **P** 04 57 30.0 -0.4
KHC Kasperske Hory 96.51 319 eP **P** 04 57 30.0 -0.4
MOR8 Moi Rana 96.52 336 eP **P** 04 57 29.7 -0.4
E17K Hotham Inlet 96.61 23 P **P** 04 57 30.9 +0.5
baz=269
L15K Ungalak Mounta 96.68 29 P **P** 04 57 31.2 +0.4
baz=269
RAUS Rausandaksla 96.69 336 eP **P** 04 57 31.0 +0.3
O14K Tigyukauivet M 96.75 31 P **P** 04 57 31.5 +0.4
baz=269
HFS Hagfors 96.76 330 P **P** 04 57 31.3 0.0
comp=Z,7.0nm,0.7s,baz=183,slow=2.5,SNR=16
HFS PKKPbc **PKKPbc** 05 14 12.7 -3.3
comp=Z,2.4nm,0.7s,baz=231,slow=7.1,SNR=6.9
HFS LR LR 05 48 46.9
comp=Z,31nm,18.4s,baz=171,slow=40
comp=Z,7.0nm,0.7s
A19K Wainwright 96.90 20 P **P** 04 57 32.4 +0.8
baz=270
VAGH Vaagaholmen 97.00 336 eP **P** 04 57 32.8 +0.7
LESA Schwarzleotal 97.06 317 eP **P** 04 57 32.5 -0.5
comp=Z,2.3nm,0.4s
LEIR Leirfjorden 97.06 336 eP **P** 04 57 32.2 -0.2
LEIR IAmb IAmb 04 57 33.4
comp=Z,14nm,0.8s
I17K Unalakleet 97.06 26 P Pdif 04 57 32.6 +0.1
baz=270
G17K Kiwalik Mounta 97.08 25 P **P** 04 57 32.6 0.0
baz=270
E18K Tukpahlearik C 97.09 23 P Pdif 04 57 32.9 +0.2
baz=270
STOK Stokkvaagen 97.10 336 eP **P** 04 57 32.5 -0.1
C19K Lookout Ridge 97.44 21 P Pdif 04 57 34.6 +0.3
baz=272
CHNA Chernabura Isl 97.61 36 P Pdif 04 57 35.8 +0.6
baz=270
S14K Fog Glacier 97.63 34 P Pdif 04 57 35.7 +0.2
baz=270
L16K Owhat River 97.64 29 P Pdif 04 57 35.9 +0.7
baz=271
WTTA Wattenberg 97.76 317 ePcP Pdif 04 57 37.7 +1.4
comp=Z,4.9nm,0.7s
J17K VABM Dome 97.79 27 P Pdif 04 57 36.0 +0.2
baz=271
M16K Timber Creek 97.90 29 P Pdif 04 57 37.1 +0.7
baz=271
NB2 NORSAR Subarra 97.98 331 P **P** 04 57 36.2 -0.6
comp=Z,1.3nm,0.8s,baz=83,slow=4.6
NB2 NORSAR Subarra 97.98 331 P **P** 04 57 36.2 -0.6
NOA NORSAR Array B 97.98 331 P **P** 04 57 36.0 -0.7
comp=Z,1.2nm,0.8s,baz=95,slow=5.0,SNR=4.6
NOA LR LR 05 47 57.4
comp=Z,14nm,18.4s,baz=270,slow=39
comp=Z,1.2nm,0.8s
D19K Kuna River 98.00 22 P Pdif 04 57 37.3 +0.5
baz=273
H18K Honhosa River 98.05 25 P Pdif 04 57 37.0 0.0
baz=272
SQTA Sankt Quirin 98.05 317 ePdiff **P** 04 57 37.2 -0.3
comp=Z,5.0nm,0.5s
MOTA Moosalm 98.12 317 ePdiff **P** 04 57 37.7 -0.2
comp=Z,7.1nm,0.9s
L17K Donlin 98.19 28 P Pdif 04 57 38.2 +0.5
baz=272
RETA Reutte 98.36 317 ePdiff **P** 04 57 37.9 -0.9
comp=Z,2.8nm,0.8s
O16K Kokwok River B 98.36 31 P Pdif 04 57 38.8 +0.3
baz=272
E19K Redstone River 98.39 23 P Pdif 04 57 39.0 +0.5
baz=274
G19K Purcell Mounta 98.53 24 P Pdif 04 57 39.5 +0.4
baz=273
D20K Etivluk River 98.53 21 P Pdif 04 57 39.2 +0.1
baz=274
FUORN Ofenpass-Fuorn 98.69 316 IAmb IAmb 04 58 09.3
comp=Z,14nm,1.4s
N17K Nushagak Hills 98.78 30 P Pdif 04 57 40.3 0.0
baz=272
H19K Roundabout Mou 98.83 25 P Pdif 04 57 40.7 +0.3
baz=274
O17K Koliganek Bris 98.86 31 P Pdif 04 57 41.0 +0.3
baz=272
A22K Sinclair Lake 98.89 19 P Pdif 04 57 41.1 +0.6
baz=276

DAVOX	**Davos/Dischmat**	**98.96**	**316**	P	Pdif	04 57 42.1	+0.4
	comp=Z,2.8nm,0.5s,baz=100,slow=6.4,SNR=7.6						
	comp=Z,2.8nm,0.5s						
F20K	**Avaraart Lake**	**99.00**	**23**	P	**Pdif**	**04 57 41.4**	**+0.3**
	baz=275						
C21K	**Knifeblade Rid**	**99.15**	**21**	P	**Pdif**	**04 57 41.8**	**0.0**
	baz=276						
R17L	**Mt. Peulik Vol**	**99.35**	**33**	P	**Pdif**	**04 57 42.0**	**-0.9**
	baz=273						
M18K	**Stony River**	**99.39**	**29**	P	**Pdif**	**04 57 42.8**	**-0.2**
	baz=274						
H20K	**Anotleneega Mo**	**99.48**	**25**	P	**Pdif**	**04 57 43.8**	**+0.4**
	baz=275						
L19K	**White Mountain**	**99.80**	**28**	P	**Pdif**	**04 57 44.7**	**-0.1**
	baz=275						
CHIR	**Chirikof Islan**	**99.85**	**35**	P	**Pdif**	**04 57 44.5**	**-0.7**
	baz=273						
F21K	**Alatna River**	**99.86**	**23**	P	**Pdif**	**04 57 44.7**	**-0.3**
	baz=277						
J20K	**Nowinta River**	**99.93**	**26**	P	**Pdif**	**04 57 45.0**	**-0.4**
	baz=276						
G21K	**Allakaket**	**99.93**	**24**	P	**Pdif**	**04 57 44.7**	**-0.7**
	baz=277						
G18K	**Katmai Hardscr**	**100.00**	**32**	P	**Pdif**	**04 57 44.9**	**-1.1**
	baz=274						
K20K	**Telida**	**100.05**	**27**	P	**Pdif**	**04 57 45.2**	**-0.7**
	baz=276						
N19K	**Bonanza Creek**	**100.09**	**29**	P	**Pdif**	**04 57 45.1**	**-1.2**
	baz=275						
F22K	**John River**	**100.32**	**23**	P	**Pdif**	**04 57 46.6**	**-0.5**
	baz=278						
H21K	**Melozitna Rive**	**100.32**	**24**	P	**Pdif**	**04 57 46.1**	**-1.0**
	baz=277						
E22K	**Anaktuvuk Pass**	**100.36**	**22**	P	**Pdif**	**04 57 46.9**	**-0.4**
	baz=279						
C23K	**Itkillik River**	**100.51**	**20**	P	**Pdif**	**04 57 47.5**	**-0.3**
	baz=280						
M20K	**Styx River**	**100.63**	**28**	P	**Pdif**	**04 57 48.3**	**-0.4**
	baz=276						
H22K	**Ishtalitna Cre**	**100.87**	**24**	P	**Pdif**	**04 57 48.8**	**-0.8**
	baz=279						
CAST	**Castle Rocks**	**100.93**	**27**	P	**Pdif**	**04 57 48.8**	**-1.1**
	baz=278						
PPLA	**Purkeypile**	**100.95**	**27**	P	**Pdif**	**04 57 49.5**	**-0.7**
	baz=277						
O20K	**Slope Mountain**	**101.08**	**30**	P	**Pdif**	**04 57 50.3**	**-0.4**
	baz=276						
TOLK	**Toolik Lake Re**	**101.09**	**21**	P	**Pdif**	**04 57 50.6**	**+0.1**
	baz=281						
E23K	**Chandalar**	**101.19**	**22**	P	**Pdif**	**04 57 50.8**	**-0.2**
	baz=281						
D24K	**Happy Valley**	**101.26**	**21**	P	**Pdif**	**04 57 50.2**	**-0.9**
	baz=282						
MLY	**Manley**	**101.27**	**25**	P	**Pdif**	**04 57 51.1**	**-0.3**
	baz=279						
G23K	**Bananza Creek**	**101.28**	**23**	P	**Pdif**	**04 57 50.9**	**-0.4**
	baz=280						
KDAK	**Kodiak Island**	**101.36**	**32**	P	**Pdif**	**04 57 50.9**	**-0.9**
	baz=276						
SKT	**Skwentna**	**101.37**	**28**	P	**Pdif**	**04 57 51.3**	**-0.6**
	baz=278						
E24K	**Your Creek**	**101.60**	**22**	P	**Pdif**	**04 57 52.6**	**-0.2**
	baz=282						
H23K	**Yukon River**	**101.63**	**24**	P	**Pdif**	**04 57 52.5**	**-0.4**
	baz=280						
L22K	**Petersville**	**101.65**	**27**	P	**Pdif**	**04 57 52.3**	**-0.8**
	baz=278						
TRF	**Thorofare Moun**	**101.72**	**27**	P	**Pdif**	**04 57 52.8**	**-0.8**
	baz=279						
I23K	**Minto, Yukon-K**	**101.83**	**25**	P	**Pdif**	**04 57 53.3**	**-0.5**
	baz=280						
F24K	**Squaw Lake**	**101.94**	**22**	P	**Pdif**	**04 57 53.9**	**-0.4**
	baz=282						
BRSE	**Bradley Lake S**	**102.07**	**30**	P	**Pdif**	**04 57 53.9**	**-1.1**
	baz=278						
D25K	**Kavik River**	**102.07**	**20**	P	**Pdif**	**04 57 53.8**	**-1.1**
	baz=284						
G24K	**Hadweenzic Riv**	**102.27**	**23**	P	**Pdif**	**04 57 54.9**	**-0.9**
	baz=282						
H24K	**Noodor Dome**	**102.30**	**24**	P	**Pdif**	**04 57 55.2**	**-0.7**
	baz=282						
PMR	**Palmer**	**102.56**	**28**	P	**Pdif**	**04 57 55.9**	**-1.2**
	baz=280						
WAT1	**Susitna Watana**	**102.61**	**27**	P	**Pdif**	**04 57 55.8**	**-1.5**
	baz=281						
POKR	**Poker Plat Res**	**102.63**	**25**	P	**Pdif**	**04 57 56.0**	**-1.4**
	baz=282						
SEW	**Seward**	**102.65**	**30**	P	**Pdif**	**04 57 56.6**	**-0.9**
	baz=279						
E25K	**Arctic Village**	**102.66**	**21**	P	**Pdif**	**04 57 56.2**	**-1.2**
	baz=284						
F25K	**Christian Rive**	**102.76**	**22**	P	**Pdif**	**04 57 57.0**	**-0.9**
	baz=284						
G25K	**Bearman Lake**	**102.79**	**23**	P	**Pdif**	**04 57 57.4**	**-0.6**
	baz=284						
SML	**Sawmill**	**102.90**	**28**	P	**Pdif**	**04 57 58.1**	**-0.6**
	baz=281						
KNK	**Knik Glacier**	**102.91**	**28**	P	**Pdif**	**04 57 58.2**	**-0.5**
	baz=280						
ILAR	**Eielson Array**	**102.93**	**25**	PKiKP	**PKiKP**	**05 02 17.2**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=296,slow=4.1,SNR=7.0						
ILAR				PKKPbc	**PKKPbc**	**05 13 56.5**	**-2.1**
	comp=Z,1.1nm,0.7s,baz=105,slow=2.1,SNR=7.8						
HDA	**Harding Lake**	**102.99**	**25**	P	**Pdif**	**04 57 57.8**	**-1.2**
	baz=282						
DHY	**Denali Highway**	**103.08**	**27**	P	**Pdif**	**04 57 58.7**	**-1.0**
	baz=282						
F26K	**Sheenjek River**	**103.29**	**22**	P	**Pdif**	**04 57 59.0**	**-1.3**
	baz=286						
PRP	**Porcupine Dome**	**103.32**	**24**	P	**Pdif**	**04 57 59.7**	**-0.9**
	baz=284						
SCM	**Sheep Creek Mo**	**103.36**	**28**	P	**Pdif**	**04 57 60.0**	**-0.8**
	baz=282						
J25K	**Salcha River,**	**103.61**	**25**	P	**Pdif**	**04 58 01.1**	**-0.7**
	baz=284						
K24K	**Donnelly Dome**	**103.62**	**26**	P	**Pdif**	**04 58 00.9**	**-0.9**
	baz=283						
G26K	**Porcupine Rive**	**103.63**	**22**	P	**Pdif**	**04 58 01.0**	**-0.8**
	baz=286						
GLI	**Glacier Island**	**103.66**	**29**	P	**Pdif**	**04 58 01.7**	**-0.4**
	baz=282						
M24K	**Tolsona, Glenn**	**103.83**	**27**	P	**Pdif**	**04 58 02.4**	**-0.4**
	baz=283						
RIDG	**Independent Ri**	**104.04**	**26**	P	**Pdif**	**04 58 03.3**	**-0.4**
	baz=284						
HARP	**HAARP**	**104.23**	**27**	P	**Pdif**	**04 58 04.2**	**-0.4**
	baz=284						
Q23K	**Middleton Isla**	**104.32**	**30**	P	**Pdif**	**04 58 05.0**	**+0.1**
	baz=282						
I26K	**Coal Creek Min**	**104.33**	**24**	P	**Pdif**	**04 58 04.8**	**-0.2**
	baz=286						
SCRK	**Sand Creek**	**104.35**	**25**	P	**Pdif**	**04 58 04.7**	**-0.5**
	baz=285						
EYAK	**Cordova Ski Ar**	**104.38**	**29**	P	**Pdif**	**04 58 05.1**	**-0.1**
	baz=283						
BMRM	**Bremner River**	**104.83**	**28**	P	**Pdif**	**04 58 06.7**	**-0.6**
	baz=284						
I27K	**Kandik River**	**104.86**	**23**	P	**Pdif**	**04 58 06.6**	**-0.7**
	baz=288						
M26K	**Nabesna, AK**	**105.20**	**27**	P	**PKiKP**	**05 02 22.5**	**-0.1**
	baz=286						
E29M	**Blow River**	**105.28**	**20**	P	**PKiKP**	**05 02 23.0**	**+0.5**
	baz=292						
TORD	**Torodi Ar. Bea**	**105.53**	**282**	PKiKP	**PKiKP**	**05 02 24.0**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=100,slow=1.7,SNR=11						
TORD				PKKPbc	**PKKPbc**	**05 13 47.6**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=293,slow=4.4,SNR=4.3						
L27K	**Beaver Creek,**	**105.53**	**26**	P	**PKiKP**	**05 02 23.1**	**0.0**
	baz=287,SNR=5.0						
I28M	**Miner Creek**	**105.57**	**23**	P	**PKiKP**	**05 02 23.3**	**+0.1**
	baz=289						
M27K	**Edge Creek, AK**	**105.72**	**27**	P	**PKiKP**	**05 02 23.6**	**-0.1**
	baz=287						
G29M	**Pine Creek**	**105.79**	**22**	P	**PKiKP**	**05 02 23.7**	**+0.2**
	baz=291						
H29M	**Whitestone**	**105.91**	**22**	P	**PKiKP**	**05 02 23.3**	**-0.5**
	baz=291						
BVCY	**Beaver Creek**	**106.15**	**27**	P	**PKiKP**	**05 02 24.4**	**+0.1**
	baz=288						
EKA	**Eskdalemuir Ar**	**106.21**	**326**	PKKPbc	PKKPbc	05 13 46.8	-1.6
	comp=Z,1.2nm,0.6s,baz=283,slow=3.2,SNR=5.8						
DAWY	**Dawson**	**106.26**	**25**	P	**PKiKP**	**05 02 24.2**	**-0.3**
	baz=289						
F30M	**Barrier River**	**106.32**	**21**	P	**PKiKP**	**05 02 24.4**	**-0.1**
	baz=294						
G30M	**tAoh Zraii Nji**	**106.42**	**21**	P	**PKiKP**	**05 02 24.2**	**-0.5**
	baz=293						
EPYK	**Eagle Plains**	**106.47**	**22**	P	**PKiKP**	**05 02 24.5**	**-0.3**
	baz=293						
YUK3	**Moose Creek**	**106.53**	**27**	P	**PKiKP**	**05 02 24.7**	**-0.5**
	baz=288						
INK	**Inuvik**	**106.80**	**20**	P	**PKiKP**	**05 02 25.4**	**+0.1**
	baz=296						
YUK8	**Steele Glacier**	**107.00**	**27**	P	**PKiKP**	**05 02 25.5**	**-0.7**
	baz=288						
I30M	**Mount Dempster**	**107.05**	**23**	P	**PKiKP**	**05 02 25.7**	**-0.3**
	baz=293						
K29M	**Barlow Dome**	**107.11**	**25**	P	**PKiKP**	**05 02 25.6**	**-0.6**
	baz=291						
L29M	**L29M**	**107.11**	**25**	P	**PKiKP**	**05 02 25.7**	**-0.4**
	baz=290,SNR=5.2						
PINM	**Pinnacle**	**107.14**	**29**	P	**PKiKP**	**05 02 26.3**	**0.0**
	baz=288						
G31M	**Satah River**	**107.14**	**21**	P	**PKiKP**	**05 02 26.4**	**+0.4**
	baz=295						
M29M	**Somme Creek**	**107.20**	**26**	P	**PKiKP**	**05 02 26.8**	**+0.4**
	baz=290						
J30M	**Hart River**	**107.32**	**24**	P	**PKiKP**	**05 02 26.2**	**-0.4**
	baz=292						
YUK4	**Talbot Arm**	**107.49**	**27**	P	**PKiKP**	**05 02 26.6**	**-0.5**
	baz=289,SNR=5.1						
H31M	**Peel River**	**107.59**	**22**	P	**PKiKP**	**05 02 26.6**	**-0.3**
	baz=295						
YUK6	**Outpost Mounta**	**107.75**	**28**	P	**PKiKP**	**05 02 27.5**	**-0.1**
	baz=289						
O29M	**Mount Kennedy**	**107.87**	**28**	P	**PKiKP**	**05 02 27.5**	**-0.3**
	baz=289						
M30M	**Minto, Yukon**	**107.88**	**26**	P	**PKiKP**	**05 02 27.4**	**-0.2**
	baz=291,SNR=5.6						
N30M	**Aishikik Lake**	**108.15**	**27**	P	**PKiKP**	**05 02 28.0**	**-0.1**
	baz=291,SNR=5.8						
HYT	**Haines Junctio**	**108.19**	**28**	P	**PKiKP**	**05 02 28.2**	**-0.1**
	baz=290						
P29M	**Windy Craggy**	**108.49**	**29**	P	**PKiKP**	**05 02 28.3**	**-0.5**
	baz=290						
P30M	**Million Dollar**	**108.69**	**28**	P	**PKiKP**	**05 02 28.9**	**-0.3**
	baz=290						
N31M	**Braeburn, Yuko**	**108.73**	**27**	P	**PKiKP**	**05 02 28.9**	**-0.2**
	baz=292,SNR=5.3						
O30N	**Mendenhall**	**108.85**	**27**	P	**PKiKP**	**05 02 29.1**	**-0.4**
	baz=292						
C36M	**Paulatuk**	**109.19**	**17**	P	**PKiKP**	**05 02 29.4**	**-0.4**
	baz=306						
PLBC	**Pleasant Camp**	**109.20**	**29**	P	**PKiKP**	**05 02 30.3**	**+0.2**
	baz=291						
WHY	**Whitehorse**	**109.45**	**27**	P	**PKiKP**	**05 02 30.2**	**-0.5**
	baz=293						
ESDC	**Sonseca Array**	**109.57**	**310**	PP	**PP**	**05 03 04.2**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=78,slow=8.3,SNR=5.6						
ESDC				PKKPbc	**PKKPbc**	**05 13 38.5**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=291,slow=4.5,SNR=4.4						
S31K	**Pelican**	**109.80**	**30**	P	**PKiKP**	**05 02 30.8**	**-0.3**
	baz=290						
MMPY	**Sheldon Lake,**	**110.19**	**25**	P	**PKiKP**	**05 02 31.8**	**-0.1**
	baz=297						
P32M	**Atlin**	**110.41**	**28**	P	**PKiKP**	**05 02 32.2**	**-0.2**
	baz=293						
R32K	**Eaglecrest**	**110.53**	**29**	P	**PKiKP**	**05 02 32.6**	**0.0**
	baz=292						
P33M	**Teslin, Yukon**	**110.56**	**27**	P	**PKiKP**	**05 02 32.5**	**-0.2**
	baz=294						
S32K	**Killisnoo**	**110.81**	**30**	P	**PKiKP**	**05 02 33.1**	**0.0**
	baz=292						
Q32M	**Nakina River**	**111.34**	**28**	P	**PKiKP**	**05 02 34.1**	**-0.3**
	baz=294						
DBIC	**Dimbokro**	**111.57**	**275**	PKiKP	**PKiKP**	**05 02 35.9**	**0.0**
	comp=Z,4.2nm,0.6s,baz=94,slow=2.6,SNR=6.7						
R33M	**Jennings River**	**111.76**	**28**	P	**PKiKP**	**05 02 35.3**	**+0.2**
	baz=296						
TGTN	**Hyland Airport**	**111.95**	**25**	P	**PKiKP**	**05 02 34.8**	**-0.5**
	baz=299						
U33K	**Whale Pass**	**112.06**	**31**	P	**PKiKP**	**05 02 35.6**	**0.0**
	baz=293						
CRAG	**Craig**	**112.31**	**32**	P	**PKiKP**	**05 02 35.9**	**-0.1**
	baz=292						
S34M	**Telegraph Cree**	**112.33**	**29**	P	**PKiKP**	**05 02 35.9**	**-0.1**
	baz=295,SNR=5.4						
WRAK	**Wrangell Islan**	**112.34**	**31**	P	**PKiKP**	**05 02 36.1**	**0.0**
	baz=294						
WTLY	**Watson Lake, Y**	**112.41**	**26**	P	**PKiKP**	**05 02 35.5**	**-0.6**
	baz=298						
DLBC	**Dease Lake**	**112.62**	**28**	PKiKP	**PKiKP**	**05 02 37.2**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=320,slow=0.8,SNR=9.8						
DLBC	**Dease Lake**	**112.62**	**28**	P	**PKiKP**	**05 02 36.3**	**-0.4**
	baz=296,SNR=6.2						
T35M	**Bob Quinn**	**113.16**	**30**	P	**PKiKP**	**05 02 37.5**	**-0.1**
	baz=296,SNR=6.9						
V35K	**Ketchikan**	**113.16**	**32**	P	**PKiKP**	**05 02 37.1**	**-0.6**
	baz=294						
BBB	**Bella Bella**	**116.36**	**34**	PKP	**PKiKP**	**05 02 44.5**	**+0.6**
	comp=Z,9.4nm,0.6s,baz=337,slow=3.9,SNR=26						
YKA	**Yellowknife Ar**	**116.57**	**20**	PKP	**PKPdf**	**05 02 43.5**	**-0.5**
	comp=Z,5.1nm,0.7s,baz=334,slow=1.7,SNR=25						
YKA				PKKPbc	**PKKPab**	**05 13 16.6**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=124,slow=4.6,SNR=11						
YKA	**Yellowknife Ar**	**116.57**	**20**		**PKPdf**	**05 02 43.8**	**-0.2**
YKA	**Yellowknife Ar**	**116.57**	**20**	PKIKP	**PKPdf**	**05 02 43.8**	**-0.2**
WIFE	**Three Sisters-**	**123.77**	**40**		**PKiKP**	**05 02 59.9**	**+0.9**
FFC	**Flin Flon**	**126.75**	**20**		**PKiKP**	**05 03 04.5**	**+0.2**
FFC	**Flin Flon**	**126.75**	**20**	PKIKP	**PKiKP**	**05 03 04.5**	**+0.2**
NVAR	**Mina Array Bea**	**128.69**	**45**	PKP	**PKiKP**	**05 03 09.5**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=294,slow=1.8,SNR=38						
NVAR				SKPbc	SKPbc	05 06 17.9	
	comp=Z,1.2nm,0.6s,baz=262,slow=4.5,SNR=5.1						
NVAR	**Mina Array Bea**	**128.69**	**45**		**PKiKP**	**05 03 09.1**	**+0.1**
GWY	**Greenwater Val**	**130.86**	**47**		**PKiKP**	**05 03 13.4**	**0.0**
SCHQ	**Schefferville**	**131.38**	**355**	PKP	**PKPdf**	**05 03 12.7**	**+0.1**
	comp=Z,12nm,0.6s,baz=7.7,slow=1.6,SNR=44						
SCHQ				SKPbc	**SKPbc**	**05 06 26.5**	**-1.4**
	comp=Z,16nm,0.5s,baz=24,slow=2.6,SNR=67						
PDAR	**Pinedale Array**	**131.97**	**35**	PKP	**PKPdf**	**05 03 14.8**	**+0.3**
	comp=Z,4.8nm,0.5s,baz=176,slow=1.4,SNR=68						
PDAR				SKPbc	**SKPbc**	**05 06 29.2**	**-1.5**
	comp=Z,4.7nm,0.8s,baz=217,slow=0.7,SNR=16						
PDAR	**Pinedale Array**	**131.97**	**35**		**PKiKP**	**05 03 15.1**	**-0.4**
ULM	**Lac du Bonnet**	**132.54**	**19**	PKP	**PKPdf**	**05 03 15.4**	**+0.5**
	comp=Z,23nm,0.8s,baz=335,slow=2.5,SNR=45						
ULM				SKPbc	**SKPbc**	**05 06 29.9**	**-2.2**
	comp=Z,13nm,0.5s,baz=349,slow=3.9,SNR=21						
RSSD	**Black Hills**	**134.04**	**30**		**PKPdf**	**05 03 18.6**	**+0.3**
RSSD	**Black Hills**	**134.04**	**30**	PKIKP	**PKPdf**	**05 03 18.6**	**+0.3**
GO06	**Cizarrerue**	**134.20**	**182**		**PKiKP**	**05 03 19.8**	**-0.2**
ICQ	**Pointe Anglais**	**136.67**	**354**		**PKiKP**	**05 03 24.3**	**-0.1**
BI02	**San Fabin de**	**137.10**	**183**		**PKPdf**	**05 03 24.7**	**+0.6**
LDAQ	**Lac Daran**	**138.53**	**357**		**PKPdf**	**05 03 27.2**	**+0.9**
ANMO	**Albuquerque**	**138.63**	**42**	PKPdf	**PKPdf**	**05 03 28.0**	**+1.0**
ANMO	**Albuquerque**	**138.63**	**42**	PKIKP	**PKPdf**	**05 03 28.0**	**+1.0**
ODSA	**Odessa**	**142.93**	**43**		**PKPdf**	**05 03 32.9**	**-1.8**
J61A	**Chester**	**143.18**	**358**		PKPpre	05 03 32.4	
TXAR	**Lajitas Array**	**143.75**	**47**	PKP	PKPbc	05 03 34.6	+0.5
	comp=Z,7.3nm,0.5s,baz=321,slow=1.0,SNR=157						
TXAR				SKPbc	**SKPbc**	**05 07 04.6**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=254,slow=1.2,SNR=7.8						
TXAR	**Lajitas Array**	**143.75**	**47**		**PKPdf**	**05 03 35.4**	**-0.8**
CPUP	**Villa Florida**	**143.76**	**205**	PKP	PKPbc	05 03 34.8	+0.8
	comp=Z,21nm,0.9s,baz=142,slow=2.7,SNR=40						
CPUP	**Villa Florida**	**143.76**	**205**		**PKPdf**	**05 03 35.2**	**-1.0**
CPUP	**Villa Florida**	**143.76**	**205**	PKIKP	**PKPdf**	**05 03 35.2**	**-1.0**
L64A	**Middleborough**	**144.51**	**356**		PKPbc	05 03 35.8	0.0
OZNA	**Ozona**	**144.62**	**43**		**PKPdf**	**05 03 37.4**	**-0.3**
LCO	**Las Campanas**	**144.67**	**185**	PKPdf	PKPbc	05 03 37.6	+0.5
LCO	**Las Campanas**	**144.67**	**185**	PKIKP	PKPbc	05 03 37.6	+0.5
AC05	**El Transito**	**144.81**	**185**		**PKPdf**	**05 03 38.3**	**+0.1**
AC04	**Llanos de Chal**	**145.50**	**184**		**PKPab**	**05 03 40.1**	**+0.4**
GO03	**Copiapo**	**146.04**	**186**		**PKPab**	**05 03 42.0**	**+0.2**
BDFB	**Brasilia**	**146.37**	**229**	PKP	**PKPbc**	**05 03 41.8**	**-0.7**
	comp=Z,50nm,0.6s,baz=123,slow=3.2,SNR=93						
BDFB				PKPbc	**PKPab**	**05 03 43.3**	**-0.2**
	comp=Z,50nm,0.6s,baz=122,slow=3.0,SNR=56						
AQDB	**Aquidauana**	**147.92**	**213**		**PKPdf**	**05 03 43.8**	**+0.4**
BBSR	**BB Station**	**152.80**	**343**		**PKiKP**	**05 03 58.5**	**+0.4**
PTLB	**Pontes e Lacer**	**153.89**	**214**		**PKPdf**	**05 03 53.0**	**+0.3**
LPAZ	**La Paz**	**156.78**	**194**	PKP	**PKPdf**	**05 03 58.0**	**+0.6**
	comp=Z,6.0nm,1.0s,baz=118,slow=0.9,SNR=12						
LPAZ				PKPab	**PKPab**	**05 04 28.2**	**+1.2**
	comp=Z,8.9nm,0.8s,baz=209,slow=3.8,SNR=14						
BOAV	**Boa Vista**	**166.19**	**254**		**PKPdf**	**05 04 06.4**	**-0.1**
BOAV				PKPab	**PKPab**	**05 05 08.5**	**+0.5**
ROSC	**El Rosal**	**178.37**	**161**	PKP	**PKPdf**	**05 04 12.8**	**+0.4**
	comp=Z,6.1nm,0.5s,baz=150,slow=1.3,SNR=6.9						

*IDC **07** 04:49:33.7±1.7,35°.53N×140°.57E,h0km,mb3.5/2, mbtmp3.4/3,ML2.6/1,MS3.0/2,Error ellipse: s-maj=37.6km s-min=29.0km az=36.0*

*JMA **07** 04:49:34.5±0.1,36°.2N±0°.3×141°.0E±0°.9,h45km±1km, MV3.5/36,E OFF IBARAKI PREF*
JMA Felt I J1 at E OFF IBARAKI PREF.

ISC 07 04:49:34.1±1.6,36°.25N±0°.07×141°.1E±0°.1,h39km±9km, n20,σ0°.81/17,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
JHYU	**Hitachinakayam**	**0.39**	**284**	*i*P		**04 49 43.6**	**+0.3**
JHYU				⇓S		**Sn**	**04 49 49.7**	**-0.1**
JIHU	**Itakohorinouch**	**0.51**	**237**	P		**Pn**	**04 49 45.2**	**+0.3**
JIHU				S		**Sn**	**04 49 52.6**	**+0.2**
JHO	**Hitachi**	**0.53**	**313**	*i*P		**Pn**	**04 49 45.4**	**+0.1**
JHO				⇓S		**Sn**	**04 49 52.8**	**-0.4**
JYT	**Yasato**	**0.69**	**269**	*i* P		**Pn**	**04 49 47.1**	**-0.3**
JYT				S		**Sn**	**04 49 55.7**	**-1.3**
ONAJ	**Iwakimizuishiy**	**0.88**	**347**	⇓*i*P		**Pn**	**04 49 50.5**	**+0.4**
ONAJ				⇓S		**Sn**	**04 50 01.4**	**-0.3**
JFK	**Kawauchi**	**1.13**	**353**	*i* P		**Pn**	**04 49 53.9**	**+0.5**
JFK				S		**Sn**	**04 50 07.3**	**-0.5**
JAG	**Ashikaga**	**1.30**	**278**	⇓*i*P		**Pn**	**04 49 55.8**	**0.0**
JAG				⇓S		**Sn**	**04 50 10.9**	**-1.0**
MJAR	**Matsushiro Arr**	**2.31**	**278**	Pn		**Pn**	**04 50 10.7**	**+1.0**
	1.9nm,0.3s,baz=110,slow=14,SNR=35						
MJAR				Sn		**Sn**	**04 50 38.8**	**+1.9**
	1.7nm,0.3s,baz=86,slow=20,SNR=4.6						
MJAR				LR		LR	04 51 15.1	
	comp=Z,93nm,19.4s,baz=159,slow=47 6.3nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.01**	**119**	T		T	05 24 39.2	
	baz=312,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**28.02**	**119**	T		T	05 24 40.3	
	baz=312,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**28.03**	**119**	T		T	05 24 45.2	
	baz=312,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**28.69**	**121**	T		T	05 25 47.5	
	baz=314,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	**28.69**	**121**	T		T	05 25 47.5	
	baz=314,slow=76,SNR=57						
H11S2	**WAKE ISLAND Hy**	**28.71**	**121**	T		T	05 25 44.6	
	baz=314,slow=76,SNR=67						
ILAR	**Eielson Array**	**50.32**	**32**	P		P	04 58 37.8	+11
	0.3nm,0.8s,baz=278,slow=6.3,SNR=4.5 0.3nm,0.8s						
WRA	**Warramunga Arr**	**56.24**	**188**	P		**P**	**04 59 10.2**	**-0.3**
	0.5nm,0.5s,baz=3.6,slow=7.0,SNR=1.1 0.5nm,0.5s						
AKTO	**Aktyubinsk**	**58.98**	**312**	LR		LR	05 27 27.7	
	comp=Z,51nm,18.2s,baz=214,slow=38						
H03N2	**Juan Fernandez**	**147.23**	**97**	T		T	07 53 57.7	
	baz=291,slow=76,SNR=3.9						
H03N3	**Juan Fernandez**	**147.24**	**97**	T		T	07 53 57.7	
	baz=291,slow=76,SNR=4.6						
H03N1	**Juan Fernandez**	**147.24**	**97**	T		T	07 53 58.9	
	baz=291,slow=76,SNR=3.5						

*NEIC **07** 04:52:08.8±1.5,2°.0S±0°.1×12°.2W±0°.2,h10km±1km, mb5.0/14,Error ellipse: s-maj=30.6km s-min=13.7km az=126.0*
*IDC **07** 04:52:09.5±29.0,0°.61S×13°.30W,h0km,mb3.6/2, mbtmp3.8/3,ML3.6/1,MS3.5/3,Error ellipse: s-maj=696.7km s-min=86.1km az=168.0*

ISC 07 04:52:08.0±0.7,2°.0S±0°.1×12°.1W±0°.1,h10km,n30, σ1s34/25,mb5.0/9,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
H10N2	**ASCENSION HYDR**	**6.27**	**202**	T		T	05 00 34.7	
	baz=4.7,slow=74,SNR=53						
H10N1	**ASCENSION HYDR**	**6.28**	**202**	T		T	05 00 36.2	
	baz=4.7,slow=74,SNR=86						
H10N3	**ASCENSION HYDR**	**6.29**	**203**	T		T	05 00 36.2	
	baz=4.7,slow=74,SNR=48						
ASCN	**Ascension**	**6.32**	**201**	Pn		**Pn**	**04 53 42.0**	**+0.7**
H10S2	**ASCENSION HYDR**	**7.37**	**200**	T		T	05 01 56.0	
	baz=218,slow=74,SNR=35						
H10S3	**ASCENSION HYDR**	**7.37**	**200**	T		T	05 02 00.2	
	baz=2.4,slow=74,SNR=57						
DBIC	**Dimbokro**	**11.

body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 07 04:56:25.2±0.3,**53°.83S**×0°.07×**134°.39W**×0°.08,**h10**km, **n224**,σ1ᵎ**26**/174,**mb5.1**/52,**MS4.8**/44,**3C-1D**,
Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.57**	**200**	P	**P**	**05 02 48.5**	**+1.3**
RPN	**Rapa Nui**	**32.45**	**45**	LR	LR	05 13 01.9	
	comp=Z,1μm,18.2s,baz=208,slow=31						
TBI	**Tubuai**	**32.49**	**334**	*e*P	**P**	**05 02 56.5**	**+0.7**
	1μm,31.0s						
TBI				*e*S	**S**	**05 08 11.6**	**+1.0**
	1μm,26.2s						
TBI				*e*LR	LR	05 11 19.5	
	25μm,25.8s						
TBI				*e*LR	LR	05 11 22.7	
	5μm,24.8s						
TBI				*e*T	T	05 37 03.3	
	116nm,0.3s						
VNDA	**Vanda**	**32.53**	**201**	P	**P**	**05 02 56.7**	**+1.0**
	2.4nm,1.0s,baz=80,slow=6.3,SNR=8.4						
VNDA				LR	LR	05 12 59.7	
	comp=Z,1μm,18.4s,baz=84,slow=31						
	2.4nm,1.0s						
VNDA	**Vanda**	**32.53**	**201**		**P**	**05 02 56.4**	**+0.7**
PMSA	**Palmer Station**	**35.59**	**136**	LR	LR	05 14 21.7	
	comp=Z,2μm,18.5s,baz=245,slow=30						
URZ	**Urewera**	**36.31**	**275**	LR	LR	05 15 04.8	
	comp=Z,1μm,18.6s,baz=134,slow=31						
QSPA	**South Pole Qui**	**36.34**	**180**	P	**P**	**05 03 29.7**	**+0.8**
	2.4nm,0.7s,baz=49,slow=3.9,SNR=10						
QSPA				LR	LR	05 16 24.4	
	comp=Z,2μm,18.2s,baz=74,slow=33						
	2.4nm,0.7s						
QSPA	**South Pole Qui**	**36.34**	**180**	P	**P**	**05 03 28.9**	**-0.1**
QSPA				IAmb	IAmb	05 03 40.9	
	comp=Z,40nm,1.4s						
RPZ	**Rata Peaks**	**36.50**	**263**	LR	LR	05 14 38.1	
	comp=Z,315nm,21.5s,baz=61,slow=30						
TVO	**Taravao**	**37.78**	**336**	*e*T	T	05 43 48.0	
	comp=Z,12nm,0.4s						
RAR	**Rarotonga**	**37.87**	**319**	LR	LR	05 16 07.3	
	comp=Z,2μm,18.1s,baz=163,slow=31						
PAE	**Paea**	**37.98**	**336**	*e*T	T	05 43 55.9	
	comp=Z,4.3nm,0.2s						
TIAR	**Tiarei**	**38.02**	**336**	*e*T	T	05 43 55.8	
	comp=Z,84nm,0.4s						
PPT2	**Papeete2**	**38.04**	**336**	*e*P	P	05 03 40.2	-3.5
	comp=Z,132nm,25.0s						
PPT2				*e*S	**S**	**05 09 34.3**	**-1.8**
	comp=Z,495nm,26.5s						
PPT2				*e*LR	LR	05 13 52.4	
	comp=Z,7μm,25.5s						
PPT2				*e*LR	LR	05 14 00.4	
	comp=Z,4μm,24.0s						
PPT2				*e*T	T	05 44 02.0	
	comp=Z,5.1nm,0.4s						
PPT	**Papeete**	**38.06**	**336**	LR	LR	05 15 09.6	
	comp=Z,2μm,19.3s,baz=140,slow=30						
ESPZ	**Base Esperanza**	**38.98**	**136**	P	**P**	**05 03 50.3**	**-0.7**
VAH	**Vaihoa**	**39.89**	**340**	*e*T	T	05 46 19.7	
	comp=Z,7.7nm,0.1s						
RAO	**Raoul Island**	**39.91**	**290**	LR	LR	05 16 18.1	
	comp=Z,512nm,21.8s,baz=168,slow=30						
BELA	**Belgrano 2**	**40.01**	**161**	P	**P**	**05 03 58.6**	**-0.9**
PMOR	**Pomariorio Ree**	**40.17**	**340**	*e*T	T	05 46 40.7	
	comp=Z,6.2nm,0.3s						
H03S2	**Juan Fernandez**	**43.44**	**86**	T	T	05 50 43.6	
	baz=223,slow=74,SNR=138						
H03S1	**Juan Fernandez**	**43.44**	**86**	T	T	05 50 44.6	
	baz=223,slow=74,SNR=145						
H03S3	**Juan Fernandez**	**43.45**	**86**	T	T	05 50 43.1	
	baz=223,slow=74,SNR=137						
H03N3	**Juan Fernandez**	**43.71**	**85**	T	T	05 50 59.2	
	baz=226,slow=72,SNR=548						
H03N2	**Juan Fernandez**	**43.71**	**85**	T	T	05 51 02.1	
	baz=226,slow=72,SNR=726						
H03N1	**Juan Fernandez**	**43.72**	**85**	T	T	05 50 55.5	
	baz=226,slow=72,SNR=419						
TAOE	**Nuku Hiva Isla**	**45.09**	**352**	*e*S	**S**	**05 11 16.3**	**-4.3**
	comp=Z,345nm,25.9s						
TAOE				*e*LR	LR	05 17 10.1	
	comp=Z,4μm,25.2s						
BI02	**San Fabin de**	**46.02**	**95**		**P**	**05 04 47.7**	**-1.1**
BI02				IAmb	IAmb	05 04 57.2	
	comp=Z,61nm,1.9s						
BI02	**San Fabin de**	**46.02**	**95**	P	**P**	**05 04 50.2**	**+1.5**
ML02	**Panimavida**	**46.55**	**94**	P	**P**	**05 04 50.4**	**-2.4**
ML02	**Panimavida**	**46.55**	**94**	P	**P**	**05 04 53.6**	**+0.8**
GO05	**Hualane**	**46.77**	**93**	P	**P**	**05 04 55.7**	**+1.2**
BO02	**Sierra Bellavi**	**47.59**	**93**		**P**	**05 05 01.2**	**+0.1**
BO02				IAmb	IAmb	05 05 10.1	
	comp=Z,37nm,1.4s						
BO02	**Sierra Bellavi**	**47.59**	**93**	P	**P**	**05 05 00.8**	**-0.3**
MT05	**Renca**	**48.60**	**92**	P	**P**	**05 05 10.3**	**+1.4**
MT16	**CCHEN**	**48.70**	**92**	P	**P**	**05 05 08.6**	**-1.1**
MT16				IAmb	IAmb	05 05 36.8	
	comp=Z,18nm,0.9s						
PEL	**Peldehue**	**48.81**	**92**	P	**P**	**05 05 10.4**	**0.0**
PEL				IAmb	IAmb	05 05 17.7	
	comp=Z,39nm,1.4s						
PEL	**Peldehue**	**48.81**	**92**	P	**P**	**05 05 10.7**	**+0.3**
VA03	**San Esteban**	**49.16**	**92**	P	**P**	**05 05 14.1**	**+1.0**
CO04	**Los Peladeros**	**49.42**	**91**	P	**P**	**05 05 15.9**	**+0.6**
AFI	**Afiamalu**	**49.48**	**309**	LR	LR	05 22 15.6	
	comp=Z,779nm,19.0s,baz=152,slow=31						
VNA2	**Neumayer--Watz**	**49.96**	**160**	⇑P	**P**	**05 05 17.5**	**-1.1**
	comp=Z,12nm,0.8s,baz=210,slow=8.4						
VNA2	**Neumayer--Watz**	**49.96**	**160**	P	**P**	**05 05 17.8**	**-0.8**
VNA1	**Neumayer--Stat**	**50.00**	**159**	⇑P	**P**	**05 05 18.8**	**-0.1**
	comp=Z,11nm,0.9s						
SNAA	**Sanae**	**50.24**	**162**	P	**P**	**05 05 18.5**	**-2.3**
	comp=Z,80nm,0.8s						
SNAA	**Sanae**	**50.24**	**162**	P	**P**	**05 05 18.8**	**-2.0**
	comp=Z,3.6nm,0.9s,baz=204,slow=5.7,SNR=9.4						
SNAA				LR	LR	05 24 23.4	
	comp=Z,2μm,21.6s,baz=228,slow=34						
	comp=Z,3.6nm,0.9s						
SNAA	**Sanae**	**50.24**	**162**		**P**	**05 05 19.1**	**-1.8**
SNAA				IAmb	IAmb	05 05 25.3	
	comp=Z,41nm,2.0s						
SNAA	**Sanae**	**50.24**	**162**	P	**P**	**05 05 18.7**	**-2.1**
TRQA	**Tornquist**	**50.52**	**103**		**P**	**05 05 23.4**	**+0.1**
TRQA				IAmb	IAmb	05 05 30.7	
	comp=Z,30nm,1.4s						
CASY	**Casey**	**50.59**	**208**	P	**P**	**05 05 25.8**	**+2.3**
CASY				IAmb	IAmb	05 05 42.4	
	comp=Z,21nm,0.8s						
CASY	**Casey**	**50.59**	**208**	P	**P**	**05 05 25.7**	**+2.2**
TROLL	**Troll, Antarti**	**50.88**	**164**	⇑P	**P**	**05 05 21.7**	**-4.1**
	comp=Z,191nm,1.1s						
ZON	**Zonda**	**51.13**	**92**	P	**P**	**05 05 29.1**	**+1.0**
ELIB	**Princess Elisa**	**53.55**	**172**	*d*P	**P**	**05 05 44.7**	**-0.9**
	comp=Z,11nm,1.3s						
PB06	**IPOC Station P**	**57.18**	**84**	P	**P**	**05 06 13.2**	**+0.8**
PB03	**IPOC Station P**	**57.58**	**83**	P	**P**	**05 06 15.4**	**+0.2**
PB09	**IPOC Station P**	**58.07**	**84**	P	**P**	**05 06 20.4**	**+1.6**
MAW	**Mawson**	**58.20**	**188**	P	**P**	**05 06 17.5**	**-1.2**
	comp=Z,8.0nm,0.9s,baz=181,slow=6.5,SNR=12						
MAW				LR	LR	05 27 42.6	
	comp=Z,619nm,21.9s,baz=153,slow=32						
	comp=Z,8.0nm,0.9s						
MAW	**Mawson**	**58.20**	**188**	P	**P**	**05 06 18.9**	**+0.2**
MAW	**Mawson**	**58.20**	**188**	P	**P**	**05 06 19.3**	**+0.5**
PB11	**IPOC Station P**	**59.40**	**82**	P	**P**	**05 06 29.0**	**+1.0**
PB11	**IPOC Station P**	**59.40**	**82**	P	**P**	**05 06 28.5**	**+0.5**
CMSA	**Cobar Meteorol**	**59.49**	**257**	P	**P**	**05 06 29.4**	**+1.1**
PB16	**IPOC Station P**	**60.60**	**81**		**P**	**05 06 37.6**	**+0.9**
PB16				IAmb	IAmb	05 07 58.9	
	comp=Z,20nm,1.0s						
PB16	**IPOC Station P**	**60.60**	**81**	P	**P**	**05 06 38.8**	**+2.0**
NNA	**Nana**	**61.48**	**70**	LR	LR	05 26 23.1	
	comp=Z,2μm,21.6s,baz=226,slow=29						
STKA	**Stephens Creek**	**61.59**	**254**	P	**P**	**05 06 40.7**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=106,slow=2.6,SNR=4.2						
STKA				LR	LR	05 29 10.4	
	comp=Z,525nm,19.7s,baz=143,slow=32						
	comp=Z,3.2nm,0.8s						
STKA	**Stephens Creek**	**61.59**	**254**	P	**P**	**05 06 44.1**	**+1.5**
CPUP	**Villa Florida**	**61.68**	**96**	P	**P**	**05 06 41.5**	**-1.8**
	comp=Z,4.4nm,1.0s,baz=251,slow=10,SNR=3.7						
CPUP				LR	LR	05 28 56.2	
	comp=Z,974nm,20.8s,baz=226,slow=32						
	comp=Z,4.4nm,1.0s						
CPUP	**Villa Florida**	**61.68**	**96**	P	**P**	**05 06 43.0**	**-0.2**
CPUP				IAmb	IAmb	05 06 49.3	
	comp=Z,29nm,1.8s						
LPAZ	**La Paz**	**63.02**	**81**	P	**P**	**05 06 52.0**	**-1.1**
	comp=Z,3.2nm,0.9s,baz=216,slow=6.4,SNR=9.0						
LPAZ				LR	LR	05 27 44.0	
	comp=Z,374nm,19.7s,baz=212,slow=30						
	comp=Z,3.2nm,0.9s						
LPAZ	**La Paz**	**63.02**	**81**		**P**	**05 06 54.1**	**+1.0**
LPAZ	**La Paz**	**63.02**	**81**	P	**P**	**05 06 54.1**	**+1.0**
ATAH	**Atahualpa**	**64.63**	**66**	LR	LR	05 28 33.8	
	comp=Z,906nm,19.1s,baz=220,slow=30						
AQDB	**Aquidauana**	**67.10**	**94**	P	**P**	**05 07 18.6**	**-0.3**
CZSB	**Cruzeiro do Su**	**67.28**	**71**	P	**P**	**05 07 20.2**	**+0.2**
SIV	**San Ignacio**	**67.41**	**86**	LR	LR	05 33 07.6	
	comp=Z,309nm,18.4s,baz=271,slow=33						
CTA	**Charters Tower**	**67.80**	**266**	LR	LR	05 32 11.1	
	comp=Z,602nm,20.7s,baz=110,slow=32						
HNR	**Honiara**	**68.16**	**284**	LR	LR	05 33 44.1	
	comp=Z,10nm,18.3s,baz=239,slow=33						
PTLB	**Pontes e Lacer**	**68.98**	**87**	P	**P**	**05 07 30.9**	**+0.3**
PTLB				IAmb	IAmb	05 07 38.7	
	comp=Z,20nm,1.6s						
MTSU	**Mount Surprise**	**70.46**	**266**	P	**P**	**05 07 41.0**	**+1.1**
AS31	**Alice Springs**	**72.23**	**254**		**P**	**05 07 49.8**	**-0.7**
ASAR	**Alice Springs**	**72.23**	**254**	P	**P**	**05 07 50.0**	**-0.5**
	comp=Z,6.0nm,1.0s,baz=140,slow=6.5,SNR=17						
	comp=Z,6.0nm,1.0s						
ASAR	**Alice Springs**	**72.23**	**254**		**P**	**05 07 49.6**	**-0.9**
H01W1	**Cape Leeuwin H**	**73.72**	**233**	T	T	06 29 25.1	
	baz=145,slow=76,SNR=96						
H01W2	**Cape Leeuwin H**	**73.72**	**233**	T	T	06 29 26.0	
	baz=145,slow=76,SNR=92						
H01W3	**Cape Leeuwin H**	**73.74**	**233**	T	T	06 29 26.5	
	baz=145,slow=76,SNR=82						
WRA	**Warramunga Arr**	**74.89**	**257**	P	**P**	**05 08 05.8**	**-0.4**
	comp=Z,3.3nm,0.9s,baz=143,slow=5.2,SNR=19						
	comp=Z,3.3nm,0.9s						
WRA	**Warramunga Arr**	**74.89**	**257**	P	**P**	**05 08 05.4**	**-0.7**
BDFB	**Brasilia**	**75.41**	**97**	P	**P**	**05 08 09.7**	**+0.4**
	comp=Z,6.0nm,0.9s,baz=203,slow=5.1,SNR=3.9						
BDFB				LR	LR	05 38 06.3	
	comp=Z,696nm,19.0s,baz=205,slow=33						
	comp=Z,6.0nm,0.9s						
BDFB	**Brasilia**	**75.41**	**97**	P	**P**	**05 08 09.0**	**-0.3**
BDFB				IAmb	IAmb	05 08 15.9	
	comp=Z,22nm,1.4s						
PMG	**Port Moresby**	**75.65**	**274**	LR	LR	05 37 43.9	
	comp=Z,448nm,18.8s,baz=156,slow=33						
JTS	**Las Juntas de**	**76.32**	**50**	LR	LR	05 33 50.9	
	comp=Z,592nm,19.6s,baz=201,slow=30						
ROSC	**El Rosal**	**76.86**	**62**	P	**P**	**05 08 17.8**	**-0.1**
	comp=Z,5.4nm,0.6s,baz=71,slow=2.4,SNR=5.0						
ROSC				LR	LR	05 37 49.3	
	comp=Z,728nm,18.2s,baz=223,slow=32						
	comp=Z,5.4nm,0.6s						
ROSC	**El Rosal**	**76.86**	**62**		**P**	**05 08 20.5**	**+2.6**
LPIG	**La Paz**	**80.36**	**22**	LR	LR	05 35 43.6	
	comp=Z,513nm,20.4s,baz=195,slow=29						
ZAIG	**Zacatecas**	**81.08**	**30**	P	**P**	**05 08 41.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**81.31**	**251**	LR	LR	05 42 09.2	
	comp=Z,666nm,18.1s,baz=148,slow=34						
SDV	**Santo Domingo**	**82.21**	**63**	LR	LR	05 39 18.4	
	comp=Z,311nm,21.7s,baz=202,slow=31						
HPIG		**84.19**	**26**	P	**P**	**05 08 57.9**	**+1.3**
JAY	**Jayapura**	**84.97**	**273**	LR	LR	05 46 45.4	
	comp=Z,193nm,18.1s,baz=142,slow=36						
PIX	**Pinacate**	**86.95**	**18**		**P**	**05 09 10.1**	**+0.2**
PIX				IAmb	IAmb	05 09 14.8	
	comp=Z,15nm,1.2s						
TX31	**Lajitas Ar. Si**	**86.99**	**27**		**P**	**05 09 10.3**	**-0.1**
TXAR	**Lajitas Array**	**86.99**	**27**	P	**P**	**05 09 10.8**	**+0.5**
	comp=Z,3.5nm,1.1s,baz=199,slow=6.6,SNR=6.8						
TXAR				LR	LR	05 41 04.1	
	comp=Z,224nm,18.5s,baz=204,slow=31						
	comp=Z,3.5nm,1.1s						
TXAR	**Lajitas Array**	**86.99**	**27**		**P**	**05 09 09.7**	**-0.7**
833A	**Chaparral WMA,**	**87.25**	**30**	P	**P**	**05 09 12.5**	**+1.0**
BAR	**Barrett**	**87.51**	**15**		**P**	**05 09 09.2**	**-3.5**
H11S2	**WAKE ISLAND Hy**	**87.90**	**306**	T	T	06 46 34.9	
	baz=143,slow=75,SNR=235						
H11S3	**WAKE ISLAND Hy**	**87.91**	**306**	T	T	06 46 36.8	
	baz=143,slow=75,SNR=179						
H11S1	**WAKE ISLAND Hy**	**87.92**	**306**	T	T	06 46 36.0	
	baz=143,slow=75,SNR=113						
SAND	**Sanderson**	**88.00**	**28**		**P**	**05 09 15.7**	**+0.5**
SAND				IAmb	IAmb	05 09 30.0	
	comp=Z,16nm,1.1s						
VHRN	**Van Horn**	**88.04**	**25**	P	**P**	**05 09 15.7**	**+0.3**
VHRN				IAmb	IAmb	05 09 29.9	
	comp=Z,9.7nm,1.0s						
113A	**Mohawk Valley,**	**88.07**	**17**		**P**	**05 09 16.8**	**+1.5**
113A				IAmb	IAmb	05 09 22.3	
	comp=Z,20nm,1.3s						
TUC	**Tucson**	**88.19**	**20**		**P**	**05 09 16.4**	**+0.4**
TUC	**Tucson**	**88.19**	**20**	P	**P**	**05 09 17.5**	**+1.5**
ELS	**Elsinore Mount**	**88.35**	**14**	P	**P**	**05 09 17.6**	**+0.9**
ELS				IAmb	IAmb	05 09 21.6	
	comp=Z,11nm,0.9s						
HNDO	**Hondo**	**88.41**	**30**		**P**	**05 09 18.5**	**+1.5**
PFO	**Pinyon Flats O**	**88.46**	**15**	LR	LR	05 39 20.9	
	comp=Z,547nm,21.2s,baz=206,slow=29						
PMD	**Palm Desert**	**88.50**	**15**	P	**P**	**05 09 18.4**	**+1.0**
PMD				IAmb	IAmb	05 09 25.0	
	comp=Z,17nm,1.4s						
BC3	**Big Chuckawall**	**88.66**	**16**		**P**	**05 09 19.5**	**+1.3**
DUN6	**Lazy B Ranch**	**88.78**	**21**	P	**P**	**05 09 19.6**	**+0.8**
MNTX	**Cornudas Mount**	**88.81**	**24**		**P**	**05 09 19.2**	**+0.4**
MNTX				IAmb	IAmb	05 09 33.3	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**88.81**	**24**	P	**P**	**05 09 18.4**	**-0.5**
H11N3	**WAKE ISLAND Hy**	**88.86**	**306**	T	T	06 47 43.6	
	baz=145,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**88.86**	**306**	T	T	06 47 59.3	
	baz=145,slow=75,SNR=33						
H11N2	**WAKE ISLAND Hy**	**88.87**	**306**	T	T	06 47 43.7	
	baz=145,slow=75,SNR=36						
BFSC	**Mount Baldy Ra**	**88.90**	**14**	P	**P**	**05 09 20.7**	**+1.3**
BLYC	**Blythe**	**88.90**	**16**		**P**	**05 09 20.4**	**+1.2**
BLYC				IAmb	IAmb	05 09 35.3	
	comp=Z,15nm,1.1s						
BELC	**Belle Mtn. Jos**	**88.91**	**15**		**P**	**05 09 21.1**	**+1.7**
BELC				IAmb	IAmb	05 09 24.8	
	comp=Z,13nm,1.0s						
MNHN	**Monahans**	**89.14**	**27**	P	**P**	**05 09 21.4**	**+1.0**
MNHN				IAmb	IAmb	05 09 35.0	
	comp=Z,18nm,1.4s						
OZNA	**Ozona**	**89.19**	**28**		**P**	**05 09 21.4**	**+0.7**
OZNA				IAmb	IAmb	05 09 36.1	
	comp=Z,12nm,1.2s						
IRM	**Iron Mountain**	**89.20**	**16**		**P**	**05 09 21.5**	**+0.9**
MDP	**Montagnes des**	**89.22**	**80**	LR	LR	05 43 28.4	
	comp=Z,280nm,20.8s,baz=194,slow=32						
Y14A	**Wickenburg**	**89.35**	**18**		**P**	**05 09 22.8**	**+1.4**
Y14A				IAmb	IAmb	05 09 37.4	
	comp=Z,27nm,1.8s						
HKT	**Hockley**	**89.87**	**33**	P	**P**	**05 09 26.6**	**+2.9**
X16A	**Lo Mia Camp, P**	**90.11**	**19**		**P**	**05 09 26.0**	**+0.9**
BRDY	**Brady**	**90.14**	**30**		**P**	**05 09 26.1**	**+1.0**
ISA	**Isabella, Lake**	**90.19**	**13**	P	**P**	**05 09 25.9**	**+0.6**
W13A	**Hualapai Mount**	**90.33**	**17**		**P**	**05 09 26.2**	**+0.1**
RCBR	**Riachuelo**	**90.33**	**100**	LR	LR	05 47 20.4	
	comp=Z,286nm,18.2s,baz=210,slow=34						
X18A	**Snowflake**	**90.51**	**20**	P	**P**	**05 09 28.1**	**+1.2**
Y22A	**Socorro**	**90.58**	**23**		**P**	**05 09 27.9**	**+0.6**
Y22A				IAmb	IAmb	05 09 42.1	
	comp=Z,10nm,1.0s						
CRNM	**Carthage**	**90.64**	**23**	P	**P**	**05 09 28.2**	**+0.6**
LENM	**Lemitar**	**90.80**	**22**		**P**	**05 09 29.4**	**+1.2**
GWY	**Greenwater Val**	**90.95**	**14**		**P**	**05 09 30.2**	**+1.3**
GWY				IAmb	IAmb	05 09 36.2	
	comp=Z,13nm,1.3s						
POST	**Post**	**91.11**	**27**	P	**P**	**05 09 31.0**	**+1.4**
WUAZ	**Wupatki**	**91.19**	**19**		**P**	**05 09 30.8**	**+0.7**
WUAZ				IAmb	IAmb	05 09 37.4	
	comp=Z,10.0nm,1.1s						
ABTX	**Abilene, Hawle**	**91.21**	**29**		**P**	**05 09 30.5**	**+0.4**
SUR	**Sutherland**	**91.49**	**159**	LR	LR	05 44 34.1	
	comp=Z,1μm,19.9s,baz=173,slow=32						
ANMO	**Albuquerque**	**91.66**	**23**	LR	LR	05 43 37.5	
	comp=Z,380nm,18.4s,baz=198,slow=31						
ANMO	**Albuquerque**	**91.66**	**23**		**P**	**05 09 33.0**	**+0.7**
ANMO	**Albuquerque**	**91.66**	**23**	P	**P**	**05 09 33.0**	**+0.7**
APMT	**Aspermont**	**91.73**	**28**		**P**	**05 09 32.7**	**+0.2**
TPNV	**Topopah Spring**	**91.76**	**14**		**P**	**05 09 32.6**	**-0.1**
TPNV				IAmb	IAmb	05 09 49.0	
	comp=Z,13nm,1.2s						
SIJI	**Sorong**	**91.88**	**266**	LR	LR	05 50 44.8	
	comp=Z,186nm,18.4s,baz=109,slow=36						
U15A	**North Rim**	**91.90**	**18**		**P**	**05 09 33.8**	**+0.3**
DSP	**Deep Springs**	**91.93**	**13**		**P**	**05 09 34.9**	**+1.7**
DSP				IAmb	IAmb	05 09 49.3	
	comp=Z,16nm,1.4s						
GMN	**Gold Mountain**	**91.96**	**14**	P	**P**	**05 09 34.1**	**+0.4**
SJG	**San Juan**	**92.28**	**62**	LR	LR	05 45 37.2	
	comp=Z,218nm,20.4s,baz=248,slow=32						
LCMT	**Little Creek M**	**92.30**	**17**	P	**P**	**05 09 35.7**	**+0.5**
KNB	**Kanab**	**92.38**	**17**	P	**P**	**05 09 36.0**	**+0.4**
KNB				IAmb	IAmb	05 09 40.6	
	comp=Z,7.4nm,1.0s						
PRN	**Pahroc Range**	**92.39**	**15**	P	**P**	**05 09 36.4**	**+0.8**
PRN				IAmb	IAmb	05 09 52.1	
	comp=Z,12nm,1.3s						
CCUT	**Cedar City**	**92.81**	**17**		**P**	**05 09 38.5**	**+0.9**
CCUT				IAmb	IAmb	05 09 44.9	
	comp=Z,8.2nm,1.2s						
SZCU	**Shurtz Canyon**	**92.90**	**17**	P	**P**	**05 09 39.2**	**+1.2**
SZCU				IAmb	IAmb	05 09 43.4	
	comp=Z,6.0nm,0.9s						
NVAR	**Mina Array Bea**	**92.93**	**13**	P	**P**	**05 09 39.2**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=193,slow=5.8,SNR=4.3						
NVAR				LR	LR	05 42 49.2	
	comp=Z,714nm,19.2s,baz=188,slow=30						
	comp=Z,1.2nm,0.9s						
NVAR	**Mina Array Bea**	**92.93**	**13**	P	**P**	**05 09 38.0**	**-0.2**
MVCO	**Mesa Verde**	**93.39**	**20**	P	**P**	**05 09 40.2**	**-0.1**
MVCO				IAmb	IAmb	05 09 54.8	
	comp=Z,8.7nm,1.1s						
MVCO	**Mesa Verde**	**93.39**	**20**	P	**P**	**05 09 41.4**	**+1.0**
MTPU	**Mount Pierson**	**93.49**	**17**		**P**	**05 09 41.8**	**+0.9**
KVN	**Kaiserville**	**93.57**	**13**		**P**	**05 09 42.2**	**+1.2**
HMU	**Henry Mountain**	**93.65**	**19**	P	**P**	**05 09 42.3**	**+0.7**
HMU				IAmb	IAmb	05 09 56.5	
	comp=Z,16nm,1.3s						
PSUT	**Pine Spring**	**93.69**	**16**	P	**P**	**05 09 42.5**	**+0.8**
S22A	**4UR Ranch, Cre**	**94.26**	**22**		**P**	**05 09 44.9**	**+0.5**
PV18	**Skein Mesa, Pa**	**94.31**	**20**	P	**P**	**05 09 46.0**	**+1.5**
PV18				IAmb	IAmb	05 09 50.3	
	comp=Z,6.6nm,0.9s						
PV10	**Paradox Valley**	**94.41**	**20**	P	**P**	**05 09 45.8**	**+0.8**
PV10				IAmb	IAmb	05 09 50.5	
	comp=Z,10nm,1.0s						
Q16A	**Castle Valley**	**94.52**	**18**	P	**P**	**05 09 45.6**	**+0.2**
Q16A				IAmb	IAmb	05 09 52.6	
	comp=Z,13nm,1.4s						
KAPI	**Kappang**	**95.25**	**254**	LR	LR	05 48 48.9	
	comp=Z,252nm,21.3s,baz=148,slow=33						
NLU	**North Lily Min**	**95.37**	**17**		**P**	**05 09 50.6**	**+1.3**
NLU				IAmb	IAmb	05 10 05.1	
	comp=Z,8.9nm,1.1s						
DUG	**Dugway, Tooele**	**95.48**	**16**		**P**	**05 09 50.0**	**+0.3**
DUG	**Dugway, Tooele**	**95.48**	**16**	P	**P**	**05 09 50.5**	**+0.8**
YBH	**Yreka Blue Hor**	**95.72**	**9**	LR	LR	05 44 42.2	
	comp=Z,730nm,18.7s,baz=163,slow=30						
PDAR	**Pinedale Array**	**98.55**	**18**	P	**P**	**05 10 02.9**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=154,slow=4.5,SNR=3.6						
PDAR				LR	LR	05 47 27.5	
	comp=Z,335nm,18.3s,baz=198,slow=31						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**98.55**	**18**	P	**P**	**05 10 03.0**	**-0.7**
TKL	**Tuckaleechee C**	**99.27**	**40**	LR	LR	05 48 07.7	
	comp=Z,138nm,21.8s,baz=187,slow=31						
LBTB	**Lobatse**	**99.59**	**162**	LR	LR	05 50 39.1	
	comp=Z,711nm,19.5s,baz=178,slow=33						
H02S1	**DAWSON INLET TI**	**106.67**	**1**	T	T	07 10 10.1	
	SNR=7.2						
H02S2	**DAWSON INLET TI**	**106.67**	**1**	T	T	07 09 54.3	
ILAR	**Eielson Array**	**118.66**	**354**	PKP	**PKPdf**	**05 15 11.4**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=199,slow=1.8,SNR=9.5						
ILAR	**Eielson Array**	**118.66**	**354**		**PKPdf**	**05 15 11.2**	**-0.7**
NJ2	**Nanjing**	**124.78**	**278**	*e*PKP	**PKiKP**	**05 15 26.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**126.12**	**250**	PKP	**PKPdf**	**05 15 26.8**	**-0.8**
	comp=Z,3.4nm,0.3s,baz=173,slow=1.0,SNR=5.5						
CMAR	**Chiang Mai Arr**	**126.12**

LPAZ	**La Paz**	**63.31**	**81**	P		P		05 14 50.8	0.0
	0.7nm,0.7s,baz=209,slow=10,SNR=4.0								
	0.7nm,0.7s								
ASAR	**Alice Springs**	**71.93**	**255**	P		P		05 15 45.2	+0.6
	0.4nm,0.8s,baz=134,slow=7.3,SNR=4.2								
	0.4nm,0.8s								
H01W1	**Cape Leeuwin H**	**73.43**	**233**	T		T		06 37 27.6	
	baz=145,slow=76,SNR=6.4								
H01W2	**Cape Leeuwin H**	**73.44**	**233**	T		T		06 37 28.1	
	baz=145,slow=76,SNR=7.5								
H01W3	**Cape Leeuwin H**	**73.45**	**233**	T		T		06 37 26.0	
	baz=145,slow=76,SNR=6.4								
WRA	**Warramunga Arr**	**74.60**	**257**	P		P		05 15 59.6	-0.7
	0.5nm,0.9s,baz=136,slow=5.4,SNR=4.6								
	0.5nm,0.9s								
ZALV	**Zalesovo Beam**	**156.86**	**286**	PKPab		PKPab		05 24 45.4	-0.1
	0.2nm,0.3s,baz=89,slow=6.3,SNR=1.4								

IDC ***07*** *05:06:20.7±0.7,53.87S×134.15W,h0km,mb4.1/7, mbtmp4.1/7,MS4.2/5,Error ellipse: s-maj=39.9km s-min=20.8km az=175.0*

NEIC ***07*** *05:06:23.0±1.1,54.02S±0.10×134.3W±0.2,h10km±1km, mb4.9/54,Error ellipse: s-maj=18.0km s-min=15.5km az=312.0*

ISC 07 05:06:22.5±0.5,**53.99S**±0.10×**134.27W**±0.08,**h10**km,**n85**, σ**0.60**/65,**mb4.8**/33,**MS4.2**/5,**Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCN	**Pitcairn Islan**	**29.05**	**8**	**P**	**P**	**05 12 22.7**	**0.0**
SBA	**Scott Base**	**31.44**	**200**	P	**P**	**05 12 42.8**	**-0.6**
RPN	**Rapa Nui**	**32.52**	**44**	LR	LR	05 23 08.8	
	comp=Z,220nm,18.5s,baz=208,slow=31						
SMAI	**San Martin Ant**	**33.48**	**141**	**P**	**P**	**05 13 01.7**	**+0.4**
BFZ	**Birch Farm**	**35.33**	**272**	**P**	**P**	**05 13 18.6**	**+0.9**
PMSA	**Palmer Station**	**35.43**	**136**	LR	LR	05 23 12.7	
	comp=Z,362nm,21.7s,baz=248,slow=28						
CMWZ	**Cape Campbell**	**35.87**	**268**	**P**	**P**	**05 13 21.9**	**-0.3**
AMCZ	**Amberley**	**35.93**	**265**	**P**	**P**	**05 13 23.3**	**+0.6**
QSPA	**South Pole Qui**	**36.18**	**180**	**P**	**P**	**05 13 24.8**	**-0.1**
OXZ	**Oxford**	**36.20**	**265**	**P**	**P**	**05 13 24.6**	**-0.4**
MG05	**Puerto Natales**	**36.35**	**112**	P	**P**	**05 13 26.4**	**+0.2**
MG05				IAmb	IAmb	05 13 27.9	
	comp=Z,24nm,1.2s						
RAR	**Rarotonga**	**38.04**	**319**	LR	LR	05 28 07.5	
	comp=Z,353nm,18.6s,baz=191,slow=34						
PPTF	**Pamatai, Papee**	**38.21**	**336**	**P**	**P**	**05 13 42.9**	**+0.4**
PPT	**Papeete**	**38.24**	**336**	LR	LR	05 25 47.4	
	comp=Z,366nm,18.1s,baz=199,slow=31						
LL05	**Los Muermos**	**41.54**	**98**	**P**	**P**	**05 14 09.3**	**-0.5**
H03S2	**Juan Fernandez**	**43.38**	**85**	T	T	06 00 43.4	
	baz=223,slow=74,SNR=14						
H03S1	**Juan Fernandez**	**43.39**	**85**	T	T	06 00 44.7	
	baz=223,slow=74,SNR=19						
H03S3	**Juan Fernandez**	**43.40**	**85**	T	T	06 00 43.1	
	baz=223,slow=74,SNR=13						
H03N3	**Juan Fernandez**	**43.65**	**85**	T	T	06 00 56.9	
	baz=226,slow=72,SNR=89						
H03N2	**Juan Fernandez**	**43.66**	**85**	T	T	06 00 55.9	
	baz=226,slow=72,SNR=74						
H03N1	**Juan Fernandez**	**43.67**	**85**	T	T	06 00 55.9	
	baz=226,slow=72,SNR=68						
ORCD	**Orcadas**	**45.15**	**136**	**P**	**P**	**05 14 38.5**	**-0.2**
BI02	**San Fabin de**	**45.94**	**95**	P	**P**	**05 14 46.0**	**+0.6**
ML02	**Panimavida**	**46.47**	**93**	P	**P**	**05 14 49.8**	**+0.3**
ML02				IAmb	IAmb	05 14 49.9	
	comp=Z,8.8nm,0.8s						
BO02	**Sierra Bellavi**	**47.52**	**93**		**P**	**05 14 58.0**	**+0.2**
BO02				IAmb	IAmb	05 15 00.3	
	comp=Z,10nm,0.8s						
BO01	**Tunca**	**47.62**	**92**	P	**P**	**05 14 57.6**	**-0.8**
MT01	**Popeta**	**47.89**	**92**	P	**P**	**05 15 00.7**	**+0.1**
MT09	**Talagante**	**48.11**	**92**	P	**P**	**05 15 02.5**	**0.0**
MT09				IAmb	IAmb	05 15 03.0	
	comp=Z,14nm,1.0s						
MT02	**Curacav**	**48.39**	**91**	P	**P**	**05 15 05.0**	**+0.6**
MT02				IAmb	IAmb	05 15 10.4	
	comp=Z,19nm,1.2s						
MT16	**CCHEN**	**48.63**	**92**	P	**P**	**05 15 06.1**	**-0.2**
MT16				IAmb	IAmb	05 15 21.5	
	comp=Z,19nm,1.1s						
PEL	**Peldehue**	**48.73**	**92**	P	**P**	**05 15 07.5**	**+0.3**
PEL				IAmb	IAmb	05 15 08.2	
	comp=Z,18nm,1.1s						
VA03	**San Esteban**	**49.09**	**91**	P	**P**	**05 15 10.3**	**+0.4**
VA03				IAmb	IAmb	05 15 12.2	
	comp=Z,10nm,0.8s						
CO04	**Los Peladeros**	**49.35**	**90**	P	**P**	**05 15 11.7**	**-0.5**
CO04				IAmb	IAmb	05 15 14.4	
	comp=Z,22nm,1.2s						
SNAA	**Sanae**	**50.06**	**162**	P	**P**	**05 15 17.9**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=219,slow=6.4,SNR=4.1						
	comp=Z,1.7nm,0.8s						
SNAA	**Sanae**	**50.06**	**162**	P	**P**	**05 15 17.6**	**+0.8**
CO03	**El Pedregal**	**50.38**	**89**	P	**P**	**05 15 19.6**	**-0.2**
CO03				IAmb	IAmb	05 15 20.0	
	comp=Z,11nm,1.1s						
TRQA	**Tornquist**	**50.42**	**103**		**P**	**05 15 20.4**	**+0.5**
TRQA				IAmb	IAmb	05 15 22.3	
	comp=Z,15nm,1.1s						
TAU	**Tasmania Unive**	**50.60**	**249**	P	**P**	**05 15 21.0**	**-0.2**
ZON	**Zonda**	**51.06**	**92**	P	**P**	**05 15 25.0**	**+0.1**
ZON				IAmb	IAmb	05 15 26.4	
	comp=Z,15nm,1.4s						
PB05	**IPOC Station P**	**56.65**	**83**	P	**P**	**05 16 06.0**	**+0.1**
PB05				IAmb	IAmb	05 16 25.4	
	comp=Z,23nm,1.3s						
PB03	**IPOC Station P**	**57.53**	**83**	P	**P**	**05 16 12.5**	**+0.3**
PB03				IAmb	IAmb	05 16 40.4	
	comp=Z,12nm,1.3s						
PB09	**IPOC Station P**	**58.02**	**83**	P	**P**	**05 16 15.0**	**-0.6**
PB09				IAmb	IAmb	05 16 29.6	
	comp=Z,18nm,1.4s						
PB11	**IPOC Station P**	**59.36**	**81**	P	**P**	**05 16 25.6**	**+0.7**
PB16	**IPOC Station P**	**60.56**	**81**		**P**	**05 16 33.8**	**0.0**
PB16				IAmb	IAmb	05 16 37.3	
	comp=Z,10nm,1.3s						
NNA	**Nana**	**61.47**	**70**	LR	LR	05 36 19.2	
	comp=Z,364nm,19.7s,baz=221,slow=29						
CPUP	**Villa Florida**	**61.59**	**96**	P	**P**	**05 16 38.7**	**-1.2**
	comp=Z,3.8nm,1.1s,baz=233,slow=10,SNR=5.0						
	comp=Z,3.8nm,1.1s						
CPUP	**Villa Florida**	**61.59**	**96**	P	**P**	**05 16 39.7**	**-0.2**
CPUP				IAmb	IAmb	05 16 40.6	
	comp=Z,14nm,1.4s						
LPAZ	**La Paz**	**62.98**	**80**	P	**P**	**05 16 49.5**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=208,slow=2.8,SNR=10						
	comp=Z,2.1nm,0.6s						
LPAZ	**La Paz**	**62.98**	**80**		**P**	**05 16 50.7**	**+0.7**
LPAZ				IAmb	IAmb	05 16 51.9	
	comp=Z,12nm,1.4s						
CZSB	**Cruzeiro do Su**	**67.27**	**71**	P	**P**	**05 17 17.3**	**+0.1**
CZSB				IAmb	IAmb	05 17 19.2	
	comp=Z,13nm,1.2s						
PTLB	**Pontes e Lacer**	**68.92**	**87**	P	**P**	**05 17 27.3**	**-0.2**
TARA	**Tarawa**	**70.25**	**302**	P	**P**	**05 17 34.7**	**-1.0**
TARA				IAmb	IAmb	05 17 35.0	
	comp=Z,19nm,1.4s						
VILB	**Vilhena**	**70.26**	**85**		**P**	**05 17 36.1**	**+0.2**
VILB				IAmb	IAmb	05 17 39.4	
	comp=Z,12nm,1.1s						
OTAV	**Otavalo**	**70.83**	**61**	P	**P**	**05 17 39.3**	**-0.5**
OTAV				IAmb	IAmb	05 17 45.6	
	comp=Z,6.0nm,1.1s						
ASAR	**Alice Springs**	**72.25**	**254**	P	**P**	**05 17 48.4**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=144,slow=5.7,SNR=7.0						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**72.25**	**254**	P	**P**	**05 17 47.9**	**0.0**
H01W1	**Cape Leeuwin H**	**73.67**	**233**	T	T	06 39 44.4	
	baz=145,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**73.68**	**233**	T	T	06 39 44.7	
	baz=145,slow=75,SNR=13						
H01W3	**Cape Leeuwin H**	**73.69**	**233**	T	T	06 39 45.7	
	baz=145,slow=75,SNR=13						
WR8	**Warramunga Arr**	**74.82**	**257**	P	**P**	**05 18 03.0**	**0.0**
WRA	**Warramunga Arr**	**74.92**	**257**	P	**P**	**05 18 04.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=140,slow=5.6,SNR=10.0						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**74.92**	**257**	P	**P**	**05 18 04.2**	**+0.5**
WB0	**Warramunga Arr**	**75.03**	**257**	P	**P**	**05 18 04.7**	**+0.4**
WB0				IAmb	IAmb	05 18 22.5	
	comp=Z,7.5nm,1.1s						
BDFB	**Brasilia**	**75.32**	**96**	P	**P**	**05 18 05.4**	**-0.6**
	comp=Z,4.1nm,1.1s,baz=97,slow=3.7,SNR=4.0						
	comp=Z,4.1nm,1.1s						
BDFB	**Brasilia**	**75.32**	**96**	P	**P**	**05 18 05.8**	**-0.2**
MACA	**Manacapuru-AM**	**77.83**	**78**	P	**P**	**05 18 19.8**	**-0.3**
MACA				IAmb	IAmb	05 18 41.0	
	comp=Z,6.6nm,0.7s						
TX31	**Lajitas Ar. Si**	**87.11**	**26**	P	**P**	**05 19 08.3**	**+0.1**
TXAR	**Lajitas Array**	**87.11**	**26**	P	**P**	**05 19 08.0**	**-0.2**
	comp=Z,1.2nm,1.1s,baz=205,slow=8.3,SNR=6.8						
	comp=Z,1.2nm,1.1s						
TXAR	**Lajitas Array**	**87.11**	**26**	P	**P**	**05 19 08.4**	**+0.3**
H11S2	**WAKE ISLAND Hy**	**88.05**	**305**	T	T	06 56 52.2	
	baz=144,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**88.06**	**305**	T	T	06 56 55.1	
	baz=144,slow=76,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**88.07**	**306**	T	T	06 57 01.9	
	baz=144,slow=76,SNR=4.1						
SAND	**Sanderson**	**88.11**	**28**		**P**	**05 19 14.4**	**+1.5**
SAND				IAmb	IAmb	05 19 17.4	
	comp=Z,6.2nm,1.4s						
TUC	**Tucson**	**88.32**	**20**	P	**P**	**05 19 14.1**	**+0.2**
TUC				IAmb	IAmb	05 19 24.5	
	comp=Z,7.6nm,1.4s						
MNTX	**Cornudas Mount**	**88.93**	**24**	P	**P**	**05 19 17.4**	**+0.7**
H11N3	**WAKE ISLAND Hy**	**89.00**	**306**	T	T	06 57 59.0	
	baz=148,slow=76,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**89.01**	**306**	T	T	06 57 55.0	
	baz=148,slow=76,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**89.02**	**306**	T	T	06 57 58.9	
	baz=148,slow=76,SNR=8.6						
ABTX	**Abilene, Hawle**	**91.32**	**29**	P	**P**	**05 19 28.6**	**+0.7**
ABTX				IAmb	IAmb	05 19 33.9	
	comp=Z,4.7nm,1.0s						
WUAZ	**Wupatki**	**91.32**	**19**	P	**P**	**05 19 29.5**	**+1.6**
ANMO	**Albuquerque**	**91.78**	**23**		**P**	**05 19 30.4**	**+0.2**
U15A	**North Rim**	**92.03**	**18**		**P**	**05 19 32.9**	**+1.5**
U15A				IAmb	IAmb	05 19 41.1	
	comp=Z,4.7nm,1.0s						
ILAR	**Eielson Array**	**118.83**	**354**	PKP	**PKPdf**	**05 25 09.3**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=202,slow=2.0,SNR=4.6						
MKAR	**Makanchi Array**	**155.82**	**268**	PKPab	**PKPab**	**05 26 42.8**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=130,slow=4.9,SNR=6.0						
ZALV	**Zalesovo Beam**	**157.20**	**286**	PKPab	**PKPab**	**05 26 47.2**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=54,slow=2.6,SNR=4.6						

KMA ***07*** *05:08:23.5±0.1,37.19N×125.56E,h13km±1km,Error ellipse: s-maj=1.2km s-min=0.8km az=79.0*

KEA ***07*** *05:08:24.6,37.28N×125.58E,h18km,ML3.6/5*

ISC 07 05:08:22.9±1.3,**37.19N**±0.03×**125.50E**±0.04,**h10**km±11km, **n23**,σ**1.32**/43,**South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YPDB	**Yeonpyeongdo**	**0.45**	**22**	P	**Pb**	**05 08 32.4**	**-0.6**
YPDB				P	**Pb**	**05 08 32.4**	**-0.6**
YPDB				S	**Sb**	**05 08 38.2**	**-1.5**
YPDB				S	**Sb**	**05 08 38.2**	**-1.5**
TANB	**Taean**	**0.72**	**135**	P	**Pg**	**05 08 37.2**	**+0.4**
TANB				P	**Pg**	**05 08 37.2**	**+0.4**
TANB				S	**Sg**	**05 08 46.3**	**0.0**
TANB				S	**Sg**	**05 08 46.3**	**0.0**
NJDA	**Nanjido**	**0.74**	**101**	P	**Pg**	**05 08 37.4**	**+0.2**
	SNR=154						
GMPB	**Gimpo**	**0.75**	**75**	P	**Pn**	**05 08 42.6**	**+3.1**
	SNR=20						
GMPB				P	**Pn**	**05 08 42.6**	**+3.1**
	SNR=20						
KSSES	**Seosan**	**0.86**	**117**	P	**Pb**	**05 08 39.5**	**-0.4**
	SNR=86						
KSSES				P	**Pb**	**05 08 39.5**	**-0.4**
	SNR=86						
HJU	**Haeju**	**0.87**	**12**	Pg	**Pb**	**05 08 38.9**	**-1.2**
HJU				Sg	**Sg**	**05 08 49.8**	**-1.1**
HJU				AML	AML		
	comp=N,2μm,0.1s						
HJU				AML	AML		
	comp=E,2μm,0.8s						
HJU				AML	AML		
	comp=Z,887nm,0.4s						
SWO2	**Suwon**	**0.87**	**91**	P	**Pn**	**05 08 45.0**	**+3.8**
	SNR=17						
SWO2				P	**Pn**	**05 08 45.0**	**+3.8**
	SNR=17						
DACB	**Daecheong-do R**	**0.90**	**316**	P	**Pb**	**05 08 40.8**	**+0.2**
	SNR=122						
DACB				P	**Pb**	**05 08 40.8**	**+0.2**
	SNR=122						
KSINC	**Incheon**	**0.94**	**72**	P	**Pg**	**05 08 40.9**	**-0.1**
	SNR=65						
KSANM	**Anmyeondo**	**0.94**	**137**	P	**Pb**	**05 08 40.9**	**-0.4**
	SNR=190						
SHHB	**Siheung-si**	**0.97**	**80**	P	**Pb**	**05 08 41.4**	**-0.4**
	SNR=36						
SHHB				P	**Pb**	**05 08 41.4**	**-0.4**
	SNR=36						
KSBAR	**Backryungdo**	**1.00**	**322**	P	**Pb**	**05 08 43.0**	**+0.7**
	SNR=139						
KSBAR				P	**Pb**	**05 08 43.0**	**+0.7**
	SNR=139						
HAWB	**Hwaseong-si**	**1.02**	**96**	P	**Pb**	**05 08 42.2**	**-0.5**
HAWB				P	**Pb**	**05 08 42.2**	**-0.5**
HAWB				S	**Sb**	**05 08 54.9**	**-1.3**
HAWB				S	**Sb**	**05 08 54.9**	**-1.3**
OYDB	**Oeyeondo**	**1.06**	**154**	P	**Pb**	**05 08 43.4**	**0.0**
	SNR=460						
OYDB				P	**Pb**	**05 08 43.4**	**0.0**
	SNR=460						
ECDB	**Euchungdo**	**1.14**	**160**	P	**Pn**	**05 08 44.6**	**-0.3**
	SNR=88						
ECDB				P	**Pn**	**05 08 44.6**	**-0.3**
	SNR=88						
YSAB	**Yesan**	**1.15**	**113**	P	**Pb**	**05 08 44.4**	**-0.3**
	SNR=56						
YSAB				P	**Pb**	**05 08 44.4**	**-0.3**
	SNR=56						
PORA	**Boryeong**	**1.21**	**135**	P	**Pn**	**05 08 45.4**	**-0.4**
	SNR=56						
KSSOD	**Songwoldong**	**1.23**	**72**	P	**Pb**	**05 08 45.9**	**-0.3**
	SNR=10						
SRW	**Sariwon**	**1.32**	**9**	Pg	**Pn**	**05 08 47.0**	**-0.4**
SRW				Sg	**Sn**	**05 09 04.5**	**-0.7**
SRW				AML	AML		
	comp=N,3μm,1.0s						
SRW				AML	AML		
	comp=E,2μm,0.5s						
SRW				AML	AML		
	comp=Z,1μm,0.8s						
GODA	**Kyodong**	**1.80**	**78**	P	Pn	05 08 39.6	-14
	SNR=11						
PYAG	**Pyongyang**	**1.87**	**6**	Sg	**Sb**	**05 09 19.0**	**-1.5**
PYAG				AML	AML		
	comp=N,522nm,0.6s						
PYAG				AML	AML		
	comp=E,680nm,0.6s						
PYAG				AML	AML		
	comp=Z,385nm,0.5s						
PYS	**Pyongsong**	**2.08**	**8**	Pg	**Pb**	**05 09 00.4**	**-0.2**
PYS				Sg	**Sb**	**05 09 25.8**	**-0.7**
PYS				AML	AML		
	comp=N,1μm,0.5s						
PYS				AML	AML		
	comp=E,1μm,0.4s						
PYS				AML	AML		
	comp=Z,1μm,0.5s						
SUJ	**Sinuiju**	**3.01**	**345**	Sg	**Sb**	**05 09 54.9**	**+1.4**
SUJ				AML	AML		
	comp=N,638nm,0.7s						
SUJ				AML	AML		
	comp=E,804nm,0.4s						
SUJ				AML	AML		
	comp=Z,84nm,0.9s						

IDC ***07*** *05:14:57.7±1.6,12.32N×86.26W,h0km,mb3.5/3, mbtmp3.6/4,ML2.9/1,MS3.8/2,Error ellipse: s-maj=111.6km s-min=20.8km az=58.0*

UCR ***07*** *05:14:58.0±1.6,11.54N×87.10W,h28km±18km,MW4.5, Presumed earthquake*

CATAC ***07*** *05:14:58.9±0.5,11.2°×8.7W±,h26km±5km,M4.1/36, MLv4.1/36,Error ellipse: s-maj=5.1km s-min=3.7km az=31.6,confirmed*

SNET ***07*** *05:14:59.1±3.4,11.43N×86.94W,h27km,ML3.7,ML4.0, Presumed earthquake*

NEIC ***07*** *05:15:00.4±2.5,11.42N±0.06×86.96W±0.08,h35km±2km, mb4.1/32,Error ellipse: s-maj=14.1km s-min=8.3km az=63.0*

ISC 07 05:14:56.6±1.2,**11.33N**±0.03×**87.04W**±0.04,**h17**km±8km, **n123**,σ**1.07**/144,**mb4.0**/17,**12C-11D**,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.96**	**27**	⇓P	**Pb**	**05 15 15.9**	**+1.1**
COPN	**Copaltepe**	**0.96**	**27**	*i*P	**Pb**	**05 15 15.9**	**+1.1**
SAPS	**Ciudad Sandino**	**1.04**	**37**	P	**Pb**	**05 15 16.9**	**+0.6**
SAPS				S	**Sg**	**05 15 30.8**	**+0.2**
SABN	**Sabanita**	**1.07**	**54**	⇓P	**Pb**	**05 15 17.4**	**+0.7**
NADN	**Granada**	**1.08**	**67**	⇓P	**Pg**	**05 15 16.9**	**-0.6**
NADN				S	**Sg**	**05 15 31.7**	**+0.1**
NADN	**Granada**	**1.08**	**67**	⇑*i*P	**Pg**	**05 15 16.9**	**-0.6**
NADN				*e*S	**Sg**	**05 15 31.8**	**+0.1**
AMTN	**Mateare**	**1.08**	**33**	P	**Pg**	**05 15 17.6**	**-0.1**
UNAN	**Cigeo UNAN**	**1.09**	**44**	⇑P	**Pb**	**05 15 17.7**	**+0.7**
UNAN				S	**Sb**	**05 15 33.0**	**+2.0**
NANN	**Nandasmo**	**1.09**	**56**	⇓P	**Pn**	**05 15 18.7**	**+1.5**
NANN				S	**Sn**	**05 15 33.8**	**+1.8**
MASN	**Masaya**	**1.09**	**53**	P	**Pn**	**05 15 18.6**	**+1.3**
MASN				S	**Sb**	**05 15 32.8**	**+1.6**
MAS3	**Al N del Volca**	**1.10**	**51**	⇓P	**Pg**	**05 15 17.5**	**-0.4**
MAS3				S	**Sg**	**05 15 32.5**	**+0.2**
TISN	**Laguna Tiscapa**	**1.11**	**43**	P	**Pg**	**05 15 17.1**	**-1.0**
APQ2	**Apoyeque**	**1.11**	**39**	P	**Pg**	**05 15 17.6**	**-0.6**
APQ2	**Apoyeque**	**1.11**	**39**	⇓P	**Pg**	**05 15 18.0**	**-0.2**
APQ2				S	**Sg**	**05 15 32.8**	**0.0**
APQ2				S	**Sb**	**05 15 33.6**	**+1.8**
MGAN	**Managua**	**1.13**	**44**	Pn	**Pg**	**05 15 18.1**	**-0.4**
MGAN	**Managua**	**1.13**	**44**	⇑P	**Pb**	**05 15 18.4**	**+0.6**
MGAN				S	**Sg**	**05 15 33.2**	**-0.1**
APYN	**Apoyeque**	**1.13**	**37**	P	**Pb**	**05 15 18.5**	**+0.7**
APYN				S	**Sb**	**05 15 34.3**	**+2.1**
WILN	**Americas 2**	**1.18**	**45**	⇓P	**Pg**	**05 15 18.9**	**-0.6**
WILN				S	**Sg**	**05 15 34.9**	**0.0**
AERN	**Aeropuerto Man**	**1.18**	**46**	⇑P	**Pg**	**05 15 19.2**	**-0.3**
AERN				S	**Sg**	**05 15 33.2**	**-1.7**
MOMN	**Momotombo**	**1.18**	**25**	P	**Pg**	**05 15 18.9**	**-0.6**
MOMN				S	**Sg**	**05 15 35.1**	**+0.1**
MACN	**El Madrono**	**1.19**	**18**	⇓P	**Pg**	**05 15 19.0**	**-0.6**
CNGA	**Al SSO del Vol**	**1.21**	**16**	⇑P	**Pg**	**05 15 19.4**	**-0.6**
CNGA				S	**Sg**	**05 15 35.9**	**+0.1**
CNGN	**Cerro Negro**	**1.21**	**16**	⇓P	**Pg**	**05 15 19.2**	**-0.9**
QUEN	**Al S del Volca**	**1.27**	**8**	⇑P	**Pn**	**05 15 20.6**	**+0.9**
PLRN	**Geotermica Pol**	**1.28**	**12**	P	**Pn**	**05 15 20.3**	**+0.5**
CRIN	**San Cristobal**	**1.36**	**360**		**Pn**	**05 15 22.0**	**+0.9**
CRIN	**San Cristobal**	**1.36**	**360**	⇑P	**Pn**	**05 15 22.0**	**+0.9**
MORN	**Al O del Volca**	**1.39**	**81**	P	**Pn**	**05 15 22.1**	**+0.8**
LCRUZ	**La Cruz**	**1.41**	**100**	*e*P	**Pn**	**05 15 22.5**	**+0.9**
LCRUZ				*e*S	**Sg**	**05 15 42.4**	**+0.3**
CARN	**Rivas**	**1.50**	**95**		**Pb**	**05 15 24.7**	**+0.6**
CARN	**Rivas**	**1.50**	**95**	P	**Pb**	**05 15 24.2**	**+0.1**
CARN	**Rivas**	**1.50**	**95**	*e*P	**Pb**	**05 15 24.1**	**+0.1**
ALIBA	**Liberia Airpor**	**1.64**	**116**	*e*P	**Pb**	**05 15 26.6**	**+0.1**
LAPC	**Finca la Perla**	**1.68**	**109**	*e*P	**Pn**	**05 15 26.6**	**+1.3**
DELF	**Filadelfia**	**1.70**	**121**	*e*P	**Pb**	**05 15 27.2**	**-0.4**
VRLE	**La Escondida,**	**1.73**	**108**	*e*P	**Pb**	**05 15 27.8**	**-0.3**
BUAI	**Buenos Aires**	**1.74**	**105**	*e*P	**Pb**	**05 15 28.0**	**-0.2**
VORI	**VORI**	**1.74**	**107**	*e*P	**Pg**	**05 15 30.6**	**+0.5**
GPS3	**Bodega del ICE**	**1.74**	**109**	*e*P	**Pb**	**05 15 28.5**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.75**	**50**		**Pn**	**05 15 26.8**	**+0.5**
BOAB	**BOACO BROADBAN**	**1.75**	**50**	⇑P	**Pn**	**05 15 26.7**	**+0.5**
BOAB				S	**Sn**	**05 15 47.5**	**-0.7**
GPS1	**Guardaparques**	**1.75**	**108**	*e*P	**Pb**	**05 15 28.2**	**-0.3**
PEJA	**Penjamo Buenos**	**1.75**	**104**	*e*P	**Pb**	**05 15 28.2**	**-0.2**
GPS2	**Hotel Rincn d**	**1.75**	**109**	*e*P	**Pb**	**05 15 28.2**	**-0.3**
SACU	**Santa Cruz**	**1.78**	**126**	*e*P	**Pg**	**05 15 32.6**	**+1.7**
LIMN	**Finca el Limon**	**1.85**	**21**	⇑P	**Pn**	**05 15 28.4**	**+0.7**
JUD3	**Juan Diaz 3**	**1.88**	**128**	Pn	**Pn**	**05 15 29.0**	**+0.9**
MESS	**Mesas**	**1.91**	**108**	*e*P	**Pb**	**05 15 30.5**	**-0.6**
CLARA	**Aguas Claras**	**1.91**	**106**	*e*P	**Pb**	**05 15 30.5**	**-0.7**
BAGA	**Bagaces**	**1.92**	**114**	*e*P	**Pg**	**05 15 32.4**	**-1.2**
PLVR	**Palo Verde**	**1.93**	**120**	*e*P	**Pg**	**05 15 33.1**	**-0.6**
HORNC	**Hornillas**	**1.93**	**108**	*e*P	**Pb**	**05 15 30.8**	**-0.7**
MATN	**Matagalpa**	**1.93**	**34**	⇓P	**Pn**	**05 15 29.4**	**+0.5**
MATN				S	**Sn**	**05 15 52.3**	**-0.6**
ACON	**Acoyapa**	**1.94**	**71**	P	**Pn**	**05 15 29.3**	**+0.4**
ACON				S	**Sn**	**05 15 52.7**	**-0.3**
VMAR	**Armenia, Volca**	**1.96**	**105**	*e*P	**Pn**	**05 15 31.0**	**+1.7**
CANAL	**Canalete**	**2.01**	**104**	*e*P	**Pn**	**05 15 31.5**	**+1.6**
UPAL	**Upala**	**2.04**	**102**	P	**Pn**	**05 15 31.6**	**+1.3**
UPAL				S	**Sn**	**05 15 56.2**	**+0.8**
UPAL	**Upala**	**2.04**	**102**	*e*P	**Pn**	**05 15 31.3**	**+1.1**
CNCH	**Conchagua**	**2.09**	**338**	⇑P	**Pn**	**05 15 32.1**	**+1.0**
CNCH				S	**Sn**	**05 15 59.4**	**+2.6**
CNCH	**Conchagua**	**2.09**	**338**	*e*P	**Pn**	**05 15 32.0**	**+1.0**
CNCH				*e*S	**Sb**	**05 16 00.1**	**+0.1**
INTP	**Intipuca**	**2.11**	**

comp=Z,3.8nm,0.6s
CCM Cathedral Cave 26.88 353 P P 05 20 35.7 -1.1
CCM IAmb IAmb 05 20 36.0
comp=Z,2.9nm,0.8s
ELIS Ellis County 27.06 338 P P 05 20 39.5 +1.1
Q51A Peebles 27.78 6 P P 05 20 43.3 -1.5
Q51A IAmb IAmb 05 20 46.3
comp=Z,10nm,1.3s
P38A Dawn 28.77 350 P P 05 20 52.5 -1.1
P38A IAmb IAmb 05 20 52.7
comp=Z,3.6nm,0.5s
N49A Columbus Grove 29.59 4 P P 05 20 59.8 -1.1
N49A IAmb IAmb 05 21 02.6
comp=Z,4.1nm,0.6s
MACA Manacapuru-AM 29.91 117 P P 05 21 01.8 -2.2
PV18 Skein Mesa, Pa 33.18 328 P P 05 21 34.3 +1.5
PV11 David Mesa, Pa 33.20 328 P P 05 21 34.0 +1.1
PB11 IPOC Station P 35.32 151 P P 05 21 51.0 -0.4
PB08 IPOC Station P 35.89 151 P P 05 21 54.9 -1.7
PD31 Pinedale Array 36.95 332 P P 05 22 05.4 +0.1
PDAR Pinedale Array 36.95 332 P P 05 22 04.5 -0.8
comp=Z,0.3nm,0.5s,baz=132,slow=8.7,SNR=4.0
comp=Z,0.3nm,0.5s
PDAR Pinedale Array 36.95 332 P P 05 22 05.9 +0.6
EPLO Experimental L 38.63 353 P P 05 22 16.8 -2.3
EPLO IAmb IAmb 05 22 17.0
comp=Z,2.3nm,0.9s
ULM Lac du Bonnet 39.48 351 P P 05 22 22.4 -3.8
comp=Z,1.1nm,0.6s,baz=146,slow=11,SNR=3.6
comp=Z,1.1nm,0.6s
ULM Lac du Bonnet 39.48 351 P P 05 22 25.0 -1.2
BBB Bella Bella 52.48 329 LR LR 05 48 46.1
comp=Z,450nm,19.5s,baz=199,slow=39
PMSA Palmer Station 77.84 170 P P 05 26 54.7 +1.8

*BJI **07** 05:17:49.0,9.˚40S±107.˚50E,h10km,mB4.8/7,mb4.7/38, Ms4.5/16,Ms7 4.3/15*
*IDC **07** 05:17:50.4±0.5,9.˚29S±107.˚57E,h0km,mb4.3/19, mbtmp4.3/20,ML3.8/1,MS3.8/3,Error ellipse: s-maj=21.7km s-min=12.0km az=67.0*
*DJA **07** 05:17:51.3±0.4,10.˚5S±4.˚×10.˚7E±.˚,h10km,M4.9/24, mB4.9/3,mb5.2/6,MLv4.8/24,Mw(mB)4.2/3*
*NEIC **07** 05:17:51.9±1.1,9.˚37S±0.˚03×107.˚48E±0.˚06,h10km±1km, mb4.8/63,Error ellipse: s-maj=10.8km s-min=5.0km az=109.0*
*GFZ **07** 05:17:51.3±0.3,9.˚5S±3.˚×10.˚7E±.˚,h10km,M4.7/22, mb4.9/22,Error ellipse: s-maj=8.0km s-min=4.3km az=25.0,confirmed*
ISC 07 05:17:51.7±1.1,9.˚42S±0.˚05×107.˚45E±0.˚05,h13km±6km, n203,σ1§09/206,mb4.7/58,MS4.3/9,4C,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBJI	**Bungbulang**	**1.95**	**6**	P	**Pn**	**05 18 24.6**	**-0.1**
BBJI	**Bungbulang**	**1.95**	**6**		**Pn**	**05 18 24.7**	**0.0**
BBJI	**Bungbulang**	**1.95**	**6**	P	**Pn**	**05 18 24.4**	**-0.3**
BBJI	**Bungbulang**	**1.95**	**6**	P	**Pn**	**05 18 24.8**	**0.0**
XMI	**Christmas Isla**	**2.02**	**239**	P	**Pn**	**05 18 24.0**	**-1.5**
KPJI	**Karang Pucung**	**2.54**	**35**	P	**Pn**	**05 18 33.9**	**+1.3**
SKJI	**Sukabumi**	**2.56**	**340**	P	**Pn**	**05 18 33.0**	**+0.1**
LEM	**Lembang**	**2.58**	**4**	Pn	**Pn**	**05 18 35.1**	**+1.7**
	70nm,0.3s,baz=59,slow=9.9,SNR=120						
LEM				Sn	**Sb**	**05 19 08.7**	**-1.1**
	70nm,0.3s,baz=339,slow=20,SNR=19						
LEM				LR	LR	05 19 30.3	
	comp=Z,680nm,21.7s,baz=208,slow=41						
LEM	**Lembang**	**2.58**	**4**	P	**Pn**	**05 18 34.5**	**+1.1**
CGJI	**Cibinong**	**3.29**	**328**	P	**Pn**	**05 18 43.1**	**+0.2**
UGM	**Wanagama**	**3.39**	**64**	P	**Pn**	**05 18 44.2**	**-0.1**
UGM	**Wanagama**	**3.39**	**64**		**Pn**	**05 18 44.2**	**-0.1**
UGM	**Wanagama**	**3.39**	**64**	P	**Pn**	**05 18 44.3**	**-0.1**
SBJI	**Serang**	**3.53**	**338**	P	**Pn**	**05 18 46.9**	**+0.6**
SMRI	**Semarang**	**3.78**	**52**	P	**Pn**	**05 18 50.5**	**+0.7**
SMRI	**Semarang**	**3.78**	**52**		**Pn**	**05 18 49.1**	**-0.7**
SMRI	**Semarang**	**3.78**	**52**	P	**Pn**	**05 18 50.7**	**+0.9**
NGJI	**Ngawi**	**4.46**	**63**	P	**Pn**	**05 19 01.2**	**+2.0**
SNJI	**Sawahan-Nganju**	**4.56**	**69**	P	**Pn**	**05 19 02.2**	**+1.5**
KASI	**Kota Agung**	**4.85**	**323**	P	**Pn**	**05 19 05.4**	**+0.9**
KASI	**Kota Agung**	**4.85**	**323**	P	**Pn**	**05 19 05.2**	**+0.7**
KLSI		**5.42**	**330**	P	**Pn**	**05 19 12.9**	**+0.6**
KLSI		**5.42**	**330**	P	**Pn**	**05 19 12.4**	**+0.1**
MDSI	**Maura Dua**	**5.88**	**326**	P	**Pn**	**05 19 18.3**	**-0.3**
BLJI	**Banyuglugur**	**6.30**	**75**	P	**Pn**	**05 19 26.4**	**+1.9**
JAGI	**Jajag, Banyuwa**	**6.69**	**82**	P	**Pn**	**05 19 30.1**	**+0.3**
JAGI	**Jajag, Banyuwa**	**6.69**	**82**		**Pn**	**05 19 30.1**	**+0.3**
JAGI	**Jajag, Banyuwa**	**6.69**	**82**	P	**Pn**	**05 19 30.2**	**+0.4**
	4µm273nm,0.7s						
JAGI	**Jajag, Banyuwa**	**6.69**	**82**	P	**Pn**	**05 19 30.1**	**+0.3**
MNAI	**Manna**	**6.72**	**318**	Pn	**Pn**	**05 19 30.0**	**-0.2**
ABJI	**Asem Bagus**	**6.90**	**77**	P	**Pn**	**05 19 35.0**	**+2.3**
IGBI	**Denpasar**	**7.62**	**86**	P	**Pn**	**05 19 42.9**	**+0.3**
IGBI	**Denpasar**	**7.62**	**86**	P	**Pn**	**05 19 43.9**	**+1.2**
SRBI	**Singaraja**	**7.79**	**81**	P	**Pn**	**05 19 45.7**	**+0.8**
KLNI	**Mataram**	**8.60**	**84**	P	**Pn**	**05 19 56.5**	**+0.5**
TWSI	**Taliwang, Sumb**	**9.34**	**87**	P	**Pn**	**05 20 06.5**	**+0.3**
PLAI	**Plampang**	**10.21**	**88**	P	**Pn**	**05 20 19.4**	**+1.2**
PLAI	**Plampang**	**10.21**	**88**	P	**Pn**	**05 20 18.4**	**+0.2**
DBNI	**Kabupaten Domp**	**10.77**	**86**	P	**Pn**	**05 20 26.2**	**+0.4**
COCO	**West Island**	**10.79**	**254**	Pn	**Pn**	**05 20 25.7**	**-0.3**
COCO	**West Island**	**10.79**	**254**	P	**Pn**	**05 20 25.3**	**-0.7**
MPSI	**Mapaga**	**15.73**	**53**	P	**Pn**	**05 21 33.7**	**+0.5**
BATI	**Baumata**	**16.00**	**94**	P	**Pn**	**05 21 36.6**	**-0.1**
KULM	**Kulim**	**16.11**	**335**	Pn	**Pn**	**05 21 37.8**	**-0.3**
KULM	**Kulim**	**16.11**	**335**	P	**Pn**	**05 21 38.0**	**-0.1**
APSI	**Ampana**	**16.46**	**60**	P	**Pn**	**05 21 41.6**	**-1.0**
MBWA	**Marble Bar**	**16.62**	**136**	P	**Pn**	**05 21 44.1**	**-0.5**
MBWA	**Marble Bar**	**16.62**	**136**	Pn	**Pn**	**05 21 44.0**	**-0.6**
TOLI2	**Tolitoli**	**16.90**	**52**	Pn	**Pn**	**05 21 46.7**	**-1.6**
TOLI2	**Tolitoli**	**16.90**	**52**	P	**P**	**05 21 49.4**	**-0.8**
LUWI	**Luwuk**	**17.37**	**62**		**Pn**	**05 21 53.6**	**-0.5**
LUWI				IAmb	IAmb	05 22 01.4	
	comp=Z,39nm,0.8s						
KKM	**Kota Kinabalu**	**17.67**	**30**	Pn	**Pn**	**05 21 56.2**	**-1.7**
KKM	**Kota Kinabalu**	**17.67**	**30**	P	**P**	**05 21 57.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.65**	**118**	P	**Pn**	**05 22 21.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=246,slow=5.7,SNR=5.3						
	comp=Z,7.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.65**	**118**	P	**P**	**05 22 21.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.65**	**118**	P	**P**	**05 22 20.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.65**	**118**	P	**P**	**05 22 20.5**	**0.0**
MORW	**Morawa**	**21.15**	**159**	P	**P**	**05 22 37.9**	**+1.2**
DLV	**Lat**	**21.25**	**3**	P	**P**	**05 22 37.6**	**-0.4**
KNRA	**Kununurra**	**21.70**	**109**		**P**	**05 22 42.2**	**-0.5**
KNRA				IAmb	IAmb	05 22 47.5	
	comp=Z,25nm,0.8s						
TNTI	**Ternate**	**22.27**	**64**	P	**P**	**05 22 47.9**	**-0.9**
TNTI				IAmb	IAmb	05 23 08.4	
	comp=Z,56nm,1.2s						
SAUI	**Saumlaki**	**23.62**	**88**	P	**P**	**05 23 02.6**	**-0.3**
FAKI	**Fak Fak**	**25.47**	**77**	P	**P**	**05 23 19.9**	**0.0**
WB0	**Warramunga Arr**	**27.99**	**115**	P	**P**	**05 23 41.8**	**-0.8**
WB0				IAmb	IAmb	05 23 54.2	
	comp=Z,15nm,1.3s						
WRA	**Warramunga Arr**	**27.99**	**115**	P	**P**	**05 23 42.5**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=291,slow=10,SNR=10						
WRA				PcP	**PcP**	**05 26 58.5**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=297,slow=2.1,SNR=6.7						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**27.99**	**115**	P	**P**	**05 23 41.4**	**-1.2**
WRA					**PcP**	**05 26 56.6**	**-1.2**
WRAB	**Tennant Creek**	**28.00**	**115**	P	**P**	**05 23 43.0**	**+0.3**
WRAB	**Tennant Creek**	**28.00**	**115**	P	**P**	**05 23 42.8**	**+0.1**
WR8	**Warramunga Arr**	**28.14**	**115**	P	**P**	**05 23 43.2**	**-0.8**
WR8				IAmb	IAmb	05 23 53.7	
	comp=Z,16nm,1.2s						
QIZ	**Qiongzhong**	**28.36**	**5**	P	**P**	**05 23 47.3**	**+1.5**
QIZ				S	**S**	**05 28 36.2**	**+3.7**
QIZ				L	L		
	comp=Z,250nm,8.6s						
QIZ				L	L		
	comp=Z,180nm,10.8s						
QIZ				L	L		
	comp=Z,270nm,12.9s						
CM31	**Chiang Mai Arr**	**28.94**	**343**	P	**P**	**05 23 51.2**	**+0.2**
CM31				IAmb	IAmb	05 24 01.5	
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**28.94**	**343**	P	**P**	**05 23 51.6**	**+0.6**
	comp=Z,3.9nm,0.6s,baz=178,slow=9.4,SNR=25						
	comp=Z,3.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.94**	**343**		**P**	**05 23 50.7**	**-0.3**
ASAR	**Alice Springs**	**28.97**	**123**	P	**P**	**05 23 52.2**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=301,slow=7.9,SNR=12						
ASAR				PcP	**PcP**	**05 27 01.9**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=292,slow=2.1,SNR=7.8						
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**28.97**	**123**	P	**P**	**05 23 51.0**	**-0.4**
ASAR					**PcP**	**05 26 59.8**	**-0.3**
AS31	**Alice Springs**	**28.97**	**123**	P	**P**	**05 23 51.7**	**+0.3**
CHTO	**Chiang Mai**	**29.28**	**343**		**P**	**05 23 53.1**	**-0.9**
CHTO				IAmb	IAmb	05 24 04.7	
	comp=Z,15nm,1.1s						
CHTO	**Chiang Mai**	**29.28**	**343**	P	**P**	**05 23 53.1**	**-0.9**
SLVN	**Son La**	**30.76**	**354**	P	**P**	**05 24 06.1**	**-1.0**
HALK	**Hakmana**	**30.80**	**299**	P	**P**	**05 24 06.8**	**-0.7**
PALK	**Pallekele**	**31.39**	**301**	P	**P**	**05 24 11.8**	**-1.0**
H08S2	**Diego Garcia H**	**34.61**	**270**	T	T	06 01 12.4	
	baz=95,slow=74,SNR=27						
H08S3	**Diego Garcia H**	**34.62**	**270**	T	T	06 01 14.7	
	baz=95,slow=74,SNR=39						
H08S1	**Diego Garcia H**	**34.62**	**270**	T	T	06 01 14.2	
	baz=95,slow=74,SNR=14						
TPUB	**Ta-pu**	**34.98**	**21**	P	**P**	**05 24 43.0**	**-1.0**
COEN	**Coen**	**35.25**	**101**	P	**P**	**05 24 45.7**	**-0.8**
YULB	**Yu-li**	**35.31**	**22**	P	**P**	**05 24 45.4**	**-1.4**
KNMB	**Chin-men Tao**	**35.33**	**17**	P	**P**	**05 24 45.9**	**-1.0**
NACB	**Ninganchiao**	**36.13**	**22**	P	**P**	**05 24 52.2**	**-1.6**
PZH	**PanZhiHua**	**36.13**	**351**	P	**P**	**05 24 57.1**	**+3.1**
INKA	**Innaminka**	**36.27**	**125**	P	**P**	**05 24 54.6**	**-0.4**
YOJ	**Yonaguni jima**	**36.94**	**24**	P	**P**	**05 24 58.9**	**-1.8**
SHL	**Shillong**	**37.93**	**337**		**P**	**05 25 09.2**	**-0.2**
SHL				IAmb	IAmb	05 25 19.3	
	comp=Z,32nm,1.0s						
STKA	**Stephens Creek**	**38.72**	**130**	P	**P**	**05 25 16.2**	**+0.4**
	comp=Z,6.9nm,0.8s,baz=308,slow=8.6,SNR=9.9						
	comp=Z,6.9nm,0.8s						
WHN	**Wuhan**	**40.28**	**9**	P	**P**	**05 25 28.9**	**+0.2**
WHN				sP	**pwP**	**05 25 38.2**	**+1.5**
EVN	**Everest**	**42.18**	**332**	P	**P**	**05 25 44.4**	**-0.8**
EVN				IAmb	IAmb	05 25 57.0	
	comp=Z,12nm,0.8s						
NJ2	**Nanjing**	**42.65**	**14**	⇑P	**P**	**05 25 49.0**	**+0.8**
NJ2				sP	**pwP**	**05 25 58.1**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,61nm,0.6s						
XAN	**Xi'an**	**43.24**	**2**	P	**P**	**05 25 52.8**	**-0.2**
XAN				pmax	pmax		
	comp=Z,37nm,0.9s						
XAN				L	L		
	comp=Z,320nm,15.1s						
XAN				L	L		
	comp=Z,190nm,16.5s						
XAN				L	L		
	comp=Z,320nm,15.8s						
ROCAM	**Rodrigues Isla**	**43.76**	**251**	P	**P**	**05 25 57.2**	**-0.2**
LYN	**LuoYang**	**43.98**	**6**	P	**P**	**05 25 59.8**	**+0.9**
LYN				pmax	pmax		
	comp=Z,29nm,0.8s						
LYN				pmax	pmax		
	comp=Z,120nm,9.6s						
LYN				L	L		
	comp=Z,270nm,16.2s						
LYN				L	L		
	comp=Z,140nm,11.0s						
LYN				L	L		
	comp=Z,340nm,15.5s						
LZDM	**Lanzhou Array**	**45.27**	**356**	P	**P**	**05 26 09.8**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=172,slow=12,SNR=6.2						
	comp=Z,1.5nm,0.3s						
LZH	**Lanzhou**	**45.39**	**356**	*e*P	**P**	**05 26 11.1**	**+0.8**
LZH				sP	pwP	05 26 18.4	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				L	L		
	comp=Z,250nm,12.0s						
LZH				L	L		
	comp=Z,280nm,12.4s						
LZH				L	L		
	comp=Z,250nm,13.1s						
HNS	**HongShan**	**47.06**	**8**	⇑P	**P**	**05 26 22.8**	**-0.4**
HNS				S	**S**	**05 33 20.3**	**+5.4**
HNS				L	L		
	comp=Z,270nm,16.7s						
HNS				L	L		
	comp=Z,190nm,16.3s						
GTA2	**Gaotai**	**49.17**	**352**	P	**P**	**05 26 40.6**	**+0.9**
GTA2				sP	pwP	05 26 50.1	+2.5
GTA2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA2				L	L		
	comp=Z,99nm,19.2s						
GTA2				L	L		
	comp=Z,220nm,19.9s						
GTA2				L	L		
	comp=Z,140nm,18.9s						
BJI2	**Beijing**	**49.84**	**9**	P	**P**	**05 26 45.3**	**+0.7**
BJI2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI2				pmax	pmax		
	comp=Z,41nm,4.5s						
HHC	**Hu-ho-hao-te**	**50.16**	**4**	*e*P	**P**	**05 26 49.6**	**+2.4**
HHC				sP	pwP	05 26 56.6	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,80nm,4.5s						
HHC				L	L		
	comp=Z,110nm,16.7s						
HHC				L	L		
	comp=Z,150nm,16.5s						
HHC				L	L		
	comp=Z,110nm,16.5s						
KSRS	**Korea Array**	**50.42**	**21**	P	**P**	**05 26 48.1**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=203,slow=8.9,SNR=1.9						
	comp=Z,0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**54.09**	**31**	P	**P**	**05 27 14.4**	**-2.1**
	comp=Z,2.1nm,0.7s,baz=192,slow=8.3,SNR=5.4						
	comp=Z,2.1nm,0.7s						
MJAR	**Matsushiro Arr**	**54.09**	**31**	P	**P**	**05 27 15.3**	**-1.1**
MJAR				IAmb	IAmb	05 27 23.1	
	comp=Z,19nm,1.8s						
JYT	**Yasato**	**54.87**	**32**	P	**P**	**05 27 21.6**	**-0.4**
WMQ	**Urumqi**	**55.94**	**343**	*e*P	**P**	**05 27 31.2**	**+1.4**
WMQ				sP	pwP	05 27 39.8	+2.2
WMQ				PcP	**PcP**	**05 28 26.6**	**-1.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WUS	**Wushi**	**56.68**	**335**	P	**P**	**05 27 34.5**	**-0.6**
WUS				IAmb	IAmb	05 27 45.4	
	comp=Z,11nm,1.1s						
CASY	**Casey**	**56.82**	**179**	P	**P**	**05 27 36.2**	**+0.6**
CASY				IAmb	IAmb	05 28 16.5	
	comp=Z,30nm,2.0s						
KBL	**Kabul**	**56.87**	**322**	P	**P**	**05 27 36.2**	**-0.6**
KBL				IAmb	IAmb	05 28 18.7	
	comp=Z,4.2nm,0.7s						
SONM	**Songino Array**	**57.01**	**359**	P	**P**	**05 27 38.0**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=171,slow=8.6,SNR=13						
	comp=Z,3.5nm,0.7s						
SONM	**Songino Array**	**57.01**	**359**	P	**P**	**05 27 37.9**	**+0.5**
ULN	**Ulaanbaatar**	**57.03**	**360**	P	**P**	**05 27 37.5**	**-0.1**
ULN				IAmb	IAmb	05 27 48.3	
	comp=Z,7.2nm,0.8s						
MANEM	**Manem**	**57.47**	**327**	P	**P**	**05 27 40.8**	**-0.2**
MANEM				IAmb	IAmb	05 27 51.1	
	comp=Z,41nm,1.1s						
TARG	**Taragay, Kyrgy**	**57.72**	**334**	P	**P**	**05 27 42.7**	**-0.1**
TARG				IAmb	IAmb	05 28 15.5	
	comp=Z,12nm,1.5s						
BNX	**BinXian**	**57.76**	**16**	⇑P	**P**	**05 27 41.4**	**-1.1**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
USA0B	**Ussuriysk Arra**	**57.82**	**21**	P	**P**	**05 27 43.0**	**+0.1**
USA0B				IAmb	IAmb	05 27 51.3	
	comp=Z,27nm,1.9s						
USRK	**Ussuriysk Ar.**	**57.82**	**21**	P	**P**	**05 27 41.4**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=186,slow=4.4,SNR=5.0						
	comp=Z,1.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**57.82**	**21**	P	**P**	**05 27 42.3**	**-0.6**
SHLS	**Shalkode**	**58.21**	**336**	*e*P	**P**	**05 27 44.8**	**-1.1**
NRN	**Naryn**	**58.28**	**333**	P	**P**	**05 27 45.7**	**-1.0**
NRN				IAmb	IAmb	05 28 02.6	
	comp=Z,5.6nm,1.0s						
KDJ	**Kajisay**	**58.31**	**334**	P	**P**	**05 27 46.8**	**+0.1**
KDJ				IAmb	IAmb	05 27 57.1	
	comp=Z,13nm,1.1s						
PDGK	**Podgornoye**	**58.34**	**336**	P	**P**	**05 27 46.6**	**-0.2**
UZB	**Uzynbulak**	**58.38**	**336**	*e*P	**P**	**05 27 47.2**	**+0.1**
SATY	**Saty**	**58.56**	**335**	*e*P	**P**	**05 27 48.5**	**+0.1**
BOOM	**Boomskoye usch**	**59.15**	**333**	P	**P**	**05 27 51.9**	**-0.6**
TNSS	**Tian-Shan**	**59.15**	**334**	*e*P	**P**	**05 27 52.7**	**-0.1**
MDOK	**Medeo**	**59.21**	**334**	*e*P	**P**	**05 27 53.1**	**+0.2**
GAR	**Garm**	**59.27**	**327**	P	**P**	**05 27 53.2**	**-0.2**
AAA	**Alma-Ata**	**59.30**	**334**	*e*P	**P**	**05 27 53.7**	**+0.2**
SHAA	**Shahritus**	**59.48**	**324**	P	**P**	**05 27 53.8**	**-1.0**
SHAA				IAmb	IAmb	05 28 16.0	
	comp=Z,13nm,1.0s						
ARSB	**Arslanbob**	**59.62**	**330**	P	**P**	**05 27 55.1**	**-0.6**
CHGR	**Chuyangaron**	**59.66**	**326**	P	**P**	**05 27 55.1**	**-0.9**
CHGR				IAmb	IAmb	05 28 09.0	
	comp=Z,8.9nm,0.7s						
H04N2	**CROZET ISLANDS**	**59.74**	**222**	T	T	06 32 47.5	
	baz=69,slow=75,SNR=19						
H04N1	**CROZET ISLANDS**	**59.76**	**222**	T	T	06 32 47.7	
	baz=69,slow=75,SNR=19						
H04N3	**CROZET ISLANDS**	**59.76**	**222**	T	T	06 32 46.5	
	baz=69,slow=75,SNR=20						
ZSN	**Zaisan**	**60.07**	**342**	*e*P	**P**	**05 27 58.9**	**+0.4**
	comp=Z,6.5nm,0.8s						
TDK	**Taldyorghan**	**60.17**	**337**	*e*P	**P**	**05 27 59.6**	**+0.3**
	comp=Z,7.5nm,0.5s						
MKAR	**Makanchi Array**	**60.30**	**340**	P	**P**	**05 28 00.3**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=146,slow=7.4,SNR=16						
	comp=Z,2.6nm,0.5s						
MAKZ	**Makanchi**	**60.41**	**340**	P	**P**	**05 28 01.1**	**+0.2**
MAKZ				IAmb	IAmb	05 28 12.1	
	comp=Z,8.5nm,1.1s						
SGDS	**Sogindy**	**60.50**	**333**	*e*P	**P**	**05 28 01.6**	**0.0**
DZA	**Taraz**	**61.61**	**330**	*e*P	**P**	**05 28 09.2**	**0.0**
	comp=Z,4.6nm,0.5s						
CHM	**Chimkent**	**62.04**	**329**	*e*P	**P**	**05 28 12.4**	**+0.3**
JKA	**Kamikawa-asahi**	**62.08**	**28**	P	**P**	**05 28 11.8**	**-0.3**
JKA				IAmb	IAmb	05 29 36.7	
	comp=Z,16nm,1.4s						
KKAR	**Karatay Array**	**62.16**	**330**	P	**P**	**05 28 12.0**	**-0.9**
KURBB	**Kurchatov Ara**	**64.86**	**340**	P	**P**	**05 28 30.9**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=156,slow=5.9,SNR=15						
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**64.91**	**340**	P	**P**	**05 28 30.4**	**-0.4**
KURK				IAmb	IAmb	05 28 41.2	
	comp=Z,14nm,1.2s						
MAW	**Mawson**	**65.20**	**197**	P	**P**	**05 28 34.0**	**+1.5**
	comp=Z,3.8nm,0.7s,baz=79,slow=4.2,SNR=8.2						
	comp=Z,3.8nm,0.7s						
MAW	**Mawson**	**65.20**	**197**	P	**P**	**05 28 34.0**	**+1.5**
ZAA0	**Zalesovo Array**	**65.97**	**346**	P	**P**	**05 28 38.5**	**+0.9**
ZAA0				IAmb	IAmb	05 28 47.2	
	comp=Z,17nm,1.5s						
ZALV	**Zalesovo Beam**	**65.97**	**346**	P	**P**	**05 28 38.3**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=121,slow=4.2,SNR=11						
	comp=Z,2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**65.97**	**346**	P	**P**	**05 28 38.1**	**+0.5**
BRZS	**Berezniki**	**66.48**	**336**	*e*P	**P**	**05 28 41.4**	**+0.3**
MSVF	**Nonsavu**	**68.80**	**105**	LR	LR	05 59 51.8	
	comp=Z,60nm,18.9s,baz=234,slow=37						
BVAR	**Borovoye Array**	**69.75**	**337**	P	**P**	**05 29 01.3**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=149,slow=8.5,SNR=18						
	comp=Z,3.8nm,0.6s						
BORK	**Borovoye**	**69.80**	**337**	P	**P**	**05 29 02.3**	**+0.6**
BORK				IAmb	IAmb	05 29 15.0	
	comp=Z,5.9nm,0.9s						
AB31	**Akbulak array**	**71.71**	**329**	P	**P**	**05 29 13.8**	**+0.4**
AB31				IAmb	IAmb	05 29 28.5	
	comp=Z,12nm,1.1s						
ABKAR	**Akbulak array**	**71.71**	**329**	P	**P**	**05 29 13.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**75.48**	**29**	P	**P**	**05 29 35.7**	**+0.1**
PETK	**Petropavlovsk-**	**75.48**	**29**	P	**P**	**05 29 35.4**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=256,slow=2.8,SNR=6.5						
	comp=Z,4.0nm,0.7s						
PETK	**Petropavlovsk-**	**75.48**	**29**	P	**P**	**05 29 36.0**	**+0.5**
MA2	**Magadan**	**76.97**	**21**	P	**P**	**05 29 43.8**	**-0.1**
MA2				IAmb	IAmb	05 29 54.1	
	comp=Z,14nm,0.9s						
ARTI	**Arti**	**77.03**	**334**	P	**P**	**05 29 43.8**	**-0.5**
KBZ	**Khabaz**	**78.73**	**318**	P	**P**	**05 29 55.1**	**+1.1**
	comp=Z,5.8nm,0.9s,baz=126,slow=5.3,SNR=16						
	comp=Z,5.8nm,0.9s						
QSPA	**South Pole Qui**	**80.59**	**180**	P	**P**	**05 30 04.5**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=309,slow=1.4,SNR=9.9						
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**80.59**	**180**	P	**P**	**05 30 04.6**	**+0.6**
TIXI	**Tiksi**	**82.14**	**7**	LR	LR	06 09 50.8	
	comp=Z,200nm,21.2s,baz=118,slow=38						
BRTR	**Keskin Array B**	**83.76**	**312**	P	**P**	**05 30 21.3**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=140,slow=6.4,SNR=5.6						
	comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	**83.76**	**312**	P	**P**	**05 30 20.5**	**-0.6**
SNAA	**Sanae**	**87.36**	**197**	P	**P**	**05 30 39.4**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=322,slow=7.9,SNR=6.1						
	comp=Z,2.1nm,0.8s						
SNAA	**Sanae**	**87.36**	**197**	P	**P**	**05 30 39.2**	**+0.8**
SNAA				IAmb	IAmb	05 30 51.1

KLSI 2.93 29 P Pn 06 17 13.5 -0.2
LEM Lembang 4.28 84 Pn Pn 06 17 32.5 0.0
36nm,0.3s,baz=198,slow=9.7,SNR=25
LEM Sn Sn 06 18 21.7 +0.4
31nm,0.3s,baz=131,slow=21,SNR=4.7
136nm,0.4s
LEM Lembang 4.28 84 P Pn 06 17 34.1 +1.6
BBJI Bungbulang 4.29 93 Pn 06 17 30.6 -2.0
BBJI Bungbulang 4.29 93 P Pn 06 17 30.9 -2.0
BBJI Bungbulang 4.29 93 P Pn 06 17 30.9 -1.6
PMBI Palembang 4.56 18 Pn Pn 06 17 33.9 -2.2
PDSI Padang 6.94 336 P Pn 06 18 05.8 -3.1
0.5nm14µm120nm,0.9s
SMRI Semarang 7.06 89 Pn Pn 06 18 09.7 -0.9
SMRI Semarang 7.06 89 P Pn 06 18 11.9 +1.3
6µm464nm,1.0s
SMRI Semarang 7.06 89 P Pn 06 18 11.8 +1.2
UGM Wanagama 7.16 95 Pn Pn 06 18 10.2 -1.7
UGM Wanagama 7.16 95 P Pn 06 18 10.8 -1.1
394nm,1.0s
UGM Wanagama 7.16 95 P Pn 06 18 11.4 -0.5
BKNI Bangkinang 7.89 343 Pn Pn 06 18 18.5 -3.5
COCO West Island 8.04 232 P Pn 06 18 22.1 -1.9
MYKOM Kota Tinggi 9.03 3 Pn Pn 06 18 34.0 -3.5
MYKOM Kota Tinggi 9.03 3 P Pn 06 18 36.0 -1.6
GSI Gunungsitoli 10.28 326 Pn Pn 06 18 51.2 -3.5
JAGI Jajag, Banyuwa 10.79 97 Pn Pn 06 18 58.9 -2.8
JAGI Jajag, Banyuwa 10.79 97 P Pn 06 18 59.8 -1.9
RPSI Rantau Prapat 10.84 336 Pn Pn 06 18 58.5 -3.9
PSI Prapat 10.94 336 P Pn 06 18 58.5 -5.3
PLAI Plampang 14.39 97 P Pn 06 19 48.5 -2.4
KAPI Kappang 16.48 83 Pn Pn 06 20 17.7 -0.6
1.3nm,0.3s,baz=275,slow=10.0,SNR=3.6
KAPI LR LR 06 27 39.2
comp=Z,360nm,20.3s,baz=262,slow=41
12nm,0.7s
KAPI Kappang 16.48 83 Pn 06 20 15.8 -2.5
KAPI Kappang 16.48 83⇑ *e*P P 06 20 20.3 -0.4
KKM Kota Kinabalu 18.45 44 Pn P 06 20 38.6 -3.9
KKM Kota Kinabalu 18.45 44 P P 06 20 42.1 -0.4
MMRI Maumere 18.78 95 P P 06 20 44.1 -1.9
MMRI Maumere 18.78 95 P P 06 20 42.4 -3.6
TOLI2 Tolitoli 19.31 65 P P 06 20 50.9 -0.9
TOLI2 IAmb IAmb 06 20 53.5
comp=Z,89nm,1.1s
TOLI2 Tolitoli 19.31 65 P P 06 20 51.8 -0.1
DLV Lat 19.78 15 P P 06 20 55.4 -1.7
BATI Baumata 20.31 100 P P 06 21 00.5 -2.3
comp=Z,80nm,0.7s,baz=114,slow=13,SNR=4.7
comp=Z,80nm,0.7s
SOEI Soe 20.85 98 P 06 21 08.1 -0.7
SOEI Soe 20.85 98 P P 06 21 08.3 -0.5
MBWA Marble Bar 21.02 133 P P 06 21 13.2 +2.8
comp=Z,22nm,1.4s
MBWA Marble Bar 21.02 133 P P 06 21 11.2 +0.9
SANI Sanana 23.17 78 P P 06 21 31.3 -2.0
MEEK Meekatharra 24.12 145 P P 06 21 42.4 +0.1
FITZ Fitzroy Crossi 24.25 118 P P 06 21 42.5 -1.0
comp=Z,5.7nm,0.8s,baz=260,slow=4.5,SNR=5.5
FITZ S S 06 26 05.3 +5.2
comp=Z,7.3nm,0.8s,baz=163,slow=18,SNR=6.3
comp=Z,5.7nm,0.8s
FITZ Fitzroy Crossi 24.25 118 P P 06 21 43.5 0.0
TNTI Ternate 25.28 73 P P 06 21 50.4 -2.5
CM31 Chiang Mai Arr 25.94 350 P P 06 21 58.7 -0.2
CMAR Chiang Mai Arr 25.94 350 P P 06 21 57.9 -0.9
comp=Z,40nm,1.0s,baz=184,slow=8.5,SNR=150
comp=Z,40nm,1.0s
CMAR Chiang Mai Arr 25.94 350 P 06 21 59.0 +0.1
CMAR Chiang Mai Arr 25.94 350 *ce*P P 06 21 59.2 +0.4
CMAR pmax pmax
comp=Z,41nm,0.9s
KNRA Kununurra 26.26 111 P P 06 22 02.0 +0.2
CHTO Chiang Mai 26.29 351 P 06 22 02.2 +0.2
CHTO IAmb IAmb 06 22 03.3
comp=Z,44nm,0.9s
CHTO Chiang Mai 26.29 351 P P 06 22 02.2 +0.2
CHTO pmax pmax
comp=Z,44nm,1.0s
CHTO Chiang Mai 26.29 351 P P 06 22 02.3 +0.2
DAV Davao City (W) 26.38 58 LR LR 06 32 49.0
comp=Z,292nm,21.8s,baz=230,slow=37
PALK Pallekele 26.80 302 P P 06 22 06.6 -0.1
PALK IAmb IAmb 06 22 11.2
comp=Z,56nm,1.4s
PALK Pallekele 26.80 302 P P 06 22 06.6 -0.1
PALK pmax pmax
comp=Z,56nm,1.4s
QIZ Qiongzhong 26.92 14 P P 06 22 08.6 +0.9
QIZ S S 06 26 47.0 +4.5
QIZ L L
comp=Z,680nm,11.4s
QIZ L L
comp=Z,800nm,12.5s
QIZ L L
comp=Z,870nm,14.3s
NPW Naypyitaw 27.81 345 P P 06 22 16.4 +0.8
SLVN Son La 28.44 1 P 06 22 20.7 -0.6
SLVN IAmb IAmb 06 22 23.5
comp=Z,26nm,1.0s
SIJI Sorong 28.57 78 P P 06 22 20.5 -2.2
comp=Z,3.9nm,0.3s,baz=255,slow=7.0,SNR=4.8
SIJI LR LR 06 35 09.6
comp=Z,148nm,20.3s,baz=264,slow=39
comp=Z,3.9nm,0.3s
H01W3 Cape Leeuwin H 29.22 162 T T 06 52 57.0
baz=335,SNR=20
H01W2 Cape Leeuwin H 29.23 162 T T 06 52 57.0
baz=335,slow=74,SNR=18
H01W1 Cape Leeuwin H 29.23 162 T T 06 52 57.2
baz=335,slow=74,SNR=16
H08S2 Diego Garcia H 30.57 267 T T 06 55 02.2
baz=90,slow=74,SNR=36
H08S3 Diego Garcia H 30.58 267 T T 06 55 01.6
baz=90,slow=74,SNR=53
H08S1 Diego Carcia H 30.59 267 T T 06 55 08.7
baz=90,slow=74,SNR=22
DGAR Diego Garcia 30.62 268 P P 06 22 42.0 +1.3
DGAR Diego Garcia 30.62 268 P P 06 22 42.0 +1.3
DGAR pmax pmax
comp=Z,233nm,1.3s
BRDH Bariadhala 31.90 339 LR LR 06 39 14.4
comp=Z,574nm,18.1s,baz=160,slow=43
KMI2 Kunming 32.24 359 ⇑P P 06 22 56.8 +1.7
KMI2 sP pP 06 23 03.9 -0.2
KMI2 pmax pmax
comp=Z,43nm,1.5s
KMI2 pmax pmax
comp=Z,170nm,3.5s
KMI2 L L
comp=Z,1µm,15.5s
KMI2 L L
comp=Z,610nm,14.7s
KMI2 L L
comp=Z,1µm,12.5s
TNCH TengChong 32.45 352 ⇑P P 06 22 57.8 +0.9
TNCH pP pP 06 23 01.2 -4.7
TNCH S S 06 28 12.9 +3.3
TNCH sS sS 06 28 20.6 -3.5
TNCH pmax pmax
comp=Z,40nm,0.6s
TNCH L L
comp=Z,2µm,13.8s
TNCH L L
comp=Z,1µm,15.4s
TNCH L L
comp=Z,2µm,13.2s
WB0 Warramunga Arr 32.58 116 P P 06 22 57.2 -0.8
WB0 IAmb IAmb 06 22 58.4
comp=Z,24nm,1.4s
WRA Warramunga Arr 32.59 116 P P 06 22 56.6 -1.5
comp=Z,3.8nm,1.0s,baz=285,slow=12,SNR=9.7
comp=Z,3.8nm,1.0s
WRA Warramunga Arr 32.59 116 P P 06 22 57.2 -0.8
WRA Warramunga Arr 32.59 116 P P 06 22 57.2 -0.8
WRA pmax pmax
comp=Z,4.0nm,1.9s
WRAB Tennant Creek 32.59 116 P P 06 22 57.6 -0.5
WRAB IAmb IAmb 06 23 23.8
comp=Z,14nm,1.1s
WRAB Tennant Creek 32.59 116 P P 06 22 57.6 -0.5
WRAB pmax pmax
comp=Z,14nm,1.2s
WR8 Warramunga Arr 32.73 116 P P 06 22 58.9 -0.5
WR8 IAmb IAmb 06 24 11.9
comp=Z,22nm,1.2s
FORT Forrest 32.90 138 P P 06 22 59.7 -0.9
AS15 Alice Springs 33.55 122 P P 06 23 06.0 -0.4
comp=Z,5.5nm,1.1s
AS31 Alice Springs 33.55 122 P P 06 23 05.6 -0.9
ASAR Alice Springs 33.55 122 P P 06 23 05.7 -0.8
comp=Z,4.7nm,1.1s,baz=296,slow=8.1,SNR=14
comp=Z,4.7nm,1.1s
PZH PanZhiHua 33.62 357 P P 06 23 07.2 +0.2
PZH S S 06 28 35.5 +7.9
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,130nm,5.4s
PZH L L
comp=Z,550nm,12.8s
PZH L L
comp=Z,670nm,12.4s
PZH L L
comp=Z,440nm,12.4s
GYA Guiyang 33.70 5 ⇓P P 06 23 08.7 +1.0
GYA pmax pmax
comp=Z,36nm,0.8s
MOKO MOKOCHONG 34.48 346 *e*P P 06 23 14.7 +0.2
MOKO IAmb IAmb 06 23 26.2
comp=Z,40nm,0.7s
SHL Shillong 34.50 342 P P 06 23 14.5 -0.2
SHL IAmb IAmb 06 23 15.6
comp=Z,30nm,0.9s
SHL Shillong 34.50 342 P P 06 23 14.5 -0.2
SHL pmax pmax
comp=Z,30nm,0.9s
SHL Shillong 34.50 342 *e*P P 06 23 14.7 0.0
SHL IAmb IAmb 06 23 17.5
comp=Z,8.7nm,0.6s
HYB Hyderabad 34.66 315 *e*P P 06 23 16.2 0.0
HYB *e*S S 06 28 46.5 +2.7
TEZP TEZPUR 35.21 344 *e*P P 06 23 20.6 -0.1
TEZP IAmb IAmb 06 23 24.1
comp=Z,14nm,1.0s
GOA Goa 36.96 308 *ex* x 06 24 16.0
GENI Genyem 36.98 85 P P 06 23 34.4 -1.7
QIS Mount Isa 37.50 114 P P 06 23 40.1 -0.2
comp=Z,15nm,1.3s
QIS Mount Isa 37.50 114 P P 06 23 40.8 +0.4
ENH Enshi 37.80 9 P P 06 23 42.6 -0.1
ENH IAmb IAmb 06 24 02.8
comp=Z,22nm,1.0s
CD2 Chengdu 37.98 1 P P 06 23 44.6 +0.4
CD2 S S 06 29 35.0 +0.9
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 L L
comp=Z,1µm,11.8s
CD2 L L
comp=Z,1µm,14.7s
CD2 L L
comp=Z,1µm,14.3s
EVN Everest 38.50 336 P 06 23 49.4 0.0
EVN IAmb IAmb 06 23 51.6
comp=Z,26nm,1.0s
EVN Everest 38.50 336 P P 06 23 50.2 +0.8
LSA Lhasa 38.59 343 P P 06 23 50.8 +0.9
LSA IAmb IAmb 06 23 52.0
comp=Z,25nm,0.8s
LSA Lhasa 38.59 343 P P 06 23 50.8 +0.9
LSA pmax pmax
comp=Z,25nm,0.8s
LSA Lhasa 38.59 343 P P 06 23 50.4 +0.5
XAN Xi'an 41.44 7 P P 06 24 12.4 -0.6
XAN S S 06 30 28.0 +2.1
XAN SS SS 06 33 21.8 -9.4
XAN ScS ScS 06 34 18.1 +3.8
XAN pmax pmax
comp=Z,36nm,1.2s
XAN L L
comp=Z,1µm,14.4s
XAN L L
comp=Z,950nm,14.4s
XAN L L
comp=Z,1µm,14.7s
NJ2 Nanjing 41.83 20 *e*P P 06 24 17.2 +1.1
NJ2 pmax pmax
comp=Z,30nm,0.5s
LYN LuoYang 42.49 11 P P 06 24 22.3 +0.7
LYN S S 06 30 50.1 +8.7
LYN pmax pmax
comp=Z,43nm,1.1s
LYN pmax pmax
comp=Z,200nm,8.7s
LYN L L
comp=Z,650nm,11.3s
LYN L L
comp=Z,810nm,12.7s
LYN L L
comp=Z,1µm,14.1s
PTH Pithoragarh 42.88 330 *e*P P 06 24 24.4 -0.5
LZDM Lanzhou Array 43.01 0 P P 06 24 25.8 -0.4
comp=Z,8.4nm,0.5s,baz=186,slow=12,SNR=9.6
comp=Z,8.4nm,0.5s
LZH Lanzhou 43.14 1 *e*P P 06 24 27.2 +0.2
LZH pP pP 06 24 33.7 -2.5
LZH S S 06 30 54.4 +3.2
LZH sS sS 06 31 07.4 +1.5
LZH pmax pmax
comp=Z,47nm,1.3s
LZH pmax pmax
comp=Z,200nm,4.8s
LZH L L
comp=Z,1µm,13.4s
LZH L L
comp=Z,880nm,13.1s
LZH L L
comp=Z,1µm,12.4s
STKA Stephens Creek 43.21 130 P P 06 24 26.9 -0.6
comp=Z,5.2nm,0.8s,baz=303,slow=9.1,SNR=8.8
comp=Z,5.2nm,0.8s
STKA Stephens Creek 43.21 130⇓ *e*P P 06 24 27.5 0.0
PMG Port Moresby 43.40 96 LR LR 06 47 32.7
comp=Z,73nm,19.0s,baz=293,slow=43
PMG Port Moresby 43.40 96⇑ *i*P P 06 24 31.3 +2.0
PMG pmax pmax
comp=Z,56nm,1.3s
NPLP NPLP New Delhi 43.72 326 *e*P P 06 24 31.3 -0.4
KUDL Kunda 43.73 325 *e*P P 06 24 31.0 -0.6
NDI New Delhi 43.73 326 *e*P P 06 24 31.3 -0.4
HNS HongShan 45.70 13 ⇓P P 06 24 47.4 +0.2
HNS PP PP 06 26 38.6 +3.8
HNS S S 06 31 36.6 +8.5
HNS pmax pmax
comp=Z,12nm,0.8s
HNS L L
comp=Z,580nm,13.1s
HNS L L
comp=Z,300nm,14.0s
HNS L L
comp=Z,500nm,13.7s
HNLY HANLEY 46.09 331 *e*P P 06 24 50.2 -0.9
CMSA Cobar Meteorol 46.26 127 P P 06 24 52.0 +0.2
comp=Z,13nm,2.0s
GTA2 Gaotai 46.65 356 P P 06 24 55.6 +0.8
GTA2 sP pP 06 25 05.7 +1.6
GTA2 pmax pmax
comp=Z,19nm,1.4s
GTA2 L L
comp=Z,840nm,15.5s
GTA2 L L
comp=Z,590nm,13.4s
GTA2 L L
comp=Z,870nm,17.9s
DHRM DHARAMSHALA 47.01 328 *e*P P 06 24 57.6 -0.3
DHRM IAmb IAmb 06 25 02.3
comp=Z,6.4nm,0.6s
THN Thein Dam 47.44 328 *e*P P 06 25 01.2 +0.2
BTO2 Baotou 48.17 7 *e*P P 06 25 07.0 +0.4
BTO2 sP pP 06 25 14.1 -1.9
BTO2 S S 06 32 06.9 +3.5
BTO2 pmax pmax
comp=Z,40nm,0.8s
BTO2 pmax pmax
comp=Z,280nm,4.5s
BTO2 L L
comp=Z,400nm,10.2s
BTO2 L L
comp=Z,1µm,15.5s
BTO2 L L
comp=Z,360nm,7.2s
HHC Hu-ho-hao-te 48.49 8 *e*P P 06 25 09.4 +0.3
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,97nm,4.7s
HHC L L
comp=Z,340nm,12.4s
HHC L L
comp=Z,490nm,12.5s
HHC L L
comp=Z,500nm,13.1s
BJT Baijiatuau 48.54 13 P P 06 25 09.6 +0.3
BJT IAmb IAmb 06 25 10.5
comp=Z,17nm,1.2s
BJT Baijiatuau 48.54 13 P P 06 25 09.6 +0.3
BJT pmax pmax
comp=Z,17nm,1.2s
BJT Baijiatuau 48.54 13 P P 06 25 09.4 +0.1
BJI2 Beijing 48.54 13 P P 06 25 09.8 +0.5
BJI2 pmax pmax
comp=Z,6.0nm,0.9s
NIL Nilore 49.71 327 P 06 25 17.9 -0.6
NIL IAmb IAmb 06 25 18.8
comp=Z,22nm,1.0s
NIL Nilore 49.71 327 P P 06 25 17.9 -0.6
NIL pmax pmax
comp=Z,22nm,1.0s
NIL Nilore 49.71 327 P P 06 25 18.0 -0.4
KSRS Korea Array 50.09 26 P P 06 25 21.4 +0.3
comp=Z,3.3nm,0.7s,baz=212,slow=7.5,SNR=20
comp=Z,3.3nm,0.7s
XLT XiLinHaoTe 52.23 12 *e*P P 06 25 37.4 +0.1
XLT pmax pmax
comp=Z,11nm,0.9s
WMQ Urumqi 52.80 346 *e*P P 06 25 42.9 +1.4
WMQ sP pP 06 25 50.1 -0.8
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ pmax pmax
comp=Z,140nm,3.8s
WMQ L L
comp=Z,230nm,19.9s
KSH2 Kashi 52.88 333 P P 06 25 42.0 -0.3
KSH2 pmax pmax
comp=Z,6.0nm,0.8s
KSH2 L L
comp=Z,360nm,21.3s
KSH2 L L
comp=Z,360nm,19.6s
KSH2 L L
comp=Z,200nm,20.6s
WUS Wushi 53.08 337 P P 06 25 44.2 +0.5
MANEM Manem 53.49 329 P 06 25 47.5 +0.5
MANEM IAmb IAmb 06 25 48.3
comp=Z,48nm,1.0s
ASAI AK-SAY(Kyrgyzs 53.92 335 P P 06 25 50.4 +0.3
TARG Taragay, Kyrgy 54.08 337 P P 06 25 51.1 -0.3
TARG Taragay, Kyrgy 54.08 337 P P 06 25 51.1 -0.3
TARG pmax pmax
comp=Z,8.0nm,0.9s
TARG Taragay, Kyrgy 54.08 337 P P 06 25 51.7 +0.3
NRN Naryn 54.57 335 P 06 25 54.5 -0.3
NRN IAmb IAmb 06 26 10.5
comp=Z,10nm,1.0s
NRN Naryn 54.57 335 P P 06 25 54.6 -0.3
NRN pmax pmax
comp=Z,10.0nm,1.0s
CN2 Changchun 54.65 20 P P 06 25 53.4 -1.5
CN2 PcP PcP 06 26 56.1 -1.4
CN2 S S 06 33 30.7 -1.8
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 L L
comp=Z,320nm,13.0s
CN2 L L
comp=Z,260nm,13.0s
CN2 L L
comp=Z,420nm,14.0s
KDJ Kajisay 54.67 336 IAmb IAmb 06 26 20.3
comp=Z,22nm,1.0s
KDJ Kajisay 54.67 336 P P 06 25 55.4 0.0
SHLS Shalkode 54.69 339 *e*P P 06 25 54.4 -1.0
SHLS pmax pmax
comp=Z,15nm,1.6s
SHLS Shalkode 54.69 339 *e*P P 06 25 54.5 -1.0
comp=Z,15nm,1.6s
PDGK Podgornoye 54.83 339 P 06 25 56.6 +0.2
PDGK Podgornoye 54.83 339 P P 06 25 56.6 +0.2
UZB Uzynbulak 54.84 338 *e*P P 06 25 56.6 +0.1
UZB Uzynbulak 54.84 338 *e*P P 06 25 56.6 +0.1
SONM Songino Array 54.94 3 P P 06 25 58.1 +1.0
comp=Z,20nm,0.9s,baz=182,slow=8.6,SNR=85
comp=Z,20nm,0.9s
SONM Songino Array 54.94 3 P 06 25 57.6 +0.4
SONM Songino Array 54.94 3 P P 06 25 57.6 +0.4
SONM pmax pmax
comp=Z,30nm,1.0s
SATY Saty 54.99 338 *e*P P 06 25 57.6 0.0
SATY Saty 54.99 338 *e*P P 06 25 57.7 0.0
ULN Ulaanbaatar 55.01 3 P 06 25 57.6 -0.1
ULN IAmb IAmb 06 25 59.6
comp=Z,17nm,1.1s
ULN Ulaanbaatar 55.01 3 *d i*P P 06 25 57.5 -0.1
ULN pmax pmax
comp=Z,21nm,1.2s
ULN Ulaanbaatar 55.01 3 P P 06 25 58.4 +0.8
KPKS Kokpek 55.24 338 *e*P P 06 25 59.4 +0.1
KPKS Kokpek 55.24 338 *e*P P 06 25 59.4 +0.1
GAR Garm 55.30 329 P P 06 25 59.1 -0.9
GAR IAmb IAmb 06 26 00.8
comp=Z,21nm,1.2s
GAR Garm 55.30 329 P P 06 25 59.0 -0.9
SHAA Shahritus 55.41 326 P P 06 25 59.5 -1.2
SHAA IAmb IAmb 06 25 59.8
comp=Z,20nm,0.8s
BOOM Boomskoye usch 55.47 336 P 06 26 01.0 -0.1
BOOM Boomskoye usch 55.47 336 P P 06 26 01.0 -0.1
BOOM pmax pmax
comp=Z,11nm,1.2s
BOOM Boomskoye usch 55.47 336 P P 06 26 01.2 0.0
TNSS Tian-Shan 55.53 337 *e*P P 06 26 01.5 -0.3
TNSS Tian-Shan 55.53 337 *e*P P 06 26 01.6 -0.3
MDOK Medeo 55.60 337 *e*P P 06 26 02.0 0.0
MDOK Medeo 55.60 337 *e*P P 06 26 02.0 0.0
PSTR Posyet 55.64 24⇓ *e*P P 06 26 01.9 -0.2
CHGR Chuyangaron 55.65 328 P P 06 26 00.9 -1.5
CHGR IAmb IAmb 06 26 02.2
comp=Z,14nm,0.9s
CHGR Chuyangaron 55.65 328⇓ *i*P P 06 26 00.7 -1.7
CHGR pmax pmax
comp=Z,20nm,1.0s
CHGR Chuyangaron 55.65 328 P P 06 26 00.4 -2.0
AAA Alma-Ata 55.69 337 *e*P P 06 26 02.6 +0.1
AAA Alma-Ata 55.69 337 *e*P P 06 26 02.6 +0.1
ARSB Arslanbob 55.81 333 P P 06 26 03.2 -0.3
ARSB IAmb IAmb 06 26 04.6
comp=Z,28nm,1.3s
ARSB Arslanbob 55.81 333 P P 06 26 03.3 -0.3
ARSB pmax pmax
comp=Z,28nm,1.3s
HNR Honiara 56.01 96 LR LR 06 55 03.0
comp=Z,4.8nm,18.0s,baz=318,slow=41
AAK Ala-Archa 56.20 335⇓ *e*P P 06 26 06.9 +0.6
AAK pmax pmax
comp=Z,6.0nm,1.3s
ARK Arkit 56.65 332 P P 06 26 09.4 -0.1
TDK Taldyqorghan 56.66 339 *e*P P 06 26 09.4 0.0
TDK Taldyqorghan 56.66 339 *e*P P 06 26 09.4 0.0
SGDS Sogindy 56.81 335 *e*P P 06 26 10.5 -0.1
MDJ Mudanjiang 56.82 22 P P 06 26 13.1 +2.6
MDJ pmax pmax
comp=Z,6.0nm,0.7s
ZSN Zaisan 56.90 345 *e*P P 06 26 11.4 +0.4
ZSN pmax pmax
comp=Z,14nm,1.0s
ZSN Zaisan 56.90 345 *e*P P 06 26 11.5 +0.4
comp=Z,14nm,1.0s
MK31 Makanchi Array 57.00 343 *c i*P P 06 26 11.5 -0.3
MKAR Makanchi Array 57.00 343 P P 06 26 11.6 -0.1
comp=Z,5.2nm,0.7s,baz=145,slow=7.9,SNR=58
comp=Z,5.2nm,0.7s
BNX BinXian 57.01 20 ⇑P P 06 26 11.4 -0.4
BNX PcP PcP 06 27 06.4 -0.3
BNX S S 06 34 08.9 +5.0

BNX sS **pS** 06 34 14.6 -1.0
BNX SS **SS** 06 37 56.3 +3.1
BNX pmax pmax
comp=Z,28nm,1.3s
BNX pmax pmax
comp=Z,190nm,7.3s
BNX L L
comp=Z,280nm,14.1s
BNX L L
comp=Z,190nm,13.0s
BNX L L
comp=Z,330nm,14.1s
MAKZ Makanchi 57.10 343 P 06 26 12.6 +0.1
MAKZ Makanchi 57.10 343 P **P** 06 26 12.6 +0.1
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MAKZ Makanchi 57.10 343 P **P** 06 26 12.2 -0.3
USA0B Ussuriysk Arra 57.41 24 P **P** 06 26 14.0 -0.7
USA0B IAmb IAmb 06 26 15.4
comp=Z,31nm,1.6s
USA0B Ussuriysk Arra 57.41 24 P **P** 06 26 14.0 -0.7
USA0B pmax pmax
comp=Z,31nm,1.7s
USRK Ussuriysk Ar. 57.41 24 P **P** 06 26 14.3 -0.3
comp=Z,3.0nm,0.6s,baz=224,slow=5.3,SNR=12
comp=Z,3.0nm,0.6s
USRK Ussuriysk Ar. 57.41 24 P 06 26 13.9 -0.8
USRK Ussuriysk Ar. 57.41 24 P **P** 06 26 13.9 -0.8
ZAK Zakamensk 57.43 360 *eP* **P** 06 26 15.1 +0.3
ZAK pmax pmax
comp=Z,11nm,1.8s
DZA Taraz 57.80 333 *eP* **P 06 26 17.6 +0.1**
DZA Taraz 57.80 333 *eP* **P** 06 26 17.6 +0.1
IUG luzhnay 57.83 331 *eP* **P** 06 26 17.5 -0.3
IUG luzhnay 57.83 331 *eP* **P** 06 26 17.6 -0.3
KNGR Kungurtug, Tuv 57.87 356⇓ *eP* **P** 06 26 19.1 +1.2
KNGR pmax pmax
comp=Z,13nm,1.2s
HIA Hailar 58.12 13 P **P 06 26 18.9 -0.7**
HIA IAmb IAmb 06 26 34.0
comp=Z,12nm,1.0s
HIA Hailar 58.12 13 P **P** 06 26 18.9 -0.7
HIA pmax pmax
comp=Z,12nm,1.0s
CHM Chimkent 58.16 331 *eP* **P 06 26 20.1 0.0**
CHM Chimkent 58.16 331 *eP* **P** 06 26 20.1 0.0
KK31 Karatay Array 58.34 332 P **P** 06 26 20.5 -0.8
KK31 Karatay Array 58.34 332 P **P** 06 26 20.5 -0.8
KK31 pmax pmax
comp=Z,7.0nm,1.5s
KKAR Karatay Array 58.34 332 P **P** 06 26 20.8 -0.5
KKAR Karatay Array 58.34 332 P **P** 06 26 20.8 -0.5
BTLS Baital 58.35 336 *eP* **P** 06 26 21.8 +0.5
BTLS Baital 58.35 336 *eP* **P** 06 26 21.8 +0.5
HILR Hailar Array B 58.39 12 P **P** 06 26 21.7 +0.2
comp=Z,4.9nm,0.6s,baz=187,slow=10,SNR=6.7
comp=Z,4.9nm,0.6s
DGZ Jazzator, Alta 58.42 348*c iP* **P 06 26 22.6 +0.8**
DGZ pmax pmax
comp=Z,29nm,0.8s
H04N2 CROZET ISLANDS 58.70 220 T T 07 30 10.0
baz=61,slow=74,SNR=5.0
H04N1 CROZET ISLANDS 58.71 220 T T 07 30 04.3
baz=61,slow=74,SNR=5.0
H04N3 CROZET ISLANDS 58.72 220 T T 07 30 05.6
baz=61,SNR=5.1
TLY Talaya 58.73 0*c iP* **P 06 26 25.1 +1.3**
TLY pmax pmax
comp=Z,12nm,0.8s
MOY Mondy 58.75 358 *eP* **P 06 26 24.3 +0.2**
MOY pmax pmax
comp=Z,27nm,1.8s
H04S1 CROZET ISLANDS 58.92 219 T T 07 30 45.1
baz=70
H04S3 CROZET ISLANDS 58.93 219 T T 07 30 47.4
baz=70
H04S2 CROZET ISLANDS 58.93 219 T T 07 30 48.3
baz=70
IRK Irkutsk 59.30 1 *eP* **P 06 26 28.2 +0.5**
IRK pmax pmax
comp=Z,71nm,1.8s
HEH HeiHe 61.00 17 *eP* **P** 06 26 39.2 -0.2
HEH pmax pmax
comp=Z,20nm,1.0s
KURBB Kurchatov Arra 61.54 342 P **P 06 26 43.0 0.0**
comp=Z,5.2nm,0.9s,baz=159,slow=6.1,SNR=20
comp=Z,5.2nm,0.9s
KURK Kurchatov 61.59 342 P 06 26 43.3 -0.1
KURK IAmb IAmb 06 27 07.4
comp=Z,9.5nm,0.8s
KURK Kurchatov 61.59 342*c iP* **P** 06 26 43.2 -0.2
KURK pmax pmax
comp=Z,11nm,0.9s
KURK Kurchatov 61.59 342 P **P 06 26 43.6 +0.2**
BRZS Berezniki 62.95 338 *eP* **P 06 26 52.9 +0.4**
BRZS Berezniki 62.95 338 *eP* **P 06 26 53.0 +0.4**
ZAA0 Zalesovo Array 62.97 348 P 06 26 52.4 -0.2
ZALV Zalesovo Beam 62.97 348 P **P** 06 26 52.7 +0.2
comp=Z,23nm,1.0s,baz=160,slow=4.7,SNR=56
ZALV LR LR 06 57 41.3
comp=Z,255nm,19.2s,baz=188,slow=39
comp=Z,23nm,1.0s
ZALV Zalesovo Beam 62.97 348 P 06 26 52.6 +0.1
ZEA Zeya 64.06 16 *eP* **P 06 27 00.4 +0.6**
ZEA pmax pmax
comp=Z,20nm,1.1s
YSS Yuzhno-Sakhali 64.33 29⇓ *eP* **P** 06 27 01.5 -0.2
YSS pmax pmax
comp=Z,25nm,1.3s
MAW Mawson 66.07 196 LR LR 06 48 35.0
comp=Z,236nm,19.8s,baz=9.0,slow=29
BVAR Borovoye Array 66.26 339 P **P** 06 27 13.7 -0.4
comp=Z,3.4nm,0.7s,baz=134,slow=8.5,SNR=12
comp=Z,3.4nm,0.7s
BORK Borovoye 66.30 339 P **P 06 27 13.8 -0.5**
BORK Borovoye 66.30 339*c iP* **P** 06 27 13.7 -0.6
BORK pmax pmax
comp=Z,9.0nm,1.5s
AB31 Akbulak array 67.84 331 P 06 27 24.2 +0.1
AB31 IAmb IAmb 06 27 24.9
comp=Z,19nm,1.1s
ABKAR Akbulak array 67.84 331 P **P 06 27 24.3 +0.2**
AKT Akhty 70.24 319 *eP* **P 06 27 38.9 -0.5**
AKT *e* 06 28 00.4
AKT pmax pmax
comp=Z,9.0nm,1.3s
YAK Yakutsk 72.06 13 *eP* **P 06 27 48.3 -1.5**
YAK *e**PP **pP** 06 27 52.6 -6.8
YAK *e* 06 28 08.0
YAK *e* 06 30 27.7
YAK *e*PPP PPP 06 32 11.3
YAK *e*S **S** 06 37 10.3 +1.4
YAK *e* 06 37 51.7
YAK *e*SS **SS** 06 41 45.4 -1.3
YAK pmax pmax
comp=Z,41nm,0.9s
YAK pmax pmax
comp=N,23nm,1.4s
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=Z,111nm,5.3s
YAK pmax pmax
comp=N,46nm,3.6s
YAK pmax pmax
comp=E,42nm,3.7s
YAK smax smax
comp=N,46nm,3.0s
YAK smax smax
comp=E,32nm,2.3s
URZ Urewera 72.80 128 LR LR 07 02 44.6
comp=E,65nm,18.1s,baz=236,slow=38
GURO Guroymak-BITLI 72.81 314 P 06 27 55.0 0.0
ARTI Arti 73.39 336 P **P** 06 27 57.8 0.0
ARTI IAmb IAmb 06 28 07.4
comp=Z,10nm,0.6s
ARTI Arti 73.39 336*c iP* **P 06 27 57.9 0.0**
ARTI 06 30 39.2
ARTI S **SKiKP** 06 37 27.5 +1.1
ARTI SS **SS** 06 42 04.5 -2.8
ARTI pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 74.44 319 P **P 06 28 04.3 +0.1**
comp=Z,3.3nm,0.8s,baz=140,slow=8.3,SNR=7.2
comp=Z,3.3nm,0.8s

KBZ Khabaz 74.44 319*de*P **P 06 28 04.8 +0.5**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 74.68 319 *e*P **P** 06 28 05.8 0.0
KIV pmax pmax
comp=Z,7.0nm,1.0s
FUNA Funafuti 75.04 97 P **P 06 28 08.4 0.0**
PETK Petropavlovsk- 75.64 30 P **P 06 28 09.7 -1.4**
comp=Z,1.5nm,0.8s,baz=234,slow=5.0,SNR=2.9
PETK LR LR 07 03 29.0
comp=Z,38nm,19.1s,baz=303,slow=37
comp=Z,1.5nm,0.8s
PETK Petropavlovsk- 75.64 30 P **P 06 28 10.4 -0.6**
PETK Petropavlovsk- 75.64 30 P **P 06 28 10.4 -0.6**
LBTB Lobatse 75.86 246 LR LR 06 53 50.3
comp=Z,139nm,20.1s,baz=75,slow=30
BELG Belogornoye 75.93 329*c iP* **P 06 28 12.0 -0.6**
BELG pmax pmax
comp=Z,4.0nm,1.3s
VNDA Vanda 76.38 169 P **P 06 28 16.3 +1.5**
comp=Z,2.2nm,0.9s,baz=297,slow=5.8,SNR=9.6
VNDA LR LR 06 56 12.5
comp=Z,95nm,20.7s,baz=256,slow=31
comp=Z,2.2nm,0.9s
VNDA Vanda 76.38 169 P **P 06 28 16.4 +1.5**
VNDA Vanda 76.38 169 P **P 06 28 16.4 +1.5**
VNDA pmax pmax
comp=Z,10.0nm,1.5s
MA2 Magadan 76.52 23 P **P 06 28 15.7 -0.2**
MA2 IAmb IAmb 06 28 17.2
comp=Z,16nm,1.1s
MA2 Magadan 76.52 23⇓ *eP* **P 06 28 15.6 -0.2**
MA2 pmax pmax
comp=Z,17nm,1.2s
MA2 Magadan 76.52 23 P **P 06 28 16.1 +0.2**
comp=Z,17nm,1.1s
NRIK Noril'sk 77.22 354 P **P**
comp=Z,5.1nm,0.8s,baz=165,slow=6.2,SNR=8.0
comp=Z,5.1nm,0.8s
NRIK Noril'sk 77.22 354 P 06 28 19.2 -0.4
NRIK IAmb IAmb 06 28 20.5
comp=Z,19nm,1.2s
NRIK Noril'sk 77.22 354*c iP* **P 06 28 19.2 -0.4**
NRIK pmax pmax
comp=Z,20nm,1.3s
KIRV Kirov 78.53 334*d iP* **P 06 28 28.0 +0.9**
BR104 Keskin Array S 79.31 313 P **P 06 28 31.6 -0.4**
comp=Z,3.3nm,0.8s
SEY Seymchan 79.31 21⇓ *iP* **P 06 28 31.8 +0.5**
SEY pmax pmax
comp=Z,17nm,1.7s
BR131 Keskin Array S 79.31 313 P 06 28 31.4 -0.6
BR131 Keskin Array S 79.31 313 P 06 28 31.4 -0.6
BR131 pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 79.31 313 P **P 06 28 30.5 -1.6**
comp=Z,2.1nm,0.8s,baz=144,slow=5.9,SNR=8.8
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 79.31 313 P 06 28 31.5 -0.6
BRTR Keskin Array B 79.31 313*ce*P **P 06 28 31.5 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BR106 Keskin Array S 79.33 313 P **P 06 28 32.1 0.0**
comp=Z,3.2nm,0.9s
VSR Storozhevoye 79.98 325 *eP* **P 06 28 34.0 -1.2**
VSR pmax pmax
comp=Z,9.0nm,0.8s
ELIB Princess Elisa 80.01 198 *dP* **P 06 28 39.1 +3.9**
comp=Z,2.7nm,1.5s
VORR Voronezh 80.15 325 *eP* **P 06 28 35.3 -0.8**
VORR pmax pmax
comp=Z,114nm,0.6s
TIXI Tiksi 80.56 8 P **P 06 28 37.5 -0.4**
TIXI IAmb IAmb 06 28 38.1
comp=Z,31nm,1.6s
TIXI Tiksi 80.56 8⇓ *iP* **P 06 28 37.3 -0.6**
TIXI pmax pmax
comp=Z,19nm,1.5s
LPSR Galich'ya Gora 80.70 326 *eP* **P 06 28 36.5 -2.5**
LPSR pmax pmax
comp=Z,8.0nm,0.9s
MDUB Mudurnu 81.33 313 P **P 06 28 42.8 0.0**
MOS Moscow 82.70 329 *eP* **P 06 28 48.5 -1.0**
MOS pmax pmax
comp=Z,31nm,0.7s
QSPA South Pole Qui 82.71 180 P **P 06 28 50.4 +0.7**
comp=Z,2.4nm,1.0s,baz=289,slow=0.8,SNR=6.9
comp=Z,2.4nm,1.0s
QSPA South Pole Qui 82.71 180 P **P 06 28 51.1 +1.5**
QSPA IAmb IAmb 06 30 42.2
comp=Z,20nm,1.7s
OBN Obninsk 83.00 328 P **P 06 28 51.6 +0.5**
OBN Obninsk 83.00 328*d iP* **P 06 28 51.7 +0.6**
OBN *e* 06 32 02.8
OBN pmax pmax
comp=Z,36nm,1.2s
OBN MLR MLR
comp=Z,44nm,16.0s
KARP Karpathos 83.08 307 P **P 06 28 52.4 +0.4**
KARP Karpathos 83.08 307 P **P 06 28 52.3 +0.3**
comp=Z,27nm,1.0s
NVL N'lazarevskaya 83.67 199 *eP* P 06 28 46.7 -7.6
NVL pmax pmax
comp=Z,2.0nm,0.7s
KLMR Klimovskoe 84.00 334 *eP* **P 06 28 55.3 -0.8**
KLMR pmax pmax
comp=Z,18nm,1.3s
TIRR Tirgusor 84.43 316 P **P 06 28 59.2 +0.5**
TIRR IAmb IAmb 06 28 59.8
comp=Z,9.2nm,1.3s
TIRR Tirgusor 84.43 316 P **P 06 28 59.2 +0.5**
TIRR pmax pmax
comp=Z,9.0nm,1.3s
AKASG Malin Array Be 85.66 322 P **P 06 29 03.8 -0.9**
comp=Z,0.3nm,0.4s,baz=91,slow=4.1,SNR=5.7
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 85.66 322 P **P 06 29 05.3 +0.6**
AKASG Malin Array Be 85.66 322*ce*P **P 06 29 05.0 +0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 85.66 322⇈ *eP* **P 06 29 04.1 -0.6**
AKBB pmax pmax
comp=Z,16nm,2.5s
AKBB Malin Array Si 85.66 322 P **P 06 29 04.7 0.0**
VRI Vrincioaia 85.95 317 P **P 06 29 07.3 +1.0**
comp=Z,5.1nm,1.2s
TESR Tescani 86.17 318 P **P 06 29 07.7 +0.4**
comp=Z,9.6nm,1.6s
LUBAR Lubar, Ukraine 86.35 321 P **P 06 29 08.0 -0.1**
MLR Muntele Rosu 86.39 317 P 06 29 08.9 +0.3
MLR IAmb IAmb 06 29 10.4
comp=Z,16nm,1.3s
MLR Muntele Rosu 86.39 317 P **P 06 29 08.9 +0.3**
MLR pmax pmax
comp=Z,16nm,1.3s
MLR Muntele Rosu 86.39 317 P **P 06 29 09.4 +0.8**
KMPD K-Podol'skiy 86.81 320 P **P 06 29 10.7 +0.3**
BURAR Bucovina Array 87.39 318 P **P 06 29 14.1 +0.7**
BUR08 Bucovina Ar. S 87.41 319 P 06 29 14.7 +1.2
BUR08 IAmb IAmb 06 29 24.5
comp=Z,5.9nm,0.9s
MNK Minsk 87.53 326 *i* P **P 06 29 14.1 +0.3**
comp=E,17nm,0.7s
MNK *i* P **P 06 29 14.1 +0.3**
comp=N,3.0nm,0.5s
MNK *i* P **P 06 29 14.1 +0.3**
comp=Z,21nm,1.3s,baz=106
MNK *i* PP **PP 06 32 38.3 -0.7**
MNK *i* PPP PPP 06 34 33.1
MNK *i* SKS **SKSac 06 39 39.4 +0.5**
MNK *i* S **SKSac 06 39 40.6 +1.8**
MNK *i* SS SS 06 45 21.6 -17
MNK *i* SSS SSS 06 49 14.5
MNK *i* LQ LQ 07 02 44.3
MNK *i* LR LR 07 09 23.7
MNK Minsk 87.53 326 *i* P **P 06 29 14.0 +0.3**
MNK *i* 06 32 38.3
MNK *i* PPP PPP 06 34 33.1
MNK *i* 06 39 39.3
MNK *i* SSS SSS 06 49 14.5
MNK pmax pmax
comp=N,3.0nm,0.5s
MNK pmax pmax
comp=E,17nm,0.7s
MNK pmax pmax
comp=Z,21nm,1.3s
RNPP5 Staryi Chortor 87.84 322 P **P 06 29 15.4 +0.1**
SNAA Sanae 88.16 198 P **P 06 29 19.8 +3.2**
comp=Z,33nm,0.7s
SNAA Sanae 88.16 198 P **P** 06 29 16.3 -0.3
comp=Z,1.1nm,0.8s,baz=108,slow=7.7,SNR=4.6
comp=Z,1.1nm,0.8s
SNAA Sanae 88.16 198 P **P 06 29 17.9 +1.2**
SNAA IAmb IAmb 06 29 44.5
comp=Z,15nm,1.5s
SNAA Sanae 88.16 198 P **P 06 29 17.9 +1.2**
SNAA pmax pmax
comp=Z,15nm,1.5s
BZS Buzias 89.39 316 P **P 06 29 22.6 -0.2**
KOLS Kolonicke sedl 89.59 319 *eP* **P 06 29 25.3 +1.6**
KOLS Kolonicke sedl 89.59 319 *eP* **P 06 29 25.3 +1.6**
VNA2 Neumayer--Watz 89.80 198 P **P 06 29 26.2 +1.9**
comp=Z,3.0nm,0.7s,baz=96,slow=3.5
SUW Suwalki 90.08 324 P **P 06 29 26.2 +0.4**
SUW Suwalki 90.08 324 P **P 06 29 26.2 +0.4**
VNA1 Neumayer--Stat 90.17 198 P **P 06 29 30.2 +4.3**
comp=Z,5.4nm,0.9s
FINES FINESS Array B 90.30 332 P **P** 06 29 26.4 -0.2
comp=Z,2.3nm,0.8s,baz=197,slow=6.0,SNR=5.5
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 92.54 340 LR LR 07 17 34.0
comp=Z,118nm,18.6s,baz=97,slow=40
HLID Hailey 131.05 36 PKPdf 06 35 37.4 -0.8
MSTX Muleshoe 144.14 39 PKPdf **PKPdf 06 36 01.7 +0.8**
AMTX Amarillo 144.17 36 PKPdf PKPbc 06 36 00.8 +0.3
GDL2 Guadalupe Moun 144.24 42 PKPdf 06 36 02.3 -0.4
K50A Casco 144.26 8 PKPbc 06 36 00.5 +0.1
P38A Dawn 144.41 23 PKPbc 06 36 01.3 +0.2
TPB28 144.47 43 PKPdf **PKPdf 06 36 03.0 -0.1**
M44A Midewin, Midew 144.56 15 PKPbc 06 36 01.6 +0.2
ELIS Ellis County 144.59 33 PKPdf PKPbc 06 36 02.1 +0.3
TRY Troy 144.59 356 PKPdf 06 36 02.4 -0.4
KAN01 Argonia South 144.61 30 PKPdf PKPbc 06 36 02.3 +0.5
TPB11 China Draw 144.62 42 PKPdf 06 36 03.7 +0.4
VHRN Van Horn 144.66 45 PKPdf 06 36 03.5 0.0
MMNY Mt. Morris Dam 144.68 2 PKPbc 06 36 02.1 +0.4
P40A Paris 145.04 21 PKPbc 06 36 02.7 -0.4
L59A Walton 145.21 358 PKPab 06 36 03.7 +0.1
AQDB Aquidauana 145.56 216 PKPdf 06 36 05.2 +0.1
N47A Urbana 145.59 12 PKPdf 06 36 04.4 -0.2
129A Stewart Farms, 145.59 39 PKPbc **PKPab 06 36 06.0 +0.6**
SFIN Lafayette 145.75 14 PKPab 06 36 05.0 -0.2
P43A Skaggs, Pawnee 145.78 18 PKPbc 06 36 05.2 -0.2
KSPA Keystone Colle 145.86 359 PKPbc 06 36 05.7 +0.1
TXAR Lajitas Array 146.43 46 PKPbc **PKPab 06 36 08.8 0.0**
comp=Z,2.9nm,0.8s,baz=296,slow=1.5,SNR=34
PTLB Pontes e Lacer 151.51 218 PKiKP 06 36 21.3 -0.2
LPAZ La Paz 155.10 200 PKPab 06 36 44.6 -0.6
LPAZ La Paz 155.10 200 PKP2 **PKPab 06 36 44.6 -0.6**

*JMA **07** 06:27:47.8±0.2, 43.7N±0.9×14.6E±°, h140km±1km, MV3.0/27, NEAR KUNASHIRI ISLAND*
*SKHL **07** 06:27:48.6±0.4, 43.80N×145.40E, h128km±3km, mb4.4/3, msh5.2/3*
ISC 07 06:27:48.5±2.0, 43.71N±0.09×145.53E±0.07, h135km±12km, n15, σ0949/26, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NMR	**Nemuro--Hokkai**	**0.37**	**156**	*eP*	**Pn**	**06 28 07.4**	**-0.1**
NMR				*eS*	**Sn**	**06 28 21.5**	**-0.3**
JRA	**Rausu**	**0.37**	**308**	P	**Pn**	**06 28 07.3**	**-0.1**
NEM2	**Nemuro 2**	**0.38**	**155**	P	**Pn**	**06 28 07.3**	**-0.2**
NEM2				S	**Sn**	**06 28 21.8**	**0.0**
JNSB	**Nemuroshibetsu**	**0.38**	**280**	P	**Pn**	**06 28 07.7**	**+0.2**
JNSB				S	**Sn**	**06 28 22.7**	**+0.8**
YUK	**Yuzh-Kuril'sk**	**0.41**	**36**	*eP*	**Pn**	**06 28 07.5**	**-0.1**
YUK				AMB	AMB	06 28 08.5	
	210nm,0.3s						
YUK				*eS*	**Sn**	**06 28 21.3**	**-0.9**
YUK				A	A	06 28 23.4	
	340nm,0.4s						
YUK				A	A	06 28 23.4	
	670nm,0.4s						
JNK	**Nakash**	**0.60**	**259**	P	**Pn**	**06 28 08.8**	**+0.1**
JNK				S	**Sn**	**06 28 24.3**	**+0.3**
JKHN	**Kushirohamanak**	**0.68**	**203**	*i* P	**Pn**	**06 28 09.4**	**+0.2**
JKHN				*eS*	**Sn**	**06 28 25.3**	**+0.4**
AKK	**Akkeshi**	**0.85**	**216**	*eP*	**Pn**	**06 28 10.5**	**0.0**
AKK				*eS*	**Sn**	**06 28 26.5**	**-0.7**
JAK	**Akkeshi**	**0.93**	**221**	P	**Pn**	**06 28 11.4**	**+0.2**
JAK				S	**Sn**	**06 28 29.0**	**+0.5**
SHO	**Shikotan**	**0.96**	**80**	*eP*	Pn	06 28 23.5	+12
SHO				AMB	AMB	06 28 23.8	
	80nm,0.3s						
SHO				*eS*	Sn	06 28 40.5	+12
SHO				A	A	06 28 41.7	
	380nm,0.4s						
SHO				A	A	06 28 41.7	
	400nm,0.4s						
JAR	**Ashorobuto**	**1.34**	**253**	P	**Pn**	**06 28 15.6**	**+0.4**
JAR				S	**Sn**	**06 28 36.3**	**+0.7**
JOB	**Onbets**	**1.47**	**238**	P	**Pn**	**06 28 16.9**	**+0.3**
JOB				S	**Sn**	**06 28 38.0**	**0.0**
JMP	**Maruseppu**	**1.60**	**282**	P	**Pn**	**06 28 17.4**	**-0.6**
JCH	**Churui**	**1.92**	**236**	P	**Pn**	**06 28 21.7**	**-0.1**
JCH				S	**Sn**	**06 28 46.1**	**-1.1**
REI	**Reidovoe**	**2.37**	**48**	*eP*	**Pn**	**06 28 27.7**	**+0.5**
REI				*eS*	**Sn**	**06 28 56.7**	**-0.2**
REI				A	A	06 29 02.6	
	10.0nm,0.7s						
REI				A	A	06 29 02.6	
	20nm,0.7s						

*MAN **07** 06:36:58.0, 16.39N×119.71E, h20km, MS3.6*
*IDC **07** 06:37:04.3±2.8, 16.26N×120.10E, h102km±27km, mb3.4/6, mbtmp3.8/7, Error ellipse: s-maj=49.8km s-min=16.2km az=58.0*
ISC 07 06:36:58.9±0.9, 16.35N±0.04×119.74E±0.09, h30km, n13, σ1892/16, mb3.8/5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.71**	**24**	*eP*	**Pn**	**06 37 27.2**	**+0.6**
SIPP				*eS*	**Sb**	**06 37 49.7**	**-1.0**
PCPS	**Palayan City**	**2.11**	**143**	*eP*	Pn	06 37 23.9	-8.4
PCPS				*eS*	Sn	06 37 44.1	-13
CVP	**Callao Caves**	**2.40**	**56**	*eP*	**Pn**	**06 37 38.6**	**+2.5**
TGY	**Tagaytay City**	**2.52**	**153**	P	**Pn**	**06 37 40.9**	**+3.0**
	700nm,0.6s,baz=202,slow=3.2,SNR=10						
TGY				S	**Sb**	**06 38 13.4**	**-0.7**
	1μm,0.7s,baz=316,slow=18,SNR=6.1						
PACPP	**Pamplona Cagay**	**2.60**	**36**	*i* P	**Pn**	**06 37 41.5**	**+2.7**
PACPP				*i* S	**Sn**	**06 38 09.7**	**+0.3**
LQP	**Lukban**	**2.82**	**142**	*eP*	**Pn**	**06 37 44.0**	**+1.8**
LQP				*eS*	**Sn**	**06 38 15.5**	**+0.2**
GQP	**Guinayangan**	**3.57**	**133**	*eP*	**Pn**	**06 37 54.1**	**+1.9**
GQP				*i* S	**Sb**	**06 38 43.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**19.96**	**279**	P	**Pn**	**06 41 32.2**	**+1.6**
	1.3nm,0.4s,baz=95,slow=7.6,SNR=14						
	1.3nm,0.4s						
SONM	**Songino Array**	**33.27**	**344**	P	**P**	**06 43 33.3**	**-0.4**
	0.7nm,0.6s,baz=168,slow=8.8,SNR=3.1						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**38.82**	**158**	P	P	06 44 17.0	-4.3
	0.8nm,0.5s,baz=338,slow=9.1,SNR=6.2						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**42.11**	**160**	P	**P**	**06 44 45.2**	**-3.3**
	1.1nm,0.6s,baz=337,slow=7.3,SNR=10						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**43.37**	**323**	P	**P**	**06 44 59.4**	**+0.8**
	0.7nm,0.8s,baz=127,slow=9.3,SNR=4.6						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**47.49**	**325**	P	**P**	**06 45 30.1**	**-1.0**
	0.8nm,0.7s,baz=121,slow=8.2,SNR=6.7						
	0.8nm,0.7s						

*RSNC **07** 07:10:02.9±0.0, 7.1N×7.3W, h141km±2km, M2.5, ML2.1*
*FUNV **07** 07:10:03.9, 7.12N×73.13W, h3km, MW2.9, Presumed earthquake*
ISC 07 07:10:01.7±1.6, 6.88N±0.04×73.13W±0.05, h144km±10km, n17, σ1926/31, Northern Colombia

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

BARC	**Barichara**	**0.29**	**191**	P	**Pn**	**07 10 22.2**	**+0.3**
BARC				S	**Sn**	**07 10 36.9**	**-0.2**
BRJC	**Barrancabermej**	**0.62**	**278**	P	**Pn**	**07 10 24.0**	**+0.9**
PAMC	**Pamplona, Colo**	**0.62**	**43**	P	**Pn**	**07 10 24.9**	**+1.2**
PAMC				S	**Sn**	**07 10 41.5**	**+1.2**
RUSC	**La Rusia**	**0.98**	**178**	P	**Pn**	**07 10 26.0**	**-0.4**
RUSC				S	**Sn**	**07 10 44.1**	**-1.0**
RUSC	**La Rusia**	**0.98**	**178**	*eP*	**Pn**	**07 10 26.2**	**-0.1**
RUSC				*eS*	**Sn**	**07 10 42.8**	**-2.3**
OCAC	**Ocana**	**1.36**	**352**	P	**Pn**	**07 10 30.4**	**+0.8**
OCAC				S	**Sn**	**07 10 52.2**	**+1.3**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	**07 10 28.8**	**-0.6**
PTBC				S	**Sn**	**07 10 49.1**	**-1.5**
SPBC	**San Pablo de B**	**1.54**	**218**	P	**Pn**	**07 10 31.2**	**-0.2**
SPBC				S	**Sn**	**07 10 52.8**	**-1.3**
ROSC	**El Rosal**	**2.35**	**210**	P	**Pn**	**07 10 43.6**	**+2.5**
ROSC				S	**Sn**	**07 11 11.7**	**+0.3**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	P	**Pn**	**07 10 47.9**	**+1.5**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**07 10 50.3**	**+0.7**
CBOC				S	**Sn**	**07 11 26.4**	**-0.1**
SDV	**Santo Domingo**	**3.17**	**51**	*eP*	**Pn**	**07 10 52.1**	**+0.8**
SDV				*eS*	**Sn**	**07 11 27.5**	**-2.1**
APAC	**Apartado, Choc**	**3.57**	**287**	P	**Pn**	**07 10 56.6**	**+0.4**
APAC				S	**Sn**	**07 11 39.4**	**+0.9**
PRAC	**Prado**	**3.60**	**209**	P	**Pn**	**07 10 56.8**	**+0.1**
PRAC				S	**Sn**	**07 11 39.7**	**+0.4**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**07 10 57.0**	**+0.1**
SJCC				S	**Sn**	**07 11 38.7**	**-1.0**
SJCC	**San Jacinto, C**	**3.62**	**326**	*eP*	**Pn**	**07 10 57.0**	**+0.1**
SJCC				*eS*	**Sn**	**07 11 36.7**	**-3.0**
PLMC	**San Jos del P**	**3.70**	**238**	P	**Pn**	**07 10 58.4**	**+0.4**

*SJA **07** 07:13:53.2±0.7, 27°.93S×66°.92W, h174km±3km, ML3.6, MW3.6*
*IDC **07** 07:13:55.0±4.5, 27°.80S×66°.75W, h164km±43km, mb3.7/1, mbtmp3.7/3, Error ellipse: s-maj=54.3km s-min=28.7km az=77.0*
ISC 07 07:13:54.1±0.8, **27°.90S**±0°.04×**66°.93W**±0°.04, **h167**km±7km, **n29**, σ1°**12**/48, **Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.59**	**254**	*eP*	**Pn**	**07 14 18.4**	**+0.4**
TINO				*eS*	**Sn**	**07 14 36.5**	**+0.3**
TINO				IAML		07 14 36.7	
	comp=Z,663nm,0.2s						
VCA	**Vinchina**	**1.40**	**233**	*eP*	**Pn**	**07 14 24.7**	**+0.5**
VCA				*eS*	**Sn**	**07 14 47.7**	**+0.3**
VCA				IAML		07 14 50.4	
	comp=Z,1μm,0.7s						
ACLC	**CERRO LA CRUZ**	**1.52**	**181**	*eP*	**Pn**	**07 14 25.5**	**+0.1**
ACLC				*eS*	**Sn**	**07 14 48.7**	**-0.9**
AHML	**Horco Molle**	**1.80**	**52**	*eP*	**Pn**	**07 14 26.8**	**-1.4**
AHML				*eS*	**Sn**	**07 14 52.5**	**-1.9**
FSA	**Cafayete**	**1.97**	**26**	*eP*	**Pn**	**07 14 31.1**	**+0.9**
FSA				*eS*	**Sn**	**07 14 58.8**	**+0.8**
AC02	**Maricunga**	**2.23**	**298**	*eP*	**Pn**	**07 14 34.2**	**+0.8**
AC02				*eS*	**Sn**	**07 15 03.9**	**+0.2**
AC02				IAML		07 15 24.1	
	comp=Z,331nm,0.6s						
AVFE	**Valle Fertil**	**2.79**	**189**	*eP*	**Pn**	**07 14 39.5**	**-0.2**
AVFE				*eS*	**Sn**	**07 15 13.4**	**-1.6**
AVFE				IAML		07 15 17.4	
	comp=Z,75nm,0.4s						
GO03	**Copiapo**	**2.95**	**275**	*eP*	**Pn**	**07 14 41.1**	**-0.5**
GO03				*eS*	**Sn**	**07 15 16.9**	**-1.5**
GO03				IAML		07 15 17.6	
	comp=Z,565nm,0.3s						
ACDV	**Cuesta del Vie**	**2.97**	**220**	*eP*	**Pn**	**07 14 42.2**	**+0.2**
ACDV				*eS*	**Sn**	**07 15 19.3**	**+0.2**
ACDV				IAML		07 15 21.7	
	comp=Z,97nm,0.4s						
AC05	**El Transito**	**3.10**	**252**	*eP*	**Pn**	**07 14 43.5**	**0.0**
AC05				*eS*	**Sn**	**07 15 20.9**	**-0.9**
AC05				IAML		07 15 24.8	
	comp=Z,159nm,0.5s						
AROD	**Rodeo**	**3.18**	**224**	*eP*	**Pn**	**07 14 45.1**	**+0.5**
AROD				*eS*	**Sn**	**07 15 23.9**	**0.0**
ACCO	**Cerro Coronel**	**3.27**	**214**	*eP*	**Pn**	**07 14 45.8**	**0.0**
ACCO				*eS*	**Sn**	**07 15 25.8**	**-0.3**
ACCO				IAML		07 15 25.9	
	comp=Z,70nm,0.3s						
CO01	**Juntas del Tor**	**3.46**	**233**	*eP*	**Pn**	**07 14 48.9**	**+0.7**
CO01				*eS*	**Sn**	**07 15 31.6**	**+1.3**
CO01				IAML		07 15 31.9	
	comp=Z,55nm,0.8s						
LCO	**Las Campanas**	**3.50**	**251**	*eP*	**Pn**	**07 14 48.0**	**-0.7**
LCO				*eS*	**Sn**	**07 15 29.9**	**-1.3**
AC04	**Llanos de Chal**	**3.68**	**264**	*eP*	**Pn**	**07 14 49.3**	**-1.4**
AC04				*eS*	**Sn**	**07 15 31.4**	**-3.4**
AC04				IAML		07 15 33.0	
	comp=Z,83nm,0.3s						
AC01	**Pan de Azucar**	**3.71**	**297**	*eP*	**Pn**	**07 14 50.2**	**-1.0**
AC01				*eS*	**Sn**	**07 15 34.3**	**-1.3**
AC01				IAML		07 15 35.8	
	comp=Z,69nm,0.3s						
ZON	**Zonda**	**3.94**	**202**	*eP*	**Pn**	**07 14 54.0**	**-0.1**
ZON				*eS*	**Sn**	**07 15 39.9**	**-1.1**
TCA	**Tanti**	**3.98**	**150**	*eP*	**Pn**	**07 14 54.5**	**-0.1**
TCA				*eS*	**Sn**	**07 15 39.6**	**-2.4**
TCA				IAML		07 15 41.4	
	comp=Z,69nm,0.4s						
GO04	**Tololo Observa**	**4.08**	**235**	*eP*	**Pn**	**07 14 51.5**	**-0.9**
GO04				IAML		07 15 44.9	
	comp=Z,210nm,0.2s						
CO03	**El Pedregal**	**4.40**	**227**	*eP*	**Pn**	**07 14 59.3**	**-0.8**
CO03				*eS*	**Sn**	**07 15 50.8**	**-0.8**
CO03				IAML		07 15 53.3	
	comp=Z,57nm,0.2s						
MRA	**San Martin**	**4.62**	**167**	*eS*	Sn	07 15 38.8	-18
MRA				IAML		07 15 53.1	
	comp=Z,42nm,0.5s						
CO02	**Combarbal**	**4.84**	**226**	*eS*	**Sn**	**07 16 00.1**	**-1.9**
CO02				IAML		07 16 04.5	
	comp=Z,41nm,0.3s						
ARCO	**CERRO ARCO**	**5.22**	**199**	*eP*	**Pn**	**07 15 10.7**	**-0.2**
ARCO				*eS*	**Sn**	**07 16 10.8**	**-0.2**
ARCO				IAML		07 16 12.9	
	comp=Z,22nm,0.2s						
CPUP	**Villa Florida**	**8.69**	**82**	P	**Pn**	**07 15 55.1**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=257,slow=16,SNR=5.7						
LPAZ	**La Paz**	**11.61**	**354**	P	**Pn**	**07 16 35.4**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=163,slow=6.3,SNR=7.5						
QSPA	**South Pole Qui**	**62.32**	**180**	P	**P**	**07 24 00.4**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=192,slow=1.0,SNR=17						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**124.94**	**203**	PKP	**PKPdf**	**07 32 35.7**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=147,slow=1.8,SNR=4.0						
WRA	**Warramunga Arr**	**128.18**	**206**	PKP	**PKiKP**	**07 32 42.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=153,slow=2.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**146.75**	**31**	PKPbc	**PKPbc**	**07 33 16.0**	**0.0**
	comp=Z,0.9nm,0.5s,baz=289,slow=4.5,SNR=3.8						

KRSC 07 07:30:33.9±1.6, **49°.05N**×**156°.63E**, **h2**km±39km, **MI3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.66**	**349**	*eP*	Pn	07 31 04.1	+0.1
SKR				*eS*	Sn	07 31 25.7	-0.1
KDTR	**Khodutka, Kamc**	**2.91**	**18**	*eP*	Pb	07 31 24.6	-1.7
KDTR				*eS*	Sb	07 32 01.7	-0.7
ASAK	**Asacha**	**3.43**	**13**	*eP*	Pb	07 31 32.2	-3.1
MTVR	**Mutnovka**	**3.57**	**15**	*eP*	Pn	07 31 32.0	+1.7
MTVR				*eS*	Sn	07 32 16.6	+3.5
RUS	**Russkaya**	**3.59**	**19**	*eP*	Pn	07 31 33.9	+3.5
RUS				*eS*	Sb	07 32 17.7	-4.2
GRL	**Gorelyy**	**3.62**	**14**	*eP*	Pb	07 31 35.5	-3.1
GRL				*eS*	Sn	07 32 17.7	+3.4
DALK	**Dalny**	**4.20**	**18**	*eP*	Pn	07 31 43.1	+4.3
DALK				*eS*	Sn	07 32 33.9	+5.5
UGLR	**Uglovaya**	**4.38**	**18**	*eP*	Pn	07 31 44.7	+3.2
KOK	**Koryaka**	**4.43**	**16**	*eP*	Pb	07 31 47.3	-5.0
SMAR	**Somma**	**4.43**	**17**	*eP*	Pn	07 31 46.5	+4.3
SDLR	**Sedlovina**	**4.46**	**18**	*eP*	Pn	07 31 47.1	+4.5
SPN	**Mys Shipunski**	**4.58**	**27**	*eP*	Pn	07 31 49.3	+5.3
SPN				*eS*	Sn	07 32 43.7	+6.0
GNL	**Ganaly**	**4.72**	**10**	*eP*	Pn	07 31 50.1	+4.0
MKZ	**Mys Kozlova**	**6.35**	**28**	*eP*	Pn	07 32 11.3	+3.0

*NOU **07** 07:36:33.2, 29°.74S×174°.67W, h263km, mb4.2/6, Kermadec Islands Region*
*WEL **07** 07:38:19.2±1.2, 36°.5S±12°×17°.8E±1°.2, h177km±16km, M3.8/13, ML3.9/13, MLv3.8/13, Error ellipse: s-maj=18.6km s-min=11.5km az=42.2*
ISC 07 07:38:14.2±3.5, **35°.8S**±0°.1×**178°.3E**±0°.1, **h234**km±16km, **n68**, σ1°**66**/75, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.73**	**179**	P	**Pn**	**07 38 54.0**	**+1.1**
MXZ				S	**Sn**	**07 39 20.6**	**-2.8**
HAZ	**Te Kaha**	**1.97**	**191**	P	**Pn**	**07 38 56.0**	**+1.0**
HAZ				S	**Sn**	**07 39 24.5**	**-2.6**
WMGZ	**Waiomatatini S**	**1.99**	**177**	P	**Pn**	**07 38 56.7**	**+1.4**
WMGZ				S	**Sn**	**07 39 27.0**	**-0.7**
PKGZ	**Pakihiroa**	**2.04**	**184**	P	**Pn**	**07 38 57.4**	**+1.7**
RUGZ	**Raukumara Rang**	**2.19**	**192**	P	**Pn**	**07 38 58.2**	**+1.0**
PUZ	**Puketiti**	**2.24**	**180**	P	**Pn**	**07 38 58.9**	**+1.2**
PUZ				S	**Sn**	**07 39 30.5**	**-1.5**
GRZ	**Great Barrier**	**2.32**	**259**	P	**Pn**	**07 38 58.5**	**0.0**
TWGZ	**Tauwhareparae**	**2.36**	**186**	P	**Pn**	**07 39 01.4**	**+2.5**
TWGZ				S	**Sn**	**07 39 32.7**	**-1.4**
TBAS	**Tolaga Bay Are**	**2.54**	**179**	P	**Pn**	**07 39 02.9**	**+2.2**
MWZ	**Matawai**	**2.57**	**193**	P	**Pn**	**07 39 02.8**	**+1.7**
MWZ				S	**Sn**	**07 39 37.4**	**-0.7**
URZ	**Urewera**	**2.60**	**201**	P	**Pn**	**07 39 02.9**	**+1.6**
URZ	**Urewera**	**2.60**	**201**	P	**Pn**	**07 39 02.8**	**+1.6**
TKGZ	**Te Karaka**	**2.63**	**187**	P	**Pn**	**07 39 03.4**	**+1.8**
TKGZ				S	**Sn**	**07 39 38.5**	**-0.6**
CNGZ	**Carnagh Statio**	**2.66**	**181**	P	**Pn**	**07 39 04.0**	**+2.1**
RAGZ	**Rawiri**	**2.75**	**194**	P	**Pn**	**07 39 05.1**	**+2.1**
RIGZ	**Rimuhau**	**2.91**	**188**	P	**Pn**	**07 39 06.3**	**+1.7**
MUGZ	**Murupara**	**2.91**	**204**	P	**Pn**	**07 39 06.5**	**+1.9**
RTZ	**Ruatahuna**	**2.97**	**200**	P	**Pn**	**07 39 06.6**	**+1.2**
SNGZ	**Shannon Statio**	**3.04**	**194**	P	**Pn**	**07 39 08.3**	**+2.1**
PRGZ	**Paritu Road**	**3.11**	**186**	P	**Pn**	**07 39 09.0**	**+2.1**
WCZ	**Waipu Caves**	**3.19**	**267**	P	**Pn**	**07 39 08.6**	**+0.8**
KNZ	**Kokohu**	**3.23**	**188**	P	**Pn**	**07 39 09.3**	**+1.2**
RAHZ	**Arahi**	**3.23**	**197**	P	**Pn**	**07 39 10.1**	**+1.9**
MTHZ	**Maungataniwha**	**3.23**	**200**	P	**Pn**	**07 39 10.8**	**+2.5**
TLZ	**Tolley Road**	**3.32**	**220**	P	**Pn**	**07 39 11.9**	**+2.6**
MHGZ	**Mahia Peninsul**	**3.33**	**185**	P	**Pn**	**07 39 11.2**	**+1.8**
WHHZ	**Waihua**	**3.35**	**194**	P	**Pn**	**07 39 11.6**	**+2.0**
NMHZ	**Naumai**	**3.47**	**199**	P	**Pn**	**07 39 13.3**	**+2.3**
ARHZ	**Aropaoanui**	**3.58**	**196**	P	**Pn**	**07 39 14.0**	**+1.8**
BKZ	**Black Stump Fm**	**3.62**	**202**	P	**Pn**	**07 39 14.9**	**+2.1**
BKZ	**Black Stump Fm**	**3.62**	**202**	P	**Pn**	**07 39 15.5**	**+2.7**
MCHZ	**McNeill Hill**	**3.82**	**199**	P	**Pn**	**07 39 17.2**	**+2.1**
HIZ	**Hauiti**	**3.83**	**224**	P	Pn	07 39 20.4	+5.2
HIZ	**Hauiti**	**3.83**	**224**	P	**Pn**	**07 39 18.1**	**+3.0**
KWHZ	**Kaweka Forest**	**3.88**	**202**	P	**Pn**	**07 39 18.4**	**+2.5**
CKHZ	**Cape Kidnapper**	**3.94**	**194**	P	**Pn**	**07 39 18.0**	**+1.5**
FWVZ	**Far West T-bar**	**4.05**	**211**	P	**Pn**	**07 39 20.3**	**+2.2**
MAVZ	**Matarangi**	**4.05**	**211**	P	**Pn**	**07 39 20.7**	**+2.5**
BHHZ	**Black Hill Sta**	**4.06**	**205**	P	**Pn**	**07 39 20.0**	**+2.0**
MOVZ	**Moawhango**	**4.10**	**208**	P	**Pn**	**07 39 19.8**	**+1.3**
MOVZ				S	**Sn**	**07 40 08.0**	**-1.4**
KRHZ	**Kereru**	**4.10**	**201**	P	**Pn**	**07 39 20.1**	**+1.7**
KAHZ	**Kahuranaki**	**4.11**	**195**	P	**Pn**	**07 39 20.1**	**+1.4**
VRZ	**Vera Road**	**4.32**	**219**	P	**Pn**	**07 39 24.5**	**+3.5**
PXZ	**Pawanui**	**4.34**	**194**	P	**Pn**	**07 39 22.4**	**+1.1**
PNHZ	**Pukenui**	**4.40**	**201**	P	**Pn**	**07 39 23.1**	**+1.0**
WPHZ	**Waipukurau**	**4.47**	**198**	P	**Pn**	**07 39 24.2**	**+1.3**
TSZ	**Takapari Road**	**4.60**	**203**	P	**Pn**	**07 39 25.7**	**+1.1**
PRHZ	**Porangahau**	**4.62**	**196**	P	**Pn**	**07 39 26.1**	**+1.4**
DVHZ	**Dannevirke**	**4.76**	**200**	P	**Pn**	**07 39 26.9**	**+0.4**
ANWZ	**Angora Road**	**4.84**	**196**	P	**Pn**	**07 39 28.8**	**+1.4**
BFZ	**Birch Farm**	**5.10**	**198**	P	**Pn**	**07 39 31.3**	**+0.6**
BFZ	**Birch Farm**	**5.10**	**198**	P	**Pn**	**07 39 31.4**	**+0.8**
MRZ	**Mangatainoka R**	**5.27**	**203**	P	**Pn**	**07 39 33.4**	**+0.7**
HOWZ	**Holdsworth Sta**	**5.51**	**202**	P	**Pn**	**07 39 35.8**	**0.0**
OGWZ	**Otaki Gorge**	**5.55**	**205**	P	**Pn**	**07 39 37.0**	**+0.8**
TMWZ	**Te Maipa**	**5.59**	**199**	P	**Pn**	**07 39 37.3**	**+0.5**
KIW	**Kapiti Island**	**5.68**	**207**	P	**Pn**	**07 39 38.8**	**+0.9**
MTW	**Mount Morrison**	**5.75**	**201**	P	**Pn**	**07 39 38.8**	**0.0**
CAW	**Cannon Point**	**5.84**	**205**	P	**Pn**	**07 39 40.2**	**+0.3**
TRWZ	**Traveller**	**5.92**	**199**	P	**Pn**	**07 39 41.2**	**+0.3**
PAWZ	**Paruwai Farm**	**5.98**	**201**	P	**Pn**	**07 39 41.5**	**-0.2**
MSWZ	**Moikau Station**	**6.06**	**202**	P	**Pn**	**07 39 42.7**	**0.0**
SNZO	**South Karori**	**6.15**	**206**	P	**Pn**	**07 39 44.4**	**+0.7**
PLWZ	**Palliser**	**6.20**	**181**	P	**Pn**	**07 39 44.5**	**+0.1**
TCW	**Tory Channel**	**6.22**	**209**	P	**Pn**	**07 39 44.7**	**0.0**
TUWZ	**Tuamarina**	**6.54**	**210**	P	**Pn**	**07 39 49.2**	**+0.5**
TKNZ	**Takaka Hill**	**6.66**	**217**	P	**Pn**	**07 39 50.7**	**+0.4**
KHZ	**Kahutara**	**7.54**	**208**	P	**Pn**	**07 40 01.6**	**+0.2**

*WEL **07** 07:43:01.9±0.6, 33°.S±8°×18°.0E±1°.7, h12km, M4.3/9, mB5.3/2, ML4.2/7, MLv4.3/9, Mw(mB)4.7/2, Error ellipse: s-maj=23.2km s-min=5.6km az=110.9*
*NOU **07** 07:43:09.1, 34°.60S×179°.92E, h320km, ML4.6/12, South of Kermadec Islands*
ISC 07 07:43:10.4±1.2, **34°.21S**±0°.06×**177°.97E**±0°.08, **h10**km, **n74**, σ2°**87**/74, **North of New Zealand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WCZ	**Waipu Caves**	**3.44**	**239**	P	**Pg**	**07 44 17.0**	**+0.7**
HAZ	**Te Kaha**	**3.54**	**182**	P	**Pb**	**07 44 12.1**	**-1.1**
HAZ				S	**Sg**	**07 45 01.8**	**-2.5**
WMGZ	**Waiomatatini S**	**3.62**	**174**	P	**Pb**	**07 44 12.2**	**-2.3**
PKGZ	**Pakihiroa**	**3.65**	**179**	P	**Pb**	**07 44 12.4**	**-2.6**
PKGZ				S	**Sg**	**07 45 04.4**	**-3.3**
RUGZ	**Raukumara Rang**	**3.76**	**184**	P	**Pb**	**07 44 14.7**	**-2.2**
PUZ	**Puketiti**	**3.86**	**177**	P	**Pb**	**07 44 14.5**	**-4.2**
PUZ				S	**Sb**	**07 45 06.0**	**+0.5**
URZ	**Urewera**	**4.10**	**189**	P	**Pb**	**07 44 19.6**	**-3.1**
URZ	**Urewera**	**4.10**	**189**	P	**Sb**	**07 45 15.6**	**+3.3**
URZ	**Urewera**	**4.10**	**189**	P	**Pb**	**07 44 19.1**	**-3.6**
MWZ	**Matawai**	**4.13**	**185**	P	**Pb**	**07 44 19.7**	**-3.5**
TKGZ	**Te Karaka**	**4.22**	**181**	P	**Pn**	**07 44 18.7**	**+3.9**
CNGZ	**Carnagh Statio**	**4.27**	**177**	P	**Pn**	**07 44 19.5**	**+4.0**
MUGZ	**Murupara**	**4.37**	**192**	P	**Pb**	**07 44 22.9**	**-4.4**
RIGZ	**Rimuhau**	**4.49**	**182**	P	**Pn**	**07 44 22.4**	**+3.9**
SNGZ	**Shannon Statio**	**4.59**	**186**	P	**Pn**	**07 44 23.1**	**+3.1**
PRGZ	**Paritu Road**	**4.71**	**181**	P	**Pn**	**07 44 24.6**	**+3.1**
KNZ	**Kokohu**	**4.81**	**183**	P	**Pn**	**07 44 25.5**	**+2.6**
HIZ	**Hauiti**	**4.98**	**209**	P	**Pb**	**07 44 36.1**	**-1.5**
HIZ	**Hauiti**	**4.98**	**209**	P	**Pb**	**07 44 36.7**	**-0.9**
RITZ	**Rihia Road**	**5.05**	**199**	P	Pb	07 44 32.8	-6.2
BKZ	**Black Stump Fm**	**5.09**	**193**	P	**Pn**	**07 44 31.5**	**+4.7**
BKZ	**Black Stump Fm**	**5.09**	**193**	S	**Sb**	**07 45 37.2**	**-3.6**
ARHZ	**Aropaoanui**	**5.11**	**189**	P	**Pn**	**07 44 30.6**	**+3.6**
FWVZ	**Far West T-bar**	**5.40**	**200**	P	Pn	07 44 36.9	+5.8
MOVZ	**Moawhango**	**5.49**	**198**	P	**Pn**	**07 44 36.6**	**+4.4**
BHHZ	**Black Hill Sta**	**5.49**	**196**	P	**Pn**	**07 44 36.2**	**+3.9**
VRZ	**Vera Road**	**5.54**	**207**	P	Pb	07 44 41.4	-5.9
KRHZ	**Kereru**	**5.57**	**193**	P	**Pn**	**07 44 33.7**	**+0.3**
KAHZ	**Kahuranaki**	**5.64**	**189**	P	**Pn**	**07 44 36.2**	**+1.8**
PNHZ	**Pukenui**	**5.87**	**193**	P	**Pn**	**07 44 39.6**	**+2.2**
PXZ	**Pawanui**	**5.88**	**188**	P	**Pn**	**07 44 39.0**	**+1.5**
GLKZ	**Green Lake**	**6.05**	**36**	S	**Pg**	**07 45 06.4**	**+0.2**
TSZ	**Takapari Road**	**6.06**	**195**	P	**Pn**	**07 44 42.1**	**+2.0**
PRHZ	**Porangahau**	**6.14**	**190**	P	**Pn**	**07 44 42.3**	**+1.2**
PRWZ	**Tori Road**	**6.53**	**194**	P	**Pn**	**07 44 48.0**	**+1.4**
BFZ	**Birch Farm**	**6.61**	**191**	P	**Pn**	**07 44 47.8**	**+0.2**
BFZ	**Birch Farm**	**6.61**	**191**	S	**Sn**	**07 46 08.8**	**+5.9**
BFZ	**Birch Farm**	**6.61**	**191**	P	**Pn**	**07 44 48.0**	**+0.5**
MRZ	**Mangatainoka R**	**6.72**	**196**	P	**Pn**	**07 44 49.7**	**+0.6**
HOWZ	**Holdsworth Sta**	**6.96**	**196**	P	**Pn**	**07 44 52.4**	**0.0**
OGWZ	**Otaki Gorge**	**6.96**	**198**	P	**Pn**	**07 44 52.7**	**+0.3**
TMWZ	**Te Maipa**	**7.08**	**193**	P	**Pn**	**07 44 53.6**	**-0.5**
MTW	**Mount Morrison**	**7.21**	**195**	P	**Pn**	**07 44 55.2**	**-0.6**
CAW	**Cannon Point**	**7.26**	**198**	P	**Pn**	**07 44 56.0**	**-0.5**
TRWZ	**Traveller**	**7.40**	**193**	P	**Pn**	**07 44 57.7**	**-0.8**
PAWZ	**Paruwai Farm**	**7.44**	**195**	P	**Pn**	**07 44 58.0**	**-1.0**
MSWZ	**Moikau Station**	**7.51**	**196**	P	**Pn**	**07 44 58.7**	**-1.3**
SNZO	**South Karori**	**7.55**	**199**	P	**Pn**	**07 45 00.1**	**-0.3**
SNZO	**South Karori**	**7.55**	**199**	S	**Sn**	**07 46 33.6**	**+7.6**
TCW	**Tory Channel**	**7.58**	**202**	P	**Pn**	**07 45 00.4**	**-0.5**
PLWZ	**Palliser**	**7.66**	**195**	P	**Pn**	**07 45 00.7**	**-1.3**
TUWZ	**Tuamarina**	**7.88**	**203**	P	**Pn**	**07 45 05.0**	**0.0**
NNZ	**Nelson**	**7.88**	**206**	P	**Pn**	**07 45 06.1**	**+1.0**
TKNZ	**Takaka Hill**	**7.89**	**209**	P	**Pn**	**07 45 06.4**	**+1.2**
QRZ	**Quartz Range**	**7.89**	**212**	P	**Pn**	**07 45 09.0**	**+3.8**
QRZ	**Quartz Range**	**7.89**	**212**	P	**Pn**	**07 45 07.2**	**+2.0**
BSWZ	**Blackbirch Sta**	**8.16**	**202**	P	**Pn**	**07 45 09.2**	**+0.3**
MRNZ	**Matariki Terra**	**8.28**	**208**	P	**Pn**	**07 45 12.2**	**+1.7**
THZ	**Tophouse**	**8.53**	**206**	P	**Pn**	**07 45 14.8**	**+0.8**
KHZ	**Kahutara**	**8.90**	**202**	P	**Pn**	**07 45 17.6**	**-1.4**
KHZ	**Kahutara**	**8.90**	**202**	S	**Sn**	**07 47 03.1**	**+3.8**
KHZ	**Kahutara**	**8.90**	**202**	P	**Pn**	**07 45 16.4**	**-2.6**
DSZ	**Denniston Nort**	**8.96**	**211**	P	**Pn**	**07 45 20.2**	**+0.3**
GVZ	**Greta Valley S**	**9.56**	**202**	P	**Pn**	**07 45 24.9**	**-3.1**
LTZ	**Lake Taylor**	**9.65**	**206**	P	**Pn**	**07 45 27.5**	**-1.8**
INZ	**Inchbonnie**	**9.92**	**209**	P	**Pn**	**07 45 31.0**	**-2.0**
OXZ	**Oxford**	**10.21**	**205**	P	**Pn**	**07 45 33.3**	**-3.7**
MQZ	**McQueen's Vall**	**10.35**	**202**	P	**Pn**	**07 45 34.3**	**-4.5**
RACZ	**Rakaia**	**10.53**	**204**	P	**Pn**	**07 45 37.9**	**-3.4**
MHCZ	**Mount Hutt**	**10.56**	**206**	P	**Pn**	**07 45 38.2**	**-3.6**
ARCZ	**Arundel**	**11.06**	**206**	P	**Pn**	**07 45 44.7**	**-4.0**
TMZ	**Timaru**	**11.50**	**206**	P	**Pn**	**07 45 49.9**	**-4.8**
JCZ	**Jackson Bay**	**12.15**	**213**	P	**Pn**	**07 45 59.9**	**-3.7**
ODZ	**Otahua Downs**	**12.20**	**205**	P	**Pn**	**07 46 00.2**	**-4.0**

*DJA **07** 07:58:00.9±0.2, 11°.S±2°.×11°.5E±°, h10km, M5.0/24, mB5.5/9, mb5.0/23, MLv5.0/24, Mw(mB)4.9/9*
*IDC **07** 07:58:00.1±0.5, 10°.83S×115°.29E, h0km, mb4.5/18, mbtmp4.5/21, ML5.0/3, MS3.5/3, Error ellipse: s-maj=20.8km s-min=11.8km az=72.0*
*NEIC **07** 07:58:01.3±1.9, 11°.02S±0°.06×115°.23E±0°.07, h10km±1km, mb4.7/30, Error ellipse: s-maj=11.7km s-min=9.9km az=50.0*
*GFZ **07** 07:58:01.1±0.2, 11°.S±2°.×11°.5E±°, h10km, M4.8/24, mb4.8/24, Error ellipse: s-maj=5.7km s-min=4.4km az=53.0, confirmed*
*BJI **07** 07:58:01.3, 11°.53S×115°.29E, h45km, mB4.8/4, mb4.7/22*
ISC 07 07:58:04.6±0.4, **11°.01S**±0°.05×**115°.26E**±0°.05, **h35**km, **n155**, σ1°**70**/151, **mb4.6**/30, **3D, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.18**	**357**	P	**Pn**	**07 58 37.5**	**-0.8**
IGBI	**Denpasar**	**2.18**	**357**	P	**Pn**	**07 58 37.8**	**-0.5**
DNP	**Denpasar**	**2.32**	**359**	P	**Pn**	**07 58 40.3**	**+0.1**
KHKI	**Kahang-Kahang**	**2.65**	**7**	P	**Pn**	**07 58 46.1**	**+1.3**
KLNI	**Mataram**	**2.70**	**18**	P	**Pn**	**07 58 46.0**	**+0.5**
KLNI	**Mataram**	**2.70**	**18**	P	**Pn**	**07 58 46.3**	**+0.8**
JAGI	**Jajag, Banyuwa**	**2.75**	**336**	P	**Pn**	**07 58 45.0**	**-1.3**
JAGI	**Jajag, Banyuwa**	**2.75**	**336**	S	**Sn**	**07 59 15.7**	**-2.5**
JAGI	**Jajag, Banyuwa**	**2.75**	**336**	

comp=Z,45nm,1.1s
FORT Forrest 22.98 151 P P 08 03 07.0 +0.7
FORT IAmb IAmb 08 03 08.1
comp=Z,22nm,1.0s
QIS Mount Isa 25.24 115 P P 08 03 29.3 +1.7
BBOO Buckleboo 28.92 142 P P 08 04 00.3 -0.2
BBOO IAmb IAmb 08 04 40.9
comp=Z,7.5nm,0.9s
STKA Stephens Creek 31.97 135 P P 08 04 29.2 +1.8
comp=Z,9.5nm,0.8s,baz=309,slow=9.1,SNR=17
STKA LR LR 08 18 59.4
comp=Z,81nm,18.6s,baz=216,slow=39
comp=Z,9.5nm,0.8s
STKA Stephens Creek 31.97 135 P P 08 04 29.1 +1.7
CMAR Chiang Mai Arr 33.41 331 P P 08 04 40.1 0.0
comp=Z,3.7nm,0.7s,baz=163,slow=8.0,SNR=18
comp=Z,3.7nm,0.7s
CMAR Chiang Mai Arr 33.41 331 P P 08 04 39.9 -0.3
CHTO Chiang Mai 33.72 331 P P 08 04 43.1 +0.3
CHTO IAmb IAmb 08 04 44.2
comp=Z,13nm,1.4s
PZH PanZhiHua 39.53 341 P P 08 05 35.4 +3.0
H08S2 Diego Garcia H 42.31 271 T T 08 51 04.4
baz=98
H08S3 Diego Garcia H 42.32 271 T T 08 51 05.2
baz=98,SNR=6.4
H08S1 Diego Carcia H 42.33 271 T T 08 51 04.8
baz=98
NJ2 Nanjing 42.95 4 eP P 08 06 04.4 +4.2
NJ2 pmax pmax
comp=Z,21nm,0.5s
XAN Xi'an 45.20 353 P P 08 06 16.8 -1.5
XAN pmax pmax
comp=Z,9.0nm,0.6s
EVN Everest 47.53 325 P P 08 06 37.2 -0.2
EVN IAmb IAmb 08 06 51.5
comp=Z,8.6nm,0.9s
EVN Everest 47.53 325 P P 08 06 37.6 +0.2
KSRS Korea Array 49.65 13 P P 08 06 52.5 -0.2
comp=Z,1.6nm,0.7s,baz=197,slow=7.9,SNR=9.2
comp=Z,1.6nm,0.7s
HHC Hu-ho-hao-te 51.71 356 eP P 08 07 12.8 +4.4
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,35nm,4.2s
MJAR Matsushiro Arr 52.00 23 P P 08 07 08.6 -2.0
comp=Z,1.2nm,0.5s,baz=200,slow=7.8,SNR=2.9
comp=Z,1.2nm,0.5s
MJAR Matsushiro Arr 52.00 23 P P 08 07 08.6 -2.0
GTA2 Gaotai 52.26 345 eP P 08 07 15.0 +2.4
GTA2 pP pP 08 07 23.5 +1.6
GTA2 pmax pmax
comp=Z,5.0nm,0.7s
CASY Casey 55.30 182 P P 08 07 34.8 +0.6
USRK Ussuriysk Ar. 57.01 14 P P 08 07 46.1 -0.7
comp=Z,2.1nm,0.6s,baz=179,slow=7.3,SNR=6.2
comp=Z,2.1nm,0.6s
SONM Songino Array 59.11 353 P P 08 08 01.5 -0.1
comp=Z,2.1nm,0.7s,baz=163,slow=12,SNR=6.8
comp=Z,2.1nm,0.7s
SONM Songino Array 59.11 353 P P 08 08 01.5 -0.1
SONM IAmb IAmb 08 08 13.1
comp=Z,5.3nm,1.1s
URZ Urewera 61.21 128 LR LR 08 34 39.0
comp=Z,79nm,20.3s,baz=224,slow=36
KSH2 Kashi 62.08 326 P P 08 08 22.3 +0.2
KSH2 pP pP 08 08 32.6 +1.0
KSH2 PcP **PcP 08 09 03.5 +1.3**
KSH2 pmax pmax
comp=Z,7.0nm,0.6s
TARG Taragay, Kyrgy 62.77 329 IAmb IAmb 08 08 30.1
comp=Z,2.6nm,0.6s
ASAI AK-SAY(Kyrgyzs 62.83 328 P P 08 08 27.6 +0.3
KBL Kabul 63.02 318 P P 08 08 27.6 -0.8
MANEM Manem 63.24 322 IAmb IAmb 08 08 41.6
comp=Z,44nm,1.2s
KDJ Kajisay 63.38 329 P P 08 08 32.0 +1.3
ANVS Anan'yevo 63.62 330 P P 08 08 32.5 +0.2
BOOM Boomskoye usch 64.27 329 P P 08 08 37.5 +0.9
OHH Osh 64.58 325 P P 08 08 37.8 -0.7
MKAR Makanchi Array 64.65 336 P P 08 08 38.9 +0.1
comp=Z,2.0nm,0.4s,baz=145,slow=7.2,SNR=19
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 64.65 336 P 08 08 38.6 -0.2
TKM2 Tokmak 2 64.76 329 P P 08 08 40.3 +0.5
SNR=11
MAKZ Makanchi 64.79 335 P P 08 08 39.7 0.0
UCH Uchtor 64.82 328 P P 08 08 41.2 +0.7
SNR=5.6
KBK Karagaybulak 64.90 328 P P 08 08 41.9 +1.2
SNR=8.5
GAR Garm 65.00 323 P P 08 08 40.9 -0.4
AAK Ala-Archa 65.12 328 P P 08 08 43.2 +1.1
SNR=5.7
AAK Ala-Archa 65.12 328 P P 08 08 42.1 0.0
AAK IAmb IAmb 08 08 43.9
comp=Z,7.0nm,0.8s
AAK Ala-Archa 65.12 328 P P 08 08 43.2 +1.1
BTK Batken 65.39 324 P P 08 08 44.8 +1.0
EKS2 Erkin-Say 65.52 328 P P 08 08 45.9 +1.3
SNR=9.0
USP Ospenovka 65.56 328 P P 08 08 45.5 +0.7
SNR=5.3
ARK Arkit 65.90 326 P P 08 08 48.0 +0.9
KURBB Kurchatov Arra 69.21 336 P P 08 09 07.5 -0.1
comp=Z,4.3nm,0.6s,baz=152,slow=5.4,SNR=26
comp=Z,4.3nm,0.6s
KURK Kurchatov 69.24 336 P P 08 09 08.4 +0.6
KURK IAmb IAmb 08 09 08.9
comp=Z,5.2nm,0.7s
KURK Kurchatov 69.24 336 P P 08 09 08.3 +0.4
ZALV Zalesovo Beam 69.68 341 P P 08 09 10.0 -0.4
comp=Z,5.1nm,0.4s,baz=148,slow=5.0,SNR=24
comp=Z,5.1nm,0.4s
ZALV Zalesovo Beam 69.68 341 P P 08 09 10.2 -0.2
VNDA Vanda 70.61 170 P P 08 09 17.7 +1.8
comp=Z,2.1nm,0.9s,baz=320,slow=7.0,SNR=9.8
comp=Z,2.1nm,0.9s
VNDA Vanda 70.61 170 P P 08 09 17.7 +1.8
BVAR Borovoye Array 74.39 334 P P 08 09 39.1 +0.4
comp=Z,3.3nm,0.7s,baz=140,slow=7.7,SNR=15
comp=Z,3.3nm,0.7s
BORK Borovoye 74.43 334 P 08 09 39.0 0.0
AB31 Akbulak array 77.13 326 IAmb IAmb 08 10 07.0
comp=Z,10nm,1.4s
ABKAR Akbulak array 77.13 326 P P 08 09 55.0 +0.5
QSPA South Pole Qui 79.00 180 P P 08 10 05.7 +0.9
comp=Z,3.3nm,0.9s,baz=176,slow=0.4,SNR=18
comp=Z,3.3nm,0.9s
QSPA South Pole Qui 79.00 180 P P 08 10 06.7 +1.9
QSPA IAmb IAmb 08 10 07.2
comp=Z,6.0nm,1.2s
SNAA Sanae 88.07 196 ||P P 08 10 53.0 +1.9
comp=Z,92nm,0.7s
SNAA Sanae 88.07 196 P P 08 10 53.5 +2.3
comp=Z,3.9nm,0.7s,baz=111,slow=3.4,SNR=14
comp=Z,3.9nm,0.7s
SNAA Sanae 88.07 196 P P 08 10 51.6 +0.5
SNAA IAmb IAmb 08 10 54.3
comp=Z,4.7nm,0.8s
SNAA Sanae 88.07 196 P P 08 10 53.4 +2.3
VNA2 Neumayer--Watz 89.72 196 ||P P 08 11 00.8 +2.0
comp=Z,2.2nm,0.6s,baz=99,slow=4.4
VNA1 Neumayer--Stat 90.11 196 ||P P 08 10 59.5 -1.1
comp=Z,1.4nm,0.7s
FINES FINESS Array B 99.19 331 P Pdif 08 11 41.3 -0.9
comp=Z,1.6nm,0.8s,baz=66,slow=6.9,SNR=3.9
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 100.14 339 P Pdif 08 11 45.9 -0.4
comp=Z,0.9nm,0.6s,baz=58,slow=4.6,SNR=4.9
comp=Z,0.9nm,0.6s
TORD Torodi Ar. Bea 115.17 279 PKP PKPdf 08 16 43.8 +0.6
comp=Z,0.3nm,0.5s,baz=73,slow=2.0,SNR=4.2
YKA Yellowknife Ar 117.51 24 PKP PKPdf 08 16 46.4 +0.1
comp=Z,0.6nm,0.4s,baz=308,slow=2.0,SNR=11
BDFB Brasilia 148.77 212 PKPbc PKiKP 08 17 51.3 +0.4
comp=Z,1.5nm,0.4s,baz=149,slow=5.9,SNR=3.7
LPAZ La Paz 152.67 173 PKPbc PKiKP 08 18 01.6 +2.0
comp=Z,1.7nm,0.8s,baz=195,slow=1.8,SNR=6.8

*JMA **07** 08:03:05.9±0.2,23˚.1N±0˚.2×120˚.8E±0˚.7,h0km, TAIWAN REGION*
*TAP **07** 08:03:06.6,23˚.05N×120˚.84E,h5km,ML4.0,C*
ISC 07 08:03:07.3±0.8,**23˚.07N**±0˚.01×**120˚.82E**±0˚.01,**h8**km±6km,

n159,σ1$05/279,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.11**	**336**	*i* P		**Pg**	**08 03 09.9**	**+0.1**
STYH				*i* S		**Sg**	**08 03 11.9**	**+0.4**
STYT	**Tauyuan**	**0.11**	**326**	*i* P		**Pg**	**08 03 09.7**	**-0.1**
STYT				*i* S		**Sg**	**08 03 11.7**	**0.0**
SLGT	**Liugui**	**0.18**	**245**	*i* P		**Pg**	**08 03 11.1**	**+0.1**
SLGT				*i* S		**Sg**	**08 03 14.1**	**+0.6**
ELDTW	**Lidau**	**0.21**	**57**	P		**Pg**	**08 03 11.5**	**-0.2**
ELDTW				S		**Sg**	**08 03 14.4**	**-0.2**
SGST	**Jiashian**	**0.22**	**273**	P		**Pg**	**08 03 11.4**	**-0.4**
SGST				S		**Sg**	**08 03 15.3**	**+0.5**
WTP	**Ta-pu**	**0.26**	**312**	*i* P		**Pb**	**08 03 13.2**	**-1.0**
WTP				*i* S		**Sb**	**08 03 17.8**	**-1.1**
TPUB	**Ta-pu**	**0.29**	**322**	P		**Pb**	**08 03 13.5**	**-1.3**
TPUB	**Ta-pu**	**0.29**	**322**	P		**Pn**	**08 03 18.7**	**+0.9**
TPUB	**Ta-pu**	**0.29**	**322**	*i* P		**Pb**	**08 03 13.8**	**-0.9**
TPUB				*i* S		**Pn**	**08 03 18.8**	**+0.9**
CHN1	**Nanshi**	**0.29**	**293**	*i* P		**Pb**	**08 03 14.2**	**-0.7**
CHN1				S		**Sb**	**08 03 19.1**	**-0.8**
LONT	**Longtian**	**0.33**	**120**	*i* P		**Pg**	**08 03 13.6**	**-0.1**
LONT				S		**Sg**	**08 03 18.4**	**+0.3**
TWG	**Pinlang**	**0.34**	**137**	P		**Pg**	**08 03 13.8**	**-0.1**
TWG				S		**Sg**	**08 03 18.7**	**+0.3**
TWGBT	**Beinan**	**0.35**	**137**	P		**Pg**	**08 03 13.8**	**-0.2**
TWGBT	**Beinan**	**0.35**	**137**	P		**Pg**	**08 03 13.9**	**-0.2**
TWGBT				S		**Sg**	**08 03 18.7**	**+0.1**
SCST	**Cishan**	**0.36**	**239**	*i* P		**Pb**	**08 03 15.0**	**-0.9**
SCST				S		**Sb**	**08 03 21.9**	**+0.2**
EHD	**Haiduan**	**0.36**	**78**	*i* P		**Pg**	**08 03 14.2**	**-0.1**
EHD				*i* S		**Sg**	**08 03 19.0**	**-0.1**
ECS	**Chishang**	**0.36**	**86**	*i* P		**Pb**	**08 03 14.7**	**-1.3**
ECS				*i* S		**Sg**	**08 03 20.1**	**+0.8**
TWK	**Hsinying**	**0.36**	**302**	*i* P		**Pb**	**08 03 15.7**	**-0.4**
TWK				S		**Sb**	**08 03 21.6**	**-0.3**
SSD	**Sandimen**	**0.37**	**209**	P		**Pg**	**08 03 13.9**	**-0.6**
SSD				S		**Sg**	**08 03 18.5**	**-0.9**
TSMG	**Majia**	**0.40**	**204**	*i* P		**Pg**	**08 03 14.5**	**-0.6**
TSMG				S		**Sg**	**08 03 19.4**	**-1.0**
WCKO	**Fanlu**	**0.42**	**331**	P		**Pb**	**08 03 16.9**	**0.0**
WCKO				S		**Sb**	**08 03 23.6**	**+0.1**
CHN3	**Shinhua**	**0.42**	**271**	eP		**Pn**	**08 03 18.4**	**-1.3**
CHN3				eS		**Sb**	**08 03 25.4**	**+1.9**
TTN	**Taitung**	**0.43**	**137**	P		**Pb**	**08 03 16.8**	**-0.4**
TTN				eS		**Sb**	**08 03 23.4**	**-0.5**
ALS	**Alishan**	**0.44**	**358**	*i* P		**Pb**	**08 03 16.2**	**-1.2**
ALS				S		**Sb**	**08 03 23.6**	**-0.7**
TWM1	**Shoushan**	**0.45**	**236**	P		**Pb**	**08 03 17.5**	**+0.1**
FULB	**Fuli**	**0.45**	**74**	*i* P		**Pb**	**08 03 16.5**	**-1.0**
FULB				*i* S		**Sb**	**08 03 23.3**	**-1.1**
EDH	**Donghe**	**0.45**	**103**	P		**Pb**	**08 03 16.7**	**-0.8**
EDH				*i* S		**Sb**	**08 03 23.4**	**-1.0**
SGLT	**Jiouru**	**0.46**	**222**	eP		**Pb**	**08 03 17.1**	**-0.6**
ECL	**Taimali**	**0.49**	**166**	P		**Pg**	**08 03 16.4**	**-0.4**
ECL				S		**Sg**	**08 03 22.6**	**-0.5**
MASBT	**Mashibuluo**	**0.49**	**201**	*i* P		**Pg**	**08 03 16.1**	**-0.6**
MASBT				S		**Sg**	**08 03 22.3**	**-0.9**
SSHA	**Shanhua**	**0.50**	**277**	P		**Pn**	**08 03 19.5**	**-1.2**
SSHA				S		**Sb**	**08 03 27.9**	**+2.2**
CHKT	**Chengkung**	**0.50**	**87**	*i* P		**Pb**	**08 03 17.8**	**-0.5**
CHKT				*i* S		**Sb**	**08 03 25.9**	**+0.1**
TWF1	**Yuli**	**0.52**	**57**	*i* P		**Pg**	**08 03 17.1**	**-0.2**
TWF1				S		**Sg**	**08 03 24.7**	**+0.6**
EYUL	**Yuli**	**0.53**	**59**	*i* P		**Pg**	**08 03 17.4**	**-0.2**
EYUL				eS		**Sg**	**08 03 24.5**	**0.0**
CHKH	**Chenggong**	**0.54**	**77**	*i* P		**Pb**	**08 03 18.1**	**-0.9**
CHN5	**Tsauling**	**0.54**	**346**	*i* P		**Pb**	**08 03 18.5**	**-0.6**
CHN5				S		**Sb**	**08 03 26.9**	**-0.2**
YULB	**Yu-li**	**0.54**	**54**	P		**Pg**	**08 03 17.1**	**-0.2**
YULB	**Yu-li**	**0.54**	**54**	*i* P		**Pg**	**08 03 17.3**	**-0.5**
YULB				S		**Sb**	**08 03 25.6**	**-1.4**
TAI1	**Yung-k'ang**	**0.55**	**267**	eS		**Sn**	**08 03 32.5**	**+1.8**
CHY	**Chiayi**	**0.56**	**319**	*i* P		**Pb**	**08 03 19.6**	**+0.2**
CHY				S		**Sb**	**08 03 28.8**	**+1.2**
ICHU	**Yijhu**	**0.58**	**300**	P		**Pb**	**08 03 20.1**	**+0.4**
ICHU				S		**Sn**	**08 03 30.1**	**-1.3**
WHYT	**Xinyi Township**	**0.62**	**2**	*i* P		**Pb**	**08 03 19.6**	**-0.8**
WHYT				S		**Sb**	**08 03 28.4**	**-1.0**
ECBN	**Changbin**	**0.63**	**67**	P		**Pb**	**08 03 20.3**	**-0.2**
ECBN				S		**Sn**	**08 03 31.7**	**-1.0**
EHY	**Hungye**	**0.63**	**47**	*i* P		**Pg**	**08 03 19.0**	**-0.5**
EHY				eS		**Sg**	**08 03 28.2**	**+0.5**
SSPT	**Xinbi**	**0.63**	**202**	*i* P		**Pb**	**08 03 19.5**	**-1.1**
EHYH	**Wanrong**	**0.64**	**49**	*i* P		**Pg**	**08 03 19.1**	**-0.5**
WDLH	**Douliu**	**0.67**	**337**	P		**Pn**	**08 03 22.0**	**-1.1**
WDLH				S		**Sn**	**08 03 31.3**	**-1.3**
WSSB	**Gushan**	**0.67**	**231**	P		**Pn**	**08 03 23.0**	**-0.1**
WSSB				S		**Sn**	**08 03 36.5**	**+2.7**
TSCK	**Chigu Township**	**0.68**	**276**	P		**Pn**	**08 03 22.4**	**-0.8**
TSCK				eS		**Sn**	**08 03 34.5**	**+0.4**
EAST	**Anshuo**	**0.69**	**178**	*i* P		**Pb**	**08 03 20.1**	**-1.4**
EAST				S		**Sg**	**08 03 29.4**	**-0.1**
KAU	**Kaohsiung**	**0.69**	**224**	P		**Pb**	**08 03 20.4**	**-1.2**
HGSD	**Ruisui**	**0.69**	**53**	P		**Pb**	**08 03 21.4**	**-0.2**
HGSD				S		**Sb**	**08 03 32.7**	**+1.3**
WDL	**Douliou City**	**0.69**	**338**	eP		**Pn**	**08 03 22.3**	**-1.1**
WDL				eS		**Sn**	**08 03 34.5**	**+0.1**
WSL	**Shuilin Townsh**	**0.71**	**309**	P		**Pn**	**08 03 22.2**	**-1.4**
WSL				S		**Sn**	**08 03 33.7**	**-1.0**
TAW	**Tawu**	**0.71**	**175**	P		**Pb**	**08 03 20.6**	**-1.3**
LDUT	**Ludao**	**0.71**	**124**	eP		**Pb**	**08 03 21.3**	**-0.7**
LDUT				S		**Sb**	**08 03 31.7**	**-0.2**
SCZT	**Fangliau**	**0.72**	**195**	P		**Pg**	**08 03 20.6**	**-0.5**
SSLB	**Suanglung**	**0.72**	**9**	P		**Pg**	**08 03 20.8**	**-0.4**
SSLB	**Suanglung**	**0.72**	**9**	S		**Sb**	**08 03 31.6**	**-0.7**
WTK	**Tuku**	**0.73**	**327**	*i* P		**Pn**	**08 03 22.7**	**-1.3**
WTK				S		**Sn**	**08 03 34.2**	**-1.1**
WJS	**Zhushan**	**0.75**	**353**	P		**Pn**	**08 03 23.1**	**-1.1**
WJS				S		**Sn**	**08 03 34.5**	**-1.4**
WSF	**Szhu**	**0.79**	**316**	P		**Pn**	**08 03 23.6**	**-1.2**
WSF				S		**Sn**	**08 03 36.4**	**-0.3**
SMLT	**Sun Moon Lake**	**0.81**	**5**	P		**Pb**	**08 03 23.5**	**-0.2**
SMLT				eS		**Sb**	**08 03 35.9**	**+1.0**
WNT	**Mingjian**	**0.81**	**351**	*i* P		**Pn**	**08 03 24.4**	**-0.6**
WNT				S		**Sn**	**08 03 37.3**	**0.0**
WARBT	**Fenglin Townsh**	**0.82**	**39**	*i* P		**Pg**	**08 03 22.3**	**-0.9**
WARBT				S		**Sb**	**08 03 34.6**	**-0.5**
WLCH	**Liuqiu**	**0.83**	**210**	eP		**Pn**	**08 03 26.1**	**+0.8**
WLCH				eS		**Sn**	**08 03 39.9**	**+2.3**
TYC	**Yuchr**	**0.83**	**2**	*i* P		**Pb**	**08 03 23.9**	**0.0**
TYC				S		**Sn**	**08 03 37.3**	**-0.4**
TWP	**Hsiaoliuchiu**	**0.84**	**211**	eP		**Pn**	**08 03 26.5**	**+1.1**
TWP				S		**Sn**	**08 03 42.6**	**+4.7**
SLIU	**Shizi**	**0.85**	**182**	P		**Pg**	**08 03 23.0**	**-0.6**
SLIU				S		**Sb**	**08 03 36.7**	**+0.8**
TEGC	**Jichi Village**	**0.91**	**46**	P		**Pn**	**08 03 25.6**	**-0.8**
TEGC				eS		**Sn**	**08 03 41.7**	**+2.0**
RLNB	**Erlin**	**0.92**	**332**	S		**Sn**	**08 03 39.9**	**0.0**
WRL	**Guolierlin Hig**	**0.92**	**334**	P		**Pn**	**08 03 25.6**	**-1.0**
WRL				*i* S		**Sn**	**08 03 39.4**	**-0.6**
ESL	**Shilin**	**0.93**	**37**	P		**Pb**	**08 03 25.1**	**-0.5**
ESL				eS		**Sg**	**08 03 36.9**	**-0.2**
WTCT	**Ta-ch'eng**	**0.93**	**328**	S		**Sn**	**08 03 40.2**	**-0.1**
OWD	**Renai**	**0.94**	**20**	P		**Pg**	**08 03 24.4**	**-0.9**
OWD				eS		**Sn**	**08 03 41.9**	**+1.4**
WUSB	**Renai**	**0.95**	**16**	P		**Pg**	**08 03 24.7**	**-0.9**
WUSB				eS		**Sn**	**08 03 43.2**	**+2.2**
SHUL	**Shoufeng**	**0.98**	**43**	P		**Pn**	**08 03 26.1**	**-0.5**
WCS	**Beigang Elemen**	**0.98**	**5**	P		**Pn**	**08 03 26.7**	**-0.7**
WCS				S		**Sn**	**08 03 41.3**	**-0.3**
WCH1	**Changhua City**	**1.03**	**346**	S		**Sn**	**08 03 43.6**	**+1.0**
WCHH	**Zhanghua**	**1.03**	**346**	eP		**Pn**	**08 03 27.9**	**-0.2**
WCHH				S		**Sn**	**08 03 43.1**	**+0.3**
SMST	**Manzhou Townsh**	**1.05**	**179**	eP		**Pn**	**08 03 27.9**	**-0.3**
SMST				eS		**Sn**	**08 03 43.1**	**0.0**
HEN	**Hengchun**	**1.06**	**184**	eP		**Pn**	**08 03 28.0**	**-0.5**
TEYL	**Yanliau Villag**	**1.06**	**42**	P		**Pn**	**08 03 28.3**	**-0.2**
TEYL				S		**Sn**	**08 03 45.9**	**+2.4**
TCU	**Taichung**	**1.08**	**353**	P		**Pn**	**08 03 28.9**	**+0.2**
TCU				S		**Sn**	**08 03 44.8**	**+0.9**
ETM	**Tongmen**	**1.08**	**34**	eP		**Pg**	**08 03 27.5**	**-0.6**
ETM				S		**Sn**	**08 03 43.9**	**-0.1**
WDGT	**Dungji**	**1.09**	**280**	*i* P		**Pn**	**08 03 28.1**	**-0.7**
WDGT				*i* S		**Sn**	**08 03 44.2**	**+0.1**
LXIB	**Xiulin Townshi**	**1.09**	**30**	P		**Pb**	**08 03 27.7**	**-0.8**
LXIB				S		**Sn**	**08 03 44.0**	**-0.3**
TWK1	**Hengchun**	**1.12**	**181**	eP		**Pn**	**08 03 29.5**	**+0.2**
TWKBT	**Hengchun**	**1.13**	**181**	P		**Pn**	**08 03 29.2**	**-0.2**
TWKBT				S		**Sn**	**08 03 48.7**	**+3.7**
WHF	**Hehuan Shan**	**1.14**	**21**	eP		**Pg**	**08 03 28.7**	**-0.6**
WHF				eS		**Sn**	**08 03 46.9**	**+0.9**
HWA	**Hwalien**	**1.15**	**38**	P		**Pn**	**08 03 29.9**	**+0.2**
HWA				eS		**Sn**	**08 03 47.1**	**+1.5**
TSEB	**Hengchuen, Pin**	**1.17**	**177**	eP		**Pn**	**08 03 29.9**	**0.0**
TSEB				eS		**Sn**	**08 03 48.2**	**+2.2**
WHP	**Taichung City**	**1.21**	**5**	P		**Pn**	**08 03 31.0**	**+0.5**
WHP				eS		**Sn**	**08 03 49.5**	**+2.3**
TDCB	**Techi**	**1.22**	**15**	P		**Pn**	**08 03 30.8**	**+0.1**
TDCB				S		**Sn**	**08 03 47.5**	**0.0**
TWT	**Tachien**	**1.22**	**15**	P		**Pn**	**08 03 30.6**	**-0.2**
TWT				eS		**Sn**	**08 03 47.6**	**0.0**
LAY	**Lan-yu**	**1.23**	**147**	eP		**Pg**	**08 03 28.8**	**-2.1**
TWD	**Chiawan**	**1.23**	**35**	P		**Pn**	**08 03 30.6**	**-0.2**
TWD				S		**Sb**	**08 03 47.2**	**+0.4**
FUSS	**Fushou**	**1.23**	**18**	P		**Pg**	**08 03 29.7**	**-1.3**
FUSS				*i* S		**Sn**	**08 03 48.5**	**+0.4**
PNG	**Penghu**	**1.27**	**293**	*i* P		**Pn**	**08 03 30.7**	**-0.5**
PNG				S		**Sn**	**08 03 48.2**	**-0.3**
TWQ1	**Liyutan**	**1.27**	**358**	P		**Pn**	**08 03 32.3**	**+0.9**
TWQ1				S		**Sn**	**08 03 51.7**	**+3.1**
LYUB	**Lan-yu**	**1.28**	**146**	eP		**Pg**	**08 03 30.5**	**-1.3**
ETLH	**Xiulin Townshi**	**1.28**	**28**	P		**Pg**	**08 03 30.9**	**-1.0**
ETLH				S		**Sn**	**08 03 49.8**	**+0.8**
WDJ	**Dajia District**	**1.28**	**352**	eP		**Pn**	**08 03 33.0**	**+1.5**
WDJ				S		**Sn**	**08 03 52.9**	**+4.0**
VCHM	**Qimei**	**1.29**	**276**	*i* P		**Pn**	**08 03 31.2**	**-0.4**
VCHM				S		**Sn**	**08 03 49.5**	**+0.4**
NACB	**Ninganchiao**	**1.30**	**33**	P		**Pg**	**08 03 30.9**	**-1.4**
NACB	**Ninganchiao**	**1.30**	**33**	P		**Pg**	**08 03 30.8**	**-1.5**
NACB				eS		**Sn**	**08 03 50.1**	**+1.4**
ETL	**Fush Village**	**1.31**	**34**	eP		**Pb**	**08 03 32.0**	**-0.1**
ETL				eS		**Sb**	**08 03 49.4**	**+0.3**
NNSB	**Datong**	**1.44**	**21**	P		**Pn**	**08 03 33.6**	**-0.2**
NNSB				S		**Sn**	**08 03 56.5**	**+3.5**
NNS	**Nan Shan**	**1.45**	**20**	P		**Pn**	**08 03 33.9**	**-0.1**
NNS				S		**Sn**	**08 03 54.6**	**+1.4**
NMLH	**Miaoli**	**1.46**	**359**	P		**Pg**	**08 03 35.7**	**+0.4**
NMLH				S		**Sn**	**08 03 57.1**	**+3.9**
EAHA	**Aohua**	**1.51**	**34**	P		**Pb**	**08 03 34.8**	**-0.7**
EAHA				eS		**Sg**	**08 03 56.4**	**+0.6**
NSTT	**Nanjuang**	**1.56**	**6**	P		**Pg**	**08 03 36.8**	**-0.4**
NSTT				S		**Sg**	**08 03 58.8**	**+1.3**
LIOB	**Emei**	**1.58**	**6**	eP		**Pg**	**08 03 37.1**	**-0.4**
LIOB				S		**Sg**	**08 03 59.5**	**+1.5**
NFF	**Wufeng Townshi**	**1.58**	**10**	P		**Pg**	**08 03 37.2**	**-0.3**
NFF				S		**Sg**	**08 03 59.8**	**+1.8**
LATG	**Datong**	**1.59**	**24**	P		**Pg**	**08 03 36.8**	**-1.0**
LATG				eS		**Sg**	**08 03 59.4**	**+0.8**
EWUT	**Wuta**	**1.62**	**32**	eP		**Pb**	**08 03 37.3**	**-0.2**
EWUT				eS		**Sg**	**08 03 59.7**	**+0.2**
NDT	**Datong Townshi**	**1.65**	**22**	P		**Pg**	**08 03 38.2**	**-0.8**
NDT				S		**Sg**	**08 04 01.4**	**+1.1**
YHNB	**Yeheng**	**1.67**	**18**	P		**Pb**	**08 03 37.6**	**-0.7**
YHNB	**Yeheng**	**1.67**	**18**	P		**Pb**	**08 03 38.1**	**-0.2**
YHNB				S		**Sg**	**08 04 02.5**	**+1.5**
NSK	**Sanguang**	**1.67**	**17**	P		**Pg**	**08 03 38.8**	**-0.5**
NSK				S		**Sg**	**08 04 02.1**	**+1.0**
ENTT	**Nioudou**	**1.70**	**23**	eP		**Pg**	**08 03 38.8**	**-1.1**
ENTT				eS		**Sg**	**08 04 02.5**	**+0.4**
SBCB	**Hsinchu**	**1.72**	**5**	eP		**Pg**	**08 03 41.5**	**+1.3**
SBCB				eS		**Sg**	**08 04 03.7**	**+1.1**
EOS4	**EOS4**	**1.72**	**52**	eP		**Pn**	**08 03 37.4**	**+0.2**
KSHI	**Guanxi Townshi**	**1.73**	**11**	eP		**Pg**	**08 03 39.4**	**-1.0**
KSHI				eS		**Sg**	**08 04 04.1**	**+1.2**
NDS	**Dongshan**	**1.76**	**28**	eP		**Pg**	**08 03 39.3**	**-1.1**
NDS				S		**Sg**	**08 04 03.5**	**-0.3**
TWC	**Suao**	**1.79**	**31**	P		**Pg**	**08 03 40.5**	**-1.3**
TWC				eS		**Sg**	**08 04 05.7**	**+0.6**
NWLT	**Wulai**	**1.81**	**20**	eP		**Pg**	**08 03 40.6**	**-1.3**
NWLT				S		**Sg**	**08 04 06.0**	**+0.6**
TWE	**Neicheng**	**1.81**	**25**	P		**Pg**	**08 03 41.7**	**-0.4**
TWE				eS		**Sg**	**08 04 06.4**	**+0.8**
FUSB	**Fushanzhiwuyua**	**1.82**	**22**	P		**Pg**	**08 03 41.4**	**-0.8**
FUSB				S		**Sg**	**08 04 07.5**	**+1.6**
EOS3	**EOS3**	**1.83**	**48**	eS		**Sb**	**08 04 04.1**	**+0.3**
EOS2	**EOS2**	**1.86**	**44**	eP		**Pb**	**08 03 40.3**	**-1.2**
TWA	**Mucha**	**2.02**	**20**	eP		**Pg**	**08 03 45.6**	**-0.5**
TWA				eS		**Sg**	**08 04 12.0**	**-0.3**
EGS		**2.04**	**30**	eP		**Pb**	**08 03 44.3**	**-0.2**
EGS				eS		**Sb**	**08 04 10.7**	**+0.7**
TWS1	**Kuangyinshan**	**2.09**	**15**	eP		**Pb**	**08 03 45.6**	**+0.1**
TWS1				eS		**Sg**	**08 04 12.8**	**-1.7**
TIPB	**Shuangxi**	**2.10**	**26**	eP		**Pb**	**08 03 45.5**	**-0.4**
TIPB				eS		**Sg**	**08 04 14.7**	**-0.2**
NTST	**Danshui**	**2.16**	**15**	eP		**Pb**	**08 03 45.4**	**-1.2**
NTST				eS		**Sb**	**08 04 13.7**	**+0.1**
NWF	**Wu-fen Shan**	**2.17**	**24**	eP		**Pb**	**08 03 46.8**	**-0.2**
NWF				eS		**Sg**	**08 04 16.0**

BHD eSg Sg 08 53 15.0 +1.4
BHD AML AML 08 53 18.8
comp=E,8µm,0.4s
SNGE Sanandaj 1.61 58 ePn **Pb 08 52 55.7 0.0**
SNGE IAML 08 53 23.5
comp=Z,4µm,1.0s
SNJK Sanadaj_Korde 1.65 44 Pg **Pb 08 52 56.4 0.0**
SNQR Sonqor, Kerman 1.72 69 Pg **Pb 08 52 58.4 +0.8**
SRSL SARDASHT 1.97 354 ePn **Pn 08 53 00.2 +1.2**
SRSL IAML 08 53 27.5
comp=Z,8µm,1.0s
MAHB Mahabad 2.51 0 Pn **Pn 08 53 07.8 +1.3**
RAFI Al-Rafai 2.55 172 ePn **Pb 08 53 11.0 -0.5**
RAFI ePn **Sb 08 53 44.0 +1.5**
BDRS Dareh Seyedi 2.67 95 Pn **Pb 08 53 11.8 -2.1**
NSR4 Al Neser 2.74 171 Pn **Pb 08 53 12.9 -1.9**
IHSH Hashtrud 3.31 22 Pn **Pn 08 53 19.6 +2.0**
GTMR Gotvand 3.38 121 ePn **Pn 08 53 21.9 +3.7**
GTMR IAML 08 54 30.1
comp=Z,480nm,1.0s
ZNJK Zanjan 3.44 45 ePn **Pn 08 53 22.1 +2.8**
ZNJK IAML 08 54 33.4
comp=Z,130nm,1.0s
KHMZ Khomeyn 3.59 97 ePn **Pn 08 53 25.1 +3.7**
KHMZ IAML 08 54 32.4
comp=Z,270nm,1.0s
HAKT HAKKARI 3.67 335 P **Pn 08 53 22.3 -0.2**
ISRB Sarab 3.91 24 Pn **Pn 08 53 27.6 +1.8**
AMIS Naft Sefid 3.98 129 Pn **Pn 08 53 29.7 +3.2**
ISHB Shabestar 4.03 359 Pn **Pn 08 53 29.1 +1.8**
IHRS Heris 4.21 15 Pn **Pn 08 53 32.0 +2.1**
GIDE GILAN DEYLAMAN 4.36 51 ePn **Pn 08 53 34.6 +2.7**
GIDE IAML 08 54 58.1
comp=Z,450nm,1.0s
GEVA Gevas 4.57 333 Pn 08 53 36.2 +1.3
IPIR Pirpir 4.63 108 Pn **Pn 08 53 38.3 +2.6**
JHBN Jahan bin 4.64 114 Pn **Pn 08 53 38.5 +2.7**
GHVR GHOM 4.65 86 ePn **Pn 08 53 39.0 +3.2**
GHVR IAML 08 55 36.4
comp=Z,750nm,1.0s
CHTH Charan 4.76 68 ePn **Pn 08 53 40.0 +2.5**
CHTH IAML 08 53 59.5
comp=Z,5.4nm,1.0s
GRMI Germi 4.88 21 ePn **Pn 08 53 41.0 +1.9**
GRMI IAML 08 55 16.9
comp=Z,95nm,1.0s
IKLH Kolahrood 5.00 99 Pn **Pn 08 53 43.7 +2.9**
GURO Guroymak-BITLI 5.20 327 Pn **Pn 08 53 42.3 -1.2**
KBD Kabd 5.34 161 P **Pn 08 53 48.6 +3.3**
KBD S **Sn 08 54 48.9 +2.6**
DAMV Damavand 5.35 73 ePn **Pn 08 53 48.3 +2.8**
DAMV IAML 08 54 58.9
comp=Z,4.7nm,1.0s
IZEF Zefreh 5.71 102 Pn **Pn 08 53 53.4 +2.9**
GNI Garni 5.94 353 Pn **Pn 08 53 53.9 +0.3**
comp=Z,0.9nm,0.3s,baz=14,slow=2.7,SNR=5.4
GNI Lg Lg 08 55 30.7
comp=Z,1.0nm,0.3s,baz=20,slow=17,SNR=3.1
GNI LR LR 08 56 20.7
comp=Z,112nm,20.9s,baz=144,slow=41
comp=Z,6.5nm,0.5s
GNI Garni 5.94 353 Pn **Pn 08 53 54.3 +0.7**
GNI Garni 5.94 353 Pn 08 53 54.5 +1.0
GNI Garni 5.94 353 P **Pn 08 53 56.2 +2.6**
GNI Garni 5.94 353 Pn **Pn 08 53 56.2 +2.6**
GNI Garni 5.94 353 P **Pn 08 53 52.9 -0.6**
comp=Z,0.4nmcomp=Z,618nmcomp=Z,46nm,0.7s
GNI Garni 5.94 353 P **Pn 08 53 56.2 +2.6**
KLNJ Kolanjah 5.94 121 ePn **Pn 08 53 56.1 +2.3**
KLNJ IAML 08 55 11.7
comp=Z,150nm,1.0s
NASN Na'in 6.13 102 ePn **Pn 08 53 59.4 +3.1**
NASN IAML 08 55 35.5
comp=Z,64nm,1.0s
KOPT Kop Dagi 7.09 326 Pn **Pn 08 54 09.9 +0.4**
AKT Akhty 7.40 12 eP **Pn 08 54 11.0 -2.5**
AKT pmax pmax
comp=Z,15nm,0.5s
AKT MLR MLR
comp=Z,234nm,14.0s
GAZ Gaziantep 7.48 295 Pn **Pn 08 54 14.8 +0.1**
ARPR Arapgir-MALATY 7.63 311 Pn 08 54 17.3 +0.6
ASF Jabal al Asfar 7.65 257 Pn **Pn 08 54 16.8 -0.2**
comp=Z,1.1nm,0.3s,baz=78,slow=10,SNR=4.3
ASF Lg Lg 08 56 25.8
comp=Z,3.9nm,0.3s,baz=229,slow=18,SNR=4.3
ASF LR LR 08 57 48.6
comp=Z,77nm,21.8s,baz=22,slow=43
comp=Z,2.5nm,0.3s
YZKH Yazd 7.69 101 ePn **Pn 08 54 21.8 +4.3**
YZKH IAML 08 55 53.3
comp=Z,29nm,1.0s
ANDN Andirin 8.27 296 P **Pn 08 54 25.2 -0.3**
MMAI Mount Meron Ar 8.66 265 Pn **Pn 08 54 30.2 -0.7**
comp=Z,1.6nm,0.3s,baz=57,slow=16,SNR=1.6
MMAI Lg Lg 08 56 56.9
comp=Z,3.7nm,0.3s,baz=89,slow=37,SNR=4.1
MMAI LR LR 08 58 40.3
comp=Z,76nm,19.1s,baz=81,slow=44
comp=Z,0.9nm,0.3s
MAK Makhachkala 8.81 9 eP Pn 08 54 27.6 -5.2
MAK eS **Sn 08 56 04.2 -7.5**
MAK pmax pmax
comp=Z,159nm,7.4s
KBZ Khabaz 9.71 348 Pn **Pn 08 54 45.8 +0.7**
comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=8.5
comp=Z,4.1nm,0.9s
KIV Kislovodsk 9.97 347 eP **Pn 08 54 47.4 -1.3**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,41nm,12.0s
KIV Kislovodsk 9.97 347 P **Pn 08 54 47.5 -1.3**
comp=Z,19nm,1.0s
EIL Elat 10.19 246 Pn **Pn 08 54 52.1 +0.3**
comp=Z,0.6nm,0.3s,baz=41,slow=9.3,SNR=1.9
EIL Lg Lg 08 57 48.1
comp=Z,1.2nm,0.3s,baz=344,slow=4.9,SNR=4.5
EIL LR LR 08 59 18.7
comp=Z,109nm,21.0s,baz=86,slow=41
comp=Z,1.8nm,0.4s
RAYN Ar Rayn 10.69 181 *i* Pn **Pn 08 54 58.4 -0.3**
SNR=9.2
RAYN Ar Rayn 10.69 181 Pn 08 54 59.1 +0.4
RAYN Ar Rayn 10.69 181 ⇓P **Pn 08 54 58.2 -0.5**
RAYN Ar Rayn 10.69 181 P **Pn 08 54 59.0 +0.3**
RAYN Ar Rayn 10.69 181 P **Pn 08 54 58.7 0.0**
BR104 Keskin Array S 11.06 303 P **Pn 08 55 01.7 -2.1**
BRTR Keskin Array B 11.07 303 Pn **Pn 08 55 04.0 +0.1**
comp=Z,0.1nm,0.3s,baz=146,slow=12,SNR=5.7
BR105 Keskin Array S 11.08 303 P **Pn 08 55 02.0 -2.1**
comp=Z,3.0nm,1.1s
BR106 Keskin Array S 11.09 303 P **Pn 08 55 01.8 -2.4**
comp=Z,1.9nm,0.8s
JRN Qarnain Island 11.17 144 P **Pn 08 55 06.0 +0.8**
JRN S **Sn 08 57 08.1 -1.6**
SLWR Sila 11.42 151 P **Pn 08 55 09.4 +0.7**
SLWR S **Sn 08 57 13.2 -2.5**
GHWR Ruwais 12.02 147 P **Pn 08 55 16.4 -0.4**
GHWR S **Sn 08 57 28.2 -2.3**
SHME Shamm 12.19 129 Pn **Pn 08 55 19.0 -0.2**
SHME Shamm 12.19 129 P **Pn 08 55 19.3 +0.2**
SHME S **Sn 08 57 30.3 -4.3**
ANN Anapa 12.30 331 eP **Pn 08 55 18.9 -1.7**
ANN eS **Sn 08 57 36.3 -0.8**
ANN pmax pmax
comp=Z,9.0nm,0.7s
BANOM Banah 12.38 129 *i* Pn **Pn 08 55 21.9 +0.1**
SNR=12
BANOM Banah 12.38 129 P **Pn 08 55 22.1 +0.3**
BANOM S **Sn 08 57 35.7 -3.6**
AJN Ajban 12.60 138 Pn **Pn 08 55 25.8 +1.0**
AJN Ajban 12.60 138 P **Pn 08 55 25.9 +1.1**
AJN S **Sn 08 57 41.9 -2.8**
NAZ Nazwa, Dubai 12.66 134 *i* Pn **Pn 08 55 26.7 +1.1**
SNR=26
NAZ Nazwa, Dubai 12.66 134 P **Pn 08 55 27.0 +1.3**
SNR=26
NAZ S **Sn 08 57 41.7 -4.5**
MASF Masafi 12.68 131 P **Pn 08 55 27.4 +1.4**
SNR=6.6
MASF S **Sn 08 57 42.1 -4.7**
MSFE Esma-Masafi 12.69 132 *i* Pn **Pn 08 55 25.8 -0.3**
SNR=16
ASUD Al Ashush, Dub 12.75 136 *i* Pn **Pn 08 55 27.7 +0.9**
SNR=11
ASUD Al Ashush, Dub 12.75 136 P **Pn 08 55 28.1 +1.3**
SNR=6.8
ASUD S **Sn 08 57 44.5 -3.7**
FAQ Al Faqa, Dubai 12.81 135 P **Pn 08 55 28.3 +0.7**
MDH Madha 12.82 131 Pn **Pn 08 55 27.8 0.0**
MDH Madha 12.82 131 P **Pn 08 55 28.2 +0.4**
SNR=8.4
UOSS Minazif 13.02 133 *i* Pn **Pn 08 55 30.1 -0.5**
SNR=19
UOSS Minazif 13.02 133 P **Pn 08 55 30.6 0.0**
UOSS Minazif 13.02 133 P **Pn 08 55 31.2 +0.6**
HATD Hatta, Dubai 13.07 133 *i* Pn **Pn 08 55 31.4 +0.2**
SNR=11
HATD Hatta, Dubai 13.07 133 P **Pn 08 55 32.0 +0.8**
SNR=11
HATD S **Sn 08 57 51.4 -4.7**
MZR Muzera 13.13 147 *i* Pn **Pn 08 55 31.9 0.0**
SNR=20
MZR Muzera 13.13 147 P **Pn 08 55 32.7 +0.7**
SNR=6.6
ASHO Ashiyiah 13.13 134 *i* Pn **Pn 08 55 31.9 -0.1**
SNR=19
ASHO Ashiyiah 13.13 134 P **Pn 08 55 32.5 +0.5**
SNR=19
ALNE Al Ain 13.43 137 *i* Pn **Pn 08 55 36.3 +0.2**
SNR=14
ALNE Al Ain 13.43 137 P **Pn 08 55 36.9 +0.8**
SNR=6.9
SOHO SOHO 13.83 134 *i* Pn **Pn 08 55 41.0 -0.5**
SNR=7.4
SOHO SOHO 13.83 134 P **Pn 08 55 41.1 -0.4**
UMZA Um Al Zommool 14.19 142 P **Pn 08 55 45.5 -0.9**
MANT Manisa 14.43 292 Pn **Pn 08 55 50.9 +1.0**
ARQ Araqi 14.43 136 P **Pn 08 55 49.2 -0.6**
SNR=6.5
HOQ Hoqain 14.71 133 P **Pn 08 55 51.9 -1.7**
BIDO Bidbid 15.25 131 P **Pn 08 55 58.8 -2.1**
BSY Bisya 15.28 136 P **Pn 08 55 59.7 -1.6**
SMDO Samad 15.55 133 P **Pn 08 56 04.4 -0.4**
SNR=19
WSAR Wadi Sarin 15.77 131 P **Pn 08 56 06.8 -0.9**
SNR=7.7
JMDO Jabal Madar 16.10 134 P **Pn 08 56 11.2 -0.7**
WBK Wadi Bani Khal 16.45 131 P **Pn 08 56 14.4 -1.9**
SNR=11
TIRR Tirgusor 16.77 313 Pn **Pn 08 56 19.4 -0.8**
TIRR Tirgusor 16.77 313 P **Pn 08 56 19.4 -0.8**
TIRR pmax pmax
comp=Z,9.0nm,1.0s
TPGR Topolog 16.98 314 ⇑P **P 08 56 25.8 +1.1**
JLN Jalan Bani Buh 17.06 131 P **Pn 08 56 21.2 -2.8**
MHTO MHTO 17.10 137 P **Pn 08 56 22.3 -2.2**
IDI Anoyia 17.12 279 Pn **P 08 56 26.8 +0.4**
comp=Z,0.8nm,0.3s,baz=79,slow=12,SNR=7.9
IDI Anoyia 17.12 279 P 08 56 26.1 -0.3
VRH Novokhopyorsk 17.19 352 eP **Pn 08 56 22.6 -2.8**
VRH pmax pmax
comp=Z,10.0nm,0.8s
CFR Carcaliu 17.32 314 ⇑P **P 08 56 27.9 -0.5**
CFR Carcaliu 17.32 314 ⇑P **P 08 56 27.9 -0.5**
VORD Divnogorie 17.34 346 eP **Pn 08 56 26.4 -1.0**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 17.61 346 eP **Pn 08 56 30.2 -0.4**
VSR pmax pmax
comp=Z,17nm,1.0s
DQM DQM 17.73 141 P **Pn 08 56 30.6 -1.7**
WHFO Wadi Hawf 17.80 154 P **Pn 08 56 31.7 -1.6**
VORR Voronezh 18.03 347 eP **Pn 08 56 33.6 -2.3**
VORR pmax pmax
comp=Z,50nm,0.4s
BELG Belogornoye 18.19 4 P **Pn 08 56 35.6 -2.2**
comp=Z,1.5nm,0.3s,baz=78,slow=3.9,SNR=6.8
comp=Z,38nm,1.0s
BELG Belogornoye 18.19 4*c*eP **Pn 08 56 35.2 -2.6**
BELG pmax pmax
comp=Z,6.0nm,0.8s
AB31 Akbulak array 18.34 31 P 08 56 40.6 +1.0
ABKAR Akbulak array 18.34 31 P 08 56 40.3 +0.7
RBK Rabkut 18.34 153 P **P 08 56 38.1 -1.8**
DMTO DMTO 18.43 151 P **P 08 56 41.0 0.0**
SNR=9.5
SHAO Shalim 18.44 149 P **Pn 08 56 42.0 +0.8**
SNR=5.5
AKTO Aktyubinsk 18.52 25 P **P 08 56 41.3 -0.4**
comp=Z,0.7nm,0.3s,baz=211,slow=9.9,SNR=17
comp=Z,9.8nm,0.7s
VRI Vrincioaia 18.52 314 ⇓P **Pn 08 56 42.8 +0.8**
VRI Vrincioaia 18.52 314 ⇓P **Pn 08 56 42.8 +0.8**
KTHA Kythira Island 18.58 283 P **P 08 56 42.2 -0.2**
MLR Muntele Rosu 18.80 313 LR LR 09 04 36.7
comp=Z,51nm,18.4s,baz=122,slow=39
LPSR Galich'ya Gora 18.97 347 eP **P 08 56 44.4 -2.2**
LPSR pmax pmax
comp=Z,80nm,0.9s
KBL Kabul 19.28 83 P P 08 56 38.2 -12
SNR=23
VOIR 19.33 311 ⇑P **Pn 08 56 52.3 +0.6**
VOIR 19.33 311 ⇑P **Pn 08 56 52.3 +0.6**
VOIR 19.33 311 P **P 08 56 50.3 -0.4**
VOIR 19.33 311 P **Pn 08 56 52.1 +0.3**
CHGR Chuyangaron 19.38 70 ⇓eP **Pn 08 56 54.9 +2.5**
CHGR pmax pmax
comp=Z,16nm,1.0s
ITM Ithomi 19.50 285 P **P 08 56 51.6 -1.0**
ITM IAmb IAmb 08 57 02.0
comp=Z,15nm,0.9s
ARR Arges 19.55 311 P **Pn 08 56 54.3 -0.2**
LOT Lotru 20.14 310 ⇑P **P 08 57 00.3 +0.8**
LOT Lotru 20.14 310 P **P 08 57 00.1 +0.5**
KMPD K-Podol'skiy 20.23 321 P **P 08 56 58.1 -2.2**
AK09 Malin Array Si 20.27 329 P **P 08 56 59.2 -1.6**
AK09 pP Pn 08 57 02.2 -0.6
AK10 Malin Array Si 20.27 329 P **P 08 56 59.2 -1.6**
AK06 Malin Array Si 20.29 329 P **P 08 56 59.2 -1.7**
AK08 Malin Array Si 20.30 329 P **P 08 56 59.4 -1.6**
AK05 Malin Array Si 20.31 329 P **P 08 56 59.5 -1.7**
GAR Garm 20.31 69 P Pn 08 57 02.9 -0.6
GAR IAmb IAmb 08 57 10.3
comp=Z,15nm,1.0s
AK02 Malin Array Si 20.33 329 P **P 08 56 59.8 -1.7**
AK12 Malin Array Si 20.35 329 P **P 08 56 59.9 -1.7**
BURAR Bucovina Array 20.35 317 ⇓P **P 08 57 01.6 -0.2**
BURAR Bucovina Array 20.35 317 P **P 08 57 01.9 +0.2**
BURAR Bucovina Array 20.35 317 ⇓P **P 08 57 01.6 -0.2**
AK01 Malin Array Si 20.36 329 P **P 08 57 00.0 -1.7**
AK14 Malin Array Si 20.36 329 P **P 08 57 00.0 -1.7**
AKASG Malin Array Be 20.36 329 P **P 08 57 00.7 -1.0**
comp=Z,0.8nm,0.4s,baz=142,slow=9.4,SNR=14
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 20.36 329 P **P 08 57 00.7 -1.0**
AKASG Malin Array Be 20.36 329 *i* P **P 08 57 00.6 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 20.36 329 P 08 57 00.8 -1.0
AKBB IAmb IAmb 08 57 07.8
comp=Z,10nm,0.9s
AKBB Malin Array Si 20.36 329 ⇑eP **P 08 56 59.8 -1.9**
AKBB pmax pmax
comp=Z,13nm,1.0s
KIEV Kiev 20.36 329 ⇑P P 08 56 53.0 -8.7
KIEV Kiev 20.36 329 P 08 57 00.6 -1.2
KIEV Kiev 20.36 329 P **P 08 57 00.6 -1.2**
KIEV Kiev 20.36 329 P **P 08 57 00.1 -1.6**
BUR08 Bucovina Ar. S 20.37 317 P 08 57 02.0 -0.1
BUR08 IAmb IAmb 08 57 08.3
comp=Z,12nm,1.2s
LUBAR Lubar, Ukraine 20.46 325 P **P 08 57 01.3 -1.6**
GZR Gura Zlata 20.74 309 ⇑P **P 08 57 05.8 -0.3**
GZR Gura Zlata 20.74 309 ⇑P **P 08 57 05.8 -0.3**
MARR Marisel-Cluj 21.10 313 ⇓P **P 08 57 10.1 +0.2**
MDVR Moldovita 21.20 307 ⇑P **P 08 57 11.4 +0.4**
MI28 Mi28,Pidlybu 21.21 327 P **P 08 57 08.5 -2.4**
KK31 Karatay Array 21.25 58 P 08 57 13.1 +1.6
KK31 Karatay Array 21.25 58 P **P 08 57 13.1 +1.6**
KK31 pmax pmax
comp=Z,8.0nm,1.1s
KKAR Karatay Array 21.25 58 P 08 57 14.9 +3.4
KKAR Karatay Array 21.25 58 P **P 08 57 14.9 +3.4**
MANEM Manem 21.30 74 P 08 57 13.7 +1.4
MANEM IAmb IAmb 08 57 22.3
comp=Z,108nm,1.3s
DRGR 21.40 313 ⇑P **P 08 57 14.7 +1.6**
DRGR 21.40 313 P **P 08 57 12.8 -0.3**
OBN Obninsk 21.81 346 P **P 08 57 16.8 -0.5**
comp=Z,10.0nm,0.3s,baz=166,slow=6.7,SNR=4.6
comp=Z,10.0nm,0.3s
OBN Obninsk 21.81 346 P **P 08 57 16.8 -0.5**
OBN Obninsk 21.81 346 eP **P 08 57 15.4 -1.9**
OBN ePPP PPP 08 57 43.5
OBN pmax pmax
comp=Z,12nm,0.8s
MOS Moscow 22.20 348 eP **P 08 57 22.7 +1.2**
MOS pmax pmax
comp=Z,24nm,0.6s
RNPP5 Staryi Chortor 22.23 326 P **P 08 57 20.1 -1.8**
ARSB Arslanbob 22.64 64 P **P 08 57 28.2 +1.6**
ARSB IAmb IAmb 08 57 43.7
comp=Z,14nm,1.2s
ARSB Arslanbob 22.64 64 P **P 08 57 28.2 +1.6**
ARSB pmax pmax
comp=Z,14nm,1.2s
MNK Minsk 23.78 334 *i* P **P 08 57 37.9 +0.1**
comp=E,24nm,0.8s
MNK *i* P **P 08 57 37.9 +0.1**
comp=N,14nm,0.7s
MNK *i* P **P 08 57 37.9 +0.1**
comp=Z,33nm,0.7s,baz=141
MNK *i* PP **PnPn 08 58 04.8 -0.9**
MNK *i* PPP PPP 08 58 12.7
MNK *i* S **S 09 01 51.2 -1.2**
MNK *i* SS **SnSn 09 02 31.2 +0.1**
MNK *i* SSS SSS 09 02 44.6
MNK *i* LR LR 09 06 44.1
MNK *i* LRM MLR 09 07 41.7
comp=E,466nm,21.0s
MNK *i* LRM MLR 09 07 41.7
comp=N,394nm,21.3s
MNK *i* LRM MLR 09 07 47.2
comp=Z,37nm,17.8s
MNK Minsk 23.78 334 *i* P **P 08 57 37.8 +0.1**
MNK *i* 08 58 04.7
MNK *i* PPP PPP 08 58 12.6
MNK *i* S **S 09 01 51.1 -1.2**
MNK *i* SS **SnSn 09 02 31.2 +0.1**
MNK *i* SSS SSS 09 02 44.6
MNK pmax pmax
comp=N,14nm,0.7s
MNK pmax pmax
comp=E,24nm,0.8s
MNK pmax pmax
comp=Z,33nm,0.7s
MNK MLR MLR
comp=N,394nm,21.0s
MNK MLR MLR
comp=E,466nm,21.0s
MNK MLR MLR
comp=Z,37nm,18.0s
ARTI Arti 23.80 18 P 08 57 39.3 +1.4
ARTI Arti 23.80 18*d* iP **P 08 57 43.5 +5.6**
ARTI 08 58 09.0
ARTI SS **SnSn 09 02 42.5 +11**
ARTI pmax pmax
comp=Z,11nm,1.0s
KIRV Kirov 24.47 5*c* iP **P 08 57 43.1 -1.0**
NACGM Naroch 24.50 333 ⇑iP **P 08 57 43.4 -1.1**
comp=Z,25nm,0.8s,baz=140
NRN Naryn 24.91 64 P 08 57 50.9 +2.2
NRN IAmb IAmb 08 57 57.0
comp=Z,3.8nm,0.6s
NRN Naryn 24.91 64 P **P 08 57 50.9 +2.2**
NRN pmax pmax
comp=Z,4.0nm,0.6s
BOOM Boomskoye usch 25.01 62 P P 08 57 52.1 +2.7
BOOM IAmb IAmb 08 58 17.5
comp=Z,4.9nm,0.9s
BOOM Boomskoye usch 25.01 62 P **P 08 57 52.1 +2.7**
BOOM pmax pmax
comp=Z,5.0nm,0.9s
BOOM Boomskoye usch 25.01 62 P P 08 57 52.5 +3.1
ASAI AK-SAY(Kyrgyzs 25.24 66 P P 08 57 55.2 +3.5
SUW Suwalki 25.32 328 P P 08 57 50.8 -1.0
SUW Suwalki 25.32 328 P P 08 57 50.8 -1.0
JAVC Velka Javorina 25.36 314 eP **P 08 57 50.9 -1.4**
MODS Modra-Piesok 25.40 312 eP **P 08 57 57.4 +4.7**
MODS Modra-Piesok 25.40 312 eP **P 08 57 57.4 +4.7**
BORK Borovoye 25.69 35 P 08 57 55.9 +0.7
BORK IAmb IAmb 08 58 08.6
comp=Z,4.2nm,0.8s
BORK Borovoye 25.69 35 ⇓*i*P **P 08 57 56.2 +1.0**
BORK pmax pmax
comp=Z,12nm,1.7s
BVAR Borovoye Array 25.71 36 P **P 08 57 56.4 +1.0**
comp=Z,3.9nm,0.6s,baz=232,slow=9.0,SNR=18
BVAR PcP **PcP 09 01 25.7 +0.5**
comp=Z,1.5nm,0.7s,baz=322,slow=4.2,SNR=4.0
comp=Z,3.9nm,0.6s
MORC Moravsky Berou 25.83 315 P P 08 57 55.5 -1.1
MORC IAmb IAmb 08 58 05.4
comp=Z,6.5nm,1.0s
MORC Moravsky Berou 25.83 315 P **P 08 57 55.5 -1.1**
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 25.83 315 eP **P 08 57 55.9 -0.7**
MORC Moravsky Berou 25.83 315 P **P 08 57 56.5 -0.2**
VRAC Vranov 26.19 314 LR LR 09 10 13.9
comp=Z,53nm,19.6s,baz=170,slow=41
VRAC Vranov 26.19 314 eP **P 08 57 59.0 -0.8**
KRUC Moravsky 26.21 313 P **P 08 57 59.7 -0.3**
KLMR Klimovskoe 26.92 353 eP **P 08 58 03.3 -2.9**
KLMR pmax pmax
comp=Z,15nm,1.5s
KURBB Kurchatov Arra 28.94 46 P **P 08 58 25.4 +1.0**
comp=Z,0.9nm,0.4s,baz=251,slow=9.0,SNR=8.0
KURBB PcP **PcP 09 01 33.7 +0.7**
comp=Z,1.3nm,0.9s,baz=251,slow=2.8,SNR=3.8
comp=Z,0.9nm,0.4s
KURK Kurchatov 29.03 45 P **P 08 58 25.4 +0.2**
KURK IAmb IAmb 08 58 33.1
comp=Z,9.7nm,1.2s
KURK **PcP 09 01 33.7 +0.5**
KURK Kurchatov 29.03 45⇓eP **P 08 58 26.0 +0.8**
KURK pmax pmax
comp=Z,12nm,1.5s
KURK Kurchatov 29.03 45 P **P 08 58 27.0 +1.8**
FINES FINESS Array B 29.97 341 P **P 08 58 32.0 -1.4**
comp=Z,3.1nm,0.6s,baz=149,slow=10,SNR=23
comp=Z,3.1nm,0.6s
FINES FINESS Array B 29.97 341 *i* P **P 08 58 32.2 -1.2**
FINES pmax pmax
comp=Z,3.0nm,0.6s
MK31 Makanchi Array 30.24 54⇑eP **P 08 58 37.2 +1.1**
MKAR Makanchi Array 30.24 54 P **P 08 58 36.9 +0.8**
comp=Z,1.2nm,0.7s,baz=256,slow=4.9,SNR=5.2
comp=Z,1.2nm,0.7s
MKAR Makanchi Array 30.24 54 P **P 08 58 37.3 +1.2**
MKAR Makanchi Array 30.24 54 P **P 08 58 37.3 +1.2**
BNI Bardonecchia 31.63 302 P **P 08 58 48.0 -0.4**
OUL Oulu 33.11 345 P **P 08 58 59.9 -1.0**
HFS Hagfors 33.21 331 P **P 08 59 00.4 -1.5**
comp=Z,9.4nm,0.6s,baz=137,slow=7.4,SNR=23
comp=Z,9.4nm,0.6s
MSF Maaselka 33.22 348 P **P 08 59 00.9 -1.0**
UDD Uddeholm 33.22 331 eP **P 08 59 01.2 -0.8**
ZAA0 Zalesovo Array 33.73 42 P **P 08 59 07.3 +0.8**
ZAA0 IAmb IAmb 08 59 08.0
comp=Z,3.2nm,0.9s
ZALV Zalesovo Beam 33.73 42 P **P 08 59 06.9 +0.4**
comp=Z,0.9nm,0.3s,baz=252,slow=7.6,SNR=5.6
comp=Z,0.9nm,0.3s
ZALV Zalesovo Beam 33.73 42 P 08 59 07.1 +0.6
ZALV Zalesovo Beam 33.73 42 *i* P **P 08 59 07.5 +1.0**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
DGZ Jazzator, Alta 34.17 50⇓eP **P 08 59 11.3 +0.6**
DGZ pmax pmax
comp=Z,5.0nm,1.7s
LVZ Lovozero 34.28 353 P **P 08 59 10.3 -0.9**
RNF Rovaniemi 34.41 346 P **P 08 59 11.3 -1.0**
KONO Kongsberg 34.66 328⇓eP **P 08 59 15.3 +0.8**
KONO pmax pmax
comp=Z,36nm,2.5s
NB2 NORSAR Subarra 34.74 331 P **P 08 59 13.4 -1.8**
comp=Z,1.3nm,0.7s,baz=125,slow=9.3
NB2 NORSAR Subarra 34.74 331 P **P 08 59 13.4 -1.8**
NOA NORSAR Array B 34.74 331 P **P 08 59 13.8 -1.5**
comp=Z,1.2nm,0.6s,baz=125,slow=8.8,SNR=4.4

comp=Z,1.2nm,0.6s
SGF Sodankyl 35.04 347 P P 08 59 16.7 -1.0
TAM Tamanrasset 36.87 263 P P 08 59 35.8 +1.7
TAM Tamanrasset 36.87 263 P P 08 59 35.8 +1.7
TAM pmax pmax
comp=Z,43nm,0.3s
KTK1 Kautokeino 37.02 347 eP P 08 59 33.9 -0.8
VADS Vadso 37.03 351 eP P 08 59 34.3 -0.4
ARA0 ARCESS Array S 37.07 348 eP P 08 59 34.5 -0.6
ARCES ARCESS Array B 37.07 348 P P 08 59 33.9 -1.2
comp=Z,2.2nm,0.5s,baz=156,slow=7.6,SNR=24
comp=Z,2.2nm,0.5s
ARCES ARCESS Array B 37.07 348 P P 08 59 34.3 -0.8
ARCES ARCESS Array B 37.07 348 P P 08 59 34.3 -0.8
ARCES pmax pmax
comp=Z,16nm,1.5s
STOK Stokkvaagen 37.43 339 eP P 08 59 37.0 -1.1
KONS Konsvik 37.52 339 eP P 08 59 38.7 -0.1
VAGH Vaagaholmen 37.63 340 eP P 08 59 39.8 0.0
JETT Jettan, Norway 38.03 346 eP P 08 59 42.6 -0.6
HAMF Hammerfest 38.35 348 eP P 08 59 45.8 0.0
TRO Tromso 38.40 345 eP P 08 59 45.6 -0.6
EKA Eskdalemuir Ar 39.53 317 P P 08 59 53.9 -2.0
comp=Z,2.4nm,0.3s,baz=106,slow=8.8,SNR=6.7
comp=Z,2.4nm,0.3s
ESDC Sonseca Array 39.63 293 P P 08 59 55.3 -1.7
comp=Z,1.4nm,0.8s,baz=65,slow=7.9,SNR=8.1
comp=Z,1.4nm,0.8s
KNGR Kungurtug, Tuv 40.72 50⇓ eP P 09 00 08.0 +2.0
KNGR pmax pmax
comp=Z,5.0nm,1.0s
NRIK Noril'sk 42.04 21 P P 09 00 16.9 +0.4
comp=Z,9.5nm,1.1s,baz=240,slow=4.2,SNR=5.1
comp=Z,9.5nm,1.1s
NRIK Noril'sk 42.04 21⇑ eP P 09 00 17.3 +0.8
NRIK pmax pmax
comp=Z,10.0nm,1.1s
TORD Torodi Ar. Bea 44.99 253 P P 09 00 40.7 -0.3
comp=Z,2.9nm,1.2s,baz=43,slow=7.5,SNR=6.9
comp=Z,2.9nm,1.2s
TORD Torodi Ar. Bea 44.99 253 P P 09 00 40.7 -0.3
TORD IAmb IAmb 09 00 43.0
comp=Z,4.0nm,1.4s
SPITS Spitsbergen Ar 45.80 352 P P 09 00 46.4 -0.2
comp=Z,3.8nm,0.3s,baz=147,slow=11,SNR=22
comp=Z,3.8nm,0.3s
ULN Ulaanbaatar 47.05 54⇓ eP P 09 00 56.7 -0.2
ULN pmax pmax
comp=Z,8.0nm,2.7s
CMAR Chiang Mai Arr 49.71 94 P P 09 01 17.4 -0.3
comp=Z,1.5nm,0.4s,baz=297,slow=8.0,SNR=11
comp=Z,1.5nm,0.4s
CMAR Chiang Mai Arr 49.71 94 i P P 09 01 18.2 +0.5
CMAR pmax pmax
comp=Z,1.0nm,0.3s
LSZ Lusaka 51.99 202 LR LR 09 26 38.0
comp=Z,190nm,19.9s,baz=135,slow=40
KLR Kul'dur 62.59 47⇓ eP P 09 02 49.3 0.0
KLR pmax pmax
comp=Z,5.0nm,1.5s
KSRS Korea Array 64.64 61 P P 09 03 02.9 -0.1
comp=Z,1.3nm,0.6s,baz=286,slow=6.9,SNR=5.1
comp=Z,1.3nm,0.6s
SEY Seymchan 67.09 28⇓ iP P 09 03 19.8 +1.5
SEY pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 68.87 20⇓ eP P 09 03 30.3 +0.9
BILL pmax pmax
comp=Z,4.0nm,1.0s
A21K Barrow 73.53 7 P P 09 03 57.7 +0.1
baz=341
A36M Sachs Harbour 73.86 357 P P 09 03 59.1 -0.4
baz=7.8
A22K Sinclair Lake 74.01 7 P P 09 04 00.1 -0.3
baz=342
A19K Wainwright 74.06 9 P P 09 04 01.1 +0.4
baz=337
SCHQ Schefferville 74.13 326 P P 09 04 00.2 -1.2
comp=Z,1.7nm,0.7s,baz=64,slow=7.0,SNR=4.8
comp=Z,1.7nm,0.7s
SCHQ Schefferville 74.13 326 P P 09 04 00.2 -1.2
B20K Meade River 74.72 8 P P 09 04 04.9 +0.3
baz=341
B22K Teshekpuk Lake 74.80 7 P P 09 04 05.2 +0.3
baz=344
C16K Lisburne Hills 75.19 11 P P 09 04 08.2 +0.9
baz=334
C19K Lookout Ridge 75.27 9 P P 09 04 08.0 +0.1
baz=339
C17K DeLong Mountai 75.35 11 P P 09 04 08.1 -0.2
baz=336
C18K Utukok River 75.48 10 P P 09 04 09.2 +0.2
baz=337
C21K Knifeblade Rid 75.80 7 P P 09 04 10.7 -0.1
baz=343
D20K Etivluk River 76.02 8 P P 09 04 12.4 +0.3
baz=341
D19K Kuna River 76.04 9 P P 09 04 12.8 +0.6
baz=340
D17K Noatak River 76.07 11 P P 09 04 13.6 +1.2
baz=336
C27K Jago River 76.20 3 P P 09 04 13.6 +0.5
baz=352
D24K Happy Valley 76.35 5 P P 09 04 14.1 +0.1
baz=348
D25K Kavik River 76.35 4 P P 09 04 14.5 +0.5
baz=350
D23K Nanushuk River 76.38 6 P P 09 04 14.2 +0.1
baz=346
C36M Paulatuk 76.43 356 P P 09 04 13.8 -0.5
baz=8.7
E20K Nigu River 76.50 8 P P 09 04 15.4 +0.5
baz=342
D27M Malcolm River 76.70 2 P P 09 04 15.5 -0.5
baz=354
E18K Tukpahlearik C 76.70 10 P P 09 04 16.5 +0.5
baz=338
TOLK Toolik Lake Re 76.79 6 P P 09 04 16.9 +0.4
baz=347
E17K Hotham Inlet 76.84 11 P P 09 04 17.6 +0.9
baz=337
E22K Anaktuvuk Pass 77.08 7 P P 09 04 18.3 +0.1
baz=345
E19K Redstone River 77.13 9 P P 09 04 18.6 +0.2
baz=341
TNA Tin City 77.15 14 P P 09 04 19.6 +1.1
baz=332
E23K Chandalar 77.36 6 P P 09 04 20.1 +0.4
baz=347
E28M Babbage River 77.38 2 P P 09 04 19.6 -0.2
baz=356
E24K Your Creek 77.43 5 P P 09 04 20.5 +0.4
baz=348
F17K Baldwin Pennin 77.52 11 P P 09 04 21.2 +0.7
baz=338
F14K Arctic Creek 77.53 13 P P 09 04 21.8 +1.1
baz=333
E25K Arctic Village 77.59 4 P P 09 04 21.2 +0.2
baz=350
F18K Selawik 77.61 10 P P 09 04 21.8 +0.8
baz=339
F15K North Star Dit 77.63 12 P P 09 04 22.0 +0.8
baz=335
E29M Blow River 77.64 1 P P 09 04 21.4 +0.2
baz=357,SNR=10
F19K Shaleruckik Mo 77.65 9 P P 09 04 21.5 +0.3
baz=340
F22K John River 77.66 7 P P 09 04 21.7 +0.3
baz=345
F20K Avaraart Lake 77.71 8 P P 09 04 22.1 +0.5
baz=342
E27K Coleen River 77.73 3 P P 09 04 21.9 +0.1
baz=354
INK Inuvik 77.75 360 P P 09 04 21.8 0.0
baz=0.7
F21K Alatna River 77.80 8 P P 09 04 22.5 +0.4
baz=344
GAMB Gambell 77.91 16 P P 09 04 24.3 +1.6
baz=329
F24K Squaw Lake 78.03 5 P P 09 04 24.1 +0.6
baz=349
F26K Sheenjek River 78.10 4 P P 09 04 24.4 +0.6
baz=352
F25K Christian Rive 78.11 4 P P 09 04 24.4 +0.5
baz=350
COLD Coldfoot 78.12 6 P P 09 04 24.3 +0.4
baz=347
G22K Bettles 78.29 7 P P 09 04 25.5 +0.6
baz=346
F28M Old Crow 78.36 2 P P 09 04 25.5 +0.3
baz=355
G15K Niukluk 78.39 12 P P 09 04 26.3 +0.9
baz=335
G19K Purcell Mounta 78.40 9 P P 09 04 25.9 +0.5
baz=341
G18K Tagagawik 78.42 10 P P 09 04 26.0 +0.5
baz=340
F30M Barrier River 78.45 1 P P 09 04 25.4 -0.3
baz=359,SNR=5.6
G21K Allakaket 78.48 8 P P 09 04 26.1 +0.2
baz=344
G17K Kiwalik Mounta 78.48 11 P P 09 04 27.0 +1.1
baz=338
ANM Nome 78.53 13 P P 09 04 27.6 +1.4
baz=334
G23K Bananza Creek 78.64 6 P P 09 04 27.5 +0.7
baz=347
G26K Porcupine Rive 78.86 4 P P 09 04 28.5 +0.6
baz=352
G24K Hadweenzic Riv 78.86 5 P P 09 04 28.5 +0.5
baz=349
G25K Bearman Lake 78.90 5 P P 09 04 28.6 +0.4
baz=350
H16K Elim 79.03 12 P P 09 04 29.7 +0.8
baz=337
H19K Roundabout Mou 79.07 9 P P 09 04 29.6 +0.5
baz=342
G30M tAoh Zraii Nji 79.08 1 P P 09 04 28.8 -0.5
baz=358,SNR=5.7
G27K Doyon Strip 79.10 3 P P 09 04 29.7 +0.3
baz=354,SNR=5.9
G29M Pine Creek 79.12 1 P P 09 04 29.6 +0.2
baz=357,SNR=5.3
H17K Granite Mounta 79.13 11 P P 09 04 29.9 +0.5
baz=339
G31M Satah River 79.14 360 P P 09 04 29.3 -0.2
baz=0.1
H18K Honhosa River 79.16 10 P P 09 04 29.3 -0.3
baz=340
H20K Anotleneega Mo 79.30 9 P P 09 04 30.8 +0.3
baz=343,SNR=5.0
H22K Ishtalitna Cre 79.31 7 P P 09 04 30.9 +0.4
baz=346
H21K Melozitna Rive 79.39 8 P P 09 04 31.2 +0.3
baz=345
H23K Yukon River 79.55 6 P P 09 04 32.3 +0.5
baz=347
EPYK Eagle Plains 79.68 1 P P 09 04 32.9 +0.4
baz=358
H24K Noodor Dome 79.68 6 P P 09 04 33.0 +0.4
baz=349
H27K Steamboat Moun 79.69 3 P P 09 04 32.9 +0.3
baz=354
H29M Whitestone 79.80 2 P P 09 04 33.9 +0.7
baz=357,SNR=6.6
I21K Tanana 79.94 7 P P 09 04 34.2 +0.3
baz=345,SNR=5.5
PRP Porcupine Dome 80.17 5 P P 09 04 35.9 +0.5
baz=351
MLY Manley 80.21 7 P P 09 04 35.7 +0.3
baz=346
I23K Minto, Yukon-K 80.23 6 P P 09 04 35.8 +0.4
baz=348
H31M Peel River 80.27 0 P P 09 04 36.0 +0.3
baz=0.0
I27K Kandik River 80.31 3 P P 09 04 36.4 +0.4
baz=354
POKR Poker Plat Res 80.43 6 P P 09 04 37.2 +0.7
baz=349
I26K Coal Creek Min 80.53 4 P P 09 04 37.9 +0.8
baz=353
I28M Miner Creek 80.53 2 P P 09 04 37.6 +0.4
baz=355,SNR=6.2
J16K Anvik River 80.56 12 P P 09 04 38.4 +1.2
baz=338
COLA College 80.63 6 ce P P 09 04 38.2 +0.6
COLA pmax pmax
comp=Z,6.0nm,0.8s
J19K Poorman 80.64 9 P P 09 04 38.1 +0.4
baz=342
J20K Nowinta River 80.66 9 P P 09 04 38.2 +0.4
baz=344
J17K VABM Dome 80.70 11 P P 09 04 38.9 +0.8
baz=340
NEA2 Nenana 80.80 6 P P 09 04 39.2 +0.7
baz=348
I30M Mount Dempster 80.84 1 P P 09 04 39.2 +0.3
baz=358,SNR=8.8
K13K Kusilvak Mount 81.06 14 P P 09 04 41.2 +1.3
baz=335
J25K Salcha River, 81.08 5 P P 09 04 40.3 +0.2
baz=351
CHUM Lake Minchumin 81.16 8 P P 09 04 40.9 +0.4
baz=345
HDA Harding Lake 81.17 6 P P 09 04 40.8 +0.3
baz=350
K20K Telida 81.45 9 P P 09 04 42.8 +0.7
baz=344
K17K Iditarod 81.47 11 P P 09 04 43.0 +0.9
baz=340
J30M Hart River 81.49 1 P P 09 04 42.3 -0.1
baz=358,SNR=7.9
CAST Castle Rocks 81.64 8 P P 09 04 43.9 +0.8
baz=345
MCK McKinley 81.66 7 P P 09 04 43.5 +0.3
baz=348
TRF Thorofare Moun 81.80 7 P P 09 04 44.7 +0.6
baz=347
SCRK Sand Creek 81.80 4 P P 09 04 44.2 +0.2
baz=352,SNR=6.6
K24K Donnelly Dome 81.85 5 P P 09 04 44.1 -0.1
baz=350
L15K Ungalak Mounta 81.90 13 P P 09 04 45.3 +0.9
baz=338
DAWY Dawson 81.93 2 P P 09 04 44.9 +0.3
baz=356
RIDG Independent Ri 81.98 5 P P 09 04 45.5 +0.5
baz=351
L14K Kuka Creek 81.98 13 P P 09 04 45.7 +0.9
baz=337
L17K Donlin 82.01 11 P P 09 04 45.8 +0.8
baz=340
PPLA Purkeypile 82.13 8 P P 09 04 46.2 +0.4
baz=345
K29M Barlow Dome 82.20 1 P P 09 04 46.1 0.0
baz=357,SNR=5.3
YKA Yellowknife Ar 82.29 351 P P 09 04 46.1 -0.3
comp=Z,1.1nm,0.8s,baz=17,slow=5.4,SNR=4.6
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 82.29 351 i P P 09 04 48.5 +2.1
YKA pmax pmax
comp=Z,1.0nm,0.8s
DHY Denali Highway 82.45 6 P P 09 04 47.8 +0.3
baz=349
L19K White Mountain 82.48 10 P P 09 04 48.4 +0.9
baz=343
M14K Bethel 82.67 13 P P 09 04 50.1 +1.8
baz=337
L26K Log Cabin Wild 82.79 4 P P 09 04 49.6 +0.5
baz=352
M19K Big River Lodg 82.81 9 P P 09 04 50.3 +1.1
baz=343
L27K Beaver Creek, 82.84 3 P P 09 04 49.9 +0.5
baz=354
M17K Holitna River 82.84 11 P P 09 04 50.5 +1.1
baz=341
WAT6 Susitna Watana 82.90 6 P P 09 04 49.9 0.0
baz=349
L29M L29M 82.93 2 P P 09 04 50.6 +0.8
baz=357
M16K Timber Creek 82.95 12 P P 09 04 50.9 +1.0
baz=340
M15K Kasigluk River 82.96 13 P P 09 04 51.4 +1.4
baz=338
M18K Stony River 83.00 10 P P 09 04 51.3 +1.1
baz=342
SKT Skwentna 83.10 8 P P 09 04 51.6 +0.9
baz=346
HARP HAARP 83.29 5 P P 09 04 52.5 +0.8
baz=351
M26K Nabesna, AK 83.43 4 P P 09 04 53.1 +0.6
baz=353
MMPY Sheldon Lake, 83.44 359 P P 09 04 52.8 +0.3
baz=2.6
N14K Kuskokwak Cree 83.49 13 P P 09 04 54.1 +1.5
baz=338
M30M Minto, Yukon 83.49 1 P P 09 04 53.3 +0.6
baz=358
M24K Tolsona, Glenn 83.50 6 P P 09 04 53.3 +0.5
baz=350
N16K Nishlik Lake 83.50 12 P P 09 04 54.0 +1.2
baz=340
BVCY Beaver Creek 83.53 3 P P 09 04 53.8 +0.9
baz=355
M27K Edge Creek, AK 83.54 4 P P 09 04 53.5 +0.3
baz=354
N15K Kwethluk River 83.56 13 P P 09 04 54.5 +1.4
baz=339
M29M Somme Creek 83.58 2 P P 09 04 53.9 +0.5
baz=357
SML Sawmill 83.61 7 P P 09 04 54.1 +0.7
baz=348
SCM Sheep Creek Mo 83.67 6 P P 09 04 54.6 +0.9
baz=349
N17K Nushagak Hills 83.71 11 P P 09 04 55.5 +1.6
baz=341
PMR Palmer 83.74 7 P P 09 04 54.9 +0.9
baz=348
N18K Kilae Creek 83.77 10 P P 09 04 55.2 +1.1
baz=342
N19K Bonanza Creek 83.85 10 P P 09 04 55.8 +1.1
baz=343
M31M Drury Creek, Y 83.89 0 P P 09 04 55.2 +0.4
baz=360
KNK Knik Glacier 83.98 7 P P 09 04 55.8 +0.5
baz=348
SPIA Saint Paul Isl 84.00 19 P P 09 04 57.3 +2.0
baz=331
N25K Chitina, Valde 84.12 5 P P 09 04 56.9 +0.9
baz=352
KLU Klutina 84.13 6 P P 09 04 57.0 +0.9
baz=350
YUK3 Moose Creek 84.18 3 P P 09 04 57.0 +0.5
baz=355
O14K Tigyukauivet M 84.19 14 P P 09 04 57.3 +1.0
baz=338
O15K Ungalikthiuk R 84.53 13 P P 09 04 59.2 +1.2
baz=339
N31M Braeburn, Yuko 84.60 1 P P 09 04 58.4 +0.1
baz=359
N30M Aishikik Lake 84.60 1 P P 09 04 59.1 +0.6
baz=358
YUK4 Talbot Arm 84.68 2 P P 09 04 58.6 -0.4
baz=356
YUK8 Steele Glacier 84.70 3 P P 09 04 58.7 -0.6
baz=356
N32M Quiet Lake 84.94 359 P P 09 05 00.6 +0.4
baz=1.1
EYAK Cordova Ski Ar 85.08 6 P P 09 05 01.7 +0.9
baz=351
P17K Kvichak River 85.10 11 P P 09 05 02.2 +1.3
baz=342
P19K Oil Pt 85.14 10 P P 09 05 01.9 +0.7
baz=344
SEW Seward 85.16 8 P P 09 05 02.0 +0.9
baz=348
HYT Haines Junctio 85.23 2 P P 09 05 02.1 +0.4
baz=357
WHY Whitehorse 85.43 0 P P 09 05 03.1 +0.4
baz=360
P23K Montague Islan 85.48 7 P P 09 05 03.7 +0.9
baz=349
Q16K King Salmon 85.56 11 P P 09 05 04.8 +1.6
baz=342
KOTAN Kotaneelee Air 85.58 355 P P 09 05 04.1 +0.8
baz=8.5
Q19K Cape Douglas, 85.78 10 P P 09 05 05.3 +1.0
baz=344
KAIM Kayak Island 85.80 5 P P 09 05 05.1 +0.7
baz=352
Q18K Katmai Hardscr 85.85 11 P P 09 05 05.7 +0.9
baz=343
PINM Pinnacle 85.87 3 P P 09 05 05.5 +0.7
baz=355
P33M Teslin, Yukon 85.88 359 P P 09 05 05.1 +0.2
baz=1.3
P30M Million Dollar 85.95 1 P P 09 05 05.9 +0.7
baz=358
Q17K Contact Creek 86.08 11 P P 09 05 06.9 +1.0
baz=342
R17L Mt. Peulik Vol 86.60 12 P P 09 05 09.4 +1.0
baz=342
PLBC Pleasant Camp 86.62 1 P P 09 05 08.8 +0.3
baz=358
R33M Jennings River 86.66 358 P P 09 05 09.0 +0.2
baz=2.8
KDAK Kodiak Island 87.04 10 P P 09 05 10.5 +0.1
baz=345
Q32M Nakina River 87.12 359 P P 09 05 10.7 -0.4
baz=1.7
S14K Fog Glacier 87.30 14 P P 09 05 11.7 -0.2
baz=339
DLBC Dease Lake 87.59 358 P P 09 05 13.5 +0.2
baz=3.6
R32K Eaglecrest 87.83 0 P P 09 05 15.1 +0.8
baz=360
S32K Kilisnoo 88.63 0 P P 09 05 18.5 +0.4
baz=360
CHNA Chernabura Isl 88.65 14 P P 09 05 19.3 +1.1
baz=339
SIT Sitka 89.04 1 P P 09 05 20.6 +0.6
baz=359
T35M Bob Quinn 89.06 358 P P 09 05 20.8 +0.6
baz=3.4
ULM Lac du Bonnet 89.25 336 LR LR 09 45 01.7
comp=Z,57nm,18.1s,baz=80,slow=35
WRAK Wrangell Islan 89.67 359 P P 09 05 23.8 +0.8
baz=1.7
U33K Whale Pass 89.99 359 P P 09 05 24.7 +0.3
baz=1.0
CRAG Craig 90.63 359 P P 09 05 27.4 -0.1
baz=1.0
V35K Ketchikan 90.75 358 P P 09 05 28.1 +0.1
baz=2.3
QSPA South Pole Qui 124.08 180 PKP PKiKP 09 11 23.4 +0.3
comp=Z,2.1nm,1.1s,baz=27,slow=2.7,SNR=4.2

*SJA **07** 08:53:12.0±0.9, 22°.37S×67°.54W, h189km, ML3.4, MW3.5*
*SCB **07** 08:53:13.8±1.1, 22°.33S×67°.50W, h152km, ML3.6/2, Error ellipse: s-maj=7.4km s-min=6.4km az=1.0*

ISC 07 08:53:10.5±1.5, 22°.38S±0°.04×67°.49W±0°.04, h198km±11km, n53, σ1s 72/84, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	0.85	228	eP	Pn	08 53 40.8	+1.4
AF01				eS	Sn	08 54 17.1	+15
AF01	San Pedro de A	0.85	228	eP	Pn	08 53 40.3	+0.8
AF01				i S	Sn	08 54 01.5	-0.4
PB09	IPOC Station P	1.73	289	eP	Pn	08 53 47.4	+1.1
PB09				eS	Sn	08 54 14.2	+0.2
PB09				IAML		08 54 18.5	
	comp=Z,120nm,0.1s						
PB09	IPOC Station P	1.73	289 ⇑	iP	Pn	08 53 47.5	+1.2
PB09				i S	Sn	08 54 12.1	-1.9
PB09				IAML		08 54 17.1	
	comp=N,149nm,0.4s						
PB09	IPOC Station P	1.73	289	P	Pn	08 53 46.9	+0.6
YJA	Yavi	1.84	84	eP	Pn	08 53 49.3	+1.5
YJA				eS	Sn	08 54 10.9	-5.7
YJA	Yavi	1.84	84	P	Pn	08 53 48.8	+1.1
PB06	IPOC Station P	1.95	260	eP	Pn	08 53 49.5	+1.0
PB06				eS	Sn	08 54 18.1	+0.1
PB06				IAML		08 54 19.5	
	comp=Z,208nm,0.2s						
PB06	IPOC Station P	1.95	260	eP	Pn	08 53 49.5	+1.0
PB06				i S	Sn	08 54 17.0	-1.0
PB06	IPOC Station P	1.95	260	P	Pn	08 53 49.6	+1.0
MOCB	Mochara	2.06	57	P	Pn	08 53 50.9	+0.9
HJA	Humahuaca	2.09	114	eP	Pn	08 53 52.0	+1.8
SALTA		2.12	150	eP	Pn	08 53 52.8	+2.2
PB03	IPOC Station P	2.12	279	eP	Pn	08 53 51.0	+0.7
PB03				eS	Sn	08 54 20.1	-1.2
PB03				IAML		08 54 20.8	
	comp=Z,394nm,0.3s						
PB03	IPOC Station P	2.12	279 ⇑	iP	Pn	08 53 51.0	+0.7
PB03				i S	Sn	08 54 19.4	-1.8
PB03				IAML		08 54 20.6	
	comp=N,504nm,0.4s						
PB07	IPOC Station P	2.31	286	eP	Pn	08 53 53.2	+0.8

PB07 eS Sn **08 54 23.6 -1.4**
PB07 IAML 08 54 24.3
comp=Z,202nm,0.5s
PB07 IPOC Station P 2.31 286 ⇑*i* P **Pn 08 53 53.2 +0.8**
PB07 *i* S **Sn 08 54 23.0 -2.0**
PB02 IPOC Station P 2.47 295 *e*P **Pn 08 53 54.7 +0.7**
PB02 *e*S **Sn 08 54 26.7 -1.3**
PB02 IAML 08 54 32.8
comp=Z,269nm,0.2s
PB02 IPOC Station P 2.47 295 ⇑*i* P **Pn 08 53 54.6 +0.5**
PB02 *i* S **Sn 08 54 25.6 -2.4**
PB02 IAML 08 54 26.6
comp=N,356nm,0.4s
PB02 IPOC Station P 2.47 295 P **Pn 08 53 54.6 +0.5**
PB02 S **Sn 08 54 26.6 -1.4**
PB02 IAML 08 54 26.9
comp=N,249nm,0.4s
PB05 IPOC Station P 2.55 259 *e*P **Pn 08 53 55.8 +0.9**
PB05 *e*S **Sn 08 54 28.2 -1.3**
PB05 IAML 08 54 30.0
comp=Z,184nm,0.4s
PB05 IPOC Station P 2.55 259 ⇑*i* P **Pn 08 53 55.7 +0.9**
PB05 *i* S **Sn 08 54 27.0 -2.5**
PB05 IAML 08 54 30.5
comp=E,202nm,0.4s
PB08 IPOC Station P 2.72 325 *e*P **Pn 08 53 58.6 +1.5**
PB08 *e*S **Sn 08 54 34.2 +0.7**
PB08 IPOC Station P 2.72 325 *e*P **Pn 08 53 58.7 +1.6**
PB08 *i* S **Sn 08 54 32.9 -0.6**
PB08 IPOC Station P 2.72 325 P **Pn 08 53 58.8 +1.6**
AOVT TarijaAcel 2.72 72 P **Pn 08 53 58.4 +1.4**
PB10 IPOC Station P 3.04 248 *e*P **Pn 08 54 01.6 +1.2**
PB10 *e*S **Sn 08 54 38.5 -1.1**
PB10 IAML 08 54 39.7
comp=Z,77nm,0.4s
PB10 IPOC Station P 3.04 248 *e*P **Pn 08 54 01.5 +1.0**
PB10 *i* S **Sn 08 54 36.8 -2.7**
PB10 IAML 08 54 40.8
comp=E,125nm,0.2s
GO01 Chusmiza 3.13 329 *e*P **Pn 08 54 03.5 +1.4**
GO01 *e*S **Sn 08 54 44.3 +1.8**
GO01 IAML 08 54 45.7
comp=Z,36nm,0.1s
GO01 Chusmiza 3.13 329 *e*P **Pn 08 54 03.2 +1.1**
GO01 *i* S **Sn 08 54 42.8 +0.3**
GO01 IAML 08 54 45.8
comp=E,141nm,0.1s
GO01 Chusmiza 3.13 329 P **Pn 08 54 03.5 +1.4**
TA02 Huaiquique 3.24 310 *e*P **Pn 08 54 03.9 +1.1**
TA02 IAML 08 55 13.1
comp=Z,77nm,0.1s
PB11 IPOC Station P 3.30 322 *e*P **Pn 08 54 03.8 0.0**
PB11 *e*S **Sn 08 54 44.2 -1.3**
PB11 IAML 08 54 45.1
comp=Z,58nm,0.3s
PB11 IPOC Station P 3.30 322 *e*P **Pn 08 54 03.8 0.0**
PB11 *i* S **Sn 08 54 42.9 -2.6**
PB11 IPOC Station P 3.30 322 P **Pn 08 54 04.4 +0.6**
PB11 S **Sn 08 54 43.6 -1.9**
PB11 IAML 08 54 47.4
comp=Z,110nm,0.2s
PB14 IPOC Station P 3.48 230 *e*P **Pn 08 54 08.2 +2.1**
PB14 *e*S **Sn 08 54 48.5 -1.2**
PB14 IAML 08 54 52.8
comp=Z,101nm,0.6s
PSGCX Pisagua 3.71 318 *e*P **Pn 08 54 07.9 -0.8**
SOEO Opoqueri 3.82 354 P **Pn 08 54 12.7 +2.2**
FSA Cafayete 3.96 160 *e*P **Pn 08 54 14.6 +2.7**
PB16 IPOC Station P 4.45 334 *e*P **Pn 08 54 19.7 +1.3**
PB16 *e*S **Sn 08 55 12.4 +0.6**
PB16 IAML 08 55 13.4
comp=Z,14nm,0.6s
PB16 IPOC Station P 4.45 334 *e*P **Pn 08 54 19.7 +1.3**
PB16 *i* S **Sn 08 55 09.3 -2.5**
PB16 IPOC Station P 4.45 334 P **Pn 08 54 20.0 +1.6**
PB12 IPOC Station P 4.60 324 *e*P **Pn 08 54 19.1 -0.7**
PB12 *e*S **Sn 08 55 12.3 -2.1**
PB12 IAML 08 55 20.0
comp=Z,13nm,1.4s
PB12 IPOC Station P 4.60 324 *e*P **Pn 08 54 19.0 -0.8**
PB12 *i* S **Sn 08 55 10.8 -3.6**
AC02 Maricunga 4.68 198 *e*P **Pn 08 54 23.2 +2.0**
AC02 *e*S **Sn 08 55 13.8 -3.0**
AC02 IAML 08 55 22.5
comp=Z,12nm,0.6s
AOEA Aiquile 4.69 27 P **Pn 08 54 22.4 +1.2**
AC01 Pan de Azucar 4.70 216 *e*P **Pn 08 54 21.4 +0.4**
AC01 *e*S **Sn 08 55 13.8 -2.8**
AC01 IAML 08 55 15.7
comp=Z,26nm,0.3s
BBOJ La Paz, Jacaqu 5.42 353 P **Pn 08 54 33.4 +2.6**
SOEJ Jacaque 5.42 353 P **Pn 08 54 33.1 +2.3**
BBOD La Paz, Gloria 5.81 349 P **Pn 08 54 38.0 +2.2**
LPAZ La Paz 6.09 354 P **Pn 08 54 42.0 +2.4**
BBOB La Paz, Bander 6.24 354 P **Pn 08 54 43.7 +2.4**
SIV San Ignacio 8.79 45 P **Pn 08 55 14.9 +0.8**

*IDC **07** 09:06:36.6±4.1,52°.57N×170°.26E, h0km, mb3.6/2, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=247.1km s-min=33.8km az=180.0*
*KRSC **07** 09:06:37.9±1.1,53°.06N×169°.92E, h42km±66km, Ml3.8*
*NEIC **07** 09:06:39.3±0.7,53°.1N±0°.3×170°.1E±0°.1, h10km±2km, mb4.2/8, Error ellipse: s-maj=42.7km s-min=12.4km az=181.0*

ISC 07 09:06:41.3±0.8,53°.1N±0°.1×169°.99E±0°.06, h35km, n39, σ1$47/33, mb3.9/8, 2C-1D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**2.52**	**96**	Pn	**Pn**	**09 07 19.0**	**-0.6**
SMY	**Shemya**	**2.52**	**96**	Pn	**Pn**	**09 07 19.2**	**-0.4**
BKI	**Bering**	**3.18**	**314**	*e*P	**Pn**	**09 07 28.8**	**+0.1**
BKI				*e*S	**Sn**	**09 08 03.8**	**-1.6**
MKZ	**Mys Kozlova**	**5.11**	**290**	*e*P	**Pn**	**09 07 55.5**	**+0.2**
AMKA	**Amchitka**	**5.97**	**103**	Pn	**Pn**	**09 08 05.6**	**-1.5**
SPN	**Mys Shipunski**	**6.00**	**274**	*e*P	**Pn**	**09 08 09.1**	**+1.6**
SPN				*e*S	**Sn**	**09 09 13.9**	**-1.1**
AVH	**Avacha**	**6.77**	**276**	*e*P	**Pn**	**09 08 19.8**	**+1.7**
KOK	**Koryaka**	**6.83**	**276**	*e*P	**Pn**	**09 08 20.4**	**+1.5**
RUS	**Russkaya**	**7.00**	**269**	*e*P	**Pn**	**09 08 22.4**	**+1.3**
MTVR	**Mutnovka**	**7.19**	**270**	*e*P	**Pn**	**09 08 25.5**	**+1.6**
GNL	**Ganaly**	**7.23**	**280**	*e*P	**Pn**	**09 08 26.8**	**+2.4**
GRL	**Gorelyy**	**7.24**	**271**	*e*P	**Pn**	**09 08 26.7**	**+2.1**
ASAK	**Asacha**	**7.37**	**269**	*e*P	**Pn**	**09 08 28.2**	**+1.8**
KDTR	**Khodutka, Kamc**	**7.39**	**265**	*e*P	**Pn**	**09 08 28.5**	**+1.0**
KDTR				*e*S	**Sn**	**09 09 45.2**	**-3.9**
PEA0B	**Petropavlovsk-**	**7.40**	**275**	Pn	**Pn**	**09 08 28.6**	**+1.9**
PETK	**Petropavlovsk-** 0.7nm,0.3s,baz=93,slow=20,SNR=18	**7.40**	**275**	Pn	**Pn**	**09 08 28.9**	**+2.2**
PETK	0.9nm,0.3s,baz=102,slow=27,SNR=11 1.0nm,0.4s				Sn	**Sn**	**09 09 48.4**	**-1.0**
PETK	**Petropavlovsk-**	**7.40**	**275**			**Pn**	**09 08 28.3**	**+1.6**
KIWB	**Kanaga Island**	**7.95**	**94**	Pn		**Pn**	**09 08 33.6**	**-0.6**
ADK	**Adak**	**8.23**	**93**	Pn		**Pn**	**09 08 37.1**	**-0.9**
ATKA	**Atka Island**	**9.66**	**89**	Pn		**Pn**	**09 08 56.9**	**-0.7**
L19K	**White Mountain**	**20.66**	**50**	P		Pn	09 11 19.5	-0.7
H19K	**Roundabout Mou**	**20.87**	**40**	P		Pn	09 11 20.6	-1.8
Q19K	**Cape Douglas,**	**20.96**	**59**	P		**P**	**09 11 20.3**	**-0.7**
OHAK	**Old Harbor**	**21.22**	**64**	P		**P**	**09 11 22.6**	**-1.0**
OHAK				IAmb		IAmb	09 11 55.1	
	comp=Z,33nm,1.5s							
F25K	**Christian Rive**	**25.59**	**38**	P		**P**	**09 12 07.6**	**+0.8**
F25K				IAmb		IAmb	09 12 10.5	
	comp=Z,3.3nm,0.8s							
GLB	**Gilahina Butte**	**25.84**	**53**	P		**P**	**09 12 09.6**	**+0.5**
GLB				IAmb		IAmb	09 12 11.2	
	comp=Z,1.9nm,0.8s							
H11N2	**WAKE ISLAND Hy** baz=3.7,slow=76,SNR=66	**33.37**	**185**	T		T	09 49 02.7	
H11N3	**WAKE ISLAND Hy** baz=3.7,slow=76,SNR=57	**33.38**	**185**	T		T	09 49 05.5	
H11N1	**WAKE ISLAND Hy** baz=3.7,slow=76,SNR=41	**33.38**	**185**	T		T	09 49 05.8	
H11S1	**WAKE ISLAND Hy** baz=3.8,slow=76,SNR=53	**34.59**	**185**	T		T	09 50 35.1	
H11S3	**WAKE ISLAND Hy** baz=3.8,slow=76,SNR=33	**34.60**	**186**	T		T	09 50 39.7	
H11S2	**WAKE ISLAND Hy** baz=3.8,slow=76,SNR=45	**34.61**	**185**	T		T	09 50 36.9	
PDAR	**Pinedale Array**	**52.18**	**67**	P		**P**	**09 15 48.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=318,slow=7.5,SNR=4.1							
	comp=Z,0.4nm,0.8s							
MK31	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=93,slow=15,SNR=3.9	**53.41**	**301**	Pn		P	09 16 02.8	+5.5
MK31				⇑Lg		Lg	09 17 06.7	
	comp=Z,0.8nm,0.5s,baz=84,slow=33							
MAKZ	**Makanchi** comp=Z,0.9nm,0.6s	**53.56**	**301**	⇓Pn		P	09 16 04.6	+6.2
MAKZ				⇑Lg		Lg	09 17 13.0	
	comp=Z,1.0nm,0.5s							
TX31	**Lajitas Ar. Si**	**65.02**	**74**	P		**P**	**09 17 18.7**	**+0.9**
TX31				IAmb		IAmb	09 17 19.4	
	comp=Z,2.8nm,1.4s							
TXAR	**Lajitas Array** comp=Z,0.4nm,0.4s,baz=304,slow=5.2,SNR=25 comp=Z,0.4nm,0.4s	**65.02**	**74**	P		**P**	**09 17 18.7**	**+0.9**
TXAR	**Lajitas Array**	**65.02**	**74**	P		**P**	**09 17 18.4**	**+0.6**
M57A	**Sunshine Farm,**	**69.63**	**48**	P		**P**	**09 17 46.5**	**-0.2**

*SJA **07** 09:24:00.9±0.7, 19°.09S×69°.55W, h124km±3km, ML4.2, MW4.1*
*NEIC **07** 09:24:01.4±1.2, 19°.07S±0°.04×69°.52W±0°.06, h125km±4km, mb4.3/13, ML4.2(GUC), Error ellipse: s-maj=7.7km s-min=5.4km az=94.0*
*GFZ **07** 09:24:01.6±0.2, 19°.5S±3°.×6°.9W±°., h122km, M4.4/10, mb4.5/10, confirmed*
*IDC **07** 09:24:01.9±0.9, 19°.09S×69°.10W, h121km±7km, mb3.8/8, mbtmp4.2/11, MS2.5/1, Error ellipse: s-maj=17.2km s-min=13.1km az=120.0*
*GUC **07** 09:24:02.5±0.8, 19°.08S×69°.51W, h120km±3km, ML4.3*
*VAO **07** 09:24:04.1±0.4, 18°.95S×68°.95W, h121km, mb4.6, Presumed earthquake*

ISC 07 09:24:00.8±0.5, 19°.07S±0°.03×69°.29W±0°.05, h119km±4km, n148, σ1$48/175, mb4.0/8, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.61**	**171**		**Pn**	**09 24 21.6**	**+1.6**
GO01					**Sn**	**09 24 36.6**	**+2.3**
GO01	**Chusmiza**	**0.61**	**171**	*e*P	**Pn**	**09 24 21.6**	**+1.6**
GO01				*e*S	**Sn**	**09 24 37.1**	**+2.8**
GO01				IAML		09 24 39.1	
	comp=Z,10μm,0.6s						
GO01	**Chusmiza**	**0.61**	**171**	⇑*i* P	**Pn**	**09 24 21.6**	**+1.6**
GO01				*e*S	**Sn**	**09 24 36.6**	**+2.3**
GO01				IAML		09 24 37.4	
	comp=N,23μm,0.5s						
GO01	**Chusmiza**	**0.61**	**171**	P	**Pn**	**09 24 21.7**	**+1.8**
PB16	**IPOC Station P**	**0.75**	**344**		**Pn**	**09 24 22.2**	**+1.0**
PB16					**Sn**	**09 24 37.3**	**+0.8**
PB16	**IPOC Station P**	**0.75**	**344**	*e*P	**Pn**	**09 24 22.2**	**+1.0**
PB16				*e*S	**Sn**	**09 24 38.1**	**+1.7**
PB16				IAML		09 24 39.0	
	comp=Z,9μm,0.4s						
PB16	**IPOC Station P**	**0.75**	**344**	*i* P	**Pn**	**09 24 22.2**	**+1.0**
PB16				*e*S	**Sn**	**09 24 37.2**	**+0.8**
PB16				IAML		09 24 38.5	
	comp=E,24μm,0.5s						
PB16	**IPOC Station P**	**0.75**	**344**	P	**Pn**	**09 24 22.4**	**+1.2**
PB11	**IPOC Station P**	**0.77**	**206**		**Pn**	**09 24 36.2**	**+0.3**
PB11	**IPOC Station P**	**0.77**	**206**	*e*P	**Pn**	**09 24 21.3**	**+0.5**
PB11				*e*S	**Sn**	**09 24 36.6**	**+0.6**
PB11				IAML		09 24 40.1	
	comp=Z,3μm,0.2s						
PB11	**IPOC Station P**	**0.77**	**206**	⇑*i* P	**Pn**	**09 24 21.4**	**+0.6**
PB11				*e*S	**Sn**	**09 24 36.4**	**+0.4**
PB11				IAML		09 24 37.4	
	comp=N,15μm,0.5s						
PB11	**IPOC Station P**	**0.77**	**206**	P	**Pn**	**09 24 21.5**	**+0.6**
PX02	**IPOC Station P**	**0.86**	**277**	*e*P	**Pn**	**09 24 20.2**	**-1.3**
PSGCX	**Pisagua**	**0.95**	**236**		**Pn**	**09 24 22.1**	**-0.2**
PSGCX					**Sn**	**09 24 37.3**	**-1.2**
PSGCX	**Pisagua**	**0.95**	**236**	P	**Pn**	**09 24 22.1**	**-0.2**
PB12	**IPOC Station P**	**1.08**	**294**		**Pn**	**09 24 22.9**	**-0.7**
PB12	**IPOC Station P**	**1.08**	**294**	⇑*i* P	**Pn**	**09 24 22.9**	**-0.7**
PB12				*e*S	**Sn**	**09 24 38.9**	**-2.0**
PB12				IAML		09 24 40.3	
	comp=E,8μm,0.6s						
PB12	**IPOC Station P**	**1.08**	**294**	P	**Pn**	**09 24 22.9**	**-0.7**
PB08	**IPOC Station P**	**1.08**	**173**		**Pn**	**09 24 25.7**	**+1.7**
PB08					**Sn**	**09 24 43.7**	**+2.2**
PB08	**IPOC Station P**	**1.08**	**173**	*e*P	**Pn**	**09 24 25.6**	**+1.6**
PB08				*e*S	**Sn**	**09 24 43.8**	**+2.3**
PB08				IAML		09 24 44.4	
	comp=Z,2μm,0.5s						
PB08	**IPOC Station P**	**1.08**	**173**	⇑*i* P	**Pn**	**09 24 25.7**	**+1.7**
PB08				*e*S	**Sn**	**09 24 43.6**	**+2.2**
PB08				IAML		09 24 45.1	
	comp=E,3μm,0.4s						
PB08	**IPOC Station P**	**1.08**	**173**	P	**Pn**	**09 24 25.9**	**+1.9**
AP01	**Chacalluta**	**1.21**	**305**		**Pn**	**09 24 24.5**	**-0.4**
AP01	**Chacalluta**	**1.21**	**305**	*e*P	**Pn**	**09 24 24.6**	**-0.3**
AP01				*e*S	**Sn**	**09 24 46.7**	**+3.6**
AP01				IAML		09 24 49.5	
	comp=Z,3μm,0.4s						
AP01	**Chacalluta**	**1.21**	**305**	*e*P	**Pn**	**09 24 24.5**	**-0.4**
AP01				*e*S	**Sn**	**09 24 41.7**	**-1.4**
AP01	**Chacalluta**	**1.21**	**305**	P	**Pn**	**09 24 24.6**	**-0.3**
TA02	**Huaiquique**	**1.44**	**213**	*e*P	**Pn**	**09 24 27.1**	**-0.4**
TA02				IAML		09 24 48.0	
	comp=Z,2μm,0.1s						
TA02	**Huaiquique**	**1.44**	**213**	*e*P	**Pn**	**09 24 27.4**	**0.0**
TA02				*e*S	**Sn**	**09 24 45.8**	**-1.8**
TA02				IAML		09 24 47.8	
	comp=N,6μm,0.2s						
TA02	**Huaiquique**	**1.44**	**213**	P	**Pn**	**09 24 27.1**	**-0.3**
PB18	**Visviri**	**1.48**	**353**	Pn	**Pn**	**09 24 31.0**	**+2.5**
PB18	**Visviri**	**1.48**	**353**	*e*P	**Pn**	**09 24 30.9**	**+2.5**
PB18				*e*S	**Sn**	**09 24 53.4**	**+3.9**
PB18	**Visviri**	**1.48**	**353**	P	**Pn**	**09 24 31.0**	**+2.5**
PB02	**IPOC Station P**	**2.31**	**194**		**Pn**	**09 24 38.9**	**+0.7**
PB02	**IPOC Station P**	**2.31**	**194**	*e*P	**Pn**	**09 24 39.0**	**+0.7**
PB02				*e*S	**Sn**	**09 25 06.4**	**-0.7**
PB02				IAML		09 25 08.0	
	comp=Z,1μm,0.3s						
PB02	**IPOC Station P**	**2.31**	**194**	*e*P	**Pn**	**09 24 39.0**	**+0.7**
PB02				IAML		09 25 07.8	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**2.31**	**194**	P	**Pn**	**09 24 39.1**	**+0.8**
PB07	**IPOC Station P**	**2.71**	**192**		**Pn**	**09 24 44.0**	**+0.7**
PB07	**IPOC Station P**	**2.71**	**192**	*e*P	**Pn**	**09 24 44.1**	**+0.7**
PB07				*e*S	**Sn**	**09 25 15.4**	**-0.7**
PB07				IAML		09 25 25.7	
	comp=Z,502nm,0.5s						
PB07	**IPOC Station P**	**2.71**	**192**	*e*P	**Pn**	**09 24 44.1**	**+0.7**
PB07				IAML		09 25 19.0	
	comp=E,938nm,0.5s						
PB07	**IPOC Station P**	**2.71**	**192**	P	**Pn**	**09 24 44.7**	**+1.3**
PB09	**IPOC Station P**	**2.72**	**179**		**Pn**	**09 24 45.4**	**+1.8**
PB09	**IPOC Station P**	**2.72**	**179**	*e*P	**Pn**	**09 24 45.1**	**+1.6**
PB09				*e*S	**Sn**	**09 25 18.0**	**+1.6**
PB09				IAML		09 25 50.0	
	comp=Z,629nm,0.7s						
PB09	**IPOC Station P**	**2.72**	**179**	*e*P	**Pn**	**09 24 45.1**	**+1.6**
PB09				*e*S	**Sn**	**09 25 12.9**	**-3.5**
PB09				IAML		09 25 15.8	
	comp=E,539nm,0.4s						
PB09	**IPOC Station P**	**2.72**	**179**	P	**Pn**	**09 24 46.0**	**+2.4**
LPAZ	**La Paz**	**2.98**	**22**	P	**Pn**	**09 24 49.6**	**+2.3**
	comp=E,38nm,0.4s,baz=217,slow=6.2,SNR=222						
LPAZ				S	**Sn**	**09 25 24.4**	**+1.2**
	comp=E,60nm,0.6s,baz=163,slow=20,SNR=6.4						
LPAZ				LR	LR	09 26 25.4	
	comp=E,82nm,19.1s,baz=162,slow=49						
LPAZ	**La Paz**	**2.98**	**22**	Pn	**Pn**	**09 24 50.4**	**+3.1**
LPAZ	**La Paz**	**2.98**	**22**	*e*P	**Pn**	**09 24 50.5**	**+3.1**
LPAZ	**La Paz**	**2.98**	**22**	*e*P	**Pn**	**09 24 49.9**	**+2.5**
LPAZ	**La Paz**	**2.98**	**22**	P	**Pn**	**09 24 50.5**	**+3.1**
PB03	**IPOC Station P**	**3.00**	**188**		**Pn**	**09 24 47.7**	**+0.4**
PB03	**IPOC Station P**	**3.00**	**188**	*e*P	**Pn**	**09 24 48.0**	**+0.8**
PB03				*e*S	**Sn**	**09 25 22.9**	**-0.1**
PB03				IAML		09 25 25.4	
	comp=Z,507nm,0.6s						
PB03	**IPOC Station P**	**3.00**	**188**	*e*P	**Pn**	**09 24 48.0**	**+0.8**
PB03				IAML		09 25 47.3	
	comp=E,612nm,0.5s						
PB03	**IPOC Station P**	**3.00**	**188**	P	**Pn**	**09 24 47.9**	**+0.6**
PB06	**IPOC Station P**	**3.63**	**184**		**Pn**	**09 24 55.8**	**+0.2**
PB06	**IPOC Station P**	**3.63**	**184**	*e*P	**Pn**	**09 24 56.2**	**+0.6**
PB06				*e*S	**Sn**	**09 25 39.0**	**+1.1**
PB06				IAML		09 25 58.8	
	comp=Z,404nm,0.7s						
PB06	**IPOC Station P**	**3.63**	**184**	*e*P	**Pn**	**09 24 56.0**	**+0.4**
PB06	**IPOC Station P**	**3.63**	**184**	P	**Pn**	**09 24 56.2**	**+0.6**
PB05	**IPOC Station P**	**3.86**	**193**		**Pn**	**09 24 58.2**	**-0.4**
PB05	**IPOC Station P**	**3.86**	**193**	*e*P	**Pn**	**09 24 58.5**	**-0.1**
PB05				*e*S	**Sn**	**09 25 42.4**	**-1.1**
PB05				IAML		09 25 44.2	
	comp=Z,208nm,1.3s						
PB05	**IPOC Station P**	**3.86**	**193**	*e*P	**Pn**	**09 24 58.4**	**-0.3**
PB05	**IPOC Station P**	**3.86**	**193**	P	**Pn**	**09 24 58.7**	**0.0**
PB10	**IPOC Station P**	**4.58**	**195**	Pn	**Pn**	**09 25 06.9**	**-1.3**
PB10	**IPOC Station P**	**4.58**	**195**	*e*P	**Pn**	**09 25 07.0**	**-1.1**
PB10				*e*S	**Sn**	**09 25 57.5**	**-2.9**
PB10				IAML		09 26 00.1	
	comp=Z,120nm,0.8s						
PB10	**IPOC Station P**	**4.58**	**195**	P	**Pn**	**09 25 07.0**	**-1.1**
YJA	**Yavi**	**4.70**	**132**	*e*P	**Pn**	**09 25 13.5**	**+3.3**
PB14	**IPOC Station P**	**5.63**	**190**	P	**Pn**	**09 25 21.9**	**-0.7**
AC01	**Pan de Azucar**	**7.15**	**189**	Pn	**Pn**	**09 25 40.0**	**-2.8**
AC02	**Maricunga**	**7.74**	**179**		**Pn**	**09 25 50.6**	**-0.6**
SIV	**San Ignacio** comp=Z,16nm,0.4s,baz=261,slow=9.4,SNR=149	**8.42**	**70**	P	**Pn**	**09 25 59.5**	**-0.6**
SIV				S	**Sn**	**09 27 29.4**	**-4.0**
	comp=Z,10nm,0.8s,baz=158,slow=20,SNR=4.3						
BBSD	**Serra de San D**	**8.46**	**79**	*e*P	**Pn**	**09 25 59.9**	**-0.8**
BBSD				*e*S	**Sn**	**09 27 30.0**	**-4.5**
AC04	**Llanos de Chal**	**9.24**	**190**	Pn	Pn	09 26 06.2	-4.9
PTLB	**Pontes e Lacer**	**10.35**	**71**		**Pn**	**09 26 25.4**	**-0.7**
PTLB	**Pontes e Lacer**	**10.35**	**71**	*e*P	**Pn**	**09 26 25.0**	**-1.0**
VILB	**Vilhena**	**10.64**	**57**		**Pn**	**09 26 28.4**	**-1.8**
VILB	**Vilhena**	**10.64**	**57**	*e*P	**Pn**	**09 26 29.3**	**-0.8**
VILB				*e*S	**Sn**	**09 28 22.1**	**-5.4**
COIM	**Forte Coimbra**	**10.88**	**96**	*e*P	**Pn**	**09 26 31.5**	**-1.8**
MURT	**Porto Murtinho**	**11.26**	**105**	*e*P	**Pn**	**09 26 37.1**	**-1.1**
AQDB	**Aquidauana**	**12.88**	**99**		**Pn**	**09 26 59.8**	**+0.3**
AQDB	**Aquidauana**	**12.88**	**99**	*e*P	**Pn**	**09 26 58.9**	**-0.6**
AQDB	**Aquidauana**	**12.88**	**99**	P	**Pn**	**09 26 59.0**	**-0.5**
CPUP	**Villa Florida** comp=Z,3.3nm,0.7s,baz=292,slow=13,SNR=7.4	**13.19**	**125**	P	**Pn**	**09 27 03.7**	**+0.1**
CPUP	**Villa Florida**	**13.19**	**125**	Pn	**Pn**	**09 27 04.7**	**+1.1**
CPUP	**Villa Florida**	**13.19**	**125**	*e*P	**Pn**	**09 27 02.2**	**-1.4**
CPUP	**Villa Florida**	**13.19**	**125**	P	**Pn**	**09 27 03.6**	**0.0**
SALV	**Santo Antonio**	**13.35**	**78**	*e*P	**Pn**	**09 27 03.6**	**-2.1**
PP1B	**Ponte de Pedra**	**13.76**	**86**	*e*P	**Pn**	**09 27 10.0**	**-1.1**
AMBA	**Amambai (Brazi**	**13.90**	**109**	*e*P	**Pn**	**09 27 13.9**	**+1.1**
MT02	**Curacav**	**14.23**	**186**	Pn	**Pn**	**09 27 16.8**	**-0.1**
MT08	**Bocatoma Ro**	**14.34**	**182**	Pn	**Pn**	**09 27 17.0**	**-1.5**
MT01	**Popeta**	**14.84**	**186**	P	**Pn**	**09 27 25.4**	**+0.7**
CLDB	**Colider**	**15.37**	**60**	*e*P	**Pn**	**09 27 30.0**	**-1.4**
CLDB	**Colider**	**15.37**	**60**	P	**P**	**09 27 32.4**	**-1.0**
BO02	**Sierra Bellavi**	**15.72**	**185**	P	**P**	**09 27 37.5**	**+0.2**
TRCB	**Terra Rica**	**16.00**	**106**	*e*P	**Pn**	**09 27 37.1**	**-2.1**
TRCB	**Terra Rica**	**16.00**	**106**	P	**P**	**09 27 41.9**	**+1.5**
TEFE	**Tefe**	**16.12**	**17**	*e*P	**Pn**	**09 27 40.0**	**-0.7**
ML02	**Panimavida** comp=Z,11nm,0.7s	**16.74**	**186**	IAmb	IAmb	09 27 51.6	
ML02	**Panimavida**	**16.74**	**186**	P	**Pn**	**09 27 48.8**	**+0.6**
PTGB	**Pitanga**	**16.94**	**112**	*e*P	**P**	**09 27 52.3**	**+1.4**
ARAG	**Araguaiana, MT**	**17.01**	**81**	*e*P	**Pn**	**09 27 50.5**	**-1.2**
BI02	**San Fabin de**	**17.62**	**185**	P	**P**	**09 27 57.5**	**-0.7**
BI02	**San Fabin de**	**17.62**	**185**	P	**Pn**	**09 27 59.6**	**+0.7**
ITAB	**Concordia**	**17.74**	**120**	P	**Pn**	**09 28 00.5**	**+0.1**
ITAB				IAmb	IAmb	09 28 38.3	
	comp=Z,35nm,1.5s						
MACA	**Manacapuru-AM**	**17.91**	**29**	P	**P**	**09 28 01.1**	**-0.4**
MACA	**Manacapuru-AM**	**17.91**	**29**	*e*P	**P**	**09 28 01.1**	**-0.4**
CPSB	**Cacapava Do Su**	**18.27**	**131**		**Pn**	**09 28 06.2**	**-0.5**
CPSB				IAmb	IAmb	09 28 08.3	
	comp=Z,27nm,1.0s						
CPSB	**Cacapava Do Su**	**18.27**	**131**	*e*P	**Pn**	**09 28 06.5**	**-0.3**
CPSB	**Cacapava Do Su**	**18.27**	**131**	P	**Pn**	**09 28 07.6**	**+0.9**
SNDB	**Serra Nova Dou**	**18.71**	**70**	*e*P	**P**	**09 28 10.4**	**+0.2**
FRTB	**Fartura**	**18.88**	**106**	*e*P	**P**	**09 28 12.0**	**0.0**
FRTB	**Fartura**	**18.88**	**106**	P	**Pn**	**09 28 13.2**	**-0.8**
BB19B	**Bebedouro**	**19.61**	**99**	*e*P	**P**	**09 28 20.3**	**+0.3**
ITTB	**Itaituba**	**19.71**	**44**	*e*P	**P**	**09 28 20.6**	**-0.5**
TRQA	**Tornquist**	**19.97**	**163**		**P**	**09 28 25.3**	**+1.6**
IPMB	**Ipameri, GO**	**20.02**	**90**	*e*P	**P**	**09 28 24.3**	**-0.2**
GO06	**Curarrehue**	**20.54**	**185**		**P**	**09 28 28.9**	**-1.0**
GO06				IAmb	IAmb	09 28 36.7	
	comp=Z,13nm,0.9s						
GO06	**Curarrehue**	**20.54**	**185**	P	**P**	**09 28 29.9**	**0.0**
BDFB	**Brasilia** comp=Z,8.8nm,0.4s,baz=265,slow=9.8,SNR=17 comp=Z,8.8nm,0.4s	**20.59**	**84**	P	**P**	**09 28 30.7**	**0.0**
RCLB	**Rio Claro- Sao**	**20.62**	**103**	*e*P	**P**	**09 28 30.8**	**-0.2**
SPB	**Sao Paulo**	**20.85**	**106**	*e*P	**P**	**09 28 33.7**	**+0.4**
PMNB	**Patos De Minas**	**21.64**	**92**	*e*P	**P**	**09 28 41.6**	**-0.4**
PMNB	**Patos De Minas**	**21.64**	**92**	P	**P**	**09 28 41.8**	**-0.1**
PRPB	**Parauapebas**	**22.89**	**58**	*e*P	**P**	**09 28 53.6**	**-0.9**
BOAV	**Boa Vista**	**23.00**	**23**	P	**P**	**09 28 55.3**	**-

mb4.4/16
THE ***07*** *09:45:14.8,43°N±16°×1°8E±1°8,h152km±32km,M4.0/32,*
mb4.2/9,MLh3.9/32
ISC 07 09:45:07.9±1.0,**43°20N**±0°02×**17°86E**±0°01,**h8**km±7km,
n288,σ1§52/393,**mb4.1/7**,**22C-16D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time h m s	Res ISC
STON	**Ston**	**0.35**	**200**	*i* Pg	**Pg**	**09 45 14.5**	**-0.2**
STON				Sg	**Sg**	**09 45 20.0**	**+0.8**
STON	**Ston**	**0.35**	**200**	*e*Pg	**Pg**	**09 45 14.4**	**-0.2**
STON				*e*Sg	**Sg**	**09 45 20.2**	**+1.0**
KLINJ	**Klinje**	**0.53**	**93**	*e*Pg	**Pg**	**09 45 17.6**	**-0.5**
KLINJ				*e*Sg	**Sg**	**09 45 26.0**	**+0.9**
DBRK	**Dubrovnik**	**0.57**	**158**	*i* Pg	**Pg**	**09 45 18.9**	**+0.1**
DBRK				Sg	**Sg**	**09 45 27.7**	**+1.5**
BRY	**Bratogost**	**0.58**	**121**	*e*Pg	**Pg**	**09 45 18.6**	**-0.4**
BRY				*e*Sg	**Sg**	**09 45 28.0**	**+1.4**
BRY	**Bratogost**	**0.58**	**121**	⇑*i*Pg	**Pg**	**09 45 18.3**	**-0.7**
BRY				*i* Sg	**Sg**	**09 45 27.7**	**+1.1**
TREB	**Trebinje**	**0.60**	**143**	*e*Pg	**Pg**	**09 45 18.9**	**-0.5**
TREB				*e*Sg	**Sg**	**09 45 28.4**	**+1.2**
RICI	**Ricice**	**0.61**	**299**	*i* Pg	**Pg**	**09 45 19.1**	**-0.6**
RICI				Sg	**Sg**	**09 45 27.9**	**+0.2**
MAKA	**Makarska**	**0.62**	**279**	*i* Pg	**Pg**	**09 45 18.8**	**-1.1**
MAKA				Sg	**Sg**	**09 45 28.4**	**+0.3**
UPM	**Unac-Piva**	**0.76**	**89**	⇑*i*Pg	**Pg**	**09 45 21.7**	**-0.9**
UPM				*e*Sg	**Sg**	**09 45 33.3**	**+0.8**
UPM	**Unac-Piva**	**0.76**	**89**	⇑*i*Pg	**Pg**	**09 45 21.7**	**-0.9**
UPM				*i* Sg	**Sb**	**09 45 33.9**	**-0.2**
LSTV	**Lastovo**	**0.83**	**239**	*e*Pg	**Pg**	**09 45 23.7**	**-0.1**
LSTV				Sg	**Sg**	**09 45 34.7**	**0.0**
HCY	**Herceg Novi**	**0.88**	**148**	*e*Pg	**Pg**	**09 45 23.9**	**-0.9**
HCY				*e*Sg	**Sg**	**09 45 37.1**	**+0.9**
HCY	**Herceg Novi**	**0.88**	**148**	⇓*i*Pg	**Pg**	**09 45 23.8**	**-1.0**
HCY				*i* Sg	**Sb**	**09 45 37.9**	**+0.6**
NKME	**Niksic**	**0.91**	**118**	⇓*i*Pg	**Pg**	**09 45 24.2**	**-1.1**
NKME				*i* Sg	**Sb**	**09 45 38.9**	**+0.8**
CEME	**Cevo**	**1.01**	**130**	⇓*i*Pg	**Pg**	**09 45 26.1**	**-1.2**
CEME				*i* Sg	**Sn**	**09 45 42.3**	**-0.5**
PLE	**Pljevlja**	**1.12**	**83**	⇑*i*Pg	**Pb**	**09 45 28.4**	**-1.2**
PLE				*i* Sg	**Sn**	**09 45 45.8**	**+0.1**
BUM	**Brajici-Budva**	**1.17**	**139**	⇓*i*Pg	**Pb**	**09 45 29.3**	**-1.1**
BUM				*i* Sg	**Sn**	**09 45 48.1**	**+1.2**
KOME	**Kolasin**	**1.26**	**105**	⇑*i*Pg	**Pn**	**09 45 30.5**	**-1.4**
KOME				*i* Sg	**Sn**	**09 45 50.8**	**+1.8**
PDG	**Podgorica**	**1.28**	**126**	⇓P	**Pn**	**09 45 31.5**	**-0.5**
PDG				⇑S	**Sb**	**09 45 49.1**	**+0.4**
PDG	**Podgorica**	**1.28**	**126**		**Pn**	**09 45 30.8**	**-1.2**
PDG				Sn	**Sg**	**09 45 51.1**	**+2.1**
PDG	**Podgorica**	**1.28**	**126**	*e*Pg	**Pn**	**09 45 31.3**	**-0.7**
PDG				*e*Sg	**Sg**	**09 45 51.8**	**+2.8**
PDG	**Podgorica**	**1.28**	**126**	*e*Pg	**Pn**	**09 45 30.6**	**-1.4**
PDG				*e*Sg	**Sg**	**09 45 50.0**	**+1.0**
PDG	**Podgorica**	**1.28**	**126**	P	**Pn**	**09 45 30.9**	**-1.2**
PDG	**Podgorica**	**1.28**	**126**	⇑*i*Pg	**Pn**	**09 45 30.9**	**-1.1**
PDG				*i* Sg	**Sg**	**09 45 51.3**	**+2.3**
BBLS	**Lazi&#263i**	**1.30**	**59**	*e*Pn	**Pn**	**09 45 32.6**	**+0.1**
BBLS				*e*Sn	**Sg**	**09 45 51.0**	**+1.1**
BBLS	**Lazi&#263i**	**1.30**	**59**	⇑*i*Pg	**Pn**	**09 45 32.3**	**-0.2**
BBLS				*e*Sg	**Sb**	**09 45 49.7**	**+0.1**
DRME	**Dracevica, Mon**	**1.40**	**136**	⇑*i*Pg	**Pn**	**09 45 33.9**	**+0.2**
DRME				*e*Sg	**Sg**	**09 45 54.0**	**+1.1**
DRME	**Dracevica, Mon**	**1.40**	**136**	*e*Pg	**Pn**	**09 45 33.7**	**0.0**
DRME				*i* Sg	**Sg**	**09 45 55.4**	**+2.5**
IVA	**Berane**	**1.52**	**102**	⇓*i*Pg	**Pn**	**09 45 35.7**	**+0.2**
IVA				*i* Sg	**Sg**	**09 45 57.9**	**+1.1**
SJES	**Sjenica**	**1.54**	**87**	*e*Pn	**Pb**	**09 45 37.4**	**+0.6**
SJES				*e*Sn	**Sg**	**09 45 59.4**	**+1.9**
SJES	**Sjenica**	**1.54**	**87**	⇑*i*Pn	**Pn**	**09 45 35.9**	**+0.1**
SJES				*e*Sn	**Sn**	**09 45 55.8**	**-0.3**
DOB	**Doboj**	**1.55**	**6**	*e*Pn	**Pn**	**09 45 35.5**	**-0.2**
DOB				*e*Sn	**Sn**	**09 45 56.0**	**0.0**
ULC	**Ulcinj**	**1.60**	**140**	⇓*i*Pn	**Pn**	**09 45 37.0**	**+0.5**
ULC				*i* Sn	**Sg**	**09 46 00.5**	**+1.2**
BLY	**Banja Luka**	**1.63**	**343**	⇑P	**Pn**	**09 45 37.4**	**+0.5**
BLY	**Banja Luka**	**1.63**	**343**		**Pn**	**09 45 36.8**	**-0.1**
BLY				Sn	**Sb**	**09 45 58.7**	**-0.1**
BLY	**Banja Luka**	**1.63**	**343**	*e*Pg	**Pb**	**09 45 37.9**	**+0.3**
BLY				*e*Sg	**Sb**	**09 45 59.4**	**+0.5**
BLY	**Banja Luka**	**1.63**	**343**	*e*Pn	**Pn**	**09 45 36.6**	**-0.3**
BLY				*e*Sn	**Sn**	**09 45 58.0**	**0.0**
BLY	**Banja Luka**	**1.63**	**343**	P	**Pn**	**09 45 37.4**	**+0.5**
PVY	**Plav**	**1.65**	**111**	⇑*i*Pn	**Pn**	**09 45 37.6**	**+0.3**
PVY				*i* Sn	**Sg**	**09 46 01.2**	**+0.2**
ZIRJ	**Zirje**	**1.68**	**287**	*e*Pn	**Pn**	**09 45 38.0**	**+0.4**
ZIRJ				Sg	**Sg**	**09 46 01.5**	**-0.4**
MORI	**Morici**	**1.71**	**294**	*e*Pn	**Pb**	**09 45 39.0**	**-0.5**
MORI				Sg	**Sg**	**09 46 02.8**	**+0.1**
IVAS	**Ivanjica**	**1.71**	**76**	*e*Pn	**Pn**	**09 45 38.7**	**+0.6**
IVAS				*e*Sn	**Sb**	**09 46 01.2**	**-0.1**
DIVS	**Divibare**	**1.79**	**59**	*e*Pn	**Pn**	**09 45 38.7**	**-0.4**
DIVS				*e*Sn	**Sb**	**09 46 03.6**	**0.0**
TEKS	**Tekeris**	**1.81**	**41**	*e*Pn	**Pb**	**09 45 41.4**	**+0.1**
TEKS				*e*Sn	**Sn**	**09 46 02.1**	**-0.4**
TEKS	**Tekeris**	**1.81**	**41**	*e*Pn	**Pn**	**09 45 39.4**	**-1.0**
TEKS				*e*Sn	**Pn**	**09 46 02.1**	**-0.4**
UDBI	**Udbina**	**2.02**	**312**	*e*Pn	**Pb**	**09 45 44.0**	**-0.9**
UDBI				Sn	**Sb**	**09 46 10.6**	**+0.4**
TRUS	**Trudelj**	**2.11**	**60**	*e*Pn	**Pn**	**09 45 43.8**	**+0.3**
SGRT	**San Giovanni R**	**2.13**	**228**	Pn	**Pn**	**09 45 43.6**	**-0.3**
DUGI	**Dugi Otok**	**2.19**	**292**	*e*Pn	**Pn**	**09 45 45.4**	**+0.8**
GOCS	**Kraljevo Serbi**	**2.22**	**80**	*e*Pn	**Pn**	**09 45 45.6**	**+0.5**
VIRC	**Vir**	**2.31**	**299**	*e*Pn	**Pn**	**09 45 47.8**	**+1.6**
VIRC				Sn	**Sb**	**09 46 16.6**	**-1.9**
PLIT	**Plitvice**	**2.33**	**317**	*e*Pn	**Pb**	**09 45 48.6**	**-1.6**
PLIT				Sn	**Sb**	**09 46 17.8**	**-1.4**
FRGS	**Fruska Gora**	**2.41**	**35**	*e*Pn	**Pn**	**09 45 46.6**	**-1.0**
FRGS				*e*Sn	**Sn**	**09 46 17.2**	**-0.1**
FRGS	**Fruska Gora**	**2.41**	**35**	*e*Pn	**Pn**	**09 45 47.3**	**-0.3**
FRGS				*e*Sn	**Sn**	**09 46 17.2**	**-0.1**
AVAS	**Avala Beograd**	**2.43**	**51**	*e*Pn	**Pn**	**09 45 47.0**	**-0.9**
AVAS				*e*Sn	**Sn**	**09 46 16.7**	**-1.1**
PHP	**Peshkopia**	**2.43**	**128**	P	**Pb**	**09 45 50.5**	**-1.4**
PHP				S	**Sn**	**09 46 19.2**	**+1.3**
PHP	**Peshkopia**	**2.43**	**128**	P	**Pb**	**09 45 50.3**	**-1.6**
MOSL	**Moslavina**	**2.54**	**342**	*e*Pn	**Pb**	**09 45 51.6**	**-2.1**
MOSL				Sn	**Sb**	**09 46 23.4**	**-1.9**
NVLJ	**Novalja**	**2.56**	**303**	*e*Pn	**Pn**	**09 45 50.2**	**+0.6**
NVLJ				Sn	**Sn**	**09 46 22.6**	**+1.6**
MATE	**Matera**	**2.69**	**199**	⇓P	**Pn**	**09 45 51.5**	**+0.1**
MATE	**Matera**	**2.69**	**199**	P	**Pb**	**09 45 54.9**	**-1.3**
RABC	**Rab**	**2.71**	**306**	*e*Pn	**Pn**	**09 45 53.1**	**+1.4**
RABC				Sn	**Sb**	**09 46 27.4**	**-2.7**
BOVS	**Bovan**	**2.83**	**80**	⇓P	**Pn**	**09 45 54.1**	**+0.7**
BOVS	**Bovan**	**2.83**	**80**	*e*Pn	**Pn**	**09 45 54.0**	**+0.6**
SKO	**Skopje**	**2.91**	**114**	*i* Pn	**Pn**	**09 45 57.0**	**+2.5**
SKO				*e*Sn	**Sb**	**09 46 34.4**	**-1.4**
BARS	**Barje**	**2.92**	**96**	*e*Pn	**Pn**	**09 45 56.5**	**+1.8**
BARS				*e*Sn	**Sb**	**09 46 33.9**	**-2.2**
OZLJ	**Ozalj**	**2.97**	**325**	*e*Pn	**Pn**	**09 45 57.4**	**+2.2**
BOJS	**Bojanci**	**2.97**	**322**	*i* Pn	**Pn**	**09 45 56.8**	**+1.5**
BOJS				*e*Sn	**Sn**	**09 46 31.5**	**+0.4**
OHR	**Ohrid**	**3.02**	**133**	*i* Pn	**Pb**	**09 45 59.3**	**-2.6**
OHR				*e*Lg	Lg	09 46 52.9	
	comp=E,603nm,0.6s						
OHR				*e*Lg	Lg	09 46 57.2	
	comp=N,798nm,0.7s						
PTJ	**Puntijarka**	**3.03**	**334**	*e*Pn	**Pn**	**09 45 57.4**	**+1.2**
PTJ				Sn	**Sn**	**09 46 35.1**	**+2.4**
MORH	**Mrgy, Hungar**	**3.07**	**10**	*e*Pn	**Pn**	**09 45 57.0**	**+0.4**
MORH				*e*Sn	**Sn**	**09 46 32.9**	**-0.6**
KALN	**Kalnik**	**3.10**	**342**	*e*Pn	**Pn**	**09 45 58.1**	**+0.9**
KALN				Sn	**Sn**	**09 46 36.9**	**+2.4**
VRSS	**Vrsac**	**3.15**	**51**	*e*Pn	**Pn**	**09 45 57.5**	**-0.3**
MDVR	**Moldovita**	**3.20**	**59**	⇓P	**Pn**	**09 45 58.5**	**0.0**
MDVR	**Moldovita**	**3.20**	**59**	*e*Pn	**Pn**	**09 45 58.9**	**+0.4**
LOBO	**Lobor**	**3.22**	**337**	*e*Pn	**Pn**	**09 46 00.3**	**+1.5**
LOBO				Sn	**Sn**	**09 46 39.7**	**+2.4**
RIY	**Rijeka**	**3.23**	**312**	*e*Pn	**Pn**	**09 46 01.0**	**+2.1**
ZAGS	**Zajecar**	**3.24**	**78**	*e*Pn	**Pn**	**09 45 59.9**	**+0.9**
PAOL	**Paolisi**	**3.27**	**230**		**Pn**	**09 45 59.6**	**+0.1**
MARCO	**Tramutola**	**3.28**	**209**	P	**Pn**	**09 46 03.1**	**+3.5**
GUMA	**Gualdo di Mace**	**3.32**	**269**		**Pn**	**09 46 00.4**	**+0.3**
BEHE	**Becsehely**	**3.36**	**347**		**Pn**	**09 46 00.8**	**+0.1**
BEHE	**Becsehely**	**3.36**	**347**	⇑*i*Pn	**Pn**	**09 46 01.1**	**+0.4**
BEHE				*e*Sn	**Sn**	**09 46 39.7**	**-1.1**
BEHE	**Becsehely**	**3.36**	**347**	P	**Pn**	**09 46 01.1**	**+0.4**
KBN	**Korca**	**3.37**	**139**	P	**Pn**	**09 46 02.1**	**+1.2**
KBN				S	**Sn**	**09 46 38.9**	**-2.2**
AQU	**L'Aquila**	**3.39**	**257**		**Pn**	**09 46 01.1**	**-0.1**
AQU	**L'Aquila**	**3.39**	**257**	*e*Pn	**Pn**	**09 46 01.0**	**-0.1**
AQU				*e*Sn	**Sn**	**09 46 41.8**	**+0.2**
AQU	**L'Aquila**	**3.39**	**257**	Pn	**Pn**	**09 46 01.4**	**+0.3**
AQU	**L'Aquila**	**3.39**	**257**	P	**Pn**	**09 46 01.3**	**+0.1**
BOSS	**Bosilegrad**	**3.47**	**100**	*e*Pn	**Pn**	**09 46 03.9**	**+1.8**
BOSS				*e*Sn	**Sn**	**09 46 44.8**	**+1.4**
ZAPS	**Zavoj**	**3.49**	**87**	*e*Pn	**Pn**	**09 46 04.2**	**+1.8**
ZAPS				*e*Sn	**Sn**	**09 46 43.0**	**-0.9**
FDMO	**Fiordimonte**	**3.50**	**269**		**Pn**	**09 46 02.9**	**+0.2**
NRCA	**Norcia**	**3.50**	**266**		**Pn**	**09 46 03.1**	**+0.4**
TRAN	**Tran**	**3.53**	**94**	P	**Pn**	**09 46 04.5**	**+1.5**
TRAN				S	**Sn**	**09 46 46.3**	**+1.3**
BLKB	**Belogradchik**	**3.53**	**81**	*e*Pn	**Pn**	**09 46 05.2**	**+2.1**
BZS	**Buzias**	**3.62**	**47**	⇑P	**Pn**	**09 46 04.8**	**+0.6**
BZS	**Buzias**	**3.62**	**47**	*e*Pn	**Pn**	**09 46 03.6**	**-0.6**
BZS	**Buzias**	**3.62**	**47**	P	**Pn**	**09 46 03.7**	**-0.6**
SRN	**Sarande**	**3.68**	**153**	P	**Pn**	**09 46 05.3**	**+0.2**
SRN				S	**Sn**	**09 46 44.8**	**-3.8**
HERR	**Herculane**	**3.69**	**61**	⇑P	**Pn**	**09 46 05.4**	**+0.2**
AMBH	**Ambrzfalva**	**3.75**	**32**	⇑P	**Pn**	**09 46 07.2**	**+1.1**
KEK	**Kerkira**	**3.77**	**157**	Pn	**Pn**	**09 46 06.6**	**+0.2**
KEK	**Kerkira**	**3.77**	**157**	P	**Pn**	**09 46 05.8**	**-0.5**
KEK				S	**Sn**	**09 46 47.2**	**-3.7**
PENT	**Pentalofos**	**3.87**	**140**	P	**Pn**	**09 46 08.5**	**+0.7**
MURB	**Monte Urbino**	**3.90**	**273**		**Pn**	**09 46 08.4**	**+0.2**
CESX	**Cesi**	**3.93**	**263**		**Pn**	**09 46 09.3**	**+0.8**
VAY	**Valandovo**	**3.96**	**117**	*i* Pn	**Pn**	**09 46 10.3**	**+1.4**
VAY				*e*Sn	**Sn**	**09 46 58.0**	**+2.4**
VAY				*e*Lg	Lg	09 47 22.8	
	comp=N,257nm,0.8s						
VAY				*e*Lg	Lg	09 47 27.5	
	comp=Z,164nm,0.9s						
VTS	**Vitosha**	**3.99**	**97**	P	**Pb**	**09 46 14.3**	**-4.2**
VTS				S	**Sn**	**09 47 00.4**	**+4.0**
VTS	**Vitosha**	**3.99**	**97**	P	**Pn**	**09 46 13.4**	**+4.0**
VTS	**Vitosha**	**3.99**	**97**	*e*Pn	**Pb**	**09 46 14.3**	**-4.2**
SOKA	**Soboth**	**4.02**	**331**		**Pn**	**09 46 10.7**	**+0.9**
SOKA					**Sn**	**09 46 57.8**	**+0.7**
SOKA	**Soboth**	**4.02**	**331**	Pn	**Pn**	**09 46 10.7**	**+0.9**
	comp=Z,21nm,0.2s,SNR=19						
SOKA				*e*Sn	**Sn**	**09 46 57.8**	**+0.7**
	comp=Z,76nm,0.6s						
OBKA	**Obir**	**4.07**	**326**		**Pn**	**09 46 12.3**	**+1.9**
OBKA	**Obir**	**4.07**	**326**	Pn	**Pn**	**09 46 12.3**	**+1.9**
	comp=Z,2.7nm,0.2s,SNR=9.5						
SIRR	**Siria**	**4.09**	**40**	⇓P	**Pn**	**09 46 10.7**	**-0.1**
SIRR	**Siria**	**4.09**	**40**	*e*Pn	**Pn**	**09 46 10.0**	**-0.7**
TIP	**Timpagrande**	**4.10**	**192**	⇑P	**Pn**	**09 46 10.5**	**-0.4**
TIP	**Timpagrande**	**4.10**	**192**		**Pn**	**09 46 10.4**	**-0.5**
TIP	**Timpagrande**	**4.10**	**192**	Pn	**Pn**	**09 46 11.5**	**+0.6**
TIP	**Timpagrande**	**4.10**	**192**	P	**Pn**	**09 46 11.4**	**+0.6**
KKB	**Krupnik**	**4.12**	**107**	P	**Pn**	**09 46 13.7**	**+2.6**
KKB				S	**Sn**	**09 47 01.7**	**+2.2**
KKB	**Krupnik**	**4.12**	**107**	P	**Pn**	**09 46 13.7**	**+2.6**
SABO	**M.te Sabotino**	**4.13**	**314**		**Pn**	**09 46 11.8**	**+0.6**
PLNA	**Plana**	**4.15**	**98**	P	**Pn**	**09 46 12.6**	**+0.9**
GZR	**Gura Zlata**	**4.16**	**56**	⇑P	**Pn**	**09 46 12.2**	**+0.5**
GZR	**Gura Zlata**	**4.16**	**56**	*e*Pn	**Pn**	**09 46 11.9**	**+0.3**
KTI	**Kastanea**	**4.24**	**130**	P	**Pn**	**09 46 13.8**	**+0.9**
KNT	**Kendrikon**	**4.26**	**117**	P	**Pn**	**09 46 13.2**	**+0.2**
KNT	**Kendrikon**	**4.26**	**117**	P	**Pn**	**09 46 13.8**	**+0.8**
MPEP	**Malo Peshtene**	**4.29**	**86**	P	**Pn**	**09 46 14.3**	**+0.8**
BUD	**Budapest**	**4.37**	**10**	P	**Pn**	**09 46 13.8**	**-0.7**
ARSA	**Arzberg**	**4.38**	**339**		**Pn**	**09 46 14.9**	**+0.2**
ARSA	**Arzberg**	**4.38**	**339**	Pn	**Pn**	**09 46 14.9**	**+0.2**
	comp=Z,14nm,0.3s,SNR=26						
ARSA				*e*Sn	**Sn**	**09 47 08.6**	**+2.7**
	comp=Z,26nm,0.4s						
ARSA	**Arzberg**	**4.38**	**339**	P	**Pn**	**09 46 15.3**	**+0.6**
MYKA	**Terra Mystica**	**4.56**	**320**		**Pn**	**09 46 19.3**	**+2.1**
MYKA	**Terra Mystica**	**4.56**	**320**	Pn	**Pn**	**09 46 19.3**	**+2.1**
	comp=Z,3.0nm,0.2s,SNR=5.8						
SESA	**Seetaler Alpe,**	**4.56**	**330**	Pn	**Pn**	**09 46 18.3**	**+1.0**
	comp=Z,22nm,0.2s,SNR=23						
SESA				*e*Sn	**Sn**	**09 47 11.9**	**+1.4**
	comp=Z,96nm,0.6s						
ACOM	**Acomizza, Ital**	**4.56**	**319**	P	**Pn**	**09 46 19.1**	**+1.8**
TETR	**Tetrakomo, Epi**	**4.63**	**145**	P	**Pn**	**09 46 18.7**	**+0.6**
RONA	**Rosalia, Austr**	**4.64**	**347**		**Pn**	**09 46 19.0**	**+0.8**
RONA					**Sn**	**09 47 13.8**	**+1.5**
RONA	**Rosalia, Austr**	**4.64**	**347**	Pn	**Pn**	**09 46 19.0**	**+0.8**
	comp=Z,3.2nm,0.2s,SNR=4.8						
RONA				*e*Sn	**Sn**	**09 47 13.8**	**+1.5**
	comp=Z,26nm,0.5s						
LIT	**Litokhoron**	**4.64**	**130**		**Pn**	**09 46 19.9**	**+1.6**
MMB	**Musomishta**	**4.66**	**109**	P	**Pn**	**09 46 19.4**	**+0.8**
MMB	**Musomishta**	**4.66**	**109**	P	**Pn**	**09 46 21.1**	**+2.5**
HORT	**Hortiatis**	**4.69**	**122**	P	**Pn**	**09 46 20.2**	**+1.1**
HORT	**Hortiatis**	**4.69**	**122**	P	**Pn**	**09 46 21.1**	**+2.0**
FUSE	**Fusea**	**4.72**	**315**	P	**Pn**	**09 46 20.5**	**+1.1**
SOH	**Sokhos**	**4.73**	**118**	P	**Pn**	**09 46 24.3**	**+4.8**
SRS	**Serrai**	**4.74**	**114**	P	**Pn**	**09 46 21.3**	**+1.7**
SRS	**Serrai**	**4.74**	**114**	P	**Pn**	**09 46 21.8**	**+2.2**
STAL	**STALIGIAL**	**4.78**	**312**	Pn	**Pn**	**09 46 20.4**	**+0.1**
TYRN	**Tyrnavos**	**4.79**	**135**	P	**Pn**	**09 46 20.6**	**+0.3**
THL	**Klokotos Trika**	**4.79**	**138**	P	**Pn**	**09 46 20.8**	**+0.1**
LOTI	**Lotu**	**4.80**	**50**	⇑P	**Pn**	**09 46 21.4**	**+0.9**
NVR	**Nevrokopi**	**4.82**	**110**	P	**Pn**	**09 46 22.7**	**+2.0**
LKD2	**Lefkada island**	**4.88**	**153**	P	**Pn**	**09 46 20.9**	**-0.8**
PSZ	**Piszkesteto**	**4.93**	**16**		**Pn**	**09 46 21.7**	**-0.7**
PSZ	**Piszkesteto**	**4.93**	**16**	P	**Pn**	**09 46 21.8**	**-0.5**
PLVB	**Pleven**	**4.94**	**85**	⇑P	**Pn**	**09 46 22.6**	**+0.3**
CONA	**Conrad Observa**	**4.94**	**344**	*i* Pn	**Pn**	**09 46 22.9**	**+0.5**
	comp=Z,2.4nm,0.2s,SNR=13						
CONA				*e*Sn	**Sn**	**09 47 18.3**	**-1.4**
	comp=Z,32nm,0.6s						
TEOL	**Teolo**	**4.95**	**298**	Pn	**Pn**	**09 46 22.2**	**-0.3**
DRAG	**Dragano-Lefkad**	**4.95**	**155**	P	**Pn**	**09 46 21.4**	**-1.2**
AMPL	**Ampelaki**	**4.96**	**148**	P	**Pn**	**09 46 22.4**	**-0.3**
NYDR	**Nydri-Lefkada**	**4.97**	**153**	P	**Pn**	**09 46 21.6**	**-0.8**
KBA	**Koelnbreinsper**	**5.03**	**322**		**Pn**	**09 46 25.9**	**+2.2**
KBA					**Sn**	**09 47 23.0**	**+0.9**
KBA	**Koelnbreinsper**	**5.03**	**322**	*i* Pn	**Pn**	**09 46 26.0**	**+2.2**
	comp=Z,5.8nm,0.3s,SNR=8.9						
KBA				*e*Sn	**Sn**	**09 47 23.0**	**+0.9**
	comp=Z,37nm,0.8s						
KBA	**Koelnbreinsper**	**5.03**	**322**	P	**Pn**	**09 46 26.3**	**+2.6**
EVGI	**Lefkada island**	**5.04**	**154**	P	**Pn**	**09 46 22.2**	**-1.5**
WINA	**Alland / Wiene**	**5.07**	**346**	Pn	**Pn**	**09 46 25.0**	**+0.8**
	comp=Z,4.6nm,0.2s,SNR=12						
WINA				*e*Sn	**Sn**	**09 47 23.3**	**+0.4**
	comp=Z,55nm,0.7s						
CGRP	**Cima Grappa**	**5.10**	**304**	P	**Pn**	**09 46 25.9**	**+1.2**
FSK	**Fiskardo**	**5.16**	**156**	P	**Pn**	**09 46 24.6**	**-0.8**
MODS	**Modra-Piesok**	**5.19**	**356**	P	**Pn**	**09 46 26.3**	**+0.5**
MODS	**Modra-Piesok**	**5.19**	**356**	*e*PN	**Pn**	**09 46 26.1**	**+0.2**
MODS				*e*SN	**Sn**	**09 47 24.8**	**-1.2**
ABTA	**Abfaltersbach**	**5.20**	**315**		**Pn**	**09 46 27.1**	**+1.1**
ABTA					**Sn**	**09 47 28.8**	**+2.6**
ABTA	**Abfaltersbach**	**5.20**	**315**	*i* Pn	**Pn**	**09 46 27.1**	**+1.1**
	comp=Z,5.3nm,0.2s						
ABTA				*e*Sn	**Sn**	**09 47 28.8**	**+2.6**
	comp=Z,91nm,0.7s						
EVR	**Evrytania**	**5.21**	**144**	P	**Pn**	**09 46 26.1**	**-0.1**
MOA	**Molln**	**5.29**	**333**		**Pn**	**09 46 28.9**	**+1.6**
MOA					**Sn**	**09 47 29.2**	**+0.7**
MOA	**Molln**	**5.29**	**333**	Pn	**Pn**	**09 46 28.9**	**+1.6**
	comp=Z,11nm,0.3s,SNR=12						
MOA				*e*Sn	**Sn**	**09 47 29.2**	**+0.7**
	comp=Z,33nm,0.5s						
MOA	**Molln**	**5.29**	**333**	P	**Pn**	**09 46 29.5**	**+2.2**
DMLN	**Damoulianata-K**	**5.31**	**158**	P	**Pn**	**09 46 26.5**	**-1.0**
ARR	**Arges**	**5.32**	**64**	⇓P	**Pn**	**09 46 28.3**	**+0.6**
ARR	**Arges**	**5.32**	**64**	P	**Pn**	**09 46 31.3**	**+3.6**
PVO	**Paravola**	**5.35**	**148**	P	**Pn**	**09 46 27.7**	**-0.3**
AGG	**Agios Georgios**	**5.36**	**140**	P	**Pn**	**09 46 28.4**	**+0.1**
CJR	**Cluj-Napoca**	**5.38**	**47**	⇓P	**Pn**	**09 46 29.2**	**+0.8**
BIOA	**Bad Ischl, Aus**	**5.39**	**328**		**Pn**	**09 46 30.7**	**+2.1**
BIOA	**Bad Ischl, Aus**	**5.39**	**328**	*i* Pn	**Pn**	**09 46 30.7**	**+2.1**
	comp=Z,14nm,0.3s						
VLS	**Valsamata**	**5.42**	**157**	P	**Pn**	**09 46 27.6**	**-1.5**
PAIG	**Palioui**	**5.45**	**125**	P	**Pn**	**09 46 30.6**	**+1.3**
PLEV	**Plevrona-Mesol**	**5.48**	**149**	P	**Pn**	**09 46 29.0**	**-0.8**
	comp=Z,0.4nmcomp=Z,36nm,0.7s						
ANX	**Ano Chora**	**5.53**	**145**	P	**Pn**	**09 46 30.4**	**-0.2**
LESA	**Schwarzleotal**	**5.59**	**321**		**Pn**	**09 46 33.4**	**+2.1**
LESA	**Schwarzleotal**	**5.59**	**321**	*e*Pn	**Pn**	**09 46 33.4**	**+2.1**
	comp=Z,20nm,0.3s,SNR=18						
KECS	**Kecovo**	**5.59**	**18**	*e*PN	**Pn**	**09 46 31.6**	**+0.2**
KECS				*e*SN	**Sn**	**09 47 33.2**	**-2.6**
VOIR		**5.62**	**64**	⇓P	**Pn**	**09 46 33.0**	**+1.2**
VOIR		**5.62**	**64**	Pn	**Pn**	**09 46 33.8**	**+2.0**
	comp=Z,0.1nmcomp=Z,12nm,1.0s						
VOIR		**5.62**	**64**	P	**Pn**	**09 46 36.6**	**+4.8**
AXS	**Araxos**	**5.66**	**151**	P	**Pn**	**09 46 31.9**	**-0.4**
	comp=Z,0.1nmcomp=Z,18nm,0.8s						
JAVC	**Velka Javorina**	**5.67**	**359**	*e*PN	**Pn**	**09 46 33.1**	**+0.7**
JAVC	**Velka Javorina**	**5.67**	**359**	P	**Pn**	**09 46 36.6**	**+4.2**
THAS	**Thassos island**	**5.73**	**115**	P	**Pn**	**09 46 34.2**	**+1.0**
	comp=Z,0.1nmcomp=Z,33nm,1.0s						
SERG	**Sergoula**	**5.74**	**145**	P	**Pn**	**09 46 33.1**	**-0.3**
	comp=Z,0.2nmcomp=Z,28nm,0.6s						
KALE	**Kalithea**	**5.79**	**145**	P	**Pn**	**09 46 33.9**	**-0.3**
	comp=Z,0.2nmcomp=Z,25nm,0.6s						
KRUC	**Moravsky**	**5.96**	**351**	*e*PN	**Pn**	**09 46 37.1**	**+0.8**
KRUC				*e*SN	**Sn**	**09 47 43.4**	**-1.3**
KRUC	**Moravsky**	**5.96**	**351**	P	**Pn**	**09 46 37.2**	**+0.8**
WTTA	**Wattenberg**	**5.99**	**315**		**Pn**	**09 46 39

BOOM					IAmb	IAmb	09 53 10.3	
	comp=Z,2.6nm,0.8s							
MK31	**Makanchi Array**	**44.56**	**62**	P		**P**	**09 53 21.1**	**+1.0**
MKAR	**Makanchi Array**	**44.56**	**62**	P		**P**	**09 53 18.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=273,slow=10.0,SNR=2.1							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**44.56**	**62**	P		**P**	**09 53 19.8**	**-0.3**
LZDM	**Lanzhou Array**	**63.78**	**64**	LR		LR	10 26 18.0	
	comp=Z,78nm,18.9s,baz=90,slow=39							
HHC	**Hu-ho-hao-te**	**65.88**	**56**	*e*P		**P**	**09 55 52.6**	**-1.5**
HHC				pmax		pmax		
	comp=Z,18nm,0.6s							
HHC				pmax		pmax		
	comp=Z,40nm,4.0s							
E29M	**Blow River**	**67.26**	**351**	P		**P**	**09 56 01.8**	**-0.6**
PZH	**PanZhiHua**	**68.12**	**74**	P		**P**	**09 56 09.4**	**+0.8**
G21K	**Allakaket**	**70.42**	**356**	P		**P**	**09 56 22.1**	**+0.1**
G21K				IAmb		IAmb	09 56 22.1	
	comp=Z,4.8nm,1.5s							
DAWY	**Dawson**	**71.58**	**350**	P		**P**	**09 56 28.9**	**-0.3**
DAWY				IAmb		IAmb	09 57 03.4	
	comp=Z,2.1nm,1.2s							
MLY	**Manley**	**71.74**	**355**	P		**P**	**09 56 30.1**	**0.0**
MLY				IAmb		IAmb	09 57 13.6	
	comp=Z,2.5nm,1.3s							
BCAR	**Beaver Creek A**	**72.84**	**350**	P		**P**	**09 56 36.8**	**+0.1**

*IDC **07** 09:52:31.8±0.7, 11°.85N×125°.39E, h0km, mb4.1/13, mbtmp4.1/13, MS3.1/2, Error ellipse: s-maj=42.4km s-min=15.8km az=65.0*
*NEIC **07** 09:52:38.6±0.7, 11°.8N±0°.1×125°.3E±0°.1, h38km±8km, mb4.6/15, Error ellipse: s-maj=19.1km s-min=14.9km az=190.0*
*MAN **07** 09:52:38.0, 11°.91N×125°.34E, h21km, MS4.1*
MAN INTENSITY III - TAFT EASTERN SAMAR; . INTENSITY II - SULAT EASTERN SAMAR.

ISC 07 09:52:38.8±1.5, 11°.89N±0°.06×125°.44E±0°.07, h47km±15km, n58, σ2s05/62, mb4.3/21, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.85**	**212**	*e*P	**Pn**	**09 52 53.3**	**-1.1**
PLP				*e*S	**Sn**	**09 53 03.9**	**-1.9**
MMPH	**Masbate**	**1.84**	**285**	*e*P	**Pn**	**09 53 07.9**	**+0.1**
MMPH				*i* S	**Sn**	**09 53 30.0**	**+0.1**
SCPH	**Surigao**	**2.09**	**179**	*e*P	**Pn**	**09 53 13.3**	**+1.9**
SCPH				*e*S	**Sn**	**09 53 43.2**	**+7.0**
LLP	**Lapu-Lapu**	**2.13**	**223**	*e*P	**Pn**	**09 53 12.1**	**+0.3**
LLP				*e*S	**Sn**	**09 53 37.8**	**+0.6**
RCP	**Roxas**	**2.66**	**263**	*i* P	**Pn**	**09 53 20.1**	**+0.9**
RCP				*i* S	**Sn**	**09 53 51.2**	**+1.0**
TBP	**Tagbilaran**	**2.68**	**216**	*e*P	**Pn**	**09 53 20.1**	**+0.7**
TBP				*e*S	**Sn**	**09 53 52.7**	**+2.0**
TSSP	**Tandag City**	**2.92**	**165**	*e*P	**Pn**	**09 53 23.0**	**+0.2**
TSSP				*e*S	**Sn**	**09 53 50.9**	**-5.8**
IBAJ	**Ibajay, Aklan**	**3.20**	**269**	*i* P	**Pn**	**09 53 27.4**	**+0.8**
LSIP	**Lazi, Siquijor**	**3.27**	**213**	*i* P	**Pn**	**09 53 28.6**	**+1.1**
LSIP				*i* S	**Sn**	**09 53 59.0**	**-6.1**
SNPH	**Sibulan**	**3.33**	**221**	*e*P	**Pn**	**09 53 28.4**	**-0.1**
CGP	**Cagayan de Oro**	**3.49**	**192**	*e*P	**Pn**	**09 53 31.8**	**+1.3**
CGP				*e*S	**Sn**	**09 54 14.7**	**+4.0**
BIPH	**Bislig**	**3.79**	**166**	*e*P	**Pn**	**09 53 35.1**	**+0.4**
BIPH				*e*S	**Sn**	**09 54 17.0**	**-1.0**
BUKP	**Musuan**	**4.00**	**185**	*e*P	Pn	09 53 44.3	+6.6
BUKP				*e*S	**Sn**	**09 54 30.5**	**+7.2**
CDOP	**Cateel, Davao**	**4.20**	**166**	*e*P	**Pn**	**09 53 40.2**	**0.0**
CDOP				*i* S	**Sn**	**09 54 24.3**	**-3.7**
LQP	**Lukban**	**4.40**	**301**	*e*P	**Pn**	**09 53 44.0**	**+0.8**
DAV	**Davao City (W)**	**4.79**	**178**	LR	LR	09 56 10.8	
	comp=Z,148nm,21.8s,baz=352,slow=46						
DAV	**Davao City (W)**	**4.79**	**178**	Pn	**Pn**	**09 53 48.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**26.38**	**288**	P	**P**	**09 58 10.0**	**-0.9**
	1.1nm,0.3s,baz=92,slow=8.3,SNR=4.8						
	1.1nm,0.3s						
PATS	**Pohnpei**	**32.80**	**96**	P	**P**	**09 59 08.1**	**+0.2**
WRA	**Warramunga Arr**	**32.82**	**164**	P	**P**	**09 59 06.2**	**-1.8**
	0.3nm,0.6s,baz=342,slow=7.9,SNR=1.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**36.29**	**167**	P	**P**	**09 59 36.8**	**-1.2**
	0.3nm,0.3s,baz=342,slow=6.8,SNR=23						
	0.3nm,0.3s						
SONM	**Songino Array**	**39.23**	**340**	P	**P**	**10 00 02.5**	**-0.2**
	1.0nm,0.5s,baz=154,slow=11,SNR=4.8						
	1.0nm,0.5s						
SONM	**Songino Array**	**39.23**	**340**	P	**P**	**10 00 02.7**	**0.0**
H11S3	**WAKE ISLAND Hy**	**40.27**	**75**	T	T	10 43 20.7	
	baz=268,slow=78						
H11S1	**WAKE ISLAND Hy**	**40.29**	**75**	T	T	10 43 18.9	
	baz=268,slow=78						
H11S2	**WAKE ISLAND Hy**	**40.29**	**75**	T	T	10 43 22.4	
	baz=268,slow=78						
H11N1	**WAKE ISLAND Hy**	**40.55**	**74**	T	T	10 43 36.1	
	baz=265,slow=74,SNR=42						
H11N2	**WAKE ISLAND Hy**	**40.56**	**74**	T	T	10 43 37.9	
	baz=265,slow=74,SNR=44						
H11N3	**WAKE ISLAND Hy**	**40.57**	**74**	T	T	10 43 41.6	
	baz=265,slow=74,SNR=36						
BBOO	**Buckleboo**	**45.59**	**167**	P	**P**	**10 00 54.5**	**+0.1**
STKA	**Stephens Creek**	**46.19**	**161**	P	**P**	**10 00 59.2**	**+0.1**
	1.8nm,0.8s,baz=336,slow=10.0,SNR=4.0						
	1.8nm,0.8s						
PEA0B	**Petropavlovsk-**	**48.52**	**25**	P	**P**	**10 01 18.1**	**+1.1**
PEA0B				IAmb	IAmb	10 01 27.2	
	comp=Z,20nm,1.5s						
PETK	**Petropavlovsk-**	**48.52**	**25**	P	**P**	**10 01 18.4**	**+1.4**
MK31	**Makanchi Array**	**50.26**	**322**	P	**P**	**10 01 30.5**	**+0.1**
MK31				IAmb	IAmb	10 01 31.6	
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**50.26**	**322**	P	**P**	**10 01 30.6**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=121,slow=8.6,SNR=20						
	comp=Z,2.2nm,0.7s						
MAKZ	**Makanchi**	**50.45**	**322**	P	**P**	**10 01 31.3**	**-0.6**
ZALV	**Zalesovo Beam**	**52.83**	**331**	P	**P**	**10 01 48.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=112,slow=6.4,SNR=1.5						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**52.83**	**331**	P	**P**	**10 01 49.1**	**-0.2**
KURK	**Kurchatov**	**54.28**	**325**	P	**P**	**10 01 59.9**	**-0.2**
KURK				IAmb	IAmb	10 02 01.2	
	comp=Z,6.8nm,0.7s						
KURBB	**Kurchatov Arra**	**54.29**	**325**	P	**P**	**10 02 00.4**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=125,slow=7.1,SNR=32						
	comp=Z,5.4nm,0.8s						
GAR	**Garm**	**55.64**	**309**	P	**P**	**10 02 09.6**	**-0.7**
GAR				IAmb	IAmb	10 02 13.0	
	comp=Z,9.3nm,1.2s						
KK31	**Karatay Array**	**56.55**	**314**	P	**P**	**10 02 16.2**	**-0.4**
KKAR	**Karatay Array**	**56.55**	**314**	P	**P**	**10 02 16.1**	**-0.5**
KKAR				PcP	**PcP**	**10 03 12.4**	**-0.4**
BVAR	**Borovoye Array**	**59.88**	**325**	P	**P**	**10 02 38.6**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=117,slow=8.5,SNR=9.6						
	comp=Z,2.4nm,0.6s						
BORK	**Borovoye**	**59.93**	**325**	P	**P**	**10 02 40.1**	**+0.1**
BORK				IAmb	IAmb	10 02 41.1	
	comp=Z,4.4nm,0.7s						
ATKA	**Atka Island**	**62.66**	**37**	P	**P**	**10 02 59.1**	**+0.6**
AB31	**Akbulak array**	**65.13**	**319**	P	**P**	**10 03 14.3**	**-0.5**
AB31				IAmb	IAmb	10 03 15.1	
	comp=Z,2.1nm,0.8s						
ABKAR	**Akbulak array**	**65.13**	**319**	P	**P**	**10 03 14.4**	**-0.3**
AMCZ	**Amberley**	**69.70**	**145**	P	**P**	**10 03 44.2**	**+0.5**
C18K	**Utukok River**	**72.96**	**22**	P	**P**	**10 04 04.5**	**+1.4**
C18K				IAmb	IAmb	10 04 13.2	
	comp=Z,8.3nm,1.4s						
D20K	**Etivluk River**	**74.62**	**22**	P	**P**	**10 04 14.8**	**+2.0**
D20K				IAmb	IAmb	10 04 25.6	
	comp=Z,3.7nm,1.1s						
ILAR	**Eielson Array**	**78.35**	**26**	P	**P**	**10 04 34.3**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=268,slow=6.3,SNR=4.1						
	comp=Z,0.3nm,0.7s						
RAR	**Rarotonga**	**80.44**	**114**	LR	LR	10 38 52.1	
	comp=Z,17nm,18.7s,baz=262,slow=35						
ARCES	**ARCESS Array B**	**82.40**	**340**	P	**P**	**10 04 55.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=86,slow=5.8,SNR=12						
	comp=Z,3.9nm,0.8s						
ARCES	**ARCESS Array B**	**82.40**	**340**	P	**P**	**10 04 55.9**	**+0.3**
ARCES				IAmb	IAmb	10 05 18.4	
	comp=Z,16nm,1.4s						
FINES	**FINESS Array B**	**84.09**	**332**	P	**P**	**10 05 04.1**	**-0.3**
	comp=Z,3.9nm,1.1s,baz=90,slow=3.8,SNR=5.3						
	comp=Z,3.9nm,1.1s						
AKASG	**Malin Array Be**	**84.81**	**321**	P	**P**	**10 05 06.6**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=66,slow=5.3,SNR=5.0						
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**117.37**	**48**	PKP	**PKiKP**	**10 11 20.4**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=246,slow=2.0,SNR=5.0						

*RSNC **07** 09:52:57.6±0.0, 7°.N±2°×7°.3W±°, h149km±2km, M2.4, ML2.0*
*FUNV **07** 09:52:59.3, 7°.15N×73°.14W, h2km, MW3.1, Presumed earthquake*

ISC 07 09:52:55.7±1.5, 6°.86N±0°.04×73°.11W±0°.06, h159km±9km, n15, σ1s45/29, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**194**	P	**Pn**	**09 53 17.8**	**+0.2**
BARC				S	**Sn**	**09 53 32.9**	**-1.4**
PAMC	**Pamplona, Colo**	**0.63**	**41**	P	**Pn**	**09 53 20.7**	**+1.4**
PAMC				S	**Sn**	**09 53 37.2**	**-0.2**
BRJC	**Barrancabermej**	**0.64**	**280**	P	**Pn**	**09 53 19.6**	**+0.8**
BRJC				S	**Sn**	**09 53 37.0**	**+0.6**
RUSC	**La Rusia**	**0.96**	**178**	P	**Pn**	**09 53 21.7**	**0.0**
RUSC				S	**Sn**	**09 53 40.3**	**-1.2**
RUSC	**La Rusia**	**0.96**	**178**	*e*P	**Pn**	**09 53 22.0**	**+0.3**
RUSC				*e*S	**Sn**	**09 53 39.2**	**-2.3**
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	P	**Pn**	**09 53 24.6**	**-0.1**
PTBC				S	**Sn**	**09 53 45.7**	**-1.2**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**09 53 26.0**	**+1.0**
OCAC				S	**Sn**	**09 53 48.8**	**+1.3**
SPBC	**San Pablo de B**	**1.54**	**218**	P	**Pn**	**09 53 26.8**	**+0.3**
SPBC				S	**Sn**	**09 53 49.0**	**-1.1**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**09 53 38.3**	**+2.5**
ROSC				S	**Sn**	**09 54 08.2**	**+1.5**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	P	**Pn**	**09 53 42.8**	**+1.7**
GUY2C				S	**Sn**	**09 54 16.9**	**+0.8**
SDV	**Santo Domingo**	**3.17**	**51**	*e*P	**Pn**	**09 53 47.6**	**+1.8**
SDV				*e*S	**Sn**	**09 54 23.0**	**-1.7**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**09 53 51.3**	**+0.2**
PRAC				S	**Sn**	**09 54 33.6**	**-0.5**
SJCC	**San Jacinto, C**	**3.64**	**326**	P	**Pn**	**09 53 51.9**	**+0.2**
SJCC				S	**Sn**	**09 54 33.9**	**-1.3**
SJCC	**San Jacinto, C**	**3.64**	**326**	*e*P	**Pn**	**09 53 52.3**	**+0.6**
SJCC				*e*S	**Sn**	**09 54 31.5**	**-3.7**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**09 54 05.1**	**-0.9**

WEL 07 09:53:26.0±1.1, 32°S±7°×17°7E±2°2, h12km, M4.3/6, mB4.8/2, ML4.2/8, MLv4.3/6, Mw(mB)4.0/2, Error ellipse: s-maj=28.3km s-min=8.5km az=87.0, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**5.46**	**175**	P	Pn	09 54 49.0	+1.8
HAZ				S	Sn	09 55 55.0	+5.1
WMGZ	**Waiomatatini S**	**5.59**	**170**	P	Pn	09 54 48.5	-0.4
WMGZ				S	Sn	09 55 55.0	+1.8
PKGZ	**Pakihiroa**	**5.60**	**173**	P	Pn	09 54 50.7	+1.6
PKGZ				S	Sn	09 55 54.4	+1.1
RUGZ	**Raukumara Rang**	**5.66**	**176**	P	Pn	09 54 52.0	+1.9
RUGZ				S	Sn	09 55 54.5	-0.6
PUZ	**Puketiti**	**5.82**	**172**	P	Pn	09 54 52.2	0.0
PUZ				S	Sn	09 55 57.2	-1.6
URZ	**Urewera**	**5.94**	**181**	P	Pn	09 54 54.5	+0.8
URZ				S	Sn	09 56 06.2	+4.5
MWZ	**Matawai**	**6.02**	**177**	P	Pn	09 54 55.5	+0.5
MWZ				S	Sn	09 56 04.9	+1.1
MUGZ	**Murupara**	**6.17**	**183**	P	Pn	09 54 59.7	+2.8
MUGZ				S	Sn	09 56 13.9	+6.5
CNGZ	**Carnagh Statio**	**6.22**	**173**	P	Pn	09 54 55.4	-2.2
RTZ	**Ruatahuna**	**6.30**	**181**	P	Pn	09 54 59.2	+0.4
SNGZ	**Shannon Statio**	**6.46**	**179**	P	Pn	09 55 00.8	-0.2
SNGZ				S	Sn	09 56 16.5	+1.8
KNZ	**Kokohu**	**6.71**	**177**	P	Pn	09 55 02.1	-2.3
KNZ				S	Sn	09 56 16.9	-3.9
BKZ	**Black Stump Fm**	**6.87**	**185**	P	Pn	09 55 07.0	+0.4
PXZ	**Pawanui**	**7.71**	**182**	P	Pn	09 55 14.6	-3.5
PXZ				S	Sn	09 56 42.7	-2.7
TSZ	**Takapari Road**	**7.80**	**187**	P	Pn	09 55 17.1	-2.2
TSZ				S	Sn	09 56 46.1	-1.5

*MOS **07** 09:54:17.3±0.8, 47°.83N×155°.68E, h81km, mb4.0/3, Error ellipse: s-maj=16.8km s-min=4.5km az=74.5*
*SKHL **07** 09:54:21.0±0.8, 48°.20N×155°.20E, h77km±6km, mb4.7/5*
*IDC **07** 09:54:22.9±4.2, 48°.42N×154°.67E, h56km±36km, mb3.2/6, mbtmp3.5/7, ML3.7/2, Error ellipse: s-maj=59.5km s-min=20.1km az=159.0*
*KRSC **07** 09:54:22.2±1.9, 48°.30N×156°.26E, h39km±41km, Ml4.0*

ISC 07 09:54:21.0±0.8, 48°.14N±0°.08×155°.38E±0°.08, h35km, n89, σ2s11/111, mb3.7/8, 3C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.59**	**10**	*e*PN	**Pn**	**09 55 00.7**	**+0.2**
SKR				*e*S	**Sn**	**09 55 28.6**	**-2.1**
SKR				pmax	pmax		
	comp=Z,61nm,0.3s						
SKR				smax	smax		
	comp=N,215nm,0.5s						
SKR				smax	smax		
	comp=E,416nm,0.5s						
SKR	**Severo-Kuril's**	**2.59**	**10**	*e*P	**Pn**	**09 55 00.2**	**-0.3**
SKR				*e*S	**Sn**	**09 55 28.7**	**-2.1**
SKR	**Severo-Kuril's**	**2.59**	**10**	*e*P	**Pn**	**09 55 00.5**	**0.0**
SKR				AMB	AMB	09 55 03.9	
	comp=E,90nm,0.3s						
SKR				*e*S	**Sn**	**09 55 29.1**	**-1.6**
SKR				A	A	09 55 33.7	
	comp=E,360nm,0.3s						
SKR				A	A	09 55 33.7	
	comp=E,290nm,0.3s						
PAU	**Pauzhetka**	**3.46**	**15**	PN	**Pn**	**09 55 13.0**	**+0.6**
PAU				S	**Sn**	**09 55 50.8**	**-1.3**
PAU	**Pauzhetka**	**3.46**	**15**	*e*P	**Pn**	**09 55 13.0**	**+0.6**
PAU				*e*S	**Sn**	**09 55 50.8**	**-1.3**
PAU	**Pauzhetka**	**3.46**	**15**	*e*P	**Pn**	**09 55 13.0**	**+0.6**
PAU				AMB	AMB	09 55 15.9	
	comp=E,30nm,0.3s						
PAU				*e*S	**Sn**	**09 55 51.0**	**-1.1**
PAU				A	A	09 55 54.1	
	comp=E,260nm,0.3s						
PAU				A	A	09 55 54.1	
	comp=E,200nm,0.3s						
KDTR	**Khodutka, Kamc**	**4.07**	**24**	PN	**Pn**	**09 55 20.7**	**0.0**
KDTR				S	**Sn**	**09 56 04.9**	**-2.1**
KDTR	**Khodutka, Kamc**	**4.07**	**24**	*e*P	**Pn**	**09 55 20.7**	**0.0**
KDTR				*e*S	**Sn**	**09 56 05.0**	**-2.1**
KDTR	**Khodutka, Kamc**	**4.07**	**24**	*e*P	**Pn**	**09 55 20.7**	**0.0**
KDTR				*e*S	**Sn**	**09 56 04.9**	**-2.1**
ASAK	**Asacha**	**4.55**	**20**	PN	**Pn**	**09 55 28.3**	**+0.9**
ASAK	**Asacha**	**4.55**	**20**	*e*P	**Pn**	**09 55 28.3**	**+0.9**
ASAK				*e*S	**Sn**	**09 56 16.0**	**-3.0**
MTVR	**Mutnovka**	**4.71**	**21**	PN	**Pn**	**09 55 30.2**	**+0.6**
MTVR				S	**Sn**	**09 56 21.2**	**-1.8**
MTVR	**Mutnovka**	**4.71**	**21**	*e*P	**Pn**	**09 55 30.2**	**+0.6**
MTVR				*e*S	**Sn**	**09 56 21.2**	**-1.8**
GRL	**Gorelyy**	**4.75**	**20**	PN	**Pn**	**09 55 31.4**	**+1.3**
GRL	**Gorelyy**	**4.75**	**20**	*e*P	**Pn**	**09 55 31.4**	**+1.3**
GRL				*e*S	**Sn**	**09 56 21.7**	**-2.3**
RUS	**Russkaya**	**4.75**	**24**	PN	**Pn**	**09 55 29.9**	**-0.1**
RUS	**Russkaya**	**4.75**	**24**	*e*P	**Pn**	**09 55 29.9**	**-0.1**
RUS				*e*S	**Sn**	**09 56 20.4**	**-3.4**
RUS	**Russkaya**	**4.75**	**24**	*e*P	**Pn**	**09 55 29.9**	**-0.1**
APC	**Apacha**	**4.93**	**13**	PN	**Pn**	**09 55 34.1**	**+1.6**
APC	**Apacha**	**4.93**	**13**	*e*P	**Pn**	**09 55 34.2**	**+1.6**
KRMR	**Karymshinskiy**	**5.02**	**19**	PN	**Pn**	**09 55 35.4**	**+1.7**
KRMR	**Karymshinskiy**	**5.02**	**19**	*e*P	**Pn**	**09 55 35.4**	**+1.7**
KRMR	**Karymshinskiy**	**5.02**	**19**	*e*P	**Pn**	**09 55 35.4**	**+1.7**
PEA0B	**Petropavlovsk-**	**5.19**	**16**	PN	**Pn**	**09 55 37.4**	**+1.2**
PETK	**Petropavlovsk-**	**5.19**	**16**	P	**Pn**	**09 55 37.4**	**+1.3**
	comp=E,1.7nm,0.3s,baz=180,slow=11,SNR=55						
PETK				S	**Sn**	**09 56 42.8**	**+8.0**
	comp=E,3.0nm,0.7s,baz=194,slow=16,SNR=1.2						
	comp=E,3.7nm,0.4s						
PET	**Petropavlovsk**	**5.32**	**22**	*d i* PN	**Pn**	**09 55 39.4**	**+1.5**
PET	**Petropavlovsk**	**5.32**	**22**	*e*P	**Pn**	**09 55 38.5**	**+0.6**
PET				*e*S	**Sn**	**09 56 35.1**	**-2.8**
PET	**Petropavlovsk**	**5.32**	**22**	*e*P	**Pn**	**09 55 39.3**	**+1.4**
PET				AMB	AMB	09 55 44.9	
	comp=E,20nm,0.3s						
PET				*e*S	**Sn**	**09 56 37.0**	**-0.8**
PET				A	A	09 56 47.7	
	comp=E,40nm,0.3s						
PET				A	A	09 56 47.7	
	comp=E,20nm,0.3s						
DALK	**Dalny**	**5.35**	**22**	PN	**Pn**	**09 55 39.3**	**+1.0**
DALK	**Dalny**	**5.35**	**22**	*e*P	**Pn**	**09 55 39.3**	**+1.0**
DALK				*e*S	**Sn**	**09 56 35.5**	**-3.2**
DALK	**Dalny**	**5.35**	**22**	*e*P	**Pn**	**09 55 39.3**	**+1.0**
UGLR	**Uglovaya**	**5.53**	**22**	PN	**Pn**	**09 55 43.0**	**+2.1**
UGLR	**Uglovaya**	**5.53**	**22**	*e*P	**Pn**	**09 55 43.0**	**+2.1**
UGLR				*e*S	**Sn**	**09 56 40.6**	**-2.6**
AVH	**Avacha**	**5.56**	**21**	PN	**Pn**	**09 55 43.7**	**+2.4**
AVH	**Avacha**	**5.56**	**21**	*e*P	**Pn**	**09 55 43.7**	**+2.4**
AVH				*e*S	**Sn**	**09 56 42.7**	**-1.2**
KOK	**Koryaka**	**5.56**	**21**	PN	**Pn**	**09 55 42.8**	**+1.5**
KOK	**Koryaka**	**5.56**	**21**	*e*P	**Pn**	**09 55 42.8**	**+1.5**
KOK				*e*S	**Sn**	**09 56 42.4**	**-1.6**
KOK	**Koryaka**	**5.56**	**21**	*e*P	**Pn**	**09 55 42.8**	**+1.5**
SMAR	**Somma**	**5.57**	**22**	PN	**Pn**	**09 55 43.2**	**+1.7**
SMAR	**Somma**	**5.57**	**22**	*e*P	**Pn**	**09 55 43.3**	**+1.7**
KRER	**Koryakskii**	**5.60**	**21**	PN	**Pn**	**09 55 43.8**	**+1.9**
KRER				S	**Sn**	**09 56 44.1**	**-0.9**
KRER	**Koryakskii**	**5.60**	**21**	*e*P	**Pn**	**09 55 43.9**	**+1.9**
KRER				*e*S	**Sn**	**09 56 44.1**	**-0.9**
SDLR	**Sedlovina**	**5.61**	**22**	PN	**Pn**	**09 55 42.5**	**+0.5**
SDLR	**Sedlovina**	**5.61**	**22**	*e*P	**Pn**	**09 55 42.5**	**+0.5**
SDLR				*e*S	**Sn**	**09 56 42.3**	**-2.9**
KRX	**Arik**	**5.63**	**20**	PN	**Pn**	**09 55 44.1**	**+1.9**
KRX	**Arik**	**5.63**	**20**	*e*P	**Pn**	**09 55 44.1**	**+1.9**
KRX				*e*S	**Sn**	**09 56 41.4**	**-4.3**
SPN	**Mys Shipunski**	**5.78**	**29**	PN	**Pn**	**09 55 45.3**	**+1.1**
SPN	**Mys Shipunski**	**5.78**	**29**	*e*P	**Pn**	**09 55 45.4**	**+1.1**
SPN				*e*S	**Sn**	**09 56 46.5**	**-2.7**
SPN	**Mys Shipunski**	**5.78**	**29**	*e*P	**Pn**	**09 55 45.3**	**+1.1**
GNL	**Ganaly**	**5.80**	**15**	PN	**Pn**	**09 55 45.8**	**+1.3**
GNL	**Ganaly**	**5.80**	**15**	*e*P	**Pn**	**09 55 45.9**	**+1.3**
GNL				*e*S	**Sn**	**09 56 46.9**	**-2.9**
REI	**Reidovoe**	**5.82**	**243**	*e*P	**Pn**	**09 55 44.6**	**-0.2**
REI				*e*S	**Sn**	**09 56 46.7**	**-3.6**
REI				A	A	09 56 51.6	
	comp=E,20nm,0.3s						
REI				A	A	09 56 51.6	
	comp=E,20nm,0.3s						
KUR	**Kuril'sk**	**5.93**	**243**	*e*PN	**Pn**	**09 55 47.3**	**+1.0**
KUR				*i* S	**Sn**	**09 56 53.2**	**+0.3**
KUR				pmax	pmax		
	comp=Z,46nm,0.7s						
KUR				smax	smax		
	comp=E,43nm,0.5s						
KUR				smax	smax		
	comp=N,39nm,0.6s						
KUR	**Kuril'sk**	**5.93**	**243**	*e*P	**Pn**	**09 55 47.3**	**+1.0**
KUR				AMB	AMB	09 55 48.9	
	comp=N,50nm,0.5s						
KUR				*i* S	**Sn**	**09 56 50.2**	**-2.7**
KUR				A	A	09 56 57.2	
	comp=N,40nm,0.3s						
KUR				A	A	09 56 57.2	
	comp=N,40nm,0.3s						
SHO	**Shikotan**	**7.32**	**238**	*e*P	Pn	09 56 15.3	+10
SHO				AMB	AMB	09 56 18.1	
	comp=N,20nm,0.4s						
SHO				*e*S	**Sn**	**09 57 31.6**	**+4.4**
SHO				A	A	09 57 43.0	
	comp=N,30nm,0.3s						
SHO				A	A	09 57 43.0	
	comp=N,30nm,0.3s						
MKZ	**Mys Kozlova**	**7.56**	**29**	PN	**Pn**	**09 56 07.5**	**-1.0**
MKZ	**Mys Kozlova**	**7.56**	**29**	*e*P	**Pn**	**09 56 07.5**	**-1.0**
MKZ				*e*S	**Sn**	**09 57 26.2**	**-6.6**
YUK	**Yuzh-Kuril'sk**	**7.79**	**242**	*c i* PN	**Pn**	**09 56 10.8**	**-0.9**
YUK				pmax	pmax		
	comp=N,19nm,0.4s						
YUK				pmax	pmax		
	comp=Z,115nm,0.4s						
YUK				pmax	pmax		
	comp=E,22nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**7.79**	**242**	*i* P	**Pn**	**09 56 11.1**	**-0.6**
YUK				AMB	AMB	09 56 11.5	
	comp=E,60nm,0.6s						
YUK				*e*S	**Sn**	**09 57 34.3**	**-4.3**
RUSJ	**Misakicho**	**8.11**	**244**	*e*PN	**Pn**	**09 56 16.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**8.26**	**238**	⇓*i*PN	**Pn**	**09 56 15.1**	**-3.2**
NMR	**Nemuro--Hokkai**	**8.26**	**238**	*i* P	**Pn**	**09 56 15.3**	**-3.0**
YSS	**Yuzhno-Sakhali**	**8.63**	**267**	*e*PN	**Pn**	**09 56 24.2**	**+0.9**
YSS			

SOEI Soe 2.80 196 P **P** 09 57 21.8 +0.3
SOEI Soe 2.80 196 S **S** 09 58 18.8 -0.7
SOEI Soe 2.80 196 **P** 09 57 21.8 +0.3
SOEI Soe 2.80 196 P **P** 09 57 21.6 +0.1
SOEI S **S** 09 58 17.6 -1.9
SOEI Soe 2.80 196 P **P** 09 57 22.0 +0.5
MMRI Maumere 3.20 240 P **P** 09 57 23.2 -0.7
MMRI Maumere 3.20 240 **P** 09 57 23.3 -0.7
MMRI Maumere 3.20 240 P **P** 09 57 23.3 -0.7
MMRI S **S** 09 58 23.9 0.0
MMRI Maumere 3.20 240 P **P** 09 57 23.5 -0.5
BATI Baumata 3.43 203 P **P** 09 57 22.8 -2.8
3µm,0.4s,baz=89,slow=1.6,SNR=284
BATI S **S** 09 58 22.3 -4.7
793nm,0.3s,baz=308,slow=18,SNR=7.5
BATI Baumata 3.43 203 P **P** 09 57 22.6 -3.0
BATI S **S** 09 58 22.2 -4.7
KDI Kendari 3.90 322 P **P** 09 57 30.3 +1.2
KDI S **S** 09 58 34.7 +1.5
NLAI Namlea 4.30 29 P **P** 09 57 33.1 +0.8
BSSI Bau Bau, Buton 4.61 281 P **P** 09 57 36.3 +1.5
BSSI S **S** 09 58 44.8 +1.0
SANI Sanana 5.05 11 P **P** 09 57 38.2 -0.5
SANI Sanana 5.05 11 S **S** 09 58 50.9 +0.2
SANI Sanana 5.05 11 P **P** 09 57 39.2 +0.5
SANI S **S** 09 58 49.7 -1.0
SANI Sanana 5.05 11 P **P** 09 57 39.5 +0.8
LBFI Labuhan Bajo, 5.30 254 P **P** 09 57 39.2 -1.7
MSAI Masohi 5.33 47 P **P** 09 57 41.6 +0.4
3.1nm7µm209nm,0.7s
WSI Waingapu 5.37 241 P **P** 09 57 40.2 -1.3
BNDI Bandanaira 5.45 63 P **P** 09 57 42.4 +0.1
BNDI Bandanaira 5.45 63 P **P** 09 57 42.9 +0.6
2.7nm408nm,1.2s
KAPI Kappang 5.63 291 P **P** 09 57 44.8 +0.9
148nm,0.4s,baz=111,slow=5.1,SNR=42
KAPI S **S** 09 59 01.6 +1.3
55nm,0.8s,baz=194,slow=22,SNR=10.0
KAPI Kappang 5.63 291 P **P** 09 57 43.2 -0.7
KAPI Kappang 5.63 291 **P** 09 57 44.3 +0.4
KAPI Kappang 5.63 291 P **P** 09 57 45.6 +1.7
138nm,0.7s
KAPI Kappang 5.63 291 P **P** 09 57 45.1 +1.2
WBSI Waikabubak, Su 6.16 245 P **P** 09 57 47.2 -1.7
SAUI Saumlaki 6.28 99 P **P** 09 57 50.3 +0.3
SAUI Saumlaki 6.28 99 P **P** 09 57 50.3 +0.3
3.8nm626nm,1.0s
LUWI Luwuk 6.37 339 P **P** 09 57 50.8 -0.1
LUWI Luwuk 6.37 339 P **P** 09 57 52.4 +1.4
LUWI Luwuk 6.37 339 P **P** 09 57 52.5 +1.6
LUWI Luwuk 6.37 339 P **P** 09 57 52.7 +1.7
DBNI Kabupaten Domp 6.82 257 P **P** 09 57 53.6 -1.7
2.6nm10µm660nm,0.6s
PMSI Majene 7.04 300 P **P** 09 57 59.2 +1.7
1.9nm7µm545nm,0.7s
PLAI Plampang 7.41 256 P **P** 09 57 59.7 -1.4
PLAI Plampang 7.41 256 P **P** 09 57 59.0 -2.1
PLAI Plampang 7.41 256 P **P** 09 57 59.7 -1.4
MMSI Mamuju 7.48 305 P **P** 09 58 03.7 +1.8
1.7nm4µm463nm,0.7s
DRS Darwin Rock St 7.88 133 P **P** 09 58 06.5 +0.7
PCI Palu 8.00 319 P **P** 09 58 09.1 +1.9
9µm656nm,1.1s
TNTI Ternate 8.10 17 P **P** 09 58 07.9 -0.2
TNTI Ternate 8.10 17 **P** 09 58 08.1 -0.1
TNTI Ternate 8.10 17 P **P** 09 58 07.8 -0.3
2µm219nm,1.0s
TNTI Ternate 8.10 17 P **P** 09 58 08.1 -0.1
FAKI Fak Fak 8.27 61 P **P** 09 58 09.6 -0.3
FAKI Fak Fak 8.27 61 **P** 09 58 08.9 -1.0
FAKI Fak Fak 8.27 61 P **P** 09 58 08.6 -1.3
FAKI Fak Fak 8.27 61 P **P** 09 58 10.2 +0.3
MTN Manton Dam 8.32 134 P **P** 09 58 10.9 +0.5
comp=Z,1µm,0.5s
MTN Manton Dam 8.32 134 **P** 09 58 10.9 +0.5
MNI Manado 8.43 359 P **P** 09 58 12.6 +1.1
SIJI Sorong 8.72 46 P **P** 09 58 14.6 0.0
comp=Z,110nm,0.5s,baz=221,slow=5.8,SNR=75
SIJI S **S** 09 59 53.1 -3.5
comp=Z,25nm,0.3s,baz=97,slow=21,SNR=9.9
SIJI Sorong 8.72 46 P **P** 09 58 14.8 +0.2
comp=Z,3µmcomp=Z,194nm,0.9s
TOLI2 Tolitoli 9.14 332 P **P** 09 58 18.6 -0.3
TOLI2 Tolitoli 9.14 332 S **S** 10 00 03.9 -0.6
TOLI2 Tolitoli 9.14 332 P **P** 09 58 19.5 +0.6
TOLI2 Tolitoli 9.14 332 P **P** 09 58 19.5 +0.6
KDU Kakadu 9.23 128 P **P** 09 58 19.5 -0.2
comp=Z,182nm,0.8s
KNRA Kununurra 9.33 157 P **P** 09 58 21.4 +0.7
comp=Z,1µm,0.7s
KNRA Kununurra 9.33 157 **P** 09 58 21.0 +0.3
KHKI Kahang-Kahang 9.44 261 P **P** 09 58 22.0 +0.1
comp=Z,2µmcomp=Z,158nm,0.9s
BKB Balikpapan 9.94 305 P **P** 09 58 30.5 +3.3
BKB Balikpapan 9.94 305 **P** 09 58 30.8 +3.6
comp=Z,3µmcomp=Z,316nm,0.7s
BKB Balikpapan 9.94 305 P **P** 09 58 30.6 +3.4
IGBI Denpasar 9.96 259 P **P** 09 58 26.8 -0.6
comp=Z,8µmcomp=Z,324nm,0.9s
SGSI Sangihe 10.66 3 P **P** 09 58 34.6 -0.2
comp=Z,13µmcomp=Z,843nm,0.8s
MWPI Manokwari, Pap 10.84 56 P **P** 09 58 39.0 +2.4
comp=Z,3µmcomp=Z,384nm,0.7s
JAGI Jajag, Banyuwa 10.88 262 P **P** 09 58 35.6 -1.5
JAGI Jajag, Banyuwa 10.88 262 S **S** 10 00 37.1 -0.8
JAGI Jajag, Banyuwa 10.88 262 **P** 09 58 35.5 -1.5
JAGI Jajag, Banyuwa 10.88 262 P **P** 09 58 35.0 -2.1
comp=Z,2µmcomp=Z,57nm,0.4s
FITZ Fitzroy Crossi 11.01 177 P **P** 09 58 38.6 +0.3
comp=Z,81nm,2.0s
FITZ Fitzroy Crossi 11.01 177 P **P** 09 58 38.4 +0.1
comp=Z,299nm,0.3s,baz=4.2,slow=7.6,SNR=4658
FITZ S **S** 10 00 36.9 -3.3
comp=Z,40nm,0.6s,baz=172,slow=18,SNR=14
FITZ Fitzroy Crossi 11.01 177 P **P** 09 58 38.2 -0.1
FITZ Fitzroy Crossi 11.01 177 S **S** 10 00 41.3 +1.1
FITZ Fitzroy Crossi 11.01 177 **P** 09 58 38.5 +0.2
FITZ Fitzroy Crossi 11.01 177 P **P** 09 58 38.8 +0.4
SRPI Serui, Papua 12.29 66 P **P** 09 58 52.7 +0.8
comp=Z,138nm,0.7s
BAKI Biak 12.47 63 P **P** 09 58 55.4 +1.6
comp=Z,2µmcomp=Z,159nm,0.5s
DDMP Don Marcelino, 13.07 3 *i* P **P** 09 58 58.8 -1.3
DDMP *e*S **S** 10 01 18.0 -2.1
SNJI Sawahan-Nganju 13.19 266 P **P** 09 59 02.6 +1.1
WAMI Wamena 13.97 78 P **P** 09 59 12.6 +3.1
comp=Z,206nm,0.6s
CDOP Cateel, Davao 14.79 5 *e*P **P** 09 59 16.8 -1.3
CDOP *i* S **S** 10 01 51.2 -1.9
BUKP Musuan 14.82 0 *e*P **P** 09 59 18.8 +0.3
MBWA Marble Bar 14.95 200 P **P** 09 59 19.0 -0.6
comp=Z,75nm,0.9s
MBWA Marble Bar 14.95 200 P **P** 09 59 19.1 -0.6
MBWA Marble Bar 14.95 200 **P** 09 59 18.9 -0.6
MBWA Marble Bar 14.95 200 P **P** 09 59 19.1 -0.5
BIPH Bislig 15.18 5 *e*P **P** 09 59 21.6 -0.6
WB0 Warramunga Arr 15.57 145 P **P** 09 59 25.2 -1.0
WRAB Tennant Creek 15.68 146 P **P** 09 59 26.5 -0.8
WRAB Tennant Creek 15.68 146 S **S** 10 02 10.2 +0.6
WRAB Tennant Creek 15.68 146 **P** 09 59 26.6 -0.8
WRAB Tennant Creek 15.68 146 P **P** 09 59 26.7 -0.6
WRA Warramunga Arr 15.68 146 P **P** 09 59 26.3 -1.0
comp=Z,102nm,0.6s,baz=322,slow=11,SNR=213
WRA S **S** 10 02 09.3 -0.3
comp=Z,26nm,0.9s,baz=323,slow=16,SNR=9.9
WRA Warramunga Arr 15.68 146 P **P** 09 59 23.8 -3.6
WRA IAmb IAmb 09 59 28.7
comp=Z,13nm,0.8s
KKM Kota Kinabalu 15.70 326 P **P** 09 59 27.1 -0.6
KKM Kota Kinabalu 15.70 326 **P** 09 59 26.8 -0.8
KKM Kota Kinabalu 15.70 326 P **P** 09 59 27.4 -0.3
comp=Z,64nm,0.7s
GENI Genyem 15.71 74 P **P** 09 59 27.4 -0.3
comp=Z,2µmcomp=Z,278nm,1.1s
GENI Genyem 15.71 74 P **P** 09 59 27.7 0.0
JAY Jayapura 16.24 75 P **P** 09 59 32.1 -1.0
comp=Z,65nm,0.5s,baz=238,slow=9.5,SNR=40
JAY Jayapura 16.24 75 P **P** 09 59 33.0 -0.2
comp=Z,102nm,0.8s
TBP Tagbilaran 16.66 356 *e*P **P** 09 59 37.0 -0.3
SCPH Surigao 16.72 2 *e*P **P** 09 59 38.2 +0.4
BBJI Bungbulang 17.25 268 P **P** 09 59 42.3 -0.8
BBJI Bungbulang 17.25 268 S **S** 10 02 37.0 +0.1

BBJI Bungbulang 17.25 268 P **P** 09 59 42.3 -0.8
BBJI IAmb IAmb 09 59 43.7
comp=Z,13nm,0.7s
BBJI Bungbulang 17.25 268 P **P** 09 59 42.4 -0.7
LLP Lapu-Lapu 17.27 356 *e*P **P** 09 59 41.5 -1.7
LLP *e*S **S** 10 02 37.2 +0.1
PPR Puerto Princes 17.85 339 *i* P **P** 09 59 49.6 +1.2
PLP Palo 18.09 360 *e*P **P** 09 59 50.6 0.0
WRKA Warakurna 18.17 170 P **P** 09 59 51.7 +0.4
comp=Z,130nm,0.9s
AS15 Alice Springs 18.57 154 P **P** 09 59 55.6 +0.6
comp=Z,202nm,0.7s
ASAR Alice Springs 18.60 154 P **P** 09 59 55.7 +0.5
comp=Z,112nm,0.5s,baz=330,slow=7.9,SNR=1179
ASAR S **S** 10 02 58.8 +0.3
comp=Z,24nm,0.9s,baz=346,slow=21,SNR=8.0
ASAR PcP **PcP** 10 03 56.9 -0.7
comp=Z,3.3nm,0.6s,baz=313,slow=1.8,SNR=1.9
ASAR ScP **ScP** 10 06 43.2 -1.0
comp=Z,1.8nm,0.4s,baz=327,slow=2.4,SNR=5.9
AS17 Alice Springs 18.63 153 P **P** 09 59 56.1 +0.5
comp=Z,221nm,0.7s
AS09 Alice Springs 18.64 154 P **P** 09 59 56.3 +0.6
comp=Z,201nm,0.7s
GIRL Giralia 18.68 213 P **P** 09 59 56.2 +0.3
comp=Z,88nm,0.9s
GIRL Giralia 18.68 213 P **P** 09 59 57.1 +1.2
IBAJ Ibajay, Aklan 18.95 351 *e*P **P** 09 59 59.2 +0.7
COEN Coen 19.10 113 P **P** 10 00 00.1 +0.3
COEN Coen 19.10 113 P **P** 10 00 00.2 +0.3
COEN Coen 19.10 113 S **S** 10 03 08.5 +1.7
COEN Coen 19.10 113 **P** 10 00 00.3 +0.4
QIS Mount Isa 19.49 135 P **P** 10 00 03.4 +0.1
comp=Z,220nm,0.5s
QIS Mount Isa 19.49 135 P **P** 10 00 03.5 +0.1
QIS Mount Isa 19.49 135 S **S** 10 03 14.2 +1.3
QIS Mount Isa 19.49 135 P **P** 10 00 03.6 +0.3
MEEK Meekatharra 20.43 197 P **P** 10 00 11.6 -0.2
comp=Z,200nm,0.8s
MEEK Meekatharra 20.43 197 P **P** 10 00 11.6 -0.2
MEEK Meekatharra 20.43 197 P **P** 10 00 12.2 +0.3
MTSU Mount Surprise 21.78 122 P **P** 10 00 24.9 +0.7
comp=Z,9.6nm,1.1s
PMG Port Moresby 22.02 98 P **P** 10 00 27.5 +1.1
PMG IAmb IAmb 10 00 27.5
comp=Z,29nm,0.9s
MORW Morawa 23.50 200 P **P** 10 00 39.2 -0.2
comp=Z,34nm,2.0s
MORW Morawa 23.50 200 P **P** 10 00 39.3 -0.1
MORW Morawa 23.50 200 **P** 10 00 39.2 -0.2
MORW IAmb IAmb 10 00 39.6
comp=Z,20nm,0.6s
FORT Forrest 23.79 174 P **P** 10 00 42.0 +0.1
comp=Z,49nm,0.7s
FORT Forrest 23.79 174 **P** 10 00 42.1 +0.1
KMBL Kambalda 24.38 187 P **P** 10 00 47.2 0.0
comp=Z,66nm,0.7s
BLDU Ballidu 24.72 197 P **P** 10 00 50.0 -0.2
comp=Z,89nm,1.7s
BLDU Ballidu 24.72 197 P **P** 10 00 50.0 -0.2
BLDU Ballidu 24.72 197 P **P** 10 00 49.4 -0.8
KLBR Kellerberrin 25.36 195 P **P** 10 00 55.7 -0.2
comp=Z,99nm,0.9s
KLBR Kellerberrin 25.36 195 P **P** 10 00 55.7 -0.2
KLBR Kellerberrin 25.36 195 P **P** 10 00 56.0 +0.2
INKA Innaminka 25.41 146 **P** 10 00 57.4 +1.1
INKA IAmb IAmb 10 00 58.9
comp=Z,16nm,0.5s
MUN Mundaring 26.14 197 P **P** 10 01 01.3 -1.5
comp=Z,38nm,0.7s
MUN Mundaring 26.14 197 P **P** 10 01 02.8 0.0
QLP Quilpie 26.67 139 P **P** 10 01 08.7 +1.2
comp=Z,149nm,0.7s
QLP Quilpie 26.67 139 P **P** 10 01 08.3 +0.8
QLP Quilpie 26.67 139 S **S** 10 05 07.5 +1.3
QLP Quilpie 26.67 139 P **P** 10 01 08.9 +1.3
NWAO Narrogin (SRO) 26.76 195 P **P** 10 01 08.3 +0.1
comp=Z,51nm,1.5s
NWAO Narrogin (SRO) 26.76 195 P **P** 10 01 06.4 -1.8
NWAO Narrogin (SRO) 26.76 195 P **P** 10 01 07.9 -0.3
comp=Z,30nm,0.3s,baz=30,slow=7.0,SNR=96
comp=Z,30nm,0.3s
NWAO Narrogin (SRO) 26.76 195 P **P** 10 01 08.5 +0.3
NWAO Narrogin (SRO) 26.76 195 P **P** 10 01 08.1 -0.1
NWAO Narrogin (SRO) 26.76 195 **P** 10 01 08.3 +0.1
KULM Kulim 27.25 296 P **P** 10 01 12.9 +0.2
BBOO Buckleboo 27.61 160 P **P** 10 01 16.0 +0.3
comp=Z,145nm,0.6s
BBOO Buckleboo 27.61 160 P **P** 10 01 16.0 +0.3
BBOO Buckleboo 27.61 160 **P** 10 01 16.1 +0.3
BBOO Buckleboo 27.61 160 P **P** 10 01 16.2 +0.4
RPSI Rantau Prapat 27.80 289 P **P** 10 01 17.8 +0.2
PSI Prapat 27.84 290 P **P** 10 01 18.1 0.0
GUMO Guam 28.42 44 P **P** 10 01 22.3 -0.7
comp=Z,55nm,0.3s,baz=192,slow=3.8,SNR=11
comp=Z,55nm,0.3s
GUMO Guam 28.42 44 P **P** 10 01 22.9 -0.1
GUMO Guam 28.42 44 **P** 10 01 21.8 -1.2
RKGY Rocky Gully 28.43 194 P **P** 10 01 24.2 +1.4
comp=Z,195nm,0.9s
STKA Stephens Creek 29.14 150 P **P** 10 01 29.6 +0.5
comp=Z,65nm,0.5s,baz=325,slow=8.5,SNR=164
STKA S **S** 10 05 44.4 -0.2
comp=Z,18nm,0.9s,baz=178,slow=20,SNR=8.1
comp=Z,65nm,0.5s
HTT Hallett 29.25 156 P **P** 10 01 31.1 +1.0
comp=Z,70nm,0.8s
HTT Hallett 29.25 156 P **P** 10 01 30.4 +0.4
HTT Hallett 29.25 156 S **S** 10 05 47.2 +1.0
TPUB Ta-pu 30.46 352 P **P** 10 01 39.6 -1.0
TPUB Ta-pu 30.46 352 **P** 10 01 39.8 -0.8
TPUB IAmb IAmb 10 02 17.6
comp=Z,32nm,1.2s
YULB Yu-li 30.46 353 P **P** 10 01 39.5 -1.1
SSLB Suanglung 30.90 353 P **P** 10 01 42.9 -1.5
CMSA Cobar Meteorol 31.09 144 P **P** 10 01 47.0 +1.1
comp=Z,55nm,0.9s
CMSA Cobar Meteorol 31.09 144 P **P** 10 01 46.6 +0.7
CMSA Cobar Meteorol 31.09 144 **P** 10 01 47.2 +1.3
NACB Ninganchiao 31.20 354 P **P** 10 01 46.6 -0.3
YHNB Yeheng 31.72 354 P **P** 10 01 51.1 -0.3
ARPS Mount Arapiles 33.33 155 P **P** 10 02 06.1 +1.2
comp=Z,121nm,0.7s
JOW Kunigami 33.82 5 P **P** 10 02 08.8 -0.3
JOW Kunigami 33.82 5 **P** 10 02 09.3 +0.2
ARMA Armidale 34.10 136 P **P** 10 02 11.4 -0.3
TATA Tatamba Isabel 34.47 95 P **P** 10 02 14.8 -0.1
NGOA Tingoa Renbel 34.84 100 P **P** 10 02 18.2 +0.3
BRAT Ballarat 34.89 153 P **P** 10 02 18.6 +0.6
TOO Toolangi 35.62 152 P **P** 10 02 26.3 +2.1
comp=Z,19nm,1.0s
TOO Toolangi 35.62 152 IAmb IAmb 10 02 27.0
comp=Z,35nm,1.4s
CAN Canberra 35.73 145 P **P** 10 02 26.8 +1.6
comp=Z,76nm,0.7s
CAN Canberra 35.73 145 P **P** 10 02 25.3 +0.2
CAN Canberra 35.73 145 **P** 10 02 27.2 +2.1
CAN Canberra 35.73 145 P **P** 10 02 27.1 +2.0
CMAR Chiang Mai Arr 36.12 315 P **P** 10 02 29.1 +0.6
comp=Z,4.3nm,0.8s,baz=142,slow=7.0,SNR=14
CMAR PcP **PcP** 10 04 41.2 +0.7
comp=Z,4.7nm,0.7s,baz=177,slow=2.7,SNR=13
CMAR ScP **ScP** 10 07 38.4 +0.7
comp=Z,0.7nm,0.3s,baz=163,slow=3.9,SNR=7.1
comp=Z,4.3nm,0.8s
HURO Huro Makira 36.58 98 P **P** 10 02 32.7 +0.3
JCJ Chichijima 37.78 25 P **P** 10 02 40.5 -1.5
comp=Z,126nm,0.7s,baz=207,slow=8.3,SNR=9.1
comp=Z,126nm,0.7s
JCJ Chichijima 37.78 25 P **P** 10 02 42.2 +0.2
JCJ Chichijima 37.78 25 **P** 10 02 41.2 -0.8
WHN Wuhan 38.75 345 ⇓P **P** 10 02 51.1 +1.3
NJ2 Nanjing 39.32 352 *e*P **P** 10 02 56.9 +2.5
NJ2 pmax pmax
comp=Z,28nm,0.5s
PZH PanZhiHua 40.28 327 P **P** 10 03 04.2 +1.8
TAU Tasmania Unive 40.77 155 P **P** 10 03 06.1 +0.2
SANVU Saraoutou 42.12 105 P **P** 10 03 17.1 0.0
YATNC Mamie plateau, 43.00 115 P **P** 10 03 24.3 +0.3
OUENC Ouen Island, N 43.05 115 P **P** 10 03 24.7 +0.4
XAN Xi'an 43.62 340 P **P** 10 03 28.0 -0.5
XAN pP pP 10 04 56.9 -5.0
XAN pmax pmax
comp=Z,17nm,0.7s

MARNC Mare, Loyalty 43.90 114 P **P** 10 03 30.8 -0.2
KSAR Wonju Array Be 44.33 3 P **P** 10 03 34.5 +0.5
KSRS Korea Array 44.34 3 P **P** 10 03 34.0 0.0
comp=Z,5.0nm,0.5s,baz=181,slow=9.6,SNR=28
KSRS PcP **pP** 10 05 07.5 -0.3
comp=Z,4.5nm,0.5s,baz=184,slow=3.3,SNR=16
comp=Z,5.0nm,0.5s
MAJO Matsushiro 45.08 15 P **P** 10 03 39.2 -0.5
MAJO IAmb IAmb 10 03 40.0
comp=Z,13nm,0.8s
MJAR Matsushiro Arr 45.08 15 P **P** 10 03 39.1 -0.7
comp=Z,10nm,0.7s,baz=191,slow=8.3,SNR=20
comp=Z,10nm,0.7s
MJAR Matsushiro Arr 45.08 15 P **P** 10 03 39.4 -0.4
HNS HongShan 45.25 348 ⇑P **P** 10 03 41.0 0.0
HNS pmax pmax
comp=Z,16nm,0.7s
LZDM Lanzhou Array 47.24 336 P **P** 10 03 56.9 +0.3
comp=Z,2.9nm,0.3s,baz=160,slow=13,SNR=3.7
LZDM PcP **PcP** 10 05 18.0 +0.3
comp=Z,1.3nm,0.3s,baz=138,slow=3.8,SNR=1.8
comp=Z,2.9nm,0.3s
LZH Lanzhou 47.30 337 *e*P **P** 10 03 57.6 +0.8
LZH PcP **PcP** 10 05 19.1 +1.4
LZH pmax pmax
comp=Z,23nm,1.2s
BJI2 Beijing 47.53 351 P **P** 10 03 58.2 -0.1
BJI2 pmax pmax
comp=Z,5.0nm,0.6s
LSA Lhasa 48.94 320 P **P** 10 04 11.0 +1.4
HHC Hu-ho-hao-te 49.24 347 *e*P **P** 10 04 13.9 +2.7
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,31nm,4.5s
JTM Tenmabayashi 49.82 16 P **P** 10 04 15.0 -0.3
JTM Tenmabayashi 49.82 16 **P** 10 04 15.8 +0.5
JTM IAmb IAmb 10 04 16.6
comp=Z,50nm,0.9s
EVN Everest 50.73 315 **P** 10 04 22.5 -0.5
XLT XiLinHaoTe 51.34 352 *e*P **P** 10 04 26.3 -0.2
XLT S **S** 10 11 07.7 +0.8
XLT pmax pmax
comp=Z,17nm,0.9s
USRK Ussuriysk Ar. 51.39 6 P **P** 10 04 26.9 +0.2
comp=Z,9.9nm,0.5s,baz=187,slow=7.2,SNR=26
comp=Z,9.9nm,0.5s
ERM Erimo 51.55 17 P **P** 10 04 27.8 -0.1
JEM Erimo 51.55 17 P **P** 10 04 27.6 -0.3
MDJ Mudanjiang 51.58 4 IAmb IAmb 10 04 29.6
comp=Z,39nm,1.0s
MDJ Mudanjiang 51.58 4 P **P** 10 04 28.9 +0.8
MDJ pmax pmax
comp=Z,47nm,0.8s
GTA2 Gaotai 51.87 335 *e*P **P** 10 04 30.8 +0.3
GTA2 PcP **PcP** 10 05 35.8 +1.2
GTA2 pmax pmax
comp=Z,10.0nm,1.0s
BNX BinXian 52.58 2 ⇑P **P** 10 04 34.8 -0.5
BNX pmax pmax
comp=Z,8.0nm,0.6s
MSVF Nonsavu 52.70 107 P **P** 10 04 37.2 +0.4
JKA Kamikawa-asahi 53.34 16 **P** 10 04 41.1 +0.5
URZ Urewera 56.27 132 P **P** 10 05 01.4 0.0
KLR Kul'dur 56.34 5 P **P** 10 05 01.5 -0.1
comp=Z,2.8nm,0.4s,baz=199,slow=6.8,SNR=16
KLR PcP **PcP** 10 05 51.5 +0.1
comp=Z,3.6nm,0.6s,baz=193,slow=3.6,SNR=7.0
comp=Z,2.8nm,0.4s
HILR Hailar Array B 56.55 356 P **P** 10 05 03.6 +0.5
comp=Z,7.0nm,0.4s,baz=170,slow=10,SNR=11
HILR PcP **PcP** 10 05 52.9 +0.5
comp=Z,3.9nm,0.5s,baz=164,slow=4.1,SNR=3.7
comp=Z,7.0nm,0.4s
ULN Ulaanbaatar 56.93 346 P **P** 10 05 06.5 +0.6
ULN PcP **PcP** 10 05 54.5 +0.5
ULN Ulaanbaatar 56.93 346 P **P** 10 05 06.6 +0.6
SONM Songino Array 57.06 345 P **P** 10 05 07.2 +0.4
comp=Z,6.4nm,0.7s,baz=165,slow=8.5,SNR=29
SONM PcP **PcP** 10 05 54.4 -0.1
comp=Z,2.3nm,0.7s,baz=150,slow=3.9,SNR=5.2
SONM pP **pP** 10 06 47.4 +0.1
comp=Z,1.4nm,0.9s,baz=169,slow=10,SNR=2.0
comp=Z,6.4nm,0.7s
SONM Songino Array 57.06 345 **P** 10 05 07.2 +0.4
SONM PcP **PcP** 10 05 54.7 +0.1
HEH HeiHe 57.09 2 *e*P **P** 10 05 07.1 +0.3
HEH pmax pmax
comp=Z,40nm,0.7s
CASY Casey 59.99 187 P **P** 10 05 26.4 +0.3
WMQ Urumqi 60.84 330 *e*P **P** 10 05 33.0 +0.8
WMQ pmax pmax
comp=Z,22nm,0.9s
TLY Talaya 61.31 345 P **P** 10 05 35.7 +0.6
SHLS Shalkode 64.82 325 *e*P **P** 10 05 56.6 -1.4
comp=Z,4.4nm,0.4s
ZSN Zaisan 64.83 331 *e*P **P** 10 05 57.9 +0.1
KSH2 Kashi 64.85 319 P **P** 10 05 58.1 -0.2
KSH2 pmax pmax
comp=Z,10.0nm,0.7s
UZB Uzynbulak 65.07 324 *e*P **P** 10 05 59.8 +0.2
SATY Saty 65.37 324 *e*P **P** 10 06 01.4 0.0
KPKS Kokpek 65.46 325 *e*P **P** 10 06 01.9 -0.1
MKAR Makanchi Array 65.65 329 P **P** 10 06 03.3 +0.3
comp=Z,14nm,0.5s,baz=128,slow=7.7,SNR=145
MKAR pP **pP** 10 07 48.9 +1.8
comp=Z,0.8nm,0.5s,baz=132,slow=7.9,SNR=1.7
MKAR S **S** 10 14 07.0 -0.9
comp=Z,1.2nm,1.0s,baz=134,slow=14,SNR=8.3
comp=Z,14nm,0.5s
MAKZ Makanchi 65.82 329 **P** 10 06 04.1 +0.1
MAKZ IAmb IAmb 10 06 04.9
comp=Z,9.2nm,0.7s
MAKZ Makanchi 65.82 329 P **P** 10 06 04.2 +0.2
PEA0B Petropavlovsk- 66.00 21 P **P** 10 06 05.9 +0.8
PEA0B IAmb IAmb 10 06 06.7
comp=Z,20nm,0.7s
PEA0B PcP **PcP** 10 06 30.6 -0.2
PETK Petropavlovsk- 66.00 21 P **P** 10 06 05.8 +0.8
comp=Z,22nm,0.7s,baz=213,slow=2.0,SNR=104
PETK PcP **PcP** 10 06 30.4 -0.3
comp=Z,4.7nm,0.5s,baz=249,slow=1.3,SNR=8.6
comp=Z,22nm,0.7s
TNSS Tian-Shan 66.22 323 *e*P **P** 10 06 06.7 -0.3
MDOK Medeo 66.23 324 *e*P **P** 10 06 06.7 -0.1
AAA Alma-Ata 66.33 324 *e*P **P** 10 06 07.3 -0.1
TDK Taldyqorghan 66.56 326 *e*P **P** 10 06 08.8 +0.1
AAK Ala-Archa 67.46 322 **P** 10 06 14.9 +0.4
AAK IAmb IAmb 10 06 15.6
comp=Z,6.6nm,0.5s
AAK Ala-Archa 67.46 322 P **P** 10 06 15.3 +0.8
SGDS Sogindy 67.84 323 *e*P **P** 10 06 16.6 -0.1
GAR Garm 68.26 317 P **P** 10 06 19.6 +0.1
GAR IAmb IAmb 10 06 19.6
comp=Z,7.4nm,0.6s
GAR Garm 68.26 317 P **P** 10 06 19.4 0.0
YAK Yakutsk 68.96 2 P **P** 10 06 22.8 -0.1
comp=Z,48nm,0.4s,baz=343,slow=1.2,SNR=9.0
comp=Z,48nm,0.4s
YAK Yakutsk 68.96 2 P **P** 10 06 23.5 +0.6
YAK Yakutsk 68.96 2 P **P** 10 06 23.2 +0.3
MA2 Magadan 69.50 14 **P** 10 06 26.8 +0.5
MA2 IAmb IAmb 10 06 27.9
comp=Z,29nm,0.8s
MA2 Magadan 69.50 14 P **P** 10 06 27.3 +1.1
ZAA0 Zalesovo Array 69.53 336 IAmb IAmb 10 06 26.7
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 69.53 336 P **P** 10 06 25.9 -0.7
comp=Z,11nm,0.4s,baz=137,slow=4.9,SNR=51
ZALV S **S** 10 14 49.3 -3.6
comp=Z,1.8nm,0.7s,baz=123,slow=11,SNR=7.8
comp=Z,11nm,0.4s
ZALV Zalesovo Beam 69.53 336 **P** 10 06 25.6 -0.9
DZA Taraz 69.56 321 *e*P **P** 10 06 27.0 -0.1
IUG Iuzhnay 70.01 320 *e*P **P** 10 06 29.6 -0.2
KURBB Kurchatov Arra 70.05 331 P **P** 10 06 29.7 0.0
comp=Z,7.3nm,0.6s,baz=136,slow=5.0,SNR=89
KURBB pP **pP** 10 08 16.5 +0.8
comp=Z,0.6nm,0.8s,baz=134,slow=5.8,SNR=1.6
comp=Z,7.3nm,0.6s
KURK Kurchatov 70.06 331 **P** 10 06 30.0 +0.2
KURK IAmb IAmb 10 06 30.7
comp=Z,15nm,0.8s
KURK Kurchatov 70.06 331 P **P** 10 06 30.0 +0.2
CHM Chimkent 70.37 320 *e*P **P** 10 06 31.9 +0.1
BRLS Borolday 70.58 320 *e*P **P** 10 06 32.9 -0.2

SHEM	Shemya Is, Ala	72.61	29	P		P	10 06 45.0	+0.4		
	comp=Z,23nm,0.4s,baz=36,slow=2.5,SNR=15									
	comp=Z,23nm,0.4s									
BRZS	Berezniki	72.64	328	eP		P	10 06 45.2	+0.3		
SEY	Seymchan	72.84	13	P		P	10 06 46.1	+0.4		
	comp=Z,29nm,0.5s,baz=212,slow=4.8,SNR=82									
	comp=Z,29nm,0.5s									
VNDA	Vanda	73.04	172	P		P	10 06 47.0	+0.2		
	comp=Z,0.6nm,0.4s,baz=317,slow=9.8,SNR=11									
VNDA	Vanda	73.04	172	P		P	10 06 46.3	-0.5		
SBA	Scott Base	73.98	172	P		P	10 06 53.4	+1.3		
BVAR	Borovoye Array	75.53	329	P		P	10 07 01.4	+0.2		
	comp=Z,14nm,0.6s,baz=129,slow=6.7,SNR=49									
	comp=Z,14nm,0.6s									
BORK	Borovoye	75.58	329			P	10 07 01.8	+0.3		
BORK					IAmb	IAmb	10 07 02.4			
	comp=Z,14nm,0.7s									
KIWB	Kanaga Island	76.56	33	IAmb		IAmb	10 07 08.5			
	comp=Z,36nm,0.8s									
ADK	Adak	76.82	33	P		P	10 07 08.9	+0.5		
GSTR	Great Sitkin T	77.26	33	IAmb		IAmb	10 07 12.1			
	comp=Z,48nm,0.7s									
ATKA	Atka Island	78.32	33	P		P	10 07 16.3	-0.2		
TIXI	Tiksi	78.57	1			P	10 07 16.9	-0.5		
TIXI					IAmb	IAmb	10 07 17.7			
	comp=Z,26nm,0.5s									
ABKAR	Akbulak array	79.52	323			P	10 07 22.6	-0.3		
NRIK	Noril'sk	80.46	347	P		P	10 07 27.8	+0.4		
	comp=Z,3.8nm,0.4s,baz=134,slow=3.6,SNR=5.9									
	comp=Z,3.8nm,0.4s									
SPIA	Saint Paul Isl	82.60	30	P		P	10 07 38.7	+0.1		
QSPA	South Pole Qui	82.94	180	P		P	10 07 40.3	-0.1		
	comp=Z,1.0nm,0.4s,baz=344,slow=5.0,SNR=15									
	comp=Z,1.0nm,0.4s									
UNV	Unalaska Valle	83.23	34	P		P	10 07 41.8	-0.1		
UNV	Unalaska Valle	83.23	34	IAmb		IAmb	10 07 44.9			
	comp=Z,12nm,0.6s									
UNV	Unalaska Valle	83.23	34	P		P	10 07 41.7	-0.2		
	baz=248									
ARTI	Arti	83.25	329	P		P	10 07 41.5	-0.4		
ARTI					IAmb	IAmb	10 07 42.2			
	comp=Z,11nm,0.7s									
RAYN	Ar Rayn	83.27	295	P		P	10 07 42.8	0.0		
RAYN	Ar Rayn	83.27	295	P		P	10 07 43.3	+0.5		
AKUT	Akutan	83.74	34	P		P	10 07 44.5	+0.1		
M11K	Mekoryuk	85.82	28	P		P	10 07 53.5	-0.9		
	baz=248									
ELIB	Princess Elisa	86.96	198	dP		P	10 08 01.2	+1.3		
	comp=Z,1.8nm,0.8s									
ELIB				dpP		pP	10 09 56.5	+2.7		
SDPT	Sand Point	87.04	33	P		P	10 08 00.1	-0.2		
SDPT	Sand Point	87.04	33	P		P	10 07 59.4	-0.9		
	baz=253									
K13K	Kusilvak Mount	87.08	26	IAmb		IAmb	10 08 01.7			
	comp=Z,20nm,1.1s									
K13K	Kusilvak Mount	87.08	26	P		P	10 08 00.4	+0.1		
	baz=249									
TNA	Tin City	87.11	23	P		P	10 08 00.3	-0.1		
	baz=246									
M13K	Dall Lake	87.15	28	P		P	10 08 00.2	-0.5		
	baz=251									
F14K	Arctic Creek	87.69	23	P		P	10 08 02.7	-0.4		
	baz=248									
L14K	Kuka Creek	87.77	27	P		P	10 08 03.3	-0.3		
	baz=251									
O14K	Tigyukauivet M	87.78	30	P		P	10 08 03.3	-0.3		
	baz=252									
N14K	Kuskokwak Cree	87.78	29	P		P	10 08 03.6	-0.1		
	baz=252									
S14K	Fog Glacier	87.80	33	P		P	10 08 03.2	-0.8		
	baz=254									
M14K	Bethel	87.91	28	IAmb		IAmb	10 08 05.2			
	comp=Z,13nm,0.8s									
M14K	Bethel	87.91	28	P		P	10 08 03.9	-0.3		
	baz=252									
G15K	Niukluk	88.41	24	P		P	10 08 06.2	-0.4		
	baz=250									
L15K	Ungalak Mounta	88.42	27	P		P	10 08 06.5	-0.1		
	baz=252									
F15K	North Star Dit	88.42	23	P		P	10 08 06.3	-0.3		
	baz=249									
O15K	Ungalikthiuk R	88.47	30	P		P	10 08 06.8	-0.2		
	baz=254									
M15K	Kasigluk River	88.49	28	P		P	10 08 07.0	0.0		
	baz=253									
N15K	Kwethluk River	88.62	29	P		P	10 08 07.2	-0.4		
	baz=253									
KBZ	Khabaz	89.17	314	P		P	10 08 10.6	+0.1		
	comp=Z,2.3nm,0.9s,baz=94,slow=4.2,SNR=6.4									
	comp=Z,2.3nm,0.9s									
J16K	Anvik River	89.29	26	P		P	10 08 10.0	-0.7		
	baz=253									
N16K	Nishlik Lake	89.34	29	P		P	10 08 10.7	-0.3		
	baz=255									
L16K	Owhat River	89.34	27	IAmb		IAmb	10 08 11.5			
	comp=Z,4nm,0.6s									
L16K	Owhat River	89.34	27	P		P	10 08 10.3	-0.6		
	baz=254									
M16K	Timber Creek	89.39	28	P		P	10 08 10.7	-0.5		
	baz=254									
I17K	Unalakleet	89.43	25	P		P	10 08 10.7	-0.5		
	baz=253									
O16K	Kokwok River B	89.43	30	P		P	10 08 10.8	-0.6		
	baz=255									
D17K	Noatak River	89.70	21	P		P	10 08 12.0	-0.5		
	baz=251									
CHIR	Chirikof Islan	89.82	34	P		P	10 08 12.4	-0.9		
	baz=257									
R17L	Mt. Peulik Vol	89.83	32	P		P	10 08 12.8	-0.5		
	baz=257									
C17K	DeLong Mountai	89.92	21	P		P	10 08 12.9	-0.6		
	baz=250									
G17K	Kiwalik Mounta	89.93	24	P		P	10 08 13.1	-0.4		
	baz=253,SNR=5.6									
E17K	Hotham Inlet	89.96	22	P		P	10 08 13.4	-0.3		
	baz=252									
O17K	Koliganek Bris	89.97	30	P		P	10 08 13.2	-0.6		
	baz=256									
F17K	Baldwin Pennin	89.98	23	P		P	10 08 12.9	-0.8		
	baz=252									
J17K	VABM Dome	89.98	26	P		P	10 08 13.2	-0.7		
	baz=254									
L17K	Donlin	89.99	27	P		P	10 08 12.9	-1.1		
	baz=255									
H17K	Granite Mounta	90.06	24	P		P	10 08 13.5	-0.7		
	baz=254									
N17K	Nushagak Hills	90.11	29	P		P	10 08 14.0	-0.6		
	baz=256									
K17K	Iditarod	90.14	27	IAmb		IAmb	10 08 15.6			
	comp=Z,9.0nm,0.9s									
K17K	Iditarod	90.14	27	P		P	10 08 14.0	-0.6		
	baz=255									
M17K	Holitna River	90.20	28	P		P	10 08 14.5	-0.4		
	baz=256									
Q17K	Contact Creek	90.22	31	P		P	10 08 14.4	-0.9		
	baz=257									
E18K	Tukpahlearik C	90.51	22	IAmb		IAmb	10 08 17.1			
	comp=Z,12nm,1.1s									
E18K	Tukpahlearik C	90.51	22	P		P	10 08 15.9	-0.3		
	baz=253,SNR=7.1									
F18K	Selawik	90.64	23	P		P	10 08 16.1	-0.7		
	baz=254									
C18K	Utukok River	90.67	21	P		P	10 08 16.8	-0.3		
	baz=252									
L18K	Granite Mounta	90.75	27	P		P	10 08 16.9	-0.5		
	baz=256									
H18K	Honhosa River	90.75	24	IAmb		IAmb	10 08 18.4			
	comp=Z,21nm,1.5s									
H18K	Honhosa River	90.75	24	P		P	10 08 17.3	-0.2		
	baz=255									
Q18K	Katmai Hardscr	90.76	31	P		P	10 08 17.1	-0.7		
	baz=258									
SII	Sitkinak Islan	90.76	33	P		P	10 08 16.6	-1.0		
	baz=258									
N18K	Kilae Creek	90.77	29	P		P	10 08 16.9	-0.7		
	baz=257									
P18K	Big Mountain,	90.81	30	P		P	10 08 17.3	-0.5		
	baz=258									
G18K	Tagagawik	90.83	24	P		P	10 08 17.4	-0.4		
	baz=255									
M18K	Stony River	90.98	28	P		P	10 08 18.1	-0.4		
	baz=257									
A19K	Wainwright	91.18	19	P		P	10 08 19.1	-0.1		
	baz=252									
C19K	Lookout Ridge	91.36	20	P		P	10 08 20.0	-0.2		
	baz=254									
OHAK	Old Harbor	91.37	33	P		P	10 08 20.2	-0.2		
OHAK	Old Harbor	91.37	33	P		P	10 08 20.0	-0.4		
	baz=259									
F19K	Shaleruckik Mo	91.42	23	P		P	10 08 20.2	-0.2		
	baz=256									
N19K	Bonanza Creek	91.47	29	P		P	10 08 20.7	-0.3		
	baz=258									
Q19K	Cape Douglas,	91.51	31	P		P	10 08 20.6	-0.5		
	baz=259									
G19K	Purcell Mounta	91.51	23	P		P	10 08 20.4	-0.5		
	baz=256									
L19K	White Mountain	91.58	28	P		P	10 08 20.9	-0.4		
	baz=258									
H19K	Roundabout Mou	91.62	24	IAmb		IAmb	10 08 22.2			
	comp=Z,9.4nm,0.9s									
H19K	Roundabout Mou	91.62	24	P		P	10 08 20.7	-0.7		
	baz=257									
J19K	Poorman	91.62	26	IAmb		IAmb	10 08 22.1			
	comp=Z,11nm,1.4s									
J19K	Poorman	91.62	26	P		P	10 08 20.8	-0.7		
	baz=257									
D19K	Kuna River	91.71	21	P		P	10 08 21.4	-0.4		
	baz=255,SNR=10									
M19K	Big River Lodg	91.73	28	P		P	10 08 21.5	-0.5		
	baz=258									
E19K	Redstone River	91.78	22	IAmb		IAmb	10 08 22.8			
	comp=Z,10nm,0.8s									
E19K	Redstone River	91.78	22	P		P	10 08 21.4	-0.7		
	baz=256									
KDAK	Kodiak Island	91.85	32	P		P	10 08 21.7	-0.9		
	baz=260									
K20K	Telida	92.17	26	P		P	10 08 23.2	-0.8		
	baz=259									
F20K	Avaraart Lake	92.25	23	P		P	10 08 23.8	-0.5		
	baz=257									
H20K	Anotleneega Mo	92.25	24	P		P	10 08 23.7	-0.7		
	baz=258									
J20K	Nowinta River	92.30	26	IAmb		IAmb	10 08 26.1			
	comp=Z,8.6nm,1.4s									
J20K	Nowinta River	92.30	26	P		P	10 08 23.7	-0.8		
	baz=259									
D20K	Etivluk River	92.30	21	P		P	10 08 23.9	-0.6		
	baz=257,SNR=7.4									
M20K	Styx River	92.31	28	P		P	10 08 22.9	-1.9		
	baz=260									
E20K	Nigu River	92.35	21	P		P	10 08 23.8	-1.0		
	baz=257,SNR=20									
B20K	Meade River	92.42	20	P		P	10 08 24.4	-0.5		
	baz=256									
HOM	Homer	92.65	30	P		P	10 08 25.1	-1.1		
	baz=261									
TROLL	Troll, Antarti	92.87	195	P		P	10 08 28.3	+1.0		
	comp=Z,54nm,0.6s									
A21K	Barrow	92.90	18	P		P	10 08 26.2	-1.0		
	baz=257									
PPLA	Purkeypile	92.92	27	P		P	10 08 26.1	-1.5		
	baz=260									
G21K	Allakaket	93.01	23	P		P	10 08 27.2	-0.6		
	baz=259									
C21K	Knifeblade Rid	93.04	21	P		P	10 08 27.6	-0.3		
	baz=258									
SKT	Skwentna	93.08	28	P		P	10 08 27.3	-0.9		
	baz=261									
BRSE	Bradley Lake S	93.12	30	P		P	10 08 27.5	-1.0		
	baz=262									
H21K	Melozitna Rive	93.13	24	P		P	10 08 27.2	-1.2		
	baz=260									
F21K	Alatna River	93.14	23	P		P	10 08 27.5	-0.9		
	baz=260									
E21K	Killik River	93.19	21	P		P	10 08 27.5	-1.2		
	baz=259									
B21K	Ikpikpuk River	93.19	20	P		P	10 08 27.9	-0.6		
	baz=259									
I21K	Tanana	93.39	25	P		P	10 08 28.9	-0.6		
	baz=261									
L22K	Petersville	93.51	28	IAmb		IAmb	10 08 29.6			
	comp=Z,3.6nm,0.8s									
L22K	Petersville	93.51	28	P		P	10 08 28.6	-1.7		
	baz=262									
F22K	John River	93.69	22	P		P	10 08 30.1	-0.8		
	baz=261									
M22K	Willow	93.70	28	P		P	10 08 30.3	-0.6		
	baz=262									
O22K	Cooper Landing	93.72	30	P		P	10 08 30.1	-1.0		
	baz=262									
CUT	Chulitna	93.73	28	P		P	10 08 30.0	-1.1		
	baz=262									
B22K	Teshekpuk Lake	93.73	20	P		P	10 08 29.9	-1.1		
	baz=260									
H22K	Ishtalitna Cre	93.75	24	P		P	10 08 30.4	-0.8		
	baz=261									
RC01	Rabbit Creek A	93.80	29	P		P	10 08 30.2	-1.3		
	baz=262									
SEW	Seward	93.81	30	P		P	10 08 29.9	-1.6		
	baz=263									
G22K	Bettles	93.86	23	P		P	10 08 30.3	-1.3		
	baz=261									
TRF	Thorofare Moun	93.86	27	P		P	10 08 30.5	-1.5		
	baz=262									
MLY	Manley	93.89	25	IAmb		IAmb	10 08 32.5			
	comp=Z,5.3nm,0.8s									
MLY	Manley	93.89	25	P		P	10 08 31.0	-0.8		
	baz=262,SNR=11									
E22K	Anaktuvuk Pass	93.93	22	P		P	10 08 31.4	-0.7		
	baz=261									
PMR	Palmer	94.15	29	P		P	10 08 32.6	-0.5		
	baz=263									
COLD	Coldfoot	94.41	23	IAmb		IAmb	10 08 35.1			
	comp=Z,5.1nm,0.7s									
COLD	Coldfoot	94.41	23	P		P	10 08 34.0	-0.2		
	baz=262									
G23K	Bananza Creek	94.41	23	IAmb		IAmb	10 08 35.2			
	comp=Z,8.0nm,1.1s									
G23K	Bananza Creek	94.41	23	P		P	10 08 33.8	-0.4		
	baz=263,SNR=8.9									
SNAA	Sanae	94.43	195	P		P	10 08 35.0	+0.7		
KNK	Knik Glacier	94.45	29	P		P	10 08 33.9	-0.6		
	baz=264									
D23K	Nanushuk River	94.46	21	IAmb		IAmb	10 08 35.6			
	comp=Z,9.7nm,1.0s									
D23K	Nanushuk River	94.46	21	P		P	10 08 33.9	-0.5		
	baz=262									
I23K	Minto, Yukon-K	94.48	25	P		P	10 08 33.7	-0.8		
	baz=263,SNR=18									
H23K	Yukon River	94.49	24	P		P	10 08 33.6	-0.9		
	baz=263									
RND	Reindeer	94.50	27	IAmb		IAmb	10 08 33.8			
	comp=Z,8.6nm,0.7s									
NEA2	Nenana	94.54	26	P		P	10 08 34.3	-0.5		
	baz=263									
SML	Sawmill	94.56	28	P		P	10 08 33.9	-1.1		
	baz=264									
WAT1	Susitna Watana	94.57	27	P		P	10 08 33.9	-1.1		
	baz=264									
C23K	Itkillik River	94.61	20	P		P	10 08 34.3	-0.7		
	baz=262									
E23K	Chandalar	94.73	22	IAmb		IAmb	10 08 36.7			
	comp=Z,6.3nm,0.9s									
E23K	Chandalar	94.73	22	P		P	10 08 35.0	-0.8		
	baz=263,SNR=6.0									
P23K	Montague Islan	94.82	30	P		P	10 08 35.9	-0.2		
	baz=264									
TOLK	Toolik Lake Re	94.82	21	P		P	10 08 36.0	0.0		
	baz=263									
M23K	Glacier View	94.84	28	P		P	10 08 35.8	-0.5		
	baz=264									
WAT6	Susitna Watana	94.91	28	P		P	10 08 36.1	-0.6		
	baz=264									
WRH	Wood River Hil	94.95	26	IAmb		IAmb	10 08 36.0			
	comp=Z,5.0nm,0.9s									
SCM	Sheep Creek Mo	95.03	28	P		P	10 08 36.5	-0.7		
	baz=265									
CCB	Clear Creek Bu	95.09	26	IAmb		IAmb	10 08 36.3			
	comp=Z,6.6nm,0.8s									
DHY	Denali Highway	95.13	27	IAmb		IAmb	10 08 37.6			
	comp=Z,4.0nm,0.6s									
DHY	Denali Highway	95.13	27	P		P	10 08 37.5	-0.2		
	baz=265									
D24K	Happy Valley	95.15	21	P		P	10 08 37.6	+0.2		
	baz=264									
E24K	Your Creek	95.16	22	P		P	10 08 37.5	-0.1		
	baz=264									
H24K	Noodor Dome	95.17	24	IAmb		IAmb	10 08 38.4			
	comp=Z,7.9nm,0.9s									
H24K	Noodor Dome	95.17	24	P		P	10 08 36.6	-1.1		
	baz=264,SNR=11									
F24K	Squaw Lake	95.33	23	IAmb		IAmb	10 08 39.6			
	comp=Z,5.3nm,1.1s									
F24K	Squaw Lake	95.33	23	P		P	10 08 37.6	-0.7		
	baz=265,SNR=5.5									
G24K	Hadweenzic Riv	95.42	24	IAmb		IAmb	10 08 39.6			
	comp=Z,6.0nm,1.1s									
G24K	Hadweenzic Riv	95.42	24	P		P	10 08 37.8	-1.0		
	baz=265,SNR=5.9									
HDA	Harding Lake	95.44	26	IAmb		IAmb	10 08 38.2			
	comp=Z,4.3nm,0.8s									
HDA	Harding Lake	95.44	26	P		P	10 08 37.6	-1.2		
	baz=265									
ILAR	Eielson Array	95.49	25	P		P	10 08 37.3	-1.8		
	comp=Z,0.9nm,0.4s,baz=257,slow=4.6,SNR=18									
ILAR					PP	PP	10 12 37.2	-1.4		
	comp=Z,0.3nm,0.8s,baz=300,slow=5.2,SNR=4.7									
	comp=Z,0.9nm,0.4s									
BRTR	Keskin Array B	95.52	309	P		P	10 08 38.9	-1.1		
	comp=Z,1.0nm,0.8s,baz=100,slow=4.9,SNR=5.4									
	comp=Z,1.0nm,0.8s									
M24K	Tolsona, Glenn	95.60	28	P		P	10 08 38.8	-0.9		
	baz=266									
KLU	Klutina	95.67	29	P		P	10 08 39.0	-1.0		
	baz=266									
K24K	Donnelly Dome	95.90	26	P		P	10 08 40.5	-0.5		
	baz=266									
G25K	Bearman Lake	95.97	24	P		P	10 08 40.6	-0.6		
	baz=266									
D25K	Kavik River	96.03	21	P		P	10 08 40.7	-0.8		
	baz=266									
J25K	Salcha River,	96.13	26	P		P	10 08 41.3	-0.8		
	baz=267									
F25K	Christian Rive	96.19	23	P		P	10 08 41.8	-0.5		
	baz=267									
E25K	Arctic Village	96.25	22	P		P	10 08 41.9	-0.6		
	baz=267									
BMRM	Bremner River	96.27	29	P		P	10 08 41.6	-1.2		
	baz=267									
FYU	Fort Yukon	96.30	24	IAmb		IAmb	10 08 44.4			
	comp=Z,5.1nm,0.8s									
KAIM	Kayak Island	96.31	30	P		P	10 08 41.6	-1.2		
	baz=267									
RIDG	Independent Ri	96.31	27	IAmb		IAmb	10 08 42.7			
	comp=Z,7.7nm,1.2s									
RIDG	Independent Ri	96.31	27	P		P	10 08 41.2	-1.7		
	baz=267									
N25K	Chitina, Valde	96.31	29	P		P	10 08 41.8	-1.2		
	baz=267									
SCRK	Sand Creek	96.70	26	P		P	10 08 43.5	-1.2		
	baz=268									
F26K	Sheenjek River	96.77	23	P		P	10 08 44.2	-0.6		
	baz=268									
MENT	Mentasta	96.78	27	IAmb		IAmb	10 08 45.2			
	comp=Z,2.4nm,0.6s									
G26K	Porcupine Rive	96.89	23	P		P	10 08 45.0	-0.3		
	baz=268									
L26K	Log Cabin Wild	96.95	27	P		P	10 08 45.3	-0.5		
	baz=268									
C27K	Jago River	96.98	21	P		P	10 08 44.9	-0.8		
	baz=269									
M26K	Nabesna, AK	97.10	28	P		P	10 08 45.9	-0.5		
	baz=268									
I26K	Coal Creek Min	97.10	25	P		P	10 08 45.8	-0.5		
	baz=269									
M27K	Edge Creek, AK	97.62	28	P		Pdif	10 08 48.3	-0.5		
	baz=270									
L27K	Beaver Creek,	97.65	27	P		P	10 08 48.9	0.0		
L27K					IAmb	IAmb	10 08 49.6			
	comp=Z,2.6nm,0.7s									
L27K	Beaver Creek,	97.65	27	P		Pdif	10 08 48.7	-0.2		
	baz=270									
BCAR	Beaver Creek A	97.67	27	P		Pdif	10 08 48.6	-0.4		
G27K	Doyon Strip	97.73	24	P		Pdif	10 08 48.9	-0.2		
	baz=270									
E27K	Coleen River	97.74	22	IAmb		IAmb	10 08 50.0			
	comp=Z,6.5nm,1.2s									
E27K	Coleen River	97.74	22	P		Pdif	10 08 48.9	-0.3		
	baz=270									
I27K	Kandik River	97.75	25	P		Pdif	10 08 48.8	-0.5		
	baz=270									
H27K	Steamboat Moun	97.78	24	IAmb		IAmb	10 08 51.5			
	comp=Z,4.2nm,1.1s									
H27K	Steamboat Moun	97.78	24	P		Pdif	10 08 48.8	-0.6		
	baz=270									
D27M	Malcolm River	97.96	21	P		Pdif	10 08 49.5	-0.7		
	baz=271									
BVCY	Beaver Creek	98.09	28	P		Pdif	10 08 50.4	-0.4		
	baz=270									
YUK3	Moose Creek	98.29	29	P		Pdif	10 08 51.4	-0.6		
	baz=271									
F28M	Old Crow	98.41	23	P		Pdif	10 08 51.4	-0.7		
	baz=272									
PINM	Pinnacle	98.41	30	P		Pdif	10 08 51.5	-0.9		
	baz=271									
O28M	Mount Upton	98.43	30	P		Pdif	10 08 51.6	-1.1		
	baz=271									
I28M	Miner Creek	98.45	25	IAmb		IAmb	10 08 54.1			
	comp=Z,6.6nm,1.2s									
I28M	Miner Creek	98.45	25	P		Pdif	10 08 52.1	-0.3		
	baz=272									
E28M	Babbage River	98.49	22	P		Pdif	10 08 52.3	-0.2		
	baz=272									
DAWY	Dawson	98.73	26	P		Pdif	10 08 52.9	-0.8		
	baz=272									
H29M	Whitestone	99.06	24	P		Pdif	10 08 54.0	-1.0		
	baz=273									
E29M	Blow River	99.11	22	P		Pdif	10 08 54.5	-0.6		
	baz=274									
G29M	Pine Creek	99.16	23	P		Pdif	10 08 54.9	-0.6		
	baz=274									
YUK4	Talbot Arm	99.17	29	P		Pdif	10 08 55.0	-0.8		
	baz=272									
M29M	Somme Creek	99.21	28	P		Pdif	10 08 55.2	-0.7		
	baz=272									
O29M	Mount Kennedy	99.24	30	P		Pdif	10 08 55.5	-0.6		
	baz=272									
L29M	L29M	99.33	27	P		Pdif	10 08 55.5	-0.8		
	baz=273									
K29M	Barlow Dome	99.56	26	P		Pdif	10 08 56.1	-1.4		
	baz=274									
P29M	Windy Craggy	99.69	31	P		Pdif	10 08 57.0	-1.0		
	baz=273									
EPYK	Eagle Plains	99.72	24	P		Pdif	10 08 56.8	-1.2		
	baz=275									
HYT	Haines Junctio	99.74	30	P		Pdif	10 08 57.3	-1.1		
	baz=273									
G30M	tAoh Zraii Nji	99.86	23	P	

LOHW	**Long Hollow**	119.38	43			PKiKP		10 14 01.9	+0.7
FFC	**Flin Flon**	119.45	29			PKPdf		10 14 00.6	-0.1
PDAR	**Pinedale Array**	120.39	44	PKP		PKPdf		10 14 02.8	-0.4
	comp=Z,1.2nm,0.6s,baz=154,slow=0.4,SNR=18								
PDAR	**Pinedale Array**	120.39	44			PKPdf		10 14 02.9	-0.2
LAO	**LASA Array**	121.06	39			PKiKP		10 14 05.2	+0.9
RSSD	**Black Hills**	123.56	41			PKPdf		10 14 09.0	-0.2
TORD	**Torodi Ar. Bea**	123.98	281	PKP		PKPdf		10 14 09.9	-0.6
	comp=Z,4.4nm,0.7s,baz=85,slow=2.1,SNR=24								
ESDC	**Sonseca Array**	124.02	314	PKP		PKPdf		10 14 09.7	-0.3
	comp=Z,0.6nm,0.6s,baz=31,slow=2.6,SNR=5.0								
E28A	**Huff**	124.48	37			PKiKP		10 14 11.0	+0.1
ULM	**Lac du Bonnet**	125.09	31	PKP		PKPdf		10 14 11.1	-0.5
	comp=Z,4.5nm,0.5s,baz=297,slow=2.3,SNR=18								
ANMO	**Albuquerque**	125.24	52			PKiKP		10 14 13.6	+0.6
MNTX	**Cornudas Mount**	127.06	55			PKiKP		10 14 17.3	+0.8
ECSD	**EROS Data Cent**	128.42	38			PKPdf		10 14 18.2	0.0
TXAR	**Lajitas Array**	129.15	58	PKP		PKiKP		10 14 20.8	-0.1
	comp=Z,1.1nm,0.4s,baz=294,slow=1.5,SNR=32								
TXAR				SKPbc		SKPbc		10 16 53.5	+0.4
	comp=Z,1.9nm,0.7s,baz=255,slow=3.8,SNR=18								
TBO	**Thunder Bay**	129.34	29			PKiKP		10 14 20.5	-0.1
DBIC	**Dimbokro**	130.27	273	PKP		PKiKP		10 14 23.1	-0.4
	comp=Z,7.7nm,1.0s,baz=90,slow=3.0,SNR=4.1								
OZNA	**Ozona**	130.77	55			PKiKP		10 14 24.2	+0.1
SCHQ	**Schefferville**	131.40	9	PKP		PKPdf		10 14 23.5	0.0
	comp=Z,2.8nm,0.4s,baz=330,slow=2.0,SNR=14								
JFWS	**Jewell Farm**	132.67	35			PKPdf		10 14 26.4	+0.2
PAOC	**Oil Creek Stat**	139.24	29			PKPpre		10 14 30.8	
LRAL	**Lakeview Retre**	140.61	45			PKPpre		10 14 35.5	
FPAL	**Fort Paine**	140.68	42			PKPpre		10 14 34.6	
TKL	**Tuckaleechee C**	141.16	39			PKPdf		10 14 38.5	-3.7
Q56A	**Snyder Ridge,**	141.38	31			PKPpre		10 14 37.1	
Y52A	**Lilburn**	142.11	41			PKPdf		10 14 40.7	-3.2
V55A	**Taylorsville**	142.58	36			PKPdf		10 14 41.6	-3.1
AC02	**Maricunga**	143.63	158			PKPdf		10 14 47.0	-0.4
T59A	**Double "B" Far**	143.79	31	PKPbc		PKPab		10 14 45.5	-0.1
MTO3	**Montecristo**	145.45	75			PKPdf		10 14 50.3	-0.1
CPUP	**Villa Florida**	146.75	176	PKPbc		PKPbc		10 14 54.4	-0.3
	comp=Z,4.7nm,0.5s,baz=186,slow=1.8,SNR=21								
AQDB	**Aquidauana**	152.65	178			PKPbc		10 15 08.6	-0.4
LPAZ	**La Paz**	153.41	151	PKP		PKPdf		10 15 03.4	0.0
	comp=Z,1.5nm,0.9s,baz=203,slow=5.6,SNR=4.6								
LPAZ				PKPbc		PKiKP		10 15 11.5	0.0
	comp=Z,2.0nm,0.4s,baz=213,slow=2.4,SNR=10								
LPAZ				PKPab		PKPab		10 15 26.1	0.0
	comp=Z,3.6nm,0.5s,baz=196,slow=5.4,SNR=9.8								

*PRE **07** 10:44:11.8±1.0,26°.39S×27°.32E,h2km,ML3.6,Presumed earthquake*
*IDC **07** 10:44:13.7±0.8,26°.39S×27°.38E,h0km,mb4.0/9, mbtmp4.1/14,ML4.2/3,Error ellipse: s-maj=19.1km s-min=12.2km az=65.0*
*NEIC **07** 10:44:14.6±0.9,26°.44S±0°.06×27°.38E±0°.06,h5km±1km, mb4.4/10,Error ellipse: s-maj=10.0km s-min=8.2km az=201.0*
*BGSI **07** 10:44:19.6±2.6,26°.30S×27°.24E,h7km±61km,Presumed earthquake*

ISC 07 10:44:13.5±1.1,26°.39S±0°.03×27°.33E±0°.03,h4km±7km, n81,σ2§11/113,mb4.3/13,1C-1D,South Africa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	0.09	111	*eP*		**Pg**	**10 44 14.3**	**-1.2**
WDLM				*eS*		**Sg**	**10 44 15.9**	**-1.0**
WDLM				IAML			10 44 17.8	
	comp=Z,50μm,0.2s							
HRAO	**HartRAO**	0.59	33	*eP*		**Pg**	**10 44 23.1**	**-1.9**
HRAO				*eS*		**Sg**	**10 44 32.3**	**-0.4**
HRAO				IAML			10 44 40.8	
	comp=Z,921nm,0.2s							
SNKL	**Senekal, Frees**	1.92	168	*eP*		**Pn**	**10 44 46.9**	**-0.1**
SNKL				*eS*		**Sn**	**10 45 11.8**	**0.0**
SNKL				IAML			10 45 17.5	
	comp=Z,1μm,0.4s							
LBTB	**Lobatse**	2.08	311	Pn		**Pb**	**10 44 51.9**	**+0.1**
	comp=Z,112nm,0.3s,baz=134,slow=14,SNR=800							
LBTB				Pg		**Pg**	**10 44 52.9**	**-0.4**
	comp=Z,41nm,0.3s,baz=124,slow=18,SNR=9.6							
LBTB				Lg		Lg	10 45 20.4	
	comp=Z,529nm,0.3s,baz=344,slow=4.3,SNR=76							
	comp=Z,357nm,0.3s							
LBTB	**Lobatse**	2.08	311	Pn		**Pb**	**10 44 51.8**	**+0.1**
LBTB				Sn		**Sb**	**10 45 19.0**	**+1.1**
LBTB	**Lobatse**	2.08	311	*eP*		**Pn**	**10 44 49.1**	**0.0**
LBTB				*eS*		**Sn**	**10 45 15.3**	**-0.2**
LBTB				IAML			10 45 21.6	
	comp=Z,2μm,0.3s							
MAKGR	**Makgori**	2.34	284	Pn		**Pn**	**10 44 54.6**	**+1.7**
MAKGR	**Makgori**	2.34	284	*i* P		**Pb**	**10 44 57.2**	**+0.9**
CRLN	**Carolina, Mapu**	2.45	81	*eP*		**Pn**	**10 44 52.9**	**-1.6**
CRLN				*eS*		**Sn**	**10 45 23.7**	**-1.2**
CRLN				IAML			10 45 29.1	
	comp=Z,137nm,0.4s							
LEPH	**Lephalale, Lim**	2.56	10	*eP*		**Pn**	**10 44 55.0**	**-0.8**
LEPH				*eS*		**Sn**	**10 45 26.9**	**-0.5**
LEPH				IAML			10 45 37.2	
	comp=Z,492nm,0.4s							
BOSA	**Boshof**	2.88	219	Pn		**Pn**	**10 45 01.1**	**+0.8**
	baz=42,slow=16							
BOSA	**Boshof**	2.88	219			**Pn**	**10 45 01.0**	**+0.8**
LPHEP	**Lephephe**	3.30	336	*i* P		**Pn**	**10 45 09.3**	**+3.4**
PILG	**Pilgrimsrest,**	3.38	65	*eP*		**Pn**	**10 45 06.5**	**-0.8**
PILG				*eS*		**Sn**	**10 45 46.5**	**-1.4**
PILG				IAML			10 46 03.0	
	comp=Z,353nm,0.6s							
SKOMA	**Sekoma**	3.59	301	*i* P		**Pn**	**10 45 11.7**	**+1.7**
HOED	**Hoedspruit, Li**	3.81	60	*eP*		**Pn**	**10 45 12.4**	**-0.6**
HOED				*eS*		**Sn**	**10 45 56.2**	**-2.0**
HOED				IAML			10 46 14.2	
	comp=Z,118nm,0.3s							
KDWAN	**Kaudwane**	3.85	321	*i* P		**Pn**	**10 45 14.9**	**+1.2**
KDWAN				*i* S		**Sn**	**10 45 58.7**	**-0.7**
KDWAN				IAML			10 46 18.3	
	comp=E,706nm,0.8s							
POGA	**Pongola**	4.03	105	Pn		**Pn**	**10 45 15.8**	**-0.2**
PHPEN	**Phepeng**	4.13	282	*i* P		**Pn**	**10 45 19.2**	**+1.8**
PMBG	**Pietermaritzbu**	4.20	139	*eP*		**Pn**	**10 45 18.2**	**-0.1**
PMBG				*eS*		**Sn**	**10 46 06.5**	**-1.3**
PMBG				IAML			10 46 23.6	
	comp=Z,203nm,0.7s							
KSTD	**Kokstad**	4.56	158	*eP*		**Pn**	**10 45 23.4**	**0.0**
KSTD				*eS*		**Sn**	**10 46 14.2**	**-2.7**
KSTD				IAML			10 46 37.8	
	comp=Z,167nm,0.4s							
MUSN	**Musina, Limpop**	4.69	30	*eP*		**Pn**	**10 45 24.3**	**-0.8**
MUSN				*eS*		**Sn**	**10 46 17.5**	**-2.5**
MUSN				IAML			10 46 41.0	
	comp=Z,157nm,0.5s							
KHWEE	**KHWEE**	4.75	338	Pn		**Pn**	**10 45 28.1**	**+2.2**
KHWEE	**KHWEE**	4.75	338	*i* P		**Pn**	**10 45 27.9**	**+2.0**
KHWEE				*i* S		**Sn**	**10 46 17.7**	**-3.8**
KHWEE				IAML			10 46 52.5	
	comp=N,2μm,0.6s							
BROLN	**Tlhalogang**	5.27	0	*i* P		**Pn**	**10 45 34.4**	**+1.3**
BROLN				*i* S		**Sn**	**10 46 31.8**	**-2.5**
BROLN				IAML			10 47 02.9	
	comp=E,269nm,0.7s							
UPI	**Upington**	5.75	249	*eP*		**Pn**	**10 45 38.5**	**-1.1**
UPI				*eS*		**Sn**	**10 46 42.7**	**-3.4**
UPI				IAML			10 47 17.4	
	comp=Z,135nm,0.4s							
KGCAE	**Kacgae**	5.84	306	Pn		**Pn**	**10 45 43.2**	**+2.3**
SOOWA	**Sowa**	5.89	350	*i* P		**Pn**	**10 45 44.6**	**+3.0**
MATP	**Matopo**	6.03	11	Pn		**Pn**	**10 45 43.5**	**-0.1**
	comp=Z,4.1nm,0.3s,baz=190,slow=13,SNR=47							
MATP				Sn		**Sn**	**10 46 50.4**	**-2.8**
	comp=Z,8.9nm,0.3s,baz=122,slow=5.8,SNR=17							
MATP				Lg		Lg	10 47 18.9	
	comp=Z,17nm,0.3s,baz=285,slow=22,SNR=12							
	comp=Z,12nm,0.4s							
BFON	**Badsfontein, M**	6.26	210	*eP*		**Pn**	**10 45 47.2**	**+0.5**
BFON				*eS*		**Sn**	**10 46 55.0**	**-3.7**
BFON				IAML			10 47 39.8	
	comp=Z,137nm,0.5s							
GRAF	**Camdeboo Natio**	6.37	202	*eP*		**Pn**	**10 45 48.2**	**+0.1**
GRAF				*eS*		**Sn**	**10 46 57.3**	**-4.0**
GRAF				IAML			10 47 44.4	
	comp=Z,104nm,0.6s							
BRAK	**Brakfontein**	6.62	215	*eP*		**Pn**	**10 45 51.4**	**-0.3**
BRAK				*eS*		**Sn**	**10 47 03.5**	**-4.2**
BRAK				IAML			10 47 24.8	
	comp=Z,41nm,0.3s							
PHDHD	**Phuduhudu**	6.68	337	Pn		**Pn**	**10 45 55.0**	**+2.5**
GRHM	**Grahamstown, E**	6.91	187	Pn		**Pn**	**10 45 55.7**	**+0.1**
GRHM	**Grahamstown, E**	6.91	187	*eP*		**Pn**	**10 45 55.6**	**0.0**
GRHM				*eS*		**Sn**	**10 47 10.4**	**-4.3**
GRHM				IAML			10 47 31.4	
	comp=Z,17nm,0.5s							
KOOLE	**Kule**	7.31	296	Pn		**Pn**	**10 46 01.6**	**+0.4**
GRAN	**Grantham**	7.41	216	*eP*		**Pn**	**10 46 01.4**	**-1.1**
GRAN				*eS*		**Sn**	**10 47 22.9**	**-4.2**
GRAN				IAML			10 48 14.2	
	comp=Z,102nm,0.5s							
GRTLG	**Ghanzi**	7.50	311	Pn		**Pn**	**10 46 04.3**	**+0.4**
GRTLG	**Ghanzi**	7.50	311	*i* P		**Pn**	**10 46 04.2**	**+0.3**
FRAZ	**Fraserburg**	7.56	222	*eP*		**Pn**	**10 46 04.0**	**-0.6**
FRAZ				*eS*		**Sn**	**10 47 26.7**	**-4.2**
FRAZ				IAML			10 48 19.5	
	comp=Z,61nm,0.4s							
MERW	**Merweville**	8.04	218	*eP*		**Pn**	**10 46 10.5**	**-0.7**
MERW				*eS*		**Sn**	**10 47 38.4**	**-4.3**
MERW				IAML			10 47 43.5	
	comp=Z,32nm,0.3s							
SUR	**Sutherland**	8.24	222	Pn		**Pn**	**10 46 15.0**	**+1.1**
	comp=Z,3.6nm,0.3s,baz=50,slow=8.4,SNR=55							
SUR				Sn		**Sn**	**10 47 44.3**	**-3.3**
	comp=Z,6.1nm,0.3s,baz=159,slow=23,SNR=7.5							
SUR				Lg		Lg	10 48 27.9	
	comp=Z,16nm,0.3s,baz=182,slow=20,SNR=7.4							
	comp=Z,13nm,0.4s							
SUR	**Sutherland**	8.24	222	Pn		**Pn**	**10 46 14.7**	**+0.7**
SUR	**Sutherland**	8.24	222	*eP*		**Pn**	**10 46 13.2**	**-0.8**
SUR				*eS*		**Sn**	**10 47 42.8**	**-4.8**
SUR				IAML			10 48 00.3	
	comp=Z,46nm,0.3s							
KSANE	**Kasane**	8.78	346	Pn		**Pn**	**10 46 22.7**	**+1.4**
KSANE	**Kasane**	8.78	346	*i* P		**Pn**	**10 46 22.7**	**+1.4**
MATJ	**Matjiesfontein**	9.01	219	*eP*		**Pn**	**10 46 23.8**	**-0.6**
MATJ				*eS*		**Sn**	**10 48 01.6**	**-4.8**
MATJ				IAML			10 48 21.9	
	comp=Z,22nm,0.4s							
PRTV	**Porterville,We**	9.77	225	*eP*		**Pn**	**10 46 33.9**	**-0.9**
PRTV				*eS*		**Sn**	**10 48 19.0**	**-6.0**
PRTV				IAML			10 48 44.4	
	comp=Z,14nm,0.4s							
CER	**Ceres**	9.84	223	*eP*		**Pn**	**10 46 34.9**	**-0.8**
CER				*eS*		**Sn**	**10 48 20.5**	**-6.2**
WIN	**Windhoek**	10.06	290	Pn		**Pn**	**10 46 40.4**	**+1.4**
LSZ	**Lusaka**	11.09	4	Pn		**Pn**	**10 46 52.5**	**-0.5**
	comp=Z,6.1nm,0.4s,baz=190,slow=12,SNR=9.0							
LSZ				Sn		**Sn**	**10 48 53.0**	**-4.6**
	comp=Z,1.5nm,0.3s,baz=287,slow=8.2,SNR=4.5							
LSZ				Lg		Lg	10 50 04.2	
	comp=Z,2.0nm,0.3s,baz=119,slow=23,SNR=5.1							
LSZ	**Lusaka**	11.09	4	Pn		**Pn**	**10 46 52.4**	**-0.6**
TSUM	**Tsumeb**	11.48	307	Pn		**Pn**	**10 46 59.4**	**+1.0**
	comp=Z,7.8nm,0.4s,baz=131,slow=11,SNR=26							
TSUM				Sn		**Sn**	**10 49 01.1**	**-6.1**
	comp=Z,0.9nm,0.3s,baz=28,slow=20,SNR=3.7							
TSUM				Lg		Lg	10 50 14.0	
	comp=Z,1.5nm,0.3s,baz=210,slow=13,SNR=4.6							
TSUM	**Tsumeb**	11.48	307	Pn		**Pn**	**10 46 59.2**	**+0.8**
ELIB	**Princess Elisa**	45.65	182	*dP*		**P**	**10 52 32.6**	**-2.3**
TORD	**Torodi Ar. Bea**	46.54	325	P		**P**	**10 52 42.8**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=134,slow=6.4,SNR=31							
	comp=Z,2.8nm,0.6s							
TORD	**Torodi Ar. Bea**	46.54	325	P		**P**	**10 52 43.2**	**+0.9**
TROLL	**Troll, Atarti**	47.68	190	P		**P**	**10 52 52.1**	**+1.3**
	comp=Z,35nm,0.6s							
SNAA	**Sanae**	48.34	192	⇑P		**P**	**10 52 57.0**	**+1.2**
	comp=Z,42nm,0.5s							
SNAA	**Sanae**	48.34	192	P		**P**	**10 52 56.4**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=60,slow=6.6,SNR=9.3							
	comp=Z,2.8nm,0.8s							
SNAA	**Sanae**	48.34	192			**P**	**10 52 56.3**	**+0.5**
SNAA					IAmb	IAmb	10 52 58.7	
	comp=Z,3.9nm,1.0s							
VNA1	**Neumayer--Stat**	48.70	195	P		**P**	**10 53 00.0**	**+1.5**
	comp=Z,3.9nm,0.6s							
VNA2	**Neumayer--Watz**	48.71	194	P		**P**	**10 52 57.7**	**-0.9**
	comp=Z,3.1nm,0.5s,baz=40,slow=6.5							
BELA	**Belgrano 2**	58.58	193	P		**P**	**10 54 11.5**	**+0.6**
BELA					IAmb	IAmb	10 54 38.5	
	comp=Z,3.9nm,1.3s							
QSPA	**South Pole Qui**	63.80	180	P		**P**	**10 54 47.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=40,slow=1.7,SNR=16							
	comp=Z,0.7nm,0.5s							
QSPA	**South Pole Qui**	63.80	180	P		**P**	**10 54 46.9**	**+0.3**
QSPA					IAmb	IAmb	10 55 22.2	
	comp=Z,3.9nm,1.5s							
ESDC	**Sonseca Array**	71.91	335	P		**P**	**10 55 39.0**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=149,slow=6.9,SNR=6.9							
	comp=Z,1.0nm,0.5s							
VNDA	**Vanda**	72.86	171	P		**P**	**10 55 43.7**	**+0.7**
VNDA					IAmb	IAmb	10 56 14.1	
	comp=Z,3.1nm,1.1s							
SBA	**Scott Base**	73.28	172	P		**P**	**10 55 46.6**	**+1.2**
SBA					IAmb	IAmb	10 56 05.9	
	comp=Z,5.4nm,1.5s							
TRQA	**Tornquist**	73.74	235	P		**P**	**10 55 49.5**	**+0.6**
TUE	**Stuetta**	74.33	347	P		**P**	**10 55 53.6**	**+1.5**
AKASG	**Malin Array Be**	76.77	1	P		**P**	**10 56 06.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=181,slow=4.6,SNR=4.1							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	76.77	1	P		**P**	**10 56 06.7**	**+0.9**
AKASG					IAmb	IAmb	10 56 47.4	
	comp=Z,3.2nm,1.1s							
KK31	**Karatay Array**	79.75	31	P		**P**	**10 56 23.6**	**+1.1**
KKAR	**Karatay Array**	79.75	31	P		**P**	**10 56 23.4**	**+0.9**
ABKAR	**Akbulak array**	80.73	21	P		**P**	**10 56 28.3**	**+0.7**
FINES	**FINESS Array B**	87.53	359	P		**P**	**10 57 03.3**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=178,slow=4.8,SNR=4.7							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	88.13	34	P		**P**	**10 57 06.1**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=227,slow=3.3,SNR=4.4							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	88.13	34	P		**P**	**10 57 05.5**	**+0.3**
KURBB	**Kurchatov Arra**	89.02	30	P		**P**	**10 57 10.1**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=237,slow=5.3,SNR=4.5							
	comp=Z,0.4nm,0.7s							
ASAR	**Alice Springs**	93.34	118	P		**P**	**10 57 32.1**	**+1.9**
	comp=Z,0.2nm,0.8s,baz=240,slow=4.3,SNR=1.5							
	comp=Z,0.2nm,0.8s							

*OSPL **07** 10:45:50.2±0.5, 18°.61N×70°.63W,h87km±18km, ML2.4, Presumed earthquake*
*SDD **07** 10:45:53.6±2.4, 18°.42N×70°.71W,h49km±39km, MD2.8, ML2.1, MW2.6, Presumed earthquake*

ISC 07 10:45:52.9±1.2,18°.52N±0°.06×70°.55W±0°.06,h34km,n9, σ2§74/14,5C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BANI	**BANI**	0.22	125	⇑*i*P		**Pb**	**10 46 03.0**	**+3.0**
BANI				IAML			10 46 27.5	
	comp=N,106nm,1.2s							
SDDR	**Presa de Saban**	0.84	303	⇓*i*P		**Pn**	**10 46 06.1**	**-2.3**
SDDR				⇑*i*S		**Sn**	**10 46 17.2**	**-2.3**
SDDR				IAML			10 46 20.2	
	comp=N,43nm,0.2s							
SDDR	**Presa de Saban**	0.84	303	*i* P		**Pn**	**10 46 06.0**	**-2.3**
SDDR				*eS*		**Sn**	**10 46 17.4**	**-2.1**
SDDR				IAML			10 46 21.3	
	comp=Z,632nm,0.4s							
LONE3	**El Aguacate, B**	0.87	276	*i* P		**Pn**	**10 46 06.2**	**-2.6**
LONE3				*eS*		**Sn**	**10 46 18.9**	**-1.4**
LONE3				IAML			10 46 21.4	
	comp=Z,15nm,0.4s							
LODU1	**El Espartillar**	0.90	259	*i* P		**Pn**	**10 46 07.3**	**-1.8**
LODU1				IAML			10 46 25.2	
	comp=Z,64nm,1.9s							
REDR	**Restauracion**	1.03	309	⇑*i*P		**Pb**	**10 46 14.2**	**+2.0**
REDR				⇑*i*S		**Sb**	**10 46 30.7**	**+5.3**
REDR				IAML			10 46 34.4	
	comp=N,57nm,0.2s							
LOVI	**El Cajuil, Ovi**	1.06	227	*i* P		**Pn**	**10 46 09.7**	**-1.7**
LOVI				*eS*		**Sn**	**10 46 23.8**	**-1.1**
LOVI				IAML			10 46 25.7	
	comp=Z,84nm,1.3s							
HATOM	**Hato Mayor del**	1.14	76	⇑*i*P		**Pb**	**10 46 14.4**	**+0.2**
HATOM				IAML			10 46 36.0	
	comp=N,20nm,3.5s							
LOBH	**Bahia de las A**	1.23	238	*i* P		**Pn**	**10 46 11.2**	**-2.5**
LOBH				IAML			10 46 31.5	
	comp=Z,50nm,1.4s							

*SSNC **07** 10:49:06.9±1.4,20°.33N×70°.56W,h26km±24km, MD3.4, ML3.1,Presumed earthquake*
*SDD **07** 10:49:09.1±1.9,20°.17N×70°.78W,h0km±10km, MD3.0, ML2.8,MW3.0,Presumed earthquake*
*OSPL **07** 10:49:09.5±2.5,20°.24N×70°.75W,h6km±9km, ML2.8, Presumed earthquake*

ISC 07 10:49:07.9±1.1,20°.22N±0°.03×70°.75W±0°.03,h17km±9km, n28,σ1§15/42,11C-6D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LUDR	**Luperon**	0.38	210	⇑*i*P		**Pg**	**10 49 15.2**	**-0.5**
SODR	**Sosua Marina B**	0.49	160	⇑*i*P		**Pg**	**10 49 17.6**	**-0.2**
SODR				IAML			10 49 33.0	
	comp=N,1μm,0.6s							
LOPP1	**Punta Rusia, P**	0.56	229	*i* P		**Pg**	**10 49 19.2**	**+0.2**
LOPP1				*eS*		**Sb**	**10 49 28.8**	**+1.9**
LOPP1				IAML			10 49 31.9	
	comp=Z,388nm,0.5s							
SC01	**Santiago de lo**	0.79	178	⇑*i*P		**Pg**	**10 49 22.5**	**-0.9**
SC01				IAML			10 49 37.9	
	comp=N,577nm,0.5s							
SC01	**Santiago de lo**	0.79	178	*i* P		**Pg**	**10 49 22.9**	**-0.5**
SC01				*eS*		**Sb**	**10 49 34.9**	**+1.3**
SC01				IAML			10 49 38.0	
	comp=Z,272nm,0.4s							
MCDR	**Montecristi**	0.91	249	⇑*i*P		**Pb**	**10 49 25.1**	**-0.1**
MCDR				IAML			10 49 49.6	
	comp=N,242nm,0.5s							
LODA1	**ITESIL, Dajabo**	1.12	233	*eS*		**Sb**	**10 49 43.8**	**+0.7**
LODA1				IAML			10 49 46.4	
	comp=Z,872nm,1.6s							
REDR	**Restauracion**	1.21	210	⇑*i*P		**Pn**	**10 49 30.8**	**+0.7**
REDR				⇓*i*S		**Sg**	**10 49 48.5**	**+1.4**
REDR				IAML			10 49 50.9	
	comp=N,754nm,0.3s							
SDDR	**Presa de Saban**	1.33	202	*i* P		**Pn**	**10 49 31.2**	**-0.6**
SDDR				*eS*		**Sn**	**10 49 49.1**	**-0.1**
SDDR				IAML			10 49 51.8	
	comp=Z,3μm,0.3s							
SDDR	**Presa de Saban**	1.33	202	*i* P		**Pn**	**10 49 31.0**	**-0.8**
SDDR				*eS*		**Sn**	**10 49 47.0**	**-2.2**
SDDR				*eSg*		**Sb**	**10 49 48.7**	**-0.6**
SDDR				*i* S		**Sg**	**10 49 48.9**	**-2.1**
SDDR				IAML			10 49 51.0	
	comp=Z,228nm,0.4s							
SDDR				IAML			10 49 51.9	
	comp=Z,250nm,0.2s							
GRTK	**Grand Turk**	1.33	345	⇑*i*P		**Pb**	**10 49 33.0**	**+0.4**
GRTK				⇓*i*S		**Sg**	**10 49 52.0**	**+0.9**
GRTK				IAML			10 49 57.4	
	comp=N,148nm,0.3s							
GRTK	**Grand Turk**	1.33	345	*i* P		**Pb**	**10 49 33.0**	**+0.4**
GRTK				IAML			10 49 54.7	
	comp=Z,126nm,0.8s							
GRTK	**Grand Turk**	1.33	345	*eP*		**Pb**	**10 49 32.6**	**+0.1**
ABDR	**Alto Bandera**	1.41	175	⇓*i*P		**Pn**	**10 49 32.4**	**-0.7**
ABDR				⇑*i*S		**Sn**	**10 49 50.9**	**-0.6**
ABDR				IAML			10 49 52.5	
	comp=E,3.7nm,0.5s							
LONE3	**El Aguacate, B**	1.74	203	*i* P		**Pn**	**10 49 38.0**	**+0.5**
LONE3				*eS*		**Sn**	**10 50 01.0**	**+1.6**
LONE3				IAML			10 50 02.5	
	comp=Z,90nm,0.3s							
SMDR	**Samana, DR**	1.74	122	⇑*i*P		**Pn**	**10 49 37.3**	**-0.2**
SMDR				⇑*i*S		**Sb**	**10 50 01.1**	**0.0**
SMDR				IAML			10 50 06.2	
	comp=N,160nm,0.4s							
BANI	**BANI**	1.86	168	⇓*i*P		**Pn**	**10 49 40.0**	**+0.9**
BANI				IAML			10 50 10.0	
	comp=N,270nm,0.6s							
SDD	**Santo Domingo**	1.92	155	⇓*i*P		**Pn**	**10 49 40.3**	**+0.4**
SDD				⇓*i*S		**Sn**	**10 50 04.1**	**+0.3**
SDD				IAML			10 50 10.7	
	comp=N,129nm,0.5s							
SDD	**Santo Domingo**	1.92	155	*i* P		**Pn**	**10 49 40.3**	**+0.4**
SDD				*eS*

12nm,0.9s
CTAO Charters Tower 22.45 271 P P 11 07 20.1 +1.6
CMSA Cobar Meteorol 23.66 242 P P 11 07 32.3 +1.5
CMSA Cobar Meteorol 23.66 242 P P 11 07 32.2 +1.5
QLP Quilpie 24.01 255 P P 11 07 35.8 +1.7
QLP Quilpie 24.01 255 P P 11 07 35.7 +1.7
MTSU Mount Surprise 24.66 275 P P 11 07 41.3 +1.2
MTSU Mount Surprise 24.66 275 P P 11 07 41.8 +1.7
PMG Port Moresby 25.61 297 LR LR 11 15 51.5
comp=Z,123nm,19.9s,baz=160,slow=32
TOO Toolangi 26.14 229 P P 11 07 54.2 +0.9
TOO IAmb IAmb 11 07 56.1
comp=Z,9.8nm,1.4s
STKA Stephens Creek 27.12 243 P P 11 08 03.0 +0.8
comp=Z,7.4nm,0.9s,baz=82,slow=8.5,SNR=10
STKA LR LR 11 18 24.3
comp=Z,145nm,18.3s,baz=212,slow=36
comp=Z,7.4nm,0.9s
STKA Stephens Creek 27.12 243 P P 11 08 03.7 +1.4
BRAT Ballarat 27.23 230 P P 11 08 06.2 +3.1
RAR Rarotonga 27.86 93 LR LR 11 18 46.3
comp=Z,49nm,18.3s,baz=264,slow=36
AUJCS Jamestown Cent 29.87 242 P P 11 08 29.0 +2.2
BBOO Buckleboo 31.89 244 P P 11 08 45.9 +1.2
BBOO Buckleboo 31.89 244 P 11 08 45.0 +0.3
BBOO Buckleboo 31.89 244 P P 11 08 45.3 +0.7
WR8 Warramunga Arr 33.36 267 P P 11 08 56.4 -1.2
WR8 IAmb IAmb 11 08 58.4
comp=Z,23nm,1.4s
AS01 Alice Springs 33.36 261 P P 11 08 58.7 +1.1
AS31 Alice Springs 33.40 261 P P 11 08 57.2 -0.8
ASAR Alice Springs 33.40 261 P P 11 08 57.8 -0.2
comp=Z,7.9nm,0.9s,baz=86,slow=9.0,SNR=51
ASAR LR LR 11 22 31.5
comp=Z,102nm,18.3s,baz=29,slow=36
comp=Z,7.9nm,0.9s
ASAR Alice Springs 33.40 261 P P 11 08 57.5 -0.5
AUALC St Philip's Co 33.42 261 P P 11 08 58.8 +0.7
WB0 Warramunga Arr 33.49 268 P P 11 08 58.2 -0.6
WRAB Tennant Creek 33.50 267 P P 11 08 59.8 +1.0
WRAB Tennant Creek 33.50 267 P P 11 08 57.8 -1.1
WRA Warramunga Arr 33.51 267 P P 11 08 57.7 -1.2
comp=Z,8.4nm,1.1s,baz=101,slow=8.3,SNR=17
WRA PcP **PcP 11 11 38.5 -1.2**
comp=Z,1.2nm,1.1s,baz=93,slow=2.5,SNR=3.0
comp=Z,8.4nm,1.1s
WRA Warramunga Arr 33.51 267 P 11 08 58.0 -0.9
JAY Jayapura 34.79 300 LR LR 11 22 38.4
comp=Z,107nm,18.8s,baz=196,slow=35
GENI Genyem 35.18 300 P P 11 09 15.9 +2.5
comp=Z,41nm,0.6s
TBI Tubuai 37.08 100 *e*LR LR 11 19 29.4
comp=Z,1μm,36.2s
PPT2 Papeete2 38.00 90 *e*LR LR 11 19 58.2
comp=Z,113nm,25.2s
PPT Papeete 38.00 90 LR LR 11 20 50.9
comp=Z,95nm,21.5s,baz=214,slow=29
MTN Manton Dam 38.35 278 P P 11 09 40.4 0.0
MTN IAmb IAmb 11 09 48.0
comp=Z,23nm,1.2s
BAKI Biak 39.29 298 P P 11 09 50.6 +2.3
comp=Z,52nm,1.3s
KMPI Kaimana, Papua 39.97 292 P P 11 09 55.6 +1.6
FITZ Fitzroy Crossi 41.94 267 P P 11 10 09.9 -0.3
comp=Z,17nm,1.0s,baz=113,slow=6.9,SNR=6.9
FITZ LR LR 11 27 48.7
comp=Z,135nm,18.4s,baz=180,slow=36
comp=Z,17nm,1.0s
FITZ Fitzroy Crossi 41.94 267 P P 11 10 10.3 +0.1
SIJI Sorong 43.50 294 LR LR 11 29 14.4
comp=Z,63nm,18.3s,baz=103,slow=37
SIJI Sorong 43.50 294 P P 11 10 22.8 -0.1
GUMO Guam 43.53 323 LR LR 11 27 59.0
comp=Z,22nm,18.5s,baz=145,slow=35
MBWA Marble Bar 46.73 262 P P 11 10 48.8 +0.2
MBWA Marble Bar 46.73 262 P P 11 10 47.6 -0.9
MEEK Meekatharra 46.90 254 P P 11 10 49.4 -0.5
KAPI Kappang 51.70 282 LR LR 11 35 31.7
comp=Z,77nm,18.7s,baz=130,slow=38
DAV Davao City (W) 52.60 299 LR LR 11 33 04.0
comp=Z,53nm,20.6s,baz=132,slow=35
TOLI2 Tolitoli 53.53 289 P P 11 11 39.9 -0.2
TOLI2 IAmb IAmb 11 11 56.8
comp=Z,9.9nm,0.9s
TOLI2 Tolitoli 53.53 289 P P 11 11 39.6 -0.6
VNDA Vanda 55.35 182 P P 11 11 51.0 -1.5
comp=Z,1.4nm,1.1s,baz=11,slow=6.9,SNR=4.5
VNDA LR LR 11 31 37.7
comp=Z,152nm,18.9s,baz=252,slow=32
comp=Z,1.4nm,1.1s
LEM Lembang 62.12 274 LR LR 11 39 46.9
comp=Z,108nm,18.1s,baz=176,slow=36
MJAR Matsushiro Arr 65.94 332 P P **11 13 03.9 -1.3**
comp=Z,5.0nm,0.9s,baz=169,slow=6.6,SNR=9.6
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 65.94 332 P P 11 13 04.5 -0.7
MJAR IAmb IAmb 11 13 05.3
comp=Z,5.3nm,0.9s
MAJO Matsushiro 65.94 332 P P 11 13 04.2 -0.9
QSPA South Pole Qui 67.70 180 P P 11 13 16.2 0.0
comp=Z,7.7nm,1.0s,baz=16,slow=2.1,SNR=18
comp=Z,7.7nm,1.0s
KSRS Korea Array 71.60 326 P P 11 13 40.5 +0.1
comp=Z,4.7nm,0.9s,baz=147,slow=6.6,SNR=21
KSRS LR LR 11 41 08.2
comp=Z,19nm,21.7s,baz=110,slow=32
comp=Z,4.7nm,0.9s
NJ2 Nanjing 73.09 316 *e*P P **11 13 51.2 +1.8**
NJ2 pmax pmax
comp=Z,12nm,0.5s
SHEM Shemya Is, Ala 74.85 2 LR LR 11 42 17.7
comp=Z,22nm,19.5s,baz=86,slow=32
USRK Ussuriysk Ar. 74.93 333 P P 11 13 59.6 -0.3
comp=Z,2.3nm,0.8s,baz=151,slow=4.4,SNR=6.0
comp=Z,2.3nm,0.8s
USRK Ussuriysk Ar. 74.93 333 P P 11 13 59.4 -0.5
MAW Mawson 75.90 202 P P 11 14 05.6 +0.3
comp=Z,4.1nm,0.8s,baz=90,slow=8.9,SNR=5.6
comp=Z,4.1nm,0.8s
MAW Mawson 75.90 202 P P 11 14 05.8 +0.5
MAW Mawson 75.90 202 P P 11 14 05.7 +0.5
PETK Petropavlovsk- 75.94 352 P P 11 14 04.8 -0.8
comp=Z,5.2nm,0.9s,baz=167,slow=7.3,SNR=11
PETK LR LR 11 42 30.8
comp=Z,49nm,20.7s,baz=173,slow=32
comp=Z,5.2nm,0.9s
CN2 Changchun 77.60 329 P P 11 14 15.1 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s
BNX BinXian 78.15 331 ⇑P P **11 14 17.4 -0.7**
BNX pmax pmax
comp=Z,7.0nm,0.9s
BELA Belgrano 2 78.92 175 P P 11 14 21.1 -1.0
BELA IAmb IAmb 11 14 22.3
comp=Z,7.3nm,1.0s
KLR Kul'dur 79.09 335 LR LR 11 44 32.1
comp=Z,34nm,20.9s,baz=212,slow=32
HNS HongShan 79.13 318 ⇓P P **11 14 24.2 +0.5**
HNS pmax pmax
comp=Z,8.0nm,0.9s
CMAR Chiang Mai Arr 80.62 294 P P 11 14 34.0 +1.7
comp=Z,4.4nm,0.9s,baz=139,slow=4.3,SNR=28
comp=Z,4.4nm,0.9s
CMAR Chiang Mai Arr 80.62 294 P P 11 14 32.2 -0.1
KMI2 Kunming 80.71 302 P P 11 14 34.9 +2.0
KMI2 pmax pmax
comp=Z,15nm,1.4s
CHTO Chiang Mai 80.79 295 P P 11 14 32.6 -0.5
CHTO IAmb IAmb 11 14 35.9
comp=Z,12nm,1.0s
CHTO Chiang Mai 80.79 295 P P 11 14 35.0 +1.9
comp=Z,14nm,1.2s
CHTO Chiang Mai 80.79 295 P P 11 14 34.4 +1.2
XAN Xi'an 80.89 312 P P 11 14 34.2 +0.8
XAN pP PcP 11 14 40.0 0.0
XAN pmax pmax
comp=Z,12nm,1.0s
PZH PanZhiHua 82.17 303 P P 11 14 41.6 +1.2
HHC Hu-ho-hao-te 83.18 319 *e*P P **11 14 45.8 +0.4**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,30nm,4.0s
MA2 Magadan 83.19 350 LR LR 11 47 46.3
comp=Z,40nm,19.9s,baz=182,slow=33
ELIB Princess Elisa 83.23 190 *d*P P **11 14 44.6 -0.7**
comp=Z,4.4nm,1.2s
TROLL Troll, Antarcti 85.49 184 ⇓P P **11 14 56.2 -0.6**
comp=Z,660nm,1.1s
SNAA Sanae 86.09 182 ⇓P P **11 14 58.8 -0.9**
comp=Z,118nm,0.9s
SNAA Sanae 86.09 182 P P **11 14 58.5 -1.1**
comp=Z,7.8nm,1.1s,baz=174,slow=4.8,SNR=16
comp=Z,7.8nm,1.1s
SNAA Sanae 86.09 182 P P **11 14 58.5 -1.1**
SNAA IAmb IAmb 11 14 60.0
comp=Z,8.5nm,1.0s
SNAA Sanae 86.09 182 P P **11 14 58.9 -0.7**
VNA2 Neumayer--Watz 86.95 181 ⇓P P **11 15 03.1 -0.7**
comp=Z,11nm,0.7s,baz=169,slow=4.9
VNA2 Neumayer--Watz 86.95 181 P P **11 15 03.3 -0.4**
VNA1 Neumayer--Stat 87.23 181 P P **11 15 04.3 -0.8**
comp=Z,16nm,1.1s
SHL Shillong 89.62 298 P P **11 15 17.5 0.0**
ULN Ulaanbaatar 89.91 323 P P **11 15 19.0 +0.8**
KAIM Kayak Island 89.96 21 P P **11 15 18.7 +0.7**
GTA2 Gaotai 90.01 313 *e*P P **11 15 19.8 +0.9**
GTA2 sP pwP 11 15 30.2 -0.9
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
YAK Yakutsk 90.12 342 LR LR 11 49 30.6
comp=Z,31nm,20.5s,baz=203,slow=31
NVAR Mina Array Bea 90.18 48 P P **11 15 19.0 -0.8**
comp=Z,0.4nm,0.3s,baz=182,slow=28,SNR=8.5
comp=Z,0.4nm,0.3s
SONM Songino Array 90.26 323 P P **11 15 19.2 -0.7**
comp=Z,3.6nm,0.9s,baz=140,slow=5.0,SNR=11
comp=Z,3.6nm,0.9s
F20K Avaraart Lake 92.71 13 P P **11 15 30.9 +0.4**
F20K IAmb IAmb 11 15 32.6
comp=Z,4.6nm,1.2s
E19K Redstone River 92.77 12 P P **11 15 31.0 +0.2**
E19K IAmb IAmb 11 15 32.3
comp=Z,3.9nm,0.9s
ILAR Eielson Array 92.94 17 P P **11 15 29.7 -2.0**
comp=Z,1.4nm,1.1s,baz=229,slow=6.8,SNR=8.8
comp=Z,1.4nm,1.1s
J25K Salcha River, 93.23 18 P P **11 15 32.2 -0.9**
J25K IAmb IAmb 11 15 45.0
comp=Z,1.3nm,1.0s
WMQ Urumqi 100.02 313 *e*P **Pdif 11 16 05.8 +1.4**
MORC Moravsky Berou 145.21 329 *e*PKP **PKPbc 11 21 56.3 0.0**
JAVC Velka Javorina 145.75 327 *e*PKP **PKPab 11 21 58.9 +0.5**
VRAC Vranov 145.98 329 *e*PKP **PKPbc 11 21 58.7 0.0**
BRG Berggiesshubel 146.07 333 *e*PKP **PKPbc 11 21 59.1 +0.3**
BRG Amp 11 22 00.9
comp=Z,17nm,1.2s
KRUC Moravsky 146.25 329 *e*PKP **PKPbc 11 21 59.3 -0.1**
MODS Modra-Piesok 146.27 327 *e*PKP **PKPab 11 22 00.5 +0.2**
EKA Eskdalemuir Ar 146.71 353 PKPbc **PKPdf 11 21 59.3 +0.4**
comp=Z,6.8nm,0.8s,baz=346,slow=2.7,SNR=11
GERES GERESS Array B 147.66 331 PKPbc **PKPbc 11 22 03.2 -0.4**
comp=Z,2.0nm,0.8s,baz=48,slow=2.0,SNR=8.1
TORD Torodi Ar. Bea 165.75 232 PKP **PKPdf 11 22 24.7 0.0**
comp=Z,1.3nm,1.0s,baz=127,slow=1.4,SNR=4.4

*IDC **07** 11:05:30.3±2.5,21.71N×143.52E,h275km±22km,mb3.1/8, mbtmp3.8/9,Error ellipse: s-maj=75.4km s-min=16.8km az=80.0*
ISC 07 11:05:32.1±2.2,21.8N±0.1×143.7E±0.6,h300km,n9, σ1§14/10,mb3.3/7,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.41**	**346**	P	**Pn**	**11 06 53.5**	**-0.9**
	20nm,0.5s,baz=274,slow=17,SNR=1.4						
JCJ				S		**11 07 59.2**	**-1.3**
	22nm,0.4s,baz=277,slow=21,SNR=2.0						
KSRS	**Korea Array**	**20.69**	**322**	P	**P**	**11 09 50.1**	**+0.3**
	0.5nm,0.5s,baz=144,slow=8.5,SNR=4.1						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**42.52**	**193**	P	**P**	**11 12 58.0**	**-0.9**
	0.5nm,0.9s,baz=15,slow=9.2,SNR=5.2						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**46.22**	**192**	P	**P**	**11 13 27.0**	**-1.0**
	0.4nm,0.8s,baz=10.0,slow=7.1,SNR=2.2						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**54.95**	**313**	P	**P**	**11 14 33.2**	**+0.7**
	0.3nm,0.5s,baz=98,slow=8.7,SNR=3.5						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**57.74**	**317**	P	**P**	**11 14 52.4**	**+0.4**
	0.6nm,0.6s,baz=89,slow=6.7,SNR=5.9						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**62.87**	**319**	P	**P**	**11 15 27.3**	**+0.8**
	1.0nm,0.4s,baz=97,slow=8.2,SNR=5.0						
	1.0nm,0.4s						
ARCES	**ARCESS Array B**	**78.94**	**342**	P	**P**	**11 17 04.1**	**+1.8**
	4.5nm,1.1s,baz=56,slow=5.6,SNR=4.1						
	4.5nm,1.1s						
FINES	**FINESS Array B**	**83.25**	**335**	P	**P**	**11 17 25.7**	**+0.6**
	0.7nm,0.5s,baz=64,slow=4.4,SNR=6.0						
	0.7nm,0.5s						

*IDC **07** 11:32:13.4±3.6,5.82N×127.08E,h40km±33km,mb3.2/4, mbtmp3.5/5,ML3.7/1,Error ellipse: s-maj=71.3km s-min=14.3km az=53.0*
*MAN **07** 11:32:18.0,6.21N×126.90E,h18km,MS3.8*
ISC 07 11:32:09.9±1.4,5.87N±0.05×127.00E±0.06,h18km±6km, n13,σ1§63/20,mb3.3/4,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.30**	**280**	*e*P	**Pb**	**11 32 34.7**	**+0.8**
DDMP				*e*S	**Sb**	**11 32 49.8**	**-0.5**
DAV	**Davao City (W)**	**1.85**	**310**	P	**Pg**	**11 32 44.4**	**-1.0**
	107nm,0.3s,baz=288,slow=6.3,SNR=1.8						
DAV				S	**Sb**	**11 33 07.5**	**+1.6**
	198nm,0.4s,baz=252,slow=23,SNR=7.2						
DMPH	**Davao City--Mi**	**1.91**	**309**	*e*P	**Pg**	**11 32 45.5**	**-1.2**
DMPH				*i* S	**Sb**	**11 33 09.1**	**+1.4**
CDOP	**Cateel, Davao**	**1.98**	**344**	*e*P	**Pb**	**11 32 45.9**	**+0.5**
CDOP				*i* S	**Sb**	**11 33 10.4**	**+0.7**
GSPH	**General Santos**	**2.05**	**276**	*i* P	**Pb**	**11 32 48.0**	**+1.3**
GSPH				*i* S	**Sn**	**11 33 06.1**	**-2.7**
BIPH	**Bislig**	**2.38**	**345**	*e*P	**Pb**	**11 32 52.3**	**0.0**
BIPH				*e*S	**Sg**	**11 33 30.3**	**+3.7**
CGP	**Cagayan de Oro**	**3.44**	**318**	*e*P	**Pg**	**11 33 11.5**	**-2.3**
CGP				*e*S	**Sb**	**11 33 50.5**	**-1.2**
SCPH	**Surigao**	**4.16**	**339**	*e*P	**Pb**	**11 33 20.8**	**-1.9**
SIJI	**Sorong**	**7.94**	**147**	P	**Pn**	**11 34 04.2**	**-0.3**
	1.1nm,0.3s,baz=356,slow=15,SNR=4.5						
	2.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**23.86**	**183**	P	**P**	**11 37 22.9**	**+0.6**
	1.2nm,0.9s,baz=6.3,slow=9.2,SNR=0.9						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**26.65**	**164**	P	**P**	**11 37 48.3**	**+0.5**
	0.5nm,0.9s,baz=343,slow=10,SNR=5.5						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**30.12**	**167**	P	**P**	**11 38 18.8**	**0.0**
	0.3nm,0.8s,baz=346,slow=8.2,SNR=2.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**55.97**	**324**	P	**P**	**11 41 48.0**	**+0.8**
	0.2nm,0.5s,baz=119,slow=7.2,SNR=2.6						
	0.2nm,0.5s						

TRN 07 11:52:43.9,17.64N×60.67W,h107km,MD3.9,Far East of Barbuda.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**1.06**	**272**	*e*P	Pn	11 53 06.5	+1.0
ANWB				*e*S	Sn	11 53 22.3	+0.6
DHSZ	**Broadband at M**	**1.71**	**218**	*e*P	Pn	11 53 13.3	+0.1
DHSZ				*e*S	Sn	11 53 35.2	-0.2
MMLZ	**Guadeloupe Bro**	**1.85**	**211**	*e*P	Pn	11 53 15.6	+0.8
MMLZ				*e*S	Sn	11 53 40.0	+1.6
TBG	**Guadaloupe-3**	**2.00**	**208**	*e*P	Pn	11 53 17.3	+0.5
TBG				*e*S	Sn	11 53 43.1	+1.2
DSLB	**Salisbury**	**2.30**	**198**	*e*P	Pn	11 53 20.3	-0.4
DSLB				*e*S	Sn	11 53 49.3	+0.5
BIM	**Bigot**	**3.12**	**187**	*e*P	Pn	11 53 32.8	+1.2
BIM				*e*S	Sn	11 54 07.3	-0.9

*TEH **07** 12:04:43.2,33.26N×46.46E,h15km±44km,ML3.1, Presumed earthquake*
*ISN **07** 12:04:44.9±1.8,33.22N×46.42E,h24km±25km,ML3.1, Presumed earthquake*

ISC 07 12:04:43.5±1.0,33.26N±0.04×46.42E±0.06,h10km,n10, σ0§52/12,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**1.07**	**7**	Pg	**Pg**	**12 05 04.1**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.14**	**27**	Pg	**Pb**	**12 05 05.2**	**-0.2**
IDHR	**Dehrash**	**1.44**	**359**	Pg	**Pn**	**12 05 09.7**	**-0.1**
RAFI	**Al-Rafai**	**1.55**	**190**	*e*Pg	**Pb**	**12 05 12.0**	**-0.3**
	baz=10.0						
RAFI				*e*Sg	**Sg**	**12 05 33.0**	**-0.4**
RAFI				AML	AML	12 05 33.7	
	comp=E,835nm,0.6s						
RAFI				AML	AML	12 05 33.9	
	comp=N,603nm,0.8s						
IDOB	**Doab**	**1.56**	**70**	Pg	**Pn**	**12 05 11.5**	**0.0**
BHD	**Baghdad**	**1.71**	**271**	*e*Pn	**Pn**	**12 05 14.0**	**+0.7**
BHD				*e*Sn	**Sg**	**12 05 38.0**	**-0.4**
SNQR	**Sonqor, Kerman**	**1.89**	**32**	Pn	**Pn**	**12 05 16.6**	**+0.5**
IALM	**Almabolaq**	**2.16**	**42**	Pn	**Pn**	**12 05 20.4**	**+0.6**
SNJK	**Sanadaj_Korde**	**2.23**	**14**	Pn	**Pn**	**12 05 21.4**	**+0.6**
AMIS	**Naft Sefid**	**2.90**	**122**	Pn	**Pn**	**12 05 30.4**	**+0.6**

*IDC **07** 12:25:24.4±3.1,5.41S×68.48E,h0km,mb3.7/8, mbtmp3.7/8,Error ellipse: s-maj=92.5km s-min=25.2km az=63.0*
ISC 07 12:25:26.7±3.3,5.4S±0.3×68.5E±0.5,h13km,n14,σ0§45/8, mb3.8/8,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**4.53**	**120**	T	T	12 31 16.1	
	baz=302						
H08S3	**Diego Garcia H**	**4.53**	**120**	T	T	12 31 16.9	
	baz=302,slow=74						
H08S2	**Diego Garcia H**	**4.55**	**120**	T	T	12 31 10.3	
	baz=302,slow=74						
CMAR	**Chiang Mai Arr**	**38.23**	**51**	P	**P**	**12 32 46.9**	**+0.1**
	0.5nm,0.3s,baz=248,slow=9.4,SNR=4.3						
	0.5nm,0.3s						
H01W3	**Cape Leeuwin H**	**51.28**	**131**	T	T	13 29 36.4	
	baz=295,slow=75,SNR=4.9						
H01W2	**Cape Leeuwin H**	**51.28**	**131**	T	T	13 29 34.3	
	baz=295,slow=75,SNR=5.0						
H01W1	**Cape Leeuwin H**	**51.30**	**131**	T	T	13 29 33.2	
	baz=295,slow=75,SNR=4.6						
MKAR	**Makanchi Array**	**53.37**	**12**	P	**P**	**12 34 45.7**	**-0.2**
	0.3nm,0.6s,baz=207,slow=7.9,SNR=4.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**56.45**	**8**	P	**P**	**12 35 07.7**	**-0.4**
	0.2nm,0.3s,baz=205,slow=7.4,SNR=5.7						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**58.21**	**1**	P	**P**	**12 35 21.3**	**+0.7**
	0.3nm,0.4s,baz=178,slow=7.1,SNR=1.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**60.68**	**11**	P	**P**	**12 35 37.1**	**-0.4**
	0.7nm,0.4s,baz=210,slow=9.3,SNR=5.1						
	0.7nm,0.4s						
SONM	**Songino Array**	**62.58**	**28**	P	**P**	**12 35 50.8**	**+0.1**
	0.6nm,0.4s,baz=221,slow=6.4,SNR=2.0						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**65.33**	**113**	P	**P**	**12 36 09.1**	**-0.2**
	0.5nm,0.7s,baz=277,slow=5.7,SNR=7.6						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**65.47**	**109**	P	**P**	**12 36 10.3**	**+0.1**
	0.8nm,0.7s,baz=282,slow=6.3,SNR=8.3						
	0.8nm,0.7s						

*BER **07** 12:44:24.5±3.4,80.11N×21.27E,h15km±19km,ML2.8, ML3.4(NAO),Confirmed Earthquake*
*FCIAR **07** 12:44:26.0,80.39N×21.66E,h10km,station OMEGA has station magnitude of 3.60*
*KOLA **07** 12:44:37.0,79.42N×22.21E,h0km,ML2.3, Spitsbergen,Barentz Sea*
ISC 07 12:44:23.6±1.0,80.03N±0.05×21.20E±0.05,h10km,n22, σ1§80/38,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.03**	**241**	Pn	**Pn**	**12 44 56.9**	**-0.9**
KBS				Sg	**Sn**	**12 45 24.9**	**+1.9**
KBS	**Kingsbay**	**2.03**	**241**	*e*P	**Pn**	**12 44 56.8**	**-0.9**
KBS				*e*Sg	**Sn**	**12 45 25.0**	**+1.9**
KBS				IAML		12 45 28.9	
	comp=Z,249nm,0.4s						
SPA0	**Spitsbergen Ar**	**2.08**	**209**	Pn	**Pn**	**12 44 58.1**	**-0.3**
	baz=23,slow=16						
SPA0				Pg	**Pb**	**12 45 01.9**	**+0.6**
	baz=23,slow=16						
SPA0				Sg	**Sb**	**12 45 28.2**	**+1.1**
	baz=23,slow=37						
SPA0	**Spitsbergen Ar**	**2.08**	**209**	Pn	**Pn**	**12 44 58.1**	**-0.3**
SPA0				Pg	**Pb**	**12 45 01.9**	**+0.6**
SPA0				Sg	**Sb**	**12 45 28.2**	**+1.1**
SPA0	**Spitsbergen Ar**	**2.08**	**209**	*e*P	**Pn**	**12 44 58.1**	**-0.3**
SPA0				*e*S	**Sb**	**12 45 29.0**	**+1.9**
BRBA	**Barentsburg A**	**2.39**	**217**	Pn	**Pn**	**12 45 02.5**	**-0.1**
BRBA				Sn	**Sn**	**12 45 29.4**	**-2.5**
BRBA	**Barentsburg A**	**2.39**	**217**	*e*P	**Pn**	**12 45 02.4**	**-0.3**
BRBA				*e*S	**Sn**	**12 45 29.5**	**-2.5**
BRBA				*e*Sg	**Sb**	**12 45 38.0**	**+1.9**
BRBA				IAML		12 45 43.5	
	comp=Z,110nm,0.3s						
HSPB	**Hornsund (broa**	**3.25**	**203**	Pn	**Pn**	**12 45 15.8**	**+1.3**
HSPB	**Hornsund (broa**	**3.25**	**203**	*e*P	**Pn**	**12 45 16.1**	**+1.6**
HSPB				*e*Pg	**Pb**	**12 45 22.1**	**+0.9**
HSPB				*e*S	**Sn**	**12 45 50.6**	**-2.5**
HSPB				*e*Sg	**Sg**	**12 46 06.5**	**-1.3**
HSPB				IAML		12 46 18.9	
	comp=Z,38nm,0.4s						
HOPEN	**Hopen**	**3.63**	**166**	Pn	**Pn**	**12 45 20.0**	**+0.3**
HOPEN				Sn	**Sn**	**12 46 00.7**	**-1.7**
HOPEN	**Hopen**	**3.63**	**166**	*e*P	**Pb**	**12 45 28.6**	**+0.9**
HOPEN				*e*S	**Sb**	**12 46 16.7**	**+5.1**
OMEGA	**Omega**	**4.47**	**67**	*e*P	**Pn**	**12 45 31.4**	**+0.2**
OMEGA				*e*S	**Sn**	**12 46 21.9**	**-1.3**
	comp=Z,54nm,1.3s						
BEA1	**Bear Island, N**	**5.59**	**186**	Pn	**Pn**	**12 45 47.1**	**+0.6**
BEA1	**Bear Island, N**	**5.59**	**186**	Pn	**Pn**	**12 45 47.1**	**+0.6**
BEA3	**Bear Island, N**	**5.59**	**186**	Pn	**Pn**	**12 45 47.0**	**+0.4**
BEA3				Sn	**Sn**	**12 46 45.2**	**-5.4**
NOR	**Nord**	**6.16**	**303**	Pn	**Pn**	**12 45 53.0**	**-1.4**
NOR	**Nord**	**6.16**	**303**	Pn	**Pn**	**12 45 53.0**	**-1.4**
ARA0	**ARCESS Array S**	**10.61**	**172**	Pn	**Pn**	**12 46 54.3**	**-1.1**
	baz=359,slow=11						
ARA0				Sn	Sn	12 48 43.2	-11
	baz=2.1,slow=22						
ARA0	**ARCESS Array S**	**10.61**	**172**	Pn	**Pn**	**12 46 54.3**	**-1.1**
ARA0				Sn	Sn	12 48 43.2	-11
ARCES	**ARCESS Array B**	**10.61**	**172**	P	**Pn**	**12 46 56.1**	**+0.7**
ARCES				S	Sn	12 48 44.6	-9.5
TERR	**Teriberka**	**11.43**	**154**	P	**Pn**	**12 47 06.7**	**+0.2**
TERR				S	Sn	12 49 06.2	-7.9
APA0	**Apatity Array**	**12.86**	**159**	S	Sn	12 49 40.4	-8.7

IDC 07 12:48:44.2±18.0,20.65S×177.43W,h518km±48km, mb3.0/4,mbtmp3.9/5,Error ellipse: s-maj=330.4km s-min=104.3km az=95.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.16**	**303**	P	P	12 50 13.9	+0.1
	4.1nm,0.5s,baz=115,slow=24,SNR=9.7						
STKA	**Stephens Creek**	**38.20**	**244**	P	P	12 55 18.3	-1.1
	0.9nm,0.4s,baz=104,slow=8.3,SNR=1.9						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**45.00**	**257**	P	P	12 56 13.5	+0.1
	1.4nm,0.5s,baz=94,slow=7.9,SNR=7.7						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**45.10**	**262**	P	P	12 56 13.9	-0.3
	0.5nm,0.3s,baz=97,slow=7.4,SNR=39						
	0.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**53.53**	**262**	P	P	12 57 17.3	+0.8
	1.2nm,0.6s,baz=103,slow=7.7,SNR=1.1						
	1.2nm,0.6s						

*NOU **07** 12:57:49.3,27.73S×178.31W,h411km,mb4.3/20, Kermadec Islands Region*
*NEIC **07** 12:57:56.2±0.7,28.01S±0.08×179.4W±0.2,h403km±10km, mb4.3/20,Error ellipse: s-maj=26.6km s-min=11.8km*

az=95.0
*IDC **07** 12:57:56.3±1.9,27.89S×179.44W,h405km±18km, mb3.6/10,mbtmp4.4/13,Error ellipse: s-maj=19.3km s-min=16.0km az=144.0*

ISC 07 12:57:55.9±0.5,28.06S±0.06×179.41W±0.09,h400km, n92,σ1§49/109,mb4.1/19,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**1.77**	**133**	P		**Pn**	**12 58 53.6**	**+3.1**
GLKZ				S		**S**	**12 59 36.6**	**+2.1**
OUZ	**Omahuta**	**9.30**	**218**	P		**Pn**	**13 00 09.1**	**+3.4**
OUZ	**Omahuta**	**9.30**	**218**	P		**Pn**	**13 00 09.3**	**+3.6**
WCZ	**Waipu Caves**	**9.47**	**212**	P		**Pn**	**13 00 11.0**	**+3.3**
MXZ	**Matakaoa Point**	**9.67**	**191**	S		**S**	**13 01 58.8**	**-1.0**
WMGZ	**Waiomatatini S**	**9.90**	**190**	P		**P**	**13 00 12.4**	**+0.1**
WMGZ				S		**S**	**13 02 02.7**	**-1.9**
HAZ	**Te Kaha**	**9.95**	**193**	P		**P**	**13 00 12.9**	**+0.1**
HAZ				S		**S**	**13 02 05.4**	**-0.3**
PKGZ	**Pakihiroa**	**10.00**	**192**	P		**Pn**	**13 00 15.2**	**+1.4**
PKGZ				S		**S**	**13 02 04.6**	**-2.2**
PUZ	**Puketiti**	**10.17**	**190**	P		**P**	**13 00 14.8**	**-0.6**
PUZ				S		**S**	**13 02 07.5**	**-2.7**
RUGZ	**Raukumara Rang**	**10.18**	**193**	P		**P**	**13 00 15.1**	**-0.3**
RUGZ				S		**S**	**13 02 09.1**	**-1.4**
TGRZ	**Tauranga**	**10.30**	**200**	P		**Pn**	**13 00 20.4**	**+3.1**
TWGZ	**Tauwhareparae**	**10.32**	**192**	P		**Pn**	**13 00 19.5**	**+1.9**
TWGZ				S		**S**	**13 02 13.2**	**-0.1**
MSVF	**Nonsavu**	**10.54**	**347**	P		**P**	**13 00 19.2**	**-0.6**
	3.6nm,0.5s,baz=158,slow=16,SNR=4.8							
MSVF	**Nonsavu**	**10.54**	**347**	P		**P**	**13 00 19.0**	**-0.7**
TOZ	**Tahuroa Road**	**10.55**	**203**	P		**Pn**	**13 00 23.2**	**+3.1**
MWZ	**Matawai**	**10.56**	**193**	P		**Pn**	**13 00 21.2**	**+0.9**
MWZ				S		**S**	**13 02 14.2**	**-3.9**
URZ	**Urewera**	**10.58**	**195**	P		**P**	**13 00 19.9**	**+0.1**
	66nm,0.3s,baz=258,slow=2.2,SNR=63							
URZ				S		**S**	**13 02 15.7**	**-2.8**
	88nm,0.6s,baz=243,slow=21,SNR=30							
URZ	**Urewera**	**10.58**	**195**	P		**P**	**13 00 19.9**	**+0.1**
URZ	**Urewera**	**10.58**	**195**	P		**Pn**	**13 00 20.3**	**-0.3**
URZ				S		**S**	**13 02 15.9**	**-2.5**
CNGZ	**Carnagh Statio**	**10.59**	**190**	P		**P**	**13 00 19.7**	**-0.1**
CNGZ				S		**S**	**13 02 16.1**	**-2.5**
TKGZ	**Te Karaka**	**10.60**	**192**	P		**P**	**13 00 19.9**	**-0.1**
TKGZ				S		**S**	**13 02 15.2**	**-3.6**
OMRZ	**Omania**	**10.62**	**198**	P		**Pn**	**13 00 23.6**	**+2.5**
HLRZ	**Highlands Stat**	**10.77**	**198**	P		**Pn**	**13 00 24.1**	**+1.3**
MUGZ	**Murupara**	**10.87**	**196**	P		**P**	**13 00 23.4**	**+0.4**
MUGZ				S		**S**	**13 02 22.3**	**-2.1**
RTZ	**Ruatahuna**	**10.95**	**195**	P		**P**	**13 00 24.2**	**+0.2**
RTZ	**Ruatahuna**	**10.95**	**195**	P		**Pn**	**13 00 25.4**	**+0.5**
SNGZ	**Shannon Statio**	**11.03**	**193**	P		**P**	**13 00 24.7**	**-0.1**
SNGZ				S		**S**	**13 02 25.9**	**-1.8**
TLZ	**Tolley Road**	**11.08**	**201**	P		**Pn**	**13 00 27.8**	**+1.5**
KNZ	**Kokohu**	**11.20**	**192**	P		**P**	**13 00 25.4**	**-1.2**
KNZ				S		**S**	**13 02 29.1**	**-1.9**
HIZ	**Hauiti**	**11.47**	**203**	P		**Pn**	**13 00 32.4**	**+1.5**
HIZ	**Hauiti**	**11.47**	**203**	P		**Pn**	**13 00 33.1**	**+2.3**
BKZ	**Black Stump Fm**	**11.59**	**196**	P		**P**	**13 00 30.5**	**-0.5**
BKZ	**Black Stump Fm**	**11.59**	**196**	P		**P**	**13 00 30.7**	**-0.3**
VRZ	**Vera Road**	**12.05**	**202**	P		**Pn**	**13 00 38.2**	**+0.6**
PWZ	**Pawanui**	**12.33**	**194**	P		**Pn**	**13 00 40.0**	**-0.8**
PXZ	**Pawanui**	**12.33**	**194**	P		**P**	**13 00 38.4**	**-0.7**
TSZ	**Takapari Road**	**12.57**	**197**	P		**P**	**13 00 40.3**	**-1.4**
BFZ	**Birch Farm**	**13.09**	**195**	P		**P**	**13 00 47.5**	**+0.1**
SNZO	**South Karori**	**14.07**	**199**	P		**P**	**13 00 56.7**	**-1.4**
DZM	**Mont Dzumac**	**14.14**	**292**	P		**P**	**13 00 59.8**	**+0.6**
	6.7nm,0.5s,baz=182,slow=16,SNR=18							
QRZ	**Quartz Range**	**14.36**	**205**	P		**P**	**13 01 01.0**	**-0.3**
KHZ	**Kahutara**	**15.43**	**200**	P		**P**	**13 01 12.0**	**-0.8**
RPZ	**Rata Peaks**	**17.41**	**204**	P		**P**	**13 01 31.3**	**-2.7**
	1.7nm,0.6s,baz=27,slow=11,SNR=6.2							
RPZ	**Rata Peaks**	**17.41**	**204**	P		**P**	**13 01 35.0**	**+1.0**
ODZ	**Otahua Downs**	**18.71**	**202**	P		**P**	**13 01 48.4**	**+0.6**
MGCD	**Mangrove Creek**	**25.84**	**251**	P		**P**	**13 02 55.1**	**+2.1**
CAN	**Canberra**	**27.76**	**247**	P		**P**	**13 03 11.9**	**+1.8**
CMSA	**Cobar Meteorol**	**30.41**	**255**	P		**P**	**13 03 34.5**	**+1.2**
TAU	**Tasmania Unive**	**30.65**	**232**	P		**P**	**13 03 35.3**	**+0.2**
TOO	**Toolangi**	**30.84**	**243**	P		**P**	**13 03 37.1**	**+0.1**
BRAT	**Ballarat**	**32.07**	**243**	P		**P**	**13 03 49.2**	**+1.7**
CTA	**Charters Tower**	**32.26**	**277**	P		**P**	**13 03 49.6**	**+0.2**
	11nm,0.5s,baz=98,slow=10,SNR=34							
	11nm,0.5s							
CTA	**Charters Tower**	**32.26**	**277**	P		**P**	**13 03 49.9**	**+0.5**
CTAO	**Charters Tower**	**32.26**	**277**	P		**P**	**13 03 50.0**	**+0.5**
CTAO	**Charters Tower**	**32.26**	**277**	P		**P**	**13 03 49.9**	**+0.5**
CTAO				IAmb		IAmb	13 03 50.9	
	comp=Z,19nm,1.1s							
QLP	**Quilpie**	**32.26**	**264**	P		**P**	**13 03 49.8**	**+0.4**
STKA	**Stephens Creek**	**33.88**	**254**	P		**P**	**13 04 03.4**	**+0.3**
	comp=Z,5.5nm,0.5s,baz=98,slow=11,SNR=21							
	comp=Z,5.5nm,0.5s							
STKA	**Stephens Creek**	**33.88**	**254**	P		**P**	**13 04 03.2**	**+0.1**
MTSU	**Mount Surprise**	**34.69**	**279**	P		**P**	**13 04 10.7**	**+0.5**
INKA	**Innaminka**	**35.11**	**261**	P		**P**	**13 04 13.3**	**-0.3**
INKA				IAmb		IAmb	13 04 15.2	
	comp=Z,6.5nm,1.1s							
BBOO	**Buckleboo**	**38.48**	**252**	P		**P**	**13 04 40.8**	**-0.8**
BBOO				IAmb		IAmb	13 04 41.5	
	comp=Z,15nm,0.8s							
AS31	**Alice Springs**	**42.05**	**265**	P		**P**	**13 05 09.8**	**-0.8**
ASAR	**Alice Springs**	**42.05**	**265**	P		**P**	**13 05 10.0**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=101,slow=7.4,SNR=66							
ASAR				ScP		**ScP**	**13 10 07.5**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=92,slow=3.6,SNR=5.1							
	comp=Z,3.1nm,0.6s							
WRA	**Warramunga Arr**	**42.81**	**270**	P		**P**	**13 05 15.6**	**-1.1**
	comp=Z,6.7nm,0.8s,baz=104,slow=8.6,SNR=36							
WRA				ScP		**ScP**	**13 10 11.1**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=102,slow=3.8,SNR=4.9							
	comp=Z,6.7nm,0.8s							
WRA	**Warramunga Arr**	**42.81**	**270**	P		**P**	**13 05 14.7**	**-2.0**
WB0	**Warramunga Arr**	**42.83**	**271**	P		**P**	**13 05 15.8**	**-1.0**
WB0				IAmb		IAmb	13 05 16.6	
	comp=Z,12nm,0.9s							
FORT	**Forrest**	**45.50**	**253**	P		**P**	**13 05 36.2**	**-1.3**
FORT				IAmb		IAmb	13 05 37.3	
	comp=Z,15nm,0.7s							
KNRA	**Kununurra**	**49.33**	**273**	P		**P**	**13 06 06.6**	**-0.2**
KNRA				IAmb		IAmb	13 06 17.7	
	comp=Z,34nm,1.5s							
FITZ	**Fitzroy Crossi**	**51.16**	**269**	P		**P**	**13 06 19.8**	**-0.6**
	comp=Z,10nm,1.1s,baz=99,slow=5.7,SNR=17							
	comp=Z,10nm,1.1s							
MBWA	**Marble Bar**	**55.28**	**263**	P		**P**	**13 06 49.1**	**-0.9**
MBWA				IAmb		IAmb	13 07 05.9	
	comp=Z,24nm,1.4s							
MORW	**Morawa**	**56.04**	**252**	P		**P**	**13 06 54.5**	**-0.7**
MORW				IAmb		IAmb	13 07 15.9	
	comp=Z,22nm,1.4s							
CASY	**Casey**	**56.64**	**207**	P		**P**	**13 06 58.1**	**-0.6**
CASY				IAmb		IAmb	13 07 24.1	
	comp=Z,11nm,0.9s							
QSPA	**South Pole Qui**	**62.04**	**180**	P		**P**	**13 07 37.3**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=52,slow=9.8,SNR=7.2							
	comp=Z,1.5nm,0.8s							
QSPA	**South Pole Qui**	**62.04**	**180**	P		**P**	**13 07 36.9**	**+1.5**
BELA	**Belgrano 2**	**72.26**	**173**	P		**P**	**13 08 39.0**	**+0.6**
KIWB	**Kanaga Island**	**79.59**	**1**	P		**P**	**13 09 19.1**	**-0.4**
ADK	**Adak**	**79.63**	**2**	P		**P**	**13 09 19.4**	**-0.3**
KSRS	**Korea Array**	**81.77**	**320**	P		**P**	**13 09 30.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=121,slow=4.7,SNR=2.2							
	comp=Z,0.6nm,0.7s							
PETK	**Petropavlovsk-**	**83.25**	**346**	P		**P**	**13 09 37.7**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=113,slow=6.9,SNR=13							
	comp=Z,2.0nm,0.5s							
PETK	**Petropavlovsk-**	**83.25**	**346**	P		**P**	**13 09 38.2**	**-0.2**
NVAR	**Mina Array Bea**	**87.38**	**43**	P		**P**	**13 09 59.5**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=229,slow=7.8,SNR=5.8							
	comp=Z,1.0nm,0.8s							
CNPM	**China Point**	**90.32**	**14**	P		**P**	**13 10 12.3**	**+0.2**
GAMB	**Gambell**	**91.73**	**3**	P		**P**	**13 10 19.5**	**+1.1**
L18K	**Granite Mounta**	**91.80**	**10**	P		**P**	**13 10 18.9**	**0.0**
L18K				IAmb		IAmb	13 10 35.2	
	comp=Z,8.4nm,1.4s							
PDAR	**Pinedale Array**	**95.30**	**44**	P		**P**	**13 10 34.0**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=236,slow=4.3,SNR=2.0							
	comp=Z,0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**118.58**	**315**	PKP		**PKPdf**	**13 15 54.7**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=96,slow=1.9,SNR=5.2							
NB2	**NORSAR Subarra1**	**146.26**	**351**	PKP		**PKPdf**	**13 16 48.8**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=13,slow=2.9							
NOA	**NORSAR Array B**	**146.26**	**351**	PKPbc		**PKPdf**	**13 16 48.4**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=15,slow=4.4,SNR=5.8							
HFS	**Hagfors**	**146.71**	**348**	PKPbc		**PKPdf**	**13 16 48.0**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=48,slow=2.1,SNR=13							
AKASG	**Malin Array Be**	**148.69**	**324**	PKPbc		**PKPbc**	**13 16 55.6**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=46,slow=3.3,SNR=9.7							
MMAI	**Mount Meron Ar**	**149.70**	**288**	PKPbc		**PKPbc**	**13 16 60.0**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=160,slow=4.6,SNR=1.8							
BRTR	**Keskin Array B**	**150.37**	**302**	PKPbc		**PKPbc**	**13 17 00.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=65,slow=3.8,SNR=2.3							

*IDC **07** 13:10:21.6±1.1,34.38N×45.61E,h0km,mb3.8/15, mbtmp3.8/21,ML3.6/5,MS2.8/2,Error ellipse: s-maj=22.4km s-min=13.4km az=166.0*
*NEIC **07** 13:10:22.8±0.8,34.36N±0.05×45.57E±0.03,h6km±5km, mb4.3/28,Error ellipse: s-maj=6.9km s-min=3.5km az=167.0*
*TEH **07** 13:10:23.2,34.33N×45.60E,h9km±28km,ML4.0, Presumed earthquake*
*THR **07** 13:10:23.8±0.0,34.32N×45.59E,h14km±7km,ML4.0, Presumed earthquake*
*ISN **07** 13:10:25.8±2.6,34.26N×45.58E,h21km±25km,ML4.0, Presumed earthquake*

ISC 07 13:10:24.0±0.4,34.32N±0.03×45.57E±0.04,h18km,n88, σ1§55/93,mb4.1/24,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.77**	**60**	Pg		**Pb**	**13 10 37.2**	**-1.8**
IDHR				Sg		**Sb**	**13 10 48.7**	**-0.6**
IGHG	**Ghaleghazi**	**0.82**	**89**	Pg		**Pb**	**13 10 38.9**	**-1.0**
IGHG				Sg		**Sn**	**13 10 52.0**	**-0.8**
ILBA	**Ilam Banvizeh**	**0.87**	**142**	*e*Pg		**Pb**	**13 10 40.5**	**-0.1**
ILBA				IAML			13 11 02.8	
	comp=Z,490nm,1.0s							
ILBA	**Ilam Banvizeh**	**0.87**	**142**	Pg		**Pb**	**13 10 40.3**	**-0.3**
KCHF	**Cheshme Sefid,**	**1.22**	**92**	Pg		**Pn**	**13 10 46.1**	**-0.1**
BHD	**Baghdad**	**1.44**	**224**	*e*Pg		**Pn**	**13 10 50.0**	**+0.9**
	baz=45							
BHD				*e*Sg		**Sg**	**13 11 11.0**	**+0.5**
BHD				AML		AML	13 11 16.2	
	comp=E,3μm,0.3s							
SNGE	**Sanandaj**	**1.66**	**62**	*e*Pn		**Pb**	**13 10 53.3**	**-0.7**
SNGE				IAML			13 11 20.6	
	comp=Z,2μm,1.0s							
SNJK	**Sanadaj _Korde**	**1.67**	**48**	Pg		**Pb**	**13 10 53.8**	**-0.5**
SNQR	**Sonqor, Kerman**	**1.78**	**72**	Pg		**Pb**	**13 10 56.0**	**-0.2**
SRSL	**SARDASHT**	**1.89**	**357**	*e*Pn		**Pb**	**13 10 57.6**	**-0.5**
SRSL				IAML			13 11 27.3	
	comp=Z,2μm,1.0s							
MAHB	**Mahabad**	**2.45**	**3**	Pn		**Pn**	**13 11 05.2**	**+2.1**
RAFI	**Al-Rafai**	**2.63**	**170**	*e*Pn		**Pn**	**13 11 07.0**	**+1.5**
RAFI				*e*Sn		**Sb**	**13 11 40.0**	**-2.4**
BDRS	**Dareh Seyedi**	**2.77**	**97**	Pn		**Pn**	**13 11 09.6**	**+1.9**
IHSH	**Hashtrud**	**3.28**	**24**	Pn		**Pn**	**13 11 16.8**	**+2.0**
IAZR	**Azarshahr**	**3.37**	**6**	Pn		**Pn**	**13 11 18.0**	**+2.1**
ZNJK	**Zanjan**	**3.46**	**46**	*e*Pn		**Pn**	**13 11 19.8**	**+2.7**
ZNJK				IAML			13 12 29.9	
	comp=Z,45nm,1.0s							
GTMR	**Gotvand**	**3.49**	**121**	*e*Pn		**Pn**	**13 11 19.5**	**+2.2**
GTMR				IAML			13 12 31.9	
	comp=Z,140nm,1.0s							
ASAO	**Ashtian**	**3.69**	**85**	*e*Pn		**Pn**	**13 11 23.5**	**+3.2**
ASAO				IAML			13 12 39.4	
	comp=Z,150nm,1.0s							
KHMZ	**Khomeyn**	**3.69**	**98**	*e*Pn		**Pn**	**13 11 22.6**	**+2.3**
KHMZ				IAML			13 12 31.5	
	comp=Z,100nm,1.0s							
ISHB	**Shabestar**	**3.96**	**1**	Pn		**Pn**	**13 11 26.6**	**+2.6**
AMIS	**Naft Sefid**	**4.09**	**129**	Pn		**Pn**	**13 11 27.4**	**+1.8**
IHRS	**Heris**	**4.17**	**16**	Pn		**Pn**	**13 11 29.3**	**+2.5**
GHVR	**GHOM**	**4.74**	**86**	*e*Pn		**Pn**	**13 11 36.7**	**+2.2**
GHVR				IAML			13 13 50.0	
	comp=Z,620nm,1.0s							
JHBN	**Jahan bin**	**4.75**	**115**	Pn		**Pn**	**13 11 37.2**	**+2.2**
CHTH	**Charan**	**4.82**	**69**	*e*Pn		**Pn**	**13 11 37.9**	**+2.0**
CHTH				IAML			13 12 40.1	
	comp=Z,2.0nm,1.0s							
GRMI	**Germi**	**4.86**	**22**	*e*Pn		**Pn**	**13 11 38.4**	**+2.2**
GRMI				IAML			13 12 52.4	
	comp=Z,32nm,1.0s							
IKLH	**Kolahrood**	**5.10**	**100**	Pn		**Pn**	**13 11 42.0**	**+2.3**
IGAR	**Gharneh**	**5.74**	**108**	Pn		**Pn**	**13 11 50.1**	**+1.6**
IZEF	**Zefreh**	**5.81**	**102**	Pn		**Pn**	**13 11 51.3**	**+1.8**
GNI	**Garni**	**5.86**	**354**	Pn		**Pn**	**13 11 50.9**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=180,slow=11,SNR=1.8							
GNI				Sn		**Sn**	**13 12 52.9**	**-3.9**
	comp=Z,2.4nm,0.3s,baz=173,slow=20,SNR=3.1							
GNI				LR		LR	13 14 18.1	
	comp=Z,48nm,19.3s,baz=165,slow=41							
	comp=Z,2.8nm,0.4s							
GNI	**Garni**	**5.86**	**354**			**Pn**	**13 11 49.7**	**-0.3**
GNI						**Sn**	**13 12 52.9**	**-3.9**
NASN	**Na'in**	**6.23**	**102**	*e*Pn		**Pn**	**13 11 57.0**	**+1.7**
NASN				IAML			13 13 16.1	
	comp=Z,21nm,1.0s							
ASF	**Jabal al Asfar**	**7.58**	**256**	Pn		**Pn**	**13 12 15.0**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=92,slow=7.0,SNR=2.6							
ASF				Lg		Lg	13 14 25.4	
	comp=Z,2.2nm,0.3s,baz=82,slow=23,SNR=6.9							
	comp=Z,1.6nm,0.2s							
MMAI	**Mount Meron Ar**	**8.58**	**264**	Pn		**Pn**	**13 12 28.5**	**+1.3**
	comp=Z,2.7nm,0.3s,baz=62,slow=18,SNR=2.4							
MMAI				Lg		Lg	13 14 57.3	
	comp=Z,2.3nm,0.3s,baz=84,slow=39,SNR=2.7							
	comp=Z,0.4nm,0.3s							
KBZ	**Khabaz**	**9.62**	**348**	Pn		**Pn**	**13 12 44.6**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=160,slow=7.5,SNR=4.3							
	comp=Z,0.9nm,0.7s							
EIL	**Elat**	**10.14**	**246**	Lg		Lg	13 15 45.6	
	comp=Z,0.2nm,0.3s,baz=16,slow=6.6,SNR=4.0							
EIL				LR		LR	13 16 35.1	
	comp=Z,91nm,19.5s,baz=87,slow=37							
RAYN	**Ar Rayn**	**10.76**	**180**			**Pn**	**13 12 56.5**	**-0.6**
UOSS	**Minazif**	**13.13**	**133**			**Pn**	**13 13 28.1**	**-1.5**
TIRR	**Tirgusor**	**16.66**	**313**	P		**P**	**13 14 18.9**	**+0.2**
TIRR				IAmb		IAmb	13 14 25.5	
	comp=Z,20nm,0.6s							
IDI	**Anoyia**	**17.02**	**279**	P		**P**	**13 14 23.2**	**+0.4**
	comp=Z,12nm,1.1s,baz=70,slow=15,SNR=1.7							
IDI	**Anoyia**	**17.02**	**279**	P		**P**	**13 14 22.4**	**-0.4**
AB31	**Akbulak array**	**18.33**	**31**	P		**P**	**13 14 37.0**	**-0.1**
AB31	**Akbulak array**	**18.33**	**31**	P		**P**	**13 14 43.7**	**+6.6**
	comp=Z,1.6nm,0.7s,baz=208,slow=12,SNR=18							
ABKAR	**Akbulak array**	**18.33**	**31**	P		**P**	**13 14 37.1**	**0.0**
AKTO	**Aktyubinsk**	**18.50**	**26**	P		**Pn**	**13 14 39.2**	**0.0**
	comp=Z,0.4nm,0.3s,baz=221,slow=8.3,SNR=12							
	comp=Z,1.8nm,0.4s							
ITM	**Ithomi**	**19.39**	**285**	P		**P**	**13 14 49.0**	**+0.1**
ITM				IAmb		IAmb	13 15 12.3	
	comp=Z,15nm,1.2s							
BURAR	**Bucovina Array**	**20.24**	**317**	P		**P**	**13 14 58.7**	**+0.5**
AKASG	**Malin Array Be**	**20.25**	**329**	P		**P**	**13 14 57.8**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=142,slow=9.7,SNR=5.1							
	comp=Z,0.5nm,0.3s							
AKASG	**Malin Array Be**	**20.25**	**329**	P		**P**	**13 14 58.4**	**+0.2**
BUR08	**Bucovina Ar. S**	**20.26**	**317**	P		**P**	**13 14 59.3**	**+0.9**
BOOM	**Boomskoye usch**	**25.06**	**62**	P		**P**	**13 15 48.1**	**+0.7**
BOOM				IAmb		IAmb	13 16 01.8	
	comp=Z,4.4nm,1.1s							
BVAR	**Borovoye Array**	**25.71**	**36**	P		**P**	**13 15 53.3**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=238,slow=8.4,SNR=7.7							
BVAR				PcP		**PcP**	**13 19 23.4**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=270,slow=1.5,SNR=4.1							
	comp=Z,1.4nm,0.7s							
KURBB	**Kurchatov Arra**	**28.96**	**46**	P		**P**	**13 16 23.4**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=253,slow=9.0,SNR=6.6							
	comp=Z,0.7nm,0.6s							
FINES	**FINESS Array B**	**29.88**	**341**	P		**P**	**13 16 29.8**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=141,slow=11,SNR=12							
	comp=Z,1.6nm,0.6s							
MKAR	**Makanchi Array**	**30.28**	**55**	P		**P**	**13 16 33.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=254,slow=8.5,SNR=6.0							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**30.28**	**55**	P		**P**	**13 16 33.6**	**-0.3**
BNI	**Bardonecchia**	**31.52**	**302**	P		**P**	**13 16 44.9**	**-0.2**
BNI				IAmb		IAmb	13 16 46.1	
	comp=Z,7.8nm,1.0s							
HFS	**Hagfors**	**33.11**	**331**	P		**P**	**13 16 58.6**	**0.0**
	comp=Z,5.1nm,0.6s,baz=139,slow=9.5,SNR=9.3							
	comp=Z,5.1nm,0.6s							
ZALV	**Zalesovo Beam**	**33.74**	**42**	P		**P**	**13 17 03.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=256,slow=6.0,SNR=3.9							
	comp=Z,0.4nm,0.3s							
NOA	**NORSAR Array B**	**34.63**	**331**	P		**P**	**13 17 10.9**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=110,slow=10,SNR=3.3							
	comp=Z,1.3nm,0.8s							
KEV	**Kevo**	**36.95**	**349**	P		**P**	**13 17 31.5**	**0.0**
KEV				IAmb		IAmb	13 17 59.7	
	comp=Z,15nm,1.2s							
ARCES	**ARCESS Array B**	**36.99**	**348**	P		**P**	**13 17 31.6**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=161,slow=6.9,SNR=14							
	comp=Z,0.9nm,0.4s							
ARCES	**ARCESS Array B**	**36.99**	**348**	P		**P**	**13 17 31.6**	**-0.4**
EKA	**Eskdalemuir Ar**	**39.42**	**317**	P		**P**	**13 17 52.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=100,slow=9.4,SNR=4.3							
	comp=Z,0.3nm,0.3s							
ESDC	**Sonseca Array**	**39.52**	**293**	P		**P**	**13 17 53.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=70,slow=8.5,SNR=1.8							
	comp=Z,0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**44.93**	**253**	P		**P**	**13 18 37.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=50,slow=7.5,SNR=2.6							
	comp=Z,0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**44.93**	**253**	P		**P**	**13 18 37.8**	**-0.1**
SPB2	**Spitsbergen Ar**	**45.72**	**352**	P		**P**	**13 18 43.8**	**+0.3**
SPITS	**Spitsbergen Ar**	**45.73**	**352**	P		**P**	**13 18 43.8**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=137,slow=9.9,SNR=13							
	comp=Z,2.8nm,0.3s							
CMAR	**Chiang Mai Arr**	**49.81**	**94**	P		**P**	**13 19 15.7**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=302,slow=8.7,SNR=5.3							
	comp=Z,0.5nm,0.4s							
DBIC	**Dimbokro**	**53.95**	**251**	P		**P**	**13 19 46.5**	**-0.4**
SCHQ	**Schefferville**	**74.03**	**326**	P		**P**	**13 21 57.6**	**-0.8**
SCHQ				IAmb		IAmb	13 22 06.5	
	comp=Z,6.5nm,1.4s							
JHJ	**Hachijo jima 2**	**75.28**	**60**	LR		LR	13 57 45.0	
	comp=Z,349nm,20.6s,baz=98,slow=38							
C18K	**Utukok River**	**75.43**	**10**	P		**P**	**13 22 07.0**	**+0.6**
C18K				IAmb		IAmb	13 22 17.2	
	comp=Z,3.2nm,1.0s							
C23K	**Itkillik River**	**75.48**	**6**	P		**P**	**13 22 07.8**	**+1.3**
C27K	**Jago River**	**76.14**	**3**	P		**P**	**13 22 11.7**	**+1.4**
E27K	**Coleen River**	**77.67**	**3**	P		**P**	**13 22 19.9**	**+1.0**
E27K				IAmb		IAmb	13 22 26.7	
	comp=Z,2.7nm,1.1s							
F24K	**Squaw Lake**	**77.97**	**5**	P		**P**	**13 22 21.1**	**+0.4**
F24K				IAmb		IAmb	13 22 49.7	
	comp=Z,4.8nm,1.5s							
F28M	**Old Crow**	**78.30**	**2**	P		**P**	**13 22 23.3**	**+0.8**
F28M				IAmb		IAmb	13 22 59.7	
	comp=Z,3.7nm,1.4s							
G19K	**Purcell Mounta**	**78.34**	**9**	P		**P**	**13 22 23.3**	**+0.6**
G19K				IAmb		IAmb	13 22 59.0	
	comp=Z,3.2nm,1.2s				

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.42**	**5**	Pn	**Pn**	**13 34 48.6**	**+1.5**
	1.0nm,0.3s,baz=59,slow=22,SNR=8.6						
SIJI				Sn	**Sn**	**13 35 55.4**	**-4.1**
	1.1nm,0.3s,baz=274,slow=22,SNR=6.7						
SIJI				LR	LR	13 37 56.6	
	comp=Z,36nm,20.8s,baz=30,slow=44 2.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**11.80**	**204**	Pn	**Pn**	**13 36 02.2**	**+1.2**
	0.2nm,0.3s,baz=31,slow=10,SNR=24						
FITZ				Sn	**Sn**	**13 38 09.8**	**-2.0**
	0.5nm,0.3s,baz=165,slow=13,SNR=5.9 6.9nm,1.1s						
WRA	**Warramunga Arr**	**13.06**	**165**	Pn	**Pn**	**13 36 19.8**	**+1.5**
	0.1nm,0.3s,baz=338,slow=14,SNR=8.1						
WRA				Sn	**Sn**	**13 38 39.7**	**-3.1**
	0.4nm,0.3s,baz=340,slow=20,SNR=6.2 0.4nm,0.6s						
ASAR	**Alice Springs**	**16.57**	**170**	Pn	**P**	**13 37 06.7**	**-0.5**
	0.1nm,0.3s,baz=350,slow=8.7,SNR=13						
ASAR				Sn	**Sn**	**13 40 04.7**	**-3.6**
	0.1nm,0.3s,baz=355,slow=28,SNR=4.4 0.3nm,0.7s						
STKA	**Stephens Creek**	**26.49**	**159**	P	**P**	**13 38 53.0**	**+3.5**
	0.7nm,0.5s,baz=338,slow=8.9,SNR=2.9 0.7nm,0.5s						
MKAR	**Makanchi Array**	**68.84**	**327**	P	**P**	**13 44 16.3**	**-0.1**
	0.4nm,0.5s,baz=118,slow=7.1,SNR=5.2 0.4nm,0.5s						

PRE 07 13:58:38.2±1.3, 25°.95S×28°.95E, h0km, ML1.7, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLN	**Carolina, Mapu**	**0.96**	**93**	*eP*	Pb	13 58 57.4	-0.5
CRLN				*eS*	Sb	13 59 10.8	-0.5
HRAO	**HartRAO**	**1.14**	**273**	*eP*	Pg	13 58 59.6	-0.5
HRAO				*eS*	Sb	13 59 15.8	-0.6
HRAO				IAML		13 59 20.0	
	comp=Z,7.5nm,0.2s						
PILG	**Pilgrimsrest,**	**1.88**	**58**	*eP*	Pn	13 59 11.8	-0.1
LEPH	**Lephalale, Lim**	**2.33**	**333**	*eP*	Pn	13 59 18.6	+0.7
LEPH				*eS*	Sn	13 59 48.6	+1.2
LEPH				IAML		13 59 53.8	
	comp=Z,4.1nm,0.4s						
SNKL	**Senekal, Frees**	**2.54**	**204**	*eP*	Pn	13 59 21.6	+0.6
SNKL				*eS*	Sn	13 59 53.2	+0.5
SNKL				IAML		13 59 59.9	
	comp=Z,4.6nm,0.4s						
LBTB	**Lobatse**	**3.17**	**286**	*eP*	Pn	13 59 30.5	+1.0
LBTB				*eS*	Sn	14 00 09.2	+1.1
LBTB				IAML		14 00 24.5	
	comp=Z,2.2nm,0.5s						

*SOME **07** 14:07:14.7, 40°.05N×77°.20E, h10km*
*KRNET **07** 14:07:15.1±0.1, 40°.04N×77°.21E, h1km, mb4.1*
*NNC **07** 14:07:16.6±1.2, 40°.08N×77°.26E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=8.5km s-min=5.9km az=161.0*

ISC 07 14:07:17.9±1.1, 40°.16N±0°.05×77°.21E±0°.03, h10km, n65, σ2§28/101, 23C-17D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.50**	**307**	⇑*iP*	**Pn**	**14 07 44.2**	**-0.9**
JNKS				⇑*iS*	**Sb**	**14 08 06.2**	**+1.0**
NRN	**Naryn**	**1.57**	**325**	⇓*iP*	**Pn**	**14 07 46.4**	**+0.3**
NRN				⇓*iS*	**Sg**	**14 08 09.8**	**+1.3**
KSH2	**Kashi**	**1.62**	**232**	Pg	**Pn**	**14 07 44.8**	**-1.9**
KSH2				Sg	**Sn**	**14 08 08.0**	**+0.3**
KSH2				smax	smax		
	comp=N,980nm,0.5s						
KSH2				smax	smax		
	comp=E,970nm,0.7s						
TARG	**Taragay, Kyrgy**	**1.63**	**16**	⇓*iP*	**Pb**	**14 07 47.8**	**-0.6**
TARG				⇓*iS*	**Sg**	**14 08 12.0**	**+1.5**
KDJ	**Kajisay**	**1.97**	**359**	⇑*iP*	**Pb**	**14 07 53.2**	**-0.8**
KDJ				⇑*iS*	**Sg**	**14 08 21.6**	**+0.3**
PRZ	**Przheval'sk**	**2.49**	**21**	⇑*eP*	**Pb**	**14 08 00.9**	**-2.0**
PRZ				⇑*eS*	**Sb**	**14 08 34.4**	**+0.7**
BOOM	**Boomskoye usch**	**2.52**	**338**	⇓*iP*	**Pb**	**14 08 00.8**	**+1.8**
BOOM				⇓*iS*	**Sb**	**14 08 34.5**	**+0.1**
ANVS	**Anan'yevo**	**2.65**	**7**	⇓*iP*	**Pb**	**14 08 02.8**	**-2.7**
ANVS				⇓*iS*	**Sb**	**14 08 37.9**	**-0.2**
SFK	**Sufi-Kurgan**	**2.85**	**268**	⇓*eP*	**Pn**	**14 08 04.4**	**+0.8**
SFK				⇓*eS*	**Sn**	**14 08 40.4**	**+2.4**
TNSS	**Tian-Shan**	**2.88**	**356**	Pg	**Pg**	**14 08 11.1**	**-2.1**
	comp=E,19nm,0.4s						
TNSS				Lg	Lg	14 08 50.7	
	comp=E,69nm,0.7s						
TNSS	**Tian-Shan**	**2.88**	**356**	*eP*	**Pg**	**14 08 11.0**	**-2.2**
	comp=E,16nm,0.6s						
TNSS				*eS*	**Sg**	**14 08 51.4**	**+0.8**
	comp=E,40nm,0.9s						
UCH	**Uchtor**	**2.90**	**316**	P	**Pb**	**14 08 08.2**	**-1.8**
	SNR=15						
UCH	**Uchtor**	**2.90**	**316**	⇓*iP*	**Pn**	**14 08 06.0**	**+1.5**
UCH				⇓*iS*	**Sn**	**14 08 43.6**	**+3.9**
IZV	**Izvestkoviy**	**2.91**	**351**	Pg	**Pb**	**14 08 11.3**	**+1.4**
	comp=E,44nm,0.6s						
IZV				Lg	Lg	14 08 51.9	
	comp=E,182nm,0.5s						
IZV	**Izvestkoviy**	**2.91**	**351**	*eP*	**Pb**	**14 08 11.3**	**+1.4**
	comp=E,44nm,0.6s						
IZV				*eS*	**Sg**	**14 08 51.9**	**+0.5**
	comp=E,182nm,0.5s						
MDOK	**Medeo**	**3.01**	**358**	Pg	**Pb**	**14 08 12.5**	**+0.9**
	comp=E,50nm,0.6s						
MDOK				Lg	Lg	14 08 53.1	
	comp=E,266nm,0.6s						
TKM2	**Tokmak 2**	**3.02**	**337**	P	**Pb**	**14 08 09.8**	**-2.0**
	SNR=36						
TKM2	**Tokmak 2**	**3.02**	**337**	⇑*iP*	**Pn**	**14 08 07.7**	**+1.8**
TKM2				⇑*iS*	**Sb**	**14 08 46.5**	**-2.2**
KBK	**Karagaybulak**	**3.02**	**326**	P	**Pb**	**14 08 10.2**	**-1.7**
	SNR=8.6						
KBK	**Karagaybulak**	**3.02**	**326**	⇑*iP*	**Pn**	**14 08 07.5**	**+1.6**
KBK				⇑*iS*	**Sn**	**14 08 46.3**	**+4.0**
MTBS	**Maitube**	**3.03**	**349**	Pg	**Pg**	**14 08 13.7**	**-2.2**
	comp=E,36nm,0.3s						
MTBS				Pg	**Pb**	**14 08 14.1**	**+2.2**
	comp=E,36nm,0.2s						
MTBS				Lg	Lg	14 08 55.9	
	comp=E,65nm,0.3s						
MTBS				Lg	Lg	14 08 56.0	
	comp=E,78nm,0.4s						
MTBS	**Maitube**	**3.03**	**349**	*eP*	**Pg**	**14 08 13.7**	**-2.2**
	comp=E,36nm,0.3s						
MTBS				*eS*	**Sg**	**14 08 55.9**	**+0.7**
	comp=E,65nm,0.3s						
KST	**Kastek**	**3.03**	**342**	Pg	**Pb**	**14 08 13.4**	**+1.4**
	comp=E,20nm,0.4s						
KST				Lg	Lg	14 08 54.7	
	comp=E,113nm,0.4s						
KST	**Kastek**	**3.03**	**342**	*eP*	**Pb**	**14 08 13.5**	**+1.4**
	comp=E,20nm,0.7s						
KST				*eS*	**Sg**	**14 08 56.0**	**+0.8**
	comp=E,100nm,0.6s						
SATY	**Saty**	**3.04**	**17**	Pg	**Pg**	**14 08 13.4**	**-2.7**
	comp=E,91nm,0.8s						
SATY				Pg	**Pb**	**14 08 13.5**	**+1.4**
	comp=E,92nm,0.9s						
SATY				Lg	Lg	14 08 55.0	
	comp=E,276nm,0.6s						
SATY				Lg	Lg	14 08 55.7	
	comp=E,269nm,0.6s						
SATY	**Saty**	**3.04**	**17**	*eP*	**Pg**	**14 08 13.4**	**-2.7**
	comp=E,91nm,0.8s						
SATY				*eS*	**Sg**	**14 08 55.6**	**+0.3**
	comp=E,269nm,0.6s						
KNDC	**Almaty**	**3.06**	**357**	⇑Pg	**Pg**	**14 08 14.6**	**-2.0**
	comp=E,133nm,0.6s						
KNDC				⇑Lg	Lg	14 08 57.9	
	comp=E,536nm,0.7s						
KOTS	**Kotyrbulak**	**3.08**	**359**	Pg	**Pg**	**14 08 14.6**	**-2.2**
	comp=E,44nm,0.4s						
KOTS				Lg	Lg	14 08 56.7	
	comp=E,388nm,0.6s						
KOTS	**Kotyrbulak**	**3.08**	**359**	*eP*	**Pg**	**14 08 14.7**	**-2.2**
	comp=E,38nm,0.6s						
KOTS				*eS*	**Sg**	**14 08 57.7**	**+1.0**
	comp=E,388nm,0.7s						
AAK	**Ala-Archa**	**3.21**	**321**	P	**Pb**	**14 08 12.3**	**-2.8**
	SNR=15						
AAK	**Ala-Archa**	**3.21**	**321**	⇑Pn	**Pn**	**14 08 10.2**	**+1.6**
	comp=E,6.6nm,0.4s						
AAK				⇑Lg	Lg	14 09 01.8	
	comp=E,56nm,0.7s						
UZB	**Uzynbulak**	**3.28**	**24**	Pg	**Pb**	**14 08 16.6**	**+0.3**
	comp=E,34nm,0.6s						
UZB				Pg	**Pg**	**14 08 17.1**	**-3.7**
	comp=E,34nm,0.5s						
UZB				Lg	Lg	14 09 01.2	
	comp=E,92nm,0.6s						
UZB				Lg	Lg	14 09 01.3	
	comp=E,95nm,0.8s						
UZB	**Uzynbulak**	**3.28**	**24**	*eP*	**Pb**	**14 08 16.6**	**+0.3**
	comp=E,34nm,0.6s						
UZB				*eS*	**Sg**	**14 09 01.3**	**-2.0**
	comp=E,95nm,0.8s						
FRU1	**Bishkek**	**3.28**	**325**	⇓*eP*	**Pn**	**14 08 11.7**	**+2.3**
FRU1				⇓*eS*	**Sb**	**14 08 53.3**	**-3.0**
CHMS	**Chumysh**	**3.38**	**328**	P	**Pb**	**14 08 14.8**	**-3.2**
	SNR=18						
KURS	**Kuram**	**3.41**	**12**	Pg	**Pg**	**14 08 19.9**	**-3.3**
	comp=E,46nm,0.6s						
KURS				Pg	**Pb**	**14 08 20.1**	**+1.7**
	comp=E,47nm,0.6s						
KURS				Lg	Lg	14 09 06.7	
	comp=E,77nm,0.6s						
KURS				Lg	Lg	14 09 07.0	
	comp=E,77nm,0.7s						
KURS	**Kuram**	**3.41**	**12**	*eP*	**Pg**	**14 08 19.9**	**-3.3**
	comp=E,46nm,0.6s						
KURS				*eS*	**Sg**	**14 09 07.0**	**-0.3**
	comp=E,77nm,0.7s						
SHLS	**Shalkode**	**3.44**	**29**	Pg	**Pg**	**14 08 23.3**	**-0.5**
	comp=E,60nm,0.3s						
SHLS				Pg	Pb	14 08 23.4	+4.4
	comp=E,60nm,0.4s						
SHLS				Lg	Lg	14 09 11.9	
	comp=E,170nm,0.5s						
SHLS				Lg	Lg	14 09 12.8	
	comp=E,170nm,0.5s						
SHLS	**Shalkode**	**3.44**	**29**	*eP*	**Pg**	**14 08 23.3**	**-0.5**
	comp=E,60nm,0.3s						
SHLS				*eS*	**Sg**	**14 09 12.8**	**+4.4**
	comp=E,170nm,0.5s						
KPKS	**Kokpek**	**3.49**	**18**	Pg	**Pb**	**14 08 21.1**	**+1.4**
	comp=E,0.4nm,0.5s						
KPKS				Pg	**Pb**	**14 08 21.2**	**+1.4**
	comp=E,0.4nm,0.2s						
KPKS				Lg	Lg	14 09 08.1	
	comp=E,223nm,0.5s						
KPKS				Lg	Lg	14 09 08.8	
	comp=E,231nm,0.6s						
KPKS	**Kokpek**	**3.49**	**18**	*eP*	**Pb**	**14 08 21.1**	**+1.4**
	comp=E,0.4nm,0.5s						
KPKS				*eS*	**Sg**	**14 09 08.8**	**-1.0**
	comp=E,231nm,0.6s						
KTBS	**Karatobe**	**3.57**	**354**	*eP*	**Pb**	**14 08 22.4**	**+1.2**
	comp=E,17nm,0.4s						
KTBS				*eS*	**Sg**	**14 09 11.7**	**-1.0**
	comp=E,69nm,0.5s						
EKS2	**Erkin-Say**	**3.59**	**315**	P	**Pb**	**14 08 18.4**	**-3.2**
	SNR=33						
PDGK	**Podgornoye**	**3.60**	**28**	⇑Pn	**Pn**	**14 08 15.1**	**+1.3**
	comp=E,30nm,0.5s						
PDGK				⇑Lg	Lg	14 09 11.8	
	comp=E,126nm,0.7s						
USP	**Ospenovka**	**3.71**	**328**	P	**Pb**	**14 08 19.7**	**-3.9**
	SNR=10.0						
KRBS	**Karabastau**	**3.72**	**343**	*eP*	**Pb**	**14 08 25.4**	**+1.7**
	comp=E,12nm,0.4s						
KRBS				*eS*	**Sg**	**14 09 16.4**	**-0.8**
SGDS	**Sogindy**	**3.81**	**331**	Pg	**Pb**	**14 08 26.9**	**+1.6**
	comp=E,6.4nm,0.2s						
SGDS				Pg	**Pg**	**14 08 27.7**	**-3.3**
	comp=E,16nm,0.6s						
SGDS				Lg	Lg	14 09 19.1	
	comp=E,38nm,0.6s						
SGDS				Lg	Lg	14 09 19.1	
	comp=E,38nm,0.6s						
MRKS	**Merke**	**3.96**	**312**	*eP*	**Pb**	**14 08 29.3**	**+1.6**
	comp=E,16nm,0.5s						
MRKS				*eS*	**Sg**	**14 09 22.8**	**-2.1**
	comp=E,26nm,0.7s						
KTMS	**Ketmen**	**4.04**	**35**	*eP*	**Pb**	**14 08 28.7**	**-0.5**
	comp=E,4.6nm,0.5s						
KTMS				*eS*	**Sg**	**14 09 22.2**	**-5.4**
	comp=E,18nm,0.7s						
ARXS	**Arharly**	**4.08**	**6**	*eP*	**Pg**	**14 08 32.8**	**-3.2**
	comp=E,25nm,0.5s						
ARXS				*eS*	**Sg**	**14 09 28.4**	**-0.5**
	comp=E,68nm,0.6s						
DJR	**Jarkent**	**4.59**	**24**	Pg	**Pb**	**14 08 41.0**	**+2.4**
	comp=E,14nm,0.3s						
DJR				Lg	Lg	14 09 42.6	
	comp=E,18nm,0.5s						
DJR	**Jarkent**	**4.59**	**24**	*eP*	**Pb**	**14 08 40.7**	**+2.1**
	comp=E,13nm,0.6s						
DJR				*eS*	**Sg**	**14 09 42.7**	**-2.5**
	comp=E,16nm,0.6s						
KAPS	**Kapalarasan**	**5.36**	**16**	Pg	Pg	14 08 55.7	-4.8
	comp=E,6.6nm,0.4s						
KAPS				Pg	Pb	14 08 57.0	+5.3
	comp=E,12nm,0.6s						
KAPS				Lg	Lg	14 10 08.9	
	comp=E,23nm,0.4s						
KAPS				Lg	Lg	14 10 09.5	
	comp=E,21nm,0.2s						
KAPS	**Kapalarasan**	**5.36**	**16**	*eP*	Pg	14 08 55.7	-4.8
	comp=E,6.6nm,0.4s						
KAPS				*eS*	**Sg**	**14 10 08.9**	**-1.2**
	comp=E,23nm,0.4s						
BTLS	**Baital**	**5.41**	**335**	Pg	**Pb**	**14 08 55.8**	**+3.4**
	comp=E,4.6nm,0.3s						
BTLS				Pg	Pg	14 08 55.9	-5.6
	comp=E,4.7nm,0.4s						
BTLS				Lg	Lg	14 10 07.0	
	comp=E,27nm,0.4s						
BTLS				Lg	Lg	14 10 08.4	
	comp=E,27nm,0.7s						
BTLS	**Baital**	**5.41**	**335**	*eP*	**Pb**	**14 08 55.9**	**+3.4**
	comp=E,4.7nm,0.4s						
BTLS				*eS*	**Sg**	**14 10 08.4**	**-3.1**
	comp=E,27nm,0.7s						
IUG	**luzhnay**	**5.77**	**292**	Pg	**Pb**	**14 08 59.5**	**+0.8**
	comp=E,10nm,0.6s						
IUG				Pg	Pg	14 09 03.1	-5.3
	comp=E,19nm,0.5s						
IUG				Lg	Lg	14 10 14.9	
	comp=E,47nm,0.5s						
IUG				Lg	Lg	14 10 19.7	
	comp=E,47nm,0.6s						
IUG	**luzhnay**	**5.77**	**292**	*eP*	**Pb**	**14 08 59.5**	**+0.8**
	comp=E,10nm,0.6s						
IUG				*eS*	**Sb**	**14 10 14.9**	**+7.0**
	comp=E,47nm,0.5s						
KK31	**Karatay Array**	**5.82**	**303**	⇑Pg	**Pg**	**14 09 05.2**	**-4.1**
	comp=E,1.2nm,0.3s,baz=129,slow=16,SNR=6.1						
KK31				⇑Lg	Lg	14 10 24.0	
	comp=E,10nm,0.6s,baz=226,slow=25						
BRLS	**Borolday**	**6.23**	**300**	Pg	**Pb**	**14 09 11.1**	**+4.7**
	comp=E,2.1nm,0.3s						
BRLS				Lg	Lg	14 10 34.0	
	comp=E,7.4nm,0.3s						
MAKZ	**Makanchi**	**7.50**	**26**	⇑Pn	**Pn**	**14 09 07.9**	**+0.6**
	comp=E,1.6nm,1.1s						
MAKZ				⇓Sn	**Sn**	**14 10 35.9**	**+3.5**
	comp=E,1.1nm,0.7s						
MAKZ				⇓Lg	Lg	14 11 15.6	
	comp=E,6.7nm,1.1s						
MK31	**Makanchi Array**	**7.59**	**27**	⇑Pn	**Pn**	**14 09 09.2**	**+0.6**
	comp=E,0.2nm,0.3s,baz=205,slow=16,SNR=7.7						
MK31				⇑Sn	**Sn**	**14 10 37.2**	**+2.5**
	comp=E,0.9nm,0.5s,baz=203,slow=21						
MK31				⇑Lg	Lg	14 11 18.9	
	comp=E,1.7nm,0.5s,baz=203,slow=29						
WMQ	**Urumqi**	**8.62**	**61**	*eP*	**Pn**	**14 09 24.1**	**+1.3**
KURBB	**Kurchatov Arra**	**10.51**	**5**	⇓Lg	Lg	14 12 54.0	
	comp=E,20nm,1.2s						
KURK	**Kurchatov**	**10.61**	**5**	⇑Lg	Lg	14 12 56.6	
	comp=E,4.7nm,0.8s						

*UPA **07** 14:54:00.8±0.9, 8°.62N×82°.79W, h20km±1km, MW3.0, Presumed earthquake*
*CATAC **07** 14:54:01.1, 8°.7N±0°.8×82°.9W±0°.8, h1km±1km, M3.0/8, MLv3.0/8, confirmed*

ISC 07 14:54:00.6±1.0, 8°.64N±0°.03×82°.82W±0°.03, h29km±5km, n25, σ1§09/42, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.09**	**219**	P	**Pb**	**14 54 04.8**	**-0.9**
CDITO				S	**Sb**	**14 54 08.4**	**-0.9**
SCLRA	**Santa Clara, W**	**0.19**	**10**	*i* P	**Pb**	**14 54 06.2**	**-0.6**
BRU2	**Volcan**	**0.20**	**39**	P	**Pb**	**14 54 06.5**	**-0.3**
BRU2	**Volcan**	**0.20**	**39**	*eP*	**Pb**	**14 54 06.3**	**-0.5**
BRU2				*i* S	**Sb**	**14 54 10.7**	**-0.4**
CLLRA	**Cordillera,**	**0.22**	**63**	*i* P	**Pb**	**14 54 06.8**	**-0.4**
LESP3	**La Esperanza,**	**0.24**	**174**	*eP*	**Pb**	**14 54 06.4**	**-0.7**
LESP3				*eS*	**Sb**	**14 54 10.8**	**-0.8**
PTAR3	**Potrerillos Ar**	**0.32**	**81**	*eP*	**Pb**	**14 54 08.3**	**0.0**
PTAR3				*eS*	**Sb**	**14 54 13.8**	**+0.2**
BQTLY	**Boquete Panama**	**0.37**	**72**	*i* P	**Pb**	**14 54 08.8**	**-0.3**
BQSF3	**Alto Boquete,**	**0.39**	**75**	*eP*	**Pb**	**14 54 09.1**	**-0.3**
BQSF3				*eS*	**Sb**	**14 54 15.7**	**+0.3**
LNBQ3	**Los Naranjos,**	**0.40**	**68**	*eP*	**Pb**	**14 54 08.9**	**-0.6**
LNBQ3				*eS*	**Sb**	**14 54 15.2**	**-0.4**
DVD	**David**	**0.41**	**120**	*eP*	**Pb**	**14 54 09.5**	**-0.1**
DVD				*eS*	**Sb**	**14 54 15.5**	**-0.3**
PTPM	**Petroterminale**	**0.44**	**188**	*eP*	**Pb**	**14 54 09.8**	**-0.2**
PTPM				*eS*	**Sb**	**14 54 16.3**	**-0.1**
LIMO3	**Limones**	**0.54**	**185**	*eP*	**Pb**	**14 54 11.4**	**-0.2**
LIMO3				*eS*	**Sb**	**14 54 18.9**	**-0.3**
CHIR3	**Chiriqui UPA,**	**0.54**	**117**	*eP*	**Pb**	**14 54 11.2**	**-0.5**
CHIR3				*eS*	**Sb**	**14 54 18.0**	**-1.1**
PIRO	**Carate, Puerto**	**0.57**	**245**	P	**Pb**	**14 54 11.2**	**-0.9**
PIRO				S	**Sb**	**14 54 19.4**	**-0.5**
PIRO	**Carate, Puerto**	**0.57**	**245**	*eP*	**Pb**	**14 54 11.1**	**-1.0**
PBNVO	**Pueblo Nuevo,**	**0.66**	**68**	*i* P	**Pb**	**14 54 12.9**	**-0.8**
PBNVO				*eS*	**Sb**	**14 54 21.7**	**-0.9**
RBALA	**Bur**	**0.70**	**70**	*i* P	**Pb**	**14 54 13.7**	**-0.6**
RBALA				*i* S	**Sb**	**14 54 22.6**	**-0.9**
CNI2	**El Empalme, Bo**	**0.85**	**24**	*eP*	**Pb**	**14 54 16.4**	**-0.4**
CNI2				*eS*	**Sb**	**14 54 28.3**	**+0.5**
OCHAL	**Ojochal**	**0.94**	**299**	P	**Pb**	**14 54 16.7**	**-1.6**
OCHAL				S	**Sb**	**14 54 28.0**	**-2.3**
KKNTU	**Kakinᵍ**	**1.02**	**79**	*i* P	**Pb**	**14 54 18.5**	**-1.1**
TRT2	**Tortugero**	**2.11**	**335**	P	**Pn**	**14 54 35.5**	**+1.5**
JTS	**Las Juntas de**	**2.67**	**308**	P	**Pn**	**14 54 43.5**	**+1.9**
JTS				S	**Sn**	**14 55 15.2**	**+2.1**
CMARA	**Lajas Hojancha**	**2.92**	**298**	P	**Pn**	**14 54 45.3**	**+0.2**
BCIP	**Isla Barro Col**	**2.99**	**80**	P	**Pb**	**14 54 50.2**	**-2.9**
BCIP				S	**Sb**	**14 55 26.8**	**-2.4**

NOU 07 15:06:17.7, 17°.31S×167°.11E, h27km, MLv4.0/18, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.11**	**112**	P	Pn	15 06 37.7	+0.3
DVP	**Devils Point**	**1.11**	**112**	S	Sb	15 06 52.4	+0.1
RTV	**Rentapao**	**1.34**	**111**	P	Pn	15 06 41.2	+0.5
RTV	**Rentapao**	**1.34**	**111**	S	Sb	15 06 58.9	-0.1
SANVU	**Saraoutou**	**1.85**	**3**	P	Pn	15 06 46.3	-1.4
KOUNC	**Koumac, New Ca**	**4.19**	**219**	P	Pn	15 07 19.5	-0.3
MARNC	**Mare, Loyalty**	**4.24**	**168**	P	Pn	15 07 21.3	+0.8
YATNC	**Mamie plateau,**	**4.73**	**182**	P	Pn	15 07 27.2	-0.1
ONTNC	**Ouen Toro**	**5.01**	**187**	P	Pn	15 07 31.6	+0.5
OUENC	**Ouen Island, N**	**5.09**	**183**	P	Pn	15 07 33.2	+1.0

*SOF **07** 15:19:47.4, 38°.76N±0°.08×25°.34E±0°.03, h2km±1km, MD4.2/11*
*ISK **07** 15:19:48.6, 38°.81N×25°.23E, h5km, ML4.2/47*
*MCSM **07** 15:19:49.8±3.0, 39°N±6°×2°5E±°, h15km±21km, mb4.5, mB4.3, MLv4.2, Mw(mB)3.4*
*IDC **07** 15:19:49.3±0.9, 38°.79N×25°.35E, h0km, mb3.6/10, mbtmp3.6/16, ML4.0/5, MS3.1/11, Error ellipse: s-maj=16.5km s-min=15.1km az=59.0*
*THE **07** 15:19:50.9, 39°N±2°×2°5E±°, h14km±8km, M4.0/25, MLh4.0/25*
*ATH **07** 15:19:50.5, 38°.77N×25°.35E, h17km, Mw3.9, Moment Tensor Solution. s10 Moment tensor: Mrr-1.96; Mθθ7.90; Mϕϕ-5.95; Mrθ-0.75; Mrϕ-5.85; Mθϕ-1.73; Fault plane solution: NP1:ϕs66.00000°, δ79.00000°, λ-168.00000°. NP2:ϕs334.00000°, δ79.00000°, λ-11.00000°.*
*AFAD **07** 15:19:51.8, 38°.82N×25°.30E, h18km±2km, MW4.2*
*NEIC **07** 15:19:51.5±1.5, 38°.84N±0°.05×25°.33E±0°.05, h9km±5km, mb4.3/18, Error ellipse: s-maj=7.9km s-min=4.2km az=148.0*
*GFZ **07** 15:19:51.9±0.2, 39°N±2°×2°5E±°, h10km, M4.1/10, mb4.5/10*
*NAO **07** 15:19:56.5, 39°.07N×24°.47E, h10km, MB3.6*

ISC 07 15:19:50.5±1.0, 38.78N±0°.02×25°.32E±0°.01, h8km±7km, n360, σ1§13/401, mb4.1/19, MS3.1/4, 21C-17D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.61**	**279**	P	**Pg**	**15 20 02.7**	**+0.4**
SKY				S	**Sb**	**15 20 12.2**	**+0.1**
SKY	**Skiros Island**	**0.61**	**279**	P	**Pg**	**15 20 02.7**	**+0.4**
SKY				S	**Sb**	**15 20 11.8**	**-0.4**
EAG2	**Marmaro, Chios**	**0.66**	**111**	P	**Pg**	**15 20 03.2**	**0.0**
EAG2				S	**Sg**	**15 20 12.2**	**+0.4**
CHOS	**Chios island**	**0.70**	**124**	Pg	**Pb**	**15 20 04.6**	**-0.3**
CHOS				Sg	**Sb**	**15 20 15.8**	**+1.1**
CHOS	**Chios island**	**0.70**	**124**	P	**Pb**	**15 20 04.4**	**-0.5**
CHOS				S	**Sb**	**15 20 13.9**	**-0.8**
CHOS	**Chios island**	**0.70**	**124**	P	**Pb**	**15 20 04.7**	**-0.3**
CHOS	**Chios island**	**0.70**	**124**	P	**Pg**	**15 20 03.8**	**-0.1**
CHOS				S	**Sg**	**15 20 12.7**	**-0.3**
EFSA	**Agios Efstrati**	**0.80**	**341**	P	**Pg**	**15 20 06.1**	**+0.2**
EFSA				S	**Sb**	**15 20 17.5**	**0.0**
KARB	**zmir-Karabur**	**0.86**	**98**	P	**Pb**	**15 20 07.7**	**0.0**
PRK	**Paraskevi**	**0.87**	**58**	P	**Pg**	**15 20 07.1**	**-0.3**
PRK				S	**Sb**	**15 20 19.3**	**-0.4**
PRK	**Paraskevi**	**0.87**	**58**	P	**Pg**	**15 20 07.0**	**-0.3**
PRK				S	**Sg**	**15 20 18

comp=N,2µm,0.9s
AOS2 Alonissos-2 1.21 288 P Pb 15 20 12.7 -0.9
AOS2 S Sb 15 20 29.1 -0.2
TNSA Tinos 1.25 186 P Pn 15 20 12.7 -1.4
TNSA S Sb 15 20 30.0 -0.4
EZNE Ezine-Canakkal 1.27 39 Pn Pn 15 20 13.4 -1.0
DKL Dikili 1.27 76 Pn Pg 15 20 15.3 +0.5
DKL Dikili 1.27 76 P Pn 15 20 13.4 -1.1
DKL S Sb 15 20 29.9 -1.2
IZMD zmir-Dikili- 1.27 80 P Pg 15 20 14.8 0.0
IZMD S Sb 15 20 30.9 -0.3
IZMD IAML 15 20 32.0
comp=N,1µm,0.9s
DION Dionisos Attik 1.30 238 P Pn 15 20 13.8 -1.0
DION Dionisos Attik 1.30 238 P Pn 15 20 13.9 -1.0
DION S Sb 15 20 32.0 +0.1
EZN Ezine 1.30 36 Pn Pn 15 20 13.6 -1.3
EZN Ezine 1.30 36 P Pn 15 20 13.6 -1.3
BAYC CANAKKALE_Bayr 1.35 44 P Pn 15 20 15.4 -0.2
PTL Penteli 1.36 238 P Pn 15 20 14.7 -1.0
PTL Penteli 1.36 238 P Pn 15 20 14.8 -1.0
PTL S Sb 15 20 33.2 -0.5
ZEDA zmir-Bergama 1.38 82 P Pn 15 20 15.9 -0.1
ZEDA S Sb 15 20 32.2 -2.1
ZEDA IAML 15 20 36.0
comp=N,2µm,0.6s
BLCB Balcova 1.41 106 Pn Pg 15 20 17.5 +0.1
ECEA Canakkale, Ece 1.42 27 P Pn 15 20 15.4 -1.2
DGB zmir 1.43 120 P Pn 15 20 16.2 -0.4
DGB S Sg 15 20 37.8 +1.4
DGB IAML 15 20 45.0
comp=N,1µm,0.7s
ACHAR Athens-Acharne 1.43 241 P Pn 15 20 16.1 -0.5
ACHAR S Sn 15 20 34.9 -0.7
GMLD Gumuldur 1.44 119 Pn Pb 15 20 17.1 -0.3
ATHP Athens-Neo Psi 1.45 238 P Pn 15 20 16.0 -0.9
ATHU Athens Univers 1.46 237 P Pn 15 20 16.0 -1.1
ATHU Athens Univers 1.46 237 P Pn 15 20 16.0 -1.1
ATHU S Sn 15 20 35.6 -0.8
LVRA Laurium 1.46 223 P Pn 15 20 16.3 -0.8
KRL1 Karlovasi Samo 1.47 132 P Pn 15 20 15.8 -1.4
KRL1 S Sn 15 20 35.0 -1.6
GADA Gvkgeada 1.48 17 Pn Pn 15 20 16.3 -1.0
GADA Gvkgeada 1.48 17 P Pn 15 20 16.1 -1.3
ATH5 Athens Parliam 1.48 238 P Pn 15 20 16.1 -1.3
NOAC Athens-Thissio 1.50 238 P Pn 15 20 17.7 +0.1
ATH Athens Observa 1.50 238 P Pn 15 20 17.3 -0.3
ATH Athens Observa 1.50 238 P Pn 15 20 17.4 -0.3
VLY Voula,Athens 1.52 233 P Pn 15 20 17.3 -0.7
VLY Voula,Athens 1.52 233 P Pn 15 20 17.2 -0.7
VLY S Sn 15 20 36.2 -1.6
STFN Stefani 1.52 247 P Pn 15 20 17.7 -0.3
STFN Stefani 1.52 247 P Pn 15 20 17.3 -0.7
STFN S Sn 15 20 36.2 -1.7
CNKL anakkale-Mer 1.52 32 P Pn 15 20 16.5 -1.5
CNKL P Pn 15 20 16.5 -1.5
CNKL S Sn 15 20 36.4 -1.6
CNKL IAML 15 20 42.0
comp=N,2µm,0.4s
BUHA Balikesir, Bur 1.54 62 P Pn 15 20 18.4 +0.2
BUHA S Sn 15 20 37.8 -0.7
BUHA IAML 15 20 44.0
comp=N,3µm,0.4s
CAMT Merkez 1.56 91 P Pg 15 20 20.1 -0.2
ELFA Athens-Elefsin 1.58 243 P Pn 15 20 17.9 -0.8
MAGU Magoula 1.58 244 P Pn 15 20 18.9 +0.1
MAGU Magoula 1.58 244 P Pn 15 20 18.7 -0.1
MAGU S Sn 15 20 38.2 -1.2
NAX1 Naxos Island 1.68 179 P Pn 15 20 19.0 -1.0
SMTH Samothraki Isl 1.69 5 P Pn 15 20 19.2 -1.2
SMTH Samothraki Isl 1.69 5 P Pn 15 20 18.8 -1.6
VILL Villia 1.69 249 P Pn 15 20 19.8 -0.5
VIL2 Platees 1.71 251 P Pn 15 20 19.6 -1.0
PAIG Paliouri 1.71 312 P Pn 15 20 19.9 -0.7
PAIG Paliouri 1.71 312 P Pb 15 20 22.0 -0.2
NEO Neokhori 1.72 288 P Pn 15 20 20.1 -0.6
NEO Neokhori 1.72 288 P Pn 15 20 20.0 -0.6
DUVT Torbali 1.76 108 P Pn 15 20 21.2 -0.1
SOMA Soma-Manisa 1.77 77 Pn Pb 15 20 22.4 -0.7
KUSD Kusadasi-Aydin 1.80 120 Pn Pb 15 20 22.7 -1.0
ATAL Atalanti 1.80 268 P Pn 15 20 21.1 -0.7
ATAL Atalanti 1.80 268 P Pn 15 20 21.1 -0.7
CANM Can-anakkale 1.82 47 Pn Pb 15 20 22.9 -1.1
LKR Lokris 1.82 267 P Pn 15 20 21.4 -0.7
LKR Lokris 1.82 267 P Pn 15 20 21.1 -1.0
GELI Tayfur-Gelibol 1.84 29 Pn Pn 15 20 22.2 -0.2
GCAM G?zelcaml? 1.85 125 Pn Pb 15 20 23.7 -0.9
OUR Ouranopolis 1.86 327 P Pn 15 20 22.1 -0.6
OUR Ouranopolis 1.86 327 P Pn 15 20 21.6 -1.1
LAPS Lapseki, ANA 1.88 38 P Pn 15 20 23.1 +0.2
LAPS S Sn 15 20 42.5 -4.3
LAPS IAML 15 20 50.0
comp=N,934nm,0.3s
THAS Thassos island 1.88 346 P Pn 15 20 21.9 -1.0
THAS Thassos island 1.88 346 P Pn 15 20 21.6 -1.3
YENI Yenice-Canakka 1.88 52 Pn Pb 15 20 24.0 -1.1
MET4 Agioi Theodoro 1.91 233 P Pn 15 20 22.5 -0.7
MET5 Makryloggos,Me 1.93 234 P Pn 15 20 22.5 -1.1
AKS Akhisar 1.95 86 Pn Pb 15 20 24.9 -1.3
AKHS Akhisar 1.95 86 P Pb 15 20 25.1 -1.1
MET6 Megalochori,Me 1.95 233 P Pn 15 20 23.2 -0.7
MET2 Kameni Chora, 1.96 234 P Pn 15 20 23.2 -0.8
STEP BALIKESIR_Sava 1.96 72 P Pg 15 20 28.4 +0.4
STEP S Sg 15 20 53.5 +0.1
LTK Loutraki 2.00 248 P Pn 15 20 24.8 +0.2
LTK Loutraki 2.00 248 P Pn 15 20 24.5 -0.1
CAVK Edirne/Enez-Ca 2.02 19 ⇑P Pn 15 20 24.6 -0.1
CAVK Edirne/Enez-Ca 2.02 19 P Pn 15 20 24.5 -0.2
BALY Balya 2.02 61 P Pg 15 20 28.7 -0.6
BALY S Sn 15 20 51.3 +0.9
BALY Balya 2.02 61 P Pn 15 20 24.5 -0.4
GOMA Golmarmara-Man 2.03 91 Pn Pb 15 20 26.3 -1.3
THS1 Thassos, Thass 2.04 344 P Pn 15 20 23.8 -1.2
ENEZ Enez 2.05 18 Pn Pn 15 20 25.7 +0.4
ENEZ Enez 2.05 18 P Pn 15 20 24.7 -0.6
BIGA Biga-Canakkale 2.06 43 Pn Pn 15 20 26.3 +1.0
AXAR Agios Charalam 2.08 270 P Pn 15 20 25.4 -0.3
AXAR Agios Charalam 2.08 270 P Pn 15 20 25.5 -0.2
ERIK Erikli-Kesan 2.10 26 Pn Pn 15 20 25.2 -0.7
GOKT Kean, EDRN 2.13 28 P Pn 15 20 25.1 -1.3
PLG Polygyros 2.15 318 P Pn 15 20 25.9 -0.8
PLG Polygyros 2.15 318 P Pn 15 20 25.8 -0.9
MILOS Milos 2.15 199 P Pn 15 20 25.0 -1.7
IZMR zmir-demi 2.16 107 P Pg 15 20 29.2 -0.6
IZMR P Pg 15 20 29.8 -2.2
BALB Balikesir 2.16 66 P Pn 15 20 26.3 -0.5
BALB Balikesir 2.16 66 Pn Pn 15 20 27.9 +1.1
BALB Balikesir 2.16 66 P Pn 15 20 26.4 -0.4
ATIT Gnen 2.17 52 P Pb 15 20 28.4 -1.6
KTTT Salihli 2.17 92 P Pb 15 20 29.8 -0.2
ALN Alexandroupoli 2.19 15 Pn Pn 15 20 25.9 -1.1
ALN Alexandroupoli 2.19 15 P Pn 15 20 25.8 -1.2
ALN Alexandroupoli 2.19 15 P Pn 15 20 26.1 -0.9
ALN Alexandroupoli 2.19 15 P Pn 15 20 26.0 -1.1
MHLO Agia Marina, M 2.21 200 P Pn 15 20 26.3 -1.2
MHLO Agia Marina, M 2.21 200 P Pn 15 20 25.8 -1.7
ODEM Odemis-Izmir 2.22 102 Pn Pn 15 20 28.9 +1.3
KRBG Karabiga-Canak 2.22 43 Pn Pn 15 20 28.5 +1.0
GONE Gonen-Balikesi 2.23 55 Pn Pn 15 20 28.7 +1.1
GORD Gordes-Manisa 2.23 86 Pn Pn 15 20 29.1 +1.3
BKES Balkesir-Mer 2.24 64 P Pn 15 20 28.4 +0.6
YKAV Yalikavak-Bodr 2.27 136 Pn Pn 15 20 29.6 +1.4
KESN Edirne-Kesan 2.29 27 P Pn 15 20 26.7 -2.2
KAVA Kavala 2.30 345 P Pn 15 20 27.6 -1.0
AYDN Tasoluk 2.30 118 P Pb 15 20 31.1 -1.2
BLKS Balkesir-Sus 2.33 61 P Pn 15 20 30.3 +1.3
BLKS P Pb 15 20 32.0 -0.7
BODT Bodrum 2.33 137 Pn Pn 15 20 30.2 +1.1
THR2 Thira island, 2.33 178 P Pn 15 20 28.4 -0.7
SAP3 Santorini-Thir 2.34 180 P Pn 15 20 27.6 -1.6
AGG Agios Georgios 2.35 277 P Pn 15 20 29.0 -0.4
AGG Agios Georgios 2.35 277 P Pn 15 20 29.6 +0.2
AGG Agios Georgios 2.35 277 P Pn 15 20 28.5 -0.8
RDO Rodhopi 2.37 4 Pn 15 20 28.6 -1.0
RDO Rodhopi 2.37 4 P Pn 15 20 28.7 -0.9
RDO Rodhopi 2.37 4 P Pn 15 20 28.8 -0.7
RDO Rodhopi 2.37 4 P Pn 15 20 28.4 -1.2
THR3 Thira Island, 2.37 178 P Pn 15 20 28.1 -1.5
THR8 Santorini-Mono 2.37 177 P Pn 15 20 28.0 -1.7
SNT5 Nea Kammeni, S 2.38 179 P Pn 15 20 29.4 -0.3

RKY Sarkoy-Tekirda 2.38 36 Pn Pn 15 20 30.9 +1.1
SART Tekirdag 2.38 36 P Pn 15 20 31.4 +1.5
CMHT Manyas 2.39 58 P Pn 15 20 29.5 -0.4
THERA Ancient Thera, 2.41 177 P Pn 15 20 28.6 -1.6
THR9 Santorini-Faro 2.42 179 P Pn 15 20 29.0 -1.3
MLSB Milas 2.44 127 Pn Pn 15 20 30.8 +0.2
SUSR Susurluk-Balik 2.44 60 Pn Pn 15 20 30.6 -0.1
NAZL Nazilli-Aydin 2.47 108 Pn Pn 15 20 32.6 +1.5
GUR Goura 2.49 251 P Pn 15 20 31.2 -0.2
GUR Goura 2.49 251 P Pn 15 20 31.5 +0.1
MADA Marmara adas 2.50 43 P Pn 15 20 32.2 +0.9
HORT Hortiatis 2.50 317 P Pn 15 20 30.9 -0.5
HORT Hortiatis 2.50 317 P Pn 15 20 31.7 +0.2
HORT Hortiatis 2.50 317 P Pn 15 20 30.6 -0.8
GAZK Gazikoy-TEKIRD 2.50 38 Pn Pn 15 20 32.6 +1.2
PSARO Psaromita, Dor 2.51 261 P Pn 15 20 30.9 -0.6
EDC Edincik 2.51 51 Pn Pn 15 20 32.6 +1.0
SFL1 Soufli 2.52 17 P Pn 15 20 30.9 -0.8
KALE Kalithea 2.52 262 P Pn 15 20 31.2 -0.6
KALE Kalithea 2.52 262 P Pn 15 20 31.0 -0.8
MRMT Marmara Adasi 2.53 43 Pn Pn 15 20 32.9 +1.0
MANT Manisa 2.55 96 Pn 15 20 33.2 +0.9
UKOP Uzunkopru-Edir 2.55 23 Pn Pn 15 20 32.1 0.0
LIT Litokhoron 2.56 302 Pn 15 20 31.9 -0.3
LIT Litokhoron 2.56 302 P Pn 15 20 32.2 -0.1
LIT Litokhoron 2.56 302 P Pn 15 20 31.8 -0.5
TYRN Tyrnavos 2.57 292 P Pn 15 20 32.4 0.0
DURS Dursunbey 2.58 71 P Pn 15 20 32.0 -0.7
SERG Sergoula 2.58 263 P Pn 15 20 31.6 -1.0
THE Thessaloniki 2.59 316 P Pn 15 20 32.8 +0.1
THE Thessaloniki 2.59 316 P Pn 15 20 32.8 +0.1
KLV Kalavryta, Ach 2.60 255 P Pn 15 20 32.0 -0.8
AGEO AgiosGiorgios, 2.61 260 P Pn 15 20 32.8 0.0
PYRG Pyrgos, Dorida 2.62 263 P Pn 15 20 32.8 -0.2
KULA Kula-Manisa 2.63 95 Pn Pn 15 20 35.1 +1.8
BAND Balkesir-Ban 2.66 53 ⇓P Pn 15 20 34.9 +1.3
BAND ⇑S Sn 15 21 08.1 +2.0
BAND Balkesir-Ban 2.66 53 P Pn 15 20 33.1 -0.5
DEMI Demirci 2.66 83 P Pb 15 20 37.0 -1.5
ANX Ano Chora 2.67 267 P Pn 15 20 33.6 -0.2
MG00 Magoula, Dorid 2.67 263 P Pn 15 20 33.1 -0.7
SRS Serrai 2.69 331 P Pn 15 20 34.0 0.0
SRS Serrai 2.69 331 P Pn 15 20 33.1 -0.9
THL Klokotos Trika 2.69 288 P Pn 15 20 34.1 +0.2
EFP Efpalio 2.70 264 P Pn 15 20 33.9 -0.2
EVR Evrytania 2.75 274 P Pn 15 20 35.2 +0.3
KCTX Karacabey (Bur 2.77 57 Pn Pn 15 20 36.4 +1.2
TKR Tekirdag 2.79 37 Pn Pn 15 20 36.5 +1.2
VLI Veliai 2.80 223 P Pn 15 20 35.2 -0.3
NVR Nevrokopi 2.80 337 P Pn 15 20 35.2 -0.4
KDZ Kurdzhali 2.84 0 *i* P Pn 15 20 34.8 -1.4
AGRP Agrapidokambos 2.85 263 P Pn 15 20 36.4 +0.2
YER Yerkesik 2.86 124 Pn Pn 15 20 38.2 +1.8
SMAA Simav-Kutahya 2.87 82 Pn Pn 15 20 38.2 +1.6
RZN Rozhen 2.94 351 *i* P Pn 15 20 37.6 -0.1
DRO Drossia 2.96 255 P Pn 15 20 37.4 -0.3
PVO Paravola 2.98 268 P Pn 15 20 38.1 +0.2
CRLT Corlu 2.99 38 Pn Pn 15 20 39.5 +1.4
BOTS Marmara Eregli 3.01 42 Pn Pn 15 20 39.9 +1.5
MMB Musomishta 3.01 337 *i* P Pn 15 20 38.5 0.0
KNT Kendrikon 3.02 323 P Pn 15 20 36.3 -2.2
ORLT Orhaneli 3.04 64 Pn Pn 15 20 40.7 +1.8
SHAP Saphane-Kutahy 3.05 84 Pn Pn 15 20 41.2 +2.1
KTHA Kythira Island 3.10 216 P Pn 15 20 39.4 -0.2
ITM Ithomi 3.12 240 Pn 15 20 40.6 +0.6
ITM Ithomi 3.12 240 P Pb 15 20 43.8 -2.4
MDNY Mudanya-Bursa 3.18 59 Pn Pn 15 20 42.3 +1.6
GEDZ Gediz 3.20 84 Pn Pn 15 20 43.4 +2.0
ARMT Armutlu 3.26 56 Pn Pn 15 20 43.5 +1.6
DIM Dimitrovgrad 3.27 3 *i* P Pn 15 20 41.8 -0.1
TVSB Tavsanli 3.29 77 Pn Pn 15 20 44.2 +1.8
VAY Valandovo 3.30 321 *e*Pn Pn 15 20 42.8 +0.4
VAY *e*Sn Sb 15 21 32.1 +2.6
ARG Arkhangelos 3.40 138 Pn 15 20 43.8 0.0
ARG Arkhangelos 3.40 138 P Pn 15 20 45.1 +1.4
KKB Krupnik 3.49 332 *i* P Pn 15 20 45.5 +0.5
IDI Anoyia 3.50 186 Pn Pn 15 20 44.2 -1.1
32nm,0.5s,baz=3.6,slow=12,SNR=50
KARP Karpathos 3.55 155 Pn 15 20 45.0 -0.9
KARP Karpathos 3.55 155 P Pn 15 20 44.9 -0.9
KARP S Sn 15 21 28.0 0.0
KARP Karpathos 3.55 155 P Pn 15 20 45.5 -0.3
LKD2 Lefkada island 3.65 272 P Pn 15 20 40.4 +3.2
ZKR Zakros 3.73 169 P Pn 15 20 50.5 +2.2
PGB Panagyurishte 3.83 347 *i* P Pn 15 20 50.4 +0.7
PLNA Plana 3.96 339 *i* P Pn 15 20 52.5 +0.9
GVD Gavdhos 4.06 195 P Pn 15 20 55.1 +2.2
SILT Sile 4.08 53 ⇑P Pn 15 20 54.4 +1.3
OHR Ohrid 4.18 305 *e*Pn Pn 15 20 52.5 -2.1
OHR *e*Sn Sn 15 21 39.5 -4.2
AKAS Kas 4.25 125 Pn 15 20 57.3 +1.7
SRN Sarande 4.27 287 P Pn 15 20 58.9 +3.2
SKO Skopje 4.35 318 *e*Pn Pn 15 20 57.6 +0.7
BLSH Balsha 4.36 340 *i* P Pn 15 20 58.5 +1.5
SZH Strazhitsa 4.51 6 *i* P Pn 15 20 58.5 -0.5
PLVB Pleven 4.63 354 ⇓P Pn 15 21 01.6 +0.9
PRD Provadia 4.65 19 *i* P Pn 15 21 00.5 -0.5
MPEP Malo Peshtene 4.72 346 *i* P Pn 15 21 03.3 +1.3
PHP Peshkopia 4.73 309 P Pn 15 21 03.5 +1.4
SAHE Sakarya_HENDEK 4.74 62 ⇓P Pn 15 21 03.0 +0.8
MDUB Mudurnu 4.84 68 Pn 15 21 03.5 +1.4
RAZG Razgrad 4.86 10 ⇑P Pn 15 21 03.6 +0.3
VALD Valchedram 5.11 344 *i* P Pn 15 21 08.0 +0.8
ICOR Ion Corvin 5.65 18 ⇑P Pn 15 21 14.9 +0.3
PDG Podgorica 5.88 310 ⇓P Pn 15 21 18.5 +0.6
PDG Podgorica 5.88 310 Pn 15 21 18.3 +0.4
TLBR Topalu 6.11 19 ⇑P Pn 15 21 20.9 -0.1
TPGR Topolog 6.50 20 ⇑P Pn 15 21 27.0 +0.7
BR105 Keskin Array S 6.51 79 P Pn 15 21 30.3 +3.7
0.1nm127nm17nm,0.8s
BR106 Keskin Array S 6.51 79 P Pn **15 21 28.5 +1.9**
0.0nm127nm16nm,0.7s
BR104 Keskin Array S 6.52 79 P Pn **15 21 28.7 +1.9**
0.0nm110nm7.4nm,0.6s
BRTR Keskin Array B 6.52 79 Pn Pn **15 21 27.0 +0.1**
0.9nm,0.3s,baz=258,slow=13,SNR=15
BRTR Lg Lg 15 23 21.3
baz=278,slow=23
BRTR LR LR 15 24 06.8
comp=Z,137nm,18.4s,baz=265,slow=40
3.1nm,0.5s
BRTR Keskin Array B 6.52 79 Pn 15 21 28.1 +1.2
MDVR Moldovita 6.57 337 ⇑P Pn 15 21 27.6 +0.2
CIDE Kastamonu/Cide 6.60 60 ⇓P Pn 15 21 28.3 +0.7
ARR Arges 6.60 356 ⇓P Pn 15 21 27.9 +0.1
ARR Arges 6.60 356 P Pn 15 21 27.8 -0.1
VOIR 6.65 358 ⇓P Pn 15 21 28.7 +0.1
VOIR 6.65 358 P Pn 15 21 27.9 -0.7
0.1nm353nm19nm,0.7s
VOIR 6.65 358 P Pn 15 21 28.4 -0.2
TIP Timpagrande 6.68 276 ⇑P Pn 15 21 30.4 +1.5
TIP Timpagrande 6.68 276 Pn 15 21 28.5 -0.4
KIRS Kirsehir-Merke 6.71 84 ⇓P Pn 15 21 30.9 +1.6
MLR Muntele Rosu 6.72 4 Pn Pn 15 21 30.3 +0.8
2.6nm,0.3s,baz=187,slow=6.3,SNR=18
MLR Lg Lg 15 23 27.2
0.5nm,0.3s,baz=336,slow=23,SNR=1.6
MLR LR LR 15 24 31.6
comp=Z,198nm,18.6s,baz=228,slow=42
MLR Muntele Rosu 6.72 4 ⇓P Pn 15 21 30.8 +1.2
MLR Muntele Rosu 6.72 4 P Pn 15 21 30.6 +1.1
0.2nm45nm,0.7s
MLR Muntele Rosu 6.72 4 P Pn 15 21 30.6 +1.1
CFR Carcaliu 6.73 17 ⇑P Pn 15 21 28.9 -0.5
LOT Lotru 6.76 351 ⇓P Pn 15 21 29.8 -0.2
LOT Lotru 6.76 351 P Pn 15 21 29.9 -0.2
GZR Gura Zlata 6.87 345 ⇑P Pn 15 21 31.8 +0.3
MATE Matera 6.90 288 ⇓P Pn 15 21 33.1 +1.3
TLCR 6.91 21 ⇑P Pn 15 21 32.3 +0.4
TNR Turnu Rosu 6.91 354 ⇑P Pn 15 21 32.1 +0.1
COVR Voineasa-Covas 7.09 5 ⇓P Pn 15 21 35.7 +1.2
PLOR Plostina 7.13 7 ⇓P Pn 15 21 35.6 +0.5
VRI Vrincioaia 7.16 8 ⇓P Pn 15 21 36.3 +1.0
VRI Vrincioaia 7.16 8 P Pn 15 21 36.5 +1.1
0.2nm54nm,0.8s
VRI Vrincioaia 7.16 8 P Pn 15 21 37.0 +1.6
DOPR Dopca 7.18 0 ⇑P Pn 15 21 36.3 +0.5
DEV Deva 7.32 347 P Pn 15 21 40.2 +2.6
BZK Bozkurt 7.35 62 ⇑P Pn 15 21 38.3 +0.3
BZS Buzias 7.36 339 ⇓P Pn 15 21 38.3 +0.1
BZS Buzias 7.36 339 P Pn 15 21 38.2 0.0

MARCO Tramutola 7.51 285 P Pn 15 21 42.6 +2.4
ONER Baraj Valea Uz 7.59 6 ⇑P Pn 15 21 41.4 +0.1
TESR Tescani 7.79 7 ⇑P Pn 15 21 45.2 +1.1
TESR Tescani 7.79 7 P Pn 15 21 44.9 +0.8
TESR Tescani 7.79 7 P Pn 15 21 44.8 +0.8
SGRT San Giovanni R 7.90 295 Pn Pn 15 21 45.7 0.0
SIRR Siria 7.95 341 ⇑P Pn 15 21 47.3 +1.0
MARR Marisel-Cluj 8.05 349 ⇑P Pn 15 21 48.9 +1.1
DRGR 8.23 347 ⇑P Pn 15 21 51.2 +1.0
ARCR ARCALIA 8.33 355 ⇓P Pn 15 21 52.6 +1.1
BLY Banja Luka 8.51 317 ⇓P Pn 15 21 55.0 +1.0
RAFF Raffo Rosso 8.79 263 Pn Pn 15 21 58.5 +0.7
BURAR Bucovina Array 8.83 360 ⇑P Pn 15 21 59.5 +1.1
BURAR Bucovina Array 8.83 360 Pn 15 21 58.9 +0.5
BUR08 Bucovina Ar. S 8.86 359 Pn 15 21 58.7 -0.1
MMAI Mount Meron Ar 9.99 122 Pn Pn **15 22 13.4 -1.0**
2.2nm,0.3s,baz=320,slow=14,SNR=7.1
MMAI LR LR 15 26 43.3
comp=Z,76nm,19.0s,baz=336,slow=42
0.8nm,0.3s
FDMO Fiordimonte 10.19 299 Pn **15 22 16.9 0.0**
KOLS Kolonicke sedl 10.38 349 P Pn 15 22 24.9 +5.2
KOLS Kolonicke sedl 10.38 349 *e*PN Pn 15 22 24.7 +5.1
MODS Modra-Piesok 11.22 331 *e*PN Pn **15 22 34.7 +3.7**
ASF Jabal al Asfar 11.51 121 Pn Pn **15 22 33.9 -1.3**
0.2nm,0.3s,baz=303,slow=18,SNR=1.4
ASF Sn Sn **15 24 36.0 -7.9**
1.1nm,0.3s,baz=239,slow=23,SNR=6.7
0.9nm,0.2s
KBA Koelnbreinsper 12.06 317 P Pn **15 22 43.8 +1.1**
AK10 Malin Array Si 12.14 12 P Pn **15 22 43.1 -0.5**
AKASG Malin Array Be 12.23 12 Pn Pn **15 22 41.9 -2.9**
0.9nm,0.3s,baz=198,slow=13,SNR=2.7
AKASG LR LR 15 27 23.2
comp=Z,38nm,19.3s,baz=262,slow=37
0.3nm,0.4s
AKBB Malin Array Si 12.23 12 P Pn **15 22 44.9 0.0**
GERES GERESS Array B 13.08 324 Pn Pn **15 22 57.2 +0.6**
0.2nm,0.4s,baz=136,slow=14,SNR=1.4
GERES LR LR 15 28 20.3
comp=Z,79nm,20.5s,baz=112,slow=39
KBZ Khabaz 14.11 64 LR LR 15 29 54.7
comp=Z,73nm,18.8s,baz=161,slow=43
GNI Garni 15.06 79 LR LR 15 29 13.3
comp=Z,94nm,18.1s,baz=338,slow=38
SENIN Lac Senin/Sane 15.27 306 Pn Pn **15 23 26.8 +0.4**
GIMEL St. Georges / 15.99 305 P P **15 23 40.7 +1.4**
HFS Hagfors 22.60 345 P P **15 24 51.7 +0.5**
2.9nm,0.9s,baz=141,slow=9.6,SNR=4.5
HFS LR LR 15 35 41.4
comp=Z,48nm,18.6s,baz=150,slow=42
2.9nm,0.9s
ESDC Sonseca Array 22.66 282 P P **15 24 52.4 +0.2**
3.2nm,0.9s,baz=75,slow=9.6,SNR=16
3.2nm,0.9s
ESDC Sonseca Array 22.66 282 P P **15 24 52.4 +0.2**
ESDC IAmb IAmb 15 25 04.2
comp=Z,9.6nm,1.4s
FINES FINESS Array B 22.69 1 P P **15 24 51.3 -0.9**
comp=Z,0.9nm,0.6s,baz=163,slow=8.3,SNR=12
comp=Z,0.9nm,0.6s
NC602 NORSAR Array S 23.61 343 P P **15 25 02.2 +0.6**
NC602 IAmb IAmb 15 25 33.3
comp=Z,21nm,1.4s
NB2 NORSAR Subarra 23.96 343 P P **15 25 05.0 0.0**
comp=Z,2.5nm,1.1s,baz=153,slow=10
NOA NORSAR Array B 23.96 343 P P **15 25 04.7 -0.2**
comp=Z,0.6nm,0.5s,baz=152,slow=12,SNR=3.9
comp=Z,0.6nm,0.5s
MD01 Midelt array s 25.03 266 P P **15 25 15.6 +0.4**
EKA Eskdalemuir Ar 25.25 320 P P **15 25 16.3 -0.4**
comp=Z,2.0nm,0.7s,baz=116,slow=10,SNR=7.4
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 30.81 0 LR LR 15 38 57.5
comp=Z,45nm,21.0s,baz=186,slow=37
TORD Torodi Ar. Bea 33.02 226 P P **15 26 26.8 +0.6**
comp=Z,0.5nm,0.5s,baz=36,slow=9.3,SNR=4.2
comp=Z,0.5nm,0.5s
TORD Torodi Ar. Bea 33.02 226 P P **15 26 26.8 +0.6**
TORD IAmb IAmb 15 27 05.6
comp=Z,2.8nm,0.6s
BORG Borgarnes 37.47 329 LR LR 15 42 18.3
comp=Z,38nm,21.3s,baz=125,slow=36
KURBB Kurchatov Arra 38.83 54 P P **15 27 17.1 +1.4**
comp=Z,0.4nm,0.6s,baz=279,slow=8.9,SNR=4.9
comp=Z,0.4nm,0.6s
KURK Kurchatov 38.88 54 P P **15 27 17.1 +1.0**
MKAR Makanchi Array 41.76 60 P P **15 27 40.0 -0.1**
comp=Z,0.5nm,0.7s,baz=284,slow=6.0,SNR=7.0
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 41.76 60 P P **15 27 40.9 +0.9**
ZALV Zalesovo Beam 42.47 49 P P **15 27 46.0 +0.3**
comp=Z,1.0nm,0.5s,baz=262,slow=11,SNR=5.4
comp=Z,1.0nm,0.5s
SCHQ Schefferville 60.54 318 P P **15 30 00.4 -0.6**
SCHQ IAmb IAmb 15 30 11.3
comp=Z,7.5nm,1.5s
HHC Hu-ho-hao-te 63.56 58 *e*P P **15 30 22.1 +0.5**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,52nm,4.3s
PZH PanZhiHua 63.81 76 P P **15 30 25.6 +2.1**
L64A Middleborough 69.34 308 P 15 30 51.4 -7.0
E29M Blow River 72.41 354 P P **15 31 17.4 +0.8**
KSPA Keystone Colle 72.58 309 P 15 31 10.9 -7.2
G30M tAoh Zraii Nji 73.62 353 P P **15 31 24.4 +0.5**
G30M IAmb IAmb 15 31 30.5
comp=Z,2.8nm,1.1s
H29M Whitestone 74.57 353 IAmb IAmb 15 31 30.8
comp=Z,2.0nm,0.6s
I30M Mount Dempster 75.35 352 P P **15 31 34.5 +0.5**
I30M IAmb IAmb 15 31 35.3
comp=Z,2.6nm,0.6s
I27K Kandik River 75.45 354 P P **15 31 35.6 +1.0**
I27K IAmb IAmb 15 31 40.1
comp=Z,2.3nm,1.1s
I28M Miner Creek 75.47 354 P P **15 31 35.0 +0.2**
J30M Hart River 75.97 352 P P **15 31 38.4 +0.8**
J30M IAmb IAmb 15 31 39.1
comp=Z,2.2nm,0.6s
KSRS Korea Array 75.99 53 LR LR 16 09 16.9
comp=Z,22nm,18.4s,baz=225,slow=39
ILAR Eielson Array 76.60 357 P P **15 31 41.3 +0.2**
comp=Z,0.3nm,0.6s,baz=353,slow=4.5,SNR=4.5
comp=Z,0.3nm,0.6s
BCAR Beaver Creek A 77.97 354 P P **15 31 50.2 +1.4**
M29M Somme Creek 78.28 352 P P **15 31 51.2 +0.6**
Q32M Nakina River 80.84 348 P P **15 32 05.9 +1.1**
Q32M IAmb IAmb 15 32 42.2
comp=Z,2.9nm,1.2s

IDC 07 15:30:29.2±2.3, 6.78S×129.51E, h0km, mb3.3/1, mbtmp3.2/3, ML3.5/2, MS3.4/1, Error ellipse: s-maj=120.5km s-min=33.3km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**161**	Pn	Pn	15 33 46.1	-1.5
	0.3nm,0.3s,baz=340,slow=14,SNR=9.8						
WRA				Sn	Sn	15 36 08.2	-15
	0.3nm,0.3s,baz=339,slow=22,SNR=7.3						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.32**	**166**	P	P	15 34 33.7	-0.3
	0.1nm,0.3s,baz=342,slow=9.0,SNR=12						
ASAR				S	Sn	15 37 31.3	-15
	0.4nm,0.9s,baz=346,slow=27,SNR=2.5						
	0.2nm,0.5s						
TGY	**Tagaytay City**	**22.42**	**338**	LR	LR	15 45 09.6	
	comp=Z,96nm,21.9s,baz=268,slow=39						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	15 41 28.9	0.0
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.6						
	0.2nm,0.5s						

*IDC **07** 15:40:45.8±2.0, 7.27S×129.07E, h164km±26km, mb2.8/1, mbtmp3.7/6, MS3.2/1, Error ellipse: s-maj=26.0km s-min=18.9km az=117.0*

ISC 07 15:40:43.5±0.9, 7.36S±0.06×129.31E±0.10, h150km, n7, σ2s99/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.26**	**243**	P	Pn	**15 42 14.5**	**+0.7**
	18nm,0.4s,baz=66,slow=20,SNR=6.9						

BATI S **Sn** 15 43 22.7 -1.7
38nm,0.7s,baz=210,slow=23,SNR=8.0
SIJI Sorong 6.74 17 P **Pn** 15 42 22.7 +2.5
2.7nm,0.6s,baz=206,slow=23,SNR=12
SIJI S **Sn** 15 43 32.2 -3.6
2.5nm,0.2s,baz=237,slow=22,SNR=8.7
FITZ Fitzroy Crossi 11.26 198 P **Pn** 15 43 22.9 +2.7
2.4nm,0.9s,baz=20,slow=13,SNR=6.6
FITZ S **Sn** 15 45 22.3 -2.3
1.3nm,0.3s,baz=231,slow=12,SNR=6.7
WRA Warramunga Arr 13.42 159 P **P** 15 43 50.4 -1.9
0.2nm,0.3s,baz=340,slow=12,SNR=18
WRA S **Sn** 15 46 13.1 -3.7
0.9nm,0.5s,baz=336,slow=22,SNR=9.1
ASAR Alice Springs 16.80 165 P **Pn** 15 44 34.2 +4.2
3.1nm,0.6s,baz=346,slow=11,SNR=81
ASAR S **S** 15 47 37.0 0.0
0.4nm,0.6s,baz=347,slow=26,SNR=2.8
TGY Tagaytay City 22.89 339 LR LR 15 54 28.7
comp=Z,64nm,20.7s,baz=126,slow=36
MKAR Makanchi Array 68.16 327 P **P** 15 51 26.8 -0.8
0.2nm,0.5s,baz=130,slow=6.3,SNR=2.2
0.2nm,0.5s

NOU 07 15:54:50.6, 17°21'S × 167°84'E, h5km, MLv4.5/23, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.61**	**147**	P	Pb	15 55 03.3	-0.5
DVP	**Devils Point**	**0.61**	**147**	S	Sg	15 55 11.1	+0.8
RTV	**Rentapao**	**0.81**	**136**	P	Pb	15 55 06.8	-0.3
RTV	**Rentapao**	**0.81**	**136**	S	Sb	15 55 17.5	-0.8
SANVU	**Saraoutou**	**1.86**	**341**	P	Pn	15 55 21.7	-1.4
SANVU	**Saraoutou**	**1.86**	**341**	S	Sn	15 55 47.5	+0.6
MARNC	**Mare, Loyalty**	**4.25**	**178**	P	Pn	15 55 55.2	-0.9
KOUNC	**Koumac, New Ca**	**4.73**	**225**	P	Pn	15 56 03.1	+0.5
YATNC	**Mamie plateau,**	**4.91**	**190**	P	Pn	15 56 05.3	+0.2
NOUC	**Port Laguerre**	**5.08**	**196**	P	Pn	15 56 08.1	+0.7
ONTNC	**Ouen Toro**	**5.24**	**194**	P	Pn	15 56 10.9	+1.3
OUENC	**Ouen Island, N**	**5.27**	**190**	P	Pn	15 56 10.4	+0.4
NGOA	**Tingoa Renbel**	**9.40**	**306**	P	Pn	15 57 07.1	+0.3
TATA	**Tatamba Isabel**	**11.76**	**317**	P	Pn	15 57 39.4	+0.3

*IDC **07** 16:21:26.6±2.9, 6°17'N × 126°07'E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=245.8km s-min=30.3km az=65.0*

DJA 07 16:22:09.5±0.4, 2°N±4° × 12°8E±°, h10km, M3.3/7, MLv3.3/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**206**	P	Pn	16 22 33.9	-0.5
SGSI	**Sangihe**	**2.96**	**305**	P	Pn	16 22 56.4	-0.1
WRA	**Warramunga Arr**	**22.68**	**164**	P	P	16 27 11.3	-0.1
	0.3nm,0.5s,baz=342,slow=9.5,SNR=2.3						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**26.15**	**168**	P	P	16 27 43.5	-0.7
	0.3nm,0.7s,baz=350,slow=8.9,SNR=4.5						
	0.3nm,0.7s						

*IDC **07** 16:35:50.7±0.5, 13°.67N × 120°.79E, h207km±3km, mb3.5/19, mbtmp4.1/20, Error ellipse: s-maj=18.6km s-min=10.9km az=65.0*
*NEIC **07** 16:35:51.9±1.0, 13°.70N±0°.08 × 120°.8E±0°.1, h212km±5km, mb4.3/34, Error ellipse: s-maj=14.2km s-min=11.6km az=84.0*
*MAN **07** 16:35:51.0, 13°.75N × 120°.70E, h198km, MS4.2*

ISC 07 16:35:50.4±0.4, 13°.65N±0°.05 × 120°.70E±0°.07, h200km, n100, σ1°32°/106, mb4.1/38, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.50**	**27**	P	**Pn**	**16 36 20.2**	**+2.6**
	916nm,0.5s,baz=237,slow=1.5,SNR=30						
TGY				S	**Sn**	**16 36 40.5**	**+1.7**
	799nm,0.5s,baz=324,slow=5.5,SNR=8.3						
TGY	**Tagaytay City**	**0.50**	**27**	*e*P	**Pn**	**16 36 20.2**	**+2.6**
LQP	**Lukban**	**0.93**	**61**	*e*P	**Pn**	**16 36 21.9**	**+1.9**
LQP				*e*S	**Sn**	**16 36 45.1**	**+2.2**
PCPS	**Palayan City**	**1.05**	**19**	*e*P	Pn	16 36 29.4	+8.8
PCPS				*e*S	Sn	16 36 59.3	+15
IBAJ	**Ibajay, Aklan**	**2.32**	**142**	*e*P	**Pn**	**16 36 31.9**	**-0.4**
BOLP	**Bolinao**	**2.82**	**344**	*e*P	**Pn**	**16 36 38.7**	**+0.8**
BOLP				*i* S	Sn	16 37 04.7	-10
RCP	**Roxas**	**2.88**	**136**	*i* P	**Pn**	**16 36 41.2**	**+2.5**
MMPH	**Masbate**	**3.12**	**114**	*e*P	**Pn**	**16 36 43.3**	**+1.7**
JAP	**San Jose, Anti**	**3.13**	**157**	*e*P	**Pn**	**16 36 44.7**	**+3.0**
JAP				*e*S	Sn	16 37 09.8	-12
PALP	**Palanan**	**3.77**	**26**	*e*P	**Pn**	**16 36 51.4**	**+2.0**
PALP				*e*S	**Sn**	**16 37 41.8**	**+6.0**
CVC	**Callao Caves**	**4.17**	**15**	*e*P	**Pn**	**16 36 55.5**	**+1.2**
SIPP	**Brgy, Tapao**	**4.25**	**357**	*e*P	**Pn**	**16 36 56.2**	**+0.9**
SIPP				*e*S	**Sn**	**16 37 44.5**	**-2.0**
LLP	**Lapu-Lapu**	**4.60**	**136**	*e*P	**Pn**	**16 37 01.1**	**+1.2**
LLP				*e*S	Sn	16 38 05.8	+11
PACPP	**Pamplona Cagay**	**4.82**	**7**	*i* P	**Pn**	**16 37 04.3**	**+1.8**
PACPP				*e*S	**Sn**	**16 37 57.5**	**-1.9**
PLP	**Palo**	**4.86**	**120**	*e*P	**Pn**	**16 37 04.3**	**+1.3**
SNPH	**Sibulan**	**4.95**	**150**	*e*P	**Pn**	**16 37 06.9**	**+2.5**
TBP	**Tagbilaran**	**5.01**	**142**	*i* P	**Pn**	**16 37 07.2**	**+2.2**
DCPH	**Dipolog City**	**5.67**	**152**	*e*P	**Pn**	**16 37 14.3**	**+0.8**
CGP	**Cagayan de Oro**	**6.48**	**142**	*e*P	**Pn**	**16 37 25.6**	**+1.5**
DAV	**Davao City (W)**	**8.11**	**143**	Pn	**Pn**	**16 37 43.3**	**-1.9**
KKM	**Kota Kinabalu**	**8.76**	**211**	Pn	**Pn**	**16 37 55.0**	**+1.3**
YULB	**Yu-li**	**9.70**	**3**	Pn	**Pn**	**16 38 05.5**	**-0.3**
LUWI	**Luwuk**	**14.74**	**172**		**Pn**	**16 39 09.8**	**+0.2**
SLVN	**Son La**	**17.74**	**298**		**Pn**	**16 39 47.1**	**+1.5**
SLVN				IAmb	IAmb	16 39 48.1	
	comp=Z,4.9nm,0.9s						
WHN	**Wuhan**	**17.80**	**342**	⇓P	**P**	**16 39 44.6**	**+0.6**
WHN				sP	**Pn**	**16 39 48.7**	**+2.6**
WHN				pmax	pmax		
	comp=Z,76nm,1.2s						
SIJI	**Sorong**	**17.83**	**143**	P	**P**	**16 39 45.2**	**+0.6**
	comp=Z,3.4nm,0.6s,baz=230,slow=21,SNR=1.9						
KULM	**Kulim**	**21.44**	**249**	P	**P**	**16 40 24.6**	**+1.4**
CM31	**Chiang Mai Arr**	**21.44**	**286**	P	**P**	**16 40 24.2**	**+1.0**
CM31				IAmb	IAmb	16 40 25.8	
	comp=Z,23nm,1.1s						
CMAR	**Chiang Mai Arr**	**21.44**	**286**	P	**P**	**16 40 24.6**	**+1.3**
	comp=Z,13nm,1.1s,baz=97,slow=7.8,SNR=57						
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**21.44**	**286**		**P**	**16 40 24.0**	**+0.8**
CHTO	**Chiang Mai**	**21.50**	**287**		**P**	**16 40 24.6**	**+0.7**
CHTO				IAmb	IAmb	16 40 25.7	
	comp=Z,10nm,1.1s						
KSRS	**Korea Array**	**24.56**	**14**	P	**P**	**16 40 51.4**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=197,slow=10.0,SNR=5.8						
	comp=Z,0.9nm,0.7s						
BBJI	**Bungbulang**	**24.66**	**212**	P	**P**	**16 40 53.1**	**0.0**
JHJ2	**Mitsune**	**26.05**	**39**	P	**P**	**16 41 04.6**	**-0.8**
LZH	**Lanzhou**	**26.98**	**329**	*e*P	**P**	**16 41 15.0**	**+1.1**
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
SHL	**Shillong**	**29.55**	**298**		**P**	**16 41 37.0**	**+0.2**
GTA2	**Gaotai**	**31.66**	**328**	P	**P**	**16 41 55.7**	**+0.6**
GTA2				pP	pP	16 42 21.5	-14
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**31.94**	**15**	P	**P**	**16 41 56.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**31.94**	**15**	P	**P**	**16 41 57.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=209,slow=7.6,SNR=6.7						
	comp=Z,0.6nm,0.5s						
BNX	**BinXian**	**32.48**	**9**	⇓P	**P**	**16 42 02.3**	**+0.3**
BNX				pmax	pmax		
	comp=Z,11nm,0.7s						
EVN	**Everest**	**34.59**	**300**	P	**P**	**16 42 21.2**	**0.0**
EVN				IAmb	IAmb	16 42 22.8	
	comp=Z,6.0nm,0.5s						
WRA	**Warramunga Arr**	**35.98**	**158**	P	**P**	**16 42 31.2**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=335,slow=9.6,SNR=4.7						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**35.98**	**158**	P	**P**	**16 42 31.2**	**-1.2**
SONM	**Songino Array**	**36.10**	**344**	P	**P**	**16 42 33.4**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=162,slow=9.8,SNR=10						
	comp=Z,2.4nm,0.5s						
SONM	**Songino Array**	**36.10**	**344**	P	**P**	**16 42 33.4**	**+0.1**
SONM				IAmb	IAmb	16 42 34.0	
	comp=Z,2.6nm,0.8s						
HEH	**HeiHe**	**36.91**	**7**	*e*P	**P**	**16 42 39.9**	**+0.1**
HEH				pmax	pmax		
	comp=Z,12nm,0.8s						
AS31	**Alice Springs**	**39.27**	**161**	P	**P**	**16 42 59.1**	**-0.9**
ASAR	**Alice Springs**	**39.27**	**161**	P	**P**	**16 42 59.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=337,slow=6.8,SNR=26						
	comp=Z,0.4nm,0.4s						
PDGK	**Podgornoye**	**46.05**	**318**	P	**P**	**16 43 54.4**	**+0.1**
MKAR	**Makanchi Array**	**46.07**	**324**	P	**P**	**16 43 54.8**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=122,slow=8.8,SNR=23						
MKAR				PcP	**PcP**	**16 45 26.8**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=111,slow=3.2,SNR=3.4						
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**46.07**	**324**		**P**	**16 43 54.1**	**-0.2**
MKAR					**PcP**	**16 45 26.8**	**-0.4**
MAKZ	**Makanchi**	**46.26**	**324**		**P**	**16 43 55.9**	**+0.1**
KDJ	**Kajisay**	**47.07**	**316**	P	**P**	**16 44 02.7**	**+0.3**
KSH2	**Kashi**	**47.10**	**311**	P	**P**	**16 44 03.0**	**+0.4**
KSH2				sP	pP	16 44 07.3	-38
KSH2				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BOOM	**Boomskoye usch**	**48.06**	**316**	P	**P**	**16 44 09.5**	**-0.4**
YAK	**Yakutsk**	**48.73**	**6**	P	**P**	**16 44 13.9**	**-0.6**
YAK				IAmb	IAmb	16 44 14.5	
	comp=Z,15nm,0.6s						
PETK	**Petropavlovsk-**	**49.06**	**29**	P	**P**	**16 44 17.6**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=243,slow=6.5,SNR=4.0						
	comp=Z,1.5nm,0.8s						
PETK	**Petropavlovsk-**	**49.06**	**29**	P	**P**	**16 44 16.6**	**-0.6**
ZALV	**Zalesovo Beam**	**49.10**	**333**	P	**P**	**16 44 17.1**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=134,slow=6.4,SNR=7.1						
	comp=Z,1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**49.10**	**333**	P	**P**	**16 44 16.9**	**-0.5**
KURBB	**Kurchatov Arra**	**50.23**	**326**	P	**P**	**16 44 26.2**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=120,slow=8.3,SNR=12						
	comp=Z,1.2nm,0.3s						
KURK	**Kurchatov**	**50.23**	**326**		**P**	**16 44 26.0**	**0.0**
KURK				IAmb	IAmb	16 44 27.1	
	comp=Z,8.3nm,0.8s						
KK31	**Karatay Array**	**52.01**	**314**	IAmb	IAmb	16 44 40.3	
	comp=Z,3.1nm,0.8s						
KKAR	**Karatay Array**	**52.01**	**314**		**P**	**16 44 39.3**	**-0.2**
BVAR	**Borovoye Array**	**55.81**	**326**	P	**P**	**16 45 06.2**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=108,slow=9.5,SNR=3.9						
	comp=Z,1.8nm,0.5s						
TIXI	**Tiksi**	**58.18**	**3**	P	**P**	**16 45 22.2**	**-0.8**
TIXI				IAmb	IAmb	16 45 23.1	
	comp=Z,4.0nm,0.8s						
AB31	**Akbulak array**	**60.77**	**319**		**P**	**16 45 40.6**	**-0.5**
AB31				IAmb	IAmb	16 45 41.2	
	comp=Z,3.3nm,0.6s						
ABKAR	**Akbulak array**	**60.77**	**319**		**P**	**16 45 40.6**	**-0.5**
RAYN	**Ar Rayn**	**71.28**	**290**	P	**P**	**16 46 48.1**	**-0.5**
RAYN				IAmb	IAmb	16 46 49.4	
	comp=Z,4.6nm,1.0s						
M14K	**Bethel**	**72.00**	**30**	P	**P**	**16 46 51.9**	**-0.2**
M14K				IAmb	IAmb	16 47 33.4	
	comp=Z,6.9nm,1.0s						
D20K	**Etivluk River**	**74.72**	**22**	P	**P**	**16 47 07.8**	**0.0**
D20K				IAmb	IAmb	16 47 08.3	
	comp=Z,9.9nm,1.4s						
F20K	**Avaraart Lake**	**75.02**	**24**	P	**P**	**16 47 09.7**	**+0.1**
KEV	**Kevo**	**78.58**	**339**	P	**P**	**16 47 28.9**	**-0.5**
ILAR	**Eielson Array**	**78.79**	**26**	P	**P**	**16 47 29.1**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=284,slow=5.4,SNR=2.3						
	comp=Z,0.3nm,0.7s						
SCM	**Sheep Creek Mo**	**79.01**	**29**	P	**P**	**16 47 31.8**	**-0.3**
SCM				IAmb	IAmb	16 47 32.4	
	comp=Z,8.5nm,1.5s						
ARA0	**ARCESS Array S**	**79.13**	**339**	*e*P	**P**	**16 47 32.1**	**-0.4**
ARCES	**ARCESS Array B**	**79.13**	**339**	P	**P**	**16 47 31.7**	**-0.8**
	comp=Z,5.8nm,1.0s,baz=75,slow=6.8,SNR=17						
	comp=Z,5.8nm,1.0s						
ARCES	**ARCESS Array B**	**79.13**	**339**	P	**P**	**16 47 31.8**	**-0.6**
ARCES				IAmb	IAmb	16 47 45.7	
	comp=Z,24nm,1.5s						
BRTR	**Keskin Array B**	**79.18**	**308**	P	**P**	**16 47 33.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=95,slow=5.5,SNR=3.7						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**79.18**	**308**	P	**P**	**16 47 32.8**	**-0.7**
SPA0	**Spitsbergen Ar**	**79.64**	**348**	*e*P	**P**	**16 47 34.9**	**-0.2**
SPITS	**Spitsbergen Ar**	**79.64**	**348**	P	**P**	**16 47 34.5**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=94,slow=8.4,SNR=4.8						
	comp=Z,1.3nm,0.4s						
KTK1	**Kautokeino**	**80.02**	**339**	*e*P	**P**	**16 47 36.3**	**-0.9**
SCRK	**Sand Creek**	**80.17**	**26**	P	**P**	**16 47 37.9**	**-0.4**
FINES	**FINESS Array B**	**80.33**	**331**	P	**P**	**16 47 38.0**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=94,slow=7.6,SNR=9.8						
	comp=Z,0.9nm,0.5s						
JETT	**Jettan, Norway**	**80.88**	**340**	*e*P	**P**	**16 47 41.8**	**0.0**
G29M	**Pine Creek**	**81.92**	**23**	P	**P**	**16 47 47.1**	**-0.2**
H29M	**Whitestone**	**81.92**	**24**	P	**P**	**16 47 47.4**	**-0.3**
STEI	**Steigen**	**83.15**	**338**	*e*P	**P**	**16 47 52.7**	**-0.9**
FAUS	**Fauske**	**83.32**	**338**	*e*P	**P**	**16 47 53.6**	**-0.9**
BUR08	**Bucovina Ar. S**	**83.70**	**317**	P	**P**	**16 47 56.7**	**-0.3**
BUR08				IAmb	IAmb	16 47 57.4	
	comp=Z,3.0nm,0.8s						
VAGH	**Vaagaholmen**	**84.29**	**338**	*e*P	**P**	**16 47 58.0**	**-1.4**
LEIR	**Leirfjorden**	**84.57**	**337**	*e*P	**P**	**16 47 59.6**	**-1.3**
HFS	**Hagfors**	**86.52**	**331**	P	**P**	**16 48 08.9**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=98,slow=5.9,SNR=14						
	comp=Z,1.9nm,0.5s						
NC405	**NORSAR Array S**	**87.05**	**333**	P	**P**	**16 48 11.9**	**-1.2**
NC405				IAmb	IAmb	16 48 41.0	
	comp=Z,13nm,1.4s						
NB201	**NORSAR Array S**	**87.26**	**333**	P	**P**	**16 48 13.0**	**-1.3**
NB2	**NORSAR Subarra**	**87.30**	**333**	P	**P**	**16 48 12.4**	**-2.0**
	comp=Z,0.7nm,0.5s,baz=66,slow=4.8						
NB2	**NORSAR Subarra**	**87.30**	**333**	P	**P**	**16 48 12.4**	**-2.0**
NOA	**NORSAR Array B**	**87.30**	**333**	P	**P**	**16 48 12.8**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=67,slow=4.6,SNR=5.5						
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**90.67**	**321**	P	**P**	**16 48 29.1**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=100,slow=3.3,SNR=3.6						
	comp=Z,0.5nm,0.6s						

*IDC **07** 16:42:30.3±0.9, 22°.42S × 170°.30E, h0km, mb4.2/9, mbtmp4.1/11, ML4.5/2, MS3.3/2, Error ellipse: s-maj=24.6km s-min=22.7km az=142.0*
*NOU **07** 16:42:32.0, 22°.34S × 170°.16E, h0km, MLv4.3/17, Southeast of Loyalty Islands*
*NEIC **07** 16:42:32.9±1.1, 22°.45S±0°.1 × 170°.21E±0°.07, h10km±1km, mb4.4/14, Error ellipse: s-maj=19.6km s-min=11.6km az=178.0*

ISC 07 16:42:33.7±0.6, 22°.40S±0°.07 × 170°.24E±0°.06, h21km, n52, σ0°75°/51, mb4.2/12, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.25**	**294**	P	**Pn**	**16 43 08.3**	**-1.4**
MARNC	**Mare, Loyalty**	**2.25**	**294**	S	**Sn**	**16 43 36.6**	**-0.1**
MARNC	**Mare, Loyalty**	**2.25**	**294**		**Pn**	**16 43 08.2**	**-1.4**
YATNC	**Mamie plateau,**	**3.12**	**276**	P	**Pn**	**16 43 20.1**	**-1.6**
YATNC	**Mamie plateau,**	**3.12**	**276**	S	**Sn**	**16 43 59.4**	**+1.0**
OUENC	**Ouen Island, N**	**3.15**	**269**	P	**Pn**	**16 43 21.4**	**-0.6**
OUENC	**Ouen Island, N**	**3.15**	**269**		**Pn**	**16 43 21.7**	**-0.3**
ONTNC	**Ouen Toro**	**3.51**	**271**	P	**Pn**	**16 43 27.0**	**0.0**
ONTNC	**Ouen Toro**	**3.51**	**271**	S	**Sn**	**16 44 09.2**	**+1.4**
ONTNC	**Ouen Toro**	**3.51**	**271**		**Pn**	**16 43 26.9**	**0.0**
DZM	**Mont Dzumac**	**3.53**	**275**	Pn	**Pn**	**16 43 27.3**	**-0.1**
	16nm,0.3s,baz=116,slow=12,SNR=104						
DZM				Sn	**Sn**	**16 44 08.1**	**-0.5**
	6.9nm,0.3s,baz=91,slow=17,SNR=3.6						
	64nm,0.4s						
NOUC	**Port Laguerre**	**3.66**	**274**	P	**Pn**	**16 43 28.4**	**-0.7**
NOUC	**Port Laguerre**	**3.66**	**274**	S	**Sn**	**16 44 12.2**	**+0.6**
RTV	**Rentapao**	**4.89**	**339**	P	**Pn**	**16 43 46.8**	**+0.8**
RTV	**Rentapao**	**4.89**	**339**	S	**Sn**	**16 44 42.3**	**+0.3**
DVP	**Devils Point**	**5.04**	**337**	P	**Pn**	**16 43 47.6**	**-0.4**
KOUNC	**Koumac, New Ca**	**5.84**	**287**	P	**Pn**	**16 43 59.5**	**+0.4**
KOUNC	**Koumac, New Ca**	**5.84**	**287**		**Pn**	**16 43 59.3**	**+0.2**
MSVF	**Nonsavu**	**8.68**	**59**	Pn	**Pn**	**16 44 38.0**	**-0.2**
	0.3nm,0.3s,baz=193,slow=12,SNR=5.5						
MSVF				LR	LR	16 47 15.7	
	comp=Z,222nm,18.8s,baz=258,slow=33						
	7.2nm,0.9s						
MSVF	**Nonsavu**	**8.68**	**59**		**Pn**	**16 44 38.5**	**+0.3**
MRZ	**Mangatainoka R**	**18.76**	**167**	P	**Pn**	**16 46 52.2**	**+0.4**
MRZ				IAmb	IAmb	16 47 23.0	
	comp=Z,57nm,1.4s						
LTZ	**Lake Taylor**	**20.39**	**176**	P	**P**	**16 47 09.4**	**+0.3**
LTZ				IAmb	IAmb	16 47 19.0	
	comp=Z,25nm,1.2s						
TOO	**Toolangi**	**26.12**	**229**	P	**P**	**16 48 06.9**	**+0.6**
STKA	**Stephens Creek**	**27.11**	**243**	P	**P**	**16 48 16.4**	**+1.1**
STKA				LR	LR	16 59 43.2	
	comp=Z,61nm,19.5s,baz=210,slow=38						
	comp=Z,4.3nm,0.8s						
INKA	**Innaminka**	**27.20**	**253**	P	**P**	**16 48 16.0**	**-0.1**
INKA				IAmb	IAmb	16 48 18.4	
	comp=Z,8.7nm,1.4s						
WR8	**Warramunga Arr**	**33.37**	**267**	P	**P**	**16 49 10.2**	**-0.6**
WR8				IAmb	IAmb	16 49 16.4	
	comp=Z,9.1nm,1.4s						
AS31	**Alice Springs**	**33.41**	**261**	P	**P**	**16 49 11.2**	**+0.1**
ASAR	**Alice Springs**	**33.41**	**261**	P	**P**	**16 49 11.1**	**0.0**
	comp=Z,2.9nm,0.8s,baz=82,slow=9.2,SNR=34						
ASAR				PcP	**PcP**	**16 51 52.5**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=100,slow=2.7,SNR=3.0						
	comp=Z,2.9nm,0.8s						
WB0	**Warramunga Arr**	**33.50**	**268**	P	**P**	**16 49 11.7**	**-0.2**
WRA	**Warramunga Arr**	**33.52**	**267**	P	**P**	**16 49 11.5**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=100,slow=8.3,SNR=23						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**33.52**	**267**	P	**P**	**16 49 11.3**	**-0.7**
MBWA	**Marble Bar**	**46.74**	**262**	P	**P**	**16 51 01.6**	**-0.1**
MJAR	**Matsushiro Arr**	**65.97**	**332**	P	**P**	**16 53 17.3**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=149,slow=5.7,SNR=4.6						
	comp=Z,1.5nm,0.7s						
MJAR	**Matsushiro Arr**	**65.97**	**332**	P	**P**	**16 53 17.3**	**-1.1**
QSPA	**South Pole Qui**	**67.67**	**180**	P	**P**	**16 53 29.5**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=343,slow=1.9,SNR=9.1						
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**67.67**	**180**	P	**P**	**16 53 29.5**	**+0.4**
QSPA				IAmb	IAmb	16 53 41.2	
	comp=Z,4.1nm,1.1s						
KSRS	**Korea Array**	**71.63**	**326**	P	**P**	**16 53 54.5**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=155,slow=6.5,SNR=5.3						
	comp=Z,1.3nm,0.8s						
BELA	**Belgrano 2**	**78.88**	**175**	P	**P**	**16 54 34.4**	**-0.5**
BELA				IAmb	IAmb	16 54 35.3	
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.65**	**294**	P	**P**	**16 54 47.2**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=133,slow=4.4,SNR=12						
	comp=Z,1.4nm,0.7s						
TROLL	**Troll, Antarti**	**85.46**	**184**	⇓P	**P**	**16 55 09.3**	**-0.3**
	comp=Z,217nm,0.7s						
SNAA	**Sanae**	**86.06**	**182**	P	**P**	**16 55 11.5**	**-1.0**
SNAA	**Sanae**	**86.06**	**182**	P	**P**	**16 55 11.2**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=146,slow=3.6,SNR=6.5						
	comp=Z,1.7nm,0.9s						
SNAA	**Sanae**	**86.06**	**182**	P	**P**	**16 55 11.2**	**-1.3**
SNAA				IAmb	IAmb	16 55 12.6	
	comp=Z,3.1nm,1.0s						
VNA2	**Neumayer--Watz**	**86.91**	**181**	P	**P**	**16 55 16.2**	**-0.4**
	baz=169,slow=4.4						
SONM	**Songino Array**	**90.30**	**323**	P	**P**	**16 55 33.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=165,slow=6.0,SNR=4.0						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**90.30**	**323**	P	**P**	**16 55 33.0**	**-0.1**
SONM				IAmb	IAmb	16 55 45.5	
	comp=Z,1.2nm,1.0s						
H03S2	**Juan Fernandez**	**93.67**	**129**	T	T	18 39 20.4	
	baz=245						
H03S1	**Juan Fernandez**	**93.68**	**129**	T	T	18 39 21.6	
	baz=245						
H03S3	**Juan Fernandez**	**93.68**	**129**	T	T	18 39 16.7	
	baz=245						
BRG	**Berggiesshubel**	**146.10**	**333**	*e*PKP	**PKPab**	**17 02 13.0**	**+0.4**
BRG				Amp		17 02 13.3	
	comp=Z,2.6nm,0.7s						
EKA	**Eskdalemuir Ar**	**146.75**	**353**	PKPbc	**PKPbc**	**17 02 13.2**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=12,slow=1.8,SNR=7.4						
GERES	**GERESS Array B**	**147.70**	**331**	PKPbc	**PKPbc**	**17 02 16.1**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=69,slow=3.3,SNR=5.4						

*IDC **07** 16:46:23.5±2.2, 37°.67N × 141°.94E, h0km, mb3.3/3, mbtmp3.6/7, ML2.8/3, Error ellipse: s-maj=42.6km s-min=25.3km az=62.0*
*JMA **07** 16:46:32.8±0.1, 37°.5N±0°.2 × 141°.3E±0°.6, h52km, MV3.5/40, E OFF FUKUSHIMA PREF*
*JMA Felt I J1 at E OFF FUKUSHIMA PRE

BKZ IAmb IAmb 16 58 02.8
comp=Z,22nm,1.4s

MRNZ Matariki Terra 29.02 202 P **P** **16 58 03.0 -0.3**
WHZ Wether Hill Ro 34.67 203 P **P** **16 58 53.0 +0.3**
H11S2 WAKE ISLAND Hy 38.57 329 T T 17 40 41.9
baz=151,slow=76
H11S3 WAKE ISLAND Hy 38.59 329 T T 17 40 49.3
baz=151,slow=76
H11S1 WAKE ISLAND Hy 38.59 329 T T 17 40 44.3
baz=151,slow=76
H11N3 WAKE ISLAND Hy 39.51 330 T T 17 42 05.4
baz=150,slow=76,SNR=5.8
H11N1 WAKE ISLAND Hy 39.52 330 T T 17 42 03.2
baz=150,slow=76,SNR=8.2
H11N2 WAKE ISLAND Hy 39.53 330 T T 17 42 04.9
baz=150,slow=76,SNR=6.5
STKA Stephens Creek 44.33 240 P **P** **17 00 12.8 -0.8**
comp=Z,1.6nm,0.8s,baz=73,slow=14,SNR=2.2
comp=Z,1.6nm,0.8s
WB0 Warramunga Arr 49.97 257 P **P** **17 00 57.0 -0.8**
WRA Warramunga Arr 50.01 256 P **P** **17 00 56.9 -1.2**
comp=Z,0.5nm,0.7s,baz=90,slow=7.1,SNR=6.1
comp=Z,0.5nm,0.7s
WRA Warramunga Arr 50.01 256 P **P** **17 00 56.9 -1.2**
AS31 Alice Springs 50.32 252 P **P** **17 00 59.3 -1.0**
ASAR Alice Springs 50.32 252 P **P** **17 00 58.9 -1.5**
comp=Z,2.1nm,0.6s,baz=88,slow=7.7,SNR=55
comp=Z,2.1nm,0.6s
VNDA Vanda 63.87 186 P **P** **17 02 36.3 +1.0**
comp=Z,0.8nm,0.8s,baz=2.9,slow=5.7,SNR=5.4
comp=Z,0.8nm,0.8s
VNDA Vanda 63.87 186 P **P** **17 02 36.1 +0.8**
VNDA IAmb IAmb 17 02 44.1
comp=Z,12nm,1.9s
QSPA South Pole Qui 75.13 180 P **P** **17 03 45.9 +0.7**
comp=Z,2.4nm,0.7s,baz=68,slow=5.4,SNR=16
comp=Z,2.4nm,0.7s
QSPA South Pole Qui 75.13 180 P **P** **17 03 46.0 +0.8**
QSPA IAmb IAmb 17 06 15.2
comp=Z,27nm,2.0s
Q19K Cape Douglas, 75.31 10 P **P** **17 03 47.6 +1.6**
PPLA Purkeypile 79.30 10 P **P** **17 04 09.8 +1.4**
PPLA IAmb IAmb 17 04 11.7
comp=Z,8.7nm,0.7s
H18K Honhosa River 80.62 6 P **P** **17 04 17.4 +2.0**
H18K IAmb IAmb 17 04 34.9
comp=Z,17nm,1.7s
ILAR Eielson Array 81.95 11 LR LR 17 37 47.0
comp=Z,60nm,18.7s,baz=102,slow=33
BELA Belgrano 2 84.47 172 P **P** **17 04 36.0 +0.5**
BELA IAmb IAmb 17 04 36.7
comp=Z,4.6nm,1.2s
SNAA Sanae 93.39 177 LR LR 17 46 17.2
comp=Z,45nm,19.7s,baz=298,slow=35
BRTR Keskin Array B 145.81 321 PKPbc **PKiKP** **17 11 45.4 -0.9**
comp=Z,0.9nm,0.8s,baz=50,slow=1.9,SNR=5.6

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*IDC **07** 16:55:30.3±0.9,3˚.69S×102˚.83W,h0km,mb3.9/9, mbtmp3.9/9,MS4.2/45,Error ellipse: s-maj=46.5km s-min=19.8km az=65.0*

*NEIC **07** 16:55:32.2±1.5,4˚.0S±0˚.1×103˚.2W±0˚.2,h10km±1km, mb4.7/151,Error ellipse: s-maj=33.2km s-min=19.5km az=252.0*

*GFZ **07** 16:55:33.0±0.2,4˚S±4˚×10˚3W±˚,h10km,M4.5/25, mb4.5/25,confirmed*

*GCMT **07** 16:55:35.2±0.2,3˚.63S±0˚.01×102˚.85W±0˚.01,h16km±1km, MW5.0/119,Moment Tensor Solution. s59,c71; s119,c175; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.34±.10; Mθθ0.60±.08; Mϕϕ-0.94±.09; Mrθ2.00±.29; Mθϕ3.45±.08; Mϕr-0.45±.23; Best double couple: Mo4.08200×10^16^ NP1:ϕs7.00000°,δ60.00000°, λ179.00000°. NP2:ϕs97.00000°,δ89.00000°,λ30.00000°. Principal axes: T 3.8790, Plg22.0000°, Azm326.0000°; N 0.4050, Plg60.0000°, Azm99.0000°; P -4.2840, Plg20.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 16:55:31.8±0.4,3˚.93S±0˚.08×103˚.06W±0˚.08,h10km,n210, σ1s26/118,mb4.7/81,MS4.3/47,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.39**	**21**	LR	LR		LR	17 07 06.2	
	comp=Z,915nm,20.1s,baz=203,slow=32								
APG	**El Apazote**	**22.57**	**33**	LR	LR		LR	17 07 07.2	
	comp=Z,127nm,21.5s,baz=227,slow=31								
MTO3	**Montecristo**	**22.71**	**36**	P	**P**		**P**	**17 00 35.4**	**+1.1**
JTS	**Las Juntas de**	**22.91**	**52**	LR	LR		LR	17 06 57.8	
	comp=Z,2μm,20.1s,baz=217,slow=30								
BOAB	**BOACO BROADBAND**	**23.74**	**47**	P	**P**		**P**	**17 00 46.0**	**+1.5**
NNA	**Nana**	**27.15**	**109**	LR	LR		LR	17 09 02.6	
	comp=Z,514nm,21.4s,baz=288,slow=30								
LPIG	**La Paz**	**28.74**	**346**	LR	LR		LR	17 09 59.8	
	comp=Z,672nm,21.2s,baz=171,slow=30								
ROSC	**El Rosal**	**30.00**	**73**	LR	LR		LR	17 11 11.9	
	comp=Z,845nm,21.3s,baz=247,slow=32								
TX31	**Lajitas Ar. Si**	**33.07**	**359**	P	**P**		**P**	**17 02 09.6**	**+1.6**
TXAR	**Lajitas Array**	**33.07**	**359**	P	**P**		**P**	**17 02 06.5**	**-1.4**
	0.5nm,0.8s,baz=184,slow=12,SNR=6.8								
TXAR					LR		LR	17 14 10.7	
	comp=Z,605nm,19.7s,baz=174,slow=34								
	0.5nm,0.8s								
TXAR	**Lajitas Array**	**33.07**	**359**	P	**P**		**P**	**17 02 09.0**	**+1.1**
HNDO	**Hondo**	**33.46**	**6**	P	**P**		**P**	**17 02 12.1**	**+0.9**
HNDO					IAmb		IAmb	17 02 13.2	
	comp=Z,11nm,1.2s								
SAND	**Sanderson**	**33.70**	**1**				**P**	**17 02 13.3**	**-0.1**
ALPN	**Alpine**	**34.11**	**359**				**P**	**17 02 18.0**	**+1.0**
ALPN					IAmb		IAmb	17 02 18.8	
	comp=Z,11nm,1.3s								
SDV	**Santo Domingo**	**34.74**	**68**	LR	LR		LR	17 14 02.5	
	comp=Z,883nm,21.6s,baz=254,slow=32								
MNTX	**Cornudas Mount**	**35.49**	**357**	P	**P**		**P**	**17 02 28.2**	**-0.7**
MNTX	**Cornudas Mount**	**35.49**	**357**	P	**P**		**P**	**17 02 28.0**	**-0.9**
SGCY	**Sterling City**	**35.69**	**3**	P	**P**		**P**	**17 02 30.5**	**0.0**
SGCY					IAmb		IAmb	17 02 51.2	
	comp=Z,13nm,1.5s								
PB16	**IPOC Station P**	**35.80**	**116**	P	**P**		**P**	**17 02 31.5**	**-0.8**
LPAZ	**La Paz**	**36.44**	**112**	P	**P**		**P**	**17 02 37.2**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=314,slow=8.8,SNR=4.9								
LPAZ					LR		LR	17 14 46.3	
	comp=Z,274nm,19.7s,baz=294,slow=32								
	comp=Z,1.6nm,0.9s								
LPAZ	**La Paz**	**36.44**	**112**				**P**	**17 02 37.1**	**-0.8**
LPAZ					IAmb		IAmb	17 02 52.3	
	comp=Z,12nm,1.5s								
LPAZ	**La Paz**	**36.44**	**112**	P	**P**		**P**	**17 02 38.9**	**+1.1**
121A	**Cookes Peak, D**	**36.53**	**353**				**P**	**17 02 38.5**	**+0.6**
121A					IAmb		IAmb	17 03 04.6	
	comp=Z,10nm,1.4s								
DUN6	**Lazy B Ranch**	**36.73**	**351**	P	**P**		**P**	**17 02 40.8**	**+1.3**
TUC	**Tucson**	**36.77**	**349**	P	**P**		**P**	**17 02 39.8**	**0.0**
TUC	**Tucson**	**36.77**	**349**	P	**P**		**P**	**17 02 39.6**	**-0.3**
H03N2	**Juan Fernandez**	**37.00**	**145**	T	T		T	17 42 04.0	
	baz=314,slow=74								
H03N1	**Juan Fernandez**	**37.01**	**145**	T	T		T	17 42 02.6	
	baz=314								
H03N3	**Juan Fernandez**	**37.02**	**145**	T	T		T	17 42 01.6	
	baz=314,slow=74								
TAOE	**Nuku Hiva Isla**	**37.16**	**261**	*e*S			**S**	**17 08 26.9**	**-3.6**
	comp=Z,96nm,28.1s								
TAOE					*e*SS		**SnSn**	**17 11 08.9**	**+3.8**
	comp=Z,337nm,26.7s								
TAOE					*e*LR		LR	17 12 45.1	
	comp=Z,894nm,24.0s								
VA04	**Juan Fernndez**	**37.21**	**146**	P	**P**		**P**	**17 02 43.4**	**-0.1**
MSTX	**Muleshoe**	**37.69**	**0**	P	**P**		**P**	**17 02 48.6**	**+0.9**
MSTX					IAmb		IAmb	17 02 52.9	
	comp=Z,12nm,1.2s								
113A	**Mohawk Valley,**	**37.88**	**345**	P	**P**		**P**	**17 02 50.0**	**+0.8**
113A					IAmb		IAmb	17 02 51.5	
	comp=Z,13nm,1.5s								
LENM	**Lemitar**	**38.06**	**355**	P	**P**		**P**	**17 02 51.8**	**+0.9**
553A	**Crawfordville**	**38.32**	**26**	P	**P**		**P**	**17 02 54.0**	**+1.1**
WMOK	**Wichita Mounta**	**38.67**	**6**	P	**P**		**P**	**17 02 54.8**	**-1.0**
ANMO	**Albuquerque**	**38.80**	**356**	LR	LR		LR	17 16 21.9	
	comp=Z,166nm,20.9s,baz=174,slow=32								
ANMO	**Albuquerque**	**38.80**	**356**	P	**P**		**P**	**17 02 57.7**	**+0.6**
Y14A	**Wickenburg**	**38.81**	**347**				**P**	**17 02 57.7**	**+0.7**
X16A	**Lo Mia Camp, P**	**38.95**	**349**				**P**	**17 02 59.2**	**+0.9**
GO03	**Copiapo**	**39.16**	**130**	P	**P**		**P**	**17 02 60.0**	**-0.1**
MIAR	**Mount Ida**	**39.30**	**12**				**P**	**17 03 01.6**	**+0.6**
MIAR	**Mount Ida**	**39.30**	**12**	P	**P**		**P**	**17 03 02.0**	**+1.0**
W35A	**Tecumseh**	**39.30**	**8**	P	**P**		**P**	**17 03 01.2**	**+0.1**
W35A					IAmb		IAmb	17 03 06.5	
	comp=Z,17nm,1.1s								
PFO	**Pinyon Flats O**	**39.42**	**342**	LR	LR		LR	17 15 34.4	
	comp=Z,482nm,18.6s,baz=141,slow=31								
BELC	**Belle Mtn. Jos**	**39.65**	**343**	P	**P**		**P**	**17 03 05.1**	**+1.0**
AC05	**El Transito**	**39.78**	**132**	P	**P**		**P**	**17 03 06.0**	**+0.6**
AC05	**El Transito**	**39.78**	**132**	P	**P**		**P**	**17 03 06.9**	**+1.5**
CO06	**Fray Jorge**	**39.82**	**135**	P	**P**		**P**	**17 03 05.2**	**-0.3**
CO06					IAmb		IAmb	17 03 31.1	
	comp=Z,20nm,1.4s								
WHAR	**Wooly Hollow**	**40.30**	**14**				**P**	**17 03 09.9**	**+0.5**
WHAR					IAmb		IAmb	17 03 15.6	
	comp=Z,15nm,1.4s								
CO01	**Juntas del Tor**	**40.53**	**133**		IAmb		IAmb	17 03 15.7	
	comp=Z,12nm,1.2s								
CO01	**Juntas del Tor**	**40.53**	**133**	P	**P**		**P**	**17 03 12.9**	**+1.2**
CO03	**El Pedregal**	**40.58**	**135**	P	**P**		**P**	**17 03 11.7**	**-0.3**
CO03					IAmb		IAmb	17 03 26.8	
	comp=Z,18nm,1.1s								
CO03	**El Pedregal**	**40.58**	**135**	P	**P**		**P**	**17 03 12.2**	**+0.2**
T25A	**Trinidad**	**40.87**	**358**	P	**P**		**P**	**17 03 15.5**	**+1.2**
U15A	**North Rim**	**41.06**	**349**	P	**P**		**P**	**17 03 17.5**	**+1.5**
MVCO	**Mesa Verde**	**41.24**	**353**	P	**P**		**P**	**17 03 17.6**	**+0.2**
MVCO	**Mesa Verde**	**41.24**	**353**	P	**P**		**P**	**17 03 18.3**	**+1.0**
LCAR	**Lake Charles**	**41.32**	**15**				**P**	**17 03 18.1**	**+0.3**
MT02	**Curacav**	**41.70**	**138**	P	**P**		**P**	**17 03 21.1**	**+0.1**
CLC	**China Lake**	**41.81**	**342**	P	**P**		**P**	**17 03 22.6**	**+0.7**
GWY	**Greenwater Val**	**41.88**	**343**				**P**	**17 03 23.4**	**+0.8**
T42A	**Van Buren**	**42.24**	**14**				**P**	**17 03 25.5**	**+0.2**
T42A					IAmb		IAmb	17 03 35.8	
	comp=Z,16nm,1.3s								
WVT	**Waverly**	**42.32**	**18**				**P**	**17 03 25.8**	**-0.2**
WVT					IAmb		IAmb	17 03 35.9	
	comp=Z,20nm,1.4s								
WVT	**Waverly**	**42.32**	**18**	P	**P**		**P**	**17 03 24.9**	**-1.1**
ZON	**Zonda**	**42.41**	**134**		IAmb		IAmb	17 03 37.1	
	comp=Z,23nm,1.3s								
SJG	**San Juan**	**42.47**	**58**	LR	LR		LR	17 17 57.7	
	comp=Z,328nm,19.0s,baz=256,slow=32								
TPNV	**Topopah Spring**	**42.48**	**344**				**P**	**17 03 28.6**	**+1.1**
PRN	**Pahroc Range**	**42.61**	**346**		IAmb		IAmb	17 03 48.2	
	comp=Z,14nm,1.4s								
CPCT	**Cooper Cave**	**42.86**	**22**		IAmb		IAmb	17 03 34.7	
	comp=Z,14nm,1.4s								
BO02	**Sierra Bellavi**	**42.88**	**140**	P	**P**		**P**	**17 03 31.1**	**+0.5**
BO02					IAmb		IAmb	17 03 36.9	
	comp=Z,22nm,1.3s								
BO02	**Sierra Bellavi**	**42.88**	**140**	P	**P**		**P**	**17 03 30.7**	**0.0**
SIV	**San Ignacio**	**42.96**	**109**	LR	LR		LR	17 19 09.7	
	comp=Z,602nm,19.7s,baz=295,slow=33								
TKL	**Tuckaleechee C**	**43.33**	**23**	LR	LR		LR	17 21 46.5	
	comp=Z,156nm,18.0s,baz=185,slow=37								
TKL	**Tuckaleechee C**	**43.33**	**23**		IAmb		IAmb	17 03 39.2	
	comp=Z,23nm,1.4s								
V53A	**Saluda**	**43.72**	**24**		IAmb		IAmb	17 03 42.5	
	comp=Z,16nm,1.3s								
BI02	**San Fabin de**	**43.76**	**142**				**P**	**17 03 38.1**	**+0.3**
BI02	**San Fabin de**	**43.76**	**142**	P	**P**		**P**	**17 03 39.0**	**+1.3**
TPH	**Tonopah**	**43.80**	**344**		IAmb		IAmb	17 03 44.6	
	comp=Z,12nm,1.5s								
P40A	**Paris**	**44.42**	**12**		IAmb		IAmb	17 03 47.6	
	comp=Z,15nm,1.2s								
NVAR	**Mina Array Bea**	**44.44**	**343**	P	**P**		**P**	**17 03 42.8**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=162,slow=10,SNR=4.9								
NVAR					LR		LR	17 18 25.0	
	comp=Z,410nm,21.3s,baz=156,slow=31								
	comp=Z,1.1nm,0.9s								
CMB	**Columbia Colle**	**44.74**	**340**	P	**P**		**P**	**17 03 46.0**	**+0.5**
CMB					IAmb		IAmb	17 04 03.9	
	comp=Z,9.9nm,1.4s								
DUG	**Dugway, Tooele**	**44.81**	**349**		IAmb		IAmb	17 03 53.4	
	comp=Z,5.6nm,1.0s								
DUG	**Dugway, Tooele**	**44.81**	**349**	P	**P**		**P**	**17 03 45.5**	**-0.6**
PNTR	**Pine Nut**	**45.44**	**342**	P	**P**		**P**	**17 03 51.8**	**+0.5**
PNTR					IAmb		IAmb	17 04 15.0	
	comp=Z,8.2nm,0.9s								
BGU	**Big Grassy Mou**	**45.56**	**349**		IAmb		IAmb	17 04 03.2	
	comp=Z,9.6nm,1.3s								
AFDM	**Forest Hills D**	**45.76**	**340**		IAmb		IAmb	17 03 56.2	
	comp=Z,15nm,1.4s								
PAHR	**Pah Rah Range**	**45.94**	**342**				**P**	**17 03 56.5**	**+1.3**
PAHR					IAmb		IAmb	17 04 14.8	
	comp=Z,15nm,1.4s								
HWUT	**Hardware Ranch**	**45.97**	**351**	P	**P**		**P**	**17 03 56.2**	**+0.8**
PDAR	**Pinedale Array**	**46.84**	**353**	P	**P**		**P**	**17 04 01.3**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=152,slow=6.7,SNR=11								
PDAR					LR		LR	17 21 24.7	
	comp=Z,74nm,18.4s,baz=166,slow=33								
	comp=Z,0.5nm,0.4s								
PDAR	**Pinedale Array**	**46.84**	**353**				**P**	**17 04 01.7**	**-0.6**
PLCA	**Paso Flores**	**46.88**	**146**	LR	LR		LR	17 18 47.1	
	comp=Z,609nm,20.4s,baz=317,slow=30								
CLDB	**Colider**	**47.33**	**101**	P	**P**		**P**	**17 04 04.2**	**-2.1**
PPTF	**Pamatai, Papee**	**47.51**	**250**	P	**P**		**P**	**17 04 09.6**	**+1.8**
PPT	**Papeete**	**47.52**	**250**	LR	LR		LR	17 18 47.6	
	comp=Z,407nm,21.1s,baz=78,slow=29								
PPT2	**Papeete2**	**47.52**	**250**	*e*S			**S**	**17 10 58.9**	**-4.3**
PPT2	comp=Z,131nm,24.5s								
					*e*SS		**SS**	**17 14 31.4**	**+0.2**
	comp=Z,473nm,28.2s								
PPT2					*e*LR		LR	17 17 27.3	
	comp=Z,991nm,24.8s								
PPT2					*e*LR		LR	17 17 31.3	
	comp=Z,812nm,26.8s								
ECSD	**EROS Data Cent**	**47.80**	**6**	P	**P**		**P**	**17 04 08.7**	**-0.7**
WVOR	**Wild Horse Val**	**48.26**	**345**	P	**P**		**P**	**17 04 14.2**	**+1.0**
FLWY	**Flagg Ranch**	**48.28**	**353**	P	**P**		**P**	**17 04 13.8**	**+0.4**
HLID	**Hailey**	**48.37**	**349**	P	**P**		**P**	**17 04 13.8**	**-0.2**
M02C	**Callahan**	**48.58**	**340**	P	**P**		**P**	**17 04 16.2**	**+0.5**
M02C					IAmb		IAmb	17 04 27.4	
	comp=Z,9.5nm,1.0s								
TBI	**Tubuai**	**48.77**	**242**	*e*LR	LR		LR	17 18 04.4	
	comp=Z,3μm,26.2s								
YBH	**Yreka Blue Hor**	**48.84**	**340**	LR	LR		LR	17 20 40.4	
	comp=Z,337nm,21.8s,baz=168,slow=31								
CPUP	**Villa Florida**	**49.08**	**122**	P	**P**		**P**	**17 04 19.0**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=360,slow=15,SNR=2.2								
CPUP					LR		LR	17 22 09.6	
	comp=Z,162nm,18.6s,baz=286,slow=33								
	comp=Z,1.9nm,1.0s								
CPUP	**Villa Florida**	**49.08**	**122**	P	**P**		**P**	**17 04 19.0**	**-0.7**
CPUP					IAmb		IAmb	17 04 44.4	
	comp=Z,11nm,1.5s								
BBOR	**Butler Butte**	**49.86**	**341**	P	**P**		**P**	**17 04 25.5**	**0.0**
BBOR					IAmb		IAmb	17 04 36.6	
	comp=Z,13nm,1.4s								
I07A	**Izee**	**50.02**	**345**				**P**	**17 04 27.5**	**+0.8**
PLID	**Pearl Lake**	**50.15**	**348**				**P**	**17 04 27.1**	**-0.7**
PLID					IAmb		IAmb	17 04 29.3	
	comp=Z,10nm,1.4s								
WIFE	**Three Sisters-**	**50.66**	**343**		IAmb		IAmb	17 04 49.8	
	comp=Z,9.2nm,1.0s								
G08A	**Pilot Rock**	**51.01**	**346**		IAmb		IAmb	17 04 58.4	
	comp=Z,13nm,1.5s								
MDP	**Montagnes des**	**51.16**	**80**	LR	LR		LR	17 24 17.8	
	comp=Z,329nm,18.8s,baz=299,slow=34								
H04A	**Detroit Lake**	**51.33**	**343**		IAmb		IAmb	17 04 47.5	
	comp=Z,15nm,1.2s								
AGMN	**Agassiz Nation**	**52.39**	**6**	P	**P**		**P**	**17 04 42.4**	**-1.8**
EYMN	**Ely**	**52.64**	**10**	P	**P**		**P**	**17 04 44.6**	**-1.5**
SADO	**Sadowa**	**52.99**	**21**	LR	LR		LR	17 26 28.4	
	comp=Z,96nm,18.1s,baz=194,slow=35								
NEW	**Newport**	**53.41**	**348**	LR	LR		LR	17 24 48.9	
	comp=Z,298nm,19.4s,baz=159,slow=33								
NEW	**Newport**	**53.41**	**348**	P	**P**		**P**	**17 04 51.7**	**-0.1**
E03A	**Lebam**	**53.43**	**342**	P	**P**		**P**	**17 04 52.3**	**+0.4**
MG05	**Puerto Natales**	**53.98**	**157**	P	**P**		**P**	**17 04 57.1**	**+1.3**
EPLO	**Experimental L**	**53.99**	**7**	IAmb	IAmb		IAmb	17 04 56.1	
	comp=Z,13nm,1.4s								
ULM	**Lac du Bonnet**	**54.31**	**6**	P	**P**		**P**	**17 04 55.4**	**-2.9**
	comp=Z,3.0nm,0.9s,baz=180,slow=7.2,SNR=6.0								
ULM					LR		LR	17 27 06.6	
	comp=Z,412nm,18.4s,baz=198,slow=35								
	comp=Z,3.0nm,0.9s								
ULM	**Lac du Bonnet**	**54.31**	**6**	IAmb	IAmb		IAmb	17 05 18.9	
	comp=Z,12nm,1.4s								
BDFB	**Brasília**	**55.33**	**106**	LR	LR		LR	17 26 49.1	
	comp=Z,128nm,19.4s,baz=249,slow=34								
RAR	**Rarotonga**	**57.63**	**247**	LR	LR		LR	17 23 26.6	
	comp=Z,194nm,19.0s,baz=84,slow=29								
FFC	**Flin Flon**	**58.45**	**1**	P	**P**		**P**	**17 05 27.3**	**-0.5**
FFC					IAmb		IAmb	17 05 47.6	
	comp=Z,8.7nm,1.5s								
BBB	**Bella Bella**	**59.81**	**342**	P	**P**		**P**	**17 05 41.2**	**+4.0**
SCHQ	**Schefferville**	**65.78**	**22**	LR	LR		LR	17 33 47.2	
	comp=Z,413nm,20.6s,baz=235,slow=35								
PMSA	**Palmer Station**	**66.82**	**163**	LR	LR		LR	17 27 44.0	
	comp=Z,351nm,21.4s,baz=312,slow=29								
YKA	**Yellowknife Ar**	**66.82**	**354**	P	**P**		**P**	**17 06 22.3**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=169,slow=5.5,SNR=7.2								
YKA					LR		LR	17 34 55.5	
	comp=Z,236nm,18.0s,baz=148,slow=36								
	comp=Z,2.3nm,0.9s								
Q32M	**Nakina River**	**66.85**	**344**	P	**P**		**P**	**17 06 24.6**	**+0.6**
Q32M					IAmb		IAmb	17 06 47.4	
	comp=Z,6.9nm,1.4s								
RCBR	**Riachuelo**	**66.91**	**95**	LR	LR		LR	17 32 41.6	
	comp=Z,35nm,18.6s,baz=266,slow=34								
BESE	**Bessie Mountai**	**67.28**	**343**		IAmb		IAmb	17 06 28.8	
	comp=Z,8.2nm,1.2s								
BLKN	**Baker Lake**	**68.27**	**3**				**P**	**17 06 31.3**	**-1.3**
AFI	**Afiamalu**	**68.41**	**257**	LR	LR		LR	17 28 22.3	
	comp=Z,178nm,21.1s,baz=74,slow=29								
O30N	**Mendenhall**	**69.43**	**343**		IAmb		IAmb	17 06 41.7	
	comp=Z,4.9nm,1.2s								
MMPY	**Sheldon Lake,**	**69.74**	**347**		IAmb		IAmb	17 07 03.9	
	comp=Z,7.6nm,1.4s								
HYT	**Haines Junctio**	**69.89**	**343**	P	**P**		**P**	**17 06 43.5**	**+0.6**
HYT					IAmb		IAmb	17 07 27.4	
	comp=Z,8.4nm,1.5s								
M31M	**Drury Creek, Y**	**70.16**	**345**		IAmb		IAmb	17 07 03.4	
	comp=Z,6.7nm,1.4s								
L29M	**L29M**	**71.89**	**344**	P	**P**		**P**	**17 06 55.6**	**+0.6**
L29M					IAmb		IAmb	17 07 07.9	
	comp=Z,7.0nm,1.2s								
BMRM	**Bremner River**	**72.25**	**340**		IAmb		IAmb	17 07 00.2	
	comp=Z,1.1nm,1.2s								
FRB	**Frobisher Bay**	**72.26**	**15**	LR	LR		LR	17 38 38.2	
	comp=Z,162nm,18.4s,baz=250,slow=36								
M27K	**Edge Creek, AK**	**72.40**	**342**		IAmb		IAmb	17 07 00.1	
	comp=Z,5.1nm,1.3s								
J30M	**Hart River**	**72.62**	**346**		IAmb		IAmb	17 07 05.8	
	comp=Z,6.5nm,1.5s								
M26K	**Nabesna, AK**	**72.78**	**342**		IAmb		IAmb	17 07 02.8	
	comp=Z,9.4nm,1.5s								
BCAR	**Beaver Creek A**	**72.91**	**343**	P	**P**		**P**	**17 07 01.1**	**+0.1**
KDAK	**Kodiak Island**	**73.17**	**335**	LR	LR		LR	17 30 54.7	
	comp=Z,355nm,21.4s,baz=132,slow=29								
H31M	**Peel River**	**73.17**	**347**		IAmb		IAmb	17 07 04.0	
	comp=Z,12nm,1.4s								
K27K	**Chicken**	**73.72**	**343**		IAmb		IAmb	17 07 07.2	
	comp=Z,5.9nm,1.1s								
G31M	**Satah River**	**74.10**	**348**		IAmb		IAmb	17 07 11.6	
	comp=Z,6.0nm,1.1s								
EPYK	**Eagle Plains**	**74.19**	**347**		IAmb		IAmb	17 07 20.6	
	comp=Z,12nm,1.2s								
I28M	**Miner Creek**	**74.23**	**345**	P	**P**		**P**	**17 07 09.4**	**+0.6**
H29M	**Whitestone**	**74.45**	**346**		IAmb		IAmb	17 07 11.7	
	comp=Z,15nm,1.4s								
ILON	**Igloolik, Nuna**	**74.58**	**8**	P	**P**		**P**	**17 07 10.4**	**-0.2**
RAO	**Raoul Island**	**74.88**	**241**	LR	LR		LR	17 35 18.5	
	comp=Z,64nm,19.1s,baz=260,slow=32								
G29M	**Pine Creek**	**74.93**	**346**		IAmb		IAmb	17 07 47.9	
	comp=Z,14nm,1.4s								
F30M	**Barrier River**	**75.00**	**348**		IAmb		IAmb	17 07 32.2	
	comp=Z,6.5nm,1.1s								
INK	**Inuvik**	**75.13**	**349**	P	**P**		**P**	**17 07 13.6**	**-0.3**
L22K	**Petersville**	**75.46**	**339**		IAmb		IAmb	17 07 16.8	
	comp=Z,9.5nm,1.4s								
ILAR	**Eielson Array**	**75.70**	**342**	P	**P**		**P**	**17 07 16.1**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=158,slow=4.8,SNR=8.7								
	comp=Z,0.7nm,0.7s								
ILAR	**Eielson Array**	**75.70**	**342**	P	**P**		**P**	**17 07 16.5**	**-0.7**
WRH	**Wood River Hil**	**75.86**	**342**	P	**P**		**P**	**17 07 17.8**	**-0.3**
WRH					IAmb		IAmb	17 07 20.4	
	comp=Z,12nm,1.5s								
E29M	**Blow River**	**76.10**	**347**		IAmb		IAmb	17 07 20.5	
	comp=Z,9.0nm,1.4s								
NEA2	**Nenana**	**76.25**	**341**		IAmb		IAmb	17 07 21.8	
	comp=Z,9.1

comp=Z,1.5nm,1.0s,baz=5.7,slow=2.4,SNR=6.8

MKAR	**Makanchi Array**	**137.04**	**355**		**PKPdf**	**17 14 55.7**	**+0.3**
WMQ	**Urumqi**	**139.15**	**348**	*e*PKP	**PKPdf**	**17 14 59.6**	**+0.2**
WMQ				LR	LR		

comp=Z,88nm,21.1s

PZH	**PanZhiHua**	**147.32**	**316**	PKPbc	**PKPdf**	**17 15 13.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**154.08**	**306**	PKPbc	**PKiKP**	**17 15 33.6**	**+0.6**

comp=Z,0.5nm,0.3s,baz=20,slow=1.1,SNR=8.8

*IDC **07** 17:00:37.4±1.7, 5.°09S×68.°40E, h0km, mb3.6/11, mbtmp3.6/11, MS3.4/5, Error ellipse: s-maj=50.4km s-min=22.3km az=47.0*

ISC 07 17:00:39.4±1.9, 5.°1S±0.°3×68.°4E±0.°3, h13km, n22, σ0s87/11, mb3.6/11, MS3.3/6, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**4.79**	**122**	T	T	17 06 45.5	

baz=311,slow=75,SNR=89

H08S1	**Diego Garcia H**	**4.79**	**122**	T	T	17 06 38.5	

baz=311,slow=75,SNR=73

H08S2	**Diego Garcia H**	**4.80**	**122**	T	T	17 06 40.9	

baz=311,slow=75,SNR=72

ATD	**Arta Tunnel**	**30.31**	**303**	LR	LR	17 16 11.8	

comp=Z,5.9nm,21.1s,baz=132,slow=31

MBAR	**Mbarara**	**37.84**	**276**	LR	LR	17 21 49.0	

comp=Z,66nm,21.8s,baz=146,slow=34

CMAR	**Chiang Mai Arr**	**38.17**	**51**	P	**P**	**17 07 58.4**	**-0.5**
CMAR				LR	LR	17 21 40.7	

0.3nm,0.3s,baz=241,slow=9.1,SNR=5.2

comp=Z,34nm,19.4s,baz=210,slow=33

0.3nm,0.3s

H01W3	**Cape Leeuwin H**	**51.56**	**131**	T	T	18 05 09.1	

baz=296,slow=75,SNR=5.9

H01W2	**Cape Leeuwin H**	**51.56**	**131**	T	T	18 05 08.5	

baz=296,slow=75,SNR=3.7

H01W1	**Cape Leeuwin H**	**51.58**	**131**	T	T	18 05 12.1	

baz=296,slow=75,SNR=5.3

MKAR	**Makanchi Array**	**53.13**	**12**	P	**P**	**17 09 55.7**	**-1.1**

0.5nm,0.8s,baz=185,slow=9.7,SNR=4.3

0.5nm,0.8s

KBZ	**Khabaz**	**53.78**	**337**	P	**P**	**17 10 02.0**	**+0.5**

1.4nm,0.6s,baz=141,slow=9.1,SNR=4.2

1.4nm,0.6s

BRTR	**Keskin Array B**	**54.91**	**328**	P	**P**	**17 10 10.2**	**+0.1**

0.5nm,0.8s,baz=153,slow=8.3,SNR=4.0

0.5nm,0.8s

KURBB	**Kurchatov Arra**	**56.20**	**8**	P	**P**	**17 10 18.3**	**-0.7**

1.2nm,0.9s,baz=203,slow=7.4,SNR=6.6

1.2nm,0.9s

BVAR	**Borovoye Array**	**57.95**	**1**	P	**P**	**17 10 31.1**	**-0.2**

0.2nm,0.5s,baz=213,slow=4.6,SNR=3.8

0.2nm,0.5s

DAV	**Davao City (W)**	**58.36**	**79**	LR	LR	17 37 44.5	

comp=Z,40nm,18.9s,baz=246,slow=38

ZALV	**Zalesovo Beam**	**60.44**	**11**	P	**P**	**17 10 47.9**	**-0.7**

1.2nm,0.7s,baz=219,slow=6.9,SNR=4.6

1.2nm,0.7s

SONM	**Songino Array**	**62.40**	**28**	P	**P**	**17 11 03.9**	**+1.8**

0.3nm,0.6s,baz=191,slow=7.0,SNR=1.8

0.3nm,0.6s

AKASG	**Malin Array Be**	**64.98**	**334**	P	**P**	**17 11 18.6**	**-0.3**

0.2nm,0.3s,baz=110,slow=7.0,SNR=1.6

0.2nm,0.3s

ASAR	**Alice Springs**	**65.56**	**114**	P	**P**	**17 11 23.1**	**-0.3**

0.4nm,0.8s,baz=271,slow=5.9,SNR=5.1

0.4nm,0.8s

WRA	**Warramunga Arr**	**65.69**	**109**	P	**P**	**17 11 24.4**	**+0.2**

0.5nm,0.6s,baz=272,slow=6.9,SNR=6.3

0.5nm,0.6s

KRVT	**Keravat (AS076**	**83.31**	**94**	LR	LR	17 47 55.7	

comp=Z,12nm,21.6s,baz=64,slow=34

TIXI	**Tiksi**	**85.91**	**16**	LR	LR	17 51 40.0	

comp=Z,44nm,21.1s,baz=56,slow=36

*IDC **07** 17:11:35.4±1.0, 3.°76S×102.°80W, h0km, mb3.7/7, mbtmp3.7/7, MS3.9/27, Error ellipse: s-maj=55.3km s-min=25.7km az=71.0*

*NEIC **07** 17:11:36.0±1.0, 3.°6S±0.°2×102.°1W±0.°2, h10km±2km, mb4.3/11, Error ellipse: s-maj=37.4km s-min=8.4km az=223.0*

*GCMT **07** 17:11:41.0±0.5, 3.°64S±0.°03×102.°82W±0.°02, h13km±2km, MW4.7/79, Moment Tensor Solution. s14,c14; s79,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_r=0.20±.07; $M_{\theta\theta}$=0.36±.07; $M_{\phi\phi}$=-0.55±.08; $M_{r\theta}$=0.29±.18; $M_{\theta\phi}$=1.21±.07; $M_{r\phi}$=0.39±.17; Best double couple: M_0=1.39300×10^{16} NP1:ϕ_s=102.00000°, δ71.00000°, λ11.00000°. NP2: ϕ_s=8.00000°, δ79.00000°, λ160.00000°. Principal axes: T 1.3780, Plg22.0000°, Azm324.0000°; N 0.0300, Plg68.0000°, Azm161.0000°; P -1.4090, Plg6.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 17:11:36.1±0.9, 3.°6S±0.°2×102.°0W±0.°2, h10km, n62, σ1s14/26, mb4.1/11, MS3.9/27, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**21.72**	**19**	LR	LR	17 23 12.7	

comp=Z,273nm,19.7s,baz=204,slow=32

JTS	**Las Juntas de**	**21.84**	**51**	LR	LR	17 23 04.4	

comp=Z,742nm,19.7s,baz=210,slow=30

ROSC	**El Rosal**	**28.85**	**73**	LR	LR	17 27 18.2	

comp=Z,310nm,20.1s,baz=286,slow=32

TX31	**Lajitas Ar. Si**	**32.80**	**357**	P	**P**	**17 18 08.8**	**-1.1**
TX31				IAmb	IAmb	17 18 30.5	

comp=Z,4.4nm,1.4s

TXAR	**Lajitas Array**	**32.80**	**357**	P	**P**	**17 18 12.8**	**+2.9**

comp=Z,1.3nm,1.2s,baz=140,slow=8.0,SNR=4.3

comp=Z,1.3nm,1.2s

TXAR	**Lajitas Array**	**32.80**	**357**	P	**P**	**17 18 09.7**	**-0.1**
SAND	**Sanderson**	**33.38**	**360**	P	**P**	**17 18 13.4**	**-1.5**
SAND				IAmb	IAmb	17 18 20.3	

comp=Z,3.9nm,1.2s

SDV	**Santo Domingo**	**33.60**	**68**	LR	LR	17 30 20.1	

comp=Z,180nm,20.1s,baz=257,slow=33

ALPN	**Alpine**	**33.84**	**357**	P	**P**	**17 18 16.7**	**-2.2**
ALPN				IAmb	IAmb	17 18 42.5	

comp=Z,4.3nm,1.2s

PB16	**IPOC Station P**	**34.95**	**117**	P	**P**	**17 18 29.5**	**+0.3**
PB16				IAmb	IAmb	17 18 44.9	

comp=Z,5.4nm,0.9s

LPAZ	**La Paz**	**35.53**	**113**	P	P	17 18 41.7	+7.3
LPAZ				LR	LR	17 31 03.8	

comp=Z,97nm,19.2s,baz=288,slow=32

comp=Z,0.6nm,0.6s

LPAZ	**La Paz**	**35.53**	**113**	P	**P**	**17 18 35.0**	**+0.6**
H03N2	**Juan Fernandez**	**36.63**	**147**	T	T	17 58 18.4	

baz=322,slow=78,SNR=18

H03N1	**Juan Fernandez**	**36.65**	**147**	T	T	17 58 09.5	

baz=322,slow=78,SNR=26

H03N3	**Juan Fernandez**	**36.65**	**147**	T	T	17 58 09.4	

baz=322,slow=78,SNR=21

TAOE	**Nuku Hiva Isla**	**38.31**	**260**	*e*LR	LR	17 28 50.8	

comp=Z,225nm,23.3s

PFO	**Pinyon Flats O**	**39.48**	**341**	LR	LR	17 31 30.1	

comp=Z,172nm,21.4s,baz=153,slow=30

SJG	**San Juan**	**41.36**	**57**	LR	LR	17 33 54.7	

comp=Z,108nm,20.2s,baz=206,slow=32

NVAR	**Mina Array Bea**	**44.49**	**342**	LR	LR	17 34 48.9	

comp=Z,85nm,18.3s,baz=152,slow=31

PDAR	**Pinedale Array**	**46.68**	**352**	P	**P**	**17 20 06.3**	**+1.0**

comp=Z,0.2nm,0.3s,baz=167,slow=7.2,SNR=4.1

PDAR				LR	LR	17 36 26.3	

comp=Z,37nm,19.5s,baz=126,slow=32

comp=Z,0.2nm,0.3s

PDAR	**Pinedale Array**	**46.68**	**352**	P	**P**	**17 20 04.0**	**-1.3**
CPUP	**Villa Florida**	**48.30**	**122**	LR	LR	17 37 56.2	

comp=Z,56nm,19.1s,baz=50,slow=32

PPT	**Papeete**	**48.67**	**250**	LR	LR	17 35 22.1	

comp=Z,96nm,18.4s,baz=84,slow=30

PPT2	**Papeete2**	**48.67**	**250**	*e*LR	LR	17 33 33.2	

comp=Z,322nm,25.2s

PPT2				*e*LR	LR	17 33 35.0	

comp=Z,182nm,28.0s

YBH	**Yreka Blue Hor**	**48.93**	**339**	LR	LR	17 36 45.4	

comp=Z,84nm,21.7s,baz=164,slow=31

TBI	**Tubuai**	**49.89**	**242**	*e*LR	LR	17 34 09.8	

comp=Z,2μm,29.5s

MDP	**Montagnes des**	**50.01**	**80**	LR	LR	17 40 15.4	

comp=Z,94nm,18.9s,baz=322,slow=34

I07A	**Izee**	**50.03**	**344**	P	**P**	**17 20 30.0**	**-1.0**
NEW	**Newport**	**53.34**	**347**	LR	LR	17 40 44.4	

comp=Z,90nm,20.0s,baz=148,slow=33

ULM	**Lac du Bonnet**	**53.91**	**5**	P	**P**	**17 21 00.8**	**+1.2**

comp=Z,0.5nm,0.3s,baz=180,slow=10,SNR=2.0

ULM				LR	LR	17 43 02.6	

comp=Z,97nm,19.9s,baz=194,slow=35

comp=Z,0.5nm,0.3s

ULM	**Lac du Bonnet**	**53.91**	**5**	P	**P**	**17 21 00.0**	**+0.4**
ULM				IAmb	IAmb	17 21 19.1	

comp=Z,3.9nm,1.0s

SPB	**Sao Paulo**	**56.19**	**116**	P	**P**	**17 21 15.7**	**-0.9**
VAO	**Valinhos**	**56.49**	**115**	P	**P**	**17 21 18.2**	**-0.8**
USHA	**Ushuaia**	**57.82**	**158**	LR	LR	17 40 22.8	

comp=Z,120nm,19.2s,baz=224,slow=30

RAR	**Rarotonga**	**58.78**	**247**	LR	LR	17 39 09.3	

comp=Z,110nm,21.1s,baz=98,slow=28

SCHQ	**Schefferville**	**65.09**	**22**	LR	LR	17 49 21.1	

comp=Z,134nm,21.8s,baz=262,slow=35

YKA	**Yellowknife Ar**	**66.63**	**354**	P	**P**	**17 22 26.4**	**-0.2**
YKA				LR	LR	17 50 26.0	

comp=Z,1.3nm,1.0s,baz=170,slow=5.9,SNR=4.7

comp=Z,99nm,18.3s,baz=88,slow=35

comp=Z,1.3nm,1.0s

PMSA	**Palmer Station**	**66.79**	**163**	LR	LR	17 43 53.4	

comp=Z,144nm,20.2s,baz=150,slow=29

KDAK	**Kodiak Island**	**73.37**	**334**	LR	LR	17 47 48.8	

comp=Z,123nm,18.4s,baz=112,slow=30

ILAR	**Eielson Array**	**75.75**	**342**	P	**P**	**17 23 22.3**	**+0.5**

comp=Z,0.3nm,0.8s,baz=124,slow=6.9,SNR=2.6

comp=Z,0.3nm,0.8s

ILAR	**Eielson Array**	**75.75**	**342**	P	**P**	**17 23 21.7**	**-0.1**
URZ	**Urewera**	**80.66**	**232**	LR	LR	17 52 41.8	

comp=Z,87nm,18.3s,baz=201,slow=31

RPZ	**Rata Peaks**	**85.35**	**227**	LR	LR	17 51 21.6	

comp=Z,8.5nm,20.6s,baz=45,slow=28

QSPA	**South Pole Qui**	**86.44**	**180**	P	**P**	**17 24 18.3**	**-0.6**

comp=Z,1.1nm,0.9s,baz=122,slow=4.8,SNR=3.5

comp=Z,1.1nm,0.9s

QSPA	**South Pole Qui**	**86.44**	**180**	P	**P**	**17 24 18.9**	**0.0**
SHEM	**Shemya Is, Ala**	**89.19**	**323**	LR	LR	17 54 54.4	

comp=Z,77nm,21.5s,baz=112,slow=29

SNAA	**Sanae**	**89.46**	**162**	LR	LR	17 56 07.4	

comp=Z,106nm,19.3s,baz=131,slow=30

H11N3	**WAKE ISLAND Hy**	**92.28**	**290**	T	T	19 05 55.3	

baz=93,slow=75,SNR=22

H11N2	**WAKE ISLAND Hy**	**92.29**	**290**	T	T	19 05 55.5	

baz=93,slow=75,SNR=35

H11N1	**WAKE ISLAND Hy**	**92.30**	**289**	T	T	19 05 56.4	

baz=93,slow=75,SNR=21

H11S2	**WAKE ISLAND Hy**	**92.41**	**288**	T	T	19 06 06.3	

baz=94,slow=75,SNR=40

H11S1	**WAKE ISLAND Hy**	**92.42**	**288**	T	T	19 06 03.4	

baz=94,slow=75,SNR=30

H11S3	**WAKE ISLAND Hy**	**92.43**	**288**	T	T	19 06 05.9	

baz=94,slow=75,SNR=24

ESDC	**Sonseca Array**	**98.44**	**51**	LR	LR	18 02 54.5	

comp=Z,77nm,18.8s,baz=194,slow=31

PETK	**Petropavlovsk-**	**99.10**	**323**	LR	LR	18 01 53.5	

comp=Z,45nm,20.6s,baz=80,slow=31

BRTR	**Keskin Array B**	**126.13**	**42**	PKP	**PKiKP**	**17 30 40.2**	**+0.4**

comp=Z,0.9nm,0.9s,baz=247,slow=0.9,SNR=3.9

ZALV	**Zalesovo Beam**	**129.52**	**355**	PKP	**PKiKP**	**17 30 47.3**	**+1.3**

comp=Z,0.6nm,0.5s,baz=11,slow=3.1,SNR=1.9

SONM	**Songino Array**	**129.65**	**335**	PKP	**PKiKP**	**17 30 46.5**	**-0.1**

comp=Z,0.3nm,0.4s,baz=336,slow=3.2,SNR=1.6

BVAR	**Borovoye Array**	**130.34**	**6**	PKP	**PKiKP**	**17 30 49.4**	**+1.6**

comp=Z,1.3nm,0.8s,baz=70,slow=1.7,SNR=6.3

KURBB	**Kurchatov Arra**	**133.16**	**360**	PKP	**PKPdf**	**17 30 52.4**	**+0.2**

comp=Z,0.4nm,0.8s,baz=29,slow=2.2,SNR=5.3

MKAR	**Makanchi Array**	**136.83**	**356**	PKP	**PKiKP**	**17 31 01.3**	**+0.3**

comp=Z,0.8nm,1.1s,baz=1.9,slow=3.6,SNR=3.9

CMAR	**Chiang Mai Arr**	**154.79**	**307**	PKPbc	**PKPbc**	**17 31 38.5**	**-0.3**

comp=Z,0.6nm,0.7s,baz=49,slow=2.6,SNR=4.1

JMA 07 17:25:48.3±0.1, 29.°N±1.°×14.°1E±.°, h35km, MV3.8/11, NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.56**	**149**	P	Pn	17 26 28.9	+1.7
CBIJ				*e*S	Sn	17 26 58.8	+1.8
JHO	**Hitachi**	**7.29**	**359**	P	Pn	17 27 35.6	+3.4
JHO				*e*S	Sn	17 28 53.8	0.0

IDC 07 17:28:41.0±3.2, 22.°64N×12.°12W, h0km, mb3.4/2, mbtmp3.3/3, ML3.2/1, MS4.1/3, Error ellipse: s-maj=105.1km s-min=50.2km az=84.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**16.18**	**123**	Pn	Pn	17 32 29.8	0.0

0.1nm,0.3s,baz=312,slow=12,SNR=1.6

0.2nm,0.3s

GERES	**GERESS Array B**	**33.20**	**32**	P	P	17 35 19.8	+0.2

0.3nm,0.4s,baz=229,slow=10,SNR=2.9

0.3nm,0.4s

TSUM	**Tsumeb**	**50.72**	**143**	LR	LR	17 57 39.8	

comp=Z,38nm,20.4s,baz=227,slow=34

MATP	**Matopo**	**58.34**	**134**	LR	LR	18 03 16.3	

comp=Z,277nm,18.6s,baz=102,slow=36

ARTI	**Arti**	**60.69**	**37**	LR	LR	18 06 09.2	

comp=Z,132nm,21.9s,baz=317,slow=37

MKAR	**Makanchi Array**	**76.74**	**45**	P	P	17 40 34.0	-0.3

0.2nm,0.5s,baz=305,slow=5.1,SNR=2.4

0.2nm,0.5s

WRA	**Warramunga Arr**	**148.67**	**91**	PKPbc	PKPbc	17 48 29.9	-1.0

0.5nm,1.1s,baz=288,slow=2.2,SNR=2.0

ASAR	**Alice Springs**	**148.79**	**99**	PKPbc	PKPbc	17 48 31.0	-0.2

0.3nm,0.6s,baz=297,slow=1.6,SNR=5.3

IDC 07 17:34:54.8±2.7, 7.°00S×129.°05E, h183km±39km, mb3.0/1, mbtmp3.5/5, Error ellipse: s-maj=61.7km s-min=20.2km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.48**	**20**	P	Pn	17 36 28.3	+0.1

1.5nm,0.3s,baz=12,slow=19,SNR=12

SIJI				S	Sn	17 37 36.3	-5.6

2.0nm,0.6s,baz=269,slow=24,SNR=6.3

FITZ	**Fitzroy Crossi**	**11.52**	**196**	P	Pn	17 37 33.2	-0.8

5.2nm,1.2s,baz=12,slow=10.0,SNR=6.9

FITZ				S	Sn	17 39 33.4	-8.7

3.6nm,0.9s,baz=347,slow=20,SNR=8.0

WRA	**Warramunga Arr**	**13.85**	**159**	P	Pn	17 38 04.7	+1.1

0.4nm,0.5s,baz=340,slow=12,SNR=5.3

WRA				S	Sn	17 40 23.1	-15

0.2nm,0.4s,baz=338,slow=22,SNR=5.3

ASAR	**Alice Springs**	**17.21**	**165**	P	P	17 38 43.2	0.0

0.3nm,0.7s,baz=337,slow=9.7,SNR=6.8

ASAR				S	S	17 41 42.5	-11

0.2nm,0.8s,baz=330,slow=13,SNR=2.0

MKAR	**Makanchi Array**	**67.71**	**327**	P	P	17 45 32.5	+0.1

0.4nm,0.7s,baz=115,slow=6.8,SNR=2.3

0.4nm,0.7s

CATAC 07 17:37:54.9±0.7, 12.°N±2.°×87.°6W±.°, h6km±3km, M1.8/5, MLv1.8/5, Error ellipse: s-maj=5.1km s-min=2.9km az=32.8, confirmed, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOMN	**Momotombo**	**0.10**	**321**	P	Pg	17 37 57.8	+0.8
MOMN				S	Sg	17 37 59.4	+0.9
MOMN	**Momotombo**	**0.10**	**321**	P	Pg	17 37 57.9	+0.8
MOMN				S	Sg	17 37 59.3	+0.8
MOM2	**El Cardon**	**0.10**	**357**	P	Pg	17 37 58.1	+1.0
MOM2				S	Sg	17 38 00.0	+1.3
MOM2	**El Cardon**	**0.10**	**357**	P	Pg	17 37 58.2	+1.1
MOM2				S	Sg	17 38 00.2	+1.5
APQ3	**Volcan Apoyequ**	**0.12**	**120**	S	Sg	17 38 00.2	+1.0
APYN	**Apoyeque**	**0.16**	**128**	S	Sg	17 38 01.9	+1.5
MACN	**El Madrono**	**0.23**	**304**	P	Pg	17 38 00.7	+1.2
MACN				S	Sg	17 38 04.2	+1.7
MACN	**El Madrono**	**0.23**	**304**	P	Pg	17 38 00.7	+1.2
MACN				S	Sg	17 38 04.5	+1.9
CNGA	**Al SSO del Vol**	**0.27**	**306**	P	Pn	17 38 04.8	-0.7
CNGN	**Cerro Negro**	**0.27**	**308**	P	Pg	17 37 59.8	-0.4
CNGN				S	Sg	17 38 05.2	+1.4
CNGN	**Cerro Negro**	**0.27**	**308**	P	Pg	17 37 59.8	-0.4
CNGN				S	Sg	17 38 05.4	+1.6
MGAN	**Managua**	**0.29**	**129**	P	Pn	17 38 08.1	+2.4

ROCN	**Rota Cerro Neg**	**0.32**	**305**	S	Sg	17 38 06.8	+1.4
MATN	**Matagalpa**	**0.80**	**42**	S	Sg	17 38 21.4	+0.7
BOAB	**BOACO BROADBAN**	**0.80**	**82**	P	Pg	17 38 10.7	+0.4
BOAB				S	Sb	17 38 22.0	-0.3
BOAB	**BOACO BROADBAN**	**0.80**	**82**	P	Pb	17 38 10.8	-0.4
BOAB				S	Sb	17 38 21.9	-0.4
RCON	**San Juan de Ri**	**1.19**	**15**	S	Sg	17 38 33.3	+0.2

*IDC **07** 17:40:35.4±20.0, 27.°27N×53.°66E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=387.6km s-min=36.1km az=178.0*

*TEH **07** 17:40:41.7, 27.°63N×53.°47E, h11km±20km, ML3.3, Presumed earthquake*

*DSN **07** 17:40:47.9±0.9, 27.°29N×53.°49E, h10km, ML3.2/7, Error ellipse: s-maj=8.8km s-min=7.8km az=56.0*

ISC 07 17:40:41.6±0.8, 27.°66N±0.°04×53.°46E±0.°05, h10km, n24, σ2s29/26, mb3.9/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.14**	**263**	Pg	**Pg**	**17 40 45.7**	**+0.9**
KHL1				Sg	**Sg**	**17 40 49.0**	**+1.9**
LMD1	**Lamerd**	**0.41**	**219**	Pg	**Pb**	**17 40 51.0**	**+0.1**
JHRM	**Jahrom**	**0.85**	**7**	Pg	**Pb**	**17 40 59.5**	**+0.9**
QIR1	**Qir**	**0.90**	**336**	Pg	**Pn**	**17 41 00.8**	**+0.5**
GENO	**Geno**	**2.43**	**95**	Pn	**Pb**	**17 41 24.3**	**-1.2**
NGRK	**Negar Kerman**	**3.50**	**55**	Pn	**Pn**	**17 41 39.0**	**+2.6**
UOSS	**Minazif**	**3.66**	**137**	P	**Pn**	**17 41 39.9**	**+1.6**
HATD	**Hatta, Dubai**	**3.70**	**139**	P	**Pn**	**17 41 41.1**	**+2.2**
KRBR	**Kerman**	**3.71**	**51**	Pn	**Pn**	**17 41 42.4**	**+3.1**
ASHO	**Ashiyiah**	**3.77**	**141**	P	**Pn**	**17 41 42.0**	**+2.1**
ASHO				S	**Sn**	**17 42 24.8**	**+0.4**
KHGB	**Koh Gabri**	**3.79**	**44**	Pn	**Pn**	**17 41 43.0**	**+2.8**
IMEH	**Mehriz**	**3.86**	**15**	Pn	**Pn**	**17 41 44.5**	**+3.3**
ALNE	**Al Ain**	**4.14**	**150**	P	**Pn**	**17 41 46.7**	**+1.8**
CHMN	**Cheshme madani**	**4.21**	**58**	Pn	**Pn**	**17 41 49.2**	**+3.1**
IBAF	**Bafgh**	**4.33**	**25**	Pn	**Pn**	**17 41 50.7**	**+3.0**
SOHO	**SOHO**	**4.47**	**141**	P	**Pn**	**17 41 52.4**	**+2.9**
MZR	**Muzera**	**4.63**	**180**	P	**Pn**	**17 41 53.6**	**+1.9**
KBAM	**BAM**	**4.64**	**70**	Pn	**Pn**	**17 41 54.4**	**+2.5**
BRTR	**Keskin Array B**	**20.36**	**311**	P	**P**	**17 45 16.8**	**-1.7**

0.2nm,0.3s,baz=140,slow=11,SNR=2.5

0.2nm,0.3s

BVAR	**Borovoye Array**	**28.29**	**22**	P	**P**	**17 46 32.7**	**-2.5**

1.9nm,0.9s,baz=210,slow=8.3,SNR=9.2

1.9nm,0.9s

KURBB	**Kurchatov Arra**	**29.81**	**33**	P	**P**	**17 46 45.4**	**-3.2**

0.4nm,0.7s,baz=227,slow=9.3,SNR=4.2

0.4nm,0.7s

ZALV	**Zalesovo Beam**	**34.90**	**33**	P	**P**	**17 47 30.7**	**-2.5**

0.4nm,0.3s,baz=230,slow=8.2,SNR=4.6

0.4nm,0.3s

| | | | | | | | |
|---

	24nm,0.4s								
SHLS	**Shalkode**	**3.37**	**31**	*e*P		**Pg**		**17 43 06.3**	**-1.0**
	4.3nm,0.2s								
SHLS				*e*S		**Sg**		**17 43 52.7**	**+1.7**
	24nm,0.4s								
KPKS	**Kokpek**	**3.39**	**20**	Pg		**Pb**		**17 43 02.6**	**-0.2**
	0.2nm,0.1s								
KPKS				Lg		Lg		17 43 46.3	
	17nm,0.5s								
KPKS	**Kokpek**	**3.39**	**20**	*e*P		**Pb**		**17 43 02.6**	**-0.2**
	0.2nm,0.1s								
KPKS				*e*S		**Sb**		**17 43 46.3**	**+2.2**
	17nm,0.5s								
KTBS	**Karatobe**	**3.43**	**355**	Pg		**Pb**		**17 43 05.5**	**+2.1**
	0.4nm,0.2s								
KTBS				Lg		Lg		17 43 51.2	
	47nm,0.6s								
KTBS	**Karatobe**	**3.43**	**355**	*e*P		**Pb**		**17 43 05.5**	**+2.1**
	0.4nm,0.2s								
KTBS				*e*S		**Sg**		**17 43 51.2**	**-1.5**
	47nm,0.6s								
PDGK	**Podgornoye**	**3.53**	**30**	⇑Pg		**Pg**		**17 43 07.9**	**-2.4**
	6.1nm,0.6s								
PDGK				⇑Lg		Lg		17 43 54.4	
	26nm,0.5s								
KRBS	**Karabastau**	**3.56**	**343**	Pg		**Pg**		**17 43 08.6**	**-2.2**
	12nm,0.3s								
KRBS				Lg		Lg		17 43 56.5	
	6.7nm,0.5s								
KRBS	**Karabastau**	**3.56**	**343**	*e*P		**Pg**		**17 43 08.6**	**-2.2**
	12nm,0.3s								
KRBS				*e*S		**Sg**		**17 43 56.5**	**-0.3**
	6.7nm,0.5s								
SGDS	**Sogindy**	**3.65**	**331**	Pg		**Pg**		**17 43 10.1**	**-2.4**
	4.1nm,0.2s								
SGDS				Lg		Lg		17 43 59.1	
	14nm,0.4s								
ARXS	**Arharly**	**3.96**	**8**	Pg		**Pb**		**17 43 15.1**	**+2.7**
	1.8nm,0.2s								
ARXS				Lg		Lg		17 44 07.7	
	23nm,0.5s								
ARXS	**Arharly**	**3.96**	**8**	*e*P		**Pb**		**17 43 15.1**	**+2.7**
	1.8nm,0.2s								
ARXS				*e*S		**Sg**		**17 44 07.7**	**-2.0**
	23nm,0.5s								
KNOS	**Konyrlen**	**4.35**	**20**	Pg		**Pb**		**17 43 21.5**	**+2.3**
	1.8nm,0.5s								
KNOS				Lg		Lg		17 44 18.3	
	5.5nm,0.4s								
DJR	**Jarkent**	**4.51**	**26**	Pg		**Pb**		**17 43 24.7**	**+2.8**
	3.6nm,0.4s								
DJR				Lg		Lg		17 44 24.3	
	6.0nm,0.4s								
DJR	**Jarkent**	**4.51**	**26**	*e*P		**Pb**		**17 43 24.6**	**+2.8**
	3.6nm,0.4s								
DJR				*e*S		**Sg**		**17 44 24.3**	**-3.1**
	6.0nm,0.4s								
KK31	**Karatay Array**	**5.66**	**302**	⇓Pg		**Pg**		**17 43 49.2**	**-1.8**
	1.1nm,0.5s,baz=131,slow=17,SNR=9.4								
KK31				⇑Lg		Lg		17 45 05.9	
	2.6nm,0.6s,baz=129,slow=24								
MAKZ	**Makanchi**	**7.42**	**27**	⇑Lg		Lg		17 45 56.5	
	2.5nm,1.9s								
MK31	**Makanchi Array**	**7.52**	**29**	Pn		**Pn**		**17 43 51.5**	**-0.7**
	0.1nm,0.3s,baz=203,slow=12,SNR=9.3								
MK31				⇑Lg		Lg		17 46 00.5	
	0.3nm,0.5s,baz=211,slow=28								

*SOME **07** 17:55:43.3, 40°.28N×77°.13E, h10km*
*NNC **07** 17:55:45.4±0.8, 40°.36N×77°.15E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=5.3km s-min=3.5km az=166.0*
*KRNET **07** 17:55:46.8±0.1, 40°.43N×77°.12E, h16km, mb3.8*

ISC 07 17:55:49.4±2.3, 40°.54N±0°.07×77°.10E±0°.03, h6km±14km, n65, σ1°38/94, 20C-20D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRN	**Naryn**	**1.22**	**317**	⇓*i*	P	**Pn**	**17 56 11.9**	**-1.4**
NRN				⇓*i*	S	**Sn**	**17 56 29.9**	**-0.4**
JNKS	**Jany-Kuch**	**1.23**	**295**	⇑*i*	P	**Pn**	**17 56 10.7**	**-2.6**
JNKS				⇑*i*	S	**Sb**	**17 56 28.7**	**-0.7**
TARG	**Taragay, Kyrgy**	**1.30**	**24**	⇓*i*	P	**Pn**	**17 56 13.4**	**-1.1**
TARG				⇓*i*	S	**Sn**	**17 56 32.5**	**0.0**
KDJ	**Kajisay**	**1.59**	**2**	⇑*i*	P	**Pb**	**17 56 18.5**	**-0.8**
KDJ				⇑*i*	S	**Sg**	**17 56 41.5**	**+0.9**
BOOM	**Boomskoye usch**	**2.14**	**336**	⇑*i*	P	**Pb**	**17 56 27.1**	**-1.5**
BOOM				⇑*i*	S	**Sb**	**17 56 56.5**	**+1.1**
PRZ	**Przheval'sk**	**2.18**	**26**	⇓*e*	P	**Pb**	**17 56 27.3**	**-2.0**
PRZ				⇓*e*	S	**Sb**	**17 56 57.1**	**+0.5**
ANVS	**Anan'yevo**	**2.28**	**11**	⇓*i*	P	**Pb**	**17 56 29.3**	**-1.8**
ANVS				⇓*i*	S	**Sb**	**17 57 00.2**	**+0.5**
TNSS	**Tian-Shan**	**2.50**	**357**	Pn		**Pb**	**17 56 34.9**	**-0.1**
	17nm,0.4s							
TNSS				Lg		Lg	17 57 11.7	
	33nm,0.4s							
TNSS	**Tian-Shan**	**2.50**	**357**	*e*P		**Pb**	**17 56 34.9**	**-0.1**
	17nm,0.4s							
TNSS				*e*S		**Sg**	**17 57 11.7**	**+2.0**
	33nm,0.4s							
IZV	**Izvestkoviy**	**2.52**	**352**	Pg		**Pb**	**17 56 35.2**	**0.0**
	52nm,0.4s							
IZV				Lg		Lg	17 57 12.3	
	113nm,0.5s							
IZV	**Izvestkoviy**	**2.52**	**352**	*e*P		**Pb**	**17 56 35.1**	**0.0**
	52nm,0.4s							
IZV				*e*S		**Sg**	**17 57 12.3**	**+1.8**
	113nm,0.5s							
UCH	**Uchtor**	**2.58**	**312**	P		**Pb**	**17 56 35.4**	**-0.8**
	SNR=14							
UCH	**Uchtor**	**2.58**	**312**	⇑*i*	P	**Pn**	**17 56 33.0**	**+1.0**
UCH				⇑*i*	S	**Sb**	**17 57 06.9**	**-1.4**
MDOK	**Medeo**	**2.62**	**359**	Pg		**Pb**	**17 56 36.3**	**-0.6**
	16nm,0.4s							
MDOK				Lg		Lg	17 57 14.4	
	201nm,0.3s							
TKM2	**Tokmak 2**	**2.63**	**335**	P		**Pb**	**17 56 37.0**	**-0.1**
	SNR=16							
TKM2	**Tokmak 2**	**2.63**	**335**	⇑*i*	P	**Pn**	**17 56 34.0**	**+1.4**
TKM2				⇑*i*	S	**Sb**	**17 57 08.5**	**-1.3**
KST	**Kastek**	**2.64**	**342**	Pg		**Pb**	**17 56 37.4**	**+0.2**
	24nm,0.2s							
KST				Lg		Lg	17 57 16.0	
	85nm,0.3s							
KST	**Kastek**	**2.64**	**342**	*e*P		**Pb**	**17 56 37.4**	**+0.2**
	24nm,0.2s							
KST				*e*S		**Sg**	**17 57 16.0**	**+1.7**
	85nm,0.3s							
KBK	**Karagaybulak**	**2.66**	**323**	P		**Pb**	**17 56 37.1**	**-0.4**
	SNR=84							
KBK	**Karagaybulak**	**2.66**	**323**	⇓*i*	P	**Pn**	**17 56 34.3**	**+1.3**
KBK				⇓*i*	S	**Sb**	**17 57 08.9**	**-1.6**
KNDC	**Almaty**	**2.68**	**358**	⇓Pg		**Pb**	**17 56 36.8**	**-1.0**
	160nm,1.1s							
KNDC				⇑Lg		Lg	17 57 17.9	
	427nm,0.6s							
KOTS	**Kotyrbulak**	**2.69**	**0**	Pg		**Pb**	**17 56 37.5**	**-0.6**
	32nm,0.3s							
KOTS				Lg		Lg	17 57 16.4	
	480nm,0.8s							
KOTS	**Kotyrbulak**	**2.69**	**0**	*e*P		**Pb**	**17 56 37.5**	**-0.6**
	32nm,0.3s							
KOTS				*e*S		**Sg**	**17 57 16.4**	**+0.4**
	480nm,0.8s							
SATY	**Saty**	**2.70**	**21**	Pg		**Pb**	**17 56 37.6**	**-0.7**
	14nm,0.5s							
SATY				Lg		Lg	17 57 16.3	
	135nm,0.3s							
SATY	**Saty**	**2.70**	**21**	*e*P		**Pb**	**17 56 37.6**	**-0.7**
	14nm,0.5s							
SATY				*e*S		**Sg**	**17 57 16.3**	**+0.1**
	135nm,0.3s							
SFK	**Sufi-Kurgan**	**2.80**	**260**	⇑*e*	P	**Pn**	**17 56 35.0**	**+0.1**
SFK				⇑*e*	S	**Sn**	**17 57 10.1**	**+1.0**
AAK	**Ala-Archa**	**2.87**	**318**	P		**Pb**	**17 56 42.4**	**+1.4**
	SNR=25							
AAK	**Ala-Archa**	**2.87**	**318**	⇓Pg		**Pb**	**17 56 40.3**	**-0.8**
	34nm,0.8s							
AAK				⇓Lg		Lg	17 57 22.7	
	68nm,0.7s							
AAK	**Ala-Archa**	**2.87**	**318**	⇓*i*	P	**Pn**	**17 56 37.0**	**+1.2**
AAK				⇓*i*	S	**Sb**	**17 57 13.8**	**-2.6**
FRU1	**Bishkek**	**2.93**	**322**	⇑*e*	P	**Pn**	**17 56 38.0**	**+1.5**
FRU1				⇑*e*	S	**Sb**	**17 57 15.4**	**-2.7**
UZB	**Uzynbulak**	**2.98**	**28**	Pg		**Pb**	**17 56 42.1**	**-0.8**
	12nm,0.5s							
UZB				Lg		Lg	17 57 24.2	
	51nm,0.3s							
UZB	**Uzynbulak**	**2.98**	**28**	*e*P		**Pb**	**17 56 42.1**	**-0.8**
	12nm,0.5s							
UZB				*e*S		**Sg**	**17 57 24.2**	**-0.8**
	51nm,0.3s							
CHMS	**Chumysh**	**3.02**	**325**	P		**Pb**	**17 56 41.9**	**-1.7**
	SNR=18							
KURS	**Kuram**	**3.06**	**15**	Pg		**Pb**	**17 56 44.4**	**+0.2**
	19nm,0.5s							
KURS				Lg		Lg	17 57 28.1	
	38nm,0.7s							
KURS	**Kuram**	**3.06**	**15**	*e*P		**Pb**	**17 56 44.4**	**+0.2**
	19nm,0.5s							
KURS				*e*S		**Sg**	**17 57 28.1**	**+0.7**
	38nm,0.7s							
KPKS	**Kokpek**	**3.16**	**21**	Pg		**Pb**	**17 56 45.1**	**-0.8**
	0.3nm,0.2s							
KPKS				Lg		Lg	17 57 29.3	
	41nm,0.5s							
KPKS	**Kokpek**	**3.16**	**21**	*e*P		**Pb**	**17 56 45.1**	**-0.8**
	0.3nm,0.2s							
KPKS				*e*S		**Sg**	**17 57 29.3**	**-1.5**
	41nm,0.5s							
KTBS	**Karatobe**	**3.19**	**355**	Pg		**Pb**	**17 56 46.6**	**+0.2**
	0.6nm,0.1s							
KTBS				Lg		Lg	17 57 31.8	
	109nm,0.5s							
KTBS	**Karatobe**	**3.19**	**355**	*e*P		**Pb**	**17 56 46.6**	**+0.2**
	0.6nm,0.1s							
KTBS				*e*S		**Sg**	**17 57 31.8**	**+0.1**
	109nm,0.5s							
EKS2	**Erkin-Say**	**3.27**	**312**	P		**Pb**	**17 56 45.7**	**-2.2**
	SNR=12							
PDGK	**Podgornoye**	**3.31**	**32**	⇑Pg		**Pb**	**17 56 48.5**	**-0.1**
	26nm,0.7s							
PDGK				⇓Lg		Lg	17 57 36.1	
	149nm,1.0s							
KRBS	**Karabastau**	**3.33**	**342**	Pg		**Pb**	**17 56 49.1**	**+0.3**
	30nm,0.4s							
KRBS				Lg		Lg	17 57 36.4	
	64nm,0.5s							
KRBS	**Karabastau**	**3.33**	**342**	*e*P		**Pb**	**17 56 49.1**	**+0.3**
	30nm,0.4s							
KRBS				*e*S		**Sg**	**17 57 36.4**	**+0.1**
	64nm,0.5s							
USP	**Ospenovka**	**3.35**	**325**	P		**Pb**	**17 56 46.3**	**-2.8**
	SNR=19							
SGDS	**Sogindy**	**3.44**	**329**	Pg		**Pb**	**17 56 51.1**	**+0.3**
	5.0nm,0.3s							
SGDS				Lg		Lg	17 57 39.6	
	53nm,0.4s							
MRKS	**Merke**	**3.64**	**309**	Pg		**Pb**	**17 56 54.3**	**+0.1**
	9.3nm,0.4s							
MRKS				Lg		Lg	17 57 45.2	
	32nm,0.4s							
MRKS	**Merke**	**3.64**	**309**	*e*P		**Pb**	**17 56 54.3**	**+0.1**
	9.3nm,0.4s							
MRKS				*e*S		**Sg**	**17 57 45.2**	**-1.3**
	32nm,0.4s							
ARXS	**Arharly**	**3.71**	**8**	Pg		**Pb**	**17 56 56.4**	**+1.0**
	9.7nm,0.6s							
ARXS				Lg		Lg	17 57 48.6	
	58nm,0.6s							
ARXS	**Arharly**	**3.71**	**8**	*e*P		**Pb**	**17 56 56.4**	**+1.0**
	9.7nm,0.6s							
ARXS				*e*S		**Sg**	**17 57 48.6**	**0.0**
	58nm,0.6s							
KTMS	**Ketmen**	**3.79**	**39**	Pg		**Pb**	**17 56 57.0**	**+0.4**
	6.2nm,0.3s							
KTMS				Lg		Lg	17 57 49.5	
	19nm,0.5s							
KTMS	**Ketmen**	**3.79**	**39**	*e*P		**Pb**	**17 56 57.0**	**+0.4**
	6.2nm,0.3s							
KTMS				*e*S		**Sg**	**17 57 49.5**	**-1.5**
	19nm,0.5s							
KNOS	**Konyrlen**	**4.12**	**21**	Pg		**Pb**	**17 57 03.8**	**+1.4**
	3.7nm,0.4s							
KNOS				Lg		Lg	17 58 01.5	
	16nm,0.4s							
DJR	**Jarkent**	**4.28**	**27**	Pg		**Pb**	**17 57 05.7**	**+0.6**
	2.0nm,0.3s							
DJR				Lg		Lg	17 58 05.1	
	16nm,0.4s							
DJR	**Jarkent**	**4.28**	**27**	*e*P		**Pb**	**17 57 05.8**	**+0.6**
	2.0nm,0.3s							
DJR				*e*S		**Sg**	**17 58 05.1**	**-1.8**
	16nm,0.4s							
BTLS	**Baital**	**5.03**	**335**	Pg		**Pb**	**17 57 20.1**	**+2.3**
	4.1nm,0.6s							
BTLS				Lg		Lg	17 58 29.5	
	34nm,0.3s							
BTLS	**Baital**	**5.03**	**335**	*e*P		**Pb**	**17 57 20.1**	**+2.3**
	4.1nm,0.6s							
BTLS				*e*S		**Sg**	**17 58 29.5**	**-1.4**
	34nm,0.3s							
KK31	**Karatay Array**	**5.55**	**300**	⇑Pg		**Pb**	**17 57 29.7**	**+3.0**
	4.6nm,0.6s,baz=124,slow=16,SNR=18							
KK31				⇑Lg		Lg	17 58 46.2	
	9.9nm,0.7s,baz=129,slow=28							
IUG	**Iuzhnay**	**5.56**	**289**	Pg		**Pb**	**17 57 28.4**	**+1.6**
	7.3nm,0.4s							
IUG				Lg		Lg	17 58 44.0	
	22nm,0.4s							
IUG	**Iuzhnay**	**5.56**	**289**	*e*P		**Pb**	**17 57 28.4**	**+1.6**
	7.3nm,0.4s							
IUG				*e*S		**Sg**	**17 58 44.0**	**-3.8**
	22nm,0.4s							
BRLS	**Boroldaу**	**5.97**	**297**	Pg		**Pb**	**17 57 37.4**	**+3.6**
	0.6nm,0.3s							
BRLS				Lg		Lg	17 58 60.0	
	4.2nm,0.6s							
BRLS	**Boroldaу**	**5.97**	**297**	*e*P		**Pb**	**17 57 37.5**	**+3.6**
	0.6nm,0.3s							
BRLS				*e*S		**Sg**	**17 58 60.0**	**-1.1**
	4.2nm,0.6s							
MAKZ	**Makanchi**	**7.20**	**28**	⇑Pn		**Pn**	**17 57 34.8**	**-0.3**
	1.2nm,0.9s							
MAKZ				⇓Lg		Lg	17 59 38.2	
	10nm,1.6s							
MK31	**Makanchi Array**	**7.30**	**29**	Pn		**Pn**	**17 57 37.0**	**+0.5**
	0.3nm,0.3s,baz=205,slow=13,SNR=16							
MK31				⇓Lg		Lg	17 59 42.3	
	1.7nm,0.6s,baz=208,slow=26							
KURBB	**Kurchatov Arra**	**10.14**	**5**	⇓Lg		Lg	18 01 13.4	
	8.0nm,0.7s							
KURK	**Kurchatov**	**10.23**	**5**	⇓Pn		**Pn**	**17 58 16.6**	**-0.1**
KURK				⇑Lg		Lg	18 01 16.3	
	5.8nm,1.2s							

IDC 07 18:17:33.8±1.9, 17°.16S×173°.35W, h0km, mb3.3/3, mbtmp3.4/4, ML3.3/1, MS2.9/1, Error ellipse: s-maj=55.0km s-min=35.3km az=124.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**3.57**	**25**	Pn		Pn	18 18 30.4	-0.1
	2.8nm,0.3s,baz=25,slow=19,SNR=1.6							
AFI				Sn		Sn	18 19 00.1	-14
	8.1nm,0.3s,baz=27,slow=20,SNR=6.3							
AFI				LR		LR	18 19 54.0	
	comp=Z,153nm,18.4s,baz=218,slow=39							
	11nm,0.4s							
WRA	**Warramunga Arr**	**49.51**	**258**	P		P	18 26 26.2	-0.4
	0.4nm,0.9s,baz=96,slow=8.1,SNR=1.4							
	0.4nm,0.9s							
ASAR	**Alice Springs**	**49.63**	**253**	P		P	18 26 27.6	+0.1
	0.3nm,0.6s,baz=94,slow=7.6,SNR=7.3							
	0.3nm,0.6s							
VNDA	**Vanda**	**61.64**	**186**	P		P	18 27 53.0	+0.1
	0.2nm,0.4s,baz=40,slow=7.9,SNR=2.0							
	0.2nm,0.4s							

*TAP **07** 18:21:41.8, 24°.38N×122°.09E, h58km, ML3.7, B*
*JMA **07** 18:21:41.2±0.1, 24°.3N±0°.5×122°.2E±0°.2, h56km±1km, MV3.1/16, TAIWAN REGION*

ISC 07 18:21:41.5±1.2, 24°.35N±0°.02×122°.19E±0°.02, h57km±5km, n167, σ1°14/304, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS2	**EOS2**	**0.08**	**31**	*i* P		**Pn**	**18 21 50.4**	**+0.6**
EOS2				S		**Sn**	**18 21 57.0**	**+1.1**
EOS3	**EOS3**	**0.14**	**120**	*i* P		**Pn**	**18 21 50.6**	**+0.6**
EOS3				S		**Sn**	**18 21 57.5**	**+1.3**
EOS4	**EOS4**	**0.26**	**153**	*e*P		**Pn**	**18 21 50.6**	**+0.1**
EOS4				S		**Sn**	**18 21 57.6**	**+0.6**
ESAO	**Su ao**	**0.39**	**305**	P		**Pn**	**18 21 52.0**	**0.0**
ESAO				*e*S		**Sn**	**18 21 59.3**	**-0.2**
EWUT	**Wuta**	**0.39**	**284**	*i* P		**Pn**	**18 21 51.8**	**-0.2**
EWUT				S		**Sn**	**18 21 59.1**	**-0.4**
TWC	**Suao**	**0.40**	**310**	*i* P		**Pn**	**18 21 52.1**	**0.0**
TWC				S		**Sn**	**18 21 59.0**	**-0.8**
EAHA	**Aohua**	**0.41**	**267**	*e*P		**Pn**	**18 21 52.0**	**-0.2**
EAHA				S		**Sn**	**18 22 00.1**	**+0.2**
EHP	**Heping Village**	**0.41**	**264**	P		**Pn**	**18 21 52.1**	**-0.2**
EHP				*e*S		**Sn**	**18 22 00.3**	**+0.3**
NDS	**Dongshan**	**0.51**	**303**	*i* P		**Pn**	**18 21 53.5**	**+0.1**
NDS				S		**Sn**	**18 22 02.0**	**+0.1**
EGS		**0.54**	**335**	*e*P		**Pn**	**18 21 53.8**	**+0.1**
ETL	**Fush Village**	**0.55**	**250**	*e*P		**Pn**	**18 21 53.3**	**-0.5**
ETL				*e*S		**Sn**	**18 22 02.1**	**-0.6**
NACB	**Ninganchiao**	**0.57**	**252**	P		**Pn**	**18 21 53.2**	**-0.7**
NACB	**Ninganchiao**	**0.57**	**252**	S		**Sn**	**18 22 00.9**	**-2.2**
NACB	**Ninganchiao**	**0.57**	**252**	P		**Pn**	**18 21 53.3**	**-0.7**
NACB				*i* S		**Sn**	**18 22 02.7**	**-0.4**
ILA	**Ilan**	**0.57**	**316**	P		**Pn**	**18 21 54.6**	**+0.6**
ILA				*i* S		**Sn**	**18 22 03.4**	**+0.3**
NTC	**Toucheng**	**0.60**	**327**	*e*P		**Pn**	**18 21 56.5**	**+2.2**
NTC				*e*S		**Sn**	**18 22 04.2**	**+0.6**
TWE	**Neicheng**	**0.60**	**308**	*i* P		**Pn**	**18 21 54.6**	**+0.3**
TWE				S		**Sn**	**18 22 03.7**	**0.0**
TWD	**Chiawan**	**0.61**	**243**	*i* P		**Pn**	**18 21 53.8**	**-0.6**
TWD				*e*S		**Sn**	**18 22 03.1**	**-0.6**
LATG	**Datong**	**0.63**	**287**	*e*P		**Pn**	**18 21 54.8**	**0.0**
LATG				*e*S		**Sn**	**18 22 04.3**	**-0.2**
ENTT	**Nioudou**	**0.64**	**297**	*i* P		**Pn**	**18 21 55.0**	**+0.2**
ENTT				*e*S		**Sn**	**18 22 04.7**	**+0.2**
HWA	**Hwalien**	**0.65**	**235**	*i* P		**Pn**	**18 21 54.7**	**-0.2**
HWA				*e*S		**Sn**	**18 22 05.1**	**+0.4**
ETLH	**Xiulin Townshi**	**0.66**	**257**	*i* P		**Pn**	**18 21 54.8**	**-0.4**
ETLH				*e*S		**Sn**	**18 22 04.0**	**-1.1**
NDT	**Datong Townshi**	**0.66**	**292**	*e*P		**Pn**	**18 21 55.4**	**+0.3**
NDT				S		**Sn**	**18 22 05.6**	**+0.6**
TWB1	**Santiao Chiao**	**0.68**	**344**	P		**Pn**	**18 21 55.0**	**-0.3**
TWB1				S		**Sn**	**18 22 04.3**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.68**	**307**	*i* P		**Pn**	**18 21 55.8**	**+0.4**
FUSB				S		**Sn**	**18 22 06.0**	**+0.5**
JYNG	**Yonagunijimaku**	**0.70**	**82**	P		**Pn**	**18 21 55.7**	**+0.3**
JYNG				S		**Sn**	**18 22 06.0**	**+0.4**
TIPB	**Shuangxi**	**0.70**	**332**	*i* P		**Pn**	**18 21 55.5**	**0.0**
TIPB				*e*S		**Sn**	**18 22 05.6**	**-0.2**
TEYL	**Yanliau Villag**	**0.72**	**228**	*i* P		**Pn**	**18 21 55.3**	**-0.6**
TEYL				*e*S		**Sn**	**18 22 06.1**	**-0.2**
NNSB	**Datong**	**0.74**	**276**	⇑*i* P		**Pn**	**18 21 55.9**	**-0.2**
NNSB				S		**Sn**	**18 22 06.3**	**-0.5**
ETM	**Tongmen**	**0.74**	**239**	*e*P		**Pn**	**18 21 55.5**	**-0.6**
ETM				S		**Sn**	**18 22 06.5**	**-0.3**
NNS	**Nan Shan**	**0.75**	**277**	*i* P		**Pn**	**18 21 56.1**	**-0.2**
NNS				S		**Sn**	**18 22 06.7**	**-0.3**
NWLT	**Wulai**	**0.75**	**304**	*e*P		**Pn**	**18 21 56.8**	**+0.5**
NWLT				S		**Sn**	**18 22 07.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.76**	**82**	P		**Pn**	**18 21 56.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.76**	**82**	*e*P		**Pn**	**18 21 56.6**	**+0.4**
YOJ				*e*S		**Sn**	**18 22 07.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.76**	**82**	*e*P		**Pn**	**18 21 56.5**	**+0.2**
YOJ				*e*S		**Sn**	**18 22 07.2**	**+0.3**
LXIB	**Xiulin Townshi**	**0.78**	**245**	*i* P		**Pn**	**18 21 56.0**	**-0.7**
LXIB				S		**Sn**	**18 22 07.6**	**-0.3**
SXI1	**Grass Mountain**	**0.79**	**339**	P		**Pn**	**18 21 56.5**	**-0.3**
SXI1				S		**Sn**	**18 22 07.3**	**-0.7**
SHUL	**Shoufeng**	**0.80**	**226**	*i* P		**Pn**	**18 21 56.5**	**-0.3**
SHUL				*e*S		**Sn**	**18 22 08.2**	**-0.2**
NWF	**Wu-fen Shan**	**0.81**	**333**	*i* P		**Pn**	**18 21 57.0**	**0.0**
NWF				*e*S		**Sn**	**18 22 07.5**	**-0.7**
WFSB	**Wu-fen Shan**	**0.81**	**333**	*i* P		**Pn**	**18 21 57.0**	**+0.1**
WFSB				*e*S		**Sn**	**18 22 07.8**	**-0.3**
YHNB	**Yeheng**	**0.81**	**293**	P		**Pn**	**18 21 56.9**	**0.0**
YHNB	**Yeheng**	**0.81**	**293**	*i* P		**Pn**	**18 21 57.2**	**+0.2**
YHNB				S		**Sn**	**18 22 08.0**	**-0.3**
NSK	**Sanguang**	**0.82**	**293**	*i* P		**Pn**	**18 21 57.2**	**+0.1**
NSK				S		**Sn**	**18 22 08.4**	**-0.2**
TWA	**Mucha**	**0.83**	**319**	*i* P		**Pn**	**18 21 57.5**	**+0.3**
TWA				S		**Sn**	**18 22 08.7**	**-0.1**
NHDH	**Xindian Distri**	**0.86**	**315**	*e*P		**Pn**	**18 21 57.6**	**0.0**
NHDH				S		**Sn**	**18 22 10.0**	**+0.7**
WHF	**Hehuan Shan**	**0.87**	**256**	*i* P		**Pn**	**18 21 57.7**	**-0.4**
WHF				*e*S		**Sn**	**18 22 09.3**	**-0.9**
FUSS	**Fushou**	**0.87**	**263**	*i* P		**Pn**	**18 21 57.9**	**0.0**
FUSS				S		**Sn**	**18 22 09.5**	**-0.4**
TEGC	**Jichi Village**	**0.87**	**223**	*e*P		**Pn**	**18 21 57.6**	**-0.2**
TEGC				S		**Sn**	**18 22 09.9**	**+0.3**
ESL	**Shilin**	**0.88**	**232**	*e*P		**Pn**	**18 21 57.0**	**-0.8**
ESL				*e*S		**Sn**	**18 22 07.8**	**-2.0**
TNOU	**National Taiwa**	**0.88**	**335**	*e*P		**Pn**	**18 21 57.5**	**-0.3**
TNOU				S		**Sn**	**18 22 09.0**	**-0.8**
NHY	**Taipei**	**0.89**	**321**	*e*P		**Pn**	**18 21 58.3**	**+0.4**
TATO

TWQ1	**Liyutan**	**1.29 270**	*eP*	**Pn**	**18 22 05.5 +2.2**
TWQ1			*eS*	**Sn**	**18 22 20.8 +1.2**
TYC	**Yuchr**	**1.30 250**	*eP*	**Pn**	**18 22 04.0 +0.6**
TYC			*eS*	**Sn**	**18 22 20.5 +0.8**
CHKH	**Chenggong**	**1.37 212**	*eP*	**Pn**	**18 22 03.5 -0.7**
CHKH			*eS*	**Sn**	**18 22 19.0 -2.4**
WHYT	**Xinyi Township**	**1.39 242**	*eP*	**Pn**	**18 22 05.3 +0.8**
WHYT			*eS*	**Sn**	**18 22 23.4 +1.4**
TCU	**Taichung**	**1.40 262**	*eP*	**Pn**	**18 22 05.4 +0.8**
TCU			*eS*	**Sn**	**18 22 24.2 +2.1**
IRIF	**Iriomote-Funau**	**1.41 90**	P	**Pn**	**18 22 05.0 +0.2**
IRIF			S	**Sn**	**18 22 22.3 0.0**
FULB	**Fuli**	**1.41 216**	*eP*	**Pn**	**18 22 04.3 -0.6**
FULB			*eS*	**Sn**	**18 22 21.2 -1.3**
WDJ	**Dajia District**	**1.41 270**	*eP*	**Pn**	**18 22 05.8 +0.9**
WDJ			*eS*	**Sn**	**18 22 23.4 +0.9**
WJS	**Zhushan**	**1.44 249**	*eP*	**Pn**	**18 22 06.7 +1.4**
WJS			*eS*	**Sn**	**18 22 25.8 +2.7**
WNT	**Mingjian**	**1.45 251**	*eP*	**Pn**	**18 22 07.3 +1.8**
CHKT	**Chengkung**	**1.46 211**	*eP*	**Pn**	**18 22 04.4 -1.1**
CHKT			*eS*	**Sn**	**18 22 20.5 -3.1**
EHD	**Haiduan**	**1.50 217**	*eP*	**Pn**	**18 22 05.0 -1.1**
EHD			*eS*	**Sn**	**18 22 23.8 -0.8**
HATJ	**Hateruma jima**	**1.50 101**	*eP*	**Pn**	**18 22 07.0 +0.9**
HATJ			*eS*	**Sn**	**18 22 25.6 +0.9**
WCHH	**Zhanghua**	**1.51 260**	*eP*	**Pn**	**18 22 07.4 +1.2**
WCHH			*eS*	**Sn**	**18 22 26.4 +1.5**
ALS	**Alishan**	**1.52 237**	*eP*	**Pn**	**18 22 07.3 +0.7**
ALS			*eS*	**Sn**	**18 22 26.7 +1.2**
WCH1	**Changhua City**	**1.52 260**	*eP*	**Pn**	**18 22 08.3 +1.9**
WCH1			*eS*	**Sn**	**18 22 26.9 +1.6**
ECS	**Chishang**	**1.54 216**	*eP*	**Pn**	**18 22 06.3 -0.3**
ECS			*eS*	**Sn**	**18 22 25.8 +0.2**
CHN5	**Tsauling**	**1.57 242**	P	**Pn**	**18 22 08.2 +1.0**
CHN5			S	**Sn**	**18 22 28.5 +1.9**
ELDTW	**Lidau**	**1.58 223**	*eP*	**Pn**	**18 22 06.7 -0.6**
ELDTW			*eS*	**Sn**	**18 22 25.5 -1.3**
EDH	**Donghe**	**1.60 211**	*eP*	**Pn**	**18 22 06.7 -0.7**
EDH			*eS*	**Sn**	**18 22 25.2 -1.8**
WGK	**Gukeng**	**1.63 246**	*eP*	**Pn**	**18 22 09.6 +1.7**
WGK			*eS*	**Sn**	**18 22 30.9 +3.1**
WDL	**Douliou City**	**1.64 247**	*eP*	**Pn**	**18 22 09.8 +1.8**
WDL			*eS*	**Sn**	**18 22 30.9 +2.9**
WDLH	**Douliu**	**1.65 247**	*eP*	**Pn**	**18 22 09.8 +1.7**
WDLH			*eS*	**Sn**	**18 22 30.2 +2.0**
JKRS	**Kuro-shima**	**1.67 94**	*eP*	**Pn**	**18 22 09.1 +0.7**
JKRS			*eS*	**Sn**	**18 22 29.4 +0.8**
WCKO	**Fanlu**	**1.71 238**	*eP*	**Pn**	**18 22 10.3 +1.3**
WCKO			*eS*	**Sn**	**18 22 32.2 +2.4**
WRL	**Guolierlin Hig**	**1.71 255**	*eP*	**Pn**	**18 22 09.8 +0.8**
WRL			*eS*	**Sn**	**18 22 30.5 +0.7**
RLNB	**Erlin**	**1.73 255**	*eP*	**Pn**	**18 22 09.8 +0.5**
RLNB			*eS*	**Sn**	**18 22 31.8 +1.6**
LONT	**Longtian**	**1.74 214**	*eP*	**Pn**	**18 22 08.4 -0.9**
LONT			*eS*	**Sn**	**18 22 28.9 -1.5**
STYH	**Taoyuan**	**1.75 228**	*eP*	**Pn**	**18 22 10.2 +0.7**
STYH			S	**Sn**	**18 22 31.9 +1.2**
TPUB	**Ta-pu**	**1.77 234**	P	**Pn**	**18 22 10.4 +0.6**
TPUB	**Ta-pu**	**1.77 234**	S	**Sn**	**18 22 32.1 +0.8**
TPUB	**Ta-pu**	**1.77 234**	*i* P	**Pn**	**18 22 11.2 +1.4**
TPUB			S	**Sn**	**18 22 33.1 +1.8**
WTK	**Tuku**	**1.77 248**	P	**Pn**	**18 22 10.8 +1.0**
WTK			S	**Sn**	**18 22 32.5 +1.2**
JIJ	**Ishigaki jima**	**1.78 89**	P	**Pn**	**18 22 10.0 +0.1**
JIJ			S	**Sn**	**18 22 31.2 -0.3**
LDUT	**Ludao**	**1.80 202**	*eP*	**Pn**	**18 22 08.3 -1.8**
LDUT			S	**Sn**	**18 22 29.5 -2.4**
WTP	**Ta-pu**	**1.81 233**	P	**Pn**	**18 22 11.8 +1.3**
WTP			S	**Sn**	**18 22 34.6 +2.2**
CHY	**Chiayi**	**1.83 243**	*eP*	**Pn**	**18 22 12.0 +1.5**
CHY			*eS*	**Sn**	**18 22 34.9 +2.4**
TWGBT	**Beinan**	**1.84 214**	P	**Pn**	**18 22 10.2 -0.5**
TWGBT	**Beinan**	**1.84 214**	*eP*	**Pn**	**18 22 10.4 -0.2**
TWGBT			*eS*	**Sn**	**18 22 30.9 -1.9**
TWG	**Pinlang**	**1.84 214**	*eP*	**Pn**	**18 22 09.8 -0.9**
TWG			*eS*	**Sn**	**18 22 30.6 -2.2**
TTN	**Taitung**	**1.86 211**	*eP*	**Pn**	**18 22 11.5 +0.5**
TTN			S	**Sn**	**18 22 33.5 +0.3**
TWK	**Hsinying**	**1.90 236**	*eP*	**Pn**	**18 22 12.8 +1.3**
TWK			S	**Sn**	**18 22 36.6 +2.2**
CHN1	**Nanshi**	**1.92 233**	*eP*	**Pn**	**18 22 13.1 +1.3**
CHN1			*eS*	**Sn**	**18 22 37.7 +3.0**
WSF	**Szhu**	**1.94 249**	P	**Pn**	**18 22 12.7 +0.7**
WSF			*eS*	**Sn**	**18 22 36.8 +1.6**
SGST	**Jiashian**	**1.94 230**	*eP*	**Pn**	**18 22 12.5 +0.5**
SGST			S	**Sn**	**18 22 37.3 +1.9**
JISG	**Ishigakijimahi**	**1.95 83**	P	**Pn**	**18 22 12.2 +0.1**
JISG			S	**Sn**	**18 22 34.8 -0.7**
SLGT	**Liugui**	**1.96 227**	*eP*	**Pn**	**18 22 13.3 +0.9**
SLGT			*eS*	**Sn**	**18 22 38.8 +3.0**
WSL	**Shuilin Townsh**	**1.98 246**	*eP*	**Pn**	**18 22 13.8 +1.2**
WSL			S	**Sn**	**18 22 37.6 +1.4**
ICHU	**Yijhu**	**2.01 241**	*eP*	**Pn**	**18 22 14.2 +1.2**
ICHU			S	**Sn**	**18 22 39.4 +2.4**
ECL	**Taimali**	**2.08 213**	*eP*	**Pn**	**18 22 13.0 -1.1**
ECL			*eS*	**Sn**	**18 22 36.9 -2.0**
SCST	**Cishan**	**2.13 227**	*eP*	**Pn**	**18 22 16.6 +1.9**
SCST			*eS*	**Sn**	**18 22 43.9 +3.8**
SSD	**Sandimen**	**2.15 222**	*eP*	**Pn**	**18 22 16.1 +1.2**
SSD			*eS*	**Sn**	**18 22 42.9 +2.5**
TSMG	**Majia**	**2.17 221**	*eP*	**Pn**	**18 22 16.4 +1.2**
SCLT	**Jiali**	**2.17 238**	*eP*	**Pn**	**18 22 16.5 +1.3**
SCLT			*eS*	**Sn**	**18 22 43.5 +2.7**
TWM1	**Shoushan**	**2.22 227**	*eP*	**Pn**	**18 22 13.5 +2.5**
MASBT	**Mashibuluo**	**2.25 220**	*eP*	**Pn**	**18 22 16.5 +0.3**
MASBT			*eS*	**Sn**	**18 22 44.2 +1.4**
JTJ	**Tarama**	**2.31 82**	P	**Pn**	**18 22 17.9 +0.9**
JTJ			S	**Sn**	**18 22 44.7 +0.4**
EAST	**Anshuo**	**2.32 212**	*eP*	**Pn**	**18 22 18.7 +1.4**
LAY	**Lan-yu**	**2.38 194**	*eP*	**Pn**	**18 22 16.9 -1.2**
LYUB	**Lan-yu**	**2.41 193**	*eP*	**Pn**	**18 22 17.0 -1.4**
SCZT	**Fangliau**	**2.44 216**	*eP*	**Pn**	**18 22 21.1 +2.1**
SCZT			S	**Sn**	**18 22 50.3 +2.7**
SLIU	**Shizi**	**2.48 211**	*eP*	**Pn**	**18 22 19.6 +0.1**
PNG	**Penghu**	**2.53 253**	P	**Pn**	**18 22 19.6 -0.6**
PNG			S	**Sn**	**18 22 48.4 -1.5**
PHUB	**P'eng-hu**	**2.54 251**	*eP*	**Pn**	**18 22 19.9 -0.3**
PHUB			S	**Sn**	**18 22 49.0 -1.0**
WDGT	**Dungji**	**2.56 245**	P	**Pn**	**18 22 20.9 +0.3**
WDGT			S	**Sn**	**18 22 49.5 -0.6**
VWUC	**VWUC**	**2.57 285**	*eP*	**Pn**	**18 22 19.8 -0.9**
VWUC			*eS*	**Sn**	**18 22 47.8 -3.0**
SMST	**Manzhou Townsh**	**2.63 208**	P	**Pn**	**18 22 21.2 -0.3**
SMST			*eS*	**Sn**	**18 22 50.9 -1.4**
HEN	**Hengchun**	**2.69 210**	*eP*	**Pn**	**18 22 23.3 +0.9**
HEN			*eS*	**Sn**	**18 22 53.4 -0.3**
MATB	**Ma-tsu**	**2.71 312**	*eP*	**Pn**	**18 22 22.0 -0.6**
MATB			*eS*	**Sn**	**18 22 52.2 -2.0**
TWKBT	**Hengchun**	**2.71 208**	*eP*	**Pn**	**18 22 22.4 -0.2**
TWK1	**Hengchun**	**2.72 208**	*eP*	**Pn**	**18 22 22.3 -0.4**
VCHM	**Qimei**	**2.77 246**	*eP*	**Pn**	**18 22 24.0 +0.6**
VCHM			S	**Sn**	**18 22 55.3 -0.5**
JIRJ	**Irabujima**	**2.78 79**	S	**Sn**	**18 22 57.0 +1.2**
PTMZ	**Houxiangcun**	**2.87 284**	*eP*	**Pn**	**18 22 24.0 -0.8**
LYJJ	**Jianjiangzhen**	**3.10 315**	*eP*	**Pn**	**18 22 27.5 -0.4**
LYJJ			*eS*	**Sn**	**18 23 02.2 -1.5**
XPSS	**Dashiqiu**	**3.14 325**	*eP*	**Pn**	**18 22 28.0 -0.4**
MHZQ	**Yeshan**	**3.35 302**	*eP*	**Pn**	**18 22 30.8 -0.5**
MHZQ			*eS*	**Sn**	**18 23 07.3 -2.6**
KNMB	**Chin-men Tao**	**3.47 273**	*eP*	**Pn**	**18 22 32.3 -0.6**
AXDP	**Jialang**	**3.88 279**	*eP*	**Pn**	**18 22 38.4 -0.2**

*IDC **07** 18:50:03.5±1.1,34˚.13N×25˚.70E,h0km,mb3.7/10, mbtmp3.6/16,ML3.4/6,Error ellipse: s-maj=22.1km s-min=15.4km az=23.0*
*ISK **07** 18:50:06.9,34˚.15N×25˚.71E,h3km,ML2.9/15*
*THE **07** 18:50:08.9,34˚N±19˚×2˚6E±1˚4,h0km±22km,M2.8/6, ML2.8/6*
*ATH **07** 18:50:09.6,34˚.35N×25˚.62E,h9km±1km,ML2.9/7,Latitude uncertainty: 6 km; Longitude uncertainty: 2 km*
*GII **07** 18:50:11.4±0.0,33˚.551N±0˚.003×26˚.172E±0˚.001, h0km,Mws3.0,confirmed*

ISC 07 18:50:04.1±1.6,**34˚04N**±0˚.05×**25˚76E**±0˚.03,**h7**km±10km, **n70**,σ2**°23**/91,**mb3.8**/9,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.14**	**19**	Pg	**Pn**	**18 50 27.1**	**+0.6**
ZKR				Sg	**Sn**	**18 50 43.0**	**+0.6**
ZKR	**Zakros**	**1.14**	**19**	P	**Pb**	**18 50 26.6**	**+0.5**
ZKR	**Zakros**	**1.14**	**19**	P	**Pb**	**18 50 26.9**	**+0.7**
ZKR				S	**Sg**	**18 50 39.8**	**-1.1**
AGNA	**Agios Nikolaos**	**1.15**	**358**	P	**Pg**	**18 50 25.9**	**-0.3**
NPS	**Neapolis**	**1.23**	**354**	P	**Pb**	**18 50 28.0**	**+0.3**
NPS				S	**Sg**	**18 50 42.6**	**-1.1**
NPS	**Neapolis**	**1.23**	**354**	P	**Pg**	**18 50 26.9**	**-0.8**
NPS				S	**Sg**	**18 50 39.6**	**-4.1**
SIVA	**Sivas**	**1.26**	**322**	P	**Pg**	**18 50 27.8**	**-0.4**
SIVA	**Sivas**	**1.26**	**322**	P	**Pg**	**18 50 27.8**	**-0.4**
IDI	**Anoyia**	**1.44**	**330**	Pn	**Pn**	**18 50 31.1**	**+0.4**
	9.0nm,0.3s,baz=143,slow=21,SNR=15						
IDI				Sn	**Sb**	**18 50 47.8**	**-2.1**
	18nm,0.3s,baz=120,slow=22,SNR=11						
IDI	**Anoyia**	**1.44**	**330**	Pn	**Pg**	**18 50 32.9**	**+1.1**
IDI				Sn	**Sn**	**18 50 52.6**	**+2.7**
IDI	**Anoyia**	**1.44**	**330**	P	**Pn**	**18 50 31.3**	**+0.6**
IDI	**Anoyia**	**1.44**	**330**	P	**Pn**	**18 50 30.8**	**+0.1**
GVD	**Gavdhos**	**1.60**	**301**	Pn	**Pg**	**18 50 35.7**	**+0.9**
GVD				Sn	**Sg**	**18 50 56.4**	**+0.9**
GVD	**Gavdhos**	**1.60**	**301**	P	**Pg**	**18 50 35.1**	**+0.4**
GVD	**Gavdhos**	**1.60**	**301**	P	**Pg**	**18 50 35.1**	**+0.4**
VAM	**Vamos**	**1.88**	**317**	P	**Pb**	**18 50 38.3**	**-0.4**
KARP	**Karpathos**	**1.90**	**37**	Pn	**Pb**	**18 50 40.5**	**+1.4**
KARP	**Karpathos**	**1.90**	**37**	P	**Pb**	**18 50 40.4**	**+1.4**
KARP	**Karpathos**	**1.90**	**37**	P	**Pb**	**18 50 40.2**	**+1.1**
KARP	**Karpathos**	**1.90**	**37**	P	**Pb**	**18 50 40.4**	**+1.4**
IMMV	**Iera Moni Meta**	**2.04**	**315**	Pn	**Pb**	**18 50 41.9**	**+0.4**
IMMV	**Iera Moni Meta**	**2.04**	**315**	P	**Pb**	**18 50 41.0**	**-0.5**
KNDR	**Palaiochora Ch**	**2.13**	**305**	Pn	**Pb**	**18 50 43.0**	**0.0**
THERA	**Ancient Thera,**	**2.34**	**354**	P	**Pn**	**18 50 44.5**	**+1.5**
THERA	**Ancient Thera,**	**2.34**	**354**	P	**Pn**	**18 50 44.4**	**+1.5**
DAT	**Datca**	**3.07**	**28**	Pn	**Pb**	**18 50 56.9**	**-2.2**
KTHA	**Kythira Island**	**3.13**	**316**	Pn	**Pn**	**18 50 57.1**	**+3.2**
KTHA	**Kythira Island**	**3.13**	**316**	P	**Pn**	**18 50 55.7**	**+1.8**
TURN	**Turunc**	**3.40**	**36**	Pn	**Pn**	**18 51 01.7**	**+4.1**
VLI	**Veliai**	**3.53**	**320**	P	**Pn**	**18 51 01.0**	**+1.6**
DALY	**Dalyan (Mula)**	**3.64**	**40**	Pn	**Pn**	**18 51 05.4**	**+4.5**
YER	**Yerkesik**	**3.71**	**33**	Pn	**Pn**	**18 51 06.3**	**+4.4**
AKAS	**Kas**	**3.84**	**54**	Pn	**Pn**	**18 51 08.4**	**+4.7**
CAME	**Cameli-Denizli**	**4.09**	**44**	Pn	**Pn**	**18 51 11.9**	**+4.7**
AYDB	**Zeytinkoy-Aydi**	**4.27**	**23**	Pn	**Pn**	**18 51 13.9**	**+4.3**
APMY	**Acipayam-Deniz**	**4.48**	**39**	Pn	**Pn**	**18 51 17.2**	**+4.8**
CSS	**Mathiatis**	**6.32**	**79**	P	**Pn**	**18 51 41.5**	**+3.8**
	0.0nm0.1nm13nm,1.6s						
CSS	**Mathiatis**	**6.32**	**79**	P	Pn	18 51 42.6	+5.0
CSS				S	**Sn**	**18 52 54.3**	**+4.1**
KZIT	**Kziot**	**7.94**	**111**	P	**Pn**	**18 52 01.0**	**+1.1**
	0.0nm0.1nm17nm,1.1s						
KZIT	**Kziot**	**7.94**	**111**	P	**Pn**	**18 52 01.7**	**+1.9**
KZIT				S	**Sn**	**18 53 27.2**	**-2.7**
AMAZ	**Amatzia**	**8.10**	**105**	P	**Pn**	**18 52 04.1**	**+1.9**
AMAZ				S	**Sn**	**18 53 33.1**	**-1.0**
MMA0B	**Mount Meron ar**	**8.12**	**95**	P	**Pn**	**18 52 06.2**	**+3.8**
MMA0B				S	**Sn**	**18 53 34.1**	**-0.3**
MMAI	**Mount Meron Ar**	**8.12**	**95**	Pn	**Pn**	**18 52 05.2**	**+2.8**
	1.4nm,0.3s,baz=270,slow=9.8,SNR=5.7						
MMAI				Sn	**Sn**	**18 53 33.0**	**-1.4**
	2.2nm,0.3s,baz=274,slow=32,SNR=4.3 0.9nm,0.4s						
SALP	**Salfit**	**8.16**	**101**	P	**Pn**	**18 52 03.6**	**+0.7**
	13nm,0.5s						
GEM	**Giv'at Ha'Em**	**8.30**	**93**	P	**Pn**	**18 52 09.1**	**+4.2**
GEM	**Giv'at Ha'Em**	**8.30**	**93**	P	**Pn**	**18 52 08.7**	**+3.8**
GEM				S	**Sn**	**18 53 39.7**	**+0.8**
RMNI	**Mount Ramon**	**8.35**	**112**	P	**Pn**	**18 52 07.6**	**+1.9**
RMNI				S	**Sn**	**18 53 37.2**	**-3.1**
YITV	**Yitav**	**8.38**	**102**	P	**Pn**	**18 52 08.3**	**+2.3**
YITV				S	**Sn**	**18 53 39.5**	**-1.3**
BRTR	**Keskin Array B**	**8.49**	**46**	Pn	**Pn**	**18 52 08.8**	**+1.2**
	0.1nm,0.3s,baz=231,slow=16,SNR=2.2 0.4nm,0.8s						
MSBI	**Mazada**	**8.53**	**106**	P	**Pn**	**18 52 10.5**	**+2.5**
	2.5nm,0.6s						
MSBI				S	**Sn**	**18 53 43.7**	**-0.8**
	2.5nm,0.6s						
MSBI	**Mazada**	**8.53**	**106**	P	**Pn**	**18 52 10.1**	**+2.1**
MSBI				S	**Sn**	**18 53 43.3**	**-1.3**
GHAJ	**Ghor Haditha**	**8.70**	**106**	P	**Pn**	**18 52 12.9**	**+2.5**
GHAJ	**Ghor Haditha**	**8.70**	**106**	P	**Pn**	**18 52 12.8**	**+2.5**
GHAJ				S	**Sn**	**18 53 47.7**	**-1.0**
HRFI	**Mount Harif**	**8.82**	**114**	P	**Pn**	**18 52 14.5**	**+2.4**
	19nm,0.7s						
HRFI	**Mount Harif**	**8.82**	**114**	P	**Pn**	**18 52 13.9**	**+1.8**
HRFI				S	**Sn**	**18 53 48.9**	**-2.9**
EIL2	**Elat**	**8.94**	**117**	P	**Pn**	**18 52 15.1**	**+1.4**
EIL2				S	**Sn**	**18 53 51.7**	**-3.0**
EIL	**Elat**	**8.95**	**117**	Pn	**Pn**	**18 52 13.9**	**+0.2**
	1.1nm,0.3s,baz=246,slow=3.4,SNR=7.0						
EIL				Sn	**Sn**	**18 53 50.3**	**-4.5**
	0.5nm,0.3s,baz=315,slow=13,SNR=2.5 3.4nm,0.5s						
ASF	**Jabal al Asfar**	**9.53**	**98**	Pn	**Pn**	**18 52 22.4**	**+0.6**
	0.3nm,0.3s,baz=295,slow=23,SNR=1.8						
ASF				Sn	**Sn**	**18 54 06.6**	**-2.5**
	0.1nm,0.3s,baz=296,slow=24,SNR=1.4 1.1nm,0.4s						
AKASG	**Malin Array Be**	**16.85**	**8**	Pn	**Pn**	**18 53 59.3**	**-0.9**
	0.8nm,0.3s,baz=202,slow=11,SNR=4.7 0.4nm,0.4s						
GERES	**GERESS Array B**	**17.31**	**332**	Pn	**P**	**18 54 07.8**	**+0.2**
	baz=143,slow=13,SNR=4.9 0.7nm,0.7s						
ESDC	**Sonseca Array**	**24.38**	**292**	P	**P**	**18 55 22.9**	**0.0**
	0.3nm,0.6s,baz=82,slow=7.3,SNR=2.7 0.3nm,0.6s						
FINES	**FINESS Array B**	**27.43**	**0**	P	**P**	**18 55 48.5**	**-1.7**
	1.3nm,0.8s,baz=144,slow=13,SNR=3.4 1.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**29.24**	**326**	P	**P**	**18 56 05.9**	**-0.5**
	0.6nm,0.7s,baz=136,slow=9.5,SNR=1.8 0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.17**	**232**	P	**P**	**18 56 15.4**	**+0.4**
	0.8nm,0.7s,baz=42,slow=8.8,SNR=4.4 0.8nm,0.7s						
ARCES	**ARCESS Array B**	**35.55**	**360**	P	**P**	**18 56 59.6**	**-1.9**
	1.1nm,0.7s,baz=177,slow=8.3,SNR=4.7 1.1nm,0.7s						
BVAR	**Borovoye Array**	**36.77**	**45**	P	**P**	**18 57 11.1**	**-1.0**
	0.2nm,0.3s,baz=256,slow=8.2,SNR=1.9 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**41.45**	**50**	P	**P**	**18 57 52.8**	**+1.5**
	0.9nm,0.4s,baz=275,slow=8.5,SNR=14 0.9nm,0.4s						
MKAR	**Makanchi Array**	**43.99**	**56**	P	**P**	**18 58 12.9**	**+0.9**
	1.1nm,0.7s,baz=279,slow=5.6,SNR=6.1 1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**45.43**	**45**	P	**P**	**18 58 23.7**	**+0.4**
	0.7nm,0.4s,baz=274,slow=8.8,SNR=4.1 0.7nm,0.4s						
USRK	**Ussuriysk Ar.**	**77.28**	**45**	P	**P**	**19 01 59.3**	**+0.1**
	0.6nm,0.6s,baz=257,slow=2.3,SNR=2.7 0.6nm,0.8s						

*NEIC **07** 19:09:09.9±1.8,8˚.67N±0˚.06×138˚.01E±0˚.09,h10km±1km, mb4.5/56,Error ellipse: s-maj=15.9km s-min=9.0km az=295.0*
*DJA **07** 19:09:10.9±0.4,9˚N±4˚×13˚8E±˚,h10km,M4.8/12, mb4.8/12,mB5.4/6,Mw(mB)4.8/6*
*IDC **07** 19:09:15.8±2.6,8˚.68N×138˚.13E,h61km±28km,mb3.8/15, mbtmp4.2/18,ML4.5/3,MS3.5/45,Error ellipse: s-maj=21.4km s-min=12.1km az=96.0*

ISC 07 19:09:13.8±0.4,**8˚68N**±0˚.05×**138˚05E**±0˚.07,**h46**km,**n121**, σ1°**54**/75,**mb4.4**/43,**MS3.6**/39,**Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.28**	**53**	P	**Pn**	**19 11 12.8**	**+1.5**
	8.5nm,0.3s,baz=173,slow=16,SNR=5.1						
GUMO				S	**Sn**	**19 12 42.6**	**-1.0**
	70nm,1.1s,baz=352,slow=22,SNR=1.8						
GUMO				LR	LR	19 14 35.9	
	comp=Z,172nm,18.1s,baz=238,slow=39 27nm,0.4s						
GUMO	**Guam**	**8.28**	**53**		**Pn**	**19 11 09.2**	**-2.1**
GUMO					**Sn**	**19 12 42.6**	**-1.0**
BAKI	**Biak**	**10.00**	**191**	P	**Pn**	**19 11 37.3**	**+2.4**
	30nm,0.8s						
SRPI	**Serui, Papua**	**10.64**	**190**	P	**Pn**	**19 11 45.7**	**+2.0**
	32nm,0.7s						
GENI	**Genyem**	**11.40**	**169**	P	**Pn**	**19 11 57.8**	**+3.8**
	2μm91nm,0.9s						

JAY	**Jayapura**	**11.43**	**167**	P	**Pn**	**19 11 57.5**	**+2.9**
	5.6nm,0.3s,baz=290,slow=5.8,SNR=83							
JAY				S	**Sn**	**19 13 57.7**	**-3.3**
	5.7nm,0.4s,baz=138,slow=17,SNR=9.1							
JAY				LR	LR	19 15 33.0		
	comp=Z,385nm,19.8s,baz=341,slow=33 17nm,0.4s							
JAY	**Jayapura**	**11.43**	**167**	P	**Pn**	**19 11 57.5**	**+2.9**	
	30nm,0.9s							
SIJI	**Sorong**	**11.65**	**216**	P	**Pn**	**19 12 00.6**	**+3.1**	
	1.2nm,0.3s,baz=28,slow=16,SNR=6.4							
SIJI				LR	LR	19 15 23.7		
	comp=Z,274nm,21.8s,baz=128,slow=32 4.8nm,0.5s							
SIJI	**Sorong**	**11.65**	**216**	P	**Pn**	**19 11 59.4**	**+1.9**	
DAV	**Davao City (W)**	**12.46**	**263**	LR	LR	19 16 00.8		
	comp=Z,81nm,21.5s,baz=102,slow=32							
FAKI	**Fak Fak**	**12.89**	**207**	Pn	**Pn**	**19 12 13.0**	**-1.6**	
MANU	**Manus Island**	**14.13**	**139**	P	**P**	**19 12 37.1**	**-0.8**	
TGY	**Tagaytay City**	**17.62**	**289**	LR	LR	19 21 05.6		
	comp=Z,101nm,18.2s,baz=136,slow=40							
JCJ	**Chichijima**	**18.73**	**12**	LR	LR	19 18 58.6		
	comp=Z,114nm,19.9s,baz=136,slow=31							
KRVT	**Keravat (AS076**	**18.99**	**132**	LR	LR	19 19 29.9		
	comp=Z,30nm,21.4s,baz=204,slow=32							
PMG	**Port Moresby**	**20.13**	**153**	P	**P**	**19 13 44.7**	**+0.7**	
	46nm,1.0s,baz=360,slow=10.0,SNR=3.9							
PMG				LR	LR	19 20 47.8		
	comp=Z,229nm,21.4s,baz=310,slow=34 46nm,1.0s							
PMG	**Port Moresby**	**20.13**	**153**	P	**P**	**19 13 42.3**	**-1.8**	
TPUB	**Ta-pu**	**22.14**	**313**	P	**P**	**19 14 04.1**	**-1.7**	
TPUB				IAmb	IAmb	19 14 24.9		
	comp=Z,50nm,1.4s							
SSLB	**Suanglung**	**22.21**	**315**	P	**P**	**19 14 04.3**	**-2.2**	
SSLB				IAmb	IAmb	19 14 26.4		
	comp=Z,18nm,1.1s							
YHNB	**Yeheng**	**22.50**	**317**	P	**P**	**19 14 05.0**	**-4.7**	
YHNB				IAmb	IAmb	19 14 09.8		
	comp=Z,40nm,1.3s							
KAPI	**Kappang**	**22.76**	**234**	LR	LR	19 23 38.5		
	comp=Z,62nm,19.0s,baz=134,slow=38							
SOEI	**Soe**	**22.89**	**217**	P	**P**	**19 14 09.8**	**-4.1**	
BATI	**Baumata**	**23.61**	**218**	LR	LR	19 25 03.4		
	comp=Z,162nm,18.1s,baz=246,slow=40							
KNRA	**Kununurra**	**25.89**	**201**	P	**P**	**19 14 39.4**	**-2.2**	
JGF	**Kuroka**	**26.80**	**359**	P	**P**	**19 14 48.3**	**-1.4**	
JGF				IAmb	IAmb	19 15 32.5		
	comp=Z,12nm,0.8s							
MJAR	**Matsushiro Arr**	**27.73**	**0**	LR	LR	19 24 09.9		
	comp=Z,110nm,19.9s,baz=166,slow=32							
HNR	**Honiara**	**28.27**	**129**	LR	LR	19 25 29.6		
	comp=Z,5.6nm,18.9s,baz=11,slow=34							
WR8	**Warramunga Arr**	**28.67**	**187**	P	**P**	**19 15 06.6**	**+0.1**	
WR8				IAmb	IAmb	19 15 29.4		
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**28.68**	**187**	P	**P**	**19 15 06.1**	**-0.5**	
	comp=Z,0.6nm,0.9s,baz=4.1,slow=9.5,SNR=7.0 comp=Z,0.6nm,0.9s							
FITZ	**Fitzroy Crossi**	**29.30**	**205**	LR	LR	19 29 10.9		
	comp=Z,124nm,18.0s,baz=6.0,slow=41							
H11S3	**WAKE ISLAND Hy**	**29.45**	**68**	T	T	19 45 40.8		
	baz=253							
H11S1	**WAKE ISLAND Hy**	**29.47**	**68**	T	T	19 45 49.0		
	baz=253,slow=74							
H11S2	**WAKE ISLAND Hy**	**29.47**	**68**	T	T	19 45 46.8		
	baz=253,slow=74							
CTA	**Charters Tower**	**29.71**	**164**	LR	LR	19 25 52.6		
	comp=Z,74nm,20.9s,baz=8.5,slow=34							
CTAO	**Charters Tower**	**29.71**	**164**	P	**P**	**19 15 15.8**	**+0.2**	
H11N1	**WAKE IS

ARSB	**Arslanbob**	**65.64**	**311**	P	**P**		**19 19 54.0**	**+0.4**
ARSB				IAmb	IAmb		19 19 56.0	
	comp=Z,6.8nm,1.2s							
GAR	**Garm**	**67.30**	**309**	P	**P**		**19 20 04.5**	**+0.3**
KK31	**Karatay Array**	**67.74**	**313**	P	**P**		**19 20 06.4**	**-0.4**
KKAR	**Karatay Array**	**67.74**	**313**	P	**P**		**19 20 06.7**	**-0.1**
NRIK	**Noril'sk**	**68.69**	**343**	LR	LR		19 51 28.9	
	comp=Z,87nm,18.1s,baz=144,slow=37							
BVAR	**Borovoye Array**	**69.73**	**323**	P	**P**		**19 20 20.1**	**+1.1**
	comp=Z,4.9nm,0.8s,baz=113,slow=6.8,SNR=22							
	comp=Z,4.9nm,0.8s							
BORK	**Borovoye**	**69.77**	**323**		**P**		**19 20 19.8**	**+0.6**
KDAK	**Kodiak Island**	**71.74**	**32**	LR	LR		19 46 02.7	
	comp=Z,41nm,20.6s,baz=239,slow=31							
J19K	**Poorman**	**71.97**	**25**	IAmb	IAmb		19 20 36.0	
	comp=Z,5.6nm,1.1s							
G19K	**Purcell Mounta**	**72.07**	**23**	P	**P**		**19 20 33.3**	**+0.4**
G19K				IAmb	IAmb		19 20 36.4	
	comp=Z,4.0nm,1.0s							
H19K	**Roundabout Mou**	**72.11**	**23**		**P**		**19 20 34.6**	**+1.4**
J20K	**Nowinta River**	**72.64**	**25**	P	**P**		**19 20 37.6**	**+1.3**
J20K				IAmb	IAmb		19 20 40.4	
	comp=Z,3.1nm,1.0s							
CAST	**Castle Rocks**	**73.32**	**26**		**P**		**19 20 42.0**	**+1.6**
H21K	**Melozitna River**	**73.60**	**24**	IAmb	IAmb		19 20 44.3	
	comp=Z,3.0nm,0.7s							
L22K	**Petersville**	**73.69**	**27**	IAmb	IAmb		19 20 44.9	
	comp=Z,6.1nm,1.0s							
E21K	**Killik River**	**73.96**	**21**		**P**		**19 20 44.3**	**+0.2**
MLY	**Manley**	**74.28**	**25**	IAmb	IAmb		19 20 49.9	
	comp=Z,5.0nm,1.3s							
RND	**Reindeer**	**74.73**	**27**	P	**P**		**19 20 48.7**	**-0.1**
RND				IAmb	IAmb		19 20 51.1	
	comp=Z,3.8nm,1.0s							
MCK	**McKinley**	**74.76**	**26**	P	**P**		**19 20 49.0**	**+0.2**
MCK				IAmb	IAmb		19 20 51.4	
	comp=Z,7.9nm,1.1s							
WRH	**Wood River Hil**	**75.27**	**25**	IAmb	IAmb		19 20 54.0	
	comp=Z,9.1nm,1.4s							
E23K	**Chandalar**	**75.42**	**22**		**P**		**19 20 53.8**	**+1.2**
E23K				IAmb	IAmb		19 21 01.4	
	comp=Z,4.2nm,1.1s							
AB31	**Akbulak array**	**75.71**	**319**	P	**P**		**19 20 53.5**	**-1.1**
ABKAR	**Akbulak array**	**75.71**	**319**	P	**P**		**19 20 53.9**	**-0.6**
ILAR	**Eielson Array**	**75.83**	**25**	P	**P**		**19 20 55.5**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=250,slow=6.4,SNR=8.1							
ILAR				LR	LR		19 50 11.9	
	comp=Z,20nm,21.7s,baz=332,slow=32							
	comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**75.83**	**25**	P	**P**		**19 20 55.2**	**+0.3**
GLB	**Gilahina Butte**	**76.75**	**29**	IAmb	IAmb		19 21 08.3	
	comp=Z,5.1nm,0.8s							
E25K	**Arctic Village**	**76.92**	**22**	IAmb	IAmb		19 21 04.9	
	comp=Z,5.0nm,1.1s							
ARTI	**Arti**	**77.10**	**326**	LR	LR		19 56 00.9	
	comp=Z,38nm,21.2s,baz=132,slow=36							
ARTI	**Arti**	**77.10**	**326**		**P**		**19 21 01.6**	**-0.6**
ARTI				IAmb	IAmb		19 21 03.0	
	comp=Z,4.3nm,1.0s							
F26K	**Sheenjek River**	**77.39**	**22**	IAmb	IAmb		19 21 07.6	
	comp=Z,3.0nm,0.8s							
K27K	**Chicken**	**77.81**	**26**	IAmb	IAmb		19 21 10.3	
	comp=Z,4.6nm,1.2s							
I27K	**Kandik River**	**78.15**	**25**	IAmb	IAmb		19 21 11.2	
	comp=Z,3.8nm,1.0s							
L29M	**L29M**	**79.52**	**27**	IAmb	IAmb		19 21 19.9	
	comp=Z,6.1nm,1.2s							
K29M	**Barlow Dome**	**79.81**	**27**		**P**		**19 21 19.2**	**+2.0**
K29M				IAmb	IAmb		19 21 21.1	
	comp=Z,6.4nm,1.4s							
N30M	**Aishikik Lake**	**79.97**	**29**	IAmb	IAmb		19 21 28.6	
	comp=Z,3.3nm,0.7s							
I30M	**Mount Dempster**	**80.32**	**25**		**P**		**19 21 21.3**	**+1.3**
G30M	**tAoh Zraii Nji**	**80.39**	**23**	IAmb	IAmb		19 21 23.1	
	comp=Z,6.2nm,1.1s							
KIRV	**Kirov**	**81.95**	**328**	LR	LR		19 59 18.6	
	comp=Z,50nm,21.1s,baz=109,slow=37							
R33M	**Jennings River**	**83.10**	**31**		**P**		**19 21 35.5**	**+0.8**
R33M				IAmb	IAmb		19 21 38.8	
	comp=Z,2.6nm,0.9s							
DLBC	**Dease Lake**	**83.68**	**32**	LR	LR		19 52 13.4	
	comp=Z,24nm,21.4s,baz=144,slow=31							
ARCES	**ARCESS Array B**	**89.60**	**341**	LR	LR		20 07 07.3	
	comp=Z,60nm,18.8s,baz=102,slow=39							
YKA	**Yellowknife Ar**	**90.23**	**26**	LR	LR		20 00 48.3	
	comp=Z,50nm,20.5s,baz=306,slow=34							
YBH	**Yreka Blue Hor**	**91.11**	**48**	LR	LR		19 54 41.7	
	comp=Z,29nm,21.6s,baz=342,slow=30							
FINES	**FINESS Array B**	**92.65**	**334**	LR	LR		20 08 23.4	
	comp=Z,47nm,18.6s,baz=56,slow=38							
AKASG	**Malin Array Be**	**95.00**	**323**	LR	LR		20 07 19.0	
	comp=Z,28nm,20.1s,baz=54,slow=37							
HFS	**Hagfors**	**98.59**	**335**	LR	LR		20 12 39.8	
	comp=Z,31nm,18.0s,baz=102,slow=39							
NOA	**NORSAR Array B**	**99.06**	**337**	LR	LR		20 09 21.2	
	comp=Z,38nm,21.7s,baz=15,slow=36							

*IDC **07** 19:28:43.3±2.2, 6°.53N×127°.08E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=182.5km s-min=24.2km az=67.0*
*MAN **07** 19:29:11.0, 10°.58N×126°.86E, h21km, MS3.0*
ISC 07 19:29:09.5±2.2, 10°.56N±0°.07×127°.0E±0°.1, h19km±8km, n9, σ1s50/15, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**1.72**	**243**	*i* P		**Pn**	**19 29 39.1**	**+0.8**
SCPH				*i* S		**Sn**	**19 29 58.1**	**-1.6**
TSSP	**Tandag City**	**1.72**	**209**	*e*P		**Pn**	**19 29 39.5**	**+1.1**
TSSP				*e*S		**Sn**	**19 29 59.9**	**0.0**
PLP	**Palo**	**2.12**	**287**	*e*P		**Pn**	**19 29 43.8**	**0.0**
PLP				*e*S		**Sn**	**19 30 07.7**	**-1.9**
BIPH	**Bislig**	**2.46**	**196**	*e*P		**Pg**	**19 29 56.1**	**-0.5**
BIPH				*i* S		**Sn**	**19 30 19.1**	**+1.1**
CDOP	**Cateel, Davao**	**2.83**	**192**	*i* P		**Pn**	**19 29 53.2**	**-0.4**
CDOP				*i* S		**Sn**	**19 30 25.4**	**-1.7**
CGP	**Cagayan de Oro**	**3.12**	**228**	*e*P		**Pn**	**19 29 57.5**	**-0.2**
CGP				*e*S		Sn	19 30 16.1	-18
TBP	**Tagbilaran**	**3.25**	**255**	*e*P		**Pn**	**19 30 01.5**	**+2.1**
TBP				*e*S		**Sn**	**19 30 37.8**	**+0.1**
MKAR	**Makanchi Array**	**52.26**	**322**	P		**P**	**19 38 21.9**	**+2.3**
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.5							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**56.27**	**325**	P		**P**	**19 38 47.1**	**-1.6**
	0.1nm,0.7s,baz=118,slow=9.6,SNR=2.1							
	0.1nm,0.7s							

IDC 07 19:35:57.9±8.4, 7°.37S×116°.72E, h478km±128km, mb2.4/3, mbtmp3.3/4, Error ellipse: s-maj=233.2km s-min=38.7km az=49.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.76**	**142**	P		P	19 38 55.5	+0.2
	2.4nm,0.9s,baz=306,slow=8.7,SNR=1.7							
FITZ				S		S	19 41 20.0	-1.8
	2.7nm,0.8s,baz=276,slow=22,SNR=1.4							
WRA	**Warramunga Arr**	**21.17**	**128**	P		P	19 40 08.6	+0.1
	0.6nm,1.0s,baz=313,slow=9.0,SNR=4.8							
	0.6nm,1.0s							
ASAR	**Alice Springs**	**23.12**	**136**	P		P	19 40 26.1	+0.1
	0.5nm,0.6s,baz=310,slow=8.9,SNR=7.5							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**62.00**	**334**	P		P	19 45 30.5	-0.1
	0.1nm,0.6s,baz=157,slow=7.8,SNR=2.0							
	0.1nm,0.6s							

*IDC **07** 19:36:11.1±2.6, 1°.35N×126°.96E, h67km±24km, mb3.7/13, mbtmp4.0/15, MS3.4/7, Error ellipse: s-maj=31.5km s-min=10.3km az=72.0*
*DJA **07** 19:36:12.1±0.4, 2°.N±3°×12°.7E±°, h29km±5km, M4.2/20, mb4.3/8, MLv4.2/20*
*NEIC **07** 19:36:12.2±1.6, 1°.37N±0°.06×126°.96E±0°.03, h75km±6km, mb4.3/27, Error ellipse: s-maj=9.6km s-min=3.8km az=160.0*
ISC 07 19:36:11.5±0.4, 1°.44N±0°.04×126°.97E±0°.05, h75km, n71, σ1s25/75, mb4.2/22, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**0.77**	**149**			**Pn**	**19 36 27.0**	**-0.6**
TNTI					Sn	**Sn**	**19 36 39.5**	**-0.1**
TNTI	**Ternate**	**0.77**	**149**	P		**Pn**	**19 36 28.0**	**+0.4**
TNTI					S	**Sn**	**19 36 39.7**	**+0.2**
MNI	**Manado**	**2.13**	**270**	P		**Pn**	**19 36 46.0**	**+0.9**
SGSI	**Sangihe**	**2.66**	**327**	P		**Pn**	**19 36 52.0**	**-0.2**
GTOI	**Gorontalo**	**4.04**	**259**	P		**Pn**	**19 37 13.4**	**+2.4**
DDMP	**Don Marcelino,**	**4.80**	**345**	*e*P		**Pn**	**19 37 21.2**	**-0.2**
DDMP				*e*S		**Sn**	**19 38 11.6**	**-4.2**
SIJI	**Sorong**	**4.87**	**118**	P		**Pn**	**19 37 22.6**	**+0.2**
	13nm,0.8s,baz=329,slow=7.5,SNR=8.9							
SIJI				LR		LR	19 39 43.4	
	comp=Z,126nm,19.1s,baz=80,slow=44							
SIJI	**Sorong**	**4.87**	**118**	P		**Pn**	**19 37 24.2**	**+1.9**
LUWI	**Luwuk**	**4.87**	**240**			**Pn**	**19 37 22.3**	**0.0**
LUWI					Sn	**Sn**	**19 38 17.4**	**0.0**
LUWI	**Luwuk**	**4.87**	**240**	P		**Pn**	**19 37 25.3**	**+3.0**
DAV	**Davao City (W)**	**5.76**	**346**	LR		LR	19 40 11.9	
	comp=Z,60nm,21.6s,baz=175,slow=41							
APSI	**Ampana**	**5.81**	**246**	P		**Pn**	**19 37 36.6**	**+1.4**
	54nm,0.9s							
TOLI2	**Tolitoli**	**6.20**	**267**			**Pn**	**19 37 40.9**	**+0.5**
TOLI2					Sn	**Sn**	**19 38 46.2**	**-3.8**
CDOP	**Cateel, Davao**	**6.33**	**355**	*i* P		**Pn**	**19 37 41.8**	**-0.5**
CDOP				*e*S		**Sn**	**19 38 50.9**	**-2.1**
BIPH	**Bislig**	**6.73**	**355**	*e*P		**Pn**	**19 37 50.1**	**+2.4**
BIPH				*e*S		**Sn**	**19 39 04.9**	**+2.0**
FAKI	**Fak Fak**	**6.83**	**129**	P		**Pn**	**19 37 50.3**	**+1.2**
	46nm,1.4s							
KDI	**Kendari**	**6.90**	**219**	P		**Pn**	**19 37 51.4**	**+1.3**
	0.2nm27nm,1.6s							
KKM	**Kota Kinabalu**	**11.66**	**293**	Pn		**Pn**	**19 38 54.2**	**-1.1**
MTN	**Manton Dam**	**14.78**	**164**	Pn		**Pn**	**19 39 35.3**	**-1.3**
KNRA	**Kununurra**	**17.10**	**174**			**Pn**	**19 40 05.0**	**-0.8**
KNRA				IAmb		IAmb	19 40 41.0	
	comp=Z,12nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.46**	**184**	P		**P**	**19 40 32.2**	**-0.1**
	comp=Z,4.0nm,0.6s,baz=12,slow=10,SNR=3.1							
WB0	**Warramunga Arr**	**22.30**	**161**	P		**P**	**19 41 01.7**	**-1.2**
WB0				IAmb		IAmb	19 41 05.1	
	comp=Z,7.5nm,0.6s							
WRA	**Warramunga Arr**	**22.45**	**162**	P		**P**	**19 41 03.5**	**-1.0**
	comp=Z,5.3nm,0.6s,baz=340,slow=10,SNR=39							
WRA				PcP		**PcP**	**19 44 56.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=332,slow=2.4,SNR=2.2							
	comp=Z,5.3nm,0.6s							
WR8	**Warramunga Arr**	**22.51**	**161**	P		**P**	**19 41 03.8**	**-1.4**
WR8				IAmb		IAmb	19 41 05.6	
	comp=Z,18nm,1.3s							
PMG	**Port Moresby**	**22.81**	**119**	LR		LR	19 53 06.2	
	comp=Z,57nm,19.1s,baz=272,slow=45							
AS31	**Alice Springs**	**25.85**	**165**	P		**P**	**19 41 35.1**	**-1.1**
ASAR	**Alice Springs**	**25.85**	**165**	P		**P**	**19 41 35.9**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=353,slow=15,SNR=26							
ASAR				PcP		**PcP**	**19 45 04.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=342,slow=2.1,SNR=5.5							
ASAR				S		**S**	**19 46 02.3**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=349,slow=21,SNR=6.1							
	comp=Z,4.0nm,0.8s							
INKA	**Innaminka**	**31.89**	**156**	P		**P**	**19 42 29.2**	**-0.6**
FORT	**Forrest**	**32.06**	**178**	P		**P**	**19 42 30.2**	**-1.1**
MORW	**Morawa**	**32.09**	**198**	P		**P**	**19 42 30.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**32.28**	**303**	P		**P**	**19 42 34.5**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=112,slow=8.9,SNR=1.7							
	comp=Z,0.3nm,0.7s							
BBOO	**Buckleboo**	**35.13**	**167**	P		**P**	**19 42 57.4**	**-0.6**
KSRS	**Korea Array**	**35.85**	**1**	P		**P**	**19 43 05.0**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=193,slow=8.0,SNR=2.0							
	comp=Z,0.3nm,0.3s							
STKA	**Stephens Creek**	**35.92**	**159**	P		**P**	**19 43 04.4**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=348,slow=8.2,SNR=7.4							
	comp=Z,2.7nm,0.8s							
MJAR	**Matsushiro Arr**	**36.44**	**15**	P		**P**	**19 43 10.0**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=186,slow=9.7,SNR=2.8							
	comp=Z,1.4nm,0.8s							
MJAR	**Matsushiro Arr**	**36.44**	**15**	P		**P**	**19 43 10.0**	**+0.8**
ARMA	**Armidale**	**39.44**	**145**	P		**P**	**19 43 34.6**	**0.0**
CAN	**Canberra**	**41.97**	**153**	P		**P**	**19 43 55.7**	**+0.3**
TOO	**Toolangi**	**42.44**	**158**	P		**P**	**19 43 59.3**	**+0.2**
TOO				IAmb		IAmb	19 44 23.6	
	comp=Z,5.1nm,1.5s							
USA0B	**Ussuriysk Arra**	**42.81**	**5**	P		**P**	**19 44 01.9**	**0.0**
USA0B				IAmb		IAmb	19 44 46.2	
	comp=Z,3.7nm,0.7s							
HILR	**Hailar Array B**	**48.33**	**354**	LR		LR	20 05 06.5	
	comp=Z,50nm,20.8s,baz=30,slow=36							
SONM	**Songino Array**	**49.53**	**342**	P		**P**	**19 44 55.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=162,slow=9.7,SNR=3.5							
	comp=Z,0.6nm,0.7s							
SONM	**Songino Array**	**49.53**	**342**	P		**P**	**19 44 55.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**57.45**	**21**	P		**P**	**19 45 53.4**	**+0.9**
PETK	**Petropavlovsk-**	**57.45**	**21**	P		**P**	**19 45 53.6**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=228,slow=8.4,SNR=4.9							
	comp=Z,1.0nm,0.4s							
PETK	**Petropavlovsk-**	**57.45**	**21**	P		**P**	**19 45 52.4**	**-0.1**
MKAR	**Makanchi Array**	**59.57**	**326**	P		**P**	**19 46 08.8**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=122,slow=7.6,SNR=14							
	comp=Z,1.2nm,0.7s							
MKAR	**Makanchi Array**	**59.57**	**326**	P		**P**	**19 46 06.1**	**-1.3**
THZ	**Tophouse**	**59.76**	**142**	P		**P**	**19 46 07.7**	**-1.1**
URZ	**Urewera**	**60.73**	**136**	LR		LR	20 11 12.4	
	comp=Z,126nm,21.2s,baz=198,slow=35							
RTZ	**Ruatahuna**	**60.80**	**137**	P		**P**	**19 46 15.6**	**-0.5**
ZALV	**Zalesovo Beam**	**62.73**	**333**	P		**P**	**19 46 29.9**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=119,slow=9.2,SNR=3.7							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**62.73**	**333**	P		**P**	**19 46 29.1**	**+0.5**
KURBB	**Kurchatov Arra**	**63.79**	**328**	P		**P**	**19 46 36.5**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=127,slow=6.2,SNR=19							
	comp=Z,1.5nm,0.7s							
KURK	**Kurchatov**	**63.79**	**328**			**P**	**19 46 36.4**	**+0.7**
KURK				IAmb		IAmb	19 46 37.8	
	comp=Z,2.3nm,0.6s							
CASY	**Casey**	**68.59**	**187**	P		**P**	**19 47 06.7**	**+0.6**
CASY				IAmb		IAmb	19 47 07.5	
	comp=Z,3.8nm,0.8s							
AB31	**Akbulak array**	**74.07**	**321**	P		**P**	**19 47 39.4**	**-0.1**
ABKAR	**Akbulak array**	**74.07**	**321**	P		**P**	**19 47 39.4**	**-0.1**
AKTO	**Aktyubinsk**	**75.60**	**322**	LR		LR	20 24 52.0	
	comp=Z,28nm,18.5s,baz=54,slow=39							
VNDA	**Vanda**	**81.14**	**173**	P		**P**	**19 48 17.3**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=347,slow=5.5,SNR=8.6							
	comp=Z,1.2nm,0.5s							
VNDA	**Vanda**	**81.14**	**173**	P		**P**	**19 48 17.3**	**-1.0**
VNDA				IAmb		IAmb	19 48 33.1	
	comp=Z,4.1nm,1.4s							
G19K	**Purcell Mounta**	**83.02**	**23**	P		**P**	**19 48 29.7**	**+1.4**
G19K				IAmb		IAmb	19 48 31.0	
	comp=Z,3.9nm,0.8s							
H19K	**Roundabout Mou**	**83.15**	**24**	P		**P**	**19 48 30.5**	**+1.5**
H19K				IAmb		IAmb	19 48 31.8	
	comp=Z,4.1nm,0.8s							
D19K	**Kuna River**	**83.16**	**21**	P		**P**	**19 48 30.6**	**+1.5**
D20K	**Etivluk River**	**83.74**	**21**	P		**P**	**19 48 33.0**	**+0.9**
OBN	**Obninsk**	**89.06**	**325**	LR		LR	20 30 55.1	
	comp=Z,82nm,21.5s,baz=70,slow=37							
I28M	**Miner Creek**	**89.99**	**25**	P		**P**	**19 49 02.7**	**+0.1**
I28M				IAmb		IAmb	19 49 40.8	
	comp=Z,3.8nm,1.5s							
QSPA	**South Pole Qui**	**91.36**	**180**	P		**P**	**19 49 08.9**	**0.0**
	comp=Z,1.1nm,1.0s,baz=330,slow=4.8,SNR=2.0							
	comp=Z,1.1nm,1.0s							
QSPA	**South Pole Qui**	**91.36**	**180**	P		**P**	**19 49 07.9**	**-1.1**
TXAR	**Lajitas Array**	**122.78**	**53**	PKP		**PKPdf**	**19 55 00.1**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=14,slow=3.1,SNR=2.5							
TORD	**Torodi Ar. Bea**	**123.83**	**287**	PKP		**PKPdf**	**19 55 01.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=56,slow=2.1,SNR=3.8							

IDC 07 19:55:39.1±3.9, 23°.84S×178°.81W, h0km, mb3.9/4, mbtmp3.9/4, MS3.1/1, Error ellipse: s-maj=101.4km s-min=39.3km az=31.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RPZ	**Rata Peaks**	**21.51**	**200**	LR		LR	20 08 18.3	
	comp=Z,47nm,18.4s,baz=216,slow=35							
STKA	**Stephens Creek**	**35.76**	**248**	P		P	20 02 39.4	-0.5
	0.6nm,0.5s,baz=106,slow=15,SNR=5.1							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**43.12**	**260**	P		P	20 03 41.4	-0.1
	1.4nm,0.8s,baz=101,slow=8.2,SNR=16							
	1.4nm,0.8s							
WRA	**Warramunga Arr**	**43.50**	**266**	P		P	20 03 44.7	+0.1
	2.5nm,0.7s,baz=102,slow=8.1,SNR=31							
	2.5nm,0.7s							
QSPA	**South Pole Qui**	**66.24**	**180**	P		P	20 06 28.8	0.0
	1.3nm,1.0s,baz=310,slow=2.4,SNR=5.1							
	1.3nm,1.0s							
HFS	**Hagfors**	**142.69**	**350**	PKP		PKPdf	20 15 13.8	0.0
	1.2nm,0.8s,baz=62,slow=3.4,SNR=4.4							

*NIED **07** 20:01:33.8, 36°.24N×137°.64E, h5km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr=2.28; Mθθ6.15; Mφφ-3.87; Mrθ-0.05; Mrφ-0.03; Mθφ3.16; Fault plane solution: Mo6.24000×10^14 NP1: φs232.00000°, δ64.00000°, λ-151.00000°. NP2: φs128.00000°, δ65.00000°, λ-29.00000°.*
JMA 07 20:01:33.8±0.0, 36°.2N±0°.1×137°.6E±0°.1, h5km±1km, MV3.4/20, 1D, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JGN	**Niukaw**	**0.26**	**267**	⇓P		P	20 01 39.2	+0.2
JNG	**Nsakai**	**0.41**	**65**	P		Pg	20 01 41.8	0.0
JNG				S		Sg	20 01 47.4	+0.2
JTT	**Ttatey**	**0.44**	**326**	P		Pg	20 01 43.0	+0.6
JTT				*e*S		Sg	20 01 49.4	+1.1
JNT	**Takato**	**0.54**	**132**	P		Pg	20 01 44.2	-0.1
JNT				S		Sg	20 01 51.3	0.0
MAT	**Matsushiro**	**0.55**	**56**	P		Pg	20 01 44.2	-0.2
MAT				S		Sg	20 01 51.5	-0.1

IDC 07 20:05:28.9±3.0, 0°.07N×135°.30E, h0km, mb3.5/4, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=164.6km s-min=22.9km az=79.0, Iran Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.91**	**183**	P		P	20 10 02.5	+0.1
	0.4nm,0.3s,baz=1.7,slow=10,SNR=24							
	2.5nm,0.6s							
ASAR	**Alice Springs**	**23.64**	**183**	P		P	20 10 42.0	0.0
	1.5nm,0.8s,baz=8.7,slow=10,SNR=20							
	1.5nm,0.8s							
MKAR	**Makanchi Array**	**65.52**	**323**	P		P	20 16 14.4	+0.1
	0.1nm,0.4s,baz=116,slow=5.0,SNR=1.9							
	0.1nm,0.4s							
ZALV	**Zalesovo Beam**	**67.84**	**331**	P		P	20 16 28.8	-0.1
	0.4nm,0.5s,baz=111,slow=7.9,SNR=1.7							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**69.51**	**325**	P		P	20 16 39.4	0.0
	0.2nm,0.7s,baz=110,slow=5.4,SNR=1.7							
	0.2nm,0.7s							

*SOME **07** 20:05:27.8, 39°.77N×70°.02E, h0km*
*ISU **07** 20:05:30, 39°.78N×70°.18E, h5km*
*KRNET **07** 20:05:31.1±0.1, 39°.82N×70°.12E, h17km, mb2.8*
ISC 07 20:05:31.1±1.3, 39°.74N±0°.04×70°.15E±0°.04, h19km±3km, n16, σ1s92/27, 12C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BTK	**Batken**	**0.61**	**58**	⇑*i*P		**Pb**	**20 05 42.4**	**-0.6**
BTK				⇑*i*S		**Sb**	**20 05 50.9**	**-0.2**
GAR	**Garm**	**0.75**	**170**	⇑*i*P		**Pn**	**20 05 47.1**	**+0.4**
GAR				⇑*i*S		**Sn**	**20 05 58.5**	**+0.9**
FRG	**Fergana**	**1.41**	**63**	S		**Sg**	**20 06 18.5**	**+1.9**
NZBK	**Nazarbek**	**1.68**	**332**	S		**Sg**	**20 06 30.9**	**+5.6**
CHMG	**Chimgan**	**1.81**	**357**	P		**Pg**	**20 06 05.0**	**-1.0**
CHMG				S		**Sg**	**20 06 30.3**	**+0.7**
TVKS	**Tavaksay**	**1.87**	**349**	P		**Pg**	**20 06 05.5**	**-1.6**
TVKS				S		**Sg**	**20 06 30.9**	**-0.6**
TRKS	**Terek-Say**	**1.94**	**22**	⇑*i*P		**Pb**	**20 06 04.6**	**-1.4**
TRKS				⇑*i*S		**Sb**	**20 06 29.2**	**-0.7**
TSTA	**Tashata**	**1.97**	**64**	S		**Sg**	**20 06 35.8**	**+1.2**
OHH	**Osh**	**2.17**	**68**	⇑*e*P		**Pb**	**20 06 09.4**	**-0.3**
OHH				⇑*e*S		**Sb**	**20 06 37.3**	**+1.1**
IUG	**Iuzhnay**	**2.41**	**358**	*e*P		**Pb**	**20 06 14.1**	**+0.2**
	13nm,0.4s							
IUG				*e*S		**Sg**	**20 06 46.6**	**-2.0**
	19nm,0.4s							
ARK	**Arkit**	**2.48**	**33**	⇑*i*P		**P

0.9nm,0.3s,baz=105,slow=12,SNR=14
7.8nm,0.7s
USA0B Ussuriysk Arra 9.54 301 Pn 20 21 21.4 -0.3
MDJ Mudanjiang 11.29 300 P **Pn 20 21 48.1 +2.5**
KSRS Korea Array 12.29 264 P **Pn 20 22 02.8 +3.5**
0.3nm,0.3s,baz=82,slow=13,SNR=6.9
1.7nm,0.9s
KSAR Wonju Array Be 12.32 264 Pn **Pn 20 21 56.1 -3.6**
JCJ Chichijima 12.68 185 P Pn 20 21 59.0 -5.7
20nm,0.5s,baz=285,slow=21,SNR=1.2
JCJ S Sn 20 24 07.6 -17
27nm,0.7s,baz=252,slow=19,SNR=1.5
BNX BinXian 13.14 302 ⇓P **Pn 20 22 11.1 +0.2**
BNX pmax pmax
comp=Z,8.0nm,0.8s
HILR Hailar Array B 19.35 308 P **P 20 23 27.3 -1.9**
comp=Z,3.1nm,0.4s,baz=107,slow=13,SNR=5.5
MA2 Magadan 20.37 11 P **P 20 23 40.3 +0.1**
comp=Z,7.6nm,0.7s,baz=187,slow=16,SNR=5.3
MA2 LR LR 20 31 14.2
comp=Z,50nm,21.5s,baz=192,slow=36
comp=Z,7.6nm,0.7s
MA2 Magadan 20.37 11 P **P 20 23 39.4 -0.8**
TIA Tai'an 20.94 269 P **P 20 23 45.1 -1.5**
TIA pmax pmax
comp=Z,11nm,0.8s
TIA LR LR
comp=N,100nm,13.4s
TIA LR LR
comp=E,330nm,13.6s
TIA LR LR
comp=Z,390nm,15.1s
YAK Yakutsk 23.80 344 P **P 20 24 14.3 -1.6**
HHC Hu-ho-hao-te 24.20 283 *eP* **P 20 24 20.0 -0.1**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,46nm,4.9s
HHC LR LR
comp=N,64nm,15.5s
HHC LR LR
comp=E,140nm,15.7s
HHC LR LR
comp=Z,160nm,15.5s
LYN LuoYang 25.08 268 P **P 20 24 28.7 +0.7**
LYN pmax pmax
comp=Z,35nm,1.0s
LYN LR LR
comp=N,220nm,13.7s
LYN LR LR
comp=E,490nm,13.7s
LYN LR LR
comp=Z,480nm,13.7s
WHN Wuhan 25.34 258 ⇓P **P 20 24 31.0 +0.6**
WHN pmax pmax
comp=Z,34nm,0.7s
WHN LR LR
comp=Z,440nm,10.5s
ULN Ulaanbaatar 27.21 299 P 20 24 45.5 -1.8
ULN IAmb IAmb 20 24 48.9
comp=Z,7.5nm,1.1s
ULN Ulaanbaatar 27.21 299 P **P 20 24 48.0 +0.6**
SONM Songino Array 27.65 299 P **P 20 24 51.4 +0.2**
comp=Z,2.6nm,0.8s,baz=89,slow=7.9,SNR=16
comp=Z,2.6nm,0.8s
SONM Songino Array 27.65 299 P 20 24 49.2 -2.0
XAN Xi'an 28.00 269 *eP* **P 20 24 50.8 -3.6**
XAN LR LR
comp=N,160nm,15.1s
XAN LR LR
comp=E,200nm,13.7s
XAN LR LR
comp=Z,190nm,17.9s
H11N2 WAKE ISLAND Hy 28.43 128 T T 20 54 52.6
baz=319,slow=75
H11N1 WAKE ISLAND Hy 28.44 128 T T 20 55 15.3
baz=319,slow=75
H11N3 WAKE ISLAND Hy 28.45 128 T T 20 54 54.7
baz=319,slow=75
H11S1 WAKE ISLAND Hy 29.25 130 T T 20 55 57.4
baz=324,slow=74
H11S3 WAKE ISLAND Hy 29.25 130 T T 20 56 00.3
baz=324
H11S2 WAKE ISLAND Hy 29.27 130 T T 20 56 03.8
baz=324,slow=74
TIXI Tiksi 32.78 352 LR LR 20 39 55.4
comp=Z,54nm,18.7s,baz=178,slow=38
GTA2 Gaotai 33.33 284 P **P 20 25 42.5 +1.1**
GTA2 pP pP 20 25 48.8 -2.6
GTA2 pmax pmax
comp=Z,7.0nm,0.8s
GTA2 LR LR
comp=N,110nm,15.1s
GTA2 LR LR
comp=E,170nm,16.5s
GTA2 LR LR
comp=Z,290nm,17.5s
PZH PanZhiHua 36.94 262 P **P 20 26 14.3 +1.6**
GOMU GeErMu 38.05 280 P **P 20 26 22.3 0.0**
GOMU pP pP 20 26 25.6 -6.7
GOMU sP pwP 20 26 30.0 -4.3
GOMU pmax pmax
comp=Z,7.0nm,0.4s
L16K Owhat River 40.60 38 P **P 20 26 43.4 +0.6**
L16K IAmb IAmb 20 27 11.8
comp=Z,7.6nm,1.4s
H17K Granite Mounta 40.84 33 P **P 20 26 45.5 +0.8**
H17K IAmb IAmb 20 27 05.2
comp=Z,7.2nm,1.4s
WMQ Urumqi 41.03 294 *eP* **P 20 26 47.9 +1.3**
WMQ pmax pmax
comp=Z,11nm,0.7s
E18K Tukpahlearik C 41.06 29 P 20 26 48.2 +1.7
C18K Utukok River 41.15 27 P **P 20 26 45.6 -1.7**
ZAA0 Zalesovo Array 41.25 310 P **P 20 26 48.9 +0.6**
ZAA0 IAmb IAmb 20 26 49.2
comp=Z,4.1nm,0.6s
ZALV Zalesovo Beam 41.25 310 P **P 20 26 48.8 +0.5**
comp=Z,4.6nm,0.5s,baz=94,slow=8.4,SNR=27
ZALV PcP **PcP 20 28 46.5 0.0**
comp=Z,1.2nm,0.8s,baz=83,slow=3.6,SNR=3.4
comp=Z,4.6nm,0.5s
NRIK Noril'sk 41.45 334 LR LR 20 45 21.9
comp=Z,77nm,18.1s,baz=99,slow=38
G18K Tagagawik 41.52 32 P **P 20 26 50.7 +0.4**
G18K IAmb IAmb 20 27 15.9
comp=Z,8.3nm,1.5s
H18K Honhosa River 41.52 33 P **P 20 26 51.0 +0.6**
D19K Kuna River 42.22 28 P **P 20 26 57.0 +1.0**
D19K IAmb IAmb 20 27 14.0
comp=Z,8.8nm,1.2s
H19K Roundabout Mou 42.37 32 P 20 26 58.5 +1.3
J20K Nowinta River 43.23 35 P **P 20 27 06.1 +2.0**
CMAR Chiang Mai Arr 43.68 254 P **P 20 27 08.8 +0.3**
comp=Z,0.4nm,0.7s,baz=44,slow=6.4,SNR=5.5
CMAR LR LR 20 44 49.7
comp=Z,22nm,19.1s,baz=210,slow=35
comp=Z,0.4nm,0.7s
MKAR Makanchi Array 44.01 300 P **P 20 27 11.2 +0.5**
comp=Z,4.0nm,1.0s,baz=84,slow=9.3,SNR=25
MKAR LR LR 20 46 26.2
comp=Z,94nm,18.4s,baz=90,slow=37
comp=Z,4.0nm,1.0s
MKAR Makanchi Array 44.01 300 P 20 27 10.6 -0.2
KDAK Kodiak Island 44.06 44 P **P 20 27 12.2 +1.3**
MAKZ Makanchi 44.21 300 P **P 20 27 11.9 -0.4**
E22K Anaktuvuk Pass 44.48 29 IAmb IAmb 20 27 23.7
comp=Z,4.2nm,1.1s
BWN Browne 45.28 35 P **P 20 27 22.3 +1.7**
KURK Kurchatov 45.49 306 P 20 27 21.9 -0.6
KURK Kurchatov 45.49 306 P **P 20 27 22.7 +0.3**
KURBB Kurchatov Arra 45.56 306 P **P 20 27 23.2 +0.2**
comp=Z,4.8nm,0.8s,baz=80,slow=8.4,SNR=40
comp=Z,4.8nm,0.8s
ILAR Eielson Array 46.38 34 P **P 20 27 30.1 +0.9**
comp=Z,0.7nm,0.6s,baz=266,slow=5.9,SNR=11
comp=Z,0.7nm,0.6s
D25K Kavik River 46.53 27 P **P 20 27 30.7 +0.3**
D25K IAmb IAmb 20 27 48.3
comp=Z,3.8nm,0.9s
F26K Sheenjek River 47.36 30 P **P 20 27 38.1 +1.2**
F26K IAmb IAmb 20 27 59.3
comp=Z,3.3nm,0.9s
EVN Everest 47.69 274 P **P 20 27 40.6 -0.1**
EVN Everest 47.69 274 P **P 20 27 37.9 -2.9**
WUS Wushi 47.79 294 P **P 20 27 41.8 +1.0**
TARG Taragay, Kyrgy 48.59 295 P 20 27 46.5 -0.8
TARG IAmb IAmb 20 27 53.0
comp=Z,2.9nm,0.7s
TARG Taragay, Kyrgy 48.59 295 P **P 20 27 46.4 -0.9**
BOOM Boomskoye usch 49.62 296 P 20 27 54.7 -0.2
BOOM Boomskoye usch 49.62 296 P **P 20 27 55.2 +0.3**
ASAI AK-SAY(Kyrgyzs 49.79 294 P **P 20 27 57.7 +1.3**
BVAR Borovoye Array 49.89 311 P **P 20 27 57.0 +0.5**
comp=Z,6.2nm,1.0s,baz=81,slow=9.2,SNR=13
comp=Z,6.2nm,1.0s
BORK Borovoye 49.93 311 P 20 27 56.9 +0.1
I30M Mount Dempster 50.75 32 P 20 28 04.3 +1.3
I30M IAmb IAmb 20 28 12.0
comp=Z,2.6nm,0.7s
KSH2 Kashi 51.15 292 P **P 20 28 07.5 +1.0**
KSH2 pmax pmax
comp=Z,2.0nm,1.0s
HYT Haines Junctio 51.20 38 P 20 28 08.2 +1.7
HYT IAmb IAmb 20 28 20.1
comp=Z,3.7nm,0.8s
H31M Peel River 51.46 31 P **P 20 28 10.0 +1.8**
H31M IAmb IAmb 20 28 26.9
comp=Z,3.1nm,0.8s
ARSB Arslanbob 52.10 296 P 20 28 13.0 -0.5
KKAR Karatay Array 53.10 299 P 20 28 20.9 +0.2
ARTI Arti 55.45 318 LR LR 20 54 56.4
comp=Z,82nm,19.5s,baz=77,slow=39
ARTI Arti 55.45 318 P 20 28 37.5 0.0
CHGR Chuyangaron 55.89 295 P **P 20 28 41.1 0.0**
ABKAR Akbulak array 57.36 309 P **P 20 28 51.4 +0.2**
WRA Warramunga Arr 59.99 190 P **P 20 29 09.5 -0.4**
comp=Z,0.8nm,0.7s,baz=7.7,slow=6.9,SNR=8.9
comp=Z,0.8nm,0.7s
ARCES ARCESS Array B 61.97 339 P **P 20 29 22.9 +0.2**
comp=Z,1.8nm,0.8s,baz=0.6,slow=8.5,SNR=1.7
comp=Z,1.8nm,0.8s
ARCES ARCESS Array B 61.97 339 P **P 20 29 22.9 +0.2**
ARCES IAmb IAmb 20 29 38.9
comp=Z,3.1nm,1.2s
DAG Danmarks Havn 63.18 355 P **P 20 29 32.4 +1.8**
ASAR Alice Springs 63.72 190 P **P 20 29 35.6 +0.8**
comp=Z,0.7nm,0.8s,baz=5.2,slow=4.2,SNR=6.1
comp=Z,0.7nm,0.8s
FINES FINESS Array B 67.10 332 P **P 20 29 56.6 +0.4**
comp=Z,3.3nm,0.9s,baz=52,slow=12,SNR=5.9
comp=Z,3.3nm,0.9s
KVAR Kislovodsk Arr 70.25 311 LR LR 21 02 03.9
comp=Z,42nm,18.9s,baz=88,slow=37
KIV Kislovodsk 70.26 311 P **P 20 30 13.3 -3.1**
NVAR Mina Array Bea 72.15 55 P **P 20 30 29.7 +1.5**
comp=Z,0.6nm,0.7s,baz=315,slow=4.9,SNR=2.2
comp=Z,0.6nm,0.7s
HFS Hagfors 72.21 336 P **P 20 30 28.5 +0.7**
comp=Z,2.5nm,0.8s,baz=42,slow=7.0,SNR=10
comp=Z,2.5nm,0.8s
NB2 NORSAR Subarra 72.24 338 P **P 20 30 28.6 +0.6**
comp=Z,0.7nm,0.6s,baz=37,slow=6.2
NOA NORSAR Array B 72.24 338 P **P 20 30 28.6 +0.6**
comp=Z,1.9nm,0.8s,baz=39,slow=6.0,SNR=4.8
comp=Z,1.9nm,0.8s
AKASG Malin Array Be 73.06 323 P **P 20 30 32.7 -0.3**
comp=Z,0.2nm,0.3s,baz=50,slow=5.8,SNR=1.8
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 73.06 323 P **P 20 30 32.7 -0.3**
AKASG IAmb IAmb 20 30 37.9
comp=Z,5.0nm,1.4s
PDAR Pinedale Array 74.68 47 P **P 20 30 43.8 +0.8**
comp=Z,0.5nm,0.6s,baz=289,slow=4.5,SNR=3.7
comp=Z,0.5nm,0.6s
ARPR Arapgir-MALATY 75.83 309 P P 20 30 45.5 -4.1
KOLS Kolonicke sedl 77.49 325 *eP* P 20 31 02.9 +4.4
BRTR Keskin Array B 78.16 312 P **P 20 31 01.9 -0.7**
comp=Z,0.5nm,0.8s,baz=46,slow=4.2,SNR=2.6
comp=Z,0.5nm,0.8s
GERES GERESS Array B 81.17 329 P **P 20 31 18.8 +0.1**
comp=Z,0.5nm,0.7s,baz=22,slow=4.3,SNR=5.1
comp=Z,0.5nm,0.7s
H03S2 Juan Fernandez 145.88 94 T T 23 21 12.3
baz=200,slow=74,SNR=4.6
H03S3 Juan Fernandez 145.89 94 T T 23 21 15.5
baz=200,slow=74,SNR=4.7
H03S1 Juan Fernandez 145.90 94 T T 23 21 22.0
baz=200,slow=74,SNR=4.4

*TEH **07** 20:20:29.5,27°.63N×53°.49E,h10km±155km,ML2.9, Presumed earthquake*
*DSN **07** 20:20:34.5±1.3,27°.30N×53°.56E,h7km±31km, ML2.6/7, Error ellipse: s-maj=31.7km s-min=7.1km az=156.0*
ISC 07 20:20:29.8±2.0,27°.70N±0°.09×53°.5E±0°.2,h12km±15km,n9,
σ0s57/10,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.14**	**246**	Pg	**Pg**	**20 20 32.7**	**-0.6**
KHL1				Sg	**Sg**	**20 20 36.6**	**+0.8**
LMD1	**Lamerd**	**0.44**	**216**	Pg	**Pg**	**20 20 38.1**	**-0.4**
QIR1	**Qir**	**0.85**	**335**	Pg	**Pn**	**20 20 47.9**	**+0.1**
UOSS	**Minazif**	**3.69**	**137**	P	**Pn**	**20 21 27.5**	**+0.7**
HATD	**Hatta, Dubai**	**3.74**	**139**	P	**Pn**	**20 21 27.1**	**-0.3**
ASHO	**Ashiyiah**	**3.81**	**141**	P	**Pn**	**20 21 28.4**	**0.0**
ALNE	**Al Ain**	**4.18**	**150**	P	**Pn**	**20 21 33.8**	**+0.3**
SOHO	**SOHO**	**4.50**	**141**	P	**Pn**	**20 21 37.8**	**-0.1**
MZR	**Muzera**	**4.67**	**180**	P	**Pn**	**20 21 40.3**	**0.0**

*IDC **07** 20:32:24.5±0.5,5°.40N×82°.56W,h0km,mb4.7/26, mbtmp4.8/32,ML4.0/5,MS4.2/45,Error ellipse: s-maj=20.4km s-min=10.1km az=58.0*
*NEIC **07** 20:32:26.3,5°.41N×82°.72W,h10km*
*NEIC **07** 20:32:26.3±2.4,5°.40N±0°.04×82°.72W±0°.07,h10km±1km, mb5.1/642,Mwb5.2/15,Mww5.2/25,Error ellipse: s-maj=12.7km s-min=6.2km az=252.0,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.15; Mθθ1.75; Mφφ-1.90; Mrθ-0.06; Mθφ8.36; Mφr-0.32; Fault plane solution: M0 8.57000×10^16^ NP1:φs276.17000°, δ87.80000°,λ0.20000°. NP2:φs186.17000°,δ89.80000°, λ177.80000°. Principal axes: T 8.4924, Plg2.0000°, Azm141.0000°; N 0.1480, Plg88.0000°, Azm1.0000°; P -8.6404, Plg1.0000°, Azm231.0000°;*
*NEIC **07** 20:32:26.4,5°.42N×82°.69W,h10km*
*UCR **07** 20:32:26.9±0.8,5°.59N×82°.63W,h11km,MW5.1, Presumed earthquake*
*GFZ **07** 20:32:26.9±0.2,5°N±3°×8°3W±°,h10km,M5.1/24, mb5.3/24*
*UPA **07** 20:32:29.5±1.4,5°.76N×82°.58W,h10km±7km,MW5.2, Presumed earthquake*
*GCMT **07** 20:32:30.3±0.1,5°.39N±0°.01×82°.56W±0°.01,h25km, MW5.3/144,Moment Tensor Solution. s89,c142; s144,c252; Duration: 1s0 Moment tensor: Scale 10^16^ Nm; Mrr0.42±.18; Mθθ-0.01±.14; Mφφ-0.40±.18; Mrθ0.35±.30; Mθφ9.72±.13; Mφr-0.57±.34; Best double couple: M0 9.74400×10^16^ NP1:φs271.00000°,δ87.00000°, λ-2.00000°. NP2:φs1.00000°,δ88.00000°,λ-177.00000°. Principal axes: T 9.5150, Plg1.0000°, Azm136.0000°; N 0.4580, Plg86.0000°, Azm31.0000°; P -9.9730, Plg4.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*CATAC **07** 20:32:30.8±0.2,6°N±1°×8°3W±°,h55km±9km,M5.5/66, mb5.9/66,mB6.0/58,MLv5.8/43,Mw(mB)5.6/58, MwMwp5.0/8,Mwp5.3/8 Error ellipse: s-maj=3.8km s-min=1.9km az=38.4,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.18; Mθθ-0.04; Mφφ-0.14; Mrθ-0.09; Mθφ6.19; Mφr4.68; Fault plane solution: M0 7.75603×10^16^ NP1:φs90.22415°,δ52.89133°, λ0.73869°. NP2:φs359.77846°,δ89.41090°,λ142.88904°. Principal axes: T 7.6600, Plg25.7145°, Azm308.5251°; N 0.1886, Plg52.8850°, Azm178.9999°; P -7.8486, Plg24.7934°, Azm51.3783°; confirmed*
*NEIC **07** 20:32:31.9,5°.41N×82°.32W,h20km,Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^16^Nm; Mrr-0.50; Mθθ0.54; Mφφ-0.04; Mrθ-4.07; Mθφ6.98; Mφr1.96; Fault plane solution: M0 8.33000×10^16^ NP1: φs184.62000°,δ61.26000°,λ-169.22000°. NP2: φs89.39000°,δ80.56000°,λ-29.17000°. Principal axes: T 7.6045, Plg13.0000°, Azm140.0000°; N 1.3032, Plg59.0000°, Azm253.0000°; P -8.9078, Plg27.0000°, Azm43.0000°;*
ISC 07 20:32:26.5±0.3,5°.41N±0°.04×82°.68W±0°.04,h15km,n1069,
σ1s92/883,mb5.1/318,MS4.2/42,1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMNES	**Limones**	**2.67**	**356**	*eP*	**Pb**	**20 33 12.8**	**-1.3**
LMNES				*eS*	**Sn**	**20 33 41.0**	**-0.2**
LIMO3	**Limones**	**2.68**	**356**	*eP*	**Pn**	**20 33 07.2**	**-1.8**
LIMO3				*eS*	**Sn**	**20 33 37.0**	**-4.3**
GMAL	**Guarumal, Vera**	**2.74**	**32**	P	**Pn**	**20 33 08.0**	**-2.0**
GMAL				S	**Sn**	**20 33 39.5**	**-3.4**
GMAL	**Guarumal, Vera**	**2.74**	**32**	*eP*	**Pn**	**20 33 07.9**	**-2.1**
GMAL	**Guarumal, Vera**	**2.74**	**32**	*eP*	**Pn**	**20 33 08.3**	**-1.7**
GMAL				*eS*	**Sn**	**20 33 38.9**	**-4.0**
PTPA	**Petro Terminal**	**2.77**	**356**	*eP*	**Pn**	**20 33 08.4**	**-2.0**
PTPA				*eS*	**Sn**	**20 33 41.0**	**-2.7**
PTPM	**Petroterminale**	**2.78**	**356**	*eP*	**Pn**	**20 33 08.8**	**-1.7**
PTPM				*eS*	**Sn**	**20 33 40.8**	**-3.0**
PVID3	**Puerto Vidal,**	**2.83**	**22**	*eP*	**Pn**	**20 33 09.4**	**-1.8**
PVID3				*eS*	**Sn**	**20 33 39.7**	**-5.3**
NANC3	**Nancito, Chiri**	**2.96**	**18**	*eP*	**Pn**	**20 33 11.2**	**-1.8**
NANC3				*eS*	**Sn**	**20 33 43.0**	**-5.4**
RSUS3	**Rio de Jesus,**	**2.97**	**31**	*eP*	**Pn**	**20 33 11.8**	**-1.3**
RSUS3				*eS*	**Sn**	**20 33 43.8**	**-4.6**
LESP3	**La Esperanza,**	**2.98**	**358**	*eP*	**Pn**	**20 33 11.3**	**-1.9**
LESP3				*eS*	**Sn**	**20 33 43.8**	**-4.8**
TOSI3	**Tonosi**	**2.98**	**48**	*eP*	**Pn**	**20 33 11.5**	**-1.7**
TOSI3				*eS*	**Sn**	**20 33 45.3**	**-3.4**
CHIR3	**Chiriqui UPA,**	**2.98**	**7**	*eP*	**Pn**	**20 33 11.3**	**-2.0**
CHIR3				*eS*	**Sn**	**20 33 43.7**	**-5.1**
DVD	**David**	**3.01**	**4**	*eP*	**Pn**	**20 33 12.3**	**-1.4**
DVD				*eS*	**Sn**	**20 33 43.9**	**-5.6**
PIRO	**Carate, Puerto**	**3.04**	**348**		**Pn**	**20 33 11.9**	**-2.2**
PIRO	**Carate, Puerto**	**3.04**	**348**	P	**Pn**	**20 33 11.7**	**-2.4**
PIRO				S	**Sn**	**20 33 48.6**	**-1.7**
PIRO	**Carate, Puerto**	**3.04**	**348**	*eP*	**Pn**	**20 33 11.5**	**-2.6**
PIRO	**Carate, Puerto**	**3.04**	**348**	*eP*	**Pn**	**20 33 12.4**	**-1.7**
PIRO				*eS*	**Sn**	**20 33 46.5**	**-3.8**
CDITO	**Canoas**	**3.15**	**357**	P	**Pn**	**20 33 14.0**	**-1.6**
CDITO				S	**Sn**	**20 33 50.7**	**-2.1**
STIA3	**Santiago, Vera**	**3.16**	**32**	*eP*	**Pn**	**20 33 14.5**	**-1.2**
STIA3				*eS*	**Sn**	**20 33 48.9**	**-4.3**
ACHO3	**Achotines, Los**	**3.19**	**51**	*eP*	**Pn**	**20 33 15.4**	**-0.7**
ACHO3				*eS*	**Sn**	**20 33 49.7**	**-4.1**
NELY	**Ciudad Neily**	**3.23**	**355**	*eP*	**Pn**	**20 33 15.0**	**-1.6**
PTAR3	**Potrerillos Ar**	**3.26**	**3**	*eP*	**Pn**	**20 33 16.1**	**-1.2**
PTAR3				*eS*	**Sn**	**20 33 51.2**	**-4.7**
CLLRA	**Cordillera,**	**3.31**	**1**	*i* P	**Pn**	**20 33 16.4**	**-1.5**
CLLRA				*eS*	**Sn**	**20 33 55.4**	**-1.7**
BQTLY	**Boquete Panama**	**3.33**	**4**	*eP*	**Pn**	**20 33 16.3**	**-1.9**
BQTLY	**Boquete Panama**	**3.33**	**4**	*i* P	**Pn**	**20 33 16.6**	**-1.6**
BQTLY				*eS*	**Sn**	**20 33 58.1**	**+0.5**
BRU2	**Volcan**	**3.36**	**360**		**Pn**	**20 33 17.1**	**-1.5**
BRU2				Sn	**Sn**	**20 33 55.8**	**-2.6**
BRU2	**Volcan**	**3.36**	**360**	*eP*	**Pn**	**20 33 16.9**	**-1.7**
BRU2				*eS*	**Sn**	**20 33 56.2**	**-2.1**
BRU2	**Volcan**	**3.36**	**360**	P	**Pn**	**20 33 17.1**	**-1.5**
BRU2	**Volcan**	**3.36**	**360**	*eP*	**Pn**	**20 33 17.4**	**-1.2**
BRU2				*eS*	**Sn**	**20 33 56.0**	**-2.4**
AZU	**Azuero**	**3.36**	**45**	P	**Pn**	**20 33 17.0**	**-1.5**
AZU	**Azuero**	**3.36**	**45**	*eP*	**Pn**	**20 33 17.0**	**-1.5**
AZU	**Azuero**	**3.36**	**45**	*eP*	**Pn**	**20 33 16.7**	**-1.7**
AZU				*eS*	**Sn**	**20 33 52.9**	**-5.2**
LNBQ3	**Los Naranjos,**	**3.36**	**4**	*eP*	**Pn**	**20 33 17.2**	**-1.5**
LNBQ3				*eS*	**Sn**	**20 33 53.6**	**-4.8**
PEDA3	**Pedasi**	**3.37**	**51**	*eP*	**Pn**	**20 33 17.9**	**-0.7**
PEDA3				*eS*	**Sn**	**20 33 54.7**	**-3.7**
CHIT3	**Chitre**	**3.38**	**42**	*eP*	**Pn**	**20 33 17.1**	**-1.7**
CHIT3				*eS*	**Sn**	**20 33 55.8**	**-2.8**
CALO3	**Calobre, Verag**	**3.42**	**32**	*eP*	**Pn**	**20 33 17.5**	**-1.8**
CALO3				*eS*	**Sn**	**20 33 53.7**	**-5.8**
RBALA	**Bur**	**3.48**	**9**	*eP*	**Pn**	**20 33 18.6**	**-1.6**
RBALA	**Bur**	**3.48**	**9**	*i* P	**Pn**	**20 33 19.1**	**-1.9**
RBALA				*eS*	**Sn**	**20 33 59.4**	**-1.8**
PBNVO	**Pueblo Nuevo,**	**3.49**	**8**	*eP*	**Pn**	**20 33 18.2**	**-2.1**
PBNVO	**Pueblo Nuevo,**	**3.49**	**8**	*i* P	**Pn**	**20 33 18.1**	**-2.1**
PBNVO				*eS*	**Sn**	**20 33 59.1**	**-2.2**
KKNTU	**Kakint^e**	**3.51**	**14**	*eP*	**Pn**	**20 33 18.9**	**-1.6**
KKNTU	**Kakint^e**	**3.51**	**14**	*i* P	**Pn**	**20 33 19.4**	**-1.1**
KKNTU				*eS*	**Sn**	**20 34 00.8**	**-1.1**
ALCO	**Alturas Coton,**	**3.52**	**358**	*eP*	**Pn**	**20 33 19.2**	**-1.6**
EDP2	**Potrero Grande**	**3.61**	**352**	*eP*	**Pn**	**20 33 20.6**	**-1.4**
FIMO	**Fila Mora**	**3.62**	**349**	*eP*	**Pn**	**20 33 20.6**	**-1.5**
OCHAL	**Ojochal**	**3.78**	**345**	P	**Pn**	**20 33 23.0**	**-1.4**
OCHAL				S	**Sn**	**20 34 06.9**	**-1.7**
EDPE	**Pejibaye, P**	**3.83**	**347**	*eP*	**Pn**	**20 33 23.5**	**-1.4**
PNME	**Penonome**	**3.84**	**37**	P	**Pn**	**20 33 24.5**	**-0.6**
PNME	**Penonome**	**3.84**	**37**	*eP*	**Pn**	**20 33 24.1**	**-1.0**
PNME				*eS*	**Sn**	**20 34 04.8**	**-5.3**
DRU0	**Durika**	**3.87**	**352**	*eP*	**Pn**	**20 33 14.0**	**-11**
CNI2	**El Empalme, Bo**	**3.99**	**3**	*eP*	**Pn**	**20 33 22.1**	**-5.1**
CNI2				*eS*	**Sn**	**20 34 06.3**	**-7.4**
ZEDO	**Perez Zeledon**	**4.04**	**346**	*eP*	**Pn**	**20 33 26.8**	**-1.1**
VTON	**El Valle, Cocl**	**4.07**	**39**	*i* P	**Pn**	**20 33 29.1**	**+0.8**
VTON				*eS*	**Sn**	**20 34 18.4**	**+2.6**
RGM0	**Gandoca**	**4.15**	**1**		**Pn**	**20 33 28.7**	**-0.7**
RGM0				Sn	**Sn**	**20 34 20.3**	**+2.6**
RGM0	**Gandoca**	**4.15**	**1**	P	**Pn**	**20 33 29.4**	**0.0**
RGM0				S	**Sn**	**20 34 21.6**	**+3.9**
RGM0	**Gandoca**	**4.15**	**1**	*eP*	**Pn**	**20 33 31.0**	**+1.7**
RGM0				*eS*	**Sn**	**20 34 20.5**	**+2.9**
QUEP	**Quepos**	**4.25**	**340**	P	**Pn**	**20 33 29.7**	**-1.1**
QUEP				S	**Sn**	**20 34 18.3**	**-1.9**
PICV	**PH. Pirrs**	**4.45**	**340**	*eP*	**Pn**	**20 33 31.9**	**-1.6**
ABE2	**San Pablo**	**4.48**	**342**	*eP*	**Pn**	**20 33 32.8**	**-1.2**
ZANG	**Zanguenga, Cho**	**4.49**	**38**	*eP*	**Pn**	**20 33 33.0**	**-1.0**
ZANG				*eS*	**Sn**	**20 34 17.5**	**-8.5**
CHOR3	**La Chorrera**	**4.51**	**40**	*eP*	**Pn**	**20 33 34.8**	**+0.5**
CHOR3				*eS*	**Sn**	**20 34 21.3**	**-5.2**
TABO3	**Taboga, Panama**	**4.57**	**43**	*eP*	**Pn**	**20 33 34.0**	**-1.2**
TABO3				*eS*	**Sn**	**20 34 21.7**	**-6.4**
ACOS	**Acosta**	**4.60**	**341**	*eP*	**Pn**	**20 33 34.2**	**-1.4**
BITO	**Garabito Jaco**	**4.60**	**335**	*eP*	**Pn**	**20 33 34.5**	**-1.0**
PCAYA	**Pacayas**	**4.61**	**346**	*eP*	**Pn**	**20 33 35.2**	**-0.8**
ARRA3	**Arraijan, Pana**	**4.63**	**40**	*eP*	**Pn**	**20 33 36.8**	**+0.9**
ARRA3				*eS*	**Sn**	**20 34 23.2**	**-6.3**
TRIO	**Tres Rios**	**4.65**	**344**	*eP*	**Pn**	**20 33 35.0**	**-1.3**
FLAM	**Flamenco Islan**	**4.67**	**42**	*eP*	**Pn**	**20 33 36.2**	**-0.3**
FLAM				*eS*	**Sn**	**20 34 25.9**	**-4.5**
BCIP	**Isla Barro Col**	**4.67**	**37**		**Pn**	**20 33 36.0**	**-0.6**
BCIP	**Isla Barro Col**	**4.67**	**37**	P	**Pn**	**20 33 36.6**	**0.0**
BCIP				S	**Sn**	**20 34 27.8**	**-2.8**
BCIP	**Isla Barro Col**	**4.67**	**37**	P	**Pn**	**20 33 35.4**	**-1.2**
BCIP	**Isla Barro Col**	**4.67**	**37**	P	**Pn**	**20 33 36.3**	**-0.3**
BCIP	**Isla Barro Col**	**4.67**	**37**	*eP*	**Pn**	**20 33 36.1**	**-0.5**
BCIP				*eS*	**Sn**	**20 34 25.6**	**-4.9**
ABRB	**Las Abras (San**	**4.68**	**347**	*eP*	**Pn**	**20 33 36.4**	**-0.4**
VICA	**Volcano Irazu**	**4.69**	**346**	*eP*	**Pn**	**20 33 36.1**	**-1.0**
ECI	**Escuela Centro**	**4.70**	**343**	*eP*	**Pn**	**20 33 36.2**	**-0.8**
VTR0	**Volcan Turrial**	**4.70**	**347**	*eP*	**Pn**	**20 33 36.7**	**-0.5**
CVTR	**Volcan Turrial**	**4.70**	**347**	*eP*	**Pn**	**20 33 36.4**	**-0.9**
CORON	**Coronado**	**4.72**	**344**	*eP*	**Pn**	**20 33 37.0**	**-0.3**
GAMB1	**Gamboa**	**4.72**	**38**	*eP*	**Pn**	**20 33 36.5**	**-0.6**
GAMB1				*eS*	**Sn**	**20 34 25.9**	**-5.6**
BELE	**Belen**	**4.77**	**342**	*eP*	**Pn**	**20 33 36.8**	**-1.2**
HDC	**Heredia**	**4.78**	**343**		**Pn**	**20 33 37.3**	**-0.7**
HDC	**Heredia**	**4.78**	**343**	*eP*	**Pn**	**20 33 37.1**	**-0.9**
HDC				*eS*	**Sn**	**20 34 32.4**	**-0.9**
HDC	**Heredia**	**4.78**	**343**	P	**Pn**	**20 33 37.8**	**-0.3**
TRB2	**Turrubares**	**4.80**	**339**	P	**Pn**	**20 33 37.0**	**-1.4**
TRB2				S	**Sn**	**20 34 31.1**	**-2.7**
OROT	**Orotina**	**4.83**	**338**	*eP*	**Pn**	**20 33 37.5**	**-1.2**
ATEO	**Atenas**	**4.84**	**340**	*eP*	**Pn**	**20 33 37.7**	**-1.2**
TCS1	**Tacares**	**4.87**	**341**	P	**Pn**	**20 33 39.2**	**-1.2**
VBV1	**V. Barva**	**4.88**	**343**	*eP*	**Pn**	**20 33 38.9**	**-0.7**

TRT2	Tortugero	5.22	349	*eP*		Pn	20 33 43.2	-0.8	SIUN	Universidad Ur	8.51	346			Pn	20 34 29.3	+0.1	CZSB	Cruzeiro do Su	16.42	143			Pn	20 36 15.2	-1.4
INDI	Punta indio, G	5.24	328	P		Pn	20 33 43.7	-0.5	SIUN	Universidad Ur	8.51	346	P		Pn	20 34 26.7	-2.5	CZSB				IAmb		IAmb	20 36 17.4	
INDI				S		Sn	20 34 40.7	-3.7	BILN	Bilwi Airport	8.61	355	Pn		Pn	20 34 31.3	+0.6		comp=Z,269nm,1.2s							
CMARA	Lajas Hojancha	5.32	329	P		Pn	20 33 44.5	-1.0	BILN	Bilwi Airport	8.61	355	P		Pn	20 34 29.9	-0.7	CZSB	Cruzeiro do Su	16.42	143	P		Pn	20 36 14.2	-2.3
CMARA	Lajas Hojancha	5.32	329	*eP*		Pn	20 33 44.6	-1.0	CVER	Cruz Verde, Cu	8.62	96	P		Pn	20 34 33.4	+2.2	CZSB	Cruzeiro do Su	16.42	143	*eP*		Pn	20 36 15.1	-1.4
CMARA				*eS*		Sn	20 34 43.0	-3.7		4µm437nm,0.8s								QMBU	Quimbuelo	16.57	27	*i* P		Pn	20 36 19.6	+1.2
CNTA3	Canitas, Panam	5.33	45	*eP*		Pn	20 33 44.7	-0.9	SJCC	San Jacinto, C	8.66	59	P		Pn	20 34 33.8	+2.4	QMBU				IAmb		IAmb	20 36 23.5	
CNTA3				*eS*		Sn	20 34 41.0	-5.8	SJCC	San Jacinto, C	8.66	59	P		Pn	20 34 33.4	+1.9		comp=Z,79nm,1.5s							
JTS	Las Juntas de	5.34	335	Pn		Pn	20 33 45.1	-0.7		6µm9µm1µm,1.4s								QMBU				IVmB_BB			20 36 24.5	
	612nm,0.4s,baz=150,slow=8.5,SNR=252								SJCC	San Jacinto, C	8.66	59	*eP*		Pn	20 34 31.8	+0.3		comp=Z,1µm,1.0s							
JTS				Sn		Sn	20 34 45.4	-1.8	SJCC				*eS*		Sn	20 36 02.5	-6.6	SGC2	Sao Gabriel da	16.62	109	*eP*		Pn	20 36 17.2	-2.0
	400nm,0.3s,baz=255,slow=24,SNR=20								RCON	San Juan de Ri	8.72	337	P		Pn	20 34 32.6	+0.3	CMIG	Matias Romero	16.66	315	Pn		P	20 36 21.1	-0.8
JTS	Las Juntas de	5.34	335			Pn	20 33 44.4	-1.4	RCPN	Sur Rio San Ju	8.74	338	P		Pn	20 34 29.1	-3.4		comp=Z,0.3nm,0.3s,baz=92,slow=11,SNR=25							
JTS						Sn	20 34 45.4	-1.8	RCFN	Al S de San Ju	8.79	337	P		Pn	20 34 31.8	-1.4	CMIG				LR		LR	20 41 49.2	
JTS	Las Juntas de	5.34	335	P		Pn	20 33 44.9	-0.9	RCVN	Varillal2	8.83	337	P		Pn	20 34 33.8	+0.1		comp=Z,1µm,19.3s,baz=128,slow=34							
JTS				S		Sn	20 34 45.5	-1.6	CHIC	Chingaza	8.95	95	P		Pn	20 34 38.4	+2.7		comp=Z,30nm,1.0s							
JTS	Las Juntas de	5.34	335	*eP*		Pn	20 33 44.1	-1.7		4µm580nm,0.7s								CMIG	Matias Romero	16.66	315	P		P	20 36 21.1	-0.8
JTS	Las Juntas de	5.34	335	P		Pn	20 33 44.6	-1.1	OCON	Estacion meteo	8.98	336	P		Pn	20 34 35.0	-0.8	HLGC	Holguin	16.67	22	*i* P		P	20 36 22.5	+0.4
JTS	Las Juntas de	5.34	335	*eP*		Pn	20 33 43.4	-2.4	VILC	Villavicencio,	9.05	98	P		Pn	20 34 38.3	+1.5	HLGC				IVmB_BB			20 36 26.4	
JTS				*eS*		Sn	20 34 44.4	-2.7	CNCH	Conchagua	9.32	327	P		Pn	20 34 41.5	+1.0		comp=Z,2µm,1.0s							
ARE1	Arenal 1	5.41	338	*eP*		Pn	20 33 46.1	-0.5	CNCH				S		Sn	20 36 22.5	-2.7	HLGC				IAmb		IAmb	20 36 26.9	
VARE2	V. Arenal	5.41	338	*eP*		Pn	20 33 46.3	-0.4	CNCH	Conchagua	9.32	327	*i* P		Pn	20 34 44.7	+4.2		comp=Z,120nm,1.8s							
CEDE	Laguna Cedeo	5.42	338	*eP*		Pn	20 33 46.6	-0.3	INTP	Intipuca	9.38	326	*i* P		Pn	20 34 44.1	+2.9	MGV	Manicaragua	16.80	9	*i* P		P	20 36 23.3	-0.2
JUD3	Juan Diaz 3	5.51	329			Pn	20 33 46.2	-1.8	LCND	La Caada	9.38	327	P		Pn	20 34 43.7	+2.5	MGV				IVmB_BB			20 36 27.2	
COVE	Coope Vega, Sa	5.54	342	P		Pn	20 33 47.9	-0.6	MACC	Macarena, Meta	9.39	110	P		Pn	20 34 41.6	+0.2		comp=Z,550nm,1.0s							
COVE				S		Sn	20 34 50.8	-1.1		10µm1µm,0.8s								MGV				IAmb		IAmb	20 36 44.2	
TOTI	Torti	5.57	51	*eP*		Pn	20 33 48.8	-0.1	PTLC	Puerto Leguiza	9.44	123	P		Pn	20 34 44.5	+2.5		comp=Z,38nm,0.9s							
TOTI				*eS*		Sn	20 33 49.6	-3.1		8µm3µm209nm,0.7s								NMDO	Nuevo Mundo	16.81	26	Pn		Pn	20 36 20.9	-0.6
COTE	Lago Cote	5.59	337	*eP*		Pn	20 33 49.0	-0.2	BARC	Barichara	9.52	82	P		Pn	20 34 46.4	+3.1	NMDO				IAmb		IAmb	20 36 27.5	
ALIB	Liberia Airpor	5.88	331	*eP*		Pn	20 33 52.9	-0.2		445nm,1.1s									comp=Z,136nm,1.0s							
UPAL	Upala	5.92	337	P		Pn	20 33 49.8	-3.8	RUSC	La Rusia	9.56	87	P		Pn	20 34 46.2	+2.1	NMDO	Nuevo Mundo	16.81	26	*i* P		P	20 36 23.4	-0.2
UPAL				S		Sn	20 34 59.0	-2.2	BLLM	Bellamira	9.68	326	*i* P		Pn	20 34 49.0	+3.6	NMDO				IAmb		IAmb	20 36 27.2	
JAMC	Jamundi, Valle	6.38	110	P		Pn	20 33 58.4	-1.7	OCAC	Ocana	9.71	73	P		Pn	20 34 47.4	+1.5		comp=Z,130nm,1.2s							
	7µm12µm672nm,0.6s									6µm708nm,0.7s								NMDO				IVmB_BB			20 37 21.2	
JAMC				S		Sn	20 35 06.9	-5.9	PACA	Pacayal	9.75	326	P		Pn	20 34 48.8	+2.4		comp=Z,5µm,1.0s							
	7µm12µm672nm,0.6s								PACA				S		Sn	20 36 33.0	-2.7	MASC	Masc	16.82	28	*i* P		Pn	20 36 22.8	+1.3
BBAC	Balboa, Cauca	6.38	122	P		Pn	20 33 57.9	-2.3	TECO	Alcaldia de Te	10.07	324	P		Pn	20 34 54.6	+3.9	MASC				IAmb		IAmb	20 36 26.9	
	12µm9µm929nm,0.7s								MCRA	Macar, Loja	10.09	164	P		Pn	20 34 52.0	+1.0		comp=Z,150nm,1.1s							
BBAC				S		Sn	20 35 08.0	-5.0		4µm741nm67nm,0.9s								MASC	Masc	16.82	28	P		P	20 36 24.2	+0.6
	12µm9µm929nm,0.7s								PAMC	Pamplona, Colo	10.10	79	P		Pn	20 34 54.4	+2.9	MOAC	Moa	16.91	26	*i* P		P	20 36 25.4	+0.8
CARN	Rivas	6.39	334			Pn	20 33 59.6	-0.5	SMRC	Santa Marta, M	10.13	55	P		Pn	20 34 53.0	+1.5	MOAC				IVmB_BB			20 36 26.7	
CARN	Rivas	6.39	334	P		Pn	20 34 01.5	+1.3		3µm202nm,1.1s									comp=Z,2µm,1.0s							
CARN				S		Sn	20 35 13.3	+0.4	SCLA	Alcaldia de Sa	10.17	325	P		Pn	20 34 56.5	+4.4	MOAC				IAmb		IAmb	20 36 27.1	
PLMC	San Jos del P	6.39	94	P		Pn	20 33 59.4	-0.8	SCLA				S		Sn	20 36 45.5	-0.5		comp=Z,210nm,1.2s							
	9µm804nm,0.8s								SCLA	Alcaldia de Sa	10.17	325	*i* P		Pn	20 34 56.5	+4.4	CAIB	Caibarien	17.26	10			Pn	20 36 27.2	+0.1
PLMC				S		Sn	20 35 10.7	-2.3	COEG	Centro de Oper	10.19	324	P		Pn	20 34 56.6	+4.2	CAIB	Caibarien	17.26	10	*i* P		P	20 36 34.5	+6.0
	9µm804nm,0.8s								COEG				S		Sn	20 36 43.6	-3.0	CAIB				IAmb		IAmb	20 36 35.3	
PAC1	Pacto, Paraso	6.42	143	P		Pn	20 33 58.7	-2.0	COEG	Centro de Oper	10.19	324	*i* P		Pn	20 34 56.5	+4.1		comp=Z,38nm,1.1s							
APAC	Apartado, Choc	6.54	67	P		Pn	20 34 05.1	+2.8	SJTE	Alcalda de S	10.26	323	*i* P		Pn	20 34 57.4	+4.0	CAIB				IVmB_BB			20 36 48.9	
	7µm22µm1µm,0.7s								PAVA	Las Pavas	10.30	324	P		Pn	20 34 57.8	+3.9		comp=Z,960nm,1.0s							
APAC				S		Sn	20 35 22.0	+5.3	PAVA				S		Sn	20 36 49.0	-0.2	SOR	Soroa	17.28	359			Pn	20 36 28.3	+0.9
	7µm22µm1µm,0.7s								PAVA	Las Pavas	10.30	324	*i* P		Pn	20 34 58.2	+4.3	SOR	Soroa	17.28	359	*i* P		P	20 36 30.0	+1.2
DBBC	Dabeiba	6.63	76	P		Pn	20 34 04.7	+1.2	PANCS	Alcalda de	10.36	322	P		Pn	20 34 57.3	+2.5	SOR				IAmb		IAmb	20 36 31.1	
DBBC				S		Sn	20 35 17.9	-1.0	LBRS	Las Brisas	10.38	323	*i* P		Pn	20 34 59.4	+4.3		comp=Z,97nm,1.1s							
POPC	Popayan, Colom	6.63	115	P		Pn	20 34 03.1	-0.6	LOMA	Loma Larga	10.38	322	P		Pn	20 34 58.5	+3.4	SOR	Soroa	17.28	359	P		P	20 36 29.6	+0.9
	8µm16µm717nm,0.5s								P5NO	Presa 5 de nov	10.41	325	P		Pn	20 34 59.3	+4.0	SDDR	Presa de Saban	17.47	38	P		Pn	20 36 30.3	+0.5
POPC				S		Sn	20 35 23.7	+4.4	UEES	Universidad Ev	10.48	322	P		Pn	20 35 01.4	+5.0	SDDR				IAmb		IAmb	20 36 34.2	
	8µm16µm717nm,0.5s								PMON	Piamonte	10.52	322	P		Pn	20 35 01.2	+4.2		comp=Z,277nm,1.2s							
BLUN	Bluefields	6.64	351	P		Pn	20 34 01.9	-1.7	JAYA	Jayaque - finc	10.56	321	P		Pn	20 35 01.2	+3.6	SDDR	Presa de Saban	17.47	38	*i* P		P	20 36 31.7	+0.7
BLUN	Bluefields	6.64	351	P		Pn	20 34 02.6	-0.9	JAYA				S		Sn	20 36 53.3	-2.5	SDDR				IAmb		IAmb	20 36 42.4	
CBOC	Ciudad Bolivar	6.65	86	P		Pn	20 34 04.5	+0.6	JAYA	Jayaque - finc	10.56	321	*i* P		Pn	20 35 01.8	+4.2		comp=Z,270nm,1.1s							
	2µm188nm,0.9s								CEDA	San Andres	10.64	322	P		Pn	20 35 02.1	+3.5	SDDR				IVmB_BB			20 36 52.0	
OTAV	Otavalo	6.65	140			Pn	20 34 02.1	-2.0	LLGN	La Laguna	10.66	325	P		Pn	20 35 01.0	+2.2		comp=Z,3µm,1.0s							
OMEN	Al SSO del Vol	6.72	334	P		Pn	20 34 02.0	-2.7	CEVE	Cerro Verde	10.80	321	P		Pn	20 35 04.3	+3.3	SDDR	Presa de Saban	17.47	38	P		P	20 36 31.6	+0.6
TULM	Tulcn-Chalpat	6.75	134	P		Pn	20 34 05.1	-0.5	CEVE	Cerro Verde	10.80	321	*i* P		Pn	20 35 06.0	+5.0	BANI	BANI	17.64	42			Pn	20 36 32.0	+0.1
TULM	Tulcn-Chalpat	6.75	134	P		Pn	20 34 05.8	+0.2	SBLS	San Blas	10.81	321	*i* P		Pn	20 35 05.3	+4.3	SDD	Santo Domingo	17.98	43	P		Pn	20 36 35.9	-0.1
	241nm,0.8s								SNJE	San Jose	10.82	321	*i* P		Pn	20 35 06.0	+4.8	SC01	Santiago de lo	18.15	39	P		Pn	20 36 38.3	+0.1
JAPN	Al SSO del Vol	6.76	334	P		Pn	20 34 02.8	-2.5	UNIC	Universidad Ca	10.88	322	P		Pn	20 35 06.7	+4.9	NNA	Nana	18.23	161	P		Pn	20 36 39.3	+0.1
MORN	Al O del Volca	6.76	334	P		Pn	20 34 03.9	-1.4	LOAL	Lomas de Alarc	11.03	321	P		Pn	20 35 05.3	+1.4		comp=Z,1.1nm,0.3s,baz=339,slow=8.9,SNR=16							
IMBA	Imbabura, San	6.79	139	P		Pn	20 34 04.3	-1.7	SLOZ	Alcaldia de Sa	11.05	321	P		Pn	20 35 08.5	+4.3	NNA				LR		LR	20 43 03.9	
PULU	Pululahua	6.79	142	P		Pn	20 34 05.5	-0.5	SARH	Santa Rosa de	11.06	328	P		Pn	20 35 08.5	+4.2		comp=Z,737nm,18.8s,baz=318,slow=35							
ACON	Acoyapa	6.96	339	P		Pn	20 34 07.8	-0.2	RBDL	Robledal	11.06	322	*i* P		Pn	20 35 08.2	+3.8		comp=Z,79nm,0.9s							
ACON				S		Sn	20 35 25.3	-1.7	FAME	Alcaldia de Sa	11.06	320	P		Pn	20 35 07.7	+3.4	NNA	Nana	18.23	161	P		Pn	20 36 39.5	+0.3
LCBC	Los crdobas,	7.14	61	P		Pn	20 34 13.7	+3.3	MTO3	Montecristo	11.09	324			Pn	20 35 05.6	+0.8	NNA				IAmb		IAmb	20 36 41.6	
	14µm1µm,1.0s								MTO3	Montecristo	11.09	324	P		Pn	20 35 08.4	+3.5		comp=Z,112nm,1.1s							
HELC	Santa Helena	7.16	83	P		Pn	20 34 12.1	+1.1	MTO3	Montecristo	11.09	324	*i* P		Pn	20 35 08.9	+4.0	NNA	Nana	18.23	161	P		P	20 36 40.6	+1.1
HELC				S		Sn	20 35 27.9	-4.4	ESQI	Esquipulas	11.21	325	Pn		Pn	20 35 08.2	+1.9	DR12	Loma Pena Alta	18.57	43	P		P	20 36 43.9	+0.7
HELC	Santa Helena	7.16	83	P		Pn	20 34 12.5	+1.5	ESQI	Esquipulas	11.21	325	P		Pn	20 35 10.7	+4.4	PCDR	Punta Cana, DR	19.09	46	P		Pn	20 36 50.6	+1.1
	2µm2µm249nm,0.8s								ESQI	Esquipulas	11.21	325	*i* P		Pn	20 35 10.4	+4.1	GRTK	Grand Turk	19.53	34	P		P	20 36 53.7	+0.2
HELC				S		Sn	20 35 31.4	-0.9	APG	El Apazote	12.22	322	Pn		Pn	20 35 22.0	+1.6	GRTK	Grand Turk	19.53	34	*i* P		P	20 36 54.7	+1.2
	2µm2µm249nm,0.8s									0.7nm,0.3s,baz=134,slow=11,SNR=33								GRTK				IAmb		IAmb	20 36 57.5	
HELC	Santa Helena	7.16	83	*eP*		Pn	20 34 11.3	+0.3	APG				LR		LR	20 39 31.2			comp=Z,270nm,1.4s							
HELC				*eS*		Sn	20 35 30.9	-1.4		comp=Z,134nm,21.3s,baz=228,slow=35								GRTK				IVmB_BB			20 37 04.0	
GUY2C	Guyana, Caldas	7.29	91	P		Pn	20 34 13.4	+0.5		5.6nm,0.7s									comp=Z,4µm,1.0s							
	4µm558nm,0.7s								APG	El Apazote	12.22	322			Pn	20 35 22.0	+1.6	TLIG	Tlapa	19.68	309	P		P	20 36 56.0	+0.6
GUY2C				S		Sn	20 35 38.0	+2.4	URIC	Uribia, Colomb	12.27	59	P		Pn	20 35 21.6	+0.7	CRPR	Cabo Rojo, PR	19.70	49	P		P	20 36 55.6	+0.1
	4µm558nm,0.7s									6µm646nm,1.1s								MLPR	Magueyes Islan	19.73	49	P		P	20 36 56.1	+0.4
NANN	Nandasmo	7.32	333	P		Pn	20 34 15.2	+2.2	URI	Uribia	12.27	59	P		Pn	20 35 22.1	+1.3	PRSN	Puerto Rico Se	19.80	49	P		P	20 36 57.7	+1.1
NANN				S		Sn	20 35 33.2	-2.7	SDV	Santo Domingo	12.44	73	Pn		Pn	20 35 25.1	+1.8	AGPR	Aguadilla, PR	19.98	48			P	20 36 59.5	+1.0
SABN	Sabanita	7.36	332	P		Pn	20 34 14.0	+0.6		13nm,0.3s,baz=244,slow=8.5,SNR=113								TEFE	Tefe	20.09	116	*eP*		P	20 36 59.9	+0.2
SLOR	San Lorenzo -	7.39	145			Pn	20 34 14.8	+0.4	SDV				Sn		Sn	20 37 36.3	-5.6	OBIP	Obispado Ponce	20.10	50	P		P	20 37 00.5	+0.7
ANTS	Antisana-Sarah	7.40	142	P		Pn	20 34 15.9	+1.3		26nm,0.3s,baz=359,slow=15,SNR=9.1								OBIP				IAmb		IAmb	20 37 09.6	
UREC	San Jos de Ur	7.47	71	P		Pn	20 34 16.4	+1.4	SDV				LR		LR	20 39 54.8			comp=Z,99nm,0.8s							
	5µm9µm702nm,1.0s									comp=Z,1µm,19.4s,baz=244,slow=36								AOPR	Arecibo Observ	20.18	49	P		P	20 37 02.1	+1.5
UREC				S		Sn	20 35 36.4	-3.2	SDV	Santo Domingo	12.44	73			Pn	20 35 25.0	+1.6	SJG	San Juan	20.50	51	P		P	20 37 05.3	+1.2
	5µm9µm702nm,1.0s								SDV	Santo Domingo	12.44	73	*eP*		Pn	20 35 24.7	+1.4		comp=Z,315nm,0.8s,baz=245,slow=5.2,SNR=83							
UREC	San Jos de Ur	7.47	71	*eP*		Pn	20 34 16.3	+1.2	RTAL	Retalhuleu	12.68	316	Pn		Pn	20 35 27.8	+1.5	SJG				LR		LR	20 43 34.7	
UREC				*eS*		Sn	20 35 35.2	-4.3	RTAL	Retalhuleu	12.68	316	P		Pn	20 35 29.3	+2.9		comp=Z,300nm,20.9s,baz=276,slow=33							
VCES	Cotopaxi	7.51	145	P		Pn	20 34 15.8	+0.7	HUEH	Huehuetenango	13.12	319	Pn		Pn	20 35 31.2	-1.3	SJG	San Juan	20.50	51	P		P	20 37 05.7	+1.6
UNAN	Cigeo UNAN	7.54	332	P		Pn	20 34 15.9	-0.1	HUEH	Huehuetenango	13.12	319	P		Pn	20 35 35.6	+3.0	SJG	San Juan	20.50	51	P		P	20 37 05.9	+1.4
WILN	Americas 2	7.55	333	P		Pn	20 34 17.3	+1.2	ATAH	Atahualpa	13.18	161	Pn		Pn	20 35 33.5	-0.1	PDPR	Patillas Dam,	20.54	51			P	20 37 05.9	+1.4
WILN				S		Sn	20 35 38.9	-2.5		0.6nm,0.3s,baz=355,slow=10.0,SNR=19								HUMP	Col San Antoni	20.74	51			P	20 37 08.2	+1.4
ORTC	Ortega, Tolima	7.56	101	P		Pn	20 34 17.3	+1.1	ATAH				LR		LR	20 40 01.7		UNM	Universidad Na	21.20	312	P		P	20 37 12.7	+0.6
	14µm1µm,1.2s									comp=Z,3µm,21.4s,baz=335,slow=35								060A	Indiantown	21.62	6	P		P	20 37 16.0	-0.1
ORTC				S		Sn	20 35 41.1	-0.7		40nm,1.0s								GRGR	Grenville	21.81	71	P		P	20 37 22.4	+4.0
	14µm1µm,1.2s								ATAH	Atahualpa	13.18	161			Pn	20 35 33.5	-0.1	BOAV	Boa Vista	22.30	97			P	20 37 24.7	+1.0
MGAN	Managua	7.56	332	Pn		Pn	20 34 16.5	+0.3	PETF	Flores	13.43	329			Pn	20 35 35.2	-1.4	BOAV	Boa Vista	22.30	97	P		P	20 37 25.5	+1.8
MGAN	Managua	7.56	332	P		Pn	20 34 17.1	+0.9	PETF	Flores	13.43	329	P		P	20 35 41.9	-4.1	BOAV	Boa Vista	22.30	97	*eP*		P	20 37 24.2	+0.6
MGAN				S		Sn	20 35 42.9	+1.1	MTDJ	Mount Denham	13.69	21			Pn	20 35 39.4	-0.9	DWPF	Disney Wildern	22.61	3	P		P	20 37 30.0	+3.4
MGAN	Managua	7.56	332	P		Pn	20 34 17.0	+0.7	MTDJ	Mount Denham	13.69	21	P		Pn	20 35 41.5	+1.2	SMRT	St. Maarten	22.90	55	P		P	20 37 30.3	+0.3
	7µm353nm,1.1s								MTDJ	Mount Denham	13.69	21	*i* P		Pn	20 35 43.5	+3.2	BIM	Bigot	23.10	65	P		P	20 37 32.7	+0.6
MGAN				S		Sn	20 35 40.2	-1.6	MTDJ				IAmb		IAmb	20 35 52.8		CXM	Morne La Croix	23.12	65	IAmb		IAmb	20 37 35.0	
	7µm353nm,1.1s									comp=Z,130nm,1.7s									comp=Z,135nm,1.2s							
MGAN	Managua	7.56	332	P		Pn	20 34 18.3	+2.1	MTDJ				IVmB_BB			20 35 53.1		MPOM	Morne Pois Mar	23.27	66	P		P	20 37 34.6	+0.8
TISN	Laguna Tiscapa	7.57	332	P		Pn	20 34 18.3	+2.0		comp=Z,2µm,1.0s								MACA	Manacapuru-AM	23.56	111	*eP*		P	20 37 36.9	+0.2
BOAB	BOACO BROADBAN	7.59	337			Pn	20 34 15.8	-0.8	FSCY	Frank Sound, G	13.89	6	P		Pn	20 35 40.2	-2.8	ZAIG	Zacatecas	25.82	314			P	20 37 58.6	+0.9
BOAB	BOACO BROADBAN	7.59	337	P		Pn	20 34 16.5	-0.1	LMGC	Las Mercedes	15.57	20	*i* P		Pn	20 36 07.3	+1.7	LPAZ	La Paz	25.93	147	P		P	20 37 59.4	+0.4
BOAB	BOACO BROADBAN	7.59	337	P		Pn	20 34 16.6	0.0	LMGC				IVmB_BB			20 36 14.8			comp=Z,15nm,0.7s,baz=339,slow=8.0,SNR=32							
APQ2	Apoyeque	7.64	332	P		Pn	20 34 18.1	+0.7		comp=Z,2µm,1.0s								LPAZ				LR		LR	20 49 19.5	
APQ2				S		Sn	20 35 41.8	-2.0	LMGC				IAmb		IAmb	20 36 15.2			comp=Z,1µm,20.1s,baz=304,slow=39							
SAPS	Ciudad Sandino	7.66	332	P		Pn	20 34 18.1	+0.5		comp=Z,160nm,1.2s									comp=Z,15nm,0.7s							
SAPS				S		Sn	20 35 42.2	-1.9	CHIV	Chivirico	15.71	22	Pn		Pn	20 36 06.8	-0.6	LPAZ	La Paz	25.93	147	*eP*		P	20 37 58.0	-1.0
PIAT	Ana Tenorio	7.75	145	P		Pn	20 34 19.2	0.0	CHIV				IAmb		IAmb	20 36 10.3		PB18	Visviri	26.31	151	P		P	20 38 05.2	+2.8
	6µm2µm111nm,1.0s									comp=Z,155nm,1.2s								PB12	IPOC Station P	26.80	153	P		P	20 38 07.0	+0.6
CHSH	Refugio Sur-Vo	7.85	151	P		Pn	20 34 22.7	+2.0	CHIV	Chivirico	15.71	22	P		Pn	20 36 08.0	+0.7	PB12				IAmb		IAmb	20 38 33.6	
GARC	Garzon, Huila	7.85	114	P		Pn	20 34 21.7	+1.2	CHIV	Chivirico	15.71	22	*i* P		Pn	20 36 09.2	+1.9		comp=Z,33nm,0.9s							
	8µm813nm,0.9s								CHIV				IAmb		IAmb	20 36 10.0		PB12	IPOC Station P	26.80	153	P		P	20 38 07.2	+0.8
MOMN	Momotombo	7.93	332	P		Pn	20 34 24.3	+3.0		comp=Z,110nm,1.6s								PB16	IPOC Station P	26.94	151			P	20 38 09.2	+1.1
MOMN				S		Sn	20 35 49.5	-1.3	CHIV				IVmB_BB			20 36 10.2		PB16				IAmb		IAmb	20 38 11.8	
PRAC	Prado	7.95	102	P		Pn	20 34 22.8	+1.2		comp=Z,2µm,1.0s									comp=Z,37nm,0.8s							
PRAC				S		Sn	20 35 50.2	-1.2	SCIG	Sabancuy	15.82	329	P		Pn	20 36 07.7	-1.1	PB16	IPOC Station P	26.94	151	P		P	20 38 09.5	+1.4
PRAC	Prado	7.95	102	P		Pn	20 34 22.8	+1.2	MARVS	Santiago de Cu	15.93	24	*i* P		Pn	20 36 12.0	+1.8	152A	Waverly Hall	27.18	356	IAmb		IAmb	20 38 19.1	
	3µm9µm904nm,0.5s								MARVS				IVmB_BB			20 36 13.2			comp=Z,20nm,0.7s							
PRAC				S		Sn	20 35 52.2	+0.8		comp=Z,3µm,1.0s								HKT	Hockley	27.38	335	P		P	20 38 13.2	+1.9
	3µm9µm904nm,0.5s								MARVS				IAmb		IAmb	20 36 16.3		LRAL	Lakeview Retre	27.77	352			P	20 38 15.7	+0.8
PRVC	Isla de Provid	8.02	9	P		Pn	20 34 21.6	-1.0		comp=Z,130nm,1.2s								LRAL				IAmb		IAmb	20 38 16.9	
MACN	El Madrono	8.04	331	P		Pn	20 34 23.4	+0.5	RCC	Rio Carpintero	16.01	24	*i* P		Pn	20 36 13.0	+1.8		comp=Z,34nm,1.1s							
MACN				S		Sn	20 35 50.8	-2.8	RCC				IVmB_BB			20 36 14.3		GOGA	Godfrey	27.87	359	P		P	20 38 16.6	+0.9
CNGA	Al SSO del Vol	8.08	331	P		Pn	20 34 23.9	+0.

comp=Z,42nm,1.4s
CPCT Cooper Cave 29.94 357 IAmb IAmb 20 38 40.7
comp=Z,21nm,0.9s
NPGB Novo Progresso 29.94 114 *eP* **P 20 38 33.5 -0.9**
Z38A Mt. Pleasant 29.98 339 IAmb IAmb 20 38 36.3
comp=Z,32nm,0.8s
PB03 IPOC Station P 30.09 156 IAmb IAmb 20 39 19.8
comp=Z,37nm,1.2s
TKL Tuckaleechee C 30.12 358 LR LR 20 50 53.5
comp=Z,358nm,18.6s,baz=180,slow=37
TKL Tuckaleechee C 30.12 358 IAmb IAmb 20 38 42.5
comp=Z,31nm,1.2s
FW13 Cleburne 30.14 335 IAmb IAmb 20 38 37.7
comp=Z,35nm,0.8s
SIV San Ignacio 30.16 135 LR LR 20 50 37.9
comp=Z,1jun,20.4s,baz=293,slow=36
V58A Windy Hill, Pi 30.41 6 IAmb IAmb 20 38 45.1
comp=Z,31nm,1.0s
V48A Smith Brothers 30.42 353 IAmb IAmb 20 38 39.8
comp=Z,43nm,1.0s
UALR University of 30.55 344 IAmb IAmb 20 38 40.6
comp=Z,25nm,0.8s
H06S1 SOCORRO T 30.59 298 T T 21 10 52.1
SNR=3.6
H06N1 SOCORRO T-PHAS 30.66 298 T T 21 10 53.8
SNR=6.4
MIAR Mount Ida 30.70 342 P **P 20 38 41.0 +0.2**
CLTN Cedars of Leba 30.71 354 IAmb IAmb 20 38 42.5
comp=Z,24nm,1.3s
OZNA Ozona 30.73 328 IAmb IAmb 20 39 45.1
comp=Z,34nm,1.2s
WVT Waverly 30.93 352 **P 20 38 42.2 -0.7**
WVT IAmb IAmb 20 38 43.4
comp=Z,25nm,0.8s
WVT Waverly 30.93 352 P **P 20 38 42.1 -0.8**
TXAR Lajitas Array 30.98 323 P **P 20 38 45.0 +1.5**
comp=Z,1.0nm,0.6s,baz=143,slow=9.3,SNR=16
TXAR LR LR 20 51 29.1
comp=Z,246nm,21.2s,baz=118,slow=37
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 30.98 323 **P 20 38 44.9 +1.4**
TZTN Tazewell 30.99 359 P **P 20 38 39.7 -3.7**
WHAR Wooly Hollow 31.03 345 IAmb IAmb 20 38 44.7
comp=Z,34nm,0.8s
PTLB Pontes e Lacer 31.20 132 IAmb IAmb 20 38 46.3
comp=Z,27nm,0.8s
PTLB Pontes e Lacer 31.20 132 *eP* **P 20 38 45.0 -0.4**
CLDB Colider 31.27 121 *eP* **P 20 38 44.8 -1.3**
CLDB Colider 31.27 121 P **P 20 38 44.9 -1.3**
BBSD Serra de San D 31.30 136 *eP* **P 20 38 45.7 -0.6**
SGCY Sterling City 31.52 329 IAmb IAmb 20 38 50.2
comp=Z,16nm,0.9s
T50A Nancy 31.52 357 IAmb IAmb 20 38 57.2
comp=Z,47nm,1.4s
FCAR Ozark Folk Cen 31.55 345 IAmb IAmb 20 38 49.1
comp=Z,26nm,0.9s
ALPN Alpine 31.72 324 IAmb IAmb 20 38 53.1
comp=Z,24nm,0.9s
SLBS Sierra La Lagu 31.93 307 P **P 20 38 53.2 +1.4**
SLBS IAmb IAmb 20 38 55.8
comp=Z,33nm,1.1s
MNHN Monahans 31.94 326 IAmb IAmb 20 38 55.9
comp=Z,17nm,0.8s
TPB05 Hovey Rd 31.94 325 IAmb IAmb 20 38 56.3
comp=Z,16nm,1.1s
PB14 IPOC Station P 32.16 159 P **P 20 38 55.5 +1.4**
APMT Aspermont 32.17 332 IAmb IAmb 20 38 55.8
comp=Z,19nm,0.8s
TPB01 Permian Basin 32.22 325 IAmb IAmb 20 38 56.9
comp=Z,9.7nm,0.8s
W35A Tecumseh 32.37 338 IAmb IAmb 20 39 00.9
comp=Z,23nm,1.1s
LPIG La Paz 32.42 308 LR LR 20 49 13.7
comp=Z,340nm,19.4s,baz=115,slow=31
TPB06 Permian Basin 32.43 326 IAmb IAmb 20 38 59.0
comp=Z,22nm,0.8s
129A Stewart Farms, 32.47 329 IAmb IAmb 20 38 58.6
comp=Z,12nm,0.9s
POST Post 32.63 330 IAmb IAmb 20 38 59.9
comp=Z,22nm,0.9s
FNO Franklin 32.66 337 IAmb IAmb 20 38 59.3
comp=Z,34nm,0.9s
R50A Paris 32.75 358 IAmb IAmb 20 39 04.9
comp=Z,41nm,1.1s
WMOK Wichita Mounta 32.76 335 IAmb IAmb 20 39 00.2
comp=Z,19nm,0.9s
128A Castleberry Fa 32.78 328 IAmb IAmb 20 40 13.5
comp=Z,16nm,1.2s
DKNS Dickens 32.83 331 IAmb IAmb 20 39 01.9
comp=Z,24nm,0.8s
WCI Wyandotte Cave 32.83 355 P **P 20 38 59.1 -0.4**
DEOK Depew 32.85 339 IAmb IAmb 20 39 05.5
comp=Z,17nm,0.9s
OK052 Battle Ridge R 33.09 339 IAmb IAmb 20 39 02.5
comp=Z,40nm,1.1s
TPB28 33.17 325 IAmb IAmb 20 39 06.1
comp=Z,12nm,0.9s
FVM French Village 33.18 349 IAmb IAmb 20 39 04.2
comp=Z,41nm,1.1s
CCM Cathedral Cave 33.41 348 P **P 20 39 04.4 -0.3**
MNTX Cornudas Mount 33.71 324 IAmb IAmb 20 39 10.2
comp=Z,30nm,1.3s
T35A Sooner Cattle 33.82 340 IAmb IAmb 20 39 11.7
comp=Z,40nm,1.3s
R40A Maddies Statio 33.87 346 IAmb IAmb 20 39 09.9
comp=Z,22nm,1.1s
P51A Williamsport 33.92 359 IAmb IAmb 20 39 14.7
comp=Z,26nm,0.9s
MSTX Muleshoe 33.99 329 IAmb IAmb 20 39 11.8
comp=Z,14nm,0.9s
P52A Corning 34.07 1 IAmb IAmb 20 39 16.3
comp=Z,24nm,0.9s
SALV Santo Antonio 34.09 129 *eP* **P 20 39 10.3 -0.4**
AMTX Amarillo 34.18 332 IAmb IAmb 20 39 13.3
comp=Z,20nm,0.8s
MCWV Mont Chateau 34.19 4 IAmb IAmb 20 39 18.1
comp=Z,24nm,0.9s
P46A Rosedale 34.30 354 IAmb IAmb 20 39 12.8
comp=Z,30nm,0.9s
O49A Covington 34.65 358 IAmb IAmb 20 39 21.2
comp=Z,39nm,1.1s
O53A New Philadelph 34.71 2 IAmb IAmb 20 39 21.9
comp=Z,35nm,1.0s
PRPB Parauapebas 34.77 109 *eP* **P 20 39 16.1 -0.7**
MVL Millersville 34.90 9 IAmb IAmb 20 39 24.7
comp=Z,32nm,1.3s
SFIN Lafayette 35.04 354 IAmb IAmb 20 39 18.9
comp=Z,30nm,0.9s
PAGS Pennsylvania G 35.07 8 IAmb IAmb 20 39 25.3
comp=Z,39nm,1.0s
COIM Forte Coimbra 35.11 136 *eP* **P 20 39 18.7 -0.8**
N53A Lisbon 35.28 2 IAmb IAmb 20 39 26.0
comp=Z,17nm,0.9s
N49A Columbus Grove 35.38 358 IAmb IAmb 20 39 26.9
comp=Z,30nm,1.0s
P38A Dawn 35.44 345 IAmb IAmb 20 39 33.0
comp=Z,24nm,0.8s
SNDB Serra Nova Dou 35.67 119 *eP* **P 20 39 23.8 -0.7**
N58A Sunbury 35.68 8 IAmb IAmb 20 39 29.8
comp=Z,16nm,0.9s
PP1B Ponte de Pedra 35.73 130 *eP* **P 20 39 24.7 -0.2**
KSU1 Kansas State U 35.83 341 IAmb IAmb 20 39 29.3
comp=Z,22nm,0.9s
M50A Fremont 35.84 360 IAmb IAmb 20 39 31.0
comp=Z,34nm,1.0s
RTBA Rita Blanca 35.95 332 IAmb IAmb 20 39 28.9
comp=Z,25nm,0.8s
PAOC Oil Creek Stat 36.05 4 IAmb IAmb 20 39 36.0
comp=Z,22nm,1.1s
AC05 El Transito 36.09 161 P **P 20 39 28.9 +0.9**
AC05 IAmb IAmb 20 39 30.1
comp=Z,33nm,0.9s
LCO Las Campanas 36.11 162 **P 20 39 28.8 +0.4**
LCO IAmb IAmb 20 39 29.7
comp=Z,14nm,0.8s
ALLY Alegheny Colle 36.15 3 IAmb IAmb 20 39 34.7
comp=Z,29nm,1.0s
BDQN Bodoquena, MS 36.19 136 *eP* **P 20 39 28.1 -0.7**
MURT Porto Murtinho 36.44 138 *eP* **P 20 39 30.1 -0.8**
KSPA Keystone Colle 36.52 9 IAmb IAmb 20 39 38.4
comp=Z,41nm,1.2s
CBKS Cedar Bluff 36.67 337 IAmb IAmb 20 39 34.8
comp=Z,41nm,0.8s
ANMO Albuquerque 36.69 326 LR LR 20 56 01.2
comp=Z,362nm,19.1s,baz=128,slow=38
ANMO Albuquerque 36.69 326 **P 20 39 34.3 +1.1**
ANMO IAmb IAmb 20 39 36.9
comp=Z,25nm,1.1s
L56A Greenwood 36.85 6 **P 20 39 33.6 -0.7**
AQDB Aquidauana 36.94 135 *eP* **P 20 39 34.6 -0.6**
ARAG Araguaiana, MT 37.07 125 *eP* **P 20 39 35.3 -1.1**
GO04 Tololo Observa 37.17 163 P **P 20 39 38.0 +0.7**
GO04 IAmb IAmb 20 39 41.8
comp=Z,52nm,1.2s
L59A Walton 37.25 9 IAmb IAmb 20 39 46.5
comp=Z,79nm,1.9s
T25A Trinidad 37.31 331 IAmb IAmb 20 39 42.3
comp=Z,31nm,1.0s
MMNY Mt. Morris Dam 37.40 6 IAmb IAmb 20 39 45.5
comp=Z,58nm,1.1s
CO06 Fray Jorge 37.41 164 IAmb IAmb 20 39 41.0
comp=Z,35nm,0.8s
K43A Burlington 37.47 353 IAmb IAmb 20 39 39.9
comp=Z,34nm,1.1s
TUC Tucson 37.49 319 **P 20 39 41.5 +1.6**
TUC IAmb IAmb 20 39 43.6
comp=Z,41nm,1.8s
K57A Scipio Center 37.56 7 IAmb IAmb 20 39 47.1
comp=Z,39nm,0.9s
SMTB Santa Maria do 37.75 112 *eP* **P 20 39 41.7 -0.5**
MEDO Medina 37.78 5 IAmb IAmb 20 39 44.1
comp=Z,35nm,1.0s
JFWS Jewell Farm 37.94 351 IAmb IAmb 20 39 43.6
comp=Z,36nm,1.0s
C2SB Chapadao do Su 37.98 130 *eP* **P 20 39 44.2 +0.2**
TRY Troy 38.01 11 IAmb IAmb 20 39 49.2
comp=Z,27nm,0.9s
SDCO Great Sand Dun 38.32 330 IAmb IAmb 20 39 51.5
comp=Z,48nm,1.1s
L34A Svendsen Farm, 38.39 343 IAmb IAmb 20 40 03.7
comp=Z,25nm,0.9s
PECO Prince Edward 38.69 7 IAmb IAmb 20 39 55.9
comp=Z,29nm,1.0s
I42A Draeger Farm, 38.71 353 IAmb IAmb 20 39 59.2
comp=Z,42nm,0.9s
H03N2 Juan Fernandez 38.80 175 T T 21 20 56.6
baz=354,slow=76,SNR=32
H03N1 Juan Fernandez 38.81 175 T T 21 20 56.3
baz=354,slow=76,SNR=38
H03N3 Juan Fernandez 38.82 175 T T 21 20 56.4
baz=354,slow=76,SNR=37
J61A Chester 38.82 12 IAmb IAmb 20 39 56.5
comp=Z,27nm,1.0s
CO04 Los Peladeros 38.88 164 IAmb IAmb 20 39 53.4
comp=Z,37nm,0.9s
I40A Norwalk 38.95 351 IAmb IAmb 20 39 52.0
comp=Z,42nm,1.2s
AMBA Amambai (Brazi 39.06 137 *eP* **P 20 39 52.0 -1.1**
ZON Zonda 39.11 161 IAmb IAmb 20 39 55.6
comp=Z,45nm,1.3s
SADO Sadowa 39.32 4 LR LR 20 55 57.6
comp=Z,461nm,18.8s,baz=240,slow=36
MVCO Mesa Verde 39.47 327 IAmb IAmb 20 40 00.3
comp=Z,66nm,1.0s
VA01 Torgedas 39.63 165 IAmb IAmb 20 40 02.3
comp=Z,46nm,0.9s
VA03 San Esteban 39.68 164 IAmb IAmb 20 40 00.2
comp=Z,40nm,0.9s
113A Mohawk Valley, 39.75 317 IAmb IAmb 20 40 02.6
comp=Z,39nm,1.2s
I63A Otisfield 39.93 14 IAmb IAmb 20 40 05.2
comp=Z,40nm,1.0s
WUAZ Wupatki 39.95 322 IAmb IAmb 20 40 04.6
comp=Z,36nm,1.0s
MT02 Curacav 39.99 165 P **P 20 40 01.6 +0.9**
CPUP Villa Florida 39.99 143 P **P 20 39 59.6 -1.2**
comp=Z,12nm,0.9s,baz=332,slow=9.8,SNR=20
CPUP LR LR 20 59 56.6
comp=Z,314nm,18.2s,baz=325,slow=41
comp=Z,12nm,0.9s
PEL Peldehue 40.00 164 IAmb IAmb 20 40 02.5
comp=Z,59nm,1.4s
FRNY Flat Rock 40.06 10 **P 20 40 02.4 +1.3**
BDFB Brasilia 40.20 122 P **P 20 40 01.9 -0.9**
comp=Z,8.9nm,0.8s,baz=286,slow=8.5,SNR=10.0
BDFB LR LR 20 55 44.0
comp=Z,612nm,21.8s,baz=311,slow=35
comp=Z,8.9nm,0.8s
BDFB Brasilia 40.20 122 **P 20 40 01.9 -0.9**
G40A Rib Lake 40.24 352 IAmb IAmb 20 40 02.8
comp=Z,31nm,1.1s
PV15 Paradox Valley 40.30 328 IAmb IAmb 20 40 07.4
comp=Z,61nm,1.0s
PV03 Paradox Valley 40.42 328 IAmb IAmb 20 40 08.0
comp=Z,53nm,0.9s
PV05 Paradox Valley 40.43 327 IAmb IAmb 20 40 07.8
comp=Z,48nm,0.9s
MT08 Bocatoma Ro 40.47 164 **P 20 40 05.4 +0.5**
MT08 IAmb IAmb 20 40 07.7
comp=Z,51nm,0.9s
PV11 David Mesa, Pa 40.47 328 IAmb IAmb 20 40 08.4
comp=Z,77nm,1.2s
PV16 Nyonger Mesa 40.50 328 IAmb IAmb 20 40 09.3
comp=Z,68nm,1.2s
PV17 East Wray Mesa 40.50 328 IAmb IAmb 20 40 08.4
comp=Z,37nm,0.8s
MT09 Talagante 40.52 165 IAmb IAmb 20 40 06.7
comp=Z,31nm,0.8s
PV22 Blue Mesa, Par 40.60 328 IAmb IAmb 20 40 09.4
comp=Z,30nm,1.1s
SPMN Marine on St. 40.63 349 IAmb IAmb 20 40 05.7
comp=Z,35nm,0.8s
GLA Glamis 40.64 317 P **P 20 40 07.4 +1.2**
GLA IAmb IAmb 20 40 10.0
comp=Z,29nm,0.9s
PV23 Carpenter Ridg 40.66 328 IAmb IAmb 20 40 11.0
comp=Z,33nm,0.9s
BO04 La Punta 40.82 165 IAmb IAmb 20 40 13.5
comp=Z,63nm,1.4s
G62A West of Eustis 41.04 13 IAmb IAmb 20 40 14.6
comp=Z,50nm,0.9s
U15A North Rim 41.11 323 IAmb IAmb 20 40 14.6
comp=Z,32nm,1.2s
IPMB Ipameri, GO 41.20 125 *eP* **P 20 40 09.6 -1.4**
HMU Henry Mountain 41.23 326 IAmb IAmb 20 40 15.1
comp=Z,57nm,1.2s
RPN Rapa Nui 41.37 217 LR LR 20 53 56.9
comp=Z,165nm,18.6s,baz=50,slow=31
PKME Peaks-Kenny Pk 41.38 14 IAmb IAmb 20 40 17.3
comp=Z,29nm,0.9s
SUSD Miller 41.41 342 P **P 20 40 12.2 -0.1**
SUSD IAmb IAmb 20 40 12.8
comp=Z,66nm,1.2s
BC3 Big Chuckawall 41.42 317 **P 20 40 15.6 +2.9**
GO05 Hualane 41.46 167 IAmb IAmb 20 40 11.3
comp=Z,56nm,1.3s
SDBA SAO DESIDERIO 41.52 115 *eP* **P 20 40 13.0 -0.7**
O20A White River Ci 41.52 330 IAmb IAmb 20 40 18.1
comp=Z,21nm,0.8s
BO02 Sierra Bellavi 41.53 165 **P 20 40 13.4 -0.2**
G65A Princeton 41.77 16 **P 20 40 16.9 +1.7**
G65A IAmb IAmb 20 40 21.9
comp=Z,42nm,1.4s
PKCU Pink Cliffs 41.80 324 IAmb IAmb 20 40 20.2
comp=Z,66nm,1.1s
KNB Kanab 41.81 323 IAmb IAmb 20 40 22.6
comp=Z,26nm,1.0s
SRU San Rafael Swe 41.95 327 IAmb IAmb 20 40 20.3
comp=Z,56nm,1.1s
F33A 5 Mile Ranch, 41.97 346 IAmb IAmb 20 40 16.9
comp=Z,22nm,0.7s
BELC Belle Mtn. Jos 41.98 317 IAmb IAmb 20 40 21.0
comp=Z,26nm,0.9s
DNR Dunn Ranch,Anz 42.17 316 IAmb IAmb 20 40 22.7
comp=Z,38nm,0.9s
F64A Sherman 42.17 15 IAmb IAmb 20 40 24.0
comp=Z,28nm,0.9s
PTGB Pitanga 42.24 136 *eP* **P 20 40 18.3 -1.2**
ML02 Panimavida 42.30 166 IAmb IAmb 20 40 23.4
comp=Z,57nm,0.9s
NBPS Pedro II - PI 42.32 103 *eP* **P 20 40 20.1 -0.2**
P17A Butcher Ranch, 42.32 327 IAmb IAmb 20 40 23.3
comp=Z,24nm,0.9s
HAL Halifax 42.50 20 IAmb IAmb 20 40 26.4
comp=Z,25nm,1.0s
RDMU Red Mountain 42.51 329 IAmb IAmb 20 40 24.6
comp=Z,37nm,1.0s
BB19B Bebedouro 42.61 129 *eP* **P 20 40 21.9 -0.5**
TCRU Three Creeks R 42.67 325 IAmb IAmb 20 40 26.6
comp=Z,24nm,0.9s
K22A Casper 42.69 334 IAmb IAmb 20 40 58.2
comp=Z,37nm,0.6s
PMNB Patos De Minas 42.93 125 *eP* **P 20 40 24.0 -1.2**
BSUT Blindstream Ca 43.10 328 IAmb IAmb 20 40 30.7
comp=Z,28nm,1.1s
JANB Januaria 43.12 119 *eP* **P 20 40 25.8 -0.9**
D62A Allapoint, All 43.14 14 IAmb IAmb 20 40 31.8
comp=Z,36nm,1.0s
BI02 San Fabin de 43.20 167 P **P 20 40 27.4 +0.4**
BI02 IAmb IAmb 20 40 46.2
comp=Z,33nm,1.1s
LMQ La Malbaie 43.30 12 IAmb IAmb 20 40 32.4
comp=Z,45nm,0.9s
TBO Thunder Bay 43.46 354 IAmb IAmb 20 40 29.8
comp=Z,34nm,0.8s
PSAL Palomas, Salto 43.48 148 *eP* **P 20 40 29.6 +0.3**
LDAQ Lac Daran 43.51 11 IAmb IAmb 20 40 33.5
comp=Z,26nm,0.8s
MWC Mount Wilson 43.52 316 IAmb IAmb 20 40 36.1
comp=Z,25nm,1.1s
QSM Queen of Sheba 43.71 319 IAmb IAmb 20 40 34.6
comp=Z,22nm,0.9s
CCCA Chr Cany lake 43.78 318 IAmb IAmb 20 40 35.6
comp=Z,44nm,1.1s
TCUT Toone Canyon 43.86 328 IAmb IAmb 20 40 41.0
comp=Z,46nm,1.0s
E28A Huff 43.87 342 IAmb IAmb 20 40 33.7
comp=Z,52nm,1.2s
ITAB Concordia 43.88 139 P **P 20 40 31.2 -1.4**
ITAB Concordia 43.88 139 *eP* **P 20 40 31.7 -1.0**
GBN Guysborough 43.90 22 IAmb IAmb 20 40 37.9
comp=Z,28nm,0.9s
FURC Furnace Creek, 44.00 319 IAmb IAmb 20 40 37.2
comp=Z,35nm,0.9s
TPO Tropico Hills 44.00 317 IAmb IAmb 20 40 37.0
comp=Z,64nm,1.4s
BATG Bathurst New B 44.09 16 P **P 20 40 34.8 +0.7**
BATG IAmb IAmb 20 40 39.5
comp=Z,25nm,1.0s
CLC China Lake 44.10 318 IAmb IAmb 20 40 37.7
comp=Z,29nm,1.4s
PDAR Pinedale Array 44.16 331 P **P 20 40 36.0 +1.0**
comp=Z,6.3nm,0.7s,baz=132,slow=10,SNR=57
comp=Z,6.3nm,0.7s
PDAR Pinedale Array 44.16 331 P **P 20 40 34.5 -0.5**
AGMN Agassiz Nation 44.19 347 IAmb IAmb 20 40 39.8
comp=Z,25nm,1.1s
HWUT Hardware Ranch 44.30 329 IAmb IAmb 20 40 38.8
comp=Z,39nm,0.9s
SPUT South Promonto 44.55 328 IAmb IAmb 20 40 41.1
comp=Z,39nm,1.3s
BGU Big Grassy Mou 44.59 327 IAmb IAmb 20 40 41.4
comp=Z,30nm,1.1s
VAO Valinhos 44.89 130 *eP* **P 20 40 39.8 -1.1**
AHID Auburn Hatcher 44.91 330 IAmb IAmb 20 40 47.1
comp=Z,18nm,0.9s
HVU Hansel Valley 45.05 328 IAmb IAmb 20 40 44.9
comp=Z,57nm,1.7s
EPLO Experimental L 45.09 350 IAmb IAmb 20 40 51.3
comp=Z,27nm,0.9s
DIAM Diamantina, MG 45.11 122 *eP* **P 20 40 41.9 -0.9**
TPH Tonopah 45.19 321 IAmb IAmb 20 40 46.5
comp=Z,20nm,1.0s
DSP Deep Springs 45.25 320 **P 20 40 43.4 +0.1**
ECR Eagle Creek 45.26 330 IAmb IAmb 20 40 50.8
comp=Z,33nm,1.0s
SNOW Snow King Moun 45.26 331 IAmb IAmb 20 40 54.3
comp=Z,24nm,0.9s
CPSB Cacapava Do Su 45.30 144 **P 20 40 43.0 -0.9**
CPSB Cacapava Do Su 45.30 144 *eP* **P 20 40 43.3 -0.7**
LOHW Long Hollow 45.30 331 IAmb IAmb 20 41 06.2
comp=Z,16nm,1.0s
MOOW Moose Ponds 45.47 331 IAmb IAmb 20 40 47.9
comp=Z,17nm,1.1s
ELK Elko 45.70 325 IAmb IAmb 20 40 50.3
comp=Z,15nm,0.9s
ICQ Pointe Anglais 45.85 14 IAmb IAmb 20 40 52.2
comp=Z,18nm,0.8s
NV11 Mina Array Sit 45.99 321 IAmb IAmb 20 40 53.0
comp=Z,28nm,1.1s
ULM Lac du Bonnet 46.04 348 P **P 20 40 48.4 -1.1**
comp=Z,12nm,0.7s,baz=152,slow=8.8,SNR=19
comp=Z,12nm,0.7s
ULM Lac du Bonnet 46.04 348 IAmb IAmb 20 40 59.2
comp=Z,23nm,1.0s
NVAR Mina Array Bea 46.08 321 P **P 20 40 52.0 +1.7**
comp=Z,28nm,0.9s,baz=133,slow=7.4,SNR=84
NVAR PcP **PcP 20 42 26.5 0.0**
NVAR comp=Z,0.9nm,0.7s,baz=112,slow=2.0,SNR=1.6 LR 21 00 27.1
comp=Z,439nm,18.1s,baz=116,slow=36
comp=Z,28nm,0.9s
NVAR Mina Array Bea 46.08 321 P **P 20 40 49.2 -1.1**
NVAR **PcP 20 42 26.5 0.0**
PLCA Paso Flores 47.25 167 P **P 20 40 59.1 -0.1**
comp=Z,17nm,1.1s,baz=11,slow=9.4,SNR=9.5
comp=Z,17nm,1.1s
PLCA Paso Flores 47.25 167 *eP* **P 20 40 59.2 +0.1**
PNTR Pine Nut 47.29 320 IAmb IAmb 20 41 03.0
comp=Z,14nm,0.9s
TRQA Tornquist 47.34 158 **P 20 40 59.0 -0.8**
SJMB Sao Joao De Ma 47.39 121 *eP* **P 20 40 59.7 -0.9**
CMC01 Camacan, BA 47.47 116 *eP* **P 20 40 58.8 -2.4**
DLMT Dillon 47.56 332 IAmb IAmb 20 41 06.2
comp=Z,24nm,1.2s
GUA01 Guaratinga, BA 47.70 118 *eP* **P 20 41 02.1 -0.8**
BSFB Barra de Sao F 47.74 121 *eP* **P 20 41 02.3 -0.9**
MFID Camas Ranch 47.81 327 IAmb IAmb 20 41 06.6
comp=Z,29nm,1.4s
BEKR Beckworth 48.22 321 IAmb IAmb 20 41 09.8
comp=Z,17nm,1.2s
RIB01 Linhares ES 48.33 122 *eP* **P 20 41 07.1 -0.7**
CAM01 Campos-RJ 48.45 125 *eP* **P 20 41 07.7 -0.9**
DRLN Deer Lake 48.61 22 **P 20 41 09.6 +0.1**
PLID Pearl Lake 49.04 329 IAmb IAmb 20 41 15.0
comp=Z,14nm,0.9s
MSO Missoula 49.27 332 IAmb IAmb 20 41 17.2
comp=Z,28nm,1.2s
LL02 Futaleuf 49.36 170 IAmb IAmb 20 41 18.6
comp=Z,22nm,1.1s
YBH Yreka Blue Hor 50.75 322 LR LR 21 03 34.4
comp=Z,320nm,20.6s,baz=139,slow=37
SCHQ Schefferville 50.91 12 P **P 20 41 26.9 -0.1**
comp=Z,30nm,1.0s,baz=192,slow=6.7,SNR=14
SCHQ LR LR 21 02 10.0
comp=Z,182nm,21.8s,baz=200,slow=35
comp=Z,30nm,1.0s
SCHQ Schefferville 50.91 12 P **P 20 41 26.1 -0.8**
SCHQ IAmb IAmb 20 41 31.2
comp=Z,30nm,1.0s
E09A Wood Farm, Sta 51.11 329 IAmb IAmb 20 41 30.9
comp=Z,27nm,1.0s
WIFE Three Sisters- 51.56 324 IAmb IAmb 20 41 35.1
comp=Z,24nm,1.0s
FFC Flin Flon 51.58 346 P **P 20 41 32.1 +0.1**
G06A Carlson Farm, 51.61 326 IAmb IAmb 20 41 35.9
comp=Z,57nm,1.5s
NEW Newport 51.80 331 LR LR 21 04 28.9
comp=Z,268nm,21.4s,baz=133,slow=37
D08A Wollman Farm, 51.87 329 P **P 20 41 34.8 +0.5**
H04A Detroit Lake 52.15 325 IAmb IAmb 20 41 39.1
comp=Z,15nm,0.9s
BUCK Buck Mountain 52.32 324 IAmb IAmb 20 41 40.2
comp=Z,34nm,1.1s
LTY Liberty 52.91 328 IAmb IAmb 20 41 44.7
comp=Z,27nm,1.2s
FCC Fort Churchill 53.94 353 IAmb IAmb 20 41 54.9
comp=Z,21nm,1.1s
GNW Green Mountain 54.24 327 IAmb IAmb 20 41 53.6
comp=Z,22nm,1.0s
NLWA Neilton Lookou 54.70 327 IAmb IAmb 20 41 58.4
comp=Z,39nm,1.4s
LLLB Lillooet 55.68 331 IAmb IAmb 20 42 05.1
comp=Z,28nm,1.2s
CBB Campbell River 57.07 329 IAmb IAmb 20 42 15.6
comp=Z,28nm,1.1s
TAOE Nuku Hiva Isla 59.02 256 *eS* **S 20 50 28.9 -4.2**
comp=Z,181nm,28.7s
TAOE *eLR LR 20 59 42.2
comp=Z,392nm,27.3s
FRB Frobisher Bay 59.12 7 LR LR 21 09 21.6
comp=Z,128nm,18.6s,baz=200,slow=38
BLKN Baker Lake 59.57 353 IAmb IAmb 20 42 34.8
comp=Z,22nm,1.1s
BBB Bella Bella 59.74 329 P **P 20 42 31.6 +1.1**
comp=Z,12nm,1.0s,baz=129,slow=6.7,SNR=8.3
BBB LR LR 21 10 16.7
comp=Z,130nm,21.0s,baz=160,slow=38
comp=Z,12nm,1.0s
BBB Bella Bella 59.74 329 IAmb IAmb 20 42 34.2
comp=Z,24nm,1.2s

IVI **Ivigtut** 61.37 18 *i* P P **20 42 39.4 -2.2**
HG4B **Hotspring** 61.38 328 IAmb IAmb 20 42 45.0
comp=Z,22nm,1.2s
YKA **Yellowknife Ar** 61.62 344 P P **20 42 43.9 +0.6**
comp=Z,16nm,0.7s,baz=141,slow=6.9,SNR=44
YKA LR LR 21 10 00.4
comp=Z,131nm,21.1s,baz=132,slow=37
comp=Z,16nm,0.7s
YKA **Yellowknife Ar** 61.62 344 P P **20 42 43.1 -0.1**
YKA **Yellowknife Ar** 61.62 344 P P **20 42 43.1 -0.1**
RUBB **Prince Rupert** 62.01 331 IAmb IAmb 20 42 49.2
comp=Z,17nm,1.3s
DIB **Dawson Inlet,** 62.52 329 IAmb IAmb 20 42 52.9
comp=Z,25nm,1.3s
NUUK **Nuuk** 62.73 15 *i* P P **20 42 49.2 -1.5**
NUUK IAmb IAmb 20 42 54.2
comp=Z,46nm,0.9s
KOTAN **Kotaneelee Air** 62.93 338 P P **20 42 54.1 +2.0**
baz=132
V35K **Ketchikan** 63.22 331 P P **20 42 55.8 +1.8**
baz=123
LIRD **Liard River Hi** 63.23 337 P P **20 42 55.9 +1.7**
baz=130
T35M **Bob Quinn** 63.50 333 IAmb IAmb 20 42 59.5
comp=Z,12nm,0.9s
T35M **Bob Quinn** 63.50 333 P P **20 42 58.1 +2.1**
baz=125,SNR=9.6
ILON **Igloolik, Nuna** 63.87 0 P P **20 42 57.5 -0.6**
ILON IAmb IAmb 20 43 00.8
comp=Z,6.6nm,0.7s
CRAG **Craig** 64.02 331 IAmb IAmb 20 43 05.1
comp=Z,11nm,1.0s
CRAG **Craig** 64.02 331 P P **20 43 01.3 +2.0**
baz=121,SNR=6.2
WRAK **Wrangell Islan** 64.15 332 P P **20 43 02.2 +2.0**
baz=123
DLBC **Dease Lake** 64.25 335 P P **20 43 02.4 +1.5**
comp=Z,14nm,0.9s,baz=125,slow=5.1,SNR=20
DLBC LR LR 21 14 16.6
comp=Z,347nm,18.2s,baz=71,slow=39
comp=Z,14nm,0.9s
DLBC **Dease Lake** 64.25 335 P P **20 43 02.7 +1.8**
baz=126,SNR=17
U33K **Whale Pass** 64.36 331 IAmb IAmb 20 43 04.5
comp=Z,17nm,1.3s
U33K **Whale Pass** 64.36 331 P P **20 43 03.2 +1.7**
baz=122,SNR=5.7
S34M **Telegraph Cree** 64.42 334 IAmb IAmb 20 43 12.8
comp=Z,14nm,1.0s
S34M **Telegraph Cree** 64.42 334 P P **20 43 03.8 +1.9**
baz=124
WTLY **Watson Lake, Y** 64.74 336 P P **20 43 05.7 +1.7**
baz=128
WRGLY **Wrigley** 64.85 341 P P **20 43 06.8 +2.2**
baz=134
R33M **Jennings River** 65.20 335 IAmb IAmb 20 43 10.1
comp=Z,19nm,1.2s
R33M **Jennings River** 65.20 335 P P **20 43 09.1 +1.9**
baz=125,SNR=18
SFJD **Kangerlussuaq** 65.31 13 LR LR 21 10 22.9
comp=Z,199nm,21.6s,baz=218,slow=35
TGTN **Hyland Airport** 65.41 338 P P **20 43 10.3 +1.9**
baz=129
Q32M **Nakina River** 65.51 334 P P **20 43 11.1 +1.8**
baz=124,SNR=9.2
S32K **Killisnoo** 65.74 332 P P **20 43 12.6 +2.0**
baz=121
SIT **Sitka** 65.89 332 P P **20 43 13.2 +1.8**
baz=120
P33M **Teslin, Yukon** 66.43 335 IAmb IAmb 20 43 22.4
comp=Z,15nm,1.1s
P33M **Teslin, Yukon** 66.43 335 P P **20 43 16.8 +1.7**
baz=124,SNR=12
P32M **Atlin** 66.47 334 IAmb IAmb 20 43 18.2
comp=Z,23nm,1.3s
P32M **Atlin** 66.47 334 P P **20 43 17.1 +1.7**
baz=122,SNR=6.1
PMOZ **Porto Moniz, M** 66.52 57 *e*P P **20 43 19.7 +3.5**
S31K **Pelican** 66.76 332 P P **20 43 19.0 +2.0**
baz=119
N32M **Quiet Lake** 67.06 336 IAmb IAmb 20 43 25.0
comp=Z,10nm,0.9s
N32M **Quiet Lake** 67.06 336 P P **20 43 20.7 +1.7**
baz=124
SKAG **Skagway** 67.11 334 P P **20 43 21.0 +1.7**
baz=121
MMPY **Sheldon Lake,** 67.19 338 IAmb IAmb 20 43 23.0
comp=Z,18nm,1.3s
MMPY **Sheldon Lake,** 67.19 338 P P **20 43 21.8 +1.9**
baz=126,SNR=15
WHY **Whitehorse** 67.54 335 P P **20 43 23.5 +1.4**
baz=122
PLBC **Pleasant Camp** 67.56 334 P P **20 43 24.2 +2.1**
baz=120
ANGG **Ammassalik, Gr** 67.83 18 P P **20 43 23.1 -0.6**
ANGG IAmb IAmb 20 43 26.1
comp=Z,16nm,0.8s
ANGG **Ammassalik, Gr** 67.83 18 *i* P P **20 43 20.7 -3.0**
ANGG IAmb IAmb 20 43 25.7
comp=Z,16nm,0.8s
O30N **Mendenhall** 68.10 335 IAmb IAmb 20 43 28.5
comp=Z,24nm,1.4s
O30N **Mendenhall** 68.10 335 P P **20 43 27.3 +1.6**
baz=121,SNR=15
P30M **Million Dollar** 68.15 334 P P **20 43 27.8 +1.9**
baz=120
M31M **Drury Creek, Y** 68.16 337 P P **20 43 27.4 +1.5**
baz=123
P29M **Windy Craggy** 68.26 333 P P **20 43 28.3 +1.7**
baz=119,SNR=14
N31M **Braeburn, Yuko** 68.34 336 IAmb IAmb 20 43 29.9
comp=Z,18nm,1.2s
N31M **Braeburn, Yuko** 68.34 336 P P **20 43 28.7 +1.6**
baz=121,SNR=7.0
HYT **Haines Junctio** 68.73 335 IAmb IAmb 20 43 33.0
comp=Z,15nm,1.4s
HYT **Haines Junctio** 68.73 335 P P **20 43 31.7 +2.0**
baz=119,SNR=7.1
N30M **Aishikik Lake** 68.87 335 IAmb IAmb 20 43 33.7
comp=Z,26nm,1.4s
N30M **Aishikik Lake** 68.87 335 P P **20 43 32.3 +1.9**
baz=120,SNR=11
O29M **Mount Kennedy** 68.95 334 P P **20 43 32.4 +1.3**
baz=118,SNR=6.0
YUK6 **Outpost Mounta** 69.16 334 P P **20 43 34.1 +1.6**
baz=118
M30M **Minto, Yukon** 69.31 336 IAmb IAmb 20 43 36.5
comp=Z,16nm,1.1s
M30M **Minto, Yukon** 69.31 336 P P **20 43 34.7 +1.6**
baz=120,SNR=18
C36M **Paulatuk** 69.35 345 P P **20 43 35.2 +2.1**
baz=135
YUK4 **Talbot Arm** 69.47 335 P P **20 43 36.1 +1.7**
baz=118,SNR=7.8
RES **Resolute Bay** 69.58 357 P P **20 43 34.9 +0.4**
comp=Z,8.1nm,1.0s,baz=164,slow=6.1,SNR=3.6
RES LR LR 21 15 02.0
comp=Z,430nm,18.2s,baz=164,slow=37
comp=Z,8.1nm,1.0s
RES **Resolute Bay** 69.58 357 IAmb IAmb 20 43 40.1
comp=Z,13nm,1.2s
PINM **Pinnacle** 69.60 333 P P **20 43 36.9 +2.0**
baz=116
PCA **Pinnacle** 69.60 333 IAmb IAmb 20 43 39.0
comp=Z,21nm,1.2s
BRWY **Burwash Landin** 69.65 335 P P **20 43 37.3 +2.1**
baz=118,SNR=8.0
PPT **Papeete** 69.84 249 LR LR 21 06 22.7
comp=Z,197nm,18.2s,baz=78,slow=29
PPT2 **Papeete2** 69.85 249 *e*S S **20 52 42.9 -4.0**
comp=Z,130nm,23.8s
PPT2 *e*SS SS **20 57 12.4 -3.7**
comp=Z,103nm,31.2s
PPT2 *e*LQ LQ 21 01 43.6
comp=Z,243nm,24.8s
PPT2 *e*LR LR 21 04 40.8
comp=Z,220nm,22.8s
PPT2 *e*LR LR 21 04 44.1
comp=Z,237nm,26.0s
O28M **Mount Upton** 69.87 334 IAmb IAmb 20 45 37.5
comp=Z,6.4nm,0.5s
O28M **Mount Upton** 69.87 334 P P **20 43 38.8 +1.9**
baz=117
M29M **Somme Creek** 69.92 336 IAmb IAmb 20 43 43.5
comp=Z,14nm,1.0s
M29M **Somme Creek** 69.92 336 P P **20 43 38.7 +1.8**
baz=119,SNR=23
YUK8 **Steele Glacier** 69.92 334 P P **20 43 38.7 +1.5**
baz=117,SNR=6.4
L29M **L29M** 70.11 337 IAmb IAmb 20 43 41.5
comp=Z,15nm,1.1s
L29M **L29M** 70.11 337 P P **20 43 39.6 +1.5**
baz=119,SNR=14
H31M **Peel River** 70.13 340 IAmb IAmb 20 43 53.9
comp=Z,16nm,1.1s
H31M **Peel River** 70.13 340 P P **20 43 40.0 +1.9**
baz=124,SNR=10.0
J30M **Hart River** 70.17 338 P P **20 43 40.3 +1.8**
baz=122,SNR=9.2
K29M **Barlow Dome** 70.24 337 IAmb IAmb 20 43 44.8
comp=Z,11nm,0.9s
K29M **Barlow Dome** 70.24 337 P P **20 43 40.3 +1.4**
baz=120,SNR=12
LOGN **Logan Glacier** 70.25 334 IAmb IAmb 20 43 43.1
comp=Z,15nm,1.1s
YUK3 **Moose Creek** 70.44 335 P P **20 43 41.8 +1.5**
baz=117,SNR=14
I30M **Mount Dempster** 70.53 339 IAmb IAmb 20 43 46.3
comp=Z,14nm,1.1s
I30M **Mount Dempster** 70.53 339 P P **20 43 42.3 +1.7**
baz=122,SNR=18
GRNC **Granite Creek** 70.55 333 IAmb IAmb 20 43 48.8
comp=Z,12nm,1.0s
KULLO **Kullorsuaq** 70.68 7 *i* P P **20 43 42.0 +0.8**
KULLO IAmb IAmb 20 43 44.2
comp=Z,20nm,1.1s
G31M **Satah River** 70.73 341 P P **20 43 41.5 -0.2**
G31M IAmb IAmb 20 43 47.2
comp=Z,16nm,1.1s
G31M **Satah River** 70.73 341 P P **20 43 43.3 +1.6**
baz=124,SNR=8.7
J29N **Klondike Camp** 70.81 338 P P **20 43 44.0 +1.7**
baz=120
F31M **Tsiigehtchic** 70.86 341 P P **20 43 44.0 +1.6**
baz=125
BVCY **Beaver Creek** 70.89 335 P P **20 43 44.4 +1.6**
baz=116
TGL **Tana Glacier** 71.04 333 IAmb IAmb 20 43 50.2
comp=Z,12nm,1.0s
DAWY **Dawson** 71.07 337 P P **20 43 45.1 +1.2**
baz=118
TBI **Tubuai** 71.11 243 *e*LQ LQ 21 02 10.1
comp=Z,2µm,32.0s
TBI *e*LR LR 21 05 26.6
comp=Z,3µm,30.0s
CRQE **Cirque** 71.15 333 P P **20 43 46.1 +1.6**
baz=114
CRQM **Cirque** 71.18 333 IAmb IAmb 20 43 56.0
comp=Z,12nm,0.9s
EPYK **Eagle Plains** 71.25 340 IAmb IAmb 20 44 13.2
comp=Z,31nm,1.6s
EPYK **Eagle Plains** 71.25 340 P P **20 43 46.5 +1.6**
baz=122
INK **Inuvik** 71.29 342 P P **20 43 46.2 +1.2**
comp=Z,5.5nm,0.7s,baz=117,slow=4.5,SNR=10
INK LR LR 21 17 38.8
comp=Z,283nm,19.0s,baz=116,slow=38
comp=Z,5.5nm,0.7s
INK **Inuvik** 71.29 342 IAmb IAmb 20 43 55.9
comp=Z,19nm,1.2s
INK **Inuvik** 71.29 342 P P **20 43 46.7 +1.6**
baz=126,SNR=6.0
M27K **Edge Creek, AK** 71.30 335 IAmb IAmb 20 43 48.5
comp=Z,15nm,1.3s
M27K **Edge Creek, AK** 71.30 335 P P **20 43 47.0 +1.6**
baz=116,SNR=13
MCARA **McCarthy VSAT** 71.38 334 IAmb IAmb 20 43 54.4
comp=Z,18nm,1.0s
MCARA **McCarthy VSAT** 71.38 334 P P **20 43 47.5 +1.8**
baz=114
G30M **tAoh Zraii Nji** 71.41 341 IAmb IAmb 20 44 01.3
comp=Z,23nm,1.7s
G30M **tAoh Zraii Nji** 71.41 341 P P **20 43 47.4 +1.5**
baz=122
KAIM **Kayak Island** 71.44 332 IAmb IAmb 20 43 50.3
comp=Z,25nm,1.1s
KAIM **Kayak Island** 71.44 332 P P **20 43 48.4 +2.4**
baz=112,SNR=6.1
TULEG **Thule** 71.48 3 *i* P P **20 43 46.8 +0.7**
TULEG IAmb IAmb 20 43 56.4
comp=Z,87nm,1.6s
VRDI **Verde Repeater** 71.51 334 IAmb IAmb 20 43 58.1
comp=Z,9.3nm,0.8s
A36M **Sachs Harbour** 71.51 347 P P **20 43 48.4 +2.1**
baz=135
BCAR **Beaver Creek A** 71.56 336 P P **20 43 47.8 +0.9**
L27K **Beaver Creek,** 71.58 336 IAmb IAmb 20 43 50.1
comp=Z,25nm,1.3s
L27K **Beaver Creek,** 71.58 336 P P **20 43 48.6 +1.6**
baz=116
F30M **Barrier River** 71.61 341 IAmb IAmb 20 43 57.9
comp=Z,19nm,0.9s
F30M **Barrier River** 71.61 341 P P **20 43 48.7 +1.7**
baz=123,SNR=14
H29M **Whitestone** 71.75 339 IAmb IAmb 20 44 16.6
comp=Z,14nm,1.0s
H29M **Whitestone** 71.75 339 P P **20 43 49.8 +1.9**
baz=120,SNR=10
GLB **Gilahina Butte** 71.75 334 IAmb IAmb 20 43 51.1
comp=Z,24nm,1.4s
M26K **Nabesna, AK** 71.79 335 P P **20 43 50.0 +1.7**
baz=114,SNR=6.6
BMRM **Bremner River** 71.92 333 P P **20 43 50.7 +1.7**
baz=112,SNR=8.9
I28M **Miner Creek** 71.93 338 P P **20 43 50.7 +1.6**
baz=118,SNR=7.2
G29M **Pine Creek** 71.98 340 IAmb IAmb 20 44 07.7
comp=Z,16nm,0.9s
G29M **Pine Creek** 71.98 340 P P **20 43 50.9 +1.6**
baz=121,SNR=12
N25K **Chitina, Valde** 72.16 334 P P **20 43 52.1 +1.6**
baz=113,SNR=7.2
Q23K **Middleton Isla** 72.17 331 P P **20 43 52.0 +1.6**
baz=110
L26K **Log Cabin Wild** 72.19 335 IAmb IAmb 20 43 53.5
comp=Z,17nm,1.3s
EYAK **Cordova Ski Ar** 72.28 332 IAmb IAmb 20 43 54.2
comp=Z,27nm,1.4s
EYAK **Cordova Ski Ar** 72.28 332 P P **20 43 52.9 +1.8**
baz=111
SUMG **Summit** 72.28 13 P P **20 43 51.5 0.0**
SUMG **Summit** 72.28 13 *i* P P **20 43 50.0 -1.5**
SUMG IAmb IAmb 20 43 56.4
comp=Z,30nm,1.0s
I27K **Kandik River** 72.62 338 P P **20 43 54.9 +1.7**
baz=117,SNR=23
E29M **Blow River** 72.70 341 P P **20 43 54.5 +1.0**
baz=121,SNR=6.3
KLU **Klutina** 72.71 333 IAmb IAmb 20 43 56.4
comp=Z,16nm,1.2s
KLU **Klutina** 72.71 333 P P **20 43 55.3 +1.5**
baz=112,SNR=8.0
HARP **HAARP** 72.71 334 P P **20 43 55.3 +1.6**
baz=112
SCRK **Sand Creek** 72.84 336 P P **20 43 56.1 +1.5**
baz=114,SNR=7.4
P23K **Montague Islan** 72.86 332 P P **20 43 56.1 +1.5**
baz=110
H27K **Steamboat Moun** 72.88 339 IAmb IAmb 20 44 01.5
comp=Z,14nm,1.1s
H27K **Steamboat Moun** 72.88 339 P P **20 43 56.2 +1.5**
baz=117,SNR=18
F28M **Old Crow** 72.95 340 P P **20 43 56.5 +1.4**
baz=119,SNR=13
GLI **Glacier Island** 73.02 333 P P **20 43 57.0 +1.5**
baz=110
M24K **Tolsona, Glenn** 73.04 334 IAmb IAmb 20 43 58.7
comp=Z,27nm,1.3s
M24K **Tolsona, Glenn** 73.04 334 P P **20 43 57.2 +1.4**
baz=111
I26K **Coal Creek Min** 73.07 338 IAmb IAmb 20 43 59.0
comp=Z,30nm,1.6s
I26K **Coal Creek Min** 73.07 338 P P **20 43 57.0 +1.3**
baz=115
RIDG **Independent Ri** 73.10 336 IAmb IAmb 20 43 58.8
comp=Z,18nm,1.2s
RIDG **Independent Ri** 73.10 336 P P **20 43 57.4 +1.4**
baz=113,SNR=5.6
G27K **Doyon Strip** 73.19 339 P P **20 43 57.6 +1.1**
baz=117,SNR=9.1
E28M **Babbage River** 73.33 341 P P **20 43 57.3 0.0**
E28M IAmb IAmb 20 44 07.3
comp=Z,12nm,1.1s
E28M **Babbage River** 73.33 341 P P **20 43 58.3 +1.1**
baz=120,SNR=6.5
D28M **Stokes Point** 73.44 342 P P **20 43 59.4 +1.6**
baz=120
SCM **Sheep Creek Mo** 73.45 333 IAmb IAmb 20 44 00.6
comp=Z,27nm,1.2s
SCM **Sheep Creek Mo** 73.45 333 P P **20 43 59.5 +1.3**
baz=110,SNR=7.1
K24K **Donnelly Dome** 73.51 336 IAmb IAmb 20 44 27.1
comp=Z,14nm,1.1s
K24K **Donnelly Dome** 73.51 336 P P **20 43 59.8 +1.3**
baz=112
M23K **Glacier View** 73.62 333 P P **20 44 00.3 +1.2**
baz=110,SNR=5.3
J25K **Salcha River,** 73.65 336 IAmb IAmb 20 44 01.9
comp=Z,36nm,1.6s
J25K **Salcha River,** 73.65 336 P P **20 44 00.6 +1.2**
baz=113,SNR=18
E27K **Coleen River** 73.80 341 P P **20 44 01.4 +1.4**
baz=117,SNR=8.3
KNK **Knik Glacier** 73.82 333 IAmb IAmb 20 44 02.7
comp=Z,25nm,1.0s
KNK **Knik Glacier** 73.82 333 P P **20 44 01.6 +1.3**
baz=109,SNR=6.0
SEW **Seward** 73.87 331 P P **20 44 01.5 +0.9**
baz=108
SML **Sawmill** 73.89 333 IAmb IAmb 20 44 03.7
comp=Z,17nm,0.9s
SML **Sawmill** 73.89 333 P P **20 44 01.7 +1.0**
baz=109,SNR=9.1
WAT6 **Susitna Watana** 73.89 334 P P **20 44 01.9 +1.0**
baz=110,SNR=14
DHY **Denali Highway** 73.91 335 P P **20 44 01.7 +0.7**
baz=110
NEEM **North Greenlan** 73.92 7 *i* P P **20 44 02.0 +1.1**
NEEM IAmb IAmb 20 44 04.5
comp=Z,30nm,1.0s
PTEO **Sao Teotonio** 74.00 53 *e*P P **20 44 03.0 +1.2**
G26K **Porcupine Rive** 74.00 339 P P **20 44 02.4 +1.2**
baz=115,SNR=8.0
MORF **Marmelete** 74.04 53 *e*P P **20 44 03.0 +1.0**
MORF IAmb IAmb 20 44 03.5
comp=Z,28nm,1.1s
MORF **Marmelete** 74.04 53 *e*P P **20 44 03.3 +1.2**
MORF *i* IAmb IAmb 20 44 24.3
comp=Z,46nm,1.4s
PRP **Porcupine Dome** 74.06 337 P P **20 44 02.9 +1.1**
baz=113
D27M **Malcolm River** 74.09 342 P P **20 44 03.1 +1.4**
baz=118
GHO **Glory Hole Cre** 74.15 333 IAmb IAmb 20 44 04.4
comp=Z,19nm,1.0s
PMR **Palmer** 74.19 333 P P **20 44 03.6 +1.3**
baz=108
SMAI **San Martin Ant** 74.19 174 P P **20 44 01.7 -0.4**
SMAI IAmb IAmb 20 45 56.1
comp=Z,8.8nm,0.5s
HDA **Harding Lake** 74.21 336 IAmb IAmb 20 44 04.5
comp=Z,14nm,1.0s
HDA **Harding Lake** 74.21 336 P P **20 44 03.5 +1.0**
baz=111,SNR=12
PLOUS **Minas do Lousa** 74.29 52 *e*P P **20 44 04.8 +1.3**
PLOUS *i* IAmb IAmb 20 44 14.7
comp=Z,34nm,1.4s
RC01 **Rabbit Creek A** 74.31 332 P P **20 44 04.1 +1.0**
baz=108
ILAR **Eielson Array** 74.32 336 P P **20 44 04.0 +0.9**
comp=Z,3.2nm,0.8s,baz=118,slow=3.9,SNR=30
ILAR PP PP **20 46 50.0 +1.0**
comp=Z,0.8nm,0.9s,baz=103,slow=8.6,SNR=2.9
ILAR LR LR 21 19 58.4
comp=Z,161nm,19.3s,baz=89,slow=38
comp=Z,3.2nm,0.8s
ILAR **Eielson Array** 74.32 336 P P **20 44 03.5 +0.4**
ILAR PP **20 46 50.0 +1.0**
WAT1 **Susitna Watana** 74.33 334 P P **20 44 04.0 +0.8**
baz=109
SLKM **Skilak Lake** 74.36 332 IAmb IAmb 20 44 05.6
comp=Z,14nm,1.0s
FYU **Fort Yukon** 74.37 338 IAmb IAmb 20 44 14.2
comp=Z,18nm,1.2s
BRSE **Bradley Lake S** 74.39 331 P P **20 44 04.8 +1.2**
baz=106
MOE **Montemor** 74.39 52 *e*P P **20 44 05.1 +1.1**
MOE *i* IAmb IAmb 20 44 44.9
comp=Z,31nm,1.6s
MESJ **Messejana** 74.43 52 *e*P P **20 44 05.3 +1.0**
MESJ IAmb IAmb 20 44 05.8
comp=Z,9.6nm,0.9s
MESJ **Messejana** 74.43 52 *e*P P **20 44 05.2 +0.9**
PCAS **Casmilo, Conde** 74.43 50 *e*P P **20 44 05.2 +0.9**
F26K **Sheenjek River** 74.44 340 P P **20 44 05.4 +1.6**
baz=115,SNR=12
BRLK **Bradley Lake** 74.46 331 IAmb IAmb 20 44 31.9
comp=Z,18nm,1.0s
PTO **Porto** 74.47 49 *e*P P **20 44 05.2 +0.7**
PMTG **Montargil** 74.54 51 *e*P P **20 44 05.5 +0.6**
PMTG *i* IAmb IAmb 20 44 22.7
comp=Z,30nm,1.3s
PCVE **Castro Verde** 74.55 53 *e*P P **20 44 06.1 +1.1**
PBDV **Barranco-do-Ve** 74.61 53 *e*P P **20 44 07.0 +1.6**
PSARD **Sardoal** 74.64 51 *e*P P **20 44 06.4 +0.8**
RND **Reindeer** 74.65 335 IAmb IAmb 20 44 07.8
comp=Z,36nm,1.2s
EVO **Evora** 74.66 52 *e*P P **20 44 06.3 +0.7**
POKR **Poker Plat Res** 74.66 337 P P **20 44 06.7 +1.6**
baz=111
PARRA **Arraiolos** 74.66 51 *e*P P **20 44 06.3 +0.6**
PARRA *i* IAmb IAmb 20 44 14.4
comp=Z,20nm,1.5s
PBEJ **Beja** 74.72 52 *i* P P **20 44 07.1 +1.1**
G25K **Bearman Lake** 74.77 338 P P **20 44 07.5 +1.8**
baz=113,SNR=11
PVAQ **Vaqueiros** 74.79 53 *e*P P **20 44 07.6 +1.2**
PVAQ *e*LR LR 21 07 57.2
PVAQ *i* IAMs_20 IAMs_20 21 11 25.7
comp=Z,112nm,22.0s
KDAK **Kodiak Island** 74.79 329 P P **20 44 07.2 +1.3**
baz=104
MCK **McKinley** 74.79 335 P P **20 44 07.2 +1.2**
baz=109
HOM **Homer** 74.80 331 P P **20 44 07.5 +1.5**
baz=106
F25K **Christian Rive** 74.93 339 P P **20 44 08.5 +1.9**
baz=113,SNR=11
CUT **Chulitna** 74.95 334 P P **20 44 08.2 +1.4**
baz=108
PVIS **Viseu** 74.96 49 *e*P P **20 44 08.1 +0.7**
OHAK **Old Harbor** 75.02 328 P P **20 44 08.8 +1.5**
baz=104
H24K **Noodor Dome** 75.09 337 P P **20 44 07.8 +0.2**
H24K IAmb IAmb 20 44 10.2
comp=Z,24nm,1.4s
H24K **Noodor Dome** 75.09 337 P P **20 44 09.2 +1.6**
baz=111,SNR=15
POLO **Lamas de Olo** 75.10 49 *e*P P **20 44 09.1 +0.8**
E25K **Arctic Village** 75.11 340 P P **20 44 09.3 +1.6**
baz=114,SNR=7.9
C27K **Jago River** 75.13 342 P P **20 44 09.2 +1.5**
baz=116
NEA2 **Nenana** 75.13 336 P P **20 44 08.9 +1.0**
baz=109,SNR=9.0
PCBR **Castelo Branco** 75.19 50 *e*P P **20 44 09.3 +0.7**
MTE **Manteigas** 75.19 50 *e*LR LR 21 08 09.9
MTE *i* IAMs_20 IAMs_20 21 10 44.1
comp=Z,125nm,22.0s
L22K **Petersville** 75.21 334 P P **20 44 09.4 +1.0**
baz=107,SNR=6.7
PMRV **Marv??o** 75.22 51 *e*P P **20 44 09.1 +0.2**
PMRV *i* IAmb IAmb 20 44 22.9
comp=Z,27nm,1.9s
PMRV *e*SS SS 20 58 31.3 -5.9
PMRV *e*LR LR 21 08 11.3
PMRV *i* IAMs_20 IAMs_20 21 09 44.8
comp=Z,86nm,24.0s
G24K **Hadweenzic Riv** 75.25 338 IAmb IAmb 20 44 11.6
comp=Z,33nm,1.6s
G24K **Hadweenzic Riv** 75.25 338 P P **20 44 10.1 +1.6**
baz=111,SNR=11
TRF **Thorofare Moun** 75.28 335 P P **20 44 09.9 +1.0**
baz=108
SII **Sitkinak Islan** 75.35 327 P P **20 44 10.4 +1.2**
baz=103
PBAR **Barrancos** 75.39 52 *e*P P **20 44 10.6 +0.7**
PBAR *i* IAmb IAmb 20 44 27.3
comp=Z,23nm,1.4s
O20K **Slope Mountain** 75.39 331 P P **20 44 10.5 +1.0**
baz=105
SKT **Skwentna** 75.39 333 IAmb IAmb 20 44 11.6
comp=Z,26nm,1.1s

SKT	Skwentna	75.39	333	P		P		20 44 10.5	+1.1
	baz=106,SNR=14								
SCO	Scoresbysund	75.41	18	*i* P		P		20 44 06.1	-3.2
SCO				IAmb		IAmb		20 44 12.8	
	comp=Z,4.9nm,1.0s								
I23K	Minto, Yukon-K	75.44	336	IAmb		IAmb		20 44 12.2	
	comp=Z,48nm,1.8s								
I23K	Minto, Yukon-K	75.44	336	P		P		20 44 10.8	+1.2
	baz=109,SNR=11								
RED	Redoubt Volcan	75.55	331	IAmb		IAmb		20 44 12.3	
	comp=Z,27nm,1.0s								
KTH	Kantishna Hill	75.58	335	P		P		20 44 10.4	-0.1
KTH				IAmb		IAmb		20 44 12.3	
	comp=Z,16nm,1.2s								
P19K	Oil Pt	75.58	330	P		P		20 44 11.6	+1.1
	baz=104								
Q19K	Cape Douglas,	75.61	330	P		P		20 44 11.8	+1.1
	baz=104								
ILSW	Iliamna Southw	75.62	331	IAmb		IAmb		20 44 15.8	
	comp=Z,16nm,1.2s								
C26K	Camden Bay	75.63	342	P		P		20 44 12.2	+1.7
	baz=115								
MVO	Moncorvo	75.66	49	*e*P		P		20 44 12.0	+0.6
MVO				*i* IAmb		IAmb		20 44 15.5	
	comp=Z,27nm,2.0s								
MVO				*e*LR		LR		21 10 34.4	
MVO				*i* IAMs_20		IAMs_20		21 11 08.6	
	comp=Z,125nm,22.0s								
F24K	Squaw Lake	75.70	339	P		P		20 44 12.7	+1.7
	baz=111,SNR=7.4								
H23K	Yukon River	75.73	337	P		P		20 44 12.5	+1.3
	baz=109								
D25K	Kavik River	75.86	341	IAmb		IAmb		20 44 22.9	
	comp=Z,22nm,1.1s								
D25K	Kavik River	75.86	341	P		P		20 44 13.4	+1.4
	baz=113,SNR=11								
PPLA	Purkeypile	75.94	334	IAmb		IAmb		20 44 17.4	
	comp=Z,16nm,0.9s								
PPLA	Purkeypile	75.94	334	P		P		20 44 13.6	+0.9
	baz=106,SNR=8.0								
MLY	Manley	75.95	336	IAmb		IAmb		20 44 14.8	
	comp=Z,27nm,1.7s								
MLY	Manley	75.95	336	P		P		20 44 13.5	+0.9
	baz=108,SNR=7.7								
CHIR	Chirikof Islan	75.98	326	P		P		20 44 13.9	+1.1
	baz=101								
CAST	Castle Rocks	76.04	334	P		P		20 44 13.7	+0.6
	baz=106,SNR=14								
M20K	Styx River	76.09	333	P		P		20 44 14.2	+0.7
	baz=105,SNR=7.1								
E24K	Your Creek	76.11	339	P		P		20 44 14.9	+1.5
	baz=111								
G23K	Bananza Creek	76.20	338	P		P		20 44 15.7	+1.7
	baz=109,SNR=11								
Q18K	Katmai Hardscr	76.24	329	P		P		20 44 15.4	+1.0
	baz=102								
O19K	Port Alsworth	76.24	331	P		P		20 44 15.6	+1.4
	baz=103								
CHUM	Lake Minchumin	76.27	335	P		P		20 44 15.1	+0.8
	baz=106								
COLD	Coldfoot	76.44	338	IAmb		IAmb		20 44 31.6	
	comp=Z,20nm,1.2s								
COLD	Coldfoot	76.44	338	P		P		20 44 17.2	+1.9
	baz=109,SNR=6.8								
N19K	Bonanza Creek	76.46	331	P		P		20 44 16.3	+0.7
	baz=103								
H22K	Ishtalitna Cre	76.47	337	P		P		20 44 17.0	+1.5
	baz=108,SNR=7.7								
I21K	Tanana	76.50	336	P		P		20 44 16.7	+1.1
	baz=107								
E23K	Chandalar	76.50	339	IAmb		IAmb		20 44 32.1	
	comp=Z,17nm,1.1s								
E23K	Chandalar	76.50	339	P		P		20 44 17.3	+1.6
	baz=110,SNR=11								
P18K	Big Mountain,	76.51	330	P		P		20 44 16.8	+1.0
	baz=102								
O18K	Koktuh Hills	76.60	330	P		P		20 44 17.4	+1.1
	baz=102								
D24K	Happy Valley	76.61	340	P		P		20 44 17.6	+1.5
	baz=111								
Q17K	Contact Creek	76.61	329	P		P		20 44 17.4	+0.8
	baz=102								
TOLK	Toolik Lake Re	76.68	340	P		P		20 44 18.0	+1.3
	baz=110								
R17L	Mt. Peulik Vol	76.73	328	P		P		20 44 18.3	+1.2
	baz=101								
G22K	Bettles	76.83	338	P		P		20 44 18.7	+1.3
	baz=108								
K20K	Telida	76.89	334	IAmb		IAmb		20 44 19.7	
	comp=Z,27nm,1.3s								
K20K	Telida	76.89	334	P		P		20 44 18.6	+0.7
	baz=104,SNR=11								
MD01	Midelt array s	76.94	58	P		P		20 44 19.1	+0.1
MD31	MD31	76.94	58	P		P		20 44 19.3	+0.4
L19K	White Mountain	76.95	333	P		P		20 44 18.9	+0.6
	baz=103								
H21K	Melozitna Rive	76.96	336	P		P		20 44 19.0	+0.7
	baz=106								
MDT	Midelt	77.07	58	LR		LR		21 16 07.5	
	comp=Z,108nm,19.0s,baz=220,slow=34								
Q16K	King Salmon	77.09	329	P		P		20 44 20.0	+1.0
	baz=101								
N18K	Kilae Creek	77.11	331	IAmb		IAmb		20 44 21.0	
	comp=Z,20nm,1.2s								
N18K	Kilae Creek	77.11	331	P		P		20 44 20.0	+0.8
	baz=102,SNR=5.3								
J20K	Nowinta River	77.12	335	IAmb		IAmb		20 44 21.0	
	comp=Z,15nm,1.2s								
J20K	Nowinta River	77.12	335	P		P		20 44 19.9	+0.8
	baz=104,SNR=10								
D23K	Nanushuk River	77.17	340	IAmb		IAmb		20 44 36.6	
	comp=Z,28nm,1.6s								
D23K	Nanushuk River	77.17	340	P		P		20 44 20.8	+1.4
	baz=109								
M18K	Stony River	77.25	332	P		P		20 44 20.6	+0.7
	baz=102,SNR=5.7								
F22K	John River	77.25	338	P		P		20 44 21.5	+1.6
	baz=107								
E22K	Anaktuvuk Pass	77.31	339	P		P		20 44 21.3	+1.1
	baz=108								
DBIC	Dimbokro	77.33	84	P		P		20 44 20.4	-0.9
	comp=Z,5.9nm,0.8s,baz=205,slow=6.5,SNR=4.2								
	comp=Z,5.9nm,0.8s								
DBIC	Dimbokro	77.33	84	P		P		20 44 20.4	-0.9
DBIC				IAmb		IAmb		20 44 26.8	
	comp=Z,14nm,1.1s								
I20K	Naaghedeneel	77.42	335	P		P		20 44 21.6	+0.8
	baz=104								
C23K	Itkillik River	77.43	341	IAmb		IAmb		20 44 53.9	
	comp=Z,33nm,1.4s								
C23K	Itkillik River	77.43	341	P		P		20 44 22.3	+1.5
	baz=109								
G21K	Allakaket	77.47	337	IAmb		IAmb		20 44 23.6	
	comp=Z,28nm,1.4s								
G21K	Allakaket	77.47	337	P		P		20 44 22.4	+1.3
	baz=106,SNR=11								
O17K	Koliganek Bris	77.52	330	P		P		20 44 22.4	+1.0
	baz=101,SNR=6.6								
F21K	Alatna River	77.66	338	IAmb		IAmb		20 44 24.9	
	comp=Z,14nm,1.1s								
F21K	Alatna River	77.66	338	P		P		20 44 23.6	+1.5
	baz=106,SNR=15								
N17K	Nushagak Hills	77.70	331	P		P		20 44 23.5	+1.0
	baz=101								
J19K	Poorman	77.71	334	IAmb		IAmb		20 44 24.0	
	comp=Z,26nm,1.7s								
J19K	Poorman	77.71	334	P		P		20 44 23.4	+0.9
	baz=103,SNR=7.1								
H20K	Anotlenesega Mo	77.75	336	P		P		20 44 23.7	+1.0
	baz=104,SNR=7.3								
L18K	Granite Mounta	77.80	333	IAmb		IAmb		20 44 24.8	
	comp=Z,19nm,1.4s								
L18K	Granite Mounta	77.80	333	P		P		20 44 23.8	+0.8
	baz=102								
ESDC	Sonseca Array	77.88	51	P		P		20 44 24.6	+0.6
	comp=Z,3.5nm,0.7s,baz=267,slow=5.6,SNR=25								
	comp=Z,3.5nm,0.7s								
ESDC	Sonseca Array	77.88	51	P		P		20 44 24.1	+0.1
ESDC				IAmb		IAmb		20 44 37.5	
	comp=Z,35nm,1.4s								
O16K	Kokwok River B	77.98	330	P		P		20 44 24.6	+0.6
	baz=100								
M17K	Holitna River	77.99	332	IAmb		IAmb		20 44 25.8	
	comp=Z,11nm,1.0s								
M17K	Holitna River	77.99	332	P		P		20 44 24.8	+0.7
	baz=101								
CHNA	Chernabura Isl	78.06	325	P		P		20 44 25.3	+0.7
	baz=98								
E21K	Killik River	78.17	339	P		P		20 44 26.2	+1.2
	baz=106								
S14K	Fog Glacier	78.24	326	P		P		20 44 26.6	+0.9
	baz=98								
H19K	Roundabout Mou	78.40	336	IAmb		IAmb		20 44 28.6	
	comp=Z,19nm,1.4s								
H19K	Roundabout Mou	78.40	336	P		P		20 44 27.3	+1.1
	baz=103,SNR=7.6								
GCSA	Galena City Sc	78.41	335	P		P		20 44 27.5	+1.3
	baz=102								
F20K	Avaraart Lake	78.46	337	P		P		20 44 27.7	+1.2
	baz=104								
N16K	Nishlik Lake	78.47	331	P		P		20 44 27.5	+0.8
	baz=100								
B22K	Teshekpuk Lake	78.50	341	P		P		20 44 28.0	+1.3
	baz=106								
L17K	Donlin	78.53	332	P		P		20 44 28.0	+1.0
	baz=100								
SDPT	Sand Point	78.63	325	P		P		20 44 28.8	+1.1
	baz=97								
K17K	Iditarod	78.63	333	IAmb		IAmb		20 44 29.6	
	comp=Z,12nm,0.9s								
K17K	Iditarod	78.63	333	P		P		20 44 28.8	+1.2
	baz=100,SNR=5.8								
M16K	Timber Creek	78.65	331	P		P		20 44 28.9	+1.2
	baz=100								
B21K	Ikpikpuk River	78.70	340	P		P		20 44 29.5	+1.7
	baz=105								
G19K	Purcell Mounta	78.79	336	IAmb		IAmb		20 44 30.7	
	comp=Z,23nm,1.4s								
G19K	Purcell Mounta	78.79	336	P		P		20 44 29.6	+1.2
	baz=102,SNR=10								
O15K	Ungalikthiuk R	78.79	329	P		P		20 44 29.5	+1.0
	baz=98								
E20K	Nigu River	78.92	339	P		P		20 44 30.5	+1.3
	baz=103,SNR=6.8								
L16K	Owhat River	79.00	332	P		P		20 44 30.3	+0.6
L16K				IAmb		IAmb		20 44 32.4	
	comp=Z,17nm,1.0s								
L16K	Owhat River	79.00	332	P		P		20 44 31.1	+1.5
	baz=99,SNR=8.0								
N15K	Kwethluk River	79.07	330	P		P		20 44 31.1	+1.1
	baz=98								
J17K	VABM Dome	79.10	334	IAmb		IAmb		20 44 32.8	
	comp=Z,16nm,1.0s								
J17K	VABM Dome	79.10	334	P		P		20 44 31.8	+1.7
	baz=100,SNR=10								
H18K	Honhosa River	79.11	335	IAmb		IAmb		20 44 33.2	
	comp=Z,27nm,1.4s								
H18K	Honhosa River	79.11	335	P		P		20 44 31.9	+1.7
	baz=101,SNR=6.9								
E19K	Redstone River	79.12	338	P		P		20 44 32.0	+1.7
	baz=102								
D20K	Etivluk River	79.17	339	IAmb		IAmb		20 44 41.2	
	comp=Z,24nm,1.5s								
D20K	Etivluk River	79.17	339	P		P		20 44 31.9	+1.5
	baz=103								
A22K	Sinclair Lake	79.18	341	P		P		20 44 32.0	+1.6
	baz=105								
F19K	Shaleruckik Mo	79.20	337	P		P		20 44 31.8	+1.2
	baz=102,SNR=6.6								
G18K	Tagagawik	79.37	336	P		P		20 44 33.1	+1.5
	baz=101,SNR=12								
M15K	Kagluk River	79.44	331	P		P		20 44 33.2	+1.2
	baz=98								
O14K	Tigyukauivet M	79.53	329	P		P		20 44 34.3	+1.8
	baz=97								
EKA	Eskdalemuir Ar	79.61	35	P		P		20 44 32.7	-0.3
	comp=Z,4.6nm,0.8s,baz=265,slow=5.8,SNR=12								
EKA				LR		LR		21 12 46.0	
	comp=Z,105nm,22.0s,baz=264,slow=30								
	comp=Z,4.6nm,0.8s								
B20K	Mede River	79.65	340	P		P		20 44 34.8	+1.8
	baz=103								
D19K	Kuna River	79.66	339	P		P		20 44 34.5	+1.4
	baz=102								
H17K	Granite Mounta	79.72	335	P		P		20 44 35.0	+1.5
	baz=99								
J16K	Anvik River	79.76	333	P		P		20 44 35.7	+1.9
	baz=98								
JMIC	Jan Mayen	79.78	19	LR		LR		21 16 58.1	
	comp=Z,92nm,21.9s,baz=240,slow=34								
A21K	Barrow	79.78	342	P		P		20 44 35.1	+1.5
	baz=104								
N14K	Kuskokwak Cree	79.83	330	P		P		20 44 35.5	+1.3
	baz=97								
F18K	Selawik	79.89	337	P		P		20 44 35.8	+1.5
	baz=100								
I17K	Unalakleet	79.89	334	P		P		20 44 35.7	+1.3
	baz=98								
L15K	Unalakk Mounta	79.95	332	P		P		20 44 36.3	+1.6
	baz=97								
RAR	Rarotonga	79.99	247	LR		LR		21 11 55.2	
	comp=Z,109nm,20.3s,baz=86,slow=30								
M14K	Bethel	80.06	331	IAmb		IAmb		20 44 38.1	
	comp=Z,20nm,1.0s								
M14K	Bethel	80.06	331	P		P		20 44 37.0	+1.6
	baz=97								
G17K	Kiwalik Mounta	80.11	336	P		P		20 44 37.2	+1.5
	baz=99,SNR=7.4								
C19K	Lookout Ridge	80.31	339	P		P		20 44 38.2	+1.5
	baz=100								
E18K	Tukpahlearik C	80.39	337	P		P		20 44 38.2	+1.1
	baz=99								
L14K	Kuka Creek	80.48	331	P		P		20 44 38.8	+1.2
	baz=96								
F17K	Baldwin Pennin	80.50	336	P		P		20 44 39.0	+1.3
	baz=98								
H16K	Elim	80.66	335	P		P		20 44 40.1	+1.5
	baz=97								
M13K	Dall Lake	80.71	330	P		P		20 44 40.1	+1.2
	baz=96								
G16K	Koyuk River	80.80	335	P		P		20 44 40.7	+1.4
	baz=97								
C18K	Utukok River	80.81	339	P		P		20 44 40.9	+1.6
	baz=99								
E17K	Hotham Inlet	80.81	337	P		P		20 44 40.8	+1.5
	baz=98								
D17K	Noatak River	81.38	338	P		P		20 44 43.7	+1.4
	baz=97								
G15K	Niukluk	81.47	335	P		P		20 44 44.5	+1.7
	baz=96								
K13K	Kusilvak Mount	81.47	332	P		P		20 44 44.3	+1.3
	baz=95								
C17K	DeLong Mountai	81.50	338	P		P		20 44 44.4	+1.4
	baz=97								
F15K	North Star Dit	81.79	336	IAmb		IAmb		20 44 47.7	
	comp=Z,35nm,1.5s								
F15K	North Star Dit	81.79	336	P		P		20 44 46.3	+1.8
	baz=95								
ANM	Nome	82.00	334	P		P		20 44 46.9	+1.2
	baz=94								
UNV	Unalaska Valle	82.01	323	P		P		20 44 47.0	+1.0
	baz=92								
M11K	Mekoryuk	82.12	330	P		P		20 44 47.6	+1.3
	baz=93								
C16K	Isburne Hills	82.28	338	P		P		20 44 48.2	+1.1
	baz=95								
F14K	Arctic Creek	82.47	335	P		P		20 44 49.4	+1.3
	baz=94								
TNA	Tin City	83.13	335	P		P		20 44 52.8	+1.2
	baz=92								
TORD	Torodi Ar. Bea	83.32	77	P		P		20 44 53.3	-0.3
	comp=Z,4.7nm,1.0s,baz=300,slow=4.6,SNR=13								
	comp=Z,4.7nm,1.0s								
TORD	Torodi Ar. Bea	83.32	77	P		P		20 44 52.6	-1.0
TORD				IAmb		IAmb		20 45 05.1	
	comp=Z,18nm,1.8s								
SPIA	Saint Paul Isl	84.17	327	P		P		20 44 58.3	+1.2
	baz=89								
GAMB	Gambell	84.75	334	P		P		20 45 01.2	+1.4
	baz=88								
ECH	Echery	85.90	42	P		P		20 45 05.9	-0.1
SPITS	Spitsbergen Ar	86.59	12	P		P		20 45 09.0	+0.1
	comp=Z,12nm,0.9s,baz=232,slow=17,SNR=1.9								
SPITS				LR		LR		21 23 21.0	
	comp=Z,151nm,21.7s,baz=276,slow=35								
	comp=Z,12nm,0.9s								
SPITS	Spitsbergen Ar	86.59	12	P		P		20 45 09.0	+0.1
BELA	Belgrano 2	87.19	171	P		P		20 45 11.1	-0.5
BELA				IAmb		IAmb		20 45 15.2	
	comp=Z,9.4nm,1.1s								
NB2	NORSAR Subarra	87.19	29	P		P		20 45 12.1	0.0
	comp=Z,1.2nm,0.8s,baz=278,slow=4.6								
NOA	NORSAR Array B	87.19	29	P		P		20 45 12.0	0.0
	comp=Z,6.1nm,1.1s,baz=276,slow=4.6,SNR=5.8								
NOA				LR		LR		21 20 47.9	
	comp=Z,42nm,20.8s,baz=265,slow=33								
	comp=Z,6.1nm,1.1s								
DAVOX	Davos/Dischmat	87.85	43	LR		LR		21 20 08.4	
	comp=Z,54nm,19.5s,baz=270,slow=33								
HFS	Hagfors	88.52	30	P		P		20 45 17.7	-0.6
	comp=Z,3.2nm,0.9s,baz=198,slow=13,SNR=2.2								
HFS				LR		LR		21 22 13.3	
	comp=Z,50nm,19.5s,baz=270,slow=34								
	comp=Z,3.2nm,0.9s								
HFS	Hagfors	88.52	30	P		P		20 45 17.7	-0.6
VNA1	Neumayer--Stat	89.95	161	P		P		20 45 25.7	+1.0
	comp=Z,8.7nm,1.1s								
GERES	GERESS Array B	90.16	41	P		P		20 45 26.8	+0.4
	comp=Z,1.0nm,0.9s,baz=215,slow=4.4,SNR=7.6								
	comp=Z,1.0nm,0.9s								
GERES	GERESS Array B	90.16	41	P		P		20 45 25.2	-1.2
AFI	Afiamalu	90.41	256	LR		LR		21 16 30.1	
	comp=Z,99nm,20.4s,baz=75,slow=29								
ARCES	ARCESS Array B	91.23	20	P		P		20 45 31.0	+0.1
	comp=Z,2.9nm,0.8s,baz=343,slow=12,SNR=3.8								
ARCES				LR		LR		21 22 52.1	
	comp=Z,47nm,21.0s,baz=288,slow=33								
	comp=Z,2.9nm,0.8s								
ARCES	ARCESS Array B	91.23	20	P		P		20 45 30.9	0.0
SNAA	Sanae	91.91	162	P		P		20 45 34.6	+0.6
	comp=Z,71nm,1.0s								
SNAA	Sanae	91.91	162	P		P		20 45 34.3	+0.3
	comp=Z,3.8nm,1.0s,baz=229,slow=2.8,SNR=7.5								
SNAA				LR		LR		21 28 13.7	
	comp=Z,72nm,18.2s,baz=294,slow=36								
	comp=Z,3.8nm,1.0s								
SNAA	Sanae	91.91	162	P		P		20 45 34.4	+0.4
VRAC	Vranov	91.96	40	LR		LR		21 20 34.9	
	comp=Z,139nm,21.6s,baz=280,slow=32								
VAE	Valguarnera	92.35	52	LR		LR		21 22 54.1	
	comp=Z,102nm,19.6s,baz=158,slow=33								
TROLL	Troll, Antarti	93.62	162	P		P		20 45 42.3	+0.3
	comp=Z,578nm,1.1s								
FINES	FINESS Array B	94.11	27	LR		LR		21 25 07.5	
	comp=Z,64nm,21.8s,baz=280,slow=34								
QSPA	South Pole Qui	95.43	180	P		P		20 45 50.7	+0.3
	comp=Z,5.3nm,0.9s,baz=176,slow=1.3,SNR=12								
	comp=Z,5.3nm,0.9s								
QSPA	South Pole Qui	95.43	180	P		P		20 45 50.6	+0.3
QSPA				IAmb		IAmb		20 45 54.9	
	comp=Z,7.2nm,1.0s								
MLR	Muntele Rosu	99.04	42	LR		LR		21 26 45.4	
	comp=Z,69nm,20.9s,baz=270,slow=33								
AKASG	Malin Array Be	99.43	37	LR		LR		21 26 20.0	
	comp=Z,62nm,21.5s,baz=253,slow=33								
H11N3	WAKE ISLAND Hyl	107.20	292	T		T		22 46 48.5	
	baz=79,slow=75,SNR=25								
H11N2	WAKE ISLAND Hyl	107.21	292	T		T		22 46 41.6	
	baz=79,slow=75,SNR=18								
H11N1	WAKE ISLAND Hyl	107.22	292	T		T		22 46 50.0	
	baz=79,slow=75,SNR=21								
H11S2	WAKE ISLAND Hyl	107.65	291	T		T		22 47 14.6	
	baz=78,slow=74								
H11S1	WAKE ISLAND Hyl	107.65	291	T		T		22 47 21.7	
	baz=78,slow=74								
H11S3	WAKE ISLAND Hyl	107.66	291	T		T		22 47 19.8	
	baz=78								
BVAR	Borovoye Array	117.48	18	PP		PP		20 52 19.7	-3.0
	comp=Z,1.1nm,0.9s,baz=316,slow=8.1,SNR=4.0								
ZALV	Zalesovo Beam	119.93	8	PKP		PKPdf		20 51 16.2	-0.2
	comp=Z,0.8nm,0.8s,baz=341,slow=8.6,SNR=3.6								
ZALV	Zalesovo Beam	119.93	8			PKPdf		20 51 16.2	-0.2
KURK	Kurchatov	121.81	14			PKPdf		20 51 20.3	+0.2
KURK						PP		20 52 51.2	-1.2
KURBB	Kurchatov Arra	121.88	14	PKP		PKPdf		20 51 20.3	0.0
	comp=Z,1.0nm,0.7s,baz=334,slow=2.5,SNR=6.1								
KURBB				PP		PP		20 52 51.2	-1.6
	comp=Z,0.4nm,0.4s,baz=326,slow=8.3,SNR=2.8								
KURBB				PKKPbc		PKKPbc		21 01 20.8	+0.7
	comp=Z,0.5nm,0.2s,baz=134,slow=2.5,SNR=4.1								
MKAR	Makanchi Array	126.34	13	PKP		PKiKP		20 51 29.7	+0.2
	comp=Z,1.0nm,0.8s,baz=342,slow=1.9,SNR=5.8								
MKAR				PP		PP		20 53 21.1	-1.7
	comp=Z,1.6nm,1.1s,baz=349,slow=3.9,SNR=4.1								
MKAR	Makanchi Array	126.34	13			PKiKP		20 51 29.7	+0.2
SONM	Songino Array	126.38	352	PKP		PKPdf		20 51 29.5	+0.3
	comp=Z,0.8nm,0.4s,baz=325,slow=1.8,SNR=2.7								
SONM				PP		PP		20 53 24.2	+1.1
	comp=Z,0.5nm,0.4s,baz=31,slow=3.5,SNR=4.3								
SONM	Songino Array	126.38	352			PKPdf		20 51 29.5	+0.3
KSRS	Korea Array	128.70	329	PKP		PKPdf		20 51 33.7	0.0
	comp=Z,1.8nm,0.9s,baz=26,slow=2.1,SNR=7.0								
KSRS	Korea Array	128.70	329			PKPdf		20 51 33.7	0.0
WMQ	Urumqi	130.23	9	*e*PKP		PKiKP		20 51 37.8	+0.4
HHC	Hu-ho-hao-te	132.14	345	*e*PKP		PKPdf		20 51 36.2	-4.1
HHC				L		L			
	comp=Z,89nm,17.0s								
HHC				L		L			
	comp=Z,85nm,16.2s								
BTO2	Baotou	132.64	347	*e*PKP		PKPdf		20 51 41.7	+0.4
BTO2				L		L			
	comp=Z,240nm,18.4s								
GTA2	Gaotai	135.27	357	*e*PKP		PKiKP		20 51 50.4	+2.6
NJ2	Nanjing	137.47	333	*e*PKP		PKPdf		20 51 50.3	-0.1
ASAR	Alice Springs	140.39	239	PKhKP		PKPpre		20 51 49.2	
	comp=Z,1.4nm,0.9s,baz=107,slow=2.2,SNR=6.7								
ASAR				PKP		PKPdf		20 51 55.0	-1.1
	comp=Z,1.4nm,0.7s,baz=96,slow=2.5,SNR=7.5								
ASAR	Alice Springs	140.39	239	PKPdf		PKPdf		20 51 53.5	-2.5
WRA	Warramunga Arr	141.22	245	PKhKP		PKPpre		20 51 53.3	
	comp=Z,0.5nm,0.8s,baz=103,slow=1.8,SNR=2.5								
WRA				PKP		PKPdf		20 51 57.2	-0.4
	comp=Z,0.6nm,0.6s,baz=104,slow=2.2,SNR=7.9								
WRA	Warramunga Arr	141.22	245			PKPdf		20 51 53.3	-4.3
CD2	Chengdu	143.36	351	PKP		PKPdf		20 52 00.0	-1.2

JHR	Hokuryu	1.50	297		P		Pn	20 33 25.3	+1.0	
RUSJ	Misakicho	1.59	49	*e*	PN		Pn	20 33 28.4	+3.1	
RUSJ					*e*S		Sn	20 33 52.6	+6.1	
NMR	Nemuro--Hokkai	1.60	79↓	*i*	PN		Pn	20 33 24.9	-0.5	
NMR					*i* S		Sn	20 33 45.4	-1.4	
NMR	Nemuro--Hokkai	1.60	79	*i*	P		Pn	20 33 25.0	-0.5	
NMR					*i* S		Sn	20 33 46.0	-0.8	
NEM2	Nemuro 2	1.61	79	*i*	P		Pn	20 33 25.0	-0.6	
NEM2					S		Sn	20 33 45.5	-1.5	
JSS	Shosan	1.82	317		P		Pn	20 33 29.2	+1.1	
YUK	Yuzh-Kuril'sk	1.92	59	*d*	PN		Pn	20 33 31.1	+1.7	
YUK					*i* S		Sn	20 33 56.7	+3.0	
YUK					pmax	pmax				
	comp=E,32nm,0.1s									
YUK					pmax	pmax				
	comp=Z,62nm,0.1s									
YUK					smax	smax				
	comp=N,162nm,0.2s									
YUK					smax	smax				
	comp=E,234nm,0.2s									
YUK	Yuzh-Kuril'sk	1.92	59	*i*	P		Pn	20 33 30.0	+0.6	
YUK					AMB	AMB		20 33 33.3		
	comp=E,60nm,0.2s									
YUK					*i* S		Sn	20 33 54.0	+0.3	
YUK					A	A		20 33 57.9		
	comp=E,220nm,0.2s									
YUK					A	A		20 33 57.9		
	comp=E,230nm,0.2s									
SHO	Shikotan	2.50	70	*e*	P		Pn	20 33 48.9	+12	
SHO					AMB	AMB		20 33 49.6		
	comp=E,30nm,0.2s									
SHO				*e*	S		Sn	20 34 17.0	+10	
SHO					A	A		20 34 18.3		
	comp=E,90nm,0.2s									
SHO					A	A		20 34 18.3		
	comp=E,110nm,0.2s									
SONM	Songino Array	26.33	293		P		P	20 38 22.3	-0.8	
	comp=E,0.4nm,0.6s,baz=87,slow=8.8,SNR=2.6									
	comp=E,0.4nm,0.6s									
H11N2	WAKE ISLAND Hy	30.44	133		T		T	21 10 28.1		
	baz=328,slow=76,SNR=12									
H11N1	WAKE ISLAND Hy	30.45	133		T		T	21 10 29.9		
	baz=328,slow=76,SNR=6.5									
H11N3	WAKE ISLAND Hy	30.45	133		T		T	21 10 35.8		
	baz=328,slow=76,SNR=6.8									
H11S1	WAKE ISLAND Hy	31.34	134		T		T	21 11 37.7		
	baz=329,slow=76									
H11S3	WAKE ISLAND Hy	31.34	134		T		T	21 11 37.5		
	baz=329,slow=76									
H11S2	WAKE ISLAND Hy	31.35	134		T		T	21 11 39.9		
	baz=329,slow=76									
MKAR	Makanchi Array	42.58	297		P		P	20 40 41.6	-0.7	
	comp=E,0.4nm,0.5s,baz=84,slow=9.4,SNR=5.9									
	comp=E,0.4nm,0.5s									
KURK	Kurchatov	43.74	304		P		P	20 40 51.4	-0.1	
KURK	Kurchatov	43.74	304	*e*	P		P	20 40 51.4	-0.1	
KURBB	Kurchatov Arra	43.82	303		P		P	20 40 51.4	-0.8	
	comp=E,0.7nm,0.5s,baz=72,slow=9.0,SNR=5.7									
	comp=E,0.7nm,0.5s									
BVAR	Borovoye Array	47.90	309		P		P	20 41 22.8	-1.5	
	comp=E,0.4nm,0.3s,baz=74,slow=7.6,SNR=5.3									
	comp=E,0.4nm,0.3s									
WRA	Warramunga Arr	63.28	190		P		P	20 43 04.3	-10	
	comp=E,0.9nm,1.0s,baz=11,slow=7.3,SNR=7.3									
	comp=E,0.9nm,1.0s									

IDC ***07*** *20:42:16.5±0.6,33˚.02N×73˚.50E,h0km,mb3.9/22, mbtmp4.0/25,ML4.0/3,Error ellipse: s-maj=16.3km s-min=12.5km az=39.0*

NEIC ***07*** *20:42:19.3±1.9,33˚.04N±0˚.05×73˚.61E±0˚.08,h10km±1km, mb4.5/45,Error ellipse: s-maj=13.0km s-min=6.0km az=243.0*

GFZ ***07*** *20:42:19.7±0.3,33˚.N±6˚×7˚.4E±˚,h10km,M4.3/12, mb4.3/12,confirmed*

NNC ***07*** *20:42:20.9±4.1,33˚.37N×73˚.69E,h0km,mb3.9,Error ellipse: s-maj=49.2km s-min=38.6km az=118.0*

NDI ***07*** *20:42:22.7±3.5,33.01N×73˚.73E,h10km,ML3.9,MW4.0, Presumed earthquake*

ISC 07 20:42:18.9±1.2,33˚.01N±0˚.04×73˚.59E±0˚.03,h13km±7km, n149,σ1s73/172,mb4.3/41,2C-1D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIL	Nilore	0.70	336		Op	Pg	20 42 32.3	-0.3
NIL					Sg	Sg	20 42 41.2	-0.6
NIL	Nilore	0.70	336	P		Pg	20 42 32.6	0.0
JMU	Jammu	1.07	102	*e*P		Pg	20 42 38.4	-1.1
JMU				*e*S		Sg	20 42 51.2	-2.2
JMU				IAML			20 42 54.8	
	comp=N,2μm,0.2s							
JMU				IAML			20 42 58.0	
	comp=E,2μm,0.3s							
SRNI	Srinagar	1.46	44	*e*P		Pg	20 42 47.7	+0.8
SRNI				*e*S		Sg	20 43 08.8	+2.9
SRNI				IAML			20 43 16.1	
	comp=E,7μm,0.6s							
SRNI				IAML			20 43 16.2	
	comp=N,7μm,0.4s							
THN	Thein Dam	1.91	107	*e*P		Pb	20 42 54.6	+0.9
THN				*e*S		Sg	20 43 20.0	-0.5
THN				IAML			20 43 21.6	
	comp=E,6μm,0.6s							
THN				IAML			20 43 32.5	
	comp=E,3μm,0.4s							
TSSA	Tissa	2.16	94	*e*P		Pb	20 42 57.8	-0.3
TSSA				*e*S		Sn	20 43 23.6	+2.0
TSSA				IAML			20 43 27.2	
	comp=E,2μm,0.3s							
TSSA				IAML			20 43 33.2	
	comp=E,2μm,0.4s							
TLWR	Talawar	2.26	117	*e*P		Pb	20 42 59.4	-0.2
TLWR				*e*S		Sb	20 43 26.9	-0.5
TLWR				*e*S		Sn	20 43 27.2	+3.5
DHRM	DHARAMSHALA	2.41	107	*i*	P	Pb	20 43 01.4	-0.9
DHRM				*e*S		Sb	20 43 30.9	-1.1
DHRM				IAML			20 43 35.8	
	comp=N,3μm,0.5s							
DHRM				IAML			20 43 36.1	
	comp=E,4μm,0.4s							
BHK	Bhakra	2.86	123	*e*P		Pn	20 43 07.3	+3.0
BHK				*e*S		Sb	20 43 43.8	-1.0
BHK				IAML			20 43 48.0	
	comp=E,505nm,0.2s							
BHK				IAML			20 43 48.2	
	comp=N,823nm,0.6s							
ALCI	Alchi Leh	3.23	67	*ex*		Pb	20 43 17.2	+0.7
ALCI				*ex*		Sb	20 43 57.0	+1.1
ALCI				IAML			20 44 01.4	
	comp=N,230nm,0.5s							
ALCI				IAML			20 44 01.7	
	comp=E,302nm,0.7s							
KBL	Kabul	4.08	293			Pn	20 43 22.4	+1.1
KBL					Sn	Sn	20 44 09.8	+0.8
KBL	Kabul	4.08	293	P		Pn	20 43 25.5	+4.2
KLP	Kalpa	4.21	109	*e*P		Pn	20 43 25.5	+2.4
KLP				*e*S		Sn	20 44 12.2	-0.2
KLP				*e*S		Sb	20 44 16.8	-7.2
KLP				IAML			20 44 31.3	
	comp=E,577nm,0.6s							
KLP				IAML			20 44 35.1	
	comp=E,100nm,0.0s							
MANEM	Manem	4.79	342			Pn	20 43 34.4	+3.4
MANEM					Sn	Sn	20 44 23.4	-3.1
NDI	New Delhi	5.32	143	*e*P		Pn	20 43 41.1	+3.0
NDI				*e*S		Sn	20 44 40.5	+1.4
KUDL	Kundal	5.45	152	*e*P		Pn	20 43 41.5	+1.6
KUDL				*e*S		Sn	20 44 41.2	-1.3
KSH2	Kashi	6.33	14	Pn		Pn	20 43 55.8	+3.7
KSH2				Sn		Sn	20 45 04.9	+0.5
KSH2				smax	smax			
	comp=N,58nm,0.5s							
KSH2				smax	smax			
	comp=E,67nm,0.4s							
SHAA	Shahritus	6.37	317			Pn	20 43 53.4	+0.8
SHAA					Sn	Sn	20 45 05.9	+0.6
GAR	Garm	6.54	337			Pn	20 43 56.3	+1.3
GAR					Sn	Sn	20 45 06.1	-3.4
PTH	Pithoragarh	6.61	119	*e*P		Pn	20 43 57.3	+1.4
PTH				*e*S		Sn	20 45 09.6	-1.6
PTH				IAML			20 45 44.1	
	comp=E,34nm,0.2s							
PTH				IAML			20 45 44.5	
	comp=N,32nm,0.2s							
CHGR	Chuyangaron	6.69	329			Pn	20 43 57.7	+0.7
CHGR	Chuyangaron	6.69	329	P		Pn	20 43 58.8	+1.8
BTK	Batken	7.38	343			Pn	20 44 07.4	+0.9
ARSB	Arslanbob	8.32	357	Pn		Pn	20 44 20.4	+1.0
NRN	Naryn	8.63	12			Pn	20 44 24.8	+1.0
UCH	Uchtor	9.24	4	P		Pn	20 44 33.6	+1.3
	SNR=44							
WUS	Wushi	9.33	27			Pn	20 44 32.7	-0.5
TARG	Taragay, Kyrgy	9.33	20			Pn	20 44 34.9	+1.4
KDJ	Kajisay	9.54	16			Pn	20 44 37.3	+1.1
EKS2	Erkin-Say	9.64	1	P		Pn	20 44 39.0	+1.5
	SNR=62							
AAK	Ala-Archa	9.64	4	Pn		Pn	20 44 38.1	+0.5
	comp=N,3.2nm,0.3s,baz=180,slow=12,SNR=30							
AAK					Sn	Sn	20 46 19.5	-6.3
	comp=N,0.4nm,0.3s,baz=211,slow=21,SNR=1.2							
AAK					Lg	Lg	20 47 18.9	
	baz=357,slow=22							
	comp=N,12nm,0.5s							
AAK	Ala-Archa	9.64	4	P		Pn	20 44 39.3	+1.7
	SNR=16							
AAK	Ala-Archa	9.64	4			Pn	20 44 37.5	-0.1
AAK	Ala-Archa	9.64	4	⇑P		Pn	20 44 37.0	-0.6
	comp=N,10.0nm,0.8s							
AAK				⇑S		Sn	20 46 23.2	-2.6
	comp=N,13nm,1.1s							
BOOM	Boomskoye usch	9.65	10			Pn	20 44 38.9	+1.2
KBK	Karagaybulak	9.70	6	P		Pn	20 44 41.0	+2.7
	SNR=36							
CHMS	Chumysh	10.02	5	P		Pn	20 44 44.2	+1.6
	SNR=13							
TKM2	Tokmak 2	10.03	9	P		Pn	20 44 44.7	+1.9
	SNR=8.8							
PRZ	Przheval'sk	10.20	21			Pn	20 44 46.7	+1.5
USP	Ospenovka	10.27	4	P		Pn	20 44 48.1	+2.0
	SNR=13							
KK31	Karatay Array	10.37	347			Pn	20 44 47.8	+0.4
KK31	Karatay Array	10.37	347	P		Pn	20 44 47.7	+0.4
	comp=N,12nm,0.3s,baz=156,slow=11,SNR=289							
KK31					LS	Sn	20 46 39.1	-4.3
	comp=N,9.1nm,0.5s,baz=160,slow=23							
KKAR	Karatay Array	10.37	347			Pn	20 44 47.9	+0.6
PDGK	Podgornoye	11.30	23	P		Pn	20 44 59.8	-0.4
EVN	Everest	12.47	110	P		Pn	20 45 14.9	-1.7
MAKZ	Makanchi	15.20	22			Pn	20 45 50.6	-2.7
MAKZ					IAmb	IAmb	20 45 55.9	
	comp=Z,10nm,0.9s							
MAKZ	Makanchi	15.20	22	P		Pn	20 45 51.8	-1.5
MK31	Makanchi Array	15.29	23	P		Pn	20 45 52.6	-1.9
	comp=Z,1.4nm,0.7s,baz=192,slow=12,SNR=35							
MKAR	Makanchi Array	15.29	23	Pn		Pn	20 45 52.5	-1.9
	comp=Z,0.6nm,0.3s,baz=195,slow=12,SNR=27							
	comp=Z,1.4nm,0.5s							
MKAR	Makanchi Array	15.29	23			Pn	20 45 51.8	-2.7
WMQ	Urumqi	15.43	42	*e*P		Pn	20 45 57.6	+1.2
WMQ					pmax	pmax		
	comp=Z,11nm,0.7s							
HYB	Hyderabad	16.15	163	*e*P		Pn	20 46 05.9	+0.1
HYB				*e*S		S	20 49 20.3	+2.1
KURBB	Kurchatov Arra	17.98	10	Pn		Pn	20 46 25.3	-3.1
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=20							
	comp=Z,5.3nm,0.7s							
KURK	Kurchatov	18.08	10			Pn	20 46 26.2	-3.5
KURK	Kurchatov	18.08	10	P		Pn	20 46 27.0	-2.7
AB31	Akbulak array	19.16	332	P		P	20 46 40.1	-1.9
AB31	Akbulak array	19.16	332	P		P	20 46 41.0	-0.9
	comp=Z,1.6nm,0.5s,baz=142,slow=12,SNR=56							
ABKAR	Akbulak array	19.16	332	P		P	20 46 39.9	-2.1
BVA0	Borovoye Array	20.14	354	P		P	20 46 52.8	+0.1
	comp=Z,0.1nm,0.8s,baz=160,slow=10,SNR=46							
BVAR	Borovoye Array	20.14	354	P		P	20 46 52.4	-0.2
	comp=Z,4.8nm,0.5s,baz=160,slow=11,SNR=22							
	comp=Z,4.8nm,0.5s							
BORK	Borovoye	20.17	354	P		P	20 46 50.9	-2.0
AKTO	Aktyubinsk	20.86	331	P		P	20 47 00.5	0.0
	comp=Z,13nm,0.7s,baz=143,slow=8.4,SNR=41							
	comp=Z,13nm,0.7s							
AKTO	Aktyubinsk	20.86	331	P		P	20 47 00.8	+0.3
GTA2	Gaotai	22.03	65	*e*P		P	20 47 14.3	+1.0
GTA2					pP	sP	20 47 20.7	+1.9
GTA2					pmax	pmax		
	comp=Z,2.0nm,0.7s							
ZAA0	Zalesovo Array	22.41	18	P		P	20 47 15.1	-2.0
ZAA0					IAmb	IAmb	20 47 27.3	
	comp=Z,8.2nm,0.8s							
ZALV	Zalesovo Beam	22.41	18	P		P	20 47 15.8	-1.2
	comp=Z,6.0nm,0.4s,baz=213,slow=9.4,SNR=33							
	comp=Z,6.0nm,0.4s							
ZALV	Zalesovo Beam	22.41	18			P	20 47 15.1	-2.0
NPW	Naypyitaw	24.05	118	P		P	20 47 32.8	-1.1
LZDM	Lanzhou Array	24.95	75	P		P	20 47 41.3	-1.1
	comp=Z,2.9nm,0.4s,baz=270,slow=7.2,SNR=2.8							
	comp=Z,2.9nm,0.4s							
ARTI	Arti	25.64	340	P		P	20 47 47.1	-0.9
ARTI					IAmb	IAmb	20 47 55.6	
	comp=Z,3.5nm,0.6s							
CHTO	Chiang Mai	26.74	116	P		P	20 47 58.1	-0.3
CMAR	Chiang Mai Arr	26.95	116	P		P	20 48 00.9	+0.7
	comp=Z,3.4nm,0.7s,baz=296,slow=9.6,SNR=28							
	comp=Z,3.4nm,0.7s							
CMAR	Chiang Mai Arr	26.95	116	P		P	20 48 00.1	-0.2
SONM	Songino Array	28.78	49	P		P	20 48 17.2	+0.7
	comp=Z,0.5nm,0.4s,baz=245,slow=9.7,SNR=3.5							
	comp=Z,0.5nm,0.4s							
SONM	Songino Array	28.78	49	P		P	20 48 16.8	+0.3
HHC	Hu-ho-hao-te	31.16	64	*e*P		P	20 48 40.0	+2.3
HHC					pmax	pmax		
	comp=Z,9.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,37nm,4.4s							
BRTR	Keskin Array B	32.66	293	P		P	20 48 50.0	-0.9
	comp=Z,0.3nm,0.6s,baz=97,slow=6.7,SNR=3.5							
	comp=Z,0.3nm,0.6s							
CSS	Mathiatis	33.28	285	P		P	20 48 57.4	+1.1
CSS					IAmb	IAmb	20 49 24.2	
	comp=Z,9.8nm,1.0s							
ELL	Elmali	35.80	289	P		P	20 49 19.8	+1.7
ELL					IAmb	IAmb	20 49 25.5	
	comp=Z,5.1nm,0.8s							
AKAS	Kas	36.11	288	P		P	20 49 21.7	+0.9
AKASG	Malin Array Be	36.83	312	P		P	20 49 25.0	-1.6
	comp=Z,0.4nm,0.5s,baz=83,slow=7.5,SNR=3.6							
	comp=Z,0.4nm,0.5s							
KCSI	Kotacane, Aceh	37.04	137	P		P	20 49 28.0	-0.7
NRIK	Noril'sk	37.23	8	P		P	20 49 29.4	-0.3
NRIK					IAmb	IAmb	20 49 45.2	
	comp=Z,4.3nm,0.8s							
NJ2	Nanjing	37.95	79	*e*P		P	20 49 36.8	+0.5
NJ2					pmax	pmax		
	comp=Z,16nm,0.5s							
MLR	Muntele Rosu	38.41	303	P		P	20 49 40.4	+0.2
MLR					IAmb	IAmb	20 49 47.8	
	comp=Z,6.7nm,0.8s							
MLR	Muntele Rosu	38.41	303	P		P	20 49 44.1	+3.9
ALN	Alexandroupoli	38.41	296	P		P	20 49 40.8	+0.7
ALN					IAmb	IAmb	20 49 42.7	
	comp=Z,9.8nm,1.1s							
BURAR	Bucovina Array	39.02	307	P		P	20 49 46.3	+1.0
VOIR		39.04	303	P		P	20 49 47.0	+1.6
DRGR		40.69	305	P		P	20 50 01.4	+2.3
FINES	FINESS Array B	41.57	328	P		P	20 50 05.7	-0.3
	comp=Z,1.3nm,0.8s,baz=99,slow=12,SNR=4.4							
	comp=Z,1.3nm,0.8s							
PSZ	Pisz-kesteto	42.62	307	P		P	20 50 15.1	+0.1
NACB	Ninganchiao	42.76	89	P		P	20 50 16.3	+0.1
YOJ	Yonaguni jima	43.83	88	P		P	20 50 27.2	+2.3
KSAR	Wonju Array Be	44.07	68	P		P	20 50 27.3	+0.7
KSAR	Wonju Array Be	44.07	68	P		P	20 50 27.3	+0.7
MORC	Moravsky Berou	44.19	310	P		P	20 50 28.4	+0.9
MORC					IAmb	IAmb	20 50 29.6	
	comp=Z,1.6nm,0.5s							
MORC	Moravsky Berou	44.19	310	*e*P		P	20 50 28.7	+1.2
MORC	Moravsky Berou	44.19	310	P		P	20 50 29.1	+1.6
KRLC	Kraliky	44.68	310	P		P	20 50 33.1	+1.6
DPC	Dobruska-Polom	44.98	310	P		P	20 50 35.6	+1.8
ARCES	ARCESS Array B	45.18	338	P		P	20 50 33.3	-1.8
	comp=Z,0.6nm,0.5s,baz=116,slow=7.7,SNR=8.7							
	comp=Z,0.6nm,0.5s							
ARCES	ARCESS Array B	45.18	338	P		P	20 50 34.4	-0.6
ARCES					IAmb	IAmb	20 50 39.8	
	comp=Z,14nm,1.4s							
BRG	Berggiesshubel	46.49	311	*e*P		P	20 50 49.2	+3.6
BRG					Amp		20 50 50.9	
	comp=Z,1.8nm,0.7s							
BRG	Berggiesshubel	46.49	311	S		SKiKP	21 02 37.0	-10
GERES	GERESS Array B	46.73	308	P		P	20 50 46.7	-1.0
	comp=Z,0.1nm,0.3s,baz=76,slow=8.1,SNR=1.9							
	comp=Z,0.1nm,0.3s							
HFS	Hagfors	47.13	324	P		P	20 50 50.5	-0.1
	comp=Z,2.0nm,0.5s,baz=98,slow=11,SNR=12							
	comp=Z,2.0nm,0.5s							
NC405	NORSAR Array S	48.22	325	P		P	20 50 58.5	-0.6
KMBO	Kilima Mbogo	48.23	233	P		P	20 50 58.0	-1.9
	baz=210,slow=16							
TIXI	Tiksi	48.25	20	P		P	20 51 00.1	+1.1
TIXI					IAmb	IAmb	20 51 13.2	
	comp=Z,7.0nm,1.0s							
NB201	NORSAR Array S	48.42	325	P		P	20 50 59.9	-0.7
NB2	NORSAR Subarra	48.45	325	P		P	20 51 00.1	-0.8
	comp=Z,1.5nm,0.7s,baz=96,slow=7.9							
NOA	NORSAR Array B	48.45	325	P		P	20 51 00.1	-0.8
	comp=Z,0.8nm,0.6s,baz=97,slow=7.6,SNR=6.5							
	comp=Z,0.8nm,0.6s							
FUORN	Ofenpass-Fuorn	49.25	306	P		P	20 51 08.1	+0.6
FUORN					IAmb	IAmb	20 51 36.2	
	comp=Z,4.1nm,1.1s							
SENIN	Lac Senin/Sane	51.31	306	P		P	20 51 23.6	+0.6
SPITS	Spitsbergen Ar	51.37	347	P		P	20 51 22.1	-0.7
	comp=Z,8.0nm,0.9s,baz=278,slow=5.8,SNR=1.5							
	comp=Z,8.0nm,0.9s							
KEST	Kesra	52.24	292	P		P	20 51 30.6	+0.7
MJB9	Matsu-Tunnel	52.30	67	P		P	20 51 31.2	+0.9
MAJO	Matsushiro	52.30	67	P		P	20 51 31.6	+1.2
MJAR	Matsushiro Arr	52.31	67	P		P	20 51 31.5	+1.1
MJAR					IAmb	IAmb	20 51 50.8	
	comp=Z,4.4nm,1.4s							
ERM	Erimo	54.54	59	P		P	20 51 46.4	-0.2
JHJ	Hachijo jima 2	54.59	70	P		P	20 51 46.0	-1.1
	comp=Z,70nm,0.7s,baz=103,slow=19,SNR=1.6							
SEY	Seymchan	56.17	33	P		P	20 51 58.1	+0.1
	comp=Z,1.1nm,0.6s,baz=210,slow=13,SNR=3.8							
	comp=Z,1.1nm,0.6s							
EKA	Eskdalemuir Ar	56.29	318	P		P	20 51 57.4	-1.6
	comp=Z,0.5nm,0.7s,baz=116,slow=5.7,SNR=3.9							
	comp=Z,0.5nm,0.7s							
ESK	Eskdalemuir	56.32	318	P		P	20 52 02.5	+3.2
HTL	Hartland	58.00	313	P		P	20 52 12.5	+1.3
ESDC	Sonseca Array	61.02	301	P		P	20 52 32.3	0.0
	comp=Z,0.9nm,0.8s,baz=54,slow=8.0,SNR=6.3							
	comp=Z,0.9nm,0.8s							
ESDC	Sonseca Array	61.02	301	P		P	20 52 32.3	0.0
SOEI	Soe	64.30	122	P		P	20 52 55.1	+0.6
GIRL	Giralia	67.57	139	P		P	20 53 15.7	+0.5
TORD	Torodi Ar. Bea	67.86	272	P		P	20 53 15.7	-1.6
	comp=Z,0.7nm,0.5s,baz=48,slow=5.9,SNR=7.4							
	comp=Z,0.7nm,0.5s							
TORD	Torodi Ar. Bea	67.86	272	P		P	20 53 15.8	-1.6
TORD					IAmb	IAmb	20 53 42.1	
	comp=Z,4.7nm,1.2s							
C16K	Lisburne Hills	70.02	20	P		P	20 53 29.7	-0.2
C18K	Utukok River	70.91	18	P		P	20 53 35.5	0.0
C19K	Lookout Ridge	71.01	18	P		P	20 53 36.7	+0.7
D19K	Kuna River	71.83	18	P		P	20 53 41.0	0.0
D19K					IAmb	IAmb	20 54 19.3	
	comp=Z,4.8nm,1.1s							
E18K	Tukpahlearik C	71.93	19	P		P	20 53 41.9	+0.4
E18K					IAmb	IAmb	20 54 20.0	
	comp=Z,9.0nm,1.4s							
C23K	Itkillik River	72.56	15	P		P	20 53 45.2	0.0
C23K					IAmb	IAmb	20 54 03.7	
	comp=Z,5.7nm,1.1s							
C27K	Jago River	74.11	13	P		P	20 53 54.1	-0.4
C27K					IAmb	IAmb	20 54 11.4	
	comp=Z,6.8nm,1.2s							
J16K	Anvik River	74.85	22	P		P	20 53 59.3	+0.5
J16K					IAmb	IAmb	20 54 13.4	
	comp=Z,6.0nm,1.1s							
J19K	Poorman	75.84	20	P		P	20 54 05.4	+0.9
L16K	Owhat River	76.34	23	P		P	20 54 08.2	+0.8
L16K					IAmb	IAmb	20 54 47.2	
	comp=Z,8.5nm,1.4s							
ILAR	Eielson Array	77.53	17	P		P	20 54 13.7	-0.4
	comp=Z,0.3nm,0.6s,baz=324,slow=5.5,SNR=2.6							
	comp=Z,0.3nm,0.6s							
WRA	Warramunga Arr	78.32	123	P		P	20 54 19.6	+0.5
	comp=Z,0.9nm,0.5s,baz=322,slow=5.0,SNR=24							
	comp=Z,0.9nm,0.5s							
AS31	Alice Springs	80.49	126	P		P	20 54 31.2	+0.3
ASAR	Alice Springs	80.49	126	P		P	20 54 31.7	+0.8
	comp=Z,0.9nm,0.7s,baz=316,slow=5.5,SNR=11							
	comp=Z,0.9nm,0.7s							
ASAR	Alice Springs	80.49	126	P		P	20 54 32.1	+1.2
STKA	Stephens Creek	90.98	128	P		P	20 55 23.0	+0.2
	comp=Z,1.1nm,0.7s,baz=12,slow=9.3,SNR=2.9							
	comp=Z,1.1nm,0.7s							
MAW	Mawson	100.62	184	P		Pdif	20 56 04.2	-1.5
	comp=Z,1.7nm,0.6s,baz=51,slow=10,SNR=2.1							

IDC ***07*** *20:44:39.0±3.3,53˚.81N×160˚.94E,h58km±35km,mb3.4/6, mbtmp3.7/7,ML2.9/1,Error ellipse: s-maj=56.0km s-min=19.9km az=148.0*

KRSC ***07*** *20:44:38.9±0.5,54˚.16N×160˚.66E,h78km±8km,Mc3.5, Ml4.1*

MOS ***07*** *20:44:39.7±0.7,54˚.14N×160˚.70E,h77km,mb4.1/1,Error ellipse: s-maj=11.0km s-min=3.9km az=73.8*

**ISC 07 20:44:40.6±0.8,54˚.16

KMNR	**Kamenistaya**	**1.61**	**352**	PN	**Pn**	**20 45 07.7**	**+0.5**
KMNR				S	**Sn**	**20 45 28.1**	**+0.9**
KMNR	**Kamenistaya**	**1.61**	**352**	*e*P	**Pn**	**20 45 07.7**	**+0.5**
KMNR				*e*S	**Sn**	**20 45 28.2**	**+0.9**
INSR	**Institute**	**1.64**	**229**	PN	**Pn**	**20 45 07.7**	**+0.3**
INSR				S	**Sn**	**20 45 28.4**	**+0.7**
INSR	**Institute**	**1.64**	**229**	*e*P	**Pn**	**20 45 07.8**	**+0.3**
INSR				*e*S	**Sn**	**20 45 28.4**	**+0.7**
PET	**Petropavlovsk**	**1.65**	**227**	⇑*i*PN	**Pn**	**20 45 07.8**	**+0.2**
PET				*e*S	**Sn**	**20 45 28.2**	**+0.3**
PET				smax	smax		
	comp=E,1μm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.6s						
PET				smax	smax		
	comp=N,3μm,0.6s						
PET				smax	smax		
	comp=E,2μm,0.6s						
PET	**Petropavlovsk**	**1.65**	**227**	*e*P	**Pn**	**20 45 07.7**	**+0.2**
PET				*e*S	**Sn**	**20 45 28.5**	**+0.6**
GNL	**Ganaly**	**1.67**	**255**	PN	**Pn**	**20 45 07.9**	**0.0**
GNL				S	**Sn**	**20 45 29.0**	**+0.5**
GNL	**Ganaly**	**1.67**	**255**	*e*P	**Pn**	**20 45 07.9**	**0.0**
GNL				*e*S	**Sn**	**20 45 29.1**	**+0.5**
BZP	**Bezymyannyi-Pe**	**1.75**	**358**	PN	**Pn**	**20 45 09.0**	**-0.1**
BZP	**Bezymyannyi-Pe**	**1.75**	**358**	*e*P	**Pn**	**20 45 09.1**	**-0.1**
BZMR	**Bezymyannaya**	**1.78**	**357**	PN	**Pn**	**20 45 09.7**	**+0.3**
BZMR				S	**Sn**	**20 45 31.3**	**+0.1**
BZMR	**Bezymyannaya**	**1.78**	**357**	*e*P	**Pn**	**20 45 09.8**	**+0.3**
BZMR				*e*S	**Sn**	**20 45 31.3**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.78**	**1**	PN	**Pn**	**20 45 10.1**	**+0.7**
BZGR				S	**Sn**	**20 45 31.9**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.78**	**1**	*e*P	**Pn**	**20 45 10.1**	**+0.7**
BZGR				*e*S	**Sn**	**20 45 32.0**	**+0.7**
KIRR	**Kirishev**	**1.80**	**355**	PN	**Pn**	**20 45 09.9**	**+0.2**
KIRR				S	**Sn**	**20 45 32.2**	**+0.5**
KIRR	**Kirishev**	**1.80**	**355**	*e*P	**Pn**	**20 45 09.9**	**+0.2**
KIRR				*e*S	**Sn**	**20 45 32.3**	**+0.5**
BZWR	**Bezymyannyi-We**	**1.81**	**357**	PN	**Pn**	**20 45 10.7**	**+0.9**
BZWR				S	**Sn**	**20 45 32.5**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.81**	**357**	*e*P	**Pn**	**20 45 10.7**	**+0.9**
BZWR				*e*S	**Sn**	**20 45 32.6**	**+0.6**
KPT	**Kopyto**	**1.82**	**352**	PN	**Pn**	**20 45 10.2**	**+0.3**
KPT				S	**Sn**	**20 45 32.8**	**+0.6**
KPT	**Kopyto**	**1.82**	**352**	*e*P	**Pn**	**20 45 10.3**	**+0.3**
KPT				*e*S	**Sn**	**20 45 32.8**	**+0.6**
ZLN	**Zelenaya**	**1.86**	**3**	PN	**Pn**	**20 45 11.3**	**+0.8**
ZLN				S	**Sn**	**20 45 33.6**	**+0.5**
ZLN	**Zelenaya**	**1.86**	**3**	*e*P	**Pn**	**20 45 11.3**	**+0.8**
ZLN				*e*S	**Sn**	**20 45 33.7**	**+0.5**
LGNR	**Loginova**	**1.92**	**1**	PN	**Pn**	**20 45 12.7**	**+1.3**
LGNR				S	**Sn**	**20 45 36.0**	**+1.1**
LGNR	**Loginova**	**1.92**	**1**	*e*P	**Pn**	**20 45 12.8**	**+1.3**
LGNR				*e*S	**Sn**	**20 45 36.1**	**+1.1**
KOZ	**Kozyrevsk**	**1.95**	**347**	PN	**Pn**	**20 45 11.6**	**0.0**
KOZ				S	**Sn**	**20 45 35.1**	**0.0**
KOZ	**Kozyrevsk**	**1.95**	**347**	*e*P	**Pn**	**20 45 11.6**	**0.0**
KOZ				*e*S	**Sn**	**20 45 35.1**	**0.0**
CIRR	**Tsirk**	**1.96**	**2**	PN	**Pn**	**20 45 12.9**	**+1.1**
CIRR				S	**Sn**	**20 45 36.0**	**+0.5**
CIRR	**Tsirk**	**1.96**	**2**	*e*P	**Pn**	**20 45 13.0**	**+1.1**
CIRR				*e*S	**Sn**	**20 45 36.0**	**+0.5**
KRMR	**Karymshinskiy**	**2.01**	**229**	PN	**Pn**	**20 45 12.4**	**0.0**
KRMR				S	**Sn**	**20 45 37.0**	**+0.5**
KRMR	**Karymshinskiy**	**2.01**	**229**	*e*P	**Pn**	**20 45 12.5**	**0.0**
KRMR				*e*S	**Sn**	**20 45 37.0**	**+0.5**
PEA0B	**Petropavlovsk-**	**2.05**	**240**	*d i*PN	**Pn**	**20 45 12.8**	**-0.1**
PEA0B				*e*S	**Sn**	**20 45 38.3**	**+0.8**
PETK	**Petropavlovsk-**	**2.05**	**240**	P	**Pn**	**20 45 12.4**	**-0.5**
	comp=E,20nm,0.3s,baz=68,slow=17,SNR=60						
PETK				S	**Sn**	**20 45 36.0**	**-1.5**
	comp=E,23nm,0.4s,baz=76,slow=18,SNR=4.2						
	comp=E,89nm,0.6s						
KLY	**Klyuchi**	**2.15**	**0**	PN	**Pn**	**20 45 15.2**	**+0.9**
KLY				S	**Sn**	**20 45 41.2**	**+1.2**
KLY	**Klyuchi**	**2.15**	**0**	*e*P	**Pn**	**20 45 15.2**	**+0.9**
KLY				*e*S	**Sn**	**20 45 41.2**	**+1.2**
RUS	**Russkaya**	**2.16**	**217**	PN	**Pn**	**20 45 14.2**	**-0.1**
RUS				S	**Sn**	**20 45 39.5**	**-0.5**
RUS	**Russkaya**	**2.16**	**217**	*e*P	**Pn**	**20 45 14.3**	**-0.1**
RUS				*e*S	**Sn**	**20 45 39.6**	**-0.5**
SRDR	**Sredinnyy**	**2.22**	**347**	PN	**Pn**	**20 45 14.8**	**-0.5**
SRDR	**Sredinnyy**	**2.22**	**347**	*e*P	**Pn**	**20 45 14.8**	**-0.5**
GRL	**Gorelyy**	**2.23**	**225**	PN	**Pn**	**20 45 16.2**	**+0.7**
GRL				S	**Sn**	**20 45 42.7**	**+0.6**
GRL	**Gorelyy**	**2.23**	**225**	*e*P	**Pn**	**20 45 16.2**	**+0.7**
GRL				*e*S	**Sn**	**20 45 42.7**	**+0.6**
MTVR	**Mutnovka**	**2.24**	**222**	PN	**Pn**	**20 45 16.3**	**+0.7**
MTVR				S	**Sn**	**20 45 42.8**	**+0.5**
MTVR	**Mutnovka**	**2.24**	**222**	*e*P	**Pn**	**20 45 16.3**	**+0.7**
MTVR				*e*S	**Sn**	**20 45 42.8**	**+0.5**
KBTR	**Krutoberegovo**	**2.40**	**30**	PN	**Pn**	**20 45 17.7**	**+0.1**
KBTR				S	**Sn**	**20 45 47.0**	**+1.1**
KBTR	**Krutoberegovo**	**2.40**	**30**	*e*P	**Pn**	**20 45 17.7**	**+0.1**
KBTR				*e*S	**Sn**	**20 45 47.0**	**+1.1**
KBG	**Krutoberegovo**	**2.41**	**29**	PN	**Pn**	**20 45 17.8**	**+0.1**
KBG				S	**Sn**	**20 45 47.6**	**+1.6**
KBG	**Krutoberegovo**	**2.41**	**29**	*e*P	**Pn**	**20 45 17.8**	**+0.1**
KBG				*e*S	**Sn**	**20 45 47.6**	**+1.6**
APC	**Apacha**	**2.42**	**241**	PN	**Pn**	**20 45 18.5**	**+0.6**
APC				S	**Sn**	**20 45 47.6**	**+1.1**
APC	**Apacha**	**2.42**	**241**	*e*P	**Pn**	**20 45 18.5**	**+0.6**
APC				*e*S	**Sn**	**20 45 47.7**	**+1.1**
ASAK	**Asacha**	**2.43**	**224**	PN	**Pn**	**20 45 18.9**	**+0.8**
ASAK				S	**Sn**	**20 45 48.1**	**+1.3**
ASAK	**Asacha**	**2.43**	**224**	*e*P	**Pn**	**20 45 18.9**	**+0.8**
ASAK				*e*S	**Sn**	**20 45 48.1**	**+1.3**
KDTR	**Khodutka, Kamc**	**2.82**	**214**	PN	**Pn**	**20 45 23.6**	**+0.2**
KDTR				S	**Sn**	**20 45 57.2**	**+1.0**
KDTR	**Khodutka, Kamc**	**2.82**	**214**	*e*P	**Pn**	**20 45 23.6**	**+0.2**
KDTR				*e*S	**Sn**	**20 45 57.3**	**+1.0**
MIPR	**Malaya Ipel'ka**	**3.01**	**233**	PN	**Pn**	**20 45 26.6**	**+0.8**
MIPR	**Malaya Ipel'ka**	**3.01**	**233**	*e*P	**Pn**	**20 45 26.7**	**+0.8**
BKI	**Bering**	**3.26**	**69**	PN	**Pn**	**20 45 29.8**	**+0.5**
BKI				S	**Sn**	**20 46 04.8**	**-2.1**
BKI	**Bering**	**3.26**	**69**	*e*P	**Pn**	**20 45 29.9**	**+0.5**
BKI				*e*S	**Sn**	**20 46 04.8**	**-2.1**
PAU	**Pauzhetka**	**3.56**	**222**	PN	**Pn**	**20 45 35.6**	**+2.2**
PAU	**Pauzhetka**	**3.56**	**222**	*e*P	**Pn**	**20 45 35.6**	**+2.2**
TIGL	**Tigil**	**3.78**	**344**	PN	**Pn**	**20 45 36.9**	**+0.6**
TIGL	**Tigil**	**3.78**	**344**	*e*P	**Pn**	**20 45 36.9**	**+0.6**
SKR	**Severo-Kuril's**	**4.45**	**220**	*e*PN	**Pn**	**20 45 49.0**	**+3.4**
SKR				*e*S	**Sn**	**20 46 37.1**	**+1.0**
SKR				smax	smax		
	comp=E,65nm,0.5s						
SKR				smax	smax		
	comp=N,86nm,0.4s						
SKR	**Severo-Kuril's**	**4.45**	**220**	*e*P	**Pn**	**20 45 48.0**	**+2.4**
SKR				*e*S	**Sn**	**20 46 38.6**	**+2.5**
OSSR	**Ossora**	**5.27**	**14**	PN	**Pn**	**20 45 59.7**	**+3.1**
OSSR	**Ossora**	**5.27**	**14**	*e*P	**Pn**	**20 45 59.8**	**+3.1**
MJAR	**Matsushiro Arr**	**23.48**	**230**	P	**P**	**20 49 41.9**	**-1.9**
	comp=N,1.2nm,0.6s,baz=20,slow=11,SNR=5.8						
	comp=N,1.2nm,0.6s						
HILR	**Hailar Array B**	**25.41**	**276**	P	**P**	**20 50 03.6**	**+2.4**
	comp=N,1.6nm,0.5s,baz=83,slow=12,SNR=2.5						
	comp=N,1.6nm,0.5s						
ILAR	**Eielson Array**	**27.83**	**47**	P	**P**	**20 50 21.9**	**-0.9**
	comp=N,0.6nm,0.8s,baz=264,slow=8.4,SNR=8.4						
	comp=N,0.6nm,0.8s						
ILAR	**Eielson Array**	**27.83**	**47**	P	**P**	**20 50 22.0**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**34.70**	**170**	T	T	21 28 48.5	
	baz=355,slow=76,SNR=90						
H11N3	**WAKE ISLAND Hy**	**34.72**	**170**	T	T	21 28 45.1	
	baz=355,slow=76,SNR=72						
H11N1	**WAKE ISLAND Hy**	**34.72**	**170**	T	T	21 28 53.1	
	baz=355,slow=76,SNR=70						
H11S1	**WAKE ISLAND Hy**	**35.89**	**170**	T	T	21 29 14.7	
	baz=351,slow=74						
H11S3	**WAKE ISLAND Hy**	**35.91**	**170**	T	T	21 29 23.9	
	baz=351,slow=74						
H11S2	**WAKE ISLAND Hy**	**35.91**	**170**	T	T	21 30 02.8	
	baz=351						
MKAR	**Makanchi Array**	**47.99**	**295**	*i* P	P	20 53 23.2	+11
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NVAR	**Mina Array Bea**	**55.08**	**71**	P	**P**	**20 54 05.7**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=296,slow=8.3,SNR=3.8						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**69.92**	**68**	P	**P**	**20 55 43.8**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=291,slow=5.3,SNR=7.4						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**77.19**	**205**	P	**P**	**20 56 24.5**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=18,slow=5.9,SNR=2.0						
	comp=Z,0.5nm,0.9s						

*OSPL **07** 20:51:52.8±2.1, 18°.49N×70°.62W, h5km±25km, ML2.3, Presumed earthquake*
*SDD **07** 20:51:53.0±2.1, 18°.58N×70°.61W, h0km±20km, MD2.6, ML2.4, MW2.6, Presumed earthquake*
ISC 07 20:51:52.2±0.9, 18°.48N±0°.04×70°.61W±0°.03, h10km, n14, σ1s56/23, 9C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BANI	**BANI**	**0.25**	**110**	⇑*i*P		**Pg**	**20 51 57.6**	**+0.2**
BANI				⇑*i*S		**Sb**	**20 52 02.9**	**-0.5**
BANI					IAML		20 52 05.0	
	comp=N,699nm,0.5s							
ABDR	**Alto Bandera**	**0.33**	**357**	⇓*i*P		**Pg**	**20 51 57.5**	**-1.5**
SDD	**Santo Domingo**	**0.66**	**92**	*e*S		**Sb**	**20 52 14.1**	**-0.9**
NEDR	**Neiba UASD**	**0.77**	**271**	⇓*i*P		**Pb**	**20 52 07.4**	**-0.2**
NEDR				⇑*i*S		**Sb**	**20 52 18.4**	**+0.2**
NEDR					IAML		20 52 21.8	
	comp=N,84nm,0.3s							
LONE3	**El Aguacate, B**	**0.82**	**279**	*i* P		**Pg**	**20 52 06.6**	**-1.4**
LONE3				*e*S		**Sb**	**20 52 19.1**	**-0.6**
LONE3					IAML		20 52 23.1	
	comp=Z,55nm,0.4s							
SDDR	**Presa de Saban**	**0.82**	**308**	⇓*i*P		**Pg**	**20 52 06.4**	**-1.6**
SDDR				⇑*i*S		**Sg**	**20 52 17.5**	**-1.1**
SDDR					IAML		20 52 19.9	
	comp=N,117nm,0.5s							
SDDR	**Presa de Saban**	**0.82**	**308**	*i* P		**Pg**	**20 52 06.3**	**-1.6**
SDDR				*e*S		**Sg**	**20 52 17.5**	**-1.1**
SDDR					IAML		20 52 20.4	
	comp=Z,1μm,0.2s							
LODU1	**El Espartillar**	**0.83**	**262**	*i* P		**Pb**	**20 52 08.5**	**-0.2**
LODU1					IAML		20 52 25.6	
	comp=Z,146nm,0.3s							
SC01	**Santiago de lo**	**0.95**	**353**	*i* P		**Pg**	**20 52 09.4**	**-1.1**
SC01				*e*S		**Sb**	**20 52 23.2**	**-0.2**
SC01					IAML		20 52 24.6	
	comp=Z,97nm,0.3s							
LOVI	**El Cajuil, Ovi**	**0.99**	**227**	*i* P		**Pg**	**20 52 09.6**	**-1.6**
LOVI				*e*S		**Sb**	**20 52 24.5**	**0.0**
LOVI					IAML		20 52 26.2	
	comp=Z,35nm,0.4s							
REDR	**Restauracion**	**1.01**	**313**	⇑*i*P		**Pn**	**20 52 14.7**	**+2.3**
REDR				⇑*i*S		**Sn**	**20 52 31.2**	**+4.4**
REDR					IAML		20 52 35.0	
	comp=N,116nm,0.9s							
LOBH	**Bahia de las A**	**1.16**	**238**	*i* P		**Pb**	**20 52 12.6**	**-1.6**
LOBH					IAML		20 52 29.4	
	comp=Z,51nm,1.7s							
HATOM	**Hato Mayor del**	**1.20**	**75**	⇑*i*P		**Pb**	**20 52 13.2**	**-1.8**
HATOM				⇑*i*S		**Sb**	**20 52 29.7**	**-1.0**
HATOM					IAML		20 52 35.1	
	comp=N,22nm,0.8s							
HIDR	**Higuey Centro**	**1.80**	**86**	⇑*i*P		**Pb**	**20 52 25.2**	**0.0**
HIDR					IAML		20 53 18.3	
	comp=N,73nm,0.2s							

*IDC **07** 21:06:28.1±0.8, 6°.35S×142°.77E, h0km, mb4.1/12, mbtmp4.2/16, ML3.9/3, MS3.7/19, Error ellipse: s-maj=27.5km s-min=16.1km az=93.0*
*NEIC **07** 21:06:30.2±1.8, 6°.42S±0°.08×142°.8E±0°.1, h10km±1km, mb4.6/20, Error ellipse: s-maj=19.7km s-min=11.7km az=71.0*
*DJA **07** 21:06:34.4±0.5, 6°S±4°×14°3E±°, h54km±15km, M4.9/6, mb4.8/3, MLv4.9/6*
ISC 07 21:06:29.5±0.5, 6°.46S±0°.05×142°.78E±0°.06, h10km, n249, σ0s95/234, mb4.5/25, MS3.8/15, 1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.10**	**230**	P		**Pg**	**21 07 30.0**	**+1.0**
MMPI				S		**Sg**	**21 08 12.1**	**+2.8**
JAY	**Jayapura**	**4.43**	**332**	Pn		**Pn**	**21 07 37.0**	**+0.1**
	4.8nm,0.3s,baz=138,slow=3.2,SNR=20							
JAY				Sn		**Sn**	**21 08 25.0**	**-3.6**
	baz=339,slow=13							
	16nm,0.4s							
JAY	**Jayapura**	**4.43**	**332**	P		**Pn**	**21 07 37.6**	**+0.7**
GENI	**Genyem**	**4.64**	**326**	P		**Pn**	**21 07 40.0**	**+0.3**
PMG	**Port Moresby**	**5.23**	**124**	Pn		**Pn**	**21 07 50.3**	**+2.4**
	16nm,0.6s,baz=139,slow=2.5,SNR=6.2							
PMG				Sn		**Sn**	**21 08 45.8**	**-2.5**
	5.1nm,0.3s,baz=75,slow=18,SNR=3.1							
PMG				LR		LR	21 10 05.4	
	comp=Z,112nm,21.1s,baz=272,slow=41							
PMG	**Port Moresby**	**5.23**	**124**	Pn		**Pn**	**21 07 48.6**	**+0.7**
PMG	**Port Moresby**	**5.23**	**124**	P		**Pn**	**21 07 48.6**	**+0.7**
	0.4nm75nm,1.0s							
KRVT	**Keravat (AS076**	**9.45**	**77**	LR		LR	21 12 27.1	
	comp=Z,26nm,18.9s,baz=216,slow=38							
SIJI	**Sorong**	**12.76**	**295**	LR		LR	21 15 19.7	
	comp=Z,243nm,18.6s,baz=102,slow=42							
MTN	**Manton Dam**	**13.11**	**240**	Pn		**Pn**	**21 09 34.0**	**-2.0**
CTA	**Charters Tower**	**13.96**	**166**	Lg		Lg	21 13 50.4	
	0.1nm,0.3s,baz=229,slow=12,SNR=3.5							
CTA				LR		LR	21 14 45.6	
	comp=Z,228nm,19.1s,baz=12,slow=35							
WB0	**Warramunga Arr**	**15.54**	**211**	Pn		**Pn**	**21 10 08.7**	**-0.2**
WR8	**Warramunga Arr**	**15.64**	**210**	Pn		**Pn**	**21 10 08.5**	**-1.8**
WR8				IAmb		IAmb	21 10 18.9	
	comp=Z,35nm,1.4s							
WRAB	**Tennant Creek**	**15.70**	**211**	Pn		**Pn**	**21 10 12.2**	**+1.2**
WRA	**Warramunga Arr**	**15.71**	**211**	Pn		**Pn**	**21 10 10.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=19							
WRA				Sn		**Sn**	**21 12 59.4**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=27,slow=21,SNR=3.1							
WRA				Lg		Lg	21 14 46.3	
	comp=Z,0.1nm,0.3s,baz=30,slow=31,SNR=4.6							
	comp=Z,2.1nm,0.6s							
KNRA	**Kununurra**	**16.52**	**235**	Pn		**Pn**	**21 10 18.8**	**-2.6**
KNRA				IAmb		IAmb	21 10 27.6	
	comp=Z,18nm,0.8s							
AS31	**Alice Springs**	**19.12**	**206**	P		**P**	**21 10 54.5**	**+1.7**
ASAR	**Alice Springs**	**19.12**	**206**	P		**P**	**21 10 54.9**	**+2.0**
	comp=Z,0.8nm,0.3s,baz=30,slow=10,SNR=73							
ASAR				S		**Sn**	**21 14 21.7**	**-6.4**
	comp=Z,3.5nm,1.1s,baz=21,slow=24,SNR=6.0							
ASAR				Lg		Lg	21 16 32.2	
	baz=19,slow=25,SNR=4.2							
ASAR				LR		LR	21 19 05.2	
	comp=Z,630nm,18.7s,baz=20,slow=39							
	comp=Z,13nm,0.9s							
BATI	**Baumata**	**19.27**	**258**	LR		LR	21 20 01.1	
	comp=Z,308nm,19.0s,baz=133,slow=42							
GUMO	**Guam**	**20.02**	**6**	LR		LR	21 18 24.4	
	comp=Z,49nm,18.4s,baz=164,slow=36							
FITZ	**Fitzroy Crossi**	**20.33**	**234**	P		**P**	**21 11 07.1**	**+1.0**
	comp=Z,7.9nm,0.6s,baz=58,slow=11,SNR=16							
FITZ				Lg		Lg	21 17 08.3	
	comp=Z,0.1nm,0.3s,baz=210,slow=9.9,SNR=3.2							
FITZ				LR		LR	21 19 37.5	
	comp=Z,441nm,18.8s,baz=34,slow=39							
	comp=Z,7.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**20.33**	**234**	P		**P**	**21 11 08.0**	**+1.9**
INKA	**Innaminka**	**21.25**	**185**	P		**P**	**21 11 18.4**	**+2.4**
DAV	**Davao City (W)**	**21.80**	**308**	LR		LR	21 19 56.7	
	comp=Z,55nm,19.9s,baz=184,slow=37							
KAPI	**Kappang**	**22.96**	**272**	LR		LR	21 21 53.9	
	comp=Z,45nm,18.7s,baz=81,slow=40							
STKA	**Stephens Creek**	**25.31**	**182**	P		**P**	**21 11 57.6**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=347,slow=8.7,SNR=6.2							
STKA				LR		LR	21 23 18.6	
	comp=Z,245nm,18.4s,baz=13,slow=40							
	comp=Z,3.6nm,0.8s							
NWAO	**Narrogin (SRO)**	**35.46**	**219**	LR		LR	21 28 49.4	
	comp=Z,363nm,18.6s,baz=298,slow=38							
NJ2	**Nanjing**	**44.58**	**331**	*e*P		**P**	**21 14 43.2**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
KSRS	**Korea Array**	**45.84**	**343**	P		**P**	**21 14 51.7**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=166,slow=9.3,SNR=9.3							
	comp=Z,2.2nm,1.0s							
CMAR	**Chiang Mai Arr**	**49.82**	**301**	P		**P**	**21 15 21.7**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=128,slow=5.4,SNR=6.2							
	comp=Z,0.3nm,0.3s							
PZH	**PanZhiHua**	**51.53**	**311**	P		**P**	**21 15 38.5**	**+2.4**
BNX	**BinXian**	**53.75**	**347**	⇓P		**P**	**21 15 51.4**	**-0.6**
BNX				pmax		pmax		
	comp=Z,6.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**55.12**	**331**	*e*P		**P**	**21 16 04.3**	**+2.1**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,59nm,5.0s							
GTA2	**Gaotai**	**60.56**	**323**	*e*P		**P**	**21 16 41.4**	**+0.9**
GTA2				pmax		pmax		
	comp=Z,2.0nm,1.2s							
PETK	**Petropavlovsk-**	**60.67**	**10**	P		**P**	**21 16 40.1**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=190,slow=6.0,SNR=4.7							
	comp=Z,2.2nm,0.8s							
ULN	**Ulaanbaatar**	**62.57**	**334**	P		**P**	**21 16 53.3**	**-0.7**
ULN				IAmb		IAmb	21 17 00.2	
	comp=Z,2.4nm,0.9s							
SONM	**Songino Array**	**62.84**	**333**	P		**P**	**21 16 55.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=160,slow=4.6,SNR=4.1							
	comp=Z,0.2nm,0.4s							
SONM	**Songino Array**	**62.84**	**333**	P		**P**	**21 16 55.4**	**-0.3**
SHEM	**Shemya Is, Ala**	**64.69**	**20**	LR		LR	21 39 41.2	
	comp=Z,44nm,20.0s,baz=300,slow=31							
WMQ	**Urumqi**	**70.45**	**321**	*e*P		P	21 17 39.8	-4.6
WMQ				pmax		pmax		
	comp=Z,24nm,0.7s							
WMQ				LR		LR		
	comp=Z,180nm,24.1s							
VNDA	**Vanda**	**71.74**	**176**	LR		LR	21 48 11.1	
	comp=Z,111nm,18.8s,baz=262,slow=35							
UNV	**Unalaska Valle**	**73.57**	**29**	P		**P**	**21 18 03.2**	**+0.5**
	baz=233							
MKAR	**Makanchi Array**	**75.22**	**322**	P		**P**	**21 18 12.8**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=120,slow=7.2,SNR=8.3							
	comp=Z,1.7nm,0.9s							
MKAR	**Makanchi Array**	**75.22**	**322**	P		**P**	**21 18 11.8**	**-0.8**
MAKZ	**Makanchi**	**75.42**	**322**	P		**P**	**21 18 13.5**	**-0.1**
MAKZ				IAmb		IAmb	21 18 15.0	
	comp=Z,6.3nm,1.3s							
KSH2	**Kashi**	**76.76**	**313**	P		**P**	**21 18 23.2**	**+1.5**
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.6s							
ZALV	**Zalesovo Beam**	**77.20**	**329**	P		**P**	**21 18 22.7**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=123,slow=5.3,SNR=4.7							
	comp=Z,0.6nm,0.6s							
SDPT	**Sand Point**	**77.32**	**29**	P		**P**	**21 18 24.6**	**+0.4**
	baz=238							
GAMB	**Gambell**	**77.92**	**19**	P		**P**	**21 18 28.2**	**+0.8**
	baz=226							
S14K	**Fog Glacier**	**78.25**	**29**	P		**P**	**21 18 28.9**	**-0.6**
	baz=239							
M13K	**Dall Lake**	**78.83**	**24**	P		**P**	**21 18 32.1**	**-0.3**
	baz=235							
O14K	**Tigyukauivet M**	**79.05**	**26**	P		**P**	**21 18 33.7**	**0.0**
	baz=237							
KURK	**Kurchatov**	**79.10**	**324**	P		**P**	**21 18 34.8**	**+0.6**
KURK				IAmb		IAmb	21 18 38.1	
	comp=Z,5.6nm,1.2s							
KURBB	**Kurchatov Arra**	**79.11**	**324**	P		**P**	**21 18 34.4**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=120,slow=4.9,SNR=8.6							
	comp=Z,1.4nm,0.9s							
K13K	**Kusilvak Mount**	**79.21**	**22**	P		**P**	**21 18 34.6**	**0.0**
	baz=233							
N14K	**Kuskokwak Cree**	**79.24**	**25**	P		**P**	**21 18 34.9**	**+0.2**
	baz=236							
M14K	**Bethel**	**79.59**	**24**	P		**P**	**21 18 36.3**	**-0.3**
	baz=236							
L14K	**Kuka Creek**	**79.63**	**24**	P		**P**	**21 18 37.4**	**+0.6**
L14K	**Kuka Creek**	**79.63**	**24**	P		**P**	**21 18 36.6**	**-0.2**
	baz=235							
O15K	**Ungalikthiuk R**	**79.63**	**26**	P		**P**	**21 18 36.6**	**-0.3**
	baz=238							
CHIR	**Chirikof Islan**	**79.95**	**30**	P		**P**	**21 18 38.7**	**0.0**
	baz=243							
N15K	**Kwethluk River**	**80.04**	**25**	P		**P**	**21 18 38.7**	**-0.5**
	baz=238							
M15K	**Kasigluk River**	**80.08**	**25**	P		**P**	**21 18 39.4**	**+0.1**
	baz=237							
**L15

baz=240
J19K **Poorman** 83.80 23 P P 21 18 58.7 -0.1
baz=242
E18K **Tukpahlearik C** 83.80 19 P P 21 18 58.6 -0.1
baz=237
M20K **Styx River** 83.84 25 P P 21 18 58.3 -0.9
baz=244
BRSE **Bradley Lake S** 84.00 28 P P 21 19 00.3 +0.3
baz=246
K20K **Telida** 84.11 24 P P 21 19 00.3 -0.2
K20K IAmb IAmb 21 19 01.5
comp=Z,4.9nm,1.0s
K20K **Telida** 84.11 24 P P 21 19 00.3 -0.2
baz=243
H19K **Roundabout Mou** 84.23 21 P P 21 19 01.0 0.0
baz=241
C18K **Utukok River** 84.30 18 P P 21 19 01.7 +0.3
baz=236
G19K **Purcell Mounta** 84.31 21 P P 21 19 02.1 +0.7
baz=240
F19K **Shaleruckik Mo** 84.42 20 P P 21 19 02.1 +0.2
baz=239
NRIK **Noril'sk** 84.45 343 P P 21 19 01.2 -0.8
comp=Z,6.2nm,0.8s,baz=96,slow=3.4,SNR=5.5
comp=Z,6.2nm,0.8s
NRIK **Noril'sk** 84.45 343 P P 21 19 01.0 -1.0
J20K **Nowinta River** 84.45 23 P P 21 19 02.7 +0.5
baz=243
SKT **Skwentna** 84.56 26 P P 21 19 03.0 +0.2
baz=246
PPLA **Purkeypile** 84.67 25 P P 21 19 03.6 +0.1
baz=245
BVAR **Borovoye Array** 84.69 325 P P 21 19 04.0 +0.4
comp=Z,8.2nm,0.8s,baz=120,slow=5.3,SNR=16
comp=Z,8.2nm,0.8s
H20K **Anotleneega Mo** 84.79 22 P P 21 19 04.3 +0.4
baz=242
E19K **Redstone River** 84.92 20 P P 21 19 04.8 +0.3
baz=240
CAST **Castle Rocks** 84.94 24 P P 21 19 04.9 +0.2
baz=245
RC01 **Rabbit Creek A** 84.99 27 P P 21 19 04.8 -0.1
baz=247
C19K **Lookout Ridge** 85.03 18 P P 21 19 05.1 0.0
baz=237
CHUM **Lake Minchumin** 85.05 24 P P 21 19 05.4 +0.3
baz=245
L22K **Petersville** 85.11 25 P P 21 19 05.5 -0.1
baz=246
D19K **Kuna River** 85.17 19 P P 21 19 05.1 -0.6
baz=239
A19K **Wainwright** 85.21 16 P P 21 19 05.2 -0.6
baz=236
F20K **Avaraart Lake** 85.23 20 P P 21 19 05.8 -0.2
baz=241
PMR **Palmer** 85.46 26 P P 21 19 07.2 0.0
baz=248
H21K **Melozitna Rive** 85.63 22 P P 21 19 07.3 -0.8
baz=244
P23K **Montague Islan** 85.66 28 P P 21 19 08.2 -0.1
baz=249
E20K **Nigu River** 85.66 19 P P 21 19 07.7 -0.5
baz=241
KNK **Knik Glacier** 85.69 27 P P 21 19 07.8 -0.6
baz=248
TRF **Thorofare Moun** 85.69 24 P P 21 19 07.8 -0.8
baz=246
I21K **Tanana** 85.73 23 P P 21 19 08.5 0.0
baz=245
D20K **Etivluk River** 85.75 19 P P 21 19 08.9 +0.2
D20K **Etivluk River** 85.75 19 P P 21 19 08.7 +0.1
baz=240
G21K **Allakaket** 85.76 21 P P 21 19 08.4 -0.3
baz=243
SML **Sawmill** 85.89 26 P P 21 19 09.3 -0.2
baz=248
F21K **Alatna River** 86.08 20 P P 21 19 10.4 0.0
baz=243
MLY **Manley** 86.15 23 P P 21 19 10.3 -0.4
baz=246
WAT1 **Susitna Watana** 86.18 25 P P 21 19 10.9 0.0
baz=248
B20K **Meade River** 86.24 17 P P 21 19 11.3 +0.4
baz=240
H22K **Ishtalitna Cre** 86.26 22 P P 21 19 11.0 -0.2
baz=245
SCM **Sheep Creek Mo** 86.34 27 P P 21 19 11.5 -0.3
baz=249
MCK **McKinley** 86.36 24 P P 21 19 11.1 -0.6
baz=248
WAT6 **Susitna Watana** 86.43 26 P P 21 19 11.5 -0.8
baz=249
E21K **Killik River** 86.47 19 P P 21 19 11.7 -0.5
baz=243
C21K **Knifeblade Rid** 86.55 19 P P 21 19 11.8 -0.7
baz=242
NEA2 **Nenana** 86.63 24 P P 21 19 13.0 0.0
baz=248
I23K **Minto, Yukon-K** 86.73 23 P P 21 19 13.6 +0.2
baz=247
DHY **Denali Highway** 86.77 25 P P 21 19 13.9 0.0
baz=249
B21K **Ikpikpuk River** 86.82 18 P P 21 19 13.9 +0.1
baz=242
H23K **Yukon River** 86.93 22 P P 21 19 13.9 -0.6
baz=247
M24K **Tolsona, Glenn** 86.95 26 P P 21 19 14.5 -0.3
baz=250
KAIM **Kayak Island** 87.05 29 P P 21 19 15.3 +0.1
baz=252
E22K **Anaktuvuk Pass** 87.06 20 P P 21 19 15.1 0.0
baz=245
G23K **Bananza Creek** 87.10 22 P P 21 19 15.5 +0.2
baz=246
BMRM **Bremner River** 87.29 28 P P 21 19 16.1 -0.3
baz=252
HDA **Harding Lake** 87.42 24 P P 21 19 16.7 -0.1
baz=249
POKR **Poker Plat Res** 87.48 23 P P 21 19 16.5 -0.6
baz=249
N25K **Chitina, Valde** 87.49 27 P P 21 19 17.6 +0.2
baz=252
B22K **Teshekpuk Lake** 87.52 18 P P 21 19 17.5 +0.3
baz=243
H24K **Noodor Dome** 87.57 23 P P 21 19 18.0 +0.4
baz=248
ILAR **Eielson Array** 87.57 24 P P 21 19 16.1 -1.4
comp=Z,2.7nm,0.8s,baz=257,slow=5.2,SNR=24
ILAR LR LR 21 55 03.6
comp=Z,18nm,21.2s,baz=359,slow=33
comp=Z,2.7nm,0.8s
ILAR **Eielson Array** 87.57 24 P P 21 19 15.9 -1.7
K24K **Donnelly Dome** 87.69 25 P P 21 19 18.0 -0.2
baz=250
E23K **Chandalar** 87.78 20 P P 21 19 18.7 0.0
baz=247
D23K **Nanushuk River** 87.79 19 P P 21 19 19.3 +0.7
baz=246,SNR=6.7
CRQE **Cirque** 87.93 28 P P 21 19 19.6 0.0
baz=253
TOLK **Toolik Lake Re** 88.02 20 P P 21 19 20.2 +0.4
baz=247
G24K **Hadweenzic Riv** 88.03 22 P P 21 19 20.1 +0.3
baz=249,SNR=5.7
RIDG **Independent Ri** 88.06 25 P P 21 19 20.3 +0.3
baz=251
J25K **Salcha River,** 88.13 24 P P 21 19 20.2 -0.2
baz=251,SNR=6.9
C23K **Itkillik River** 88.17 19 P P 21 19 20.6 +0.3
baz=246,SNR=5.4
E24K **Your Creek** 88.18 20 P P 21 19 20.2 -0.3
baz=248
F24K **Squaw Lake** 88.18 21 P P 21 19 20.9 +0.3
F24K **Squaw Lake** 88.18 21 P P 21 19 20.8 +0.3
baz=248,SNR=7.4
PRP **Porcupine Dome** 88.37 23 P P 21 19 21.3 -0.2
baz=251
M26K **Nabesna, AK** 88.46 27 P P 21 19 21.4 -0.5
baz=253
D24K **Happy Valley** 88.47 19 P P 21 19 22.0 +0.3
baz=248
SCRK **Sand Creek** 88.50 25 P P 21 19 22.4 +0.2
baz=252
G25K **Bearman Lake** 88.57 22 P P 21 19 22.7 +0.5
baz=250
M27K **Edge Creek, AK** 88.94 27 P P 21 19 24.2 -0.1
baz=254,SNR=5.2
F25K **Christian Rive** 89.02 21 P P 21 19 24.2 -0.2
baz=251
PINM **Pinnacle** 89.11 29 P P 21 19 24.8 -0.3
baz=256
L27K **Beaver Creek,** 89.16 26 P P 21 19 24.9 -0.3
baz=254
BCAR **Beaver Creek A** 89.18 26 P P 21 19 25.4 +0.1
E25K **Arctic Village** 89.22 21 P P 21 19 25.2 -0.2
baz=251
I26K **Coal Creek Min** 89.24 24 P P 21 19 25.5 0.0
baz=253
O28M **Mount Upton** 89.31 29 P P 21 19 25.7 -0.5
baz=256
YUK3 **Moose Creek** 89.43 28 P P 21 19 26.8 0.0
baz=255,SNR=5.6
G26K **Porcupine Rive** 89.49 22 P P 21 19 26.7 +0.1
baz=252,SNR=10
F26K **Sheenjek River** 89.59 21 P P 21 19 27.6 +0.5
baz=252,SNR=6.1
YUK8 **Steele Glacier** 89.63 28 P P 21 19 27.1 -0.6
baz=256
I27K **Kandik River** 89.94 24 P P 21 19 28.9 +0.1
baz=254,SNR=8.1
O29M **Mount Kennedy** 89.97 29 P P 21 19 29.2 +0.1
baz=257
H27K **Steamboat Moun** 90.15 23 P P 21 19 30.1 +0.3
baz=254,SNR=8.1
YUK6 **Outpost Mounta** 90.22 29 P P 21 19 30.3 -0.2
baz=257
P29M **Windy Craggy** 90.23 30 P P 21 19 30.0 -0.3
baz=258
G27K **Doyon Strip** 90.26 23 P P 21 19 29.7 -0.6
baz=254
C27K **Jago River** 90.34 20 P P 21 19 30.2 -0.4
baz=252
DAWY **Dawson** 90.47 25 P P 21 19 31.7 +0.3
DAWY **Dawson** 90.47 25 P P 21 19 31.0 -0.3
baz=256
M29M **Somme Creek** 90.50 27 P P 21 19 31.5 -0.1
baz=257
I28M **Miner Creek** 90.58 24 P P 21 19 31.4 -0.5
baz=256
HYT **Haines Junctio** 90.60 29 P P 21 19 31.5 -0.6
baz=258
E27K **Coleen River** 90.66 21 P P 21 19 32.1 0.0
baz=254
S31K **Pelican** 90.66 32 P P 21 19 31.2 -1.0
baz=259
P30M **Million Dollar** 90.72 30 P P 21 19 31.3 -1.2
baz=258
L29M **L29M** 90.80 27 P P 21 19 32.8 -0.1
baz=257
PLBC **Pleasant Camp** 90.88 30 P P 21 19 32.6 -0.7
baz=259
N30M **Aishikik Lake** 90.93 28 P P 21 19 32.8 -0.8
baz=258
F28M **Old Crow** 91.14 22 P P 21 19 33.6 -0.7
baz=255
D27M **Malcolm River** 91.16 20 P P 21 19 34.1 -0.4
baz=255
K29M **Barlow Dome** 91.23 26 P P 21 19 34.8 -0.1
baz=258
M30M **Minto, Yukon** 91.29 27 P P 21 19 35.0 -0.2
baz=259
H29M **Whitestone** 91.39 23 P P 21 19 34.5 -1.0
baz=257
E28M **Babbage River** 91.50 21 P P 21 19 35.3 -0.7
baz=256
G29M **Pine Creek** 91.67 23 P P 21 19 36.2 -0.6
baz=258
WHY **Whitehorse** 91.83 29 P P 21 19 36.9 -0.9
baz=260
J30M **Hart River** 91.88 25 P P 21 19 36.9 -1.0
baz=259
CRAG **Craig** 91.93 35 P P 21 19 37.3 -0.9
baz=262
I30M **Mount Dempster** 91.99 25 P P 21 19 37.6 -0.8
baz=259
U33K **Whale Pass** 92.03 34 P P 21 19 37.9 -0.6
baz=262
E29M **Blow River** 92.04 21 P P 21 19 38.0 -0.4
baz=258
EPYK **Eagle Plains** 92.07 23 P P 21 19 37.7 -1.0
baz=259
G30M **tAoh Zraii Nji** 92.38 23 P P 21 19 39.5 -0.7
baz=259
F30M **Barrier River** 92.67 22 P P 21 19 40.8 -0.6
baz=260
V35K **Ketchikan** 92.76 35 P P 21 19 41.4 -0.6
baz=263
Q32M **Nakina River** 92.88 31 P P 21 19 42.7 -0.1
baz=262
H31M **Peel River** 92.92 24 P P 21 19 42.2 -0.5
baz=261
G31M **Satah River** 93.13 23 P P 21 19 43.3 -0.1
baz=261
R33M **Jennings River** 93.60 31 P P 21 19 44.9 -1.1
baz=264
INK **Inuvik** 93.62 22 LR LR 22 01 51.0
comp=Z,20nm,18.2s,baz=56,slow=36
INK **Inuvik** 93.62 22 P P 21 19 44.7 -1.0
baz=262
T35M **Bob Quinn** 93.71 33 P P 21 19 45.9 -0.5
baz=264
MMPY **Sheldon Lake,** 93.82 28 P P 21 19 46.4 -0.5
baz=264
DLBC **Dease Lake** 93.98 32 P P 21 19 47.2 -0.5
baz=264
WTLY **Watson Lake, Y** 94.76 30 P P 21 19 50.2 -1.0
baz=265
KOTAN **Kotaelee Air** 97.14 30 P P 21 20 01.1 -0.8
baz=270
YBH **Yreka Blue Hor** 97.62 49 LR LR 21 56 43.4
comp=Z,36nm,20.7s,baz=334,slow=31
SNAA **Sanae** 98.83 190 LR LR 22 04 57.3
comp=Z,106nm,19.3s,baz=336,slow=36

NEIC ***07*** *21:11:15.6±2.0, 34°.26N±0°.05×25°.17E±0°.07, h10km±1km, mb4.0/20, Error ellipse: s-maj=10.3km s-min=7.0km az=240.0*
ISK ***07*** *21:11:19.9, 34°.53N×25°.38E, h21km, ML3.6/24*
IDC ***07*** *21:11:20.7±1.4, 34°.53N×25°.40E, h41km±11km, mb3.7/14, mbtmp3.9/22, ML3.5/6, Error ellipse: s-maj=15.9km s-min=9.8km az=25.0*
ATH ***07*** *21:11:23.4, 34°.66N×25°.35E, h52km±6km, ML3.6/10, Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*
THE ***07*** *21:11:23.4, 35°N±4°×2°5E±°, h27km±7km, M3.4/27, MLh3.4/27*
GII ***07*** *21:11:24.2±0.0, 34°.177N±0°.003×26°.044E±0°.001, h0km, Mws3.6, confirmed*
AFAD ***07*** *21:11:25.5, 34°.96N×26°.08E, h7km±3km, MW3.6*
ISC 07 21:11:18.7±1.2**, 34°.39N**±0°.05×**25°.37E**±0°.03**, h32**km±8km**, **n221**, σ1**9**99/263**, **mb4.0**/20, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**324**	P		**Pb**	**21 11 33.9**	**+0.1**
SIVA				S		**Sb**	**21 11 42.4**	**-1.6**
KSTL	**Kastelli Herak**	**0.82**	**358**	P		**Pb**	**21 11 33.5**	**-1.0**
KSTL				S		**Sb**	**21 11 44.2**	**-1.0**
NPS	**Neapolis**	**0.89**	**13**	P		**Pn**	**21 11 36.0**	**+1.0**
NPS				S		**Sb**	**21 11 45.8**	**-1.5**
NPS	**Neapolis**	**0.89**	**13**	P		**Pn**	**21 11 36.1**	**+1.0**
NPS				S		**Sb**	**21 11 46.9**	**-0.5**
IDI	**Anoyia**	**0.98**	**336**	P		**Pn**	**21 11 36.6**	**+0.3**
	196nm,0.3s,baz=140,slow=16,SNR=286							
IDI				S		**Sb**	**21 11 48.9**	**-1.0**
	692nm,0.4s,baz=202,slow=16,SNR=19							
IDI	**Anoyia**	**0.98**	**336**			**Pn**	**21 11 37.0**	**+0.7**
IDI				Sg		**Sb**	**21 11 49.9**	**+0.1**
IDI	**Anoyia**	**0.98**	**336**	Pg		**Pb**	**21 11 37.2**	**0.0**
IDI				Sg		**Sb**	**21 11 49.7**	**-0.2**
IDI	**Anoyia**	**0.98**	**336**	P		**Pn**	**21 11 37.0**	**+0.7**
IDI				S		**Sb**	**21 11 48.0**	**-1.8**
IDI	**Anoyia**	**0.98**	**336**	P		**Pb**	**21 11 37.2**	**0.0**
IDI				S		**Sb**	**21 11 48.3**	**-1.6**
ZKR	**Zakros**	**1.00**	**44**	Pg		**Pb**	**21 11 38.4**	**+0.8**
ZKR	**Zakros**	**1.00**	**44**	P		**Pb**	**21 11 39.6**	**+2.1**
ZKR	**Zakros**	**1.00**	**44**	P		**Pb**	**21 11 39.3**	**+1.7**
ZKR				S		**Sb**	**21 11 49.9**	**-0.6**
GVD	**Gavdhos**	**1.15**	**293**	Pn		**Pb**	**21 11 40.5**	**+0.5**
GVD				Sn		**Sb**	**21 11 55.8**	**+1.2**
GVD	**Gavdhos**	**1.15**	**293**	P		**Pb**	**21 11 40.9**	**+0.9**
GVD	**Gavdhos**	**1.15**	**293**	P		**Pb**	**21 11 40.9**	**+0.9**
GVD				S		**Sb**	**21 11 55.4**	**+0.8**
VAM	**Vamos**	**1.40**	**317**	P		**Pb**	**21 11 44.4**	**+0.2**
VAM				S		**Sn**	**21 11 59.4**	**0.0**
CHNB	**Souda**	**1.53**	**316**	P		**Pb**	**21 11 46.3**	**-0.2**
CHNB				S		**Sn**	**21 12 02.5**	**-0.2**
IMMV	**Iera Moni Meta**	**1.56**	**314**	Pn		**Pb**	**21 11 46.2**	**-0.8**
IMMV	**Iera Moni Meta**	**1.56**	**314**	P		**Pb**	**21 11 46.2**	**-0.8**
IMMV	**Iera Moni Meta**	**1.56**	**314**	P		**Pb**	**21 11 46.3**	**-0.8**
IMMV				S		**Sn**	**21 12 03.5**	**0.0**
CHAN	**Chania**	**1.57**	**316**	P		**Pb**	**21 11 46.6**	**-0.5**
KNDR	**Palaiochora Ch**	**1.67**	**301**	Pn		**Pb**	**21 11 48.2**	**-0.5**
KNDR	**Palaiochora Ch**	**1.67**	**301**	P		**Pn**	**21 11 47.5**	**+1.8**
KNDR	**Palaiochora Ch**	**1.67**	**301**	P		**Pb**	**21 11 47.8**	**-0.9**
KARP	**Karpathos**	**1.87**	**51**			**Pb**	**21 11 51.5**	**-0.7**
KARP	**Karpathos**	**1.87**	**51**	Pn		**Pb**	**21 11 50.5**	**-1.7**
KARP	**Karpathos**	**1.87**	**51**	P		**Pb**	**21 11 52.2**	**0.0**
KARP	**Karpathos**	**1.87**	**51**	P		**Pb**	**21 11 52.7**	**+0.5**
KARP	**Karpathos**	**1.87**	**51**	P		**Pb**	**21 11 52.3**	**0.0**
THERA	**Ancient Thera,**	**1.98**	**2**	P		**Pn**	**21 11 50.6**	**+0.6**
THERA	**Ancient Thera,**	**1.98**	**2**	P		**Pn**	**21 11 50.7**	**+0.7**
THR3	**Thira Island,**	**2.02**	**1**	P		**Pn**	**21 11 51.6**	**+1.1**
THR8	**Santorini-Mono**	**2.02**	**2**	P		**Pn**	**21 11 51.5**	**+1.0**
SAP3	**Santorini-Thir**	**2.04**	**359**	P		**Pn**	**21 11 52.1**	**+1.2**
SAP3	**Santorini-Thir**	**2.04**	**359**	P		**Pn**	**21 11 51.5**	**+0.7**
ANKY	**Antikythira Is**	**2.25**	**312**	P		**Pn**	**21 11 55.7**	**+2.0**
ANKY	**Antikythira Is**	**2.25**	**312**	P		**Pn**	**21 11 55.8**	**+2.1**
MHLO	**Agia Marina, M**	**2.43**	**341**	P		**Pn**	**21 11 56.8**	**+0.6**
MHLO	**Agia Marina, M**	**2.43**	**341**	P		**Pn**	**21 11 56.8**	**+0.6**
KTHA	**Kythira Island**	**2.65**	**315**	Pn		**Pn**	**21 12 01.8**	**+2.5**
KTHA	**Kythira Island**	**2.65**	**315**	P		**Pn**	**21 12 00.3**	**+1.0**
YAZI	**Mula-Datşa-**	**2.85**	**36**	P		**Pn**	**21 12 03.5**	**+1.5**
ARG	**Arkhangelos**	**2.90**	**50**	Pn		**Pn**	**21 12 05.3**	**+2.7**
ARG	**Arkhangelos**	**2.90**	**50**	Pn		**Pn**	**21 12 05.2**	**+2.6**
ARG	**Arkhangelos**	**2.90**	**50**	P		**Pn**	**21 12 05.3**	**+2.7**
ARG	**Arkhangelos**	**2.90**	**50**	P		**Pn**	**21 12 05.4**	**+2.7**
DAT	**Datca**	**2.95**	**37**	Pn		**Pn**	**21 12 05.5**	**+2.1**
VLI	**Veliai**	**3.06**	**320**	P		**Pn**	**21 12 05.0**	**+0.2**
VLI	**Veliai**	**3.06**	**320**	P		**Pn**	**21 12 05.2**	**+0.4**
BODT	**Bodrum**	**3.10**	**30**	Pn		**Pn**	**21 12 07.7**	**+2.3**
BODT	**Bodrum**	**3.10**	**30**	P		**Pn**	**21 12 07.7**	**+2.3**
BDRM	**Kayabasi**	**3.16**	**32**	P		**Pn**	**21 12 06.8**	**+0.5**
TURN	**Turunc**	**3.34**	**44**	Pn		**Pn**	**21 12 10.8**	**+2.1**
TURN	**Turunc**	**3.34**	**44**	P		**Pn**	**21 12 09.5**	**+0.8**
MET6	**Megalochori,Me**	**3.59**	**334**	P		**Pn**	**21 12 12.4**	**+0.2**
MET4	**Agioi Theodoro**	**3.60**	**334**	P		**Pn**	**21 12 12.4**	**+0.1**
DALY	**Dalyan (Mula)**	**3.61**	**47**	Pn		**Pn**	**21 12 15.2**	**+2.8**
DALY	**Dalyan (Mula)**	**3.61**	**47**	P		**Pn**	**21 12 13.3**	**+0.9**
DALY				S		**Sn**	**21 12 50.2**	**-3.7**
DALY				IAML			21 13 10.0	
	comp=N,52nm,0.7s							
YER	**Yerkesik**	**3.62**	**40**	Pn		**Pn**	**21 12 14.9**	**+2.3**
YER	**Yerkesik**	**3.62**	**40**	P		**Pn**	**21 12 14.9**	**+2.3**
GCAM	**G?zelcaml?**	**3.63**	**24**	Pn		**Pn**	**21 12 15.2**	**+2.5**
VLY	**Voula,Athens**	**3.69**	**340**	P		**Pn**	**21 12 14.4**	**+1.0**
KARY	**Karystos**	**3.71**	**349**	P		**Pn**	**21 12 14.5**	**+0.6**
MULA	**Mugla, Merkez-**	**3.73**	**39**	P		**Pn**	**21 12 16.5**	**+2.4**
IZZE	**Mula-Seydike**	**3.75**	**56**	P		**Pn**	**21 12 15.4**	**+1.1**
IZZE				S		**Sn**	**21 12 53.0**	**-4.6**
IZZE				IAML			21 12 58.0	
	comp=N,237nm,0.5s							
IZZE				IAML			21 13 02.0	
	comp=E,98nm,0.5s							
SABU	**Mula-Dalaman**	**3.81**	**49**	P		**Pn**	**21 12 16.0**	**+0.8**
AYDN	**Tasoluk**	**3.85**	**31**	P		**Pn**	**21 12 17.1**	**+1.4**
DION	**Dionisos Attik**	**3.86**	**343**	P		**Pn**	**21 12 16.4**	**+0.5**
AKAS	**Kas**	**3.92**	**61**	Pn		**Pn**	**21 12 18.4**	**+1.6**
AKAS	**Kas**	**3.92**	**61**	Pn		**Pn**	**21 12 19.8**	**+3.0**
AKAS	**Kas**	**3.92**	**61**	P		**Pn**	**21 12 18.7**	**+1.9**
AKAS				S		**Sn**	**21 12 56.2**	**-5.6**
AKAS				IAML			21 13 03.0	
	comp=N,214nm,0.5s							
ITM	**Ithomi**	**3.95**	**316**	Pn		**Pn**	**21 12 16.4**	**-0.7**
ITM	**Ithomi**	**3.95**	**316**	P		**Pn**	**21 12 17.6**	**+0.5**
CHOS	**Chios island**	**4.03**	**8**	Pn		**Pn**	**21 12 20.6**	**+2.4**
CHOS	**Chios island**	**4.03**	**8**	P		**Pn**	**21 12 20.0**	**+1.7**
URLA	**Izmir**	**4.08**	**14**	Pn		**Pn**	**21 12 21.1**	**+2.1**
CAME	**Cameli-Denizli**	**4.09**	**50**	Pn		**Pn**	**21 12 21.0**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**4.09**	**29**	Pn		**Pn**	**21 12 21.4**	**+2.2**
VILL	**Villia**	**4.12**	**337**	P		**Pn**	**21 12 20.0**	**+0.5**
DNZT	**Denizli-Tavas-**	**4.14**	**45**	P		**Pn**	**21 12 20.3**	**+0.6**
DNZT				P			21 12 22.0	
DNZT				S		**Sn**	**21 13 02.2**	**-4.9**
DNZT				IAML			21 13 13.0	
	comp=N,44nm,0.6s							
ESEN	**Aydn-Nazilli**	**4.17**	**34**	P		**Pn**	**21 12 21.4**	**+1.3**
TAVA	**DENIZLI_Tavas**	**4.21**	**42**	P		**Pn**	**21 12 21.4**	**+0.7**
TAVA				S		**Sn**	**21 13 00.0**	**-8.8**
TAVA				IAML			21 13 38.0	
	comp=N,24nm,0.6s							
BLCB	**Balcova**	**4.21**	**18**	Pn		**Pn**	**21 12 23.2**	**+2.5**
KNIK	**Mula-Seydike**	**4.21**	**53**	P		**Pn**	**21 12 22.0**	**+1.2**
CAEL	**Denizli, Camel**	**4.21**	**49**	P		**Pn**	**21 12 22.1**	**+1.1**
NAZL	**Nazilli-Aydin**	**4.28**	**33**	Pn		**Pn**	**21 12 24.4**	**+2.8**
IZMR	**zmir-demi**	**4.28**	**28**	P		**Pn**	**21 12 23.6**	**+2.0**
KYMI	**Kymi, Euboea I**	**4.36**	**347**	P		**Pn**	**21 12 23.4**	**+0.7**
ELL	**Elmali**	**4.38**	**56**	Pn		**Pn**	**21 12 25.1**	**+1.9**
ELL	**Elmali**	**4.38**	**56**	Pn		**Pn**	**21 12 26.5**	**+3.3**
DNIZ	**Denizli-Tavas-**	**4.39**	**42**	P		**Pn**	**21 12 25.2**	**+2.0**
DNIZ				S		**Sn**	**21 13 10.3**	**-3.0**
DNIZ				IAML			21 13 21.0	
	comp=N,56nm,0.4s							
APMY	**Acipayam-Deniz**	**4.43**	**45**	Pn		**Pn**	**21 12 26.1**	**+2.3**
GOLH	**Golhisar**	**4.43**	**49**	P		**Pn**	**21 12 25.8**	**+1.9**
ODEM	**Odemis-Izmir**	**4.45**	**29**	Pn		**Pn**	**21 12 26.5**	**+2.5**
KIRA	**zmir-Kiraz**	**4.52**	**32**	P		**Pn**	**21 12 27.4**	**+2.4**
SULTU	**Buldan**	**4.57**	**36**	P		**Pn**	**21 12 26.9**	**+1.1**
INCE	**Denizli-Bozkur**	**4.75**	**45**	P		**Pn**	**21 12 26.3**	**-1.9**
SERG	**Sergoula**	**4.82**	**327**	P		**Pn**	**21 12 31.9**	**+2.6**
MANT	**Manisa**	**4.83**	**31**	Pn		**Pn**	**21 12 30.9**	**+1.5**
BRDR	**BURDUR-Merkez**	**5.03**	**48**	P		**Pn**	**21 12 30.7**	**-1.4**
PASA	**Karahalli, USA**	**5.16**	**39**	P		**Pn**	**21 12 34.5**	**+0.6**
PVO	**Paravola**	**5.23**	**325**	P		**Pn**	**21 12 36.7**	**+2.0**
EVR	**Evrytania**	**5.35**	**329**	P		**Pn**	**21 12 38.4**	**+2.0**
VLS	**Valsamata**	**5.40**	**316**	P		**Pn**	**21 12 38.6**	**+1.5**
AMPL	**Ampelaki**	**5.62**	**325**	P		**Pn**	**21 12 41.9**	**+1.9**
EVGI	**Lefkada island**	**5.68**	**319**	P		**Pn**	**21 12 42.2**	**+1.4**
NYDR	**Nydri-Lefkada**	**5.72**	**320**	P		**Pn**	**21 12 42.9**	**+1.4**
DRAG	**Dragano-Lefkad**	**5.77**	**319**	P		**Pn**	**21 12 43.5**	**+1.4**
LKD2	**Lefkada island**	**5.80**	**321**	P		**Pn**	**21 12 43.4**	**+0.9**
LIT	**Litokhoron**	**6.15**	**339**	Pn		**Pn**	**21 12 47.2**	**-0.1**
CSS	**Mathiatis**	**6.58**	**83**	Pn		**Pn**	**21 12 53.8**	**+0.5**
CSS	**Mathiatis**	**6.58**	**83**	P		**Pn**	**21 12 55.9**	**+2.6**
	0.1nm13nm,0.6s							
CSS	**Mathiatis**	**6.58**	**83**	P		**Pn**	**21 12 53.8**	**+0.5**
CSS				S		**Sn**	**21 14 04.9**	**-2.4**
KEK	**Kerkira**	**6.93**	**322**	Pn		**Pn**	**21 12 57.2**	**-0.8**
CY604	**RAF Akrotiri,**	**7.56**	**88**	Pn		**Pn**	**21 13 07.4**	**+1.0**
OFRI	**`Ofer**	**8.22**	**100**	P		**Pn**	**21 13 16.5**	**+0.7**
OFRI				S		**Sn**	**21 14 42.9**	**-4.7**
KZIT	**Kziot**	**8.37**	**112**	P		**Pn**	**21 13 19.5**	**+1.8**
KZIT	**Kziot**	**8.37**	**112**	P		**Pn**	**21 13 17.8**	**+0.1**
KZIT				S		**Sn**	**21 14 45.6**	**-5.6**
SLTI	**Sal'it**	**8.37**	**102**	P		**Pn**	**21 13 17.5**	**-0.3**
SLTI				S		**Sn**	**21 14 45.9**	**-5.4**
TIP	**Timpagrande**	**8.40**	**307**	Pn		**Pn**	**21 13 16.7**	**-1.5**
MMA0B	**Mount Meron ar**	**8.47**	**97**	P		**Pn**	**21 13 19.8**	**+0.6**
MMA0B				S		**Sn**	**21 14 49.9**	**-3.9**
MMAI	**Mount Meron Ar**	**8.47**	**97**	P		**Pn**	**21 13 20.2**	**+0.9**
	3.4nm,0.3s,baz=297,slow=11,SNR=18							
MMAI				S		**Sn**	**21 14 52.1**	**-1.7**
	1.9nm,0.3s,baz=278,slow=25,SNR=6.1							
	1.6nm,0.3s							
BR131	**Keskin Array S**	**8.49**	**49**	Pn		**Pn**	**21 13 20.8**	**+1.3**
BRTR	**Keskin Array B**	**8.49**	**49**	P		**Pn**	**21 13 21.0**	**+1.5**
	0.2nm,0.3s,baz=222,slow=14,SNR=8.3							
BRTR				S		**Sn**	**21 14 51.1**	**-3.1**
	0.6nm,0.6s,baz=218,slow=25,SNR=1.3							
	0.8nm,0.5s							
BRTR	**Keskin Array B**	**8.49**	**49**	Pn		**Pn**	**21 13 21.8**	**+2.3**
AMAZ	**Amatzia**	**8.51**	**107**	P		**Pn**	**21 13 22.7**	**+2.9**
	0.4nm1µm23nm,0.4s							
AMAZ	**Amatzia**	**8.51**	**107**	P		**Pn**	**21 13 20.2**	**+0.4**
AMAZ				S		**Sn**	**21 14 49.9**	**-4.8**
SALP	**Salfit**	**8.55**	**103**	P		**Pn**	**21 13 21.8**	**+1.5**
QRWL	**Qaraoun**	**8.61**	**93**	*e*P		**Pn**	**21 13 21.2**	**+0.1**
MMLI	**Mount Malkishu**	**8.62**	**100**	P		**Pn**	**21 13 20.8**	**-0.5**
MMLI				S		**Sn**	**21 14 52.6**	**-5.0**
KNHM	**Kefar Nahum**	**8.64**	**97**	P		**Pn**	**21 13 21.8**	**+0.3**
KNHM				S		**Sn**	**21 14 53.6**	**-4.4**
GEM	**Giv'at Ha'Em**	**8.65**	**95**	P		Pn	21 13 29.4	+7.8
GEM	**Giv'at Ha'Em**	**8.65**	**95**	P		**Pn**	**21 13 21.5**	**-0.1**
GEM				S		**Sn**	**21 14 54.2**	**-3.8**

SHBL Chebaa 8.69 94 *e*P Pn 21 13 22.6 +0.3
ZAHL Zahle 8.73 91 *e*P Pn 21 13 23.0 +0.1
RCY Rachaya 8.74 93 *e*P Pn 21 13 23.1 +0.1
HWQ Hawqa 8.75 88 *e*P Pn 21 13 23.7 +0.6
YITV Yitav 8.77 103 P Pn 21 13 23.8 +0.5
YITV S Sn 21 14 56.6 -4.5
QRNJ Al-Qirein 8.78 101 P Pn 21 13 25.8 +2.4
9.1nm23µm1µm,0.9s
RGMN Argaman 8.78 102 P Pn 21 13 23.8 +0.4
RGMN S Sn 21 14 56.9 -4.4
RMNI Mount Ramon 8.79 113 P Pn 21 13 24.5 +0.9
RMNI S Sn 21 14 56.9 -4.7
UJAP Al Uja 8.80 103 P Pn 21 13 25.7 +2.0
0.2nm712nm31nm,0.4s
KSHT Keshet 8.81 96 P Pn 21 13 24.8 +0.9
KSHT S Sn 21 14 58.2 -4.0
MZS Mizpe Shalem 8.88 106 P Pn 21 13 25.6 +0.8
MZS S Sn 21 14 59.2 -4.5
BEIL Beino 8.93 86 *e*P Pn 21 13 25.8 +0.2
MSBI Mazada 8.94 107 P Pn 21 13 29.1 +3.5
0.0nm4.4nm,1.0s
MSBI Mazada 8.94 107 P Pn 21 13 25.8 +0.2
MSBI S Sn 21 15 00.2 -5.0
GHAJ Ghor Haditha 9.11 107 Pn Pn 21 13 29.4 +1.5
GHAJ Ghor Haditha 9.11 107 P Pn 21 13 30.6 +2.6
GHAJ Ghor Haditha 9.11 107 P Pn 21 13 28.8 +0.9
GHAJ S Sn 21 15 04.2 -5.2
ZFRI Zfri 9.12 112 P Pn 21 13 28.4 +0.2
ZFRI S Sn 21 15 04.6 -5.1
HRFI Mount Harif 9.27 115 P Pn 21 13 32.8 +2.7
0.1nm402nm22nm,0.5s
PDG Podgorica 9.35 331 Pn Pn 21 13 29.3 -1.9
RAFF Raffo Rosso 9.38 291 Pn Pn 21 13 30.0 -1.6
EIL2 Elat 9.39 117 P Pn 21 13 32.5 +0.7
EIL2 S Sn 21 15 10.9 -5.5
EIL Elat 9.39 117 P Pn 21 13 33.4 +1.5
2.5nm,0.3s,baz=309,slow=2.4,SNR=26
EIL S Sn 21 15 12.1 -4.3
7.0nm,0.3s,baz=244,slow=17,SNR=7.4
7.9nm,0.4s
EIL Elat 9.39 117 P Pn 21 13 34.0 +2.2
0.1nm7.6nm,0.5s
VAE Valguarnera 9.41 292 P Pn 21 13 32.3 +0.3
6.1nm,0.9s,baz=135,slow=14,SNR=1.4
VAE S Sn 21 15 12.1 -4.6
8.4nm,0.5s,baz=246,slow=7.3,SNR=3.6
ASF Jabal al Asfar 9.90 100 P Pn 21 13 40.4 +1.6
0.4nm,0.3s,baz=325,slow=2.4,SNR=3.9
ASF S Sn 21 15 23.6 -5.4
1.3nm,0.3s,baz=297,slow=23,SNR=1.9
1.1nm,0.3s
SGRT San Giovanni R 10.56 317 Pn Pn 21 13 44.8 -3.1
NRCA Norcia 12.76 315 Pn Pn 21 14 17.1 -0.7
FDMO Fiordimonte 12.89 316 Pn 21 14 18.8 -0.9
SOKA Soboth 14.56 331 *e*P P 21 14 49.5 +0.9
5.0nm,1.3s
SABO M.te Sabotino 14.64 326 P P 21 14 49.1 -0.3
ARSA Arzberg 14.84 333 *e*P P 21 14 52.6 +1.0
2.3nm,0.7s
RONA Rosalia, Austr 14.94 336 *i* P P 21 14 53.5 +0.7
2.0nm,0.7s
SESA Seetaler Alpe, 15.10 331 *e*P P 21 14 54.8 +0.1
2.8nm,0.4s
KBA Koelnbreinsper 15.59 328 *e*P P 21 15 00.7 +0.6
1.0nm,0.4s
ABTA Abfaltersbach 15.72 326 *e*P P 21 15 02.1 +0.6
1.1nm,0.4s
MOA Molln 15.81 332 *e*P P 21 15 03.0 +0.5
0.7nm,0.5s
LESA Schwarzleotal 16.15 328 *e*P P 21 15 06.5 +0.3
2.0nm,0.8s
KIV Kislovodsk 16.45 49 P P 21 15 11.4 +1.8
KBZ Khabaz 16.47 50 P P 21 15 10.4 +0.7
9.3nm,0.7s,baz=226,slow=6.9,SNR=22
WTTA Wattenberg 16.50 325 *e*P P 21 15 11.0 +0.7
1.0nm,0.4s
AKASG Malin Array Be 16.54 9 P Pn 21 15 08.5 +0.4
1.2nm,0.4s,baz=201,slow=11,SNR=20
AKASG Malin Array Be 16.54 9 Pn 21 15 07.6 -0.6
AKBB Malin Array Si 16.54 9 Pn Pn 21 15 09.0 +0.8
AKBB IAmb IAmb 21 15 09.8
comp=Z,7.9nm,0.8s
SQTA Sankt Quirin 16.68 324 *e*P P 21 15 12.0 -0.1
comp=Z,0.4nm,0.2s
FUORN Ofenpass-Fuorn 16.73 321 P P 21 15 13.5 +0.5
FETA Feichten 16.77 323 *i* P Pn 21 15 12.8 +1.5
comp=Z,0.3nm,0.4s
GERES GERESS Array B 16.84 333 P Pn 21 15 12.4 +0.3
baz=150,slow=11,SNR=9.2
comp=Z,0.8nm,0.6s
GERES GERESS Array B 16.84 333 Pn 21 15 13.8 +1.7
DAVOX Davos/Dischmat 17.04 321 P Pn 21 15 15.0 +0.4
comp=Z,0.3nm,0.3s,baz=133,slow=14,SNR=2.9
comp=Z,0.9nm,0.4s
DAVA Damuels 17.38 322 *e*P Pn 21 15 19.7 +0.9
comp=Z,1.0nm,0.4s
SENIN Lac Senin/Sane 18.19 317 Pn 21 15 28.8 -0.1
CEST Esterri de Car 20.53 301 P 21 15 55.5 +1.0
CEST IAmb IAmb 21 16 33.8
comp=Z,11nm,1.1s
ESDC Sonseca Array 23.95 291 P P 21 16 30.3 +0.2
comp=Z,1.1nm,0.7s,baz=75,slow=9.6,SNR=15
comp=Z,1.1nm,0.7s
ESDC Sonseca Array 23.95 291 P P 21 16 27.3 -2.7
PAB San Pablo 24.24 291 P P 21 16 32.3 -0.5
PAB IAmb IAmb 21 16 55.2
comp=Z,4.4nm,1.1s
HFS Hagfors 26.86 347 P P 21 16 54.5 -1.7
comp=Z,3.5nm,1.0s,baz=145,slow=11,SNR=6.0
comp=Z,3.5nm,1.0s
FINES FINESS Array B 27.08 1 P P 21 16 55.9 -2.2
comp=Z,1.6nm,0.7s,baz=166,slow=11,SNR=9.9
comp=Z,1.6nm,0.7s
UOSS Minazif 28.31 101 P P 21 17 11.5 +2.0
EKA Eskdalemuir Ar 28.77 325 P P 21 17 12.2 -1.2
comp=Z,0.6nm,0.5s,baz=126,slow=11,SNR=5.2
comp=Z,0.6nm,0.5s
AB31 Akbulak array 29.44 49 P P 21 17 20.3 +1.0
ABKAR Akbulak array 29.44 49 P P 21 17 20.0 +0.7
TORD Torodi Ar. Bea 30.13 231 P P 21 17 27.9 +2.1
comp=Z,1.2nm,0.5s,baz=34,slow=8.5,SNR=18
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 35.20 0 P P 21 18 08.0 -1.5
comp=Z,0.5nm,0.5s,baz=178,slow=8.5,SNR=4.4
comp=Z,0.5nm,0.5s
KK31 Karatay Array 35.90 62 P P 21 18 17.0 +1.1
KK31 IAmb IAmb 21 18 18.1
comp=Z,1.6nm,0.8s
KKAR Karatay Array 35.90 62 P P 21 18 17.0 +1.1
GAR Garm 36.05 69 P P 21 18 18.9 +1.5
ARSB Arslanbob 37.84 65 P P 21 18 34.3 +1.7
ARSB IAmb IAmb 21 18 38.6
comp=Z,6.0nm,1.2s
KURBB Kurchatov Arra 41.48 50 P P 21 19 03.2 +0.8
comp=Z,1.4nm,0.5s,baz=276,slow=8.7,SNR=13
comp=Z,1.4nm,0.5s
KURK Kurchatov 41.53 50 P P 21 19 03.3 +0.4
KURK IAmb IAmb 21 19 04.3
comp=Z,1.5nm,0.8s
MAKZ Makanchi 43.84 56 P P 21 19 22.8 +1.0
MAKZ IAmb IAmb 21 19 31.0
comp=Z,3.5nm,1.3s
MKAR Makanchi Array 44.06 56 P P 21 19 24.5 +0.9
comp=Z,1.4nm,0.5s,baz=270,slow=7.0,SNR=16
comp=Z,1.4nm,0.5s
SCO Scoresbysund 44.12 339 P P 21 19 24.0 +0.4
SCO IAmb IAmb 21 19 25.5
comp=Z,3.3nm,1.0s
ZAA0 Zalesovo Array 45.41 46 P P 21 19 34.2 0.0
ZALV Zalesovo Beam 45.41 46 P P 21 19 34.3 +0.1
comp=Z,3.0nm,0.4s,baz=270,slow=8.9,SNR=17
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 45.41 46 P P 21 19 34.1 -0.1
SUMG Summit 49.76 339 P P 21 20 08.1 0.0
SUMG IAmb IAmb 21 20 10.7
comp=Z,3.0nm,1.0s
SONM Songino Array 59.84 50 P P 21 21 22.0 +0.8
comp=Z,0.8nm,0.7s,baz=291,slow=7.1,SNR=5.3
comp=Z,0.8nm,0.7s
SONM Songino Array 59.84 50 P P 21 21 21.6 +0.4
SONM IAmb IAmb 21 21 23.2
comp=Z,0.8nm,0.9s
ULN Ulaanbaatar 60.25 50 P P 21 21 24.6 +0.5
CMAR Chiang Mai Arr 66.49 83 P P 21 22 06.8 +1.3
comp=Z,0.7nm,0.6s,baz=292,slow=7.4,SNR=6.7
comp=Z,0.7nm,0.6s

USRK Ussuriysk Ar. 77.26 45 P P 21 23 10.3 +0.5
comp=Z,1.3nm,0.6s,baz=306,slow=5.9,SNR=4.7
comp=Z,1.3nm,0.6s
USRK Ussuriysk Ar. 77.26 45 P P 21 23 10.0 +0.2
KSRS Korea Array 78.61 52 P P 21 23 18.4 +1.0
comp=Z,0.8nm,0.5s,baz=299,slow=4.2,SNR=2.9
comp=Z,0.8nm,0.5s
ILAR Eielson Array 80.98 357 P P 21 23 30.2 +0.4
comp=Z,0.3nm,0.8s,baz=11,slow=1.8,SNR=2.6
comp=Z,0.3nm,0.8s
ILAR Eielson Array 80.98 357 P P 21 23 29.6 -0.2
QSPA South Pole Qui 124.25 180 PKP PKPdf 21 30 13.9 +0.6
comp=Z,0.6nm,0.7s,baz=295,slow=2.2,SNR=1.7
QSPA South Pole Qui 124.25 180 PKPdf PKPdf 21 30 14.1 +0.8

*ISK **07** 21:35:40.0,35˙90N×35˙50E,h10km,ML2.9/18*
*GRAL **07** 21:35:42.8±0.6,35˙88N×35˙50E,h14km±13km,MD3.5*
*GII **07** 21:35:42.2±0.0,35˙93N×35˙57E,h0km±9km,Mws3.0, confirmed*
*AFAD **07** 21:35:42.7,36˙01N×35˙64E,h22km±1km,ML2.7*

ISC 07 21:35:40.5±1.4,**35˙92N**±0˙02×**35˙59E**±0˙03,**h10**km±11km, **n63,σ1°03/96,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.43**	**74**	P	**Pb**	**21 35 50.8**	**+0.5**
YAYL				S	**Sb**	**21 35 56.9**	**-0.1**
YAYL				IAML		21 35 59.0	
	comp=N,1µm,0.3s						
TAHT	**Tahtakopru-Hat**	**0.66**	**46**	Pg	**Pn**	**21 35 55.0**	**-1.0**
TAHT				Sg	**Sn**	**21 36 05.2**	**-1.3**
KRTS	**Karatas**	**0.68**	**345**	Pg	**Pn**	**21 35 53.5**	**-0.1**
KRTS				Sg	**Sb**	**21 36 03.8**	**-0.1**
RHAN	**Hatay/Reyhanl**	**0.89**	**67**	P	**Pn**	**21 35 58.3**	**-0.4**
YURE	**YUREGIR**	**0.91**	**2**	P	**Pb**	**21 35 58.3**	**-0.1**
YURE				S	**Sn**	**21 36 14.9**	**+2.3**
YURE				IAML		21 36 18.0	
	comp=N,327nm,0.9s						
HASA	**Hatay-Hassa-Ha**	**1.10**	**41**	P	**Pn**	**21 36 02.2**	**+0.1**
HASA				S	**Sn**	**21 36 16.3**	**-1.1**
HASA				IAML		21 36 19.0	
	comp=N,552nm,0.2s						
CAYT	**Sariam**	**1.27**	**350**	P	**Pg**	**21 36 05.2**	**+0.3**
CAYT				S	**Sb**	**21 36 20.6**	**-0.4**
CAYT				IAML		21 36 26.0	
	comp=N,197nm,0.4s						
CAYT				IAML		21 36 26.0	
	comp=E,131nm,0.5s						
SLFK	**Silifke-Mersin**	**1.41**	**290**	Pn	**Pn**	**21 36 05.5**	**-0.8**
SILI	**Silifke-Mersin**	**1.42**	**289**	Pn	**Pn**	**21 36 05.3**	**-1.2**
SILI				Sn	**Sn**	**21 36 24.2**	**-1.0**
BEIL	**Beino**	**1.46**	**160**	*e*P	**Pb**	**21 36 07.7**	**-0.1**
BEIL				*e*S	**Sn**	**21 36 25.8**	**-0.4**
KUZU	**Kuzuini**	**1.47**	**54**	P	**Pg**	**21 36 08.4**	**-0.3**
KUZU				S	**Sn**	**21 36 25.4**	**-1.1**
KUZU				IAML		21 36 30.0	
	comp=N,510nm,0.4s						
GULE	**Gulek**	**1.51**	**335**	P	**Pb**	**21 36 09.3**	**+0.5**
GULE				S	**Sb**	**21 36 28.7**	**+0.6**
GULE				IAML		21 36 35.0	
	comp=N,107nm,0.6s						
KAMA	**Osmaniye**	**1.53**	**34**	P	**Pb**	**21 36 08.4**	**-0.7**
KAMA				S	**Sn**	**21 36 25.9**	**-2.3**
KAMA				IAML		21 36 37.0	
	comp=N,74nm,0.7s						
TISA	**Tisan-Mersin**	**1.57**	**279**	Pn	**Pn**	**21 36 07.5**	**-1.0**
KOZT	**Kozan**	**1.57**	**7**	Pn	**Pn**	**21 36 09.0**	**+0.5**
KOZT				Sn	**Sg**	**21 36 30.5**	**-0.5**
IKL	**Isikli**	**1.58**	**282**	Pn	**Pn**	**21 36 07.5**	**-1.1**
KEBE	**Keben-Mersin**	**1.61**	**290**	Pn	**Pn**	**21 36 08.5**	**-0.6**
HWQ	**Hawqa**	**1.66**	**170**	*e*P	**Pn**	**21 36 09.9**	**0.0**
HWQ				*e*S	**Sn**	**21 36 30.2**	**-1.2**
BECE	**Buyukeceli-Mer**	**1.66**	**279**	Pn	**Pn**	**21 36 09.1**	**-0.7**
BECE	**Buyukeceli-Mer**	**1.66**	**279**	Pn	**Pn**	**21 36 09.4**	**-0.4**
GULN	**MERSIN_Gulnar**	**1.68**	**280**	P	**Pn**	**21 36 07.2**	**-2.8**
GULN				S	**Sn**	**21 36 27.7**	**-4.0**
ANDN	**Andirin**	**1.77**	**20**	P	**Pn**	**21 36 11.9**	**+0.6**
ANDN				S	**Sb**	**21 36 35.0**	**-0.4**
ANDN				IAML		21 36 47.0	
	comp=N,102nm,0.5s						
KHMR	**Kahramanmara**	**1.77**	**36**	P	**Pn**	**21 36 10.9**	**-0.5**
CMRD	**Camardi-Nigde**	**1.81**	**345**	Pn	**Pn**	**21 36 12.1**	**+0.2**
GAZ	**Gaziantep**	**1.81**	**46**	Pn	**Pb**	**21 36 12.7**	**-1.1**
TEVE	**Tevekalti-Mers**	**1.81**	**287**	Pn	**Pn**	**21 36 11.2**	**-0.7**
KMRS	**Kahramanmaras**	**1.90**	**33**	Pn	**Pb**	**21 36 14.0**	**-1.4**
KERG	**Konya-Eregli**	**1.90**	**322**	P	**Pn**	**21 36 13.5**	**+0.3**
KERG				S	**Sn**	**21 36 38.0**	**+0.7**
KERG				IAML		21 36 42.0	
	comp=N,53nm,0.5s						
KHMN	**Narli-Kahraman**	**1.94**	**40**	Pn	**Pb**	**21 36 15.4**	**-0.5**
KHMN	**Narli-Kahraman**	**1.94**	**40**	P	**Pg**	**21 36 18.6**	**+0.9**
KAHM	**Kahramanmaras,**	**1.95**	**35**	P	**Pn**	**21 36 13.7**	**-0.1**
BHL	**Bhannes**	**2.01**	**179**	*e*P	**Pn**	**21 36 14.7**	**0.0**
NZIP	**Nizip/Gaziante**	**2.02**	**56**	P	**Pn**	**21 36 15.5**	**+0.8**
NZIP				S	**Sn**	**21 36 39.4**	**-0.7**
NZIP				IAML		21 36 46.0	
	comp=N,64nm,0.5s						
ZAHL	**Zahle**	**2.07**	**173**	*e*P	**Pn**	**21 36 16.2**	**+0.7**
CSS	**Mathiatis**	**2.08**	**243**	P	**Pn**	**21 36 15.5**	**0.0**
SAIM	**ADANA**	**2.09**	**11**	P	**Pn**	**21 36 16.9**	**+1.2**
NIDE	**Nigde/Merkez-G**	**2.18**	**343**	P	**Pn**	**21 36 17.4**	**+0.4**
NIDE				S	**Sn**	**21 36 45.3**	**+1.1**
NIDE				IAML		21 36 48.0	
	comp=N,95nm,0.8s						
YAHY	**KAYSERI_Yahyal**	**2.18**	**355**	P	**Pn**	**21 36 18.4**	**+1.4**
YAHY				S	**Sn**	**21 36 44.3**	**+0.1**
DQRL	**Deir Qamar**	**2.21**	**180**	*e*P	**Pn**	**21 36 17.3**	**0.0**
DQRL				*e*S	**Sn**	**21 36 43.5**	**-1.3**
KRMN	**Karaman**	**2.25**	**304**	Pn	**Pn**	**21 36 18.1**	**+0.1**
QRWL	**Qaraoun**	**2.37**	**178**	*e*P	**Pn**	**21 36 19.7**	**+0.1**
YESY	**Yesilyurt**	**2.38**	**322**	Pn	**Pn**	**21 36 20.2**	**+0.5**
RCY	**Rachaya**	**2.42**	**175**	*e*P	**Pn**	**21 36 20.6**	**+0.2**
RCY				*e*S	**Sn**	**21 36 48.4**	**-1.8**
KKBE	**Karaman, Kazim**	**2.50**	**302**	P	**Pn**	**21 36 21.8**	**+0.4**
BSIR	**Belisirma, Guz**	**2.57**	**336**	P	**Pn**	**21 36 24.6**	**+2.3**
BSIR				S	**Sn**	**21 36 56.2**	**+2.5**
BSIR				IAML		21 36 59.0	
	comp=N,38nm,0.5s						
SHBL	**Chebaa**	**2.57**	**177**	*e*P	**Pn**	**21 36 22.5**	**+0.1**
SARI	**SarD1z-Kayseri**	**2.57**	**15**	Pn	**Pn**	**21 36 23.2**	**+0.8**
GULA	**Gulagac**	**2.65**	**336**	Pn	**Pn**	**21 36 24.4**	**+0.9**
GEM	**Giv'at Ha'Em**	**2.70**	**179**	P	**Pn**	**21 36 24.6**	**+0.5**
GEM				S	**Sn**	**21 36 55.8**	**-1.0**
KIRY	**Kiryat Shemona**	**2.71**	**180**	P	**Pn**	**21 36 25.4**	**+1.3**
KIRY				S	**Sn**	**21 36 57.1**	**+0.2**
HNTI	**Hanita**	**2.85**	**187**	P	**Pn**	**21 36 26.7**	**+0.6**
HNTI				S	**Sn**	**21 37 00.3**	**-0.2**
MMA0B	**Mount Meron ar**	**2.90**	**183**	P	**Pn**	**21 36 26.8**	**-0.1**
MMA0B				S	**Sn**	**21 37 01.6**	**-0.3**
BNN	**Bunyan**	**2.94**	**4**	Pn	**Pn**	**21 36 28.8**	**+1.4**
KSHT	**Keshet**	**2.94**	**176**	P	**Pn**	**21 36 28.2**	**+0.8**
ZEFT	**Zefat**	**2.94**	**182**	P	**Pn**	**21 36 27.8**	**+0.4**
ZEFT				S	**Sn**	**21 37 03.1**	**+0.2**
KNHM	**Kefar Nahum**	**3.03**	**180**	P	**Pn**	**21 36 29.4**	**+0.8**
KNHM				S	**Sn**	**21 37 05.3**	**+0.5**
BLGI	**Bet Lehem HaGe**	**3.19**	**186**	P	**Pn**	**21 36 31.4**	**+0.5**
BLGI				S	**Sn**	**21 37 09.9**	**+0.8**
MMLI	**Mount Malkishu**	**3.48**	**182**	P	**Pn**	**21 36 35.8**	**+1.1**
MMLI				S	**Sn**	**21 37 16.9**	**+0.9**
ROII	**Roi**	**3.66**	**181**	P	**Pn**	**21 36 38.2**	**+0.9**
MZS	**Mizpe Shalem**	**4.34**	**182**	P	**Pn**	**21 36 47.8**	**+1.2**
AMAZ	**Amatzia**	**4.41**	**188**	P	**Pn**	**21 36 49.1**	**+1.5**
AMAZ				S	**Sn**	**21 37 39.9**	**+0.8**
KZIT	**Kziot**	**5.10**	**192**	P	**Pn**	**21 36 57.6**	**+0.6**
KZIT				S	**Sn**	**21 37 56.4**	**+0.4**
HRFI	**Mount Harif**	**5.88**	**185**	P	**Pn**	**21 37 09.1**	**+1.2**
HRFI				S	**Sn**	**21 38 15.2**	**-0.3**

*IDC **07** 21:42:33.1±0.9,28˙35N×139˙70E,h433km±9km,mb3.7/28, mbtmp4.4/32,Error ellipse: s-maj=12.3km s-min=7.9km az=76.0*
*GFZ **07** 21:42:33.5±0.4,28˚N±5˚×14˚0E±˚,h437km±5km,M4.6/33, mb4.5/33,Error ellipse: s-maj=14.9km s-min=7.3km az=121.5,confirmed*
*JMA **07** 21:42:33.2±0.3,28˚N±2˚×14˚0E±˚,h444km,MV4.5/20,W OFF OGASAWARA*
*NEIC **07** 21:42:33.7±1.5,28˚.31N±0˚.08×139˚.7E±0˚.1,h434km±6km, mb4.3/77,Error ellipse: s-maj=14.9km s-min=11.9km*

az=97.0

ISC 07 21:42:34.2±0.3,**28˙32N**±0˙04×**139˙73E**±0˙06,**h448**km, **n456,σ1°15/473,mb4.3/76,3D,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.50**	**119**	*i* P	**P**	**21 43 35.0**	**-2.6**
CBIJ				*e*S	**S**	**21 44 23.9**	**-5.1**
JCJ	**Chichijima**	**2.50**	**119**	P	**P**	**21 43 34.0**	**-3.6**
	503nm,0.3s,baz=57,slow=6.5,SNR=147						
JCJ				S	S	21 44 17.7	-11
	1µm,0.4s,baz=143,slow=23,SNR=6.3						
JCJ	**Chichijima**	**2.50**	**119**	P	**P**	**21 43 34.9**	**-2.7**
JCJ	**Chichijima**	**2.50**	**119**	S	**S**	**21 44 24.7**	**-4.2**
JCJ	**Chichijima**	**2.50**	**119**		**P**	**21 43 34.3**	**-3.3**
JCJ	**Chichijima**	**2.50**	**119**	P	**P**	**21 43 35.1**	**-2.5**
JHH2	**Haha-jima-NKT2**	**2.75**	**127**	P	**P**	**21 43 37.1**	**-2.2**
JHH2				S	**S**	**21 44 27.9**	**-4.1**
JHJ2	**Mitsune**	**4.78**	**1**	P	**P**	**21 43 54.8**	**-1.4**
JHJ2	**Mitsune**	**4.78**	**1**	P	**P**	**21 43 53.8**	**-2.5**
JHJ2	**Mitsune**	**4.78**	**1**	P	**P**	**21 43 54.7**	**-1.6**
JHJ	**Hachijo jima 2**	**4.79**	**1**	P	**P**	**21 43 54.1**	**-2.1**
	56nm,0.3s,baz=249,slow=23,SNR=6.4						
JHJ				S	S	21 44 52.7	-11
	213nm,0.5s,baz=288,slow=17,SNR=4.9						
BSO1	**Boso 1**	**6.40**	**9**	P	**P**	**21 44 10.7**	**-1.2**
BSO1				S	**S**	**21 45 27.5**	**-4.5**
BSO2	**Boso 2**	**6.47**	**8**	*e*S	**S**	**21 45 28.9**	**-4.8**
BSO3	**Boso 3**	**6.50**	**6**	P	**P**	**21 44 11.5**	**-1.7**
BSO3				*e*S	**S**	**21 45 28.6**	**-5.6**
INU	**Inuyama**	**7.38**	**342**	P	**P**	**21 44 23.1**	**+0.3**
INU	**Inuyama**	**7.38**	**342**	P	**P**	**21 44 22.4**	**+0.3**
JRY	**Ryogami san**	**7.71**	**355**	*e*P	**P**	**21 44 24.8**	**-1.6**
JWT	**Wachi**	**7.86**	**333**	P	**P**	**21 44 30.4**	**+2.5**
JMZ	**Minamidaito 2**	**7.98**	**254**	P	**P**	**21 44 29.6**	**+0.2**
JMZ	**Minamidaito 2**	**7.98**	**254**	P	**P**	**21 44 28.9**	**-0.6**
JMZ	**Minamidaito 2**	**7.98**	**254**	*e*P	**P**	**21 44 28.8**	**-0.6**
MJAR	**Matsushiro Arr**	**8.30**	**351**	P	**P**	**21 44 30.8**	**-1.9**
	1.8nm,0.4s,baz=164,slow=9.2,SNR=11						
MJAR				S	**S**	**21 46 05.5**	**-4.6**
	5.6nm,0.8s,baz=180,slow=29,SNR=7.9						
MAJO	**Matsushiro**	**8.30**	**351**	P	**P**	**21 44 31.6**	**-1.1**
MAJO	**Matsushiro**	**8.30**	**351**	P	**P**	**21 44 30.4**	**-2.4**
MJB9	**Matsu-Tunnel**	**8.30**	**351**	P	**P**	**21 44 31.9**	**-0.9**
JSU	**Suzuyama**	**8.65**	**294**	P	**P**	**21 44 36.9**	**+0.3**
JOW	**Kunigami**	**10.27**	**264**	P	**P**	**21 44 55.6**	**+1.3**
JOW	**Kunigami**	**10.27**	**264**	P	**P**	**21 44 55.5**	**+1.1**
JMK	**Ichinoseki**	**10.68**	**6**	P	**P**	**21 44 58.3**	**-0.2**
JMK				*e*S	**S**	**21 46 55.8**	**-1.7**
JTU	**Tsushima**	**10.77**	**308**	P	**P**	**21 45 00.7**	**+1.1**
JTM	**Tenmabayashi**	**12.49**	**5**	P	**P**	**21 45 18.7**	**+0.5**
JTM	**Tenmabayashi**	**12.49**	**5**	S	**S**	**21 47 36.0**	**+2.5**
JTM	**Tenmabayashi**	**12.49**	**5**	P	**P**	**21 45 18.6**	**+0.4**
JOT	**Ohata**	**13.08**	**4**	*e*P	**P**	**21 45 24.9**	**+0.3**
KSRS	**Korea Array**	**13.46**	**316**	P	**P**	**21 45 26.6**	**-2.1**
	1.4nm,0.7s,baz=128,slow=9.7,SNR=6.2						
ERM	**Erimo**	**13.95**	**11**	P	**P**	**21 45 35.1**	**+1.2**
ERM	**Erimo**	**13.95**	**11**	S	**S**	**21 48 04.9**	**+2.5**
ERM	**Erimo**	**13.95**	**11**	P	**P**	**21 45 34.8**	**+0.9**
ERM	**Erimo**	**13.95**	**11**	P	**P**	**21 45 35.2**	**+1.2**
JER	**Erimo**	**13.95**	**11**	P	**P**	**21 45 35.4**	**+1.5**
JCH	**Churui**	**14.56**	**11**	P	**P**	**21 45 41.5**	**+1.0**
YOJ	**Yonaguni jima**	**15.46**	**259**	P	**P**	**21 45 50.2**	**-0.2**
YOJ	**Yonaguni jima**	**15.46**	**259**	P	**P**	**21 45 52.1**	**+1.7**
NEM2	**Nemuro 2**	**15.78**	**16**	*e*P	**P**	**21 45 53.6**	**+0.2**
JKA	**Kamikawa-asahi**	**15.93**	**8**	P	**P**	**21 45 55.3**	**+0.2**
JKA				IAmb	IAmb	21 45 56.3	
	comp=Z,11nm,0.9s						
JKA	**Kamikawa-asahi**	**15.93**	**8**	P	**P**	**21 45 55.1**	**0.0**
NACB	**Ninganchiao**	**16.78**	**260**	P	**P**	**21 46 02.7**	**-1.6**
YHNB	**Yeheng**	**16.83**	**262**	P	**P**	**21 46 04.7**	**-0.2**
YHNB	**Yeheng**	**16.83**	**262**	P	**P**	**21 46 02.3**	**-2.6**
USA0B	**Ussuriysk Arra**	**17.02**	**341**	P	**P**	**21 46 07.8**	**+1.3**
USA0B				IAmb	IAmb	21 46 09.8	
	comp=Z,10nm,0.7s						
USRK	**Ussuriysk Ar.**	**17.02**	**341**	P	**P**	**21 46 06.7**	**+0.2**
	comp=Z,10nm,0.6s,baz=164,slow=9.8,SNR=20						
USRK	**Ussuriysk Ar.**	**17.02**	**341**	P	**P**	**21 46 07.7**	**+1.2**
YULB	**Yu-li**	**17.30**	**258**	P	**P**	**21 46 09.6**	**-0.2**
YULB	**Yu-li**	**17.30**	**258**	P	**P**	**21 46 08.6**	**-1.2**
YULB	**Yu-li**	**17.30**	**258**	P	**P**	**21 46 09.3**	**-0.5**
SSLB	**Suanglung**	**17.46**	**259**	P	**P**	**21 46 11.1**	**-0.5**
SSLB	**Suanglung**	**17.46**	**259**	P	**P**	**21 46 10.4**	**-1.2**
SSLB	**Suanglung**	**17.46**	**259**	P	**P**	**21 46 11.3**	**-0.3**
TWG	**Pinlang**	**17.70**	**256**	P	**P**	**21 46 12.8**	**-1.2**
TWG	**Pinlang**	**17.70**	**256**	P	**P**	**21 46 13.1**	**-0.9**
TPUB	**Ta-pu**	**17.90**	**258**	P	**P**	**21 46 17.5**	**+1.3**
TPUB	**Ta-pu**	**17.90**	**258**	P	**P**	**21 46 14.8**	**-1.4**
CN2	**Changchun**	**19.24**	**327**	P	**P**	**21 46 28.2**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KNMB	**Chin-men Tao**	**19.50**	**264**	P	**P**	**21 46 30.5**	**-0.7**
BNX	**BinXian**	**19.94**	**334**	⇓P	**P**	**21 46 35.7**	**+0.8**
BNX				pmax	pmax		
	comp=Z,34nm,0.6s						
KLR	**Kul'dur**	**21.76**	**346**	P	**P**	**21 46 52.3**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=172,slow=7.7,SNR=19						
	comp=Z,3.7nm,0.6s						
WHN	**Wuhan**	**22.20**	**282**	⇓P	**P**	**21 46 55.5**	**-0.2**
WHN				pmax	pmax		
	comp=Z,68nm,0.5s						
HEH	**HeiHe**	**23.83**	**340**	*e*P	**P**	**21 47 10.6**	**+0.6**
HEH				pmax	pmax		
	comp=Z,15nm,0.7s						
HILR	**Hailar Array B**	**26.14**	**330**	P	**P**	**21 47 30.6**	**-0.1**
	comp=Z,3.3nm,0.4s,baz=132,slow=8.8,SNR=4.0						
	comp=Z,3.3nm,0.4s						
HHC	**Hu-ho-hao-te**	**26.22**	**306**	*e*P	**P**	**21 47 31.0**	**-0.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HH

comp=Z,5.7nm,0.8s
CHTO **Chiang Mai** 38.41 265 P P 21 49 15.6 -0.4
CMAR **Chiang Mai Arr** 38.54 264 P P 21 49 17.2 +0.2
comp=Z,1.7nm,0.7s,baz=78,slow=5.1,SNR=15
CMAR PcP PcP 21 51 19.7 +0.8
comp=Z,0.4nm,0.4s,baz=48,slow=1.7,SNR=6.8
comp=Z,1.7nm,0.7s
CMAR **Chiang Mai Arr** 38.54 264 P P 21 49 16.4 -0.6
KIWB **Kanaga Island** 39.71 42 P P 21 49 26.6 +0.5
ADK **Adak** 39.99 42 P P 21 49 29.3 +1.0
ADK **Adak** 39.99 42 P P 21 49 29.4 +1.0
ADK IAmb IAmb 21 49 49.3
comp=Z,33nm,1.2s
GSTR **Great Sitkin T** 40.42 42 P P 21 49 32.5 +0.6
NPW **Naypyitaw** 40.53 268 P P 21 49 33.8 +0.7
ATKA **Atka Island** 41.55 42 P P 21 49 42.2 +1.4
ATKA **Atka Island** 41.55 42 P P 21 49 41.5 +0.7
KULM **Kulim** 43.55 246 P P 21 49 57.8 +0.6
KULM **Kulim** 43.55 246 P P 21 49 57.4 +0.2
KULM IAmb IAmb 21 49 58.6
comp=Z,14nm,0.7s
KULM **Kulim** 43.55 246 P P 21 49 57.4 +0.2
KNRA **Kununurra** 45.01 195 P P 21 50 08.5 +0.2
KNRA IAmb IAmb 21 50 37.3
comp=Z,24nm,1.2s
SPIA **Saint Paul Isl** 45.23 36 P P 21 50 09.9 +0.3
baz=252
EVN **Everest** 46.34 283 P P 21 50 19.5 +0.2
EVN IAmb IAmb 21 50 20.4
comp=Z,6.7nm,0.5s
EVN **Everest** 46.34 283 P P 21 50 19.6 +0.2
UNV **Unalaska Valle** 46.45 41 P P 21 50 19.6 +0.5
baz=259
LVA **Lava Point** 46.79 41 P P 21 50 21.9 +0.3
AKUT **Akutan** 46.93 41 P P 21 50 23.5 +0.9
AKUT IAmb IAmb 21 51 07.3
comp=Z,37nm,1.2s
GAMB **Gambell** 47.00 27 P P 21 50 23.6 +0.6
baz=245
KLSI 47.04 231 P P 21 50 24.8 +0.7
ZALV **Zalesovo Beam** 47.14 319 P P 21 50 23.6 -0.6
comp=Z,1.2nm,0.4s,baz=92,slow=4.6,SNR=9.8
ZALV PcP PcP 21 51 47.1 -0.3
comp=Z,4.5nm,0.4s,baz=118,slow=3.6,SNR=19
ZALV ScP ScP 21 54 57.6 -0.3
comp=Z,0.8nm,0.5s,baz=122,slow=3.2,SNR=5.5
comp=Z,1.2nm,0.4s
ZALV **Zalesovo Beam** 47.14 319 P P 21 50 23.1 -1.1
MDSI **Maura Dua** 47.28 232 P P 21 50 25.9 +0.1
MKAR **Makanchi Array** 48.02 309 P P 21 50 30.7 -0.4
comp=Z,2.1nm,0.5s,baz=93,slow=9.5,SNR=20
MKAR PcP PcP 21 51 51.0 +0.2
comp=Z,3.4nm,0.6s,baz=78,slow=6.7,SNR=19
MKAR ScP ScP 21 55 01.9 0.0
comp=Z,1.4nm,0.8s,baz=89,slow=4.8,SNR=8.6
comp=Z,2.1nm,0.5s
MKAR **Makanchi Array** 48.02 309 P P 21 50 30.3 -0.8
FITZ **Fitzroy Crossi** 48.12 198 P P 21 50 31.8 -0.2
FITZ **Fitzroy Crossi** 48.12 198 P P 21 50 32.2 +0.1
M11K **Mekoryuk** 48.20 33 P P 21 50 32.1 0.0
baz=253
MAKZ **Makanchi** 48.23 309 P P 21 50 32.2 -0.5
MAKZ **Makanchi** 48.23 309 P P 21 50 32.6 -0.1
WRAB **Tennant Creek** 48.25 187 P P 21 50 33.0 -0.1
WR8 **Warramunga Arr** 48.26 187 P P 21 50 32.9 -0.2
WR8 IAmb IAmb 21 50 33.9
comp=Z,8.1nm,1.1s
WRA **Warramunga Arr** 48.26 187 P P 21 50 32.9 -0.2
comp=Z,1.5nm,0.3s,baz=1.9,slow=7.7,SNR=60
WRA PcP PcP 21 51 53.0 +1.1
comp=Z,3.2nm,0.5s,baz=359,slow=3.8,SNR=18
WRA ScP ScP 21 55 03.5 +0.4
comp=Z,1.1nm,0.8s,baz=4.6,slow=4.6,SNR=4.7
comp=Z,1.5nm,0.3s
GSI **Gunungsitoli** 48.39 244 P P 21 50 34.9 +0.6
GSI **Gunungsitoli** 48.39 244 P P 21 50 34.0 -0.2
QIS **Mount Isa** 48.59 180 P P 21 50 35.3 -0.3
TNA **Tin City** 49.22 26 P P 21 50 39.6 0.0
baz=247
K13K **Kusilvak Mount** 49.36 31 P P 21 50 41.2 +0.4
baz=254
M13K **Dall Lake** 49.57 33 P P 21 50 42.9 +0.5
baz=256
F14K **Arctic Creek** 49.80 26 P P 21 50 44.3 +0.3
baz=249
PDGK **Podgornoye** 50.06 304 P P 21 50 46.3 -0.2
L14K **Kuka Creek** 50.11 32 P P 21 50 46.2 -0.1
baz=256
SDPT **Sand Point** 50.16 40 P P 21 50 46.6 -0.2
baz=263
N14K **Kuskokwak Cree** 50.27 34 P P 21 50 47.6 +0.1
baz=258
M14K **Bethel** 50.32 33 P P 21 50 49.5 +1.7
M14K IAmb IAmb 21 50 50.6
comp=Z,9.7nm,0.7s
M14K **Bethel** 50.32 33 P P 21 50 47.9 +0.1
baz=257
O14K **Tigyukauivet M** 50.35 35 P P 21 50 47.7 -0.4
baz=259
WUS **Wushi** 50.42 302 P P 21 50 49.2 0.0
F15K **North Star Dit** 50.54 26 P P 21 50 50.7 +1.3
F15K IAmb IAmb 21 50 52.8
comp=Z,14nm,1.4s
F15K **North Star Dit** 50.54 26 P P 21 50 49.8 +0.3
baz=250
G15K **Niukluk** 50.55 27 P P 21 50 49.2 -0.3
baz=252
KURK **Kurchatov** 50.58 314 P P 21 50 49.5 -0.4
CHNA **Chernabura Isl** 50.60 41 P P 21 50 49.8 -0.3
baz=264
KURBB **Kurchatov Arra** 50.63 314 P P 21 50 50.0 -0.4
comp=Z,4.2nm,0.4s,baz=92,slow=7.5,SNR=20
comp=Z,4.2nm,0.4s
NRIK **Noril'sk** 50.72 339 P P 21 50 50.6 -0.1
comp=Z,4.8nm,0.4s,baz=121,slow=4.1,SNR=5.3
comp=Z,4.8nm,0.4s
NRIK **Noril'sk** 50.72 339 P P 21 50 50.6 -0.1
NRIK IAmb IAmb 21 50 51.6
comp=Z,9.6nm,1.0s
L15K **Ungalak Mounta** 50.75 32 P P 21 50 51.4 +0.3
baz=257
S14K **Fog Glacier** 50.79 39 P P 21 50 51.6 0.0
baz=263
M15K **Kasigluk River** 50.92 33 P P 21 50 52.7 +0.4
baz=258
O15K **Ungalikthiuk R** 51.06 35 P P 21 50 54.5 +1.1
O15K IAmb IAmb 21 51 11.2
comp=Z,25nm,1.4s
O15K **Ungalikthiuk R** 51.06 35 P P 21 50 53.9 +0.4
baz=260
N15K **Kwethluk River** 51.10 34 P P 21 50 54.8 +1.1
N15K **Kwethluk River** 51.10 34 P P 21 50 54.3 +0.6
baz=259
H16K **Elim** 51.17 28 P P 21 50 54.6 +0.5
baz=254
C16K **Lisburne Hills** 51.20 23 P P 21 50 54.9 +0.7
baz=248
G16K **Koyuk River** 51.34 27 P P 21 50 55.7 +0.4
baz=253
TARG **Taragay, Kyrgy** 51.43 302 P P 21 50 57.9 +1.0
J16K **Anvik River** 51.52 30 P P 21 50 57.1 +0.4
baz=256
I17K **Unalakleet** 51.63 29 P P 21 50 57.6 +0.2
baz=256
L16K **Owhat River** 51.69 32 P P 21 50 58.5 +0.5
baz=259
D17K **Noatak River** 51.79 24 P P 21 50 58.9 +0.4
baz=251
N16K **Nishlik Lake** 51.81 34 P P 21 50 59.6 +0.8
baz=260
M16K **Timber Creek** 51.81 33 P P 21 50 59.1 +0.2
baz=260
KDJ **Kajisay** 51.85 303 P P 21 50 58.4 -1.3
AS01 **Alice Springs** 51.98 187 P P 21 51 00.0 -0.6
AS31 **Alice Springs** 51.99 187 P P 21 51 00.6 -0.1
ASAR **Alice Springs** 51.99 187 P P 21 51 00.7 +0.1
comp=Z,1.0nm,0.4s,baz=3.8,slow=6.6,SNR=25
ASAR PcP PcP 21 52 07.1 +1.4
comp=Z,2.3nm,0.7s,baz=9.6,slow=4.3,SNR=12
comp=Z,1.0nm,0.4s
ASAR **Alice Springs** 51.99 187 P P 21 51 00.5 -0.1
O16K **Kokwok River B** 52.00 35 P P 21 51 00.7 +0.5
baz=262
C17K **DeLong Mountai** 52.02 23 P P 21 51 00.7 +0.5
baz=250
E17K **Hotham Inlet** 52.05 25 P P 21 51 00.7 +0.3
baz=252
G17K **Kiwalik Mounta** 52.06 27 P P 21 51 01.2 +0.7
baz=255,SNR=7.1
F17K **Baldwin Pennin** 52.08 26 P P 21 51 01.2 +0.5
baz=253
H17K **Granite Mounta** 52.22 28 P P 21 51 02.1 +0.4
baz=256
J17K **VABM Dome** 52.22 30 P P 21 51 02.5 +0.7
baz=258
L17K **Donlin** 52.32 32 P P 21 51 03.0 +0.5
baz=260
K17K **Iditarod** 52.43 31 P P 21 51 03.9 +0.6
baz=259
ASAI **AK-SAY(Kyrgyzs** 52.48 301 P P 21 51 05.3 +0.9
O17K **Koliganek Bris** 52.53 35 P P 21 51 05.3 +1.3
baz=262
N17K **Nushagak Hills** 52.59 34 P P 21 51 05.7 +1.2
baz=262
M17K **Holitna River** 52.60 33 P P 21 51 05.9 +1.4
baz=261
E18K **Tukpahlearik C** 52.61 25 P P 21 51 05.6 +1.1
baz=253
BOOM **Boomskoye usch** 52.73 303 P P 21 51 06.4 +0.4
F18K **Selawik** 52.74 26 P P 21 51 06.7 +1.3
baz=255
MBWA **Marble Bar** 52.85 204 P P 21 51 06.6 -0.2
MBWA IAmb IAmb 21 51 29.3
comp=Z,27nm,1.4s
H18K **Honhosa River** 52.91 28 P P 21 51 07.4 +0.7
baz=257
CHIR **Chirikof Islan** 52.94 40 P P 21 51 07.5 +0.5
baz=267
G18K **Tagagawik** 52.96 27 P P 21 51 08.0 +0.9
G18K **Tagagawik** 52.96 27 P P 21 51 07.8 +0.7
baz=256,SNR=5.4
L18K **Granite Mounta** 53.08 32 P P 21 51 09.2 +1.3
baz=261
N18K **Kilae Creek** 53.24 34 P P 21 51 09.7 +0.5
baz=263
A19K **Wainwright** 53.31 21 P P 21 51 10.4 +1.0
baz=251
M18K **Stony River** 53.38 33 P P 21 51 11.0 +0.9
baz=262
P18K **Big Mountain,** 53.43 35 P P 21 51 11.7 +1.2
baz=264
KSH2 **Kashi** 53.45 299 P P 21 51 12.0 +0.8
KSH2 pmax pmax
comp=Z,7.0nm,0.8s
C19K **Lookout Ridge** 53.46 23 P P 21 51 11.7 +1.1
baz=253
Q18K **Katmai Hardscr** 53.48 36 P P 21 51 11.7 +0.7
baz=265
O18K **Koktuh Hills** 53.49 35 P P 21 51 12.0 +1.1
baz=264
F19K **Shaleruckik Mo** 53.52 26 P P 21 51 12.4 +1.4
baz=257
G19K **Purcell Mounta** 53.64 27 P P 21 51 13.2 +1.3
baz=258
H19K **Roundabout Mou** 53.77 28 P P 21 51 14.1 +1.4
baz=259,SNR=11
SII **Sitkinak Islan** 53.78 39 P P 21 51 13.8 +0.7
baz=268
D19K **Kuna River** 53.81 24 P P 21 51 14.1 +1.0
baz=255
J19K **Poorman** 53.84 30 P P 21 51 14.3 +0.9
baz=261
E19K **Redstone River** 53.88 25 P P 21 51 14.6 +1.0
baz=257,SNR=7.3
L19K **White Mountain** 53.93 32 P P 21 51 14.7 +0.6
baz=263
N19K **Bonanza Creek** 53.94 34 P P 21 51 14.8 +0.5
baz=264
Q19K **Cape Douglas,** 54.20 36 P P 21 51 16.8 +0.7
baz=266
OHAK **Old Harbor** 54.30 38 P P 21 51 17.3 +0.6
OHAK **Old Harbor** 54.30 38 P P 21 51 17.8 +1.1
baz=268
F20K **Avaraart Lake** 54.36 26 P P 21 51 17.3 +0.3
F20K **Avaraart Lake** 54.36 26 P P 21 51 18.2 +1.3
baz=258
D20K **Etivluk River** 54.40 24 P P 21 51 18.4 +1.1
baz=256
H20K **Anotleneega Mo** 54.41 28 P P 21 51 18.7 +1.3
baz=260,SNR=5.0
K20K **Telida** 54.44 30 P P 21 51 18.6 +1.0
baz=263
E20K **Nigu River** 54.44 24 P P 21 51 18.6 +0.9
baz=257
J20K **Nowinta River** 54.51 29 P P 21 51 19.2 +1.1
baz=262,SNR=8.1
KDAK **Kodiak Island** 54.70 37 P P 21 51 20.0 +0.5
KDAK IAmb IAmb 21 51 36.9
comp=Z,26nm,1.2s
KDAK **Kodiak Island** 54.70 37 P P 21 51 20.6 +1.1
baz=266
O20K **Slope Mountain** 54.80 35 P P 21 51 21.3 +1.0
baz=266
G21K **Allakaket** 55.13 27 P P 21 51 23.4 +1.0
baz=261
C21K **Knifeblade Rid** 55.14 23 P P 21 51 23.5 +1.0
baz=258
PPLA **Purkeypile** 55.23 31 P P 21 51 24.0 +0.6
baz=265
F21K **Alatna River** 55.25 26 P P 21 51 24.6 +1.3
baz=260
CHUM **Lake Minchumin** 55.27 30 P P 21 51 24.4 +0.9
baz=264
H21K **Melozitna Rive** 55.28 28 P P 21 51 24.6 +1.0
baz=262,SNR=6.3
E21K **Killik River** 55.29 24 P P 21 51 23.8 +0.3
baz=259
B21K **Ikpikpuk River** 55.30 23 P P 21 51 24.7 +1.2
baz=258
CAST **Castle Rocks** 55.33 31 P P 21 51 25.1 +1.2
baz=264
SKT **Skwentna** 55.46 32 P P 21 51 26.1 +1.2
baz=266
BVAR **Borovoye Array** 55.67 317 P P 21 51 26.4 -0.1
comp=Z,6.9nm,0.6s,baz=90,slow=8.0,SNR=33
BVAR PcP PcP 21 52 19.5 0.0
comp=Z,4.1nm,0.6s,baz=112,slow=6.6,SNR=7.1
comp=Z,6.9nm,0.6s
BORK **Borovoye** 55.71 317 P P 21 51 26.4 -0.3
BORK IAmb IAmb 21 51 28.0
comp=Z,14nm,1.0s
ARK **Arkit** 55.75 303 P P 21 51 28.1 +0.7
L22K **Petersville** 55.85 32 P P 21 51 28.0 +0.4
H22K **Ishtalitna Cre** 55.90 28 P P 21 51 29.5 +1.6
baz=263,SNR=6.1
G22K **Bettles** 55.97 26 P P 21 51 29.5 +1.2
baz=263
E22K **Anaktuvuk Pass** 56.03 25 P P 21 51 29.9 +1.1
baz=262
MLY **Manley** 56.07 29 P P 21 51 30.0 +0.8
baz=265,SNR=5.8
TRF **Thorofare Moun** 56.14 31 P P 21 51 30.1 +0.3
baz=266
NIL **Nilore** 56.37 293 P P 21 51 32.4 +0.7
COLD **Coldfoot** 56.52 26 P P 21 51 32.7 +0.6
baz=264
G23K **Bananza Creek** 56.53 27 P P 21 51 34.0 +1.8
G23K **Bananza Creek** 56.53 27 P P 21 51 33.6 +1.3
baz=264,SNR=7.3
D23K **Nanushuk River** 56.56 24 P P 21 51 33.5 +1.1
baz=262
PMR **Palmer** 56.58 33 P P 21 51 33.9 +1.2
baz=268
KK31 **Karatay Array** 56.60 305 P P 21 51 32.9 -0.3
KK31 IAmb IAmb 21 51 34.1
comp=Z,9.5nm,0.8s
KKAR **Karatay Array** 56.60 305 P P 21 51 33.2 0.0
H23K **Yukon River** 56.64 28 P P 21 51 34.5 +1.5
baz=265
I23K **Minto, Yukon-K** 56.66 29 P P 21 51 34.0 +0.8
baz=266
C23K **Itkillik River** 56.71 23 P P 21 51 34.3 +0.9
baz=262
NEA2 **Nenana** 56.75 29 P P 21 51 34.8 +1.0
baz=266,SNR=6.1
MCK **McKinley** 56.76 30 P P 21 51 33.9 +0.1
baz=267
E23K **Chandalar** 56.83 25 P P 21 51 35.2 +0.8
baz=264
WAT1 **Susitna Watana** 56.89 31 P P 21 51 35.5 +0.7
baz=268
KNK **Knik Glacier** 56.90 33 P P 21 51 35.5 +0.6
baz=269
BTK **Batken** 56.91 301 P P 21 51 35.2 -0.2
TOLK **Toolik Lake Re** 56.92 24 P P 21 51 35.8 +0.9
baz=263
SML **Sawmill** 56.97 33 P P 21 51 36.4 +1.0
baz=269
D24K **Happy Valley** 57.24 24 P P 21 51 37.8 +0.8
baz=264
M23K **Glacier View** 57.26 33 P P 21 51 38.4 +1.1
baz=270
E24K **Your Creek** 57.26 25 P P 21 51 38.3 +1.0
E24K **Your Creek** 57.26 25 P P 21 51 37.7 +0.4
baz=265
WAT6 **Susitna Watana** 57.26 32 P P 21 51 38.0 +0.4
baz=269
H24K **Noodor Dome** 57.33 28 P P 21 51 39.0 +1.2
baz=267,SNR=9.2
P23K **Montague Islan** 57.42 35 P P 21 51 39.6 +1.2
baz=271
F24K **Squaw Lake** 57.44 26 P P 21 51 39.5 +1.0
baz=266,SNR=5.3
DHY **Denali Highway** 57.44 31 P P 21 51 39.7 +1.0
baz=269
SCM **Sheep Creek Mo** 57.44 33 P P 21 51 39.1 +0.4
baz=270
POKR **Poker Plat Res** 57.48 29 P P 21 51 39.7 +0.9
baz=268
GAR **Garm** 57.50 300 P P 21 51 39.1 -0.5
GAR IAmb IAmb 21 51 40.4
comp=Z,13nm,0.8s
GAR **Garm** 57.50 300 P P 21 51 39.2 -0.3
G24K **Hadweenzic Riv** 57.54 27 P P 21 51 40.6 +1.4
baz=267,SNR=7.7
GLI **Glacier Island** 57.56 34 P P 21 51 40.6 +1.2
baz=271
HDA **Harding Lake** 57.66 30 P P 21 51 40.7 +0.7
baz=268
ILAR **Eielson Array** 57.70 29 P P 21 51 40.2 -0.1
comp=Z,1.8nm,0.8s,baz=294,slow=8.9,SNR=19
comp=Z,1.8nm,0.8s
ILAR **Eielson Array** 57.70 29 P P 21 51 39.9 -0.4
HIN **Hinchinbrook I** 57.86 34 P P 21 51 42.6 +1.1
HIN IAmb IAmb 21 51 42.8
comp=Z,13nm,0.9s
M24K **Tolsona, Glenn** 57.99 32 P P 21 51 42.9 +0.5
baz=271
G25K **Bearman Lake** 58.09 27 P P 21 51 43.8 +1.0
baz=268
KLU **Klutina** 58.12 33 P P 21 51 44.8 +1.5
baz=271
D25K **Kavik River** 58.13 24 P P 21 51 44.6 +1.4
baz=266
K24K **Donnelly Dome** 58.16 30 P P 21 51 44.8 +1.3
baz=270
EYAK **Cordova Ski Ar** 58.23 34 P P 21 51 45.4 +1.4
baz=272
F25K **Christian Rive** 58.30 26 P P 21 51 46.1 +1.7
baz=268
J25K **Salcha River,** 58.34 29 P P 21 51 46.0 +1.3
baz=270
E25K **Arctic Village** 58.35 25 P P 21 51 46.7 +1.9
baz=267
CHGR **Chuyangaron** 58.45 300 P P 21 51 46.1 0.0
CHGR **Chuyangaron** 58.45 300 P P 21 51 46.2 +0.2
HARP **HAARP** 58.46 32 P P 21 51 47.4 +1.8
baz=271
RIDG **Independent Ri** 58.58 30 P P 21 51 47.6 +1.3
baz=271
N25K **Chitina, Valde** 58.75 33 P P 21 51 49.0 +1.4
baz=272
BMRM **Bremner River** 58.77 34 P P 21 51 48.7 +1.0
baz=273
F26K **Sheenjek River** 58.88 26 P P 21 51 50.1 +1.8
F26K **Sheenjek River** 58.88 26 P P 21 51 49.8 +1.5
baz=269
MSVF **Nonsavu** 58.91 136 P P 21 51 48.9 -0.4
KAIM **Kayak Island** 58.92 35 P P 21 51 49.6 +0.9
baz=274
SCRK **Sand Creek** 58.95 30 P P 21 51 49.6 +0.6
baz=271,SNR=12
G26K **Porcupine Rive** 59.01 27 P P 21 51 50.5 +1.4
baz=270
C27K **Jago River** 59.08 23 P P 21 51 50.8 +1.2
baz=268
BERG **Berg Lake** 59.25 34 P P 21 51 52.6 +1.7
BERG IAmb IAmb 21 51 53.2
comp=Z,8.7nm,0.5s
L26K **Log Cabin Wild** 59.27 31 P P 21 51 52.1 +1.0
baz=273
I26K **Coal Creek Min** 59.28 28 P P 21 51 52.2 +1.2
baz=271
M26K **Nabesna, AK** 59.47 32 P P 21 51 53.4 +1.0
baz=273
ARMA **Armidale** 59.50 168 P P 21 51 54.3 +1.2
ARMA IAmb IAmb 21 51 57.9
comp=Z,24nm,1.4s
MCARA **McCarthy VSAT** 59.51 33 P P 21 51 53.6 +0.9
baz=274
CRQE **Cirque** 59.52 34 P P 21 51 53.8 +0.9
baz=274
KBL **Kabul** 59.53 295 P P 21 51 53.3 -0.2
FORT **Forrest** 59.81 192 P P 21 51 55.3 +0.3
FORT IAmb IAmb 21 52 37.8
comp=Z,18nm,1.3s
E27K **Coleen River** 59.84 25 P P 21 51 55.5 +0.8
baz=271
G27K **Doyon Strip** 59.85 27 P P 21 51 56.0 +1.1
baz=272
STKA **Stephens Creek** 59.89 178 P P 21 51 55.8 +0.3
comp=Z,3.0nm,0.6s,baz=22,slow=7.5,SNR=12
comp=Z,3.0nm,0.6s
STKA **Stephens Creek** 59.89 178 P P 21 51 55.8 +0.3
I27K **Kandik River** 59.91 28 P P 21 51 56.8 +1.5
baz=273,SNR=5.7
H27K **Steamboat Moun** 59.92 27 P P 21 51 57.5 +2.2
H27K **Steamboat Moun** 59.92 27 P P 21 51 56.7 +1.3
baz=272,SNR=7.9
L27K **Beaver Creek,** 59.96 31 P P 21 51 56.7 +1.0
baz=274
M27K **Edge Creek, AK** 59.99 32 P P 21 51 56.7 +0.7
baz=274
D27M **Malcolm River** 60.05 24 P P 21 51 57.3 +1.1
baz=271
BVCY **Beaver Creek** 60.46 32 P P 21 52 00.2 +1.2
baz=275
F28M **Old Crow** 60.51 26 P P 21 52 00.6 +1.3
baz=273
E28M **Babbage River** 60.59 25 P P 21 52 00.7 +1.0
baz=273
I28M **Miner Creek** 60.62 28 P P 21 52 01.1 +1.0
I28M IAmb IAmb 21 52 02.3
comp=Z,4.5nm,0.7s
I28M **Miner Creek** 60.62 28 P P 21 52 01.0 +0.9
baz=274,SNR=8.1
YUK3 **Moose Creek** 60.70 32 P P 21 52 01.9 +1.0
baz=276
BBOO **Buckleboo** 60.89 184 P P 21 52 02.0 -0.2
O28M **Mount Upton** 60.94 34 P P 21 52 02.9 +0.3
baz=277
DAWY **Dawson** 60.97 30 P P 21 52 03.4 +1.0
baz=275
PINM **Pinnacle** 60.99 34 P P 21 52 03.4 +0.8
baz=277
YUK8 **Steele Glacier** 61.09 33 P P 21 52 04.2 +0.7
baz=277
H29M **Whitestone** 61.20 27 P P 21 52 04.9 +1.1
baz=275
E29M **Blow River** 61.20 25 P P 21 52 05.6 +1.8
baz=274
G29M **Pine Creek** 61.28 26 P P 21 52 06.0 +1.7
baz=275,SNR=7.8
M29M **Somme Creek** 61.56 32 P P 21 52 07.9 +1.5
baz=277,SNR=9.2
YUK4 **Talbot Arm** 61.62 33 P P 21 52 08.3 +1.5
baz=278
L29M **L29M** 61.63 31 P P 21 52 08.4 +1.7
baz=277,SNR=7.2
O29M **Mount Kennedy** 61.79 34 P P 21 52 09.4 +1.4
baz=278
YUK6 **Outpost Mounta** 61.81 33 P P 21 52 09.5 +1.3
baz=278
K29M **Barlow Dome** 61.81 30 P P 21 52 09.3 +1.3
baz=277,SNR=5.3
EPYK **Eagle Plains** 61.85 27 P P 21 52 09.6 +1.5
baz=277,SNR=10
G30M **tAoh Zraii Nji** 61.98 26 P P 21 52 09.9 +0.9
baz=277
F30M **Barrier River** 62.07 26 P P 21 52 11.0 +1.5
F30M IAmb IAmb 21 52 11.8
comp=Z,9.7nm,1.3s

F30M	**Barrier River**	**62.07**	**26**	P		**P**	**21 52 11.0**	**+1.5**
	baz=277								
I30M	**Mount Dempster**	**62.13**	**28**	P		**P**	**21 52 11.4**	**+1.4**
	baz=278,SNR=10								
ARTI	**Arti**	**62.23**	**322**	P		**P**	**21 52 10.1**	**-0.6**
J30M	**Hart River**	**62.23**	**29**	P		**P**	**21 52 12.1**	**+1.3**
J30M	**Hart River**	**62.23**	**29**	P		**P**	**21 52 11.9**	**+1.1**
	baz=278,SNR=6.1								
HYT	**Haines Junctio**	**62.24**	**33**	P		**P**	**21 52 12.4**	**+1.5**
	baz=279								
P29M	**Windy Craggy**	**62.31**	**35**	P		**P**	**21 52 12.9**	**+1.6**
	baz=279								
M30M	**Minto, Yukon**	**62.31**	**31**	P		**P**	**21 52 12.8**	**+1.6**
	baz=278,SNR=5.2								
N30M	**Aishikik Lake**	**62.34**	**33**	P		**P**	**21 52 12.9**	**+1.4**
	baz=279								
P30M	**Million Dollar**	**62.62**	**34**	P		**P**	**21 52 14.7**	**+1.4**
	baz=280								
AB31	**Akbulak array**	**62.68**	**313**	P		**P**	**21 52 13.2**	**-0.5**
AB31				IAmb	IAmb		21 52 14.2		
	comp=Z,12nm,0.6s								
ABKAR	**Akbulak array**	**62.68**	**313**	P		**P**	**21 52 13.6**	**-0.2**
G31M	**Satah River**	**62.74**	**26**	P		**P**	**21 52 14.8**	**+0.9**
	baz=278								
INK	**Inuvik**	**62.83**	**25**	P		**P**	**21 52 15.7**	**+1.4**
	baz=278								
H31M	**Peel River**	**62.88**	**28**	P		**P**	**21 52 15.9**	**+1.0**
	baz=279,SNR=5.6								
O30N	**Mendenhall**	**62.93**	**33**	P		**P**	**21 52 16.3**	**+1.1**
	baz=280								
N31M	**Braeburn, Yuko**	**62.96**	**32**	P		**P**	**21 52 16.5**	**+1.1**
	baz=280								
PLBC	**Pleasant Camp**	**63.03**	**35**	P		**P**	**21 52 17.2**	**+1.4**
	baz=280								
M31M	**Drury Creek, Y**	**63.48**	**32**	P		**P**	**21 52 20.0**	**+1.2**
	baz=281,SNR=6.0								
WHY	**Whitehorse**	**63.54**	**33**	P		**P**	**21 52 20.4**	**+1.1**
	baz=281								
N32M	**Quiet Lake**	**64.30**	**33**	P		**P**	**21 52 24.9**	**+0.8**
	baz=282								
P32M	**Atlin**	**64.33**	**34**	P		**P**	**21 52 24.5**	**+0.2**
	baz=282								
P33M	**Teslin, Yukon**	**64.63**	**34**	P		**P**	**21 52 27.5**	**+1.2**
	baz=283								
MMPY	**Sheldon Lake,**	**64.82**	**31**	P		**P**	**21 52 29.1**	**+1.7**
	baz=283								
R33M	**Jennings River**	**65.74**	**34**	P		**P**	**21 52 34.8**	**+1.5**
	baz=285								
TGTN	**Hyland Airport**	**66.45**	**31**	P		**P**	**21 52 39.4**	**+1.7**
	baz=286								
DLBC	**Dease Lake**	**66.46**	**35**	P		**P**	**21 52 39.2**	**+1.4**
	baz=286								
DIB	**Dawson Inlet,**	**66.58**	**41**	P		**P**	**21 52 39.5**	**+1.0**
DIB				IAmb	IAmb		21 52 40.2		
	comp=Z,4.0nm,0.7s								
T35M	**Bob Quinn**	**66.75**	**37**	P		**P**	**21 52 40.9**	**+1.4**
	baz=286								
VADS	**Vadso**	**70.22**	**340**	*e*P		**P**	**21 53 00.9**	**+0.6**
KEV	**Kevo**	**71.10**	**340**	P		**P**	**21 53 05.9**	**+0.3**
ARA0	**ARCESS Array S**	**71.67**	**340**	*e*P		**P**	**21 53 09.6**	**+0.6**
ARCES	**ARCESS Array B**	**71.67**	**340**	P		**P**	**21 53 09.5**	**+0.5**
	comp=Z,3.8nm,0.4s,baz=69,slow=8.2,SNR=48								
	comp=Z,3.8nm,0.4s								
ARCES	**ARCESS Array B**	**71.67**	**340**	P		**P**	**21 53 09.3**	**+0.3**
ARCES				IAmb	IAmb		21 53 10.6		
	comp=Z,13nm,1.1s								
YKA	**Yellowknife Ar**	**72.09**	**28**	P		**P**	**21 53 12.2**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=301,slow=5.9,SNR=5.0								
	comp=Z,1.0nm,0.6s								
KTK1	**Kautokeino**	**72.63**	**340**	*e*P		**P**	**21 53 15.5**	**+0.9**
JETT	**Jettan, Norway**	**73.13**	**341**	*e*P		**P**	**21 53 18.2**	**+0.7**
JETT				IAmb	IAmb		21 53 18.4		
	comp=Z,20nm,1.0s								
TRO	**Tromso**	**73.50**	**342**	*e*P		**P**	**21 53 19.8**	**+0.2**
TRO				IAmb	IAmb		21 53 21.8		
	comp=Z,419nm,2.9s								
KBZ	**Khabaz**	**75.58**	**312**	P		**P**	**21 53 32.4**	**+0.6**
	comp=Z,12nm,0.8s,baz=104,slow=3.9,SNR=25								
	comp=Z,12nm,0.8s								
KIV	**Kislovodsk**	**75.62**	**312**	P		**P**	**21 53 33.8**	**+1.6**
KIV				IAmb	IAmb		21 53 34.4		
	comp=Z,8.9nm,0.8s								
KIV	**Kislovodsk**	**75.62**	**312**	P		**P**	**21 53 32.5**	**+0.3**
	comp=Z,8.1nm,0.8s								
KIV	**Kislovodsk**	**75.62**	**312**	P		**P**	**21 53 33.2**	**+1.0**
STEI	**Steigen**	**75.62**	**341**	*e*P		**P**	**21 53 31.9**	**+0.3**
STEI				IAmb	IAmb		21 53 32.3		
	comp=Z,149nm,2.4s								
FINES	**FINESS Array B**	**75.88**	**333**	P		**P**	**21 53 33.1**	**-0.1**
	comp=Z,8.8nm,0.3s,baz=68,slow=4.8,SNR=235								
	comp=Z,8.8nm,0.3s								
NNZ	**Nelson**	**75.88**	**154**	P		**P**	**21 53 33.9**	**+0.6**
FAUS	**Fauske**	**75.98**	**341**	*e*P		**P**	**21 53 34.0**	**+0.4**
FAUS				IAmb	IAmb		21 53 36.1		
	comp=Z,39nm,2.1s								
TUWZ	**Tuamarina**	**76.28**	**154**	P		**P**	**21 53 36.6**	**+1.0**
EPOS	**Posof**	**76.66**	**310**	P		**P**	**21 53 39.1**	**+1.0**
RAUS	**Rausandaksla**	**76.98**	**340**	*e*P		**P**	**21 53 39.1**	**-0.1**
VAGH	**Vaagaholmen**	**77.00**	**341**	*e*P		**P**	**21 53 39.2**	**0.0**
MOR8	**Moi Rana**	**77.04**	**340**	*e*P		**P**	**21 53 38.9**	**-0.6**
LEIR	**Leirfjorden**	**77.47**	**340**	*e*P		**P**	**21 53 41.7**	**-0.1**
HAKT	**HAKKARI**	**77.70**	**306**	P		**P**	**21 53 44.0**	**0.0**
MTSE	**Matsula**	**78.38**	**331**	P		**P**	**21 53 46.8**	**-0.1**
NSS	**Namsos**	**78.93**	**340**	*e*P		**P**	**21 53 49.4**	**-0.3**
NSS				IAmb	IAmb		21 53 50.3		
	comp=Z,19nm,1.4s								
NACGM	**Naroch**	**79.24**	**327**	⇓*i*P		**P**	**21 53 51.6**	**0.0**
	comp=Z,20nm,0.8s,baz=55								
KELT	**Kelkit**	**79.62**	**310**	P		**P**	**21 53 55.4**	**+1.2**
PABE	**Paberze**	**80.21**	**329**	P		**P**	**21 53 56.7**	**0.0**
PABE	**Paberze**	**80.21**	**329**	P		**P**	**21 53 56.6**	**0.0**
AK03	**Malin Array Si**	**80.33**	**323**	P		**P**	**21 53 56.6**	**-0.8**
AKASG	**Malin Array Be**	**80.34**	**323**	P		**P**	**21 53 56.9**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=53,slow=5.3,SNR=28								
	comp=Z,2.3nm,0.4s								
AKASG	**Malin Array Be**	**80.34**	**323**	P		**P**	**21 53 57.1**	**-0.3**
AKBB	**Malin Array Si**	**80.34**	**323**	P		**P**	**21 53 56.7**	**-0.8**
AKBB				IAmb	IAmb		21 53 57.7		
	comp=Z,8.3nm,0.6s								
AKBB	**Malin Array Si**	**80.34**	**323**	P		**P**	**21 53 56.9**	**-0.6**
KIEV	**Kiev**	**80.35**	**323**	P		**P**	**21 53 56.5**	**-1.1**
MI28	**MI28,Pidlybu**	**81.03**	**324**	P		**P**	**21 53 59.7**	**-1.4**
HFS	**Hagfors**	**81.43**	**336**	P		**P**	**21 54 02.4**	**-0.6**
	comp=Z,5.3nm,0.4s,baz=101,slow=3.0,SNR=60								
	comp=Z,5.3nm,0.4s								
NVAR	**Mina Array Bea**	**81.46**	**51**	P		**P**	**21 54 05.7**	**+1.9**
	comp=Z,1.8nm,0.7s,baz=302,slow=6.3,SNR=4.0								
	comp=Z,1.8nm,0.7s								
NVAR	**Mina Array Bea**	**81.46**	**51**	P		**P**	**21 54 04.8**	**+0.9**
LUBAR	**Lubar, Ukraine**	**81.56**	**323**	P		**P**	**21 54 03.1**	**-0.7**
NB201	**NORSAR Array S**	**81.63**	**337**	P		**P**	**21 54 03.2**	**-0.8**
BAL3X	**Bal3x, Balta**	**81.65**	**320**	P		**P**	**21 54 04.3**	**0.0**
NB2	**NORSAR Subarra**	**81.66**	**337**	P		**P**	**21 54 03.5**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=45,slow=5.3								
NB2	**NORSAR Subarra**	**81.66**	**337**	P		**P**	**21 54 03.5**	**-0.7**
NOA	**NORSAR Array B**	**81.66**	**337**	P		**P**	**21 54 03.8**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=60,slow=6.2,SNR=20								
	comp=Z,3.5nm,0.5s								
RNPP9	**Sopachiv**	**81.68**	**325**	P		**P**	**21 54 04.1**	**-0.3**
NC602	**NORSAR Array S**	**81.77**	**337**	*e*P		**P**	**21 54 04.0**	**-0.7**
RAYN	**Ar Rayn**	**82.67**	**293**	P		**P**	**21 54 10.4**	**+0.3**
RAYN				IAmb	IAmb		21 54 11.3		
	comp=Z,11nm,0.8s								
RAYN	**Ar Rayn**	**82.67**	**293**	P		**P**	**21 54 10.7**	**+0.6**
ANDN	**Andirin**	**82.85**	**309**	P		**P**	**21 54 10.5**	**-0.3**
KMPD	**K-Podol'skiy**	**83.03**	**322**	P		**P**	**21 54 10.5**	**-0.9**
BR131	**Keskin Array S**	**83.57**	**312**	P		**P**	**21 54 14.0**	**-0.5**
BR131				IAmb	IAmb		21 54 15.4		
	comp=Z,4.2nm,0.6s								
BRTR	**Keskin Array B**	**83.57**	**312**	P		**P**	**21 54 14.2**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=104,slow=3.5,SNR=22								
	comp=Z,2.9nm,0.5s								
BRTR	**Keskin Array B**	**83.57**	**312**	P		**P**	**21 54 14.1**	**-0.4**
BUR08	**Bucovina Ar. S**	**84.25**	**322**	P		**P**	**21 54 17.6**	**-0.1**
BUR08				IAmb	IAmb		21 54 18.3		
	comp=Z,8.4nm,1.5s								
BURAR	**Bucovina Array**	**84.26**	**322**	P		**P**	**21 54 17.1**	**-0.6**
HOMB	**Homborsund**	**84.63**	**336**	*e*P		**P**	**21 54 18.5**	**-0.6**
MMAI	**Mount Meron Ar**	**85.83**	**305**	P		**P**	**21 54 26.0**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=17,slow=8.7,SNR=6.6								
	comp=Z,1.6nm,0.5s								
CSS	**Mathiatis**	**86.29**	**308**	P		**P**	**21 54 26.7**	**-1.0**
CSS				IAmb	IAmb		21 54 48.6		
	comp=Z,15nm,1.1s								
MORC	**Moravsky Berou**	**86.86**	**327**	*e*P		**P**	**21 54 29.6**	**-0.5**
JAVC	**Velka Javorina**	**87.40**	**326**	*e*P		**P**	**21 54 33.3**	**+0.5**
VRAC	**Vranov**	**87.63**	**327**	*e*P		**P**	**21 54 32.8**	**-0.9**
KRUC	**Moravsky**	**87.89**	**327**	*e*P		**P**	**21 54 34.2**	**-0.8**
GERES	**GERESS Array B**	**89.33**	**328**	P		**P**	**21 54 41.0**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=40,slow=4.5,SNR=14								
	comp=Z,1.1nm,0.6s								
EKA	**Eskdalemuir Ar**	**90.83**	**340**	P		**P**	**21 54 47.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=54,slow=3.3,SNR=15								
	comp=Z,0.5nm,0.3s								
FUORN	**Ofenpass-Fuorn**	**92.54**	**328**	P		**P**	**21 54 56.2**	**-0.7**
FUORN				IAmb	IAmb		21 54 57.1		
	comp=Z,2.7nm,0.8s								
TXAR	**Lajitas Array**	**96.59**	**52**	P		**P**	**21 55 13.7**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=329,slow=4.3,SNR=4.0								
	comp=Z,0.2nm,0.6s								
TXAR	**Lajitas Array**	**96.59**	**52**	P		**P**	**21 55 14.3**	**-1.1**
QSPA	**South Pole Qui**	**118.09**	**180**	PKP		**PKPdf**	**22 00 28.3**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=284,slow=1.6,SNR=26								
QSPA	**South Pole Qui**	**118.09**	**180**	PKPdf		**PKPdf**	**22 00 28.5**	**0.0**
TORD	**Torodi Ar. Bea**	**122.14**	**310**	PKP		**PKPdf**	**22 00 37.6**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=62,slow=1.4,SNR=26								
BELA	**Belgrano 2**	**130.29**	**182**	PKPdf		**PKPdf**	**22 00 51.6**	**+0.1**
DBIC	**Dimbokro**	**131.24**	**310**	PKP		**PKPdf**	**22 00 55.6**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=36,slow=4.0,SNR=1.5								
SNAA	**Sanae**	**132.00**	**195**	PKP		**PKPdf**	**22 00 55.5**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=91,slow=0.9,SNR=4.2								
SNAA	**Sanae**	**132.00**	**195**			**PKPdf**	**22 00 54.9**	**-0.1**
ESPZ	**Base Esperanza**	**143.27**	**167**	PKPdf		**PKPdf**	**22 01 15.2**	**-0.5**
LPAZ	**La Paz**	**151.66**	**71**	PKPbc		**PKiKP**	**22 01 39.5**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=335,slow=2.6,SNR=8.3								
LPAZ	**La Paz**	**151.66**	**71**			**PKiKP**	**22 01 40.0**	**+1.3**
PLCA	**Paso Flores**	**152.29**	**125**	PKPbc		**PKiKP**	**22 01 39.6**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=167,slow=4.1,SNR=6.4								
PLCA	**Paso Flores**	**152.29**	**125**	PKPbc		**PKiKP**	**22 01 39.5**	**+0.8**

WEL 07 21:49:55.3±1.1, 31°S±14°×17°9W±3°7, h12km, M4.5/2, mB4.9/1, ML4.7/8, MLv4.5/2, Mw(mB)4.2/1, Error ellipse: s-maj=51.1km s-min=8.0km az=109.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.74**	**198**	P	Pn	21 51 33.0	-1.1
WMGZ	**Waiomatatini S**	**6.96**	**196**	P	Pn	21 51 40.0	+3.0
WMGZ				S	Sn	21 52 56.5	+0.3
HAZ	**Te Kaha**	**7.07**	**200**	P	Pn	21 51 41.1	+2.5
HAZ				S	Sn	21 53 02.6	+3.7
PKGZ	**Pakihiroa**	**7.09**	**198**	S	Sn	21 53 01.0	+1.6
PUZ	**Puketiti**	**7.24**	**197**	P	Pn	21 51 42.6	+1.7
PUZ				S	Sn	21 53 01.2	-1.9
RUGZ	**Raukumara Rang**	**7.30**	**200**	P	Pn	21 51 43.9	+2.1
CNGZ	**Carnagh Statio**	**7.64**	**196**	S	Sn	21 53 14.0	+1.1
MWZ	**Matawai**	**7.68**	**200**	P	Pn	21 51 48.5	+1.5
MWZ				S	Sn	21 53 15.2	+1.1
TKGZ	**Te Karaka**	**7.69**	**198**	P	Pn	21 51 45.8	-1.3
TKGZ				S	Sn	21 53 14.6	+0.5
URZ	**Urewera**	**7.74**	**203**	P	Pn	21 51 47.3	-0.6
URZ				S	Sn	21 53 18.8	+3.3
SNGZ	**Shannon Statio**	**8.15**	**200**	P	Pn	21 51 52.8	-0.7
SNGZ				S	Sn	21 53 26.2	+0.6
RAHZ	**Arahi**	**8.35**	**201**	P	Pn	21 51 55.7	-0.5
RAHZ				S	Sn	21 53 31.9	+1.4
MTHZ	**Maungataniwha**	**8.37**	**202**	P	Pn	21 51 56.1	-0.4
MTHZ				S	Sn	21 53 32.4	+1.5
NMHZ	**Naumai**	**8.60**	**202**	P	Pn	21 51 58.4	-1.4
NMHZ				S	Sn	21 53 38.4	+1.6
ARHZ	**Aropaoanui**	**8.70**	**200**	P	Pn	21 51 58.4	-2.6
ARHZ				S	Sn	21 53 38.8	-0.2
BKZ	**Black Stump Fm**	**8.77**	**203**	P	Pn	21 52 00.5	-1.4
BKZ				S	Sn	21 53 40.9	+0.1
SNVZ	**South Ngauruho**	**9.10**	**207**	P	Pn	21 52 04.8	-1.7
BHHZ	**Black Hill Sta**	**9.21**	**204**	P	Pn	21 52 05.7	-2.3
BHHZ				S	Sn	21 53 52.0	+0.5

SOME 07 22:29:27.2, 44.00N×80.83E, h10km
NNC 07 22:27:54.1±4.4, 44.57N×85.98E, h7km±14km, mb2.7, mpv2.8,4C-3D, Error ellipse: s-maj=30.9km s-min=19.1km az=123.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.41**	**312**	⇓Pn	Pn	22 28 47.5	-0.3
	0.1nm,0.4s,baz=144,slow=13,SNR=34						
MK31				⇑Pg	Pb	22 28 56.8	+1.9
	0.6nm,0.4s,baz=129,slow=15						
MK31				⇑Lg	Lg	22 29 42.5	
	baz=133,slow=29						
MAKZ	**Makanchi**	**3.59**	**310**	⇑Pn	Pn	22 28 49.4	-0.9
	1.5nm,0.8s						
MAKZ				⇓Pg	Pb	22 28 59.9	+1.9
	0.8nm,0.4s						
MAKZ				⇑Sn	Sn	22 29 33.6	+0.7
	1.3nm,0.8s						
MAKZ				⇓Lg	Lg	22 29 48.1	
	1.9nm,0.5s						
DJR	**Jarkent**	**4.44**	**269**	P	Pg	22 29 42.6	+23
	0.5nm,0.1s						
DJR				S	Sn	22 29 53.7	-0.3
	2.0nm,0.3s						
DJR	**Jarkent**	**4.44**	**269**	*e*P	Pg	22 29 42.6	+23
	0.5nm,0.1s						
DJR				*e*S	Sn	22 29 53.7	-0.3
	2.0nm,0.3s						
KNOS	**Konyrlen**	**4.87**	**270**	P	Pg	22 29 50.8	+23
	0.8nm,0.1s						
KNOS				S	Sn	22 30 08.0	+3.2
	2.1nm,0.4s						
KPKS	**Kokpek**	**5.38**	**261**	P	Pg	22 29 58.0	+21
	0.3nm,0.1s						
KPKS				S	Sn	22 30 19.9	+2.9
	3.0nm,0.3s						
KPKS	**Kokpek**	**5.38**	**261**	*e*P	Pg	22 29 58.0	+21
	0.3nm,0.1s						
KPKS				*e*S	Sn	22 30 19.9	+2.9
	3.0nm,0.3s						

IDC 07 22:29:33.4±7.3, 6.17S×147.74E, h67km±51km, mb4.0/3, mbtmp4.3/5, ML4.3/1, MS3.1/6, Error ellipse: s-maj=61.0km s-min=44.9km az=68.0
NEIC 07 22:29:36.1±0.5, 6.3S±0.1×147.7E±0.2, h74km±8km, mb4.4/15, Error ellipse: s-maj=27.5km s-min=14.8km az=83.0
ISC 07 22:29:35.4±1.0, 6.3S±0.1×147.7E±0.2, h77km, n31, σ0.874/27, mb4.3/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.18**	**190**	P	Pn	**22 30 22.2**	**-1.0**
	58nm,0.6s,baz=356,slow=6.9,SNR=36						
PMG				S	Sn	**22 31 00.7**	**+0.6**
	96nm,0.6s,baz=212,slow=22,SNR=7.8						
PMG				LR	LR	22 32 03.1	
	comp=Z,212nm,18.6s,baz=82,slow=46						
PMG	**Port Moresby**	**3.18**	**190**		Pn	**22 30 23.1**	**-0.1**
KRVT	**Keravat (AS076**	**4.72**	**66**	LR	LR	22 32 59.7	
	comp=Z,4.2nm,18.8s,baz=245,slow=44						
COEN	**Coen**	**8.86**	**210**	Pn	Pn	**22 31 40.7**	**0.0**
SIJI	**Sorong**	**17.25**	**287**	LR	LR	22 41 54.6	
	comp=Z,30nm,19.0s,baz=170,slow=43						
WB0	**Warramunga Arr**	**18.65**	**223**	P	P	**22 33 46.7**	**-0.5**
WB0				IAmb	IAmb	22 33 49.5	
	comp=Z,11nm,1.0s						
WR8	**Warramunga Arr**	**18.71**	**222**	P	P	**22 33 47.3**	**-0.6**
WR8				IAmb	IAmb	22 33 50.7	
	comp=Z,18nm,1.1s						
WRA	**Warramunga Arr**	**18.81**	**222**	P	P	**22 33 48.0**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=50,slow=10,SNR=42						
	comp=Z,7.4nm,0.8s						
EIDS	**Eidsvold**	**19.29**	**171**	P	P	**22 33 53.9**	**-0.2**
EIDS				IAmb	IAmb	22 34 08.5	
	comp=Z,31nm,1.4s						
KNRA	**Kununurra**	**20.80**	**242**	P	P	**22 34 10.5**	**-0.1**
KNRA				IAmb	IAmb	22 34 18.7	
	comp=Z,41nm,1.4s						
AS31	**Alice Springs**	**21.82**	**216**	P	P	**22 34 21.3**	**-0.2**
ASAR	**Alice Springs**	**21.82**	**216**	P	P	**22 34 21.7**	**+0.2**
	comp=Z,6.6nm,0.5s,baz=52,slow=9.0,SNR=120						
	comp=Z,6.6nm,0.5s						
ASAR	**Alice Springs**	**21.82**	**216**	P	P	**22 34 21.0**	**-0.5**
INKA	**Innaminka**	**22.37**	**196**	P	P	**22 34 26.6**	**-0.8**
ARMA	**Armidale**	**24.33**	**172**	P	P	**22 34 46.8**	**+0.7**
ARMA				IAmb	IAmb	22 34 49.7	
	comp=Z,46nm,1.5s						
STKA	**Stephens Creek**	**26.13**	**192**	P	P	**22 35 02.0**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=35,slow=8.8,SNR=7.5						
STKA				LR	LR	22 45 45.2	
	comp=Z,102nm,19.5s,baz=245,slow=37						
	comp=Z,4.3nm,0.7s						
KAPI	**Kappang**	**27.84**	**271**	LR	LR	22 48 12.5	
	comp=Z,41nm,20.1s,baz=275,slow=40						
BBOO	**Buckleboo**	**28.57**	**201**	P	P	**22 35 25.4**	**+1.3**
BBOO				IAmb	IAmb	22 35 46.3	
	comp=Z,26nm,1.5s						
FORT	**Forrest**	**30.59**	**215**	P	P	**22 35 42.4**	**+0.4**
FORT				IAmb	IAmb	22 36 05.7	
	comp=Z,10nm,1.1s						
MBWA	**Marble Bar**	**30.87**	**239**	P	P	**22 35 44.5**	**-0.1**
MORW	**Morawa**	**37.53**	**229**	P	P	**22 36 42.2**	**0.0**
NWAO	**Narrogin (SRO)**	**38.82**	**223**	P	P	**22 36 52.7**	**-0.3**
AFI	**Afiamalu**	**40.56**	**104**	LR	LR	22 50 28.4	
	comp=Z,56nm,18.1s,baz=100,slow=31						
KSRS	**Korea Array**	**47.23**	**338**	LR	LR	22 55 42.4	
	comp=Z,16nm,19.8s,baz=220,slow=33						
VNDA	**Vanda**	**71.63**	**177**	P	P	**22 40 48.9**	**+0.8**
VNDA				IAmb	IAmb	22 41 26.4	
	comp=Z,3.9nm,1.5s						
BOOM	**Boomskoye usch**	**80.95**	**315**	P	P	**22 41 42.4**	**+0.6**
QSPA	**South Pole Qui**	**83.72**	**180**	P	P	**22 41 55.8**	**0.0**
	comp=Z,6.6nm,0.4s,baz=311,slow=0.9,SNR=9.9						
	comp=Z,6.6nm,0.4s						
QSPA	**South Pole Qui**	**83.72**	**180**	P	P	**22 41 55.8**	**0.0**
QSPA				IAmb	IAmb	22 42 15.1	
	comp=Z,7.2nm,1.4s						
ILULI	**Ilulissat**	**115.91**	**7**	PKPdf	PKPdf	**22 48 09.8**	**+1.1**
AC04	**Llanos de Chal**	**129.29**	**134**	PKPdf	PKPdf	**22 48 33.9**	**-1.8**
TORD	**Torodi Ar. Bea**	**145.83**	**284**	PKPbc	PKPdf	**22 49 05.0**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=60,slow=3.3,SNR=4.5						

GRAL 07 22:29:58.8±0.3, 33.01N×35.88E, h0km±4km, MD3.0
JSO 07 22:29:58.9±0.5, 33°N±4°×3°6E±°, h3km±4km, M3.0/10, Md3.2/10, ML2.9/9, MLv2.9/10
GII 07 22:29:58.2±0.0, 33.057N±0.001×35.912E±0.001, h0km, Mws2.5, confirmed
ISC 07 22:29:58.8±1.1, 33.05N±0.02×35.94E±0.04, h7km±9km, n37, σ0.863/54, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSHT	**Keshet**	**0.13**	**236**	P	Pg	**22 30 01.0**	**-0.6**
KSHT				S	Sg	**22 30 03.8**	**+0.2**
HULT	**Hulata**	**0.28**	**269**	P	Pg	**22 30 04.1**	**-0.2**
HULT				S	Sg	**22 30 08.4**	**+0.5**
GEM	**Giv'at Ha'Em**	**0.28**	**304**	P	Pg	**22 30 04.0**	**-0.3**
GEM	**Giv'at Ha'Em**	**0.28**	**304**	P	Pg	**22 30 03.8**	**-0.5**
GEM				S	Sg	**22 30 08.4**	**+0.4**
SHBL	**Chebaa**	**0.34**	**331**	*e*P	Pg	**22 30 05.1**	**-0.3**
SHBL				*e*S	Sg	**22 30 09.9**	**0.0**
KIRY	**Kiryat Shemona**	**0.35**	**296**	P	Pg	**22 30 05.5**	**-0.1**
KNHM	**Kefar Nahum**	**0.35**	**241**	P	Pg	**22 30 05.1**	**-0.4**
KNHM				S	Sg	**22 30 11.1**	**+1.0**
ZEFT	**Zefat**	**0.38**	**257**	P	Pg	**22 30 06.0**	**-0.3**
RCY	**Rachaya**	**0.45**	**349**	*e*P	Pg	**22 30 07.3**	**-0.3**
RCY				*e*S	Sg	**22 30 13.9**	**+0.4**
MMA0B	**Mount Meron ar**	**0.45**	**265**	P	Pg	**22 30 07.1**	**-0.5**
MMA0B				S	Sg	**22 30 14.4**	**+0.9**
QRWL	**Qaraoun**	**0.54**	**337**	*e*P	Pg	**22 30 08.8**	**-0.4**
DQRL	**Deir Qamar**	**0.72**	**335**	*e*P	Pg	**22 30 12.2**	**-0.5**
DQRL				*e*S	Sg	**22 30 21.9**	**-0.2**
MMLI	**Mount Malkishu**	**0.75**	**215**	P	Pg	**22 30 12.9**	**-0.4**
MMLI				S	Sb	**22 30 24.1**	**-0.6**
QRNJ	**Al-Qirein**	**0.78**	**203**	P	Pg	**22 30 13.9**	**+0.1**
ZAHL	**Zahle**	**0.80**	**357**	*e*P	Pg	**22 30 14.0**	**-0.3**
BHL	**Bhannes**	**0.88**	**344**	*e*P	Pg	**22 30 15.0**	**-0.7**
ROII	**Roi

comp=E,8µm,0.2s
PBA IAML 23 50 16.8
comp=N,4µm,0.4s
KHLT Khaolaem Dam 6.15 73 P Pn 23 51 02.1 +3.8
PHET Kaeng Krachan 6.93 90 P Pn 23 51 12.0 +3.0
CM31 Chiang Mai Arr 8.21 48 Pn 23 51 28.2 +1.6
CMAR Chiang Mai Arr 8.21 48 Pn Pn 23 51 27.8 +1.2
comp=N,1.3nm,0.3s,baz=238,slow=15,SNR=6.2
CMAR Sn **Sn 23 52 53.4 -6.1**
comp=N,0.6nm,0.3s,baz=237,slow=29,SNR=4.5
comp=N,1.3nm,0.3s
CMAR Chiang Mai Arr 8.21 48 Pn Pn 23 51 28.7 +2.1
CHTO Chiang Mai 8.45 46 Pn Pn 23 51 31.9 +2.1
CHTO Chiang Mai 8.45 46 P Pn 23 51 41.5 +12
LAMP Lampang 8.76 50 P Pn 23 51 42.0 +7.9
BWNR Bhubaneshwar 9.64 319 *eP* **Pn 23 51 47.0 +0.9**
BWNR *ex* x 23 53 25.0
BWNR IAML 23 53 31.5
comp=Z,137nm,0.4s
VIS Vishakhapatnam 10.02 299 *ex* **Pn 23 51 53.0 +1.6**
VIS *ex* x 23 53 34.4
KULM Kulim 11.11 133 Pn Pn 23 52 07.6 +1.3
MDRS Chennai 11.96 272 *ex* Sn 23 54 19.3 -12
MDRS IAML 23 54 26.0
comp=E,50nm,0.2s
MDRS IAML 23 54 28.0
comp=E,103nm,0.3s
SHL Shillong 12.50 357 Pn Pn 23 52 26.4 +1.0
SHL Shillong 12.50 357 *eS* **Sn 23 54 37.7 -7.1**
KOHI KOHIMA 12.72 7 *eP* **Pn 23 52 27.9 -0.6**
KOHI *eS* Sn 23 54 41.1 -9.2
PALK Pallekele 12.96 245 Pn Pn 23 52 27.9 -3.7
comp=E,0.2nm,0.3s,baz=62,slow=14,SNR=1.6
PALK Sn Sn 23 54 42.2 -14
comp=E,2.5nm,0.3s,baz=142,slow=18,SNR=7.4
PALK LR LR 23 57 06.4
comp=E,170nm,20.8s,baz=66,slow=36
comp=E,5.7nm,0.9s
PALK Pallekele 12.96 245 Pn Pn 23 52 31.7 +0.1
DHUB DHUBRI 13.15 350 *ex* P 23 52 40.2 -4.1
DHUB *eS* Sn 23 54 51.3 -9.2
BLSP Bilaspur 13.36 314 *eP* **Pn 23 52 39.7 +2.6**
BLSP *ex* x 23 54 55.2
MOKO MOKOCHONG 13.37 8 *ex* **Sn 23 55 05.1 -1.0**
HYB Hyderabad 14.17 290 *ex* **P 23 52 57.8 +2.0**
HYB *ex* x 23 55 13.1
HYB IAML 23 55 27.5
comp=E,26nm,0.4s
HYB IAML 23 55 30.1
comp=E,40nm,0.4s
HYB Hyderabad 14.17 290 *eP* **Pn 23 52 48.2 0.0**
HYB *eS* **Sn 23 55 26.5 +1.0**
ZIRO ZIRO 14.49 5 *eP* **Pn 23 52 52.8 +0.1**
ZIRO *ex* x 23 55 27.9
EVN Everest 15.79 341 Pn Pn 23 53 12.2 +1.9
PZH PanZhiHua 15.97 31 P P 23 53 16.3 +0.5
LSA Lhasa 16.65 356 Pn Pn 23 53 21.3 0.0
AKL Akola 16.68 299 *eP* **P 23 53 23.2 -0.4**
AKL IAML 23 56 17.4
comp=E,48nm,0.8s
AKL *ex* x 23 56 23.6
ENH Enshi 23.26 40 P P 23 54 34.9 -0.2
LEM Lembang 24.77 142 LR LR 00 06 00.6
comp=E,145nm,21.2s,baz=345,slow=40
LZDM Lanzhou Array 24.96 22 P P 23 54 52.5 +1.2
comp=E,2.5nm,0.3s,baz=210,slow=13,SNR=3.7
comp=E,2.5nm,0.3s
LZH Lanzhou 25.13 22 *eP* **P 23 54 53.6 +0.9**
LZH sP sP 23 55 01.2 +4.2
LZH pmax pmax
comp=Z,28nm,1.3s
LZH LR LR
comp=N,150nm,11.7s
LZH LR LR
comp=E,120nm,11.3s
LZH LR LR
comp=Z,250nm,12.4s
XAN Xi'an 25.70 33 P P 23 54 57.8 +0.1
XAN pmax pmax
comp=Z,25nm,0.7s
XAN LR LR
comp=N,140nm,14.4s
XAN LR LR
comp=E,140nm,15.2s
NIL Nilore 27.01 323 P P 23 55 09.9 +0.3
NIL IAmb IAmb 23 55 11.9
comp=Z,13nm,0.9s
NIL Nilore 27.01 323 P P 23 55 11.0 +1.4
GTA2 Gaotai 27.13 12 P P 23 55 13.0 +2.3
GTA2 sP sP 23 55 19.8 +4.8
GTA2 pmax pmax
comp=Z,11nm,0.6s
H08S3 Diego Garcia H 28.58 225 T T 00 25 04.1
baz=43,slow=76,SNR=44
H08S2 Diego Garcia H 28.59 225 T T 00 25 07.3
baz=43,slow=76,SNR=38
H08S1 Diego Carcia H 28.60 225 T T 00 24 56.8
baz=43,slow=76,SNR=22
KSH2 Kashi 30.04 333 P P 23 55 37.6 +0.9
KSH2 sP sP 23 55 44.9 +4.0
KSH2 pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 30.20 319 P P 23 55 37.4 -0.8
KBL IAmb IAmb 23 55 40.1
comp=Z,5.8nm,1.1s
WUS Wushi 30.39 340 P P 23 55 40.0 +0.3
NJ2 Nanjing 30.69 48 *eP* **P 23 55 44.2 +1.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
MANEM Manem 30.70 326 P P 23 55 41.6 -1.1
MANEM IAmb IAmb 23 55 47.8
comp=Z,18nm,0.5s
WMQ Urumqi 30.97 353 *eP* **P 23 55 48.9 +4.1**
WMQ LR LR
comp=Z,49nm,20.9s
ASAI AK-SAY(Kyrgyzs 31.12 336 P P 23 55 48.4 +2.0
TARG Taragay, Kyrgy 31.35 339 P P 23 55 48.7 +0.2
TARG IAmb IAmb 23 55 51.6
comp=Z,4.9nm,0.8s
TARG Taragay, Kyrgy 31.35 339 P P 23 55 50.9 +2.4
NRN Naryn 31.77 336 P P 23 55 52.6 +0.5
NRN IAmb IAmb 23 55 54.5
comp=Z,6.2nm,1.2s
PRZ Przheval'sk 31.81 340 P P 23 55 53.7 +1.4
PRZ IAmb IAmb 23 55 56.0
comp=Z,6.0nm,0.8s
KDJ Kajisay 31.92 338 P P 23 55 54.9 +1.6
KDJ Kajisay 31.92 338 P P 23 55 55.8 +2.5
PDGK Podgornoye 32.23 342 P P 23 55 57.5 +1.7
KAPI Kappang 32.45 122 LR LR 00 11 46.1
comp=Z,87nm,18.6s,baz=296,slow=41
GAR Garm 32.50 327 P P 23 55 59.2 +0.9
GAR Garm 32.50 327 P P 23 55 59.7 +1.4
BOOM Boomskoye usch 32.69 337 P P 23 56 00.3 +0.3
BOOM Boomskoye usch 32.69 337 P P 23 56 01.4 +1.4
SHAA Shahritus 32.73 323 P P 23 56 00.5 +0.2
SHAA IAmb IAmb 23 56 44.5
comp=Z,7.3nm,0.7s
CHGR Chuyangaron 32.88 325 P P 23 56 02.0 +0.4
CHGR Chuyangaron 32.88 325 P P 23 56 02.0 +0.4
ARSB Arslanbob 32.96 332 P P 23 56 02.8 +0.4
ARSB IAmb IAmb 23 56 05.1
comp=Z,8.5nm,0.9s
BTK Batken 33.02 329 P P 23 56 05.0 +2.2
BTK Batken 33.02 329 P P 23 56 05.5 +2.7
AAK Ala-Archa 33.39 335 LR LR 00 11 20.9
comp=Z,98nm,19.6s,baz=154,slow=39
AAK Ala-Archa 33.39 335 P P 23 56 08.3 +2.2
AAK IAmb IAmb 23 56 09.2
comp=Z,4.5nm,0.8s
AAK Ala-Archa 33.39 335 P P 23 56 08.8 +2.7
ARK Arkit 33.80 332 P P 23 56 11.8 +2.1
HRA Herat 34.72 313 P P 23 56 14.8 -3.0
MKAR Makanchi Array 34.75 348 P P 23 56 18.9 +1.2
comp=Z,5.0nm,0.8s,baz=162,slow=8.4,SNR=44
MKAR PcP **PcP 23 58 51.0 -0.3**
comp=Z,1.0nm,0.7s,baz=143,slow=2.4,SNR=4.1
MKAR LR LR 00 14 12.0
comp=Z,60nm,18.1s,baz=140,slow=43
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 34.75 348 P P 23 56 17.9 +0.2
MAKZ Makanchi 34.83 347 P P 23 56 18.1 -0.3
MAKZ IAmb IAmb 23 56 20.0
comp=Z,3.9nm,0.6s
MAKZ Makanchi 34.83 347 P P 23 56 18.4 0.0
KK31 Karatay Array 35.49 332 P P 23 56 24.9 +0.7
KK31 IAmb IAmb 23 56 26.5
comp=Z,6.0nm,1.1s
KKAR Karatay Array 35.49 332 P P 23 56 24.9 +0.7
SONM Songino Array 36.59 16 P P 23 56 35.2 +1.6
comp=Z,3.6nm,0.8s,baz=201,slow=9.0,SNR=18
SONM LR LR 00 14 33.7
comp=Z,61nm,19.7s,baz=223,slow=41
comp=Z,3.6nm,0.8s
SONM Songino Array 36.59 16 P P 23 56 34.5 +0.8
SONM IAmb IAmb 23 56 43.2
comp=Z,8.0nm,1.3s
ULN Ulaanbaatar 36.80 16 P P 23 56 36.1 +0.7
KURBB Kurchatov Arra 39.20 346 P P 23 56 56.4 +1.0
comp=Z,4.8nm,0.7s,baz=162,slow=7.8,SNR=38
KURBB PcP **PcP 23 59 04.5 -0.1**
comp=Z,0.2nm,0.3s,baz=154,slow=2.4,SNR=4.6
comp=Z,4.8nm,0.7s
KURK Kurchatov 39.26 346 P P 23 56 56.5 +0.5
KURK Kurchatov 39.26 346 P P 23 56 57.1 +1.1
TLY Talaya 39.59 11 LR LR 00 15 46.2
comp=Z,54nm,19.5s,baz=190,slow=40
TLY Talaya 39.59 11 P P 23 57 00.4 +1.7
KSAR Wonju Array Be 39.82 46 P P 23 57 00.7 0.0
KSRS Korea Array 39.85 46 P P 23 57 00.9 -0.1
comp=Z,3.3nm,0.6s,baz=241,slow=8.6,SNR=16
KSRS LR LR 00 15 45.2
comp=Z,40nm,18.9s,baz=230,slow=40
comp=Z,3.3nm,0.6s
ZAA0 Zalesovo Array 41.28 353 P P 23 57 13.1 +0.4
ZALV Zalesovo Beam 41.28 353 P P 23 57 13.2 +0.6
comp=Z,6.1nm,0.7s,baz=173,slow=9.1,SNR=27
ZALV LR LR 00 20 03.5
comp=Z,40nm,18.3s,baz=204,slow=44
comp=Z,6.1nm,0.7s
ZALV Zalesovo Beam 41.28 353 P P 23 57 12.3 -0.4
BVAR Borovoye Array 43.63 341 P P 23 57 32.3 +0.5
comp=Z,6.0nm,1.1s,baz=141,slow=7.5,SNR=12
BVAR PcP **PcP 23 59 19.1 0.0**
comp=Z,1.1nm,0.7s,baz=134,slow=4.2,SNR=4.1
comp=Z,6.0nm,1.1s
BORK Borovoye 43.68 341 P P 23 57 32.5 +0.3
BNX BinXian 43.97 35 ⇑ **P P 23 57 34.7 0.0**
BNX pmax pmax
comp=Z,5.0nm,0.9s
FITZ Fitzroy Crossi 44.99 133 P P 23 57 41.3 -1.8
AB31 Akbulak array 44.99 330 P P 23 57 43.6 +0.9
AB31 IAmb IAmb 23 57 44.9
comp=Z,6.6nm,1.0s
ABKAR Akbulak array 44.99 330 P P 23 57 43.4 +0.7
USRK Ussuriysk Ar. 45.84 40 P P 23 57 49.1 -0.5
MJAR Matsushiro Arr 47.08 52 LR LR 00 20 56.5
comp=Z,53nm,20.0s,baz=245,slow=40
KLR Kul'dur 48.40 34 LR LR 00 22 32.6
comp=Z,51nm,19.0s,baz=236,slow=41
ARTI Arti 50.60 336 LR LR 00 22 08.8
comp=Z,50nm,19.6s,baz=159,slow=39
ARTI Arti 50.60 336 P P 23 58 26.1 -0.1
GUMO Guam 50.87 83 LR LR 00 18 28.4
comp=Z,15nm,21.6s,baz=118,slow=34
GURO Guroymak-BITLI 51.31 309 P P 23 58 32.0 +0.1
GURO IAmb IAmb 23 58 34.4
comp=Z,7.1nm,1.2s
KBZ Khabaz 52.27 316 P P 23 58 37.6 -1.3
comp=Z,1.2nm,0.7s,baz=104,slow=9.3,SNR=2.3
comp=Z,1.2nm,0.7s
KIV Kislovodsk 52.49 316 P P 23 58 41.1 +0.5
KIV Kislovodsk 52.49 316 P P 23 58 42.3 +1.6
comp=Z,13nm,1.0s
KIV Kislovodsk 52.49 316 P P 23 58 42.1 +1.4
WRA Warramunga Arr 52.60 128 P P 23 58 39.5 -2.2
comp=Z,1.3nm,0.6s,baz=306,slow=8.3,SNR=14
WRA PcP **PcP 23 59 51.2 -0.6**
comp=Z,0.8nm,0.7s,baz=320,slow=3.1,SNR=7.5
comp=Z,1.3nm,0.6s
KELT Kelkit 53.80 310 P P 23 58 51.7 +1.2
ASAR Alice Springs 54.47 132 P P 23 58 53.5 -1.9
comp=Z,1.1nm,0.4s,baz=308,slow=6.8,SNR=21
ASAR PcP **PcP 23 59 58.4 -0.5**
comp=Z,1.0nm,0.7s,baz=300,slow=3.5,SNR=6.2
comp=Z,1.1nm,0.4s
ASAR Alice Springs 54.47 132 P P 23 58 54.3 -1.1
ANDN Andirin 55.46 307 P P 23 59 02.7 +0.2
EIL Elat 55.59 297 LR LR 00 26 33.9
comp=Z,62nm,18.3s,baz=132,slow=40
BR131 Keskin Array S 57.93 309 P P 23 59 19.1 -0.9
BR131 IAmb IAmb 23 59 20.5
comp=Z,5.9nm,0.8s
BRTR Keskin Array B 57.93 309 P P 23 59 19.6 -0.5
comp=Z,3.4nm,0.7s,baz=124,slow=7.9,SNR=26
comp=Z,3.4nm,0.7s
BRTR Keskin Array B 57.93 309 P P 23 59 19.2 -0.8
KKUL Konya-Kulu 58.39 308 P P 23 59 23.0 -0.3
ELL Elmali 60.43 305 P P 23 59 36.8 -0.7
AKASG Malin Array Be 63.17 320 P P 23 59 54.9 -0.5
comp=Z,0.3nm,0.3s,baz=93,slow=4.4,SNR=6.7
comp=Z,0.3nm,0.3s
VRI Vrincioaia 63.93 315 P P 00 00 02.2 +1.6
MLR Muntele Rosu 64.43 314 LR LR 00 32 19.9
comp=Z,61nm,20.1s,baz=197,slow=40
MLR Muntele Rosu 64.43 314 P P 00 00 04.6 +0.6
MLR Muntele Rosu 64.43 314 P P 00 00 05.1 +1.1
STKA Stephens Creek 64.82 135 P P 00 00 05.1 -1.4
comp=Z,1.5nm,0.8s,baz=296,slow=11,SNR=1.2
comp=Z,1.5nm,0.8s
PETK Petropavlovsk- 64.83 37 P P 00 00 06.5 +0.1
comp=Z,1.1nm,0.7s,baz=255,slow=5.5,SNR=2.1
comp=Z,1.1nm,0.7s
PETK Petropavlovsk- 64.83 37 P P 00 00 05.9 -0.5
BURAR Bucovina Array 65.21 317 P P 00 00 08.7 -0.4
BURAR IAmb IAmb 00 00 10.4
comp=Z,2.1nm,0.8s
BUR08 Bucovina Ar. S 65.22 317 P P 00 00 09.2 +0.1
BUR08 IAmb IAmb 00 00 48.7
comp=Z,8.3nm,1.4s
SUW Suwalki 67.44 323 P P 00 00 22.7 -0.3
FINES FINESS Array B 67.45 332 P P 00 00 23.0 0.0
comp=Z,3.6nm,0.7s,baz=89,slow=5.5,SNR=25
comp=Z,3.6nm,0.7s
H04N2 CROZET ISLANDS 69.36 209 T T 01 16 12.0
baz=44,slow=74,SNR=6.8
H04N1 CROZET ISLANDS 69.37 209 T T 01 16 12.8
baz=44,slow=74,SNR=7.8
H04N3 CROZET ISLANDS 69.38 209 T T 01 16 11.4
baz=44,slow=74,SNR=9.1
ARCES ARCESS Array B 69.92 340 P P 00 00 38.5 +0.2
comp=Z,1.1nm,0.5s,baz=93,slow=6.5,SNR=12
ARCES LR LR 00 34 45.2
comp=Z,43nm,18.1s,baz=104,slow=39
comp=Z,1.1nm,0.5s
ARCES ARCESS Array B 69.92 340 P P 00 00 38.6 +0.4
ARCES IAmb IAmb 00 00 53.4
comp=Z,8.0nm,1.2s
GEC2 GERESS Array S 72.97 317 P P 00 00 57.0 -0.2
GEC2 IAmb IAmb 00 00 58.4
comp=Z,3.2nm,0.9s
GERES GERESS Array B 72.97 317 P P 00 00 56.9 -0.3
comp=Z,2.0nm,0.8s,baz=87,slow=4.7,SNR=21
comp=Z,2.0nm,0.8s
GERES GERESS Array B 72.97 317 P P 00 00 56.5 -0.7
HFS Hagfors 73.24 329 P P 00 00 58.2 -0.3
comp=Z,2.8nm,0.7s,baz=134,slow=4.3,SNR=6.6
comp=Z,2.8nm,0.7s
NB2 NORSAR Subarra 74.50 330 P P 00 01 05.6 -0.3
comp=Z,1.0nm,0.6s,baz=91,slow=5.9
NOA NORSAR Array B 74.50 330 P P 00 01 05.6 -0.3
comp=Z,1.2nm,0.6s,baz=91,slow=5.7,SNR=6.1
NOA LR LR 00 36 40.4
comp=Z,23nm,20.8s,baz=180,slow=38
comp=Z,1.2nm,0.6s
EKA Eskdalemuir Ar 82.61 325 P P 00 01 50.9 +0.2
comp=Z,1.7nm,0.7s,baz=87,slow=5.8,SNR=8.0
comp=Z,1.7nm,0.7s
H19K Roundabout Mou 86.69 23 P P 00 02 12.3 +1.3
H19K IAmb IAmb 00 02 45.4
comp=Z,9.3nm,1.5s
ESDC Sonseca Array 86.71 310 P P 00 02 11.5 -0.3
comp=Z,1.0nm,0.8s,baz=58,slow=4.0,SNR=6.6
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 86.71 310 P P 00 02 11.0 -0.8
TORD Torodi Ar. Bea 87.88 283 P P 00 02 18.0 +0.2
comp=Z,1.6nm,0.7s,baz=90,slow=4.3,SNR=10
comp=Z,1.6nm,0.7s
H21K Melozitna Rive 87.99 22 P P 00 02 17.0 -0.4
H21K IAmb IAmb 00 02 27.7
comp=Z,3.0nm,1.0s
D25K Kavik River 88.26 18 P P 00 02 18.6 -0.1
D25K IAmb IAmb 00 02 20.0
comp=Z,3.5nm,0.7s
CAST Castle Rocks 89.32 24 P P 00 02 24.2 +0.5
CAST IAmb IAmb 00 02 37.6
comp=Z,3.4nm,0.7s
G26K Porcupine Rive 90.41 19 P P 00 02 29.1 +0.4
G26K IAmb IAmb 00 02 30.5
comp=Z,3.1nm,0.7s
ILAR Eielson Array 90.59 22 P P 00 02 28.7 -0.9
comp=Z,0.5nm,0.6s,baz=298,slow=5.3,SNR=6.1
comp=Z,0.5nm,0.6s
ILAR Eielson Array 90.59 22 P P 00 02 28.6 -1.0
TXAR Lajitas Array 135.09 20 PKP PKPdf 00 08 48.3 +0.6
comp=Z,0.3nm,0.6s,baz=8.7,slow=3.0,SNR=5.0
TRQA Tornquist 146.29 218 PKPdf PKPdf 00 09 07.0 -0.5
BOAV Boa Vista 149.17 298 PKPdf PKPdf 00 09 12.1 -0.9

IDC ***07*** *23:57:15.1±1.2, 15.°70S×167.°55E, h0km, mb3.7/5, mbtmp3.8/6, MS3.6/2, Error ellipse: s-maj=37.8km s-min=29.7km az=106.0*
NOU ***07*** *23:57:20.3, 15.°84S×167.°38E, h15km, MLv4.6/21, Vanuatu Islands*
NEIC ***07*** *23:57:20.4±0.8, 15.°8S±0.°1×167.°5E±0.°2, h27km±2km, mb4.1/4, Error ellipse: s-maj=25.1km s-min=11.2km az=59.0*
ISC 07 23:57:21.4±0.8, 15.°77S±0.°07×167.°4E±0.°1, h39km, n31, σ0s 79/31, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.36**	**333**	P	**Pn**	**23 57 30.0**	**-0.2**
SANVU	**Saraoutou**	**0.36**	**333**	S	**Sn**	**23 57 36.8**	**+0.1**
SANVU	**Saraoutou**	**0.36**	**333**		**Pn**	**23 57 30.1**	**-0.2**
SANVU				Sg	**Sn**	**23 57 36.8**	**+0.1**
DVP	**Devils Point**	**2.09**	**158**	P	**Pn**	**23 57 53.8**	**-0.2**
DVP	**Devils Point**	**2.09**	**158**	S	**Sn**	**23 58 19.8**	**+1.0**
RTV	**Rentapao**	**2.25**	**154**	P	**Pn**	**23 57 56.3**	**+0.2**
RTV	**Rentapao**	**2.25**	**154**	S	**Sn**	**23 58 23.7**	**+1.1**
KOUNC	**Koumac, New Ca**	**5.59**	**211**	P	**Pn**	**23 58 41.5**	**-0.5**
KOUNC	**Koumac, New Ca**	**5.59**	**211**	Pn	**Pn**	**23 58 41.0**	**-1.0**
MARNC	**Mare, Loyalty**	**5.71**	**174**	P	**Pn**	**23 58 44.2**	**+0.5**
MARNC	**Mare, Loyalty**	**5.71**	**174**	Pn	**Pn**	**23 58 42.1**	**-1.6**
YATNC	**Mamie plateau,**	**6.27**	**184**	P	**Pn**	**23 58 50.4**	**-1.0**
DZM	**Mont Dzumac**	**6.33**	**188**	Pn	**Pn**	**23 58 51.5**	**-0.7**
	9.8nm,0.4s,baz=22,slow=16						
NOUC	**Port Laguerre**	**6.38**	**189**	P	**Pn**	**23 58 53.2**	**+0.3**
ONTNC	**Ouen Toro**	**6.56**	**187**	P	**Pn**	**23 58 55.9**	**+0.5**
ONTNC	**Ouen Toro**	**6.56**	**187**	Pn	**Pn**	**23 58 54.7**	**-0.7**
OUENC	**Ouen Island, N**	**6.63**	**184**	P	**Pn**	**23 58 56.6**	**+0.2**
OUENC	**Ouen Island, N**	**6.63**	**184**	Pn	**Pn**	**23 58 55.6**	**-0.7**
NGOA	**Tingoa Renbel**	**8.25**	**300**	P	**Pn**	**23 59 20.2**	**+1.6**
BKZ	**Black Stump Fm**	**24.64**	**163**		**P**	**00 02 37.1**	**-1.2**
BKZ				IAmb	IAmb	00 02 58.2	
	comp=Z,9.2nm,1.0s						
WRA	**Warramunga Arr**	**31.69**	**258**	P	**P**	**00 03 42.3**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=85,slow=9.1,SNR=1.8						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**32.41**	**251**	P	**P**	**00 03 48.5**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=78,slow=8.9,SNR=9.0						
ASAR				LR	LR	00 15 36.9	
	comp=Z,77nm,18.7s,baz=280,slow=34						
	comp=Z,0.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.93**	**261**	LR	LR	00 20 36.2	
	comp=Z,98nm,20.2s,baz=332,slow=35						
VNDA	**Vanda**	**61.83**	**181**	P	**P**	**00 07 35.4**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=12,slow=4.8,SNR=3.9						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**61.83**	**181**		**P**	**00 07 35.2**	**-0.8**
SBA	**Scott Base**	**62.10**	**180**	P	**P**	**00 07 38.2**	**+0.4**
QSPA	**South Pole Qui**	**74.26**	**180**	P	**P**	**00 08 54.8**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=63,slow=2.3,SNR=5.7						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**74.26**	**180**		**P**	**00 08 55.0**	**+0.6**
QSPA				IAmb	IAmb	00 08 57.8	
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**87.48**	**18**	P	**P**	**00 10 03.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=243,slow=4.0,SNR=4.6						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**121.28**	**345**	PKP	**PKPdf**	**00 16 09.8**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=42,slow=2.4,SNR=6.7						
ARCES	**ARCESS Array B**	**121.28**	**345**	PKPdf	**PKiKP**	**00 16 10.0**	**+0.1**

DJA ***07*** *23:58:23.0±0.3, 4.°N±3.°×9.°7E±.°, h82km±6km, M4.4/29, mb4.4/11, mB5.2/4, MLv4.3/29, Mw(mB)4.6/4*
IDC ***07*** *23:59:01.1±9.3, 3.°74N×96.°33E, h546km±106km, mb2.7/6, mbtmp3.7/7, Error ellipse: s-maj=118.8km s-min=14.7km az=58.0*
ISC 07 23:58:22.4±0.9, 3.°91N±0.°05×96.°53E±0.°08, h100km, n28, σ0s 97/27, mb3.6/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**0.38**	**341**	P	**Pn**	**23 58 36.4**	**-1.0**
TPTI		**0.92**	**135**	P	**Pn**	**23 58 40.5**	**-1.4**
LHMI	**Lhok Sumawe**	**1.38**	**18**	P	**Pn**	**23 58 46.7**	**-0.5**
LHMI	**Lhok Sumawe**	**1.38**	**18**	S	**Sn**	**23 59 05.2**	**-0.7**
LHMI	**Lhok Sumawe**	**1.38**	**18**	P	**Pn**	**23 58 47.1**	**-0.1**
SNSI	**Sinabang, Aceh**	**1.50**	**188**	P	**Pn**	**23 58 48.5**	**-0.2**
BSI	**Banda Aceh**	**2.00**	**322**	P	**Pn**	**23 58 56.3**	**+1.3**
PSI	**Prapat**	**2.63**	**115**	P	**Pn**	**23 59 03.7**	**+0.3**
PSI	**Prapat**	**2.63**	**115**	P	**Pn**	**23 59 03.6**	**+0.2**
GSI	**Gunungsitoli**	**2.79**	**158**	P	**Pn**	**23 59 05.2**	**-0.2**
GSI	**Gunungsitoli**	**2.79**	**158**	P	**Pn**	**23 59 05.0**	**-0.4**
PBSI	**Pulau Batu**	**4.31**	**156**	P	**Pn**	**23 59 26.0**	**+0.2**
KULM	**Kulim**	**4.33**	**71**	P	**Pn**	**23 59 25.6**	**-0.5**
KULM	**Kulim**	**4.33**	**71**	P	**Pn**	**23 59 25.5**	**-0.5**
MNSI	**Mandailing Nat**	**4.34**	**135**	P	**Pn**	**23 59 26.0**	**-0.2**
PDSI	**Padang**	**6.19**	**141**	P	**Pn**	**23 59 51.8**	**+0.4**
	0.3nm16nm,1.0s						
MYKOM	**Kota Tinggi**	**7.61**	**106**	P	**Pn**	**00 00 10.6**	**0.0**
MYKOM	**Kota Tinggi**	**7.61**	**106**	P	**Pn**	**00 00 10.6**	**0.0**
BTDF	**Bukit Timah Da**	**7.67**	**109**	P	**Pn**	**00 00 11.7**	**+0.3**
	0.1nm345nm21nm,0.9s						
KLSI		**11.84**	**136**	P	**Pn**	**00 01 06.3**	**-1.7**
KASI	**Kota Agung**	**12.29**	**140**	P	**Pn**	**00 01 10.9**	**-3.1**
CMAR	**Chiang Mai Arr**	**14.65**	**9**	P	P	00 02 09.6	+21
	1.8nm,0.3s,baz=193,slow=11,SNR=5.5						
WRA	**Warramunga Arr**	**44.06**	**124**	P	**P**	**00 06 21.5**	**+0.8**
	0.6nm,0.3s,baz=302,slow=9.2,SNR=17						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**44.47**	**346**	P	**P**	**00 06 23.6**	**0.0**
	0.3nm,0.3s,baz=159,slow=8.8,SNR=8.5						
	0.3nm,0.3s						
SONM	**Songino Array**	**44.58**	**9**	P	**P**	**00 06 26.1**	**+1.5**
	0.3nm,0.3s,baz=190,slow=4.4,SNR=1.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**45.58**	**129**	P	**P**	**00 06 33.0**	**+0.2**
	0.1nm,0.3s,baz=304,slow=7.8,SNR=5.0						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**50.80**	**351**	P	**P**	**00 07 12.5**	**+0.1**
	0.3nm,0.4s,baz=157,slow=8.7,SNR=2.4						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**53.49**	**341**	P	**P**	**00 07 31.8**	**-0.6**
	0.6nm,0.7s,baz=156,slow=11,SNR=3.6						
	0.6nm,0.7s						

IDC ***08*** *00:22:57.3±1.0, 35.°46N×26.°95E, h0km, mb3.5/6, mbtmp3.4/11, ML3.1/5, Error ellipse: s-maj=23.9km s-min=14.0km az=172.0*
ISK ***08*** *00:22:58.7, 35.°47N×26.°77E, h10km, ML3.0/24*
ATH ***08*** *00:22:58.4, 35.°57N×26.°73E, h8km±2km, ML3.4/7, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
THE ***08*** *00:22:59.0, 35.°N±3.°×2.°7E±.°, h11km±3km, M3.4/15, MLh3.4/15*
AFAD ***08*** *00:22:59.2, 35.°62N×26.°86E, h12km±1km, ML2.8*
ISC 08 00:22:58.9±1.0, 35.°49N±0.°03×26.°76E±0.°02, h13km±7km, n93, σ1s 17/131, mb3.4/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.33**	**79**	Pg	**Pg**	**00 23 05.8**	**+0.1**
KARP				Sg	**Sb**	**00 23 10.9**	**-1.1**
KARP	**Karpathos**	**0.33**	**79**	P	**Pg**	**00 23 05.6**	**-0.1**
KARP				S	**Sg**	**00 23 10.6**	**+0.3**
KARP	**Karpathos**	**0.33**	**79**	P	**Pg**	**00 23 05.4**	**-0.3**
KARP				S	**Sg**	**00 23 10.4**	**+0.2**
ZKR	**Zakros**	**0.58**	**231**	Pg	**Pg**	**00 23 09.9**	**-0.4**
ZKR				Sg	**Sb**	**00 23 19.2**	**+0.1**

ZKR	**Zakros**	**0.58**	**231**	P	**Pg**	**00 23 10.1**	**-0.1**
ZKR	**Zakros**	**0.58**	**231**	P	**Pg**	**00 23 09.8**	**-0.5**
ZKR				S	**Sb**	**00 23 19.0**	**-0.1**
SIT2	**Siteia**	**0.60**	**243**	P	**Pg**	**00 23 10.4**	**-0.3**
SIT2				S	**Sb**	**00 23 19.5**	**-0.3**
NPS	**Neapolis**	**0.96**	**257**	P	**Pg**	**00 23 17.3**	**-0.3**
NPS				S	**Sb**	**00 23 30.4**	**+0.1**
NPS	**Neapolis**	**0.96**	**257**	P	**Pg**	**00 23 17.1**	**-0.4**
NPS				S	**Sb**	**00 23 30.4**	**+0.1**
YAZI	**Mula-Dat§a-**	**1.32**	**25**	P	**Pn**	**00 23 21.7**	**-1.4**
ARG	**Arkhangelos**	**1.33**	**56**	Pn	**Pb**	**00 23 23.7**	**0.0**
ARG				Sn	**Sg**	**00 23 42.2**	**+0.5**
ARG	**Arkhangelos**	**1.33**	**56**	P	**Pn**	**00 23 23.4**	**+0.2**
ARG				S	**Sb**	**00 23 40.4**	**-0.2**
ARG	**Arkhangelos**	**1.33**	**56**	P	**Pn**	**00 23 23.2**	**0.0**
ARG				S	**Sn**	**00 23 40.9**	**+0.2**
THERA	**Ancient Thera,**	**1.37**	**311**	P	**Pn**	**00 23 23.1**	**-0.7**
THERA				S	**Sb**	**00 23 41.2**	**-0.6**
THERA	**Ancient Thera,**	**1.37**	**311**	P	**Pn**	**00 23 22.9**	**-0.9**
THERA				S	**Sb**	**00 23 40.6**	**-1.1**
THR8	**Santorini-Mono**	**1.39**	**312**	P	**Pn**	**00 23 23.5**	**-0.5**
THR8	**Santorini-Mono**	**1.39**	**312**	P	**Pn**	**00 23 23.2**	**-0.8**
IACM	**Heraklion**	**1.39**	**263**	S	**Sn**	**00 23 42.6**	**+0.2**
DAT	**Datca**	**1.41**	**28**	Pn	**Pg**	**00 23 25.4**	**-0.6**
DAT	**Datca**	**1.41**	**28**	P	**Pn**	**00 23 23.8**	**-0.6**
DAT				S	**Sb**	**00 23 43.2**	**+0.1**
THR6	**Thira Island,**	**1.41**	**309**	P	**Pn**	**00 23 23.8**	**-0.6**
THR6	**Thira Island,**	**1.41**	**309**	P	**Pn**	**00 23 23.6**	**-0.7**
THRA	**Thira**	**1.42**	**311**	P	**Pn**	**00 23 24.4**	**-0.1**
SFIR	**Foira Santorin**	**1.43**	**311**	P	**Pn**	**00 23 24.3**	**-0.4**
SFIR				S	**Sn**	**00 23 42.8**	**-0.6**
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pn**	**00 23 24.4**	**-0.3**
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pn**	**00 23 24.2**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.44**	**310**	P	**Pn**	**00 23 24.7**	**-0.1**
SNT5				S	**Sg**	**00 23 44.7**	**-0.6**
SNT5	**Nea Kammeni, S**	**1.44**	**310**	P	**Pn**	**00 23 25.0**	**+0.2**
SNT5				S	**Sn**	**00 23 43.0**	**-0.6**
THR3	**Thira Island,**	**1.44**	**310**	P	**Pn**	**00 23 24.0**	**-0.7**
THR3	**Thira Island,**	**1.44**	**310**	P	**Pn**	**00 23 23.9**	**-0.8**
THR2	**Thira island,**	**1.44**	**312**	P	**Pn**	**00 23 24.4**	**-0.4**
THR2	**Thira island,**	**1.44**	**312**	P	**Pn**	**00 23 24.0**	**-0.8**
THR5	**Thira Island,**	**1.48**	**309**	P	**Pn**	**00 23 24.9**	**-0.4**
KLNA	**Kalymnos**	**1.48**	**7**	P	**Pn**	**00 23 23.6**	**-1.7**
KLNA				S	**Sn**	**00 23 43.0**	**-1.5**
SAP3	**Santorini-Thir**	**1.49**	**310**	P	**Pn**	**00 23 24.8**	**-0.6**
SAP3				S	**Sn**	**00 23 44.7**	**-0.1**
IDI	**Anoyia**	**1.54**	**263**	Pg	**Pn**	**00 23 26.8**	**+0.6**
	4.6nm,0.3s,baz=85,slow=13,SNR=26						
IDI				Lg	Lg	00 23 46.3	
	74nm,0.3s,baz=2.1,slow=17,SNR=16						
IDI	**Anoyia**	**1.54**	**263**	P	**Pn**	**00 23 25.4**	**-0.8**
IDI				S	**Sn**	**00 23 46.2**	**0.0**
IDI	**Anoyia**	**1.54**	**263**	P	**Pn**	**00 23 26.4**	**+0.2**
IDI				S	**Sn**	**00 23 46.8**	**+0.6**
BODT	**Bodrum**	**1.64**	**16**	Pn	**Pb**	**00 23 28.6**	**-0.4**
BODT	**Bodrum**	**1.64**	**16**	P	**Pn**	**00 23 27.4**	**-0.1**
BODT				S	**Sn**	**00 23 48.6**	**+0.1**
SIVA	**Sivas**	**1.66**	**254**	P	**Pb**	**00 23 29.3**	**-0.1**
SIVA				S	**Sn**	**00 23 49.5**	**+0.5**
BDRM	**Kayabasi**	**1.67**	**19**	P	**Pn**	**00 23 26.7**	**-1.3**
TURN	**Turunc**	**1.76**	**43**	Pn	**Pn**	**00 23 29.2**	**0.0**
TURN	**Turunc**	**1.76**	**43**	P	**Pn**	**00 23 29.0**	**-0.2**
TURN				S	**Sn**	**00 23 52.2**	**+0.7**
DDIM	**Aydin, Didim**	**2.01**	**11**	P	**Pg**	**00 23 37.3**	**-0.1**
DALY	**Dalyan (Mula)**	**2.03**	**48**	Pn	**Pb**	**00 23 33.8**	**+1.0**
DALY	**Dalyan (Mula)**	**2.03**	**48**	P	**Pb**	**00 23 35.0**	**-0.6**
DALY				S	**Sb**	**00 24 00.3**	**-0.5**
DALY				IAML		00 24 10.0	
	comp=N,85nm,0.4s						
YER	**Yerkesik**	**2.05**	**36**	Pn	**Pn**	**00 23 33.7**	**+0.4**
YER	**Yerkesik**	**2.05**	**36**	P	**Pn**	**00 23 33.5**	**+0.2**
YER				S	**Sn**	**00 24 00.2**	**+1.4**
VAM	**Vamos**	**2.09**	**269**	P	**Pn**	**00 23 34.3**	**+0.5**
VAM				S	**Sn**	**00 23 59.3**	**-0.4**
MULA	**Mugla, Merkez-**	**2.17**	**35**	P	**Pn**	**00 23 35.7**	**+0.8**
IZZE	**Mula-Seydike**	**2.21**	**64**	P	**Pn**	**00 23 36.7**	**+1.3**
IZZE				S	**Sn**	**00 24 04.1**	**+1.4**
IZZE				IAML		00 24 08.0	
	comp=N,106nm,0.5s						
CHAN	**Chania**	**2.22**	**272**	P	**Pn**	**00 23 36.4**	**+0.9**
CHAN				S	**Sn**	**00 24 01.5**	**-1.3**
SABU	**Mula-Dalaman**	**2.23**	**53**	P	**Pn**	**00 23 36.9**	**+1.3**
SABU				S	**Sn**	**00 24 04.9**	**+1.8**
GCAM	**G?zelcaml?**	**2.24**	**10**	Pn	**Pn**	**00 23 37.4**	**+1.6**
GCAM	**G?zelcaml?**	**2.24**	**10**	P	**Pb**	**00 23 40.1**	**+0.7**
MHLO	**Agia Marina, M**	**2.26**	**303**	S	**Sn**	**00 24 04.5**	**+0.8**
MHLO	**Agia Marina, M**	**2.26**	**303**	P	**Pn**	**00 23 36.6**	**+0.6**
MHLO				S	**Sn**	**00 24 03.7**	**0.0**
IMMV	**Iera Moni Meta**	**2.27**	**270**	P	**Pn**	**00 23 35.7**	**-0.5**
IMMV				S	**Sn**	**00 24 04.2**	**+0.2**
IMMV	**Iera Moni Meta**	**2.27**	**270**	P	**Pn**	**00 23 36.4**	**+0.3**
IMMV				S	**Sn**	**00 24 03.2**	**-0.9**
AYDN	**Tasoluk**	**2.35**	**22**	P	**Pn**	**00 23 38.8**	**+1.5**
AKAS	**Kas**	**2.43**	**71**	Pn	**Pn**	**00 23 39.7**	**+1.2**
CAME	**Cameli-Denizli**	**2.52**	**54**	Pn	**Pn**	**00 23 40.6**	**+0.9**
DNZT	**Denizli-Tavas-**	**2.56**	**45**	P	**Pn**	**00 23 42.4**	**+2.1**
DNZT				S	**Sb**	**00 24 13.9**	**-2.3**
DNZT				IAML		00 24 17.0	
	comp=N,55nm,0.5s						
DGB	**zmir**	**2.56**	**2**	P	**Pn**	**00 23 38.2**	**-2.0**
GMLD	**Gumuldur**	**2.59**	**3**	Pn	**Pn**	**00 23 41.9**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**2.62**	**20**	Pn	**Pn**	**00 23 42.5**	**+1.4**
TAVA	**DENIZLI_Tavas**	**2.63**	**41**	P	**Pb**	**00 23 43.8**	**-2.2**
TAVA				S	**Sb**	**00 24 16.8**	**-1.4**
ESEN	**Aydn-Nazilli**	**2.64**	**28**	P	**Pn**	**00 23 41.3**	**+0.1**
ESEN				S	**Sn**	**00 24 14.1**	**+1.0**
NAZL	**Nazilli-Aydin**	**2.76**	**26**	Pn	**Pn**	**00 23 44.7**	**+1.7**
ELL	**Elmali**	**2.84**	**63**	Pn	**Pn**	**00 23 45.8**	**+1.6**
APMY	**Acipayam-Deniz**	**2.85**	**45**	Pn	**Pn**	**00 23 45.7**	**+1.5**
URLA	**Izmir**	**2.87**	**357**	Pn	**Pn**	**00 23 46.1**	**+1.6**
BLDB	**Balcova**	**2.90**	**4**	Pn	**Pn**	**00 23 46.5**	**+1.6**
CHOS	**Chios island**	**2.95**	**349**	Pn	**Pn**	**00 23 47.0**	**+1.4**
ODEM	**Odemis-Izmir**	**2.98**	**20**	Pn	**Pn**	**00 23 47.6**	**+1.6**
KTHA	**Kythira Island**	**3.10**	**285**	P	**Pn**	**00 23 47.3**	**-0.3**
KORT	**Korkueli**	**3.27**	**61**	Pn	**Pn**	**00 23 51.8**	**+1.7**
VLI	**Veliai**	**3.33**	**293**	P	**Pn**	**00 23 50.5**	**-0.3**
KULA	**Kula-Manisa**	**3.38**	**26**	Pn	**Pn**	**00 23 53.1**	**+1.5**
ANTB	**Antalya**	**3.45**	**65**	Pn	**Pn**	**00 23 54.2**	**+1.8**
GORD	**Gordes-Manisa**	**3.60**	**18**	Pn	**Pn**	**00 23 56.3**	**+1.8**
BRTR	**Keskin Array B**	**6.91**	**50**	Pn	**Pn**	**00 24 39.6**	**-0.4**
	0.1nm,0.3s,baz=219,slow=16,SNR=3.6 0.3nm,0.6s						
MMAI	**Mount Meron Ar**	**7.57**	**107**	Pn	**Pn**	**00 24 47.5**	**-1.5**
	0.5nm,0.3s,baz=288,slow=15,SNR=1.8						
MMAI				Sn	**Sn**	**00 26 10.1**	**-4.6**
	1.6nm,0.3s,baz=287,slow=15,SNR=5.9 0.5nm,0.3s						
EIL	**Elat**	**9.02**	**128**	Pn	**Pn**	**00 25 08.6**	**-0.3**
	0.2nm,0.3s,baz=315,slow=2.9,SNR=3.0						
EIL				Sn	**Sn**	**00 26 44.4**	**-6.0**
	0.5nm,0.3s,baz=356,slow=15,SNR=4.4 2.3nm,0.6s						
AKASG	**Malin Array Be**	**15.31**	**6**	Pn	**Pn**	**00 26 35.0**	**+0.2**
	0.5nm,0.3s,baz=192,slow=10.0,SNR=5.0 0.3nm,0.4s						
GERES	**GERESS Array B**	**16.46**	**328**	Pn	**P**	**00 26 52.1**	**-0.2**
	baz=141,slow=11,SNR=5.0 0.3nm,0.4s						
ESDC	**Sonseca Array**	**24.64**	**289**	P	**P**	**00 28 21.8**	**+2.5**
	0.6nm,0.7s,baz=90,slow=9.3,SNR=9.1 0.6nm,0.7s						
EKA	**Eskdalemuir Ar**	**28.55**	**323**	P	**P**	**00 28 55.2**	**+1.0**
	0.8nm,0.9s,baz=122,slow=9.5,SNR=2.3 0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.71**	**232**	P	**P**	**00 29 23.8**	**+1.3**
	0.2nm,0.4s,baz=33,slow=8.3,SNR=5.7 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**39.90**	**51**	P	**P**	**00 30 32.0**	**-0.4**
	0.2nm,0.3s,baz=276,slow=8.6,SNR=3.4 0.2nm,0.3s						
MKAR	**Makanchi Array**	**42.50**	**57**	P	**P**	**00 30 52.4**	**-1.6**
	0.4nm,0.5s,baz=275,slow=7.7,SNR=5.4 0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**43.83**	**46**	P	**P**	**00 31 04.0**	**-0.5**
	0.4nm,0.5s,baz=264,slow=8.5,SNR=2.2 0.4nm,0.5s						

*MAN **08** 00:28:12.0, 15˚.16N×119˚.94E, h70km, MS4.7*
MAN INTENSITY IV - CABANGAN SAN FELIPE AND IBA ZAMBALES; . INTENSITY III - QUEZON CITY; CITY OF MALABON; CITY OF MAKATI; CITY OF MANILA; .

INTENSITY II - PASAY CITY; SAN MATEO RIZAL.
*DJA **08** 00:28:14.7±0.5, 15˚.N±4˚×12˚.0E±˚, h87km±8km, M4.8/19, mb4.8/19, mB5.3/5, MLv4.9/1, Mw(mB)4.7/5, MwMwp6.0/1, Mwp6.0/1*
*BJI **08** 00:28:14.5, 15˚.22N×120˚.36E, h106km, mB4.7/13, mb4.6/53*
*IDC **08** 00:28:15.9±0.5, 15˚.07N×120˚.33E, h116km±5km, mb4.2/27, mbtmp4.6/28, MS3.3/18, Error ellipse: s-maj=17.4km s-min=7.1km az=68.0*
*NEIC **08** 00:28:15.4±1.6, 15˚.19N±0˚.07×120˚.26E±0˚.10, h98km±6km, mb4.8/213, Error ellipse: s-maj=14.5km s-min=8.8km az=70.0*
*GFZ **08** 00:28:18.8±0.6, 15˚.N±4˚×12˚.0E±˚, h123km±6km, M4.9/25, mb4.8/25*
ISC 08 00:28:15.1±0.4, 15˚.15N±0˚.04×120˚.29E±0˚.05, h100km±3km, h101km: pP-P, n625, σ1§07/557, mb4.8/175, 23C-10D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
PCPS	**Palayan City**	**0.90**	**124**	*eP*	**Pn**	**00 28 34.8**	**+0.3**
PCPS				*eS*	**Sn**	**00 28 47.6**	**-1.4**
TGY	**Tagaytay City**	**1.22**	**149**	P	**Pn**	**00 28 37.9**	**-0.1**
	8µm,0.5s,baz=325,slow=3.3,SNR=242						
TGY				S	**Sn**	**00 28 56.6**	**+1.2**
	12µm,0.6s,baz=343,slow=19,SNR=15						
TGY	**Tagaytay City**	**1.22**	**149**	*eP*	**Pn**	**00 28 38.9**	**+0.9**
TGY				*eS*	Sn	00 29 05.5	+10
LQP	**Lukban**	**1.59**	**130**	*i* P	**Pn**	**00 28 43.2**	**+0.5**
LQP				*i* S	**Sn**	**00 29 04.3**	**+0.6**
PGP	**Puerto Galera**	**1.76**	**158**	*eP*	**Pn**	**00 28 43.8**	**-0.9**
PGP				*eS*	**Sn**	**00 29 08.0**	**+0.8**
GQP	**Guinayangan**	**2.43**	**120**	*eP*	**Pn**	**00 28 55.0**	**+1.7**
GQP				*i* S	Sn	00 29 34.3	+12
SIPP	**Brgy, Tapao**	**2.76**	**3**	*eP*	**Pn**	**00 28 55.1**	**-2.5**
SIPP				*eS*	**Sn**	**00 29 30.2**	**-0.2**
MMPH	**Masbate**	**4.27**	**130**	*i* P	Pn	00 29 27.2	+9.3
MMPH				*i* S	**Sn**	**00 30 05.7**	**-1.1**
RCP	**Roxas**	**4.30**	**146**	*i* P	**Pn**	**00 29 20.5**	**+2.2**
PPR	**Puerto Princes**	**5.55**	**196**	*i* P	**Pn**	**00 29 33.0**	**-2.3**
LLP	**Lapu-Lapu**	**6.00**	**143**	*eP*	**Pn**	**00 29 44.5**	**+3.2**
LLP				*eS*	Sn	00 31 10.0	+21
PLP	**Palo**	**6.05**	**130**	*eP*	**Pn**	**00 29 44.4**	**+2.4**
SNPH	**Sibulan**	**6.45**	**153**	*eP*	**Pn**	**00 29 50.7**	**+3.1**
TBP	**Tagbilaran**	**6.45**	**147**	*i* P	**Pn**	**00 29 50.8**	**+3.2**
TWG	**Pinlang**	**7.66**	**5**		**Pn**	**00 30 02.1**	**-1.9**
TWG	**Pinlang**	**7.66**	**5**	P	**Pn**	**00 30 05.1**	**+1.1**
TPUB	**Ta-pu**	**8.11**	**2**	Pn	**Pn**	**00 30 08.7**	**-1.4**
TPUB	**Ta-pu**	**8.11**	**2**	P	**Pn**	**00 30 11.9**	**+1.7**
YULB	**Yu-li**	**8.25**	**6**	Pn	**Pn**	**00 30 11.1**	**-1.0**
YULB	**Yu-li**	**8.25**	**6**	P	**Pn**	**00 30 13.7**	**+1.6**
SSLB	**Suanglung**	**8.61**	**4**	Pn	**Pn**	**00 30 17.1**	**+0.2**
SSLB	**Suanglung**	**8.61**	**4**	P	**Pn**	**00 30 18.1**	**+1.1**
NACB	**Ninganchiao**	**9.06**	**8**	Pn	**Pn**	**00 30 22.2**	**-0.8**
NACB	**Ninganchiao**	**9.06**	**8**	P	**Pn**	**00 30 23.1**	**+0.1**
KNMB	**Chin-men Tao**	**9.43**	**349**		**Pn**	**00 30 25.4**	**-2.7**
YHNB	**Yeheng**	**9.52**	**6**	Pn	**Pn**	**00 30 29.2**	**-0.2**
YHNB	**Yeheng**	**9.52**	**6**	P	**Pn**	**00 30 30.6**	**+1.2**
DAV	**Davao City (W)**	**9.56**	**147**	LR	LR	00 35 11.2	
	comp=Z,45nm,20.8s,baz=331,slow=44						
YOJ	**Yonaguni jima**	**9.61**	**15**	Pn	**Pn**	**00 30 30.0**	**-0.4**
DDMP	**Don Marcelino,**	**10.45**	**149**	*eP*	**Pn**	**00 30 45.8**	**+3.8**
QIZ	**Qiongzhong**	**10.70**	**293**	P	**Pn**	**00 30 45.3**	**-0.1**
QIZ				S	**Sn**	**00 32 46.0**	**+2.7**
QIZ				L	L		
	comp=N,420nm,13.2s						
QIZ				L	L		
	comp=E,140nm,14.5s						
QIZ				L	L		
	comp=Z,340nm,12.5s						
TOLI2	**Tolitoli**	**13.96**	**178**	Pn	**Pn**	**00 31 28.8**	**+0.2**
GTOI	**Gorontalo**	**14.67**	**169**	P	**Pn**	**00 31 36.3**	**-1.4**
	40nm,1.2s						
WHN	**Wuhan**	**16.26**	**341**	⇓P	**P**	**00 32 01.5**	**+2.8**
LUWI	**Luwuk**	**16.28**	**171**		**P**	**00 31 58.5**	**-0.5**
LUWI	**Luwuk**	**16.28**	**171**	P	**P**	**00 32 05.2**	**+6.1**
NJ2	**Nanjing**	**16.87**	**356**	*eP*	**P**	**00 32 05.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,44nm,0.5s						
MMSI	**Mamuju**	**17.78**	**185**	P	**Pn**	**00 32 18.2**	**+2.0**
	555nm54nm,0.8s						
KMI2	**Kunming**	**19.22**	**304**	P	**Pn**	**00 32 37.3**	**+3.8**
KMI2				S	**Sn**	**00 36 09.5**	**+0.2**
KMI2				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI2				L	L		
	comp=N,190nm,15.0s						
KMI2				L	L		
	comp=E,140nm,11.4s						
KMI2				L	L		
	comp=Z,120nm,13.8s						
KAPI	**Kappang**	**20.04**	**182**	P	**P**	**00 32 40.8**	**+0.5**
	11nm,0.8s,baz=333,slow=9.0,SNR=3.6						
PZH	**PanZhiHua**	**20.66**	**306**	P	**P**	**00 32 47.8**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CM31	**Chiang Mai Arr**	**20.69**	**282**	P	**P**	**00 32 48.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.69**	**282**	P	**P**	**00 32 48.1**	**+0.8**
	20nm,0.9s,baz=98,slow=9.8,SNR=75						
CMAR				PcP	**PcP**	**00 36 54.6**	**+1.1**
	1.6nm,0.3s,baz=86,slow=1.6,SNR=8.9						
CMAR				LR	LR	00 40 36.5	
	comp=Z,61nm,21.8s,baz=105,slow=36 20nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.69**	**282**	P	**P**	**00 32 47.7**	**+0.4**
CMAR					**PcP**	**00 36 53.5**	**-0.1**
CHTO	**Chiang Mai**	**20.73**	**283**	P	**P**	**00 32 47.8**	**0.0**
CHTO	**Chiang Mai**	**20.73**	**283**	P	**P**	**00 32 48.0**	**+0.3**
CHTO	**Chiang Mai**	**20.73**	**283**	P	**P**	**00 32 48.5**	**+0.8**
TIA	**Tai'an**	**21.16**	**353**	P	**P**	**00 32 52.7**	**+0.5**
TIA				S	S	00 36 29.5	-12
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	**21.43**	**333**	P	**P**	**00 32 55.8**	**+0.7**
XAN				S	**S**	**00 36 47.9**	**+0.7**
XAN				pmax	pmax		
	comp=Z,31nm,0.9s						
CD2	**Chengdu**	**21.80**	**319**	P	**P**	**00 32 59.7**	**+0.6**
CD2				S	**S**	**00 36 54.2**	**-0.2**
CD2				pmax	pmax		
	comp=Z,80nm,0.7s						
CD2				L	L		
	comp=N,580nm,13.9s						
CD2				L	L		
	comp=E,640nm,11.9s						
CD2				L	L		
	comp=Z,550nm,13.4s						
TNCH	**TengChong**	**22.65**	**299**	⇓P	**P**	**00 33 08.7**	**+0.5**
TNCH				PP	**sP**	**00 33 43.3**	**+3.9**
TNCH				pmax	pmax		
	comp=Z,60nm,1.0s						
HNS	**HongShan**	**22.70**	**348**	⇑P	**P**	**00 33 08.8**	**+0.4**
HNS				pP	**sP**	**00 33 35.1**	**-5.5**
HNS				S	**S**	**00 37 09.5**	**+0.2**
HNS				pmax	pmax		
	comp=Z,27nm,1.0s						
HNS				L	L		
	comp=N,140nm,15.7s						
HNS				L	L		
	comp=Z,150nm,14.1s						
KSRS	**Korea Array**	**23.23**	**16**	P	**P**	**00 33 11.7**	**-1.7**
	2.6nm,0.7s,baz=200,slow=9.9,SNR=10						
KSRS				LR	LR	00 42 21.5	
	comp=Z,30nm,20.3s,baz=200,slow=36 2.6nm,0.7s						
JCJ	**Chichijima**	**23.59**	**56**	LR	LR	00 40 44.8	
	comp=Z,96nm,21.8s,baz=114,slow=32						
DL2	**Dalian**	**23.69**	**3**	P	**P**	**00 33 18.8**	**+1.2**
DL2				pmax	pmax		
	comp=Z,16nm,1.0s						
GUMO	**Guam**	**23.86**	**91**	LR	LR	00 41 39.0	
	comp=Z,40nm,21.7s,baz=287,slow=34						
PSI	**Prapat**	**24.37**	**242**	P	**P**	**00 33 24.1**	**-0.1**
	16nm,0.9s						
RPSI	**Rantau Prapat**	**24.43**	**242**	P	**P**	**00 33 23.5**	**-1.0**
MNSI	**Mandailing Nat**	**24.93**	**237**	P	**P**	**00 33 30.2**	**+1.1**
	45nm,0.8s						
KLSI		**25.02**	**219**	P	**P**	**00 33 31.1**	**+1.2**
BJT	**Baijiatuan**	**25.03**	**353**	P	**P**	**00 33 29.5**	**-0.3**
LZDM	**Lanzhou Array**	**25.48**	**327**	P	**P**	**00 33 34.6**	**+0.3**
	1.6nm,0.3s,baz=138,slow=12,SNR=1.8 1.6nm,0.3s						
LZH	**Lanzhou**	**25.51**	**328**	*eP*	**P**	**00 33 34.9**	**+0.6**
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				L	L		
	comp=N,320nm,12.4s						
LZH				L	L		
	comp=E,320nm,12.0s						
LZH				L	L		
	comp=Z,200nm,12.7s						
BBJI	**Bungbulang**	**25.72**	**210**	P	**P**	**00 33 36.7**	**+0.4**
BBJI				IAmb	IAmb	00 34 00.5	
	comp=Z,73nm,1.9s						
MJAR	**Matsushiro Arr**	**26.63**	**34**	LR	LR	00 46 19.9	
	comp=Z,22nm,18.4s,baz=213,slow=41						
HHC	**Hu-ho-hao-te**	**26.70**	**345**	*eP*	**P**	**00 33 47.0**	**+2.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,67nm,5.0s						
BRDH	**Bariadhala**	**28.08**	**290**	LR	LR	00 46 25.7	
	comp=Z,148nm,18.5s,baz=204,slow=39						
SHL	**Shillong**	**28.51**	**296**	P	**P**	**00 33 59.9**	**-1.6**
SHL				IAmb	IAmb	00 34 00.9	
	comp=Z,17nm,0.7s						
CN2	**Changchun**	**28.89**	**8**	*eP*	**P**	**00 34 06.6**	**+2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA2	**Gaotai**	**30.19**	**327**	*eP*	**P**	**00 34 16.2**	**+0.2**
GTA2				pP	pP	00 34 38.7	+0.2
GTA2				PcP	**PcP**	**00 37 15.8**	**+0.9**
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA2				L	L		
	comp=Z,160nm,14.4s						
GTA2				L	L		
	comp=Z,210nm,15.1s						
GTA2				L	L		
	comp=Z,240nm,14.8s						
USRK	**Ussuriysk Ar.**	**30.62**	**17**	P	**P**	**00 34 20.3**	**+0.8**
	comp=Z,4.5nm,0.7s,baz=212,slow=10,SNR=7.5						
USRK				LR	LR	00 47 31.7	
	comp=Z,28nm,20.9s,baz=227,slow=38 comp=Z,4.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**30.62**	**17**	P	**P**	**00 34 19.8**	**+0.2**
BNX	**BinXian**	**31.08**	**10**	⇓P	**P**	**00 34 22.7**	**-0.9**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EVN	**Everest**	**33.52**	**298**	P	**P**	**00 34 45.5**	**-0.4**
EVN				IAmb	IAmb	00 34 46.5	
	comp=Z,8.1nm,0.6s						
EVN	**Everest**	**33.52**	**298**	P	**P**	**00 34 45.9**	**-0.1**
HILR	**Hailar Array B**	**34.31**	**359**	P	**P**	**00 34 51.1**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=182,slow=17,SNR=2.8 comp=Z,1.5nm,0.5s						
ULN	**Ulaanbaatar**	**34.41**	**344**	P	**P**	**00 34 52.4**	**-0.5**
ULN	**Ulaanbaatar**	**34.41**	**344**	P	**P**	**00 34 52.8**	**-0.1**
ULN	**Ulaanbaatar**	**34.41**	**344**	P	**P**	**00 34 52.9**	**+0.1**
JKA	**Kamikawa-asahi**	**34.55**	**29**	P	**P**	**00 34 54.5**	**+0.7**
JKA	**Kamikawa-asahi**	**34.55**	**29**	P	**P**	**00 34 55.1**	**+1.3**
SONM	**Songino Array**	**34.56**	**343**	P	**P**	**00 34 53.7**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=164,slow=9.7,SNR=13						
SONM				PcP	**PcP**	**00 37 26.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=165,slow=4.3,SNR=2.0						
SONM				LR	LR	00 48 47.2	
	comp=Z,99nm,21.7s,baz=202,slow=36 comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**34.56**	**343**	P	**P**	**00 34 54.3**	**+0.2**
KLR	**Kul'dur**	**35.26**	**13**	LR	LR	00 49 16.4	
	comp=Z,82nm,21.8s,baz=206,slow=36						
COEN	**Coen**	**36.73**	**141**	P	**P**	**00 35 09.9**	**-2.9**
WB0	**Warramunga Arr**	**37.37**	**158**	P	**P**	**00 35 15.8**	**-2.5**
WB0				IAmb	IAmb	00 36 04.6	
	comp=Z,25nm,1.5s						
WRAB	**Tennant Creek**	**37.51**	**158**	P	**P**	**00 35 17.4**	**-2.0**
WRAB				IAmb	IAmb	00 35 28.4	
	comp=Z,21nm,1.2s						
WRAB	**Tennant Creek**	**37.51**	**158**	P	**P**	**00 35 17.9**	**-1.5**
WRA	**Warramunga Arr**	**37.51**	**158**	P	**P**	**00 35 17.8**	**-1.6**
	comp=Z,3.8nm,0.5s,baz=337,slow=8.6,SNR=35						
WRA				PcP	**PcP**	**00 37 35.1**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=322,slow=3.4,SNR=1.7						
WRA				S	**S**	**00 40 54.8**	**-6.4**
	comp=Z,1.1nm,1.1s,baz=338,slow=15,SNR=4.5 comp=Z,3.8nm,0.5s						
PATS

comp=Z,17nm,1.0s
PETK Petropavlovsk- 47.96 30 P **P 00 36 43.9 +0.4**
comp=Z,7.0nm,0.7s,baz=233,slow=4.5,SNR=16
PETK PcP **PcP 00 38 09.9 -0.3**
comp=Z,1.5nm,0.6s,baz=226,slow=5.4,SNR=1.8
comp=Z,7.0nm,0.7s
SGDS Segindy 47.97 315 *e*P **P 00 36 43.9 +0.1**
USP Osepenovka 47.99 315 P **P 00 36 44.5 +0.5**
SNR=13
EKS2 Erkin-Say 48.27 314 P **P 00 36 47.2 +1.0**
SNR=12
MANEM Manem 48.30 307 P **P 00 36 46.7 0.0**
MANEM IAmb IAmb 00 36 48.6
comp=Z,68nm,0.6s
ARSB Arslanbob 48.39 312 P **P 00 36 47.4 +0.2**
ARSB IAmb IAmb 00 36 48.6
comp=Z,15nm,0.7s
KURK Kurchatov 48.77 326 P **P 00 36 49.8 +0.1**
KURK Kurchatov 48.77 326 P **P 00 36 50.1 +0.5**
KURK Kurchatov 48.77 326 P **P 00 36 49.8 +0.1**
KURK pP **pP 00 37 13.3 -0.3**
KURBB Kurchatov Arra 48.77 326 P **P 00 36 49.9 +0.2**
comp=Z,10nm,0.7s,baz=122,slow=8.1,SNR=62
KURBB PcP **PcP 00 38 12.9 -0.2**
comp=Z,0.7nm,0.6s,baz=126,slow=4.9,SNR=1.2
KURBB LR LR 00 59 40.9
comp=Z,48nm,18.1s,baz=176,slow=39
comp=Z,10nm,0.7s
BTLS Baital 48.95 317 *e*P **P 00 36 51.3 +0.1**
BTK Batken 49.60 310 P **P 00 36 56.5 +0.2**
BTK IAmb IAmb 00 36 57.9
comp=Z,30nm,1.6s
MA2 Magadan 49.67 20 P **P 00 36 56.8 +0.4**
MA2 Magadan 49.67 20 P **P 00 36 56.8 +0.4**
comp=Z,30nm,0.8s
MA2 Magadan 49.67 20 P **P 00 36 57.1 +0.7**
GAR Garm 49.70 309 P **P 00 36 57.0 -0.2**
GAR Garm 49.70 309 P **P 00 36 57.5 +0.3**
KBL Kabul 49.79 303 P **P 00 36 57.8 -0.2**
KBL Kabul 49.79 303 P **P 00 36 58.2 +0.2**
BBOO Buckleboo 50.02 163 P **P 00 36 57.9 -1.5**
DZA Taraz 50.05 314 *e*P **P 00 37 00.1 +0.5**
comp=Z,8.1nm,0.7s
CHGR Chuyangaron 50.50 308 P **P 00 37 02.7 -0.5**
KK31 Karatay Array 50.68 314 P **P 00 37 04.2 -0.2**
KKAR Karatay Array 50.68 314 P **P 00 37 04.3 -0.1**
IUG Iuzhnay 50.74 312 ⇓*i*P **P 00 37 05.5 +0.5**
comp=Z,13nm,0.8s
STKA Stephens Creek 51.03 157 P **P 00 37 06.2 -0.8**
comp=Z,2.4nm,0.7s,baz=333,slow=7.8,SNR=4.2
STKA LR LR 01 01 59.9
comp=Z,93nm,18.3s,baz=207,slow=40
comp=Z,2.4nm,0.7s
CHM Chimkent 51.10 312 *e*P **P 00 37 08.1 +0.6**
BRLS Borolday 51.13 313 *e*P **P 00 37 08.2 +0.5**
comp=Z,5.7nm,0.7s
BRZS Berezniki 51.78 323 *e*P **P 00 37 12.8 +0.3**
BVAR Borovoye Array 54.36 325 P **P 00 37 31.3 0.0**
comp=Z,11nm,0.7s,baz=116,slow=9.8,SNR=58
comp=Z,11nm,0.7s
BORK Borovoye 54.40 325 P **P 00 37 31.6 0.0**
ARMA Armidale 54.44 146 P **P 00 37 32.5 +0.2**
NRIK Noril'sk 57.92 347 P **P 00 37 56.0 -0.3**
comp=Z,11nm,0.8s,baz=135,slow=8.6,SNR=14
comp=Z,11nm,0.8s
NRIK Noril'sk 57.92 347 P **P 00 37 55.8 -0.6**
AB31 Akbulak array 59.38 319 P **P 00 38 07.2 +0.3**
ABKAR Akbulak array 59.38 319 P **P 00 38 06.8 0.0**
BILL Bilibino 60.46 18 P **P 00 38 13.7 -0.1**
BILL Bilibino 60.46 18 P **P 00 38 13.8 -0.1**
BILL pP **pP 00 38 37.9 -0.8**
AKTO Aktyubinsk 60.85 320 LR LR 01 06 11.6
comp=Z,79nm,19.7s,baz=132,slow=37
ARTI Arti 62.04 326 P **P 00 38 24.0 -0.8**
ARTI Arti 62.04 326 P **P 00 38 24.3 -0.5**
SPIA Saint Paul Isl 66.28 34 P **P 00 38 53.0 +0.6**
baz=261
GAMB Gambell 66.84 27 P **P 00 38 56.2 +0.3**
baz=257
UNV Unalaska Valle 68.00 38 P **P 00 39 03.7 +0.3**
baz=266
TNA Tin City 68.79 25 P **P 00 39 08.5 +0.4**
baz=260
M11K Mekoryuk 68.80 31 P **P 00 39 09.1 +0.9**
baz=263
GNI Garni 69.42 308 P **P 00 39 14.2 +1.5**
comp=Z,15nm,1.3s
GNI Garni 69.42 308 P **P 00 39 13.5 +0.9**
GNI x x 00 39 49.4
F14K Arctic Creek 69.43 25 P **P 00 39 12.9 +0.8**
baz=261
ANM Nome 69.71 26 P **P 00 39 15.2 +1.4**
baz=262
K13K Kusilvak Mount 69.72 29 P **P 00 39 14.9 +1.0**
baz=264
F15K North Star Dit 70.16 25 P **P 00 39 17.2 +0.7**
F15K North Star Dit 70.16 25 P **P 00 39 17.8 +1.3**
baz=263
M13K Dall Lake 70.22 31 P **P 00 39 17.8 +0.8**
baz=266
C16K Lisburne Hills 70.25 22 P **P 00 39 17.8 +0.8**
baz=261
G15K Niukluk 70.33 26 P **P 00 39 17.9 +0.3**
baz=264
RAYN Ar Rayn 70.38 290 P **P 00 39 18.4 -0.4**
RAYN IAmb IAmb 00 39 19.6
comp=Z,14nm,0.9s
RAYN Ar Rayn 70.38 290 P **P 00 39 18.6 -0.2**
L14K Kuka Creek 70.61 30 P **P 00 39 19.6 +0.3**
baz=266
KBZ Khabaz 70.62 311 P **P 00 39 19.4 -0.3**
comp=Z,14nm,0.9s,baz=59,slow=6.1,SNR=20
comp=Z,14nm,0.9s
KIV Kislovodsk 70.77 312 ⇓P **P 00 39 21.4 +0.6**
KIV Kislovodsk 70.77 312 P **P 00 39 21.4 +0.6**
KIV Kislovodsk 70.77 312 P **P 00 39 21.1 +0.4**
comp=Z,292nmcomp=Z,49nm,0.8s
KIV Kislovodsk 70.77 312 P **P 00 39 21.6 +0.8**
KIV Kislovodsk 70.77 312 P **P 00 39 21.2 +0.4**
M14K Bethel 70.92 31 P **P 00 39 21.9 +0.7**
baz=267
D17K Noatak River 71.02 23 P **P 00 39 22.4 +0.7**
baz=264
N14K Kuskokwak Cree 71.02 31 P **P 00 39 21.8 0.0**
baz=268
H16K Elim 71.06 26 P **P 00 39 22.4 +0.4**
baz=265
C17K DeLong Mountai 71.07 22 P **P 00 39 22.7 +0.7**
baz=263
G16K Koyuk River 71.07 26 P **P 00 39 23.6 +1.6**
baz=265
RDOG Red Dog Mine 71.12 23 P **P 00 39 24.0 +1.6**
baz=264
L15K Ungalak Mounta 71.20 30 P **P 00 39 23.8 +0.9**
baz=267
O14K Tigyukauivet M 71.20 32 P **P 00 39 23.5 +0.6**
baz=268
E17K Hotham Inlet 71.44 24 P **P 00 39 25.3 +1.0**
baz=265
M15K Kasigluk River 71.54 31 P **P 00 39 26.0 +1.0**
baz=268
F17K Baldwin Pennin 71.61 25 P **P 00 39 26.4 +1.1**
F17K IAmb IAmb 00 39 27.4
comp=Z,11nm,0.7s
F17K Baldwin Pennin 71.61 25 P **P 00 39 26.4 +1.1**
baz=266,SNR=7.1
I17K Unalakleet 71.68 27 P **P 00 39 26.7 +1.0**
baz=267
J16K Anvik River 71.69 28 P **P 00 39 27.2 +1.4**
baz=267
G17K Kiwalik Mounta 71.79 26 P **P 00 39 27.5 +1.1**
baz=266,SNR=19
C18K Utukok River 71.81 22 P **P 00 39 27.3 +0.7**
C18K Utukok River 71.81 22 P **P 00 39 27.9 +1.4**
baz=265
N15K Kwethluk River 71.83 31 P **P 00 39 27.4 +0.6**
baz=269
E18K Tukpahlearik C 71.94 24 P **P 00 39 28.4 +1.1**
baz=266
O15K Ungalikthiuk R 71.94 32 P **P 00 39 27.8 +0.4**
baz=269
A19K Wainwright 72.00 21 P **P 00 39 27.9 +0.4**
baz=265
H17K Granite Mounta 72.07 26 IAmb IAmb 00 39 30.4
comp=Z,12nm,0.7s
H17K Granite Mounta 72.07 26 P **P 00 39 29.1 +1.0**
baz=267,SNR=10
CHNA Chernabura Isl 72.08 37 P **P 00 39 28.2 -0.1**
baz=271
S14K Fog Glacier 72.08 35 P **P 00 39 28.1 -0.4**
baz=270
L16K Owhat River 72.16 30 P **P 00 39 29.7 +1.0**
baz=269
F18K Selawik 72.26 24 P **P 00 39 30.1 +1.0**
baz=267,SNR=9.4
J17K VABM Dome 72.38 28 IAmb IAmb 00 39 32.4
comp=Z,11nm,0.8s
J17K VABM Dome 72.38 28 P **P 00 39 31.0 +1.0**
baz=269,SNR=6.0
M16K Timber Creek 72.40 30 P **P 00 39 30.7 +0.6**
baz=270
C19K Lookout Ridge 72.43 22 P **P 00 39 29.7 -0.5**
baz=266
N16K Nishlik Lake 72.49 31 P **P 00 39 30.6 -0.1**
baz=270
G18K Tagagawik 72.64 25 P **P 00 39 31.9 +0.5**
baz=268,SNR=16
L17K Donlin 72.72 29 P **P 00 39 32.9 +0.9**
baz=270
K17K Iditarod 72.72 29 IAmb IAmb 00 39 34.5
comp=Z,30nm,1.4s
K17K Iditarod 72.72 29 P **P 00 39 33.1 +1.1**
baz=270
H18K Honhosa River 72.73 26 IAmb IAmb 00 39 33.9
comp=Z,48nm,2.0s
H18K Honhosa River 72.73 26 P **P 00 39 32.5 +0.5**
baz=269,SNR=5.6
O16K Kokwok River B 72.83 32 P **P 00 39 33.0 +0.3**
baz=271
D19K Kuna River 72.93 22 IAmb IAmb 00 39 35.1
comp=Z,16nm,0.8s
D19K Kuna River 72.93 22 P **P 00 39 34.0 +0.8**
baz=268,SNR=9.3
F19K Shaleruckik Mo 73.02 24 P **P 00 39 34.3 +0.7**
baz=269
M17K Holitna River 73.13 30 P **P 00 39 35.7 +1.2**
baz=271
E19K Redstone River 73.24 24 IAmb IAmb 00 39 37.0
comp=Z,9.3nm,0.8s
E19K Redstone River 73.24 24 P **P 00 39 35.7 +0.7**
baz=268,SNR=12
N17K Nushagak Hills 73.27 31 P **P 00 39 35.8 +0.5**
N17K Nushagak Hills 73.27 31 P **P 00 39 36.3 +1.1**
baz=271
G19K Purcell Mounta 73.28 25 P **P 00 39 36.2 +1.0**
baz=270,SNR=7.5
B20K Meade River 73.33 21 P **P 00 39 36.4 +1.1**
baz=268
O17K Koliganek Bris 73.33 32 P **P 00 39 36.5 +0.9**
baz=272
L18K Granite Mounta 73.48 29 IAmb IAmb 00 39 38.4
comp=Z,7.6nm,0.6s
L18K Granite Mounta 73.48 29 P **P 00 39 37.7 +1.2**
baz=271,SNR=6.4
D20K Etivluk River 73.49 22 IAmb IAmb 00 39 38.4
comp=Z,15nm,0.8s
D20K Etivluk River 73.49 22 P **P 00 39 37.6 +1.1**
baz=269,SNR=9.7
H19K Roundabout Mou 73.54 26 IAmb IAmb 00 39 38.6
comp=Z,13nm,0.7s
H19K Roundabout Mou 73.54 26 P **P 00 39 37.9 +1.2**
baz=270,SNR=20
E20K Nigu River 73.64 23 P **P 00 39 38.1 +0.7**
baz=270,SNR=12
R17L Mt. Peulik Vol 73.79 34 P **P 00 39 39.7 +1.3**
baz=273
F20K Avaraart Lake 73.82 24 IAmb IAmb 00 39 40.3
comp=Z,9.2nm,0.7s
F20K Avaraart Lake 73.82 24 P **P 00 39 39.6 +1.2**
baz=271,SNR=16
N18K Kilae Creek 73.91 31 P **P 00 39 39.7 +0.7**
baz=272
M18K Stony River 73.91 30 P **P 00 39 40.0 +1.0**
baz=272,SNR=7.5
J19K Poorman 73.92 27 P **P 00 39 39.9 +0.8**
baz=272,SNR=5.7
Q17K Contact Creek 74.02 33 P **P 00 39 40.7 +0.9**
baz=273
OBN Obninsk 74.14 324 P **P 00 39 40.0 -0.4**
comp=Z,13nm,0.6s,baz=117,slow=4.5,SNR=5.2
comp=Z,13nm,0.6s
OBN Obninsk 74.14 324 P **P 00 39 39.2 -1.2**
OBN Obninsk 74.14 324 P **P 00 39 39.4 -1.0**
comp=Z,22nm,1.1s
OBN Obninsk 74.14 324 P **P 00 39 39.4 -1.0**
OBN pP **pP 00 40 04.6 -1.6**
C21K Knifeblade Rid 74.15 22 P **P 00 39 41.7 +1.4**
baz=271
H20K Anotleneega Mo 74.20 26 P **P 00 39 41.9 +1.2**
baz=272,SNR=16
B21K Ikpikpuk River 74.21 21 P **P 00 39 41.5 +1.0**
baz=271
O18K Koktuh Hills 74.28 31 P **P 00 39 42.0 +0.8**
baz=273,SNR=6.5
P18K Big Mountain, 74.30 32 P **P 00 39 41.9 +0.5**
baz=273
L19K White Mountain 74.34 29 IAmb IAmb 00 39 43.9
comp=Z,15nm,1.1s
L19K White Mountain 74.34 29 P **P 00 39 42.6 +1.1**
baz=273,SNR=7.2
I20K Naaghedeneel 74.39 26 P **P 00 39 42.9 +1.2**
baz=272
ARPR Arapgir-MALATY 74.43 307 IAmb IAmb 00 39 44.8
comp=Z,9.4nm,0.8s
ARPR Arapgir-MALATY 74.43 307 P **P 00 39 44.0 +1.2**
Q18K Katmai Hardscr 74.45 33 P **P 00 39 43.3 +0.9**
baz=274
E21K Killik River 74.46 22 P **P 00 39 43.0 +0.8**
baz=272
J20K Nowinta River 74.56 27 IAmb IAmb 00 39 44.6
comp=Z,8.8nm,0.6s
J20K Nowinta River 74.56 27 P **P 00 39 43.8 +1.1**
baz=273,SNR=11
N19K Bonanza Creek 74.59 30 IAmb IAmb 00 39 45.4
comp=Z,15nm,1.0s
N19K Bonanza Creek 74.59 30 P **P 00 39 44.7 +1.6**
baz=274,SNR=7.4
K20K Telida 74.64 28 P **P 00 39 44.6 +1.4**
baz=273,SNR=7.9
F21K Alatna River 74.69 24 P **P 00 39 44.2 +0.8**
baz=273
G21K Allakaket 74.72 24 P **P 00 39 44.4 +0.8**
G21K IAmb IAmb 00 39 45.7
comp=Z,14nm,0.9s
G21K Allakaket 74.72 24 P **P 00 39 44.8 +1.2**
baz=273,SNR=18
KHAM Kharkiv 74.74 318 P **P 00 39 44.9 +0.8**
H21K Melozitna Rive 75.05 25 IAmb IAmb 00 39 47.9
comp=Z,18nm,1.2s
H21K Melozitna Rive 75.05 25 P **P 00 39 46.7 +1.1**
baz=274,SNR=5.5
M20K Styx River 75.17 29 IAmb IAmb 00 39 48.7
comp=Z,16nm,1.1s
M20K Styx River 75.17 29 P **P 00 39 47.3 +1.0**
baz=273,SNR=9.0
F22K John River 75.18 23 P **P 00 39 47.4 +1.2**
baz=274
E22K Anaktuvuk Pass 75.28 23 P **P 00 39 47.7 +0.8**
baz=274
P19K Oil Pt 75.29 32 P **P 00 39 47.6 +0.5**
baz=275
CHUM Lake Minchumin 75.39 27 P **P 00 39 48.2 +0.8**
baz=274
I21K Tanana 75.43 26 P **P 00 39 48.8 +1.1**
baz=274
OHAK Old Harbor 75.48 34 P **P 00 39 48.7 +0.6**
baz=275
G22K Bettles 75.48 24 P **P 00 39 48.7 +0.7**
baz=274
PPLA Purkeypile 75.52 28 P **P 00 39 49.2 +0.8**
baz=275
CAST Castle Rocks 75.53 28 P **P 00 39 49.1 +0.8**
baz=275,SNR=31
O20K Slope Mountain 75.56 31 P **P 00 39 49.0 +0.4**
baz=275
GAZ Gaziantep 75.56 305 IAmb IAmb 00 39 50.9
comp=Z,20nm,1.0s
C23K Itkillik River 75.59 21 P **P 00 39 49.1 +0.6**
baz=274
H22K Ishtalitna Cre 75.62 25 IAmb IAmb 00 39 51.4
comp=Z,28nm,1.4s
H22K Ishtalitna Cre 75.62 25 P **P 00 39 50.1 +1.3**
baz=275,SNR=18
D23K Nanushuk River 75.63 22 IAmb IAmb 00 39 51.0
comp=Z,32nm,1.6s
D23K Nanushuk River 75.63 22 P **P 00 39 50.0 +1.2**
baz=275,SNR=5.6
SPCR Spurr Chakacha 75.66 30 P **P 00 39 49.7 +0.5**
baz=275
TOKA Tokat 75.70 308 IAmb IAmb 00 39 51.1
comp=Z,12nm,1.0s
KDAK Kodiak Island 75.80 33 LR LR 01 09 52.3
comp=Z,3µm,21.2s,baz=239,slow=33
KDAK Kodiak Island 75.80 33 P **P 00 39 50.2 +0.2**
baz=276
KDAK Kodiak Island 75.80 33 P **P 00 39 50.3 +0.3**
KDAK PcP **PcP 00 40 03.4 +1.3**
SKT Skwentna 75.91 29 P **P 00 39 50.6 +0.1**
baz=276,SNR=7.7
MLY Manley 75.97 26 IAmb IAmb 00 39 52.9
comp=Z,16nm,1.0s
MLY Manley 75.97 26 P **P 00 39 51.5 +0.6**
baz=276,SNR=16
COLD Coldfoot 75.97 24 P **P 00 39 51.6 +0.9**
baz=276
KTH Kantishna Hill 76.03 27 P **P 00 39 51.9 +0.6**
TOLK Toolik Lake Re 76.06 22 P **P 00 39 52.1 +0.7**
baz=276,SNR=5.0
G23K Bananza Creek 76.09 24 P **P 00 39 52.3 +0.8**
baz=276,SNR=8.3
HOM Homer 76.10 32 P **P 00 39 51.8 +0.2**
baz=276
E23K Chandalar 76.11 23 IAmb IAmb 00 39 53.3
comp=Z,7.2nm,0.7s
E23K Chandalar 76.11 23 P **P 00 39 52.1 +0.5**
baz=276,SNR=8.2
VADS Vadso 76.19 339 *e*P **P 00 39 52.2 +0.3**
VADS IAmb IAmb 00 39 52.8
comp=Z,164nm,2.2s
L22K Petersville 76.21 29 P **P 00 39 52.5 +0.3**
baz=276,SNR=23
D24K Happy Valley 76.28 22 IAmb IAmb 00 39 53.9
comp=Z,8.8nm,0.6s
D24K Happy Valley 76.28 22 P **P 00 39 53.3 +0.8**
baz=276
TRF Thorofare Moun 76.33 28 IAmb IAmb 00 39 56.2
comp=Z,25nm,1.2s
TRF Thorofare Moun 76.33 28 P **P 00 39 53.3 +0.2**
baz=276
H23K Yukon River 76.38 25 IAmb IAmb 00 39 55.7
comp=Z,14nm,1.0s
H23K Yukon River 76.38 25 P **P 00 39 54.4 +1.3**
baz=276
BNN Bunyan 76.39 307 IAmb IAmb 00 39 55.1
comp=Z,12nm,0.9s
CUT Chulitna 76.45 29 P **P 00 39 53.5 -0.1**
baz=277
E24K Your Creek 76.53 23 P **P 00 39 54.4 +0.4**
E24K Your Creek 76.53 23 P **P 00 39 54.8 +0.8**
baz=277,SNR=11
I23K Minto, Yukon-K 76.53 26 P **P 00 39 54.7 +0.8**
baz=277,SNR=15
BRSE Bradley Lake S 76.54 31 P **P 00 39 55.1 +0.9**
baz=277
M22K Willow 76.60 29 P **P 00 39 54.6 +0.2**
baz=277
NEA2 Nenana 76.72 26 P **P 00 39 55.4 +0.4**
baz=277,SNR=10
F24K Squaw Lake 76.83 23 P **P 00 39 56.8 +1.2**
baz=278,SNR=10
RC01 Rabbit Creek A 76.87 30 P **P 00 39 55.7 -0.3**
baz=278
MCK McKinley 76.89 27 P **P 00 39 56.2 +0.2**
baz=278,SNR=8.7
RND Reindeer 76.97 28 IAmb IAmb 00 39 57.5
comp=Z,18nm,0.8s
H24K Noodor Dome 77.06 25 P **P 00 39 57.9 +1.0**
baz=278,SNR=10
PMR Palmer 77.09 29 IAmb IAmb 00 39 57.9
comp=Z,13nm,0.8s
PMR Palmer 77.09 29 P **P 00 39 57.0 -0.1**
baz=278
G24K Hadweenzic Riv 77.10 24 P **P 00 39 58.0 +0.9**
G24K Hadweenzic Riv 77.10 24 P **P 00 39 57.9 +0.7**
baz=278,SNR=6.9
D25K Kavik River 77.12 21 IAmb IAmb 00 39 58.9
comp=Z,17nm,0.9s
D25K Kavik River 77.12 21 P **P 00 39 57.7 +0.4**
baz=279,SNR=11
SEW Seward 77.14 31 P **P 00 39 57.3 -0.1**
baz=278
GHO Glory Hole Cre 77.16 29 IAmb IAmb 00 40 02.7
comp=Z,10nm,0.8s
WAT1 Susitna Watana 77.19 28 P **P 00 39 57.5 -0.3**
baz=278
COLA College 77.20 26 P **P 00 39 57.9 +0.2**
baz=278
COLA College 77.20 26 P **P 00 39 57.5 -0.2**
KNK Knik Glacier 77.44 30 IAmb IAmb 00 40 00.5
comp=Z,24nm,1.1s
KNK Knik Glacier 77.44 30 P **P 00 39 59.1 -0.1**
baz=278
SML Sawmill 77.44 29 P **P 00 39 59.3 +0.2**
baz=278,SNR=11
ARA0 ARCESS Array S 77.59 339 *e*P **P 00 40 00.1 +0.2**
ARCES ARCESS Array B 77.59 339 P **P 00 39 59.8 -0.1**
comp=Z,3.5nm,0.5s,baz=78,slow=5.8,SNR=48
comp=Z,3.5nm,0.5s
ARCES ARCESS Array B 77.59 339 P **P 00 39 59.1 -0.8**
WAT6 Susitna Watana 77.59 28 P **P 00 40 00.3 +0.1**
baz=279,SNR=5.9
E25K Arctic Village 77.61 23 P **P 00 40 00.8 +0.8**
baz=280
G25K Bearman Lake 77.63 24 P **P 00 40 00.7 +0.7**
baz=279,SNR=14
ILAR Eielson Array 77.63 26 P **P 00 39 59.2 -0.9**
comp=Z,3.6nm,0.9s,baz=272,slow=4.9,SNR=32
comp=Z,3.6nm,0.9s
HDA Harding Lake 77.66 26 IAmb IAmb 00 40 00.6
comp=Z,9.3nm,0.8s
HDA Harding Lake 77.66 26 P **P 00 40 00.6 +0.3**
baz=279,SNR=7.0
F25K Christian Rive 77.67 23 P **P 00 40 01.8 +1.5**
baz=280,SNR=14
DHY Denali Highway 77.68 28 IAmb IAmb 00 40 02.1
comp=Z,8.8nm,0.7s
DHY Denali Highway 77.68 28 P **P 00 40 01.3 +0.6**
baz=279,SNR=8.6
M23K Glacier View 77.72 29 P **P 00 40 01.1 +0.4**
baz=279,SNR=6.8
KIRS Kirsehir-Merke 77.83 307 ⇑P **P 00 40 01.5 -0.3**
GHAJ Ghor Haditha 77.86 299 IAmb IAmb 00 40 03.9
comp=Z,21nm,0.9s
SCM Sheep Creek Mo 77.90 29 P **P 00 40 02.5 +0.7**
baz=279,SNR=13
BRTR Keskin Array B 77.94 308 P **P 00 40 01.5 -1.0**
comp=Z,3.4nm,0.8s,baz=95,slow=4.6,SNR=22
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 77.94 308 P **P 00 40 01.0 -1.6**
BR104 Keskin Array S 77.94 308 P **P 00 40 02.1 -0.4**
comp=Z,42nmcomp=Z,5.7nm,0.9s
BR106 Keskin Array S 77.96 308 P **P 00 40 02.2 -0.4**
comp=Z,40nmcomp=Z,5.7nm,0.9s
C27K Jago River 78.00 21 IAmb IAmb 00 40 04.2
comp=Z,15nm,0.8s
C27K Jago River 78.00 21 P **P 00 40 03.2 +1.1**
baz=281,SNR=6.4
PRP Porcupine Dome 78.07 25 P **P 00 40 03.8 +1.1**
baz=280,SNR=6.1
SPITS Spitsbergen Ar 78.10 348 P **P 00 40 02.2 -0.3**
comp=Z,5.3nm,0.5s,baz=74,slow=12,SNR=9.5
comp=Z,5.3nm,0.5s
P23K Montague Islan 78.17 31 P **P 00 40 03.6 +0.4**
baz=280
GLI Glacier Island 78.17 30 IAmb IAmb 00 40 04.5
comp=Z,19nm,0.8s
GLI Glacier Island 78.17 30 P **P 00 40 03.3 0.0**
baz=280
F26K Sheenjek River 78.21 23 P **P 00 40 04.3 +1.0**
baz=281,SNR=8.5
K24K Donnelly Dome 78.27 27 P **P 00 40 04.5 +0.7**
baz=280,SNR=8.8
J25K Salcha River, 78.30 26 P **P 00 40 03.0 -0.9**
baz=280,SNR=6.1
M24K Tolsona, Glenn 78.39 29 P **P 00 40 05.3 +0.8**
baz=280,SNR=13
KTK1 Kautokeino 78.49 339 *e*P **P 00 40 04.9 +0.1**
FID Port Fidalgo 78.49 30 IAmb IAmb 00 40 06.5
comp=Z,20nm,1.0s
G26K Porcupine Rive 78.49 24 IAmb IAmb 00 40 07.2
comp=Z,16nm,1.1s
G26K Porcupine Rive 78.49 24 P **P 00 40 05.5 +0.7**

baz=282,SNR=12
KLU Klutina 78.62 29 IAmb IAmb 00 40 07.3
comp=Z,12nm,0.8s
KLU Klutina 78.62 29 P P 00 40 06.2 +0.4
baz=281,SNR=8.9
EIL Elat 78.68 298 P P 00 40 07.5 +0.9
RIDG Independent Ri 78.69 27 P P 00 40 06.1 +0.1
baz=281,SNR=18
HARP HAARP 78.81 28 IAmb IAmb 00 40 09.2
comp=Z,20nm,0.8s
HARP HAARP 78.81 28 P P 00 40 07.5 +0.8
baz=281
FINES FINESS Array B 78.83 331 P P 00 40 06.1 -0.6
comp=Z,5.5nm,0.7s,baz=71,slow=6.4,SNR=23
comp=Z,5.5nm,0.7s
EYAK Cordova Ski Ar 78.88 30 P P 00 40 06.8 -0.2
EYAK IAmb IAmb 00 40 08.5
comp=Z,9.7nm,0.8s
EYAK Cordova Ski Ar 78.88 30 P P 00 40 07.9 +0.9
baz=281
SCRK Sand Creek 79.01 27 IAmb IAmb 00 40 09.3
comp=Z,24nm,1.5s
SCRK Sand Creek 79.01 27 P P 00 40 08.2 +0.3
baz=282,SNR=15
D27M Malcolm River 79.03 21 P P 00 40 08.8 +1.0
baz=284
CSS Mathiatis 79.03 303 IAmb IAmb 00 40 09.8
comp=Z,23nm,0.9s
CSS Mathiatis 79.03 303 P P 00 40 08.9 +0.5
E27K Coleen River 79.05 22 IAmb IAmb 00 40 10.0
comp=Z,17nm,1.2s
E27K Coleen River 79.05 22 P P 00 40 09.0 +1.1
baz=283,SNR=11
VSU Vasula 79.08 328 P P 00 40 06.8 -1.3
I26K Coal Creek Min 79.08 25 IAmb IAmb 00 40 09.5
comp=Z,18nm,0.8s
I26K Coal Creek Min 79.08 25 P P 00 40 08.7 +0.6
baz=282
AKASG Malin Array Be 79.10 320 P P 00 40 07.0 -1.5
comp=Z,4.9nm,0.8s,baz=66,slow=5.7,SNR=16
comp=Z,4.9nm,0.8s
AKASG Malin Array Be 79.10 320 P P 00 40 07.8 -0.7
AKBB Malin Array Si 79.10 320 IAmb IAmb 00 40 08.6
comp=Z,12nm,0.9s
AKBB Malin Array Si 79.10 320 P P 00 40 07.8 -0.7
KIEV Kiev 79.11 320 ⇑P P 00 40 07.9 -0.6
KIEV Kiev 79.11 320 P P 00 40 08.0 -0.5
KIEV Kiev 79.11 320 P P 00 40 07.6 -0.9
N25K Chitina, Valde 79.22 29 P P 00 40 09.9 +0.8
baz=282,SNR=10
JETT Jettan, Norway 79.34 339 eP P 00 40 09.8 +0.3
JETT IAmb IAmb 00 40 12.8
comp=Z,22nm,1.1s
G27K Doyon Strip 79.34 24 P P 00 40 10.4 +0.9
baz=283,SNR=11
BMRM Bremner River 79.35 30 IAmb IAmb 00 40 11.3
comp=Z,14nm,1.0s
BMRM Bremner River 79.35 30 P P 00 40 10.4 +0.6
baz=282
L26K Log Cabin Wild 79.49 27 IAmb IAmb 00 40 12.4
comp=Z,8.9nm,0.8s
L26K Log Cabin Wild 79.49 27 P P 00 40 11.1 +0.7
baz=283
H27K Steamboat Moun 79.53 24 P P 00 40 12.0 +1.4
baz=284,SNR=9.2
GLB Gilahina Butte 79.63 29 IAmb IAmb 00 40 13.0
comp=Z,12nm,0.9s
I27K Kandik River 79.64 25 P P 00 40 11.9 +0.7
I27K IAmb IAmb 00 40 13.6
comp=Z,13nm,1.0s
I27K Kandik River 79.64 25 P P 00 40 12.3 +1.0
baz=284,SNR=15
MDUB Mudurnu 79.65 309 IAmb IAmb 00 40 12.4
comp=Z,23nm,0.9s
KAIM Kayak Island 79.66 31 P P 00 40 12.3 +0.9
baz=282
E28M Babbage River 79.69 22 P P 00 40 11.9 +0.6
baz=285,SNR=8.8
M26K Nabesna, AK 79.79 28 IAmb IAmb 00 40 14.0
comp=Z,19nm,0.9s
M26K Nabesna, AK 79.79 28 P P 00 40 12.8 +0.7
baz=283,SNR=16
TRO Tromso 79.82 340 eP P 00 40 12.2 +0.2
F28M Old Crow 79.82 23 IAmb IAmb 00 40 14.0
comp=Z,15nm,0.9s
F28M Old Crow 79.82 23 P P 00 40 12.8 +0.7
baz=285,SNR=19
K27K Chicken 79.82 26 IAmb IAmb 00 40 14.7
comp=Z,18nm,0.9s
MCARA McCarthy VSAT 80.01 29 IAmb IAmb 00 40 15.2
comp=Z,8.8nm,0.7s
MCARA McCarthy VSAT 80.01 29 P P 00 40 14.0 +0.8
baz=283
MI28 MI28,Pidlybu 80.03 320 P P 00 40 11.2 -2.3
CRQM Cirque 80.10 30 IAmb IAmb 00 40 15.6
comp=Z,13nm,0.8s
CRQE Cirque 80.12 30 P P 00 40 14.8 +0.9
baz=283,SNR=5.7
SORM Soroca 80.15 317 ⇑P P 00 40 13.7 -0.5
L27K Beaver Creek, 80.16 27 IAmb IAmb 00 40 16.5
comp=Z,13nm,0.8s
L27K Beaver Creek, 80.16 27 P P 00 40 15.2 +1.1
baz=284
LUBAR Lubar, Ukraine 80.17 319 P P 00 40 13.7 -0.6
BCAR Beaver Creek A 80.18 27 P P 00 40 15.1 +0.9
TGL Tana Glacier 80.25 30 IAmb IAmb 00 40 16.2
comp=Z,12nm,0.6s
M27K Edge Creek, AK 80.31 28 P P 00 40 15.8 +0.9
baz=284,SNR=12
E29M Blow River 80.33 22 IAmb IAmb 00 40 16.9
comp=Z,11nm,0.8s
E29M Blow River 80.33 22 P P 00 40 15.3 +0.5
baz=287,SNR=21
I28M Miner Creek 80.36 25 IAmb IAmb 00 40 17.4
comp=Z,16nm,0.8s
I28M Miner Creek 80.36 25 P P 00 40 16.1 +1.0
baz=285,SNR=32
G29M Pine Creek 80.70 23 P P 00 40 17.8 +0.9
baz=287,SNR=21
BVCY Beaver Creek 80.75 28 P P 00 40 18.3 +1.1
baz=285
GRNC Granite Creek 80.76 30 IAmb IAmb 00 40 19.6
comp=Z,46nm,1.8s
H29M Whitestone 80.77 24 IAmb IAmb 00 40 19.1
comp=Z,20nm,0.9s
H29M Whitestone 80.77 24 P P 00 40 17.7 +0.5
baz=286,SNR=25
CFR Carcaliu 80.91 314 ⇑P P 00 40 18.3 0.0
DAWY Dawson 80.96 26 IAmb IAmb 00 40 20.1
comp=Z,12nm,0.9s
DAWY Dawson 80.96 26 P P 00 40 19.1 +0.8
baz=286,SNR=14
RNPP9 Sopachiv 81.02 321 P P 00 40 17.8 -1.0
LOGN Logan Glacier 81.10 29 IAmb IAmb 00 40 21.6
comp=Z,16nm,0.8s
YUK3 Moose Creek 81.10 28 P P 00 40 20.3 +1.0
baz=285,SNR=9.7
PABE Paberze 81.19 325 P P 00 40 19.3 -0.2
F30M Barrier River 81.32 22 IAmb IAmb 00 40 21.8
comp=Z,18nm,0.8s
F30M Barrier River 81.32 22 P P 00 40 20.5 +0.4
baz=289,SNR=14
J29N Klondike Camp 81.34 25 P P 00 40 21.5 +1.2
baz=287
G30M tAoh Zraii Nji 81.36 23 IAmb IAmb 00 40 21.4
comp=Z,18nm,0.9s
G30M tAoh Zraii Nji 81.36 23 P P 00 40 20.4 0.0
baz=288,SNR=20
EPYK Eagle Plains 81.36 23 IAmb IAmb 00 40 21.6
comp=Z,16nm,0.8s
EPYK Eagle Plains 81.36 23 P P 00 40 20.4 0.0
baz=288,SNR=14
ELL Elmali 81.39 306 IAmb IAmb 00 40 22.1
comp=Z,31nm,1.4s
O28M Mount Upton 81.50 29 P P 00 40 22.4 +0.9
baz=286
YUK8 Steele Glacier 81.55 29 P P 00 40 23.2 +1.4
baz=286,SNR=5.8
STEI Steigen 81.62 338 eP P 00 40 21.2 -0.4
STEI IAmb IAmb 00 40 21.7
comp=Z,36nm,1.4s
GIRR Girov 81.63 316 ⇑P P 00 40 22.3 +0.1
TESR Tescani 81.63 316 ⇑P P 00 40 22.3 +0.2
PINM Pinnacle 81.65 30 P P 00 40 23.3 +1.2
baz=286,SNR=5.9
VRI Vrincioaia 81.72 315 ⇑P P 00 40 23.4 +0.8
VRI Vrincioaia 81.72 315 P P 00 40 23.3 +0.6
L29M L29M 81.77 27 P P 00 40 24.4 +1.8
baz=287,SNR=39
PLOR Plostina 81.78 315 ⇑P P 00 40 23.2 +0.2
SAHR Sahastru 81.78 315 ⇓P P 00 40 23.8 +0.8
K29M Barlow Dome 81.81 26 IAmb IAmb 00 40 25.1
comp=Z,17nm,0.8s
K29M Barlow Dome 81.81 26 P P 00 40 24.1 +1.2
baz=288,SNR=36
M29M Somme Creek 81.82 27 IAmb IAmb 00 40 25.6
comp=Z,14nm,0.8s
M29M Somme Creek 81.82 27 P P 00 40 24.3 +1.3
baz=287,SNR=32
I30M Mount Dempster 81.86 24 IAmb IAmb 00 40 24.8
comp=Z,20nm,0.8s
I30M Mount Dempster 81.86 24 P P 00 40 23.9 +0.8
baz=288,SNR=39
BRWY Burwash Landin 81.87 29 P P 00 40 23.6 +0.5
baz=287
INK Inuvik 81.89 21 P P 00 40 22.4 -0.7
INK IAmb IAmb 00 40 24.2
comp=Z,12nm,0.8s
INK Inuvik 81.89 21 P P 00 40 23.4 +0.3
baz=290,SNR=9.9
SUW Suwalki 82.00 324 eP P 00 40 23.8 -0.1
MANT Manisa 82.06 308 IAmb IAmb 00 40 25.4
comp=Z,16nm,1.2s
J30M Hart River 82.08 25 P P 00 40 25.4 +1.0
baz=288,SNR=14
COVR Voinsa-Covas 82.08 315 ⇑P P 00 40 24.5 -0.1
G31M Satah River 82.11 23 IAmb IAmb 00 40 25.1
comp=Z,13nm,1.1s
G31M Satah River 82.11 23 P P 00 40 24.0 -0.1
baz=290,SNR=8.3
F31M Tsiigehtchic 82.12 22 IAmb IAmb 00 40 25.2
comp=Z,18nm,0.8s
F31M Tsiigehtchic 82.12 22 P P 00 40 24.1 -0.1
baz=290,SNR=6.9
LOF Lofoten 82.15 339 eP P 00 40 24.5 +0.1
LOF IAmb IAmb 00 40 25.9
comp=Z,25nm,1.1s
YUK6 Outpost Mounta 82.31 29 P P 00 40 26.7 +1.0
baz=287,SNR=7.1
BURAR Bucovina Array 82.33 317 ⇑P P 00 40 26.4 +0.5
BURAR Bucovina Array 82.33 317 P P 00 40 25.6 -0.3
BUR08 Bucovina Ar. S 82.33 317 IAmb IAmb 00 40 27.1
comp=Z,15nm,0.7s
MLR Muntele Rosu 82.34 315 ⇑P P 00 40 26.4 +0.3
MLR Muntele Rosu 82.34 315 IAmb IAmb 00 40 27.2
comp=Z,14nm,0.7s
O29M Mount Kennedy 82.39 30 P P 00 40 27.1 +1.1
baz=287
H31M Peel River 82.46 24 IAmb IAmb 00 40 27.5
comp=Z,15nm,0.8s
H31M Peel River 82.46 24 P P 00 40 26.5 +0.4
baz=290,SNR=18
M30M Minto, Yukon 82.52 27 IAmb IAmb 00 40 29.1
comp=Z,9.9nm,0.8s
M30M Minto, Yukon 82.52 27 P P 00 40 27.9 +1.4
baz=288,SNR=25
DOPR Dopca 82.61 316 ⇓P P 00 40 27.4 +0.1
N30M Aishikik Lake 82.73 28 IAmb IAmb 00 40 30.2
comp=Z,12nm,0.7s
N30M Aishikik Lake 82.73 28 P P 00 40 29.0 +1.3
baz=288,SNR=5.7
HYT Haines Junctio 82.74 29 P P 00 40 28.9 +1.1
baz=288,SNR=14
VAGH Vaagaholmen 82.76 337 eP P 00 40 28.2 +0.7
VAGH IAmb IAmb 00 40 32.4
comp=Z,691nm,3.6s
KONS Konsvik 82.90 337 eP P 00 40 29.1 +0.8
KONS IAmb IAmb 00 40 30.8
comp=Z,7.5nm,0.9s
VOIR 82.97 315 ⇑P P 00 40 29.6 +0.3
STOK Stokkvaagen 83.00 337 eP P 00 40 28.4 -0.5
P29M Windy Craggy 83.00 30 P P 00 40 29.6 +0.6
P29M IAmb IAmb 00 40 31.6
comp=Z,12nm,0.8s
P29M Windy Craggy 83.00 30 P P 00 40 30.3 +1.2
baz=288,SNR=7.5
ARCR ARCALIA 83.03 317 ⇓P P 00 40 30.5 +1.1
LEIR Leirfjorden 83.04 337 eP P 00 40 28.5 -0.6
LEIR IAmb IAmb 00 40 30.3
comp=Z,129nm,2.3s
P30M Million Dollar 83.22 29 P P 00 40 31.3 +1.1
baz=288
ARR Arges 83.27 315 ⇑P P 00 40 30.1 -0.7
N31M Braeburn, Yuko 83.32 28 IAmb IAmb 00 40 33.2
comp=Z,9.7nm,0.8s
N31M Braeburn, Yuko 83.32 28 P P 00 40 31.7 +1.0
baz=289
O30N Mendenhall 83.42 29 IAmb IAmb 00 40 33.5
comp=Z,10nm,0.7s
O30N Mendenhall 83.42 29 P P 00 40 32.2 +1.0
baz=289,SNR=15
KWP Kalwaria Pacla 83.42 320 eP P 00 40 31.6 +0.2
BMR Baia Mare 83.44 318 ⇓P P 00 40 32.2 +0.7
CJR Cluj-Napoca 83.62 317 ⇑P P 00 40 33.6 +1.1
M31M Drury Creek, Y 83.70 27 P P 00 40 33.4 +0.8
baz=290,SNR=10
PLBC Pleasant Camp 83.72 30 P P 00 40 34.0 +1.3
baz=289,SNR=5.6
PLVB Pleven 83.78 313 ⇑P P 00 40 33.3 0.0
LOT Lotru 83.84 315 ⇑P P 00 40 33.9 +0.2
KOLS Kolonicke sedl 83.89 319 eP P 00 40 34.0 +0.2
MARR Marisel-Cluj 83.95 317 ⇑P P 00 40 35.0 +0.7
WHY Whitehorse 84.01 29 P P 00 40 35.5 +1.2
baz=290,SNR=14
NSS Namsos 84.09 336 eP P 00 40 33.6 -0.8
NSS IAmb IAmb 00 40 34.2
comp=Z,38nm,1.5s
DRGR 84.19 317 ⇑P P 00 40 36.0 +0.5
SKAG Skagway 84.21 30 P P 00 40 36.7 +1.5
baz=290
S31K Pelican 84.28 31 P P 00 40 36.9 +1.4
baz=289
DEV Deva 84.31 316 ⇓P P 00 40 36.6 +0.6
R31K City Hall, Gus 84.37 31 P P 00 40 37.2 +1.3
baz=290
GZR Gura Zlata 84.53 315 ⇑P P 00 40 36.7 -0.5
C36M Paulatuk 84.57 19 IAmb IAmb 00 40 37.7
comp=Z,18nm,0.9s
C36M Paulatuk 84.57 19 P P 00 40 36.5 -0.3
baz=289
N32M Quiet Lake 84.66 28 P P 00 40 38.7 +1.2
baz=292
MMPY Sheldon Lake, 84.89 26 IAmb IAmb 00 40 41.1
comp=Z,15nm,1.1s
MMPY Sheldon Lake, 84.89 26 P P 00 40 39.8 +1.2
baz=293,SNR=15
P32M Atlin 84.94 29 IAmb IAmb 00 40 41.4
comp=Z,8.1nm,0.8s
P32M Atlin 84.94 29 P P 00 40 40.1 +1.2
baz=291
NIE Niedzica 84.99 320 eP P 00 40 40.5 +1.1
HFS Hagfors 85.02 331 P P 00 40 38.0 -1.3
comp=Z,4.6nm,0.6s,baz=64,slow=3.4,SNR=28
comp=Z,4.6nm,0.6s
SIRR Siria 85.03 316 ⇑P P 00 40 40.2 +0.6
SIT Sitka 85.04 32 P P 00 40 40.4 +1.0
baz=290
OJC Ojcow 85.06 321 eP P 00 40 39.3 -0.4
P33M Teslin, Yukon 85.13 29 P P 00 40 40.3 +0.3
P33M IAmb IAmb 00 40 41.7
comp=Z,7.7nm,0.8s
P33M Teslin, Yukon 85.13 29 P P 00 40 41.2 +1.3
baz=292,SNR=11
PSZ Piszkesteto 85.70 318 ⇑P P 00 40 43.1 +0.1
PSZ Piszkesteto 85.70 318 IAmb IAmb 00 40 44.0
comp=Z,11nm,1.1s
NB2 NORSAR Subarra 85.79 333 P P 00 40 42.4 -0.7
comp=Z,5.9nm,0.7s,baz=67,slow=4.8
NB2 NORSAR Subarra 85.79 333 P P 00 40 42.4 -0.7
NOA NORSAR Array B 85.79 333 P P 00 40 41.9 -1.2
comp=Z,11nm,0.8s,baz=66,slow=4.9,SNR=36
comp=Z,11nm,0.8s
Q32M Nakina River 85.86 30 P P 00 40 45.1 +1.4
baz=293,SNR=5.9
NAO01 NORSAR Array S 86.02 332 IAmb IAmb 00 40 43.8
comp=Z,13nm,0.8s
R33M Jennings River 86.31 29 IAmb IAmb 00 40 48.7
comp=Z,6.4nm,0.9s
R33M Jennings River 86.31 29 P P 00 40 47.4 +1.6
baz=294,SNR=11
STEB Steborice 86.39 321 eP P 00 40 46.3 +0.1
OSL Oslo 86.47 332 eP P 00 40 46.9 +0.5
U33K Whale Pass 86.52 33 P P 00 40 47.9 +1.2
baz=292
MAUC Maruska 86.54 320 eP P 00 40 47.4 +0.4
MORC Moravsky Berou 86.58 321 ⇑P P 00 40 46.7 -0.5
MORC Moravsky Berou 86.58 321 P P 00 40 46.6 -0.5
MORC IAmb IAmb 00 40 48.6
comp=Z,10nm,1.2s
MORC Moravsky Berou 86.58 321 eP P 00 40 46.8 -0.5
TGTN Hyland Airport 86.63 27 P P 00 40 48.5 +1.3
baz=296
MOL Molde 86.71 335 eP P 00 40 47.8 +0.3
MOL IAmb IAmb 00 40 48.2
comp=Z,116nm,2.1s
CRAG Craig 86.76 33 P P 00 40 49.1 +1.2
baz=292
WRAK Wrangell Islan 86.80 32 P P 00 40 49.5 +1.4
baz=293
JAVC Velka Javorina 86.80 320 eP P 00 40 49.1 +0.7
S34M Telegraph Cree 86.83 30 P P 00 40 49.8 +1.6
baz=294
KRLC Kraliky 86.94 321 eP P 00 40 49.7 +0.7
KSP Ksiaz 86.97 322 eP P 00 40 49.6 +0.5
WTLY Watson Lake, Y 87.01 28 P P 00 40 50.5 +1.4
baz=296,SNR=7.1
OSTC Ostas 87.12 322 eP P 00 40 49.3 -0.5
AKN Aaknes 87.12 334 eP P 00 40 50.0 +0.4
DPC Dobruska-Polom 87.12 322 eP P 00 40 50.0 +0.1
DLBC Dease Lake 87.14 30 P P 00 40 51.1 +1.3
baz=294
VRAC Vranov 87.32 320 eP P 00 40 50.9 +0.1
KRUC Moravsky 87.53 320 eP P 00 40 51.4 -0.4
T35M Bob Quinn 87.64 31 P P 00 40 53.4 +1.2
baz=294
RES Resolute Bay 87.67 9 LR LR 01 26 53.9
comp=Z,1µm,18.4s,baz=211,slow=40
WRGLY Wrigley 87.81 24 P P 00 40 54.0 +1.1
baz=300
BRG Berggiesshubel 88.35 323 eP P 00 40 55.9 +0.2
BRG Amp 00 40 56.7
comp=Z,5.8nm,1.0s
LIRD Liard River Hi 88.55 28 P P 00 40 57.5 +1.1
baz=298
KOTAN Kotaneelee Air 89.11 27 P P 00 40 59.3 +0.3
baz=300
KHC Kasperske Hory 89.23 321 eP P 00 41 00.1 +0.2
GERES GERESS Array B 89.26 321 P P 00 40 59.6 -0.5
comp=Z,1.9nm,0.8s,baz=67,slow=3.3,SNR=19
comp=Z,1.9nm,0.8s
GERES GERESS Array B 89.26 321 P P 00 40 59.5 -0.6
MOA Molln 89.28 320 i PcP P 00 41 00.4 +0.3
comp=Z,9.6nm,1.2s,SNR=5.0
SESA Seetaler Alpe, 89.37 319 ePcP P 00 41 00.8 +0.1
comp=Z,7.7nm,1.0s
BIOA Bad Ischl, Aus 89.74 320 eP P 00 41 01.8 -0.4
comp=Z,3.1nm,0.9s
GRF Grafenberg Arr 90.42 322 eP P 00 41 05.8 +0.4
comp=Z,7.1nm,1.0s,baz=66,slow=4.1
LESA Schwarzleotal 90.44 320 eP P 00 41 05.0 -0.6
comp=Z,7.1nm,1.1s
ABTA Abfaltersbach 90.81 319 eP P 00 41 06.4 -1.0
comp=Z,4.6nm,0.9s
WTTA Wattenberg 91.15 320 i P P 00 41 08.7 -0.3
comp=Z,8.3nm,0.7s,SNR=6.2
WATA Walderalm 91.16 320 eP P 00 41 08.6 -0.5
comp=Z,7.4nm,1.1s
SQTA Sankt Quirin 91.44 320 eP P 00 41 09.9 -0.4
comp=Z,11nm,1.0s
MOTA Moosalm 91.45 320 i P P 00 41 09.9 -0.5
comp=Z,8.5nm,1.0s,SNR=6.1
YKAW3 Yellowknife Wh 91.55 22 IAmb IAmb 00 41 11.8
comp=Z,6.7nm,0.8s
YKA Yellowknife Ar 91.59 22 P P 00 41 10.8 +0.4
comp=Z,4.9nm,0.7s,baz=308,slow=4.5,SNR=27
YKA LR LR 01 22 43.1
comp=Z,1µm,21.9s,baz=272,slow=36
comp=Z,4.9nm,0.7s
YKA Yellowknife Ar 91.59 22 P P 00 41 10.2 -0.3
FETA Feichten 91.82 320 i PcP P 00 41 12.0 -0.1
comp=Z,9.6nm,1.0s,SNR=8.2
TUE Stuetta 92.91 320 IAmb IAmb 00 41 18.1
comp=Z,11nm,1.4s
PDAR Pinedale Array 106.43 36 PKKPbc PKKPbc 00 57 48.4 -1.7
comp=Z,0.4nm,0.5s,baz=121,slow=1.5,SNR=4.7
PDAR PKKP PKKPdf 00 58 00.6 -0.5
comp=Z,0.2nm,0.4s,baz=137,slow=3.5,SNR=4.0
TORD Torodi Ar. Bea 113.05 292 PKiKP PKiKP 00 46 40.5 -1.0
comp=Z,1.1nm,0.8s,baz=67,slow=1.4,SNR=6.2
TXAR Lajitas Array 118.71 44 PKP PKiKP 00 46 52.5 +0.2
comp=Z,1.3nm,0.6s,baz=300,slow=1.5,SNR=22
TXAR Lajitas Array 118.71 44 PKiKP PKiKP 00 46 52.7 +0.4
DBIC Dimbokro 121.48 288 PKP PKiKP 00 46 58.8 +0.9
comp=Z,2.4nm,0.6s,baz=110,slow=0.7,SNR=4.6
PLCA Paso Flores 152.82 162 PKPbc PKiKP 00 48 01.3 +0.4
comp=Z,2.7nm,0.7s,baz=180,slow=2.6,SNR=7.4

IDC 08 00:44:19.7±628.0, 6°.67N×48°.00E, h0km, Error ellipse: s-maj=260.0km s-min=132.3km az=120.0, Northeastern Somalia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I19DJ	I19DJ	6.75	315	I	I	01 22 10.0	
	0.3nm,0.7s,baz=135,slow=314,SNR=12						
I32KE	NAIROBI INFRAS	13.64	235	I	I	02 07 40.0	
	baz=56,slow=321,SNR=3.0						
I26DE	FREYUNG INFRAS	51.04	331	I	I	05 58 30.0	
	baz=134,slow=329,SNR=1.1						

DJA 08 00:53:43.3±0.8, 2°.5S±9°.7×113°.9E±°, h10km, M4.2/6, mb5.0/1, MLv3.8/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	1.35	103	P	Pn	00 54 08.2	-0.1
JAY	Jayapura	1.87	97	P	Pn	00 54 15.4	0.0
KMPI	Kaimana, Papua	5.32	255	P	Pn	00 55 02.7	-0.1

*OMAN **08** 00:57:10.9±1.0, 25°.65N×58°.39E, h10km, ml2.8/22, Error ellipse: s-maj=8.1km s-min=3.9km az=44.0*
*TEH **08** 00:57:10.7, 25°.89N×58°.53E, h20km±308km, ML2.9, Presumed earthquake*

ISC 08 00:57:11.6±1.8, 25°.78N±0°.04×58°.48E±0°.04, h27km±17km, n30, σ1§10/51, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JASK	Jask - Hormozg	0.56	279	Pg	Pb	00 57 22.8	-0.1
BANOM	Banah	1.97	275	P	Pn	00 57 43.1	-0.1
BANOM				S	Sn	00 58 06.5	-0.5
MDH	Madha	2.03	257	P	Pn	00 57 42.6	-1.4
MDH				S	Sn	00 58 07.9	-0.5
SHME	Shamm	2.12	278	P	Pn	00 57 45.3	0.0
SHME				S	Sn	00 58 11.6	+0.8
MASF	Masafi	2.13	260	P	Pn	00 57 45.2	-0.3
MASF				S	Sn	00 58 11.9	+0.7
UOSS	Minazif	2.22	249	P	Pn	00 57 46.0	-0.6
UOSS				S	Sn	00 58 11.4	-1.8
BIDO	Bidbid	2.27	188	P	Pn	00 57 47.0	-0.3
	SNR=8.3						
BIDO				S	Sn	00 58 13.3	-1.0
KHNJ	Kahnooj	2.27	342	Pn	Pn	00 57 46.6	-0.8
HATD	Hatta, Dubai	2.33	247	P	Pn	00 57 47.6	-0.5
HATD				S	Sn	00 58 13.8	-2.1
SOHO	SOHO	2.41	228	P	Pn	00 57 47.3	-1.8
SOHO				S	Sn	00 58 16.9	-0.9
HOQ	Hoqain	2.43	206	P	Pn	00 57 48.5	-1.0
	SNR=63						
HOQ				S	Sn	00 58 17.7	-0.7
NGCH	Negor - Chabah	2.44	99	Pn	Pn	00 57 50.1	+0.6
ASHO	Ashiyiah	2.45	244	P	Pn	00 57 50.0	+0.2
	SNR=13						
ASHO				S	Sn	00 58 19.5	+0.7
WSAR	Wadi Sarin	2.53	177	P	Pn	00 57 51.8	+0.8
	SNR=6.3						
WSAR				S	Sn	00 58 21.1	+0.2
GENO	Geno	2.62	309	Pn	Pn	00 57 54.0	+1.7
NAZ	Nazwa, Dubai	2.67	254	P	Pn	00 57 54.5	+1.7
NAZ				S	Sn	00 58 26.1	+1.8
SMDO	Samad	2.73	188	P	Pn	00 57 54.0	+0.2
	SNR=28						
SMDO				S	Sn	00 58 26.6	+0.6
	SNR=8.8						
FAQ	Al Faqa, Dubai	2.81	249	P	Pn	00 57 56.2	+1.5
FAQ				S	Sn	00 58 28.9	+1.2

ALNE	**Al Ain** SNR=7.9	**3.01**	**236**	P	**Pn**	**00 57 58.5 +0.9**
ALNE				S	**Sn**	**00 58 34.1 +1.4**
ARQ	**Araqi** SNR=39	**3.01**	**217**	P	**Pn**	**00 57 58.7 +1.2**
ARQ				S	**Sn**	**00 58 33.6 +0.8**
WBK	**Wadi Bani Khal** SNR=58	**3.18**	**172**	P	**Pn**	**00 57 59.7 -0.2**
WBK				S	**Sn**	**00 58 35.8 -1.2**
BSY	**Bisya** SNR=33	**3.24**	**201**	P	**Pn**	**00 58 01.9 +1.3**
BSY				S	**Sn**	**00 58 38.8 +0.4**
KBAM	**BAM**	**3.35**	**360**	Pn	**Pn**	**00 58 01.6 -0.7**
JMDO	**Jabal Madar**	**3.41**	**186**	P	**Pn**	**00 58 03.6 +0.6**
JLN	**Jalan Bani Buh** SNR=32	**3.71**	**167**	P	**Pn**	**00 58 07.0 -0.1**
JLN				S	**Sn**	**00 58 49.1 -0.8**
SRVN	**Saravan**	**3.86**	**64**	Pn	**Pn**	**00 58 09.5 +0.2**
UMZA	**Um Al Zommool**	**4.30**	**226**	P	**Pn**	**00 58 15.8 +0.6**
UMZA				S	**Sn**	**00 59 03.9 -0.6**
MHTO	**MHTO**	**4.79**	**186**	P	**Pn**	**00 58 22.2 +0.3**
MHTO				S	**Sn**	**00 59 17.9 +1.3**
KHGB	**Koh Gabri**	**4.91**	**339**	Pn	**Pn**	**00 58 24.4 +0.5**
MZR	**Muzera**	**5.33**	**240**	S	**Sn**	**00 59 26.7 -3.2**

*BJI **08** 01:07:01.0, 56˙20N× 153˙90W, h10km, mB5.6/46, mb5.3/74, Ms5.4/75, Ms7 5.3/73*

*IPGP **08** 01:07:02.0, 56˙08N× 153˙58W, h10km, Mw5.4, Fault plane solution: NP1:φ≈251.00000°, δ10.00000°, λ108.00000°. NP2:φ≈52.00000°, δ80.00000°, λ87.00000°.*

*IDC **08** 01:07:02.1±0.4, 56˙30N× 153˙87W, h0km, mb5.0/34, mbtmp4.9/38, ML4.3/4, MS4.6/62, Error ellipse: s-maj=10.2km s-min=7.6km az=179.0*

*NEIC **08** 01:07:03.4±1.2, 56˙12N±0˙05× 153˙74W±0˙10, h11km±3km, mb5.4/213, ML5.1/52, Mww5.1/61, Error ellipse: s-maj=8.0km s-min=6.9km az=83.0*

*GFZ **08** 01:07:04.6±0.1, 56˚N× 3˚× 15˚4W±˚, h10km, M5.2/147, mB5.7/92, mb5.4/147, Mw5.2/36, Mw(mB)5.2/92, confirmed*

*NEIC **08** 01:07:04, 56˙20N× 153˙84W, h11km*

*ANF **08** 01:07:05.9±0.5, 56˙16N× 153˙67W, h33km±3km, ML5.4/32, Error ellipse: s-maj=3.9km s-min=1.6km az=14.0*

*GCMT **08** 01:07:06.7±0.2, 56˙03N±0˙01× 153˙53W±0˙02, h19km, MW5.2/120, Moment Tensor Solution. s96,c158; s120,c199; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr3.56±.13; Mtt-3.99±.10; Mpp0.43±.09; Mrt5.52±.34; Mrp-1.68±.06; Mtp3.37±.29; Best double couple: M0 7.65300×10^16 NP1:φ≈268.00000°, δ18.00000°, λ117.00000°. NP2:φ≈60.00000°, δ74.00000°, λ82.00000°. Principal axes: T 7.2550, Plg60.0000°, Azm318.0000°; N 0.7970, Plg8.0000°, Azm62.0000°; P -8.0500, Plg29.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **08** 01:07:07.9±1.0, 56˙06N× 153˙87W, h60km, mb5.6/122, MS4.7/21 Error ellipse: s-maj=8.3km s-min=4.0km az=102.7*

*BGR **08** 01:07:11.7, 56˙74N× 154˙56W, h27km, mb5.5, mB_BB5.7, Ms4.6*

*NEIC **08** 01:07:12.9, 56˙20N× 153˙66W, h18km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16 Nm; Mrr3.04; Mtt-3.43; Mpp0.38; Mrt3.86; Mtp-0.64; Mtr1.66; Fault plane solution: M0 5.35000×10^16 NP1: φ≈274.55000°, δ20.50000°, λ113.89000°. NP2: φ≈69.24000°, δ71.33000°, λ81.39000°. Principal axes: T 5.1679, Plg63.0000°, Azm326.0000°; N 0.3433, Plg8.0000°, Azm72.0000°; P -5.5113, Plg26.0000°, Azm166.0000°;*

ISC 08 01:07:04.0±0.3, 56˙06N±0˙03× 153˙81W±0˙03, h16km±1km, h16km:pP-P, n1630, σ1s60/1794, mb5.4/380, MS4.8/125, 118C-47D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SII	**Sitkinak Islan**	**0.54**	**338**	P	**Pg**	**01 07 14.9**	**+0.2**
SII	**Sitkinak Islan**	**0.54**	**338**	S	**Sn**	**01 07 24.6**	**-1.3**
SII	**Sitkinak Islan**	**0.54**	**338**	Pg	**Pb**	**01 07 15.5**	**+0.4**
SII				Sg	**Sb**	**01 07 23.1**	**+0.4**
SII				IAML		01 07 27.0	
	comp=E,196μm,1.2s						
SII	**Sitkinak Islan** baz=150,SNR=1000	**0.54**	**338**	P	**Pb**	**01 07 15.6**	**+0.4**
SII	baz=150			S	**Sn**	**01 07 24.4**	**-1.5**
OHAK	**Old Harbor**	**1.20**	**14**	P	**Pn**	**01 07 24.3**	**-1.8**
OHAK	**Old Harbor**	**1.20**	**14**		**Pn**	**01 07 24.4**	**-1.7**
OHAK					**Sb**	**01 07 39.8**	**-1.8**
OHAK				IAML		01 07 57.5	
	comp=E,34μm,1.0s						
OHAK	**Old Harbor** baz=191,SNR=419	**1.20**	**14**	P	**Pn**	**01 07 24.6**	**-1.5**
KDAK	**Kodiak Island**	**1.85**	**21**	Pg	**Pn**	**01 07 33.7**	**-1.5**
KDAK	comp=E,297nm,0.3s,baz=208,slow=7.4,SNR=1964			Lg	Lg	01 07 54.2	
	comp=E,264nm,0.3s,baz=190,slow=10,SNR=8.5						
KDAK	**Kodiak Island**	**1.85**	**21**		**Pn**	**01 07 33.6**	**-1.5**
KDAK	**Kodiak Island** baz=200	**1.85**	**21**	P	**Pn**	**01 07 33.8**	**-1.3**
KDAK	**Kodiak Island**	**1.85**	**21**	⇑P	**Pn**	**01 07 33.6**	**-1.5**
R17L	**Mt. Peulik Vol**	**2.10**	**319**		**Pn**	**01 07 38.3**	**-0.4**
R17L					**Sb**	**01 08 06.4**	**-1.3**
R17L	**Mt. Peulik Vol** baz=136	**2.10**	**319**	P	**Pn**	**01 07 38.4**	**-0.2**
ACHA	**Angle Creek He**	**2.31**	**340**		**Pn**	**01 07 40.4**	**-1.0**
PLK1	**Peulik 1**	**2.32**	**320**		**Pn**	**01 07 41.6**	**+0.1**
PLK1					**Sb**	**01 08 11.8**	**-2.0**
PLBL	**Peulik Blue Cr**	**2.33**	**316**		**Pn**	**01 07 41.7**	**0.0**
PLBL					**Sb**	**01 08 12.2**	**-1.9**
ANCK	**Angle Creek**	**2.33**	**338**		**Pn**	**01 07 41.0**	**-0.8**
KAKN	**Katmai Knife C**	**2.34**	**344**		**Pn**	**01 07 41.1**	**-0.8**
KABU	**Katmai Buttres**	**2.35**	**341**		**Pn**	**01 07 41.6**	**-0.5**
KABU					**Sn**	**01 08 10.9**	**+0.2**
KAWH	**Katmai**	**2.39**	**347**		**Pn**	**01 07 41.7**	**-0.9**
KAWH					**Sn**	**01 08 10.8**	**-0.8**
KAWH					**Sb**	**01 08 13.1**	**-2.8**
KAHG	**Katmai Hook Gl**	**2.47**	**351**		**Pn**	**01 07 43.5**	**-0.2**
KAHG					**Sn**	**01 08 12.3**	**-1.2**
KARR	**Katmai Rainbow**	**2.49**	**349**		**Pn**	**01 07 43.7**	**-0.2**
ANPB	**Aniakchak Plen**	**2.59**	**288**		**Pn**	**01 07 45.3**	**0.0**
ANNW	**Aniakchak Nort**	**2.60**	**292**		**Pn**	**01 07 45.9**	**+0.3**
Q18K	**Katmai Hardscr**	**2.67**	**346**		**Pn**	**01 07 45.8**	**-0.7**
Q18K	**Katmai Hardscr** baz=164,SNR=50	**2.67**	**346**	P	**Pn**	**01 07 45.8**	**-0.7**
Q19K	**Cape Douglas,**	**2.88**	**2**		**Pn**	**01 07 48.4**	**-0.8**
Q19K	**Cape Douglas,** baz=180,SNR=53	**2.88**	**2**	P	**Pn**	**01 07 48.8**	**-0.5**
Q16K	**King Salmon** baz=147,SNR=12	**3.04**	**331**	P	**Pn**	**01 07 50.6**	**-0.8**
VNKR	**Veniaminof 5**	**3.12**	**272**		**Pn**	**01 07 52.7**	**+0.1**
S14K	**Fog Glacier** baz=91,SNR=33	**3.22**	**276**	P	**Pn**	**01 07 54.5**	**+0.5**
VNFG	**Fog Glacier, M**	**3.22**	**276**		**Pn**	**01 07 54.2**	**+0.2**
VNFG	**Fog Glacier, M**	**3.22**	**276**		**Pn**	**01 07 54.4**	**+0.4**
AUJK	**Augustine Jueg**	**3.30**	**4**		**Pn**	**01 07 54.4**	**-0.7**
AGU	**Augustine-Summ**	**3.31**	**3**		**Pn**	**01 07 54.9**	**-0.4**
AUCH	**Augustine Cone**	**3.31**	**3**		**Pn**	**01 07 54.7**	**-0.6**
AUW	**Augustine West**	**3.32**	**3**		**Pn**	**01 07 54.6**	**-0.7**
P18K	**Big Mountain,**	**3.42**	**348**		**Pn**	**01 07 55.7**	**-1.0**
P18K	**Big Mountain,** baz=165,SNR=60	**3.42**	**348**	P	**Pn**	**01 07 55.9**	**-0.9**
CHNA	**Chernabura Isl**	**3.51**	**252**	P	**Pn**	**01 07 57.7**	**-0.2**
CHNA	**Chernabura Isl** baz=67,SNR=49	**3.51**	**252**	P	**Pn**	**01 07 57.8**	**-0.2**
CNBA	**Chernabura Isl**	**3.52**	**252**		**Pn**	**01 07 57.3**	**-0.7**
P19K	**Oil Pt**	**3.61**	**5**		**Pn**	**01 07 58.8**	**-0.6**
P19K	**Oil Pt** baz=184	**3.61**	**5**	P	**Pn**	**01 07 58.4**	**-1.0**
CNPM	**China Poot**	**3.74**	**21**		**Pn**	**01 07 59.8**	**-1.2**
CNPM				IAML		01 09 20.4	
	comp=N,3μm,1.1s						
HOM	**Homer**	**3.79**	**17**		**Pn**	**01 08 01.0**	**-0.7**
HOM	**Homer** baz=198,SNR=24	**3.79**	**17**	P	**Pn**	**01 08 01.1**	**-0.6**
SDPT	**Sand Point**	**3.84**	**262**	P	**Pn**	**01 08 02.5**	**+0.1**
SDPT	**Sand Point**	**3.84**	**262**	S	**Sn**	**01 08 47.8**	**+0.7**
SDPT	**Sand Point**	**3.84**	**262**		**Pn**	**01 08 02.3**	**-0.1**
SDPT	**Sand Point** baz=76,SNR=55	**3.84**	**262**	P	**Pn**	**01 08 02.8**	**+0.4**
O18K	**Koktuh Hills**	**3.87**	**350**		**Pn**	**01 08 01.8**	**-1.1**
O18K				IAML		01 09 15.2	
	comp=N,3μm,1.3s						
O18K				IAML		01 09 21.4	
	comp=E,3μm,1.5s						
O18K	**Koktuh Hills** baz=167,SNR=32	**3.87**	**350**	P	**Pn**	**01 08 02.1**	**-0.8**
ILS	**Iliamna Low So**	**3.93**	**5**		**Pn**	**01 08 02.6**	**-1.1**
ILSW	**Iliamna Southw**	**3.95**	**5**		**Pn**	**01 08 02.7**	**-1.3**
ILSW				IAML		01 09 36.1	
	comp=E,3μm,1.7s						
IVE	**Iliamna Volcan**	**3.99**	**6**		**Pn**	**01 08 03.2**	**-1.3**
BRLK	**Bradley Lake**	**4.03**	**22**		**Pn**	**01 08 03.3**	**-1.8**
BRLK				IAML		01 09 31.2	
	comp=E,2μm,1.7s						
BRSE	**Bradley Lake S** baz=204,SNR=95	**4.04**	**23**	P	**Pn**	**01 08 03.4**	**-1.8**
O20K	**Slope Mountain** baz=188,SNR=88	**4.08**	**8**	P	**Pn**	**01 08 05.3**	**-0.5**
O17K	**Koliganek Bris**	**4.11**	**336**		**Pn**	**01 08 05.2**	**-1.0**
O17K	**Koliganek Bris** baz=152	**4.11**	**336**	P	**Pn**	**01 08 05.2**	**-1.0**
O19K	**Port Alsworth**	**4.15**	**356**		**Pn**	**01 08 05.6**	**-1.1**
O19K				IAML		01 08 57.5	
	comp=N,2μm,0.6s						
O19K	**Port Alsworth** baz=175,SNR=9.4	**4.15**	**356**	P	**Pn**	**01 08 05.9**	**-0.8**
O16K	**Kokwok River B**	**4.21**	**329**		**Pn**	**01 08 06.2**	**-1.4**
O16K				IAML		01 09 34.0	
	comp=E,1μm,1.4s						
O16K	**Kokwok River B** baz=144,SNR=12	**4.21**	**329**	P	**Pn**	**01 08 06.5**	**-1.1**
RED	**Redoubt Volcan**	**4.40**	**7**		**Pn**	**01 08 08.7**	**-1.5**
RED				IAML		01 09 36.7	
	comp=E,3μm,1.5s						
RED				IAML		01 09 51.6	
	comp=N,1μm,1.2s						
RDSO	**Redoubt South**	**4.44**	**7**		**Pn**	**01 08 10.0**	**-0.8**
RDWB	**Redoubt West**	**4.47**	**6**		**Pn**	**01 08 10.4**	**-0.8**
O15K	**Ungalikthiuk R**	**4.49**	**316**		**Pn**	**01 08 10.5**	**-0.9**
O15K				IAML		01 09 35.3	
	comp=E,2μm,1.2s						
O15K				IAML		01 09 50.5	
	comp=N,1μm,1.4s						
O15K	**Ungalikthiuk R** baz=131,SNR=23	**4.49**	**316**	P	**Pn**	**01 08 10.6**	**-0.8**
PS1A	**Pavlof South-1**	**4.53**	**265**		**Pn**	**01 08 12.2**	**+0.3**
NCT	**North Crescent**	**4.54**	**6**		**Pn**	**01 08 11.2**	**-0.9**
RDJH	**Redoubt Jeurge**	**4.57**	**6**		**Pn**	**01 08 11.9**	**-0.7**
PS4A	**Pavlof South-4**	**4.61**	**264**		**Pn**	**01 08 13.0**	**0.0**
SEW	**Seward**	**4.67**	**28**		**Pn**	**01 08 10.7**	**-3.1**
SEW				IAML		01 09 54.1	
	comp=N,2μm,1.3s						
SEW	**Seward** baz=211,SNR=19	**4.67**	**28**	P	**Pn**	**01 08 10.9**	**-2.8**
PN7A	**Pavlof North-7**	**4.67**	**266**		**Pn**	**01 08 14.0**	**+0.1**
N18K	**Kilae Creek**	**4.76**	**348**		**Pn**	**01 08 14.0**	**-1.1**
N18K				IAML		01 09 57.5	
	comp=N,1μm,2.2s						
N18K				IAML		01 10 01.6	
	comp=E,2μm,1.5s						
N18K	**Kilae Creek** baz=165,SNR=43	**4.76**	**348**	P	**Pn**	**01 08 14.5**	**-0.6**
N19K	**Bonanza Creek**	**4.78**	**356**		**Pn**	**01 08 14.5**	**-0.9**
N19K				IAML		01 10 04.3	
	comp=E,2μm,1.6s						
N19K				IAML		01 10 04.4	
	comp=N,1μm,0.9s						
N19K	**Bonanza Creek** baz=175,SNR=46	**4.78**	**356**	P	**Pn**	**01 08 14.9**	**-0.6**
N17K	**Nushagak Hills**	**4.82**	**340**		**Pn**	**01 08 14.7**	**-1.2**
N17K				IAML		01 10 09.2	
	comp=E,997nm,2.1s						
N17K	**Nushagak Hills** baz=156,SNR=26	**4.82**	**340**	P	**Pn**	**01 08 15.1**	**-0.8**
SLKM	**Skilak Lake**	**4.84**	**22**		**Pn**	**01 08 13.9**	**-2.4**
SLKM				IAML		01 10 00.2	
	comp=N,2μm,2.1s						
DTNA	**Dutton South F**	**4.87**	**263**		**Sn**	**01 09 13.2**	**+0.5**
DT1	**Dutton Round H**	**4.90**	**262**		**Sn**	**01 09 14.4**	**+1.1**
CAPN	**Captain Cook N** baz=197	**4.92**	**15**	P	**Pn**	**01 08 14.9**	**-2.4**
O14K	**Tigyukauivet M**	**5.12**	**312**		**Pn**	**01 08 19.5**	**-0.5**
O14K				IAML		01 10 12.5	
	comp=E,1μm,1.3s						
O14K				IAML		01 10 12.6	
	comp=N,1μm,1.2s						
O14K	**Tigyukauivet M** baz=125,SNR=10.0	**5.12**	**312**	P	**Pn**	**01 08 19.5**	**-0.5**
N16K	**Nishlik Lake** baz=146,SNR=27	**5.14**	**331**	P	**Pn**	**01 08 19.5**	**-0.8**
P23K	**Montague Islan**	**5.21**	**38**		**Pn**	**01 08 18.4**	**-2.9**
P23K					**Sn**	**01 09 18.4**	**-2.6**
P23K				IAML		01 10 32.5	
	comp=E,2μm,1.5s						
P23K	**Montague Islan** baz=223,SNR=16	**5.21**	**38**	P	**Pn**	**01 08 18.4**	**-2.9**
SPU	**Mount Spurr**	**5.21**	**9**		**Pn**	**01 08 20.1**	**-1.3**
SPCR	**Spurr Chakacha** baz=189,SNR=12	**5.22**	**9**	P	**Pn**	**01 08 20.1**	**-1.4**
Q23K	**Middleton Isla** baz=233	**5.23**	**47**	P	**Pn**	**01 08 18.4**	**-3.1**
MID	**Middleton Isla**	**5.23**	**47**		**Pn**	**01 08 18.8**	**-2.8**
MID					**Sn**	**01 09 17.6**	**-3.8**
MID				IAML		01 11 32.4	
	comp=N,724nm,2.5s						
SPBG	**Spurr Blockage**	**5.27**	**8**		**Pn**	**01 08 21.0**	**-1.1**
N15K	**Kwethluk River**	**5.29**	**324**		**Pn**	**01 08 21.5**	**-0.9**
N15K				IAML		01 10 28.1	
	comp=E,1μm,1.5s						
N15K				IAML		01 10 33.5	
	comp=N,1μm,1.8s						
N15K	**Kwethluk River** baz=138,SNR=20	**5.29**	**324**	P	**Pn**	**01 08 21.9**	**-0.5**
SPCG	**Spurr Capps Gl**	**5.33**	**9**		**Pn**	**01 08 22.1**	**-0.9**
RC01	**Rabbit Creek A**	**5.47**	**21**		**Pn**	**01 08 23.2**	**-1.6**
RC01	**Rabbit Creek A** baz=204,SNR=92	**5.47**	**21**	P	**Pn**	**01 08 22.8**	**-2.0**
M18K	**Stony River** baz=168,SNR=76	**5.54**	**350**	P	**Pn**	**01 08 25.1**	**-0.7**
STLK	**Strandline Lak**	**5.55**	**10**		**Pn**	**01 08 24.7**	**-1.2**
M16K	**Timber Creek**	**5.66**	**334**		**Pn**	**01 08 26.1**	**-1.3**
M16K	**Timber Creek** baz=149,SNR=69	**5.66**	**334**	P	**Pn**	**01 08 26.8**	**-0.5**
M17K	**Holitna River**	**5.68**	**342**		**Pn**	**01 08 26.1**	**-1.5**
M17K	**Holitna River** baz=158,SNR=127	**5.68**	**342**	P	**Pn**	**01 08 27.2**	**-0.4**
N14K	**Kuskokwak Cree**	**5.70**	**316**		**Pn**	**01 08 27.3**	**-0.6**
N14K	**Kuskokwak Cree** baz=129,SNR=26	**5.70**	**316**	P	**Pn**	**01 08 27.9**	**-0.1**
ISNN	**Isanotski Not**	**5.80**	**262**		**Pn**	**01 08 29.1**	**-0.3**
HIN	**Hinchinbrook I**	**5.81**	**39**		**Pn**	**01 08 27.0**	**-2.5**
HIN					**Sn**	**01 09 32.5**	**-3.3**
M20K	**Styx River**	**5.85**	**3**		**Pn**	**01 08 28.2**	**-1.9**
M20K	**Styx River** baz=183,SNR=32	**5.85**	**3**	P	**Pn**	**01 08 29.3**	**-0.8**
M15K	**Kasigluk River**	**5.88**	**325**		**Pn**	**01 08 29.9**	**-0.6**
M15K	**Kasigluk River** baz=138,SNR=20	**5.88**	**325**	P	**Pn**	**01 08 29.4**	**-1.1**
SSLN	**Shishaldin Nor**	**5.93**	**262**		**Pn**	**01 08 30.8**	**-0.4**
SSLS	**Shishaldin Sou**	**5.96**	**261**		**Pn**	**01 08 32.1**	**+0.4**
GLI	**Glacier Island**	**5.98**	**33**		**Pn**	**01 08 28.8**	**-3.0**
GLI	**Glacier Island** baz=218	**5.98**	**33**	P	**Pn**	**01 08 29.1**	**-2.6**
SSBA	**Shishaldin**	**6.01**	**262**		**Pn**	**01 08 31.8**	**-0.6**
M22K	**Willow**	**6.02**	**17**		**Pn**	**01 08 30.4**	**-1.9**
M22K	**Willow** baz=200	**6.02**	**17**	P	**Pn**	**01 08 29.9**	**-2.4**
KNK	**Knik Glacier**	**6.04**	**25**		**Pn**	**01 08 30.5**	**-2.2**
KNK	**Knik Glacier** baz=209,SNR=14	**6.04**	**25**	P	**Pn**	**01 08 30.3**	**-2.4**
SKT	**Skwentna**	**6.05**	**10**		**Pn**	**01 08 30.9**	**-1.9**
SKT	**Skwentna** baz=192,SNR=21	**6.05**	**10**	P	**Pn**	**01 08 30.9**	**-1.9**
PMR	**Palmer**	**6.05**	**22**	P	**Pn**	**01 08 31.8**	**-1.0**
PMR	**Palmer**	**6.05**	**22**	S	**Sn**	**01 09 41.6**	**-0.1**
PMR	**Palmer** baz=205	**6.05**	**22**	P	**Pn**	**01 08 30.2**	**-2.6**
L19K	**White Mountain**	**6.16**	**355**		**Pn**	**01 08 33.1**	**-1.2**
L19K	**White Mountain** baz=174,SNR=107	**6.16**	**355**	P	**Pn**	**01 08 33.7**	**-0.7**
EYAK	**Cordova Ski Ar**	**6.18**	**40**	P	**Pn**	**01 08 32.1**	**-2.5**
EYAK	**Cordova Ski Ar**	**6.18**	**40**		**Pn**	**01 08 31.9**	**-2.8**
EYAK	**Cordova Ski Ar** baz=226,SNR=27	**6.18**	**40**	P	**Pn**	**01 08 32.4**	**-2.2**
KAIM	**Kayak Island**	**6.32**	**48**		**Pn**	**01 08 34.9**	**-1.5**
KAIM					**Sn**	**01 09 45.2**	**-3.0**
KAIM	**Kayak Island** baz=236,SNR=46	**6.32**	**48**	P	**Pn**	**01 08 34.2**	**-2.2**
L18K	**Granite Mounta**	**6.35**	**348**		**Pn**	**01 08 36.0**	**-0.9**
L18K	**Granite Mounta** baz=165,SNR=51	**6.35**	**348**	P	**Pn**	**01 08 36.0**	**-0.9**
M14K	**Bethel**	**6.36**	**321**		**Pn**	**01 08 36.3**	**-0.7**
M14K	**Bethel** baz=134,SNR=11	**6.36**	**321**	P	**Pn**	**01 08 36.5**	**-0.4**
L16K	**Owhat River**	**6.38**	**335**		**Pn**	**01 08 36.2**	**-1.0**
L16K	**Owhat River** baz=150,SNR=48	**6.38**	**335**	P	**Pn**	**01 08 36.3**	**-1.0**
SML	**Sawmill**	**6.42**	**24**		**Pn**	**01 08 35.5**	**-2.4**
SML	**Sawmill** baz=208,SNR=61	**6.42**	**24**	P	**Pn**	**01 08 35.7**	**-2.2**
RAGM	**Ragged Mountai**	**6.49**	**44**		**Pn**	**01 08 35.7**	**-3.0**
RAGM					**Sn**	**01 09 49.7**	**-2.7**
L17K	**Donlin** baz=157,SNR=31	**6.51**	**341**	P	**Pn**	**01 08 38.2**	**-0.9**
M23K	**Glacier View**	**6.55**	**26**		**Pn**	**01 08 37.6**	**-2.0**
M23K	**Glacier View** baz=211,SNR=47	**6.55**	**26**	P	**Pn**	**01 08 37.5**	**-2.2**
GOAT	**Goat Mountain**	**6.59**	**43**		**Pn**	**01 08 37.3**	**-2.9**
GOAT					**Sn**	**01 09 52.6**	**-2.3**
DIV	**Divide**	**6.59**	**36**		**Pn**	**01 08 37.8**	**-2.5**
DIV					**Sn**	**01 09 51.8**	**-3.2**
CUT	**Chulitna**	**6.62**	**14**		**Pn**	**01 08 39.6**	**-0.9**
CUT	**Chulitna** baz=197	**6.62**	**14**	P	**Pn**	**01 08 39.5**	**-0.9**
M13K	**Dall Lake**	**6.66**	**315**		**Pn**	**01 08 40.9**	**-0.2**
M13K	**Dall Lake** baz=126,SNR=11	**6.66**	**315**	P	**Pn**	**01 08 41.0**	**-0.1**
L22K	**Petersville**	**6.67**	**12**		**Pn**	**01 08 39.3**	**-2.0**
L22K	**Petersville** baz=194,SNR=38	**6.67**	**12**	P	**Pn**	**01 08 39.5**	**-1.7**
SCM	**Sheep Creek Mo** baz=212,SNR=164	**6.69**	**27**	P	**Pn**	**01 08 39.7**	**-1.9**
KLU	**Klutina**	**6.81**	**34**		**Pn**	**01 08 40.9**	**-2.4**
KLU	**Klutina** baz=220,SNR=50	**6.81**	**34**	P	**Pn**	**01 08 41.0**	**-2.4**
BERG	**Berg Lake**	**6.88**	**47**		**Pn**	**01 08 42.2**	**-1.9**
BMRM	**Bremner River** baz=228,SNR=38	**6.88**	**41**	P	**Pn**	**01 08 41.9**	**-2.4**
L15K	**Ungalak Mounta**	**6.89**	**328**		**Pn**	**01 08 43.0**	**-1.3**
L15K	**Ungalak Mounta** baz=141	**6.89**	**328**	P	**Pn**	**01 08 43.2**	**-1.1**
PPLA	**Purkeypile**	**6.90**	**6**		**Pn**	**01 08 43.4**	**-1.3**
PPLA	**Purkeypile** baz=187,SNR=18	**6.90**	**6**	P	**Pn**	**01 08 43.5**	**-1.1**
L14K	**Kuka Creek**	**7.02**	**323**		**Pn**	**01 08 45.3**	**-0.7**
L14K	**Kuka Creek** baz=134	**7.02**	**323**	P	**Pn**	**01 08 45.4**	**-0.7**
K17K	**Iditarod** baz=158,SNR=42	**7.05**	**343**	P	**Pn**	**01 08 46.1**	**-0.4**
AKSA	**Akutan Strait**	**7.09**	**259**		**Pn**	**01 08 45.9**	**-1.1**
AKUT	**Akutan**	**7.13**	**259**	P	**Pn**	**01 08 47.4**	**-0.2**
AKUT	**Akutan**	**7.13**	**259**	S	**Sn**	**01 10 08.4**	**+0.2**
AKUT	**Akutan**	**7.13**	**259**		**Pn**	**01 08 47.2**	**-0.3**
AHB	**Akutan Harbor**	**7.16**	**259**		**Pn**	**01 08 46.9**	**-1.2**
M24K	**Tolsona, Glenn**	**7.22**	**30**		**Pn**	**01 08 47.2**	**-1.7**
M24K	**Tolsona, Glenn** baz=216,SNR=59	**7.22**	**30**	P	**Pn**	**01 08 47.2**	**-1.7**
AKGG	**Akutan Green G**	**7.23**	**260**		**Pn**	**01 08 47.6**	**-1.3**
AKBBA	**Akutan Broad B**	**7.23**	**259**		**Pn**	**01 08 47.8**	**-1.2**
WAT6	**Susitna Watana**	**7.24**	**23**		**Pn**	**01 08 46.7**	**-2.5**
WAT6	**Susitna Watana** baz=208,SNR=20	**7.24**	**23**	P	**Pn**	**01 08 46.7**	**-2.5**
WAT7	**Susitna Watana**	**7.25**	**18**		**Pn**	**01 08 47.0**	**-2.3**
ZRO	**Akutan Zero**	**7.26**	**259**		**Pn**	**01 08 48.2**	**-1.2**
LVA	**Lava Point**	**7.26**	**260**		**Pn**	**01 08 49.7**	**+0.3**
AKRB	**Akutan Reef Bi**	**7.29**	**260**		**Pn**	**01 08 48.5**	**-1.4**
WAT1	**Susitna Watana**	**7.29**	**19**		**Pn**	**01 08 47.5**	**-2.4**
WAT1	**Susitna Watana** baz=203	**7.29**	**19**	P	**Pn**	**01 08 47.8**	**-2.1**
CRQM	**Cirque**	**7.32**	**46**		**Pn**	**01 08 48.2**	**-2.1**
K20K	**Telida** baz=178,SNR=50	**7.32**	**359**	P	**Pn**	**01 08 48.8**	**-1.4**
N25K	**Chitina, Valde**	**7.33**	**37**		**Pn**	**01 08 47.2**	**-3.2**
N25K	**Chitina, Valde** baz=224,SNR=25	**7.33**	**37**	P	**Pn**	**01 08 48.0**	**-2.4**
CRQE	**Cirque** baz=234,SNR=14	**7.33**	**46**	P	**Pn**	**01 08 48.2**	**-2.3**
BARK	**Barkley Ridge**	**7.39**	**49**		**Pn**	**01 08 49.2**	**-2.0**
CAST	**Castle Rocks**	**7.43**	**6**		**Pn**	**01 08 50.6**	**-1.1**
CAST	**Castle Rocks** baz=187,SNR=98	**7.43**	**6**	P	**Pn**	**01 08 50.3**	**-1.4**
TGL	**Tana Glacier**	**7.44**	**46**		**Pn**	**01 08 48.2**	**-3.7**
VRDI	**Verde Repeater**	**7.48**	**42**		**Pn**	**01 08 49.1**	**-3.5**
GLB	**Gilahina Butte**	**7.49**	**40**		**Pn**	**01 08 50.4**	**-2.2**
TRF	**Thorofare Moun**	**7.62**	**12**		**Pn**	**01 08 52.3**	**-2.1**
TRF	**Thorofare Moun** baz=195,SNR=25	**7.62**	**12**	P	**Pn**	**01 08 52.7**	**-1.8**
UNV	**Unalaska Valle**	**7.64**	**258**	P	**Pn**	**01 08 53.5**	**-1.0**
UNV	**Unalaska Valle**	**7.64**	**258**	S	**Sn**	**01 10 20.9**	**+0.2**
UNV	**Unalaska Valle**	**7.64**	**258**		**Pn**	**01 08 53.6**	**-1.0**
UNV	**Unalaska Valle** baz=68,SNR=30	**7.64**	**258**	P	**Pn**	**01 08 53.7**	**-0.8**
KTH	**Kantishna Hill**	**7.65**	**10**		**Pn**	**01 08 54.1**	**-0.7**
MNAT	**Makushin Natee**	**7.72**	**259**		**Pn**	**01 08 54.2**	**-1.5**
MCARA	**McCarthy

HDA Harding Lake 9.04 19 Pn 01 09 11.4 -2.3
HDA Harding Lake 9.04 19 P Pn 01 09 12.8 -0.8
baz=205,SNR=36
O29M Mount Kennedy 9.09 56 Pn 01 09 13.3 -1.3
O29M Mount Kennedy 9.09 56 P Pn 01 09 13.3 -1.3
baz=249,SNR=36
CCB Clear Creek Bu 9.11 17 Pn 01 09 12.3 -2.3
MLY Manley 9.12 8 Pn 01 09 12.7 -2.2
MLY Manley 9.12 8 P Pn 01 09 13.1 -1.8
baz=190,SNR=11
SPIA Saint Paul Isl 9.13 284 P Pn 01 09 15.2 +0.2
SPIA Saint Paul Isl 9.13 284 Pn 01 09 15.0 +0.1
SPIA Saint Paul Isl 9.13 284 P Pn 01 09 16.4 +1.5
baz=90
BVCY Beaver Creek 9.18 41 P Pn 01 09 15.2 -0.6
baz=232
I21K Tanana 9.19 5 P Pn 01 09 14.2 -1.6
baz=186
L27K Beaver Creek, 9.27 36 P Pn 01 09 16.0 -0.9
baz=226
P29M Windy Craggy 9.28 61 Pn 01 09 15.6 -1.5
P29M Windy Craggy 9.28 61 P Pn 01 09 16.3 -0.8
baz=254,SNR=28
BCAR Beaver Creek A 9.29 36 Pn 01 09 15.4 -1.8
COLA College 9.31 16 P Pn 01 09 17.5 +0.1
COLA College 9.31 16 ⇓*i*P Pn 01 09 15.1 -2.3
COLA College 9.31 16 Pn 01 09 15.1 -2.3
COLA College 9.31 16 P Pn 01 09 15.3 -2.1
baz=201
COLA College 9.31 16 ⇑P Pn 01 09 14.4 -3.0
SCRK Sand Creek 9.33 28 P Pn 01 09 16.1 -1.6
baz=216,SNR=18
MDM Murphy Dome 9.34 15 Pn 01 09 14.9 -2.9
BRWY Burwash Landin 9.34 49 P Pn 01 09 16.4 -1.4
baz=242
I23K Minto, Yukon-K 9.37 12 P Pn 01 09 15.2 -3.0
baz=195,SNR=44
IL31 9.38 18 Pn 01 09 15.2 -3.1
ILAR Eielson Array 9.38 18 Pn Pn 01 09 14.9 -3.4
comp=N,2.3nm,0.3s,baz=205,slow=13,SNR=80
ILAR Sn Sn 01 10 47.7 -16
baz=212,slow=22
ILAR Lg Lg 01 11 45.8
baz=213,slow=22
ILAR LR LR 01 13 23.8
comp=N,10μm,19.2s,baz=194,slow=42
ILAR ScP ScP 01 19 08.2 +0.7
comp=N,3.1nm,1.2s,baz=204,slow=2.0,SNR=5.7
ILAR Eielson Array 9.38 18 P Pn 01 09 16.3 -2.1
ILAR Eielson Array 9.38 18 Pn 01 09 16.3 -2.1
ILAR ScP 01 19 06.6 -0.9
IL01 9.38 18 Pn 01 09 16.8 -1.5
H18K Honhosa River 9.39 348 Pn 01 09 16.9 -1.6
H18K Honhosa River 9.39 348 P Pn 01 09 17.7 -0.8
baz=164,SNR=73
H17K Granite Mounta 9.39 344 P Pn 01 09 18.3 -0.3
baz=158,SNR=54
YUK6 Outpost Mounta 9.44 52 P Pn 01 09 16.3 -3.2
baz=245
H20K Anotleneega Mo 9.48 357 P Pn 01 09 17.9 -1.8
baz=176,SNR=40
YUK4 Talbot Arm 9.49 50 P Pn 01 09 17.8 -2.4
baz=242
J25K Salcha River, 9.53 22 P Pn 01 09 18.2 -2.4
baz=209,SNR=38
H16K Elim 9.55 338 Pn 01 09 19.2 -1.5
H16K Elim 9.55 338 P Pn 01 09 19.8 -1.0
baz=150,SNR=30
H19K Roundabout Mou 9.58 353 Pn 01 09 19.1 -2.0
H19K Roundabout Mou 9.58 353 P Pn 01 09 20.0 -1.1
baz=171,SNR=22
POKR Poker Plat Res 9.60 16 Pn 01 09 19.2 -2.3
POKR Poker Plat Res 9.60 16 P Pn 01 09 17.7 -3.8
baz=202
H21K Melozitna Rive 9.64 2 Pn 01 09 20.2 -1.8
H21K Melozitna Rive 9.64 2 P Pn 01 09 19.4 -2.6
baz=183,SNR=19
S31K Pelican 9.77 72 Pn 01 09 22.0 -1.8
S31K Pelican 9.77 72 P Pn 01 09 20.7 -3.1
baz=266,SNR=34
HYT Haines Junctio 9.78 54 Pn 01 09 22.1 -1.9
HYT Haines Junctio 9.78 54 P Pn 01 09 21.9 -2.1
baz=248,SNR=24
P30M Million Dollar 9.80 59 P Pn 01 09 21.9 -2.2
baz=253
PLBC Pleasant Camp 9.92 63 P Pn 01 09 24.4 -1.4
baz=257,SNR=40
H22K Ishtalitna Cre 9.94 6 P Pn 01 09 24.3 -1.7
baz=188,SNR=21
H23K Yukon River 10.01 10 Pn 01 09 24.0 -3.0
H23K Yukon River 10.01 10 P Pn 01 09 24.0 -3.0
baz=194,SNR=42
G17K Kiwalik Mounta 10.03 343 P Pn 01 09 26.3 -1.1
baz=157,SNR=19
M29M Somme Creek 10.11 45 Pn 01 09 26.8 -1.8
M29M Somme Creek 10.11 45 P Pn 01 09 26.4 -2.2
baz=238,SNR=66
G18K Tagagawik 10.14 349 P Pn 01 09 27.7 -1.1
baz=164,SNR=45
N30M Aishikik Lake 10.21 51 Pn 01 09 27.3 -2.6
N30M Aishikik Lake 10.21 51 P Pn 01 09 27.2 -2.8
baz=245
H24K Noodor Dome 10.22 14 Pn 01 09 26.7 -3.2
H24K Noodor Dome 10.22 14 P Pn 01 09 27.1 -2.8
baz=199,SNR=23
G19K Purcell Mounta 10.24 352 P Pn 01 09 28.8 -1.4
baz=169,SNR=29
SIT Sitka 10.25 77 P Pn 01 09 27.8 -2.5
SIT Sitka 10.25 77 P Pn 01 09 27.8 -2.5
SIT Sitka 10.25 77 Pn 01 09 27.8 -2.5
SIT Sitka 10.25 77 P Pn 01 09 27.9 -2.4
baz=272
ANM Nome 10.26 331 P Pn 01 09 28.7 -1.7
ANM Nome 10.26 331 Pn 01 09 28.7 -1.7
ANM Nome 10.26 331 P Pn 01 09 29.9 -0.5
baz=140,SNR=6.8
G15K Niukluk 10.26 335 P Pn 01 09 30.2 -0.2
baz=146,SNR=14
PRP Porcupine Dome 10.30 20 P Pn 01 09 29.0 -2.1
baz=206,SNR=25
O30N Mendenhall 10.41 56 Pn 01 09 31.0 -1.6
O30N Mendenhall 10.41 56 P Pn 01 09 31.0 -1.6
baz=251,SNR=14
SKAG Skagway 10.44 63 P Pn 01 09 32.1 -0.7
SKAG Skagway 10.44 63 Pn 01 09 32.2 -0.7
SKAG Skagway 10.44 63 P Pn 01 09 31.4 -1.4
baz=259,SNR=6.2
G21K Allakaket 10.49 1 P Pn 01 09 31.8 -1.8
baz=181,SNR=28
BESE Bessie Mountai 10.55 68 Pn 01 09 33.1 -1.4
L29M L29M 10.61 42 P Pn 01 09 33.6 -1.7
baz=235,SNR=38
S32K Killisnoo 10.65 74 Pn 01 09 34.9 -0.8
S32K Killisnoo 10.65 74 P Pn 01 09 34.6 -1.2
baz=270,SNR=6.7
DAWY Dawson 10.76 36 Pn 01 09 35.4 -1.9
DAWY Dawson 10.76 36 P Pn 01 09 36.9 -0.4
baz=228
JIS Juneau Island 10.77 70 P Pn 01 09 36.8 -0.6
N31M Braeburn, Yuko 10.80 52 P Pn 01 09 36.6 -1.3
baz=248,SNR=12
G23K Bananza Creek 10.84 8 P Pn 01 09 35.7 -2.7
baz=191,SNR=32
M30M Minto, Yukon 10.85 46 P Pn 01 09 36.1 -2.4
baz=240,SNR=16
F18K Selawik 10.93 348 P Pn 01 09 37.8 -1.8
baz=162,SNR=11
WHY Whitehorse 10.94 57 Pn 01 09 38.5 -1.4
WHY Whitehorse 10.94 57 P Pn 01 09 38.6 -1.2
baz=253,SNR=24
G22K Bettles 10.95 5 P Pn 01 09 38.6 -1.3
baz=186
F19K Shaleruckik Mo 10.97 352 P Pn 01 09 39.0 -1.1
baz=168,SNR=25
F15K North Star Dit 11.00 336 P Pn 01 09 40.0 -0.6
baz=146,SNR=15
F17K Baldwin Pennin 11.00 344 Pn 01 09 38.9 -1.6
F17K Baldwin Pennin 11.00 344 P Pn 01 09 39.3 -1.2
baz=157,SNR=14
F20K Avaraart Lake 11.06 356 Pn 01 09 39.1 -2.3
F20K Avaraart Lake 11.06 356 P Pn 01 09 40.1 -1.3
baz=174,SNR=25
G24K Hadweenzic Riv 11.09 13 P Pn 01 09 38.1 -3.7
baz=198,SNR=29
F21K Alatna River 11.20 1 P Pn 01 09 41.7 -1.6
baz=181,SNR=16

F14K Arctic Creek 11.22 332 P Pn 01 09 44.7 +1.1
baz=141
I27K Kandik River 11.24 27 Pn 01 09 42.3 -1.6
I27K Kandik River 11.24 27 P Pn 01 09 43.3 -0.7
baz=217,SNR=24
K29M Barlow Dome 11.26 40 Pn 01 09 42.6 -1.6
K29M Barlow Dome 11.26 40 P Pn 01 09 43.6 -0.6
baz=233,SNR=8.3
P32M Atlin 11.27 63 Pn 01 09 42.4 -2.0
P32M Atlin 11.27 63 P Pn 01 09 42.0 -2.3
baz=260,SNR=6.0
FYU Fort Yukon 11.30 18 Pn 01 09 42.5 -2.1
COLD Coldfoot 11.33 7 P Pn 01 09 43.0 -2.1
baz=190,SNR=24
G25K Bearman Lake 11.34 16 P Pn 01 09 42.6 -2.6
baz=202,SNR=9.4
J29N Klondike Camp 11.40 36 P Pn 01 09 44.9 -1.2
baz=229
F22K John River 11.51 3 P Pn 01 09 46.4 -1.2
baz=184
E19K Redstone River 11.55 353 P Pn 01 09 47.1 -0.9
baz=170,SNR=34
U33K Whale Pass 11.55 81 P Pn 01 09 46.4 -1.7
baz=278,SNR=12
I28M Miner Creek 11.57 30 P Pn 01 09 46.6 -1.9
baz=222,SNR=18
CRAG Craig 11.66 84 P Pn 01 09 48.2 -1.4
CRAG Craig 11.66 84 P Pn 01 09 48.3 -1.3
baz=282
E17K Hotham Inlet 11.68 344 P Pn 01 09 48.6 -1.3
baz=157
M31M Drury Creek, Y 11.69 50 P Pn 01 09 48.2 -1.8
baz=247,SNR=16
TNA Tin City 11.72 330 P Pn 01 09 50.1 -0.2
baz=137
H27K Steamboat Moun 11.77 25 P Pn 01 09 49.8 -1.3
baz=216
GAMB Gambell 11.81 318 P Pn 01 09 51.3 -0.2
baz=122
F24K Squaw Lake 11.82 11 P Pn 01 09 50.2 -1.6
baz=196
P33M Teslin, Yukon 11.83 61 P Pn 01 09 50.1 -1.8
baz=259
E18K Tukpahlearik C 11.83 347 P Pn 01 09 51.3 -0.6
baz=161,SNR=16
G26K Porcupine Rive 11.90 19 P Pn 01 09 50.4 -2.4
baz=208,SNR=11
N32M Quiet Lake 11.92 56 Pn 01 09 51.4 -1.9
N32M Quiet Lake 11.92 56 P Pn 01 09 52.2 -1.1
baz=254
Q32M Nakina River 11.93 67 Pn 01 09 52.2 -1.2
Q32M Nakina River 11.93 67 P Pn 01 09 52.4 -1.0
baz=265,SNR=15
WRAK Wrangell Islan 11.94 79 Pn 01 09 52.7 -0.7
WRAK Wrangell Islan 11.94 79 P Pn 01 09 52.8 -0.7
baz=277
J30M Hart River 12.12 38 P Pn 01 09 53.5 -2.5
baz=233,SNR=10
E22K Anaktuvuk Pass 12.15 4 P Pn 01 09 55.1 -1.2
baz=185
F25K Christian Rive 12.18 15 P Pn 01 09 54.3 -2.4
baz=202,SNR=15
E23K Chandalar 12.19 7 P Pn 01 09 54.9 -2.0
baz=191,SNR=19
G27K Doyon Strip 12.22 23 P Pn 01 09 54.2 -3.0
baz=214
E20K Nigu River 12.29 356 P Pn 01 09 57.1 -1.1
baz=173,SNR=19
E24K Your Creek 12.30 9 P Pn 01 09 56.2 -2.2
baz=194,SNR=6.4
E21K Killik River 12.43 360 P Pn 01 09 58.9 -1.2
baz=179
D17K Noatak River 12.45 343 P Pn 01 09 59.8 -0.5
baz=155,SNR=5.2
S34M Telegraph Cree 12.49 72 P Pn 01 09 58.9 -2.1
baz=271
I30M Mount Dempster 12.50 36 P Pn 01 09 58.8 -2.3
baz=231,SNR=12
F26K Sheenjek River 12.51 17 P Pn 01 09 59.2 -1.9
baz=206,SNR=19
V35K Ketchikan 12.54 84 Pn 01 10 01.6 0.0
V35K Ketchikan 12.54 84 P Pn 01 09 59.5 -2.1
baz=283,SNR=12
ATKA Atka Island 12.55 261 P Pn 01 10 00.2 -1.6
ATKA Atka Island 12.55 261 Pn 01 09 59.8 -2.0
H29M Whitestone 12.58 30 P Pn 01 10 00.3 -1.8
baz=223
D19K Kuna River 12.63 353 P Pn 01 10 01.6 -1.2
baz=169
R33M Jennings River 12.63 65 P Pn 01 10 00.2 -2.8
baz=265,SNR=16
DIB Dawson Inlet, 12.68 94 Pn 01 10 02.5 -1.0
H02S1 DAWSON INLET T 12.68 94 Pn Pn 01 09 59.1 -4.4
H02S1 Sn Sn 01 12 11.7 -12
H02S2 DAWSON INLET T 12.68 94 Pn Pn 01 09 59.0 -4.5
H02S2 Sn Sn 01 12 11.7 -12
E25K Arctic Village 12.68 14 P Pn 01 10 00.9 -2.7
baz=201,SNR=5.7
RDOG Red Dog Mine 12.74 344 P Pn 01 10 02.6 -1.8
baz=156
D20K Etivluk River 12.76 355 P Pn 01 10 03.5 -1.1
baz=173
TOLK Toolik Lake Re 12.77 7 P Pn 01 10 02.2 -2.6
baz=190,SNR=8.2
MOBC Moresby Island 12.98 94 Pn 01 10 06.1 -1.7
T35M Bob Quinn 13.03 76 Pn 01 10 07.7 -0.6
T35M Bob Quinn 13.03 76 P Pn 01 10 05.8 -2.4
baz=276,SNR=27
D23K Nanushuk River 13.03 5 P Pn 01 10 06.1 -2.1
baz=188,SNR=15
C18K Utukok River 13.07 348 P Pn 01 10 07.4 -1.5
baz=161
DLBC Dease Lake 13.07 70 Pn Pn 01 10 08.6 -0.4
comp=N,0.9nm,0.3s,baz=270,slow=6.1,SNR=15
DLBC Sn Sn 01 12 29.0 -4.9
comp=N,0.7nm,0.3s,baz=270,slow=19,SNR=1.3
comp=N,5.2nm,0.5s
DLBC Dease Lake 13.07 70 P Pn 01 10 06.1 -2.9
baz=270,SNR=8.6
C21K Knifeblade Rid 13.15 358 P Pn 01 10 07.8 -2.1
baz=177
EPYK Eagle Plains 13.15 31 P Pn 01 10 08.5 -1.5
baz=226,SNR=15
C17K DeLong Mountai 13.17 345 P Pn 01 10 08.6 -1.6
baz=156
G29M Pine Creek 13.18 28 P Pn 01 10 07.7 -2.7
baz=222,SNR=18
MMPY Sheldon Lake, 13.20 51 P Pn 01 10 08.1 -2.5
baz=250,SNR=46
F28M Old Crow 13.28 24 P Pn 01 10 09.2 -2.4
baz=216,SNR=23
D24K Happy Valley 13.33 8 P Pn 01 10 10.1 -2.3
baz=192
C16K Lisburne Hills 13.35 341 P Pn 01 10 12.0 -0.6
baz=151,SNR=6.6
C19K Lookout Ridge 13.35 351 P Pn 01 10 10.7 -1.9
baz=166,SNR=11
E27K Coleen River 13.40 20 P Pn 01 10 10.9 -2.4
baz=210,SNR=7.3
H31M Peel River 13.53 36 P Pn 01 10 13.9 -1.1
baz=233,SNR=41
RUBB Prince Rupert 13.55 88 Pn 01 10 14.5 -0.9
B21K Ikpikpuk River 13.62 359 P Pn 01 10 14.5 -1.7
baz=178
GSTR Great Sitkin T 13.63 262 Pn 01 10 14.7 -1.9
D25K Kavik River 13.72 11 P Pn 01 10 15.4 -2.3
baz=198
G30M tAoh Zraii Nji 13.72 30 P Pn 01 10 15.7 -2.0
baz=225,SNR=21
HG4B Hotspring 13.75 96 Pn Pn 01 10 17.8 -0.4
C23K Itkillik River 13.90 5 P Pn 01 10 17.6 -2.5
baz=187
ADK Adak 14.07 262 P Pn 01 10 21.5 -1.0
ADK Adak 14.07 262 P Pn 01 10 20.7 -1.8
ADK Adak 14.07 262 Pn 01 10 20.7 -1.8
ADK Adak 14.07 262 P Pn 01 10 22.0 -0.5
B20K Meade River 14.08 355 P Pn 01 10 20.3 -2.2
baz=172,SNR=5.4
E28M Babbage River 14.16 22 P Pn 01 10 21.4 -2.3
baz=214,SNR=10
G31M Satah River 14.25 32 P Pn 01 10 23.1 -1.8
baz=229,SNR=20
TGTN Hyland Airport 14.27 57 P Pn 01 10 22.2 -3.0
baz=259,SNR=6.9
F30M Barrier River 14.29 29 P Pn 01 10 24.5 -0.9
baz=224,SNR=54
B22K Teshekpuk Lake 14.33 1 P Pn 01 10 24.9 -1.1
baz=181
C27K Jago River 14.34 14 P Pn 01 10 24.6 -1.5
baz=203,SNR=11
KIWB Kanaga Island 14.34 263 Pn 01 10 24.5 -1.7
E29M Blow River 14.35 24 Pn 01 10 24.6 -1.7
E29M Blow River 14.35 24 P Pn 01 10 25.0 -1.3
baz=218,SNR=58
D27M Malcolm River 14.43 19 P Pn 01 10 26.3 -1.1
baz=210,SNR=32
C26K Camden Bay 14.45 12 P Pn 01 10 26.2 -1.5
baz=200,SNR=5.2
A19K Wainwright 14.55 350 P Pn 01 10 27.9 -1.1
baz=163
F31M Tsiigehtchic 14.75 31 P Pn 01 10 30.0 -1.7
baz=229
D28M Stokes Point 14.93 21 P Pn 01 10 33.7 -0.4
baz=214
A22K Sinclair Lake 15.01 359 P Pn 01 10 34.6 -0.5
baz=177
LIRD Liard River Hi 15.12 66 P Pn 01 10 36.4 -0.4
baz=269,SNR=5.8
A21K Barrow 15.37 357 P Pn 01 10 39.5 -0.3
baz=174
INK Inuvik 15.39 29 Pn Pn 01 10 38.3 -1.9
comp=N,0.4nm,0.3s,baz=226,slow=9.5,SNR=13
INK Sn Sn 01 13 30.4 +0.4
comp=N,0.1nm,0.3s,baz=231,slow=13,SNR=1.1
INK Lg Lg 01 15 02.8
comp=N,0.1nm,0.3s,baz=180,slow=16,SNR=1.3
INK LR LR 01 16 25.3
comp=N,1μm,18.7s,baz=224,slow=37
comp=N,8.9nm,0.9s
INK Inuvik 15.39 29 P Pn 01 10 38.9 -1.3
baz=227,SNR=24
INK Inuvik 15.39 29 ⇑P Pn 01 10 38.0 -2.2
BBB Bella Bella 15.52 94 Pn Pn 01 10 41.9 -0.1
comp=N,0.5nm,0.3s,baz=300,slow=16,SNR=7.5
comp=N,11nm,0.9s
BBB Bella Bella 15.52 94 Pn 01 10 39.6 -2.3
BBB Bella Bella 15.52 94 ⇓P Pn 01 10 41.2 -0.8
KOTAN Kotaneelee Air 16.17 63 P Pn 01 10 49.2 -1.2
baz=268,SNR=12
AMKA Amchitka 16.53 265 Pn 01 10 52.6 -2.4
AMKA IAmb IAmb 01 10 57.7
comp=Z,226nm,1.0s
WRGLY Wrigley 16.80 52 P Pn 01 10 57.9 -0.4
baz=259,SNR=8.0
CBB Campbell River 18.05 98 Pn 01 11 13.4 -0.6
C36M Paulatuk 18.77 33 P P 01 11 20.4 -1.6
baz=240,SNR=17
SHEM Shemya Is, Ala 18.88 273 P P 01 11 22.4 -1.1
comp=Z,3.5nm,0.3s,baz=68,slow=5.4,SNR=7.6
SHEM S Sn 01 14 55.4 +0.6
comp=Z,26nm,0.9s,baz=45,slow=4.3,SNR=1.9
comp=Z,65nm,0.8s
SHEM Shemya Is, Ala 18.88 273 P P 01 11 22.2 -1.2
SMY Shemya 18.88 273 P P 01 11 21.7 -1.7
SMY pmax pmax
comp=Z,137nm,1.0s
SMY Shemya 18.88 273 P P 01 11 21.7 -1.7
SMY IAmb IAmb 01 11 30.6
comp=Z,137nm,1.0s
CLRS Cowichan Lake 19.38 99 P P 01 11 27.5 -1.4
LLLB Lillooet 19.71 93 P P 01 11 32.1 -0.5
A36M Sachs Harbour 19.94 26 P P 01 11 34.9 +0.1
baz=232,SNR=23
NLWA Neilton Lookou 20.34 103 P P 01 11 38.5 -0.9
WISH Wishkah 20.55 103 P P 01 11 41.5 -0.2
WISH IAmb IAmb 01 11 56.9
comp=Z,111nm,1.1s
YKAW3 Yellowknife Wh 20.76 56 P P 01 11 41.6 -2.2
YKAW3 IAmb IAmb 01 11 58.3
comp=Z,94nm,0.9s
YKA Yellowknife Ar 20.77 56 P P 01 11 44.1 +0.2
comp=Z,63nm,0.8s,baz=271,slow=10,SNR=111
YKA PcP PcP 01 15 52.4 +0.1
comp=Z,4.6nm,0.8s,baz=271,slow=1.9,SNR=5.9
YKA ScP ScP 01 19 29.7 +1.7
comp=Z,0.9nm,0.8s,baz=263,slow=2.1,SNR=3.2
comp=Z,63nm,0.8s
BILL Bilibino 21.73 319 *c*iP P 01 11 52.8 -1.5
BILL pmax pmax
comp=Z,135nm,1.5s
BILL Bilibino 21.73 319 P P 01 11 52.3 -2.0
BILL IAmb IAmb 01 11 54.6
comp=Z,152nm,1.4s
COR Corvallis 22.41 108 P P 01 12 01.4 -0.3
COR pmax pmax
comp=Z,75nm,1.0s
COR Corvallis 22.41 108 P P 01 12 01.4 -0.3
COR IAmb IAmb 01 12 13.2
comp=Z,75nm,1.0s
COR Corvallis 22.41 108 ⇓P P 01 12 04.4 +2.7
HAWA Hanford 23.32 100 P P 01 12 09.8 -1.4
EDM Edmonton 23.35 80 P P 01 12 10.7 -0.7
EDM pmax pmax
comp=Z,161nm,1.3s
EDM Edmonton 23.35 80 P P 01 12 10.7 -0.7
EDM IAmb IAmb 01 12 31.7
comp=Z,161nm,1.3s
WIFE Three Sisters- 23.56 107 P P 01 12 14.3 +0.5
WIFE IAmb IAmb 01 12 32.7
comp=Z,77nm,1.0s
NEW Newport 23.58 94 LR LR 01 19 50.3
comp=Z,1μm,21.6s,baz=296,slow=32
NEW Newport 23.58 94 ⇓P P 01 12 15.6 +1.8
YBH Yreka Blue Hor 24.70 112 LR LR 01 19 48.4
comp=Z,825nm,21.4s,baz=312,slow=31
YBH Yreka Blue Hor 24.70 112 P P 01 12 25.0 +0.6
YBH pmax pmax
comp=Z,54nm,1.2s
YBH Yreka Blue Hor 24.70 112 P P 01 12 25.0 +0.6
KHMM Horse Mountain 24.81 115 P P 01 12 25.6 +0.3
KHMM IAmb IAmb 01 12 47.0
comp=Z,62nm,1.3s
KHBM Hayfork Bally 25.23 115 P P 01 12 29.4 +0.2
KHBM IAmb IAmb 01 12 42.3
comp=Z,80nm,1.3s
BMO Blue Mountains 25.50 101 P P 01 12 31.6 +0.1
BMO pmax pmax
comp=Z,24nm,1.0s
BMO Blue Mountains 25.50 101 P P 01 12 31.6 +0.1
PLID Pearl Lake 26.07 99 P P 01 12 36.3 -0.6
WVOR Wild Horse Val 26.37 106 ⇓P P 01 12 42.2 +2.7
SUTB Sutter Butte 27.03 115 P P 01 12 45.3 +0.1
BEKR Beckworth 27.28 112 P P 01 12 48.2 +0.4
PET Petropavlovsk 27.31 284 *e*P P 01 12 47.2 -0.4
PET *e*S S 01 17 17.6 -8.7
PET pmax pmax
comp=Z,500nm,7.3s
PET pmax pmax
comp=Z,87nm,1.1s
PET pmax pmax
comp=Z,300nm,16.1s
PET MLR MLR
comp=Z,1μm,19.0s
PET MLR MLR
comp=Z,1μm,17.0s
PET Petropavlovsk 27.31 284 P P 01 12 46.0 -1.6
PET IAmb IAmb 01 13 11.9
comp=Z,130nm,1.2s
PET Petropavlovsk 27.31 284 P P 01 12 47.2 -0.4
comp=Z,1μmcomp=Z,89nm,1.2s
PET Petropavlovsk 27.31 284 ⇑P P 01 12 46.9 -0.7
SEY Seymchan 27.41 307 *c*iP P 01 12 47.2 -1.3
SEY pmax pmax
comp=Z,46nm,1.8s
PEA0B Petropavlovsk- 27.79 284 P P 01 12 51.2 -0.8
PEA0B pmax pmax
comp=Z,211nm,1.7s
PEA0B Petropavlovsk- 27.79 284 P P 01 12 51.2 -0.8
PEA0B IAmb IAmb 01 13 15.5
comp=Z,211nm,1.6s
PETK Petropavlovsk- 27.79 284 P P 01 12 50.7 -1.3
comp=Z,4.5nm,0.4s,baz=69,slow=12,SNR=26
PETK PcP PcP 01 16 08.3 +0.5
comp=Z,12nm,1.0s,baz=72,slow=4.7,SNR=4.2
PETK LR LR 01 25 10.8
comp=Z,929nm,19.3s,baz=82,slow=39
comp=Z,4.5nm,0.4s
PETK Petropavlovsk- 27.79 284 P P 01 12 51.1 -0.9
PETK PcP 01 16 08.0 +0.2
EGMT Eagleton 27.85 88 P P 01 12 52.1 -0.5
HLID Hailey 27.92 100 P P 01 12 53.4 0.0
HLID Hailey 27.92 100 P P 01 12 55.2 +1.7
BCYI Bear Canyon 28.00 98 P P 01 12 54.4 +0.2

BOZ	**Bozeman (W)**	**28.20**	**94**	P	**P**	**01 12 55.8**	**-0.1**		
BOZ				pmax	pmax				
	comp=Z,33nm,1.8s								
BOZ	**Bozeman (W)**	**28.20**	**94**	P	**P**	**01 12 55.8**	**-0.1**		
YHL	**Hebgen Lake**	**28.90**	**95**	P	**P**	**01 13 02.3**	**0.0**		
FFC	**Flin Flon**	**28.91**	**71**	*e*P	**P**	**01 13 02.6**	**+0.7**		
FFC	**Flin Flon**	**28.91**	**71**	P	**P**	**01 13 01.3**	**-0.5**		
FFC	**Flin Flon**	**28.91**	**71**	P	**P**	**01 13 02.9**	**+1.0**		
BLKN	**Baker Lake**	**28.91**	**50**	P	**P**	**01 13 01.2**	**-0.5**		
BLKN				IAmb	IAmb	01 13 10.6			
	comp=Z,56nm,1.1s								
RES	**Resolute Bay**	**28.94**	**28**	P	**P**	**01 13 00.8**	**-1.2**		
RES				pmax	pmax				
	comp=Z,29nm,1.0s								
RES	**Resolute Bay**	**28.94**	**28**	P	**P**	**01 13 00.8**	**-1.2**		
RES	**Resolute Bay**	**28.94**	**28**	⇑P	**P**	**01 13 02.0**	**0.0**		
MA2	**Magadan**	**28.99**	**300**	*c i*P	**P**	**01 13 02.1**	**-0.5**		
MA2				pmax	pmax				
	comp=Z,68nm,1.7s								
MA2	**Magadan**	**28.99**	**300**	P	**P**	**01 13 01.3**	**-1.3**		
MA2				IAmb	IAmb	01 13 03.9			
	comp=Z,148nm,1.9s								
MA2	**Magadan**	**28.99**	**300**	P	**P**	**01 13 02.2**	**-0.4**		
MA2	**Magadan**	**28.99**	**300**	⇑P	**P**	**01 13 02.0**	**-0.6**		
NVAR	**Mina Array Bea**	**29.42**	**112**	P	**P**	**01 13 09.3**	**+2.5**		
	comp=Z,10nm,0.8s,baz=314,slow=8.0,SNR=4.9								
NVAR				PcP	**PcP**	**01 16 12.8**	**+0.4**		
	comp=Z,7.7nm,0.9s,baz=323,slow=2.9,SNR=6.7								
NVAR				ScP	**ScP**	**01 19 54.4**	**+1.2**		
	comp=Z,5.4nm,1.0s,baz=313,slow=4.0,SNR=15								
NVAR				LR	LR	01 22 54.8			
	comp=Z,1µm,18.7s,baz=319,slow=32								
	comp=Z,10nm,0.8s								
SKR	**Severo-Kuril's**	**29.80**	**281**	*e*P	**P**	**01 13 08.3**	**-1.5**		
SKR				*e*S	S	01 17 54.1	-11		
SKR				pmax	pmax				
	comp=Z,59nm,1.4s								
SKR				pmax	pmax				
	comp=Z,500nm,3.4s								
SKR				MLR	MLR				
	comp=Z,1µm,17.0s								
SKR				MLR	MLR				
	comp=N,960nm,16.0s								
SKR				MLR	MLR				
	comp=E,1µm,18.0s								
TPH	**Tonopah**	**30.25**	**111**	P	**P**	**01 13 14.4**	**+0.2**		
TPH				pmax	pmax				
	comp=Z,32nm,1.2s								
TPH	**Tonopah**	**30.25**	**111**	P	**P**	**01 13 14.4**	**+0.2**		
SPUT	**South Promonto**	**30.51**	**101**	P	**P**	**01 13 15.9**	**-0.5**		
HWUT	**Hardware Ranch**	**30.79**	**100**	P	**P**	**01 13 22.2**	**+3.3**		
CWC	**Cottonwood Cre**	**31.05**	**114**	P	**P**	**01 13 20.8**	**-0.4**		
DUG	**Dugway, Tooele**	**31.08**	**103**	P	**P**	**01 13 24.6**	**+3.2**		
PD31	**Pinedale Array**	**31.14**	**96**	P	**P**	**01 13 22.0**	**0.0**		
PDAR	**Pinedale Array**	**31.14**	**96**	P	**P**	**01 13 23.6**	**+1.6**		
	comp=Z,2.0nm,0.8s,baz=314,slow=8.9,SNR=13								
PDAR				PcP	**PcP**	**01 16 16.5**	**-0.3**		
	comp=Z,2.2nm,1.0s,baz=294,slow=4.5,SNR=3.8								
PDAR				ScP	**ScP**	**01 19 58.9**	**+0.1**		
	comp=Z,1.9nm,1.0s,baz=318,slow=4.4,SNR=7.2								
PDAR				P3KPbc		01 45 03.6			
	comp=Z,1.7nm,0.9s,baz=98,slow=2.2,SNR=7.6								
	comp=Z,2.0nm,0.8s								
PDAR	**Pinedale Array**	**31.14**	**96**	P	**P**	**01 13 21.9**	**-0.1**		
PDAR					**PcP**	**01 16 16.7**	**-0.1**		
PDAR					**ScP**	**01 19 57.7**	**-1.1**		
FCC	**Fort Churchill**	**31.36**	**60**	P	**P**	**01 13 22.6**	**-0.8**		
FCC				pmax	pmax				
	comp=Z,23nm,1.1s								
FCC	**Fort Churchill**	**31.36**	**60**	P	**P**	**01 13 22.6**	**-0.8**		
CLC	**China Lake**	**31.78**	**114**	P	**P**	**01 13 28.1**	**+0.6**		
CLC				pmax	pmax				
	comp=Z,50nm,1.7s								
CLC	**China Lake**	**31.78**	**114**	P	**P**	**01 13 28.1**	**+0.6**		
CLC				IAmb	IAmb	01 13 53.4			
	comp=Z,50nm,1.7s								
RSSD	**Black Hills**	**33.36**	**90**	P	**P**	**01 13 41.7**	**+0.2**		
RSSD				pmax	pmax				
	comp=Z,72nm,1.4s								
RSSD	**Black Hills**	**33.36**	**90**	P	**P**	**01 13 41.7**	**+0.2**		
RSSD				IAmb	IAmb	01 13 54.2			
	comp=Z,72nm,1.4s								
RSSD	**Black Hills**	**33.36**	**90**	P	**P**	**01 13 45.1**	**+3.6**		
O20A	**White River Ci**	**33.64**	**99**	P	**P**	**01 13 43.7**	**-0.2**		
O20A				IAmb	IAmb	01 14 01.9			
	comp=Z,46nm,0.9s								
POIN	**Pond Inlet**	**33.80**	**31**	P	**P**	**01 13 43.8**	**-0.9**		
POIN				IAmb	IAmb	01 14 12.8			
	comp=Z,44nm,1.2s								
PFO	**Pinyon Flats O**	**34.08**	**115**	LR	LR	01 25 38.9			
	comp=Z,1µm,18.4s,baz=307,slow=33								
PFO	**Pinyon Flats O**	**34.08**	**115**	*de*P	**P**	**01 13 49.7**	**+2.0**		
PFO				pmax	pmax				
	comp=Z,31nm,1.4s								
PFO	**Pinyon Flats O**	**34.08**	**115**	P	**P**	**01 13 48.1**	**+0.4**		
PMD	**Palm Desert**	**34.10**	**115**	P	**P**	**01 13 47.8**	**+0.1**		
ULM	**Lac du Bonnet**	**34.32**	**75**	P	**P**	**01 13 49.0**	**-0.4**		
	comp=Z,16nm,0.9s,baz=307,slow=11,SNR=22								
ULM				S	**S**	**01 19 08.8**	**-7.1**		
	comp=Z,1.0nm,0.5s,baz=299,slow=19,SNR=1.5								
ULM				LR	LR	01 27 46.9			
	comp=Z,2µm,18.8s,baz=312,slow=36								
ULM				P3KPbc		01 44 46.5			
	comp=Z,2.0nm,0.3s,baz=153,slow=4.5,SNR=1.8								
	comp=Z,16nm,0.9s								
ULM	**Lac du Bonnet**	**34.32**	**75**	P	**P**	**01 13 49.6**	**+0.1**		
ULM				pmax	pmax				
	comp=Z,65nm,1.2s								
ULM	**Lac du Bonnet**	**34.32**	**75**	P	**P**	**01 13 49.5**	**+0.1**		
ULM				IAmb	IAmb	01 14 00.2			
	comp=Z,65nm,1.1s								
BORC	**Borrego Spring**	**34.38**	**116**	P	**P**	**01 13 49.5**	**-0.7**		
TIXI	**Tiksi**	**34.48**	**327**	*ce*P	**P**	**01 13 49.8**	**-0.9**		
TIXI				pmax	pmax				
	comp=Z,74nm,1.3s								
TIXI	**Tiksi**	**34.48**	**327**	P	**P**	**01 13 49.2**	**-1.5**		
TIXI				IAmb	IAmb	01 13 51.2			
	comp=Z,72nm,1.2s								
WUAZ	**Wupatki**	**35.26**	**108**	P	**P**	**01 13 57.5**	**-0.5**		
TULEG	**Thule**	**35.28**	**24**	P	**P**	**01 13 56.5**	**-1.0**		
TULEG				IAmb	IAmb	01 14 05.6			
	comp=Z,122nm,1.6s								
TULEG	**Thule**	**35.28**	**24**	P	**P**	**01 13 57.6**	**+0.1**		
TULEG	**Thule**	**35.28**	**24**	*i* P	**P**	**01 13 57.2**	**-0.3**		
TULEG				IAmb	IAmb	01 13 59.5			
	comp=Z,152nm,1.8s								
ISCO	**Idaho Springs**	**35.33**	**97**	P	**P**	**01 14 02.7**	**+4.0**		
AGMN	**Agassiz Nation**	**35.41**	**78**	P	**P**	**01 14 00.2**	**+1.3**		
MVCO	**Mesa Verde**	**35.57**	**103**	P	**P**	**01 14 00.6**	**-0.1**		
MVCO	**Mesa Verde**	**35.57**	**103**	P	**P**	**01 14 01.8**	**+1.1**		
S22A	**4UR Ranch, Cre**	**36.10**	**100**	P	**P**	**01 14 05.3**	**0.0**		
OGNE	**Ogallala**	**36.55**	**92**	P	**P**	**01 14 09.2**	**+0.4**		
OGNE				IAmb	IAmb	01 14 22.4			
	comp=Z,170nm,1.6s								
X18A	**Snowflake**	**36.77**	**107**	P	**P**	**01 14 10.5**	**-0.5**		
NKL	**Nikolayevsk**	**36.78**	**294**	*e*P	**P**	**01 14 10.4**	**-0.1**		
NKL				*e*S	**S**	**01 19 55.2**	**+1.6**		
NKL				pmax	pmax				
	comp=E,32nm,0.8s								
NKL				pmax	pmax				
	comp=N,112nm,1.2s								
NKL				pmax	pmax				
	comp=Z,316nm,1.2s								
NKL				smax	smax				
	comp=E,169nm,4.0s								
NKL				smax	smax				
	comp=N,63nm,1.8s								
NKL				MLR	MLR				
	comp=E,9µm,23.0s								
NKL				MLR	MLR				
	comp=N,5µm,18.0s								
NKL				MLR	MLR				
	comp=Z,7µm,22.0s								
TYV	**Tymovskoe**	**36.98**	**289**	*e*P	**P**	**01 14 12.4**	**+0.1**		
TYV				*e*S	**S**	**01 19 54.7**	**-2.0**		
TYV				pmax	pmax				
	comp=Z,51nm,1.1s								
TYV				pmax	pmax				
	comp=Z,300nm,3.7s								
TYV				smax	smax				
	comp=N,300nm,5.5s								
TYV				smax	smax				
	comp=E,500nm,5.5s								
TYV				smax	smax				
	comp=N,13nm,2.0s								
TYV				smax	smax				
	comp=E,18nm,2.0s								
TYV				MLR	MLR				
	comp=E,4µm,22.0s								
TYV				MLR	MLR				
	comp=Z,1µm,22.0s								
YAK	**Yakutsk**	**37.64**	**311**	LR	LR	01 30 53.8			
	comp=Z,2µm,20.3s,baz=79,slow=38								
YAK	**Yakutsk**	**37.64**	**311**	*e*P	**P**	**01 14 16.1**	**-1.7**		
YAK				*e*		01 16 35.5			
YAK				*e*S	**S**	**01 20 03.9**	**-2.6**		
YAK				*e*SS	**SnSn**	**01 22 40.0**	**-5.3**		
YAK				*e*		01 24 28.0			
YAK				pmax	pmax				
	comp=Z,110nm,1.6s								
YAK				pmax	pmax				
	comp=N,23nm,1.6s								
YAK				pmax	pmax				
	comp=E,57nm,2.0s								
YAK				pmax	pmax				
	comp=Z,134nm,3.2s								
YAK				pmax	pmax				
	comp=N,42nm,2.3s								
YAK				pmax	pmax				
	comp=E,91nm,2.3s								
YAK				smax	smax				
	comp=N,27nm,1.8s								
YAK				smax	smax				
	comp=E,26nm,1.9s								
YAK				MLR	MLR				
	comp=Z,3µm,18.0s								
YAK				MLR	MLR				
	comp=N,1µm,17.0s								
YAK				MLR	MLR				
	comp=E,2µm,15.0s								
YAK	**Yakutsk**	**37.64**	**311**	P	**P**	**01 14 16.2**	**-1.5**		
YAK				IAmb	IAmb	01 14 17.7			
	comp=Z,98nm,1.1s								
YAK	**Yakutsk**	**37.64**	**311**	P	**P**	**01 14 16.8**	**-0.9**		
ECSD	**EROS Data Cent**	**37.76**	**84**	P	**P**	**01 14 18.7**	**-0.3**		
ECSD	**EROS Data Cent**	**37.76**	**84**	P	**P**	**01 14 20.2**	**+1.2**		
T25A	**Trinidad**	**37.87**	**99**	P	**P**	**01 14 19.2**	**-1.1**		
EYMN	**Ely**	**38.00**	**75**	P	**P**	**01 14 21.2**	**+0.2**		
EYMN				IAmb	IAmb	01 14 31.1			
	comp=Z,79nm,0.7s								
EYMN	**Ely**	**38.00**	**75**	P	**P**	**01 14 22.2**	**+1.2**		
TUC	**Tucson**	**38.04**	**110**	P	**P**	**01 14 21.6**	**0.0**		
TUC				pmax	pmax				
	comp=Z,14nm,1.1s								
TUC	**Tucson**	**38.04**	**110**	P	**P**	**01 14 21.6**	**0.0**		
TUC	**Tucson**	**38.04**	**110**	P	**P**	**01 14 24.4**	**+2.9**		
UGL	**Uglegorsk**	**38.30**	**287**	*e*P	**P**	**01 14 24.1**	**+0.6**		
UGL				*e*S	**S**	**01 20 18.9**	**+2.1**		
UGL				pmax	pmax				
	comp=Z,400nm,2.6s								
UGL				MLR	MLR				
	comp=N,500nm,17.0s								
UGL				MLR	MLR				
	comp=E,2µm,17.0s								
UGL				MLR	MLR				
	comp=Z,2µm,15.0s								
ANMO	**Albuquerque**	**38.35**	**103**	LR	LR	01 29 21.2			
	comp=Z,364nm,19.6s,baz=312,slow=35								
ANMO	**Albuquerque**	**38.35**	**103**	⇓*e*P	**P**	**01 14 26.3**	**+2.0**		
ANMO				pmax	pmax				
	comp=Z,19nm,1.5s								
ANMO	**Albuquerque**	**38.35**	**103**	P	**P**	**01 14 24.7**	**+0.4**		
ANMO	**Albuquerque**	**38.35**	**103**	P	**P**	**01 14 27.1**	**+2.8**		
NEEM	**North Greenlan**	**38.67**	**20**	*i* P	**P**	**01 14 24.8**	**-1.9**		
NEEM				IAmb	IAmb	01 14 27.7			
	comp=Z,184nm,1.5s								
KULLO	**Kullorsuaq**	**38.69**	**25**	P	**P**	**01 14 27.1**	**+0.6**		
KULLO	**Kullorsuaq**	**38.69**	**25**	*i* P	**P**	**01 14 25.2**	**-1.3**		
KULLO				IAmb	IAmb	01 14 27.9			
	comp=Z,50nm,0.9s								
TBO	**Thunder Bay**	**38.71**	**73**	P	**P**	**01 14 26.5**	**-0.4**		
TBO				IAmb	IAmb	01 14 36.9			
	comp=Z,35nm,0.8s								
Y22A	**Socorro**	**38.83**	**105**	P	**P**	**01 14 28.2**	**-0.1**		
YSS	**Yuzhno-Sakhali**	**39.20**	**284**	*ce*P	**P**	**01 14 31.4**	**+0.4**		
YSS				*e**SP	**sP**	**01 14 42.9**	**+5.2**		
YSS				*e*		01 16 00.8			
YSS				*e*S	**S**	**01 20 29.4**	**-0.9**		
YSS				pmax	pmax				
	comp=Z,300nm,5.7s								
YSS				pmax	pmax				
	comp=Z,20nm,0.9s								
YSS				pmax	pmax				
	comp=Z,200nm,4.1s								
YSS				pmax	pmax				
	comp=N,100nm,3.8s								
YSS				pmax	pmax				
	comp=E,200nm,3.2s								
YSS				smax	smax				
	comp=N,200nm,4.9s								
YSS				MLR	MLR				
	comp=Z,1µm,17.0s								
YSS				MLR	MLR				
	comp=N,500nm,16.0s								
YSS				MLR	MLR				
	comp=E,1µm,16.0s								
YSS	**Yuzhno-Sakhali**	**39.20**	**284**	P	**P**	**01 14 30.9**	**0.0**		
YSS	**Yuzhno-Sakhali**	**39.20**	**284**	⇑P	**P**	**01 14 30.7**	**-0.3**		
YUK	**Yuzh-Kuril'sk**	**39.31**	**278**	*de*P	**P**	**01 14 34.8**	**+2.8**		
121A	**Cookes Peak, D**	**39.46**	**107**	P	**P**	**01 14 34.2**	**+0.6**		
UPNV	**Upernavik**	**39.82**	**27**	P	**P**	**01 14 36.4**	**+0.4**		
UPNV	**Upernavik**	**39.82**	**27**	*i* P	**P**	**01 14 35.3**	**-0.6**		
UPNV				IAmb	IAmb	01 14 37.2			
	comp=Z,56nm,1.1s								
GRNR	**Gornyy**	**40.29**	**293**	⇑*i*P	**P**	**01 14 39.5**	**-0.6**		
GRNR				pmax	pmax				
	comp=Z,20nm,1.2s								
GRNR				MLR	MLR				
	comp=E,1µm,17.0s								
GRNR				MLR	MLR				
	comp=N,560nm,15.0s								
GRNR				MLR	MLR				
	comp=Z,870nm,14.0s								
FRB	**Frobisher Bay**	**40.35**	**43**	LR	LR	01 32 33.9			
	comp=Z,3µm,18.0s,baz=298,slow=38								
FRB	**Frobisher Bay**	**40.35**	**43**	P	**P**	**01 14 40.5**	**+0.1**		
HSIG		**40.57**	**114**	P	**P**	**01 14 43.1**	**+0.5**		
NOR	**Nord**	**40.67**	**9**	P	**P**	**01 14 43.4**	**+0.5**		
NOR	**Nord**	**40.67**	**9**	*i* P	**P**	**01 14 41.7**	**-1.1**		
NOR				IAmb	IAmb	01 14 44.3			
	comp=Z,79nm,1.4s								
KSU1	**Kansas State U**	**40.85**	**90**	P	**P**	**01 14 44.5**	**-0.4**		
JKA	**Kamikawa-asahi**	**41.06**	**281**	P	**P**	**01 14 46.1**	**-0.4**		
JKA				IAmb	IAmb	01 14 48.0			
	comp=Z,81nm,1.0s								
JKA	**Kamikawa-asahi**	**41.06**	**281**	P	**P**	**01 14 47.0**	**+0.5**		
ASAJ	**Asahikawa**	**41.06**	**281**	P	**P**	**01 14 46.1**	**-0.4**		
ASAJ				pmax	pmax				
	comp=Z,81nm,1.0s								
MNTX	**Cornudas Mount**	**41.40**	**105**	P	**P**	**01 14 52.2**	**+2.8**		
JFWS	**Jewell Farm**	**41.83**	**81**	P	**P**	**01 14 52.0**	**-0.8**		
JFWS				pmax	pmax				
	comp=Z,38nm,0.9s								
JFWS	**Jewell Farm**	**41.83**	**81**	P	**P**	**01 14 52.0**	**-0.8**		
JFWS				IAmb	IAmb	01 15 02.1			
	comp=Z,38nm,0.8s								
ERM	**Erimo**	**42.13**	**278**	*c i*P	**P**	**01 14 55.5**	**+0.2**		
ERM				pmax	pmax				
	comp=Z,173nm,1.3s								
ERM	**Erimo**	**42.13**	**278**	P	**P**	**01 14 55.0**	**-0.2**		
ERM				IAmb	IAmb	01 14 57.6			
	comp=Z,157nm,1.2s								
ERM	**Erimo**	**42.13**	**278**	P	**P**	**01 14 55.9**	**+0.7**		
WMOK	**Wichita Mounta**	**42.75**	**96**	P	**P**	**01 15 00.2**	**-0.2**		
WMOK				pmax	pmax				
	comp=Z,35nm,0.9s								
WMOK	**Wichita Mounta**	**42.75**	**96**	P	**P**	**01 15 00.2**	**-0.2**		
WMOK	**Wichita Mounta**	**42.75**	**96**	P	**P**	**01 15 02.3**	**+1.9**		
ZEA	**Zeya**	**43.12**	**301**	*e*P	**P**	**01 15 02.3**	**-0.9**		
ZEA				pmax	pmax				
	comp=Z,30nm,1.5s								
ZEA				pmax	pmax				
	comp=E,100nm,4.5s								
ZEA				pmax	pmax				
	comp=Z,200nm,4.4s								
ZEA				MLR	MLR				
	comp=E,700nm,12.0s								
ZEA				MLR	MLR				
	comp=N,500nm,15.0s								
ZEA				MLR	MLR				
	comp=Z,1µm,15.0s								
KLR	**Kul'dur**	**43.63**	**294**	*c i*P	**P**	**01 15 06.9**	**-0.4**		
KLR				pmax	pmax				
	comp=Z,131nm,1.3s								
S39A	**Bolivar**	**43.68**	**89**	P	**P**	**01 15 07.4**	**-0.5**		
S39A				IAmb	IAmb	01 15 16.6			
	comp=Z,31nm,0.8s								
HDIL	**Hopedale**	**43.94**	**82**	P	**P**	**01 15 09.9**	**0.0**		
JTM	**Tenmabayashi**	**44.12**	**278**	P	**P**	**01 15 10.8**	**-0.6**		
JTM				IAmb	IAmb	01 15 12.4			
	comp=Z,81nm,1.1s								
JTM	**Tenmabayashi**	**44.12**	**278**	P	**P**	**01 15 11.4**	**0.0**		
TXAR	**Lajitas Array**	**44.16**	**106**	P	**P**	**01 15 13.9**	**+1.9**		
	comp=Z,9.7nm,0.7s,baz=325,slow=7.0,SNR=51								
TXAR				PcP	**PcP**	**01 16 57.3**	**+0.7**		
	comp=Z,7.5nm,0.9s,baz=317,slow=3.3,SNR=5.9								
TXAR				ScP	**ScP**	**01 20 48.5**	**+0.9**		
	comp=Z,5.3nm,1.1s,baz=317,slow=3.3,SNR=11								
TXAR				LR	LR	01 32 46.2			
	comp=Z,963nm,18.6s,baz=318,slow=35								
	comp=Z,9.7nm,0.7s								
SUMG	**Summit**	**44.19**	**23**	P	**P**	**01 15 11.2**	**-0.8**		
SUMG				pmax	pmax				
	comp=Z,65nm,0.8s								
SUMG	**Summit**	**44.19**	**23**	P	**P**	**01 15 11.2**	**-0.8**		
SUMG				IAmb	IAmb	01 15 23.1			
	comp=Z,65nm,0.8s								
SUMG	**Summit**	**44.19**	**23**	P	**P**	**01 15 12.9**	**+0.9**		
SUMG	**Summit**	**44.19**	**23**	*i* P	**P**	**01 15 11.8**	**-0.2**		
HHAR	**Hobbs**	**44.34**	**90**	P	**P**	**01 15 13.5**	**+0.3**		
HHAR				IAmb	IAmb	01 15 22.6			
	comp=Z,31nm,0.8s								
DAG	**Danmarks Havn**	**44.43**	**13**	P	**P**	**01 15 13.3**	**-0.1**		
DAG	**Danmarks Havn**	**44.43**	**13**	*i* P	**P**	**01 15 11.6**	**-1.9**		
DAG				IAmb	IAmb	01 15 14.2			
	comp=Z,154nm,1.2s								
CCM	**Cathedral Cave**	**44.59**	**86**	P	**P**	**01 15 14.7**	**-0.5**		
CCM				pmax	pmax				
	comp=Z,23nm,0.8s								
CCM	**Cathedral Cave**	**44.59**	**86**	P	**P**	**01 15 14.7**	**-0.5**		
CCM				IAmb	IAmb	01 15 24.2			
	comp=Z,23nm,0.8s								
SFJD	**Kangerlussuaq**	**44.69**	**33**	LR	LR	01 35 25.1			
	comp=Z,955nm,18.3s,baz=310,slow=38								
SFJD	**Kangerlussuaq**	**44.69**	**33**	P	**P**	**01 15 16.5**	**+1.0**		
SFJD	**Kangerlussuaq**	**44.69**	**33**	*i* P	**P**	**01 15 14.3**	**-1.2**		
SFJD				IAmb	IAmb	01 15 17.9			
	comp=Z,98nm,1.3s								
LPIG	**La Paz**	**44.93**	**117**	LR	LR	01 31 17.5			
	comp=Z,354nm,19.3s,baz=346,slow=32								
KBS	**Kingsbay**	**44.99**	**4**	*e*P	**P**	**01 15 19.8**	**+1.9**		
KBS				IAMs_20	IAMs_20	01 38 22.6			
	comp=Z,1µm,15.5s								
KBS	**Kingsbay**	**44.99**	**4**	⇑P	**P**	**01 15 19.1**	**+1.2**		
KBS	**Kingsbay**	**44.99**	**4**	*i* P	**P**	**01 15 18.2**	**+0.3**		
HPIG		**45.00**	**110**	P	**P**	**01 15 19.3**	**+0.5**		
HPIG				IAmb	IAmb	01 15 30.9			
	comp=Z,23nm,0.8s								
HPIG		**45.00**	**110**	⇓P	**P**	**01 15 21.1**	**+2.2**		
HEH	**HeiHe**	**45.18**	**297**	*e*P	**P**	**01 15 18.0**	**-1.7**		
HEH				PcP	**PcP**	**01 17 00.2**	**+0.5**		
HEH				pmax	pmax				
	comp=Z,32nm,1.3s								
HEH				L	L				
	comp=Z,2µm,14.5s								
HEH				L	L				
	comp=Z,1µm,15.4s								
HEH				L	L				
	comp=Z,3µm,15.4s								
JCT	**Junction City**	**45.38**	**101**	P	**P**	**01 15 21.9**	**+0.3**		
JCT				pmax	pmax				
	comp=Z,100nm,0.9s								
JCT	**Junction City**	**45.38**	**101**	P	**P**	**01 15 21.9**	**+0.3**		
MIAR	**Mount Ida**	**45.80**	**92**	P	**P**	**01 15 24.6**	**-0.2**		
MIAR				pmax	pmax				
	comp=Z,87nm,1.0s								
MIAR	**Mount Ida**	**45.80**	**92**	P	**P**	**01 15 24.6**	**-0.2**		
MIAR	**Mount Ida**	**45.80**	**92**	⇓P	**P**	**01 15 26.4**	**+1.6**		
SPA0	**Spitsbergen Ar**	**45.88**	**3**	*e*P	**P**	**01 15 25.4**	**+0.4**		
SPA0				IAMs_20	IAMs_20	01 34 56.0			
	comp=Z,983nm,19.3s								
SPITS	**Spitsbergen Ar**	**45.88**	**3**	P	**P**	**01 15 23.9**	**-1.0**		
	comp=Z,78nm,0.9s,baz=353,slow=10,SNR=14								
SPITS				LR	LR	01 35 31.2			
	comp=Z,869nm,18.2s,baz=351,slow=37								
	comp=Z,78nm,0.9s								
SPITS	**Spitsbergen Ar**	**45.88**	**3**	P	**P**	**01 15 24.5**	**-0.5**		
SPITS				pmax	pmax				
	comp=Z,266nm,1.3s								
SPB2	**Spitsbergen Ar**	**45.88**	**3**	P	**P**	**01 15 24.6**	**-0.4**		
NUUK	**Nuuk**	**46.14**	**36**	⇑P	**P**	**01 15 28.0**	**+0.9**		
NUUK	**Nuuk**	**46.14**	**36**	*i* P	**P**	**01 15 26.9**	**-0.2**		
SCHQ	**Schefferville**	**46.18**	**53**	P	**P**	**01 15 27.1**	**-0.5**		
	comp=Z,23nm,0.8s,baz=307,slow=8.1,SNR=31								
SCHQ				S	**S**	**01 22 10.7**	**-2.2**		
	comp=Z,2.3nm,0.9s,baz=311,slow=20,SNR=2.1								
SCHQ				LR	LR	01 37 33.1			
	comp=Z,1µm,18.3s,baz=309,slow=40								
	comp=Z,23nm,0.8s								
DBG	**Daneborg**	**46.26**	**16**	P	**P**	**01 15 27.8**	**-0.1**		
DBG	**Daneborg**	**46.26**	**16**	*i* P	**P**	**01 15 27.5**	**-0.5**		
DBG				IAmb	IAmb	01 15 28.7			
	comp=Z,98nm,1.2s								
BLO	**Bloomington**	**46.44**	**82**	P	**P**	**01 15 29.4**	**-0.4**		
BLO				pmax	pmax				
	comp=Z,58nm,0.8s								
BLO	**Bloomington**	**46.44**	**82**	P	**P**	**01 15 29.4**	**-0.4**		
BLO				IAmb	IAmb	01 15 39.7			
	comp=Z,58nm,0.8s								

baz=28,slow=76,SNR=2235
H11S2 WAKE ISLAND Hy 47.79 235 T T 02 07 10.2
baz=28,slow=76,SNR=285
H11S3 WAKE ISLAND Hy 47.80 235 T T 02 07 10.3
baz=28,slow=76,SNR=320
WVT Waverly 47.87 86 P **P** **01 15 42.3 +1.3**
HKT Hockley 47.98 98 *ce*P **P** **01 15 45.5 +3.7**
HKT pmax pmax
comp=Z,123nm,1.4s
HKT Hockley 47.98 98 P **P** **01 15 41.3 -0.5**
HKT Hockley 47.98 98 P **P** **01 15 45.7 +3.9**
BNX BinXian 48.13 293 ⇑P **P** **01 15 42.6 -0.3**
BNX pP **pP** **01 15 45.9 -1.9**
BNX sP **sP** **01 15 47.5 -2.2**
BNX S **S** **01 22 37.4 -3.4**
BNX pmax pmax
comp=Z,48nm,1.4s
BNX pmax pmax
comp=Z,450nm,3.2s
BNX L L
comp=Z,1μm,17.9s
BNX L L
comp=Z,2μm,16.3s
BNX L L
comp=Z,2μm,15.9s
OXF Oxford 48.16 88 P **P** **01 15 42.2 -1.1**
OXF pmax pmax
comp=Z,135nm,1.0s
OXF Oxford 48.16 88 P **P** **01 15 42.1 -1.1**
MSHR Mys Shultsa 48.31 287 *i* P **P** **01 15 44.4 +0.1**
MSHR pmax pmax
comp=Z,51nm,1.0s
PSTR Posyet 48.45 287 *i* P **P** **01 15 45.9 +0.6**
WBO Williamsburg 48.51 68 P **P** **01 15 45.5 -0.3**
WBO IAmb IAmb 01 15 55.5
comp=Z,62nm,1.6s
MAJO Matsushiro 48.69 276 *i* P **P** **01 15 47.5 +0.2**
MAJO pmax pmax
comp=Z,81nm,1.4s
MAJO Matsushiro 48.69 276 P **P** **01 15 47.6 +0.2**
MAJO IAmb IAmb 01 15 56.7
comp=Z,57nm,1.1s
MAJO Matsushiro 48.69 276 P **P** **01 15 47.6 +0.3**
MJAR Matsushiro Arr 48.69 276 P **P** **01 15 47.1 -0.2**
comp=Z,10nm,1.0s,baz=36,slow=4.0,SNR=17
MJAR PcP **PcP** **01 17 12.9 +0.5**
comp=Z,5.3nm,0.9s,baz=46,slow=3.5,SNR=5.0
MJAR LR LR 01 37 09.7
comp=Z,307nm,21.1s,baz=60,slow=37
comp=Z,10nm,1.0s
MJAR Matsushiro Arr 48.69 276 P **P** **01 15 47.0 -0.3**
MJAR pmax pmax
comp=Z,17nm,1.2s
MJAR Matsushiro Arr 48.69 276 P **P** **01 15 47.0 -0.3**
MNTQ Montreal, Queb 49.02 67 P **P** **01 15 48.5 -1.3**
MNTQ IAmb IAmb 01 15 58.6
comp=Z,28nm,1.1s
SCO Scoresbysund 49.16 19 P **P** **01 15 49.4 -1.1**
SCO pmax pmax
comp=Z,81nm,1.4s
SCO Scoresbysund 49.16 19 P **P** **01 15 49.4 -1.1**
SCO IAmb IAmb 01 15 52.1
comp=Z,81nm,1.4s
SCO Scoresbysund 49.16 19 P **P** **01 15 50.7 +0.3**
SCO Scoresbysund 49.16 19 *i* P **P** **01 15 50.3 -0.1**
SCO IAmb IAmb 01 15 51.8
comp=Z,81nm,1.4s
IVI Ivigtut 49.37 38 P **P** **01 15 51.8 -0.3**
IVI Ivigtut 49.37 38 *i* P **P** **01 15 50.6 -1.6**
IVI IAmb IAmb 01 16 13.3
comp=Z,30nm,0.9s
HILR Hailar Array B 49.38 301 P **P** **01 15 51.9 -0.7**
comp=Z,2.4nm,0.4s,baz=65,slow=10,SNR=7.7
HILR PcP **PcP** **01 17 15.0 +0.3**
comp=Z,3.6nm,0.6s,baz=90,slow=4.3,SNR=1.5
comp=Z,2.4nm,0.4s
ANGG Ammassalik, Gr 49.42 29 P **P** **01 15 51.3 -1.2**
ANGG IAmb IAmb 01 15 59.8
comp=Z,42nm,0.9s
ANGG Ammassalik, Gr 49.42 29 P **P** **01 15 51.9 -0.6**
ANGG Ammassalik, Gr 49.42 29 *i* P **P** **01 15 51.9 -0.6**
ANGG IAmb IAmb 01 15 52.5
comp=Z,26nm,0.8s
HIA Hailar 49.58 301 P **P** **01 15 53.1 -1.0**
HIA pmax pmax
comp=Z,61nm,1.4s
HIA Hailar 49.58 301 P **P** **01 15 53.1 -1.0**
HIA IAmb IAmb 01 15 54.8
comp=Z,61nm,1.4s
HIA Hailar 49.58 301 P **P** **01 15 53.6 -0.4**
BJO1 Bjornoya 49.62 3 *e*S **S** **01 23 08.2 +7.1**
BJO1 IAMs_20 IAMs_20 01 37 28.0
comp=Z,1μm,19.8s
TZTN Tazewell 49.96 82 P **P** **01 15 56.9 -0.2**
TZTN IAmb IAmb 01 16 07.4
comp=Z,25nm,1.1s
TZTN Tazewell 49.96 82 P **P** **01 15 58.1 +1.1**
ZAIG Zacatecas 50.01 110 P **P** **01 15 57.7 -0.2**
ZAIG Zacatecas 50.01 110 P **P** **01 15 59.8 +1.9**
BINY Binghamton 50.06 71 P **P** **01 15 58.9 +1.1**
NRS Narsarsuaq 50.34 37 *i* P **P** **01 16 01.4 +1.8**
TKL Tuckaleechee C 50.48 83 LR LR 01 37 15.8
comp=Z,2μm,18.3s,baz=329,slow=36
CN2 Changchun 50.48 292 ⇑P **P** **01 16 00.4 -0.4**
CN2 *es*P pP 01 16 05.6 -0.1
CN2 *e*S **S** **01 23 10.7 -3.0**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 L L
comp=Z,500nm,14.0s
CN2 L L
comp=Z,400nm,14.0s
CN2 L L
comp=Z,600nm,16.0s
CIT Chita 50.58 307 *e*P **P** **01 16 02.2 +0.6**
CIT *e* 01 16 14.6
CIT *e* 01 16 27.4
CIT *e* 01 18 04.4
CIT pmax pmax
comp=Z,249nm,1.6s
LRAL Lakeview Retre 50.60 88 P **P** **01 16 01.6 -0.3**
JMIC Jan Mayen 50.87 14 LR LR 01 39 36.5
comp=Z,421nm,18.5s,baz=350,slow=39
BATG Bathurst New B 51.59 60 P **P** **01 16 08.4 -0.7**
BATG IAmb IAmb 01 16 18.7
comp=Z,43nm,0.9s
HHU Hamhung 52.12 287 P **P** **01 16 13.0 -0.2**
HHU AmB
comp=Z,204nm,1.6s
CBN Corbin Frederi 52.16 76 P **P** **01 16 13.1 -0.4**
CBN IAmb IAmb 01 16 23.1
comp=Z,32nm,0.8s
GOGA Godfrey 52.30 85 P **P** **01 16 15.7 +1.1**
SNY Shenyang 52.84 292 ⇑P **P** **01 16 18.5 0.0**
SNY S **S** **01 23 44.7 -1.6**
SNY pmax pmax
comp=Z,85nm,1.2s
SNY pmax pmax
comp=Z,410nm,3.6s
SNY L L
comp=Z,540nm,17.7s
SNY L L
comp=Z,520nm,17.5s
SNY L L
comp=Z,880nm,17.7s
MOIG Morelia 53.28 111 P **P** **01 16 22.2 0.0**
MOIG IAmb IAmb 01 17 20.0
comp=Z,20nm,0.7s
JCJ Chichijima 53.54 265 LR LR 01 41 01.0
comp=Z,168nm,19.6s,baz=54,slow=38
HAMF Hammerfest 53.58 1 *e*P **P** **01 16 23.3 -0.3**
HAMF IAmb IAmb 01 16 24.0
comp=Z,128nm,1.5s
HAMF *e*S **S** **01 24 02.9 +7.2**
KS19 Wonju Array Si 53.69 285 P **P** **01 16 25.3 +0.5**
KS19 IAmb IAmb 01 16 27.1
comp=Z,49nm,1.1s
KSRS Korea Array 53.69 285 P **P** **01 16 25.2 +0.4**
comp=Z,26nm,1.0s,baz=47,slow=6.8,SNR=80
KSRS LR LR 01 38 32.3
comp=Z,454nm,21.9s,baz=45,slow=35
comp=Z,26nm,1.0s
PYAG Pyongyang 53.70 288 P **P** **01 16 24.5 -0.3**
PYAG S **S** **01 23 55.8 -2.2**
PYAG AmB
comp=Z,477nm,1.6s
KSAR Wonju Array Be 53.72 285 P **P** **01 16 25.3 +0.3**
KSAR Wonju Array Be 53.72 285 P **P** **01 16 25.3 +0.3**
VADS Vadso 54.10 359 *e*P **P** **01 16 27.4 0.0**
VADS IAmb IAmb 01 16 27.8
comp=Z,69nm,1.0s
VADS *e*S **S** **01 24 09.4 +6.7**
VADS IAMs_20 IAMs_20 01 45 01.2
comp=Z,647nm,15.6s
BORG Borgarnes 54.17 23 LR LR 01 41 20.6
comp=Z,864nm,19.4s,baz=328,slow=38
BORG Borgarnes 54.17 23 P **P** **01 16 27.6 -0.3**
BORG pmax pmax
comp=Z,44nm,1.2s
BORG Borgarnes 54.17 23 P **P** **01 16 27.6 -0.3**
BORG IAmb IAmb 01 16 37.6
comp=Z,44nm,1.1s
INCN Inchon 54.37 286 P **P** **01 16 29.8 0.0**
INCN pmax pmax
comp=Z,64nm,1.2s
INCN Inchon 54.37 286 P **P** **01 16 29.8 0.0**
INCN IAmb IAmb 01 16 31.4
comp=Z,64nm,1.1s
INCN Inchon 54.37 286 ⇑P **P** **01 16 29.8 0.0**
IRK Irkutsk 54.43 312 *e*P **P** **01 16 29.1 -1.0**
IRK pmax pmax
comp=Z,102nm,1.9s
HJU Haeju 54.45 287 P **P** **01 16 30.4 +0.1**
HJU S **S** **01 24 06.1 -2.0**
HJU AmB
comp=Z,449nm,1.2s
KEV Kevo 54.48 360 P **P** **01 16 29.5 -0.7**
KEV pmax pmax
comp=Z,62nm,1.1s
KEV Kevo 54.48 360 P **P** **01 16 29.5 -0.7**
KEV IAmb IAmb 01 16 30.7
comp=Z,62nm,1.1s
KEV Kevo 54.48 360 P **P** **01 16 29.9 -0.2**
TRO Tromso 54.50 3 *e*P **P** **01 16 30.9 +0.7**
TRO IAmb IAmb 01 16 34.3
comp=Z,45nm,1.0s
TRO *e*S **S** **01 24 15.1 +7.1**
TRO IAMs_20 IAMs_20 01 40 40.8
comp=Z,624nm,18.6s
JETT Jettan, Norway 54.62 2 *e*P **P** **01 16 31.8 +0.6**
JETT IAmb IAmb 01 16 32.4
comp=Z,290nm,1.8s
ARA0 ARCESS Array S 54.71 0 *e*P **P** **01 16 31.6 -0.3**
ARA0 IAmb IAmb 01 16 35.8
comp=Z,39nm,1.2s
ARA0 *e*S **S** **01 24 17.5 +6.6**
ARA0 IAMs_20 IAMs_20 01 41 26.6
comp=Z,642nm,16.0s
ARCES ARCESS Array B 54.71 0 P **P** **01 16 30.7 -1.1**
comp=Z,16nm,0.9s,baz=4.1,slow=7.3,SNR=37
ARCES LR LR 01 41 41.5
comp=Z,404nm,18.1s,baz=334,slow=38
comp=Z,16nm,0.9s
ARCES ARCESS Array B 54.71 0 P **P** **01 16 31.4 -0.4**
ARCES pmax pmax
comp=Z,32nm,1.1s
ARCES ARCESS Array B 54.71 0 P **P** **01 16 31.4 -0.4**
ARCES IAmb IAmb 01 16 40.4
comp=Z,32nm,1.1s
TJN Taejon 54.79 284 P **P** **01 16 32.9 +0.1**
TJN pmax pmax
comp=Z,369nm,1.2s
TJN Taejon 54.79 284 P **P** **01 16 32.9 +0.1**
JTU Tsushima 55.05 281 P **P** **01 16 35.5 +0.8**
TLY Talaya 55.11 312 LR LR 01 42 41.8
comp=Z,1μm,19.5s,baz=40,slow=39
TLY Talaya 55.11 312 *ce*P **P** **01 16 35.2 +0.2**
TLY pmax pmax
comp=Z,80nm,1.3s
TLY Talaya 55.11 312 P **P** **01 16 34.8 -0.2**
TLY IAmb IAmb 01 16 45.0
comp=Z,54nm,1.1s
TLY Talaya 55.11 312 ⇑P **P** **01 16 35.5 +0.5**
GBN Guysborough 55.13 59 P **P** **01 16 34.9 -0.2**
GBN IAmb IAmb 01 16 45.0
comp=Z,79nm,1.5s
XLT XiLinHaoTe 55.16 298 *e*P **P** **01 16 36.1 +0.6**
XLT PcP **PcP** **01 17 37.6 +1.0**
XLT S **S** **01 24 20.0 +2.2**
XLT pmax pmax
comp=Z,37nm,1.2s
XLT pmax pmax
comp=Z,350nm,3.6s
XLT L L
comp=Z,1μm,15.0s
XLT L L
comp=Z,1μm,15.7s
KTK1 Kautokeino 55.21 1 *e*P **P** **01 16 35.1 -0.3**
KTK1 IAmb IAmb 01 16 43.1
comp=Z,64nm,1.1s
KTK1 *e*S **S** **01 24 24.8 +7.1**
LOF Lofoten 55.77 6 *e*P **P** **01 16 39.6 +0.2**
LOF IAmb IAmb 01 16 43.0
comp=Z,46nm,1.1s
LOF *e*S **S** **01 24 31.4 +6.4**
DL2 Dalian 55.99 290 P **P** **01 16 41.8 +0.4**
DL2 S **S** **01 24 30.6 +1.8**
DL2 pmax pmax
comp=Z,48nm,1.0s
DL2 pmax pmax
comp=Z,280nm,3.6s
DL2 L L
comp=Z,720nm,18.1s
DL2 L L
comp=Z,970nm,15.7s
DL2 L L
comp=Z,1μm,21.8s
STEI Steigen 56.05 5 *e*P **P** **01 16 41.5 0.0**
STEI IAmb IAmb 01 16 50.1
comp=Z,53nm,1.0s
STEI *e*S **S** **01 24 35.3 +6.5**
LVZ Lovozero 56.19 356 *ce*P **P** **01 16 42.5 -0.1**
LVZ pmax pmax
comp=Z,123nm,1.0s
LVZ Lovozero 56.19 356 P **P** **01 16 41.8 -0.8**
LVZ Lovozero 56.19 356 P **P** **01 16 42.3 -0.3**
comp=Z,1μmcomp=Z,128nm,1.2s
LVZ Lovozero 56.19 356 P **P** **01 16 42.8 +0.3**
MOY Mondy 56.21 314 *e*P **P** **01 16 43.6 +0.6**
MOY pmax pmax
comp=Z,76nm,2.0s
ZAK Zakamensk 56.23 311 *e*P **P** **01 16 42.8 -0.4**
ZAK pmax pmax
comp=Z,35nm,1.8s
ULN Ulaanbaatar 56.49 307 *c i*P **P** **01 16 45.2 +0.1**
ULN pmax pmax
comp=Z,33nm,1.1s
ULN Ulaanbaatar 56.49 307 P **P** **01 16 44.3 -0.8**
ULN IAmb IAmb 01 16 46.6
comp=Z,33nm,1.1s
ULN Ulaanbaatar 56.49 307 P **P** **01 16 45.2 +0.1**
ULN Ulaanbaatar 56.49 307 P **P** **01 16 45.5 +0.4**
APA Apatity 56.56 357 ⇓*i*P **P** **01 16 43.7 -1.4**
APA *i* 01 17 36.4
APA *i* S **S** **01 24 30.0 -5.7**
APA *i* 01 26 26.9
APA pmax pmax
comp=Z,23nm,1.1s
FAUS Fauske 56.60 5 *e*P **P** **01 16 45.4 0.0**
FAUS IAmb IAmb 01 16 46.3
comp=Z,185nm,1.9s
FAUS *e*S **S** **01 24 42.4 +6.2**
SONM Songino Array 56.80 307 P **P** **01 16 47.7 +0.3**
comp=Z,48nm,0.9s,baz=40,slow=7.6,SNR=209
SONM S **S** **01 24 39.1 -0.6**
comp=Z,0.4nm,0.3s,baz=24,slow=14,SNR=1.6
SONM LR LR 01 43 02.2
comp=Z,2μm,21.1s,baz=43,slow=38
comp=Z,48nm,0.9s
SONM Songino Array 56.80 307 P **P** **01 16 47.6 +0.3**
SONM pmax pmax
comp=Z,68nm,0.8s
SONM Songino Array 56.80 307 P **P** **01 16 47.6 +0.3**
SGF Sodankyl 56.81 360 P **P** **01 16 47.4 +0.6**
VAGH Vaagaholmen 57.14 6 *e*P **P** **01 16 49.4 +0.2**
VAGH IAmb IAmb 01 16 59.8
comp=Z,42nm,1.0s
VAGH *e*S **S** **01 24 50.1 +6.8**
KONS Konsvik 57.36 6 *e*P **P** **01 16 51.1 +0.3**
KONS IAmb IAmb 01 16 51.9
comp=Z,88nm,1.7s
KONS *e*S **S** **01 24 53.6 +7.4**
RAUS Rausandaksla 57.48 6 *e*P **P** **01 16 51.8 +0.2**
RAUS IAmb IAmb 01 16 52.6
comp=Z,72nm,1.1s
RAUS *e*S **S** **01 24 55.4 +7.7**
STOK Stokkvaagen 57.52 6 *e*P **P** **01 16 52.3 +0.4**
STOK IAmb IAmb 01 16 53.1
comp=Z,88nm,1.3s
STOK *e*S **S** **01 24 56.5 +8.2**
LEIR Leirfjorden 57.75 6 *e*P **P** **01 16 53.5 0.0**
LEIR IAmb IAmb 01 16 54.7
comp=Z,288nm,1.9s
LEIR *e*S **S** **01 24 57.8 +6.6**
MOR8 Moi Rana 57.76 6 *e*P **P** **01 16 52.9 -0.8**
MOR8 IAmb IAmb 01 17 00.7
comp=Z,59nm,1.1s
MOR8 *e*S **S** **01 24 57.8 +6.2**
BJI2 Beijing 57.98 295 P **P** **01 16 55.7 +0.1**
BJI2 PP **PP** **01 19 03.6 -0.1**
BJI2 S **S** **01 24 57.5 +2.4**
BJI2 SS **SS** **01 28 48.5 +2.9**
BJI2 pmax pmax
comp=Z,110nm,3.6s
BJI2 L L
comp=Z,350nm,14.9s
BJI2 L L
comp=Z,500nm,14.8s
BJI2 L L
comp=Z,730nm,15.1s
BJT Baijiatuao 57.99 295 P **P** **01 16 55.4 -0.2**
BJT pmax pmax
comp=Z,48nm,1.4s
BJT Baijiatuao 57.99 295 P **P** **01 16 55.4 -0.2**
BJT IAmb IAmb 01 17 04.7
comp=Z,48nm,1.4s
BJT Baijiatuao 57.99 295 P **P** **01 16 55.9 +0.3**
MSF Maaselka 58.33 359 P **P** **01 16 58.1 +0.5**
CMIG Matias Romero 58.76 107 LR LR 01 40 51.2
comp=Z,247nm,19.5s,baz=328,slow=34
OUL Oulu 59.18 0 P **P** **01 17 03.6 +0.1**
NSS Namsos 59.24 7 *e*P **P** **01 17 03.9 -0.1**
NSS IAmb IAmb 01 17 04.9
comp=Z,82nm,1.1s
HHC Hu-ho-hao-te 59.66 299 *e*P **P** **01 17 07.8 +0.4**
HHC sP sP 01 17 14.7 +0.5
HHC S **S** **01 25 15.5 -1.6**
HHC sS sS 01 25 26.7 +1.4
HHC pmax pmax
comp=Z,54nm,0.9s
HHC pmax pmax
comp=Z,450nm,4.1s
HHC L L
comp=Z,720nm,15.3s
HHC L L
comp=Z,1μm,14.5s
HHC L L
comp=Z,2μm,15.3s
TEIG Tepich 59.82 99 P **P** **01 17 08.7 +0.2**
TEIG IAmb IAmb 01 17 18.3
comp=Z,45nm,0.9s
TEIG Tepich 59.82 99 P **P** **01 17 12.3 +3.7**
ADZR Andozero 59.98 354 *c i*P **P** **01 17 08.8 -0.2**
ADZR S **S** **01 25 23.9 +3.7**
ADZR pmax pmax
comp=Z,162nm,0.9s
ADZR pmax pmax
comp=Z,182nm,1.0s
ADZR MLR MLR
comp=Z,662nm,18.0s
ZAA0 Zalesovo Array 60.32 324 P **P** **01 17 11.5 0.0**
ZALV Zalesovo Beam 60.32 324 P **P** **01 17 11.5 0.0**
comp=Z,50nm,0.9s,baz=30,slow=6.7,SNR=175
ZALV S **S** **01 25 26.2 +1.3**
comp=Z,0.2nm,0.3s,baz=64,slow=13,SNR=1.7
ZALV LR LR 01 45 46.9
comp=Z,1μm,19.8s,baz=46,slow=39
comp=Z,50nm,0.9s
ZALV Zalesovo Beam 60.32 324 *i* P **P** **01 17 11.6 +0.1**
ZALV pmax pmax
comp=Z,50nm,0.9s
TIA Tai'an 60.37 292 P **P** **01 17 12.4 +0.2**
TIA pmax pmax
comp=Z,39nm,1.4s
TIA pmax pmax
comp=Z,320nm,6.5s
TIA L L
comp=Z,760nm,20.6s
TIA L L
comp=Z,590nm,20.6s
TIA L L
comp=Z,1μm,13.7s
BTO2 Baotou 60.56 300 *e*P **P** **01 17 13.5 -0.1**
BTO2 pP **pP** **01 17 17.6 -1.0**
BTO2 PP **PP** **01 19 26.4 -0.3**
BTO2 S **S** **01 25 30.3 +1.6**
BTO2 pmax pmax
comp=Z,69nm,0.9s
BTO2 pmax pmax
comp=Z,610nm,3.3s
BTO2 L L
comp=Z,1μm,14.2s
BTO2 L L
comp=Z,1μm,15.1s
BTO2 L L
comp=Z,1μm,15.9s
HNS HongShan 60.71 294 ⇑P **P** **01 17 15.2 +0.7**
HNS S **S** **01 25 35.7 +5.3**
HNS pmax pmax
comp=Z,69nm,1.4s
HNS pmax pmax
comp=Z,420nm,4.2s
HNS L L
comp=Z,720nm,15.4s
HNS L L
comp=Z,840nm,15.9s
HNS L L
comp=Z,1μm,15.7s
MOL Molde 60.81 10 *e*P **P** **01 17 15.0 +0.2**
MOL IAmb IAmb 01 17 16.0
comp=Z,157nm,1.6s
AKN Aaknes 61.14 10 *e*P **P** **01 17 17.8 +0.8**
AKN IAmb IAmb 01 17 18.0
comp=Z,64nm,1.0s
DOMB Dombas 61.47 9 *e*P **P** **01 17 19.4 +0.1**
DOMB IAmb IAmb 01 17 27.2
comp=Z,55nm,1.1s
JOW Kunigami 61.53 276 P **P** **01 17 20.1 -0.1**
TIY Taiyuan 61.63 296 *e*P **P** **01 17 22.4 +1.6**
TIY S **S** **01 25 48.7 +6.5**
TIY L L
comp=Z,570nm,22.0s
TIY L L
comp=Z,450nm,22.7s
HYA Hoyanger 62.05 11 *e*P **P** **01 17 23.8 +0.7**
NC204 NORSAR Array S 62.37 8 *e*P **P** **01 17 26.2 +0.8**
NC204 NORSAR Array S 62.37 8 P **P** **01 17 25.0 -0.4**
NC303 NORSAR Array S 62.47 8 *e*P **P** **01 17 26.8 +0.8**
NBO00 NORSAR Array S 62.62 8 *e*P **P** **01 17 27.0 +0.1**
NB2 NORSAR Subarra 62.64 8 P **P** **01 17 27.2 0.0**
comp=Z,86nm,1.2s,baz=351,slow=6.9
NB2 NORSAR Subarra 62.64 8 P **P** **01 17 27.2 0.0**
NOA NORSAR Array B 62.64 8 P **P** **01 17 27.0 -0.2**
comp=Z,20nm,0.9s,baz=349,slow=6.7,SNR=38
NOA LR LR 01 46 06.7
comp=Z,179nm,18.7s,baz=335,slow=38
comp=Z,20nm,0.9s
NOA NORSAR Array B 62.64 8 P **P** **01 17 27.0 -0.2**
NJ2 Nanjing 62.65 287 *e*P **P** **01 17 27.3 -0.3**
NJ2 pmax pmax
comp=Z,95nm,1.4s
NJ2 L L
comp=Z,2μm,22.7s
NJ2 L L
comp=Z,3μm,20.8s
BER Bergen 62.73 11 *e*S **S** **01 26 01.6 +6.4**
SKAR Skarslia 62.74 10 *e*P **P** **01 17 28.2 +0.4**
SKAR IAmb IAmb 01 17 36.1
comp=Z,60nm,1.2s
NAO01 NORSAR Array S 62.81 8 P **P** **01 17 28.8 +0.6**
FIA1 FINESS Array S 62.83 0 P **P** **01 17 28.2 -0.1**
FINES FINESS Array B 62.83 0 P **P** **01 17 27.3 -1.0**
comp=Z,25nm,1.0s,baz=358,slow=6.8,SNR=34

comp=Z,25nm,1.0s
FINES FINESS Array B 62.83 0 *i* P **P 01 17 28.5 +0.1**
FINES pmax pmax
comp=Z,25nm,1.0s
GUMO Guam 62.93 253 LR LR 01 41 37.6
comp=Z,294nm,21.9s,baz=86,slow=33
KLMR Klimovskoe 62.95 353 *eP* **P 01 17 27.6 -1.5**
KLMR pmax pmax
comp=Z,160nm,1.1s
DGZ Jazzator, Alta 62.97 320*c iP* **P 01 17 30.5 +0.8**
NC602 NORSAR Array S 62.97 8 *eP* **P 01 17 29.2 -0.1**
NC602 IAmb IAmb 01 17 30.4
comp=Z,82nm,1.6s
NC602 *eS* **S 01 26 07.0 +8.7**
BBSR BB Station 63.35 71 P **P 01 17 31.8 -0.4**
BBSR IAmb IAmb 01 17 41.3
comp=Z,38nm,1.0s
BBSR BB Station 63.35 71 P **P 01 17 32.2 0.0**
HFS Hagfors 63.72 7 P **P 01 17 33.7 -0.6**
comp=Z,22nm,0.9s,baz=353,slow=5.8,SNR=35
comp=Z,22nm,0.9s
BLS5 Blasjo 63.79 11 *eP* **P 01 17 34.8 0.0**
KMY Karmoy 63.86 12 *eS* **S 01 26 15.8 +6.4**
KONO Kongsberg 63.88 9*c iP* **P 01 17 35.6 +0.3**
KONO pmax pmax
comp=Z,68nm,1.7s
KONO Kongsberg 63.88 9 *eP* **P 01 17 36.1 +0.7**
KONO *eS* **S 01 26 16.6 +7.0**
KONO Kongsberg 63.88 9 P **P 01 17 35.5 +0.3**
KONO Kongsberg 63.88 9 ⇑P **P 01 17 35.7 +0.3**
LYN LuoYang 64.06 294 P **P 01 17 37.8 +0.9**
LYN S **S 01 26 15.9 +3.2**
LYN pmax pmax
comp=Z,140nm,1.2s
LYN pmax pmax
comp=Z,700nm,3.6s
LYN L L
comp=Z,1μm,14.8s
LYN L L
comp=Z,1μm,15.1s
LYN L L
comp=Z,2μm,13.7s
SVE Sverdlovsk 64.07 340*de*P **P 01 17 36.6 0.0**
SVE *eS* **S 01 26 12.0 -0.1**
SVE pmax pmax
comp=Z,117nm,1.2s
KPL Plockton 64.07 19 *eP* **P 01 17 36.6 +0.1**
KPL IAmb IAmb 01 17 37.7
comp=Z,5.3nm,0.8s
KIRV Kirov 64.20 347*c iP* **P 01 17 36.7 -0.7**
MCD Coleburn Disti 64.25 17 *eP* **P 01 17 37.6 -0.2**
MCD IAmb IAmb 01 17 42.4
comp=Z,22nm,1.0s
PUL Pulkovo 64.46 358⇑*iP* **P 01 17 40.4 +1.3**
PUL pmax pmax
comp=Z,64nm,1.0s
ARBE Arbavere 64.85 0 P **P 01 17 42.0 +0.4**
ARTI Arti 64.91 341 LR LR 01 51 17.1
comp=Z,642nm,18.5s,baz=34,slow=41
ARTI Arti 64.91 341*c iP* **P 01 17 41.8 -0.3**
ARTI 01 18 14.6
ARTI S **S 01 26 22.4 0.0**
ARTI SS **SS 01 30 31.3 -1.6**
ARTI pmax pmax
comp=Z,125nm,1.1s
ARTI MLR MLR
comp=Z,697nm,19.0s
ARTI Arti 64.91 341 P **P 01 17 41.4 -0.7**
DRUM Mains of Drumt 65.02 17 P **P 01 17 43.2 +0.4**
DRUM Mains of Drumt 65.02 17 *eP* **P 01 17 42.8 0.0**
DRUM IAmb IAmb 01 17 44.3
comp=Z,36nm,0.9s
KURK Kurchatov 65.06 326*c iP* **P 01 17 43.1 -0.1**
KURK pmax pmax
comp=Z,82nm,1.5s
KURK Kurchatov 65.06 326 P **P 01 17 42.6 -0.6**
KURK IAmb IAmb 01 17 52.8
comp=Z,34nm,0.8s
KURK Kurchatov 65.06 326 ⇑P **P 01 17 43.3 +0.1**
LAWE Loch Awe, Argy 65.14 19 *eP* **P 01 17 43.2 -0.4**
LAWE IAmb IAmb 01 17 44.8
comp=Z,7.4nm,0.8s
KURBB Kurchatov Arra 65.17 326 P **P 01 17 43.9 0.0**
comp=Z,27nm,1.0s,baz=28,slow=6.2,SNR=144
comp=Z,27nm,1.0s
INVG Invergeldie, C 65.22 18 *eP* **P 01 17 43.9 -0.2**
INVG IAmb IAmb 01 17 45.7
comp=Z,8.7nm,0.8s
BORK Borovoye 65.36 332*c iP* **P 01 17 45.0 -0.1**
BORK pmax pmax
comp=Z,116nm,1.4s
BORK Borovoye 65.36 332 P **P 01 17 44.7 -0.4**
BVAR Borovoye Array 65.36 332 P **P 01 17 44.6 -0.5**
comp=Z,43nm,0.8s,baz=31,slow=5.5,SNR=206
BVAR S **S 01 26 26.4 -1.7**
comp=Z,0.1nm,0.3s,baz=40,slow=16,SNR=1.7
BVAR PKP2bc **P'P'bc 01 46 32.0 -5.9**
comp=Z,0.7nm,0.4s,baz=219,slow=1.8,SNR=4.6
comp=Z,43nm,0.8s
EAB Aberfoyle 65.39 18 *eP* **P 01 17 45.4 +0.2**
EAB IAmb IAmb 01 17 46.6
comp=Z,12nm,0.7s
MTSE Matsula 65.56 1 P **P 01 17 45.9 -0.3**
TAOE Nuku Hiva Isla 65.67 165 *e*LR LR 01 37 29.0
comp=Z,485nm,24.2s
TAOE *e*T T 02 29 08.0
comp=Z,235nm,0.4s
ZSN Zaisan 65.79 321*c iP* **P 01 17 48.5 +0.5**
ZSN *eS* **S 01 26 34.2 +0.7**
ZSN pmax pmax
comp=Z,19nm,1.0s
ZSN Zaisan 65.79 321⇑*iP* **P 01 17 48.5 +0.5**
comp=Z,19nm,1.0s
ZSN *eS* **S 01 26 34.2 +0.7**
VSU Vasula 65.82 360*c iP* **P 01 17 47.0 -1.0**
VSU pmax pmax
comp=Z,120nm,1.1s
VSU Vasula 65.82 360 ⇑P **P 01 17 46.6 -1.4**
EDI Edinburgh 65.85 18 *eP* **P 01 17 48.2 0.0**
EDI IAmb IAmb 01 17 49.8
comp=Z,12nm,0.8s
IDGL Inch Island, C 65.86 20 P **P 01 17 48.9 +0.6**
WHN Wuhan 66.23 290 ⇑P **P 01 17 51.3 +0.3**
WHN S **S 01 26 46.0 +6.7**
WHN pmax pmax
comp=Z,430nm,1.8s
WHN pmax pmax
comp=Z,850nm,3.5s
WHN L L
comp=Z,2μm,16.3s
WHN L L
comp=Z,2μm,15.2s
WHN L L
comp=Z,2μm,15.8s
XAN Xi'an 66.27 296 ⇑P **P 01 17 51.6 +0.3**
XAN S **S 01 26 41.9 +2.0**
XAN pmax pmax
comp=Z,55nm,1.5s
XAN pmax pmax
comp=Z,420nm,4.1s
XAN L L
comp=Z,1μm,14.3s
XAN L L
comp=Z,930nm,14.1s
XAN L L
comp=Z,2μm,16.5s
GTA2 Gaotai 66.32 306 P **P 01 17 51.5 -0.2**
GTA2 sP sP 01 17 59.1 +0.5
GTA2 S **S 01 26 40.7 +0.2**
GTA2 pmax pmax
comp=Z,51nm,1.4s
GTA2 pmax pmax
comp=Z,380nm,5.5s
GTA2 L L
comp=Z,3μm,15.8s
GTA2 L L
comp=Z,3μm,16.8s
GTA2 L L
comp=Z,5μm,16.8s
EKA Eskdalemuir Ar 66.42 18 P **P 01 17 51.7 -0.2**
comp=Z,19nm,0.9s,baz=344,slow=6.3,SNR=39
EKA LR LR 01 48 43.5
comp=Z,607nm,19.2s,baz=330,slow=38
comp=Z,19nm,0.9s
EKA Eskdalemuir Ar 66.42 18 P **P 01 17 51.4 -0.4**
EKA pmax pmax
comp=Z,47nm,1.2s
ESK Eskdalemuir 66.42 18 P **P 01 17 51.4 -0.5**
ESK pmax pmax
comp=Z,50nm,1.2s
ESK Eskdalemuir 66.42 18 P **P 01 17 51.4 -0.5**
ESK IAmb IAmb 01 18 00.5
comp=Z,50nm,1.1s
ESK Eskdalemuir 66.42 18 P **P 01 17 52.9 +1.0**
ESK Eskdalemuir 66.42 18 *eP* **P 01 17 52.1 +0.2**
ESK IAmb IAmb 01 17 56.5
comp=Z,14nm,1.0s
NEWG New Galloway 66.43 19 *eP* **P 01 17 51.9 0.0**
NEWG IAmb IAmb 01 17 53.1
comp=Z,9.0nm,0.8s
CHIV Chivirico 66.66 89 P **P 01 17 53.3 -0.5**
FABU Falkenberg 66.77 8 *i* P **P 01 17 52.9 -1.2**
MUD Monsted U'grnd 66.99 10 *i* P **P 01 17 56.3 +0.8**
MUD IAmb IAmb 01 18 05.0
comp=Z,66nm,1.0s
NMDO Nuevo Mundo 66.99 87 P **P 01 17 56.4 +0.4**
NMDO IAmb IAmb 01 18 05.9
comp=Z,41nm,0.9s
IGLA Glengowla, Co 67.04 22 P **P 01 17 56.4 +0.6**
IGLA Glengowla, Co 67.04 22 *eP* **P 01 17 56.0 +0.2**
IGLA IAmb IAmb 01 17 57.6
comp=Z,21nm,0.9s
SIUN Universidad Ur 67.04 100 P **P 01 17 56.5 +0.2**
SIUN IAmb IAmb 01 18 06.4
comp=Z,20nm,0.9s
ILTH Belurgan, Co L 67.08 20 P **P 01 17 55.8 -0.2**
ILTH Belurgan, Co L 67.08 20 P **P 01 17 55.9 -0.2**
EDMD Edmundbyers 67.10 17 P **P 01 17 56.8 +0.5**
EDMD Edmundbyers 67.10 17 *eP* **P 01 17 55.6 -0.6**
EDMD IAmb IAmb 01 18 01.0
comp=Z,13nm,1.0s
LZH Lanzhou 67.15 301 *eP* **P 01 17 57.3 +0.3**
LZH sP sP 01 18 05.5 +1.6
LZH S **S 01 26 50.9 +0.2**
LZH pmax pmax
comp=Z,53nm,1.3s
LZH pmax pmax
comp=Z,430nm,4.8s
LZH L L
comp=Z,2μm,14.1s
LZH L L
comp=Z,2μm,14.1s
LZH L L
comp=Z,2μm,13.4s
MK31 Makanchi Array 67.25 322 P **P 01 17 56.6 -0.8**
MK31 pmax pmax
comp=Z,23nm,0.9s
MK31 Makanchi Array 67.25 322 P **P 01 17 56.6 -0.8**
MK31 IAmb IAmb 01 18 06.7
comp=Z,23nm,0.9s
MKAR Makanchi Array 67.25 322 P **P 01 17 56.9 -0.5**
comp=Z,15nm,1.0s,baz=40,slow=6.8,SNR=93
MKAR S **S 01 26 50.9 -0.4**
comp=Z,0.5nm,0.8s,baz=11,slow=2.9,SNR=1.8
MKAR PKP2bc **P'P'bc 01 46 26.4 -5.6**
comp=Z,0.6nm,1.0s,baz=221,slow=1.5,SNR=4.4
MKAR LR LR 01 49 58.6
comp=Z,2μm,18.1s,baz=24,slow=38
comp=Z,15nm,1.0s
MKAR Makanchi Array 67.25 322 *i* P **P 01 17 57.0 -0.4**
MKAR pmax pmax
comp=Z,16nm,1.0s
MKAR Makanchi Array 67.25 322 P **P 01 17 57.1 -0.3**
LZDM Lanzhou Array 67.32 301 P **P 01 17 57.9 -0.4**
comp=Z,1.5nm,0.3s,baz=58,slow=8.8,SNR=4.7
comp=Z,1.5nm,0.3s
NACB Ninganchiao 67.33 280 P **P 01 17 57.4 -0.7**
NACB Ninganchiao 67.33 280 P **P 01 17 58.1 -0.1**
MAKZ Makanchi 67.35 322 P **P 01 17 57.7 -0.3**
MAKZ pmax pmax
comp=Z,104nm,1.5s
MAKZ Makanchi 67.35 322 P **P 01 17 57.7 -0.3**
MAKZ Makanchi 67.35 322 P **P 01 17 57.9 -0.1**
DEL Delary 67.38 7 *i* P **P 01 17 58.5 +0.6**
MTDJ Mount Denham 67.43 91 P **P 01 17 58.4 -0.5**
MTDJ Mount Denham 67.43 91 P **P 01 17 56.6 -2.3**
comp=Z,68nm,1.0s
BRZS Berezniki 67.48 330 *eP* **P 01 17 58.7 0.0**
BRZS Berezniki 67.48 330 *eP* **P 01 17 58.8 0.0**
BOAB BOACO BROADBAND 67.59 101 P **P 01 17 59.0 -0.8**
BLEU Blekinge 67.67 6 *i* P **P 01 17 58.3 -1.5**
GDLE Glaisdale, N Y 67.68 17 *eP* **P 01 17 59.6 -0.2**
GDLE IAmb IAmb 01 18 04.1
comp=Z,21nm,0.8s
DSB Dublin 67.81 20 P **P 01 18 00.8 +0.1**
WMQ Urumqi 67.82 317 ⇑P **P 01 18 02.2 +1.2**
WMQ pP sP 01 18 09.6 +1.7
WMQ PcP **PcP 01 18 30.7 +3.1**
WMQ S **S 01 27 04.3 +6.0**
WMQ pmax pmax
comp=Z,31nm,1.3s
WMQ pmax pmax
comp=Z,350nm,5.5s
WMQ L L
comp=Z,1μm,22.1s
WMQ L L
comp=Z,1μm,22.1s
WMQ L L
comp=Z,1μm,18.9s
SSLB Suanglung 67.99 280 P **P 01 18 01.9 -0.5**
SSLB IAmb IAmb 01 18 13.6
comp=Z,44nm,1.0s
SSLB Suanglung 67.99 280 P **P 01 18 01.1 -1.2**
HPK Haverah Park 67.99 17 *eP* **P 01 18 02.4 +0.5**
HPK IAmb IAmb 01 18 05.8
comp=Z,11nm,0.8s
MOS Moscow 68.17 353 *eP* **P 01 18 02.9 0.0**
MOS *e* 01 18 28.1
MOS *e* 01 20 32.5
MOS *eS* **S 01 27 01.2 -0.7**
MOS pmax pmax
comp=Z,82nm,0.9s
MOS pmax pmax
comp=N,64nm,0.8s
VAL Valentia 68.23 23 P **P 01 18 04.3 +0.9**
LBWR Ladybower, Pea 68.51 18 P **P 01 18 06.3 +1.2**
LBWR Ladybower, Pea 68.51 18 *eP* **P 01 18 05.5 +0.4**
LBWR IAmb IAmb 01 18 09.8
comp=Z,26nm,0.8s
IWEX Carrickbyrne, 68.56 21 P **P 01 18 06.0 +0.6**
LMK Market Rasen 68.69 17 P **P 01 18 07.6 +1.4**
FOEL Foel Wylfa 68.75 19 P **P 01 18 07.8 +1.2**
PABE Paberze 68.78 1 P **P 01 18 06.5 -0.2**
PABE Paberze 68.78 1 P **P 01 18 07.1 +0.4**
CNSH ChangSha 68.85 289 ⇑P **P 01 18 08.2 +0.6**
CNSH S **S 01 27 14.0 +3.2**
CNSH pmax pmax
comp=Z,340nm,2.8s
CNSH L L
comp=Z,630nm,14.7s
CNSH L L
comp=Z,300nm,15.9s
CNSH L L
comp=Z,870nm,15.3s
OBN Obninsk 68.86 354 LR LR 01 52 22.3
comp=Z,169nm,18.7s,baz=341,slow=40
OBN Obninsk 68.86 354 ⇓P **P 01 18 07.6 +0.4**
OBN Obninsk 68.86 354*c iP* **P 01 18 06.3 -0.9**
OBN *e* 01 18 32.6
OBN *e* 01 20 39.0
OBN *e*PPP PPP 01 22 20.3
OBN *e*SSS SSS 01 34 38.1
OBN pmax pmax
comp=Z,132nm,1.4s
OBN MLR MLR
comp=Z,385nm,18.0s
OBN Obninsk 68.86 354 P **P 01 18 06.1 -1.1**
OBN Obninsk 68.86 354 P **P 01 18 07.4 +0.2**
comp=Z,1μmcomp=Z,106nm,1.1s
OBN Obninsk 68.86 354 P **P 01 18 07.0 -0.3**
ENH Enshi 68.98 293 P **P 01 18 07.8 -0.7**
ENH Enshi 68.98 293 P **P 01 18 08.8 +0.3**
CWF Charnwood Fore 69.22 17 P **P 01 18 10.3 +0.7**
CWF Charnwood Fore 69.22 17 *eP* **P 01 18 09.4 -0.1**
CWF IAmb IAmb 01 18 13.5
comp=Z,12nm,0.8s
WACR West Acre 69.55 16 P **P 01 18 12.6 +1.0**
WACR West Acre 69.55 16 *eP* **P 01 18 11.8 +0.3**
WACR IAmb IAmb 01 18 16.1
comp=Z,82nm,0.9s
BSEG Bad Segeberg 69.59 10 *eP* **P 01 18 13.2 +1.4**
comp=Z,69nm,1.6s,baz=352,slow=5.9
BSEG *ep*P **sP 01 18 20.9 +2.2**
BSEG Bad Segeberg 69.59 10 P **P 01 18 12.9 +1.2**
MCH1 Michaelchurch 69.64 19 *eP* **P 01 18 12.3 +0.2**
MCH1 IAmb IAmb 01 18 16.9
comp=Z,14nm,0.9s
MNK Minsk 69.79 359 *i* P **P 01 18 13.8 +0.8**
comp=E,20nm,0.7s
MNK *i* P **P 01 18 13.8 +0.8**
comp=N,10.0nm,0.8s
MNK *i* P **P 01 18 13.8 +0.8**
comp=Z,36nm,0.9s,baz=1.0
MNK *i* PcP **PcP 01 18 41.0 +5.4**
MNK *i* PP **PP 01 20 47.5 +0.9**
MNK *i* PPP PPP 01 22 28.5
MNK *i* S **S 01 27 22.8 +1.6**
MNK *i* ScS **ScS 01 28 15.3 +1.5**
MNK *i* SS **SS 01 31 51.6 +3.3**
MNK *i* SSS SSS 01 35 09.1
MNK *i* LQ LQ 01 44 47.7
MNK *i* LR LR 01 49 13.9
MNK *i* LRM MLR 01 50 32.9
comp=N,144nm,17.0s
MNK *i* LRM MLR 01 50 38.0
comp=E,251nm,19.3s
MNK *i* LRM MLR 01 50 45.1
comp=Z,316nm,17.7s
MNK Minsk 69.79 359 *i* P **P 01 18 13.7 +0.8**
MNK *i* 01 18 41.0
MNK *i* 01 20 47.4
MNK *i* PPP PPP 01 22 28.4
MNK *i* S **S 01 27 22.7 +1.6**
MNK *i* SS **SS 01 31 51.6 +3.3**
MNK pmax pmax
comp=Z,36nm,0.9s
MNK pmax pmax
comp=N,10.0nm,0.8s
MNK pmax pmax
comp=E,20nm,0.7s
MNK MLR MLR
comp=N,144nm,17.0s
MNK MLR MLR
comp=E,251nm,19.0s
MNK MLR MLR
comp=Z,316nm,18.0s
TDK Taldyqorghan 70.14 323 *eP* **P 01 18 15.8 +0.4**
TDK pmax pmax
comp=Z,26nm,0.8s
TDK MLR MLR
comp=Z,2μm,15.0s
TDK Taldyqorghan 70.14 323 *eP* **P 01 18 15.8 +0.4**
comp=Z,26nm,0.8s
TDK LR LR 01 51 30.1
comp=Z,2μm,14.8s
SUW Suwalki 70.26 2 *eP* **P 01 18 15.4 -0.5**
SUW *e*L L 01 44 23.9
comp=Z,269nm,29.5s
SUW Suwalki 70.26 2 P **P 01 18 14.7 -1.2**
SUW Suwalki 70.26 2 P **P 01 18 14.7 -1.2**
SDDR Presa de Saban 70.32 85 P **P 01 18 16.4 -0.4**
SDDR IAmb IAmb 01 18 27.7
comp=Z,31nm,0.8s
SDDR Presa de Saban 70.32 85 P **P 01 18 15.4 -1.5**
comp=Z,44nm,1.1s
SDDR Presa de Saban 70.32 85 P **P 01 18 19.9 +3.1**
BELG Belogornoye 70.47 346*c iP* **P 01 18 16.7 -0.5**
GORT1 Trebel 70.62 9 *eP* **P 01 18 19.6 +1.6**
comp=Z,54nm,1.4s,baz=352,slow=5.9
GORT1 *ep*P **sP 01 18 27.3 +2.4**
AKTO Aktyubinsk 70.62 339 LR LR 01 51 57.8
comp=Z,383nm,21.3s,baz=70,slow=38
AKTO Aktyubinsk 70.62 339 P **P 01 18 17.1 -1.1**
RETH Rethem/Aller, 70.68 11 *eP* **P 01 18 19.9 +1.5**
comp=Z,80nm,1.6s,baz=352,slow=5.9
RETH *ep*P **sP 01 18 27.6 +2.2**
RETH Rethem/Aller, 70.68 11 P **P 01 18 19.5 +1.1**
GKP Gorka Klasztor 70.78 6 *eP* **P 01 18 20.1 +1.0**
GKP *e*L L 01 49 01.4
comp=Z,310nm,21.9s
IBBN Ibbenburen 70.93 12 *eP* **P 01 18 21.4 +1.4**
comp=Z,114nm,1.6s,baz=352,slow=5.9
IBBN *ep*P **sP 01 18 29.0 +2.1**
IBBN Ibbenburen 70.93 12 P **P 01 18 20.9 +0.9**
DYA Yadsworthy 70.96 20 *eP* **P 01 18 19.7 -0.5**
DYA IAmb IAmb 01 18 21.7
comp=Z,20nm,0.9s
PMOR Pomariorio Ree 70.97 174 *eT* T 02 35 47.9
comp=Z,649nm,0.3s
WTSB Winterswijk 71.15 13 P **P 01 18 22.1 +0.8**
LPSR Galich'ya Gora 71.19 352 *eP* **P 01 18 20.5 -1.1**
LPSR *e*S **S 01 27 33.8 -3.8**
LPSR pmax pmax
comp=Z,66nm,1.0s
LPSR smax smax
comp=E,100nm,3.2s
VAH Vaihoa 71.22 174 *eT* T 02 36 02.9
comp=E,78nm,0.4s
PDGK Podgornoye 71.25 322 P **P 01 18 22.2 -0.1**
PDGK Podgornoye 71.25 322 P **P 01 18 22.0 -0.3**
GOMU GeErMu 71.25 307 P **P 01 18 22.4 -0.3**
GOMU pP pP 01 18 26.1 -1.7
GOMU sP sP 01 18 29.8 +0.2
GOMU S **S 01 27 39.1 -0.4**
GOMU pmax pmax
comp=E,22nm,0.9s
GOMU L L
comp=E,3μm,16.2s
GOMU L L
comp=E,1μm,16.3s
GOMU L L
comp=E,4μm,16.5s
FLTG Flechtingen 71.27 10 *eP* **P 01 18 22.6 +0.6**
comp=E,69nm,1.6s,baz=352,slow=5.9
FLTG *ep*P **sP 01 18 30.3 +1.4**
AFI Afiamalu 71.32 198 LR LR 01 45 53.4
comp=E,352nm,18.5s,baz=3.0,slow=33
RUE Ruedersdorf 71.34 8 *eP* **P 01 18 23.6 +1.1**
comp=E,95nm,1.2s,baz=352,slow=5.9
RUE *ep*P **sP 01 18 31.3 +2.0**
RUE Ruedersdorf 71.34 8 P **P 01 18 23.5 +1.1**
AB31 Akbulak array 71.34 337 *i* P **P 01 18 21.8 -0.8**
AB31 Akbulak array 71.34 337 P **P 01 18 22.3 -0.3**
ABKAR Akbulak array 71.34 337 P **P 01 18 22.1 -0.5**
CD2 Chengdu 71.37 298 *eP* **P 01 18 27.0 +3.9**
SHLS Shalkode 71.41 322*c iP* **P 01 18 22.8 -0.4**
SHLS pmax pmax
comp=Z,37nm,1.3s
SHLS Shalkode 71.41 322⇑*iP* **P 01 18 22.9 -0.4**
comp=Z,37nm,1.3s
ASSE Asse, Remlinge 71.41 10 *eP* **P 01 18 24.1 +1.2**
comp=Z,37nm,1.2s,baz=352,slow=5.9
ASSE *ep*P **sP 01 18 31.7 +1.9**
ASSE Asse, Remlinge 71.41 10 P **P 01 18 23.7 +0.8**
BTLS Baital 71.51 326 *eP* **P 01 18 24.0 +0.3**
BTLS *e*S **S 01 27 42.6 +1.0**
BTLS Baital 71.51 326 *eP* **P 01 18 24.1 +0.3**
BTLS *e*S **S 01 27 42.7 +1.0**
UZB Uzynbulak 71.57 322*c iP* **P 01 18 24.7 +0.4**
UZB *e*S **S 01 27 43.0 +0.4**
UZB pmax pmax
comp=Z,28nm,1.5s
UZB Uzynbulak 71.57 322⇑*iP* **P 01 18 24.7 +0.4**
comp=Z,28nm,1.5s
UZB *e*S **S 01 27 43.1 +0.4**
CLZ Clausthal 71.67 10 *eP* **P 01 18 26.0 +1.5**
comp=Z,121nm,1.6s,baz=352,slow=5.9
CLZ *ep*P **sP 01 18 33.7 +2.2**
CLZ Clausthal 71.67 10 P **P 01 18 25.7 +1.1**
BUG Bochum--Univer 71.72 12 *eP* **P 01 18 25.7 +0.9**
comp=Z,104nm,1.6s,baz=352,slow=5.9
BUG *ep*P **sP 01 18 33.4 +1.7**
BUG Bochum--Univer 71.72 12 P **P 01 18 25.4 +0.6**
SATY Saty 71.86 322*c iP* **P 01 18 26.2 +0.2**
SATY pmax pmax
comp=Z,33nm,1.4s
SATY Saty 71.86 322⇑*iP* **P 01 18 26.3 +0.2**
comp=Z,33nm,1.4s
GTTG Gottingen 71.92 11 *eP* **P 01 18 27.5 +1.5**
comp=Z,74nm,1.2s,baz=352,slow=5.9
GTTG *ep*P **sP 01 18 35.2 +2.2**
GTTG Gottingen 71.92 11 P **P 01 18 27.2 +1.1**
UCC Uccle 71.97 14 P **P 01 18 25.4 -1.0**
UCC pmax pmax
comp=Z,109nm,1.7s

UCC Uccle 71.97 14 P **P 01 18 25.4 -1.0**
UCC Uccle 71.97 14 *d*P **P 01 18 26.4 +0.1**
UCC Uccle 71.97 14 P **P 01 18 26.8 +0.5**
KASTN Kahler Asten 72.09 12 *e*P **P 01 18 28.2 +1.1**
comp=Z,36nm,1.3s,baz=352,slow=5.9
KASTN *e*pP **sP 01 18 35.9 +1.9**
VORR Voronezh 72.09 352 *e*P **P 01 18 26.4 -0.6**
VORR *e*S **S 01 27 45.2 -2.8**
VORR pmax pmax
comp=Z,64nm,1.2s
VORR smax smax
comp=N,100nm,0.5s
WIMM Wimmelburg 72.09 10 P **P 01 18 27.8 +0.7**
BEBN Eben Emael 72.15 14 *d*P **P 01 18 27.4 0.0**
comp=Z,27nm,1.2s
HGN Heimansgroeve 72.22 13 P **P 01 18 28.6 +0.7**
MDOK Medeo 72.22 323 *e*P **P 01 18 28.5 +0.3**
MDOK Medeo 72.22 323 *e*P **P 01 18 28.5 +0.3**
MDOK LR LR 01 52 45.5
AAA Alma-Ata 72.23 324 *e*P **P 01 18 28.5 +0.4**
AAA pmax pmax
comp=Z,3μm,13.4s
AAA MLR MLR
comp=Z,3μm,14.0s
AAA Alma-Ata 72.23 324 *e*P **P 01 18 28.6 +0.4**
comp=Z,3μm,13.4s
AAA LR LR 01 52 47.0
comp=Z,3μm,14.4s
VRH Novokhopyorsk 72.33 350 *e*P P 01 18 22.5 -5.9
VRH pmax pmax
comp=Z,30nm,1.0s
BSTI Sart Tilman 72.35 14 *d*P **P 01 18 29.6 +1.0**
comp=Z,7.6nm,1.1s
PRZ Przheval'sk 72.37 322 P **P 01 18 28.7 -0.4**
PRZ pmax pmax
comp=Z,102nm,1.4s
PRZ Przheval'sk 72.37 322 P **P 01 18 28.7 -0.4**
PRZ Przheval'sk 72.37 322 P **P 01 18 30.8 +1.6**
TNSS Tian-Shan 72.37 323 *e*P **P 01 18 29.2 -0.2**
TNSS Tian-Shan 72.37 323 *e*P **P 01 18 29.3 -0.2**
BEL Belsk 72.37 4 *e*P **P 01 18 29.7 +1.0**
BEL *e*L L 01 45 18.8
comp=Z,289nm,31.5s
MEM Membach 72.38 13 *d*P **P 01 18 29.0 +0.2**
comp=Z,24nm,1.0s
MEM Membach 72.38 13 P **P 01 18 29.4 +0.6**
BTNL Ternell 72.42 13 *d*P **P 01 18 29.6 +0.5**
comp=Z,19nm,1.0s
NEUB Neuenburg 72.43 9 *e*P **P 01 18 30.1 +1.0**
comp=Z,111nm,1.5s,baz=352,slow=5.9
NEUB *e*pP **sP 01 18 37.8 +1.8**
NEUB Neuenburg 72.43 9 P **P 01 18 29.9 +0.8**
BCLA Clavier 72.47 14 *d*P **P 01 18 29.2 -0.2**
comp=Z,17nm,1.4s
BGES Gesves 72.48 14 *d*P **P 01 18 29.6 +0.2**
comp=Z,18nm,0.9s
BMRD Maredsous 72.52 14 *d*P **P 01 18 30.2 +0.6**
comp=Z,29nm,1.3s
GULI GuiLin 72.53 289 ⇑P **P 01 18 29.3 -0.8**
GULI S **S 01 27 52.6 -1.1**
GULI pmax pmax
comp=Z,58nm,1.2s
GULI L L
comp=Z,350nm,16.5s
GULI L L
comp=Z,360nm,15.3s
GULI L L
comp=Z,700nm,14.1s
VSR Storozhevoye 72.55 351 *e*P **P 01 18 29.0 -0.8**
VSR *e*S **S 01 27 49.4 -3.8**
VSR pmax pmax
comp=Z,54nm,1.0s
VSR MLR MLR
comp=Z,300nm,19.0s
BHOU Houvegnez 72.63 13 *d*P **P 01 18 30.8 +0.5**
comp=Z,7.6nm,1.3s
UBBA Unterbreizbach 72.64 11 *e*P **P 01 18 31.5 +1.2**
comp=Z,43nm,1.7s,baz=352,slow=5.9
UBBA *e*pP **sP 01 18 39.2 +2.0**
UBBA Unterbreizbach 72.64 11 P **P 01 18 31.4 +1.2**
DOU Dourbes 72.69 14 *d*P **P 01 18 30.8 +0.1**
comp=Z,19nm,1.3s
RCHB Rochefort 72.72 14 *d*P **P 01 18 30.6 -0.3**
comp=Z,22nm,1.3s
RCHB Rochefort 72.72 14 P **P 01 18 31.4 +0.6**
SGDS Sogindy 72.76 325 ⇑*i*P **P 01 18 31.9 +0.6**
comp=Z,37nm,1.6s
VORD Divnogorie 72.78 351 *e*P **P 01 18 29.4 -1.8**
VORD pmax pmax
comp=Z,50nm,0.9s
RNPP9 Sopachiv 72.89 0 P **P 01 18 31.9 +0.1**
TKM2 Tokmak 2 72.92 324 P **P 01 18 33.3 +0.8**
SNR=38
BRG Berggiesshubel 72.95 8 *e*P **P 01 18 33.1 +0.9**
comp=Z,70nm,1.6s,baz=352,slow=5.9
BRG *e*pP **sP 01 18 40.8 +1.7**
BRG Berggiesshubel 72.95 8 P **P 01 18 32.7 +0.5**
BRG Berggiesshubel 72.95 8 *i* P **P 01 18 32.6 +0.4**
BRG Amp 01 18 34.0
comp=Z,28nm,1.1s
BRG Berggiesshubel 72.95 8 P P 01 18 40.7 +8.5
BRG Amp 01 18 41.7
comp=Z,39nm,1.1s
BRG ⇑PP **PcP 01 18 48.4 -0.7**
BRG Amp 01 18 49.0
comp=Z,16nm,0.9s
BRG PP **PP 01 21 12.1 -1.6**
BRG Amp 01 21 14.5
comp=Z,7.3nm,1.3s
BRG Berggiesshubel 72.95 8 S **S 01 28 00.0 +2.2**
USP Ospenovka 72.97 325 P **P 01 18 33.2 +0.8**
SNR=25
MOX Moxa 72.97 10 *e*P **P 01 18 33.3 +1.0**
comp=Z,64nm,1.4s,baz=352,slow=5.9
MOX *e*pP **sP 01 18 41.0 +1.8**
MOX *e*L L 01 55 51.3
comp=Z,268nm,18.5s
MOX Moxa 72.97 10 P **P 01 18 33.0 +0.7**
TNS Taunus Mts 73.06 12 *e*P **P 01 18 34.0 +1.1**
comp=Z,20nm,0.9s,baz=352,slow=5.9
TNS *e*pP **sP 01 18 41.7 +1.8**
TNS Taunus Mts 73.06 12 P **P 01 18 33.6 +0.7**
KDJ Kajisay 73.10 323 P **P 01 18 33.1 -0.4**
KDJ pmax pmax
comp=Z,123nm,1.5s
KDJ Kajisay 73.10 323 P **P 01 18 33.0 -0.4**
KDJ Kajisay 73.10 323 P **P 01 18 34.4 +1.0**
CHMS Chumysh 73.12 325 P **P 01 18 34.3 +0.8**
SNR=26
KSP Ksiaz 73.14 7 *e*P **P 01 18 34.3 +0.9**
KSP *e*L L 01 54 36.0
comp=Z,362nm,19.3s
KSP Ksiaz 73.14 7 P **P 01 18 33.7 +0.4**
comp=Z,545nmcomp=Z,46nm,1.3s
HSKC Hora Svate Kat 73.17 8 *e*P **P 01 18 34.4 +0.9**
HSKC *ex* x 01 18 41.0
HSKC Hora Svate Kat 73.17 8 P **P 01 18 34.3 +0.7**
PLN Plauen 73.18 9 *e*P **P 01 18 34.5 +1.0**
comp=Z,6.2nm,0.9s,baz=352,slow=5.9
PLN *e*pP **sP 01 18 42.2 +1.7**
BOOM Boomskoye usch 73.19 324 P **P 01 18 33.9 -0.1**
BOOM pmax pmax
comp=Z,110nm,1.4s
BOOM Boomskoye usch 73.19 324 P **P 01 18 33.9 -0.1**
BOOM Boomskoye usch 73.19 324 P **P 01 18 35.0 +1.0**
WUS Wushi 73.22 321 P **P 01 18 35.0 +0.9**
TARG Taragay, Kyrgy 73.24 322 P **P 01 18 35.9 +1.3**
TANN Tannenbergstha 73.28 9 *e*P **P 01 18 35.3 +1.1**
comp=Z,74nm,1.9s,baz=352,slow=5.9
TANN *e*pP **sP 01 18 43.0 +1.9**
TANN Tannenbergstha 73.28 9 P **P 01 18 34.8 +0.6**
RICC Richard 73.29 8 *e*P **P 01 18 35.3 +1.1**
ULHL Ulahol 73.31 324 P **P 01 18 37.0 +2.2**
SNR=8.4
WLF Walferdange 73.33 13 P **P 01 18 34.5 +0.1**
WLF pmax pmax
comp=Z,104nm,1.5s
WLF Walferdange 73.33 13 P **P 01 18 34.5 +0.1**
WLF Walferdange 73.33 13 *d*P **P 01 18 35.4 +0.9**
comp=Z,21nm,1.4s
WLF Walferdange 73.33 13 *e*P **P 01 18 36.0 +1.6**
comp=Z,131nm,1.8s,baz=352,slow=5.9
WLF *e*pP **sP 01 18 43.7 +2.4**
WLF Walferdange 73.33 13 P **P 01 18 35.6 +1.2**
FRU1 Bishkek 73.33 325 P **P 01 18 35.3 +0.6**
FRU1 pmax pmax
comp=Z,189nm,1.4s
FRU1 Bishkek 73.33 325 P **P 01 18 35.3 +0.6**
PVCC Panska Ves 73.34 8 *e*P **P 01 18 35.4 +0.9**
PVCC MLR MLR
comp=Z,200nm,20.0s
PVCC Panska Ves 73.34 8 *e*P **P 01 18 35.4 +0.9**
PVCC AMS AMS 02 02 10.0
comp=Z,200nm,20.0s
PVCC Panska Ves 73.34 8 P **P 01 18 35.3 +0.9**
MI28 Mi28,Pidlybu 73.37 359 P **P 01 18 33.7 -0.9**
KBK Karagaybulak 73.37 325 P **P 01 18 36.1 +1.1**
SNR=32
CHVC Chvalec 73.38 7 *e*P **P 01 18 35.4 +0.6**
CHVC Chvalec 73.38 7 *e*P **P 01 18 35.4 +0.6**
CHVC *ex* x 01 18 41.8
OSTC Ostas 73.42 7 *e*P **P 01 18 35.8 +0.8**
OSTC *e*S **S 01 28 03.8 +0.5**
OSTC MLR MLR
comp=Z,400nm,20.2s
OSTC Ostas 73.42 7 *e*P **P 01 18 35.8 +0.8**
OSTC *e*S **S 01 28 03.8 +0.5**
OSTC AMS AMS 01 54 50.0
comp=Z,400nm,20.2s
TIAR Tiarei 73.43 176 *e*T T 02 38 54.6
comp=Z,744nm,0.3s
PPT Papeete 73.43 176 LR LR 01 46 34.4
comp=Z,391nm,18.2s,baz=354,slow=32
PPT2 Papeete2 73.45 176 *e*P **P 01 18 36.5 +1.0**
comp=Z,53nm,24.8s
PPT2 *e*S **SKiKP 01 28 10.8 +5.5**
comp=Z,208nm,26.8s
PPT2 *e*SS **SS 01 32 44.4 -2.9**
comp=Z,78nm,23.2s
PPT2 *e*LR LR 01 40 56.7
comp=Z,469nm,23.0s
PPT2 *e*LR LR 01 41 05.2
comp=Z,521nm,21.8s
PPT2 *e*T T 02 38 53.6
comp=Z,30nm,0.3s
NKC Novy Kostel 73.46 9 *e*P **P 01 18 36.2 +1.0**
NKC *e*S **SKiKP 01 28 05.6 +0.9**
NKC MLR MLR
comp=Z,400nm,19.0s
NKC Novy Kostel 73.46 9 *e*P **P 01 18 36.2 +1.0**
NKC *e*S **SKiKP 01 28 05.6 +0.9**
NKC AMS AMS 01 58 10.0
comp=Z,400nm,19.0s
NKC Novy Kostel 73.46 9 P **P 01 18 36.0 +0.8**
UPC Upice 73.46 7 *e*P **P 01 18 36.0 +0.8**
UPC MLR MLR
comp=Z,300nm,16.0s
UPC Upice 73.46 7 *e*P **P 01 18 36.0 +0.8**
UPC AMS AMS 02 01 10.0
comp=Z,300nm,16.0s
UPC Upice 73.46 7 P **P 01 18 35.8 +0.5**
GYA Guiyang 73.52 293 ⇓P **P 01 18 37.0 +0.9**
GYA pmax pmax
comp=Z,62nm,1.1s
PAE Paea 73.52 176 *e*T T 02 39 02.4
comp=Z,51nm,0.4s
AAK Ala-Archa 73.53 325 LR LR 01 53 17.6
comp=Z,721nm,19.7s,baz=30,slow=38
AAK Ala-Archa 73.53 325 P **P 01 18 36.9 +0.9**
SNR=19
AAK Ala-Archa 73.53 325*c i*P **P 01 18 36.5 +0.5**
AAK pmax pmax
comp=Z,53nm,1.0s
AAK Ala-Archa 73.53 325 P **P 01 18 36.2 +0.2**
AAK IAmb IAmb 01 18 46.5
comp=Z,43nm,1.0s
AAK Ala-Archa 73.53 325 P **P 01 18 36.9 +0.9**
AKASG Malin Array Be 73.57 358 P **P 01 18 34.9 -0.9**
comp=Z,19nm,0.8s,baz=6.9,slow=6.1,SNR=71
comp=Z,19nm,0.8s
AKASG Malin Array Be 73.57 358 *i* P **P 01 18 35.0 -0.9**
AKASG pmax pmax
comp=Z,20nm,0.8s
AKASG Malin Array Be 73.57 358 P **P 01 18 35.1 -0.8**
AKASG IAmb IAmb 01 18 43.5
comp=Z,62nm,1.1s
AKBB Malin Array Si 73.57 358*c i*P **P 01 18 35.0 -0.8**
AKBB pmax pmax
comp=Z,132nm,1.6s
AKBB Malin Array Si 73.57 358 P **P 01 18 34.7 -1.1**
KIEV Kiev 73.58 358 ⇑P **P 01 18 35.5 -0.4**
KIEV Kiev 73.58 358 ⇑P **P 01 18 35.5 -0.4**
KIEV Kiev 73.58 358 P **P 01 18 35.3 -0.5**
comp=Z,3μmcomp=Z,296nm,1.3s
KIEV Kiev 73.58 358 P **P 01 18 35.4 -0.5**
DPC Dobruska-Polom 73.64 7 *e*P **P 01 18 37.1 +0.8**
DPC *e*S **S 01 28 07.6 +1.8**
DPC MLR MLR
comp=Z,300nm,20.0s
DPC Dobruska-Polom 73.64 7 *e*P **P 01 18 37.1 +0.8**
DPC *e*sP **sP 01 18 44.3 +1.1**
DPC *e*S S 01 28 07.6 +1.8
DPC AMS AMS 02 01 20.0
comp=Z,300nm,20.0s
DPC Dobruska-Polom 73.64 7 P **P 01 18 36.9 +0.6**
comp=Z,675nmcomp=Z,55nm,1.4s
DPC Dobruska-Polom 73.64 7 P **P 01 18 37.3 +0.9**
TVO Taravao 73.66 175 *e*T T 02 39 08.9
comp=Z,31nm,0.3s
EKS2 Erkin-Say 73.74 325 P **P 01 18 38.1 +1.0**
SNR=38
GRA3 Grafenberg Arr 73.82 10 P **P 01 18 38.3 +1.0**
PRU Pruhonice 73.87 8 *e*P **P 01 18 38.1 +0.5**
PRU *e*S **S 01 28 08.5 +0.2**
PRU MLR MLR
comp=Z,400nm,15.3s
PRU Pruhonice 73.87 8 *e*P **P 01 18 38.1 +0.5**
PRU *e*sP **sP 01 18 44.8 +0.2**
PRU *e*S **S 01 28 08.5 +0.2**
PRU AMS AMS 02 00 50.0
comp=Z,400nm,15.3s
PRU Pruhonice 73.87 8 P **P 01 18 38.4 +0.7**
GRA1 Grafenberg Arr 73.88 10 P **P 01 18 38.6 +0.9**
GRF Grafenberg Arr 73.88 10 *e*P **P 01 18 38.9 +1.2**
comp=Z,20nm,0.9s,baz=352,slow=5.9
GRF *e*pP **sP 01 18 46.6 +2.0**
GRF *e*L L 01 55 36.7
comp=Z,266nm,18.1s
GRFO Grafenberg 73.88 10 P **P 01 18 37.4 -0.3**
GRFO pmax pmax
comp=Z,23nm,0.9s
GRFO Grafenberg 73.88 10 P **P 01 18 37.4 -0.3**
GRFO IAmb IAmb 01 18 46.8
comp=Z,23nm,0.9s
GRFO Grafenberg 73.88 10 P **P 01 18 38.7 +1.0**
UCH Uchtor 73.89 325 P **P 01 18 39.4 +0.9**
SNR=9.5
ROTZ Rotzenmuhle 73.90 9 *e*P **P 01 18 39.0 +1.2**
comp=Z,5.3nm,1.0s,baz=352,slow=5.9
ROTZ *e*pP **sP 01 18 46.7 +1.9**
GRA2 Grafenberg Arr 73.93 10 P **P 01 18 38.9 +0.9**
KRLC Kraliky 73.94 6 *e*P **P 01 18 38.9 +0.8**
KRLC Kraliky 73.94 6 *e*P **P 01 18 38.9 +0.8**
KRLC *ex* x 01 18 45.7
KRLC Kraliky 73.94 6 P **P 01 18 38.8 +0.7**
OJC Ojcow 73.95 4 *e*P **P 01 18 38.8 +0.7**
OJC *e*L L 01 46 57.8
comp=Z,331nm,27.8s
OJC Ojcow 73.95 4 P **P 01 18 37.7 -0.4**
OJC Ojcow 73.95 4 P **P 01 18 37.7 -0.4**
OJC Ojcow 73.95 4 P **P 01 18 38.5 +0.4**
comp=Z,329nmcomp=Z,29nm,1.2s
OJC Ojcow 73.95 4 P **P 01 18 38.3 +0.2**
NRN Naryn 74.12 323 P **P 01 18 39.2 -0.4**
NRN pmax pmax
comp=Z,72nm,1.3s
NRN Naryn 74.12 323 P **P 01 18 39.2 -0.4**
NRN IAmb IAmb 01 18 49.9
comp=Z,72nm,1.3s
GRB4 Grafenberg Arr 74.13 10 P **P 01 18 40.0 +0.8**
STEB Steborice 74.14 6 *e*P **P 01 18 39.8 +0.6**
STEB *ex* x 01 18 46.2
GRB1 Grafenberg Arr 74.22 10 P **P 01 18 40.5 +0.8**
OKC Ostrava-Krasne 74.25 5 *e*P **P 01 18 40.7 +0.8**
OKC MLR MLR
comp=Z,300nm,13.6s
OKC Ostrava-Krasne 74.25 5 *e*P **P 01 18 40.7 +0.8**
OKC AMS AMS 02 04 50.0
comp=Z,300nm,13.6s
OKC Ostrava-Krasne 74.25 5 P **P 01 18 40.4 +0.5**
GRB3 Grafenberg Arr 74.28 10 P **P 01 18 41.1 +1.0**
MORC Moravsky Berou 74.28 6 ⇑P **P 01 18 41.2 +1.1**
MORC Moravsky Berou 74.28 6 P **P 01 18 39.2 -0.9**
MORC pmax pmax
comp=Z,71nm,1.7s
MORC Moravsky Berou 74.28 6 P **P 01 18 39.2 -0.9**
MORC IAmb IAmb 01 18 49.6
comp=Z,71nm,1.7s
MORC Moravsky Berou 74.28 6 *e*P **P 01 18 39.7 -0.4**
MORC Moravsky Berou 74.28 6 P **P 01 18 40.5 +0.3**
DZA Taraz 74.29 327 *e*P **P 01 18 40.7 +0.4**
DZA Taraz 74.29 327 *e*P **P 01 18 40.7 +0.4**
GRB2 Grafenberg Arr 74.34 10 P **P 01 18 41.1 +0.7**
KK31 Karatay Array 74.35 328 P **P 01 18 40.0 -0.5**
KK31 pmax pmax
comp=Z,176nm,1.7s
KK31 Karatay Array 74.35 328 P **P 01 18 40.0 -0.5**
KKAR Karatay Array 74.35 328 P **P 01 18 40.3 -0.3**
KKAR Karatay Array 74.35 328 P **P 01 18 40.3 -0.3**
CLF Chambon-Foret 74.36 16 P **P 01 18 40.6 +0.1**
CLF Chambon-Foret 74.36 16 P **P 01 18 41.7 +1.2**
LUBAR Lubar, Ukraine 74.38 359 P **P 01 18 39.2 -1.4**
ZVC Zvikov 74.39 8 *e*P **P 01 18 41.3 +0.6**
ASAI AK-SAY(Kyrgyzs 74.40 323 P **P 01 18 42.6 +1.2**
GRB5 Grafenberg Arr 74.50 10 P **P 01 18 41.9 +0.6**
GRC4 Grafenberg Arr 74.51 10 P **P 01 18 41.9 +0.5**
STU Stuttgart 74.57 12 P **P 01 18 41.5 -0.3**
STU pmax pmax
comp=Z,29nm,1.0s
STU Stuttgart 74.57 12 P **P 01 18 41.5 -0.3**
STU IAmb IAmb 01 18 50.7
comp=Z,29nm,1.0s
STU Stuttgart 74.57 12 *e*P **P 01 18 42.7 +1.0**
comp=Z,325nm,2.1s,baz=352,slow=5.9
STU *e*pP **sP 01 18 50.4 +1.7**
STU Stuttgart 74.57 12 P **P 01 18 42.4 +0.6**
WET Wettzell 74.58 9 *e*P **P 01 18 43.1 +1.3**
comp=Z,43nm,1.5s,baz=352,slow=5.9
WET *e*pP **sP 01 18 50.8 +2.1**
WET Wettzell 74.58 9 P **P 01 18 42.4 +0.6**
KRVT Keravat (AS076 74.59 237 LR LR 01 50 46.1
comp=Z,32nm,18.0s,baz=293,slow=35
GRC1 Grafenberg Arr 74.60 10 P **P 01 18 42.3 +0.4**
BRLS Boroldav 74.61 328 *e*P **P 01 18 43.8 +1.7**
BRLS Boroldav 74.61 328 *e*P **P 01 18 43.9 +1.7**
TREC Trest 74.63 7 *e*P **P 01 18 42.5 +0.4**
TREC Trest 74.63 7 *e*P **P 01 18 42.5 +0.4**
TREC Trest 74.63 7 P **P 01 18 42.5 +0.4**
KWP Kalwaria Pacla 74.63 2 *e*P **P 01 18 43.0 +0.8**
KWP *e*L L 01 47 28.9
comp=Z,286nm,28.3s
KWP Kalwaria Pacla 74.63 2 P **P 01 18 42.2 +0.1**
comp=Z,881nmcomp=Z,88nm,1.3s
KHC Kasperske Hory 74.65 9 *e*P **P 01 18 43.2 +1.0**
KHC *e* 01 18 49.5
KHC *e*S **S 01 28 14.9 -2.2**
KHC MLR MLR
comp=Z,300nm,16.8s
KHC Kasperske Hory 74.65 9 P **P 01 18 42.4 +0.2**
KHC Kasperske Hory 74.65 9 *e*P **P 01 18 43.2 +1.0**
KHC *e*sP **sP 01 18 49.5 +0.3**
KHC *e*S **S 01 28 14.9 -2.2**
KHC AMS AMS 01 56 20.0
comp=Z,300nm,16.8s
KHC Kasperske Hory 74.65 9 P **P 01 18 42.9 +0.7**
comp=Z,628nmcomp=Z,53nm,1.3s
KHC Kasperske Hory 74.65 9 P **P 01 18 43.3 +1.0**
VRAC Vranov 74.69 6 ⇑P **P 01 18 43.0 +0.5**
VRAC Vranov 74.69 6 ⇑P **P 01 18 43.0 +0.5**
VRAC Vranov 74.69 6 *e*P **P 01 18 42.7 +0.2**
VRAC Vranov 74.69 6 P **P 01 18 43.1 +0.7**
GRC3 Grafenberg Arr 74.71 10 P **P 01 18 43.0 +0.5**
GRC2 Grafenberg Arr 74.71 10 P **P 01 18 42.9 +0.4**
MAUC Maruska 74.71 6 *e*P **P 01 18 43.0 +0.4**
MAUC *ex* x 01 18 49.8
MAUC *e*S **S 01 28 19.1 +1.3**
NIE Niedzica 74.77 4 *e*P **P 01 18 44.3 +1.3**
NIE *e*L L 01 47 26.7
comp=Z,194nm,26.0s
NIE Niedzica 74.77 4 P **P 01 18 43.5 +0.6**
comp=Z,16nm,1.2s
STHS Stebnicka Huta 74.81 3 *e*P **P 01 18 43.5 +0.4**
STHS pmax pmax
comp=Z,29nm,0.9s
STHS Stebnicka Huta 74.81 3 *e*P **P 01 18 43.5 +0.4**
ECH Echery 74.88 13 P **P 01 18 43.7 +0.1**
ECH pmax pmax
comp=Z,126nm,1.8s
ECH Echery 74.88 13 P **P 01 18 43.7 +0.1**
ECH IAmb IAmb 01 18 53.0
comp=Z,126nm,1.8s
ECH Echery 74.88 13 P **P 01 18 44.2 +0.6**
BFO Black Forest 74.91 12 P **P 01 18 43.6 -0.2**
BFO pmax pmax
comp=Z,106nm,1.8s
BFO Black Forest 74.91 12 P **P 01 18 43.6 -0.2**
BFO IAmb IAmb 01 18 53.3
comp=Z,106nm,1.8s
BFO Black Forest 74.91 12 *e*P **P 01 18 44.6 +0.9**
comp=Z,87nm,2.0s,baz=352,slow=5.9
BFO *e*pP **sP 01 18 52.3 +1.7**
KRUC Moravsky 74.92 7 *e*P **P 01 18 43.8 0.0**
KRUC Moravsky 74.92 7 P **P 01 18 44.2 +0.4**
GEC2 GERESS Array S 74.94 9 *e*P **P 01 18 44.8 +0.8**
comp=Z,81nm,2.0s,baz=352,slow=5.9
GEC2 *e*pP **sP 01 18 52.5 +1.6**
GERES GERESS Array B 74.94 9 P **P 01 18 44.0 0.0**
comp=Z,6.7nm,0.8s,baz=352,slow=5.3,SNR=64
comp=Z,6.7nm,0.8s
GERES GERESS Array B 74.94 9 P **P 01 18 43.5 -0.5**
ARK Arkit 75.09 326 P **P 01 18 45.0 -0.1**
ARSB Arslanbob 75.20 325 P **P 01 18 45.7 0.0**
ARSB pmax pmax
comp=Z,67nm,1.2s
ARSB Arslanbob 75.20 325 P **P 01 18 45.7 0.0**
ARSB IAmb IAmb 01 18 55.3
comp=Z,67nm,1.2s
JAVC Velka Javorina 75.20 6 *e*P **P 01 18 46.9 +1.4**
JAVC Velka Javorina 75.20 6 P **P 01 18 46.8 +1.4**
KOLS Kolonicke sedl 75.32 3 *e*P **P 01 18 46.7 +0.6**
KOLS pmax pmax
comp=Z,15nm,1.1s
KOLS Kolonicke sedl 75.32 3 P **P 01 18 47.3 +1.2**
KOLS Kolonicke sedl 75.32 3 *e*P **P 01 18 46.7 +0.6**
CHM Chimkent 75.33 328 *e*P **P 01 18 46.7 +0.4**
CHM pmax pmax
comp=Z,49nm,1.4s
CHM Chimkent 75.33 328 *e*P **P 01 18 46.8 +0.4**
comp=Z,49nm,1.4s
CHM LR LR 01 54 33.0
IUG Iuzhnay 75.36 328*c i*P **P 01 18 47.0 +0.5**
IUG pmax pmax
comp=Z,37nm,1.1s
IUG Iuzhnay 75.36 328 ⇑*i*P **P 01 18 47.1 +0.5**
comp=Z,37nm,1.1s
FUR Furstenfeldbru 75.39 10 *e*P **P 01 18 47.6 +1.1**
comp=Z,239nm,2.1s,baz=352,slow=5.9
FUR *e*pP **sP 01 18 55.3 +1.8**
FUR Furstenfeldbru 75.39 10 P **P 01 18 47.3 +0.7**
SLE Schleitheim 75.48 12 P **P 01 18 47.5 +0.4**
SJCC San Jacinto, C 75.50 94 P **P 01 18 48.0 +0.3**
comp=Z,17nm,1.3s
SMOL Smolenice 75.53 6 *e*P **P 01 18 48.3 +1.0**
SMOL pmax pmax
comp=Z,11nm,1.2s
HNR Honiara 75.64 227 LR LR 01 46 59.5
comp=Z,26nm,20.7s,baz=108,slow=32
MODS Modra-Piesok 75.67 6 *e*P **P 01 18 48.7 +0.6**
MODS pmax pmax
comp=Z,96nm,1.5s
MODS Modra-Piesok 75.67 6 P **P 01 18 49.3 +1.2**
MODS Modra-Piesok 75.67 6 *e*P **P 01 18 48.7 +0.6**
BOURR Bourrignon 75.69 13 P **P 01 18 49.1 +0.8**
KECS Kecovo 75.71 4 P **P 01 18 49.4 +1.1**
KMPD K-Podol'skiy 75.74 360 P **P 01 18 46.4 -2.1**
WINA Alland / Wiene 75.85 7 *e*pP **P 01 18 49.6 +0.5**
comp=Z,36nm,1.6s,SNR=16
WINA *e*PcP **sP 01 18 57.5 +1.4**
comp=Z,68nm,1.5s
MOA Molln 75.98 8 *i* pP **P 01 18 50.0 +0.1**
comp=Z,18nm,1.5s,SNR=9.9
MOA Molln 75.98 8 P **P 01 18 50.2 +0.3**
OHH Osh 75.99 325 P **P 01 18 49.5 -0.7**

PZH	**PanZhiHua**	**75.99**	**297**		P		**P**	**01 18 50.3**	**-0.1**
PZH					S		**S**	**01 28 32.2**	**-0.7**
PZH					pmax	pmax			
	comp=Z,70nm,1.1s								
PZH					pmax	pmax			
	comp=Z,250nm,3.5s								
PZH					L	L			
	comp=Z,810nm,14.5s								
PZH					L	L			
	comp=Z,570nm,14.9s								
PZH					L	L			
	comp=Z,1µm,15.2s								
RETA	**Reutte**	**76.01**	**11**	*i*	pP		**P**	**01 18 50.5**	**+0.4**
	comp=Z,22nm,1.8s,SNR=8.6								
CONA	**Conrad Observa**	**76.02**	**7**	*e*	pP		**P**	**01 18 50.8**	**+0.6**
	comp=Z,37nm,1.6s,SNR=12								
CONA				*e*	PcP		**sP**	**01 18 58.7**	**+1.5**
	comp=Z,34nm,1.0s								
BIOA	**Bad Ischl, Aus**	**76.08**	**9**	*i*	pP		**P**	**01 18 50.7**	**+0.2**
	comp=Z,26nm,1.4s,SNR=12								
BIOA				*e*	PcP		**sP**	**01 18 58.7**	**+1.2**
	comp=Z,44nm,1.1s								
DAVA	**Damuels**	**76.12**	**11**	*i*	pP		**P**	**01 18 51.0**	**+0.1**
	comp=Z,9.0nm,1.0s								
DAVA	**Damuels**	**76.12**	**11**		P		**P**	**01 18 51.4**	**+0.6**
TRPA	**Tarpa**	**76.13**	**3**		P		**P**	**01 18 51.3**	**+0.6**
SORM	**Soroca**	**76.16**	**359**	⇓	P		**P**	**01 18 50.6**	**-0.2**
SORM	**Soroca**	**76.16**	**359**	⇓	P		**P**	**01 18 50.6**	**-0.2**
MOTA	**Moosalm**	**76.19**	**10**	*e*	pP		**P**	**01 18 51.7**	**+0.4**
	comp=Z,38nm,1.3s,SNR=16								
MOTA				*e*	PcP		**sP**	**01 18 59.2**	**+1.0**
	comp=Z,56nm,1.3s								
WATA	**Walderalm**	**76.25**	**10**	*i*	pP		**P**	**01 18 52.0**	**+0.4**
	comp=Z,46nm,1.2s,SNR=19								
PSZ	**Piszkesteto**	**76.25**	**4**	⇓	P		**P**	**01 18 53.2**	**+1.7**
PSZ	**Piszkesteto**	**76.25**	**4**		P		**P**	**01 18 51.2**	**-0.3**
PSZ					pmax	pmax			
	comp=Z,89nm,1.4s								
PSZ	**Piszkesteto**	**76.25**	**4**		P		**P**	**01 18 51.2**	**-0.3**
PSZ					lAmb	lAmb		01 19 01.5	
	comp=Z,89nm,1.4s								
PSZ	**Piszkesteto**	**76.25**	**4**		P		**P**	**01 18 52.4**	**+0.9**
LESA	**Schwarzleotal**	**76.26**	**9**	*e*	pP		**P**	**01 18 52.0**	**+0.5**
	comp=Z,28nm,1.4s,SNR=14								
RONA	**Rosalia, Austr**	**76.28**	**7**	*i*	pP		**P**	**01 18 52.3**	**+0.7**
	comp=Z,20nm,2.0s,SNR=5.6								
RONA				*e*	PcP		**sP**	**01 19 00.1**	**+1.6**
	comp=Z,22nm,1.1s								
SOP	**Sopron**	**76.31**	**7**		P		**P**	**01 18 52.6**	**+0.9**
KSH2	**Kashi**	**76.31**	**323**		P		**P**	**01 18 53.0**	**+0.9**
KSH2					PcP		**sP**	**01 19 00.4**	**+1.3**
KSH2					S		**S**	**01 28 29.6**	**-6.6**
KSH2					pmax	pmax			
	comp=Z,34nm,1.0s								
KSH2					L	L			
	comp=Z,2µm,15.5s								
KSH2					L	L			
	comp=Z,2µm,15.1s								
KSH2					L	L			
	comp=Z,3µm,15.5s								
SQTA	**Sankt Quirin**	**76.32**	**10**	*i*	pP		**P**	**01 18 52.7**	**+0.7**
	comp=Z,41nm,1.0s,SNR=24								
SQTA				*e*	PcP		**sP**	**01 19 00.6**	**+1.7**
	comp=Z,128nm,1.7s								
WTTA	**Wattenberg**	**76.32**	**10**	*i*	pP		**P**	**01 18 52.7**	**+0.7**
	comp=Z,48nm,1.5s,SNR=17								
WTTA				*e*	PcP		**sP**	**01 19 00.5**	**+1.5**
	comp=Z,50nm,0.9s								
WTTA	**Wattenberg**	**76.32**	**10**		P		**P**	**01 18 52.9**	**+0.9**
BNALP	**Bannalp**	**76.36**	**12**		P		**P**	**01 18 53.1**	**+0.9**
APAC	**Apartado, Choc**	**76.36**	**96**		P		**P**	**01 18 53.4**	**+1.0**
	comp=Z,55nm,1.0s								
GIMEL	**St. Georges /**	**76.41**	**14**		P		**P**	**01 18 53.9**	**+1.4**
FETA	**Feichten**	**76.47**	**11**	*e*	pP		**P**	**01 18 53.5**	**+0.6**
	comp=Z,22nm,0.9s,SNR=11								
KMI2	**Kunming**	**76.60**	**295**	⇑	P		**P**	**01 18 54.3**	**+0.3**
KMI2					pP		sP	01 19 02.5	+1.5
KMI2					S		**S**	**01 28 40.3**	**+0.5**
KMI2					pmax	pmax			
	comp=Z,25nm,1.4s								
KMI2					pmax	pmax			
	comp=Z,260nm,4.3s								
KMI2					L	L			
	comp=Z,600nm,18.6s								
KMI2					L	L			
	comp=Z,540nm,18.1s								
KMI2					L	L			
	comp=Z,670nm,21.2s								
BMR	**Baia Mare**	**76.61**	**2**	⇑	P		**P**	**01 18 54.9**	**+1.5**
BMR	**Baia Mare**	**76.61**	**2**	⇑	P		**P**	**01 18 54.9**	**+1.5**
BMR	**Baia Mare**	**76.61**	**2**		P		**P**	**01 18 54.1**	**+0.7**
DAVOX	**Davos/Dischmat**	**76.61**	**11**		LR		LR	01 56 18.6	
	comp=Z,186nm,18.3s,baz=350,slow=39								
BUD	**Budapest**	**76.65**	**5**		P		**P**	**01 18 53.7**	**0.0**
BUR08	**Bucovina Ar. S**	**76.66**	**1**		P		**P**	**01 18 53.3**	**-0.6**
KBA	**Koelnbreinsper**	**76.67**	**9**	*i*	pP		**P**	**01 18 54.8**	**+0.8**
	comp=Z,60nm,1.4s,SNR=22								
KBA				*e*	PcP		**sP**	**01 19 02.7**	**+1.8**
	comp=Z,90nm,1.1s								
KBA	**Koelnbreinsper**	**76.67**	**9**		P		**P**	**01 18 54.9**	**+0.9**
ARSA	**Arzberg**	**76.67**	**7**		P		**P**	**01 18 53.9**	**+0.1**
ARSA					lAmb	lAmb		01 19 03.7	
	comp=Z,61nm,1.6s								
ARSA	**Arzberg**	**76.67**	**7**	*e*	pP		**P**	**01 18 54.5**	**+0.7**
	comp=Z,14nm,1.1s,SNR=7.8								
ARSA				*e*	PcP		**sP**	**01 19 02.5**	**+1.7**
	comp=Z,36nm,1.6s								
ARSA	**Arzberg**	**76.67**	**7**		P		**P**	**01 18 54.9**	**+1.0**
BURAR	**Bucovina Array**	**76.69**	**1**	⇓	P		**P**	**01 18 54.7**	**+0.7**
BURAR	**Bucovina Array**	**76.69**	**1**	⇓	P		**P**	**01 18 54.7**	**+0.7**
SENIN	**Lac Senin/Sane**	**76.72**	**13**		P		**P**	**01 18 54.4**	**+0.1**
SESA	**Seetaler Alpe,**	**76.73**	**8**	*i*	pP		**P**	**01 18 55.0**	**+0.6**
	comp=Z,78nm,1.3s,SNR=23								
SESA				*e*	PcP		**sP**	**01 19 03.0**	**+1.7**
	comp=Z,105nm,1.0s								
FUORN	**Ofenpass-Fuorn**	**76.82**	**11**		P		**P**	**01 18 55.0**	**0.0**
FUORN					lAmb	lAmb		01 19 05.1	
	comp=Z,56nm,1.2s								
FUORN	**Ofenpass-Fuorn**	**76.82**	**11**		P		**P**	**01 18 56.0**	**+1.1**
TUE	**Stuetta**	**76.86**	**12**		P		**P**	**01 18 56.3**	**+1.2**
LTVH	**Ltavrtes, Hu**	**76.86**	**3**	⇑	P		**P**	**01 18 57.0**	**+2.2**
LTVH	**Ltavrtes, Hu**	**76.86**	**3**		P		**P**	**01 18 56.3**	**+1.5**
MPLH	**Magyarpolny**	**76.88**	**6**		P		**P**	**01 18 55.9**	**+1.0**
ABTA	**Abfaltersbach**	**76.92**	**10**	*e*	pP		**P**	**01 18 55.5**	**+0.2**
	comp=Z,22nm,1.3s,SNR=6.8								
BTK	**Batken**	**77.03**	**326**		P		**P**	**01 18 56.6**	**+0.6**
UREC	**San Jos de Ur**	**77.06**	**95**		P		**P**	**01 18 57.3**	**+0.8**
	comp=Z,31nm,0.9s								
RAR	**Rarotonga**	**77.13**	**186**		LR		LR	01 47 44.4	
	comp=Z,284nm,18.1s,baz=343,slow=32								
MYKA	**Terra Mystica**	**77.14**	**9**	*i*	P		**P**	**01 18 56.3**	**-0.2**
	comp=Z,9.6nm,0.9s								
SOKA	**Soboth**	**77.20**	**8**	*i*	pP		**P**	**01 18 57.2**	**+0.3**
	comp=Z,37nm,1.3s,SNR=17								
SOKA				*e*	PcP		**sP**	**01 19 05.3**	**+1.5**
	comp=Z,78nm,1.4s								
ACOM	**Acomizza, Ital**	**77.21**	**9**		P		**P**	**01 18 57.6**	**+0.6**
ARCR	**ARCALIA**	**77.21**	**1**	⇑	P		**P**	**01 18 58.4**	**+1.6**
MSVF	**Nonsavu**	**77.25**	**207**		LR		LR	01 48 49.9	
	comp=Z,337nm,19.6s,baz=20,slow=32								
PERS	**Pernice**	**77.25**	**8**	*i*	P		**P**	**01 18 57.6**	**+0.5**
PERS				*i*	PcP		**sP**	**01 19 05.2**	**+1.2**
FUSE	**Fusea**	**77.29**	**9**		P		**P**	**01 18 56.7**	**-0.6**
PRED	**Cave del Predi**	**77.31**	**9**		P		**P**	**01 18 57.1**	**-0.4**
PRED					lAmb	lAmb		01 19 07.0	
	comp=Z,21nm,1.1s								
OBKA	**Obir**	**77.33**	**8**	*i*	pP		**P**	**01 18 58.0**	**+0.3**
	comp=Z,34nm,0.8s,SNR=14								
OBKA	**Obir**	**77.33**	**8**		P		**P**	**01 18 58.2**	**+0.6**
GIRR	**Girov**	**77.35**	**360**	⇑	P		**P**	**01 18 58.0**	**+0.4**
SSB	**Saint Sauveur**	**77.39**	**15**		P		**P**	**01 18 57.8**	**-0.1**
SSB					pmax	pmax			
	comp=Z,50nm,1.6s								
SSB	**Saint Sauveur**	**77.39**	**15**		P		**P**	**01 18 57.8**	**-0.1**
SSB					lAmb	lAmb		01 19 07.8	
	comp=Z,50nm,1.6s								
SSB	**Saint Sauveur**	**77.39**	**15**		P		**P**	**01 18 58.8**	**+0.8**
GROS	**Grobnik**	**77.45**	**8**	*i*	P		**P**	**01 18 58.4**	**+0.1**
DRGR		**77.47**	**2**	⇑	P		**P**	**01 18 59.6**	**+1.2**
DRGR		**77.47**	**2**	⇑	P		**P**	**01 18 59.6**	**+1.2**
DRGR		**77.47**	**2**		P		**P**	**01 18 58.7**	**+0.3**
KOGS	**Kog**	**77.52**	**7**	*e*	P		**P**	**01 18 58.8**	**+0.3**
KOGS				*i*	PcP		**sP**	**01 19 06.6**	**+1.1**
BEHE	**Becsehely**	**77.53**	**7**	*e*	P		P	01 19 05.9	+7.3
BEHE	**Becsehely**	**77.53**	**7**		P		**P**	**01 18 59.5**	**+0.9**
MARR	**Marisel-Cluj**	**77.60**	**2**	⇓	P		**P**	**01 18 59.9**	**+0.7**
CGRP	**Cima Grappa**	**77.71**	**10**		P		**P**	**01 18 59.7**	**-0.2**
TESR	**Tescani**	**77.80**	**360**	⇑	P		**P**	**01 19 00.0**	**-0.1**
TESR	**Tescani**	**77.80**	**360**		P		**P**	**01 19 00.1**	**-0.1**
ERBR	**Yeremizino-Bor**	**77.88**	**350**	*e*	P		**P**	**01 19 00.2**	**-0.4**
ERBR					pmax	pmax			
	comp=Z,53nm,1.0s								
MORH	**Mrgy, Hungar**	**77.89**	**5**	⇑	*i* P		**P**	**01 19 00.4**	**-0.2**
MORH	**Mrgy, Hungar**	**77.89**	**5**		P		**P**	**01 19 00.9**	**+0.3**
QIZ	**Qiongzhong**	**77.90**	**286**		P		**P**	**01 19 01.3**	**+0.2**
QIZ					S		**S**	**01 28 53.0**	**-0.5**
QIZ					SS		**SS**	**01 33 50.8**	**-2.9**
QIZ					L	L			
	comp=Z,320nm,13.9s								
QIZ					L	L			
	comp=Z,310nm,13.3s								
QIZ					L	L			
	comp=Z,520nm,15.5s								
OCAC	**Ocana**	**77.90**	**93**		P		P	01 19 08.3	+7.0
BNI	**Bardonecchia**	**77.92**	**14**		P		**P**	**01 19 02.8**	**+1.8**
SIRR	**Siria**	**77.97**	**3**	⇓	P		**P**	**01 19 02.2**	**+1.1**
PGAV	**Gavieira, Arco**	**78.07**	**26**	*e*	P		**P**	**01 19 03.3**	**+1.4**
PGAV				*e*	PcP		**PcP**	**01 19 12.2**	**+0.8**
PGAV				*i*	lAmb		lAmb	01 19 14.2	
	comp=Z,70nm,1.6s								
PGAV				*e*	S		**S**	**01 28 57.1**	**+2.0**
PGAV				*e*	SS		SS	01 34 06.1	+11
PGAV				*e*	LR		LR	01 48 33.3	
PGAV				*i*	lAMs_20		lAMs_20	01 53 06.7	
	comp=Z,560nm,20.0s								
GAR	**Garm**	**78.16**	**326**		P		**P**	**01 19 02.2**	**-0.2**
GAR	**Garm**	**78.16**	**326**		P		**P**	**01 19 02.9**	**+0.4**
TEOL	**Teolo**	**78.21**	**10**		P		**P**	**01 19 01.9**	**-0.5**
OZUR		**78.21**	**0**	⇑	P		**P**	**01 19 04.0**	**+1.5**
BOSR	**Bodos**	**78.23**	**0**	⇓	P		**P**	**01 19 03.8**	**+1.3**
GHRR		**78.24**	**359**	⇓	P		**P**	**01 19 03.3**	**+0.8**
GHRR		**78.24**	**359**		P		**P**	**01 19 03.8**	**+1.2**
GOF	**Gofitskoye**	**78.25**	**348**	*e*	P		**P**	**01 19 03.1**	**+0.4**
TURR	**Turia**	**78.25**	**0**	⇓	P		**P**	**01 19 04.1**	**+1.4**
GBRS	**Gornja Briga**	**78.32**	**8**	*i*	PcP		**PcP**	**01 19 10.7**	**-1.7**
DOPR	**Dopca**	**78.34**	**1**	⇑	P		**P**	**01 19 04.8**	**+1.7**
CBOC	**Ciudad Bolivar**	**78.35**	**97**		P		**P**	**01 19 04.7**	**+0.9**
	comp=Z,22nm,1.0s								
HELC	**Santa Helena**	**78.35**	**96**		P		**P**	**01 19 04.2**	**+0.2**
	comp=Z,20nm,1.0s								
LSA	**Lhasa**	**78.37**	**306**		S		**S**	**01 29 04.6**	**+5.2**
LSA					pmax	pmax			
	comp=Z,25nm,1.2s								
LSA					LR	LR			
	comp=N,2µm,17.5s								
LSA					LR	LR			
	comp=E,1µm,14.9s								
LSA					LR	LR			
	comp=Z,3µm,16.8s								
LSA	**Lhasa**	**78.37**	**306**		P		**P**	**01 19 04.1**	**-0.1**
LSA					pmax	pmax			
	comp=Z,40nm,1.1s								
LSA	**Lhasa**	**78.37**	**306**		P		**P**	**01 19 04.1**	**-0.1**
LSA					lAmb	lAmb		01 19 13.8	
	comp=Z,40nm,1.1s								
LSA	**Lhasa**	**78.37**	**306**		P		**P**	**01 19 05.6**	**+1.4**
PCAB	**Cabril**	**78.37**	**25**	*e*	P		**P**	**01 19 04.8**	**+1.3**
PCAB				*e*	PcP		**PcP**	**01 19 12.6**	**-0.1**
DEV	**Deva**	**78.39**	**2**		P		**P**	**01 19 03.8**	**+0.4**
VRI	**Vrincioaia**	**78.44**	**360**	⇑	P		**P**	**01 19 04.8**	**+1.1**
VRI	**Vrincioaia**	**78.44**	**360**	⇑	P		**P**	**01 19 04.8**	**+1.1**
VRI	**Vrincioaia**	**78.44**	**360**		P		**P**	**01 19 04.7**	**+1.0**
PLOR	**Plostina**	**78.46**	**360**	⇑	P		**P**	**01 19 04.2**	**+0.4**
PLOR	**Plostina**	**78.46**	**360**	⇑	P		**P**	**01 19 04.2**	**+0.4**
ECAL	**Calabor**	**78.46**	**24**		P		**P**	**01 19 05.6**	**+1.7**
COVR	**Voineasa-Covas**	**78.46**	**360**	⇑	P		**P**	**01 19 05.7**	**+1.8**
SAHR	**Sahastru**	**78.58**	**360**	⇑	P		**P**	**01 19 06.1**	**+1.6**
PBRG	**Braganca**	**78.59**	**24**	*e*	P		**P**	**01 19 05.8**	**+1.1**
PBRG				*e*	PcP		**PcP**	**01 19 13.5**	**-0.2**
PBRG				*i*	lAmb		lAmb	01 19 17.1	
	comp=Z,52nm,1.2s								
BZS	**Buzias**	**78.62**	**3**	⇑	P		**P**	**01 19 05.0**	**+0.3**
BZS	**Buzias**	**78.62**	**3**	⇑	P		**P**	**01 19 05.0**	**+0.3**
BZS	**Buzias**	**78.62**	**3**		P		**P**	**01 19 05.0**	**+0.3**
ATE	**Arette**	**78.64**	**20**		P		**P**	**01 19 06.5**	**+1.6**
TNR	**Turnu Rosu**	**78.64**	**1**	⇓	P		**P**	**01 19 04.2**	**-0.6**
TNR	**Turnu Rosu**	**78.64**	**1**	⇓	P		**P**	**01 19 04.2**	**-0.6**
POLO	**Lamas de Olo**	**78.75**	**25**	*e*	P		**P**	**01 19 06.9**	**+1.3**
POLO				*e*	PcP		**PcP**	**01 19 14.8**	**+0.4**
POLO				*i*	lAmb		lAmb	01 19 15.5	
	comp=Z,30nm,1.5s								
PTO	**Porto**	**78.77**	**26**	*e*	P		**P**	**01 19 06.9**	**+1.3**
PTO				*e*	PcP		**PcP**	**01 19 14.3**	**-0.1**
PTO				*i*	lAmb		lAmb	01 19 17.7	
	comp=Z,74nm,1.4s								
MLR	**Muntele Rosu**	**78.82**	**0**		LR		LR	01 58 44.6	
	comp=Z,323nm,18.0s,baz=7.0,slow=40								
MLR	**Muntele Rosu**	**78.82**	**0**	⇑	P		**P**	**01 19 07.6**	**+1.6**
MLR	**Muntele Rosu**	**78.82**	**0**		P		**P**	**01 19 06.2**	**+0.2**
MLR					pmax	pmax			
	comp=Z,111nm,1.6s								
MLR	**Muntele Rosu**	**78.82**	**0**		P		**P**	**01 19 06.2**	**+0.2**
MLR	**Muntele Rosu**	**78.82**	**0**		P		**P**	**01 19 07.4**	**+1.4**
TNCH	**TengChong**	**78.82**	**298**		P		**P**	**01 19 06.8**	**+0.5**
TNCH					S		**S**	**01 29 04.7**	**+1.0**
TNCH					pmax	pmax			
	comp=Z,89nm,1.2s								
TNCH					L	L			
	comp=Z,440nm,14.1s								
TNCH					L	L			
	comp=Z,420nm,10.0s								
TNCH					L	L			
	comp=Z,670nm,16.5s								
ISO	**Isola**	**78.83**	**14**		P		**P**	**01 19 07.2**	**+1.2**
CHGR	**Chuyangaron**	**78.83**	**327**	*c*	*i* P		**P**	**01 19 06.4**	**+0.3**
CHGR					pmax	pmax			
	comp=Z,134nm,1.1s								
CHGR	**Chuyangaron**	**78.83**	**327**		P		**P**	**01 19 05.8**	**-0.3**
LOT	**Lotru**	**78.84**	**2**	⇑	P		P	01 19 01.2	-4.9
RUSF	**Rustrel**	**78.84**	**15**		P		**P**	**01 19 08.1**	**+2.1**
PVRL	**Vila Real**	**78.86**	**25**	*e*	P		**P**	**01 19 07.7**	**+1.5**
PVRL				*e*	PcP		**PcP**	**01 19 15.2**	**+0.3**
PVRL				*i*	lAmb		lAmb	01 19 18.6	
	comp=Z,81nm,1.5s								
VOIR		**78.87**	**1**	⇑	P		**P**	**01 19 07.1**	**+1.0**
VOIR		**78.87**	**1**	⇑	P		**P**	**01 19 07.1**	**+1.0**
VOIR		**78.87**	**1**		P		**P**	**01 19 07.0**	**+0.9**
GZR	**Gura Zlata**	**78.87**	**2**	⇑	P		**P**	**01 19 06.5**	**+0.3**
GZR	**Gura Zlata**	**78.87**	**2**	⇑	P		**P**	**01 19 06.5**	**+0.3**
SDV	**Santo Domingo**	**78.88**	**91**		LR		LR	01 56 11.1	
	comp=Z,421nm,19.2s,baz=342,slow=37								
SDV	**Santo Domingo**	**78.88**	**91**		P		**P**	**01 19 06.6**	**-0.2**
SDV	**Santo Domingo**	**78.88**	**91**	*e*	P		**P**	**01 19 06.8**	**0.0**
LABN	**Labinsk**	**78.92**	**349**	*e*	P		**P**	**01 19 06.5**	**+0.2**
LABN					pmax	pmax			
	comp=Z,45nm,1.2s								
DAV	**Davao City (W)**	**78.93**	**266**		LR		LR	01 53 29.3	
	comp=Z,321nm,19.8s,baz=46,slow=35								
ARR	**Arges**	**78.93**	**1**	⇑	P		**P**	**01 19 07.9**	**+1.4**
ARR	**Arges**	**78.93**	**1**		P		**P**	**01 19 07.0**	**+0.5**
ZIRO	**ZIRO**	**78.97**	**303**	*e*	P		**P**	**01 19 07.8**	**+0.7**
PAMC	**Pamplona, Colo**	**78.99**	**93**		P		**P**	**01 19 08.5**	**+0.8**
PLMC	**San Jos del P**	**78.99**	**98**		P		**P**	**01 19 07.0**	**-0.2**
	comp=Z,18nm,1.1s								
FRGS	**Fruska Gora**	**79.01**	**5**	*e*	P		**P**	**01 19 06.9**	**0.0**
ANN	**Anapa**	**79.06**	**352**	*e*	P		**P**	**01 19 06.0**	**-1.1**
ANN					pmax	pmax			
	comp=Z,39nm,1.2s								
TLCR		**79.10**	**358**	⇑	P		**P**	**01 19 07.9**	**+0.6**
TLCR		**79.10**	**358**	⇑	P		**P**	**01 19 07.9**	**+0.6**
CFR	**Carcaliu**	**79.12**	**359**	⇓	P		**P**	**01 19 07.9**	**+0.5**
CFR	**Carcaliu**	**79.12**	**359**	⇓	P		**P**	**01 19 07.9**	**+0.5**
MVO	**Moncorvo**	**79.13**	**25**	*e*	P		**P**	**01 19 08.8**	**+1.2**
MVO				*e*	PcP		**PcP**	**01 19 16.6**	**+0.5**
MVO				*i*	lAmb		lAmb	01 19 17.7	
	comp=Z,56nm,1.1s								
MVO				*e*	SS		SS	01 34 29.9	+19
MVO				*e*	LR		LR	01 49 39.7	
MVO				*i*	lAMs_20		lAMs_20	01 53 43.8	
	comp=Z,564nm,20.0s								
SIM	**Simferopol'**	**79.14**	**354**	*e*	P		**P**	**01 19 07.6**	**+0.1**
SIM				*e*	S		**S**	**01 29 05.0**	**-1.1**
SIM					pmax	pmax			
	comp=Z,29nm,1.0s								
SIM					pmax	pmax			
	comp=Z,40nm,4.7s								
SLVN	**Son La**	**79.15**	**292**		P		**P**	**01 19 08.2**	**+0.1**
SLVN					lAmb	lAmb		01 19 18.6	
	comp=Z,55nm,0.9s								
TBI	**Tubuai**	**79.18**	**176**	*e*	S		**S**	**01 29 05.2**	**-1.5**
	comp=Z,3µm,35.5s								
TBI				*e*	SS		**SS**	**01 34 15.1**	**+1.3**
	comp=Z,1µm,30.8s								
TBI				*e*	LQ		LQ	01 40 17.1	
	comp=Z,1µm,25.5s								
TBI				*e*	LR		LR	01 43 43.5	
	comp=Z,3µm,27.8s								
TBI				*e*	T		T	02 46 06.4	
	comp=Z,81nm,0.3s								
ESCA	**l'Escarene**	**79.21**	**14**		P		**P**	**01 19 06.9**	**-1.1**
NORC	**Norcasia**	**79.23**	**96**		P		**P**	**01 19 08.2**	**-0.3**
	comp=Z,57nm,0.9s								
GUY2C	**Guyana, Caldas**	**79.24**	**97**		P		**P**	**01 19 08.9**	**-0.2**
	comp=Z,27nm,1.0s								
BLY	**Banja Luka**	**79.27**	**7**	⇓	P		**P**	**01 19 09.1**	**+0.8**
BLY	**Banja Luka**	**79.27**	**7**	⇑	*i* P		**P**	**01 19 07.7**	**-0.6**
BARC	**Barichara**	**79.33**	**94**		P		**P**	**01 19 09.0**	**-0.3**
	comp=Z,923nmcomp=Z,102nm,1.0s								
PVIS	**Viseu**	**79.35**	**26**	*e*	P		**P**	**01 19 09.9**	**+1.1**
PVIS				*e*	PcP		**PcP**	**01 19 17.6**	**+0.7**
HERR	**Herculane**	**79.38**	**3**	⇑	P		**P**	**01 19 09.6**	**+0.8**
KIV	**Kislovodsk**	**79.38**	**348**	⇑	P		**P**	**01 19 09.4**	**+0.4**
KIV	**Kislovodsk**	**79.38**	**348**	*e*	P		**P**	**01 19 09.3**	**+0.3**
KIV				*e*				01 22 05.3	
KIV				*e*	S		**S**	**01 29 09.4**	**+0.4**
KIV					pmax	pmax			
	comp=Z,66nm,1.1s								
KIV					pmax	pmax			
	comp=Z,32nm,4.1s								
KIV	**Kislovodsk**	**79.38**	**348**		P		**P**	**01 19 08.8**	**-0.3**
KIV					lAmb	lAmb		01 19 18.3	
	comp=Z,57nm,0.8s								
KIV	**Kislovodsk**	**79.38**	**348**		P		**P**	**01 19 09.7**	**+0.6**
TPGR	**Topolog**	**79.43**	**358**	⇓	P		**P**	**01 19 09.8**	**+0.6**
MDVR	**Moldovita**	**79.45**	**3**	⇑	P		**P**	**01 19 10.3**	**+1.0**
CEST	**Esterri de Car**	**79.47**	**18**		P		**P**	**01 19 09.2**	**-0.4**
CEST					lAmb	lAmb		01 19 19.5	
	comp=Z,64nm,1.3s								
KBZ	**Khabaz**	**79.58**	**348**		P		**P**	**01 19 09.7**	**-0.2**
	comp=Z,23nm,0.9s,baz=7.0,slow=4.7,SNR=40								
KBZ					LR		LR	02 00 26.4	
	comp=Z,175nm,18.1s,baz=30,slow=40								
	comp=Z,23nm,0.9s								
KBZ	**Khabaz**	**79.58**	**348**	*c*	*i* P		**P**	**01 19 10.4**	**+0.5**
KBZ					pmax	pmax			
	comp=Z,40nm,1.0s								
SHA1	**Shidzhatmaz**	**79.60**	**348**	*c*	*i* P		**P**	**01 19 10.7**	**+0.3**
TEKS	**Tekeris**	**79.60**	**5**	⇑	*i* P		**P**	**01 19 09.8**	**-0.3**
SPBC	**San Pablo de B**	**79.61**	**95**		P		P	01 19 17.9	+7.3
MOKO	**MOKOCHONG**	**79.67**	**302**	*e*	P		**P**	**01 19 12.1**	**+1.1**
MAK	**Makhachkala**	**79.71**	**344**	*d*	*i* P		**P**	**01 19 06.9**	**-3.8**
MAK				*e*	S		**S**	**01 29 05.5**	**-6.7**
MAK				*e*	SS		**SS**	**01 34 14.7**	**-4.6**
MAK					pmax	pmax			
	comp=Z,260nm,1.5s								
NCK	**Nalchik**	**79.72**	**347**	*c*	*i* P		**P**	**01 19 11.7**	**+0.9**
NCK					pmax	pmax			
	comp=Z,81nm,1.0s								
MTE	**Manteigas**	**79.73**	**26**	*e*	P		**P**	**01 19 12.2**	**+1.2**
MTE				*e*	PcP		**PcP**	**01

comp=Z,26nm,1.2s
PAB San Pablo 81.29 23 P P 01 19 19.4 +0.1
PAB IAmb IAmb 01 19 31.0
comp=Z,26nm,1.2s
MOE Montemor 81.31 27 eP P 01 19 20.0 +0.7
MOE ePcP sP 01 19 27.9 +1.6
MOE i IAmb IAmb 01 19 29.7
comp=Z,60nm,1.9s
PMG Port Moresby 81.35 239 LR LR 01 51 01.3
comp=Z,294nm,21.0s,baz=9.5,slow=32
PMG Port Moresby 81.35 239⇑ *iP* **P 01 19 21.2 +1.5**
PMG pmax pmax
comp=Z,46nm,1.2s
PMG Port Moresby 81.35 239 P P 01 19 20.1 +0.3
PMG IAmb IAmb 01 19 22.1
comp=Z,49nm,1.1s
AQU L'Aquila 81.36 10 eP P 01 19 22.6 +3.0
TREB Trebinje 81.37 6 eP P 01 19 18.7 -0.9
EVO Evora 81.38 26 eP P 01 19 20.3 +0.6
EVO ePcP sP 01 19 28.1 +1.4
EVO i IAmb IAmb 01 19 29.4
comp=Z,33nm,1.3s
URMC La Uribe, Meta 81.42 97 P P 01 19 26.8 +6.5
SHL Shillong 81.56 304 P P 01 19 19.8 -1.3
SHL pmax pmax
comp=Z,22nm,1.0s
SHL Shillong 81.56 304 P P 01 19 19.8 -1.3
SHL IAmb IAmb 01 19 44.2
comp=Z,22nm,1.0s
SHL Shillong 81.56 304 eP P 01 19 19.4 -1.7
SHL eP pP 01 19 20.5 -5.7
TULM Tulcn-Chalpat 81.62 101 P P 01 19 23.1 +1.2
comp=Z,33nm,1.2s
HCY Herceg Novi 81.64 6 eP P 01 19 17.8 -3.3
OTAV Otavalo 81.65 102 P P 01 19 22.2 +0.2
OTAV pmax pmax
comp=Z,15nm,1.2s
OTAV Otavalo 81.65 102 P P 01 19 22.2 +0.2
GARC Garzon, Huila 81.67 98 P P 01 19 30.3 +8.4
PDG Podgorica 81.70 5 ⇓P **P 01 19 21.9 +0.6**
PDG Podgorica 81.70 5 eP P 01 19 21.3 0.0
PLOUS Minas do Lousa 81.75 27 eP P 01 19 22.8 +1.1
PLOUS ePcP sP 01 19 30.2 +1.6
TSSA Tissa 81.78 319 eP P 01 19 22.3 +0.2
TSSA IAmb IAmb 01 19 24.9
comp=Z,26nm,1.1s
EVN Everest 81.79 309 P P 01 19 22.3 -0.6
EVN IAmb IAmb 01 19 32.8
comp=Z,85nm,1.3s
EVN Everest 81.79 309 P P 01 19 23.9 +1.0
SILR SILCHAR 81.79 303 eP P 01 19 22.5 +0.4
EPOS Posof 81.80 348 P P 01 19 23.3 +1.2
DRME Dracevica, Mon 81.94 5 eP P 01 19 22.3 -0.3
PBAR Barrancos 81.96 26 eP P 01 19 23.7 +0.9
PBAR i IAmb IAmb 01 19 25.4
comp=Z,41nm,1.6s
PBAR ePcP sP 01 19 30.7 +0.9
MESJ Messejana 81.99 27 eP P 01 19 23.3 +0.4
MESJ eS S 01 29 36.7 +0.5
MESJ IAMs_20 IAMs_20 01 54 54.3
comp=Z,698nm,16.2s
DHUB DHUBRI 82.04 305 eP P 01 19 23.7 +0.4
NIL Nilore 82.07 322 P P 01 19 23.6 +0.1
NIL pmax pmax
comp=Z,243nm,1.7s
NIL Nilore 82.07 322 P P 01 19 23.6 +0.1
NIL Nilore 82.07 322 P P 01 19 24.3 +0.8
PTEO Sao Teotonio 82.14 27 ePcP **PcP 01 19 31.6 +2.5**
PCVE Castro Verde 82.23 27 eP P 01 19 25.0 +0.8
PCVE ePcP sP 01 19 32.7 +1.5
DHRM DHARAMSHALA 82.25 319 eP P 01 19 24.3 -0.4
DHRM IAmb IAmb 01 19 26.0
comp=Z,25nm,0.7s
SKO Skopje 82.25 4 *i* P **P 01 19 24.9 +0.6**
SIJI Sorong 82.33 257 LR LR 01 51 44.3
comp=Z,162nm,20.6s,baz=63,slow=33
SIJI Sorong 82.33 257 P P 01 19 25.5 +0.5
comp=Z,15nm,0.6s
MORF Marmelete 82.38 27 eP P 01 19 25.7 +0.6
MORF ePcP sP 01 19 33.5 +1.5
PHP Peshkopia 82.50 4 P P 01 19 25.7 0.0
PVAQ Vaqueiros 82.53 27 eP P 01 19 26.8 +1.0
PVAQ ePcP sP 01 19 34.5 +1.7
PVAQ i IAmb IAmb 01 19 37.9
comp=Z,57nm,1.7s
PVAQ eS SKSac 01 29 45.4 -0.7
PVAQ eLR LR 01 50 12.9
PVAQ i IAMs_20 IAMs_20 01 56 01.1
comp=Z,660nm,20.0s
PVAQ Vaqueiros 82.53 27 P P 01 19 25.6 -0.2
PVAQ IAmb IAmb 01 19 35.6
comp=Z,86nm,1.5s
PBDV Barranco-do-Ve 82.62 27 ePcP **PcP 01 19 35.3 +4.0**
KTUT Trabzon 82.63 350 ⇓P **P 01 19 27.2 +0.9**
KBL Kabul 82.65 326 P P 01 19 25.2 -1.6
KBL pmax pmax
comp=Z,23nm,1.0s
KBL Kabul 82.65 326 P P 01 19 25.2 -1.6
KBL IAmb IAmb 01 19 34.0
comp=Z,23nm,1.0s
KBL Kabul 82.65 326 P P 01 19 25.6 -1.1
PIAT Ana Tenorio 82.78 103 P P 01 19 28.9 +1.1
DIGO Kars 82.79 347 P P 01 19 28.8 +1.4
GNI Garni 82.87 346 LR LR 02 02 09.9
comp=Z,315nm,18.3s,baz=16,slow=40
GNI Garni 82.87 346 *ceP* **P 01 19 28.7 +1.0**
GNI pmax pmax
comp=Z,74nm,1.6s
GNI Garni 82.87 346 P P 01 19 28.0 +0.3
GNI Garni 82.87 346 P P 01 19 29.3 +1.6
VAY Valandovo 82.94 3 *i* P **P 01 19 28.0 +0.1**
OHR Ohrid 83.09 4 *i* P **P 01 19 29.9 +1.2**
KNT Kendrikon 83.10 3 P P 01 19 28.5 -0.2
PTH Pithoragarh 83.13 315 eP P 01 19 29.7 +0.5
RDO Rodhopi 83.16 0 P P 01 19 29.2 +0.3
RDO Rodhopi 83.16 0 P P 01 19 29.8 +0.8
SRS Serrai 83.16 2 P P 01 19 29.5 +0.4
LGTI Lohaghat 83.34 315 eP P 01 19 30.9 +0.5
KELT Kelkit 83.52 350 P P 01 19 32.3 +1.2
EMUR La Murta 83.59 22 P P 01 19 32.2 +0.9
MARCO Tramutola 83.60 8 P P 01 19 33.2 +1.8
CHTO Chiang Mai 83.81 294 P P 01 19 31.7 -1.0
CHTO pmax pmax
comp=Z,75nm,1.6s
CHTO Chiang Mai 83.81 294 P P 01 19 31.7 -1.0
CHTO Chiang Mai 83.81 294 P P 01 19 32.4 -0.3
comp=Z,421nmcomp=Z,26nm,1.5s
CHTO Chiang Mai 83.81 294 P P 01 19 32.5 -0.1
CART Cartagena 83.88 21 P P 01 19 33.3 +0.6
PMOZ Porto Moniz, M 84.06 36 eLR LR 01 51 47.2
PMOZ i IAMs_20 IAMs_20 01 56 12.3
comp=Z,350nm,18.0s
CM31 Chiang Mai Arr 84.11 294 P P 01 19 34.0 -0.2
CMAR Chiang Mai Arr 84.11 294 P P 01 19 34.1 -0.1
comp=Z,20nm,0.9s,baz=32,slow=4.8,SNR=99
CMAR LR LR 01 58 55.8
comp=Z,198nm,20.7s,baz=50,slow=37
comp=Z,20nm,0.9s
CMAR Chiang Mai Arr 84.11 294 *i* P **P 01 19 34.5 +0.3**
CMAR pmax pmax
comp=Z,21nm,0.9s
BRDH Bariadhala 84.14 302 LR LR 01 59 46.0
comp=Z,851nm,20.2s,baz=17,slow=38
BR131 Keskin Array S 84.37 354 *c iP* **P 01 19 35.7 +0.3**
BRTR Keskin Array B 84.37 354 P P 01 19 35.0 -0.4
comp=Z,8.2nm,1.0s,baz=11,slow=2.2,SNR=36
BRTR PP **PP 01 22 48.5 -0.9**
comp=Z,0.7nm,1.0s,baz=360,slow=6.9,SNR=6.6
comp=Z,8.2nm,1.0s
BRTR Keskin Array B 84.37 354 *i* P **P 01 19 35.5 0.0**
BRTR pmax pmax
comp=Z,8.0nm,1.0s
BRTR Keskin Array B 84.37 354 P P 01 19 35.4 0.0
DLV Lat 84.45 283 P P 01 19 37.6 +1.4
BALY Balya 84.56 359 P P 01 19 36.8 +0.6
ARPR Arapgir-MALATY 84.65 351 P P 01 19 38.5 +1.7
TIP Timpagrande 84.79 7 P P 01 19 37.6 +0.1
HRA Herat 84.81 331 P P 01 19 37.3 -0.5
HRA IAmb IAmb 01 19 48.3
comp=Z,88nm,2.0s
GEVA Gevas 84.90 347 P P 01 19 38.4 +0.3
KIRS Kirsehir-Merke 84.94 354⇑P **P 01 19 40.0 +1.7**
KKUL Konya-Kulu 84.96 355 P P 01 19 39.3 +0.9

KKM Kota Kinabalu 85.02 273 P P 01 19 39.4 +0.4
KKM Kota Kinabalu 85.02 273 P P 01 19 40.2 +1.3
comp=Z,1µmcomp=Z,89nm,1.3s
KKM Kota Kinabalu 85.02 273 P P 01 19 40.4 +1.4
NPLP NPLP New Delhi 85.16 317 *eP* **P 01 19 39.4 0.0**
AGG Agios Georgios 85.22 3 P P 01 19 39.2 -0.4
HAKT HÄKKARI 85.56 346 P P 01 19 42.6 +1.1
GTOI Gorontalo 85.66 265 P P 01 19 41.1 -0.9
MANT Manisa 85.79 358 P P 01 19 41.6 -1.1
MANT IAmb IAmb 01 19 51.5
comp=Z,60nm,1.4s
KUDL Kundal 85.86 317 *eP* **P 01 19 42.9 0.0**
KUDL IAmb IAmb 01 19 47.0
comp=Z,17nm,0.6s
ALBI Allahabad 86.25 312 *eP* **P 01 19 44.4 -0.5**
ALBI IAmb IAmb 01 19 48.5
comp=Z,32nm,1.0s
VAE Valguarnera 86.28 9 LR LR 02 01 07.3
comp=Z,302nm,19.6s,baz=333,slow=38
ANDN Andirin 86.32 352 P P 01 19 46.5 +1.3
TOLI2 Tolitoli 86.51 267 P P 01 19 44.3 -1.9
TOLI2 IAmb IAmb 01 19 55.8
comp=Z,20nm,0.9s
TOLI2 Tolitoli 86.51 267 P P 01 19 45.1 -1.1
AYDN Tasoluk 86.63 359 P P 01 19 46.8 +0.2
IFR Ifrane 86.86 26 P P 01 19 49.0 +1.1
ITM Ithomi 87.05 3 P P 01 19 47.2 -1.3
ITM Ithomi 87.05 3 P P 01 19 48.9 +0.3
LUWI Luwuk 87.17 264 P P 01 19 48.1 -1.3
LUWI Luwuk 87.17 264 P P 01 19 58.8 +9.4
LUWI Luwuk 87.17 264 P P 01 19 49.0 -0.4
COEN Coen 87.21 240 P P 01 19 50.1 +0.6
comp=Z,26nm,1.4s
JHNI Jhansi 87.44 314 *ex* **P 01 19 49.4 -1.3**
JHNI IAmb IAmb 01 19 51.4
comp=Z,16nm,0.9s
KEST Kesra 87.44 14 P P 01 19 50.7 +0.1
comp=Z,3.6nm,1.0s,baz=347,slow=14,SNR=6.6
KEST LR LR 02 02 34.2
comp=Z,345nm,19.7s,baz=3.5,slow=38
comp=Z,3.6nm,1.0s
KEST Kesra 87.44 14 P P 01 19 50.1 -0.5
KEST IAmb IAmb 01 20 00.1
comp=Z,20nm,1.1s
ELL Elmali 87.50 357 P P 01 19 50.1 -0.8
ELL pmax pmax
comp=Z,13nm,0.9s
ELL Elmali 87.50 357 P P 01 19 50.1 -0.8
ELL IAmb IAmb 01 20 00.5
comp=Z,13nm,0.9s
MD01 Midelt array s 87.57 26 P P 01 19 50.8 -0.6
MD31 MD31 87.57 26 P P 01 19 50.9 -0.3
MD31 IAmb IAmb 01 20 01.7
comp=Z,13nm,0.8s
MPSI Mapaga 87.64 267 P P 01 19 52.0 +0.3
MDT Midelt 87.66 26 LR LR 02 01 12.8
comp=Z,332nm,18.5s,baz=359,slow=37
ARG Arkhangelos 88.07 358 P P 01 19 53.0 -0.5
SGC2 Sao Gabriel da 88.35 93 *eP* **P 01 19 54.5 -0.5**
IMMV Iera Moni Meta 88.82 2 P P 01 19 57.2 +0.2
BLSP Bilaspur 88.93 310 *eP* **P 01 19 56.8 -0.9**
BWNR Bhubaneshwar 88.93 306 *eP* **P 01 19 58.4 +0.7**
BWNR IAmb IAmb 01 19 59.3
comp=Z,64nm,1.2s
CSS Mathiatis 89.13 354 P P 01 19 58.2 -0.3
CSS Mathiatis 89.13 354 P P 01 19 59.5 +0.9
ZKR Zakros 89.18 360 P P 01 19 57.3 -1.4
CY604 RAF Akrotiri, 89.67 353 P P 01 20 00.5 -0.2
BOAV Boa Vista 89.87 86 P P 01 20 01.2 -1.1
BOAV Boa Vista 89.87 86 *eP* **P 01 20 02.7 +0.4**
BHPL Bhopal 89.89 314 *eP* **P 01 20 01.6 -0.7**
BHPL IAmb IAmb 01 20 07.4
comp=Z,15nm,1.2s
MTSU Mount Surprise 90.27 237 P P 01 20 05.8 +1.9
MMSI Mamuju 90.69 266 P P 01 20 05.2 -0.8
comp=Z,27nm,0.9s
MMAI Mount Meron Ar 90.93 352 P P 01 20 07.9 +0.8
comp=Z,3.1nm,0.9s,baz=353,slow=9.4,SNR=4.6
comp=Z,3.1nm,0.9s
CTA Charters Tower 91.06 234 LR LR 01 57 36.5
comp=Z,184nm,19.5s,baz=41,slow=33
RPN Rapa Nui 91.08 141 LR LR 01 53 07.8
comp=Z,196nm,18.1s,baz=19,slow=30
KAPI Kappang 92.13 264 LR LR 01 57 46.8
comp=Z,101nm,21.2s,baz=40,slow=33
KAPI Kappang 92.13 264 P P 01 20 12.1 -0.6
KAPI pmax pmax
comp=Z,33nm,1.2s
KAPI Kappang 92.13 264 P P 01 20 12.1 -0.6
KAPI IAmb IAmb 01 20 23.7
comp=Z,33nm,1.1s
KAPI Kappang 92.13 264 P P 01 20 12.8 +0.2
comp=Z,15nm,1.4s
KAPI Kappang 92.13 264 P P 01 20 13.3 +0.6
TEFE Tefe 92.42 93 *eP* **P 01 20 13.7 -0.4**
KULM Kulim 94.23 286 P P 01 20 20.7 -1.7
KULM IAmb IAmb 01 20 32.6
comp=Z,15nm,1.0s
KULM Kulim 94.23 286 P P 01 20 22.0 -0.4
comp=Z,16nm,1.1s
EIL Elat 94.28 352 LR LR 02 09 51.0
comp=Z,73nm,20.3s,baz=45,slow=40
MACA Manacapuru-AM 94.35 89 *eP* **P 01 20 22.3 -0.6**
HYB Hyderabad 94.63 311 *eP* **P 01 20 25.3 +1.0**
HYB *eS* **S 01 31 39.6 +2.9**
MYKOM Kota Tinggi 95.40 281 P P 01 20 27.4 -0.3
MYKOM IAmb IAmb 01 21 44.8
comp=Z,12nm,0.8s
WRA Warramunga Arr 96.68 244 P P 01 20 32.7 -0.6
comp=Z,1.9nm,1.0s,baz=29,slow=4.4,SNR=4.6
comp=Z,1.9nm,1.0s
URZ Urewera 97.16 203 LR LR 01 58 49.4
comp=Z,281nm,20.0s,baz=12,slow=32
PSI Prapat 97.24 286 P P 01 20 34.5 -1.8
PSI pmax pmax
comp=Z,19nm,1.1s
PSI Prapat 97.24 286 P P 01 20 36.2 -0.1
comp=Z,19nm,1.1s
RPSI Rantau Prapat 97.33 286 P P 01 20 34.5 -2.1
RPSI IAmb IAmb 01 20 45.2
comp=Z,19nm,1.1s
RAYN Ar Rayn 99.05 342 P Pdif 01 20 42.6 -1.6
RAYN pmax pmax
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 99.05 342 P Pdif 01 20 42.6 -1.6
RAYN IAmb IAmb 01 20 53.9
comp=Z,4.7nm,0.8s
RAYN Ar Rayn 99.05 342 P Pdif 01 20 45.0 +0.7
FITZ Fitzroy Crossi 99.67 252 LR LR 02 04 02.5
comp=Z,226nm,20.8s,baz=18,slow=34
ASAR Alice Springs 100.02 242 P Pdif 01 20 48.3 0.0
comp=Z,1.4nm,1.1s,baz=31,slow=4.6,SNR=4.7
ASAR Alice Springs 100.02 242 P **Pdif 01 20 47.1 -1.2**
ASAR Alice Springs 100.02 242 Pdif 01 20 47.1 -1.2
LPAZ La Paz 100.97 103 P Pdif 01 20 53.7 +0.3
comp=Z,1.4nm,0.8s,baz=330,slow=6.1,SNR=6.3
TORD Torodi Ar. Bea 108.06 25 PKKPbc PKKPbc 01 36 41.0 +0.4
comp=Z,0.6nm,0.7s,baz=180,slow=2.3,SNR=4.6
H03N2 Juan Fernandez 109.38 121 T T 03 23 57.2
baz=326,slow=78,SNR=37
H03N1 Juan Fernandez 109.39 121 T T 03 23 59.4
baz=326,slow=78,SNR=36
H03N3 Juan Fernandez 109.39 121 T T 03 23 58.5
baz=326,slow=78,SNR=40
GRTLG Ghanzi 145.15 8 P PKPdf 01 26 40.5 -0.2
FOMA Nahampoana Res 145.44 325 PKPbc 01 26 39.8 -1.1
QSPA South Pole Qui 145.85 180 PKPbc **PKPab 01 26 41.4 -0.1**
comp=Z,68nm,1.0s,baz=54,slow=1.7,SNR=44
QSPA South Pole Qui 145.85 180 PKPbc 01 26 41.3 +0.2
WIN Windhoek 145.88 15 PKP2 **PKPdf 01 26 41.6 -0.4**
WIN Windhoek 145.88 15 PKPdf **PKPdf 01 26 41.6 -0.4**
WIN Windhoek 145.88 15 P PKPab 01 26 43.0 -0.1
KHWEE KHWEE 145.92 1 PKPdf **PKPdf 01 26 41.1 -0.9**
KOOLE Kule 146.68 10 PKPdf 01 26 42.6 -0.7
KOOLE Kule 146.68 10 P PKPbc 01 26 45.4 +0.5
SKOMA Sekoma 148.44 4 P PKPbc 01 26 50.0 +0.4
LBTB Lobatse 148.98 1 PKIKP **PKPdf 01 26 46.2 -0.8**
LBTB Lobatse 148.98 1 PKPdf **PKPdf 01 26 46.2 -0.8**
LBTB Lobatse 148.98 1 P PKPbc 01 26 51.4 +0.4
MAKGR Makgori 149.76 2 PKPdf **PKPdf 01 26 47.3 -1.0**
MAKGR Makgori 149.76 2 P PKPbc 01 26 53.4 +0.4
BELA Belgrano 2 150.11 158 PKPdf 01 26 48.2 +1.1
POGA Pongola 151.03 350 PKPbc 01 26 55.0 -0.8
VNA2 Neumayer--Watz 159.31 149⇑PKPab **PKPab 01 27 42.1 +4.6**

comp=Z,5.4nm,0.8s,baz=243,slow=2.0
MAW Mawson 159.56 221 PKP **PKPdf 01 27 00.4 +0.2**
comp=Z,0.8nm,0.4s,baz=121,slow=5.9,SNR=2.1
SNAA Sanae 160.14 153⇑PKPab **PKPab 01 27 42.8 +1.6**
comp=Z,137nm,0.8s
SNAA Sanae 160.14 153 PKP **PKPdf 01 27 01.6 +0.7**
comp=Z,2.0nm,0.9s,baz=252,slow=3.2,SNR=3.1
SNAA PKPab **PKPab 01 27 42.5 +1.2**
comp=Z,5.4nm,1.0s,baz=218,slow=2.3,SNR=6.0
SNAA Sanae 160.14 153 PKPdf 01 27 01.2 +0.3

*ISK **08** 01:19:35.2,35˚.58N×26˚.72E, h3km, ML2.6/23*
*AFAD **08** 01:19:35.0,35˚.65N×26˚.84E, h11km±10km, ML2.2*
THE 08 01:19:36.7,36˚N±3˚×27˚E±˚, h8km±3km, M2.7/12,
MLh2.7/12, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**83**	Pg	Pg	01 19 43.1	-0.2
KARP				Sg	Sg	01 19 48.6	+0.8
KARP	**Karpathos**	**0.34**	**83**	P	Pg	01 19 43.3	0.0
KARP				S	Sg	01 19 48.3	+0.5
ZKR	**Zakros**	**0.59**	**228**	Pg	Pg	01 19 47.6	-0.5
ZKR	**Zakros**	**0.59**	**228**	P	Pg	01 19 47.8	-0.3
NPS	**Neapolis**	**0.96**	**256**	P	Pg	01 19 54.8	-0.4
NPS				S	Sb	01 20 08.4	-0.2
YAZI	**Mula-Dat§a-**	**1.30**	**26**	P	Pn	01 19 55.6	-5.6
ARG	**Arkhangelos**	**1.32**	**57**	Pn	Pn	01 20 00.9	-0.5
ARG	**Arkhangelos**	**1.32**	**57**	P	Pn	01 20 01.2	-0.2
ARG				S	Sb	01 20 18.6	-0.2
THERA	**Ancient Thera,**	**1.35**	**310**	P	Pn	01 20 00.8	-1.0
THERA				S	Sb	01 20 18.6	-1.0
THR8	**Santorini-Mono**	**1.37**	**311**	P	Pn	01 20 01.2	-0.9
THR6	**Thira Island,**	**1.39**	**308**	P	Pn	01 20 01.4	-0.9
DAT	**Datca**	**1.39**	**28**	Pn	Pn	01 20 01.4	-1.1
DAT	**Datca**	**1.39**	**28**	P	Pn	01 20 01.6	-0.9
DAT				S	Sb	01 20 20.7	-0.2
DAT	**Datca**	**1.39**	**28**	P	Pn	01 19 56.0	-6.6
DAT				S	Sb	01 20 17.8	-3.1
SNT5	**Nea Kammeni, S**	**1.42**	**309**	P	Pn	01 20 02.8	0.0
SNT5				S	Sn	01 20 21.7	0.0
THR3	**Thira Island,**	**1.42**	**310**	P	Pn	01 20 02.0	-0.8
THR2	**Thira island,**	**1.42**	**312**	P	Pn	01 20 02.1	-0.8
THR5	**Thira Island,**	**1.46**	**309**	P	Pn	01 20 02.6	-0.7
SAP3	**Santorini-Thir**	**1.47**	**309**	P	Pn	01 20 02.9	-0.6
SAP3				S	Sn	01 20 22.8	-0.1
IDI	**Anoyia**	**1.54**	**262**	Pn	Pn	01 20 04.2	-0.3
IDI	**Anoyia**	**1.54**	**262**	P	Pn	01 20 03.4	-1.1
IDI				S	Sn	01 20 23.7	-1.0
BODT	**Bodrum**	**1.62**	**16**	Pn	Pn	01 20 04.6	-0.9
BODT	**Bodrum**	**1.62**	**16**	P	Pn	01 20 05.0	-0.5
BDRM	**Kayabasi**	**1.65**	**20**	P	Pn	01 19 55.0	-1.1
SIVA	**Sivas**	**1.66**	**253**	P	Pb	01 20 08.1	+0.5
SIVA				S	Sn	01 20 26.8	-0.9
TURN	**Turunc**	**1.75**	**43**	Pn	Pn	01 20 06.8	-0.5
TURN	**Turunc**	**1.75**	**43**	P	Pn	01 20 05.4	-1.9
TURN				S	Sn	01 20 27.9	-1.8
TURN				IAML		01 20 43.0	
comp=N,28nm,0.5s							
MLSB	**Milas**	**1.97**	**25**	Pn	Pn	01 20 08.7	-1.7
DALY	**Dalyan (Mula)**	**2.02**	**49**	Pn	Pn	01 20 10.7	-0.3
DALY	**Dalyan (Mula)**	**2.02**	**49**	P	Pn	01 20 11.0	0.0
DALY				S	Sn	01 20 35.8	-0.6
DALY				IAML		01 20 47.0	
comp=N,18nm,0.6s							
YER	**Yerkesik**	**2.04**	**37**	Pn	Pn	01 20 11.2	-0.2
YER	**Yerkesik**	**2.04**	**37**	P	Pn	01 20 11.0	-0.4
YER				S	Sn	01 20 38.2	+1.1
VAM	**Vamos**	**2.09**	**268**	P	Pn	01 20 11.9	-0.1
VAM				S	Sn	01 20 38.7	+0.5
IZZE	**Mula-Seydike**	**2.21**	**64**	P	Pn	01 20 13.6	-0.1
GCAM	**G?zelcaml?**	**2.22**	**10**	Pn	Pn	01 20 13.1	-0.7
SABU	**Mula-Dalaman**	**2.22**	**53**	P	Pn	01 20 12.3	-1.6
SABU				S	Sn	01 20 43.0	+1.4
SABU				IAML		01 20 53.0	
comp=N,17nm,0.8s							
IMMV	**Iera Moni Meta**	**2.26**	**270**	Pn	Pn	01 20 14.2	-0.2
IMMV	**Iera Moni Meta**	**2.26**	**270**	P	Pn	01 20 14.1	-0.4
GVD	**Gavdhos**	**2.28**	**254**	Pn	Pn	01 20 15.3	+0.6
AYDN	**Tasoluk**	**2.33**	**23**	P	Pn	01 20 13.3	-2.2
AKAS	**Kas**	**2.43**	**72**	Pn	Pn	01 20 16.9	+0.1
AKAS	**Kas**	**2.43**	**72**	P	Pn	01 20 16.5	-0.3
CAME	**Cameli-Denizli**	**2.51**	**54**	Pn	Pn	01 20 17.8	-0.2
DNZT	**Denizli-Tavas-**	**2.55**	**45**	P	Pn	01 20 20.1	+1.7
DNZT				S	Sn	01 20 49.8	+0.2
KNDR	**Palaiochora Ch**	**2.57**	**265**	Pn	Pn	01 20 19.4	+0.8
TAVA	**DENIZLI_Tavas**	**2.62**	**41**	P	Pn	01 20 19.5	+0.1
TAVA				S	Sn	01 20 52.4	+1.0
TAVA				IAML		01 21 07.0	
comp=E,13nm,0.5s							
ESEN	**Aydn-Nazilli**	**2.62**	**29**	P	Pn	01 20 17.8	-1.5
ESEN				S	Sn	01 20 48.5	-2.8
KNIK	**Mula-Seydike**	**2.64**	**59**	P	Pn	01 20 17.2	-2.6
NAZL	**Nazilli-Aydin**	**2.75**	**26**	Pn	Pn	01 20 20.5	-0.6
DNIZ	**Denizli-Tavas-**	**2.80**	**40**	P	Pn	01 20 17.8	-4.1
ELL	**Elmali**	**2.84**	**63**	Pn	Pn	01 20 23.3	+0.9
APMY	**Acipayam-Deniz**	**2.84**	**46**	Pn	Pn	01 20 22.4	0.0
GOLH	**Golhisar**	**2.85**	**52**	P	Pn	01 20 22.4	-0.2
URLA	**Izmir**	**2.85**	**358**	Pn	Pn	01 20 22.2	-0.3
CHOS	**Chios island**	**2.93**	**349**	Pn	Pn	01 20 22.9	-0.7
ODEM	**Odemis-Izmir**	**2.96**	**21**	Pn	Pn	01 20 23.3	-0.8
KIRA	**zmir-Kiraz**	**2.99**	**26**	P	Pn	01 20 24.4	-0.2
KTHA	**Kythira Island**	**3.09**	**285**	Pn	Pn	01 20 25.9	+0.1
KTHA	**Kythira Island**	**3.09**	**285**	P	Pn	01 20 25.2	-0.6
VLI	**Veliai**	**3.32**	**292**	P	Pn	01 20 28.8	-0.2

*ISK **08** 01:21:49.2,35˚.53N×26˚.74E, h8km, ML2.8/23*
*AFAD **08** 01:21:49.6,35˚.52N×26˚.90E, h16km±1km, ML2.4*
*THE **08** 01:21:50.6,36˚N±3˚×27˚E±˚, h7km±3km, M2.9/15,*
MLh2.9/15
*IDC **08** 01:21:51.5±1.6,35˚.37N×26˚.99E, h0km, mb3.3/2,*
mbtmp3.1/5, ML2.7/3, Error ellipse: s-maj=34.6km
s-min=23.7km az=180.0
ISC 08 01:21:50.8±1.2, 35˚.48N±0˚.05×26˚.76E±0˚.03, h7km±10km,
n73, σ1˚60/93, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**78**	Pg	**Pg**	**01 21 56.5**	**-0.9**
KARP				Sg	**Sg**	**01 22 01.7**	**-0.2**
KARP	**Karpathos**	**0.34**	**78**	P	**Pg**	**01 21 57.3**	**-0.1**
KARP				S	**Sg**	**01 22 02.2**	**+0.3**
ZKR	**Zakros**	**0.57**	**231**	Pg	**Pg**	**01 22 00.9**	**-0.8**
ZKR				Sg	**Sb**	**01 22 10.3**	**-1.1**
ZKR	**Zakros**	**0.57**	**231**	P	**Pg**	**01 22 01.7**	**-0.1**
ZKR				S	**Sb**	**01 22 11.0**	**-0.4**
NPS	**Neapolis**	**0.96**	**257**	P	**Pg**	**01 22 08.9**	**-0.3**
NPS				S	**Sb**	**01 22 22.0**	**-0.6**
YAZI	**Mula-Dat§a-**	**1.33**	**25**	P	**Pn**	**01 22 12.4**	**-3.4**
ARG	**Arkhangelos**	**1.34**	**56**	Pn	**Pn**	**01 22 14.3**	**-1.6**
ARG				Sn	**Sn**	**01 22 32.8**	**-1.1**
ARG	**Arkhangelos**	**1.34**	**56**	P	**Pn**	**01 22 15.1**	**-0.8**
ARG				S	**Sn**	**01 22 32.6**	**-1.3**
THERA	**Ancient Thera,**	**1.37**	**311**	P	**Pn**	**01 22 14.7**	**-1.6**
THR8	**Santorini-Mono**	**1.39**	**312**	P	**Pn**	**01 22 15.2**	**-1.4**
THR6	**Thira Island,**	**1.41**	**309**	P	**Pn**	**01 22 15.6**	**-1.2**
DAT	**Datca**	**1.42**	**28**	Pn	**Pn**	**01 22 15.1**	**-2.0**
DAT	**Datca**	**1.42**	**28**	P	**Pn**	**01 22 15.4**	**-1.7**
DAT	**Datca**	**1.42**	**28**	P	**Pn**	**01 22 15.0**	**-2.0**
DAT				S	**Sn**	**01 22 33.0**	**-3.1**
DAT				IAML		01 22 43.0	
comp=N,60nm,0.6s							
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pn**	**01 22 15.0**	**-2.3**
SNT5	**Nea Kammeni, S**	**1.44**	**310**	P	**Pn**	**01 22 16.7**	**-0.6**
THR3	**Thira Island,**	**1.44**	**311**	P	**Pn**	**01 22 15.8**	**-1.5**
THR2	**Thira island,**	**1.44**	**312**	P	**Pn**	**01 22 15.9**	**-1.4**
THR5	**Thira Island,**	**1.48**	**310**	P	**Pn**	**01 22 16.6**	**-1.3**
SAP3	**Santorini-Thir**	**1.49**	**310**	P	**Pn**	**01 22 16.7**	**-1.3**
SAP3				S	**Sn**	**01 22 36.1**	**-1.6**
IDI	**Anoyia**	**1.54**	**263**	Pn	**Pn**	**01 22 17.5**	**-1.2**
IDI	**Anoyia**	**1.54**	**263**	P	**Pn**	**01 22 17.2**	**-1.5**
BODT	**Bodrum**	**1.64**	**16**	Pn	**Pn**	**01 22 18.3**	**-1.8**
BODT	**Bodrum**	**1.64**	**16**	S	**Sn**	**01 22 40.7**	**-0.9**
SIVA	**Sivas**	**1.66**	**254**	P	**Pb**	**01 22 22.0**	**+0.4**
SIVA				S	**Sn**	**01 22 41.4**	**-0.5**
BDRM	**Kayabasi**	**1.68**	**19**	P	Pn	01 22 15.6	-5.0
TURN	**Turunc**	**1.77**	**43**	Pn	**Pn**	**01 22 20.2**	**-1.6**
TURN	**Turunc**	**1.77**	**43**	P	**Pn**	**01 22 20.2**	**-1.6**

TURN				S	Sn	01 22 40.1	-4.5	
TURN				IAML		01 22 52.0		
	comp=E,42nm,0.6s							
MLSB	**Milas**	**1.99**	**24**	Pn	**Pn**	**01 22 23.8**	**-1.1**	
DALY	**Dalyan (Mula)**	**2.04**	**48**	Pn	**Pn**	**01 22 24.3**	**-1.2**	
DALY	**Dalyan (Mula)**	**2.04**	**48**	P	**Pn**	**01 22 24.1**	**-1.4**	
DALY				S	**Sn**	**01 22 51.2**	**0.0**	
DALY				IAML		01 22 58.0		
	comp=N,34nm,0.6s							
YER	**Yerkesik**	**2.06**	**36**	Pn	**Pn**	**01 22 24.5**	**-1.4**	
YER	**Yerkesik**	**2.06**	**36**	P	**Pn**	**01 22 25.1**	**-0.8**	
YER				S	**Sn**	**01 22 51.3**	**-0.7**	
VAM	**Vamos**	**2.09**	**269**	P	**Pn**	**01 22 25.9**	**-0.3**	
VAM				S	**Sn**	**01 22 51.7**	**-0.8**	
MULA	**Mugla, Merkez-**	**2.18**	**35**	P	**Pn**	**01 22 24.5**	**-3.1**	
IZZE	**Mula-Seydike**	**2.22**	**64**	P	**Pn**	**01 22 27.1**	**-1.0**	
SABU	**Mula-Dalaman**	**2.24**	**52**	P	**Pn**	**01 22 27.1**	**-1.2**	
SABU				S	**Sn**	**01 22 55.5**	**-0.8**	
SABU				IAML		01 23 11.0		
	comp=N,28nm,1.1s							
GCAM	**G?zelcaml?**	**2.25**	**10**	Pn	**Pn**	**01 22 27.1**	**-1.4**	
IMMV	**Iera Moni Meta**	**2.26**	**270**	Pn	**Pn**	**01 22 27.9**	**-0.7**	
IMMV	**Iera Moni Meta**	**2.26**	**270**	P	**Pn**	**01 22 28.5**	**-0.2**	
GVD	**Gavdhos**	**2.28**	**255**	Pn	**Pn**	**01 22 28.2**	**-0.6**	
AYDN	**Tasoluk**	**2.36**	**22**	P	**Pn**	**01 22 29.0**	**-1.0**	
AKAS	**Kas**	**2.44**	**71**	Pn	**Pn**	**01 22 30.3**	**-0.8**	
AKAS	**Kas**	**2.44**	**71**	P	**Pn**	**01 22 30.3**	**-0.8**	
CAME	**Cameli-Denizli**	**2.53**	**54**	Pn	**Pn**	**01 22 31.6**	**-0.8**	
DNZT	**Denizli-Tavas-**	**2.57**	**45**	P	**Pn**	**01 22 33.3**	**+0.4**	
DNZT				S	**Sn**	**01 23 03.6**	**-0.8**	
DNZT				IAML		01 23 14.0		
	comp=N,17nm,0.7s							
KNDR	**Palaiochora Ch**	**2.57**	**265**	Pn	**Pn**	**01 22 32.3**	**-0.5**	
DGB	**zmir**	**2.57**	**2**	P	**Pn**	**01 22 35.9**	**+3.0**	
DGB				S	**Sb**	**01 23 11.8**	**+2.7**	
DGB				IAML		01 23 18.0		
	comp=E,21nm,0.8s							
TAVA	**DENIZLI_Tavas**	**2.64**	**41**	P	**Pn**	**01 22 34.3**	**+0.4**	
TAVA				S	**Sn**	**01 23 04.3**	**-1.9**	
TAVA				IAML		01 23 12.0		
	comp=N,16nm,0.7s							
CAEL	**Denizli, Camel**	**2.64**	**51**	P	**Pn**	**01 22 34.9**	**+0.9**	
ESEN	**Aydn-Nazilli**	**2.65**	**28**	P	**Pn**	**01 22 32.0**	**-1.9**	
ESEN				S	**Sn**	**01 23 02.0**	**-4.3**	
KNIK	**Mula-Seydike**	**2.66**	**58**	P	**Pn**	**01 22 34.9**	**+0.7**	
NAZL	**Nazilli-Aydin**	**2.77**	**26**	Pn	**Pn**	**01 22 34.5**	**-1.2**	
IZMR	**zmir-demi**	**2.82**	**20**	P	**Pn**	**01 22 37.2**	**+0.9**	
DNIZ	**Denizli-Tavas-**	**2.82**	**40**	P	**Pn**	**01 22 34.9**	**-1.5**	
ANKY	**Antikythira Is**	**2.84**	**279**	P	**Pn**	**01 22 34.9**	**-1.6**	
ELL	**Elmali**	**2.85**	**63**	Pn	**Pn**	**01 22 36.5**	**-0.3**	
APMY	**Acipayam-Deniz**	**2.86**	**45**	Pn	**Pn**	**01 22 35.9**	**-1.0**	
GOLH	**Golhisar**	**2.87**	**51**	P	**Pn**	**01 22 35.9**	**-1.1**	
URLA	**Izmir**	**2.88**	**358**	Pn	**Pn**	**01 22 36.1**	**-1.0**	
CHOS	**Chios island**	**2.96**	**349**	Pn	**Pn**	**01 22 37.3**	**-1.0**	
ODEM	**Odemis-Izmir**	**2.99**	**20**	Pn	**Pn**	**01 22 37.6**	**-1.1**	
KIRA	**zmir-Kiraz**	**3.02**	**25**	P	**Pn**	**01 22 38.5**	**-0.6**	
SULTU	**Buldan**	**3.04**	**32**	P	**Pn**	**01 22 38.5**	**-0.9**	
KTHA	**Kythira Island**	**3.10**	**286**	Pn	**Pn**	**01 22 39.3**	**-0.8**	
KTHA	**Kythira Island**	**3.10**	**286**	P	**Pn**	**01 22 39.1**	**-1.0**	
VLI	**Veliai**	**3.33**	**293**	P	**Pn**	**01 22 42.4**	**-0.9**	
VLI				S	**Sn**	**01 23 20.7**	**-2.4**	
VLY	**Voula,Athens**	**3.36**	**316**	P	**Pn**	**01 22 43.2**	**-0.5**	
VLY				S	**Sn**	**01 23 21.3**	**-2.6**	
BRTR	**Keskin Array B**	**6.92**	**50**	Pn	**Pn**	**01 23 35.3**	**+2.6**	
	baz=225,slow=17,SNR=1.3							
	0.3nm,0.5s							
MMAI	**Mount Meron Ar**	**7.57**	**106**	Pn	**Pn**	**01 23 40.1**	**-1.5**	
	0.3nm,0.3s,baz=294,slow=14,SNR=1.6							
MMAI				Sn	**Sn**	**01 25 06.8**	**-1.0**	
	0.8nm,0.3s,baz=296,slow=40,SNR=1.4							
	0.3nm,0.4s							
GERES	**GERESS Array B**	**16.46**	**328**	Pn	**P**	**01 25 48.1**	**+3.1**	
	baz=138,slow=12,SNR=1.3							
	0.2nm,0.6s							
ESDC	**Sonseca Array**	**24.64**	**289**	P	**P**	**01 27 15.0**	**+3.0**	
	0.4nm,0.7s,baz=88,slow=9.6,SNR=4.7							
	0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.70**	**232**	P	P	01 28 17.9	+2.7	
	0.5nm,0.9s,baz=32,slow=9.8,SNR=4.6							
	0.5nm,0.9s							

IDC 08 01:56:34.5±1.4,9°26N×40°56W,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=43.4km s-min=31.9km az=176.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**31.02**	**122**	T	T	02 35 31.7	
	baz=302,slow=75,SNR=5.0						
H10N2	**ASCENSION HYDR**	**31.02**	**122**	T	T	02 35 16.8	
	baz=302,slow=75,SNR=4.5						
H10N1	**ASCENSION HYDR**	**31.04**	**122**	T	T	02 35 33.1	
	baz=302,slow=75,SNR=5.2						
SIV	**San Ignacio**	**32.28**	**219**	P	P	02 03 05.4	+0.1
	0.4nm,0.5s,baz=59,slow=23,SNR=2.2						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**41.59**	**81**	P	P	02 04 24.5	-0.1
	1.2nm,0.9s,baz=256,slow=8.3,SNR=4.6						
	1.2nm,0.9s						
ULM	**Lac du Bonnet**	**61.11**	**323**	P	P	02 06 50.6	+0.1
	1.0nm,0.5s,baz=101,slow=5.2,SNR=3.7						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**62.11**	**298**	P	P	02 06 57.6	-0.2
	0.2nm,0.6s,baz=102,slow=6.3,SNR=4.2						
	0.2nm,0.6s						

*IDC **08** 02:00:50.4±0.9,8°.63N×40°.74W,h0km,mb3.7/9, mbtmp3.7/9,MS3.5/4,Error ellipse: s-maj=25.8km s-min=23.3km az=147.0*

ISC 08 02:00:51.9±0.8,8°.6N±0°.2×40°.7W±0°.1,h10km,n16,σ1§28/9, mb3.7/8,MS3.4/4,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**25.15**	**197**	P	**P**	**02 06 17.2**	**-0.4**
	2.1nm,0.9s,baz=11,slow=16,SNR=3.3						
	2.1nm,0.9s						
SJG	**San Juan**	**26.43**	**294**	LR	LR	02 15 21.0	
	comp=Z,88nm,19.4s,baz=83,slow=33						
H10N3	**ASCENSION HYDR**	**30.83**	**121**	T	T	02 39 35.6	
	baz=302,slow=75,SNR=3.8						
H10N2	**ASCENSION HYDR**	**30.84**	**121**	T	T	02 39 42.0	
	baz=302,slow=75,SNR=4.3						
H10N1	**ASCENSION HYDR**	**30.86**	**121**	T	T	02 39 45.0	
	baz=302,slow=75,SNR=3.8						
SIV	**San Ignacio**	**31.67**	**220**	P	**P**	**02 07 14.6**	**-1.2**
	0.3nm,0.3s,baz=60,slow=14,SNR=3.7						
	0.3nm,0.3s						
DBIC	**Dimbokro**	**35.61**	**91**	P	**P**	**02 07 50.4**	**+0.2**
	4.0nm,0.9s,baz=309,slow=9.0,SNR=1.7						
	4.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**41.88**	**80**	P	**P**	**02 08 41.6**	**-1.2**
	1.0nm,0.9s,baz=270,slow=7.2,SNR=4.3						
	1.0nm,0.9s						
TKL	**Tuckaleechee C**	**47.55**	**311**	LR	LR	02 24 56.7	
	comp=Z,56nm,21.9s,baz=72,slow=30						
GERES	**GERESS Array B**	**60.55**	**38**	P	**P**	**02 11 02.2**	**-0.5**
	0.3nm,0.7s,baz=267,slow=7.6,SNR=2.8						
	0.3nm,0.7s						
ULM	**Lac du Bonnet**	**61.51**	**323**	P	**P**	**02 11 08.9**	**-0.1**
	1.3nm,0.7s,baz=112,slow=11,SNR=3.9						
	1.3nm,0.7s						
TXAR	**Lajitas Array**	**62.26**	**299**	P	**P**	**02 11 14.2**	**-0.4**
	0.3nm,0.8s,baz=123,slow=6.3,SNR=4.5						
	0.3nm,0.8s						
NOA	**NORSAR Array B**	**64.75**	**25**	LR	LR	02 36 47.2	
	comp=Z,20nm,19.6s,baz=245,slow=33						
PMSA	**Palmer Station**	**75.24**	**190**	LR	LR	02 45 32.1	
	comp=Z,83nm,20.2s,baz=80,slow=36						
SNAA	**Sanae**	**83.93**	**169**	P	**P**	**02 13 23.9**	**+2.1**
	1.2nm,0.7s,baz=1.5,slow=5.2,SNR=4.7						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**89.05**	**336**	P	**P**	**02 13 48.5**	**+1.4**
	0.3nm,0.8s,baz=56,slow=5.1,SNR=4.2						
	0.3nm,0.8s						

NNC 08 02:13:43.9±11.0,36°68N×69°96E,h0km,mb3.6,mpv3.3, 4C-2D,Error ellipse: s-maj=88.7km s-min=63.9km az=173.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.43**	**4**	⇑P	Pn	02 15 22.0	+2.0
	1.8nm,0.5s,baz=182,slow=13,SNR=24						
KK31				⇓S	Sn	02 16 36.9	+2.8
	1.6nm,0.3s,baz=191,slow=25,SNR=8.0						
DHRM	**DHARAMSHALA**	**6.85**	**128**	*e*P	Pn	02 15 30.4	+4.5
DHRM				IAML		02 16 11.2	
	comp=N,84nm,0.0s						
DHRM				IAML		02 16 11.3	
	comp=E,69nm,0.3s						
AAK	**Ala-Archa**	**6.91**	**29**	⇑P	Pn	02 15 24.7	-1.8
	comp=E,0.9nm,0.6s						
AAK				⇑S	Sn	02 16 44.3	-1.6
	comp=E,1.4nm,0.6s						
AB31	**Akbulak array**	**14.54**	**333**	⇓P	Pn	02 17 11.7	+1.0
	comp=E,0.4nm,0.3s,baz=159,slow=12,SNR=25						
AB31				⇑S	Sn	02 19 54.7	+2.2
	comp=E,1.5nm,0.6s,baz=153,slow=23,SNR=6.8						

*GFZ **08** 02:39:58.0±0.7,26°N±11°×10°3E±°,h10km,M4.8/58, mb4.8/58,confirmed*
*IDC **08** 02:39:59.1±0.6,26°.02N×103°.08E,h0km,mb4.3/22, mbtmp4.2/24,ML4.2/2,MS3.6/21,Error ellipse: s-maj=18.5km s-min=13.3km az=73.0*
*BJI **08** 02:40:00.6,25°.99N×103°.15E,h10km,mB4.5/9,mb4.5/32, ML4.3/16,Ms4.2/45,Ms7 4.0/42*
*MOS **08** 02:40:00.7±0.9,26°.07N×103°.02E,h19km,mb4.8/42,Error ellipse: s-maj=8.1km s-min=4.1km az=123.1*
*NEIC **08** 02:40:01.7±0.9,26°.19N±0°.03×103°.08E±0°.08,h10km±1km, mb4.6/67,Error ellipse: s-maj=11.9km s-min=5.8km az=94.0*
*BGR **08** 02:40:06.3,25°.98N×103°.10E,h33km,mb4.7*

ISC 08 02:40:01.1±0.7,26°.02N±0°.03×103°.13E±0°.03,h13km±4km, n429,σ1§10/453,mb4.6/123,MS3.6/25,27C-24D,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI2	**Kunming**	**0.93**	**202**	⇑Pg	**Pg**	**02 40 17.3**	**-1.9**
KMI2				Sg	**Sg**	**02 40 29.6**	**-1.8**
KMI2				SMN			
	3μm,0.5s						
KMI2				SME			
	4μm,0.9s						
PZH	**PanZhiHua**	**1.33**	**292**	Pg	**Pn**	**02 40 25.3**	**-0.3**
PZH				Sg	**Sn**	**02 40 43.2**	**-0.1**
PZH				SMN			
	5μm,0.8s						
PZH				SME			
	4μm,0.8s						
GYA	**Guiyang**	**3.21**	**81**	⇑Pn	**Pn**	**02 40 52.9**	**+1.5**
GYA				Sn	**Sb**	**02 41 36.7**	**-0.5**
TNCH	**TengChong**	**4.28**	**258**	Pn	**Pn**	**02 41 08.2**	**+2.0**
TNCH				Pg	**Pg**	**02 41 21.1**	**-2.0**
TNCH				Sn	**Sn**	**02 41 55.8**	**-0.2**
TNCH				Sg	**Sg**	**02 42 15.5**	**-3.0**
TNCH				SMN			
	3μm,1.3s						
TNCH				SME			
	2μm,1.3s						
TNCH				L	L		
	comp=N,3μm,3.8s						
TNCH				L	L		
	comp=E,2μm,2.0s						
TNCH				L	L		
	comp=Z,880nm,4.8s						
SLVN	**Son La**	**4.72**	**171**		**Pn**	**02 41 15.3**	**+3.2**
CD2	**Chengdu**	**4.91**	**6**	Pn	**Pn**	**02 41 17.4**	**+2.7**
CD2				Pg	**Pg**	**02 41 33.0**	**-2.1**
CD2				Sn	**Sn**	**02 42 15.5**	**+4.2**
CD2				Sg	**Sg**	**02 42 38.3**	**-0.3**
CD2				SMN			
	560nm,1.0s						
CD2				SME			
	580nm,0.9s						
GULI	**GuiLin**	**6.57**	**95**	Pn	**Pn**	**02 41 39.4**	**+1.8**
GULI				Sg	**Sg**	**02 43 28.5**	**-3.7**
GULI				SMN			
	210nm,1.0s						
GULI				SME			
	140nm,1.0s						
ENH	**Enshi**	**7.03**	**52**	Pn	**Pn**	**02 41 44.3**	**+0.4**
CHTO	**Chiang Mai**	**8.15**	**209**	P	**Pn**	**02 42 02.9**	**+3.7**
CHTO	**Chiang Mai**	**8.15**	**209**	Pn	**Pn**	**02 42 02.9**	**+3.7**
MORE	**Moreh**	**8.19**	**259**	Pn	**Pn**	**02 42 01.6**	**+1.8**
CMAR	**Chiang Mai Arr**	**8.46**	**208**	Pn	**Pn**	**02 42 04.1**	**+0.6**
	0.7nm,0.3s,baz=23,slow=12,SNR=12						
CMAR				Pg	Pb	02 42 32.9	+5.3
	0.8nm,0.3s,baz=30,slow=18,SNR=2.0						
CMAR				Lg	Lg	02 44 27.7	
	0.5nm,0.3s,baz=32,slow=30,SNR=2.0						
CMAR				LR	LR	02 45 44.9	
	comp=Z,368nm,20.2s,baz=25,slow=41						
	4.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**8.46**	**208**	Pn	**Pn**	**02 42 07.3**	**+3.8**
CNSH	**ChangSha**	**9.00**	**74**	P	**Pn**	**02 42 12.3**	**+1.4**
CNSH				S	**Sn**	**02 43 50.5**	**-1.6**
CNSH				SMN			
	120nm,0.8s						
CNSH				SME			
	140nm,1.0s						
CNSH				L	L		
	comp=E,990nm,6.1s						
CNSH				L	L		
	comp=Z,890nm,7.9s						
QIZ	**Qiongzhong**	**9.32**	**137**	Pn	**Pn**	**02 42 19.7**	**+4.4**
QIZ	**Qiongzhong**	**9.32**	**137**	P	**Pn**	**02 42 13.5**	**-1.8**
QIZ				S	**Sn**	**02 44 00.4**	**+0.3**
QIZ				L	L		
	comp=E,750nm,7.5s						
QIZ				L	L		
	comp=Z,2μm,9.0s						
XAN	**Xi'an**	**9.44**	**31**	P	**Pn**	**02 42 17.7**	**+0.8**
XAN				S	**Sn**	**02 44 00.0**	**-2.9**
XAN				L	L		
	comp=N,2μm,8.7s						
XAN				L	L		
	comp=E,2μm,8.9s						
XAN				L	L		
	comp=Z,710nm,6.0s						
GZH2	**Guangzhou**	**9.85**	**102**	P	**Pn**	**02 42 22.3**	**-0.2**
GZH2				S	**Sn**	**02 44 13.1**	**+0.1**
GZH2				SMN			
	110nm,1.2s						
GZH2				SME			
	59nm,1.0s						
LZDM	**Lanzhou Array**	**9.92**	**3**	Pn	**Pn**	**02 42 22.5**	**-1.2**
	baz=172,slow=12						
LZDM				LR	LR	02 46 37.4	
	comp=Z,251nm,19.9s,baz=240,slow=40						
	5.6nm,0.4s						
LZH	**Lanzhou**	**10.05**	**3**	*e*P	Pn	02 42 31.0	+5.5
LZH				sP		02 42 37.8	
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				L	L		
	comp=N,1μm,10.0s						
LZH				L	L		
	comp=Z,730nm,11.3s						
SHL	**Shillong**	**10.14**	**270**	P	**Pn**	**02 42 27.3**	**+0.6**
SHL	**Shillong**	**10.14**	**270**	Pn	**Pn**	**02 42 27.2**	**+0.6**
WHN	**Wuhan**	**10.87**	**63**	P	**Pn**	**02 42 37.9**	**+1.4**
WHN				sP		02 42 43.2	
WHN				S	**Sn**	**02 44 33.3**	**-4.7**
WHN				L	L		
	comp=N,4μm,8.0s						
WHN				L	L		
	comp=E,2μm,9.0s						
WHN				L	L		
	comp=Z,2μm,6.0s						
LSA	**Lhasa**	**11.21**	**292**	P	**Pn**	**02 42 42.1**	**+0.5**
LSA	**Lhasa**	**11.21**	**292**		**Pn**	**02 42 42.1**	**+0.5**
LSA	**Lhasa**	**11.21**	**292**	P	**Pn**	**02 42 45.4**	**+3.8**
GTA2	**Gaotai**	**13.72**	**349**	*e*P	**Pn**	**02 43 16.9**	**+1.3**
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA2				L	L		
	comp=N,470nm,13.1s						
GTA2				L	L		
	comp=E,630nm,17.2s						
GTA2				L	L		
	comp=Z,750nm,12.0s						
EVN	**Everest**	**14.67**	**281**		**Pn**	**02 43 26.7**	**-2.3**
EVN	**Everest**	**14.67**	**281**	P	**Pn**	**02 43 32.0**	**+3.0**
NJ2	**Nanjing**	**15.01**	**63**	*e*P	**Pn**	**02 43 35.4**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
NJ2				L	L		
	comp=N,3μm,9.0s						
NJ2				L	L		
	comp=E,1μm,8.1s						
TIA	**Tai'an**	**15.70**	**46**	P	**Pn**	**02 43 42.7**	**+0.6**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TIA				L	L		
	comp=N,440nm,11.3s						
TIA				L	L		
	comp=E,300nm,11.0s						
TIA				L	L		
	comp=Z,470nm,12.7s						
BTO2	**Baotou**	**15.72**	**19**	*e*P	**Pn**	**02 43 41.2**	**-1.3**
BTO2				sP	**P**	**02 43 48.0**	**+1.5**
BTO2				PP	**sP**	**02 43 54.0**	**+1.5**
BTO2				S	**Sn**	**02 46 34.6**	**-2.0**
BTO2				pmax	pmax		
	comp=Z,18nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,89nm,3.9s						
BTO2				L	L		
	comp=N,870nm,9.0s						
BTO2				L	L		
	comp=Z,520nm,6.9s						
TPUB	**Ta-pu**	**16.14**	**96**		**P**	**02 43 51.4**	**+0.3**
HHC	**Hu-ho-hao-te**	**16.37**	**23**	*e*P	**Pn**	**02 43 52.1**	**+1.4**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,67nm,4.1s						
HHC				L	L		
	comp=N,310nm,13.8s						
HHC				L	L		
	comp=E,650nm,12.2s						
HHC				L	L		
	comp=Z,210nm,14.5s						
BJT	**Baijiatuan**	**17.70**	**35**	P	**Pn**	**02 44 07.0**	**-0.4**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJT	**Baijiatuan**	**17.70**	**35**		**Pn**	**02 44 07.0**	**-0.4**
BJI2	**Beijing**	**17.71**	**35**	P	**P**	**02 44 09.6**	**+1.3**
BJI2				S	**Sn**	**02 47 25.0**	**+0.4**
BJI2				pmax	pmax		
	comp=Z,49nm,4.7s						
BJI2				L	L		
	comp=Z,120nm,9.2s						
BJI2				L	L		
	comp=Z,150nm,12.0s						
DL2	**Dalian**	**20.17**	**46**	P	**P**	**02 44 34.6**	**-0.7**
DL2				S	Sn	02 48 23.5	-0.6
DL2				pmax	pmax		
	comp=Z,16nm,0.8s						
DL2				L	L		
	comp=Z,450nm,18.5s						
DL2				L	L		
	comp=Z,260nm,13.5s						
DL2				L	L		
	comp=Z,250nm,10.2s						
WMQ	**Urumqi**	**21.74**	**329**	*e*P	**P**	**02 44 57.0**	**+4.6**
WMQ				pmax	pmax		
	comp=Z,14nm,1.7s						
WMQ				L	L		
	comp=Z,250nm,16.5s						
WMQ				L	L		
	comp=Z,190nm,12.9s						
WMQ				L	L		
	comp=Z,110nm,16.5s						
SONM	**Songino Array**	**21.93**	**6**	P	**P**	**02 44 55.0**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=191,slow=11,SNR=18						
SONM				LR	LR	02 54 25.0	
	comp=Z,90nm,21.3s,baz=215,slow=40						
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**21.93**	**6**	P	**P**	**02 44 53.3**	**-1.1**
SONM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	**Songino Array**	**21.93**	**6**		**P**	**02 44 53.3**	**-1.1**
ULN	**Ulaanbaatar**	**22.02**	**7**	*d i*P	**P**	**02 44 56.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**22.02**	**7**		**P**	**02 44 53.4**	**-2.1**
ULN	**Ulaanbaatar**	**22.02**	**7**	P	**P**	**02 44 56.3**	**+0.9**
PSI	**Prapat**	**23.44**	**191**	P	**P**	**02 45 12.9**	**+2.5**
PSI				pmax	pmax		
	comp=Z,12nm,1.2s						
RPSI	**Rantau Prapat**	**23.54**	**191**	P	**P**	**02 45 12.9**	**+1.6**
RPSI				IAmb	IAmb	02 45 16.4	
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**23.90**	**55**	P	**P**	**02 45 15.4**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=243,slow=10,SNR=4.5						
KSRS				LR	LR	02 54 53.5	
	comp=Z,109nm,18.6s,baz=255,slow=37						
	comp=Z,1.5nm,0.6s						
ZAK	**Zakamensk**	**24.32**	**0**	*e*P	**P**	**02 45 19.3**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,13nm,1.8s						
WUS	**Wushi**	**24.90**	**313**	P	**P**	**02 45 23.5**	**-0.5**
WUS				IAmb	IAmb	02 45 32.1	
	comp=Z,10nm,0.8s						
WUS	**Wushi**	**24.90**	**313**	P	**P**	**02 45 25.9**	**+1.9**
TLY	**Talaya**	**25.63**	**1**	LR	LR	02 56 28.1	
	comp=Z,96nm,21.3s,baz=172,slow=39						
TLY	**Talaya**	**25.63**	**1**	⇑*e*P	**P**	**02 45 32.7**	**+2.4**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHLS	**Shalkode**	**25.78**	**318**	*e*P	**P**	**02 45 29.6**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SHLS	**Shalkode**	**25.78**	**318**	*e*P	**P**	**02 45 29.6**	**-2.3**
	comp=Z,9.1nm,1.2s						
ZSN	**Zaisan**	**25.79**	**331**	*e*P	**P**	**02 45 32.1**	**+0.3**
ZSN	**Zaisan**	**25.79**	**331**	*e*P	**P**	**02 45 32.1**	**+0.3**
PDGK	**Podgornoye**	**25.86**	**318**	P	**P**	**02 45 31.8**	**-0.9**
PDGK	**Podgornoye**	**25.86**	**318**	P	**P**	**02 45 31.8**	**-0.9**
UZB	**Uzynbulak**	**26.05**	**317**	*e*P	**P**	**02 45 34.4**	**+0.1**
UZB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
UZB	**Uzynbulak**	**26.05**	**317**	*e*P	**P**	**02 45 34.5**	**+0.1**
	comp=Z,8.1nm,1.2s						
PRZ	**Przheval'sk**	**26.08**	**315**	P	**P**	**02 45 34.4**	**-0.3**
PRZ				pmax	pmax		
	comp=Z,18nm,0.8s						
PRZ	**Przheval'sk**	**26.08**	**315**	P	**P**	**02 45 34.4**	**-0.3**
PRZ				IAmb	IAmb	02 45 40.5	
	comp=Z,18nm,0.8s						
TARG	**Taragay, Kyrgy**	**26.09**	**313**	P	**P**	**02 45 33.4**	**-1.6**
TARG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TARG	**Taragay, Kyrgy**	**26.09**	**313**	P	**P**	**02 45 33.4**	**-1.6**
TARG				IAmb	IAmb	02 45 41.0	
	comp=Z,10nm,1.0s						
TARG	**Taragay, Kyrgy**	**26.09**	**313**	P	**P**	**02 45 36.0**	**+0.9**
MK31	**Makanchi Array**	**26.52**	**327**	*d i*P	**P**	**02 45 39.3**	**+0.9**
MKAR	**Makanchi Array**	**26.52**	**327**	P	**P**	**02 45 39.0**	**+0.5**
	comp=Z,4.6nm,0.7s,baz=129,slow=9.6,SNR=31						
MKAR				PcP	**PcP**	**02 49 02.1**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=116,slow=5.5,SNR=6.2						
MKAR				ScP	**ScP**	**02 52 41.5**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=133,slow=5.3,SNR=3.9						
MK

comp=Z,19nm,0.9s
MAKZ Makanchi 26.68 327 P P 02 45 39.1 -0.8
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 26.68 327 P 02 45 39.1 -0.8
MAKZ Makanchi 26.68 327 P P 02 45 40.9 +1.0
KDJ Kajisay 26.69 314 P P 02 45 39.4 -0.8
KDJ pmax pmax
comp=Z,13nm,1.0s
KDJ Kajisay 26.69 314 P P 02 45 39.4 -0.8
KDJ IAmb IAmb 02 45 46.2
comp=Z,13nm,1.0s
NIL Nilore 26.94 294 P P 02 45 41.9 -0.5
NIL pmax pmax
comp=Z,12nm,0.8s
NIL Nilore 26.94 294 P 02 45 41.9 -0.5
NIL IAmb IAmb 02 45 47.9
comp=Z,12nm,0.8s
NIL Nilore 26.94 294 P P 02 45 42.8 +0.4
NRN Naryn 27.15 311 P P 02 45 43.4 -1.2
NRN pmax pmax
comp=Z,6.0nm,0.7s
NRN Naryn 27.15 311 P P 02 45 43.4 -1.2
NRN IAmb IAmb 02 45 52.4
comp=Z,5.5nm,0.7s
MDOK Medeo 27.28 315 *eP* **P 02 45 45.7 +0.2**
MDOK Medeo 27.28 315 *eP* **P 02 45 45.8 +0.2**
TNSS Tian-Shan 27.28 315 *eP* **P 02 45 45.9 +0.1**
TNSS Tian-Shan 27.28 315 *eP* **P 02 45 46.0 +0.1**
AAA Alma-Ata 27.39 315 *eP* **P 02 45 46.6 +0.2**
AAA Alma-Ata 27.39 315 *eP* **P 02 45 46.7 +0.3**
TDK Taldyqorghan 27.46 320 *eP* **P 02 45 47.1 +0.2**
TDK Taldyqorghan 27.46 320 *eP* **P 02 45 47.1 +0.2**
BOOM Boomskoye usch 27.67 313 P P 02 45 47.7 -1.3
BOOM pmax pmax
comp=Z,8.0nm,1.2s
BOOM Boomskoye usch 27.67 313 P P 02 45 47.7 -1.3
BOOM IAmb IAmb 02 46 20.8
comp=Z,7,8nm,1.2s
BOOM Boomskoye usch 27.67 313 P P 02 45 49.8 +0.7
PALK Pallekele 28.35 233 LR LR 02 57 05.1
comp=Z,86nm,21.9s,baz=113,slow=36
AAK Ala-Archa 28.69 313 LR LR 02 59 04.7
comp=Z,240nm,19.8s,baz=122,slow=40
AAK Ala-Archa 28.69 313⇓ *eP* **P 02 45 59.2 +1.1**
AAK pmax pmax
comp=Z,9.0nm,2.3s
AAK Ala-Archa 28.69 313 P P 02 45 57.1 -1.0
MANEM Manem 28.96 301 P P 02 45 59.9 -0.8
MANEM IAmb IAmb 02 46 10.7
comp=Z,33nm,1.2s
SGDS Sogindy 28.97 314 *eP* **P 02 46 00.7 +0.3**
USA0B Ussuriysk Arra 29.55 45 *eP* **P 02 46 07.6 +2.1**
USRK Ussuriysk Ar. 29.55 45 P P 02 46 06.1 +0.6
comp=Z,2.0nm,0.8s,baz=253,slow=13,SNR=4.1
USRK LR LR 02 58 17.7
comp=Z,97nm,18.0s,baz=191,slow=37
comp=Z,2.0nm,0.8s
BTLS Baital 30.09 317 *eP* **P 02 46 10.5 +0.2**
BTLS Baital 30.09 317 *eP* **P 02 46 10.6 +0.2**
GAR Garm 30.37 303 P P 02 46 12.5 -0.6
KBL Kabul 30.52 294 P P 02 46 13.5 -1.0
KBL pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 30.52 294 P P 02 46 13.5 -1.0
KBL IAmb IAmb 02 46 22.2
comp=Z,4.6nm,0.8s
KURBB Kurchatov Arra 30.96 329 P P 02 46 18.9 +1.0
comp=Z,9.2nm,0.8s,baz=134,slow=10.0,SNR=65
KURBB PcP **PcP 02 49 11.9 -2.1**
comp=Z,2.4nm,0.2s,baz=128,slow=2.7,SNR=4.1
comp=Z,9.2nm,0.8s
KURK Kurchatov 30.99 329*d iP* **P 02 46 19.0 +0.9**
KURK pmax pmax
comp=Z,28nm,0.9s
KURK Kurchatov 30.99 329 P P 02 46 17.8 -0.3
KURK Kurchatov 30.99 329 P P 02 46 19.1 +1.0
ZAA0 Zalesovo Array 31.03 339 P P 02 46 17.2 -1.2
ZALV Zalesovo Beam 31.03 339 P P 02 46 19.3 +0.8
comp=Z,15nm,0.9s,baz=145,slow=8.8,SNR=48
ZALV PcP **PcP 02 49 11.8 -2.2**
comp=Z,0.6nm,0.6s,baz=151,slow=3.3,SNR=2.2
ZALV LR LR 02 59 30.9
comp=Z,80nm,18.9s,baz=156,slow=38
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 31.03 339 P 02 46 17.4 -1.1
CHGR Chuyangaron 31.16 302*de***P P 02 46 20.3 +0.3**
CHGR pmax pmax
comp=Z,12nm,0.7s
CHGR Chuyangaron 31.16 302 P P 02 46 19.3 -0.7
CHGR Chuyangaron 31.16 302 P P 02 46 20.5 +0.5
KK31 Karatay Array 31.55 311 P P 02 46 22.4 -0.9
KK31 pmax pmax
comp=Z,1.0nm,0.8s
KK31 Karatay Array 31.55 311 P P 02 46 22.4 -0.9
KKAR Karatay Array 31.55 311 P P 02 46 22.2 -1.1
KKAR Karatay Array 31.55 311 P P 02 46 22.1 -1.1
MJAR Matsushiro Arr 31.61 62 LR LR 03 00 21.5
comp=Z,139nm,18.2s,baz=254,slow=39
SHAA Shahritus 31.73 300 P P 02 46 24.0 -0.9
SHAA IAmb IAmb 02 46 26.3
comp=Z,11nm,0.7s
CHM Chimkent 31.90 309 *eP* **P 02 46 26.6 +0.3**
CHM Chimkent 31.90 309 *eP* **P 02 46 26.6 +0.3**
BRLS Boroldaу 31.98 311 *eP* **P 02 46 27.6 +0.5**
BRLS Boroldaу 31.98 311 *eP* **P 02 46 27.6 +0.5**
KLR Kul'dur 32.09 36 LR LR 03 00 09.2
comp=Z,98nm,18.6s,baz=252,slow=38
BVAR Borovoye Array 36.40 327 P P 02 47 06.1 +0.9
comp=Z,8.8nm,0.8s,baz=119,slow=9.7,SNR=23
BVAR PcP **PcP 02 49 28.2 -1.1**
comp=Z,1.5nm,0.6s,baz=134,slow=4.3,SNR=4.3
comp=Z,8.8nm,0.8s
BORK Borovoye 36.45 327*d iP* **P 02 47 06.4 +0.8**
BORK pmax pmax
comp=Z,14nm,0.9s
BORK Borovoye 36.45 327 P P 02 47 05.2 -0.4
BORK IAmb IAmb 02 47 07.3
comp=Z,9.9nm,0.8s
AB31 Akbulak array 40.58 316 P P 02 47 40.5 +0.1
ABKAR Akbulak array 40.58 316 P P 02 47 40.3 -0.1
SVE Sverdlovsk 43.18 327 *eP* **P 02 48 03.0 +1.5**
ARTI Arti 44.11 326 LR LR 03 08 06.8
comp=Z,75nm,19.9s,baz=124,slow=38
ARTI Arti 44.11 326*d iP* **P 02 48 09.4 +0.4**
ARTI pmax pmax
comp=Z,6.0nm,0.7s
ARTI Arti 44.11 326 P P 02 48 08.3 -0.6
ARTI IAmb IAmb 02 48 10.3
comp=Z,8.3nm,0.7s
NRIK Noril'sk 44.31 352 P P 02 48 11.2 +0.8
comp=Z,5.9nm,0.5s,baz=158,slow=8.9,SNR=7.3
NRIK LR LR 03 07 19.7
comp=Z,69nm,18.9s,baz=184,slow=37
comp=Z,5.9nm,0.5s
NRIK Noril'sk 44.31 352*d iP* **P 02 48 10.8 +0.4**
NRIK pmax pmax
comp=Z,8.0nm,0.8s
NRIK Noril'sk 44.31 352 P P 02 48 10.3 -0.2
NRIK IAmb IAmb 02 48 11.8
comp=Z,7.5nm,0.8s
TIXI Tiksi 47.89 11 LR LR 03 09 00.2
comp=Z,46nm,18.9s,baz=220,slow=36
PETK Petropavlovsk- 48.51 41 LR LR 03 10 01.6
comp=Z,65nm,19.2s,baz=295,slow=37
BELG Belogornoye 48.92 318*d iP* **P 02 48 47.0 +0.2**
BELG pmax pmax
comp=Z,5.0nm,0.8s
KIRV Kirov 49.41 326*d iP* **P 02 48 50.7 +0.3**
KIV Kislovodsk 51.51 307 *eP* **P 02 49 07.0 +0.3**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,61nm,17.0s
KIV Kislovodsk 51.51 307 P P 02 49 05.8 -0.9
KIV IAmb IAmb 02 49 07.9
comp=Z,14nm,1.1s
KIV Kislovodsk 51.51 307 P P 02 49 07.2 +0.5
SHA1 Shidzhatmaz 51.53 306*de* **P P 02 49 07.4 +0.3**
EPOS Posof 51.55 303 P P 02 49 08.4 +1.3
RAYN Ar Rayn 52.02 280 P P 02 49 10.1 -0.6
RAYN pmax pmax
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 52.02 280 P P 02 49 10.1 -0.6
RAYN IAmb IAmb 02 49 11.1
comp=Z,4.8nm,0.8s
RAYN Ar Rayn 52.02 280 P P 02 49 10.1 -0.6
GURO Guroymak-BITLI 52.28 300 P P 02 49 12.6 0.0
GURO IAmb IAmb 02 49 14.8
comp=Z,5.4nm,0.8s
VRH Novokhopyorsk 52.40 316 *eP* **P 02 49 11.6 -1.5**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 54.01 316 *eP* **P 02 49 23.1 -1.8**
VSR pmax pmax
comp=Z,5.0nm,0.8s
LPSR Galich'ya Gora 54.22 317 *eP* **P 02 49 25.5 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
WB0 Warramunga Arr 54.71 143 P P 02 49 31.9 +1.5
WB0 IAmb IAmb 02 49 40.6
comp=Z,8.8nm,1.4s
KLMR Klimovskoe 54.81 328 *eP* **P 02 49 29.2 -1.4**
KLMR pmax pmax
comp=Z,23nm,1.4s
WRA Warramunga Arr 54.83 143 P P 02 49 31.6 +0.3
comp=Z,1.2nm,0.7s,baz=332,slow=8.3,SNR=11
comp=Z,1.2nm,0.7s
WRA Warramunga Arr 54.83 143 P P 02 49 32.4 +1.1
WRA pmax pmax
comp=Z,1.0nm,1.4s
WRA Warramunga Arr 54.83 143 P P 02 49 32.4 +1.1
MOS Moscow 55.19 321 *eP* **P 02 49 33.9 +0.5**
OBN Obninsk 55.75 320*de* **P P 02 49 38.2 +0.7**
OBN *e* 02 51 40.9
OBN *eS* **S 02 57 22.7 -1.0**
OBN pmax pmax
comp=Z,21nm,1.7s
OBN MLR MLR
comp=Z,49nm,17.0s
ASAR Alice Springs 57.68 146 P P 02 49 53.2 +1.7
comp=Z,0.6nm,0.5s,baz=328,slow=7.0,SNR=8.0
comp=Z,0.6nm,0.5s
LVZ Lovozero 58.08 335 P P 02 49 52.7 -1.1
LVZ pmax pmax
comp=Z,7.0nm,0.9s
LVZ Lovozero 58.08 335 P P 02 49 52.7 -1.1
LVZ IAmb IAmb 02 50 08.2
comp=Z,6.8nm,0.9s
LVZ Lovozero 58.08 335 P P 02 49 53.2 -0.6
KIRS Kirsehir-Merke 58.49 301⇓ **P P 02 49 56.6 -0.6**
BR131 Keskin Array S 58.61 302 P P 02 49 57.3 -0.8
BR131 pmax pmax
comp=Z,7.0nm,1.4s
BR131 Keskin Array S 58.61 302 P P 02 49 57.3 -0.8
BR131 IAmb IAmb 02 50 11.1
comp=Z,7.0nm,1.4s
BRTR Keskin Array B 58.61 302 P P 02 49 57.9 -0.3
comp=Z,1.4nm,0.7s,baz=116,slow=6.5,SNR=10
comp=Z,1.4nm,0.7s
BRTR Keskin Array B 58.61 302 P P 02 49 57.4 -0.7
BRTR Keskin Array B 58.61 302 P P 02 49 57.4 -0.7
KKUL Konya-Kulu 59.25 302 P P 02 50 02.8 +0.2
EIL Elat 59.60 290 P P 02 50 04.2 -0.8
MSF Maaselka 60.06 333 P P 02 50 06.8 -0.7
AK09 Malin Array Si 60.27 315 P P 02 50 10.3 +1.0
AKASG Malin Array Be 60.30 315 P P 02 50 09.0 -0.4
comp=Z,3.7nm,0.5s,baz=72,slow=6.7,SNR=22
AKASG LR LR 03 18 20.3
comp=Z,60nm,19.3s,baz=62,slow=38
comp=Z,3.7nm,0.5s
AKASG Malin Array Be 60.30 315 P P 02 50 08.6 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 60.30 315 P P 02 50 08.6 -0.9
AKBB Malin Array Si 60.30 315*de* **P P 02 50 08.9 -0.6**
AKBB pmax pmax
comp=Z,8.0nm,0.6s
AKBB Malin Array Si 60.30 315 P 02 50 08.5 -1.0
AKBB Malin Array Si 60.30 315 P P 02 50 08.1 -1.4
KIEV Kiev 60.32 315⇑ **P P 02 50 08.8 -0.8**
KIEV Kiev 60.32 315⇑ **P P 02 50 08.8 -0.8**
KIEV Kiev 60.32 315 P P 02 50 09.2 -0.3
MNK Minsk 60.78 320 *i P* **P 02 50 12.8 +0.1**
comp=E,9.0nm,0.7s
MNK *i P* **P 02 50 12.8 +0.1**
comp=N,7.0nm,0.8s
MNK *i P* **P 02 50 12.8 +0.1**
comp=Z,8.0nm,0.7s,baz=86
MNK *i* PcP **PcP 02 50 57.1 +0.6**
MNK *i* PP **PP 02 52 26.2 -0.2**
MNK *i* PPP PPP 02 53 49.2
MNK *i* S **S 02 58 29.3 -0.2**
MNK *i* ScS **ScS 03 00 03.6 +0.3**
MNK *i* SS **SS 03 02 28.8 +0.8**
MNK *i* SSS SSS 03 05 13.5
MNK *i* LQ LQ 03 12 05.8
MNK *i* LR LR 03 16 42.4
MNK *i* LRM MLR 03 18 32.4
comp=E,115nm,22.3s
MNK *i* LRM MLR 03 18 32.4
comp=N,134nm,21.6s
MNK *i* LRM MLR 03 18 36.8
comp=Z,92nm,20.8s
MNK Minsk 60.78 320 *i P* **P 02 50 12.7 +0.1**
MNK *i* 02 50 57.0
MNK *i* 02 52 26.2
MNK *i* S **S 02 58 29.3 -0.2**
MNK *i* 03 00 03.6
MNK *i* SS **SS 03 02 28.8 +0.8**
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK pmax pmax
comp=E,9.0nm,0.7s
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK MLR MLR
comp=E,115nm,22.0s
MNK MLR MLR
comp=N,134nm,22.0s
MNK MLR MLR
comp=Z,92nm,21.0s
KEV Kevo 61.04 337 P P 02 50 14.2 0.0
SGF Sodankyl 61.12 335 P P 02 50 14.6 -0.1
VSU Vasula 61.15 324*d iP* **P 02 50 14.2 -0.9**
VSU pmax pmax
comp=Z,16nm,0.7s
VSU Vasula 61.15 324 P P 02 50 14.3 -0.9
SORM Soroca 61.17 312⇑ **P P 02 50 15.2 -0.2**
SORM Soroca 61.17 312⇑ **P P 02 50 15.2 -0.2**
MI28 Mi28,Pidlybu 61.26 316 P P 02 50 14.2 -1.8
RNF Rovaniemi 61.30 334 P P 02 50 16.0 0.0
LUBAR Lubar, Ukraine 61.33 315 P P 02 50 15.9 -0.6
FIA1 FINESS Array S 61.34 328 P P 02 50 15.8 -0.6
FINES FINESS Array B 61.34 328 P P 02 50 16.3 -0.1
comp=Z,6.8nm,0.6s,baz=88,slow=7.2,SNR=48
comp=Z,6.8nm,0.6s
OUL Oulu 61.35 332 P P 02 50 16.2 -0.1
ARBE Arbavere 61.49 325 P P 02 50 17.7 +0.3
ARCES ARCESS Array B 61.56 337 P P 02 50 17.2 -0.5
comp=Z,0.8nm,0.4s,baz=84,slow=6.9,SNR=13
comp=Z,0.8nm,0.4s
ELL Elmali 62.06 299 P P 02 50 21.0 -0.8
ELL pmax pmax
comp=Z,27nm,1.3s
ELL Elmali 62.06 299 P 02 50 21.0 -0.8
RNPP9 Sopachiv 62.31 316 P P 02 50 22.6 -0.5
KMPD K-Podol'skiy 62.36 313 P P 02 50 22.4 -1.0
KTK1 Kautokeino 62.36 336 *eP* **P 02 50 23.0 -0.1**
TESR Tescani 62.56 311 P P 02 50 24.6 -0.2
VRI Vrincioaia 62.61 310⇑ **P P 02 50 24.9 -0.3**
VRI Vrincioaia 62.61 310⇑ **P P 02 50 24.9 -0.3**
VRI Vrincioaia 62.61 310 P P 02 50 26.0 +0.8
comp=Z,16nm,1.0s
VRI Vrincioaia 62.61 310 P P 02 50 25.7 +0.5
MTSE Matsula 62.66 325 P P 02 50 25.3 +0.1
PLOR Plostina 62.67 310⇑ **P P 02 50 26.6 +1.0**
PLOR Plostina 62.67 310⇑ **P P 02 50 26.6 +1.0**
PABE Paberze 62.93 321 P P 02 50 26.4 -0.6
PABE Paberze 62.93 321 P P 02 50 27.4 +0.3
BALY Balya 63.16 303 P P 02 50 28.6 -0.5
MLR Muntele Rosu 63.22 310⇓ **P P 02 50 30.7 +1.3**
MLR Muntele Rosu 63.22 310 P P 02 50 29.3 -0.1
MLR pmax pmax
comp=Z,10.0nm,0.8s
MLR Muntele Rosu 63.22 310 P 02 50 29.3 -0.1
MLR Muntele Rosu 63.22 310 P P 02 50 30.2 +0.8
comp=Z,14nm,1.0s
MLR Muntele Rosu 63.22 310 P P 02 50 30.7 +1.3
BURAR Bucovina Array 63.33 312⇑ **P P 02 50 29.9 -0.2**
BURAR Bucovina Array 63.33 312⇑ **P P 02 50 29.9 -0.2**
BURAR Bucovina Array 63.33 312 P P 02 50 29.9 -0.2
BURAR IAmb IAmb 02 50 30.9
comp=Z,2.0nm,0.7s
BUR08 Bucovina Ar. S 63.34 312 P 02 50 30.1 0.0
BUR08 IAmb IAmb 02 50 30.8
comp=Z,2.4nm,0.8s
JETT Jettan, Norway 63.35 337 *eP* **P 02 50 29.9 +0.1**
SUW Suwalki 63.58 320 *eP* **P 02 50 31.4 -0.1**
SUW Suwalki 63.58 320 P P 02 50 30.6 -0.8
SUW Suwalki 63.58 320 P P 02 50 30.6 -0.8
VOIR 63.85 310⇑ **P P 02 50 33.7 +0.2**
VOIR 63.85 310⇑ **P P 02 50 33.7 +0.2**
TRO Tromso 63.86 337 *eP* **P 02 50 32.4 -0.7**
ARCR ARCALIA 64.01 312⇑ **P P 02 50 37.7 +3.3**
ARR Arges 64.15 310⇑ **P P 02 50 34.9 -0.6**
ARR Arges 64.15 310 P P 02 50 35.3 -0.2
KWP Kalwaria Pacla 64.60 315 *eP* **P 02 50 38.9 +0.6**
KWP Kalwaria Pacla 64.60 315 P P 02 50 38.3 0.0
comp=Z,28nm,0.8s
MARR Marisel-Cluj 64.92 312⇓ **P P 02 50 41.4 +0.9**
DRGR 65.17 312⇑ **P P 02 50 41.8 -0.3**
DRGR 65.17 312⇑ **P P 02 50 41.8 -0.3**
DRGR 65.17 312 P P 02 50 42.7 +0.6
DEV Deva 65.23 311⇑ **P P 02 50 43.6 +1.2**
DEV Deva 65.23 311⇑ **P P 02 50 43.6 +1.2**
DEV Deva 65.23 311 P P 02 50 43.4 +1.0
STEI Steigen 65.39 335 *eP* **P 02 50 41.2 -1.7**
FAUS Fauske 65.45 335 *eP* **P 02 50 42.0 -1.4**
HERR Herculane 65.79 310⇑ **P P 02 50 47.0 +1.0**
MOR8 Moi Rana 65.98 334 *eP* **P 02 50 45.6 -1.3**
SIRR Siria 65.99 311⇑ **P P 02 50 48.2 +0.8**
PAIG Paliouri 66.07 304 P P 02 50 47.4 -0.5
RAUS Rausandaksla 66.09 334 *eP* **P 02 50 47.1 -0.5**
BZS Buzias 66.17 311 P P 02 50 48.5 0.0
NIE Niedzica 66.18 315 *eP* **P 02 50 48.1 -0.5**
NIE Niedzica 66.18 315 P P 02 50 49.3 +0.7
MDVR Moldovita 66.30 310⇑ **P P 02 50 49.5 +0.1**
OJC Ojcow 66.33 316 *eP* **P 02 50 49.9 +0.5**
OJC Ojcow 66.33 316 P P 02 50 49.2 -0.2
OJC Ojcow 66.33 316 P P 02 50 49.2 -0.2
VAGH Vaagaholmen 66.34 334 *eP* **P 02 50 48.5 -0.7**
KONS Konsvik 66.44 334 *eP* **P 02 50 49.2 -0.7**
KONS IAmb IAmb 02 50 53.0
comp=Z,56nm,2.0s
STOK Stokkvaagen 66.52 334 *eP* **P 02 50 49.6 -0.7**
LEIR Leirfjorden 66.52 334 *eP* **P 02 50 49.6 -0.7**
LEIR IAmb IAmb 02 50 52.1
comp=Z,66nm,2.0s
IMMV Iera Moni Meta 67.03 299 P P 02 50 54.5 +0.3
NSS Namsos 67.32 332 *eP* **P 02 50 56.3 +0.8**
HFS Hagfors 67.53 327 P P 02 50 56.5 -0.4
comp=Z,3.8nm,0.5s,baz=64,slow=3.4,SNR=25
comp=Z,3.8nm,0.5s
STEB Steborice 67.66 316 *eP* **P 02 50 58.3 +0.4**
MORC Moravsky Berou 67.84 316⇑ **P P 02 50 59.6 +0.5**
MORC Moravsky Berou 67.84 316 P P 02 50 58.9 -0.2
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 67.84 316 P 02 50 58.9 -0.2
MORC IAmb IAmb 02 51 01.1
comp=Z,6.2nm,1.0s
MORC Moravsky Berou 67.84 316 *eP* **P 02 50 58.6 -0.5**
MORC Moravsky Berou 67.84 316 P P 02 50 59.1 0.0
PHP Peshkopia 67.98 307 P P 02 50 60.0 -0.2
JAVC Velka Javorina 67.99 315 *eP* **P 02 51 01.3 +1.2**
KBN Korca 68.02 306 P P 02 50 58.7 -1.7
MORH Mrgy, Hungar 68.03 312 P P 02 51 00.6 +0.2
ITM Ithomi 68.13 302 P P 02 50 59.4 -1.8
KRLC Kraliky 68.25 316 *eP* **P 02 51 02.0 +0.4**
KRLC Kraliky 68.25 316 *eP* **P 02 51 02.0 +0.4**
KRLC Kraliky 68.25 316 P P 02 51 02.6 +0.9
KSP Ksiaz 68.35 317 *eP* **P 02 51 02.8 +0.6**
NC602 NORSAR Array S 68.42 328 *eP* **P 02 51 01.4 -1.0**
DPC Dobruska-Polom 68.46 317 *eP* **P 02 51 02.8 -0.2**
DPC Dobruska-Polom 68.46 317 *eP* **P 02 51 02.8 -0.2**
DPC Dobruska-Polom 68.46 317 P P 02 51 04.0 +1.0
OSTC Ostas 68.47 317 *eP* **P 02 51 02.6 -0.4**
OSTC Ostas 68.47 317 *eP* **P 02 51 02.6 -0.4**
NB2 NORSAR Subarra 68.50 328 P P 02 51 02.3 -0.7
comp=Z,2.7nm,0.6s,baz=75,slow=6.5
NB2 NORSAR Subarra 68.50 328 P P 02 51 02.3 -0.7
NOA NORSAR Array B 68.50 328 P P 02 51 02.1 -0.9
comp=Z,4.3nm,0.7s,baz=75,slow=6.3,SNR=17
NOA LR LR 03 22 54.4
comp=Z,32nm,20.2s,baz=85,slow=38
comp=Z,4.3nm,0.7s
VRAC Vranov 68.56 315 LR LR 03 24 42.1
comp=Z,41nm,20.4s,baz=109,slow=39
VRAC Vranov 68.56 315⇓ **P P 02 51 04.6 +1.0**
VRAC Vranov 68.56 315⇓ **P P 02 51 04.6 +1.0**
VRAC Vranov 68.56 315 *eP* **P 02 51 03.9 +0.3**
VRAC Vranov 68.56 315 P P 02 51 04.7 +1.1
UPC Upice 68.61 317 *eP* **P 02 51 04.9 +1.0**
UPC Upice 68.61 317 *eP* **P 02 51 04.9 +1.0**
UPC Upice 68.61 317 P P 02 51 04.7 +0.8
PDG Podgorica 68.63 308⇑ **P P 02 51 04.1 0.0**
PDG Podgorica 68.63 308 P P 02 51 03.4 -0.7
PDG Podgorica 68.63 308 P P 02 51 03.7 -0.3
KRUC Moravsky 68.75 315 *eP* **P 02 51 05.0 +0.2**
KRUC Moravsky 68.75 315 P P 02 51 05.7 +0.9
OSL Oslo 69.02 327 *eP* **P 02 51 06.4 +0.2**
RONA Rosalia, Austr 69.19 314 *eP* **P 02 51 07.7 +0.2**
comp=Z,4.6nm,1.0s
WINA Alland / Wiene 69.22 314 *eP* **P 02 51 08.3 +0.6**
comp=Z,1.5nm,0.6s
TREC Trest 69.26 316 P P 02 51 09.2 +1.2
CONA Conrad Observa 69.40 314 *eP* **P 02 51 09.3 +0.4**
comp=Z,7.6nm,1.0s
KONO Kongsberg 69.65 327 *eP* **P 02 51 10.4 +0.3**
MOL Molde 69.75 331 *eP* **P 02 51 10.8 +0.2**
BRG Berggiesshubel 69.78 318 *eP* **P 02 51 12.1 +1.0**
comp=Z,5.1nm,0.7s,baz=71,slow=6.0
BRG Berggiesshubel 69.78 318 P P 02 51 11.6 +0.5
BRG Berggiesshubel 69.78 318 *i P* **P 02 51 11.5 +0.5**
BRG Amp 02 51 12.3
comp=Z,5.1nm,0.7s
ARSA Arzberg 69.82 314 *eP* **P 02 51 11.2 -0.3**
comp=Z,4.6nm,0.9s
ZVC Zvikov 70.03 316 *eP* **P 02 51 13.1 +0.4**
HSKC Hora Svate Kat 70.16 317 *eP* **P 02 51 14.2 +0.7**
HSKC Hora Svate Kat 70.16 317 P P 02 51 14.2 +0.7
SOKA Soboth 70.30 313 *i P* **P 02 51 14.5 0.0**
comp=Z,7.0nm,1.0s,SNR=7.1
MOA Molln 70.45 314 *eP* **P 02 51 15.6 +0.2**
comp=Z,3.5nm,0.7s
MOA Molln 70.45 314 P P 02 51 15.2 -0.1
SESA Seetaler Alpe, 70.48 314 *i P* **P 02 51 15.7 0.0**
comp=Z,13nm,0.8s,SNR=6.5
KHC Kasperske Hory 70.51 316⇑ *iP* **P 02 51 16.4 +0.7**
KHC pmax pmax
comp=Z,3.0nm,0.8s
KHC Kasperske Hory 70.51 316 P P 02 51 15.1 -0.5
KHC IAmb IAmb 02 51 17.0
comp=Z,2.9nm,0.8s
KHC Kasperske Hory 70.51 316 *eP* **P 02 51 16.1 +0.5**
KHC Kasperske Hory 70.51 316 P P 02 51 16.2 +0.5
GEC2 GERESS Array S 70.52 316 P 02 51 15.2 -0.5
GEC2 IAmb IAmb 02 51 17.1
comp=Z,4.4nm,0.7s
GEC2 GERESS Array S 70.52 316 *eP* **P 02 51 16.8 +1.0**
comp=Z,4.1nm,0.7s,baz=71,slow=6.0
GERES GERESS Array B 70.52 316 P P 02 51 16.2 +0.4
comp=Z,3.1nm,0.6s,baz=69,slow=4.6,SNR=44
comp=Z,3.1nm,0.6s
GERES GERESS Array B 70.52 316 P P 02 51 15.4 -0.4
OBKA Obir 70.67 313 *eP* **P 02 51 16.6 -0.2**
comp=Z,6.0nm,1.1s
OBKA Obir 70.67 313 P P 02 51 17.2 +0.5
TANN Tannenbergstha 70.81 317 *eP* **P 02 51 18.5 +1.0**
comp=Z,3.7nm,0.7s,baz=71,slow=6.0
TANN Tannenbergstha 70.81 317 P P 02 51 17.9 +0.4
NKC Novy Kostel 70.88 317 P P 02 51 18.3 +0.5
BIOA Bad Ischl, Aus 70.91 314 *eP* **P 02 51 18.0 -0.1**
comp=Z,4.8nm,0.6s
WET Wettzell 70.94 316 *eP* **P 02 51 19.6 +1.3**
comp=Z,4.7nm,0.9s,baz=71,slow=6.0
WET Wettzell 70.94 316 P P 02 51 18.9 +0.6
FLTG Flechtingen 70.96 320 *eP* **P 02 51 18.8 +0.5**
comp=Z,6.2nm,1.1s,baz=71,slow=6.0
PLN Plauen 70.98 317 *eP* **P 02 51 19.3 +0.9**
comp=Z,1.2nm,0.8s,baz=71,slow=6.0

NEUB	**Neuenburg**	**70.98**	**318**	*eP*	**P**	**02 51 19.4**	**+1.0**
	comp=Z,16nm,1.0s,baz=71,slow=6.0						
BSEG	**Bad Segeberg**	**70.99**	**321**	*eP*	**P**	**02 51 20.0**	**+1.6**
	comp=Z,6.6nm,0.8s,baz=71,slow=6.0						
K17K	**Iditarod**	**71.01**	**29**		**P**	**02 51 19.0**	**+0.6**
WIMM	**Wimmelburg**	**71.05**	**319**	P	**P**	**02 51 19.4**	**+0.6**
ROTZ	**Rotzenmuhle**	**71.17**	**317**	*eP*	**P**	**02 51 20.9**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=71,slow=6.0						
MYKA	**Terra Mystica**	**71.23**	**313**	*eP*	**P**	**02 51 19.8**	**-0.4**
	comp=Z,3.0nm,0.7s						
MOX	**Moxa**	**71.25**	**318**	*eP*	**P**	**02 51 21.1**	**+1.0**
	comp=Z,3.4nm,1.1s,baz=71,slow=6.0						
MOX	**Moxa**	**71.25**	**318**	P	**P**	**02 51 20.4**	**+0.2**
KBA	**Koelnbreinsper**	**71.29**	**314**	*eP*	**P**	**02 51 20.2**	**-0.4**
	comp=Z,4.3nm,0.5s						
KBA	**Koelnbreinsper**	**71.29**	**314**	P	**P**	**02 51 20.3**	**-0.3**
ASSE	**Asse, Remlinge**	**71.35**	**319**	*eP*	**P**	**02 51 21.5**	**+1.0**
	comp=Z,6.4nm,1.0s,baz=71,slow=6.0						
DRE	**Drenchia**	**71.37**	**313**	P	**P**	**02 51 20.7**	**-0.3**
TIP	**Timpagrande**	**71.41**	**305**	P	**P**	**02 51 20.8**	**-0.6**
G21K	**Allakaket**	**71.56**	**24**	P	**P**	**02 51 21.5**	**-0.2**
G21K				IAmb	IAmb	02 51 34.3	
	comp=Z,3.1nm,1.0s						
LESA	**Schwarzleotal**	**71.61**	**314**	*i* P	**P**	**02 51 22.2**	**-0.3**
	comp=Z,3.8nm,0.4s,SNR=6.5						
CLZ	**Clausthal**	**71.62**	**319**	*eP*	**P**	**02 51 23.6**	**+1.3**
	comp=Z,7.9nm,0.8s,baz=71,slow=6.0						
CLZ	**Clausthal**	**71.62**	**319**	P	**P**	**02 51 23.1**	**+0.8**
GRB5	**Grafenberg Arr**	**71.70**	**316**	P	**P**	**02 51 24.0**	**+1.1**
GRA3	**Grafenberg Arr**	**71.72**	**317**	P	**P**	**02 51 23.7**	**+0.7**
GRF	**Grafenberg Arr**	**71.80**	**317**	*eP*	**P**	**02 51 25.0**	**+1.5**
	comp=Z,5.4nm,0.8s,baz=71,slow=6.0						
GRFO	**Grafenberg**	**71.80**	**317**	P	**P**	**02 51 24.1**	**+0.7**
GRC4	**Grafenberg Arr**	**71.81**	**316**	P	**P**	**02 51 24.3**	**+0.8**
ABTA	**Abfaltersbach**	**71.93**	**314**	*eP*	**P**	**02 51 23.5**	**-0.8**
	comp=Z,3.5nm,0.6s						
GTTG	**Gottingen**	**71.95**	**319**	*eP*	**P**	**02 51 25.4**	**+1.1**
	comp=Z,6.9nm,0.8s,baz=71,slow=6.0						
UBBA	**Unterbreizbach**	**72.17**	**318**	*eP*	**P**	**02 51 26.4**	**+0.9**
	comp=Z,3.1nm,0.5s,baz=71,slow=6.0						
FUR	**Furstenfeldbru**	**72.26**	**315**	*eP*	**P**	**02 51 27.7**	**+1.5**
	comp=Z,19nm,0.7s,baz=71,slow=6.0						
WTTA	**Wattenberg**	**72.33**	**314**	*i* P	**P**	**02 51 26.6**	**-0.3**
	comp=Z,7.8nm,0.6s,SNR=9.2						
WTTA	**Wattenberg**	**72.33**	**314**	P	**P**	**02 51 26.8**	**-0.1**
WATA	**Walderalm**	**72.34**	**314**	*eP*	**P**	**02 51 26.5**	**-0.4**
	comp=Z,6.0nm,0.9s						
SQTA	**Sankt Quirin**	**72.62**	**314**	*i* P	**P**	**02 51 28.2**	**-0.4**
	comp=Z,11nm,0.6s,SNR=5.2						
MOTA	**Moosalm**	**72.64**	**315**	*eP*	**P**	**02 51 27.9**	**-0.9**
	comp=Z,8.3nm,0.7s						
E24K	**Your Creek**	**72.68**	**22**	P	**P**	**02 51 28.3**	**-0.2**
CGRP	**Cima Grappa**	**72.68**	**313**	P	**P**	**02 51 28.5**	**-0.5**
RETA	**Reutte**	**72.81**	**315**	*eP*	**P**	**02 51 29.4**	**-0.2**
	comp=Z,4.1nm,0.6s						
FETA	**Feichten**	**73.00**	**314**	*i* P	**P**	**02 51 30.5**	**-0.4**
	comp=Z,10.0nm,0.8s,SNR=16						
TNS	**Taunus Mts**	**73.31**	**318**	*eP*	**P**	**02 51 33.6**	**+1.1**
	comp=Z,5.3nm,0.9s,baz=71,slow=6.0						
STU	**Stuttgart**	**73.36**	**316**	*eP*	**P**	**02 51 33.9**	**+1.1**
	comp=Z,23nm,0.7s,baz=71,slow=6.0						
CAST	**Castle Rocks**	**73.36**	**27**	P	**P**	**02 51 33.1**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**73.43**	**314**		**P**	**02 51 33.2**	**-0.3**
FUORN				IAmb	IAmb	02 51 38.6	
	comp=Z,5.5nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**73.43**	**314**	P	**P**	**02 51 34.0**	**+0.4**
DAVA	**Damuels**	**73.45**	**315**	*eP*	**P**	**02 51 32.9**	**-0.5**
	comp=Z,7.7nm,1.4s						
SALO	**Salr**	**73.61**	**313**	P	**P**	**02 51 34.1**	**-0.2**
BFO	**Black Forest**	**74.05**	**316**	*eP*	**P**	**02 51 37.6**	**+0.8**
	comp=Z,5.1nm,1.0s,baz=71,slow=6.0						
TUE	**Stuetta**	**74.08**	**314**		**P**	**02 51 37.1**	**-0.2**
TUE				IAmb	IAmb	02 51 38.1	
	comp=Z,4.5nm,0.7s						
TUE	**Stuetta**	**74.08**	**314**	P	**P**	**02 51 37.1**	**-0.2**
COLA	**College**	**74.38**	**25**	*eP*	**P**	**02 51 39.2**	**+0.9**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ILAR	**Eielson Array**	**74.79**	**25**	P	**P**	**02 51 39.5**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=280,slow=4.9,SNR=4.5						
	comp=Z,0.3nm,0.5s						
WLF	**Walferdange**	**74.89**	**318**	P	**P**	**02 51 41.4**	**-0.2**
WLF				pmax	pmax		
	comp=Z,14nm,0.9s						
WLF	**Walferdange**	**74.89**	**318**	P	**P**	**02 51 41.4**	**-0.2**
WLF	**Walferdange**	**74.89**	**318**	*dP*	**P**	**02 51 42.3**	**+0.6**
	comp=Z,10.0nm,0.9s						
WLF	**Walferdange**	**74.89**	**318**	*eP*	**P**	**02 51 43.2**	**+1.6**
	comp=Z,14nm,0.9s,baz=71,slow=6.0						
WLF	**Walferdange**	**74.89**	**318**	P	**P**	**02 51 42.4**	**+0.8**
PRP	**Porcupine Dome**	**74.92**	**24**		**P**	**02 51 42.0**	**+0.3**
PRP				IAmb	IAmb	02 51 43.0	
	comp=Z,3.2nm,0.7s						
BOURR	**Bourrignon**	**75.09**	**316**	P	**P**	**02 51 43.3**	**+0.4**
SENIN	**Lac Senin/Sane**	**75.43**	**315**	P	**P**	**02 51 44.8**	**-0.4**
SENIN				IAmb	IAmb	02 51 52.0	
	comp=Z,3.2nm,0.7s						
BMRD	**Maredsous**	**75.47**	**319**	*dP*	**P**	**02 51 44.8**	**-0.1**
	comp=Z,3.9nm,0.9s						
KDAK	**Kodiak Island**	**75.56**	**32**	LR	LR	03 27 48.0	
	comp=Z,68nm,21.5s,baz=321,slow=38						
DOU	**Dourbes**	**75.65**	**319**	*dP*	**P**	**02 51 45.4**	**-0.6**
H27K	**Steamboat Moun**	**75.95**	**22**	P	**P**	**02 51 47.5**	**0.0**
H27K				IAmb	IAmb	02 51 55.7	
	comp=Z,3.5nm,1.1s						
I27K	**Kandik River**	**76.27**	**23**	P	**P**	**02 51 49.7**	**+0.4**
SCRK	**Sand Creek**	**76.28**	**25**	P	**P**	**02 51 49.0**	**-0.5**
BNI	**Bardonecchia**	**76.34**	**314**	P	**P**	**02 51 49.8**	**-0.4**
BNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BNI	**Bardonecchia**	**76.34**	**314**	P	**P**	**02 51 49.8**	**-0.4**
BNI				IAmb	IAmb	02 51 51.1	
	comp=Z,4.6nm,0.8s						
BNI	**Bardonecchia**	**76.34**	**314**	P	**P**	**02 51 50.2**	**0.0**
ISO	**Isola**	**76.44**	**313**	P	**P**	**02 51 51.1**	**+0.4**
I28M	**Miner Creek**	**76.94**	**22**	P	**P**	**02 51 53.1**	**0.0**
INK	**Inuvik**	**77.23**	**19**	P	**P**	**02 51 54.6**	**0.0**
BCAR	**Beaver Creek A**	**77.60**	**25**	P	**P**	**02 51 57.3**	**+0.4**
EKA	**Eskdalemuir Ar**	**77.65**	**326**	P	**P**	**02 51 57.0**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=63,slow=5.6,SNR=14						
	comp=Z,1.7nm,0.6s						
EKA	**Eskdalemuir Ar**	**77.65**	**326**	P	**P**	**02 51 57.0**	**-0.2**
SUMG	**Summit**	**78.25**	**349**	P	**P**	**02 51 59.9**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SUMG	**Summit**	**78.25**	**349**	P	**P**	**02 51 59.9**	**-0.8**
SUMG				IAmb	IAmb	02 52 00.8	
	comp=Z,4.0nm,0.7s						
H31M	**Peel River**	**78.58**	**21**	P	**P**	**02 52 00.2**	**-0.2**
H31M				IAmb	IAmb	02 52 20.9	
	comp=Z,3.6nm,1.0s						
O30N	**Mendenhall**	**81.14**	**25**	P	**P**	**02 52 16.9**	**+0.7**
LSZ	**Lusaka**	**83.60**	**250**	P	**P**	**02 52 29.8**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,12nm,1.5s						
LSZ	**Lusaka**	**83.60**	**250**	P	**P**	**02 52 29.8**	**-0.1**
ILON	**Igloolik, Nuna**	**84.82**	**2**	P	**P**	**02 52 34.7**	**-0.3**
ILON				IAmb	IAmb	02 52 58.7	
	comp=Z,11nm,1.5s						
ESDC	**Sonseca Array**	**85.79**	**312**	P	**P**	**02 52 40.3**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=46,slow=4.5,SNR=4.9						
	comp=Z,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**86.79**	**17**	P	**P**	**02 52 44.8**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=333,slow=5.3,SNR=4.7						
	comp=Z,0.7nm,0.7s						
BBB	**Bella Bella**	**90.17**	**29**	LR	LR	03 38 57.7	
	comp=Z,24nm,19.1s,baz=218,slow=39						
TORD	**Torodi Ar. Bea**	**94.31**	**287**	P	**P**	**02 53 21.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=44,slow=3.9,SNR=2.0						
	comp=Z,0.4nm,0.7s						
QSPA	**South Pole Qui**	**115.81**	**180**	PKP	**PKiKP**	**02 58 42.5**	**-0.3**
	comp=Z,1.3nm,1.1s,baz=343,slow=2.4,SNR=2.3						
TXAR	**Lajitas Array**	**119.25**	**27**	PKP	**PKiKP**	**02 58 50.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=245,slow=0.9,SNR=6.5						
TXAR	**Lajitas Array**	**119.25**	**27**	PKIKP	**PKPdf**	**02 58 50.1**	**-0.7**
TXAR	**Lajitas Array**	**119.25**	**27**		**PKPdf**	**02 58 50.1**	**-0.7**
ROSC	**El Rosal**	**149.22**	**355**	PKPbc	**PKPbc**	**02 59 51.1**	**+0.2**
	comp=Z,13nm,0.8s,baz=102,slow=7.5,SNR=7.9						
BDFB	**Brasilia**	**151.18**	**285**	PKPbc	**PKPbc**	**02 59 53.5**	**-1.6**
	comp=Z,3.8nm,0.9s,baz=162,slow=3.2,SNR=4.2						
MACA	**Manacapuru-AM**	**152.46**	**323**	PKPbc	**PKPbc**	**02 59 56.4**	**-1.6**

***IDC 08** 03:27:18.1±17.0, 4°.59N×61°.26E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=598.0km*

s-min=31.8km az=73.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**45.81**	**20**	P	P	03 35 41.4	-0.3
	0.3nm,0.6s,baz=221,slow=9.0,SNR=3.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**48.12**	**15**	P	P	03 35 59.6	0.0
	0.1nm,0.3s,baz=210,slow=8.4,SNR=2.3						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**52.82**	**17**	P	P	03 36 35.2	0.0
	0.6nm,0.3s,baz=218,slow=9.1,SNR=3.3						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**75.76**	**112**	P	P	03 39 06.4	0.0
	1.1nm,0.8s,baz=291,slow=4.6,SNR=6.4						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**76.06**	**116**	P	P	03 39 08.1	+0.1
	0.7nm,0.8s,baz=299,slow=5.4,SNR=4.3						
	0.7nm,0.8s						

*IDC **08** 03:28:02.6±3.5, 0°.30S×97°.93E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=152.4km s-min=24.6km az=55.0*

*DJA **08** 03:28:08.8±0.5, 0°N±2°×9°8E±°, h11km±5km, M4.1/21, mb4.4/2, MLv4.0/21*

ISC 08 03:28:08.9±2.1, 0°.10N±0°.07×98°.40E±0°.07, h28km±18km, n21, σ1°.04/12, mb3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.20**	**217**	P	**Pn**	**03 28 16.2**	**+0.2**
GSI	**Gunungsitoli**	**1.45**	**325**	P	**Pn**	**03 28 34.3**	**+1.0**
SISI	**Saibi**	**1.58**	**154**	P	**Pb**	**03 28 37.3**	**-0.2**
PPI	**Padang Panjang**	**2.08**	**106**	P	**Pn**	**03 28 42.9**	**+1.0**
PDSI	**Padang**	**2.30**	**116**	P	**Pn**	**03 28 45.3**	**+0.3**
PSI	**Prapat**	**2.73**	**11**	P	**Pn**	**03 28 50.3**	**-0.7**
BSI	**Banda Aceh**	**6.19**	**330**	P	**Pn**	**03 29 38.5**	**0.0**
H08S2	**Diego Garcia H**	**26.95**	**253**	T	T	04 01 13.9	
	baz=73,slow=76						
H08S3	**Diego Garcia H**	**26.96**	**253**	T	T	04 01 16.5	
	baz=73,slow=76						
H08S1	**Diego Carcia H**	**26.97**	**253**	T	T	04 01 17.3	
	baz=73,slow=76						
WRA	**Warramunga Arr**	**40.44**	**122**	P	**P**	**03 35 43.9**	**-1.4**
	0.3nm,0.4s,baz=300,slow=7.9,SNR=2.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**41.78**	**127**	P	**P**	**03 35 56.2**	**-0.2**
	0.2nm,0.3s,baz=298,slow=8.2,SNR=2.0						
	0.2nm,0.3s						
SONM	**Songino Array**	**48.05**	**7**	P	**P**	**03 36 47.3**	**+1.4**
	0.3nm,0.4s,baz=199,slow=8.4,SNR=2.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.59**	**345**	P	**P**	**03 36 50.6**	**+0.6**
	0.9nm,0.7s,baz=152,slow=8.0,SNR=7.9						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**57.67**	**340**	P	**P**	**03 37 55.5**	**-1.3**
	0.9nm,0.5s,baz=164,slow=7.7,SNR=4.0						
	0.9nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.56**	**215**	T	T	04 44 48.7	
	baz=56,slow=74,SNR=4.2						
H04N1	**CROZET ISLANDS**	**61.57**	**215**	T	T	04 44 50.0	
	baz=56,slow=74,SNR=4.4						
H04N3	**CROZET ISLANDS**	**61.58**	**215**	T	T	04 44 48.0	
	baz=56,slow=74,SNR=5.1						
H04S1	**CROZET ISLANDS**	**61.88**	**214**	T	T	04 45 11.1	
	baz=55						
H04S3	**CROZET ISLANDS**	**61.89**	**214**	T	T	04 45 09.5	
	baz=55						
H04S2	**CROZET ISLANDS**	**61.90**	**214**	T	T	04 45 13.7	
	baz=55						

*IDC **08** 03:34:19.7±0.8, 4°.98N×62°.13E, h0km, mb3.8/14, mbtmp3.8/14, MS3.7/27, Error ellipse: s-maj=24.2km s-min=18.4km az=4.0*

*NEIC **08** 03:34:21.5±1.4, 5°.0N±0°.1×62°.2E±0°.1, h10km±1km, mb4.6/20, Error ellipse: s-maj=20.7km s-min=18.9km az=101.0*

ISC 08 03:34:21.6±0.6, 5°.0N±0°.1×62°.17E±0°.10, h16km, n65, σ0°.92/42, mb4.1/20, MS3.6/27, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**18.56**	**82**	LR	LR	03 44 17.7	
	comp=Z,304nm,19.3s,baz=267,slow=32						
ATD	**Arta Tunnel**	**20.19**	**290**	P	**P**	**03 38 56.9**	**+1.0**
	0.3nm,0.3s,baz=61,slow=13,SNR=1.9						
ATD				LR	LR	03 45 04.9	
	comp=Z,5.7nm,21.7s,baz=184,slow=32						
	0.3nm,0.3s						
ATD	**Arta Tunnel**	**20.19**	**290**	P	**P**	**03 38 55.7**	**-0.2**
ATD				IAmb	IAmb	03 39 10.9	
	comp=Z,22nm,1.0s						
HYB	**Hyderabad**	**20.25**	**51**	*eP*	**P**	**03 38 57.0**	**+0.5**
HYB				*eS*	Sn	03 42 47.7	+1.4
RAYN	**Ar Rayn**	**24.46**	**321**	P	**P**	**03 39 43.3**	**+0.2**
ROCAM	**Rodrigues Isla**	**24.61**	**177**	P	**P**	**03 39 40.9**	**-0.5**
KIBK	**Kibwezi**	**25.18**	**254**	P	**P**	**03 39 45.5**	**-1.2**
KIBK				IAmb	IAmb	03 39 54.5	
	comp=Z,13nm,1.3s						
KMBO	**Kilima Mbogo**	**25.62**	**257**	P	**P**	**03 39 52.2**	**+1.3**
	baz=63,slow=13						
KMBO				LR	LR	03 49 51.7	
	comp=Z,190nm,19.1s,baz=96,slow=36						
RER	**Riviere de l'E**	**26.73**	**193**	P	**P**	**03 40 01.2**	**+0.5**
MBAR	**Mbarara**	**31.88**	**261**	LR	LR	03 52 09.7	
	comp=Z,145nm,20.3s,baz=113,slow=34						
EVN	**Everest**	**32.73**	**43**	P	**P**	**03 40 51.9**	**-2.6**
EVN				IAmb	IAmb	03 41 03.6	
	comp=Z,9.7nm,1.5s						
BRDH	**Bariadhala**	**33.47**	**55**	LR	LR	03 54 37.0	
	comp=Z,427nm,19.8s,baz=242,slow=36						
EIL	**Elat**	**35.56**	**317**	LR	LR	03 55 10.0	
	comp=Z,141nm,18.0s,baz=98,slow=35						
BTK	**Batken**	**35.78**	**11**	P	**P**	**03 41 18.4**	**-1.7**
BTK				IAmb	IAmb	03 42 03.0	
	comp=Z,3.3nm,0.4s						
ASF	**Jabal al Asfar**	**35.93**	**322**	LR	LR	03 54 10.9	
	comp=Z,82nm,19.3s,baz=206,slow=33						
MMAI	**Mount Meron Ar**	**37.42**	**321**	LR	LR	03 56 38.8	
	comp=Z,100nm,18.4s,baz=151,slow=36						
CMAR	**Chiang Mai Arr**	**38.31**	**66**	LR	LR	03 58 22.9	
	comp=Z,45nm,18.0s,baz=235,slow=38						
MATP	**Matopo**	**41.61**	**232**	LR	LR	03 56 25.8	
	comp=Z,272nm,19.2s,baz=101,slow=32						
KBZ	**Khabaz**	**42.17**	**339**	LR	LR	04 01 05.9	
	comp=Z,34nm,21.4s,baz=162,slow=38						
BRTR	**Keskin Array B**	**43.12**	**327**	LR	LR	04 00 59.1	
	comp=Z,64nm,18.9s,baz=140,slow=37						
AB31	**Akbulak array**	**44.16**	**358**	P	**P**	**03 42 29.5**	**0.0**
ABKAR	**Akbulak array**	**44.16**	**358**	P	**P**	**03 42 30.1**	**+0.6**
KARP	**Karpathos**	**44.33**	**318**	P	**P**	**03 42 31.5**	**+0.4**
MKAR	**Makanchi Array**	**45.13**	**19**	P	**P**	**03 42 38.3**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=195,slow=8.7,SNR=5.2						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**45.13**	**19**	P	**P**	**03 42 37.9**	**+0.5**
AKTO	**Aktyubinsk**	**45.43**	**356**	LR	LR	04 02 17.4	
	comp=Z,66nm,21.1s,baz=238,slow=37						
LBTB	**Lobatse**	**46.40**	**228**	LR	LR	03 59 46.5	
	comp=Z,110nm,21.7s,baz=68,slow=33						
LBTB	**Lobatse**	**46.40**	**228**	P	**P**	**03 42 46.8**	**-1.0**
LBTB				IAmb	IAmb	03 42 49.1	
	comp=Z,12nm,1.4s						
KURBB	**Kurchatov Arra**	**47.51**	**14**	P	**P**	**03 42 57.4**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=214,slow=8.2,SNR=4.7						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**47.62**	**14**	P	**P**	**03 42 57.5**	**+0.7**
KURK				IAmb	IAmb	03 43 12.2	
	comp=Z,4.3nm,1.4s						
TSUM	**Tsumeb**	**50.03**	**240**	LR	LR	04 02 35.8	
	comp=Z,114nm,19.0s,baz=99,slow=34						
ZALV	**Zalesovo Beam**	**52.19**	**17**	P	**P**	**03 43 32.4**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=218,slow=11,SNR=5.2						
ZALV				LR	LR	04 06 55.1	
	comp=Z,50nm,19.5s,baz=238,slow=38						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**52.19**	**17**	P	**P**	**03 43 32.6**	**+1.1**
AKASG	**Malin Array Be**	**53.26**	**334**	P	**P**	**03 43 39.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=130,slow=6.4,SNR=6.5						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**53.26**	**334**	P	**P**	**03 43 39.2**	**-0.2**
AKASG				IAmb	IAmb	03 44 15.2	
	comp=Z,3.3nm,1.3s						
SUR	**Sutherland**	**54.08**	**224**	LR	LR	04 05 51.3	
	comp=Z,167nm,18.7s,baz=70,slow=35						
KIRV	**Kirov**	**54.38**	**352**	LR	LR	04 09 12.0	
	comp=Z,51nm,19.8s,baz=181,slow=38						
SONM	**Songino Array**	**56.99**	**34**	P	**P**	**03 44 08.6**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=219,slow=4.9,SNR=4.0						
SONM				LR	LR	04 09 04.5	
	comp=Z,92nm,19.4s,baz=261,slow=37						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**56.99**	**34**	P	**P**	**03 44 07.3**	**+0.7**
KEST	**Kesra**	**57.32**	**310**	P	**P**	**03 44 08.5**	**-0.6**
KEST				IAmb	IAmb	03 44 12.4	
	comp=Z,15nm,1.4s						
TLY	**Talaya**	**57.84**	**29**	LR	LR	04 09 08.2	
	comp=Z,67nm,19.3s,baz=226,slow=36						
VRAC	**Vranov**	**58.56**	**327**	LR	LR	04 10 59.9	
	comp=Z,17nm,18.4s,baz=144,slow=38						
GERES	**GERESS Array B**	**59.92**	**325**	P	**P**	**03 44 26.8**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=134,slow=5.8,SNR=3.5						
	comp=Z,0.3nm,0.7s						
GERES	**GERESS Array B**	**59.92**	**325**	P	**P**	**03 44 26.5**	**-0.6**
TORD	**Torodi Ar. Bea**	**60.15**	**282**	P	**P**	**03 44 28.3**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=92,slow=7.3,SNR=5.8						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**60.15**	**282**	P	**P**	**03 44 28.2**	**-0.9**
TORD				IAmb	IAmb	03 44 48.7	
	comp=Z,4.1nm,0.8s						
DAVOX	**Davos/Dischmat**	**61.22**	**322**	LR	LR	04 12 05.7	
	comp=Z,39nm,19.4s,baz=82,slow=37						
SENIN	**Lac Senin/Sane**	**62.66**	**320**	P	**P**	**03 44 45.8**	**0.0**
SENIN				IAmb	IAmb	03 44 49.4	
	comp=Z,6.3nm,0.8s						
NRIK	**Noril'sk**	**66.41**	**10**	LR	LR	04 17 30.8	
	comp=Z,56nm,18.6s,baz=190,slow=39						
DBIC	**Dimbokro**	**66.66**	**275**	P	**P**	**03 45 13.3**	**+1.0**
	comp=Z,8.3nm,1.1s,baz=90,slow=4.0,SNR=3.0						
DBIC				LR	LR	04 12 47.5	
	comp=Z,61nm,19.7s,baz=138,slow=35						
	comp=Z,8.3nm,1.1s						
DBIC	**Dimbokro**	**66.66**	**275**	P	**P**	**03 45 12.2**	**-0.1**
NOA	**NORSAR Array B**	**67.62**	**336**	LR	LR	04 16 52.8	
	comp=Z,22nm,20.1s,baz=140,slow=38						
ESDC	**Sonseca Array**	**68.53**	**311**	P	**P**	**03 45 24.7**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=90,slow=5.6,SNR=9.1						
	comp=Z,1.1nm,0.8s						
ESDC	**Sonseca Array**	**68.53**	**311**	P	**P**	**03 45 23.9**	**+0.1**
ARCES	**ARCESS Array B**	**68.79**	**347**	P	**P**	**03 45 23.7**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=122,slow=7.7,SNR=1.8						
	comp=Z,1.2nm,0.8s						
ARCES	**ARCESS Array B**	**68.79**	**347**	P	**P**	**03 45 25.1**	**+0.5**
EKA	**Eskdalemuir Ar**	**72.04**	**327**	P	**P**	**03 45 45.1**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=105,slow=6.4,SNR=5.0						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**75.06**	**112**	P	**P**	**03 46 04.0**	**+0.7**
	2.1nm,0.8s,baz=286,slow=5.0,SNR=8.3						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**75.06**	**112**	P	**P**	**03 46 03.5**	**+0.2**
ASAR	**Alice Springs**	**75.41**	**116**	P	**P**	**03 46 06.1**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=288,slow=5.8,SNR=7.1						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**75.41**	**116**	P	**P**	**03 46 05.9**	**+0.7**
JHJ	**Hachijo jima 2**	**76.92**	**57**	LR	LR	04 24 35.4	
	comp=Z,211nm,18.4s,baz=106,slow=39						
PETK	**Petropavlovsk-**	**89.37**	**37**	LR	LR	04 29 10.6	
	comp=Z,53nm,18.5s,baz=253,slow=37						
SHEM	**Shemya Is, Ala**	**99.08**	**35**	LR	LR	04 34 10.4	
	comp=Z,34nm,21.2s,baz=178,slow=36						
TXAR	**Lajitas Array**	**143.27**	**339**	PKP	**PKPdf**	**03 53 56.5**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=51,slow=2.8,SNR=2.9						

*IDC **08** 03:40:47.1±1.5, 3°.58S×130°.58E, h0km, mb3.5/3, mbtmp3.6/6, ML3.4/3, MS3.8/1, Error ellipse: s-maj=66.3km s-min=22.7km az=85.0*

**ISC 08 03:40:47.9±1.0, 3°.70S±0°.

DLV	Lat	15.51	46	Pn		Pn		04 07 22.1	-1.4
CM31	Chiang Mai Arr	17.18	6	Pn		Pn		04 07 42.9	-1.6
CMAR	Chiang Mai Arr	17.18	6	P		Pn		04 07 43.5	-1.0
	0.5nm,0.3s,baz=195,slow=13,SNR=14								
CMAR				LR		LR		04 15 21.6	
	comp=Z,410nm,18.0s,baz=180,slow=40								
	7.3nm,0.9s								
CMAR	Chiang Mai Arr	17.18	6	Pn		Pn		04 07 42.7	-1.8
PALK	Pallekele	17.38	291	LR		LR		04 14 09.4	
	comp=Z,417nm,18.6s,baz=117,slow=36								
CHTO	Chiang Mai	17.53	6			Pn		04 07 48.6	-0.3
CHTO	Chiang Mai	17.53	6	P		Pn		04 07 47.3	-1.6
NPW	Naypyitaw	18.42	357	P		Pn		04 08 00.6	+0.8
KKM	Kota Kinabalu	19.67	76	P		P		04 08 13.0	-0.6
SLVN	Son La	21.02	18	P		P		04 08 26.9	-1.2
QIZ	Qiongzhong	21.63	35	P		P		04 08 32.4	-2.3
QIZ				IAmb		IAmb		04 08 36.7	
	comp=Z,126nm,1.9s								
QIZ	Qiongzhong	21.63	35	P		P		04 08 36.2	+1.6
QIZ				S		S		04 12 34.2	+0.9
QIZ				L		L			
	comp=Z,450nm,14.9s								
QIZ				L		L			
	comp=Z,450nm,12.9s								
QIZ				L		L			
	comp=Z,390nm,15.5s								
RAGD	RAYAGADA	22.30	324	*e*P		P		04 08 44.1	+2.2
RAGD				IAmb		IAmb		04 08 45.6	
	comp=Z,10.0nm,0.6s								
KAPI	Kappang	23.49	106	P		P		04 08 53.7	-0.6
KAPI				IAmb		IAmb		04 08 55.5	
	comp=Z,32nm,1.1s								
TNCH	TengChong	23.66	3	*e*P		P		04 08 57.1	+1.2
TNCH				pP		pP		04 09 05.0	+2.0
TNCH				sP		sP		04 09 08.9	+2.9
TNCH				S		S		04 13 06.3	-3.3
TNCH				sS		sS		04 13 23.6	+2.5
TNCH				pmax		pmax			
	comp=Z,23nm,0.8s								
TNCH				pmax		pmax			
	comp=Z,220nm,3.1s								
TNCH				L		L			
	comp=Z,830nm,12.7s								
TNCH				L		L			
	comp=Z,220nm,7.3s								
TNCH				L		L			
	comp=Z,940nm,12.6s								
TOLI2	Tolitoli	23.70	90	P		P		04 08 55.3	-0.9
TOLI2				IAmb		IAmb		04 08 56.6	
	comp=Z,35nm,0.9s								
TOLI2	Tolitoli	23.70	90	P		P		04 08 55.5	-0.8
TOLI2				pP		pP		04 09 01.4	-1.8
KMI2	Kunming	24.36	13	P		P		04 09 03.3	+0.8
KMI2				pP		pP		04 09 09.7	-0.1
KMI2				sP		sP		04 09 15.2	+2.5
KMI2				S		S		04 13 28.2	+7.3
KMI2				pmax		pmax			
	comp=Z,51nm,1.2s								
KMI2				pmax		pmax			
	comp=Z,200nm,4.1s								
KMI2				L		L			
	comp=Z,1μm,16.6s								
KMI2				L		L			
	comp=Z,720nm,12.9s								
KMI2				L		L			
	comp=Z,1μm,15.5s								
SHL	Shillong	24.67	349	P		P		04 09 04.2	-1.1
SHL	Shillong	24.67	349	*e*P		P		04 09 05.2	-0.1
SHL				IAmb		IAmb		04 09 08.0	
	comp=Z,30nm,0.8s								
BOK	Bokaro	24.88	335	*e*P		P		04 09 07.8	+0.7
BOK				IAmb		IAmb		04 09 11.7	
	comp=Z,33nm,1.3s								
MOKO	MOKOCHONG	25.03	355	*e*P		P		04 09 09.7	+1.2
GUWA	GUWAHATI	25.32	349	*e*P		P		04 09 11.1	+0.2
PZH	PanZhiHua	25.48	10	P		P		04 09 12.7	+0.1
DHUB	DHUBRI	25.54	345	*e*P		P		04 09 14.9	+2.0
LUWI	Luwuk	25.79	95	P		P		04 09 13.6	-1.8
LKP	Lekhapani	25.94	357	IAML				04 08 53.5	
	comp=Z,937nm,20.2s								
H08S2	Diego Garcia H	26.08	250	T		T		04 36 12.1	
	baz=73,slow=74								
H08S3	Diego Garcia H	26.08	250	T		T		04 36 13.3	
	baz=73,slow=74								
H08S1	Diego Carcia H	26.09	250	T		T		04 36 14.2	
	baz=73								
SZP	Santa	28.10	53	P		P		04 09 36.4	+0.3
EVN	Everest	28.30	341	P		P		04 09 38.3	-0.2
EVN				IAmb		IAmb		04 09 45.4	
	comp=Z,12nm,0.8s								
EVN	Everest	28.30	341	P		P		04 09 40.5	+2.0
LSA	Lhasa	28.83	349	P		P		04 09 43.4	+0.4
DAV	Davao City (W)	28.99	78	LR		LR		04 23 06.9	
	comp=Z,140nm,18.9s,baz=189,slow=40								
ENH	Enshi	31.16	21	P		P		04 10 02.3	-0.8
ENH	Enshi	31.16	21	P		P		04 10 02.7	-0.4
ENH				pP		pP		04 10 09.2	-1.1
ENH	Enshi	31.16	21	P		P		04 10 03.0	-0.2
ENH				PcP		PcP		04 12 57.3	-0.7
SSLB	Suanglung	32.19	44	P		P		04 10 11.6	-0.7
SSLB	Suanglung	32.19	44	P		P		04 10 12.3	0.0
WHN	Wuhan	33.41	28	P		P		04 10 23.1	+0.3
WHN				L		L			
	comp=Z,1μm,18.2s								
WHN				L		L			
	comp=Z,910nm,14.9s								
WHN				L		L			
	comp=Z,2μm,14.8s								
XAN	Xi'an	34.43	18	P		P		04 10 31.1	-0.7
XAN				pP		pP		04 10 38.5	-0.5
XAN				S		S		04 15 56.1	-2.6
XAN				pmax		pmax			
	comp=Z,35nm,1.0s								
XAN				L		L			
	comp=Z,730nm,14.9s								
XAN				L		L			
	comp=Z,380nm,15.7s								
XAN				L		L			
	comp=Z,830nm,15.2s								
XAN	Xi'an	34.43	18	P		P		04 10 31.4	-0.3
XAN				x		x		04 10 38.3	
LZDM	Lanzhou Array	35.05	9	P		P		04 10 37.6	+0.2
	comp=Z,1.5nm,0.3s,baz=188,slow=18,SNR=3.9								
	comp=Z,1.5nm,0.3s								
LZH	Lanzhou	35.20	10	*e*P		P		04 10 38.3	-0.2
LZH				pP		pP		04 10 46.3	+0.5
LZH				pmax		pmax			
	comp=Z,15nm,1.2s								
LZH				L		L			
	comp=Z,530nm,12.7s								
LZH				L		L			
	comp=Z,470nm,13.4s								
LZH				L		L			
	comp=Z,550nm,13.1s								
HNLY	HANLEY	35.67	333	*e*P		P		04 10 44.9	+1.9
HNLY				IAmb		IAmb		04 10 46.2	
	comp=Z,5.5nm,0.9s								
LYN	LuoYang	36.09	22	P		P		04 10 45.9	-0.1
LYN				pmax		pmax			
	comp=Z,43nm,1.1s								
LYN				pmax		pmax			
	comp=Z,160nm,11.3s								
LYN				L		L			
	comp=Z,460nm,12.0s								
LYN				L		L			
	comp=Z,380nm,14.8s								
LYN				L		L			
	comp=Z,380nm,15.1s								
DHRM	DHARAMSHALA	36.51	330	*e*P		P		04 10 52.5	+2.6
DHRM				IAmb		IAmb		04 10 57.1	
	comp=Z,14nm,1.0s								
NJ2	Nanjing	36.87	32	*e*P		P		04 10 53.1	+0.5
NJ2				pmax		pmax			
	comp=Z,30nm,0.7s								
GTA2	Gaotai	38.11	3	P		P		04 11 03.4	+0.1
GTA2				sP		sP		04 11 15.1	+1.6
GTA2				pmax		pmax			
	comp=Z,13nm,1.0s								
GTA2				L		L			
	comp=Z,360nm,14.1s								
GTA2				L		L			
	comp=Z,260nm,13.1s								
GTA2				L		L			
	comp=Z,400nm,14.8s								
NIL	Nilore	39.20	328	P		P		04 11 13.1	+0.8
NIL						IAmb		IAmb	04 11 41.0
	comp=Z,16nm,1.2s								
NIL	Nilore	39.20	328	P		P		04 11 13.1	+0.8
H01W3	Cape Leeuwin H	39.35	158	T		T		04 53 06.1	
	baz=333,slow=76,SNR=11								
H01W2	Cape Leeuwin H	39.37	158	T		T		04 53 04.7	
	baz=333,slow=76,SNR=9.3								
H01W1	Cape Leeuwin H	39.37	158	T		T		04 52 48.9	
	baz=333,slow=76,SNR=8.9								
TIA	Tai'an	39.42	26	P		P		04 11 13.9	-0.2
TIA				pmax		pmax			
	comp=Z,5.0nm,0.5s								
TIA				L		L			
	comp=Z,370nm,14.4s								
TIA				L		L			
	comp=Z,350nm,14.4s								
TIA				L		L			
	comp=Z,740nm,15.8s								
HNS	HongShan	39.45	22	⇓P		P		04 11 15.2	+0.9
HNS				S		S		04 17 09.3	-5.7
HNS				pmax		pmax			
	comp=Z,10.0nm,0.8s								
HNS				L		L			
	comp=Z,260nm,17.9s								
HNS				L		L			
	comp=Z,150nm,16.1s								
HNS				L		L			
	comp=Z,210nm,16.6s								
HHC	Hu-ho-hao-te	41.52	17	*e*P		P		04 11 34.5	+2.9
HHC				pmax		pmax			
	comp=Z,8.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,45nm,4.0s								
WRA	Warramunga Arr	42.17	122	P		P		04 11 36.5	-0.6
	comp=Z,2.7nm,0.7s,baz=300,slow=9.1,SNR=24								
	comp=Z,2.7nm,0.7s								
WRA	Warramunga Arr	42.17	122	P		P		04 11 36.5	-0.6
BJT	Baijiatuau	42.30	22	P		P		04 11 38.0	+0.3
BJT				IAmb		IAmb		04 11 40.8	
	comp=Z,14nm,0.6s								
BJT	Baijiatuau	42.30	22	P		P		04 11 38.9	+1.1
BJT	Baijiatuau	42.30	22	P		P		04 11 38.9	+1.1
BJI2	Beijing	42.30	22	P		P		04 11 39.1	+1.3
BJI2				pP		pP		04 11 48.0	+2.9
BJI2				S		S		04 17 59.3	+2.0
BJI2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
BJI2				pmax		pmax			
	comp=Z,25nm,3.8s								
BJI2				L		L			
	comp=Z,100nm,15.8s								
BJI2				L		L			
	comp=Z,54nm,15.5s								
BJI2				L		L			
	comp=Z,97nm,14.9s								
WR8	Warramunga Arr	42.31	122	P		P		04 11 38.3	0.0
WR8				IAmb		IAmb		04 11 55.8	
	comp=Z,13nm,1.2s								
KSH2	Kashi	42.52	335	P		P		04 11 45.2	+5.4
KSH2				pmax		pmax			
	comp=Z,3.0nm,0.5s								
WUS	Wushi	42.90	340	P		P		04 11 43.4	+0.6
WUS	Wushi	42.90	340	P		P		04 11 44.5	+1.6
MANEM	Manem	43.01	330	P		P		04 11 44.9	+0.9
MANEM				IAmb		IAmb		04 12 08.2	
	comp=Z,38nm,0.7s								
WMQ	Urumqi	43.18	350	*e*P		P		04 11 46.1	+1.1
WMQ				sP		sP		04 12 02.5	+7.4
WMQ				pmax		pmax			
	comp=Z,24nm,2.1s								
WMQ				L		L			
	comp=Z,120nm,24.2s								
ASAR	Alice Springs	43.53	127	P		P		04 11 47.8	-0.3
	comp=Z,2.3nm,0.8s,baz=296,slow=7.8,SNR=16								
ASAR				PcP		PcP		04 13 36.4	+0.6
	comp=Z,0.8nm,0.6s,baz=324,slow=3.4,SNR=4.3								
ASAR				LR		LR		04 31 39.8	
	comp=Z,102nm,21.3s,baz=294,slow=38								
	comp=Z,2.3nm,0.8s								
AS31	Alice Springs	43.53	127	P		P		04 11 47.8	-0.3
DL2	Dalian	43.67	28	P		P		04 11 48.9	0.0
DL2				pmax		pmax			
	comp=Z,19nm,0.6s								
TARG	Taragay, Kyrgy	43.86	339	P		P		04 11 51.4	+0.4
TARG				IAmb		IAmb		04 12 18.3	
	comp=Z,12nm,1.0s								
TARG	Taragay, Kyrgy	43.86	339	P		P		04 11 52.7	+1.7
NRN	Naryn	44.28	337			P		04 11 54.9	+0.8
NRN				IAmb		IAmb		04 12 20.7	
	comp=Z,11nm,1.0s								
KDJ	Kajisay	44.44	339			P		04 11 55.9	+0.6
KDJ				IAmb		IAmb		04 12 22.1	
	comp=Z,18nm,1.0s								
KDJ	Kajisay	44.44	339	P		P		04 11 57.0	+1.7
SHLS	Shalkode	44.58	342	*e*P		P		04 11 56.3	0.0
UZB	Uzynbulak	44.71	341	*e*P		P		04 11 58.5	+1.1
PDGK	Podgornoye	44.73	342	P		P		04 11 58.3	+0.9
TJN	Taejon	44.79	35	P		P		04 11 57.2	-0.7
GAR	Garm	44.82	330	P		P		04 11 58.3	0.0
GAR				IAmb		IAmb		04 12 19.3	
	comp=Z,24nm,1.3s								
GAR	Garm	44.82	330	P		P		04 11 58.9	+0.6
SHAA	Shahritus	44.89	327	P		P		04 11 58.8	0.0
SHAA				IAmb		IAmb		04 12 38.6	
	comp=Z,34nm,1.0s								
CHGR	Chuyangaron	45.15	329			P		04 12 01.1	+0.3
CHGR				IAmb		IAmb		04 12 07.8	
	comp=Z,18nm,1.0s								
CHGR	Chuyangaron	45.15	329	P		P		04 12 00.7	-0.2
CHGR				pP		pP		04 12 06.8	-1.4
BOOM	Boomskoye usch	45.21	338			P		04 12 01.8	+0.4
BOOM				IAmb		IAmb		04 12 29.6	
	comp=Z,8.6nm,1.0s								
BOOM	Boomskoye usch	45.21	338	P		P		04 12 02.3	+0.9
TNSS	Tian-Shan	45.32	339	*e*P		P		04 12 03.0	+0.5
MDOK	Medeo	45.39	339	*e*P		P		04 12 03.7	+0.9
BTK	Batken	45.39	332	P		P		04 12 03.5	+0.7
BTK				IAmb		IAmb		04 12 19.3	
	comp=Z,7.8nm,0.8s								
AAA	Alma-Ata	45.48	339	*e*P		P		04 12 04.3	+0.9
KSAR	Wonju Array Be	45.83	35	P		P		04 12 05.5	-0.6
KSRS	Korea Array	45.86	35	P		P		04 12 06.5	+0.2
	comp=Z,13nm,0.9s,baz=223,slow=9.0,SNR=65								
KSRS				LR		LR		04 32 53.0	
	comp=Z,81nm,18.4s,baz=215,slow=38								
	comp=Z,13nm,0.9s								
KS19	Wonju Array Si	45.86	35	P		P		04 12 05.8	-0.7
KS19				IAmb		IAmb		04 12 07.3	
	comp=Z,19nm,0.9s								
AAK	Ala-Archa	45.89	337	LR		LR		04 34 38.3	
	comp=Z,105nm,18.2s,baz=156,slow=40								
AAK	Ala-Archa	45.89	337	P		P		04 12 06.8	0.0
AAK				IAmb		IAmb		04 12 38.0	
	comp=Z,5.0nm,0.8s								
ARK	Arkit	46.25	334	P		P		04 12 10.9	+1.3
SGDS	Sogindy	46.53	337	*e*P		P		04 12 12.5	+0.8
SONM	Songino Array	47.08	9	P		P		04 12 16.8	+0.9
	comp=Z,9.4nm,0.8s,baz=192,slow=9.0,SNR=32								
SONM				PcP		PcP		04 13 47.8	0.0
	comp=Z,0.8nm,0.7s,baz=194,slow=3.0,SNR=1.7								
	comp=Z,9.4nm,0.8s								
SONM	Songino Array	47.08	9	P		P		04 12 16.5	+0.5
SONM				IAmb		IAmb		04 12 17.7	
	comp=Z,10nm,0.9s								
SONM						PcP		04 13 48.1	+0.4
MKAR	Makanchi Array	47.15	346	P		P		04 12 17.3	+0.9
	comp=Z,4.9nm,0.8s,baz=152,slow=8.1,SNR=40								
MKAR				LR		LR		04 35 41.4	
	comp=Z,86nm,21.6s,baz=178,slow=41								
	comp=Z,4.9nm,0.8s								
MKAR	Makanchi Array	47.15	346			P		04 12 17.8	+1.4
ZSN	Zaisan	47.21	349	*e*P		P		04 12 18.2	+1.4
	comp=Z,5.0nm,1.0s								
ULN	Ulaanbaatar	47.21	9			P		04 12 16.7	-0.3
ULN				IAmb		IAmb		04 12 18.5	
	comp=Z,8.0nm,0.9s								
ULN	Ulaanbaatar	47.21	9	P		P		04 12 17.6	+0.6
ULN	Ulaanbaatar	47.21	9	P		P		04 12 17.2	+0.2
MAKZ	Makanchi	47.23	346			P		04 12 17.3	+0.3
MAKZ				IAmb		IAmb		04 12 40.9	
	comp=Z,7.6nm,0.8s								
MAKZ	Makanchi	47.23	346	P		P		04 12 17.5	+0.4
IUG	Iuzhnay	47.40	333	*e*P		P		04 12 19.6	+1.1
	comp=Z,6.7nm,0.5s								
DZA	Taraz	47.41	334	*e*P		P		04 12 19.7	+1.2
CHM	Chimkent	47.73	332	*e*P		P		04 12 22.1	+1.1
KK31	Karatay Array	47.94	334			P		04 12 22.8	+0.2
KKAR	Karatay Array	47.94	334			P		04 12 23.1	+0.5
TLY	Talaya	50.53	5	LR		LR		04 36 56.7	
	comp=Z,223nm,18.3s,baz=172,slow=39								
TLY	Talaya	50.53	5			P		04 12 41.9	-0.4
TLY				IAmb		IAmb		04 12 44.7	
	comp=Z,3.7nm,0.6s								
TLY	Talaya	50.53	5	P		P		04 12 43.5	+1.2
TLY	Talaya	50.53	5	P		P		04 12 43.1	+0.8
INKA	Innaminka	50.89	128			P		04 12 46.4	+1.1
KURBB	Kurchatov Arra	51.63	345	P		P		04 12 51.0	+0.5
	comp=Z,3.7nm,0.8s,baz=167,slow=7.0,SNR=42								
	comp=Z,3.7nm,0.8s								
BNX	BinXian	51.68	27	⇑P		P		04 12 50.5	-0.5
BNX				pmax		pmax			
	comp=Z,23nm,0.8s								
KURK	Kurchatov	51.69	345			P		04 12 51.5	+0.5
KURK				IAmb		IAmb		04 13 16.2	
	comp=Z,17nm,1.2s								
KURK	Kurchatov	51.69	345	P		P		04 12 51.2	+0.2
KURK	Kurchatov	51.69	345	P		P		04 12 51.4	+0.4
MJAR	Matsushiro Arr	51.72	42	P		P		04 12 51.9	+0.4
	comp=Z,2.0nm,0.6s,baz=232,slow=6.0,SNR=4.3								
MJAR				LR		LR		04 38 48.7	
	comp=Z,78nm,18.5s,baz=341,slow=41								
	comp=Z,2.0nm,0.6s								
MJAR	Matsushiro Arr	51.72	42	P		P		04 12 51.0	-0.5
MDJ	Mudanjiang	51.86	29	P		P		04 12 52.7	+0.3
MDJ				pmax		pmax			
	comp=Z,8.0nm,1.4s								
MDJ	Mudanjiang	51.86	29	P		P		04 12 53.2	+0.8
HILR	Hailar Array B	51.87	19	P		P		04 12 52.7	+0.3
	comp=Z,2.7nm,0.3s,baz=188,slow=10,SNR=4.7								
HILR				LR		LR		04 37 12.7	
	comp=Z,96nm,21.7s,baz=125,slow=39								
	comp=Z,2.7nm,0.3s								
CTA	Charters Tower	52.64	117	LR		LR		04 40 01.4	
	comp=Z,122nm,18.4s,baz=236,slow=41								
USRK	Ussuriysk Ar.	52.77	31	P		P		04 12 59.5	+0.4
	comp=Z,20nm,0.9s,baz=230,slow=5.4,SNR=25								
USRK				LR		LR		04 37 16.3	
	comp=Z,184nm,18.7s,baz=221,slow=38								
	comp=Z,20nm,0.9s								
USRK	Ussuriysk Ar.	52.77	31	P		P		04 12 59.2	+0.1
ZAA0	Zalesovo Array	53.47	351			P		04 13 03.9	-0.2
ZALV	Zalesovo Beam	53.47	351	P		P		04 13 04.5	+0.4
	comp=Z,12nm,0.7s,baz=179,slow=6.4,SNR=54								
ZALV				LR		LR		04 40 53.7	
	comp=Z,77nm,18.9s,baz=178,slow=42								
	comp=Z,12nm,0.7s								
ZALV	Zalesovo Beam	53.47	351			P		04 13 03.9	-0.2
STKA	Stephens Creek	53.49	132	P		P		04 13 04.7	0.0
	comp=Z,3.5nm,0.9s,baz=262,slow=5.8,SNR=4.5								
STKA				LR		LR		04 38 12.5	
	comp=Z,164nm,21.2s,baz=291,slow=39								
	comp=Z,3.5nm,0.9s								
HEH	HeiHe	55.19	23	*e*P		P		04 13 16.8	+0.1
HEH				pmax		pmax			
	comp=Z,14nm,1.3s								
BVAR	Borovoye Array	56.15	341	P		P		04 13 23.7	+0.2
	comp=Z,7.6nm,0.8s,baz=140,slow=7.7,SNR=23								
	comp=Z,7.6nm,0.8s								
BORK	Borovoye	56.19	341			P		04 13 24.0	+0.3
BORK				IAmb		IAmb		04 13 25.0	
	comp=Z,7.5nm,0.8s								
CMSA	Cobar Meteorol	56.43	130	P		P		04 13 27.9	+2.0
CMSA				pP		pP		04 13 34.4	+0.9
AB31	Akbulak array	57.40	332			P		04 13 32.4	0.0
AB31				IAmb		IAmb		04 13 34.0	
	comp=Z,9.7nm,0.8s								
ABKAR	Akbulak array	57.40	332			P		04 13 32.2	-0.3
AKTO	Aktyubinsk	59.11	332	LR		LR		04 43 15.0	
	comp=Z,49nm,18.1s,baz=195,slow=40								
H04N2	CROZET ISLANDS	61.77	214	T		T		05 20 58.4	
	baz=54,slow=75,SNR=168								
H04N1	CROZET ISLANDS	61.78	214	T		T		05 20 58.2	
	baz=54,slow=75,SNR=196								
H04N3	CROZET ISLANDS	61.78	214	T		T		05 20 57.3	
	baz=54,slow=75,SNR=190								
H04S1	CROZET ISLANDS	62.11	213	T		T		05 21 20.8	
	baz=54,slow=76,SNR=99								
H04S3	CROZET ISLANDS	62.12	213	T		T		05 21 21.6	
	baz=54,slow=76,SNR=136								
H04S2	CROZET ISLANDS	62.12	213	T		T		05 21 22.7	
	baz=54,slow=76,SNR=73								
ARTI	Arti	63.11	337	LR		LR		04 44 34.6	
	comp=Z,56nm,19.2s,baz=146,slow=39								
ARTI	Arti	63.11	337	P		P		04 14 11.6	+0.1
ARTI	Arti	63.11	337	P		P		04 14 11.6	+0.1
KBZ	Khabaz	63.94	319	P		P		04 14 17.5	+0.3
	comp=Z,1.5nm,0.7s,baz=132,slow=6.7,SNR=3.7								
	comp=Z,1.5nm,0.7s								
ASF	Jabal al Asfar	64.33	305	LR		LR		04 43 58.2	
	comp=Z,74nm,18.4s,baz=206,slow=38								
EIL	Elat	65.32	302	LR		LR		04 43 31.9	
	comp=Z,97nm,18.2s,baz=91,slow=37								
NRIK	Noril'sk	68.25	356	P		P		04 14 43.1	-1.3
	comp=Z,5.1nm,0.8s,baz=167,slow=8.3,SNR=4.0								
	comp=Z,5.1nm,0.8s								
NRIK	Noril'sk	68.25	356	P		P		04 14 43.9	-0.5
NRIK				IAmb		IAmb		04 14 45.4	
	comp=Z,6.3nm,0.8s								
BRTR	Keskin Array B	68.98	312	P		P		04 14 48.4	-1.3
	comp=Z,0.6nm,0.7s,baz=131,slow=5.9,SNR=3.0								
BRTR				LR		LR		04 47 42.7	
	comp=Z,32nm,18.2s,baz=179,slow=38								
	comp=Z,0.6nm,0.7s								
BRTR	Keskin Array B	68.98	312	P		P		04 14 49.3	-0.4
LSZ	Lusaka	70.02	253	LR		LR		04 41 46.9	
	comp=Z,132nm,19.3s,baz=120,slow=33								
PETK	Petropavlovsk-	71.74	34	P		P		04 15 06.2	+0.1
	comp=Z,1.9nm,0.8s,baz=209,slow=4.9,SNR=4.5								
	comp=Z,1.9nm,0.8s								
PETK	Petropavlovsk-	71.74	34	P		P		04 15 05.3	-0.8
LBTB	Lobatse	73.81	244	LR		LR		04 44 26.7	
	comp=Z,100nm,18.7s,baz=72,slow=33								
AKASG	Malin Array Be	75.13	322	P		P		04 15 25.2	-0.9
	comp=Z,0.2nm,0.3s,baz=94,slow=3.9,SNR=5.0								
AKASG				LR		LR		04 53 12.5	
	comp=Z,36nm,18.5s,baz=67,slow=40								
	comp=Z,0.2nm,0.3s								
AKASG	Malin Array Be	75.13	322	P		P		04 15 25.6	-0.5
SUR	Sutherland	79.10	237	LR	

mbtmp3.6/15, ML3.4/5, MS3.5/3, Error ellipse: s-maj=20.2km s-min=17.0km az=161.0
*ATH **08** 04:29:00.6, 37.20N×20.29E, h10km±1km, ML3.6/13, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **08** 04:29:02.8, 37°N±1′×2′0E±″, h0km±1km, M3.5/19, MLh3.5/19*
*NAO **08** 04:29:09.2, 37.27N×20.42E, h10km, MB3.8*

ISC 08 04:29:02.1±1.4, 37.25N±0.03×20.43E±0.03, h11km±9km, n61, σ1§57/96, mb3.7/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.56**	**35**	P	**Pb**	**04 29 13.7**	**-0.4**
LTHK				S	**Sb**	**04 29 21.4**	**-0.7**
LTHK	**Lithakia**	**0.56**	**35**	P	**Pb**	**04 29 13.7**	**-0.4**
LTHK				S	**Sb**	**04 29 21.8**	**-0.3**
ORTH	**Orthonies,Zaky**	**0.64**	**19**	P	**Pb**	**04 29 15.0**	**-0.4**
ORTH				S	**Sb**	**04 29 24.0**	**-0.3**
ORTH	**Orthonies,Zaky**	**0.64**	**19**	P	**Pb**	**04 29 14.9**	**-0.4**
ORTH				S	**Sb**	**04 29 24.1**	**-0.3**
KYPS	**Kipseli, Zakin**	**0.65**	**29**	P	**Pb**	**04 29 15.6**	**0.0**
KYPS				S	**Sb**	**04 29 25.0**	**+0.3**
CLEM	**Kyllini,Ilia,G**	**0.85**	**41**	P	**Pb**	**04 29 19.1**	**+0.1**
CLEM				S	**Sn**	**04 29 31.6**	**-1.0**
RTZL	**Ratzakli, Kefa**	**0.87**	**18**	P	**Pb**	**04 29 19.0**	**-0.3**
RTZL				S	**Sn**	**04 29 32.0**	**-1.1**
RTZL	**Ratzakli, Kefa**	**0.87**	**18**	P	**Pb**	**04 29 18.8**	**-0.5**
RTZL				S	**Sb**	**04 29 31.5**	**+0.5**
KFL1	**Kefalonia,Entr**	**0.92**	**3**	P	**Pn**	**04 29 20.4**	**-0.7**
KFL1				S	**Sb**	**04 29 32.8**	**+0.4**
ARG2	**Argostoli**	**0.93**	**3**	P	**Pb**	**04 29 19.7**	**-0.6**
ARG2				S	**Sg**	**04 29 33.2**	**-1.2**
ARG2	**Argostoli**	**0.93**	**3**	P	**Pb**	**04 29 19.3**	**-1.0**
VLS	**Valsamata**	**0.94**	**8**	P	**Pb**	**04 29 20.1**	**-0.4**
VLS				S	**Sb**	**04 29 33.2**	**+0.3**
VLS	**Valsamata**	**0.94**	**8**	P	**Pb**	**04 29 19.9**	**-0.5**
VLS				S	**Sb**	**04 29 32.5**	**-0.4**
DMLN	**Damoulianata-K**	**0.99**	**357**	P	**Pn**	**04 29 22.9**	**+0.9**
DMLN				S	**Sn**	**04 29 35.8**	**-0.3**
DMLN	**Damoulianata-K**	**0.99**	**357**	P	**Pn**	**04 29 21.3**	**-0.8**
DMLN				S	**Sn**	**04 29 35.1**	**-1.0**
ZARO	**Zacharo**	**1.00**	**76**	P	**Pn**	**04 29 22.6**	**+0.4**
ZARO				S	**Sn**	**04 29 37.0**	**+0.8**
AMT	**Artemida-Makis**	**1.06**	**74**	P	**Pb**	**04 29 22.4**	**-0.1**
AMT				S	**Sn**	**04 29 38.8**	**+1.1**
AMT	**Artemida-Makis**	**1.06**	**74**	P	**Pb**	**04 29 22.4**	**-0.1**
AMT				S	**Sn**	**04 29 38.9**	**+1.1**
PYL1	**Pylos**	**1.06**	**108**	P	**Pb**	**04 29 22.6**	**0.0**
PYL1				S	**Sn**	**04 29 38.3**	**+0.5**
MTHA	**Methoni**	**1.11**	**112**	P	**Pn**	**04 29 23.8**	**+0.2**
MTHA				S	**Sb**	**04 29 38.8**	**+1.1**
PYL	**PYLOS**	**1.11**	**108**	P	**Pn**	**04 29 23.4**	**-0.1**
PYL				S	**Sn**	**04 29 40.9**	**+2.0**
PYL	**PYLOS**	**1.11**	**108**	P	**Pb**	**04 29 23.3**	**0.0**
PYL				S	**Sn**	**04 29 39.1**	**+0.3**
YRMI	**Loutra Irminis**	**1.12**	**40**	P	**Pn**	**04 29 23.7**	**-0.1**
YRMI				S	**Sn**	**04 29 40.2**	**+1.0**
RLS	**Riolos of Patr**	**1.16**	**45**	P	**Pn**	**04 29 24.2**	**0.0**
RLS				S	**Sb**	**04 29 39.3**	**+0.2**
RLS	**Riolos of Patr**	**1.16**	**45**	P	**Pn**	**04 29 23.9**	**-0.4**
RLS				S	**Sn**	**04 29 41.0**	**+0.9**
ITM	**Ithomi**	**1.20**	**93**	P	**Pn**	**04 29 25.2**	**+0.4**
ITM				S	**Sn**	**04 29 43.0**	**+1.9**
ITM	**Ithomi**	**1.20**	**93**	P	**Pn**	**04 29 24.8**	**-0.1**
ITM				S	**Sn**	**04 29 42.8**	**+1.7**
AXS	**Araxos**	**1.21**	**38**	P	**Pn**	**04 29 25.1**	**+0.1**
AXS	**Araxos**	**1.21**	**38**	P	**Pn**	**04 29 24.8**	**-0.2**
FSK	**Fiskardo**	**1.22**	**5**	P	**Pn**	**04 29 25.2**	**+0.1**
FSK				S	**Sn**	**04 29 43.1**	**+1.5**
FSK	**Fiskardo**	**1.22**	**5**	P	**Pn**	**04 29 25.1**	**0.0**
FSK				S	**Sn**	**04 29 41.4**	**-0.1**
DRO	**Drossia**	**1.24**	**55**	P	**Pn**	**04 29 25.8**	**+0.4**
DRO				S	**Sn**	**04 29 45.1**	**+2.9**
DRO	**Drossia**	**1.24**	**55**	P	**Pn**	**04 29 25.6**	**+0.2**
DRO				S	**Sn**	**04 29 44.4**	**+2.2**
VALY	**Valyra**	**1.24**	**93**	P	**Pn**	**04 29 25.9**	**+0.5**
VALY				S	**Sn**	**04 29 43.0**	**+0.8**
PLEV	**Plevrona-Mesol**	**1.40**	**33**	P	**Pb**	**04 29 28.7**	**+0.4**
PLEV				S	**Sn**	**04 29 48.8**	**+2.7**
NYDR	**Nydri-Lefkada**	**1.48**	**8**	P	**Pb**	**04 29 30.2**	**+0.5**
NYDR				S	**Sn**	**04 29 52.4**	**+4.4**
VLX	**Vlachokerasia**	**1.56**	**85**	P	**Pg**	**04 29 31.4**	**-0.6**
KLV	**Kalavryta, Ach**	**1.58**	**59**	P	**Pg**	**04 29 31.1**	**-1.4**
PVO	**Paravola**	**1.62**	**32**	P	**Pg**	**04 29 33.4**	**+0.2**
EFP	**Efpalio**	**1.66**	**44**	P	**Pg**	**04 29 33.0**	**-1.0**
GUR	**Goura**	**1.67**	**65**	P	**Pg**	**04 29 33.2**	**-1.0**
OHR	**Ohrid**	**3.87**	**4**	*e*Pn	**Pn**	**04 30 04.4**	**+2.8**
IDI	**Anoyia**	**4.10**	**117**	Pn	**Pn**	**04 30 01.0**	**-3.8**
	9.3nm,0.3s,baz=332,slow=15,SNR=9.2						
IDI				Sn	**Sn**	**04 30 47.0**	**-5.8**
	1.4nm,0.3s,baz=287,slow=17,SNR=1.8						
VAY	**Valandovo**	**4.39**	**22**	*e*Pn	**Pn**	**04 30 09.7**	**+0.9**
VAE	**Valguarnera**	**4.80**	**275**	Pn	**Pn**	**04 30 16.8**	**+2.4**
	10.0nm,0.4s,baz=95,slow=12,SNR=1.0						
VAE				Sn	**Sn**	**04 31 08.7**	**-1.3**
	baz=210,slow=4.2						
KEST	**Kesra**	**9.05**	**264**	Pn	**Pn**	**04 31 15.8**	**+3.0**
	0.2nm,0.3s,baz=49,slow=11,SNR=2.7						
KEST				Sn	**Sn**	**04 32 52.2**	**-2.7**
	0.1nm,0.3s,baz=306,slow=16,SNR=1.6						
	4.1nm,0.9s						
MLR	**Muntele Rosu**	**9.22**	**25**	Pn	**Pn**	**04 31 14.1**	**-1.0**
	0.3nm,0.3s,baz=263,slow=17,SNR=3.5						
MLR				LR	LR	04 35 47.3	
	comp=Z,71nm,18.7s,baz=136,slow=45						
	1.9nm,0.8s						
DAVOX	**Davos/Dischmat**	**12.33**	**324**	Pn	**Pn**	**04 31 59.4**	**+1.7**
	0.1nm,0.3s,baz=354,slow=9.3,SNR=3.0						
DAVOX				Sn	**Sn**	**04 34 07.8**	**-7.4**
	0.2nm,0.3s,baz=302,slow=18,SNR=1.7						
	1.6nm,0.8s						
GERES	**GERESS Array B**	**12.59**	**339**	Pn	**Pn**	**04 32 02.5**	**+1.3**
	baz=166,slow=14,SNR=2.6						
GERES				Sn	Sn	04 34 12.7	-8.7
	baz=5.0,slow=34,SNR=4.4						
	0.3nm,0.5s						
ESDC	**Sonseca Array**	**19.24**	**285**	P	**Pn**	**04 33 28.6**	**+1.2**
	0.1nm,0.3s,baz=90,slow=10,SNR=1.6						
	0.5nm,0.8s						
HFS	**Hagfors**	**23.31**	**351**	P	**P**	**04 34 09.2**	**-0.6**
	2.2nm,0.5s,baz=155,slow=11,SNR=9.0						
	2.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**24.15**	**326**	P	**P**	**04 34 19.1**	**+1.0**
	0.5nm,0.4s,baz=132,slow=7.1,SNR=9.0						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**24.48**	**7**	P	**P**	**04 34 20.0**	**-0.9**
	2.0nm,0.8s,baz=180,slow=8.7,SNR=4.4						
	2.0nm,0.8s						
NB2	**NORSAR Subarra**	**24.52**	**349**	P	**P**	**04 34 21.8**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=162,slow=9.3						
NOA	**NORSAR Array B**	**24.52**	**349**	P	**P**	**04 34 21.5**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=161,slow=8.7,SNR=6.4						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.26**	**220**	P	**P**	**04 35 06.2**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=31,slow=8.7,SNR=8.0						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**42.85**	**53**	P	**P**	**04 36 59.3**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=284,slow=8.8,SNR=6.1						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.86**	**58**	P	**P**	**04 37 23.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=276,slow=7.0,SNR=7.2						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**46.37**	**47**	P	**P**	**04 37 27.8**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=294,slow=8.0,SNR=4.1						
	comp=Z,0.8nm,0.5s						
NEW	**Newport**	**86.85**	**333**	LR	LR	05 24 19.5	
	comp=Z,48nm,19.1s,baz=338,slow=38						
NVAR	**Mina Array Bea**	**95.63**	**329**	LR	LR	05 28 56.6	
	comp=Z,40nm,18.3s,baz=36,slow=38						

IDC 08 04:59:09.3±1.5, 23.62S×175.31W, h0km, mb3.7/4, mbtmp3.8/5, ML5.2/1, Error ellipse: s-maj=64.0km s-min=27.0km az=165.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.54**	**312**	Pn	Pn	05 01 14.8	+0.5
	0.9nm,0.3s,baz=144,slow=14,SNR=9.4						
	25nm,0.9s						
ASAR	**Alice Springs**	**46.31**	**259**	P	P	05 07 37.6	+0.4
	0.6nm,0.6s,baz=100,slow=7.3,SNR=6.7						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**46.71**	**264**	P	P	05 07 39.6	-0.8
	0.7nm,0.7s,baz=102,slow=8.3,SNR=5.3						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	**81.63**	**42**	P	P	05 11 28.6	-1.0
	0.4nm,0.7s,baz=232,slow=6.9,SNR=3.8						
	0.4nm,0.7s						
H03S2	**Juan Fernandez**	**82.19**	**123**	T	T	06 43 21.2	
	baz=246,slow=74,SNR=23						
H03S1	**Juan Fernandez**	**82.20**	**123**	T	T	06 43 22.6	
	baz=246,slow=74,SNR=28						
H03S3	**Juan Fernandez**	**82.21**	**123**	T	T	06 43 20.9	
	baz=246,slow=74,SNR=26						
H03N2	**Juan Fernandez**	**82.34**	**123**	T	T	06 43 14.8	
	baz=238,slow=73,SNR=8.6						
H03N3	**Juan Fernandez**	**82.34**	**123**	T	T	06 43 31.4	
	baz=238,slow=73,SNR=7.6						
H03N1	**Juan Fernandez**	**82.36**	**123**	T	T	06 43 27.9	
	baz=238,slow=73,SNR=8.2						
TXAR	**Lajitas Array**	**86.67**	**56**	P	P	05 11 56.1	+0.7
	0.6nm,0.8s,baz=212,slow=7.7,SNR=9.9						
	0.6nm,0.8s						

*NAO **08** 05:18:57.2, 51.57N×16.13E, h10km, MB3.3*
*BJI **08** 05:18:57.0, 51.60N×16.10E, h6km, mB4.9/6, mb4.9/48, Ms4.6/2, Ms7 4.5/1*
*DNK **08** 05:18:58.1±1.9, 51.65N×16.12E, h1km, ML4.0, Presumed earthquake*
*MOS **08** 05:18:58.5±1.3, 51.60N×16.20E, h10km, mb5.0/41, Error ellipse: s-maj=4.9km s-min=3.3km az=81.7*
*NEIC **08** 05:18:59.8±1.7, 51.57N±0.05×16.25E±0.06, h5km±1km, mb5.0/224, ML4.5/23(VIE), Error ellipse: s-maj=7.9km s-min=6.6km az=183.0*
*IPEC **08** 05:18:59.0±0.2, 51.55N×16.20E, h1km, ML4.6/8, Error ellipse: s-maj=1.9km s-min=1.1km az=66.0, Mining induced.*
*IDC **08** 05:18:59.2±0.3, 51.57N×16.09E, h0km, mb4.5/21, mbtmp4.5/35, ML3.6/13, MS3.3/15, Error ellipse: s-maj=7.6km s-min=5.8km az=117.0*
*BNS **08** 05:19:00.7±0.7, 51.57N×16.05E, h1km±12km, ML4.5*
*BGR **08** 05:19:00.1±0.2, 51.53N×16.18E, h1km, ML4.7/25, Error ellipse: s-maj=2.2km s-min=1.1km az=26.0*
*GFZ **08** 05:19:00.2±0.1, 52°N±1′×1′6E±″, h3km, M5.0/67, mb4.8/67, Error ellipse: s-maj=3.0km s-min=2.5km az=7.9, confirmed*
*MCSM **08** 05:19:00.0±0.3, 51°N±2′×1′6E±″, h10km±2km, mb4.9, mB5.2, MLv5.3, Mw(mB)4.6*
*PRU **08** 05:19:00.1, 51.54N×16.23E, h0km, M4.9*
*VIE **08** 05:19:01.2±0.5, 51.43N×15.97E, h0km, mb4.2/27, ml4.5/23, ms4.9/4, Error ellipse: s-maj=4.4km s-min=3.8km az=38.0 81 km WNW of Wroclaw Suspected Mining induced.*

ISC 08 05:18:58.7±0.2, 51.58N±0.02×16.19E±0.02, h0km, n971, σ1§35/1017, mb5.0/168, MS3.5/8, 24C-77D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.74**	**175**	*e*Pg	**Pg**	**05 19 13.0**	**+0.2**
KSP				*e*Sg	**Sg**	**05 19 23.1**	**+0.7**
KSP	**Ksiaz**	**0.74**	**175**	*e*Pg	**Pg**	**05 19 13.1**	**+0.2**
KSP				*e*Sg	**Sg**	**05 19 23.2**	**+0.7**
KSP	**Ksiaz**	**0.74**	**175**	P	**Pg**	**05 19 13.0**	**+0.2**
CHVC	**Chvalec**	**0.99**	**185**	*e*P	**Pb**	**05 19 18.4**	**-0.4**
CHVC				*e*		05 19 31.2	
CHVC	**Chvalec**	**0.99**	**185**	*e*PG	**Pb**	**05 19 18.4**	**-0.4**
CHVC				*e*SG	**Sg**	**05 19 31.2**	**+0.6**
OSTC	**Ostas**	**1.02**	**179**	*e*P	**Pb**	**05 19 18.9**	**-0.4**
OSTC				*e*		05 19 31.5	
OSTC	**Ostas**	**1.02**	**179**	*e*PG	**Pb**	**05 19 18.9**	**-0.4**
OSTC				*e*SG	**Sg**	**05 19 31.5**	**0.0**
UPC	**Upice**	**1.08**	**186**	*e*P	**Pg**	**05 19 19.7**	**+0.4**
UPC				*e*		05 19 33.7	
UPC				smax	smax		
	comp=N,6μm,0.6s						
UPC				MLR	MLR		
	comp=Z,16μm,5.8s						
UPC	**Upice**	**1.08**	**186**	*e*PG	**Pg**	**05 19 19.7**	**+0.4**
UPC				*e*SG	**Sg**	**05 19 33.7**	**+0.4**
	comp=Z,6μm,0.6s						
UPC				AMS	AMS	05 19 40.0	
	comp=Z,16μm,5.8s						
UPC	**Upice**	**1.08**	**186**	ǁP	**Pg**	**05 19 19.3**	**0.0**
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*P	**Pg**	**05 19 22.2**	**0.0**
DPC				*e*		05 19 38.3	
DPC				smax	smax		
	comp=N,4μm,0.9s						
DPC				MLR	MLR		
	comp=Z,16μm,5.3s						
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG	**Pg**	**05 19 22.2**	**0.0**
DPC				*e*SG	**Sg**	**05 19 38.3**	**+0.1**
	comp=Z,4μm,0.9s						
DPC				AMS	AMS	05 19 50.0	
	comp=Z,16μm,5.3s						
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*Pg	**Pg**	**05 19 21.9**	**-0.3**
DPC				*e*Sg	**Sg**	**05 19 38.3**	**+0.1**
DPC	**Dobruska-Polom**	**1.23**	**176**	P	**Pg**	**05 19 22.3**	**0.0**
DPC	**Dobruska-Polom**	**1.23**	**176**	ǁP	**Pg**	**05 19 21.9**	**-0.3**
PIVO	**Bartosovice**	**1.41**	**171**	*e*Pg	**Pn**	**05 19 25.0**	**-0.7**
	baz=351						
PIVO				*e*Sg	**Sg**	**05 19 42.4**	**-1.6**
	comp=Z,5μm,0.7s,baz=351						
PVCC	**Panska Ves**	**1.47**	**225**	*e*P	**Pg**	**05 19 26.6**	**-0.1**
PVCC				*e*		05 19 46.6	
PVCC				smax	smax		
	comp=N,10μm,0.8s						
PVCC	**Panska Ves**	**1.47**	**225**	*e*PG	**Pg**	**05 19 26.6**	**-0.1**
PVCC				*e*SG	**Sn**	**05 19 46.6**	**+0.4**
	comp=N,10μm,0.8s						
PVCC	**Panska Ves**	**1.47**	**225**	ǁP	**Pn**	**05 19 25.8**	**-0.5**
KRLC	**Kraliky**	**1.55**	**166**	*e*P	**Pn**	**05 19 27.5**	**-0.1**
KRLC				*e*		05 19 47.3	
KRLC				smax	smax		
	comp=N,3μm,0.8s						
KRLC				MLR	MLR		
	comp=Z,17μm,4.6s						
KRLC	**Kraliky**	**1.55**	**166**	*e*PG	**Pn**	**05 19 27.5**	**-0.1**
KRLC				*e*SG	**Sn**	**05 19 47.3**	**-1.1**
	comp=Z,3μm,0.8s						
KRLC				AMS	AMS	05 19 50.0	
	comp=Z,17μm,4.6s						
KRLC	**Kraliky**	**1.55**	**166**	ǁP	**Pn**	**05 19 27.1**	**-0.5**
BRG	**Berggiesshubel**	**1.58**	**244**	*e*Pn	**Pn**	**05 19 27.0**	**-1.0**
BRG				*e*Pg	**Pb**	**05 19 28.4**	**-0.3**
BRG				*e*Sg	**Sg**	**05 19 50.1**	**+0.8**
BRG	**Berggiesshubel**	**1.58**	**244**	ǁP	**Pn**	**05 19 27.0**	**-1.0**
BRG	**Berggiesshubel**	**1.58**	**244**	Pn	**Pn**	**05 19 26.9**	**-1.0**
BRG				Pg	**Pg**	**05 19 29.3**	**+0.4**
BRG				Sg	**Sg**	**05 19 49.8**	**+0.5**
BRG				Amp		05 19 50.6	
	comp=Z,4μm,0.5s						
ANAC	**Anensky vrch**	**1.69**	**153**	*e*Pn	**Pn**	**05 19 28.8**	**-0.6**
	baz=334						
ANAC				*e*Sg	**Sn**	**05 19 51.1**	**-0.6**
	comp=Z,4μm,0.9s,baz=334						
RUE	**Ruedersdorf**	**1.74**	**302**	*e*P	**Pn**	**05 19 30.3**	**+0.2**
RUE	**Ruedersdorf**	**1.74**	**302**	*e*Pn	**Pn**	**05 19 29.8**	**-0.3**
RUE				*e*Sg	**Sg**	**05 19 56.3**	**+1.8**
RUE	**Ruedersdorf**	**1.74**	**302**	ǁP	**Pn**	**05 19 29.6**	**-0.5**
RUE	**Ruedersdorf**	**1.74**	**302**	*i* Pn	**Pn**	**05 19 28.6**	**-1.4**
RYBC	**Ceska Rybna**	**1.77**	**183**	*e*Pn	**Pn**	**05 19 30.1**	**-0.5**
	baz=2.8						
RYBC				*e*Sg	**Sn**	**05 19 53.7**	**-0.2**
	comp=Z,5μm,0.8s,baz=2.8						
GKP	**Gorka Klasztor**	**1.81**	**20**	*e*P	**Pb**	**05 19 33.0**	**+0.3**
GKP	**Gorka Klasztor**	**1.81**	**20**	*e*Pn	**Pb**	**05 19 32.7**	**0.0**
FBE	**Freiberg**	**1.90**	**251**	*e*Pn	**Pn**	**05 19 32.0**	**-0.3**
FBE				*e*Pg	**Pg**	**05 19 34.8**	**-0.2**
FBE				*e*Sg	**Sg**	**05 19 59.5**	**-0.1**
PRU	**Pruhonice**	**1.90**	**214**	*e*P	**Pn**	**05 19 31.8**	**-0.6**
PRU				*e*		05 19 59.4	
PRU				smax	smax		
	comp=N,6μm,1.3s						
PRU				MLR	MLR		
	comp=Z,16μm,5.1s						
PRU	**Pruhonice**	**1.90**	**214**	*e*PN	**Pn**	**05 19 31.8**	**-0.6**
PRU				*e*PG	**Pb**	**05 19 34.2**	**-0.1**
PRU				*e*SG	**Sg**	**05 19 59.4**	**-0.4**
	comp=Z,6μm,1.3s						
PRU				AMS	AMS	05 20 10.0	
	comp=Z,16μm,5.1s						
PRU	**Pruhonice**	**1.90**	**214**	ǁP	**Pn**	**05 19 31.7**	**-0.7**
STEB	**Steborice**	**1.93**	**148**	*e*PN	**Pn**	**05 19 32.6**	**-0.1**
STEB				*e*PG	**Pb**	**05 19 34.9**	**+0.2**
STEB				*e*SG	**Sb**	**05 19 59.3**	**0.0**
	comp=Z,6μm,0.6s						
RAC	**Raciborz**	**1.96**	**139**	*e*PG	**Pg**	**05 19 36.1**	**-0.2**
RAC				*e*SG	**Sg**	**05 20 02.8**	**+1.1**
RAC	**Raciborz**	**1.96**	**139**	*e*P	**Pg**	**05 19 36.1**	**-0.2**
RAC				*e*		05 20 02.8	
HSKC	**Hora Svate Kat**	**1.99**	**242**	*e*PN	**Pn**	**05 19 32.8**	**-0.8**
HSKC				*e*SG	**Sb**	**05 20 01.2**	**+0.1**
	comp=Z,8μm,1.1s						
HSKC				AMS	AMS	05 20 10.0	
	comp=Z,14μm,4.3s						
HSKC	**Hora Svate Kat**	**1.99**	**242**	P	**Pn**	**05 19 32.6**	**-1.0**
MORC	**Moravsky Berou**	**2.00**	**154**	ǁP	**Pn**	**05 19 33.5**	**-0.2**
MORC	**Moravsky Berou**	**2.00**	**154**	P	**Pn**	**05 19 33.1**	**-0.6**
MORC	**Moravsky Berou**	**2.00**	**154**		**Pn**	**05 19 33.1**	**-0.6**
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**05 19 33.3**	**-0.5**
	baz=335						
MORC				*e*Sg	**Sb**	**05 20 00.9**	**-0.5**
	comp=Z,4μm,1.1s,baz=335						
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**05 19 33.1**	**-0.6**
MORC				*e*Sg	**Sg**	**05 20 02.6**	**-0.3**
MORC	**Moravsky Berou**	**2.00**	**154**	ǁP	**Pn**	**05 19 33.2**	**-0.5**
OKC	**Ostrava-Krasne**	**2.14**	**144**	*e*SG	**Sb**	**05 20 06.2**	**+0.8**
	comp=Z,4μm,0.8s						
OKC	**Ostrava-Krasne**	**2.14**	**144**	*e*Pn	**Pn**	**05 19 35.1**	**-0.6**
OKC				*e*Pg	**Pg**	**05 19 39.7**	**0.0**
OKC				*e*Sg	**Sb**	**05 20 06.0**	**+0.5**
OKC	**Ostrava-Krasne**	**2.14**	**144**	ǁP	**Pn**	**05 19 34.7**	**-1.0**
LNIZ	**Loecknitz**	**2.27**	**329**	*e*Pn	**Pn**	**05 19 36.8**	**-0.6**
LNIZ				*e*Sn	**Sn**	**05 20 05.2**	**-0.8**
LNIZ	**Loecknitz**	**2.27**	**329**	ǁP	**Pn**	**05 19 36.4**	**-1.0**
VRAC	**Vranov**	**2.29**	**173**	Pn	**Pn**	**05 19 37.9**	**+0.3**
	comp=Z,38nm,0.3s,baz=352,slow=14,SNR=114						
VRAC				Lg	Lg	05 20 09.7	
	comp=Z,189nm,0.3s,baz=276,slow=23,SNR=12						
VRAC				LR	LR	05 20 41.1	
	comp=Z,784nm,18.0s,baz=19,slow=44						
	comp=Z,446nm,0.8s						
VRAC	**Vranov**	**2.29**	**173**	ĵP	**Pn**	**05 19 38.3**	**+0.6**
VRAC	**Vranov**	**2.29**	**173**	*e*Pn	**Pn**	**05 19 37.4**	**-0.3**
	baz=354						
VRAC				*e*Sg	**Sb**	**05 20 09.6**	**0.0**
	comp=Z,4μm,1.4s,baz=354						
VRAC	**Vranov**	**2.29**	**173**	ǁP	**Pn**	**05 19 37.4**	**-0.3**
TREC	**Trest**	**2.33**	**191**	*e*P	**Pn**	**05 19 38.7**	**+0.4**
TREC				*e*		05 20 13.1	
TREC				MLR	MLR		
	comp=Z,12μm,5.1s						
TREC	**Trest**	**2.33**	**191**	*e*PN	**Pn**	**05 19 38.7**	**+0.4**
TREC				*e*SG	**Sg**	**05 20 13.1**	**-0.4**
TREC				AMS	AMS	05 20 30.0	
	comp=Z,12μm,5.1s						
TREC	**Trest**	**2.33**	**191**	ǁP	**Pn**	**05 19 38.0**	**-0.3**
ZVC	**Zvikov**	**2.49**	**212**	*e*PG	**Pg**	**05 19 45.6**	**-0.8**
ZVC				*e*SG	**Sg**	**05 20 18.1**	**-0.6**
	comp=Z,655nm,0.4s						
ZVC				AMS	AMS	05 20 30.0	
	comp=Z,14μm,5.2s						
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn	**Pn**	**05 19 40.7**	**-0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**05 20 16.8**	**+0.4**
	comp=Z,4μm,1.2s,baz=357						
KRUC	**Moravsky**	**2.52**	**177**	ǁP	**Pn**	**05 19 40.7**	**-0.2**
STAC	**Stalkov**	**2.61**	**193**	*e*Pn	**Pn**	**05 19 41.8**	**-0.4**
	baz=13						
STAC				*e*Sg	**Sb**	**05 20 20.0**	**+1.0**
	comp=Z,4μm,1.1s,baz=13						
TANN	**Tannenbergstha**	**2.63**	**245**	*e*Pn	**Pn**	**05 19 42.2**	**-0.2**
TANN				*e*Pg	**Pg**	**05 19 49.1**	**+0.1**
TANN				*e*Sg	**Sg**	**05 20 22.7**	**-0.2**
TANN	**Tannenbergstha**	**2.63**	**245**	ǁP	**Pn**	**05 19 41.2**	**-1.1**
OJC	**Ojcow**	**2.66**	**119**	*e*Pn	**Pn**	**05 19 41.0**	**-1.9**
OJC				*e*Pg	**Pg**	**05 19 49.1**	**-0.5**
OJC				*e*Sg	**Sg**	**05 20 25.5**	**+1.4**
OJC	**Ojcow**	**2.66**	**119**	P	**Pn**	**05 19 40.9**	**-1.9**
OJC	**Ojcow**	**2.66**	**119**		**Pn**	**05 19 40.9**	**-1.9**
OJC	**Ojcow**	**2.66**	**119**	*e*Pn	**Pn**	**05 19 41.1**	**-1.7**
OJC				*e*Pg	**Pg**	**05 19 49.2**	**-0.4**
OJC				*e*Sg	**Sg**	**05 20 25.4**	**+1.4**
OJC	**Ojcow**	**2.66**	**119**	P	**Pn**	**05 19 41.2**	**-1.6**
WERD	**Werda**	**2.70**	**247**	*e*Pn	**Pn**	**05 19 43.0**	**-0.3**
WERD				*e*Pg	**Pg**	**05 19 50.5**	**+0.1**
WERD				*e*Sg	**Sg**	**05 20 24.7**	**-0.6**
**

NIE eSg Sg 05 20 47.9 0.0
NIE Niedzica 3.40 128 P Pn 05 19 52.1 -0.9
RGN Rugen 3.44 331 Pn Pn 05 19 54.0 +0.5
ASSE Asse, Remlinge 3.46 281 P Pn 05 19 54.6 +0.9
ASSE Asse, Remlinge 3.46 281 *i* P Pn 05 19 50.6 -3.1
WINA Alland / Wiene 3.48 181 *i* Pn Pn 05 19 53.9 0.0
SNR=122
WINA eSg Sg 05 20 49.3 -0.9
GRB3 Grafenberg Arr 3.58 233 ⇓P Pn 05 19 55.2 -0.3
GRA3 Grafenberg Arr 3.59 241 ⇓P Pn 05 19 55.2 -0.4
BSD Bornholm Skovb 3.62 348 eP Pn 05 19 57.0 +1.0
BSD Bornholm Skovb 3.62 348 P Pn 05 19 56.6 +0.7
BSD Bornholm Skovb 3.62 348 *i* P Pn 05 19 54.8 -1.2
BSD IAML 05 21 07.5
comp=Z,273nm,1.1s
CLZ Clausthal 3.63 276 eP Pn 05 19 56.4 +0.3
CLZ ePg Pg 05 20 09.3 +1.2
CLZ eSg Sg 05 20 55.3 +0.2
CLZ Clausthal 3.63 276 P Pn 05 19 55.7 -0.4
CLZ Clausthal 3.63 276 *i* P Pn 05 19 56.4 +0.3
GRA2 Grafenberg Arr 3.63 240 ⇓P Pn 05 19 55.8 -0.2
GRB1 Grafenberg Arr 3.63 235 ⇓P Pn 05 19 55.8 -0.3
GRB4 Grafenberg Arr 3.63 236 ⇓P Pn 05 19 55.4 -0.7
CONA Conrad Observa 3.66 183 *i* Pn Pn 05 19 56.6 0.0
comp=Z,54nm,0.5s,SNR=154
CONA eSg Sg 05 20 55.1 -1.1
comp=Z,667nm,0.5s
GRA1 Grafenberg Arr 3.68 241 Pn 05 19 56.7 -0.2
GRA1 Grafenberg Arr 3.68 241 ⇓P Pn 05 19 56.6 -0.2
GRF Grafenberg Arr 3.68 241 P Pn 05 19 56.7 -0.2
GRF Grafenberg Arr 3.68 241 eP Pn 05 19 57.0 +0.2
GRF ePg Pg 05 20 10.6 +1.4
GRF eSg Sg 05 20 55.6 -1.3
GRFO Grafenberg 3.68 241 P Pn 05 19 56.9 +0.1
GRFO Grafenberg 3.68 241 Pn 05 19 56.9 +0.1
GRFO Grafenberg 3.68 241 P Pn 05 19 56.8 -0.1
GRB2 Grafenberg Arr 3.70 233 P Pn 05 19 57.1 0.0
GRB5 Grafenberg Arr 3.80 231 P Pn 05 19 58.3 -0.1
GTTG Gottingen 3.88 272 ePn Pn 05 20 00.3 +0.8
GTTG ePg Pg 05 20 12.2 -0.8
GTTG eSg Sg 05 21 02.4 -0.9
GTTG Gottingen 3.88 272 P Pn 05 20 00.0 +0.4
RONA Rosalia, Austr 3.88 179 Pn 05 19 59.4 -0.2
RONA Sg Sg 05 21 04.2 +0.9
RONA Rosalia, Austr 3.88 179 *i* Pn Pn 05 19 59.4 -0.2
comp=Z,25nm,0.6s,SNR=45
RONA eSg Sg 05 21 04.2 +0.9
comp=Z,290nm,0.4s
STHS Stebnicka Huta 3.89 122 eP Pn 05 19 59.0 -0.6
STHS Stebnicka Huta 3.89 122 ePN Pn 05 19 59.0 -0.6
STHS ePG Pg 05 20 13.4 +0.3
GRC4 Grafenberg Arr 3.89 232 P Pn 05 19 59.5 -0.2
SOP Sopron 3.91 176 P Pn 05 20 00.1 +0.2
MOA Molln 3.94 199 Pn 05 20 00.6 +0.3
MOA Sg Sg 05 21 04.3 -0.7
MOA Molln 3.94 199 *i* Pn Pn 05 20 00.6 +0.3
comp=Z,177nm,0.5s,SNR=189
MOA eSg Sg 05 21 04.3 -0.7
comp=Z,1μm,0.7s
MOA Molln 3.94 199 P Pn 05 20 00.4 0.0
GRC1 Grafenberg Arr 3.95 231 P Pn 05 20 00.1 -0.4
UBBA Unterbreizbach 3.96 261 ePn Pn 05 19 59.9 -0.7
UBBA ePg Pg 05 20 13.8 -0.8
UBBA eSg Sg 05 21 05.4 -0.5
UBBA Unterbreizbach 3.96 261 P Pn 05 20 00.3 -0.3
GRC3 Grafenberg Arr 4.00 229 P Pn 05 20 00.9 -0.2
SPAHL Spahl 4.06 259 ePn Pn 05 20 02.2 +0.1
SPAHL ePg Pg 05 20 15.5 -1.0
SPAHL eSg Sg 05 21 09.0 0.0
KHUS Kellenhusen 4.07 312 ePn Pn 05 20 02.3 +0.2
KHUS ePg Pg 05 20 17.2 +0.6
GRC2 Grafenberg Arr 4.11 231 P Pn 05 20 02.4 -0.3
KECS Kecovo 4.16 137 P Pn 05 20 04.0 +0.6
KW1 Garching a.d. 4.17 215 ePn Pn 05 20 04.0 +0.5
KW1 ePg Pg 05 20 17.9 -0.6
BIOA Bad Ischl, Aus 4.23 204 Pn 05 20 04.2 -0.1
BIOA Sg Sg 05 21 15.1 +0.7
BIOA Bad Ischl, Aus 4.23 204 *i* Pn Pn 05 20 04.2 -0.1
comp=Z,55nm,0.4s,SNR=58
BIOA Sg Sg 05 21 15.1 +0.7
comp=Z,1μm,0.8s
BSEG Bad Segeberg 4.28 306 ePn Pn 05 20 04.2 -0.7
BSEG Bad Segeberg 4.28 306 P Pn 05 20 04.0 -0.9
ARSA Arzberg 4.35 186 Pn 05 20 06.7 +0.7
ARSA Sg Sg 05 21 18.5 0.0
ARSA Arzberg 4.35 186 *i* Pn Pn 05 20 06.7 +0.7
comp=Z,37nm,0.4s,SNR=43
ARSA eSg Sg 05 21 18.5 0.0
comp=Z,601nm,0.6s
RETH Rethem/Aller, 4.36 288 ePn Pn 05 20 07.1 +1.0
RETH Rethem/Aller, 4.36 288 P Pn 05 20 07.0 +1.0
GOLB Goldborn 4.37 291 ePn Pn 05 20 07.4 +1.2
LUNU Lund 4.38 339 *i* P Pn 05 20 04.7 -1.6
PSZ Piszkesteto 4.38 145 ⇓P Pn 05 20 07.3 +0.8
PSZ Piszkesteto 4.38 145 P Pn 05 20 07.3 +0.8
PSZ Piszkesteto 4.38 145 Pn 05 20 06.0 -0.5
NORI Noerdlinger Ri 4.58 234 ePn Pn 05 20 09.7 +0.5
KWP Kalwaria Pacla 4.59 113 P Pn 05 20 08.3 -1.0
SESA Seetaler Alpe, 4.59 194 *i* Pn Pn 05 20 09.9 +0.4
comp=Z,159nm,0.4s,SNR=175
SESA Sg Sg 05 21 25.9 -0.3
comp=Z,939nm,0.6s
FUR Furstenfeldbru 4.66 225 ePn Pn 05 20 10.7 +0.4
KOLS Kolonicke sedl 4.72 122 eP Pn 05 20 11.5 +0.4
KOLS Kolonicke sedl 4.72 122 ePN Pn 05 20 11.5 +0.4
KOLS ePG Pg 05 20 29.4 +0.4
BLEU Blekinge 4.74 357 *i* P Pn 05 20 10.5 -0.8
LESA Schwarzleotal 4.75 210 Pn 05 20 11.9 +0.4
LESA Sg Sg 05 21 30.6 -0.4
LESA Schwarzleotal 4.75 210 *i* Pn Pn 05 20 11.9 +0.4
comp=Z,15nm,0.4s,SNR=32
LESA eSg Sg 05 21 30.6 -0.4
comp=Z,220nm,0.6s
STE02 Stenlille02 4.80 328 IAML 05 22 16.3
comp=Z,256nm,1.3s
KBA Koelnbreinsper 4.87 204 P Pn 05 20 13.4 +0.1
KBA Koelnbreinsper 4.87 204 Pn 05 20 13.4 +0.1
KBA Sg Sg 05 21 35.2 +0.1
KBA Koelnbreinsper 4.87 204 *i* Pn Pn 05 20 13.4 +0.1
comp=Z,137nm,0.5s,SNR=159
KBA Sg Sg 05 21 35.2 +0.1
comp=Z,707nm,1.0s
BJUU Bjuv 4.88 339 *i* P Pn 05 20 11.0 -2.2
KASTN Kahler Asten 4.88 269 ePn Pn 05 20 12.9 -0.4
KASTN ePg Pg 05 20 32.6 +0.4
KASTN eSn Sn 05 21 06.7 -3.8
KASTN eSg Sg 05 21 36.8 +1.5
BE1 Monatshausen 4.88 223 ePn Pn 05 20 13.2 -0.1
SUW Suwalki 4.89 57 P Pn 05 20 13.7 +0.3
SUW Suwalki 4.89 57 Pn 05 20 13.7 +0.3
SUW Suwalki 4.89 57 eP Pn 05 20 11.0 -2.5
SOKA Soboth 4.96 189 Pn 05 20 15.0 +0.5
SOKA Sg Sg 05 21 44.4 +6.4
SOKA Soboth 4.96 189 *i* Pn Pn 05 20 15.0 +0.5
comp=Z,14nm,0.4s,SNR=21
SOKA Sg Sg 05 21 44.4 +6.4
comp=Z,140nm,0.7s
PERS Pernice 5.00 188 ePn Pn 05 20 15.4 +0.5
TNS Taunus Mts 5.08 258 ePn Pn 05 20 16.0 -0.1
TNS eSg Sg 05 21 40.0 -1.8
DEL Delary 5.09 345 *i* P Pn 05 20 14.9 -1.2
BEHE Becsehely 5.13 175 Pn 05 20 17.1 +0.4
BEHE Becsehely 5.13 175 ePn Pn 05 20 17.9 +1.2
OBKA Obir 5.19 193 Pn 05 20 18.3 +0.8
OBKA Sg Sg 05 21 47.6 +2.4
OBKA Obir 5.19 193 *i* Pn Pn 05 20 18.3 +0.8
comp=Z,26nm,0.7s,SNR=24
OBKA eSg Sg 05 21 47.6 +2.4
comp=Z,363nm,0.6s
WATA Walderalm 5.20 217 P Pn 05 20 18.5 +0.6
WATA Walderalm 5.20 217 Pn 05 20 18.5 +0.6
WATA Sg Sg 05 21 47.9 +2.2
WATA Walderalm 5.20 217 *i* Pn Pn 05 20 18.5 +0.6
comp=Z,155nm,0.8s,SNR=60
WATA Sg Sg 05 21 47.9 +2.2
comp=Z,276nm,0.7s,SNR=36
MYKA Terra Mystica 5.23 200 Pn 05 20 18.5 +0.4
MYKA Sg Sg 05 21 46.5 0.0
MYKA Terra Mystica 5.23 200 *i* Pn Pn 05 20 18.5 +0.4
comp=Z,11nm,0.6s,SNR=9.2
MYKA eSg Sg 05 21 46.5 0.0
comp=Z,295nm,1.1s

WTTA Wattenberg 5.24 216 P Pn 05 20 18.9 +0.5
WTTA Wattenberg 5.24 216 Pn 05 20 18.9 +0.5
WTTA Sg Sg 05 21 48.7 +1.8
WTTA Wattenberg 5.24 216 *i* Pn Pn 05 20 18.9 +0.5
comp=Z,65nm,0.5s,SNR=58
WTTA eSg Sg 05 21 48.7 +1.8
comp=Z,285nm,0.5s
IBBN Ibbenburen 5.27 281 ePn Pn 05 20 19.2 +0.6
MOTA Moosalm 5.38 220 Pn 05 20 20.0 -0.2
MOTA Sg Sg 05 21 50.5 -0.8
MOTA Moosalm 5.38 220 *i* Pn Pn 05 20 20.0 -0.2
comp=Z,26nm,0.4s,SNR=23
MOTA eSg Sg 05 21 50.5 -0.8
comp=Z,319nm,0.7s
ABTA Abfaltersbach 5.40 208 Pn 05 20 20.9 +0.4
ABTA Sg Sg 05 21 53.5 +1.3
ABTA Abfaltersbach 5.40 208 *i* Pn Pn 05 20 20.9 +0.4
comp=Z,78nm,0.6s,SNR=69
ABTA eSg Sg 05 21 53.5 +1.3
comp=Z,251nm,0.7s
RETA Reutte 5.41 223 Pn 05 20 20.2 -0.4
RETA Sg Sg 05 21 52.8 +0.5
RETA Reutte 5.41 223 *i* Pn Pn 05 20 20.2 -0.4
comp=Z,35nm,0.8s,SNR=20
RETA eSg Sg 05 21 52.8 +0.5
comp=Z,265nm,0.8s
PRED Cave del Predi 5.42 200 Pn 05 20 20.9 +0.1
SQTA Sankt Quirin 5.44 219 P Pn 05 20 21.6 +0.5
SQTA Sankt Quirin 5.44 219 Pn 05 20 21.6 +0.5
SQTA Sg Sg 05 21 52.9 -0.4
SQTA Sankt Quirin 5.44 219 *i* Pn Pn 05 20 21.5 +0.5
comp=Z,32nm,0.4s,SNR=42
SQTA eSg Sg 05 21 52.9 -0.4
comp=Z,193nm,0.7s
NAST IGS Nastaetten 5.45 259 ePn Pn 05 20 20.7 -0.4
KOE Koeppel 5.46 261 ePn Pn 05 20 20.9 -0.4
SSRD Sdr. Stenderup 5.53 318 IAML 05 22 47.4
comp=Z,504nm,1.1s
BUG Bochum--Univer 5.57 272 ePn Pn 05 20 22.5 -0.2
HOBG Hohbusch 5.59 267 ePn Pn 05 20 22.8 -0.2
PBUR Paburge 5.60 35 eP Pn 05 20 22.4 -0.7
MORH Mrgy, Hungar 5.61 162 ePn Pn 05 20 23.0 -0.2
BGG Burgeitz 5.77 260 ePn Pn 05 20 25.1 -0.3
CRES Cresnjevec Ost 5.78 185 ePn Pn 05 20 25.1 -0.5
FETA Feichten 5.79 220 Pn 05 20 26.1 +0.1
FETA Sg Sg 05 22 06.5 +1.9
FETA Feichten 5.79 220 *i* Pn Pn 05 20 26.1 +0.1
comp=Z,2.2nm,0.5s,SNR=18
FETA Sg Sg 05 22 06.5 +1.9
comp=Z,106nm,0.8s
STAL STALIGIAL 5.79 205 Pn 05 20 26.5 +0.7
SABO M.te Sabotino 5.86 198 Pn 05 20 27.1 +0.3
DAVA Damuels 5.95 226 Pn 05 20 27.8 -0.3
DAVA Sg Sg 05 22 12.8 +3.2
DAVA Damuels 5.95 226 *i* Pn Pn 05 20 27.8 -0.3
comp=Z,9.8nm,0.4s,SNR=14
DAVA Sg Sg 05 22 12.8 +3.2
comp=Z,286nm,1.0s
STB Steinbach 5.97 264 ePn Pn 05 20 28.0 -0.3
BFO Black Forest 6.02 240 P Pn 05 20 28.4 -0.6
BFO Black Forest 6.02 240 Pn 05 20 28.4 -0.6
BFO Black Forest 6.02 240 ePn Pn 05 20 27.3 -1.7
BFO ePg Pg 05 20 54.0 0.0
BFO eSg Sg 05 22 09.9 -2.1
RNPP8 Varash 6.05 89 P Pn 05 20 28.2 -1.1
RNPP9 Sopachiv 6.06 88 P Pn 05 20 28.5 -1.0
PABE Paberze 6.08 47 Pn 05 20 30.7 +1.0
PABE Paberze 6.08 47 eP Pn 05 20 28.3 -1.4
RNPP5 Staryi Chortor 6.08 90 P Pn 05 20 28.7 -1.0
BOJS Bojanci 6.11 186 ePn Pn 05 20 30.4 +0.2
HILG Hillesheim 6.15 262 ePn Pn 05 20 30.5 -0.2
KLL Kalltalsperre 6.29 265 ePn Pn 05 20 32.1 -0.5
DAVOX Davos/Dischmat 6.33 223 Pn Pn 05 20 33.7 +0.2
comp=Z,5.4nm,0.3s,baz=17,slow=9.9,SNR=34
DAVOX Sn Sn 05 21 44.4 -2.2
comp=Z,5.5nm,0.3s,baz=41,slow=17,SNR=3.8
DAVOX Lg Lg 05 22 14.8
comp=Z,5.3nm,0.3s,baz=16,slow=20,SNR=5.0
comp=Z,17nm,0.4s
DREG Dreilaegerbach 6.33 266 ePn Pn 05 20 32.6 -0.6
MUD Monsted U'grnd 6.40 323 IAML 05 21 11.0
comp=Z,203nm,1.7s
BTNL Ternell 6.42 265 dP Pn 05 20 34.2 -0.1
DRGR 6.42 136 ⇓P Pn 05 20 34.9 +0.3
DRGR 6.42 136 P Pn 05 20 34.8 +0.3
SIRR Siria 6.42 144 ⇑P Pn 05 20 34.6 +0.1
MEM Membach 6.49 265 dP Pn 05 20 34.8 -0.5
BHOU Houvegnez 6.55 263 dP Pn 05 20 36.4 +0.2
BEBN Eben Emael 6.65 267 dP Pn 05 20 37.8 +0.2
WLF Walferdange 6.67 257 P Pn 05 20 37.1 -0.7
WLF Walferdange 6.67 257 P Pn 05 20 37.5 -0.3
WLF Walferdange 6.67 257 Pn 05 20 37.5 -0.3
WLF Walferdange 6.67 257 dP Pn 05 20 37.4 -0.3
WLF Walferdange 6.67 257 ePn Pn 05 20 37.5 -0.3
MARR Marisel-Cluj 6.69 134 ⇓P Pn 05 20 38.6 +0.4
ECH Echery 6.73 244 P Pn 05 20 37.5 -1.2
ECH Echery 6.73 244 Pn 05 20 37.5 -1.2
BSTI Sart Tilman 6.77 266 dP Pn 05 20 39.7 +0.6
TUE Stuetta 6.80 224 Pn 05 20 40.7 +0.8
TUE Stuetta 6.80 224 P Pn 05 20 39.4 -0.5
comp=Z,5.6nmcomp=Z,2μmcomp=Z,171nm,0.7s
FRGS Fruska Gora 6.86 158 ePn Pn 05 20 41.2 +0.7
FRGS Fruska Gora 6.86 158 P Pn 05 20 41.5 +0.9
BLY Banja Luka 6.87 174 ⇓P Pn 05 20 41.0 +0.5
BLY Banja Luka 6.87 174 ePn Pn 05 20 40.6 +0.1
CJR Cluj-Napoca 6.88 132 ⇓P Pn 05 20 41.6 +0.8
CJR Cluj-Napoca 6.88 132 P Pn 05 20 41.5 +0.8
BZS Buzias 6.97 147 ⇑P Pn 05 20 42.3 +0.3
BZS Buzias 6.97 147 P Pn 05 20 42.2 +0.3
BCLA Clavier 6.97 265 dP Pn 05 20 42.1 +0.2
SLIT Slitere, Latvi 7.02 28 eP Pn 05 20 41.2 -1.4
SALO Salr 7.04 214 Pn 05 20 43.9 +0.9
BUR08 Bucovina Ar. S 7.05 120 Pn 05 20 43.6 +0.3
RCHB Rochefort 7.08 263 dP Pn 05 20 43.5 0.0
BURAR Bucovina Array 7.08 121 ⇑P Pn 05 20 43.7 +0.1
BURAR Bucovina Array 7.08 121 P Pn 05 20 43.7 +0.1
BURAR Bucovina Array 7.08 121 Pn 05 20 44.1 +0.5
BGES Gesves 7.11 265 dP Pn 05 20 44.6 +0.7
NACGM Naroch 7.18 58 ⇑*i* P Pn 05 20 44.8 +0.1
comp=Z,81nm,0.9s,baz=248
MI28 Mi28,Pidlybu 7.24 91 P Pn 05 20 44.0 -1.6
KMPD K-Podol'skiy 7.27 111 P Pn 05 20 44.0 -2.0
BMRD Maredsous 7.33 264 dP Pn 05 20 47.3 +0.5
TEKS Tekeris 7.38 161 ePn Pn 05 20 48.1 +0.5
MI29 MI29, Kamyanyy 7.45 94 P Pn 05 20 47.8 -0.8
comp=Z,6.0nmcomp=Z,19μmcomp=Z,418nm,1.1s
UCC Uccle 7.48 269 dP Pn 05 20 49.5 +0.7
DOU Dourbes 7.49 263 dP Pn 05 20 50.1 +1.0
DOU dS Sn 05 22 15.1 +0.4
LUBAR Lubar, Ukraine 7.53 98 P Pn 05 20 47.4 -2.2
MNK Minsk 7.63 63 *i* P Pn 05 20 50.6 -0.4
MNK *i* P Pn 05 20 50.6 -0.4
MNK *i* P Pn 05 20 50.6 -0.4
comp=Z,15nm,0.7s,baz=252
MNK *i* PP PnPn 05 20 58.3 -0.1
MNK *i* S Sn 05 22 17.4 -0.7
MNK *i* SS SnSn 05 22 29.9 +0.7
MNK *i* LQ LQ 05 22 59.3
MNK *i* LR LR 05 23 33.6
MNK *i* LRM MLR 05 23 59.6
comp=E,115nm,15.4s
MNK *i* LRM MLR 05 24 09.1
comp=Z,197nm,12.6s
MNK *i* LRM MLR 05 24 09.7
comp=N,173nm,13.2s
MNK Minsk 7.63 63 *i* P Pn 05 20 50.6 -0.4
MNK *i* S Sn 05 22 17.4 -0.7
MNK pmax pmax
comp=Z,15nm,0.7s
MNK MLR MLR
comp=E,115nm,15.0s
MNK MLR MLR
comp=Z,197nm,13.0s
MNK MLR MLR
comp=N,173nm,13.0s
MDVR Moldovita 7.74 149 ⇑P Pn 05 20 53.0 +0.4
BBLS Lazi&#263i 8.02 163 ePn Pn 05 20 57.6 +1.2
AK20 Malin Array Si 8.11 91 P Pn 05 20 55.9 -1.6
AK19 Malin Array Si 8.11 91 P Pn 05 20 55.9 -1.7
AK21 Malin Array Si 8.12 91 P Pn 05 20 56.1 -1.6
AK22 Malin Array Si 8.14 91 P Pn 05 20 56.3 -1.7
AK18 Malin Array Si 8.15 91 P Pn 05 20 56.4 -1.7
AK17 Malin Array Si 8.15 91 P Pn 05 20 56.4 -1.7

AK13 Malin Array Si 8.16 92 P Pn 05 20 56.6 -1.7
AK16 Malin Array Si 8.18 91 P Pn 05 20 56.9 -1.6
AK15 Malin Array Si 8.19 91 P Pn 05 20 57.0 -1.6
AK14 Malin Array Si 8.19 92 P Pn 05 20 57.0 -1.7
KIEV Kiev 8.24 91 ⇓P Pn 05 20 58.4 -0.9
KIEV Kiev 8.24 91 P Pn 05 20 58.4 -0.9
KIEV Kiev 8.24 91 Pn 05 20 58.0 -1.4
AKASG Malin Array Be 8.25 91 Pn Pn 05 20 58.6 -0.8
comp=N,1.8nm,0.3s,baz=276,slow=13,SNR=28
AKASG Pg Pb 05 21 19.7 -2.6
comp=N,2.5nm,0.3s,baz=285,slow=14,SNR=5.7
AKASG Sn Sn 05 22 27.2 -6.1
comp=N,4.4nm,0.3s,baz=268,slow=24,SNR=6.4
AKASG Lg Lg 05 23 19.6
comp=N,1.6nm,0.3s,baz=275,slow=25,SNR=4.3
AKASG LR LR 05 24 42.8
comp=N,258nm,20.2s,baz=240,slow=41
comp=N,40nm,0.8s
AKBB Malin Array Si 8.25 91*c i* P Pn 05 20 57.6 -1.9
AKBB Malin Array Si 8.25 91 Pn 05 20 58.2 -1.3
UPP Uppsala 8.34 5 eP Pn 05 21 00.7 0.0
ARR Arges 8.37 135 ⇓P Pn 05 21 01.4 +0.2
MTSE Matsula 8.38 28 eP Pn 05 20 58.7 -2.4
VLC Villacollemand 8.38 210 P Pn 05 21 01.8 +0.5
VOIR 8.50 133 ⇓P Pn 05 21 03.5 +0.4
VOIR 8.50 133 P Pn 05 21 03.5 +0.4
VOIR 8.50 133 P Pn 05 21 02.3 -0.8
comp=N,15nm,1.4s
TESR Tescani 8.54 122 ⇓P Pn 05 21 02.9 -0.6
TESR Tescani 8.54 122 P Pn 05 21 02.9 -0.6
comp=N,1μmcomp=N,86nm,1.4s
SORM Soroca 8.58 109 ⇓P Pn 05 21 04.4 +0.3
SORM Soroca 8.58 109 P Pn 05 21 04.3 +0.3
HFS Hagfors 8.69 352 Pn Pn 05 21 04.0 -1.5
comp=N,0.4nm,0.3s,baz=170,slow=14,SNR=13
HFS Sn Sn 05 22 30.0 -14
comp=N,0.1nm,0.3s,baz=182,slow=21,SNR=1.4
HFS Lg Lg 05 23 24.6
comp=N,1.1nm,0.3s,baz=176,slow=27,SNR=3.8
HFS LR LR 05 24 46.9
comp=N,126nm,19.9s,baz=190,slow=40
comp=N,13nm,1.1s
SJES Sjenica 8.71 161 ePn Pn 05 21 07.2 +1.3
BRY Bratogost 8.83 169 ePn Pn 05 21 08.5 +0.9
AAL Aland 8.88 12 eP Pn 05 21 05.8 -2.3
MLR Muntele Rosu 8.88 129 Pn Pn 05 21 08.1 -0.2
comp=N,0.2nm,0.3s,baz=38,slow=24,SNR=3.7
MLR Pg Pg 05 21 29.6 -19
comp=N,0.4nm,0.3s,baz=313,slow=11,SNR=8.5
MLR Lg Lg 05 23 40.8
comp=N,0.2nm,0.3s,baz=317,slow=19,SNR=1.5
MLR LR LR 05 24 56.4
comp=N,74nm,20.3s,baz=324,slow=40
comp=N,2.5nm,0.7s
MLR Muntele Rosu 8.88 129 P Pn 05 21 07.1 -1.2
comp=N,23nm,1.8s
VRI Vrincioaia 9.01 125 ⇓P Pn 05 21 10.3 +0.3
VRI Vrincioaia 9.01 125 P Pn 05 21 10.2 +0.3
VSU Vasula 9.17 37*c i* P Pn 05 21 11.7 -0.4
VSU pmax pmax
comp=Z,260nm,1.7s
VSU Vasula 9.17 37 eP Pn 05 21 09.2 -2.9
AQU L'Aquila 9.42 193 P Pn 05 21 14.4 -1.2
AQU L'Aquila 9.42 193 ePn Pn 05 21 14.0 -1.6
AQU L'Aquila 9.42 193 P Pn 05 21 14.5 -1.1
comp=Z,24nm,1.3s
NC602 NORSAR Array S 9.54 346 eP Pn 05 21 16.4 -0.7
ARBE Arbavere 9.63 31 eP Pn 05 21 17.0 -1.3
NB2 NORSAR Subarra 9.88 346 Pn Pn 05 21 19.3 -2.5
comp=Z,4.3nm,1.1s,baz=162,slow=14
NB2 NORSAR Subarra 9.88 346 Pn Pn 05 21 19.3 -2.5
NOA NORSAR Array B 9.88 346 Pn Pn 05 21 18.4 -3.4
baz=172,slow=17,SNR=6.8
NOA Sn Sn 05 23 01.5 -12
baz=153,slow=22,SNR=3.6
NOA Lg Lg 05 24 09.5
comp=Z,0.1nm,0.3s,baz=212,slow=15,SNR=5.4
NOA LR LR 05 25 31.6
comp=Z,156nm,19.4s,baz=165,slow=40
comp=Z,2.4nm,0.9s
RAF Rauma 9.96 16 eP Pn 05 21 21.7 -1.1
FINES FINESS Array B 11.28 25 Pn Pn 05 21 38.8 -2.1
comp=Z,1.1nm,0.3s,baz=201,slow=8.8,SNR=43
FINES Sn Sn 05 23 37.3 -10
comp=Z,1.8nm,0.3s,baz=212,slow=20,SNR=5.3
FINES Lg Lg 05 24 54.3
comp=Z,0.4nm,0.3s,baz=214,slow=24,SNR=1.3
FINES LR LR 05 26 22.9
comp=Z,162nm,20.0s,baz=197,slow=39
comp=Z,19nm,0.8s
PUL Pulkovo 11.43 39*i* ⇓*i* P Pn 05 21 41.6 -1.3
KESW Keswick, Cumbr 11.98 292 P Pn 05 21 47.8 -2.8
VAF Ylistaro 12.01 14 eP Pn 05 21 46.8 -4.1
EKA Eskdalemuir Ar 12.12 296 Pn Pn 05 21 48.6 -3.9
baz=102,slow=14
EKA Sn Sn 05 23 53.7 -14
baz=99,slow=25
OBN Obninsk 12.67 66 Pn Pn 05 21 55.3 -4.6
comp=Z,6.8nm,0.3s,baz=251,slow=21,SNR=11
OBN Sn Sn 05 24 13.7 -7.9
comp=Z,4.8nm,0.3s,baz=126,slow=21,SNR=3.7
OBN Lg Lg 05 25 39.5
comp=Z,6.1nm,0.3s,baz=153,slow=23,SNR=1.7
comp=Z,20nm,0.4s
OBN Obninsk 12.67 66*de* P Pn 05 21 56.1 -3.9
OBN *e* S Sn 05 24 21.3 -0.3
OBN pmax pmax
comp=Z,89nm,1.4s
OBN MLR MLR
comp=Z,344nm,6.0s
OBN Obninsk 12.67 66 Pn 05 21 56.1 -3.9
OBN Obninsk 12.67 66 P Pn 05 21 58.1 -1.8
comp=Z,46nm,1.2s
NSS Namsos 13.18 352 eP Pn 05 22 04.8 -1.9
NSS *e* 05 24 30.9
MOS Moscow 13.36 63 eP Pn 05 22 05.3 -4.0
MOS *e* S Sn 05 24 32.2 -6.2
MOS pmax pmax
comp=Z,50nm,0.6s
MOS MLR MLR
comp=Z,400nm,11.0s
SIM Simferopol' 13.64 112 P P 05 22 18.1 -4.3
SIM S Sn 05 24 53.4 +7.9
SIM pmax pmax
comp=Z,47nm,0.7s
SIM MLR MLR
comp=Z,200nm,10.0s
JOF Joensuu 13.96 30 eP Pn 05 22 13.5 -4.0
LPSR Galich'ya Gora 14.01 77 eP Pn 05 22 13.1 -5.1
LPSR *e* S Sn 05 24 46.7 -7.6
LPSR pmax pmax
comp=Z,65nm,0.8s
LPSR smax smax
comp=E,100nm,1.1s
VAE Valguarnera 14.15 186 Pn Pn 05 22 20.4 +0.1
comp=E,1.9nm,0.3s,baz=0.0,slow=11,SNR=1.5
comp=E,1.1nm,0.3s
VORR Voronezh 14.29 81 eP Pn 05 22 16.1 -6.0
VORR pmax pmax
comp=Z,78nm,0.5s
VSR Storozhevoye 14.34 82 eP Pn 05 22 15.0 -7.8
VSR pmax pmax
comp=Z,20nm,1.1s
VSR MLR MLR
comp=Z,330nm,9.0s
VORD Divnogorie 14.47 83 eP Pn 05 22 18.1 -6.4
VORD pmax pmax
comp=Z,10.0nm,1.0s
LEIR Leirfjorden 14.66 355 eP Pn 05 22 23.1 -3.9
LEIR IAmb IAmb 05 22 27.4
comp=Z,38nm,1.0s
LEIR *e* 05 25 01.2
MOR8 Moi Rana 14.66 357 eP Pn 05 22 25.4 -1.8
MOR8 IAmb IAmb 05 22 34.8
comp=Z,31nm,1.2s
MOR8 *e* 05 25 01.2
STOK Stokkvaagen 14.89 355 eP Pn 05 22 27.9 -2.2
STOK IAmb IAmb 05 22 29.4
comp=Z,75nm,1.2s
RAUS Rausandaksla 14.94 357 eP Pn 05 22 27.4 -3.5
RAUS IAmb IAmb 05 22 40.3
comp=Z,31nm,1.2s
KONS Konsvik 15.05 355 eP Pn 05 22 30.0 -2.3
VAGH Vaagaholmen 15.27 356 eP Pn 05 22 34.8 -0.4
ANN Anapa 15.68 107 eP Pn 05 22 39.3 -1.4

ANN eS Sn 05 25 34.7 -0.2
ANN pmax pmax
comp=Z,87nm,1.6s
FAUS Fauske 15.86 359 eP Pn 05 22 40.8 -2.1
KLMR Klimovskoe 15.87 45 eP Pn 05 22 40.5 -2.6
KLMR e 05 25 39.1
KLMR pmax pmax
comp=Z,50nm,1.5s
VRH Novokhopyorsk 15.92 81 eP Pn 05 22 36.0 -7.9
VRH pmax pmax
comp=Z,80nm,1.1s
VRH MLR MLR
comp=Z,380nm,11.0s
EIBI Ibiza 16.29 225 P Pn 05 22 49.6 +1.0
STEI Steigen 16.41 359 eP Pn 05 22 46.4 -3.7
KEST Kesra 16.58 200 Pn Pn 05 22 52.8 +0.2
comp=Z,0.2nm,0.3s,baz=315,slow=2.2,SNR=12
comp=Z,18nm,1.1s
KEST Kesra 16.58 200 P Pn 05 22 53.0 +0.5
LANU Lannavaara 16.76 8 eP Pn 05 22 49.3 -5.3
ECHE Chera 16.91 232 P Pn 05 22 56.3 -0.4
BR131 Keskin Array S 16.96 128 P Pn 05 22 55.4 -1.9
BR131 pmax pmax
comp=Z,29nm,1.5s
BR131 Keskin Array S 16.96 128 Pn Pn 05 22 55.4 -1.9
BRTR Keskin Array B 16.96 128 Pn Pn 05 22 53.8 -3.5
comp=Z,0.1nm,0.3s,baz=316,slow=6.9,SNR=13
BRTR Keskin Array B 16.96 128 *i* P P 05 23 00.8 +1.4
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 16.96 128 Pn Pn 05 22 55.3 -2.0
ADZR Andozero 16.97 35 eP Pn 05 22 50.6 -6.5
ADZR pmax pmax
comp=Z,27nm,0.7s
ERBR Yeremizino-Bor 17.05 101 eP Pn 05 22 56.6 -1.7
ERBR eS Sn 05 26 08.7 +0.3
ERBR MLR MLR
comp=Z,75nm,10.0s
UCM Universidad Co 17.54 238 P P 05 23 05.8 +0.1
SOC Sochi 17.72 108*c* *i* P P 05 23 08.1 +0.5
SOC *e* 05 26 27.4
SOC pmax pmax
comp=Z,23nm,0.9s
SOC MLR MLR
comp=Z,32nm,9.0s
LABN Labinsk 17.74 103 eP Pn 05 23 05.1 -1.8
LABN eS Sn 05 26 23.7 -1.4
LABN MLR MLR
comp=Z,123nm,11.0s
KTK1 Kautokeino 17.81 8 eP Pn 05 23 04.6 -3.1
VSLR Vesyoloye 17.98 107*c* *i* P P 05 23 11.1 +0.7
AKAS Kas 18.09 143 Pn Pn 05 23 07.9 -3.5
AKAS Kas 18.09 143 P P 05 23 11.7 -0.1
APA Apatity 18.14 21 ||*i* P Pn 05 23 03.9 -7.7
APA pmax pmax
comp=Z,17nm,1.4s
APA MLR MLR
comp=Z,1µm,6.3s
JETT Jettan, Norway 18.15 5 eP Pn 05 23 09.6 -2.2
TRO Tromso 18.16 3 eP Pn 05 23 09.4 -2.5
ESDC Sonseca Array 18.38 237 P Pn 05 23 13.1 -1.7
comp=Z,6.1nm,1.1s,baz=42,slow=10,SNR=20
ESDC LR LR 05 30 37.4
comp=Z,50nm,18.5s,baz=100,slow=38
ESDC Sonseca Array 18.38 237 P P 05 23 15.4 +0.4
ARA0 ARCESS Array S 18.55 10 eP P 05 23 12.6 -4.0
ARCES ARCESS Array B 18.55 10 P P 05 23 13.8 -2.7
comp=Z,12nm,0.8s,baz=186,slow=9.8,SNR=15
ARCES S Sn 05 26 29.1 -15
comp=Z,1.7nm,0.7s,baz=198,slow=24,SNR=1.9
ARCES LR LR 05 31 19.8
comp=Z,50nm,19.8s,baz=231,slow=40
ARCES ARCESS Array B 18.55 10 P P 05 23 14.3 -2.2
ARCES pmax pmax
comp=Z,40nm,1.2s
ARCES ARCESS Array B 18.55 10 P P 05 23 14.3 -2.2
ARCES Sn Sn 05 26 29.1 -15
PAB San Pablo 18.67 238 P P 05 23 17.2 -1.0
PAB pmax pmax
comp=Z,27nm,1.5s
PAB San Pablo 18.67 238 P P 05 23 17.2 -1.0
LVZ Lovozero 18.69 22*ce* eP P 05 23 15.7 -2.4
LVZ pmax pmax
comp=Z,72nm,1.7s
LVZ Lovozero 18.69 22 P P 05 23 14.9 -3.2
BNN Bunyan 18.73 125 P P 05 23 17.7 -1.3
KEV Kevo 18.93 12 P P 05 23 20.5 -0.2
KEV pmax pmax
comp=Z,28nm,0.9s
KEV Kevo 18.93 12 P P 05 23 20.5 -0.2
KEV Kevo 18.93 12 P P 05 23 19.2 -1.5
GOF Gofitskoye 18.95 100*ce* eP Pn 05 23 22.4 +0.7
MVO Moncorvo 19.03 246 eLR LR 05 31 22.8
MVO *i* IAMs_20 IAMs_20 05 35 33.6
comp=Z,64nm,20.0s
KIV Kislovodsk 19.30 103 eP Pn 05 23 26.0 0.0
KIV eS S 05 27 04.3 0.0
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,40nm,14.0s
KIV Kislovodsk 19.30 103 P Pn 05 23 27.3 +1.3
KVAR Kislovodsk Arr 19.30 103 P P 05 23 25.2 +0.1
baz=299,slow=10
KVAR Sn Sn 05 26 49.4 -14
baz=304,slow=7.3
comp=Z,2.3nm,0.4s
BELG Belogornoye 19.31 75 P P 05 23 21.6 -3.4
comp=Z,64nm,1.0s,baz=252,slow=20,SNR=16
BELG Sn Sn 05 26 46.6 -16
comp=Z,0.4nm,0.3s,baz=233,slow=20,SNR=1.4
BELG Belogornoye 19.31 75*d* *i* P P 05 23 25.4 +0.5
BELG pmax pmax
comp=Z,21nm,1.1s
SHA1 Shidzhatmaz 19.40 103*d* *i* P P 05 23 26.6 +0.3
HAMF Hammerfest 19.44 8 eP P 05 23 24.9 -1.4
KBZ Khabaz 19.55 103 P P 05 23 28.0 +0.3
comp=Z,0.1nm,0.3s,baz=304,slow=12,SNR=12
KBZ Sn Sn 05 26 56.4 -12
comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=1.7
KBZ Lg Lg 05 29 20.9
comp=Z,0.1nm,0.3s,baz=235,slow=16,SNR=4.5
comp=Z,11nm,1.1s
KBZ Khabaz 19.55 103*d* *i* P P 05 23 28.3 +0.6
KBZ pmax pmax
comp=Z,16nm,1.1s
VADS Vadso 19.59 13 eP P 05 23 27.3 -0.6
KELT Kelkit 19.62 117 P Pn 05 23 31.1 +1.1
MTE Manteigas 19.83 245 eLR LR 05 31 55.4
MTE *i* IAMs_20 IAMs_20 05 32 31.0
comp=Z,60nm,16.0s
ARPR Arapgir-MALATY 19.86 120 P Pn 05 23 34.0 +1.1
ANDN Andirin 19.96 127 P Pn 05 23 34.4 +0.4
NCK Nalchik 20.10 103 || eP P 05 23 32.3 -1.5
NCK pmax pmax
comp=Z,14nm,0.4s
KIRV Kirov 20.11 57 ||*i* P P 05 23 32.6 -1.0
PCBR Castelo Branco 20.17 244 P Pn 05 23 38.5 +2.2
PMRV Marv??o 20.41 243 eLR LR 05 32 09.0
PMRV *i* IAMs_20 IAMs_20 05 32 58.0
comp=Z,91nm,16.0s
KOPT Kop Dagi 20.41 115 P P 05 23 35.7 -1.7
CSS Mathiatis 20.69 137 P P 05 23 39.4 -0.8
comp=Z,21nm,1.3s
CSS Mathiatis 20.69 137 P Pn 05 23 41.5 -1.0
GAZ Gaziantep 20.71 126 P P 05 23 39.2 -1.3
PSARD Sardoal 20.72 244 P Pn 05 23 44.8 +2.0
EPOS Posof 20.74 109 P Pn 05 23 43.1 -0.1
PESTR Estremoz 20.91 242 P P 05 23 41.0 -1.5
PESTR Estremoz 20.91 242 P Pn 05 23 47.1 +2.1
PESTR Estremoz 20.91 242 P P 05 23 43.7 +1.1
PBAR Barrancos 21.11 240 P P 05 23 44.0 -0.6
PBAR Barrancos 21.11 240 P P 05 23 48.1 +3.4
PARRA Arraiolos 21.20 242 eP P 05 23 48.3 +2.7
PARRA *e*pP 05 23 49.4
EVO Evora 21.38 242 P P 05 23 47.3 -0.3
EVO Evora 21.38 242 eP P 05 23 49.5 +1.9
MOE Montemor 21.57 242 eP P 05 23 49.9 +0.2
DIGO Kars 21.81 110 P P 05 23 54.2 +1.8
MESJ Messejana 21.99 241 eP P 05 23 56.6 +2.5
PVAQ Vaqueiros 22.04 239 eP P 05 23 55.4 +0.7
PVAQ eLR LR 05 33 08.4
PVAQ *i* IAMs_20 IAMs_20 05 33 38.9
comp=Z,44nm,16.0s

PVAQ Vaqueiros 22.04 239 P P 05 23 54.8 +0.1
PBDV Barranco-do-Ve 22.27 239 P P 05 23 56.1 -1.1
PBDV Barranco-do-Ve 22.27 239 eP P 05 23 58.3 +1.1
GNI Garni 22.78 109*d* *i* P P 05 24 04.1 +1.3
GNI pmax pmax
comp=Z,109nm,1.6s
GNI Garni 22.78 109 P P 05 24 03.3 +0.5
GNI Garni 22.78 109 P P 05 24 04.3 +1.5
MAK Makhachkala 22.79 100 eP P 05 23 58.1 -4.5
MAK *e*S S 05 28 04.7 -7.8
MAK pmax pmax
comp=Z,217nm,1.0s
MAK MLR MLR
comp=Z,171nm,12.0s
GEVA Gevas 23.03 115 P P 05 24 03.9 -1.5
BORG Borgarnes 23.34 319 LR LR 05 34 15.8
comp=Z,67nm,18.0s,baz=106,slow=39
MMLI Mount Malkishu 23.75 136 P P 05 24 14.0 +1.5
AKT Akhty 23.76 103 eP P 05 24 12.0 -0.7
AKT *e*PPP PPP 05 24 47.6
AKT pmax pmax
comp=Z,59nm,1.8s
AKT MLR MLR
comp=Z,98nm,13.0s
IFR Ifrane 23.78 229 P P 05 24 10.9 -2.0
HAKT HAKKARI 23.92 115 P P 05 24 16.8 +2.4
MD31 MD31 24.14 227 P P 05 24 13.8 -2.5
UJAP Al Uja 24.18 137 P P 05 24 17.9 +1.4
KZIT Kziot 24.65 140 P P 05 24 21.6 +0.7
MSBI Mazada 24.69 138 P P 05 24 22.7 +1.5
GHAJ Ghor Haditha 24.79 137 P P 05 24 24.3 +2.3
ARTI Arti 24.97 62*d* *i* P P 05 24 23.4 -0.2
ARTI 05 24 53.5
ARTI S S 05 28 46.4 -1.6
ARTI pmax pmax
comp=Z,37nm,1.1s
ARTI Arti 24.97 62 P P 05 24 23.0 -0.6
ARTI IAmb IAmb 05 24 28.5
comp=Z,19nm,0.7s
HRFI Mount Harif 25.68 140 P P 05 24 31.4 +1.2
SCO Scoresbysund 25.72 331 P P 05 24 31.7 +1.5
SCO pmax pmax
comp=Z,15nm,1.0s
SCO Scoresbysund 25.72 331 P P 05 24 31.7 +1.5
SCO Scoresbysund 25.72 331 P P 05 24 32.4 +2.2
EIL Elat 25.96 140 P P 05 24 33.9 +1.1
SVE Sverdlovsk 26.15 61 eP P 05 24 35.0 +0.7
SVE pmax pmax
comp=Z,61nm,1.4s
TIO Tiouine 26.93 229 P P 05 24 40.6 -1.0
TIO Tiouine 26.93 229 P P 05 24 41.7 +0.1
AB31 Akbulak array 27.67 77 *i* P P 05 24 48.0 0.0
ABKAR Akbulak array 27.67 77 P P 05 24 47.5 -0.5
TAM Tamanrasset 29.90 200 P P 05 25 06.6 -1.6
TAM pmax pmax
comp=Z,51nm,0.3s
TAM Tamanrasset 29.90 200 P P 05 25 06.6 -1.6
TAM Tamanrasset 29.90 200 P P 05 25 09.8 +1.7
SUMG Summit 31.36 332 P P 05 25 21.0 +0.1
SUMG pmax pmax
comp=Z,9.0nm,1.1s
SUMG Summit 31.36 332 P P 05 25 21.0 +0.1
SUMG Summit 31.36 332 P P 05 25 21.6 +0.6
BORK Borovoye 32.47 66*d* *i* P P 05 25 31.5 +1.0
BORK pmax pmax
comp=Z,37nm,1.6s
BORK Borovoye 32.47 66 P P 05 25 31.4 +1.0
BORK IAmb IAmb 05 25 32.7
comp=Z,13nm,0.8s
BVA0 Borovoye Array 32.52 66 *i* P P 05 25 32.2 +1.3
BVAR Borovoye Array 32.52 66 P P 05 25 31.5 +0.6
comp=Z,7.3nm,0.7s,baz=295,slow=7.6,SNR=37
comp=Z,7.3nm,0.7s
NRS Narsarsuaq 34.18 311 P P 05 25 44.6 -0.5
SFJD Kangerlussuaq 35.40 321 LR LR 05 39 49.5
comp=Z,37nm,18.9s,baz=110,slow=35
IVI Ivigtut 35.47 311 P P 05 25 56.0 -0.3
RAYN Ar Rayn 35.95 130 P P 05 25 59.6 -1.3
RAYN pmax pmax
comp=Z,8.0nm,1.2s
RAYN Ar Rayn 35.95 130 P P 05 25 59.6 -1.3
RAYN Ar Rayn 35.95 130 P P 05 26 01.7 +0.7
NRIK Noril'sk 36.74 34 P P 05 26 07.7 +0.5
comp=Z,4.3nm,0.8s,baz=241,slow=7.9,SNR=5.8
comp=Z,4.3nm,0.8s
NRIK Noril'sk 36.74 34*de* P P 05 26 08.9 +1.7
NRIK pmax pmax
comp=Z,17nm,1.5s
NRIK Noril'sk 36.74 34 P P 05 26 07.5 +0.4
KULLO Kullorsuaq 36.81 335 P P 05 26 08.7 +1.0
CHM Chimkent 36.87 83 eP P 05 26 10.3 +1.7
CHM Chimkent 36.87 83 eP P 05 26 10.4 +1.7
KK31 Karatay Array 37.01 81 *i* P P 05 26 11.1 +1.4
KK31 Karatay Array 37.01 81 IAmb IAmb 05 26 13.1
comp=Z,41nm,1.4s
KKAR Karatay Array 37.01 81 P P 05 26 10.8 +1.1
KKAR Karatay Array 37.01 81 P P 05 26 10.8 +1.1
IUG luzhnay 37.23 83 eP P 05 26 13.5 +1.8
IUG pmax pmax
comp=Z,31nm,1.2s
IUG luzhnay 37.23 83 eP P 05 26 13.6 +1.8
comp=Z,31nm,1.2s
DZA Taraz 37.63 81 eP P 05 26 16.7 +1.7
DZA Taraz 37.63 81 eP P 05 26 16.7 +1.7
KURBB Kurchatov Arra 38.10 66 P P 05 26 19.5 +0.6
comp=Z,7.0nm,0.8s,baz=297,slow=8.9,SNR=47
KURBB PP PP 05 27 44.0 -1.6
comp=Z,3.5nm,1.0s,baz=294,slow=12,SNR=8.0
comp=Z,7.0nm,0.8s
KURBB Kurchatov Arra 38.10 66 P P 05 26 18.7 -0.2
KURK Kurchatov 38.12 66 *i* P P 05 26 19.3 +0.3
KURK pmax pmax
comp=Z,26nm,1.6s
KURK Kurchatov 38.12 66 P P 05 26 18.7 -0.3
KURK Kurchatov 38.12 66 P P 05 26 18.7 -0.3
BTLS Baital 38.15 76 eP P 05 26 21.2 +1.9
BTLS Baital 38.15 76 eP P 05 26 21.2 +1.9
ARK Arkit 38.62 82 P P 05 26 25.9 +2.4
CHGR Chuyangaron 38.71 88 || P P 05 26 25.4 +1.1
CHGR pmax pmax
comp=Z,71nm,1.3s
CHGR Chuyangaron 38.71 88 P P 05 26 25.6 +1.4
SHAA Shahritus 38.73 90 IAmb IAmb 05 26 28.0
comp=Z,37nm,1.0s
BTK Batken 38.91 85 P P 05 26 27.7 +1.8
GAR Garm 39.22 87 P P 05 26 30.6 +2.0
SGDS Sogindy 39.34 78 ||*i* P P 05 26 31.2 +1.7
TULEG Thule 39.43 338 P P 05 26 30.3 +0.6
TULEG IAmb IAmb 05 26 33.2
comp=Z,53nm,1.4s
TULEG Thule 39.43 338 P P 05 26 30.3 +0.6
AAK Ala-Archa 39.71 79 *d* *i* P P 05 26 34.6 +1.9
AAK pmax pmax
comp=Z,44nm,1.5s
AAK Ala-Archa 39.71 79 P P 05 26 33.8 +1.1
AAK IAmb IAmb 05 26 35.7
comp=Z,20nm,0.9s
AAK Ala-Archa 39.71 79 P P 05 26 34.4 +1.7
OHH Osh 39.86 83 P P 05 26 34.4 +0.5
TORD Torodi Ar. Bea 40.08 202 P P 05 26 35.9 +0.1
comp=Z,14nm,1.1s,baz=10,slow=6.8,SNR=32
TORD PP PP 05 28 05.0 -2.8
comp=Z,1.6nm,0.9s,baz=11,slow=11,SNR=3.6
comp=Z,14nm,1.1s
TORD Torodi Ar. Bea 40.08 202 P P 05 26 36.1 +0.4
TORD IAmb IAmb 05 26 37.5
comp=Z,29nm,1.4s
ZAA0 Zalesovo Array 40.12 59 P P 05 26 36.1 +0.4
ZALV Zalesovo Beam 40.12 59 P P 05 26 37.0 +1.3
comp=Z,16nm,1.2s,baz=295,slow=8.0,SNR=26
ZALV PP PP 05 28 06.6 -1.0
comp=Z,1.1nm,0.6s,baz=294,slow=11,SNR=3.9
comp=Z,16nm,1.2s
ZALV Zalesovo Beam 40.12 59 P P 05 26 35.9 +0.2
BOOM Boomskoye usch 40.68 79 P P 05 26 42.6 +1.9
TDK Taldyqorghan 40.80 74 eP P 05 26 43.3 +1.8
TDK pmax pmax
comp=Z,16nm,1.0s
TDK Taldyqorghan 40.80 74 eP P 05 26 43.3 +1.8
comp=Z,16nm,1.0s
MDOK Medeo 40.98 77 eP P 05 26 44.8 +1.6
MDOK Medeo 40.98 77 eP P 05 26 44.9 +1.6
TNSS Tian-Shan 40.99 77 eP P 05 26 44.8 +1.3
TNSS Tian-Shan 40.99 77 eP P 05 26 44.9 +1.3

KDJ Kajisay 41.64 78 P P 05 26 50.7 +2.0
SATY Saty 41.86 76*c* *i* P P 05 26 52.0 +1.6
SATY Saty 41.86 76 ||*i* P P 05 26 52.0 +1.6
ASAI AK-SAY(Kyrgyzs 41.94 80 P P 05 26 53.5 +2.2
MAKZ Makanchi 41.95 70 P P 05 26 51.8 +0.8
MAKZ pmax pmax
comp=Z,13nm,1.3s
MAKZ Makanchi 41.95 70 P P 05 26 51.8 +0.8
MAKZ Makanchi 41.95 70 P P 05 26 52.2 +1.2
MK31 Makanchi Array 42.15 69 *d* *i* P P 05 26 53.1 +0.6
MKAR Makanchi Array 42.15 69 P P 05 26 53.6 +1.1
comp=Z,2.4nm,0.7s,baz=308,slow=6.0,SNR=32
MKAR PP PP 05 28 29.2 -0.5
comp=Z,2.2nm,1.0s,baz=330,slow=7.0,SNR=5.4
MKAR LR LR 05 45 26.2
comp=Z,70nm,18.8s,baz=236,slow=38
comp=Z,2.4nm,0.7s
MKAR Makanchi Array 42.15 69 P P 05 26 52.8 +0.3
MKAR Makanchi Array 42.15 69 P P 05 26 52.8 +0.3
PRZ Przheval'sk 42.18 77 P P 05 26 56.1 +3.0
UZB Uzynbulak 42.19 76*c* *i* P P 05 26 54.6 +1.6
UZB Uzynbulak 42.19 76 ||*i* P P 05 26 54.7 +1.6
TARG Taragay, Kyrgy 42.25 78 P P 05 26 56.9 +3.0
KSH2 Kashi 42.40 83 P P 05 26 57.3 +2.4
KSH2 pmax pmax
comp=Z,29nm,1.4s
SHLS Shalkode 42.45 76*c* *i* P P 05 26 58.9 +3.8
SHLS pmax pmax
comp=Z,22nm,1.1s
SHLS Shalkode 42.45 76 ||*i* P P 05 26 59.0 +3.8
comp=Z,22nm,1.1s
ZSN Zaisan 43.29 67 eP P 05 27 03.6 +1.8
ZSN Zaisan 43.29 67 eP P 05 27 03.7 +1.8
WUS Wushi 43.42 78 P P 05 27 05.3 +2.2
DGZ Jazzator, Alta 43.57 63*d* *i* P P 05 27 05.9 +1.7
DGZ pmax pmax
comp=Z,29nm,1.3s
DRLN Deer Lake 45.16 298 P P 05 27 16.8 +0.1
DRLN IAmb IAmb 05 27 18.9
comp=Z,18nm,1.1s
ILON Igloolik, Nuna 45.58 331 P P 05 27 19.6 -0.2
ILON IAmb IAmb 05 27 21.5
comp=Z,18nm,1.4s
WMQ Urumqi 46.97 70 eP P 05 27 34.4 +3.3
WMQ pmax pmax
comp=Z,19nm,1.3s
SCHQ Schefferville 47.06 308 P P 05 27 31.7 0.0
comp=Z,8.7nm,0.8s,baz=79,slow=5.9,SNR=12
comp=Z,8.7nm,0.8s
SCHQ Schefferville 47.06 308 IAmb IAmb 05 27 33.7
comp=Z,12nm,0.9s
DHRM DHARAMSHALA 47.28 90 eP P 05 27 35.2 +1.3
TIXI Tiksi 48.32 23 || eP P 05 27 43.6 +2.4
TIXI pmax pmax
comp=Z,12nm,1.1s
LODK Lodwar 50.60 155 P P 05 27 59.5 +0.2
BATG Bathurst New B 50.98 300 P P 05 28 01.8 0.0
BATG IAmb IAmb 05 28 03.9
comp=Z,37nm,1.3s
TLY Talaya 51.04 53*d* *i* P P 05 28 04.1 +1.9
TLY pmax pmax
comp=Z,25nm,1.3s
ZAK Zakamensk 51.64 55 eP P 05 28 07.6 +0.7
ZAK pmax pmax
comp=Z,18nm,1.5s
D62A Allapoint, All 52.71 301 P P 05 28 15.2 +0.6
D62A IAmb IAmb 05 28 17.0
comp=Z,29nm,1.4s
BLKN Baker Lake 53.08 330 P P 05 28 17.2 +0.1
LDAQ Lac Daran 53.31 303 IAmb IAmb 05 28 20.6
comp=Z,24nm,1.4s
MBAR Mbarara 53.43 162*ce* eP P 05 28 21.2 +0.7
MBAR pmax pmax
comp=Z,14nm,1.3s
MBAR Mbarara 53.43 162 P P 05 28 20.0 -0.5
PKME Peaks-Kenny Pk 53.99 299 IAmb IAmb 05 28 26.4
comp=Z,26nm,1.3s
SONM Songino Array 54.84 56 P P 05 28 32.2 +1.7
comp=Z,7.9nm,1.0s,baz=289,slow=7.2,SNR=43
comp=Z,7.9nm,1.0s
SONM Songino Array 54.84 56 P P 05 28 30.8 +0.4
SONM pmax pmax
comp=Z,21nm,1.3s
SONM Songino Array 54.84 56 P P 05 28 30.8 +0.4
SONM IAmb IAmb 05 28 33.0
comp=Z,21nm,1.3s
YAK Yakutsk 55.12 32 eP P 05 28 32.1 0.0
YAK *e**PP PcP 05 28 36.0 -57
YAK *e* 05 29 33.1
YAK *e* 05 30 31.5
YAK *e*PPP PPP 05 31 46.7
YAK *e*S S 05 36 15.8 +0.4
YAK *e**SS 05 36 22.1
YAK *e* 05 38 21.2
YAK *e*SS SS 05 40 01.1 +2.7
YAK pmax pmax
comp=Z,43nm,1.3s
YAK pmax pmax
comp=N,15nm,1.4s
YAK pmax pmax
comp=E,15nm,1.5s
YAK pmax pmax
comp=Z,112nm,3.8s
YAK pmax pmax
comp=N,34nm,3.5s
YAK pmax pmax
comp=E,29nm,3.5s
YAK smax smax
comp=E,18nm,2.5s
YAK smax smax
comp=N,15nm,1.6s
YAK Yakutsk 55.12 32 P P 05 28 31.7 -0.4
ULN Ulaanbaatar 55.15 55 *d* *i* P P 05 28 34.2 +1.4
ULN pmax pmax
comp=Z,14nm,1.4s
ULN Ulaanbaatar 55.15 55 P P 05 28 33.7 +0.9
ULN Ulaanbaatar 55.15 55 P P 05 28 34.4 +1.6
comp=Z,34nm,1.4s
ULN Ulaanbaatar 55.15 55 P P 05 28 34.8 +2.1
C36M Paulatuk 55.92 344 P P 05 28 37.6 -0.1
baz=29
FCC Fort Churchill 56.34 324 P P 05 28 40.6 -0.2
FCC pmax pmax
comp=Z,7.0nm,0.9s
FCC Fort Churchill 56.34 324 P P 05 28 40.6 -0.2
GTA2 Gaotai 56.70 67 P P 05 28 45.3 +1.4
GTA2 PcP PcP 05 29 41.0 +1.0
GTA2 pmax pmax
comp=Z,9.0nm,1.5s
EVN Everest 56.80 86 P P 05 28 45.3 -0.1
EVN Everest 56.80 86 P P 05 28 46.6 +1.2
A22K Sinclair Lake 57.56 357 P P 05 28 49.0 -0.3
baz=6.5
D28M Stokes Point 58.01 350 P P 05 28 52.1 -0.4
baz=18
C27K Jago River 58.22 352 P P 05 28 53.7 -0.3
baz=15
LSA Lhasa 58.26 81 P P 05 28 57.3 +1.9
D27M Malcolm River 58.33 351 P P 05 28 54.3 -0.5
baz=16
INK Inuvik 58.33 347 P P 05 28 54.5 -0.3
baz=22
A19K Wainwright 58.51 359 P P 05 28 55.9 -0.1
baz=1.9
C23K Itkillik River 58.52 355 P P 05 28 56.0 -0.1
baz=9.6
B20K Meade River 58.63 357 P P 05 28 56.5 -0.3
baz=4.8
BILL Bilibino 58.63 13 ||*i* P P 05 28 58.2 +1.3
BILL pmax pmax
comp=Z,16nm,1.3s
D25K Kavik River 58.73 353 P P 05 28 57.6 -0.1
baz=13
E28M Babbage River 58.79 350 P P 05 28 58.2 +0.2
baz=17
E29M Blow River 58.81 349 P P 05 28 58.4 +0.2
baz=18,SNR=16
B21K Ikpikpuk River 58.93 356 P P 05 28 58.8 -0.1
baz=6.6
F31M Tsiigehtchic 59.17 347 P P 05 29 00.8 +0.2
baz=21
F30M Barrier River 59.28 348 IAmb IAmb 05 29 03.0
comp=Z,12nm,1.4s
F30M Barrier River 59.28 348 P P 05 29 01.6 +0.1
baz=20

D23K **Nanushuk River** 59.38 355 P P 05 29 02.3 +0.2
baz=9.4
C21K **Knifeblade Rid** 59.40 356 P P 05 29 02.5 +0.3
baz=6.5
E27K **Coleen River** 59.41 351 P P 05 29 02.5 +0.2
baz=16
HYB **Hyderabad** 59.42 101 eP P 05 29 02.7 -0.3
HYB eS S 05 37 13.1 -0.1
TOLK **Toolik Lake Re** 59.63 354 P P 05 29 04.0 +0.1
baz=10
G31M **Satah River** 59.73 347 P P 05 29 04.5 +0.1
baz=21
YKAW3 **Yellowknife Wh** 59.76 336 IAmb IAmb 05 29 06.6
comp=Z,14nm,0.9s
F28M **Old Crow** 59.78 350 IAmb IAmb 05 29 07.3
comp=Z,8.0nm,1.1s
F28M **Old Crow** 59.78 350 P P 05 29 05.2 +0.3
baz=17,SNR=8.2
YKAW1 **Yellowknife Wh** 59.79 336 IAmb IAmb 05 29 06.8
comp=Z,14nm,1.1s
YKA **Yellowknife Ar** 59.81 336 P P 05 29 05.7 +0.6
comp=Z,5.7nm,0.7s,baz=32,slow=6.6,SNR=47
comp=Z,5.7nm,0.7s
YKA **Yellowknife Ar** 59.81 336 *i*P P 05 29 05.6 +0.5
YKA pmax pmax
comp=Z,6.0nm,0.7s
YKA **Yellowknife Ar** 59.81 336 P P 05 29 05.3 +0.2
E25K **Arctic Village** 59.85 352 P P 05 29 05.9 +0.5
baz=13
D20K **Etivluk River** 59.91 357 P P 05 29 05.9 +0.1
baz=5.1
G30M **tAoh Zraii Nji** 59.94 348 P P 05 29 06.0 -0.1
baz=19,SNR=6.8
C18K **Utukok River** 60.08 359 P P 05 29 06.7 -0.3
baz=1.8
E24K **Your Creek** 60.12 353 P P 05 29 07.0 -0.2
baz=11
F26K **Sheenjek River** 60.14 351 IAmb IAmb 05 29 10.7
comp=Z,7.0nm,0.9s
F26K **Sheenjek River** 60.14 351 P P 05 29 07.4 0.0
baz=14,SNR=9.8
D19K **Kuna River** 60.17 358 P P 05 29 07.8 +0.2
baz=4.0
E23K **Chandalar** 60.21 354 IAmb IAmb 05 29 10.2
comp=Z,13nm,1.5s
E23K **Chandalar** 60.21 354 P P 05 29 08.6 +0.6
baz=10,SNR=6.0
G29M **Pine Creek** 60.23 349 IAmb IAmb 05 29 09.5
comp=Z,11nm,1.1s
G29M **Pine Creek** 60.23 349 P P 05 29 08.1 +0.1
baz=18,SNR=8.8
C17K **DeLong Mountai** 60.27 360 P P 05 29 08.4 +0.2
baz=0.4
E22K **Anaktuvuk Pass** 60.27 355 P P 05 29 08.5 +0.2
baz=8.5
ZEA **Zeya** 60.31 40 eP P 05 29 10.1 +1.4
ZEA pmax pmax
comp=Z,10.0nm,1.2s
E20K **Nigu River** 60.35 357 P P 05 29 09.2 +0.3
baz=5.4
F25K **Christian River** 60.37 352 P P 05 29 09.1 +0.1
baz=13,SNR=6.7
C16K **Lisburne Hills** 60.46 1 P P 05 29 09.7 +0.2
baz=359
EPYK **Eagle Plains** 60.58 348 IAmb IAmb 05 29 12.4
comp=Z,14nm,1.4s
EPYK **Eagle Plains** 60.58 348 P P 05 29 10.9 +0.5
baz=19
F24K **Squaw Lake** 60.62 353 P P 05 29 11.5 +0.8
baz=11,SNR=5.4
SEY **Seymchan** 60.73 21⇑ *i*P P 05 29 12.2 +0.7
SEY pmax pmax
comp=Z,8.0nm,1.1s
G27K **Doyon Strip** 60.75 350 P P 05 29 12.2 +0.6
baz=16,SNR=6.1
H31M **Peel River** 60.79 347 P P 05 29 12.0 +0.2
baz=20
G26K **Porcupine Rive** 60.83 351 P P 05 29 12.8 +0.8
baz=14
F22K **John River** 60.91 355 P P 05 29 13.4 +0.7
baz=8.2
H29M **Whitestone** 60.94 349 P P 05 29 13.6 +0.7
H29M IAmb IAmb 05 29 15.0
comp=Z,9.9nm,1.2s
H29M **Whitestone** 60.94 349 P P 05 29 13.5 +0.7
baz=18,SNR=6.0
D17K **Noatak River** 61.05 360 P P 05 29 14.2 +0.7
baz=0.5
COLD **Coldfoot** 61.07 354 P P 05 29 14.0 +0.3
baz=9.6
E19K **Redstone River** 61.19 357 P P 05 29 14.5 0.0
baz=4.6,SNR=7.6
G25K **Bearman Lake** 61.22 352 P P 05 29 15.5 +0.8
baz=12
WRGLY **Wrigley** 61.23 340 P P 05 29 15.2 +0.4
baz=27
F21K **Alatna River** 61.27 355 P P 05 29 15.3 +0.2
baz=7.3
H27K **Steamboat Moun** 61.29 350 P P 05 29 16.2 +0.9
H27K IAmb IAmb 05 29 18.6
comp=Z,12nm,1.3s
H27K **Steamboat Moun** 61.29 350 P P 05 29 15.6 +0.3
baz=16,SNR=9.6
E18K **Tukpahlearik C** 61.30 359 P P 05 29 15.6 +0.4
baz=2.2
LZH **Lanzhou** 61.39 67 eP P 05 29 18.3 +1.8
LZH sP PcP 05 29 29.1 -30
LZH pmax pmax
comp=Z,21nm,1.3s
LZDM **Lanzhou Array** 61.39 67 P P 05 29 17.1 +0.4
comp=Z,4.3nm,0.6s,baz=294,slow=4.4,SNR=4.4
comp=Z,4.3nm,0.6s
G24K **Hadweenzic Riv** 61.40 353 IAmb IAmb 05 29 19.5
comp=Z,11nm,1.4s
G24K **Hadweenzic Riv** 61.40 353 P P 05 29 16.4 +0.5
baz=12,SNR=6.7
G22K **Bettles** 61.46 355 P P 05 29 16.6 +0.3
baz=8.6
F20K **Avaraart Lake** 61.54 356 P P 05 29 17.0 +0.2
baz=5.7
G23K **Bananza Creek** 61.57 354 P P 05 29 16.9 -0.2
baz=9.7
I30M **Mount Dempster** 61.62 347 IAmb IAmb 05 29 19.0
comp=Z,6.4nm,1.0s
I30M **Mount Dempster** 61.62 347 P P 05 29 17.6 -0.1
baz=19,SNR=14
E17K **Hotham Inlet** 61.66 359 P P 05 29 18.2 +0.6
baz=1.3,SNR=5.8
SHL **Shillong** 61.66 84 P P 05 29 17.7 -0.8
SHL pmax pmax
comp=Z,26nm,1.0s
SHL **Shillong** 61.66 84 P P 05 29 17.7 -0.8
F19K **Shaleruckik Mo** 61.83 357 P P 05 29 18.9 +0.2
baz=4.2
I28M **Miner Creek** 61.87 349 P P 05 29 19.1 -0.2
baz=17,SNR=7.2
I27K **Kandik River** 61.91 350 IAmb IAmb 05 29 21.8
comp=Z,8.8nm,1.3s
I27K **Kandik River** 61.91 350 P P 05 29 20.3 +0.8
baz=15,SNR=6.9
G21K **Allakaket** 61.97 355 P P 05 29 19.8 0.0
baz=7.2,SNR=5.2
F18K **Selawik** 62.11 358 P P 05 29 21.2 +0.5
baz=2.9
J30M **Hart River** 62.23 347 IAmb IAmb 05 29 25.2
comp=Z,9.4nm,0.9s
J30M **Hart River** 62.23 347 P P 05 29 22.2 +0.5
baz=19,SNR=20
FFC **Flin Flon** 62.25 325 P P 05 29 22.4 +0.6
FFC pmax pmax
comp=Z,12nm,1.0s
FFC **Flin Flon** 62.25 325 P P 05 29 22.4 +0.6
FFC IAmb IAmb 05 29 23.6
comp=Z,12nm,0.9s
FFC **Flin Flon** 62.25 325 P P 05 29 22.6 +0.8
H24K **Noodor Dome** 62.28 353 P P 05 29 22.6 +0.7
baz=11
F17K **Baldwin Pennin** 62.29 359 P P 05 29 22.9 +1.0
baz=1.7
HHC **Hu-ho-hao-te** 62.30 59 eP P 05 29 22.1 -0.5
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,4.5s
PRP **Porcupine Dome** 62.39 352 P P 05 29 23.4 +0.6
baz=13
H23K **Yukon River** 62.42 353 P P 05 29 23.4 +0.6
baz=9.9
H22K **Ishtalitna Cre** 62.47 354 IAmb IAmb 05 29 26.0
comp=Z,10nm,1.4s
H22K **Ishtalitna Cre** 62.47 354 P P 05 29 24.2 +1.0
baz=8.7,SNR=6.2
G19K **Purcell Mounta** 62.50 357 IAmb IAmb 05 29 25.8
comp=Z,6.1nm,0.9s
G19K **Purcell Mounta** 62.50 357 P P 05 29 24.2 +0.9
baz=4.7,SNR=5.8
G18K **Tagagawik** 62.79 358 IAmb IAmb 05 29 27.0
comp=Z,6.5nm,1.1s
G18K **Tagagawik** 62.79 358 P P 05 29 26.0 +0.7
baz=3.5,SNR=6.1
H21K **Melozitna Rive** 62.79 355 IAmb IAmb 05 29 29.2
comp=Z,16nm,1.5s
H21K **Melozitna Rive** 62.79 355 P P 05 29 26.0 +0.7
baz=7.6
POKR **Poker Plat Res** 62.95 352 P P 05 29 26.9 +0.5
baz=11
HEH **HeiHe** 62.99 42 eP P 05 29 27.9 +1.1
HEH pmax pmax
comp=Z,16nm,1.3s
F15K **North Star Dit** 63.04 0 P P 05 29 27.6 +0.7
baz=359
H20K **Anotleneega Mo** 63.06 356 P P 05 29 28.1 +1.0
baz=6.2
I23K **Minto, Yukon-K** 63.07 353 P P 05 29 28.0 +0.9
baz=10.0
K29M **Barlow Dome** 63.09 347 IAmb IAmb 05 29 30.6
comp=Z,9.0nm,1.1s
K29M **Barlow Dome** 63.09 347 P P 05 29 28.9 +1.4
baz=18,SNR=8.4
DAWY **Dawson** 63.13 348 P P 05 29 28.0 +0.3
baz=17,SNR=13
TNA **Tin City** 63.15 2 P P 05 29 27.9 +0.3
baz=357
EYMN **Ely** 63.19 314 P P 05 29 29.3 +1.1
I21K **Tanana** 63.22 354 P P 05 29 29.3 +1.2
baz=8.2
G17K **Kiwalik Mounta** 63.23 359 P P 05 29 28.9 +0.7
baz=2.1
ILAR **Eielson Array** 63.25 352 P P 05 29 28.1 -0.2
comp=Z,0.8nm,0.8s,baz=5.4,slow=5.1,SNR=10
comp=Z,0.8nm,0.8s
J25K **Salcha River,** 63.26 351 P P 05 29 28.6 +0.1
baz=13
F14K **Arctic Creek** 63.27 1 P P 05 29 28.8 +0.3
baz=358
MA2 **Magadan** 63.27 24 LR LR 06 01 52.0
comp=Z,31nm,18.6s,baz=134,slow=41
MA2 **Magadan** 63.27 24⇓ eP P 05 29 28.0 -0.6
MA2 pmax pmax
comp=Z,31nm,1.9s
MMPY **Sheldon Lake,** 63.28 344 IAmb IAmb 05 29 31.7
comp=Z,6.8nm,1.1s
MMPY **Sheldon Lake,** 63.28 344 P P 05 29 29.8 +1.1
baz=22,SNR=7.4
MLY **Manley** 63.29 354 P P 05 29 29.2 +0.5
baz=9.0
ULM **Lac du Bonnet** 63.34 318 P P 05 29 28.5 -0.7
comp=Z,6.5nm,1.0s,baz=52,slow=7.5,SNR=12
comp=Z,6.5nm,1.0s
ULM **Lac du Bonnet** 63.34 318 IAmb IAmb 05 29 30.4
comp=Z,15nm,1.2s
H18K **Honosa River** 63.53 357 IAmb IAmb 05 29 32.7
comp=Z,12nm,1.5s
H18K **Honhosa River** 63.53 357 P P 05 29 31.0 +0.8
baz=3.7
NEA2 **Nenana** 63.60 353 P P 05 29 31.3 +0.6
baz=10
HDA **Harding Lake** 63.61 352 P P 05 29 31.2 +0.5
baz=12
I20K **Naaghedeneel** 63.74 356 P P 05 29 31.8 +0.3
baz=6.4
SCRK **Sand Creek** 63.75 350 P P 05 29 32.3 +0.5
baz=14,SNR=5.1
G15K **Niukluk** 63.76 0 P P 05 29 32.7 +1.0
baz=360
H17K **Granite Mounta** 63.78 358 P P 05 29 33.0 +1.1
baz=2.6
L29M **L29M** 63.88 347 IAmb IAmb 05 29 35.6
comp=Z,8.4nm,1.4s
L29M **L29M** 63.88 347 P P 05 29 33.2 +0.5
baz=18
GCSA **Galena City Sc** 63.89 357 P P 05 29 33.1 +0.6
baz=4.8
RIDG **Independent Ri** 64.07 351 IAmb IAmb 05 29 37.0
comp=Z,9.8nm,0.9s
RIDG **Independent Ri** 64.07 351 P P 05 29 34.7 +0.9
baz=13,SNR=9.5
K24K **Donnelly Dome** 64.09 351 P P 05 29 35.0 +1.0
baz=12
H16K **Elim** 64.11 359 P P 05 29 35.2 +1.1
baz=1.0
KOTAN **Kotaneelee Air** 64.13 339 P P 05 29 35.2 +1.0
baz=26
ANM **Nome** 64.19 1 P P 05 29 35.1 +0.5
baz=359
M31M **Drury Creek, Y** 64.19 345 P P 05 29 34.9 +0.2
baz=20
M30M **Minto, Yukon** 64.20 346 P P 05 29 35.4 +0.7
baz=18,SNR=5.3
E38A **The Farm, Brul** 64.22 313 P P 05 29 35.4 +0.4
J20K **Nowinta River** 64.34 355 P P 05 29 36.3 +0.8
baz=6.6
BCAR **Beaver Creek A** 64.39 349 P P 05 29 36.5 +0.5
L27K **Beaver Creek,** 64.40 349 IAmb IAmb 05 29 38.6
comp=Z,6.9nm,1.1s
L27K **Beaver Creek,** 64.40 349 P P 05 29 36.9 +0.9
baz=15,SNR=11
MCK **McKinley** 64.44 353 IAmb IAmb 05 29 38.0
comp=Z,12nm,1.3s
MCK **McKinley** 64.44 353 P P 05 29 36.9 +0.7
baz=10
P53A **Whipple** 64.45 302 P P 05 29 37.7 +1.1
CHUM **Lake Minchumin** 64.53 354 P P 05 29 37.8 +1.1
baz=7.8
M29M **Somme Creek** 64.56 347 IAmb IAmb 05 29 39.9
comp=Z,8.9nm,1.2s
M29M **Somme Creek** 64.56 347 P P 05 29 38.2 +1.0
baz=17,SNR=7.9
J19K **Poorman** 64.59 356 P P 05 29 38.4 +1.2
baz=5.6
G40A **Rib Lake** 64.60 311 P P 05 29 38.3 +0.7
L26K **Log Cabin Wild** 64.61 350 IAmb IAmb 05 29 41.3
comp=Z,12nm,1.0s
L26K **Log Cabin Wild** 64.61 350 P P 05 29 38.6 +1.2
baz=14,SNR=11
GAMB **Gambell** 64.82 4 P P 05 29 39.9 +1.2
baz=354
TRF **Thorofare Moun** 64.82 353 P P 05 29 39.3 +0.4
baz=9.2
AGMN **Agassiz Nation** 64.83 317 IAmb IAmb 05 29 41.3
comp=Z,9.1nm,1.1s
AGMN **Agassiz Nation** 64.83 317 P P 05 29 39.4 +0.3
I17K **Unalakleet** 64.85 358 P P 05 29 40.0 +1.2
baz=2.1
BVCY **Beaver Creek** 64.91 348 P P 05 29 40.2 +0.9
baz=16,SNR=5.7
DHY **Denali Highway** 64.96 352 IAmb IAmb 05 29 41.7
comp=Z,12nm,1.0s
DHY **Denali Highway** 64.96 352 P P 05 29 40.1 +0.3
baz=11,SNR=10
N32M **Quiet Lake** 64.96 344 P P 05 29 40.6 +0.9
baz=20
CAST **Castle Rocks** 64.97 354 P P 05 29 40.5 +0.8
baz=8.0,SNR=6.3
N31M **Braeburn, Yuko** 65.08 346 IAmb IAmb 05 29 43.6
comp=Z,11nm,1.1s
N31M **Braeburn, Yuko** 65.08 346 P P 05 29 41.8 +1.3
baz=19,SNR=7.1
M27K **Edge Creek, AK** 65.09 349 IAmb IAmb 05 29 43.4
comp=Z,15nm,1.4s
M27K **Edge Creek, AK** 65.09 349 P P 05 29 41.7 +1.1
baz=15,SNR=7.5
K20K **Telida** 65.15 355 P P 05 29 41.9 +1.0
baz=6.6
M26K **Nabesna, AK** 65.17 349 IAmb IAmb 05 29 45.0
comp=Z,7.8nm,1.2s
M26K **Nabesna, AK** 65.17 349 P P 05 29 42.5 +1.4
baz=14,SNR=5.6
LIRD **Liard River Hi** 65.23 340 P P 05 29 42.1 +0.7
baz=25
J17K **VABM Dome** 65.31 358 IAmb IAmb 05 29 46.6
comp=Z,10nm,1.2s
J17K **VABM Dome** 65.31 358 P P 05 29 42.0 +0.2
baz=3.2
N30M **Aishikik Lake** 65.31 346 IAmb IAmb 05 29 45.0
comp=Z,10nm,1.4s
N30M **Aishikik Lake** 65.31 346 P P 05 29 42.6 +0.6
baz=18,SNR=6.4
BJI2 **Beijing** 65.33 56 P P 05 29 43.8 +1.5
BJI2 pmax pmax
comp=Z,4.0nm,0.9s
J16K **Anvik River** 65.45 358 P P 05 29 43.1 +0.3
baz=2.1
YUK3 **Moose Creek** 65.47 348 P P 05 29 43.8 +0.5
baz=16,SNR=12
WAT6 **Susitna Watana** 65.48 352 P P 05 29 43.9 +0.7
baz=11
PPLA **Purkeypile** 65.50 354 P P 05 29 43.8 +0.5
baz=7.9
KLR **Kul'dur** 65.57 41 deP P 05 29 44.2 +0.4
KLR pmax pmax
comp=Z,24nm,1.7s
YUK4 **Talbot Arm** 65.64 347 P P 05 29 44.0 -0.3
baz=17
WHY **Whitehorse** 65.72 345 IAmb IAmb 05 29 46.6
comp=Z,13nm,1.2s
WHY **Whitehorse** 65.72 345 P P 05 29 45.0 +0.2
baz=19
XAN **Xi'an** 65.75 65 P P 05 29 46.3 +1.0
XAN pmax pmax
comp=Z,21nm,1.2s
L22K **Petersville** 65.77 353 P P 05 29 45.4 +0.5
baz=8.8
P33M **Teslin, Yukon** 65.80 344 IAmb IAmb 05 29 47.6
comp=Z,9.2nm,1.1s
P33M **Teslin, Yukon** 65.80 344 P P 05 29 46.0 +0.8
baz=21,SNR=9.1
O30N **Mendenhall** 65.81 346 IAmb IAmb 05 29 47.1
comp=Z,6.3nm,1.0s
O30N **Mendenhall** 65.81 346 P P 05 29 45.7 +0.4
baz=18,SNR=6.3
Q51A **Peebles** 65.82 303 IAmb IAmb 05 29 47.7
comp=Z,18nm,1.4s
SPMN **Marine on St.** 65.84 313 IAmb IAmb 05 29 47.2
comp=Z,17nm,1.4s
O48B **Farmland** 65.85 305 IAmb IAmb 05 29 47.6
comp=Z,21nm,1.4s
YUK8 **Steele Glacier** 65.86 348 P P 05 29 46.7 +0.9
baz=16
K17K **Iditarod** 65.97 357 P P 05 29 46.8 +0.7
baz=3.7
HYT **Haines Junctio** 65.98 346 P P 05 29 47.3 +0.9
baz=18
YUK6 **Outpost Mounta** 65.99 347 P P 05 29 46.9 +0.3
baz=17
N25K **Chitina, Valde** 66.13 350 P P 05 29 47.9 +0.6
baz=13
TNCH **TengChong** 66.15 79 ⇑P P 05 29 47.2 -0.9
TNCH pP PcP 05 29 51.1 -27
TNCH sP 05 29 53.5
TNCH pmax pmax
comp=Z,37nm,1.3s
TNCH pmax pmax
comp=Z,130nm,3.2s
MCARA **McCarthy VSAT** 66.17 349 P P 05 29 48.2 +0.8
baz=14
SCM **Sheep Creek Mo** 66.18 352 P P 05 29 48.4 +0.8
baz=11,SNR=8.0
R33M **Jennings River** 66.22 342 IAmb IAmb 05 29 51.3
comp=Z,8.6nm,1.1s
R33M **Jennings River** 66.22 342 P P 05 29 48.2 +0.2
baz=22,SNR=12
M23K **Glacier View** 66.25 352 P P 05 29 48.5 +0.5
baz=11
SML **Sawmill** 66.29 352 IAmb IAmb 05 29 51.4
comp=Z,7.3nm,0.8s
SML **Sawmill** 66.29 352 P P 05 29 48.3 0.0
baz=10
L19K **White Mountain** 66.36 355 IAmb IAmb 05 29 52.5
comp=Z,9.2nm,1.0s
L19K **White Mountain** 66.36 355 P P 05 29 49.2 +0.5
baz=8.0,SNR=5.3
SKT **Skwentna** 66.37 354 P P 05 29 48.8 +0.1
baz=8.3
JFWS **Jewell Farm** 66.39 310 IAmb IAmb 05 29 51.5
comp=Z,15nm,1.2s
L18K **Granite Mounta** 66.41 356 P P 05 29 49.1 +0.2
baz=4.8
BNX **BinXian** 66.44 45 ⇑P P 05 29 50.0 +0.6
BNX pmax pmax
comp=Z,10.0nm,1.3s
HNS **HongShan** 66.49 59 ⇓P P 05 29 50.3 +0.5
HNS pmax pmax
comp=Z,13nm,1.2s
M22K **Willow** 66.49 353 P P 05 29 49.9 +0.5
baz=9.2
P32M **Atlin** 66.54 344 P P 05 29 50.2 +0.3
baz=20
L17K **Donlin** 66.55 357 P P 05 29 50.3 +0.4
baz=3.7
P30M **Million Dollar** 66.57 346 P P 05 29 50.6 +0.5
baz=18
M20K **Styx River** 66.57 355 P P 05 29 50.4 +0.3
baz=7.2
PMR **Palmer** 66.57 352 P P 05 29 50.2 +0.3
baz=9.9
M19K **Big River Lodg** 66.62 355 P P 05 29 51.0 +0.6
baz=6.3
O29M **Mount Kennedy** 66.63 347 P P 05 29 51.1 +0.5
baz=17
GRNC **Granite Creek** 66.65 348 IAmb IAmb 05 29 54.4
comp=Z,17nm,1.4s
KNK **Knik Glacier** 66.69 352 P P 05 29 51.3 +0.5
baz=10
SFIN **Lafayette** 66.75 306 IAmb IAmb 05 29 52.7
comp=Z,13nm,1.2s
BMRM **Bremner River** 66.75 350 P P 05 29 51.9 +0.6
baz=13
CRQE **Crque** 66.79 349 P P 05 29 52.5 +0.9
baz=14,SNR=7.5
K13K **Kusilvak Mount** 66.83 0 P P 05 29 52.3 +0.6
baz=359
Q32M **Nakina River** 66.87 343 P P 05 29 52.8 +0.6
baz=21
DLBC **Dease Lake** 66.93 341 P P 05 29 53.3 +0.9
baz=22
SKAG **Skagway** 66.94 345 P P 05 29 53.1 +0.8
baz=19
L16K **Owhat River** 67.01 358 P P 05 29 53.4 +0.7
baz=2.9
PZH **PanZhiHua** 67.03 76 P P 05 29 54.9 +1.2
PZH pmax pmax
comp=Z,20nm,1.4s
CN2 **Changchun** 67.05 48 eP P 05 29 52.8 -0.5
CN2 pmax pmax
comp=Z,10.0nm,0.6s
PINM **Pinnacle** 67.07 347 P P 05 29 53.9 +0.6
baz=16
L15K **Ungalak Mounta** 67.08 359 P P 05 29 53.9 +0.7
baz=1.5
GLI **Glacier Island** 67.09 351 P P 05 29 53.8 +0.4
baz=11
M18K **Stony River** 67.10 356 P P 05 29 54.0 +0.7
baz=5.3
RC01 **Rabbit Creek A** 67.12 353 P P 05 29 54.3 +0.8
baz=9.4
P29M **Windy Craggy** 67.16 346 P P 05 29 54.2 +0.4
baz=17
M17K **Holitna River** 67.25 357 P P 05 29 55.3 +1.0
baz=4.2
EYAK **Cordova Ski Ar** 67.28 350 P P 05 29 55.7 +1.2
baz=12
LSZ **Lusaka** 67.39 167 P P 05 29 55.2 -0.6
L14K **Kuka Creek** 67.43 359 P P 05 29 56.8 +1.4
baz=0.7
L40A **Anamosa** 67.51 310 IAmb IAmb 05 29 57.4
comp=Z,10.0nm,1.1s
S34M **Telegraph Cree** 67.64 342 P P 05 29 58.0 +1.2
baz=21
M16K **Timber Creek** 67.68 357 P P 05 29 57.7 +0.6
baz=3.2
N19K **Bonanza Creek** 67.71 355 P P 05 29 58.3 +1.0
baz=6.2
HDIL **Hopedale** 67.72 307 IAmb IAmb 05 29 59.1
comp=Z,12nm,0.9s
O22K **Cooper Landing** 67.72 353 P P 05 29 58.4 +1.1
baz=9.4
KAIM **Kayak Island** 67.75 350 P P 05 29 58.4 +0.9
baz=13
N18K **Kilae Creek** 67.91 356 P P 05 29 59.7 +1.2
baz=5.3
WCI **Wyandotte Cave** 67.95 304 P P 05 29 59.1 -0.1
WCI pmax pmax
comp=Z,16nm,1.2s

WCI	**Wyandotte Cave**	**67.95**	**304**	P	**P**	**05 29 59.1**	**-0.1**
WCI				IAmb	IAmb	05 30 01.2		
	comp=Z,16nm,1.1s							
WCI	**Wyandotte Cave**	**67.95**	**304**	P	**P**	**05 29 59.9**	**+0.8**
P23K	**Montague Islan**	**67.99**	**351**	P	**P**	**05 30 00.2**	**+1.1**
	baz=11							
M14K	**Bethel**	**68.01**	**359**	P	**P**	**05 30 00.3**	**+1.2**
	baz=1.2							
M15K	**Kasigluk River**	**68.05**	**358**	P	**P**	**05 30 00.4**	**+1.0**
	baz=2.0							
SEW	**Seward**	**68.07**	**352**	P	**P**	**05 30 00.1**	**+0.6**
	baz=9.5							
N17K	**Nushagak Hills**	**68.12**	**356**	P	**P**	**05 30 00.8**	**+1.0**
	baz=4.4							
N16K	**Nishlik Lake**	**68.23**	**357**	P	**P**	**05 30 01.6**	**+1.0**
	baz=3.3							
Q23K	**Middleton Isla**	**68.45**	**351**	P	**P**	**05 30 03.0**	**+1.2**
	baz=12							
S31K	**Pelican**	**68.51**	**345**	IAmb	IAmb	05 30 05.2		
	comp=Z,15nm,1.3s							
S31K	**Pelican**	**68.51**	**345**	P	**P**	**05 30 03.0**	**+0.7**
	baz=18							
BRSE	**Bradley Lake S**	**68.53**	**353**	P	**P**	**05 30 03.2**	**+0.7**
	baz=8.7							
N15K	**Kwethluk River**	**68.57**	**358**	P	**P**	**05 30 03.4**	**+0.7**
	baz=2.4							
KMI2	**Kunming**	**68.64**	**76**	P	**P**	**05 30 05.0**	**+1.1**
KMI2				pmax	pmax			
	comp=Z,9.0nm,1.2s							
S32K	**Killisnoo**	**68.70**	**344**	P	**P**	**05 30 04.0**	**+0.5**
	baz=19							
O18K	**Koktuh Hills**	**68.70**	**355**	P	**P**	**05 30 04.0**	**+0.5**
	baz=5.7							
ECSD	**EROS Data Cent**	**68.72**	**314**	P	**P**	**05 30 04.4**	**+0.6**
N14K	**Kuskokwak Cree**	**68.84**	**359**	P	**P**	**05 30 04.6**	**+0.3**
	baz=1.4							
O17K	**Koliganek Bris**	**68.87**	**356**	P	**P**	**05 30 04.7**	**+0.2**
	baz=4.4							
DL2	**Dalian**	**68.95**	**54**	P	**P**	**05 30 06.5**	**+1.1**
DL2				pmax	pmax			
	comp=Z,13nm,0.6s							
U49A	**Red Boiling Sp**	**68.98**	**302**	IAmb	IAmb	05 30 07.4		
	comp=Z,10nm,1.3s							
P18K	**Big Mountain,**	**69.17**	**355**	P	**P**	**05 30 06.8**	**+0.3**
	baz=5.7							
SIT	**Sitka**	**69.22**	**344**	P	**P**	**05 30 07.2**	**+0.5**
	baz=18							
WRAK	**Wrangell Islan**	**69.27**	**342**	P	**P**	**05 30 07.7**	**+0.6**
	baz=20							
Q19K	**Cape Douglas,**	**69.54**	**354**	P	**P**	**05 30 09.2**	**+0.5**
	baz=6.7							
O15K	**Ungalikthiuk R**	**69.56**	**358**	P	**P**	**05 30 09.3**	**+0.5**
	baz=2.6							
USRK	**Ussuriysk Ar.**	**69.66**	**44**	P	**P**	**05 30 10.0**	**+0.3**
	comp=Z,6.1nm,1.0s,baz=316,slow=4.0,SNR=3.0							
	comp=Z,6.1nm,1.0s							
U33K	**Whale Pass**	**69.71**	**342**	P	**P**	**05 30 10.5**	**+0.8**
	baz=20							
FVM	**French Village**	**70.25**	**306**	IAmb	IAmb	05 30 14.3		
	comp=Z,7.3nm,1.1s							
TSUM	**Tsumeb**	**70.48**	**179**	LR	LR	06 02 21.3		
	comp=Z,103nm,19.3s,baz=112,slow=37							
P38A	**Dawn**	**70.50**	**310**	IAmb	IAmb	05 30 16.1		
	comp=Z,17nm,1.0s							
PEA0B	**Petropavlovsk-**	**70.79**	**23**	*d*	*iP*	**P**	**05 30 15.4**	**-1.1**
PETK	**Petropavlovsk-**	**70.79**	**23**	P		**P**	**05 30 16.8**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=349,slow=3.0,SNR=5.5							
	comp=Z,2.9nm,0.8s							
PETK	**Petropavlovsk-**	**70.79**	**23**	P		**P**	**05 30 16.1**	**-0.4**
PETK	**Petropavlovsk-**	**70.79**	**23**	P		**P**	**05 30 16.1**	**-0.4**
R40A	**Maddies Statio**	**70.93**	**308**	IAmb	IAmb	05 30 18.6		
	comp=Z,12nm,1.1s							
CHTO	**Chiang Mai**	**71.03**	**84**	P	**P**	**05 30 18.7**	**+0.3**
CHTO				pmax	pmax			
	comp=Z,15nm,1.0s							
CHTO	**Chiang Mai**	**71.03**	**84**	P	**P**	**05 30 18.7**	**+0.3**
CHTO				IAmb	IAmb	05 30 20.2		
	comp=Z,15nm,0.9s							
CHTO	**Chiang Mai**	**71.03**	**84**	P	**P**	**05 30 19.3**	**+0.8**
	comp=Z,19nm,1.5s							
CHTO	**Chiang Mai**	**71.03**	**84**	P	**P**	**05 30 19.3**	**+0.8**
CHTO				pP	**P**	**05 30 20.5**	**+2.0**
X48A	**Hartselle**	**71.22**	**302**	IAmb	IAmb	05 30 21.8		
	comp=Z,9.1nm,1.3s							
CMAR	**Chiang Mai Arr**	**71.30**	**84**	P	**P**	**05 30 21.1**	**+1.1**
	comp=Z,6.1nm,1.0s,baz=310,slow=7.0,SNR=32							
	comp=Z,6.1nm,1.0s							
CMAR	**Chiang Mai Arr**	**71.30**	**84**	P	**P**	**05 30 20.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**71.30**	**84**	P	**P**	**05 30 20.2**	**+0.1**
T42A	**Van Buren**	**71.32**	**306**	IAmb	IAmb	05 30 20.8		
	comp=Z,14nm,1.5s							
WHN	**Wuhan**	**71.42**	**64**	P	**P**	**05 30 21.5**	**+0.9**
RSSD	**Black Hills**	**71.58**	**319**	P	**P**	**05 30 22.4**	**+0.6**
YSS	**Yuzhno-Sakhali**	**71.66**	**35**	*eP*	**P**	**05 30 22.8**	**+1.0**
YSS				pmax	pmax			
	comp=Z,20nm,1.0s							
S39A	**Bolivar**	**71.92**	**308**	IAmb	IAmb	05 30 24.8		
	comp=Z,19nm,1.2s							
LDM	**Libby Dam**	**72.07**	**328**	IAmb	IAmb	05 30 27.0		
	comp=Z,18nm,1.1s							
NJ2	**Nanjing**	**72.75**	**60**	*eP*	**P**	**05 30 26.4**	**-2.2**
NJ2				pmax	pmax			
	comp=Z,33nm,0.5s							
RLMT	**Red Lodge**	**72.81**	**323**	IAmb	IAmb	05 30 32.3		
	comp=Z,22nm,1.2s							
NEW	**Newport**	**72.82**	**329**	IAmb	IAmb	05 30 30.9		
	comp=Z,9.8nm,1.1s							
NEW	**Newport**	**72.82**	**329**	P	**P**	**05 30 32.2**	**+1.4**
KSAR	**Wonju Array Be**	**73.18**	**51**	P	**P**	**05 30 30.8**	**-0.2**
KSAR	**Wonju Array Be**	**73.18**	**51**	P	**P**	**05 30 30.8**	**-0.2**
KSRS	**Korea Array**	**73.19**	**51**	P	**P**	**05 30 31.9**	**+0.8**
	comp=Z,5.5nm,1.1s,baz=332,slow=5.4,SNR=15							
KSRS				LR	LR	06 05 54.3		
	comp=Z,15nm,21.0s,baz=240,slow=38							
	comp=Z,5.5nm,1.1s							
HHAR	**Hobbs**	**73.33**	**308**	IAmb	IAmb	05 30 33.5		
	comp=Z,16nm,1.4s							
U38A	**Gravette**	**73.42**	**308**	IAmb	IAmb	05 30 34.3		
	comp=Z,28nm,1.5s							
C09A	**Chrisman Ranch**	**73.59**	**330**	IAmb	IAmb	05 30 36.0		
	comp=Z,6.0nm,0.6s							
FLWY	**Flagg Ranch**	**74.23**	**323**	IAmb	IAmb	05 30 40.7		
	comp=Z,18nm,1.1s							
MIAR	**Mount Ida**	**74.52**	**306**	P	**P**	**05 30 40.0**	**+1.0**
OK051	**E0350 and S346**	**74.56**	**310**	IAmb	IAmb	05 30 41.1		
	comp=Z,21nm,1.1s							
OK048	**Pawnee Station**	**74.68**	**310**	IAmb	IAmb	05 30 42.7		
	comp=Z,27nm,1.2s							
LTY	**Liberty**	**74.81**	**331**	IAmb	IAmb	05 30 42.8		
	comp=Z,14nm,1.3s							
BW06	**Boulder Array**	**74.92**	**322**	IAmb	IAmb	05 30 43.1		
	comp=Z,15nm,1.2s							
PDAR	**Pinedale Array**	**74.92**	**322**	P	**P**	**05 30 42.1**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=51,slow=5.2,SNR=30							
	comp=Z,4.0nm,0.8s							
PDAR	**Pinedale Array**	**74.92**	**322**	P	**P**	**05 30 41.7**	**+0.2**
PLID	**Pearl Lake**	**75.25**	**327**	IAmb	IAmb	05 30 45.6		
	comp=Z,17nm,1.2s							
D05A	**Enumclaw**	**75.27**	**332**	IAmb	IAmb	05 30 45.9		
	comp=Z,27nm,1.2s							
AHID	**Auburn Hatcher**	**75.51**	**323**	P	**P**	**05 30 46.9**	**+2.0**
LON	**Longmire**	**75.61**	**332**	IAmb	IAmb	05 30 48.6		
	comp=Z,10nm,1.2s							
ISCO	**Idaho Springs**	**75.83**	**318**	P	**P**	**05 30 48.8**	**+2.0**
HLID	**Hailey**	**76.03**	**325**	P	**P**	**05 30 49.2**	**+1.4**
JTM	**Tenmabayashi**	**76.26**	**40**	P	**P**	**05 30 49.8**	**+0.9**
JTM	**Tenmabayashi**	**76.26**	**40**	P	**P**	**05 30 50.1**	**+1.3**
MFID	**Camas Ranch**	**76.66**	**326**	IAmb	IAmb	05 30 53.2		
	comp=Z,8.2nm,1.0s							
HWUT	**Hardware Ranch**	**76.68**	**322**	P	**P**	**05 30 53.3**	**+1.9**
LBTB	**Lobatse**	**76.71**	**171**	P	**P**	**05 30 53.5**	**+2.1**
WMOK	**Wichita Mounta**	**76.92**	**310**	IAmb	IAmb	05 30 54.9		
	comp=Z,11nm,1.1s							
WMOK	**Wichita Mounta**	**76.92**	**310**	P	**P**	**05 30 53.8**	**+1.0**
HVU	**Hansel Valley**	**76.98**	**323**	IAmb	IAmb	05 31 05.5		
	comp=Z,16nm,1.3s							
SDCO	**Great Sand Dun**	**77.50**	**316**	IAmb	IAmb	05 30 59.4		
	comp=Z,23nm,1.4s							
H04A	**Detroit Lake**	**77.59**	**331**	IAmb	IAmb	05 30 60.0		
	comp=Z,15nm,1.2s							
DUG	**Dugway, Tooele**	**78.37**	**323**	P	**P**	**05 31 02.5**	**+1.6**
WVOR	**Wild Horse Val**	**78.48**	**328**	P	**P**	**05 31 03.0**	**+1.5**
MAJO	**Matsushiro**	**78.65**	**44**	*ceP*	**P**	**05 31 03.0**	**+0.7**
MAJO				pmax	pmax			
	comp=Z,16nm,1.2s							
MJAR	**Matsushiro Arr**	**78.65**	**44**	P	**P**	**05 31 03.2**	**+0.9**
	comp=Z,6.2nm,1.0s,baz=322,slow=5.6,SNR=10							
	comp=Z,6.2nm,1.0s							
MJAR	**Matsushiro Arr**	**78.65**	**44**	P	**P**	**05 31 02.7**	**+0.4**
MJAR				pmax	pmax			
	comp=Z,12nm,1.3s							
MJAR	**Matsushiro Arr**	**78.65**	**44**	P	**P**	**05 31 02.7**	**+0.4**
MJAR				IAmb	IAmb	05 31 04.7		
	comp=Z,12nm,1.2s							
MVCO	**Mesa Verde**	**79.22**	**318**	P	**P**	**05 31 07.8**	**+2.0**
HKT	**Hockley**	**79.33**	**305**	P	**P**	**05 31 07.9**	**+1.9**
ANMO	**Albuquerque**	**80.27**	**315**	P	**P**	**05 31 13.2**	**+1.8**
ANMO				pmax	pmax			
	comp=Z,28nm,1.4s							
ANMO	**Albuquerque**	**80.27**	**315**	P	**P**	**05 31 13.2**	**+1.8**
ANMO				IAmb	IAmb	05 31 14.9		
	comp=Z,28nm,1.4s							
ANMO	**Albuquerque**	**80.27**	**315**	P	**P**	**05 31 13.1**	**+1.7**
SGCY	**Sterling City**	**80.35**	**310**	IAmb	IAmb	05 31 13.7		
	comp=Z,25nm,1.5s							
TPH	**Tonopah**	**81.87**	**325**	IAmb	IAmb	05 31 22.7		
	comp=Z,16nm,1.3s							
TPB13	**Reeves - Culbe**	**81.93**	**312**	IAmb	IAmb	05 31 22.8		
	comp=Z,36nm,1.3s							
NVAR	**Mina Array Bea**	**81.94**	**326**	P	**P**	**05 31 21.1**	**+0.8**
	comp=Z,4.9nm,1.1s,baz=44,slow=3.9,SNR=13							
	comp=Z,4.9nm,1.1s							
NVAR	**Mina Array Bea**	**81.94**	**326**	P	**P**	**05 31 20.1**	**-0.2**
ORV	**Oroville**	**82.02**	**328**	IAmb	IAmb	05 31 22.9		
	comp=Z,16nm,1.4s							
KULM	**Kulim**	**82.44**	**91**	P	**P**	**05 31 23.0**	**0.0**
MNTX	**Cornudas Mount**	**82.52**	**313**	P	**P**	**05 31 23.9**	**+0.8**
PSI	**Prapat**	**83.30**	**94**	P	**P**	**05 31 27.5**	**0.0**
	comp=Z,24nm,1.1s							
TXAR	**Lajitas Array**	**83.71**	**310**	P	**P**	**05 31 30.9**	**+1.4**
	comp=Z,5.6nm,1.1s,baz=46,slow=3.6,SNR=36							
	comp=Z,5.6nm,1.1s							
TXAR	**Lajitas Array**	**83.71**	**310**	P	**P**	**05 31 30.0**	**+0.5**
TXAR	**Lajitas Array**	**83.71**	**310**	P	**P**	**05 31 30.0**	**+0.5**
GSC	**Goldstone, Bar**	**84.17**	**323**	IAmb	IAmb	05 31 34.9		
	comp=Z,13nm,1.3s							
TUC	**Tucson**	**84.38**	**317**	P	**P**	**05 31 33.8**	**+0.9**
TUC	**Tucson**	**84.38**	**317**	P	**P**	**05 31 33.8**	**+0.9**
TUC	**Tucson**	**84.38**	**317**	P	**P**	**05 31 35.2**	**+2.4**
IRM	**Iron Mountain**	**84.55**	**321**	IAmb	IAmb	05 31 36.9		
	comp=Z,16nm,1.3s							
BELC	**Belle Mtn. Jos**	**85.02**	**322**	IAmb	IAmb	05 31 41.0		
	comp=Z,14nm,1.2s							
BC3	**Big Chuckawall**	**85.11**	**321**	IAmb	IAmb	05 31 39.6		
	comp=Z,11nm,1.2s							
PMD	**Palm Desert**	**85.48**	**322**	IAmb	IAmb	05 31 42.0		
	comp=Z,20nm,1.4s							
PFO	**Pinyon Flats O**	**85.54**	**322**	P	**P**	**05 31 38.3**	**-0.4**
PFO				pmax	pmax			
	comp=Z,9.0nm,1.1s							
PFO	**Pinyon Flats O**	**85.54**	**322**	P	**P**	**05 31 38.3**	**-0.4**
PFO				IAmb	IAmb	05 31 42.0		
	comp=Z,9.0nm,1.1s							
MWC	**Mount Wilson**	**85.60**	**323**	IAmb	IAmb	05 31 43.2		
	comp=Z,14nm,1.1s							
ELS	**Elsinore Mount**	**85.88**	**323**	IAmb	IAmb	05 31 44.6		
	comp=Z,14nm,1.2s							
BDFB	**Brasilia**	**87.00**	**240**	P	**P**	**05 31 46.5**	**+0.5**
	comp=Z,5.7nm,1.0s,baz=21,slow=6.2,SNR=6.3							
	comp=Z,5.7nm,1.0s							
BDFB	**Brasilia**	**87.00**	**240**	P	**P**	**05 31 47.6**	**+1.7**
BDFB				pmax	pmax			
	comp=Z,14nm,1.3s							
BDFB	**Brasilia**	**87.00**	**240**	P	**P**	**05 31 47.6**	**+1.7**
BDFB				IAmb	IAmb	05 31 48.2		
	comp=Z,13nm,1.3s							
CLDB	**Colider**	**87.53**	**249**	P	**P**	**05 31 49.2**	**+0.8**
WRA	**Warramunga Arr**	**122.81**	**81**	PKP	**PKPdf**	**05 37 54.7**	**-1.8**
	comp=Z,1.1nm,1.0s,baz=320,slow=1.7,SNR=4.2							
ASAR	**Alice Springs**	**125.31**	**84**	PKP	**PKPdf**	**05 38 01.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=356,slow=2.4,SNR=9.1							
VNDA	**Vanda**	**151.02**	**165**	PKPbc	**PKPbc**	**05 38 50.8**	**-0.9**
	comp=Z,2.6nm,1.0s,baz=289,slow=6.0,SNR=10							
VNDA	**Vanda**	**151.02**	**165**	PKIKP	**PKPbc**	**05 38 51.8**	**+0.1**
VNDA	**Vanda**	**151.02**	**165**		**PKPbc**	**05 38 51.8**	**+0.1**

*NEIC **08** 05:29:02.6±2.7, 52.°79N±0.°06×166.°85W±0.°04, h35km±2km, mb3.8/15, ML3.5/14, ML3.5(AEIC), Error ellipse: s-maj=10.3km s-min=3.1km az=164.0*
*IDC **08** 05:29:03.9±4.5, 53.°12N×166.°99W, h60km±39km, mb3.6/11, mbtmp3.9/12, ML4.1/1, Error ellipse: s-maj=44.4km s-min=20.1km az=7.0*
*AEIC **08** 05:29:04.5±2.0, 52.°84N±0.°06×166.°85W±0.°06, h27km±6km, Error ellipse: s-maj=9.2km s-min=4.8km az=166.0*
ISC 08 05:29:03.1±1.3, 52.°85N±0.°10×166.°83W±0.°05, h66km±9km, n97, σ1°44/100, mb3.9/12, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.86**	**311**			**Pn**	**05 29 19.1**	**-0.6**
OKFG						**Sn**	**05 29 30.6**	**-1.3**
OKTU	**Okmok Mt. Tuli**	**0.91**	**306**			**Pn**	**05 29 19.9**	**-0.4**
MGOD	**Makushin Gods**	**0.94**	**358**			**Pn**	**05 29 20.7**	**-0.1**
MGOD						**Sn**	**05 29 33.4**	**-0.5**
OKER	**Okmok East Rim**	**0.95**	**310**			**Pn**	**05 29 20.6**	**-0.3**
MAPS	**Pakushin South**	**0.96**	**356**			**Pn**	**05 29 20.6**	**-0.4**
MAPS						**Sn**	**05 29 33.6**	**-0.5**
MREP	**Makushin Rep't**	**0.96**	**3**			**Pn**	**05 29 21.0**	**0.0**
MREP						**Sn**	**05 29 34.1**	**-0.2**
OKNC	**Okmok New Cone**	**0.99**	**308**			**Pn**	**05 29 20.9**	**-0.4**
OKNC						**Sn**	**05 29 34.0**	**-0.8**
UNV	**Unalaska Valle**	**1.01**	**11**	P		**Pn**	**05 29 21.0**	**-0.6**
UNV	**Unalaska Valle**	**1.01**	**11**			**Pn**	**05 29 21.7**	**+0.1**
UNV				Sn		**Sn**	**05 29 34.5**	**-0.7**
MNAT	**Makushin Natee**	**1.04**	**5**			**Pn**	**05 29 22.0**	**+0.1**
MNAT						**Sn**	**05 29 35.8**	**-0.1**
ZRO	**Akutan Zero**	**1.34**	**22**			**Sn**	**05 29 43.3**	**+0.4**
AKRB	**Akutan Reef Bi**	**1.36**	**19**			**Sn**	**05 29 43.6**	**+0.3**
LVA	**Lava Point**	**1.39**	**20**			**Pn**	**05 29 27.3**	**+0.8**
LVA				Sn		**Sn**	**05 29 44.3**	**+0.1**
LVA				IAML			05 29 49.5	
	comp=E,631nm,0.4s							
LVA				IAML			05 29 57.6	
	comp=N,814nm,0.5s							
AHB	**Akutan Harbor**	**1.40**	**25**			**Sn**	**05 29 44.9**	**+0.5**
AKUT	**Akutan**	**1.43**	**26**	P		**Pn**	**05 29 27.2**	**+0.2**
AKUT	**Akutan**	**1.43**	**26**	P		**Sn**	**05 29 45.3**	**+0.3**
AKUT	**Akutan**	**1.43**	**26**			**Pn**	**05 29 27.5**	**+0.5**
AKUT				Sn		**Sn**	**05 29 45.1**	**+0.1**
AKUT				IAML			05 29 46.5	
	comp=E,685nm,0.3s							
AKSA	**Akutan Strait**	**1.45**	**27**			**Sn**	**05 29 45.4**	**-0.1**
SSBA	**Shishaldin**	**2.50**	**39**			**Sn**	**05 30 13.0**	**+2.0**
SSLS	**Shishaldin Sou**	**2.51**	**41**			**Pn**	**05 29 42.7**	**+1.1**
SSLS						**Sn**	**05 30 12.1**	**+1.0**
SSLN	**Shishaldin Nor**	**2.58**	**39**			**Pn**	**05 29 44.0**	**+1.4**
SSLN						**Sn**	**05 30 14.6**	**+1.7**
ISNN	**Isanotski Nort**	**2.68**	**41**			**Sn**	**05 30 18.0**	**+2.7**
PS4A	**Pavlof South-4**	**3.85**	**48**			**Pn**	**05 30 01.0**	**+1.2**
PS4A						**Sn**	**05 30 45.0**	**+1.3**
PS1A	**Pavlof South-1**	**3.94**	**47**			**Pn**	**05 30 01.9**	**+1.8**
KOSE	**Korovin Southe**	**4.43**	**266**			**Pn**	**05 30 09.9**	**+2.1**
KONE	**Korovin Northe**	**4.47**	**267**			**Pn**	**05 30 10.1**	**+1.9**
KOFP	**Korovin Flat P**	**4.47**	**265**			**Pn**	**05 30 09.7**	**+1.3**
SDPT	**Sand Point**	**4.50**	**54**	P		**Pn**	**05 30 09.2**	**+0.6**
SDPT	**Sand Point**	**4.50**	**54**	S		**Sn**	**05 30 58.9**	**-0.7**
SDPT	**Sand Point**	**4.50**	**54**			**Pn**	**05 30 09.3**	**+0.7**
SDPT				Sn		**Sn**	**05 30 58.7**	**-0.9**
SDPT				IAML			05 31 06.3	
	comp=E,57nm,0.6s							
KOKL	**Mount Kliuchef**	**4.53**	**266**			**Pn**	**05 30 10.4**	**+1.2**
ATKA	**Atka Island**	**4.55**	**265**	Pn		**Pn**	**05 30 10.1**	**+0.7**
ATKA				IAML			05 31 01.1	
	comp=E,65nm,0.8s							
ATKA				IAML			05 31 04.0	
	comp=N,48nm,0.4s							
CNBA	**Chernabura Isl**	**4.72**	**62**			**Pn**	**05 30 11.8**	**+0.1**
CNBA				Sn		**Sn**	**05 31 02.7**	**-2.3**
CNBA				IAML			05 31 03.9	
	comp=N,30nm,0.3s							
CNBA				IAML			05 31 06.8	
	comp=E,36nm,0.5s							
CHNA	**Chernabura Isl**	**4.72**	**62**	P		**Pn**	**05 30 12.6**	**+0.9**
SPIA	**Saint Paul Isl**	**4.76**	**337**	Pn		**Pn**	**05 30 11.9**	**-0.3**
SPIA				Sn		**Sn**	**05 31 05.3**	**-0.7**
VNKR	**Veniaminof 5**	**5.39**	**51**			**Pn**	**05 30 22.6**	**+1.6**
VNFG	**Fog Glacier, M**	**5.45**	**48**	Pn		**Pn**	**05 30 22.6**	**+0.8**
GSIG	**Igitkin Island**	**5.64**	**265**			**Pn**	**05 30 25.1**	**+0.8**
GSTR	**Great Sitkin T**	**5.70**	**266**	Pn		**Pn**	**05 30 26.3**	**+1.2**
GSMY	**Great Sitkin M**	**5.70**	**266**			**Pn**	**05 30 26.2**	**+1.0**
GSCK	**Great Sitkin C**	**5.77**	**265**			**Pn**	**05 30 27.1**	**+1.0**
ETKA	**Kagalaska Isla**	**5.95**	**264**			**Pn**	**05 30 29.1**	**+0.5**
ADAG	**Mount Adagdak**	**6.05**	**266**			**Pn**	**05 30 31.4**	**+1.6**
ADK	**Adak**	**6.12**	**265**	Pn		**Pn**	**05 30 31.6**	**+0.8**
KIWB	**Kanaga Island**	**6.41**	**265**	Pn		**Pn**	**05 30 35.1**	**+0.4**
TASE	**Tanaga Southea**	**6.95**	**266**			**Pn**	**05 30 44.1**	**+1.9**
O16K	**Kokwok River B**	**8.32**	**32**	Pn		**Pn**	**05 31 01.7**	**+0.8**
ACHA	**Angle Creek He**	**8.44**	**46**	Pn		**Pn**	**05 31 03.9**	**+1.2**
OHAK	**Old Harbor**	**8.92**	**55**	P		**Pn**	**05 31 08.9**	**-0.1**
OHAK	**Old Harbor**	**8.92**	**55**	Pn		**Pn**	**05 31 08.5**	**-0.5**
KDAK	**Kodiak Island**	**9.50**	**53**	P		**Pn**	**05 31 16.2**	**-0.7**
	comp=E,1.8nm,0.3s,baz=106,slow=1.0,SNR=35							
KDAK				S		**Sn**	**05 32 54.4**	**-7.5**
	comp=E,4.0nm,0.7s,baz=195,slow=19,SNR=1.7							
	comp=E,5.0nm,0.4s							
O18K	**Koktuh Hills**	**9.52**	**38**	Pn		**Pn**	**05 31 19.0**	**+1.7**
Q19K	**Cape Douglas,**	**9.57**	**45**	Pn		**Pn**	**05 31 18.4**	**+0.4**
RED	**Redoubt Volcan**	**10.81**	**40**	Pn		**Pn**	**05 31 37.8**	**+2.8**
CNPM	**China Poot**	**10.94**	**46**	Pn		**Pn**	**05 31 35.9**	**-0.8**
SLKM	**Skilak Lake**	**11.89**	**43**	Pn		**Pn**	**05 31 48.7**	**-1.0**
SEW	**Seward**	**12.01**	**46**	Pn		**Pn**	**05 31 49.7**	**-1.6**
SKT	**Skwentna**	**12.28**	**36**	Pn		**Pn**	**05 31 55.5**	**+0.6**
CAST	**Castle Rocks**	**13.10**	**30**	Pn		**Pn**	**05 32 07.2**	**+1.1**
HIN	**Hinchinbrook I**	**13.46**	**48**	Pn		**Pn**	**05 32 08.8**	**-2.1**
EYAK	**Cordova Ski Ar**	**13.86**	**48**	P		**Pn**	**05 32 13.8**	**-2.3**
KLU	**Klutina**	**14.20**	**44**	Pn		**Pn**	**05 32 18.1**	**-2.7**
KAIM	**Kayak Island**	**14.24**	**51**	Pn		**Pn**	**05 32 19.9**	**-1.3**
M24K	**Tolsona, Glenn**	**14.40**	**42**	Pn		**Pn**	**05 32 21.1**	**-2.2**
BWN	**Browne**	**14.46**	**32**	P		**P**	**05 32 30.3**	**+1.3**
GLB	**Gilahina Butte**	**15.09**	**46**			**Pn**	**05 32 29.7**	**-2.5**
VRDI	**Verde Repeater**	**15.16**	**47**	Pn		**Pn**	**05 32 29.9**	**-3.4**
VRDI				IAmb	IAmb	05 32 40.7		
	comp=Z,3.8nm,0.8s							
O29M	**Mount Kennedy**	**17.15**	**53**	IAmb	IAmb	05 33 10.4		
	comp=Z,3.9nm,0.7s							
N31M	**Braeburn, Yuko**	**18.75**	**50**	IAmb	IAmb	05 33 30.0		
	comp=Z,4.8nm,0.9s							
WHY	**Whitehorse**	**19.01**	**53**	IAmb	IAmb	05 33 23.9		
	comp=Z,5.9nm,0.9s							
P32M	**Atlin**	**19.45**	**57**	IAmb	IAmb	05 33 28.2		
	comp=Z,4.2nm,0.8s							
P33M	**Teslin, Yukon**	**19.96**	**55**	P		**Pn**	**05 33 32.5**	**+0.6**
P33M				IAmb	IAmb	05 33 36.3		
	comp=Z,3.5nm,0.9s							
N32M	**Quiet Lake**	**19.96**	**52**	P		**Pn**	**05 33 32.9**	**+1.1**
N32M				IAmb	IAmb	05 33 36.7		
	comp=Z,5.7nm,0.8s							
MMPY	**Sheldon Lake,**	**21.07**	**48**	P		**P**	**05 33 41.0**	**-0.6**
MMPY				IAmb	IAmb	05 33 47.7		
	comp=Z,3.9nm,1.2s							
PEA0B	**Petropavlovsk-**	**21.23**	**285**	P		**P**	**05 33 43.1**	**-0.2**
PETK	**Petropavlovsk-**	**21.23**	**285**	P		**P**	**05 33 43.1**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=84,slow=15,SNR=8.2							
	comp=Z,2.6nm,0.5s							
YKA	**Yellowknife Ar**	**28.75**	**50**	P		**P**	**05 34 54.1**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=279,slow=8.7,SNR=1.8							
	comp=Z,0.1nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**38.82**	**222**	T		T	06 17 41

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UUPR	**Utuado, UPR, P**	**0.39**	**35**⇑*eP*		**Pg**	**05 47 14.1**	**-0.1**
AOPR	**Arecibo Observ**	**0.46**	**25**		**Pg**	**05 47 15.1**	**-0.3**
AOPR					**Sg**	**05 47 22.1**	**+0.5**
AOPR				IAML		05 47 22.6	
	comp=E,5μm,0.5s						
AOPR	**Arecibo Observ**	**0.46**	**25**⇓*iP*		**Pg**	**05 47 15.3**	**-0.1**
AOPR				⇓*iS*	**Sg**	**05 47 21.7**	**+0.2**
AOPR				IAML		05 47 22.5	
	comp=N,4μm,0.6s						
AOPR	**Arecibo Observ**	**0.46**	**25**⇓*eP*		**Pg**	**05 47 15.3**	**-0.1**
AGPR	**Aguadilla, PR**	**0.55**	**345**		**Pg**	**05 47 16.9**	**-0.3**
AGPR					**Sg**	**05 47 24.6**	**0.0**
AGPR				IAML		05 47 25.4	
	comp=N,7μm,0.5s						
AGPR	**Aguadilla, PR**	**0.55**	**345**⇑*iP*		**Pg**	**05 47 17.0**	**-0.3**
AGPR				⇑*iS*	**Sg**	**05 47 24.7**	**0.0**
AGPR				IAML		05 47 25.3	
	comp=N,5μm,0.5s						
AGPR	**Aguadilla, PR**	**0.55**	**345**⇑*eP*		**Pg**	**05 47 17.0**	**-0.3**
IDE	**Isla Desecheo**	**0.67**	**313**		**Pg**	**05 47 18.8**	**-0.7**
IDE					**Sg**	**05 47 28.4**	**+0.1**
IDE	**Isla Desecheo**	**0.67**	**313**⇑*eP*		**Pg**	**05 47 18.8**	**-0.7**
IDE				*eS*	**Sg**	**05 47 28.4**	**+0.1**
EMPR	**Esperanza - Ma**	**0.68**	**37**		**Pg**	**05 47 19.6**	**0.0**
EMPR					**Sb**	**05 47 29.6**	**-0.1**
EMPR	**Esperanza - Ma**	**0.68**	**37**⇓*eP*		**Pg**	**05 47 19.6**	**-0.3**
EMPR				*eS*	**Sb**	**05 47 29.6**	**-0.1**
ECPR	**Experimental S**	**0.68**	**56**	Pg	**Pg**	**05 47 19.3**	**-0.4**
ECPR					**Sg**	**05 47 29.2**	**+0.4**
ECPR				IAML		05 47 29.8	
	comp=N,5μm,0.3s						
ECPR				IAML		05 47 30.2	
	comp=N,2μm,0.3s						
ECPR	**Experimental S**	**0.68**	**56**⇓*eP*		**Pg**	**05 47 19.4**	**-0.4**
SJG	**San Juan**	**0.79**	**77**		**Pg**	**05 47 21.1**	**-0.6**
SJG				IAML		05 47 33.9	
	comp=N,1μm,0.5s						
SJG	**San Juan**	**0.79**	**77**⇓*iP*		**Pg**	**05 47 21.1**	**-0.6**
SJG				⇑*iS*	**Sg**	**05 47 32.3**	**+0.2**
SJG	**San Juan**	**0.79**	**77** *iP*		**Pg**	**05 47 21.2**	**-0.6**
SJG				*eS*	**Sg**	**05 47 32.3**	**+0.2**
SJG	**San Juan**	**0.79**	**77**⇑*eP*		**Pg**	**05 47 21.4**	**-0.4**
HUMP	**Col San Antoni**	**1.07**	**79**		**Pg**	**05 47 25.9**	**-1.3**
HUMP					**Sg**	**05 47 41.1**	**0.0**
HUMP				IAML		05 47 45.0	
	comp=N,935nm,0.3s						
HUMP	**Col San Antoni**	**1.07**	**79**⇑*eP*		**Pg**	**05 47 25.9**	**-1.3**
PCDR	**Punta Cana, DR**	**1.47**	**293**		**Pn**	**05 47 32.4**	**-0.6**
PCDR					**Sn**	**05 47 52.3**	**0.0**
PCDR	**Punta Cana, DR**	**1.47**	**293**⇑*iP*		**Pn**	**05 47 33.3**	**+0.3**
PCDR				IAML		05 48 02.6	
	comp=N,186nm,0.7s						
PCDR	**Punta Cana, DR**	**1.47**	**293** *iP*		**Pn**	**05 47 32.4**	**-0.6**
PCDR				IAML		05 47 59.8	
	comp=Z,125nm,1.5s						
PCDR	**Punta Cana, DR**	**1.47**	**293**⇑*eP*		**Pn**	**05 47 32.1**	**-0.9**
PCDR				*eS*	**Sn**	**05 47 52.3**	**0.0**
HIDR	**Higuey Centro**	**1.80**	**292**⇓*iP*		**Pn**	**05 47 39.0**	**+1.5**
HIDR				IAML		05 48 08.1	
	comp=N,118nm,0.3s						
DR12	**Loma Pena Alta**	**2.46**	**291**		**Pn**	**05 47 47.3**	**+0.7**
HATOM	**Hato Mayor del**	**2.46**	**291**⇑*iP*		**Pn**	**05 47 48.1**	**+1.5**
HATOM				IAML		05 48 31.0	
	comp=N,90nm,1.1s						
SMDR	**Samana, DR**	**2.51**	**303**⇑*iP*		**Pb**	**05 47 50.2**	**-1.4**
SMDR				IAML		05 48 36.6	
	comp=N,110nm,0.6s						
BANI	**BANI**	**3.27**	**279**	Pn	**Pn**	**05 48 01.1**	**+3.2**
BANI	**BANI**	**3.27**	**279**⇑*iP*		**Pn**	**05 48 01.0**	**+3.2**
BANI				IAML		05 49 09.3	
	comp=N,67nm,0.5s						
SC01	**Santiago de lo**	**3.87**	**293**	Pn	**Pn**	**05 48 07.9**	**+1.8**
SDDR	**Presa de Saban**	**4.24**	**285**⇑*iP*		**Pn**	**05 48 13.9**	**+2.8**
SDDR				IAML		05 48 23.5	
	comp=N,19nm,0.5s						

*AFAD **08** 05:47:09.9,35.67N×40.66E,h11km±5km, MW3.9*
*ISK **08** 05:47:12.5,35.56N×40.90E,h13km, ML4.2/14*
ISC 08 05:47:10.4±1.8,35.73N±0.05×40.64E±0.04,h2km±15km, n44,σ1°66/62,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIDY	**Mardin/Midyat-**	**1.78**	**20**	P	**Pg**	**05 47 44.5**	**-0.1**
MIDY				S	**Sg**	**05 48 10.1**	**+2.3**
SANL	**SANLIURFA_Merk**	**1.96**	**318**	P	**Pb**	**05 47 45.2**	**-1.2**
SANL				S	**Sb**	**05 48 11.5**	**-0.3**
SURC	**SANLIURFA_SURC**	**2.00**	**306**	P	**Pn**	**05 47 44.2**	**-1.0**
SURC				S	**Sb**	**05 48 12.4**	**-0.5**
BTMN	**Batman**	**2.22**	**13**	P	**Pb**	**05 47 49.4**	**-1.9**
BTMN				S	**Sg**	**05 48 23.6**	**+1.9**
DIYA	**Diyarbakir**	**2.23**	**349**	P	**Pb**	**05 47 50.5**	**-0.9**
DIYA				S	**Sb**	**05 48 20.1**	**+0.5**
DYBB	**Diyarbakir**	**2.26**	**350**	Pn	**Pg**	**05 47 53.7**	**0.0**
DYBB				Sn	**Sg**	**05 48 23.6**	**+0.7**
SIRN	**Sırnak**	**2.27**	**38**	P	**Pb**	**05 47 50.0**	**-2.2**
SIRN				S	**Sb**	**05 48 22.1**	**+1.4**
HANM	**anlurfa/Hi**	**2.33**	**323**	P	**Pn**	**05 47 48.2**	**-1.5**
HANM				S	**Sb**	**05 48 23.3**	**+0.9**
SRTM	**Siirt_Merkez**	**2.48**	**24**	P	**Pb**	**05 47 54.0**	**-1.8**
SRTM				S	**Sg**	**05 48 32.5**	**+2.3**
ATAB	**Bozova**	**2.57**	**313**	P	**Pb**	**05 47 55.1**	**-2.0**
ATAB				S	**Sb**	**05 48 30.8**	**+1.6**
CNGT	**ngs**	**2.70**	**337**	P	**Pb**	**05 47 59.5**	**-0.1**
CNGT				S	**Sg**	**05 48 36.8**	**-0.5**
NZIP	**Nizip/Gaziante**	**2.73**	**300**	P	**Pb**	**05 47 58.0**	**-2.0**
NZIP				S	**Sb**	**05 48 33.9**	**0.0**
MDNT	**Maden**	**2.77**	**344**	P	**Pb**	**05 48 00.3**	**-0.4**
MDNT				S	**Sb**	**05 48 36.8**	**+1.7**
SVRC	**Sivrice-ELAZID**	**2.85**	**338**	Pn	**Pb**	**05 48 02.4**	**+0.2**
ESIJ	**Sivrice-Elazig**	**2.92**	**339**	Pn	**Pb**	**05 48 03.4**	**+0.2**
ESGZ	**Sivrice-Elazig**	**2.98**	**335**	Pn	**Pb**	**05 48 04.4**	**+0.1**
MAYK		**3.01**	**356**	P	**Pn**	**05 48 00.9**	**+1.7**
MAYK				S	**Sg**	**05 48 48.8**	**+1.8**
GURO	**Guroymak-BITLI**	**3.03**	**21**	Pn	**Pb**	**05 48 02.5**	**-2.6**
KOVA	**Elazig, Kovanc**	**3.04**	**348**	P	**Pb**	**05 48 06.9**	**+1.5**
KOVA				S	**Sg**	**05 48 47.4**	**-0.8**
KUZU	**Kuzuini**	**3.06**	**291**	P	**Pb**	**05 48 05.5**	**-0.2**
KUZU				S	**Sb**	**05 48 45.7**	**+2.1**
ELZG	**Elazig**	**3.06**	**335**	P	**Pb**	**05 48 06.9**	**+1.1**
ELZG				S	**Sg**	**05 48 48.6**	**-0.3**
MUSM	**Mu-Merkez**	**3.07**	**13**	P	**Pn**	**05 48 00.6**	**+0.5**
GAZ	**Gaziantep**	**3.12**	**299**	Pn	**Pb**	**05 48 06.6**	**0.0**
AKCA	**Adyaman/G¶l**	**3.14**	**312**	P	**Pb**	**05 48 04.6**	**-2.4**
AKCA				S	**Sb**	**05 48 47.7**	**+1.9**
AKDM	**Akdamar-Van**	**3.20**	**35**	Pn	**Pb**	**05 48 04.7**	**-3.4**
SLHN	**Bingol, Solhan**	**3.24**	**5**	P	**Pn**	**05 48 02.3**	**-0.1**
BNGB	**Bingl**	**3.26**	**1**	Pn	**Pb**	**05 48 07.4**	**-1.6**
RHAN	**Hatay/Reyhanl**	**3.32**	**280**	P	**Pb**	**05 48 08.6**	**-1.3**
RHAN				S	**Sb**	**05 48 51.1**	**+0.4**
KMRS	**Kahramanmaras**	**3.49**	**302**	Pn	**Pb**	**05 48 12.0**	**-1.0**
HASA	**Hatay-Hassa-Ha**	**3.51**	**288**	P	**Pb**	**05 48 11.5**	**-1.7**
TAHT	**Tahtakopru-Hat**	**3.67**	**281**	Pn	**Pb**	**05 48 14.1**	**-1.8**
YEDI	**Yedisu-Bingol**	**3.71**	**359**	Pn	**Pb**	**05 48 13.8**	**-2.9**
ARPR	**Arapgir-MALATY**	**3.83**	**332**	Pn	**Pb**	**05 48 16.7**	**-2.0**
BEIL	**Beino**	**3.84**	**253**	*eP*	**Pn**	**05 48 10.8**	**+0.3**
ERZN	**Erzincan**	**3.92**	**350**	Pn	**Pb**	**05 48 17.3**	**-3.0**
ILIC	**ilic-Erzincan**	**4.07**	**337**	Pn	**Pb**	**05 48 19.8**	**-3.0**
HWQ	**Hawqa**	**4.11**	**251**	*eP*	**Pn**	**05 48 14.8**	**+0.4**
KOZT	**Kozan**	**4.25**	**296**	Pn	**Pb**	**05 48 22.9**	**-2.9**
SARI	**SarD1z-Kayseri**	**4.31**	**310**	Pn	**Pb**	**05 48 23.8**	**-3.1**
KOPR	**Koprukoy-ERZUR**	**4.36**	**12**	Pn	Pn	05 48 22.1	+4.2
RCY	**Rachaya**	**4.54**	**242**	*eP*	**Pn**	**05 48 21.5**	**+1.2**
QRWL	**Qaraoun**	**4.63**	**243**	*eP*	**Pn**	**05 48 23.0**	**+1.6**
DQRL	**Deir Qamar**	**4.64**	**246**	*eP*	**Pn**	**05 48 23.0**	**+1.4**
SHBL	**Chebaa**	**4.69**	**241**	*eP*	**Pn**	**05 48 23.1**	**+0.8**

IDC 08 05:59:54.0±3.5,33.49S×177.54W,h0km,mb3.7/2, mbtmp3.8/3,ML3.3/1,Error ellipse: s-maj=88.8km s-min=49.2km az=132.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.44**	**221**	Pn	Pn	06 01 30.1	0.0
	0.7nm,0.3s,baz=25,slow=15,SNR=1.0						
URZ				Sn	Sn	06 02 32.6	-12
	1.9nm,0.3s,baz=9.7,slow=18,SNR=10.0						
	6.2nm,0.7s						
ASAR	**Alice Springs**	**43.42**	**270**	P	P	06 07 58.6	-0.1
	0.6nm,0.6s,baz=115,slow=8.4,SNR=5.6						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**44.68**	**275**	P	P	06 08 08.8	-0.1
	0.9nm,0.6s,baz=118,slow=8.1,SNR=8.7						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**148.16**	**339**	PKPbc	PKPbc	06 19 40.3	-0.7
	0.4nm,0.4s,baz=51,slow=2.7,SNR=3.9						

IDC 08 06:09:44.9±12.0,8.09S×118.53E,h0km,mb3.5/2, mbtmp3.7/4,ML3.5/2,MS3.3/1,Error ellipse: s-maj=209.1km s-min=163.0km az=62.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.29**	**22**	Sn	Sb	06 11 27.0	+2.3
	3.7nm,0.3s,baz=240,slow=20,SNR=8.1						
BATI	**Baumata**		**5.49 113**	LR	LR	06 13 14.0	
	comp=Z,249nm,18.1s,baz=176,slow=38						
FITZ	**Fitzroy Crossi**	**12.12**	**146**	Pn	Pn	06 12 40.6	+1.7
	0.1nm,0.3s,baz=323,slow=13,SNR=2.6						
	9.2nm,1.2s						
WRA	**Warramunga Arr**	**19.32**	**129**	P	P	06 14 11.9	+0.1
	0.3nm,0.3s,baz=301,slow=12,SNR=15						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**21.38**	**138**	P	P	06 14 32.9	-1.3
	0.7nm,0.9s,baz=311,slow=10,SNR=5.0						
	0.7nm,0.9s						
STKA	**Stephens Creek**	**31.95**	**141**	P	P	06 16 13.0	+0.4
	0.9nm,0.4s,baz=318,slow=12,SNR=3.2						
	0.9nm,0.4s						

*NEIC **08** 06:15:49.4±1.4,6.82S±0.06×154.8E±0.2,h10km±1km, mb4.4/8, Error ellipse: s-maj=27.6km s-min=9.6km az=85.0*
*IDC **08** 06:15:56.7±5.3,6.80S×154.45E,h73km±46km,mb3.9/14, mbtmp4.2/16,ML3.9/2,MS3.3/16,Error ellipse: s-maj=26.5km s-min=16.3km az=92.0*
ISC 08 06:15:52.9±0.6,6.80S±0.09×154.6E±0.1,h39km,n40, σ0°81/30,mb4.3/18,MS3.6/12,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.55**	**317**		**Pn**	**06 16 46.2**	**+0.7**
KRVT	**Keravat (AS076**	**3.56**	**314**	LR	LR	06 18 31.2	
	comp=Z,119nm,18.4s,baz=81,slow=45						
HNR	**Honiara**	**5.91**	**117**	LR	LR	06 19 42.2	
	comp=Z,27nm,18.2s,baz=52,slow=37						
PMG	**Port Moresby**	**7.80**	**250**	LR	LR	06 20 44.2	
	comp=Z,155nm,19.5s,baz=104,slow=38						
CTA	**Charters Tower**	**15.49**	**211**	P	**Pn**	**06 19 28.9**	**+0.2**
	0.3nm,0.3s,baz=28,slow=12,SNR=6.7						
CTA				LR	LR	06 25 10.9	
	comp=Z,109nm,18.0s,baz=48,slow=36						
	5.4nm,0.9s						
DZM	**Mont Dzumac**	**19.01**	**144**	P	**Pn**	**06 20 13.4**	**+0.8**
	0.4nm,0.3s,baz=352,slow=23,SNR=2.7						
	7.8nm,0.9s						
GUMO	**Guam**	**22.44**	**335**	LR	LR	06 28 34.8	
	comp=Z,17nm,21.1s,baz=130,slow=34						
WB0	**Warramunga Arr**	**23.47**	**235**		**P**	**06 20 59.6**	**+0.4**
WB0				IAmb	IAmb	06 21 00.7	
	comp=Z,10nm,0.9s						
WR8	**Warramunga Arr**	**23.48**	**234**		**P**	**06 20 59.5**	**+0.2**
WR8				IAmb	IAmb	06 21 00.8	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**23.59**	**234**		**P**	**06 21 00.8**	**+0.5**
WRAB				IAmb	IAmb	06 21 02.2	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**23.60**	**234**	P	**P**	**06 21 00.4**	**-0.1**
	comp=Z,12nm,0.9s,baz=55,slow=9.6,SNR=25						
WRA				PcP	**PcP**	**06 24 44.4**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=60,slow=2.5,SNR=4.8						
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**23.60**	**234**	P	**P**	**06 20 59.9**	**-0.6**
WRA					**PcP**	**06 24 44.4**	**-0.5**
ASAR	**Alice Springs**	**26.01**	**228**	P	**P**	**06 21 21.9**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=60,slow=8.6,SNR=17						
ASAR				PcP	**PcP**	**06 24 49.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=41,slow=4.3,SNR=3.2						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**27.75**	**204**	P	**P**	**06 21 38.2**	**+0.3**
	comp=Z,3.9nm,0.8s,baz=37,slow=11,SNR=5.3						
	comp=Z,3.9nm,0.8s						
RAR	**Rarotonga**	**46.35**	**113**	LR	LR	06 42 58.3	
	comp=Z,65nm,19.1s,baz=350,slow=35						
KSRS	**Korea Array**	**50.58**	**332**	P	**P**	**06 24 48.1**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=149,slow=7.7,SNR=10						
	comp=Z,2.4nm,0.8s						
PPT	**Papeete**	**55.43**	**107**	LR	LR	06 46 36.6	
	comp=Z,37nm,19.2s,baz=269,slow=33						
KLR	**Kul'dur**	**59.26**	**343**	LR	LR	06 54 17.7	
	comp=Z,20nm,18.0s,baz=232,slow=39						
PEA0B	**Petropavlovsk-**	**59.74**	**2**	P	**P**	**06 25 54.8**	**+1.1**
PETK	**Petropavlovsk-**	**59.74**	**2**	P	**P**	**06 25 54.5**	**+0.9**
	comp=Z,2.8nm,0.7s,baz=179,slow=5.9,SNR=6.0						
PETK				LR	LR	06 48 38.7	
	comp=Z,32nm,20.7s,baz=189,slow=33						
	comp=Z,2.8nm,0.7s						
SHEM	**Shemya Is, Ala**	**61.58**	**13**	LR	LR	06 50 31.3	
	comp=Z,53nm,19.3s,baz=130,slow=34						
VNDA	**Vanda**	**70.78**	**178**	P	**P**	**06 27 05.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=330,slow=6.3,SNR=6.9						
	comp=Z,1.2nm,0.8s						
VNDA	**Vanda**	**70.78**	**178**	P	**P**	**06 27 05.0**	**+0.1**
YAK	**Yakutsk**	**71.28**	**348**	LR	LR	07 00 21.4	
	comp=Z,20nm,18.0s,baz=215,slow=37						
KDAK	**Kodiak Island**	**77.17**	**26**	LR	LR	07 06 44.9	
	comp=Z,27nm,18.0s,baz=236,slow=40						
MKAR	**Makanchi Array**	**83.00**	**319**	P	**P**	**06 28 11.9**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=96,slow=4.9,SNR=6.1						
	comp=Z,0.5nm,0.6s						
QSPA	**South Pole Qui**	**83.17**	**180**	P	**P**	**06 28 14.8**	**0.0**
	comp=Z,5.3nm,1.1s,baz=276,slow=0.9,SNR=9.5						
	comp=Z,5.3nm,1.1s						
QSPA	**South Pole Qui**	**83.17**	**180**	P	**P**	**06 28 15.4**	**+0.5**
ILAR	**Eielson Array**	**83.34**	**22**	P	**P**	**06 28 15.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=259,slow=5.2,SNR=5.3						
ILAR				LR	LR	07 03 50.2	
	comp=Z,30nm,18.3s,baz=263,slow=34						
	comp=Z,0.3nm,0.6s						
MAW	**Mawson**	**84.42**	**203**	P	**P**	**06 28 21.4**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=156,slow=6.8,SNR=4.4						
	comp=Z,2.8nm,0.6s						
KURK	**Kurchatov**	**86.44**	**322**	P	**P**	**06 28 30.8**	**-0.6**
KURK				IAmb	IAmb	06 28 42.4	
	comp=Z,1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**86.47**	**322**	P	**P**	**06 28 30.8**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=94,slow=4.5,SNR=1.6						
	comp=Z,1.5nm,0.3s						
YBH	**Yreka Blue Hor**	**89.05**	**48**	LR	LR	07 03 19.7	
	comp=Z,32nm,19.5s,baz=262,slow=32						
BVAR	**Borovoye Array**	**91.90**	**323**	P	**P**	**06 28 57.0**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=111,slow=6.3,SNR=2.3						
	comp=Z,0.6nm,0.4s						
NVAR	**Mina Array Bea**	**91.91**	**52**	P	**P**	**06 28 56.8**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=252,slow=9.5,SNR=3.6						
	comp=Z,0.5nm,0.8s						
NEW	**Newport**	**93.88**	**42**	LR	LR	07 04 10.9	
	comp=Z,43nm,20.6s,baz=282,slow=31						
YKA	**Yellowknife Ar**	**96.35**	**28**	P	**P**	**06 29 18.4**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=256,slow=4.3,SNR=4.4						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**98.86**	**48**	LR	LR	07 08 01.0	
	comp=Z,21nm,19.8s,baz=49,slow=32						
BDFB	**Brasilia**	**148.40**	**135**	PKPbc	**PKPbc**	**06 35 35.6**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=243,slow=4.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**152.59**	**285**	PKPbc	**PKPbc**	**06 35 44.8**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=57,slow=2.1,SNR=9.7						

*IPEC **08** 06:18:15.4±0.2,51.56N×16.23E,h1km,ML2.7/8, Error ellipse: s-maj=1.9km s-min=1.1km az=67.0*
*DNK **08** 06:18:15.4±0.8,51.58N×16.16E,h15km±323km,ML2.1, Presumed earthquake*
*BGR **08** 06:18:16.9±0.5,51.50N×16.12E,h1km,ML2.9/12,Error ellipse: s-maj=5.6km s-min=2.2km az=18.0*
*PRU **08** 06:18:17.8,51.49N×16.14E,h0km*
*VIE **08** 06:18:19.1±0.6,51.34N×16.07E,h0km,mb2.5/15, ml3.2/15,Error ellipse: s-maj=4.9km s-min=3.8km az=55.0 71 km WNW of Wroclaw Suspected Mining induced.*
ISC 08 06:18:14.5±0.8,51.62N±0.03×16.18E±0.02,h0km,n52, σ1°29/99,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.78**	**174**	*eP*	**Pg**	**06 18 29.6**	**+0.3**
KSP				*eS*	**Sg**	**06 18 39.0**	**-0.3**
KSP	**Ksiaz**	**0.78**	**174**	*eP*	**Pg**	**06 18 29.7**	**+0.3**
KSP				*eS*	**Sg**	**06 18 39.0**	**-0.3**
CHVC	**Chvalec**	**1.03**	**184**	*eP*	**Pg**	**06 18 34.6**	**+0.4**
CHVC				*eS*	**Sg**	**06 18 47.0**	**-0.6**
	comp=Z,110nm,0.5s						
OSTC	**Ostas**	**1.06**	**179**	*eP*	**Pg**	**06 18 35.1**	**+0.3**
OSTC				*eS*	**Sg**	**06 18 47.7**	**-0.8**
	comp=Z,114nm,0.4s						
UPC	**Upice**	**1.11**	**185**	*eP*	**Pg**	**06 18 35.8**	**0.0**
UPC				*eS*	**Sg**	**06 18 49.4**	**-0.8**
	comp=Z,115nm,0.4s						
DPC	**Dobruska-Polom**	**1.27**	**176**	*eP*	**Pg**	**06 18 38.7**	**-0.1**
DPC				*eS*	**Sg**	**06 18 54.3**	**-0.9**
	comp=Z,69nm,0.3s						
DPC	**Dobruska-Polom**	**1.27**	**176**	*eP*	**Pg**	**06 18 38.4**	**-0.4**
DPC				*eS*	**Sg**	**06 18 54.2**	**-1.1**
PIVO	**Bartosovice**	**1.45**	**171**	*eP*	**Pg**	**06 18 41.4**	**-0.8**
	baz=352						
PIVO				*eS*	**Sg**	**06 18 58.9**	**-2.1**
	178nm,0.2s,baz=352						
PVCC	**Panska Ves**	**1.49**	**224**	*eP*	**Pg**	**06 18 42.8**	**-0.1**
PVCC				*eS*	**Sn**	**06 19 02.5**	**-0.1**
	comp=Z,264nm,0.4s						
BRG	**Berggiesshubel**	**1.59**	**243**	*eP*	**Pn**	**06 18 44.1**	**+0.3**
BRG				*eP*	**Pb**	**06 18 44.9**	**+0.2**
BRG				*eS*	**Sg**	**06 19 05.8**	**+0.3**
BRG	**Berggiesshubel**	**1.59**	**243**	Pg	**Pn**	**06 18 45.1**	**+1.3**
BRG				Sg	**Sg**	**06 19 05.7**	**+0.3**
BRG				Amp		06 19 07.3	
	comp=Z,177nm,0.4s						
KRLC	**Kraliky**	**1.59**	**166**	*eP*	**Pn**	**06 18 44.5**	**+0.6**
KRLC				*eS*	**Sg**	**06 19 03.6**	**-1.9**
	comp=Z,76nm,0.2s						
ANAC	**Anensky vrch**	**1.72**	**153**	*eP*	**Pn**	**06 18 45.5**	**-0.2**
	baz=334						
ANAC				*eS*	**Sn**	**06 19 07.2**	**-1.2**
	comp=Z,43nm,0.2s,baz=334						
RYBC	**Ceska Rybna**	**1.81**	**182**	*eP*	**Pn**	**06 18 47.0**	**+0.1**
	baz=3.4						
RYBC				*eS*	**Sn**	**06 19 10.3**	**-0.3**
	comp=Z,80nm,0.2s,baz=3.4						
FBE	**Freiberg**	**1.90**	**250**	*eP*	**Pb**	**06 18 50.9**	**+0.9**
FBE				*eS*	**Sg**	**06 19 15.7**	**+0.2**
STEB	**Steborice**	**1.97**	**148**	*eP*	**Pb**	**06 18 51.5**	**+0.4**
STEB				*eS*	**Sb**	**06 19 16.6**	**+0.5**
	comp=Z,90nm,0.3s						
MORC	**Moravsky Berou**	**2.04**	**154**	*eP*	**Pn**	**06 18 49.8**	**-0.2**
MORC				*eS*	**Sb**	**06 19 18.5**	**+0.3**
MORC	**Moravsky Berou**	**2.04**	**154**	*eP*	**Pn**	**06 18 49.7**	**-0.3**
	baz=335						
MORC				*eS*	**Sn**	**06 19 17.1**	**+0.9**
	comp=Z,48nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.18**	**144**	*eP*	**Pb**	**06 18 54.8**	**+0.1**
OKC				*eS*	**Sb**	**06 19 23.4**	**+1.2**
	comp=Z,52nm,0.5s						
OKC	**Ostrava-Krasne**	**2.18**	**144**	*eS*	**Sb**	**06 19 22.4**	**+0.2**
VRAC	**Vranov**	**2.33**	**173**	*eP*	**Pn**	**06 18 54.0**	**0.0**
	baz=354						
VRAC				*eS*	**Sb**	**06 19 26.3**	**-0.2**
	comp=Z,29nm,0.2s,baz=354						
MAUC	**Maruska**	**2.49**	**154**	*eP*	**Pb**	**06 19 01.0**	**+1.0**
MAUC				*eS*	**Sg**	**06 19 33.2**	**-1.1**
ZVC	**Zvikov**	**2.52**	**211**	*eP*	**Pn**	**06 18 57.0**	**+0.4**
ZVC				*eP*	**Pb**	**06 19 00.9**	**+0.4**
ZVC				*eS*	**Sg**	**06 19 33.5**	**-1.9**
	comp=Z,21nm,0.4s						
KRUC	**Moravsky**	**2.56**	**177**	*eP*	**Pn**	**06 18 57.2**	**0.0**
	baz=358						
KRUC				*eS*	**Sb**	**06 19 33.8**	**+0.5**
	comp=Z,29nm,0.4s,baz=358						
TANN	**Tannenbergstha**	**2.64**	**244**	*eP*	**Pn**	**06 18 59.0**	**+0.8**
TANN				*eP*	**Pb**	**06 19 04.5**	**+2.0**
TANN				*eS*	**Sg**	**06 19 37.9**	**-1.2**
STAC	**Stalkov**	**2.65**	**193**	*eP*	**Pn**	**06 18 58.6**	**+0.

1µm,0.2s,baz=83,slow=22,SNR=8.8
RAO Raoul Island 1.66 185 Pn 06 30 46.7 -5.2
RAO Sn **Sn 06 31 12.7 -0.7**
MXZ Matakaoa Point 10.48 198 Pn **Pn 06 32 47.0 -3.9**
MSVF Nonsavu 10.55 338 Pn Pn 06 32 44.5 -7.5
NIUE Niue 11.10 42 Pn Pn 06 32 50.5 -8.9
URZ Urewera 11.48 201 S Sn 06 35 00.3 -10
6.9nm,0.8s,baz=239,slow=19,SNR=6.4
MARNC Mare, Loyalty 14.30 292 Pn **Pn 06 33 40.8 -0.8**
CTA Charters Tower 32.68 275 LR LR 06 48 49.2
comp=Z,60nm,18.2s,baz=190,slow=33
INKA Innaminka 36.64 260 P **P 06 37 22.2 +1.6**
ASAR Alice Springs 43.56 264 P **P 06 38 19.4 +1.4**
0.6nm,0.8s,baz=91,slow=7.2,SNR=7.1
0.6nm,0.8s
WRA Warramunga Arr 44.29 269 P **P 06 38 24.9 +1.2**
0.6nm,0.5s,baz=107,slow=7.6,SNR=9.5
0.6nm,0.5s
WRA Warramunga Arr 44.29 269 P **P 06 38 24.4 +0.7**
WB0 Warramunga Arr 44.30 269 **P 06 38 24.4 +0.6**
WB0 IAmb IAmb 06 38 58.7
comp=Z,5.8nm,1.1s
FORT Forrest 47.04 253 P **P 06 38 46.6 +1.3**
SBA Scott Base 50.84 184 P **P 06 39 15.8 +2.1**
SBA IAmb IAmb 06 39 20.1
comp=Z,2.3nm,1.0s
VNDA Vanda 50.90 186 P **P 06 39 16.6 +2.5**
comp=Z,0.4nm,0.6s,baz=8.3,slow=9.0,SNR=5.9
comp=Z,0.4nm,0.6s
VNDA Vanda 50.90 186 P **P 06 39 15.1 +1.0**
VNDA IAmb IAmb 06 39 55.9
comp=Z,3.5nm,1.4s
QSPA South Pole Qui 62.51 180 P **P 06 40 37.0 +0.5**
comp=Z,1.1nm,0.8s,baz=275,slow=1.0,SNR=8.1
comp=Z,1.1nm,0.8s
QSPA South Pole Qui 62.51 180 P **P 06 40 37.0 +0.5**
QSPA IAmb IAmb 06 41 18.2
comp=Z,1.3nm,1.4s
H03S2 Juan Fernandez 81.83 124 T T 08 12 58.6
baz=240,slow=75,SNR=7.9
H03S1 Juan Fernandez 81.84 124 T T 08 12 58.8
baz=240,slow=75,SNR=3.5
H03S3 Juan Fernandez 81.85 124 T T 08 12 58.6
baz=240,slow=75,SNR=3.5
H03N3 Juan Fernandez 82.01 123 T T 08 13 08.8
baz=236,slow=74
H03N2 Juan Fernandez 82.01 123 T T 08 13 00.7
baz=236
H03N1 Juan Fernandez 82.02 123 T T 08 13 09.4
baz=236,slow=74
NVAR Mina Array Bea 86.03 43 P **P 06 42 53.8 +0.5**
comp=Z,1.1nm,0.8s,baz=226,slow=8.4,SNR=6.9
comp=Z,1.1nm,0.8s
NVAR Mina Array Bea 86.03 43 P **P 06 42 52.8 -0.6**
TXAR Lajitas Array 90.68 57 P **P 06 43 15.2 -0.3**
comp=Z,0.3nm,0.9s,baz=241,slow=7.0,SNR=3.6
comp=Z,0.3nm,0.9s
PDAR Pinedale Array 93.95 43 P **P 06 43 30.2 -0.2**
comp=Z,0.5nm,0.8s,baz=192,slow=2.7,SNR=4.7
comp=Z,0.5nm,0.8s
ILAR Eielson Array 95.15 13 P **P 06 43 34.5 -0.6**
comp=Z,0.4nm,0.7s,baz=328,slow=19,SNR=4.1
comp=Z,0.4nm,0.7s
FINES FINESS Array B 142.58 341 PKhKP PKPpre 06 49 40.2
comp=Z,0.5nm,0.4s,baz=28,slow=3.3,SNR=4.1
NOA NORSAR Array B 146.01 352 PKPbc **PKPab 06 49 51.3 -0.7**
comp=Z,0.6nm,0.6s,baz=17,slow=2.7,SNR=3.5
HFS Hagfors 146.54 350 PKPbc **PKPab 06 49 52.8 -1.2**
comp=Z,1.4nm,0.6s,baz=27,slow=1.6,SNR=5.4
AKASG Malin Array Be 149.16 326 PKPbc **PKiKP 06 50 00.8 -0.5**
comp=Z,0.8nm,0.5s,baz=43,slow=3.7,SNR=6.3

*SSNC **08** 06:30:50.8±2.6,20.˚11N×70.˚79W,h5km±17km,MD3.5, ML2.6,Presumed earthquake*
*SDD **08** 06:30:52.1±2.6,20.˚21N×70.˚77W,h10km±8km,MD3.1, ML2.7,MW2.9,Presumed earthquake*
*OSPL **08** 06:30:52.0±2.5,20.˚26N×70.˚77W,h10km±19km,ML2.7, Presumed earthquake*

ISC 08 06:30:50.0±1.1,20.˚20N±0.˚03×70.˚70W±0.˚03,h30km±11km, n29,σ1ᵗˢ30/47,13C-8D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LUDR	**Luperon**	**0.39**	**219**	⇑*iP*		**Pb**	**06 30 57.2**	**-1.5**
LUDR				⇑*iS*		**Sn**	**06 31 05.1**	**-0.9**
LUDR				IAML			06 31 06.7	
	comp=E,1µm,0.3s							
SODR	**Sosua Marina B**	**0.45**	**166**	⇑*iP*		**Pn**	**06 31 00.5**	**-0.1**
SODR				⇑*iS*		**Sn**	**06 31 08.9**	**+1.2**
SODR				IAML			06 31 11.6	
	comp=N,640nm,0.4s							
LOPP1	**Punta Rusia, P**	**0.58**	**235**	*i*P		**Pb**	**06 31 01.3**	**-0.5**
LOPP1				*e*S		**Sn**	**06 31 10.9**	**+0.1**
LOPP1				IAML			06 31 14.1	
	comp=Z,179nm,0.5s							
MADR	**Mao Valverde**	**0.73**	**212**	⇑*iP*		**Pb**	**06 31 03.9**	**-0.5**
MADR				⇓*iS*		**Sn**	**06 31 15.3**	**+0.7**
MADR				IAML			06 31 22.0	
	comp=N,269nm,0.6s							
SC01	**Santiago de lo**	**0.76**	**182**	⇓*iP*		**Pn**	**06 31 06.2**	**+1.4**
SC01				⇓*iS*		**Sn**	**06 31 17.1**	**+1.7**
SC01				IAML			06 31 18.7	
	comp=N,201nm,0.6s							
SC01	**Santiago de lo**	**0.76**	**182**	*i*P		**Pn**	**06 31 07.1**	**+2.3**
SC01				*e*S		**Sn**	**06 31 17.5**	**+2.1**
MCDR	**Montecristi**	**0.95**	**252**	⇑*iP*		**Pn**	**06 31 07.4**	**0.0**
MCDR				IAML			06 31 25.4	
	comp=N,103nm,0.4s							
LODA1	**ITESIL, Dajabo**	**1.15**	**236**	*e*S		**Sn**	**06 31 26.1**	**+1.3**
REDR	**Restauracion**	**1.22**	**213**	⇑*iP*		**Pb**	**06 31 13.1**	**+0.6**
REDR				⇑*iS*		**Sb**	**06 31 30.7**	**+2.9**
REDR				IAML			06 31 32.6	
	comp=N,324nm,0.1s							
SDDR	**Presa de Saban**	**1.33**	**205**	⇓*iP*		**Pb**	**06 31 13.2**	**-1.2**
SDDR				⇓*iS*		**Sb**	**06 31 31.1**	**+0.1**
SDDR				IAML			06 31 33.8	
	comp=N,110nm,0.3s							
SDDR	**Presa de Saban**	**1.33**	**205**	*i*P		**Pb**	**06 31 13.3**	**-1.0**
SDDR				*e*S		**Sb**	**06 31 31.2**	**+0.2**
SDDR				IAML			06 31 35.3	
	comp=Z,1µm,0.3s							
SDDR	**Presa de Saban**	**1.33**	**205**	*e*P		**Pb**	**06 31 13.4**	**-1.0**
SDDR				*e*S		**Sn**	**06 31 27.9**	**-1.5**
SDDR				IAML			06 31 31.4	
	comp=Z,107nm,0.3s							
SDDR				IAML			06 31 31.5	
	comp=Z,122nm,0.3s							
GRTK	**Grand Turk**	**1.37**	**343**	⇑*iP*		**Pb**	**06 31 14.9**	**-0.2**
GRTK				⇑*iS*		**Sb**	**06 31 33.9**	**+1.6**
GRTK				IAML			06 31 39.2	
	comp=N,138nm,0.2s							
GRTK	**Grand Turk**	**1.37**	**343**	*i*P		**Pb**	**06 31 14.5**	**-0.6**
GRTK				IAML			06 31 38.9	
	comp=Z,70nm,0.6s							
GRTK	**Grand Turk**	**1.37**	**343**	*e*P		**Pb**	**06 31 14.9**	**-0.2**
GRTK				*e*S		**Sb**	**06 31 34.4**	**+2.1**
GRTK				IAML			06 31 36.9	
	comp=Z,246nm,0.3s							
GRTK				IAML			06 31 37.8	
	comp=Z,142nm,0.2s							
SMDR	**Samana, DR**	**1.68**	**122**	⇓*iP*		**Pb**	**06 31 19.6**	**-0.7**
SMDR				⇓*iS*		**Sb**	**06 31 41.7**	**+0.6**
SMDR				IAML			06 31 56.2	
	comp=N,93nm,0.6s							
LONE3	**El Aguacate, B**	**1.74**	**205**	*i*P		**Pb**	**06 31 20.3**	**-1.1**
LONE3				*e*S		**Sb**	**06 31 43.1**	**+0.3**
LONE3				IAML			06 31 44.8	
	comp=Z,58nm,0.3s							
BANI	**BANI**	**1.82**	**170**	⇑*iP*		**Pb**	**06 31 22.2**	**-0.5**
BANI				IAML			06 31 52.3	
	comp=N,97nm,0.3s							
HATOM	**Hato Mayor del**	**1.87**	**138**	⇓*iP*		**Pb**	**06 31 22.4**	**-1.1**
HATOM				IAML			06 31 53.5	
	comp=N,23nm,0.2s							
LODU1	**El Espartillar**	**1.98**	**202**	*i*P		**Pb**	**06 31 24.9**	**-0.4**
LODU1				IAML			06 31 51.8	
	comp=Z,125nm,0.4s							
HIDR	**Higuey Centro**	**2.46**	**130**	⇑*iP*		**Pb**	**06 31 31.5**	**-2.0**
HIDR				IAML			06 32 13.1	
	comp=N,40nm,0.3s							
LOBH	**Bahia de las A**	**2.49**	**201**	*i*P		**Pb**	**06 31 32.4**	**-1.6**
LOBH				IAML			06 32 06.2	
	comp=Z,36nm,0.9s							
PCDR	**Punta Cana, DR**	**2.75**	**127**	⇑*iP*		**Pb**	**06 31 35.7**	**-2.9**
PCDR				IAML			06 32 12.2	
	comp=N,68nm,2.6s							
MASC	**Masc**	**3.32**	**270**	*e*P		**Pn**	**06 31 39.7**	**-0.3**
MASC				*e*S		**Sn**	**06 32 18.3**	**-0.2**
MASC				IAML			06 32 19.4	
	comp=E,5.4nm,0.3s							
MASC				IAML			06 32 20.8	
	comp=N,6.3nm,0.2s							
QMBU	**Quimbuelo**	**3.87**	**271**	*e*P		**Pn**	**06 31 47.0**	**-0.6**
QMBU				*e*S		**Sn**	**06 32 30.9**	**-1.1**
GTBY	**Guantanamo Bay**	**4.16**	**267**	*e*P		**Sn**	**06 31 51.7**	**+0.2**
GTBY				*e*S		**Sn**	**06 32 39.0**	**-0.2**
RCC	**Rio Carpintero**	**4.70**	**268**	*e*P		**Pn**	**06 31 58.4**	**-0.6**
RCC				*e*S		**Sn**	**06 32 51.0**	**-1.6**
HLGC	**Holguin**	**5.08**	**279**	*e*P		**Pn**	**06 32 02.5**	**-1.7**
HLGC				*e*S		**Sn**	**06 33 03.4**	**+1.6**
CCCC	**Cccc**	**6.70**	**280**	*e*P		Pn	06 32 19.0	-7.4
CCCC				*e*S		Sn	06 33 30.2	-12
CCCC				IAML			06 33 32.7	
	comp=N,0.8nm,0.2s							
CCCC				IAML			06 33 33.3	
	comp=E,0.7nm,0.2s							

TEH 08 06:33:06.3,28.˚75N×57.˚84E,h9km±36km,ML3.7, Presumed earthquake,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBAM	**BAM**	**0.66**	**54**	Pg		Pg	06 33 19.5	+0.4
KBAM				Sg		Sg	06 33 28.5	+0.6
KHNJ	**Kahnooj**	**0.80**	**188**	Pg		Pg	06 33 21.1	-0.7
CHMN	**Cheshme madani**	**1.14**	**347**	Pg		Pg	06 33 28.1	-0.2
CHMN				Sg		Sb	06 33 43.9	+0.4
NGRK	**Negar Kerman**	**1.32**	**313**	Pg		Pn	06 33 30.9	-0.4
NGRK				Sg		Sb	06 33 48.7	+0.1
KRBR	**Kerman**	**1.55**	**323**	Pg		Pb	06 33 35.1	-0.3
IBND	**Bandar-abas**	**1.73**	**222**	Pg		Pg	06 33 38.9	-0.6
GENO	**Geno**	**1.99**	**228**	Pn		Pb	06 33 42.1	-0.7
KHGB	**Koh Gabri**	**2.01**	**324**	Pn		Pb	06 33 42.4	-0.8
ZHSF	**Zahedan**	**2.71**	**71**	Pn		Pn	06 33 51.1	+0.9
JASK	**Jask - Hormozg**	**2.87**	**179**	Pn		Pn	06 33 53.7	+1.5
NHDN	**Nehbandan**	**3.26**	**35**	Pn		Pn	06 33 59.4	+1.6
IKOO	**Kooshah**	**3.80**	**15**	Pn		Pn	06 34 07.5	+2.2
IMEH	**Mehriz**	**3.84**	**314**	Pn		Pn	06 34 08.0	+2.1
ITEG	**Tejag**	**4.21**	**10**	Pn		Pn	06 34 12.9	+2.1
IDAH	**Dahanechah**	**4.35**	**23**	Pn		Pn	06 34 14.3	+1.5
DSBU	**Dashti - Bushe**	**5.80**	**268**	Pn		Pn	06 34 34.0	+1.5
KLNJ	**Kolanjah**	**5.87**	**294**	Pn		Pn	06 34 35.5	+1.6

IDC 08 06:48:59.6±1.9,23.˚42S×175.˚35W,h0km,mb3.5/3, mbtmp3.7/4,ML5.0/1,Error ellipse: s-maj=68.2km s-min=34.2km az=169.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**8.38**	**311**	Pn		Pn	06 51 03.7	+1.3
	0.6nm,0.3s,baz=117,slow=6.8,SNR=4.2 19nm,1.1s							
ASAR	**Alice Springs**	**46.31**	**259**	P		P	06 57 27.9	+0.3
	0.3nm,0.6s,baz=96,slow=8.0,SNR=4.1 0.3nm,0.6s							
WRA	**Warramunga Arr**	**46.70**	**264**	P		P	06 57 29.6	-1.0
	0.5nm,0.7s,baz=96,slow=8.2,SNR=5.2 0.5nm,0.7s							
H03S2	**Juan Fernandez**	**82.33**	**123**	T		T	08 33 08.4	
	baz=250,slow=75,SNR=22							
H03S1	**Juan Fernandez**	**82.34**	**123**	T		T	08 33 11.4	
	baz=250,slow=75,SNR=27							
H03S3	**Juan Fernandez**	**82.34**	**123**	T		T	08 33 01.4	
	baz=250,slow=75,SNR=27							
H03N2	**Juan Fernandez**	**82.48**	**123**	T		T	08 33 06.3	
	baz=249,SNR=11							
H03N3	**Juan Fernandez**	**82.48**	**123**	T		T	08 33 06.9	
	baz=249,SNR=9.6							
H03N1	**Juan Fernandez**	**82.49**	**123**	T		T	08 33 10.0	
	baz=249,SNR=9.4							
TXAR	**Lajitas Array**	**86.59**	**56**	P		P	07 01 45.3	0.0
	0.5nm,0.9s,baz=239,slow=5.2,SNR=5.2 0.5nm,0.9s							

*IDC **08** 06:55:45.0±6.2,36.˚45N×72.˚29E,h97km±48km,mb3.4/5, mbtmp3.7/11,MS3.4/1,Error ellipse: s-maj=47.0km s-min=27.8km az=31.0*

ISC 08 06:55:45.4±1.3,36.˚5N±0.˚1×72.˚2E±0.˚1,h100km,n14, σ0ˢ73/16,mb3.5/5,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AAK	**Ala-Archa**	**6.36**	**15**	P		**Pn**	**06 57 17.3**	**+0.7**
	3.8nm,0.4s,baz=196,slow=9.9,SNR=9.9							
AAK				S		**Sn**	**06 58 28.0**	**+0.2**
	3.8nm,0.5s,baz=4.1,slow=15,SNR=5.7							
AAK	**Ala-Archa**	**6.36**	**15**	⇑P		**Pn**	**06 57 16.8**	**+0.2**
	1.6nm,0.5s							
AAK				⇑S		**Sn**	**06 58 27.7**	**-0.2**
	11nm,1.1s							
KK31	**Karatay Array**	**6.70**	**349**	⇓P		**Pn**	**06 57 20.8**	**-0.4**
	6.2nm,0.3s,baz=177,slow=14,SNR=65							
KK31				⇑S		**Sn**	**06 58 34.7**	**-1.4**
	1.9nm,0.3s,baz=175,slow=19							
MKAR	**Makanchi Array**	**12.72**	**33**	P		**Pn**	**06 58 43.2**	**+0.6**
	0.1nm,0.3s,baz=210,slow=13,SNR=11							
KURBB	**Kurchatov Arra**	**14.81**	**16**	P		**P**	**06 59 11.7**	**-1.1**
	1.1nm,0.7s,baz=206,slow=11,SNR=5.8							
BVAR	**Borovoye Array**	**16.55**	**356**	P		**P**	**06 59 32.7**	**+0.5**
	2.0nm,0.7s,baz=156,slow=11,SNR=6.6							
AKTO	**Aktyubinsk**	**17.27**	**328**	P		**P**	**06 59 40.6**	**+0.6**
	1.6nm,0.3s,baz=124,slow=11,SNR=8.1							
ZALV	**Zalesovo Beam**	**19.50**	**23**	P		**P**	**07 00 04.6**	**+0.1**
	1.0nm,0.3s,baz=219,slow=9.8,SNR=5.3							
ARCES	**ARCESS Array B**	**41.50**	**337**	P		**P**	**07 03 23.1**	**+0.9**
	0.4nm,0.3s,baz=117,slow=8.7,SNR=10 0.4nm,0.3s							
HFS	**Hagfors**	**43.65**	**322**	P		**P**	**07 03 39.9**	**+0.1**
	1.4nm,0.4s,baz=99,slow=9.3,SNR=11 1.4nm,0.4s							
NOA	**NORSAR Array B**	**44.95**	**323**	P		**P**	**07 03 50.3**	**+0.1**
	0.5nm,0.8s,baz=92,slow=4.8,SNR=1.5 0.5nm,0.8s							
DAVOX	**Davos/Dischmat**	**46.57**	**303**	LR		LR	07 28 51.5	
	comp=Z,45nm,19.3s,baz=143,slow=43							
YKA	**Yellowknife Ar**	**81.17**	**3**	P		**P**	**07 07 50.1**	**+0.5**
	0.4nm,0.5s,baz=351,slow=5.3,SNR=12 0.4nm,0.5s							
WRA	**Warramunga Arr**	**81.18**	**123**	P		**P**	**07 07 49.2**	**-1.0**
	0.3nm,0.8s,baz=315,slow=5.6,SNR=1.3 0.3nm,0.8s							

*NEIC **08** 07:05:39.7±1.3,52.˚3N±0.˚1×178.˚55W±0.˚07,h180km±4km, mb3.9/19,ML4.1/14,ML3.9(AEIC),Error ellipse: s-maj=19.5km s-min=5.9km az=174.0*
*IDC **08** 07:05:40.8±0.9,52.˚36N×178.˚62W,h192km±7km,mb3.4/17, mbtmp4.0/21,Error ellipse: s-maj=17.1km s-min=9.7km az=174.0*

ISC 08 07:05:39.2±0.6,52.˚1N±0.˚1×178.˚61W±0.˚04,h189km±5km, n91,σ1ᵗˢ17/102,mb3.9/20,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GANE	**Gareloi Northe**	**0.32**	**199**			**Pn**	**07 06 03.9**	**-0.7**
GANE						**Sn**	**07 06 23.1**	**-0.9**
GAEA	**Gareloi East**	**0.35**	**194**			**Pn**	**07 06 04.3**	**-0.4**
GAEA						**Sn**	**07 06 23.4**	**-0.8**
TANO	**Tanaga North**	**0.37**	**125**			**Pn**	**07 06 04.4**	**-0.3**
TANO						**Sn**	**07 06 23.6**	**-0.6**
GALAA	**Gareloi Lava P**	**0.38**	**196**			**Pn**	**07 06 04.3**	**-0.4**
GALAA						**Sn**	**07 06 23.9**	**-0.4**
TASE	**Tanaga Southea**	**0.46**	**129**			**Pn**	**07 06 04.5**	**-0.5**
TASE						**Sn**	**07 06 24.5**	**-0.3**
TAFL	**Tanaga Flats**	**0.57**	**130**			**Pn**	**07 06 05.0**	**-0.4**
TAFL						**Sn**	**07 06 24.9**	**-0.7**
TAPA	**Tanaga Point A**	**0.58**	**122**			**Pn**	**07 06 05.0**	**-0.5**
TAPA						**Sn**	**07 06 24.8**	**-0.9**
GAKI	**Gareloi-Kavalg**	**0.58**	**193**			**Pn**	**07 06 05.1**	**-0.4**
GAKI						**Sn**	**07 06 24.3**	**-1.3**
KICM	**Kanaga Island**	**0.90**	**103**			**Sn**	**07 06 28.0**	**-0.7**
KIKV	**Kanaga Island**	**0.92**	**105**			**Sn**	**07 06 27.9**	**-1.1**
KIMD	**Kanaga Island**	**0.93**	**113**			**Sn**	**07 06 27.3**	**-1.8**
KIWB	**Kanaga Island**	**0.94**	**106**			**Pn**	**07 06 07.0**	**-0.5**
KIWB						**Sn**	**07 06 27.1**	**-2.1**
CERB	**Semis' Cerberu**	**1.10**	**261**			**Pn**	**07 06 09.0**	**+0.4**
CERB						**Sn**	**07 06 31.1**	**-0.3**
CEAP	**Semis' Anvil P**	**1.13**	**264**			**Pn**	**07 06 09.1**	**+0.3**
CESW	**Semis' Southwe**	**1.15**	**259**			**Pn**	**07 06 09.0**	**0.0**
ADK	**Adak**	**1.21**	**101**			**Pn**	**07 06 08.5**	**-1.0**
ADK				IAML			07 06 33.2	
	2µm,0.2s							
ADK				IAML			07 06 34.6	
	1µm,0.2s							
ADK	**Adak**	**1.21**	**101**			**Sn**	**07 06 31.1**	**-1.8**
ADAG	**Mount Adagdak**	**1.25**	**96**			**Sn**	**07 06 32.0**	**-1.3**
ETKA	**Kagalaska Isla**	**1.39**	**100**			**Sn**	**07 06 33.6**	**-1.9**
AMKA	**Amchitka**	**1.50**	**241**			**Sn**	**07 06 12.1**	**+0.2**
AMKA				Sn		**Sn**	**07 06 35.8**	**-1.5**
AMKA				IAML			07 06 37.5	
	comp=N,1µm,0.3s							
AMKA				IAML			07 06 38.2	
	comp=E,1µm,0.3s							
GSSP	**Great Sitkin S**	**1.50**	**90**			**Sn**	**07 06 36.0**	**-1.4**
GSCK	**Great Sitkin C**	**1.51**	**93**			**Pn**	**07 06 11.5**	**-0.6**
GSCK						**Sn**	**07 06 36.2**	**-1.4**
GSTD	**Great Sitkin T**	**1.52**	**92**			**Sn**	**07 06 36.1**	**-1.7**
GSTR	**Great Sitkin T**	**1.57**	**90**			**Pn**	**07 06 12.1**	**-0.6**
GSTR						**Sn**	**07 06 38.1**	**-0.5**
GSTR				IAML			07 06 43.8	
	comp=E,2µm,0.5s							
GSMY	**Great Sitkin M**	**1.58**	**92**			**Sn**	**07 06 37.8**	**-0.8**
KOWE	**Korovin West**	**2.69**	**83**			**Pn**	**07 06 23.9**	**-0.8**
KONW	**Korovin Northw**	**2.72**	**82**			**Pn**	**07 06 24.4**	**-0.6**
ATKA	**Atka Island**	**2.72**	**87**			**Pn**	**07 06 23.9**	**-1.0**
ATKA				IAML			07 07 00.5	
	comp=E,389nm,0.4s							
ATKA				IAML			07 07 00.6	
	comp=N,266nm,0.3s							
KOFP	**Korovin Flat P**	**2.78**	**85**			**Pn**	**07 06 25.2**	**-0.5**
SHEM	**Shemya Is, Ala**	**4.50**	**281**	P		**Pn**	**07 06 46.9**	**0.0**
	comp=N,31nm,0.5s,baz=114,slow=4.8,SNR=12							
SHEM				S		**Sn**	**07 07 40.6**	**+0.5**
	comp=N,20nm,0.6s,baz=66,slow=20,SNR=1.3							
SHEM	**Shemya Is, Ala**	**4.50**	**281**			**Pn**	**07 06 46.9**	**0.0**
SHEM						**Sn**	**07 07 40.6**	**+0.5**
SMY	**Shemya**	**4.50**	**281**	Pn		**Pn**	**07 06 47.0**	**+0.1**
SMY				IAML			07 08 56.0	
	comp=E,70nm,1.5s							
OKCE	**Okmok Cone E**	**6.47**	**74**			**Pn**	**07 07 13.1**	**+0.7**
OKTU	**Okmok Mt. Tuli**	**6.54**	**75**			**Pn**	**07 07 13.4**	**+0.1**
MGOD	**Makushin Gods**	**7.29**	**72**			**Pn**	**07 07 23.0**	**0.0**
UNV	**Unalaska Valle**	**7.51**	**72**			**Pn**	**07 07 26.0**	**+0.2**
LVA	**Lava Point**	**7.83**	**70**			**Pn**	**07 07 30.7**	**+0.5**
AKUT	**Akutan**	**7.98**	**70**			**Pn**	**07 07 31.8**	**-0.3**
AKSA	**Akutan Strait**	**8.02**	**70**			**Pn**	**07 07 33.2**	**+0.6**
SSBA	**Shishaldin**	**9.04**	**67**			**Pn**	**07 07 46.1**	**+0.1**
SDPT	**Sand Point**	**11.21**	**66**	Pn		**Pn**	**07 08 12.2**	**-1.8**
CNBA	**Chernabura Isl**	**11.65**	**69**	Pn		**Pn**	**07 08 17.4**	**-2.3**
M16K	**Timber Creek**	**13.97**	**43**			**Pn**	**07 08 49.0**	**+0.1**
CHIR	**Chirikof Islan**	**14.00**	**66**	Pn		**P**	**07 08 49.5**	**-1.9**
PETK	**Petropavlovsk-**	**14.41**	**283**	P		**P**	**07 08 55.2**	**-0.8**
	comp=E,1.5nm,0.6s,baz=84,slow=15,SNR=2.5							
PETK				S		**S**	**07 11 29.4**	**-6.5**
	comp=E,0.5nm,0.5s,baz=121,slow=17,SNR=1.7							
KDAK	**Kodiak Island**	**15.93**	**59**	P		**P**	**07 09 11.0**	**-1.7**
	comp=E,15nm,0.5s,baz=258,slow=9.3,SNR=107							
KDAK				S		S	07 11 57.9	-11
	comp=E,5.2nm,1.0s,baz=166,slow=15,SNR=1.7							
KDAK	**Kodiak Island**	**15.93**	**59**	P		**P**	**07 09 11.8**	**-0.9**
SLKM	**Skilak Lake**	**17.72**	**51**	P		**P**	**07 09 32.3**	**0.0**
SLKM				IAmb	IAmb		07 09 36.3	
	comp=Z,11nm,1.1s							
CAST	**Castle Rocks**	**17.95**	**41**	P		**P**	**07 09 35.3**	**+0.5**
CAST				IAmb	IAmb		07 09 39.5	
	comp=Z,3.2nm,0.6s							
L22K	**Petersville**	**18.12**	**44**	P		**P**	**07 09 37.1**	**+0.3**
PMR	**Palmer**	**18.53**	**48**	P		**P**	**07 09 40.7**	**-0.4**
PMR				IAmb	IAmb		07 10 12.6	
	comp=Z,6.0nm,1.3s							
TRF	**Thorofare Moun**	**18.69**	**42**	P		**P**	**07 09 43.5**	**+0.5**
TRF				IAmb	IAmb		07 09 46.0	
	comp=Z,5.5nm,1.2s							
SEY	**Seymchan**	**18.78**	**316**	P		**P**	**07 09 44.6**	**+0.9**
	comp=Z,5.4nm,0.7s,baz=114,slow=11,SNR=7.2							
GLI	**Glacier Island**	**19.30**	**51**	P		**P**	**07 09 49.4**	**-0.1**
SCM	**Sheep Creek Mo**	**19.43**	**48**	P		**P**	**07 09 50.3**	**-0.6**
DHY	**Denali Highway**	**19.78**	**44**	P		**P**	**07 09 55.0**	**+0.2**
DHY				IAmb	IAmb		07 09 58.7	
	comp=Z,3.2nm,0.9s							
CCB	**Clear Creek Bu**	**20.18**	**40**	P		**P**	**07 09 58.4**	**-0.4**
ILAR	**Eielson Array**	**20.59**	**40**	P		**P**	**07 10 02.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=236,slow=8.1,SNR=9.5 comp=Z,0.4nm,0.6s							
H24K	**Noodor Dome**	**20.66**	**37**	P		**P**	**07 10 03.9**	**-0.1**
H24K				IAmb	IAmb		07 10 07.9	
	comp=Z,5.2nm,1.4s							
VRDI	**Verde Repeater**	**21.10**	**51**	P		**P**	**07 10 07.8**	**-1.1**
F24K	**Squaw Lake**	**21.47**	**32**	P		**P**	**07 10 12.9**	**+0.3**
F24K				IAmb	IAmb		07 10 15.1	
	comp=Z,3.6nm,0.8s							
SCRK	**Sand Creek**	**21.50**	**43**	P		**P**	**07 10 11.8**	**-1.2**
BCAR	**Beaver Creek A**	**22.23**	**46**	P		**P**	**07 10 20.6**	**+0.6**
K27K	**Chicken**	**22.33**	**44**	P		**P**	**07 10 22.2**	**+1.2**
K27K				IAmb	IAmb		07 11 06.2	
	comp=Z,6.8nm,1.4s							
D25K

AKASG pP **pP** **07 17 45.8 +2.9**
comp=Z,1.5nm,0.6s,baz=20,slow=6.0,SNR=3.2
comp=Z,0.4nm,0.4s
WRA **Warramunga Arr 82.63 224** P P 07 17 42.6 +1.5
comp=Z,0.6nm,0.6s,baz=32,slow=5.9,SNR=8.7
comp=Z,0.6nm,0.6s
WRA **Warramunga Arr 82.63 224** P P 07 17 42.6 +1.5
BRTR **Keskin Array B 84.31 336** P **P** **07 17 49.9 +0.1**
comp=Z,1.1nm,0.8s,baz=12,slow=7.4,SNR=2.8
comp=Z,1.1nm,0.8s
ASAR **Alice Springs 86.12 223** P P 07 18 01.2 +2.7
comp=Z,1.3nm,0.8s,baz=22,slow=5.1,SNR=10
comp=Z,1.3nm,0.8s
TORD **Torodi Ar. Bea 115.00 360** PKP **PKPdf** **07 23 56.9 -0.8**
comp=Z,0.2nm,0.4s,baz=43,slow=2.1,SNR=1.3

JMA 08 07:07:00.5±0.2, 34°N±3°×13°7E±°, h384km, MV3.5/26, SE OFF KII PENINSULA, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO4	**TONANKAI O.B.S**	**0.44**	**31**	*eP*	Pn	07 07 49.1	+1.2
JTNC	**Tanabenakahech**	**1.39**	**278**	*eP*	Pn	07 07 51.5	0.0
JWY	**Kouya**	**1.51**	**293**	*eP*	Pn	07 07 52.4	+0.3
JWT	**Wachi**	**2.26**	**317**	*eP*	Pn	07 07 56.8	+0.2
JAI	**Aioi**	**2.35**	**275**	*eP*	Pn	07 07 57.3	0.0
JKY	**Yasaka**	**2.68**	**319**	*eP*	Pn	07 08 00.0	+0.3
JRY	**Ryogami san**	**2.73**	**29**	*eP*	Pn	07 08 02.3	+2.1
JKSM	**Kasumi**	**2.90**	**313**	*eP*	Pn	07 08 01.8	+0.2
BSO1	**Boso 1**	**3.24**	**71**	*eP*	Pn	07 08 04.0	+0.2
BSO1				*eS*	S	07 08 53.2	-2.0
JAG	**Ashikaga**	**3.31**	**32**	P	Pn	07 08 05.6	+0.5
JAG				S	S	07 08 53.2	-4.2
JNA	**Nagahama**	**4.00**	**270**	*eP*	Pn	07 08 12.1	+0.6
JFK	**Kawauchi**	**4.75**	**37**	*eP*	Pn	07 08 19.7	+0.7
JFK				*eS*	S	07 09 18.3	-4.5
JMM	**Marumori**	**5.11**	**33**	*eS*	S	07 09 26.0	-3.5

*NAO **08** 07:10:18.4, 32°.15N×47°.14E, h33km, MB3.8*
*ISN **08** 07:10:35.4±7.8, 34°.23N×45°.63E, h0km±56km, ML4.1, Presumed earthquake*
*IDC **08** 07:10:36.8±0.9, 34°.39N×45°.53E, h0km, mb4.0/18, mbtmp4.0/27, ML3.6/8, MS3.3/15, Error ellipse: s-maj=17.4km s-min=11.8km az=158.0*
*NEIC **08** 07:10:38.3±1.3, 34°.27N±0°.05×45°.59E±0°.09, h10km±1km, mb4.3/15, Error ellipse: s-maj=13.2km s-min=7.8km az=102.0*
*TEH **08** 07:10:38.1, 34°.32N×45°.59E, h11km±26km, ML4.2, Presumed earthquake*
*THR **08** 07:10:39.3±0.0, 34°.31N×45°.59E, h14km±10km, ML4.2, Presumed earthquake*
*GFZ **08** 07:10:57.9±0.3, 38°N±5°×4°6E±°, h10km, M4.0/15, mb4.0/15, confirmed*
*GII **08** 07:11:23.5±0.0, 34°.12N×45°.59E, h0km, confirmed*
ISC 08 07:10:38.3±0.4, 34°25N±0°.04×45°61E±0°.03, h10km, n147, σ1s79/135, mb4.2/22, MS3.2/12, 4C-2D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.78**	**55**	Pg	**Pg**	**07 10 52.5**	**-1.0**
IDHR				Sg	**Sg**	**07 11 04.3**	**+0.6**
ILBA	**Ilam Banvizeh**	**0.80**	**141**	*ePg*	**Pn**	**07 10 55.7**	**0.0**
ILBA				IAML		07 11 19.4	
	comp=Z,730nm,1.0s						
ILBA	**Ilam Banvizeh**	**0.80**	**141**	Pg	**Pn**	**07 10 55.5**	**-0.2**
IGHG	**Ghaleghazi**	**0.80**	**84**	Pg	**Pg**	**07 10 54.2**	**+0.5**
IGHG				Sg	**Sb**	**07 11 06.8**	**+1.5**
KCHF	**Cheshme Sefid,**	**1.19**	**88**	Pg	**Pb**	**07 11 00.9**	**-0.1**
BHD	**Baghdad**	**1.42**	**227**	*ePg*	**Pn**	**07 11 01.0**	**-3.1**
	baz=47						
BHD				*eSg*	**Sn**	**07 11 23.0**	**+0.2**
BHD				AML	AML	07 11 31.4	
	comp=E,3μm,0.6s						
SNGE	**Sanandaj**	**1.66**	**59**	*ePn*	**Pb**	**07 11 08.6**	**-0.5**
SNGE				IAML		07 11 35.2	
	comp=Z,3μm,1.0s						
SNJK	**Sanadaj _Korde**	**1.69**	**45**	Pg	**Pb**	**07 11 09.0**	**-0.7**
SNQR	**Sonqor, Kerman**	**1.77**	**69**	Pg	**Pb**	**07 11 11.0**	**-0.1**
SRSL	**SARDASHT**	**1.96**	**356**	*ePn*	**Pn**	**07 11 12.9**	**+1.0**
SRSL				IAML		07 11 42.2	
	comp=Z,8μm,1.0s						
MAHB	**Mahabad**	**2.51**	**2**	Pn	**Pn**	**07 11 20.4**	**+1.0**
RAFI	**Al-Rafai**	**2.55**	**170**	*ePn*	**Pn**	**07 11 20.0**	**+0.2**
RAFI				*eSn*	**Sb**	**07 11 58.0**	**+2.3**
BDRS	**Dareh Seyedi**	**2.73**	**95**	Pn	**Pn**	**07 11 24.6**	**+2.2**
IHSH	**Hashtrud**	**3.33**	**23**	Pn	**Pn**	**07 11 32.0**	**+1.2**
GTMR	**Gotvand**	**3.43**	**120**	*ePn*	**Pn**	**07 11 34.2**	**+2.4**
GTMR				IAML		07 12 49.6	
	comp=Z,220nm,1.0s						
IAZR	**Azarshahr**	**3.44**	**5**	Pn	**Pn**	**07 11 33.4**	**+1.3**
ZNJK	**Zanjan**	**3.48**	**45**	*ePn*	**Pn**	**07 11 34.8**	**+2.0**
ZNJK				IAML		07 13 02.1	
	comp=Z,170nm,1.0s						
HAKT	**HAKKARI**	**3.65**	**335**	Pn	**Pn**	**07 11 35.4**	**+0.4**
KHMZ	**Khomeyn**	**3.65**	**97**	*ePn*	**Pn**	**07 11 38.1**	**+3.1**
KHMZ				IAML		07 12 50.6	
	comp=Z,140nm,1.0s						
ASAO	**Ashtian**	**3.66**	**84**	*ePn*	**Pn**	**07 11 38.0**	**+2.7**
ASAO				IAML		07 12 54.2	
	comp=Z,290nm,1.0s						
AMIS	**Naft Sefid**	**4.02**	**129**	Pn	**Pn**	**07 11 42.5**	**+2.5**
GIDE	**GILAN DEYLAMAN**	**4.40**	**51**	*ePn*	**Pn**	**07 11 48.4**	**+3.0**
GIDE				IAML		07 13 12.1	
	comp=Z,530nm,1.0s						
GEVA	**Gevas**	**4.55**	**334**		**Pn**	**07 11 48.8**	**+1.4**
JHBN	**Jahan bin**	**4.69**	**114**	Pn	**Pn**	**07 11 51.3**	**+1.8**
IKLH	**Kolahrood**	**5.06**	**99**	Pn	**Pn**	**07 11 56.6**	**+2.2**
IZEF	**Zefreh**	**5.77**	**102**	Pn	**Pn**	**07 12 06.2**	**+2.0**
GNI	**Garni**	**5.93**	**354**	Pn	**Pn**	**07 12 07.2**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=170,slow=17,SNR=4.0						
GNI				Pg	**Pb**	**07 12 21.6**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=198,slow=4.1,SNR=6.9						
GNI				Lg	Lg	07 13 44.6	
	comp=Z,1.2nm,0.3s,baz=146,slow=18,SNR=1.3						
	comp=Z,5.3nm,0.4s						
GNI	**Garni**	**5.93**	**354**	Pn	**Pn**	**07 12 06.8**	**+0.5**
GNI					**Pb**	**07 12 21.6**	**-0.3**
KOPT	**Kop Dagi**	**7.06**	**326**	Pn	**Pn**	**07 12 21.0**	**-0.9**
GAZ	**Gaziantep**	**7.43**	**296**	Pn	**Pn**	**07 12 28.7**	**+1.9**
ARPR	**Arapgir-MALATY**	**7.58**	**312**	Pn	**Pn**	**07 12 30.1**	**+1.1**
ASF	**Jabal al Asfar**	**7.59**	**257**	Pn	**Pn**	**07 12 28.8**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=68,slow=11,SNR=6.2						
ASF				Lg	Lg	07 14 37.5	
	comp=Z,3.7nm,0.3s,baz=55,slow=19,SNR=5.1						
ASF				LR	LR	07 16 18.3	
	comp=Z,272nm,19.7s,baz=26,slow=45						
	comp=Z,2.8nm,0.4s						
KSHT	**Keshet**	**8.27**	**264**	P	Pg	07 13 23.6	+6.9
NATI	**Neve Ativ**	**8.28**	**266**	P	Pg	07 13 23.6	+6.8
GEM	**Giv'at Ha'Em**	**8.35**	**266**	P	Pg	07 13 24.5	+6.3
KNHM	**Kefar Nahum**	**8.48**	**264**	P	Pg	07 13 26.2	+5.6
MMA0B	**Mount Meron ar**	**8.60**	**265**	P	Pg	07 13 28.1	+5.1
MMAI	**Mount Meron Ar**	**8.60**	**265**	Pn	**Pn**	**07 12 42.4**	**-0.6**
	comp=Z,2.8nm,0.3s,baz=83,slow=16,SNR=2.2						
MMAI				Lg	Lg	07 15 08.2	
	comp=Z,3.8nm,0.3s,baz=94,slow=35,SNR=3.5						
MMAI				LR	LR	07 16 57.6	
	comp=Z,247nm,18.0s,baz=72,slow=44						
	comp=Z,0.8nm,0.3s						
RGMN	**Argaman**	**8.70**	**259**	P	**Pg**	**07 13 29.1**	**+4.2**
ROII	**Roi**	**8.71**	**260**	P	**Pg**	**07 13 29.1**	**+4.1**
MMLI	**Mount Malkishu**	**8.71**	**261**	P	**Pg**	**07 13 25.7**	**+0.6**
MMLI	**Mount Malkishu**	**8.71**	**261**	P	**Pg**	**07 13 29.6**	**+4.5**
UJAP	**Al Uja**	**8.81**	**258**	P	**Pg**	**07 13 30.8**	**-1.2**
GHAJ	**Ghor Haditha**	**8.95**	**254**	P	**Pg**	**07 13 33.6**	**+4.0**
GHAJ	**Ghor Haditha**	**8.95**	**254**	P	**Pg**	**07 13 32.3**	**+2.6**
OFRI	**`Ofer**	**9.03**	**263**	P	Pg	07 13 33.7	
SLTI	**Sal'it**	**9.08**	**260**	P	Pg	07 13 34.3	
MSBI	**Mazada**	**9.11**	**254**	P	Pg	07 13 35.2	
MSBI	**Mazada**	**9.11**	**254**	P	Pg	07 13 34.6	
ZFRI	**Zfri**	**9.56**	**250**	P	Pg	07 13 40.6	
KBZ	**Khabaz**	**9.70**	**348**	Pn	**Pn**	**07 12 57.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=9.0,SNR=7.5						
	comp=Z,6.0nm,1.0s						
RMNI	**Mount Ramon**	**9.86**	**251**	P	Pg	07 13 45.0	
HRFI	**Mount Harif**	**9.90**	**248**	P	Pg	07 13 45.2	
KVAR	**Kislovodsk Arr**	**9.95**	**348**	Pn	**Pn**	**07 13 01.8**	**+0.3**
	baz=180,slow=10						
	comp=Z,1.6nm,0.3s						
KZIT	**Kziot**	**10.03**	**254**	P	Pg	07 13 47.3	
EIL	**Elat**	**10.14**	**246**	Pn	**Pn**	**07 13 02.9**	**-1.0**
	comp=Z,2.2nm,0.4s,baz=358,slow=21,SNR=1.6						
EIL				Lg	Lg	07 16 02.2	
	comp=Z,1.3nm,0.3s,baz=61,slow=12,SNR=3.8						
EIL				LR	LR	07 17 59.8	
	comp=Z,187nm,20.2s,baz=90,slow=44						
EIL	**Elat**	**10.14**	**246**	P	Pg	07 13 48.4	
RAYN	**Ar Rayn**	**10.69**	**181**		**Pn**	**07 13 09.9**	**-1.6**
BRTR	**Keskin Array B**	**11.02**	**303**	Pn	**Pn**	**07 13 15.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=183,slow=19,SNR=2.3						
UOSS	**Minazif**	**13.06**	**132**		**Pn**	**07 13 42.7**	**-1.3**
IDI	**Anoyia**	**17.06**	**279**	Pn	**Pn**	**07 14 37.5**	**+0.5**
	comp=Z,5.1nm,0.6s,baz=67,slow=13,SNR=5.9						
IDI	**Anoyia**	**17.06**	**279**	Pn	**Pn**	**07 14 36.4**	**-0.5**
IDI				IAmb	IAmb	07 14 44.6	
	comp=Z,13nm,0.9s						
BELG	**Belogornoye**	**18.20**	**4**	P	**Pn**	**07 14 48.6**	**-2.2**
	comp=Z,1.1nm,0.3s,baz=197,slow=19,SNR=12						
	comp=Z,25nm,0.9s						
AB31	**Akbulak array**	**18.37**	**31**		**Pn**	**07 14 52.1**	**-0.8**
ABKAR	**Akbulak array**	**18.37**	**31**		**Pn**	**07 14 52.9**	**-0.1**
AKTO	**Aktyubinsk**	**18.55**	**26**	P	**P**	**07 14 54.1**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=210,slow=10.0,SNR=13						
AKTO				LR	LR	07 23 26.6	
	comp=Z,46nm,18.5s,baz=263,slow=42						
	comp=Z,6.2nm,0.6s						
VOIR		**19.29**	**312**	⇑P	**Pn**	**07 15 05.0**	**+0.8**
VOIR		**19.29**	**312**	P	**Pn**	**07 15 04.9**	**+0.6**
ARR	**Arges**	**19.51**	**311**	⇑P	**Pn**	**07 15 07.0**	**0.0**
ARR	**Arges**	**19.51**	**311**	P	**P**	**07 15 04.8**	**-0.9**
BURAR	**Bucovina Array**	**20.31**	**317**	⇑P	**P**	**07 15 14.6**	**+0.2**
BURAR	**Bucovina Array**	**20.31**	**317**	P	**P**	**07 15 14.0**	**-0.4**
AKASG	**Malin Array Be**	**20.33**	**329**	P	**P**	**07 15 11.9**	**-2.5**
	comp=Z,0.7nm,0.4s,baz=139,slow=9.8,SNR=7.7						
AKASG				LR	LR	07 25 35.8	
	comp=Z,50nm,18.3s,baz=56,slow=45						
	comp=Z,0.7nm,0.4s						
AKBB	**Malin Array Si**	**20.33**	**329**		**P**	**07 15 13.4**	**-1.1**
AKBB				IAmb	IAmb	07 15 18.4	
	comp=Z,13nm,1.1s						
KIEV	**Kiev**	**20.33**	**329**	⇓P	**P**	**07 15 14.0**	**-0.5**
KIEV	**Kiev**	**20.33**	**329**		**P**	**07 15 13.7**	**-0.7**
BUR08	**Bucovina Ar. S**	**20.33**	**317**	P	**P**	**07 15 12.7**	**-2.0**
MARR	**Marisel-Cluj**	**21.05**	**313**	⇑P	**P**	**07 15 21.5**	**-1.0**
MDVR	**Moldovita**	**21.15**	**307**	⇓P	**P**	**07 15 22.5**	**-1.0**
KKAR	**Karatay Array**	**21.30**	**58**	P	**P**	**07 15 24.0**	**-1.1**
MANEM	**Manem**	**21.35**	**74**		**P**	**07 15 26.4**	**+0.5**
MANEM				IAmb	IAmb	07 15 33.8	
	comp=Z,33nm,1.0s						
ARK	**Arkit**	**22.03**	**62**	P	**P**	**07 15 34.7**	**+1.7**
TRPA	**Tarpa**	**22.11**	**316**	P	**P**	**07 15 33.4**	**-0.3**
KOLS	**Kolonicke sedl**	**22.68**	**317**	P	**P**	**07 15 40.4**	**+0.6**
KOLS	**Kolonicke sedl**	**22.68**	**317**	*e*PN	**P**	**07 15 43.7**	**+3.9**
STHS	**Stebnicka Huta**	**23.50**	**318**	*eP*	**P**	**07 15 49.4**	**+1.1**
MNK	**Minsk**	**23.76**	**334**	*i* P	**P**	**07 15 53.3**	**+2.6**
	comp=E,23nm,0.8s						
MNK				*i* P	**P**	**07 15 53.3**	**+2.6**
	comp=N,17nm,0.9s						
MNK				*i* P	**P**	**07 15 53.3**	**+2.6**
	comp=Z,10.0nm,0.7s,baz=141						
MNK				*i* PP	**PnPn**	**07 16 21.0**	**+2.8**
MNK				*i* S	**S**	**07 20 11.5**	**+5.7**
MNK				*i* SS	**SnSn**	**07 20 49.7**	**+5.8**
MNK				*i* SSS	SSS	07 21 04.7	
MNK				*i* LR	LR	07 25 05.1	
MNK				*i* LRM	MLR	07 26 20.6	
	comp=Z,78nm,16.7s						
MNK				*i* LRM	MLR	07 26 49.1	
	comp=N,223nm,23.3s						
MNK				*i* LRM	MLR	07 26 50.4	
	comp=E,236nm,20.5s						
ARTI	**Arti**	**23.81**	**18**	P	**P**	**07 15 49.7**	**-1.5**
	comp=E,2.0nm,0.4s,baz=248,slow=3.4,SNR=3.7						
	comp=E,2.0nm,0.4s						
ARTI	**Arti**	**23.81**	**18**		**P**	**07 15 50.9**	**-0.3**
ARTI				IAmb	IAmb	07 15 57.9	
	comp=Z,12nm,0.9s						
AAK	**Ala-Archa**	**24.04**	**61**	LR	LR	07 27 03.6	
	comp=Z,58nm,20.1s,baz=304,slow=41						
KSH2	**Kashi**	**24.45**	**70**	P	**P**	**07 16 01.0**	**+3.5**
KSH2				sP	sP	07 16 06.5	+4.5
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OJC	**Ojcow**	**24.72**	**318**	P	**P**	**07 15 59.7**	**+0.1**
NRN	**Naryn**	**24.96**	**64**		**P**	**07 16 02.2**	**0.0**
NRN				IAmb	IAmb	07 16 05.2	
	comp=Z,4.0nm,0.6s						
BOOM	**Boomskoye usch**	**25.06**	**62**	P	**P**	**07 16 04.4**	**+1.4**
SUW	**Suwalki**	**25.29**	**328**	P	**P**	**07 16 04.3**	**-0.4**
ASAI	**AK-SAY(Kyrgyzs**	**25.30**	**66**	P	**P**	**07 16 08.2**	**+2.9**
MODS	**Modra-Piesok**	**25.36**	**312**	P	**P**	**07 16 05.5**	**+0.1**
MODS	**Modra-Piesok**	**25.36**	**312**	*eP*	**P**	**07 16 10.0**	**+4.6**
BORK	**Borovoye**	**25.72**	**36**	P	**P**	**07 16 08.2**	**-0.4**
BORK				IAmb	IAmb	07 16 16.7	
	comp=Z,3.2nm,0.7s						
BVAR	**Borovoye Array**	**25.74**	**36**	P	**P**	**07 16 09.1**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=239,slow=8.3,SNR=10						
	comp=Z,4.3nm,0.7s						
MORC	**Moravsky Berou**	**25.79**	**315**	P	**P**	**07 16 09.2**	**-0.1**
ARSA	**Arzberg**	**26.05**	**309**	P	**P**	**07 16 15.4**	**+3.6**
VRAC	**Vranov**	**26.15**	**314**	LR	LR	07 28 25.8	
	comp=Z,69nm,18.1s,baz=122,slow=41						
UPC	**Upice**	**27.00**	**316**	P	**P**	**07 16 19.8**	**-0.4**
GERES	**GERESS Array B**	**27.74**	**311**	LR	LR	07 29 16.2	
	comp=Z,32nm,18.2s,baz=75,slow=41						
KURBB	**Kurchatov Arra**	**28.98**	**46**	P	**P**	**07 16 38.5**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=255,slow=9.8,SNR=7.4						
	comp=Z,1.9nm,0.9s						
KURK	**Kurchatov**	**29.07**	**45**	P	**P**	**07 16 38.5**	**-0.2**
FINES	**FINESS Array B**	**29.95**	**341**	P	**P**	**07 16 45.0**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=145,slow=11,SNR=14						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**30.29**	**54**	P	**P**	**07 16 49.8**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=255,slow=11,SNR=1.2						
	comp=Z,0.9nm,0.8s						
BNI	**Bardonecchia**	**31.58**	**302**		**P**	**07 16 59.8**	**-1.3**
HFS	**Hagfors**	**33.19**	**331**	P	**P**	**07 17 13.9**	**-1.0**
	comp=Z,5.5nm,0.6s,baz=148,slow=6.5,SNR=12						
	comp=Z,5.5nm,0.6s						
ZALV	**Zalesovo Beam**	**33.77**	**42**	LR	LR	07 32 42.5	
	comp=Z,37nm,20.7s,baz=210,slow=39						
NB2	**NORSAR Subarra**	**34.71**	**331**	P	**P**	**07 17 25.8**	**-2.3**
	comp=Z,1.0nm,0.7s,baz=124,slow=8.6						
NB2	**NORSAR Subarra**	**34.71**	**331**	P	**P**	**07 17 25.8**	**-2.3**
NOA	**NORSAR Array B**	**34.71**	**331**	P	**P**	**07 17 25.8**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=125,slow=8.7,SNR=3.9						
	comp=Z,1.3nm,0.8s						
KTK1	**Kautokeino**	**37.01**	**347**	*eP*	**P**	**07 17 46.4**	**-1.3**
VADS	**Vadso**	**37.02**	**351**	*eP*	**P**	**07 17 46.8**	**-0.9**
ARA0	**ARCESS Array S**	**37.06**	**348**	*eP*	**P**	**07 17 45.4**	**-2.7**
ARCES	**ARCESS Array B**	**37.06**	**348**	P	**P**	**07 17 46.9**	**-1.2**
	comp=Z,1.6nm,0.3s,baz=160,slow=7.3,SNR=20						
	comp=Z,1.6nm,0.3s						
ARCES	**ARCESS Array B**	**37.06**	**348**	P	**P**	**07 17 46.9**	**-1.2**
ARCES				IAmb	IAmb	07 17 47.9	
	comp=Z,16nm,1.3s						
STOK	**Stokkvaagen**	**37.41**	**339**	*eP*	**P**	**07 17 49.9**	**-1.2**
VAGH	**Vaagaholmen**	**37.61**	**340**	*eP*	**P**	**07 17 52.5**	**-0.3**
STEI	**Steigen**	**37.93**	**342**	*eP*	**P**	**07 17 54.1**	**-1.4**
JETT	**Jettan, Norway**	**38.02**	**346**	*eP*	**P**	**07 17 55.2**	**-1.1**
HAMF	**Hammerfest**	**38.34**	**348**	*eP*	**P**	**07 17 58.4**	**-0.5**
EKA	**Eskdalemuir Ar**	**39.49**	**317**	P	**P**	**07 18 07.3**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=102,slow=8.8,SNR=5.3						
	comp=Z,0.4nm,0.4s						
ESDC	**Sonseca Array**	**39.57**	**293**	P	**P**	**07 18 08.8**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=88,slow=7.0,SNR=5.0						
	comp=Z,1.4nm,1.0s						
ESDC	**Sonseca Array**	**39.57**	**293**	P	**P**	**07 18 08.8**	**-1.0**
ESDC				IAmb	IAmb	07 18 09.6	
	comp=Z,7.0nm,1.3s						
NRIK	**Noril'sk**	**42.06**	**21**	P	**P**	**07 18 29.4**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=250,slow=6.2,SNR=3.7						
NRIK				LR	LR	07 40 04.7	
	comp=Z,36nm,19.8s,baz=198,slow=42						
	comp=Z,3.7nm,0.6s						
NRIK	**Noril'sk**	**42.06**	**21**	P	**P**	**07 18 29.4**	**-0.4**
NRIK				IAmb	IAmb	07 18 31.1	
	comp=Z,5.7nm,0.8s						
TLY	**Talaya**	**44.65**	**49**	LR	LR	07 39 35.9	
	comp=Z,32nm,19.9s,baz=245,slow=39						
TORD	**Torodi Ar. Bea**	**44.94**	**253**	P	**P**	**07 18 53.7**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=39,slow=7.7,SNR=3.9						
	comp=Z,0.8nm,0.9s						
SPA0	**Spitsbergen Ar**	**45.80**	**352**	*eP*	**P**	**07 18 59.6**	**-0.1**
SPITS	**Spitsbergen Ar**	**45.80**	**352**	P	**P**	**07 18 59.2**	**-0.5**
	comp=Z,2.2nm,0.4s,baz=141,slow=11,SNR=18						
	comp=Z,2.2nm,0.4s						
SONM	**Songino Array**	**46.66**	**54**		**P**	**07 19 07.5**	**+0.5**
SONM				IAmb	IAmb	07 19 34.5	
	comp=Z,4.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.77**	**94**	P	**P**	**07 19 30.9**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=295,slow=8.1,SNR=4.2						
	comp=Z,1.2nm,0.3s						
HHC	**Hu-ho-hao-te**	**51.61**	**62**	*eP*	**P**	**07 19 44.7**	**-0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,60nm,6.0s						
DBIC	**Dimbokro**	**53.96**	**251**	LR	LR	07 45 57.5	
	comp=Z,62nm,19.0s,baz=132,slow=39						
TIXI	**Tiksi**	**55.79**	**22**	LR	LR	07 45 51.7	
	comp=Z,37nm,18.6s,baz=144,slow=38						
YAK	**Yakutsk**	**57.70**	**34**	LR	LR	07 49 02.2	
	comp=Z,57nm,19.0s,baz=267,slow=40						
KSRS	**Korea Array**	**64.70**	**61**	P	**P**	**07 21 15.8**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=281,slow=6.9,SNR=4.2						
	comp=Z,0.9nm,0.5s						
MA2	**Magadan**	**68.16**	**32**	LR	LR	07 56 49.0	
	comp=Z,29nm,18.4s,baz=163,slow=41						
INK	**Inuvik**	**77.75**	**360**	P	**P**	**07 22 33.8**	**-1.2**
COLA	**College**	**80.64**	**6**	P	**P**	**07 22 50.8**	**-0.1**
ILAR	**Eielson Array**	**80.82**	**5**	P	**P**	**07 22 51.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=322,slow=4.8,SNR=5.6						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**82.28**	**351**	P	**P**	**07 22 58.7**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=16,slow=5.2,SNR=7.4						
	comp=Z,1.0nm,0.9s						
QSPA	**South Pole Qui**	**124.08**	**180**	PKP	**PKPdf**	**07 29 35.9**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=277,slow=1.1,SNR=2.4						

*ASRS **08** 07:13:12.0±2.3, 53°.72N×91°.12E, h0km, M3.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*NNC **08** 07:13:19.7±2.5, 53°.76N×90°.78E, h15km±12km, mb3.9, mpv3.7, Error ellipse: s-maj=21.0km s-min=16.0km az=23.0, Suspected Mining explosion.*
*IDC **08** 07:13:20.3±3.0, 53°.64N×90°.65E, h0km, mbtmp3.5/3, ML3.0/3, Error ellipse: s-maj=26.5km s-min=21.0km az=55.0*
ISC 08 07:13:20.0±3.9, 53°7N±0°.1×90°6E±0°.2, h0km, n10, σ1s24/15, 10C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVINFRA**	**3.41**	**276**	I	I	07 34 55.0	
	0.1nm,1.4s,baz=92,slow=312,SNR=2.8						
ZAA0	**Zalesovo Array**	**3.41**	**276**	⇑Pg	**Pg**	**07 14 23.4**	**-1.8**
	19nm,0.8s						
ZAA0				⇑Lg	Lg	07 15 15.0	
	74nm,0.7s						
ZALV	**Zalesovo Beam**	**3.41**	**276**	Pn	**Pn**	**07 14 15.2**	**+0.9**
	2.1nm,0.3s,baz=96,slow=10,SNR=12						
ZALV				Pg	**Pb**	**07 14 21.7**	**+0.5**
	3.3nm,0.3s,baz=93,slow=16,SNR=19						
ZALV				Lg	Lg	07 15 10.9	
	1.4nm,0.3s,baz=91,slow=24,SNR=8.5						
	1.1nm,0.3s						
KURK	**Kurchatov**	**7.92**	**253**	⇑Pn	**Pn**	**07 15 16.0**	**-0.3**
	2.9nm,1.0s						
KURK				⇑Sn	**Sn**	**07 16 48.1**	**+1.5**
	9.8nm,0.9s						
KURK				⇑Lg	Lg	07 17 35.6	
	19nm,0.8s						
KURBB	**Kurchatov Arra**	**8.01**	**252**	Pn	**Pn**	**07 15 18.4**	**+0.8**
	0.3nm,0.3s,baz=65,slow=14,SNR=34						
KURBB				Sn	**Sn**	**07 16 48.8**	**-0.1**
	0.1nm,0.3s,baz=66,slow=25,SNR=7.5						
KURBB				Lg	Lg	07 17 35.4	
	0.1nm,0.3s,baz=63,slow=32,SNR=5.5						
	5.5nm,0.7s	

NEIC ***08*** *08:27:14.0±1.9, 17°.99S±0°.09×178°.45W±0°.10, h585km±3km, mb4.8/493, Error ellipse: s-maj=14.2km s-min=12.0km az=136.0*

NOU ***08*** *08:27:13.7, 17°.93S×178°.38W, h588km, mb5.1/96, Fiji Islands Region*

IDC ***08*** *08:27:14.7±0.7, 17°.97S×178°.49W, h597km±7km, mb4.1/17, mbtmp5.0/20, Error ellipse: s-maj=12.0km s-min=10.7km az=148.0*

BGR ***08*** *08:27:14.4, 18°.54S×178°.67W, h600km*

GCMT ***08*** *08:27:15.0±0.6, 17°.61S±0°.07×178°.50W±0°.05, h597km±5km, MW5.3/50, Moment Tensor Solution. s50,c70; Duration: 1ŝ0 Moment tensor: Scale 10¹⁷Nm; Mrr0.21±.04; Mθθ0.49±.07; Mϕϕ-0.70±.06; Mrθ0.79±.07; Mθϕ0.16±.06; Mϕr-0.07±.07; Best double couple: M₀0.96700×10¹⁷ NP1:ϕ₁s26.00000°, δ48.00000°, λ161.00000°. NP2:ϕ₂s129.00000°, δ76.00000°, λ43.00000°. Principal axes: T 1.1560, Plg40.0000°, Azm357.0000°; N -0.3790, Plg45.0000°, Azm144.0000°; P -0.7780, Plg17.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

GFZ ***08*** *08:27:15.2±0.5, 18°.5S±8°.1×17°.9W±°, h594km±4km, M4.8/31, mb5.0/31*

ISC 08 08:27:13.1±0.3, 18°.00S±0°.05×178°.33W±0°.04, h588km±3km, h589km; pP-P, n942, σ1ŝ00/784, mb4.8/287, 33C-27D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.52**	**243**	P		**P**	**08 28 23.0**	**+0.7**
LKBA	**Tubou, Lakemba**	**0.52**	**243**	S		**S**	**08 29 19.2**	**+0.6**
DGTI	**Dogotuki**	**2.50**	**312**	P		**P**	**08 28 28.7**	**0.0**
DGTI	**Dogotuki**	**2.50**	**312**	S		**S**	**08 29 29.9**	**-0.2**
MSVF	**Nonsavu**	**3.46**	**274**	P		**P**	**08 28 35.4**	**+1.2**
	808nm,0.8s,baz=132,slow=2.8,SNR=539							
MSVF				S		**S**	**08 29 42.5**	**+2.3**
	85nm,0.9s,baz=128,slow=20,SNR=12							
MSVF	**Nonsavu**	**3.46**	**274**	P		**P**	**08 28 35.0**	**+0.8**
MSVF	**Nonsavu**	**3.46**	**274**	S		**S**	**08 29 41.8**	**+1.6**
MSVF	**Nonsavu**	**3.46**	**274**	P		**P**	**08 28 35.5**	**+1.3**
FUTU	**Fugatoga**	**3.67**	**3**	P		**P**	**08 28 36.6**	**+1.0**
FUTU	**Fugatoga**	**3.67**	**3**	S		**S**	**08 29 44.3**	**+1.7**
FUTU	**Fugatoga**	**3.67**	**3**	P		**P**	**08 28 35.2**	**-0.4**
FUTU	**Fugatoga**	**3.67**	**3**	P		**P**	**08 28 36.6**	**+1.0**
AFI	**Afiamalu**	**7.50**	**58**	P		**P**	**08 29 06.5**	**-0.9**
	273nm,0.6s,baz=160,slow=1.4,SNR=44							
AFI				S		**S**	**08 30 38.8**	**-2.3**
	180nm,0.9s,baz=244,slow=21,SNR=4.7							
AFI	**Afiamalu**	**7.50**	**58**	P		**P**	**08 29 06.7**	**-0.8**
NIUE	**Niue**	**8.05**	**99**	P		**P**	**08 29 13.6**	**+1.1**
RAO	**Raoul Island**	**11.21**	**178**	S		**S**	**08 31 48.8**	**+1.3**
	393nm,0.6s,baz=41,slow=20,SNR=3.7							
RTV	**Rentapao**	**12.61**	**269**	P		**P**	**08 29 58.4**	**+0.3**
DVP	**Devils Point**	**12.84**	**269**	P		**P**	**08 30 01.2**	**+0.8**
MARNC	**Mare, Loyalty**	**13.30**	**253**	P		**P**	**08 30 03.3**	**-1.8**
MARNC	**Mare, Loyalty**	**13.30**	**253**	S		**S**	**08 32 25.3**	**-1.1**
MARNC	**Mare, Loyalty**	**13.30**	**253**			**P**	**08 30 03.0**	**-2.2**
SANVU	**Saraoutou**	**14.09**	**278**	P		**P**	**08 30 12.7**	**-0.4**
SANVU	**Saraoutou**	**14.09**	**278**	S		**S**	**08 32 39.9**	**-0.6**
SANVU	**Saraoutou**	**14.09**	**278**			**P**	**08 30 10.9**	**-2.2**
SANVU	**Saraoutou**	**14.09**	**278**	P		**P**	**08 30 10.7**	**-2.4**
YATNC	**Mamie plateau,**	**14.46**	**251**	P		**P**	**08 30 16.5**	**-0.2**
YATNC	**Mamie plateau,**	**14.46**	**251**	S		**S**	**08 32 47.7**	**+0.8**
OUENC	**Ouen Island, N**	**14.59**	**250**	P		**P**	**08 30 18.1**	**+0.2**
OUENC	**Ouen Island, N**	**14.59**	**250**	S		**S**	**08 32 49.8**	**+0.7**
OUENC	**Ouen Island, N**	**14.59**	**250**			**P**	**08 30 15.8**	**-2.1**
DZM	**Mont Dzumac**	**14.87**	**252**	P		**P**	**08 30 19.3**	**-1.3**
	37nm,0.5s,baz=76,slow=15,SNR=15							
DZM				S		**S**	**08 32 55.3**	**+1.4**
	baz=144,slow=19							
ONTNC	**Ouen Toro**	**14.91**	**251**	P		**P**	**08 30 20.9**	**0.0**
ONTNC	**Ouen Toro**	**14.91**	**251**			**P**	**08 30 19.9**	**-1.0**
NOUC	**Port Laguerre**	**15.00**	**252**	P		**P**	**08 30 21.2**	**-0.5**
NOUC	**Port Laguerre**	**15.00**	**252**	S		**S**	**08 32 56.8**	**+0.8**
KOUNC	**Koumac, New Ca**	**16.61**	**258**	P		**P**	**08 30 37.4**	**+0.8**
KOUNC	**Koumac, New Ca**	**16.61**	**258**	S		**S**	**08 33 23.1**	**+0.7**
KOUNC	**Koumac, New Ca**	**16.61**	**258**			**P**	**08 30 36.9**	**+0.2**
RAR	**Rarotonga**	**17.77**	**103**	P		**P**	**08 30 48.9**	**+1.7**
	42nm,0.8s,baz=255,slow=6.0,SNR=5.1							
RAR	**Rarotonga**	**17.77**	**103**	P		**P**	**08 30 47.3**	**0.0**
URZ	**Urewera**	**20.58**	**190**	P		**P**	**08 31 13.1**	**+0.7**
	18nm,0.9s,baz=27,slow=3.1,SNR=11							
URZ				S		**S**	**08 34 22.4**	**-3.2**
	17nm,1.0s,baz=38,slow=19,SNR=2.1							
	18nm,0.9s							
HNR	**Honiara**	**22.73**	**289**	P		**P**	**08 31 32.7**	**+0.6**
HNR	**Honiara**	**22.73**	**289**	P		**P**	**08 31 30.5**	**-1.6**
HNR	**Honiara**	**22.73**	**289**	P		**P**	**08 31 32.9**	**+0.9**
SAVO	**Savo Central**	**22.97**	**290**	P		**P**	**08 31 34.3**	**+0.1**
TATA	**Tatamba Isabel**	**23.30**	**291**	P		**P**	**08 31 36.9**	**-0.2**
QRZ	**Quartz Range**	**24.07**	**197**	P		**P**	**08 31 44.4**	**+0.8**
TUWZ	**Tuamarina**	**24.28**	**194**	P		**P**	**08 31 46.6**	**+1.2**
PPT2	**Papeete2**	**27.37**	**94**	*e*S		**S**	**08 36 07.4**	**-5.7**
	54nm,25.0s							
PPT2				*e*S		sS	08 38 55.8	-12
	90nm,23.5s							
PPT	**Papeete**	**27.38**	**94**	P		**P**	**08 32 15.4**	**+2.4**
	64nm,0.8s,baz=0.0,slow=2.0,SNR=7.2							
	64nm,0.8s							
TBI	**Tubuai**	**27.51**	**106**	*e*S		**S**	**08 36 08.3**	**-6.5**
	3µm,34.0s							
TBI				*e*S		sS	08 39 07.5	-1.9
	1µm,43.5s							
AUBSH	**Beerwah State**	**27.92**	**246**	P		**P**	**08 32 17.9**	**+0.3**
TW1H	**Toowoomba 1 Ha**	**28.92**	**245**	P		**P**	**08 32 26.5**	**+0.1**
AUTOO	**Toowoomba Stat**	**28.92**	**245**	P		**P**	**08 32 26.9**	**+0.5**
	329nm,1.0s							
GD1S	**Gladstone Soft**	**29.04**	**253**	P		**P**	**08 32 27.8**	**+0.5**
EIDS	**Eidsvold**	**29.31**	**250**	P		**P**	**08 32 28.8**	**-0.8**
	comp=Z,84nm,0.9s							
EIDS	**Eidsvold**	**29.31**	**250**	P		**P**	**08 32 29.3**	**-0.3**
EIDS	**Eidsvold**	**29.31**	**250**			**P**	**08 32 28.8**	**-0.8**
EIDS	**Eidsvold**	**29.31**	**250**	P		**P**	**08 32 29.1**	**-0.5**
ARMA	**Armidale**	**29.96**	**240**	P		**P**	**08 32 35.9**	**+0.6**
	comp=Z,85nm,0.8s							
ARMA	**Armidale**	**29.96**	**240**	P		**P**	**08 32 36.1**	**+0.8**
ARMA	**Armidale**	**29.96**	**240**			**P**	**08 32 35.9**	**+0.6**
ARMA	**Armidale**	**29.96**	**240**	P		**P**	**08 32 36.1**	**+0.8**
AUPHS	**Peel High Scho**	**30.77**	**239**	P		**P**	**08 32 42.5**	**+0.3**
SYDH	**Sydney Hard Ro**	**31.79**	**234**	P		**P**	**08 32 51.4**	**+0.6**
WOLH	**Wollongong Har**	**31.93**	**233**	P		**P**	**08 32 52.5**	**+0.5**
AULRC	**Lightning Ridg**	**32.76**	**243**	P		**P**	**08 32 59.7**	**+0.6**
AUDCS	**Dubbo College**	**32.95**	**238**	P		**P**	**08 33 01.4**	**+0.8**
CNB	**Canberra Magne**	**33.43**	**232**	P		**P**	**08 33 05.6**	**+0.9**
	comp=Z,4.4nm,1.0s							
CTA	**Charters Tower**	**33.50**	**261**	P		**P**	**08 33 04.6**	**-0.9**
	comp=Z,33nm,1.0s							
CTA	**Charters Tower**	**33.50**	**261**	P		**P**	**08 33 05.3**	**-0.1**
CTAO	**Charters Tower**	**33.50**	**261**	P		**P**	**08 33 05.0**	**-0.4**
CTAO	**Charters Tower**	**33.50**	**261**			**P**	**08 33 04.8**	**-0.6**
CTAO	**Charters Tower**	**33.50**	**261**	P		**P**	**08 33 04.9**	**-0.5**
CTAO	**Charters Tower**	**33.50**	**261**	P		**P**	**08 33 04.3**	**-1.1**
AUDAR	**Daramalan Coll**	**33.58**	**233**	P		**P**	**08 33 07.1**	**+1.2**
AUMHS	**Melrose High S**	**33.66**	**233**	P		**P**	**08 33 07.5**	**+1.0**
AUMTS	**Mt Stromlo**	**33.71**	**233**	P		**P**	**08 33 07.7**	**+0.7**
CAN	**Canberra**	**33.71**	**233**	P		**P**	**08 33 07.5**	**+0.6**
	comp=Z,89nm,1.3s							
CAN	**Canberra**	**33.71**	**233**	P		**P**	**08 33 07.8**	**+0.8**
CAN	**Canberra**	**33.71**	**233**			**P**	**08 33 07.4**	**+0.4**
CAN	**Canberra**	**33.71**	**233**	P		**P**	**08 33 07.8**	**+0.8**
AUSMG	**Snowy Mountain**	**34.42**	**231**	P		**P**	**08 33 14.1**	**+1.1**
PMG	**Port Moresby**	**34.55**	**280**	P		**P**	**08 33 14.4**	**+0.3**
PMG	**Port Moresby**	**34.55**	**280**	P		**P**	**08 33 14.1**	**-0.1**
PMG	**Port Moresby**	**34.55**	**280**			**P**	**08 33 14.0**	**-0.2**
PMG	**Port Moresby**	**34.55**	**280**	P		**P**	**08 33 14.5**	**+0.3**
PMG	**Port Moresby**	**34.55**	**280**	P		**P**	**08 33 14.6**	**+0.4**
CMSA	**Cobar Meteorol**	**35.17**	**241**	P		**P**	**08 33 19.4**	**+0.3**
	comp=Z,144nm,0.8s							
CMSA	**Cobar Meteorol**	**35.17**	**241**	P		**P**	**08 33 19.4**	**+0.3**
CMSA	**Cobar Meteorol**	**35.17**	**241**	P		**P**	**08 33 19.5**	**+0.3**
MTSU	**Mount Surprise**	**35.47**	**264**	P		**P**	**08 33 21.0**	**-0.9**
	comp=Z,41nm,0.8s							
MTSU	**Mount Surprise**	**35.47**	**264**	P		**P**	**08 33 21.6**	**-0.2**
MTSU	**Mount Surprise**	**35.47**	**264**	P		**P**	**08 33 21.2**	**-0.6**
QLP	**Quilpie**	**35.57**	**249**	P		**P**	**08 33 22.2**	**-0.4**
	comp=Z,256nm,0.8s,comp=Z,0.0nm							
QLP	**Quilpie**	**35.57**	**249**	P		**P**	**08 33 22.6**	**+0.1**
QLP	**Quilpie**	**35.57**	**249**	P		**P**	**08 33 22.3**	**-0.2**
JOHN	**Johnston Islan**	**35.58**	**15**	P		**P**	**08 33 22.8**	**+0.2**
GLAD	**Gladstone**	**36.84**	**224**	P		**P**	**08 33 33.3**	**+0.6**
TOO	**Toolangi**	**37.17**	**231**	P		**P**	**08 33 36.3**	**+0.7**
	comp=Z,49nm,0.9s							
TOO	**Toolangi**	**37.17**	**231**	P		**P**	**08 33 36.1**	**+0.6**
COEN	**Coen**	**37.18**	**270**	P		**P**	**08 33 35.8**	**-0.1**
	comp=Z,152nm,0.9s							
COEN	**Coen**	**37.18**	**270**	P		**P**	**08 33 36.0**	**+0.1**
COEN	**Coen**	**37.18**	**270**	P		**P**	**08 33 36.0**	**+0.1**
MANU	**Manus Island**	**37.20**	**291**	P		**P**	**08 33 36.3**	**+0.2**
AUMAG	**Moama Anglican**	**37.22**	**234**	P		**P**	**08 33 36.3**	**+0.4**
CORO	**Coronation Par**	**37.63**	**224**	P		**P**	**08 33 39.8**	**+0.6**
MOO	**Moorlands**	**38.08**	**223**	P		**P**	**08 33 43.5**	**+0.8**
	comp=Z,45nm,1.0s							
TAOE	**Nuku Hiva Isla**	**38.17**	**81**	*e*S		**S**	**08 38 49.3**	**-7.3**
	comp=Z,56nm,35.6s							
TAOE				*e*SS		**SS**	**08 42 19.1**	**+1.4**
	comp=Z,99nm,28.3s							
BRAT	**Ballarat**	**38.32**	**232**	P		**P**	**08 33 45.4**	**+0.6**
STKA	**Stephens Creek**	**38.65**	**241**	P		**P**	**08 33 48.2**	**+0.7**
	comp=Z,571nm,1.2s,comp=Z,0.0nm							
STKA	**Stephens Creek**	**38.65**	**241**	P		**P**	**08 33 48.0**	**+0.3**
	comp=Z,96nm,0.8s,baz=89,slow=9.0,SNR=131							
	comp=Z,96nm,0.8s							
STKA	**Stephens Creek**	**38.65**	**241**	P		**P**	**08 33 47.9**	**+0.3**
STKA	**Stephens Creek**	**38.65**	**241**	P		**P**	**08 33 48.4**	**+0.8**
INKA	**Innaminka**	**38.78**	**248**	P		**P**	**08 33 49.2**	**+0.5**
QIS	**Mount Isa**	**39.71**	**259**	P		**P**	**08 33 55.0**	**-1.2**
	comp=Z,13nm,0.8s							
QIS	**Mount Isa**	**39.71**	**259**	P		**P**	**08 33 55.3**	**-1.0**
QIS	**Mount Isa**	**39.71**	**259**	P		**P**	**08 33 54.7**	**-1.5**
WAKE	**Wake Island**	**39.87**	**338**	P		**P**	**08 33 56.6**	**-0.8**
WAKE				x		x	08 35 19.3	
WAKE				pP		**pP**	**08 35 36.7**	**-0.7**
HTT	**Hallett**	**41.16**	**240**	P		**P**	**08 34 08.1**	**+0.4**
	comp=Z,44nm,0.8s							
HTT	**Hallett**	**41.16**	**240**	P		**P**	**08 34 08.2**	**+0.5**
AUMBR	**Murray Bridge**	**41.23**	**237**	P		**P**	**08 34 08.6**	**+0.6**
AUJCS	**Jamestown Cent**	**41.38**	**240**	P		**P**	**08 34 09.8**	**+0.5**
AUMAR	**Marden Senior**	**41.69**	**237**	P		**P**	**08 34 12.6**	**+0.9**
JAY	**Jayapura**	**43.00**	**286**	P		**P**	**08 34 22.3**	**0.0**
	comp=Z,933nmcomp=Z,107nm,1.2s							
OVEH	**Oceanview Est**	**43.06**	**32**	P		**P**	**08 34 23.4**	**+0.6**
OVEH				IAmb		IAmb	08 34 24.8	
	comp=Z,136nm,0.8s							
TRH	**Trail**	**43.39**	**32**	P		**P**	**08 34 26.6**	**+1.0**
BBOO	**Buckleboo**	**43.43**	**241**	P		**P**	**08 34 25.4**	**+0.1**
	comp=Z,119nm,0.8s							
BBOO	**Buckleboo**	**43.43**	**241**	P		**P**	**08 34 25.7**	**+0.4**
BBOO	**Buckleboo**	**43.43**	**241**			**P**	**08 34 25.4**	**+0.1**
BBOO	**Buckleboo**	**43.43**	**241**	P		**P**	**08 34 25.6**	**+0.3**
GENI	**Genyem**	**43.46**	**286**	P		**P**	**08 34 26.4**	**+0.6**
GENI	**Genyem**	**43.46**	**286**	P		**P**	**08 34 26.6**	**+0.8**
	comp=Z,130nm,1.0s							
GENI	**Genyem**	**43.46**	**286**	P		**P**	**08 34 26.8**	**+1.0**
MLOA	**Mauna Loa Obse**	**43.48**	**32**	P		**P**	**08 34 27.3**	**+1.0**
CPK	**Cone Peak**	**43.49**	**32**	P		**P**	**08 34 27.4**	**+1.5**
PUH	**Pauahi**	**43.53**	**33**	P		**P**	**08 34 27.3**	**+1.0**
BYL	**Byron's Ledge**	**43.53**	**32**	P		**P**	**08 34 27.0**	**+0.7**
HATHI	**Halema'uma'u T**	**43.54**	**32**	P		**P**	**08 34 26.9**	**+0.4**
JOKA	**Jonika Flow**	**43.68**	**33**	P		**P**	**08 34 28.1**	**+0.6**
POHA	**Pohakuloa**	**43.69**	**32**	P		**P**	**08 34 28.7**	**+1.0**
AUCAS	**Cummins Area S**	**43.93**	**239**	P		**P**	**08 34 30.4**	**+1.2**
HLK	**Haleakala**	**44.18**	**30**	P		**P**	**08 34 31.9**	**+0.4**
WRAB	**Tennant Creek**	**44.68**	**260**	P		**P**	**08 34 34.3**	**-0.8**
WRAB	**Tennant Creek**	**44.68**	**260**	P		**P**	**08 34 34.1**	**-1.0**
WRAB	**Tennant Creek**	**44.68**	**260**	P		**P**	**08 34 34.0**	**-1.2**
WRAB	**Tennant Creek**	**44.68**	**260**	P		**P**	**08 34 33.7**	**-1.5**
WRAB				pP		**pP**	**08 36 16.6**	**-2.1**
WRA	**Warramunga Arr**	**44.69**	**260**	P		**P**	**08 34 33.9**	**-1.4**
	comp=Z,42nm,0.7s,baz=96,slow=7.0,SNR=637							
WRA				PcP		**PcP**	**08 36 05.0**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=89,slow=3.2,SNR=1.5							
WRA				PP		**PP**	**08 36 30.3**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=95,slow=9.3,SNR=5.6							
WRA				ScP		**ScP**	**08 39 01.5**	**-0.2**
	comp=Z,3.4nm,1.1s,baz=91,slow=4.4,SNR=5.8							
WRA				S		**S**	**08 40 24.6**	**-5.5**
	comp=Z,1.2nm,0.8s,baz=100,slow=13,SNR=4.1							
	comp=Z,42nm,0.7s							
WRA	**Warramunga Arr**	**44.69**	**260**	P		**P**	**08 34 33.5**	**-1.7**
AS17	**Alice Springs**	**44.76**	**254**	P		**P**	**08 34 35.4**	**-0.4**
	comp=Z,496nm,0.7s							
AS01	**Alice Springs**	**44.79**	**254**	P		**P**	**08 34 35.7**	**-0.3**
AS31	**Alice Springs**	**44.84**	**254**	P		**P**	**08 34 35.9**	**-0.5**
	comp=Z,103nm,0.8s,comp=Z,0.0nm							
ASAR	**Alice Springs**	**44.84**	**254**	P		**P**	**08 34 36.0**	**-0.4**
	comp=Z,262nm,0.7s,baz=88,slow=8.5,SNR=3117							
ASAR				PcP		**PcP**	**08 36 05.7**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=101,slow=4.4,SNR=1.6							
ASAR				PP		**PP**	**08 36 29.5**	**-2.2**
	comp=Z,7.2nm,0.8s,baz=79,slow=8.9,SNR=5.5							
ASAR				ScP		**ScP**	**08 39 02.2**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=90,slow=3.9,SNR=6.4							
ASAR				S		**S**	**08 40 28.7**	**-3.5**
	comp=Z,5.1nm,1.0s,baz=86,slow=16,SNR=12							
AUALC	**St Philip's Co**	**44.85**	**254**	P		**P**	**08 34 36.2**	**-0.3**
KDU	**Kakadu**	**47.63**	**269**	P		**P**	**08 34 56.5**	**-1.0**
	comp=Z,31nm,0.8s							
BAKI	**Biak**	**47.74**	**285**	P		**P**	**08 34 59.1**	**+0.8**
	comp=Z,97nm,0.7s							
GUMO	**Guam**	**47.99**	**308**	P		**P**	**08 34 59.4**	**-0.7**
MTN	**Manton Dam**	**48.87**	**268**	P		**P**	**08 35 05.4**	**-1.3**
	comp=Z,62nm,0.8s							
MTN	**Manton Dam**	**48.87**	**268**			**P**	**08 35 05.7**	**-1.0**
WRKA	**Warakurna**	**49.89**	**252**	P		**P**	**08 35 13.8**	**-0.3**
	comp=Z,63nm,1.2s							
FORT	**Forrest**	**50.04**	**245**	P		**P**	**08 35 14.3**	**-0.7**
	comp=Z,45nm,0.8s							
FORT	**Forrest**	**50.04**	**245**			**P**	**08 35 14.4**	**-0.6**
FORT				IAmb		IAmb	08 35 15.1	
	comp=Z,29nm,0.7s							
KNRA	**Kununurra**	**50.55**	**264**	P		**P**	**08 35 18.0**	**-0.9**
	comp=Z,86nm,0.7s							
SIJI	**Sorong**	**52.33**	**283**	P		**P**	**08 35 31.3**	**-0.5**
	comp=Z,1µmcomp=Z,115nm,1.0s							
SWI	**Sorong**	**52.33**	**283**	P		**P**	**08 35 31.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.09**	**261**	P		**P**	**08 35 37.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**53.09**	**261**	P		**P**	**08 35 37.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**53.09**	**261**			**P**	**08 35 37.1**	**0.0**
NLAI	**Namlea**	**55.38**	**279**	P		**P**	**08 35 52.9**	**-0.4**
DRV	**Dumont d'Urvil**	**55.60**	**199**	P		**P**	**08 35 54.7**	**+0.9**
DRV				PcP		**PcP**	**08 36 43.2**	**-1.4**
DRV				pP		**pP**	**08 37 44.3**	**-0.1**
SOEI	**Soe**	**56.14**	**270**	P		**P**	**08 35 59.1**	**+0.4**
SOEI	**Soe**	**56.14**	**270**	P		**P**	**08 35 59.8**	**+1.1**
	comp=Z,154nm,1.0s							
SOEI	**Soe**	**56.14**	**270**	P		**P**	**08 35 59.8**	**+1.1**
SANI	**Sanana**	**56.83**	**280**	P		**P**	**08 36 01.7**	**-1.5**
	comp=Z,72nm,0.8s							
MBWA	**Marble Bar**	**58.12**	**256**	P		**P**	**08 36 11.1**	**-0.8**
	comp=Z,42nm,1.1s							
MBWA	**Marble Bar**	**58.12**	**256**	P		**P**	**08 36 11.3**	**-0.6**
MBWA	**Marble Bar**	**58.12**	**256**	P		**P**	**08 36 11.4**	**-0.6**
MBWA				IAmb		IAmb	08 36 12.0	
	comp=Z,113nm,1.6s							
MBWA	**Marble Bar**	**58.12**	**256**	P		**P**	**08 36 11.3**	**-0.6**
MBWA				pP		**pP**	**08 36 03.3**	**-0.8**
MEEK	**Meekatharra**	**58.47**	**249**	P		**P**	**08 36 13.3**	**-0.9**
	comp=Z,45nm,0.8s							
MEEK	**Meekatharra**	**58.47**	**249**	P		**P**	**08 36 14.6**	**+0.4**
AUKUL	**Kulin High Sch**	**58.47**	**242**	P		**P**	**08 36 14.3**	**+0.2**
KLBR	**Kellerberrin**	**58.85**	**244**	P		**P**	**08 36 16.0**	**-0.7**
	comp=Z,172nm,0.8s							
KLBR	**Kellerberrin**	**58.85**	**244**	P		**P**	**08 36 17.2**	**+0.5**
KLBR	**Kellerberrin**	**58.85**	**244**	P		**P**	**08 36 16.4**	**-0.3**
NWAO	**Narrogin (SRO)**	**59.23**	**242**	P		**P**	**08 36 19.0**	**-0.2**
NWAO				IAmb		IAmb	08 36 28.0	
	comp=Z,142nm,1.8s							
BLDU	**Ballidu**	**59.81**	**245**	P		**P**	**08 36 22.1**	**-1.0**
	comp=Z,35nm,1.3s							
MUN	**Mundaring**	**60.15**	**243**	P		**P**	**08 36 25.3**	**0.0**
	comp=Z,45nm,1.1s							
VNDA	**Vanda**	**60.36**	**185**	P		**P**	**08 36 27.0**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=237,slow=2.0,SNR=2.3							
VNDA	**Vanda**	**60.36**	**185**	P		**P**	**08 36 27.0**	**+1.2**
MORW	**Morawa**	**60.51**	**246**	P		**P**	**08 36 26.8**	**-0.9**
	comp=Z,46nm,1.9s							
MORW	**Morawa**	**60.51**	**246**	P		**P**	**08 36 28.0**	**+0.3**
MORW	**Morawa**	**60.51**	**246**	P		**P**	**08 36 27.2**	**-0.5**
GTOI	**Gorontalo**	**60.55**	**281**	P		**P**	**08 36 29.2**	**+1.0**
	comp=Z,28nm,0.7s							
LBFI	**Labuhan Bajo,**	**60.65**	**270**	P		**P**	**08 36 28.1**	**-0.7**
DBNI	**Kabupaten Domp**	**62.14**	**270**	P		**P**	**08 36 37.4**	**-1.2**
	comp=Z,133nm,1.0s							
PLAI	**Plampang**	**62.56**	**269**	P		**P**	**08 36 41.9**	**+0.6**
PLAI	**Plampang**	**62.56**	**269**	P		**P**	**08 36 41.2**	**-0.1**
	comp=Z,87nm,0.9s							
PLAI	**Plampang**	**62.56**	**269**	P		**P**	**08 36 40.9**	**-0.4**
TOLI2	**Tolitoli**	**62.80**	**281**	P		**P**	**08 36 43.0**	**+0.2**
MPSI	**Mapaga**	**63.36**	**280**	P		**P**	**08 36 46.0**	**-0.4**
CCD	**Concordia, Ant**	**64.80**	**194**	P		**P**	**08 36 56.2**	**+1.3**
CCD				pP		**pwP**	**08 38 52.9**	**-0.5**
CASY	**Casey**	**66.09**	**205**	P		**P**	**08 37 03.6**	**+1.1**
JAGI	**Jajag, Banyuwa**	**66.11**	**269**	P		**P**	**08 37 02.4**	**-1.3**
MJAR	**Matsushiro Arr**	**68.02**	**323**	P		**P**	**08 37 14.2**	**-0.7**
	comp=Z,8.8nm,0.6s,baz=156,slow=6.3,SNR=17							
	comp=Z,8.8nm,0.6s							
MJAR	**Matsushiro Arr**	**68.02**	**323**	P		**P**	**08 37 14.2**	**-0.7**
SNJI	**Sawahan-Nganju**	**68.58**	**269**	P		**P**	**08 37 19.2**	**+0.3**
	comp=Z,64nm,1.6s							
AMKA	**Amchitka**	**69.10**	**358**	P		**P**	**08 37 20.3**	**-0.7**
AMKA				IAmb		IAmb	08 37 21.6	
	comp=Z,25nm,1.0s							
JTM	**Tenmabayashi**	**69.58**	**328**	P		**P**	**08 37 24.2**	**+0.1**
JTM				IAmb		IAmb	08 37 25.6	
	comp=Z,41nm,1.2s							
ADK	**Adak**	**69.59**	**1**	P		**P**	**08 37 22.9**	**-1.0**
ADK	**Adak**	**69.59**	**1**	P		**P**	**08 37 23.2**	**-0.7**
ADK	**Adak**	**69.59**	**1**	P		**P**	**08 37 23.2**	**-0.7**
ADK	**Adak**	**69.59**	**1**	P		**P**	**08 37 23.4**	**-0.5**
ADK				pP		**pP**	**08 39 22.7**	**+0.4**
UGM	**Wanagama**	**69.72**	**268**	P		**P**	**08 37 25.5**	**-0.1**
ATKA	**Atka Island**	**69.99**	**3**	P		**P**	**08 37 25.1**	**-1.1**
JKA	**Kamikawa-asahi**	**71.39**	**331**	IAmb		IAmb	08 37 36.4	
	comp=Z,15nm,0.7s							
QSPA	**South Pole Qui**	**72.06**	**180**	P		**P**	**08 37 39.2**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=22,slow=6.6,SNR=9.2							
QSPA	**South Pole Qui**	**72.06**	**180**	P		**P**	**08 37 39.2**	**+0.8**
UNV	**Unalaska Valle**	**72.27**	**7**	P		**P**	**08 37 38.5**	**-1.0**
UNV	**Unalaska Valle**	**72.27**	**7**	IAmb		IAmb	08 37 39.4	
	comp=Z,30nm,0.8s							
UNV	**Unalaska Valle**	**72.27**	**7**	P		**P**	**08 37 38.5**	**-1.0**
	baz=192							
LVA	**Lava Point**	**72.63**	**8**	IAmb		IAmb	08 37 41.1	
	comp=Z,24nm,0.6s							
PETK	**Petropavlovs

O16K	Kokwok River B	79.06	10	P	P	08 38 16.1	-0.7	
	baz=200,SNR=8.7							
M13K	Dall Lake	79.07	8	P	P	08 38 17.7	+0.8	
	baz=195							
L04D	Klamath Falls	79.08	39	IAmb	IAmb	08 38 20.2		
	comp=Z,40nm,0.8s							
DSP	Deep Springs	79.08	45	IAmb	IAmb	08 38 20.8		
	comp=Z,30nm,1.0s							
LHV	Little Huntoon	79.21	44	IAmb	IAmb	08 38 21.5		
	comp=Z,44nm,1.0s							
N15K	Kwethluk River	79.28	9	IAmb	IAmb	08 38 19.8		
	comp=Z,25nm,0.8s							
N15K	Kwethluk River	79.28	9	P	P	08 38 18.5	+0.4	
	baz=198,SNR=9.1							
Q19K	Cape Douglas,	79.28	13	P	P	08 38 18.1	-0.1	
	baz=204							
GWY	Greenwater Val	79.34	46	P	P	08 38 20.5	+1.3	
FURC	Furnace Creek,	79.36	46	P	P	08 38 20.4	+1.4	
I03D	Drain, OR	79.36	37	P	P	08 38 20.1	+1.3	
I03D				IAmb	IAmb	08 38 21.5		
	comp=Z,36nm,1.2s							
IRM	Iron Mountain	79.38	49	P	P	08 38 20.7	+1.4	
P18K	Big Mountain,	79.39	12	P	P	08 38 18.5	-0.3	
	baz=202							
O17K	Koliganek Bris	79.40	11	P	P	08 38 18.3	-0.4	
	baz=201,SNR=6.4							
NVAR	Mina Array Bea	79.44	44	P	P	08 38 21.4	+1.7	
	comp=Z,18nm,0.8s,baz=225,slow=9.0,SNR=70							
	comp=Z,18nm,0.8s							
NVAR	Mina Array Bea	79.44	44	P	P	08 38 20.7	+1.0	
PAHR	Pah Rah Range	79.44	42	IAmb	IAmb	08 38 22.4		
	comp=Z,34nm,1.2s							
NV11	Mina Array Sit	79.53	44	IAmb	IAmb	08 38 23.0		
	comp=Z,37nm,1.1s							
M14K	Bethel	79.58	8	IAmb	IAmb	08 38 21.3		
	comp=Z,42nm,1.2s							
M14K	Bethel	79.58	8	P	P	08 38 20.2	+0.6	
	baz=196,SNR=8.3							
BLYC	Blythe	79.62	49	P	P	08 38 22.7	+2.2	
K04D	Chiloquin, OR	79.65	39	P	P	08 38 21.5	+0.9	
K04D				IAmb	IAmb	08 38 23.3		
	comp=Z,26nm,0.9s							
M15K	Kasigluk River	79.70	9	P	P	08 38 20.7	+0.5	
	baz=197,SNR=8.7							
N16K	Nishlik Lake	79.78	10	P	P	08 38 21.4	+0.7	
	baz=199,SNR=9.0							
O18K	Koktuh Hills	79.82	12	P	P	08 38 21.0	+0.1	
	baz=202,SNR=26							
BUCK	Buck Mountain	79.87	37	IAmb	IAmb	08 38 24.5		
	comp=Z,41nm,1.1s							
TPH	Tonopah	79.96	45	IAmb	IAmb	08 38 25.3		
	comp=Z,33nm,1.1s							
P19K	Oil Pt	80.03	13	P	P	08 38 22.1	0.0	
	baz=204							
L14K	Kuka Creek	80.05	8	P	P	08 38 22.7	+0.6	
	baz=195,SNR=5.5							
N17K	Nushagak Hills	80.09	10	P	P	08 38 22.2	-0.1	
	baz=200,SNR=7.8							
BNX	BinXian	80.21	325	P	P	08 38 23.7	+0.5	
BNX				PcP	PcP	08 38 27.7	-0.6	
BNX				S	SKSac	08 47 44.5	-0.7	
BNX				pmax	pmax			
	comp=Z,25nm,0.8s							
H04D	Lebanon	80.21	37	IAmb	IAmb	08 38 26.1		
	comp=Z,36nm,1.1s							
M16K	Timber Creek	80.27	9	P	P	08 38 24.7	+1.5	
	baz=199,SNR=15							
O19K	Port Alsworth	80.31	12	P	P	08 38 23.3	-0.1	
	baz=203,SNR=17							
HOM	Homer	80.38	13	P	P	08 38 24.3	+0.5	
	baz=206							
K13K	Kusilvak Mount	80.40	7	P	P	08 38 24.6	+0.7	
	baz=193							
WIFE	Three Sisters-	80.46	38	P	P	08 38 26.1	+1.2	
WIFE				IAmb	IAmb	08 38 27.6		
	comp=Z,33nm,1.0s							
N18K	Kilae Creek	80.47	11	P	P	08 38 24.1	-0.2	
	baz=202,SNR=6.3							
L15K	Ungalak Mounta	80.53	8	P	P	08 38 25.0	+0.4	
	baz=196							
O20K	Slope Mountain	80.55	13	P	P	08 38 24.1	-0.7	
	baz=205							
H04A	Detroit Lake	80.62	37	IAmb	IAmb	08 38 27.1		
	comp=Z,27nm,0.6s							
BRSE	Bradley Lake S	80.66	14	P	P	08 38 25.5	+0.2	
	baz=207,SNR=13							
S11A	Rachel	80.73	46	IAmb	IAmb	08 38 29.2		
	comp=Z,45nm,1.1s							
G04A	Mulino	80.77	36	IAmb	IAmb	08 38 29.7		
	comp=Z,32nm,0.8s							
RED	Redoubt Volcan	80.83	13	IAmb	IAmb	08 38 26.6		
	comp=Z,42nm,1.0s							
L16K	Owhat River	80.85	9	IAmb	IAmb	08 38 28.2		
	comp=Z,41nm,1.1s							
L16K	Owhat River	80.85	9	P	P	08 38 27.0	+0.8	
	baz=198,SNR=19							
N19K	Bonanza Creek	80.85	12	IAmb	IAmb	08 38 26.9		
	comp=Z,21nm,0.8s							
N19K	Bonanza Creek	80.85	12	P	P	08 38 25.8	-0.6	
	baz=203,SNR=11							
M17K	Holitna River	80.87	10	P	P	08 38 27.1	+0.7	
M17K	Holitna River	80.87	10	P	P	08 38 27.8	+1.5	
	baz=200,SNR=26							
I05D	Terrebonne, OR	80.90	38	P	P	08 38 28.0	+1.1	
I05D				IAmb	IAmb	08 38 29.7		
	comp=Z,31nm,1.0s							
PRN	Pahroc Range	81.08	46	IAmb	IAmb	08 38 31.5		
	comp=Z,41nm,0.9s							
DIB	Dawson Inlet,	81.17	26	IAmb	IAmb	08 38 29.9		
	comp=Z,25nm,1.0s							
WISH	Wishkah	81.22	34	IAmb	IAmb	08 38 31.0		
	comp=Z,27nm,0.8s							
M18K	Stony River	81.23	11	P	P	08 38 28.6	+0.4	
	baz=202,SNR=10							
SEW	Seward	81.28	14	IAmb	IAmb	08 38 29.2		
	comp=Z,20nm,0.8s							
SEW	Seward	81.28	14	P	P	08 38 28.2	-0.2	
	baz=208,SNR=10							
HOOD	Mount Hood Mea	81.30	37	IAmb	IAmb	08 38 31.4		
	comp=Z,47nm,1.1s							
NLWA	Neilton Lookou	81.34	34	IAmb	IAmb	08 38 31.9		
	comp=Z,32nm,1.1s							
WVOR	Wild Horse Val	81.43	40	IAmb	IAmb	08 38 32.7		
	comp=Z,49nm,1.0s							
WVOR	Wild Horse Val	81.43	40	P	P	08 38 31.7	+1.9	
L17K	Donlin	81.43	9	P	P	08 38 30.7	+1.6	
	baz=199,SNR=31							
G05A	Wamic	81.45	37	P	P	08 38 30.5	+0.8	
G05A				IAmb	IAmb	08 38 32.2		
	comp=Z,33nm,1.0s							
Q23K	Middleton Isla	81.45	16	P	P	08 38 29.5	+0.2	
	baz=211							
O22K	Cooper Landing	81.55	14	P	P	08 38 29.6	-0.1	
	baz=208							
SPCR	Spur Chakacha	81.66	12	P	P	08 38 29.9	-0.6	
	baz=205							
GAMB	Gambell	81.67	3	P	P	08 38 30.8	+0.5	
	baz=186							
SPU	Mount Spurr	81.67	13	IAmb	IAmb	08 38 30.7		
	comp=Z,23nm,1.0s							
P23K	Montague Islan	81.67	15	P	P	08 38 30.5	0.0	
	baz=210							
TUC	Tucson	81.69	52	P	P	08 38 32.5	+1.1	
TUC				IAmb	IAmb	08 38 35.2		
	comp=Z,36nm,1.1s							
TUC	Tucson	81.69	52	P	P	08 38 34.2	+2.9	
TUC	Tucson	81.69	52	P	P	08 38 34.1	+2.7	
TUC				pP	pwP	08 40 37.7	-0.8	
L18K	Granite Mounta	81.77	10	P	P	08 38 32.1	+1.2	
	baz=201,SNR=26							
I07A	Izee	81.83	39	IAmb	IAmb	08 38 34.6		
	comp=Z,38nm,0.8s							
G06A	Carlson Farm,	81.83	37	IAmb	IAmb	08 38 34.1		
	comp=Z,20nm,1.0s							
M19K	Big River Lodg	81.88	11	IAmb	IAmb	08 38 32.3		
	comp=Z,20nm,0.8s							
M19K	Big River Lodg	81.88	11	P	P	08 38 31.4	0.0	
	baz=203							
B04A	Port Angeles	81.95	34	IAmb	IAmb	08 38 34.9		
	comp=Z,37nm,1.2s							
K17K	Iditarod	81.98	9	IAmb	IAmb	08 38 34.0		
	comp=Z,64nm,1.6s							
K17K	Iditarod	81.98	9	P	P	08 38 32.7	+0.7	
	baz=199,SNR=10							
STLK	Strandline Lak	82.00	12	IAmb	IAmb	08 38 32.2		
	comp=Z,28nm,0.8s							
GNW	Green Mountain	82.01	34	P	P	08 38 33.5	+1.0	
GNW				IAmb	IAmb	08 38 34.8		
	comp=Z,27nm,0.9s							
J08A	Circle Bar Ran	82.04	40	IAmb	IAmb	08 38 35.6		
	comp=Z,55nm,1.1s							
L19K	White Mountain	82.05	11	IAmb	IAmb	08 38 34.0		
	comp=Z,30nm,1.0s							
L19K	White Mountain	82.05	11	P	P	08 38 32.8	+0.5	
	baz=203,SNR=17							
BELA	Belgrano 2	82.07	173	P	P	08 38 31.9	-0.5	
BELA				IAmb	IAmb	08 39 38.2		
	comp=Z,21nm,1.0s							
RC01	Rabbit Creek A	82.09	14	IAmb	IAmb	08 38 33.5		
	comp=Z,38nm,1.1s							
RC01	Rabbit Creek A	82.09	14	P	P	08 38 32.5	0.0	
	baz=207,SNR=12							
M20K	Styx River	82.09	12	P	P	08 38 32.0	-0.7	
	baz=204							
CLRS	Cowichan Lake	82.10	33	IAmb	IAmb	08 38 35.1		
	comp=Z,21nm,0.9s							
LCMT	Little Creek M	82.14	47	IAmb	IAmb	08 38 36.6		
	comp=Z,24nm,0.9s							
X16A	Lo Mia Camp, P	82.18	50	IAmb	IAmb	08 38 37.5		
	comp=Z,33nm,1.0s							
J16K	Anvik River	82.19	8	IAmb	IAmb	08 38 35.0		
	comp=Z,35nm,1.0s							
J16K	Anvik River	82.19	8	P	P	08 38 34.1	+1.1	
	baz=197,SNR=19							
CBB	Campbell River	82.25	31	IAmb	IAmb	08 38 36.0		
	comp=Z,26nm,1.0s							
CCUT	Cedar City	82.32	47	IAmb	IAmb	08 38 37.9		
	comp=Z,22nm,0.9s							
PGC	Sidney	82.34	33	IAmb	IAmb	08 38 35.8		
	comp=Z,22nm,0.8s							
KAIM	Kayak Island	82.39	16	IAmb	IAmb	08 38 35.8		
	comp=Z,49nm,1.0s							
KAIM	Kayak Island	82.39	16	P	P	08 38 34.5	+0.5	
	baz=212							
319A	Douglas	82.42	54	P	P	08 38 37.0	+1.9	
319A				IAmb	IAmb	08 38 39.0		
	comp=Z,45nm,1.0s							
KNB	Kanab	82.43	47	IAmb	IAmb	08 38 38.3		
	comp=Z,25nm,0.9s							
PSUT	Pine Spring	82.47	46	P	P	08 38 36.8	+1.5	
PSUT				IAmb	IAmb	08 38 37.9		
	comp=Z,20nm,0.8s							
SKT	Skwentna	82.50	12	P	P	08 38 33.3	-1.3	
	baz=206,SNR=8.5							
J17K	VABM Dome	82.51	9	IAmb	IAmb	08 38 36.0		
	comp=Z,18nm,0.7s							
J17K	VABM Dome	82.51	9	P	P	08 38 35.4	+0.8	
	baz=198,SNR=12							
GLI	Glacier Island	82.52	15	P	P	08 38 34.5	-0.2	
	baz=210							
SZCU	Shurtz Canyon	82.53	47	P	P	08 38 37.4	+1.7	
SZCU				IAmb	IAmb	08 38 38.8		
	comp=Z,24nm,1.0s							
CRAG	Craig	82.57	24	P	P	08 38 35.9	+0.9	
CRAG	Craig	82.57	24	P	P	08 38 36.3	+1.2	
	baz=223,SNR=6.6							
EYAK	Cordova Ski Ar	82.57	16	P	P	08 38 34.8	-0.2	
	baz=211							
M22K	Willow	82.59	13	P	P	08 38 35.0	-0.1	
	baz=207,SNR=14							
F07A	Phinny Hill Vi	82.62	37	P	P	08 38 36.5	+1.0	
F07A				IAmb	IAmb	08 38 38.0		
	comp=Z,26nm,0.9s							
KNK	Knik Glacier	82.66	14	P	P	08 38 35.4	0.0	
	baz=209							
PMR	Palmer	82.67	14	P	P	08 38 35.1	-0.3	
PMR	Palmer	82.67	14	P	P	08 38 35.3	-0.1	
PMR				IAmb	IAmb	08 38 36.4		
	comp=Z,56nm,1.3s							
PMR	Palmer	82.67	14	P	P	08 38 35.4	-0.1	
	baz=208,SNR=20							
ELK	Elko	82.67	43	IAmb	IAmb	08 38 38.9		
	comp=Z,23nm,1.0s							
RAGM	Ragged Mountai	82.71	16	IAmb	IAmb	08 38 37.2		
	comp=Z,32nm,0.9s							
WUAZ	Wupatki	82.75	49	IAmb	IAmb	08 38 40.0		
	comp=Z,30nm,1.0s							
I17K	Unalakleet	82.76	8	P	P	08 38 36.6	+0.7	
	baz=197							
MXC	Moxie City	82.81	36	IAmb	IAmb	08 38 39.0		
	comp=Z,27nm,1.2s							
G08A	Pilot Rock	82.83	38	IAmb	IAmb	08 38 39.4		
	comp=Z,48nm,1.3s							
SIT	Sitka	82.93	22	P	P	08 38 37.8	+0.9	
SIT	Sitka	82.93	22	P	P	08 38 37.7	+0.9	
	baz=221							
LTY	Liberty	83.00	35	IAmb	IAmb	08 38 39.6		
	comp=Z,22nm,1.0s							
PKCU	Pink Cliffs	83.00	47	P	P	08 38 39.0	+0.9	
PKCU				IAmb	IAmb	08 38 42.0		
	comp=Z,47nm,1.0s							
U33K	Whale Pass	83.04	24	IAmb	IAmb	08 38 39.8		
	comp=Z,26nm,0.9s							
U33K	Whale Pass	83.04	24	P	P	08 38 38.7	+1.3	
	baz=223,SNR=12							
E07A	Sunnyside	83.04	36	IAmb	IAmb	08 38 40.3		
	comp=Z,45nm,1.1s							
V35K	Ketchikan	83.06	25	IAmb	IAmb	08 38 39.8		
	comp=Z,23nm,1.0s							
V35K	Ketchikan	83.06	25	P	P	08 38 38.7	+1.2	
	baz=224,SNR=9.4							
DUN6	Lazy B Ranch	83.08	53	P	P	08 38 40.7	+2.3	
HAWA	Hanford	83.13	37	IAmb	IAmb	08 38 40.7		
	comp=Z,47nm,1.1s							
CUT	Chulitna	83.15	13	P	P	08 38 37.6	-0.2	
	baz=207,SNR=8.8							
L22K	Petersville	83.15	12	IAmb	IAmb	08 38 38.2		
	comp=Z,39nm,1.0s							
L22K	Petersville	83.15	12	P	P	08 38 37.2	-0.7	
	baz=206,SNR=28							
M23K	Glacier View	83.17	14	P	P	08 38 37.4	-0.6	
	baz=212							
PPLA	Purkeypile	83.20	12	IAmb	IAmb	08 38 37.8		
	comp=Z,34nm,1.5s							
PPLA	Purkeypile	83.20	12	P	P	08 38 36.7	-1.5	
	baz=205							
BMRM	Bremner River	83.22	16	P	P	08 38 38.3	0.0	
	baz=212,SNR=12							
A05A	Maple Falls	83.27	33	IAmb	IAmb	08 38 40.7		
	comp=Z,36nm,1.7s							
K20K	Telida	83.28	11	P	P	08 38 38.7	+0.2	
	baz=203,SNR=44							
SCM	Sheep Creek Mo	83.30	14	P	P	08 38 38.8	+0.1	
	baz=210							
H16K	Elim	83.30	7	P	P	08 38 39.1	+0.6	
	baz=196,SNR=7.7							
S31K	Pelican	83.30	21	IAmb	IAmb	08 38 40.8		
	comp=Z,34nm,1.0s							
S31K	Pelican	83.30	21	P	P	08 38 39.6	+1.0	
	baz=220,SNR=14							
KLU	Klutina	83.34	15	P	P	08 38 38.8	-0.1	
	baz=211							
MTPU	Mount Pierson	83.37	47	IAmb	IAmb	08 38 43.7		
	comp=Z,26nm,1.0s							
HPIG		83.41	59	P	P	08 38 42.0	+1.7	
HPIG				IAmb	IAmb	08 38 43.6		
	comp=Z,29nm,1.5s							
HPIG		83.41	59	P	P	08 38 42.7	+2.5	
CRQE	Cirque	83.44	17	P	P	08 38 39.8	+0.3	
	baz=214,SNR=18							
G15K	Niukluk	83.45	6	P	P	08 38 39.6	+0.3	
	baz=194,SNR=16							
S32K	Killisnoo	83.51	22	P	P	08 38 40.7	+1.0	
	baz=222,SNR=5.8							
WRAK	Wrangell Islan	83.56	24	IAmb	IAmb	08 38 42.2		
	comp=Z,26nm,0.8s							
WRAK	Wrangell Islan	83.56	24	P	P	08 38 41.2	+1.2	
	baz=224,SNR=19							
BMO	Blue Mountains	83.56	39	P	P	08 38 41.0	+0.5	
J19K	Poorman	83.60	10	P	P	08 38 40.7	+0.7	
	baz=202,SNR=17							
EPH	Ephrata	83.65	36	IAmb	IAmb	08 38 42.9		
	comp=Z,36nm,1.0s							
TNA	Tin City	83.67	4	P	P	08 38 40.7	+0.4	
	baz=190							
MFID	Camas Ranch	83.69	41	IAmb	IAmb	08 38 43.8		
	comp=Z,28nm,1.0s							
CAST	Castle Rocks	83.70	12	P	P	08 38 39.4	-1.2	
	baz=205							
PCA	Pinnacle	83.71	18	IAmb	IAmb	08 38 42.1		
	comp=Z,22nm,0.9s							
PINM	Pinnacle	83.71	18	P	P	08 38 41.2	+0.5	
	baz=216,SNR=6.4							
F14K	Arctic Creek	83.71	5	P	P	08 38 41.0	+0.5	
	baz=192							
N25K	Chitina, Valde	83.77	15	P	P	08 38 41.4	+0.4	
	baz=212,SNR=37							
M24K	Tolsona, Glenn	83.81	15	P	P	08 38 41.8	+0.7	
	baz=211,SNR=14							
WAT6	Susitna Watana	83.85	14	P	P	08 38 41.5	0.0	
	baz=209,SNR=40							
D08A	Wollman Farm,	83.86	36	IAmb	IAmb	08 38 44.2		
	comp=Z,30nm,0.9s							
H17K	Granite Mounta	83.87	8	P	P	08 38 41.3	-0.1	
	baz=198							
WAT1	Susitna Watana	83.89	13	P	P	08 38 41.4	-0.1	
	baz=208							
LYN	LuoYang	83.94	309	P	P	08 38 43.0	+0.6	
LYN				pmax	pmax			
	comp=Z,30nm,0.8s							
PSI	Prapat	83.96	275	P	P	08 38 43.2	0.0	
MCARA	McCarthy VSAT	83.99	16	P	P	08 38 42.1	+0.1	
MCARA				IAmb	IAmb	08 38 43.5		
	comp=Z,38nm,1.1s							
MCARA	McCarthy VSAT	83.99	16	P	P	08 38 42.3	+0.2	
	baz=214,SNR=8.0							
DUG	Dugway, Tooele	83.99	45	P	P	08 38 44.2	+1.5	
E09A	Wood Farm, Sta	83.99	37	P	P	08 38 43.8	+1.4	
E09A				IAmb	IAmb	08 38 44.6		
	comp=Z,40nm,1.5s							
G16K	Koyuk River	84.02	7	P	P	08 38 42.2	+0.2	
	baz=195							
J20K	Nowinta River	84.02	10	P	P	08 38 42.3	+0.2	
	baz=203,SNR=26							
KTH	Kantishna Hill	84.05	12	IAmb	IAmb	08 38 43.6		
	comp=Z,29nm,0.9s							
CHUM	Lake Minchumin	84.08	11	P	P	08 38 41.8	-0.6	
	baz=205,SNR=15							
TRF	Thorofare Moun	84.08	12	P	P	08 38 41.9	-0.7	
	baz=207,SNR=53							
F15K	North Star Dit	84.09	6	P	P	08 38 42.5	+0.1	
	baz=193							
P29M	Windy Craggy	84.11	19	IAmb	IAmb	08 38 44.8		
	comp=Z,32nm,0.8s							
P29M	Windy Craggy	84.11	19	P	P	08 38 43.8	+1.1	
	baz=219,SNR=21							
GCSA	Galena City Sc	84.11	9	P	P	08 38 42.8	+0.3	
	baz=201							
JIS	Juneau Island	84.18	22	P	P	08 38 43.8	+0.8	
F10A	Beach Ranch, E	84.22	38	P	P	08 38 44.7	+1.0	
O28M	Mount Upton	84.27	18	P	P	08 38 44.2	+0.4	
	baz=216,SNR=28							
HARP	HAARP	84.30	15	P	P	08 38 43.9	+0.3	
	baz=212,SNR=9.1							
G17K	Kiwalik Mounta	84.32	7	P	P	08 38 43.6	0.0	
	baz=197,SNR=6.9							
DHY	Denali Highway	84.37	14	P	P	08 38 44.0	0.0	
	baz=210,SNR=15							
O29M	Mount Kennedy	84.38	19	IAmb	IAmb	08 38 46.0		
	comp=Z,26nm,1.4s							
O29M	Mount Kennedy	84.38	19	P	P	08 38 44.9	+0.8	
	baz=218,SNR=10							
ZAIG	Zacatecas	84.39	64	P	P	08 38 48.4	+3.2	
PLBC	Pleasant Camp	84.41	20	P	P	08 38 45.1	+1.0	
	baz=220,SNR=27							
PLID	Pearl Lake	84.47	39	IAmb	IAmb	08 38 47.2		
	comp=Z,60nm,1.9s							
Q16A	Castle Valley	84.49	46	IAmb	IAmb	08 38 48.8		
	comp=Z,26nm,1.5s							
I20K	Naaghedeneel	84.54	10	P	P	08 38 45.3	+0.7	
	baz=203							
MCK	McKinley	84.61	13	P	P	08 38 44.7	-0.3	
	baz=208,SNR=19							
C09A	Chrisman Ranch	84.64	36	P	P	08 38 45.9	+0.3	
C09A				IAmb	IAmb	08 38 47.7		
	comp=Z,24nm,0.9s							
TMUT	Trail Mountain	84.64	46	P	P	08 38 48.2	+2.0	
TMUT				IAmb	IAmb	08 38 49.3		
	comp=Z,17nm,0.8s							
HLID	Hailey	84.65	41	IAmb	IAmb	08 38 48.8		
	comp=Z,19nm,0.8s							
HLID	Hailey	84.65	41	P	P	08 38 47.9	+2.0	
EPT	El Paso	84.73	54	IAmb	IAmb	08 38 49.7		
	comp=Z,22nm,0.8s							
P30M	Million Dollar	84.73	19	P	P	08 38 47.2	+1.4	
	baz=219							
SKAG	Skagway	84.75	20	P	P	08 38 46.4	+0.6	
SKAG	Skagway	84.75	20	IAmb	IAmb	08 38 48.4		
	comp=Z,63nm,1.7s							
SKAG	Skagway	84.75	20	P	P	08 38 47.4	+1.6	
	baz=221,SNR=7.3							
T35M	Bob Quinn	84.77	24	P	P	08 38 47.5	+1.5	
	baz=225,SNR=8.3							
HVU	Hansel Valley	84.80	43	IAmb	IAmb	08 38 49.3		
	comp=Z,68nm,1.8s							
YUK8	Steele Glacier	84.81	18	P	P	08 38 47.0	+0.7	
	baz=217,SNR=35							
M26K	Nabesna, AK	84.85	16	IAmb	IAmb	08 38 47.8		
	comp=Z,40nm,1.0s							
M26K	Nabesna, AK	84.85	16	P	P	08 38 46.7	+0.5	
	baz=214,SNR=38							
G18K	Tagagawik	84.95	8	P	P	08 38 46.2	-0.4	
	baz=199,SNR=6.6							
YUK6	Outpost Mounta	84.95	18	P	P	08 38 47.5	+0.5	
	baz=218,SNR=5.1							
YUK3	Moose Creek	85.01	17	P	P	08 38 47.8	+0.5	
	baz=216,SNR=64							
SRU	San Rafael Swe	85.02	46	IAmb	IAmb	08 38 50.4		
	comp=Z,17nm,0.8s							
BRWY	Burwash Landin	85.09	18	P	P	08 38 48.1	+0.6	
	baz=217,SNR=7.7							
S34M	Telegraph Cree	85.10	23	P	P	08 38 48.8	+1.3	
	baz=224,SNR=27							
M27K	Edge Creek, AK	85.10	16	P	P	08 38 48.3	+0.7	
	baz=215,SNR=55							
MENT	Mentasta	85.11	15	P	P	08 38 47.8	+0.3	
MENT	Mentasta	85.11	15	P	P	08 38 47.6	+0.1	
MENT				IAmb	IAmb	08 38 48.9		
	comp=Z,18nm,1.0s							
HYT	Haines Junctio	85.11	19	IAmb	IAmb	08 38 49.5		
	comp=Z,18nm,1.0s							
HYT	Haines Junctio	85.11	19	P	P	08 38 48.5	+0.8	
	baz=219,SNR=23							
H20K	Anotleneega Mo	85.12	10	P	P	08 38 47.9	+0.4	
	baz=202,SNR=12							
F17K	Baldwin Pennin	85.15	7	P	P	08 38 47.7	+0.2	
	baz=196,SNR=6.4							
YUK4	Talbot Arm	85.18	18	P	P	08 38 49.0	+0.9	
	baz=218,SNR=8.4							
L26K	Log Cabin Wild	85.28	15	IAmb	IAmb	08 38 49.7		
	comp=Z,21nm,1.2s							
L26K	Log Cabin Wild	85.28	15	P	P	08 38 48.6	+0.3	
	baz=213,SNR=15							
I21K	Tanana	85.32	11	P	P	08 38 48.1	-0.3	
	baz=205							
NEA2	Nenana	85.35	12	P	P

NEW	Newport	85.54	36	IAmb	IAmb	08 38 51.7		
	comp=Z,14nm,0.8s							
NEW	Newport	85.54	36	P	P	08 38 50.8	+0.9	
MNTX	Cornudas Mount	85.57	55	IAmb	IAmb	08 38 53.7		
	comp=Z,21nm,1.2s							
MNTX	Cornudas Mount	85.57	55	P	P	08 38 52.7	+2.3	
MVCO	Mesa Verde	85.58	49	P	P	08 38 52.1	+1.5	
H21K	Melozitna Rive	85.61	10	P	P	08 38 49.8	0.0	
	baz=204,SNR=9.5							
HDA	Harding Lake	85.63	13	IAmb	IAmb	08 38 50.6		
	comp=Z,24nm,1.0s							
HDA	Harding Lake	85.63	13	P	P	08 38 49.6	-0.2	
	baz=210,SNR=19							
BCYI	Bear Canyon	85.66	41	IAmb	IAmb	08 38 53.1		
	comp=Z,11nm,0.8s							
L27K	Beaver Creek,	85.70	16	P	P	08 38 50.6	+0.3	
	baz=215,SNR=13							
E17K	Hotham Inlet	85.71	6	P	P	08 38 50.4	+0.2	
	baz=196,SNR=12							
BCAR	Beaver Creek A	85.71	16	P	P	08 38 50.7	+0.3	
PV10	Paradox Valley	85.72	47	IAmb	IAmb	08 38 53.5		
	comp=Z,20nm,0.9s							
PV19	Morning Glory	85.73	48	IAmb	IAmb	08 38 55.5		
	comp=Z,27nm,1.1s							
N30M	Aishikik Lake	85.74	19	P	P	08 38 51.0	+0.4	
	baz=219,SNR=12							
PV18	Skein Mesa, Pa	85.75	48	IAmb	IAmb	08 38 55.0		
	comp=Z,15nm,1.0s							
PV20	West Nyswonger	85.75	48	IAmb	IAmb	08 38 55.6		
	comp=Z,27nm,1.0s							
PV23	Carpenter Ridg	85.77	47	IAmb	IAmb	08 38 54.1		
	comp=Z,23nm,0.8s							
I23K	Minto, Yukon-K	85.78	12	IAmb	IAmb	08 38 51.1		
	comp=Z,36nm,1.6s							
I23K	Minto, Yukon-K	85.78	12	P	P	08 38 49.9	-0.6	
	baz=208,SNR=7.9							
PV11	David Mesa, Pa	85.80	48	IAmb	IAmb	08 38 54.3		
	comp=Z,24nm,1.4s							
WHY	Whitehorse	85.81	20	P	P	08 38 52.0	+1.0	
	baz=221,SNR=16							
COLA	College	85.84	13	P	P	08 38 50.1	-0.8	
COLA	College	85.84	13	P	P	08 38 50.3	-0.5	
COLA	College	85.84	13	P	P	08 38 50.3	-0.5	
	baz=209							
COLA	College	85.84	13	P	P	08 38 50.4	-0.5	
COLA	College	85.84	13	P	P	08 38 50.1	-0.8	
PV02	Paradox Valley	85.86	48	IAmb	IAmb	08 38 54.4		
	comp=Z,12nm,0.9s							
XLT	XiLinHaoTe	85.86	319	*e*P	P	08 38 52.2	+0.6	
XLT				pmax	pmax			
	comp=Z,11nm,1.0s							
DLBC	Dease Lake	85.88	23	P	P	08 38 52.4	+1.1	
	baz=226,SNR=16							
SCRK	Sand Creek	85.93	14	P	P	08 38 51.5	+0.1	
	baz=213,SNR=23							
F19K	Shaleruckik Mo	85.95	8	P	P	08 38 51.2	-0.1	
	baz=200,SNR=16							
ILAR	Eielson Array	85.95	13	P	P	08 38 50.8	-0.6	
	comp=Z,7.6nm,0.5s,baz=231,slow=5.5,SNR=102							
ILAR				PP	PP	08 42 24.0	+1.1	
	comp=Z,2.7nm,1.1s,baz=221,slow=7.1,SNR=5.5							
	comp=Z,7.6nm,0.5s							
TXAR	Lajitas Array	85.98	58	P	P	08 38 55.4	+2.8	
	comp=Z,21nm,0.8s,baz=220,slow=6.0,SNR=266							
	comp=Z,21nm,0.8s							
TXAR	Lajitas Array	85.98	58	P	P	08 38 54.0	+1.5	
H22K	Ishtalitna Cre	86.08	11	P	P	08 38 51.9	-0.1	
	baz=206,SNR=17							
ANMO	Albuquerque	86.09	51	P	P	08 38 54.0	+0.9	
ANMO	Albuquerque	86.09	51	P	P	08 38 54.8	+1.7	
ANMO	Albuquerque	86.09	51	P	P	08 38 54.6	+1.5	
M29M	Somme Creek	86.11	17	IAmb	IAmb	08 38 55.0		
	comp=Z,17nm,1.0s							
M29M	Somme Creek	86.11	17	P	P	08 38 52.7	+0.3	
	baz=218,SNR=34							
POKR	Poker Plat Res	86.14	13	P	P	08 38 51.6	-0.8	
	baz=209							
J25K	Salcha River,	86.15	14	IAmb	IAmb	08 38 52.9		
	comp=Z,13nm,0.6s							
J25K	Salcha River,	86.15	14	P	P	08 38 52.3	-0.2	
	baz=211							
N31M	Braeburn, Yuko	86.16	19	IAmb	IAmb	08 38 54.4		
	comp=Z,32nm,1.1s							
N31M	Braeburn, Yuko	86.16	19	P	P	08 38 53.5	+1.0	
	baz=220,SNR=24							
P33M	Teslin, Yukon	86.16	21	P	P	08 38 53.5	+0.9	
	baz=223,SNR=15							
E18K	Tukpahlearik C	86.17	7	IAmb	IAmb	08 38 54.2		
	comp=Z,11nm,0.8s							
E18K	Tukpahlearik C	86.17	7	P	P	08 38 52.6	+0.2	
	baz=197,SNR=12							
D17K	Noatak River	86.18	6	P	P	08 38 53.6	+1.2	
	baz=195,SNR=6.1							
R33M	Jennings River	86.22	22	IAmb	IAmb	08 38 55.4		
	comp=Z,34nm,1.2s							
R33M	Jennings River	86.22	22	P	P	08 38 54.2	+1.3	
	baz=225,SNR=27							
TPB28		86.24	55	IAmb	IAmb	08 38 56.5		
	comp=Z,5.2nm,0.7s							
G21K	Allakaket	86.28	10	IAmb	IAmb	08 38 54.0		
	comp=Z,13nm,0.8s							
G21K	Allakaket	86.28	10	P	P	08 38 53.0	0.0	
	baz=204,SNR=19							
H23K	Yukon River	86.35	11	P	P	08 38 52.6	-0.7	
	baz=207							
AHID	Auburn Hatcher	86.36	43	IAmb	IAmb	08 38 56.9		
	comp=Z,31nm,1.5s							
AHID	Auburn Hatcher	86.36	43	P	P	08 38 54.0	-0.1	
XAN	Xi'an	86.37	307	P	P	08 38 55.4	+1.2	
XAN				sP	sP	08 42 00.7	+1.0	
XAN				pmax	pmax			
	comp=Z,18nm,1.1s							
K27K	Chicken	86.44	15	IAmb	IAmb	08 38 55.7		
	comp=Z,23nm,1.2s							
F20K	Avaraart Lake	86.44	9	P	P	08 38 53.6	0.0	
	baz=202							
TPB01	Permian Basin	86.52	56	IAmb	IAmb	08 38 58.3		
	comp=Z,44nm,1.4s							
RDOG	Red Dog Mine	86.54	6	P	P	08 38 54.1	-0.1	
	baz=195							
C16K	Lisburne Hills	86.55	5	P	P	08 38 53.6	-0.5	
	baz=192							
E19K	Redstone River	86.62	8	IAmb	IAmb	08 38 55.5		
	comp=Z,14nm,0.8s							
E19K	Redstone River	86.62	8	P	P	08 38 54.5	0.0	
	baz=200,SNR=18							
HILR	Hailar Array B	86.63	325	P	P	08 38 55.4	+0.3	
	comp=Z,0.8nm,0.3s,baz=206,slow=13,SNR=1.8							
	comp=Z,0.8nm,0.3s							
DLMT	Dillon	86.68	40	IAmb	IAmb	08 38 58.2		
	comp=Z,24nm,0.9s							
H24K	Noodor Dome	86.68	12	P	P	08 38 53.5	-1.4	
	baz=209,SNR=5.6							
M30M	Minto, Yukon	86.69	18	IAmb	IAmb	08 38 56.6		
	comp=Z,28nm,0.9s							
M30M	Minto, Yukon	86.69	18	P	P	08 38 55.6	+0.6	
	baz=219,SNR=58							
TPB13	Reeves - Culbe	86.71	55	IAmb	IAmb	08 38 59.0		
	comp=Z,17nm,0.7s							
L29M	L29M	86.73	17	P	P	08 38 56.1	+0.9	
	baz=218,SNR=37							
N32M	Quiet Lake	86.77	20	IAmb	IAmb	08 38 57.5		
	comp=Z,35nm,1.2s							
N32M	Quiet Lake	86.77	20	P	P	08 38 56.5	+1.1	
	baz=223							
FXWY	Fox Creek	86.82	42	IAmb	IAmb	08 39 00.2		
	comp=Z,13nm,0.9s							
TPB05	Hovey Rd	86.87	56	IAmb	IAmb	08 39 00.4		
	comp=Z,25nm,1.0s							
PRP	Porcupine Dome	86.89	13	P	P	08 38 55.5	-0.5	
	baz=211,SNR=11							
C17K	DeLong Mountai	86.93	6	P	P	08 38 56.3	+0.3	
	baz=194							
F21K	Alatna River	86.94	9	P	P	08 38 56.0	-0.1	
	baz=204,SNR=8.7							
G22K	Bettles	86.98	10	P	P	08 38 56.2	0.0	
	baz=206							
S22A	4UR Ranch, Cre	87.01	49	IAmb	IAmb	08 39 00.4		
	comp=Z,16nm,1.1s							
G23K	Bananza Creek	87.05	11	P	P	08 38 56.9	+0.3	
	baz=207,SNR=14							
O20A	White River Ci	87.06	46	IAmb	IAmb	08 39 00.2		
	comp=Z,15nm,1.0s							
LOHW	Long Hollow	87.08	42	IAmb	IAmb	08 38 59.7		
	comp=Z,11nm,0.7s							
M31M	Drury Creek, Y	87.13	19	IAmb	IAmb	08 38 58.3		
	comp=Z,13nm,1.0s							
M31M	Drury Creek, Y	87.13	19	P	P	08 38 57.3	+0.2	
	baz=221,SNR=13							
TPB06	Permian Basin	87.24	56	IAmb	IAmb	08 39 01.3		
	comp=Z,12nm,1.0s							
C18K	Utukok River	87.29	6	P	P	08 38 57.5	-0.2	
	baz=196							
BW06	Boulder Array	87.36	43	IAmb	IAmb	08 39 01.0		
	comp=Z,15nm,0.8s							
PD31	Pinedale Array	87.36	43	IAmb	IAmb	08 39 01.0		
	comp=Z,15nm,0.8s							
PDAR	Pinedale Array	87.36	43	P	P	08 38 59.9	+1.0	
	comp=Z,9.9nm,0.6s,baz=218,slow=3.2,SNR=138							
PDAR				PP	PP	08 42 33.0	-1.8	
	comp=Z,1.3nm,0.9s,baz=243,slow=6.3,SNR=7.6							
	comp=Z,9.9nm,0.6s							
PDAR	Pinedale Array	87.36	43	P	P	08 38 59.6	+0.7	
HHC	Hu-ho-hao-te	87.39	314	*e*P	P	08 38 58.5	-0.4	
HHC				pmax	pmax			
	comp=Z,9.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,51nm,5.4s							
BOZ	Bozeman (W)	87.39	40	IAmb	IAmb	08 39 01.6		
	comp=Z,23nm,1.2s							
F22K	John River	87.41	10	P	P	08 38 58.6	+0.3	
	baz=205							
SAND	Sanderson	87.46	58	IAmb	IAmb	08 39 02.4		
	comp=Z,18nm,0.9s							
H17A	Grant Village	87.47	42	IAmb	IAmb	08 39 03.3		
	comp=Z,22nm,0.9s							
K29M	Barlow Dome	87.48	17	IAmb	IAmb	08 39 00.7		
	comp=Z,35nm,1.4s							
K29M	Barlow Dome	87.48	17	P	P	08 38 59.5	+0.8	
	baz=219,SNR=22							
MNHN	Monahans	87.48	56	IAmb	IAmb	08 39 02.3		
	comp=Z,15nm,1.0s							
COLD	Coldfoot	87.48	11	IAmb	IAmb	08 39 00.2		
	comp=Z,25nm,1.0s							
COLD	Coldfoot	87.48	11	P	P	08 38 59.1	+0.5	
	baz=207,SNR=24							
D19K	Kuna River	87.49	7	IAmb	IAmb	08 38 59.5		
	comp=Z,10nm,0.8s							
D19K	Kuna River	87.49	7	P	P	08 38 58.6	0.0	
	baz=199,SNR=6.5							
WTLY	Watson Lake, Y	87.51	22	P	P	08 38 59.8	+0.9	
	baz=226							
E20K	Nigu River	87.51	8	P	P	08 38 59.1	+0.4	
	baz=201,SNR=23							
G24K	Hadweenzic Riv	87.52	12	P	P	08 38 58.5	-0.3	
	baz=209,SNR=7.6							
J29N	Klondike Camp	87.77	16	P	P	08 39 00.6	+0.5	
	baz=218							
I27K	Kandik River	87.85	14	P	P	08 39 00.5	+0.1	
	baz=215,SNR=11							
G25K	Bearman Lake	87.85	12	P	P	08 39 00.2	-0.1	
	baz=211,SNR=6.2							
D20K	Etivluk River	87.88	8	P	P	08 39 00.6	+0.1	
	baz=201,SNR=7.6							
C19K	Lookout Ridge	87.90	7	P	P	08 39 00.8	+0.3	
	baz=198							
HAYD	Hayden	87.90	46	IAmb	IAmb	08 39 04.3		
	comp=Z,13nm,0.9s							
ODSA	Odessa	87.95	55	IAmb	IAmb	08 39 04.4		
	comp=Z,24nm,1.0s							
E21K	Killik River	87.99	9	IAmb	IAmb	08 39 01.8		
	comp=Z,21nm,1.1s							
E21K	Killik River	87.99	9	P	P	08 39 00.7	-0.2	
	baz=203							
E22K	Anaktuvuk Pass	88.04	10	P	P	08 39 01.3	+0.1	
	baz=205							
LIRD	Liard River Hi	88.04	24	P	P	08 39 02.1	+0.8	
	baz=229							
I28M	Miner Creek	88.13	15	IAmb	IAmb	08 39 02.8		
	comp=Z,9.8nm,0.9s							
I28M	Miner Creek	88.13	15	P	P	08 39 01.9	+0.1	
	baz=216,SNR=19							
F24K	Squaw Lake	88.16	11	IAmb	IAmb	08 39 03.3		
	comp=Z,14nm,0.8s							
F24K	Squaw Lake	88.16	11	P	P	08 39 02.5	+0.7	
	baz=209,SNR=28							
128A	Castleberry Fa	88.19	55	IAmb	IAmb	08 39 05.5		
	comp=Z,13nm,0.8s							
E23K	Chandalar	88.33	10	IAmb	IAmb	08 39 04.0		
	comp=Z,20nm,1.0s							
E23K	Chandalar	88.33	10	P	P	08 39 03.1	+0.4	
	baz=207,SNR=18							
J30M	Hart River	88.38	17	IAmb	IAmb	08 39 04.7		
	comp=Z,36nm,1.9s							
J30M	Hart River	88.38	17	P	P	08 39 03.5	+0.5	
	baz=220,SNR=12							
H27K	Steamboat Moun	88.39	14	IAmb	IAmb	08 39 04.5		
	comp=Z,11nm,0.9s							
H27K	Steamboat Moun	88.39	14	P	P	08 39 03.4	+0.5	
	baz=215,SNR=17							
MMPY	Sheldon Lake,	88.43	20	P	P	08 39 04.3	+1.1	
	baz=224,SNR=48							
229A	Bryant Ranch,	88.47	56	IAmb	IAmb	08 39 06.9		
	comp=Z,13nm,0.9s							
G26K	Porcupine Rive	88.49	13	P	P	08 39 03.9	+0.7	
	baz=213							
C21K	Knifeblade Rid	88.54	8	P	P	08 39 04.0	+0.6	
	baz=202,SNR=9.7							
E24K	Your Creek	88.54	11	P	P	08 39 03.8	+0.2	
	baz=208							
RLMT	Red Lodge	88.63	41	IAmb	IAmb	08 39 07.7		
	comp=Z,16nm,1.0s							
F25K	Christian Rive	88.66	12	IAmb	IAmb	08 39 05.9		
	comp=Z,13nm,1.1s							
F25K	Christian Rive	88.66	12	P	P	08 39 04.8	+0.6	
	baz=211,SNR=11							
129A	Stewart Farms,	88.67	55	IAmb	IAmb	08 39 07.7		
	comp=Z,19nm,1.0s							
ISCO	Idaho Springs	88.74	47	IAmb	IAmb	08 39 08.4		
	comp=Z,22nm,1.8s							
ISCO	Idaho Springs	88.74	47	P	P	08 39 07.6	+2.1	
G27K	Doyon Strip	88.83	14	P	P	08 39 05.3	+0.3	
	baz=215,SNR=10.0							
TOLK	Toolik Lake Re	88.86	10	P	P	08 39 05.3	+0.2	
	baz=207,SNR=6.6							
I30M	Mount Dempster	88.87	16	P	P	08 39 05.4	+0.2	
	baz=220,SNR=35							
D23K	Nanushuk River	88.97	10	P	P	08 39 06.1	+0.6	
	baz=206,SNR=16							
CMAR	Chiang Mai Arr	88.98	290	P	P	08 39 07.6	+0.9	
	comp=Z,1.4nm,0.3s,baz=97,slow=2.3,SNR=7.1							
	comp=Z,1.4nm,0.3s							
B21K	Ikpikpuk River	88.99	8	P	P	08 39 05.7	+0.2	
	baz=203							
B20K	Meade River	89.03	7	P	P	08 39 05.9	+0.2	
	baz=200							
F26K	Sheenjek River	89.04	12	IAmb	IAmb	08 39 07.8		
	comp=Z,9.3nm,0.9s							
F26K	Sheenjek River	89.04	12	P	P	08 39 06.5	+0.7	
	baz=212,SNR=13							
833A	Chaparral WMA,	89.08	60	IAmb	IAmb	08 39 10.2		
	comp=Z,16nm,1.0s							
ELIB	Princess Elisa	89.08	187	*d*P	P	08 39 07.2	+0.9	
ELIB				*d*pP	pP	08 41 11.1	-2.2	
ELIB				*d*sP	sP	08 42 09.2	-2.9	
E25K	Arctic Village	89.12	12	IAmb	IAmb	08 39 07.9		
	comp=Z,12nm,1.0s							
E25K	Arctic Village	89.12	12	P	P	08 39 06.6	+0.4	
	baz=211,SNR=11							
H29M	Whitestone	89.14	15	P	P	08 39 06.5	+0.2	
	baz=218,SNR=34							
KOTAN	Kotaneelee Air	89.30	24	P	P	08 39 07.7	+0.5	
	baz=231							
K22A	Casper	89.32	45	IAmb	IAmb	08 39 10.2		
	comp=Z,20nm,1.2s							
D24K	Happy Valley	89.44	10	IAmb	IAmb	08 39 09.1		
	comp=Z,16nm,1.0s							
D24K	Happy Valley	89.44	10	P	P	08 39 08.1	+0.5	
	baz=208							
RTBA	Rita Blanca	89.47	51	IAmb	IAmb	08 39 11.4		
	comp=Z,10nm,1.0s							
JCT	Junction City	89.52	58	IAmb	IAmb	08 39 11.4		
	comp=Z,12nm,0.8s							
SN07	Snyder 07	89.61	55	IAmb	IAmb	08 39 11.3		
	comp=Z,12nm,0.9s							
AMTX	Amarillo	89.67	53	IAmb	IAmb	08 39 11.9		
	comp=Z,15nm,0.9s							
EPYK	Eagle Plains	89.67	16	P	P	08 39 09.1	+0.3	
	baz=219,SNR=18							
C23K	Itkillik River	89.76	9	P	P	08 39 09.6	+0.5	
	baz=206							
G29M	Pine Creek	89.77	15	IAmb	IAmb	08 39 10.5		
	comp=Z,18nm,1.0s							
G29M	Pine Creek	89.77	15	P	P	08 39 09.4	+0.1	
	baz=218,SNR=15							
DKNS	Dickens	89.79	54	IAmb	IAmb	08 39 12.3		
	comp=Z,9.8nm,1.0s							
B22K	Teshekpuk Lake	89.82	8	P	P	08 39 09.7	+0.4	
	baz=204							
H31M	Peel River	89.86	17	IAmb	IAmb	08 39 10.7		
	comp=Z,13nm,0.9s							
H31M	Peel River	89.86	17	P	P	08 39 09.7	0.0	
	baz=221,SNR=16							
F28M	Old Crow	89.90	14	IAmb	IAmb	08 39 11.1		
	comp=Z,14nm,1.4s							
F28M	Old Crow	89.90	14	P	P	08 39 10.0	+0.2	
	baz=216,SNR=10							
E27K	Coleen River	89.99	13	IAmb	IAmb	08 39 12.0		
	comp=Z,15nm,1.4s							
E27K	Coleen River	89.99	13	P	P	08 39 10.7	+0.5	
	baz=215,SNR=8.9							
D25K	Kavik River	90.01	11	P	P	08 39 10.2	-0.2	
	baz=210							
A22K	Sinclair Lake	90.23	7	P	P	08 39 11.4	+0.2	
	baz=202							
G30M	tAoh Zraii Nji	90.27	15	P	P	08 39 11.7	+0.2	
	baz=220,SNR=52							
A21K	Barrow	90.33	7	P	P	08 39 11.7	0.0	
	baz=201							
G31M	Satah River	90.72	16	P	P	08 39 13.7	+0.1	
	baz=222,SNR=44							
C27K	Jago River	90.77	11	IAmb	IAmb	08 39 15.9		
	comp=Z,14nm,1.0s							
C27K	Jago River	90.77	11	P	P	08 39 14.1	+0.3	
	baz=213							
E28M	Babbage River	90.77	13	IAmb	IAmb	08 39 15.2		
	comp=Z,17nm,1.1s							
E28M	Babbage River	90.77	13	P	P	08 39 14.2	+0.4	
	baz=217,SNR=17							
F30M	Barrier River	90.86	15	IAmb	IAmb	08 39 16.2		
	comp=Z,13nm,1.1s							
F30M	Barrier River	90.86	15	P	P	08 39 14.3	+0.1	
	baz=220,SNR=13							
E29M	Blow River	90.97	14	IAmb	IAmb	08 39 16.3		
	comp=Z,12nm,1.4s							
E29M	Blow River	90.97	14	P	P	08 39 14.6	-0.1	
	baz=218,SNR=8.1							
D27M	Malcolm River	90.99	12	IAmb	IAmb	08 40 18.1		
	comp=Z,20nm,1.4s							
D27M	Malcolm River	90.99	12	P	P	08 39 15.4	+0.5	
	baz=215							
LZDM	Lanzhou Array	91.07	307	P	P	08 39 17.6	+1.3	
	comp=Z,2.6nm,0.5s,baz=91,slow=9.1,SNR=1.4							
	comp=Z,2.6nm,0.5s							
F31M	Tsiigehtchic	91.25	16	P	P	08 39 16.2	+0.2	
	baz=222,SNR=12							
WRGLY	Wrigley	91.48	22	P	P	08 39 17.3	+0.2	
	baz=231							
D28M	Stokes Point	91.53	13	P	P	08 39 17.2	0.0	
	baz=217							
RSSD	Black Hills	91.58	44	P	P	08 39 18.5	+0.1	
RSSD	Black Hills	91.58	44	P	P	08 39 19.4	+1.0	
WMOK	Wichita Mounta	91.84	54	P	P	08 39 20.3	+0.8	
INK	Inuvik	91.95	15	P	P	08 39 18.9	-0.2	
	baz=222							
INK	Inuvik	91.95	15	P	P	08 39 19.0	-0.2	
CROK	Carrier	93.06	53	IAmb	IAmb	08 39 28.0		
	comp=Z,12nm,0.9s							
SONM	Songino Array	93.66	319	P	P	08 39 28.1	+0.4	
	comp=Z,0.6nm,0.5s,baz=140,slow=5.0,SNR=4.3							
	comp=Z,0.6nm,0.5s							
SONM	Songino Array	93.66	319	P	P	08 39 28.1	+0.4	
T35A	Sooner Cattle	94.31	53	IAmb	IAmb	08 39 33.4		
	comp=Z,6.3nm,0.7s							
YKA	Yellowknife Ar	94.38	25	P	P	08 39 30.6	+0.1	
	comp=Z,5.0nm,0.8s,baz=237,slow=4.7,SNR=44							
YKA				PP	PP	08 43 26.2	-2.3	
	comp=Z,1.2nm,1.0s,baz=244,slow=7.4,SNR=7.4							
	comp=Z,5.0nm,0.8s							
YKA	Yellowknife Ar	94.38	25	P	P	08 39 29.9	-0.5	
YKAW3	Yellowknife Wh	94.41	25	IAmb	IAmb	08 39 31.7		
	comp=Z,9.7nm,1.1s							
YKAW1	Yellowknife Wh	94.42	25	IAmb	IAmb	08 39 31.9		
	comp=Z,11nm,1.2s							
C36M	Paulatuk	95.16	17	IAmb	IAmb	08 39 34.9		
	comp=Z,7.5nm,0.8s							
C36M	Paulatuk	95.16	17	P	P	08 39 33.8	0.0	
	baz=231							
ECSD	EROS Data Cent	96.44	46	IAmb	IAmb	08 39 41.9		
	comp=Z,4.5nm,0.9s							
ECSD	EROS Data Cent	96.44	46	P	P	08 39 41.2	+1.0	
S39A	Bolivar	96.97	53	IAmb	IAmb	08 39 45.5		
	comp=Z,3.8nm,0.8s							
P38A	Dawn	97.38	51	IAmb	IAmb	08 39 46.7		
	comp=Z,5.2nm,0.9s							
ZALV	Zalesovo Beam	108.35	322	PKiKP	PKiKP	08 44 34.4	-0.8	
	comp=Z,1.6nm,0.7s,baz=180,slow=1.8,SNR=5.6							
MKAR	Makanchi Array	109.25	314	PKiKP	PKiKP	08 44 36.5	-0.6	
	comp=Z,1.3nm,0.5s,baz=245,slow=1.4,SNR=8.2							
KURBB	Kurchatov Arra	111.99	318	PKiKP	PKiKP	08 44 41.1	-1.0	
	comp=Z,1.7nm,0.7s,baz=94,slow=2.0,SNR=11							
BVAR	Borovoye Array	116.96	321	PKP	PKPdf	08 44 51.2	-0.5	
	comp=Z,3.5nm,0.4s,baz=140,slow=1.3,SNR=14							
BORK	Borovoye	117.00	321		PKPdf	08 44 51.1	-0.6	
SPITS	Spitsbergen Ar	119.36	357	PKP	PKPdf	08 44 55.3	-0.4	
	comp=Z,4.2nm,0.7s,baz=318,slow=7.8,SNR=1.8							
ARTI	Arti	123.07	326	PKP	PKPdf	08 45 03.3	0.0	
	comp=Z,7.3nm,0.7s,baz=118,slow=4.2,SNR=8.3							
ARTI	Arti	123.07	326		PKPdf	08 45 02.9	-0.4	
AKTO	Aktyubinsk	124.98	319	PKP	PKPdf	08 45 06.8	-0.3	
	comp=Z,2.8nm,0.7s,baz=17,slow=1.7,SNR=6.2							
SCO	Scoresbysund	125.61	10		PKPdf	08 45 08.0	+0.2	
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	08 45 09.3	-0.1	
	comp=Z,6.3nm,0.8s,baz=68,slow=0.7,SNR=14							
KIRV	Kirov	126.64	331	PKP	PKPdf	08 45 09.9	-0.1	
	comp=Z,14nm,0.5s,baz=329,slow=1.7,SNR=3.5							
FINES	FINESS Array B	133.29	344	PKhKP	PKPpre	08 45 16.7		
	comp=Z,1.0nm,0.5s,baz=96,slow=7.7,SNR=4.2							
FINES				PKP	PKPd

BRTR Keskin Array B 144.90 315 PKP PKPbc 08 45 45.0 -0.2
comp=Z,4.8nm,0.5s,baz=128,slow=2.0,SNR=28
BRTR Keskin Array B 144.90 315 PKPbc 08 45 44.9 -0.3
STHS Stebnicka Huta 144.90 338 *e*PKP PKPbc 08 45 45.2 +0.5
BR104 Keskin Array S 144.90 315 PKP **PKPdf 08 45 44.1 -0.4**
BR106 Keskin Array S 144.91 315 PKP **PKPdf 08 45 44.1 -0.4**
KOLS Kolonicke sedl 144.91 336 *e*PKP **PKPab 08 45 45.9 +0.2**
BR105 Keskin Array S 144.91 315 PKP **PKPdf 08 45 44.1 -0.4**
FLTG Flechtingen 144.92 350 *e*PKPbc PKPbc 08 45 45.0 +0.4
baz=15,slow=2.9
FOEL Foel Wylfa 144.97 5 *e*P PKPbc 08 45 45.1 +0.3
KIRS Kirsehir-Merke 144.99 314 ⇑P **PKPbc 08 45 45.2 -0.2**
CFR Carcaliu 145.05 327 ⇑P **PKPbc 08 45 45.5 +0.3**
IWEX Carrickbyrne, 145.06 9 *e*P **PKPbc 08 45 45.1 +0.1**
TPGR Topolog 145.11 326 ⇑P **PKPab 08 45 46.3 -0.3**
ONER Baraj Valea Uz 145.12 330 ⇑P **PKPab 08 45 46.7 0.0**
ASSE Asse, Remlinge 145.21 350 *e*PKPbc **PKPab 08 45 46.1 -0.5**
baz=15,slow=2.9
KSP Ksiaz 145.21 344 *e*PKP **PKPbc 08 45 45.9 +0.3**
KSP Ksiaz 145.21 344 PKP **PKPbc 08 45 45.2 -0.4**
NIE Niedzica 145.23 339 *e*PKP **PKPab 08 45 46.4 -0.6**
NIE Niedzica 145.23 339 PKP **PKPbc 08 45 45.3 -0.4**
CWF Charnwood Fore 145.25 3 *e*P **PKPbc 08 45 45.7 +0.1**
VRI Vrincioaia 145.29 329 ⇑P **PKPbc 08 45 46.1 +0.1**
VRI Vrincioaia 145.29 329 PKP **PKPbc 08 45 45.4 -0.6**
WACR West Acre 145.33 1 *e*P **PKPbc 08 45 45.7 -0.1**
PLOR Plostina 145.34 329 ⇓P **PKPbc 08 45 46.7 +0.5**
HLM1 Long Mynd 145.37 5 *e*P **PKPab 08 45 46.1 +0.1**
SAHR Sahastru 145.41 329 ⇓P **PKPab 08 45 47.3 -0.5**
BMR Baia Mare 145.43 334 ⇓P **PKPab 08 45 46.8 +0.5**
IBBN Ibbenburen 145.43 353 *e*PKPbc **PKPab 08 45 46.9 -0.7**
baz=15,slow=2.9
OSTC Ostas 145.49 344⇑*e*PKP **PKPab 08 45 47.3 -0.6**
TURR Turia 145.50 330 ⇑P **PKPab 08 45 47.7 -0.5**
ARCR ARCALIA 145.51 332 ⇑P **PKPab 08 45 47.5 -0.6**
CHVC Chvalec 145.51 344⇑*e*PKP **PKPab 08 45 47.3 -0.7**
CLZ Clausthal 145.53 350 *e*PKPbc **PKPab 08 45 47.5 -0.6**
baz=15,slow=2.9
COVR Voineasa-Covas 145.56 329 ⇑P **PKPbc 08 45 47.0 +0.2**
STEB Steboricе 145.61 341⇑*e*PKP **PKPbc 08 45 47.3 +0.6**
DPC Dobruska-Polom 145.65 343⇑*e*PKP **PKPab 08 45 47.9 -0.7**
BOSR Bodos 145.66 330 ⇓P **PKPab 08 45 48.4 -0.4**
BRG Berggiesshubel 145.77 346 *e*PKPbc **PKPbc 08 45 48.0 +0.9**
baz=15,slow=2.9
BRG Berggiesshubel 145.77 346 *e*PKP **PKPbc 08 45 46.8 -0.4**
BRG Amp 08 45 50.0
comp=Z,20nm,0.8s
BRG Berggiesshubel 145.77 346 P **PKiKP 08 45 54.2 +4.4**
BRG Amp 08 45 56.1
comp=Z,8.0nm,0.9s
KRLC Kraliky 145.77 343⇑*e*PKP **PKPbc 08 45 48.0 +0.7**
MORC Moravsky Berou 145.82 342 ⇑P **PKPbc 08 45 47.7 +0.3**
MORC Moravsky Berou 145.82 342 *e*PKP **PKPbc 08 45 47.7 +0.3**
DOPR Dopca 145.87 330 ⇑P **PKPab 08 45 48.8 -0.8**
MCH1 Michaelchurch 145.87 5 *e*P **PKPbc 08 45 47.2 -0.1**
GTTG Gottingen 145.88 351 *e*PKPbc **PKPbc 08 45 48.3 +0.9**
baz=15,slow=2.9
NEUB Neuenburg 145.90 349 *e*PKPbc **PKPbc 08 45 48.4 +0.9**
baz=15,slow=2.9
ISR Istrita 145.91 328 ⇓P **PKPbc 08 45 48.8 +1.0**
PVCC Panska Ves 145.94 345⇑*e*PKP **PKPbc 08 45 48.4 +0.8**
MLR Muntele Rosu 145.94 329 PKPbc **PKPbc 08 45 47.9 -0.1**
comp=Z,14nm,0.9s,baz=135,slow=2.7,SNR=8.2
MLR Muntele Rosu 145.94 329 ⇑P **PKPdf 08 45 45.7 -0.3**
KECS Kecovo 145.95 337 *e*PKP **PKiKP 08 45 50.5 +0.3**
MONM Monmouth 146.04 5 *e*P **PKPbc 08 45 47.9 0.0**
MAUC Maruska 146.09 341⇑*e*PKP **PKPbc 08 45 49.1 +0.9**
CJR Cluj-Napoca 146.13 333 ⇑P **PKPbc 08 45 48.9 +0.5**
HSKC Hora Svate Kat 146.13 347⇑*e*PKP **PKPbc 08 45 48.8 +0.6**
MMAI Mount Meron Ar 146.25 303 PKPbc **PKPbc 08 45 50.0 +0.8**
comp=Z,4.8nm,0.5s,baz=111,slow=6.3,SNR=8.4
BUG Bochum--Univer 146.34 354 *e*PKPbc **PKPbc 08 45 49.2 +0.5**
baz=15,slow=2.9
MARR Marisel-Cluj 146.37 333 ⇓P **PKPbc 08 45 49.8 +0.7**
VOIR 146.42 330 ⇓P **PKPbc 08 45 50.0 +0.7**
KASTN Kahler Asten 146.44 352 *e*PKPbc **PKPbc 08 45 49.7 +0.7**
baz=15,slow=2.9
PRU Pruhonice 146.45 345⇑*e*PKP **PKPbc 08 45 49.3 +0.2**
DRGR 146.45 333 ⇑P **PKPbc 08 45 49.7 +0.5**
MOX Moxa 146.47 349 *e*PKPbc **PKPbc 08 45 49.8 +0.7**
baz=15,slow=2.9
VRAC Vranov 146.51 342 PKPbc **PKPbc 08 45 49.7 +0.4**
comp=Z,15nm,0.8s,baz=46,slow=2.9,SNR=12
VRAC Vranov 146.51 342 ⇓P **PKPbc 08 45 48.8 -0.5**
VRAC Vranov 146.51 342 *e*PKP **PKPbc 08 45 49.7 +0.4**
PLN Plauen 146.52 348 *e*PKPbc **PKPbc 08 45 50.1 +0.8**
baz=15,slow=2.9
TANN Tannenbergstha 146.52 347 *e*PKPbc **PKPbc 08 45 50.2 +0.9**
baz=15,slow=2.9
JAVC Velka Javorina 146.59 341 *e*PKP **PKiKP 08 45 51.1 -0.5**
PSZ Piszkesteto 146.64 338 ⇑P **PKPbc 08 45 50.1 +0.4**
PSZ Piszkesteto 146.64 338 **PKPbc 08 45 50.2 +0.4**
ARR Arges 146.67 330 ⇑P **PKiKP 08 45 51.0 -1.0**
KRUC Moravsky 146.79 342 *e*PKP **PKPbc 08 45 50.5 +0.5**
ZVC Zvikov 147.04 345⇑*e*PKP **PKPbc 08 45 51.2 +0.5**
MODS Modra-Piesok 147.14 341 *e*PKP **PKiKP 08 45 51.9 -0.8**
ROTZ Rotzenmuhle 147.19 347 *e*PKPbc **PKiKP 08 45 52.0 -0.7**
baz=15,slow=2.9
UCC Uccle 147.20 357 *d*PKP **PKPbc 08 45 51.6 +0.6**
MEM Membach 147.28 355 *d*PKP **PKPbc 08 45 51.5 +0.3**
BTNL Ternell 147.29 355 *d*PKP **PKPbc 08 45 51.5 +0.2**
SIRR Siria 147.31 334 ⇓P **PKPbc 08 45 52.0 +0.6**
BSTI Sart Tilman 147.34 355 *d*PKP **PKPbc 08 45 51.8 +0.4**
TNS Taunus Mts 147.39 352 *e*PKPbc **PKiKP 08 45 52.5 -0.7**
baz=15,slow=2.9
TNS *e*PKPab **PKPab 08 45 56.1 +0.5**
baz=16,slow=3.9
GRF Grafenberg Arr 147.46 348 *e*PKPbc **PKiKP 08 45 52.9 -0.4**
baz=15,slow=2.9
GRF *e*PKPab **PKPab 08 45 56.7 +0.9**
baz=16,slow=3.9
KHC Kasperske Hory 147.48 345⇑*e*PKP **PKPbc 08 45 52.1 +0.2**
KHC *e*PKPAB **PKPab 08 45 56.2 +0.2**
GZR Gura Zlata 147.51 332 ⇑P **PKPbc 08 45 52.0 -0.1**
BHOU Houvegnez 147.53 355 *d*PKP **PKPbc 08 45 52.7 +0.8**
BGES Gesves 147.57 356 *d*PKP **PKPbc 08 45 51.9 -0.1**
WET Wettzell 147.63 346 *e*PKPbc **PKiKP 08 45 53.1 -0.6**
baz=15,slow=2.9
WET *e*PKPab **PKPab 08 45 57.4 +0.8**
baz=16,slow=3.9
BMRD Maredsous 147.67 356 *d*PKP **PKPbc 08 45 52.7 +0.4**
GEC2 GERESS Array S 147.71 345 *e*PKPbc **PKiKP 08 45 53.3 -0.7**
baz=15,slow=2.9
GEC2 *e*PKPab **PKPab 08 45 57.6 +0.6**
baz=16,slow=3.9
GERES GERESS Array B 147.71 345 PKPbc **PKPbc 08 45 53.0 +0.4**
comp=Z,13nm,0.6s,baz=357,slow=2.7,SNR=35
WINA Alland / Wiene 147.75 342 *i* PKP **PKiKP 08 45 53.5 -0.5**
comp=Z,14nm,0.7s,SNR=6.3
RCHB Rochefort 147.79 356 *d*PKP **PKPbc 08 45 52.8 +0.3**
DOU Dourbes 147.89 356 *d*PKP **PKPbc 08 45 53.4 +0.6**
CONA Conrad Observa 147.97 342 *e*PKP **PKiKP 08 45 53.9 -0.6**
comp=Z,26nm,1.1s,SNR=16
RONA Rosalia, Austr 148.04 341 *i* PKP **PKPbc 08 45 53.9 +0.6**
comp=Z,18nm,0.7s,SNR=10
HERR Herculane 148.07 332 ⇑P **PKPbc 08 45 53.4 0.0**
PLVB Pleven 148.11 327 ⇑P **PKPbc 08 45 53.3 -0.3**
WLF Walferdange 148.20 354 *d*PKP **PKiKP 08 45 54.7 -0.1**
WLF Walferdange 148.20 354 *e*PKPbc **PKiKP 08 45 55.1 +0.3**
baz=15,slow=2.9
WLF *e*PKPab **PKPab 08 45 59.7 +0.8**
baz=16,slow=3.9
MDVR Moldovita 148.46 332 ⇓P **PKPbc 08 45 54.9 +0.4**
MOA Molln 148.49 344 *i* PKP **PKPbc 08 45 54.7 +0.3**
comp=Z,18nm,1.2s,SNR=7.5
MOA *e*PKP **PKPab 08 46 00.6 +0.5**
comp=Z,20nm,1.1s
MORH Mrgy, Hungar 148.54 337 ⇑P **PKPbc 08 45 54.7 +0.1**
ARSA Arzberg 148.68 342 *e*PKP **PKPbc 08 45 55.3 +0.4**
comp=Z,16nm,1.6s
ARSA *e*PKP **PKPab 08 46 00.6 -0.3**
comp=Z,5.7nm,0.8s
STU Stuttgart 148.70 350 *e*PKPbc **PKiKP 08 45 55.8 -0.1**
baz=15,slow=2.9
STU *e*PKPab **PKPab 08 46 01.2 +0.3**
baz=16,slow=3.9
BIOA Bad Ischl, Aus 148.80 344 *e*PKP **PKPbc 08 45 55.4 +0.2**
comp=Z,13nm,0.9s
BIOA *e*PKP **PKPab 08 46 01.9 +0.5**
comp=Z,17nm,0.8s
FUR Furstenfeldbru 148.90 348 *e*PKPbc **PKiKP 08 45 56.4 +0.1**
baz=15,slow=2.9
SESA Seetaler Alpe, 149.08 343 *i* PKP **PKPbc 08 45 56.1 0.0**
comp=Z,92nm,1.2s,SNR=19
SESA *e*PKP **PKPab 08 46 03.1 +0.3**
comp=Z,42nm,0.6s
BFO Black Forest 149.26 351 **PKPbc 08 45 56.2 -0.1**
BFO Black Forest 149.26 351 *e*PKPbc **PKiKP 08 45 57.0 -0.1**
baz=15,slow=2.9
BFO *e*PKPab **PKPab 08 46 03.5 +0.2**
baz=16,slow=3.9
LESA Schwarzleotal 149.29 345 *e*PKP **PKPdf 08 45 50.4 -1.0**
comp=Z,3.9nm,0.7s
LESA *e*PKP **PKPbc 08 45 56.5 +0.1**
comp=Z,22nm,1.3s
LESA *e*PKP **PKPab 08 46 03.9 +0.3**
comp=Z,9.9nm,0.6s
SOKA Soboth 149.34 342 *i* PKP **PKPbc 08 45 56.4 -0.2**
comp=Z,25nm,1.3s,SNR=11
AKAS Kas 149.37 312 **PKPbc 08 45 57.0 -0.1**
KBA Koelnbreinsper 149.44 344 *i* PKP **PKPbc 08 45 56.6 -0.4**
comp=Z,20nm,1.0s,SNR=8.5
KBA *e*PKP **PKPab 08 46 04.8 +0.5**
comp=Z,12nm,0.6s
WATA Walderalm 149.63 347 *i* PKP **PKPbc 08 45 57.4 0.0**
comp=Z,18nm,0.8s,SNR=6.1
WATA *i* PKP **PKPab 08 46 05.4 +0.4**
comp=Z,10nm,0.7s
OBKA Obir 149.63 342 *e*PKP **PKPbc 08 45 57.0 -0.3**
comp=Z,11nm,1.2s
OBKA *e*PKP **PKPab 08 46 04.6 -0.4**
comp=Z,7.6nm,0.8s
RETA Reutte 149.65 348 *i* PKP **PKPbc 08 45 57.5 +0.2**
comp=Z,6.2nm,0.5s,SNR=5.2
RETA *e*PKP **PKPab 08 46 05.3 +0.3**
comp=Z,18nm,1.2s
WTTA Wattenberg 149.68 346 *e*PKP **PKPdf 08 45 52.3 +0.1**
comp=Z,3.6nm,0.7s
WTTA *i* PKP **PKPbc 08 45 57.8 +0.3**
comp=Z,31nm,0.7s,SNR=10.0
WTTA *e*PKP **PKPab 08 46 05.2 -0.1**
comp=Z,37nm,1.0s
MOTA Moosalm 149.72 347 *i* PKP **PKPbc 08 45 57.7 +0.1**
comp=Z,23nm,0.9s,SNR=7.3
MYKA Terra Mystica 149.78 343 *i* PKP **PKPbc 08 45 57.1 -0.5**
comp=Z,14nm,0.6s,SNR=7.0
MYKA *e*PKP **PKPab 08 46 04.9 -0.7**
comp=Z,6.2nm,0.5s
SQTA Sankt Quirin 149.81 347 *i* PKP **PKPbc 08 45 58.0 +0.2**
comp=Z,23nm,0.7s,SNR=7.8
ABTA Abfaltersbach 149.96 345 *e*PKP **PKPdf 08 45 53.0 +0.6**
comp=Z,5.1nm,0.8s
ABTA *i* PKP **PKPbc 08 45 57.7 -0.4**
comp=Z,28nm,0.7s,SNR=11
DAVA Damuels 150.02 349 *i* PKP **PKiKP 08 45 58.8 -0.1**
comp=Z,35nm,1.1s,SNR=9.6
FETA Feichten 150.11 348 *e*PKP **PKPdf 08 45 53.4 +0.6**
comp=Z,6.2nm,0.8s
FETA *i* PKP **PKPbc 08 45 58.8 +0.3**
comp=Z,21nm,0.8s,SNR=6.9
BLY Banja Luka 150.33 337 ⇑P **PKiKP 08 45 59.6 +0.2**
DAVOX Davos/Dischmat 150.50 348 PKP **PKPdf 08 45 53.6 +0.2**
comp=Z,1.6nm,0.3s,baz=53,slow=5.1,SNR=4.1
DAVOX PKPbc **PKiKP 08 46 00.1 +0.2**
comp=Z,36nm,0.7s,baz=326,slow=1.3,SNR=36
TUE Stuetta 150.90 349 **PKPdf 08 45 54.3 +0.2**
BNI Bardonecchia 152.70 352 **PKPbc 08 46 04.4 +0.1**
PCAB Cabril 154.95 17 *e*PKPab **PKPbc 08 46 28.3 +0.7**
PBRG Braganca 155.20 15 *e*PKPab **PKPbc 08 46 29.1 +0.4**
POLO Lamas de Olo 155.33 17 *e*PKPab **PKPab 08 46 29.7 +0.3**
PVRL Vila Real 155.44 17 *e*PKPab **PKPab 08 46 30.4 +0.6**
MVO Monservo 155.73 16 *e*PKPab **PKPab 08 46 31.6 +0.6**
PVIS Viseu 155.91 18 *e*PKPab **PKPab 08 46 32.1 +0.3**
MTE Manteigas 156.30 18 *e*PKPab **PKPab 08 46 33.5 0.0**
PCAS Casmilo, Conde 156.32 20 *e*PKPab **PKPab 08 46 33.8 +0.2**
PSARD Sardoal 156.84 20 *e*PKPab **PKPab 08 46 36.1 +0.3**
PMTG Montargil 157.31 20 *e*PKPab **PKPab 08 46 37.4 -0.4**
PARRA Arraiolos 157.60 20 *e*PKPab **PKPab 08 46 39.0 -0.1**
MOE Montemor 157.76 21 *e*PKPab **PKPab 08 46 39.3 -0.5**
ESDC Sonseca Array 157.85 12 PKP **PKPdf 08 46 04.5 +0.9**
comp=Z,0.8nm,0.7s,baz=357,slow=3.0,SNR=4.6
ESDC PKPab **PKPab 08 46 40.5 +0.3**
comp=Z,3.3nm,0.7s,baz=332,slow=3.9,SNR=14
PBAR Barrancos 158.50 19 *e*PKPab **PKPab 08 46 43.9 +0.9**
PVAQ Vaqueiros 158.98 21 *e*PKPab **PKPab 08 46 45.7 +0.5**
KEST Kesra 161.07 340 PKPab **PKPab 08 46 54.6 +0.2**
comp=Z,4.9nm,0.8s,baz=90,slow=3.0,SNR=3.7
MD01 Midelt array s 164.10 20 **PKPdf 08 46 11.1 +0.6**
MD01 **PKPab 08 47 09.2 +1.2**
MD31 MD31 164.10 20 **PKPab 08 47 08.9 +1.0**
TORD Torodi Ar. Bea 175.18 180 PKP **PKPdf 08 46 16.5 -0.7**
comp=Z,1.6nm,1.1s,baz=189,slow=0.6,SNR=7.8

IDC 08 08:35:09.7±3.2, 53°.64N×87°.25E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=30.4km s-min=17.9km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**283**	I	I		08 44 00.0	
	baz=103,slow=312,SNR=0.9							
ZALV	**Zalesovo Beam**	**1.48**	**283**	Pg	Pn		08 35 35.4	-2.1
	0.5nm,0.3s,baz=101,slow=14,SNR=6.6							
ZALV				Lg	Lg		08 35 57.6	
	0.7nm,0.3s,baz=101,slow=29,SNR=4.5							
KURBB	**Kurchatov Arra**	**6.16**	**244**	Pn	Pn		08 36 42.0	0.0
	baz=62,slow=14,SNR=2.1							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.56**	**207**	Pn	Pn		08 37 03.2	+2.0
	0.1nm,0.3s,baz=25,slow=13,SNR=2.0							
	0.2nm,0.3s							

*IDC **08** 08:40:24.2±0.9, 3°.27S×80°.68W, h0km, mb3.7/8, mbtmp3.8/12, ML3.6/4, MS3.5/9, Error ellipse: s-maj=44.1km s-min=16.3km az=63.0*
*IGQ **08** 08:40:26.5±0.8, 3°S±2°×8°1W±°, h19km±6km, M4.3/17, Mjma4.3/17, MLv4.2/13, Ms(BB)4.3/11*
*RSNC **08** 08:40:29.1±1.0, 3°S±6°×8°1W±1°.3, h79km±48km, M4.2, mB5.1, mb4.3, ML3.6, Mw(mB)4.5*
*NEIC **08** 08:40:30.8±2.2, 3°.34S±0°.07×80°.7W±0°.1, h46km±7km, mb4.3/11, Error ellipse: s-maj=18.5km s-min=9.2km az=70.0*

ISC 08 08:40:27.7±2.4, 3°39S±0°.04×80°.95W±0°.07, h29km±17km, n102, σ1$29/105, mb3.8/10, MS3.6/5, 12C-3D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ISPG	**Isla Puna-Puer**	**0.89**	**62**	⇑P		**Pn**	**08 40 44.1**	**-0.2**
ISPG				S		**Sb**	**08 40 58.1**	**+2.0**
MORR	**Playas El Morr**	**0.96**	**39**	⇑P		Pn	08 40 43.9	-1.4
MORR				S		**Sn**	**08 40 57.1**	**-0.9**
ACH2	**Ecuador-Machal**	**1.15**	**84**	P		Pn	08 40 45.2	-2.6
ACH2				S		**Sn**	**08 40 59.3**	**-3.2**
SALI	**Salinas**	**1.20**	**358**	P		**Pn**	**08 40 48.0**	**-0.5**
SALI				S		**Sn**	**08 41 00.5**	**-3.3**
AMCR	**Ecuador-Macara**	**1.39**	**134**	P		**Pn**	**08 40 49.7**	**-1.5**
AMCR				S		**Sn**	**08 41 07.6**	**-1.1**
MCRA	**Macar, Loja**	**1.39**	**134**	⇑P		Pn	08 40 49.5	-1.7
MCRA				S		**Sn**	**08 41 06.9**	**-1.8**
AC07	**Ecuador-Guayaq**	**1.56**	**38**	P		**Pn**	**08 40 52.7**	**-0.9**
PPLP	**Puerto Lpez**	**1.84**	**5**	P		**Pn**	**08 40 56.7**	**-0.7**
ACUE	**Ecuador-Cuenca**	**2.04**	**77**	P		**Pn**	**08 41 01.0**	**+0.5**
JIPI	**JIPIJAPA**	**2.05**	**11**	P		**Pn**	**08 41 00.4**	**+0.1**
AZAM	**Ecuador-Zamora**	**2.10**	**109**	P		**Pn**	**08 41 02.2**	**+1.2**
ISPT	**Isla de la Pla**	**2.12**	**357**	P		**Pn**	**08 41 00.7**	**-0.4**
ZUMB	**Zumba**	**2.32**	**129**	⇑P		**Pn**	**08 41 04.4**	**+0.3**
BOSC	**San Juan Bosco**	**2.46**	**85**	P		**Pn**	**08 41 06.2**	**+0.2**
JSCH	**Cashca Tororas**	**2.58**	**50**	P		**Pn**	**08 41 05.8**	**-2.1**
AGRD	**Ecuador-Guaran**	**2.65**	**47**	P		**Pn**	**08 41 07.3**	**-1.6**
PECV	**Mancha de Ca P**	**2.75**	**19**	P		**Pn**	**08 41 08.3**	**-1.5**
CHSH	**Refugio Sur-Vo**	**2.81**	**48**	P		**Pn**	**08 41 10.7**	**-0.4**
TAMH	**Tambohuasha Ch**	**2.84**	**50**	P		**Pn**	**08 41 10.3**	**-1.2**
PORT	**Chimborazo Vol**	**2.90**	**49**	P		**Pn**	**08 41 12.1**	**-0.3**
IGUA	**Igualata**	**2.98**	**51**	P		**Pn**	**08 41 12.7**	**-0.9**
ARRY	**Arrayan**	**3.12**	**53**	P		**Pn**	**08 41 15.3**	**0.0**
BPAT	**Tungurahua Vol**	**3.14**	**53**	P		**Pn**	**08 41 15.4**	**-0.2**
JUI6	**Juive**	**3.16**	**52**	P		**Pn**	**08 41 16.2**	**+0.5**
PIS1	**Pisayambo**	**3.45**	**48**	P		**Pn**	**08 41 20.9**	**+0.9**
ILLI	**Illinizas Sur**	**3.46**	**40**	⇑P		**Pn**	**08 41 20.3**	**+0.2**
PUYO	**Puyo, Santa Ro**	**3.48**	**57**	P		**Pn**	**08 41 22.0**	**+2.0**
SRAM	**San Ramn-Vol**	**3.54**	**42**	P		**Pn**	**08 41 21.9**	**+0.7**
BRRN	**Barrancas-Volc**	**3.58**	**44**	P		**Pn**	**08 41 22.8**	**+1.0**
PIAT	**Ana Tenorio**	**3.59**	**49**	P		**Pn**	**08 41 22.4**	**+0.7**
TAIS	**Taisha**	**3.59**	**74**	P		**Pn**	**08 41 21.2**	**-0.2**
SLOR	**San Lorenzo -**	**3.60**	**43**			**Pn**	**08 41 23.3**	**+1.2**
SLOR	**San Lorenzo -**	**3.60**	**43**	P		**Pn**	**08 41 23.4**	**+1.3**
VCES	**Cotopaxi**	**3.63**	**45**	⇑P		**Pn**	**08 41 23.2**	**+0.8**
BMOR	**Cotopaxi Volca**	**3.63**	**43**	P		**Pn**	**08 41 23.7**	**+1.3**
BNAS	**Cotopaxi Volca**	**3.66**	**42**	P		**Pn**	**08 41 23.6**	**+0.8**
SUCR	**Mariscal Sucre**	**3.67**	**42**	⇑P		**Pn**	**08 41 24.5**	**+1.5**
NAS2	**Nasa**	**3.69**	**42**	⇓P		**Pn**	**08 41 24.6**	**+1.3**
BREF	**Cotopaxi Volca**	**3.69**	**43**	P		**Pn**	**08 41 24.9**	**+1.5**
BTAM	**Cotopaxi Volca**	**3.71**	**43**	⇑P		**Pn**	**08 41 24.6**	**+1.0**
BVC2	**Cotopaxi Volca**	**3.72**	**43**	⇑P		**Pn**	**08 41 24.7**	**+1.1**
TAMB	**Tambo**	**3.72**	**44**	⇑P		**Pn**	**08 41 25.0**	**+1.3**
VC1	**Cotopaxi 1**	**3.73**	**43**	⇑P		**Pn**	**08 41 25.3**	**+1.4**
PKYU	**Pakayacu**	**3.77**	**63**	P		**Pn**	**08 41 23.9**	**0.0**
PITA	**Cotopaxi Volc**	**3.77**	**42**	P		**Pn**	**08 41 26.0**	**+1.6**
GGPT	**Toaza - Volcan**	**3.91**	**37**	P		**Pn**	**08 41 26.7**	**+0.4**
BV15	**Puerto Quito-O**	**3.93**	**26**	P		**Pn**	**08 41 24.7**	**-1.4**
JUA2	**San Juan 2**	**3.93**	**37**	P		**Pn**	**08 41 27.0**	**+0.5**
ANTG	**Antisana-Guama**	**3.94**	**43**	⇓P		**Pn**	**08 41 28.2**	**+1.5**
TERV	**Terraza Guagua**	**3.96**	**36**	⇑P		**Pn**	**08 41 27.5**	**+0.4**
ANTS	**Antisana-Sarah**	**4.00**	**44**	P		**Pn**	**08 41 27.8**	**+0.2**
YANA	**Yana**	**4.03**	**36**	P		**Pn**	**08 41 28.3**	**+0.4**
ANTI	**Antisana**	**4.04**	**44**	P		**Pn**	**08 41 28.7**	**+0.5**
PULU	**Pululahua**	**4.18**	**36**	P		**Pn**	**08 41 30.5**	**+0.6**
PAC1	**Pacto, Paraso**	**4.22**	**31**	P		**Pn**	**08 41 29.4**	**-0.9**
PAC1	**Pacto, Paraso**	**4.22**	**31**	P		**Pn**	**08 41 29.1**	**-1.2**
PAC1				S		**Sn**	**08 42 18.6**	**-0.2**
OTAV	**Otavalo**	**4.38**	**35**			**Pn**	**08 41 32.3**	**-0.5**
CUSE	**Cuicocha Este**	**4.47**	**35**	P		**Pn**	**08 41 34.2**	**+0.3**
CUSE				S		**Sn**	**08 42 25.2**	**0.0**
CAYR	**Refugio Cayamb**	**4.48**	**41**	P		**Pn**	**08 41 35.1**	**+0.8**
CUIC	**Cuicocha-Domo**	**4.49**	**35**	⇓P		**Pn**	**08 41 35.0**	**+0.8**
ATAH	**Atahualpa**	**4.51**	**146**	Pn		**Pn**	**08 41 34.9**	**+0.5**
	3.4nm,0.3s,baz=336,slow=7.3,SNR=22							
ATAH				Sn		**Sn**	**08 42 27.6**	**+1.5**
	22nm,0.3s,baz=357,slow=17,SNR=7.3							
ATAH				LR		LR	08 43 25.7	
	comp=Z,455nm,18.1s,baz=301,slow=41							
	39nm,0.8s							
URCU	**Urcuqui**	**4.66**	**35**	P		**Pn**	**08 41 38.1**	**+1.6**
CASC	**Dorado de Casc**	**5.03**	**46**	P		**Pn**	**08 41 41.1**	**-0.3**
LNGL	**El Angel-Carch**	**5.05**	**36**	P		**Pn**	**08 41 42.9**	**+0.9**
ECEN	**Cerro Negro**	**5.14**	**35**	P		**Pn**	**08 41 45.5**	**+2.2**
CHL2	**Volcn Chiles**	**5.15**	**36**	P		**Pn**	**08 41 45.8**	**+2.4**
TULM	**Tulcn-Chalpat**	**5.16**	**38**	P		**Pn**	**08 41 44.1**	**+0.6**
	737nm79nm,0.9s							
CMBC	**Cumbal**	**5.32**	**36**	P		**Pn**	**08 41 48.8**	**+3.2**
BBAC	**Balboa, Cauca**	**6.53**	**35**	P		**Pn**	**08 42 03.4**	**+1.3**
BBAC	**Balboa, Cauca**	**6.53**	**35**	P		**Pn**	**08 42 02.0**	**0.0**
	25nm,0.7s							
BBAC				S		**Sn**	**08 43 16.1**	**+0.5**
	25nm,0.7s							
PTLC	**Puerto Leguiza**	**7.09**	**60**	P		Pn	08 42 05.2	-4.4
	520nm31nm,1.0s							
FLOC	**Florencia**	**7.24**	**47**	P		**Pn**	**08 42 09.6**	**-2.1**
	23nm,1.1s							
POPC	**Popayan, Colom**	**7.28**	**36**	P		**Pn**	**08 42 11.6**	**-0.7**
	7.1nm,0.7s							
POPC				S		**Sn**	**08 43 33.2**	**-1.0**
	7.1nm,0.7s							
JAMC	**Jamundi, Valle**	**7.83**	**33**	P		**Pn**	**08 42 19.3**	**-0.6**
CZSB	**Cruzeiro do Su**	**9.27**	**118**			**Pn**	**08 42 38.3**	**-1.2**
NNA	**Nana**	**9.46**	**155**	Pn		**Pn**	**08 42 43.2**	**+1.0**
	1.9nm,0.3s,baz=305,slow=2.3,SNR=2.5							
NNA				Sn		**Sn**	**08 44 30.3**	**+2.7**
	1.6nm,0.3s,baz=280,slow=7.8,SNR=1.9							
	4.5nm,0.3s							
JTS	**Las Juntas de**	**14.16**	**344**	LR		LR	08 48 17.7	
	comp=Z,92nm,20.0s,baz=166,slow=34							
SDV	**Santo Domingo**	**15.95**	**40**	Pn		**Pn**	**08 44 07.2**	**-3.3**
	0.6nm,0.3s,baz=188,slow=12,SNR=3.6							
SDV				LR		LR	08 51 18.6	
	comp=Z,136nm,21.3s,baz=242,slow=42							
	3.1nm,0.4s							
BOAB	**BOACO BROADBAN**	**16.42**	**343**	Pn		**Pn**	**08 44 14.5**	**-1.7**
BOAB				IAmb		IAmb	08 44 16.2	
	comp=Z,38nm,1.3s							
LPAZ	**La Paz**	**17.98**	**136**	P		**Pn**	**08 44 34.8**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=332,slow=19,SNR=5.7							
LPAZ				LR		LR	08 52 48.2	
	comp=Z,248nm,20.2s,baz=304,slow=42							
	comp=Z,1.4nm,0.7s							
LPAZ	**La Paz**	**17.98**	**136**	P		**Pn**	**08 44 34.8**	**-1.5**
PB18	**Visviri**	**18.05**	**142**			**Pn**	**08 44 35.1**	**-1.9**
PB18				IAmb		IAmb	08 44 53.3	
	comp=Z,28nm,1.3s							
PB16	**IPOC Station P**	**18.61**	**144**	P		**P**	**08 44 43.8**	**+0.4**
GO01	**Chusmiza**	**19.84**	**146**	P		**P**	**08 44 55.2**	**-1.6**
GO01				IAmb		IAmb	08 45 18.2	
	comp=Z,15nm,1.2s							
PB07	**IPOC Station P**	**21.16**	**150**	P		**P**	**08 45 11.0**	**+0.1**

CHSH	**Refugio Sur-Vo**	**2.80**	**48**	P		Pn	08 51 47.0	-0.7
TAMH	**Tambohuasha Ch**	**2.83**	**50**	P		Pn	08 51 47.2	-0.8
PORT	**Chimborazo Vol**	**2.89**	**49**	P		Pn	08 51 48.6	-0.3
SANGA	**Volcan Sangay**	**2.89**	**63**	P		Pn	08 51 49.7	+0.8
IGUA	**Igualata**	**2.98**	**51**	⇑P		Pn	08 51 49.5	-0.6
ARRY	**Arrayan**	**3.11**	**53**	P		Pn	08 51 51.2	-0.6
BPAT	**Tungurahua Vol**	**3.13**	**53**	P		Pn	08 51 52.0	-0.1
JUI6	**Juive**	**3.15**	**52**	P		Pn	08 51 52.7	+0.4
PIS1	**Pisayambo**	**3.45**	**48**	⇓P		Pn	08 51 57.8	+1.2
ILLI	**Illinizas Sur**	**3.46**	**40**	⇓P		Pn	08 51 56.8	+0.1
SRAM	**San Ramn-Vol**	**3.54**	**42**	P		Pn	08 51 58.5	+0.8
TAIS	**Taisha**	**3.58**	**74**	P		Pn	08 51 57.7	-0.3
SLOR	**San Lorenzo -**	**3.60**	**43**	P		Pn	08 51 59.7	+1.1
VCES	**Cotopaxi**	**3.62**	**45**	P		Pn	08 52 00.0	+1.1
BMOR	**Cotopaxi Volca**	**3.62**	**43**	P		Pn	08 52 00.1	+1.0
BNAS	**Cotopaxi Volca**	**3.65**	**42**	⇓P		Pn	08 51 59.9	+0.6
SUCR	**Mariscal Sucre**	**3.67**	**42**	P		Pn	08 52 01.0	+1.5
NAS2	**Nasa**	**3.68**	**42**	⇑P		Pn	08 52 01.2	+1.4
BREF	**Cotopaxi Volca**	**3.68**	**43**	⇑P		Pn	08 52 01.0	+1.1
BTAM	**Cotopaxi Volca**	**3.71**	**43**	⇑P		Pn	08 52 01.0	+0.8
BVC2	**Cotopaxi Volca**	**3.71**	**43**	⇑P		Pn	08 52 01.2	+1.0
TAMB	**Tambo**	**3.71**	**44**	⇑P		Pn	08 52 01.3	+1.0
VC1	**Cotopaxi 1**	**3.73**	**43**	⇑P		Pn	08 52 01.6	+1.1
PKYU	**Pakayacu**	**3.77**	**63**	P		Pn	08 52 00.4	-0.1
PITA	**Cotopaxi Volc**	**3.77**	**42**	⇑P		Pn	08 52 02.3	+1.4
TOMA	**Boca Toma-Volc**	**3.81**	**41**	P		Pn	08 52 02.3	+0.8
GGPT	**Toaza - Volcan**	**3.91**	**37**	⇓P		Pn	08 52 03.1	+0.3
JUA2	**San Juan 2**	**3.92**	**37**	P		Pn	08 52 03.8	+0.7
ANTM	**Antisana-La Mi**	**3.93**	**44**	⇓P		Pn	08 52 04.7	+1.6
ANTG	**Antisana-Guama**	**3.93**	**43**	P		Pn	08 52 04.3	+1.1
TERV	**Terraza Guagua**	**3.96**	**36**	⇓P		Pn	08 52 04.1	+0.5
ANTS	**Antisana-Sarah**	**3.99**	**44**	⇓P		Pn	08 52 04.7	+0.6
ANTI	**Antisana**	**4.03**	**44**	⇓P		Pn	08 52 05.4	+0.8
PULU	**Pululahua**	**4.17**	**36**	P		Pn	08 52 07.3	+0.9
PAC1	**Pacto, Paraso**	**4.22**	**31**	P		Pn	08 52 05.6	-1.3
CUSE	**Cuicocha Este**	**4.46**	**35**	P		Pn	08 52 11.0	+0.6
CAYR	**Refugio Cayamb**	**4.48**	**41**	P		Pn	08 52 11.6	+0.7
CUIC	**Cuicocha-Domo**	**4.48**	**35**	⇓P		Pn	08 52 11.3	+0.6
IMBA	**Imbabura, San**	**4.56**	**37**	P		Pn	08 52 14.9	+3.1
URCU	**Urcuqui**	**4.65**	**35**	P		Pn	08 52 14.4	+1.3
LNGL	**El Angel-Carch**	**5.04**	**36**	P		Pn	08 52 19.8	+1.3
ECEN	**Cerro Negro**	**5.13**	**35**	P		Pn	08 52 22.3	+2.5
CHL2	**Volcn Chiles**	**5.14**	**36**	P		Pn	08 52 22.6	+2.7

*DJA **08** 08:58:17.2±0.8,2°S±8°×13°9E±°, h10km,M4.6/5,mb4.8/1, MLv4.4/5*

*IDC **08** 08:58:18.5±1.8,2°44S×139°47E, h0km, mb3.4/3, mbtmp3.5/4, ML3.6/1, MS3.3/3, Error ellipse: s-maj=33.6km s-min=14.3km az=167.0*

ISC 08 08:58:22.3±1.5, 2°3S±0°2×139°49E±0°10, h27km, n11, σ1§66/9, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.73**	**111**	P	**Pn**	**08 58 37.3**	**+0.5**
GENI				S	**Sn**	**08 58 47.4**	**+0.4**
JAY	**Jayapura**	**1.23**	**98**	Pg	**Pn**	**08 58 44.0**	**+0.2**
	29nm,0.3s,baz=243,slow=14,SNR=99						
JAY				Lg	Lg	08 58 57.3	
	150nm,0.3s,baz=119,slow=19,SNR=21						
JAY	**Jayapura**	**1.23**	**98**	P	**Pn**	**08 58 43.7**	**-0.1**
WAMI	**Wamena**	**1.73**	**207**	P	**Pb**	**08 58 55.4**	**+2.0**
MWPI	**Manokwari, Pap**	**5.62**	**284**	P	Pn	08 59 37.2	-7.0
GUMO	**Guam**	**16.70**	**19**	LR	LR	09 08 41.4	
	comp=Z,24nm,19.0s,baz=208,slow=37						
WRA	**Warramunga Arr**	**18.21**	**196**	P	**Pn**	**09 02 30.6**	**-2.8**
	0.2nm,0.3s,baz=10,slow=13,SNR=11 1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.74**	**220**	P	**P**	**09 03 01.6**	**+0.6**
	2.4nm,0.9s,baz=51,slow=13,SNR=4.4						
FITZ				LR	LR	09 12 49.3	
	comp=Z,94nm,18.7s,baz=8.5,slow=42 2.4nm,0.9s						
ASAR	**Alice Springs**	**21.89**	**194**	P	**P**	**09 03 11.4**	**-2.0**
	1.0nm,0.7s,baz=18,slow=10,SNR=21 1.0nm,0.7s						
JHJ	**Hachijo jima 2**	**35.26**	**0**	LR	LR	09 16 44.7	
	comp=Z,172nm,21.3s,baz=194,slow=31						
ILAR	**Eielson Array**	**85.17**	**24**	P	**P**	**09 10 56.3**	**+0.4**
	0.2nm,0.8s,baz=244,slow=3.5,SNR=4.4 0.2nm,0.8s						

*BJI **08** 09:08:19.5,50°30S×114°39E, h10km, mB5.5/22, mb5.1/51, Ms4.8/22, Ms7.4 5/27*

*IDC **08** 09:08:22.5±0.5,49°81S×114°40E, h0km, mb4.6/16, mbtmp4.6/17, ML2.3/1, MS4.2/39, Error ellipse: s-maj=23.7km s-min=13.0km az=109.0*

*GFZ **08** 09:08:24.6,49°78S×114°33E, h12km, Mw5.0/14, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr3.75; Mθθ-0.77; Mφφ-2.98; Mrθ-0.62; Mθφ-0.69; Mφr0.10; Fault plane solution: M₀3.55291×10¹⁶ NP1: φs203.91758°, δ46.17973°, λ101.14678°. NP2:φs8.03248°, δ44.93536°, λ78.61006°. Principal axes: T 3.8373, Plg81.9570°, Azm191.6098°; N -0.6619, Plg8.0181°, Azm16.1487°; P -3.1754, Plg0.6282°, Azm286.0602°;*

*GFZ **08** 09:08:24.9±0.2,50°S×11°4E±°, h10km, M5.2/24, mb4.9/24*

*NEIC **08** 09:08:24.2±1.2,49°80S±0°02×114°4E±0°2, h10km±1km, mb5.3/48, Mww4.9/10, Error ellipse: s-maj=20.2km s-min=3.4km az=274.0*

*GCMT **08** 09:08:27.2±0.2,49°83S±0°02×114°34E±0°02, h12km, MW5.0/120, Moment Tensor Solution. s49,c68; s120,c190; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.90±.08; Mθθ-0.44±.07; Mφφ-3.46±.07; Mrθ1.03±.27; Mθφ-1.54±.06; Mφr1.26±.23; Best double couple: M₀4.32300×10¹⁶ NP1:φs196.00000°, δ35.00000°, λ79.00000°. NP2:φs29.00000°, δ56.00000°, λ97.00000°. Principal axes: T 4.2440, Plg78.0000°, Azm324.0000°; N 0.1580, Plg6.0000°, Azm205.0000°; P -4.4020, Plg11.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 09:08:25.1±0.3, 49°93S±0°05×114°61E±0°07, h17km, n227, σ1§72/206, mb5.1/64, MS4.4/54, 2C-6D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.02**	**358**	T	T	09 26 58.7	
	baz=179,slow=74,SNR=521						
H01W1	**Cape Leeuwin H**	**15.03**	**359**	T	T	09 26 57.5	
	baz=179,slow=74,SNR=478						
H01W3	**Cape Leeuwin H**	**15.04**	**359**	T	T	09 26 58.2	
	baz=179,slow=74,SNR=567						
CASY	**Casey**	**16.54**	**186**		**Pn**	**09 12 15.3**	**-0.6**
CASY	**Casey**	**16.54**	**186**	P	**Pn**	**09 12 16.6**	**+0.7**
NWAO	**Narrogin (SRO)**	**17.09**	**8**	P	**Pn**	**09 12 21.4**	**-1.8**
	0.6nm,0.3s,baz=215,slow=16,SNR=4.6						
NWAO				LR	LR	09 16 59.1	
	comp=Z,872nm,21.9s,baz=142,slow=30 41nm,1.2s						
NWAO	**Narrogin (SRO)**	**17.09**	**8**	P	**P**	**09 12 26.0**	**+1.2**
NWAO	**Narrogin (SRO)**	**17.09**	**8**	P	**P**	**09 12 26.4**	**+1.6**
NWAO	**Narrogin (SRO)**	**17.09**	**8**		**Pn**	**09 12 20.0**	**-3.2**
AUKUL	**Kulin High Sch**	**17.44**	**10**	P	**P**	**09 12 31.8**	**+3.1**
MUN	**Mundaring**	**17.97**	**4**	P	**P**	**09 12 36.4**	**+1.9**
BLDU	**Ballidu**	**19.35**	**5**	P	**Pn**	**09 12 51.8**	**+0.9**
BLDU	**Ballidu**	**19.35**	**5**	P	**P**	**09 12 48.4**	**-1.3**
MORW	**Morawa**	**20.86**	**4**	P	**P**	**09 13 05.1**	**-1.0**
MORW	**Morawa**	**20.86**	**4**		**P**	**09 13 02.4**	**-3.7**
MORW				IAmb	IAmb	09 13 08.7	
	comp=Z,143nm,1.4s						
MORW	**Morawa**	**20.86**	**4**	P	**P**	**09 13 05.1**	**-1.0**
FORT	**Forrest**	**21.64**	**33**		**P**	**09 13 12.0**	**-2.4**
MGBR	**Mount Gambier**	**22.22**	**67**	P	**P**	**09 13 20.5**	**-0.2**
MGBR				IAmb	IAmb	09 13 29.3	
	comp=Z,193nm,1.9s						
AUMAR	**Marden Senior**	**23.11**	**59**	P	P	09 13 38.0	+7.9
BBOO	**Buckleboo**	**23.35**	**51**	P	P	09 13 40.4	+7.9
BBOO	**Buckleboo**	**23.35**	**51**		**P**	**09 13 31.2**	**-1.4**
BBOO				IAmb	IAmb	09 13 36.0	
	comp=Z,272nm,2.0s						
BBOO	**Buckleboo**	**23.35**	**51**	P	**P**	**09 13 32.0**	**-0.5**
MEEK	**Meekatharra**	**23.45**	**9**	P	**P**	**09 13 34.1**	**+0.5**
MEEK	**Meekatharra**	**23.45**	**9**	P	**P**	**09 13 33.6**	**0.0**
TAU	**Tasmania Unive**	**23.48**	**85**	P	**P**	**09 13 38.0**	**+4.3**
TAU	**Tasmania Unive**	**23.48**	**85**		**P**	**09 13 34.4**	**+0.7**
TAU	**Tasmania Unive**	**23.48**	**85**	P	**P**	**09 13 36.9**	**+3.1**
AUTAR	**Taroona High S**	**23.49**	**85**	P	**P**	**09 13 39.0**	**+5.2**
MOO	**Moorlands**	**23.62**	**84**	P	**P**	**09 13 38.2**	**+3.0**
MOO	**Moorlands**	**23.62**	**84**	P	**P**	**09 13 37.9**	**+2.8**
CORO	**Coronation Par**	**24.10**	**82**	P	**P**	**09 13 44.2**	**+4.6**
HTT	**Hallett**	**24.36**	**57**	P	**P**	**09 13 48.4**	**+6.2**
AUJCS	**Jamestown Cent**	**24.37**	**56**	P	**P**	**09 13 49.4**	**+7.2**
GLAD	**Gladstone**	**24.90**	**82**	P	**P**	**09 13 52.0**	**+5.1**
TOO	**Toolangi**	**25.30**	**73**	P	**P**	**09 13 51.2**	**+0.5**
STKA	**Stephens Creek**	**27.00**	**58**	P	**P**	**09 14 06.2**	**+0.2**
	comp=Z,5.2nm,0.9s,baz=203,slow=9.7,SNR=5.5						
STKA				LR	LR	09 22 49.2	
	comp=Z,819nm,21.9s,baz=213,slow=32 comp=Z,5.2nm,0.9s						
CAN	**Canberra**	**28.91**	**73**	P	**P**	**09 14 23.5**	**+0.3**
CAN				IAmb	IAmb	09 14 33.3	
	comp=Z,104nm,1.9s						
CMSA	**Cobar Meteorol**	**29.56**	**63**	P	P	09 14 35.4	+6.5
CMSA	**Cobar Meteorol**	**29.56**	**63**	P	**P**	**09 14 30.8**	**+1.9**
INKA	**Innaminka**	**29.82**	**52**		**P**	**09 14 31.1**	**-0.1**
AUALC	**St Philip's Co**	**30.21**	**37**	P	**P**	**09 14 39.5**	**+4.8**
ASAR	**Alice Springs**	**30.24**	**37**	P	**P**	**09 14 35.2**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=212,slow=8.2,SNR=20						
ASAR				PcP	**PcP**	**09 17 34.7**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=190,slow=2.5,SNR=5.6						
ASAR				LR	LR	09 25 07.3	
	comp=Z,382nm,21.6s,baz=204,slow=33 comp=Z,3.5nm,0.8s						
AS31	**Alice Springs**	**30.25**	**37**	P	**P**	**09 14 35.2**	**+0.2**
AS01	**Alice Springs**	**30.26**	**37**	P	**P**	**09 14 39.7**	**+4.5**
MAW	**Mawson**	**30.89**	**216**	P	**P**	**09 14 40.2**	**0.0**
	comp=Z,18nm,0.9s,baz=84,slow=10,SNR=17 comp=Z,18nm,0.9s						
MAW	**Mawson**	**30.89**	**216**		**P**	**09 14 40.6**	**+0.4**
VNDA	**Vanda**	**32.84**	**163**	P	**P**	**09 14 58.6**	**+1.4**
	comp=Z,3.9nm,0.9s,baz=294,slow=8.8,SNR=17						
VNDA				LR	LR	09 27 39.3	
	comp=Z,938nm,18.4s,baz=307,slow=35 comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**32.84**	**163**	P	**P**	**09 14 58.8**	**+1.6**
VNDA				IAmb	IAmb	09 15 06.8	
	comp=Z,32nm,1.1s						
FITZ	**Fitzroy Crossi**	**32.97**	**20**	P	**P**	**09 14 58.9**	**0.0**
	comp=Z,16nm,1.1s,baz=192,slow=13,SNR=6.3						
FITZ				LR	LR	09 28 31.8	
	comp=Z,249nm,18.4s,baz=202,slow=37 comp=Z,16nm,1.1s						
FITZ	**Fitzroy Crossi**	**32.97**	**20**	P	**P**	**09 14 58.1**	**-0.8**
WRA	**Warramunga Arr**	**33.79**	**35**	P	**P**	**09 15 05.2**	**-1.0**
	comp=Z,16nm,1.1s,baz=201,slow=8.2,SNR=25						
WRA				PcP	**PcP**	**09 17 44.7**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=217,slow=2.8,SNR=4.9 comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**33.79**	**35**	P	**P**	**09 15 06.1**	**0.0**
WRAB	**Tennant Creek**	**33.80**	**35**	P	**P**	**09 15 05.7**	**-0.5**
WRAB				IAmb	IAmb	09 15 13.3	
	comp=Z,51nm,1.2s						
WRAB	**Tennant Creek**	**33.80**	**35**	P	**P**	**09 15 06.7**	**+0.5**
WR8	**Warramunga Arr**	**33.84**	**35**	P	**P**	**09 15 05.9**	**-0.6**
WR8				IAmb	IAmb	09 15 13.5	
	comp=Z,50nm,1.2s						
ARMA	**Armidale**	**33.88**	**69**	P	**P**	**09 15 08.1**	**+1.1**
ARMA				IAmb	IAmb	09 15 56.9	
	comp=Z,61nm,1.8s						
SBA	**Scott Base**	**33.93**	**163**	P	**P**	**09 15 09.3**	**+2.5**
SBA				IAmb	IAmb	09 15 29.9	
	comp=Z,66nm,1.6s						
WB0	**Warramunga Arr**	**33.97**	**35**	P	**P**	**09 15 06.8**	**-0.9**
WB0				IAmb	IAmb	09 15 14.6	
	comp=Z,37nm,1.1s						
QIS	**Mount Isa**	**35.38**	**43**	P	**P**	**09 15 20.4**	**+0.5**
RPZ	**Rata Peaks**	**38.32**	**103**	LR	LR	09 28 19.7	
	comp=Z,56nm,19.5s,baz=234,slow=31						
CTA	**Charters Tower**	**38.95**	**52**	LR	LR	09 31 30.9	
	comp=Z,665nm,18.8s,baz=208,slow=36						
CTAO	**Charters Tower**	**38.95**	**52**		**P**	**09 15 50.3**	**+0.1**
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**09 16 01.4**	**+1.1**
	comp=Z,4.0nm,0.8s,baz=16,slow=4.6,SNR=26						
QSPA				LR	LR	09 32 09.2	
	comp=Z,762nm,18.6s,baz=336,slow=35 comp=Z,4.0nm,0.8s						
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**09 16 01.1**	**+0.8**
QSPA				IAmb	IAmb	09 16 09.4	
	comp=Z,106nm,1.6s						
BATI	**Baumata**	**40.30**	**14**	LR	LR	09 31 01.9	
	comp=Z,295nm,21.3s,baz=188,slow=34						
SOEI	**Soe**	**40.84**	**15**	P	**P**	**09 16 05.2**	**-0.8**
SOEI				IAmb	IAmb	09 16 21.6	
	comp=Z,72nm,1.2s						
DBNI	**Kabupaten Domp**	**41.41**	**6**	P	**P**	**09 16 11.2**	**+0.7**
	comp=Z,30nm,2.0s						
SNJI	**Sawahan-Nganju**	**42.07**	**356**	P	**P**	**09 16 16.9**	**+0.7**
	comp=Z,72nm,2.2s						
LEM	**Lembang**	**43.35**	**350**	LR	LR	09 31 34.9	
	comp=Z,513nm,19.8s,baz=210,slow=32						
DBJI	**Dramaga**	**43.73**	**349**	P	**P**	**09 16 31.4**	**+2.0**
CGJI	**Cibinong**	**43.81**	**347**	P	**P**	**09 16 31.8**	**+1.8**
ELIB	**Princess Elisa**	**43.90**	**207**	*d*P	**P**	**09 16 30.8**	**+0.5**
	comp=Z,14nm,1.0s						
KAPI	**Kappang**	**44.97**	**7**	P	**P**	**09 16 39.6**	**+0.3**
	comp=Z,6.1nm,0.3s,baz=200,slow=8.9,SNR=4.1						
KAPI				LR	LR	09 36 24.5	
	comp=Z,219nm,18.1s,baz=198,slow=38 comp=Z,6.1nm,0.3s						
KAPI	**Kappang**	**44.97**	**7**	P	**P**	**09 16 37.7**	**-1.6**
URZ	**Urewera**	**45.13**	**100**	LR	LR	09 33 24.4	
	comp=Z,1µm,18.7s,baz=217,slow=33						
KLSI		**45.84**	**346**	P	**P**	**09 16 47.3**	**+1.0**
SPSI	**Sidrap Palu**	**46.01**	**7**	P	**P**	**09 16 49.0**	**+1.5**
MDSI	**Maura Dua**	**46.13**	**346**	P	**P**	**09 16 49.0**	**+0.5**
PMG	**Port Moresby**	**48.59**	**45**	LR	LR	09 37 17.5	
	comp=Z,423nm,18.0s,baz=214,slow=36						
KOUNC	**Koumac, New Ca**	**48.84**	**72**	P	**P**	**09 17 10.1**	**+0.6**
DZM	**Mont Dzumac**	**49.04**	**75**	P	**P**	**09 17 11.8**	**+0.6**
	comp=Z,12nm,1.1s,baz=205,slow=11,SNR=3.4 comp=Z,12nm,1.1s						
TROLL	**Troll, Antarti**	**49.48**	**202**	⇓P	**P**	**09 17 14.8**	**+0.7**
	comp=Z,280nm,0.8s						
SISI	**Saibi**	**50.20**	**340**	P	**P**	**09 17 21.1**	**+1.2**
	comp=Z,76nm,1.7s						
SIJI	**Sorong**	**50.90**	**22**	LR	LR	09 38 30.3	
	comp=Z,50nm,21.3s,baz=146,slow=36						
SNAA	**Sanae**	**50.98**	**201**	⇓P	**P**	**09 17 26.1**	**+0.8**
	comp=Z,237nm,1.1s						
SNAA	**Sanae**	**50.98**	**201**	P	**P**	**09 17 25.6**	**+0.3**
	comp=Z,5.8nm,0.8s,baz=139,slow=10,SNR=18						
SNAA				LR	LR	09 37 30.1	
	comp=Z,191nm,18.0s,baz=106,slow=34 comp=Z,5.8nm,0.8s						
SNAA	**Sanae**	**50.98**	**201**		**P**	**09 17 25.7**	**+0.4**
SNAA				IAmb	IAmb	09 17 33.7	
	comp=Z,70nm,1.4s						
SNAA	**Sanae**	**50.98**	**201**	P	**P**	**09 17 26.4**	**+1.0**
BELA	**Belgrano 2**	**51.07**	**188**	P	**P**	**09 17 26.1**	**+0.3**
BELA				IAmb	IAmb	09 17 33.8	
	comp=Z,57nm,1.4s						
TOLI2	**Tolitoli**	**51.12**	**8**	P	**P**	**09 17 25.4**	**-1.4**
TOLI2				IAmb	IAmb	09 17 33.4	
	comp=Z,63nm,1.5s						
TOLI2	**Tolitoli**	**51.12**	**8**	P	**P**	**09 17 25.8**	**-1.0**
MNSI	**Mandailing Nat**	**52.15**	**341**	P	**P**	**09 17 35.2**	**+0.6**
JAY	**Jayapura**	**52.18**	**34**	LR	LR	09 39 32.6	
	comp=Z,228nm,20.0s,baz=204,slow=36						
SBUM	**Sibu**	**52.21**	**357**	P	**P**	**09 17 34.5**	**-0.5**
SBUM				IAmb	IAmb	09 17 42.8	
	comp=Z,53nm,1.5s						
SBUM	**Sibu**	**52.21**	**357**	P	**P**	**09 17 34.9**	**-0.1**
	comp=Z,637nmcomp=Z,25nm,1.9s						
SBUM	**Sibu**	**52.21**	**357**	P	**P**	**09 17 35.0**	**0.0**
MYKOM	**Kota Tinggi**	**52.34**	**346**	P	**P**	**09 17 35.0**	**-0.9**
MYKOM				IAmb	IAmb	09 17 43.2	
	comp=Z,45nm,1.4s						
MYKOM	**Kota Tinggi**	**52.34**	**346**	P	**P**	**09 17 36.1**	**+0.1**
	comp=Z,73nmcomp=Z,27nm,2.0s						
MYKOM	**Kota Tinggi**	**52.34**	**346**	P	**P**	**09 17 35.4**	**-0.6**
VNA2	**Neumayer--Watz**	**52.55**	**201**	⇓P	**P**	**09 17 37.7**	**+0.7**
	comp=Z,9.8nm,0.7s,baz=130,slow=7.6						
VNA2	**Neumayer--Watz**	**52.55**	**201**	P	**P**	**09 17 37.8**	**+0.8**
VNA1	**Neumayer--Stat**	**52.95**	**201**	⇓P	**P**	**09 17 41.0**	**+1.1**
	comp=Z,24nm,1.6s						
GSI	**Gunungsitoli**	**53.09**	**339**	P	**P**	**09 17 39.7**	**-1.9**
GSI	**Gunungsitoli**	**53.09**	**339**	P	**P**	**09 17 43.7**	**+2.1**
	comp=Z,7µmcomp=Z,77nm,1.9s						
GSI	**Gunungsitoli**	**53.09**	**339**	P	P	**09 17 43.1**	**+1.5**
RPSI	**Rantau Prapat**	**54.13**	**341**	P	**P**	**09 17 47.2**	**-1.9**
PSI	**Prapat**	**54.23**	**341**	P	**P**	**09 17 49.1**	**-1.0**
	comp=Z,680nmcomp=Z,32nm,1.6s						
H08S2	**Diego Garcia H**	**54.82**	**306**	T	T	10 16 28.8	
	baz=148,slow=76,SNR=17						
H08S1	**Diego Carcia H**	**54.83**	**306**	T	T	10 16 29.6	
	baz=148,slow=76,SNR=18						
H08S3	**Diego Garcia H**	**54.84**	**306**	T	T	10 16 28.6	
	baz=148,slow=76,SNR=33						
HNR	**Honiara**	**55.08**	**59**	LR	LR	09 40 05.9	
	comp=Z,17nm,18.2s,baz=300,slow=34						
KCSI	**Kotacane, Aceh**	**55.19**	**339**	P	**P**	**09 17 56.7**	**-0.2**
KRVT	**Keravat (AS076**	**55.33**	**47**	LR	LR	09 41 06.3	
	comp=Z,48nm,19.7s,baz=103,slow=36						
RABL	**Rabaul**	**55.50**	**48**	P	**P**	**09 17 59.9**	**+0.7**
KKM	**Kota Kinabalu**	**55.76**	**2**	P	**P**	**09 18 00.4**	**-0.6**
KKM				IAmb	IAmb	09 18 09.1	
	comp=Z,28nm,1.2s						
KULM	**Kulim**	**56.31**	**343**	P	**P**	**09 18 03.8**	**-1.1**
KULM	**Kulim**	**56.31**	**343**	P	**P**	**09 18 04.2**	**-0.7**
	comp=Z,1µmcomp=Z,51nm,1.7s						
KULM	**Kulim**	**56.31**	**343**	P	**P**	**09 18 04.2**	**-0.7**
DAV	**Davao City (W)**	**57.56**	**13**	LR	LR	09 42 04.6	
	comp=Z,94nm,20.9s,baz=182,slow=35						
BSI	**Banda Aceh**	**57.68**	**337**	P	**P**	**09 18 15.0**	**+0.4**
MSVF	**Nonsavu**	**59.57**	**81**	LR	LR	09 40 50.0	
	comp=Z,300nm,18.0s,baz=219,slow=33						
OPO	**Ambohidratompo**	**61.51**	**275**	LR	LR	09 40 35.5	
	comp=Z,342nm,18.8s,baz=94,slow=32						
SMAI	**San Martin Ant**	**62.26**	**179**	P	**P**	**09 18 46.5**	**+1.1**
PALK	**Pallekele**	**64.14**	**322**	LR	LR	09 41 57.6	
	comp=Z,352nm,18.2s,baz=165,slow=32						
PALK	**Pallekele**	**64.14**	**322**	P	**P**	**09 18 57.5**	**-1.1**
PALK	**Pallekele**	**64.14**	**322**	P	**P**	**09 18 56.7**	**-1.9**
	comp=Z,15nm,1.6s						
MALK	**Mahakanadarawa**	**65.23**	**322**	P	**P**	**09 19 05.8**	**+0.2**
PMSA	**Palmer Station**	**65.64**	**181**	LR	LR	09 48 38.9	
	comp=Z,178nm,18.5s,baz=194,slow=37						
SUR	**Sutherland**	**68.25**	**245**	LR	LR	09 42 26.9	
	comp=Z,272nm,20.9s,baz=104,slow=30						
GUMO	**Guam**	**68.61**	**32**	LR	LR	09 48 56.4	
	comp=Z,50nm,20.0s,baz=174,slow=36						
QIZ	**Qiongzhong**	**68.78**	**355**	P	**P**	**09 19 30.0**	**+2.0**
QIZ				S	**S**	**09 28 36.2**	**+5.5**
QIZ				L	L		
	comp=Z,140nm,15.6s						
QIZ				L	L		
	comp=Z,230nm,19.4s						
QIZ				L	L		
	comp=Z,210nm,17.4s						
AFI	**Afiamalu**	**68.94**	**87**	LR	LR	09 44 49.6	
	comp=Z,233nm,19.9s,baz=214,slow=32						
CMAR	**Chiang Mai Arr**	**69.48**	**344**	P	**P**	**09 19 31.4**	**-1.0**
	comp=Z,7.8nm,0.9s,baz=190,slow=5.7,SNR=39						
CMAR				LR	LR	09 49 59.5	
	comp=Z,60nm,18.1s,baz=190,slow=36 comp=Z,7.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**69.48**	**344**	P	**P**	**09 19 31.3**	**-1.1**
CHTO	**Chiang Mai**	**69.83**	**344**	P	**P**	**09 19 33.7**	**-0.9**
CHTO				IAmb	IAmb	09 19 35.4	
	comp=Z,34nm,1.5s						
CHTO	**Chiang Mai**	**69.83**	**344**	P	**P**	**09 19 34.4**	**-0.1**
	comp=Z,485nmcomp=Z,16nm,2.3s						
CHTO	**Chiang Mai**	**69.83**	**344**	P	**P**	**09 19 33.9**	**-0.6**
LBTB	**Lobatse**	**70.67**	**254**	LR	LR	09 44 01.8	
	comp=Z,418nm,21.3s,baz=126,slow=30						
RAR	**Rarotonga**	**71.30**	**101**	LR	LR	09 46 20.6	
	comp=Z,118nm,19.6s,baz=239,slow=32						
MATP	**Matopo**	**72.19**	**259**	LR	LR	09 46 27.7	
	comp=Z,551nm,18.1s,baz=126,slow=32						
BRDH	**Bariadiala**	**75.10**	**338**	LR	LR	09 54 11.7	
	comp=Z,231nm,18.0s,baz=156,slow=37						
KMI2	**Kunming**	**75.48**	**349**	⇑P	**P**	**09 20 09.4**	**+1.1**
KMI2				sP	sP	09 20 15.0	+0.8
KMI2				S	**S**	**09 29 52.9

LYN S **S** **09 31 19.3 +1.0**
LYN pmax pmax
comp=Z,19nm,1.0s
LYN pmax pmax
comp=Z,220nm,4.5s
LYN L L
comp=Z,170nm,21.6s
LYN L L
comp=Z,150nm,15.5s
LYN L L
comp=Z,240nm,16.1s
MBAR Mbarara 85.59 274 LR LR 09 52 41.5
comp=Z,466nm,19.6s,baz=118,slow=31
TIA Tai'an 85.79 2 P **P** **09 21 03.0 0.0**
TIA pmax pmax
comp=Z,19nm,1.1s
LZDM Lanzhou Array 86.05 351 P **P** **09 21 04.3 -0.4**
comp=Z,23nm,0.4s,baz=193,slow=6.1,SNR=4.1
comp=Z,23nm,0.4s
LZH Lanzhou 86.17 351 *e*P **P** **09 21 05.5 +0.4**
LZH sP sP 09 21 11.3 +0.2
LZH S **S** **09 31 39.6 +0.8**
LZH pmax pmax
comp=Z,28nm,1.2s
LZH pmax pmax
comp=Z,230nm,4.5s
LZH L L
comp=Z,230nm,17.9s
LZH L L
comp=Z,190nm,18.2s
LZH L L
comp=Z,240nm,18.6s
HNS HongShan 86.95 0 ⇓P **P** **09 21 09.3 +0.7**
HNS S **S** **09 31 44.1 -1.8**
HNS pmax pmax
comp=Z,22nm,1.3s
HNS L L
comp=Z,130nm,15.7s
HNS L L
comp=Z,120nm,16.7s
ATD Arta Tunnel 87.32 291 LR LR 09 52 25.9
comp=Z,12nm,21.8s,baz=182,slow=30
GOMU GeErMu 87.52 344 P **P** **09 21 12.8 +0.8**
GOMU pP sP 09 21 16.7 -1.2
GOMU sP pwP 09 21 20.4 -1.0
GOMU pmax pmax
comp=Z,5.0nm,0.6s
KSAR Wonju Array Be 87.78 11 P **P** **09 21 13.2 +0.5**
KSRS Korea Array 87.80 11 P **P** **09 21 12.9 +0.2**
comp=Z,3.7nm,1.1s,baz=185,slow=4.4,SNR=17
KSRS LR LR 09 58 46.6
comp=Z,26nm,21.9s,baz=195,slow=34
comp=Z,3.7nm,1.1s
MJAR Matsushiro Arr 88.59 19 P **P** **09 21 16.3 -0.3**
comp=Z,2.8nm,1.0s,baz=198,slow=6.4,SNR=5.4
MJAR LR LR 09 57 03.9
comp=Z,24nm,21.6s,baz=204,slow=33
comp=Z,2.8nm,1.0s
MJAR Matsushiro Arr 88.59 19 P **P** **09 21 16.4 -0.2**
MJAR IAmb IAmb 09 21 23.9
comp=Z,23nm,1.5s
DL2 Dalian 88.67 5 P **P** **09 21 17.1 +0.3**
DL2 S **S** **09 32 02.4 +0.1**
DL2 pmax pmax
comp=Z,21nm,1.2s
DL2 pmax pmax
comp=Z,200nm,5.5s
DL2 L L
comp=Z,150nm,19.3s
DL2 L L
comp=Z,200nm,17.5s
DL2 L L
comp=Z,230nm,17.6s
BJI2 Beijing 89.58 1 P **P** **09 21 21.6 +0.5**
BJI2 pmax pmax
comp=Z,5.0nm,1.2s
GTA2 Gaotai 89.99 349 P **P** **09 21 22.8 -0.4**
GTA2 sP sP 09 21 29.7 +0.5
GTA2 S **S** **09 32 13.1 -1.9**
GTA2 pmax pmax
comp=Z,15nm,1.4s
GTA2 L L
comp=Z,150nm,16.1s
GTA2 L L
comp=Z,130nm,19.2s
GTA2 L L
comp=Z,160nm,18.9s
BTO2 Baotou 90.38 356 *e*P **P** **09 21 26.1 +1.1**
BTO2 PP **PP** **09 24 58.9 -1.1**
BTO2 SKS **SKSac** **09 31 54.2 -0.9**
BTO2 S **ScS** **09 32 21.8 -0.5**
BTO2 pmax pmax
comp=Z,22nm,0.7s
BTO2 pmax pmax
comp=Z,240nm,3.6s
BTO2 L L
comp=Z,290nm,20.6s
BTO2 L L
comp=Z,180nm,16.7s
BTO2 L L
comp=Z,360nm,20.1s
HHC Hu-ho-hao-te 90.43 358 *e*P **P** **09 21 26.6 +1.4**
HHC S **S** **09 32 18.8 -0.2**
HHC sS sS 09 32 33.4 +7.1
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,3.9s
HHC L L
comp=Z,200nm,23.7s
HHC L L
comp=Z,220nm,22.2s
HHC L L
comp=Z,67nm,21.4s
NIL Nilore 90.93 327 P **P** **09 21 26.8 -0.8**
NIL Nilore 90.93 327 P **P** **09 21 27.0 -0.6**
TAOE Nuku Hiva Isla 92.94 107 *e*S **S** **09 32 37.7 -5.3**
comp=Z,32nm,22.5s
TAOE *e*SS **SS** **09 38 51.9 -4.4**
comp=Z,68nm,23.8s
TAOE *e*LR LR 09 51 24.3
comp=Z,460nm,21.5s
XLT XiLinHaoTe 93.45 1 *e*P **P** **09 21 39.3 +0.2**
XLT pP sP 09 21 45.6 +0.5
XLT pmax pmax
comp=Z,15nm,0.9s
CN2 Changchun 93.82 8 *e*P **P** **09 21 40.9 +0.2**
CN2 *es*P sP 09 21 47.0 +0.3
CN2 *e*S **S** **09 32 48.3 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 L L
comp=Z,100nm,16.0s
CN2 L L
comp=Z,100nm,16.0s
CN2 L L
comp=Z,100nm,17.0s
RPN Rapa Nui 93.94 142 LR LR 09 54 07.0
comp=Z,108nm,21.0s,baz=78,slow=29
USRK Ussuriysk Ar. 94.96 12 P **P** **09 21 45.9 0.0**
comp=Z,2.7nm,0.7s,baz=209,slow=3.5,SNR=6.6
comp=Z,2.7nm,0.7s
USRK Ussuriysk Ar. 94.96 12 **P** **09 21 45.2 -0.7**
RAYN Ar Rayn 95.23 301 P **P** **09 21 45.9 -1.9**
RAYN Ar Rayn 95.23 301 P **P** **09 21 47.7 -0.1**
WMQ Urumqi 96.28 341 *e*P **P** **09 21 52.2 +0.2**
WMQ pP sP 09 21 58.2 +0.2
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ L L
comp=Z,66nm,16.1s
SONM Songino Array 97.64 354 P **P** **09 21 56.1 -2.1**
comp=Z,0.4nm,0.4s,baz=150,slow=3.3,SNR=5.1
SONM LR LR 10 10 30.4
comp=Z,89nm,18.1s,baz=180,slow=38
comp=Z,0.4nm,0.4s
SONM Songino Array 97.64 354 P **P** **09 21 55.7 -2.4**
KLR Kul'dur 99.87 11 LR LR 10 11 03.0
comp=Z,30nm,18.9s,baz=221,slow=38
H10S2 ASCENSION HYDR 106.62 233 T T 11 22 31.3
baz=144,slow=74,SNR=24
H10S3 ASCENSION HYDR 106.63 233 T T 11 22 44.5
baz=76,slow=74,SNR=23
TORD Torodi Ar. Bea 114.68 261 PKP PKPdf 09 27 03.8 -0.9
comp=Z,0.3nm,0.4s,baz=224,slow=5.4,SNR=3.6

AKASG Malin Array Be 123.77 310 PKP **PKPdf** **09 27 20.1 -0.8**
comp=Z,0.2nm,0.2s,baz=106,slow=1.1,SNR=4.8
BURAR Bucovina Array 123.87 305 **PKPdf** **09 27 19.9 -1.6**
MI29 MI29, Kamyanyy 124.27 309 PKP **PKPdf** **09 27 21.4 -0.5**
J19K Poorman 133.14 37 **PKPdf** **09 27 37.9 -0.6**
H24K Noodor Dome 136.90 37 **PKPdf** **09 27 45.4 -0.1**
ILAR Eielson Array 136.92 38 PKP **PKPdf** **09 27 45.8 +0.3**
comp=Z,1.9nm,1.1s,baz=256,slow=3.6,SNR=8.4
J25K Salcha River, 137.48 39 **PKPdf** **09 27 46.5 -0.1**
NOA NORSAR Array B 137.69 315 PKP **PKPdf** **09 27 46.5 -0.5**
comp=Z,0.2nm,0.3s,baz=110,slow=1.9,SNR=2.7
SCRK Sand Creek 137.83 40 **PKPdf** **09 27 47.1 -0.2**
K27K Chicken 138.65 40 **PKPdf** **09 27 48.3 -0.3**
G26K Porcupine Rive 138.82 36 **PKPdf** **09 27 48.8 -0.1**
M29M Somme Creek 139.73 44 **PKPdf** **09 27 50.5 -0.4**
L29M L29M 140.07 43 **PKPdf** **09 27 50.0 -1.4**
E28M Babbage River 140.77 34 **PKPdf** **09 27 51.9 -0.6**
NVAR Mina Array Bea 141.12 86 **PKPdf** **09 27 53.0 -1.3**
F30M Barrier River 141.99 36 **PKPdf** **09 27 54.2 -0.4**
EKA Eskdalemuir Ar 142.97 303 PKhKP PKPpre 09 27 52.3
comp=Z,0.4nm,0.3s,baz=146,slow=1.4,SNR=4.6
WUAZ Wupatki 143.87 96 PKPbc 09 27 57.8 +0.8
MXC Moxie City 143.98 74 PKPbc 09 27 57.7 +1.0
TXAR Lajitas Array 144.58 111 PKP PKPbc 09 28 00.3 +1.0
comp=Z,1.7nm,0.8s,baz=194,slow=4.5,SNR=17
ANMO Albuquerque 146.66 101 **PKPdf** **09 28 02.8 -1.3**
ECR Eagle Creek 148.03 84 **PKPdf** **09 28 05.1 -1.0**
PDAR Pinedale Array 149.06 86 PKPbc **PKiKP** **09 28 13.0 -0.2**
comp=Z,3.9nm,1.1s,baz=240,slow=4.3,SNR=15
PDAR Pinedale Array 149.06 86 **PKPdf** **09 28 05.8 -2.0**
YKA Yellowknife Ar 150.68 46 PKPbc **PKPbc** **09 28 14.9 0.0**
comp=Z,5.8nm,0.8s,baz=275,slow=2.1,SNR=20
YKA Yellowknife Ar 150.68 46 **PKPdf** **09 28 08.9 -0.5**
YKA PKPbc **PKPbc** **09 28 14.8 0.0**
YKA PKPab **PKPab** **09 28 22.1 +0.1**
SCO Scoresbysund 151.21 331 PKPdf **PKPdf** **09 28 08.4 -1.5**
ULM Lac du Bonnet 160.50 77 PKPab **PKPab** **09 29 03.9 -0.5**
comp=Z,2.7nm,0.9s,baz=242,slow=6.2,SNR=5.4
TRQ Mont Tremblant 172.83 118 PKPdf **PKPdf** **09 28 31.2 -1.3**
TRQ **PKPab** **09 29 59.2 +0.2**

*IPEC **08** 09:09:37.8±0.2,51.°56N×16.°21E,h1km,ML2.5/8,Error ellipse: s-maj=1.9km s-min=1.1km az=66.0*
*DNK **08** 09:09:37.2±1.6,51.°42N×16.°00E,h26km±67km,ML2.2, Presumed earthquake*
*VIE **08** 09:09:39.8±0.6,51.°41N×16.°17E,h0km,mb2.7/10, ml3.0/11,Error ellipse: s-maj=3.9km s-min=3.1km az=23.0 68 km WNW of Wroclaw Suspected Mining induced.*
*PRU **08** 09:09:39.7,51.°52N×16.°10E,h0km*
*BGR **08** 09:09:39.2±0.5,51.°51N×16.°13E,h1km,ML3.0/11,Error ellipse: s-maj=5.6km s-min=2.2km az=16.0*
ISC 08 09:09:36.4±0.8,51.°61N±0.°03×16.°18E±0.°02,h0km,n49,σ1s12/96,1D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**175**	*e*Pg	**Pg**		**09 09 51.9**	**+0.8**
KSP				*e*Sg	**Sg**		**09 10 01.4**	**+0.2**
KSP	**Ksiaz**	**0.77**	**175**	*e*Pg	**Pg**		**09 09 51.9**	**+0.8**
KSP				*e*Sg	**Sg**		**09 10 01.5**	**+0.4**
CHVC	**Chvalec**	**1.03**	**184**	*e*PG	**Pb**		**09 09 56.7**	**-0.3**
CHVC				*e*SG	**Sb**		**09 10 10.0**	**-1.1**
comp=Z,65nm,0.4s								
OSTC	**Ostas**	**1.05**	**179**	*e*PG	**Pb**		**09 09 57.4**	**-0.1**
OSTC				*e*SG	**Sb**		**09 10 11.0**	**-0.9**
comp=Z,71nm,0.2s								
UPC	**Upice**	**1.11**	**185**	*e*PG	**Pg**		**09 09 58.0**	**+0.4**
UPC				*e*SG	**Sb**		**09 10 12.4**	**-1.0**
comp=Z,107nm,0.2s								
DPC	**Dobruska-Polom**	**1.26**	**176**	*e*PG	**Pg**		**09 10 00.7**	**+0.1**
DPC				*e*SG	**Sg**		**09 10 16.8**	**-0.2**
comp=Z,43nm,0.5s								
DPC	**Dobruska-Polom**	**1.26**	**176**	*e*Pg	**Pg**		**09 10 00.7**	**+0.1**
DPC				*e*Sg	**Sb**		**09 10 17.0**	**-0.9**
PIVO	**Bartosovice**	**1.44**	**171**	*e*Pg	**Pg**		**09 10 03.8**	**-0.3**
baz=351								
PIVO				*e*Sg	**Sg**		**09 10 21.4**	**-1.4**
92nm,0.2s,baz=351								
KRLC	**Kraliky**	**1.58**	**166**	*e*PG	**Pn**		**09 10 06.0**	**+0.2**
KRLC				*e*SG	**Sn**		**09 10 26.9**	**0.0**
comp=Z,44nm,0.5s								
BRG	**Berggiesshubel**	**1.59**	**243**	*e*Pn	**Pn**		**09 10 06.3**	**+0.6**
BRG				*e*Pg	**Pg**		**09 10 07.2**	**+0.4**
BRG				*e*Sg	**Sg**		**09 10 28.1**	**+0.8**
BRG	**Berggiesshubel**	**1.59**	**243**	Pg	**Pg**		**09 10 07.2**	**+0.4**
BRG				Sg	**Sg**		**09 10 28.0**	**+0.7**
BRG				Amp			09 10 28.8	
comp=Z,311nm,0.4s								
BRG				⇓*e*PKPf			09 27 31.1	
BRG				Amp			09 27 42.7	
comp=Z,6.1nm,1.2s								
ANAC	**Anensky vrch**	**1.72**	**153**	*e*Pn	**Pn**		**09 10 07.7**	**+0.1**
baz=334								
ANAC				*e*Sg	**Sn**		**09 10 29.8**	**-0.4**
comp=Z,21nm,0.1s,baz=334								
RYBC	**Ceska Rybna**	**1.81**	**182**	*e*Pn	**Pn**		**09 10 09.2**	**+0.4**
baz=2.9								
RYBC				*e*Sg	**Sb**		**09 10 32.5**	**-1.0**
comp=Z,67nm,0.2s,baz=2.9								
FBE	**Freiberg**	**1.90**	**250**	*e*Pg	**Pb**		**09 10 13.0**	**+1.1**
FBE				*e*Sg	**Sg**		**09 10 38.1**	**+0.6**
PRU	**Pruhonice**	**1.93**	**213**	*e*PG	**Pn**		**09 10 11.6**	**+1.2**
PRU				*e*SG	**Sg**		**09 10 37.2**	**-1.1**
comp=Z,78nm,0.3s								
STEB	**Steborice**	**1.96**	**148**	*e*PG	**Pb**		**09 10 13.3**	**+0.4**
STEB				*e*SG	**Sg**		**09 10 40.7**	**+1.4**
comp=Z,50nm,0.3s								
MORC	**Moravsky Berou**	**2.03**	**154**	*e*Pn	**Pn**		**09 10 12.0**	**+0.1**
MORC	**Moravsky Berou**	**2.03**	**154**	*e*Pn	**Pn**		**09 10 12.0**	**+0.1**
baz=335								
MORC				*e*Sg	**Sb**		**09 10 39.6**	**-0.4**
comp=Z,25nm,0.3s,baz=335								
OKC	**Ostrava-Krasne**	**2.17**	**144**	*e*PG	**Pg**		**09 10 18.2**	**+0.2**
OKC				*e*SG	**Sg**		**09 10 47.3**	**+1.2**
comp=Z,42nm,0.5s								
OKC	**Ostrava-Krasne**	**2.17**	**144**	*e*Sg	**Sg**		**09 10 45.1**	**-1.1**
VRAC	**Vranov**	**2.32**	**173**	*e*Pn	**Pn**		**09 10 16.3**	**+0.5**
baz=354								
VRAC				*e*Sg	**Sb**		**09 10 48.7**	**+0.4**
comp=Z,25nm,0.4s,baz=354								
MAUC	**Maruska**	**2.48**	**154**	*e*PG	**Pg**		**09 10 23.7**	**-0.2**
MAUC				*e*SG	**Sg**		**09 10 56.5**	**+0.4**
ZVC	**Zvikov**	**2.52**	**211**	*e*PN	**Pn**		**09 10 19.5**	**+1.0**
ZVC				*e*PG	**Pb**		**09 10 23.4**	**+1.0**
ZVC				*e*SG	**Sg**		**09 10 56.8**	**-0.4**
comp=Z,27nm,0.3s								
KRUC	**Moravsky**	**2.56**	**177**	*e*Pn	**Pn**		**09 10 19.7**	**+0.6**
baz=357								
KRUC				*e*Sg	**Sg**		**09 10 56.1**	**-2.3**
comp=Z,13nm,0.3s,baz=357								
TANN	**Tannenbergstha**	**2.63**	**244**	*e*Pn	**Pn**		**09 10 20.8**	**+0.6**
TANN				*e*Sg	**Sg**		**09 11 00.5**	**-0.5**
STAC	**Stalkov**	**2.64**	**193**	*e*Pn	**Pn**		**09 10 20.9**	**+0.6**
baz=13								
STAC				*e*Sg	**Sg**		**09 10 59.0**	**-2.3**
comp=Z,19nm,0.2s,baz=13								
OJC	**Ojcow**	**2.68**	**120**	*e*Pg	**Pg**		**09 10 28.2**	**+0.5**
OJC				*e*Sg	**Sg**		**09 11 04.0**	**+1.6**
WERD	**Werda**	**2.71**	**246**	*e*Pn	**Pn**		**09 10 22.4**	**+1.2**
WERD				*e*Sg	**Sg**		**09 11 02.2**	**-1.1**
JAVC	**Velka Javorina**	**2.92**	**160**	*e*Pn	**Pn**		**09 10 24.6**	**+0.5**
baz=341								
KHC	**Kasperske Hory**	**2.99**	**215**	*e*PN	**Pn**		**09 10 26.4**	**+1.3**
KHC				*e*PG	**Pb**		**09 10 31.8**	**+1.3**
KHC				*e*SN	**Sn**		**09 11 01.7**	**+0.1**
KHC				*e*SG	**Sg**		**09 11 10.8**	**-1.5**
comp=Z,26nm,0.5s								
MOX	**Moxa**	**3.03**	**253**	*e*Pn	**Pn**		**09 10 26.9**	**+1.3**
MOX				*e*Pg	**Pg**		**09 10 34.7**	**+0.2**
MOX				*e*Sg	**Sg**		**09 11 13.9**	**+0.2**
ROTZ	**Rotzenmuhle**	**3.13**	**235**	*e*Pn	**Pn**		**09 10 27.5**	**+0.6**
ROTZ				*e*Sg	**Sg**		**09 11 14.8**	**-2.0**
GEC2	**GERESS Array S**	**3.19**	**211**	*e*Pn	**Pn**		**09 10 29.2**	**+1.3**
GEC2				*e*Sg	**Sg**		**09 11 17.4**	**-1.5**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*PG	**Pg**		**09 10 38.8**	**-1.1**
MODS				*e*SG	**Sg**		**09 11 24.9**	**+2.0**
WINA	**Alland / Wiene**	**3.51**	**181**	*e*Pn	**Pn**		**09 10 33.1**	**+0.9**
comp=Z,1.6nm,0.2s								
WINA				*e*Sg	**Sg**		**09 11 28.8**	**-0.2**
comp=Z,24nm,0.4s								
BSD	**Bornholm Skovb**	**3.59**	**348**	*i* P	**Pn**		**09 10 33.0**	**-0.3**
BSD				*i* S	**Sn**		**09 11 15.7**	**-0.7**
BSD				IAML			09 11 18.8	
comp=Z,2.5nm,0.2s								
CONA	**Conrad Observa**	**3.69**	**183**	Pn	**Pn**		**09 10 36.1**	**+1.4**
comp=Z,0.9nm,0.1s,SNR=4.9								
CONA				*e*Sg	**Sg**		**09 11 34.5**	**-0.5**
comp=Z,11nm,0.4s								
STHS	**Stebnicka Huta**	**3.91**	**122**	*e*PG	**Pg**		**09 10 51.2**	**-0.1**
STHS				*e*SG	**Sg**		**09 11 41.9**	**0.0**
RONA	**Rosalia, Austr**	**3.92**	**179**	*i* Pn	**Pn**		**09 10 38.7**	**+0.9**
comp=Z,0.8nm,0.3s								
RONA				*e*Sg	**Sg**		**09 11 38.6**	**-3.5**
comp=Z,2.0nm,0.3s								
MOA	**Molln**	**3.96**	**199**	Pn	**Pn**		**09 10 39.1**	**+0.7**
comp=Z,3.5nm,0.3s,SNR=6.4								
MOA				*e*Sg	**Sg**		**09 11 43.1**	**-0.5**
comp=Z,19nm,0.6s								
BIOA	**Bad Ischl, Aus**	**4.25**	**204**	*e*Sg	**Sg**		**09 11 51.5**	**-1.6**
comp=Z,17nm,0.5s								
LUNU	**Lund**	**4.34**	**339**	*i* P	**Pn**		**09 10 44.4**	**+0.8**
LUNU				*i* S	**Sn**		**09 11 33.0**	**-1.9**
ARSA	**Arzberg**	**4.38**	**186**	*e*Pn	**Pn**		**09 10 47.6**	**+3.4**
comp=Z,3.0nm,0.3s								
ARSA				*e*Sg	**Sg**		**09 11 56.7**	**-0.4**
comp=Z,7.4nm,0.5s								
SESA	**Seetaler Alpe,**	**4.62**	**194**	Pn	**Pn**		**09 10 48.6**	**+1.0**
SNR=12								
SESA				*e*Sg	**Sg**		**09 12 03.3**	**-1.5**
comp=Z,16nm,0.5s								
BLEU	**Blekinge**	**4.71**	**358**	*i* P	**Pn**		**09 10 50.5**	**+1.9**
BJUU	**Bjuv**	**4.85**	**339**	*i* P	**Pn**		**09 10 51.7**	**+1.2**
KBA	**Koelnbreinsper**	**4.90**	**203**	Pn	**Pn**		**09 10 52.4**	**+1.0**
comp=Z,2.9nm,0.4s,SNR=4.2								
KBA				*e*Sg	**Sg**		**09 12 15.8**	**+2.1**
comp=Z,4.9nm,0.4s								
SOKA	**Soboth**	**4.99**	**189**	*e*Sg	**Sg**		**09 12 16.8**	**0.0**
comp=Z,2.2nm,0.6s								
DEL	**Delary**	**5.06**	**345**	*i* P	**Pn**		**09 10 53.0**	**-0.4**
DEL				*i* S	**Sn**		**09 11 49.8**	**-2.6**
DEL				IAML			09 11 53.2	
comp=Z,1.1nm,0.3s								

*NEIC **08** 09:12:11.7±0.9,20.°9S±0.°1×178.°55W±0.°07,h538km±7km, mb4.1/23,Error ellipse: s-maj=20.6km s-min=8.9km az=192.0*
*IDC **08** 09:12:12.6±1.2,20.°95S×178.°67W,h545km±11km, mb3.2/14,mbtmp4.2/18,Error ellipse: s-maj=16.6km s-min=12.9km az=126.0*
ISC 08 09:12:12.6±0.5,20.°91S±0.°09×178.°64W±0.°08,h550km, n59,σ0s82/61,mb3.9/25,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.44**	**315**	P		**P**	**09 13 36.9**	**-1.2**
18nm,0.7s,baz=136,slow=18,SNR=20								
MSVF				S		**S**	**09 14 48.1**	**+0.4**
18nm,0.9s,baz=338,slow=21,SNR=3.6								
MSVF	**Nonsavu**	**4.44**	**315**			**P**	**09 13 37.6**	**-0.5**
FUTU	**Fugatoga**	**6.59**	**4**	P		**P**	**09 13 55.5**	**-1.4**
NIUE	**Niue**	**8.40**	**79**			**P**	**09 14 12.1**	**-2.3**
AFI	**Afiamalu**	**9.56**	**44**	P		**P**	**09 14 27.1**	**+0.9**
24nm,0.8s,baz=263,slow=8.1,SNR=3.6								
MARNC	**Mare, Loyalty**	**12.44**	**265**	P		**P**	**09 14 55.3**	**-0.5**
DZM	**Mont Dzumac**	**13.93**	**263**	P		**P**	**09 15 10.7**	**-0.6**
11nm,0.8s,baz=90,slow=19,SNR=4.8								
URZ	**Urewera**	**17.67**	**191**	P		**P**	**09 15 47.2**	**-0.1**
3.5nm,0.5s,baz=16,slow=9.6,SNR=1.6								
CTA	**Charters Tower**	**32.85**	**265**	P		**P**	**09 18 01.8**	**+0.2**
3.7nm,0.5s,baz=79,slow=10,SNR=7.7								
3.7nm,0.5s								
CTAO	**Charters Tower**	**32.85**	**265**	P		**P**	**09 18 02.0**	**+0.4**
CTAO				IAmb		IAmb	09 18 20.6	
comp=Z,11nm,1.1s								
TOO	**Toolangi**	**35.17**	**234**	P		**P**	**09 18 21.1**	**+0.3**
TOO				IAmb		IAmb	09 18 51.3	
comp=Z,4.0nm,1.3s								
COEN	**Coen**	**37.01**	**274**	P		**P**	**09 18 36.4**	**+0.1**
STKA	**Stephens Creek**	**37.07**	**245**	P		**P**	**09 18 36.5**	**-0.1**
comp=Z,2.3nm,0.8s,baz=108,slow=6.3,SNR=4.6								
comp=Z,2.3nm,0.8s								
BBOO	**Buckleboo**	**41.83**	**244**	P		**P**	**09 19 14.3**	**-0.5**
WR8	**Warramunga Arr**	**43.80**	**263**	P		**P**	**09 19 29.8**	**-0.6**
WR8				IAmb		IAmb	09 19 33.5	
comp=Z,15nm,1.4s								
AS31	**Alice Springs**	**43.84**	**257**	P		**P**	**09 19 30.7**	**0.0**
ASAR	**Alice Springs**	**43.84**	**257**	P		**P**	**09 19 30.6**	**-0.1**
comp=Z,5.4nm,0.9s,baz=98,slow=7.8,SNR=3								
ASAR				PcP		**PcP**	**09 21 05.2**	**+0.2**
comp=Z,1.2nm,0.6s,baz=106,slow=3.7,SNR=11								
ASAR				ScP		**ScP**	**09 24 06.2**	**+1.8**
comp=Z,0.4nm,0.7s,baz=98,slow=4.2,SNR=4.4								
comp=Z,5.4nm,0.9s								
WB0	**Warramunga Arr**	**43.93**	**263**	P		**P**	**09 19 30.9**	**-0.5**
WB0				IAmb		IAmb	09 19 31.1	
comp=Z,4.2nm,0.7s								
WRA	**Warramunga Arr**	**43.95**	**263**	P		**P**	**09 19 30.6**	**-0.9**
comp=Z,2.3nm,0.6s,baz=99,slow=7.6,SNR=33								
WRA				PcP		**PcP**	**09 21 04.6**	**-0.7**
comp=Z,0.3nm,0.8s,baz=99,slow=3.0,SNR=3.1								
comp=Z,2.3nm,0.6s								
WRA	**Warramunga Arr**	**43.95**	**263**	P		**P**	**09 19 31.0**	**-0.6**
MTN	**Manton Dam**	**48.57**	**271**	P		**P**	**09 20 06.1**	**-0.4**
FORT	**Forrest**	**48.58**	**247**	P		**P**	**09 20 05.9**	**-0.5**
FORT				IAmb		IAmb	09 20 20.2	
comp=Z,14nm,1.1s								
KNRA	**Kununurra**	**50.03**	**267**	P		**P**	**09 20 17.4**	**0.0**
KNRA				IAmb		IAmb	09 20 20.2	
comp=Z,15nm,1.1s								
FITZ	**Fitzroy Crossi**	**52.38**	**263**	P		**P**	**09 20 34.2**	**-0.1**
comp=Z,2.4nm,0.9s,baz=108,slow=9.6,SNR=1.7								
comp=Z,2.4nm,0.9s								
FITZ	**Fitzroy Crossi**	**52.38**	**263**	P		**P**	**09 20 34.6**	**+0.3**
MBWA	**Marble Bar**	**57.18**	**258**	P		**P**	**09 21 07.5**	**-0.3**
MBWA				IAmb		IAmb	09 21 37.4	
comp=Z,12nm,1.2s								
SBA	**Scott Base**	**57.42**	**184**	P		**P**	**09 21 10.6**	**+2.1**
VNDA	**Vanda**	**57.45**	**185**	P		**P**	**09 21 09.6**	**+0.9**
comp=Z,0.5nm,0.7s,baz=2.1,slow=6.5,SNR=6.0								
comp=Z,0.5nm,0.7s								
VNDA	**Vanda**	**57.45**	**185**	P		**P**	**09 21 09.6**	**+0.9**
NWAO	**Narrogin (SRO)**	**57.65**	**244**	P		**P**	**09 21 10.3**	**-0.5**
MORW	**Morawa**	**59.12**	**248**	P		**P**	**09 21 20.4**	**-0.4**
MORW				IAmb		IAmb	09 21 45.8	
comp=Z,19nm,1.2s								
QSPA	**South Pole Qui**	**69.16**	**180**	P		**P**	**09 22 23.9**	**-0.1**
comp=Z,3.8nm,0.8s,baz=58,slow=5.0,SNR=10								
comp=Z,3.8nm,0.8s								
QSPA	**South Pole Qui**	**69.16**	**180**	P		**P**	**09 22 24.2**	**+0.2**
QSPA				IAmb		IAmb	09 22 25.1	
comp=Z,5.8nm,0.9s								
KKM	**Kota Kinabalu**	**69.28**	**285**	P		**P**	**09 22 25.1**	**-0.5**
MJAR	**Matsushiro Arr**	**70.19**	**324**	P		**P**	**09 22 31.0**	**+0.6**
comp=Z,1.3nm,0.6s,baz=167,slow=4.3,SNR=2.2								
comp=Z,1.3nm,0.6s								
PETK	**Petropavlovsk-**	**76.52**	**346**	P		**P**	**09 23 07.3**	**+1.2**
comp=Z,0.9nm,0.7s,baz=147,slow=2.9,SNR=2.0								
comp=Z,0.9nm,0.7s								
KSRS	**Korea Array**	**76.80**	**319**	P		**P**	**09 23 10.0**	**+2.1**
comp=Z,0.3nm,0.3s,baz=111,slow=6.7,SNR=1.9								
comp=Z,0.3nm,0.3s								
BELA	**Belgrano 2**	**79.23**	**173**	P		**P**	**09 23 20.1**	**-0.4**
BELA				IAmb		IAmb	09 23 21.4	
comp=Z,3.8nm,1.0s								
W13A	**Hualapai Mount**	**82.89**	**48**	P		**P**	**09 23 39.6**	**-0.7**
W13A				IAmb		IAmb	09 23 45.8	
comp=Z,3.4nm,0.8s								
F10A	**Beach Ranch, E**	**86.70**	**38**	P		**P**	**09 23 58.8**	**+0.4**
F10A				IAmb		IAmb	09 23 59.7	
comp=Z,3.1nm,0.8s								
GLB	**Gilahina Butte**	**86.70**	**16**	P		**P**	**09 23 58.5**	**+0.5**
GLB				IAmb		IAmb	09 24 08.1	
comp=Z,4.7nm,1.2s								
TXAR	**Lajitas Array**	**87.78**	**58**	P		**P**	**09 24 04.8**	**+0.9**
comp=Z,0.8nm,0.9s,baz=235,slow=4.4,SNR=7.3								
comp=Z,0.8nm,0.9s								
ILAR	**Eielson Array**	**88.85**	**

MKAR	**Makanchi Array**	**111.04**	**313**		**PKiKP**	**PKiKP**	09 29 43.2	-0.5
KURBB	**Kurchatov Arra**	**113.94**	**317**	PKiKP	**PKiKP**		09 29 47.9	-1.2
	comp=Z,0.3nm,0.3s,baz=108,slow=1.8,SNR=4.9							
BVAR	**Borovoye Array**	**119.01**	**320**	PKP	**PKPdf**		09 29 58.0	-0.8
	comp=Z,1.5nm,0.4s,baz=88,slow=1.8,SNR=4.8							
ARCES	**ARCESS Array B**	**129.22**	**349**	PKP	**PKiKP**		09 30 18.3	-0.4
	comp=Z,1.4nm,0.7s,baz=45,slow=1.9,SNR=7.0							
ARCES	**ARCESS Array B**	**129.22**	**349**		**PKPdf**		09 30 17.5	-0.4
FINES	**FINESS Array B**	**136.00**	**343**	PKP	**PKiKP**		09 30 32.2	-0.4
	comp=Z,0.6nm,0.4s,baz=5,7,slow=1.4,SNR=1.7							
HFS	**Hagfors**	**139.85**	**350**	PKhKP	PKPpre		09 30 31.8	
	comp=Z,1.1nm,0.3s,baz=64,slow=3.4,SNR=9.0							
AKASG	**Malin Array Be**	**143.08**	**330**	PKP	PKPab		09 30 41.4	-0.2
	comp=Z,3.5nm,0.5s,baz=44,slow=4.3,SNR=20							
EKA	**Eskdalemuir Ar**	**145.46**	**5**	PKPbc	**PKPbc**		09 30 48.8	-0.5
	comp=Z,0.7nm,0.5s,baz=316,slow=3.5,SNR=4.8							
BRTR	**Keskin Array B**	**146.66**	**311**	PKPbc	**PKPbc**		09 30 53.0	-0.3
	comp=Z,1.5nm,0.6s,baz=136,slow=3.9,SNR=6.0							
BRTR	**Keskin Array B**	**146.66**	**311**		**PKPbc**		09 30 53.7	+0.4
MMAI	**Mount Meron Ar**	**147.49**	**299**	PKPbc	**PKPbc**		09 30 55.8	+0.2
	comp=Z,5.4nm,0.8s,baz=74,slow=6.3,SNR=4.0							
GERES	**GERESS Array B**	**150.43**	**343**	PKPbc	**PKPbc**		09 31 02.4	+0.1
	comp=Z,1.2nm,0.6s,baz=338,slow=2.1,SNR=4.2							

IDC 08 09:31:51.0±2.2, 33°.34N×88°.94E, h0km, mb3.5/2, mbtmp3.7/5, ML3.7/2, MS3.4/1, Error ellipse: s-maj=74.6km s-min=24.3km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.32**	**146**	P	Pn	09 35 54.9	+0.6
	0.9nm,0.3s,baz=337,slow=11,SNR=8.2						
KURBB	**Kurchatov Arra**	**18.89**	**339**	P	Pn	09 36 13.7	+0.3
	0.1nm,0.3s,baz=150,slow=11,SNR=4.7						
	0.8nm,0.2s						
SONM	**Songino Array**	**19.57**	**37**	P	Pn	09 36 21.2	-0.5
	1.0nm,0.3s,baz=227,slow=13,SNR=4.9						
	0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**20.81**	**353**	P	P	09 36 32.9	-0.9
	1.1nm,0.6s,baz=179,slow=12,SNR=5.5						
	1.1nm,0.6s						
EIL	**Elat**	**45.76**	**281**	LR	LR	10 04 17.6	
	comp=Z,412nm,18.2s,baz=96,slow=42						
WRA	**Warramunga Arr**	**68.44**	**134**	P		09 42 54.7	-0.2
	0.3nm,0.5s,baz=325,slow=6.6,SNR=7.7						
	0.3nm,0.5s						

*AFAD **08** 09:34:29.3, 35°.62N×26°.28E, h11km±2km, ML3.5*
*IDC **08** 09:34:30.5±1.7, 35°.20N×26°.78E, h0km, mb3.8/5, mbtmp3.6/9, ML3.2/3, MS3.9/2, Error ellipse: s-maj=37.0km s-min=15.3km az=172.0*
*ISK **08** 09:34:32.7, 35°.53N×26°.72E, h2km, ML3.4/23*
*ATH **08** 09:34:32.9, 35°.58N×26°.68E, h7km±2km, ML3.7/11, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*THE **08** 09:34:33.2, 35°.N±3'×2'.7E±', h8km±3km, M3.5/17, ML3.5/17*

ISC 08 09:34:33.0±1.0, 35°.53N±0'.03×26°.68E±0'.02, h7km±8km, n90, σ1s05/122, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.39**	**87**	Pg	**Pg**	**09 34 40.6**	**-0.1**
KARP				Sg	**Sb**	**09 34 46.5**	**-2.0**
KARP	**Karpathos**	**0.39**	**87**	P	**Pg**	**09 34 40.5**	**-0.1**
KARP				S	**Sg**	**09 34 46.3**	**+0.5**
KARP	**Karpathos**	**0.39**	**87**	P	**Pg**	**09 34 40.4**	**-0.2**
KARP				S	**Sg**	**09 34 46.0**	**+0.2**
ZKR	**Zakros**	**0.56**	**223**	P	**Pg**	**09 34 43.5**	**-0.3**
ZKR				S	**Sg**	**09 34 52.2**	**+1.1**
ZKR	**Zakros**	**0.56**	**223**	P	**Pg**	**09 34 43.5**	**-0.3**
ZKR				S	**Sg**	**09 34 52.1**	**+1.1**
SIT2	**Siteia**	**0.57**	**236**	P	**Pg**	**09 34 43.8**	**-0.2**
SIT2				S	**Sg**	**09 34 52.1**	**+0.7**
AGNA	**Agios Nikolaos**	**0.85**	**247**	P	**Pg**	**09 34 49.7**	**+0.3**
AGNA				S	**Sg**	**09 35 00.9**	**+0.4**
NPS	**Neapolis**	**0.91**	**254**	P	**Pg**	**09 34 50.6**	**+0.1**
NPS				S	**Sb**	**09 35 03.4**	**-0.1**
NPS	**Neapolis**	**0.91**	**254**	P	**Pg**	**09 34 50.5**	**-0.1**
NPS				S	**Sg**	**09 35 02.8**	**+0.4**
THERA	**Ancient Thera,**	**1.29**	**311**	P	**Pn**	**09 34 57.1**	**-0.3**
THERA				S	**Sn**	**09 35 15.3**	**+0.3**
THERA	**Ancient Thera,**	**1.29**	**311**	P	**Pn**	**09 34 56.8**	**-0.6**
YAZI	**Mula-Dat§a-**	**1.31**	**28**	P	**Pn**	**09 34 55.1**	**-2.6**
THR8	**Santorini-Mono**	**1.31**	**312**	P	**Pn**	**09 34 57.6**	**-0.2**
THR8	**Santorini-Mono**	**1.31**	**312**	P	**Pn**	**09 34 57.0**	**-0.7**
THR6	**Thira Island,**	**1.33**	**309**	P	**Pb**	**09 34 58.1**	**-0.2**
IACM	**Heraklion**	**1.33**	**261**	S	**Sb**	**09 35 15.7**	**+0.1**
IACM	**Heraklion**	**1.33**	**261**	P	**Pn**	**09 34 57.8**	**-0.2**
IACM				S	**Sb**	**09 35 15.6**	**+0.1**
THR9	**Santorini-Faro**	**1.36**	**308**	P	**Pb**	**09 34 58.5**	**-0.3**
THR9	**Santorini-Faro**	**1.36**	**308**	P	**Pn**	**09 34 57.8**	**-0.6**
ARG	**Arkhangelos**	**1.36**	**59**	Pn	**Pg**	**09 34 58.9**	**-0.2**
ARG				Sn	**Sn**	**09 35 18.1**	**+1.4**
ARG	**Arkhangelos**	**1.36**	**59**	P	**Pg**	**09 34 58.6**	**-0.6**
ARG				S	**Sn**	**09 35 16.9**	**+0.2**
ARG	**Arkhangelos**	**1.36**	**59**	P	**Pb**	**09 34 58.2**	**-0.6**
SNT5	**Nea Kammeni, S**	**1.36**	**310**	P	**Pb**	**09 34 58.6**	**-0.3**
SNT5				S	**Sg**	**09 35 18.0**	**+1.2**
SNT5	**Nea Kammeni, S**	**1.36**	**310**	P	**Pg**	**09 34 59.0**	**-0.2**
THR3	**Thira Island,**	**1.36**	**311**	P	**Pn**	**09 34 58.4**	**0.0**
THR3	**Thira Island,**	**1.36**	**311**	P	**Pn**	**09 34 57.9**	**-0.5**
THR2	**Thira island,**	**1.37**	**313**	P	**Pn**	**09 34 58.5**	**0.0**
THR5	**Thira Island,**	**1.40**	**310**	P	**Pn**	**09 34 58.5**	**-0.5**
DAT	**Datca**	**1.40**	**31**	Pn	**Pg**	**09 34 59.7**	**-0.3**
DAT	**Datca**	**1.40**	**31**	P	**Pn**	**09 34 58.6**	**-0.5**
DAT				S	**Sg**	**09 35 18.2**	**0.0**
SAP3	**Santorini-Thir**	**1.41**	**310**	P	**Pn**	**09 34 59.0**	**-0.1**
SAP3				S	**Sg**	**09 35 18.8**	**+0.3**
SAP3	**Santorini-Thir**	**1.41**	**310**	P	**Pn**	**09 34 58.3**	**-0.8**
IDI	**Anoyia**	**1.48**	**261**	Pn	**Pn**	**09 34 59.6**	**-0.6**
	32nm,0.3s,baz=99,slow=16,SNR=124						
IDI				Sn	**Sb**	**09 35 20.3**	**+0.4**
	111nm,0.3s,baz=162,slow=20,SNR=17						
IDI	**Anoyia**	**1.48**	**261**	Pn	**Pg**	**09 35 01.4**	**-0.1**
IDI	**Anoyia**	**1.48**	**261**	P	**Pn**	**09 34 59.5**	**-0.6**
IDI				S	**Sn**	**09 35 19.7**	**-0.1**
IDI	**Anoyia**	**1.48**	**261**	P	**Pn**	**09 34 59.5**	**-0.7**
SIVA	**Sivas**	**1.61**	**252**	P	**Pb**	**09 35 03.1**	**0.0**
SIVA				S	**Sn**	**09 35 23.2**	**+0.3**
SIVA	**Sivas**	**1.61**	**252**	P	**Pn**	**09 35 01.4**	**-0.4**
SIVA				S	**Sn**	**09 35 23.4**	**+0.5**
BODT	**Bodrum**	**1.62**	**18**	Pn	**Pb**	**09 35 02.8**	**-0.4**
BODT	**Bodrum**	**1.62**	**18**	P	**Pb**	**09 35 02.3**	**-0.8**
BODT				S	**Sg**	**09 35 27.6**	**+2.6**
BDRM	**Kayabasi**	**1.66**	**22**	P	**Pn**	**09 35 02.4**	**-0.1**
YKAV	**Yalıkavak-Bodr**	**1.67**	**17**	Pn	**Pb**	**09 35 03.7**	**-0.3**
TURN	**Turunc**	**1.78**	**45**	Pn	**Pn**	**09 35 04.2**	**+0.1**
TURN	**Turunc**	**1.78**	**45**	P	**Pn**	**09 35 03.5**	**-0.6**
TURN				S	**Sb**	**09 35 28.2**	**-0.1**
VAM	**Vamos**	**2.03**	**267**	P	**Pb**	**09 35 10.2**	**-0.4**
VAM				S	**Sn**	**09 35 32.7**	**-0.4**
VAM	**Vamos**	**2.03**	**267**	P	**Pn**	**09 35 08.4**	**+0.8**
DALY	**Dalyan (Mula)**	**2.05**	**50**	Pn	**Pb**	**09 35 09.1**	**-1.5**
DALY	**Dalyan (Mula)**	**2.05**	**50**	P	**Pb**	**09 35 09.2**	**-1.4**
YER	**Yerkesik**	**2.06**	**38**	Pn	**Pn**	**09 35 08.5**	**+0.3**
YER	**Yerkesik**	**2.06**	**38**	P	**Pn**	**09 35 08.4**	**+0.3**
YER				S	**Sb**	**09 35 35.4**	**-1.2**
CHAN	**Chania**	**2.15**	**271**	P	**Pn**	**09 35 09.7**	**+0.4**
MULA	**Mugla, Merkez-**	**2.18**	**37**	P	**Pn**	**09 35 10.1**	**+0.4**
MHLO	**Agia Marina, M**	**2.18**	**303**	P	**Pb**	**09 35 11.7**	**-1.1**
MHLO				S	**Sb**	**09 35 38.8**	**-1.2**
MHLO	**Agia Marina, M**	**2.18**	**303**	P	**Pn**	**09 35 09.0**	**-0.7**
IMMV	**Iera Moni Meta**	**2.20**	**269**	Pn	**Pb**	**09 35 11.9**	**-1.3**
IMMV	**Iera Moni Meta**	**2.20**	**269**	P	**Pn**	**09 35 09.3**	**-0.7**
IMMV				S	**Sn**	**09 35 38.5**	**+1.0**
IMMV	**Iera Moni Meta**	**2.20**	**269**	P	**Pn**	**09 35 09.6**	**-0.5**
GCAM	**G?zelcaml?**	**2.22**	**11**	Pn	**Pb**	**09 35 11.4**	**-2.0**
GVD	**Gavdhos**	**2.23**	**253**	Pn	**Pb**	**09 35 12.3**	**-1.4**
GVD	**Gavdhos**	**2.23**	**253**	P	**Pb**	**09 35 13.3**	**-0.3**
GVD	**Gavdhos**	**2.23**	**253**	P	**Pn**	**09 35 10.9**	**+0.6**
SABU	**Mula-Dalaman**	**2.26**	**54**	P	**Pb**	**09 35 12.3**	**-1.9**
SABU				S	**Sg**	**09 35 47.8**	**+2.2**
AKAS	**Kas**	**2.48**	**73**	Pn	**Pn**	**09 35 14.9**	**+1.0**
CAME	**Cameli-Denizli**	**2.55**	**55**	Pn	**Pn**	**09 35 16.3**	**+1.4**
ESEN	**Aydn-Nazilli**	**2.63**	**30**	P	**Pn**	**09 35 16.5**	**+0.6**
ESEN				S	**Sb**	**09 35 50.4**	**-2.6**
TAVA	**DENIZLI_Tavas**	**2.64**	**42**	P	**Pn**	**09 35 17.3**	**+1.2**
TAVA				S	**Sb**	**09 35 52.1**	**-1.3**
CAEL	**Denizli, Camel**	**2.66**	**52**	P	**Pb**	**09 35 19.6**	**-1.4**
CAEL				S	**Sg**	**09 35 59.7**	**+1.2**
CAEL					IAML	09 36 07.0	
	comp=N,256nm,0.7s						
CAEL					IAML	09 36 24.0	
	comp=E,258nm,0.7s						
KNIK	**Mula-Seydike**	**2.69**	**60**	P	**Pn**	**09 35 18.3**	**+1.6**
NAZL	**Nazilli-Aydin**	**2.76**	**28**	Pn	**Pn**	**09 35 19.2**	**+1.6**
ANKY	**Antikythira Is**	**2.77**	**278**	P	**Pn**	**09 35 17.4**	**-0.4**
DNIZ	**Denizli-Tavas-**	**2.83**	**41**	P	**Pn**	**09 35 20.0**	**+1.3**
DNIZ				S	**Sb**	**09 35 58.2**	**-0.5**
DNIZ					IAML	09 36 13.0	
	comp=N,150nm,0.5s						
DNIZ					IAML	09 36 15.0	
	comp=E,196nm,0.3s						
URLA	**Izmir**	**2.83**	**359**	Pn	**Pn**	**09 35 20.4**	**+1.7**
APMY	**Acipayam-Deniz**	**2.87**	**47**	Pn	**Pn**	**09 35 20.6**	**+1.4**
BLCB	**Balcova**	**2.87**	**6**	Pn	**Pn**	**09 35 20.9**	**+1.8**
ELL	**Elmali**	**2.88**	**64**	Pn	**Pn**	**09 35 20.7**	**+1.2**
GOLH	**Golhisar**	**2.88**	**53**	P	**Pn**	**09 35 21.0**	**+1.5**
GOLH				S	**Sb**	**09 36 00.6**	**+0.2**
GOLH					IAML	09 36 08.0	
	comp=N,126nm,0.9s						
GOLH					IAML	09 36 14.0	
	comp=E,124nm,0.6s						
CHOS	**Chios island**	**2.90**	**350**	Pn	**Pn**	**09 35 19.9**	**+0.2**
ODEM	**Odemis-Izmir**	**2.96**	**22**	Pn	**Pn**	**09 35 22.1**	**+1.6**
KRBN	**Karaburun**	**3.06**	**358**	Pn	**Pn**	**09 35 23.4**	**+1.6**
KORT	**Korkueli**	**3.31**	**63**	Pn	**Pn**	**09 35 26.8**	**+1.5**
BRTR	**Keskin Array B**	**6.93**	**51**	Pn	**Pn**	**09 36 16.4**	**+1.2**
	0.3nm,0.3s,baz=226,slow=14,SNR=4.7						
BRTR					Sn	**09 37 37.5**	**+3.2**
	0.2nm,0.3s,baz=217,slow=23,SNR=2.2						
BRTR					LR	LR	09 40 01.3
	comp=Z,28nm,19.6s,baz=212,slow=47						
	0.8nm,0.5s						
MMAI	**Mount Meron Ar**	**7.64**	**107**	Pn	**Pn**	**09 36 23.0**	**-1.8**
	0.8nm,0.4s,baz=292,slow=16,SNR=1.4						
AKASG	**Malin Array Be**	**15.28**	**6**	Pn	**P**	**09 38 12.1**	**-1.8**
	0.4nm,0.3s,baz=196,slow=11,SNR=4.9						
	0.3nm,0.4s						
GERES	**GERESS Array B**	**16.39**	**328**	Pn	**P**	**09 38 27.1**	**+0.7**
	baz=146,slow=13,SNR=6.2						
	1.0nm,0.4s						
ESDC	**Sonseca Array**	**24.57**	**289**	P	**P**	**09 39 53.5**	**-0.1**
	0.6nm,0.5s,baz=90,slow=11,SNR=5.2						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**25.94**	**359**	P	**P**	**09 40 08.0**	**+2.4**
	1.4nm,0.7s,baz=224,slow=9.7,SNR=2.0						
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**39.92**	**51**	P	**P**	**09 42 06.8**	**-0.7**
	0.5nm,0.2s,baz=279,slow=9.0,SNR=5.4						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**42.53**	**57**	P	**P**	**09 42 29.0**	**-0.1**
	0.9nm,0.5s,baz=278,slow=7.5,SNR=7.5						
MKAR					LR	LR	10 04 21.8
	comp=Z,168nm,19.6s,baz=192,slow=42						
	0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**43.85**	**46**	P	**P**	**09 42 38.2**	**-1.5**
	0.6nm,0.4s,baz=253,slow=9.1,SNR=3.6						
	0.6nm,0.4s						
SDV	**Santo Domingo**	**90.79**	**281**	LR	LR	10 23 25.3	
	comp=Z,57nm,20.6s,baz=228,slow=32						

*IDC **08** 09:36:19.4±7.4, 32°.12S×69°.39W, h93km±58km, mb3.5/4, mbtmp3.8/7, ML4.0/3, Error ellipse: s-maj=52.9km s-min=34.1km az=38.0*
*SJA **08** 09:36:20.5±0.8, 31°.97S×69°.33W, h130km±3km, ML3.7, MW3.8*
*NEIC **08** 09:36:22.6±1.2, 31°.95S±0°.05×69°.33W±0°.07, h113km±5km, mb4.4/14, Error ellipse: s-maj=9.6km s-min=6.5km az=121.0*

ISC 08 09:36:22.7±0.6, 31°.97S±0°.03×69°.32W±0°.03, h123km±5km, n117, σ1s46/162, mb4.4/9, 8C-10D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.17**	**7**	eP	**Pn**	**09 36 38.9**	**-1.1**
RTLS					IAML	09 36 53.4	
	comp=Z,5μm,0.3s						
ZON	**Zonda**	**0.69**	**52**	eP	**Pn**	**09 36 41.4**	**-0.9**
ZON				eS	**Sn**	**09 36 56.4**	**-0.7**
ZON					IAML	09 36 58.1	
	comp=Z,781nm,0.6s						
ZON	**Zonda**	**0.69**	**52**		**Pn**	**09 36 41.4**	**-0.9**
ZON					Sn	**09 36 55.5**	**-1.7**
SJA	**San Juan**	**0.79**	**56**	eP	**Pn**	**09 36 39.1**	**-3.9**
SJA				eS	**Sn**	**09 36 58.6**	**+0.2**
SJA					IAML	09 37 03.3	
	comp=Z,1μm,0.5s						
RTLL	**Cerro Villicun**	**0.96**	**49**	eP	**Pn**	**09 36 43.9**	**-0.7**
RTLL				eS	**Sn**	**09 36 59.5**	**-1.8**
RTLL					IAML	09 37 00.8	
	comp=Z,2μm,0.3s						
AAGR	**Agrelo**	**1.19**	**160**	eP	**Pn**	**09 36 46.8**	**-0.1**
AAGR				eS	Sn	09 36 53.8	-12
AAGR					IAML	09 37 13.0	
	comp=Z,995nm,0.8s						
VA03	**San Esteban**	**1.31**	**232**	eP	**Pn**	**09 36 47.1**	**-1.1**
VA03				eS	**Sn**	**09 37 07.7**	**+0.1**
VA03					IAML	09 37 12.3	
	comp=Z,2μm,0.2s						
VA03	**San Esteban**	**1.31**	**232**		**Pn**	**09 36 47.8**	**-0.4**
VA03					Sn	**09 37 07.1**	**-0.5**
VA03	**San Esteban**	**1.31**	**232**	eP	**Pn**	**09 36 47.6**	**-0.6**
VA03				eS	**Sn**	**09 37 07.3**	**-0.3**
VA03					IAML	09 37 08.0	
	comp=N,4μm,0.3s						
ACCO	**Cerro Coronel**	**1.40**	**9**	eP	**Pn**	**09 36 49.1**	**-0.4**
ACCO					IAML	09 37 11.8	
	comp=Z,687nm,0.5s						
CO04	**Los Peladeros**	**1.41**	**267**		**Pn**	**09 36 48.0**	**-1.4**
CO04	**Los Peladeros**	**1.41**	**267**	eP	**Pn**	**09 36 48.1**	**-1.4**
CO04				eS	**Sn**	**09 37 07.7**	**-2.1**
CO04					IAML	09 37 09.8	
	comp=N,6μm,0.2s						
MT08	**Bocatoma Ro**	**1.58**	**202**	eP	**Pn**	**09 36 51.1**	**-0.4**
MT08				eS	**Sn**	**09 37 11.2**	**-2.2**
MT08					IAML	09 37 21.8	
	comp=Z,310nm,0.2s						
MT08	**Bocatoma Ro**	**1.58**	**202**		**Pn**	**09 36 51.5**	**0.0**
MT08	**Bocatoma Ro**	**1.58**	**202**	eP	**Pn**	**09 36 51.5**	**0.0**
MT08				eS	**Sn**	**09 37 15.7**	**+2.3**
MT08					IAML	09 37 21.6	
	comp=E,580nm,0.4s						
CO02	**Combarbal**	**1.62**	**298**	eP	**Pn**	**09 36 50.9**	**-1.0**
CO02				eS	**Sn**	**09 37 13.8**	**-0.2**
CO02					IAML	09 37 14.7	
	comp=Z,1μm,0.2s						
CO02	**Combarbal**	**1.62**	**298**		**Pn**	**09 36 50.9**	**-1.0**
CO02	**Combarbal**	**1.62**	**298**	eP	**Pn**	**09 36 50.8**	**-1.0**
CO02				eS	**Sn**	**09 37 13.0**	**-1.0**
PEL	**Peldehue**	**1.64**	**224**	eP	**Pn**	**09 36 51.2**	**-0.8**
PEL				eS	**Sn**	**09 37 16.5**	**+2.2**
PEL					IAML	09 37 24.4	
	comp=Z,292nm,0.2s						
PEL	**Peldehue**	**1.64**	**224**		**Pn**	**09 36 51.0**	**-0.9**
AVIZ	**Vizcacheras**	**1.64**	**156**	eP	**Pn**	**09 36 52.2**	**+0.2**
MT10	**Hacienda Santa**	**1.65**	**218**	eP	**Pn**	**09 36 52.2**	**0.0**
MT10				eS	**Sn**	**09 37 14.9**	**+0.2**
ROCH	**El Roble**	**1.74**	**235**	eP	**Pn**	**09 36 52.2**	**-1.1**
ROCH				eS	**Sn**	**09 37 14.7**	**-2.1**
ROCH					IAML	09 37 19.2	
	comp=N,2μm,0.4s						
MT14	**Cerro Cal¡n**	**1.75**	**215**	eP	**Pn**	**09 36 53.2**	**-0.1**
MT14				eS	**Sn**	**09 37 16.5**	**-0.2**
MT14					IAML	09 37 18.4	
	comp=E,2μm,0.5s						
MT16	**CCHEN**	**1.77**	**215**		**Pn**	**09 36 53.3**	**-0.2**
MT16	**CCHEN**	**1.77**	**215**	eP	**Pn**	**09 36 53.3**	**-0.2**
MT16				eS	**Sn**	**09 37 16.8**	**-0.3**
MT16					IAML	09 37 20.3	
	comp=E,590nm,0.3s						
ACDV	**Cuesta del Vie**	**1.80**	**6**	eP	**Pn**	**09 36 54.0**	**-0.1**
ACDV				eS	**Sn**	**09 37 17.5**	**-0.4**
ACDV					IAML	09 37 19.0	
	comp=Z,416nm,0.3s						
AROD	**Rodeo**	**1.80**	**356**	eP	**Pn**	**09 36 54.6**	**+0.4**
MT03	**Universidad Ad**	**1.82**	**213**	eP	**Pn**	**09 36 53.4**	**-0.8**
MT03				eS	**Sn**	**09 37 18.8**	**+0.6**
MT03					IAML	09 37 19.8	
	comp=Z,1μm,0.3s						
MT03	**Universidad Ad**	**1.82**	**213**		**Pn**	**09 36 54.0**	**-0.1**
MT03	**Universidad Ad**	**1.82**	**213**	eP	**Pn**	**09 36 54.0**	**-0.1**
MT03				eS	**Sn**	**09 37 18.2**	**0.0**
MT03					IAML	09 37 19.9	
	comp=E,3μm,0.3s						
ACAN	**Cantantal**	**1.83**	**100**	eP	**Pn**	**09 36 52.3**	**-2.0**
MT05	**Renca**	**1.85**	**220**	eP	**Pn**	**09 36 53.4**	**-1.1**
MT05				eS	**Sn**	**09 37 18.8**	**0.0**
MT05					IAML	09 37 19.1	
	comp=Z,936nm,0.2s						
MT05	**Renca**	**1.85**	**220**		**Pn**	**09 36 53.8**	**-0.7**
MT05	**Renca**	**1.85**	**220**	eP	**Pn**	**09 36 54.0**	**-0.5**
MT05				eS	**Sn**	**09 37 18.2**	**-0.6**
MT05					IAML	09 37 19.3	
	comp=N,4μm,0.4s						
MT02	**Curacav**	**2.00**	**230**	eP	**Pn**	**09 36 54.8**	**-1.5**
MT02				eS	**Sn**	**09 37 20.2**	**-1.7**
MT02					IAML	09 37 22.5	
	comp=Z,267nm,0.2s						
MT02	**Curacav**	**2.00**	**230**		**Pn**	**09 36 54.7**	**-1.5**
MT02	**Curacav**	**2.00**	**230**	eP	**Pn**	**09 36 54.8**	**-1.5**
MT02				eS	**Sn**	**09 37 19.2**	**-2.8**
MT02					IAML	09 37 21.6	
	comp=E,619nm,0.3s						
MT12	**Pirque**	**2.04**	**210**	eP	**Pn**	**09 36 56.5**	**-0.2**
MT12				eS	**Sn**	**09 37 22.6**	**-0.3**
MT12					IAML	09 37 29.6	
	comp=E,1μm,0.3s						
AVFE	**Valle Fertil**	**2.06**	**51**	eP	**Pn**	**09 36 56.6**	**-0.5**
AVFE				eS	**Sn**	**09 37 22.8**	**-0.8**
AVFE					IAML	09 37 23.6	
	comp=Z,246nm,0.4s						
CO01	**Juntas del Tor**	**2.10**	**341**	eP	**Pn**	**09 36 57.9**	**+0.2**
CO01				eS	**Sn**	**09 37 22.2**	**-2.3**
CO01					IAML	09 37 30.2	
	comp=E,166nm,0.3s						
CO01	**Juntas del Tor**	**2.10**	**341**		**Pn**	**09 36 58.4**	**+0.7**
CO01	**Juntas del Tor**	**2.10**	**341**	eP	**Pn**	**09 36 58.4**	**+0.7**
CO01				eS	**Sn**	**09 37 25.4**	**+0.9**
CO01					IAML	09 37 29.1	
	comp=E,370nm,0.4s						
GO04	**Tololo Observa**	**2.20**	**324**	eP	**Pn**	**09 36 57.2**	**-1.8**
GO04				eS	**Sn**	**09 37 26.2**	**-0.5**
GO04					IAML	09 37 28.9	
	comp=Z,704nm,0.2s						
GO04	**Tololo Observa**	**2.20**	**324**		**Pn**	**09 36 58.0**	**-1.1**
GO04	**Tololo Observa**	**2.20**	**324**	eP	**Pn**	**09 36 57.9**	**-1.1**
GO04				eS	**Sn**	**09 37 25.0**	**-1.7**
GO04					IAML	09 37 27.5	
	comp=E,3μm,0.3s						
VA01	**Torpederas**	**2.23**	**241**	eP	**Pn**	**09 36 57.6**	**-1.4**
VA01				eS	**Sn**	**09 37 26.7**	**-0.3**
VA01					IAML	09 37 29.9	
	comp=Z,247nm,0.2s						
VA01	**Torpederas**	**2.23**	**241**		**Pn**	**09 36 57.4**	**-1.6**
VA01	**Torpederas**	**2.23**	**241**	eP	**Pn**	**09 36 57.3**	**-1.7**
VA01				eS	**Sn**	**09 37 22.9**	**-4.0**
VA01					IAML	09 37 29.2	
	comp=E,932nm,0.2s						
MT09	**Talagante**	**2.28**	**217**		**Pn**	**09 36 59.2**	**-0.7**
MT09	**Talagante**	**2.28**	**217**	eP	**Pn**	**09 36 58.8**	**-1.2**
MT09				eS	**Sn**	**09 37 26.8**	**-1.6**
MT09					IAML	09 37 28.3	
	comp=E,2μm,0.2s						
BO04	**La Punta**	**2.29**	**208**		**Pn**	**09 36 60.0**	**+0.1**
BO04	**La Punta**	**2.29**	**208**	eP	**Pn**	**09 36 59.5**	**-0.4**
BO04				eS	**Sn**	**09 37 28.1**	**-0.3**
BO04					IAML	09 37 29.9	
	comp=E,841nm,0.2s						
CO06	**Fray Jorge**	**2.37**	**303**		**Pn**	**09 36 58.8**	**-2.1**
MT01	**Popeta**	**2.49**	**220**	eP	**Pn**	**09 37 00.7**	**-1.7**
MT01					IAML	09 37 34.9	
	comp=Z,281nm,0.6s						
MT01	**Popeta**	**2.49**	**220**		**Pn**	**09 37 00.7**	**-1.7**
MT01	**Popeta**	**2.49**	**220**	eP	**Pn**	**09 37 00.5**	**-1.9**
MT01				eS	**Sn**	**09 37 29.9**	**-3.1**
MT01					IAML	09 37 31.5	
	comp=E,538nm,0.3s						
VA05	**Santo Doming

MACA IAmb IAmb 09 42 36.0
comp=Z,9.1nm,1.0s

BOAV **Boa Vista** **35.18 15** **P** **P** **09 43 04.9 -0.1**
BOAV IAmb IAmb 09 43 05.5
comp=Z,3.4nm,0.8s

CELP **Cerrillos** **49.83 3** P **P** **09 45 03.5 +0.2**
SNAA **Sanae** **52.62 159** P **P** **09 45 25.7 +2.1**
HNDO **Hondo** **67.46 332** P **P** **09 47 07.1 +1.9**
HNDO IAmb IAmb 09 47 07.5
comp=Z,3.6nm,0.9s

TXAR **Lajitas Array** **69.15 328** P **P** **09 47 16.9 +1.0**
comp=Z,0.3nm,0.5s,baz=154,slow=9.7,SNR=6.4
comp=Z,0.3nm,0.5s

TXAR **Lajitas Array** **69.15 328** P **P** **09 47 16.3 +0.4**
V48A **Smith Brothers** **69.33 345** **P** **09 47 17.4 +0.7**
V48A IAmb IAmb 09 47 17.5
comp=Z,3.4nm,0.5s

WVT **Waverly** **69.93 344** P **P** **09 47 20.9 +0.5**
WVT IAmb IAmb 09 47 21.3
comp=Z,6.2nm,0.7s

PLPT **Palo Pinto** **70.01 334** P **P** **09 47 22.0 +1.0**
R40A **Maddies Statio** **73.10 341** P **P** **09 47 40.0 +0.7**
TORD **Torodi Ar. Bea** **81.36 69** P **P** **09 48 26.6 +0.5**
comp=Z,1.5nm,0.8s,baz=266,slow=3.3,SNR=5.1
comp=Z,1.5nm,0.8s

PDAR **Pinedale Array** **83.03 331** P **P** **09 48 34.5 0.0**
comp=Z,0.1nm,0.4s,baz=229,slow=2.8,SNR=1.8
comp=Z,0.1nm,0.4s

PDAR **Pinedale Array** **83.03 331** P **P** **09 48 34.9 +0.5**
SCHQ **Schefferville** **86.48 1** P **P** **09 48 51.5 +0.4**
comp=Z,1.8nm,0.7s,baz=180,slow=5.1,SNR=2.6
comp=Z,1.8nm,0.7s

SCHQ **Schefferville** **86.48 1** P **P** **09 48 51.6 +0.5**
SCHQ IAmb IAmb 09 48 57.6
comp=Z,10nm,1.5s

ASAR **Alice Springs** **120.38 205** PKP **PKPdf** **09 54 59.5 -0.5**
comp=Z,0.2nm,0.4s,baz=136,slow=1.8,SNR=4.4

ASAR **Alice Springs** **120.38 205** **PKPdf** **09 54 59.7 -0.4**
WRA **Warramunga Arr** **123.62 207** PKP **PKPdf** **09 55 06.2 -0.1**
comp=Z,0.5nm,0.4s,baz=154,slow=1.9,SNR=22

WRA **Warramunga Arr** **123.62 207** **PKPdf** **09 55 06.1 -0.3**
KURBB **Kurchatov Arra** **149.83 42** PKPbc **PKiKP** **09 55 59.0 +0.2**
comp=Z,0.9nm,0.2s,baz=316,slow=3.9,SNR=4.2

ZALV **Zalesovo Beam** **151.29 32** PKPbc **PKiKP** **09 56 02.1 +0.4**
comp=Z,1.5nm,0.4s,baz=291,slow=4.1,SNR=7.6

ZALV **Zalesovo Beam** **151.29 32** **PKiKP** **09 56 02.3 +0.6**
MKAR **Makanchi Array** **153.71 48** PKPbc **PKiKP** **09 56 07.3 +0.3**
comp=Z,0.2nm,0.4s,baz=29,slow=3.3,SNR=1.3

*TEH **08** 09:45:53.1,26°.83N×54°.13E,h8km±54km,ML3.8, Presumed earthquake*
*DSN **08** 09:45:54.5±1.5,27°.02N×54°.09E,h15km,ML3.2/14, Error ellipse: s-maj=16.7km s-min=4.6km az=123.0*
*OMAN **08** 09:46:08.9±0.1,25°.88N×54°.63E,h10km,ml2.8/23, Error ellipse: s-maj=1.3km s-min=0.7km az=344.0*
ISC 08 09:45:54.3±0.8, 26°.80N±0°.03×54°.16E±0°.03, h19km, n55, σ2s70/64, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**1.03**	**302**	Pg	**Pb**	**09 46 12.9**	**-0.8**
LMD1				Sg	**Sg**	**09 46 26.5**	**-1.6**
KHL1	**Khalili_Fars**	**1.13**	**318**	Pg	**Pb**	**09 46 13.8**	**-1.5**
JHRM	**Jahrom**	**1.77**	**343**	Pg	**Pb**	**09 46 25.8**	**-0.5**
UMQ	**Umm Al-Quwin**	**1.86**	**133**	P	**Pb**	**09 46 29.1**	**+1.4**
GENO	**Geno**	**1.89**	**71**	Pn	**Pb**	**09 46 28.0**	**-0.4**
SHME	**Shamm**	**1.93**	**112**	*eP*	**Pb**	**09 46 28.1**	**-0.8**
	SNR=10						
SHME	**Shamm**	**1.93**	**112**	P	**Pg**	**09 46 33.9**	**+2.5**
SHME				S	**Sb**	**09 46 52.5**	**-0.1**
QIR1	**Qir**	**1.94**	**330**	Pn	**Pb**	**09 46 27.4**	**-1.7**
BANOM	**Banah**	**2.11**	**114**	*eP*	**Pb**	**09 46 31.0**	**-1.0**
	SNR=7.4						
BANOM	**Banah**	**2.11**	**114**	P	**Pg**	**09 46 37.6**	**+2.7**
BANOM				S	**Sn**	**09 46 55.6**	**+1.1**
JRN	**Qarnain Island**	**2.19**	**213**	P	**Pg**	**09 46 40.5**	**+4.1**
JRN				S	**Sg**	**09 47 04.4**	**-0.5**
IBND	**Bandar-abas**	**2.22**	**73**	Pn	**Pb**	**09 46 32.4**	**-1.4**
NAZ	**Nazwa, Dubai**	**2.26**	**143**	*eP*	**Pb**	**09 46 34.8**	**+0.3**
	SNR=14						
NAZ	**Nazwa, Dubai**	**2.26**	**143**	P	**Pb**	**09 46 33.4**	**-1.1**
	SNR=7.1						
MASF	**Masafi**	**2.29**	**128**	P	**Pb**	**09 46 35.1**	**-0.1**
MASF				S	**Sn**	**09 46 55.2**	**-3.8**
MSFE	**Esma-Masafi**	**2.30**	**128**	*eP*	**Pb**	**09 46 35.0**	**-0.2**
	SNR=6.8						
AJN	**Ajban**	**2.35**	**161**	P	**Pb**	**09 46 34.5**	**-1.6**
ASUD	**Al Ashush, Dub**	**2.41**	**154**	*eP*	**Pb**	**09 46 37.1**	**0.0**
	SNR=9.3						
ASUD	**Al Ashush, Dub**	**2.41**	**154**	P	**Pb**	**09 46 37.5**	**+0.4**
	SNR=9.3						
FAQ	**Al Faqa, Dubai**	**2.42**	**147**	*eP*	**Pb**	**09 46 37.1**	**-0.1**
	SNR=6.2						
FAQ	**Al Faqa, Dubai**	**2.42**	**147**	P	**Pb**	**09 46 37.1**	**-0.1**
MDH	**Madha**	**2.44**	**127**	P	**Pb**	**09 46 36.6**	**-1.0**
MDH	**Madha**	**2.44**	**127**	P	**Pb**	**09 46 37.0**	**-0.6**
UOSS	**Minazif**	**2.61**	**135**	*eP*	**Pb**	**09 46 39.0**	**-1.5**
	SNR=5.8						
UOSS	**Minazif**	**2.61**	**135**	P	**Pb**	**09 46 39.0**	**-1.5**
UOSS	**Minazif**	**2.61**	**135**	Pn	**Pn**	**09 46 38.2**	**+2.7**
HATD	**Hatta, Dubai**	**2.65**	**137**	*eP*	**Pb**	**09 46 39.6**	**-1.6**
	SNR=6.9						
HATD	**Hatta, Dubai**	**2.65**	**137**	P	**Pb**	**09 46 39.6**	**-1.6**
	SNR=5.2						
ASHO	**Ashiyiah**	**2.72**	**140**	*eP*	**Pb**	**09 46 40.7**	**-1.7**
	SNR=10						
ASHO	**Ashiyiah**	**2.72**	**140**	P	**Pb**	**09 46 40.5**	**-1.8**
	SNR=10						
ALNE	**Al Ain**	**3.09**	**152**	*i* P	**Pb**	**09 46 46.2**	**-2.6**
	SNR=17						
ALNE	**Al Ain**	**3.09**	**152**	P	**Pb**	**09 46 46.1**	**-2.6**
	SNR=23						
ALNE				S	Sn	09 47 10.3	-8.3
KHNJ	**Kahnooj**	**3.36**	**69**	Pn	**Pn**	**09 46 47.2**	**+1.4**
SOHO	**SOHO**	**3.42**	**140**	*i* P	**Pn**	**09 46 49.8**	**+3.3**
	SNR=6.7						
SOHO	**SOHO**	**3.42**	**140**	P	**Pn**	**09 46 49.6**	**+3.1**
JASK	**Jask - Hormozg**	**3.46**	**105**	Pn	**Pn**	**09 46 49.0**	**+1.8**
NGRK	**Negar Kerman**	**3.63**	**38**	Pn	**Pn**	**09 46 51.3**	**+1.4**
KRBR	**Kerman**	**3.91**	**35**	Pn	**Pn**	**09 46 55.5**	**+1.8**
ARQ	**Araqi**	**4.06**	**148**	P	**Pn**	**09 46 59.0**	**+3.5**
	SNR=32						
KHGB	**Koh Gabri**	**4.11**	**29**	Pn	**Pn**	**09 46 58.5**	**+2.2**
UMZA	**Um Al Zommool**	**4.17**	**167**	P	**Pn**	**09 46 60.0**	**+3.0**
UMZA				S	**Sn**	**09 47 37.2**	**-8.0**
CHMN	**Cheshme madani**	**4.26**	**44**	Pn	**Pn**	**09 47 01.4**	**+2.8**
HOQ	**Hoqain**	**4.29**	**138**	P	**Pn**	**09 47 02.2**	**+3.5**
HOQ				S	**Sn**	**09 47 41.5**	**-6.8**
KBAM	**BAM**	**4.46**	**58**	Pn	**Pn**	**09 47 03.4**	**+2.5**
BIDO	**Bidbid**	**4.86**	**131**	P	**Pn**	**09 47 09.1**	**+2.6**
BSY	**Bisya**	**4.89**	**145**	P	**Pn**	**09 47 10.6**	**+3.7**
	SNR=14						
SMDO	**Samad**	**5.13**	**136**	P	**Pn**	**09 47 13.2**	**+2.9**
SMDO				S	**Sn**	**09 48 02.3**	**-6.9**
DOBD	**Dorbid, Yazd**	**5.18**	**3**	Pn	**Pn**	**09 47 12.7**	**+1.7**
WSAR	**Wadi Sarin**	**5.39**	**130**	P	**Pn**	**09 47 16.6**	**+2.9**
WSAR				S	**Sn**	**09 48 09.9**	**-5.4**
JMDO	**Jabal Madar**	**5.69**	**140**	P	**Pn**	**09 47 20.3**	**+2.4**
WBK	**Wadi Bani Khal**	**6.05**	**133**	P	**Pn**	**09 47 25.3**	**+2.5**
	SNR=8.3						
JLN	**Jalan Bani Buh**	**6.66**	**133**	P	**Pn**	**09 47 31.8**	**+0.6**
MHTO	**MHTO**	**6.76**	**148**	P	**Pn**	**09 47 35.2**	**+2.7**
SRVN	**Saravan**	**7.37**	**83**	Pn	**Pn**	**09 47 44.1**	**+3.0**
DQM	**DQM**	**7.51**	**155**	P	**Pn**	**09 47 44.5**	**+1.7**

*ASRS **08** 09:50:06.0±1.3,54°.20N×87°.16E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 08 09:50:10.4±3.7, 54°.17N×87°.53E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=32.8km s-min=20.0km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**263**	I	I	09 58 50.0	
	baz=81,slow=315,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.61**	**263**	Pg	Pn	09 50 39.6	-0.4
	0.8nm,0.3s,baz=86,slow=15,SNR=6.3						
ZALV				Lg	Lg	09 51 01.6	
	1.5nm,0.3s,baz=78,slow=29,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.55**	**241**	Pn	Pn	09 51 48.5	+0.7
	baz=52,slow=13,SNR=1.8						
	0.2nm,0.3s						

MKAR **Makanchi Array** **8.10** **206** Pn **Pn** 09 52 10.2 +1.0
0.3nm,0.3s,baz=20,slow=18,SNR=2.6
0.3nm,0.4s

IDC 08 09:58:46.6±2.6, 2°.99N×129°.33E, h0km, mb3.3/3, mbtmp3.3/3, MS3.5/1, Error ellipse: s-maj=158.9km s-min=28.8km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.32**	**168**	P	P	10 03 55.8	-0.6
	0.4nm,0.6s,baz=348,slow=11,SNR=4.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**26.87**	**171**	P	P	10 04 29.5	+0.2
	0.3nm,0.8s,baz=352,slow=9.8,SNR=5.6						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**59.65**	**324**	P	P	10 08 52.9	+0.2
	0.2nm,0.3s,baz=120,slow=7.3,SNR=2.0						
	0.2nm,0.3s						
RPZ	**Rata Peaks**	**59.69**	**146**	LR	LR	10 34 16.3	
	comp=Z,38nm,18.2s,baz=222,slow=36						

*IDC **08** 10:13:38.2±0.8, 15°.28S×173°.01W, h0km, mb3.8/8, mbtmp3.8/8, MS3.0/2, Error ellipse: s-maj=34.2km s-min=18.8km az=126.0*
*NEIC **08** 10:13:38.9±1.0, 15°.38S±0°.04×172°.71W±0°.10, h10km±1km, mb4.0/8, Error ellipse: s-maj=16.3km s-min=7.5km az=262.0*
ISC 08 10:13:38.9±0.7, 15°.34S±0°.07×172°.7W±0°.1, h10km, n28, σ1s65/22, mb3.9/10, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.69**	**32**	P	**Pn**	**10 14 08.7**	**+0.2**
	74nm,0.3s,baz=203,slow=4.7,SNR=194						
AFI				Sn	**Sn**	**10 14 26.9**	**-3.3**
	501nm,0.3s,baz=64,slow=21,SNR=50						
AFI	**Afiamalu**	**1.69**	**32**		**Pn**	**10 14 08.8**	**+0.2**
AFI					**Sn**	**10 14 27.3**	**-3.0**
NIUE	**Niue**	**4.57**	**145**	Pn	**Pn**	**10 14 47.4**	**-0.7**
MSVF	**Nonsavu**	**9.17**	**254**	LR	LR	10 18 57.7	
	comp=Z,167nm,18.4s,baz=117,slow=36						
RAR	**Rarotonga**	**13.60**	**117**	LR	LR	10 21 01.5	
	comp=Z,34nm,18.7s,baz=306,slow=32						
EIDS	**Eidsvold**	**35.28**	**248**	P	**P**	**10 20 33.2**	**-1.0**
ARMA	**Armidale**	**35.94**	**239**	P	**P**	**10 20 38.2**	**-1.7**
H11S2	**WAKE ISLAND Hy**	**39.26**	**328**	T	T	11 02 46.0	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**39.27**	**328**	T	T	11 02 45.4	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**39.28**	**328**	T	T	11 02 48.1	
	baz=149						
H11N3	**WAKE ISLAND Hy**	**40.20**	**329**	T	T	11 04 02.0	
	baz=150,slow=76,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**40.20**	**329**	T	T	11 04 01.9	
	baz=150,slow=76,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**40.21**	**329**	T	T	11 04 03.2	
	baz=150,slow=76,SNR=4.9						
WR8	**Warramunga Arr**	**50.35**	**257**	P	**P**	**10 22 35.9**	**-0.7**
WB0	**Warramunga Arr**	**50.47**	**257**	P	**P**	**10 22 36.7**	**-0.7**
WB0				IAmb	IAmb	10 22 46.3	
	comp=Z,2.9nm,1.0s						
WRA	**Warramunga Arr**	**50.50**	**257**	P	**P**	**10 22 36.0**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=98,slow=6.1,SNR=11						
	comp=Z,0.4nm,0.8s						
WRA	**Warramunga Arr**	**50.50**	**257**	P	**P**	**10 22 36.2**	**-1.5**
AS31	**Alice Springs**	**50.76**	**252**	P	**P**	**10 22 38.3**	**-1.3**
AS31				IAmb	IAmb	10 22 39.5	
	comp=Z,1.4nm,1.1s						
ASAR	**Alice Springs**	**50.76**	**252**	P	**P**	**10 22 38.0**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=90,slow=7.7,SNR=47						
	comp=Z,1.3nm,0.4s						
VNDA	**Vanda**	**63.50**	**186**	P	**P**	**10 24 10.8**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=13,slow=7.2,SNR=5.3						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**63.50**	**186**	P	**P**	**10 24 08.6**	**-0.2**
VNDA				IAmb	IAmb	10 24 26.6	
	comp=Z,1.0nm,1.1s						
PETK	**Petropavlovsk-**	**72.78**	**342**	P	**P**	**10 25 08.3**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=75,slow=6.3,SNR=4.3						
	comp=Z,2.8nm,1.0s						
QSPA	**South Pole Qui**	**74.70**	**180**	P	**P**	**10 25 19.5**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=118,slow=0.7,SNR=7.4						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**74.70**	**180**	P	**P**	**10 25 18.0**	**-0.7**
QSPA				IAmb	IAmb	10 25 36.4	
	comp=Z,1.5nm,1.1s						
PDAR	**Pinedale Array**	**81.78**	**42**	P	**P**	**10 26 00.8**	**+2.5**
	comp=Z,0.2nm,0.5s,baz=220,slow=3.5,SNR=3.7						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**81.78**	**42**	P	**P**	**10 25 58.3**	**0.0**
ILAR	**Eielson Array**	**82.26**	**11**	P	**P**	**10 26 01.4**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=208,slow=7.3,SNR=7.0						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**89.78**	**23**	P	**P**	**10 26 39.0**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=236,slow=5.1,SNR=5.9						
	comp=Z,0.4nm,0.8s						

*IDC **08** 10:23:16.5±0.8, 18°.16S×65°.39E, h0km, mb3.9/10, mbtmp3.9/11, ML4.6/1, MS3.7/11, Error ellipse: s-maj=26.8km s-min=21.5km az=89.0*
*NEIC **08** 10:23:17.2±1.5, 18°.35S±0°.1×65°.2E±0°.1, h10km±1km, mb4.2/20, Error ellipse: s-maj=21.5km s-min=14.8km az=143.0*
ISC 08 10:23:17.3±0.5, 18°.2S±0°.1×65°.13E±0°.09, h10km, n55, σ1s07/37, mb4.1/18, MS3.8/11, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**2.28**	**227**	Pn	**Pn**	**10 23 54.6**	**-0.3**
RER	**Riviere de l'E**	**9.32**	**250**	Pn	**Pn**	**10 25 32.0**	**+0.2**
H08S1	**Diego Garcia H**	**12.69**	**35**	T	T	10 38 54.6	
	baz=213,slow=75,SNR=68						
H08S2	**Diego Garcia H**	**12.70**	**35**	T	T	10 38 55.0	
	baz=213,slow=75,SNR=74						
H08S3	**Diego Garcia H**	**12.71**	**35**	T	T	10 38 55.5	
	baz=213,slow=75,SNR=126						
ABPO	**Ambohimpanom**	**16.99**	**264**		**Pn**	**10 27 15.8**	**+0.5**
ABPO				IAmb	IAmb	10 27 23.9	
	comp=Z,19nm,1.4s						
OPO	**Ambohidratompo**	**17.03**	**266**	P	**P**	**10 27 18.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=12						
	comp=Z,4.1nm,0.4s						
VOI	**Vohitsoka**	**17.61**	**255**	P	**Pn**	**10 27 21.1**	**-2.0**
PALK	**Pallekele**	**29.61**	**33**	P	**P**	**10 29 22.9**	**0.0**
PALK				IAmb	IAmb	10 29 28.6	
	comp=Z,12nm,1.1s						
H04N2	**CROZET ISLANDS**	**30.00**	**199**	T	T	11 01 17.0	
	baz=27,slow=76,SNR=68						
H04N1	**CROZET ISLANDS**	**30.00**	**199**	T	T	11 01 18.5	
	baz=27,slow=76,SNR=73						
H04N3	**CROZET ISLANDS**	**30.02**	**199**	T	T	11 01 18.2	
	baz=27,slow=76,SNR=71						
LSZ	**Lusaka**	**35.45**	**269**	LR	LR	10 42 57.9	
	comp=Z,112nm,18.9s,baz=143,slow=33						
LODK	**Lodwar**	**36.35**	**303**	P	**P**	**10 30 21.6**	**-0.2**
LODK				IAmb	IAmb	10 30 22.4	
	comp=Z,5.1nm,1.5s						
LBTB	**Lobatse**	**37.28**	**252**	LR	LR	10 44 31.4	
	comp=Z,117nm,18.8s,baz=74,slow=34						
KSANE	**Kasane**	**37.96**	**264**	P	**P**	**10 30 34.5**	**-1.1**
LEM	**Lembang**	**42.88**	**80**	LR	LR	10 48 07.1	
	comp=Z,111nm,18.1s,baz=193,slow=35						
H01W2	**Cape Leeuwin H**	**46.43**	**121**	T	T	11 21 25.2	
	baz=278,slow=75,SNR=100						
H01W3	**Cape Leeuwin H**	**46.43**	**121**	T	T	11 21 28.3	
	baz=278,slow=75,SNR=116						
H01W1	**Cape Leeuwin H**	**46.44**	**121**	T	T	11 21 29.7	
	baz=278,slow=75,SNR=107						
CMAR	**Chiang Mai Ar**	**49.30**	**44**	P	**P**	**10 32 07.6**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=235,slow=8.2,SNR=6.8						
CMAR				LR	LR	10 51 41.4	
	comp=Z,39nm,18.4s,baz=245,slow=35						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Ar**	**49.30**	**44**	P	**P**	**10 32 06.3**	**-0.5**
CHTO	**Chiang Mai**	**49.56**	**44**	P	**P**	**10 32 08.5**	**-0.2**
CHTO				IAmb	IAmb	10 32 11.5	
	comp=Z,2.4nm,0.8s						
SHL	**Shillong**	**50.69**	**32**	P	**P**	**10 32 18.0**	**+0.6**
SHL				IAmb	IAmb	10 32 19.2	
	comp=Z,8.2nm,1.2s						
KAPI	**Kappang**	**54.89**	**83**	LR	LR	10 55 47.2	
	comp=Z,73nm,18.0s,baz=224,slow=36						

FITZ **Fitzroy Crossi** **57.26** **100** LR LR 10 52 41.2
comp=Z,64nm,21.9s,baz=210,slow=31

ASAR **Alice Springs** **63.94** **108** P **P** **10 33 49.6** **-1.5**
comp=Z,0.9nm,0.8s,baz=269,slow=5.9,SNR=11
ASAR LR LR 10 57 33.0
comp=Z,138nm,21.0s,baz=282,slow=32
comp=Z,0.9nm,0.8s

ASAR **Alice Springs** **63.94** **108** P **P** **10 33 49.7** **-1.3**
WRA **Warramunga Arr** **65.00** **104** P **P** **10 33 57.6** **-0.5**
comp=Z,2.0nm,1.0s,baz=261,slow=5.3,SNR=7.5
comp=Z,2.0nm,1.0s

WRA **Warramunga Arr** **65.00** **104** P **P** **10 33 57.4** **-0.7**
WB0 **Warramunga Arr** **65.08** **104** P **P** **10 33 58.9** **+0.3**
WR8 **Warramunga Arr** **65.15** **104** P **P** **10 33 58.5** **-0.5**
WR0 **Warramunga Arr** **65.18** **104** P **P** **10 33 57.6** **-1.6**
SNAA **Sanae** **65.97** **199** P **P** **10 34 05.4** **+2.0**
comp=Z,0.8nm,0.7s,baz=48,slow=6.0,SNR=4.9
comp=Z,0.8nm,0.7s

MK31 **Makanchi Array** **66.51** **13** P **P** **10 34 06.8** **-0.4**
MK31 IAmb IAmb 10 34 08.2
comp=Z,1.4nm,1.1s

MKAR **Makanchi Array** **66.51** **13** P **P** **10 34 07.2** **+0.1**
comp=Z,0.3nm,0.4s,baz=193,slow=5.9,SNR=2.3
comp=Z,0.3nm,0.4s

MKAR **Makanchi Array** **66.51** **13** P **P** **10 34 06.7** **-0.5**
STKA **Stephens Creek** **69.37** **118** LR LR 11 00 45.8
comp=Z,55nm,18.1s,baz=208,slow=32

BVAR **Borovoye Array** **71.06** **3** P **P** **10 34 34.5** **-0.8**
comp=Z,0.3nm,0.4s,baz=168,slow=9.6,SNR=4.1
comp=Z,0.3nm,0.4s

QSPA **South Pole Qui** **71.91** **180** P **P** **10 34 41.8** **+1.2**
comp=Z,3.1nm,1.0s,baz=299,slow=2.5,SNR=3.4
comp=Z,3.1nm,1.0s

QSPA **South Pole Qui** **71.91** **180** P **P** **10 34 40.1** **-0.5**
ZAA0 **Zalesovo Array** **73.81** **12** P **P** **10 34 50.9** **-0.7**
ZAA0 IAmb IAmb 10 34 59.7
comp=Z,2.2nm,1.1s

ZALV **Zalesovo Beam** **73.81** **12** P **P** **10 34 50.2** **-1.5**
comp=Z,0.7nm,0.5s,baz=205,slow=6.4,SNR=4.3
comp=Z,0.7nm,0.5s

ZALV **Zalesovo Beam** **73.81** **12** P **P** **10 34 49.7** **-2.0**
BELA **Belgrano 2** **74.38** **192** P **P** **10 34 55.0** **+0.1**
BURAR **Bucovina Array** **74.64** **333** P **P** **10 34 56.1** **-0.8**
SBA **Scott Base** **74.77** **168** P **P** **10 34 57.0** **-0.1**
SBA IAmb IAmb 10 34 58.8
comp=Z,3.4nm,1.4s

SONM **Songino Array** **75.40** **27** P **P** **10 35 02.4** **+1.1**
comp=Z,0.5nm,0.5s,baz=197,slow=4.4,SNR=2.0
comp=Z,0.5nm,0.5s

SONM **Songino Array** **75.40** **27** P **P** **10 35 01.0** **-0.2**
AKASG **Malin Array Be** **75.51** **337** P **P** **10 35 04.4** **+2.8**
comp=Z,0.3nm,0.3s,baz=145,slow=5.1,SNR=5.8
comp=Z,0.3nm,0.3s

AKASG **Malin Array Be** **75.51** **337** P **P** **10 35 01.7** **+0.1**
AKASG IAmb IAmb 10 35 05.7
comp=Z,1.7nm,0.8s

ULN **Ulaanbaatar** **75.71** **28** P **P** **10 35 02.6** **-0.5**
ULN IAmb IAmb 10 35 22.1
comp=Z,4.6nm,1.4s

CTA **Charters Tower** **75.89** **107** LR LR 11 05 12.1
comp=Z,60nm,19.9s,baz=228,slow=33

TLY **Talaya** **77.28** **23** LR LR 11 09 38.3
comp=Z,35nm,18.1s,baz=259,slow=36

NRIK **Noril'sk** **88.75** **8** LR LR 11 15 09.2
comp=Z,49nm,19.0s,baz=294,slow=35

*CATAC **08** 10:29:08.7, 13°.N±5°.×9°.1W±°., h10km±6km, M3.0/7, MLv3.0/7, confirmed*
*GCG **08** 10:29:08.1±1.0, 13°.26N×91°.13W, h18km±15km, MD4.3, Presumed earthquake*
*SNET **08** 10:29:25.9±9.8, 13°.74N×90°.24W, h30km, ML2.7, Presumed earthquake*
ISC 08 10:29:09.1±2.9, 13°.3N±0°.1×91°.02W±0°.09, h10km±14km, n22, σ1s13/31, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FG8	**Yepocapa, Chim**	**1.05**	**25**	*eP*	**Pg**	**10 29 29.5**	**+0.2**
FG16	**Alotenango, Sa**	**1.08**	**27**	*i* P	**Pb**	**10 29 30.0**	**0.0**
FAME	**Alcaldia de Sa**	**1.12**	**61**	P	**Pb**	**10 29 29.1**	**-1.4**
STG5	**El Palmar, Qui**	**1.13**	**344**	*i* P	**Pn**	**10 29 33.5**	**+2.5**
STG8	**El Palmar, Qui**	**1.18**	**344**	*eP*	**Pn**	**10 29 34.5**	**+2.7**
RTAL	**Retalhuleu**	**1.37**	**332**	P	**Pn**	**10 29 32.0**	**-2.3**
RTAL				S	**Sb**	**10 29 50.5**	**-2.0**
SLOZ	**Alcaldia de Sa**	**1.40**	**59**	P	**Pn**	**10 29 33.7**	**-1.0**
SLOZ				S	**Sn**	**10 29 52.7**	**-0.5**
CEVE	**Cerro Verde**	**1.46**	**69**	P	**Pb**	**10 29 37.5**	**+1.1**
CEVE				S	**Sn**	**10 29 55.2**	**+0.3**
SBLS	**San Blas**	**1.46**	**69**	*i* P	**Pn**	**10 29 34.9**	**-0.8**
JAYA	**Jayaque - finc**	**1.57**	**77**	P	**Pn**	**10 29 36.5**	**-0.7**
JAYA				S	**Sn**	**10 29 58.2**	**+0.7**
JAYA	**Jayaque - finc**	**1.57**	**77**	*eP*	**Pn**	**10 29 36.1**	**-1.0**
JAYA	**Jayaque - finc**	**1.57**	**77**	*i* P	**Pn**	**10 29 37.1**	**0.0**
JAYA				*eS*	**Sn**	**10 29 57.5**	**-0.1**
APG	**El Apazote**	**1.77**	**18**	*eP*	**Pn**	**10 29 39.9**	**-0.1**
MTO3	**Montecristo**	**1.95**	**56**	P	**Pn**	**10 29 42.2**	**-0.2**
MTO3				S	**Sn**	**10 30 07.8**	**+0.9**
MTO3	**Montecristo**	**1.95**	**56**	*eP*	**Pn**	**10 29 42.2**	**-0.2**
MTO3	**Montecristo**	**1.95**	**56**	*i* P	**Pn**	**10 29 42.6**	**+0.3**
SJTE	**Alcalda de S**	**1.99**	**81**	*i* P	**Pn**	**10 29 43.3**	**+0.5**
SJTE				*eS*	**Sn**	**10 30 08.3**	**+0.6**
ESQI	**Esquipulas**	**2.05**	**53**	P	**Pn**	**10 29 44.0**	**+0.2**
ESQI				S	**Sn**	**10 30 09.8**	**+0.4**
ESQI	**Esquipulas**	**2.05**	**53**	*i* P	**Pn**	**10 29 43.8**	**0.0**
COEG	**Centro de Oper**	**2.11**	**81**	P	**Pn**	**10 29 45.1

YANA	**Yana**	**2.32**	**61**	P	**Pn**	**10 34 09.4**	**+0.3**
PIAT	**Ana Tenorio**	**2.35**	**84**	P	**Pn**	**10 34 10.7**	**+1.3**
PIAT				S	**Sn**	**10 34 38.4**	**+1.0**
PAC1	**Pacto, Paraso**	**2.35**	**50**	P	**Pn**	**10 34 09.5**	**+0.2**
PAC1	**Pacto, Paraso**	**2.35**	**50**	P	**Pn**	**10 34 06.5**	**-2.8**
PAC1				S	**Sn**	**10 34 36.2**	**-1.0**
SANGA	**Volcan Sangay**	**2.36**	**110**	P	**Pn**	**10 34 10.6**	**+0.9**
PULU	**Pululahua**	**2.45**	**59**	P	**Pn**	**10 34 13.5**	**+2.6**
ANTG	**Antisana-Guama**	**2.46**	**72**	P	**Pn**	**10 34 12.6**	**+1.5**
ANTM	**Antisana-La Mi**	**2.48**	**73**	P	**Pn**	**10 34 12.8**	**+1.4**
PUEM	**Granja Avicola**	**2.49**	**64**	P	**Pn**	**10 34 13.8**	**+2.5**
ANTS	**Antisana-Sarah**	**2.54**	**73**	P	**Pn**	**10 34 14.3**	**+2.1**
ANTI	**Antisana**	**2.56**	**72**	P	**Pn**	**10 34 14.3**	**+1.8**
CUSE	**Cuicocha Este**	**2.69**	**55**	P	**Pn**	**10 34 15.5**	**+1.3**
CUSE	**Cuicocha Este**	**2.69**	**55**	P	**Pn**	**10 34 15.1**	**+0.9**
CUSE				S	**Sn**	**10 34 48.0**	**+2.2**
BOSC	**San Juan Bosco**	**2.82**	**132**	P	**Pn**	**10 34 19.0**	**+3.2**
IMBA	**Imbabura, San**	**2.84**	**58**	P	**Pn**	**10 34 18.9**	**+2.6**
CAYR	**Refugio Cayamb**	**2.88**	**64**	P	**Pn**	**10 34 19.4**	**+2.4**
URCU	**Urcuqui**	**2.88**	**54**	P	**Pb**	**10 34 21.3**	**-2.5**
YAHU	**Yahuarcocha**	**2.99**	**57**	P	**Pn**	**10 34 21.4**	**+3.0**
PKYU	**Pakayacu**	**3.02**	**97**	P	**Pn**	**10 34 21.7**	**+3.2**
MCRA	**Macar, Loja**	**3.16**	**168**	P	**Pn**	**10 34 21.8**	**+1.4**
MCRA				S	**Sn**	**10 34 55.9**	**-1.1**
LNGL	**El Angel-Carch**	**3.26**	**53**	P	**Pn**	**10 34 24.3**	**+2.1**
TAIS	**Taisha**	**3.29**	**110**	P	**Pb**	**10 34 27.1**	**-3.4**
CHL2	**Volc¡n Chiles**	**3.37**	**53**	P	**Pn**	**10 34 26.4**	**+2.8**
TULM	**Tulcn-Chalpat**	**3.42**	**55**	P	**Pn**	**10 34 28.1**	**+3.8**
CMBC	**Cumbal**	**3.52**	**52**	P	**Pb**	**10 34 30.6**	**-4.2**
BBAC	**Balboa, Cauca**	**4.67**	**46**	P	**Pn**	**10 34 40.8**	**-0.4**
BBAC				S	**Sn**	**10 35 39.6**	**+5.2**
POPC	**Popayan, Colom**	**5.44**	**46**	P	**Pn**	**10 34 52.0**	**+0.2**
POPC				S	**Sn**	**10 35 55.6**	**+2.2**

IDC 08 10:52:04.9±8.2, 11°.60N×139°.72E, h0km, mb3.6/4, mbtmp3.6/4, MS2.5/2, Error ellipse: s-maj=368.4km s-min=25.9km az=78.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.40**	**68**	LR	LR	10 55 09.9	
	comp=Z,49nm,20.5s,baz=243,slow=34						
JCJ	**Chichijima**	**15.59**	**8**	LR	LR	11 00 46.0	
	comp=Z,23nm,21.6s,baz=110,slow=33						
WRA	**Warramunga Arr**	**31.79**	**190**	P	P	10 58 32.2	+0.9
	1.1nm,1.2s,baz=7.2,slow=9.0,SNR=1.8 1.1nm,1.2s						
ASAR	**Alice Springs**	**35.51**	**189**	P	P	10 59 02.8	-0.9
	0.4nm,0.8s,baz=14,slow=8.5,SNR=4.5 0.4nm,0.8s						
MKAR	**Makanchi Array**	**59.49**	**318**	P	P	11 02 10.3	+0.4
	0.4nm,0.7s,baz=116,slow=6.6,SNR=3.6 0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**62.94**	**321**	P	P	11 02 32.9	-0.3
	1.0nm,0.6s,baz=103,slow=7.3,SNR=8.1 1.0nm,0.6s						

*IDC **08** 10:53:27.9±3.6, 36°.59N×139°.96E, h95km±25km, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=48.3km s-min=10.4km az=61.0*
*JMA **08** 10:53:28.5±0.1, 36°.5N±0°.3×139°.9E±0°.5, h87km, MV3.2/35, SOUTHERN TOCHIGI PREF*
JMA Felt I J1 at SOUTHERN TOCHIGI PREF .
ISC 08 10:53:27.0±0.9, 36°.51N±0°.05×139°.97E±0°.06, h74km, n22, σ2§47/20, mb3.8/5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.43**	**259**	*i* P	**Pn**	**10 53 42.1**	**+2.5**
JKT	**Katashina**	**0.64**	**294**	P	**Pn**	**10 53 43.8**	**+2.1**
JKT				*eS*	**Sn**	**10 53 55.5**	**+3.0**
JFY	**Yanaizu**	**0.92**	**347**	P	**Pn**	**10 53 46.5**	**+1.7**
JRY	**Ryogami san**	**0.99**	**241**	*i* P	**Pn**	**10 53 48.1**	**+2.4**
JUON	**Uonuma**	**1.02**	**314**	P	**Pn**	**10 53 47.5**	**+1.6**
JOTO	**OTAMA OYAMA**	**1.09**	**15**	*i* P	**Pn**	**10 53 49.0**	**+2.1**
JOTO				*eS*	**Sn**	**10 54 04.4**	**+2.7**
JFK	**Kawauchi**	**1.12**	**40**	*eP*	**Pn**	**10 53 49.6**	**+2.3**
JNS	**Sasagawa**	**1.41**	**338**	P	**Pn**	**10 53 52.2**	**+1.2**
MJAR	**Matsushiro Arr**	**1.42**	**272**	P	**Pn**	**10 53 52.1**	**+1.0**
	26nm,0.3s,baz=84,slow=17,SNR=140						
MJAR				S	**Sn**	**10 54 11.1**	**+1.8**
	10nm,0.4s,baz=86,slow=16,SNR=4.8						
JHJ	**Hachijo jima 2**	**3.38**	**183**	P	**Pn**	**10 54 19.4**	**+2.0**
	38nm,0.3s,baz=136,slow=23,SNR=15						
JHJ				S	**Sn**	**10 55 00.9**	**+4.5**
	81nm,0.3s,baz=277,slow=22,SNR=6.3						
JCJ	**Chichijima**	**9.57**	**168**	P	**Pn**	**10 55 38.1**	**-3.8**
	10nm,0.4s,baz=336,slow=20,SNR=0.8						
JCJ				S	Sn	10 57 18.2	-10
	54nm,0.9s,baz=265,slow=17,SNR=1.9						
SONM	**Songino Array**	**27.13**	**305**	P	**P**	**10 59 01.9**	**-1.3**
	0.4nm,0.5s,baz=98,slow=8.9,SNR=6.6 0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.90**	**118**	T	T	11 29 30.2	
	baz=308						
H11N1	**WAKE ISLAND Hy**	**28.90**	**118**	T	T	11 29 33.9	
	baz=308						
H11N3	**WAKE ISLAND Hy**	**28.91**	**118**	T	T	11 29 36.7	
	baz=308						
H11S1	**WAKE ISLAND Hy**	**29.57**	**120**	T	T	11 30 21.3	
	baz=314,slow=75,SNR=9.2						
H11S3	**WAKE ISLAND Hy**	**29.57**	**120**	T	T	11 30 22.4	
	baz=314,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**29.59**	**120**	T	T	11 30 22.2	
	baz=314,slow=75,SNR=4.4						
ZALV	**Zalesovo Beam**	**41.42**	**313**	P	**P**	**11 01 04.2**	**-1.7**
	1.1nm,0.5s,baz=73,slow=6.8,SNR=5.1 1.1nm,0.5s						
MKAR	**Makanchi Array**	**43.42**	**302**	P	**P**	**11 01 20.9**	**-1.4**
	0.5nm,0.6s,baz=90,slow=8.6,SNR=6.7 0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**45.42**	**308**	P	**P**	**11 01 36.3**	**-1.9**
	0.8nm,0.5s,baz=84,slow=7.9,SNR=9.5 0.8nm,0.5s						
WRA	**Warramunga Arr**	**56.39**	**186**	P	**P**	**11 02 59.7**	**-1.1**
	0.3nm,0.3s,baz=1.1,slow=7.5,SNR=13 0.3nm,0.3s						

*GCG **08** 11:00:07.9±1.4, 13°.39N×91°.09W, h50km±15km, MD4.5, Presumed earthquake*
*CATAC **08** 11:00:08.1, 13°N±4°×9°1W±°, h2km±1km, M3.6/24, MLv3.6/24, confirmed*
*SNET **08** 11:00:14.7±4.5, 13°.87N×90°.72W, h25km, ML3.2, Presumed earthquake*
ISC 08 11:00:05.4±1.8, 13°.25N±0°.07×90°.96W±0°.05, h14km±10km, n46, σ1§26/72, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**1.08**	**21**	*i* P	**Pg**	**11 00 26.7**	**+0.5**
FAME	**Alcaldia de Sa**	**1.09**	**57**	P	**Pg**	**11 00 26.4**	**-0.1**
FAME				S	**Sb**	**11 00 40.0**	**-0.2**
FG16	**Alotenango, Sa**	**1.11**	**23**	*i* P	**Pg**	**11 00 27.2**	**+0.3**
STG5	**El Palmar, Qui**	**1.21**	**342**	*i* P	**Pg**	**11 00 30.7**	**+2.0**
STG8	**El Palmar, Qui**	**1.26**	**342**	*eP*	**Pg**	**11 00 31.8**	**+2.2**
LOAL	**Lomas de Alarc**	**1.37**	**57**	P	**Pb**	**11 00 31.0**	**+0.2**
LOAL				S	**Sn**	**11 00 47.9**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.38**	**56**	P	**Pb**	**11 00 31.1**	**0.0**
SLOZ				S	**Sb**	**11 00 49.4**	**+0.8**
CEVE	**Cerro Verde**	**1.42**	**66**	P	**Pg**	**11 00 32.6**	**-0.2**
CEVE	**Cerro Verde**	**1.42**	**66**	*i* P	**Pg**	**11 00 33.0**	**+0.2**
CEVE				*eS*	**Sg**	**11 00 51.2**	**-0.2**
RTAL	**Retalhuleu**	**1.46**	**331**	P	**Pn**	**11 00 30.0**	**-1.4**
RTAL				S	**Sn**	**11 00 48.0**	**-2.3**
RBDL	**Robledal**	**1.51**	**55**	*i* P	**Pb**	**11 00 33.4**	**+0.1**
JAYA	**Jayaque - finc**	**1.52**	**74**	P	**Pb**	**11 00 33.7**	**+0.1**
JAYA				S	**Sg**	**11 00 55.0**	**+0.4**
JAYA	**Jayaque - finc**	**1.52**	**74**	*eP*	**Pb**	**11 00 33.4**	**-0.2**
JAYA	**Jayaque - finc**	**1.52**	**74**	*i* P	**Pg**	**11 00 34.1**	**-0.6**
JAYA				*eS*	**Sg**	**11 00 54.7**	**+0.1**
UNIC	**Universidad Ca**	**1.55**	**62**	P	**Pb**	**11 00 33.4**	**-0.6**
UNIC				S	**Sg**	**11 00 55.0**	**-0.5**
CEDA	**San Andres**	**1.62**	**70**	P	**Pn**	**11 00 32.2**	**-1.4**
CEDA				S	**Sg**	**11 00 57.3**	**-0.2**
PMON	**Piamonte**	**1.67**	**74**	P	**Pg**	**11 00 36.7**	**-0.7**
PMON				S	**Sb**	**11 00 58.2**	**+1.3**
BOQS	**Boqueron**	**1.70**	**73**	*i* P	**Pg**	**11 00 38.1**	**-0.1**
UEES	**Universidad Ev**	**1.74**	**74**	P	**Pg**	**11 00 38.3**	**-0.5**
UEES				S	**Sg**	**11 01 00.5**	**-0.9**
SEMO	**Seminario San**	**1.75**	**75**	P	**Pg**	**11 00 38.0**	**-1.0**
SEMO				S	**Sg**	**11 01 01.1**	**-0.6**
PANCS	**Alcalda de**	**1.77**	**78**	P	**Pg**	**11 00 39.3**	**-0.1**
PANCS				S	**Sg**	**11 01 01.5**	**-0.9**
LOMA	**Loma Larga**	**1.78**	**77**	P	**Pg**	**11 00 38.7**	**-1.0**
LOMA	**Loma Larga**	**1.78**	**77**	*i* P	**Pg**	**11 00 39.2**	**-0.5**
LOMA				*eS*	**Sb**	**11 01 01.4**	**+1.0**
APG	**El Apazote**	**1.81**	**15**	*i* P	**Pb**	**11 00 37.2**	**-1.3**
LFRS	**El Faro**	**1.88**	**78**	*i* P	**Pg**	**11 00 41.0**	**-0.6**
LFRS				*eS*	**Sb**	**11 01 03.1**	**0.0**
MTO3	**Montecristo**	**1.93**	**53**	P	**Pb**	**11 00 39.4**	**-1.1**
MTO3				S	**Sb**	**11 01 04.8**	**+0.2**
MTO3	**Montecristo**	**1.93**	**53**	*i* P	**Pb**	**11 00 39.5**	**-1.0**
MTO3	**Montecristo**	**1.93**	**53**	*i* P	**Pn**	**11 00 39.0**	**+0.9**
PAVA	**Las Pavas**	**2.02**	**76**	P	**Pb**	**11 00 42.5**	**+0.5**
PAVA				S	**Sg**	**11 01 09.6**	**-0.9**
PAVA	**Las Pavas**	**2.02**	**76**	*i* P	**Pb**	**11 00 42.5**	**+0.5**
ESQI	**Esquipulas**	**2.04**	**50**	P	**Pb**	**11 00 41.5**	**-0.9**
ESQI				S	**Sb**	**11 01 08.7**	**+1.0**
ZAFR2	**Estanzuela, Za**	**2.05**	**50**	*i* P	**Pb**	**11 00 42.3**	**-0.1**
COEG	**Centro de Oper**	**2.06**	**79**	P	**Pb**	**11 00 42.1**	**-0.5**
COEG				S	**Sg**	**11 01 11.1**	**-0.5**
COEG	**Centro de Oper**	**2.06**	**79**	*i* P	**Pb**	**11 00 43.0**	**+0.4**
COEG				*eS*	**Sb**	**11 01 09.6**	**+1.4**
HUEH	**Huehuetenango**	**2.13**	**346**	P	**Pb**	**11 00 41.8**	**-2.0**
HUEH	**Huehuetenango**	**2.13**	**346**	*i* P	**Pb**	**11 00 43.9**	**0.0**
HUEH				*eS*	**Sb**	**11 01 10.2**	**0.0**
TECO	**Alcaldia de Te**	**2.14**	**82**	P	**Pb**	**11 00 43.3**	**-0.7**
TECO				S	**Sb**	**11 01 11.8**	**+1.4**
LLGN	**La Laguna**	**2.16**	**65**	P	**Pb**	**11 00 43.0**	**-1.4**
LLGN				S	**Sb**	**11 01 12.5**	**+1.4**
SCLA	**Alcaldia de Sa**	**2.22**	**78**	P	**Pb**	**11 00 45.3**	**0.0**
SCLA				S	**Sg**	**11 01 15.1**	**-1.6**
PACA	**Pacayal**	**2.58**	**85**	P	**Pb**	**11 00 50.2**	**-1.3**
PACA				S	**Sb**	**11 01 23.1**	**0.0**
SARH	**Santa Rosa de**	**2.62**	**54**	P	**Pn**	**11 00 49.5**	**+2.1**
SARH	**Santa Rosa de**	**2.62**	**54**	*i* P	**Pn**	**11 00 49.5**	**+2.1**
LCND	**La Caada**	**2.99**	**88**	P	**Pb**	**11 00 55.8**	**-2.7**
CNCH	**Conchagua**	**3.04**	**89**	P	**Pb**	**11 00 56.5**	**-2.9**
CNCH				S	**Sb**	**11 01 35.5**	**-1.0**
TELN	**Telica**	**4.08**	**99**	P	**Pn**	**11 01 10.5**	**+3.0**
MACN	**El Madrono**	**4.25**	**100**	P	**Pn**	**11 01 14.1**	**+4.3**

WEL 08 11:05:48.8±0.6, 33°S±6°×17°9W±1°5, h12km, M4.8/7, mB4.9/3, ML4.5/11, MLv4.8/7, Mw(mB)4.2/3, Error ellipse: s-maj=20.0km s-min=4.4km az=109.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.42**	**16**	P	Pn	11 06 43.1	+1.2
GLKZ				S	Sn	11 07 24.3	+1.9
WMGZ	**Waiomatatini S**	**5.65**	**201**	P	Pn	11 07 13.9	+1.3
WMGZ				S	Sn	11 08 21.0	+3.6
PKGZ	**Pakihiroa**	**5.80**	**203**	P	Pn	11 07 15.4	+0.7
PKGZ				S	Sn	11 08 23.6	+2.4
HAZ	**Te Kaha**	**5.81**	**206**	P	Pn	11 07 15.6	+0.9
HAZ				S	Sn	11 08 24.5	+3.3
GRZ	**Great Barrier**	**5.87**	**230**	P	Pn	11 07 17.1	+1.6
PUZ	**Puketiti**	**5.93**	**201**	P	Pn	11 07 16.5	0.0
PUZ				S	Sn	11 08 26.3	+1.9
RUGZ	**Raukumara Rang**	**6.03**	**206**	P	Pn	11 07 18.6	+0.7
RUGZ				S	Sn	11 08 27.2	+0.2
CNGZ	**Carnagh Statio**	**6.33**	**200**	P	Pn	11 07 21.7	-0.2
TKGZ	**Te Karaka**	**6.40**	**203**	P	Pn	11 07 21.7	-1.1
TKGZ				S	Sn	11 08 36.0	+0.2
MWZ	**Matawai**	**6.41**	**205**	P	Pn	11 07 22.0	-1.1
MWZ				S	Sn	11 08 36.9	+0.7
WCZ	**Waipu Caves**	**6.45**	**237**	P	Pn	11 07 24.1	+0.5
URZ	**Urewera**	**6.50**	**208**	P	Pn	11 07 22.3	-2.0
OUZ	**Omahuta**	**6.69**	**245**	P	Pn	11 07 25.8	-1.1
MUGZ	**Murupara**	**6.83**	**209**	P	Pn	11 07 26.8	-2.0
SNGZ	**Shannon Statio**	**6.88**	**205**	P	Pn	11 07 27.4	-2.1
KNZ	**Kokohu**	**6.98**	**202**	P	Pn	11 07 27.2	-3.6
RAHZ	**Arahi**	**7.09**	**206**	P	Pn	11 07 29.9	-2.4
NMHZ	**Naumai**	**7.35**	**206**	P	Pn	11 07 33.1	-2.9
BKZ	**Black Stump Fm**	**7.53**	**208**	P	Pn	11 07 34.9	-3.6

*CATAC **08** 11:17:06.1±0.7, 14°N±4°×9°1W±°, h17km±5km, M3.5/12, MLv3.5/12, Error ellipse: s-maj=9.3km s-min=3.6km az=34.1, confirmed*
*GCG **08** 11:17:07.9±1.3, 14°.18N×91°.14W, h75km±9km, MD4.2, ML4.0, Presumed earthquake*
ISC 08 11:17:12.1±1.4, 14°.13N±0°.08×90°.98W±0°.05, h31km±11km, n23, σ2§24/38, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**0.42**	**72**	*i* P	**Pb**	**11 17 20.5**	**-1.0**
FG8				*i* S	**Sb**	**11 17 29.2**	**+1.3**
STG5	**El Palmar, Qui**	**0.45**	**307**	*i* P	**Pn**	**11 17 23.3**	**+0.7**
STG5				*i* S	**Sn**	**11 17 33.6**	**+3.8**
FG16	**Alotenango, Sa**	**0.47**	**72**	*i* P	**Pn**	**11 17 21.0**	**-2.0**
STG8	**El Palmar, Qui**	**0.48**	**311**	*i* P	**Pn**	**11 17 24.1**	**+0.9**
STG8				*i* S	**Sn**	**11 17 35.8**	**+5.1**
STG8				IAML		11 17 39.3	
	comp=E,4µm,0.2s						
PCG5	**San Vicente Pa**	**0.59**	**81**	*i* P	**Pn**	**11 17 21.9**	**-2.6**
PCG5				*i* S	**Sn**	**11 17 32.4**	**-0.7**
RTAL	**Retalhuleu**	**0.80**	**299**	P	**Pn**	**11 17 23.2**	**-4.2**
RTAL				S	**Sn**	**11 17 34.4**	**-3.8**
FAME	**Alcaldia de Sa**	**0.97**	**107**	P	**Pn**	**11 17 28.2**	**-1.5**
FAME				S	**Sn**	**11 17 43.8**	**+1.3**
APG	**El Apazote**	**1.00**	**30**	*i* P	**Pn**	**11 17 28.8**	**-1.4**
SLOZ	**Alcaldia de Sa**	**1.16**	**95**	P	**Pn**	**11 17 31.0**	**-1.3**
SLOZ				S	**Sb**	**11 17 49.9**	**+1.5**
LOAL	**Lomas de Alarc**	**1.17**	**96**	P	**Pn**	**11 17 31.3**	**-1.1**
LOAL				S	**Sb**	**11 17 50.2**	**+1.6**
HUEH	**Huehuetenango**	**1.29**	**337**	P	**Pn**	**11 17 31.4**	**-2.8**
HUEH				S	**Sb**	**11 17 52.6**	**+0.4**
CEVE	**Cerro Verde**	**1.34**	**103**	P	**Pn**	**11 17 34.3**	**-0.7**
CEVE				S	**Sb**	**11 17 55.2**	**+1.3**
UNIC	**Universidad Ca**	**1.39**	**96**	P	**Pn**	**11 17 33.8**	**-1.7**
UNIC				S	**Sb**	**11 17 56.1**	**+1.1**
JAYA	**Jayaque - finc**	**1.56**	**108**	P	**Pn**	**11 17 35.9**	**-1.9**
JAYA				S	**Sn**	**11 17 57.3**	**+0.3**
JAYA	**Jayaque - finc**	**1.56**	**108**	*i* P	**Pn**	**11 17 35.8**	**-2.1**
MTO3	**Montecristo**	**1.59**	**80**	P	**Pn**	**11 17 36.4**	**-2.0**
MTO3				S	**Sb**	**11 18 04.9**	**+4.1**
MTO3	**Montecristo**	**1.59**	**80**	*i* P	**Pn**	**11 17 36.1**	**-2.2**
ZAFR2	**Estanzuela, Za**	**1.64**	**74**	*i* P	**Pn**	**11 17 36.6**	**-2.3**
PMON	**Piamonte**	**1.67**	**104**	P	**Pn**	**11 17 38.2**	**-1.1**
PMON				S	**Sn**	**11 18 01.7**	**+2.0**
LOMA	**Loma Larga**	**1.82**	**105**	S	**Sb**	**11 18 07.1**	**-0.1**
PANCS	**Alcalda de**	**1.82**	**106**	S	**Sn**	**11 18 04.9**	**+1.6**
COEG	**Centro de Oper**	**2.10**	**104**	P	**Pn**	**11 17 45.0**	**-0.2**
COEG				S	**Sn**	**11 18 13.0**	**+2.7**
TECO	**Alcaldia de Te**	**2.21**	**105**	S	**Sn**	**11 18 14.4**	**+1.4**

*GCG **08** 11:23:41.9±1.9, 13°.40N×91°.07W, h19km±13km, MD4.3, ML4.1, Presumed earthquake*
*SNET **08** 11:23:51.9±6.1, 13°.51N×90°.54W, h25km, ML3.0, Presumed earthquake*
ISC 08 11:23:45.6±2.8, 13°.5N±0°.1×90°.81W±0°.09, h29km, n11, σ1§86/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**0.83**	**17**	*eP*	**Pb**	**11 24 01.3**	**-0.4**
FG16	**Alotenango, Sa**	**0.86**	**20**	*eP*	**Pb**	**11 24 01.8**	**-0.4**
STG8	**El Palmar, Qui**	**1.12**	**332**	*eP*	**Pb**	**11 24 06.4**	**-0.2**
STG8				IAML		11 24 46.9	
	comp=N,3µm,0.5s						
SBLS	**San Blas**	**1.22**	**72**	*i* P	**Pb**	**11 24 07.9**	**-0.3**
SBLS				*eS*	**Sb**	**11 24 26.9**	**+3.3**
JAYA	**Jayaque - finc**	**1.34**	**81**	*eP*	**Pb**	**11 24 08.3**	**-1.9**
JAYA	**Jayaque - finc**	**1.34**	**81**	*i* P	**Pb**	**11 24 09.2**	**-1.0**
JAYA				*eS*	**Sb**	**11 24 28.7**	**+1.6**
PMON	**Piamonte**	**1.48**	**80**	*i* P	**Pb**	**11 24 11.6**	**-0.9**
APG	**El Apazote**	**1.57**	**12**	*i* P	**Pb**	**11 24 11.7**	**-2.6**
APG				*eS*	**Sb**	**11 24 34.9**	**+1.0**
MTO3	**Montecristo**	**1.69**	**56**	*eP*	**Pb**	**11 24 14.0**	**-2.2**
MTO3	**Montecristo**	**1.69**	**56**	*i* P	**Pb**	**11 24 14.1**	**-2.2**
SJTE	**Alcalda de S**	**1.76**	**85**	*i* P	**Pb**	**11 24 15.8**	**-1.5**
SJTE				*eS*	**Sb**	**11 24 40.6**	**+1.5**

*NEIC **08** 11:29:35.2±1.1, 17°.5S±0°.1×178°.8W±0°.1, h544km±10km, mb4.0/16, Error ellipse: s-maj=18.8km s-min=14.0km az=221.0*
*IDC **08** 11:29:36.3±3.6, 17°.36S×178°.98W, h560km±21km, mb3.2/4, mbtmp4.0/5, Error ellipse: s-maj=87.9km s-min=32.7km az=25.0*
ISC 08 11:29:34.9±0.8, 17°.5S±0°.2×178°.9W±0°.1, h539km, n25, σ0§87/26, mb4.0/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.94**	**265**	P	**P**	**11 30 51.4**	**+2.7**
	7.5nm,0.9s,baz=217,slow=22,SNR=4.2						
FUTU	**Fugatoga**	**3.24**	**13**	P	**P**	**11 30 51.6**	**+0.9**
NIUE	**Niue**	**8.65**	**102**	P	**P**	**11 31 38.9**	**0.0**
MARNC	**Mare, Loyalty**	**12.97**	**250**	P	**P**	**11 32 23.2**	**-0.3**
EIDS	**Eidsvold**	**28.99**	**249**	P	**P**	**11 34 50.3**	**-1.0**
EIDS				IAmb	IAmb	11 34 57.4	
	comp=Z,5.3nm,1.1s						
ARMA	**Armidale**	**29.77**	**239**	P	**P**	**11 34 58.2**	**+0.1**
CAN	**Canberra**	**33.61**	**232**	P	**P**	**11 35 31.0**	**+0.3**
CAN				IAmb	IAmb	11 35 52.8	
	comp=Z,4.4nm,1.1s						
COEN	**Coen**	**36.65**	**270**	P	**P**	**11 35 56.5**	**+0.2**
STKA	**Stephens Creek**	**38.44**	**241**	P	**P**	**11 36 11.1**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=78,slow=6.5,SNR=5.3 comp=Z,2.2nm,0.9s						
BBOO	**Buckleboo**	**43.22**	**241**	P	**P**	**11 36 48.5**	**-0.2**
BBOO				IAmb	IAmb	11 37 02.2	
	comp=Z,7.0nm,1.1s						
WR8	**Warramunga Arr**	**44.11**	**259**	P	**P**	**11 36 54.9**	**-0.9**
WB0	**Warramunga Arr**	**44.23**	**259**	P	**P**	**11 36 55.9**	**-0.8**
WB0				IAmb	IAmb	11 37 17.7	
	comp=Z,4.5nm,1.1s						
WRA	**Warramunga Arr**	**44.27**	**259**	P	**P**	**11 36 55.7**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=95,slow=7.9,SNR=41 comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**44.27**	**259**	P	**P**	**11 36 55.7**	**-1.3**
AS31	**Alice Springs**	**44.47**	**254**	P	**P**	**11 36 58.2**	**-0.4**
AS31				IAmb	IAmb	11 36 58.6	
	comp=Z,2.5nm,0.4s						
ASAR	**Alice Springs**	**44.47**	**254**	P	**P**	**11 36 58.1**	**-0.4**
	comp=Z,5.4nm,0.4s,baz=88,slow=8.0,SNR=135						
ASAR				PcP	**PcP**	**11 38 29.9**	**-0.5**
	comp=Z,0.2nm,0.9s,baz=83,slow=3.4,SNR=0.8 comp=Z,5.4nm,0.4s						
ASAR	**Alice Springs**	**44.47**	**254**	P	**P**	**11 36 57.8**	**-0.8**
MTN	**Manton Dam**	**48.36**	**268**	P	**P**	**11 37 27.5**	**-0.6**
FORT	**Forrest**	**49.78**	**244**	P	**P**	**11 37 37.7**	**-0.6**
KNRA	**Kununurra**	**50.08**	**264**	P	**P**	**11 37 40.2**	**-0.6**
KNRA				IAmb	IAmb	11 37 57.1	
	comp=Z,6.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.65**	**260**	P	**P**	**11 37 59.2**	**-0.1**
MBWA	**Marble Bar**	**57.74**	**256**	P	**P**	**11 38 34.3**	**-0.4**
MBWA				IAmb	IAmb	11 38 52.8	
	comp=Z,8.5nm,1.1s						
JYT	**Yasato**	**65.96**	**325**	P	**P**	**11 39 27.9**	**+0.1**
QSPA	**South Pole Qui**	**72.57**	**180**	P	**P**	**11 40 07.4**	**+0.2**
	comp=Z,1.5nm,1.0s,baz=94,slow=1.9,SNR=5.9 comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**72.57**	**180**	P	**P**	**11 40 07.3**	**0.0**
QSPA				IAmb	IAmb	11 40 08.2	
	comp=Z,2.2nm,1.1s						

*SOME **08** 11:35:52.7, 42°.67N×70°.52E, h5km*
*NNC **08** 11:35:53.0±0.8, 42°.66N×70°.46E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=6.9km s-min=4.4km az=106.0, Suspected Mining explosion.*
*KRNET **08** 11:35:54.2±0.1, 42°.66N×70°.73E, mb2.4*
ISC 08 11:35:52.0±0.8, 42°.57N±0°.04×70°.51E±0°.03, h0km, n15, σ1§10/27, 9C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.54**	**0**	P	**Pg**	**11 36 01.9**	**-0.5**
	2.3nm,0.1s,baz=184,slow=18,SNR=217						
KK31				S	**Sg**	**11 36 08.2**	**-1.1**
	9.5nm,0.2s,baz=180,slow=31,SNR=40						
IUG	**Iuzhnay**	**

KPT	Kopyto	2.60	303	eP		Pb	12 18 04.2	-2.3
KPT				eS		Sn	12 18 35.6	+1.1
KII	Karymskiy	2.79	260	eP		Pn	12 18 06.0	+1.1
KOZ	Kozyrevsk	2.82	303	eP		Pb	12 18 07.2	-3.0
KOZ				eS		Sn	12 18 40.5	+0.7
SPN	Mys Shipunski	2.86	240	eP		Pn	12 18 06.2	+0.5
SPN				eS		Sn	12 18 37.7	-3.0
SRDR	Sredinnyy	3.03	306	eP		Pn	12 18 10.2	+2.1
SRDR				eS		Sn	12 18 45.2	+0.2
SDLR	Sedlovina	3.37	249	eP		Pn	12 18 14.3	+1.5
SDLR				eS		Sn	12 18 52.4	-1.0
SMAR	Somma	3.42	249	eP		Pn	12 18 14.8	+1.2
SMAR				eS		Sn	12 18 53.7	-1.1
KRER	Koryakskii	3.43	250	eP		Pn	12 18 15.0	+1.2
KRER				eS		Sn	12 18 54.6	-0.5
UGLR	Uglovaya	3.43	248	eP		Pn	12 18 15.3	+1.6
UGLR				eS		Sn	12 18 54.2	-0.7
AVH	Avacha	3.45	249	eP		Pn	12 18 15.2	+1.3
AVH				eS		Sn	12 18 54.8	-0.6
KRX	Arik	3.46	251	eP		Pn	12 18 15.7	+1.6
KRX				eS		Sn	12 18 55.0	-0.8
KOK	Koryaka	3.49	250	eP		Pn	12 18 15.8	+1.2
DALK	Dalny	3.55	246	eP		Pn	12 18 16.3	+1.2
DALK				eS		Sn	12 18 55.9	-1.8
PET	Petropavlovsk	3.60	246	eP		Pn	12 18 17.3	+1.4
PET				eS		Sn	12 18 56.1	-3.0
GNL	Ganaly	3.74	258	eP		Pn	12 18 20.1	+2.1
RUS	Russkaya	3.99	239	eP		Pn	12 18 22.2	+1.0
PETK	Petropavlovsk- 0.7nm,0.3s,baz=70,slow=14,SNR=24	4.08	251	Pn		Pn	12 18 24.6	+2.1
PETK				Sn		Sn	12 19 11.3	+0.4
	1.2nm,0.3s,baz=44,slow=21,SNR=6.9 1.5nm,0.5s							
MTVR	Mutnovka	4.13	241	eP		Pn	12 18 24.4	+1.1
MTVR				eS		Sn	12 19 09.6	-2.7
GRL	Gorelyy	4.15	243	eP		Pn	12 18 24.8	+1.3
ASAK	Asacha	4.33	241	eP		Pn	12 18 26.4	+0.4
KDTR	Khodutka, Kamc	4.59	235	eP		Pn	12 18 30.0	+0.6
OSSR	Ossora	4.68	353	eP		Pn	12 18 32.5	+1.8
ILAR	Eielson Array 0.6nm,0.8s,baz=267,slow=9.7,SNR=2.7 0.6nm,0.8s	26.04	47	P		P	12 22 54.1	+0.7
H11N2	WAKE ISLAND Hy baz=0.2,slow=74	34.89	175	T		T	13 02 11.0	
H11N3	WAKE ISLAND Hy baz=0.2	34.90	175	T		T	13 02 10.4	
H11N1	WAKE ISLAND Hy baz=0.2,slow=74	34.91	175	T		T	13 02 07.6	
YKA	Yellowknife Ar 0.4nm,0.8s,baz=299,slow=9.4,SNR=4.4 0.4nm,0.8s	40.42	45	P		P	12 24 59.8	+1.5
KURBB	Kurchatov Arra 0.7nm,0.4s,baz=56,slow=7.7,SNR=7.8 0.7nm,0.4s	49.03	303	P		P	12 26 07.6	+0.5
MKAR	Makanchi Array 0.4nm,0.6s,baz=57,slow=7.4,SNR=4.9 0.4nm,0.6s	49.62	297	P		P	12 26 12.3	+0.6

*SJA **08** 12:20:50.0±0.6,21°.17S×70°.55W,h61km,ML3.5,MW3.6*
*GUC **08** 12:20:52.6±0.8,21°.16S×70°.45W,h56km±7km,ML3.7*

ISC 08 12:20:50.8±1.5,**21°.20S**±0°.03×**70°.60W**±0°.07,**h32**km±12km,
n29,σ1**s27/44,9C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.66**	**100**			eP	**Pb**	**12 21 04.3**	**+0.2**
PB02	**IPOC Station P**	**0.66**	**100**				eP	**Pb**	**12 21 04.5**	**+0.4**
PB02						eS	**Sb**	**12 21 13.1**	**-0.1**
PB02				IAML				12 21 14.5	
	comp=E,10μm,0.5s								
PB07	**IPOC Station P**	**0.84**	**128**			eP	**Pb**	**12 21 07.3**	**+0.2**
PB07						eS	**Sb**	**12 21 18.2**	**0.0**
PB07				IAML				12 21 19.1	
	comp=Z,1μm,0.3s								
PB07	**IPOC Station P**	**0.84**	**128**				eP	**Pb**	**12 21 07.3**	**+0.2**
PB07						eS	**Sb**	**12 21 18.1**	**-0.1**
PB07				IAML				12 21 18.5	
	comp=E,3μm,0.3s								
TA02	**Huaiquique**	**1.02**	**25**	eP			**Pn**	**12 21 09.2**	**+0.3**
TA02				IAML				12 21 25.8	
	comp=Z,2μm,0.1s								
TA02	**Huaiquique**	**1.02**	**25**	eP			**Pn**	**12 21 09.1**	**+0.3**
TA02						eS	**Sb**	**12 21 21.3**	**-1.8**
PB03	**IPOC Station P**	**1.15**	**137**	eP			**Pn**	**12 21 11.4**	**+0.6**
PB03				IAML				12 21 28.9	
	comp=Z,458nm,0.1s								
PB03	**IPOC Station P**	**1.15**	**137**				eP	**Pn**	**12 21 11.4**	**+0.6**
PB03						eS	**Sn**	**12 21 25.5**	**-0.1**
PB09	**IPOC Station P**	**1.39**	**115**	eP			**Pn**	**12 21 15.1**	**+0.9**
PB09				IAML				12 21 35.8	
	comp=Z,533nm,0.6s								
PB09	**IPOC Station P**	**1.39**	**115**				eP	**Pn**	**12 21 15.2**	**+1.1**
PB09						eS	**Sn**	**12 21 31.9**	**+0.3**
PSGCX	**Pisagua**	**1.66**	**16**	eP			**Pn**	**12 21 17.8**	**+0.1**
PSGCX				IAML				12 21 40.1	
	comp=Z,469nm,0.3s								
PSGCX	**Pisagua**	**1.66**	**16**	eP			**Pn**	**12 21 18.0**	**+0.2**
PSGCX						eS	**Sn**	**12 21 36.7**	**-1.3**
PB05	**IPOC Station P**	**1.68**	**168**	eP			**Pn**	**12 21 19.0**	**+1.0**
PB05	**IPOC Station P**	**1.68**	**168**				eP	**Pn**	**12 21 19.1**	**+1.0**
PB11	**IPOC Station P**	**1.68**	**32**	eP			**Pn**	**12 21 17.9**	**-0.2**
PB11				IAML				12 21 39.6	
	comp=Z,546nm,0.2s								
PB11	**IPOC Station P**	**1.68**	**32**				eP	**Pn**	**12 21 18.0**	**-0.2**
PB11						eS	**Sn**	**12 21 37.5**	**-1.2**
PB11				IAML				12 21 40.4	
	comp=N,2μm,0.3s								
PB08	**IPOC Station P**	**1.71**	**52**	eP			**Pn**	**12 21 18.8**	**0.0**
PB08				IAML				12 21 41.3	
	comp=Z,600nm,0.3s								
PB08	**IPOC Station P**	**1.71**	**52**				eP	**Pn**	**12 21 19.0**	**+0.2**
PB08						eS	**Sn**	**12 21 38.5**	**-1.3**
PB08				IAML				12 21 40.8	
	comp=E,1μm,0.2s								
PB06	**IPOC Station P**	**1.77**	**148**	eP			**Pn**	**12 21 20.0**	**+0.6**
PB06	**IPOC Station P**	**1.77**	**148**				eP	**Pn**	**12 21 19.9**	**+0.6**
PB06						eS	**Sn**	**12 21 40.7**	**-0.2**
GO01	**Chusmiza**	**2.02**	**41**	eP			**Pn**	**12 21 22.8**	**-0.2**
GO01				IAML				12 21 48.9	
	comp=Z,696nm,0.2s								
GO01	**Chusmiza**	**2.02**	**41**				eP	**Pn**	**12 21 23.3**	**+0.3**
GO01						eS	**Sn**	**12 21 46.1**	**-1.2**
PB12	**IPOC Station P**	**2.59**	**6**	eP			**Pn**	**12 21 31.1**	**+0.6**
PB12						eS	**Sn**	**12 22 00.7**	**-0.2**
PB12				IAML				12 22 01.4	
	comp=Z,117nm,0.3s								
PB12	**IPOC Station P**	**2.59**	**6**				eP	**Pn**	**12 21 31.0**	**+0.4**
PB12						eS	**Sn**	**12 21 59.0**	**-1.9**
PB12				IAML				12 22 07.5	
	comp=E,291nm,0.1s								
AP01	**Chacalluta**	**2.83**	**5**	eP			**Pn**	**12 21 37.0**	**+3.3**
AP01				IAML				12 22 30.3	
	comp=Z,157nm,0.2s								
AF01	**San Pedro de A**	**2.84**	**128**	eP			Pb	12 21 48.6	+7.6
AF01						eS	**Sb**	**12 22 14.6**	**-0.8**
AF01				IAML				12 22 48.6	
	comp=Z,232nm,0.4s								
PB16	**IPOC Station P**	**3.03**	**20**	eP			**Pn**	**12 21 38.0**	**+1.0**
PB16						eS	**Sn**	**12 22 17.5**	**+4.9**
PB16				IAML				12 22 24.9	
	comp=Z,51nm,0.4s								
PB14	**IPOC Station P**	**3.41**	**177**	eP			**Pn**	**12 21 42.5**	**+0.5**
AC01	**Pan de Azucar**	**4.92**	**180**	eP			**Pn**	**12 22 02.3**	**-0.3**
AC01						eS	**Sn**	**12 22 55.9**	**-2.5**
AC01				IAML				12 23 11.2	
	comp=Z,18nm,2.5s								

*IDC **08** 12:28:47.0±0.9,27°.12N×140°.30E,h389km±8km,mb3.6/27,*
mbtmp4.3/31,Error ellipse: s-maj=13.5km s-min=9.4km
az=79.0
*NEIC **08** 12:28:48.0±1.3,27°.08N±0°.10×140°.2E±0°.1,h390km±8km,*
mb4.0/69,Error ellipse: s-maj=18.9km s-min=13.9km
az=97.0
*JMA **08** 12:28:49.8±0.2,28°.1°×14°.1E±°,h394km±2km,MV4.2/19,*
NEAR CHICHIJIMA ISLAND

ISC 08 12:28:47.9±0.6,**27°.14N**±0°.08×**140°.45E**±0°.10,**h400**km,
n121,σ1**s49/95,mb4.0/58,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.55**	**91**	P			**Pn**	**12 29 40.5**	**-0.9**
CBIJ						eS	**S**	**12 30 20.4**	**-4.0**
JCJ	**Chichijima** 92nm,0.3s,baz=152,slow=23,SNR=88	**1.55**	**91**	P			**Pn**	**12 29 39.3**	**-2.0**
JCJ						S	**S**	**12 30 18.3**	**-6.1**
	240nm,0.3s,baz=336,slow=22,SNR=15								
JCJ	**Chichijima**	**1.55**	**91**				**Pn**	**12 29 40.4**	**-1.0**
JHH2	**Haha-jima-NKT2**	**1.62**	**108**	P			**Pn**	**12 29 41.6**	**-0.1**
JHH2						eS	**S**	**12 30 22.8**	**-2.4**
JHJ2	**Mitsune**	**5.97**	**355**				**Pn**	**12 30 20.0**	**-0.2**
JHJ	**Hachijo jima 2** 44nm,0.3s,baz=98,slow=16,SNR=7.2	**5.99**	**355**	P			**Pn**	**12 30 19.8**	**-0.5**
JHJ						S	**S**	**12 31 32.7**	**-2.8**
	90nm,0.4s,baz=102,slow=19,SNR=4.8								
JIE	**Ise**	**7.91**	**337**	eP			**P**	**12 30 43.8**	**+1.6**
JKN2	**Miekihoku**	**7.93**	**334**	eP			**P**	**12 30 44.1**	**+1.6**
INU	**Inuyama**	**8.69**	**341**				**P**	**12 30 51.8**	**+0.9**
JHO	**Hitachi**	**9.44**	**1**	eP			**Pn**	**12 30 58.8**	**-0.5**
JHO				eS			**S**	**12 32 41.8**	**-5.5**
MJAR	**Matsushiro Arr** 1.3nm,0.4s,baz=164,slow=10,SNR=8.2	**9.56**	**349**	P			**P**	**12 30 59.6**	**-1.0**
MJAR						S	**S**	**12 32 46.1**	**-3.6**
	4.5nm,0.8s,baz=101,slow=21,SNR=7.7								
MAJO	**Matsushiro**	**9.56**	**349**				**Pn**	**12 31 00.2**	**-0.6**
JTM	**Tenmabayashi**	**13.62**	**2**	P			**Pn**	**12 31 48.0**	**+0.3**
KSRS	**Korea Array** 3.6nm,0.7s,baz=129,slow=11,SNR=18	**14.75**	**317**	P			**P**	**12 31 57.1**	**-0.4**
YOJ	**Yonaguni jima**	**15.93**	**264**	P			P	12 32 08.1	-2.4
JKA	**Kamikawa-asahi**	**17.03**	**5**	P			**P**	**12 32 23.7**	**+1.7**
JKA				IAmb			IAmb	12 32 41.5	
	comp=Z,6.3nm,1.1s								
USA0B	**Ussuriysk Arra**	**18.34**	**340**	P			**P**	**12 32 36.2**	**+0.3**
USRK	**Ussuriysk Ar.** comp=Z,16nm,0.8s,baz=164,slow=9.5,SNR=21	**18.34**	**340**	P			**P**	**12 32 35.3**	**-0.5**
USRK	**Ussuriysk Ar.**	**18.34**	**340**	P			**P**	**12 32 36.5**	**+0.7**
YSS	**Yuzhno-Sakhali** comp=Z,6.3nm,0.9s	**19.86**	**5**	P			**P**	**12 32 51.3**	**+0.4**
YSS				IAmb			IAmb	12 33 11.9	
HILR	**Hailar Array B** comp=Z,2.4nm,0.5s,baz=145,slow=5.3,SNR=2.3 comp=Z,2.4nm,0.5s	**27.47**	**330**	P			**P**	**12 33 58.6**	**-0.7**
PETK	**Petropavlovsk-** comp=Z,0.9nm,0.6s,baz=207,slow=6.3,SNR=4.3 comp=Z,0.9nm,0.6s	**28.94**	**22**	P			**P**	**12 34 13.1**	**+1.0**
PETK	**Petropavlovsk-**	**28.94**	**22**	P			P	12 34 14.7	+2.5
SIJI	**Sorong** comp=Z,6.2nm,0.7s,baz=84,slow=11,SNR=3.7 comp=Z,6.2nm,0.7s	**29.22**	**199**	P			P	12 34 14.0	-1.0
LZDM	**Lanzhou Array** comp=Z,2.1nm,0.3s,baz=181,slow=7.4,SNR=4.5 comp=Z,2.1nm,0.3s	**32.38**	**295**	P			P	12 34 41.4	-1.2
LUWI	**Luwuk**	**32.78**	**214**	P			P	12 34 43.9	-2.0
SONM	**Songino Array** comp=Z,0.4nm,0.4s,baz=126,slow=7.3,SNR=1.7 comp=Z,0.4nm,0.4s	**33.62**	**317**	P			**P**	**12 34 52.4**	**-0.5**
MTN	**Manton Dam**	**40.76**	**194**	P			P	12 35 50.8	-1.4
TIXI	**Tiksi**	**45.02**	**355**	P			**P**	**12 36 25.8**	**+0.7**
TIXI				IAmb			IAmb	12 36 26.1	
	comp=Z,6.5nm,0.9s								
UNV	**Unalaska Valle**	**46.92**	**40**	P			P	12 36 41.6	+1.5
WB0	**Warramunga Arr**	**47.00**	**188**	P			P	12 36 41.0	-0.1
WB0				IAmb			IAmb	12 36 49.6	
	comp=Z,15nm,1.4s								
WRAB	**Tennant Creek**	**47.17**	**188**	P			P	12 36 42.4	0.0
WR8	**Warramunga Arr**	**47.17**	**188**	P			P	12 36 42.3	-0.1
WR8				IAmb			IAmb	12 36 43.8	
	comp=Z,13nm,1.5s								
WRA	**Warramunga Arr** comp=Z,1.6nm,0.4s,baz=4.8,slow=7.7,SNR=25	**47.18**	**188**	P			P	12 36 42.2	-0.3
WRA				ScP			**ScP**	**12 41 20.6**	**-0.9**
	comp=Z,0.8nm,1.1s,baz=6.9,slow=4.9,SNR=4.7 comp=Z,1.6nm,0.4s								
WRA	**Warramunga Arr**	**47.18**	**188**	P			P	12 36 41.4	-1.1
FITZ	**Fitzoy Crossi**	**47.21**	**199**	P			P	12 36 42.8	+0.1
AKUT	**Akutan**	**47.41**	**40**	P			P	12 36 45.7	+1.9
ZAA0	**Zalesovo Array**	**48.44**	**319**	P			**P**	**12 36 51.5**	**-0.1**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.5s,baz=101,slow=7.3,SNR=7.1	**48.44**	**319**	P			**P**	**12 36 50.7**	**-0.9**
ZALV				PcP			**PcP**	**12 38 09.6**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=113,slow=2.6,SNR=6.1								
ZALV				ScP			**ScP**	**12 41 25.6**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=2.5 comp=Z,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**48.44**	**319**	P			**P**	**12 36 51.4**	**-0.2**
MKAR	**Makanchi Array** comp=Z,0.9nm,0.5s,baz=90,slow=9.4,SNR=12	**49.25**	**310**	P			**P**	**12 36 57.6**	**-0.2**
MKAR				PcP			**PcP**	**12 38 14.1**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=109,slow=3.5,SNR=2.6								
MKAR				ScP			**ScP**	**12 41 30.1**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=103,slow=4.6,SNR=7.2 comp=Z,0.9nm,0.5s								
MKAR	**Makanchi Array**	**49.25**	**310**	P			**P**	**12 36 57.4**	**-0.5**
MAKZ	**Makanchi**	**49.47**	**310**	P			**P**	**12 36 59.4**	**-0.1**
N14K	**Kuskokwak Cree**	**50.90**	**33**	P			P	12 37 12.1	+2.3
AS31	**Alice Springs**	**50.90**	**188**	P			P	12 37 10.6	+0.3
ASAR	**Alice Springs** comp=Z,0.6nm,0.6s,baz=358,slow=4.7,SNR=8.4 comp=Z,0.6nm,0.6s	**50.91**	**188**	P			P	12 37 10.0	-0.3
ASAR	**Alice Springs**	**50.91**	**188**	P			P	12 37 10.6	+0.2
PDGK	**Podgornoye**	**51.25**	**305**				**P**	**12 37 12.8**	**0.0**
F15K	**North Star Dit**	**51.31**	**26**	P			P	12 37 15.4	+2.7
N15K	**Kwethluk River**	**51.73**	**33**	P			P	12 37 17.9	+2.0
KURK	**Kurchatov**	**51.85**	**315**				**P**	**12 37 16.7**	**-0.2**
KURK				IAmb			IAmb	12 37 18.3	
	comp=Z,3.9nm,0.7s								
KURBB	**Kurchatov Arra** comp=Z,4.5nm,0.5s,baz=92,slow=7.9,SNR=62 comp=Z,4.5nm,0.5s	**51.90**	**314**	P			**P**	**12 37 16.9**	**-0.3**
C16K	**Lisburne Hills**	**52.03**	**23**	P			**P**	**12 37 19.9**	**+2.0**
C16K				IAmb			IAmb	12 37 43.0	
	comp=Z,11nm,1.4s								
NRIK	**Norilsk** comp=Z,4.0nm,0.6s,baz=138,slow=8.0,SNR=2.9 comp=Z,4.0nm,0.6s	**52.05**	**339**	P			**P**	**12 37 17.9**	**-0.1**
NRIK	**Norilsk**	**52.05**	**339**	P			**P**	**12 37 18.1**	**+0.1**
NRIK				IAmb			IAmb	12 37 18.9	
	comp=Z,4.5nm,0.8s								
M16K	**Timber Creek**	**52.45**	**32**	P			P	12 37 23.4	+2.3
J17K	**VABM Dome**	**52.92**	**29**	P			P	12 37 27.1	+2.7
J17K				IAmb			IAmb	12 37 49.6	
	comp=Z,7.3nm,1.3s								
K17K	**Iditarod**	**53.11**	**30**	P			P	12 37 28.5	+2.7
K17K				IAmb			IAmb	12 37 29.7	
	comp=Z,6.1nm,0.9s								
N17K	**Nushagak Hills**	**53.22**	**33**	P			P	12 37 29.2	+2.6
N17K				IAmb			IAmb	12 37 58.1	
	comp=Z,13nm,1.2s								
M17K	**Holitna River**	**53.25**	**32**	P			P	12 37 29.3	+2.5
M17K				IAmb			IAmb	12 37 35.2	
	comp=Z,15nm,1.4s								
E18K	**Tukpahlearik C**	**53.41**	**24**	P			P	12 37 30.9	+3.0
C18K	**Utukok River**	**53.60**	**23**	P			**P**	**12 37 31.1**	**+1.7**
BOOM	**Boomskoye usch**	**53.91**	**304**	P			**P**	**12 37 32.5**	**+0.4**
C19K	**Lookout Ridge**	**54.30**	**22**	P			P	12 37 36.7	+2.4
C19K				IAmb			IAmb	12 37 44.0	
	comp=Z,10nm,1.5s								
D20K	**Etivluk River**	**55.22**	**23**	P			**P**	**12 37 42.7**	**+1.9**
D20K				IAmb			IAmb	12 37 43.1	
	comp=Z,4.4nm,0.5s								
MLY	**Manley**	**56.80**	**28**	P			**P**	**12 37 54.0**	**+2.1**
BVAR	**Borovoye Array** comp=Z,10nm,0.5s,baz=85,slow=6.9,SNR=40 comp=Z,10nm,0.5s	**56.96**	**317**	P			**P**	**12 37 53.2**	**0.0**
BORK	**Borovoye**	**57.00**	**317**				**P**	**12 37 53.8**	**+0.3**
G23K	**Bananza Creek**	**57.30**	**26**				**P**	**12 37 57.7**	**+2.4**
MCK	**McKinley**	**57.45**	**30**	P			**P**	**12 37 57.9**	**+1.5**
MCK				IAmb			IAmb	12 37 58.4	
	comp=Z,5.0nm,0.8s								
NEA2	**Nenana**	**57.47**	**29**	P			**P**	**12 37 58.2**	**+1.7**
NEA2				IAmb			IAmb	12 37 59.0	
	comp=Z,3.5nm,0.6s								
C23K	**Itkillik River**	**57.54**	**23**	P			**P**	**12 37 58.8**	**+1.9**
C23K				IAmb			IAmb	12 37 59.0	
	comp=Z,9.5nm,1.4s								
KK31	**Karatay Array**	**57.80**	**306**				**P**	**12 37 58.8**	**-0.4**
KK31				IAmb			IAmb	12 38 00.0	
	comp=Z,3.6nm,0.8s								
KKAR	**Karatay Array**	**57.80**	**306**				**P**	**12 37 59.5**	**+0.3**
E24K	**Your Creek**	**58.05**	**25**	P			**P**	**12 38 02.8**	**+2.3**
E24K				IAmb			IAmb	12 38 03.2	
	comp=Z,2.5nm,0.6s								
F24K	**Squaw Lake**	**58.22**	**25**				P	12 38 04.1	+2.5
F24K				IAmb			IAmb	12 38 04.7	
	comp=Z,2.5nm,0.6s								
ILAR	**Eielson Array** comp=Z,1.1nm,0.6s,baz=254,slow=5.7,SNR=12 comp=Z,1.1nm,0.6s	**58.41**	**29**	P			**P**	**12 38 03.4**	**+0.4**
ILAR	**Eielson Array**	**58.41**	**29**	P			**P**	**12 38 04.0**	**+1.0**
F25K	**Christian Rive**	**59.08**	**25**	P			P	12 38 10.1	+2.5
SCRK	**Sand Creek**	**59.65**	**30**				**P**	**12 38 12.8**	**+1.3**
SCRK				IAmb			IAmb	12 38 13.3	
	comp=Z,3.5nm,0.7s								
L26K	**Log Cabin Wild** comp=Z,4.2nm,0.6s	**59.95**	**31**	IAmb			IAmb	12 38 16.0	
F28M	**Old Crow** comp=Z,3.0nm,0.7s	**61.29**	**25**	IAmb			IAmb	12 38 25.2	
I28M	**Miner Creek**	**61.35**	**28**				**P**	**12 38 24.9**	**+2.0**
I28M				IAmb			IAmb	12 38 25.2	
	comp=Z,2.2nm,0.5s								
E28M	**Babbage River** comp=Z,3.6nm,0.7s	**61.39**	**24**	IAmb			IAmb	12 38 25.9	
G29M	**Pine Creek**	**62.05**	**26**				**P**	**12 38 29.5**	**+2.2**
G29M				IAmb			IAmb	12 38 30.4	
	comp=Z,4.3nm,0.8s								
M29M	**Somme Creek**	**62.23**	**31**				P	12 38 31.0	+2.4
M29M				IAmb			IAmb	12 38 31.7	
	comp=Z,3.0nm,0.7s								
L29M	**L29M** comp=Z,3.1nm,0.6s	**62.32**	**31**	IAmb			IAmb	12 38 32.4	
G30M	**tAoh Zraii Nji** comp=Z,3.8nm,1.1s	**62.75**	**26**	IAmb			IAmb	12 38 35.7	
M30M	**Minto, Yukon**	**62.98**	**31**				**P**	**12 38 35.8**	**+2.3**
M30M				IAmb			IAmb	12 38 36.2	
	comp=Z,1.9nm,0.7s								
N31M	**Braeburn, Yuko** comp=Z,3.0nm,0.6s	**63.61**	**32**	IAmb			IAmb	12 38 40.5	
INK	**Inuvik**	**63.63**	**24**	P			**P**	**12 38 38.6**	**+1.2**
AB31	**Akbulak array**	**63.95**	**314**				**P**	**12 38 39.9**	**0.0**
AB31				IAmb			IAmb	12 38 40.2	
	comp=Z,2.1nm,0.7s								
ABKAR	**Akbulak array**	**63.95**	**314**	P			**P**	**12 38 39.7**	**-0.2**
M31M	**Drury Creek, Y**	**64.15**	**31**	P			**P**	**12 38 43.2**	**+2.2**
M31M				IAmb			IAmb	12 38 43.4	
	comp=Z,2.8nm,0.6s								
SPITS	**Spitsbergen Ar** comp=Z,14nm,1.1s,baz=91,slow=7.6,SNR=5.3 comp=Z,14nm,1.1s	**70.06**	**350**	P			**P**	**12 39 18.2**	**+0.8**
YKA	**Yellowknife Ar** comp=Z,3.5nm,0.6s,baz=299,slow=6.1,SNR=40 comp=Z,3.5nm,0.6s	**72.83**	**28**	P			**P**	**12 39 34.8**	**+0.9**
YKA	**Yellowknife Ar**	**72.83**	**28**	P			**P**	**12 39 34.6**	**+0.6**
YKAW1	**Yellowknife Wh**	**72.89**	**28**	P			**P**	**12 39 35.3**	**+1.0**
ARCES	**ARCESS Array B** comp=Z,2.6nm,0.7s,baz=73,slow=9.0,SNR=12 comp=Z,2.6nm,0.7s	**72.98**	**341**	P			**P**	**12 39 35.3**	**+0.5**
ARCES	**ARCESS Array B**	**72.98**	**341**	P			**P**	**12 39 35.6**	**+0.8**
KBZ	**Khabaz** comp=Z,3.0nm,0.8s,baz=84,slow=5.3,SNR=3.0 comp=Z,3.0nm,0.8s	**76.84**	**312**	P			**P**	**12 39 57.2**	**+0.2**
FIA1	**FINESS Array S**	**77.22**	**333**	P			**P**	**12 39 58.5**	**-0.2**
FINES	**FINESS Array B** comp=Z,6.9nm,0.4s,baz=67,slow=4.9,SNR=88 comp=Z,6.9nm,0.4s	**77.22**	**333**	P			**P**	**12 39 58.5**	**-0.2**
FINES	**FINESS Array B**	**77.22**	**333**	P			**P**	**12 39 58.6**	**-0.1**
AKASG	**Malin Array Be** comp=Z,0.8nm,0.3s,baz=50,slow=5.8,SNR=8.0 comp=Z,0.8nm,0.3s	**81.66**	**323**	P			**P**	**12 40 22.0**	**-0.7**
AKASG	**Malin Array Be**	**81.66**	**323**	P			**P**	**12 40 22.8**	**+0.2**
AKASG				IAmb			IAmb	12 40 27.4	
	comp=Z,2.9nm,1.2s								
KIEV	**Kiev**	**81.67**	**323**	P			**P**	**12 40 22.5**	**-0.2**
KIEV				IAmb			IAmb	12 40 26.0	
	comp=Z,2.7nm,0.8s								
NVAR	**Mina Array Bea** comp=Z,1.1nm,0.6s,baz=292,slow=5.3,SNR=12 comp=Z,1.1nm,0.6s	**81.70**	**51**	P			**P**	**12 40 25.1**	**+1.7**
HFS	**Hagfors** comp=Z,1.7nm,0.3s,baz=111,slow=2.1,SNR=18 comp=Z,1.7nm,0.3s	**82.76**	**336**	P			**P**	**12 40 27.3**	**-0.8**
NB2	**NORSAR Subarra** comp=Z,1.4nm,0.5s,baz=49,slow=4.6	**82.99**	**338**	P			**P**	**12 40 28.6**	**-0.7**
NOA	**NORSAR Array B** comp=Z,2.9nm,0.6s,baz=46,slow=4.8,SNR=11 comp=Z,2.9nm,0.6s	**82.99**	**338**	P			**P**	**12 40 28.4**	**-0.8**
BRTR	**Keskin Array B** comp=Z,0.8nm

OUF	**Merijarvi**	**3.12**	**168**	PN	**Pn**	**12 32 41.7**	**+1.3**
OUF				smax	smax	12 33 22.4	
	comp=Z,1.0nm,0.2s						
KU1	**Kurvinen**	**3.14**	**123**	PN	**Pn**	**12 32 41.2**	**+0.5**
RMF	**Romuvaara**	**4.23**	**136**	PN	**Pn**	**12 32 57.6**	**+2.0**
FINES	**FINESS Array B**	**6.12**	**167**	Pn	**Pn**	**12 33 23.1**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=355,slow=13,SNR=4.9						
FINES				Sn	**Sn**	**12 34 33.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=348,slow=23,SNR=5.7						
	comp=Z,0.4nm,0.4s						

*IDC **08** 12:42:49.2±5.2,9°11S×124°20E,h76km±62km,mb3.4/2, mbtmp3.9/5,ML3.9/3,Error ellipse: s-maj=70.8km s-min=30.2km az=33.0*
*DJA **08** 12:42:51.4±0.3,9°S±4°×12°4E±°,h72km±6km,M3.9/13, mb4.3/7,MLv3.6/13*
ISC 08 12:42:50.0±1.2,**9.08S**±0.10×**124.1E**±0.1,**h74**km,**n16,** σ1§**98**/**18**,**Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SOEI	**Soe**	**0.69**	**168**	P		**Pn**	**12 43 07.9**	**+2.7**
SOEI				S		**Sn**	**12 43 20.2**	**+3.8**
BATI	**Baumata**	**1.21**	**202**	P		**Pn**	**12 43 10.7**	**-0.6**
	40nm,0.3s,baz=84,slow=2.2,SNR=13							
BATI				S		**Sn**	**12 43 26.8**	**-0.5**
	214nm,0.3s,baz=128,slow=7.0,SNR=9.8							
MMRI	**Maumere**	**1.91**	**283**	P		**Pn**	**12 43 21.3**	**+0.8**
WSI	**Waingapu**	**3.81**	**261**	P		**Pn**	**12 43 48.7**	**+2.4**
LBFI	**Labuhan Bajo,**	**4.22**	**278**	P		**Pn**	**12 43 54.2**	**+2.3**
WBSI	**Waikabubak, Su**	**4.70**	**263**	P		**Pn**	**12 43 59.1**	**+0.7**
DBNI	**Kabupaten Domp**	**5.77**	**275**	P		**Pn**	**12 44 15.1**	**+2.1**
PLAI	**Plampang**	**6.27**	**272**	P		**Pn**	**12 44 21.8**	**+1.9**
	0.2nm34nm,1.1s							
TWSI	**Taliwang, Sumb**	**7.16**	**272**	P		**Pn**	**12 44 33.4**	**+1.4**
	22nm,1.0s							
MTNI	**Mataram**	**7.87**	**273**	P		**Pn**	**12 44 41.6**	**-0.1**
	9.5nm,0.7s							
KHKI	**Kahang-Kahang**	**8.44**	**274**	P		**Pn**	**12 44 51.3**	**+1.7**
	30nm,1.9s							
FITZ	**Fitzroy Crossi**	**9.09**	**171**	P		**Pn**	**12 44 57.0**	**-1.4**
	1.9nm,0.3s,baz=0.2,slow=8.7,SNR=109							
FITZ				S		Sn	12 46 30.1	-8.9
	14nm,0.3s,baz=140,slow=14,SNR=14							
	4.4nm,0.3s							
WRA	**Warramunga Arr**	**14.64**	**139**	P		**Pn**	**12 46 10.4**	**-2.8**
	0.4nm,0.3s,baz=319,slow=14,SNR=32							
WRA				S		Sn	12 48 43.0	-11
	2.0nm,0.5s,baz=307,slow=24,SNR=13							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**17.26**	**148**	P		**Pn**	**12 46 45.2**	**-1.1**
	0.3nm,0.3s,baz=319,slow=11,SNR=18							
ASAR				S		Sn	12 49 45.6	-12
	0.9nm,0.5s,baz=314,slow=20,SNR=7.0							
	2.6nm,0.8s							
MKAR	**Makanchi Array**	**66.94**	**330**	P		**P**	**12 53 33.9**	**-0.8**
	0.3nm,0.5s,baz=125,slow=7.9,SNR=4.8							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**71.02**	**337**	P		**P**	**12 53 59.3**	**-0.4**
	0.3nm,0.4s,baz=128,slow=9.3,SNR=3.6							
	0.3nm,0.4s							

*HEL **08** 13:38:01.3±0.2,61°87N×31°26E,h0km,ML1.5,Explosion*
*IDC **08** 13:38:03.7±2.8,61°90N×30°89E,h0km,mbtmp2.7/2, ML1.9/2,Error ellipse: s-maj=27.4km s-min=11.4km az=137.0*
ISC 08 13:37:57.7±1.9,**61°88N**±0°06×**31°48E**±0°10,**h0**km,**n13,** σ1§**19**/**21**,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOF	**Joensuu**	**1.04**	**356**	*e*P		**Pn**	**13 38 20.2**	**+0.7**
RUF	**Ruokolahti**	**1.29**	**250**	*e*P		**Pn**	**13 38 24.2**	**+1.3**
NIF	**Nilsia**	**2.27**	**313**	*e*PG		**Pg**	**13 38 40.8**	**-0.3**
NIF				*e*SB		**Sb**	**13 39 08.3**	**+0.3**
VJF	**Virojoki**	**2.33**	**236**	*e*PB		**Pb**	**13 38 40.0**	**-0.4**
VJF				*e*SG		**Sb**	**13 39 09.7**	**0.0**
VJF				smax	smax	13 39 12.3		
	comp=Z,0.9nm,0.1s							
RMF	**Romuvaara**	**2.45**	**344**	*e*P		**Pb**	**13 38 42.2**	**-0.3**
RMF				*e*S		**Sb**	**13 39 11.9**	**-1.2**
RMF				smax	smax	13 39 15.7		
	comp=Z,1.8nm,0.1s							
KAF	**Kangasniemi**	**2.45**	**278**	*e*PG		**Pg**	**13 38 43.8**	**-0.8**
KAF				*e*SG		**Sb**	**13 39 13.1**	**-0.2**
FIA1	**FINESS Array S**	**2.61**	**263**	*e*PB		**Pb**	**13 38 44.8**	**-0.5**
FIA1				*e*SB		**Sb**	**13 39 17.0**	**-0.9**
FINES	**FINESS Array B**	**2.61**	**263**	Pn		**Pb**	**13 38 45.0**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=78,slow=14,SNR=14							
FINES				Lg		Lg	13 39 17.1	
	comp=Z,2.6nm,0.3s,baz=74,slow=26,SNR=32							
	comp=Z,1.0nm,0.3s							
SUF	**Sumiainen**	**2.63**	**291**	*e*PG		**Pg**	**13 38 46.8**	**-1.2**
SUF				*e*SB		**Sb**	**13 39 18.0**	**-0.2**
KEF	**Keuruu**	**3.13**	**278**	*e*PB		**Pb**	**13 38 53.3**	**-0.8**
KEF				*e*SB		**Sb**	**13 39 31.5**	**-1.2**
KEF				smax	smax	13 39 34.8		
	comp=Z,1.3nm,0.1s							
OUF	**Merijarvi**	**3.95**	**312**	*e*PB		**Pb**	**13 39 07.9**	**-0.1**
OUF				*e*S		**Sn**	**13 39 49.9**	**+3.6**
ARCES	**ARCESS Array B**	**8.06**	**345**	Pn		**Pn**	**13 39 57.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=156,slow=16,SNR=1.8							
ARCES				Sn		**Sn**	**13 41 26.1**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=161,slow=26,SNR=1.5							
ARCES				Lg		Lg	13 42 04.7	
	comp=Z,0.1nm,0.3s,baz=156,slow=36,SNR=2.2							
	comp=Z,0.8nm,0.8s							
I37NO	**I37NO**	**8.96**	**329**	I		I	14 29 20.0	
	baz=135,slow=323,SNR=1.0							

KRSC 08 14:00:30.3±1.8,**48°31N×155°76E,h17**km±22km,**MI3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.38**	**5**	*e*S		Sb	14 01 39.6	-2.2
PAU	**Pauzhetka**	**3.23**	**12**	*e*S		Sn	14 02 01.8	+3.6
KDTR	**Khodutka, Kamc**	**3.81**	**22**	*e*S		Sn	14 02 17.3	+5.0
MTVR	**Mutnovka**	**4.45**	**19**	*e*S		Sn	14 02 34.7	+6.2
RUS	**Russkaya**	**4.49**	**22**	*e*P		Pn	14 01 40.7	+3.4
RUS				*e*S		Sn	14 02 33.6	+4.5
GRL	**Gorelyy**	**4.50**	**18**	*e*P		Pn	14 01 42.1	+4.4
GRL				*e*S		Sn	14 02 35.7	+6.2
DALK	**Dalny**	**5.09**	**21**	*e*P		Pn	14 01 51.7	+6.0
DALK				*e*S		Sn	14 02 50.0	+6.0
KOK	**Koryaka**	**5.31**	**19**	*e*P		Pn	14 01 53.9	+5.1
SPN	**Mys Shipunski**	**5.50**	**28**	*e*P		Pn	14 01 55.6	+4.3
SPN				*e*S		Sn	14 02 59.7	+5.5

*DJA **08** 14:54:45.9±0.2,6°S±3°×10°6E±°,h179km±2km,M4.5/48, mB5.1/12,mb4.6/42,MLv4.5/48,Mw(mB)4.5/12*
*NEIC **08** 14:54:45.5±2.3,5°91S±0°10×105°81E±0°08,h171km±5km, mb4.5/47,Error ellipse: s-maj=15.9km s-min=7.8km az=214.0*
*IDC **08** 14:54:46.6±1.2,5°81S×105°92E,h186km±8km,mb3.8/18, mbtmp4.3/18,MS3.4/1,Error ellipse: s-maj=22.3km s-min=8.0km az=52.0*
ISC 08 14:54:45.7±0.6,**5°93S**±0°06×**105°80E**±0°05,**h184**km±4km, **n150,** σ1§**39**/173,**mb4.4**/40,**1D,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BLSI	**Bandar Lampung**	**0.79**	**315**	P		**Pn**	**14 55 12.9**	**+0.5**
BLSI				S		**Sn**	**14 55 32.4**	**-0.6**
TNG	**Tangerang**	**0.87**	**106**	P		**Pn**	**14 55 13.2**	**+0.3**
TNG				S		**Sn**	**14 55 33.4**	**-0.4**
KASI	**Kota Agung**	**1.36**	**287**	P		**Pn**	**14 55 17.8**	**+1.1**
KASI				S		**Sn**	**14 55 39.8**	**-0.8**
KLI	**Kotabumi**	**1.42**	**318**	P		**Pn**	**14 55 18.1**	**+0.9**
KLI				S		**Sn**	**14 55 41.5**	**-0.2**
KLSI		**1.63**	**319**	P		**Pn**	**14 55 20.3**	**+1.1**
KLSI				S		**Sn**	**14 55 45.2**	**-0.1**
LEM	**Lembang**	**2.01**	**116**	P		**Pn**	**14 55 24.0**	**+0.6**
	317nm,0.5s,baz=270,slow=5.1,SNR=52							
LEM				S		**Sn**	**14 55 53.7**	**+1.2**
	88nm,0.6s,baz=300,slow=20,SNR=3.7							
LEM				LR		LR	14 56 06.8	
	comp=Z,157nm,20.7s,baz=350,slow=41							
LEM	**Lembang**	**2.01**	**116**	P		**Pn**	**14 55 23.9**	**+0.6**
BBJI	**Bungbulang**	**2.38**	**130**	P		**Pn**	**14 55 26.8**	**-0.6**

BBJI	**Bungbulang**	**2.38**	**130**	S		**Sn**	**14 55 58.5**	**-1.2**
BBJI	**Bungbulang**	**2.38**	**130**			**Pn**	**14 55 26.7**	**-0.6**
BBJI				Sn		**Sn**	**14 55 57.0**	**-2.7**
BBJI	**Bungbulang**	**2.38**	**130**	P		**Pn**	**14 55 26.7**	**-0.6**
MNAI	**Manna**	**3.24**	**299**	Pn		**Pn**	**14 55 39.1**	**+1.6**
MNAI				Sn		**Sn**	**14 56 16.9**	**-0.8**
MNAI	**Manna**	**3.24**	**299**	P		**Pn**	**14 55 39.0**	**+1.6**
EGSI	**Enggano, Bengk**	**3.56**	**279**	P		**Pn**	**14 55 43.2**	**+1.9**
TPI	**Tanjungpandan**	**3.66**	**30**	P		**Pn**	**14 55 42.7**	**+0.1**
KSI	**Kapahiang**	**3.92**	**305**	P		**Pn**	**14 55 48.0**	**+2.0**
SMRI	**Semarang**	**4.74**	**104**	P		**Pn**	**14 55 58.2**	**+1.8**
SMRI	**Semarang**	**4.74**	**104**			**Pn**	**14 55 55.9**	**-0.5**
SMRI	**Semarang**	**4.74**	**104**	P		**Pn**	**14 55 58.0**	**+1.6**
UGM	**Wanagama**	**5.08**	**113**	Pn		**Pn**	**14 56 01.1**	**+0.3**
UGM	**Wanagama**	**5.08**	**113**	P		**Pn**	**14 56 00.6**	**-0.3**
	1.0nm198nm,1.1s							
SNJI	**Sawahan-Nganju**	**6.19**	**108**	P		**Pn**	**14 56 17.1**	**+1.6**
	0.6nm181nm,0.6s							
PPSI	**Pulau Pagai**	**6.58**	**298**	P		**Pn**	**14 56 20.3**	**0.0**
PDSI	**Padang**	**7.30**	**313**	P		**Pn**	**14 56 29.8**	**-0.1**
BKNI	**Bangkinang**	**7.83**	**322**	Pn		**Pn**	**14 56 36.3**	**-0.5**
MYKOM	**Kota Tinggi**	**7.92**	**346**	Pn		**Pn**	**14 56 37.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**8.66**	**107**	Pn		**Pn**	**14 56 48.0**	**+0.3**
JAGI	**Jajag, Banyuwa**	**8.66**	**107**	P		**Pn**	**14 56 47.2**	**-0.5**
	29nm,0.4s							
PBSI	**Pulau Batu**	**9.51**	**308**	P		**Pn**	**14 56 57.0**	**-1.9**
SBUM	**Sibu**	**10.51**	**38**	P		**Pn**	**14 57 14.5**	**+2.6**
SBUM	**Sibu**	**10.51**	**38**			**Pn**	**14 57 11.6**	**-0.3**
SBUM	**Sibu**	**10.51**	**38**	P		**Pn**	**14 57 13.6**	**+1.7**
	13nm,1.1s							
GSI	**Gunungsitoli**	**10.92**	**311**	P		**Pn**	**14 57 15.1**	**-2.1**
GSI	**Gunungsitoli**	**10.92**	**311**			**Pn**	**14 57 14.5**	**-2.7**
GSI	**Gunungsitoli**	**10.92**	**311**	P		**Pn**	**14 57 14.0**	**-3.2**
	67nm,0.8s							
RPSI	**Rantau Prapat**	**10.98**	**321**			**Pn**	**14 57 16.3**	**-1.7**
PSI	**Prapat**	**11.07**	**321**	P		**Pn**	**14 57 17.6**	**-1.6**
PSI	**Prapat**	**11.07**	**321**	P		**Pn**	**14 57 16.6**	**-2.6**
	10nm,0.9s							
TWSI	**Taliwang, Sumb**	**11.34**	**105**	P		**Pn**	**14 57 20.6**	**-2.0**
	23nm,0.5s							
KULM	**Kulim**	**12.28**	**335**	Pn		**Pn**	**14 57 35.0**	**+0.3**
KULM	**Kulim**	**12.28**	**335**	P		**Pn**	**14 57 34.6**	**-0.1**
TPTI		**12.55**	**316**	P		**Pn**	**14 57 35.5**	**-2.6**
	32nm,1.0s							
DBNI	**Kabupaten Domp**	**12.67**	**102**	P		**Pn**	**14 57 41.4**	**+1.7**
WBSI	**Waikabubak, Su**	**13.96**	**106**	P		**Pn**	**14 57 57.2**	**+1.3**
	84nm,1.5s							
LBFI	**Labuhan Bajo,**	**14.20**	**101**	P		**P**	**14 58 01.2**	**+0.3**
PCI	**Palu**	**14.87**	**71**	P		**P**	**14 58 10.6**	**+2.3**
	1µm54nm,1.0s							
KKM	**Kota Kinabalu**	**15.80**	**41**			**P**	**14 58 19.3**	**+0.6**
KKM				IAmb		IAmb	14 58 21.8	
	comp=Z,11nm,0.9s							
KKM	**Kota Kinabalu**	**15.80**	**41**	P		**P**	**14 58 19.5**	**+0.8**
	comp=Z,12nm,0.7s							
TOLI2	**Tolitoli**	**16.51**	**65**	P		**Pn**	**14 58 28.9**	**+1.8**
TOLI2	**Tolitoli**	**16.51**	**65**	P		**Pn**	**14 58 28.0**	**+0.8**
TOLI2				IAmb		IAmb	14 58 30.3	
	comp=Z,17nm,0.7s							
MMRI	**Maumere**	**16.52**	**100**			**P**	**14 58 25.4**	**-1.1**
MMRI	**Maumere**	**16.52**	**100**	P		**P**	**14 58 27.3**	**+0.7**
	comp=Z,78nm,0.5s							
LUWI	**Luwuk**	**17.62**	**75**	P		**P**	**14 58 39.1**	**+0.5**
LUWI				IAmb		IAmb	14 58 59.8	
	comp=Z,39nm,0.9s							
BATI	**Baumata**	**18.18**	**105**	P		**P**	**14 58 43.1**	**-1.7**
	comp=Z,268nm,0.6s,baz=270,slow=5.1,SNR=31							
BATI				S		**S**	**15 01 54.4**	**-9.1**
	comp=Z,18nm,0.6s,baz=311,slow=19,SNR=2.0							
GTOI	**Gorontalo**	**18.38**	**70**	P		**P**	**14 58 47.6**	**+0.7**
	comp=Z,46nm,1.1s							
SOEI	**Soe**	**18.68**	**103**	P		**Pn**	**14 58 52.7**	**-0.2**
SOEI	**Soe**	**18.68**	**103**			**P**	**14 58 50.5**	**+0.2**
SOEI	**Soe**	**18.68**	**103**	P		**P**	**14 58 50.2**	**-0.1**
	comp=Z,75nm,0.8s							
MBWA	**Marble Bar**	**20.28**	**140**	P		**P**	**14 59 07.2**	**-0.2**
MBWA				IAmb		IAmb	14 59 23.1	
	comp=Z,25nm,1.4s							
TNTI	**Ternate**	**22.54**	**74**	P		**P**	**14 59 33.8**	**+3.3**
TNTI	**Ternate**	**22.54**	**74**			**P**	**14 59 30.4**	**-0.1**
TNTI	**Ternate**	**22.54**	**74**	P		**P**	**14 59 31.6**	**+1.1**
	comp=Z,34nm,1.1s							
FITZ	**Fitzroy Crossi**	**22.83**	**124**	P		**P**	**14 59 33.9**	**+0.8**
	comp=Z,16nm,0.9s,baz=301,slow=8.9,SNR=17							
FITZ				S		**S**	**15 03 34.8**	**+6.3**
	comp=Z,4.0nm,1.1s,baz=342,slow=16,SNR=2.1							
	comp=Z,16nm,0.9s							
FITZ	**Fitzroy Crossi**	**22.83**	**124**	P		**P**	**14 59 35.2**	**+2.1**
FITZ	**Fitzroy Crossi**	**22.83**	**124**	P		**P**	**14 59 33.9**	**+0.8**
KNRA	**Kununurra**	**24.52**	**115**			**P**	**14 59 48.6**	**+0.1**
CM31	**Chiang Mai Arr**	**25.16**	**345**	P		**P**	**14 59 53.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**25.16**	**345**	P		**P**	**14 59 53.9**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=166,slow=9.1,SNR=4.3							
CMAR				ScP		**ScP**	**15 06 43.9**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=165,slow=4.6,SNR=5.8							
	comp=Z,0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**25.16**	**345**	P		**P**	**14 59 54.1**	**-0.1**
DRS	**Darwin Rock St**	**25.59**	**106**	P		**P**	**15 00 00.9**	**+2.7**
MTN	**Manton Dam**	**25.90**	**107**			**P**	**15 00 01.1**	**+0.1**
SIJI	**Sorong**	**25.90**	**80**	P		**P**	**15 00 00.4**	**-0.6**
	comp=Z,12nm,0.7s,baz=288,slow=20,SNR=5.8							
	comp=Z,12nm,0.7s							
CRAI	**Chiangrai**	**26.54**	**349**	P		**P**	**15 00 05.5**	**-1.1**
WRA	**Warramunga Arr**	**31.03**	**119**	P		**P**	**15 00 46.8**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=292,slow=9.8,SNR=48							
WRA				PcP		**PcP**	**15 03 38.7**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=298,slow=2.2,SNR=5.1							
WRA				S		**S**	**15 05 36.0**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=296,slow=15,SNR=5.8							
WRA				ScP		**ScP**	**15 07 04.8**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=304,slow=3.3,SNR=2.6							
	comp=Z,1.4nm,0.3s							
WRA	**Warramunga Arr**	**31.03**	**119**	P		**P**	**15 00 47.2**	**+0.7**
WRA						**PcP**	**15 03 38.7**	**+0.8**
WRAB	**Tennant Creek**	**31.03**	**119**	P		**P**	**15 00 47.4**	**+0.9**
WRAB				IAmb		IAmb	15 00 49.1	
	comp=Z,5.8nm,1.0s							
WR8	**Warramunga Arr**	**31.17**	**119**			**P**	**15 00 48.7**	**+1.0**
WR8				IAmb		IAmb	15 00 49.3	
	comp=Z,5.5nm,0.5s							
ASAR	**Alice Springs**	**32.27**	**126**	P		**P**	**15 00 58.5**	**+1.1**
	comp=Z,1.6nm,0.4s,baz=299,slow=8.6,SNR=107							
ASAR				PcP		**PcP**	**15 03 42.1**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=298,slow=2.0,SNR=4.6							
ASAR				S		**S**	**15 05 55.7**	**-1.7**
	comp=Z,1.1nm,0.8s,baz=299,slow=16,SNR=7.4							
ASAR				ScP		**ScP**	**15 07 08.7**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=299,slow=2.9,SNR=6.8							
	comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**32.27**	**126**	P		**P**	**15 00 58.8**	**+1.5**
ASAR						**PcP**	**15 03 42.1**	**+0.9**
AS31	**Alice Springs**	**32.27**	**126**			**P**	**15 00 58.8**	**+1.4**
AS31				IAmb		IAmb	15 00 59.1	
	comp=Z,5.2nm,1.5s							
YULB	**Yu-li**	**32.84**	**27**	P		**P**	**15 01 01.5**	**-0.7**
COEN	**Coen**	**37.62**	**105**	P		**P**	**15 01 43.8**	**+0.7**
COEN				IAmb		IAmb	15 02 12.6	
	comp=Z,22nm,1.2s							
INKA	**Innaminka**	**39.62**	**127**	P		**P**	**15 01 59.0**	**-0.6**
PMG	**Port Moresby**	**41.11**	**97**	P		**P**	**15 02 12.6**	**+0.5**
PMG				IAmb		IAmb	15 02 57.1	
	comp=Z,27nm,1.1s							
CTAO	**Charters Tower**	**41.71**	**114**	P		**P**	**15 02 18.4**	**+1.5**
CTAO				IAmb		IAmb	15 02 20.1	
	comp=Z,29nm,1.4s							
STKA	**Stephens Creek**	**42.23**	**132**	P		**P**	**15 02 22.7**	**+1.7**
	comp=Z,3.9nm,0.4s,baz=309,slow=9.1,SNR=12							
	comp=Z,3.9nm,0.4s							
EIDS	**Eidsvold**	**47.39**	**119**	P		**P**	**15 03 00.6**	**-1.2**
EIDS				IAmb		IAmb	15 03 11.8	
	comp=Z,9.9nm,1.1s							
KSAR	**Wonju Array Be**	**47.82**	**24**	P		**P**	**15 03 03.9**	**-0.8**
KSRS	**Korea Array**	**47.84**	**24**	P		**P**	**15 03 05.6**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=213,slow=7.8,SNR=9.6							
KSRS				ScP		**ScP**	**15 08 07.7**	**0.0**
	comp=Z,0.4nm,0.5s,baz=206,slow=4.0,SNR=4.1							
	comp=Z,1.1nm,0.7s							
TOO	**Toolangi**	**47.89**	**137**	P		**P**	**15 03 04.9**	**-0.6**
CAN	**Canberra**	**49.30**	**132**	P		**P**	**15 03 14.8**	**-1.5**
CAN				IAmb		IAmb	15 03 18.8	
	comp=Z,19nm,1.4s							
JGF	**Kuroka**	**50.86**	**33**	P		**P**	**15 03 28.3**	**+0.4**
JGF				IAmb		IAmb	15 03 51.8	
	comp=Z,15nm,1.1s							
MJAR	**Matsushiro Arr**	**52.02**	**33**	P		**P**	**15 03 36.9**	**+0.5**

SONM	**Songino Array**	**53.54**	**0**	P		**P**	**15 03 47.9**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=182,slow=9.2,SNR=5.7							
SONM				PcP		**PcP**	**15 04 51.5**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=188,slow=5.8,SNR=2.1							
SONM				ScP		**ScP**	**15 08 32.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=181,slow=2.6,SNR=2.6							
	comp=Z,1.3nm,0.5s							
SONM	**Songino Array**	**53.54**	**0**	P		**P**	**15 03 47.9**	**+0.4**
SONM						**PcP**	**15 04 51.5**	**-0.3**
PDGK	**Podgornoye**	**54.52**	**337**	P		**P**	**15 03 53.4**	**-1.3**
MDJ	**Mudanjiang**	**54.68**	**21**	P		**P**	**15 03 55.6**	**0.0**
MDJ				IAmb		IAmb	15 03 56.7	
	comp=Z,4.5nm,0.8s							
BNX	**BinXian**	**54.94**	**18**	⇓P		**P**	**15 03 58.4**	**+0.9**
BNX				pmax		pmax		
	comp=Z,15nm,0.7s							
USA0B	**Ussuriysk Arra**	**55.20**	**23**	P		**P**	**15 03 59.8**	**+0.3**
USA0B				IAmb		IAmb	15 04 00.1	
	comp=Z,5.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**55.20**	**23**	P		**P**	**15 03 59.2**	**-0.2**
	comp=Z,6.7nm,0.6s,baz=206,slow=6.0,SNR=23							
	comp=Z,6.7nm,0.6s							
USRK	**Ussuriysk Ar.**	**55.20**	**23**			**P**	**15 03 59.7**	**+0.3**
BOOM	**Boomskoye usch**	**55.32**	**333**	P		**P**	**15 04 00.6**	**0.0**
GAR	**Garm**	**55.48**	**327**	P		**P**	**15 04 01.7**	**0.0**
GAR				IAmb		IAmb	15 04 35.3	
	comp=Z,7.2nm,1.1s							
CHGR	**Chuyangaron**	**55.88**	**326**	P		**P**	**15 04 04.2**	**-0.2**
CHGR				IAmb		IAmb	15 04 04.9	
	comp=Z,10nm,1.2s							
MKAR	**Makanchi Array**	**56.49**	**341**	P		**P**	**15 04 07.9**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=151,slow=7.4,SNR=9.4							
MKAR				ScP		**ScP**	**15 08 45.4**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=143,slow=5.8,SNR=2.3							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**56.49**	**341**	P		**P**	**15 04 08.3**	**-0.3**
HILR	**Hailar Array B**	**56.58**	**11**	P		**P**	**15 04 08.9**	**-0.3**
	comp=Z,6.4nm,0.4s,baz=197,slow=8.6,SNR=8.9							
	comp=Z,6.4nm,0.4s							
JTM	**Tennabayashi**	**56.64**	**32**	P		**P**	**15 04 09.1**	**-0.6**
ERM	**Erimo**	**58.62**	**32**	P		**P**	**15 04 23.1**	**-0.3**
HEH	**HeiHe**	**59.01**	**16**	*e*P		**P**	**15 04 25.9**	**-0.1**
HEH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
JKA	**Kamikawa-asahi**	**59.84**	**30**	P		**P**	**15 04 31.6**	**-0.2**
JKA				IAmb		IAmb	15 04 38.0	
	comp=Z,15nm,1.4s							
OUENC	**Ouen Island, N**	**61.01**	**112**	P		**P**	**15 04 40.7**	**+0.5**
KURBB	**Kurchatov Arra**	**61.05**	**341**	P		**P**	**15 04 39.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=150,slow=5.6,SNR=4.4							
	comp=Z,0.3nm,0.3s							
KURK	**Kurchatov**	**61.10**	**341**	P		**P**	**15 04 39.9**	**-0.3**
YSS	**Yuzhno-Sakhali**	**61.98**	**28**	P		**P**	**15 04 45.9**	**-0.3**
YSS				IAmb		IAmb	15 05 15.4	
	comp=Z,12nm,1.2s							
ZAA0	**Zalesovo Array**	**62.22**	**346**	P		**P**	**15 04 46.7**	**-0.9**
ZALV	**Zalesovo Beam**	**62.22**	**346**	P		**P**	**15 04 46.3**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=156,slow=6.8,SNR=5.5							
	comp=Z,0.7nm,0.3s							
ZALV	**Zalesovo Beam**	**62.22**	**346**	P		**P**	**15 04 46.7**	**-0.9**
BVAR	**Borovoye Array**	**65.93**	**337**	P		**P**	**15 05 10.1**	**-1.7**
	comp=

WCS	**Beigang Elemen**	**0.40**	**189**	*e*P	Pb	15 00 32.7	0.0
WCS				*i* S	Sb	15 00 38.3	-0.9
WHF	**Hehuan Shan**	**0.41**	**140**	⇓P	Pb	15 00 32.5	-0.5
WHF				*i* S	Sb	15 00 38.6	-1.2
NSK	**Sanguang**	**0.41**	**58**	*i* P	Pb	15 00 31.9	-0.9
NSK				*e*S	Sg	15 00 37.2	+1.2
TCU	**Taichung**	**0.42**	**222**	P	Pb	15 00 32.5	-0.4
TCU				S	Sb	15 00 39.2	-0.4
YHNB	**Yeheng**	**0.42**	**60**	P	Pg	15 00 31.7	+0.8
YHNB				S	Sb	15 00 38.3	-1.4
DPDB	**Guoxing**	**0.43**	**187**	P	Pb	15 00 32.9	-0.2
DPDB				*e*S	Sb	15 00 38.5	-1.4
WWCA	**Taichung City**	**0.46**	**244**	P	Pb	15 00 33.1	-0.6
WWCA				S	Sb	15 00 42.1	+1.1
WUSB	**Renai**	**0.48**	**165**	*i* P	Pb	15 00 33.8	-0.3
WUSB				*e*S	Sg	15 00 39.8	+1.4
WWF	**Wufeng**	**0.49**	**212**	*e*P	Pb	15 00 35.3	+1.1
WWF				S	Sb	15 00 42.2	+0.5
LATG	**Datong**	**0.50**	**81**	*e*P	Pb	15 00 34.3	-0.2
LATG				S	Sb	15 00 41.0	-1.2
ETLH	**Xiulin Townshi**	**0.52**	**119**	⇓P	Pg	15 00 33.3	+0.3
ETLH				S	Sb	15 00 41.9	-0.9
OWD	**Renai**	**0.53**	**160**	P	Pb	15 00 34.8	-0.2
OWD				*e*S	Sg	15 00 41.3	+1.2
NCUH	**Zhongli**	**0.54**	**20**	P	Pb	15 00 35.5	+0.4
NCUH				S	Sb	15 00 44.4	+1.1
NCU	**National Centr**	**0.54**	**20**	*e*P	Pb	15 00 35.6	+0.5
NCU				*e*S	Sb	15 00 42.6	-0.8
ENTT	**Nioudou**	**0.56**	**71**	P	Pb	15 00 35.1	-0.4
ENTT				*e*S	Sg	15 00 42.4	+1.3
TYC	**Yuchr**	**0.56**	**192**	P	Pb	15 00 35.2	-0.3
NWLT	**Wulai**	**0.57**	**56**	P	Pb	15 00 35.0	-0.6
NWLT				*e*S	Sg	15 00 41.8	+0.5
SMLT	**Sun Moon Lake**	**0.58**	**187**	P	Pb	15 00 35.7	-0.1
SMLT				S	Sb	15 00 45.1	+0.7
LXIB	**Xiulin Townshi**	**0.59**	**138**	P	Pb	15 00 35.9	0.0
LXIB				S	Sb	15 00 44.0	-0.7
NACB	**Ninganchiao**	**0.63**	**117**	P	Pb	15 00 36.1	-0.5
NACB				S	Sb	15 00 45.1	-0.6
FUSB	**Fushanzhiwuyua**	**0.63**	**61**	P	Pb	15 00 35.9	-0.7
FUSB				*e*S	Sb	15 00 45.9	+0.1
WNT	**Mingjian**	**0.64**	**205**	P	Pb	15 00 37.4	+0.6
WNT				S	Sb	15 00 47.3	+1.3
SSLB	**Suanglung**	**0.67**	**182**	P	Pb	15 00 37.3	+0.1
SSLB				S	Sb	15 00 47.2	+0.3
TWD	**Chiawan**	**0.68**	**124**	P	Pb	15 00 36.9	-0.4
TWD				S	Sb	15 00 46.6	-0.5
TWE	**Neicheng**	**0.68**	**67**	*e*P	Pb	15 00 37.5	+0.1
TWE				*e*S	Sb	15 00 48.5	+1.3
NDS	**Dongshan**	**0.69**	**75**	⇓P	Pb	15 00 37.1	-0.5
NDS				*e*S	Sb	15 00 48.2	+0.6
ENA	**Nanau**	**0.69**	**92**	P	Pb	15 00 37.4	-0.3
ENA				*e*S	Sg	15 00 45.9	+0.7
EAHA	**Aohua**	**0.70**	**100**	P	Pb	15 00 37.4	-0.4
EAHA				*e*S	Sb	15 00 48.4	+0.5
TAP	**Taipei**	**0.75**	**39**	*e*P	Pg	15 00 36.6	-0.7
TAP				S	Sb	15 00 50.4	+1.1
TWS1	**Kuangyinshan**	**0.75**	**32**	P	Pb	15 00 39.5	+0.8
TWS1				S	Sb	15 00 50.6	+1.3
WHYT	**Xinyi Township**	**0.77**	**189**	*e*P	Pn	15 00 40.1	-0.6
WHYT				*i* S	Sn	15 01 54.4	-1.4
RLNB	**Erlin**	**0.80**	**225**	P	Pb	15 00 39.5	+0.1
RLNB				*e*S	Sn	15 00 52.4	-1.1
WARBT	**Fenglin Townsh**	**0.82**	**153**	P	Pb	15 00 39.5	-0.4
WARBT				*e*S	Sg	15 00 50.0	+0.6
YM01	**YM01**	**0.87**	**38**	P	Pb	15 00 40.8	+0.1
YM01				S	Sn	15 00 54.4	-0.9
CHN5	**Tsauling**	**0.90**	**198**	P	Pb	15 00 41.5	+0.3
CHN5				S	Sn	15 00 55.5	-0.7
YM08	**YM08**	**0.91**	**37**	P	Pb	15 00 41.9	+0.4
YM08				*e*S	Sn	15 00 55.9	-0.5
TIPB	**Shuangxi**	**0.92**	**56**	*e*P	Pb	15 00 41.7	+0.1
TIPB				*e*S	Sn	15 00 56.0	-0.6
ALS	**Alishan**	**0.96**	**190**	*e*P	Pn	15 00 43.6	0.0
ALS				*e*S	Sn	15 00 58.3	+0.5
WSF	**Szhu**	**1.07**	**221**	P	Pb	15 00 44.2	+0.2
WSF				*e*S	Sn	15 01 00.6	+0.4
WCKO	**Fanlu**	**1.07**	**199**	P	Pn	15 00 45.0	+0.1
WCKO				S	Sn	15 01 00.4	+0.1
YULB	**Yu-li**	**1.10**	**165**	*e*P	Pn	15 00 45.3	+0.1
CHN4	**Tsaushan**	**1.16**	**198**	*e*P	Pn	15 00 45.9	-0.1
CHN4				*e*S	Sn	15 01 02.9	+0.6
TPUB	**Ta-pu**	**1.20**	**196**	P	Pn	15 00 47.3	+0.7
TPUB				*e*S	Sn	15 01 04.4	+1.0
WTP	**Ta-pu**	**1.25**	**196**	*e*P	Pn	15 00 47.3	0.0
WTP				*e*S	Sn	15 01 04.9	+0.1
ELDTW	**Lidau**	**1.26**	**178**	*e*P	Pn	15 00 48.7	+1.1
ELDTW				*e*S	Sn	15 01 06.9	+1.8
TSCK	**Chigu Township**	**1.54**	**212**	P	Pn	15 00 51.5	+0.2
TSCK				*e*S	Sg	15 01 13.0	+0.5
TWGBT	**Beinan**	**1.64**	**177**	*e*P	Pb	15 00 53.2	-0.5
TWGBT				*e*S	Sb	15 01 14.7	0.0

*TAP **08** 15:14:40.0,25.5ˢ4N×122.8ˢ2E,h254km,ML3.6,D*
*JMA **08** 15:14:42.9±0.3,25°N±3.3ˢ×122.7E±0.8,h229km,MV3.3/15, NW OFF ISHIGAKIJIMA IS*

ISC 08 15:14:42.2±2.7,25.4N±0.1ˢ×122.70E±0.04,h244km±17km, n65,σ0ᵗ63/105,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	**Pengchaiyu**	**0.63**	**296**	*e*P	**Pn**	**15 15 15.4**	**+0.6**
TWB1	**Santiao Chiao**	**0.73**	**242**	*e*P	**Pn**	**15 15 15.3**	**+0.1**
SXI1	**Grass Mountain**	**0.79**	**251**	*e*P	**Pn**	**15 15 15.6**	**+0.1**
SXI1				*e*S	**S**	**15 15 41.8**	**+0.1**
TIPB	**Shuangxi**	**0.88**	**245**	P	**Pn**	**15 15 16.0**	**0.0**
TIPB				*e*S	**S**	**15 15 42.4**	**0.0**
WFSB	**Wu-fen Shan**	**0.88**	**252**	P	**Pn**	**15 15 16.1**	**+0.2**
JYNG	**Yonagunijimaku**	**0.93**	**166**	*e*P	**Pn**	**15 15 16.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.93**	**163**	P	**Pn**	**15 15 16.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.93**	**163**	*e*P	**Pn**	**15 15 16.2**	**0.0**
EOS2	**EOS2**	**1.02**	**205**	*e*P	**Pn**	**15 15 16.9**	**+0.3**
TWC	**Suao**	**1.07**	**226**	P	**Pn**	**15 15 16.6**	**-0.4**
ESAO	**Su ao**	**1.10**	**225**	*e*P	**Pn**	**15 15 17.5**	**+0.4**
EOS3	**EOS3**	**1.12**	**198**	*e*P	**Pn**	**15 15 17.8**	**+0.7**
TWE	**Neicheng**	**1.13**	**236**	*e*P	**Pn**	**15 15 18.1**	**+0.8**
NDS	**Dongshan**	**1.15**	**232**	*e*P	**Pn**	**15 15 17.6**	**+0.1**
NDS				*e*S	**S**	**15 15 45.5**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.17**	**240**	P	**Pn**	**15 15 17.2**	**-0.4**
FUSB				*e*S	**S**	**15 15 45.6**	**+0.1**
NWLT	**Wulai**	**1.23**	**242**	*e*P	**Pn**	**15 15 17.8**	**-0.2**
NWLT				*e*S	**S**	**15 15 44.7**	**-1.3**
EWUT	**Wuta**	**1.23**	**223**	*e*P	**Pn**	**15 15 18.1**	**+0.1**
ENTT	**Nioudou**	**1.25**	**236**	*e*P	**Pn**	**15 15 18.4**	**+0.2**
ENTT				S	**S**	**15 15 46.9**	**+0.6**
EOS4	**EOS4**	**1.28**	**196**	*e*P	**Pn**	**15 15 18.1**	**+0.3**
EOS4				*e*S	**S**	**15 15 47.1**	**+1.2**
NDT	**Datong Townshi**	**1.31**	**236**	*e*P	**Pn**	**15 15 19.0**	**+0.4**
NDT				*e*S	**S**	**15 15 47.2**	**+0.2**
LATG	**Datong**	**1.34**	**233**	P	**Pn**	**15 15 19.2**	**+0.3**
LATG				S	**S**	**15 15 48.0**	**+0.3**
EAHA	**Aohua**	**1.34**	**221**	*e*P	**Pn**	**15 15 16.6**	**-2.1**
IRIF	**Iriomote-Funau**	**1.38**	**137**	*e*P	**Pn**	**15 15 18.9**	**-0.1**
YHNB	**Yeheng**	**1.38**	**241**	*e*P	**Pn**	**15 15 18.8**	**-0.3**
YHNB				*e*S	**S**	**15 15 47.2**	**-0.9**
NSK	**Sanguang**	**1.40**	**241**	*e*P	**Pn**	**15 15 19.1**	**-0.1**
NSK				*e*S	**S**	**15 15 47.0**	**-1.2**
KSHI	**Guanxi Townshi**	**1.50**	**248**	*e*P	**Pn**	**15 15 19.3**	**-0.6**
KSHI				*e*S	**S**	**15 15 49.7**	**+0.3**
NNS	**Nan Shan**	**1.51**	**233**	*e*P	**Pn**	**15 15 20.4**	**+0.3**
NNS				*e*S	**S**	**15 15 50.2**	**+0.3**
NNSB	**Datong**	**1.51**	**233**	*e*P	**Pn**	**15 15 20.1**	**0.0**
NNSB				*e*S	**S**	**15 15 49.7**	**-0.2**
ETL	**Fush Village**	**1.54**	**220**	*e*P	**Pn**	**15 15 20.4**	**+0.1**
ETL				*e*S	**S**	**15 15 49.5**	**-0.7**
NACB	**Ninganchiao**	**1.55**	**221**	*e*P	**Pn**	**15 15 20.1**	**-0.2**
NACB				*e*S	**S**	**15 15 49.3**	**-0.9**
ETLH	**Xiulin Townshi**	**1.59**	**224**	P	**Pn**	**15 15 20.8**	**0.0**
ETLH				*e*S	**S**	**15 15 50.5**	**-0.6**
NFF	**Wufeng Townshi**	**1.61**	**244**	*e*P	**Pn**	**15 15 20.4**	**-0.5**
NFF				S	**S**	**15 15 49.8**	**-1.3**
TWD	**Chiawan**	**1.62**	**219**	*e*P	**Pn**	**15 15 20.9**	**0.0**
TWD				*e*S	**S**	**15 15 51.2**	**0.0**
JKRS	**Kuro-shima**	**1.63**	**133**	*e*P	**Pn**	**15 15 21.5**	**+0.6**
JKRS				*e*S	**S**	**15 15 51.2**	**0.0**
HATJ	**Hateruma jima**	**1.63**	**142**	*e*P	**Pn**	**15 15 21.8**	**+0.8**
JIJ	**Ishigaki jima**	**1.64**	**127**	P	**Pn**	**15 15 21.0**	**0.0**
JIJ				*e*S	**S**	**15 15 50.2**	**-1.2**
JISG	**Ishigakijimahi**	**1.65**	**117**	*e*P	**Pn**	**15 15 21.0**	**0.0**
JISG				*e*S	**S**	**15 15 50.8**	**-0.7**
LIOB	**Emei**	**1.69**	**246**	*e*P	**Pn**	**15 15 21.4**	**0.0**
LIOB				*e*S	**S**	**15 15 51.9**	**-0.3**
HWA	**Hwalien**	**1.70**	**216**	*e*P	**Pn**	**15 15 21.8**	**+0.4**
NSTT	**Nanjuang**	**1.71**	**245**	*e*P	**Pn**	**15 15 21.3**	**-0.3**
NSTT				*e*S	**S**	**15 15 51.9**	**-0.5**
FUSS	**Fushou**	**1.73**	**231**	*e*P	**Pn**	**15 15 22.6**	**+0.6**
FUSS				S	**S**	**15 15 53.5**	**+0.2**
ETM	**Tongmen**	**1.77**	**219**	*e*P	**Pn**	**15 15 21.8**	**-0.3**
TWT	**Tachien**	**1.77**	**232**	*e*P	**Pn**	**15 15 22.9**	**+0.6**
TWT				S	**S**	**15 15 54.9**	**+1.1**
LXIB	**Xiulin Townshi**	**1.77**	**222**	*e*P	**Pn**	**15 15 22.1**	**-0.2**
LXIB				*e*S	**S**	**15 15 53.9**	**+0.1**
WHF	**Hehuan Shan**	**1.78**	**228**	*e*P	**Pn**	**15 15 22.6**	**-0.1**
WHF				*e*S	**S**	**15 15 54.4**	**0.0**
TDCB	**Techi**	**1.78**	**232**	*e*P	**Pn**	**15 15 22.8**	**+0.5**
TDCB				S	**S**	**15 15 54.3**	**+0.3**
TEYL	**Yanliau Villag**	**1.79**	**214**	*e*P	**Pn**	**15 15 22.6**	**+0.4**
SHUL	**Shoufeng**	**1.87**	**214**	*e*P	**Pn**	**15 15 23.4**	**+0.4**
SHUL				*e*S	**S**	**15 15 55.6**	**+0.5**
ESL	**Shilin**	**1.92**	**217**	*e*P	**Pn**	**15 15 22.8**	**-0.6**
WHP	**Taichung City**	**1.92**	**237**	*e*P	**Pn**	**15 15 23.6**	**+0.1**
WHP				*e*S	**S**	**15 15 55.7**	**-0.3**
JTJ	**Tarama**	**1.95**	**111**	*e*P	**Pn**	**15 15 24.2**	**+0.6**
JTJ				*e*S	**S**	**15 15 56.0**	**-0.1**
OWD	**Renai**	**1.97**	**225**	P	**Pn**	**15 15 24.0**	**0.0**
OWD				S	**S**	**15 15 57.3**	**+0.4**
WUSB	**Renai**	**1.98**	**227**	*e*P	**Pn**	**15 15 24.8**	**+0.7**
WUSB				S	**S**	**15 15 58.0**	**+0.9**
WARBT	**Fenglin Townsh**	**2.02**	**217**	*e*P	**Pn**	**15 15 23.8**	**-0.6**
WARBT				*e*S	**S**	**15 15 56.9**	**-0.7**
WCS	**Beigang Elemen**	**2.08**	**232**	*e*P	**Pn**	**15 15 25.1**	**+0.2**
WCS				*e*S	**S**	**15 15 58.5**	**+0.1**
HGSD	**Ruisui**	**2.19**	**212**	*e*P	**Pn**	**15 15 26.7**	**+0.8**
SMLT	**Sun Moon Lake**	**2.20**	**229**	*e*P	**Pn**	**15 15 26.5**	**+0.3**
TYC	**Yuchr**	**2.22**	**230**	*e*P	**Pn**	**15 15 26.2**	**0.0**
EHYH	**Wanrong**	**2.23**	**214**	*e*P	**Pn**	**15 15 26.2**	**-0.1**
SSLB	**Suanglung**	**2.23**	**226**	*e*P	**Pn**	**15 15 26.8**	**+0.4**
SSLB				*e*S	**S**	**15 16 02.1**	**+1.0**
EHY	**Hungye**	**2.23**	**215**	*e*P	**Pn**	**15 15 26.0**	**-0.3**
JIRJ	**Irabujima**	**2.32**	**102**	*e*P	**Pn**	**15 15 27.5**	**+0.4**
JIRJ				*e*S	**S**	**15 16 01.6**	**-0.8**
YULB	**Yu-li**	**2.34**	**214**	*e*P	**Pn**	**15 15 24.7**	**-2.7**
WHYT	**Xinyi Township**	**2.36**	**226**	*e*P	**Pn**	**15 15 27.7**	**+0.1**
WHYT				*e*S	**S**	**15 16 04.0**	**+0.6**
JMJ2	**Miyako jima3**	**2.46**	**104**	*e*P	**Pn**	**15 15 29.3**	**+0.8**
JMJ2				*e*S	**S**	**15 16 04.4**	**-0.6**

*OSPL **08** 15:23:20.4±2.0, 18.°40N×72.°35W,h0km±14km, ML2.3, Presumed earthquake*
*SDD **08** 15:23:23.9±2.9, 18.°52N×72.°17W,h0km±19km, MD3.2, ML2.3, MW2.9, Presumed earthquake*

ISC 08 15:23:19.5±1.7,18.°44N±0.°06×72.°32W±0.°06,h10km±14km, n11,σ1ᵗ78/17,5C-2D,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODU1	**El Espartillar**	**0.81**	**96**	*i* P	**Pg**	**15 23 34.8**	**-0.3**
LODU1				*e*S	**Sg**	**15 23 47.2**	**+1.6**
LODU1				IAML		15 23 49.8	
	comp=Z,430nm,2.7s						
LONE3	**El Aguacate, B**	**0.83**	**79**	*i* P	**Pg**	**15 23 34.8**	**-0.8**
LONE3				*e*S	**Sg**	**15 23 47.5**	**+1.0**
LONE3				IAML		15 23 48.6	
	comp=Z,47nm,0.8s						
LOBH	**Bahia de las A**	**0.87**	**132**	*i* P	**Pg**	**15 23 35.4**	**-0.9**
LOBH				*e*S	**Sg**	**15 23 47.9**	**+0.3**
LOBH				IAML		15 23 48.1	
	comp=Z,67nm,0.5s						
LOVI	**El Cajuil, Ovi**	**1.11**	**125**	*i* P	**Pb**	**15 23 40.5**	**-0.3**
LOVI				*e*S	**Sg**	**15 23 55.6**	**+0.3**
LOVI				IAML		15 24 03.7	
	comp=Z,71nm,0.4s						
SDDR	**Presa de Saban**	**1.12**	**61**	⇑*i* P	**Pb**	**15 23 40.4**	**-0.6**
SDDR				⇓*i* S	**Sb**	**15 23 55.3**	**-0.3**
SDDR				IAML		15 23 59.7	
	comp=N,42nm,0.6s						
SDDR				IAML		15 24 01.8	
	comp=E,40nm,0.6s						
SDDR	**Presa de Saban**	**1.12**	**61**	*i* P	**Pb**	**15 23 41.2**	**+0.3**
SDDR				IAML		15 23 54.9	
	comp=Z,608nm,0.2s						
REDR	**Restauracion**	**1.14**	**51**	⇓*i* P	Pb	15 23 37.4	-3.8
REDR				⇑*i* S	**Sb**	**15 23 51.1**	**-5.0**
REDR				IAML		15 23 51.6	
	comp=N,92nm,0.1s						
REDR				IAML		15 23 56.7	
	comp=E,74nm,0.2s						
MCDR	**Montecristi**	**1.57**	**23**	⇑*i* S	**Sn**	**15 24 07.7**	**-0.2**
MCDR				IAML		15 24 08.6	
	comp=N,57nm,0.3s						
LOPP1	**Punta Rusia, P**	**1.76**	**37**	*i* P	**Pn**	**15 23 52.5**	**+2.5**
LOPP1				*e*S	**Sn**	**15 24 13.3**	**+0.7**
LOPP1				IAML		15 24 15.6	
	comp=Z,27nm,0.6s						
BANI	**BANI**	**1.86**	**91**	⇑*i* P	**Pn**	**15 23 52.9**	**+1.3**
BANI				IAML		15 24 28.3	
	comp=N,93nm,0.7s						
GTBY	**Guantanamo Bay**	**3.02**	**300**	⇑*i* S	**Sb**	**15 24 48.9**	**-1.5**
GTBY				IAML		15 24 56.8	
	comp=E,25nm,1.3s						

*DNK **08** 15:50:54.8±1.4,51.°18N×16.°22E,h38km±53km, ML2.3, Presumed earthquake*
*IPEC **08** 15:50:55.7±0.2,51.°47N×16.°31E,h1km, ML2.5/8, Error ellipse: s-maj=1.9km s-min=1.2km az=64.0*
*IDC **08** 15:50:55.8±0.9,51.°32N×16.°30E,h0km, mbtmp3.3/4, ML2.8/4, Error ellipse: s-maj=22.3km s-min=7.8km az=107.0*
*BGR **08** 15:50:57.5±0.5,51.°39N×16.°22E,h1km, ML2.8/12, Error ellipse: s-maj=5.6km s-min=2.2km az=15.0*
*VIE **08** 15:50:58.1±1.0,51.°34N×16.°20E,h0km, mb2.6/7, ml3.1/7, Error ellipse: s-maj=6.9km s-min=6.2km az=13.0 63 km WNW of Wroclaw Suspected Mining induced.*
*PRU **08** 15:50:58.2,51.°41N×16.°24E,h0km*

ISC 08 15:50:54.7±0.7,51.°51N±0.°03×16.°25E±0.°02,h0km,n51,
σ1ᵗ33/87,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**178**	*e*Pg	**Pg**	**15 51 08.1**	**+0.8**
KSP				*e*Sg	**Sg**	**15 51 16.3**	**+0.3**
KSP	**Ksiaz**	**0.66**	**178**	*e*Pg	**Pg**	**15 51 08.2**	**+0.8**
KSP				*e*Sg	**Sg**	**15 51 15.9**	**-0.1**
CHVC	**Chvalec**	**0.93**	**188**	*e*PG	**Pg**	**15 51 13.0**	**+0.6**
CHVC				*e*SG	**Sg**	**15 51 25.3**	**+0.9**
OSTC	**Ostas**	**0.95**	**181**	*e*PG	**Pb**	**15 51 13.7**	**-0.3**
OSTC				*e*SG	**Sg**	**15 51 25.8**	**+0.6**
	comp=Z,64nm,0.5s						
UPC	**Upice**	**1.01**	**189**	*e*PG	**Pg**	**15 51 14.3**	**+0.3**
UPC				*e*SG	**Sg**	**15 51 27.5**	**+0.4**
	comp=Z,109nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**178**	*e*PG	**Pb**	**15 51 17.3**	**-0.3**
DPC				*e*SG	**Sg**	**15 51 32.3**	**+0.5**
	comp=Z,46nm,0.6s						
DPC	**Dobruska-Polom**	**1.16**	**178**	*e*Pg	**Pb**	**15 51 17.2**	**-0.3**
DPC				*e*Sg	**Sg**	**15 51 31.7**	**-0.1**
PIVO	**Bartosovice**	**1.33**	**172**	*e*Pg	**Pg**	**15 51 20.4**	**+0.2**
	baz=354						
PIVO				*e*Sg	**Sg**	**15 51 36.5**	**-1.0**
	72nm,0.3s,baz=354						
PVCC	**Panska Ves**	**1.45**	**228**	*e*PG	**Pb**	**15 51 23.6**	**+1.2**
PVCC				*e*SG	**Sn**	**15 51 41.9**	**+0.2**
	comp=Z,222nm,0.4s						
KRLC	**Kraliky**	**1.47**	**167**	*e*PG	**Pg**	**15 51 22.8**	**-0.1**
KRLC				*e*SG	**Sg**	**15 51 41.9**	**0.0**
	comp=Z,58nm,0.6s						
BRG	**Berggiesshubel**	**1.58**	**247**	*e*Pg	**Pg**	**15 51 25.9**	**+0.9**
BRG				*e*Sg	**Sg**	**15 51 46.8**	**+1.2**
BRG	**Berggiesshubel**	**1.58**	**247**	Pg	**Pg**	**15 51 25.9**	**+0.9**
BRG				Sg	**Sg**	**15 51 46.7**	**+1.2**
BRG				Amp		15 51 48.1	
	comp=Z,51nm,0.3s						
ANAC	**Anensky vrch**	**1.60**	**153**	*e*Pn	**Pn**	**15 51 24.5**	**+0.2**
	baz=335						
ANAC				*e*Sg	**Sn**	**15 51 44.5**	**-1.2**
	comp=Z,44nm,0.4s,baz=335						
RYBC	**Ceska Rybna**	**1.70**	**184**	*e*Pn	**Pn**	**15 51 26.0**	**+0.3**
	baz=5.3						
RYBC				*e*Sg	**Sn**	**15 51 48.1**	**0.0**
	comp=Z,38nm,0.3s,baz=5.3						
STEB	**Steborice**	**1.85**	**148**	*e*PG	**Pg**	**15 51 30.3**	**+0.2**
STEB				*e*SG	**Sg**	**15 51 53.5**	**-0.5**
	comp=Z,49nm,0.5s						
FBE	**Freiberg**	**1.91**	**253**	*e*Pg	**Pg**	**15 51 32.2**	**+0.8**
FBE				*e*Sg	**Sg**	**15 51 56.6**	**+0.5**
MORC	**Moravsky Berou**	**1.92**	**154**	*e*Pg	**Pg**	**15 51 31.3**	**-0.1**
MORC				*e*Sg	**Sb**	**15 51 55.4**	**+0.4**
MORC	**Moravsky Berou**	**1.92**	**154**	*e*Pn	**Pn**	**15 51 28.8**	**+0.2**
	baz=336						
MORC				*e*Sg	**Sn**	**15 51 54.1**	**+0.7**
	comp=Z,32nm,0.5s,baz=336						
MORC	**Moravsky Berou**	**1.92**	**154**	*e*PN	**Pn**	**15 51 28.9**	**+0.3**
MORC				*e*SG	**Sb**	**15 51 54.2**	**-0.8**
OKC	**Ostrava-Krasne**	**2.06**	**143**	*e*Pg	**Pg**	**15 51 34.3**	**+0.2**
OKC				*e*Sg	**Sb**	**15 51 59.3**	**+0.3**
VRAC	**Vranov**	**2.21**	**174**	Pn	**Pn**	**15 51 31.2**	**-1.4**
	comp=Z,2.5nm,0.3s,baz=338,slow=16,SNR=6.3						
VRAC				Lg	Lg	15 51 59.9	
	comp=Z,1.4nm,0.3s,baz=61,slow=5.5,SNR=4.2 comp=Z,3.2nm,0.4s						
VRAC	**Vranov**	**2.21**	**174**	*e*Pn	**Pn**	**15 51 32.8**	**+0.2**
	baz=355						
VRAC				*e*Sg	**Sb**	**15 52 03.6**	**+0.2**
	comp=Z,25nm,0.6s,baz=355						
KRUC	**Moravsky**	**2.45**	**178**	*e*Sg	**Sb**	**15 52 11.3**	**+1.1**
	comp=Z,27nm,0.6s,baz=359						
ZVC	**Zvikov**	**2.45**	**213**	*e*PG	**Pg**	**15 51 40.8**	**-0.8**
ZVC				*e*SG	**Sg**	**15 52 12.9**	**-0.5**
	comp=Z,30nm,0.4s						
STAC	**Stalkov**	**2.55**	**194**	*e*Sg	**Sb**	**15 52 14.8**	**+1.5**
	comp=Z,27nm,0.4s,baz=14						
OJC	**Ojcow**	**2.59**	**118**	*e*Pg	**Pg**	**15 51 46.1**	**+1.8**
OJC				*e*Sg	**Sg**	**15 52 20.3**	**+2.4**
OJC	**Ojcow**	**2.59**	**118**	*e*Pg	**Pg**	**15 51 45.6**	**+1.3**
OJC				*e*Sg	**Sg**	**15 52 19.7**	**+1.8**
TANN	**Tannenbergstha**	**2.63**	**247**	*e*Pg	**Pg**	**15 51 46.7**	**+1.6**
TANN				*e*Sg	**Sg**	**15 52 18.8**	**-0.4**
WERD	**Werda**	**2.71**	**249**	*e*Pg	**Pg**	**15 51 48.0**	**+1.4**
WERD				*e*Sg	**Sg**	**15 52 21.8**	**+0.2**
KHC	**Kasperske Hory**	**2.93**	**217**	*e*PG	**Pb**	**15 51 48.6**	**+0.8**
KHC				*e*SN	**Sn**	**15 52 16.0**	**-2.4**
KHC				*e*SG	**Sg**	**15 52 27.9**	**-0.9**
	comp=Z,26nm,0.7s						
MOX	**Moxa**	**3.05**	**255**	*e*Pg	**Pg**	**15 51 54.4**	**+1.3**
MOX				*e*Sg	**Sg**	**15 52 33.1**	**+0.6**
ROTZ	**Rotzenmuhle**	**3.11**	**238**	*e*Sg	**Sg**	**15 52 32.8**	**-1.7**
GEC2	**GERESS Array S**	**3.13**	**213**	*e*Sg	**Sg**	**15 52 33.0**	**-2.1**
GERES	**GERESS Array B**	**3.13**	**213**	Pg	**Pb**	**15 51 50.9**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=25,slow=17,SNR=4.8						
GERES				Sn	**Sn**	**15 52 19.2**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=39,slow=18,SNR=3.7						
GERES				Lg	Lg	15 52 31.0	
	comp=Z,0.9nm,0.3s,baz=31,slow=23,SNR=9.0						
WINA	**Alland / Wiene**	**3.40**	**182**	*e*Pn	**Pn**	**15 51 49.5**	**+0.5**
	comp=Z,3.0nm,0.4s						
CONA	**Conrad Observa**	**3.59**	**184**	*i* Pn	**Pn**	**15 51 54.1**	**+2.4**
	comp=Z,6.0nm,0.7s						
CONA				*e*Sg	**Sg**	**15 52 50.1**	**+0.1**
	comp=Z,19nm,0.4s						
BSD	**Bornholm Skovb**	**3.70**	**348**	*i* P	**Pn**	**15 51 54.3**	**+1.3**
BSD				*i* S	**Sn**	**15 52 37.5**	**+0.1**
BSD				IAML		15 52 40.7	
	comp=Z,2.8nm,0.2s						
MOA	**Molln**	**3.88**	**200**	*e*Pn	**Pn**	**15 51 56.6**	**+1.1**
	comp=Z,7.1nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	Pg	**Pg**

*NOU **08** 16:10:30.2, 37°.84S × 179°.85E, h0km, MLv4.3/12, Off E. Coast of N. Island, N.Z.*
ISC 08 16:10:26.8±2.7, 37°.30S±0°.07 × 179°.97W±0°.08, h17km±13km, n115, σ1s61/121, mb3.6/4, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.38**	**248**	P	**Pb**	**16 10 53.2**	**+1.0**
WMGZ				S	**Sg**	**16 11 12.5**	**+1.0**
MXZ	**Matakaoa Point**	**1.39**	**259**	P	**Pn**	**16 10 52.1**	**+0.6**
MXZ	**Matakaoa Point**	**1.39**	**259**	S	**Sg**	**16 11 10.0**	**-1.9**
MXZ	**Matakaoa Point**	**1.39**	**259**	P	**Pn**	**16 10 52.0**	**+0.6**
MXZ				S	**Sb**	**16 11 09.8**	**-0.1**
PUZ	**Puketiti**	**1.60**	**241**	P	**Pb**	**16 10 56.2**	**+0.3**
PUZ				S	**Sb**	**16 11 17.1**	**+1.1**
HAZ	**Te Kaha**	**1.84**	**255**	P	**Pb**	**16 10 59.5**	**-0.5**
HAZ				S	**Sb**	**16 11 22.5**	**-0.2**
TWGZ	**Tauwhareparae**	**1.84**	**241**	P	**Pn**	**16 10 59.7**	**+2.0**
TWGZ				S	**Sb**	**16 11 23.2**	**+0.3**
CNGZ	**Carnagh Statio**	**1.86**	**230**	P	**Pb**	**16 11 00.9**	**+0.5**
RUGZ	**Raukumara Rang**	**1.98**	**250**	P	**Pn**	**16 11 01.1**	**+1.5**
TKGZ	**Te Karaka**	**2.06**	**236**	P	**Pn**	**16 11 02.6**	**+1.9**
TKGZ				S	**Sb**	**16 11 28.8**	**-0.5**
MWZ	**Matawai**	**2.23**	**242**	P	**Pn**	**16 11 04.4**	**+1.4**
MWZ				S	**Sn**	**16 11 30.8**	**+0.6**
RIGZ	**Rimuhau**	**2.27**	**231**	P	**Pn**	**16 11 06.0**	**+2.4**
RIGZ				S	**Sn**	**16 11 34.3**	**+3.1**
PRGZ	**Paritu Road**	**2.34**	**226**	P	**Pn**	**16 11 06.9**	**+2.3**
PRGZ				S	**Sn**	**16 11 36.1**	**+3.2**
RAGZ	**Rawiri**	**2.39**	**239**	P	**Pn**	**16 11 06.8**	**+1.6**
RAGZ				S	**Sn**	**16 11 35.1**	**+1.0**
WHRZ	**Whale Island**	**2.49**	**256**	P	**Pn**	**16 11 08.4**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.49**	**221**	P	**Pn**	**16 11 08.9**	**+2.3**
URZ	**Urewera**	**2.50**	**247**	Pn	**Pn**	**16 11 08.5**	**+1.8**
	22nm,0.3s,baz=245,slow=3.8,SNR=259						
URZ				Sn	**Sn**	**16 11 36.8**	**0.0**
	26nm,0.3s,baz=157,slow=23,SNR=17 61nm,0.3s						
URZ	**Urewera**	**2.50**	**247**	P	**Pn**	**16 11 08.6**	**+1.9**
URZ	**Urewera**	**2.50**	**247**	P	**Pn**	**16 11 08.4**	**+1.7**
URZ				S	**Sn**	**16 11 38.1**	**+1.3**
KNZ	**Kokohu**	**2.53**	**226**	P	**Pn**	**16 11 09.0**	**+1.9**
SNGZ	**Shannon Statio**	**2.59**	**234**	P	**Pn**	**16 11 09.8**	**+1.8**
SNGZ				S	**Sn**	**16 11 41.1**	**+2.2**
EDRZ	**Edgecumbe**	**2.73**	**252**	P	**Pn**	**16 11 11.5**	**+1.6**
RTZ	**Ruatahuna**	**2.74**	**240**	P	**Pn**	**16 11 12.1**	**+1.9**
OPRZ	**Ohinepanea**	**2.81**	**258**	P	**Pn**	**16 11 11.6**	**+0.6**
RAHZ	**Arahi**	**2.83**	**234**	P	**Pn**	**16 11 13.2**	**+2.0**
WHHZ	**Waihua**	**2.83**	**230**	P	**Pn**	**16 11 13.2**	**+2.0**
MUGZ	**Murupara**	**2.83**	**245**	P	**Pn**	**16 11 12.8**	**+1.5**
TARZ	**Mount Tarawera**	**2.94**	**250**	P	**Pn**	**16 11 14.8**	**+1.9**
MTHZ	**Maungataniwha**	**2.95**	**237**	P	**Pn**	**16 11 14.7**	**+1.8**
RRRZ	**Republican Roa**	**2.97**	**249**	P	**Pn**	**16 11 15.2**	**+2.0**
OMRZ	**Omania**	**3.01**	**253**	P	**Pn**	**16 11 15.6**	**+1.8**
TGRZ	**Tauranga**	**3.02**	**261**	P	**Pn**	**16 11 14.6**	**+0.7**
ARHZ	**Aropaoanui**	**3.09**	**230**	P	**Pn**	**16 11 16.9**	**+2.1**
KARZ	**Kaharoa**	**3.09**	**255**	P	**Pn**	**16 11 16.1**	**+1.3**
NMHZ	**Naumai**	**3.11**	**234**	P	**Pn**	**16 11 17.0**	**+1.9**
PRRZ	**Plateau Road**	**3.11**	**246**	P	**Pn**	**16 11 16.4**	**+1.3**
MRHZ	**Matea Rd**	**3.23**	**241**	P	**Pn**	**16 11 18.2**	**+1.4**
CKHZ	**Cape Kidnapper**	**3.30**	**224**	P	**Pn**	**16 11 19.4**	**+1.7**
BKZ	**Black Stump Fm**	**3.35**	**235**	P	**Pn**	**16 11 19.5**	**+1.1**
BKZ	**Black Stump Fm**	**3.35**	**235**	P	**Pn**	**16 11 19.7**	**+1.3**
MCHZ	**McNeill Hill**	**3.38**	**230**	P	**Pn**	**16 11 20.5**	**+1.7**
KAHZ	**Kahuranaki**	**3.51**	**224**	P	**Pn**	**16 11 22.2**	**+1.6**
KUTZ	**Kaahu Road**	**3.53**	**249**	P	**Pn**	**16 11 22.6**	**+1.7**
KWHZ	**Kaweka Forest**	**3.54**	**232**	P	**Pn**	**16 11 22.4**	**+1.3**
TOZ	**Tahuroa Road**	**3.62**	**262**	P	**Pn**	**16 11 22.8**	**+0.6**
PXZ	**Pawanui**	**3.68**	**221**	P	**Pn**	**16 11 24.0**	**+1.1**
TLZ	**Tolley Road**	**3.70**	**253**	P	**Pn**	**16 11 24.5**	**+1.2**
KRZ	**Kereru**	**3.70**	**230**	P	**Pn**	**16 11 24.5**	**+1.2**
TMVZ	**Te Maari**	**3.86**	**241**	P	**Pn**	**16 11 26.8**	**+1.3**
ETVZ	**East Tongariro**	**3.86**	**240**	P	**Pn**	**16 11 27.2**	**+1.7**
NTVZ	**North Tongarir**	**3.87**	**241**	P	**Pn**	**16 11 27.4**	**+1.8**
MKAZ	**Moumakai**	**3.89**	**271**	P	**Pn**	**16 11 26.0**	**+0.2**
SNVZ	**South Ngauruho**	**3.93**	**240**	P	**Pn**	**16 11 28.1**	**+1.5**
WPHZ	**Waipukurau**	**3.94**	**224**	P	**Pn**	**16 11 27.3**	**+0.8**
WTVZ	**West Tongariro**	**3.94**	**241**	P	**Pn**	**16 11 28.6**	**+2.0**
WIAZ	**Waiheke Island**	**3.95**	**276**	P	**Pn**	**16 11 26.7**	**+0.1**
NGZ	**Ngauruhoe**	**3.96**	**240**	P	**Pn**	**16 11 28.5**	**+1.7**
MOVZ	**Moawhango**	**3.96**	**237**	P	**Pn**	**16 11 28.6**	**+1.7**
PNHZ	**Pukenui**	**3.97**	**228**	P	**Pn**	**16 11 27.4**	**+0.4**
COVZ	**Chateau Observ**	**4.01**	**240**	P	**Pn**	**16 11 29.2**	**+1.7**
FWVZ	**Far West T-bar**	**4.03**	**240**	P	**Pn**	**16 11 29.6**	**+1.7**
MAVZ	**Matarangi**	**4.03**	**239**	P	**Pn**	**16 11 28.7**	**+0.7**
TWVZ	**Taurewa**	**4.03**	**243**	P	**Pn**	**16 11 29.8**	**+2.0**
WNVZ	**Wahianoa**	**4.03**	**239**	P	**Pn**	**16 11 29.1**	**+1.3**
ETAZ	**East Tamaki Re**	**4.09**	**273**	P	**Pn**	**16 11 29.2**	**+0.7**
MBAZ	**Motutapu North**	**4.14**	**276**	P	**Pn**	**16 11 30.6**	**+1.4**
MTVZ	**Mangateitei**	**4.14**	**238**	P	**Pn**	**16 11 31.2**	**+1.8**
ANWZ	**Angora Road**	**4.20**	**220**	P	**Pn**	**16 11 30.7**	**+0.7**
TSZ	**Takapari Road**	**4.21**	**228**	P	**Pn**	**16 11 30.4**	**+0.2**
DVHZ	**Dannevirke**	**4.25**	**224**	P	**Pn**	**16 11 31.0**	**+0.3**
HIZ	**Hauiti**	**4.26**	**252**	P	**Pn**	**16 11 33.0**	**+2.1**
HIZ	**Hauiti**	**4.26**	**252**	P	**Pn**	**16 11 33.1**	**+2.1**
RVAZ	**Riverhead Bore**	**4.39**	**275**	P	**Pn**	**16 11 33.7**	**+1.0**
BFZ	**Birch Farm**	**4.48**	**220**	P	**Pn**	**16 11 33.8**	**-0.1**
VRZ	**Vera Road**	**4.53**	**245**	P	**Pn**	**16 11 36.4**	**+1.7**
PRWZ	**Pori Road**	**4.53**	**223**	P	**Pn**	**16 11 35.6**	**+0.9**
POWZ	**Post Office Ro**	**4.54**	**226**	P	**Pn**	**16 11 35.3**	**+0.6**
WAZ	**Wanganui**	**4.65**	**237**	P	**Pn**	**16 11 38.8**	**+2.5**
WCZ	**Waipu Caves**	**4.77**	**285**	P	**Pn**	**16 11 38.4**	**+0.5**
MRZ	**Mangatainoka R**	**4.82**	**225**	P	**Pn**	**16 11 38.8**	**+0.1**
TMWZ	**Te Maipa**	**4.98**	**219**	P	**Pn**	**16 11 40.3**	**-0.5**
HOWZ	**Holdsworth Sta**	**5.02**	**223**	P	**Pn**	**16 11 41.2**	**-0.2**
OGWZ	**Otaki Gorge**	**5.16**	**226**	P	**Pn**	**16 11 42.2**	**-0.7**
MTW	**Mount Morrison**	**5.21**	**221**	P	**Pn**	**16 11 43.2**	**-0.8**
CAW	**Cannon Point**	**5.41**	**224**	P	**Pn**	**16 11 45.9**	**-0.8**
PAWZ	**Paruwai Farm**	**5.41**	**220**	P	**Pn**	**16 11 45.9**	**-0.9**
OUZ	**Omahuta**	**5.60**	**290**	P	**Pn**	**16 11 49.8**	**+0.5**
DUWZ	**D'Urville Isla**	**5.90**	**232**	P	**Pn**	**16 11 52.9**	**-0.6**
TCW	**Tory Channel**	**5.93**	**227**	P	**Pn**	**16 11 53.3**	**-0.5**
TUWZ	**Tuamarina**	**6.26**	**227**	P	**Pn**	**16 11 57.7**	**-0.7**
BSWZ	**Blackbirch Sta**	**6.48**	**225**	P	**Pn**	**16 12 00.1**	**-1.3**
QRZ	**Quartz Range**	**6.81**	**237**	P	**Pn**	**16 12 04.7**	**-1.3**
QRZ	**Quartz Range**	**6.81**	**237**	S	**Sn**	**16 13 19.8**	**-3.3**
QRZ	**Quartz Range**	**6.81**	**237**	P	**Pn**	**16 12 04.3**	**-1.7**
CTZ	**Chatham Island**	**6.92**	**159**	P	**Pn**	**16 12 11.8**	**+4.5**
MRNZ	**Matariki Terra**	**6.96**	**232**	P	**Pn**	**16 12 06.5**	**-1.5**
THZ	**Tophouse**	**7.08**	**229**	P	**Pn**	**16 12 08.1**	**-1.6**
KHZ	**Kahutara**	**7.14**	**222**	P	**Pn**	**16 12 09.7**	**-0.7**
KHZ	**Kahutara**	**7.14**	**222**	S	**Sn**	**16 13 25.5**	**-5.6**
GVZ	**Greta Valley S**	**7.79**	**221**	P	**Pn**	**16 12 19.3**	**0.0**
LTZ	**Lake Taylor**	**8.08**	**225**	P	**Pn**	**16 12 22.1**	**-1.3**
INZ	**Inchbonnie**	**8.52**	**228**	P	**Pn**	**16 12 28.4**	**-1.1**
RPZ	**Rata Peaks**	**9.36**	**224**	P	**Pn**	**16 12 40.1**	**-0.8**
ODZ	**Otahua Downs**	**10.47**	**219**	P	**Pn**	**16 12 53.8**	**-2.3**
ASAR	**Alice Springs**	**41.62**	**276**	P	**P**	**16 18 13.9**	**-0.3**
	0.7nm,0.6s,baz=120,slow=8.1,SNR=17 0.7nm,0.6s						
WRA	**Warramunga Arr**	**43.23**	**281**	P	**P**	**16 18 26.7**	**-0.6**
	0.5nm,0.5s,baz=120,slow=7.6,SNR=12 0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.10**	**276**	P	**P**	**16 19 27.1**	**-1.5**
	2.9nm,0.9s,baz=102,slow=9.3,SNR=2.3 2.9nm,0.9s						
QSPA	**South Pole Qui**	**52.83**	**180**	P	P	16 19 47.7	+6.6
	1.0nm,1.1s,baz=261,slow=7.9,SNR=1.2 1.0nm,1.1s						
H03S2	**Juan Fernandez**	**78.04**	**123**	T	T	17 48 29.8	
	baz=231,slow=74,SNR=8.5						
H03S1	**Juan Fernandez**	**78.05**	**123**	T	T	17 48 30.6	
	baz=231,slow=74,SNR=9.3						
H03S3	**Juan Fernandez**	**78.06**	**123**	T	T	17 48 29.5	
	baz=231,slow=74,SNR=10						
H03N3	**Juan Fernandez**	**78.27**	**123**	T	T	17 48 43.0	
	baz=235,slow=72,SNR=26						
H03N2	**Juan Fernandez**	**78.27**	**123**	T	T	17 48 41.8	
	baz=235,slow=72,SNR=22						
H03N1	**Juan Fernandez**	**78.28**	**123**	T	T	17 48 42.0	
	baz=235,slow=72,SNR=22						
FINES	**FINESS Array B**	**150.86**	**334**	PKPbc	**PKiKP**	**16 30 19.5**	**+1.4**
	0.7nm,0.6s,baz=36,slow=2.6,SNR=4.1						

*SJA **08** 16:32:22.7±0.6, 24°.06S × 66°.90W, h206km±6km, ML3.8, MW3.7*
*GUC **08** 16:32:24.2±0.6, 24°.03S × 67°.13W, h230km±10km, ML3.9*
*IDC **08** 16:32:29.4±10.0, 23°.46S × 66°.08W, h212km±76km, mb3.4/1, mbtmp4.0/3, Error ellipse: s-maj=117.0km s-min=44.6km az=25.0*
ISC 08 16:32:22.6±1.0, 24°.05S±0°.04 × 66°.91W±0°.05, h200km, n34, σ1s93/54, 1C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.55**	**109**	*eP*	**Pn**	**16 32 51.6**	**+1.1**
SLA	**San Lorenzo**	**1.45**	**118**	*eP*	Pn	16 32 47.4	-8.6
AF01	**San Pedro de A**	**1.59**	**313**	*eP*	**Pn**	**16 33 01.9**	**+4.4**
AF01				*eS*	**Sn**	**16 33 31.6**	**+7.1**
AF01	**San Pedro de A**	**1.59**	**313**	*eP*	**Pn**	**16 32 59.7**	**+2.2**
FSA	**Cafayete**	**2.22**	**158**	*eP*	**Pn**	**16 33 04.3**	**+0.7**
YJA	**Yavi**	**2.26**	**35**	*eP*	**Pn**	**16 33 06.2**	**+1.8**
PB06	**IPOC Station P**	**2.79**	**298**	*eP*	**Pn**	**16 33 11.4**	**+1.5**
PB06				*eS*	**Sn**	**16 33 46.3**	**-0.5**
PB06				IAML		16 33 52.8	
	comp=Z,152nm,0.2s						
PB06	**IPOC Station P**	**2.79**	**298**	⇑*iP*	**Pn**	**16 33 11.7**	**+1.8**
PB06				*eS*	**Sn**	**16 33 46.9**	**+0.1**
PB06				IAML		16 33 50.1	
	comp=N,254nm,0.2s						
AHML	**Horco Molle**	**3.08**	**153**	*eP*	**Pn**	**16 33 14.5**	**+1.4**
AHML				*eS*	**Sn**	**16 33 50.1**	**-2.8**
PB09	**IPOC Station P**	**3.10**	**316**	*eP*	**Pn**	**16 33 15.1**	**+1.5**
PB09				*eS*	**Sn**	**16 33 55.4**	**+1.8**
PB09				IAML		16 33 58.7	
	comp=Z,139nm,0.4s						
PB09	**IPOC Station P**	**3.10**	**316**	*eP*	**Pn**	**16 33 15.6**	**+1.9**
PB09				*eS*	**Sn**	**16 33 54.2**	**+0.7**
PB09				IAML		16 33 56.5	
	comp=N,120nm,0.3s						
PB14	**IPOC Station P**	**3.24**	**259**	*eP*	**Pn**	**16 33 16.6**	**+1.2**
PB14				*eS*	**Sn**	**16 33 56.6**	**-0.1**
PB14				IAML		16 33 59.0	
	comp=Z,162nm,0.5s						
PB14	**IPOC Station P**	**3.24**	**259**	*eP*	**Pn**	**16 33 16.6**	**+1.2**
PB14				IAML		16 33 59.0	
	comp=E,105nm,0.3s						
PB05	**IPOC Station P**	**3.25**	**291**	*eP*	**Pn**	**16 33 16.6**	**+1.3**
PB05				*eS*	**Sn**	**16 33 56.7**	**+0.1**
PB05				IAML		16 34 02.8	
	comp=Z,84nm,0.5s						
PB05	**IPOC Station P**	**3.25**	**291**	*eP*	**Pn**	**16 33 16.7**	**+1.4**
PB05				IAML		16 33 59.9	
	comp=E,154nm,0.3s						
PB03	**IPOC Station P**	**3.29**	**307**	*eP*	**Pn**	**16 33 17.1**	**+1.3**
PB03				*eS*	**Sn**	**16 33 57.0**	**-0.5**
PB03				IAML		16 33 59.8	
	comp=Z,329nm,0.1s						
PB03	**IPOC Station P**	**3.29**	**307**	*eP*	**Pn**	**16 33 17.1**	**+1.3**
AC02	**Maricunga**	**3.43**	**215**	*eP*	**Pn**	**16 33 19.6**	**+1.8**
AC02				*eS*	**Sn**	**16 34 00.4**	**-0.7**
AC02	**Maricunga**	**3.43**	**215**	*eP*	**Pn**	**16 33 19.6**	**+1.8**
PB07	**IPOC Station P**	**3.59**	**309**	*eP*	**Pn**	**16 33 20.5**	**+1.0**
PB07				*eS*	**Sn**	**16 34 03.8**	**-0.2**
PB07				IAML		16 34 07.4	
	comp=Z,180nm,0.3s						
PB07	**IPOC Station P**	**3.59**	**309**	*eP*	**Pn**	**16 33 20.6**	**+1.1**
PB07				*eS*	**Sn**	**16 34 02.7**	**-1.3**
PB02	**IPOC Station P**	**3.87**	**314**	*eP*	**Pn**	**16 33 23.7**	**+0.8**
PB02				*eS*	**Sn**	**16 34 09.7**	**-0.4**
PB02				IAML		16 34 12.2	
	comp=Z,296nm,0.2s						
PB02	**IPOC Station P**	**3.87**	**314**	*eP*	**Pn**	**16 33 23.7**	**+0.8**
AC01	**Pan de Azucar**	**3.95**	**237**	*eP*	**Pn**	**16 33 23.9**	**+0.3**
AC01				*eS*	**Sn**	**16 34 10.6**	**-1.1**
AC01				IAML		16 34 13.8	
	comp=Z,47nm,0.3s						
TINO	**Tinogasta**	**4.04**	**188**	*eP*	**Pn**	**16 33 27.4**	**+2.4**
TINO				*eS*	**Sn**	**16 34 13.6**	**-0.6**
PB08	**IPOC Station P**	**4.41**	**331**	*eP*	**Pn**	**16 33 31.6**	**+1.6**
PB08				*eS*	**Sn**	**16 34 23.3**	**+0.5**
PB08				IAML		16 34 28.0	
	comp=Z,65nm,0.3s						
GO03	**Copiapo**	**4.63**	**220**	*eP*	**Pn**	**16 33 33.0**	**+0.6**
GO03				*eS*	**Sn**	**16 34 25.8**	**-1.5**
GO03				IAML		16 34 29.1	
	comp=Z,40nm,0.4s						
GO01	**Chusmiza**	**4.85**	**334**	*eP*	**Pn**	**16 33 36.7**	**+1.2**
GO01				*eS*	Sn	16 34 48.0	+15
PB11	**IPOC Station P**	**4.97**	**329**	*eP*	**Pn**	**16 33 36.3**	**-0.5**
PB11				*eS*	**Sn**	**16 34 33.5**	**-1.8**
PB11				IAML		16 34 34.1	
	comp=Z,105nm,0.4s						
PSGCX	**Pisagua**	**5.34**	**325**	*eP*	**Pn**	**16 33 40.2**	**-1.3**
PSGCX				*eS*	**Sn**	**16 34 39.3**	**-4.5**
PSGCX				IAML		16 34 49.2	
	comp=Z,48nm,0.2s						
ACLC	**CERRO LA CRUZ**	**5.36**	**180**	*eP*	**Pn**	**16 33 42.7**	**+1.0**
ACLC				*eS*	**Sn**	**16 34 44.2**	**-0.1**
LPAZ	**La Paz**	**7.80**	**351**	P	**Pn**	**16 34 15.5**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=168,slow=6.1,SNR=9.3						
LPAZ				S	**Sn**	**16 35 40.2**	**-2.2**
	comp=Z,0.6nm,0.6s,baz=165,slow=23,SNR=1.5						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**16 36 32.3**	**-3.9**
	comp=Z,5.9nm,0.6s,baz=234,slow=9.5,SNR=8.0						
TORD	**Torodi Ar. Bea**	**76.51**	**69**	P	**P**	**16 43 51.4**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=254,slow=5.4,SNR=8.0 comp=Z,0.7nm,0.5s						

*IDC **08** 16:32:25.6±0.8, 6°.30N × 127°.05E, h0km, mb3.7/10, mbtmp3.7/11, ML3.4/1, MS3.7/2, Error ellipse: s-maj=37.8km s-min=13.5km az=60.0*
*MAN **08** 16:32:27.0, 5°.65N × 126°.48E, h33km, MS4.3*
*DJA **08** 16:32:32.7±0.4, 6°.N±3° × 12°.6E±°, h10km, M4.4/8, mb4.7/7, mB4.8/2, MLv4.3/8, Mw(mB)4.1/2*
ISC 08 16:32:28.4±1.8, 5°.91N±0°.03 × 126°.45E±0°.06, h16km±11km, n38, σ2s13/44, mb3.7/11, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.76**	**285**	*i* P	**Pb**	**16 32 44.1**	**+1.0**
DDMP				*eS*	**Sg**	**16 32 52.4**	**-0.8**
DAV	**Davao City (W)**	**1.44**	**323**	Pn	**Pb**	**16 32 54.9**	**+0.1**
	112nm,0.3s,baz=87,slow=18,SNR=12						
DAV				Sn	**Sg**	**16 33 17.6**	**+2.8**
	163nm,0.3s,baz=109,slow=21,SNR=6.9						
DAV				LR	LR	16 33 51.0	
	comp=Z,356nm,18.6s,baz=76,slow=52						
DAV	**Davao City (W)**	**1.44**	**323**	P	**Pb**	**16 32 54.9**	**+0.1**
DAV				S	**Sn**	**16 33 11.4**	**-0.9**
DAV	**Davao City (W)**	**1.44**	**323**	P	**Pn**	**16 32 52.0**	**-1.8**
DMPH	**Davao City--Mi**	**1.49**	**321**	*i* P	**Pb**	**16 32 55.6**	**-0.1**
DMPH				*i* S	**Sg**	**16 33 15.4**	**-1.1**
GSPH	**General Santos**	**1.50**	**277**	*i* P	**Pn**	**16 32 53.4**	**-1.4**
GSPH				*i* S	**Sn**	**16 33 09.7**	**-4.4**
KCP	**Kidapawan**	**1.73**	**309**	*i* P	**Pn**	**16 32 58.0**	**0.0**
KCP				*i* S	**Sn**	**16 33 20.1**	**+0.3**
CDOP	**Cateel, Davao**	**1.86**	**360**	*i* P	**Pb**	**16 33 01.1**	**-0.9**
CDOP				*i* S	**Sb**	**16 33 25.3**	**+0.3**
BIPH	**Bislig**	**2.26**	**358**	*eP*	**Pn**	**16 33 06.0**	**+1.0**
BIPH				*i* S	**Sb**	**16 33 35.3**	**-1.2**
SGSI	**Sangihe**	**2.40**	**203**	P	**Pb**	**16 33 10.3**	**-0.9**
SGSI				S	**Sb**	**16 33 41.2**	**+0.7**
CTBH	**Cotabato--PC H**	**2.54**	**301**	*eP*	**Pn**	**16 33 09.9**	**+0.9**
CGP	**Cagayan de Oro**	**3.06**	**326**	*eP*	**Pn**	**16 33 18.2**	**+2.0**
CGP				*i* S	**Sg**	**16 34 03.7**	**-3.3**
SCPH	**Surigao**	**3.96**	**346**	*eP*	**Pn**	**16 33 31.0**	**+2.6**
SCPH				*eS*	**Sb**	**16 34 25.1**	**-0.4**
DCPH	**Dipolog City**	**4.06**	**311**	*eP*	**Pn**	**16 33 34.4**	**+4.6**
TBP	**Tagbilaran**	**4.54**	**326**	*eP*	**Pn**	**16 33 37.3**	**+0.8**
SNPH	**Sibulan**	**4.66**	**317**	*eP*	**Pn**	**16 33 42.6**	**+4.4**
MNI	**Manado**	**4.72**	**200**	P	**Pn**	**16 33 42.1**	**+3.1**
PLP	**Palo**	**5.42**	**345**	*eP*	**Pn**	**16 33 51.0**	**+2.5**
PLP				*eS*	**Sn**	**16 34 51.9**	**+1.4**
GTOI	**Gorontalo**	**6.26**	**213**	P	**Pn**	**16 34 02.7**	**+2.5**
	0.2nm574nm48nm,0.8s						
SIJI	**Sorong**	**8.28**	**144**	Pn	**Pn**	**16 34 25.6**	**-2.3**
	0.4nm,0.3s,baz=312,slow=17,SNR=2.1 10nm,1.1s						
BATI	**Baumata**	**16.25**	**190**	LR	LR	16 44 03.9	
	comp=Z,280nm,18.0s,baz=208,slow=42						
WRA	**Warramunga Arr**	**26.84**	**163**	P	**P**	**16 38 10.4**	**+2.0**
	0.9nm,0.6s,baz=346,slow=10.0,SNR=9.9 0.9nm,0.6s						
ASAR	**Alice Springs**	**30.29**	**166**	P	**P**	**16 38 41.5**	**+2.4**
	0.5nm,0.6s,baz=340,slow=6.9,SNR=19						
ASAR				PcP	**PcP**	**16 41 40.3**	**+0.8**
	0.5nm,0.6s,baz=350,slow=2.4,SNR=6.1 0.5nm,0.6s						
XAN	**Xi'an**	**32.36**	**332**	P	**P**	**16 39 00.2**	**+2.9**
XAN				pP	sP	16 39 08.7	+4.9
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
STKA	**Stephens Creek**	**40.26**	**160**	P	**P**	**16 40 05.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=340,slow=9.5,SNR=4.2						
STKA				LR	LR	17 02 16.0	
	comp=Z,83nm,18.4s,baz=208,slow=44 comp=Z,1.5nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**41.16**	**69**	T	T	17 23 59.0	
	baz=259,slow=75						
H11S1	**WAKE ISLAND Hy**	**41.17**	**69**	T	T	17 23 59.0	
	baz=259,slow=75						
H11S2	**WAKE ISLAND Hy**	**41.18**	**69**	T	T	17 24 02.0	
	baz=259,slow=75						
H11N1	**WAKE ISLAND Hy**	**41.62**	**67**	T	T	17 24 37.5	
	baz=255,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.63**	**67**	T	T	17 24 37.9	
	baz=255,slow=75						
H11N3	**WAKE ISLAND Hy**	**41.64**	**67**	T	T	17 24 38.5	
	baz=255,slow=75						
SONM	**Songino Array**	**45.15**	**341**	P	**P**	**16 40 41.5**	**-3.0**
	comp=Z,0.2nm,0.5s,baz=164,slow=6.9,SNR=3.0 comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.62**	**325**	P	**P**	**16 42 03.7**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=113,slow=8.4,SNR=7.4 comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**58.53**	**333**	P	**P**	**16 42 22.7**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=150,slow=6.1,SNR=1.6 comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**59.76**	**327**	P	**P**	**16 42 33.5**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=124,slow=6.1,SNR=7.9 comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**65.35**	**327**	P	**P**	**16 43 11.6**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=111,slow=7.9,SNR=2.7 comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**83.27**	**26**	P	**P**	**16 44 50.1**	**-4.0**
	comp=Z,0.2nm,0.6s,baz=262,slow=6.6,SNR=4.1 comp=Z,0.2nm,0.6s						
VNDA	**Vanda**	**85.61**	**173**	P	**P**	**16 45 06.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=339,slow=3.7,SNR=5.3 comp=Z,0.4nm,0.6s						

*UCR **08** 16:53:08.2±0.9, 11°.41N × 86°.15W, h67km±6km, MW4.1, Presumed earthquake*
*CATAC **08** 16:53:09.1±0.2, 11°.N±2° × 8°.6W±°, h61km±2km, M3.9/36, MLv3.9/36, Error ellipse: s-maj=4.6km s-min=1.8km az=45.9, confirmed*
ISC 08 16:53:09.5±1.2, 11°.39N±0°.03 × 86°.12W±0°.04, h74km±7km, n95, σ0s86/151, 4C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.37**	**14**	P	**Pn**	**16 53 20.9**	**-0.7**
NADN				S	**Sn**	**16 53 30.9**	**+0.4**
NADN	**Granada**	**0.37**	**14**	*eP*	**Pn**	**16 53 20.6**	**-1.0**
JAPN	**AI SSO del Vol**	**0.46**	**72**	⇓*eP*	**Pn**	**16 53 18.8**	**-3.5**
MORN	**AI O del Volca**	**0.49**	**71**	P	**Pn**	**16 53 22.2**	**-0.4**
MORN				S	**Sn**	**16 53 33.5**	**+1.2**
NANN	**Nandasmo**	**0.55**	**0**	P	**Pn**	**16 53 24.2**	**+1.0**
NANN				S

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CEDE	Laguna Cedeo	1.65	123	⇓eP	Pn	16 53 36.5	-0.2
CEDE				eS	Sn	16 53 58.3	+1.0
MTEVE	Monteverde	1.66	130	eP	Pn	16 53 36.1	-0.7
ARE1	Arenal 1	1.66	124	⇑iP	Pn	16 53 36.7	0.0
ARE1				eS	Sn	16 53 58.2	+0.9
VARE2	V. Arenal	1.66	124	eP	Pn	16 53 36.6	-0.1
CASO	Castillo	1.66	125	eP	Pn	16 53 36.5	-0.3
CASO				eS	Sn	16 53 58.3	+0.9
VACR	Volcan Arenal	1.68	122	eP	Pn	16 53 36.2	-0.8
LIMN	Finca el Limon	1.68	352	P	Pn	16 53 36.7	-0.4
LIMN				S	Sn	16 53 57.4	-0.6
FORC	Fortuna	1.69	123	eP	Pn	16 53 36.7	-0.5
COVE	Coope Vega, Sa	1.81	111	P	Pn	16 53 37.7	-1.1
LAFE	Finca La Fe, P	1.97	143	eP	Pn	16 53 40.1	-0.7
RCON	San Juan de Ri	2.09	359	P	Pn	16 53 42.9	+0.3
RCPN	Sur Rio San Ju	2.13	1	P	Pn	16 53 43.2	+0.1
RCVN	Varillal2	2.19	358	P	Pn	16 53 43.7	-0.2
TRB2	Turrubares	2.20	131	P	Pn	16 53 42.9	-1.1
TRB2				S	Sn	16 54 09.8	-0.5
OCON	Estacion meteo	2.26	351	P	Pn	16 53 44.9	+0.1
BLUN	Bluefields	2.38	75	P	Pn	16 53 46.0	-0.4
TRT2	Tortugero	2.48	109	P	Pn	16 53 47.0	-0.8
TRT2	Tortugero	2.48	109	eP	Pn	16 53 46.6	-1.2
ACOS	Acosta	2.49	129	eP	Pn	16 53 45.7	-2.2
CVIMO	Finca Echandi	2.53	122	eP	Pn	16 53 52.8	+4.2
ABE2	San Pablo	2.63	129	⇑iP	Pn	16 53 49.6	-0.4
ABE2				eS	Sn	16 54 21.9	+0.9
SIUN	Universidad Ur	2.66	29	P	Pn	16 53 50.4	+0.1
SIUN				S	Sn	16 54 22.3	+0.8
CVTR	Volcan Turrial	2.69	120	eP	Pn	16 53 50.3	-0.6
ABRB	Las Abras (San	2.73	120	eP	Pn	16 53 51.0	-0.3
PIEC	Cerro El Cedra	2.76	129	eP	Pn	16 53 51.5	-0.2
PACA	Pacayal	2.99	314	P	Pn	16 53 54.7	0.0
PACA				S	Sn	16 54 29.0	-0.5
OCHAL	Ojochal	3.33	133	P	Pn	16 53 59.8	+0.5
OCHAL				S	Sn	16 54 38.2	+0.4
SCLA	Alcaldia de Sa	3.43	312	S	Sn	16 54 40.0	-0.3
JAYA	Jayaque - finc	3.96	305	P	Pn	16 54 08.2	+0.3
JAYA				S	Sn	16 54 51.1	-2.1
ALCO	Alturas Coton,	4.04	126	eP	Pn	16 54 10.1	+0.9
MTO3	Montecristo	4.35	314	P	Pn	16 54 13.8	+0.4

NIED **08** *16:54:31.4, 23.23N×121.39E, h23km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.91; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$0.06; $M_{r\theta}$0.66; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.74; Fault plane solution: $M_0$1.53000×10^{15} NP1: ϕ_s273.00000°, δ30.00000°, λ52.00000°. NP2: ϕ_s135.00000°, δ67.00000°, λ109.00000°.*

JMA **08** *16:54:31.4±0.2, 23°N±1°×12°1E±°, h23km±3km, MV4.2/18, TAIWAN REGION*

BJI **08** *16:54:32.8, 23.46N×121.16E, h9km, mB4.5/5, mb4.2/12, ML3.9/4, Ms4.0/13, Ms7 4.0/14*

NEIC **08** *16:54:32.5±2.3, 23.25N±0.03×121.29E±0.04, h27km±3km, mb4.2/15, Error ellipse: s-maj=5.9km s-min=3.8km az=114.0*

TAP **08** *16:54:32.9, 23.25N×121.28E, h23km, ML4.6, B*

ASIES **08** *16:54:33.5, 23.24N×121.30E, h21km, Mw4.2, Fault plane solution: NP1:ϕ_s293.00000°, δ45.00000°, λ52.00000°. NP2:ϕ_s160.00000°, δ56.00000°, λ121.00000°.*

IDC **08** *16:54:36.7±5.1, 23.18N×121.68E, h73km±50km, mb3.6/12, mbtmp3.8/14, ML3.2/2, MS3.4/15, Error ellipse: s-maj=25.3km s-min=14.0km az=69.0*

ISC 08 16:54:32.7±0.6, **23.24N**±0.01×**121.36E**±0.02, **h27**km±3km, **n244, σ1§35**/374, **mb4.0**/20, **MS3.5**/12, **13C-52D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKH	Chenggong	0.06	144	⇑iP	Pb	16 54 37.8	+0.5
CHKH				S	Sb	16 54 41.5	+1.2
FULB	Fuli	0.07	236	⇑iP	Pb	16 54 37.5	+0.1
FULB				iS	Sb	16 54 41.0	+0.5
EYUL	Yuli	0.11	342	⇑iP	Pb	16 54 37.4	-0.2
EYUL				S	Sb	16 54 40.8	-0.3
ECBN	Changbin	0.12	48	⇓iP	Pb	16 54 38.8	+1.1
ECBN				S	Sb	16 54 43.3	+2.3
TWF1	Yuli	0.13	333	⇑iP	Pb	16 54 37.3	-0.5
TWF1				S	Sb	16 54 40.0	-1.2
CHKT	Chengkung	0.14	177	⇓P	Pb	16 54 38.4	+0.5
CHKT				S	Sb	16 54 42.5	+1.1
YULB	Yu-li	0.16	340	P	Pb	16 54 37.3	-0.8
YULB	Yu-li	0.16	340	Pg	Pb	16 54 37.3	-0.8
YULB				Sg	Sb	16 54 40.5	-1.3
YULB	Yu-li	0.16	340	⇑iP	Pb	16 54 37.6	-0.6
YULB				S	Sb	16 54 40.6	-1.2
EHD	Haiduan	0.17	237	⇑iP	Pb	16 54 37.3	-0.9
EHD				S	Sb	16 54 40.1	-1.8
ECS	Chishang	0.19	222	⇓P	Pb	16 54 38.2	-0.2
ECS				S	Sb	16 54 42.4	+0.1
EHYH	Wanrong	0.25	357	⇑iP	Pb	16 54 39.0	-0.2
EHYH				S	Sb	16 54 42.9	-0.8
HGSD	Ruisui	0.26	13	⇓iP	Pb	16 54 40.0	+0.7
HGSD				S	Sn	16 54 45.4	-0.6
EHY	Hungye	0.27	353	⇓P	Pb	16 54 39.0	-0.4
EHY				S	Sb	16 54 42.8	-1.2
EDH	Donghe	0.27	191	⇓P	Pb	16 54 39.6	+0.2
EDH				eS	Sb	16 54 44.0	0.0
ELDTW	Lidau	0.32	261	⇑iP	Pb	16 54 39.1	-1.0
ELDTW				S	Sb	16 54 43.0	-2.3
LONT	Longtian	0.39	212	⇓P	Pb	16 54 40.4	-0.8
LONT				eS	Sb	16 54 46.1	-0.9
WARBT	Fenglin Townsh	0.48	3	⇓iP	Pb	16 54 41.6	-1.0
TWGBT	Beinan	0.49	211	P	Pb	16 54 41.5	-1.3
TWGBT	Beinan	0.49	211	⇓iP	Pb	16 54 41.6	-1.3
TWGBT				S	Sb	16 54 47.9	-1.8
TWG	Pinlang	0.49	212	Pg	Pb	16 54 41.4	-1.5
TWG				Sg	Sb	16 54 48.0	-1.8
TWG	Pinlang	0.49	212	⇓P	Pb	16 54 41.6	-1.3
TWG				S	Sb	16 54 48.3	-1.5
TEGC	Jichi Village	0.50	20	⇓P	Pb	16 54 43.4	+0.4
TEGC				S	Sn	16 54 52.1	+0.3
TTN	Taitung	0.52	202	⇓P	Pb	16 54 43.2	-0.1
TTN				S	Sb	16 54 51.0	+0.5
STYH	Taoyuan	0.54	263	⇓iP	Pb	16 54 42.9	-0.7
STYH				S	Sb	16 54 49.4	-1.7
LDUT	Ludao	0.57	170	P	Pb	16 54 44.0	-0.1
LDUT				S	Sb	16 54 52.4	+0.4
ALS	Alishan	0.58	298	⇑iP	Pb	16 54 44.1	-0.3
ALS				S	Sb	16 54 51.7	-0.7
ESL	Shilin	0.58	7	⇓iP	Pb	16 54 43.2	-1.1
SHUL	Shoufeng	0.58	19	⇓P	Pb	16 54 44.2	-0.1
SHUL				S	Sb	16 54 53.3	+1.2
WHYT	Xinyi Township	0.65	315	⇑iP	Pn	16 54 45.6	-0.6
WHYT				S	Sb	16 54 53.8	-0.4
SSLB	Suanglung	0.66	326	P	Pb	16 54 45.4	-0.3
SSLB	Suanglung	0.66	326		Pb	16 54 45.2	-0.4
SSLB				Sg	Sb	16 54 51.9	-2.6
SSLB	Suanglung	0.66	326	⇑iP	Pb	16 54 45.2	-0.4
SSLB				S	Sb	16 54 52.5	-2.0
TEYL	Yanliau Villag	0.66	19	⇓eP	Pb	16 54 45.9	+0.2
TEYL				eS	Sn	16 54 57.5	+1.5
TPUB	Ta-pu	0.67	275	P	Pb	16 54 45.6	-0.3
TPUB	Ta-pu	0.67	275		Pb	16 54 45.6	-0.3
TPUB					Sb	16 54 54.2	-0.6
TPUB	Ta-pu	0.67	275	⇓iP	Pb	16 54 45.7	-0.8
TPUB				S	Sn	16 54 54.5	-1.7
WTP	Ta-pu	0.68	271	⇓iP	Pb	16 54 46.0	-0.7
WTP				S	Sn	16 54 54.9	-1.6
SLGT	Liugui	0.70	250	⇓P	Pb	16 54 45.9	-0.4
SLGT				S	Sb	16 54 54.7	-0.9
CHN5	Tsauling	0.72	300	⇑iP	Pb	16 54 46.8	-0.5
CHN5				S	Sn	16 54 56.3	-1.1
WCKO	Fanlu	0.72	286	⇓P	Pb	16 54 46.7	-0.4
WCKO				S	Sn	16 54 56.5	-0.9
SGST	Jiashian	0.73	258	⇓iP	Pb	16 54 45.7	-1.1
SGST				S	Sb	16 54 55.5	-1.0
OWD	Renai	0.73	347	⇓P	Pb	16 54 46.3	-0.7
OWD				eS	Sb	16 54 55.0	-1.7
ETM	Tongmen	0.73	10	eP	Pb	16 54 45.6	-1.3
ECL	Taimali	0.74	210	⇓P	Pb	16 54 44.8	-2.2
CHN1	Nanshi	0.77	266	⇓P	Pb	16 54 47.5	-0.2
CHN1				eS	Sn	16 54 58.1	-0.4
SMLT	Sun Moon Lake	0.77	327	eP	Pb	16 54 47.4	-0.1
SMLT				eS	Sb	16 54 57.0	-0.6
HWA	Hwalien	0.77	17	eP	Pb	16 54 47.0	-0.5
LXIB	Xiulin Townshi	0.78	4	⇓P	Pb	16 54 46.4	-1.3
WUSB	Renai	0.78	344	⇓P	Pb	16 54 47.3	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WUSB				S	Sb	16 54 56.9	-1.2
TWK	Hsinying	0.80	272	⇓P	Pn	16 54 47.9	-0.4
TWK				S	Sn	16 54 58.3	-1.1
TYC	Yuchr	0.81	325	eP	Pn	16 54 48.1	-0.2
TYC				S	Sn	16 54 59.3	-0.2
TSMG	Majia	0.84	231	eP	Pb	16 54 47.6	-1.1
TSMG				eS	Sn	16 54 59.7	-0.7
WGK	Gukeng	0.86	301	⇑P	Pn	16 54 49.4	+0.4
WGK				S	Sn	16 55 00.5	-0.2
TWD	Chiawan	0.86	15	eP	Pb	16 54 47.5	-1.6
SCST	Cishan	0.87	246	eP	Pn	16 54 49.7	+0.5
SCST				eS	Sn	16 55 04.0	+3.0
WDLH	Douliu	0.88	301	eP	Pn	16 54 49.9	+0.6
WDLH				eS	Sn	16 55 01.6	+0.4
WNT	Mingjian	0.89	316	⇓P	Pn	16 54 50.3	+0.9
WNT				eS	Sn	16 55 02.3	+0.9
WDL	Douliou City	0.89	302	eP	Pn	16 54 50.5	+1.0
WDL				S	Sn	16 55 01.9	+0.5
CHY	Chiayi	0.90	287	⇓P	Pn	16 54 50.2	+0.6
CHY				eS	Sn	16 55 01.7	0.0
WHF	Hehuan Shan	0.91	355	⇓P	Pb	16 54 49.0	-1.0
WHF				eS	Sb	16 55 01.1	-0.8
WCS	Beigang Elemen	0.91	333	eP	Pn	16 54 50.1	+0.3
WCS				eS	Sn	16 55 01.6	-0.5
MASBT	Mashibuluo	0.92	227	⇓P	Pb	16 54 48.7	-1.3
MASBT				eS	Sn	16 55 03.1	+1.0
CHN3	Shinhua	0.93	260	⇓P	Pn	16 54 51.5	+1.5
CHN3				S	Sn	16 55 05.4	+3.0
ETL	Fush Village	0.95	15	eP	Pb	16 54 49.1	-1.4
ETL				eS	Sn	16 55 04.4	+1.4
SGLT	Jiouru	0.95	238	eP	Pn	16 54 51.0	+0.8
SGLT				eS	Sn	16 55 07.1	+4.2
NACB	Ninganchiao	0.95	13	P	Pb	16 54 49.6	-1.0
NACB	Ninganchiao	0.95	13		Pb	16 54 48.7	-1.9
NACB	Ninganchiao	0.95	13	⇓P	Pb	16 54 48.7	-1.9
NACB				eS	Sb	16 55 02.5	-0.4
TWM1	Shoushan	0.96	245	⇓P	Pn	16 54 51.8	+1.4
TWM1				eS	Sn	16 55 08.1	+5.0
ETLH	Xiulin Townshi	0.97	7	eP	Pb	16 54 49.1	-1.9
EAST	Anshuo	0.97	209	⇓P	Pb	16 54 48.8	-2.2
TAW	Tawu	0.97	206	eP	Pb	16 54 48.6	-2.4
SSHA	Shanhua	0.99	264	⇓P	Pn	16 54 52.1	+1.3
SSHA				S	Sn	16 55 06.9	+2.9
WTK	Tuku	1.00	297	eP	Pn	16 54 52.1	+1.1
WTK				eS	Sn	16 55 05.6	+1.5
ICHU	Yijhu	1.00	277	⇓P	Pn	16 54 51.8	+0.8
ICHU				eS	Sn	16 55 05.8	+1.7
FUSS	Fushou	1.01	354	eP	Pb	16 54 51.1	-0.6
FUSS				eS	Sb	16 55 03.2	-1.5
TWT	Tachien	1.02	351	eP	Pn	16 54 51.4	-0.1
TWT				eS	Sb	16 55 04.2	-0.8
TDCB	Techi	1.03	350	⇓P	Pn	16 54 51.5	0.0
TDCB				eS	Sb	16 55 04.1	-0.9
SSPT	Xinbi	1.05	224	⇓P	Pn	16 54 51.7	0.0
SSPT				eS	Sn	16 55 09.2	+3.9
SNJT	Kaohsiung City	1.06	243	eP	Pn	16 54 54.3	+2.0
SNJT				eS	Sn	16 55 10.6	+4.9
TAI1	Yung-k'ang	1.06	259	eP	Pn	16 54 53.3	+0.9
CHN8	Yiju	1.06	276	eP	Pn	16 54 52.5	+0.1
CHN8				S	Sn	16 55 07.6	+1.9
WSL	Shuilin Townsh	1.08	285	P	Pn	16 54 52.9	+0.3
WSL				S	Sn	16 55 07.7	+1.6
SCZT	Fangliau	1.10	218	⇓P	Pn	16 54 51.6	-0.8
SCZT				eS	Sn	16 55 10.2	+3.5
TCU	Taichung	1.10	325	eP	Pb	16 54 53.7	+0.7
TCU				eS	Sn	16 55 09.3	+2.6
WHP	Taichung City	1.10	340	eP	Pb	16 54 53.9	+0.8
WHP				eS	Sn	16 55 09.4	+2.5
WCHH	Zhanghua	1.11	319	eP	Pb	16 54 54.0	+0.7
WCHH				eS	Sn	16 55 09.0	+2.0
WCH1	Changhua City	1.11	318	eP	Pb	16 54 54.0	+0.7
WCH1				eS	Sn	16 55 09.3	+2.3
WRL	Guolierlin Hig	1.12	306	eP	Pb	16 54 54.0	+0.7
WRL				eS	Sn	16 55 07.7	+0.6
WSF	Szhu	1.12	291	⇓P	Pb	16 54 53.2	-0.1
WSF				eS	Sn	16 55 07.7	+0.6
RLNB	Erlin	1.12	306	eP	Pb	16 54 53.6	+0.2
RLNB				eS	Sn	16 55 08.4	+1.1
EAHA	Aohua	1.14	18	eP	Pn	16 54 52.1	-0.8
SLIU	Shizi	1.14	207	eP	Pn	16 54 51.4	-1.5
SLIU				eS	Sn	16 55 08.2	+0.4
WTCT	Ta-ch'eng	1.17	302	eP	Pb	16 54 54.2	0.0
WTCT				eS	Sn	16 55 09.4	+1.1
WSSB	Gushan	1.17	240	eP	Pb	16 54 55.6	+1.3
WSSB				eS	Sn	16 55 12.9	+4.4
TSCK	Chigu Township	1.17	266	eP	Pb	16 54 54.2	-0.1
TSCK				eS	Sn	16 55 09.9	+1.4
NNSB	Datong	1.18	1	⇓P	Pn	16 54 53.3	-0.4
NNSB				eS	Sn	16 55 07.5	-1.4
NNS	Nan Shan	1.20	1	eP	Pn	16 54 53.5	-0.3
LAY	Lan-yu	1.21	171	eP	Pn	16 54 53.0	-0.9
LAY				eS	Sn	16 55 07.5	-1.9
TWQ1	Liyutan	1.23	334	⇓P	Pb	16 54 56.1	+0.8
TWQ1				eS	Sb	16 55 12.2	+1.5
EOS4	EOS4	1.24	45	eP	Pn	16 54 54.6	+0.6
EOS4				eS	Sn	16 55 10.5	+0.8
LYUB	Lan-yu	1.25	170	eP	Pn	16 54 52.9	-1.6
LYUB				eS	Sn	16 55 07.3	-3.1
WLCH	Liuqiu	1.26	226	eP	Pb	16 54 57.8	+2.0
WLCH				eS	Sb	16 55 17.8	+6.1
TWP	Hsiaoliuchiu	1.28	226	eP	Pb	16 54 57.7	+1.6
TWP				eS	Sb	16 55 16.3	+4.2
WDJ	Dajia District	1.28	329	eP	Pb	16 54 57.1	+0.9
WDJ				eS	Sb	16 55 14.1	+1.8
LATG	Datong	1.30	7	⇓P	Pn	16 54 54.4	-0.8
SMST	Manzhou Townsh	1.30	202	eP	Pn	16 54 56.2	-0.3
EOS3	EOS3	1.36	40	eP	Pn	16 54 56.5	+0.6
EOS3				eS	Sn	16 55 13.9	+0.9
NDT	Datong Townshi	1.36	6	eP	Pn	16 54 56.1	+0.1
TWK1	Hengchun	1.39	202	eP	Pb	16 54 58.0	0.0
TWKBT	Hengchun	1.39	201	eP	Pn	16 54 55.5	-0.8
NMLH	Miaoli	1.39	338	eP	Pb	16 54 58.7	+0.6
NMLH				eS	Sb	16 55 16.6	+1.1
TSEB	Hengchuen, Pin	1.40	198	eP	Pb	16 54 58.3	+0.1
ESAO	Su ao	1.40	18	eP	Pn	16 54 57.3	+0.7
ESAO				eS	Sn	16 55 15.4	+1.2
NFF	Wufeng Townshi	1.40	351	eP	Pb	16 54 57.9	-0.4
NFF				eS	Sb	16 55 17.3	+1.5
ENTT	Nioudou	1.41	8	eP	Pn	16 54 56.3	-0.3
EOS2	EOS2	1.42	34	eP	Pn	16 54 57.9	+1.2
EOS2				eS	Sb	16 55 17.4	+1.3
NSTT	Nanjuang	1.42	347	eP	Pb	16 54 58.6	0.0
NSTT				eS	Sb	16 55 17.6	+1.2
YHNB	Yeheng	1.42	1	P	Pn	16 54 57.9	+1.0
YHNB	Yeheng	1.42	1	Pn	Pn	16 54 57.0	+0.1
YHNB	Yeheng	1.42	1	⇓eP	Pn	16 54 57.2	+0.3
YHNB				eS	Sn	16 55 14.7	-0.2
NDS	Dongshan	1.43	13	eP	Pn	16 54 55.7	-1.1
NSK	Sanguang	1.43	360	⇓eP	Pn	16 54 57.3	+0.3
NSK				eS	Sn	16 55 15.3	+0.3
LIOB	Emei	1.44	347	eP	Pb	16 54 58.9	+0.1
LIOB				eS	Sb	16 55 18.3	+1.7
TWC	Suao	1.44	18	eP	Pn	16 54 56.3	-0.7
TWC				eS	Sb	16 55 16.6	-0.1
TWE	Neicheng	1.50	11	eP	Pn	16 54 57.4	-0.5
FUSB	Fushanzhiwuyua	1.53	8	eP	Pn	16 54 58.0	-0.3
FUSB				eS	Sn	16 55 17.4	0.0
NWLT	Wulai	1.54	5	eP	Pn	16 54 58.8	+0.3
NWLT				eS	Sn	16 55 17.6	+0.1
KSHI	Guanxi Townshi	1.54	354	eP	Pb	16 55 00.8	+0.2
KSHI				eS	Sb	16 55 20.3	+0.7
WDGT	Dungji	1.56	271	⇓P	Pn	16 54 58.8	+0.1
WDGT				eS	Sn	16 55 16.7	-1.4
SBCB	Hsinchu	1.58	348	eP	Pn	16 55 00.2	+1.2
SBCB				eS	Sb	16 55 21.0	+0.1
HSN	Hsinchu	1.60	347	eP	Pb	16 55 00.8	-0.7
HSN				eS	Sb	16 55 22.3	+1.0
PHUB	P'eng-hu	1.66	280	eP	Pn	16 55 00.3	+0.2
PHUB				eS	Sn	16 55 20.2	-0.4
EGS		1.68	18	eP	Pn	16 55 01.7	+1.3
PNG	Penghu	1.69	282	eP	Pn	16 55 00.8	+0.3
PNG				eS	Sn	16 55 20.4	-0.8
NHDH	Xindian Distri	1.72	5	eP	Pn	16 55 02.0	+1.0
NHDH				eS	Sn	16 55 22.8	+0.7
NCUH	Zhongli	1.73	355	eP	Pb	16 55 02.8	-1.0
NCUH				eS	Sb	16 55 25.7	+0.6
TATO	Taipei	1.73	4	P	Pn	16 55 01.5	+0.5
TATO	Taipei	1.73	4	Pn	Pn	16 55 01.4	+0.4
TWA	Mucha	1.75	7	eP	Pn	16 55 02.0	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TWA				eS	Sn	16 55 23.5	+0.8
VCHM	Qimei	1.77	269	eP	Pn	16 55 01.7	+0.1
VCHM				eS	Sn	16 55 23.7	+0.4
TIPB	Shuangxi	1.78	14	eP	Pn	16 55 02.6	+0.8
TIPB				eS	Sn	16 55 24.3	+0.8
NHY	Taipei	1.80	6	eS	Sn	16 55 25.0	+1.0
TWB1	Santiao Chiao	1.85	18	eP	Pn	16 55 04.0	+1.2
TWB1				eS	Sn	16 55 26.7	+1.5
TWS1	Kuangyinshan	1.85	2	eP	Pn	16 55 03.8	+1.0
TWS1				eS	Sn	16 55 27.0	+1.7
NWF	Wu-fen Shan	1.86	12	eP	Pn	16 55 04.0	+1.0
NWF				eS	Sn	16 55 25.5	-0.2
WFSB	Wu-fen Shan	1.86	12	eP	Pn	16 55 03.6	+0.7
WFSB				eS	Sn	16 55 26.1	+0.5
JYNG	Yonagunijimaku	1.89	50	P	Pn	16 55 04.4	+1.2
JYNG				eS	Sn	16 55 27.5	+1.3
YM01	YM01	1.91	6	⇓eP	Pn	16 55 03.6	+0.1
YM01				eS	Sn	16 55 27.3	+0.5
NTST	Danshui	1.92	2	eP	Pn	16 55 04.4	+0.7
NTST				eS	Sn	16 55 28.7	+1.8
ZUZH	Zhuzihu	1.92	5	eP	Pn	16 55 03.9	+0.2
ZUZH				eS	Sn	16 55 26.7	-0.4
TNOU	National Taiwa	1.94	11	eP	Pn	16 55 04.1	+0.1
TNOU				eS	Sn	16 55 27.2	-0.2
YOJ	Yonaguni jima	1.94	51	P	Pn	16 55 05.1	+1.2
YOJ	Yonaguni jima	1.94	51	Pn	Pn	16 55 04.6	+0.6
YOJ	Yonaguni jima	1.94	51	⇓P	Pn	16 55 05.2	+1.2
YOJ				eS	Sn	16 55 28.8	+1.3
YOJ	Yonaguni jima	1.94	51	P	Pn	16 55 05.2	+1.2
YOJ				S	Sn	16 55 29.0	+1.5
ANP	Anpu	1.94	4	eP	Pn	16 55 05.6	+1.5
YM08	YM08	1.95	6	eP	Pn	16 55 03.9	-0.2
TWY	Chenhua	2.04	6	eP	Pn	16 55 06.4	+1.1
HATJ	Hateruma jima	2.39	70	eP	Pn	16 55 11.1	+1.0
HATJ				S	Sn	16 55 39.2	+0.8
IRIF	Iriomote-Funau	2.43	63	P	Pn	16 55 11.9	+1.2
IRIF				eS	Sn	16 55 41.5	+1.9
PCYT	Pengchaiyu	2.47	15	eP	Pn	16 55 12.8	+1.6
PCYT				eS	Sn	16 55 41.9	+1.5
VWUC	VWUC	2.47	315	eP	Pn	16 55 11.8	+0.7
VWUC				eS	Sn	16 55 39.9	-0.5
JKRS	Kuro-shima	2.62	67	eP	Pn	16 55 14.8	+1.5
JKRS				S	Sn	16 55 45.6	+1.3
PTMZ	Houxiangcun	2.72	312	⇓P	Pn	16 55 15.4	+0.7
PTMZ				eS	Sn	16 55 45.5	-1.2
JIJ	Ishigaki jima	2.79	66	P	Pn	16 55 16.2	+0.7
JIJ				eS	Sn	16 55 48.8	+0.5
KNM	Kinmen	2.92	294	eP	Pn	16 55 19.1	+1.7
KNM				eS	Sn	16 55 51.9	+0.2
KNMB	Chin-men Tao	2.98	295	Pn	Pn	16 55 18.1	-0.2
KNMB	Chin-men Tao	2.98	295	⇓P	Pn	16 55 18.2	0.0
KNMB				eS	Sn	16 55 50.7	-2.4
JISG	Ishigakijimahi	3.02	63	iP	Pn	16 55 19.3	+0.6
JISG				eS	Sn	16 55 53.3	-0.7
MATB	Ma-tsu	3.17	336	eP	Pn	16 55 21.3	+0.5
MATB				eS	Sn	16 55 57.0	-0.8
JTJ	Tarama	3.36	65	eP	Pn	16 55 24.4	+0.9
JTJ				S	Sn	16 56 02.9	+0.4
ZPLA	Ao Xicun	3.38	282	eP	Pn	16 55 24.5	+0.7
ZPLA				eS	Sn	16 56 01.5	-1.5
AXDP	Jialang	3.51	299	⇓eP	Pn	16 55 25.9	+0.4
AXDP				eS	Sn	16 56 04.0	-2.2
MHZQ	Yeshan	3.55	324	eP	Pn	16 55 26.8	+0.7
MHZQ				eS	Sn	16 56 06.0	-1.2
LYJJ	Jianjiangzhen	3.60	337	eP	Pn	16 55 27.5	+0.7
LYJJ				eS	Sn	16 56 07.6	-0.9
DSXP	Dongshan	3.64	278	eP	Pn	16 55 28.0	+0.7
DSXP				eS	Sn	16 56 08.1	-1.3
XPSS	Dashiqiu	3.83	344	eP	Pn	16 55 29.4	-0.4
XPSS				eS	Sn	16 56 12.8	-1.1
JIRJ	Irabujima	3.85	65	P	Pn	16 55 30.9	+0.8
JIRJ				S	Sn	16 56 15.3	+0.7
JMJ	Miyako jima 2	3.92	66	P	Pn	16 55 32.2	+1.0
JMJ2	Miyako jima3	3.93	67	eP	Pn	16 55 32.9	+1.7
JMJ2				S	Sn	16 56 17.7	+1.3
JOGS	Gusukube	4.00	67	P	Pn	16 55 33.8	+1.5
JOGS				eS	Sn	16 56 19.9	+1.6
SXFK	Yanhouchang	4.61	314	eP	Pn	16 55 41.1	+0.4
SXFK				eS	Sn	16 56 31.6	-1.8
HKPS	Hong Kong Po S	6.73	263	Pn	Pn	16 56 09.7	-0.1
JOW	Kunigami	7.22	59	P	Pn	16 56 17.4	+0.9
JOW	Kunigami	7.22	59	Pn	Pn	16 56 16.4	-0.1
TGY	Tagaytay City	9.10	183	LR	LR	17 01 04.9	
	comp=Z,160nm,18.0s,baz=1.0,slow=43						
WHN	Wuhan	9.59	321	P	Pn	16 56 50.2	+1.2
WHN				S	Sn	16 58 41.5	+5.5
WHN				L	L		
	comp=N,1μm,9.4s						
WHN				L	L		
	comp=E,1μm,8.4s						
WHN				L	L		
	comp=Z,2μm,12.2s						
QIZ	Qiongzhong	11.53	251	P	Pn	16 57 16.1	+0.4
QIZ				S	Sn	16 59 24.7	+1.0
QIZ				L	L		
	comp=N,240nm,16.5s						
QIZ				L	L		
	comp=E,220nm,20.2s						
QIZ				L	L		
	comp=Z,380nm,16.6s						
KSAR	Wonju Array Be	15.23	20	Pn	Pn	16 58 04.8	-1.1
KSRS	Korea Array	15.25	20	P	Pn	16 58 06.0	-0.2
	0.2nm,0.3s,baz=201,slow=12,SNR=12						
KSRS				LR	LR	17 04 44.2	
	comp=Z,56nm,20.3s,baz=225,slow=40						
	0.7nm,0.5s						
KS19	Wonju Array Si	15.28	20	Pn	Pn	16 58 06.1	-0.4
XAN	Xi'an	15.31	317	eP	Pn	16 58 05.1	-2.0
XAN				S	Sn	17 00 53.5	-2.5
XAN				L	L		
	comp=N,400nm,15.8s						
XAN				L	L		
	comp=E,420nm,14.7s						
XAN				L	L		
	comp=Z,620nm,14.5s						
JCJ	Chichijima	19.23	74	LR	LR	17 05 03.2	
	comp=Z,37nm,20.5s,baz=206,slow=33						
MJAR	Matsushiro Arr	19.69	44	P	P	16 58 59.4	-0.5
	baz=218,slow=9.3,SNR=4.1						
	0.4nm,0.5s						
MJAR	Matsushiro Arr	19.69	44		P	16 58 59.2	-0.7
BTO2	Baotou	19.95	334	eP	Pn	16 59 07.4	+2.8
BTO2				pmax	pmax		
	comp=Z,16nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,140nm,4.3s						
BTO2				L	L		
	comp=N,880nm,13.1s						
BTO2				L	L		
	comp=E,400nm,14.9s						
BTO2				L	L		
	comp=Z,1μm,12.3s						
CHTO	Chiang Mai	21.37	262	P	P	16 59 21.2	+2.9
CHTO				IAmb	IAmb	16 59 23.7	
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	21.47	261	P	P	16 59 22.8	+3.4
	comp=Z,1.1nm,0.7s,baz=62,slow=7.9,SNR=8.7						
CMAR				LR	LR	17 08 28.0	
	comp=Z,125nm,18.0s,baz=85,slow=38						
	comp=Z,1.1nm,0.7s						
CMAR	Chiang Mai Arr	21.47	261	P	P	16 59 21.8	+2.5
USRK	Ussuriysk Ar.	22.66	20	P	P	16 59 31.5	-0.3
	comp=Z,0.7nm,0.8s,baz=207,slow=9.3,SNR=2.7						
	comp=Z,0.7nm,0.8s						
USRK	Ussuriysk Ar.	22.66	20	P	P	16 59 31.9	+0.1
GUMO	Guam	24.25	109	LR	LR	17 08 23.6	
	comp=Z,36nm,19.6s,baz=260,slow=34						
KLR	Kul'dur	27.21	15	LR	LR	17 11 15.2	
	comp=Z,47nm,19.3s,baz=204,slow=37						
SONM	Songino Array	27.30	338	P	P	17 00 15.9	+0.8
	comp=Z,0.4nm,0.3s,baz=140,slow=9.4,SNR=2.2						
SONM				LR	LR	17 12 35.2	
	comp=Z,203nm,18.1s,baz=113,slow=39						
	comp=Z,0.4nm,0.3s						
TLY	Talaya	31.51	339	LR	LR	17 14 46.2	
	comp=Z,104nm,20.6s,baz=138,slow=38						
JAY	Jayapura	31.79	141	LR	LR	17 14 45.2	
	comp=Z,31nm,18.3s,baz=312,slow=38						
MK31	Makanchi Array	39.13	317	P	P	17 01 58.5	+0.6
MKAR	Makanchi Array	39.13	317	P	P	17 01 59.1	+1.2
	comp=Z,0.6nm,0.6s,baz=116,slow=9.7,SNR=8.1						
MKAR				LR	LR	17 19 23.2	
	comp=Z,84nm,20.8s,baz=132,slow=38						

	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**39.13**	**317**	P	**P**	**17 01 58.0**	**+0.1**	
YAK	**Yakutsk**	**39.19**	**6**	LR	LR	17 19 52.2		
	comp=Z,82nm,18.8s,baz=201,slow=39							
ZAA0	**Zalesovo Array**	**41.12**	**328**	P	**P**	**17 02 14.5**	**+0.2**	
ZAA0				IAmb	IAmb	17 02 19.7		
	comp=Z,2.9nm,0.9s							
ZALV	**Zalesovo Beam**	**41.12**	**328**	P	**P**	**17 02 14.9**	**+0.6**	
	comp=Z,2.0nm,0.8s,baz=111,slow=8.0,SNR=7.1							
ZALV				LR	LR	17 20 35.9		
	comp=Z,64nm,18.2s,baz=127,slow=38							
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**41.12**	**328**	P	**P**	**17 02 13.0**	**-1.3**	
H11N1	**WAKE ISLAND Hy**	**42.39**	**86**	T	T	17 47 39.1		
	baz=283,slow=75,SNR=58							
H11N2	**WAKE ISLAND Hy**	**42.39**	**86**	T	T	17 47 36.6		
	baz=283,slow=75,SNR=58							
H11N3	**WAKE ISLAND Hy**	**42.41**	**86**	T	T	17 47 42.3		
	baz=283,slow=75,SNR=55							
H11S3	**WAKE ISLAND Hy**	**42.49**	**88**	T	T	17 47 43.5		
	baz=284,slow=75,SNR=70							
H11S1	**WAKE ISLAND Hy**	**42.50**	**88**	T	T	17 47 44.9		
	baz=284,slow=75,SNR=62							
H11S2	**WAKE ISLAND Hy**	**42.51**	**88**	T	T	17 47 44.9		
	baz=284,slow=75,SNR=64							
COEN	**Coen**	**42.69**	**148**	P	**P**	**17 02 27.3**	**-0.2**	
KURBB	**Kurchatov Arra**	**42.93**	**321**	P	**P**	**17 02 30.0**	**+0.8**	
	comp=Z,1.5nm,0.3s,baz=121,slow=6.6,SNR=1.9							
	comp=Z,1.5nm,0.3s							
AAK	**Ala-Archa**	**43.21**	**308**	LR	LR	17 23 19.2		
	comp=Z,56nm,20.4s,baz=162,slow=40							
WB0	**Warramunga Arr**	**44.60**	**162**	P	**P**	**17 02 40.4**	**-2.4**	
WB0				IAmb	IAmb	17 02 55.5		
	comp=Z,9.1nm,1.3s							
WRAB	**Tennant Creek**	**44.74**	**163**	P	**P**	**17 02 44.1**	**+0.2**	
WRAB				IAmb	IAmb	17 03 11.0		
	comp=Z,15nm,1.5s							
WRA	**Warramunga Arr**	**44.75**	**163**	P	**P**	**17 02 41.9**	**-2.1**	
	comp=Z,1.5nm,0.7s,baz=344,slow=9.0,SNR=14							
	comp=Z,1.5nm,0.7s							
WB2	**Warramunga Arr**	**44.75**	**163**	P	**P**	**17 02 42.3**	**-1.7**	
WB2				IAmb	IAmb	17 02 42.9		
	comp=Z,6.7nm,1.1s							
WR8	**Warramunga Arr**	**44.81**	**162**	P	**P**	**17 02 42.9**	**-1.6**	
WR0	**Warramunga Arr**	**44.82**	**162**	P	**P**	**17 02 43.6**	**-1.0**	
WR0				IAmb	IAmb	17 02 45.2		
	comp=Z,4.5nm,0.8s							
GIRL	**Giralia**	**46.13**	**189**	P	**P**	**17 02 55.5**	**+0.6**	
AS31	**Alice Springs**	**48.19**	**164**	P	**P**	**17 03 10.0**	**-1.1**	
AS31				IAmb	IAmb	17 03 49.5		
	comp=Z,1.6nm,1.4s							
ASAR	**Alice Springs**	**48.19**	**165**	P	**P**	**17 03 08.3**	**-2.8**	
	comp=Z,0.8nm,0.8s,baz=340,slow=7.0,SNR=10							
	comp=Z,0.8nm,0.8s							
ASAR	**Alice Springs**	**48.19**	**165**	P	**P**	**17 03 10.3**	**-0.7**	
AB31	**Akbulak array**	**54.22**	**315**	P	**P**	**17 03 56.9**	**+0.9**	
AB31				IAmb	IAmb	17 04 19.1		
	comp=Z,3.2nm,1.4s							
ABKAR	**Akbulak array**	**54.22**	**315**	P	**P**	**17 03 55.2**	**-0.7**	
ARTI	**Arti**	**56.05**	**323**	LR	LR	17 30 18.9		
	comp=Z,55nm,19.2s,baz=149,slow=38							
STKA	**Stephens Creek**	**58.12**	**160**	P	**P**	**17 04 22.1**	**-1.9**	
	comp=Z,3.5nm,0.8s,baz=330,slow=10.0,SNR=5.4							
	comp=Z,3.5nm,0.8s							
KIRV	**Kirov**	**61.08**	**325**	LR	LR	17 33 43.2		
	comp=Z,78nm,18.2s,baz=90,slow=38							
FINES	**FINESS Array B**	**72.34**	**330**	P	**P**	**17 05 55.5**	**-0.3**	
	comp=Z,1.6nm,0.8s,baz=90,slow=7.1,SNR=4.5							
	comp=Z,1.6nm,0.8s							
FINES	**FINESS Array B**	**72.34**	**330**	P	**P**	**17 05 54.8**	**-1.0**	
NB2	**NORSAR Subarra**	**79.13**	**332**	P	**P**	**17 06 33.7**	**-1.1**	
	comp=Z,0.6nm,0.6s,baz=59,slow=5.6							
NOA	**NORSAR Array B**	**79.13**	**332**	P	**P**	**17 06 34.1**	**-0.6**	
	comp=Z,1.0nm,0.6s,baz=60,slow=5.5,SNR=5.5							
	comp=Z,1.0nm,0.6s							
GERES	**GERESS Array B**	**83.67**	**321**	P	**P**	**17 06 59.3**	**+0.1**	
	comp=Z,0.5nm,0.6s,baz=40,slow=2.3,SNR=6.1							
	comp=Z,0.5nm,0.6s							

JMA 08 17:18:44.5±0.1, 37.8N±0.3×141.8E±0.7, h49km±1km, MV1.2/26, SE OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JIKH	**Ishinomakikobu**	**0.55**	**333**	*i* P		Pn	17 18 56.4	0.0
JIKH				S		Sn	17 19 04.8	-0.1
JIO	**Ouri**	**0.72**	**332**	P		Pn	17 18 58.6	0.0
JIO				*e*S		Sn	17 19 08.6	-0.1
JMM	**Marumori**	**0.79**	**274**	P		Pn	17 18 59.5	+0.1
JMM				*e*S		Sn	17 19 10.4	+0.2
JOTO	**OTAMA OYAMA**	**1.18**	**258**	*e*P		Pn	17 19 05.8	+1.1
JMK	**Ichinoseki**	**1.22**	**339**	*e*P		Pn	17 19 05.7	+0.5
JMK				*e*S		Sn	17 19 21.1	+0.6
JOM	**Ohasama**	**1.70**	**347**	*e*P		Pn	17 19 12.5	+0.8
JOM				*e*S		Sn	17 19 32.2	-0.1

*IDC **08** 17:18:49.5±0.9, 37.24N×142.41E, h0km, mb4.2/18, mbtmp4.1/23, ML3.3/5, MS3.5/20, Error ellipse: s-maj=21.7km s-min=14.2km az=96.0*

*NEIC **08** 17:18:52.6±1.9, 37.20N±0.02×142.5E±0.1, h22km±6km, mb4.5/18, Error ellipse: s-maj=13.1km s-min=2.0km az=99.0*

*NIED **08** 17:18:53.0, 37.27N×142.24E, h27km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.58; Mϑϑ-0.01; Mϕϕ-0.57; Mrϑ1.02; Mϑϕ-0.99; Mϕr2.26; Fault plane solution: Mo2.68000×10^15^ NP1: ϕs250.00000°, δ14.00000°, λ137.00000°. NP2: ϕs22.00000°, δ80.00000°, λ79.00000°.*

*JMA **08** 17:18:53.0±0.2, 37.3N±0.6×142.2E±, h27km, MD4.5/36, MV4.4/36, E OFF FUKUSHIMA PREF*

ISC 08 17:18:54.3±0.6, 37.22N±0.05×142.33E±0.07, h35km, n123, σ1s25/98, mb4.4/32, MS3.8/20, 1C-7D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JFK	**Kawauchi**	**1.17**	**278**	⇓P		**Pn**	**17 19 12.6**	**-1.6**
JFK				⇓*e*S		**Sn**	**17 19 26.2**	**-2.7**
ONAJ	**Iwakimizuishiy**	**1.23**	**265**	⇓P		**Pn**	**17 19 13.3**	**-1.7**
JIKH	**Ishinomakikobu**	**1.29**	**328**	⇓P		**Pn**	**17 19 14.2**	**-1.5**
JMM	**Marumori**	**1.38**	**299**	⇓*i*P		**Pn**	**17 19 15.7**	**-1.4**
JFFD	**Fukushimafurud**	**1.42**	**266**	A		A	17 19 16.6	
	comp=N,6.0nm,4.3s,comp=E,4.0nm,0.8s							
JIO	**Ouri**	**1.46**	**328**	⇓*i*P		**Pn**	**17 19 16.9**	**-1.2**
JOTO	**OTAMA OYAMA**	**1.63**	**283**	*i* P		**Pn**	**17 19 20.2**	**-0.2**
JOTO					A	A	17 19 20.2	
	comp=N,13nm,0.5s,comp=E,12nm,1.3s							
JOTO				*e*S		**Sn**	**17 19 39.5**	**-0.7**
JOU	**Okura**	**1.75**	**312**	*i* P		**Pn**	**17 19 21.7**	**-0.5**
JOU				*e*S		**Sn**	**17 19 42.4**	**-0.8**
JYAR	**Yonezawaarcadi**	**1.87**	**293**	A		A	17 19 23.0	
	comp=N,20nm,1.2s,comp=E,17nm,1.1s							
JCAJ	**Choshiashikaji**	**1.91**	**219**	A		A	17 19 24.6	
	comp=N,5.0nm,1.0s,comp=E,5.0nm,1.7s							
JIHU	**Itakohorinouch**	**1.91**	**230**	A		A	17 19 24.5	
	comp=N,20nm,2.3s,comp=E,14nm,3.8s							
JSB	**Shiboa**	**1.94**	**263**	A		A	17 19 24.3	
	comp=N,13nm,1.3s,comp=E,13nm,1.5s							
JMK	**Ichinoseki**	**1.94**	**334**	*i* P		**Pn**	**17 19 24.6**	**-0.1**
JYS	**Shirataka**	**2.06**	**300**	P		**Pn**	**17 19 26.9**	**+0.5**
JFY	**Yanaizu**	**2.10**	**276**	P		**Pn**	**17 19 27.2**	**+0.3**
JYK	**Kaneyama**	**2.30**	**318**	⇓*i*P		**Pn**	**17 19 29.5**	**-0.2**
JOM	**Ohasama**	**2.40**	**340**	*i* P		**Pn**	**17 19 31.1**	**+0.1**
JAG	**Ashikaga**	**2.44**	**252**	*i* P		**Pn**	**17 19 31.2**	**-0.4**
I30JP	**ISUMI INFRASON**	**2.50**	**221**	Pn		**Pn**	**17 19 32.9**	**+0.4**
	baz=37,slow=389							
I30JP				Sn		**Sn**	**17 20 02.1**	**+0.3**
	baz=64,slow=206							
MJAR	**Matsushiro Arr**	**3.37**	**260**	Pn		**Pn**	**17 19 44.4**	**0.0**
	comp=E,2.0nm,0.3s,baz=86,slow=16,SNR=76							
MJAR				Sn		**Sn**	**17 20 22.2**	**-1.0**
	comp=E,1.7nm,0.3s,baz=74,slow=17,SNR=3.9							
MJAR				LR		LR	17 21 19.4	
	comp=E,1μm,18.4s,baz=108,slow=44							
	comp=E,18nm,0.6s							
MJAR	**Matsushiro Arr**	**3.37**	**260**			**Pn**	**17 19 45.6**	**+1.2**
MJAR						**Sn**	**17 20 22.2**	**-1.0**
MAJO	**Matsushiro**	**3.37**	**260**	P		**Pn**	**17 19 45.5**	**+1.1**
MAJO	**Matsushiro**	**3.37**	**260**			**Pn**	**17 19 45.3**	**+0.8**
MJB9	**Matsu-Tunnel**	**3.37**	**260**	Pn		**Pn**	**17 19 45.4**	**+0.9**
JTM	**Tenmabayashi**	**3.70**	**345**			**Pn**	**17 19 49.8**	**+0.9**
JSG	**Sagara**	**4.21**	**234**	P		Pn	17 20 00.8	+4.9
JSG	**Sagara**	**4.21**	**234**	Pn		**Pn**	**17 19 58.0**	**+2.0**
JGF	**Kuroka**	**4.32**	**250**	P		Pn	17 20 00.5	+3.0
JGF	**Kuroka**	**4.32**	**250**			**Pn**	**17 19 59.9**	**+2.4**
JHJ2	**Mitsune**	**4.58**	**207**	Pn		**Pn**	**17 20 00.6**	**-0.4**
JHJ	**Hachijo jima 2**	**4.59**	**208**	Pn		**Pn**	**17 20 00.5**	**-0.6**
	comp=E,14nm,0.3s,baz=329,slow=21,SNR=16							
JHJ				Sn		**Sn**	**17 20 48.8**	**-4.4**
	comp=E,57nm,0.3s,baz=72,slow=21,SNR=7.9							
	comp=E,65nm,0.4s							
INU	**Inuyama**	**4.68**	**248**	P		**Pn**	**17 20 05.1**	**+2.7**
INU	**Inuyama**	**4.68**	**248**			**Pn**	**17 20 04.5**	**+2.2**
ERM	**Erimo**	**4.84**	**7**	P		**Pn**	**17 20 04.1**	**-0.4**
ERM	**Erimo**	**4.84**	**7**	Pn		**Pn**	**17 20 04.2**	**-0.3**
JEM	**Erimo**	**4.84**	**7**	P		**Pn**	**17 20 04.4**	**-0.1**
JKA	**Kamikawa-asahi**	**6.90**	**2**			**Pn**	**17 20 32.6**	**-0.2**
JMN	**Monobe**	**7.72**	**246**	P		**Pn**	**17 20 46.7**	**+2.5**
JMN	**Monobe**	**7.72**	**246**			**Pn**	**17 20 45.2**	**+1.0**
JCJ	**Chichijima**	**10.09**	**181**	Pn		**Pn**	**17 21 13.1**	**-3.6**
	comp=E,1.8nm,0.3s,baz=353,slow=20,SNR=8.2							
JCJ				Sn		Sn	17 22 57.2	-11
	comp=E,4.0nm,0.3s,baz=255,slow=22,SNR=1.1							
JCJ				LR		LR	17 27 29.4	
	comp=E,34nm,19.9s,baz=5.5,slow=51							
USRK	**Ussuriysk Ar.**	**10.50**	**315**	Pn		**Pn**	**17 21 22.7**	**+0.5**
	comp=E,0.2nm,0.3s,baz=125,slow=14,SNR=4.8							
USRK				LR		LR	17 25 08.5	
	comp=E,374nm,19.4s,baz=141,slow=36							
	comp=E,2.7nm,0.7s							
USRK	**Ussuriysk Ar.**	**10.50**	**315**			**Pn**	**17 21 23.3**	**+1.2**
KSRS	**Korea Array**	**11.47**	**276**	Pn		**Pn**	**17 21 37.5**	**+2.0**
	comp=E,0.1nm,0.3s,baz=90,slow=13,SNR=13							
KSRS				LR		LR	17 25 50.4	
	comp=E,360nm,18.7s,baz=85,slow=36							
	comp=E,2.1nm,0.6s							
MDJ	**Mudanjiang**	**12.13**	**311**	P		P	17 21 48.9	-7.8
MDJ				S			17 25 15.0	
MDJ				pmax		pmax		
	comp=Z,7.0nm,1.5s							
MDJ				LR		LR		
	comp=N,170nm,21.3s							
MDJ				LR		LR		
	comp=E,310nm,17.5s							
MDJ				LR		LR		
	comp=Z,410nm,19.2s							
MDJ	**Mudanjiang**	**12.13**	**311**	Pn		**Pn**	**17 21 43.8**	**-0.8**
KLR	**Kul'dur**	**14.25**	**331**	Pn		**Pn**	**17 22 14.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=2.3							
KLR				LR		LR	17 27 39.8	
	comp=Z,308nm,18.6s,baz=146,slow=37							
	comp=Z,0.7nm,0.6s							
PETK	**Petropavlovsk-**	**19.17**	**29**	LR		LR	17 31 28.6	
	comp=E,65nm,19.4s,baz=198,slow=40							
NJ2	**Nanjing**	**19.97**	**262**	*e*P		**Pn**	**17 23 25.0**	**-0.4**
NJ2				pmax		pmax		
	comp=Z,21nm,0.7s							
TIA	**Tai'an**	**20.22**	**275**	P		**P**	**17 23 24.4**	**-1.8**
TIA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
HILR	**Hailar Array B**	**20.44**	**314**	P		**P**	**17 23 27.2**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=140,slow=7.5,SNR=2.6							
	comp=Z,1.7nm,0.5s							
HNS	**HongShan**	**21.95**	**279**	⇑P		**P**	**17 23 48.5**	**+3.8**
HNS				pmax		pmax		
	comp=Z,13nm,0.8s							
HNS				LR		LR		
	comp=N,200nm,15.2s							
HNS				LR		LR		
	comp=E,190nm,16.2s							
HNS				LR		LR		
	comp=Z,260nm,12.7s							
MA2	**Magadan**	**23.03**	**11**	LR		LR	17 33 43.9	
	comp=Z,44nm,18.3s,baz=197,slow=39							
GUMO	**Guam**	**23.64**	**174**	LR		LR	17 32 46.7	
	comp=Z,27nm,20.9s,baz=10,slow=35							
HHC	**Hu-ho-hao-te**	**24.11**	**288**	*e*P		**P**	**17 24 05.8**	**-0.9**
HHC				pmax		pmax		
	comp=Z,14nm,0.6s							
HHC				pmax		pmax		
	comp=Z,51nm,5.8s							
HHC				LR		LR		
	comp=N,98nm,15.7s							
HHC				LR		LR		
	comp=E,110nm,17.2s							
HHC				LR		LR		
	comp=Z,170nm,16.8s							
WHN	**Wuhan**	**24.11**	**262**	P		**P**	**17 24 08.1**	**+1.4**
WHN				LR		LR		
	comp=Z,550nm,12.4s							
LYN	**LuoYang**	**24.30**	**273**	P		**P**	**17 24 07.7**	**-0.7**
LYN				pmax		pmax		
	comp=Z,19nm,0.6s							
LYN				LR		LR		
	comp=N,290nm,15.1s							
LYN				LR		LR		
	comp=E,210nm,13.4s							
LYN				LR		LR		
	comp=Z,270nm,17.2s							
YAK	**Yakutsk**	**26.06**	**346**	P		**P**	**17 24 24.0**	**0.0**
	comp=Z,8.1nm,0.3s,baz=133,slow=1.8,SNR=6.1							
YAK				LR		LR	17 34 59.7	
	comp=Z,66nm,18.9s,baz=152,slow=37							
	comp=Z,8.1nm,0.3s							
YAK	**Yakutsk**	**26.06**	**346**	P		**P**	**17 24 24.0**	**0.0**
SEY	**Seymchan**	**26.48**	**10**	P		**P**	**17 24 28.1**	**+0.2**
	comp=Z,5.9nm,1.1s,baz=200,slow=8.2,SNR=7.4							
	comp=Z,5.9nm,1.1s							
XAN	**Xi'an**	**27.26**	**273**	P		**P**	**17 24 35.4**	**+0.1**
XAN				pP		pP	17 24 43.7	-1.1
XAN				pmax		pmax		
	comp=Z,6.0nm,0.6s							
XAN				LR		LR		
	comp=N,140nm,13.6s							
XAN				LR		LR		
	comp=E,110nm,13.0s							
XAN				LR		LR		
	comp=Z,140nm,15.1s							
H11N2	**WAKE ISLAND Hy**	**27.62**	**122**	T		T	17 53 30.4	
	baz=315,slow=75,SNR=57							
H11N1	**WAKE ISLAND Hy**	**27.63**	**122**	T		T	17 53 41.0	
	baz=315,slow=75,SNR=46							
H11N3	**WAKE ISLAND Hy**	**27.64**	**122**	T		T	17 53 33.1	
	baz=315,slow=75,SNR=53							
ULN	**Ulaanbaatar**	**27.86**	**304**			**P**	**17 24 41.1**	**+0.5**
ENH	**Enshi**	**28.08**	**265**			**P**	**17 24 40.4**	**-2.1**
ENH	**Enshi**	**28.08**	**265**	P		**P**	**17 24 40.2**	**-2.4**
ENH				IAmb		IAmb	17 24 52.5	
	comp=Z,13nm,0.7s							
SONM	**Songino Array**	**28.29**	**303**	P		**P**	**17 24 44.5**	**+0.1**
	comp=Z,5.7nm,0.8s,baz=101,slow=9.3,SNR=23							
	comp=Z,5.7nm,0.8s							
SONM	**Songino Array**	**28.29**	**303**			**P**	**17 24 44.5**	**+0.1**
SONM				IAmb		IAmb	17 24 46.1	
	comp=Z,4.6nm,0.9s							
H11S1	**WAKE ISLAND Hy**	**28.35**	**124**	T		T	17 54 29.1	
	baz=317,slow=76,SNR=184							
H11S3	**WAKE ISLAND Hy**	**28.35**	**124**	T		T	17 54 30.3	
	baz=317,slow=76,SNR=210							
H11S2	**WAKE ISLAND Hy**	**28.37**	**124**	T		T	17 54 31.2	
	baz=317,slow=76,SNR=168							
TLY	**Talaya**	**30.77**	**310**	LR		LR	17 38 11.2	
	comp=Z,140nm,18.6s,baz=108,slow=38							
TIXI	**Tiksi**	**35.20**	**353**	LR		LR	17 41 51.3	
	comp=Z,70nm,19.2s,baz=181,slow=39							
KMI2	**Kunming**	**35.69**	**262**	P		**P**	**17 25 51.1**	**+1.5**
KMI2				pP		pP	17 25 59.7	+0.3
KMI2				pmax		pmax		
	comp=Z,8.0nm,0.7s							
KMI2				LR		LR		
	comp=N,130nm,16.3s							
KMI2				LR		LR		
	comp=E,130nm,20.1s							
KMI2				LR		LR		
	comp=Z,210nm,21.6s							
PZH	**PanZhiHua**	**35.85**	**265**	P		**P**	**17 25 51.0**	**+0.2**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
GOMU	**GeErMu**	**37.79**	**283**	P		**P**	**17 26 07.3**	**-0.3**
GOMU				pP		pP	17 26 10.7	-6.8
GOMU				sP		sP	17 26 13.9	-7.7
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**42.25**	**256**	P		**P**	**17 26 45.3**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=59,slow=5.5,SNR=4.5							
CMAR				LR		LR	17 46 23.4	
	comp=Z,47nm,20.0s,baz=295,slow=39							
	comp=Z,0.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**42.25**	**256**	P		**P**	**17 26 44.2**	**-0.1**
ZALV	**Zalesovo Beam**	**42.33**	**312**	P		**P**	**17 26 45.2**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=90,slow=7.4,SNR=15							
ZALV				LR		LR	17 44 59.5	
	comp=Z,108nm,18.4s,baz=79,slow=37							
	comp=Z,3.8nm,0.8s							
ZALV	**Zalesovo Beam**	**42.33**	**312**			**P**	**17 26 43.9**	**-0.7**
MKAR	**Makanchi Array**	**44.64**	**302**	P		**P**	**17 27 04.0**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=86,slow=8.9,SNR=23							
MKAR				LR		LR	17 46 51.6	
	comp=Z,48nm,18.1s,baz=46,slow=38							
	comp=Z,3.4nm,0.7s							
MKAR	**Makanchi Array**	**44.64**	**302**			**P**	**17 27 02.5**	**-0.8**
MAKZ	**Makanchi**	**44.85**	**302**			**P**	**17 27 05.5**	**+0.6**
MAKZ				IAmb		IAmb	17 27 09.5	
	comp=Z,3.7nm,0.8s							
KURK	**Kurchatov**	**46.40**	**308**			**P**	**17 27 17.3**	**+0.2**
KURBB	**Kurchatov Arra**	**46.47**	**308**	P		**P**	**17 27 17.9**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=82,slow=8.3,SNR=33							
	comp=Z,4.8nm,0.7s							
PMG	**Port Moresby**	**46.59**	**173**	LR		LR	17 48 01.2	
	comp=Z,23nm,18.7s,baz=326,slow=38							
PDGK	**Podgornoye**	**47.34**	**298**			**P**	**17 27 24.7**	**0.0**
WUS	**Wushi**	**48.12**	**295**	P		**P**	**17 27 31.3**	**+0.5**
WUS				IAmb		IAmb	17 27 35.7	
	comp=Z,12nm,1.2s							
ILAR	**Eielson Array**	**48.95**	**32**	P		**P**	**17 27 37.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=282,slow=6.9,SNR=5.5							
	comp=Z,0.6nm,0.8s							
BOOM	**Boomskoye usch**	**50.07**	**298**			**P**	**17 27 46.8**	**+1.0**
BOOM				IAmb		IAmb	17 28 00.9	
	comp=Z,2.8nm,0.6s							
BVAR	**Borovoye Array**	**50.99**	**312**	P		**P**	**17 27 53.1**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=103,slow=6.4,SNR=5.2							
	comp=Z,0.8nm,0.5s							
BORK	**Borovoye**	**51.03**	**312**	P		**P**	**17 27 51.9**	**-0.7**
AAK	**Ala-Archa**	**51.05**	**299**	LR		LR	17 51 02.6	
	comp=Z,130nm,18.3s,baz=98,slow=38							
KSH2	**Kashi**	**51.42**	**294**	P		**P**	**17 27 56.4**	**+0.4**
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.8s							
I30M	**Mount Dempster**	**53.34**	**31**			**P**	**17 28 10.3**	**+0.6**
I30M				IAmb		IAmb	17 28 24.7	
	comp=Z,2.5nm,0.8s							
KKAR	**Karatay Array**	**53.67**	**300**			**P**	**17 28 12.5**	**+0.2**
G31M	**Satah River**	**53.87**	**29**	P		**P**	**17 28 13.1**	**-0.3**
GAR	**Garm**	**55.28**	**296**	P		**P**	**17 28 23.2**	**-1.1**
GAR				IAmb		IAmb	17 28 46.6	
	comp=Z,5.7nm,0.7s							
ARTI	**Arti**	**56.81**	**319**			**P**	**17 28 34.0**	**-0.8**
ARTI				IAmb		IAmb	17 28 48.2	
	comp=Z,6.7nm,0.6s							
WRA	**Warramunga Arr**	**57.35**	**189**	P		**P**	**17 28 39.4**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=5.2,slow=7.2,SNR=16							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**57.35**	**189**	P		**P**	**17 28 39.4**	**+0.5**
SHAA	**Shahritus**	**57.44**	**295**	IAmb		IAmb	17 28 50.8	
	comp=Z,20nm,0.8s							
ABKAR	**Akbulak array**	**58.38**	**310**	P		**P**	**17 28 45.9**	**-0.1**
ASAR	**Alice Springs**	**61.07**	**189**	P		**P**	**17 29 05.3**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=353,slow=3.7,SNR=7.7							
	comp=Z,1.3nm,1.0s							
BELG	**Belogornoye**	**64.17**	**317**	LR		LR	18 02 11.9	
	comp=Z,200nm,18.0s,baz=82,slow=40							
FINES	**FINESS Array B**	**68.99**	**333**	P		**P**	**17 29 56.6**	**+1.0**
	comp=Z,4.6nm,0.8s,baz=64,slow=4.4,SNR=13							
	comp=Z,4.6nm,0.8s							
FINES	**FINESS Array B**	**68.99**	**333**	P		**P**	**17 29 56.2**	**+0.6**
KVAR	**Kislovodsk Arr**	**71.33**	**311**	LR		LR	18 03 32.2	
	comp=Z,67nm,21.7s,baz=186,slow=38							
KBZ	**Khabaz**	**71.34**	**311**	P		**P**	**17 30 11.8**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=63,slow=2.3,SNR=4.6							
	comp=Z,3.2nm,0.8s							
HFS	**Hagfors**	**74.22**	**336**	P		**P**	**17 30 27.7**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=62,slow=9.9,SNR=1.9							
	comp=Z,1.9nm,0.9s							
NB2	**NORSAR Subarra**	**74.30**	**338**	P		**P**	**17 30 28.6**	**+0.9**
	comp=Z,5.0nm,1.2s,baz=38,slow=5.9							
NOA	**NORSAR Array B**	**74.30**	**338**	P		**P**	**17 30 28.6**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=38,slow=5.8,SNR=3.7							
NOA				LR		LR	18 06 46.8	
	comp=Z,59nm,18.6s,baz=315,slow=39							
	comp=Z,1.8nm,0.9s							
AKASG	**Malin Array Be**	**74.60**	**323**	P		**P**	**17 30 29.2**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=47,slow=6.2,SNR=10							
	comp=Z,1.7nm,0.5s							
AKASG	**Malin Array Be**	**74.60**	**

MGIG Sg 17 23 37.4 -0.7
MGIG Malinaltepec 1.51 74⇑ eP Pn 17 23 15.4 +0.1
MGIG eS Sg 17 23 37.4 -0.7
PLIG Platanillo 1.67 22 Pn 17 23 17.9 +0.5
PLIG Sg 17 23 40.7 -2.6
PLIG Platanillo 1.67 22⇑ eP Pn 17 23 17.9 +0.5
PLIG eS Sg 17 23 40.7 -2.6
TLIG Tlapa 1.69 64 Pn 17 23 17.9 +0.3
TLIG Sn Sb 17 23 41.1 +0.7
TLIG Tlapa 1.69 64⇑ eP Pn 17 23 18.1 +0.5
TLIG eS Sb 17 23 41.0 +0.5
HMTT Tlapaneco 1.80 58 Pn 17 23 17.6 -1.6
HMTT Sg 17 23 45.2 -2.2
HMTT Tlapaneco 1.80 58 *i* P Pn 17 23 17.6 -1.6
HMTT eS Sg 17 23 45.2 -2.2
UON La Union 1.95 306 eP Pn 17 23 13.0 -8.1
UON eS Sn **17 23 40.5 -4.5**
MAVM Malinalco, Edo 2.21 17 Pb 17 23 27.8 -0.7
MAVM Sb **17 23 56.6 +1.1**
MAVM Malinalco, Edo 2.21 17 eP Pb 17 23 27.8 -0.7
MAVM eS Sb **17 23 56.6 +1.1**
FTIG Fresnillo de T 2.21 61 Pn 17 23 25.4 +0.5
FTIG Fresnillo de T 2.21 61⇑ *i* P Pn 17 23 25.4 +0.5
YAIG Yautepec 2.27 27 Pn 17 23 25.5 -0.2
YAIG Sn **17 23 53.4 +0.2**
YAIG Yautepec 2.27 27 eP Pn 17 23 25.5 -0.2
YAIG eS Sn **17 23 53.4 +0.2**
TXIG Tlaxiaco 2.32 79 Pn 17 23 27.2 +0.7
TXIG Sb **17 24 00.8 +1.8**
TXIG Tlaxiaco 2.32 79⇑ *i* P Pn 17 23 27.2 +0.7
TXIG eS Sb **17 24 00.8 +1.8**
HLIG Huajuapan de L 2.46 66 Pn 17 23 57.7 -0.2
HLIG Sn **17 23 57.7 -0.2**
HLIG Huajuapan de L 2.46 66⇑ eP Pn 17 23 28.9 +0.6
HLIG eS Sn **17 23 57.7 -0.2**
TOVM TOLUCA 2.48 11 Pn 17 23 29.5 +0.8
TOVM Sb **17 24 00.5 -3.1**
TOVM TOLUCA 2.48 11 eP Pn 17 23 29.5 +0.8
TOVM eS Sb **17 24 00.5 -3.1**
YOIG Yosondua 2.50 89 Pn 17 23 29.6 +0.6
YOIG Sb **17 24 06.0 +1.9**
YOIG Yosondua 2.50 89⇑ *i* P Pn 17 23 29.6 +0.6
YOIG eS Sb **17 24 06.0 +1.9**
MZVM 2.51 20 Pb 17 23 31.9 -1.6
MZVM Sn **17 23 57.4 -1.4**
MZVM 2.51 20 eP Pb 17 23 31.9 -1.6
MZVM eS Sn **17 23 57.4 -1.4**
AOVM Tlapan 2.55 18 Pn 17 23 30.0 +0.2
AOVM Sn **17 23 56.1 -4.4**
AOVM Tlapan 2.55 18 eP Pn 17 23 30.0 +0.2
AOVM eS Sn **17 23 56.1 -4.4**
TLVM San Miguel Top 2.55 22 Pb 17 23 33.2 -1.3
TLVM Sb **17 24 04.6 -1.0**
TLVM San Miguel Top 2.55 22 eP Pb 17 23 33.2 -1.3
TLVM eS Sb **17 24 04.6 -1.0**
INVM La Marquesa 2.56 17 Pn 17 23 31.0 +1.2
INVM Sb **17 24 03.6 -2.2**
INVM La Marquesa 2.56 17 eP Pn 17 23 31.0 +1.2
INVM eS Sb **17 24 03.6 -2.2**
PBXN Popocatepetl 2.59 33 eP Pn 17 23 30.4 0.0
PBXN eS Sb **17 24 07.8 +0.8**
MPVM San Francisco 2.60 25 Pn 17 23 31.9 +1.6
MPVM Sb **17 24 07.9 +1.1**
MPVM San Francisco 2.60 25 eP Pn 17 23 31.9 +1.6
MPVM eS Sb **17 24 07.9 +1.1**
PPCU Popocatapetl 2.60 34 eP Pn 17 23 30.6 0.0
PPCU eS Sb **17 24 07.3 0.0**
XCVM Xochimilco 2.60 22 Pb 17 23 32.6 -2.7
XCVM Sb **17 24 06.2 -0.8**
XCVM Xochimilco 2.60 22 eP Pb 17 23 32.6 -2.7
XCVM eS Sb **17 24 06.2 -0.8**
PBCV Popocatepetl 2.63 35 eP Pn 17 23 30.6 -0.2
PBCV eS Sb **17 24 05.6 -2.3**
AMVM AMECAMECA 2.63 29 Sb 17 24 08.2 +0.3
AMVM AMECAMECA 2.63 29 eP Pn 17 23 23.5 -7.3
AMVM eS Sb **17 24 08.2 +0.3**
PBPN Popocatepetl 2.64 33 eP Pn 17 23 30.7 -0.4
PBPN eS Sb **17 24 08.3 +0.1**
CNCY Coyoacan 2.64 21 eP Pb 17 23 33.7 -2.3
CNCY eS Sb **17 24 07.6 -0.5**
CUP5 Mexico City 2.65 20 Pb 17 23 35.0 -1.1
CUP5 Sb **17 24 08.9 +0.4**
CUP5 Mexico City 2.65 20 eP Pb 17 23 35.0 -1.1
CUP5 eS Sb **17 24 08.9 +0.4**
UNM Universidad Na 2.65 20 Pn 17 23 32.3 +1.2
UNM Universidad Na 2.65 20 eP Pn 17 23 33.0 +2.0
UNM eS Sb **17 24 05.0 -3.4**
UNM Universidad Na 2.65 20 P Pn 17 23 32.5 +1.4
PPAX Atlixo 2.66 38 eP Pn 17 23 30.8 -0.3
PPAX eS Sn **17 24 02.9 0.0**
COVM Coyoacan 2.68 21 eP Pn 17 23 33.0 +1.6
COVM eS Sb **17 24 08.9 -0.3**
THVM De Xico 2.71 24 Pb 17 23 36.7 -0.4
THVM Sb **17 24 10.5 +0.4**
THVM De Xico 2.71 24 eP Pb 17 23 36.7 -0.4
THVM eS Sb **17 24 10.5 +0.4**
MHVM Bosque de Chap 2.72 19 Pb 17 23 36.5 -0.7
MHVM Sb **17 24 10.7 +0.4**
MHVM Bosque de Chap 2.72 19 eP Pb 17 23 36.5 -0.7
MHVM eS Sb **17 24 10.7 +0.4**
TACY Mexico City 2.72 20 eP Pg 17 23 39.0 -2.3
TACY eS Sb **17 24 12.2 +1.9**
PPSX Xalitzintla 2.74 35 eP Pn 17 23 31.8 -0.5
PPSX eS Sb **17 24 10.8 -0.1**
VRVM Mexico City 2.76 21 Sb 17 24 07.8 -3.7
VRVM Mexico City 2.76 21 eS Sb 17 24 07.8 -3.7
CTVM Cuauhtemoc 2.76 20 Sb 17 24 11.6 -0.1
CTVM Cuauhtemoc 2.76 20 eS Sb 17 24 11.6 -0.1
PBVM Pinon 2.79 21 Pn 17 23 34.0 +1.4
PBVM Sb **17 24 11.1 -1.0**
PBVM Pinon 2.79 21 eP Pn 17 23 34.0 +1.4
PBVM eS Sb **17 24 11.1 -1.0**
APVM Azcapotzalco 2.79 19 Pb 17 23 35.5 -3.0
APVM Sn **17 24 07.6 +1.3**
APVM Azcapotzalco 2.79 19 eP Pb 17 23 35.5 -3.0
APVM eS Sn **17 24 07.6 +1.3**
AZVM Cuida Lopez Ma 2.86 17 Pb 17 23 36.9 -2.9
AZVM Sb **17 24 11.5 -3.0**
AZVM Cuida Lopez Ma 2.86 17 eP Pb 17 23 36.9 -2.9
AZVM eS Sb **17 24 11.5 -3.0**
PHPU Puebla 2.90 40 Pn 17 23 37.0 +2.5
PHPU Sb **17 24 16.2 +0.6**
PHPU Puebla 2.90 40 eP Pn 17 23 37.0 +2.5
PHPU eS Sb **17 24 16.2 +0.6**
ATVM ATLACOMULCO 2.93 6 Pn 17 23 37.5 +2.6
ATVM Sb **17 24 15.5 -1.0**
ATVM ATLACOMULCO 2.93 6 eP Pn 17 23 37.5 +2.6
ATVM eS Sb **17 24 15.5 -1.0**
MOIG Morelia 3.00 341 Pb 17 23 39.4 -2.6
MOIG Morelia 3.00 341 *i* P Pn 17 23 36.9 +1.2
PEIG Puerto Escondi 3.00 106 Pn 17 23 36.5 +0.9
PEIG Sb **17 24 16.8 -1.6**
PEIG Puerto Escondi 3.00 106 eP Pn 17 23 36.5 +0.9
PEIG eS Sb **17 24 16.8 -1.6**
TPIG Tehuac#an 3.10 59 Pn 17 23 36.5 -0.6
TPIG Pb 17 23 37.3 -6.4
TPIG Sb **17 24 20.4 -0.8**
TPIG Tehuac#an 3.10 59 eP Pn 17 23 36.5 -0.6
TPIG *i* P Pb 17 23 37.3 -6.4
TPIG eS Sb **17 24 20.4 -0.8**
ZUVM ZUMPANGO 3.15 19 Pb 17 23 42.5 -2.1
ZUVM Sb **17 24 20.2 -2.5**
ZUVM ZUMPANGO 3.15 19 eP Pb 17 23 42.5 -2.1
ZUVM eS Sb **17 24 20.2 -2.5**
URUA Uruapan 3.16 325 Pb 17 23 42.3 -2.4
URUA Sb **17 24 24.2 +1.3**
URUA Uruapan 3.16 325 eP Pb 17 23 42.3 -2.4
URUA eS Sb **17 24 24.2 +1.3**
VTVM Tizayuca 3.21 24 Pn 17 23 41.5 +2.8
VTVM Sn **17 24 17.8 +1.3**
VTVM Tizayuca 3.21 24 eP Pn 17 23 41.5 +2.8
VTVM eS Sn **17 24 17.8 +1.3**
TOIG Toxpalan 3.21 66 Pn 17 23 38.9 +0.4
TOIG Sb **17 24 24.6 +0.3**
TOIG Toxpalan 3.21 66 eP Pn 17 23 38.9 +0.4
TOIG eS Sb **17 24 24.6 +0.3**
ACAM Acambaro 3.24 351 Pb 17 23 44.3 -1.8
ACAM Sb **17 24 28.2 +2.9**
ACAM Acambaro 3.24 351 eP Pb 17 23 44.3 -1.8
ACAM eS Sb **17 24 28.2 +2.9**
OXIG Oaxaca 3.29 85 Pn 17 23 40.2 +0.5
OXIG Sn **17 24 15.8 -2.6**
VHO Vista Hermosa 3.29 85 eP Pn 17 23 40.2 +0.6
VHO eS Sn **17 24 15.8 -2.6**
OXBJ Oaxaca 3.29 85 Pb 17 23 43.6 -3.4
OXBJ Sb **17 24 28.2 +1.3**
OXBJ Oaxaca 3.29 85 eP Pb 17 23 43.6 -3.4
OXBJ eS Sb **17 24 28.2 +1.3**
OXLC Oaxaca 3.31 85 Pb 17 23 47.0 -0.4
OXLC Sb **17 24 28.8 +1.4**
OXLC Oaxaca 3.31 85 eP Pb 17 23 47.0 -0.4
OXLC eS Sb **17 24 28.8 +1.4**
MMIG Aquila 3.37 296 Pn 17 23 38.1 -2.6
MMIG Sn **17 24 22.3 +2.2**
MMIG Aquila 3.37 296 eP Pn 17 23 38.1 -2.6
MMIG eS Sn **17 24 22.3 +2.2**
DHIG Demacu 3.61 17 Pn 17 23 43.5 -0.7
DHIG Sn **17 24 25.6 -0.8**
DEIG Demacu 3.61 17 eP Pn 17 23 43.5 -0.7
DEIG eS Sn **17 24 25.6 -0.8**
HUIG Huatulco 4.03 105 Pn 17 23 50.0 +0.2
HUIG Sn **17 24 30.5 -5.9**
HUIG Huatulco 4.03 105 eP Pn 17 23 50.0 +0.2
HUIG eS Sn **17 24 30.5 -5.9**
IGIG Irapuato, Guan 4.06 344 Pb 17 23 55.9 -4.2
IGIG Sn **17 24 38.8 +1.4**
IGIG Irapuato, Guan 4.06 344 eP Pb 17 23 55.9 -4.2
IGIG eS Sn **17 24 38.8 +1.4**
CDAR Ciudad de Arme 4.23 300 eP Pn 17 23 54.1 +1.7
CDAR eS Sn **17 24 38.8 -2.5**
INCO Volcan de Coli 4.23 310 eP Pn 17 23 56.7 +3.8
INCO eS Sn **17 24 47.4 +5.4**
NEUV Arroyo Zacate 4.25 77 Pn 17 23 52.4 -0.4
NEUV Sn **17 24 38.7 -3.2**
NEUV Arroyo Zacate 4.25 77 eP Pn 17 23 52.4 -0.4
NEUV eS Sn **17 24 38.7 -3.2**
CEGR Campo Tres 4.34 306 Pn 17 23 56.5 +2.2
CEGR Sn **17 24 42.1 -2.3**
CEGR Campo Tres 4.34 306 eP Pn 17 23 56.5 +2.2
CEGR eS Sn **17 24 42.1 -2.3**
LVIG Laguna Verde 4.57 50 Pn 17 24 01.0 +3.8
LVIG Sn **17 24 52.3 +2.5**
LVIG Laguna Verde 4.57 50 eP Pn 17 24 01.0 +3.8
LVIG eS Sn **17 24 52.3 +2.5**
RPIG Rio Verde 5.03 2 Pn 17 24 09.0 +5.4
RPIG Sn **17 25 04.8 +3.5**
RPIG Rio Verde 5.03 2 eP Pn 17 24 09.0 +5.4
RPIG eS Sn **17 25 04.8 +3.5**
CMIG Matias Romero 5.05 86 Pn 17 24 02.8 -1.1
2.1nm,0.3s,baz=253,slow=12,SNR=15
CMIG Lg Lg 17 25 23.3
12nm,0.3s,baz=41,slow=6.8,SNR=4.7
4.7nm,0.3s
CMIG Matias Romero 5.05 86 Pn 17 24 02.8 -1.1
CMIG Sn **17 25 04.2 +2.5**
CMIG Matias Romero 5.05 86 eP Pn 17 24 02.8 -1.1
CMIG eS Sn **17 25 04.2 +2.5**
CJM Chamela 5.35 300 eP Pn 17 24 05.3 -2.6
CJM eS Sn **17 25 01.9 -7.1**
ANIG Ahuacatlan 5.89 316 Pn 17 24 17.3 +1.9
ANIG Sn **17 25 23.9 +1.5**
ANIG Ahuacatlan 5.89 316 eP Pn 17 24 17.3 +1.9
ANIG eS Sn **17 25 23.9 +1.5**
GTIG Gomez Farias 6.27 8 Pn 17 24 16.8 -3.8
GTIG Sn **17 25 31.1 -0.7**
GTIG Gomez Farias 6.27 8 eP Pn 17 24 16.8 -3.8
GTIG eS Sn **17 25 31.1 -0.7**
ZAIG Zacatecas 6.33 339 Pn Pn 17 24 25.4 +3.8
ZAIG Sn **17 25 28.2 -5.3**
ZAIG Zacatecas 6.33 339 eP Pn 17 24 25.7 +4.1
ZAIG eS Sn **17 25 28.2 -5.3**
ZAIG Zacatecas 6.33 339 P Pn 17 24 20.0 -1.6
LNIG Linares 8.05 4 Pn 17 24 39.1 -5.9
LNIG Sn **17 26 10.2 -5.4**
LNIG Linares 8.05 4 eP Pn 17 24 39.1 -5.9
LNIG eS Sn **17 26 10.2 -5.4**
RTAL Retalhuleu 8.47 105 Pn Pn 17 24 50.4 -0.4
APG El Apazote 9.50 100 Pn Pn 17 25 03.8 -1.3
0.1nm,0.3s,baz=225,slow=19,SNR=3.6
APG Sn **Sn 17 26 46.5 -5.0**
baz=229,slow=19,SNR=1.4
APG Lg Lg 17 27 40.0
baz=61,slow=23,SNR=3.9
APG LR LR 17 28 39.2
comp=Z,50nm,19.8s,baz=300,slow=38
PDIG Papasquiaro 9.52 330 Pn 17 25 12.4 +7.0
PDIG Sn **17 26 48.3 -3.7**
PDIG Papasquiaro 9.52 330 eP Pn 17 25 12.4 +7.0
PDIG eS Sn **17 26 48.3 -3.7**
PETF Flores 9.85 88 Pn Pn 17 25 06.7 -3.0
MTO3 Montecristo 10.68 102 Pn Pn 17 25 18.9 -2.4
HPIG 11.28 334 Pn Pn 17 25 28.9 -0.5
SLBS Sierra La Lagu 11.44 308 Pn 17 25 33.1 +1.6
LPIG La Paz 11.95 309 Lg Lg 17 29 10.4
43nm,0.3s,baz=245,slow=0.8,SNR=6.8
LPIG LR LR 17 29 52.6
comp=Z,395nm,18.3s,baz=115,slow=35
HNDO Hondo 12.67 3 Pn 17 25 46.5 -1.7
TXAR Lajitas Array 12.86 346 Pn Pn 17 25 52.7 +1.8
0.6nm,0.9s,baz=164,slow=14,SNR=4.8
TXAR Lg Lg 17 29 33.1
baz=152,slow=35,SNR=4.2
TXAR LR LR 17 31 31.1
comp=Z,539nm,18.6s,baz=150,slow=41
TXAR Lajitas Array 12.86 346 Pn **Pn 17 25 52.4 +1.5**
SAND Sanderson 13.19 353 Pn 17 25 59.0 +3.6
JCT Junction City 13.59 1 Pn **Pn 17 25 59.2 -1.7**
ALPN Alpine 13.85 347 Pn 17 26 01.7 -2.8
OZNA Ozona 14.06 357 Pn 17 26 09.3 +2.0
435B Jarrell 14.09 9 Pn **Pn 17 26 07.5 -0.1**
TPB05 Hovey Rd 14.32 349 Pn 17 26 13.1 +2.2
BRDY Brady 14.43 4 Pn 17 26 12.3 -0.1
TPB01 Permian Basin 14.43 347 Pn **Pn 17 26 15.5 +3.0**
VHRN Van Horn 14.57 343 Pn 17 26 16.7 +2.2
MNRH Monahans 14.64 351 Pn 17 26 17.1 +1.9
PECS Pecos 14.86 348 Pn **Pn 17 26 20.1 +1.8**
SGCY Sterling City 15.04 357 Pn 17 26 22.2 +1.5
SGCY lAmb lAmb 17 26 27.4
comp=Z,24nm,1.1s
441A DeRidder 15.25 23 Pn 17 26 22.4 -0.9
TPB28 15.29 346 Pn 17 26 25.5 +1.4
TPB28 lAmb lAmb 17 26 34.4
comp=Z,12nm,1.2s
WHTX Lake Whitney, 15.29 9 Pn 17 26 24.1 +0.1
WHTX lAmb lAmb 17 26 30.5
comp=Z,39nm,1.0s
MNTX Cornudas Mount 15.54 343 P 17 26 30.0 -1.4
MNTX Cornudas Mount 15.54 343 P **P 17 26 30.8 -0.7**
FW13 Cleburne 15.65 9 Pn 17 26 28.3 -0.3
FW13 lAmb lAmb 17 26 35.9
comp=Z,53nm,1.2s
HSIG 15.67 323 lAmb lAmb 17 26 36.9
comp=Z,26nm,1.1s
JUD3 Juan Diaz 3 15.68 113 Pn 17 26 26.1 -3.0
ABTX Abilene, Hawle 15.73 2 Pn 17 26 30.0 +0.3
ABTX lAmb lAmb 17 26 41.5
comp=Z,44nm,1.3s
CLNB Carlsbad 15.73 348 Pn **P 17 26 31.7 -1.9**
GDL2 Guadalupe Moun 15.77 347 Pn 17 26 31.7 +1.4
PLPT Palo Pinto 16.00 6 Pn 17 26 33.0 -0.1
PLPT lAmb lAmb 17 26 45.5
comp=Z,59nm,1.2s
FW06 Azle 16.24 8 lAmb lAmb 17 26 41.8
comp=Z,27nm,0.8s
APMT Aspermont 16.43 0 lAmb lAmb 17 26 49.2
comp=Z,34nm,0.8s
MSTX Muleshoe 17.23 353 lAmb lAmb 17 26 56.6
comp=Z,27nm,0.9s
DUN6 Lazy B Ranch 17.62 334 lAmb lAmb 17 27 11.0
comp=Z,56nm,1.4s
Z41A Richland Creek 17.65 21 Pn 17 26 52.4 -1.5
Z41A lAmb lAmb 17 27 03.8
comp=Z,44nm,0.8s
WMOK Wichita Mounta 17.88 4 Pn 17 26 54.5 -2.2
WMOK Wichita Mounta 17.88 4 P **Pn 17 26 55.6 -1.1**
WLAR White Oak Lake 17.94 19 Pn **Pn 17 26 56.3 -1.2**
WLAR lAmb lAmb 17 27 05.8
comp=Z,72nm,1.3s
AMTX Amarillo 18.03 356 Pn 17 26 58.1 -0.6
TUC Tucson 18.17 330 P **Pn 17 26 59.5 -0.9**
TUC Tucson 18.17 330 P **P 17 27 01.5 +0.9**
ANMO Albuquerque 18.90 344 Pn **Pn 17 27 09.9 +0.5**
comp=Z,0.1nm,0.3s,baz=140,slow=8.8,SNR=4.7
ANMO Lg Lg 17 32 49.8
comp=Z,0.1nm,0.3s,baz=29,slow=23,SNR=3.7
ANMO LR LR 17 34 58.9
comp=Z,456nm,18.1s,baz=166,slow=39
comp=Z,1.8nm,0.8s
ANMO Albuquerque 18.90 344 P **Pn 17 27 09.4 +0.1**
ANMO Albuquerque 18.90 344 P **Pn 17 27 10.8 +1.5**
OK052 Battle Ridge R 19.32 8 lAmb lAmb 17 27 20.5
comp=Z,28nm,0.9s
TUL3 Leonard 19.40 11 lAmb lAmb 17 27 36.2
comp=Z,33nm,1.0s
RTBA Rita Blanca 19.66 354 P 17 27 17.2 +0.2
WHAR Wooly Hollow 19.68 19 lAmb lAmb 17 27 25.9
comp=Z,24nm,1.0s
OK048 Pawnee Station 19.72 8 lAmb lAmb 17 27 26.3
comp=Z,27nm,1.0s
RLO Rose Lookout 19.79 12 lAmb lAmb 17 27 28.8
comp=Z,20nm,1.1s
U38A Gravette 20.19 14 lAmb lAmb 17 27 33.2
comp=Z,19nm,1.1s
T35A Sooner Cattle 20.27 8 P P 17 27 22.6 -0.8
T35A lAmb lAmb 17 27 42.8
comp=Z,13nm,0.7s
CAIB Caibarien 20.27 71 P P 17 27 21.4 -2.1
CAIB lAmb lAmb 17 27 26.3
comp=Z,28nm,1.2s
FCAR Ozark Folk Cen 20.29 19 lAmb lAmb 17 27 31.9
comp=Z,39nm,1.4s
T25A Trinidad 20.58 350 P 17 27 28.0 +1.0
LCAR Lake Charles 20.77 21 lAmb lAmb 17 27 34.7
comp=Z,18nm,1.0s
Y49A Blount Mountai 20.98 34 P 17 27 30.6 -0.6
Y49A lAmb lAmb 17 27 38.7
comp=Z,28nm,1.1s
X48A Hartselle 21.12 31 P 17 27 31.3 -1.3
X48A lAmb lAmb 17 27 43.7
comp=Z,13nm,0.8s
WUAZ Wupatki 21.13 334 lAmb lAmb 17 27 46.1
comp=Z,13nm,0.8s
BLYC Blythe 21.23 325 lAmb lAmb 17 27 44.2
comp=Z,18nm,0.9s
MVCO Mesa Verde 21.60 342 P P 17 27 40.0 +1.9
IRM Iron Mountain 21.88 325 lAmb lAmb 17 27 44.8
comp=Z,15nm,1.1s
FPAL Fort Paine 21.93 34 lAmb lAmb 17 27 52.3
comp=Z,19nm,0.9s
W13A Hualapai Mount 21.94 329 lAmb lAmb 17 27 54.2
comp=Z,12nm,0.8s
WVT Waverly 22.12 27 P 17 27 42.5 -1.0
WVT lAmb lAmb 17 27 47.2
comp=Z,23nm,1.2s
WVT Waverly 22.12 27 P P 17 27 43.1 -0.4
PFO Pinyon Flats O 22.23 322 LR LR 17 37 05.2
comp=Z,194nm,18.1s,baz=178,slow=38
Y52A Lilburn 22.29 37 lAmb lAmb 17 27 56.1
comp=Z,11nm,0.8s
GOGA Godfrey 22.33 39 lAmb lAmb 17 27 48.9
comp=Z,24nm,0.9s
GOGA Godfrey 22.33 39 P P 17 27 45.1 -0.6
X51A Calhoun 22.35 35 lAmb lAmb 17 27 57.3
comp=Z,17nm,0.9s
R40A Maddies Statio 22.47 16 lAmb lAmb 17 28 00.2
comp=Z,15nm,0.8s
W50A Signal Mountai 22.59 33 lAmb lAmb 17 28 14.4
comp=Z,15nm,0.9s
S44A Carbondale 22.90 23 lAmb lAmb 17 28 00.3
comp=Z,25nm,1.0s
HMU Henry Mountain 23.00 338 lAmb lAmb 17 27 56.8
comp=Z,27nm,1.0s
KNB Kanab 23.02 333 lAmb lAmb 17 28 03.7
comp=Z,12nm,1.1s
MTPC Mountain Pass 23.10 326 lAmb lAmb 17 27 58.3
comp=Z,13nm,1.1s
T47A Sharon Grove 23.16 27 lAmb lAmb 17 28 04.7
comp=Z,14nm,0.8s
CPCT Cooper Cave 23.20 34 lAmb lAmb 17 28 03.3
comp=Z,9.9nm,0.8s
ISCO Idaho Springs 23.37 349 P P 17 27 57.8 +1.0
U49A Red Boiling Sp 23.39 30 lAmb lAmb 17 27 56.6
comp=Z,11nm,1.0s
HODGE Hodges 23.62 39 lAmb lAmb 17 28 00.6
comp=Z,21nm,1.1s
MTPU Mount Pierson 23.63 336 lAmb lAmb 17 28 09.7
comp=Z,14nm,0.8s
P40A Paris 23.70 16 lAmb lAmb 17 28 09.7
comp=Z,14nm,1.0s
BG3 Lake Jocassee 23.75 37 lAmb lAmb 17 28 02.3
comp=Z,17nm,0.9s
TKL Tuckaleechee C 23.76 35 lAmb lAmb 17 28 06.9
comp=Z,15nm,1.1s
Q44A Meyer Farm, Va 24.05 22 lAmb lAmb 17 28 11.6
comp=Z,16nm,0.8s
QSM Queen of Sheba 24.16 325 lAmb lAmb 17 28 17.6
comp=Z,22nm,1.4s
V53A Saluda 24.30 36 lAmb lAmb 17 28 20.1
comp=Z,14nm,0.7s
P18A Preston Nutter 24.36 341 lAmb lAmb 17 28 19.1
comp=Z,13nm,1.2s
CLC China Lake 24.46 324 lAmb lAmb 17 28 41.1
comp=Z,6.0nm,0.5s
TZTN Tazewell 24.54 34 P P 17 28 06.5 -1.0
WCI Wyandotte Cave 24.55 27 P P 17 28 07.0 -0.6
WCI lAmb lAmb 17 28 18.6
comp=Z,13nm,0.7s
WCI Wyandotte Cave 24.55 27 P P 17 28 07.5 -0.1
TPNV Topopah Spring 24.58 328 lAmb lAmb 17 28 13.0
comp=Z,13nm,1.1s
WCT Wildcat Mounta 24.65 327 lAmb lAmb 17 28 13.6
comp=Z,10nm,1.1s
KMSC Kings Mountain 24.80 39 lAmb lAmb 17 28 19.2
comp=Z,20nm,1.0s
BIRD Birdtown, Kers 25.01 41 P P 17 28 12.3 +0.5
BSUT Blindstream Ca 25.35 341 lAmb lAmb 17 28 18.8
comp=Z,9.2nm,1.0s
V55A Taylorsville 25.35 38 lAmb lAmb 17 28 23.9
comp=Z,14nm,0.8s
GMN Gold Mountain 25.37 327 lAmb lAmb 17 28 27.0
comp=Z,10nm,0.8s
R50A Paris 25.49 30 lAmb lAmb 17 28 17.4
comp=Z,11nm,1.2s
DUG Dugway, Tooele 25.74 337 P P 17 28 21.4 +2.8
DUG pP **sP 17 28 27.6 +1.0**
TPH Tonopah 25.94 328 lAmb lAmb 17 28 30.6
comp=Z,8.2nm,0.9s
Q51A Peebles, 26.55 30 lAmb lAmb 17 28 33.0
comp=Z,12nm,0.7s
HWUT Hardware Ranch 26.57 341 P P 17 28 28.4 +2.2
O48B Farmland 26.73 26 lAmb lAmb 17 28 27.4
comp=Z,15nm,0.8s
LHV Little Huntoon 26.73 327 lAmb lAmb 17 28 46.7
comp=Z,8.8nm,1.1s
NVAR Mina Array Bea 26.76 327 P P 17 28 30.9 +3.0
comp=Z,6.6nm,0.9s,baz=153,slow=9.6,SNR=22
NVAR LR LR 17 39 34.4
comp=Z,189nm,18.7s,baz=154,slow=38
comp=Z,6.6nm,0.9s
NVAR Mina Array Bea 26.76 327 P P 17 28 30.7 +2.8
ECSD EROS Data Cent 26.99 6 P P 17 28 30.1 +0.5
PDAR Pinedale Array 27.07 345 P P 17 28 31.9 +1.3
comp=Z,2.1nm,0.9s,baz=143,slow=10,SNR=15
PDAR LR LR 17 38 59.6
comp=Z,63nm,19.4s,baz=168,slow=36
comp=Z,2.1nm,0.9s
PDAR Pinedale Array 27.07 345 P 17 28 31.4 +0.7
ELK Elko 27.17 334 LR LR 17 40 37.7
comp=Z,340nm,18.0s,baz=159,slow=39
N49A Columbus Grove 27.69 27 lAmb lAmb 17 28 37.5
comp=Z,8.6nm,0.8s
PNTR Pine Nut 27.93 326 lAmb lAmb 17 28 50.7
comp=Z,8.5nm,0.8s
S57A Dark Hollow, R 27.98 38 lAmb lAmb 17 28 47.6
comp=Z,9.7nm,0.7s
O52A Adamsville 28.13 31 lAmb lAmb 17 28 40.6
comp=Z,13nm,0.9s
T59A Double "B" Far 28.31 40 P P 17 28 41.4 -0.1
T59A lAmb lAmb 17 28 50.4
comp=Z,10nm,0.9s
HLID Hailey 29.27 339 P P 17 28 50.2 +0.1
SDV Santo Domingo 29.82 102 LR LR 17 41 01.1
comp=Z,106nm,19.9s,baz=52,slow=37
WVOR Wild Horse Val 30.02 332 P P 17 28 59.4 +2.6
WVOR pP **sP 17 29 05.4 +0.6**
PAOC Oil Creek Stat 30.26 31 lAmb lAmb 17 29 01.1
comp=Z,13nm,1.1s
J08A Circle Bar Ran 30.68 333 lAmb lAmb 17 29 06.1

comp=Z,8.9nm,0.8s
YBH **Yreka Blue Hor** 31.48 327 LR LR 17 41 42.8
comp=Z,90nm,20.4s,baz=159,slow=36
AGMN **Agassiz Nation** 31.58 5 IAmb IAmb 17 29 12.5
comp=Z,8.7nm,1.1s
AGMN **Agassiz Nation** 31.58 5 P **P** **17 29 10.7 +0.4**
ATAH **Atahualpa** 32.10 136 LR LR 17 39 54.7
comp=Z,60nm,18.9s,baz=351,slow=32
SJG **San Juan** 32.44 83 LR LR 17 42 39.5
comp=Z,64nm,21.9s,baz=124,slow=37
G08A **Pilot Rock** 32.46 335 IAmb IAmb 17 29 27.4
comp=Z,7.3nm,0.8s
SADO **Sadowa** 32.99 28 LR LR 17 44 45.3
comp=Z,109nm,18.8s,baz=152,slow=40
EPLO **Experimental L** 33.17 8 IAmb IAmb 17 29 32.1
comp=Z,5.0nm,0.7s
H04A **Detroit Lake** 33.39 331 IAmb IAmb 17 29 35.1
comp=Z,10nm,1.0s
BUKO **Buck Lake** 33.40 27 IAmb IAmb 17 29 26.7
comp=Z,7.0nm,0.7s
ULM **Lac du Bonnet** 33.52 5 P **P** **17 29 26.5 -0.8**
comp=Z,3.6nm,0.7s,baz=181,slow=10,SNR=4.9
ULM LR LR 17 42 50.5
comp=Z,64nm,18.6s,baz=63,slow=36
comp=Z,3.6nm,0.7s
ULM **Lac du Bonnet** 33.52 5 IAmb IAmb 17 29 28.1
comp=Z,4.5nm,0.8s
NEW **Newport** 34.29 340 LR LR 17 43 16.2
comp=Z,111nm,18.3s,baz=166,slow=36
LON **Longmire** 34.81 334 IAmb IAmb 17 29 48.0
comp=Z,5.3nm,0.8s
NCB **Newcomb** 34.82 34 IAmb IAmb 17 29 37.1
comp=Z,4.7nm,0.8s
B08A **Colville Reser** 35.14 338 IAmb IAmb 17 29 45.6
comp=Z,12nm,1.3s
FFC **Flin Flon** 37.85 358 **P** 17 30 04.8 +0.5
FFC IAmb IAmb 17 30 05.8
comp=Z,9.8nm,0.9s
FFC **Flin Flon** 37.85 358 P **P** **17 30 05.2 +0.9**
FFC pP **sP** **17 30 11.8 -0.6**
D62A **Allapoint, All** 39.60 34 IAmb IAmb 17 30 21.0
comp=Z,12nm,1.0s
BBB **Bella Bella** 41.62 334 LR LR 17 48 56.4
comp=Z,108nm,20.8s,baz=116,slow=38
V35K **Ketchikan** 45.33 335 P **P** **17 31 08.7 +3.0**
baz=135
LPAZ **La Paz** 45.61 135 LR LR 17 48 21.3
comp=Z,35nm,18.2s,baz=46,slow=34
SCHQ **Schefferville** 45.76 26 P **P** **17 31 07.9 -1.2**
comp=Z,10nm,0.8s,baz=223,slow=4.6,SNR=11
SCHQ LR LR 17 52 33.4
comp=Z,76nm,19.4s,baz=252,slow=39
comp=Z,10nm,0.8s
SCHQ **Schefferville** 45.76 26 **P** **17 31 09.3 +0.2**
T35M **Bob Quinn** 46.02 338 IAmb IAmb 17 31 15.0
comp=Z,5.2nm,0.8s
T35M **Bob Quinn** 46.02 338 P **P** **17 31 13.7 +2.6**
baz=138
CRAG **Craig** 46.05 335 P **P** **17 31 14.7 +3.4**
baz=133
U33K **Whale Pass** 46.49 335 P **P** **17 31 17.9 +3.1**
baz=134
KOTAN **Kotaneelee Air** 46.58 344 P **P** **17 31 17.8 +2.4**
baz=148
YKA **Yellowknife Ar** 46.73 351 P **P** **17 31 16.9 +0.4**
comp=Z,5.7nm,0.8s,baz=163,slow=7.5,SNR=38
comp=Z,5.7nm,0.8s
YKA **Yellowknife Ar** 46.73 351 P **P** **17 31 15.9 -0.6**
S34M **Telegraph Cree** 47.03 338 P **P** **17 31 22.1 +3.1**
baz=138
DLBC **Dease Lake** 47.03 339 P **P** **17 31 22.4 +3.2**
baz=139,SNR=8.7
TAOE **Nuku Hiva Isla** 47.07 240 *e*S **S** **17 38 06.8 -4.7**
comp=Z,49nm,23.2s
TAOE *e*LR LR 17 44 28.6
comp=Z,131nm,24.3s
TAOE *e*T T 18 21 27.3
comp=Z,25nm,0.2s
BLKN **Baker Lake** 47.53 2 **P** **17 31 22.9 +0.1**
WTLY **Watson Lake, Y** 47.93 341 P **P** **17 31 28.7 +2.6**
baz=142,SNR=11
MDP **Montagnes des** 47.95 98 LR LR 17 54 07.3
comp=Z,59nm,18.0s,baz=250,slow=39
S32K **Killisnoo** 48.01 336 P **P** **17 31 29.7 +3.1**
baz=133
R33M **Jennings River** 48.08 339 IAmb IAmb 17 31 31.5
comp=Z,7.5nm,1.1s
R33M **Jennings River** 48.08 339 P **P** **17 31 29.9 +2.6**
baz=139,SNR=8.7
Q32M **Nakina River** 48.21 338 P **P** **17 31 30.6 +2.2**
baz=137
TGTN **Hyland Airport** 48.90 343 P **P** **17 31 36.0 +2.5**
baz=143
S31K **Pelican** 49.00 335 P **P** **17 31 36.9 +2.7**
baz=132
WRGLY **Wrigley** 49.09 346 P **P** **17 31 36.5 +1.6**
baz=150
P32M **Atlin** 49.18 338 IAmb IAmb 17 31 39.3
comp=Z,5.2nm,1.1s
P32M **Atlin** 49.18 338 P **P** **17 31 38.3 +2.6**
baz=135
P33M **Teslin, Yukon** 49.31 339 P **P** **17 31 39.3 +2.6**
baz=137
SKAG **Skagway** 49.67 337 P **P** **17 31 42.1 +2.8**
baz=134
PLBC **Pleasant Camp** 50.05 337 P **P** **17 31 45.1 +2.8**
baz=132
N32M **Quiet Lake** 50.09 340 P **P** **17 31 45.2 +2.5**
baz=137
WHY **Whitehorse** 50.35 339 P **P** **17 31 47.2 +2.5**
baz=135
MMPY **Sheldon Lake,** 50.63 342 P **P** **17 31 49.7 +3.0**
baz=140,SNR=24
P29M **Windy Craggy** 50.69 336 P **P** **17 31 49.9 +2.7**
baz=131
O30N **Mendenhall** 50.85 338 IAmb IAmb 17 31 52.2
comp=Z,4.0nm,0.9s
O30N **Mendenhall** 50.85 338 P **P** **17 31 51.2 +2.8**
baz=133
N31M **Braeburn, Yuko** 51.24 339 P **P** **17 31 53.9 +2.7**
baz=134,SNR=5.4
M31M **Drury Creek, Y** 51.29 340 P **P** **17 31 54.3 +2.7**
baz=136,SNR=5.8
HYT **Haines Junctio** 51.40 338 P **P** **17 31 55.7 +3.1**
baz=132
O29M **Mount Kennedy** 51.45 337 P **P** **17 31 56.0 +3.0**
baz=130
N30M **Aishikik Lake** 51.68 338 IAmb IAmb 17 31 59.5
comp=Z,4.1nm,0.9s
N30M **Aishikik Lake** 51.68 338 P **P** **17 31 57.5 +2.9**
baz=133,SNR=7.4
YUK6 **Outpost Mounta** 51.79 337 P **P** **17 31 58.5 +2.8**
baz=131
PINM **Pinnacle** 51.97 336 P **P** **17 31 59.8 +3.1**
baz=128
YUK4 **Talbot Arm** 52.16 338 P **P** **17 32 01.6 +3.3**
baz=131
BRWY **Burwash Landin** 52.32 338 P **P** **17 32 02.4 +3.0**
baz=130
M30M **Minto, Yukon** 52.35 340 IAmb IAmb 17 32 02.9
comp=Z,4.8nm,0.9s
M30M **Minto, Yukon** 52.35 340 P **P** **17 32 02.3 +2.8**
baz=134,SNR=7.3
YUK8 **Steele Glacier** 52.53 337 P **P** **17 32 04.1 +2.9**
baz=130,SNR=5.0
M29M **Somme Creek** 52.82 339 IAmb IAmb 17 32 07.5
comp=Z,5.6nm,0.8s
M29M **Somme Creek** 52.82 339 P **P** **17 32 06.0 +2.9**
baz=132,SNR=11
YUK3 **Moose Creek** 53.10 337 P **P** **17 32 07.7 +2.4**
baz=129
L29M **L29M** 53.16 340 P **P** **17 32 08.0 +2.4**
baz=132,SNR=30
K29M **Barlow Dome** 53.46 340 IAmb IAmb 17 32 11.7
comp=Z,6.9nm,0.8s
K29M **Barlow Dome** 53.46 340 P **P** **17 32 10.1 +2.3**
baz=134,SNR=13
CRQE **Cirque** 53.49 335 P **P** **17 32 10.9 +2.9**
baz=126
J30M **Hart River** 53.61 342 IAmb IAmb 17 32 12.8
comp=Z,4.0nm,0.8s
J30M **Hart River** 53.61 342 P **P** **17 32 11.1 +2.2**
baz=135,SNR=7.0
BVCY **Beaver Creek** 53.65 338 P **P** **17 32 11.6 +2.5**
baz=129
ILON **Igloolik, Nuna** 53.75 8 **P** **17 32 09.6 -0.1**
MCARA **McCarthy VSAT** 53.83 336 P **P** **17 32 13.1 +2.7**
baz=126

H31M **Peel River** 53.94 343 IAmb IAmb 17 32 21.2
comp=Z,4.0nm,0.9s
H31M **Peel River** 53.94 343 P **P** **17 32 13.1 +2.0**
baz=138
H03N2 **Juan Fernandez** 53.94 158 T T 18 30 22.7
baz=338,slow=78,SNR=133
H03N1 **Juan Fernandez** 53.95 158 T T 18 30 23.8
baz=338,slow=78,SNR=145
H03N3 **Juan Fernandez** 53.96 158 T T 18 30 23.2
baz=338,slow=78,SNR=124
M27K **Edge Creek, AK** 53.99 337 IAmb IAmb 17 32 16.3
comp=Z,9.2nm,1.3s
M27K **Edge Creek, AK** 53.99 337 P **P** **17 32 13.8 +2.1**
baz=128
I30M **Mount Dempster** 54.09 342 IAmb IAmb 17 32 15.2
comp=Z,4.7nm,0.8s
I30M **Mount Dempster** 54.09 342 P **P** **17 32 14.3 +1.9**
baz=136,SNR=11
GLB **Gilahina Butte** 54.17 336 IAmb IAmb 17 32 16.8
comp=Z,7.8nm,1.0s
BMRM **Bremner River** 54.22 335 P **P** **17 32 15.7 +2.4**
baz=124
BCAR **Beaver Creek A** 54.40 338 **P** **17 32 16.0 +1.5**
L27K **Beaver Creek,** 54.41 338 P **P** **17 32 16.8 +2.1**
baz=128
M26K **Nabesna, AK** 54.43 337 IAmb IAmb 17 32 18.3
comp=Z,4.1nm,0.8s
M26K **Nabesna, AK** 54.43 337 P **P** **17 32 16.8 +2.0**
baz=127
EYAK **Cordova Ski Ar** 54.45 334 P **P** **17 32 17.4 +2.5**
baz=123
N25K **Chitina, Valde** 54.58 336 P **P** **17 32 18.1 +2.2**
baz=124
G31M **Satah River** 54.76 344 P **P** **17 32 18.7 +1.6**
baz=139,SNR=12
P23K **Montague Islan** 54.86 333 P **P** **17 32 20.3 +2.3**
baz=120
L26K **Log Cabin Wild** 54.94 338 P **P** **17 32 20.3 +1.8**
baz=127
EPYK **Eagle Plains** 55.01 343 IAmb IAmb 17 33 03.1
comp=Z,5.5nm,1.1s
EPYK **Eagle Plains** 55.01 343 P **P** **17 32 20.6 +1.6**
baz=136
F31M **Tsiigehtchic** 55.02 345 P **P** **17 32 19.9 +1.0**
baz=140
MENT **Mentasta** 55.02 337 IAmb IAmb 17 32 21.9
comp=Z,4.1nm,0.8s
KLU **Klutina** 55.04 335 IAmb IAmb 17 32 31.6
comp=Z,7.1nm,1.0s
KLU **Klutina** 55.04 335 P **P** **17 32 21.4 +2.1**
baz=123
GLI **Glacier Island** 55.19 334 P **P** **17 32 22.7 +2.4**
baz=121
HARP **HAARP** 55.25 336 P **P** **17 32 23.2 +2.5**
baz=124
G30M **tAoh Zraii Nji** 55.32 344 P **P** **17 32 22.9 +1.7**
baz=136
I28M **Miner Creek** 55.32 341 P **P** **17 32 22.8 +1.5**
baz=132
H29M **Whitestone** 55.38 342 **P** **17 32 23.1 +1.5**
H29M **Whitestone** 55.38 342 P **P** **17 32 23.4 +1.9**
baz=134,SNR=10
M24K **Tolsona, Glenn** 55.48 336 P **P** **17 32 24.1 +1.7**
baz=123
INK **Inuvik** 55.63 346 IAmb IAmb 17 32 25.6
comp=Z,5.5nm,0.8s
INK **Inuvik** 55.63 346 P **P** **17 32 24.4 +1.1**
baz=140,SNR=5.2
INK **Inuvik** 55.63 346 P **P** **17 32 24.7 +1.4**
F30M **Barrier River** 55.67 344 **P** **17 32 25.0 +1.3**
F30M **Barrier River** 55.67 344 P **P** **17 32 24.9 +1.3**
baz=137,SNR=10.0
SCRK **Sand Creek** 55.73 338 IAmb IAmb 17 32 27.6
comp=Z,5.5nm,0.9s
SCRK **Sand Creek** 55.73 338 P **P** **17 32 26.1 +1.7**
baz=126,SNR=8.0
G29M **Pine Creek** 55.76 343 IAmb IAmb 17 32 26.8
comp=Z,2.9nm,0.8s
G29M **Pine Creek** 55.76 343 P **P** **17 32 25.6 +1.3**
baz=134
SCM **Sheep Creek Mo** 55.79 335 P **P** **17 32 26.6 +1.9**
baz=122
RIDG **Independent Ri** 55.90 338 P **P** **17 32 27.5 +2.0**
baz=125,SNR=11
I27K **Kandik River** 55.95 341 IAmb IAmb 17 32 28.9
comp=Z,3.6nm,0.8s
I27K **Kandik River** 55.95 341 P **P** **17 32 27.9 +2.1**
baz=130,SNR=7.1
KNK **Knik Glacier** 56.03 334 P **P** **17 32 28.3 +2.0**
baz=120
SML **Sawmill** 56.18 335 P **P** **17 32 29.2 +1.7**
baz=121
KDAK **Kodiak Island** 56.23 329 P **P** **17 32 30.1 +2.4**
baz=114
I26K **Coal Creek Min** 56.26 340 P **P** **17 32 30.0 +2.1**
baz=128
K24K **Donnelly Dome** 56.28 338 P **P** **17 32 30.0 +1.9**
baz=124
H27K **Steamboat Moun** 56.33 341 IAmb IAmb 17 32 50.0
comp=Z,3.1nm,0.9s
H27K **Steamboat Moun** 56.33 341 P **P** **17 32 29.9 +1.5**
baz=130
WAT6 **Susitna Watana** 56.35 336 P **P** **17 32 30.7 +1.9**
baz=122
OHAK **Old Harbor** 56.36 328 P **P** **17 32 30.4 +1.7**
baz=113
RC01 **Rabbit Creek A** 56.41 334 P **P** **17 32 31.0 +2.0**
baz=119
DHY **Denali Highway** 56.47 336 P **P** **17 32 31.1 +1.4**
baz=122
HOM **Homer** 56.59 332 P **P** **17 32 32.4 +2.1**
baz=116
J25K **Salcha River,** 56.60 339 IAmb IAmb 17 32 34.2
comp=Z,3.2nm,0.9s
J25K **Salcha River,** 56.60 339 P **P** **17 32 32.4 +1.9**
baz=125,SNR=5.4
PMOR **Pomariorio Ree** 56.74 239 *e*T T 18 33 49.1
comp=Z,3.9nm,0.2s
G27K **Doyon Strip** 56.75 342 IAmb IAmb 17 32 33.7
comp=Z,4.0nm,0.7s
G27K **Doyon Strip** 56.75 342 P **P** **17 32 33.0 +1.6**
baz=130,SNR=9.5
F28M **Old Crow** 56.77 343 P **P** **17 32 32.8 +1.3**
baz=133
E29M **Blow River** 56.78 344 IAmb IAmb 17 32 34.3
comp=Z,5.2nm,1.0s
E29M **Blow River** 56.78 344 P **P** **17 32 33.2 +1.6**
baz=135,SNR=7.3
M22K **Willow** 56.89 334 P **P** **17 32 34.4 +2.0**
baz=119
HDA **Harding Lake** 57.05 338 IAmb IAmb 17 32 35.9
comp=Z,6.0nm,0.8s
HDA **Harding Lake** 57.05 338 P **P** **17 32 35.5 +2.0**
baz=124
A36M **Sachs Harbour** 57.09 351 P **P** **17 32 34.3 +0.7**
baz=151
PRP **Porcupine Dome** 57.18 339 P **P** **17 32 36.2 +1.5**
baz=126,SNR=14
O20K **Slope Mountain** 57.22 332 P **P** **17 32 37.0 +2.1**
baz=115
ILAR **Eielson Array** 57.23 338 P **P** **17 32 36.2 +1.5**
comp=Z,5.5nm,1.0s,baz=148,slow=5.2,SNR=36
comp=Z,5.5nm,1.0s
ILAR **Eielson Array** 57.23 338 **P** **17 32 35.4 +0.6**
CUT **Chulitna** 57.27 335 P **P** **17 32 36.8 +1.8**
baz=119
P19K **Oil Pt** 57.31 331 P **P** **17 32 37.2 +1.7**
baz=114
E28M **Babbage River** 57.36 344 IAmb IAmb 17 32 37.9
comp=Z,4.5nm,0.9s
E28M **Babbage River** 57.36 344 P **P** **17 32 36.8 +1.2**
baz=134,SNR=7.5
MCK **McKinley** 57.42 337 P **P** **17 32 37.8 +1.6**
baz=121
G26K **Porcupine Rive** 57.49 341 P **P** **17 32 38.0 +1.5**
baz=128
WRH **Wood River Hil** 57.49 338 IAmb IAmb 17 32 39.2
comp=Z,4.5nm,1.0s
SPCR **Spurr Chakacha** 57.52 333 P **P** **17 32 38.8 +1.8**
baz=116
L22K **Petersville** 57.53 335 IAmb IAmb 17 32 39.8
comp=Z,7.8nm,1.1s
L22K **Petersville** 57.53 335 P **P** **17 32 38.6 +1.5**
baz=118
SKT **Skwentna** 57.59 334 P **P** **17 32 38.9 +1.5**
baz=117
POKR **Poker Plat Res** 57.61 338 P **P** **17 32 38.6 +1.1**
baz=123

E27K **Coleen River** 57.64 343 IAmb IAmb 17 32 40.5
comp=Z,7.8nm,1.1s
E27K **Coleen River** 57.64 343 P **P** **17 32 39.1 +1.4**
baz=131,SNR=6.5
D28M **Stokes Point** 57.67 345 P **P** **17 32 38.9 +1.2**
baz=135
Q18K **Katmai Hardscr** 57.75 330 P **P** **17 32 40.0 +1.3**
baz=112
TRF **Thorofare Moun** 57.80 336 P **P** **17 32 40.4 +1.4**
baz=120,SNR=11
NEA2 **Nenana** 57.92 337 IAmb IAmb 17 32 49.1
comp=Z,9.6nm,1.4s
NEA2 **Nenana** 57.92 337 P **P** **17 32 41.2 +1.6**
baz=121
F26K **Sheenjek River** 58.06 342 P **P** **17 32 42.2 +1.5**
baz=128
KTH **Kantishna Hill** 58.09 336 IAmb IAmb 17 32 43.2
comp=Z,4.5nm,0.9s
G25K **Bearman Lake** 58.11 340 P **P** **17 32 42.6 +1.7**
baz=126
P18K **Big Mountain,** 58.14 330 P **P** **17 32 42.7 +1.4**
baz=112
H24K **Noodor Dome** 58.17 339 P **P** **17 32 42.8 +1.4**
baz=123,SNR=16
D27M **Malcolm River** 58.18 344 P **P** **17 32 42.6 +1.1**
baz=132
M20K **Styx River** 58.22 334 IAmb IAmb 17 32 44.5
comp=Z,6.8nm,1.0s
M20K **Styx River** 58.22 334 P **P** **17 32 43.4 +1.4**
baz=116
PPLA **Purkeypile** 58.29 335 P **P** **17 32 43.9 +1.5**
baz=117
O18K **Koktuh Hills** 58.31 331 P **P** **17 32 44.3 +1.8**
baz=112
I23K **Minto, Yukon-K** 58.31 338 P **P** **17 32 44.4 +2.0**
baz=121,SNR=13
N19K **Bonanza Creek** 58.36 332 P **P** **17 32 44.7 +1.8**
baz=114
F25K **Christian Rive** 58.45 341 IAmb IAmb 17 32 53.2
comp=Z,2.8nm,0.8s
F25K **Christian Rive** 58.45 341 P **P** **17 32 44.9 +1.5**
baz=127
CAST **Castle Rocks** 58.49 335 P **P** **17 32 44.8 +1.2**
baz=118,SNR=12
G24K **Hadwenzic Riv** 58.52 340 P **P** **17 32 45.2 +1.4**
baz=124,SNR=12
H23K **Yukon River** 58.74 339 IAmb IAmb 17 32 55.3
comp=Z,3.6nm,0.9s
H23K **Yukon River** 58.74 339 P **P** **17 32 47.1 +1.7**
baz=122
E25K **Arctic Village** 58.75 342 P **P** **17 32 46.9 +1.4**
baz=127
MLY **Manley** 58.76 337 P **P** **17 32 47.1 +1.6**
baz=120,SNR=13
M19K **Big River Lodg** 58.77 333 P **P** **17 32 47.1 +1.4**
baz=114
CHUM **Lake Minchumin** 58.80 336 P **P** **17 32 47.3 +1.5**
baz=118
CHNA **Chernabura Isl** 58.90 324 P **P** **17 32 48.1 +1.5**
baz=106
N18K **Kilae Creek** 58.94 332 P **P** **17 32 48.3 +1.4**
baz=112
L19K **White Mountain** 59.09 333 P **P** **17 32 49.0 +1.2**
baz=114
F24K **Squaw Lake** 59.11 341 P **P** **17 32 49.1 +1.1**
baz=124
C27K **Jago River** 59.16 344 P **P** **17 32 49.4 +1.1**
baz=130
O17K **Koliganek Bris** 59.16 330 P **P** **17 32 50.0 +1.6**
baz=111
M18K **Stony River** 59.23 333 P **P** **17 32 50.1 +1.3**
baz=113
K20K **Telida** 59.26 335 P **P** **17 32 50.4 +1.4**
baz=116,SNR=6.7
I21K **Tanana** 59.29 337 P **P** **17 32 50.7 +1.5**
baz=119
G23K **Bananza Creek** 59.37 339 IAmb IAmb 17 32 52.5
comp=Z,5.2nm,0.9s
G23K **Bananza Creek** 59.37 339 P **P** **17 32 50.9 +1.1**
baz=122,SNR=7.6
H22K **Ishtalina Cre** 59.42 338 IAmb IAmb 17 32 52.2
comp=Z,5.3nm,0.8s
H22K **Ishtalina Cre** 59.42 338 P **P** **17 32 51.7 +1.6**
baz=120,SNR=9.8
PPT **Papeete** 59.47 237 LR LR 17 52 55.6
comp=Z,49nm,18.1s,baz=344,slow=30
N17K **Nushagak Hills** 59.48 331 P **P** **17 32 52.3 +1.8**
baz=111
PPT2 **Papeete2** 59.48 237 *e*LR LR 17 50 18.1
comp=Z,94nm,25.2s
PPT2 *e*LR LR 17 50 25.2
comp=Z,104nm,24.2s
SDPT **Sand Point** 59.53 325 P **P** **17 32 52.6 +1.6**
baz=105
O16K **Kokwok River B** 59.58 330 P **P** **17 32 53.2 +1.9**
baz=110
E24K **Your Creek** 59.61 341 P **P** **17 32 52.7 +1.2**
baz=124
J20K **Nowinta River** 59.65 336 P **P** **17 32 53.2 +1.6**
baz=118,SNR=8.3
C26K **Camden Bay** 59.67 344 P **P** **17 32 52.5 +0.8**
baz=128
COLD **Coldfoot** 59.70 340 P **P** **17 32 53.6 +1.6**
baz=122
D25K **Kavik River** 59.71 343 P **P** **17 32 53.2 +1.1**
baz=127,SNR=7.6
H21K **Melozitna Rive** 59.82 338 IAmb IAmb 17 32 54.9
comp=Z,5.7nm,0.9s
H21K **Melozitna Rive** 59.82 338 P **P** **17 32 54.0 +1.1**
baz=118,SNR=7.2
L18K **Granite Mounta** 59.89 333 P **P** **17 32 55.0 +1.7**
baz=112
M17K **Holitna River** 59.91 332 P **P** **17 32 55.6 +2.0**
baz=111
E23K **Chandalar** 59.96 341 P **P** **17 32 55.2 +1.3**
baz=123,SNR=7.6
G22K **Bettles** 59.98 339 P **P** **17 32 55.5 +1.6**
baz=120
I20K **Naaghedeneel** 60.05 336 P **P** **17 32 55.4 +1.0**
baz=116
J19K **Poorman** 60.16 335 **P** **17 32 55.7 +0.6**
J19K **Poorman** 60.16 335 P **P** **17 32 56.2 +1.0**
baz=114,SNR=9.0
N16K **Nishlik Lake** 60.20 331 P **P** **17 32 56.7 +1.2**
baz=109
TOLK **Toolik Lake Re** 60.26 341 P **P** **17 32 57.0 +1.1**
baz=123
O15K **Ungalikthiuk R** 60.28 329 P **P** **17 32 57.3 +1.2**
baz=108
D24K **Happy Valley** 60.32 342 P **P** **17 32 57.1 +0.9**
baz=124
M16K **Timber Creek** 60.47 331 P **P** **17 32 58.9 +1.5**
baz=110
ILULI **Ilulissat** 60.47 18 P **P** **17 33 01.5 +4.3**
ILULI **Ilulissat** 60.47 18 P **P** **17 33 01.5 +4.3**
G21K **Allakaket** 60.48 338 P **P** **17 32 58.6 +1.2**
baz=118
F22K **John River** 60.50 340 P **P** **17 32 59.2 +1.7**
baz=120,SNR=8.7
H20K **Anotleneega Mo** 60.51 337 P **P** **17 32 58.6 +1.0**
baz=116,SNR=9.4
L17K **Donlin** 60.56 333 P **P** **17 32 59.3 +1.4**
baz=111
K17K **Iditarod** 60.77 333 P **P** **17 33 00.8 +1.4**
baz=111
D23K **Nanushuk River** 60.78 341 **P** **17 33 00.7 +1.3**
D23K **Nanushuk River** 60.78 341 P **P** **17 33 00.9 +1.6**
baz=122
F21K **Alatna River** 60.81 339 **P** **17 32 59.7 +0.1**
F21K **Alatna River** 60.81 339 P **P** **17 33 00.9 +1.3**
baz=118,SNR=11
L16K **Owhat River** 60.93 332 P **P** **17 33 01.9 +1.4**
baz=109
O14K **Tigyukauivet M** 61.01 329 P **P** **17 33 02.2 +1.1**
baz=106
M15K **Kasigluk River** 61.16 331 P **P** **17 33 03.4 +1.3**
baz=108
C23K **Itkillik River** 61.23 342 **P** **17 33 04.2 +1.8**
C23K **Itkillik River** 61.23 342 P **P** **17 33 03.8 +1.5**
baz=122
J17K **VABM Dome** 61.34 334 P **P** **17 33 04.7 +1.4**
baz=111
N14K **Kuskokwak Cree** 61.41 330 P **P** **17 33 05.4 +1.7**
baz=106
F20K **Avaraart Lake** 61.51 338 IAmb IAmb 17 33 07.4
comp=Z,3.1nm,0.9s
F20K **Avaraart Lake** 61.51 338 P **P** **17 33 05.8 +1.6**
baz=116,SNR=5.2

E21K	**Killik River** baz=118	**61.55**	**340**	P	**P**	**17 33 05.8 +1.2**
G19K	**Purcell Mounta** baz=114,SNR=13	**61.61**	**337**	P	**P**	**17 33 06.4 +1.4**
H18K	**Honhosa River** baz=112	**61.70**	**336**	P	**P**	**17 33 07.4 +1.7**
M14K	**Bethel** baz=106	**61.78**	**331**	P	**P**	**17 33 07.6 +1.4**
J16K	**Anvik River** baz=109	**61.95**	**334**	P	**P**	**17 33 09.1 +1.7**
G18K	**Tagagawik** baz=112	**62.10**	**337**	P	**P**	**17 33 09.9 +1.5**
F19K	**Shaleruckik Mo** comp=Z,4.4nm,0.8s	**62.15**	**338**	IAmb	IAmb	17 33 18.9
F19K	**Shaleruckik Mo** baz=114,SNR=5.7	**62.15**	**338**	P	**P**	**17 33 09.9 +1.4**
C21K	**Knifeblade Rid** baz=118,SNR=5.1	**62.15**	**341**	P	**P**	**17 33 10.2 +1.6**
I17K	**Unalakleet** baz=109	**62.19**	**334**	P	**P**	**17 33 10.3 +1.4**
E20K	**Nigu River** baz=116	**62.20**	**340**	P	**P**	**17 33 10.4 +1.4**
E19K	**Redstone River** baz=114	**62.21**	**339**	P	**P**	**17 33 10.7 +1.7**
H17K	**Granite Mounta** baz=111	**62.24**	**335**	P	**P**	**17 33 10.6 +1.4**
L14K	**Kuka Creek** baz=106	**62.28**	**331**	P	**P**	**17 33 11.1 +1.5**
B22K	**Teshekpuk Lake** baz=120	**62.31**	**342**	P	**P**	**17 33 10.6 +1.0**
B21K	**Ikpikpuk River** baz=118	**62.32**	**341**	P	**P**	**17 33 10.7 +1.0**
M13K	**Dall Lake** baz=105	**62.34**	**330**	P	**P**	**17 33 11.8 +1.8**
D20K	**Etivluk River** baz=116	**62.54**	**340**	P	**P**	**17 33 12.9 +1.6**
UNV	**Unalaska Valle** baz=99	**62.65**	**322**	P	**P**	**17 33 13.7 +1.6**
G17K	**Kiwalik Mount** baz=110	**62.73**	**336**	P	**P**	**17 33 14.0 +1.5**
F18K	**Selawik** baz=112	**62.74**	**337**	P	**P**	**17 33 14.0 +1.4**
D19K	**Kuna River** baz=114	**62.95**	**339**	P	**P**	**17 33 15.0 +1.0**
H16K	**Elim** baz=108	**63.08**	**335**	P	**P**	**17 33 16.4 +1.6**
B20K	**Meade River** baz=116	**63.28**	**341**	P	**P**	**17 33 17.1 +1.0**
F17K	**Baldwin Pennin** baz=110	**63.28**	**337**	P	**P**	**17 33 17.5 +1.3**
K13K	**Kusilvak Mount** baz=104	**63.35**	**331**	P	**P**	**17 33 18.4 +1.7**
G16K	**Koyuk River** baz=108	**63.36**	**336**	P	**P**	**17 33 18.3 +1.6**
E18K	**Tukpahlearik C** baz=111	**63.39**	**338**	P	**P**	**17 33 18.0 +1.1**
C19K	**Lookout Ridge** baz=113	**63.68**	**340**	P	**P**	**17 33 20.1 +1.3**
A21K	**Barrow** baz=117	**63.71**	**343**	P	**P**	**17 33 20.7 +1.8**
E17K	**Hotham Inlet** baz=110	**63.72**	**337**	P	**P**	**17 33 20.5 +1.5**
G15K	**Niuluk** baz=107	**63.92**	**335**	P	**P**	**17 33 21.7 +1.3**
C18K	**Utukok River** baz=111	**64.05**	**339**	P	**P**	**17 33 22.9 +1.6**
ANM	**Nome** baz=105	**64.35**	**334**	P	**P**	**17 33 25.0 +1.8**
F15K	**North Star Dit** baz=106	**64.37**	**336**	P	**P**	**17 33 25.6 +2.2**
D17K	**Noatak River** baz=109	**64.38**	**338**	P	**P**	**17 33 25.0 +1.6**
C17K	**DeLong Mountai** baz=109	**64.67**	**339**	P	**P**	**17 33 27.0 +1.6**
F14K	**Arctic Creek** baz=105	**64.98**	**335**	P	**P**	**17 33 28.1 +0.8**
NEEM	**North Greenlan**	**65.29**	**10**	*i* P	**P**	**17 33 28.5 -1.0**
C16K	**Lisburne Hills** baz=107	**65.37**	**338**	P	**P**	**17 33 30.3 +0.5**
TNA	**Tin City** baz=103	**65.64**	**335**	P	**P**	**17 33 32.5 +0.8**
SUMG	**Summit**	**65.72**	**17**		**P**	**17 33 33.1 +0.5**
SUMG	**Summit**	**65.72**	**17**	P	**P**	**17 33 34.4 +1.8**
SUMG	**Summit**	**65.72**	**17**	*i* P	**P**	**17 33 33.0 +0.5**
GAMB	**Gambell** baz=99	**66.89**	**333**	P	**P**	**17 33 40.1 +0.4**
EKA	**Eskdalemuir Ar** comp=Z,1.0nm,0.8s,baz=307,slow=7.0,SNR=3.8 comp=Z,1.0nm,0.8s	**80.24**	**35**	P	**P**	**17 34 58.6 +0.3**
PETK	**Petropavlovsk-** comp=Z,2.6nm,0.8s,baz=88,slow=7.6,SNR=4.9 comp=Z,2.6nm,0.8s	**83.79**	**324**	P	**P**	**17 35 19.4 +2.4**
PETK	**Petropavlovsk-**	**83.79**	**324**	P	**P**	**17 35 17.4 +0.3**
ESDC	**Sonseca Array** comp=Z,1.5nm,1.0s,baz=298,slow=6.4,SNR=6.3 comp=Z,1.5nm,1.0s	**84.08**	**50**	P	**P**	**17 35 18.8 0.0**
ESDC	**Sonseca Array**	**84.08**	**50**	P	**P**	**17 35 17.1 -1.8**
MA2	**Magadan** comp=Z,32nm,18.8s,baz=350,slow=37	**84.93**	**331**	LR	LR	18 15 18.3
NOA	**NORSAR Array B** comp=Z,0.5nm,0.7s,baz=292,slow=4.8,SNR=3.7	**85.32**	**27**	P	**P**	**17 35 25.5 +0.8**
NOA	comp=Z,14nm,19.2s,baz=20,slow=37 comp=Z,0.5nm,0.7s			LR	LR	18 15 30.4
ARCES	**ARCESS Array B** comp=Z,2.3nm,0.9s,baz=356,slow=7.8,SNR=3.7 comp=Z,2.3nm,0.9s	**85.81**	**17**	P	**P**	**17 35 27.4 +0.5**
ARCES	**ARCESS Array B**	**85.81**	**17**	P	**P**	**17 35 26.6 -0.4**
HHC	**Hu-ho-hao-te**	**115.50**	**334**	*eP*	**PKiKP**	**17 41 30.6 +0.4**
ASAR	**Alice Springs** comp=Z,0.6nm,0.9s,baz=137,slow=2.7,SNR=4.8	**129.07**	**253**	PKP	**PKPdf**	**17 41 56.4 -0.2**
ASAR	**Alice Springs**	**129.07**	**253**		**PKPdf**	**17 41 54.5 -2.0**
PZH	**PanZhiHua**	**131.96**	**333**	PKP	**PKPdf**	**17 42 03.0 +0.9**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.8s,baz=59,slow=1.7,SNR=4.5	**140.21**	**331**	PKP	**PKPdf**	**17 42 18.3 +0.8**
CMAR	**Chiang Mai Arr**	**140.21**	**331**		**PKPdf**	**17 42 15.3 -2.2**

*NIED **08** 17:32:04.2, 37.26N× 142.26E, h26km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.66; Mθθ0.77; Mϕϕ-3.43; Mrθ2.27; Mθϕ-1.54; Mϕr6.48; Fault plane solution: M0 7.62000×10¹⁴ NP1: ϕs196.00000°, δ13.00000°, λ87.00000°. NP2:ϕs19.00000°, δ77.00000°, λ91.00000°.*

*JMA **08** 17:32:04.2±0.3, 37.3N±0.8× 14.2E±, h26km, MV3.9/36, E OFF FUKUSHIMA PREF*

*IDC **08** 17:32:06.6±4.2, 37.27N× 142.12E, h41km±35km, mb3.5/10, mbtmp3.7/13, ML3.1/3, MS3.3/7, Error ellipse: s-maj=38.5km s-min=18.2km az=70.0*

ISC 08 17:32:04.7±1.0, 37.14N±0.07× 142.41E±0.10, h35km, n43, σ1$82/31, mb3.7/10, MS3.3/3, 1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.24**	**281**	P		**Pn**	**17 32 24.1**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.28**	**269**	P		**Pn**	**17 32 24.9**	**-1.3**
JIKH	**Ishinomakikobu**	**1.39**	**328**	*i* P		**Pn**	**17 32 25.7**	**-1.9**
JMM	**Marumori**	**1.48**	**300**	↓P		**Pn**	**17 32 27.1**	**-1.6**
JIO	**Ouri**	**1.56**	**328**	P		**Pn**	**17 32 28.3**	**-1.5**
JOTO	**OTAMA OYAMA**	**1.70**	**285**	*i* P		**Pn**	**17 32 31.6**	**-0.3**
JOU	**Okura**	**1.85**	**312**	P		**Pn**	**17 32 33.3**	**-0.6**
JMK	**Ichinoseki**	**2.04**	**333**	*i* P		**Pn**	**17 32 36.1**	**-0.4**
JYS	**Shirataka**	**2.15**	**301**	P		**Pn**	**17 32 38.3**	**+0.3**
JFY	**Yanaizu**	**2.17**	**278**	P		**Pn**	**17 32 38.8**	**+0.5**
JYK	**Kaneyama**	**2.40**	**318**	P		**Pn**	**17 32 41.1**	**-0.4**
JAG	**Ashikaga**	**2.47**	**254**	P		**Pn**	**17 32 43.0**	**+0.5**
JOM	**Ohasama**	**2.49**	**340**	P		**Pn**	**17 32 42.6**	**-0.1**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=89,slow=15,SNR=21	**3.42**	**261**	P		**Pn**	**17 32 55.8**	**+0.3**
MJAR	12nm,0.8s,baz=79,slow=13,SNR=6.8			S		**Sn**	**17 33 38.8**	**+4.0**
MJAR	comp=Z,346nm,18.6s,baz=137,slow=45 4.5nm,0.6s			LR		LR	17 34 30.9	
MAJO	**Matsushiro**	**3.42**	**261**	P		Pn	17 32 59.9	+4.4
JGF	**Kuroka**	**4.35**	**251**	P		Pn	17 33 12.7	+4.3
JHJ2	**Mitsune**	**4.54**	**209**	P		**Pn**	**17 33 13.4**	**+2.5**
JHJ	**Hachijo jima 2** 12nm,0.3s,baz=241,slow=22,SNR=5.1	**4.55**	**209**	P		**Pn**	**17 33 12.4**	**+1.4**
JHJ	97nm,0.9s,baz=90,slow=22,SNR=1.8 27nm,0.3s			S		**Sn**	**17 33 57.6**	**-5.0**
INU	**Inuyama**	**4.71**	**249**	P		Pn	17 33 17.5	+4.3
ERM	**Erimo**	**4.91**	**7**	P		**Pn**	**17 33 17.6**	**+1.7**
JEM	**Erimo**	**4.91**	**7**	P		**Pn**	**17 33 17.6**	**+1.7**
USRK	**Ussuriysk Ar.** comp=Z,106nm,18.4s,baz=197,slow=37	**10.59**	**315**	LR	LR	17 38 29.3		
KSRS	**Korea Array** 0.1nm,0.3s,baz=88,slow=14,SNR=7.0	**11.54**	**276**	P		**Pn**	**17 34 44.7**	**-2.1**
KSRS	comp=Z,101nm,19.0s,baz=75,slow=37 0.5nm,0.7s			LR		LR	17 39 02.0	
KLR	**Kul'dur** comp=Z,78nm,18.2s,baz=172,slow=38	**14.35**	**331**	LR		LR	17 41 01.2	
HILR	**Hailar Array B** comp=Z,146nm,21.1s,baz=45,slow=38	**20.53**	**314**	LR		LR	17 44 51.6	
H11N2	**WAKE ISLAND Hy** baz=315,slow=75	**27.52**	**122**	T		T	18 06 48.2	
H11N1	**WAKE ISLAND Hy** baz=315,slow=75	**27.53**	**122**	T		T	18 06 47.4	
H11N3	**WAKE ISLAND Hy** baz=315,slow=75	**27.54**	**122**	T		T	18 06 44.2	
H11S1	**WAKE ISLAND Hy** baz=317,slow=76	**28.26**	**124**	T		T	18 07 40.7	
H11S3	**WAKE ISLAND Hy** baz=317,slow=76	**28.26**	**124**	T		T	18 07 40.3	
H11S2	**WAKE ISLAND Hy** baz=317,slow=76	**28.27**	**124**	T		T	18 07 40.5	
SONM	**Songino Array** 2.0nm,0.9s,baz=99,slow=9.2,SNR=4.5 2.0nm,0.9s	**28.39**	**304**	P	**P**	**17 37 55.4**	**-0.4**	
TLY	**Talaya** comp=Z,43nm,19.8s,baz=158,slow=38	**30.86**	**311**	LR	LR	17 51 15.0		
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=101,slow=5.3,SNR=4.8 0.7nm,0.5s	**42.43**	**312**	P	**P**	**17 39 53.5**	**-2.2**	
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=86,slow=8.0,SNR=10 0.5nm,0.6s	**44.74**	**302**	P	**P**	**17 40 12.4**	**-2.1**	
KURBB	**Kurchatov Arra** 1.4nm,0.5s,baz=81,slow=8.3,SNR=12 1.4nm,0.5s	**46.56**	**308**	P	**P**	**17 40 27.6**	**-1.2**	
ILAR	**Eielson Array** 0.2nm,0.6s,baz=279,slow=7.2,SNR=2.3 0.2nm,0.6s	**48.98**	**32**	P	**P**	**17 40 48.1**	**+0.7**	
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=76,slow=12,SNR=2.2 0.3nm,0.4s	**51.09**	**312**	P	**P**	**17 41 03.6**	**+0.1**	
INK	**Inuvik** comp=Z,39nm,18.8s,baz=118,slow=38	**53.93**	**27**	LR	LR	18 06 34.9		
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=4.8,slow=7.1,SNR=8.4 0.5nm,0.6s	**57.28**	**189**	P	**P**	**17 41 50.8**	**+1.9**	
ASAR	**Alice Springs** 0.4nm,0.8s,baz=1.4,slow=6.3,SNR=5.7 0.4nm,0.8s	**61.01**	**189**	P	**P**	**17 42 16.3**	**+1.7**	
FINES	**FINESS Array B** 1.2nm,0.8s,baz=46,slow=6.5,SNR=2.1 1.2nm,0.8s	**69.09**	**333**	P	**P**	**17 43 07.5**	**+0.9**	
AKASG	**Malin Array Be** 0.6nm,0.4s,baz=47,slow=5.2,SNR=5.3 0.6nm,0.4s	**74.70**	**323**	P	**P**	**17 43 41.1**	**+0.6**	

*IDC **08** 17:41:31.5±0.6, 66.13N× 18.73W, h0km, mb3.9/15, mbtmp4.0/22, ML3.4/6, MS3.6/27, Error ellipse: s-maj=15.7km s-min=11.8km az=1.0*

*REY **08** 17:41:32.0, 66.22N× 18.53W, h10km*

*GFZ **08** 17:41:32.6±0.3, 66.N±4.×1.9W±., h10km, M4.1/24, mb4.1/24*

*NEIC **08** 17:41:33.4±1.8, 66.09N±0.03× 18.7W±0.1, h10km±1km, mb4.2/48, Error ellipse: s-maj=10.9km s-min=3.1km az=66.0*

*DNK **08** 17:41:34.2±4.3, 66.36N× 18.20W, h18km±226km, ML2.5, Presumed earthquake*

ISC 08 17:41:32.1±1.0, 66.20N±0.03× 18.49W±0.02, h7km±6km, n208, σ1$74/196, mb4.1/52, MS3.6/24, 8D, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ISIG	**Siglufjorour**	**0.19**	**249**	P		**Pg**	**17 41 35.5**	**-0.4**
ISIG				S		**Sg**	**17 41 38.2**	**-0.2**
IBRE	**Brettingsstaoi**	**0.25**	**108**	P		**Pg**	**17 41 37.2**	**+0.3**
IBRE				S		**Sg**	**17 41 41.5**	**+1.2**
IHLA	**Hella**	**0.26**	**171**	P		**Pg**	**17 41 37.4**	**+0.2**
IHLA				S		**Sg**	**17 41 41.5**	**+0.8**
IGRI	**Grimsey**	**0.39**	**29**	P		**Pg**	**17 41 39.2**	**-0.5**
IGRI				S		**Sg**	**17 41 44.6**	**-0.3**
IGRA	**Granastaoir**	**0.47**	**127**	P		**Pg**	**17 41 40.9**	**-0.2**
IGRA				S		**Sg**	**17 41 47.6**	**+0.5**
IHED	**Heoinshofoi**	**0.49**	**103**	P		**Pg**	**17 41 41.2**	**-0.5**
IHED				S		**Sg**	**17 41 48.5**	**+0.5**
IHRN	**Hraun**	**0.67**	**263**	P		**Pg**	**17 41 43.4**	**-1.6**
IHRN				S		**Sg**	**17 41 52.2**	**-1.5**
IDIM	**Dimmadalss**	**0.68**	**110**	P		**Pg**	**17 41 44.0**	**-1.1**
ISKI	**Skildingahlsh**	**0.68**	**118**	P		**Pg**	**17 41 44.1**	**-1.1**
ISKI				S		**Sg**	**17 41 53.6**	**-0.5**
IKVO	**Krokottuvotn**	**0.82**	**126**	P		**Pg**	**17 41 46.4**	**-1.5**
IGHA	**Grjothals**	**0.83**	**115**	P		**Pg**	**17 41 46.7**	**-1.3**
ILEI	**Leirhofn**	**0.83**	**75**	P		**Pg**	**17 41 46.2**	**-1.9**
ILEI				S		**Sg**	**17 41 58.6**	**-0.3**
IGIL	**Gilhagi**	**0.88**	**97**	P		**Pg**	**17 41 47.3**	**-1.7**
IGIL				S		**Sg**	**17 41 59.4**	**-0.9**
IMEL	**Melhnausar**	**0.98**	**129**	P		**Pg**	**17 41 49.3**	**-1.6**
ISVA	**Svartarkot**	**1.00**	**149**	P		**Pg**	**17 41 49.7**	**-1.6**
ISVA				S		**Sg**	**17 42 03.4**	**-1.0**
IGRS	**Grimsstaoir**	**1.12**	**119**	P		**Pg**	**17 41 51.2**	**-2.6**
IGRS				S		**Sg**	**17 42 06.8**	**-1.4**
IASK	**Askja**	**1.38**	**146**	P		**Pn**	**17 41 55.7**	**-2.2**
IASK				S		**Sb**	**17 42 14.2**	**-2.0**
ISTE	**Stelbrattur**	**1.43**	**200**	P		**Pn**	**17 41 56.4**	**-2.2**
THOR	**Thorvaldshraun**	**1.48**	**149**	P		**Pn**	**17 41 57.0**	**-2.2**
IDYN	**Dyngjuhals**	**1.49**	**161**	P		**Pn**	**17 41 57.5**	**-2.0**
IMKO	**Mokollar**	**1.52**	**143**	P		**Pn**	**17 41 57.4**	**-2.4**
IVON	**Vonarskard**	**1.56**	**168**	P		**Pn**	**17 41 58.5**	**-1.9**
IKIS	**Kista**	**1.58**	**165**	P		**Pn**	**17 41 59.1**	**-1.7**
ISKR	**Skrokkalda**	**1.65**	**178**	P		**Pn**	**17 42 00.1**	**-1.5**
IKRE	**Kreppuhraun**	**1.67**	**147**	P		**Pn**	**17 41 59.6**	**-2.3**
IADA	**Aoalbol**	**1.69**	**133**	P		**Pn**	**17 41 59.7**	**-2.5**
IVSH	**V-Sauoahnukur**	**1.81**	**139**	P		**Pn**	**17 42 01.4**	**-2.4**
IGRF	**Grimsfjall**	**1.87**	**164**	P		**Pn**	**17 42 03.2**	**-1.6**
IASB	**sbjarnarstai**	**1.88**	**220**	P		**Pn**	**17 42 02.7**	**-2.0**
BORG	**Borgarnes** 1μm,0.3s,baz=27,slow=6.6,SNR=3351	**1.88**	**220**	Pn		**Pn**	**17 42 02.7**	**-2.0**
BORG	331nm,0.3s,baz=263,slow=16,SNR=25			Sn		**Sn**	**17 42 27.2**	**-1.4**
BORG	comp=Z,1μm,18.6s,baz=54,slow=46			LR		LR	17 42 51.5	
BORG	**Borgarnes**	**1.88**	**220**			**Pn**	**17 42 02.7**	**-2.0**
BORG					Sn	**Sn**	**17 42 26.6**	**-2.0**
BORG	**Borgarnes**	**1.88**	**220**	P		**Pn**	**17 42 02.8**	**-1.9**
IVOT	**Vottur**	**2.01**	**164**	P		**Pn**	**17 42 05.5**	**-1.1**
IGYG	**Gygjarholskot**	**2.06**	**201**	P		**Pn**	**17 42 05.5**	**-1.6**
IHES	**Hestalda**	**2.21**	**192**	P		**Pn**	**17 42 08.0**	**-1.2**
IKSK	**Karasker**	**2.22**	**157**	P		**Pn**	**17 42 07.7**	**-1.7**
IFED	**Fedgar**	**2.24**	**194**	P		**Pn**	**17 42 08.9**	**-0.8**
IKAL	**Kalfafell**	**2.29**	**171**	P		**Pn**	**17 42 09.4**	**-0.9**
IHEI	**Heioarbar**	**2.32**	**211**	P		**Pn**	**17 42 09.0**	**-1.7**
IMJO	**Mjoaskard**	**2.33**	**193**	P		**Pn**	**17 42 09.8**	**-1.2**
IMOR	**Morastadir**	**2.35**	**217**	P		**Pn**	**17 42 09.5**	**-1.7**
ISAU	**Saurbar**	**2.36**	**201**	P		**Pn**	**17 42 09.7**	**-1.6**
IKRO	**Krokur**	**2.39**	**209**	P		**Pn**	**17 42 10.1**	**-1.6**
IKVI	**Kvisker**	**2.39**	**158**	P		**Pn**	**17 42 10.3**	**-1.4**
IFAG	**Fagurholsmyri**	**2.46**	**161**	P		**Pn**	**17 42 12.0**	**-0.6**
IASM	**Asmuli**	**2.54**	**202**	P		**Pn**	**17 42 12.7**	**-1.1**
IRJU	**Rjupnafell**	**2.59**	**182**	P		**Pn**	**17 42 14.1**	**-0.4**
IKAS	**Kald??rsel**	**2.61**	**215**	P		**Pn**	**17 42 13.4**	**-1.3**
IVOS	**Vogsosar**	**2.72**	**212**	P		**Pn**	**17 42 15.1**	**-1.1**
IKRI	**Krysuvik**	**2.78**	**215**	P		**Pn**	**17 42 16.0**	**-1.1**
SCO	**Scoresbysund**	**4.49**	**345**	Pn		**Pn**	**17 42 37.7**	**-2.8**
SCO	**Scoresbysund**	**4.49**	**345**	P		**Pn**	**17 42 38.1**	**-2.4**
SCO	**Scoresbysund** baz=139,slow=9.3	**4.49**	**345**	*e*		**Pn**	**17 42 36.5**	**-4.0**
SCO				*i* P		**Pn**	**17 42 37.9**	**-2.6**
SCO				*i* S		**Sn**	**17 43 27.5**	**-5.4**
SCO	comp=Z,22nm,0.4s			IAML			17 43 33.4	
SOEG	**Soedalen**	**5.40**	**298**	*i* P		**Pn**	**17 42 53.7**	**+0.7**
SOEG				*i* S		**Sn**	**17 43 51.2**	**-4.1**
JMIC	**Jan Mayen** comp=Z,69nm,0.5s,baz=225,slow=15,SNR=4.1	**6.03**	**33**	Pn		**Pn**	**17 43 04.6**	**+2.9**
JMIC	comp=Z,380nm,20.8s,baz=232,slow=31			LR		LR	17 44 40.8	
DBG	**Daneborg**	**8.17**	**357**	*i*		Pn	17 43 38.4	+7.5
SUMG	**Summit**	**9.46**	**321**			**Pn**	**17 43 46.7**	**-2.3**
SUMG	**Summit**	**9.46**	**321**	P		**Pn**	**17 43 48.3**	**-0.7**
SUMG	**Summit**	**9.46**	**321**	*i* P		**Pn**	**17 43 47.0**	**-2.0**
DAG	**Danmarks Havn**	**10.63**	**360**	*i* P		**Pn**	**17 44 00.3**	**-4.2**
SFJD	**Kangerlussuaq** comp=Z,239nm,19.1s,baz=84,slow=35	**12.72**	**288**	LR	LR	17 48 57.7		
EKA	**Eskdalemuir Ar** baz=333,slow=13 comp=Z,2.6nm,0.8s	**13.17**	**138**	Pn	**Pn**	**17 44 40.6**	**+1.2**	
ESK	**Eskdalemuir**	**13.17**	**139**	Pn	**Pn**	**17 44 38.2**	**-1.2**	
NOA	**NORSAR Array B** baz=311,slow=11,SNR=3.5	**14.08**	**98**	Pn	**Pn**	**17 44 54.1**	**+2.3**	
NOA	baz=313,slow=23,SNR=3.5 comp=Z,0.8nm,0.6s			Sn	**Sn**	**17 47 24.5**	**-3.6**	
KBS	**Kingsbay**	**15.34**	**22**	Pn	**Pn**	**17 45 11.4**	**+2.6**	
HFS	**Hagfors** comp=Z,0.2nm,0.3s,baz=282,slow=7.4,SNR=5.6	**15.60**	**98**	Pn	**Pn**	**17 45 13.9**	**+1.6**	
HFS	comp=Z,0.1nm,0.3s,baz=323,slow=22,SNR=2.2			Sn	**Sn**	**17 47 57.2**	**-7.9**	
HFS	comp=Z,64nm,20.2s,baz=288,slow=36 comp=Z,2.2nm,0.8s			LR	LR	17 50 59.6		
SPITS	**Spitsbergen Ar** baz=228,slow=12 comp=Z,14nm,1.0s	**15.64**	**26**	Pn	**P**	**17 45 15.6**	**-1.3**	
ARCES	**ARCESS Array B** comp=Z,0.3nm,0.3s,baz=264,slow=11,SNR=6.7	**16.62**	**59**	Pn	**Pn**	**17 45 26.8**	**+1.6**	
ARCES	comp=Z,270nm,20.0s,baz=276,slow=32 comp=Z,6.8nm,0.9s			LR	LR	17 50 25.5		
ARCES	**ARCESS Array B**	**16.62**	**59**		**Pn**	**17 45 25.1**	**-0.1**	
MSF	**Maaselka**	**18.93**	**69**	P	**Pn**	**17 45 54.1**	**+0.2**	
RETH	**Rethem/Aller,**	**19.30**	**121**	P	**Pn**	**17 45 59.1**	**+0.8**	
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=316,slow=11,SNR=8.6 comp=Z,2.5nm,0.7s	**19.87**	**83**	P	**Pn**	**17 46 05.2**	**+0.1**	
FINES	**FINESS Array B**	**19.87**	**83**	P	**P**	**17 46 04.1**	**+0.6**	
BSTI	**Sart Tilman**	**19.88**	**130**	*d*P	**Pn**	**17 46 07.8**	**+2.5**	
BMRD	**Maredsous**	**19.88**	**132**	*d*P	**Pn**	**17 46 05.1**	**-0.2**	
BCLA	**Clavier** comp=Z,5.4nm,1.3s	**19.94**	**131**	*d*P	**Pn**	**17 46 05.2**	**-0.8**	
MEM	**Membach** comp=Z,6.3nm,1.0s	**20.00**	**129**	*d*P	**Pn**	**17 46 07.0**	**+0.3**	
DOU	**Dourbes** comp=Z,5.7nm,1.1s	**20.01**	**132**	*d*P	**Pn**	**17 46 06.2**	**-0.7**	
RCHB	**Rochefort**	**20.15**	**131**	*d*P	**P**	**17 46 07.3**	**+0.7**	
RCHB				*d*PP	**PnPn**	**17 46 24.0**	**+1.4**	
LVZ	**Lovozero**	**20.26**	**61**	P	Pn	17 46 10.2	+0.4	
LVZ	comp=Z,17nm,1.1s			IAmb	IAmb	17 46 20.1		
CLZ	**Clausthal**	**20.40**	**121**	P	Pn	17 46 11.1	-0.3	
GTTG	**Gottingen**	**20.50**	**122**	P	Pn	17 46 13.4	+0.8	
WLF	**Walferdange**	**20.87**	**130**	P	**P**	**17 46 14.0**	**-0.4**	
WLF	comp=Z,16nm,1.3s			IAmb	IAmb	17 46 20.4		
WLF	**Walferdange**	**20.87**	**130**	*d*P	Pn	17 46 15.7	-1.2	
WIMM	**Wimmelburg**	**21.06**	**120**	P	**P**	**17 46 15.6**	**-0.8**	
TNS	**Taunus Mts**	**21.11**	**126**	P	**P**	**17 46 19.1**	**+2.0**	
UBBA	**Unterbreizbach**	**21.12**	**123**	P	**P**	**17 46 19.2**	**+2.1**	
CLF	**Chambon-Foret**	**21.22**	**139**	P	**P**	**17 46 18.7**	**+0.5**	
MOX	**Moxa**	**21.83**	**121**	P	**P**	**17 46 26.3**	**+1.5**	
TANN	**Tannenbergstha**	**22.32**	**120**	P	**P**	**17 46 31.3**	**+1.3**	
ECH	**Echery**	**22.46**	**131**	P	**P**	**17 46 32.8**	**+1.2**	
ECH	comp=Z,12nm,1.5s			IAmb	IAmb	17 46 53.0		
BRG	**Berggiesshubel**	**22.46**	**117**	P	**P**	**17 46 32.8**	**+1.2**	
BRG	**Berggiesshubel**	**22.46**	**117**	*eP*	**P**	**17 46 32.8**	**+1.2**	
BRG	comp=Z,2.6nm,0.8s			Amp		17 46 34.1		
BRG	**Berggiesshubel**	**22.46**	**117**	P	P	17 46 38.8	+7.2	
BRG	comp=Z,3.6nm,1.0s			Amp		17 46 39.7		
HSKC	**Hora Svate Kat**	**22.50**	**118**	P	**P**	**17 46 33.5**	**+1.5**	
GRA2	**Grafenberg Arr**	**22.57**	**123**	P	**P**	**17 46 35.3**	**+2.5**	
BFO	**Black Forest**	**22.72**	**129**		**P**	**17 46 34.9**	**+0.5**	
BFO	comp=Z,8.8nm,0.9s			IAmb	IAmb	17 46 36.9		
PABE	**Paberze**	**22.78**	**97**		**P**	**17 46 36.3**	**+1.4**	
PABE	**Paberze**	**22.78**	**97**	P	**P**	**17 46 36.1**	**+1.3**	
PVCC	**Panska Ves**	**22.97**	**117**	P	**P**	**17 46 39.2**	**+2.2**	
SLE	**Schleitheim**	**23.27**	**129**	P	**P**	**17 46 41.5**	**+1.4**	
CHVC	**Chvalec**	**23.47**	**115**	*eP*	**P**	**17 46 43.5**	**+1.5**	
WET	**Wettzell**	**23.53**	**121**	P	**P**	**17 46 44.2**	**+1.6**	
ZVC	**Zvikov**	**23.75**	**119**	*eP*	**P**	**17 46 45.7**	**+1.0**	
DPC	**Dobruska-Polom**	**23.76**	**115**	*eP*	**P**	**17 46 46.6**	**+1.7**	
DPC	**Dobruska-Polom**	**23.76**	**115**	P	**P**	**17 46 46.0**	**+1.1**	
KHC	**Kasperske Hory**	**23.79**	**120**		**P**	**17 46 45.9**	**+0.8**	
KHC	**Kasperske Hory**	**23.79**	**120**	*eP*	**P**	**17 46 47.1**	**+1.9**	
KHC	**Kasperske Hory**	**23.79**	**120**	P	**P**	**17 46 46.4**	**+1.2**	
GERES	**GERESS Array B** comp=Z,2.0nm,0.8s,baz=312,slow=8.4,SNR=15	**24.07**	**120**	P	**P**	**17 46 49.4**	**+1.4**	
GERES	comp=Z,136nm,18.8s,baz=318,slow=40 comp=Z,2.0nm,0.8s			LR	LR	17 57 34.9		
GERES	**GERESS Array B**	**24.07**	**120**	P	**P**	**17 46 48.4**	**+0.5**	
DAVA	**Damuels** comp=Z,10nm,1.4s	**24.14**	**128**	*i* P	**P**	**17 46 50.2**	**+1.6**	
RETA	**Reutte** comp=Z,6.9nm,1.3s	**24.25**	**126**	*eP*	**P**	**17 46 50.6**	**+1.1**	
CKRC	**Cesky Krumlov**	**24.31**	**120**	*eP*	**P**	**17 46 51.7**	**+1.7**	
TREC	**Trest**	**24.33**	**117**	P	**P**	**17 46 51.8**	**+1.6**	
MOTA	**Moosalm** comp=Z,10nm,1.2s	**24.48**	**126**	*i* P	**P**	**17 46 52.7**

comp=Z,7.2nm,1.5s
KIRV Kirov 30.85 71 LR LR 17 59 30.9
comp=Z,103nm,18.2s,baz=315,slow=35
VAE Valguarnera 34.43 130 LR LR 18 02 24.3
comp=Z,54nm,18.0s,baz=159,slow=36
KEST Kesra 34.58 138 LR LR 18 02 39.5
comp=Z,96nm,18.7s,baz=336,slow=37
NRIK Noril'sk 35.45 36 LR LR 18 04 29.5
comp=Z,63nm,18.1s,baz=356,slow=39
ARTI Arti 35.82 68 LR LR 18 02 26.8
comp=Z,200nm,18.2s,baz=348,slow=35
YKA Yellowknife Ar 37.87 311 P **P 17 48 49.5 +0.3**
comp=Z,1.1nm,0.7s,baz=44,slow=9.1,SNR=9.6
YKA LR LR 18 03 48.1
comp=Z,97nm,20.3s,baz=82,slow=35
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 39.29 106 P **P 17 49 03.5 +2.0**
comp=Z,1.7nm,0.7s,baz=334,slow=10.0,SNR=4.6
comp=Z,1.7nm,0.7s
E28M Babbage River 39.34 330 P **P 17 49 03.3 +1.9**
F30M Barrier River 39.38 328 **P 17 49 04.4 +2.6**
F30M IAmb IAmb 17 49 08.3
comp=Z,4.4nm,0.9s
KBZ Khabaz 39.61 93 P **P 17 49 04.2 +0.4**
comp=Z,1.7nm,0.7s,baz=301,slow=5.9,SNR=1.6
KBZ LR LR 18 07 14.7
comp=Z,68nm,18.3s,baz=206,slow=39
comp=Z,1.7nm,0.7s
G31M Satah River 39.62 326 **P 17 49 04.6 +0.9**
G30M tAoh Zraii Nji 40.00 327 **P 17 49 09.7 +2.7**
G30M IAmb IAmb 17 49 14.7
comp=Z,7.5nm,1.4s
D25K Kavik River 40.02 334 IAmb IAmb 17 49 14.4
comp=Z,6.3nm,0.9s
E27K Coleen River 40.10 331 **P 17 49 09.3 +1.5**
AKTO Aktyubinsk 40.25 74 LR LR 18 05 13.6
comp=Z,103nm,20.2s,baz=352,slow=35
G29M Pine Creek 40.45 328 IAmb IAmb 17 49 17.1
comp=Z,5.2nm,1.1s
H31M Peel River 40.55 325 IAmb IAmb 17 49 19.5
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 40.74 286 P **P 17 49 13.0 -0.3**
comp=Z,3.2nm,0.7s,baz=67,slow=9.1,SNR=4.6
ULM LR LR 18 05 31.3
comp=Z,107nm,18.1s,baz=34,slow=35
comp=Z,3.2nm,0.7s
ULM Lac du Bonnet 40.74 286 IAmb IAmb 17 49 17.6
comp=Z,4.0nm,0.8s
E25K Arctic Village 40.92 333 P **P 17 49 16.2 +1.6**
E25K IAmb IAmb 17 49 21.7
comp=Z,6.9nm,1.4s
E23K Chandalar 41.70 335 IAmb IAmb 17 49 28.2
comp=Z,7.5nm,1.2s
G24K Hadweenzic Riv 42.53 333 IAmb IAmb 17 49 35.8
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 42.85 63 P **P 17 49 31.6 +1.2**
comp=Z,1.1nm,0.6s,baz=319,slow=8.4,SNR=5.7
comp=Z,1.1nm,0.6s
GNI Garni 43.36 95 LR LR 18 09 19.6
comp=Z,64nm,18.7s,baz=328,slow=38
ILAR Eielson Array 44.13 331 P **P 17 49 41.6 +0.9**
comp=Z,0.6nm,0.9s,baz=26,slow=5.9,SNR=8.8
comp=Z,0.6nm,0.9s
ILAR Eielson Array 44.13 331 P **P 17 49 41.4 +0.7**
BCAR Beaver Creek A 44.58 327 **P 17 49 47.6 +3.3**
MLY Manley 44.63 333 IAmb IAmb 17 49 57.6
comp=Z,2.8nm,0.9s
NEA2 Nenana 44.71 332 IAmb IAmb 17 49 52.4
comp=Z,4.1nm,1.0s
DLBC Dease Lake 45.66 317 LR LR 18 08 22.7
comp=Z,75nm,19.1s,baz=10,slow=35
ZALV Zalesovo Beam 47.00 52 P **P 17 50 03.4 0.0**
comp=Z,0.5nm,0.7s,baz=324,slow=7.1,SNR=1.9
comp=Z,0.5nm,0.7s
ZALV Zalesovo Beam 47.00 52 P **P 17 50 02.6 -0.8**
KURK Kurchatov 47.66 59 P **P 17 50 09.1 +0.6**
KURK IAmb IAmb 17 50 10.1
comp=Z,2.4nm,0.8s
KURBB Kurchatov Arra 47.70 59 P **P 17 50 09.0 +0.1**
comp=Z,1.1nm,0.3s,baz=327,slow=7.3,SNR=8.6
comp=Z,1.1nm,0.3s
W50A Signal Mountai 49.06 265 P **P 17 50 19.3 -0.3**
BBB Bella Bella 50.49 311 LR LR 18 10 55.5
comp=Z,51nm,18.0s,baz=64,slow=35
BOZ Bozeman (W) 50.57 295 **P 17 50 30.8 -0.3**
BOZ IAmb IAmb 17 50 41.5
comp=Z,2.5nm,0.9s
KDAK Kodiak Island 51.65 331 LR LR 18 14 33.4
comp=Z,64nm,18.5s,baz=24,slow=38
BW06 Boulder Array 52.21 291 P **P 17 50 44.0 +0.5**
BW06 IAmb IAmb 17 50 48.3
comp=Z,4.3nm,1.1s
PDAR Pinedale Array 52.21 291 P **P 17 50 43.0 -0.6**
comp=Z,1.5nm,0.7s,baz=57,slow=5.5,SNR=8.4
comp=Z,1.5nm,0.7s
PDAR Pinedale Array 52.21 291 **P 17 50 43.9 +0.3**
MKAR Makanchi Array 52.27 59 P **P 17 50 44.5 +0.8**
comp=Z,1.1nm,0.8s,baz=335,slow=5.4,SNR=11
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 52.27 59 P **P 17 50 44.4 +0.7**
AAK Ala-Archa 53.04 67 P **P 17 50 50.3 +0.7**
BOOM Boomskoye usch 53.71 66 P **P 17 50 56.7 +2.2**
BOOM IAmb IAmb 17 51 02.0
comp=Z,5.5nm,1.4s
CHGR Chuyangaron 54.44 74 P **P 17 51 01.7 +1.9**
KDJ Kajisay 54.48 65 P **P 17 51 01.4 +1.3**
GAR Garm 54.59 73 P **P 17 51 02.4 +1.4**
TORD Torodi Ar. Bea 54.72 156 P **P 17 51 01.7 -0.2**
comp=Z,0.7nm,0.6s,baz=341,slow=7.0,SNR=3.7
comp=Z,0.7nm,0.6s
TORD Torodi Ar. Bea 54.72 156 P **P 17 51 00.9 -1.0**
ELK Elko 56.09 295 LR LR 18 14 46.7
comp=Z,99nm,18.8s,baz=26,slow=36
KSH2 Kashi 56.47 69 P **P 17 51 16.7 +2.2**
KSH2 sP sP 17 51 29.3 +12
KSH2 pmax pmax
comp=Z,4.0nm,0.8s
WMQ Urumqi 56.72 56 *e*P **P 17 51 19.6 +3.5**
WMQ LR LR
comp=Z,94nm,24.7s
SJG San Juan 57.16 237 LR LR 18 11 14.3
comp=Z,23nm,21.8s,baz=96,slow=31
ANMO Albuquerque 57.80 284 LR LR 18 15 17.3
comp=Z,62nm,18.9s,baz=45,slow=35
YBH Yreka Blue Hor 57.90 301 LR LR 18 18 04.4
comp=Z,35nm,18.1s,baz=22,slow=38
PFO Pinyon Flats O 62.83 292 LR LR 18 19 59.0
comp=Z,96nm,18.9s,baz=31,slow=37
HHC Hu-ho-hao-te 66.58 39 *e*P **P 17 52 22.9 +0.2**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,53nm,4.8s
LPIG La Paz 68.94 282 LR LR 18 22 49.8
comp=Z,62nm,19.2s,baz=168,slow=36

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*GFZ **08** 17:50:40.4±0.6,37°N±6°×14°3E±°,h10km,M4.5/22, mb4.5/22,confirmed*
*NIED **08** 17:50:44.8,37°.24N×142°.34E,h48km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.05; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-1.57; $M_{r\theta}$1.08; $M_{\theta\phi}$-1.34; $M_{r\phi}$2.60; Fault plane solution: $M_0$3.62000×10^{15} NP1: ϕ_s226.00000°,δ20.00000°,λ111.00000°. NP2: ϕ_s24.00000°,δ71.00000°,λ82.00000°.*
*JMA **08** 17:50:44.8±0.4,37°N±1°×14°2E±°,h48km,MD4.5/32, MV4.1/32,E OFF FUKUSHIMA PREF*
*IDC **08** 17:50:47.0±2.0,37°.08N×142°.22E,h43km±18km,mb3.9/17, mbtmp4.1/24,ML3.2/6,MS3.8/35,Error ellipse: s-maj=16.4km s-min=12.1km az=75.0*
*NEIC **08** 17:50:47.1±1.5,37°.14N±0°.08×142°.14E±0°.03,h40km±8km, mb4.4/20,Error ellipse: s-maj=11.8km s-min=2.5km az=166.0*

ISC 08 17:50:46.8±0.5,37°.13N±0°.05×142°.24E±0°.06,h50km,n154, σ1ŝ72/126,mb4.3/31,MS3.8/36,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.15**	**269**	P	**Pn**	**17 51 05.5**	**-1.2**
JIKH	**Ishinomakikobu**	**1.33**	**333**	P	**Pn**	**17 51 06.7**	**-2.4**
JMM	**Marumori**	**1.37**	**303**	P	**Pn**	**17 51 07.7**	**-1.8**
JMM				S	**Sn**	**17 51 24.9**	**-1.7**
JIO	**Ouri**	**1.50**	**332**	P	**Pn**	**17 51 09.0**	**-2.4**
JOTO	**OTAMA OYAMA**	**1.58**	**287**	P	**Pn**	**17 51 11.7**	**-0.8**
JOTO				S	**Sn**	**17 51 31.4**	**-0.4**
JOU	**Okura**	**1.76**	**315**	P	**Pn**	**17 51 14.0**	**-0.9**
JOU				A	A	17 51 14.0	
comp=N,7.0nm,1.1s,comp=E,5.0nm,1.7s							
JOFO	**Osakifurukawao**	**1.81**	**325**	A	A	17 51 13.7	
comp=N,17nm,5.6s,comp=E,28nm,3.7s							
JSB	**Shiboa**	**1.86**	**266**	A	A	17 51 16.3	
comp=N,12nm,1.4s,comp=E,10.0nm,1.1s							
JMK	**Ichinoseki**	**1.99**	**336**	P	**Pn**	**17 51 16.5**	**-1.5**
JFY	**Yanaizu**	**2.04**	**279**	P	**Pn**	**17 51 19.0**	**+0.2**
JYK	**Kaneyama**	**2.33**	**321**	P	**Pn**	**17 51 21.4**	**-1.2**
JYK				S	**Sn**	**17 51 46.4**	**-3.7**
I30JP	**ISUMI INFRASON**	**2.39**	**221**	P	**Pn**	**17 51 22.1**	**-1.5**
baz=23,slow=446							
I30JP				S	**Sn**	**17 51 49.8**	**-1.8**
baz=48,slow=210							
MJAR	**Matsushiro Arr**	**3.29**	**261**	P	**Pn**	**17 51 35.9**	**+0.1**
comp=E,1.7nm,0.3s,baz=84,slow=16,SNR=26							
MJAR				S	**Sn**	**17 52 13.6**	**-0.1**
comp=E,52nm,0.8s,baz=181,slow=20,SNR=7.1							
MJAR				LR	LR	17 53 10.7	
comp=E,1μm,18.6s,baz=109,slow=44							
comp=E,28nm,0.7s							
MJAR	**Matsushiro Arr**	**3.29**	**261**		**Pn**	**17 51 34.4**	**-1.4**
MJAR					**Sn**	**17 52 13.6**	**-0.1**
MAJO	**Matsushiro**	**3.29**	**261**	P	**Pn**	**17 51 38.0**	**+2.2**
JTM	**Tenmabayashi**	**3.77**	**346**		Pn	17 51 36.3	-6.1
JTM	**Tenmabayashi**	**3.77**	**346**	P	**Pn**	**17 51 42.0**	**-0.4**
JSG	**Sagara**	**4.10**	**235**	Pn	**Pn**	**17 51 48.0**	**+1.1**
JGF	**Kuroka**	**4.22**	**250**		**Pn**	**17 51 48.5**	**-0.2**
JGF	**Kuroka**	**4.22**	**250**	P	**Pn**	**17 51 52.4**	**+3.6**
JHJ2	**Mitsune**	**4.47**	**207**	Pn	**Pn**	**17 51 52.0**	**-0.1**
JHJ	**Hachijo jima 2**	**4.47**	**207**	P	**Pn**	**17 51 52.6**	**+0.5**
comp=E,32nm,0.3s,baz=84,slow=23,SNR=13							
JHJ				S	**Sn**	**17 52 39.9**	**-3.1**
comp=E,196nm,0.4s,baz=261,slow=23,SNR=9.3							
comp=E,56nm,0.3s							
INU	**Inuyama**	**4.58**	**249**		**Pn**	**17 51 52.9**	**-0.6**
INU	**Inuyama**	**4.58**	**249**	P	**Pn**	**17 51 56.4**	**+2.9**
ERM	**Erimo**	**4.94**	**8**	Pn	**Pn**	**17 51 55.1**	**-3.2**
JKA	**Kamikawa-asahi**	**6.99**	**2**	Pn	**Pn**	**17 52 23.1**	**-3.5**
JKA	**Kamikawa-asahi**	**6.99**	**2**	P	**Pn**	**17 52 23.9**	**-2.7**
JMN	**Monobe**	**7.62**	**246**	Pn	**Pn**	**17 52 34.0**	**-1.2**
JMN	**Monobe**	**7.62**	**246**	P	**Pn**	**17 52 37.4**	**+2.1**
YSS	**Yuzhno-Sakhali**	**9.83**	**2**	Pn	**Pn**	**17 53 03.2**	**-2.3**
YSS	**Yuzhno-Sakhali**	**9.83**	**2**	P	**Pn**	**17 53 03.1**	**-2.3**
JCJ	**Chichijima**	**10.00**	**180**	P	**Pn**	**17 53 06.3**	**-1.6**
comp=E,17nm,0.5s,baz=298,slow=17,SNR=1.2							
JCJ				S	**Sn**	**17 54 51.5**	**-7.1**
comp=E,84nm,0.7s,baz=282,slow=23,SNR=6.2							
USRK	**Ussuriysk Ar.**	**10.51**	**315**	P	**Pn**	**17 53 15.2**	**+0.5**
comp=E,0.2nm,0.3s,baz=132,slow=12,SNR=8.7							
USRK				LR	LR	17 56 59.9	
comp=E,472nm,19.8s,baz=134,slow=35							
comp=E,8.8nm,0.8s							
USRK	**Ussuriysk Ar.**	**10.51**	**315**	Pn	**Pn**	**17 53 10.4**	**-4.3**
KSRS	**Korea Array**	**11.41**	**276**	P	**Pn**	**17 53 29.0**	**+1.9**
comp=E,0.1nm,0.3s,baz=90,slow=13,SNR=16							
KSRS				LR	LR	17 57 41.8	
comp=E,452nm,18.8s,baz=105,slow=36							
comp=E,2.5nm,0.9s							
KSAR	**Wonju Array Be**	**11.44**	**276**	Pn	**Pn**	**17 53 23.6**	**-3.9**
MDJ	**Mudanjiang**	**12.14**	**312**	P	P	17 53 41.1	-7.2
KLR	**Kul'dur**	**14.30**	**331**	P	**Pn**	**17 54 06.4**	**+0.1**
comp=E,0.1nm,0.3s,baz=141,slow=14,SNR=5.6							
KLR				LR	LR	17 59 30.9	
comp=E,398nm,18.8s,baz=144,slow=36							
comp=E,0.7nm,0.6s							
DL2	**Dalian**	**16.34**	**283**	P	**P**	**17 54 33.9**	**-1.1**
DL2				S	**Sn**	**17 57 31.4**	**-1.7**
DL2				pmax	pmax		
comp=Z,12nm,0.9s							
DL2				pmax	pmax		
comp=Z,75nm,5.5s							
DL2				LR	LR		
comp=N,180nm,16.3s							
DL2				LR	LR		
comp=E,200nm,17.0s							
DL2				LR	LR		
comp=Z,300nm,13.0s							
PETK	**Petropavlovsk-**	**19.28**	**29**	P	**Pn**	**17 55 09.3**	**+0.6**
comp=Z,0.1nm,0.3s,baz=213,slow=14,SNR=1.8							
PETK				LR	LR	18 03 19.9	
comp=Z,97nm,19.6s,baz=216,slow=39							
comp=Z,2.2nm,1.0s							
TIA	**Tai'an**	**20.16**	**275**	P	**P**	**17 55 15.8**	**-1.1**
TIA				pmax	pmax		
comp=Z,4.0nm,1.0s							
TIA				LR	LR		
comp=N,190nm,12.4s							
TIA				LR	LR		
comp=E,150nm,12.4s							
TIA				LR	LR		
comp=Z,400nm,14.4s							
HILR	**Hailar Array B**	**20.45**	**315**	LR	LR	18 03 11.4	
comp=Z,250nm,21.9s,baz=65,slow=36							
BJT	**Baijiatuan**	**20.57**	**286**	P	**P**	**17 55 16.2**	**-5.1**
XLT	**XiLinHaoTe**	**20.96**	**297**	*e*P	**P**	**17 55 23.8**	**-1.8**
XLT				sP	pP	17 55 36.7	-0.3
XLT				PP	**PnPn**	**17 55 46.5**	**+0.7**
XLT				pmax	pmax		
comp=Z,13nm,0.9s							
XLT				LR	LR		
comp=N,14nm,16.2s							
XLT				LR	LR		
comp=E,350nm,18.5s							
XLT				LR	LR		
comp=Z,280nm,17.9s							
TPUB	**Ta-pu**	**23.14**	**240**	P	**P**	**17 55 48.0**	**-0.9**
GUMO	**Guam**	**23.56**	**174**	LR	LR	18 04 07.0	
comp=Z,30nm,21.4s,baz=14,slow=34							
WHN	**Wuhan**	**24.03**	**262**	P	**P**	**17 55 58.9**	**+1.8**
HHC	**Hu-ho-hao-te**	**24.07**	**288**	*e*P	**P**	**17 55 56.5**	**-1.1**
HHC				pmax	pmax		
comp=Z,6.0nm,0.6s							
HHC				pmax	pmax		
comp=Z,43nm,6.0s							
HHC				LR	LR		
comp=N,70nm,12.2s							
HHC				LR	LR		
comp=E,190nm,14.1s							
HHC				LR	LR		
comp=Z,220nm,14.1s							
YAK	**Yakutsk**	**26.13**	**347**	LR	LR	18 06 42.1	
comp=Z,68nm,21.1s,baz=125,slow=36							
YAK	**Yakutsk**	**26.13**	**347**		**P**	**17 56 16.4**	**+0.5**
YAK				IAmb	IAmb	17 56 16.7	
comp=Z,13nm,0.7s							
YAK	**Yakutsk**	**26.13**	**347**	P	**P**	**17 56 15.6**	**-0.3**
XAN	**Xi'an**	**27.19**	**274**	P	**P**	**17 56 26.1**	**+0.3**
XAN	**Xi'an**	**27.19**	**274**	P	**P**	**17 56 26.2**	**+0.4**
XAN				pP	pP	17 56 35.4	-3.0
XAN				pmax	pmax		
comp=Z,7.0nm,0.9s							
XAN				LR	LR		
comp=N,190nm,18.6s							
XAN				LR	LR		
comp=E,150nm,16.5s							
XAN				LR	LR		
comp=Z,210nm,16.5s							
H11N2	**WAKE ISLAND Hy**	**27.63**	**122**	T	T	18 25 20.7	
baz=315,slow=75							
H11N1	**WAKE ISLAND Hy**	**27.64**	**122**	T	T	18 25 23.3	
baz=315,slow=75							
H11N3	**WAKE ISLAND Hy**	**27.65**	**122**	T	T	18 25 26.9	
baz=315,slow=75							
ULN	**Ulaanbaatar**	**27.85**	**304**	P	**P**	**17 56 30.1**	**-1.6**
ULN				IAmb	IAmb	17 56 33.7	
comp=Z,12nm,1.4s							
ULN	**Ulaanbaatar**	**27.85**	**304**	P	**P**	**17 56 33.1**	**+1.4**
ENH	**Enshi**	**28.00**	**266**	P	**P**	**17 56 34.3**	**+1.3**
SONM	**Songino Array**	**28.28**	**304**	P	**P**	**17 56 36.8**	**+1.2**
comp=Z,6.9nm,0.9s,baz=103,slow=9.1,SNR=20							
SONM				LR	LR	18 08 12.3	
comp=Z,94nm,20.4s,baz=78,slow=37							
comp=Z,6.9nm,0.9s							
SONM	**Songino Array**	**28.28**	**304**		**P**	**17 56 35.7**	**+0.2**
H11S1	**WAKE ISLAND Hy**	**28.36**	**124**	T	T	18 26 18.3	
baz=317,slow=76							
H11S3	**WAKE ISLAND Hy**	**28.36**	**124**	T	T	18 26 18.7	
baz=317,slow=76							
H11S2	**WAKE ISLAND Hy**	**28.38**	**124**	T	T	18 26 19.6	
baz=317,slow=76							
TLY	**Talaya**	**30.77**	**311**	LR	LR	18 09 53.1	
comp=Z,178nm,18.7s,baz=80,slow=37							
LZDM	**Lanzhou Array**	**30.85**	**280**	LR	LR	18 10 37.6	
comp=Z,204nm,18.1s,baz=220,slow=39							
TIXI	**Tiksi**	**35.28**	**353**	LR	LR	18 13 24.1	
comp=Z,184nm,18.8s,baz=159,slow=38							
KMI2	**Kunming**	**35.61**	**262**	P	P	17 57 45.5	+5.4
KMI2				pmax	pmax		
comp=Z,11nm,1.1s							
KMI2				LR	LR		
comp=N,170nm,16.3s							
KMI2				LR	LR		
comp=E,200nm,24.8s							
KMI2				LR	LR		
comp=Z,190nm,23.9s							
PZH	**PanZhiHua**	**35.77**	**265**	P	**P**	**17 57 44.5**	**+3.2**
GOMU	**GeErMu**	**37.74**	**283**	P	**P**	**17 57 57.6**	**-0.7**
GOMU				pP	pP	17 58 01.9	-9.3
GOMU				sP	sP	17 58 05.6	-11
GOMU				pmax	pmax		
comp=Z,7.0nm,0.7s							
WMQ	**Urumqi**	**41.39**	**297**	*e*P	**P**	**17 58 30.4**	**+2.2**
WMQ				LR	LR		
comp=Z,100nm,24.3s							
CMAR	**Chiang Mai Arr**	**42.16**	**256**	P	**P**	**17 58 34.5**	**-0.1**
comp=Z,0.3nm,0.4s,baz=60,slow=6.9,SNR=4.5							
CMAR				LR	LR	18 17 16.5	
comp=Z,65nm,19.1s,baz=250,slow=38							
comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**42.16**	**256**	P	**P**	**17 58 34.1**	**-0.6**
ZALV	**Zalesovo Beam**	**42.34**	**312**	P	**P**	**17 58 36.6**	**+0.9**
comp=Z,5.8nm,0.9s,baz=90,slow=7.4,SNR=19							
comp=Z,5.8nm,0.9s							
ZALV	**Zalesovo Beam**	**42.34**	**312**		**P**	**17 58 36.0**	**+0.3**
NRIK	**Noril'sk**	**43.46**	**335**	LR	LR	18 17 55.9	
comp=Z,198nm,18.2s,baz=60,slow=37							
MKAR	**Makanchi Array**	**44.63**	**302**	P	**P**	**17 58 55.4**	**+1.1**
comp=Z,3.8nm,0.8s,baz=87,slow=9.2,SNR=23							
MKAR				LR	LR	18 17 29.3	
comp=Z,76nm,20.3s,baz=126,slow=36							
comp=Z,3.8nm,0.8s							
MKAR	**Makanchi Array**	**44.63**	**302**		**P**	**17 58 54.5**	**+0.3**
MAKZ	**Makanchi**	**44.84**	**302**		**P**	**17 58 55.4**	**-0.5**
MAKZ				IAmb	IAmb	17 58 59.8	
comp=Z,6.8nm,1.2s							
MAKZ	**Makanchi**	**44.84**	**302**	P	**P**	**17 58 57.0**	**+1.1**
BRDH	**Bariadhala**	**45.66**	**266**	LR	LR	18 22 26.4	
comp=Z,152nm,19.5s,baz=158,slow=42							
KURK	**Kurchatov**	**46.40**	**308**		**P**	**17 59 08.5**	**+0.4**
KURK	**Kurchatov**	**46.40**	**308**	P	**P**	**17 59 08.8**	**+0.7**
KURBB	**Kurchatov Arra**	**46.47**	**308**	P	**P**	**17 59 09.3**	**+0.7**
comp=Z,4.9nm,0.6s,baz=82,slow=8.4,SNR=42							
KURBB				LR	LR	18 19 22.6	
comp=Z,168nm,18.6s,baz=183,slow=37							
comp=Z,4.9nm,0.6s							
PDGK	**Podgornoye**	**47.31**	**298**		**P**	**17 59 15.9**	**+0.4**
WUS	**Wushi**	**48.09**	**295**	P	**P**	**17 59 23.4**	**+1.7**
TARG	**Taragay, Kyrgy**	**48.95**	**296**		**P**	**17 59 28.4**	**-0.2**
TARG				IAmb	IAmb	17 59 34.2	
comp=Z,4.7nm,1.0s							
TARG	**Taragay, Kyrgy**	**48.95**	**296**	P	**P**	**17 59 30.8**	**+2.3**
ILAR	**Eielson Array**	**49.06**	**32**	P	**P**	**17 59 29.6**	**+1.0**
comp=Z,0.5nm,0.7s,baz=275,slow=6.9,SNR=7.1							
comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**49.06**	**32**	P	**P**	**17 59 29.0**	**+0.4**
BOOM	**Boomskoye usch**	**50.05**	**298**		**P**	**17 59 37.3**	**+0.6**
BOOM				IAmb	IAmb	17 59 51.4	
comp=Z,2.6nm,0.8s							
BOOM	**Boomskoye usch**	**50.05**	**298**	P	**P**	**17 59 38.6**	**+2.0**
ASAI	**AK-SAY(Kyrgyzs**	**50.12**	**296**	P	**P**	**17 59 38.9**	**+1.5**
BVAR	**Borovoye Array**	**51.00**	**312**	P	**P**	**17 59 44.8**	**+1.3**
comp=Z,1.9nm,0.9s,baz=75,slow=6.4,SNR=8.8							
comp=Z,1.9nm,0.9s							
BORK	**Borovoye**	**51.04**	**312**	P	**P**	**17 59 44.1**	**+0.4**
BORK				IAmb	IAmb	17 59 55.4	
comp=Z,4.0nm,1.1s							
KSH2	**Kashi**	**51.39**	**294**	P	**P**	**17 59 46.5**	**-0.3**
KSH2				pmax	pmax		
comp=Z,2.0nm,0.6s							
I28M	**Miner Creek**	**51.94**	**31**	P	P	17 59 52.2	+1.8
ARK	**Arkit**	**53.08**	**298**	P	P	18 00 02.7	+3.5
I30M	**Mount Dempster**	**53.45**	**31**		**P**	**18 00 02.7**	**+1.1**
I30M				IAmb	IAmb	18 00 22.3	
comp=Z,3.8nm,1.0s							
KKAR	**Karatay Array**	**53.65**	**300**	P	**P**	**18 00 03.4**	**+0.1**
CHGR	**Chuyangaron**	**56.22**	**296**	P	**P**	**18 00 23.4**	**+1.4**
ARTI	**Arti**	**56.84**	**319**	LR	LR	18 27 01.4	
comp=Z,126nm,18.4s,baz=70,slow=38							
ARTI	**Arti**	**56.84**	**319**		**P**	**18 00 26.5**	**+0.5**
WRA	**Warramunga Arr**	**57.25**	**189**	P	**P**	**18 00 30.6**	**+1.4**
comp=Z,0.9nm,0.6s,baz=6.2,slow=7.2,SNR=8.4							
comp=Z,0.9nm,0.6s							
WRA	**Warramunga Arr**	**57.25**	**189**	P	**P**	**18 00 29.5**	**+0.3**
SHAA	**Shahritus**	**57.41**	**295**	IAmb	IAmb	18 00 45.4	
comp=Z,21nm,0.8s							
ABKAR	**Akbulak array**	**58.38**	**310**	P	**P**	**18 00 36.2**	**-0.7**
ASAR	**Alice Springs**	**60.97**	**189**	P	**P**	**18 00 56.9**	**+1.9**
comp=Z,1.1nm,0.8s,baz=8.9,slow=6.3,SNR=8.3							
comp=Z,1.1nm,0.8s							
ASAR	**Alice Springs**	**60.97**	**189**	P	**P**	**18 00 55.9**	**+0.9**
ARCES	**ARCESS Array B**	**64.14**	**340**	LR	LR	18 31 42.0	
comp=Z,40nm,21.3s,baz=30,slow=38							
SGF	**Sodankyl**	**65.12**	**337**	P	**P**	**18 01 23.3**	**+1.3**
MSF	**Maaselka**	**65.24**	**335**	P	**P**	**18 01 23.8**	**+1.1**
FINES	**FINESS Array B**	**69.04**	**332**	P	**P**	**18 01 47.7**	**+0.8**
comp=Z,5.5nm,0.7s,baz=55,slow=7.2,SNR=17							
FINES				LR	LR	18 33 06.2	
comp=Z,60nm,20.4s,baz=36,slow=37							
comp=Z,5.5nm,0.7s							
FINES	**FINESS Array B**	**69.04**	**332**	P	**P**	**18 01 47.3**	**+0.4**
KBZ	**Khabaz**	**71.34**	**311**	P	**P**	**18 02 02.2**	**+1.0**
comp=Z,2.7nm,0.7s,baz=71,slow=5.6,SNR=4.5							
comp=Z,2.7nm,0.7s							
KIV	**Kislovodsk**	**71.34**	**311**		**P**	**18 02 02.7**	**+1.3**
KIV	**Kislovodsk**	**71.34**	**311**	P	**P**	**18 02 02.7**	**+1.3**
PABE	**Paberze**	**73.81**	**329**	P	**P**	**18 02 17.1**	**+1.4**
HFS	**Hagfors**	**74.28**	**336**	LR	LR	18 37 55.1	
comp=Z,156nm,18.6s,baz=36,slow=38							
NOA	**NORSAR Array B**	**74.36**	**338**	P	**P**	**18 02 18.7**	**-0.2**
comp=Z,1.2nm,0.7s,baz=39,slow=5.7,SNR=3.6							
NOA				LR	LR	18 38 38.4	
comp=Z,70nm,18.6s,baz=40,slow=39							
comp=Z,1.2nm,0.7s							
AKASG	**Malin Array Be**	**74.63**	**323**	P	**P**	**18 02 21.5**	**+0.9**
comp=Z,3.4nm,0.6s,baz=47,slow=6.2,SNR=16							
AKASG				LR	LR	18 38 37.7	
comp=Z,68nm,20.2s,baz=32,slow=38							
comp=Z,3.4nm,0.6s							
AKASG	**Malin Array Be**	**74.63**	**323**	P	**P**	**18 02 20.8**	**+0.3**
AKASG				IAmb	IAmb	18 02 39.3	
comp=Z,6.8nm,1.5s							
KIEV	**Kiev**	**74.64**	**323**	P	**P**	**18 02 21.6**	**+0.9**
PDAR	**Pinedale Array**	**77.13**	**46**	P	**P**	**18 02 36.8**	**+1.5**
comp=Z,0.1nm,0.4s,baz=315,slow=8.7,SNR=1.7							
comp=Z,0.1nm,0.4s							
PDAR	**Pined

comp=Z,0.8nm,0.6s
GERES **GERESS Array B** 82.98 329 P P 18 03 07.0 +0.4
EKA **Eskdalemuir Ar** 83.26 341 P P 18 03 09.0 +1.2
comp=Z,1.2nm,0.8s,baz=43,slow=8.0,SNR=3.8
EKA LR LR 18 44 05.8
comp=Z,45nm,18.8s,baz=76,slow=38
comp=Z,1.2nm,0.8s
PPT **Papeete** 84.08 117 LR LR 18 36 30.1
comp=Z,48nm,19.7s,baz=10.0,slow=33
PPT2 **Papeete2** 84.10 117 *e*LR LR 18 30 07.2
comp=Z,44nm,22.2s
SCHQ **Schefferville** 85.06 16 LR LR 18 43 57.7
comp=Z,18nm,18.1s,baz=106,slow=38
TAOE **Nuku Hiva Isla** 85.55 105 *e*LR LR 18 30 45.3
comp=Z,122nm,24.2s
DAVOX **Davos/Dischmat** 86.19 329 LR LR 18 45 21.2
comp=Z,95nm,19.0s,baz=78,slow=38
VAE **Valguarnera** 91.48 321 LR LR 18 49 10.5
comp=Z,102nm,19.9s,baz=135,slow=38
ESDC **Sonseca Array** 97.50 334 LR LR 18 52 45.7
comp=Z,64nm,18.7s,baz=90,slow=38

IDC 08 17:56:14.4±2.7, 30.79S×178.13W, h0km, mb3.7/2, mbtmp3.9/3, ML3.4/1, Error ellipse: s-maj=67.3km s-min=20.5km az=113.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.55**	**7**	Pn	Pg	17 56 45.1	+1.0
	88nm,0.3s,baz=196,slow=20,SNR=2.0						
RAO				Sn	Sn	17 57 03.5	-0.5
	219nm,0.3s,baz=299,slow=22,SNR=6.1						
URZ	**Urewera**	**8.42**	**206**	Pn	Pn	17 58 19.1	+1.4
	0.4nm,0.3s,baz=358,slow=10,SNR=2.3						
URZ				Sn	Sn	17 59 53.2	-0.2
	1.0nm,0.3s,baz=196,slow=22,SNR=8.5						
	21nm,1.1s						
ASAR	**Alice Springs**	**42.98**	**267**	P	P	18 04 15.3	-0.3
	0.5nm,0.8s,baz=107,slow=7.5,SNR=5.4						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**44.00**	**273**	P	P	18 04 24.1	+0.2
	1.1nm,0.6s,baz=112,slow=8.0,SNR=9.0						
	1.1nm,0.6s						
H03S2	**Juan Fernandez**	**80.34**	**124**	T	T	19 37 34.2	
	baz=238,slow=74,SNR=11						
H03S1	**Juan Fernandez**	**80.36**	**124**	T	T	19 37 35.3	
	baz=238,slow=74,SNR=11						
H03S3	**Juan Fernandez**	**80.36**	**124**	T	T	19 37 29.8	
	baz=238,slow=74,SNR=22						
H03N3	**Juan Fernandez**	**80.54**	**123**	T	T	19 37 46.9	
	baz=241,slow=74						
H03N2	**Juan Fernandez**	**80.54**	**123**	T	T	19 37 49.7	
	baz=241						
H03N1	**Juan Fernandez**	**80.55**	**123**	T	T	19 37 48.8	
	baz=241,slow=74						
FINES	**FINESS Array B**	**145.47**	**340**	PKPbc	PKPdf	18 15 51.8	-1.9
	1.0nm,0.4s,baz=58,slow=2.8,SNR=9.2						

BER 08 18:00:55.0±3.0, 60.67N×6.35E, h0km, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HYA	**Hoyanger**	**0.50**	**351**	*e*P	Pg	18 01 02.9	-1.8
ASK	**Askoy**	**0.60**	**252**	*e*P	Pg	18 01 06.1	-0.4
ASK				*e*S	Sg	18 01 14.4	+0.2
ODD1	**Odda**	**0.77**	**170**	*e*P	Pg	18 01 10.4	+0.7
SUE	**Sulen**	**0.87**	**297**	*e*P	Pg	18 01 10.8	-0.8
SUE				*e*S	Sg	18 01 21.2	-1.7
SKAR	**Skarslia**	**0.96**	**89**	*e*P	Pg	18 01 13.7	+0.3
SKAR				*e*S	Sb	18 01 27.0	-0.9
AKN	**Aaknes**	**1.54**	**11**	*e*P	Pn	18 01 22.0	-1.8
AKN				*e*S	Sn	18 01 42.6	-1.9
NBO00	**NORSAR Array S**	**2.20**	**79**	*e*Sg	Sn	18 02 01.0	+0.4

IDC 08 18:01:23.4±7.2, 17.73S×178.59W, h514km±26km, mb3.2/2, mbtmp3.9/3, Error ellipse: s-maj=273.1km s-min=34.8km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.20**	**269**	P	P	18 02 37.0	0.0
	6.7nm,0.7s,baz=45,slow=4.3,SNR=4.2						
WRA	**Warramunga Arr**	**44.49**	**259**	P	P	18 08 48.6	-0.5
	0.5nm,0.5s,baz=96,slow=6.9,SNR=19						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.67**	**254**	P	P	18 08 50.6	+0.2
	3.8nm,0.4s,baz=89,slow=7.9,SNR=188						
	3.8nm,0.4s						
GERES	**GERESS Array B**	**147.40**	**345**	PKPbc	PKPbc	18 20 08.7	-0.6
	0.8nm,0.5s,baz=22,slow=2.9,SNR=9.2						

*IDC **08** 18:08:17.6±0.7, 54.17S×60.53W, h0km, mb4.1/6, mbtmp4.1/9, ML3.8/3, MS3.3/1, Error ellipse: s-maj=24.7km s-min=17.9km az=83.0*
*NEIC **08** 18:08:19.9±1.9, 54.19S±0.07×60.38W±0.10, h10km±1km, mb4.6/27, Error ellipse: s-maj=12.2km s-min=8.6km az=328.0*
ISC 08 18:08:19.5±0.5, 54.14S±0.06×60.60W±0.05, h10km, n69, σ1§74/72, mb4.5/19, 2C-1D, Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFI	**East Falkland**	**2.91**	**33**		**Pn**	**18 09 05.7**	**0.0**
USHA	**Ushuaia**	**4.62**	**258**	Pn	**Pn**	**18 09 30.7**	**+1.4**
	2.9nm,0.3s,baz=95,slow=10,SNR=28						
USHA				Sn	**Sn**	**18 10 26.1**	**+3.1**
	11nm,0.3s,baz=340,slow=6.0,SNR=2.1						
	36nm,0.5s						
USHA	**Ushuaia**	**4.62**	**258**	*i* P	**Pn**	**18 09 30.1**	**+0.9**
USHA				IAmb	IAmb	18 09 59.5	
	comp=N,134nm,1.2s						
USHA				*i* S	**Sn**	**18 10 24.9**	**+1.9**
MG02	**Cerro Sombrero**	**5.33**	**281**	Pn	**Pn**	**18 09 39.2**	**+0.2**
MG02	**Cerro Sombrero**	**5.33**	**281**	*i* P	**Pn**	**18 09 38.9**	**-0.1**
MG02				*i* S	**Sn**	**18 10 38.2**	**-2.3**
GO10	**Punta Arenas**	**6.30**	**275**		**Pn**	**18 09 52.0**	**-0.3**
GO10	**Punta Arenas**	**6.30**	**275**	*i* P	**Pn**	**18 09 52.1**	**-0.2**
GO10				IAmb	IAmb	18 10 03.7	
	comp=N,198nm,1.3s						
GO10				IAmb	IAmb	18 10 04.0	
	comp=E,1μm,2.5s						
GO10				*i* S	**Sn**	**18 11 03.2**	**-1.0**
MG05	**Puerto Natales**	**7.61**	**284**	*i* P	**Pn**	**18 10 08.6**	**-1.7**
MG05				IAmb	IAmb	18 10 14.2	
	comp=N,131nm,1.6s						
MG05				*i* S	**Sn**	**18 11 33.8**	**-2.7**
MG05				IAML		18 11 38.6	
	comp=N,169nm,0.7s						
ESPZ	**Base Esperanza**	**9.47**	**170**		**Pn**	**18 10 35.9**	**+0.1**
PMSA	**Palmer Station**	**10.81**	**188**	Pn	**Pn**	**18 10 55.1**	**+1.1**
	comp=N,1.4nm,0.3s,baz=27,slow=11,SNR=12						
	comp=N,13nm,0.6s						
PMSA	**Palmer Station**	**10.81**	**188**	Pn	**Pn**	**18 10 55.2**	**+1.2**
PLCA	**Paso Flores**	**14.99**	**329**	Pn	**Pn**	**18 11 51.3**	**+0.1**
	comp=N,0.1nm,0.3s,baz=175,slow=6.1,SNR=4.0						
	comp=N,1.9nm,0.8s						
TRQA	**Tornquist**	**16.11**	**356**	Pn	**Pn**	**18 12 07.9**	**+1.9**
BI02	**San Fabin de**	**18.98**	**333**	P	**Pn**	**18 12 45.1**	**+3.5**
BO02	**Sierra Bellavi**	**20.62**	**336**	P	Pn	18 13 01.4	+0.3
GO05	**Hualane**	**20.71**	**333**		**P**	**18 13 01.6**	**+1.8**
GO05				IAmb	IAmb	18 13 07.0	
	comp=Z,15nm,0.6s						
BO04	**La Punta**	**21.35**	**337**	P	**P**	**18 13 08.5**	**+1.8**
BO04				IAmb	IAmb	18 13 13.1	
	comp=Z,20nm,0.7s						
MT01	**Popeta**	**21.62**	**335**	P	**P**	**18 13 10.6**	**+1.0**
MT01				IAmb	IAmb	18 13 39.4	
	comp=Z,25nm,1.4s						
MT09	**Talagante**	**21.64**	**336**	P	**P**	**18 13 11.0**	**+1.0**
MT09				IAmb	IAmb	18 13 16.9	
	comp=Z,19nm,0.8s						
MT03	**Universidad Ad**	**21.80**	**337**	P	**P**	**18 13 13.1**	**+1.5**
MT02	**Curacav**	**22.17**	**336**	P	**P**	**18 13 15.8**	**+0.3**
MT02				IAmb	IAmb	18 13 20.9	
	comp=Z,20nm,0.8s						
VA03	**San Esteban**	**22.51**	**338**	P	**P**	**18 13 20.3**	**+1.1**
CO04	**Los Peladeros**	**23.30**	**337**		**P**	**18 13 29.0**	**+1.3**
CO04				IAmb	IAmb	18 13 33.4	
	comp=Z,14nm,0.8s						
ZON	**Zonda**	**23.32**	**342**		**P**	**18 13 27.7**	**+0.1**
ZON				IAmb	IAmb	18 13 32.0	
	comp=Z,7.8nm,0.7s						
CO02	**Combarbal**	**24.11**	**338**		**P**	**18 13 36.7**	**+1.4**
CO02				IAmb	IAmb	18 13 38.5	
	comp=Z,12nm,0.6s						
CO03	**El Pedregal**	**24.40**	**339**	P	**P**	**18 13 39.9**	**+1.9**
CO03				IAmb	IAmb	18 13 41.3	
	comp=Z,12nm,0.8s						
CO06	**Fray Jorge**	**24.77**	**337**	P	**P**	**18 13 42.9**	**+1.7**
CO06				IAmb	IAmb	18 13 43.9	
	comp=Z,12nm,0.8s						
GO04	**Tololo Observa**	**25.06**	**339**	P	**P**	**18 13 45.1**	**+1.0**
CO01	**Juntas del Tor**	**25.11**	**340**	P	**P**	**18 13 47.4**	**+2.9**
CO01				IAmb	IAmb	18 13 49.1	
	comp=Z,19nm,1.1s						
LCO	**Las Campanas**	**26.17**	**340**		**P**	**18 13 55.1**	**+0.9**
AC05	**El Transito**	**26.25**	**341**	P	**P**	**18 13 55.5**	**+0.8**
CPUP	**Villa Florida**	**27.88**	**6**	P	**P**	**18 14 09.9**	**+0.6**
	comp=Z,3.4nm,1.0s,baz=170,slow=10,SNR=4.0						
	comp=Z,3.4nm,1.0s						
CPUP	**Villa Florida**	**27.88**	**6**	P	**P**	**18 14 10.0**	**+0.7**
CPUP				IAmb	IAmb	18 14 10.7	
	comp=Z,19nm,1.4s						
VNA1	**Neumayer--Stat**	**28.09**	**146**	⇑P	**P**	**18 14 09.8**	**-1.0**
	comp=Z,5.3nm,0.8s						
SNAA	**Sanae**	**29.96**	**148**	⇑P	**P**	**18 14 26.6**	**-0.9**
	comp=Z,93nm,0.6s						
SNAA	**Sanae**	**29.96**	**148**	P	**P**	**18 14 26.3**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=293,slow=7.2,SNR=15						
	comp=Z,2.1nm,0.9s						
SNAA	**Sanae**	**29.96**	**148**		**P**	**18 14 26.2**	**-1.2**
SNAA				IAmb	IAmb	18 14 31.9	
	comp=Z,5.0nm,0.9s						
TROLL	**Troll, Antarti**	**31.66**	**148**	P	**P**	**18 14 41.5**	**-1.0**
	comp=Z,168nm,0.5s						
QSPA	**South Pole Qui**	**36.11**	**180**	P	**P**	**18 15 20.9**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=250,slow=1.3,SNR=18						
	comp=Z,2.5nm,0.6s						
QSPA	**South Pole Qui**	**36.11**	**180**	P	**P**	**18 15 20.0**	**-1.2**
PB16	**IPOC Station P**	**36.39**	**346**	IAmb	IAmb	18 15 28.4	
	comp=Z,9.9nm,0.7s						
ELIB	**Princess Elisa**	**38.03**	**150**	*d*P	**P**	**18 15 35.9**	**-1.6**
	comp=Z,4.0nm,0.8s						
LPAZ	**La Paz**	**38.23**	**348**	P	**P**	**18 15 40.6**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=208,slow=7.5,SNR=5.0						
LPAZ				LR	LR	18 33 24.1	
	comp=Z,41nm,18.8s,baz=116,slow=39						
	comp=Z,1.7nm,0.6s						
LPAZ	**La Paz**	**38.23**	**348**	P	**P**	**18 15 40.8**	**+0.7**
SBA	**Scott Base**	**45.11**	**193**	P	**P**	**18 16 35.3**	**+0.2**
H10S3	**ASCENSION HYDR**	**58.04**	**57**	T	T	19 20 44.4	
	baz=211,slow=74,SNR=8.1						
H10S2	**ASCENSION HYDR**	**58.04**	**57**	T	T	19 20 44.7	
	baz=9.2,slow=74,SNR=9.9						
H10N3	**ASCENSION HYDR**	**59.08**	**56**	T	T	19 22 03.2	
	baz=209,slow=75,SNR=11						
H10N1	**ASCENSION HYDR**	**59.09**	**56**	T	T	19 22 03.7	
	baz=209,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**59.10**	**56**	T	T	19 22 04.5	
	baz=209,slow=75,SNR=14						
TORD	**Torodi Ar. Bea**	**85.19**	**60**	P	**P**	**18 20 55.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=209,slow=4.1,SNR=8.9						
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**85.19**	**60**	P	**P**	**18 20 55.6**	**-0.4**
TORD				IAmb	IAmb	18 21 01.8	
	comp=Z,3.1nm,0.7s						
TXAR	**Lajitas Array**	**91.08**	**323**	P	**P**	**18 21 23.9**	**0.0**
	comp=Z,2.4nm,0.7s,baz=156,slow=8.9,SNR=4.8						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**91.08**	**323**	P	**P**	**18 21 23.6**	**-0.3**
ASAR	**Alice Springs**	**101.51**	**194**	P	**Pdif**	**18 22 09.8**	**-1.8**
	comp=Z,0.7nm,1.1s,baz=170,slow=4.8,SNR=8.0						
ASAR	**Alice Springs**	**101.51**	**194**		**Pdif**	**18 22 09.1**	**-2.4**
WRA	**Warramunga Arr**	**105.11**	**195**	Pdiff	**Pdif**	**18 22 25.7**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=172,slow=4.2,SNR=1.7						
YKA	**Yellowknife Ar**	**123.75**	**333**	PKP	**PKPdf**	**18 27 13.7**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=145,slow=2.2,SNR=5.1						
ILAR	**Eielson Array**	**135.58**	**322**	PKP	**PKPdf**	**18 27 36.5**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=156,slow=1.1,SNR=4.3						
ILAR	**Eielson Array**	**135.58**	**322**		**PKPdf**	**18 27 37.8**	**-0.6**
KSH2	**Kashi**	**146.97**	**99**	PKPbc	**PKiKP**	**18 28 06.6**	**+2.3**
PZH	**PanZhiHua**	**149.46**	**148**	PKPbc	**PKPdf**	**18 28 03.2**	**-1.0**
BVAR	**Borovoye Array**	**151.34**	**72**	PKPbc	**PKPbc**	**18 28 11.0**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=329,slow=2.6,SNR=16						
KURBB	**Kurchatov Arra**	**155.06**	**81**	PKP	**PKPdf**	**18 28 10.4**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=246,slow=2.0,SNR=7.5						
KURBB				PKPab	**PKPab**	**18 28 36.9**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=250,slow=5.2,SNR=14						
KURK	**Kurchatov**	**155.15**	**81**		**PKPdf**	**18 28 10.1**	**-1.6**
KURK					**PKPab**	**18 28 36.9**	**+0.4**
MKAR	**Makanchi Array**	**155.49**	**92**	PKP	**PKPdf**	**18 28 09.7**	**-2.6**
	comp=Z,0.3nm,0.8s,baz=224,slow=4.0,SNR=2.3						
MKAR				PKPab	**pPKPab**	**18 28 39.8**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=240,slow=5.7,SNR=4.4						
WMQ	**Urumqi**	**156.96**	**104**	PKP	**PKPdf**	**18 28 13.9**	**-0.5**
WMQ				pPKP	sPKPdf	18 28 26.3	+7.3
WMQ				PKPab	**PKPab**	**18 28 44.8**	**+0.1**
WMQ				PP	**PP**	**18 32 30.5**	**+6.8**
NJ2	**Nanjing**	**157.92**	**179**	*e*P	**PKPdf**	**18 28 17.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC	**Hu-ho-hao-te**	**165.70**	**155**	*e*P	**PKPdf**	**18 28 19.1**	**-4.7**

*TEH **08** 18:09:46.4, 32.93N×46.05E, h9km±29km, ML3.3, Presumed earthquake*
*ISN **08** 18:09:47.5±1.6, 32.92N×46.36E, h46km, ML3.1, Presumed earthquake*
ISC 08 18:09:47.0±0.9, 32.91N±0.04×46.03E±0.05, h10km, n11, σ1§65/14, 1D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.73**	**12**	Pg	**Pb**	**18 10 00.6**	**-1.2**
RAFI	**Al-Rafai**	**1.19**	**176**	*e*Pg	**Pg**	**18 10 10.0**	**+0.2**
	baz=10.0						
RAFI				⇓*e*Sg	**Sb**	**18 10 23.5**	**-1.5**
RAFI				AML	AML	18 10 35.6	
	comp=N,196nm,0.2s						
BHD	**Baghdad**	**1.43**	**285**	*e*Pn	**Pb**	**18 10 13.0**	**-0.8**
BHD				*e*Sn	**Sn**	**18 10 31.0**	**-0.9**
BHD				AML	AML	18 10 46.1	
	comp=E,553nm,0.4s						
IGHG	**Ghaleghazi**	**1.49**	**17**	Pg	**Pg**	**18 10 15.8**	**+0.2**
IGHG				Sg	**Sg**	**18 10 36.7**	**+1.7**
KCHF	**Cheshme Sefid,**	**1.60**	**32**	Pg	**Pg**	**18 10 17.4**	**-0.4**
IDHR	**Dehrash**	**1.81**	**9**	Pg	**Pg**	**18 10 20.5**	**-1.3**
IBZA	**Bozab**	**2.18**	**44**	Pn	**Pb**	**18 10 25.6**	**-1.1**
SNQR	**Sonqor, Kerman**	**2.35**	**34**	Pn	**Pb**	**18 10 28.5**	**-1.2**
BDRS	**Dareh Seyedi**	**2.60**	**66**	Pn	**Pb**	**18 10 31.4**	**-2.6**
QABG	**Abgarm-Qazvin**	**4.05**	**46**	Pn	**Pn**	**18 10 51.5**	**+2.1**
IPIR	**Pirpir**	**4.10**	**92**	Pn	**Pn**	**18 10 52.5**	**+2.4**

*RHSSO **08** 18:52:57.8±0.4, 43.21N×17.81E, h7km±3km, ML2.8/7*
*PDG **08** 18:52:58.3±0.2, 43.19N×17.82E, h10km, MD3.1/1, ML3.0/12, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0*
*BEO **08** 18:52:58.4±0.3, 43.24N×17.78E, h3km±2km, ML2.7/11*
*PRU **08** 18:53:01.5, 43.94N×19.62E, h10km, M2.9*
ISC 08 18:52:57.7±1.0, 43.21N±0.02×17.84E±0.01, h5km±9km, n70, σ1§36/123, 10C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.36**	**197**	*i* Pg	**Pg**	**18 53 04.5**	**-0.1**
STON				Sg	**Sg**	**18 53 08.8**	**-0.5**
STON	**Ston**	**0.36**	**197**	*e*Pg	**Pg**	**18 53 04.6**	**-0.1**
STON				*e*Sg	**Sg**	**18 53 10.2**	**+0.9**
KLINJ	**Klinje**	**0.55**	**94**	*e*Pg	**Pg**	**18 53 07.7**	**-0.6**
KLINJ				*e*Sg	**Sb**	**18 53 16.7**	**-1.4**
RICI	**Ricice**	**0.59**	**299**	*i* Pg	**Pg**	**18 53 08.8**	**-0.2**
RICI				Sg	**Sb**	**18 53 18.1**	**-1.0**
DBRK	**Dubrovnik**	**0.59**	**157**	*e*Pg	**Pg**	**18 53 08.7**	**-0.3**
DBRK				Sg	**Sb**	**18 53 18.2**	**-1.0**
BRY	**Bratogost**	**0.60**	**121**	⇑*i*Pg	**Pg**	**18 53 08.5**	**-0.8**
BRY				*e*Sg	**Sg**	**18 53 18.1**	**+1.0**
BRY	**Bratogost**	**0.60**	**121**	⇓*i*Pg	**Pg**	**18 53 09.0**	**-0.3**
BRY				*i* Sg	**Sb**	**18 53 18.7**	**-0.9**
MAKA	**Makarska**	**0.60**	**277**	*i* Pg	**Pg**	**18 53 08.9**	**-0.4**
MAKA				Sg	**Sg**	**18 53 17.5**	**+0.3**
TREB	**Trebinje**	**0.62**	**143**	⇓*i*Pg	**Pg**	**18 53 09.1**	**-0.6**
TREB				*e*Sg	**Sg**	**18 53 18.5**	**+0.8**
LSTV	**Lastovo**	**0.83**	**238**	*e*Pg	**Pg**	**18 53 12.8**	**-0.8**
LSTV				Sg	**Sg**	**18 53 24.3**	**0.0**
HCY	**Herceg Novi**	**0.90**	**148**	⇑*i*Pg	**Pg**	**18 53 14.1**	**-1.0**
HCY				*e*Sg	**Sb**	**18 53 27.7**	**-0.6**
HCY	**Herceg Novi**	**0.90**	**148**	⇓*i*Pg	**Pg**	**18 53 14.2**	**-0.9**
HCY				*i* Sg	**Sb**	**18 53 28.8**	**+0.5**
NKME	**Niksic**	**0.93**	**118**	⇓*i*Pg	**Pg**	**18 53 15.0**	**-0.6**
NKME				*i* Sg	**Sn**	**18 53 30.0**	**-1.3**
CEME	**Cevo**	**1.03**	**130**	⇓*i*Pg	**Pg**	**18 53 16.6**	**-1.0**
CEME				*i* Sg	**Sn**	**18 53 33.1**	**-0.8**
PLE	**Pljevlja**	**1.14**	**84**	⇓*i*Pg	**Pn**	**18 53 19.9**	**-0.6**
PLE				*i* Sg	**Sn**	**18 53 37.4**	**+0.9**
BUM	**Brajici-Budva**	**1.20**	**139**	⇑*i*Pg	**Pb**	**18 53 20.7**	**-0.3**
BUM				*i* Sg	**Sn**	**18 53 38.8**	**+0.9**
KOME	**Kolasin**	**1.28**	**106**	⇑*i*Pg	**Pn**	**18 53 21.9**	**-0.5**
KOME				*i* Sg	**Sn**	**18 53 42.1**	**+2.1**
PDG	**Podgorica**	**1.30**	**126**	*e*Pg	**Pb**	**18 53 22.7**	**0.0**
PDG				*e*Sg	**Sg**	**18 53 41.9**	**+2.3**
PDG	**Podgorica**	**1.30**	**126**	⇑*i*Pg	**Pn**	**18 53 20.7**	**-1.9**
PDG				*e*Sg	**Sg**	**18 53 40.1**	**+0.5**
PDG	**Podgorica**	**1.30**	**126**	⇑*i*Pg	**Pn**	**18 53 22.2**	**-0.4**
PDG				*i* Sg	**Sg**	**18 53 42.5**	**+2.9**
KIJV	**Kijevo**	**1.31**	**308**	Sg	**Sg**	**18 53 42.5**	**+2.7**
BBLS	**Lazi&#263i**	**1.31**	**60**	*e*Pg	**Pb**	**18 53 22.8**	**-0.1**
BBLS				*e*Sg	**Sg**	**18 53 40.3**	**+0.4**
BBLS	**Lazi&#263i**	**1.31**	**60**	⇑*i*Pg	**Pn**	**18 53 21.7**	**-1.1**
BBLS				*e*Sg	**Sg**	**18 53 39.9**	**0.0**
DRME	**Dracevica, Mon**	**1.43**	**136**	⇑*i*Pg	**Pn**	**18 53 24.2**	**-0.1**
DRME				*e*Sg	**Sg**	**18 53 44.0**	**+0.5**
DRME	**Dracevica, Mon**	**1.43**	**136**	⇓*i*Pg	**Pb**	**18 53 24.5**	**-0.3**
DRME				*i* Sg	**Sg**	**18 53 46.2**	**+2.7**
IVA	**Berane**	**1.54**	**102**	⇑*i*Pg	**Pb**	**18 53 26.6**	**-0.3**
IVA				*i* Sg	**Sg**	**18 53 49.6**	**+2.3**
SJES	**Sjenica**	**1.56**	**88**	*e*Pg	**Pg**	**18 53 27.7**	**+0.1**
SJES				*e*Sg	**Sg**	**18 53 49.4**	**+1.6**
SJES	**Sjenica**	**1.56**	**88**	⇑*i*Pn	**Pn**	**18 53 25.3**	**-1.0**
SJES				*e*Sn	**Sb**	**18 53 46.8**	**-0.5**
BLY	**Banja Luka**	**1.61**	**343**	*e*Pg	**Pb**	**18 53 27.7**	**-0.2**
BLY				*e*Sg	**Sg**	**18 53 49.6**	**+0.2**
BLY	**Banja Luka**	**1.61**	**343**	*e*Pn	**Pn**	**18 53 26.9**	**+0.1**
BLY				*e*Sn	**Sb**	**18 53 47.8**	**-0.7**
ULC	**Ulcinj**	**1.62**	**140**	⇓*i*Pn	**Pn**	**18 53 27.3**	**+0.3**
ULC				*i* Sn	**Sg**	**18 53 51.3**	**+1.4**
ZIRJ	**Zirje**	**1.66**	**286**	*e*Pn	**Pb**	**18 53 28.1**	**-0.6**
ZIRJ				Sg	**Sg**	**18 53 51.2**	**+0.2**
PVY	**Plav**	**1.68**	**111**	⇓*i*Pn	**Pb**	**18 53 28.9**	**-0.2**
PVY				*i* Sn	**Sg**	**18 53 52.3**	**+0.8**
MORI	**Morici**	**1.68**	**294**	*i* Pn	**Pb**	**18 53 29.3**	**+0.1**
MORI				Sg	**Sg**	**18 53 52.5**	**+0.7**
IVAS	**Ivanjica**	**1.72**	**77**	*e*Pg	**Pb**	**18 53 28.9**	**-1.0**
IVAS				*e*Sg	**Sg**	**18 53 53.3**	**+0.2**
DIVS	**Divibare**	**1.79**	**60**	*e*Pg	**Pb**	**18 53 31.4**	**+0.2**
DIVS				*e*Sg	**Sg**	**18 53 56.6**	**+1.2**
TEKS	**Tekeris**	**1.81**	**42**	*e*Pg	**Pg**	**18 53 32.2**	**-0.2**
TEKS				*e*Sg	**Sg**	**18 53 55.6**	**-0.3**
TEKS	**Tekeris**	**1.81**	**42**	*e*Pn	**Pn**	**18 53 30.0**	**+0.4**
TEKS				*e*Sn	**Sb**	**18 53 53.4**	**-1.0**
UDBI	**Udbina**	**2.00**	**312**	*e*Pn	**Pb**	**18 53 33.7**	**-0.9**
UDBI				Sn	**Sg**	**18 54 01.0**	**-0.8**
TRUS	**Trudelj**	**2.12**	**61**	*e*Pn	**Pb**	**18 53 35.9**	**-0.7**
DUGI	**Dugi Otok**	**2.17**	**292**	*e*Pn	**Pb**	**18 53 36.5**	**-1.0**
DUGI				Sn	**Sb**	**18 54 03.8**	**-0.8**
GOCS	**Kraljevo Serbi**	**2.24**	**80**	*e*Pn	**Pn**	**18 53 36.2**	**+0.6**
GOCS				*e*Sn	**Sb**	**18 54 05.8**	**-1.0**
VIRC	**Vir**	**2.29**	**299**	*e*Pn	**Pb**	**18 53 38.5**	**-1.0**
PLIT	**Plitvice**	**2.31**	**317**	*e*Pn	**Pb**	**18 53 39.4**	**-0.5**
PLIT				Sn	**Sb**	**18 54 09.4**	**+0.6**
SELS	**Selova**	**2.40**	**89**	*e*Pn	**Pn**	**18 53 38.4**	**+0.7**
SELS				*e*Sn	**Sb**	**18 54 09.1**	**-2.2**
FRGS	**Fruska Gora**	**2.41**	**35**	*e*Pn	**Pn**	**18 53 38.0**	**+2.2**
FRGS				*e*Sn	**Sn**	**18 54 07.9**	**+0.2**
RABC	**Rab**	**2.69**	**306**	*e*Pn	**Pn**	**18 53 43.1**	**+1.4**
RABC				Sn	**Sb**	**18 54 17.2**	**-2.4**
BARS	**Barje**	**2.94**	**96**	*e*Pn	**Pn**	**18 53 46.5**	**+1.3**
MORH	**Mrgy, Hungar**	**3.06**	**11**	*e*Pn	**Pn**	**18 53 47.0**	**+0.3**
MORH				*e*Sn	**Sn**	**18 54 23.0**	**-0.6**
CRES	**Cresnjevec Ost**

GGPT	Toaza - Volcan	2.17	115	⇑P		Pn	18 53 40.8	+0.5
JUA2	San Juan 2	2.17	115	⇓P		Pn	18 53 41.5	+1.0
PULU	Pululahua	2.19	108	P		Pn	18 53 41.8	+1.1
CUSE	Cuicocha Este	2.21	100	⇓P		Pb	18 53 42.9	-1.6
CUSE	Cuicocha Este	2.21	100	P		Pb	18 53 43.1	-1.4
CUSE				S		Sb	18 54 10.7	-1.2
LITE1	Lita	2.22	88	⇑P		Pn	18 53 41.2	+0.3
ALIT	Ecuador-Imbabu	2.22	88	P		Pb	18 53 42.9	-1.5
PPLP	Puerto Lpez	2.25	185	P		Pg	18 53 48.6	+0.9
PPLP	Puerto Lpez	2.25	185	P		Pb	18 53 43.9	-0.9
CUIC	Cuicocha-Domo	2.25	100	⇓P		Pb	18 53 43.5	-1.7
COTA	Cotacachi	2.27	99	⇑P		Pb	18 53 44.3	-1.2
ILLI	Illinizas Sur	2.33	127	⇓P		Pn	18 53 42.7	+0.1
URCU	Urcuqui	2.34	97	P		Pb	18 53 45.5	-1.1
PUEM	Granja Avicola	2.36	111	P		Pb	18 53 45.3	-1.7
IMBA	Imbabura, San	2.42	100	P		Pb	18 53 47.1	-0.9
TOMA	Boca Toma-Volc	2.46	119	P		Pn	18 53 46.0	+1.6
SUCR	Mariscal Sucre	2.48	123	P		Pn	18 53 46.4	+1.7
SRAM	San Ramn-Vol	2.48	126	P		Pb	18 53 46.9	-2.1
PITA	Cotopaxi Volc	2.49	120	P		Pn	18 53 46.2	+1.4
NAS2	Nasa	2.50	123	P		Pb	18 53 49.4	0.0
BNAS	Cotopaxi Volca	2.51	123	P		Pn	18 53 46.5	+1.3
CHMA	Chilma	2.52	87	P		Pn	18 53 46.1	+0.9
SLOR	San Lorenzo -	2.52	124	P		Pn	18 53 47.0	+1.6
YAHU	Yahuarcocha	2.53	98	P		Pb	18 53 49.7	-0.1
BREF	Cotopaxi Volca	2.54	123	P		Pn	18 53 47.4	+1.7
BVC2	Cotopaxi Volca	2.56	122	P		Pn	18 53 47.8	+1.9
VC1	Cotopaxi 1	2.56	122	P		Pn	18 53 48.0	+2.2
BMOR	Cotopaxi Volca	2.56	124	P		Pn	18 53 47.1	+1.2
LNGL	El Angel-Carch	2.58	89	P		Pn	18 53 47.2	+1.1
BTAM	Cotopaxi Volca	2.58	122	P		Pn	18 53 48.3	+2.1
ECEN	Cerro Negro	2.61	87	P		Pn	18 53 48.2	+1.6
TAMB	Tambo	2.61	122	P		Pn	18 53 48.7	+2.0
ANTG	Antisana-Guama	2.62	117	P		Pn	18 53 48.6	+1.9
CHL1	Volcn Chiles	2.63	88	P		Pn	18 53 48.7	+1.8
VCES	Cotopaxi	2.65	124	P		Pn	18 53 49.2	+2.1
ANTM	Antisana-La Mi	2.66	118	P		Pn	18 53 48.8	+1.5
CAYR	Refugio Cayamb	2.66	105	P		Pb	18 53 50.5	-1.8
CHL2	Volcn Chiles	2.66	88	P		Pb	18 53 49.6	-2.6
ANTI	Antisana	2.68	115	P		Pb	18 53 50.0	-2.5
ANTS	Antisana-Sarah	2.69	116	P		Pn	18 53 49.8	+2.0
CHSH	Refugio Sur-Vo	2.78	142	P		Pn	18 53 51.0	+2.1
PIS1	Pisayambo	2.81	129	P		Pb	18 53 52.2	-2.5
PORT	Chimborazo Vol	2.81	140	P		Pn	18 53 51.6	+2.2
PIAT	Ana Tenorio	2.87	126	P		Pb	18 53 55.9	+0.2
TAMH	Tambohuasha Ch	2.87	141	P		Pn	18 53 52.3	+2.2
JSCH	Cashca Tororas	2.89	146	P		Pb	18 53 53.6	-2.5
IGUA	Igualata	2.92	138	P		Pb	18 53 54.0	-2.6
ARRY	Arrayan	3.06	136	P		Pb	18 53 56.4	-2.4
REVS	Reventador Sur	3.07	105	P		Pb	18 53 56.9	-2.0
BPAT	Tungurahua Vol	3.07	136	P		Pb	18 53 56.8	-2.3
CASC	Dorado de Casc	3.29	100	P		Pn	18 53 56.6	+1.1
GR1C	Gorgona, Isla	3.32	47	P		Pn	18 53 56.4	+0.6
MORR	Playas El Morr	3.34	176	P		Pb	18 54 00.3	-3.1
BBAC	Balboa, Cauca	3.58	69	P		Pn	18 54 00.5	+0.9
BBAC	Balboa, Cauca	3.58	69	P		Pn	18 54 01.1	+1.5
BBAC				S		Sb	18 54 48.2	-2.7
POPC	Popayan, Colom	4.30	65	P		Pn	18 54 12.4	+2.8
BOSC	San Juan Bosco	4.36	152	P		Pn	18 54 14.2	+3.8
GUY2C	Guyana, Caldas	6.87	49	P		Pn	18 54 45.0	-0.1

NEIC ***08*** *19:16:10.6±1.2,5.3S×0.2×105.1E±0.1, h136km±7km, mb4.3/8, Error ellipse: s-maj=30.9km s-min=9.4km az=214.0*

DJA ***08*** *19:16:11.2±0.3,6.7S×6×10.5E±, h129km±3km, M4.1/35, mB4.6/1, mb4.3/6, MLv4.0/35, Mw(mB)3.8/1*

IDC ***08*** *19:16:12.4±3.3,5.2S×105.2E, h156km±27km, mb3.3/6, mbtmp3.9/8, Error ellipse: s-maj=55.6km s-min=18.8km az=55.0*

ISC 08 19:16:10.4±0.7,**5.5S**±0.1×**104.98E**±0.0,**h150**km,**n33**, σ1§**37**/42,**mb3.8**/9,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.30	59	P	Pn	19 16 30.3	-0.7
KASI	Kota Agung	0.48	271	P	Pn	19 16 30.5	-1.1
KLI	Kotabumi	0.67	349	P	Pn	19 16 32.9	+0.1
KLI				S	Sn	19 16 49.4	-0.4
KLSI		0.87	343	P	Pn	19 16 34.3	+0.1
KLSI				S	Sn	19 16 51.4	-0.9
TNG	Tangerang	1.77	111	P	Pn	19 16 42.4	-0.5
MNAI	Manna	2.33	300	Pn	Pn	19 16 49.4	-0.1
MNAI					Sn	19 17 18.2	-1.3
MNAI	Manna	2.33	300	P	Pn	19 16 49.6	+0.1
LEM	Lembang	2.92	116	P	Pn	19 16 57.7	+0.8
	18nm,0.3s,baz=313,slow=19,SNR=3.8						
LEM	Lembang	2.92	116	P	Pn	19 16 57.6	+0.7
KSI	Kapahiang	3.03	308	P	Pn	19 16 58.8	+0.6
BBJI	Bungbulang	3.27	126		Pn	19 17 00.7	-0.6
BBJI				Sn	Sn	19 17 37.4	-3.4
BBJI	Bungbulang	3.27	126	P	Pn	19 17 01.0	-0.3
PDSI	Padang	6.43	315	P	Pn	19 17 41.7	-1.3
	18nm,0.4s						
SNJI	Sawahan-Nganju	7.09	109	P	Pn	19 17 54.6	+2.7
	20nm,0.6s						
JAGI	Jajag, Banyuwa	9.56	108	Pn	Pn	19 18 23.5	-1.1
JAGI				Sn	Sn	19 20 07.9	-2.7
GSI	Gunungsitoli	10.04	312		Pn	19 18 26.8	-4.2
BATI	Baumata	19.07	105	P	P	19 20 20.1	-1.4
	15nm,0.6s,baz=288,slow=12,SNR=1.6						
KNRA	Kununurra	25.43	115	P	P	19 21 24.6	+0.2
MTN	Manton Dam	26.80	108	P	P	19 21 37.0	+0.2
MTN				IAmb	IAmb	19 21 52.4	
	comp=Z,9.1nm,1.0s						
WB0	Warramunga Arr	31.91	119	P	P	19 22 20.4	-1.6
WB0				IAmb	IAmb	19 22 29.5	
	comp=Z,7.0nm,1.2s						
WRA	Warramunga Arr	31.93	119	P	P	19 22 22.7	+0.5
	comp=Z,0.8nm,0.6s,baz=305,slow=9.2,SNR=8.5						
WRA				PcP	PcP	19 25 10.0	+0.9
	comp=Z,0.4nm,1.0s,baz=304,slow=1.7,SNR=1.4						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	31.93	119	P	P	19 22 22.7	+0.5
WRA					PcP	19 25 10.0	+0.9
WR8	Warramunga Arr	32.08	119	P	P	19 22 23.9	+0.4
WR8				IAmb	IAmb	19 22 53.9	
	comp=Z,12nm,1.5s						
ASAR	Alice Springs	33.17	126	P	P	19 22 33.5	+0.6
	comp=Z,0.7nm,0.3s,baz=297,slow=7.7,SNR=26						
ASAR				PcP	PcP	19 25 13.0	+0.5
	comp=Z,0.3nm,0.7s,baz=299,slow=1.9,SNR=2.2						
	comp=Z,0.7nm,0.3s						
ASAR	Alice Springs	33.17	126	P	P	19 22 34.0	+1.1
ASAR					PcP	19 25 13.0	+0.5
AS31	Alice Springs	33.17	126	P	P	19 22 33.9	+0.9
BBOO	Buckleboo	39.69	137	P	P	19 23 29.5	+1.5
STKA	Stephens Creek	43.11	132	P	P	19 23 57.5	+1.5
	comp=Z,1.9nm,0.5s,baz=305,slow=8.5,SNR=6.6						
	comp=Z,1.9nm,0.5s						
SONM	Songino Array	53.15	1	PcP	PcP	19 26 19.4	+0.4
	comp=Z,0.4nm,0.4s,baz=158,slow=4.5,SNR=2.5						
MKAR	Makanchi Array	55.84	347	P	P	19 25 31.6	-0.6
	comp=Z,0.1nm,0.4s,baz=148,slow=8.5,SNR=2.1						
	comp=Z,0.1nm,0.4s						
ZALV	Zalesovo Beam	61.63	347	P	P	19 26 13.0	+1.0
	comp=Z,0.5nm,0.5s,baz=142,slow=6.8,SNR=4.6						
	comp=Z,0.5nm,0.5s						
QSPA	South Pole Qui	84.45	180	P	P	19 28 27.6	+1.5
	comp=Z,0.7nm,0.9s,baz=270,slow=4.0,SNR=1.2						
	comp=Z,0.7nm,0.9s						
QSPA	South Pole Qui	84.45	180	P	P	19 28 27.6	+1.5
QSPA				IAmb	IAmb	19 28 54.1	
	comp=Z,3.8nm,1.4s						

IDC ***08*** *19:19:02.8±3.8, 17.2S×178.6W, h588km±20km, mb3.5/3, mbtmp4.4/4, Error ellipse: s-maj=111.9km s-min=62.3km az=152.0*

NEIC ***08*** *19:19:02.7±1.3, 17.3S±0.3×178.4W±0.0, h588km±12km, mb4.3/17, Error ellipse: s-maj=42.9km s-min=4.1km az=163.0*

ISC 08 19:19:02.6±1.0,**17.4S**±0.2×**178.5W**±0.1,**h600**km,**n25**, σ1§**15**/28,**mb4.2**/12,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.30	263	P	P	19 20 22.3	-1.3
	62nm,0.6s,baz=83,slow=8.1,SNR=48						
MSVF	Nonsavu	3.30	263	P	P	19 20 22.6	-1.1
AFI	Afiamalu	7.34	63	P	P	19 20 54.5	-1.4
MARNC	Mare, Loyalty	13.34	250	P	P	19 21 52.1	-2.8
SANVU	Saraoutou	13.84	276	P	P	19 21 57.7	-2.3
KOUNC	Koumac, New Ca	16.58	256	P	P	19 22 27.2	+1.9
CTAO	Charters Tower	33.44	260	P	P	19 24 54.3	+0.5
MANU	Manus Island	36.81	291	P	P	19 25 22.4	+0.7
STKA	Stephens Creek	38.81	241	P	P	19 25 38.0	+0.4
	2.2nm,0.5s,baz=97,slow=11,SNR=6.9						
	2.2nm,0.5s						
INKA	Innaminka	38.86	247	P	P	19 25 39.0	+0.9
BBOO	Buckleboo	43.59	240	P	P	19 26 15.5	+0.3
WR8	Warramunga Arr	44.48	259	P	P	19 26 25.2	+0.1
WR8				IAmb	IAmb	19 26 35.6	
	comp=Z,14nm,1.5s						
WB0	Warramunga Arr	44.60	259	P	P	19 26 23.4	+0.1
WB0				IAmb	IAmb	19 26 36.3	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.64	259	P	P	19 26 23.4	-0.1
	comp=Z,1.3nm,0.5s,baz=93,slow=6.8,SNR=48						
WRA				PcP	PcP	19 27 53.8	+0.8
	comp=Z,0.3nm,0.6s,baz=102,slow=3.4,SNR=1.6						
	comp=Z,1.3nm,0.5s						
WRA	Warramunga Arr	44.64	259	P	P	19 26 23.4	-0.1
WRA					PcP	19 27 53.8	+0.8
AS31	Alice Springs	44.85	254	P	P	19 26 25.5	+0.4
AS31				IAmb	IAmb	19 26 26.2	
	comp=Z,3.9nm,0.7s						
ASAR	Alice Springs	44.85	254	P	P	19 26 25.7	+0.6
	comp=Z,13nm,0.5s,baz=88,slow=8.1,SNR=271						
ASAR				PcP	PcP	19 27 54.6	+0.8
	comp=Z,0.3nm,0.5s,baz=94,slow=3.6,SNR=2.5						
	comp=Z,13nm,0.5s						
MTN	Manton Dam	48.72	268	P	P	19 26 54.6	+0.4
MTN				IAmb	IAmb	19 27 02.5	
	comp=Z,13nm,1.2s						
FORT	Forrest	50.16	244	P	P	19 27 04.5	0.0
FORT				IAmb	IAmb	19 27 21.4	
	comp=Z,5.5nm,1.0s						
KNRA	Kununurra	50.45	264	P	P	19 27 08.0	+1.2
KNRA				IAmb	IAmb	19 27 48.1	
	comp=Z,26nm,1.4s						
FITZ	Fitzroy Crossi	53.02	260	P	P	19 27 27.0	+1.7
MBWA	Marble Bar	58.11	256	P	P	19 28 01.1	+0.6
MBWA				IAmb	IAmb	19 28 39.6	
	comp=Z,18nm,1.4s						
KKM	Kota Kinabalu	68.51	284	P	P	19 29 05.8	-1.1
KKM				IAmb	IAmb	19 29 25.2	
	comp=Z,16nm,1.1s						
UNV	Unalaska Valle	71.66	7	P	P	19 29 25.5	+1.0
UNV				IAmb	IAmb	19 29 50.2	
	comp=Z,25nm,1.5s						
AFDM	Forest Hills D	77.64	42	P	P	19 29 58.9	+0.5

IDC ***08*** *19:51:48.4±0.9, 31.4S×179.3W, h235km±11km, mb3.8/4, mbtmp4.3/7, Error ellipse: s-maj=21.0km s-min=13.4km az=109.0*

NEIC ***08*** *19:51:48.6±1.6, 31.5S±0.1×179.3W±0.2, h233km±13km, mb4.1/9, Error ellipse: s-maj=25.3km s-min=12.8km az=114.0*

WEL ***08*** *19:51:51.4±0.5, 32.5S±8×17.9W±1.9, h12km, M4.8/6, mB5.0/3, ML4.7/12, MLv4.8/6, Mw(mB)4.3/3, Error ellipse: s-maj=27.2km s-min=4.0km az=111.4*

NOU ***08*** *19:52:26.2, 33.98S×178.83E, h306km, MLv4.6/9, South of Kermadec Islands*

ISC 08 19:51:48.2±0.7,**31.28S**±0.07×**179.9W**±0.1,**h200**km,**n99**, σ1§**97**/109,**mb4.2**/8,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.62	40	P	Pn	19 52 34.3	+0.9
GLKZ				S	Sn	19 53 08.8	0.0
RIZ	Raoul Island	2.63	40	P	Pn	19 52 34.7	+1.1
RIZ				S	Sn	19 53 11.5	+2.5
RAO	Raoul Island	2.63	40	P	Pn	19 52 35.2	+1.6
	129nm,0.3s,baz=153,slow=24,SNR=1.5						
RAO				S	Sn	19 53 11.0	+2.0
	315nm,0.3s,baz=74,slow=22,SNR=2.5						
RAO	Raoul Island	2.63	40	P	Pn	19 52 33.8	+0.2
RAO				S	Sn	19 53 11.5	+2.5
WCZ	Waipu Caves	6.70	225	P	Pn	19 53 33.3	+8.9
HAZ	Te Kaha	6.74	196	P	Pn	19 53 26.7	+1.8
HAZ				S	Sn	19 54 46.5	+4.7
PUZ	Puketiti	6.95	192	P	Pn	19 53 30.0	+2.3
PUZ				S	Sn	19 54 47.4	+0.7
RUGZ	Raukumara Rang	6.97	196	P	Pn	19 53 30.2	+2.2
RUGZ				S	Sn	19 54 49.3	+2.0
TWGZ	Tauwhareparae	7.10	194	P	Pn	19 53 32.8	+3.1
TWGZ				S	Sn	19 54 52.7	+2.4
MWZ	Matawai	7.35	196	P	Pn	19 53 35.8	+2.9
MWZ				S	Sn	19 54 57.6	+1.3
CNGZ	Carnagh Statio	7.36	192	P	Pn	19 53 36.4	+3.5
CNGZ				S	Sn	19 54 56.3	+0.1
URZ	Urewera	7.39	199	P	Pn	19 53 33.9	+0.5
	4.6nm,0.3s,baz=76,slow=8.3,SNR=7.8						
URZ				S	Sn	19 54 58.1	+1.0
	12nm,0.3s,baz=259,slow=9.5,SNR=8.0						
URZ	Urewera	7.39	199	P	Pn	19 53 37.9	+4.5
URZ	Urewera	7.39	199	P	Pn	19 53 34.3	+0.9
URZ				S	Sn	19 54 58.7	+1.7
RAGZ	Rawiri	7.53	196	S	Sn	19 55 02.3	+1.7
MUGZ	Murupara	7.69	200	P	Pn	19 53 40.5	+3.2
MUGZ				S	Sn	19 55 06.1	+1.9
RTZ	Ruatahuna	7.76	199	Pn	Pn	19 53 37.3	-1.0
RTZ	Ruatahuna	7.76	199	P	Pn	19 53 37.4	-0.8
SNGZ	Shannon Statio	7.82	196	P	Pn	19 53 41.4	+2.3
SNGZ				S	Sn	19 55 08.0	+0.7
PRGZ	Paritu Road	7.84	193	S	Sn	19 55 07.2	-0.6
RAHZ	Arahi	8.01	197	P	Pn	19 53 43.6	+2.1
MTHZ	Maungataniwha	8.02	199	S	Sn	19 55 14.3	+2.3
MRHZ	Matea Rd	8.12	201	P	Pn	19 53 47.1	+4.1
NMHZ	Naumai	8.26	198	P	Pn	19 53 47.1	+2.3
ARHZ	Aropaoanui	8.37	197	P	Pn	19 53 48.5	+2.5
BKZ	Black Stump Fm	8.41	200	P	Pn	19 53 50.4	+3.7
BKZ	Black Stump Fm	8.41	200	P	Pn	19 53 51.2	+4.5
HIZ	Hauiti	8.41	210	P	Pn	19 53 54.6	+7.9
NTVZ	North Tongarir	8.61	204	P	Pn	19 53 52.7	+3.3
KWHZ	Kaweka Forest	8.67	199	P	Pn	19 53 52.2	+2.1
SNVZ	South Ngauruho	8.70	204	P	Pn	19 53 54.3	+3.7
FWVZ	Far West T-bar	8.79	204	P	Pn	19 53 52.6	+0.8
MAVZ	Matarangi	8.80	204	P	Pn	19 53 54.9	+2.9
TRVZ	Turoa	8.83	204	P	Pn	19 53 56.0	+3.7
WNVZ	Wahianoa	8.84	204	P	Pn	19 53 53.8	+1.4
MOVZ	Moawhango	8.86	203	P	Pn	19 53 53.8	+1.2
KRHZ	Kereru	8.89	199	P	Pn	19 53 50.1	-2.8
PNHZ	Pukenui	9.19	199	P	Pn	19 53 57.6	+0.9
TSZ	Takapari Road	9.39	200	P	Pn	19 53 59.4	0.0
DVHZ	Dannevirke	9.55	199	P	Pn	19 54 02.2	+0.7
PRWZ	Pori Road	9.85	199	P	Pn	19 54 07.1	+1.8
BFZ	Birch Farm	9.89	197	P	Pn	19 54 07.0	+1.1
BFZ	Birch Farm	9.89	197	Pn	Pn	19 54 02.7	-3.2
BFZ	Birch Farm	9.89	197	P	Pn	19 54 05.3	-0.5
MRZ	Mangatainoka R	10.06	200	Pn	Pn	19 54 03.6	-4.4
MRZ	Mangatainoka R	10.06	200	P	Pn	19 54 04.5	-3.6
HOWZ	Holdsworth Sta	10.29	200	P	Pn	19 54 10.4	-0.7
OGWZ	Otaki Gorge	10.32	201	P	Pn	19 54 10.1	-1.4
TMWZ	Te Maipa	10.38	198	P	Pn	19 54 10.7	-1.6
KIW	Kapiti Island	10.45	202	P	Pn	19 54 14.1	+1.0
CAW	Cannon Point	10.62	201	P	Pn	19 54 14.0	-1.3
DUWZ	D'Urville Isla	10.74	206	P	Pn	19 54 17.0	+0.1
SNZO	South Karori	10.92	202	P	Pn	19 54 19.8	+0.7
TCW	Tory Channel	10.97	204	P	Pn	19 54 19.6	-0.2
PLWZ	Palliser	10.99	200	P	Pn	19 54 19.7	-0.3
TUWZ	Tuamarina	11.29	204	P	Pn	19 54 23.8	0.0
TUWZ	Tuamarina	11.29	204	P	Pn	19 54 24.4	+0.6
NNZ	Nelson	11.31	207	Pn	Pn	19 54 22.9	-1.2
NNZ	Nelson	11.31	207	P	Pn	19 54 24.1	0.0
TKNZ	Takaka Hill	11.32	209	Pn	Pn	19 54 23.3	-1.0
TKNZ	Takaka Hill	11.32	209	P	Pn	19 54 25.1	+0.8
QRZ	Quartz Range	11.33	211	P	Pn	19 54 25.4	+1.0
QRZ	Quartz Range	11.33	211	P	Pn	19 54 25.3	+1.0
BSWZ	Blackbirch Sta	11.56	204	Pn	Pn	19 54 27.7	+0.4
BSWZ	Blackbirch Sta	11.56	204	P	Pn	19 54 27.9	+0.6
MRNZ	Matariki Terra	11.71	208	Pn	Pn	19 54 28.7	-0.5
MRNZ	Matariki Terra	11.71	208	P	Pn	19 54 29.3	+0.1
THZ	Tophouse	11.96	207	Pn	Pn	19 54 31.8	-0.7
THZ	Tophouse	11.96	207	P	Pn	19 54 32.3	-0.1
KHZ	Kahutara	12.30	204	P	Pn	19 54 36.7	+0.1
KHZ	Kahutara	12.30	204	Pn	Pn	19 54 34.9	-1.7
KHZ	Kahutara	12.30	204	P	Pn	19 54 36.2	-0.5
DSZ	Denniston Nort	12.40	210	Pn	Pn	19 54 38.2	+0.2
GVZ	Greta Valley S	12.96	204	Pn	Pn	19 54 43.7	-1.3
GVZ	Greta Valley S	12.96	204	P	Pn	19 54 44.6	-0.4
LTZ	Lake Taylor	13.07	206	Pn	Pn	19 54 45.5	-1.0
WVZ	Waitaha Valley	13.94	210	P	P	19 55 04.7	+5.6
RPZ	Rata Peaks	14.34	208	P	Pn	19 55 00.2	-1.9
	2.2nm,0.6s,baz=25,slow=14,SNR=4.6						
RPZ	Rata Peaks	14.34	208	P	Pn	19 55 02.0	-0.1
RPZ	Rata Peaks	14.34	208	P	Pn	19 55 00.6	-1.5
FOZ	Fox Glacier	14.71	211		Pn	19 55 06.7	+0.1
JCZ	Jackson Bay	15.59	212	P	P	19 55 17.0	-0.5
ODZ	Otahua Downs	15.62	206	P	P	19 55 17.2	-0.5
ODZ	Otahua Downs	15.62	206	Pn	P	19 55 17.6	-0.1
WKZ	Wanaka	16.09	210	P	P	19 55 21.3	-1.6
STKA	Stephens Creek	32.72	259	P	P	19 58 04.2	+2.3
	4.1nm,0.4s,baz=102,slow=11,SNR=12						
	4.1nm,0.4s						
INKA	Innaminka	34.34	266	P	P	19 58 17.5	+1.5
INKA				IAmb	IAmb	19 58 36.5	
	comp=Z,5.6nm,1.5s						
BBOO	Buckleboo	37.19	256	P	P	19 58 41.3	+1.1
BBOO				IAmb	IAmb	19 59 14.9	
	comp=Z,37nm,1.5s						
AS31	Alice Springs	41.47	269	P	P	19 59 16.0	+0.3
ASAR	Alice Springs	41.47	269	P	P	19 59 16.0	+0.3
	comp=Z,1.5nm,0.4s,baz=104,slow=7.4,SNR=35						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	41.47	269	P	P	19 59 15.6	-0.2
WR8	Warramunga Arr	42.40	274	P	P	19 59 23.1	-0.1
WR8				IAmb	IAmb	19 59 25.4	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	42.54	274	P	P	19 59 24.0	-0.4
	comp=Z,2.0nm,0.3s,baz=111,slow=8.1,SNR=51						
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	42.54	274	P	P	19 59 24.7	+0.3
WB0	Warramunga Arr	42.57	274	P	P	19 59 24.7	+0.1
WB0				IAmb	IAmb	19 59 56.3	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	58.83	180	P	P	20 01 21.6	-3.9
	comp=Z,1.5nm,0.4s,baz=38,slow=7.0,SNR=25						
	comp=Z,1.5nm,0.4s						
QSPA	South Pole Qui	58.83	180	P	P	20 01 21.6	-3.9
QSPA				IAmb	IAmb	20 01 30.6	
	comp=Z,5.0nm,1.4s						
FINES	FINESS Array B	145.39	338	PKPbc	PKPdf	20 10 57.3	-4.0
	comp=Z,1.6nm,0.4s,baz=47,slow=4.0,SNR=26						
FINES	FINESS Array B	145.39	338		PKPdf	20 10 57.7	-3.7

IDC ***08*** *19:55:48.6±2.8, 10.25S×161.11E, h56km±22km, mb3.7/7, mbtmp4.0/9, ML3.6/2, MS3.3/7, Error ellipse: s-maj=27.6km s-min=16.5km az=71.0*

NEIC ***08*** *19:55:48.1±1.5, 10.2S±0.1×161.15E±0.08, h50km±8km, mb4.2/16, Error ellipse: s-maj=19.2km s-min=4.9km az=212.0*

ISC 08 19:55:49.3±0.7,**10.19S**±0.10×**161.10E**±0.09,**h67**km,**n37**, σ1§**09**/30,**mb3.9**/13,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.36	304	P	Pn	19 56 11.2	-1.1
	34nm,0.6s,baz=40,slow=5.4,SNR=42						
HNR				S	Sn	19 56 29.2	-0.4
	156nm,0.3s,baz=270,slow=6.2,SNR=20						
HNR				LR	LR	19 57 00.0	
	comp=Z,38nm,19.1s,baz=226,slow=51						
HNR	Honiara	1.36	304		Pn	19 56 11.3	-1.1
HNR				Sn	Sn	19 56 27.0	-2.7
SANVU	Saraoutou	7.92	132	Pn	Pn	19 57 40.0	-1.8
KRVT	Keravat (AS076	10.73	302	LR	LR	20 02 57.6	
	comp=Z,24nm,18.3s,baz=86,slow=40						
DZM	Mont Dzumac	12.88	157	P	Pn	19 58 49.4	-0.2
	0.2nm,0.3s,baz=345,slow=17,SNR=7.2						
DZM				LR	LR	20 02 41.0	
	comp=Z,83nm,19.1s,baz=34,slow=32						
	6.6nm,1.0s						
PMG	Port Moresby	13.76	272	LR	LR	20 04 08.3	
	comp=Z,191nm,19.1s,baz=116,slow=36						
CTA	Charters Tower	17.36	234	P	P	19 59 48.7	+0.9
	0.2nm,0.3s,baz=33,slow=16,SNR=3.6						
CTA				LR	LR	20 05 26.9	
	comp=Z,119nm,21.6s,baz=46,slow=33						
	4.4nm,0.8s						
AFI	Afiamalu

PALK Pallekele 20.05 87 LR LR 20 09 34.7
comp=Z,122nm,22.0s,baz=256,slow=32
MBAR Mbarara 30.57 258 LR LR 20 18 23.8
comp=Z,65nm,18.3s,baz=103,slow=38
BRDH Bariadhala 33.99 59 LR LR 20 18 35.7
comp=Z,151nm,19.1s,baz=292,slow=34
AAK Ala-Archa 37.98 17 LR LR 20 23 44.5
comp=Z,60nm,18.4s,baz=202,slow=39
LSZ Lusaka 38.70 236 LR LR 20 21 11.8
comp=Z,120nm,21.6s,baz=146,slow=34
CMAR Chiang Mai Arr 39.23 69 P **P** **20 06 33.8 +1.1**
0.4nm,0.8s,baz=268,slow=9.0,SNR=1.5
CMAR LR LR 20 21 04.3
comp=Z,37nm,20.2s,baz=230,slow=34
0.4nm,0.8s
BRTR Keskin Array B 40.90 328 LR LR 20 24 20.3
comp=Z,39nm,18.9s,baz=142,slow=37
MATP Matopo 41.36 229 LR LR 20 23 37.4
comp=Z,98nm,18.5s,baz=98,slow=36
MKAR Makanchi Array 44.23 21 P **P** **20 07 12.4 -0.7**
0.1nm,0.3s,baz=224,slow=10.0,SNR=1.6
MKAR LR LR 20 27 15.3
comp=Z,56nm,18.7s,baz=192,slow=38
0.1nm,0.3s
LBTB Lobatse 46.27 226 LR LR 20 22 46.8
comp=Z,89nm,20.7s,baz=68,slow=31
KURBB Kurchatov Arra 46.41 16 P **P** **20 07 29.8 -0.6**
0.6nm,0.8s,baz=220,slow=7.3,SNR=6.4
0.6nm,0.8s
MLR Muntele Rosu 48.98 328 LR LR 20 28 51.9
comp=Z,25nm,19.9s,baz=142,slow=36
TSUM Tsumeb 49.45 238 LR LR 20 27 11.2
comp=Z,56nm,19.0s,baz=98,slow=34
AKASG Malin Array Be 51.12 335 P **P** **20 08 06.3 -0.3**
0.2nm,0.3s,baz=139,slow=6.2,SNR=1.7
0.2nm,0.3s
ZALV Zalesovo Beam 51.17 18 P **P** **20 08 05.2 -1.7**
0.2nm,0.3s,baz=213,slow=6.9,SNR=4.4
0.2nm,0.3s
H04N1 CROZET ISLANDS 53.08 188 T T 21 05 36.5
baz=11,slow=75,SNR=16
H04N2 CROZET ISLANDS 53.08 188 T T 21 05 54.7
baz=11,slow=75,SNR=20
H04N3 CROZET ISLANDS 53.09 188 T T 21 05 35.5
baz=11,slow=75,SNR=18
SUR Sutherland 54.12 222 LR LR 20 30 03.0
comp=Z,110nm,18.8s,baz=114,slow=34
SONM Songino Array 56.62 35 P **P** **20 08 48.1 +1.0**
0.2nm,0.4s,baz=234,slow=5.0,SNR=3.6
0.2nm,0.4s
NOA NORSAR Array B 65.50 336 LR LR 20 41 10.3
comp=Z,15nm,20.3s,baz=140,slow=39
NWAO Narrogin (SRO) 66.61 130 LR LR 20 33 18.8
comp=Z,47nm,19.3s,baz=106,slow=31
KLR Kul'dur 72.81 41 LR LR 20 43 40.3
comp=Z,88nm,19.5s,baz=232,slow=37
WRA Warramunga Arr 77.18 112 P **P** **20 10 57.8 -0.6**
0.8nm,1.1s,baz=278,slow=5.8,SNR=4.5
0.8nm,1.1s
ASAR Alice Springs 77.58 116 P **P** **20 10 60.0 -0.6**
0.6nm,0.9s,baz=283,slow=5.3,SNR=3.3
0.6nm,0.9s

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*IDC **08** 20:00:31.2±0.9, 14°.51N×144°.30E, h0km, mb3.7/10, mbtmp3.7/10, MS3.1/6, Error ellipse: s-maj=34.6km s-min=13.4km az=65.0*

ISC 08 20:00:35.3±0.8, 14°.5N±0°.1×144°.3E±0°.2, h27km, n22, σ0s38/12, mb3.7/10, MS3.0/3, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.05**	**148**	**Pn**	**Pn**	**20 00 53.9**	**-0.4**
GUMO	27nm,0.3s,baz=320,slow=7.9,SNR=18			Sn	**Sb**	**20 01 08.6**	**+0.3**
JCJ	**Chichijima**	**12.70**	**351**	LR	LR	20 07 11.5	
DAV	comp=Z,41nm,21.6s,baz=120,slow=32 **Davao City (W)**	**19.80**	**250**	LR	LR	20 10 50.8	
SIJI	comp=Z,79nm,21.5s,baz=83,slow=31 **Sorong**	**19.98**	**221**	LR	LR	20 11 19.6	
H11S3	comp=Z,78nm,20.8s,baz=42,slow=32 **WAKE ISLAND Hy**	**21.83**	**76**	T	T	20 28 25.7	
H11S1	baz=262,slow=75,SNR=17 **WAKE ISLAND Hy**	**21.84**	**76**	T	T	20 28 21.0	
H11S2	baz=262,slow=75,SNR=14 **WAKE ISLAND Hy**	**21.85**	**76**	T	T	20 28 22.7	
H11N1	baz=262,slow=75,SNR=20 **WAKE ISLAND Hy**	**22.20**	**73**	T	T	20 28 48.9	
H11N2	baz=259 **WAKE ISLAND Hy**	**22.21**	**73**	T	T	20 28 49.3	
H11N3	baz=259 **WAKE ISLAND Hy**	**22.22**	**73**	T	T	20 28 50.4	
MJAR	baz=259 **Matsushiro Arr**	**22.62**	**347**	P	**P**	**20 05 33.7**	**-0.5**
MJAR	1.6nm,0.9s,baz=168,slow=8.9,SNR=1.7			LR	LR	20 13 45.6	
TGY	comp=Z,53nm,18.9s,baz=176,slow=35 1.6nm,0.9s **Tagaytay City**	**22.64**	**272**	LR	LR	20 12 16.3	
KSRS	comp=Z,85nm,20.9s,baz=176,slow=31 **Korea Array**	**27.11**	**331**	LR	LR	20 16 31.2	
WRA	comp=Z,29nm,18.5s,baz=220,slow=35 **Warramunga Arr**	**35.59**	**196**	P	**P**	**20 07 30.7**	**-0.1**
ASAR	2.6nm,0.9s,baz=16,slow=9.7,SNR=9.7 2.6nm,0.9s **Alice Springs**	**39.26**	**195**	P	**P**	**20 08 02.0**	**+0.2**
CMAR	0.3nm,0.7s,baz=16,slow=11,SNR=2.4 0.3nm,0.7s **Chiang Mai Arr**	**43.59**	**282**	P	**P**	**20 08 37.6**	**+0.1**
SONM	1.2nm,0.9s,baz=76,slow=8.0,SNR=6.8 1.2nm,0.9s **Songino Array**	**45.68**	**325**	P	**P**	**20 08 54.2**	**+0.3**
MKAR	0.3nm,0.4s,baz=134,slow=6.2,SNR=2.6 0.3nm,0.4s **Makanchi Array**	**60.46**	**316**	P	**P**	**20 10 42.9**	**+0.2**
ZALV	0.6nm,0.8s,baz=94,slow=7.9,SNR=5.5 0.6nm,0.8s **Zalesovo Beam**	**60.57**	**324**	P	**P**	**20 10 43.3**	**0.0**
KURBB	0.5nm,0.6s,baz=108,slow=7.2,SNR=3.5 0.5nm,0.6s **Kurchatov Arra**	**63.58**	**320**	P	**P**	**20 11 03.0**	**-0.6**
BVAR	1.9nm,0.9s,baz=101,slow=6.8,SNR=19 1.9nm,0.9s **Borovoye Array**	**68.88**	**322**	P	**P**	**20 11 37.2**	**-0.3**
YKA	0.9nm,0.8s,baz=99,slow=9.2,SNR=4.5 0.9nm,0.8s **Yellowknife Ar**	**82.32**	**27**	P	**P**	**20 12 54.8**	**+0.5**
	0.1nm,0.5s,baz=276,slow=15,SNR=2.0 0.1nm,0.5s						

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*IDC **08** 20:16:25.4±0.8, 14°.57N×144°.30E, h0km, mb3.8/12, mbtmp3.8/12, MS3.5/26, Error ellipse: s-maj=32.3km s-min=12.2km az=69.0*

*NEIC **08** 20:16:27.9±1.1, 14°.53N±0°.04×144°.34E±0°.06, h13km±5km, mb4.4/8, Error ellipse: s-maj=8.7km s-min=5.9km az=101.0*

ISC 08 20:16:29.2±0.6, 14°.56N±0°.05×144°.34E±0°.08, h27km, n53, σ0s54/29, mb4.0/15, MS3.5/25, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.09**	**152**	**Pn**	**Pn**	**20 16 48.6**	**-0.2**
GUMO	90nm,0.3s,baz=295,slow=3.9,SNR=19			Sn	**Sb**	**20 17 04.1**	**+0.7**
GUMO	90nm,0.3s,baz=139,slow=20,SNR=7.2 **Guam**	**1.09**	**152**		**Pn**	**20 16 47.4**	**-1.4**
GUMO					**Sb**	**20 17 04.1**	**+0.7**
DPSS	**Saipan**	**1.56**	**64**		**Pn**	**20 16 55.6**	**+0.4**
DPSS				Sn	**Sb**	**20 17 16.1**	**-0.7**
JCJ	**Chichijima**	**12.63**	**351**	LR	LR	20 22 18.3	
PATS	comp=Z,32nm,20.7s,baz=160,slow=28 **Pohnpei**	**15.72**	**118**	Pn	**Pn**	**20 20 08.8**	**-0.3**
DAV	**Davao City (W)**	**19.86**	**250**	LR	LR	20 26 45.2	
SIJI	comp=Z,136nm,21.2s,baz=82,slow=31 **Sorong**	**20.06**	**221**	LR	LR	20 27 14.9	
KRVT	comp=Z,128nm,21.5s,baz=62,slow=32 **Keravat (AS076**	**20.23**	**157**	LR	LR	20 28 26.8	
H11S3	comp=Z,5.5nm,19.1s,baz=265,slow=36 **WAKE ISLAND Hy**	**21.78**	**77**	T	T	20 44 15.3	
H11S1	baz=262,slow=75,SNR=35 **WAKE ISLAND Hy**	**21.79**	**77**	T	T	20 44 15.5	
H11S2	baz=262,slow=75,SNR=38 **WAKE ISLAND Hy**	**21.80**	**77**	T	T	20 44 21.3	
H11N1	baz=262,slow=75,SNR=28 **WAKE ISLAND Hy**	**22.15**	**73**	T	T	20 44 44.7	
	baz=259,slow=75,SNR=5.6						

H11N2	**WAKE ISLAND Hy**	**22.16**	**73**	T	T	20 44 45.3	
	baz=259,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**22.16**	**73**	T	T	20 44 46.8	
	baz=259,slow=75,SNR=5.9						
MJAR	**Matsushiro Arr**	**22.57**	**347**	P	**P**	**20 21 27.4**	**-0.1**
	4.5nm,1.1s,baz=165,slow=9.1,SNR=6.7 4.5nm,1.1s						
MJAR	**Matsushiro Arr**	**22.57**	**347**	P	**P**	**20 21 27.5**	**+0.1**
MJB9	**Matsu-Tunnel**	**22.57**	**347**	P	**P**	**20 21 27.7**	**+0.2**
MJB9				IAmb	IAmb	20 21 43.0	
	comp=Z,14nm,1.3s						
TGY	**Tagaytay City**	**22.67**	**272**	LR	LR	20 28 21.8	
	comp=Z,94nm,19.9s,baz=118,slow=32						
KSRS	**Korea Array**	**27.07**	**330**	P	**P**	**20 22 09.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=145,slow=9.2,SNR=6.0						
KSRS				LR	LR	20 32 23.5	
	comp=Z,42nm,18.6s,baz=145,slow=35 comp=Z,1.0nm,0.8s						
KAPI	**Kappang**	**31.18**	**233**	LR	LR	20 34 00.3	
	comp=Z,58nm,18.6s,baz=0.0,slow=34						
BATI	**Baumata**	**32.02**	**221**	LR	LR	20 34 03.2	
	comp=Z,199nm,21.4s,baz=154,slow=33						
WRA	**Warramunga Arr**	**35.67**	**196**	P	**P**	**20 23 25.8**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=5.2,slow=9.7,SNR=12 comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**35.67**	**196**	P	**P**	**20 23 25.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**37.32**	**210**	LR	LR	20 39 11.8	
	comp=Z,64nm,19.8s,baz=346,slow=37						
ASAR	**Alice Springs**	**39.34**	**195**	P	**P**	**20 23 56.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=14,slow=12,SNR=6.1 comp=Z,0.4nm,0.8s						
PETK	**Petropavlovsk-**	**39.89**	**13**	LR	LR	20 37 48.7	
	comp=Z,40nm,20.7s,baz=205,slow=32						
LEM	**Lembang**	**42.16**	**242**	LR	LR	20 43 18.6	
	comp=Z,76nm,18.7s,baz=170,slow=38						
CMAR	**Chiang Mai Arr**	**43.61**	**282**	P	**P**	**20 24 31.4**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=78,slow=6.4,SNR=9.4						
CMAR				LR	LR	20 43 46.6	
	comp=Z,41nm,18.0s,baz=95,slow=38 comp=Z,1.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.61**	**282**	P	**P**	**20 24 31.5**	**-0.1**
SONM	**Songino Array**	**45.65**	**325**	P	**P**	**20 24 47.7**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=140,slow=7.4,SNR=6.1						
SONM				LR	LR	20 43 56.5	
	comp=Z,67nm,19.4s,baz=160,slow=36 comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**45.65**	**325**	P	**P**	**20 24 47.6**	**0.0**
SONM				IAmb	IAmb	20 24 48.5	
	comp=Z,2.0nm,1.1s						
STKA	**Stephens Creek**	**46.24**	**183**	P	**P**	**20 24 52.2**	**0.0**
	comp=Z,1.6nm,0.9s,baz=359,slow=12,SNR=3.2 comp=Z,1.6nm,0.9s						
TLY	**Talaya**	**49.26**	**328**	LR	LR	20 45 13.7	
	comp=Z,19nm,18.5s,baz=172,slow=35						
M11K	**Mekoryuk**	**58.04**	**26**	P	**P**	**20 26 19.0**	**-0.5**
MKAR	**Makanchi Array**	**60.44**	**316**	P	**P**	**20 26 36.8**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=93,slow=9.0,SNR=7.8						
MKAR				LR	LR	20 53 41.9	
	comp=Z,47nm,18.1s,baz=140,slow=37 comp=Z,1.7nm,1.0s						
MKAR	**Makanchi Array**	**60.44**	**316**	P	**P**	**20 26 36.4**	**-0.1**
ZALV	**Zalesovo Beam**	**60.54**	**324**	P	**P**	**20 26 36.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=113,slow=6.4,SNR=4.8						
ZALV				LR	LR	20 53 53.9	
	comp=Z,50nm,18.1s,baz=138,slow=37 comp=Z,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**60.54**	**324**	P	**P**	**20 26 37.1**	**+0.1**
MAKZ	**Makanchi**	**60.65**	**316**	P	**P**	**20 26 36.7**	**-1.3**
MAKZ				IAmb	IAmb	20 26 39.7	
	comp=Z,3.2nm,1.0s						
URZ	**Urewera**	**60.86**	**151**	LR	LR	20 51 32.8	
	comp=Z,56nm,18.1s,baz=40,slow=35						
KURK	**Kurchatov**	**63.51**	**320**	P	**P**	**20 26 57.2**	**+0.2**
KURK				IAmb	IAmb	20 26 58.3	
	comp=Z,15nm,1.4s						
KDAK	**Kodiak Island**	**63.53**	**32**	LR	LR	20 54 21.7	
	comp=Z,21nm,19.3s,baz=258,slow=36						
KURBB	**Kurchatov Arra**	**63.55**	**320**	P	**P**	**20 26 57.2**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=102,slow=6.6,SNR=14						
KURBB				LR	LR	20 54 16.9	
	comp=Z,64nm,21.2s,baz=183,slow=36 comp=Z,1.1nm,0.3s						
AAK	**Ala-Archa**	**65.49**	**310**	LR	LR	20 56 29.0	
	comp=Z,53nm,20.1s,baz=198,slow=37						
ILAR	**Eielson Array**	**67.92**	**26**	P	**P**	**20 27 26.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=259,slow=5.2,SNR=2.0 comp=Z,0.3nm,0.6s						
BVAR	**Borovoye Array**	**68.85**	**322**	P	**P**	**20 27 31.8**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=91,slow=6.4,SNR=7.8 comp=Z,1.0nm,0.6s						
DLBC	**Dease Lake**	**75.45**	**33**	LR	LR	20 59 48.6	
	comp=Z,15nm,19.1s,baz=106,slow=34						
ARTI	**Arti**	**75.78**	**325**	LR	LR	21 03 55.1	
	comp=Z,43nm,18.2s,baz=156,slow=38						
BBB	**Bella Bella**	**77.16**	**39**	LR	LR	20 55 27.9	
	comp=Z,38nm,20.0s,baz=226,slow=30						
YKA	**Yellowknife Ar**	**82.24**	**27**	LR	LR	21 03 46.2	
	comp=Z,22nm,20.7s,baz=24,slow=34						
YBH	**Yreka Blue Hor**	**82.63**	**49**	LR	LR	20 57 54.6	
	comp=Z,29nm,20.1s,baz=316,slow=30						
NEW	**Newport**	**84.85**	**42**	LR	LR	21 01 25.3	
	comp=Z,27nm,20.0s,baz=294,slow=32						
ANMO	**Albuquerque**	**96.85**	**51**	LR	LR	21 12 27.4	
	comp=Z,16nm,18.1s,baz=318,slow=35						

IDC 08 20:27:45.7±7.9, 5°.30S×145°.53E, h79km±63km, mb3.2/2, mbtmp3.5/4, ML3.6/1, MS3.2/1, Error ellipse: s-maj=81.2km s-min=48.9km az=46.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.39**	**158**	P	Pn	20 28 51.7	+1.8
PMG	4.5nm,0.3s,baz=338,slow=14,SNR=9.7			S	Sn	20 29 39.7	-0.1
WRA	20nm,0.4s,baz=164,slow=19,SNR=17 **Warramunga Arr**	**18.17**	**216**	P	P	20 31 51.9	-0.3
ASAR	0.2nm,0.3s,baz=35,slow=11,SNR=10.0 0.2nm,0.3s **Alice Springs**	**21.42**	**210**	P	P	20 32 27.2	-0.2
	0.2nm,0.3s,baz=43,slow=8.4,SNR=8.2 0.2nm,0.3s						
STKA	**Stephens Creek**	**26.69**	**187**	P	P	20 33 17.9	+0.3
	1.6nm,0.6s,baz=7.1,slow=8.1,SNR=2.5 1.6nm,0.6s						
RPZ	**Rata Peaks**	**44.38**	**153**	LR	LR	20 53 38.3	
	comp=Z,25nm,19.3s,baz=357,slow=35						

IDC 08 20:40:34.7±3.2, 32°.79S×178°.16W, h0km, mb3.7/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=73.3km s-min=37.4km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.68**	**214**	Pn	Pn	20 42 13.2	-0.9
URZ	0.5nm,0.3s,baz=352,slow=17,SNR=1.8			Sn	Sn	20 43 32.4	+1.5
ASAR	2.0nm,0.3s,baz=194,slow=20,SNR=9.2 18nm,1.2s **Alice Springs**	**42.90**	**270**	P	P	20 48 35.4	+0.1
	0.7nm,0.7s,baz=109,slow=7.3,SNR=9.6 0.7nm,0.7s						
WRA	**Warramunga Arr**	**44.10**	**275**	P	P	20 48 44.6	-0.3
	0.7nm,0.5s,baz=115,slow=8.0,SNR=14 0.7nm,0.5s						
FINES	**FINESS Array B**	**147.32**	**339**	PKPbc	PKPbc	21 00 18.8	-0.7
	1.8nm,0.9s,baz=51,slow=6.4,SNR=4.8						

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*WEL **08** 20:42:54.5±0.9, 32°.5S±6°.×17°.8W±1°.7, h100km, M4.8/13, mB5.1/12, ML5.2/13, MLv5.2/13, Mw(mB)4.4/8, Error ellipse: s-maj=22.6km s-min=4.3km az=105.4*

*IDC **08** 20:42:57.4±1.8, 31°.64S×178°.51W, h45km±16km, mb4.0/9, mbtmp4.3/11, ML5.1/3, MS3.6/8, Error ellipse: s-maj=21.7km s-min=12.8km az=113.0*

*NEIC **08** 20:42:57.3±1.7, 31°.67S±0°.07×178°.6W±0°.1, h35km±1km, mb4.9/25, Error ellipse: s-maj=22.1km s-min=10.0km az=105.0*

ISC 08 20:42:56.8±0.4, 31°.71S±0°.05×178°.60W±0°.10, h35km, n122, σ1s52/108, mb4.8/24, MS3.8/4, 5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.51**	**14**	P	**Pn**	**20 43 35.7**	**+0.6**
GLKZ				S	**Sn**	**20 44 04.9**	**+0.4**
RAO	**Raoul Island**	**2.52**	**14**	P	**Pn**	**20 43 35.4**	**+0.1**
	354nm,0.3s,baz=117,slow=23,SNR=6.3						
RAO				S	**Sn**	**20 44 03.7**	**-1.1**
	1µm,0.2s,baz=293,slow=23,SNR=4.3						
RAO	**Raoul Island**	**2.52**	**14**		**Pn**	**20 43 34.3**	**-1.0**
RAO					**Sn**	**20 44 03.7**	**-1.1**
MXZ	**Matakaoa Point**	**6.37**	**203**	Pn	**Pn**	**20 44 27.3**	**-0.8**
MXZ	**Matakaoa Point**	**6.37**	**203**	P	**Pn**	**20 44 28.0**	**-0.1**
WMGZ	**Waiomatatini S**	**6.57**	**201**	P	**Pn**	**20 44 30.4**	**-0.5**
WMGZ				S	**Sn**	**20 45 46.0**	**+1.4**
PUZ	**Puketiti**	**6.85**	**201**	P	**Pn**	**20 44 33.4**	**-1.4**
PUZ				S	**Sn**	**20 45 49.9**	**-1.6**
RUGZ	**Raukumara Rang**	**6.95**	**205**	P	**Pn**	**20 44 35.0**	**-1.3**
RUGZ				S	**Sn**	**20 45 54.1**	**+0.1**
TWGZ	**Tauwhareparae**	**7.03**	**203**	P	**Pn**	**20 44 37.0**	**-0.3**
TWGZ				S	**Sn**	**20 45 55.1**	**-1.0**
WCZ	**Waipu Caves**	**7.22**	**232**	P	Pn	20 44 46.3	+6.4
CNGZ	**Carnagh Statio**	**7.25**	**200**	P	**Pn**	**20 44 39.0**	**-1.2**
OPRZ	**Ohinepanea**	**7.30**	**212**	P	**Pn**	**20 44 43.8**	**+2.8**
MWZ	**Matawai**	**7.33**	**205**	P	**Pn**	**20 44 40.4**	**-1.0**
MWZ				S	**Sn**	**20 46 01.2**	**-2.1**
OUZ	**Omahuta**	**7.40**	**240**	P	Pn	20 44 48.3	+6.0
URZ	**Urewera**	**7.42**	**207**	P	**Pn**	**20 44 42.5**	**0.0**
	4.2nm,0.3s,baz=270,slow=5.5,SNR=25						
URZ				S	**Sn**	**20 46 04.2**	**-1.2**
	67nm,0.5s,baz=333,slow=23,SNR=9.1 20nm,0.3s						
URZ	**Urewera**	**7.42**	**207**	P	**Pn**	**20 44 41.5**	**-1.1**
URZ				S	**Sn**	**20 46 04.7**	**-0.7**
RAGZ	**Rawiri**	**7.51**	**205**	P	**Pn**	**20 44 42.3**	**-1.6**
RAGZ				S	**Sn**	**20 46 06.4**	**-1.5**
TOZ	**Tahuroa Road**	**7.72**	**217**	Pn	**Pn**	**20 44 45.2**	**-1.5**
TOZ	**Tahuroa Road**	**7.72**	**217**	P	**Pn**	**20 44 45.3**	**-1.4**
MUGZ	**Murupara**	**7.74**	**208**	P	**Pn**	**20 44 46.1**	**-0.9**
PRGZ	**Paritu Road**	**7.75**	**201**	P	**Pn**	**20 44 46.0**	**-1.1**
PRGZ				S	**Sn**	**20 46 09.9**	**-3.7**
RTZ	**Ruatahuna**	**7.78**	**206**		**Pn**	**20 44 47.3**	**-0.3**
RTZ	**Ruatahuna**	**7.78**	**206**	P	**Pn**	**20 44 46.0**	**-1.6**
SNGZ	**Shannon Statio**	**7.79**	**204**	P	**Pn**	**20 44 47.2**	**-1.6**
SNGZ				S	**Sn**	**20 46 13.2**	**-1.6**
RAHZ	**Arahi**	**8.01**	**205**	P	**Pn**	**20 44 49.3**	**-1.3**
MTHZ	**Maungataniwha**	**8.04**	**206**	P	**Pn**	**20 44 49.0**	**-2.1**
MTHZ				S	**Sn**	**20 46 19.9**	**-0.9**
MRHZ	**Matea Rd**	**8.19**	**208**	P	Pn	20 44 47.8	-5.4
NMHZ	**Naumai**	**8.27**	**206**	P	**Pn**	**20 44 51.9**	**-2.4**
ARHZ	**Aropaoanui**	**8.35**	**204**	P	**Pn**	**20 44 53.3**	**-1.9**
BKZ	**Black Stump Fm**	**8.45**	**207**	P	Pn	20 44 50.1	-6.5
TMVZ	**Te Maari**	**8.72**	**211**	P	**Pn**	**20 45 00.9**	**+0.3**
ETVZ	**East Tongariro**	**8.74**	**210**	P	**Pn**	**20 45 00.9**	**+0.1**
BHHZ	**Black Hill Sta**	**8.89**	**208**	P	Pn	20 44 52.7	-10
KRHZ	**Kereru**	**8.91**	**206**	P	Pn	20 44 54.5	-8.5
BFZ	**Birch Farm**	**9.87**	**203**	Pn	**Pn**	**20 45 13.5**	**-2.6**
MRZ	**Mangatainoka R**	**10.09**	**206**	Pn	**Pn**	**20 45 16.8**	**-2.4**
TKNZ	**Takaka Hill**	**11.52**	**214**	Pn	**Pn**	**20 45 36.5**	**-2.3**
KHZ	**Kahutara**	**12.38**	**208**	Pn	Pn	20 45 45.9	-4.7
LTZ	**Lake Taylor**	**13.22**	**211**	Pn	Pn	20 45 58.2	-3.7
MSVF	**Nonsavu**	**14.24**	**347**	P	**Pn**	**20 46 15.5**	**-0.6**
	1.0nm,0.3s,baz=150,slow=18,SNR=6.2						
MSVF				LR	LR	20 50 32.7	
	comp=Z,236nm,21.3s,baz=186,slow=32 4.0nm,0.4s						
MSVF	**Nonsavu**	**14.24**	**347**		**Pn**	**20 46 15.4**	**-0.7**
ODZ	**Otahua Downs**	**15.74**	**209**		**Pn**	**20 46 34.7**	**-1.0**
ODZ				IAmb	IAmb	20 46 41.5	
	comp=Z,64nm,1.3s						
DZM	**Mont Dzumac**	**16.42**	**302**	LR	LR	20 51 55.1	
	comp=Z,273nm,19.3s,baz=192,slow=33						
AFI	**Afiamalu**	**18.79**	**21**	LR	LR	20 53 47.0	
	comp=Z,67nm,18.4s,baz=186,slow=35						
RAR	**Rarotonga**	**19.81**	**63**	LR	LR	20 53 26.1	
	comp=Z,37nm,21.4s,baz=267,slow=32						
ARMA	**Armidale**	**25.50**	**265**	P	**P**	**20 48 25.6**	**+3.5**
ARMA				IAmb	IAmb	20 48 53.8	
	comp=Z,35nm,1.9s						
TBI	**Tubuai**	**27.09**	**79**	*e*LR	LR	20 54 45.4	
	comp=Z,2µm,33.0s						
TBI				*e*T	T	21 16 45.1	
	comp=Z,31nm,0.3s						
PAE	**Paea**	**29.74**	**69**	*e*T	T	21 19 57.7	
	comp=Z,69nm,0.2s						
PPT2	**Papeete2**	**29.78**	**69**	*e*LR	LR	20 56 01.5	
	comp=Z,168nm,28.8s						
PPT2				*e*T	T	21 20 05.1	
	comp=Z,12nm,0.3s						
TOO	**Toolangi**	**29.99**	**249**	P	**P**	**20 49 03.4**	**+1.3**
VAH	**Vaihoa**	**32.65**	**67**	*e*T	T	21 23 30.3	
	comp=Z,48nm,0.3s						
CTA	**Charters Tower**	**33.52**	**282**	LR	LR	21 01 26.3	
	comp=Z,94nm,18.3s,baz=100,slow=33						
CTAO	**Charters Tower**	**33.52**	**282**	P	**P**	**20 49 34.2**	**+1.0**
CTAO				IAmb	IAmb	20 49 37.7	
	comp=Z,23nm,0.8s						
CTAO	**Charters Tower**	**33.52**	**282**	P	**P**	**20 49 36.4**	**+3.1**
STKA	**Stephens Creek**	**33.70**	**259**	P	**P**	**20 49 36.3**	**+1.6**
	comp=Z,4.2nm,0.7s,baz=92,slow=10,SNR=9.4						
STKA				LR	LR	21 00 46.2	
	comp=Z,122nm,21.0s,baz=88,slow=32 comp=Z,4.2nm,0.7s						
INKA	**Innaminka**	**35.38**	**266**	P	**P**	**20 49 49.4**	**+0.1**
BBOO	**Buckleboo**	**38.13**	**256**	P	**P**	**20 50 12.9**	**+0.2**
AS31	**Alice Springs**	**42.54**	**269**	P	**P**	**20 50 49.5**	**+0.2**
ASAR	**Alice Springs**	**42.54**	**269**	P	**P**	**20 50 49.8**	**+0.4**
	comp=Z,8.8nm,0.6s,baz=103,slow=7.5,SNR=107 comp=Z,8.8nm,0.6s						
ASAR	**Alice Springs**	**42.54**	**269**	P	**P**	**20 50 48.8**	**-0.5**
WR8	**Warramunga Arr**	**43.51**	**274**	P	**P**	**20 50 57.2**	**+0.1**
WR8				IAmb	IAmb	20 50 58.3	
	comp=Z,16nm,0.6s						
WRAB	**Tennant Creek**	**43.64**	**274**	P	**P**	**20 50 58.4**	**+0.1**
WRAB	**Tennant Creek**	**43.64**	**274**	P	**P**	**20 50 58.6**	**+0.4**
WRA	**Warramunga Arr**	**43.65**	**274**	P	**P**	**20 50 58.3**	**0.0**
	comp=Z,19nm,0.4s,baz=113,slow=7.9,SNR=352						
WRA	**Warramunga Arr**	**43.65**	**274**	P	**P**	**20 50 57.6**	**-0.7**
WB0	**Warramunga Arr**	**43.68**	**274**	P	**P**	**20 50 58.6**	**+0.1**
FORT	**Forrest**	**45.22**	**257**	P	**P**	**20 51 10.0**	**-0.7**
FORT				IAmb	IAmb	20 51 31.2	
	comp=Z,7.3nm,0.9s						
SBA	**Scott Base**	**46.70**	**184**	P	**P**	**20 51 22.9**	**+1.2**
SBA				IAmb	IAmb	20 53 07.4	
	comp=Z,21nm,1.8s						
MTN	**Manton Dam**	**

baz=237,slow=74,SNR=94
H03S3 Juan Fernandez 80.19 124 T T 22 23 43.5
baz=237,slow=74,SNR=100
H03N3 Juan Fernandez 80.38 123 T T 22 23 48.2
baz=241,slow=72,SNR=38
H03N2 Juan Fernandez 80.38 123 T T 22 23 56.5
baz=241,slow=72,SNR=45
H03N1 Juan Fernandez 80.39 123 T T 22 23 56.8
baz=241,slow=72,SNR=97
PLCA Paso Flores 81.99 133 P **P** **20 55 12.9 -0.4**
comp=Z,2.0nm,0.9s,baz=258,slow=10,SNR=2.9
comp=Z,2.0nm,0.9s
KSRS Korea Array 85.01 320 P **P** **20 55 28.7 +0.2**
comp=Z,1.3nm,0.7s,baz=138,slow=5.2,SNR=7.1
comp=Z,1.3nm,0.7s
PETK Petropavlovsk- 86.95 346 P **P** **20 55 36.1 -1.6**
comp=Z,2.8nm,0.8s,baz=140,slow=5.6,SNR=4.8
comp=Z,2.8nm,0.8s
PETK Petropavlovsk- 86.95 346 P **P** **20 55 36.6 -1.2**
CWC Cottonwood Cre 88.35 45 P **P** **20 55 48.1 +3.0**
CWC IAmb IAmb 20 55 48.3
comp=Z,13nm,1.6s
NVAR Mina Array Bea 89.55 43 P **P** **20 55 51.2 +0.5**
comp=Z,1.0nm,0.8s,baz=222,slow=8.7,SNR=4.8
comp=Z,1.0nm,0.8s
HPIG 90.71 59 P **P** **20 55 59.7 +3.3**
HPIG IAmb IAmb 20 56 00.8
comp=Z,6.4nm,0.6s
PINE Pine Mountain 91.75 38 P **P** **20 56 00.8 0.0**
PINE IAmb IAmb 20 56 02.7
comp=Z,4.5nm,0.9s
TXAR Lajitas Array 93.53 58 P **P** **20 56 09.0 -0.3**
comp=Z,0.3nm,0.9s,baz=258,slow=2.9,SNR=2.6
comp=Z,0.3nm,0.9s
MKAR Makanchi Arrar 118.21 310 PKP **PKPdf** **21 01 38.1 -1.8**
comp=Z,0.7nm,0.8s,baz=92,slow=0.7,SNR=6.3
ZALV Zalesovo Beam 118.66 318 PKP **PKPdf** **21 01 38.8 -1.7**
comp=Z,0.4nm,0.5s,baz=108,slow=2.7,SNR=1.7
KURK Kurchatov 121.57 313 **PKPdf** **21 01 44.5 -1.8**
KURBB Kurchatov Arra 121.61 313 PKP **PKPdf** **21 01 44.4 -1.9**
comp=Z,1.6nm,0.6s,baz=103,slow=1.9,SNR=20
BVAR Borovoye Array 126.97 315 PKP **PKPdf** **21 01 55.4 -1.1**
comp=Z,1.5nm,0.4s,baz=140,slow=1.3,SNR=8.9
SPITS Spitsbergen Ar 132.97 356 PKP **PKPdf** **21 02 06.7 -0.6**
comp=Z,6.1nm,1.0s,baz=21,slow=2.4,SNR=5.3
ARCES ARCESS Array B 139.75 347 PKhKP PKPpre 21 02 11.9
comp=Z,0.5nm,0.4s,baz=11,slow=1.2,SNR=4.7
BELG Belogornoye 140.77 316 PKP **PKPdf** **21 02 22.8 +0.5**
comp=Z,3.1nm,0.5s,baz=315,slow=2.9,SNR=1.9
FINES FINESS Array B 146.19 339 PKPbc **PKPdf** **21 02 31.1 -0.5**
comp=Z,8.6nm,0.4s,baz=48,slow=4.0,SNR=130
FINES FINESS Array B 146.19 339 **PKPdf** **21 02 30.7 -0.8**
NB2 NORSAR Subarra 149.96 350 PKP **PKPbc** **21 02 41.9 -0.9**
comp=Z,2.1nm,0.7s,baz=18,slow=2.6
NOA NORSAR Array B 149.96 350 PKPbc **PKPbc** **21 02 41.2 -1.6**
comp=Z,3.3nm,0.7s,baz=13,slow=4.1,SNR=13
HFS Hagfors 150.41 348 PKPbc **PKPbc** **21 02 42.3 -1.6**
comp=Z,8.5nm,0.8s,baz=27,slow=2.5,SNR=8.6
NACGM Naroch 150.66 330 ⇓ *i* P **PKPbc** **21 02 43.5 -1.1**
comp=Z,29nm,0.9s,baz=150
AKASG Malin Array Be 152.00 321 PKPbc **PKPbc** **21 02 46.8 -1.0**
comp=Z,1.7nm,0.5s,baz=58,slow=2.5,SNR=8.7
AKASG Malin Array Be 152.00 321 **PKPbc** **21 02 46.0 -1.8**
BRTR Keskin Array B 152.74 296 PKPbc **PKPbc** **21 02 49.3 -0.8**
comp=Z,1.3nm,0.7s,baz=85,slow=3.1,SNR=3.0
TORD Torodi Ar. Bea 161.52 181 PKPab **PKPab** **21 03 38.1 -0.8**
comp=Z,3.1nm,0.7s,baz=180,slow=3.5,SNR=12

*ISK **08** 20:57:52.9, 38˚.18N×38˚.53E, h5km, ML4.1/17*
*IDC **08** 20:57:54.0±0.6, 38˚.14N×38˚.52E, h0km, mb3.8/12, mbtmp3.8/23, ML3.3/10, MS3.0/7, Error ellipse: s-maj=12.0km s-min=7.9km az=157.0*
*GII **08** 20:57:53.3±0.0, 38˚.374N±0˚.002×38˚.569E±0˚.001, h0km, Mws4.2, confirmed*
*AFAD **08** 20:57:54.5, 38˚.19N×38˚.57E, h7km±2km, MW4.4*
*NEIC **08** 20:57:55.5±2.4, 38˚.14N±0˚.03×38˚.54E±0˚.06, h10km±1km, mb4.1/18, Error ellipse: s-maj=7.7km s-min=4.6km az=270.0*

ISC 08 20:57:55.6±0.4, **38˚20N**±0˚.02×**38˚.57E**±0˚.02, **h10km, n153, σ1§65/174, mb3.9/22, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MAYA	**Malatya/Merkez**	**0.17**	**318**	P		**Pg**	**20 57 58.9**	**-0.5**
MAYA				S		**Sg**	**20 58 01.2**	**-0.8**
MAYA				IAML			20 58 02.0	
	comp=N,10μm,0.5s							
MAYA				IAML			20 58 02.0	
	comp=E,16μm,0.3s							
NARI	**Adyaman-Kaht**	**0.35**	**154**	P		**Pg**	**20 58 01.3**	**-1.3**
NARI				S		**Sg**	**20 58 04.3**	**-2.9**
NARI				IAML			20 58 07.0	
	comp=N,8μm,0.4s							
NARI				IAML			20 58 07.0	
	comp=E,10μm,0.5s							
MDYL	**Doganyol-Malat**	**0.39**	**72**	Pg		**Pb**	**20 58 03.4**	**-1.2**
MDYL				Sg		**Sb**	**20 58 09.5**	**-1.2**
ELZG	**Elazig**	**0.44**	**47**	P		**Pg**	**20 58 03.5**	**-0.9**
ELZG				S		**Sg**	**20 58 09.8**	**-0.4**
ELZG				IAML			20 58 13.0	
	comp=N,2μm,0.3s							
ELZG				IAML			20 58 13.0	
	comp=E,2μm,0.7s							
ESGZ	**Sivrice-Elazig**	**0.45**	**59**	Pg		**Pg**	**20 58 03.7**	**-0.8**
AZEY	**Adyaman-Merk**	**0.46**	**213**	P		**Pg**	**20 58 03.9**	**-0.8**
AKCD	**Akcadag**	**0.52**	**281**	P		**Pg**	**20 58 05.0**	**-0.8**
AKCD				S		**Sg**	**20 58 10.8**	**-1.9**
AKCD				IAML			20 58 13.0	
	comp=E,3μm,0.4s							
AKCD				IAML			20 58 16.0	
	comp=N,4μm,0.3s							
CNGT	**ngs**	**0.57**	**88**	P		**Pg**	**20 58 05.4**	**-1.4**
SVRC	**Sivrice-ELAZID**	**0.61**	**72**	Pg		**Pg**	**20 58 06.1**	**-1.3**
SVRC				Sg		**Sb**	**20 58 16.5**	**-0.6**
ESIJ	**Sivrice-Elazig**	**0.63**	**67**	Pg		**Pg**	**20 58 07.4**	**-0.5**
ESIJ				Sg		**Sb**	**20 58 17.6**	**-0.3**
HANM	**anlurfa/Hi**	**0.66**	**158**	P		**Pg**	**20 58 07.3**	**-1.2**
ELZ	**Elazig**	**0.70**	**45**	P		**Pg**	**20 58 08.1**	**-1.1**
ATAB	**Bozova**	**0.76**	**197**	P		**Pg**	**20 58 09.0**	**-1.3**
URFA	**Urfa**	**0.78**	**165**	Pg		**Pg**	**20 58 08.3**	**-2.4**
AKCA	**Adyaman/G¶l**	**0.81**	**240**	P		**Pb**	**20 58 10.2**	**-1.6**
HEKM	**Malatya_Hekimh**	**0.83**	**325**	P		**Pg**	**20 58 10.7**	**-1.0**
MDNT	**Maden**	**0.90**	**77**	P		**Pg**	**20 58 11.9**	**-0.9**
ARPR	**Arapgir-MALATY**	**0.91**	**348**	Pg		**Pg**	**20 58 11.9**	**-1.3**
ARPR	**Arapgir-MALATY**	**0.91**	**348**	Pg		**Pg**	**20 58 11.7**	**-1.5**
ARPR				Sg		**Sb**	**20 58 25.8**	**-0.1**
MCKZ	**Bingol**	**0.97**	**19**	P		**Pg**	**20 58 12.6**	**-1.8**
SANL	**SANLIURFA_Merk**	**1.08**	**162**	P		**Pn**	**20 58 15.9**	**-0.9**
KOVA	**Elazig, Kovanc**	**1.10**	**62**	P		**Pb**	**20 58 15.9**	**-0.9**
ELBS	**KAHRAMANMARAS**	**1.14**	**277**	P		**Pb**	**20 58 16.0**	**-1.5**
CUGUR	**Gurin_SVAS**	**1.15**	**298**	P		**Pb**	**20 58 16.1**	**-1.5**
GZT	**Gaziantep**	**1.16**	**224**	P		**Pb**	**20 58 16.6**	**-1.3**
TNCL	**Tunceli-Merkez**	**1.19**	**39**	P		**Pb**	**20 58 17.0**	**-1.4**
MDIV		**1.20**	**340**	P		**Pg**	**20 58 18.0**	**-0.6**
ILIC	**ilic-Erzincan**	**1.25**	**360**	Pn		**Pn**	**20 58 18.2**	**-1.1**
ILIC				Sn		**Sn**	**20 58 37.2**	**+0.9**
DYBB	**Diyarbakir**	**1.26**	**101**	Pn		**Pb**	**20 58 18.7**	**-0.8**
KHMN	**Narli-Kahraman**	**1.38**	**235**	Pn		**Pn**	**20 58 19.7**	**-1.3**
GAZ	**Gaziantep**	**1.49**	**227**	Pn		**Pn**	**20 58 21.2**	**-1.3**
GAZ				Sn		**Sg**	**20 58 42.5**	**-1.0**
GAZ	**Gaziantep**	**1.49**	**227**			**Pn**	**20 58 21.0**	**-1.5**
KMRS	**Kahramanmaras**	**1.49**	**243**	Pn		**Pn**	**20 58 21.5**	**-1.0**
KMRS				Sn		**Sg**	**20 58 42.5**	**-1.1**
ERZN	**Erzincan**	**1.65**	**33**	Pn		**Pb**	**20 58 24.8**	**-1.4**
BNGB	**Bingl**	**1.83**	**64**	Pn		**Pb**	**20 58 27.4**	**-1.9**
YEDI	**Yedisu-Bingol**	**1.98**	**51**	Pn		**Pn**	**20 58 29.6**	**+0.3**
SVAN	**Silvan-Diyarba**	**2.07**	**90**	Pn		**Pn**	**20 58 30.9**	**+0.4**
SVAN				Sn		**Sb**	**20 58 54.4**	**-0.7**
KARO	**Karliova-Bingo**	**2.23**	**59**	Pn		**Pn**	**20 58 33.3**	**+0.4**
BNN	**Bunyan**	**2.23**	**288**			**Pb**	**20 58 33.8**	**-2.3**
KOPT	**Kop Dagi**	**2.35**	**39**			**Pb**	**20 58 36.1**	**-2.2**
VRTB	**Varto-Mus**	**2.45**	**66**	Pn		**Pn**	**20 58 36.3**	**+0.4**
TOKA	**Tokat**	**2.67**	**323**			**Pn**	**20 58 40.0**	**+1.2**
GURO	**Guroymak-BITLI**	**2.74**	**82**	Pn		**Pn**	**20 58 40.0**	**+0.2**
GURO	**Guroymak-BITLI**	**2.74**	**82**			**Pn**	**20 58 39.0**	**-0.8**
GEVA	**Gevas**	**3.53**	**87**			**Pn**	**20 58 51.1**	**+0.3**
BEIL	**Beino**	**4.13**	**209**	*eP*		**Pn**	**20 58 58.1**	**-0.6**
BRTR	**Keskin Array B**	**4.14**	**293**	Pn		**Pn**	**20 58 59.5**	**+0.6**
	2.8nm,0.3s,baz=124,slow=8.1,SNR=63							
BRTR				Lg		Lg	21 00 04.5	
	1.9nm,0.3s,baz=118,slow=28,SNR=5.9							
BRTR				LR		LR	21 00 51.5	
	comp=Z,402nm,18.4s,baz=93,slow=43							
	11nm,0.6s							
HWQ	**Hawqa**	**4.45**	**209**	*eP*		**Pn**	**20 59 02.7**	**-0.6**
SNOP	**Sinop**	**4.61**	**327**			**Pn**	**20 59 05.7**	**+0.4**
ZAHL	**Zahle**	**4.85**	**207**	*eP*		**Pn**	**20 59 08.4**	**-0.4**
BHL	**Bhannes**	**4.89**	**210**	*eP*		**Pn**	**20 59 09.5**	**+0.2**
CY604	**RAF Akrotiri,**	**5.06**	**222**			**Pn**	**20 59 09.5**	**-1.7**
DQRL	**Deir Qamar**	**5.10**	**209**	*eP*		**Pn**	**20 59 11.8**	**-0.4**
GNI	**Garni**	**5.17**	**66**	Pn		**Pn**	**20 59 16.0**	**+2.7**
	1.8nm,0.3s,baz=283,slow=4.1,SNR=3.7							
GNI				Sn		**Sn**	**21 00 15.3**	**+2.2**
	0.3nm,0.3s,baz=344,slow=15,SNR=1.3							
GNI				Lg		Lg	21 00 42.4	
	0.1nm,0.3s,baz=229,slow=20,SNR=1.4							
GNI				LR		LR	21 01 41.8	
	comp=Z,178nm,18.9s,baz=261,slow=44							
	4.3nm,0.3s							
GNI	**Garni**	**5.17**	**66**	Pn		**Pn**	**20 59 12.3**	**-1.0**
GNI						**Sn**	**21 00 15.3**	**+2.2**
RCY	**Rachaya**	**5.19**	**206**	*eP*		**Pn**	**20 59 13.4**	**-0.1**
QRWL	**Qaraoun**	**5.20**	**208**	*eP*		**Pn**	**20 59 13.8**	**+0.3**
CSS	**Mathiatis**	**5.31**	**234**			**Pn**	**20 59 14.0**	**-1.1**
CSS	**Mathiatis**	**5.31**	**234**	P		**Pn**	**20 59 15.1**	**+0.1**
SHBL	**Chebaa**	**5.36**	**206**	*eP*		**Pn**	**20 59 15.7**	**-0.1**
NATI	**Neve Ativ**	**5.44**	**206**	P		**Pn**	**20 59 17.2**	**+0.4**
NATI				S		**Sn**	**21 00 22.9**	**+3.5**
GEM	**Giv'at Ha'Em**	**5.51**	**206**	P		**Pn**	**20 59 17.9**	**+0.2**
GEM				S		**Sn**	**21 00 23.9**	**+2.7**
KSHT	**Keshet**	**5.67**	**204**	P		**Pn**	**20 59 20.8**	**+0.8**
KSHT				S		**Sn**	**21 00 28.1**	**+2.9**
MMA0B	**Mount Meron ar**	**5.78**	**207**	P		**Pn**	**20 59 21.7**	**+0.2**
MMA0B				S		**Sn**	**21 00 30.9**	**+3.0**
MMAI	**Mount Meron Ar**	**5.78**	**207**	Pn		**Pn**	**20 59 20.9**	**-0.6**
	3.5nm,0.3s,baz=11,slow=18,SNR=31							
MMAI				Lg		Lg	21 00 53.8	
	13nm,0.3s,baz=11,slow=24,SNR=5.7							
MMAI				LR		LR	21 01 32.7	
	comp=Z,92nm,19.2s,baz=12,slow=38							
KNHM	**Kefar Nahum**	**5.84**	**206**	P		**Pn**	**20 59 22.8**	**+0.6**
KNHM				S		**Sn**	**21 00 31.8**	**+2.6**
MDUB	**Mudurnu**	**6.15**	**294**	Pn		**Pn**	**20 59 25.6**	**-1.0**
ASF	**Jabal al Asfar**	**6.17**	**193**	Pn		**Pn**	**20 59 25.8**	**-1.0**
	1.2nm,0.3s,baz=9.0,slow=9.8,SNR=14							
ASF				Lg		Lg	21 01 07.5	
	7.3nm,0.3s,baz=30,slow=20,SNR=5.5							
	3.1nm,0.3s							
OFRI	**`Ofer**	**6.29**	**209**	P		**Pn**	**20 59 28.7**	**+0.2**
OFRI				S		**Sn**	**21 00 42.9**	**+2.5**
MMLI	**Mount Malkishu**	**6.30**	**205**	P		**Pn**	**20 59 29.5**	**+0.9**
MMLI				S		**Sn**	**21 00 43.6**	**+3.0**
KBZ	**Khabaz**	**6.42**	**29**	Pn		**Pn**	**20 59 32.9**	**+2.7**
	0.2nm,0.3s,baz=237,slow=14,SNR=1.7							
	1.1nm,0.5s							
ROII	**Roi**	**6.45**	**204**	P		**Pn**	**20 59 31.5**	**+0.9**
ROII				S		**Sn**	**21 00 47.2**	**+2.9**
RGMN	**Argaman**	**6.51**	**203**	P		**Pn**	**20 59 32.3**	**+0.9**
RGMN				S		**Sn**	**21 00 48.8**	**+3.0**
KVAR	**Kislovodsk Arr**	**6.54**	**27**	Pn		**Pn**	20 59 36.0	+4.0
	baz=210,slow=14							
	3.4nm,0.7s							
SLTI	**Sal'it**	**6.61**	**207**	P		**Pn**	**20 59 33.8**	**+1.0**
SLTI				S		**Sn**	**21 00 51.3**	**+3.0**
YITV	**Yitav**	**6.75**	**203**	P		**Pn**	**20 59 35.6**	**+0.9**
YITV				S		**Sn**	**21 00 54.7**	**+3.0**
ELL	**Elmali**	**7.04**	**261**	Pn		**Pn**	**20 59 37.9**	**-0.9**
AMAZ	**Amatzia**	**7.30**	**205**	P		**Pn**	**20 59 43.2**	**+0.9**
AMAZ				S		**Sn**	**21 01 08.1**	**+2.9**
GHAJ	**Ghor Haditha**	**7.31**	**201**			**Pn**	**20 59 42.1**	**-0.3**
GHAJ	**Ghor Haditha**	**7.31**	**201**	P		**Pn**	**20 59 42.3**	**-0.1**
GHAJ				S		**Sn**	**21 01 08.4**	**+3.0**
MSBI	**Mazada**	**7.36**	**202**	P		**Pn**	**20 59 43.8**	**+0.8**
MSBI				S		**Sn**	**21 01 09.7**	**+3.1**
AKAS	**Kas**	**7.42**	**257**	Pn		**Pn**	**20 59 43.7**	**-0.4**
KZIT	**Kziot**	**8.05**	**207**	P		**Pn**	**20 59 53.2**	**+0.6**
KZIT				S		**Sn**	**21 01 25.2**	**+1.6**
RMNI	**Mount Ramon**	**8.21**	**204**	P		**Pn**	**20 59 55.8**	**+0.9**
RMNI				S		**Sn**	**21 01 30.9**	**+3.2**
HRFI	**Mount Harif**	**8.65**	**201**	P		**Pn**	**21 00 01.8**	**+0.9**
HRFI				S		**Sn**	**21 01 41.6**	**+3.1**
EIL	**Elat**	**9.02**	**201**	Pn		**Pn**	**21 00 05.7**	**-0.3**
	0.6nm,0.3s,baz=14,slow=13,SNR=4.9							
EIL				Lg		Lg	21 02 37.9	
	0.3nm,0.3s,baz=11,slow=14,SNR=2.1							
EIL				LR		LR	21 04 00.4	
	comp=Z,168nm,20.9s,baz=92,slow=41							
	1.5nm,0.4s							
EIL	**Elat**	**9.02**	**201**	P		**Pn**	**21 00 06.9**	**+0.9**
EIL				S		**Sn**	**21 01 50.6**	**+3.0**
IDI	**Anoyia**	**11.36**	**259**	Pn		**Pn**	**21 00 37.1**	**-0.8**
	1.2nm,0.3s,baz=72,slow=14,SNR=3.0							
	23nm,1.0s							
IDI	**Anoyia**	**11.36**	**259**	Pn		**Pn**	**21 00 36.6**	**-1.3**
MLR	**Muntele Rosu**	**11.90**	**312**	Pn		**Pn**	**21 00 46.6**	**+1.2**
	0.1nm,0.3s,baz=121,slow=19,SNR=1.3							
MLR				LR		LR	21 06 25.3	
	comp=Z,23nm,21.9s,baz=60,slow=43							
	0.4nm,0.5s							
BURAR	**Bucovina Array**	**13.56**	**318**	Pn		**Pn**	**21 01 09.0**	**+1.0**
AKASG	**Malin Array Be**	**14.15**	**335**	Pn		**Pn**	**21 01 14.8**	**-1.2**
	0.3nm,0.3s,baz=141,slow=12,SNR=2.5							
	0.2nm,0.3s							
TIP	**Timpagrande**	**17.06**	**280**			**P**	**21 01 54.2**	**-1.9**
TIP					IAmb	IAmb	21 02 01.9	
	comp=Z,21nm,1.5s							
AKTO	**Aktyubinsk**	**18.46**	**42**	P		**Pn**	**21 02 10.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=238,slow=10.0,SNR=3.8							
	comp=Z,1.5nm,0.6s							
RONA	**Rosalia, Austr**	**18.81**	**307**	*ep*P		P	21 02 22.7	+7.4
	comp=Z,2.8nm,1.3s							
ABKAR	**Akbulak array**	**18.92**	**47**	P		**P**	**21 02 15.4**	**-1.0**
MORC	**Moravsky Berou**	**18.98**	**314**	P		**Pn**	**21 02 18.4**	**+0.6**
MORC	**Moravsky Berou**	**18.98**	**314**	*eP*		**Pn**	**21 02 18.6**	**+0.8**
ARSA	**Arzberg**	**19.14**	**306**	*ep*P		P	21 02 25.5	+6.6
	comp=Z,1.3nm,0.5s							
CONA	**Conrad Observa**	**19.17**	**308**	*i* pP		P	21 02 26.2	+6.9
	comp=Z,2.7nm,1.0s							
SOKA	**Soboth**	**19.28**	**304**	*i* P		**Pn**	**21 02 24.1**	**+2.7**
	comp=Z,2.8nm,1.3s							
VRAC	**Vranov**	**19.30**	**312**	LR		LR	21 10 45.7	
	comp=Z,36nm,18.7s,baz=99,slow=40							
HRA	**Herat**	**19.44**	**94**	P		**P**	**21 02 21.8**	**-0.7**
OBKA	**Obir**	**19.55**	**303**	*ep*P		**P**	**21 02 29.0**	**+5.6**
	comp=Z,3.7nm,1.0s							
AQU	**L'Aquila**	**19.62**	**290**	P		**Pn**	**21 02 25.1**	**-0.4**
AQU					IAmb	IAmb	21 02 35.6	
	comp=Z,9.6nm,0.9s							
NRCA	**Norcia**	**19.87**	**292**	P		**P**	**21 02 25.4**	**-1.6**
NRCA					IAmb	IAmb	21 02 34.1	
	comp=Z,16nm,1.4s							
FDMO	**Fiordimonte**	**19.91**	**292**	P		**Pn**	**21 02 27.4**	**-1.6**
FDMO					IAmb	IAmb	21 02 33.5	
	comp=Z,11nm,0.9s							
SABO	**M.te Sabotino**	**20.04**	**301**	P		**P**	**21 02 27.6**	**-1.1**
SABO					IAmb	IAmb	21 02 38.4	
	comp=Z,6.0nm,0.7s							
MOA	**Molln**	**20.14**	**306**	*i* P		Pn	21 02 32.7	+1.0
	comp=Z,2.4nm,0.9s							
MYKA	**Terra Mystica**	**20.18**	**303**	*ep*P		**P**	**21 02 34.8**	**+4.5**
	comp=Z,3.3nm,1.1s							
PRED	**Cave del Predi**	**20.18**	**302**	P		**P**	**21 02 29.9**	**-0.4**
CESX	**Cesi**	**20.25**	**291**	P		**P**	**21 02 25.5**	**-5.5**
CESX					IAmb	IAmb	21 02 37.2	
	comp=Z,7.5nm,0.8s							
MURB	**Monte Urbino**	**20.34**	**293**	P		**P**	**21 02 29.6**	**-2.5**
BIOA	**Bad Ischl, Aus**	**20.49**	**306**	*ep*P		pP	21 02 38.5	+1.5
	comp=Z,1.4nm,0.5s							
KBA	**Koelnbreinsper**	**20.50**	**304**	*i* P		Pn	21 02 36.2	+0.2
	comp=Z,5.5nm,1.2s							
GERES	**GERESS Array B**	**20.85**	**309**	P		Pn	21 02 38.5	-1.5
	comp=Z,1.1nm,0.6s,baz=113,slow=10,SNR=11							
	comp=Z,1.1nm,0.6s							
GERES	**GERESS Array B**	**20.85**	**309**	P		**P**	**21 02 36.0**	**-1.6**
ABTA	**Abfaltersbach**	**20.96**	**302**	*ep*P		**P**	**21 02 37.7**	**-1.1**
	comp=Z,3.3nm,1.0s							
LESA	**Schwarzleotal**	**21.04**	**304**	*i* pP		**P**	**21 02 44.4**	**+4.8**
	comp=Z,2.1nm,0.6s							
WTTA	**Wattenberg**	**21.67**	**303**	*i* pP		**P**	**21 02 47.5**	**+1.0**
	comp=Z,4.3nm,1.1s							
WATA	**Walderalm**	**21.73**	**304**	*i* pP		**P**	**21 02 49.2**	**+2.0**
	comp=Z,3.8nm,1.0s							
SQTA	**Sankt Quirin**	**21.94**	**303**	*i* pP		**P**	**21 02 50.5**	**+1.1**
	comp=Z,2.7nm,0.7s							
MOTA	**Moosalm**	**22.04**	**303**	*i* pP		**P**	**21 02 51.7**	**+1.2**
	comp=Z,4.8nm,1.0s							
FETA	**Feichten**	**22.21**	**302**	*i* pP		**P**	**21 02 53.9**	**+1.6**
	comp=Z,3.4nm,0.9s							
RETA	**Reutte**	**22.30**	**304**	*ep*P		**P**	**21 02 54.2**	**+1.0**
	comp=Z,2.8nm,0.6s							
DAVA	**Damuels**	**22.84**	**303**	*ep*P		**P**	**21 02 59.6**	**+0.6**
	comp=Z,3.9nm,0.6s							
KEST	**Kesra**	**23.44**	**273**	P		**P**	**21 03 05.9**	**+0.7**
	comp=Z,10nm,0.8s,baz=68,slow=5.1,SNR=8.5							
	comp=Z,10nm,0.8s							
KEST	**Kesra**	**23.44**	**273**	P		**P**	**21 03 04.6**	**-0.5**
KKAR	**Karatay Array**	**24.64**	**68**			**P**	**21 03 17.4**	**+1.1**
BNI	**Bardonecchia**	**24.69**	**296**	P		**P**	**21 03 17.0**	**+0.1**
BNI					IAmb	IAmb	21 03 25.1	
	comp=Z,5.0nm,0.8s							
GAR	**Garm**	**24.76**	**78**	P		**P**	**21 03 15.8**	**-1.7**
BVAR	**Borovoye Array**	**26.47**	**46**	P		**P**	**21 03 33.8**	**+1.1**
	comp=Z,3.3nm,0.9s,baz=249,slow=6.2,SNR=7.6							
	comp=Z,3.3nm,0.9s							
KURBB	**Kurchatov Arra**	**30.75**	**53**	P		**P**	**21 04 11.7**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=266,slow=8.9,SNR=8.2							
	comp=Z,1.0nm,0.6s							
KURK	**Kurchatov**	**30.82**	**53**	P		**P**	**21 04 11.3**	**-0.2**
KURK					IAmb	IAmb	21 04 17.8	
	comp=Z,2.2nm,1.1s							
EKA	**Eskdalemuir Ar**	**32.72**	**315**	P		**P**	**21 04 28.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=110,slow=9.5,SNR=4.1							
	comp=Z,0.6nm,0.5s							
ESDC	**Sonseca Array**	**32.90**	**286**	P		**P**	**21 04 29.5**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=67,slow=9.0,SNR=8.4							
	comp=Z,1.2nm,0.8s							
ESDC	**Sonseca Array**	**32.90**	**286**	P		**P**	**21 04 29.2**	**-0.8**
ESDC					IAmb	IAmb	21 04 38.7	
	comp=Z,3.5nm,1.2s							
MKAR	**Makanchi Array**	**33.00**	**61**	P		**P**	**21 04 31.1**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=277,slow=6.7,SNR=14							
	comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**33.00**	**61**	P		**P**	**21 04 32.0**	**+1.3**
ZALV	**Zalesovo Beam**	**35.04**	**48**	P		**P**	**21 04 48.1**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=280,slow=8.3,SNR=3.7							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**35.04**	**48**	P		**P**	**21 04 49.7**	**+1.4**
WMQ	**Urumqi**	**37.05**	**65**	*eP*		**P**	**21 05 07.4**	**+1.7**
TORD	**Torodi Ar. Bea**	**41.14**	**243**	P		**P**	**21 05 39.0**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=43,slow=8.9,SNR=4.6							
	comp=Z,1.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**41.14**	**243**	P		**P**	**21 05 38.0**	**-2.1**
TORD					IAmb	IAmb	21 05 44.0	
	comp=Z,4.5nm,1.0s							
SONM	**Songino Array**	**49.05**	**56**	P		**P**	**21 06 43.2**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=302,slow=8.3,SNR=2.5							
	comp=Z,0.5nm,0.9s							
SONM	**Songino Array**	**49.05**	**56**	P		**P**	**21 06 43.1**	**+0.2**
DBIC	**Dimbokro**	**50.25**	**243**	P		**P**	**21 06 51.2**	**-1.0**
	comp=Z,4.5nm,1.0s,baz=56,slow=7.3,SNR=1.9							
	comp=Z,4.5nm,1.0s							
DBIC	**Dimbokro**	**50.25**	**243**	P		**P**	**21 06 50.4**	**-1.8**
HHC	**Hu-ho-hao-te**	**54.83**	**63**	*eP*		**P**	**21 07 25.3**	**-0.7**
HHC					pmax	pmax		
	comp=Z,7.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,25nm,4.1s							
CMAR	**Chiang Mai Arr**	**55.70**	**93**	P		**P**	**21 07 32.0**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=293,slow=4.0,SNR=2.3							
	comp=Z,0.8nm,1.0s							
CMAR	**

JCAJ **Choshiashikaji 0.83 111** A A 21 05 45.7
comp=N,26nm,3.0s,comp=E,33nm,2.0s
JKUC **kamogawauchiur 0.89 164** A A 21 05 46.5
comp=N,59nm,1.9s,comp=E,49nm,1.0s
JKT **Katashina 0.91 325** ⇓*i*P **Pn** **21 05 44.7 +1.2**
JKT A A 21 05 44.7
comp=N,57nm,0.3s,comp=E,88nm,0.3s
JKT ⇓S **Sn** **21 05 56.5 +1.1**
JSB **Shiboa 0.95 1** A A 21 05 45.9
comp=N,66nm,0.9s,comp=E,81nm,0.9s
TATJ **Tateyama 2 0.99 180** A A 21 05 47.7
comp=N,174nm,2.1s,comp=E,134nm,1.5s
JOD2 **Odawara 2 1.00 221** ⇓*i*P **Pn** **21 05 47.3 +2.6**
JOD2 A A 21 05 47.3
comp=N,50nm,1.6s,comp=E,49nm,1.1s
JOD2 ⇓S **Sn** **21 06 01.2 +3.6**
JGK **Kuni 1.15 298** A A 21 05 48.7
comp=N,21nm,1.9s,comp=E,18nm,0.7s
JFFD **Fukushimafurud 1.19 26** A A 21 05 49.8
comp=N,15nm,2.1s,comp=E,23nm,0.9s
JYN **Shimob 1.22 245** *i* P **Pn** **21 05 50.4 +2.8**
JYN A A 21 05 50.4
comp=N,37nm,1.2s,comp=E,43nm,1.0s
JHTM **Izuhatsuma 1.28 215** A A 21 05 51.6
comp=N,75nm,0.5s,comp=E,104nm,0.8s
JFNN **Fujinakano 1.29 231** A A 21 05 51.4
comp=N,45nm,1.1s,comp=E,33nm,2.9s
ONAJ **Iwakimizuishiy 1.30 34** A A 21 05 51.5
comp=N,39nm,0.3s,comp=E,53nm,0.3s
BSO3 **Boso 3 1.31 157** ⇓*i*P **Pn** **21 05 51.6 +2.9**
JIM2 **Oshima 3 1.35 196** *i* P **Pn** **21 05 51.7 +2.2**
JIM2 A A 21 05 51.7
comp=N,49nm,0.5s,comp=E,55nm,2.2s
JIM2 S **Sn** **21 06 09.1 +2.8**
JUON **Uonuma 1.36 331** ⇓*i*P **Pn** **21 05 51.1 +1.5**
JUON A A 21 05 51.1
comp=N,14nm,4.1s,comp=E,13nm,3.5s
JFY **Yanaizu 1.39 354** ⇓*i*P **Pn** **21 05 51.9 +1.9**
JFY A A 21 05 51.9
comp=N,10.0nm,2.1s,comp=E,29nm,1.2s
JNT **Takato 1.44 265** ⇓*i*P **Pn** **21 05 53.6 +2.9**
JNT A A 21 05 53.6
comp=N,21nm,1.1s,comp=E,35nm,0.8s
MJAR **Matsushiro Arr 1.46 291** P **Pn** **21 05 52.6 +1.6**
comp=E,1µm,0.4s,baz=89,slow=13,SNR=3350
MJAR S **Sn** **21 06 10.1 +1.2**
comp=E,846nm,0.6s,baz=293,slow=38,SNR=6.6
MJAR LR LR 21 06 30.5
comp=E,2µm,18.8s,baz=142,slow=44
MAJO **Matsushiro 1.46 291** P **Pn** **21 05 52.8 +1.8**
MAJO **Matsushiro 1.46 291** P **Pn** **21 05 52.8 +1.8**
MAJO 21 06 10.8
MAJO **Matsushiro 1.46 291** **Pn** **21 05 52.8 +1.8**
MAJO Sn **Sn** **21 06 10.8 +1.9**
MAJO **Matsushiro 1.46 291** P **Pn** **21 05 52.1 +1.1**
JIZS **Izushimoda 1.54 213** A A 21 05 55.3
comp=N,17nm,1.0s,comp=E,32nm,1.2s
JFK **Kawauchi 1.56 30** A A 21 05 55.1
comp=N,10.0nm,2.8s,comp=E,11nm,2.7s
JTHY **Toshimahigashi 1.57 199** A A 21 05 56.0
comp=N,30nm,2.2s,comp=E,24nm,2.2s
JOTO **OTAMA OYAMA 1.58 13** A A 21 05 55.1
comp=N,39nm,0.4s,comp=E,55nm,1.5s
SHZ3 **Shizuoka 3 1.67 236** A A 21 05 56.8
comp=N,25nm,0.6s,comp=E,17nm,1.2s
JNIO **Niijimaoohara 1.74 197** A A 21 05 58.3
comp=N,27nm,1.1s,comp=E,28nm,1.6s
JJN **Nakama 1.77 308** A A 21 05 57.5
comp=N,12nm,2.0s,comp=E,13nm,3.2s
JSKK **Shikinejimakit 1.77 199** A A 21 05 58.8
comp=N,12nm,1.9s,comp=E,21nm,1.7s
JNY **Yasuok 1.78 249** A A 21 05 58.2
comp=N,32nm,1.4s,comp=E,20nm,1.7s
JIZZ **Izumozaki 1.79 328** A A 21 05 57.8
comp=N,34nm,2.9s,comp=E,19nm,3.0s
JNS **Sasagawa 1.85 346** A A 21 05 58.9
comp=N,7.0nm,3.1s,comp=E,6.0nm,3.0s
JYAR **Yonezawaarcadi 1.90 6** A A 21 05 59.7
comp=N,17nm,1.2s,comp=E,18nm,1.8s
JSG **Sagara 1.94 227** P Pn 21 06 02.1 +4.6
JSG **Sagara 1.94 227** S **Sn** **21 06 26.7 +6.1**
JSG **Sagara 1.94 227** **Pn** **21 05 59.2 +1.7**
JSG Sn **Sn** **21 06 25.5 +4.9**
JSG **Sagara 1.94 227** P **Pn** **21 06 01.8 +4.3**
JSG **Sagara 1.94 227** A A 21 06 00.8
comp=N,21nm,2.4s,comp=E,34nm,1.8s
JKKS **Kakegawashinom 2.01 232** A A 21 06 01.8
comp=N,16nm,2.0s,comp=E,17nm,2.4s
JGF **Kuroka 2.11 259** P Pn 21 06 04.0 +4.2
JGF **Kuroka 2.11 259** S **Sn** **21 06 31.3 +6.5**
JGF **Kuroka 2.11 259** **Pn** **21 06 02.6 +2.8**
JGF Sn **Sn** **21 06 26.5 +1.6**
JGF **Kuroka 2.11 259** P **Pn** **21 06 03.5 +3.7**
JGF **Kuroka 2.11 259** A A 21 06 02.7
comp=N,13nm,1.8s,comp=E,12nm,1.5s
HMMJ **Hamamatsu 2 2.12 237** A A 21 06 03.3
comp=N,8.0nm,2.7s,comp=E,5.0nm,3.3s
JTT **Ttatey 2.15 286** A A 21 06 03.1
comp=N,7.0nm,2.1s,comp=E,8.0nm,3.6s
JYS **Shirataka 2.20 3** A A 21 06 04.0
comp=N,12nm,2.4s,comp=E,20nm,2.0s
JAO **Obara 2.28 251** A A 21 06 05.3
comp=N,15nm,1.6s,comp=E,14nm,1.2s
JOU **Okura 2.42 14** A A 21 06 07.2
comp=N,10.0nm,1.1s,comp=E,11nm,2.0s
INU **Inuyama 2.44 255** P **Pn** **21 06 07.5 +3.2**
INU **Inuyama 2.44 255** S **Sn** **21 06 39.0 +6.0**
INU **Inuyama 2.44 255** **Pn** **21 06 06.9 +2.5**
INU **Inuyama 2.44 255** P **Pn** **21 06 07.6 +3.2**
JYA **Atsumi 2.57 357** A A 21 06 09.2
comp=N,8.0nm,1.6s,comp=E,10.0nm,1.1s
JICN **Ichinomiyachia 2.59 255** A A 21 06 09.6
comp=N,22nm,2.0s,comp=E,21nm,2.2s
JAA **Atsumi 2.64 239** A A 21 06 10.7
comp=N,4.0nm,3.3s,comp=E,4.0nm,1.5s
JOFO **Osakifurukawao 2.70 17** A A 21 06 11.3
comp=N,39nm,3.5s,comp=E,48nm,4.0s
JHJ **Hachijo jima 2 2.90 182** P **Pn** **21 06 13.0 +2.3**
comp=E,3µm,0.4s,baz=321,slow=16,SNR=1168
JHJ S **Sn** **21 06 44.9 +0.6**
comp=E,3µm,0.4s,baz=65,slow=22,SNR=12
JHJ2 **Mitsune 2.90 181** P **Pn** **21 06 13.2 +2.5**
JHJ2 **Mitsune 2.90 181** S **Sn** **21 06 46.9 +2.5**
JHJ2 **Mitsune 2.90 181** **Pn** **21 06 12.4 +1.7**
JHJ2 **Mitsune 2.90 181** P **Pn** **21 06 13.2 +2.5**
JYK **Kaneyama 2.92 7** A A 21 06 14.2
comp=N,4.0nm,1.3s,comp=E,6.0nm,2.3s
JYYZ **Yamagatayuza 2.99 0** A A 21 06 15.2
comp=N,15nm,4.5s,comp=E,17nm,3.9s
JIE **Ise 3.08 239** A A 21 06 16.8
comp=N,3.0nm,2.1s,comp=E,4.0nm,1.8s
JFM **Mihama 3.22 262** A A 21 06 18.5
comp=N,5.0nm,2.7s,comp=E,4.0nm,1.6s
JRG **Rokugo 3.42 10** A A 21 06 21.4
comp=N,5.0nm,3.1s,comp=E,6.0nm,2.3s
JYW **Yuwa 3.52 4** A A 21 06 22.8
comp=N,16nm,2.1s,comp=E,12nm,2.7s
JSZI **Iwateshizukuis 3.81 12** A A 21 06 26.8
comp=N,11nm,2.7s,comp=E,13nm,2.5s
JKY **Yasaka 3.92 266** A A 21 06 28.3
comp=N,7.0nm,2.1s,comp=E,3.0nm,1.8s
JMIK **Miki 4.14 254** A A 21 06 31.5
comp=N,5.0nm,1.4s,comp=E,4.0nm,1.3s
JTM **Tenmabayashi 4.85 11** P **Pn** **21 06 40.9 +3.5**
JTM **Tenmabayashi 4.85 11** S **Sn** **21 07 35.1 +2.8**
JTM **Tenmabayashi 4.85 11** **Pn** **21 06 41.0 +3.6**
JTM **Tenmabayashi 4.85 11** P Pn 21 06 41.9 +4.5
JMN **Monobe 5.45 247** **Pn** **21 06 47.0 +1.2**
ERM **Erimo 6.50 22** P **Pn** **21 07 02.2 +2.1**
ERM **Erimo 6.50 22** S **Sn** **21 08 15.5 +2.5**
ERM **Erimo 6.50 22***c i*P **Pn** **21 07 01.8 +1.7**
ERM **Erimo 6.50 22** **Pn** **21 07 01.8 +1.7**
ERM **Erimo 6.50 22** P Pn 21 07 04.5 +4.4
JEM **Erimo 6.50 22** P **Pn** **21 07 02.1 +2.0**
JEM **Erimo 6.50 22** S **Sn** **21 08 15.4 +2.4**
ASAJ **Asahikawa 8.35 14** P **Pn** **21 07 26.9 +1.5**
JKA **Kamikawa-asahi 8.35 14** **Pn** **21 07 26.9 +1.4**
NMR **Nemuro--Hokkai 8.60 30** *e*P **Pn** **21 07 27.5 -1.4**
NMR *i* S **Sn** **21 08 57.9 -6.7**
RUSJ **Misakicho 9.05 25** *e*P **Pn** **21 07 35.3 +0.2**
RUSJ *i* S **Sn** **21 09 12.1 -3.6**
JSU **Suzuyama 9.06 243** Pn **Pn** **21 07 37.2 +2.0**
JCJ **Chichijima 9.11 167** P **Pn** **21 07 34.4 -1.6**
comp=E,122nm,0.3s,baz=41,slow=14,SNR=51
JCJ S **Sn** **21 09 11.2 -6.0**
comp=E,101nm,0.3s,baz=232,slow=21,SNR=7.0
JCJ **Chichijima 9.11 167** P **Pn** **21 07 36.8 +0.8**
JCJ **Chichijima 9.11 167** **Pn** **21 07 35.6 -0.4**
YUK **Yuzh-Kuril'sk 9.22 28** *e*P **Pn** **21 07 38.1 +0.8**
YUK *i* S **Sn** **21 09 14.9 -4.8**
YUK pmax pmax
comp=N,31nm,0.3s
YUK pmax pmax
comp=Z,121nm,0.3s
YUK pmax pmax
comp=E,10.0nm,0.1s
VLA **Vladivostok 9.40 321** ⇓*i*P **Pn** **21 07 39.5 -0.4**
VLA pmax pmax
comp=Z,11nm,0.8s
PSTR **Posyet 9.66 316** *e*P **Pn** **21 07 43.6 +0.1**
KSRS **Korea Array 9.72 282** P Pn 21 07 48.2 +4.0
comp=Z,6.6nm,0.4s,baz=96,slow=14,SNR=58
KSRS LR LR 21 11 24.5
comp=Z,708nm,20.1s,baz=90,slow=37
KSAR **Wonju Array Be 9.75 282** P **Pn** **21 07 47.1 +2.5**
KSAR **Wonju Array Be 9.75 282** **Pn** **21 07 47.1 +2.5**
KS19 **Wonju Array Si 9.77 282** Pn **Pn** **21 07 46.5 +1.6**
TJN **Taejon 10.14 276** P **Pn** **21 07 51.2 +1.2**
TJN **Taejon 10.14 276** Pn **Pn** **21 07 51.2 +1.2**
USA0B **Ussuriysk Arra 10.16 326***ce*P **Pn** **21 07 52.3 +2.0**
USA0B **Ussuriysk Arra 10.16 326** Pn **Pn** **21 07 53.3 +2.9**
USRK **Ussuriysk Ar. 10.16 326** P Pn 21 07 55.1 +4.8
comp=Z,16nm,0.8s,baz=139,slow=13,SNR=29
USRK LR LR 21 11 31.6
comp=Z,312nm,21.9s,baz=144,slow=36
USRK **Ussuriysk Ar. 10.16 326** P **Pn** **21 07 53.8 +3.5**
USRK **Ussuriysk Ar. 10.16 326** **Pn** **21 07 53.8 +3.5**
INCN **Inchon 10.74 282** P **Pn** **21 07 59.1 +0.8**
INCN **Inchon 10.74 282** Pn **Pn** **21 07 59.1 +0.8**
KUR **Kuril'sk 11.01 31** *e*P **Pn** **21 08 00.6 -1.3**
KUR *i* S **Sn** **21 09 58.3 -5.3**
YSS **Yuzhno-Sakhali 11.13 10** *e*P **Pn** **21 08 04.1 +0.6**
YSS *e*S **Sn** **21 10 02.8 -3.8**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,500nm,19.0s
YSS MLR MLR
comp=N,400nm,17.0s
YSS MLR MLR
comp=E,300nm,17.0s
YSS **Yuzhno-Sakhali 11.13 10** Pn **Pn** **21 08 04.2 +0.6**
MDJ **Mudanjiang 11.63 321** P Pn 21 08 15.7 +5.2
MDJ S Sn 21 10 30.7 +12
MDJ pmax pmax
comp=Z,13nm,0.8s
MDJ LR LR
comp=N,390nm,21.6s
MDJ LR LR
comp=E,190nm,24.0s
MDJ LR LR
comp=Z,760nm,23.4s
MDJ **Mudanjiang 11.63 321** **Pn** **21 08 13.4 +3.0**
MDJ **Mudanjiang 11.63 321** P Pn 21 08 15.9 +5.5
CN2 **Changchun 13.53 309** *e*P **Pn** **21 08 38.8 +2.5**
CN2 *e*pP P 21 08 48.0 +3.3
CN2 *e*S **Sn** **21 11 06.8 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=N,100nm,10.0s
CN2 LR LR
comp=E,100nm,10.0s
CN2 LR LR
comp=Z,100nm,12.0s
BNX **BinXian 13.53 320** ⇑P **Pn** **21 08 38.4 +2.0**
BNX S **Sn** **21 11 06.7 +1.4**
BNX pmax pmax
comp=Z,13nm,1.3s
BNX pmax pmax
comp=Z,140nm,5.4s
BNX LR LR
comp=N,280nm,21.4s
BNX LR LR
comp=E,200nm,17.9s
BNX LR LR
comp=Z,480nm,27.6s
KLR **Kul'dur 14.49 338** P **Pn** **21 08 50.3 +1.0**
comp=Z,2.9nm,0.7s,baz=135,slow=12,SNR=12
KLR LR LR 21 14 24.7
comp=Z,362nm,18.0s,baz=144,slow=37
KLR **Kul'dur 14.49 338** ⇓*i*P **Pn** **21 08 49.4 +0.1**
DL2 **Dalian 14.79 287** P **P** **21 08 57.1 -1.6**
DL2 sP Pn 21 09 15.9 +22
DL2 *e*S **Sn** **21 11 38.6 +2.5**
DL2 pmax pmax
comp=Z,35nm,0.9s
DL2 pmax pmax
comp=Z,210nm,6.5s
DL2 LR LR
comp=N,160nm,10.5s
DL2 LR LR
comp=E,580nm,17.2s
DL2 LR LR
comp=Z,660nm,20.5s
NJ2 **Nanjing 17.88 263** *e*P **P** **21 09 32.8 -0.2**
NJ2 pmax pmax
comp=Z,26nm,0.5s
TIA **Tai'an 18.40 277** P **P** **21 09 35.0 -3.7**
TIA pmax pmax
comp=Z,12nm,0.8s
TIA AMB AMB
comp=Z,83nm,2.8s
TIA LR LR
comp=N,210nm,15.8s
TIA LR LR
comp=E,290nm,13.7s
TIA LR LR
comp=Z,340nm,12.4s
BJI2 **Beijing 19.10 289** P **Pn** **21 09 46.5 -0.9**
BJI2 pP **pP** **21 09 56.8 +0.5**
BJI2 sP **sP** **21 10 01.2 -0.1**
BJI2 S **Sn** **21 13 17.1 -3.3**
BJI2 sS **sS** **21 13 42.1 +5.4**
BJI2 pmax pmax
comp=Z,11nm,0.8s
BJI2 pmax pmax
comp=Z,32nm,4.4s
BJI2 LR LR
comp=N,93nm,17.1s
BJI2 LR LR
comp=E,57nm,20.0s
BJI2 LR LR
comp=Z,120nm,24.9s
BJT **Baijiatuan 19.10 289** P **Pn** **21 09 48.1 +0.7**
BJT **Baijiatuan 19.10 289** P **P** **21 09 45.5 -0.9**
BJT pmax pmax
comp=Z,16nm,1.0s
BJT **Baijiatuan 19.10 289** **P** **21 09 45.5 -0.9**
BJT **Baijiatuan 19.10 289** P **Pn** **21 09 46.8 -0.7**
NACB **Ninganchiao 19.71 238** P **Pn** **21 09 54.4 -0.5**
NACB **Ninganchiao 19.71 238** P **P** **21 09 51.7 -1.4**
HIA **Hailar 19.80 318** P **P** **21 09 51.3 -2.6**
HIA pmax pmax
comp=Z,10.0nm,1.0s
HIA **Hailar 19.80 318** P **P** **21 09 51.3 -2.6**
ZEA **Zeya 19.80 337** *e*P **P** **21 09 51.7 -2.1**
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.7s
ZEA MLR MLR
comp=E,100nm,12.0s
ZEA MLR MLR
comp=N,100nm,9.0s
ZEA MLR MLR
comp=Z,200nm,14.0s
HILR **Hailar Array B 19.96 319** P **P** **21 09 54.4 -1.3**
comp=Z,9.6nm,0.7s,baz=112,slow=12,SNR=6.8
HILR LR LR 21 18 07.1
comp=Z,95nm,18.6s,baz=160,slow=38
HNS **HongShan 20.23 281** ⇓P **P** **21 09 56.9 -1.8**
HNS S **S** **21 13 39.5 -3.9**
HNS SS **SnSn** **21 14 06.2 +3.9**
HNS pmax pmax
comp=Z,21nm,0.9s
HNS LR LR
comp=N,160nm,18.4s
HNS LR LR
comp=E,270nm,18.4s
HNS LR LR
comp=Z,270nm,21.6s
SSLB **Suanglung 20.41 239** P Pn 21 10 02.2 -0.9
YULB **Yu-li 20.43 237** P Pn 21 10 03.4 +0.1
YULB **Yu-li 20.43 237** P **P** **21 09 59.9 -1.1**
TPUB **Ta-pu 20.95 238** P Pn 21 10 09.8 +0.4
PEA0B **Petropavlovsk- 21.18 31** P **P** **21 10 09.2 +0.4**
PEA0B pmax pmax
comp=Z,20nm,1.0s
PEA0B **Petropavlovsk- 21.18 31** P **P** **21 10 09.2 +0.4**
PETK **Petropavlovsk- 21.18 31** P **P** **21 10 10.0 +1.2**
comp=Z,3.1nm,0.7s,baz=223,slow=8.0,SNR=5.2
PETK LR LR 21 18 06.9
comp=Z,87nm,19.9s,baz=218,slow=36
comp=Z,3.1nm,0.7s
PETK **Petropavlovsk- 21.18 31** P **P** **21 10 08.8 0.0**
PETK **Petropavlovsk- 21.18 31** P **P** **21 10 08.8 0.0**
PET **Petropavlovsk 21.52 32** *e*P **P** **21 10 14.8 +2.4**
PET *e*S **S** **21 14 10.8 +2.1**
PET pmax pmax
comp=Z,22nm,0.8s
PET pmax pmax
comp=Z,300nm,3.2s
PET pmax pmax
comp=Z,100nm,5.5s
PET MLR MLR
comp=Z,100nm,12.0s
PET MLR MLR
comp=Z,200nm,13.0s
PET **Petropavlovsk 21.52 32** P **P** **21 10 13.5 +1.1**
PET **Petropavlovsk 21.52 32** P **P** **21 10 14.0 +1.6**
comp=Z,25nm,1.1s
WHN **Wuhan 22.02 263** P **P** **21 10 18.2 +0.3**
WHN LR LR
comp=Z,880nm,11.6s
LYN **LuoYang 22.41 274** P **P** **21 10 23.5 +1.3**
LYN pmax pmax
comp=Z,19nm,1.1s
LYN LR LR
comp=N,330nm,18.5s
LYN LR LR
comp=E,320nm,20.6s
LYN LR LR
comp=Z,530nm,16.1s
HHC **Hu-ho-hao-te 22.66 291** *e*P **P** **21 10 24.2 -0.8**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,68nm,4.4s
HHC LR LR
comp=N,120nm,14.3s
HHC LR LR
comp=E,190nm,15.0s
HHC LR LR
comp=Z,190nm,16.4s
GUMO **Guam 22.78 167** LR LR 21 19 08.4
comp=Z,75nm,19.0s,baz=22,slow=36
MA2 **Magadan 24.61 13** LR LR 21 21 34.8
comp=Z,56nm,18.6s,baz=198,slow=39
MA2 **Magadan 24.61 13***c i*P **P** **21 10 43.9 +0.6**
MA2 pmax pmax
comp=Z,40nm,1.1s
MA2 **Magadan 24.61 13** P **P** **21 10 42.8 -0.5**
MA2 IAmb IAmb 21 11 05.8
comp=Z,35nm,0.9s
MA2 **Magadan 24.61 13** P **P** **21 10 44.5 +1.2**
comp=Z,45nm,1.0s
XAN **Xi'an 25.39 275** P **P** **21 10 49.1 -1.6**
XAN sP sP 21 11 06.8 +0.4
XAN pmax pmax
comp=Z,14nm,1.0s
XAN LR LR
comp=N,270nm,17.7s
XAN LR LR
comp=E,230nm,14.9s
XAN LR LR
comp=Z,230nm,17.9s
ENH **Enshi 26.04 266** P **P** **21 10 55.1 -1.5**
ENH IAmb IAmb 21 10 56.4
comp=Z,19nm,0.8s
ENH **Enshi 26.04 266** P **P** **21 10 55.5 -1.1**
YAK **Yakutsk 26.81 349** LR LR 21 21 52.6
comp=Z,224nm,18.4s,baz=154,slow=37
YAK **Yakutsk 26.81 349** *e*P **P** **21 11 02.0 -1.2**
YAK *e**PP **pP** **21 11 13.6 -0.5**
YAK *e*PPP PPP 21 11 51.7
YAK *e* 21 14 25.1
YAK *e*S **S** **21 15 36.4 0.0**
YAK *e*SS **SnSn** **21 16 43.0 0.0**
YAK *e* 21 21 51.4
YAK pmax pmax
comp=Z,43nm,1.0s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,99nm,4.0s
YAK pmax pmax
comp=N,50nm,4.1s
YAK pmax pmax
comp=E,36nm,3.3s
YAK smax smax
comp=E,63nm,4.0s
YAK smax smax
comp=N,60nm,1.7s
YAK MLR MLR
comp=Z,283nm,24.0s
YAK MLR MLR
comp=N,144nm,20.0s
YAK MLR MLR
comp=E,101nm,19.0s
YAK **Yakutsk 26.81 349** P **P** **21 11 02.2 -1.0**
YAK IAmb IAmb 21 11 04.5
comp=Z,41nm,1.0s
YAK **Yakutsk 26.81 349** P **P** **21 11 02.7 -0.5**
ULN **Ulaanbaatar 26.94 306***c i*P **P** **21 11 05.4 +0.7**
ULN *i* *PP **sP** **21 11 17.8 -2.7**
ULN pmax pmax
comp=Z,9.0nm,1.1s
ULN **Ulaanbaatar 26.94 306** P **P** **21 11 04.3 -0.4**
ULN **Ulaanbaatar 26.94 306** P **P** **21 11 05.5 +0.7**
SONM **Songino Array 27.36 306** P **P** **21 11 07.1 -1.4**
comp=Z,3.8nm,0.7s,baz=110,slow=9.1,SNR=27
SONM PcP **PcP** **21 14 27.0 +0.3**
comp=Z,0.3nm,0.3s,baz=128,slow=1.8,SNR=2.3
SONM LR LR 21 22 21.9
comp=Z,147nm,20.8s,baz=110,slow=37
comp=Z,3.8nm,0.7s
SONM **Songino Array 27.36 306** P **P** **21 11 08.2 -0.3**
SONM pmax pmax
comp=Z,6.0nm,0.9s
SONM **Songino Array 27.36 306** P **P** **21 11 08.2 -0.3**
BOD **Bodaibo 27.76 330** *e*P **P** **21 11 11.4 -0.4**
BOD pmax pmax
comp=Z,16nm,1.1s
SEY **Seymchan 28.03 12** ⇑*i*P **P** **21 11 14.8 +0.7**
SEY *i* *PP **pP** **21 11 26.8 +1.8**
SEY pmax pmax
comp=Z,8.0nm,0.9s
LZDM **Lanzhou Array 29.19 281** P **P** **21 11 23.9 -1.2**
comp=Z,1.3nm,0.4s,baz=70,slow=12,SNR=1.6
LZDM LR LR 21 24 16.9
comp=Z,205nm,19.1s,baz=20,slow=39
comp=Z,1.3nm,0.4s
TLY **Talaya 30.10 313** LR LR 21 24 24.7
comp=Z,96nm,18.7s,baz=106,slow=38
TLY **Talaya 30.10 313** *e*P **P** **21 11 31.6 -1.0**
TLY pmax pmax
comp=Z,3.0nm,0.9s
QIZ **Qiongzhong 31.40 245** P **P** **21 11 44.8 +0.4**
QIZ S **S** **21 16 49.6 +0.3**
QIZ LR LR
comp=N,230nm,12.3s
QIZ LR LR
comp=E,170nm,16.4s
QIZ LR LR
comp=Z,170nm,17.2s
GTA2 **Gaotai 31.74 289** *e*P **P** **21 11 46.2 -1.2**
GTA2 sP sP 21 12 05.5 +2.3
GTA2 PcP **PcP** **21 14 39.4 +1.3**
GTA2 pmax pmax

comp=Z,6.0nm,0.7s
GTA2 LR LR
comp=N,160nm,17.2s
GTA2 LR LR
comp=E,170nm,18.2s
GTA2 LR LR
comp=Z,180nm,20.6s
KMI2 Kunming 33.59 262 P **P** **21 12 02.4 -1.3**
KMI2 pmax pmax
comp=Z,10.0nm,1.0s
KMI2 LR LR
comp=N,91nm,12.7s
KMI2 LR LR
comp=E,180nm,19.0s
KMI2 LR LR
comp=Z,220nm,18.7s
PATS Pohnpei 33.59 145 P **P** **21 12 03.4 -0.2**
KNGR Kungurtug, Tuv 33.61 309 ⇓ *iP* **P** **21 12 04.9 +1.3**
KNGR pmax pmax
comp=Z,7.0nm,1.1s
PZH PanZhiHua 33.79 265 P **P** **21 12 04.3 -1.1**
PZH pmax pmax
comp=Z,10.0nm,0.6s
KIWB Kanaga Island 34.18 49 P **P** **21 12 08.6 +0.3**
BILL Bilibino 35.34 17 ⇓ *iP* **P** **21 12 18.9 +0.7**
BILL *i* *PP **sP** **21 12 31.5 -2.6**
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL Bilibino 35.34 17 P **P** **21 12 18.6 +0.4**
BILL IAmb IAmb 21 12 20.2
comp=Z,13nm,1.2s
ATKA Atka Island 36.04 49 P **P** **21 12 24.7 +0.4**
ATKA IAmb IAmb 21 12 44.8
comp=Z,17nm,1.1s
TIXI Tiksi 36.16 354 LR LR 21 28 20.8
comp=Z,125nm,18.9s,baz=197,slow=38
TIXI Tiksi 36.16 354 *deP* **P** **21 12 24.7 -0.4**
TIXI pmax pmax
comp=Z,20nm,1.4s
TIXI Tiksi 36.16 354 P **P** **21 12 24.0 -1.1**
TIXI IAmb IAmb 21 12 41.4
comp=Z,14nm,1.1s
GOMU GeErMu 36.17 284 P **P** **21 12 23.8 -2.3**
GOMU pP pP 21 12 27.6 -10
GOMU sP sP 21 12 31.7 -10
GOMU pmax pmax
comp=Z,6.0nm,0.7s
DLV Lat 37.11 238 P **P** **21 12 33.1 -0.9**
SIJI Sorong 37.57 194 LR LR 21 26 55.1
comp=Z,176nm,19.5s,baz=48,slow=34
TOLI2 Tolitoli 39.00 211 P **P** **21 12 50.8 +1.1**
TOLI2 Tolitoli 39.00 211 P **P** **21 12 48.2 -1.5**
FAKI Fak Fak 39.39 192 P **P** **21 12 52.5 -0.4**
DGZ Jazzator, Alta 40.01 307 *ciP* **P** **21 12 58.6 +0.6**
DGZ pmax pmax
comp=Z,27nm,0.8s
SANI Sanana 40.04 202 P **P** **21 12 59.2 +0.8**
CMAR Chiang Mai Arr 40.06 255 P **P** **21 12 57.5 -1.1**
comp=Z,0.5nm,0.5s,baz=49,slow=6.0,SNR=4.5
CMAR PcP **PcP** **21 15 03.5 +0.6**
comp=Z,1.4nm,0.9s,baz=32,slow=2.2,SNR=6.6
CMAR LR LR 21 30 41.9
comp=Z,55nm,19.9s,baz=55,slow=38
comp=Z,0.5nm,0.5s
CMAR Chiang Mai Arr 40.06 255 *iP* **P** **21 12 59.7 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 40.06 255 P **P** **21 12 56.0 -2.6**
WMQ Urumqi 40.22 298 *eP* **P** **21 13 01.6 +1.9**
WMQ pP sP 21 13 15.8 +0.1
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ LR LR
comp=Z,75nm,24.0s
UNV Unalaska Valle 40.83 47 P **P** **21 13 05.5 +1.0**
baz=266
LSA Lhasa 41.09 276 P **P** **21 13 08.3 +0.7**
LSA Lhasa 41.09 276 P **P** **21 13 07.3 -0.3**
LSA pmax pmax
comp=Z,16nm,0.9s
LSA Lhasa 41.09 276 P **P** **21 13 07.2 -0.3**
LSA IAmb IAmb 21 13 09.1
comp=Z,16nm,0.9s
LSA Lhasa 41.09 276 P **P** **21 13 08.6 +1.0**
ZAA0 Zalesovo Array 41.71 313 P **P** **21 13 10.5 -1.2**
ZALV Zalesovo Beam 41.71 313 P **P** **21 13 11.5 -0.2**
comp=Z,27nm,0.7s,baz=91,slow=6.6,SNR=126
ZALV PcP **PcP** **21 15 07.3 -0.4**
comp=Z,5.6nm,0.5s,baz=107,slow=3.2,SNR=12
ZALV LR LR 21 30 54.3
comp=Z,54nm,19.8s,baz=76,slow=37
comp=Z,27nm,0.7s
ZALV Zalesovo Beam 41.71 313 P **P** **21 13 11.1 -0.6**
ZALV 21 15 06.8
ZALV Zalesovo Beam 41.71 313 P **P** **21 13 11.1 -0.6**
ZALV **PcP** **21 15 06.8 -0.9**
M11K Mekoryuk 41.81 37 P **P** **21 13 13.5 +1.1**
baz=259
ZSN Zaisan 41.81 303 *ciP* **P** **21 13 12.6 -0.1**
ZSN Zaisan 41.81 303 ⇑ *iP* **P** **21 13 12.6 -0.1**
SHL Shillong 42.17 270 P **P** **21 13 14.3 -1.8**
SHL pmax pmax
comp=Z,10.0nm,0.7s
SHL Shillong 42.17 270 **P** **21 13 14.3 -1.8**
SHL IAmb IAmb 21 13 15.5
comp=Z,9.7nm,0.7s
TNA Tin City 42.33 29 P **P** **21 13 17.4 +0.8**
baz=252
K13K Kusilvak Mount 42.83 35 P **P** **21 13 21.1 +0.3**
K13K Kusilvak Mount 42.83 35 P **P** **21 13 21.8 +1.0**
baz=259
F14K Arctic Creek 42.94 30 P **P** **21 13 22.7 +1.1**
baz=254
ANM Nome 43.09 31 P **P** **21 13 23.9 +1.0**
baz=256
M13K Dall Lake 43.21 37 P **P** **21 13 24.8 +1.0**
baz=262
MK31 Makanchi Array 43.63 303 *ciP* **P** **21 13 27.1 -0.4**
MKAR Makanchi Array 43.63 303 P **P** **21 13 27.3 -0.2**
comp=Z,8.6nm,0.7s,baz=88,slow=9.7,SNR=77
MKAR PcP **PcP** **21 15 13.8 -0.5**
comp=Z,2.1nm,0.8s,baz=72,slow=4.7,SNR=3.1
MKAR LR LR 21 32 15.9
comp=Z,135nm,18.6s,baz=32,slow=37
comp=Z,8.6nm,0.7s
MKAR Makanchi Array 43.63 303 P **P** **21 13 26.5 -1.0**
L14K Kuka Creek 43.66 36 P **P** **21 13 28.0 +0.5**
baz=262
F15K North Star Dit 43.68 30 **P** **21 13 29.0 +1.4**
F15K IAmb IAmb 21 13 32.2
comp=Z,13nm,1.1s
F15K North Star Dit 43.68 30 P **P** **21 13 28.2 +0.6**
baz=255,SNR=6.4
NRIK Noril'sk 43.69 336 P **P** **21 13 27.2 -0.4**
comp=Z,12nm,0.7s,baz=104,slow=11,SNR=10
NRIK LR LR 21 32 50.7
comp=Z,173nm,18.2s,baz=120,slow=38
comp=Z,12nm,0.7s
NRIK Noril'sk 43.69 336 *ciP* **P** **21 13 26.9 -0.7**
NRIK pmax pmax
comp=Z,21nm,1.1s
NRIK Noril'sk 43.69 336 P **P** **21 13 26.6 -0.9**
NRIK IAmb IAmb 21 13 29.4
comp=Z,28nm,1.2s
BRDH Bariadhala 43.70 266 LR LR 21 35 15.1
comp=Z,146nm,18.4s,baz=132,slow=41
G15K Niukluk 43.75 31 P **P** **21 13 28.8 +0.6**
baz=257
MAKZ Makanchi 43.84 303 P **P** **21 13 28.4 -0.8**
MAKZ pmax pmax
comp=Z,7.0nm,0.7s
MAKZ Makanchi 43.84 303 **P** **21 13 28.4 -0.8**
MAKZ Makanchi 43.84 303 P **P** **21 13 29.1 -0.1**
M14K Bethel 43.93 37 P **P** **21 13 30.9 +1.3**
baz=263
N14K Kuskokwak Cree 43.97 38 P **P** **21 13 30.6 +0.6**
baz=264
O14K Tigyukauivet M 44.12 39 P **P** **21 13 32.5 +1.3**
baz=265
L15K Ungalak Mounta 44.28 36 P **P** **21 13 33.2 +0.8**
baz=262
SDPT Sand Point 44.38 45 P **P** **21 13 34.4 +1.1**
baz=270
H16K Elim 44.43 31 P **P** **21 13 34.7 +1.1**
baz=259
M15K Kasigluk River 44.55 37 P **P** **21 13 36.2 +1.6**
baz=264
N15K Kwethluk River 44.79 38 P **P** **21 13 38.0 +1.4**
baz=265
D17K Noatak River 44.80 27 P **P** **21 13 37.9 +1.4**
baz=255,SNR=8.0
O15K Ungalikthiuk R 44.86 39 P **P** **21 13 38.1 +1.0**
baz=267
CHNA Chernabura Isl 44.89 46 P **P** **21 13 38.0 +0.6**
CHNA Chernabura Isl 44.89 46 P **P** **21 13 38.8 +1.4**
baz=271
S14K Fog Glacier 44.91 43 P **P** **21 13 38.9 +1.3**
baz=270
J16K Anvik River 44.91 33 P **P** **21 13 38.5 +1.1**
baz=262
RDOG Red Dog Mine 44.96 27 P **P** **21 13 39.0 +1.2**
RDOG IAmb IAmb 21 13 44.4
comp=Z,15nm,1.1s
I17K Unalakleet 44.96 33 P **P** **21 13 39.2 +1.4**
baz=261
C17K DeLong Mountai 44.97 26 P **P** **21 13 39.4 +1.5**
baz=254
KAPI Kappang 44.98 209 LR LR 21 32 23.6
comp=Z,42nm,18.4s,baz=6.0,slow=36
KAPI Kappang 44.98 209 P **P** **21 13 37.7 -0.8**
KAPI pmax pmax
comp=Z,21nm,1.2s
KAPI Kappang 44.98 209 P **P** **21 13 37.7 -0.8**
KAPI IAmb IAmb 21 13 56.6
comp=Z,21nm,1.2s
E17K Hotham Inlet 45.12 28 P **P** **21 13 40.6 +1.5**
baz=257,SNR=13
F17K Baldwin Pennin 45.20 29 P **P** **21 13 41.3 +1.7**
baz=258,SNR=6.3
L16K Owhat River 45.23 36 **P** **21 13 40.5 +0.5**
L16K Owhat River 45.23 36 P **P** **21 13 41.1 +1.1**
baz=264
G17K Kiwalik Mounta 45.25 30 P **P** **21 13 41.5 +1.4**
baz=260
EVN Everest 45.27 275 P **P** **21 13 40.1 -1.4**
EVN IAmb IAmb 21 13 42.9
comp=Z,28nm,1.1s
EVN Everest 45.27 275 P **P** **21 13 42.0 +0.5**
M16K Timber Creek 45.42 37 P **P** **21 13 42.8 +1.3**
M16K IAmb IAmb 21 13 47.7
comp=Z,17nm,1.2s
M16K Timber Creek 45.42 37 P **P** **21 13 43.0 +1.4**
baz=266
H17K Granite Mounta 45.46 31 P **P** **21 13 43.2 +1.4**
baz=261
N16K Nishlik Lake 45.47 38 P **P** **21 13 43.6 +1.6**
baz=266
KURK Kurchatov 45.60 309 *ciP* **P** **21 13 42.6 -0.6**
KURK pmax pmax
comp=Z,48nm,1.0s
KURK Kurchatov 45.60 309 P **P** **21 13 42.5 -0.6**
KURK Kurchatov 45.60 309 P **P** **21 13 42.9 -0.3**
J17K VABM Dome 45.60 33 **P** **21 13 43.8 +0.9**
J17K IAmb IAmb 21 13 50.1
comp=Z,10nm,1.0s
J17K VABM Dome 45.60 33 P **P** **21 13 44.6 +1.7**
baz=263,SNR=7.3
E18K Tukpahlearik C 45.66 28 P **P** **21 13 45.2 +1.9**
baz=258,SNR=13
KURBB Kurchatov Arra 45.67 309 P **P** **21 13 43.3 -0.4**
comp=Z,29nm,0.8s,baz=84,slow=8.1,SNR=198
KURBB PcP **PcP** **21 15 20.3 -0.9**
comp=Z,1.8nm,0.8s,baz=81,slow=3.5,SNR=2.4
KURBB LR LR 21 33 42.5
comp=Z,132nm,18.4s,baz=168,slow=37
comp=Z,29nm,0.8s
PMG Port Moresby 45.70 170 LR LR 21 32 57.1
comp=Z,64nm,19.6s,baz=346,slow=36
C18K Utukok River 45.72 26 P **P** **21 13 44.8 +0.9**
C18K IAmb IAmb 21 13 50.2
comp=Z,22nm,1.1s
C18K Utukok River 45.72 26 P **P** **21 13 45.4 +1.5**
baz=256,SNR=7.0
O16K Kokwok River B 45.76 39 P **P** **21 13 45.9 +1.6**
baz=268
P16K Nushagak River 45.80 40 P **P** **21 13 46.1 +1.6**
baz=268
L17K Donlin 45.83 35 P **P** **21 13 46.6 +1.8**
baz=265
F18K Selawik 45.86 29 P **P** **21 13 46.6 +1.8**
baz=259,SNR=9.3
K17K Iditarod 45.88 34 **P** **21 13 44.6 -0.5**
K17K IAmb IAmb 21 13 52.3
comp=Z,13nm,0.8s
K17K Iditarod 45.88 34 P **P** **21 13 47.1 +1.9**
baz=264,SNR=7.4
G18K Tagagawik 46.13 30 P **P** **21 13 48.4 +1.3**
baz=261,SNR=18
H18K Honhosa River 46.14 31 P **P** **21 13 48.6 +1.4**
baz=262,SNR=5.5
PDGK Podgornoye 46.17 298 P **P** **21 13 46.9 -1.0**
PDGK Podgornoye 46.17 298 P **P** **21 13 46.9 -1.0**
M17K Holitna River 46.18 36 P **P** **21 13 49.0 +1.5**
baz=266
SHLS Shalkode 46.23 298 *ciP* **P** **21 13 45.6 -2.7**
SHLS pmax pmax
comp=Z,5.0nm,0.7s
SHLS Shalkode 46.23 298 ⇑ *iP* **P** **21 13 45.7 -2.7**
comp=Z,4.9nm,0.7s
N17K Nushagak Hills 46.26 38 P **P** **21 13 49.9 +1.8**
baz=268
O17K Koliganek Bris 46.28 39 P **P** **21 13 49.9 +1.7**
baz=268
C19K Lookout Ridge 46.40 26 P **P** **21 13 50.7 +1.5**
baz=257
Q16K King Salmon 46.48 40 P **P** **21 13 51.6 +1.7**
baz=270
UZB Uzynbulak 46.55 298 *ciP* **P** **21 13 50.5 -0.4**
UZB pmax pmax
comp=Z,7.0nm,0.9s
UZB Uzynbulak 46.55 298 ⇑ *iP* **P** **21 13 50.5 -0.4**
comp=Z,6.9nm,0.9s
L18K Granite Mounta 46.59 35 **P** **21 13 52.4 +1.7**
L18K IAmb IAmb 21 13 54.7
comp=Z,12nm,1.4s
L18K Granite Mounta 46.59 35 P **P** **21 13 52.2 +1.5**
baz=266
TDK Taldyqorghan 46.60 301 *eP* **P** **21 13 50.9 -0.1**
TDK pmax pmax
comp=Z,8.0nm,0.8s
TDK Taldyqorghan 46.60 301 *eP* **P** **21 13 51.0 -0.1**
comp=Z,7.9nm,0.8s
P17K Kwhaak River 46.60 39 P **P** **21 13 52.0 +1.2**
baz=270
F19K Shaleruckik Mo 46.63 29 P **P** **21 13 52.5 +1.6**
baz=261
R17L Mt. Peulik Vol 46.65 42 P **P** **21 13 52.7 +1.5**
baz=271
D19K Kuna River 46.79 27 P **P** **21 13 53.7 +1.4**
baz=259,SNR=14
G19K Purcell Mounta 46.80 30 P **P** **21 13 53.8 +1.4**
baz=262,SNR=7.2
WUS Wushi 46.86 296 P **P** **21 13 52.8 -0.6**
WUS Wushi 46.86 296 P **P** **21 13 53.9 +0.5**
Q17K Contact Creek 46.89 41 P **P** **21 13 54.6 +1.4**
baz=271
N18K Kilae Creek 46.90 37 P **P** **21 13 54.3 +1.1**
baz=269
E19K Redstone River 46.94 28 **P** **21 13 54.3 +0.9**
E19K IAmb IAmb 21 13 57.2
comp=Z,15nm,0.9s
E19K Redstone River 46.94 28 P **P** **21 13 54.9 +1.5**
baz=261,SNR=27
M18K Stony River 46.96 36 P **P** **21 13 55.1 +1.5**
baz=268
SATY Saty 47.01 298 *eP* **P** **21 13 54.2 -0.2**
SATY pmax pmax
comp=Z,8.0nm,1.1s
SATY Saty 47.01 298 *eP* **P** **21 13 54.3 -0.2**
comp=Z,8.2nm,1.1s
CHIR Chirikof Islan 47.12 44 P **P** **21 13 56.4 +1.5**
baz=273
PRZ Przheval'sk 47.15 298 P **P** **21 13 55.5 -0.1**
PRZ pmax pmax
comp=Z,35nm,0.9s
PRZ Przheval'sk 47.15 298 P **P** **21 13 55.5 -0.1**
PRZ Przheval'sk 47.15 298 P **P** **21 13 56.7 +1.1**
J19K Poorman 47.20 33 P **P** **21 13 56.9 +1.5**
baz=266,SNR=7.8
P18K Big Mountain, 47.22 39 P **P** **21 13 56.9 +1.1**
baz=270
O18K Koktuh Hills 47.23 39 P **P** **21 13 57.2 +1.4**
baz=270
Q18K Katmai Hardscr 47.34 40 P **P** **21 13 58.1 +1.3**
baz=271
D20K Etivluk River 47.38 26 **P** **21 13 57.5 +0.7**
D20K IAmb IAmb 21 14 00.6
comp=Z,15nm,0.8s
D20K Etivluk River 47.38 26 P **P** **21 13 58.5 +1.6**
baz=260,SNR=11
B20K Meade River 47.42 25 P **P** **21 13 58.5 +1.4**
baz=259
L19K White Mountain 47.45 35 P **P** **21 13 59.1 +1.6**
baz=268
E20K Nigu River 47.46 27 P **P** **21 13 59.0 +1.5**
baz=261,SNR=17
F20K Avaraart Lake 47.46 29 P **P** **21 13 59.0 +1.5**
baz=263
N19K Bonanza Creek 47.59 37 P **P** **21 14 00.1 +1.4**
baz=270
H20K Anotleneega Mo 47.63 31 P **P** **21 14 00.4 +1.5**
baz=265,SNR=6.5
I20K Naaghedeneel 47.75 32 P **P** **21 14 01.3 +1.6**
baz=266
TARG Taragay, Kyrgy 47.76 297 P **P** **21 14 00.2 -0.4**
TARG pmax pmax
comp=Z,30nm,0.8s
TARG Taragay, Kyrgy 47.76 297 **P** **21 14 00.2 -0.4**
TARG Taragay, Kyrgy 47.76 297 P **P** **21 14 01.4 +0.7**
K20K Telida 47.85 34 P **P** **21 14 02.3 +1.7**
baz=268,SNR=7.9
J20K Nowinta River 47.85 33 P **P** **21 14 02.3 +1.7**
baz=267,SNR=10
SOEI Soe 47.86 201 P **P** **21 14 02.1 +0.9**
SII Sitkinak Islan 47.88 43 P **P** **21 14 02.1 +1.2**
baz=274
MDOK Medeo 47.95 299 *eP* **P** **21 14 01.4 -0.4**
MDOK Medeo 47.95 299 *eP* **P** **21 14 01.5 -0.4**
AAA Alma-Ata 48.03 299 *eP* **P** **21 14 02.4 +0.1**
AAA pmax pmax
comp=Z,5.0nm,0.5s
AAA Alma-Ata 48.03 299 *eP* **P** **21 14 02.5 +0.1**
comp=Z,5.1nm,0.5s
Q19K Cape Douglas, 48.05 40 P **P** **21 14 03.6 +1.4**
baz=272
BTDF Bukit Timah Da 48.05 232 P **P** **21 14 05.2 +2.5**
TNSS Tian-Shan 48.05 299 *eP* **P** **21 14 02.4 -0.4**
TNSS Tian-Shan 48.05 299 *eP* **P** **21 14 02.5 -0.4**
C21K Knifeblade Rid 48.10 26 P **P** **21 14 04.1 +1.7**
baz=262,SNR=8.8
KDJ Kajisay 48.11 297 P **P** **21 14 02.6 -0.5**
KDJ pmax pmax
comp=Z,14nm,0.8s
KDJ Kajisay 48.11 297 **P** **21 14 02.6 -0.5**
KDJ IAmb IAmb 21 14 04.3
comp=Z,14nm,0.8s
KDJ Kajisay 48.11 297 P **P** **21 14 03.5 +0.4**
B21K Ikpikpuk River 48.23 25 P **P** **21 14 05.1 +1.8**
baz=262,SNR=11
P19K Oil Pt 48.23 39 P **P** **21 14 05.2 +1.6**
baz=272
M20K Styx River 48.25 36 P **P** **21 14 04.9 +1.2**
baz=270
G21K Allakaket 48.28 30 P **P** **21 14 05.1 +1.2**
baz=265,SNR=12
E21K Killik River 48.30 27 P **P** **21 14 05.4 +1.5**
baz=263,SNR=7.3
OHAK Old Harbor 48.33 42 P **P** **21 14 05.5 +1.3**
baz=274
F21K Alatna River 48.35 29 P **P** **21 14 05.8 +1.4**
baz=265,SNR=10
H21K Melozitna Rive 48.51 31 P **P** **21 14 06.2 +0.6**
H21K Melozitna Rive 48.51 31 P **P** **21 14 07.0 +1.4**
baz=267,SNR=7.9
O20K Slope Mountain 48.53 38 P **P** **21 14 07.4 +1.5**
baz=272
JOHN Johnston Islan 48.63 100 P **P** **21 14 07.8 +0.7**
CHUM Lake Minchumin 48.65 33 P **P** **21 14 08.1 +1.4**
baz=269,SNR=8.3
KDAK Kodiak Island 48.67 41 LR LR 21 33 59.1
comp=Z,58nm,21.9s,baz=244,slow=35
KDAK Kodiak Island 48.67 41 P **P** **21 14 08.2 +1.3**
baz=274
PPLA Purkeypile 48.69 34 P **P** **21 14 08.5 +1.3**
baz=270
B22K Teshekpuk Lake 48.73 24 P **P** **21 14 08.6 +1.4**
baz=262
CAST Castle Rocks 48.74 34 P **P** **21 14 08.8 +1.3**
CAST Castle Rocks 48.74 34 P **P** **21 14 08.8 +1.3**
baz=270,SNR=6.8
ULHL Ulahol 48.75 298 P **P** **21 14 08.3 +0.2**
SNR=8.0
I21K Tanana 48.83 31 P **P** **21 14 09.6 +1.5**
baz=268
F22K John River 48.88 28 P **P** **21 14 10.4 +2.0**
baz=266,SNR=11
ASAI AK-SAY(Kyrgyzs 48.91 296 P **P** **21 14 10.0 +0.6**
BOOM Boomskoye usch 48.91 298 P **P** **21 14 08.4 -0.8**
BOOM pmax pmax
comp=Z,14nm,0.9s
BOOM Boomskoye usch 48.91 298 **P** **21 14 08.4 -0.8**
BOOM IAmb IAmb 21 14 10.6
comp=Z,14nm,0.9s
BOOM Boomskoye usch 48.91 298 P **P** **21 14 09.7 +0.5**
SKT Skwentna 49.01 36 P **P** **21 14 10.3 +0.8**
baz=271
TKM2 Tokmak 2 49.04 299 P **P** **21 14 11.0 +0.8**
SNR=9.9
E22K Anaktuvuk Pass 49.07 27 P **P** **21 14 11.4 +1.5**
baz=266
G22K Bettles 49.10 29 P **P** **21 14 11.8 +1.7**
baz=267
H22K Ishtalina Cre 49.11 30 P **P** **21 14 11.7 +1.5**
baz=268,SNR=8.0
NRN Naryn 49.14 297 P **P** **21 14 10.8 -0.4**
NRN pmax pmax
comp=Z,13nm,1.0s
NRN Naryn 49.14 297 **P** **21 14 10.8 -0.4**
NRN IAmb IAmb 21 14 12.4
comp=Z,13nm,1.0s
PLAI Plampang 49.23 209 P **P** **21 14 13.6 +1.9**
MTN Manton Dam 49.30 191 P **P** **21 14 13.3 +1.2**
comp=Z,24nm,0.7s
MTN Manton Dam 49.30 191 P **P** **21 14 11.7 -0.4**
L22K Petersville 49.35 35 P **P** **21 14 13.7 +1.6**
baz=271,SNR=6.0
MLY Manley 49.35 32 P **P** **21 14 13.4 +1.3**
MLY IAmb IAmb 21 14 16.3
comp=Z,9.4nm,0.9s
MLY Manley 49.35 32 P **P** **21 14 13.8 +1.7**
baz=269,SNR=14
BRZS Berezniki 49.48 308 *eP* **P** **21 14 12.8 -0.4**
BRZS Berezniki 49.48 308 *eP* **P** **21 14 12.8 -0.4**
BRSE Bradley Lake S 49.49 39 P **P** **21 14 14.6 +1.4**
baz=274
D23K Nanushuk River 49.54 26 P **P** **21 14 15.0 +1.6**
baz=266,SNR=6.9
TRF Thorofare Moun 49.55 34 P **P** **21 14 15.0 +1.2**
TRF Thorofare Moun 49.55 34 P **P** **21 14 15.1 +1.3**
baz=271
KBK Karagaybulak 49.57 299 P **P** **21 14 15.3 +1.0**
SNR=8.8
SGDS Sogindy 49.59 300 *eP* **P** **21 14 14.2 -0.1**
comp=Z,6.3nm,0.8s
BTLS Baital 49.61 302 *eP* **P** **21 14 14.0 -0.2**
BTLS pmax pmax
comp=Z,6.0nm,0.8s
BTLS Baital 49.61 302 *eP* **P** **21 14 14.1 -0.2**
comp=Z,6.2nm,0.8s
CHMS Chumysh 49.62 299 P **P** **21 14 14.8 +0.3**
SNR=16
COLD Coldfoot 49.63 29 P **P** **21 14 15.5 +1.4**
baz=268
C23K Itkillik River 49.63 25 P **P** **21 14 15.6 +1.5**
baz=265,SNR=9.5
G23K Bananza Creek 49.68 29 P **P** **21 14 16.1 +1.5**
baz=268,SNR=6.3
USP Ospenovka 49.73 299 P **P** **21 14 15.5 +0.2**
SNR=22
FRU1 Bishkek 49.76 299 P **P** **21 14 15.3 -0.2**
FRU1 pmax pmax
comp=Z,27nm,0.9s
FRU1 Bishkek 49.76 299 P **P** **21 14 15.3 -0.2**
H23K Yukon River 49.86 31 P **P** **21 14 17.5 +1.6**
H23K IAmb IAmb 21 14 20.4
comp=Z,15nm,1.0s
H23K Yukon River 49.86 31 P **P** **21 14 17.7 +1.7**
baz=270
E23K Chandalar 49.88 28 P **P** **21 14 17.6 +1.4**
baz=268,SNR=26

AAK **Ala-Archa** 49.90 299 LR LR 21 36 33.7
comp=Z,130nm,20.3s,baz=80,slow=37
AAK **Ala-Archa** 49.90 299 P **P** **21 14 17.1 +0.3**
SNR=9.1
AAK **Ala-Archa** 49.90 299 *i* P **P** **21 14 17.1 +0.3**
SNR=9.8
AAK **Ala-Archa** 49.90 299 *c i* P **P** **21 14 17.0 +0.3**
AAK pmax pmax
comp=Z,19nm,1.0s
AAK **Ala-Archa** 49.90 299 P **P** **21 14 15.8 -0.9**
AAK IAmb IAmb 21 14 17.9
comp=Z,17nm,0.9s
AAK **Ala-Archa** 49.90 299 P **P** **21 14 17.1 +0.3**
RC01 **Rabbit Creek A** 49.90 37 P **P** **21 14 17.8 +1.5**
baz=274
BWN **Browne** 49.90 33 P **P** **21 14 17.3 +1.0**
TOLK **Toolik Lake Re** 49.93 27 P **P** **21 14 18.0 +1.6**
baz=267
I23K **Minto, Yukon-K** 49.94 31 P **P** **21 14 18.0 +1.5**
baz=270,SNR=7.8
UCH **Uchtor** 50.00 298 P **P** **21 14 18.4 +0.5**
SNR=14
NEA2 **Nenana** 50.07 32 P **P** **21 14 18.9 +1.3**
baz=271,SNR=15
SEW **Seward** 50.11 38 P **P** **21 14 19.3 +1.5**
baz=275
KSH2 **Kashi** 50.12 294 P **P** **21 14 19.0 +0.5**
KSH2 sP sP 21 14 40.6 +6.0
KSH2 pmax pmax
comp=Z,14nm,0.8s
MCK **McKinley** 50.15 33 P **P** **21 14 19.4 +1.3**
baz=272
PMR **Palmer** 50.16 36 P **P** **21 14 19.4 +1.2**
baz=274
D24K **Happy Valley** 50.22 26 P **P** **21 14 19.4 +0.9**
baz=268
E24K **Your Creek** 50.31 28 P **P** **21 14 20.4 +1.1**
baz=269,SNR=15
BVAR **Borovoye Array** 50.35 313 P **P** **21 14 19.6 -0.3**
comp=Z,10nm,0.6s,baz=79,slow=6.8,SNR=49
BVAR PcP **PcP** **21 15 37.8 -0.2**
comp=Z,1.8nm,0.5s,baz=89,slow=2.4,SNR=2.1
comp=Z,10nm,0.6s
WAT1 **Susitna Watana** 50.36 34 P **P** **21 14 20.7 +0.9**
baz=273
BORK **Borovoye** 50.39 313 *c i* P **P** **21 14 20.0 -0.1**
BORK pmax pmax
comp=Z,11nm,0.9s
BORK **Borovoye** 50.39 313 P **P** **21 14 19.4 -0.8**
BORK IAmb IAmb 21 14 21.7
comp=Z,12nm,0.9s
EKS2 **Erkin-Say** 50.40 299 P **P** **21 14 20.7 +0.2**
SNR=8.1
KNK **Knik Glacier** 50.50 36 P **P** **21 14 22.2 +1.4**
baz=274
F24K **Squaw Lake** 50.53 28 P **P** **21 14 22.4 +1.4**
baz=270
SML **Sawmill** 50.53 36 P **P** **21 14 22.4 +1.3**
baz=274
H24K **Noodor Dome** 50.55 31 P **P** **21 14 22.7 +1.6**
baz=271,SNR=15
COLA **College** 50.58 32 P **P** **21 14 23.8 +2.5**
G24K **Hadweenzic Riv** 50.69 29 P **P** **21 14 23.8 +1.6**
baz=271,SNR=9.9
POKR **Poker Plat Res** 50.75 31 P **P** **21 14 24.3 +1.6**
baz=272
WAT6 **Susitna Watana** 50.75 35 P **P** **21 14 24.3 +1.4**
baz=274
M23K **Glacier View** 50.82 36 P **P** **21 14 24.6 +1.4**
baz=275
DHY **Denali Highway** 50.88 34 P **P** **21 14 25.1 +1.2**
baz=274,SNR=5.5
HDA **Harding Lake** 50.99 32 P **P** **21 14 25.9 +1.4**
baz=273,SNR=6.9
ILAR **Eielson Array** 51.00 32 P **P** **21 14 25.1 +0.5**
comp=Z,3.4nm,0.7s,baz=275,slow=6.3,SNR=35
ILAR LR LR 21 36 58.9
comp=Z,33nm,19.7s,baz=247,slow=37
comp=Z,3.4nm,0.7s
SCM **Sheep Creek Mo** 51.00 36 P **P** **21 14 25.7 +1.0**
baz=275
D25K **Kavik River** 51.10 26 P **P** **21 14 26.8 +1.5**
baz=270,SNR=12
P23K **Montague Islan** 51.15 38 P **P** **21 14 27.4 +1.7**
baz=276
GLI **Glacier Island** 51.20 37 P **P** **21 14 27.7 +1.6**
baz=276
G25K **Bearman Lake** 51.24 29 P **P** **21 14 28.0 +1.7**
baz=272,SNR=8.0
F25K **Christian Rive** 51.39 28 P **P** **21 14 29.3 +1.8**
baz=272,SNR=11
E25K **Arctic Village** 51.40 28 P **P** **21 14 29.4 +1.8**
baz=272,SNR=9.7
M24K **Tolsona, Glenn** 51.52 35 P **P** **21 14 29.9 +1.3**
baz=276
PRP **Porcupine Dome** 51.53 31 P **P** **21 14 30.1 +1.5**
baz=274,SNR=11
K24K **Donnelly Dome** 51.55 33 P **P** **21 14 29.9 +1.3**
baz=275
C26K **Camden Bay** 51.61 25 P **P** **21 14 29.8 +0.9**
baz=271
J25K **Salcha River,** 51.66 32 P **P** **21 14 31.2 +1.6**
baz=274
KLU **Klutina** 51.70 36 P **P** **21 14 31.5 +1.6**
baz=276
OHH **Osh** 51.73 297 P **P** **21 14 29.3 -1.2**
Q23K **Middleton Isla** 51.74 39 P **P** **21 14 31.9 +1.7**
baz=278
EYAK **Cordova Ski Ar** 51.90 37 P **P** **21 14 32.8 +1.5**
baz=277
ARK **Arkit** 51.94 298 P **P** **21 14 32.9 +0.8**
F26K **Sheenjek River** 51.96 28 P **P** **21 14 33.7 +2.0**
baz=275,SNR=30
HARP **HAARP** 51.96 35 P **P** **21 14 33.2 +1.4**
baz=276
RIDG **Independent Ri** 51.97 33 P **P** **21 14 33.1 +1.3**
baz=276
C27K **Jago River** 52.03 26 P **P** **21 14 34.0 +1.8**
baz=272,SNR=6.4
DZA **Taraz** 52.06 300 *e* P **P** **21 14 32.7 -0.1**
DZA pmax pmax
comp=Z,8.0nm,0.6s
DZA **Taraz** 52.06 300 *e* P **P** **21 14 32.7 -0.1**
comp=Z,8.2nm,0.6s
G26K **Porcupine Rive** 52.14 29 P **P** **21 14 34.7 +1.7**
baz=274,SNR=16
GSI **Gunungsitoli** 52.23 238 P **P** **21 14 35.7 +1.4**
GSI **Gunungsitoli** 52.23 238 P **P** **21 14 33.3 -1.0**
N25K **Chitina, Valde** 52.32 36 P **P** **21 14 35.9 +1.4**
baz=278
SCRK **Sand Creek** 52.32 33 P **P** **21 14 36.1 +1.5**
baz=276,SNR=18
BMRM **Bremner River** 52.40 37 P **P** **21 14 36.7 +1.6**
baz=278,SNR=5.7
RAGM **Ragged Mountai** 52.45 37 P **P** **21 14 36.5 +1.1**
RAGM IAmb IAmb 21 14 41.5
comp=Z,18nm,1.2s
KNRA **Kununurra** 52.48 194 P **P** **21 14 36.0 0.0**
comp=Z,22nm,1.0s
KNRA **Kununurra** 52.48 194 P **P** **21 14 36.0 0.0**
MENT **Mentasta** 52.56 34 P **P** **21 14 37.7 +1.5**
MENT IAmb IAmb 21 14 46.7
comp=Z,10nm,1.0s
KK31 **Karatay Array** 52.58 300 P **P** **21 14 35.9 -0.8**
KK31 pmax pmax
comp=Z,31nm,1.0s
KK31 **Karatay Array** 52.58 300 P **P** **21 14 35.9 -0.8**
KKAR **Karatay Array** 52.58 300 P **P** **21 14 36.3 -0.4**
KKAR **Karatay Array** 52.58 300 P **P** **21 14 36.3 -0.4**
KAIM **Kayak Island** 52.64 38 P **P** **21 14 38.2 +1.4**
baz=279
L26K **Log Cabin Wild** 52.72 34 P **P** **21 14 39.2 +1.8**
baz=277,SNR=8.8
E27K **Coleen River** 52.88 27 P **P** **21 14 40.1 +1.6**
baz=275,SNR=14
M26K **Nabesna, AK** 52.96 35 P **P** **21 14 40.9 +1.7**
baz=278,SNR=7.1
G27K **Doyon Strip** 52.99 29 P **P** **21 14 41.1 +1.7**
baz=276
D27M **Malcolm River** 53.02 26 P **P** **21 14 41.4 +1.8**
baz=275
BRLS **Borolday** 53.07 300 *c i* P **P** **21 14 41.5 +1.2**
BRLS pmax pmax
comp=Z,10.0nm,0.9s
BRLS **Borolday** 53.07 300⇑ *i* P **P** **21 14 41.6 +1.2**
comp=Z,10nm,0.9s
MCARA **McCarthy VSAT** 53.10 36 P **P** **21 14 42.1 +2.0**
baz=279
H27K **Steamboat Moun** 53.11 30 P **P** **21 14 42.3 +2.1**
baz=277,SNR=10
I27K **Kandik River** 53.14 31 P **P** **21 14 42.5 +2.0**
baz=277
CRQE **Cirque** 53.16 37 P **P** **21 14 42.4 +1.6**
baz=279,SNR=7.9
BTK **Batken** 53.31 297 P **P** **21 14 40.7 -1.5**
BTK pmax pmax
comp=Z,13nm,1.0s
BTK **Batken** 53.31 297 **P** **21 14 40.7 -1.5**
BTK IAmb IAmb 21 14 51.5
comp=Z,13nm,1.0s
BTK **Batken** 53.31 297 P **P** **21 14 42.1 -0.1**
L27K **Beaver Creek,** 53.40 34 P **P** **21 14 44.2 +1.8**
baz=279
BCAR **Beaver Creek A** 53.41 34 P **P** **21 14 43.9 +1.3**
CHM **Chimkent** 53.45 300 *e* P **P** **21 14 43.1 0.0**
CHM **Chimkent** 53.45 300 *e* P **P** **21 14 43.2 0.0**
M27K **Edge Creek, AK** 53.48 35 P **P** **21 14 44.8 +1.6**
baz=279,SNR=14
MANEM **Manem** 53.53 293 P **P** **21 14 44.0 0.0**
MANEM IAmb IAmb 21 14 45.8
comp=Z,51nm,0.6s
F28M **Old Crow** 53.59 28 P **P** **21 14 45.6 +1.8**
baz=277,SNR=12
E28M **Babbage River** 53.60 27 P **P** **21 14 45.6 +1.8**
baz=277,SNR=10.0
NIL **Nilore** 53.77 288 P **P** **21 14 45.3 -0.3**
NIL pmax pmax
comp=Z,20nm,0.8s
NIL **Nilore** 53.77 288 **P** **21 14 45.2 -0.3**
NIL **Nilore** 53.77 288 P **P** **21 14 46.1 +0.5**
D28M **Stokes Point** 53.80 26 P **P** **21 14 47.0 +1.8**
baz=277
I28M **Miner Creek** 53.86 31 P **P** **21 14 47.7 +1.9**
baz=279,SNR=26
BVCY **Beaver Creek** 53.94 34 P **P** **21 14 48.3 +2.0**
baz=280,SNR=6.2
GAR **Garm** 54.03 296 **P** **21 14 47.0 -0.5**
GAR **Garm** 54.03 296 P **P** **21 14 47.5 0.0**
E29M **Blow River** 54.23 27 P **P** **21 14 50.5 +2.2**
baz=278,SNR=22
YUK3 **Moose Creek** 54.24 35 P **P** **21 14 50.4 +1.6**
baz=281,SNR=11
DAWY **Dawson** 54.31 32 P **P** **21 14 50.6 +1.6**
baz=280
H29M **Whitestone** 54.38 30 P **P** **21 14 51.3 +1.9**
baz=279,SNR=6.5
G29M **Pine Creek** 54.40 29 P **P** **21 14 51.6 +1.9**
baz=279,SNR=16
O28M **Mount Upton** 54.56 36 P **P** **21 14 53.1 +1.9**
baz=282
YUK8 **Steele Glacier** 54.66 36 P **P** **21 14 53.8 +1.9**
baz=282
PINM **Pinnacle** 54.67 37 P **P** **21 14 53.8 +2.1**
baz=282
J29N **Klondike Camp** 54.75 32 P **P** **21 14 54.4 +2.1**
baz=281
BRWY **Burwash Landin** 54.99 36 P **P** **21 14 56.0 +2.0**
baz=282
CHGR **Chuyangaron** 55.00 296 *c i* P **P** **21 14 54.3 -0.2**
CHGR pmax pmax
comp=Z,79nm,0.8s
CHGR **Chuyangaron** 55.00 296 **P** **21 14 53.9 -0.6**
EPYK **Eagle Plains** 55.01 29 P **P** **21 14 56.2 +2.1**
baz=281,SNR=23
M29M **Somme Creek** 55.03 34 P **P** **21 14 56.2 +1.8**
baz=282,SNR=14
L29M **L29M** 55.05 33 P **P** **21 14 56.6 +2.2**
baz=282,SNR=21
G30M **tAoh Zraii Nji** 55.09 28 P **P** **21 14 56.4 +1.8**
baz=281,SNR=28
SVE **Sverdlovsk** 55.10 319 *e* P **P** **21 14 55.2 +0.4**
SVE pmax pmax
comp=Z,28nm,1.2s
F30M **Barrier River** 55.14 28 P **P** **21 14 56.5 +1.6**
F30M **Barrier River** 55.14 28 P **P** **21 14 57.0 +2.1**
baz=281,SNR=16
K29M **Barlow Dome** 55.16 32 P **P** **21 14 57.3 +1.9**
baz=282,SNR=10.0
YUK4 **Talbot Arm** 55.18 35 P **P** **21 14 57.5 +1.9**
baz=282,SNR=8.5
I30M **Mount Dempster** 55.37 31 P **P** **21 14 58.8 +2.0**
baz=282,SNR=56
YUK6 **Outpost Mounta** 55.40 36 P **P** **21 14 59.0 +1.7**
baz=283,SNR=7.5
O29M **Mount Kennedy** 55.44 37 P **P** **21 14 59.6 +2.2**
baz=283,SNR=11
FITZ **Fitzroy Crossi** 55.49 197 P **P** **21 14 59.3 +1.3**
comp=Z,2.9nm,1.0s
FITZ **Fitzroy Crossi** 55.49 197 LR LR 21 37 36.0
comp=Z,57nm,21.3s,baz=358,slow=35
FITZ **Fitzroy Crossi** 55.49 197 P **P** **21 14 58.5 +0.5**
FITZ **Fitzroy Crossi** 55.49 197 P **P** **21 14 58.3 +0.4**
J30M **Hart River** 55.52 31 P **P** **21 14 59.7 +1.7**
baz=282,SNR=7.4
WB0 **Warramunga Arr** 55.73 186 P **P** **21 14 59.5 -0.2**
M30M **Minto, Yukon** 55.76 34 P **P** **21 15 01.4 +1.9**
baz=283
HYT **Haines Junctio** 55.84 36 **P** **21 15 01.7 +1.5**
HYT IAmb IAmb 21 15 04.2
comp=Z,9.6nm,1.0s
HYT **Haines Junctio** 55.84 36 P **P** **21 15 02.6 +2.4**
baz=284,SNR=12
INK **Inuvik** 55.84 27 LR LR 21 39 57.4
comp=Z,46nm,20.9s,baz=5.0,slow=37
INK **Inuvik** 55.84 27 P **P** **21 15 01.6 +1.7**
baz=282,SNR=7.4
INK **Inuvik** 55.84 27 P **P** **21 15 01.6 +1.7**
G31M **Satah River** 55.85 28 P **P** **21 15 01.7 +1.7**
baz=282,SNR=9.6
N30M **Aishikik Lake** 55.88 35 P **P** **21 15 02.4 +1.9**
baz=284
WRAB **Tennant Creek** 55.90 186 P **P** **21 15 01.6 +0.7**
WRAB **Tennant Creek** 55.90 186 P **P** **21 15 01.8 +0.9**
WRA **Warramunga Arr** 55.91 186 P **P** **21 15 00.7 -0.3**
comp=Z,7.5nm,0.4s,baz=1.7,slow=7.5,SNR=86
comp=Z,7.5nm,0.4s
WRA **Warramunga Arr** 55.91 186 *i* P **P** **21 15 01.1 +0.2**
WRA pmax pmax
comp=Z,8.0nm,0.4s
WRA **Warramunga Arr** 55.91 186 P **P** **21 15 00.3 -0.6**
F31M **Tsiigehtchic** 55.94 28 P **P** **21 15 02.6 +1.9**
baz=282
P29M **Windy Craggy** 56.01 37 P **P** **21 15 03.4 +2.0**
baz=284,SNR=8.3
H31M **Peel River** 56.07 30 P **P** **21 15 03.7 +2.0**
baz=283,SNR=26
P30M **Million Dollar** 56.27 37 P **P** **21 15 05.3 +2.1**
baz=285
QIS **Mount Isa** 56.27 180 P **P** **21 15 04.1 +0.6**
ARTI **Arti** 56.42 319 LR LR 21 41 13.6
comp=Z,53nm,18.3s,baz=104,slow=38
ARTI **Arti** 56.42 319 *c i* P **P** **21 15 04.0 -0.3**
ARTI pmax pmax
comp=Z,23nm,1.0s
ARTI **Arti** 56.42 319 P **P** **21 15 03.9 -0.4**
N31M **Braeburn, Yuko** 56.48 35 P **P** **21 15 06.7 +2.0**
baz=285,SNR=5.7
O30N **Mendenhall** 56.52 36 P **P** **21 15 06.9 +1.9**
baz=285
KBL **Kabul** 56.64 291 P **P** **21 15 05.2 -1.3**
KBL pmax pmax
comp=Z,18nm,0.9s
KBL **Kabul** 56.64 291 **P** **21 15 05.2 -1.3**
PLBC **Pleasant Camp** 56.73 37 P **P** **21 15 08.6 +2.2**
baz=286,SNR=13
M31M **Drury Creek, Y** 56.94 34 P **P** **21 15 10.1 +2.2**
baz=285
WHY **Whitehorse** 57.12 36 **P** **21 15 10.4 +1.1**
WHY **Whitehorse** 57.12 36 P **P** **21 15 11.1 +1.8**
baz=286,SNR=6.3
S31K **Pelican** 57.21 39 P **P** **21 15 12.0 +2.2**
baz=287
SKAG **Skagway** 57.24 37 P **P** **21 15 12.1 +2.0**
baz=286
A36M **Sachs Harbour** 57.65 22 P **P** **21 15 14.4 +1.7**
A36M **Sachs Harbour** 57.65 22 P **P** **21 15 14.6 +1.9**
baz=287,SNR=7.3
AB31 **Akbulak array** 57.66 310 P **P** **21 15 12.4 -0.8**
ABKAR **Akbulak array** 57.66 310 **P** **21 15 12.6 -0.5**
N32M **Quiet Lake** 57.83 35 P **P** **21 15 15.9 +1.6**
baz=287
SIT **Sitka** 57.95 40 P **P** **21 15 16.8 +1.7**
baz=288
P32M **Atlin** 57.99 37 P **P** **21 15 17.0 +1.6**
baz=288,SNR=13
R32K **Eaglecrest** 57.99 38 P **P** **21 15 17.3 +2.0**
baz=288,SNR=5.3
JIS **Juneau Island** 58.06 38 P **P** **21 15 16.4 +0.6**
S32K **Killisnoo** 58.21 39 P **P** **21 15 18.9 +2.1**
baz=288,SNR=6.9
MMPY **Sheldon Lake,** 58.21 33 P **P** **21 15 18.9 +1.9**
baz=288,SNR=7.1
P33M **Teslin, Yukon** 58.23 36 P **P** **21 15 19.0 +1.9**
baz=288,SNR=16
AKTO **Aktyubinsk** 58.44 312 LR LR 21 40 40.7
comp=Z,74nm,20.3s,baz=74,slow=36
C36M **Paulatuk** 58.86 24 **P** **21 15 22.4 +1.2**
C36M **Paulatuk** 58.86 24 P **P** **21 15 22.8 +1.7**
baz=290,SNR=10.0
Q32M **Nakina River** 58.89 37 P **P** **21 15 23.9 +2.1**
baz=289,SNR=5.6
R33M **Jennings River** 59.38 36 P **P** **21 15 27.4 +2.2**
baz=290,SNR=5.7
U33K **Whale Pass** 59.41 41 P **P** **21 15 27.2 +2.1**
baz=290
AS15 **Alice Springs** 59.60 186 P **P** **21 15 27.6 +0.7**
comp=Z,9.2nm,0.5s
AS17 **Alice Springs** 59.62 186 P **P** **21 15 24.1 -3.0**
comp=Z,8.5nm,1.1s
AS01 **Alice Springs** 59.63 186 P **P** **21 15 27.5 +0.4**
CRAG **Craig** 59.63 41 P **P** **21 15 28.9 +2.2**
baz=290
AS31 **Alice Springs** 59.63 186 P **P** **21 15 28.4 +1.3**
comp=Z,2.9nm,0.5s
AS31 **Alice Springs** 59.63 186 P **P** **21 15 27.5 +0.4**
ASAR **Alice Springs** 59.63 186 P **P** **21 15 27.1 0.0**
comp=Z,1.7nm,0.5s,baz=12,slow=6.1,SNR=33
ASAR LR LR 21 41 19.9
comp=Z,120nm,19.5s,baz=344,slow=36
comp=Z,1.7nm,0.5s
AS09 **Alice Springs** 59.66 186 P **P** **21 15 28.7 +1.4**
comp=Z,9.0nm,0.8s
S34M **Telegraph Cree** 59.81 38 P **P** **21 15 29.9 +1.9**
baz=290
TGTN **Hyland Airport** 59.90 34 P **P** **21 15 30.4 +1.7**
baz=291
MBWA **Marble Bar** 59.99 202 P **P** **21 15 30.5 +1.0**
MBWA **Marble Bar** 59.99 202 P **P** **21 15 29.0 -0.6**
DLBC **Dease Lake** 60.17 37 P **P** **21 15 32.7 +2.1**
baz=291
KIRV **Kirov** 60.32 323 LR LR 21 43 17.1
comp=Z,71nm,20.0s,baz=84,slow=38
KIRV **Kirov** 60.32 323 *c i* P **P** **21 15 31.4 0.0**
V35K **Ketchikan** 60.48 41 P **P** **21 15 34.1 +1.6**
baz=292
T35M **Bob Quinn** 60.59 39 P **P** **21 15 35.1 +1.7**
baz=292,SNR=6.2
PALK **Pallekele** 60.95 257 LR LR 21 43 40.3
comp=Z,83nm,18.2s,baz=230,slow=38
PALK **Pallekele** 60.95 257 P **P** **21 15 35.9 -0.5**
PALK **Pallekele** 60.95 257 P **P** **21 15 35.3 -1.2**
PALK pmax pmax
comp=Z,19nm,1.2s
PALK **Pallekele** 60.95 257 P **P** **21 15 35.3 -1.2**
SPA0 **Spitsbergen Ar** 61.28 349 *e* P **P** **21 15 38.6 +0.9**
SPITS **Spitsbergen Ar** 61.28 349 P **P** **21 15 37.9 +0.2**
comp=Z,2.1nm,0.4s,baz=52,slow=6.9,SNR=11
SPITS LR LR 21 42 47.4
comp=Z,61nm,20.8s,baz=54,slow=36
comp=Z,2.1nm,0.4s
WRGLY **Wrigley** 61.34 31 P **P** **21 15 40.2 +1.9**
baz=294
KBS **Kingsbay** 61.44 350 *e* P **P** **21 15 40.0 +1.3**
LIRD **Liard River Hi** 61.69 35 P **P** **21 15 42.7 +2.0**
baz=293,SNR=5.2
WRKA **Warakurna** 61.71 192 P **P** **21 15 42.3 +1.1**
comp=Z,8.5nm,0.5s
HRA **Herat** 61.80 294 **P** **21 15 41.9 -0.3**
HRA IAmb IAmb 21 15 43.4
comp=Z,12nm,0.8s
EIDS **Eidsvold** 61.97 169 P **P** **21 15 43.4 +0.6**
NOR **Nord** 61.98 356 *i* P **P** **21 15 40.3 -2.1**
NOR IAmb IAmb 21 15 59.2
comp=Z,68nm,1.9s
LVZ **Lovozero** 62.53 336 *e* P **P** **21 15 46.3 0.0**
LVZ pmax pmax
comp=Z,12nm,1.1s
VADS **Vadso** 63.07 339 *e* P **P** **21 15 50.3 +0.6**
APA **Apatity** 63.11 336 *e* P **P** **21 15 49.1 -0.9**
APA *e* 21 16 28.4
APA *e* 21 18 10.6
APA pmax pmax
comp=Z,11nm,0.9s
APA MLR MLR
comp=Z,258nm,3.6s
INKA **Innaminka** 63.42 179 **P** **21 15 51.8 -0.7**
BBB **Bella Bella** 63.64 43 LR LR 21 44 15.9
comp=Z,13nm,19.2s,baz=235,slow=36
BELG **Belogornoye** 63.71 317 LR LR 21 46 08.0
comp=Z,95nm,18.5s,baz=9.4,slow=38
BELG **Belogornoye** 63.71 317 *c i* P **P** **21 15 53.9 -0.3**
BELG pmax pmax
comp=Z,15nm,0.9s
RES **Resolute Bay** 63.88 14 LR LR 21 45 31.4
comp=Z,40nm,20.9s,baz=109,slow=38
RES **Resolute Bay** 63.88 14 P **P** **21 15 55.2 +0.1**
RES pmax pmax
comp=Z,13nm,0.9s
RES **Resolute Bay** 63.88 14 P **P** **21 15 55.2 +0.1**
RES IAmb IAmb 21 15 56.8
comp=Z,12nm,0.9s
KEV **Kevo** 63.95 339 P **P** **21 15 54.8 -0.8**
KEV pmax pmax
comp=Z,14nm,0.9s
KEV **Kevo** 63.95 339 P **P** **21 15 54.8 -0.8**
KEV IAmb IAmb 21 15 56.3
comp=Z,14nm,0.9s
KLMR **Klimovskoe** 63.96 328 *e* P **P** **21 15 54.3 -1.5**
KLMR *e*PP **pP** **21 16 07.6 0.0**
KLMR pmax pmax
comp=Z,19nm,0.7s
ARA0 **ARCESS Array S** 64.51 339 *e* P **P** **21 15 59.3 0.0**
ARA0 IAmb IAmb 21 16 00.2
comp=Z,9.5nm,0.8s
ARCES **ARCESS Array B** 64.51 339 P **P** **21 15 59.4 +0.1**
comp=Z,7.3nm,0.8s,baz=59,slow=7.3,SNR=15
ARCES LR LR 21 47 34.0
comp=Z,78nm,18.8s,baz=40,slow=39
comp=Z,7.3nm,0.8s
ARCES **ARCESS Array B** 64.51 339 P **P** **21 15 59.1 -0.2**
ARCES pmax pmax
comp=Z,8.0nm,0.9s
ARCES **ARCESS Array B** 64.51 339 **P** **21 15 59.1 -0.2**
ARCES IAmb IAmb 21 16 00.4
comp=Z,7.9nm,0.8s
MSVF **Nonsavu** 64.51 139 LR LR 21 39 26.2
comp=Z,31nm,20.4s,baz=145,slow=32
YKA **Yellowknife Ar** 65.29 30 P **P** **21 16 05.0 +0.5**
comp=Z,4.4nm,0.8s,baz=300,slow=6.4,SNR=25
comp=Z,4.4nm,0.8s
YKA **Yellowknife Ar** 65.29 30 *i* P **P** **21 16 05.3 +0.9**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA **Yellowknife Ar** 65.29 30 P **P** **21 16 04.5 0.0**
SGF **Sodankyl** 65.41 337 P **P** **21 16 05.7 +0.6**
MSF **Maaselka** 65.45 335 P **P** **21 16 05.7 +0.2**
KTK1 **Kautokeino** 65.47 339 *e* P **P** **21 16 05.8 +0.3**
KTK1 IAmb IAmb 21 16 05.9
comp=Z,18nm,1.1s
MEEK **Meekatharra** 65.48 201 P **P** **21 16 07.0 +0.9**
JETT **Jettan, Norway** 65.92 340 *e* P **P** **21 16 08.8 +0.3**
TULEG **Thule** 66.26 7 P **P** **21 16 10.4 0.0**
TULEG IAmb IAmb 21 16 11.2
comp=Z,9.6nm,0.6s
NEEM **North Greenlan** 66.60 3 *i* P **P** **21 16 11.8 -1.2**
NEEM IAmb IAmb 21 16 17.1
comp=Z,24nm,0.7s
DAG **Danmarks Havn** 66.67 355 P **P** **21 16 13.2 +0.1**
OUL **Oulu** 67.00 335 P **P** **21 16 15.5 +0.2**
MOS **Moscow** 67.33 323 *e* P **P** **21 16 17.2 -0.4**
FORT **Forrest** 67.37 191 P **P** **21 16 17.8 -0.2**
FORT IAmb IAmb 21 16 38.5
comp=Z,9.9nm,0.7s
AFI **Afiamalu** 67.45 128 LR LR 21 45 37.1
comp=Z,36nm,18.1s,baz=13,slow=36
VRH **Novokhopyorsk** 67.51 318 *e* P **P** **21 16 15.8 -3.0**
VRH pmax pmax
comp=Z,20nm,0.9s
STKA **Stephens Creek** 67.56 178 P **P** **21 16 20.0 +0.8**
comp=Z,4.7nm,0.9s,baz=15,slow=4.3,SNR=6.6

STKA LR LR 21 47 26.9
comp=Z,90nm,18.5s,baz=23,slow=37
comp=Z,4.7nm,0.9s
OBN Obninsk 68.17 323 LR LR 21 48 03.0
comp=Z,70nm,21.3s,baz=336,slow=38
OBN Obninsk 68.17 323 *ce*P **P 21 16 22.4 -0.5**
OBN *e* 21 16 51.8
OBN *e* 21 18 56.0
OBN *e*SSS SSS 21 32 45.3
OBN pmax pmax
comp=Z,16nm,0.9s
OBN MLR MLR
comp=Z,95nm,16.0s
OBN Obninsk 68.17 323 P **P 21 16 21.5 -1.4**
OBN Obninsk 68.17 323 P **P 21 16 21.7 -1.2**
comp=Z,30nm,1.0s
OBN Obninsk 68.17 323 P **P 21 16 22.4 -0.5**
LPSR Galich'ya Gora 68.29 320 *e*P **P 21 16 22.8 -0.9**
LPSR pmax pmax
comp=Z,55nm,1.0s
STEI Steigen 68.42 340 *e*P **P 21 16 24.1 -0.1**
STEI IAmb IAmb 21 16 24.8
comp=Z,15nm,0.9s
MORW Morawa 68.53 202 P **P 21 16 26.0 +0.7**
MORW Morawa 68.53 202 P **P 21 16 24.6 -0.7**
MORW IAmb IAmb 21 16 51.0
comp=Z,23nm,1.4s
BBOO Buckleboo 68.57 183 P **P 21 16 24.9 -0.6**
BBOO IAmb IAmb 21 17 03.1
comp=Z,16nm,1.1s
VORR Voronezh 68.62 319 *e*P **P 21 16 22.6 -3.2**
VORR pmax pmax
comp=Z,27nm,0.4s
AKT Akhty 68.70 306 *e*P **P 21 16 26.3 -0.3**
AKT *e**PP **sP 21 16 40.2 -2.9**
AKT *e**SP **PcP 21 16 45.9 -5.3**
AKT *e* 21 16 50.0
AKT pmax pmax
comp=Z,11nm,0.7s
AKT MLR MLR
comp=Z,201nm,26.0s
FAUS Fauske 68.79 340 *e*P **P 21 16 26.7 +0.2**
FAUS IAmb IAmb 21 16 27.3
comp=Z,20nm,0.9s
VSR Storozhevoye 68.88 319 *e*P **P 21 16 25.9 -1.5**
VSR pmax pmax
comp=Z,38nm,0.8s
VORD Divnogorie 68.95 318 *e*P **P 21 16 25.6 -2.2**
VORD pmax pmax
comp=Z,10.0nm,0.9s
KULLO Kullorsuaq 69.09 5 *i* P **P 21 16 28.0 -0.4**
KULLO IAmb IAmb 21 16 28.9
comp=Z,13nm,0.6s
FIA1 FINESS Array S 69.14 332 P **P 21 16 28.5 -0.3**
FINES FINESS Array B 69.14 332 P **P 21 16 28.4 -0.4**
comp=Z,22nm,0.8s,baz=73,slow=6.6,SNR=58
FINES LR LR 21 51 44.4
comp=Z,47nm,18.6s,baz=59,slow=40
comp=Z,22nm,0.8s
FINES FINESS Array B 69.14 332 *i* P **P 21 16 28.3 -0.5**
FINES pmax pmax
comp=Z,22nm,0.8s
FINES FINESS Array B 69.14 332 **P 21 16 28.3 -0.5**
BLDU Ballidu 69.77 201 P **P 21 16 33.8 +0.8**
RAUS Rausandaksla 69.81 340 *e*P **P 21 16 33.0 +0.2**
VAGH Vaagaholmen 69.81 340 *e*P **P 21 16 32.9 0.0**
GOF Gofitskoye 69.85 311 *ce*P **P 21 16 34.0 +0.5**
MOR8 Moi Rana 69.88 339 *e*P **P 21 16 32.3 -1.1**
MOR8 IAmb IAmb 21 16 32.8
comp=Z,28nm,0.9s
LEIR Leirfjorden 70.30 340 IAmb IAmb 21 16 36.5
comp=Z,14nm,1.0s
LEIR *e*P **P 21 16 36.6 +0.7**
ARBE Arbavere 70.41 330 P **P 21 16 37.0 +0.3**
SHME Shamm 70.42 288 *i* P **P 21 16 37.9 +0.5**
SNR=6.3
KBZ Khabaz 70.63 310 P **P 21 16 38.4 +0.1**
comp=Z,19nm,0.9s,baz=43,slow=2.4,SNR=21
KBZ LR LR 21 51 22.8
comp=Z,56nm,19.6s,baz=106,slow=39
comp=Z,19nm,0.9s
KBZ Khabaz 70.63 310 *c* *i*P **P 21 16 38.6 +0.3**
KBZ pmax pmax
comp=Z,22nm,0.9s
KIV Kislovodsk 70.64 311 *i* P **P 21 16 39.3 +0.7**
SNR=12
KIV Kislovodsk 70.64 311 *e*P **P 21 16 38.4 -0.1**
KIV pmax pmax
comp=Z,46nm,1.1s
KIV MLR MLR
comp=Z,51nm,17.0s
KIV Kislovodsk 70.64 311 **P 21 16 37.5 -1.0**
KIV Kislovodsk 70.64 311 P **P 21 16 38.3 -0.2**
comp=Z,369nmcomp=Z,41nm,1.1s
KIV Kislovodsk 70.64 311 P **P 21 16 39.2 +0.7**
HOOD Mount Hood Mea 70.68 48 P **P 21 16 39.1 +0.3**
HOOD IAmb IAmb 21 16 42.5
comp=Z,25nm,1.1s
VSU Vasula 70.70 329 *c* *i*P **P 21 16 37.3 -1.2**
VSU pmax pmax
comp=Z,39nm,0.8s
VSU Vasula 70.70 329 P **P 21 16 37.9 -0.6**
MSFE Esma-Masafi 70.77 288 P **P 21 16 40.0 +0.5**
SHA1 Shidzhatmaz 70.77 310 ⇓ *i*P **P 21 16 39.5 0.0**
BLKN Baker Lake 70.80 22 **P 21 16 39.1 +0.2**
BLKN IAmb IAmb 21 16 40.6
comp=Z,17nm,0.8s
EDM Edmonton 70.89 38 P **P 21 16 39.9 +0.1**
EDM pmax pmax
comp=Z,15nm,1.2s
EDM Edmonton 70.89 38 **P 21 16 39.9 +0.1**
EDM IAmb IAmb 21 16 42.0
comp=Z,15nm,1.2s
UPNV Upernavik 70.92 5 *i* P **P 21 16 37.7 -1.9**
UPNV IAmb IAmb 21 16 43.9
comp=Z,27nm,1.2s
JMIC Jan Mayen 70.92 350 LR LR 21 48 10.1
comp=Z,31nm,18.0s,baz=76,slow=36
ERBR Yeremizino-Bor 71.04 313 *e*P **P 21 16 40.6 -0.2**
ERBR *e**PP **sP 21 16 54.2 -3.2**
ERBR pmax pmax
comp=Z,30nm,0.9s
HATD Hatta, Dubai 71.07 287 P **P 21 16 41.8 +0.5**
SOHO SOHO 71.12 286 P **P 21 16 41.7 +0.1**
ASHO Ashiyiah 71.20 287 P **P 21 16 42.0 -0.2**
WIFE Three Sisters- 71.25 49 **P 21 16 43.0 +0.7**
WIFE IAmb IAmb 21 17 20.6
comp=Z,11nm,0.5s
GNI Garni 71.33 306 LR LR 21 50 58.1
comp=Z,76nm,18.1s,baz=90,slow=38
GNI Garni 71.33 306 *e*P **P 21 16 43.6 +0.8**
GNI pmax pmax
comp=Z,9.0nm,0.9s
NAZ Nazwa, Dubai 71.35 288 P **P 21 16 42.9 -0.1**
LABN Labinsk 71.47 312 *e*P **P 21 16 44.2 +0.8**
LABN *e**PP **sP 21 16 57.0 -3.0**
LABN pmax pmax
comp=Z,59nm,1.5s
SUMG Summit 71.69 359 P **P 21 16 44.7 -0.1**
SUMG Summit 71.69 359 **P 21 16 44.7 -0.1**
SUMG IAmb IAmb 21 16 47.0
comp=Z,20nm,0.9s
SUMG Summit 71.69 359 P **P 21 16 46.6 +1.9**
SUMG Summit 71.69 359 *i* P **P 21 16 46.0 +1.3**
SUMG IAmb IAmb 21 16 46.7
comp=Z,19nm,0.9s
NSS Namsos 71.79 339 *e*P **P 21 16 45.6 +0.7**
EPOS Posof 71.91 308 P **P 21 16 47.7 +1.4**
PINE Pine Mountain 71.92 49 **P 21 16 47.1 +0.7**
PINE IAmb IAmb 21 16 50.0
comp=Z,16nm,0.9s
MNK Minsk 72.64 325 *i* P **P 21 16 51.1 +0.9**
comp=E,22nm,0.9s
MNK *i* P **P 21 16 51.1 +0.9**
comp=N,14nm,0.9s
MNK *i* P **P 21 16 51.1 +0.9**
comp=Z,39nm,0.9s,baz=52
MNK *i* pP **sP 21 17 05.3 -1.5**
MNK *i* PP **PP 21 19 32.9 +1.4**
MNK *i* PPP PPP 21 21 17.4
MNK *i* S **S 21 26 12.9 +0.8**
MNK *i* sS **sS 21 26 37.4 +5.4**
MNK *i* SS **SS 21 30 53.9 +3.0**
MNK *i* SSS SSS 21 34 14.5
MNK *i* LQ LQ 21 44 09.2
MNK *i* LR LR 21 48 11.1
MNK *i* LRM MLR 21 52 02.9
comp=Z,32nm,15.4s
MNK *i* LRM MLR 21 52 03.5
comp=E,130nm,17.7s
MNK *i* LRM MLR 21 52 20.6
comp=N,94nm,17.7s
MNK Minsk 72.64 325 *i* P **P 21 16 51.0 +0.9**
MNK *i* *PP **sP 21 17 05.3 -1.5**
MNK *i* 21 19 32.9
MNK *i* PPP PPP 21 21 17.3
MNK *i* S **S 21 26 12.9 +0.8**
MNK *i* *SS **sS 21 26 37.4 +5.4**
MNK *i* 21 26 53.8
MNK *i* SS **SS 21 30 53.9 +3.0**
MNK pmax pmax
comp=Z,39nm,0.9s
MNK pmax pmax
comp=N,14nm,0.9s
MNK pmax pmax
comp=E,22nm,0.9s
MNK MLR MLR
comp=Z,32nm,15.0s
MNK MLR MLR
comp=E,130nm,18.0s
MNK MLR MLR
comp=N,94nm,18.0s
BMO Blue Mountains 73.51 46 P **P 21 16 56.1 +0.4**
BMO pmax pmax
comp=Z,7.0nm,1.0s
BMO Blue Mountains 73.51 46 P **P 21 16 56.0 +0.4**
PABE Paberze 73.75 328 **P 21 16 56.0 -0.7**
PABE Paberze 73.75 328 P **P 21 16 56.9 +0.2**
ORV Oroville 73.88 53 P **P 21 16 58.3 +0.5**
ORV pmax pmax
comp=Z,7.0nm,1.0s
ORV Oroville 73.88 53 **P 21 16 58.3 +0.5**
GURO Guroymak-BITLI 73.95 306 P **P 21 16 57.7 -0.7**
GURO IAmb IAmb 21 17 00.3
comp=Z,14nm,0.8s
WVOR Wild Horse Val 74.08 49 P **P 21 17 01.3 +2.2**
MZR Muzera 74.09 287 *i* P **P 21 16 58.9 -0.4**
SNR=8.9
AK03 Malin Array Si 74.33 322 P **P 21 16 59.3 -0.9**
AKASG Malin Array Be 74.34 322 P **P 21 16 59.8 -0.5**
comp=Z,2.3nm,0.3s,baz=50,slow=6.0,SNR=52
AKASG LR LR 21 51 24.5
comp=Z,105nm,22.0s,baz=56,slow=37
comp=Z,2.3nm,0.3s
AKASG Malin Array Be 74.34 322 *i* P **P 21 16 59.7 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG Malin Array Be 74.34 322 P **P 21 16 59.2 -1.1**
AKASG IAmb IAmb 21 17 01.0
comp=Z,8.8nm,1.0s
AKBB Malin Array Si 74.34 322 *c* *i*P **P 21 16 59.6 -0.7**
AKBB pmax pmax
comp=Z,20nm,0.9s
AKBB Malin Array Si 74.34 322 P **P 21 16 59.1 -1.2**
AKBB Malin Array Si 74.34 322 P **P 21 16 59.3 -1.0**
AK01 Malin Array Si 74.36 322 P **P 21 16 59.3 -1.1**
KIEV Kiev 74.36 322 ⇑ P **P 21 17 00.5 +0.2**
KIEV Kiev 74.36 322 *i* P **P 21 16 59.9 -0.4**
SNR=13
KIEV Kiev 74.36 322 P **P 21 17 00.5 +0.2**
KIEV Kiev 74.36 322 P **P 21 16 59.3 -1.1**
comp=Z,107nm,0.9s
KIEV Kiev 74.36 322 P **P 21 16 60.0 -0.4**
AK04 Malin Array Si 74.36 322 P **P 21 16 59.4 -1.0**
AK09 Malin Array Si 74.37 322 P **P 21 16 59.4 -1.0**
AK08 Malin Array Si 74.37 322 P **P 21 16 59.4 -1.0**
AK02 Malin Array Si 74.38 322 P **P 21 16 59.5 -1.0**
NC405 NORSAR Array S 74.42 337 P **P 21 17 00.2 -0.4**
NC405 IAmb IAmb 21 17 01.7
comp=Z,20nm,0.9s
BEKR Beckworth 74.44 52 **P 21 17 02.3 +1.0**
BEKR IAmb IAmb 21 17 04.5
comp=Z,14nm,1.0s
HFS Hagfors 74.50 335 P **P 21 17 00.6 -0.5**
comp=Z,12nm,0.9s,baz=58,slow=5.4,SNR=20
HFS LR LR 21 52 21.6
comp=Z,92nm,21.2s,baz=52,slow=38
comp=Z,12nm,0.9s
DOMB Dombas 74.54 338 *e*P **P 21 17 02.1 +0.8**
MOL Molde 74.57 339 *e*P **P 21 17 02.4 +1.0**
NB2 NORSAR Subarra 74.64 337 P **P 21 17 01.5 -0.4**
comp=Z,22nm,1.0s,baz=40,slow=6.2
NB2 PP **PP 21 19 48.7 +0.3**
comp=Z,1.2nm,0.8s,baz=39,slow=7.9
NB2 NORSAR Subarra 74.64 337 P **P 21 17 01.5 -0.4**
NOA NORSAR Array B 74.64 337 P **P 21 17 01.8 -0.2**
comp=Z,12nm,0.8s,baz=40,slow=5.8,SNR=31
NOA PP **PP 21 19 48.3 -0.1**
comp=Z,2.6nm,0.9s,baz=40,slow=8.7,SNR=4.2
NOA LR LR 21 52 47.9
comp=Z,92nm,20.0s,baz=45,slow=38
comp=Z,12nm,0.8s
NC602 NORSAR Array S 74.77 336 *e*P **P 21 17 02.2 -0.4**
MI28 Mi28,Pidlybu 74.97 323 P **P 21 17 02.5 -1.4**
SUW Suwalki 75.08 327 *e*P **P 21 17 04.5 0.0**
SUW Suwalki 75.08 327 P **P 21 17 03.6 -0.9**
SUW Suwalki 75.08 327 **P 21 17 03.6 -0.9**
SIM Simferopol' 75.19 315 *e*P **P 21 17 05.8 +0.5**
SIM pmax pmax
comp=Z,31nm,1.1s
SIM MLR MLR
comp=Z,40nm,18.0s
MFID Camas Ranch 75.21 47 **P 21 17 06.2 +0.6**
MFID IAmb IAmb 21 17 08.7
comp=Z,10nm,1.1s
FFC Flin Flon 75.21 32 P **P 21 17 05.1 -0.2**
FFC pmax pmax
comp=Z,11nm,1.3s
FFC Flin Flon 75.21 32 **P 21 17 05.1 -0.2**
FFC IAmb IAmb 21 17 07.2
comp=Z,11nm,1.2s
FFC Flin Flon 75.21 32 P **P 21 17 06.4 +1.2**
RNPP9 Sopachiv 75.53 324 P **P 21 17 06.5 -0.6**
LUBAR Lubar, Ukraine 75.57 322 P **P 21 17 06.6 -0.8**
RNPP8 Varash 75.59 324 P **P 21 17 06.8 -0.7**
OSL Oslo 75.64 336 *e*P **P 21 17 08.2 +0.6**
RNPP5 Staryi Chortor 75.65 324 P **P 21 17 07.3 -0.5**
BAL3X Bal3'x, Balta 75.86 319 P **P 21 17 08.4 -0.7**
HLID Hailey 75.95 46 **P 21 17 10.2 +0.3**
HLID Hailey 75.95 46 P **P 21 17 10.2 +0.3**
BOZ Bozeman (W) 76.32 43 P **P 21 17 12.6 +0.7**
BOZ pmax pmax
comp=Z,7.0nm,1.0s
BOZ Bozeman (W) 76.32 43 **P 21 17 12.6 +0.7**
SORM Soroca 76.39 320 ⇑ P **P 21 17 11.6 -0.5**
SORM Soroca 76.39 320 P **P 21 17 11.5 -0.5**
NVAR Mina Array Bea 76.57 52 P **P 21 17 15.1 +1.4**
comp=Z,7.0nm,0.8s,baz=285,slow=5.7,SNR=27
comp=Z,7.0nm,0.8s
NVAR Mina Array Bea 76.57 52 P **P 21 17 14.1 +0.5**
SFJD Kangerlussuaq 76.99 4 LR LR 21 54 52.8
comp=Z,28nm,18.4s,baz=352,slow=38
ELK Elko 77.13 49 P **P 21 17 17.8 +1.0**
ELK pmax pmax
comp=Z,6.0nm,1.0s
ELK Elko 77.13 49 **P 21 17 17.8 +1.0**
BEL Belsk 77.62 326 *e*P **P 21 17 19.9 +1.0**
BNN Bunyan 77.75 309 **P 21 17 19.6 -0.5**
BNN IAmb IAmb 21 17 21.8
comp=Z,18nm,1.0s
GAZ Gaziantep 77.88 307 **P 21 17 20.8 0.0**
GAZ IAmb IAmb 21 17 22.7
comp=Z,22nm,1.0s
VLDR Vladesti 77.99 318 ⇑ P **P 21 17 20.9 -0.2**
HVU Hansel Valley 77.99 47 P **P 21 17 21.9 +0.5**
HVU pmax pmax
comp=Z,6.0nm,0.7s
HVU Hansel Valley 77.99 47 **P 21 17 21.9 +0.5**
HVU IAmb IAmb 21 17 24.5
comp=Z,6.2nm,0.7s
GIRR Girov 78.11 320 ⇑ P **P 21 17 21.4 -0.4**
ANDN Andirin 78.19 308 P **P 21 17 23.5 +1.0**
KWP Kalwaria Pacla 78.23 324 *e*P **P 21 17 22.3 +0.6**
KWP Kalwaria Pacla 78.23 324 P **P 21 17 22.3 -0.1**
JURR Jurilovca 78.24 317 ⇓ P **P 21 17 22.3 -0.2**
TESR Tescani 78.32 320 ⇑ P **P 21 17 22.8 -0.2**
TESR Tescani 78.32 320 P **P 21 17 23.1 +0.1**
BUR08 Bucovina Ar. S 78.33 321 P **P 21 17 22.5 -0.6**
BURAR Bucovina Array 78.34 321 ⇑ P **P 21 17 22.8 -0.4**
BURAR Bucovina Array 78.34 321 P **P 21 17 22.7 -0.4**
BURAR Bucovina Array 78.34 321 **P 21 17 23.0 -0.2**
BURAR IAmb IAmb 21 17 24.7
comp=Z,7.5nm,0.8s
CFR Carcaliu 78.39 318 ⇑ P **P 21 17 23.0 -0.3**
CFR Carcaliu 78.39 318 P **P 21 17 23.0 -0.3**
TPGR Topolog 78.44 318 ⇑ P **P 21 17 23.9 +0.2**
BORG Borgarnes 78.48 352 LR LR 21 52 17.6
comp=Z,16nm,21.0s,baz=15,slow=36
ODBI Odobesti 78.59 319 ⇓ P **P 21 17 25.6 +1.1**
BR131 Keskin Array S 78.60 311 *d* *i*P **P 21 17 25.2 +0.4**
BRTR Keskin Array B 78.60 311 P **P 21 17 25.0 +0.2**
comp=Z,3.1nm,0.9s,baz=56,slow=6.1,SNR=12
comp=Z,3.1nm,0.9s
BRTR Keskin Array B 78.60 311 **P 21 17 24.3 -0.5**
VRI Vrincioaia 78.70 319 ⇑ P **P 21 17 25.4 +0.3**
VRI Vrincioaia 78.70 319 P **P 21 17 25.3 +0.3**
TPNV Topopah Spring 78.76 52 P **P 21 17 26.0 +0.3**
TPNV pmax pmax
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 78.76 52 **P 21 17 26.0 +0.3**
TPNV IAmb IAmb 21 17 28.6
comp=Z,8.3nm,0.9s
HWUT Hardware Ranch 78.81 46 **P 21 17 26.8 +0.8**
HWUT IAmb IAmb 21 17 29.1
comp=Z,13nm,1.2s
HWUT Hardware Ranch 78.81 46 P **P 21 17 28.5 +2.5**
SAHR Sahastru 78.81 319 ⇓ P **P 21 17 26.1 +0.3**
KOLS Kolonicke sedl 78.92 323 *e*P **P 21 17 26.5 +0.3**
KOLS pmax pmax
comp=Z,8.0nm,1.0s
KOLS Kolonicke sedl 78.92 323 P **P 21 17 26.6 +0.3**
KOLS Kolonicke sedl 78.92 323 *e*P **P 21 17 26.5 +0.3**
DUG Dugway, Tooele 78.94 48 P **P 21 17 28.9 +2.2**
TUR Turia 78.95 320 ⇓ P **P 21 17 27.0 +0.5**
OZUR 79.05 320 ⇑ P **P 21 17 27.5 +0.5**
BOSR Bodos 79.12 320 ⇑ P **P 21 17 28.4 +1.0**
ARCR ARCALIA 79.13 321 ⇓ P **P 21 17 28.2 +0.8**
OJC Ojcow 79.19 326 *e*P **P 21 17 28.1 +0.4**
OJC Ojcow 79.19 326 P **P 21 17 27.2 -0.5**
OJC Ojcow 79.19 326 **P 21 17 27.1 -0.5**
OJC Ojcow 79.19 326 P **P 21 17 28.2 +0.5**
PD31 Pinedale Array 79.25 45 P **P 21 17 28.3 -0.1**
PDAR Pinedale Array 79.25 45 P **P 21 17 29.0 +0.6**
comp=Z,2.3nm,0.9s,baz=298,slow=3.2,SNR=13
comp=Z,2.3nm,0.9s
PDAR Pinedale Array 79.25 45 P **P 21 17 28.2 -0.1**
ICOR Ion Corvin 79.25 317 ⇓ P **P 21 17 28.8 +0.8**
PSUT Pine Spring 79.32 50 P **P 21 17 29.1 +0.3**
TRPA Tarpa 79.33 323 P **P 21 17 29.1 +0.7**
DOPR Dopca 79.34 320 ⇑ P **P 21 17 29.1 +0.5**
MLR Muntele Rosu 79.36 319 LR LR 21 54 36.5
comp=Z,47nm,18.2s,baz=44,slow=37
MLR Muntele Rosu 79.36 319 ⇓ P **P 21 17 29.1 +0.3**
MLR Muntele Rosu 79.36 319 P **P 21 17 29.1 +0.3**
NIE Niedzica 79.52 325 *e*P **P 21 17 30.3 +0.8**
CJR Cluj-Napoca 79.76 321 ⇑ P **P 21 17 31.9 +1.0**
CJR Cluj-Napoca 79.76 321 P **P 21 17 31.9 +1.0**
VOIR 79.87 320 ⇓ P **P 21 17 32.2 +0.6**
VOIR 79.87 320 P **P 21 17 32.1 +0.6**
RAYN Ar Rayn 79.90 292 *i* P **P 21 17 32.0 0.0**
SNR=15
RAYN Ar Rayn 79.90 292 P **P 21 17 31.0 -1.1**
RAYN pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 79.90 292 **P 21 17 31.0 -1.1**
RAYN IAmb IAmb 21 17 32.8
comp=Z,11nm,0.9s
RAYN Ar Rayn 79.90 292 P **P 21 17 32.1 0.0**
LANS Liptovska Anna 80.09 325 *e*P **P 21 17 33.6 +1.0**
LANS pmax pmax
comp=Z,5.0nm,1.1s
LANS Liptovska Anna 80.09 325 *e*P **P 21 17 33.6 +1.0**
ARR Arges 80.13 320 ⇑ P **P 21 17 33.7 +0.8**
ARR Arges 80.13 320 P **P 21 17 33.8 +0.8**
KSP Ksiaz 80.31 328 *e*P **P 21 17 33.9 +0.2**
STEB Steborice 80.31 326 *e*P **P 21 17 34.1 +0.3**
BSEG Bad Segeberg 80.40 332 *e*P **P 21 17 34.6 +0.5**
comp=Z,7.3nm,1.0s,baz=39,slow=5.2
BSEG Bad Segeberg 80.40 332 P **P 21 17 33.9 -0.2**
MORC Moravsky Berou 80.53 326 ⇑ P **P 21 17 35.0 0.0**
MORC Moravsky Berou 80.53 326 P **P 21 17 34.3 -0.7**
MORC pmax pmax
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 80.53 326 **P 21 17 34.3 -0.7**
MORC IAmb IAmb 21 17 36.4
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 80.53 326 *e*P **P 21 17 35.0 0.0**
MORC Moravsky Berou 80.53 326 P **P 21 17 35.5 +0.5**
RAR Rarotonga 80.57 125 LR LR 21 50 38.9
comp=Z,34nm,18.7s,baz=326,slow=34
CHVC Chvalec 80.60 328 *e*P **P 21 17 35.8 +0.5**
CHVC Chvalec 80.60 328 *e*P **P 21 17 35.8 +0.5**
PFO Pinyon Flats O 80.62 55 LR LR 21 46 38.1
comp=Z,42nm,19.9s,baz=219,slow=31
PFO Pinyon Flats O 80.62 55 P **P 21 17 35.9 +0.1**
PFO pmax pmax
comp=Z,14nm,1.2s
PFO Pinyon Flats O 80.62 55 P **P 21 17 35.9 +0.1**
PFO IAmb IAmb 21 17 39.1
comp=Z,14nm,1.1s
P17A Butcher Ranch, 80.64 48 P **P 21 17 36.4 +0.5**
P17A IAmb IAmb 21 17 38.9
comp=Z,13nm,1.0s
KRLC Kraliky 80.65 327 *e*P **P 21 17 35.8 +0.2**
KRLC Kraliky 80.65 327 *e*P **P 21 17 35.8 +0.2**
KRLC Kraliky 80.65 327 P **P 21 17 36.1 +0.5**
DPC Dobruska-Polom 80.66 327 *e*P **P 21 17 36.4 +0.8**
DPC Dobruska-Polom 80.66 327 *e*P **P 21 17 36.4 +0.8**
DPC Dobruska-Polom 80.66 327 P **P 21 17 36.5 +0.8**
UPC Upice 80.68 328 P **P 21 17 36.2 +0.5**
GORT1 Trebel 80.75 331 *e*P **P 21 17 36.5 +0.6**
comp=Z,19nm,1.1s,baz=39,slow=5.2
PSZ Piszkesteto 80.76 324 ⇓ P **P 21 17 36.9 +0.6**
PSZ Piszkesteto 80.76 324 P **P 21 17 36.1 -0.2**
PSZ pmax pmax
comp=Z,14nm,1.0s
PSZ Piszkesteto 80.76 324 **P 21 17 36.1 -0.2**
PSZ IAmb IAmb 21 17 37.9
comp=Z,14nm,1.0s
PSZ Piszkesteto 80.76 324 P **P 21 17 37.0 +0.8**
ULM Lac du Bonnet 81.02 33 P **P 21 17 37.6 +0.1**
comp=Z,3.4nm,0.7s,baz=318,slow=7.7,SNR=4.8
comp=Z,3.4nm,0.7s
ULM Lac du Bonnet 81.02 33 P **P 21 17 37.4 -0.1**
ULM pmax pmax
comp=Z,9.0nm,1.1s
ULM Lac du Bonnet 81.02 33 **P 21 17 37.4 -0.1**
SIRR Siria 81.05 322 ⇑ P **P 21 17 37.3 -0.4**
ASF Jabal al Asfar 81.05 303 LR LR 21 56 43.6
comp=Z,65nm,19.6s,baz=26,slow=38
GZR Gura Zlata 81.08 321 ⇓ P **P 21 17 37.8 -0.2**
GZR Gura Zlata 81.08 321 P **P 21 17 37.8 -0.2**
JAVC Velka Javorina 81.13 326 *e*P **P 21 17 39.1 +0.9**
JAVC Velka Javorina 81.13 326 P **P 21 17 39.6 +1.4**
BC3 Big Chuckawall 81.26 55 **P 21 17 39.1 -0.2**
BC3 IAmb IAmb 21 17 42.5
comp=Z,7.5nm,0.8s
PVCC Panska Ves 81.28 328 P **P 21 17 39.7 +0.7**
FLTG Flechtingen 81.29 331 *e*P **P 21 17 38.7 -0.1**
comp=Z,17nm,1.2s,baz=39,slow=5.2
BRG Berggiesshubel 81.29 329 *e*P **P 21 17 39.3 +0.4**
comp=Z,5.5nm,0.9s,baz=39,slow=5.2
BRG Berggiesshubel 81.29 329 P **P 21 17 39.2 +0.3**
BRG Berggiesshubel 81.29 329 *i* P **P 21 17 39.0 +0.1**
BRG Amp 21 17 40.2
comp=Z,5.6nm,0.9s
VRAC Vranov 81.30 326 LR LR 21 55 28.9
comp=Z,58nm,21.5s,baz=47,slow=37
VRAC Vranov 81.30 326 ⇑ P **P 21 17 39.7 +0.6**
VRAC Vranov 81.30 326 P **P 21 17 39.6 +0.6**
VRAC Vranov 81.30 326 *e*P **P 21 17 39.2 +0.2**
VRAC Vranov 81.30 326 P **P 21 17 39.7 +0.6**
PLVB Pleven 81.47 318 ⇑ P **P 21 17 40.1 +0.1**
BZS Buzias 81.52 321 ⇑ P **P 21 17 39.9 -0.3**
BZS Buzias 81.52 321 P **P 21 17 39.9 -0.3**
BZS Buzias 81.52 321 P **P 21 17 40.1 -0.1**
URZ Urewera 81.53 151 LR LR 21 48 41.7
comp=Z,103nm,20.6s,baz=324,slow=32
MMAI Mount Meron Ar 81.55 305 P **P 21 17 41.2 +0.4**
comp=Z,3.4nm,0.6s,baz=32,slow=21,SNR=9.9
MMAI LR LR 21 57 52.4
comp=Z,58nm,18.7s,baz=69,slow=39

comp=Z,3.4nm,0.6s
KRUC Moravsky 81.56 326 *e*P **P 21 17 40.6 +0.2**
KRUC Moravsky 81.56 326 P **P 21 17 41.0 +0.6**
MODS Modra-Piesok 81.67 325 *e*P **P 21 17 42.0 +1.0**
MODS pmax pmax
comp=Z,20nm,1.1s
MODS Modra-Piesok 81.67 325 *e*P **P 21 17 42.0 +1.0**
RETH Rethem/Aller, 81.69 332 *e*P **P 21 17 41.3 +0.3**
comp=Z,6.6nm,1.0s,baz=39,slow=5.2
RETH Rethem/Aller, 81.69 332 P **P 21 17 41.1 +0.1**
PRU Pruhonice 81.70 328 *e*P **P 21 17 41.8 +0.7**
PRU Pruhonice 81.70 328 *e*P **P 21 17 41.8 +0.7**
PRU Pruhonice 81.70 328 P **P 21 17 41.6 +0.5**
HSKC Hora Svate Kat 81.71 329 *e*P **P 21 17 41.4 +0.2**
HSKC Hora Svate Kat 81.71 329 P **P 21 17 41.5 +0.3**
TREC Trest 81.80 327 P **P 21 17 42.0 +0.3**
WIMM Wimmelburg 81.80 330 P **P 21 17 40.3 -1.3**
NEUB Neuenburg 81.93 330 *e*P **P 21 17 42.6 +0.3**
comp=Z,16nm,1.0s,baz=39,slow=5.2
NEUB Neuenburg 81.93 330 P **P 21 17 42.4 +0.1**
CLZ Clausthal 82.00 331 *e*P **P 21 17 43.3 +0.6**
comp=Z,13nm,1.1s,baz=39,slow=5.2
CLZ Clausthal 82.00 331 P **P 21 17 43.2 +0.4**
MDVR Moldovita 82.05 321 ⇓P **P 21 17 42.5 -0.6**
TANN Tannenbergstha 82.26 329 *e*P **P 21 17 44.3 +0.1**
comp=Z,63nm,2.9s,baz=39,slow=5.2
PLN Plauen 82.33 329 *e*P **P 21 17 44.8 +0.4**
comp=Z,1.5nm,0.9s,baz=39,slow=5.2
EPLO Experimental L 82.37 32 **P 21 17 44.8 +0.1**
EPLO IAmb IAmb 21 17 46.4
comp=Z,9.4nm,1.0s
GTTG Gottingen 82.39 331 *e*P **P 21 17 45.2 +0.5**
comp=Z,9.2nm,0.7s,baz=39,slow=5.2
NKC Novy Kostel 82.40 329 P **P 21 17 44.8 0.0**
MPLH Magyarpolny 82.41 324 P **P 21 17 45.1 +0.2**
MOX Moxa 82.43 330 *e*P **P 21 17 45.3 +0.3**
comp=Z,4.2nm,0.9s,baz=39,slow=5.2
MOX *e*L L 21 54 20.4
comp=Z,53nm,20.3s
SOP Sopron 82.50 325 P **P 21 17 46.2 +0.9**
MORH Mrgy, Hungar 82.57 323 ⇑P **P 21 17 45.3 -0.4**
MORH Mrgy, Hungar 82.57 323 P **P 21 17 45.5 -0.3**
RONA Rosalia, Austr 82.61 325 *i* P **P 21 17 46.9 +0.9**
comp=Z,9.5nm,1.2s,SNR=5.3
IBBN Ibbenburen 82.64 333 *e*P **P 21 17 46.1 +0.1**
comp=Z,16nm,1.2s,baz=39,slow=5.2
CONA Conrad Observa 82.64 326 *i* P **P 21 17 47.0 +0.8**
comp=Z,11nm,1.4s,SNR=5.8
Y14A Wickenburg 82.69 53 P **P 21 17 47.4 +0.7**
Y14A IAmb IAmb 21 17 49.4
comp=Z,6.7nm,0.8s
KHC Kasperske Hory 82.76 328*c* *i*P **P 21 17 46.4 -0.3**
KHC pmax pmax
comp=Z,7.0nm,0.8s
KHC Kasperske Hory 82.76 328 **P 21 17 46.0 -0.7**
KHC Kasperske Hory 82.76 328 *e*P **P 21 17 47.2 +0.5**
KHC AMS AMS 21 58 40.0
comp=Z,100nm,14.4s
KHC Kasperske Hory 82.76 328 P **P 21 17 47.1 +0.4**
ROTZ Rotzenmuhle 82.86 329 *e*P **P 21 17 47.9 +0.7**
comp=Z,3.5nm,1.4s,baz=39,slow=5.2
GEC2 GERESS Array S 82.92 328 *e*P **P 21 17 47.8 +0.1**
comp=Z,3.7nm,0.8s,baz=39,slow=5.2
GERES GERESS Array B 82.92 328 P **P 21 17 47.1 -0.5**
comp=Z,1.4nm,0.4s,baz=35,slow=3.3,SNR=21
GERES PP **PP 21 20 55.5 -2.2**
comp=Z,0.4nm,0.9s,baz=28,slow=6.5,SNR=3.5
comp=Z,1.4nm,0.4s
GERES GERESS Array B 82.92 328 P **P 21 17 46.7 -0.9**
WET Wettzell 83.05 328 *e*P **P 21 17 48.8 +0.6**
comp=Z,9.5nm,1.3s,baz=39,slow=5.2
WET Wettzell 83.05 328 P **P 21 17 48.6 +0.4**
GRA3 Grafenberg Arr 83.23 329 P **P 21 17 49.7 +0.6**
KASTN Kahler Asten 83.27 332 *e*P **P 21 17 49.5 +0.2**
comp=Z,9.6nm,1.4s,baz=39,slow=5.2
ARSA Arzberg 83.29 326 P **P 21 17 49.2 -0.3**
ARSA Arzberg 83.29 326 *i* P **P 21 17 50.1 +0.6**
comp=Z,6.8nm,1.5s
GRA2 Grafenberg Arr 83.30 329 P **P 21 17 49.9 +0.5**
GRA1 Grafenberg Arr 83.33 329 **P 21 17 49.3 -0.3**
GRA1 IAmb IAmb 21 17 51.2
comp=Z,14nm,0.9s
GRA1 Grafenberg Arr 83.33 329 P **P 21 17 50.2 +0.6**
GRF Grafenberg Arr 83.33 329 P **P 21 17 49.3 -0.3**
GRF pmax pmax
comp=Z,14nm,0.9s
GRF Grafenberg Arr 83.33 329 *e*P **P 21 17 50.4 +0.8**
comp=Z,14nm,0.9s,baz=39,slow=5.2
GRF *e*L L 21 58 30.0
comp=Z,47nm,18.1s
GRFO Grafenberg 83.33 329 P **P 21 17 50.2 +0.6**
GRB3 Grafenberg Arr 83.35 329 P **P 21 17 50.2 +0.4**
GRB4 Grafenberg Arr 83.36 329 P **P 21 17 50.5 +0.8**
MOA Molln 83.42 327 *i* P **P 21 17 50.6 +0.4**
comp=Z,10nm,1.3s
MOA Molln 83.42 327 P **P 21 17 50.9 +0.7**
MVCO Mesa Verde 83.44 48 **P 21 17 50.9 +0.1**
MVCO IAmb IAmb 21 18 00.3
comp=Z,4.3nm,0.6s
MVCO Mesa Verde 83.44 48 P **P 21 17 51.6 +0.9**
KZIT Kziot 83.51 304 P **P 21 17 51.5 +0.6**
SRS Serrai 83.56 317 P **P 21 17 51.3 +0.3**
HRFI Mount Harif 83.61 302 P **P 21 17 50.9 -0.5**
GRC4 Grafenberg Arr 83.67 329 P **P 21 17 51.6 +0.2**
EKA Eskdalemuir Ar 83.67 340 P **P 21 17 51.1 -0.2**
comp=Z,0.7nm,0.4s,baz=37,slow=4.9,SNR=11
EKA LR LR 21 57 52.7
comp=Z,60nm,18.8s,baz=8.0,slow=38
comp=Z,0.7nm,0.4s
EKA Eskdalemuir Ar 83.67 340 P **P 21 17 50.9 -0.3**
EKA pmax pmax
comp=Z,9.0nm,1.4s
GRC1 Grafenberg Arr 83.74 329 P **P 21 17 52.3 +0.5**
GRC3 Grafenberg Arr 83.79 329 P **P 21 17 52.1 +0.1**
BIOA Bad Ischl, Aus 83.81 327 *i* P **P 21 17 52.8 +0.6**
comp=Z,8.8nm,1.1s,SNR=7.4
SESA Seetaler Alpe, 83.83 326 *i* P **P 21 17 52.7 +0.1**
SNR=11
EIL Elat 83.89 302 LR LR 21 58 54.8
comp=Z,52nm,18.0s,baz=87,slow=38
EIL Elat 83.89 302 P **P 21 17 53.5 +0.7**
KNT Kendrikon 83.91 317 P **P 21 17 51.8 -1.0**
SOKA Soboth 83.94 325 *i* P **P 21 17 53.1 +0.1**
comp=Z,17nm,1.1s,SNR=13
TNS Taunus Mts 84.03 331 *e*P **P 21 17 53.5 +0.2**
comp=Z,7.7nm,1.3s,baz=39,slow=5.2
X18A Snowflake 84.27 51 P **P 21 17 55.4 +0.4**
X18A IAmb IAmb 21 17 57.8
comp=Z,9.1nm,1.0s
OBKA Obir 84.29 326 *e*P **P 21 17 54.5 -0.2**
comp=Z,3.1nm,0.9s
KBA Koelnbreinsper 84.41 327 *i* P **P 21 17 55.3 -0.1**
comp=Z,3.9nm,1.2s
KBA Koelnbreinsper 84.41 327 P **P 21 17 55.0 -0.4**
LESA Schwarzleotal 84.44 327 *i* P **P 21 17 55.5 +0.1**
comp=Z,6.8nm,1.1s,SNR=5.3
MYKA Terra Mystica 84.61 326 *e*P **P 21 17 55.6 -0.7**
comp=Z,2.4nm,0.6s
ACOM Acomizza, Ital 84.73 326 P **P 21 17 56.4 -0.7**
LIT Litokhoron 84.87 317 P **P 21 17 56.7 -1.0**
LIT pmax pmax
comp=Z,22nm,1.0s
LIT Litokhoron 84.87 317 **P 21 17 56.7 -1.0**
LIT Litokhoron 84.87 317 P **P 21 17 57.5 -0.2**
SDCO Great Sand Dun 84.87 46 P **P 21 17 58.4 +0.3**
PMOR Pomariorio Ree 84.91 113 *e*T T 22 51 01.1
comp=Z,7.0nm,0.2s
PDG Podgorica 84.97 320 ⇓P **P 21 17 58.0 -0.1**
PDG Podgorica 84.97 320 P **P 21 17 58.3 +0.2**
WATA Walderalm 84.99 328 *e*P **P 21 17 58.2 -0.2**
comp=Z,1.7nm,1.0s
WTTA Wattenberg 85.02 328 *i* P **P 21 17 58.4 -0.1**
comp=Z,5.0nm,1.4s
ABTA Abfaltersbach 85.03 327 *i* P **P 21 17 57.6 -0.8**
comp=Z,6.6nm,1.1s
FUSE Fusea 85.07 326 P **P 21 17 57.3 -1.2**
TUC Tucson 85.16 53 P **P 21 17 59.6 +0.2**
TUC pmax pmax
comp=Z,7.0nm,0.9s
TUC Tucson 85.16 53 **P 21 17 59.6 +0.2**
TUC IAmb IAmb 21 18 02.1
comp=Z,6.8nm,0.9s
TUC Tucson 85.16 53 P **P 21 18 01.6 +2.2**
MOTA Moosalm 85.19 328 *i* P **P 21 17 59.2 -0.1**
comp=Z,4.8nm,1.3s
RETA Reutte 85.23 328 *i* P **P 21 17 59.0 -0.4**
comp=Z,5.9nm,1.0s
SQTA Sankt Quirin 85.24 328 *i* P **P 21 17 59.4 -0.1**
comp=Z,2.0nm,0.9s
PPT Papeete 85.29 116 LR LR 21 49 18.0
comp=Z,52nm,20.5s,baz=358,slow=31
PPT2 Papeete2 85.30 116 *e*LR LR 21 44 47.1
comp=Z,227nm,30.8s
PPT2 *e*LR LR 21 44 54.8
comp=Z,170nm,26.8s
BMRD Maredsous 85.36 333 *d*P **P 21 17 59.8 -0.1**
comp=Z,6.2nm,1.0s
ECSD EROS Data Cent 85.46 37 **P 21 18 00.2 -0.3**
ECSD EROS Data Cent 85.46 37 P **P 21 18 01.1 +0.5**
BFO Black Forest 85.58 330 P **P 21 18 00.0 -1.1**
BFO pmax pmax
comp=Z,9.0nm,1.0s
BFO Black Forest 85.58 330 **P 21 18 00.0 -1.1**
BFO IAmb IAmb 21 18 01.2
comp=Z,9.0nm,1.0s
BFO Black Forest 85.58 330 *e*P **P 21 18 01.1 0.0**
comp=Z,9.7nm,1.0s,baz=39,slow=5.2
BFO *ep*P **sP 21 18 15.7 -2.1**
FETA Feichten 85.60 328 *i* P **P 21 18 01.1 -0.3**
comp=Z,3.8nm,0.8s
DAVA Damuels 85.76 328 *i* P **P 21 18 02.2 +0.1**
comp=Z,7.0nm,0.9s
FUORN Ofenpass-Fuorn 86.11 328 **P 21 18 02.9 -1.2**
FUORN IAmb IAmb 21 18 05.1
comp=Z,15nm,1.2s
FUORN Ofenpass-Fuorn 86.11 328 P **P 21 18 04.1 +0.1**
DAVOX Davos/Dischmat 86.15 328 LR LR 22 00 06.4
comp=Z,50nm,18.0s,baz=36,slow=38
ANMO Albuquerque 86.17 49 P **P 21 18 06.9 +2.4**
SCHQ Schefferville 86.64 15 P **P 21 18 07.0 +0.9**
comp=Z,5.6nm,0.8s,baz=302,slow=8.4,SNR=5.5
SCHQ LR LR 22 00 38.5
comp=Z,36nm,18.6s,baz=304,slow=38
comp=Z,5.6nm,0.8s
TAOE Nuku Hiva Isla 87.12 103 *e*LR LR 21 45 53.0
comp=Z,178nm,27.6s
AQU L'Aquila 87.96 323 P **P 21 18 13.5 +0.6**
TBI Tubuai 89.07 120 *e*LR LR 21 46 39.5
comp=Z,647nm,28.8s
WMOK Wichita Mounta 90.86 45 P **P 21 18 26.2 -0.3**
WMOK pmax pmax
comp=Z,4.0nm,1.0s
WMOK Wichita Mounta 90.86 45 P **P 21 18 26.2 -0.3**
WMOK IAmb IAmb 21 18 28.6
comp=Z,3.6nm,0.9s
WMOK Wichita Mounta 90.86 45 P **P 21 18 27.0 +0.5**
VAE Valguarnera 91.13 320 LR LR 22 02 05.4
comp=Z,114nm,18.0s,baz=79,slow=37
TXAR Lajitas Array 91.71 51 P **P 21 18 32.0 +1.4**
comp=Z,2.2nm,0.7s,baz=303,slow=3.1,SNR=27
TXAR LR LR 21 52 28.2
comp=Z,18nm,21.5s,baz=2.5,slow=31
comp=Z,2.2nm,0.7s
TXAR Lajitas Array 91.71 51 P **P 21 18 30.4 -0.3**
TXAR Lajitas Array 91.71 51 **P 21 18 30.4 -0.3**
SADO Sadowa 92.15 27 LR LR 22 04 49.3
comp=Z,30nm,18.8s,baz=182,slow=39
ESDC Sonseca Array 97.64 333 LR LR 22 07 32.3
comp=Z,28nm,18.1s,baz=21,slow=38
TORD Torodi Ar. Bea 117.16 313 PKP **PKPdf 21 24 07.6 -0.8**
comp=Z,0.4nm,0.5s,baz=355,slow=0.7,SNR=6.0
QSPA South Pole Qui 125.77 180 PKP **PKPdf 21 24 22.9 -0.5**
comp=Z,1.9nm,1.0s,baz=0.0,slow=2.0,SNR=3.2
QSPA South Pole Qui 125.77 180 **PKPdf 21 24 23.4 0.0**

*IDC **08** 21:27:44.0±0.8, 37.˚50N×117.˚47W, h0km, mbtmp3.0/5, ML3.4/5, Error ellipse: s-maj=9.6km s-min=5.8km az=60.0*
*NEIC **08** 21:27:44.1±1.3, 37.˚520N±0.˚005×117.˚44W±0.˚02, h13km±9km, ML3.4/154, ML3.7/20(REN), Mwr3.6/45(SLM), Error ellipse: s-maj=2.2km s-min=0.4km az=69.0*
*REN **08** 21:27:44.9±1.9, 37.˚53N±0.˚01×117.˚44W±0.˚02, h9km±8km, Error ellipse: s-maj=2.2km s-min=1.7km az=68.0*
*NEIC **08** 21:27:44, 37.˚53N×117.˚42W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=2.70; Mθθ 1.33; Mφφ 1.37; Mrθ 0.19; Mrφ 1.78; Mθφ 1.91; Fault plane solution: M0 3.51000×10^14^ NP1:φs 204.00000°, δ 62.00000°, λ -112.00000°. NP2:φs 65.00000°, δ 35.00000°, λ -55.00000°. Principal axes: T 3.5123, Plg 14.0000°, Azm 310.0000°; N -0.0041, Plg 19.0000°, Azm 215.0000°; P -3.5082, Plg 66.0000°, Azm 75.0000°:*

ISC 08 21:27:44.3±1.0, 37.˚52N±0.˚02×117.˚45W±0.˚02, h13km±8km, n82, σ1 9 13/91, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMN	**Gold Mountain**	**0.26**	**145**		**Pg**	**21 27 50.3**	**+0.3**
GMN				Sg	**Sg**	**21 27 54.1**	**+0.3**
GMN				IAML		21 27 54.9	
	comp=E,5μm,0.8s						
GMN				IAML		21 27 55.5	
	comp=N,4μm,0.6s						
LCH	**Last Change Ra**	**0.33**	**209**		**Pb**	**21 27 52.0**	**0.0**
LCH					**Sb**	**21 27 56.7**	**-0.6**
DSP	**Deep Springs**	**0.44**	**251**		**Pb**	**21 27 53.6**	**-0.3**
DSP				Sg	**Sb**	**21 27 59.9**	**-0.5**
DSP				IAML		21 28 00.4	
	comp=N,3μm,0.7s						
DSP				IAML		21 28 00.7	
	comp=E,5μm,0.8s						
TPH	**Tonopah**	**0.58**	**18**	Pg	**Pg**	**21 27 55.9**	**+0.1**
TPH				Sg	**Sg**	**21 28 03.6**	**+0.1**
TPH				IAML		21 28 10.9	
	comp=E,1μm,0.9s						
TIN	**Tinemaha, Big**	**0.78**	**234**		**Pg**	**21 27 58.2**	**-1.1**
TIN				Sg	**Sb**	**21 28 10.2**	**-0.1**
COLR	**Columbus**	**0.79**	**323**		**Pg**	**21 27 58.2**	**-1.4**
COLR					**Pb**	**21 28 00.1**	**+0.1**
COLR					**Sb**	**21 28 11.2**	**+0.6**
WCT	**Wildcat Mounta**	**0.98**	**138**		**Pg**	**21 28 03.0**	**-0.1**
NV11	**Mina Array Sit**	**1.07**	**329**		**Pg**	**21 28 04.8**	**-0.1**
NV11				IAML		21 28 22.7	
	comp=N,641nm,1.1s						
NV11				IAML		21 28 22.9	
	comp=E,1μm,1.0s						
LHV	**Little Huntoon**	**1.11**	**312**		**Pn**	**21 28 05.8**	**+0.3**
TPNV	**Topopah Spring**	**1.11**	**120**		**Pb**	**21 28 05.5**	**0.0**
TPNV				IAML		21 28 27.6	
	comp=E,1μm,1.2s						
NVAR	**Mina Array Bea**	**1.13**	**324**	Pg	**Pb**	**21 28 06.2**	**+0.4**
	comp=E,175nm,0.3s,baz=148,slow=18,SNR=604						
NVAR				Lg	Lg	21 28 21.0	
	comp=E,155nm,0.3s,baz=150,slow=27,SNR=19						
NVAR	**Mina Array Bea**	**1.13**	**324**		**Pg**	**21 28 05.8**	**-0.3**
FURC	**Furnace Creek,**	**1.15**	**156**		**Pn**	**21 28 06.3**	**+0.3**
MCBM	**Casa Benchmark**	**1.16**	**277**		**Pn**	**21 28 07.5**	**+1.0**
CWC	**Cottonwood Cre**	**1.19**	**205**		**Pb**	**21 28 07.0**	**+0.2**
SDH	**Striped Hills**	**1.24**	**134**		**Pg**	**21 28 08.0**	**-0.3**
MDYM	**Dry Creek**	**1.25**	**277**		**Pg**	**21 28 09.2**	**+0.8**
CPY	**CP-1**	**1.26**	**117**		**Pg**	**21 28 08.1**	**-0.3**
MDPB	**Devils Postpil**	**1.30**	**276**		**Pn**	**21 28 08.9**	**+0.5**
MDPB				IAML		21 28 27.4	
	comp=E,457nm,0.6s						
MDPB				IAML		21 28 32.2	
	comp=N,422nm,0.8s						
Q09A	**Carvers**	**1.33**	**9**		**Pn**	**21 28 09.2**	**+0.4**
S11A	**Rachel**	**1.36**	**84**		**Pb**	**21 28 09.8**	**+0.1**
AMDNV	**Amargosa**	**1.42**	**138**		**Pg**	**21 28 11.4**	**-0.1**
GWY	**Greenwater Val**	**1.47**	**155**		**Pb**	**21 28 11.3**	**-0.2**
GWY				IAML		21 28 42.4	
	comp=N,817nm,1.1s						
KCC	**Kaiser Creek**	**1.50**	**263**		**Pg**	**21 28 12.8**	**-0.4**
JRC2	**Joshua Ridge**	**1.56**	**191**		**Pb**	**21 28 13.6**	**+0.5**
KVN	**Kaiserville**	**1.61**	**342**		**Pn**	**21 28 13.1**	**+0.4**
QSM	**Queen of Sheba**	**1.62**	**163**		**Pn**	**21 28 13.5**	**+0.9**
QSM				IAML		21 28 38.8	
	comp=N,520nm,0.7s						
QSM				IAML		21 28 40.8	
	comp=E,524nm,0.6s						
CLC	**China Lake**	**1.70**	**184**		**Pn**	**21 28 14.6**	**+0.9**
WAKR	**Walker**	**1.85**	**303**		**Pn**	**21 28 16.7**	**+0.8**
PRN	**Pahroc Range**	**1.91**	**93**		**Pn**	**21 28 17.7**	**+1.1**
CCCA	**Chr Cany lake**	**1.99**	**178**		**Pn**	**21 28 18.9**	**+1.2**
ISA	**Isabella, Lake**	**2.03**	**204**		**Pn**	**21 28 19.4**	**+1.1**
LRMC	**Laurel Mtn Rad**	**2.04**	**185**		**Pn**	**21 28 19.4**	**+0.9**
LRMC				IAML		21 28 52.3	
	comp=E,231nm,0.8s						
VES	**Vestal, Richgr**	**2.13**	**219**		**Pn**	**21 28 20.9**	**+1.4**
VES				IAML		21 28 54.5	
	comp=E,252nm,0.4s						
VES				IAML		21 29 03.3	
	comp=N,218nm,1.4s						
GSC	**Goldstone, Bar**	**2.27**	**167**		**Pn**	**21 28 22.7**	**+1.1**
GSC				IAML		21 29 00.2	
	comp=E,356nm,0.9s						
GSC				IAML		21 29 00.3	
	comp=N,252nm,0.7s						
PNTR	**Pine Nut**	**2.31**	**313**		**Pn**	**21 28 23.0**	**+0.7**
PNTR				IAML		21 29 00.4	
	comp=E,281nm,1.1s						
PNTR				IAML		21 29 01.6	
	comp=N,254nm,1.1s						
CMB	**Columbia Colle**	**2.38**	**283**		**Pn**	**21 28 23.9**	**+0.8**
CMB				IAML		21 29 05.9	
	comp=E,133nm,0.8s						
MTPC	**Mountain Pass**	**2.54**	**142**		**Pn**	**21 28 26.4**	**+1.0**
MTPC				IAML		21 29 07.6	
	comp=N,127nm,0.5s						
MTPC				IAML		21 29 14.2	
	comp=E,143nm,1.1s						
PAHR	**Pah Rah Range**	**2.66**	**326**		**Pn**	**21 28 27.9**	**+0.9**
PAHR				IAML		21 29 16.1	
	comp=E,113nm,1.2s						
MPK	**Martis Peak**	**2.69**	**312**		**Pn**	**21 28 28.7**	**+1.1**
MPK				IAML		21 29 13.9	
	comp=E,139nm,0.7s						
MPK				IAML		21 29 20.9	
	comp=N,215nm,1.1s						
TPO	**Tropico Hills**	**2.71**	**194**		**Pn**	**21 28 28.6**	**+1.0**
TPO				IAML		21 29 18.1	
	comp=E,103nm,1.0s						
TPO				IAML		21 29 28.9	
	comp=N,123nm,1.1s						
PKD	**Bear Valley Ra**	**2.94**	**239**		**Pn**	**21 28 31.1**	**+0.4**
PKD				IAML		21 29 31.8	
	comp=E,165nm,1.2s						
PKD				IAML		21 29 34.5	
	comp=N,123nm,1.3s						
PSUT	**Pine Spring**	**3.01**	**69**		**Pn**	**21 28 32.6**	**+0.7**
PSUT				IAML		21 29 26.0	
	comp=N,168nm,1.0s						
PSUT				IAML		21 29 29.0	
	comp=E,180nm,1.0s						
BBGB	**Big Mountain B**	**3.02**	**253**		**Pn**	**21 28 33.2**	**+1.2**
AFDM	**Forest Hills D**	**3.12**	**298**		**Pn**	**21 28 34.2**	**+1.0**
CCUT	**Cedar City**	**3.25**	**88**		**Pn**	**21 28 36.0**	**+0.9**
CCUT				IAML		21 29 36.8	
	comp=N,110nm,1.6s						
CCUT				IAML		21 29 40.5	
	comp=E,63nm,1.1s						
BEKR	**Beckworth**	**3.27**	**317**		**Pn**	**21 28 36.6**	**+1.2**
BFSC	**Mount Baldy Ra**	**3.28**	**183**		**Pn**	**21 28 36.8**	**+1.3**
SAO	**San Andreas Ge**	**3.28**	**258**		**Pn**	**21 28 37.1**	**+1.7**
MWC	**Mount Wilson**	**3.33**	**189**		**Pn**	**21 28 36.3**	**+0.1**
MWC				IAML		21 29 39.2	
	comp=N,69nm,0.9s						
MHC	**Mount Hamilton**	**3.34**	**268**		**Pn**	**21 28 37.5**	**+1.2**
MHC				IAML		21 29 35.0	
	comp=N,156nm,0.8s						
MHC				IAML		21 29 37.4	
	comp=E,156nm,1.2s						
LCMT	**Little Creek M**	**3.39**	**97**		**Pn**	**21 28 38.0**	**+1.0**
SZCU	**Shurtz Canyon**	**3.47**	**87**	Pn	**Pn**	**21 28 39.0**	**+0.9**
SZCU				IAML		21 29 41.3	
	comp=N,84nm,0.4s						
ELK	**Elko**	**3.65**	**27**	Pn	**Pn**	**21 28 42.0**	**+1.3**
	comp=N,0.8nm,0.3s,baz=213,slow=13,SNR=12						
ELK				Pg	**Pg**	**21 28 52.0**	**-2.2**
	comp=N,5.8nm,0.3s,baz=209,slow=14,SNR=18						
ELK				Sn	**Sn**	**21 29 26.4**	**+2.7**
	comp=N,2.1nm,0.3s,baz=261,slow=11,SNR=4.0						
ELK				Lg	Lg	21 29 39.3	
	comp=N,12nm,0.3s,baz=227,slow=26,SNR=8.2						
	comp=N,1.8nm,0.3s						
ELK	**Elko**	**3.65**	**27**		**Pn**	**21 28 40.8**	**+0.1**
BELC	**Belle Mtn. Jos**	**3.70**	**161**		**Pn**	**21 28 42.1**	**+0.8**
BELC				IAML		21 29 44.6	
	comp=N,61nm,0.5s						
BELC				IAML		21 29 46.6	
	comp=E,81nm,1.0s						
KNB	**Kanab**	**3.72**	**96**		**Pn**	**21 28 42.6**	**+1.0**
KNB				IAML		21 29 47.0	
	comp=N,74nm,1.6s						
KNB				IAML		21 29 47.6	
	comp=E,54nm,0.9s						
W13A	**Hualapai Mount**	**3.76**	**129**		**Pn**	**21 28 42.6**	**+0.5**
W13A				IAML		21 29 54.1	
	comp=N,62nm,1.6s						
W13A				IAML		21 29 57.7	
	comp=E,49nm,1.3s						
ORV	**Oroville**	**3.77**	**304**		**Pn**	**21 28 43.9**	**+1.8**
JRSC	**Jasper Ridge**	**3.81**	**270**		**Pn**	**21 28 43.2**	**+0.5**
JRSC				IAML		21 30 10.9	
	comp=E,76nm,2.4s						
JRSC				IAML		21 30 50.8	
	comp=N,70nm,2.9s						
IRM	**Iron Mountain**	**3.84**	**150**		**Pn**	**21 28 43.7**	**+0.5**
IRM				IAML		21 29 48.9	
	comp=E,97nm,1.1s						
IRM				IAML		21 29 50.8	
	comp=N,52nm,1.6s						
ELS	**Elsinore Mount**	**3.86**	**180**		**Pn**	**21 28 44.0**	**+0.5**
PMD	**Palm Desert**	**3.96**	**167**		**Pn**	**21 28 45.1**	**+0.4**
PFO	**Pinyon Flats O**	**3.98**	**168**	Pn	**Pn**	**21 28 46.7**	**+1.5**
	comp=N,0.9nm,0.3s,baz=352,slow=12,SNR=7.0						
PFO				Sn	**Sn**	**21 29 32.9**	**+1.2**
	comp=N,1.4nm,0.3s,baz=0.0,slow=20,SNR=5.8						
PFO				Lg	Lg	21 29 51.0	
	comp=N,2.5nm,0.3s,baz=344,slow=21,SNR=5.3						
	comp=N,4.3nm,0.3s						
PFO	**Pinyon Flats O**	**3.98**	**168**		**Pn**	**21 28 45.6**	**+0.5**
CVS	**Carmenet Viney**	**4.05**	**283**		**Pn**	**21 28 46.0**	**+0.1**
CVS				IAML		21 30 00.4	
	comp=N,45nm,2.2s						
CVS				IAML		21 30 03.0	
	comp=E,46nm,2.6s						
PKCU	**Pink Cliffs**	**4.09**	**89**	Pn	**Pn**	**21 28 46.8**	**0.0**
MTPU	**Mount Pierson**	**4.20**	**81**		**Pn**	**21 28 49.5**	**+1.1**
MTPU				IAML		21 30 07.3	
	comp=E,33nm,1.8s						
MTPU				IAML		21 30 08.5	
	comp=N,48nm,1.1s						
U15A	**North Rim**	**4.27**	**103**		**Pn**	**21 28 48.7**	**-0.6**
BORC	**Borrego Spring**	**4.32**	**168**		**Pn**	**21 28 51.2**	**+1.5**
BORC				IAML		21 30 07.3	
	comp=E,33nm,0.9s						
O03E	**Paynes Creek**	**4.38**	**311**		**Pn**	**21 28 52.4**	**+1.7**
O03E				IAML		21 30 10.1	
	comp=N,37nm,1.9s						
O03E				IAML		21 30 20.9	
	comp=E,56nm,1.1s						
HATC	**Hat Creek Radi**	**4.54**	**318**		**Pn**	**21 28 52.0**	**-0.7**
HATC				IAML		21 30 27.1	
	comp=E,57nm,2.7s						
BGU	**Big Grassy Mou**	**4.83**	**44**		**Pn**	**21 28 57.6**	**+0.7**
BGU				IAML		21 30 24.5	
	comp=N,22nm,1.3s						
BGU				IAML		21 30 44.1	
	comp=E,20nm,1.1s						
BAR	**Barrett**	**4.87**	**172**	Pn	**Pn**	**21 28 58.1**	**+0.9**
BAR				IAML		21 30 22.1	
	comp=E,23nm,1.3s						
BAR				IAML		21 30 27.7	
	comp=N,19nm,1.2s						
O02D	**Mt. Diablo Mer**	**4.94**	**304**		**Pn**	**21 29 00.7**	**+2.4**
O02D				IAML		21 30 28.2	
	comp=E,21nm,2.0s						
O02D				IAML		21 30 38.0	
	comp=N,20nm,2.1s						
Y14A	**Wickenburg**	**5.08**	**133**		**Pn**	**21 29 00.7**	**+0.5**
Y14A				IAML		21 30 36.1	
	comp=E,35nm,1.2s						
ESJX	**Sierra Juarez**	**5.64**	**167**		**Pn**	**21 29 08.9**	**+0.9**
X16A	**Lo Mia Camp, P**	**5.77**	**121**	Pn	**Pn**	**21 29 11.8**	**+2.0**
YBH	**Yreka Blue Hor**	**5.85**	**318**	Pn	**Pn**	**21 29 12.3**	**+1.5**
	comp=E,0.1nm,0.3s,baz=135,slow=16,SNR=2.0						
YBH				Lg	Lg	21 30 46.1	
	comp=E,0.2nm,0.3s,baz=133,slow=25,SNR=2.1						
	comp=E,0.8nm,0.6s						
PDAR	**Pinedale Array**	**8.00**	**47**	Pn	**Pn**	**21 29 44.7**	**+4.3**
	comp=E,0.3nm,0.3s,

ANMO	**Albuquerque**	**9.24**	**103**	Pg		Pn	21 30 33.5	+36
	comp=E,0.1nm,0.3s,baz=279,slow=14,SNR=4.9							
ANMO				Lg		Lg	21 32 30.6	
	comp=E,0.1nm,0.3s,baz=97,slow=8.1,SNR=3.4							
TXAR	**Lajitas Array**	**14.10**	**121**	Pn		**P**	**21 31 08.2**	**-3.2**
	baz=310,slow=13,SNR=2.8							
	comp=E,0.2nm,0.7s							

CATAC ***08*** *21:39:03.0±0.4, 12°N±2°×8°8W±°, h18km±2km, M3.7/34, MLv3.7/34, Error ellipse: s-maj=4.5km s-min=1.8km az=25.2, confirmed*

NEIC ***08*** *21:39:04.2±2.0, 12°.20N±0°.05×87°.69W±0°.06, h35km±2km, mb4.1/4, Error ellipse: s-maj=10.4km s-min=8.1km az=227.0*

SNET ***08*** *21:39:04.6±2.9, 12°.20N×87°.71W, h29km, ML3.6, Presumed earthquake*

ISC 08 21:39:03.4±1.3, 12.12N±0°.05×87.75W±0°.03, h31km±11km, n63, σ1s26/99, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.89**	**50**		**Pb**	**21 39 20.5**	**0.0**
CRIN					**Sb**	**21 39 30.2**	**-1.9**
CRIN	**San Cristobal**	**0.89**	**50**	P	**Pb**	**21 39 21.0**	**+0.5**
CRIN				S	**Sn**	**21 39 33.4**	**+1.6**
QUEN	**Al S del Volca**	**0.99**	**62**	P	**Pb**	**21 39 21.7**	**-0.5**
HERN	**Volcan Telica**	**1.02**	**61**		**Pn**	**21 39 21.5**	**-0.1**
HERN					**Sn**	**21 39 31.9**	**-3.1**
HERN	**Volcan Telica**	**1.02**	**61**	P	**Pn**	**21 39 21.9**	**+0.2**
HERN				S	**Sb**	**21 39 37.0**	**+1.2**
ROCN	**Rota Cerro Neg**	**1.06**	**68**	P	**Pb**	**21 39 23.1**	**-0.1**
PLRN	**Geotermica Pol**	**1.06**	**64**	P	**Pb**	**21 39 22.8**	**-0.5**
CNGA	**Al SSO del Vol**	**1.09**	**70**	P	**Pb**	**21 39 23.2**	**-0.6**
CNGA				S	**Sb**	**21 39 39.2**	**+1.5**
CNGN	**Cerro Negro**	**1.09**	**70**	P	**Pb**	**21 39 23.4**	**-0.4**
CNGN				S	**Sb**	**21 39 38.6**	**+0.8**
MACN	**El Madrono**	**1.10**	**72**	P	**Pb**	**21 39 23.5**	**-0.6**
MACN				S	**Sb**	**21 39 38.7**	**+0.6**
INTP	**Intipuca**	**1.11**	**344**	*eP*	**Pb**	**21 39 26.1**	**+2.0**
INTP				*eS*	**Sb**	**21 39 37.7**	**-0.6**
CNCH	**Conchagua**	**1.15**	**356**	P	**Pn**	**21 39 23.5**	**0.0**
CNCH				S	**Sb**	**21 39 40.2**	**+0.6**
CNCH	**Conchagua**	**1.15**	**356**	*eP*	**Pn**	**21 39 23.9**	**+0.3**
CNCH				*eS*	**Sb**	**21 39 39.9**	**+0.4**
LCND	**La Caada**	**1.19**	**353**	P	**Pn**	**21 39 23.9**	**0.0**
LCND				S	**Sb**	**21 39 40.8**	**+0.3**
LCND	**La Caada**	**1.19**	**353**	*eP*	**Pn**	**21 39 23.9**	**0.0**
MOMN	**Momotombo**	**1.22**	**76**	P	**Pn**	**21 39 24.8**	**+0.5**
MOMN				S	**Sb**	**21 39 42.1**	**+0.8**
SAPS	**Ciudad Sandino**	**1.31**	**88**	P	**Pn**	**21 39 26.3**	**+0.6**
SAPS				S	**Sb**	**21 39 44.0**	**-0.1**
APQ3	**Volcan Apoyequ**	**1.36**	**83**	P	**Pn**	**21 39 26.9**	**+0.7**
APQ3				S	**Sb**	**21 39 46.2**	**+0.9**
APYN	**Apoyeque**	**1.37**	**85**	P	**Pn**	**21 39 27.5**	**+1.1**
APYN				S	**Sb**	**21 39 44.8**	**-0.9**
APQ2	**Apoyeque**	**1.39**	**87**	P	**Pn**	**21 39 27.5**	**+0.8**
APQ2	**Apoyeque**	**1.39**	**87**	P	**Pn**	**21 39 27.6**	**+0.8**
APQ2				S	**Sb**	**21 39 45.8**	**-0.5**
APQ2				S	**Sn**	**21 39 46.8**	**+2.7**
BLLM	**Bellamira**	**1.40**	**340**	*eP*	**Pn**	**21 39 26.6**	**-0.2**
RANC	**El Ranchito**	**1.41**	**338**	P	**Pn**	**21 39 27.8**	**+0.7**
RANC				S	**Sb**	**21 39 45.7**	**-1.2**
UNAN	**Cigeo UNAN**	**1.45**	**90**	P	**Pn**	**21 39 28.6**	**+1.1**
UNAN				S	**Sb**	**21 39 47.0**	**-0.8**
TISN	**Laguna Tiscapa**	**1.45**	**89**	P	**Pn**	**21 39 27.9**	**+0.4**
PACA	**Pacayal**	**1.45**	**337**	P	**Pn**	**21 39 27.5**	**-0.2**
PACA				S	**Sb**	**21 39 47.6**	**-0.5**
MGAN	**Managua**	**1.47**	**89**		**Pn**	**21 39 27.5**	**-0.2**
MGAN	**Managua**	**1.47**	**89**	P	**Pn**	**21 39 29.2**	**+1.5**
MGAN				S	**Sb**	**21 39 48.6**	**+0.1**
WILN	**Americas 2**	**1.53**	**88**	P	**Pn**	**21 39 29.5**	**+0.9**
WILN				S	**Sb**	**21 39 49.5**	**-0.6**
MAS3	**Al N del Volca**	**1.54**	**93**	P	**Pn**	**21 39 30.2**	**+1.4**
MAS3				S	**Sb**	**21 39 49.8**	**-0.8**
AERN	**Aeropuerto Man**	**1.55**	**89**	P	**Pn**	**21 39 29.7**	**+0.8**
AERN				S	**Sb**	**21 39 50.0**	**-0.7**
SABN	**Sabanita**	**1.56**	**96**	P	**Pn**	**21 39 29.7**	**+0.7**
MASN	**Masaya**	**1.57**	**95**	P	**Pn**	**21 39 29.9**	**+0.7**
NANN	**Nandasmo**	**1.60**	**96**	S	**Sb**	**21 39 51.6**	**-0.8**
LIMN	**Finca el Limon**	**1.64**	**55**	P	**Pn**	**21 39 30.8**	**+0.5**
LIMN				S	**Sb**	**21 39 52.5**	**-1.0**
TECO	**Alcaldia de Te**	**1.73**	**325**	S	**Sb**	**21 39 54.6**	**-1.4**
SCLA	**Alcaldia de Sa**	**1.84**	**329**	S	**Sb**	**21 39 57.8**	**+1.4**
SJTE	**Alcalda de S**	**1.93**	**321**	*eP*	**Pn**	**21 39 33.8**	**-0.4**
SJTE				*eS*	**Sn**	**21 39 57.5**	**+0.1**
OCON	**Estacion meteo**	**1.95**	**39**	P	**Pn**	**21 39 35.8**	**+1.3**
MATN	**Matagalpa**	**1.95**	**65**	P	**Pn**	**21 39 35.6**	**+1.1**
MATN				S	**Sb**	**21 40 00.7**	**-1.8**
PAVA	**Las Pavas**	**1.96**	**324**	P	**Pn**	**21 39 35.8**	**+1.2**
PAVA				S	**Sb**	**21 40 00.9**	**-1.8**
MARCA	**Marcala la Paz**	**2.04**	**352**	P	**Pn**	**21 39 37.5**	**+1.7**
MARCA				S	**Sb**	**21 40 02.9**	**-2.2**
RCFN	**Al S de San Ju**	**2.05**	**47**	P	**Pn**	**21 39 37.7**	**+1.7**
RCFN				S	**Sb**	**21 40 03.1**	**-2.3**
LOMA	**Loma Larga**	**2.05**	**318**	S	**Sn**	**21 40 02.5**	**+1.9**
BOAB	**BOACO BROADBAN**	**2.06**	**81**		**Pn**	**21 39 36.6**	**+0.6**
BOAB	**BOACO BROADBAN**	**2.06**	**81**	P	**Pn**	**21 39 37.1**	**+1.2**
BOAB				S	**Sb**	**21 40 03.3**	**-2.2**
RCON	**San Juan de Ri**	**2.06**	**49**	P	**Pn**	**21 39 37.5**	**+1.4**
RCON				S	**Sb**	**21 40 03.2**	**-2.4**
P5NO	**Presa 5 de nov**	**2.10**	**332**	P	**Pn**	**21 39 37.8**	**+1.3**
P5NO				S	**Sb**	**21 40 04.0**	**-2.6**
RCVN	**Varillal2**	**2.10**	**46**	P	**Pn**	**21 39 37.9**	**+1.3**
RCVN				S	**Sb**	**21 40 04.0**	**-2.7**
PMON	**Piamonte**	**2.20**	**316**	P	**Pn**	**21 39 38.3**	**+0.4**
PMON				S	**Sb**	**21 40 07.0**	**-2.5**
JAYA	**Jayaque - finc**	**2.25**	**313**	S	**Sn**	**21 40 06.8**	**+1.3**
CEVE	**Cerro Verde**	**2.49**	**313**	S	**Sn**	**21 40 13.4**	**+1.8**
MTO3	**Montecristo**	**2.75**	**325**		**Pn**	**21 39 45.6**	**-0.1**
MTO3	**Montecristo**	**2.75**	**325**	P	**Pn**	**21 39 46.7**	**+1.0**
MTO3				S	**Sn**	**21 40 20.7**	**+2.7**
ESQI	**Esquipulas**	**2.88**	**328**	Pn	**Pn**	**21 39 45.5**	**-1.8**
JUD3	**Juan Diaz 3**	**2.91**	**132**		**Pn**	**21 39 47.3**	**-0.4**
JTS	**Las Juntas de**	**3.29**	**123**		**Pn**	**21 39 52.4**	**-0.5**
SIUN	**Universidad Ur**	**3.31**	**61**	Pn	**Pn**	**21 39 51.0**	**-2.0**
PIRO	**Carate, Puerto**	**5.70**	**130**		**Pn**	**21 40 26.5**	**+0.5**
833A	**Chaparral WMA,**	**19.45**	**328**		**P**	**21 43 27.0**	**-0.6**
TXAR	**Lajitas Array**	**22.65**	**322**		**P**	**21 44 01.9**	**-0.3**
TX31	**Lajitas Ar. Si**	**22.65**	**322**	P	**P**	**21 44 02.0**	**-0.1**
MNHN	**Monahans**	**23.62**	**326**	P	**P**	**21 44 10.8**	**-1.2**
MNHN				IAmb	IAmb	21 44 13.5	
	comp=Z,5.1nm,0.8s						

IDC ***08*** *22:00:49.4±2.4, 6°.26S×152°.71E, h0km, mb3.4/5, mbtmp3.5/6, ML2.3/1, Error ellipse: s-maj=87.2km s-min=26.7km az=124.0*

ISC 08 22:00:56.1±2.0, 6°.2S±0°.4×152°.4E±0°.4, h38km, n6, σ0s88/7, mb3.4/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.10**	**238**	Pn	**Pn**	**22 02 24.5**	**+0.8**
	4.6nm,0.3s,baz=53,slow=10,SNR=7.1						
PMG				Sn	**Sn**	**22 03 31.1**	**-1.1**
	1.4nm,0.3s,baz=133,slow=17,SNR=2.7						
	9.3nm,0.3s						
WRA	**Warramunga Arr**	**22.25**	**230**	P	**P**	**22 05 50.0**	**+0.1**
	0.3nm,0.6s,baz=58,slow=11,SNR=1.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**24.88**	**224**	P	**P**	**22 06 15.4**	**-0.1**
	0.4nm,0.9s,baz=58,slow=8.8,SNR=4.4						
	0.4nm,0.9s						
ZALV	**Zalesovo Beam**	**82.05**	**327**	P	**P**	**22 13 12.1**	**-0.2**
	0.4nm,0.6s,baz=108,slow=4.7,SNR=2.1						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**83.57**	**22**	P	**P**	**22 13 19.3**	**-0.7**
	0.2nm,0.6s,baz=258,slow=5.7,SNR=2.6						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**84.61**	**322**	P	**P**	**22 13 26.3**	**+0.8**
	0.4nm,0.8s,baz=107,slow=3.6,SNR=4.6						
	0.4nm,0.8s						

WEL 08 22:03:13.4±0.8, 31°S±7°×17°9E±1°2, h12km, M4.7/7, mB5.1/7, ML4.7/13, MLv4.9/7, Mw(mB)4.5/7, Error ellipse: s-maj=17.6km s-min=4.4km az=116.4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.39**	**50**	P	Pn	22 04 06.0	-0.1
GLKZ				S	Sn	22 04 48.0	+1.8
HAZ	**Te Kaha**	**6.36**	**190**	P	Pn	22 04 48.9	+2.0
HAZ				S	Sn	22 06 03.9	+4.4
MKAZ	**Moumakai**	**6.49**	**209**	P	Pn	22 04 51.7	+2.9
RUGZ	**Raukumara Rang**	**6.58**	**190**	P	Pn	22 04 50.7	+0.6
RUGZ				S	Sn	22 06 06.5	+1.4
PUZ	**Puketiti**	**6.62**	**186**	P	Pn	22 04 52.3	+1.8
PUZ				S	Sn	22 06 06.5	+0.6
TWGZ	**Tauwhareparae**	**6.75**	**188**	P	Pn	22 04 51.9	-0.5
TWGZ				S	Sn	22 06 11.9	+2.8
TOZ	**Tahuroa Road**	**6.91**	**204**	P	Pn	22 04 58.7	+4.2
URZ	**Urewera**	**6.96**	**193**	P	Pn	22 04 54.7	-0.5
URZ				S	Sn	22 06 17.3	+3.0
MWZ	**Matawai**	**6.96**	**190**	P	Pn	22 04 54.3	-1.0
MWZ				S	Sn	22 06 15.3	+0.9
TKGZ	**Te Karaka**	**7.02**	**188**	P	Pn	22 04 54.5	-1.6
TKGZ				S	Sn	22 06 15.4	-0.4
CNGZ	**Carnagh Statio**	**7.03**	**186**	P	Pn	22 04 55.2	-1.0
RAGZ	**Rawiri**	**7.14**	**191**	P	Pn	22 04 56.7	-1.0
RTZ	**Ruatahuna**	**7.33**	**193**	P	Pn	22 04 59.2	-1.2
RTZ				S	Sn	22 06 23.9	+0.3
RAHZ	**Arahi**	**7.61**	**192**	P	Pn	22 05 02.0	-2.0
RAHZ				S	Sn	22 06 28.8	-1.4
MRHZ	**Matea Rd**	**7.66**	**196**	P	Pn	22 05 04.7	-0.2
WHHZ	**Waihua**	**7.74**	**191**	P	Pn	22 05 05.2	-0.7
NMHZ	**Naumai**	**7.83**	**193**	P	Pn	22 05 04.9	-2.3
ARHZ	**Aropaoanui**	**7.96**	**192**	P	Pn	22 05 07.1	-1.8
BKZ	**Black Stump Fm**	**7.96**	**195**	P	Pn	22 05 07.1	-2.0
NTVZ	**North Tongarir**	**8.11**	**199**	P	Pn	22 05 10.3	-0.7
MCHZ	**McNeill Hill**	**8.19**	**193**	P	Pn	22 05 10.3	-1.8
SNVZ	**South Ngauruho**	**8.20**	**199**	P	Pn	22 05 11.5	-0.8
FWVZ	**Far West T-bar**	**8.29**	**200**	P	Pn	22 05 12.1	-1.5
TRVZ	**Turoa**	**8.33**	**199**	P	Pn	22 05 12.6	-1.6
WNVZ	**Wahianoa**	**8.34**	**199**	P	Pn	22 05 11.5	-2.8
BHHZ	**Black Hill Sta**	**8.37**	**196**	P	Pn	22 05 11.0	-3.6
MOVZ	**Moawhango**	**8.37**	**198**	P	Pn	22 05 12.0	-2.7
KRHZ	**Kereru**	**8.45**	**195**	P	Pn	22 05 11.3	-4.4
KAHZ	**Kahuranaki**	**8.50**	**192**	P	Pn	22 05 12.3	-4.0
PXZ	**Pawanui**	**8.73**	**191**	P	Pn	22 05 14.2	-5.2
PNHZ	**Pukenui**	**8.74**	**195**	P	Pn	22 05 13.8	-6.0
TSZ	**Takapari Road**	**8.94**	**196**	P	Pn	22 05 17.5	-4.8
DVHZ	**Dannevirke**	**9.12**	**194**	P	Pn	22 05 18.3	-6.6
POWZ	**Post Office Ro**	**9.30**	**196**	P	Pn	22 05 22.4	-4.9
PRWZ	**Pori Road**	**9.41**	**195**	P	Pn	22 05 24.0	-4.8
BFZ	**Birch Farm**	**9.47**	**193**	P	Pn	22 05 23.2	-6.5
MRZ	**Mangatainoka R**	**9.60**	**196**	P	Pn	22 05 23.2	-8.2
TIWZ	**Tintock**	**9.64**	**195**	P	Pn	22 05 26.0	-6.0
HOWZ	**Holdsworth Sta**	**9.84**	**196**	P	Pn	22 05 27.5	-7.2
OGWZ	**Otaki Gorge**	**9.85**	**198**	P	Pn	22 05 26.4	-8.4
TMWZ	**Te Maipa**	**9.95**	**194**	P	Pn	22 05 27.9	-8.4
KIW	**Kapiti Island**	**9.96**	**199**	P	Pn	22 05 29.6	-6.8
MTW	**Mount Morrison**	**10.09**	**196**	P	Pn	22 05 32.6	-5.5
CAW	**Cannon Point**	**10.15**	**198**	P	Pn	22 05 31.3	-7.6
PAWZ	**Paruwai Farm**	**10.32**	**196**	P	Pn	22 05 33.8	-7.5
TCW	**Tory Channel**	**10.46**	**200**	P	Pn	22 05 35.8	-7.4
TUWZ	**Tuamarina**	**10.77**	**201**	P	Pn	22 05 40.4	-7.0
THZ	**Tophouse**	**11.41**	**204**	P	Pn	22 05 49.0	-7.2

NOU ***08*** *22:10:42.7, 38°.05S×176°.58E, h173km, MLv3.7/15, North Island, New Zealand*

WEL ***08*** *22:10:45.7±0.7, 38°S±3°×17°6E±°, h137km±6km, M3.0/30, ML2.5/8, MLv3.0/30, Error ellipse: s-maj=4.7km s-min=4.2km az=84.8*

ISC 08 22:10:40.0±1.7, 37.89S±0°.05×176.50E±0°.04, h184km±9km, n128, σ1s77/145, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.06**	**46**	P	**Pn**	**22 11 04.4**	**+0.1**
OMRZ	**Omania**	**0.24**	**205**	P	**Pn**	**22 11 05.2**	**+0.6**
TGRZ	**Tauranga**	**0.25**	**310**	P	**Pn**	**22 11 04.8**	**+0.3**
HLRZ	**Highlands Stat**	**0.38**	**198**	P	**Pn**	**22 11 05.9**	**+1.0**
KMRZ	**Kaimai**	**0.44**	**275**	P	**Pn**	**22 11 05.8**	**+0.6**
RRRZ	**Republican Roa**	**0.45**	**179**	P	**Pn**	**22 11 06.5**	**+1.4**
HRRZ	**Handcock Road**	**0.53**	**199**	P	**Pn**	**22 11 06.5**	**+1.0**
URZ	**Urewera**	**0.61**	**128**	P	**Pn**	**22 11 06.3**	**+0.6**
URZ	**Urewera**	**0.61**	**128**	P	**Pn**	**22 11 06.1**	**+0.3**
URZ				S	**Sn**	**22 11 23.0**	**-2.7**
MYRZ	**Mayor Island**	**0.64**	**341**	P	**Pn**	**22 11 06.7**	**+0.6**
ALRZ	**Allen Road**	**0.69**	**190**	P	**Pn**	**22 11 07.5**	**+1.3**
TOZ	**Tahuroa Road**	**0.81**	**281**	P	**Pn**	**22 11 07.8**	**+1.0**
TOZ				S	**Sn**	**22 11 26.0**	**-1.5**
RTZ	**Ruatahuna**	**0.82**	**153**	P	**Pn**	**22 11 08.1**	**+1.1**
RTZ				S	**Sn**	**22 11 26.1**	**-2.0**
TLZ	**Tolley Road**	**0.88**	**239**	P	**Pn**	**22 11 08.8**	**+1.5**
TLZ				S	**Sn**	**22 11 27.7**	**-0.8**
MWZ	**Matawai**	**0.93**	**119**	P	**Pn**	**22 11 08.6**	**+0.9**
MWZ				S	**Sn**	**22 11 29.6**	**+0.5**
RUGZ	**Raukumara Rang**	**0.93**	**95**	P	**Pn**	**22 11 07.9**	**+0.1**
RAGZ	**Rawiri**	**0.94**	**130**	P	**Pn**	**22 11 09.3**	**+1.4**
RAGZ				S	**Sn**	**22 11 28.1**	**-1.3**
MRHZ	**Matea Rd**	**0.95**	**184**	P	**Pn**	**22 11 09.4**	**+1.6**
MRHZ				S	**Sn**	**22 11 27.7**	**-1.8**
MTHZ	**Maungataniwha**	**1.00**	**165**	P	**Pn**	**22 11 09.9**	**+1.7**
MTHZ				S	**Sn**	**22 11 28.6**	**-1.6**
HAZ	**Te Kaha**	**1.02**	**83**	P	**Pn**	**22 11 09.4**	**+1.1**
HAZ				S	**Sn**	**22 11 28.0**	**-2.1**
SNGZ	**Shannon Statio**	**1.11**	**144**	P	**Pn**	**22 11 09.3**	**+0.3**
RAHZ	**Arahi**	**1.13**	**156**	P	**Pn**	**22 11 11.5**	**+2.4**
RAHZ				S	**Sn**	**22 11 30.9**	**-0.9**
RATZ	**Rangitukua**	**1.13**	**210**	P	**Pn**	**22 11 11.1**	**+1.9**
TKGZ	**Te Karaka**	**1.20**	**118**	P	**Pn**	**22 11 11.5**	**+1.8**
RITZ	**Rihia Road**	**1.20**	**205**	P	**Pn**	**22 11 12.1**	**+2.4**
TWGZ	**Tauwhareparae**	**1.20**	**104**	P	**Pn**	**22 11 11.8**	**+2.0**
NMHZ	**Naumai**	**1.23**	**169**	P	**Pn**	**22 11 12.8**	**+2.7**
NMHZ				S	**Sn**	**22 11 32.8**	**-0.7**
PKGZ	**Pakihiroa**	**1.25**	**90**	P	**Pn**	**22 11 11.8**	**+1.7**
PKGZ				S	**Sn**	**22 11 32.2**	**-1.2**
KATZ	**Kakaramea**	**1.26**	**210**	P	**Pn**	**22 11 13.4**	**+3.0**
BKZ	**Black Stump Fm**	**1.28**	**180**	P	**Pn**	**22 11 12.1**	**+1.7**
BKZ	**Black Stump Fm**	**1.28**	**180**	P	**Pn**	**22 11 11.9**	**+1.5**
BKZ				S	**Sn**	**22 11 32.4**	**-1.7**
RIGZ	**Rimuhau**	**1.29**	**130**	P	**Pn**	**22 11 13.3**	**+2.9**
MKAZ	**Moumakai**	**1.32**	**306**	P	**Pn**	**22 11 12.1**	**+1.4**
WHHZ	**Waihua**	**1.32**	**154**	P	**Pn**	**22 11 13.4**	**+2.7**
WHHZ				S	**Sn**	**22 11 33.6**	**-1.0**
NTVZ	**North Tongarir**	**1.37**	**208**	P	**Pn**	**22 11 13.8**	**+2.5**
TMVZ	**Te Maari**	**1.38**	**207**	P	**Pn**	**22 11 13.6**	**+2.3**
KRVZ	**Karewarewa**	**1.38**	**209**	P	**Pn**	**22 11 13.8**	**+2.4**
PUZ	**Puketiti**	**1.40**	**98**	P	**Pn**	**22 11 13.1**	**+1.6**
WTVZ	**West Tongariro**	**1.42**	**210**	P	**Pn**	**22 11 14.0**	**+2.3**
ARHZ	**Aropaoanui**	**1.43**	**164**	P	**Pn**	**22 11 14.0**	**+2.4**
ARHZ				S	**Sn**	**22 11 35.6**	**-0.7**
HIZ	**Hauiti**	**1.44**	**244**	P	**Pn**	**22 11 13.9**	**+2.2**
HIZ	**Hauiti**	**1.44**	**244**	P	**Pn**	**22 11 14.0**	**+2.2**
TWVZ	**Taurewa**	**1.45**	**215**	P	**Pn**	**22 11 14.4**	**+2.4**
KNZ	**Kokohu**	**1.46**	**141**	P	**Pn**	**22 11 14.0**	**+2.1**
SNVZ	**South Ngauruho**	**1.46**	**207**	P	**Pn**	**22 11 14.5**	**+2.4**
MXZ	**Matakaoa Point**	**1.47**	**78**	P	**Pn**	**22 11 14.0**	**+2.0**
MXZ	**Matakaoa Point**	**1.47**	**78**	P	**Sn**	**22 11 36.8**	**0.0**
MXZ	**Matakaoa Point**	**1.47**	**78**	P	**Pn**	**22 11 14.1**	**+2.1**
NGZ	**Ngauruhoe**	**1.47**	**208**	P	**Pn**	**22 11 14.6**	**+2.5**
CNGZ	**Carnagh Statio**	**1.47**	**114**	P	**Pn**	**22 11 14.6**	**+2.6**
PRGZ	**Paritu Road**	**1.50**	**134**	P	**Pn**	**22 11 14.6**	**+2.3**
COVZ	**Chateau Observ**	**1.51**	**210**	P	**Pn**	**22 11 14.9**	**+2.4**
WMGZ	**Waiomatatini S**	**1.52**	**88**	P	**Pn**	**22 11 14.2**	**+1.8**
KWHZ	**Kaweka Forest**	**1.54**	**182**	P	**Pn**	**22 11 14.9**	**+2.2**
KWHZ				S	**Sn**	**22 11 37.5**	**-0.8**
WIAZ	**Waiheke Island**	**1.54**	**315**	P	**Pn**	**22 11 14.2**	**+1.5**
FWVZ	**Far West T-bar**	**1.56**	**208**	P	**Pn**	**22 11 15.4**	**+2.3**
ETAZ	**East Tamaki Re**	**1.56**	**306**	P	**Pn**	**22 11 14.7**	**+1.8**
MAVZ	**Matarangi**	**1.56**	**208**	P	**Pn**	**22 11 15.6**	**+2.3**
MCHZ	**McNeill Hill**	**1.56**	**174**	P	**Pn**	**22 11 15.6**	**+2.7**
TRVZ	**Turoa**	**1.59**	**208**	P	**Pn**	**22 11 15.8**	**+2.3**
WNVZ	**Wahianoa**	**1.60**	**206**	P	**Pn**	**22 11 15.6**	**+2.1**
MOVZ	**Moawhango**	**1.63**	**201**	P	**Pn**	**22 11 15.3**	**+1.7**
MOVZ				S	**Sn**	**22 11 37.9**	**-1.9**
BHHZ	**Black Hill Sta**	**1.64**	**192**	P	**Pn**	**22 11 15.5**	**+1.8**
BHHZ				S	**Sn**	**22 11 38.4**	**-1.6**
MHGZ	**Mahia Peninsul**	**1.68**	**139**	P	**Pn**	**22 11 16.6**	**+2.6**
MBAZ	**Motutapu North**	**1.70**	**311**	P	**Pn**	**22 11 16.1**	**+1.9**
MTVZ	**Mangateitei**	**1.70**	**208**	P	**Pn**	**22 11 16.7**	**+2.4**
KRHZ	**Kereru**	**1.76**	**183**	P	**Pn**	**22 11 17.1**	**+2.2**
CKHZ	**Cape Kidnapper**	**1.83**	**166**	P	**Pn**	**22 11 18.1**	**+2.6**
VRZ	**Vera Road**	**1.84**	**227**	P	**Pn**	**22 11 18.8**	**+3.1**
KAHZ	**Kahuranaki**	**1.93**	**171**	P	**Pn**	**22 11 19.2**	**+2.5**
PNHZ	**Pukenui**	**2.04**	**187**	P	**Pn**	**22 11 19.5**	**+1.7**
PXZ	**Pawanui**	**2.16**	**173**	P	**Pn**	**22 11 21.3**	**+2.2**
WPHZ	**Waipukurau**	**2.17**	**181**	P	**Pn**	**22 11 21.2**	**+2.0**
TSZ	**Takapari Road**	**2.21**	**191**	P	**Pn**	**22 11 21.3**	**+1.7**
WAZ	**Wanganui**	**2.21**	**212**	P	**Pn**	**22 11 22.2**	**+2.5**
DREZ	**Durham Road**	**2.22**	**233**	P	**Pn**	**22 11 23.6**	**+3.8**
LREZ	**Lake Rotokare**	**2.27**	**226**	P	**Pn**	22 11 25.1	+4.8
NEZ	**North Egmont**	**2.34**	**233**	P	**Pn**	**22 11 25.1**	**+3.9**
PRHZ	**Porangahau**	**2.38**	**178**	P	**Pn**	**22 11 23.6**	**+2.1**
KHEZ	**Kahui Hut**	**2.40**	**233**	P	**Pn**	**22 11 25.1**	**+3.2**
KHEZ	**Kahui Hut**	**2.40**	**233**	P	**Pn**	**22 11 25.6**	**+3.7**
DVHZ	**Dannevirke**	**2.42**	**186**	P	**Pn**	**22 11 23.5**	**+1.5**
POWZ	**Post Office Ro**	**2.57**	**193**	P	**Pn**	**22 11 25.2**	**+1.5**
ANWZ	**Angora Road**	**2.57**	**180**	P	**Pn**	**22 11 25.9**	**+2.3**
WCZ	**Waipu Caves**	**2.60**	**318**	P	**Pn**	**22 11 26.5**	**+2.4**
PRWZ	**Pori Road**	**2.70**	**189**	P	**Pn**	**22 11 27.2**	**+2.0**
BFZ	**Birch Farm**	**2.80**	**184**	P	**Pn**	**22 11 27.8**	**+1.4**
BFZ	**Birch Farm**	**2.80**	**184**	P	**Sn**	**22 12 02.2**	**-0.5**
BFZ	**Birch Farm**	**2.80**	**184**	P	**Pn**	**22 11 28.0**	**+1.6**
MRZ	**Mangatainoka R**	**2.86**	**194**	P	**Pn**	**22 11 28.4**	**+1.2**
TIWZ	**Tintock**	**2.92**	**189**	P	**Pn**	**22 11 29.5**	**+1.5**
CPWZ	**Castlepoint**	**3.03**	**184**	P	**Pn**	**22 11 31.4**	**+2.3**
HOWZ	**Holdsworth Sta**	**3.10**	**194**	P	**Pn**	**22 11 31.1**	**+1.0**
OGWZ	**Otaki Gorge**	**3.10**	**199**	P	**Pn**	**22 11 31.3**	**+1.2**
KIW	**Kapiti Island**	**3.22**	**202**	P	**Pn**	**22 11 32.3**	**+0.8**
TMWZ	**Te Maipa**	**3.25**	**188**	P	**Pn**	**22 11 33.1**	**+1.2**
MTW	**Mount Morrison**	**3.36**	**193**	P	**Pn**	**22 11 33.9**	**+0.8**
CAW	**Cannon Point**	**3.40**	**199**	P	**Pn**	**22 11 34.6**	**+0.8**
DUWZ	**D'Urville Isla**	**3.53**	**214**	P	**Pn**	**22 11 36.1**	**+0.8**
TRWZ	**Traveller**	**3.56**	**190**	P	**Pn**	**22 11 36.7**	**+1.0**
PAWZ	**Paruwai Farm**	**3.59**	**193**	P	**Pn**	**22 11 36.7**	**+0.6**
WEL	**Wellington**	**3.65**	**201**	P	**Pn**	**22 11 37.6**	**+0.8**
MSWZ	**Moikau Station**	**3.66**	**195**	P	**Pn**	**22 11 37.4**	**+0.5**
SNZO	**South Karori**	**3.69**	**202**	P	**Pn**	**22 11 37.8**	**+0.6**
SNZO	**South Karori**	**3.69**	**202**	S	**Sn**	**22 12 20.9**	**-1.3**
TCW	**Tory Channel**	**3.74**	**207**	P	**Pn**	**22 11 38.

BETC				S	Sn	22 16 28.7	-0.1	
CBOC	**Ciudad Bolivar**	**1.87**	**11**	P	Pn	22 16 08.5	-0.5	
CBOC				S	Sn	22 16 33.3	-0.7	
GARC	**Garzon, Huila**	**2.02**	**154**	P	Pn	22 16 10.6	-0.4	
GARC				S	Sn	22 16 36.6	-0.9	
GR1C	**Gorgona, Isla**	**2.05**	**241**	P	Pn	22 16 09.9	-1.1	
GR1C				S	Sn	22 16 35.5	-2.1	
URMC	**La Uribe, Meta**	**2.14**	**111**	P	Pn	22 16 11.8	-0.4	
URMC				S	Sn	22 16 38.3	-1.4	
NORC	**Norcasia**	**2.15**	**44**	P	Pn	22 16 11.9	-0.4	
NORC				S	Sn	22 16 38.8	-1.1	
BBAC	**Balboa, Cauca**	**2.17**	**204**	P	Pn	22 16 12.1	-0.6	
BBAC				S	Sn	22 16 40.6	+0.1	
ROSC	**El Rosal**	**2.21**	**68**	P	Pn	22 16 14.6	+1.3	
ROSC				S	Sn	22 16 43.8	+2.1	
HELC	**Santa Helena**	**2.32**	**21**	P	Pn	22 16 13.7	-1.0	
HELC				S	Sn	22 16 43.7	-0.4	
CVER	**Cruz Verde, Cu**	**2.35**	**78**	P	Pn	22 16 15.4	+0.2	
CVER				S	Sn	22 16 45.0	0.0	
SOLC	**Bahia Solano**	**2.42**	**335**	P	Pn	22 16 15.2	-0.4	
SOLC				S	Sn	22 16 45.6	-0.2	
CRUC	**La Cruz**	**2.50**	**193**	P	Pn	22 16 17.1	+0.1	
CRUC				S	Sn	22 16 47.7	-0.5	
VILC	**Villavicencio,**	**2.68**	**88**	P	Pn	22 16 19.6	+0.6	
VILC				S	Sn	22 16 52.7	+0.8	
CHIC	**Chingaza**	**2.71**	**77**	P	Pn	22 16 20.1	+0.5	
CHIC				S	Sn	22 16 53.1	+0.1	
SPBC	**San Pablo de B**	**2.81**	**55**	P	Pn	22 16 20.5	-0.2	
SPBC				S	Sn	22 16 55.2	+0.3	
DBBC	**Dabeiba**	**2.98**	**3**	P	Pn	22 16 22.3	-0.6	
DBBC				S	Sn	22 16 57.6	-1.2	
MACC	**Macarena, Meta**	**3.14**	**126**	P	Pn	22 16 23.8	-1.1	
PTBC	**PUERTO BERRIO,**	**3.15**	**37**	P	Pn	22 16 24.0	-1.0	
PTBC				S	Sn	22 16 59.6	-3.0	
PTAC	**Punta Ardita,**	**3.42**	**335**	P	Pn	22 16 27.8	-0.6	
RUSC	**La Rusia**	**3.77**	**60**	P	Pn	22 16 33.2	-0.4	
UREC	**San Jos de Ur**	**3.80**	**13**	P	Pn	22 16 32.4	-1.1	
APAC	**Apartado, Choc**	**3.86**	**357**	P	Pn	22 16 34.8	+0.5	
BRJC	**Barrancabermej**	**3.94**	**42**	P	Pn	22 16 33.8	-1.5	
CASC	**Dorado de Casc**	**3.98**	**194**	P	Pn	22 16 35.0	-0.9	
BARC	**Barichara**	**4.08**	**51**	P	Pn	22 16 37.2	-0.2	
BARC				S	Sn	22 17 22.8	-2.1	
PTLC	**Puerto Leguiza**	**4.14**	**157**	P	Pn	22 16 39.4	+1.4	
CUSE	**Cuicocha Este**	**4.21**	**209**	P	Pn	22 16 40.0	+0.7	
CUSE				S	Sn	22 17 27.1	-1.0	
PAC1	**Pacto, Paraso**	**4.44**	**213**	P	Pn	22 16 39.6	-2.5	
LCBC	**Los crdobas,**	**4.80**	**0**	P	Pn	22 16 46.5	-0.4	
PAMC	**Pamplona, Colo**	**4.93**	**48**	P	Pn	22 16 48.6	-0.3	
AZU	**Azuero**	**5.39**	**314**	P	Pn	22 16 54.2	-0.5	
	1µm17nm,1.2s							
SJCC	**San Jacinto, C**	**5.96**	**11**	P	Pn	22 17 01.3	-1.1	
	13nm,1.3s							
BCIP	**Isla Barro Col**	**6.16**	**326**	P	Pn	22 17 05.5	+0.5	
	57nm,1.7s							

IDC ***08*** *22:29:17.6±1.7, 1°.30N×127°.07E, h0km, mb3.5/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=119.0km s-min=20.6km az=69.0*

DJA ***08*** *22:29:27.1±0.5, 1°.3×12°.7E±°, h29km±7km, M3.8/11, mb4.1/1, MLv3.6/11*

ISC 08 22:29:27.3±1.1, 1°.3N±0°.1×127°.1E±0°.1, h100km, n9, σ2s51/10, mb3.5/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.56**	**147**	P	**Pn**	**22 29 41.7**	**-1.9**
TNTI				S	**Sn**	**22 29 52.8**	**-3.0**
MNI	**Manado**	**2.23**	**275**	P	**Pn**	**22 29 59.9**	**-3.0**
SGSI	**Sangihe**	**2.87**	**328**	P	**Pn**	**22 30 08.8**	**-2.5**
GTOI	**Gorontalo**	**4.09**	**262**	P	**Pn**	**22 30 27.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.27**	**184**	P	**P**	**22 33 44.8**	**+0.6**
	0.1nm,0.3s,baz=17,slow=11,SNR=2.0 2.3nm,0.8s						
WRA	**Warramunga Arr**	**22.24**	**162**	P	**P**	**22 34 16.7**	**+0.7**
	1.1nm,0.5s,baz=340,slow=11,SNR=16 1.1nm,0.5s						
ASAR	**Alice Springs**	**25.64**	**165**	P	**P**	**22 34 49.5**	**+1.7**
	0.4nm,0.3s,baz=346,slow=9.1,SNR=7.7 0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.78**	**326**	P	**P**	**22 39 24.9**	**+2.9**
	0.3nm,0.5s,baz=118,slow=7.9,SNR=4.1 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**64.00**	**328**	P	**P**	**22 39 52.1**	**+1.9**
	0.5nm,0.8s,baz=129,slow=6.4,SNR=5.7 0.5nm,0.8s						

SDD ***08*** *22:35:16.6±0.7, 19°.73N×72°.62W, h19km±118km, MD3.2, ML2.4, MW2.7, Presumed earthquake*

SSNC ***08*** *22:35:16.9±1.4, 20°.23N×72°.34W, h25km±66km, MW2.9, Presumed earthquake*

OSPL ***08*** *22:35:17.6±0.8, 19°.73N×72°.54W, h0km±7km, ML2.5, Presumed earthquake*

ISC 08 22:35:16.0±1.5, 19.8N±0°.1×72.57W±0°.05, h11km±13km, n14, σ1s04/23, 6C-2D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODA1	**ITESIL, Dajabo**	**0.83**	**104**	*i* P	**Pg**	**22 35 32.3**	**+0.2**
LODA1				*e*S	**Sg**	**22 35 43.0**	**0.0**
LODA1				IAML		22 35 44.3	
	comp=Z,878nm,2.2s						
MCDR	**Montecristi**	**0.87**	**80⇑**	*e*Pg	**Pg**	**22 35 32.5**	**-0.3**
MCDR				⇓*e*Sg	**Sb**	**22 35 45.2**	**+0.5**
MCDR				IAML		22 35 45.9	
	comp=E,207nm,0.5s						
MCDR				IAML		22 35 49.0	
	comp=N,196nm,0.1s						
REDR	**Restauracion**	**1.25**	**117⇑**	*e*Pg	Pn	22 35 34.0	-5.4
REDR				⇑*e*Sg	Sb	22 35 46.6	-9.0
REDR				IAML		22 35 47.1	
	comp=N,256nm,0.2s						
REDR				IAML		22 35 47.5	
	comp=E,174nm,0.2s						
LOPP1	**Punta Rusia, P**	**1.29**	**85**	*i* P	**Pb**	**22 35 40.4**	**+0.1**
LOPP1				IAML		22 36 01.3	
	comp=Z,87nm,1.5s						
SDDR	**Presa de Saban**	**1.43**	**122⇓**	*e*Pg	**Pn**	**22 35 42.0**	**+0.1**
SDDR				⇑*e*Sg	**Sn**	**22 36 00.9**	**+0.2**
SDDR				IAML		22 36 06.0	
	comp=E,21nm,0.3s						
SDDR				IAML		22 36 07.9	
	comp=N,17nm,1.1s						
SDDR	**Presa de Saban**	**1.43**	**122**	*i* P	**Pn**	**22 35 42.1**	**+0.1**
SDDR				*e*S	**Sn**	**22 36 00.5**	**-0.3**
SDDR				IAML		22 36 07.0	
	comp=Z,357nm,0.2s						
SDDR	**Presa de Saban**	**1.43**	**122**	*i* P	**Pn**	**22 35 41.8**	**-0.1**
SDDR				*e*S	**Sn**	**22 35 59.8**	**-0.9**
LONE3	**El Aguacate, B**	**1.54**	**137**	*i* P	**Pn**	**22 35 43.6**	**0.0**
LONE3				*e*S	**Sn**	**22 36 04.3**	**+0.5**
LONE3				IAML		22 36 10.3	
	comp=Z,12nm,2.0s						
MASC	**Masc**	**1.62**	**286**	*i* P	**Pn**	**22 35 45.7**	**+1.1**
MASC				*e*S	**Sb**	**22 36 07.0**	**+0.4**
MASC				IAML		22 36 11.0	
	comp=Z,19nm,0.1s						
MASC	**Masc**	**1.62**	**286**	*i* P	**Pn**	**22 35 45.4**	**+0.8**
MASC				*e*S	**Sn**	**22 36 05.1**	**-0.5**
MASC				IAmb	IAmb	22 36 11.0	
	comp=Z,19nm,0.6s						
QMBU	**Quimbuelo**	**2.16**	**282**	*i* P	**Pn**	**22 35 51.1**	**-1.0**
QMBU				*e*S	**Sn**	**22 36 17.3**	**-1.6**
QMBU				*e*Sg	**Sb**	**22 36 19.6**	**-2.5**
GTBY	**Guantanamo Bay**	**2.40**	**275⇑**	*e*Pg	**Pn**	**22 35 56.7**	**+1.4**
GTBY				⇑*e*Sg	**Sn**	**22 36 27.0**	**+2.2**
GTBY				IAML		22 36 31.1	
	comp=N,24nm,1.4s						
GTBY	**Guantanamo Bay**	**2.40**	**275**	*i* P	**Pn**	**22 35 56.0**	**+0.7**
HATOM	**Hato Mayor del**	**3.15**	**107**	IAML		22 36 53.1	
	comp=N,8.6nm,0.0s						
HATOM				IAML		22 36 53.6	
	comp=E,14nm,0.4s						

ISK ***08*** *22:39:25.4, 38°.17N×38°.55E, h5km, ML4.0/19*

IDC ***08*** *22:39:26.8±0.7, 38°.11N×38°.51E, h0km, mb3.8/11, mbtmp3.8/19, ML3.2/8, MS3.0/10, Error ellipse: s-maj=13.7km s-min=8.7km az=167.0*

AFAD ***08*** *22:39:26.2, 38°.17N×38°.55E, h7km±2km, MW3.9*

NEIC ***08*** *22:39:27.6±1.2, 38°.17N±0°.03×38°.56E±0°.05, h10km±1km, mb4.0/14, Error ellipse: s-maj=6.6km s-min=5.5km az=298.0*

GII ***08*** *22:39:29.0±0.0, 38°.119N±0°.009×38°.479E±0°.004, h0km, Mws4.2, confirmed*

ISC 08 22:39:26.8±1.1, 38°.18N±0°.02×38°.58E±0°.02, h3km±7km, n142, σ1s19/153, mb3.9/21, MS3.4/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.19**	**320**	P	**Pg**	**22 39 30.7**	**+0.2**
MAYA				S	**Sg**	**22 39 33.2**	**+0.1**
MAYA				IAML		22 39 34.0	
	comp=N,7µm,0.2s						
MAYA				IAML		22 39 34.0	
	comp=E,12µm,0.3s						
NARI	**Adyaman-Kaht**	**0.33**	**154**	P	**Pg**	**22 39 33.2**	**+0.1**
NARI				S	**Sg**	**22 39 37.7**	**+0.3**
MDYL	**Doganyol-Malat**	**0.38**	**69**	Pg	**Pb**	**22 39 35.4**	**-0.9**
MDYL				Sg	**Sb**	**22 39 41.8**	**-0.9**
ELZG	**Elazig**	**0.45**	**45**	P	**Pg**	**22 39 35.6**	**+0.1**
ELZG				S	**Sg**	**22 39 42.1**	**+0.8**
ELZG				IAML		22 39 43.0	
	comp=E,1µm,0.6s						
ELZG				IAML		22 39 44.0	
	comp=N,2µm,0.6s						
AZEY	**Adyaman-Merk**	**0.45**	**216**	P	**Pg**	**22 39 35.6**	**+0.1**
AZEY				S	**Sg**	**22 39 41.7**	**+0.3**
AZEY				IAML		22 39 42.0	
	comp=N,7µm,0.6s						
AZEY				IAML		22 39 45.0	
	comp=E,5µm,0.5s						
ESGZ	**Sivrice-Elazig**	**0.45**	**56**	Pg	**Pg**	**22 39 35.6**	**0.0**
ESGZ				Sg	**Sg**	**22 39 42.9**	**+1.4**
AKCD	**Akcadag**	**0.53**	**283**	P	**Pg**	**22 39 36.7**	**-0.3**
AKCD				S	**Sg**	**22 39 43.6**	**-0.3**
AKCD				IAML		22 39 46.0	
	comp=N,2µm,0.4s						
AKCD				IAML		22 39 47.0	
	comp=E,1µm,0.4s						
CNGT	**ngs**	**0.57**	**86**	P	**Pg**	**22 39 37.5**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.60**	**71**	Pg	**Pg**	**22 39 38.6**	**+0.2**
SVRC				Sg	**Sb**	**22 39 48.6**	**-0.5**
ESIJ	**Sivrice-Elazig**	**0.63**	**65**	Pg	**Pg**	**22 39 39.3**	**+0.3**
ESIJ				Sg	**Sb**	**22 39 49.4**	**-0.5**
HANM	**anlurfa/Hi**	**0.64**	**158**	P	**Pg**	**22 39 39.2**	**0.0**
ELZ	**Elazig**	**0.71**	**44**	P	**Pg**	**22 39 40.2**	**-0.2**
ATAB	**Bozova**	**0.74**	**198**	P	**Pg**	**22 39 40.7**	**-0.3**
URFA	**Urfa**	**0.76**	**165**	Pg	**Pg**	**22 39 40.9**	**-0.5**
AKCA	**Adyaman/G¶**	**0.80**	**242**	P	**Pg**	**22 39 42.0**	**-0.3**
HEKM	**Malatya_Hekimh**	**0.85**	**325**	P	**Pg**	**22 39 42.4**	**-0.8**
MDNT	**Maden**	**0.89**	**76**	P	**Pg**	**22 39 43.7**	**-0.2**
ARPR	**Arapgir-MALATY**	**0.93**	**348**	Pg	**Pg**	**22 39 44.5**	**-0.2**
ARPR				Sg	**Sb**	**22 39 58.4**	**-0.2**
ARPR	**Arapgir-MALATY**	**0.93**	**348**		**Pg**	**22 39 44.0**	**-0.7**
ARPR					**Sb**	**22 39 58.0**	**-0.5**
MCKZ	**Bingol**	**0.99**	**18**	P	**Pg**	**22 39 44.6**	**-1.2**
SANL	**SANLIURFA_Merk**	**1.06**	**162**	P	**Pb**	**22 39 47.6**	**-0.1**
KOVA	**Elazig, Kovanc**	**1.10**	**61**	P	**Pg**	**22 39 47.7**	**-0.2**
ELBS	**KAHRAMANMARAS**	**1.15**	**278**	P	**Pg**	**22 39 47.7**	**-1.2**
GZT	**Gaziantep**	**1.15**	**225**	P	**Pb**	**22 39 49.3**	**-0.1**
CUGUR	**Gurin_SVAS**	**1.16**	**298**	P	**Pg**	**22 39 47.8**	**-1.3**
TNCL	**Tunceli-Merkez**	**1.20**	**39**	P	**Pg**	**22 39 48.6**	**-1.2**
MDIV		**1.22**	**340**	P	**Pg**	**22 39 49.7**	**-0.4**
DIYA	**Diyarbakir**	**1.24**	**101**	P	**Pg**	**22 39 50.7**	**+0.1**
DYBB	**Diyarbakir**	**1.25**	**100**	Pn	**Pg**	**22 39 50.7**	**-0.1**
ILIC	**ilic-Erzincan**	**1.27**	**360**	Pn	**Pg**	**22 39 51.1**	**-0.1**
NZIP	**Nizip/Gaziante**	**1.34**	**213**	P	**Pn**	**22 39 51.6**	**-0.9**
KHMN	**Narli-Kahraman**	**1.38**	**236**	Pn	**Pn**	**22 39 52.3**	**-0.6**
KHMN	**Narli-Kahraman**	**1.38**	**236**	P	**Pn**	**22 39 51.9**	**-1.0**
KAHM	**Kahramanmaras,**	**1.43**	**243**	P	**Pn**	**22 39 52.7**	**-0.8**
GAZ	**Gaziantep**	**1.48**	**228**	Pn	**Pn**	**22 39 54.2**	**-0.2**
GAZ	**Gaziantep**	**1.48**	**228**	Pn	**Pn**	**22 39 53.0**	**-1.4**
GAZ				Sn	**Sb**	**22 40 13.3**	**-0.9**
KMRS	**Kahramanmaras**	**1.49**	**244**	Pn	**Pn**	**22 39 53.9**	**-0.6**
ERZN	**Erzincan**	**1.66**	**32**	Pn	**Pn**	**22 39 57.2**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.72**	**278**	Pn	**Pn**	**22 39 58.1**	**+0.4**
BNGB	**Bingl**	**1.83**	**63**	Pn	**Pn**	**22 39 59.2**	**-0.1**
YEDI	**Yedisu-Bingol**	**1.98**	**50**	Pn	**Pn**	**22 40 02.5**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.06**	**90**	Pn	**Pn**	**22 40 03.1**	**+0.7**
SVSK	**Karacayir**	**2.13**	**325**	Pn	**Pn**	**22 40 03.7**	**+0.5**
KARO	**Karliova-Bingo**	**2.23**	**59**	Pn	**Pn**	**22 40 05.3**	**+0.4**
BNN	**Bunyan**	**2.25**	**288**		**Pn**	**22 40 04.5**	**-0.5**
KOPT	**Kop Dagi**	**2.37**	**38**	Pn	**Pn**	**22 40 06.3**	**-0.5**
TOKA	**Tokat**	**2.69**	**323**		**Pn**	**22 40 11.1**	**0.0**
GURO	**Guroymak-BITLI**	**2.74**	**81**	Pn	**Pn**	**22 40 12.1**	**+0.4**
GURO	**Guroymak-BITLI**	**2.74**	**81**		**Pn**	**22 40 11.4**	**-0.3**
GURO				Sn	**Sn**	**22 40 45.0**	**-0.4**
KTUT	**Trabzon**	**2.95**	**18**	Pn	**Pn**	**22 40 15.8**	**+1.3**
KOPR	**Koprukoy-ERZUR**	**3.12**	**54**	Pn	**Pn**	**22 40 18.0**	**+0.9**
MLAZ	**Malazgirt-MUS**	**3.25**	**72**	Pn	**Pn**	**22 40 20.1**	**+1.3**
GEVA	**Gevas**	**3.53**	**86**	Pn	**Pn**	**22 40 22.9**	**+0.3**
BEIL	**Beino**	**4.11**	**209**	*e*P	**Pn**	**22 40 30.1**	**-0.4**
BRTR	**Keskin Array B**	**4.15**	**293**	Pn	**Pn**	**22 40 32.1**	**+1.0**
	2.1nm,0.3s,baz=122,slow=9.0,SNR=38						
BRTR				Pg	**Pb**	**22 40 42.5**	**+1.9**
	2.4nm,0.3s,baz=122,slow=16,SNR=23						
BRTR				Lg	Lg	22 41 38.7	
	1.6nm,0.3s,baz=120,slow=27,SNR=6.0						
BRTR				LR	LR	22 42 23.4	
	comp=Z,345nm,18.7s,baz=106,slow=43 9.5nm,0.7s						
BRTR	**Keskin Array B**	**4.15**	**293**		**Pn**	**22 40 31.3**	**+0.1**
BATM	**Batumi**	**4.17**	**34**	P	**Pn**	**22 40 32.7**	**+1.3**
HWQ	**Hawqa**	**4.44**	**209**	*e*P	**Pn**	**22 40 34.5**	**-0.6**
ZAHL	**Zahle**	**4.83**	**208**	*e*P	**Pn**	**22 40 40.5**	**-0.1**
BHL	**Bhannes**	**4.88**	**210**	*e*P	**Pn**	**22 40 41.4**	**+0.3**
AKH	**Akhalkalaki**	**4.97**	**48**	P	**Pn**	**22 40 43.9**	**+1.5**
CY604	**RAF Akrotiri,**	**5.05**	**222**	Pn	**Pn**	**22 40 40.7**	**-2.4**
DQRL	**Deir Qamar**	**5.09**	**210**	*e*P	**Pn**	**22 40 44.4**	**+0.4**
GNI	**Garni**	**5.18**	**66**	Pn	**Pn**	**22 40 47.0**	**+1.8**
	1.0nm,0.3s,baz=261,slow=17,SNR=2.5						
GNI				Pg	**Pg**	**22 41 03.0**	**-3.0**
	0.9nm,0.3s,baz=281,slow=5.2,SNR=3.9						
GNI				LR	LR	22 43 13.6	
	comp=Z,148nm,18.1s,baz=258,slow=43 2.8nm,0.3s						
GNI	**Garni**	**5.18**	**66**		**Pn**	**22 40 45.6**	**+0.3**
RCY	**Rachaya**	**5.18**	**206**	*e*P	**Pn**	**22 40 45.4**	**+0.1**
QRWL	**Qaraoun**	**5.19**	**208**	*e*P	**Pn**	**22 40 45.8**	**+0.5**
CSS	**Mathiatis**	**5.31**	**234**		**Pn**	**22 40 45.9**	**-1.1**
CSS	**Mathiatis**	**5.31**	**234**	P	**Pn**	**22 40 47.7**	**+0.7**
SHBL	**Chebaa**	**5.34**	**206**	*e*P	**Pn**	**22 40 47.5**	**-0.1**
GEM	**Giv'at Ha'Em**	**5.50**	**206**	P	**Pn**	**22 40 50.1**	**+0.6**
KIRY	**Kiryat Shemona**	**5.53**	**207**	P	**Pn**	**22 40 51.9**	**+1.9**
KSHT	**Keshet**	**5.66**	**204**	P	**Pn**	**22 40 52.8**	**+1.1**
MMA0B	**Mount Meron ar**	**5.77**	**208**	P	**Pn**	**22 40 54.6**	**+1.3**
MMAI	**Mount Meron Ar**	**5.77**	**208**	Pn	**Pn**	**22 40 53.2**	**-0.1**
	6.0nm,0.3s,baz=22,slow=16,SNR=29						
MMAI				Lg	Lg	22 42 26.5	
	2.5nm,0.3s,baz=27,slow=26,SNR=2.2 2.9nm,0.4s						
KNHM	**Kefar Nahum**	**5.82**	**206**	P	**Pn**	**22 40 54.3**	**+0.3**
ASF	**Jabal al Asfar**	**6.15**	**193**	Pn	**Pn**	**22 40 57.7**	**-0.9**
	0.6nm,0.3s,baz=14,slow=14,SNR=9.7						
ASF				Lg	Lg	22 42 34.3	
	1.2nm,0.3s,baz=68,slow=11,SNR=3.6						
ASF				LR	LR	22 43 40.7	
	comp=Z,99nm,19.3s,baz=26,slow=42 5.6nm,0.8s						
MMLI	**Mount Malkishu**	**6.28**	**205**	P	**Pn**	**22 41 01.3**	**+1.0**
MMLI				S	**Sn**	**22 42 14.2**	**+1.5**
CHRG	**Chargali**	**6.38**	**47**	P	**Pn**	**22 41 03.7**	**+1.9**
KBZ	**Khabaz**	**6.43**	**29**	LR	LR	22 43 03.8	
	comp=Z,25nm,21.9s,baz=170,slow=33						
ROII	**Roi**	**6.44**	**204**	P	**Pn**	**22 41 03.4**	**+1.0**
KVAR	**Kislovodsk Arr**	**6.55**	**27**	Pn	**Pn**	**22 41 07.4**	**+3.2**
	baz=210,slow=14 5.5nm,1.2s						
YITV	**Yitav**	**6.74**	**204**	P	**Pn**	**22 41 08.3**	**+1.8**
JER	**Jerusalem**	**6.97**	**204**	P	**Pn**	**22 41 11.6**	**+1.8**
ELL	**Elmali**	**7.04**	**261**	Pn	**Pn**	**22 41 09.8**	**-1.1**
AMAZ	**Amatzia**	**7.28**	**206**	P	**Pn**	**22 41 15.4**	**+1.3**
AMAZ				S	**Sn**	**22 42 38.7**	**+1.4**
AKAS	**Kas**	**7.42**	**258**	Pn	**Pn**	**22 41 15.7**	**-0.4**
KZIT	**Kziot**	**8.03**	**207**	P	**Pn**	**22 41 26.1**	**+1.7**
KZIT				S	**Sn**	**22 42 56.9**	**+1.2**
EIL	**Elat**	**9.01**	**201**	Pn	**Pn**	**22 41 37.4**	**-0.3**
	0.2nm,0.3s,baz=7.9,slow=19,SNR=2.5						
EIL				Pg		22 42 05.8	
	0.4nm,0.3s,baz=13,slow=17,SNR=3.6						
EIL				Lg	Lg	22 44 10.4	
	0.4nm,0.3s,baz=38,slow=15,SNR=4.4						
EIL				LR	LR	22 45 30.9	
	comp=Z,157nm,18.3s,baz=84,slow=41 2.9nm,0.7s						
IDI	**Anoyia**	**11.36**	**259**	Pn	**Pn**	**22 42 10.2**	**+0.3**
	1.1nm,0.3s,baz=76,slow=12,SNR=7.7 9.1nm,0.6s						
IDI	**Anoyia**	**11.36**	**259**	Pn	**Pn**	**22 42 09.4**	**-0.6**
BURAR	**Bucovina Array**	**13.58**	**318**	Pn	**Pn**	**22 42 39.5**	**-0.8**
BUR08	**Bucovina Ar. S**	**13.61**	**318**	Pn	**Pn**	**22 42 40.4**	**-0.3**
TIP	**Timpagrande**	**17.07**	**280**		**Pn**	**22 43 25.7**	**-0.7**
OJC	**Ojcow**	**18.00**	**318**		**Pn**	**22 43 36.9**	**-1.0**
AKTO	**Aktyubinsk**	**18.47**	**42**	P	**Pn**	**22 43 46.5**	**+3.0**
	baz=239,slow=6.8,SNR=6.3						
AKTO				LR	LR	22 51 14.0	
	comp=Z,26nm,21.3s,baz=238,slow=38 2.5nm,0.8s						
AB31	**Akbulak array**	**18.93**	**47**	P	**P**	**22 43 45.8**	**-2.9**
ABKAR	**Akbulak array**	**18.93**	**47**	P	**P**	**22 43 46.4**	**-2.2**
VRAC	**Vranov**	**19.32**	**312**	LR	LR	22 52 40.3	
	comp=Z,15nm,18.1s,baz=148,slow=41						
OBKA	**Obir**	**19.56**	**303**	*e*P	**Pn**	**22 43 59.1**	**+2.1**
	1.9nm,0.8s						
AQU	**L'Aquila**	**19.64**	**290**	P	**P**	**22 43 53.7**	**-2.8**
AQU				IAmb	IAmb	22 44 07.6	
	comp=Z,8.8nm,1.0s						
NRCA	**Norcia**	**19.89**	**292**	P	**P**	**22 43 58.7**	**-0.5**
NRCA				IAmb	IAmb	22 44 05.4	
	comp=Z,13nm,1.5s						
FDMO	**Fiordimonte**	**19.92**	**292**		**P**	**22 43 59.0**	**-0.6**
FDMO				IAmb	IAmb	22 44 05.4	
	comp=Z,8.6nm,0.9s						
MOA	**Molln**	**20.16**	**306**	*i* P	Pn	22 44 06.7	+2.7
	comp=Z,3.0nm,1.1s						
CESX	**Cesi**	**20.26**	**291**		**P**	**22 44 01.6**	**-1.7**
CESX				IAmb	IAmb	22 44 09.1	
	comp=Z,5.9nm,0.8s						
BIOA	**Bad Ischl, Aus**	**20.51**	**306**	*e*pP	Pn	22 44 12.7	+4.6
	comp=Z,2.8nm,0.9s						
GERES	**GERESS Array B**	**20.87**	**309**	P	**P**	**22 44 10.4**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=110,slow=10,SNR=10 comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**20.87**	**309**	P	**P**	**22 44 08.8**	**-1.1**
ABTA	**Abfaltersbach**	**20.98**	**302**	*e*Pn	Pn	22 44 13.2	-0.4
	comp=Z,3.5nm,1.3s						
LESA	**Schwarzleotal**	**21.05**	**304**	*e*P	**P**	**22 44 11.2**	**-0.7**
	comp=Z,1.7nm,0.9s						
WTTA	**Wattenberg**	**21.69**	**303**	*e*pP	**P**	**22 44 20.0**	**+1.2**
	comp=Z,4.8nm,0.9s						
WATA	**Walderalm**	**21.75**	**304**	*e*P	**P**	**22 44 21.8**	**+2.4**
	comp=Z,7.0nm,1.2s						
SQTA	**Sankt Quirin**	**21.96**	**303**	*i* pP	**P**	**22 44 26.5**	**+4.8**
	comp=Z,4.7nm,1.0s						
MOTA	**Moosalm**	**22.06**	**303**	*i* pP	**P**	**22 44 23.8**	**+0.9**
	comp=Z,4.4nm,0.9s						
FETA	**Feichten**	**22.23**	**302**	*i* P	**P**	**22 44 25.8**	**+1.1**
	comp=Z,4.2nm,0.9s						
RETA	**Reutte**	**22.32**	**304**	*e*P	**P**	**22 44 27.4**	**+1.9**
	comp=Z,8.0nm,1.8s						
ARTI	**Arti**	**22.49**	**30**	LR	LR	22 56 04.4	
	comp=Z,18nm,19.3s,baz=167,slow=44						
ARTI	**Arti**	**22.49**	**30**	P	**P**	**22 44 26.0**	**-1.1**
ARTI				IAmb	IAmb	22 44 47.9	
	comp=Z,3.1nm,0.6s						
DAVA	**Damuels**	**22.86**	**303**	*e*P	**P**	**22 44 31.4**	**+0.1**
	comp=Z,2.5nm,0.6s						
KEST	**Kesra**	**23.45**	**273**	P	**P**	**22 44 38.2**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=67,slow=1.8,SNR=8.5 comp=Z,7.5nm,0.8s						
KEST	**Kesra**	**23.45**	**273**	P	**P**	**22 44 35.8**	**-1.6**
KEST				IAmb	IAmb	22 44 43.1	
	comp=Z,8.5nm,0.9s						
SENIN	**Lac Senin/Sane**	**24.43**	**300**	P	**P**	**22 44 46.2**	**-0.5**
SENIN				IAmb	IAmb	22 44 50.4	
	comp=Z,3.2nm,0.8s						
FINES	**FINESS Array B**	**24.56**	**346**	P	**P**	**22 44 49.8**	**+2.3**
	comp=Z,1.3nm,0.6s

RTLL eS Sn 22 48 44.6 +0.8
RTLL IAML 22 48 45.0
comp=Z,6μm,0.5s
CFA Coronel Fontan 0.71 85 P Pn 22 48 30.2 -0.7
comp=Z,538nm,0.3s,baz=310,slow=7.9,SNR=3153
CFA S Sn 22 48 44.4 -0.8
comp=Z,485nm,0.4s,baz=196,slow=12,SNR=8.7
CFA Coronel Fontan 0.71 85 eP Pn 22 48 30.8 -0.2
CFA eS Sn 22 48 45.0 -0.1
ASAL Salagasta 0.94 168 eP Pn 22 48 33.6 +0.6
ASAL eS Sn 22 48 50.4 +1.6
ACCO Cerro Coronel 1.08 0 eP Pn 22 48 35.0 +0.2
ACCO eS Sn 22 48 53.6 +1.6
ARCO CERRO ARCO 1.17 174 eP Pn 22 48 36.3 +0.8
ARCO eS Sn 22 48 53.3 0.0
ARCO IAML 22 48 56.2
comp=Z,9μm,0.6s
AAGR Agrelo 1.42 172 eP Pn 22 48 39.2 +0.9
AAGR eS Sn 22 48 54.8 -3.5
ACDV Cuesta del Vie 1.50 358 eP Pn 22 48 40.3 +1.0
ACDV eS Sn 22 49 01.0 +1.0
ACDV IAML 22 49 01.8
comp=Z,2μm,0.5s
AROD Rodeo 1.54 347 eP Pn 22 48 40.7 +0.7
AROD eS Sn 22 49 02.2 +1.1
VA03 San Esteban 1.66 229 Pn 22 48 41.9 +0.8
VA03 Sn Sn 22 49 04.3 +1.0
VA03 San Esteban 1.66 229 *i* P Pn 22 48 42.0 +0.8
VA03 *i* S Sn 22 49 04.5 +1.2
VA03 IAML 22 49 06.5
comp=N,4μm,0.5s
VA03 San Esteban 1.66 229 P Pn 22 48 42.1 +1.0
CO04 Los Peladeros 1.67 257 Pn 22 48 41.4 0.0
CO04 Sn Sn 22 49 03.7 +0.1
CO04 Los Peladeros 1.67 257 ⇓*i* P Pn 22 48 41.4 0.0
CO04 *i* S Sn 22 49 03.4 -0.2
CO04 IAML 22 49 05.3
comp=N,16μm,0.3s
CO04 Los Peladeros 1.67 257 P Pn 22 48 41.5 +0.1
ACAN Cantantal 1.70 111 eP Pn 22 48 41.4 -0.2
ACAN IAML 22 49 05.8
comp=Z,8μm,0.5s
AVFE Valle Fertil 1.71 54 eP Pn 22 48 41.9 +0.1
AVFE eS Sn 22 49 04.4 0.0
CO02 Combarbal 1.72 285 Pn 22 48 42.1 +0.3
CO02 Sn Sn 22 49 05.0 +0.5
CO02 Combarbal 1.72 285 ⇑*i* P Pn 22 48 42.1 +0.3
CO02 *i* S Sn 22 49 05.0 +0.5
CO02 IAML 22 49 07.6
comp=N,14μm,0.6s
CO02 Combarbal 1.72 285 P Pn 22 48 42.4 +0.5
AVIZ Vizcacheras 1.85 166 eP Pn 22 48 44.5 +1.0
CO01 Juntas del Tor 1.91 332 Pn 22 48 45.8 +1.4
CO01 Juntas del Tor 1.91 332 ⇑*i* P Pn 22 48 45.9 +1.5
CO01 *i* S Sn 22 49 10.3 +1.4
CO01 Juntas del Tor 1.91 332 P Pn 22 48 46.0 +1.6
MT08 Bocatoma Ro 1.94 204 Pn 22 48 45.8 +1.1
MT08 Bocatoma Ro 1.94 204 ⇓*i* P Pn 22 48 46.0 +1.3
MT08 *i* S Sn 22 49 11.9 +2.3
MT08 IAML 22 49 16.0
comp=N,2μm,0.3s
PEL Peldehue 2.00 223 Pn 22 48 45.6 +0.2
PEL Peldehue 2.00 223 ⇓*i* P Pn 22 48 45.6 +0.2
PEL *i* S Sn 22 49 11.2 +0.4
PEL IAML 22 49 13.9
comp=E,1μm,0.3s
PEL Peldehue 2.00 223 P Pn 22 48 45.6 +0.2
MT10 Hacienda Santa 2.02 218 ⇓*i* P Pn 22 48 46.7 +1.1
ROCH El Roble 2.09 231 ⇓*i* P Pn 22 48 46.6 0.0
ROCH *i* S Sn 22 49 12.8 -0.2
ROCH IAML 22 49 18.2
comp=N,3μm,0.4s
GO04 Tololo Observa 2.11 315 Pn 22 48 46.8 -0.1
GO04 Tololo Observa 2.11 315 ⇑*i* P Pn 22 48 46.9 -0.1
GO04 *i* S Sn 22 49 13.4 -0.1
GO04 IAML 22 49 20.6
comp=E,7μm,0.4s
GO04 Tololo Observa 2.11 315 P Pn 22 48 47.1 +0.2
MT14 Cerro Cal¡n 2.12 215 ⇓*i* P Pn 22 48 47.7 +0.9
MT14 *i* S Sn 22 49 14.7 +1.4
MT14 IAML 22 49 21.5
comp=N,2μm,0.6s
MT16 CCHEN 2.14 215 Pn 22 48 47.9 +0.8
MT16 CCHEN 2.14 215 ⇓*i* P Pn 22 48 48.1 +1.0
MT16 *i* S Sn 22 49 14.8 +0.9
MT16 IAML 22 49 19.1
comp=E,972nm,0.5s
MT03 Universidad Ad 2.19 214 Pn 22 48 48.4 +0.7
MT03 Universidad Ad 2.19 214 ⇓*i* P Pn 22 48 48.6 +0.9
MT03 *i* S Sn 22 49 16.0 +1.0
MT03 IAML 22 49 22.1
comp=E,3μm,0.3s
MT05 Renca 2.22 219 Pn 22 48 48.6 +0.5
MT05 Renca 2.22 219 ⇓*i* P Pn 22 48 48.6 +0.5
MT05 *i* S Sn 22 49 16.5 +0.9
MT05 IAML 22 49 18.7
comp=N,5μm,0.4s
MT02 Curacav 2.36 227 Pn 22 48 49.2 -0.6
MT02 Curacav 2.36 227 ⇓*i* P Pn 22 48 49.2 -0.6
LMEL Las Melosas 2.37 204 ⇓*i* P Pn 22 48 51.1 +0.9
LMEL *i* S Sn 22 49 23.2 +4.0
LMEL IAML 22 49 31.7
comp=E,772nm,0.4s
MT12 Pirque 2.40 211 ⇓*i* P Pn 22 48 51.2 +0.7
MT12 *i* S Sn 22 49 19.9 0.0
MT12 IAML 22 49 23.9
comp=E,2μm,0.6s
VA01 Torpederas 2.56 238 Pn 22 48 51.2 -1.3
VA01 Torpederas 2.56 238 *i* P Pn 22 48 51.2 -1.3
VA01 *i* S Sn 22 49 21.3 -2.2
VA01 IAML 22 49 28.0
comp=E,1μm,0.1s
VA01 Torpederas 2.56 238 P Pn 22 48 51.7 -0.8
BO04 La Punta 2.65 209 Pn 22 48 54.0 +0.4
BO04 La Punta 2.65 209 ⇓*i* P Pn 22 48 54.2 +0.6
BO04 *i* S Sn 22 49 26.5 +0.9
BO04 IAML 22 49 29.2
comp=N,1μm,0.4s
MT09 Talagante 2.65 217 Pn 22 48 53.3 -0.4
MT09 Talagante 2.65 217 ⇓*i* P Pn 22 48 53.5 -0.2
MT09 *i* S Sn 22 49 24.8 -0.9
MT09 IAML 22 49 26.9
comp=E,3μm,0.3s
MT01 Popeta 2.86 220 Pn 22 48 55.3 -1.0
MT01 Popeta 2.86 220 ⇓*i* P Pn 22 48 55.3 -1.0
MT01 *i* S Sn 22 49 28.4 -1.9
MT01 IAML 22 49 30.2
comp=E,871nm,0.2s
ACLC CERRO LA CRUZ 2.89 40 eP Pn 22 48 57.0 +0.1
ACLC eS Sn 22 49 47.8 +16
ACLC IAML 22 49 59.0
comp=Z,552nm,0.6s
VA05 Santo Domingo 2.92 227 Pn 22 48 56.4 -0.7
VA05 Santo Domingo 2.92 227 eP Pn 22 48 56.4 -0.7
VA05 *i* S Sn 22 49 28.1 -3.7
VA05 IAML 22 49 39.3
comp=E,1μm,0.5s
VA05 Santo Domingo 2.92 227 P Pn 22 48 57.6 +0.5
LCO Las Campanas 3.01 332 eP Pn 22 48 58.6 +0.1
LCO eS Sn 22 49 34.6 +0.3
LCO IAML 22 49 35.7
comp=Z,1μm,0.3s
LCO Las Campanas 3.01 332 Pn 22 48 58.3 -0.3
LCO Las Campanas 3.01 332 ⇑*i* P Pn 22 48 58.2 -0.3
LCO *i* S Sn 22 49 33.4 -1.0
AC05 El Transito 3.02 339 Pn 22 48 59.5 +1.0
AC05 El Transito 3.02 339 ⇑*i* P Pn 22 48 59.6 +1.0
AC05 El Transito 3.02 339 P Pn 22 48 59.7 +1.2
VCA Vinchina 3.02 14 eP Pn 22 48 58.8 +0.1
VCA eS Sn 22 49 35.1 +0.6
VCA IAML 22 49 43.5
comp=Z,1μm,0.5s
BO01 Tunca 3.20 211 Pn 22 48 59.9 -0.9
BO01 Tunca 3.20 211 P Pn 22 49 00.1 -0.7
BO02 Sierra Bellavi 3.43 204 Pn 22 49 04.0 +0.2
BO02 Sierra Bellavi 3.43 204 *i* P Pn 22 49 04.1 +0.2
BO02 *i* S Sn 22 49 44.0 +0.1
BO02 IAML 22 49 50.7
comp=Z,913nm,0.3s
BO02 Sierra Bellavi 3.43 204 P Pn 22 49 04.4 +0.5
BO03 Pichilemu 3.72 220 *i* P Pn 22 49 05.2 -2.5
BO03 *i* S Sn 22 49 46.5 -4.3

BO03 Pichilemu 3.72 220 P Pn 22 49 06.2 -1.5
TINO Tinogasta 3.83 20 eP Pn 22 49 09.8 +0.5
TINO eS Sn 22 49 56.4 +2.8
TINO IAML 22 50 01.9
comp=Z,415nm,0.5s
TCA Tanti 3.83 86 eP Pn 22 49 09.0 -0.4
TCA eS Sn 22 49 53.0 -0.7
TCA IAML 22 50 09.8
comp=Z,378nm,0.7s
AC04 Llanos de Chal 3.87 333 Pn 22 49 08.9 -0.9
AC04 Llanos de Chal 3.87 333 P Pn 22 49 09.1 -0.7
GO05 Hualane 4.10 215 Pn 22 49 10.4 -2.4
GO05 Hualane 4.10 215 P Pn 22 49 11.3 -1.6
GO03 Copiapo 4.19 346 Pn 22 49 13.9 -0.3
GO03 Copiapo 4.19 346 ⇑*i* P Pn 22 49 13.6 -0.6
GO03 *i* S Sn 22 49 58.9 -3.5
GO03 Copiapo 4.19 346 P Pn 22 49 13.8 -0.4
ML02 Panimavida 4.52 205 Pn 22 49 17.0 -1.5
ML02 Panimavida 4.52 205 P Pn 22 49 17.4 -1.2
AC02 Maricunga 4.82 359 Pn 22 49 23.7 +0.6
AC02 Maricunga 4.82 359 P Pn 22 49 23.9 +0.9
BI02 San Fabin de 5.30 200 Pn 22 49 28.2 -0.9
BI02 San Fabin de 5.30 200 P Pn 22 49 28.4 -0.7
AC01 Pan de Azucar 5.67 346 Pn 22 49 32.5 -1.5
PB14 IPOC Station P 7.12 350 Pn 22 49 50.9 -3.1
GO06 Curarrehue 8.13 193 Pn 22 50 06.2 -1.2
GO06 Curarrehue 8.13 193 P Pn 22 50 06.4 -1.0
TRQA Tornquist 8.62 140 Pn 22 50 13.0 -1.0
PB05 IPOC Station P 8.85 353 Pn 22 50 12.7 -4.5
PLCA Paso Flores 9.12 187 P Pn 22 50 20.1 -0.7
comp=Z,3.8nm,0.5s,baz=3.2,slow=10,SNR=13
PLCA Lg Lg 22 52 58.5
comp=Z,0.8nm,0.3s,baz=334,slow=7.1,SNR=3.7
PLCA Paso Flores 9.12 187 Pn Pn 22 50 18.9 -1.8
PLCA Paso Flores 9.12 187 eP Pn 22 50 17.6 -3.1
PLCA Paso Flores 9.12 187 P Pn 22 50 19.9 -0.8
PB03 IPOC Station P 9.61 356 Pn 22 50 23.2 -4.3
PSAL Palomas, Salto 9.81 90 eP Pn 22 50 28.2 -1.9
CPUP Villa Florida 11.57 66 P Pn 22 50 51.9 -1.8
comp=Z,0.8nm,0.5s,baz=246,slow=16,SNR=3.5
CPUP Lg Lg 22 54 06.2
comp=Z,0.3nm,0.3s,baz=172,slow=20,SNR=3.2
CPUP Villa Florida 11.57 66 Pn Pn 22 50 51.7 -2.1
CPUP Villa Florida 11.57 66 eP Pn 22 50 51.4 -2.3
PB16 IPOC Station P 13.29 358 Pn Pn 22 51 15.4 -1.5
PB16 IPOC Station P 13.29 358 P Pn 22 51 18.4 +1.5
COYC Coyhaique 14.07 189 Pn 22 51 26.0 -0.3
MURT Porto Murtinho 14.29 48 eP Pn 22 51 29.1 -0.1
LPAZ La Paz 15.34 3 P Pn 22 51 43.6 +0.4
comp=Z,6.7nm,0.7s,baz=173,slow=7.0,SNR=35
LPAZ La Paz 15.34 3 Pn 22 51 43.1 0.0
LPAZ La Paz 15.34 3 eP Pn 22 51 43.8 +0.7
LPAZ La Paz 15.34 3 P P 22 51 44.8 -0.5
COIM Forte Coimbra 15.49 44 eP Pn 22 51 44.3 -0.7
BBSD Serra de San D 16.34 30 eP Pn 22 51 54.4 -0.6
PTGB Pitanga 16.50 69 eP Pn 22 51 57.3 +0.3
GO08 Villa O'Higgin 16.98 188 Pn 22 52 00.3 -2.2
GO08 IAmb IAmb 22 52 06.4
comp=Z,17nm,0.7s
GO08 Villa O'Higgin 16.98 188 P Pn 22 52 00.8 -1.7
SIV San Ignacio 17.23 27 P P 22 52 05.0 -0.6
comp=Z,14nm,1.0s,baz=213,slow=11,SNR=48
PTLB Pontes e Lacer 18.52 32 P P 22 52 19.6 -0.1
PTLB IAmb IAmb 22 52 22.1
comp=Z,26nm,1.3s
PTLB Pontes e Lacer 18.52 32 eP Pn 22 52 21.2 -0.1
PP1B Ponte de Pedra 19.01 46 eP Pn 22 52 26.4 -0.7
SALV Santo Antonio 19.88 41 eP P 22 52 34.8 +0.3
MG05 Puerto Natales 20.15 186 P P 22 52 36.6 -0.5
MG05 IAmb IAmb 22 53 11.7
comp=Z,53nm,1.4s
VILB Vilhena 20.34 26 P P 22 52 39.0 -0.5
VILB IAmb IAmb 22 52 40.5
comp=Z,32nm,0.8s
VILB Vilhena 20.34 26 eP P 22 52 39.6 +0.1
PET01 Itanhaem-SP 20.58 74 eP P 22 52 41.5 -0.5
SPB Sao Paulo 20.77 73 P P 22 52 41.3 -2.7
SPB Sao Paulo 20.77 73 eP P 22 52 42.0 -2.0
MG02 Cerro Sombrero 21.09 180 P P 22 52 46.2 -1.0
GO10 Punta Arenas 21.52 183 P P 22 52 51.7 -0.1
EFI East Falkland 21.56 161 P P 22 52 50.9 -1.4
EFI East Falkland 21.56 161 P P 22 52 51.4 -0.8
CZSB Cruzeiro do Su 24.07 351 P P 22 53 16.7 -0.3
CZSB Cruzeiro do Su 24.07 351 eP P 22 53 17.2 +0.2
CLDB Colider 24.07 34 eP P 22 53 16.4 -0.6
BDFB Brasilia 24.96 55 P P 22 53 24.7 -0.5
comp=Z,2.2nm,0.5s,baz=214,slow=14,SNR=4.8
comp=Z,2.2nm,0.5s
BDFB Brasilia 24.96 55 P P 22 53 24.4 -0.9
SNDB Serra Nova Dou 25.55 44 eP P 22 53 30.2 -0.3
ALF01 Guarapari-ES 27.64 73 eP P 22 53 48.2 -1.0
NPGB Novo Progresso 27.65 30 eP P 22 53 49.0 -0.3
JANB Januaria 28.00 59 eP P 22 53 52.1 -0.4
TEFE Tefe 28.33 eP P 22 53 55.8 +0.3
MACA Manacapuru-AM 29.44 17 eP P 22 54 05.2 +0.4
SGC2 Sao Gabriel da 31.41 4 eP P 22 54 21.6 -1.0
ESPZ Base Esperanza 32.65 170 P P 22 54 34.5 +1.6
ESPZ IAmb IAmb 22 54 36.7
comp=Z,10nm,0.9s
OTAV Otavalo 32.96 343 P P 22 54 37.8 +1.2
BOAV Boa Vista 34.84 15 P P 22 54 51.6 -0.8
BOAV IAmb IAmb 22 54 53.1
comp=Z,9.8nm,0.8s
BOAV Boa Vista 34.84 15 eP P 22 54 51.5 -0.8
NBMA Muriti-CE 37.19 56 eP P 22 55 12.3 -0.2
NBPV Pedro Velho 40.33 59 eP P 22 55 38.8 +0.1
CRPR Cabo Rojo, PR 49.43 2 P P 22 56 49.8 -0.8
BANI BANI 49.80 358 P P 22 56 53.8 +0.3
VNA1 Neumayer--Stat 50.85 158 ⇑P P 22 57 01.9 +1.2
comp=Z,3.8nm,0.8s
VNA2 Neumayer--Watz 51.21 158 ⇑P P 22 57 04.5 +1.1
comp=Z,5.5nm,0.6s,baz=284,slow=7.3
VNA2 Neumayer--Watz 51.21 158 P P 22 57 04.7 +1.2
SNAA Sanae 52.81 159 ⇑P P 22 57 16.4 +0.9
comp=Z,29nm,0.4s
SNAA Sanae 52.81 159 P P 22 57 16.0 +0.6
comp=Z,2.6nm,0.9s,baz=270,slow=7.1,SNR=6.7
comp=Z,2.6nm,0.9s
SNAA Sanae 52.81 159 P P 22 57 16.0 +0.6
SNAA Sanae 52.81 159 P P 22 57 16.3 +0.9
TROLL Troll, Antarti 54.53 159 ⇑P P 22 57 28.9 +1.0
comp=Z,213nm,0.9s
TROLL ⇓pP pP 22 57 56.3 +1.0
comp=Z,250nm,1.1s
QSPA South Pole Qui 58.56 180 P P 22 57 57.8 +1.2
comp=Z,1.2nm,0.6s,baz=142,slow=2.4,SNR=11
comp=Z,1.2nm,0.6s
QSPA South Pole Qui 58.56 180 P P 22 57 57.4 +0.8
QSPA IAmb IAmb 22 58 26.7
comp=Z,8.9nm,1.4s
Y60A Bolivia 65.90 352 P P 22 58 46.0 +0.5
833A Chaparral WMA, 66.29 331 P 22 58 49.3 +1.1
X58A Rowland 66.58 351 P P 22 58 50.3 +0.3
FPAL Fort Paine 67.68 345 P P 22 58 57.0 +0.1
X48A Hartselle 67.92 344 P 22 58 58.2 -0.2
X48A IAmb IAmb 22 58 59.8
comp=Z,9.1nm,0.8s
W50A Signal Mountai 68.25 346 P P 22 59 00.5 -0.1
W50A IAmb IAmb 22 59 01.8
comp=Z,9.4nm,0.7s
CPCT Cooper Cave 68.33 346 P P 22 59 00.6 -0.4
CPCT IAmb IAmb 22 59 02.1
comp=Z,4.7nm,0.7s
TKL Tuckaleechee C 68.39 347 P P 22 59 01.1 -0.2
TKL IAmb IAmb 22 59 41.6
comp=Z,12nm,1.2s
BRDY Brady 68.74 333 P 22 59 03.8 +0.1
BRDY IAmb IAmb 22 59 05.5
comp=Z,7.3nm,1.1s
FCAR Ozark Folk Cen 70.61 340 P P 22 59 15.1 +0.1
VHRN Van Horn 70.85 328 P P 22 59 16.9 +0.2
WCI Wyandotte Cave 71.38 346 P P 22 59 18.8 -0.7
WCI IAmb IAmb 22 59 20.1
comp=Z,8.4nm,0.8s
WCI Wyandotte Cave 71.38 346 P P 22 59 18.8 -0.7
GDL2 Guadalupe Moun 71.77 329 P P 22 59 22.4 +0.2
MNTX Cornudas Mount 71.80 328 P 22 59 22.2 -0.1
MNTX Cornudas Mount 71.80 328 P P 22 59 22.3 0.0
DBIC Dimbokro 72.05 70 P P 22 59 23.8 -0.4
comp=Z,28nm,1.3s,baz=242,slow=6.2,SNR=6.2
comp=Z,28nm,1.3s
DBIC Dimbokro 72.05 70 P P 22 59 23.8 -0.4
DBIC IAmb IAmb 22 59 25.0
comp=Z,17nm,1.2s
BLO Bloomington 72.33 346 P P 22 59 24.7 -0.5
BLO IAmb IAmb 22 59 25.4
comp=Z,8.4nm,0.7s
CCM Cathedral Cave 72.39 342 P P 22 59 25.8 +0.2
CCM IAmb IAmb 22 59 27.0
comp=Z,13nm,1.1s
MSTX Muleshoe 72.61 331 P 22 59 27.6 +0.4
MSTX IAmb IAmb 22 59 28.8
comp=Z,13nm,1.0s
S39A Bolivar 72.63 340 P P 22 59 27.2 +0.1
S39A IAmb IAmb 22 59 28.7
comp=Z,15nm,1.2s
ACSO Alum Creek Sta 72.70 349 P P 22 59 26.9 -0.5
ACSO IAmb IAmb 22 59 28.3
comp=Z,12nm,0.7s
R40A Maddies Statio 72.89 341 P P 22 59 28.6 0.0
PAOC Oil Creek Stat 73.48 352 P P 22 59 32.0 0.0
PAOC IAmb IAmb 23 00 04.1
comp=Z,15nm,1.5s
121A Cookes Peak, D 73.61 327 P 22 59 34.3 +1.1
121A IAmb IAmb 22 59 36.0
comp=Z,6.2nm,0.9s
SUR Sutherland 73.74 118 P P 22 59 33.5 -0.7
N47A Urbana 73.81 347 P P 22 59 33.4 -0.6
P40A Paris 73.99 342 P 22 59 35.0 0.0
HDIL Hopedale 74.27 344 P P 22 59 36.2 -0.4
ANMO Albuquerque 75.02 329 P P 22 59 42.5 +1.2
ANMO Albuquerque 75.02 329 P P 22 59 42.4 +1.2
T25A Trinidad 76.02 332 P P 22 59 47.8 +0.8
T25A IAmb IAmb 22 59 49.8
comp=Z,6.3nm,1.0s
L40A Anamosa 76.16 343 P P 22 59 47.4 0.0
PKME Peaks-Kenny Pk 76.58 360 P P 22 59 50.7 +1.0
PKME IAmb IAmb 23 00 31.1
comp=Z,21nm,1.3s
SDCO Great Sand Dun 76.98 331 P P 22 59 53.4 +0.8
KOOLE Kule 77.70 109 P P 22 59 57.0 +0.2
ISCO Idaho Springs 78.78 332 P P 23 00 03.9 +1.4
PV18 Skein Mesa, Pa 78.85 329 P 23 00 03.0 +0.2
PV18 IAmb IAmb 23 00 04.9
comp=Z,4.5nm,0.8s
ECSD EROS Data Cent 79.16 340 P 23 00 04.1 0.0
ECSD IAmb IAmb 23 00 05.0
comp=Z,5.6nm,0.6s
ECSD EROS Data Cent 79.16 340 P P 23 00 04.7 +0.6
GRTLG Ghanzi 79.32 108 P P 23 00 06.2 +0.5
P18A Preston Nutter 80.58 329 P P 23 00 12.2 0.0
LBTB Lobatse 80.98 114 P P 23 00 14.3 -0.2
LBTB IAmb IAmb 23 00 33.8
comp=Z,11nm,1.3s
TORD Torodi Ar. Bea 81.05 69 P P 23 00 15.0 +0.2
comp=Z,3.5nm,0.7s,baz=232,slow=5.1,SNR=27
comp=Z,3.5nm,0.7s
RSSD Black Hills 81.91 335 P P 23 00 19.8 +0.7
PDAR Pinedale Array 82.88 331 P P 23 00 24.6 +0.5
comp=Z,1.3nm,0.8s,baz=145,slow=5.4,SNR=10
comp=Z,1.3nm,0.8s
PDAR Pinedale Array 82.88 331 P P 23 00 23.6 -0.5
NVAR Mina Array Bea 83.47 323 P P 23 00 28.3 +1.0
comp=Z,1.1nm,0.7s,baz=154,slow=5.9,SNR=6.7
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 83.47 323 P P 23 00 27.9 +0.6
ULM Lac du Bonnet 84.96 343 P P 23 00 34.3 +0.2
comp=Z,4.2nm,0.8s,baz=142,slow=5.4,SNR=5.6
comp=Z,4.2nm,0.8s
HLID Hailey 85.60 329 P P 23 00 39.6 +1.9
BCYI Bear Canyon 85.75 330 P P 23 00 39.2 +0.7
PLID Pearl Lake 87.50 329 P 23 00 47.5 +0.4
PLID IAmb IAmb 23 00 49.0
comp=Z,4.0nm,0.9s
K05A Summer Lake 87.99 325 P P 23 00 50.8 +1.4
K05A IAmb IAmb 23 00 52.0
comp=Z,6.7nm,0.9s
PINE Pine Mountain 88.81 325 P 23 00 54.1 +0.9
PINE IAmb IAmb 23 00 55.8
comp=Z,5.2nm,0.8s
ASAR Alice Springs 120.74 205 PKP PKPdf 23 06 50.2 -1.2
comp=Z,0.3nm,0.4s,baz=149,slow=1.8,SNR=2.6
WRA Warramunga Arr 123.98 207 PKP PKPdf 23 06 57.1 -0.5
comp=Z,0.2nm,0.5s,baz=157,slow=1.7,SNR=8.8
WRA Warramunga Arr 123.98 207 PKPdf 23 06 56.7 -0.9
BVAR Borovoye Array 143.88 42 PKP PKPbc 23 07 32.4 +0.8
comp=Z,0.7nm,0.4s,baz=309,slow=1.8,SNR=3.6
DPSS Saipan 144.28 251 PKPdf PKPdf 23 07 35.2 -0.1
KKAR Karatay Array 146.22 59 PKPbc PKPbc 23 07 39.0 -0.2
GAR Garm 146.28 66 PKPbc PKPbc 23 07 39.5 -0.1
TOLI2 Tolitoli 148.21 199 PKPbc PKPdf 23 07 44.1 +2.0
AAK Ala-Archa 149.18 59 PKPbc PKPbc 23 07 47.8 +0.5
KURBB Kurchatov Arra 149.47 42 PKPbc PKPbc 23 07 48.2 +0.7
comp=Z,3.0nm,0.7s,baz=299,slow=3.2,SNR=27
KURK Kurchatov 149.48 42 PKPbc 23 07 47.4 -0.1
KSH2 Kashi 150.37 66 PKPbc PKiKP 23 07 51.6 +0.6
NRN Naryn 150.47 61 PKPbc PKPbc 23 07 50.8 +0.1
ZAA0 Zalesovo Array 150.93 32 PKPbc PKPbc 23 07 51.0 +0.1
ZALV Zalesovo Beam 150.93 32 PKPbc PKPbc 23 07 51.6 +0.7
comp=Z,8.8nm,0.6s,baz=304,slow=3.2,SNR=46
ZALV Zalesovo Beam 150.93 32 PKPbc 23 07 51.0 0.0
MKAR Makanchi Array 153.35 47 PKPbc PKPbc 23 07 56.4 -0.2
comp=Z,1.3nm,0.8s,baz=298,slow=2.6,SNR=9.4
MKAR PKPab PKPab 23 08 09.0 -0.2
comp=Z,2.1nm,0.7s,baz=301,slow=3.8,SNR=14
MKAR Makanchi Array 153.35 47 PKPbc 23 07 55.7 -1.0
MKAR PKPab 23 08 09.0 -0.2
SONM Songino Array 163.49 11 PKPab PKPab 23 08 54.1 +1.0
comp=Z,0.7nm,0.7s,baz=323,slow=3.6,SNR=4.2
PZH PanZhiHua 170.45 120 PKP PKPdf 23 08 06.2 -0.9
HHC Hu-ho-hao-te 170.83 357 eP PKPdf 23 08 07.2 +0.4
NJ2 Nanjing 173.25 275 eP PKPdf 23 08 07.6 -0.4
NJ2 pmax pmax
comp=Z,25nm,0.6s
XAN Xi'an 177.10 35 *e*PKP PKPdf 23 08 07.6 -1.5

NNC ***08*** *23:27:36.7±3.1, 53.37N×87.61E, h1km±25km, mb4.8, mpv4.5, Error ellipse: s-maj=28.8km s-min=10.2km az=66.0, Suspected Mining explosion.*
ASRS ***08*** *23:27:36.9, 53.4N±0.6×87.4E±0.6, h2km, MLh4.0/19, confirmed*
IDC ***08*** *23:27:37.4±1.0, 53.47N×87.47E, h0km, mb3.8/7, mbtmp4.0/12, ML3.6/5, MS2.9/2, Error ellipse: s-maj=12.0km s-min=10.8km az=133.0*
ISC 08 23:27:37.2±0.5, 53.43N±0.02×87.42E±0.02, h0km, n59, σ1§49/103, mb3.7/7, 6C-21D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KALT1	**Kaltan 1**	**0.01**	**165**	P	**Pg**	**23 27 37.7**	**+0.4**
KALT1				S	**Sg**	**23 27 38.1**	**+0.6**
KALT2	**Kaltan 2**	**0.06**	**247**	P	**Pg**	**23 27 39.6**	**+1.2**
KALT2				S	**Sg**	**23 27 41.1**	**+1.9**
MALIN	**Malinovka, Kuz**	**0.09**	**268**	⇓P	**Pg**	**23 27 39.2**	**+0.3**
MALIN				S	**Sg**	**23 27 41.2**	**+1.2**
KALT3	**Kaltan 3**	**0.09**	**7**	P	**Pg**	**23 27 39.2**	**+0.3**
KALT3				S	**Sg**	**23 27 41.5**	**+1.4**
TAIL	**Tailep, Kuzbas**	**0.14**	**280**	P	**Pg**	**23 27 40.2**	**+0.4**
TAIL				S	**Sg**	**23 27 43.0**	**+1.4**
KIYZ	**Kiyzas, Kuzbas**	**0.24**	**56**	⇓P	**Pg**	**23 27 42.2**	**+0.3**
KIYZ				S	**Sg**	**23 27 46.3**	**+1.3**
ERU	**Erunakovo, Kuz**	**0.72**	**358**	⇓P	**Pg**	**23 27 51.4**	**+0.5**
ERU				S	**Sb**	**23 28 02.3**	**-0.7**
TASR	**Tashtagol**	**0.72**	**157**	⇓P	**Pg**	**23 27 51.6**	**+0.6**
TASR				S	**Sg**	**23 28 01.9**	**+1.6**
ELT	**Eltsovka**	**0.73**	**257**	⇓P	**Pg**	**23 27 50.8**	**-0.3**
ELT				S	**Sg**	**23 28 00.9**	**+0.4**
VCHU	**Verkh-Chumysh,**	**0.79**	**313**	⇓P	**Pg**	**23 27 52.2**	**-0.1**
VCHU				S	**Sg**	**23 28 04.0**	**+1.5**
LUZB	**Luzhba, Kemero**	**0.92**	**74**	P	**Pg**	**23 27 54.2**	**-0.5**
LUZB				S	**Sg**	**23 28 07.6**	**+1.1**
BJR3	**Bachatsky-3 (S**	**1.10**	**317**	⇓P	**Pg**	**23 27 58.1**	**-0.1**
BJR3				S	**Sb**	**23 28 14.4**	**+0.5**
BJR2	**Bachatsky-2, K**	**1.15**	**319**	⇓P	**Pg**	**23 28 00.1**	**+0.8**
BJR2				S	**Sn**	**23 28 18.1**	**+1.1**

SALR	**Pechorkino, Sa**	**1.42**	**315**	⇓P		**Pn**	**23 28 03.5**	**-0.8**
SALR				S		**Sg**	**23 28 23.6**	**+0.7**
ARTR	**Artybash**	**1.63**	**183**	⇓P		**Pn**	**23 28 06.7**	**-0.5**
ARTR				S		**Sn**	**23 28 28.7**	**-0.2**
I46RU	**ZALESOVO INFRA**	**1.63**	**290**	I		I	23 37 10.0	
	baz=110,slow=315,SNR=0.2							
ZAA0	**Zalesovo Array**	**1.63**	**290**	⇓P		**Pn**	**23 28 06.8**	**-0.4**
	72nm,0.6s							
ZAA0				⇑S		**Sg**	**23 28 32.2**	**+2.6**
	182nm,0.6s							
ZALV	**Zalesovo Beam**	**1.63**	**290**	Pg		**Pn**	**23 28 07.0**	**-0.2**
	30nm,0.3s,baz=109,slow=17,SNR=274							
ZALV				Lg		Lg	23 28 29.9	
	26nm,0.3s,baz=108,slow=28,SNR=12							
YALR	**Yailyu, Altay**	**1.66**	**176**	⇓P		**Pn**	**23 28 07.1**	**-0.5**
YALR				S		**Sn**	**23 28 29.5**	**-0.1**
GALT	**Gorno-Altaysk,**	**1.72**	**212**	P		**Pn**	**23 28 08.6**	**+0.2**
GALT				S		**Sn**	**23 28 31.7**	**+0.6**
VEH	**Verkhnyaya Baz**	**1.75**	**94**	P		**Pn**	**23 28 08.9**	**0.0**
VEH				S		**Sn**	**23 28 32.3**	**+0.4**
BALAH	**Balakhonka, Ku**	**2.34**	**340**	P		**Pn**	**23 28 18.5**	**+1.7**
BALAH				S		**Sb**	**23 28 50.8**	**+1.2**
ELDR	**Elanda**	**2.36**	**201**	⇓P		**Pn**	**23 28 18.7**	**+1.6**
ELDR				S		**Sb**	**23 28 50.0**	**-0.2**
DJO	**Djoy, Khakassi**	**2.38**	**104**	⇓P		**Pn**	**23 28 18.6**	**+1.2**
DJO				S		**Sb**	**23 28 50.7**	**-0.1**
CERR	**Cheremushki**	**2.47**	**102**	⇑P		**Pb**	**23 28 21.5**	**-1.0**
CERR				S		**Sb**	**23 28 54.2**	**+0.7**
KHAR	**Kharino, NSO,**	**2.55**	**299**	P		**Pn**	**23 28 20.3**	**+0.5**
KHAR				S		**Sb**	**23 28 55.1**	**-0.7**
ULGR	**Ulagan, Altay**	**2.83**	**173**	P		**Pn**	**23 28 26.1**	**+2.4**
ULGR				S		**Sb**	**23 29 04.3**	**+0.5**
NVSII	**Novosibirsk**	**2.84**	**302**	P		**Pn**	**23 28 25.0**	**+1.2**
NVSII				S		**Sb**	**23 29 03.1**	**-0.9**
NVS	**Novosibirsk**	**2.84**	**302**	P		**Pn**	**23 28 24.7**	**+0.9**
NVS				S		**Sb**	**23 29 03.4**	**-0.7**
TEL	**Teeli**	**2.95**	**144**	P		**Pn**	**23 28 28.2**	**+2.8**
TEL				S		**Sg**	**23 29 12.4**	**+0.4**
NHES	**Novosibirsk, N**	**2.98**	**301**	P		**Pb**	**23 28 29.6**	**-1.5**
NHES				S		**Sb**	**23 29 09.0**	**+1.0**
UKR	**Ust'-Kan**	**2.98**	**214**	P		**Pb**	**23 28 29.9**	**-1.2**
UKR				S		**Sb**	**23 29 10.3**	**+2.2**
BSTK	**Bystrovka, Nov**	**3.04**	**294**	P		**Pn**	**23 28 27.6**	**+1.1**
BSTK				S		**Sb**	**23 29 12.2**	**+2.5**
AKAR	**Aktash**	**3.11**	**178**	P		**Pn**	**23 28 30.0**	**+2.3**
AKAR				S		**Sb**	**23 29 13.6**	**+1.6**
CHBI	**Chibit, Altay**	**3.12**	**179**	P		**Pn**	**23 28 29.9**	**+2.2**
CHBI				S		**Sg**	**23 29 15.2**	**-2.1**
TUNR	**Tungur**	**3.34**	**192**	P		**Pn**	**23 28 33.3**	**+2.6**
TUNR				S		**Sg**	**23 29 22.5**	**-2.0**
CUR	**Chagan-Uzun**	**3.38**	**170**	P		**Pn**	**23 28 34.2**	**+2.9**
CUR				S		**Sg**	**23 29 23.7**	**-2.1**
DGZ	**Jazzator, Alta**	**3.73**	**180**	P		**Pb**	**23 28 40.9**	**-3.2**
DGZ				S		**Sb**	**23 29 33.1**	**+3.3**
MINR	**Mina**	**4.25**	**67**	P		**Pn**	**23 28 44.0**	**+0.8**
MINR				S		**Sg**	**23 29 54.9**	**+1.3**
KZLR	**Kyzyl**	**4.62**	**109**	P		**Pb**	**23 29 00.9**	**+1.8**
KZLR				S		**Sg**	**23 30 02.4**	**-3.3**
KURK	**Kurchatov**	**6.07**	**247**	⇓Pn		**Pn**	**23 29 09.5**	**+1.4**
	13nm,0.6s							
KURK				⇓Sn		**Sn**	**23 30 20.1**	**+2.0**
	5.1nm,0.5s							
KURK				⇑Lg		Lg	23 30 54.5	
	48nm,0.8s							
KURBB	**Kurchatov Arra**	**6.16**	**246**	Pn		**Pn**	**23 29 11.1**	**+1.7**
	2.4nm,0.3s,baz=62,slow=14,SNR=304							
KURBB				Sn		**Sn**	**23 30 21.4**	**+0.9**
	0.7nm,0.3s,baz=118,slow=30,SNR=6.3							
KURBB				Lg		Lg	23 30 52.3	
	0.4nm,0.3s,baz=325,slow=26,SNR=5.1							
	60nm,0.6s							
KURBB	**Kurchatov Arra**	**6.16**	**246**	⇓Pn		**Pn**	**23 29 10.8**	**+1.4**
	74nm,0.6s							
KURBB				⇓Sn		**Sn**	**23 30 19.7**	**-0.8**
	37nm,0.7s							
KURBB				⇓Lg		Lg	23 30 56.6	
	168nm,0.7s							
MK31	**Makanchi Array**	**7.41**	**208**	⇑Pn		**Pn**	**23 29 28.3**	**+1.7**
	14nm,0.5s,baz=28,slow=12,SNR=382							
MK31				Sn		**Sn**	**23 30 52.5**	**+1.2**
	2.4nm,0.5s,baz=58,slow=22,SNR=5.2							
MK31				⇓Lg		Lg	23 31 31.7	
	55nm,1.1s,baz=30,slow=28,SNR=9.3							
MKAR	**Makanchi Array**	**7.41**	**208**	Pn		**Pn**	**23 29 28.5**	**+1.9**
	9.8nm,0.3s,baz=28,slow=13,SNR=485							
MKAR				Sn		**Sn**	**23 30 52.6**	**+1.3**
	2.1nm,0.3s,baz=36,slow=28,SNR=6.3							
MKAR				Lg		Lg	23 31 29.0	
	2.4nm,0.3s,baz=26,slow=29,SNR=7.5							
MKAR				LR		LR	23 31 56.6	
	comp=Z,32nm,19.6s,baz=173,slow=35							
	39nm,0.5s							
MAKZ	**Makanchi**	**7.49**	**210**	⇓Pn		**Pn**	**23 29 29.1**	**+1.4**
	32nm,0.6s							
MAKZ				⇑Sn		**Sn**	**23 30 53.3**	**+0.1**
	9.1nm,0.6s							
MAKZ				⇑Lg		Lg	23 31 33.9	
	45nm,1.0s							
TLY	**Talaya**	**10.04**	**93**	Lg		Lg	23 32 50.7	
	baz=229,slow=23							
BVAR	**Borovoye Array**	**10.22**	**275**	Pn		**Pn**	**23 30 04.5**	**-0.6**
	0.2nm,0.3s,baz=72,slow=15,SNR=18							
BVAR				Sn		**Sn**	**23 31 55.1**	**-5.2**
	0.2nm,0.3s,baz=74,slow=26,SNR=9.2							
	6.9nm,0.7s							
SONM	**Songino Array**	**13.27**	**107**	Pn		**Pn**	**23 30 45.8**	**-1.0**
	0.1nm,0.3s,baz=297,slow=13,SNR=4.6							
SONM				Lg		Lg	23 34 32.8	
	0.2nm,0.3s,baz=296,slow=33,SNR=2.0							
	0.8nm,0.7s							
ARTI	**Arti**	**16.90**	**292**	Pn		**Pn**	**23 31 33.7**	**-1.1**
	0.2nm,0.3s,baz=111,slow=17,SNR=3.5							
ARTI				Sn		**Sn**	**23 34 42.3**	**-0.7**
	0.5nm,0.3s,baz=174,slow=14,SNR=3.8							
	2.0nm,0.7s							
AKTO	**Aktyubinsk**	**18.32**	**273**	P		**Pn**	**23 31 50.0**	**-2.5**
	1.0nm,0.4s,baz=66,slow=12,SNR=3.8							
FINES	**FINESS Array B**	**32.81**	**309**	P		**P**	**23 34 12.1**	**+0.3**
	2.1nm,0.8s,baz=66,slow=7.1,SNR=6.7							
	2.1nm,0.8s							
AKASG	**Malin Array Be**	**35.03**	**290**	P		**P**	**23 34 30.7**	**-0.5**
	0.4nm,0.4s,baz=58,slow=8.8,SNR=3.0							
	0.4nm,0.4s							
HFS	**Hagfors**	**38.97**	**310**	P		**P**	**23 35 04.2**	**-0.4**
	4.5nm,0.7s,baz=76,slow=13,SNR=9.5							
	4.5nm,0.7s							
NB2	**NORSAR Subarra**	**39.71**	**312**	P		**P**	**23 35 12.4**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=65,slow=7.9							
NOA	**NORSAR Array B**	**39.71**	**312**	P		**P**	**23 35 12.2**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=64,slow=8.2,SNR=5.9							
	comp=Z,0.9nm,0.6s							
GERES	**GERESS Array B**	**44.58**	**295**	P		**P**	**23 35 51.5**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=69,slow=8.3,SNR=4.2							
	comp=Z,0.4nm,0.7s							
ILAR	**Eielson Array**	**54.96**	**25**	P		**P**	**23 37 08.5**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=313,slow=4.5,SNR=12							
ILAR				LR		LR	00 02 27.0	
	comp=Z,27nm,18.5s,baz=265,slow=38							
	comp=Z,1.0nm,0.7s							
ESDC	**Sonseca Array**	**60.11**	**297**	P		**P**	**23 37 46.3**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=35,slow=8.5,SNR=2.8							
	comp=Z,0.5nm,0.9s							

*SJA **08** 23:28:36.3±1.0, 18°.55S×70°.64W, h46^{km}±9^{km}, ML3.2, MW3.6*

*GUC **08** 23:28:38.7±0.7, 18°.64S×70°.65W, h35^{km}±2^{km}, ML3.4*

ISC 08 23:28:35.6±2.1, 18°.56S±0°.06×70°.7W±0°.1, h16^{km}±13^{km}, n21, σ0°67/30, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.32**	**101**	*eP*			**Pn**	**23 28 46.0**	**+0.3**
PB12				IAML				23 28 52.9	
	comp=Z,1μm,0.3s								
PB12	**IPOC Station P**	**0.32**	**101**	*eP*			**Pn**	**23 28 46.0**	**+0.3**
PB12				*eS*			**Sn**	**23 28 51.7**	**-0.4**
AP01	**Chacalluta**	**0.35**	**59**	*eP*			**Pn**	**23 28 46.4**	**+0.3**
AP01				*eS*			**Sn**	**23 28 52.8**	**0.0**
AP01				IAML				23 28 52.9	
	comp=Z,7μm,0.1s								
AP01	**Chacalluta**	**0.35**	**59**	*eP*			**Pn**	**23 28 46.5**	**+0.4**
AP01				IAML				23 28 53.4	
	comp=E,16μm,0.2s								
PB16	**IPOC Station P**	**1.12**	**79**	*eP*			**Pn**	**23 28 57.2**	**+0.2**
PB16				*eS*			**Sg**	**23 29 12.0**	**0.0**
PB16				IAML				23 29 13.0	
	comp=Z,381nm,0.2s								
PB16	**IPOC Station P**	**1.12**	**79**	*eP*			**Pn**	**23 28 57.2**	**+0.2**
PSGCX	**Pisagua**	**1.16**	**154**	*eP*			**Pb**	**23 28 56.7**	**-0.5**
PSGCX				*eS*			**Sn**	**23 29 13.0**	**+0.3**
PSGCX				IAML				23 29 13.2	
	comp=Z,459nm,0.3s								
PSGCX	**Pisagua**	**1.16**	**154**	*eP*			**Pb**	**23 28 56.7**	**-0.5**
PSGCX				*eS*			**Sb**	**23 29 10.6**	**-1.5**
PB18	**Visviri**	**1.48**	**50**	*eP*			**Pg**	**23 29 04.4**	**+0.3**
PB18				IAML				23 29 30.4	
	comp=E,488nm,0.3s								
PB11	**IPOC Station P**	**1.53**	**142**	*eP*			**Pn**	**23 29 02.8**	**+0.4**
PB11				*eS*			**Sn**	**23 29 22.3**	**+0.2**
PB11				IAML				23 29 27.9	
	comp=Z,253nm,0.1s								
PB11	**IPOC Station P**	**1.53**	**142**	*eP*			**Pn**	**23 29 02.8**	**+0.4**
PB11				*eS*			**Sn**	**23 29 22.0**	**-0.1**
PB11				IAML				23 29 23.9	
	comp=N,403nm,0.1s								
GO01	**Chusmiza**	**1.77**	**129**	*eP*			**Pn**	**23 29 07.2**	**+1.1**
GO01	**Chusmiza**	**1.77**	**129**	*eP*			**Pn**	**23 29 07.3**	**+1.3**
GO01				*eS*			**Sn**	**23 29 29.4**	**+0.9**
GO01				IAML				23 29 32.7	
	comp=N,883nm,0.1s								
TA02	**Huaiquique**	**1.78**	**164**	*eP*			**Pn**	**23 29 06.3**	**+0.6**
TA02				IAML				23 29 31.8	
	comp=N,1μm,0.1s								
PB08	**IPOC Station P**	**2.12**	**138**	*eP*			**Pn**	**23 29 11.6**	**+0.9**
PB08				*eS*			**Sn**	**23 29 37.3**	**+0.2**
PB08				IAML				23 29 41.5	
	comp=Z,94nm,0.1s								
PB08	**IPOC Station P**	**2.12**	**138**	*eP*			**Pn**	**23 29 11.8**	**+1.0**
PB02	**IPOC Station P**	**2.84**	**165**	*eP*			**Pn**	**23 29 20.8**	**+0.3**
PB02				IAML				23 30 12.0	
	comp=Z,90nm,0.5s								
PB02	**IPOC Station P**	**2.84**	**165**	*eP*			**Pn**	**23 29 20.7**	**+0.3**
PB02				IAML				23 30 11.2	
	comp=E,293nm,0.1s								
PB07	**IPOC Station P**	**3.24**	**167**	*eP*			**Pn**	**23 29 26.2**	**+0.3**
PB07				IAML				23 30 22.9	
	comp=E,43nm,0.3s								
PB09	**IPOC Station P**	**3.49**	**158**	*eP*			**Pn**	**23 29 30.7**	**+1.3**
PB09				IAML				23 30 31.9	
	comp=Z,36nm,0.6s								
PB03	**IPOC Station P**	**3.58**	**166**	*eP*			**Pn**	**23 29 30.7**	**+0.1**

*GUC **08** 23:30:10.6±0.9, 17°.30S×69°.92W, h15^{km}±10^{km}, ML4.2*

*NEIC **08** 23:30:13.2±2.0, 17°.52S±0°.04×69°.95W±0°.05, h10^{km}±1^{km}, mb4.3/8, ML4.1(GUC), Error ellipse: s-maj=8.4km s-min=6.1km az=118.0*

*IDC **08** 23:30:19.3±4.1, 17°.34S×69°.85W, h51^{km}±34^{km}, mb3.6/7, mbtmp3.9/8, ML4.4/1, MS3.3/6, Error ellipse: s-maj=28.5km s-min=24.7km az=52.0*

ISC 08 23:30:11.9±1.7, 17°.45S±0°.05×69°.97W±0°.05, h5^{km}±10^{km}, n56, σ0°93/63, mb4.0/7, MS3.2/4, 4C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.49**	**107**				**Pg**	**23 30 21.4**	**0.0**
PB18							**Sg**	**23 30 28.6**	**+0.8**
PB18	**Visviri**	**0.49**	**107**	⇓	*iP*		**Pg**	**23 30 21.4**	**0.0**
AP01	**Chacalluta**	**0.99**	**201**				**Pg**	**23 30 31.2**	**+0.4**
AP01						Sn	**Sb**	**23 30 46.3**	**+1.4**
AP01	**Chacalluta**	**0.99**	**201**	⇑	*iP*		**Pb**	**23 30 31.5**	**0.0**
AP01					*iS*		**Sb**	**23 30 46.0**	**+1.1**
AP01					IAML			23 30 47.3	
	comp=E,15μm,0.4s								
PB16	**IPOC Station P**	**0.99**	**154**				**Pg**	**23 30 30.9**	**0.0**
PB16	**IPOC Station P**	**0.99**	**154**	⇓	*iP*		**Pg**	**23 30 31.0**	**0.0**
PB12	**IPOC Station P**	**1.21**	**196**		*iP*	Pn	**Pg**	**23 30 35.1**	**-0.1**
PB12						Sn	**Sb**	**23 30 52.3**	**+0.8**
PB12	**IPOC Station P**	**1.21**	**196**	⇑	*iP*		**Pg**	**23 30 35.1**	**-0.1**
PB12					*iS*		**Sn**	**23 30 52.5**	**0.0**
PB12					IAML			23 30 53.3	
	comp=N,3μm,0.2s								
PX02	**IPOC Station P**	**1.53**	**188**		*iP*		**Pn**	**23 30 39.2**	**-0.8**
PX02					*iS*		**Sb**	**23 31 01.0**	**+0.4**
I08BO	**LAS PENAS INFR**	**1.90**	**50**		I		I	23 42 30.0	
	baz=230,slow=293,SNR=3.3								
LPAZ	**La Paz**	**2.10**	**57**		P		**Pb**	**23 30 50.4**	**-0.6**
	comp=N,98nm,0.3s,baz=240,slow=9.3,SNR=185								
LPAZ					S		**Sn**	**23 31 14.9**	**-0.4**
	comp=N,47nm,0.4s,baz=330,slow=20,SNR=1.7								
LPAZ					LR		LR	23 31 45.8	
	comp=N,455nm,18.6s,baz=319,slow=44								
PSGCX	**Pisagua**	**2.15**	**184**				**Pn**	**23 30 49.6**	**+1.0**
PSGCX	**Pisagua**	**2.15**	**184**	⇑	*iP*		**Pn**	**23 30 50.2**	**-1.2**
PSGCX					*iS*		**Sb**	**23 31 19.0**	**+0.6**
PB11	**IPOC Station P**	**2.32**	**173**			Pn	**Pn**	**23 30 52.1**	**+1.1**
PB11	**IPOC Station P**	**2.32**	**173**	⇑	*iP*		**Pb**	**23 30 53.5**	**-1.0**
PB11					*iS*		**Sb**	**23 31 25.0**	**+1.4**
PB11					IAML			23 31 26.9	
	comp=E,1μm,0.2s								
GO01	**Chusmiza**	**2.33**	**162**		*iP*		**Pb**	**23 30 54.5**	**-0.3**
GO01					*iS*		**Sg**	**23 31 27.2**	**+0.2**
GO01					IAML			23 31 32.7	
	comp=N,800nm,0.2s								
PB08	**IPOC Station P**	**2.79**	**164**		Pn		**Pn**	**23 30 59.2**	**+1.6**
PB08	**IPOC Station P**	**2.79**	**164**		*iP*		**Pb**	**23 31 02.7**	**+0.1**
PB08					*iS*		**Sg**	**23 31 40.3**	**-1.4**
PB08					IAML			23 31 42.4	
	comp=E,407nm,0.6s								
TA02	**Huaiquique**	**2.81**	**183**		*eP*		**Pn**	**23 30 58.6**	**+1.0**
TA02					*iS*		**Sb**	**23 31 38.8**	**+1.3**
TA02					IAML			23 31 40.4	
	comp=N,2μm,0.3s								
PB02	**IPOC Station P**	**3.85**	**179**		Pn		**Pn**	**23 31 12.6**	**+0.5**
PB07	**IPOC Station P**	**4.26**	**179**		Pn		**Pn**	**23 31 17.1**	**-0.6**
PB09	**IPOC Station P**	**4.38**	**171**				**Pn**	**23 31 18.1**	**-1.3**
PB03	**IPOC Station P**	**4.58**	**177**				**Pn**	**23 31 21.5**	**-0.7**
PB06	**IPOC Station P**	**5.25**	**176**		Pn		**Pn**	**23 31 30.2**	**-1.1**
PB05	**IPOC Station P**	**5.38**	**182**		Pn		**Pn**	**23 31 31.8**	**-1.3**
SIV	**San Ignacio**	**8.65**	**82**		P		**Pn**	**23 32 19.7**	**+1.8**
	comp=N,0.4nm,0.3s,baz=262,slow=10,SNR=33								
SIV					S		**Sn**	**23 33 55.8**	**-0.1**
	comp=N,1.9nm,0.4s,baz=153,slow=20,SNR=1.4								
SIV					LR		LR	23 35 52.2	
	comp=N,122nm,19.8s,baz=288,slow=39								
	comp=N,7.6nm,0.4s								
AC01	**Pan de Azucar**	**8.68**	**184**		Pn		**Pn**	**23 32 16.9**	**-1.4**
VILB	**Vilhena**	**10.43**	**66**				**Pn**	**23 32 43.2**	**+0.8**
PTLB	**Pontes e Lacer**	**10.58**	**81**				**Pn**	**23 32 44.9**	**+0.5**
AC05	**El Transito**	**11.34**	**181**		Pn		**Pn**	**23 32 54.8**	**-0.1**
CPUP	**Villa Florida**	**14.68**	**129**		LR		LR	23 40 37.4	
	comp=N,93nm,19.4s,baz=312,slow=42								
MT02	**Curacav**	**15.78**	**184**		Pn		**Pn**	**23 33 53.9**	**-1.1**
MT02					IAmb		IAmb	23 34 00.2	
	comp=Z,18nm,1.1s								
MT09	**Talagante**	**16.29**	**183**		Pn		**Pn**	**23 34 00.8**	**-0.9**
MT09					IAmb		IAmb	23 34 42.1	
	comp=Z,29nm,1.5s								
MT01	**Popeta**	**16.39**	**184**		Pn		**Pn**	**23 34 01.9**	**-1.0**
BO02	**Sierra Bellavi**	**17.29**	**182**		Pn		**Pn**	**23 34 13.4**	**-0.9**
TRQA	**Tornquist**	**21.70**	**163**		P		**P**	**23 35 04.0**	**+0.2**
TRQA					IAmb		IAmb	23 35 14.8	
	comp=Z,19nm,1.4s								
SDV	**Santo Domingo**	**26.17**	**359**		LR		LR	23 47 00.1	
	comp=Z,79nm,19.9s,baz=229,slow=38								
MDP	**Montagnes des**	**28.19**	**39**		LR		LR	23 47 54.5	
	comp=Z,100nm,18.2s,baz=225,slow=38								
JTS	**Las Juntas de**	**31.28**	**331**		LR		LR	23 50 49.7	
	comp=Z,40nm,18.1s,baz=150,slow=39								
CMIG	**Matias Romero**	**42.19**	**323**		LR		LR	23 54 04.6	
	comp=Z,26nm,20.2s,baz=178,slow=34								
TXAR	**Lajitas Array**	**56.75**	**325**		P		**P**	**23 39 58.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=151,slow=9.5,SNR=5.5								
	comp=Z,0.3nm,0.6s								
TXAR	**Lajitas Array**	**56.75**	**325**		P		**P**	**23 39 57.6**	**+0.4**
PDAR	**Pinedale Array**	**70.11**	**330**		P		**P**	**23 41 26.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=140,slow=6.2,SNR=2.2								
	comp=Z,0.2nm,0.3s								
ULM	**Lac du Bonnet**	**71.17**	**343**		P		**P**	**23 41 31.0**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=172,slow=4.3,SNR=4.6								
	comp=Z,1.8nm,0.6s								
ULM	**Lac du Bonnet**	**71.17**	**343**		P		**P**	**23 41 30.7**	**-0.9**
ULM					IAmb		IAmb	23 41 49.4	
	comp=Z,2.8nm,1.0s								
QSPA	**South Pole Qui**	**72.72**	**180**		P		**P**	**23 41 42.5**	**+1.5**
	comp=Z,1.2nm,0.9s,baz=168,slow=1.6,SNR=5.5								
	comp=Z,1.2nm,0.9s								
QSPA	**South Pole Qui**	**72.72**	**180**		P		**P**	**23 41 39.9**	**-1.1**
PAHR	**Pah Rah Range**	**73.17**	**322**		P		**P**	**23 41 44.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.99**	**72**		P		**P**	**23 42 05.7**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=254,slow=5.6,SNR=6.7								
	comp=Z,1.4nm,0.6s								
ESDC	**Sonseca Array**	**83.68**	**45**		P		**P**	**23 42 42.0**	**0.0**
	comp=Z,0.5nm,0.8s,baz=251,slow=5.1,SNR=3.0								
	comp=Z,0.5nm,0.8s								
YKA	**Yellowknife Ar**	**87.05**	**341**		P		**P**	**23 42 59.1**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=134,slow=5.3,SNR=7.2								
	comp=Z,1.0nm,0.8s								
WRA	**Warramunga Arr**	**135.84**	**214**		PKP		**PKiKP**	**23 49 36.4**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=125,slow=3.4,SNR=2.2								
ZALV	**Zalesovo Beam**	**138.66**	**22**		PKP		**PKPdf**	**23 49 39.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=323,slow=1.4,SNR=4.6								
MKAR	**Makanchi Array**	**142.84**	**32**		PKP		**PKPdf**	**23 49 44.1**	**-2.7**
	comp=Z,0.3nm,0.8s,baz=315,slow=1.6,SNR=2.7								
SONM	**Songino Array**	**149.54**	**5**		PKPbc		**PKiKP**	**23 50 03.8**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=350,slow=1.7,SNR=6.7								
SONM	**Songino Array**	**149.54**	**5**				**PKPbc**	**23 50 02.8**	**0.0**

*IDC **08** 23:39:56.9±1.9, 8°.06S×74°.54W, h152^{km}±29^{km}, mb3.6/6, mbtmp4.1/10, Error ellipse: s-maj=28.3km s-min=12.9km az=55.0*

*VAO **08** 23:39:57.2±0.6, 8°.09S×74°.54W, h153^{km}, mb4.2, Presumed earthquake*

*NEIC **08** 23:39:58.1±1.3, 8°.11S±0°.07×74°.57W±0°.06, h165^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=10.2km s-min=9.2km az=184.0*

*OSUNB **08** 23:39:59.2±2.0, 8°.14S×74°.47W, h153^{km}±6^{km}, mb4.3/10, Error ellipse: s-maj=6.9km s-min=17.8km az=0.0*

ISC 08 23:39:56.9±0.6, 8°.10S±0°.05×74°.55W±0°.05, h151^{km}, n63, σ1°28/73, mb4.0/6, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.87**	**79**				**Pn**	**23 40 32.9**	**+2.3**
CZSB						Sn	**Sn**	**23 40 59.1**	**+2.7**
CZSB	**Cruzeiro do Su**	**1.87**	**79**		P	Pn	**Pn**	**23 40 32.7**	**+2.1**
CZSB					S	Sn	**Sn**	**23 40 57.7**	**+1.3**
CZSB	**Cruzeiro do Su**	**1.87**	**79**	*eP*			**Pn**	**23 40 32.1**	**+1.6**
CZSB				*eS*			**Sn**	**23 40 57.8**	**+1.3**
ATAH	**Atahualpa**	**3.93**	**284**	P			**Pn**	**23 40 58.0**	**+1.3**
	53nm,0.3s,baz=104,slow=13,SNR=187								
ATAH				S			**Sn**	**23 41 42.8**	**-0.2**
	137nm,0.5s,baz=233,slow=22,SNR=21								
NNA	**Nana**	**4.47**	**210**	P			**Pn**	**23 41 05.4**	**+2.0**
	15nm,0.3s,baz=31,slow=13,SNR=13								
NNA				S			**Sn**	**23 41 56.3**	**+1.0**
	52nm,0.3s,baz=283,slow=17,SNR=8.2								
NNA	**Nana**	**4.47**	**210**				**Pn**	**23 41 05.9**	**+2.4**
NNA						Sn	**Sn**	**23 41 54.8**	**-0.5**
RBRC	**Rio Branco AC**	**6.84**	**106**	*eP*			**Pn**	**23 41 35.6**	**+0.7**
RBRC				*eS*			**Sn**	**23 42 52.0**	**+0.2**
SLOR	**San Lorenzo -**	**8.31**	**332**	Pn			**Pn**	**23 41 55.2**	**+0.2**
OTAV	**Otavalo**	**9.15**	**335**	Pn			**Pn**	**23 42 06.8**	**+0.6**
LPAZ	**La Paz**	**10.27**	**143**	P			**Pn**	**23 42 21.4**	**+0.2**
	1.3nm,0.4s,baz=318,slow=7.4,SNR=8.9								
LPAZ				S			**Sn**	**23 44 15.3**	**+0.1**
	4.7nm,0.7s,baz=322,slow

Suspected explosion
*IDC **08** 23:55:33.2±0.7, 65°.20N×24°.97E, h0km, mbtmp3.1/5, ML2.2/5, Error ellipse: s-maj=11.7km s-min=6.1km az=94.0*
*HEL **08** 23:55:33.4±0.1, 65°.24N×24°.75E, h0km, ML2.1, Explosion*
*UPP **08** 23:55:36.3±1.0, 65°.29N×24°.03E, h0km, ML2.6, Presumed earthquake*

ISC 08 23:55:32.1±0.7, **65°.26N**±0°.02×**24°.66E**±0°.02, **h0km**, **n77**, σ1§**54**/111, **Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUL	**Oulu**	**0.55**	**107**	*e*P	**Pg**	**23 55 42.6**	**0.0**
OUL				*e*S	**Sg**	**23 55 48.5**	**-1.2**
TOF	**Tornio**	**0.84**	**351**	*e*P	**Pg**	**23 55 48.5**	**+0.4**
TOF				*e*S	**Sg**	**23 56 00.6**	**+1.6**
OUF	**Merijarvi**	**0.89**	**178**	*e*P	**Pg**	**23 55 48.8**	**-0.3**
OUF				*e*S	**Sg**	**23 56 01.0**	**+0.4**
OBF8	**Ulkokalla**	**1.06**	**210**	*e*P	**Pg**	**23 55 52.0**	**-0.4**
OBF8				*e*S	**Sg**	**23 56 06.6**	**+0.5**
RANF	**Ranua**	**1.17**	**48**	*e*P	**Pg**	**23 55 54.2**	**-0.2**
RANF				*e*S	**Sg**	**23 56 09.4**	**-0.1**
RNF	**Rovaniemi**	**1.47**	**22**	*e*P	**Pn**	**23 56 00.1**	**+0.3**
RNF				*e*S	**Sg**	**23 56 18.5**	**-0.8**
BURU	**Burvik**	**1.55**	**246**	*e*P	**Pn**	**23 56 01.2**	**+0.4**
BURU				*e*S	**Sn**	**23 56 22.1**	**+0.5**
KU2	**Taivalkoski**	**1.56**	**71**	*e*P	**Pn**	**23 56 00.9**	**-0.1**
KU2				*e*S	**Sn**	**23 56 19.4**	**-2.5**
ERTU	**Ertsjaerv**	**1.65**	**323**	P	**Pn**	**23 56 03.2**	**+0.9**
	baz=134						
ERTU				S	**Sn**	**23 56 24.3**	**+0.2**
ERTU	**Ertsjaerv**	**1.65**	**323**	*e*P	**Pn**	**23 56 03.2**	**+0.9**
ERTU				*e*S	**Sn**	**23 56 25.0**	**+0.9**
MSF	**Maaselka**	**1.94**	**68**	*e*PG	**Pn**	**23 56 07.4**	**+1.2**
MSF				*e*S	**Sn**	**23 56 31.4**	**+0.2**
KLF	**Kolari**	**2.01**	**352**	*e*PB	**Pn**	**23 56 09.1**	**+1.9**
KLF				*e*SG	**Sb**	**23 56 35.5**	**+0.5**
KU1	**Kurvinen**	**2.08**	**79**	*e*PG	**Pn**	**23 56 09.6**	**+1.5**
KU1				*e*SB	**Sn**	**23 56 35.0**	**+0.4**
UMAU	**Umeaa**	**2.20**	**233**	*e*P	**Pn**	**23 56 10.8**	**+1.0**
UMAU				*e*S	**Sn**	**23 56 38.2**	**+0.6**
UMAU				smax	smax	23 56 40.4	
	comp=Z,13nm,0.2s						
OLKF	**Oulanka, Finla**	**2.23**	**59**	*e*PB	**Pn**	**23 56 12.2**	**+2.0**
OLKF				*e*S	**Sn**	**23 56 38.9**	**+0.5**
OLKF				smax	smax	23 56 41.0	
	comp=Z,5.8nm,0.2s						
KU6	**Riekki**	**2.31**	**68**	*e*PB	**Pn**	**23 56 13.3**	**+2.1**
KU6				*e*SB	**Sn**	**23 56 42.0**	**+1.8**
KU6				smax	smax	23 56 43.7	
	comp=Z,11nm,0.2s						
NIF	**Nilsia**	**2.32**	**142**	*e*PB	**Pn**	**23 56 13.3**	**+1.8**
NIF				*e*SB	**Sn**	**23 56 42.2**	**+1.5**
NIF				smax	smax	23 56 45.5	
	comp=Z,8.2nm,0.2s						
SGF	**Sodankyl**	**2.32**	**18**	*e*P	**Pn**	**23 56 12.4**	**+0.9**
SGF				*e*SB	**Sb**	**23 56 43.7**	**-0.2**
SGF				smax	smax	23 56 45.9	
	comp=Z,11nm,0.2s						
VAF	**Ylistaro**	**2.39**	**202**	*e*P	**Pn**	**23 56 13.8**	**+1.5**
VAF	**Ylistaro**	**2.39**	**202**	*e*P	**Pn**	**23 56 13.8**	**+1.5**
VAF				*e*SB	**Sn**	**23 56 45.1**	**+2.9**
VAF				smax	smax	23 56 48.1	
	comp=Z,8.6nm,0.2s						
MASU	**Masugnsbyn**	**2.46**	**335**	P	**Pn**	**23 56 15.8**	**+2.5**
RMF	**Romuvaara**	**2.49**	**112**	*e*PB	**Pn**	**23 56 15.4**	**+1.6**
RMF				*e*SB	**Sn**	**23 56 46.8**	**+1.9**
RMF				smax	smax	23 56 47.4	
	comp=Z,4.9nm,0.1s						
DUNU	**Dundret**	**2.50**	**320**	P	**Pn**	**23 56 16.0**	**+2.0**
SUF	**Sumiainen**	**2.63**	**165**	*e*P	**Pn**	**23 56 17.6**	**+1.9**
SUF	**Sumiainen**	**2.63**	**165**	*e*PB	**Pn**	**23 56 18.5**	**+2.8**
SUF				*e*SB	**Sn**	**23 56 51.7**	**+3.5**
SUF				smax	smax	23 56 52.8	
	comp=Z,15nm,0.2s						
LANU	**Lannavaara**	**3.00**	**341**	P	**Pn**	**23 56 23.3**	**+2.5**
LANU	**Lannavaara**	**3.00**	**341**	*e*P	**Pn**	**23 56 23.6**	**+2.8**
LANU	**Lannavaara**	**3.00**	**341**	*e*P	**Pn**	**23 56 23.6**	**+2.8**
LANU				*e*S	**Sn**	**23 56 59.5**	**+2.1**
HUSU	**Husum**	**3.05**	**233**	*e*P	**Pn**	**23 56 23.0**	**+1.6**
HUSU				*e*S	**Sn**	**23 56 59.1**	**+0.5**
KEF	**Keuruu**	**3.10**	**178**	*e*P	**Pn**	**23 56 23.9**	**+1.7**
KEF	**Keuruu**	**3.10**	**178**	*e*P	**Pn**	**23 56 23.7**	**+1.5**
KEF				*e*S	**Sn**	**23 56 59.9**	**0.0**
HEF	**Hetta**	**3.19**	**353**	*e*P	**Pn**	**23 56 25.7**	**+2.2**
HEF				*e*S	**Sn**	**23 57 02.3**	**+0.1**
VRF	**Varrio**	**3.19**	**36**	*e*P	**Pn**	**23 56 23.8**	**+0.3**
VRF				*e*S	**Sn**	**23 57 01.1**	**-1.1**
KUA	**Kurravaara**	**3.21**	**330**	P	**Pn**	**23 56 26.1**	**+2.4**
KAF	**Kangasniemi**	**3.24**	**166**	*e*P	**Pn**	**23 56 25.9**	**+1.8**
SALU	**Saltoluokta**	**3.27**	**313**	*e*P	**Pn**	**23 56 26.4**	**+1.9**
SALU	**Saltoluokta**	**3.27**	**313**	P	**Pn**	**23 56 26.4**	**+1.9**
RATU	**Laukkuluspa**	**3.28**	**324**	P	**Pn**	**23 56 27.1**	**+2.4**
NIKU	**Nikkaluokta**	**3.45**	**322**	P	**Pn**	**23 56 29.1**	**+2.1**
RAJF	**Raja-Jooseppi**	**3.54**	**22**	*e*P	**Pn**	**23 56 28.8**	**+0.6**
KPF	**Kankaanpaa**	**3.62**	**200**	*e*P	**Pn**	**23 56 31.1**	**+1.8**
JOF	**Joensuu**	**3.75**	**126**	*e*P	**Pn**	**23 56 31.9**	**+0.9**
JOF	**Joensuu**	**3.75**	**126**	*e*P	**Pn**	**23 56 31.8**	**+0.8**
SOLU	**Sollefteaa**	**3.81**	**241**	P	**Pn**	**23 56 32.5**	**+0.7**
KTK1	**Kautokeino**	**3.81**	**352**	*e*P	**Pn**	**23 56 34.0**	**+2.0**
KTK1	**Kautokeino**	**3.81**	**352**	*e*P	**Pn**	**23 56 34.0**	**+2.0**
FIA1	**FINESS Array S**	**3.88**	**170**	*e*P	**Pn**	**23 56 34.6**	**+1.7**
FINES	**FINESS Array B**	**3.88**	**170**	Pn	**Pn**	**23 56 33.5**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=352,slow=13,SNR=40						
FINES				Pg	**Pb**	**23 56 39.4**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=356,slow=17,SNR=3.7						
FINES				Sn	**Sn**	**23 57 18.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=356,slow=23,SNR=5.9						
FINES				Lg	Lg	23 57 33.0	
	comp=Z,1.4nm,0.3s,baz=350,slow=27,SNR=8.8						
	comp=Z,0.5nm,0.2s						
HEMU	**Hemsoen**	**3.90**	**231**	*e*P	**Pn**	**23 56 33.7**	**+0.6**
HEMU				*e*S	**Sn**	**23 57 18.6**	**-1.0**
RUF	**Ruokolahti**	**4.30**	**151**	*e*P	**Pn**	**23 56 40.1**	**+1.4**
ARA0	**ARCESS Array S**	**4.31**	**4**	*e*P	**Pn**	**23 56 39.8**	**+1.0**
ARA0				*e*S	**Sn**	**23 57 28.7**	**-1.0**
ARCES	**ARCESS Array B**	**4.31**	**4**	Pn	**Pn**	**23 56 39.7**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=183,slow=14,SNR=43						
ARCES				Pg	**Pb**	**23 56 48.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=182,slow=17,SNR=8.7						
ARCES				Sn	**Sn**	**23 57 28.8**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=188,slow=22,SNR=5.3						
ARCES				Lg	Lg	23 57 41.5	
	comp=Z,0.6nm,0.3s,baz=177,slow=29,SNR=5.6						
	comp=Z,0.7nm,0.3s						
RAF	**Rauma**	**4.45**	**198**	*e*P	**Pn**	**23 56 42.5**	**+1.9**
RAF	**Rauma**	**4.45**	**198**	*e*P	**Pn**	**23 56 42.5**	**+1.9**
KEV	**Kevo**	**4.61**	**10**	*e*P	**Pn**	**23 56 43.0**	**+0.1**
STEI	**Steigen**	**4.62**	**310**	*e*P	**Pn**	**23 56 44.1**	**+1.2**
PVF	**Pernaja**	**4.76**	**173**	*e*P	**Pn**	**23 56 46.4**	**+1.4**
NUR	**Nurmijarvi**	**4.76**	**180**	*e*P	**Pn**	**23 56 46.8**	**+1.8**
LEIR	**Leirfjorden**	**4.85**	**285**	*e*P	**Pn**	**23 56 46.3**	**+0.2**
VAGH	**Vaagaholmen**	**4.88**	**293**	*e*P	**Pn**	**23 56 47.7**	**+1.1**
VJF	**Virojoki**	**4.92**	**163**	*e*P	**Pn**	**23 56 48.2**	**+1.1**
MEF	**Metsahovi**	**5.06**	**181**	*e*P	**Pn**	**23 56 50.5**	**+1.5**
MEF	**Metsahovi**	**5.06**	**181**	*e*P	**Pn**	**23 56 50.7**	**+1.7**
VUOS	**Vuosaari Helsi**	**5.09**	**177**	*e*P	**Pn**	**23 56 51.9**	**+2.5**
HEL1	**Helsinki**	**5.10**	**179**	*e*P	**Pn**	**23 56 51.5**	**+2.0**
LAUT	**Lauttasaari He**	**5.12**	**179**	*e*P	**Pn**	**23 56 51.9**	**+2.0**
HEL5	**Espoo, Suvisaa**	**5.16**	**180**	*e*P	**Pn**	**23 56 52.3**	**+2.0**
TVF	**Tvarminne**	**5.47**	**187**	*e*P	**Pn**	**23 56 56.5**	**+1.8**
AAL	**Aland**	**5.53**	**205**	*e*P	**Pn**	**23 56 56.4**	**+1.0**
AAL	**Aland**	**5.53**	**205**	*e*P	**Pn**	**23 56 56.3**	**+0.9**
MTSE	**Matsula**	**6.58**	**184**	*e*P	**Pn**	**23 57 10.9**	**+1.1**
MTSE	**Matsula**	**6.58**	**184**	*e*P	**Pn**	**23 57 10.6**	**+0.8**
VSU	**Vasula**	**6.89**	**171**	*e*P	**Pn**	**23 57 13.4**	**-0.7**
VSU	**Vasula**	**6.89**	**171**	*e*P	**Pn**	**23 57 13.4**	**-0.7**
HFS	**Hagfors**	**7.19**	**229**	Pn	**Pn**	**23 57 18.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=46,slow=12,SNR=14						
HFS				Sn	**Sn**	**23 58 36.9**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=47,slow=26,SNR=1.4						
HFS				Lg	Lg	23 59 12.2	
	comp=Z,0.3nm,0.3s,baz=38,slow=31,SNR=5.3						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	**7.40**	**241**	Pn	**Pn**	**23 57 21.1**	**-0.2**
	baz=51,slow=14,SNR=5.5						
NOA				Sn	**Sn**	**23 58 43.8**	**-2.1**
	baz=52,slow=24,SNR=1.1						
NOA				Lg	Lg	23 59 29.3	
	baz=68,slow=7.1,SNR=1.9						
	comp=Z,0.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**13.22**	**353**	Pn	**Pn**	**23 58 39.3**	**-1.4**
	baz=162,slow=14						
	comp=Z,2.6nm,0.8s						

*IDC **08** 23:56:07.2±6.4, 58°.93N×32°.45W, h0km, mb3.7/5, mbtmp3.7/6, ML4.0/1, MS3.0/13, Error ellipse: s-maj=162.7km s-min=36.4km az=97.0*

ISC 08 23:56:11.0±2.8, **59°.4N**±0°.5×**32°.7W**±0°.7, **h10km**, **n18**, σ0§**47**/6, **mb3.7**/4, **MS3.0**/10, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**7.53**	**40**	Pn	**Pn**	**23 58 01.1**	**+0.5**
	2.1nm,0.3s,baz=229,slow=11,SNR=12						
BORG				Sn	**Sn**	**23 59 25.6**	**-0.3**
	0.5nm,0.3s,baz=117,slow=18,SNR=3.0						
	7.7nm,0.5s						
SFJD	**Kangerlussuaq**	**11.05**	**321**	LR	LR	00 01 54.0	
	comp=Z,9.3nm,18.7s,baz=142,slow=30						
FRB	**Frobisher Bay**	**17.44**	**300**	LR	LR	00 06 31.5	
	comp=Z,56nm,21.1s,baz=108,slow=35						
SCHQ	**Schefferville**	**18.96**	**271**	LR	LR	00 06 24.7	
	comp=Z,45nm,21.1s,baz=97,slow=32						
NOA	**NORSAR Array B**	**21.55**	**67**	LR	LR	00 08 10.9	
	comp=Z,26nm,18.1s,baz=130,slow=33						
HFS	**Hagfors**	**22.98**	**68**	LR	LR	00 08 42.9	
	comp=Z,26nm,19.1s,baz=268,slow=33						
ARCES	**ARCESS Array B**	**25.92**	**43**	P	**P**	**00 01 42.6**	**-0.3**
	1.2nm,0.6s,baz=273,slow=7.2,SNR=6.9						
ARCES				LR	LR	00 09 10.6	
	comp=Z,21nm,20.0s,baz=300,slow=30						
	1.2nm,0.6s						
DAVOX	**Davos/Dischmat**	**27.98**	**98**	LR	LR	00 11 58.7	
	comp=Z,32nm,19.2s,baz=264,slow=34						
FINES	**FINESS Array B**	**28.21**	**60**	P	**P**	**00 02 03.5**	**0.0**
	2.6nm,0.9s,baz=291,slow=8.5,SNR=4.4						
	2.6nm,0.9s						
GERES	**GERESS Array B**	**28.57**	**91**	LR	LR	00 12 56.9	
	comp=Z,39nm,19.2s,baz=293,slow=36						
VRAC	**Vranov**	**29.76**	**88**	LR	LR	00 14 05.7	
	comp=Z,25nm,18.8s,baz=304,slow=36						
SADO	**Sadowa**	**31.35**	**263**	LR	LR	00 14 10.2	
	comp=Z,44nm,21.6s,baz=140,slow=34						
YKA	**Yellowknife Ar**	**37.38**	**311**	LR	LR	00 18 24.5	
	comp=Z,31nm,20.2s,baz=56,slow=35						
NEW	**Newport**	**47.74**	**296**	LR	LR	00 24 48.4	
	comp=Z,55nm,18.3s,baz=67,slow=36						
PDAR	**Pinedale Array**	**48.17**	**286**	LR	LR	00 23 45.1	
	comp=Z,25nm,19.1s,baz=46,slow=34						
BVAR	**Borovoye Array**	**52.03**	**48**	P	**P**	**00 05 19.8**	**-0.5**
	0.3nm,0.4s,baz=310,slow=7.2,SNR=2.7						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**52.76**	**136**	P	P	00 05 19.9	-6.0
	0.4nm,0.9s,baz=345,slow=6.8,SNR=1.6						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**61.56**	**45**	P	**P**	**00 06 28.2**	**+0.2**
	0.3nm,0.6s,baz=319,slow=6.3,SNR=2.3						
	0.3nm,0.6s						

*IDC **09** 00:40:48.5±0.9, 34°.92N×36°.95W, h0km, mb3.7/10, mbtmp3.7/10, MS3.5/25, Error ellipse: s-maj=34.5km s-min=20.7km az=161.0*

ISC 09 00:40:50.1±0.9, **34°.9N**±0°.2×**37°.0W**±0°.1, **h10km**, **n35**, σ0§**73**/10, **mb3.8**/9, **MS3.5**/25, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**26.58**	**70**	P	**P**	**00 46 28.0**	**-0.4**
	0.8nm,1.0s,baz=267,slow=8.6,SNR=2.4						
ESDC				LR	LR	00 54 39.7	
	comp=Z,26nm,19.3s,baz=231,slow=31						
	0.8nm,1.0s						
SCHQ	**Schefferville**	**28.71**	**323**	LR	LR	00 57 11.8	
	comp=Z,91nm,20.8s,baz=118,slow=34						
MDP	**Montagnes des**	**33.04**	**210**	LR	LR	00 57 35.4	
	comp=Z,47nm,19.8s,baz=30,slow=30						
SADO	**Sadowa**	**33.52**	**300**	LR	LR	00 59 00.9	
	comp=Z,37nm,20.9s,baz=100,slow=33						
TKL	**Tuckaleechee C**	**37.94**	**285**	LR	LR	01 01 12.8	
	comp=Z,44nm,18.9s,baz=52,slow=32						
GERES	**GERESS Array B**	**39.47**	**53**	P	**P**	**00 48 20.8**	**+0.2**
	0.8nm,0.8s,baz=268,slow=9.2,SNR=5.3						
	0.8nm,0.8s						
NOA	**NORSAR Array B**	**40.13**	**34**	LR	LR	01 02 00.7	
	comp=Z,13nm,19.7s,baz=95,slow=32						
DBIC	**Dimbokro**	**40.78**	**126**	LR	LR	01 03 37.1	
	comp=Z,67nm,18.7s,baz=345,slow=34						
TORD	**Torodi Ar. Bea**	**41.07**	**112**	P	**P**	**00 48 35.1**	**+1.0**
	1.1nm,1.0s,baz=308,slow=6.2,SNR=3.4						
	1.1nm,1.0s						
VRAC	**Vranov**	**41.37**	**53**	LR	LR	01 04 26.2	
	comp=Z,23nm,18.2s,baz=184,slow=34						
ULM	**Lac du Bonnet**	**44.82**	**309**	LR	LR	01 08 06.3	
	comp=Z,70nm,18.5s,baz=16,slow=36						
H10N2	**ASCENSION HYDR**	**47.53**	**149**	T	T	01 39 35.0	
	baz=335,slow=75,SNR=289						
H10N3	**ASCENSION HYDR**	**47.54**	**149**	T	T	01 39 35.4	
	baz=335,slow=75,SNR=272						
H10N1	**ASCENSION HYDR**	**47.55**	**149**	T	T	01 39 36.7	
	baz=335,slow=75,SNR=299						
AKASG	**Malin Array Be**	**49.39**	**50**	P	**P**	**00 49 38.9**	**-0.8**
	0.4nm,0.4s,baz=261,slow=9.3,SNR=1.6						
AKASG				LR	LR	01 09 10.2	
	comp=Z,34nm,18.5s,baz=254,slow=34						
	0.4nm,0.4s						
YKA	**Yellowknife Ar**	**54.10**	**326**	LR	LR	01 12 38.9	
	comp=Z,70nm,18.9s,baz=56,slow=35						
PDAR	**Pinedale Array**	**55.49**	**301**	P	**P**	**00 50 25.5**	**+0.1**
	0.1nm,0.4s,baz=56,slow=9.2,SNR=1.7						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**55.84**	**284**	P	**P**	**00 50 28.7**	**+0.8**
	0.4nm,0.6s,baz=69,slow=8.2,SNR=5.0						
TXAR				LR	LR	01 13 09.7	
	comp=Z,45nm,19.6s,baz=46,slow=35						
	0.4nm,0.6s						
ANMO	**Albuquerque**	**55.85**	**292**	LR	LR	01 14 26.5	
	comp=Z,40nm,18.2s,baz=62,slow=36						
NEW	**Newport**	**58.81**	**310**	LR	LR	01 15 02.1	
	comp=Z,60nm,21.1s,baz=50,slow=35						
LPAZ	**La Paz**	**58.92**	**215**	P	**P**	**00 50 49.3**	**-1.0**
	1.6nm,1.0s,baz=43,slow=8.4,SNR=4.2						
	1.6nm,1.0s						
INK	**Inuvik**	**60.38**	**335**	LR	LR	01 16 24.6	
	comp=Z,18nm,19.9s,baz=69,slow=35						
DLBC	**Dease Lake**	**62.51**	**324**	LR	LR	01 18 06.6	
	comp=Z,109nm,19.2s,baz=40,slow=36						
NVAR	**Mina Array Bea**	**63.26**	**300**	LR	LR	01 17 11.2	
	comp=Z,24nm,21.1s,baz=60,slow=35						
LPIG	**La Paz**	**63.48**	**282**	LR	LR	01 17 12.4	
	comp=Z,27nm,19.9s,baz=175,slow=34						
PFO	**Pinyon Flats O**	**63.96**	**294**	LR	LR	01 17 21.1	
	comp=Z,36nm,19.9s,baz=133,slow=34						
BBB	**Bella Bella**	**63.97**	**317**	LR	LR	01 18 55.9	
	comp=Z,63nm,18.1s,baz=60,slow=36						
YBH	**Yreka Blue Hor**	**64.94**	**305**	LR	LR	01 18 38.1	
	comp=Z,38nm,21.2s,baz=26,slow=35						
ILAR	**Eielson Array**	**66.74**	**334**	LR	LR	01 21 00.6	
	comp=Z,31nm,18.3s,baz=355,slow=36						
BVAR	**Borovoye Array**	**72.17**	**37**	P	**P**	**00 52 15.0**	**+0.2**
	1.6nm,0.7s,baz=291,slow=5.1,SNR=8.9						
	1.6nm,0.7s						
KDAK	**Kodiak Island**	**73.09**	**330**	LR	LR	01 25 47.5	
	comp=Z,36nm,18.4s,baz=45,slow=37						
KURBB	**Kurchatov Arra**	**77.63**	**36**	P	**P**	**00 52 46.8**	**+0.3**
	1.8nm,0.7s,baz=312,slow=5.7,SNR=25						
	1.8nm,0.7s						
LSZ	**Lusaka**	**79.39**	**117**	LR	LR	01 29 29.0	
	comp=Z,99nm,18.2s,baz=138,slow=37						
MKAR	**Makanchi Array**	**82.05**	**37**	P	**P**	**00 53 10.2**	**-0.4**
	1.5nm,0.9s,baz=316,slow=5.1,SNR=7.9						
	1.5nm,0.9s						
LBTB	**Lobatse**	**84.03**	**126**	LR	LR	01 27 20.2	
	comp=Z,92nm,19.3s,baz=66,slow=33						

KRSC 09 00:41:29.0±1.5, **55°.10N**×**164°.51E**, **h47**km±28km, **Mc3.1, Ml4.1, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.84**	**82**	*e*P	Pn	00 41 44.6	+0.1
BKI				*e*S	Sn	00 41 55.0	-0.8
KBTR	**Krutoberegovo**	**1.47**	**320**	*e*P	Pn	00 41 52.4	-0.6
KBTR				*e*S	Sn	00 42 09.7	-1.3
MKZ	**Mys Kozlova**	**1.70**	**253**	*e*P	Pn	00 41 59.1	+3.0
MKZ				*e*S	Sn	00 42 19.0	+2.4
ZLN	**Zelenaya**	**2.30**	**295**	*e*P	Pn	00 42 07.8	+3.3
TUMD	**Tumrok D**	**2.36**	**274**	*e*P	Pn	00 42 08.5	+3.2
TUMD				*e*S	Sn	00 42 36.7	+3.7
BZP	**Bezymyannyi-Pe**	**2.41**	**292**	*e*P	Pn	00 42 08.8	+2.8
BZMR	**Bezymyannaya**	**2.44**	**292**	*e*P	Pn	00 42 10.1	+3.7
BZWR	**Bezymyannyi-We**	**2.44**	**292**	*e*P	Pn	00 42 10.0	+3.5
KLY	**Klyuchi**	**2.50**	**301**	*e*P	Pn	00 42 08.2	+1.0
KLY				*e*S	Sn	00 42 37.0	+0.7
TUMR	**Tumrok**	**2.51**	**276**	*e*P	Pn	00 42 10.9	+3.5
TUMR				*e*S	Sn	00 42 40.1	+3.3
KIRR	**Kirishev**	**2.52**	**292**	*e*P	Pn	00 42 10.8	+3.2
KMNR	**Kamenistaya**	**2.53**	**287**	*e*P	Pn	00 42 11.2	+3.6
KMNR				*e*S	Sn	00 42 41.7	+4.6
KPT	**Kopyto**	**2.59**	**291**	*e*P	Pn	00 42 12.3	+3.8
KPT				*e*S	Sn	00 42 42.2	+3.5
KOZ	**Kozyrevsk**	**2.81**	**292**	*e*P	Pn	00 42 15.4	+4.0
KOZ				*e*S	Sn	00 42 49.8	+5.9
SRDR	**Sredinnyy**	**2.98**	**296**	*e*P	Pn	00 42 16.7	+3.0
KII	**Karymskiy**	**3.13**	**252**	*e*P	Pn	00 42 20.1	+4.2
KII				*e*S	Sn	00 42 56.0	+3.9
SPN	**Mys Shipunski**	**3.32**	**235**	*e*P	Pn	00 42 22.7	+4.4
SPN				*e*S	Sn	00 42 58.0	+1.6
NLC	**Nalytchevo**	**3.60**	**240**	*e*P	Pn	00 42 26.3	+4.1
NLC				*e*S	Sn	00 43 05.9	+2.5
SDLR	**Sedlovina**	**3.78**	**243**	*e*P	Pn	00 42 29.4	+4.7
SDLR				*e*S	Sn	00 43 11.7	+3.7
SMAR	**Somma**	**3.83**	**244**	*e*P	Pn	00 42 30.1	+4.6
SMAR				*e*S	Sn	00 43 13.0	+3.7
KRER	**Koryakskii**	**3.83**	**244**	*e*P	Pn	00 42 30.1	+4.6
KRER				*e*S	Sn	00 43 13.1	+3.7
UGLR	**Uglovaya**	**3.84**	**243**	*e*P	Pn	00 42 30.4	+4.7
UGLR				*e*S	Sn	00 43 13.4	+3.9
KRX	**Arik**	**3.86**	**246**	*e*P	Pn	00 42 30.6	+4.8
KRX				*e*S	Sn	00 43 13.9	+4.0
AVH	**Avacha**	**3.86**	**244**	*e*P	Pn	00 42 31.0	+5.2
AVH				*e*S	Sn	00 43 14.5	+4.6
KOK	**Koryaka**	**3.90**	**245**	*e*P	Pn	00 42 31.3	+4.9
KOK				*e*S	Sn	00 43 15.2	+4.4
PET	**Petropavlovsk**	**4.03**	**241**	*e*P	Pn	00 42 32.6	+4.5
PET				*e*S	Sn	00 43 17.0	+3.1
GNL	**Ganaly**	**4.09**	**253**	*e*P	Pn	00 42 33.9	+4.8
GNL				*e*S	Sn	00 43 20.2	+4.5
KRMR	**Karymshinskiy**	**4.40**	**242**	*e*P	Pn	00 42 37.5	+4.3
KRMR				*e*S	Sn	00 43 26.6	+3.6
RUS	**Russkaya**	**4.45**	**236**	*e*P	Pn	00 42 37.8	+4.0
RUS				*e*S	Sn	00 43 26.2	+1.9
MTVR	**Mutnovka**	**4.58**	**238**	*e*P	Pn	00 42 40.3	+4.6
MTVR				*e*S	Sn	00 43 30.6	+2.9
GRL	**Gorelyy**	**4.59**	**239**	*e*P	Pn	00 42 41.0	+5.1
GRL				*e*S	Sn	00 43 32.3	+4.3
ASAK	**Asacha**	**4.78**	**238**	*e*P	Pn	00 42 43.8	+5.4
ASAK				*e*S	Sn	00 43 36.7	+4.3
APC	**Apacha**	**4.85**	**246**	*e*P	Pn	00 42 45.0	+5.6
KDTR	**Khodutka, Kamc**	**5.06**	**232**	*e*P	Pn	00 42 46.1	+3.8
KDTR				*e*S	Sn	00 43 39.1	-0.3

*IDC **09** 01:27:58.9±0.9, 16°.01S×179°.58W, h0km, mb3.8/8, mbtmp3.8/9, ML5.9/1, MS3.5/16, Error ellipse: s-maj=35.1km s-min=20.3km az=139.0*

ISC 09 01:28:02.6±0.8, **16°.0S**±0°.2×**179°.7W**±0°.2, **h22km**, **n27**, σ0§**97**/11, **mb3.7**/8, **MS3.6**/14, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.76**	**232**	Pn	**Pn**	**01 28 46.6

87nm,0.7s
WRA **Warramunga Arr** **18.09 182** P **Pn** **01 45 22.8 -1.9**
0.2nm,0.3s,baz=5.9,slow=11,SNR=23
3.0nm,0.8s
FITZ **Fitzroy Crossi** **18.73 209** P **P** **01 45 31.9 -0.2**
0.2nm,0.3s,baz=24,slow=10,SNR=2.4
6.8nm,1.1s
ASAR **Alice Springs** **21.81 183** P **P** **01 46 05.3 -0.2**
9.3nm,1.0s,baz=8.1,slow=12,SNR=30
9.3nm,1.0s
MKAR **Makanchi Array** **66.89 323** P **P** **01 52 04.9 -0.7**
0.2nm,0.6s,baz=130,slow=8.4,SNR=2.1
0.2nm,0.6s
KURBB **Kurchatov Arra** **70.93 326** P **P** **01 52 28.5 -2.1**
0.1nm,0.3s,baz=106,slow=4.9,SNR=2.6
0.1nm,0.3s
NRIK **Noril'sk** **77.84 344** LR LR 02 30 50.2
comp=Z,18nm,18.2s,baz=176,slow=38

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*THE **09** 02:16:13.8, 41˚N±4˚×2˚0E±˚, h21km, M2.6/33, MLh2.6/33*
*TIR **09** 02:16:14.8, 41˚.04N×19˚.99E, h12km, Ml2.5/5*
*SKO **09** 02:16:15.4, 40˚.96N×19˚.89E, h2km, ML2.5*
*PDG **09** 02:16:16.3±0.2, 41˚.00N×19˚.59E, h15km, ML2.7/12, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
*BEO **09** 02:16:17.4±0.8, 41˚.09N×19˚.99E, h14km±5km, ML2.4/4*
ISC 09 02:16:15.2±1.0, **41°.03N**±0°.01×**19°.89E**±0°.02, **h13**km±8km, **n78**, σ1°23/127, **6C-6D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**357**	P	**Pg**	**02 16 20.7**	**-1.0**
TIR				S	**Sb**	**02 16 27.5**	**-0.2**
TIR				AML	AML	02 16 31.2	
	2.3nm,0.4s						
VLO	**Vlora**	**0.64**	**208**	P	**Pg**	**02 16 27.5**	**-0.1**
VLO				S	**Sb**	**02 16 37.4**	**+0.5**
VLO				AML	AML	02 16 40.5	
	3.9nm,0.4s						
VLO	**Vlora**	**0.64**	**208**	P	**Pg**	**02 16 27.3**	**-0.3**
VLO				S	**Sn**	**02 16 39.7**	**-0.1**
OHR	**Ohrid**	**0.69**	**83**	*i* Pg	**Pg**	**02 16 27.8**	**-0.9**
OHR				*i* Sg	**Sg**	**02 16 38.0**	**+0.2**
OHR				*e*Lg	Lg	02 16 38.3	
	comp=N,128nm,0.5s						
OHR				*e*Lg	Lg	02 16 38.4	
	comp=E,171nm,0.6s						
PHP	**Peshkopia**	**0.78**	**32**	P	**Pg**	**02 16 28.9**	**-1.3**
PHP				S	**Sg**	**02 16 39.6**	**-0.8**
PHP				AML	AML	02 16 45.0	
	comp=E,0.8nm,0.3s						
PHP	**Peshkopia**	**0.78**	**32**	P	**Pg**	**02 16 28.9**	**-1.3**
PHP				S	**Sb**	**02 16 41.7**	**+0.7**
KBN	**Korca**	**0.80**	**120**	P	**Pg**	**02 16 28.5**	**-2.1**
KBN				S	**Sg**	**02 16 39.8**	**-1.2**
ULC	**Ulcinj**	**1.05**	**333**	⇑*i* Pg	**Pb**	**02 16 35.3**	**+0.1**
ULC				*i* Sg	**Sn**	**02 16 50.7**	**+0.6**
SDA	**Shkodra**	**1.06**	**344**	P	**Pn**	**02 16 35.7**	**0.0**
SDA				S	**Sn**	**02 16 53.6**	**+3.3**
SDA				AML	AML	02 16 56.7	
	comp=E,0.3nm,0.2s						
SRN	**Sarande**	**1.15**	**176**	P	**Pn**	**02 16 36.9**	**0.0**
SRN				S	**Sg**	**02 16 53.9**	**+1.6**
SRN				AML	AML	02 16 57.2	
	comp=E,0.5nm,0.4s						
SRN	**Sarande**	**1.15**	**176**	P	**Pb**	**02 16 37.3**	**+0.4**
SRN				S	**Sg**	**02 16 55.0**	**+2.7**
DRME	**Dracevica, Mon**	**1.27**	**336**	⇑*i* Pg	**Pg**	**02 16 39.7**	**+0.1**
DRME				*i* Sg	**Sg**	**02 16 59.3**	**+2.2**
KEK	**Kerkira**	**1.32**	**183**	P	**Pn**	**02 16 38.6**	**-0.7**
KEK				S	**Sg**	**02 16 58.7**	**+1.1**
BUM	**Brajici-Budva**	**1.47**	**330**	⇓*i* Pg	**Pb**	**02 16 42.3**	**-0.1**
BUM				*i* Sg	**Sg**	**02 17 03.3**	**+0.7**
PDG	**Podgorica**	**1.48**	**342**	P	**Pb**	**02 16 42.9**	**+0.4**
PDG				S	**Sg**	**02 17 03.9**	**+1.2**
PDG	**Podgorica**	**1.48**	**342**	*e*Pg	**Pb**	**02 16 43.0**	**+0.6**
PDG				*e*Sg	**Sg**	**02 17 04.6**	**+1.9**
PDG	**Podgorica**	**1.48**	**342**	⇓*i* Pg	**Pb**	**02 16 43.1**	**+0.6**
PDG				*i* Sg	**Sg**	**02 17 04.3**	**+1.6**
SKO	**Skopje**	**1.50**	**51**	*i* Pg	**Pb**	**02 16 43.4**	**+0.5**
SKO				*i* Sg	**Sg**	**02 17 04.3**	**+0.9**
IGT	**Igoumenitsa**	**1.54**	**167**	P	**Pb**	**02 16 43.6**	**+0.1**
IGT				S	**Sg**	**02 17 04.6**	**0.0**
IGT	**Igoumenitsa**	**1.54**	**167**	P	**Pn**	**02 16 43.0**	**+0.8**
IGT				S	**Sg**	**02 17 05.5**	**+1.0**
JAN	**Janina**	**1.56**	**151**	P	**Pb**	**02 16 44.1**	**+0.3**
JAN				S	**Sg**	**02 17 07.6**	**+2.3**
PVY	**Plav**	**1.56**	**2**	⇑*i* Pn	**Pg**	**02 16 45.1**	**-0.1**
PVY				*i* Sn	**Sg**	**02 17 08.5**	**+3.0**
LFKM	**Lefkimmi**	**1.59**	**175**	P	**Pn**	**02 16 41.7**	**-1.3**
LFKM				S	**Sg**	**02 17 08.4**	**+2.1**
KZN	**Kozani**	**1.60**	**116**	P	**Pb**	**02 16 44.2**	**-0.4**
KZN				S	**Sg**	**02 17 07.6**	**+0.7**
CEME	**Cevo**	**1.68**	**335**	⇑*i* Pn	**Pn**	**02 16 45.0**	**+0.7**
CEME				*i* Sn	**Sg**	**02 17 08.8**	**-0.4**
HCY	**Herceg Novi**	**1.76**	**324**	⇓*i* Pn	**Pn**	**02 16 45.5**	**+0.2**
HCY				*i* Sn	**Sb**	**02 17 09.2**	**0.0**
PRMD	**Pramanda**	**1.76**	**148**	P	**Pb**	**02 16 47.0**	**-0.3**
KOME	**Kolasin**	**1.84**	**351**	⇓*i* Pn	**Pb**	**02 16 48.9**	**+0.2**
KOME				*i* Sn	**Sg**	**02 17 14.1**	**-0.2**
IVA	**Berane**	**1.84**	**0**	⇓*i* Pn	**Pb**	**02 16 49.1**	**+0.4**
IVA				*i* Sn	**Sg**	**02 17 14.5**	**+0.1**
NKME	**Niksic**	**1.87**	**338**	⇑*i* Pn	**Pn**	**02 16 48.1**	**+1.2**
NKME				*i* Sn	**Sb**	**02 17 13.5**	**+1.0**
TETR	**Tetrakomo, Epi**	**1.99**	**147**	P	**Pb**	**02 16 50.5**	**-0.8**
VAY	**Valandovo**	**2.05**	**81**	*e*Pn	**Pb**	**02 16 50.9**	**-1.3**
VAY				*e*Sn	**Sb**	**02 17 17.2**	**-0.3**
VAY				*e*Lg	Lg	02 17 18.7	
	comp=E,17nm,0.5s						
VAY				*e*Lg	Lg	02 17 23.5	
	comp=N,22nm,0.6s						
BRY	**Bratogost**	**2.12**	**332**	⇓*i* Pn	**Pn**	**02 16 51.0**	**+0.5**
BRY				*i* Sn	**Sb**	**02 17 19.4**	**-0.5**
LIT	**Litokhoron**	**2.19**	**114**	P	**Pn**	**02 16 52.4**	**+1.2**
THL	**Klokotos Trika**	**2.19**	**131**	P	**Pn**	**02 16 52.8**	**+1.6**
THL				S	**Sb**	**02 17 20.7**	**-0.9**
TYRN	**Tyrnavos**	**2.22**	**126**	P	**Pn**	**02 16 53.4**	**+1.7**
TYRN				S	**Sb**	**02 17 22.1**	**-0.6**
SJES	**Sjenica**	**2.23**	**2**	*e*Pg	**Pb**	**02 16 54.9**	**-0.5**
SJES				*e*Sg	**Sb**	**02 17 24.5**	**+1.6**
KNT	**Kendrikon**	**2.28**	**86**	P	**Pn**	**02 16 52.5**	**0.0**
KNT				S	**Sn**	**02 17 21.1**	**+0.6**
TSLK	**Tsoukalades, L**	**2.28**	**165**	P	**Pn**	**02 16 53.9**	**+1.4**
BARS	**Barje**	**2.29**	**38**	*e*Pn	**Pb**	**02 16 55.6**	**-0.8**
LKD2	**Lefkada island**	**2.32**	**165**	P	**Pn**	**02 16 52.9**	**-0.1**
LKD2				S	**Sn**	**02 17 22.1**	**+0.8**
PLE	**Pljevlja**	**2.33**	**351**	⇑*i* Pn	**Pb**	**02 16 55.5**	**-1.5**
PLE				*i* Sn	**Sb**	**02 17 25.3**	**-0.4**
AMPL	**Ampelaki**	**2.34**	**154**	P	**Pn**	**02 16 54.3**	**+1.0**
AMPL				S	**Sb**	**02 17 24.3**	**-1.7**
SELS	**Selova**	**2.37**	**22**	*e*Pn	**Pb**	**02 16 56.8**	**-0.9**
NYDR	**Nydri-Lefkada**	**2.40**	**165**	P	**Pn**	**02 16 53.8**	**-0.3**
BOSS	**Bosilegrad**	**2.43**	**52**	*e*Pn	**Pn**	**02 16 55.5**	**+0.9**
STON	**Ston**	**2.46**	**319**	*e*Pn	**Pn**	**02 16 54.8**	**-0.1**
HORT	**Hortiatis**	**2.48**	**99**	P	**Pn**	**02 16 55.5**	**+0.2**
EVGI	**Lefkada island**	**2.48**	**166**	P	**Pn**	**02 16 55.1**	**-0.1**
IVAS	**Ivanjica**	**2.55**	**4**	*e*Pn	**Pn**	**02 16 57.6**	**+1.3**
KKB	**Krupnik**	**2.57**	**71**	P	**Pn**	**02 16 57.1**	**+0.7**
EVR	**Evrytania**	**2.58**	**144**	P	**Pn**	**02 16 58.9**	**+2.3**
FSK	**Fiskardo**	**2.62**	**168**	P	**Pn**	**02 16 57.7**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.63**	**16**	*e*Sn	**Sn**	**02 17 29.7**	**+0.4**
SOH	**Sokhos**	**2.63**	**93**	P	**Pn**	**02 16 58.2**	**+0.7**
PVO	**Paravola**	**2.72**	**152**	P	**Pn**	**02 16 60.0**	**+1.4**
AGG	**Agios Georgios**	**2.75**	**136**	P	**Pn**	**02 17 01.3**	**+2.4**
LSTV	**Lastovo**	**2.83**	**309**	*e*Pn	**Pn**	**02 16 58.7**	**-1.3**
LSTV					Sn	**Sn**	**02 17 31.3**	**-2.7**
PLEV	**Plevrona-Mesol**	**2.87**	**155**	P	**Pn**	**02 17 00.7**	**+0.2**
ANX	**Ano Chora**	**2.90**	**147**	P	**Pn**	**02 17 03.5**	**+2.5**
VLS	**Valsamata**	**2.90**	**169**	P	**Pn**	**02 17 00.5**	**-0.5**
NVR	**Nevrokopi**	**3.02**	**83**	P	**Pn**	**02 17 04.0**	**+1.4**
RTZL	**Ratzakli, Kefa**	**3.03**	**167**	P	**Pn**	**02 17 03.0**	**+0.3**
EFP	**Efpalio**	**3.03**	**148**	P	**Pn**	**02 17 04.6**	**+1.8**
ZAPS	**Zavoj**	**3.03**	**41**	*e*Pn	**Pn**	**02 17 04.5**	**+1.6**
ZAPS				*e*Sn	**Sn**	**02 17 36.7**	**-2.3**
MAKA	**Makarska**	**3.10**	**318**	*e*Pn	**Pn**	**02 17 03.8**	**0.0**
MAKA				*e*Sn	**Sn**	**02 17 41.3**	**+0.6**
SERG	**Sergoula**	**3.10**	**147**	P	**Pn**	**02 17 06.6**	**+2.7**
RICI	**Ricice**	**3.20**	**321**	*e*Pn	**Pn**	**02 17 04.5**	**-0.6**
RICI				*e*Sn	**Sn**	**02 17 42.9**	**-0.3**
ZAGS	**Zajecar**	**3.28**	**31**	*e*Pn	**Pn**	**02 17 07.8**	**+1.6**
ZAGS				*e*Sn	**Sn**	**02 17 44.5**	**-0.5**
KIJV	**Kijevo**	**3.93**	**320**	*e*Pn	**Pn**	**02 17 14.3**	**-0.9**
KIJV				*e*Sn	**Sn**	**02 18 01.3**	**+0.1**
ZIRJ	**Zirje**	**4.09**	**311**	*e*Pn	**Pn**	**02 17 15.2**	**-2.3**
ZIRJ				*e*Sn	**Sn**	**02 18 02.5**	**-2.6**
MORI	**Morici**	**4.19**	**314**	*e*Pn	**Pn**	**02 17 17.7**	**-1.1**
MORI				*e*Sn	**Sn**	**02 18 06.1**	**-1.5**
UDBI	**Udbina**	**4.63**	**320**	*e*Pn	**Pn**	**02 17 25.1**	**+0.3**
UDBI				*e*Sn	**Sn**	**02 18 18.3**	**-0.1**
DUGI	**Dugi Otok**	**4.64**	**311**	Sn	**Sn**	**02 18 17.2**	**-1.3**
VIRC	**Vir**	**4.83**	**314**	*e*Pn	**Pn**	**02 17 26.2**	**-1.3**
VIRC				Sn	**Sn**	**02 18 21.3**	**-1.9**
PLIT	**Plitvice**	**4.96**	**322**	*e*Pn	**Pn**	**02 17 29.1**	**-0.2**
PLIT				Sn	**Sn**	**02 18 26.0**	**-0.5**
SOKA	**Soboth**	**6.65**	**330**	*e*Pn	**Pn**	**02 17 53.3**	**+0.8**
	comp=N,0.5nm,0.3s						
OBKA	**Obir**	**6.70**	**327**	*e*Pn	**Pn**	**02 17 55.1**	**+1.8**
	comp=N,0.3nm,0.2s						

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*ISK **09** 02:17:11.8, 36˚.48N×26˚.86E, h4km, ML2.5/13*
*ATH **09** 02:17:12.1, 36˚.52N×26˚.87E, h11km±2km, ML2.6/7, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*AFAD **09** 02:17:13.3, 36˚.56N×26˚.89E, h10km±1km, ML2.5*
ISC 09 02:17:11.9±1.2, **36°.51N**±0°.02×**26°.87E**±0°.02, **h10**km±10km, **n52**, σ0°46/68, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLNA	**Kalymnos**	**0.45**	**10**	P	**Pg**	**02 17 20.9**	**+0.1**
KLNA				S	**Sg**	**02 17 26.6**	**-0.2**
YAZI	**Mula-Dat§a-**	**0.50**	**70**	P	**Pb**	**02 17 22.6**	**-0.2**
YAZI				S	**Sb**	**02 17 29.4**	**-0.8**
DAT	**Datca**	**0.61**	**69**	Pg	**Pb**	**02 17 24.7**	**-0.1**
DAT				Sg	**Sb**	**02 17 34.0**	**+0.5**
DAT	**Datca**	**0.61**	**69**	P	**Pb**	**02 17 24.7**	**-0.1**
DAT				S	**Sb**	**02 17 33.0**	**-0.4**
BODT	**Bodrum**	**0.65**	**33**	Pg	**Pb**	**02 17 25.9**	**+0.4**
BODT				Sg	**Sb**	**02 17 35.4**	**+0.7**
YKAV	**Yalikavak-Bodr**	**0.69**	**28**	Pg	**Pb**	**02 17 26.1**	**-0.1**
BDRM	**Kayabasi**	**0.72**	**40**	P	**Pb**	**02 17 26.5**	**-0.1**
BDRM				S	**Sb**	**02 17 36.0**	**-0.6**
DDIM	**Aydin, Didim**	**0.99**	**17**	P	**Pg**	**02 17 30.9**	**-0.1**
DDIM				S	**Sb**	**02 17 44.5**	**+0.2**
DDIM				IAML		02 17 47.0	
	comp=N,110nm,0.5s						
DDIM				IAML		02 17 55.0	
	comp=E,162nm,1.3s						
KARP	**Karpathos**	**0.99**	**166**	Pg	**Pg**	**02 17 30.9**	**0.0**
KARP				Sg	**Sb**	**02 17 44.8**	**+0.5**
KARP	**Karpathos**	**0.99**	**166**	P	**Pb**	**02 17 31.4**	**+0.2**
KARP				S	**Sb**	**02 17 44.8**	**+0.5**
ARG	**Arkhangelos**	**1.05**	**106**	Pg	**Pb**	**02 17 32.6**	**+0.3**
ARG	**Arkhangelos**	**1.05**	**106**	P	**Pg**	**02 17 32.3**	**+0.1**
ARG				S	**Sg**	**02 17 45.4**	**-0.5**
THR8	**Santorini-Mono**	**1.13**	**265**	P	**Pb**	**02 17 32.8**	**-0.7**
THERA	**Ancient Thera,**	**1.14**	**263**	P	**Pb**	**02 17 33.3**	**-0.3**
THERA				S	**Sb**	**02 17 48.6**	**+0.1**
TURN	**Turunc**	**1.14**	**76**	Pn	**Pn**	**02 17 34.2**	**+0.3**
TURN	**Turunc**	**1.14**	**76**	P	**Pn**	**02 17 34.2**	**+0.3**
THR2	**Thira island,**	**1.16**	**267**	P	**Pb**	**02 17 33.9**	**-0.2**
SNT5	**Nea Kammeni, S**	**1.19**	**265**	P	**Pb**	**02 17 34.9**	**+0.2**
THR6	**Thira Island,**	**1.20**	**263**	P	**Pb**	**02 17 34.8**	**0.0**
GCAM	**G?zelcami?**	**1.22**	**14**	Pn	**Pg**	**02 17 36.2**	**+0.8**
GCAM	**G?zelcami?**	**1.22**	**14**	P	**Pn**	**02 17 35.1**	**0.0**
THR9	**Santorini-Faro**	**1.23**	**263**	P	**Pn**	**02 17 35.0**	**-0.2**
THR5	**Thira Island,**	**1.23**	**266**	P	**Pn**	**02 17 35.0**	**-0.2**
SAP3	**Santorini-Thir**	**1.23**	**267**	P	**Pn**	**02 17 35.4**	**+0.1**
KRL1	**Karlovasi Samo**	**1.29**	**354**	P	**Pn**	**02 17 36.0**	**0.0**
KRL1				S	**Sb**	**02 17 52.9**	**0.0**
YER	**Yerkesik**	**1.29**	**61**	Pn	**Pg**	**02 17 37.4**	**+0.7**
NAX1	**Naxos Island**	**1.34**	**297**	P	**Pn**	**02 17 36.8**	**+0.1**
AYDN	**Tasoluk**	**1.40**	**35**	P	**Pb**	**02 17 38.5**	**+0.2**
DALY	**Dalyan (Mula)**	**1.47**	**77**	Pn	**Pg**	**02 17 40.2**	**+0.2**
DALY	**Dalyan (Mula)**	**1.47**	**77**	P	**Pg**	**02 17 40.0**	**-0.1**
ZKR	**Zakros**	**1.49**	**201**	P	**Pn**	**02 17 39.4**	**+0.6**
ZKR				S	**Sn**	**02 17 57.6**	**-0.8**
DGB	**zmir**	**1.54**	**0**	P	**Pn**	**02 17 39.7**	**+0.3**
NPS	**Neapolis**	**1.61**	**220**	P	**Pn**	**02 17 40.1**	**-0.3**
NPS				S	**Sn**	**02 18 01.5**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**29**	Pn	**Pb**	**02 17 42.9**	**+0.4**
SABU	**Mula-Dalaman**	**1.71**	**79**	P	**Pg**	**02 17 44.5**	**-0.3**
ESEN	**Aydn-Nazilli**	**1.75**	**42**	P	**Pg**	**02 17 46.0**	**+0.7**
DUVT	**Torbali**	**1.77**	**15**	P	**Pg**	**02 17 45.5**	**-0.3**
KSTL	**Kastelli Herak**	**1.80**	**224**	P	**Pn**	**02 17 43.5**	**+0.4**
IZMR	**zmir-demi**	**1.84**	**28**	P	**Pg**	**02 17 46.5**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.84**	**38**	Pn	**Pb**	**02 17 45.9**	**+0.2**
URLA	**Izmir**	**1.86**	**353**	P	**Pg**	**02 17 48.8**	**+1.2**
DNZT	**Denizli-Tavas-**	**1.89**	**65**	P	**Pb**	**02 17 47.3**	**+0.7**
IZZE	**Mula-Seydike**	**1.90**	**92**	P	**Pg**	**02 17 47.7**	**-0.6**
CHOS	**Chios island**	**1.98**	**341**	P	**Pn**	**02 17 46.2**	**+0.5**
CAME	**Cameli-Denizli**	**2.00**	**77**	Pn	**Pb**	**02 17 48.0**	**-0.5**
ODEM	**Odemis-Izmir**	**2.01**	**28**	Pn	**Pb**	**02 17 47.7**	**-0.9**
IDI	**Anoyia**	**2.02**	**233**	P	**Pn**	**02 17 46.3**	**+0.1**
IDI				S	**Sn**	**02 18 11.4**	**0.0**
KIRA	**zmir-Kiraz**	**2.08**	**35**	P	**Pb**	**02 17 50.6**	**+0.8**
CAMT	**Merkez**	**2.26**	**9**	P	**Pb**	**02 17 52.1**	**-0.8**
GOLH	**Golhisar**	**2.28**	**71**	P	**Pb**	**02 17 53.7**	**+0.6**
DKL	**Dikili**	**2.56**	**1**	P	**Pn**	**02 17 52.8**	**-0.6**
DION	**Dionisos Attik**	**2.82**	**305**	P	**Pn**	**02 17 57.2**	**+0.1**
DION				S	**Sn**	**02 18 31.0**	**-0.1**

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*NOU **09** 02:16:41.9, 22˚.66S×173˚.29E, h0km, MLv5.3/8, Southeast of Loyalty Islands*
*IDC **09** 02:17:19.2±0.9, 22˚.39S×170˚.37E, h0km, mb4.3/10, mbtmp4.3/11, ML4.3/1, MS3.2/6, Error ellipse: s-maj=26.4km s-min=23.3km az=98.0*
*NEIC **09** 02:17:21.8±1.1, 22˚.29S±0˚.10×170˚.22E±0˚.05, h10km±1km, mb4.6/18, Error ellipse: s-maj=17.1km s-min=7.1km az=12.0*
*GFZ **09** 02:17:31.5±1.1, 22˚S±9˚×17˚0E±˚, h91km±14km, M4.5/11, mb4.5/11, Error ellipse: s-maj=19.9km s-min=11.5km az=16.5, confirmed*
ISC 09 02:17:23.5±0.5, **22°.29S**±0°.09×**170°.20E**±0°.07, **h21**km, **n86**, σ1°05/81, **mb4.5**/19, **MS3.2**/3, **3D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.17**	**291**	P	**Pn**	**02 17 57.7**	**-0.6**
MARNC	**Mare, Loyalty**	**2.17**	**291**		**Pn**	**02 17 57.8**	**-0.5**
YATNC	**Mamie plateau,**	**3.08**	**274**	P	**Pn**	**02 18 10.0**	**-0.8**
OUENC	**Ouen Island, N**	**3.11**	**267**	P	**Pn**	**02 18 10.9**	**-0.4**
OUENC	**Ouen Island, N**	**3.11**	**267**		**Pn**	**02 18 11.0**	**-0.4**
ONTNC	**Ouen Toro**	**3.47**	**269**	P	**Pn**	**02 18 17.7**	**+1.5**
ONTNC	**Ouen Toro**	**3.47**	**269**		**Pn**	**02 18 16.3**	**0.0**
DZM	**Mont Dzumac**	**3.49**	**273**	Pn	**Pn**	**02 18 16.9**	**+0.3**
	26nm,0.3s,baz=112,slow=11,SNR=120						
DZM				LR	LR	02 18 57.0	
	comp=Z,154nm,20.6s,baz=54,slow=27						
DZM				Sn	**Sn**	**02 18 57.4**	**+0.1**
	12nm,0.3s,baz=70,slow=20,SNR=3.5						
	71nm,0.4s						
NOUC	**Port Laguerre**	**3.62**	**272**	P	**Pn**	**02 18 18.6**	**+0.3**
KOUNC	**Koumac, New Ca**	**5.78**	**286**	P	**Pn**	**02 18 49.6**	**+1.7**
KOUNC	**Koumac, New Ca**	**5.78**	**286**		**Pn**	**02 18 46.4**	**-1.6**
MSVF	**Nonsavu**	**8.66**	**60**	Pn	**Pn**	**02 19 31.8**	**+4.2**
	0.3nm,0.3s,baz=229,slow=12,SNR=8.7						
MSVF				LR	LR	02 21 46.3	
	comp=Z,91nm,19.0s,baz=177,slow=31						
MSVF	**Nonsavu**	**8.66**	**60**		**Pn**	**02 19 26.7**	**-1.0**
MSVF	**Nonsavu**	**8.66**	**60**	P	Pn	02 19 33.6	+5.9
HNR	**Honiara**	**16.14**	**321**	LR	LR	02 26 47.3	
	comp=Z,4.9nm,19.5s,baz=173,slow=35						
URZ	**Urewera**	**16.99**	**161**	LR	LR	02 26 03.3	
	comp=Z,100nm,20.6s,baz=332,slow=31						
ARMA	**Armidale**	**18.49**	**240**	P	**P**	**02 21 37.8**	**-0.5**
NIUE	**Niue**	**18.86**	**84**	P	**P**	**02 21 41.6**	**-0.8**
SNZO	**South Karori**	**19.34**	**170**	P	**Pn**	**02 21 49.3**	**+0.7**
CTA	**Charters Tower**	**22.43**	**271**	LR	LR	02 29 18.8	
	comp=Z,68nm,20.0s,baz=30,slow=32						
CTAO	**Charters Tower**	**22.43**	**271**	P	**P**	**02 22 23.1**	**+2.0**
CAN	**Canberra**	**22.61**	**230**	P	**P**	**02 22 25.4**	**+2.6**
CMSA	**Cobar Meteorol**	**23.67**	**242**	P	**P**	**02 22 35.0**	**+1.4**
MTSU	**Mount Surprise**	**24.63**	**275**	P	**P**	**02 22 44.5**	**+1.8**
TOO	**Toolangi**	**26.17**	**229**	P	**P**	**02 22 55.6**	**-0.9**
TOO				IAmb	IAmb	02 22 59.6	
	comp=Z,9.5nm,1.5s						
STKA	**Stephens Creek**	**27.13**	**243**	P	**P**	**02 23 05.3**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=91,slow=13,SNR=7.2						
	comp=Z,2.3nm,0.5s						
BBOO	**Buckleboo**	**31.91**	**243**	P	**P**	**02 23 48.1**	**+0.5**
BBOO	**Buckleboo**	**31.91**	**243**	P	**P**	**02 23 47.9**	**+0.3**
WR8	**Warramunga Arr**	**33.34**	**267**	P	**P**	**02 23 59.2**	**-1.0**
WR8				IAmb	IAmb	02 24 01.8	
	comp=Z,19nm,1.5s						
ASAR	**Alice Springs**	**33.39**	**260**	P	**P**	**02 24 00.6**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=83,slow=8.9,SNR=23						
	comp=Z,4.7nm,0.9s						
ASAR	**Alice Springs**	**33.39**	**260**	P	**P**	**02 23 59.7**	**-1.0**
WB0	**Warramunga Arr**	**33.47**	**268**	P	**P**	**02 24 00.3**	**-1.1**
WB0				IAmb	IAmb	02 24 05.7	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**33.49**	**267**	P	**P**	**02 24 00.9**	**-0.6**
	comp=Z,1.8nm,0.4s,baz=98,slow=8.4,SNR=26						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**33.49**	**267**	P	**P**	**02 24 00.8**	**-0.7**
PPT	**Papeete**	**38.03**	**90**	LR	LR	02 35 13.0	
	comp=Z,36nm,20.8s,baz=178,slow=28						
FORT	**Forrest**	**38.46**	**248**	P	**P**	**02 24 44.1**	**+0.1**
FORT				IAmb	IAmb	02 24 48.3	
	comp=Z,10nm,1.1s						
KNRA	**Kununurra**	**39.64**	**272**	P	**P**	**02 24 52.5**	**-1.5**
KNRA				IAmb	IAmb	02 25 35.6	
	comp=Z,23nm,1.3s						
FITZ	**Fitzroy Crossi**	**41.92**	**267**	LR	LR	02 42 34.0	
	comp=Z,66nm,18.2s,baz=286,slow=36						
FITZ	**Fitzroy Crossi**	**41.92**	**267**	P	**P**	**02 25 12.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**41.92**	**267**	P	**P**	**02 25 13.6**	**+0.8**
MBWA	**Marble Bar**	**46.72**	**261**	P	**P**	**02 25 51.5**	**+0.2**
MBWA	**Marble Bar**	**46.72**	**261**	P	**P**	**02 25 51.2**	**-0.1**
MEEK	**Meekatharra**	**46.90**	**254**	P	**P**	**02 25 52.5**	**-0.2**
VNDA	**Vanda**	**55.43**	**182**	P	**P**	**02 26 55.8**	**0.0**
SBA	**Scott Base**	**55.64**	**181**	P	**P**	**02 26 57.1**	**-0.3**
SBA				IAmb	IAmb	02 26 59.3	
	comp=Z,8.6nm,1.4s						
MJAR	**Matsushiro Arr**	**65.86**	**332**	P	**P**	**02 28 06.6**	**-0.9**
	comp=Z,2.6nm,0.7s,baz=153,slow=6.8,SNR=6.7						
	comp=Z,2.6nm,0.7s						
MJAR	**Matsushiro Arr**	**65.86**	**332**	P	**P**	**02 28 06.9**	**-0.6**
MJAR				IAmb	IAmb	02 28 08.6	
	comp=Z,4.6nm,1.3s						
QSPA	**South Pole Qui**	**67.78**	**180**	P	**P**	**02 28 18.4**	**-1.2**
	comp=Z,4.3nm,1.0s,baz=22,slow=1.8,SNR=8.5						
	comp=Z,4.3nm,1.0s						
QSPA	**South Pole Qui**	**67.78**	**180**	P	**P**	**02 28 19.3**	**-0.3**
QSPA	**South Pole Qui**	**67.78**	**180**	P	**P**	**02 28 19.5**	**0.0**
KSRS	**Korea Array**	**71.52**	**326**	P	**P**	**02 28 43.0**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=136,slow=6.5,SNR=9.8						
	comp=Z,2.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**80.57**	**294**	P	**P**	**02 29 36.7**	**+1.9**
	comp=Z,1.3nm,0.4s,baz=140,slow=4.7,SNR=11						
	comp=Z,1.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**80.57**	**294**	P	**P**	**02 29 34.5**	**-0.3**
TROLL	**Troll, Antarti**	**85.57**	**184**	⇓P	**P**	**02 29 59.2**	**-0.8**

PSGCX				IAML			02 54 52.4
	comp=Z,848nm,0.3s						
PSGCX	**Pisagua**	**0.90 293**⇑	*eP*		**Pn**	**02 54 36.4**	**-0.2**
PSGCX			*eS*		**Sn**	**02 54 51.5**	**+0.8**
PB02	**IPOC Station P**	**1.49 204**	*i P*		**Pn**	**02 54 43.0**	**-0.6**
PB02				IAML		02 55 10.4	
	comp=Z,706nm,0.3s						
PB02	**IPOC Station P**	**1.49 204**⇑	*eP*		**Pn**	**02 54 43.2**	**-0.4**
PB02			*eS*		**Sn**	**02 55 03.9**	**+0.7**
PB02				IAML		02 55 09.6	
	comp=N,1μm,0.3s						
PB16	**IPOC Station P**	**1.63 351**	*i P*		**Pn**	**02 54 45.5**	**-0.3**
PB16				IAML		02 55 12.5	
	comp=Z,75nm,0.4s						
PB16	**IPOC Station P**	**1.63 351**⇓	*eP*		**Pn**	**02 54 46.0**	**+0.2**
PB16			*eS*		**Sn**	**02 55 08.5**	**+1.5**
PB12	**IPOC Station P**	**1.68 322**	*i P*		**Pn**	**02 54 44.8**	**-1.2**
PB12			*eS*		**Sn**	**02 55 07.5**	**+0.1**
PB12				IAML		02 55 13.8	
	comp=Z,272nm,0.3s						
PB12	**IPOC Station P**	**1.68 322**⇑	*eP*		**Pn**	**02 54 45.1**	**-0.9**
PB12			*eS*		**Sn**	**02 55 07.8**	**+0.4**
PB12				IAML		02 55 16.0	
	comp=N,453nm,0.3s						
PB09	**IPOC Station P**	**1.83 180**	*i P*		**Pn**	**02 54 47.6**	**-0.5**
PB09				IAML		02 55 17.5	
	comp=Z,197nm,0.5s						
PB09	**IPOC Station P**	**1.83 180**⇑	*eP*		**Pn**	**02 54 48.1**	**+0.1**
PB09			*eS*		**Sn**	**02 55 12.2**	**+1.1**
PB09				IAML		02 55 19.4	
	comp=E,211nm,0.4s						
PB07	**IPOC Station P**	**1.86 199**	*i P*		**Pn**	**02 54 47.8**	**-0.6**
PB07			*eS*		**Sn**	**02 55 11.8**	**0.0**
PB07				IAML		02 55 19.1	
	comp=Z,309nm,0.4s						
PB07	**IPOC Station P**	**1.86 199**⇑	*eP*		**Pn**	**02 54 48.0**	**-0.5**
PB07			*eS*		**Sn**	**02 55 12.6**	**+0.8**
PB07				IAML		02 55 18.6	
	comp=E,362nm,0.3s						
AP01	**Chacalluta**	**1.88 326**	*i P*		**Pn**	**02 54 48.1**	**-0.4**
AP01			*eS*		**Sn**	**02 55 11.2**	**-0.7**
AP01				IAML		02 55 20.4	
	comp=Z,399nm,0.1s						
AP01	**Chacalluta**	**1.88 326**	*eP*		**Pn**	**02 54 48.1**	**-0.4**
AP01			*eS*		**Sn**	**02 55 12.9**	**+0.9**
AP01				IAML		02 55 19.9	
	comp=N,618nm,0.3s						
PB03	**IPOC Station P**	**2.14 193**	*i P*		**Pn**	**02 54 51.5**	**-0.5**
PB03				IAML		02 55 23.8	
	comp=Z,275nm,0.2s						
PB03	**IPOC Station P**	**2.14 193**	*eP*		**Pn**	**02 54 51.9**	**-0.2**
PB03			*eS*		**Sn**	**02 55 17.1**	**-1.1**
PB03				IAML		02 55 23.7	
	comp=E,209nm,0.4s						
PB06	**IPOC Station P**	**2.76 186**	*i P*		**Pn**	**02 55 00.1**	**-0.1**
PB06				IAML		02 55 42.3	
	comp=Z,109nm,0.4s						
PB05	**IPOC Station P**	**3.02 197**	*i P*		**Pn**	**02 55 03.1**	**-0.6**
PB05				IAML		02 55 51.4	
	comp=Z,73nm,0.4s						

IDC ***09*** *02:54:57.1±1.3,39°.96N×143°.39E, h0km, mb4.2/19, mbtmp4.1/23, ML3.4/3, MS3.5/25, Error ellipse: s-maj=30.5km s-min=16.2km az=160.0*

NIED ***09*** *02:54:58.3, 39°.87N×143°.42E, h22km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.18; Mθθ0.14; Mϕϕ-1.32; Mrθ1.47; Mθϕ-0.55; Mϕr1.54; Fault plane solution: M₀2.54000×10¹⁵ NP1: ϕs175.00000°, δ21.00000°, λ46.00000°. NP2:ϕs40.00000°, δ75.00000°, λ105.00000°.*

GFZ ***09*** *02:54:58.7±0.5, 40°.N±4°.×14°.3E±°, h10km, M4.6/25, mb4.6/25, confirmed*

JMA ***09*** *02:54:58.3±0.2, 39°.9N±0°.7×143°.4E±1°.0, h22km, MD4.6/36, MV4.5/36, FAR E OFF SANRIKU*

JMA Felt I J1 at FAR E OFF SANRIKU .

NEIC ***09*** *02:55:02.0±1.3, 39°.87N±0°.06×143°.2E±0°.1, h29km±1km, mb4.5/32, Error ellipse: s-maj=12.7km s-min=9.0km az=97.0*

ISC 09 02:54:57.8±0.5, 39°.86N±0°.05×143°.33E±0°.05, h6km, n190, σ0s95/170, mb4.5/54, MS3.7/26, 2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.13 275**		P		**Pg**	**02 55 19.8**	**+0.2**
JTH				*eS*		**Sb**	**02 55 35.5**	**+0.7**
MIYJ	**Miyakonagasawa**	**1.20 257**		*i* P		**Pg**	**02 55 21.0**	**+0.1**
MIYJ				*eS*		**Sn**	**02 55 37.5**	**-0.3**
JKEN	**Kujiedanarisaw**	**1.29 286**		P		**Pn**	**02 55 21.8**	**-0.6**
JANG	**Nango**	**1.49 291**		*i* P		**Pn**	**02 55 24.8**	**-0.3**
JSZI	**Iwateshizukuis**	**1.84 267**		A		A	02 55 30.4	
	comp=N,11nm,2.1s,comp=E,11nm,1.3s							
JMK	**Ichinoseki**	**1.87 242**		*i* P		**Pn**	**02 55 30.6**	**+0.3**
JTM	**Tenmabayashi**	**1.96 299**		P		**Pn**	**02 55 32.6**	**+0.9**
JTM	**Tenmabayashi**	**1.96 299**				**Pn**	**02 55 32.1**	**+0.5**
JTM	**Tenmabayashi**	**1.96 299**		P		**Pn**	**02 55 32.5**	**+0.9**
JTM	**Tenmabayashi**	**1.96 299**		*i* P		**Pn**	**02 55 32.4**	**+0.7**
JIO	**Ouri**	**2.08 228**		*i* P		**Pn**	**02 55 32.7**	**-0.5**
JRG	**Rokugo**	**2.13 258**		A		A	02 55 34.7	
	comp=N,10.0nm,1.8s,comp=E,12nm,0.6s							
ERM	**Erimo**	**2.16 357**		P		**Pn**	**02 55 35.4**	**+1.0**
ERM	**Erimo**	**2.16 357**		Pn		**Pn**	**02 55 35.0**	**+0.6**
ERM	**Erimo**	**2.16 357**		P		**Pn**	**02 55 35.0**	**+0.6**
JEM	**Erimo**	**2.16 357**		P		**Pn**	**02 55 35.4**	**+1.0**
JOT	**Ohata**	**2.31 312**		P		**Pn**	**02 55 37.2**	**+0.8**
JNBK	**Urakawa-nobuka**	**2.46 350**		P		**Pn**	**02 55 39.1**	**+0.6**
JYK	**Kaneyama**	**2.49 249**		*i* P		**Pn**	**02 55 39.8**	**+0.9**
JCH	**Churui**	**2.76 0**		P		**Pn**	**02 55 42.5**	**0.0**
JCH				S		**Sn**	**02 56 15.8**	**-0.4**
JKA	**Kamikawa-asahi**	**4.29 353**		Pn		**Pn**	**02 56 04.9**	**+1.2**
JKA	**Kamikawa-asahi**	**4.29 353**		P		**Pn**	**02 56 01.4**	**-2.3**
JYT	**Yasato**	**4.39 215**		Pn		**Pn**	**02 56 06.2**	**+1.3**
MJAR	**Matsushiro Arr**	**5.22 232**		Pn		**Pn**	**02 56 17.9**	**+1.5**
	comp=E,0.8nm,0.3s,baz=36,slow=13,SNR=40							
MJAR				LR		LR	02 58 32.3	
	comp=E,251nm,20.9s,baz=126,slow=40 comp=E,18nm,0.9s							
MJAR	**Matsushiro Arr**	**5.22 232**		Pn		**Pn**	**02 56 17.4**	**+1.0**
MJB9	**Matsu-Tunnel**	**5.22 232**		Pn		**Pn**	**02 56 17.5**	**+1.1**
MAJO	**Matsushiro**	**5.22 232**		P		**Pn**	**02 56 18.6**	**+2.2**
MAJO	**Matsushiro**	**5.22 232**		Pn		**Pn**	**02 56 17.5**	**+1.1**
MAJO	**Matsushiro**	**5.22 232**		P		**Pn**	**02 56 18.2**	**+1.7**
JGF	**Kuroka**	**6.36 230**		P		**Pn**	**02 56 35.4**	**+3.3**
JGF	**Kuroka**	**6.36 230**		Pn		**Pn**	**02 56 33.1**	**+0.9**
JGF	**Kuroka**	**6.36 230**		P		**Pn**	**02 56 33.2**	**+1.1**
JSG	**Sagara**	**6.60 220**		Pn		**Pn**	**02 56 36.9**	**+1.5**
INU	**Inuyama**	**6.73 230**		Pn		**Pn**	**02 56 38.5**	**+1.3**
INU	**Inuyama**	**6.73 230**		P		**Pn**	**02 56 40.4**	**+3.2**
JHJ2	**Mitsune**	**7.30 204**		P		**Pn**	**02 56 45.7**	**+0.7**
JHJ2	**Mitsune**	**7.30 204**		Pn		**Pn**	**02 56 43.9**	**-1.2**
JHJ2	**Mitsune**	**7.30 204**		P		**Pn**	**02 56 43.8**	**-1.2**
JHJ	**Hachijo jima 2**	**7.30 204**		Pn		**Pn**	**02 56 43.7**	**-1.3**
	comp=E,27nm,0.3s,baz=71,slow=20,SNR=9.0							
JHJ						Sn	02 57 59.0	-9.3
	comp=E,24nm,0.3s,baz=53,slow=22,SNR=4.4							
USRK	**Ussuriysk Ar.**	**9.49 301**		LR		LR	03 00 57.7	
	comp=E,289nm,18.4s,baz=134,slow=38							
USRK	**Ussuriysk Ar.**	**9.49 301**		Pn		**Pn**	**02 57 13.9**	**-1.1**
MDJ	**Mudanjiang**	**11.24 300**		P		**Pn**	**02 57 42.3**	**+3.4**
MDJ				S		**Sn**	**02 59 44.8**	**0.0**
MDJ				pmax		pmax		
	comp=Z,14nm,0.7s							
MDJ				LR		LR		
	comp=N,290nm,14.4s							
MDJ				LR		LR		
	comp=E,290nm,15.8s							
MDJ				LR		LR		
	comp=Z,490nm,15.8s							
KSRS	**Korea Array**	**12.28 264**		Pn		**Pn**	**02 57 53.6**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=86,slow=14,SNR=7.1							
KSRS				LR		LR	03 02 21.3	
	comp=Z,263nm,18.4s,baz=70,slow=36 comp=Z,1.7nm,0.6s							
KLR	**Kul'dur**	**12.48 322**		Pn		**Pn**	**02 57 56.9**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=137,slow=15,SNR=4.3							
KLR				LR		LR	03 02 58.3	
	comp=Z,202nm,20.6s,baz=144,slow=39 comp=Z,1.5nm,0.8s							
BNX	**BinXian**	**13.08 302**	⇓	P		**Pn**	**02 58 05.5**	**+1.4**
BNX				pmax		pmax		
	comp=Z,10.0nm,0.9s							

PETK	**Petropavlovsk-**	**16.50 32**		LR		LR	03 04 42.2
	comp=E,68nm,20.4s,baz=192,slow=36						
DL2	**Dalian**	**16.81 274**		*eP*		**P**	**02 58 55.8**	**-0.1**
DL2				S		**Sn**	**03 01 59.0**	**-1.6**
DL2				pmax		pmax		
	comp=Z,19nm,0.9s							
DL2				pmax		pmax		
	comp=Z,200nm,7.2s							
DL2				LR		LR		
	comp=N,200nm,16.6s							
DL2				LR		LR		
	comp=E,240nm,18.2s							
DL2				LR		LR		
	comp=Z,500nm,19.5s							
HILR	**Hailar Array B**	**19.29 308**		P		**P**	**02 59 21.6**	**-1.7**
	comp=Z,7.0nm,0.4s,baz=117,slow=12,SNR=9.1							
MA2	**Magadan**	**20.29 11**		P		**P**	**02 59 31.7**	**-2.3**
	comp=Z,9.8nm,0.6s,baz=175,slow=12,SNR=4.8							
MA2				LR		LR	03 08 48.1	
	comp=E,28nm,18.0s,baz=199,slow=41 comp=Z,9.8nm,0.6s							
MA2	**Magadan**	**20.29 11**		P		**P**	**02 59 33.3**	**-0.8**
MA2				IAmb		IAmb	03 00 04.6	
	comp=Z,26nm,1.2s							
XLT	**XiLinHaoTe**	**20.65 290**		*eP*		**P**	**02 59 37.2**	**-1.0**
XLT				pP		pwP	02 59 44.4	+2.7
XLT				sP		Pn	02 59 48.8	+8.3
XLT				pmax		pmax		
	comp=Z,11nm,0.7s							
TIA	**Tai'an**	**20.93 268**		P		**P**	**02 59 40.4**	**-0.8**
TIA				pmax		pmax		
	comp=Z,15nm,1.1s							
TIA				LR		LR		
	comp=N,150nm,15.1s							
TIA				LR		LR		
	comp=E,350nm,15.6s							
TIA				LR		LR		
	comp=Z,500nm,13.8s							
NJ2	**Nanjing**	**21.25 256**		*eP*		**P**	**02 59 44.4**	**-0.2**
NJ2				pmax		pmax		
	comp=Z,21nm,0.6s							
YAK	**Yakutsk**	**23.71 344**		LR		LR	03 10 16.3	
	comp=Z,38nm,20.8s,baz=158,slow=39							
SEY	**Seymchan**	**23.74 10**		P		**P**	**03 00 09.0**	**-1.5**
	comp=Z,6.6nm,0.8s,baz=195,slow=7.5,SNR=15 comp=Z,6.6nm,0.8s							
HHC	**Hu-ho-hao-te**	**24.17 283**		*eP*		**P**	**03 00 14.4**	**-0.5**
HHC				pmax		pmax		
	comp=Z,13nm,0.6s							
HHC				pmax		pmax		
	comp=Z,36nm,5.9s							
HHC				LR		LR		
	comp=N,97nm,15.1s							
HHC				LR		LR		
	comp=E,210nm,16.8s							
HHC				LR		LR		
	comp=Z,220nm,18.9s							
LYN	**LuoYang**	**25.07 268**		P		**P**	**03 00 22.3**	**-0.7**
LYN				pmax		pmax		
	comp=Z,24nm,1.1s							
LYN				LR		LR		
	comp=N,300nm,12.4s							
LYN				LR		LR		
	comp=E,440nm,13.5s							
LYN				LR		LR		
	comp=Z,630nm,14.7s							
WHN	**Wuhan**	**25.35 258**		P		**P**	**03 00 25.6**	**+0.1**
WHN				pmax		pmax		
	comp=Z,42nm,0.8s							
GUMO	**Guam**	**26.20 177**		LR		LR	03 09 40.6	
	comp=Z,40nm,21.1s,baz=104,slow=34							
ULN	**Ulaanbaatar**	**27.16 299**		P		**P**	**03 00 42.6**	**+0.7**
SONM	**Songino Array**	**27.60 299**		P		**P**	**03 00 46.1**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=99,slow=9.2,SNR=16							
SONM				LR		LR	03 12 23.5	
	comp=Z,209nm,18.8s,baz=92,slow=38 comp=Z,3.3nm,0.7s							
SONM	**Songino Array**	**27.60 299**		P		**P**	**03 00 45.2**	**-0.6**
XAN	**Xi'an**	**27.99 269**		P		**P**	**03 00 48.4**	**-1.0**
XAN				pmax		pmax		
	comp=Z,9.0nm,1.0s							
XAN				LR		LR		
	comp=E,270nm,15.8s							
XAN				LR		LR		
	comp=Z,210nm,13.7s							
H11N2	**WAKE ISLAND Hy**	**28.49 128**		T		T	03 31 47.0	
	baz=318,slow=75,SNR=395							
H11N1	**WAKE ISLAND Hy**	**28.50 128**		T		T	03 31 55.9	
	baz=318,slow=75,SNR=303							
H11N3	**WAKE ISLAND Hy**	**28.51 128**		T		T	03 31 49.0	
	baz=318,slow=75,SNR=375							
ENH	**Enshi**	**29.16 261**		P		**P**	**03 00 59.1**	**-0.8**
H11S1	**WAKE ISLAND Hy**	**29.32 130**		T		T	03 32 53.1	
	baz=319,slow=76,SNR=54							
H11S3	**WAKE ISLAND Hy**	**29.32 130**		T		T	03 32 56.3	
	baz=319,slow=76,SNR=35							
H11S2	**WAKE ISLAND Hy**	**29.33 130**		T		T	03 33 02.1	
	baz=319,slow=76,SNR=40							
TLY	**Talaya**	**29.74 307**		LR		LR	03 13 42.6	
	comp=Z,81nm,18.5s,baz=104,slow=38							
LZH	**Lanzhou**	**31.18 276**		*eP*		P	03 01 23.8	+6.0
LZH				sP		pwP	03 01 30.6	+9.2
LZH				pmax		pmax		
	comp=Z,14nm,1.1s							
LZH				LR		LR		
	comp=N,130nm,13.6s							
LZH				LR		LR		
	comp=E,220nm,15.5s							
LZH				LR		LR		
	comp=Z,290nm,14.9s							
TIXI	**Tiksi**	**32.70 352**		LR		LR	03 16 09.3	
	comp=Z,67nm,19.0s,baz=178,slow=39							
GTA2	**Gaotai**	**33.29 284**		*eP*		**P**	**03 01 37.0**	**+0.7**
GTA2				pmax		pmax		
	comp=Z,11nm,1.0s							
GTA2				LR		LR		
	comp=N,110nm,12.0s							
GTA2				LR		LR		
	comp=E,230nm,15.5s							
GTA2				LR		LR		
	comp=Z,320nm,15.8s							
DAV	**Davao City (W)**	**36.33 211**		LR		LR	03 15 03.0	
	comp=Z,32nm,21.5s,baz=338,slow=33							
PZH	**PanZhiHua**	**36.94 262**		P		**P**	**03 02 08.2**	**+0.3**
PZH				pmax		pmax		
	comp=Z,20nm,0.6s							
GOMU	**GeErMu**	**38.02 280**		P		**P**	**03 02 16.5**	**-0.7**
GOMU				pP		sP	03 02 19.9	+0.8
GOMU				sP		pwP	03 02 23.9	+3.1
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.4s							
WMQ	**Urumqi**	**40.98 294**		*eP*		**P**	**03 02 43.6**	**+2.1**
WMQ				pP		pwP	03 02 48.7	+3.7
WMQ				pmax		pmax		
	comp=Z,25nm,0.9s							
C18K	**Utukok River**	**41.08 27**		P		**P**	**03 02 41.9**	**0.0**
C18K				IAmb		IAmb	03 02 42.5	
	comp=Z,9.2nm,1.4s							
ZALV	**Zalesovo Beam**	**41.19 310**		P		**P**	**03 02 43.2**	**+0.3**
	comp=Z,7.1nm,0.4s,baz=94,slow=8.5,SNR=33							
ZALV				LR		LR	03 20 36.7	
	comp=Z,52nm,20.4s,baz=89,slow=37 comp=Z,7.1nm,0.4s							
ZALV	**Zalesovo Beam**	**41.19 310**		P		**P**	**03 02 42.7**	**-0.3**
NRIK	**Noril'sk**	**41.37 334**		LR		LR	03 21 33.3	
	comp=Z,87nm,18.7s,baz=126,slow=39							
G18K	**Tagagawik**	**41.46 32**		P		**P**	**03 02 45.6**	**+0.6**
E19K	**Redstone River**	**42.28 30**		P		**P**	**03 02 52.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**43.70 254**		P		**P**	**03 03 03.8**	**0.0**
	comp=Z,0.9nm,0.3s,baz=52,slow=7.5,SNR=4.1 comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**43.70 254**		P		**P**	**03 03 02.4**	**-1.3**
MKAR	**Makanchi Array**	**43.96 300**		P		**P**	**03 03 05.8**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=82,slow=9.9,SNR=18							
MKAR				LR		LR	03 22 21.3	
	comp=Z,124nm,19.0s,baz=70,slow=37 comp=Z,4.2nm,0.9s							
MKAR	**Makanchi Array**	**43.96 300**		P		**P**	**03 03 05.3**	**-0.3**
MAKZ	**Makanchi**	**44.16 300**		P		**P**	**03 03 07.3**	**0.0**
MAKZ				IAmb		IAmb	03 03 08.3	
	comp=Z,6.2nm,1.1s							
MAKZ	**Makanchi**	**44.16 300**		P		**P**	**03 03 07.7**	**+0.5**
KURK	**Kurchatov**	**45.43 306**		P		**P**	**03 03 16.4**	**-0.8**
KURK				IAmb		IAmb	03 03 31.6	
	comp=Z,7.0nm,0.7s							
KURK	**Kurchatov**	**45.43 306**		P		**P**	**03 03 17.2**	**0.0**
KURBB	**Kurchatov Arra**	**45.51 306**		P		**P**	**03 03 17.7**	**-0.1**

	comp=Z,3.5nm,0.4s,baz=80,slow=8.5,SNR=33 comp=Z,3.5nm,0.4s						
ILAR	**Eielson Array**	**46.31 34**		P		**P**	**03 03 24.3**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=264,slow=6.5,SNR=14 comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**46.31 34**		P		**P**	**03 03 24.0**	**0.0**
PDGK	**Podgornoye**	**46.84 296**		P		**P**	**03 03 28.2**	**-0.4**
F26K	**Sheenjek River**	**47.30 30**		P		**P**	**03 03 33.4**	**+1.7**
F26K				IAmb		IAmb	03 03 57.1	
	comp=Z,3.1nm,1.1s							
EVN	**Everest**	**47.67 274**		P		**P**	**03 03 35.7**	**-0.2**
EVN				IAmb		IAmb	03 03 48.2	
	comp=Z,7.3nm,0.7s							
EVN	**Everest**	**47.67 274**		P		**P**	**03 03 36.6**	**+0.7**
WUS	**Wushi**	**47.74 293**		P		**P**	**03 03 35.6**	**-0.1**
WUS	**Wushi**	**47.74 293**		P		**P**	**03 03 36.0**	**+0.2**
TARG	**Taragay, Kyrgy**	**48.55 295**				**P**	**03 03 40.8**	**-1.5**
TARG				IAmb		IAmb	03 03 47.9	
	comp=Z,6.7nm,0.9s							
TARG	**Taragay, Kyrgy**	**48.55 295**		P		**P**	**03 03 43.0**	**+0.7**
I28M	**Miner Creek**	**49.18 33**		P		**P**	**03 03 47.8**	**+1.4**
BOOM	**Boomskoye usch**	**49.58 296**				**P**	**03 03 50.0**	**+0.2**
BOOM	**Boomskoye usch**	**49.58 296**		P		**P**	**03 03 50.3**	**+0.5**
E29M	**Blow River**	**49.58 29**				**P**	**03 03 50.6**	**+1.4**
ASAI	**AK-SAY(Kyrgyzs**	**49.75 294**		P		**P**	**03 03 52.0**	**+0.6**
BVAR	**Borovoye Array**	**49.83 311**		P		**P**	**03 03 51.5**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=76,slow=7.9,SNR=17 comp=Z,3.0nm,0.5s							
BORK	**Borovoye**	**49.86 311**		P		**P**	**03 03 51.4**	**-0.2**
BORK				IAmb		IAmb	03 03 53.1	
	comp=Z,5.5nm,0.9s							
K29M	**Barlow Dome**	**50.47 34**		P		**P**	**03 03 57.1**	**+0.8**
AAK	**Ala-Archa**	**50.52 297**		LR		LR	03 26 37.4	
	comp=Z,85nm,18.4s,baz=126,slow=38							
AAK	**Ala-Archa**	**50.52 297**		P		**P**	**03 03 57.0**	**0.0**
I30M	**Mount Dempster**	**50.69 32**				**P**	**03 03 58.7**	**+0.8**
I30M				IAmb		IAmb	03 04 15.6	
	comp=Z,3.3nm,0.8s							
KSH2	**Kashi**	**51.11 292**		P		**P**	**03 04 01.0**	**-0.5**
KSH2				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HYT	**Haines Junctio**	**51.15 38**		P		**P**	**03 04 02.1**	**+0.7**
HYT				IAmb		IAmb	03 04 22.6	
	comp=Z,3.0nm,0.8s							
H31M	**Peel River**	**51.40 32**		P		**P**	**03 04 03.4**	**+0.3**
H31M				IAmb		IAmb	03 04 20.7	
	comp=Z,4.6nm,0.9s							
ARSB	**Arslanbob**	**52.06 296**				**P**	**03 04 08.7**	**+0.2**
KKAR	**Karatay Array**	**53.05 299**		P		**P**	**03 04 14.6**	**-1.1**
NIL	**Nilore**	**55.19 287**		P		**P**	**03 04 32.6**	**+1.2**
ARTI	**Arti**	**55.38 318**		LR		LR	03 30 50.7	
	comp=Z,115nm,19.0s,baz=66,slow=39							
ARTI	**Arti**	**55.38 318**		P		**P**	**03 04 32.2**	**-0.1**
CHGR	**Chuyangaron**	**55.84 294**		P		**P**	**03 04 35.9**	**-0.3**
ABKAR	**Akbulak array**	**57.30 309**		P		**P**	**03 04 46.0**	**-0.2**
AKTO	**Aktyubinsk**	**57.93 311**		LR		LR	03 31 02.4	
	comp=Z,50nm,20.6s,baz=186,slow=37							
WB0	**Warramunga Arr**	**59.90 190**		P		**P**	**03 05 03.5**	**-1.1**
WR8	**Warramunga Arr**	**60.07 190**		P		**P**	**03 05 04.2**	**-1.5**
WRA	**Warramunga Arr**	**60.08 190**		P		**P**	**03 05 04.6**	**-1.2**
YKA	**Yellowknife Ar**	**60.62 31**		P		**P**	**03 05 07.7**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=299,slow=6.9,SNR=1.8 comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**60.62 31**		P		**P**	**03 05 08.9**	**-0.1**
ARCES	**ARCESS Array B**	**61.89 339**		P		**P**	**03 05 16.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=40,slow=8.3,SNR=4.0 comp=Z,1.4nm,0.8s							
ARCES	**ARCESS Array B**	**61.89 339**		P		**P**	**03 05 17.5**	**-0.1**
ARCES				IAmb		IAmb	03 05 19.5	
	comp=Z,6.2nm,1.2s							
SGF	**Sodankyl**	**62.94 337**		P		**P**	**03 05 24.6**	**0.0**
RNF	**Rovaniemi**	**63.63 337**		P		**P**	**03 05 29.0**	**-0.2**
OUL	**Oulu**	**64.66 335**		P		**P**	**03 05 35.5**	**-0.5**
FINES	**FINESS Array B**	**67.02 332**		P		**P**	**03 05 50.8**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=45,slow=6.4,SNR=13							
FINES				LR		LR	03 38 02.3	
	comp=Z,79nm,18.5s,baz=44,slow=39 comp=Z,3.7nm,0.9s							
FINES	**FINESS Array B**	**67.02 332**		P		**P**	**03 05 51.0**	**-0.2**
SUMG	**Summit**	**67.86 1**		P		**P**	**03 05 57.9**	**+1.0**
KIV	**Kislovodsk**	**70.20 311**		P		**P**	**03 06 11.7**	**+0.2**
KIV	**Kislovodsk**	**70.20 311**		P		**P**	**03 06 12.6**	**+1.1**
KBZ	**Khabaz**	**70.21 311**		P		**P**	**03 06 11.7**	**+0.2**
	comp=Z,5.0nm,0.9s,baz=43,slow=4.0,SNR=6.4 comp=Z,5.0nm,0.9s							
HFS	**Hagfors**	**72.13 336**		P		**P**	**03 06 22.7**	**-0.1**
	comp=Z,1.9nm,0.4s,baz=43,slow=6.7,SNR=17							
HFS				LR		LR	03 41 19.2	
	comp=Z,40nm,19.5s,baz=40,slow=39 comp=Z,1.9nm,0.4s							
NB2	**NORSAR Subarra**	**72.16 338**		P		**P**	**03 06 22.9**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=36,slow=6.2							
NOA	**NORSAR Array B**	**72.16 338**		P		**P**	**03 06 22.9**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=38,slow=6.1,SNR=7.3							
NOA				LR		LR	03 42 09.3	
	comp=Z,32nm,19.0s,baz=35,slow=39 comp=Z,2.1nm,0.8s							
SFJD	**Kangerlussuaq**	**72.94 6**		LR		LR	03 40 47.1	
	comp=Z,36nm,18.3s,baz=308,slow=38							
AKASG	**Malin Array Be**

comp=Z,0.2nm,0.5s
TXAR Lajitas Array 87.22 54 P P 03 07 45.9 +0.5
L59A Walton 91.22 27 P P 03 08 04.4 +0.4
ESDC Sonseca Array 95.39 335 LR LR 03 57 15.2
comp=Z,36nm,18.4s,baz=91,slow=39
EDA Edea 118.94 304 PKPdf PKPdf 03 13 47.2 -0.7
CXM Morne La Croix 121.02 28 PKPdf PKPdf 03 13 51.1 -0.9
PB11 IPOC Station P 145.35 64 PKPbc PKPbc 03 14 36.7 -0.3
PB02 IPOC Station P 146.21 67 PKPdf PKPdf 03 14 38.1 -0.3

NEIC ***09*** *03:00:00.9±1.8, 5°.95S±0°.07×152°.1E±0°.1, h10km±1km, mb4.4/15, Error ellipse: s-maj=26.0km s-min=9.0km az=109.0*
IDC ***09*** *03:00:07.1±6.5, 5°.56S×151°.54E, h56km±55km, mb3.5/5, mbtmp3.8/6, ML2.0/1, Error ellipse: s-maj=55.0km s-min=31.8km az=111.0*
ISC 09 03:00:05.0±0.8, **5°.8S**±0°.1×**151°.9E**±0°.2, **h35**km, **n27,** σ1♀**19**/30, **mb4.3**/13, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.65	9		Pn	03 00 31.5	0.0
RABL				Sn	Sn	03 00 54.0	+2.6
PMG	Port Moresby	5.91	233	P	Pn	03 01 31.7	+1.7
	2.6nm,0.3s,baz=67,slow=14,SNR=4.2						
PMG				S	Sn	03 02 35.1	-1.4
	12nm,0.5s,baz=91,slow=21,SNR=3.8						
	14nm,0.5s						
PMG	Port Moresby	5.91	233		Pn	03 01 29.6	-0.4
PMG					Sn	03 02 37.7	+1.2
WB0	Warramunga Arr	21.96	229	P	P	03 04 55.8	-0.1
WB0				IAmb	IAmb	03 05 04.6	
	comp=Z,9.4nm,0.9s						
WR0	Warramunga Arr	21.97	229	P	P	03 04 56.6	+0.6
WR0				IAmb	IAmb	03 05 14.8	
	comp=Z,16nm,1.4s						
WR8	Warramunga Arr	22.00	229	P	P	03 04 55.4	-0.9
WR8				IAmb	IAmb	03 04 56.2	
	comp=Z,19nm,1.4s						
WRAB	Tennant Creek	22.09	229	P	P	03 04 57.1	-0.3
WRAB				IAmb	IAmb	03 05 10.6	
	comp=Z,19nm,1.4s						
WB2	Warramunga Arr	22.10	229	P	P	03 04 56.3	-1.1
WRA	Warramunga Arr	22.11	229	P	P	03 04 56.9	-0.6
	comp=Z,1.9nm,0.5s,baz=51,slow=10,SNR=19						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	22.11	229	P	P	03 04 56.4	-1.1
WRA				IAmb	IAmb	03 05 09.1	
	comp=Z,0.9nm,1.5s						
KNRA	Kununurra	24.74	245	P	P	03 05 23.1	-0.3
KNRA				IAmb	IAmb	03 05 56.7	
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	24.80	223	P	P	03 05 24.3	+0.4
	comp=Z,1.5nm,0.7s,baz=56,slow=9.1,SNR=14						
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	24.80	223	P	P	03 05 24.2	+0.3
MBWA	Marble Bar	34.70	241	P	P	03 06 52.2	+0.4
MBWA				IAmb	IAmb	03 06 55.3	
	comp=Z,18nm,1.2s						
ADK	Adak	63.44	21	P	P	03 10 28.8	-2.3
VNDA	Vanda	71.84	178	P	P	03 11 25.1	+1.3
	comp=Z,0.4nm,0.6s,baz=340,slow=7.5,SNR=6.5						
	comp=Z,0.4nm,0.6s						
VNDA	Vanda	71.84	178	P	P	03 11 25.2	+1.4
ILSW	Iliamna Southw	78.46	25	P	P	03 12 01.7	-0.5
CNPM	China Poot	79.02	26	P	P	03 12 04.5	-0.7
STLK	Strandline Lak	79.83	24	P	P	03 12 09.2	-0.5
STLK				IAmb	IAmb	03 12 34.4	
	comp=Z,4.6nm,1.3s						
HDA	Harding Lake	83.24	23	P	P	03 12 26.2	-1.4
HDA				IAmb	IAmb	03 13 05.8	
	comp=Z,6.3nm,1.5s						
ILAR	Eielson Array	83.44	22	P	P	03 12 27.4	-1.1
	comp=Z,0.3nm,0.7s,baz=240,slow=4.5,SNR=5.1						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	83.44	22	P	P	03 12 26.7	-1.8
QSPA	South Pole Qui	84.14	180	P	P	03 12 32.9	+0.5
	comp=Z,1.7nm,1.1s,baz=0.8,slow=1.8,SNR=3.1						
	comp=Z,1.7nm,1.1s						
QSPA	South Pole Qui	84.14	180	P	P	03 12 32.6	+0.3
QSPA				IAmb	IAmb	03 13 12.3	
	comp=Z,7.1nm,1.4s						
TORD	Torodi Ar. Bea	149.77	286	PKPbc	PKPbc	03 19 51.0	-1.3
	comp=Z,0.2nm,0.4s,baz=86,slow=2.9,SNR=4.1						
TORD	Torodi Ar. Bea	149.77	286		PKPdf	03 19 49.0	+1.4

IDC ***09*** *03:19:37.8±2.8, 32°.29N×142°.84E, h0km, mb3.8/5, mbtmp3.7/6, ML2.5/1, MS3.6/2, Error ellipse: s-maj=115.6km s-min=22.1km az=65.0*
NEIC ***09*** *03:19:39.7±0.8, 32°.34N±0°.08×142°.7E±0°.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=16.3km s-min=14.0km az=99.0*
ISC 09 03:19:39.2±0.6, **32°.34N**±0°.07×**142°.68E**±0°.09, **h10**km, **n36,** σ0**73**/36, **mb4.5**/15, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	5.58	320	Pn	Pn	03 21 04.2	+1.8
	0.2nm,0.3s,baz=149,slow=11,SNR=8.6						
MJAR				Sn	Sn	03 22 04.9	-1.7
	0.1nm,0.3s,baz=111,slow=28,SNR=4.5						
	2.3nm,0.7s						
MJAR	Matsushiro Arr	5.58	320		Pn	03 21 03.1	+0.7
MJAR					Sn	03 22 05.9	-0.7
ERM	Erimo	9.67	2	Pn	Pn	03 21 58.8	+0.5
JKA	Kamikawa-asahi	11.76	360	Pn	Pn	03 22 27.3	+0.3
GUMO	Guam	18.77	173	P	P	03 23 58.5	0.0
BJT	Baijiatuan	22.67	297	P	P	03 24 40.2	-0.6
PEA0B	Petropavlovsk-	23.41	23	P	P	03 24 47.6	-0.6
PEA0B				IAmb	IAmb	03 25 21.8	
	comp=Z,8.1nm,1.0s						
PETK	Petropavlovsk-	23.41	23	P	P	03 24 47.2	-1.0
HIA	Hailar	24.09	321	P	P	03 24 53.8	-1.0
HIA				IAmb	IAmb	03 24 58.7	
	comp=Z,9.2nm,0.5s						
SHEM	Shemya Is, Ala	30.47	39	P	P	03 25 52.1	+0.1
SONM	Songino Array	31.44	310	P	P	03 26 01.6	+0.7
	comp=Z,0.4nm,0.4s,baz=126,slow=7.4,SNR=2.6						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	31.44	310	P	P	03 26 01.4	+0.5
QIZ	Qiongzhong	32.28	254	P	P	03 26 07.9	-0.4
TLY	Talaya	34.31	316	P	P	03 26 25.6	-0.2
TLY				IAmb	IAmb	03 26 27.0	
	comp=Z,7.6nm,0.6s						
ATKA	Atka Island	36.89	45	P	P	03 26 48.2	+0.4
ATKA				IAmb	IAmb	03 26 49.3	
	comp=Z,14nm,0.9s						
M11K	Mekoryuk	43.45	34	P	P	03 27 42.3	+0.2
L14K	Kuka Creek	45.37	34	P	P	03 27 57.4	+0.1
L14K				IAmb	IAmb	03 28 34.0	
	comp=Z,6.0nm,1.1s						
BATI	Baumata	46.04	206	LR	LR	03 47 27.8	
	comp=Z,98nm,18.8s,baz=158,slow=36						
MKAR	Makanchi Array	47.61	306	P	P	03 28 16.6	+1.3
	comp=Z,0.4nm,0.4s,baz=82,slow=13,SNR=1.4						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	47.61	306	P	P	03 28 15.8	+0.5
KNRA	Kununurra	49.57	198	P	P	03 28 29.9	-0.7
KNRA				IAmb	IAmb	03 28 31.8	
	comp=Z,20nm,1.1s						
MCK	McKinley	52.01	32	P	P	03 28 48.9	+0.4
CTA	Charters Tower	52.24	176	P	P	03 28 50.4	-0.3
	comp=Z,1.6nm,0.7s,baz=330,slow=8.1,SNR=1.1						
	comp=Z,1.6nm,0.7s						
WB0	Warramunga Arr	52.41	190	P	P	03 28 51.7	-0.2
WB0				IAmb	IAmb	03 28 53.0	
	comp=Z,7.8nm,1.1s						
WR8	Warramunga Arr	52.58	190	P	P	03 28 52.8	-0.4
WR8				IAmb	IAmb	03 29 08.0	
	comp=Z,17nm,1.5s						
WRAB	Tennant Creek	52.58	190	P	P	03 28 52.4	-0.7
WRAB				IAmb	IAmb	03 29 11.5	
	comp=Z,8.1nm,1.3s						
WRA	Warramunga Arr	52.59	190	P	P	03 28 53.0	-0.3
	comp=Z,1.4nm,0.5s,baz=8.1,slow=7.7,SNR=12						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	52.59	190	P	P	03 28 52.0	-1.3
FITZ	Fitzroy Crossi	52.74	200	LR	LR	03 54 15.8	
	comp=Z,40nm,18.1s,baz=331,slow=39						
FITZ	Fitzroy Crossi	52.74	200	P	P	03 28 54.3	0.0
FYU	Fort Yukon	53.70	28	P	P	03 29 01.4	+0.5
FYU				IAmb	IAmb	03 29 41.9	
	comp=Z,3.2nm,0.9s						
ASAR	Alice Springs	56.32	190	P	P	03 29 20.4	0.0
	comp=Z,0.4nm,0.4s,baz=17,slow=10,SNR=6.9						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	56.32	190	P	P	03 29 20.7	+0.4
ABKAR	Akbulak array	61.81	312	P	P	03 29 58.5	+0.3
QSPA	South Pole Qui	122.09	180	PKP	PKPdf	03 38 33.2	-0.1
	comp=Z,1.6nm,0.8s,baz=268,slow=2.3,SNR=5.2						
QSPA	South Pole Qui	122.09	180		PKPdf	03 38 33.6	+0.3

IDC ***09*** *03:20:07.6±11.0, 19°.03S×176°.84W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=344.9km s-min=91.5km az=134.0*
NEIC ***09*** *03:20:47.9±1.3, 19°.8S±0°.1×177°.5W±0°.1, h332km±6km, mb4.3/23, Error ellipse: s-maj=18.2km s-min=13.4km az=60.0*
ISC 09 03:20:48.9±0.6, **19°.9S**±0°.1×**177°.5W**±0°.1, **h350**km, **n33,** σ0**85**/33, **mb4.2**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.19	85	Pn	Pn	03 22 31.9	-1.6
MARNC	Mare, Loyalty	13.64	261		P	03 23 48.9	+0.2
OUENC	Ouen Island, N	14.83	257	P	P	03 24 00.3	-1.4
NNZ	Nelson	22.64	198	P	P	03 25 20.6	-0.2
LBZ	Lake Benmore	26.50	200	P	P	03 25 55.8	+0.3
CTAO	Charters Tower	34.02	263	P	P	03 27 01.0	-0.4
CTAO				IAmb	IAmb	03 27 23.9	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	43.24	243	P	P	03 28 17.2	0.0
BBOO				IAmb	IAmb	03 28 42.2	
	comp=Z,25nm,1.4s						
WR0	Warramunga Arr	44.97	261	P	P	03 28 30.3	-0.5
WR0				IAmb	IAmb	03 29 02.3	
	comp=Z,13nm,1.4s						
WR8	Warramunga Arr	45.00	261	P	P	03 28 30.2	-1.0
WR8				IAmb	IAmb	03 28 33.6	
	comp=Z,15nm,1.4s						
ASAR	Alice Springs	45.12	256	P	P	03 28 32.9	+0.8
	comp=Z,1.6nm,0.4s,baz=90,slow=7.7,SNR=22						
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	45.12	256	P	P	03 28 31.7	-0.4
WB0	Warramunga Arr	45.13	262	P	P	03 28 31.4	-0.8
WB2	Warramunga Arr	45.15	261	P	P	03 28 32.0	-0.3
WRAB	Tennant Creek	45.15	261	P	P	03 28 32.2	-0.1
WRA	Warramunga Arr	45.16	261	P	P	03 28 32.3	-0.1
	comp=Z,1.4nm,0.5s,baz=97,slow=7.2,SNR=28						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	45.16	261	P	P	03 28 32.0	-0.3
MTN	Manton Dam	49.63	270	P	P	03 29 05.0	-1.6
MTN				IAmb	IAmb	03 29 08.4	
	comp=Z,25nm,1.4s						
KNRA	Kununurra	51.17	266	P	P	03 29 16.8	-1.2
KNRA				IAmb	IAmb	03 29 28.4	
	comp=Z,29nm,1.4s						
FITZ	Fitzroy Crossi	53.58	262	P	P	03 29 35.3	-0.1
	comp=Z,4.7nm,1.0s,baz=98,slow=7.5,SNR=2.3						
	comp=Z,4.7nm,1.0s						
FITZ	Fitzroy Crossi	53.58	262	P	P	03 29 34.5	-0.9
MBWA	Marble Bar	58.45	257	P	P	03 30 08.3	-1.3
VNDA	Vanda	58.56	185	P	P	03 30 10.7	+1.3
NWAO	Narrogin (SRO)	59.07	243	P	P	03 30 14.1	+0.5
MORW	Morawa	60.50	247	P	P	03 30 22.9	-0.5
MORW				IAmb	IAmb	03 30 55.3	
	comp=Z,18nm,1.2s						
MAJO	Matsushiro	70.00	323	P	P	03 31 24.0	+0.4
MAJO				IAmb	IAmb	03 31 44.5	
	comp=Z,4.2nm,0.8s						
AMKA	Amchitka	71.01	358	P	P	03 31 28.8	-0.4
PEA0B	Petropavlovsk-	75.80	345	P	P	03 31 57.8	+0.9
PEA0B				IAmb	IAmb	03 32 23.8	
	comp=Z,12nm,1.2s						
PETK	Petropavlovsk-	75.80	345	P	P	03 31 56.3	-0.6
USA0B	Ussuriysk Arra	78.72	326	P	P	03 32 12.9	-0.3
USA0B				IAmb	IAmb	03 32 45.6	
	comp=Z,2.1nm,0.9s						
IRM	Iron Mountain	80.03	48	P	P	03 32 21.1	+0.6
IRM				IAmb	IAmb	03 32 36.3	
	comp=Z,6.5nm,1.2s						
G23K	Bananza Creek	88.75	11	P	P	03 33 04.3	+1.2
G23K				IAmb	IAmb	03 33 04.7	
	comp=Z,4.5nm,0.9s						
CMAR	Chiang Mai Arr	90.36	289	P	P	03 33 12.8	+1.3
	comp=Z,0.4nm,0.4s,baz=84,slow=2.9,SNR=4.4						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	90.36	289	P	P	03 33 12.2	+0.6

GFZ ***09*** *03:22:49.5±0.1, 7°.1N±3°.7×7°.3W±°, h142km, M4.8/55, mb4.9/55, confirmed*
IDC ***09*** *03:22:50.9±0.6, 6°.77N×72°.96W, h156km±5km, mb4.3/23, mbtmp4.8/27, MS3.3/6, Error ellipse: s-maj=9.3km s-min=6.0km az=122.0*
BJI ***09*** *03:22:50.0, 6°.80N×73°.00W, h164km, mB5.2/2*
VAO ***09*** *03:22:51.2±0.3, 6°.72N×72°.98W, h150km, mb5.1, Presumed earthquake*
NEIC ***09*** *03:22:51.3±2.1, 6°.79N±0°.05×72°.99W±0°.06, h156km±6km, mb4.9/655, Error ellipse: s-maj=10.9km s-min=1.6km az=132.0*
RSNC ***09*** *03:22:52.1±0.0, 7°.1N±1°×7°.3W±°, h150km±1km, M5.3, mb5.6, mB5.6, ML5.0, Mw(mB)5.1, MwMwp4.5, Mwp4.9*
CATAC ***09*** *03:22:52.1±0.8, 7°.1N±3°×7°.3W±°, h148km±7km, M4.9/6, mB4.9/5, mb4.9/4, MLv5.2/6, Mw(mB)4.2/5, MwMwp3.5/1, Mwp4.2/1, Error ellipse: s-maj=11.3km s-min=5.9km az=69.0, confirmed*
FUNV ***09*** *03:22:55.6, 7°.01N×73°.18W, h100km, MW5.0, Presumed earthquake*
ISC 09 03:22:50.8±0.3, **6°.82N**±0°.03×**73°.08W**±0°.03, **h157**km±3km, **h157**km:**pP-P, n959,** σ1**927**/753, **mb4.9**/328, **8C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	205	P	Pn	03 23 12.4	0.0
BARC				S	Sn	03 23 27.8	-1.0
PAMC	Pamplona, Colo	0.64	36	P	Pn	03 23 15.3	+1.0
PAMC				S	Sn	03 23 32.8	+0.6
BRJC	Barrancabermej	0.68	283	P	Pn	03 23 14.1	+0.2
BRJC				S	Sn	03 23 31.2	-0.4
RUSC	La Rusia	0.92	180	P	Pn	03 23 16.6	+0.3
RUSC				S	Sn	03 23 35.2	-0.4
RUSC	La Rusia	0.92	180	P	Pn	03 23 16.3	+0.1
RUSC				S	Sn	03 23 34.4	-1.3
RUSC	La Rusia	0.92	180	eP	Pn	03 23 16.5	+0.3
RUSC				eS	Sn	03 23 33.1	-2.5
PTBC	PUERTO BERRIO,	1.40	259	P	Pn	03 23 18.7	-1.2
PTBC				S	Sn	03 23 39.8	-2.4
OCAC	Ocana	1.43	350	P	Pn	03 23 20.5	+0.1
OCAC				S	Sn	03 23 42.7	-0.5
SPBC	San Pablo de B	1.52	221	P	Pn	03 23 21.1	-0.2
SPBC				S	Sn	03 23 43.1	-1.6
NORC	Norcasia	2.17	235	P	Pn	03 23 27.9	-0.6
NORC				S	Sn	03 23 55.9	-1.6
CHIC	Chingaza	2.27	197	P	Pn	03 23 30.3	+0.3
CHIC				S	Sn	03 24 00.0	-0.2
ROSC	El Rosal	2.32	212	P	Pn	03 23 32.0	+1.5
	9µm,0.4s,baz=79,slow=13,SNR=3281						
ROSC				S	Sn	03 24 02.1	+0.9
	58µm,0.4s,baz=326,slow=23,SNR=28						
ROSC	El Rosal	2.32	212		Pn	03 23 32.1	+1.5
ROSC				Sn	Sn	03 24 01.6	+0.4
ROSC	El Rosal	2.32	212	P	Pn	03 23 32.0	+1.5
ROSC				S	Sn	03 24 01.9	+0.7
CVER	Cruz Verde, Cu	2.49	204	P	Pn	03 23 33.8	+1.2
CVER				S	Sn	03 24 04.6	-0.3
UREC	San Jos de Ur	2.61	291	P	Pn	03 23 31.8	-1.8
UREC				S	Sn	03 24 03.5	-3.2
VILC	Villavicencio,	2.76	193	P	Pn	03 23 35.7	+0.1
VILC				S	Sn	03 24 09.7	-0.6
GUY2C	Guyana, Caldas	2.77	235	P	Pn	03 23 36.1	0.0
GUY2C				S	Sn	03 24 09.8	-1.3
CBOC	Ciudad Bolivar	3.07	252	P	Pn	03 23 39.5	0.0
CBOC				S	Sn	03 24 14.6	-2.6
DBBC	Dabeiba	3.12	274	P	Pn	03 23 39.6	-0.4
DBBC				S	Sn	03 24 14.7	-3.4
SDV	Santo Domingo	3.17	50	P	Pn	03 23 42.0	+1.2
	2µm,0.3s,baz=259,slow=4.7,SNR=1947						
SDV				S	Sn	03 24 18.5	-1.1
	2µm,0.5s,baz=61,slow=21,SNR=25						
SDV	Santo Domingo	3.17	50	Pn	Pn	03 23 41.8	+0.9
SDV				Sn	Sn	03 24 18.7	-0.9
SDV	Santo Domingo	3.17	50	eP	Pn	03 23 42.0	+1.2
SDV				eS	Sn	03 24 16.8	-2.9
SDV	Santo Domingo	3.17	50	eP	Pn	03 23 41.6	+0.7
SDV				eS	Sn	03 24 18.5	-1.1
PRAC	Prado	3.57	210	P	Pn	03 23 45.3	-0.5
PRAC				S	Sn	03 24 27.5	-1.0
APAC	Apartado, Choc	3.64	287	P	Pn	03 23 46.2	-0.4
APAC				S	Sn	03 24 28.0	-1.9
SJCC	San Jacinto, C	3.70	326	P	Pn	03 23 46.8	-0.7
SJCC				S	Sn	03 24 27.6	-3.9
SJCC	San Jacinto, C	3.70	326	P	Pn	03 23 45.9	-1.5
SJCC	San Jacinto, C	3.70	326	eP	Pn	03 23 46.0	-1.5
SJCC				eS	Sn	03 24 26.8	-4.7
PLMC	San Jos del P	3.71	239	P	Pn	03 23 47.1	-0.5
PLMC				S	Sn	03 24 28.0	-3.8
URMC	La Uribe, Meta	3.78	200	P	Pn	03 23 48.8	+0.3
URMC				S	Sn	03 24 32.8	-0.6
LCBC	Los crdobas,	3.84	302	P	Pn	03 23 48.1	-1.1
LCBC				S	Sn	03 24 32.8	-1.8
SOLC	Bahia Solano	4.34	262	P	Pn	03 23 55.4	-0.3
PIZC	Pizarro, Choco	4.64	247	P	Pn	03 24 00.3	+0.6
MACC	Macarena, Meta	4.71	189	P	Pn	03 23 59.3	-1.3
PTAC	Punta Ardita,	4.71	274	P	Pn	03 23 59.0	-1.5
PTAC				S	Sn	03 24 49.6	-5.3
BETC	Betania	4.74	210	P	Pn	03 24 00.4	-0.6
URIC	Uribia, Colomb	4.97	12	P	Pn	03 24 02.7	-1.2
	3µm13µm549nm,0.5s						
URIC	Uribia, Colomb	4.97	12	eP	Pn	03 24 02.7	-1.2
URIC				eS	Sn	03 24 54.7	-6.4
JAMC	Jamundi, Valle	5.06	225	P	Pn	03 24 04.6	-0.9
GARC	Garzon, Huila	5.19	208	P	Pn	03 24 06.5	-0.7
POPC	Popayan, Colom	5.56	220	P	Pn	03 24 11.7	-0.3
	5µm488nm,0.5s						
BBAC	Balboa, Cauca	6.32	221	P	Pn	03 24 21.0	-1.1
	11µm698nm,0.7s						
GR1C	Gorgona, Isla	6.33	233	P	Pn	03 24 20.2	-1.8
PTLC	Puerto Leguiza	6.82	195	P	Pn	03 24 31.1	+2.5
	7µm722nm,0.4s						
BCIP	Isla Barro Col	7.09	290	Pn	Pn	03 24 30.0	-2.1
BCIP	Isla Barro Col	7.09	290	P	Pn	03 24 30.0	-2.1
	3µm347nm,0.8s						
BCIP	Isla Barro Col	7.09	290	P	Pn	03 24 29.8	-2.3
FUNV	FUNVISIS	7.18	59	eP	Pn	03 24 33.8	+0.4
FUNV				eS	Sn	03 25 50.0	-4.0
AZU	Azuero	7.20	278	P	Pn	03 24 32.3	-1.3
	5µm357nm,0.6s						
CMBC	Cumbal	7.52	219	P	Pn	03 24 38.8	+0.5
	6µm975nm,2.1s						
TULM	Tulcn-Chalpat	7.67	218	P	Pn	03 24 42.1	+1.8
	5µm672nm,0.7s						
CASC	Dorado de Casc	7.88	213	P	Pn	03 24 42.6	-0.2
	3µm324nm,0.9s						
GMAL	Guarumal, Vera	8.14	277	P	Pn	03 24 45.8	-0.4
	3µm351nm,0.8s						
OTAV	Otavalo	8.45	220	Pn	Pn	03 24 49.4	-1.3
PAC1	Pacto, Paraso	8.65	221	P	Pn	03 24 50.3	-2.8
	4µm215nm,0.4s						
SGC2	Sao Gabriel da	9.22	138	eP	Pn	03 24 58.0	-2.4
RBALA	Bur	9.22	283	eP	Pn	03 24 59.5	-1.0
SLOR	San Lorenzo -	9.24	216	Pn	Pn	03 25 00.9	-0.3
BQTLY	Boquete Panama	9.49	282	eP	Pn	03 25 04.5	+0.3
RNCC	Cayo Roncador,	9.63	315	P	Pn	03 25 03.6	-2.2
BRU2	Volcan	9.72	282	Pn	Pn	03 25 07.2	-0.1
BRU2	Volcan	9.72	282	eP	Pn	03 25 06.9	-0.4
BRU2	Volcan	9.72	282	P	Pn	03 25 07.8	+0.5
SCLRA	Santa Clara, W	9.82	282	eP	Pn	03 25 09.2	+0.7
ALCO	Alturas Coton,	9.89	283	iP	Pn	03 25 09.8	+0.2
NELY	Ciudad Neily	9.95	281	eP	Pn	03 25 10.7	+0.6
EDP2	Potrero Grande	10.24	283	eP	Pn	03 25 14.6	+0.7
PIRO	Carate, Puerto	10.29	279	Pn	Pn	03 25 12.3	-2.3
FIMO	Fila Mora	10.40	283	eP	Pn	03 25 17.9	+1.6
BURE	Buenos Aires	10.43	284	eP	Pn	03 25 17.7	+1.2
EDPE	Pejibaye, P	10.65	283	eP	Pn	03 25 20.8	+1.5
RESJ	San Isidro (Tu	10.93	288	eP	Pn	03 25 23.9	+0.8
ABRB	Las Abras (San	10.99	287	iP	Pn	03 25 24.8	+0.8
VTCV	VTCV, Calle Va	10.99	287	eP	Pn	03 25 24.0	-0.1
CVTR	Volcan Turrial	11.04	287	iP	Pn	03 25 25.1	+0.3
REPA	Paraso	11.09	286	eP	Pn	03 25 25.6	+0.4
PIEC	Cerro El Cedra	11.12	285	eP	Pn	03 25 26.9	+1.1
ABE2	San Pablo	11.23	286	eP	Pn	03 25 28.3	+1.1
ECI	Escuela Centro	11.29	287	eP	Pn	03 25 29.4	+1.5
SJS3	Mercedes San J	11.29	287	eP	Pn	03 25 29.2	+1.3
PICV	PH. Pirrs	11.35	285	eP	Pn	03 25 30.8	+2.2
HDC	Heredia	11.37	287	Pn	Pn	03 25 29.4	+0.6
HDC	Heredia	11.37	287	eP	Pn	03 25 29.8	+0.9
HDC	Heredia	11.37	287	eP	Pn	03 25 30.1	+1.3
HDC	Heredia	11.37	287	P	Pn	03 25 30.3	+1.4
VBV1	V. Barva	11.38	287	eP	Pn	03 25 30.9	+1.7
BELE	Belen	11.43	287	eP	Pn	03 25 30.9	+1.3
TCS1	Tacares	11.55	287	eP	Pn	03 25 32.9	+1.7
PCJ	Portland Cotta	11.56	340	iP	Pn	03 25 33.0	+1.8
ATEO	Atenas	11.62	286	eP	Pn	03 25 33.6	+1.6
VPL3	V. Platanar	11.65	288	eP	Pn	03 25 32.6	+0.1
HOJ	Hope	11.68	342	iP	Pn	03 25 35.6	+2.8
PALD	Palmares	11.69	287	eP	Pn	03 25 34.1	+1.1
SRA1	San Ramn	11.74	287	eP	P	03 25 38.4	-2.1
GWJ	Greenwich	11.74	343	iP	Pn	03 25 35.2	+1.5
GWJ				iP	P	03 25 35.9	-4.6
BLUN	Bluefields	11.74	297	P	Pn	03 25 32.8	-0.8
STH	Stony Hill	11.77	342	iP	Pn	03 25 35.3	+1.3
STH

GTBY Guantanamo Bay 13.18 352 *i* P P 03 25 55.2 -1.1
GTBY Guantanamo Bay 13.18 352 *e*P Pn 03 25 52.4 +0.3
GTBY Guantanamo Bay 13.18 352 P Pn 03 25 53.8 +1.7
BOAV Boa Vista 13.26 109 Pn Pn 03 25 50.2 -3.0
BOAV Boa Vista 13.26 109 *e*P Pn 03 25 50.2 -3.0
TEFE Tefe 13.28 140 *e*P Pn 03 25 50.0 -3.4
HUMP Col San Antoni 13.28 31 P Pn 03 25 51.9 -1.5
MASC Masc 13.32 355 *e*P Pn 03 25 54.8 +0.9
MASC Masc 13.32 355 P Pn 03 25 55.8 +1.8
RCC Rio Carpintero 13.34 349 *e*P Pn 03 25 53.7 -0.5
MARVS Santiago de Cu 13.39 348 *e*P Pn 03 25 54.4 -0.3
QMBU Quimbuelo 13.41 353 *e*P Pn 03 25 55.5 +0.5
BOAB BOACO BROADBAN 13.51 295 Pn Pn 03 25 55.9 -1.7
BOAB BOACO BROADBAN 13.51 295 P P 03 26 00.4 -0.8
LMGC Las Mercedes 13.71 344 *e*P Pn 03 26 00.4 +1.6
NMDO Nuevo Mundo 13.78 352 *e*P P 03 26 02.6 -0.5
YAR Yar 13.84 347 *e*P Pn 03 26 00.9 +0.4
MOAC Moa 13.88 353 *e*P P 03 26 03.9 -0.2
SLBI Saint Lucia, B 13.88 58 *e*P Pn 03 25 54.0 -7.0
SLAC Saint Lucia, A 13.89 59 *e*P Pn 03 25 51.5 -10
BIM Bigot 14.06 56 *e*P P 03 26 05.8 -0.4
BIM Bigot 14.06 56 *e*P Pn 03 26 02.0 -1.2
FDFM Morne la Roset 14.10 55 Pn Pn 03 26 02.6 -1.1
MPOM Morne Pois Mar 14.19 57 Pn Pn 03 26 03.3 -1.7
MPOM Morne Pois Mar 14.19 57 P Pn 03 26 03.1 -1.8
HLGC Holguin 14.28 349 *e*P P 03 26 08.8 +0.1
CBCY The Bluff, Cay 14.39 334 *e*P Pn 03 26 06.2 -1.1
DWS Wesley 14.44 52 *e*P P 03 26 17.0 +6.6
CZSB Cruzeiro do Su 14.46 179 Pn Pn 03 26 07.7 -0.6
CZSB Cruzeiro do Su 14.46 179 *e*P Pn 03 26 07.4 -0.9
LCCY Blossom Villag 14.47 333 *e*P Pn 03 26 08.1 -0.3
SEUS St. Eustatius 14.48 42 *e*P Pn 03 26 07.4 -1.1
SKI Saint Kitts 14.53 43 *e*P Pn 03 25 59.0 -10
BBGH Gun Hill 14.72 64 *e*P P 03 26 15.5 +2.0
BBGH Gun Hill 14.72 64 *e*P P 03 26 16.1 +2.6
ATAH Atahualpa 14.84 201 P Pn 03 26 13.8 +0.4
9.9nm,0.5s,baz=19,slow=5.8,SNR=12
ATAH S S 03 29 06.8 +2.1
24nm,0.9s,baz=220,slow=17,SNR=3.9
CCCC Cccc 15.00 343 *e*P Pn 03 26 15.6 +0.7
ANWB Willy Bob 15.42 45 *e*P Pn 03 26 18.9 -1.3
MACA Manacapuru-AM 15.85 128 Pn 03 26 25.0 -0.6
MACA Manacapuru-AM 15.85 128 *e*P Pn 03 26 24.9 -0.7
MGV Manicaragua 16.60 337 *e*P Pn 03 26 35.4 +0.9
CAMR Camarioca 18.01 335 *e*P Pn 03 26 51.5 +0.1
SOR Soroa 18.54 330 P Pn 03 26 56.9 -0.8
SOR Soroa 18.54 330 *e*P Pn 03 26 56.8 -0.8
SOR Soroa 18.54 330 P Pn 03 26 57.0 -0.6
APG El Apazote 18.90 297 P P 03 26 59.0 -0.7
0.9nm,0.5s,baz=100,slow=12,SNR=9.1
NNA Nana 19.05 191 P P 03 26 59.6 -1.6
7.3nm,0.4s,baz=21,slow=8.3,SNR=4.6
NNA S S 03 30 28.9 -0.4
10nm,0.7s,baz=215,slow=5.0,SNR=2.3
NNA Nana 19.05 191 P P 03 27 00.5 -0.8
MDP Montagnes des 20.40 94 P P 03 27 16.1 +0.4
97nm,0.9s,baz=263,slow=11,SNR=56
97nm,0.9s
ITTB Itaituba 20.57 122 *e*P P 03 27 18.8 +1.3
DWPF Disney Wildern 22.61 340 P P 03 27 38.9 +0.6
DWPF Disney Wildern 22.61 340 P P 03 27 40.3 +2.0
VILB Vilhena 23.44 147 P P 03 27 46.2 0.0
VILB Vilhena 23.44 147 *e*P P 03 27 46.4 +0.2
LPAZ La Paz 23.47 168 P P 03 27 45.6 -1.5
3.5nm,0.4s,baz=342,slow=4.7,SNR=42
LPAZ LR LR 03 37 15.9
comp=Z,54nm,19.3s,baz=336,slow=37
3.5nm,0.4s
LPAZ La Paz 23.47 168 P P 03 27 46.6 -0.5
LPAZ IAmb IAmb 03 28 20.9
comp=Z,39nm,0.7s
CLDB Colider 24.59 135 *e*P P 03 27 55.9 -0.7
CLDB Colider 24.59 135 P P 03 27 56.5 -0.2
AP01 Chacalluta 25.18 174 P P 03 27 58.6 -3.2
PB16 IPOC Station P 25.24 172 P P 03 28 00.4 -2.6
PTLB Pontes e Lacer 26.08 148 P P 03 28 09.0 -1.0
PTLB pP pP 03 28 41.9 -1.4
PTLB IAmb IAmb 03 28 45.3
comp=Z,26nm,0.8s
PTLB Pontes e Lacer 26.08 148 *e*P P 03 28 09.3 -0.7
TIGA Tifton 26.39 339 IAmb IAmb 03 28 15.9
comp=Z,50nm,1.1s
PRPB Parauapebas 26.56 119 *e*P P 03 28 14.6 +0.2
PRPB *e*pP pP 03 28 48.4 +1.0
GO01 Chusmiza 26.60 172 P P 03 28 13.4 -1.7
GO01 IAmb IAmb 03 28 55.4
comp=Z,27nm,0.7s
GO01 Chusmiza 26.60 172 P P 03 28 14.5 -0.7
BBSD Serra de San D 26.85 153 *e*P P 03 28 15.9 -1.0
BBSD *e*pP pP 03 28 49.1 -1.4
TLIG Tlapa 27.07 296 IAmb IAmb 03 28 27.8
comp=Z,11nm,0.5s
250A Grady 27.89 336 P P 03 28 27.6 +1.5
Y57A Sumter 27.90 347 P P 03 28 27.4 +1.3
PB02 IPOC Station P 28.14 174 P P 03 28 27.6 -0.8
GOGA Godfrey 28.16 341 IAmb IAmb 03 28 31.5
comp=Z,26nm,0.9s
GOGA Godfrey 28.16 341 P P 03 28 30.7 +2.2
X58A Rowland 28.20 349 IAmb IAmb 03 28 31.3
comp=Z,16nm,0.7s
JSC Jenkinsville 28.36 346 P P 03 28 31.5 +1.3
JSC IAmb IAmb 03 28 33.0
comp=Z,29nm,0.7s
JSC PcP PcP 03 31 40.2 +1.2
SALV Santo Antonio 28.39 143 *e*P P 03 28 30.3 -0.3
BIRD Birdtown, Kers 28.52 347 IAmb IAmb 03 28 34.4
comp=Z,33nm,1.3s
HODGE Hodges 28.57 344 P P 03 28 33.7 +1.7
SNDB Serra Nova Dou 28.60 131 *e*P P 03 28 32.6 +0.1
W59A Clinton 28.64 351 IAmb IAmb 03 28 35.0
comp=Z,21nm,0.8s
346A Big Creek Wild 28.85 330 P P 03 28 35.9 +1.4
PAULI Pauline 29.01 345 IAmb IAmb 03 28 38.8
comp=Z,22nm,0.8s
LRAL Lakeview Retre 29.12 335 IAmb IAmb 03 28 40.1
comp=Z,38nm,1.1s
KMSC Kings Mountain 29.19 346 IAmb IAmb 03 28 40.3
comp=Z,16nm,0.6s
V58A Windy Hill, Pi 29.37 350 IAmb IAmb 03 28 40.9
comp=Z,10nm,0.6s
BG3 Lake Jocassee 29.47 343 IAmb IAmb 03 28 43.5
comp=Z,48nm,1.3s
X51A Calhoun 29.68 340 IAmb IAmb 03 28 44.7
comp=Z,27nm,0.9s
146A Union 29.68 332 IAmb IAmb 03 28 45.3
comp=Z,52nm,1.2s
Z47A Carrollton 29.71 334 P P 03 28 43.9 +1.8
SMTB Santa Maria do 29.80 121 *e*P P 03 28 43.7 +0.5
V55A Taylorsville 29.84 347 IAmb IAmb 03 28 46.5
comp=Z,25nm,0.8s
FPAL Fort Paine 29.91 339 P P 03 28 45.6 +1.6
FPAL IAmb IAmb 03 28 46.4
comp=Z,15nm,0.6s
V53A Saluda 30.07 344 IAmb IAmb 03 28 48.6
comp=Z,19nm,0.8s
U56A King 30.14 348 IAmb IAmb 03 28 50.9
comp=Z,24nm,1.4s
PP1B Ponte de Pedra 30.20 144 *e*P P 03 28 47.1 +0.5
T59A Double "B" Far 30.29 353 IAmb IAmb 03 28 49.6
comp=Z,28nm,0.7s
TKL Tuckaleechee C 30.34 343 LR LR 03 40 53.3
comp=Z,48nm,21.6s,baz=171,slow=36
TKL Tuckaleechee C 30.34 343 IAmb IAmb 03 28 51.2
comp=Z,18nm,1.0s
CPCT Cooper Cave 30.37 341 IAmb IAmb 03 28 51.2
comp=Z,34nm,0.9s
COIM Forte Coimbra 30.53 151 *e*P P 03 28 47.8 -1.7
COIM *e*pP pP 03 29 21.1 -2.3
ARAG Araguaiana, MT 30.73 137 *e*P P 03 28 51.1 -0.3
143A Socs Landing, 30.89 329 IAmb IAmb 03 28 57.5
comp=Z,30nm,1.0s
BLA Blacksburg 30.98 349 IAmb IAmb 03 28 56.5
comp=Z,37nm,1.1s
TZTN Tazewell 31.10 344 IAmb IAmb 03 28 57.4
comp=Z,42nm,1.2s
TZTN Tazewell 31.10 344 P P 03 28 56.5 +2.2
S57A Dark Hollow, R 31.26 351 IAmb IAmb 03 28 58.3
comp=Z,27nm,0.7s
HKT Hockley 31.42 320 P P 03 28 57.9 +0.7
HKT Hockley 31.42 320 P P 03 28 58.7 +1.5
HKT Hockley 31.42 320 P P 03 28 58.5 +1.3
HKT sP sP 03 29 49.6 +1.1
CLTN Cedars of Leba 31.56 339 IAmb IAmb 03 29 01.4
comp=Z,38nm,1.3s

S54A Dingess, Beckl 31.73 348 IAmb IAmb 03 29 03.1
comp=Z,36nm,0.9s
U49A Red Boiling Sp 31.76 340 IAmb IAmb 03 29 02.4
comp=Z,16nm,0.7s
R55A Marlinton 31.97 349 IAmb IAmb 03 29 05.4
comp=Z,26nm,0.8s
Z41A Richland Creek 32.05 328 IAmb IAmb 03 29 05.6
comp=Z,32nm,0.9s
AQDB Aquidauana 32.06 148 P P 03 29 02.1 -0.7
AQDB Aquidauana 32.06 148 *e*P P 03 29 02.2 -0.7
AQDB *e*pP pP 03 29 35.2 -1.6
AQDB Aquidauana 32.06 148 P P 03 29 02.3 -0.6
MURT Porto Murtinho 32.11 152 *e*P P 03 29 01.5 -1.8
MURT *e*pP pP 03 29 35.9 -1.5
S51A Beattyville 32.13 344 IAmb IAmb 03 29 06.4
comp=Z,30nm,0.8s
WVT Waverly 32.15 337 P P 03 29 04.4 +0.8
WVT Waverly 32.15 337 P P 03 29 05.1 +1.5
WVT Waverly 32.15 337 P P 03 29 04.7 +1.1
C2SB Chapadao do Su 32.32 142 *e*P P 03 29 06.3 +1.0
ZAIG Zacatecas 32.52 302 P P 03 29 09.8 +2.4
Q56A Snyder Ridge, 32.55 351 IAmb IAmb 03 29 10.6
comp=Z,33nm,1.1s
Q54A Coxs Mills 32.78 349 IAmb IAmb 03 29 12.2
comp=Z,26nm,0.9s
833A Chaparral WMA, 32.82 314 P P 03 29 08.4 -1.1
833A IAmb IAmb 03 29 10.4
comp=Z,15nm,0.7s
P57A Homestead Farm 32.82 353 IAmb IAmb 03 29 13.1
comp=Z,31nm,1.1s
UALR University of 33.00 330 IAmb IAmb 03 29 12.9
comp=Z,12nm,0.6s
X40A Basin Creek Fa 33.02 329 IAmb IAmb 03 29 13.4
comp=Z,33nm,1.0s
435B Jarrell 33.10 319 P P 03 29 12.7 +0.7
MVL Millersville 33.17 355 IAmb IAmb 03 29 14.9
comp=Z,12nm,0.6s
R49A Shelbyville 33.19 342 IAmb IAmb 03 29 15.2
comp=Z,19nm,0.6s
Z38A Mt. Pleasant 33.25 325 IAmb IAmb 03 29 15.2
comp=Z,36nm,0.9s
MCWV Mont Chateau 33.26 350 IAmb IAmb 03 29 16.7
comp=Z,30nm,0.9s
P53A Whipple 33.38 348 IAmb IAmb 03 29 17.4
comp=Z,41nm,1.1s
BDFB Brasilia 33.38 132 P P 03 29 14.7 0.0
comp=Z,34nm,0.6s,baz=295,slow=9.8,SNR=71
comp=Z,34nm,0.6s
WHAR Wooly Hollow 33.39 331 IAmb IAmb 03 29 16.2
comp=Z,39nm,0.9s
PAGS Pennsylvania G 33.42 355 IAmb IAmb 03 29 17.1
comp=Z,19nm,0.8s
MIAR Mount Ida 33.45 328 IAmb IAmb 03 29 16.2
comp=Z,13nm,0.8s
MIAR Mount Ida 33.45 328 P P 03 29 15.5 +0.6
HNDO Hondo 33.45 316 P P 03 29 14.8 -0.2
HNDO IAmb IAmb 03 29 16.1
comp=Z,40nm,1.6s
NBPS Pedro II - PI 33.48 109 *e*P P 03 29 16.0 +0.5
WCI Wyandotte Cave 33.48 341 P P 03 29 16.1 +0.9
WCI Wyandotte Cave 33.48 341 P P 03 29 17.1 +1.9
WCI Wyandotte Cave 33.48 341 P P 03 29 16.6 +1.5
WCI PcP PcP 03 31 55.6 +3.1
TREL Terrell 33.50 323 IAmb IAmb 03 29 17.7
comp=Z,29nm,0.9s
WHTX Lake Whitney, 33.83 321 IAmb IAmb 03 29 20.2
comp=Z,31nm,1.1s
O54A Avella 33.86 350 IAmb IAmb 03 29 20.9
comp=Z,11nm,0.7s
SDBA SAO DESIDERIO 33.90 124 *e*P P 03 29 19.0 -0.1
N58A Sunbury 34.03 355 IAmb IAmb 03 29 22.4
comp=Z,16nm,0.9s
PAL Palisades 34.05 359 IAmb IAmb 03 29 22.4
comp=Z,20nm,0.6s
FW13 Cleburne 34.05 321 IAmb IAmb 03 29 22.0
comp=Z,30nm,0.7s
O53A New Philadelph 34.08 349 IAmb IAmb 03 29 23.3
comp=Z,31nm,0.8s
T42A Van Buren 34.27 334 P P 03 29 22.4 +0.5
P48A Milroy 34.35 343 IAmb IAmb 03 29 24.7
comp=Z,57nm,1.7s
BRDY Brady 34.35 318 P P 03 29 22.9 +0.1
BRDY IAmb IAmb 03 29 24.2
comp=Z,64nm,1.4s
BRDY PcP PcP 03 31 55.7 +0.5
ACSO Alum Creek Sta 34.43 347 IAmb IAmb 03 29 26.4
comp=Z,38nm,0.8s
N53A Lisbon 34.55 350 P P 03 29 25.8 +1.5
N53A IAmb IAmb 03 29 27.3
comp=Z,27nm,1.1s
PAMR Moraine State 34.55 351 IAmb IAmb 03 29 27.6
comp=Z,39nm,0.8s
FW06 Azle 34.55 322 IAmb IAmb 03 29 26.6
comp=Z,34nm,0.8s
M57A Sunshine Farm, 34.56 355 IAmb IAmb 03 29 27.4
comp=Z,23nm,0.7s
O49A Covington 34.73 345 P P 03 29 27.3 +1.5
O49A IAmb IAmb 03 29 29.1
comp=Z,16nm,0.9s
KSCT Kent School, K 34.76 359 IAmb IAmb 03 29 28.8
comp=Z,27nm,1.1s
IPMB Ipameri, GO 34.78 135 *e*P P 03 29 26.4 -0.3
IPMB *e*pP pP 03 29 57.4 -3.4
N51A Ashland 34.95 348 IAmb IAmb 03 29 30.5
comp=Z,19nm,0.7s
HHAR Hobbs 34.99 330 IAmb IAmb 03 29 29.4
comp=Z,26nm,0.9s
O48B Farmland 35.01 344 IAmb IAmb 03 29 30.5
comp=Z,19nm,0.8s
LOOK Love County 35.04 324 IAmb IAmb 03 29 35.1
comp=Z,18nm,0.9s
PAOC Oil Creek Stat 35.05 351 IAmb IAmb 03 29 31.8
comp=Z,48nm,1.1s
CCM Cathedral Cave 35.19 335 P P 03 29 30.8 +0.9
CCM pP pP 03 30 04.4 +1.0
L59A Walton 35.27 357 IAmb IAmb 03 29 33.4
comp=Z,15nm,0.8s
SLM Saint Louis 35.27 336 P P 03 29 30.7 +0.2
BINY Binghamton 35.33 356 IAmb IAmb 03 29 33.7
comp=Z,25nm,0.6s
BINY Binghamton 35.33 356 P P 03 29 32.6 +1.6
U38A Gravette 35.34 330 IAmb IAmb 03 29 32.1
comp=Z,31nm,1.1s
M52A Cheriland 35.35 349 IAmb IAmb 03 29 34.1
comp=Z,34nm,1.0s
N49A Columbus Grove 35.38 345 IAmb IAmb 03 29 33.8
comp=Z,58nm,1.2s
L56A Greenwood 35.40 354 IAmb IAmb 03 29 35.0
comp=Z,45nm,1.0s
L61B Northampton 35.49 1 IAmb IAmb 03 29 35.0
comp=Z,30nm,1.2s
TRCB Terra Rica 35.59 146 *e*P P 03 29 33.9 +0.4
ABTX Abilene, Hawle 35.63 320 IAmb IAmb 03 29 35.5
comp=Z,30nm,0.8s
WTFS Witchita Falls 35.65 322 IAmb IAmb 03 29 35.5
comp=Z,38nm,0.9s
W35A Tecumseh 35.70 325 IAmb IAmb 03 29 35.2
comp=Z,16nm,0.6s
SAND Sanderson 35.71 314 IAmb IAmb 03 29 36.4
comp=Z,13nm,0.8s
K62A Royalston 35.71 1 IAmb IAmb 03 29 37.7
comp=Z,27nm,0.9s
X34A Smith Ranch, M 35.85 324 IAmb IAmb 03 29 37.4
comp=Z,22nm,0.7s
JANB Januaria 35.85 127 *e*P P 03 29 35.3 -0.5
K57A Scipio Center 35.90 356 IAmb IAmb 03 29 38.5
comp=Z,34nm,0.7s
MMNY Mt. Morris Dam 36.02 354 IAmb IAmb 03 29 39.6
comp=Z,52nm,1.5s
CPUP Villa Florida 36.32 156 P P 03 29 36.1 -3.4
comp=Z,3.8nm,0.8s,baz=331,slow=9.6,SNR=7.6
CPUP LR LR 03 44 45.0
comp=Z,56nm,21.4s,baz=42,slow=36
CPUP Villa Florida 36.32 156 IAmb IAmb 03 30 21.1
comp=Z,36nm,1.8s
J61A Chester 36.38 1 IAmb IAmb 03 29 43.1
comp=Z,16nm,0.9s
APMT Aspermont 36.39 320 IAmb IAmb 03 29 42.8
comp=Z,13nm,0.7s
PMNB Patos De Minas 36.40 134 *e*P P 03 29 40.3 -0.2
PMNB Patos De Minas 36.40 134 P P 03 29 40.3 -0.2
TXAR Lajitas Array 36.50 312 P P 03 29 42.1 +0.9
comp=Z,8.6nm,0.4s,baz=127,slow=9.2,SNR=204
TXAR PcP PcP 03 32 03.6 +1.9
comp=Z,1.7nm,0.5s,baz=141,slow=5.4,SNR=5.7
comp=Z,8.6nm,0.4s

TXAR Lajitas Array 36.50 312 P P 03 29 41.3 +0.1
TXAR pP pP 03 30 14.8 -0.2
TXAR PcP 03 32 03.0 +1.3
WMOK Wichita Mounta 36.51 323 IAmb IAmb 03 29 42.0
comp=Z,19nm,0.7s
WMOK Wichita Mounta 36.51 323 P P 03 29 41.2 0.0
MEDO Medina 36.51 353 IAmb IAmb 03 29 43.7
comp=Z,48nm,1.0s
J59A Piesco 36.52 358 IAmb IAmb 03 29 44.8
comp=Z,20nm,1.2s
J55A Hilton 36.54 354 IAmb IAmb 03 29 43.8
comp=Z,28nm,0.6s
229A Bryant Ranch, 36.66 317 IAmb IAmb 03 29 44.2
comp=Z,40nm,0.7s
TMB01 Midkiff 36.66 316 IAmb IAmb 03 29 44.0
comp=Z,14nm,0.7s
BB19B Bebedouro 36.73 140 *e*P P 03 29 42.9 -0.3
SN07 Snyder 07 36.74 319 IAmb IAmb 03 29 44.6
comp=Z,27nm,0.6s
HPIG 36.86 307 IAmb IAmb 03 29 45.9
comp=Z,12nm,0.5s
HPIG 36.86 307 P P 03 29 45.6 +1.1
M44A Midewin, Midew 36.91 341 IAmb IAmb 03 29 45.7
comp=Z,43nm,1.2s
NBMA Muriti-CE 37.01 112 *e*P P 03 29 45.6 -0.1
NCB Newcomb 37.02 359 IAmb IAmb 03 29 49.8
comp=Z,14nm,0.8s
129A Stewart Farms, 37.09 318 IAmb IAmb 03 29 48.0
comp=Z,41nm,1.1s
TPB05 Hovey Rd 37.11 314 IAmb IAmb 03 29 48.0
comp=Z,49nm,0.6s
DKNS Dickens 37.12 320 IAmb IAmb 03 29 48.2
comp=Z,19nm,0.7s
PECO Prince Edward 37.13 355 IAmb IAmb 03 29 48.5
comp=Z,20nm,0.8s
ODSA Odessa 37.25 316 IAmb IAmb 03 29 51.1
comp=Z,28nm,1.2s
CROK Carrier 37.29 326 IAmb IAmb 03 29 48.9
comp=Z,29nm,0.7s
PTGB Pitanga 37.44 148 *e*P P 03 29 47.3 -1.9
TPB06 Permian Basin 37.44 315 IAmb IAmb 03 29 50.2
comp=Z,14nm,0.7s
TPB01 Permian Basin 37.45 314 IAmb IAmb 03 29 50.7
comp=Z,23nm,0.7s
128A Castleberry Fa 37.51 317 IAmb IAmb 03 29 51.6
comp=Z,54nm,0.6s
L44A Lake County Fo 37.59 342 IAmb IAmb 03 29 51.4
comp=Z,40nm,1.1s
CANS Sao Roque de M 37.61 136 *e*P P 03 29 51.0 +0.4
LONY Lake Ozonia 37.68 358 IAmb IAmb 03 29 53.7
comp=Z,27nm,1.3s
DELO Deloro Mine 37.76 355 IAmb IAmb 03 29 53.4
comp=Z,20nm,0.6s
FRTB Fartura 37.77 143 *e*P P 03 29 51.6 -0.4
FRNY Flat Rock 37.87 359 IAmb IAmb 03 29 55.2
comp=Z,16nm,0.9s
WBO Williamsburg 38.08 357 IAmb IAmb 03 29 56.8
comp=Z,56nm,1.2s
SADO Sadowa 38.17 353 IAmb IAmb 03 29 57.3
comp=Z,26nm,0.9s
VHRN Van Horn 38.23 313 IAmb IAmb 03 29 57.6
comp=Z,27nm,1.2s
DIAM Diamantina, MG 38.27 131 *e*P P 03 29 56.1 -0.2
G62A West of Eustis 38.32 3 IAmb IAmb 03 29 59.3
comp=Z,26nm,0.8s
RCLB Rio Claro- Sao 38.34 140 *e*P P 03 29 56.2 -0.5
TPB28 38.36 314 IAmb IAmb 03 29 59.2
comp=Z,11nm,1.1s
ZON Zonda 38.38 174 P P 03 29 56.3 -0.6
ZON IAmb IAmb 03 31 01.5
comp=Z,26nm,1.5s
G65A Princeton 38.53 6 P P 03 29 59.5 +1.5
G65A IAmb IAmb 03 30 00.7
comp=Z,36nm,1.0s
GGN Saint George 38.54 7 P P 03 29 59.4 +1.4
GGN IAmb IAmb 03 30 00.7
comp=Z,35nm,0.7s
MNTQ Montreal, Queb 38.54 359 IAmb IAmb 03 30 00.8
comp=Z,36nm,0.8s
ARCA Araguai, MG 38.73 128 *e*P P 03 29 59.8 -0.2
BUKO Buck Lake 38.87 353 IAmb IAmb 03 30 02.7
comp=Z,18nm,0.6s
MNTX Cornudas Mount 39.00 314 IAmb IAmb 03 30 04.8
comp=Z,25nm,0.8s
MNTX Cornudas Mount 39.00 314 P P 03 30 03.3 +1.1
R32A Long Quarter, 39.08 327 IAmb IAmb 03 30 03.8
comp=Z,22nm,1.1s
F64A Sherman 39.11 5 P P 03 30 04.1 +1.4
F64A IAmb IAmb 03 30 05.6
comp=Z,23nm,1.1s
F64A PcP PcP 03 32 09.7 +0.4
VAO Valinhos 39.12 140 IAmb IAmb 03 30 03.6
comp=Z,17nm,0.7s
VAO Valinhos 39.12 140 *e*P P 03 30 02.9 -0.4
SLBS Sierra La Lagu 39.16 299 P P 03 30 05.9 +2.3
RCBR Riachuelo 39.17 108 *e*P P 03 30 03.2 -0.6
BSCB Bom Sucesso 39.20 135 *e*P P 03 30 03.6 -0.3
BSCB Bom Sucesso 39.20 135 P P 03 30 03.1 -0.9
SCIA State Center 39.25 336 P P 03 30 04.0 0.0
SPB Sao Paulo 39.26 141 *e*P P 03 30 03.0 -1.2
SPB Sao Paulo 39.26 141 P P 03 30 03.1 -1.1
TRQ Mont Tremblant 39.28 358 IAmb IAmb 03 30 06.7
comp=Z,27nm,1.2s
PET01 Itanhaem-SP 39.87 142 *e*P P 03 30 08.6 -0.7
CMC01 Camacan, BA 39.89 124 *e*P P 03 30 09.3 -0.3
RTBA Rita Blanca 40.04 322 IAmb IAmb 03 30 12.6
comp=Z,66nm,1.4s
D62A Allapoint, All 40.27 4 IAmb IAmb 03 30 15.0
comp=Z,30nm,0.6s
GUA01 Guaratinga, BA 40.30 126 *e*P P 03 30 12.4 -0.5
SJMB Sao Joao De Ma 40.40 129 *e*P P 03 30 13.1 -0.7
L34A Svendsen Farm, 40.65 333 P P 03 30 15.2 -0.4
LMQ La Malbaie 40.65 3 P P 03 30 16.3 +0.8
LMQ IAmb IAmb 03 30 18.1
comp=Z,18nm,0.6s
BSFB Barra de Sao F 40.73 129 *e*P P 03 30 15.9 -0.6
BATG Bathurst New B 40.76 7 P P 03 30 17.2 +0.8
LDAQ Lac Daran 41.03 2 P P 03 30 19.6 +1.0
LDAQ IAmb IAmb 03 30 21.1
comp=Z,19nm,0.7s
G40A Rib Lake 41.09 342 P P 03 30 19.6 +0.4
G40A IAmb IAmb 03 30 20.9
comp=Z,36nm,1.1s
I37A Lemond, Waseca 41.10 338 P P 03 30 18.9 -0.4
I37A IAmb IAmb 03 30 20.3
comp=Z,19nm,0.5s
121A Cookes Peak, D 41.18 313 P P 03 30 21.5 +1.3
121A IAmb IAmb 03 30 23.3
comp=Z,25nm,1.1s
CRNM Carthage 41.18 316 P P 03 30 20.4 +0.1
VLDQ Val d'Or 41.32 356 IAmb IAmb 03 30 24.0
comp=Z,40nm,1.3s
RIB01 Linhares ES 41.36 129 *e*P P 03 30 21.5 -0.2
LENM Lemitar 41.46 316 P P 03 30 23.2 +0.6
T25A Trinidad 41.52 321 IAmb IAmb 03 30 25.5
comp=Z,14nm,0.6s
ANMO Albuquerque 41.54 317 P P 03 30 23.6 +0.4
ANMO Albuquerque 41.54 317 P P 03 30 24.8 +1.5
ANMO Albuquerque 41.54 317 P P 03 30 24.4 +1.2
ANMO pP pP 03 30 58.5 +0.8
DUB01 Friburgo-RJ 41.59 134 *e*P P 03 30 23.5 -0.1
KSCO Kaye Shedlock' 41.67 325 IAmb IAmb 03 30 26.0
comp=Z,24nm,0.5s
319A Douglas 41.72 311 IAmb IAmb 03 30 27.3
comp=Z,17nm,0.7s
ALF01 Guarapari-ES 41.88 131 *e*P P 03 30 25.7 -0.2
SPMN Marine on St. 41.92 339 IAmb IAmb 03 30 27.0
comp=Z,20nm,0.9s
CAM01 Campos-RJ 41.94 134 *e*P P 03 30 25.4 -0.9
ECSD EROS Data Cent 42.17 334 IAmb IAmb 03 30 28.7
comp=Z,38nm,1.1s
ECSD EROS Data Cent 42.17 334 P P 03 30 27.8 -0.1
SDCO Great Sand Dun 42.58 321 IAmb IAmb 03 30 34.4
comp=Z,15nm,0.8s
TUC Tucson 43.28 311 P P 03 30 37.6 +0.4
TUC Tucson 43.28 311 P P 03 30 38.7 +1.5
TUC Tucson 43.28 311 P P 03 30 38.4 +1.2
TUC pP pP 03 31 13.4 +1.5
S22A 4UR Ranch, Cre 43.41 320 IAmb IAmb 03 30 41.3
comp=Z,34nm,1.3s
F33A 5 Mile Ranch, 43.75 337 IAmb IAmb 03 30 41.4
comp=Z,38nm,1.1s
EYMN Ely 43.88 342 P P 03 30 42.0 +0.4
TBO Thunder Bay 43.92 344 IAmb IAmb 03 30 43.4
comp=Z,37nm,0.9s

ISCO Idaho Springs 43.93 323 IAmb IAmb 03 30 45.2
comp=Z,20nm,0.8s
ISCO Idaho Springs 43.93 323 P P 03 30 44.3 +1.8
MVCO Mesa Verde 44.19 318 IAmb IAmb 03 30 47.0
comp=Z,45nm,1.4s
MVCO Mesa Verde 44.19 318 P P 03 30 46.0 +1.5
PV15 Paradox Valley 44.82 320 IAmb IAmb 03 30 52.4
comp=Z,67nm,1.1s
PV13 Radium Mtn., P 44.93 319 IAmb IAmb 03 30 52.9
comp=Z,32nm,0.8s
PV07 Paradox Valley 44.98 320 IAmb IAmb 03 30 53.5
comp=Z,36nm,1.3s
PV03 Paradox Valley 45.01 319 IAmb IAmb 03 30 53.4
comp=Z,14nm,0.6s
PV12 Saucer Basin, 45.01 320 IAmb IAmb 03 30 53.7
comp=Z,37nm,0.7s
PV18 Skein Mesa, Pa 45.04 319 IAmb IAmb 03 30 55.6
comp=Z,40nm,0.7s
PV11 David Mesa, Pa 45.05 319 IAmb IAmb 03 30 53.7
comp=Z,14nm,0.7s
PV05 Paradox Valley 45.07 319 IAmb IAmb 03 30 53.4
comp=Z,22nm,0.6s
PV17 East Wray Mesa 45.09 319 IAmb IAmb 03 30 55.4
comp=Z,16nm,0.6s
PV19 Morning Glory 45.12 319 IAmb IAmb 03 30 56.3
comp=Z,45nm,1.2s
PV22 Blue Mesa, Par 45.13 320 IAmb IAmb 03 30 54.3
comp=Z,16nm,0.7s
PV20 West Nyswonger 45.13 319 IAmb IAmb 03 30 56.4
comp=Z,66nm,1.5s
PV23 Carpenter Ridg 45.22 320 IAmb IAmb 03 30 56.2
comp=Z,17nm,0.6s
WUAZ Wupatki 45.25 315 IAmb IAmb 03 30 56.1
comp=Z,40nm,0.9s
PV21 Cone Mtn., Par 45.26 320 IAmb IAmb 03 30 55.4
comp=Z,35nm,1.4s
AGMN Agassiz Nation 45.64 339 IAmb IAmb 03 30 56.9
comp=Z,33nm,0.7s
AGMN Agassiz Nation 45.64 339 P P 03 30 56.2 +0.7
Y14A Wickenburg 45.68 312 IAmb IAmb 03 30 58.4
comp=Z,21nm,0.7s
O20A White River Ci 45.73 322 IAmb IAmb 03 30 59.9
comp=Z,12nm,0.5s
RSSD Black Hills 45.96 329 P P 03 30 58.8 +0.4
RSSD Black Hills 45.96 329 P P 03 30 59.3 +0.9
RSSD Black Hills 45.96 329 P P 03 30 58.8 +0.4
HMU Henry Mountain 46.07 318 IAmb IAmb 03 31 02.7
comp=Z,62nm,1.1s
U15A North Rim 46.35 315 IAmb IAmb 03 31 04.5
comp=Z,29nm,1.1s
SRU San Rafael Swe 46.57 319 IAmb IAmb 03 31 05.5
comp=Z,19nm,0.8s
GLA Glamis 46.67 310 IAmb IAmb 03 31 06.2
comp=Z,19nm,0.7s
P18A Preston Nutter 46.68 320 IAmb IAmb 03 31 06.7
comp=Z,31nm,1.3s
RDMU Red Mountain 46.80 322 IAmb IAmb 03 31 07.0
comp=Z,35nm,1.3s
Q16A Castle Valley 46.89 319 IAmb IAmb 03 31 07.8
comp=Z,42nm,1.9s
P17A Butcher Ranch, 46.91 320 IAmb IAmb 03 31 08.2
comp=Z,28nm,0.9s
KNB Kanab 47.01 316 IAmb IAmb 03 31 09.5
comp=Z,31nm,0.9s
ULM Lac du Bonnet 47.30 340 P P 03 31 08.4 0.0
comp=Z,51nm,0.5s,baz=143,slow=7.6,SNR=147
ULM LR LR 03 51 09.7
comp=Z,42nm,20.1s,baz=148,slow=36
comp=Z,51nm,0.5s
LCMT Little Creek M 47.30 315 IAmb IAmb 03 31 11.6
comp=Z,24nm,1.0s
PLCA Paso Flores 47.37 177 P P 03 31 08.2 -0.9
comp=Z,4.4nm,0.9s,baz=343,slow=8.8,SNR=6.0
comp=Z,4.4nm,0.9s
PLCA Paso Flores 47.37 177 P P 03 31 07.4 -1.7
PLCA IAmb IAmb 03 31 46.7
comp=Z,41nm,1.7s
SZCU Shurtz Canyon 47.48 316 IAmb IAmb 03 31 12.0
comp=Z,15nm,0.5s
BSUT Blindstream Ca 47.52 321 IAmb IAmb 03 31 13.1
comp=Z,24nm,0.9s
TCRU Three Creeks R 47.57 318 IAmb IAmb 03 31 13.6
comp=Z,40nm,0.9s
MPU Maple Canyon 47.78 320 P P 03 31 13.1 +0.5
MPU IAmb IAmb 03 31 14.8
comp=Z,28nm,1.0s
BW06 Boulder Array 48.10 324 IAmb IAmb 03 31 16.8
comp=Z,30nm,1.3s
PDAR Pinedale Array 48.10 324 P P 03 31 15.7 +0.7
comp=Z,6.6nm,0.5s,baz=126,slow=9.1,SNR=92
PDAR PcP PcP 03 32 41.8 +1.5
comp=Z,1.7nm,0.4s,baz=130,slow=0.5,SNR=4.8
comp=Z,6.6nm,0.5s
PDAR Pinedale Array 48.10 324 P P 03 31 15.6 +0.5
PDAR PcP PcP 03 32 42.2 +2.0
SCHQ Schefferville 48.14 5 P P 03 31 15.8 +1.0
comp=Z,31nm,0.6s,baz=186,slow=7.1,SNR=107
SCHQ ScP ScP 03 36 19.4 -0.3
comp=Z,4.0nm,0.7s,baz=183,slow=6.6,SNR=4.6
comp=Z,31nm,0.6s
SCHQ Schefferville 48.14 5 P P 03 31 15.3 +0.5
SCHQ IAmb IAmb 03 31 16.7
comp=Z,32nm,0.6s
SCHQ ScP 03 36 19.8 +0.1
HWUT Hardware Ranch 48.63 322 IAmb IAmb 03 31 21.0
comp=Z,15nm,0.6s
HWUT Hardware Ranch 48.63 322 P P 03 31 19.8 +0.8
DUG Dugway, Tooele 48.64 319 P P 03 31 20.6 +1.6
LAO LASA Array 48.86 330 IAmb IAmb 03 31 22.0
comp=Z,27nm,1.1s
SPUT South Promonto 49.01 321 IAmb IAmb 03 31 23.9
comp=Z,29nm,1.6s
AHID Auburn Hatcher 49.02 323 IAmb IAmb 03 31 23.5
comp=Z,23nm,1.0s
AHID Auburn Hatcher 49.02 323 P P 03 31 22.8 +0.8
GSC Goldstone, Bar 49.10 312 IAmb IAmb 03 31 24.9
comp=Z,15nm,0.7s
BGU Big Grassy Mou 49.17 320 IAmb IAmb 03 31 25.0
comp=Z,28nm,0.7s
SNOW Snow King Moun 49.22 324 IAmb IAmb 03 31 26.4
comp=Z,37nm,1.1s
LOHW Long Hollow 49.23 324 IAmb IAmb 03 31 25.5
comp=Z,19nm,0.6s
ECR Eagle Creek 49.34 323 IAmb IAmb 03 31 26.3
comp=Z,13nm,0.6s
RLMT Red Lodge 49.41 327 IAmb IAmb 03 31 27.8
comp=Z,33nm,1.6s
CCCA Chr Cany lake 49.60 312 IAmb IAmb 03 31 28.6
comp=Z,20nm,0.6s
YMR Madison River 50.07 325 IAmb IAmb 03 31 32.4
comp=Z,16nm,0.6s
YHL Hebgen Lake 50.30 325 IAmb IAmb 03 31 34.8
comp=Z,48nm,1.3s
ELK Elko 50.51 319 P P 03 31 33.7 +0.4
DSP Deep Springs 50.82 314 IAmb IAmb 03 31 38.2
comp=Z,20nm,1.1s
BOZ Bozeman (W) 51.01 326 IAmb IAmb 03 31 38.9
comp=Z,13nm,0.7s
DLMT Dillon 51.41 325 IAmb IAmb 03 31 42.3
comp=Z,19nm,1.1s
HLID Hailey 51.47 322 IAmb IAmb 03 31 42.6
comp=Z,22nm,1.2s
HLID Hailey 51.47 322 P P 03 31 41.6 +1.3
NVAR Mina Array Bea 51.52 315 P P 03 31 42.1 +1.3
comp=Z,5.3nm,0.7s,baz=122,slow=7.3,SNR=38
NVAR LR LR 03 57 58.8
comp=Z,20nm,18.3s,baz=266,slow=41
comp=Z,5.3nm,0.7s
NVAR Mina Array Bea 51.52 315 P P 03 31 41.4 +0.6
EGMT Eagleton 51.53 329 IAmb IAmb 03 31 42.8
comp=Z,42nm,1.4s
MFID Camas Ranch 52.26 321 IAmb IAmb 03 31 48.9
comp=Z,22nm,0.6s
PNTR Pine Nut 52.71 315 IAmb IAmb 03 31 52.1
comp=Z,13nm,0.8s
FFC Flin Flon 53.10 339 P P 03 31 51.1 -0.8
FFC IAmb IAmb 03 31 53.3
comp=Z,43nm,1.4s
FFC Flin Flon 53.10 339 P P 03 31 52.5 +0.5
FFC Flin Flon 53.10 339 P P 03 31 52.2 +0.3
PLID Pearl Lake 53.25 323 IAmb IAmb 03 31 54.8
comp=Z,14nm,0.8s
WVOR Wild Horse Val 53.56 319 IAmb IAmb 03 31 59.1
comp=Z,24nm,1.1s
WVOR Wild Horse Val 53.56 319 P P 03 31 56.8 +1.1
BEKR Beckworth 53.57 315 IAmb IAmb 03 31 57.8
comp=Z,19nm,1.3s

FCC Fort Churchill 54.28 347 IAmb IAmb 03 32 01.5
comp=Z,42nm,1.2s
SUTB Sutter Butte 54.32 314 IAmb IAmb 03 32 03.2
comp=Z,33nm,1.4s
F10A Beach Ranch, E 54.45 323 IAmb IAmb 03 32 03.2
comp=Z,19nm,0.5s
LDM Libby Dam 54.73 327 IAmb IAmb 03 32 05.9
comp=Z,14nm,0.9s
HATC Hat Creek Radi 54.74 316 IAmb IAmb 03 32 06.0
comp=Z,23nm,0.9s
O03E Paynes Creek 54.76 315 IAmb IAmb 03 32 05.3
comp=Z,16nm,1.0s
I07A Izee 54.90 320 IAmb IAmb 03 32 07.3
comp=Z,14nm,0.9s
LNOR Lincton Mounta 55.03 323 IAmb IAmb 03 32 07.6
comp=Z,16nm,0.6s
K05A Summer Lake 55.17 318 IAmb IAmb 03 32 09.2
comp=Z,46nm,1.9s
E09A Wood Farm, Sta 55.27 323 IAmb IAmb 03 32 09.4
comp=Z,16nm,0.9s
M03C McCloud 55.38 316 IAmb IAmb 03 32 09.8
comp=Z,12nm,0.5s
NEW Newport 55.62 326 IAmb IAmb 03 32 11.2
comp=Z,7.2nm,0.7s
NEW Newport 55.62 326 P P 03 32 10.8 +0.5
J05D Fort Rock, OR 55.65 319 IAmb IAmb 03 32 12.8
comp=Z,34nm,1.1s
KHBM Hanford Bally 55.90 315 IAmb IAmb 03 32 14.4
comp=Z,15nm,0.9s
L04D Klamath Falls 55.90 317 IAmb IAmb 03 32 14.8
comp=Z,24nm,1.0s
YBH Yreka Blue Hor 55.97 317 IAmb IAmb 03 32 13.2
comp=Z,8.0nm,0.6s
D08A Wollman Farm, 56.01 324 IAmb IAmb 03 32 14.4
comp=Z,7.8nm,0.8s
F07A Phinny Hill Vi 56.03 322 IAmb IAmb 03 32 16.7
comp=Z,18nm,0.6s
G06A Carlson Farm, 56.15 321 IAmb IAmb 03 32 17.0
comp=Z,28nm,1.2s
I05D Terrebonne, OR 56.19 320 IAmb IAmb 03 32 17.0
comp=Z,17nm,1.3s
WIFE Three Sisters- 56.37 319 IAmb IAmb 03 32 18.3
comp=Z,20nm,0.7s
BBOR Butler Butte 56.43 318 IAmb IAmb 03 32 18.5
comp=Z,16nm,1.3s
EPH Ephrata 56.56 324 IAmb IAmb 03 32 19.2
comp=Z,28nm,1.0s
G05A Wamic 56.58 321 IAmb IAmb 03 32 21.0
comp=Z,13nm,0.8s
I04A Tendick Farm, 56.64 319 IAmb IAmb 03 32 19.5
comp=Z,15nm,1.0s
H04A Detroit Lake 56.88 320 IAmb IAmb 03 32 23.2
comp=Z,22nm,0.8s
FRB Frobisher Bay 56.91 2 P P 03 32 19.3 +0.2
B08A Colville Reser 56.92 325 IAmb IAmb 03 32 21.0
comp=Z,23nm,1.1s
K02D Willamette Mer 57.01 317 IAmb IAmb 03 32 21.7
comp=Z,32nm,1.4s
LTY Liberty 57.15 323 IAmb IAmb 03 32 23.2
comp=Z,15nm,0.7s
BUCK Buck Mountain 57.19 319 IAmb IAmb 03 32 22.9
comp=Z,28nm,0.9s
COR Corvallis 57.56 319 P P 03 32 25.5 +1.5
COR Corvallis 57.56 319 P P 03 32 25.4 +1.5
COR Corvallis 57.56 319 P P 03 32 24.8 +0.8
COR x x 03 33 03.0
D05A Enumclaw 57.90 323 IAmb IAmb 03 32 28.1
comp=Z,23nm,1.0s
E03A Lebam 58.57 321 IAmb IAmb 03 32 33.1
comp=Z,21nm,0.9s
GNW Green Mountain 58.58 323 IAmb IAmb 03 32 32.0
comp=Z,18nm,1.0s
RADR Rader Ridge 58.66 321 IAmb IAmb 03 32 34.1
comp=Z,22nm,0.8s
NLWA Neilton Lookou 59.13 322 IAmb IAmb 03 32 37.5
comp=Z,23nm,1.2s
LLLB Lillooet 59.49 326 IAmb IAmb 03 32 39.1
comp=Z,31nm,1.2s
CBB Campbell River 61.19 324 P P 03 32 50.2 +1.4
CBB IAmb IAmb 03 32 51.2
comp=Z,28nm,1.0s
ILON Igloolik, Nuna 62.73 357 P P 03 32 58.5 -0.3
ILON IAmb IAmb 03 32 59.6
comp=Z,27nm,1.4s
YKA Yellowknife Ar 63.28 340 P P 03 33 02.9 +0.4
comp=Z,24nm,0.5s,baz=135,slow=6.8,SNR=308
comp=Z,24nm,0.5s
YKA Yellowknife Ar 63.28 340 P P 03 33 02.3 -0.1
BBB Bella Bella 63.69 326 P P 03 33 06.8 +1.5
ANGG Ammassalik, Gr 63.69 16 P P 03 33 05.4 +0.3
KOTAN Kotaneelee Air 65.48 335 P P 03 33 17.7 +0.9
baz=122
LIRD Liard River Hi 65.99 333 P P 03 33 20.7 +0.6
baz=120
U35K Hyder 66.27 329 P P 03 33 23.1 +1.1
baz=115
T35M Bob Quinn 66.83 330 IAmb IAmb 03 33 28.4
comp=Z,26nm,1.2s
T35M Bob Quinn 66.83 330 P P 03 33 27.4 +1.8
baz=115,SNR=11
V35K Ketchikan 66.86 328 P P 03 33 26.9 +1.2
baz=113
WRGLY Wrigley 66.93 338 P P 03 33 26.6 +0.7
baz=124,SNR=11
DLBC Dease Lake 67.35 331 LR LR 04 03 42.3
baz=116,SNR=15 comp=Z,22nm,20.9s,baz=38,slow=36
DLBC Dease Lake 67.35 331 P P 03 33 30.4 +1.6
WTLY Watson Lake, Y 67.53 333 IAmb IAmb 03 33 32.0
comp=Z,24nm,0.8s
WTLY Watson Lake, Y 67.53 333 P P 03 33 31.2 +1.3
baz=117
S34M Telegraph Cree 67.65 331 IAmb IAmb 03 33 33.2
comp=Z,18nm,0.8s
S34M Telegraph Cree 67.65 331 P P 03 33 32.2 +1.5
baz=114,SNR=15
WRAK Wrangell Islan 67.66 329 P P 03 33 31.9 +1.2
baz=113
DBIC Dimbokro 67.69 86 P P 03 33 31.1 -0.6
comp=Z,28nm,0.6s,baz=294,slow=5.9,SNR=38
comp=Z,28nm,0.6s
DBIC Dimbokro 67.69 86 P P 03 33 30.6 -1.2
DBIC Dimbokro 67.69 86 P P 03 33 30.8 -1.0
DBIC Dimbokro 67.69 86 P P 03 33 31.0 -0.8
CRAG Craig 67.71 328 P P 03 33 32.5 +1.5
baz=112
U33K Whale Pass 67.95 328 IAmb IAmb 03 33 34.7
comp=Z,21nm,1.4s
U33K Whale Pass 67.95 328 P P 03 33 34.1 +1.6
baz=112
TGTN Hyland Airport 67.97 335 P P 03 33 34.5 +1.8
baz=118
T33K Petersburg 68.12 329 P P 03 33 35.3 +1.7
baz=112
R33M Jennings River 68.20 332 IAmb IAmb 03 33 36.8
comp=Z,14nm,0.9s
R33M Jennings River 68.20 332 P P 03 33 35.7 +1.4
baz=115,SNR=19
Q32M Nakina River 68.63 331 IAmb IAmb 03 33 39.8
comp=Z,12nm,0.9s
Q32M Nakina River 68.63 331 P P 03 33 38.7 +1.7
baz=114,SNR=15
SUMG Summit 68.98 11 P P 03 33 39.3 +0.1
SUMG Summit 68.98 11 P P 03 33 40.8 +1.7
SUMG Summit 68.98 11 *i* P P 03 33 40.0 +0.9
SUMG IAmb IAmb 03 33 41.3
comp=Z,33nm,0.5s
S32K Killisnoo 69.19 329 IAmb IAmb 03 33 42.6
comp=Z,19nm,1.1s
S32K Killisnoo 69.19 329 P P 03 33 41.6 +1.4
baz=111,SNR=15
P33M Teslin, Yukon 69.39 333 IAmb IAmb 03 33 44.1
comp=Z,14nm,1.1s
P33M Teslin, Yukon 69.39 333 P P 03 33 42.8 +1.3
baz=114,SNR=19
SIT Sitka 69.42 329 P P 03 33 42.9 +1.2
baz=110
R32K Eaglecrest 69.45 330 P P 03 33 43.3 +1.4
baz=111,SNR=6.8
P32M Atlin 69.56 332 P P 03 33 42.8 +0.3
P32M IAmb IAmb 03 33 45.0
comp=Z,13nm,1.0s
P32M Atlin 69.56 332 P P 03 33 43.9 +1.4
baz=112,SNR=8.8
ESDC Sonseca Array 69.62 50 P P 03 33 42.8 -0.6
comp=Z,0.8nm,0.6s,baz=268,slow=6.3,SNR=13
comp=Z,0.8nm,0.6s
ESDC Sonseca Array 69.62 50 P P 03 33 43.1 -0.2

ESDC IAmb IAmb 03 34 21.8
comp=Z,33nm,1.8s
MMPY Sheldon Lake, 69.72 335 P P 03 33 44.6 +1.1
MMPY Sheldon Lake, 69.72 335 P P 03 33 44.8 +1.3
baz=116,SNR=9.5
BESE Bessie Mountai 69.73 331 P P 03 33 44.9 +1.3
N32M Quiet Lake 69.88 333 P P 03 33 46.0 +1.5
N32M IAmb IAmb 03 33 46.9
comp=Z,22nm,0.8s
N32M Quiet Lake 69.88 333 P P 03 33 45.9 +1.5
baz=114
R31K City Hall, Gus 70.10 330 P P 03 33 47.6 +1.9
baz=110
S31K Pelican 70.19 330 P P 03 33 47.9 +1.6
baz=110
SKAG Skagway 70.28 331 P P 03 33 48.4 +1.6
baz=111
WHY Whitehorse 70.50 333 P P 03 33 49.2 +0.9
baz=112
C36M Paulatuk 70.61 343 P P 03 33 49.7 +1.0
baz=125
PLBC Pleasant Camp 70.77 331 P P 03 33 51.1 +1.3
baz=110
M31M Drury Creek, Y 70.87 334 IAmb IAmb 03 33 53.1
comp=Z,18nm,1.2s
M31M Drury Creek, Y 70.87 334 P P 03 33 52.1 +1.6
baz=113,SNR=14
O30N Mendenhall 71.10 332 IAmb IAmb 03 33 54.5
comp=Z,25nm,1.0s
O30N Mendenhall 71.10 332 P P 03 33 53.2 +1.4
baz=111,SNR=38
N31M Braeburn, Yuko 71.22 333 IAmb IAmb 03 33 55.2
comp=Z,41nm,1.1s
N31M Braeburn, Yuko 71.22 333 P P 03 33 54.2 +1.7
baz=111,SNR=35
P30M Million Dollar 71.28 332 P P 03 33 54.8 +1.8
baz=110
P29M Windy Craggy 71.49 331 P P 03 33 55.6 +1.4
baz=109
NEEM North Greenlan 71.55 5 *i* P P 03 33 55.2 +0.7
NEEM IAmb IAmb 03 33 55.9
comp=Z,42nm,0.8s
HYT Haines Junctio 71.77 332 P P 03 33 58.0 +2.0
baz=109,SNR=6.9
N30M Aishikik Lake 71.79 333 IAmb IAmb 03 33 59.0
comp=Z,26nm,1.2s
N30M Aishikik Lake 71.79 333 P P 03 33 58.0 +2.0
baz=110,SNR=30
M30M Minto, Yukon 72.05 334 IAmb IAmb 03 33 59.7
comp=Z,20nm,0.8s
M30M Minto, Yukon 72.05 334 P P 03 33 58.8 +1.2
baz=111
O29M Mount Kennedy 72.10 332 P P 03 33 59.7 +1.7
baz=108,SNR=5.3
YUK6 Outpost Mounta 72.20 332 P P 03 34 00.8 +2.1
baz=109,SNR=13
H31M Peel River 72.29 338 IAmb IAmb 03 34 01.6
comp=Z,26nm,1.2s
H31M Peel River 72.29 338 P P 03 33 59.8 +1.0
baz=114,SNR=14
A36M Sachs Harbour 72.45 345 P P 03 34 00.2 +0.6
baz=125,SNR=8.5
YUK4 Talbot Arm 72.46 333 P P 03 34 02.0 +1.8
baz=109,SNR=12
J30M Hart River 72.58 336 P P 03 34 02.0 +1.3
baz=112
BRWY Burwash Landin 72.65 333 P P 03 34 03.0 +1.9
baz=108,SNR=5.6
G31M Satah River 72.72 339 IAmb IAmb 03 34 03.2
comp=Z,21nm,1.1s
G31M Satah River 72.72 339 P P 03 34 02.1 +0.8
baz=114,SNR=16
M29M Somme Creek 72.74 334 P P 03 34 02.9 +1.2
baz=109,SNR=8.5
F31M Tsiigehtchic 72.75 339 P P 03 34 02.4 +0.9
baz=115
K29M Barlow Dome 72.81 335 P P 03 34 03.1 +1.0
baz=110,SNR=19
L29M L29M 72.81 334 P P 03 34 02.9 +0.9
baz=110,SNR=11
PINM Pinnacle 72.84 331 P P 03 34 03.9 +1.7
baz=107
I30M Mount Dempster 72.84 337 P P 03 34 03.3 +1.0
baz=112,SNR=18
YUK8 Steele Glacier 72.96 332 P P 03 34 04.9 +1.7
baz=107,SNR=7.1
O28M Mount Upton 73.00 332 P P 03 34 05.2 +1.7
baz=107
ESK Eskdalemuir 73.02 34 P P 03 34 04.0 +0.7
EKA Eskdalemuir Ar 73.05 34 P P 03 34 02.7 -0.7
comp=Z,0.8nm,0.4s,baz=274,slow=2.3,SNR=13
comp=Z,0.8nm,0.4s
INK Inuvik 73.05 340 IAmb IAmb 03 34 04.8
comp=Z,54nm,1.8s
INK Inuvik 73.05 340 P P 03 34 04.0 +0.8
baz=115,SNR=14
INK Inuvik 73.05 340 P P 03 34 04.0 +0.8
EPYK Eagle Plains 73.40 338 IAmb IAmb 03 34 07.5
comp=Z,34nm,1.4s
EPYK Eagle Plains 73.40 338 P P 03 34 06.3 +0.8
baz=112,SNR=17
YUK3 Moose Creek 73.42 333 P P 03 34 07.3 +1.5
baz=107,SNR=30
G30M tAoh Zraii Nji 73.45 339 P P 03 34 06.6 +0.9
baz=112
F30M Barrier River 73.54 339 IAmb IAmb 03 34 08.1
comp=Z,51nm,1.3s
F30M Barrier River 73.54 339 P P 03 34 07.2 +1.1
baz=113,SNR=20
DAWY Dawson 73.66 335 P P 03 34 07.7 +0.7
baz=105,SNR=7.1
TORD Torodi Ar. Bea 73.70 78 P P 03 34 06.6 -1.5
comp=Z,2.8nm,0.4s,baz=284,slow=6.2,SNR=86
comp=Z,2.8nm,0.4s
TORD Torodi Ar. Bea 73.70 78 P P 03 34 06.6 -1.5
BVCY Beaver Creek 73.79 333 P P 03 34 09.6 +1.8
baz=107,SNR=8.5
H29M Whitestone 73.97 337 IAmb IAmb 03 34 10.2
comp=Z,12nm,0.5s
H29M Whitestone 73.97 337 P P 03 34 09.7 +1.0
baz=110,SNR=13
G29M Pine Creek 74.08 338 P P 03 34 10.3 +0.9
baz=111,SNR=14
M27K Edge Creek, AK 74.23 333 IAmb IAmb 03 34 13.2
comp=Z,36nm,1.2s
M27K Edge Creek, AK 74.23 333 P P 03 34 12.3 +1.9
baz=106,SNR=30
I28M Miner Creek 74.32 336 P P 03 34 11.8 +0.9
baz=108,SNR=16
CRQE Cirque 74.37 331 P P 03 34 12.8 +1.5
baz=104
BCAR Beaver Creek A 74.38 334 P P 03 34 12.1 +0.9
L27K Beaver Creek, 74.40 334 IAmb IAmb 03 34 14.0
comp=Z,19nm,1.2s
L27K Beaver Creek, 74.40 334 P P 03 34 12.8 +1.5
baz=106,SNR=22
MCARA McCarthy VSAT 74.50 332 IAmb IAmb 03 34 15.0
comp=Z,21nm,1.2s
MCARA McCarthy VSAT 74.50 332 P P 03 34 13.9 +2.0
baz=104
E29M Blow River 74.57 340 IAmb IAmb 03 34 13.9
comp=Z,18nm,0.8s
E29M Blow River 74.57 340 P P 03 34 12.9 +0.7
baz=111,SNR=28
M26K Nabesna, AK 74.74 333 P P 03 34 14.6 +1.3
baz=105,SNR=5.1
GLB Gilahina Butte 74.88 332 IAmb IAmb 03 34 16.9
comp=Z,21nm,1.3s
F28M Old Crow 75.00 339 P P 03 34 15.1 +0.4
baz=109,SNR=13
I27K Kandik River 75.04 336 P P 03 34 15.9 +1.0
baz=107,SNR=20
RAGM Ragged Mountai 75.05 331 IAmb IAmb 03 34 18.4
comp=Z,26nm,1.0s
L26K Log Cabin Wild 75.06 334 IAmb IAmb 03 34 17.7
comp=Z,26nm,1.2s
L26K Log Cabin Wild 75.06 334 P P 03 34 16.5 +1.5
baz=105,SNR=9.0
BMRM Bremner River 75.14 331 IAmb IAmb 03 34 18.1
comp=Z,46nm,1.4s
BMRM Bremner River 75.14 331 P P 03 34 17.1 +1.5
baz=103,SNR=7.3
H27K Steamboat Moun 75.19 337 P P 03 34 16.4 +0.6
baz=107,SNR=5.5
D28M Stokes Point 75.19 340 P P 03 34 15.4 -0.2
baz=111
E28M Babbage River 75.21 340 P P 03 34 16.0 +0.2
baz=110,SNR=12

N25K **Chitina, Valde** 75.28 332 P P 03 34 18.0 +1.5
baz=103
G27K **Doyon Strip** 75.41 338 P P 03 34 17.1 +0.1
baz=107
I26K **Coal Creek Min** 75.57 336 P P 03 34 18.4 +0.5
baz=105
SCRK **Sand Creek** 75.57 335 P P 03 34 19.5 +1.3
baz=104,SNR=17
EYAK **Cordova Ski Ar** 75.60 331 P P 03 34 19.4 +1.3
baz=102
DAG **Danmarks Havn** 75.65 11 P P 03 34 18.2 0.0
DAG **Danmarks Havn** 75.65 11 *i* P P 03 34 17.2 -1.0
DAG IAmb IAmb 03 34 18.4
comp=Z,5.2nm,0.6s
Q23K **Middleton Isla** 75.67 330 P P 03 34 19.4 +0.8
baz=101
E27K **Coleen River** 75.80 339 IAmb IAmb 03 34 20.8
comp=Z,24nm,1.4s
E27K **Coleen River** 75.80 339 P P 03 34 19.9 +0.7
baz=108,SNR=13
ALE **Alert** 75.81 1 P P 03 34 18.8 -0.2
ALE PcP PcP 03 34 30.7 -0.1
KLU **Klutina** 75.88 332 P P 03 34 21.0 +1.2
baz=102
RIDG **Independent Ri** 75.89 334 IAmb IAmb 03 34 22.2
comp=Z,33nm,1.2s
RIDG **Independent Ri** 75.89 334 P P 03 34 21.1 +1.3
baz=103,SNR=12
D27M **Malcolm River** 75.91 340 P P 03 34 20.6 +0.7
baz=108
M24K **Tolsona, Glenn** 76.12 332 IAmb IAmb 03 34 23.8
comp=Z,40nm,1.2s
M24K **Tolsona, Glenn** 76.12 332 P P 03 34 22.8 +1.6
baz=102
G26K **Porcupine Rive** 76.25 338 P P 03 34 22.1 +0.4
baz=105
K24K **Donnelly Dome** 76.31 334 IAmb IAmb 03 34 24.3
comp=Z,15nm,0.7s
K24K **Donnelly Dome** 76.31 334 P P 03 34 23.2 +1.1
baz=103,SNR=7.2
J25K **Salcha River,** 76.31 335 P P 03 34 23.2 +1.0
baz=103,SNR=13
GLI **Glacier Island** 76.31 331 P P 03 34 23.1 +0.9
baz=101
PRP **Porcupine Dome** 76.58 336 IAmb IAmb 03 34 25.5
comp=Z,11nm,0.7s
PRP **Porcupine Dome** 76.58 336 P P 03 34 24.3 +0.4
baz=103,SNR=13
F26K **Sheenjek River** 76.58 338 P P 03 34 24.5 +0.8
baz=105
SCM **Sheep Creek Mo** 76.60 332 P P 03 34 25.1 +1.2
baz=101,SNR=5.1
FYU **Fort Yukon** 76.71 337 IAmb IAmb 03 34 27.1
comp=Z,19nm,1.2s
M23K **Glacier View** 76.78 332 P P 03 34 25.6 +0.8
baz=103,SNR=5.2
DHY **Denali Highway** 76.86 333 P P 03 34 26.4 +1.0
baz=101,SNR=5.1
WAT6 **Susitna Watana** 76.93 333 P P 03 34 26.6 +0.7
baz=100,SNR=9.6
HDA **Harding Lake** 76.94 335 IAmb IAmb 03 34 27.2
comp=Z,11nm,0.7s
HDA **Harding Lake** 76.94 335 P P 03 34 26.2 +0.6
baz=102,SNR=12
C27K **Jago River** 76.95 340 P P 03 34 26.4 +0.7
baz=106
ILAR **Eielson Array** 76.98 335 P P 03 34 26.3 +0.4
comp=Z,2.9nm,0.7s,baz=102,slow=3.9,SNR=29
ILAR PP PP 03 37 20.4 -0.7
comp=Z,1.0nm,0.9s,baz=112,slow=7.8,SNR=4.6
comp=Z,2.9nm,0.7s
ILAR **Eielson Array** 76.98 335 P P 03 34 26.1 +0.2
KNK **Knik Glacier** 77.06 331 P P 03 34 27.3 +0.9
baz=100
SML **Sawmill** 77.07 332 P P 03 34 27.5 +1.0
baz=100
G25K **Bearman Lake** 77.10 337 P P 03 34 27.7 +1.3
baz=103,SNR=8.7
F25K **Christian Rive** 77.11 338 P P 03 34 28.2 +1.6
baz=104,SNR=9.1
E25K **Arctic Village** 77.21 338 P P 03 34 28.4 +1.3
baz=104
POKR **Poker Flat Res** 77.28 335 P P 03 34 28.7 +1.1
baz=101
SEW **Seward** 77.33 330 P P 03 34 29.0 +1.1
baz=98
GHO **Glory Hole Cre** 77.34 332 IAmb IAmb 03 34 30.4
comp=Z,24nm,0.8s
WAT1 **Susitna Watana** 77.34 333 P P 03 34 28.9 +0.9
baz=100
PMR **Palmer** 77.41 332 P P 03 34 28.9 +0.7
baz=99
COLA **College** 77.41 335 P P 03 34 28.4 +0.1
COLA pP pP 03 35 07.4 +0.6
O22K **Cooper Landing** 77.52 330 P P 03 34 29.6 +0.7
baz=98
H24K **Noodor Dome** 77.61 336 P P 03 34 30.2 +0.8
baz=101,SNR=9.7
G24K **Hadweenzic Riv** 77.62 337 P P 03 34 30.8 +1.4
baz=102,SNR=9.9
RC01 **Rabbit Creek A** 77.62 331 P P 03 34 30.2 +0.7
baz=98
MCK **McKinley** 77.67 334 P P 03 34 30.8 +1.1
baz=100
SLKM **Skilak Lake** 77.77 330 IAmb IAmb 03 34 32.0
comp=Z,15nm,0.6s
D25K **Kavik River** 77.78 340 IAmb IAmb 03 34 32.1
comp=Z,19nm,1.2s
D25K **Kavik River** 77.78 340 P P 03 34 31.3 +0.9
baz=103,SNR=12
NEA2 **Nenana** 77.87 335 IAmb IAmb 03 34 32.6
comp=Z,20nm,1.2s
NEA2 **Nenana** 77.87 335 P P 03 34 31.4 +0.5
baz=100,SNR=8.3
M22K **Willow** 77.90 332 IAmb IAmb 03 34 33.3
comp=Z,37nm,1.0s
M22K **Willow** 77.90 332 P P 03 34 31.8 +0.8
baz=98
BRSE **Bradley Lake S** 77.93 330 P P 03 34 32.0 +0.7
baz=97
F24K **Squaw Lake** 77.94 338 P P 03 34 32.6 +1.4
baz=101,SNR=11
CUT **Chulitna** 78.06 332 P P 03 34 32.7 +0.9
baz=98
I23K **Minto, Yukon-K** 78.09 335 P P 03 34 32.8 +0.8
baz=100,SNR=8.4
KMY **Karmoy** 78.20 31 *e*P P 03 34 33.3 +0.6
TRF **Thorofare Moun** 78.22 333 IAmb IAmb 03 34 35.0
comp=Z,70nm,2.0s
TRF **Thorofare Moun** 78.22 333 P P 03 34 33.7 +0.7
baz=98,SNR=8.1
E24K **Your Creek** 78.27 338 P P 03 34 34.4 +1.4
baz=101
H23K **Yukon River** 78.28 336 P P 03 34 33.9 +0.8
baz=100
L22K **Petersville** 78.31 332 P P 03 34 33.6 +0.3
baz=98
HOM **Homer** 78.37 329 P P 03 34 34.6 +1.0
baz=96
SKT **Skwentna** 78.59 332 IAmb IAmb 03 34 37.3
comp=Z,34nm,1.5s
SKT **Skwentna** 78.59 332 P P 03 34 35.5 +0.6
baz=97,SNR=7.9
D24K **Happy Valley** 78.60 339 P P 03 34 35.6 +0.8
baz=101
G23K **Bananza Creek** 78.61 337 P P 03 34 36.5 +1.6
baz=99,SNR=12
MLY **Manley** 78.65 335 P P 03 34 35.9 +0.7
baz=98,SNR=9.5
E23K **Chandalar** 78.69 338 P P 03 34 36.5 +1.2
baz=100,SNR=8.4
COLD **Coldfoot** 78.77 337 P P 03 34 37.3 +1.6
baz=99
TOLK **Toolik Lake Re** 78.77 339 P P 03 34 36.9 +1.1
baz=100
SPCR **Spurr Chakacha** 78.82 331 P P 03 34 37.5 +1.3
baz=96
O20K **Slope Mountain** 78.91 330 P P 03 34 37.4 +0.7
baz=96
OHAK **Old Harbor** 79.00 327 P P 03 34 37.8 +0.7
baz=94
PPLA **Purkeypile** 79.00 333 IAmb IAmb 03 34 38.8
comp=Z,23nm,0.5s
PPLA **Purkeypile** 79.00 333 P P 03 34 37.9 +0.7
baz=96,SNR=13
RED **Redoubt Volcan** 79.02 330 IAmb IAmb 03 34 39.1
comp=Z,31nm,0.9s
CAST **Castle Rocks** 79.02 333 P P 03 34 37.5 +0.4
baz=97,SNR=15
H22K **Ishtalitna Cre** 79.03 336 P P 03 34 38.0 +0.8
baz=98,SNR=6.0
ILSW **Iliamna Southw** 79.16 330 IAmb IAmb 03 34 39.3
comp=Z,20nm,0.8s
CHUM **Lake Minchumin** 79.17 334 P P 03 34 38.6 +0.6
baz=97,SNR=10
D23K **Nanushuk River** 79.22 339 P P 03 34 39.6 +1.4
baz=99,SNR=5.5
G22K **Bettles** 79.23 337 P P 03 34 39.6 +1.4
baz=98
Q19K **Cape Douglas,** 79.32 329 P P 03 34 39.8 +0.9
baz=94
M20K **Styx River** 79.33 332 IAmb IAmb 03 34 40.3
comp=Z,11nm,0.6s
M20K **Styx River** 79.33 332 P P 03 34 39.3 +0.3
baz=96
C23K **Itkillik River** 79.34 340 P P 03 34 39.9 +1.1
baz=99,SNR=5.4
AKN **Aaknes** 79.37 28 *e*P P 03 34 39.8 +0.7
E22K **Anaktuvuk Pass** 79.51 338 P P 03 34 40.7 +0.9
baz=98
F22K **John River** 79.57 337 P P 03 34 41.1 +1.0
baz=97
H21K **Melozitna Rive** 79.59 336 P P 03 34 41.0 +0.8
baz=96
O19K **Port Alsworth** 79.76 330 P P 03 34 41.8 +0.6
baz=94
SKAR **Skarslia** 79.87 30 *e*P P 03 34 43.4 +1.5
N19K **Bonanza Creek** 79.89 331 P P 03 34 41.6 -0.4
baz=94
K20K **Telida** 79.90 333 P P 03 34 42.2 +0.3
baz=95,SNR=7.3
M19K **Big River Lodg** 79.93 332 P P 03 34 42.6 +0.5
baz=94
G21K **Allakaket** 79.97 336 P P 03 34 43.4 +1.2
baz=96,SNR=9.2
J20K **Nowinta River** 80.01 334 IAmb IAmb 03 34 43.9
comp=Z,26nm,1.2s
J20K **Nowinta River** 80.01 334 P P 03 34 43.0 +0.6
baz=95,SNR=15
Q18K **Katmai Hardscr** 80.01 328 P P 03 34 42.8 0.0
baz=93
F21K **Alatna River** 80.03 337 P P 03 34 43.7 +1.1
baz=96,SNR=14
L19K **White Mountain** 80.17 332 P P 03 34 43.8 +0.4
baz=94,SNR=5.3
P18K **Big Mountain,** 80.17 329 P P 03 34 43.3 -0.2
baz=93
O18K **Koktuh Hills** 80.19 330 P P 03 34 43.6 0.0
baz=93
DAVA **Damuels** 80.25 43 *i* PcP P 03 34 45.3 +1.0
comp=Z,6.0nm,0.7s
DAVA **Damuels** 80.25 43 P P 03 34 45.5 +1.2
E21K **Killik River** 80.35 338 P P 03 34 45.0 +0.8
baz=96
B22K **Teshekpuk Lake** 80.36 340 P P 03 34 45.3 +1.1
baz=97
H20K **Anotleneega Mo** 80.43 335 P P 03 34 45.5 +0.8
baz=95,SNR=8.3
Q17K **Contact Creek** 80.45 328 P P 03 34 45.1 0.0
baz=92
N18K **Kilae Creek** 80.57 330 IAmb IAmb 03 34 46.6
comp=Z,14nm,0.9s
N18K **Kilae Creek** 80.57 330 P P 03 34 45.8 +0.2
baz=93,SNR=5.1
M18K **Stony River** 80.58 331 P P 03 34 45.9 +0.3
baz=93
CLZ **Clausthal** 80.63 39 P P 03 34 46.8 +0.7
J19K **Poorman** 80.64 334 P P 03 34 46.7 +0.8
baz=94
R17L **Mt. Peulik Vol** 80.68 327 P P 03 34 46.4 +0.2
baz=92
B21K **Ikpikpuk River** 80.70 339 P P 03 34 47.2 +1.2
baz=96
C21K **Knifeblade Rid** 80.71 339 P P 03 34 47.1 +1.0
baz=95
P17K **Kvichak River** 80.78 329 P P 03 34 47.0 +0.3
baz=92
FETA **Feichten** 80.83 44 *i* PcP P 03 34 48.4 +0.9
comp=Z,3.3nm,0.8s
Q16K **King Salmon** 80.88 328 P P 03 34 47.8 +0.6
baz=92
F20K **Avaraart Lake** 80.89 337 P P 03 34 48.1 +1.0
baz=94
A22K **Sinclair Lake** 80.95 341 P P 03 34 48.7 +1.3
baz=95
L18K **Granite Mounta** 81.03 332 P P 03 34 49.0 +1.1
baz=92
MOTA **Moosalm** 81.09 43 *e*PcP P 03 34 49.6 +0.8
comp=Z,3.3nm,0.8s
O17K **Koliganek Bris** 81.14 329 P P 03 34 49.2 +0.7
baz=92
E20K **Nigu River** 81.15 338 P P 03 34 50.0 +1.5
baz=94,SNR=26
N17K **Nushagak Hills** 81.20 330 P P 03 34 49.3 +0.4
baz=92
NB2 **NORSAR Subarra** 81.31 29 P P 03 34 49.9 +0.4
comp=Z,3.8nm,0.6s,baz=268,slow=5.6
NB2 **NORSAR Subarra** 81.31 29 P P 03 34 49.9 +0.4
NOA **NORSAR Array B** 81.31 29 P P 03 34 49.8 +0.4
comp=Z,3.8nm,0.5s,baz=268,slow=5.3,SNR=17
comp=Z,3.8nm,0.5s
D20K **Etivluk River** 81.34 338 P P 03 34 50.7 +1.2
baz=94,SNR=6.9
M17K **Holitna River** 81.35 331 P P 03 34 50.2 +0.5
baz=92
G19K **Purcell Mounta** 81.38 336 P P 03 34 50.5 +0.8
baz=93,SNR=8.4
NC602 **NORSAR Array S** 81.46 30 *e*P P 03 34 50.6 +0.4
E19K **Redstone River** 81.50 337 P P 03 34 51.3 +1.0
baz=93,SNR=12
B20K **Meade River** 81.61 340 P P 03 34 51.9 +1.1
baz=93
O16K **Kokwok River B** 81.64 329 P P 03 34 50.8 -0.4
baz=91
F19K **Shaleruckik Mo** 81.68 337 P P 03 34 51.9 +0.6
baz=92,SNR=6.2
NSS **Namsos** 81.75 26 *e*P P 03 34 52.4 +0.8
L17K **Donlin** 81.78 332 P P 03 34 52.7 +0.8
baz=91,SNR=5.5
K17K **Iditarod** 81.79 332 P P 03 34 52.8 +0.8
baz=91
H18K **Honhosa River** 81.87 335 P P 03 34 53.8 +1.5
baz=91,SNR=7.1
D19K **Kuna River** 81.88 338 IAmb IAmb 03 35 35.7
comp=Z,14nm,0.7s
D19K **Kuna River** 81.88 338 P P 03 34 53.5 +1.2
baz=92,SNR=10
N16K **Ishlik Lake** 81.99 330 P P 03 34 54.5 +1.5
baz=90
G18K **Tagagawik** 82.01 336 P P 03 34 54.1 +1.1
baz=91,SNR=11
ABTA **Abfaltersbach** 82.06 44 *i* PcP P 03 34 54.2 +0.4
comp=Z,2.0nm,0.6s
M16K **Timber Creek** 82.08 331 P P 03 34 54.3 +0.8
baz=90
LESA **Schwarzleotal** 82.15 43 *i* PcP P 03 34 53.7 -0.6
comp=Z,2.3nm,0.5s
J17K **VABM Dome** 82.16 333 P P 03 34 55.0 +1.2
baz=90
L16K **Owhat River** 82.33 331 P P 03 34 56.0 +1.2
baz=90
KBS **Kingsbay** 82.39 11 *e*P P 03 34 56.8 +2.0
S14K **Fog Glacier** 82.42 326 P P 03 34 56.1 +0.6
baz=89
F18K **Selawik** 82.42 336 P P 03 34 56.3 +1.2
baz=90
C19K **Lookout Ridge** 82.43 339 IAmb IAmb 03 34 58.0
comp=Z,30nm,1.2s
C19K **Lookout Ridge** 82.43 339 P P 03 34 56.7 +1.5
baz=91,SNR=8.2
CHNA **Chernabura Isl** 82.46 324 P P 03 34 56.7 +1.1
baz=89
O15K **Ungalikthiuk R** 82.52 329 P P 03 34 56.9 +1.1
baz=89
HFS **Hagfors** 82.53 30 P P 03 34 55.6 -0.2
comp=Z,2.8nm,0.5s,baz=264,slow=3.0,SNR=21
comp=Z,2.8nm,0.5s
H17K **Granite Mounta** 82.53 335 P P 03 34 56.9 +1.1
baz=90
HSKC **Hora Svate Kat** 82.56 40 P P 03 34 56.0 -0.2
KBA **Koelnbreinsper** 82.62 43 *i* PcP P 03 34 57.3 +0.4
comp=Z,1.9nm,0.5s
KBA **Koelnbreinsper** 82.62 43 P P 03 34 57.2 +0.4
N15K **Kwethluk River** 82.65 330 P P 03 34 57.4 +0.9
baz=89
BIOA **Bad Ischl, Aus** 82.80 43 *e*PcP P 03 34 58.4 +0.8
comp=Z,2.1nm,0.4s
GERES **GERESS Array B** 82.80 42 P P 03 34 57.0 -0.6
comp=Z,2.1nm,0.7s,baz=253,slow=4.1,SNR=17
comp=Z,2.1nm,0.7s
GERES **GERESS Array B** 82.80 42 P P 03 34 57.5 -0.1
E18K **Tukpahlearik C** 82.80 337 P P 03 34 57.8 +0.7
baz=90
G17K **Kiwalik Mounta** 82.83 335 P P 03 34 58.7 +1.4
baz=89
MYKA **Terra Mystica** 82.84 44 *e*PcP P 03 34 57.4 -0.5
comp=Z,2.6nm,0.6s
J16K **Anvik River** 82.84 333 P P 03 34 59.2 +1.8
baz=89
EDA **Edea** 82.85 87 P P 03 34 58.4 0.0
DRE **Drenchia** 82.86 44 P P 03 34 57.3 -0.7
I17K **Unalakleet** 82.88 334 IAmb IAmb 03 35 00.3
comp=Z,14nm,0.7s
I17K **Unalakleet** 82.88 334 P P 03 34 59.2 +1.7
baz=89,SNR=6.0
M15K **Kasigluk River** 82.93 330 P P 03 34 59.0 +1.1
baz=89
SDPT **Sand Point** 82.96 325 P P 03 34 58.7 +0.6
baz=88
C18K **Utukok River** 83.01 338 P P 03 34 59.3 +1.0
baz=89
F17K **Baldwin Pennin** 83.07 336 P P 03 34 59.6 +1.1
baz=89
MOA **Molln** 83.21 43 *i* PcP P 03 34 59.3 -0.4
comp=Z,2.5nm,0.7s
SPA0 **Spitsbergen Ar** 83.26 12 *e*P P 03 35 00.5 +1.2
SPITS **Spitsbergen Ar** 83.26 12 P P 03 34 59.9 +0.6
comp=Z,2.3nm,0.4s,baz=177,slow=1.7,SNR=23
comp=Z,2.3nm,0.4s
E17K **Hotham Inlet** 83.28 337 P P 03 35 00.7 +1.2
baz=88,SNR=12
L15K **Ungalak Mounta** 83.29 331 P P 03 35 00.7 +1.0
baz=88
N14K **Kuskokwak Cree** 83.45 330 P P 03 35 01.5 +1.0
baz=88
OBKA **Obir** 83.47 44 *e*PcP P 03 35 02.8 +1.7
comp=Z,1.9nm,0.8s
H16K **Elim** 83.53 334 P P 03 35 02.3 +1.4
baz=88
RDOG **Red Dog Mine** 83.66 338 P P 03 35 02.5 +1.0
baz=88
C17K **DeLong Mountai** 83.74 338 P P 03 35 03.1 +1.1
baz=87
D17K **Noatak River** 83.74 337 P P 03 35 03.0 +1.1
baz=87
L14K **Kuka Creek** 83.88 331 P P 03 35 03.6 +1.0
baz=87
ARSA **Arzberg** 84.10 43 *e*PcP P 03 35 03.2 -0.9
comp=Z,1.6nm,0.6s
M13K **Dall Lake** 84.26 330 P P 03 35 05.7 +1.1
baz=86
G15K **Niukluk** 84.28 335 P P 03 35 06.1 +1.5
baz=86
CONA **Conrad Observa** 84.28 43 *e*PcP P 03 35 05.0 -0.2
comp=Z,2.3nm,0.8s
TRO **Tromso** 84.36 21 *e*P P 03 35 05.9 +1.0
DPC **Dobruska-Polom** 84.42 40 P P 03 35 06.3 +0.5
F15K **North Star Dit** 84.48 335 IAmb IAmb 03 35 08.0
comp=Z,7.3nm,0.6s
F15K **North Star Dit** 84.48 335 P P 03 35 07.5 +1.7
baz=86,SNR=5.5
C16K **Lisburne Hills** 84.56 338 P P 03 35 07.3 +1.3
baz=85
RONA **Rosalia, Austr** 84.59 43 *e*PcP P 03 35 07.3 +0.7
comp=Z,1.6nm,0.7s
K13K **Kusilvak Mount** 84.78 332 P P 03 35 08.3 +1.1
baz=85
ANM **Nome** 84.88 334 P P 03 35 09.2 +1.5
baz=85
JETT **Jettan, Norway** 84.88 21 *e*P P 03 35 08.7 +1.0
JETT IAmb IAmb 03 35 10.0
comp=Z,10nm,0.9s
F14K **Arctic Creek** 85.20 335 P P 03 35 10.4 +1.1
baz=84
TNA **Tin City** 85.85 335 P P 03 35 13.2 +0.8
baz=83
KTK1 **Kautokeino** 85.95 21 *e*P P 03 35 13.7 +0.8
UNV **Unalaska Valle** 86.57 324 P P 03 35 16.8 +0.6
baz=83
ARA0 **ARCESS Array S** 86.66 20 *e*P P 03 35 17.0 +0.6
ARCES **ARCESS Array B** 86.66 20 P P 03 35 16.4 0.0
comp=Z,4.1nm,0.6s,baz=279,slow=4.2,SNR=31
comp=Z,4.1nm,0.6s
ARCES **ARCESS Array B** 86.66 20 P P 03 35 16.7 +0.3
ARCES IAmb IAmb 03 36 00.6
comp=Z,44nm,1.8s
RNF **Rovaniemi** 87.39 23 P P 03 35 20.1 +0.2
SGF **Sodankyl** 87.43 22 P P 03 35 20.5 +0.5
GAMB **Gambell** 87.74 334 P P 03 35 23.0 +1.4
baz=79
VNA1 **Neumayer--Stat** 88.30 162 ⇑P P 03 35 23.6 -0.4
comp=Z,6.4nm,0.6s
FINES **FINESS Array B** 88.42 28 P P 03 35 24.7 -0.2
comp=Z,1.8nm,0.6s,baz=273,slow=4.3,SNR=12
comp=Z,1.8nm,0.6s
FINES **FINESS Array B** 88.42 28 P P 03 35 24.6 -0.4
VNA2 **Neumayer--Watz** 88.68 163 ⇑P P 03 35 24.9 -1.0
comp=Z,6.7nm,0.5s,baz=310,slow=5.1
VNA2 ⇑pP pP 03 36 07.0 +0.9
comp=Z,1.4nm,0.5s,baz=291,slow=3.3
VNA2 **Neumayer--Watz** 88.68 163 P P 03 35 25.0 -0.9
TRPA **Tarpa** 88.71 42 P P 03 35 27.3 +0.7
MSF **Maaselka** 88.74 24 P P 03 35 27.4 +1.1
SNAA **Sanae** 90.33 163 ⇑P P 03 35 32.5 -1.1
comp=Z,83nm,0.7s
SNAA **Sanae** 90.33 163 P P 03 35 32.5 -1.1
comp=Z,3.0nm,0.7s,baz=267,slow=5.1,SNR=11
comp=Z,3.0nm,0.7s
SNAA **Sanae** 90.33 163 P P 03 35 33.4 -0.2
SNAA **Sanae** 90.33 163 P P 03 35 32.7 -0.9
ARR **Arges** 90.59 44 P P 03 35 36.0 +0.5
MI28 **Mi28,Pidlybu** 91.48 38 P P 03 35 38.9 -0.5
TESR **Tescani** 91.75 43 P P 03 35 40.7 -0.1
LUBAR **Lubar, Ukraine** 91.76 39 P P 03 35 40.0 -0.7
TROLL **Troll, Antarti** 92.03 162 ⇑P P 03 35 40.8 -0.9
comp=Z,484nm,0.6s
QSPA **South Pole Qui** 96.83 180 P P 03 36 03.2 -0.5
comp=Z,3.7nm,0.9s,baz=148,slow=1.1,SNR=11
comp=Z,3.7nm,0.9s
QSPA **South Pole Qui** 96.83 180 P P 03 36 03.2 -0.5
QSPA IAmb IAmb 03 36 05.3
comp=Z,13nm,1.4s
ZALV **Zalesovo Beam** 116.66 14 PKP PKiKP 03 41 16.6 +0.3
comp=Z,5.0nm,0.4s,baz=253,slow=2.0,SNR=23
ZALV **Zalesovo Beam** 116.66 14 PKPdf 03 41 16.1 -0.1
KURK **Kurchatov** 117.69 20 PKiKP 03 41 18.5 +0.1
KURBB **Kurchatov Arra** 117.74 20 PKP PKiKP 03 41 18.9 +0.5
comp=Z,2.5nm,0.6s,baz=318,slow=2.2,SNR=30
MKAR **Makanchi Array** 122.31 20 PKP PKPdf 03 41 27.3 -0.2
comp=Z,3.8nm,0.4s,baz=308,slow=2.4,SNR=35
MKAR **Makanchi Array** 122.31 20 PKPdf 03 41 27.4 -0.1
HILR **Hailar Array B** 122.75 350 PKP PKiKP 03 41 29.7 +1.2
comp=Z,8.3nm,0.4s,baz=46,slow=1.3,SNR=14
SONM **Songino Array** 125.58 0 PKP PKiKP 03 41 34.8 +0.5
comp=Z,5.8nm,0.5s,baz=318,slow=1.0,SNR=27
SONM **Songino Array** 125.58 0 PKiKP 03 41 34.1 -0.1
MJAR **Matsushiro Arr** 127.84 328 PKP PKiKP 03 41 39.5 +0.5
comp=Z,0.7nm,0.5s,baz=207,slow=2.0,SNR=4.4
KSRS **Korea Array** 131.78 338 PKP PKiKP 03 41 46.4 -0.4
comp=Z,1.2nm,0.6s,baz=17,slow=2.0,SNR=7.9
HHC **Hu-ho-hao-te** 132.38 355 *e*PKP PKPdf 03 41 46.1 -0.8
GTA2 **Gaotai** 133.45 8 *e*PKP PKiKP 03 41 50.2 -0.1
STKA **Stephens Creek** 139.18 228 PKP PKPdf 03 41 59.4 -0.3
comp=Z,5.2nm,1.0s,baz=107,slow=3.8,SNR=5.0
XAN **Xi'an** 139.32 357 PKP PKiKP 03 42 01.6 -0.7
NJ2 **Nanjing** 139.71 344 *e*PKP PKPdf 03 42 01.0 +0.4
CD2 **Chengdu** 142.36 4 PKP PKPdf 03 42 04.0 -1.5
QIS **Mount Isa** 145.53 243 P PKPbc 03 42 11.9 +0.2
PZH **PanZhiHua** 146.50 8 PKPbc PKPdf 03 42 11.5 -1.4
PZH PKPab PKPab 03 42 16.0 +0.3
GYA **Guiyang** 146.92 0 PKPbc PKPab 03 42 17.4 +0.1
ASAR **Alice Springs** 149.14 234 PKP PKPdf 03 42 17.0 -0.2
comp=Z,11nm,0.6s,baz=119,slow=3.4,SNR=79
ASAR PKPbc PKPbc 03 42 21.3 -0.3
comp=Z,12nm,0.6s,baz=120,slow=3.6,SNR=49
ASAR **Alice Springs** 149.14 234 PKPdf PKPdf 03 42 17.0 -0.2
WRA **Warramunga Arr** 150.37 241 PKP PKPdf 03 42 19.8 +0.6
comp=Z,8.3nm,0.5s,baz=106,slow=3.0,SNR=79
WRA PKPbc PKPbc 03 42 24.4 -0.2
comp=Z,8.7nm,0.5s,baz=108,slow=2.6,SNR=28
WRA **Warramunga Arr** 150.37 241 PKPdf PKPdf 03 42 17.5 -1.7
CMAR **Chiang Mai Arr** 153.68 17 PKP PKPdf 03 42 25.6 +1.4
comp=Z,3.0nm,0.6s,baz=299,slow=2.0,SNR=12

CMAR PKPbc **PKiKP** **03 42 32.6 +0.5**
comp=Z,8.7nm,0.5s,baz=324,slow=3.5,SNR=23

*BJI **09** 03:24:20.8, 24°.12N× 121°.74E, h18km, mB4.4/11, mb4.3/28, ML4.5/6, Ms4.1/21, Ms7 3.9/22*
*NIED **09** 03:24:22.4, 24°.07N× 121°.65E, h29km, MW4.4, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr3.06; Mθθ-1.88; Mφφ-1.18; Mrθ1.32; Mrφ-1.46; Mθφ2.94; Fault plane solution: M₀4.42000×10¹⁵ NP1: φs246.00000°, δ25.00000°, λ121.00000°. NP2: φs33.00000°, δ69.00000°, λ77.00000°.*
*NEIC **09** 03:24:22.8▫1.6, 24°.12N▫0°.03× 121°.68E▫0°.04, h30km▫5km, mb4.5/25, Mwr4.3/25 Error ellipse: s-maj=5.6km s-min=3.9km az=120.0*
*NEIC **09** 03:24:22.7, 24°.12N× 121°.68E, h29km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.70; Mθθ-0.62; Mφφ-0.08; Mrθ0.79; Mrφ-1.16; Mθφ3.03; Fault plane solution: M₀3.40000×10¹⁵ NP1: φs268.54000°, δ20.26000°, λ160.99000°. NP2: φs16.44000°, δ83.52000°, λ70.76000°. Principal axes: T 3.3665, Plg48.0000°, Azm266.0000°; N 0.0645, Plg19.0000°, Azm19.0000°; P -3.4309, Plg36.0000°, Azm123.0000°;*
*JMA **09** 03:24:22.4▫0.1, 24°.1N▫0°.3× 121°.7E▫0°.7, h29km, MV4.3/17, TAIWAN REGION*
*ASIES **09** 03:24:23.5, 24°.15N× 121°.68E, h28km, Mw4.3, Fault plane solution: NP1:φs317.00000°, δ14.00000°, λ-147.00000°. NP2:φs195.00000°, δ82.00000°, λ-78.00000°.*
*TAP **09** 03:24:23.3, 24°.15N× 121°.68E, h29km, ML4.9, B*
*IDC **09** 03:24:27.3▫4.8, 24°.12N× 121°.76E, h73km▫46km, mb3.8/14, mbtmp4.2/16, ML3.6/2, MS3.6/26, Error ellipse: s-maj=21.7km s-min=13.3km az=66.0*

ISC 09 03:24:22.7▫0.6, 24°.12N▫0°.01× 121°.71E▫0°.02, h31km▫3km, **n278, σ1§23/381, mb4.3/29, MS3.6**/22, **13C-27D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m	s	Res ISC
ETL	**Fush Village**	**0.09**	**300**	↑*i*P	**Pb**	**03 24 28.4**	**+0.3**	
ETL				*e*S	**Sb**	**03 24 31.2**	**-0.6**	
TWD	**Chiawan**	**0.11**	**251**	↑*i*P	**Pb**	**03 24 28.6**	**+0.5**	
TWD				*i* S	**Sb**	**03 24 32.7**	**+0.9**	
NACB	**Ninganchiao**	**0.12**	**300**	P	**Pb**	**03 24 28.3**	**+0.1**	
NACB	**Ninganchiao**	**0.12**	**300**		**Pb**	**03 24 28.5**	**+0.3**	
NACB				Sg	**Sb**	**03 24 31.4**	**-0.6**	
NACB	**Ninganchiao**	**0.12**	**300**	↓*i*P	**Pb**	**03 24 28.5**	**+0.3**	
NACB				S	**Sb**	**03 24 32.2**	**+0.2**	
HWA	**Hwalien**	**0.17**	**214**	↑*i*P	**Pn**	**03 24 29.8**	**+0.7**	
HWA				S	**Sb**	**03 24 34.8**	**+2.2**	
EHP	**Heping Village**	**0.20**	**9**	↑*i*P	**Pb**	**03 24 29.2**	**+0.3**	
EHP				S	**Sb**	**03 24 33.7**	**+0.5**	
EAHA	**Aohua**	**0.22**	**8**	↑*i*P	**Pb**	**03 24 29.3**	**+0.1**	
EAHA				S	**Sb**	**03 24 33.8**	**+0.3**	
ETLH	**Xiulin Townshi**	**0.23**	**294**	↓*i*P	**Pb**	**03 24 29.4**	**+0.1**	
ETLH				S	**Sb**	**03 24 33.8**	**-0.1**	
ETM	**Tongmen**	**0.25**	**233**	↓*i*P	**Pb**	**03 24 29.9**	**+0.4**	
ETM				S	**Sb**	**03 24 34.9**	**+0.7**	
TEYL	**Yanliau Villag**	**0.27**	**202**	↑*i*P	**Pb**	**03 24 30.6**	**+0.8**	
TEYL				*i* S	**Sn**	**03 24 36.5**	**+1.0**	
LXIB	**Xiulin Townshi**	**0.28**	**251**	↓*i*P	**Pb**	**03 24 30.2**	**+0.1**	
LXIB				S	**Sb**	**03 24 35.4**	**+0.2**	
EWUT	**Wuta**	**0.34**	**11**	↑*i*P	**Pb**	**03 24 30.9**	**+0.2**	
EWUT				S	**Sb**	**03 24 36.4**	**+0.3**	
SHUL	**Shoufeng**	**0.35**	**202**	*e*P	**Pn**	**03 24 32.2**	**+0.5**	
SHUL				*e*S	**Sn**	**03 24 39.4**	**+1.8**	
ESL	**Shilin**	**0.39**	**220**	↓*i*P	**Pb**	**03 24 31.6**	**+0.1**	
ESL				*e*S	**Sb**	**03 24 37.6**	**+0.2**	
WHF	**Hehuan Shan**	**0.41**	**274**	↓*i*P	**Pb**	**03 24 32.1**	**+0.1**	
WHF				S	**Sb**	**03 24 38.5**	**+0.1**	
NNSB	**Datong**	**0.43**	**317**	↓*i*P	**Pb**	**03 24 32.2**	**0.0**	
NNSB				S	**Sb**	**03 24 38.3**	**-0.4**	
FUSS	**Fushou**	**0.44**	**287**	↓*i*P	**Pb**	**03 24 32.7**	**+0.2**	
FUSS				*i* S	**Sb**	**03 24 39.3**	**+0.2**	
NNS	**Nan Shan**	**0.44**	**317**	↓*i*P	**Pb**	**03 24 32.4**	**0.0**	
NNS				S	**Sb**	**03 24 38.8**	**-0.3**	
LATG	**Datong**	**0.45**	**339**	↓*i*P	**Pb**	**03 24 32.4**	**0.0**	
LATG				*e*S	**Sb**	**03 24 38.5**	**-0.6**	
ESAO	**Su ao**	**0.48**	**15**	P	**Pb**	**03 24 33.2**	**+0.4**	
ESAO				S	**Sb**	**03 24 40.1**	**+0.5**	
WARBT	**Fenglin Townsh**	**0.49**	**217**	P	**Pb**	**03 24 32.8**	**-0.2**	
WARBT				*e*S	**Sb**	**03 24 40.4**	**+0.3**	
TWT	**Tachien**	**0.50**	**286**	↓*i*P	**Pb**	**03 24 33.9**	**+0.5**	
TWT				S	**Sb**	**03 24 40.9**	**+0.3**	
TWC	**Suao**	**0.51**	**15**	↑*i*P	**Pb**	**03 24 33.8**	**+0.5**	
TWC				*e*S	**Sb**	**03 24 41.2**	**+0.6**	
OWD	**Renai**	**0.51**	**252**	↓*i*P	**Pb**	**03 24 33.8**	**+0.3**	
OWD				S	**Sb**	**03 24 40.8**	**0.0**	
NDS	**Dongshan**	**0.52**	**1**	↓P	**Pb**	**03 24 33.4**	**0.0**	
NDS				*e*S	**Sb**	**03 24 40.7**	**0.0**	
NDT	**Datong Townshi**	**0.52**	**340**	↓*i*P	**Pb**	**03 24 33.5**	**0.0**	
NDT				S	**Sb**	**03 24 40.8**	**0.0**	
TDCB	**Techi**	**0.52**	**285**	↓*i*P	**Pb**	**03 24 33.9**	**+0.3**	
TDCB				S	**Sb**	**03 24 40.9**	**-0.1**	
ENTT	**Nioudou**	**0.54**	**346**	↓P	**Pb**	**03 24 33.8**	**0.0**	
ENTT				*e*S	**Sb**	**03 24 41.8**	**+0.4**	
WUSB	**Renai**	**0.55**	**257**	↓*i*P	**Pb**	**03 24 34.4**	**+0.3**	
WUSB				*e*S	**Sb**	**03 24 42.0**	**+0.1**	
EOS4	**EOS4**	**0.56**	**89**	↓*i*P	**Pn**	**03 24 35.1**	**+0.9**	
EOS4				*e*S	**Sn**	**03 24 43.9**	**+1.6**	
EOS2	**EOS2**	**0.57**	**58**	↑*i*P	**Pn**	**03 24 36.4**	**+1.8**	
EOS3	**EOS3**	**0.58**	**73**	↓*i*P	**Pn**	**03 24 36.5**	**+1.8**	
TWE	**Neicheng**	**0.60**	**357**	↓*i*P	**Pb**	**03 24 35.0**	**+0.1**	
TWE				*e*S	**Sn**	**03 24 44.2**	**+0.3**	
YHNB	**Yeheng**	**0.63**	**331**	P	**Pb**	**03 24 35.4**	**+0.1**	
YHNB	**Yeheng**	**0.63**	**331**		**Pb**	**03 24 35.3**	**-0.1**	
YHNB				Sg	**Sb**	**03 24 42.6**	**-1.4**	
YHNB	**Yeheng**	**0.63**	**331**	↓*i*P	**Pb**	**03 24 35.4**	**+0.1**	
YHNB				*i* S	**Sb**	**03 24 43.2**	**-0.7**	
NSK	**Sanguang**	**0.64**	**330**	↓*i*P	**Pb**	**03 24 35.5**	**0.0**	
NSK				*i* S	**Sb**	**03 24 43.4**	**-0.9**	
ILA	**Ilan**	**0.65**	**3**	*e*P	**Pb**	**03 24 36.1**	**+0.5**	
ILA				*e*S	**Sn**	**03 24 46.0**	**+1.0**	
FUSB	**Fushanzhiwuyua**	**0.65**	**350**	↓*i*P	**Pb**	**03 24 35.6**	**-0.1**	
FUSB				S	**Sb**	**03 24 44.1**	**-0.4**	
HGSD	**Ruisui**	**0.67**	**203**	*e*P	**Pb**	**03 24 36.4**	**+0.4**	
NWLT	**Wulai**	**0.69**	**344**	*e*P	**Pb**	**03 24 36.0**	**-0.2**	
NWLT				*e*S	**Sb**	**03 24 45.1**	**-0.4**	
EHY	**Hungye**	**0.70**	**210**	*e*P	**Pb**	**03 24 35.9**	**-0.6**	
EHYH	**Wanrong**	**0.70**	**208**	*e*P	**Pb**	**03 24 35.8**	**-0.6**	
WHP	**Taichung City**	**0.71**	**283**	P	**Pb**	**03 24 37.0**	**+0.3**	
WHP				S	**Sn**	**03 24 46.7**	**0.0**	
WCS	**Beigang Elemen**	**0.73**	**266**	P	**Pb**	**03 24 37.1**	**+0.2**	
WCS				*e*S	**Sn**	**03 24 47.1**	**+0.1**	
NFF	**Wufeng Townshi**	**0.74**	**314**	↓*i*P	**Pb**	**03 24 37.4**	**+0.1**	
NFF				*e*S	**Sb**	**03 24 46.9**	**-0.2**	
NTC	**Toucheng**	**0.74**	**9**	*e*S	**Sn**	**03 24 48.1**	**+0.7**	
EGS		**0.76**	**16**	*e*P	**Pn**	**03 24 38.4**	**+1.1**	
EGS				*e*S	**Sn**	**03 24 49.2**	**+1.6**	
SSLB	**Suanglung**	**0.76**	**245**	P	**Pb**	**03 24 37.8**	**+0.3**	
SSLB	**Suanglung**	**0.76**	**245**		**Pb**	**03 24 37.5**	**0.0**	
SSLB				Sg	**Sb**	**03 24 46.9**	**-0.7**	
SSLB	**Suanglung**	**0.76**	**245**	↑*i*P	**Pb**	**03 24 37.6**	**+0.2**	
SSLB				S	**Sb**	**03 24 47.4**	**-0.2**	
SMLT	**Sun Moon Lake**	**0.77**	**253**	P	**Pn**	**03 24 38.0**	**+0.4**	
SMLT				*e*S	**Sn**	**03 24 48.8**	**+0.6**	
TYC	**Yuchr**	**0.81**	**255**	↓*i*P	**Pn**	**03 24 38.4**	**+0.4**	
TYC				*e*S	**Sn**	**03 24 49.5**	**+0.7**	
YULB	**Yu-li**	**0.81**	**208**	P	**Pb**	**03 24 38.9**	**+0.6**	
YULB	**Yu-li**	**0.81**	**208**	S	**Sn**	**03 24 50.1**	**+1.0**	
YULB	**Yu-li**	**0.81**	**208**		**Pn**	**03 24 36.9**	**-1.2**	
YULB	**Yu-li**	**0.81**	**208**	*e*P	**Pb**	**03 24 39.0**	**+0.7**	
KSHI	**Guanxi Townshi**	**0.82**	**324**	P	**Pb**	**03 24 39.0**	**+0.6**	
KSHI				*e*S	**Sn**	**03 24 50.1**	**+0.9**	
LIOB	**Emei**	**0.82**	**310**	↓*i*P	**Pb**	**03 24 39.2**	**+0.7**	
LIOB				S	**Sn**	**03 24 49.9**	**+0.5**	
NSTT	**Nanjuang**	**0.82**	**309**	↓*i*P	**Pb**	**03 24 39.0**	**+0.5**	
NSTT				*i* S	**Sn**	**03 24 49.5**	**+0.2**	
ECBN	**Changbin**	**0.83**	**196**	*e*P	**Pb**	**03 24 39.4**	**+0.9**	
ECBN				*e*S	**Sn**	**03 24 51.6**	**+2.2**	
EYUL	**Yuli**	**0.84**	**205**	*e*P	**Pb**	**03 24 39.5**	**+0.7**	
TWF1	**Yuli**	**0.85**	**206**	*e*P	**Pn**	**03 24 37.8**	**-0.7**	
NHDH	**Xindian Distri**	**0.86**	**349**	*e*P	**Pb**	**03 24 39.6**	**+0.5**	
NHDH				*e*S	**Sb**	**03 24 50.6**	**+0.3**	
TIPB	**Shuangxi**	**0.86**	**7**	*e*P	**Pn**	**03 24 39.3**	**+0.6**	
TIPB				*e*S	**Sb**	**03 24 50.5**	**+0.1**	
TWA	**Mucha**	**0.87**	**353**	P	**Pb**	**03 24 39.7**	**+0.4**	
TWA				S	**Sb**	**03 24 50.7**	**+0.1**	
TATO	**Taipei**	**0.88**	**347**	P	**Pn**	**03 24 39.6**	**+0.6**	
TATO	**Taipei**	**0.88**	**347**	S	**Sn**	**03 24 51.3**	**+0.6**	
TATO	**Taipei**	**0.88**	**347**		**Pn**	**03 24 39.3**	**+0.3**	
WHYT	**Xinyi Township**	**0.89**	**242**	*e*P	**Pb**	**03 24 40.0**	**+0.4**	
WHYT				*e*S	**Sn**	**03 24 52.0**	**+1.1**	
TWB1	**Santiao Chiao**	**0.93**	**16**	*e*P	**Pb**	**03 24 40.8**	**+0.6**	
TWB1				*e*S	**Sb**	**03 24 53.8**	**+1.6**	
NHY	**Taipei**	**0.93**	**352**	*e*P	**Pn**	**03 24 40.5**	**+0.8**	
NHY				*e*S	**Sb**	**03 24 53.3**	**+1.0**	
NMLH	**Miaoli**	**0.94**	**297**	*e*P	**Pb**	**03 24 41.8**	**+1.4**	
NMLH				*e*S	**Sb**	**03 24 54.8**	**+2.3**	
SBCB	**Hsinchu**	**0.94**	**316**	P	**Pb**	**03 24 41.5**	**+1.0**	
SBCB				*i* S	**Sb**	**03 24 55.0**	**+2.4**	
TCU	**Taichung**	**0.94**	**272**	P	**Pb**	**03 24 41.9**	**+1.4**	
TCU				S	**Sb**	**03 24 55.8**	**+3.1**	
WJS	**Zhushan**	**0.94**	**252**	*e*P	**Pb**	**03 24 41.8**	**+1.3**	
WJS				*e*S	**Sb**	**03 24 54.7**	**+2.1**	
WFSB	**Wu-fen Shan**	**0.95**	**4**	*e*P	**Pn**	**03 24 40.9**	**+0.9**	
WFSB				*e*S	**Sb**	**03 24 54.2**	**+1.2**	
HSN	**Hsinchu**	**0.96**	**316**	P	**Pb**	**03 24 41.3**	**+0.6**	
HSN				S	**Sb**	**03 24 55.1**	**+2.0**	
CHKH	**Chenggong**	**0.96**	**197**	*e*P	**Pn**	**03 24 40.7**	**+0.6**	
WNT	**Mingjian**	**0.96**	**256**	P	**Pb**	**03 24 42.0**	**+1.1**	
WNT				S	**Sb**	**03 24 55.5**	**+2.2**	
NCUH	**Zhongli**	**0.97**	**331**	*i* P	**Pb**	**03 24 41.6**	**+0.6**	
NCUH				*i* S	**Sb**	**03 24 55.3**	**+1.7**	
FULB	**Fuli**	**0.99**	**203**	*e*P	**Pn**	**03 24 41.2**	**+0.7**	
WDJ	**Dajia District**	**1.00**	**284**	*e*P	**Pb**	**03 24 42.4**	**+0.9**	
WDJ				*e*S	**Sb**	**03 24 56.6**	**+2.3**	
TWS1	**Kuangyinshan**	**1.02**	**345**	*e*P	**Pb**	**03 24 42.0**	**+0.2**	
TWS1				*e*S	**Sb**	**03 24 55.8**	**+1.0**	
ALS	**Alishan**	**1.02**	**234**	↑P	**Pb**	**03 24 42.4**	**+0.4**	
ALS				*e*S	**Sb**	**03 24 56.7**	**+0.5**	
TNOU	**National Taiwa**	**1.03**	**3**	*e*P	**Pn**	**03 24 41.8**	**+0.7**	
TNOU				*e*S	**Sb**	**03 24 55.6**	**+0.4**	
YM01	**YM01**	**1.03**	**353**	*e*P	**Pn**	**03 24 41.9**	**+0.7**	
YM01				*e*S	**Sn**	**03 24 55.2**	**+0.6**	
WCHH	**Zhanghua**	**1.05**	**268**	*e*P	**Pb**	**03 24 43.1**	**+0.8**	
WCHH				*e*S	**Sb**	**03 24 57.7**	**+2.0**	
ZUZH	**Zhuzihu**	**1.05**	**352**	P	**Pn**	**03 24 41.8**	**+0.4**	
ZUZH				*e*S	**Sn**	**03 24 55.6**	**+0.5**	
CHKT	**Chengkung**	**1.06**	**197**	P	**Pn**	**03 24 41.8**	**+0.4**	
CHKT				S	**Sb**	**03 24 56.9**	**+1.0**	
WCH1	**Changhua City**	**1.06**	**268**	*e*P	**Pb**	**03 24 43.7**	**+1.3**	
WCH1				*e*S	**Sb**	**03 24 58.5**	**+2.5**	
EHD	**Haiduan**	**1.07**	**206**	*e*P	**Pn**	**03 24 41.4**	**-0.2**	
NTST	**Danshui**	**1.07**	**347**	*e*P	**Pn**	**03 24 42.3**	**+0.7**	
NTST				*e*S	**Sb**	**03 24 57.8**	**+1.5**	
CHN5	**Tsauling**	**1.07**	**242**	P	**Pb**	**03 24 43.4**	**+0.6**	
CHN5				S	**Sb**	**03 24 58.9**	**+2.5**	
ANP	**Anpu**	**1.08**	**351**	*e*P	**Pn**	**03 24 42.3**	**+0.4**	
ECS	**Chishang**	**1.11**	**204**	*e*P	**Pb**	**03 24 44.2**	**+0.9**	
ELDTW	**Lidau**	**1.12**	**215**	*e*P	**Pn**	**03 24 41.9**	**-0.4**	
ELDTW				*e*S	**Sn**	**03 24 57.5**	**+0.8**	
WGK	**Gukeng**	**1.13**	**248**	*e*P	**Pb**	**03 24 44.5**	**+0.8**	
WGK				*e*S	**Sb**	**03 25 00.3**	**+2.3**	
WDL	**Douliou City**	**1.14**	**250**	*e*P	**Pb**	**03 24 45.0**	**+1.2**	
WDL				*e*S	**Sb**	**03 25 00.6**	**+2.3**	
WDLH	**Douliu**	**1.15**	**249**	P	**Pb**	**03 24 44.9**	**+0.9**	
WDLH				S	**Sb**	**03 25 00.9**	**+2.3**	
TWY	**Chenhua**	**1.16**	**355**	*e*P	**Pn**	**03 24 43.9**	**+1.0**	
JYNG	**Yonagunijimaku**	**1.18**	**73**	P	**Pn**	**03 24 44.3**	**+1.2**	
JYNG				S	**Sn**	**03 24 59.7**	**+1.6**	
EDH	**Donghe**	**1.20**	**198**	*e*P	**Pn**	**03 24 43.5**	**+0.2**	
EDH				*e*S	**Sb**	**03 25 00.6**	**+0.8**	
WCKO	**Fanlu**	**1.21**	**237**	*e*P	**Pb**	**03 24 46.2**	**+1.1**	
WCKO				*e*S	**Sb**	**03 25 02.5**	**+2.2**	
WRL	**Guolierlin Hig**	**1.23**	**260**	*e*P	**Pb**	**03 24 45.8**	**+0.4**	
WRL				S	**Sb**	**03 25 02.2**	**+1.2**	
YOJ	**Yonaguni jima**	**1.24**	**74**	P	**Pn**	**03 24 45.0**	**+1.1**	
YOJ	**Yonaguni jima**	**1.24**	**74**	S	**Sb**	**03 25 02.1**	**+1.0**	
YOJ	**Yonaguni jima**	**1.24**	**74**		**Pn**	**03 24 45.0**	**+1.1**	
YOJ	**Yonaguni jima**	**1.24**	**74**	*i* P	**Pn**	**03 24 45.2**	**+1.3**	
YOJ				S	**Sb**	**03 25 01.9**	**+0.8**	
YOJ	**Yonaguni jima**	**1.24**	**74**	P	**Pn**	**03 24 45.1**	**+1.3**	
YOJ				*e*S	**Sb**	**03 25 01.9**	**+0.8**	
RLNB	**Erlin**	**1.25**	**260**	*i* P	**Pb**	**03 24 46.0**	**+0.4**	
RLNB				S	**Sb**	**03 25 03.3**	**+1.8**	
STYH	**Taoyuan**	**1.27**	**222**	*e*P	**Pn**	**03 24 45.5**	**+1.2**	
CHN4	**Tsaushan**	**1.27**	**234**	*e*P	**Pb**	**03 24 46.9**	**+0.8**	
CHN4				*e*S	**Sb**	**03 25 05.1**	**+3.0**	
TPUB	**Ta-pu**	**1.28**	**231**	P	**Pb**	**03 24 46.2**	**0.0**	
TPUB	**Ta-pu**	**1.28**	**231**		**Pb**	**03 24 45.9**	**-0.3**	
TPUB	**Ta-pu**	**1.28**	**231**	P	**Pb**	**03 24 46.9**	**+0.8**	
TPUB				S	**Sb**	**03 25 04.8**	**+2.6**	
WTK	**Tuku**	**1.28**	**251**	P	**Pb**	**03 24 46.6**	**+0.4**	
WTK				S	**Sb**	**03 25 04.5**	**+2.3**	
LONT	**Longtian**	**1.31**	**204**	*e*P	**Pn**	**03 24 45.5**	**+0.6**	
WTP	**Ta-pu**	**1.32**	**229**	P	**Pb**	**03 24 47.2**	**+0.3**	
WTP				*e*S	**Sb**	**03 25 05.7**	**+2.2**	
CHY	**Chiayi**	**1.33**	**243**	*i* P	**Pb**	**03 24 47.6**	**+0.7**	
CHY				*i* S	**Sb**	**03 25 06.3**	**+2.8**	
WTCT	**Ta-ch'eng**	**1.33**	**259**	*e*S	**Sb**	**03 25 04.7**	**+1.1**	
TWK	**Hsinying**	**1.40**	**233**	*i* P	**Pb**	**03 24 48.5**	**+0.2**	
TWK				*e*S	**Sb**	**03 25 07.3**	**+1.5**	
TWG	**Pinlang**	**1.41**	**204**		**Pn**	**03 24 45.3**	**-1.1**	
TWG	**Pinlang**	**1.41**	**204**	*e*P	**Pb**	**03 24 49.3**	**+0.9**	
TWGBT	**Beinan**	**1.41**	**204**	P	**Pn**	**03 24 47.3**	**+1.0**	
TWGBT	**Beinan**	**1.41**	**204**	*e*P	**Pn**	**03 24 46.0**	**-0.3**	
TWGBT				*e*S	**Sn**	**03 25 04.1**	**+0.2**	
CHN1	**Nanshi**	**1.42**	**230**	*e*P	**Pb**	**03 24 49.0**	**+0.4**	
CHN1				*e*S	**Sb**	**03 25 07.5**	**+1.1**	
TTN	**Taitung**	**1.45**	**201**	*e*P	**Pb**	**03 24 49.1**	**+0.1**	
LDUT	**Ludao**	**1.45**	**189**	*e*P	**Pn**	**03 24 46.0**	**-0.8**	
SGST	**Jiashian**	**1.46**	**225**	P	**Pn**	**03 24 48.3**	**+1.4**	
SGST				*e*S	**Sb**	**03 25 08.9**	**+1.6**	
WSL	**Shuilin Townsh**	**1.48**	**247**	*i* P	**Pb**	**03 24 49.5**	**0.0**	
WSL				S	**Sb**	**03 25 09.2**	**+1.4**	
SLGT	**Liugui**	**1.48**	**221**	*e*P	**Pb**	**03 24 50.1**	**+0.5**	
SLGT				*e*S	**Sb**	**03 25 09.4**	**+1.3**	
ICHU	**Yijhu**	**1.51**	**240**	P	**Pb**	**03 24 50.1**	**0.0**	
ICHU				*e*S	**Sb**	**03 25 09.8**	**+1.0**	
PCYT	**Pengchaiyu**	**1.54**	**12**	*e*P	**Pn**	**03 24 49.2**	**+1.1**	
PCYT				*e*S	**Sn**	**03 25 09.1**	**+2.0**	
CHN8	**Yiju**	**1.57**	**241**	P	**Pb**	**03 24 50.5**	**-0.5**	
CHN8				S	**Sb**	**03 25 11.8**	**+1.3**	
CHN3	**Shinhua**	**1.61**	**230**	*e*S	**Sb**	**03 25 14.9**	**+3.2**	
SSHA	**Shanhua**	**1.62**	**233**	*e*P	**Pb**	**03 24 52.5**	**+0.5**	
SSHA				*e*S	**Sb**	**03 25 14.3**	**+2.2**	
SCST	**Cishan**	**1.65**	**223**	*e*P	**Pb**	**03 24 52.1**	**-0.4**	
SCST				*e*S	**Sb**	**03 25 14.7**	**+1.7**	
ECL	**Taimali**	**1.66**	**205**	*e*P	**Pn**	**03 24 51.3**	**+1.4**	
SCLT	**Jiali**	**1.67**	**236**	*e*P	**Pb**	**03 24 52.4**	**-0.4**	
SCLT				*e*S	**Sb**	**03 25 15.4**	**+1.9**	
SSD	**Sandimen**	**1.68**	**216**	*e*P	**Pb**	**03 24 52.9**	**-0.1**	
SSD				*e*S	**Sb**	**03 25 14.4**	**+0.6**	
TSMG	**Majia**	**1.71**	**215**	*e*P	**Pb**	**03 24 53.4**	**-0.1**	
TWM1	**Shoushan**	**1.74**	**223**	*e*P	**Pb**	**03 24 55.1**	**+1.0**	
TWM1				*e*S	**Sb**	**03 25 18.4**	**+2.8**	
TSCK	**Chigu Township**	**1.77**	**237**	*e*P	**Pb**	**03 24 53.8**	**-0.7**	
TSCK				*e*S	**Sb**	**03 25 16.5**	**+0.2**	
SGLT	**Jiouru**	**1.78**	**219**	*e*P	**Pb**	**03 24 55.9**	**+1.3**	
MASBT	**Mashibuluo**	**1.79**	**214**	*e*P	**Pb**	**03 24 53.9**	**-0.9**	
MASBT				*e*S	**Sb**	**03 25 17.5**	**+0.5**	
IRIF	**Iriomote-Funau**	**1.86**	**83**	P	**Pn**	**03 24 53.7**	**+1.2**	
EAST	**Anshuo**	**1.90**	**205**	*e*P	**Pn**	**03 24 54.9**	**+1.9**	
TAW	**Tawu**	**1.90**	**203**	*e*P	**Pn**	**03 24 55.7**	**-1.1**	
HATJ	**Hateruma jima**	**1.92**	**91**	*e*S	**Sn**	**03 25 18.7**	**+2.3**	
SSPT	**Xinbi**	**1.93**	**213**	*e*P	**Pb**	**03 24 56.2**	**-1.0**	
WSSB	**Sushan**	**1.98**	**222**	*e*P	**Pb**	**03 24 56.9**	**-1.2**	
SCZT	**Fangliau**	**2.00**	**210**	*e*P	**Pn**	**03 24 56.7**	**+2.3**	
PNG	**Penghu**	**2.04**	**255**	*e*P	**Pn**	**03 24 56.1**	**+1.1**	
PNG				S	**Sn**	**03 25 21.0**	**+1.5**	
PHUB	**P'eng-hu**	**2.04**	**253**	P	**Pn**	**03 24 56.3**	**+1.3**	
PHUB				*i* S	**Sn**	**03 25 21.5**	**+2.0**	
WDGT	**Dungji**	**2.06**	**246**	*i* P	**Pn**	**03 24 57.0**	**+1.7**	
WDGT				S	**Sn**	**03 25 22.3**	**+2.4**	
SLIU	**Shizi**	**2.07**	**204**	*e*P	**Pn**	**03 24 58.0**	**+2.7**	
LAY	**Lan-yu**	**2.07**	**184**	*e*P	**Pn**	**03 24 56.9**	**+1.5**	
JKRS	**Kuro-shima**	**2.11**	**86**	P	**Pn**	**03 24 57.7**	**+1.9**	
JKRS				*e*S	**Sn**	**03 25 23.1**	**+2.1**	
LYUB	**Lan-yu**	**2.11**	**183**	*e*P	**Pn**	**03 24 55.5**	**-0.4**	
LYUB				*e*S	**Sn**	**03 25 19.2**	**-1.8**	
SMST	**Manzhou Townsh**	**2.23**	**201**	*e*P	**Pn**	**03 24 58.8**	**+1.2**	
VWUC	**VWUC**	**2.23**	**293**	*i* P	**Pn**	**03 24 58.0**	**+0.4**	
VWUC				*i* S	**Sn**	**03 25 23.4**	**-0.7**	
JIJ	**Ishigaki jima**	**2.24**	**83**	P	**Pn**	**03 24 58.9**	**+1.2**	
JIJ				S	**Sn**	**03 25 25.0**	**+0.7**	
VCHM	**Qimei**	**2.27**	**247**	*i* P	**Pn**	**03 24 59.9**	**+1.8**	
VCHM				*i* S	**Sn**	**03 25 27.1**	**+2.0**	
HEN	**Hengchun**	**2.28**	**203**	*e*P	**Pb**	**03 25 02.9**	**-0.3**	
HEN				*e*S	**Sb**	**03 25 30.8**	**-0.2**	
TWK1	**Hengchun**	**2.31**	**201**	*e*P	**Pn**	**03 25 00.8**	**+2.1**	
TWK1				*e*S	**Sb**	**03 25 30.4**	**-1.6**	
TWKBT	**Hengchun**	**2.32**	**201**	*e*P	**Pn**	**03 25 01.4**	**+2.7**	
TWKBT				*e*S	**Sb**	**03 25 30.7**	**-1.3**	
TSEB	**Hengchuen, Pin**	**2.33**	**199**	*e*P	**Pb**	**03 25 02.2**	**-1.8**	
TSEB				*e*S	**Sb**	**03 25 31.7**	**-0.5**	
JISG	**Ishigakijimahi**	**2.42**	**78**	P	**Pn**	**03 25 01.1**	**+0.9**	
JISG				*e*S	**Sn**	**03 25 29.4**	**+0.6**	
PTMZ	**Houxiangcun**	**2.53**	**292**	*e*P	**Pn**	**03 25 02.1**	**+0.5**	
PTMZ				*i* S	**Sn**	**03 25 30.5**	**-1.0**	
MATB	**Ma-tsu**	**2.58**	**322**	*e*P	**Pn**	**03 25 02.4**	**0.0**	
MATB				*e*S	**Sn**	**03 25 32.8**	**+0.1**	
JTJ	**Tarama**	**2.78**	**79**	*e*P	**Pn**	**03 25 06.8**	**+1.7**	
QZH2	**Quanzhou**	**2.95**	**287**	⇑*i*Pn	**Pn**	**03 25 07.9**	**+0.5**	
QZH2				Sn	**Sn**	**03 25 40.8**	**-1.0**	
QZH2				SMN				
	1μm,0.6s							
QZH2				SME				
	1μm,0.7s							
LYJJ	**Jianjiangzhen**	**3.00**	**324**	*e*P	**Pn**	**03 25 08.3**	**+0.2**	
KNM	**Kinmen**	**3.00**	**276**	*e*P	**Pn**	**03 25 10.3**	**+2.1**	
KNMB	**Chin-men Tao**	**3.05**	**277**		**Pn**	**03 25 09.0**	**+0.2**	
KNMB	**Chin-men Tao**	**3.05**	**277**	*e*P	**Pn**	**03 25 09.0**	**+0.2**	
XPSS	**Dashiqiu**	**3.12**	**334**	*e*P	**Pn**	**03 25 09.7**	**-0.1**	
MHZQ	**Yeshan**	**3.13**	**310**	*e*P	**Pn

WMQ	**Urumqi**	**34.05**	**314**	*e*P		**P**	**03 31 06.2**	**+2.0**
MTN	**Manton Dam**	**37.87**	**165**	P		**P**	**03 31 35.5**	**-1.5**
YAK	**Yakutsk**	**38.29**	**6**	LR		LR	03 50 35.0	
	comp=Z,37nm,19.1s,baz=190,slow=41							
MKAR	**Makanchi Array**	**38.72**	**316**	P		**P**	**03 31 44.9**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=108,slow=10,SNR=19							
	comp=Z,2.6nm,0.5s							
MKAR	**Makanchi Array**	**38.72**	**316**			**P**	**03 31 43.9**	**0.0**
MAKZ	**Makanchi**	**38.92**	**316**			**P**	**03 31 46.0**	**+0.3**
MAKZ				IAmb		IAmb	03 31 47.5	
	comp=Z,3.8nm,0.8s							
PDGK	**Podgornoye**	**39.50**	**310**	P		**P**	**03 31 50.1**	**-0.6**
PETK	**Petropavlovsk-**	**39.66**	**34**	LR		LR	03 48 04.4	
	comp=Z,55nm,20.9s,baz=226,slow=36							
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**03 31 59.0**	**-0.1**
	comp=Z,3.4nm,0.5s,baz=115,slow=7.7,SNR=16							
ZALV				LR		LR	03 49 56.6	
	comp=Z,93nm,19.0s,baz=129,slow=38							
	comp=Z,3.4nm,0.5s							
ZALV	**Zalesovo Beam**	**40.56**	**327**			**P**	**03 31 58.5**	**-0.7**
MA2	**Magadan**	**40.87**	**22**	LR		LR	03 50 16.7	
	comp=Z,48nm,19.6s,baz=238,slow=38							
NRN	**Naryn**	**41.61**	**306**	P		**P**	**03 32 07.7**	**-0.7**
NRN				IAmb		IAmb	03 32 11.1	
	comp=Z,5.8nm,1.2s							
H11N1	**WAKE ISLAND Hy**	**42.01**	**87**	T		T	04 17 45.7	
	baz=283,slow=74,SNR=7.0							
H11N2	**WAKE ISLAND Hy**	**42.02**	**87**	T		T	04 17 38.7	
	baz=283,slow=74,SNR=9.1							
H11N3	**WAKE ISLAND Hy**	**42.03**	**87**	T		T	04 17 43.2	
	baz=283,slow=74,SNR=9.7							
H11S3	**WAKE ISLAND Hy**	**42.14**	**89**	T		T	04 18 10.2	
	baz=284,slow=74							
H11S1	**WAKE ISLAND Hy**	**42.15**	**89**	T		T	04 17 34.7	
	baz=284							
H11S2	**WAKE ISLAND Hy**	**42.16**	**89**	T		T	04 18 21.8	
	baz=284,slow=74							
KURK	**Kurchatov**	**42.45**	**320**	P		**P**	**03 32 14.2**	**-0.5**
KURBB	**Kurchatov Arra**	**42.47**	**320**	P		**P**	**03 32 15.2**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=111,slow=7.3,SNR=12							
	comp=Z,1.5nm,0.8s							
MBWA	**Marble Bar**	**45.04**	**183**	P		**P**	**03 32 34.6**	**-1.2**
MBWA				IAmb		IAmb	03 32 39.7	
	comp=Z,16nm,1.1s							
WB0	**Warramunga Arr**	**45.34**	**163**	P		**P**	**03 32 37.4**	**-0.7**
WB0				IAmb		IAmb	03 32 41.1	
	comp=Z,11nm,1.2s							
WRAB	**Tennant Creek**	**45.48**	**163**	P		**P**	**03 32 38.2**	**-1.1**
WRAB				IAmb		IAmb	03 32 52.0	
	comp=Z,4.2nm,0.9s							
WRA	**Warramunga Arr**	**45.49**	**163**	P		**P**	**03 32 38.9**	**-0.5**
	comp=Z,3.4nm,0.6s,baz=344,slow=8.7,SNR=14							
	comp=Z,3.4nm,0.6s							
WRA	**Warramunga Arr**	**45.49**	**163**	P		**P**	**03 32 38.0**	**-1.3**
WR8	**Warramunga Arr**	**45.54**	**163**	P		**P**	**03 32 39.2**	**-0.6**
WR8				IAmb		IAmb	03 32 41.2	
	comp=Z,6.1nm,0.7s							
KKAR	**Karatay Array**	**45.89**	**307**	P		**P**	**03 32 42.8**	**+0.3**
GIRL	**Giralia**	**47.04**	**189**	P		**P**	**03 32 51.1**	**-0.4**
BVAR	**Borovoye Array**	**48.03**	**321**	P		**P**	**03 32 59.1**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=98,slow=8.6,SNR=10							
	comp=Z,2.0nm,0.5s							
BORK	**Borovoye**	**48.08**	**321**	P		**P**	**03 32 59.0**	**-0.2**
BORK				IAmb		IAmb	03 33 00.6	
	comp=Z,5.8nm,1.1s							
ASAR	**Alice Springs**	**48.95**	**165**	P		**P**	**03 33 06.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=340,slow=7.0,SNR=8.8							
	comp=Z,1.3nm,0.5s							
ASAR	**Alice Springs**	**48.95**	**165**	P		**P**	**03 33 05.6**	**-0.7**
NRIK	**Noril'sk**	**49.59**	**345**	LR		LR	03 55 47.2	
	comp=Z,67nm,19.7s,baz=152,slow=38							
CTA	**Charters Tower**	**50.02**	**149**	LR		LR	03 55 26.4	
	comp=Z,44nm,18.1s,baz=246,slow=37							
AMKA	**Amchitka**	**51.43**	**43**	P		**P**	**03 33 25.7**	**+1.0**
MORW	**Morawa**	**53.16**	**186**	P		**P**	**03 33 36.8**	**-1.0**
MORW				IAmb		IAmb	03 34 03.2	
	comp=Z,21nm,1.4s							
AB31	**Akbulak array**	**53.83**	**314**	P		**P**	**03 33 42.7**	**+0.1**
AB31				IAmb		IAmb	03 33 44.0	
	comp=Z,2.7nm,0.7s							
ABKAR	**Akbulak array**	**53.83**	**314**	P		**P**	**03 33 43.2**	**+0.5**
FORT	**Forrest**	**54.92**	**173**	P		**P**	**03 33 49.7**	**-0.9**
FORT				IAmb		IAmb	03 34 03.1	
	comp=Z,7.0nm,0.9s							
ARTI	**Arti**	**55.54**	**323**	LR		LR	03 57 55.3	
	comp=Z,56nm,18.4s,baz=116,slow=36							
ARTI	**Arti**	**55.54**	**323**	P		**P**	**03 33 53.9**	**-1.0**
ARTI				IAmb		IAmb	03 33 55.4	
	comp=Z,7.1nm,0.7s							
NWAO	**Narrogin (SRO)**	**56.88**	**184**	P		**P**	**03 34 04.0**	**-0.6**
BBOO	**Buckleboo**	**58.24**	**166**	P		**P**	**03 34 13.8**	**-0.4**
STKA	**Stephens Creek**	**58.84**	**160**	P		**P**	**03 34 18.1**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=355,slow=8.4,SNR=5.1							
	comp=Z,2.1nm,0.6s							
KIRV	**Kirov**	**60.55**	**325**	LR		LR	04 02 24.9	
	comp=Z,86nm,18.9s,baz=109,slow=38							
KBZ	**Khabaz**	**65.89**	**309**	P		**P**	**03 35 05.8**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=111,slow=8.6,SNR=3.9							
	comp=Z,2.9nm,0.8s							
KDAK	**Kodiak Island**	**67.69**	**35**	LR		LR	04 05 37.5	
	comp=Z,26nm,21.4s,baz=304,slow=36							
SPITS	**Spitsbergen Ar**	**69.65**	**348**	LR		LR	04 10 07.4	
	comp=Z,55nm,18.3s,baz=96,slow=39							
FINES	**FINESS Array B**	**71.75**	**330**	P		**P**	**03 35 41.0**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=56,slow=4.8,SNR=6.8							
FINES				LR		LR	04 10 11.9	
	comp=Z,62nm,19.1s,baz=87,slow=38							
	comp=Z,1.9nm,0.6s							
FINES	**FINESS Array B**	**71.75**	**330**	P		**P**	**03 35 41.5**	**-0.2**
BRTR	**Keskin Array B**	**73.60**	**307**	P		**P**	**03 35 53.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=110,slow=4.4,SNR=4.6							
	comp=Z,0.4nm,0.5s							
AFI	**Afiamalu**	**75.14**	**113**	LR		LR	04 06 49.0	
	comp=Z,23nm,18.4s,baz=278,slow=34							
HFS	**Hagfors**	**77.86**	**331**	LR		LR	04 14 01.5	
	comp=Z,117nm,18.3s,baz=64,slow=38							
NOA	**NORSAR Array B**	**78.51**	**332**	LR		LR	04 14 24.3	
	comp=Z,93nm,18.6s,baz=65,slow=38							
YKA	**Yellowknife Ar**	**82.85**	**23**	P		**P**	**03 36 44.0**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=313,slow=5.0,SNR=18							
	comp=Z,2.1nm,0.6s							
EKA	**Eskdalemuir Ar**	**88.00**	**332**	LR		LR	04 21 04.6	
	comp=Z,54nm,18.8s,baz=18,slow=39							
RAR	**Rarotonga**	**88.65**	**114**	LR		LR	04 17 19.9	
	comp=Z,16nm,18.1s,baz=259,slow=36							
PPT	**Papeete**	**95.88**	**107**	LR		LR	04 13 22.9	
	comp=Z,20nm,20.4s,baz=199,slow=31							

*IDC **09** 03:25:51.9±1.6, 3.°85S×142.°34E, h0km, mb4.1/3, mbtmp4.3/4, ML4.6/1, MS3.0/1, Error ellipse: s-maj=111.6km s-min=26.1km az=120.0*
*NEIC **09** 03:26:03.6±1.6, 4.°09S±0.°09×142.°6E±0.°2, h105km±10km, mb4.3/12, Error ellipse: s-maj=27.7km s-min=9.8km az=108.0*
ISC 09 03:26:02.8±0.9,**4.°1S**±0.°1×**142.°7E**±0.°1,**h115**km,**n21**, σ1$**79**/20,**mb4.1**/4,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**6.89**	**141**	Pn		**Pn**	**03 27 40.0**	**-1.3**
COEN	**Coen**	**9.84**	**178**	Pn		**Pn**	**03 28 21.0**	**-0.2**
CTA	**Charters Tower**	**16.29**	**168**	LR		LR	03 37 21.4	
	comp=Z,52nm,19.3s,baz=275,slow=42							
WB0	**Warramunga Arr**	**17.60**	**207**	P		**P**	**03 29 59.9**	**-0.5**
WB0				IAmb		IAmb	03 30 03.9	
	comp=Z,12nm,0.8s							
WR0	**Warramunga Arr**	**17.71**	**206**	P		**Pn**	**03 30 01.4**	**-0.8**
WR8	**Warramunga Arr**	**17.72**	**206**	P		**P**	**03 30 01.5**	**-0.2**
WR8				IAmb		IAmb	03 30 05.5	
	comp=Z,18nm,0.7s							
WRAB	**Tennant Creek**	**17.77**	**207**	P		**Pn**	**03 30 02.1**	**-0.8**
WRAB				IAmb		IAmb	03 30 06.0	
	comp=Z,7.8nm,0.7s							
WB2	**Warramunga Arr**	**17.77**	**207**	P		**Pn**	**03 30 02.4**	**-0.6**
WB2				IAmb		IAmb	03 30 04.8	
	comp=Z,12nm,0.9s							
WRA	**Warramunga Arr**	**17.78**	**207**	P		**P**	**03 30 01.8**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=25,slow=12,SNR=38							
	comp=Z,10.0nm,0.5s							
WRA	**Warramunga Arr**	**17.78**	**207**	P		**P**	**03 30 01.1**	**-1.2**
KNRA	**Kununurra**	**17.95**	**229**	P		**P**	**03 30 03.3**	**-0.8**
KNRA				IAmb		IAmb	03 30 05.4	
	comp=Z,41nm,1.4s							
ASAR	**Alice Springs**	**21.27**	**203**	P		**P**	**03 30 40.5**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=33,slow=9.9,SNR=16							
	comp=Z,3.5nm,0.9s							
ASAR	**Alice Springs**	**21.27**	**203**	P		**P**	**03 30 40.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.79**	**229**	P		**P**	**03 30 44.0**	**-1.6**
	comp=Z,8.9nm,0.7s,baz=46,slow=13,SNR=14							
	comp=Z,8.9nm,0.7s							
FITZ	**Fitzroy Crossi**	**21.79**	**229**	P		**P**	**03 30 44.6**	**-1.1**
INKA	**Innaminka**	**23.62**	**184**	P		**P**	**03 31 04.7**	**+1.2**
NWAO	**Narrogin (SRO)**	**37.32**	**217**	P		**P**	**03 33 05.5**	**+1.5**
MNAI	**Manna**	**39.67**	**268**	P		**P**	**03 33 24.6**	**+0.5**
MAJO	**Matsushiro**	**40.62**	**354**	P		**P**	**03 33 27.6**	**-3.9**
MAJO				IAmb		IAmb	03 33 40.5	
	comp=Z,3.2nm,0.7s							
ILAR	**Eielson Array**	**85.41**	**24**	P		**P**	**03 38 30.9**	**+3.8**
	comp=Z,1.3nm,0.6s,baz=261,slow=4.6,SNR=11							
	comp=Z,1.3nm,0.6s							
ILAR	**Eielson Array**	**85.41**	**24**	P		**P**	**03 38 30.5**	**+3.4**

*NEIC **09** 03:28:19.4±1.2, 5.°92S±0.°08×151.°9E±0.°2, h10km±1km, mb4.4/11, Error ellipse: s-maj=32.4km s-min=10.0km az=109.0*
*IDC **09** 03:28:29.7±8.8, 5.°90S×151.°25E, h83km±63km, mb3.5/4, mbtmp3.9/5, ML2.0/1, Error ellipse: s-maj=59.8km s-min=58.4km az=16.0*
ISC 09 03:28:23.3±0.8,**5.°8S**±0.°1×**151.°7E**±0.°2,**h41**km,**n21**, σ1$**35**/23,**mb4.1**/10,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**1.70**	**17**			**Pn**	**03 28 49.7**	**-0.8**
RABL				Sn		**Sn**	**03 29 12.3**	**+1.2**
PMG	**Port Moresby**	**5.71**	**231**	P		**Pn**	**03 29 48.0**	**+2.5**
	3.2nm,0.3s,baz=325,slow=8.5,SNR=2.1							
PMG				S		**Sn**	**03 30 46.2**	**-3.6**
	19nm,0.6s,baz=302,slow=4.5,SNR=3.5							
	8.8nm,0.4s							
PMG	**Port Moresby**	**5.71**	**231**			**Pn**	**03 29 47.2**	**+1.7**
GUMO	**Guam**	**20.44**	**341**	P		**P**	**03 32 58.4**	**+1.1**
WB0	**Warramunga Arr**	**21.77**	**229**	P		**P**	**03 33 12.0**	**+0.3**
WB0				IAmb		IAmb	03 33 55.1	
	comp=Z,5.1nm,0.8s							
WR8	**Warramunga Arr**	**21.81**	**228**	P		**P**	**03 33 12.3**	**+0.3**
WR8				IAmb		IAmb	03 33 17.2	
	comp=Z,21nm,1.4s							
WB2	**Warramunga Arr**	**21.91**	**229**	P		**P**	**03 33 14.0**	**+0.8**
WB2				IAmb		IAmb	03 33 56.1	
	comp=Z,19nm,1.5s							
WRA	**Warramunga Arr**	**21.92**	**229**	P		**P**	**03 33 14.3**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=51,slow=10,SNR=6.5							
	comp=Z,3.0nm,0.8s							
WRA	**Warramunga Arr**	**21.92**	**229**	P		**P**	**03 33 11.9**	**-1.4**
ASAR	**Alice Springs**	**24.63**	**222**	P		**P**	**03 33 41.0**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=57,slow=8.6,SNR=5.7							
	comp=Z,1.7nm,0.8s							
ASAR	**Alice Springs**	**24.63**	**222**	P		**P**	**03 33 40.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**28.18**	**242**	P		**P**	**03 34 10.2**	**-2.0**
	comp=Z,1.9nm,0.6s,baz=76,slow=12,SNR=1.8							
	comp=Z,1.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**28.18**	**242**	P		**P**	**03 34 12.4**	**+0.3**
BBOO	**Buckleboo**	**30.53**	**206**	P		**P**	**03 34 32.0**	**-0.8**
BBOO				IAmb		IAmb	03 34 42.5	
	comp=Z,33nm,1.4s							
NWAO	**Narrogin (SRO)**	**41.86**	**225**	P		**P**	**03 36 09.6**	**0.0**
VNDA	**Vanda**	**71.85**	**178**	P		**P**	**03 39 41.5**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=330,slow=4.7,SNR=2.1							
	comp=Z,0.5nm,0.9s							
VNDA	**Vanda**	**71.85**	**178**	P		**P**	**03 39 42.1**	**+0.7**
VNDA				IAmb		IAmb	03 39 56.1	
	comp=Z,1.7nm,1.2s							
N18K	**Kilae Creek**	**77.84**	**24**	P		**P**	**03 40 15.8**	**-0.5**
N18K				IAmb		IAmb	03 40 33.1	
	comp=Z,6.8nm,1.2s							
QSPA	**South Pole Qui**	**84.14**	**180**	P		**P**	**03 40 49.9**	**0.0**
QSPA				IAmb		IAmb	03 41 05.3	
	comp=Z,8.0nm,1.5s							
TORD	**Torodi Ar. Bea**	**149.53**	**286**	PKPbc		**PKPbc**	**03 48 08.9**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=96,slow=3.0,SNR=4.9							
TORD	**Torodi Ar. Bea**	**149.53**	**286**	PKPdf		**PKPdf**	**03 48 05.7**	**+0.9**

*SJA **09** 03:46:38.2±0.7, 32.°49S×71.°62W, h20km±3km, ML3.8, MW3.8*
*IDC **09** 03:46:41.8±3.4, 32.°48S×71.°65W, h52km±30km, mb3.5/3, mbtmp3.6/8, ML3.7/5, MS3.2/2, Error ellipse: s-maj=31.3km s-min=18.7km az=123.0*
*GUC **09** 03:46:41.3±0.8, 32.°50S×71.°51W, h47km±2km, ML3.7*
ISC 09 03:46:40.0±1.2,**32.°48S**±0.°02×**71.°63W**±0.°04,**h28**km±9km, **n73**,σ1$**47**/88,**1C-11D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VA01	**Torpederas**	**0.55**	**181**	*e*P		**Pn**	**03 46 53.1**	**+1.2**
VA01	**Torpederas**	**0.55**	**181**	⇓*i*P		**Pn**	**03 46 53.0**	**+1.2**
VA01				*i* S		**Sn**	**03 47 01.1**	**+1.0**
VA01				IAML			03 47 02.3	
	comp=N,5μm,0.4s							
CO04	**Los Peladeros**	**0.70**	**52**	*e*P		**Pn**	**03 46 54.5**	**+0.1**
CO04				*i* S		**Sn**	**03 47 04.0**	**-0.4**
CO04				IAML			03 47 06.0	
	comp=N,18μm,0.4s							
ROCH	**El Roble**	**0.72**	**134**	⇓*i*P		**Pb**	**03 46 54.5**	**+0.4**
ROCH				*i* S		**Sb**	**03 47 03.7**	**-0.1**
ROCH				IAML			03 47 04.5	
	comp=N,4μm,0.4s							
MT02	**Curacav**	**0.89**	**152**	*e*P		**Pb**	**03 46 56.0**	**-0.7**
MT02				*e*S		**Sb**	**03 47 07.2**	**-1.1**
MT02	**Curacav**	**0.89**	**152**	⇓*i*P		**Pb**	**03 46 56.8**	**0.0**
MT02				*i* S		**Sb**	**03 47 08.1**	**-0.2**
VA03	**San Esteban**	**0.96**	**108**	*e*P		**Pb**	**03 46 57.5**	**-0.5**
VA03				*e*S		**Sb**	**03 47 09.8**	**-0.5**
VA03				IAML			03 47 10.9	
	comp=Z,4μm,0.5s							
VA03	**San Esteban**	**0.96**	**108**	⇓*i*P		**Pb**	**03 46 57.6**	**-0.4**
VA03				*e*S		**Sb**	**03 47 09.3**	**-1.0**
VA03				IAML			03 47 10.9	
	comp=E,8μm,0.1s							
PEL	**Peldehue**	**1.04**	**130**	*e*P		Pn	03 46 53.5	-5.2
PEL				IAML			03 47 12.9	
	comp=Z,2μm,0.3s							
PEL	**Peldehue**	**1.04**	**130**	*e*P		**Pn**	**03 46 58.6**	**-0.1**
PEL				*e*S		**Sb**	**03 47 11.9**	**-0.8**
VA05	**Santo Domingo**	**1.18**	**179**	*e*P		**Pn**	**03 47 01.4**	**+0.8**
VA05				*i* S		**Sn**	**03 47 16.6**	**+0.9**
VA05				IAML			03 47 21.3	
	comp=E,3μm,0.2s							
MT05	**Renca**	**1.18**	**141**	*e*P		**Pn**	**03 47 00.5**	**-0.2**
MT05				*e*S		**Sn**	**03 47 16.0**	**0.0**
MT05				IAML			03 47 22.0	
	comp=Z,1μm,0.3s							
MT05	**Renca**	**1.18**	**141**	⇓*i*P		**Pn**	**03 47 01.1**	**+0.4**
MT05				*e*S		**Sn**	**03 47 15.7**	**-0.2**
MT05				IAML			03 47 19.3	
	comp=E,5μm,0.3s							
MT10	**Hacienda Santa**	**1.22**	**131**	⇓*i*P		**Pn**	**03 47 01.8**	**+0.5**
MT14	**Cerro Cal¡n**	**1.30**	**135**	⇓*i*P		**Pn**	**03 47 02.9**	**+0.6**
MT14				*i* S		**Sn**	**03 47 18.9**	**0.0**
MT14				IAML			03 47 25.2	
	comp=E,3μm,0.3s							
MT16	**CCHEN**	**1.33**	**136**	⇓*i*P		**Pn**	**03 47 03.4**	**+0.6**
MT16				*e*S		**Sn**	**03 47 19.4**	**-0.2**
MT16				IAML			03 47 21.0	
	comp=E,2μm,0.3s							
CO02	**Combarbal**	**1.38**	**23**	*e*P		**Pb**	**03 47 04.7**	**-0.5**
CO02				*e*S		**Sb**	**03 47 23.2**	**+0.8**
CO02				IAML			03 47 25.1	
	comp=Z,3μm,0.3s							
CO02	**Combarbal**	**1.38**	**23**	⇓*i*P		**Pb**	**03 47 04.6**	**-0.5**
CO02				*e*S		**Sb**	**03 47 22.4**	**0.0**
MT03	**Universidad Ad**	**1.39**	**137**	*e*P		**Pn**	**03 47 04.2**	**+0.7**
MT03				*e*S		**Sn**	**03 47 21.8**	**+0.8**
MT03				IAML			03 47 22.6	
	comp=Z,2μm,0.2s							
MT09	**Talagante**	**1.41**	**158**	*e*P		**Pn**	**03 47 05.2**	**+1.3**
MT09				*e*S		**Sn**	**03 47 22.5**	**+1.0**
MT09				IAML			03 47 25.9	
	comp=E,1μm,0.4s							
MT01	**Popeta**	**1.42**	**167**	*e*P		**Pn**	**03 47 05.0**	**+1.0**
MT01				*e*S		**Sb**	**03 47 28.2**	**+4.7**
MT01				IAML			03 47 29.4	
	comp=Z,708nm,0.7s							
MT01	**Popeta**	**1.42**	**167**	⇑*i*P		**Pn**	**03 47 04.9**	**+1.0**
MT01				IAML			03 47 28.8	
	comp=N,1μm,0.6s							

MT12	**Pirque**	**1.55**	**144**	⇓*i*P		**Pn**	**03 47 06.6**	**+0.9**
MT12				*e*S		**Sn**	**03 47 25.4**	**+0.4**
MT12				IAML			03 47 31.8	
	comp=E,3μm,0.3s							
MT08	**Bocatoma Ro**	**1.67**	**126**	*e*P		**Pn**	**03 47 08.7**	**+1.2**
MT08				*e*S		**Sb**	**03 47 30.9**	**+0.1**
MT08				IAML			03 47 32.5	
	comp=Z,442nm,0.6s							
MT08	**Bocatoma Ro**	**1.67**	**126**	⇓*i*P		**Pn**	**03 47 08.5**	**+1.0**
MT08				*e*S		**Sn**	**03 47 28.3**	**+0.2**
MT08				IAML			03 47 30.8	
	comp=E,778nm,0.4s							
BO04	**La Punta**	**1.74**	**151**	*e*P		**Pn**	**03 47 09.6**	**+1.3**
BO04				*e*S		**Sn**	**03 47 30.4**	**+0.8**
BO04				IAML			03 47 36.2	
	comp=E,1μm,0.2s							
CO03	**El Pedregal**	**1.82**	**26**	*e*P		**Pn**	**03 47 10.7**	**+1.2**
CO03				*e*S		**Sb**	**03 47 35.0**	**0.0**
CO03				IAML			03 47 35.5	
	comp=Z,727nm,0.2s							
CO03	**El Pedregal**	**1.82**	**26**	*e*P		**Pn**	**03 47 10.9**	**+1.4**
CO03				*e*S		**Sb**	**03 47 33.1**	**-1.9**
CO03				IAML			03 47 36.9	
	comp=E,1μm,0.2s							
BO01	**Tunca**	**1.97**	**167**	*e*P		**Pn**	**03 47 07.6**	**-3.8**
BO01	**Tunca**	**1.97**	**167**	*e*P		**Pn**	**03 47 12.6**	**+1.2**
BO03	**Pichilemu**	**2.04**	**188**	*e*P		**Pn**	**03 47 12.6**	**+0.2**
BO03				IAML			03 47 49.5	
	comp=N,366nm,0.8s							
RTLS	**Leoncito**	**2.09**	**72**	*e*P		**Pb**	**03 47 16.5**	**-0.9**
RTLS				*e*S		**Sn**	**03 47 38.8**	**+0.1**
RTLS				IAML			03 47 47.1	
	comp=Z,2μm,0.7s							
ARCO	**CERRO ARCO**	**2.31**	**100**	*e*P		**Pb**	**03 47 20.3**	**-0.6**
ARCO				IAML			03 47 53.0	
	comp=Z,302nm,0.8s							
GO04	**Tololo Observa**	**2.40**	**17**	*e*P		**Pn**	**03 47 18.9**	**+1.3**
GO04				*e*S		**Sn**	**03 47 46.0**	**-0.3**
GO04				IAML			03 47 57.8	
	comp=Z,812nm,0.6s							
BO02	**Sierra Bellavi**	**2.42**	**163**	*e*P		**Pn**	**03 47 19.0**	**+1.3**
BO02				IAML			03 47 56.6	
	comp=Z,682nm,0.6s							
BO02	**Sierra Bellavi**	**2.42**	**163**	*e*P		**Pn**	**03 47 18.8**	**+1.1**
BO02				IAML			03 48 00.4	
	comp=E,856nm,0.4s							
AAGR	**Agrelo**	**2.44**	**105**	*e*P		**Pb**	**03 47 22.2**	**-1.0**
AAGR				IAML			03 47 55.0	
	comp=Z,180nm,0.8s							
GO05	**Hualane**	**2.54**	**186**	*e*P		**Pn**	**03 47 19.9**	**+0.5**
GO05				*e*S		**Sb**	**03 47 55.2**	**-0.5**
GO05				IAML			03 48 07.6	
	comp=Z,196nm,0.8s							
ZON	**Zonda**	**2.67**	**71**	*e*P		**Pn**	**03 47 19.7**	**-1.5**
ZON				IAML			03 48 12.9	
	comp=Z,218nm,1.0s							
SJA	**San Juan**	**2.77**	**71**	*e*P		Pn	03 47 14.0	-8.6
SJA				*e*S		Sn	03 47 42.0	-13
SJA				IAML			03 47 43.9	
	comp=Z,301nm,0.3s							
AVIZ	**Vizcacheras**	**2.80**	**112**	*e*P		**Pn**	**03 47 22.9**	**-0.1**
CO01	**Juntas del Tor**	**2.82**	**28**	*e*P		**Pn**	**03 47 24.6**	**+1.2**
CO01				*e*S		**Sn**	**03 47 59.3**	**+2.8**
CO01				IAML			03 48 11.9	
	comp=Z,307nm,0.8s							
ACCO	**Cerro Coronel**	**2.89**	**50**	*e*P		**Pb**	**03 47 27.8**	**-3.2**
ACCO				*e*S		**Sb**	**03 48 11.2**	**+5.2**
ACCO				IAML			03 48 21.4	
	comp=Z,300nm,0.6s							
RTLL	**Cerro Villicun**	**2.92**	**68**	*e*P		**Pn**	**03 47 25.6**	**+1.0**
RTLL				*e*S		Sb	03 48 15.1	+8.5
RTLL				IAML			03 48 18.4	
	comp=Z,208nm,0.4s							
CFA	**Coronel Fontan**	**3.01**	**74**	P		**Pn**	**03 47 28.2**	**+2.4**
	comp=Z,5.5nm,0.3s,baz=264,slow=8.7,SNR=149							
CFA				S		**Sn**	**03 48 02.5**	**+1.5**
	comp=Z,31nm,0.3s,baz=207,slow=15,SNR=4.3							
	comp=Z,18nm,0.3s							
LCO	**Las Campanas**	**3.54**	**13**	*e*P		**Pn**	**03 47 34.5**	**+1.1**
LCO				IAML			03 48 37.5	
	comp=Z,252nm,0.4s					

RTAL	**Retalhuleu**	**0.67**	**18**	P		**Pn**	**03 52 24.6**	**-1.1**
RTAL				S		**Sn**	**03 52 34.7**	**-0.4**
STG5	**El Palmar, Qui**	**0.75**	**47**	*i* P		**Pn**	**03 52 26.4**	**-0.4**
STG8	**El Palmar, Qui**	**0.78**	**44**	*i* P		**Pn**	**03 52 27.2**	**-0.2**
STG8				IAML			03 52 44.2	
	comp=E,13μm,0.2s							
QUEO	**Labor Ovalle**	**1.05**	**21**	*i* P		**Pn**	**03 52 29.9**	**-1.2**
QUEO				IAML			03 52 52.0	
	comp=E,8μm,0.2s							
THIG		**1.07**	**341**	*i* P		**Pn**	**03 52 28.6**	**-2.5**
ESSG	**Sabana Grande**	**1.16**	**65**	*i* P		**Pn**	**03 52 31.1**	**-1.3**
FG8	**Yepocapa, Chim**	**1.36**	**74**	*i* P		**Pn**	**03 52 30.5**	**-4.6**
FG16	**Alotenango, Sa**	**1.41**	**74**	*i* P		**Pn**	**03 52 31.8**	**-4.2**
HUEH	**Huehuetenango**	**1.48**	**15**			**Pn**	**03 52 36.4**	**-0.5**
HUEH	**Huehuetenango**	**1.48**	**15**	P		**Pn**	**03 52 36.6**	**-0.3**
HUEH				S		**Sn**	**03 52 58.8**	**+3.7**
HUEH	**Huehuetenango**	**1.48**	**15**	*i* P		**Pn**	**03 52 36.1**	**-0.7**
HUEH				IAML			03 53 05.2	
	comp=E,4μm,0.4s							
GCG4	**OSOP**	**1.51**	**62**	*i* P		**Pn**	**03 52 37.4**	**+0.1**
GCG4				*i* S		**Sn**	**03 52 55.9**	**+0.1**
PCG5	**San Vicente Pa**	**1.53**	**77**	*i* P		**Pn**	**03 52 33.9**	**-3.6**
PCG5				IAML			03 53 01.1	
	comp=N,8μm,0.4s							
APG	**El Apazote**	**1.79**	**51**	P		**Pn**	**03 52 41.8**	**+0.6**
	comp=N,19nm,0.4s,baz=204,slow=14,SNR=222							
APG				S		**Sn**	**03 53 02.0**	**-0.8**
	comp=N,25nm,0.3s,baz=212,slow=16,SNR=11							
APG				LR	LR		03 53 14.6	
	comp=N,20nm,20.8s,baz=276,slow=42							
APG	**El Apazote**	**1.79**	**51**	*i* P		**Pn**	**03 52 41.8**	**+0.6**
FAME	**Alcaldia de Sa**	**1.84**	**91**	P		**Pn**	**03 52 42.0**	**+0.3**
FAME				S		**Sn**	**03 53 04.4**	**+0.6**
SLOZ	**Alcaldia de Sa**	**2.07**	**86**	P		**Pn**	**03 52 45.1**	**+0.3**
SLOZ				S		**Sn**	**03 53 11.3**	**+1.8**
LOAL	**Lomas de Alarc**	**2.07**	**87**	P		**Pn**	**03 52 45.3**	**+0.5**
LOAL				S		**Sn**	**03 53 11.9**	**+2.4**
AVCB	**Coban**	**2.15**	**43**	IAML			03 53 25.8	
	comp=E,6μm,0.5s							
JUAM	**Asuncion Mita**	**2.19**	**78**	*i* P		**Pn**	**03 52 46.5**	**+0.1**
CEVE	**Cerro Verde**	**2.22**	**91**	P		**Pn**	**03 52 47.1**	**0.0**
CEVE				S		**Sn**	**03 53 15.0**	**+1.5**
UNIC	**Universidad Ca**	**2.30**	**87**	P		**Pn**	**03 52 47.8**	**-0.2**
UNIC				S		**Sn**	**03 53 17.0**	**+2.0**
JAYA	**Jayaque - finc**	**2.40**	**95**	P		**Pn**	**03 52 49.3**	**-0.2**
JAYA				S		**Sn**	**03 53 19.7**	**+1.9**
JAYA	**Jayaque - finc**	**2.40**	**95**	*i* P		**Pn**	**03 52 48.3**	**-1.2**
JAYA				*i* S		**Sn**	**03 53 15.7**	**-2.1**
JAYA				IAML			03 53 26.4	
	comp=N,4μm,0.3s							
CEDA	**San Andres**	**2.45**	**92**	P		**Pn**	**03 52 49.8**	**-0.2**
CEDA				S		**Sn**	**03 53 21.1**	**+2.4**
MTO3	**Montecristo**	**2.53**	**78**			**Pn**	**03 52 51.2**	**-0.1**
MTO3	**Montecristo**	**2.53**	**78**	P		**Pn**	**03 52 51.1**	**-0.2**
MTO3				S		**Sn**	**03 53 23.2**	**+2.3**
MTO3	**Montecristo**	**2.53**	**78**	*i* P		**Pn**	**03 52 51.0**	**-0.2**
PMON	**Piamonte**	**2.53**	**94**	P		**Pn**	**03 52 51.2**	**0.0**
PMON				S		**Sn**	**03 53 21.8**	**+1.0**
LALI	**Alcalda de L**	**2.55**	**99**	P		**Pn**	**03 52 51.6**	**+0.2**
LALI				S		**Sn**	**03 53 23.2**	**+2.0**
ZAFR2	**Estanzuela, Za**	**2.58**	**74**	*i* P		**Pn**	**03 52 51.7**	**0.0**
ESQI	**Esquipulas**	**2.58**	**75**			**Pn**	**03 52 51.4**	**-0.5**
ESQI	**Esquipulas**	**2.58**	**75**	P		**Pn**	**03 52 52.1**	**+0.2**
ESQI				S		**Sn**	**03 53 24.7**	**+2.5**
UEES	**Universidad Ev**	**2.60**	**93**	P		**Pn**	**03 52 52.6**	**+0.4**
UEES				S		**Sn**	**03 53 25.5**	**+2.9**
SEMO	**Seminario San**	**2.62**	**94**	P		**Pn**	**03 52 52.3**	**0.0**
SEMO				S		**Sn**	**03 53 24.6**	**+1.6**
PANCS	**Alcalda de**	**2.67**	**95**	P		**Pn**	**03 52 53.3**	**+0.2**
PANCS				S		**Sn**	**03 53 25.2**	**+1.0**
LOMA	**Loma Larga**	**2.67**	**95**	P		**Pn**	**03 52 53.3**	**+0.1**
LOMA				S		**Sn**	**03 53 26.0**	**+1.5**
LLGN	**La Laguna**	**2.89**	**84**	P		**Pn**	**03 52 55.7**	**-0.5**
PAVA	**Las Pavas**	**2.90**	**93**	P		**Pn**	**03 52 56.2**	**0.0**
PAVA				S		**Sn**	**03 53 32.1**	**+2.2**
COEG	**Centro de Oper**	**2.96**	**95**	P		**Pn**	**03 52 57.7**	**+0.7**
COEG				S		**Sn**	**03 53 33.5**	**+2.1**
P5NO	**Presa 5 de nov**	**3.06**	**88**	P		**Pn**	**03 52 58.0**	**-0.4**
TECO	**Alcaldia de Te**	**3.06**	**96**	P		**Pn**	**03 52 58.4**	**-0.1**
TECO				S		**Sn**	**03 53 36.0**	**+2.1**
TGIG		**3.10**	**338**	*i* P		**Pn**	**03 52 57.5**	**-1.6**
SARH	**Santa Rosa de**	**3.18**	**73**	P		**Pn**	**03 53 01.0**	**+0.9**
SARH				S		**Sn**	**03 53 39.1**	**+2.3**
SARH	**Santa Rosa de**	**3.18**	**73**	*i* P		**Pn**	**03 52 59.8**	**-0.3**
PACA	**Pacayal**	**3.51**	**96**	P		**Pn**	**03 53 05.4**	**+0.7**
PETF	**Flores**	**3.60**	**33**			**Pn**	**03 53 06.3**	**+0.5**
PETF	**Flores**	**3.60**	**33**	P		**Pn**	**03 53 06.8**	**+0.9**
PETF	**Flores**	**3.60**	**33**	*i* P		**Pn**	**03 53 06.4**	**+0.6**
MARCA	**Marcala la Paz**	**3.77**	**85**	P		**Pn**	**03 53 08.6**	**+0.4**
MARCA	**Marcala la Paz**	**3.77**	**85**	*i* P		**Pn**	**03 53 06.8**	**-1.5**
CNCH	**Conchagua**	**4.01**	**98**	P		**Pn**	**03 53 12.0**	**+0.4**
CNCH				S		**Sn**	**03 53 59.7**	**+2.3**
CMIG	**Matias Romero**	**4.29**	**318**	P		**Pn**	**03 53 12.9**	**-2.3**
	comp=N,27nm,0.4s,baz=159,slow=15,SNR=26							
CMIG				S		**Sn**	**03 54 02.8**	**-1.2**
	comp=N,190nm,19.6s,baz=119,slow=42							
BOAB	**BOACO BROADBAN**	**6.25**	**102**			**Pn**	**03 53 42.0**	**-0.2**
JUD3	**Juan Diaz 3**	**7.25**	**120**			**Pn**	**03 53 57.2**	**+1.2**
TLIG	**Tlapa**	**7.38**	**301**			**Pn**	**03 53 59.0**	**+1.2**
JTS	**Las Juntas de**	**7.69**	**117**	P		**Pn**	**03 54 00.1**	**-1.8**
	comp=N,2.5nm,0.3s,baz=317,slow=19,SNR=6.7							
JTS				S		**Sn**	**03 55 24.0**	**-3.8**
	comp=N,3.7nm,0.7s,baz=249,slow=16,SNR=0.9							
JTS	**Las Juntas de**	**7.69**	**117**			**Pn**	**03 54 01.6**	**-0.3**
JTS						**Sn**	**03 55 26.2**	**-1.6**
BRU2	**Volcan**	**10.36**	**118**			**Pn**	**03 54 39.6**	**+0.8**
SAND	**Sanderson**	**18.57**	**331**			**Pn**	**03 56 27.2**	**+0.7**
TXAR	**Lajitas Array**	**18.84**	**327**	P		**Pn**	**03 56 29.6**	**-0.2**
	comp=N,2.0nm,0.7s,baz=154,slow=13,SNR=31							
TXAR	**Lajitas Array**	**18.84**	**327**			**Pn**	**03 56 30.2**	**+0.4**
OZNA	**Ozona**	**18.96**	**335**	P		**Pn**	**03 56 31.6**	**+0.4**
Z47A	**Carrollton**	**19.54**	**10**	P		**Pn**	**03 56 37.5**	**-0.5**
Z47A				IAmb	IAmb		03 56 39.1	
	comp=Z,11nm,0.7s							
ALPN	**Alpine**	**19.66**	**329**			**Pn**	**03 56 39.5**	**0.0**
PLPT	**Palo Pinto**	**19.73**	**344**	P		**P**	**03 56 39.0**	**+0.4**
PLPT				IAmb	IAmb		03 56 39.9	
	comp=Z,7.0nm,0.8s							
MNHN	**Monahans**	**20.03**	**332**			Pn	03 56 43.5	-0.4
MNHN				IAmb	IAmb		03 56 44.8	
	comp=Z,8.3nm,0.7s							
PECS	**Pecos**	**20.58**	**330**	P		**P**	**03 56 48.6**	**+0.8**
ODSA	**Odessa**	**20.60**	**334**	P		**P**	**03 56 49.0**	**+0.9**
ODSA				IAmb	IAmb		03 56 49.2	
	comp=Z,8.2nm,0.8s							
MIAR	**Mount Ida**	**20.63**	**356**			**P**	**03 56 48.1**	**-0.1**
VHRN	**Van Horn**	**20.68**	**327**			**P**	**03 56 50.2**	**+1.2**
VHRN				IAmb	IAmb		03 56 52.5	
	comp=Z,5.4nm,0.7s							
APMT	**Aspermont**	**20.75**	**340**			**P**	**03 56 49.5**	**-0.1**
APMT				IAmb	IAmb		03 56 51.5	
	comp=Z,7.0nm,0.6s							
X48A	**Hartselle**	**20.95**	**11**			**P**	**03 56 51.4**	**-0.3**
X48A				IAmb	IAmb		03 56 57.8	
	comp=Z,6.1nm,0.9s							
TPB28		**21.13**	**329**	P		**P**	**03 56 54.5**	**+0.6**
TPB28				IAmb	IAmb		03 56 59.0	
	comp=Z,25nm,0.4s							
CLNB	**Carlsbad**	**21.32**	**331**	P		**P**	**03 56 56.4**	**+0.5**
FPAL	**Fort Paine**	**21.34**	**14**			**P**	**03 56 55.7**	**-0.3**
FPAL				IAmb	IAmb		03 57 18.8	
	comp=Z,4.5nm,0.8s							
SDV	**Santo Domingo**	**21.44**	**101**	LR	LR		04 05 58.6	
	comp=Z,45nm,18.3s,baz=258,slow=39							
GDL2	**Guadalupe Moun**	**21.50**	**330**	P		**P**	**03 56 57.8**	**0.0**
MNTX	**Cornudas Mount**	**21.61**	**327**			**P**	**03 56 58.6**	**-0.3**
MNTX				IAmb	IAmb		03 56 59.9	
	comp=Z,5.2nm,0.8s							
W35A	**Tecumseh**	**21.64**	**349**	P		**P**	**03 56 58.6**	**-0.6**
W35A				IAmb	IAmb		03 57 00.0	
	comp=Z,5.6nm,0.6s							
V48A	**Smith Brothers**	**22.24**	**11**	P		**P**	**03 57 04.5**	**-1.0**
V48A				IAmb	IAmb		03 57 05.7	
	comp=Z,6.5nm,0.9s							
WVT	**Waverly**	**22.45**	**9**	P		**P**	**03 57 06.0**	**-1.8**
AMTX	**Amarillo**	**22.70**	**339**	P		**P**	**03 57 09.2**	**-1.3**
TKL	**Tuckaleechee C**	**22.89**	**17**	P		**P**	**03 57 09.4**	**-3.0**
	comp=Z,2.2nm,0.7s,baz=186,slow=11,SNR=4.0							
	comp=Z,2.2nm,0.7s							
TKL	**Tuckaleechee C**	**22.89**	**17**	P		**P**	**03 57 12.7**	**+0.2**
TKL				IAmb	IAmb		03 57 39.6	
	comp=Z,3.4nm,0.8s							
T47A	**Sharon Grove**	**23.41**	**10**	P		**P**	**03 57 16.1**	**-1.5**
121A	**Cookes Peak, D**	**23.55**	**325**			**P**	**03 57 20.2**	**+0.9**
S39A	**Bolivar**	**23.74**	**357**	P		**P**	**03 57 20.6**	**-0.2**
S44A	**Carbondale**	**23.83**	**5**			**P**	**03 57 20.3**	**-1.2**
CRNM	**Carthage**	**24.08**	**329**	P		**P**	**03 57 25.0**	**+0.8**
Y22A	**Socorro**	**24.19**	**328**			**P**	**03 57 26.6**	**+1.4**
Y22A				IAmb	IAmb		03 57 29.3	
	comp=Z,5.0nm,0.8s							
SBM	**South Baldy**	**24.33**	**328**	P		**P**	**03 57 28.8**	**+2.2**
LENM	**Lemitar**	**24.37**	**329**	P		**P**	**03 57 27.3**	**+0.5**
RTBA	**Rita Blanca**	**24.46**	**339**	P		**P**	**03 57 27.5**	**0.0**
ANMO	**Albuquerque**	**24.74**	**330**	P		**P**	**03 57 31.2**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=150,slow=13,SNR=18							
	comp=Z,2.9nm,0.8s							
ANMO	**Albuquerque**	**24.74**	**330**			**P**	**03 57 30.8**	**+0.6**
OLIL	**Olney**	**24.98**	**7**	P		**P**	**03 57 31.6**	**-0.5**
SJG	**San Juan**	**25.11**	**77**	LR	LR		04 07 17.4	
	comp=Z,37nm,19.2s,baz=248,slow=36							
T25A	**Trinidad**	**25.71**	**337**	P		**P**	**03 57 39.4**	**+0.5**
T25A				IAmb	IAmb		03 57 41.9	
	comp=Z,2.5nm,0.7s							
X16A	**Lo Mia Camp, P**	**27.02**	**323**	P		**P**	**03 57 52.5**	**+1.7**
PV13	**Radium Mtn., P**	**28.46**	**331**	P		**P**	**03 58 05.2**	**+1.5**
HMU	**Henry Mountain**	**29.22**	**328**	P		**P**	**03 58 11.6**	**+1.1**
HMU				IAmb	IAmb		03 58 17.5	
	comp=Z,2.8nm,0.8s							
KNB	**Kanab**	**29.65**	**325**	P		**P**	**03 58 14.7**	**+0.5**
KNB				IAmb	IAmb		03 58 16.4	
	comp=Z,2.0nm,0.7s							
MTPU	**Mount Pierson**	**30.05**	**327**			**P**	**03 58 19.2**	**+1.3**
MTPU				IAmb	IAmb		03 58 22.4	
	comp=Z,2.1nm,0.7s							
PDAR	**Pinedale Array**	**32.56**	**335**	P		**P**	**03 58 39.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=156,slow=10,SNR=2.7							
	comp=Z,0.2nm,0.3s							
SNOW	**Snow King Moun**	**33.63**	**335**	P		**P**	**03 58 49.8**	**+0.6**
ELK	**Elko**	**33.63**	**327**			**P**	**03 58 51.3**	**+2.0**
ELK				IAmb	IAmb		03 58 53.5	
	comp=Z,1.6nm,0.8s							
NVAR	**Mina Array Bea**	**33.81**	**321**	P		**P**	**03 58 52.7**	**+1.8**
	comp=Z,2.6nm,0.7s,baz=137,slow=8.4,SNR=14							
NVAR				LR	LR		04 14 16.1	
	comp=Z,42nm,19.8s,baz=240,slow=39							
	comp=Z,2.6nm,0.7s							
NVAR	**Mina Array Bea**	**33.81**	**321**	P		**P**	**03 58 51.6**	**+0.8**
KVN	**Kaiserville**	**34.09**	**322**			**P**	**03 58 54.0**	**+0.8**
HLID	**Hailey**	**35.32**	**331**			**P**	**03 59 04.4**	**+0.7**
HLID				IAmb	IAmb		03 59 05.5	
	comp=Z,1.6nm,0.9s							
MCMT	**McKenzie Canyo**	**35.61**	**334**	P		**P**	**03 59 07.4**	**+1.1**
PLID	**Pearl Lake**	**37.22**	**331**			**P**	**03 59 20.6**	**+0.6**
PLID				IAmb	IAmb		03 59 21.1	
	comp=Z,5.0nm,1.3s							
LPAZ	**La Paz**	**38.09**	**141**	P		**P**	**03 59 27.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=314,slow=5.6,SNR=4.9							
	comp=Z,0.2nm,0.6s							
LPAZ	**La Paz**	**38.09**	**141**	P		**P**	**03 59 28.2**	**+0.1**
F10A	**Beach Ranch, E**	**38.45**	**331**			**P**	**03 59 30.8**	**+0.6**
H04A	**Detroit Lake**	**40.06**	**326**	P		**P**	**03 59 45.0**	**+1.4**
SIV	**San Ignacio**	**42.55**	**133**	P		**P**	**04 00 04.3**	**0.0**
	comp=Z,0.5nm,0.4s,baz=310,slow=7.9,SNR=2.8							
	comp=Z,0.5nm,0.4s							
YKA	**Yellowknife Ar**	**51.16**	**347**	P		**P**	**04 01 09.8**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=154,slow=7.9,SNR=6.7							
YKA				PcP	**PcP**		**04 02 25.4**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=159,slow=3.1,SNR=5.1							
	comp=Z,0.7nm,0.5s							
YKA	**Yellowknife Ar**	**51.16**	**347**	P		**P**	**04 01 12.3**	**+1.4**
YKA						**PcP**	**04 02 26.9**	**+1.0**
ILAR	**Eielson Array**	**62.98**	**337**	P		**P**	**04 02 34.6**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=110,slow=6.8,SNR=5.2							
	comp=Z,1.6nm,0.9s							
EKA	**Eskdalemuir Ar**	**78.01**	**36**	P		**P**	**04 04 03.0**	**-3.4**
	comp=Z,0.8nm,0.6s,baz=278,slow=7.7,SNR=5.5							
	comp=Z,0.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**90.32**	**76**	P		**P**	**04 05 06.3**	**-3.4**
	comp=Z,0.5nm,0.9s,baz=278,slow=5.9,SNR=1.7							
	comp=Z,0.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**90.32**	**76**	P		**P**	**04 05 08.9**	**-0.8**
HHC	**Hu-ho-hao-te**	**121.36**	**339**	*e*P		**PKiKP**	**04 11 02.4**	**+0.8**
WMQ	**Urumqi**	**122.58**	**0**	*e*PKP		**PKiKP**	**04 11 05.5**	**+1.6**
WMQ				sPKP	sPKPdf		04 11 19.9	-2.1
CMAR	**Chiang Mai Arr**	**146.13**	**341**	PKPbc		**PKPab**	**04 11 49.3**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=334,slow=3.9,SNR=16							
CMAR	**Chiang Mai Arr**	**146.13**	**341**	PKPdf		**PKPdf**	**04 11 48.0**	**+0.1**

*IDC **09** 04:07:05.8±1.9, 34.°00S×73.°50W, h0km, mb3.2/1, mbtmp3.4/4, ML3.6/3, MS2.7/1, Error ellipse: s-maj=36.3km s-min=27.1km az=83.0*

*GUC **09** 04:07:08.9±0.8, 33.°89S×73.°28W, h18km±2km, ML3.1*

ISC 09 04:07:06.5±3.5, 33.°95S±0.°05×73.°31W±0.°08, h2km±20km, n27, σ1s43/39, 9C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BO03	**Pichilemu**	**1.24**	**116**	⇑	*e*P	**Pn**	**04 07 31.1**	**+0.3**
BO03					*e*S	**Sb**	**04 07 47.4**	**+0.3**
BO03					IAML		04 07 48.9	
	comp=N,386nm,0.3s							
VA05	**Santo Domingo**	**1.45**	**79**	⇑	*e*P	**Pn**	**04 07 34.0**	**+0.4**
VA05					*e*S	**Sg**	**04 07 53.5**	**+0.6**
VA05					IAML		04 07 56.2	
	comp=E,429nm,0.4s							
GO05	**Hualane**	**1.55**	**133**	⇑	*e*P	**Pn**	**04 07 35.4**	**+0.2**
GO05					*e*S	**Sn**	**04 07 54.4**	**-1.5**
GO05					IAML		04 07 56.5	
	comp=N,334nm,0.4s							
VA01	**Torpederas**	**1.67**	**57**		*e*P	**Pn**	**04 07 36.6**	**-0.2**
VA01					*e*S	**Sb**	**04 07 57.9**	**-1.5**
MT01	**Popeta**	**1.72**	**88**	⇑	*e*P	**Pn**	**04 07 37.6**	**+0.2**
MT01					*e*S	**Sb**	**04 07 59.7**	**-1.1**
MT01					IAML		04 08 01.5	
	comp=N,244nm,0.4s							
MT09	**Talagante**	**1.94**	**85**	⇑	*e*P	**Pn**	**04 07 40.9**	**+0.3**
MT09					*e*S	**Sb**	**04 08 06.0**	**-1.4**
MT09					IAML		04 08 06.6	
	comp=N,382nm,0.5s							
MT02	**Curacav**	**1.94**	**70**	⇑	*e*P	**Pn**	**04 07 40.6**	**+0.2**
MT02					*e*S	**Sb**	**04 08 05.3**	**-2.0**
MT02					IAML		04 08 07.0	
	comp=N,153nm,0.4s							
ROCH	**El Roble**	**2.16**	**64**		*e*P	**Pn**	**04 07 44.4**	**+0.8**
ROCH					*e*S	**Sb**	**04 08 11.5**	**-2.2**
ROCH					IAML		04 08 17.5	
	comp=N,206nm,0.4s							
MT05	**Renca**	**2.22**	**76**		*e*P	**Pn**	**04 07 45.2**	**+0.9**
MT05					*e*S	**Sb**	**04 08 13.8**	**-1.5**
MT05					IAML		04 08 16.2	
	comp=N,219nm,0.4s							
BO04	**La Punta**	**2.25**	**92**		*e*P	**Pn**	**04 07 46.0**	**+1.3**
BO04					*e*S	**Sb**	**04 08 14.7**	**-1.4**
BO02	**Sierra Bellavi**	**2.25**	**112**	⇑	*e*P	**Pn**	**04 07 46.8**	**+1.9**
BO02					*e*S	**Sb**	**04 08 15.2**	**-1.1**
MT12	**Pirque**	**2.31**	**85**		*e*P	**Pn**	**04 07 46.6**	**+1.0**
MT12					*e*S	**Sb**	**04 08 15.7**	**-2.2**
MT12					IAML		04 08 16.4	
	comp=E,399nm,0.4s							
PEL	**Peldehue**	**2.34**	**71**	⇑	*e*P	**Pn**	**04 07 47.3**	**+1.3**
PEL					*e*S	**Sb**	**04 08 16.7**	**-2.0**
PEL					IAML		04 08 19.9	
	comp=N,175nm,0.6s							
MT03	**Universidad Ad**	**2.38**	**80**		*e*P	**Pn**	**04 07 47.7**	**+1.1**
MT03					*e*S	**Sb**	**04 08 17.5**	**-2.4**
MT03					IAML		04 08 24.0	
	comp=E,268nm,0.3s							
ML02	**Panimavida**	**2.38**	**140**		*e*P	**Pn**	**04 07 47.7**	**+1.1**
ML02					*e*S	**Sn**	**04 08 16.4**	**0.0**
MT10	**Hacienda Santa**	**2.41**	**74**	⇑	*e*P	**Pn**	**04 07 48.8**	**+1.7**
VA03	**San Esteban**	**2.60**	**64**		*e*P	**Pn**	**04 07 50.4**	**+0.8**
VA03					*e*S	**Sn**	**04 08 22.4**	**+0.6**
VA03					IAML		04 08 25.1	
	comp=E,144nm,0.3s							
H03S1	**Juan Fernandez**	**4.65**	**270**	T		T	04 12 43.9	
	baz=100,slow=70,SNR=3.5							
H03S3	**Juan Fernandez**	**4.66**	**270**	T		T	04 12 54.8	
	baz=100,slow=70,SNR=3.4							
H03S2	**Juan Fernandez**	**4.67**	**270**	T		T	04 12 51.6	
	baz=100,slow=70,SNR=3.6							
H03N1	**Juan Fernandez**	**4.70**	**275**	T		T	04 12 59.4	
	baz=89,slow=73,SNR=5.0							
H03N3	**Juan Fernandez**	**4.70**	**275**	T		T	04 12 58.8	
	baz=89,slow=73,SNR=5.9							
H03N2	**Juan Fernandez**	**4.71**	**275**	T		T	04 12 58.0	
	baz=89,slow=73,SNR=5.0							
CFA	**Coronel Fontan**	**4.87**	**63**	Pn		**Pn**	**04 08 23.4**	**+2.6**
	comp=E,0.4nm,0.3s,baz=239,slow=16,SNR=16							
CFA				Sn		**Sn**	**04 09 21.1**	**+3.2**
	comp=E,0.8nm,0.3s,baz=321,slow=22,SNR=7.6							
CFA				LR		LR	04 10 07.7	
	comp=E,71nm,18.3s,baz=196,slow=36							
	comp=E,1.0nm,0.3s							
PLCA	**Paso Flores**	**7.12**	**163**	Pn		**Pn**	**04 08 51.2**	**-0.4**
	comp=E,0.9nm,0.3s,baz=332,slow=14,SNR=26							
PLCA				Sn		**Sn**	**04 10 13.9**	**+0.8**
	baz=233,slow=4.7							
	comp=E,2.4nm,0.4s							
LPAZ	**La Paz**	**18.20**	**16**	P		**P**	**04 11 21.1**	**-0.2**
	baz=176,slow=9.8,SNR=5.6							
	comp=E,1.0nm,0.7s							
TXAR	**Lajitas Array**	**69.19**	**332**	P		**P**	**04 18 14.1**	**-0.5**
	comp=E,0.1nm,0.5s,baz=143,slow=7.2,SNR=4.0							
	comp=E,0.1nm,0.5s							

*NEIC **09** 04:12:02.9, 24.°12N×121.°69E, h27km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.27; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.85; $M_{r\theta}$0.13; $M_{r\phi}$-0.81; $M_{\theta\phi}$0.86; Fault plane solution: $M_0$1.64000×10^{15} NP1:ϕ_s21.77000°, δ61.53000°, λ.72.81000°. NP2:ϕ_s234.75000°, δ32.88000°, λ118.58000°. Principal axes: T 1.5892, Plg69.0000°, Azm257.0000°; N 0.0893, Plg15.0000°, Azm30.0000°; P -1.6785, Plg15.0000°, Azm124.0000°;*

*BJI **09** 04:12:02.1, 24.°19N×121.°82E, h31km, mB4.2/7, mb4.2/15, ML4.2/5, Ms3.9/11, Ms7 3.6/13*

*NIED **09** 04:12:02.4, 24.°08N×121.°67E, h29km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.91; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$-1.62; $M_{r\theta}$0.95; $M_{\theta\phi}$-1.04; $M_{r\phi}$0.84; Fault plane solution: $M_0$2.99000×10^{15} NP1: ϕ_s218.00000°, δ33.00000°, λ.85.00000°. NP2:ϕ_s44.00000°, δ58.00000°, λ.93.00000°.*

*JMA **09** 04:12:02.4±0.1, 24.°1N±0.°6×12.°2E±.°, h29km±1km, MV4.0/16, TAIWAN REGION*

*NEIC **09** 04:12:03.0±1.2, 24.°11N±0.°02×121.°69E±0.°04, h29km±4km, mb4.4/25, Mwr4.1/22, Error ellipse: s-maj=5.9km s-min=2.1km az=116.0*

*ASIES **09** 04:12:03.5, 24.°15N×121.°67E, h27km, Mw4.0, Fault plane solution: NP1:ϕ_s225.00000°, δ25.00000°, λ.114.00000°. NP2:ϕ_s19.00000°, δ67.00000°, λ.79.00000°.*

*TAP **09** 04:12:03.3, 24.°15N×121.°67E, h29km, ML4.7, B*

*IDC **09** 04:12:08.4±4.7, 24.°09N×121.°70E, h84km±43km, mb3.7/12, mbtmp4.0/15, MS3.3/16, Error ellipse: s-maj=24.9km s-min=14.2km az=64.0*

ISC 09 04:12:03.0±0.6, 24.°13N±0.°01×121.°69E±0.°02, h30km±3km, n256, σ1s12/385, mb4.3/26, MS3.4/15, 9C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ETL	**Fush Village**	**0.07**	**294**	⇑	*i*P	**Pb**	**04 12 08.3**	**+0.1**
ETL					S	**Sb**	**04 12 12.4**	**+0.6**
NACB	**Ninganchiao**	**0.10**	**296**		P	**Pb**	**04 12 08.2**	**-0.1**
NACB	**Ninganchiao**	**0.10**	**296**		S	**Sb**	**04 12 12.2**	**+0.2**
NACB	**Ninganchiao**	**0.10**	**296**		Pg	**Pb**

LIOB	**Emei**	**0.80 310**	||P	**Pb**	04 12 19.2	+0.7
LIOB				eS	**Sn**	04 12 29.8	+0.5
NSTT	**Nanjuang**	**0.80 308**	||P	**Pb**	04 12 19.0	+0.5
NSTT				S	**Sb**	04 12 29.2	+0.2
YULB	**Yu-li**	**0.82 206**		P	**Pn**	04 12 17.2	-1.4
YULB	**Yu-li**	**0.82 206**		Pn	**Pn**	04 12 16.8	-1.7
YULB	**Yu-li**	**0.82 206**		eP	**Pn**	04 12 17.2	-1.4
ECBN	**Changbin**	**0.84 195**		eP	**Pn**	04 12 19.2	+0.4
ECBN				eS	**Sb**	04 12 30.4	+0.4
NHDH	**Xindian Distri**	**0.84 350**		eP	**Pb**	04 12 19.2	0.0
NHDH				eS	**Sn**	04 12 30.3	+0.1
TIPB	**Shuangxi**	**0.85 8**		eP	**Pb**	04 12 19.1	-0.1
TIPB				eS	**Sn**	04 12 30.3	0.0
EYUL	**Yuli**	**0.85 204**		eP	**Pn**	04 12 19.1	+0.1
TWA	**Mucha**	**0.85 353**		eP	**Pn**	04 12 19.4	+0.1
TWA				eS	**Sn**	04 12 30.6	+0.2
TWF1	**Yuli**	**0.85 205**		eP	**Pn**	04 12 17.7	-1.4
TWF1				eS	**Sb**	04 12 30.8	+0.3
TATO	**Taipei**	**0.86 348**		P	**Pb**	04 12 19.7	+0.2
TATO	**Taipei**	**0.86 348**		S	**Sn**	04 12 31.4	+0.7
TATO	**Taipei**	**0.86 348**		Pn	**Pn**	04 12 19.2	+0.1
WHYT	**Xinyi Township**	**0.88 241**		eP	**Pn**	04 12 20.1	+0.7
WHYT				eS	**Sb**	04 12 31.8	+0.5
NHY	**Taipei**	**0.91 353**		eP	**Pb**	04 12 20.2	-0.1
NHY				eS	**Sn**	04 12 32.7	+0.8
TWB1	**Santiao Chiao**	**0.91 17**		eP	**Pb**	04 12 20.5	+0.2
TWB1				eS	**Sb**	04 12 33.1	+0.9
NMLH	**Miaoli**	**0.92 296**		eP	**Pb**	04 12 21.5	+1.1
SBCB	**Hsinchu**	**0.92 316**	||eP	**Pb**	04 12 21.4	+0.9
SBCB				eS	**Sb**	04 12 34.1	+1.8
TCU	**Taichung**	**0.93 271**		eP	**Pb**	04 12 22.0	+1.5
TCU				eS	**Sb**	04 12 35.4	+2.8
HSN	**Hsinchu**	**0.94 316**	||P	**Pb**	04 12 21.4	+0.7
HSN				S	**Sb**	04 12 35.0	+2.2
WFSB	**Wu-fen Shan**	**0.94 5**		P	**Pb**	04 12 21.1	+0.3
WFSB				eS	**Sb**	04 12 34.0	+1.1
NCUH	**Zhongli**	**0.95 331**		P	**Pb**	04 12 21.6	+0.6
NCUH				S	**Sb**	04 12 35.1	+1.9
WNT	**Mingjian**	**0.95 255**	||eP	**Pb**	04 12 21.9	+0.9
WNT				eS	**Sb**	04 12 35.6	+2.3
CHKH	**Chenggong**	**0.97 196**		eP	**Pn**	04 12 20.7	0.0
CHKH				eS	**Sb**	04 12 34.8	+0.9
SXI1	**Grass Mountain**	**0.97 10**		eP	**Pb**	04 12 21.6	+0.1
SXI1				eS	**Sb**	04 12 35.2	+1.3
WDJ	**Dajia District**	**0.98 283**		eP	**Pb**	04 12 22.6	+1.1
WDJ				eS	**Sb**	04 12 35.4	+1.3
FULB	**Fuli**	**1.00 202**		eP	**Pn**	04 12 20.9	-0.1
TWS1	**Kuangyinshan**	**1.00 346**		eP	**Pb**	04 12 21.6	-0.1
TWS1				eS	**Sb**	04 12 35.6	+1.0
TNOU	**National Taiwa**	**1.02 4**		eP	**Pb**	04 12 21.8	-0.3
TNOU				eS	**Sb**	04 12 35.1	0.0
YM01	**YM01**	**1.02 354**		eP	**Pn**	04 12 21.5	+0.2
YM01				eS	**Sb**	04 12 35.1	-0.1
ALS	**Alishan**	**1.02 233**	||P	**Pn**	04 12 22.2	+0.7
ZUZH	**Zhuzihu**	**1.03 353**		eP	**Pn**	04 12 22.0	+0.4
ZUZH				eS	**Sb**	04 12 35.2	-0.4
WCHH	**Zhanghua**	**1.04 267**		eP	**Pb**	04 12 23.4	+1.0
WCHH				eS	**Sb**	04 12 37.6	+1.9
WCH1	**Changhua City**	**1.05 267**		eP	**Pb**	04 12 23.5	+1.0
WCH1				eS	**Sb**	04 12 37.8	+1.8
NTST	**Danshui**	**1.05 348**		eP	**Pb**	04 12 23.1	+0.4
NTST				eS	**Sb**	04 12 36.5	+0.4
YM08	**YM08**	**1.06 355**		eP	**Pn**	04 12 21.8	-0.1
ANP	**Anpu**	**1.06 352**		eP	**Pb**	04 12 22.8	-0.1
CHN5	**Tsauling**	**1.07 240**		eP	**Pb**	04 12 23.4	+0.4
CHN5				eS	**Sb**	04 12 38.0	+1.3
CHKT	**Chengkung**	**1.07 196**		eP	**Pn**	04 12 22.0	0.0
CHKT				eS	**Sn**	04 12 36.9	+1.1
EHD	**Haiduan**	**1.07 205**		eP	**Pn**	04 12 21.0	-1.1
EHD				eS	**Sb**	04 12 37.5	+0.8
ECS	**Chishang**	**1.12 203**		eP	**Pb**	04 12 24.0	+0.2
ECS				eS	**Sb**	04 12 39.0	+1.0
ELDTW	**Lidau**	**1.12 214**		eP	**Pn**	04 12 21.9	-1.0
ELDTW				eS	**Sn**	04 12 38.2	+0.9
WGK	**Gukeng**	**1.12 247**		eP	**Pb**	04 12 24.4	+0.5
WGK				eS	**Sb**	04 12 40.2	+2.1
WDL	**Douliou City**	**1.13 249**		eP	**Pb**	04 12 24.8	+0.7
WDL				eS	**Sb**	04 12 40.8	+2.4
TWY	**Chenhua**	**1.14 356**		eP	**Pb**	04 12 23.6	-0.6
WDLH	**Douliu**	**1.14 248**		eP	**Pb**	04 12 24.9	+0.7
WDLH				eS	**Sb**	04 12 40.5	+1.8
JYNG	**Yonagunijimaku**	**1.19 74**		eP	**Pn**	04 12 24.1	+0.6
JYNG				eS	**Sb**	04 12 40.5	+0.5
EDH	**Donghe**	**1.21 197**		eP	**Pn**	04 12 23.6	-0.3
EDH				eS	**Sn**	04 12 40.3	+1.1
WCKO	**Fanlu**	**1.21 236**		eP	**Pb**	04 12 25.8	+0.4
WCKO				eS	**Sb**	04 12 42.6	+2.0
WRL	**Guolierlin Hig**	**1.22 260**		eP	**Pb**	04 12 26.2	+0.6
WRL				eS	**Sb**	04 12 43.2	+2.2
RLNB	**Erlin**	**1.24 259**		eP	**Pb**	04 12 26.2	+0.4
RLNB				eS	**Sb**	04 12 42.8	+1.3
YOJ	**Yonaguni jima**	**1.25 74**		P	**Pn**	04 12 24.9	+0.5
YOJ	**Yonaguni jima**	**1.25 74**		Pn	**Pn**	04 12 24.7	+0.3
YOJ	**Yonaguni jima**	**1.25 74**		eP	**Pn**	04 12 24.8	+0.3
YOJ				eS	**Sn**	04 12 40.9	+0.7
YOJ	**Yonaguni jima**	**1.25 74**		P	**Pn**	04 12 25.0	+0.6
YOJ				eS	**Sn**	04 12 41.0	+0.8
WTK	**Tuku**	**1.27 250**		eP	**Pb**	04 12 26.6	+0.2
WTK				eS	**Sb**	04 12 43.9	+1.6
STYH	**Taoyuan**	**1.27 221**		eP	**Pn**	04 12 25.6	+0.9
STYH				eS	**Sn**	04 12 42.3	+1.5
TPUB	**Ta-pu**	**1.28 230**		S	**Sn**	04 12 41.2	+0.2
TPUB	**Ta-pu**	**1.28 230**		Pn	**Pb**	04 12 26.2	-0.2
TPUB	**Ta-pu**	**1.28 230**		eP	**Pb**	04 12 26.8	+0.3
TPUB				eS	**Sb**	04 12 42.9	+0.4
WTCT	**Ta-ch'eng**	**1.32 259**		eS	**Sb**	04 12 45.0	+1.3
CHY	**Chiayi**	**1.32 242**		eP	**Pb**	04 12 27.8	+0.6
CHY				eS	**Sb**	04 12 45.9	+2.1
LONT	**Longtian**	**1.32 203**		eP	**Pn**	04 12 25.2	-0.3
WTP	**Ta-pu**	**1.32 228**		eP	**Pb**	04 12 27.6	+0.3
WTP				eS	**Sb**	04 12 44.8	+0.9
TWK	**Hsinying**	**1.40 232**		eP	**Pb**	04 12 28.5	-0.1
TWK				eS	**Sb**	04 12 47.3	+1.2
CHN1	**Nanshi**	**1.42 229**		eP	**Pb**	04 12 29.1	+0.1
CHN1				eS	**Sb**	04 12 48.0	+1.3
TWG	**Pinlang**	**1.42 204**		Pn	**Pn**	04 12 25.7	-1.2
TWG	**Pinlang**	**1.42 204**		eP	**Pn**	04 12 25.6	-1.2
TWGBT	**Beinan**	**1.42 203**		P	**Pn**	04 12 25.6	-1.2
TWGBT	**Beinan**	**1.42 203**		eP	**Pn**	04 12 25.8	-1.0
TWGBT				eS	**Sn**	04 12 45.7	+1.2
WSF	**Szhu**	**1.43 250**		eP	**Pb**	04 12 28.9	-0.1
WSF				eS	**Sb**	04 12 48.1	+1.2
SGST	**Jiashian**	**1.46 224**		eP	**Pn**	04 12 28.6	+1.3
SGST				eS	**Sb**	04 12 48.7	+1.0
TTN	**Taitung**	**1.46 200**		eP	**Pb**	04 12 30.3	+0.7
LDUT	**Ludao**	**1.47 188**		eP	**Pn**	04 12 26.2	-1.2
WSL	**Shuilin Townsh**	**1.47 246**		eP	**Pb**	04 12 29.7	0.0
WSL				eS	**Sb**	04 12 49.7	+1.6
SLGT	**Liugui**	**1.48 220**		eP	**Pb**	04 12 29.7	-0.3
SLGT				eS	**Sb**	04 12 50.1	+1.7
ICHU	**Yijhu**	**1.50 240**		eP	**Pb**	04 12 30.3	0.0
ICHU				eS	**Sb**	04 12 49.5	+0.5
PCYT	**Pengchaiyu**	**1.53 13**		eP	**Pn**	04 12 29.1	+0.8
PCYT				eS	**Sb**	04 12 49.0	-0.8
CHN8	**Yiju**	**1.56 240**		eP	**Pb**	04 12 31.0	-0.3
CHN8				eS	**Sb**	04 12 52.0	+1.3
CHN3	**Shinhua**	**1.61 229**		eS	**Sb**	04 12 55.6	+3.6
SSHA	**Shanhua**	**1.62 233**		eS	**Sb**	04 12 54.3	+1.9
SCST	**Cishan**	**1.66 222**		eP	**Pb**	04 12 32.7	-0.2
SCST				eS	**Sb**	04 12 54.5	+1.1
ECL	**Taimali**	**1.67 204**		eP	**Pn**	04 12 32.0	+1.7
ECL				eS	**Sn**	04 12 50.8	+0.1
SCLT	**Jiali**	**1.67 236**		eP	**Pb**	04 12 32.6	-0.5
SCLT				eS	**Sb**	04 12 54.7	+1.0
SSD	**Sandimen**	**1.69 215**		eP	**Pb**	04 12 32.9	-0.5
SSD				eS	**Sb**	04 12 54.3	+0.1
TSMG	**Majia**	**1.71 214**		eP	**Pb**	04 12 33.2	-0.7
TWM1	**Shoushan**	**1.75 222**		eP	**Pb**	04 12 34.7	+0.3
TSCK	**Chigu Township**	**1.77 237**		eP	**Pn**	04 12 33.6	+2.0
TSCK				eS	**Sb**	04 12 55.9	-0.7
MASBT	**Mashibuluo**	**1.80 213**		eP	**Pn**	04 12 32.1	+0.1
MASBT				eS	**Sb**	04 12 56.9	-0.6
IRIF	**Iriomote-Funau**	**1.87 83**		P	**Pn**	04 12 33.5	+0.5
IRIF				eS	**Sn**	04 12 57.2	+1.6
EAST	**Anshuo**	**1.91 204**		eP	**Pb**	04 12 33.2	-0.3
HATJ	**Hateruma jima**	**1.93 92**		P	**Pn**	04 12 34.8	+1.0
SSPT	**Xinbi**	**1.94 212**		eP	**Pn**	04 12 36.0	+2.1
SSPT				eS	**Sb**	04 13 02.5	+1.0
SCZT	**Fangliau**	**2.01 210**		eP	**Pn**	04 12 37.3	+2.4
SCZT				eS	**Sb**	04 13 03.3	-0.2
PNG	**Penghu**	**2.04 254**		eP	**Pn**	04 12 36.2	+0.9
PNG				eS	**Sn**	04 13 01.0	+1.3
PHUB	**P'eng-hu**	**2.04 253**		eP	**Pn**	04 12 36.0	+0.8
PHUB				eS	**Sn**	04 13 00.8	+1.2
WDGT	**Dungji**	**2.05 245**		eP	**Pn**	04 12 37.2	+1.7
WDGT				eS	**Sn**	04 13 02.0	+1.8
SLIU	**Shizi**	**2.08 203**		eP	**Pn**	04 12 37.7	+1.9
JKRS	**Kuro-shima**	**2.12 87**		P	**Pn**	04 12 37.7	+1.3
JKRS				S	**Sn**	04 13 03.9	+2.1
LYUB	**Lan-yu**	**2.12 183**		eP	**Pn**	04 12 35.2	-1.2
LYUB				eS	**Sn**	04 12 59.4	-2.4
VWUC	**VWUC**	**2.21 293**		eP	**Pn**	04 12 37.9	+0.2
VWUC				eS	**Sn**	04 13 02.8	-1.3
SMST	**Manzhou Townsh**	**2.24 201**		eP	**Pn**	04 12 38.8	+0.7
SMST				eS	**Sn**	04 13 06.1	+1.4
JIJ	**Ishigaki jima**	**2.25 84**		/ P	**Pn**	04 12 38.6	+0.4
JIJ				eS	**Sn**	04 13 05.5	+0.6
VCHM	**Qimei**	**2.27 247**		eP	**Pn**	04 12 39.8	+1.4
VCHM				eS	**Sn**	04 13 07.0	+1.6
HEN	**Hengchun**	**2.29 203**		eP	**Pb**	04 12 42.5	-1.2
HEN				eS	**Sb**	04 13 09.8	-1.7
TWK1	**Hengchun**	**2.33 201**		eP	**Pn**	04 12 41.4	+2.1
TWK1				eS	**Sn**	04 13 10.2	+3.4
TWKBT	**Hengchun**	**2.33 201**		eP	**Pn**	04 12 41.5	+2.3
TWKBT				eS	**Sn**	04 13 08.9	+2.1
TSEB	**Hengchuen, Pin**	**2.34 198**		eP	**Pn**	04 12 42.0	+2.6
TSEB				eS	**Sb**	04 13 11.3	-1.6
JISG	**Ishigakijimahi**	**2.43 79**		P	**Pn**	04 12 40.9	+0.2
JISG				eS	**Sn**	04 13 10.4	+1.0
PTMZ	**Houxiangcun**	**2.51 292**		eP	**Pn**	04 12 41.9	+0.1
PTMZ				eS	**Sn**	04 13 09.6	-1.7
MATB	**Ma-tsu**	**2.56 322**		eP	**Pn**	04 12 42.2	-0.3
MATB				eS	**Sn**	04 13 10.8	-1.8
JTJ	**Tarama**	**2.79 79**		P	**Pn**	04 12 46.7	+1.1
LYJJ	**Jianjiangzhen**	**2.98 324**		eP	**Pn**	04 12 48.2	+0.1
LYJJ				eS	**Sn**	04 13 20.7	-2.1
KNM	**Kinmen**	**2.99 276**		eP	**Pn**	04 12 50.3	+2.0
KNM				eS	**Sn**	04 13 24.2	+1.0
KNMB	**Chin-men Tao**	**3.03 277**		Pn	**Pn**	04 12 49.0	+0.1
KNMB	**Chin-men Tao**	**3.03 277**		eP	**Pn**	04 12 49.1	+0.1
KNMB				eS	**Sn**	04 13 21.4	-2.8
XPSS	**Dashiqiu**	**3.10 334**		eP	**Pn**	04 12 49.7	-0.2
XPSS				eS	**Sn**	04 13 23.3	-2.6
MHZQ	**Yeshan**	**3.11 310**		eP	**Pn**	04 12 50.2	+0.2
MHZQ				eS	**Sn**	04 13 25.0	-1.1
JMJ	**Miyako jima 2**	**3.35 78**		P	**Pn**	04 12 54.1	+0.7
JMJ2	**Miyako jima3**	**3.37 79**		eP	**Pn**	04 12 55.3	+1.7
JMJ2				eS	**Sn**	04 13 34.6	+2.0
AXDP	**Jialang**	**3.48 283**		eP	**Pn**	04 12 55.7	+0.7
AXDP				eS	**Sn**	04 13 33.1	-2.1
ZPLA	**Ao Xicun**	**3.61 268**		eP	**Pn**	04 12 57.3	+0.4
ZPLA				eS	**Sn**	04 13 36.8	-1.7
DSXP	**Dongshan**	**3.93 265**		eP	**Pn**	04 13 01.5	+0.3
DSXP				eS	**Sn**	04 13 43.8	-2.5
SXFK	**Yanhouchang**	**4.30 302**		eP	**Pn**	04 13 06.6	+0.1
SXFK				eS	**Sn**	04 13 53.6	-2.1
JOW	**Kunigami**	**6.53 64**		P	**Pn**	04 13 36.8	-0.2
JOW	**Kunigami**	**6.53 64**		Pn	**Pn**	04 13 36.7	-0.4
WHN	**Wuhan**	**9.13 316**		P	**Pn**	04 14 13.1	+0.4
WHN				S	**Sn**	04 15 53.8	-0.7
WHN				L	L		
	comp=Z,1μm,15.1s						
QIZ	**Qiongzhong**	**12.13 248**		P	**Pn**	04 14 54.7	+0.8
QIZ				S	**Sn**	04 17 10.3	+2.1
QIZ				L	L		
	comp=N,150nm,14.3s						
QIZ				L	L		
	comp=E,160nm,16.1s						
QIZ				L	L		
	comp=Z,110nm,14.3s						
KSRS	**Korea Array**	**14.31 20**		P	**P**	04 15 28.1	-2.3
	6.5nm,0.7s,baz=201,slow=12,SNR=30						
KSRS				LR	LR	04 21 50.9	
	comp=Z,73nm,18.3s,baz=190,slow=41						
DL2	**Dalian**	**14.73 360**		P	**P**	04 15 38.3	+3.3
DL2				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN	**Xi'an**	**14.89 314**		eP	Pn	04 15 24.1	-7.4
XAN				LR	LR		
	comp=N,330nm,6.5s						
XAN				LR	LR		
	comp=E,220nm,6.5s						
XAN				LR	LR		
	comp=Z,250nm,11.6s						
HHC	**Hu-ho-hao-te**	**18.71 335**		eP	**Pn**	04 16 23.0	+3.3
HHC				pP	pP	04 16 28.7	+1.2
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,48nm,5.1s						
HHC				L	L		
	comp=Z,130nm,15.1s						
HHC				L	L		
	comp=Z,110nm,16.8s						
HHC				L	L		
	comp=Z,140nm,15.1s						
MJAR	**Matsushiro Arr**	**18.84 45**		P	**Pn**	04 16 23.1	+1.9
	comp=Z,0.8nm,0.5s,baz=241,slow=8.1,SNR=1.6						
MJAR				LR	LR	04 24 00.3	
	comp=Z,62nm,21.9s,baz=211,slow=38						
MJAR	**Matsushiro Arr**	**18.84 45**		P	**P**	04 16 18.9	-1.7
LZH	**Lanzhou**	**19.47 312**		eP	Pn	04 16 36.2	+7.3
LZH				pP	sP	04 16 43.4	+3.3
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				LR	LR		
	comp=N,180nm,13.2s						
LZH				LR	LR		
	comp=E,230nm,14.3s						
LZH				LR	LR		
	comp=Z,330nm,16.0s						
LZDM	**Lanzhou Array**	**19.50 311**		P	**Pn**	04 16 29.5	+0.1
	comp=Z,1.5nm,0.3s,baz=96,slow=10,SNR=1.6						
CMAR	**Chiang Mai Arr**	**21.92 259**		LR	LR	04 25 45.5	
	comp=Z,52nm,19.5s,baz=70,slow=37						
GTA2	**Gaotai**	**24.03 315**		eP	**P**	04 17 18.2	+2.7
GTA2				sP	sP	04 17 30.7	+2.3
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA2				L	L		
	comp=Z,120nm,12.0s						
GTA2				L	L		
	comp=Z,160nm,14.4s						
GTA2				L	L		
	comp=Z,140nm,15.8s						
GUMO	**Guam**	**24.27 111**		LR	LR	04 25 34.7	
	comp=Z,24nm,20.8s,baz=144,slow=33						
HILR	**Hailar Array B**	**25.42 357**		P	**P**	04 17 29.0	+1.0
	comp=Z,4.1nm,0.4s,baz=191,slow=15,SNR=1.4						
	comp=Z,4.1nm,0.4s						
KLR	**Kul'dur**	**26.27 15**		LR	LR	04 28 28.6	
	comp=Z,40nm,19.6s,baz=193,slow=37						
ULN	**Ulaanbaatar**	**26.39 337**		P	**P**	04 17 36.9	0.0
SONM	**Songino Array**	**26.60 337**		P	**P**	04 17 37.4	-1.3
	comp=Z,1.9nm,0.7s,baz=152,slow=10,SNR=7.4						
SONM				LR	LR	04 29 39.0	
	comp=Z,108nm,18.9s,baz=228,slow=39						
	comp=Z,1.9nm,0.7s						
SONM	**Songino Array**	**26.60 337**		P	**P**	04 17 39.1	+0.3
TLY	**Talaya**	**30.80 338**		LR	LR	04 31 47.8	
	comp=Z,80nm,19.3s,baz=155,slow=38						
YAK	**Yakutsk**	**38.27**		LR	LR	04 35 47.6	
	comp=Z,39nm,18.3s,baz=208,slow=37						
MKAR	**Makanchi Array**	**38.70 316**		P	**P**	04 19 24.9	+0.7
	comp=Z,1.8nm,0.7s,baz=108,slow=9.7,SNR=13						
MKAR				PcP	**PcP**	04 21 35.5	-0.2
	comp=Z,0.4nm,0.6s,baz=79,slow=3.8,SNR=3.4						
MKAR				LR	LR	04 36 44.5	
	comp=Z,66nm,18.1s,baz=91,slow=38						
	comp=Z,1.8nm,0.7s						
MKAR	**Makanchi Array**	**38.70 316**		P	**P**	04 19 23.9	-0.3
MKAR					**PcP**	04 21 35.1	-0.6
PEA0B	**Petropavlovsk-**	**39.65 34**		P	**P**	04 19 31.0	-1.0
PETK	**Petropavlovsk-**	**39.65 34**		P	**P**	04 19 31.3	-0.7
ZALV	**Zalesovo Beam**	**40.54 327**		P	**P**	04 19 39.1	-0.3
	comp=Z,1.7nm,0.5s,baz=116,slow=9.8,SNR=5.7						
ZALV				LR	LR	04 37 35.3	
	comp=Z,52nm,20.1s,baz=163,slow=38						
	comp=Z,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	**40.54 327**		P	**P**	04 19 38.8	-0.6
MA2	**Magadan**	**40.86 22**		LR	LR	04 37 24.4	
	comp=Z,37nm,19.0s,baz=262,slow=37						
H11N1	**WAKE ISLAND Hy**	**42.03 87**		T	T	05 05 21.4	
	baz=283,slow=74,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**42.03 87**		T	T	05 05 16.8	
	baz=283,slow=74,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**42.04 87**		T	T	05 05 14.3	
	baz=283,slow=74,SNR=4.3						
FITZ	**Fitzroy Crossi**	**42.15 174**		P	**P**	04 19 51.6	-1.3
H11S3	**WAKE ISLAND Hy**	**42.16 89**		T	T	05 05 25.9	
	baz=282,slow=74						
H11S1	**WAKE ISLAND Hy**	**42.16 89**		T	T	05 05 37.4	
	baz=282,slow=74						
H11S2	**WAKE ISLAND Hy**	**42.17 89**		T	T	05 05 29.6	
	baz=282						
KURK	**Kurchatov**	**42.43 320**		P	**P**	04 19 54.9	-0.1
KURBB	**Kurchatov Arra**	**42.45 320**		P	**P**	04 19 55.2	+0.1
	comp=Z,0.6nm,0.6s,baz=112,slow=10,SNR=8.4						
	comp=Z,0.6nm,0.6s						
COCO	**West Island**	**43.51 217**		P	**P**	04 20 02.5	-1.4
WB0	**Warramunga Arr**	**45.35 163**		P	**P**	04 20 17.2	-1.5
WB0				IAmb	IAmb	04 20 47.3	
	comp=Z,6.7nm,1.2s						
WRAB	**Tennant Creek**	**45.50 163**		P	**P**	04 20 18.6	-1.2
WRA	**Warramunga Arr**	**45.51 163**		P	**P**	04 20 18.5	-1.4
	comp=Z,2.0nm,0.6s,baz=344,slow=8.7,SNR=25						
WRA				PcP	**PcP**	04 21 56.9	-1.6
	comp=Z,0.4nm,0.8s,baz=344,slow=3.1,SNR=1.7						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**45.51 163**		P	**P**	04 20 19.2	-0.7
WRA					**PcP**	04 21 56.6	-1.9
WR8	**Warramunga Arr**	**45.56 163**		P	**P**	04 20 19.4	-0.9
BVAR	**Borovoye Array**	**48.01 321**		P	**P**	04 20 39.4	+0.2
	comp=Z,2.0nm,0.7s,baz=92,slow=11,SNR=7.1						
BVAR				PcP	**PcP**	04 22 04.7	-2.2
	comp=Z,0.5nm,0.4s,baz=121,slow=5.4,SNR=2.3						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**48.97 165**		P	**P**	04 20 46.6	-0.2
	comp=Z,1.0nm,0.6s,baz=338,slow=7.0,SNR=8.7						
ASAR				PcP	**PcP**	04 22 09.2	-1.5
	comp=Z,0.4nm,0.8s,baz=321,slow=3.5,SNR=1.9						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**48.97 165**		P	**P**	04 20 46.2	-0.6
ASAR					**PcP**	04 22 09.7	-1.0
AB31	**Akbulak array**	**53.81 314**		P	**P**	04 21 23.1	+0.2
AB31				IAmb	IAmb	04 21 23.9	
	comp=Z,1.8nm,0.8s						
ABKAR	**Akbulak array**	**53.81 314**		P	**P**	04 21 23.7	+0.8
KIRV	**Kirov**	**60.53 325**		LR	LR	04 51 20.1	
	comp=Z,42nm,19.3s,baz=118,slow=39						
E18K	**Tukpahlearik C**	**63.25 25**		P	**P**	04 22 28.6	+0.3
E18K				IAmb	IAmb	04 22 34.3	
	comp=Z,3.0nm,1.1s						
H17K	**Granite Mounta**	**63.51 28**		P	**P**	04 22 30.3	+0.2
H17K				IAmb	IAmb	04 22 32.2	
	comp=Z,2.1nm,0.8s						
C19K	**Lookout Ridge**	**63.67 23**		P	**P**	04 22 30.0	-1.2
C19K				IAmb	IAmb	04 22 32.8	
	comp=Z,6.7nm,1.2s						
J17K	**VABM Dome**	**63.91 30**		P	**P**	04 22 33.4	+0.6
J17K				IAmb	IAmb	04 22 34.1	
	comp=Z,3.9nm,0.8s						
G21K	**Allakaket**	**66.07 26**		P	**P**	04 22 47.2	+0.5
G21K				IAmb	IAmb	04 23 18.3	
	comp=Z,2.0nm,0.9s						
C23K	**Itkillik River**	**66.79 22**		P	**P**	04 22 51.9	+0.5
E23K	**Chandalar**	**67.38 24**		P	**P**	04 22 55.1	-0.1
E23K				IAmb	IAmb	04 23 00.2	
	comp=Z,4.8nm,1.2s						
G24K	**Hadweenzic Riv**	**68.43 25**		P	**P**	04 23 02.3	+0.6
G24K				IAmb	IAmb	04 23 03.1	
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**69.05 27**		P	**P**	04 23 04.3	-1.3
	comp=Z,0.5nm,0.6s,baz=288,slow=7.7,SNR=8.4						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**69.05 27**		P	**P**	04 23 04.6	-1.0

STKA	**Stephens Creek**	**27.12**	**234**	P		**P**	**04 40 29.8**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=74,slow=10,SNR=9.7							
	comp=Z,4.4nm,0.6s							
WRA	**Warramunga Arr**	**31.21**	**261**	P		**P**	**04 41 04.9**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=86,slow=6.8,SNR=2.9							
	comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**31.21**	**261**	P		**P**	**04 41 03.7**	**-2.3**
RAR	**Rarotonga**	**31.24**	**102**	LR		LR	04 54 02.6	
	comp=Z,17nm,18.1s,baz=290,slow=37							
ASAR	**Alice Springs**	**31.70**	**254**	P		**P**	**04 41 10.3**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=80,slow=8.6,SNR=12							
	comp=Z,1.2nm,0.4s							
ASAR	**Alice Springs**	**31.70**	**254**	P		**P**	**04 41 08.6**	**-1.8**
BBOO	**Buckleboo**	**31.80**	**236**	P		**P**	**04 41 11.4**	**+0.3**
GUMO	**Guam**	**38.19**	**323**	LR		LR	04 55 44.4	
	comp=Z,36nm,21.7s,baz=114,slow=33							
FITZ	**Fitzroy Crossi**	**39.54**	**263**	LR		LR	04 57 49.2	
	comp=Z,74nm,19.3s,baz=260,slow=35							
PPT2	**Papeete2**	**41.06**	**97**	*e*LR		LR	04 54 16.5	
	comp=Z,100nm,31.2s							
PPT2				*e*LR		LR	04 54 18.0	
	comp=Z,112nm,27.0s							
PPT	**Papeete**	**41.06**	**97**	LR		LR	04 59 09.5	
	comp=Z,14nm,18.1s,baz=248,slow=36							
MORW	**Morawa**	**48.01**	**247**	P		**P**	**04 43 25.7**	**-0.1**
KAPI	**Kappang**	**48.12**	**279**	P		**P**	**04 43 26.1**	**-0.6**
KAPI				IAmb		IAmb	04 44 03.1	
	comp=Z,9.1nm,0.9s							
TOLI2	**Tolitoli**	**49.44**	**287**	P		**P**	**04 43 37.3**	**+0.4**
TAOE	**Nuku Hiva Isla**	**51.80**	**87**	*e*LR		LR	04 59 09.4	
	comp=Z,62nm,28.7s							
PETK	**Petropavlovsk-**	**71.05**	**354**	P		**P**	**04 46 06.8**	**+2.5**
	comp=Z,1.7nm,0.7s,baz=214,slow=7.6,SNR=3.9							
	comp=Z,1.7nm,0.7s							
PETK	**Petropavlovsk-**	**71.05**	**354**	P		**P**	**04 46 06.0**	**+1.7**
QSPA	**South Pole Qui**	**72.29**	**180**	P		**P**	**04 46 13.1**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=66,slow=1.4,SNR=6.1							
	comp=Z,1.5nm,0.8s							
QSPA	**South Pole Qui**	**72.29**	**180**	P		**P**	**04 46 12.3**	**+0.4**
QSPA				IAmb		IAmb	04 46 16.9	
	comp=Z,12nm,1.4s							
CMAR	**Chiang Mai Arr**	**76.18**	**295**	P		**P**	**04 46 37.5**	**+2.3**
	comp=Z,1.4nm,0.4s,baz=118,slow=5.9,SNR=11							
	comp=Z,1.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**76.18**	**295**	P		**P**	**04 46 35.2**	**0.0**
SONM	**Songino Array**	**84.91**	**324**	P		**P**	**04 47 22.5**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=142,slow=4.9,SNR=2.5							
	comp=Z,0.4nm,0.4s							
SONM	**Songino Array**	**84.91**	**324**	P		**P**	**04 47 20.7**	**-0.9**
L19K	**White Mountain**	**85.11**	**17**	P		**P**	**04 47 21.6**	**-0.5**
L19K				IAmb		IAmb	04 47 25.9	
	comp=Z,7.0nm,1.0s							
CAST	**Castle Rocks**	**86.87**	**17**	P		**P**	**04 47 30.4**	**-0.4**
CAST				IAmb		IAmb	04 47 32.0	
	comp=Z,3.3nm,0.8s							
G19K	**Purcell Mounta**	**87.82**	**14**	P		**P**	**04 47 36.6**	**+1.3**
G19K				IAmb		IAmb	04 47 38.4	
	comp=Z,3.5nm,0.8s							
E19K	**Redstone River**	**88.88**	**13**	P		**P**	**04 47 39.4**	**-0.9**
E19K				IAmb		IAmb	04 47 44.1	
	comp=Z,3.1nm,0.7s							
NVAR	**Mina Array Bea**	**89.24**	**49**	P		**P**	**04 47 44.6**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=258,slow=5.6,SNR=3.5							
	comp=Z,0.6nm,0.7s							
NVAR	**Mina Array Bea**	**89.24**	**49**	P		**P**	**04 47 41.0**	**-1.9**
ILAR	**Eielson Array**	**89.39**	**18**	P		**P**	**04 47 42.5**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=236,slow=5.0,SNR=27							
	comp=Z,1.5nm,0.6s							
ILAR	**Eielson Array**	**89.39**	**18**	P		**P**	**04 47 42.6**	**0.0**
SNAA	**Sanae**	**90.55**	**183**	P		**P**	**04 47 47.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=207,slow=6.8,SNR=1.9							
	comp=Z,0.5nm,0.6s							
SNAA	**Sanae**	**90.55**	**183**	P		**P**	**04 47 48.4**	**+0.1**
SNAA				IAmb		IAmb	04 48 02.7	
	comp=Z,4.5nm,1.4s							
I07A	**Izee**	**90.69**	**44**	P		**P**	**04 47 50.5**	**+1.1**
I07A				IAmb		IAmb	04 47 52.7	
	comp=Z,2.2nm,0.7s							
MKAR	**Makanchi Array**	**99.37**	**316**	P		**Pdif**	**04 48 29.4**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=156,slow=8.6,SNR=1.2							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**99.37**	**316**	P		**Pdif**	**04 48 25.8**	**-3.1**
ARCES	**ARCESS Array B**	**123.16**	**345**	PKP		**PKPdf**	**04 53 42.6**	**0.0**
	comp=Z,2.7nm,1.0s,baz=89,slow=1.7,SNR=4.5							
ARCES	**ARCESS Array B**	**123.16**	**345**			**PKPdf**	**04 53 43.2**	**+0.6**
ABTA	**Abfaltersbach**	**144.36**	**330**	*e*PKP		PKPbc	04 54 22.7	+1.5
	comp=Z,2.7nm,0.6s							
MOTA	**Moosalm**	**144.58**	**332**	*i* PKP		**PKPab**	**04 54 22.7**	**+0.9**
	comp=Z,6.9nm,1.0s							
FETA	**Feichten**	**144.99**	**332**	*i* PKP		**PKPbc**	**04 54 24.2**	**+0.8**
	comp=Z,4.0nm,0.6s							
DAVA	**Damuels**	**145.17**	**333**	*i* PKP		**PKPbc**	**04 54 24.2**	**+0.3**
	comp=Z,15nm,1.3s							

*IDC **09** 04:35:55.4±2.2,6°.85S×132°.08E,h0km,mb3.8/2, mbtmp3.8/6,ML3.8/4,MS2.8/1,Error ellipse: s-maj=97.1km s-min=24.5km az=84.0*

*NEIC **09** 04:35:55.9±1.9,6°.74S±0°.06×132°.3E±0°.2,h10km±1km, mb4.5/5,Error ellipse: s-maj=25.8km s-min=9.5km az=100.0*

ISC 09 04:35:57.9±0.7,6°.80S±0°.05×132°.2E±0°.1,h35km,n23, σ2ˢ15/26,mb4.0/5,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.50**	**218**			Pn	**Pn**	**04 36 24.7**	**+2.5**
FAKI	**Fak Fak**	**3.85**	**0**			Pn	**Pn**	**04 36 55.2**	**+0.5**
SIJI	**Sorong**	**5.97**	**351**			Pn	**Pn**	**04 37 24.9**	**+1.1**
	2.0nm,0.3s,baz=164,slow=19,SNR=7.6								
SIJI						Sn	**Sn**	**04 38 26.6**	**-4.4**
	0.5nm,0.3s,baz=291,slow=23,SNR=1.2								
	6.3nm,0.4s								
MTN	**Manton Dam**	**6.10**	**190**			Pn	**Pn**	**04 37 27.5**	**+1.8**
MTN						Sn	**Sn**	**04 38 33.6**	**-0.7**
KNRA	**Kununurra**	**9.46**	**201**			Pn	**Pn**	**04 38 11.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.94**	**209**			Pn	**Pn**	**04 38 58.6**	**-0.8**
	0.5nm,0.3s,baz=31,slow=13,SNR=11								
FITZ						Sn	Sn	04 41 11.7	-10
	0.5nm,0.3s,baz=200,slow=19,SNR=7.1								
	1.6nm,0.4s								
FITZ	**Fitzroy Crossi**	**12.94**	**209**				**Pn**	**04 38 57.9**	**-1.5**
WB0	**Warramunga Arr**	**13.06**	**171**			Pn	**Pn**	**04 39 02.4**	**+1.4**
WRA	**Warramunga Arr**	**13.22**	**171**			Pn	**Pn**	**04 39 04.8**	**+1.5**
	0.4nm,0.3s,baz=351,slow=13,SNR=28								
WRA						Sn	**Sn**	**04 41 26.4**	**-2.8**
	0.6nm,0.3s,baz=352,slow=23,SNR=6.8								
	1.2nm,0.7s								
WRA	**Warramunga Arr**	**13.22**	**171**				**Pn**	**04 39 01.5**	**-1.8**
WB2	**Warramunga Arr**	**13.23**	**171**			Pn	**Pn**	**04 39 03.8**	**+0.5**
WR8	**Warramunga Arr**	**13.26**	**171**			Pn	**Pn**	**04 39 04.6**	**+0.8**
AS31	**Alice Springs**	**16.85**	**175**			Pn	**Pn**	**04 39 52.5**	**+1.4**
ASAR	**Alice Springs**	**16.85**	**175**			Pn	**Pn**	**04 39 52.3**	**+1.1**
	0.4nm,0.3s,baz=353,slow=13,SNR=5.6								
ASAR						Sn	**Sn**	**04 42 52.3**	**-5.1**
	0.2nm,0.3s,baz=0.6,slow=28,SNR=4.4								
	0.5nm,0.4s								
ASAR	**Alice Springs**	**16.85**	**175**			P	**P**	**04 39 52.9**	**-0.1**
JOW	**Kunigami**	**33.65**	**354**			P	**P**	**04 42 33.9**	**-1.5**
TAU	**Tasmania Unive**	**38.35**	**162**			P	**P**	**04 43 16.2**	**+0.7**
TAU						IAmb	IAmb	04 43 26.1	
	comp=Z,13nm,1.1s								
KSRS	**Korea Array**	**44.20**	**355**	LR		LR	LR	05 01 34.2	
	comp=Z,12nm,21.6s,baz=225,slow=35								
MKAR	**Makanchi Array**	**69.29**	**326**	P			**P**	**04 47 04.8**	**+3.2**
	comp=Z,0.5nm,0.4s,baz=120,slow=7.8,SNR=7.5								
	comp=Z,0.5nm,0.4s								
MKAR	**Makanchi Array**	**69.29**	**326**	P			**P**	**04 47 04.2**	**+2.5**
KURBB	**Kurchatov Arra**	**73.51**	**328**	P			**P**	**04 47 29.4**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=129,slow=5.0,SNR=4.4								
	comp=Z,0.3nm,0.5s								
KURK	**Kurchatov**	**73.52**	**328**	P			**P**	**04 47 28.5**	**+1.5**
KURK				IAmb			IAmb	04 47 33.5	
	comp=Z,1.4nm,1.1s								
CNBA	**Chernabura Isl**	**83.24**	**33**	P			**P**	**04 48 21.0**	**+0.5**
CNBA				IAmb			IAmb	04 48 22.6	
	comp=Z,14nm,1.0s								

*IDC **09** 04:44:07.9±1.6,6°.82S×132°.11E,h0km,mb3.9/4, mbtmp3.8/8,ML3.7/4,MS3.6/1,Error ellipse: s-maj=88.4km s-min=20.8km az=81.0*

*NEIC **09** 04:44:09.5±1.5,6°.68S±0°.04×131°.9E±0°.1,h10km±1km, mb4.4/10,Error ellipse: s-maj=22.0km s-min=7.5km az=94.0*

ISC 09 04:44:08.8±0.6,6°.75S±0°.05×132°.0E±0°.1,h10km,n33, σ1ˢ93/34,mb4.1/9,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.38**	**208**			Pn	**Pn**	**04 44 35.1**	**+0.9**
FAKI	**Fak Fak**	**3.82**	**4**			Pn	**Pn**	**04 45 06.6**	**-1.1**
SIJI	**Sorong**	**5.88**	**353**			Pn	**Pn**	**04 45 38.1**	**+2.0**
	2.6nm,0.3s,baz=197,slow=22,SNR=10.0								
SIJI						Sn	**Sn**	**04 46 40.7**	**-3.0**
	2.1nm,0.3s,baz=232,slow=22,SNR=1.9								
	5.2nm,0.3s								
MTN	**Manton Dam**	**6.11**	**188**			Pn	**Pn**	**04 45 40.6**	**+1.4**
KNRA	**Kununurra**	**9.40**	**199**			Pn	**Pn**	**04 46 26.4**	**+1.9**
FITZ	**Fitzroy Crossi**	**12.85**	**208**			Pn	**Pn**	**04 47 11.7**	**+0.1**
	0.3nm,0.3s,baz=26,slow=9.5,SNR=17								
FITZ						Sn	Sn	04 49 24.6	-10
	0.7nm,0.3s,baz=228,slow=23,SNR=7.9								
	2.2nm,0.6s								
FITZ	**Fitzroy Crossi**	**12.85**	**208**				**Pn**	**04 47 11.4**	**-0.2**
WB0	**Warramunga Arr**	**13.15**	**170**			Pn	**Pn**	**04 47 16.5**	**+0.6**
WRAB	**Tennant Creek**	**13.31**	**170**			Pn	**Pn**	**04 47 20.2**	**+2.3**
WRA	**Warramunga Arr**	**13.32**	**170**			Pn	**Pn**	**04 47 18.0**	**0.0**
	0.4nm,0.3s,baz=352,slow=14,SNR=14								
WRA						Sn	Sn	04 49 38.8	-7.5
	0.6nm,0.3s,baz=358,slow=23,SNR=8.0								
	0.7nm,0.4s								
WRA	**Warramunga Arr**	**13.32**	**170**				**Pn**	**04 47 17.0**	**-1.1**
WB2	**Warramunga Arr**	**13.32**	**170**			Pn	**Pn**	**04 47 18.6**	**+0.5**
WR8	**Warramunga Arr**	**13.36**	**170**			Pn	**Pn**	**04 47 19.4**	**+0.8**
AS31	**Alice Springs**	**16.92**	**174**			Pn	**Pn**	**04 48 06.7**	**+0.7**
ASAR	**Alice Springs**	**16.92**	**174**			Pn	**Pn**	**04 48 06.8**	**+0.9**
	0.2nm,0.3s,baz=352,slow=13,SNR=10								
ASAR						Sn	**Sn**	**04 51 06.0**	**-8.2**
	0.2nm,0.3s,baz=359,slow=29,SNR=6.0								
	0.6nm,0.4s								
ASAR	**Alice Springs**	**16.92**	**174**				**Pn**	**04 48 07.3**	**+1.3**
CTAO	**Charters Tower**	**19.20**	**135**	P		P	**P**	**04 48 34.9**	**+1.9**
CTAO				IAmb		IAmb		04 48 42.3	
	comp=Z,15nm,1.2s								
BBOO	**Buckleboo**	**26.21**	**172**	P		P	**P**	**04 49 44.1**	**+0.2**
BBOO				IAmb		IAmb		04 49 57.3	
	comp=Z,12nm,1.1s								
STKA	**Stephens Creek**	**26.57**	**161**	LR		LR		05 00 47.5	
	comp=Z,124nm,20.1s,baz=210,slow=38								
HNR	**Honiara**	**27.84**	**97**	P		P	**P**	**04 49 59.2**	**+0.4**
ARMA	**Armidale**	**29.93**	**144**	P		P	**P**	**04 50 17.8**	**+0.5**
ARMA				IAmb		IAmb		04 50 30.8	
	comp=Z,6.6nm,1.2s								
TOO	**Toolangi**	**33.06**	**160**	P		P	**P**	**04 50 44.5**	**-0.2**
TOO				IAmb		IAmb		04 50 55.1	
	comp=Z,1.8nm,1.0s								
MKAR	**Makanchi Array**	**69.09**	**326**	P			**P**	**04 55 17.4**	**+2.3**
	comp=Z,1.0nm,0.5s,baz=121,slow=7.5,SNR=10								
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**69.09**	**326**	P			**P**	**04 55 15.4**	**+0.3**
SHEM	**Shemya Is, Ala**	**69.20**	**26**	P			**P**	**04 55 16.6**	**+1.0**
SHEM				IAmb		IAmb		04 55 24.1	
	comp=Z,79nm,1.1s								
SMY	**Shemya**	**69.20**	**26**	P			**P**	**04 55 15.7**	**+0.1**
ZALV	**Zalesovo Beam**	**72.23**	**333**	P			**P**	**04 55 34.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=87,slow=3.2,SNR=4.8								
	comp=Z,0.6nm,0.5s								
ZALV	**Zalesovo Beam**	**72.23**	**333**	P			**P**	**04 55 34.4**	**+0.3**
KURBB	**Kurchatov Arra**	**73.32**	**328**	P			**P**	**04 55 42.5**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=130,slow=5.3,SNR=6.7								
	comp=Z,0.4nm,0.5s								
KURK	**Kurchatov**	**73.33**	**328**	P			**P**	**04 55 41.2**	**+0.6**
KURK				IAmb		IAmb		04 56 00.6	
	comp=Z,1.6nm,0.9s								
QSPA	**South Pole Qui**	**83.22**	**180**	P			**P**	**04 56 35.2**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=281,slow=5.2,SNR=5.3								
	comp=Z,0.7nm,0.8s								
QSPA	**South Pole Qui**	**83.22**	**180**	P			**P**	**04 56 35.9**	**+0.5**
ABKAR	**Akbulak array**	**83.52**	**321**	P			**P**	**04 56 35.4**	**-1.6**

*SJA **09** 04:44:25.7±0.6,21°.15S×68°.06W,h172km,ML3.4,MW3.5*

*IDC **09** 04:44:26.3±1.9,21°.20S×67°.73W,h142km±21km,mb3.4/2, mbtmp3.7/7,Error ellipse: s-maj=24.5km s-min=17.7km az=92.0*

*SCB **09** 04:44:26.7±1.1,21°.21S×68°.04W,h158km,ML3.9/3,Error ellipse: s-maj=7.9km s-min=7.0km az=0.0*

*GUC **09** 04:44:28.0±0.5,21°.16S×68°.13W,h167km±3km,ML3.7*

ISC 09 04:44:26.4±0.8,21°.16S±0°.04×68°.01W±0°.04,h159km±8km, n60,σ1ˢ46/80,12C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.31**	**241**	*e*P		Pn	**Pn**	**04 44 55.5**	**+0.5**
PB09				IAML				04 45 19.2	
	comp=Z,199nm,0.8s								
PB09	**IPOC Station P**	**1.31**	**241**	*e*P			**Pn**	**04 44 56.1**	**+1.1**
PB09				*e*S			**Sn**	**04 45 18.0**	**+1.1**
PB09	**IPOC Station P**	**1.31**	**241**	P			**Pn**	**04 44 56.1**	**+1.1**
PB08	**IPOC Station P**	**1.47**	**313**	*e*P			**Pn**	**04 44 57.9**	**+1.1**
PB08				IAML				04 45 26.3	
	comp=Z,234nm,0.4s								
PB08	**IPOC Station P**	**1.47**	**313**	*e*P			**Pn**	**04 44 57.9**	**+1.1**
PB08				*e*S			**Sn**	**04 45 20.8**	**+0.7**
PB08				IAML				04 45 22.2	
	comp=E,570nm,0.3s								
PB08	**IPOC Station P**	**1.47**	**313**	P			**Pn**	**04 44 58.1**	**+1.3**
PB02	**IPOC Station P**	**1.77**	**264**	*e*P			**Pn**	**04 45 00.0**	**+0.4**
PB02				IAML				04 45 31.8	
	comp=Z,731nm,0.2s								
PB02	**IPOC Station P**	**1.77**	**264**	*e*P			**Pn**	**04 44 60.0**	**+0.4**
PB02				*e*S			**Sn**	**04 45 24.0**	**-1.1**
PB02				IAML				04 45 25.8	
	comp=N,1μm,0.4s								
PB02	**IPOC Station P**	**1.77**	**264**	P			**Pn**	**04 45 00.1**	**+0.4**
PB02				S			**Sn**	**04 45 25.1**	**0.0**
PB02				IAML				04 45 26.0	
	comp=N,783nm,0.2s								
AF01	**San Pedro de A**	**1.79**	**185**	*e*P			Pn	04 44 42.9	-17
AF01				IAML				04 45 02.4	
	comp=Z,94nm,0.8s								
PB07	**IPOC Station P**	**1.84**	**252**	*e*P			**Pn**	**04 45 00.9**	**+0.4**
PB07				IAML				04 45 31.1	
	comp=Z,294nm,0.3s								
PB07	**IPOC Station P**	**1.84**	**252**	*e*P			**Pn**	**04 45 00.9**	**+0.4**
PB07				*e*S			**Sn**	**04 45 25.6**	**-1.0**
PB07				IAML				04 45 26.1	
	comp=N,739nm,0.2s								
PB03	**IPOC Station P**	**1.85**	**241**	*e*P			**Pn**	**04 45 01.1**	**+0.5**
PB03				IAML				04 45 32.0	
	comp=Z,167nm,0.1s								
PB03	**IPOC Station P**	**1.85**	**241**	*e*P			**Pn**	**04 45 01.0**	**+0.5**
PB03				*e*S			**Sn**	**04 45 26.2**	**-0.6**
PB03				IAML				04 45 26.7	
	comp=E,468nm,0.1s								
GO01	**Chusmiza**	**1.85**	**323**	*e*P			**Pn**	**04 45 01.7**	**+0.8**
GO01				IAML				04 45 33.0	
	comp=Z,164nm,0.3s								
GO01	**Chusmiza**	**1.85**	**323**	*e*P			**Pn**	**04 45 01.7**	**+0.8**
GO01				*e*S			**Sn**	**04 45 28.0**	**+0.5**
GO01	**Chusmiza**	**1.85**	**323**	P			**Pn**	**04 45 01.8**	**+0.8**
PB11	**IPOC Station P**	**2.08**	**312**	*e*P			**Pn**	**04 45 03.4**	**+0.3**
PB11				IAML				04 45 34.1	
	comp=Z,323nm,0.2s								
PB11	**IPOC Station P**	**2.08**	**312**	*e*P			**Pn**	**04 45 03.4**	**+0.3**
PB11				*e*S			**Sn**	**04 45 30.5**	**-0.9**
PB11				IAML				04 45 33.0	
	comp=N,897nm,0.5s								
PB11	**IPOC Station P**	**2.08**	**312**	P			**Pn**	**04 45 03.5**	**+0.3**
PB11				S			**Sn**	**04 45 31.5**	**0.0**
PB11				IAML				04 45 32.1	
	comp=N,709nm,0.2s								
PB06	**IPOC Station P**	**2.12**	**223**	*e*P			**Pn**	**04 45 04.1**	**+0.5**
PB06				IAML				04 45 40.9	
	comp=Z,65nm,0.1s								
PB06	**IPOC Station P**	**2.12**	**223**	*e*P			**Pn**	**04 45 04.1**	**+0.5**
PB06				*e*S			**Sn**	**04 45 31.9**	**-0.4**
PB06				IAML				04 45 32.9	
	comp=E,296nm,0.1s								
PB06	**IPOC Station P**	**2.12**	**223**	P			**Pn**	**04 45 04.1**	**+0.5**
TA02	**Huaiquique**	**2.17**	**294**	*e*P			**Pn**	**04 45 04.0**	**-0.2**
TA02				*e*S			**Sn**	**04 45 32.2**	**-0.9**
TA02				IAML				04 45 37.5	
	comp=Z,410nm,0.1s								
TA02	**Huaiquique**	**2.17**	**294**	*e*P			**Pn**	**04 45 03.9**	**-0.2**
TA02				*e*S			**Sn**	**04 45 31.6**	**-1.5**
MOCB	**Mochara**	**2.21**	**93**	P			**Pn**	**04 45 06.3**	**+1.3**
MOCB				S			**Sn**	**04 45 35.9**	**+1.1**
MOCB				IAML				04 45 36.9	
	comp=Z,290nm,0.7s								
PSGCX	**Pisagua**	**2.52**	**308**	*e*P			**Pn**	**04 45 07.6**	**-0.7**
PSGCX				IAML				04 45 44.8	
	comp=Z,144nm,0.5s								
PSGCX	**Pisagua**	**2.52**	**308**	*e*P			**Pn**	**04 45 07.6**	**-0.7**
PSGCX				*e*S			**Sn**	**04 45 38.8**	**-1.9**
YJA	**Yavi**	**2.53**	**114**	*e*P			**Pn**	**04 45 10.5**	**+1.7**
YJA				*e*S			**Sn**	**04 45 41.6**	**+0.1**
YJA	**Yavi**	**2.53**	**114**	P			**Pn**	**04 45 09.9**	**+1.1**
SOEO	**Opoqueri**	**2.58**	**3**	P			**Pn**	**04 45 11.6**	**+2.1**
PB05	**IPOC Station P**	**2.64**	**230**	*e*P			**Pn**	**04 45 09.9**	**+0.1**
PB05				IAML				04 45 48.0	
	comp=Z,47nm,0.3s								
PB05	**IPOC Station P**	**2.64**	**230**	*e*P			**Pn**	**04 45 09.9**	**+0.1**
PB05				*e*S			**Sn**	**04 45 41.7**	**-1.8**
AOVT	**TarijaAcel**	**3.10**	**98**	P			**Pn**	**04 45 16.5**	**+0.8**
PB16	**IPOC Station P**	**3.14**	**333**	*e*P			**Pn**	**04 45 17.9**	**+1.4**
PB16				IAML				04 46 01.7	
	comp=Z,35nm,0.4s								
PB16	**IPOC Station P**	**3.14**	**333**	*e*P			**Pn**	**04 45 17.7**	**+1.2**
PB16				*e*S			**Sn**	**04 45 56.1**	**+0.8**
PB16				IAML				04 45 58.4	
	comp=E,72nm,0.4s								
PB16	**IPOC Station P**	**3.14**	**333**	P			**Pn**	**04 45 17.9**	**+1.4**
HJA	**Humahuaca**	**3.16**	**131**	*e*P			**Pn**	**04 45 18.1**	**+1.6**
PB12	**IPOC Station P**	**3.34**	**319**	*e*P			**Pn**	**04 45 17.4**	**-1.2**
PB12				IAML				04 46 00.0	
	comp=Z,77nm,0.3s								
PB12	**IPOC Station P**	**3.34**	**319**	*e*P			**Pn**	**04 45 17.3**	**-1.3**
SALTA		**3.42**	**154**	*e*P			**Pn**	**04 45 16.4**	**-3.6**
SALTA				*e*P				04 45 21.9	
AP01	**Chacalluta**	**3.54**	**321**	*e*P			**Pn**	**04 45 20.5**	**-0.4**
AP01				*e*S			**Sn**	**04 46 03.8**	**+0.5**
AP01				IAML				04 46 19.4	
	comp=Z,193nm,0.3s								
AOEA	**Aiquile**	**3.95**	**42**	P			**Pn**	**04 45 28.6**	**+2.0**
PB14	**IPOC Station P**	**4.10**	**212**	*e*P			**Pn**	**04 45 28.5**	**0.0**
PB14				*e*S			**Sn**	**04 46 13.5**	**-3.4**
PB14				IAML				04 46 26.6	
	comp=Z,20nm,0.6s								
PB14	**IPOC Station P**	**4.10**	**212**	P			**Pn**	**04 45 28.5**	**0.0**
BBOJ	**La Paz, Jacaqu**	**4.16**	**358**	P			**Pn**	**04 45 31.0**	**+1.4**
SOEJ	**Jacaque**	**4.16**	**358**	P			**Pn**	**04 45 31.4**	**+1.8**
SLA	**San Lorenzo**	**4.23**	**147**	*e*P			**Pn**	**04 45 31.8**	**+1.7**
BBOD	**La Paz, Gloria**	**4.53**	**353**	P			**Pn**	**04 45 36.2**	**+1.8**
LPAZ	**La Paz**	**4.84**	**359**	P			**Pn**	**04 45 40.1**	**+1.5**
	comp=Z,9.3nm,0.3s,baz=158,slow=4.9,SNR=104								
LPAZ				S			**Sn**	**04 46 35.3**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=227,slow=21,SNR=1.4								
BBOB	**La Paz, Bander**	**4.99**	**359**	P			**Pn**	**04 45 41.8**	**+1.4**
BBSD	**Serra de San D**	**8.03**	**62**	P			**Pn**	**04 46 19.2**	**-1.1**
SIV	**San Ignacio**	**8.35**	**53**	P			**Pn**	**04 46 22.1**	**-2.4**
	comp=Z,1.4nm,0.3s,baz=249,slow=11,SNR=11								
SIV				S			**Sn**	**04 47 50.9**	**-6.7**
	comp=Z,1.5nm,0.6s,baz=136,slow=22,SNR=5.7								
SIV	**San Ignacio**	**8.35**	**53**	P			**Pn**	**04 46 22.9**	**-1.6**
CFA	**Coronel Fontan**	**10.41**	**181**	P			**Pn**	**04 46 50.0**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=289,slow=9.4,SNR=7.1								
CFA				S	

YUK smax smax
comp=E,29µm,0.6s
YUK Yuzh-Kuril'sk 3.06 237 *i* P **Pn 05 14 51.1 +0.1**
YUK AMB AMB 05 14 51.6
comp=E,37µm,2.0s
YUK AMB AMB 05 14 51.6
comp=E,37µm,0.3s
YUK *i* S **Sn 05 15 26.5 -1.4**
YUK A A 05 15 29.4
comp=E,18µm,0.6s
YUK A A 05 15 29.4
comp=E,30µm,0.6s
YUK A A 05 15 29.6
comp=E,12µm,0.4s
YUK A A 05 15 29.6
comp=E,29µm,0.4s
RUSJ Misakicho 3.39 243⇑ *i* PN **Pn 05 14 55.6 +0.3**
RUSJ *i* S **Sn 05 15 37.9 +2.3**
NEM2 Nemuro 2 3.55 229 P **Pn 05 14 55.2 -2.1**
NEM2 S **Sn 05 15 33.9 -5.4**
NMR Nemuro--Hokkai 3.56 229⇑ *i* PN **Pn 05 14 55.2 -2.1**
NMR Nemuro--Hokkai 3.56 229 *i* P **Pn 05 14 55.3 -2.1**
JRA Rausu 3.56 241 P **Pn 05 14 57.7 +0.3**
JRA A A 05 14 57.7
comp=N,11nm,1.4s,comp=E,8.0nm,1.7s
JRA *e*S **Sn 05 15 41.0 +1.6**
JNSB Nemuroshibetsu 3.72 240 A A 05 14 59.0
comp=N,29nm,2.4s,comp=E,18nm,1.3s
JNK Nakash 4.00 239 P **Pn 05 15 02.9 -0.2**
JNK *e*S **Sn 05 15 48.8 -0.9**
JKHN Kushirohamanak 4.05 231 A A 05 15 02.2
comp=N,11nm,1.0s,comp=E,20nm,1.1s
JTKR Abashiri--Toko 4.31 248 P **Pn 05 15 07.8 +0.5**
JTKR *e*S **Sn 05 15 57.9 +0.8**
JAK Akkeshi 4.37 233 P **Pn 05 15 06.0 -2.0**
JAK A A 05 15 06.0
comp=N,15nm,0.3s,comp=E,13nm,0.3s
JAK *e*S **Sn 05 15 53.4 -5.0**
JAR Ashorobuto 4.73 241 P **Pn 05 15 12.9 +0.1**
JAR A A 05 15 12.9
comp=N,17nm,1.4s,comp=E,15nm,0.6s
JAR *e*S **Sn 05 16 06.5 -0.5**
YSS Yuzhno-Sakhali 4.78 287 P **Pn 05 15 14.3 +0.9**
YSS Yuzhno-Sakhali 4.78 287*c i*PN **Pn 05 15 15.6 +2.2**
YSS Yuzhno-Sakhali 4.78 287 **Pn 05 15 15.5 +2.1**
YSS Sn **Sn 05 16 11.1 +2.9**
YSS Yuzhno-Sakhali 4.78 287 P **Pn 05 15 15.9 +2.5**
YSS Yuzhno-Sakhali 4.78 287 *i* P **Pn 05 15 15.1 +1.7**
YSS *e*S **Sn 05 16 11.2 +3.0**
JOB Onbets 4.92 237 P **Pn 05 15 14.4 -0.9**
JOB A A 05 15 14.4
comp=N,12nm,0.9s,comp=E,13nm,0.9s
JOB *e*S **Sn 05 16 07.8 -3.7**
JKK2 Kamakawa 2 5.11 251 *e*P **Pn 05 15 19.1 +1.2**
JKA Kamikawa-asahi 5.12 254 **Pn 05 15 19.7 +1.8**
JKA Sn **Sn 05 16 17.3 +1.1**
JKA Kamikawa-asahi 5.12 254 P **Pn 05 15 19.8 +1.8**
JWK2 Keihoku 5.31 268 *e*P **Pn 05 15 23.7 +3.2**
JWK2 A A 05 15 23.7
comp=N,2.0nm,3.1s,comp=E,6.0nm,4.3s
JCH Churui 5.37 237 P **Pn 05 15 20.5 -0.8**
JCH A A 05 15 20.5
comp=N,13nm,1.6s,comp=E,11nm,0.5s
JCH *e*S **Sn 05 16 16.4 -5.9**
JAB Ashibetsu 5.61 249 P **Pn 05 15 26.1 +1.5**
JEM Erimo 5.87 233 P **Pn 05 15 26.7 -1.3**
ERM Erimo 5.87 233 P **Pn 05 15 27.0 -1.0**
ERM Erimo 5.87 233*c i*PN **Pn 05 15 26.5 -1.5**
ERM pmax pmax
comp=Z,520nm,0.8s
ERM Erimo 5.87 233 **Pn 05 15 26.9 -1.1**
ERM Erimo 5.87 233 P **Pn 05 15 27.4 -0.6**
JRBN Rebuntou 5.88 270 *e*P **Pn 05 15 30.6 +2.5**
JNBK Urakawa-nobuka 5.93 237 P **Pn 05 15 26.2 -2.6**
JNBK A A 05 15 26.2
comp=N,10.0nm,0.4s,comp=E,15nm,0.4s
UGL Uglegorsk 6.01 306⇑ *i*PN **Pn 05 15 32.8 +3.0**
UGL *i* S **Sn 05 16 40.4 +2.9**
UGL pmax pmax
comp=Z,649nm,1.1s
UGL smax smax
comp=E,3µm,3.2s
UGL smax smax
comp=N,2µm,5.4s
UGL Uglegorsk 6.01 306 *i* P **Pn 05 15 32.8 +3.0**
UGL AMB AMB 05 15 33.4
comp=N,650nm,0.6s
UGL *i* S **Sn 05 16 40.4 +2.9**
SKR Severo-Kuril's 6.66 40⇑ *i*PN **Pn 05 15 37.4 -1.0**
SKR *e*S **Sn 05 16 49.2 -3.9**
SKR pmax pmax
comp=Z,400nm,12.2s
SKR pmax pmax
comp=Z,1µm,0.7s
SKR smax smax
comp=N,298nm,0.7s
SKR smax smax
comp=E,313nm,0.7s
SKR MLR MLR
comp=N,700nm,16.0s
SKR MLR MLR
comp=E,700nm,15.0s
SKR Severo-Kuril's 6.66 40 *i* P **Pn 05 15 37.4 -1.0**
SKR AMB AMB 05 15 40.2
comp=E,900nm,0.4s
SKR AMB AMB 05 15 40.3
comp=E,950nm,2.0s
SKR *e*S **Sn 05 16 49.9 -3.2**
SKR A A 05 16 57.8
comp=E,230nm,0.5s
SKR A A 05 16 57.8
comp=E,240nm,0.5s
TYV Tymovskoe 6.83 321 *e*PN **Pn 05 15 43.1 +2.4**
TYV *e*S **Sn 05 17 00.5 +3.3**
TYV pmax pmax
comp=Z,198nm,1.0s
TYV pmax pmax
comp=Z,400nm,5.3s
TYV smax smax
comp=N,52nm,1.2s
TYV smax smax
comp=E,52nm,1.2s
TYV smax smax
comp=N,100nm,2.8s
TYV smax smax
comp=E,300nm,2.8s
TYV Tymovskoe 6.83 321 *e*P **Pn 05 15 42.9 +2.2**
TYV *e*S **Sn 05 16 59.4 +2.2**
JOT Ohata 7.49 237 A A 05 15 48.8
comp=N,4.0nm,1.0s,comp=E,2.0nm,0.3s
JTM Tenmabayashi 7.86 234 P **Pn 05 15 51.2 -3.4**
JTM Tenmabayashi 7.86 234 **Pn 05 15 50.7 -3.9**
JTM Tenmabayashi 7.86 234 P **Pn 05 15 51.0 -3.6**
JANG Nango 7.90 230 *e*P Pn 05 15 50.3 -4.8
JANG A A 05 15 50.3
comp=N,7.0nm,0.5s,comp=E,7.0nm,1.3s
JANG *e*S Sn 05 17 12.3 -11
JTH Tanohata 8.03 226 *e*P Pn 05 15 52.0 -5.0
JTH *e*S Sn 05 17 14.4 -12
PEA0B Petropavlovsk- 9.12 33*c i*PN **Pn 05 16 10.2 -1.2**
PETK Petropavlovsk- 9.12 33 P **Pn 05 16 10.1 -1.3**
comp=E,195nm,0.6s,baz=204,slow=10,SNR=263
PETK S **Sn 05 17 55.6 +3.2**
comp=E,6.7nm,0.8s,baz=178,slow=19,SNR=0.9
PETK LR LR 05 19 40.2
comp=E,476nm,19.2s,baz=206,slow=37
PETK Petropavlovsk- 9.12 33 **Pn 05 16 09.7 -1.7**
NKL Nikolayevsk 9.35 326 *e*PN **Pn 05 16 14.6 +0.3**
NKL *e*S **Sn 05 17 59.3 +1.6**
NKL pmax pmax
comp=N,55nm,0.9s
NKL pmax pmax
comp=E,601nm,1.2s
NKL pmax pmax
comp=Z,626nm,1.2s
NKL smax smax
comp=E,281nm,2.0s
NKL smax smax
comp=N,251nm,2.5s
NKL MLR MLR
comp=E,2µm,14.0s
NKL MLR MLR
comp=N,1µm,13.0s

NKL MLR MLR
comp=Z,2µm,16.0s
NKL Nikolayevsk 9.35 326 *e*P **Pn 05 16 15.8 +1.5**
NKL *e*S **Sn 05 17 59.2 +1.6**
PET Petropavlovsk 9.44 36 P **Pn 05 16 13.4 -2.2**
PET Petropavlovsk 9.44 36 *e*PN **Pn 05 16 12.7 -2.9**
PET *e*S **Sn 05 17 55.8 -4.2**
PET pmax pmax
comp=Z,500nm,8.2s
PET pmax pmax
comp=Z,300nm,7.8s
PET pmax pmax
comp=Z,96nm,1.2s
PET MLR MLR
comp=Z,300nm,15.0s
PET MLR MLR
comp=Z,400nm,14.0s
PET Petropavlovsk 9.44 36 **Pn 05 16 12.6 -3.0**
PET Petropavlovsk 9.44 36 P **Pn 05 16 13.0 -2.6**
comp=Z,1µmcomp=Z,58nm,1.0s
PET Petropavlovsk 9.44 36 P **Pn 05 16 12.9 -2.7**
PET Petropavlovsk 9.44 36 *e*P **Pn 05 16 13.7 -1.9**
PET *e*S **Sn 05 17 55.8 -4.2**
GRNR Gornyy 10.02 305⇑ *i*PN **Pn 05 16 24.4 +1.0**
GRNR pmax pmax
comp=E,30nm,0.8s
GRNR pmax pmax
comp=Z,40nm,0.7s
GRNR MLR MLR
comp=E,220nm,14.0s
GRNR MLR MLR
comp=Z,190nm,15.0s
GRNR Gornyy 10.02 305 *e*P **Pn 05 16 24.4 +1.0**
USA0B Ussuriysk Arra 12.45 269*c i*PN **Pn 05 16 56.0 +0.7**
USA0B Ussuriysk Arra 12.45 269 Pn **Pn 05 16 55.5 +0.2**
USRK Ussuriysk Ar. 12.45 269 P **Pn 05 16 55.4 0.0**
comp=Z,34nm,0.7s,baz=83,slow=12,SNR=41
USRK Ussuriysk Ar. 12.45 269 PN **Pn 05 16 55.5 +0.2**
USRK Ussuriysk Ar. 12.45 269 **Pn 05 16 55.5 +0.2**
USRK Ussuriysk Ar. 12.45 269 *e*P **Pn 05 16 55.5 +0.2**
KLR Kul'dur 12.46 293 P **Pn 05 16 55.9 +0.5**
comp=Z,22nm,0.8s,baz=110,slow=12,SNR=32
KLR S **Sn 05 19 15.8 +3.0**
comp=Z,6.0nm,0.8s,baz=68,slow=9.1,SNR=1.5
KLR LR LR 05 22 05.5
comp=Z,224nm,20.9s,baz=108,slow=39
KLR PcP **PcP 05 22 23.2 +0.6**
comp=Z,4.8nm,0.6s,baz=37,slow=1.5,SNR=5.2
KLR Kul'dur 12.46 293*d i*PN **Pn 05 16 58.4 +3.0**
KLR pmax pmax
comp=Z,30nm,1.5s
MJAR Matsushiro Arr 12.48 226 P **Pn 05 16 53.0 -2.8**
comp=Z,94nm,0.8s,baz=31,slow=13,SNR=88
MJAR S **Sn 05 19 08.6 -5.0**
comp=Z,22nm,0.8s,baz=29,slow=18,SNR=5.1
MJAR LR LR 05 21 52.6
comp=Z,148nm,21.6s,baz=103,slow=38
MJAR Matsushiro Arr 12.48 226 PN **Pn 05 16 52.8 -3.0**
MJAR Matsushiro Arr 12.48 226 **Pn 05 16 52.8 -3.0**
MJB9 Matsu-Tunnel 12.48 227 Pn **Pn 05 16 53.7 -2.1**
MAJO Matsushiro 12.48 227 P **Pn 05 16 53.1 -2.7**
MAJO Matsushiro 12.48 227 S **Sn 05 19 11.5 -2.1**
MAJO Matsushiro 12.48 227*c i*PN **Pn 05 16 52.7 -3.1**
MAJO Matsushiro 12.48 227 **Pn 05 16 52.6 -3.1**
MAJO Matsushiro 12.48 227 P **Pn 05 16 53.0 -2.7**
VLA Vladivostok 12.81 264*c i*PN **Pn 05 17 01.8 +1.8**
VLA Vladivostok 12.81 264 *e*P **Pn 05 17 01.8 +1.8**
MSHR Mys Shultsa 13.49 263 P **Pn 05 17 08.4 -0.3**
JGF Kuroka 13.64 226 P **Pn 05 17 08.9 -1.9**
JGF Kuroka 13.64 226 **Pn 05 17 08.5 -2.3**
JGF Kuroka 13.64 226 P **Pn 05 17 08.6 -2.2**
PSTR Posyet 13.72 264⇓ *i*P **Pn 05 17 11.3 -0.2**
PSTR Posyet 13.72 264 *e*P **Pn 05 17 11.3 -0.2**
MA2 Magadan 13.88 3 P **Pn 05 17 12.4 -1.0**
comp=Z,68nm,0.8s,baz=178,slow=9.8,SNR=29
MA2 LR LR 05 22 23.6
comp=Z,161nm,20.5s,baz=214,slow=36
MA2 Magadan 13.88 3 P **Pn 05 17 13.5 0.0**
MA2 Magadan 13.88 3*c i*P **Pn 05 17 12.7 -0.8**
MA2 Magadan 13.88 3 **Pn 05 17 12.7 -0.8**
MA2 Magadan 13.88 3 P **Pn 05 17 12.8 -0.8**
comp=Z,2µmcomp=Z,129nm,0.8s
MA2 Magadan 13.88 3 P **Pn 05 17 12.8 -0.7**
MA2 Magadan 13.88 3 *e*P **Pn 05 17 12.7 -0.7**
JSG Sagara 13.99 222 P **Pn 05 17 12.9 -2.1**
JSG Sagara 13.99 222 S **Sn 05 19 45.6 -4.2**
JSG Sagara 13.99 222 **Pn 05 17 15.1 0.0**
JSG Sagara 13.99 222 P **Pn 05 17 16.0 +1.0**
INU Inuyama 14.01 227 P **Pn 05 17 13.4 -2.0**
INU Inuyama 14.01 227 **Pn 05 17 13.2 -2.2**
INU Inuyama 14.01 227 P **Pn 05 17 13.5 -2.0**
MDJ Mudanjiang 14.04 273 P **Pn 05 17 17.2 +1.5**
MDJ Mudanjiang 14.04 273 **Pn 05 17 15.9 +0.3**
MDJ Mudanjiang 14.04 273 P **Pn 05 17 16.5 +0.8**
MDJ S **Sn 05 19 51.1 +0.1**
MDJ pmax pmax
comp=Z,26nm,1.1s
MDJ pmax pmax
comp=Z,300nm,3.6s
MDJ L L
comp=Z,920nm,14.8s
MDJ L L
comp=Z,300nm,17.9s
MDJ L L
comp=Z,410nm,15.8s
MDJ Mudanjiang 14.04 273 P **Pn 05 17 16.9 +1.2**
JHJ2 Mitsune 14.62 214 Pn **Pn 05 17 20.9 -2.2**
JHJ Hachijo jima 2 14.63 214 P **Pn 05 17 21.2 -2.0**
comp=Z,230nm,0.7s,baz=298,slow=22,SNR=9.6
JHJ S Sn 05 19 53.6 -12
comp=Z,225nm,0.4s,baz=67,slow=23,SNR=12
BNX BinXian 15.38 278⇓ P **Pn 05 17 32.3 0.0**
BNX S **Sn 05 20 19.6 -3.5**
BNX pmax pmax
comp=Z,55nm,0.8s
BNX pmax pmax
comp=Z,270nm,7.9s
BNX L L
comp=Z,590nm,13.6s
BNX L L
comp=Z,210nm,14.6s
BNX L L
comp=Z,220nm,14.1s
HEH HeiHe 15.40 295 *e*P **Pn 05 17 33.4 +0.9**
HEH sP **pwP 05 18 02.0 -0.1**
HEH S **Sn 05 20 24.6 +1.2**
HEH pmax pmax
comp=Z,37nm,0.9s
ZEA Zeya 16.37 307 *e*P **P 05 17 45.8 +1.2**
ZEA *e*S **S 05 20 36.9 -10**
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=E,40nm,0.8s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA smax smax
comp=E,200nm,9.0s
ZEA smax smax
comp=N,300nm,7.7s
ZEA Zeya 16.37 307 *e*P **P 05 17 45.8 +1.2**
JMN Monobe 16.91 230 P **P 05 17 51.0 +0.2**
JMN Monobe 16.91 230 P **P 05 17 50.8 0.0**
CN2 Changchun 17.13 272 *e*P **P 05 17 52.4 -0.7**
CN2 *es*P pwP 05 18 25.9 +4.5
CN2 *e*S **S 05 20 57.7 -6.5**
CN2 pmax pmax
comp=N,100nm,3.0s
CN2 L L
comp=N,700nm,17.0s
CN2 L L
comp=N,400nm,17.0s
CN2 L L
comp=N,500nm,16.0s
SEY Seymchan 17.31 5 P **P 05 17 54.1 -0.7**
comp=N,132nm,0.8s,baz=183,slow=8.3,SNR=93
SEY ScP **ScP 05 25 49.0 -1.4**
comp=N,2.4nm,0.3s,baz=182,slow=1.2,SNR=6.9
SHEM Shemya Is, Ala 17.50 58 P **Pn 05 17 57.9 -0.1**
comp=N,207nm,0.9s,baz=245,slow=2.3,SNR=11
SHEM S S 05 21 00.5 -11
comp=N,33nm,0.8s,baz=251,slow=22,SNR=6.0
SHEM LR LR 05 23 16.9
comp=N,63nm,20.4s,baz=316,slow=32
SMY Shemya 17.50 58 P **Pn 05 18 00.0 +1.9**

SMY Shemya 17.50 58 P **P 05 17 57.0 -0.1**
SMY Shemya 17.50 58 P **P 05 17 57.0 -0.1**
KSRS Korea Array 18.05 250 P **P 05 18 02.1 -1.2**
comp=N,61nm,0.7s,baz=55,slow=11,SNR=129
KSRS S **S 05 21 20.7 -2.0**
comp=N,0.7nm,0.4s,baz=70,slow=14,SNR=1.1
KSRS PcP **PcP 05 22 31.9 +1.1**
comp=N,8.0nm,0.7s,baz=6.7,slow=0.7,SNR=14
KSRS ScP **ScP 05 25 54.5 +2.0**
comp=N,0.7nm,0.5s,baz=68,slow=1.2,SNR=5.0
KSAR Wonju Array Be 18.09 250 P **P 05 18 04.3 +0.7**
KSAR Wonju Array Be 18.09 250 **P 05 18 04.3 +0.7**
KSAR Wonju Array Be 18.09 250 *e*P **P 05 18 04.3 +0.7**
INCN Inchon 18.89 252 P **P 05 18 13.7 +1.2**
INCN Inchon 18.89 252 P **P 05 18 12.8 +0.3**
INCN Inchon 18.89 252 P **Pn 05 18 14.1 -0.6**
INCN Inchon 18.89 252 **P 05 18 12.8 +0.3**
INCN Inchon 18.89 252 P **Pn 05 18 14.1 -0.6**
INCN Inchon 18.89 252 *e*P **P 05 18 12.8 +0.3**
TJN Taejon 19.04 248 P **P 05 18 14.1 +0.1**
TJN Taejon 19.04 248*d i*P **P 05 18 14.7 +0.7**
TJN pmax pmax
comp=Z,2.0nm,1.0s
TJN Taejon 19.04 248 **P 05 18 13.9 -0.1**
JCJ Chichijima 19.49 200 P **P 05 18 17.3 -1.6**
comp=Z,245nm,0.8s,baz=70,slow=2.2,SNR=9.1
JCJ Chichijima 19.49 200 **P 05 18 18.4 -0.5**
JCJ Chichijima 19.49 200 P **P 05 18 18.4 -0.5**
JCJ Chichijima 19.49 200 P **P 05 18 18.4 -0.5**
YAK Yakutsk 19.90 332 P **P 05 18 21.9 -1.2**
comp=Z,98nm,0.4s,baz=295,slow=2.0,SNR=14
YAK S **S 05 21 56.2 -2.7**
comp=Z,56nm,0.7s,baz=48,slow=24,SNR=10
YAK Yakutsk 19.90 332*c i*P **P 05 18 21.7 -1.4**
YAK pmax pmax
comp=Z,101nm,0.6s
YAK Yakutsk 19.90 332 **P 05 18 23.4 +0.3**
YAK Yakutsk 19.90 332 P **P 05 18 23.7 +0.6**
HILR Hailar Array B 20.29 292 P **P 05 18 25.8 -1.6**
comp=Z,8.1nm,0.5s,baz=95,slow=9.4,SNR=9.0
HILR PcP **PcP 05 22 35.2 +0.5**
comp=Z,1.6nm,0.3s,baz=132,slow=2.1,SNR=2.8
HILR LR LR 05 26 57.8
comp=Z,135nm,18.5s,baz=340,slow=38
HIA Hailar 20.30 291 P **P 05 18 28.7 +1.2**
HIA Hailar 20.30 291 P **P 05 18 26.6 -0.9**
HIA Hailar 20.30 291 P **P 05 18 26.6 -0.9**
HIA Hailar 20.30 291 P **P 05 18 27.0 -0.5**
JSU Suzuyama 20.47 233 P **P 05 18 29.4 -0.1**
JSU Suzuyama 20.47 233 P **P 05 18 29.6 +0.1**
JSU Suzuyama 20.47 233 P **P 05 18 30.3 +0.8**
AMKA Amchitka 20.47 63 **P 05 18 28.9 -0.3**
DL2 Dalian 21.59 261 P **P 05 18 41.4 0.0**
DL2 pP **pP 05 19 05.4 -1.0**
DL2 S **S 05 22 30.8 -0.7**
DL2 pmax pmax
comp=Z,110nm,1.0s
DL2 pmax pmax
comp=Z,190nm,4.2s
KIWB Kanaga Island 22.70 62 P **P 05 18 51.7 -0.7**
KIWB IAmb IAmb 05 18 53.4
comp=Z,45nm,0.8s
ADK Adak 23.00 62 P **P 05 18 54.2 -0.9**
ADK pmax pmax
comp=Z,43nm,1.0s
ADK Adak 23.00 62 P **P 05 18 54.2 -0.9**
ADK IAmb IAmb 05 19 23.6
comp=Z,43nm,0.9s
GSTR Great Sitkin T 23.39 62 P **P 05 18 58.5 -0.2**
XLT XiLinHaoTe 23.64 278 *e*P **P 05 19 01.7 +0.6**
XLT pP pP 05 19 21.0 -7.4
XLT sP pwP 05 19 35.8 +3.1
XLT PP **PnPn 05 19 37.7 -0.4**
XLT PcP **PcP 05 22 42.4 +0.9**
XLT S **S 05 23 03.6 -1.4**
XLT pmax pmax
comp=Z,70nm,0.7s
XLT L L
comp=Z,50nm,18.3s
XLT L L
comp=Z,220nm,13.2s
XLT L L
comp=Z,200nm,13.2s
BILL Bilibino 24.00 16*c i*P **P 05 19 01.8 -2.3**
BILL pmax pmax
comp=Z,13nm,0.8s
BILL Bilibino 24.00 16 **P 05 19 02.5 -1.6**
BILL IAmb IAmb 05 19 11.2
comp=Z,41nm,1.1s
ATKA Atka Island 24.54 61 P **P 05 19 10.3 +1.2**
ATKA Atka Island 24.54 61 **P 05 19 08.7 -0.4**
ATKA IAmb IAmb 05 19 14.4
comp=Z,49nm,0.9s
BOD Bodaibo 24.71 312 *e*P **P 05 19 08.8 -1.8**
BOD pmax pmax
comp=Z,12nm,0.8s
BJI2 Beijing 24.92 269 P **P 05 19 13.6 +0.9**
BJI2 S **S 05 23 27.2 +1.9**
BJI2 pmax pmax
comp=Z,72nm,0.9s
BJI2 L L
comp=Z,250nm,22.0s
BJI2 L L
comp=Z,72nm,23.1s
BJI2 L L
comp=Z,110nm,16.3s
BJT Baijiatuau 24.92 269 P **P 05 19 14.2 +1.5**
BJT Baijiatuau 24.92 269 P **P 05 19 13.4 +0.7**
BJT pmax pmax
comp=Z,147nm,1.0s
BJT Baijiatuau 24.92 269 P **P 05 19 13.4 +0.7**
BJT Baijiatuau 24.92 269 P **P 05 19 14.8 +2.1**
JOW Kunigami 25.30 229 P **P 05 19 17.4 +1.1**
JOW Kunigami 25.30 229 P **P 05 19 16.4 +0.1**
JOW Kunigami 25.30 229 P **P 05 19 16.8 +0.5**
TIA Tai'an 26.03 260 P **P 05 19 23.2 +0.4**
TIA PP **sP 05 20 09.2 +0.2**
TIA PcP **PcP 05 22 47.9 +1.0**
TIA S **S 05 23 44.8 +1.8**
TIA pmax pmax
comp=Z,38nm,1.1s
HNS HongShan 27.11 264⇓ P **P 05 19 33.5 +1.1**
HNS pP **pP 05 20 02.0 -0.1**
HNS S **S 05 24 00.2 +0.3**
HNS pmax pmax
comp=Z,49nm,0.7s
HNS L L
comp=Z,78nm,9.0s
HNS L L
comp=Z,140nm,12.9s
HNS L L
comp=Z,140nm,10.2s
NJ2 Nanjing 27.26 251⇓ P **P 05 19 34.4 +0.6**
NJ2 pP **pP 05 20 00.2 -3.8**
NJ2 pmax pmax
comp=Z,85nm,0.8s
TIXI Tiksi 27.77 346 S **S 05 24 04.2 -5.5**
comp=Z,2.7nm,0.3s,baz=111,slow=21,SNR=1.3
TIXI Tiksi 27.77 346*c i*P **P 05 19 35.9 -2.0**
TIXI pmax pmax
comp=Z,35nm,0.8s
TIXI Tiksi 27.77 346 **P 05 19 36.1 -1.8**
HHC Hu-ho-hao-te 27.81 274⇓ *i*P **P 05 19 40.2 +1.4**
HHC sP sP 05 20 21.2 -3.4
HHC pmax pmax
comp=Z,84nm,0.8s
ULN Ulaanbaatar 28.82 290 *e*P **P 05 19 47.1 -0.7**
ULN pmax pmax
comp=Z,15nm,1.4s
ULN Ulaanbaatar 28.82 290 P **P 05 19 49.4 +1.7**
ULN Ulaanbaatar 28.82 290 **P 05 19 47.4 -0.4**
ULN Ulaanbaatar 28.82 290 P **P 05 19 47.0 -0.7**
comp=Z,783nmcomp=Z,47nm,1.1s
ULN Ulaanbaatar 28.82 290 P **P 05 19 49.2 +1.5**
ULN Ulaanbaatar 28.82 290 *e*P **P 05 19 47.1 -0.7**
BTO2 Baotou 29.03 274 *e*P **P 05 19 46.1 -3.5**
BTO2 S **S 05 24 27.6 -2.7**
BTO2 pmax pmax
comp=Z,11nm,0.6s
BTO2 pmax pmax
comp=Z,160nm,4.7s
BTO2 L L
comp=Z,1µm,14.9s
BTO2 L L

comp=Z,400nm,9.4s
BTO2 L L
comp=Z,480nm,16.5s
SONM Songino Array 29.26 290 P **P** **05 19 50.5 -1.2**
comp=Z,4.5nm,0.6s,baz=77,slow=8.7,SNR=15
SONM PcP **PcP** **05 22 53.9 -0.8**
comp=Z,3.6nm,0.7s,baz=79,slow=2.3,SNR=3.6
SONM S **S** **05 24 34.2 +0.3**
comp=Z,0.5nm,0.4s,baz=115,slow=6.5,SNR=1.5
SONM ScP **ScP** **05 26 23.6 +0.8**
comp=Z,4.0nm,0.9s,baz=92,slow=3.9,SNR=9.2
SONM LR LR 05 32 59.0
comp=Z,153nm,18.3s,baz=143,slow=39
comp=Z,4.5nm,0.6s
SONM Songino Array 29.26 290 P **P** **05 19 50.8 -0.8**
SONM pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 29.26 290 P **P** **05 19 50.8 -0.8**
H11N2 WAKE ISLAND Hy 29.68 145 T T 05 51 12.7
baz=334,slow=75,SNR=5431
H11N1 WAKE ISLAND Hy 29.69 145 T T 05 51 04.4
baz=334,slow=75,SNR=592
H11N3 WAKE ISLAND Hy 29.70 145 T T 05 51 09.4
baz=334,slow=75,SNR=3302
LYN LuoYang 30.13 261 P **P** **05 20 00.2 +0.9**
LYN S **S** **05 24 54.0 +6.6**
LYN pmax pmax
comp=Z,72nm,0.7s
TNA Tin City 30.29 34 **P** **05 20 00.4 +0.1**
TNA IAmb IAmb 05 20 02.0
comp=Z,27nm,0.8s
TNA Tin City 30.29 34 P **P** **05 20 01.0 +0.7**
baz=250,SNR=6.1
TLY Talaya 30.38 298 PcP **PcP** **05 22 58.3 +0.9**
comp=Z,4.3nm,0.6s,baz=63,slow=4.5,SNR=4.1
TLY LR LR 05 33 19.8
comp=Z,158nm,19.1s,baz=78,slow=38
H11S1 WAKE ISLAND Hy 30.71 147 T T 05 52 20.9
baz=336,slow=76,SNR=1346
H11S3 WAKE ISLAND Hy 30.71 147 T T 05 52 25.1
baz=336,slow=76,SNR=476
H11S2 WAKE ISLAND Hy 30.73 147 T T 05 52 25.4
baz=336,slow=76,SNR=922
K13K Kusilvak Mount 30.75 42 IAmb IAmb 05 20 06.0
comp=Z,29nm,1.1s
K13K Kusilvak Mount 30.75 42 P **P** **05 20 05.0 +0.7**
baz=260,SNR=7.1
ZAK Zakamensk 30.80 296 *e*P **P** **05 20 06.3 +1.2**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
ZAK Zakamensk 30.80 296 *e*P **P** **05 20 06.3 +1.2**
F14K Arctic Creek 30.89 35 P **P** **05 20 06.6 +1.0**
baz=252
ANM Nome 31.02 36 P **P** **05 20 07.8 +1.1**
baz=254
M13K Dall Lake 31.15 45 P **P** **05 20 09.4 +1.5**
baz=263
WHN Wuhan 31.20 253 ⇓P **P** **05 20 09.1 +0.5**
WHN ScS ScS 05 30 24.8 -2.0
WHN pmax pmax
comp=Z,240nm,0.8s
L14K Kuka Creek 31.59 43 IAmb IAmb 05 20 13.8
comp=Z,38nm,0.9s
L14K Kuka Creek 31.59 43 P **P** **05 20 12.8 +1.1**
baz=263,SNR=14
F15K North Star Dit 31.63 35 P **P** **05 20 13.1 +1.0**
baz=254,SNR=8.5
G15K Niukluk 31.68 36 P **P** **05 20 13.5 +0.9**
baz=255,SNR=22
M14K Bethel 31.87 44 P **P** **05 20 15.1 +0.9**
baz=264,SNR=8.0
YULB Yu-li 31.88 235 P **P** **05 20 14.8 +0.1**
YULB IAmb IAmb 05 20 31.0
comp=Z,25nm,1.0s
N14K Kuskokwak Cree 31.93 46 IAmb IAmb 05 20 20.4
comp=Z,44nm,1.0s
N14K Kuskokwak Cree 31.93 46 P **P** **05 20 15.4 +0.7**
baz=266
MOY Mondy 32.02 298 *e*P **P** **05 20 18.9 +3.1**
MOY pmax pmax
comp=Z,6.0nm,1.4s
O14K Tigyukauivet M 32.11 47 P **P** **05 20 16.9 +0.6**
baz=267
L15K Ungalak Mounta 32.20 43 P **P** **05 20 17.5 +0.4**
baz=263
C16K Lisburne Hills 32.20 30 IAmb IAmb 05 20 18.1
comp=Z,44nm,0.9s
C16K Lisburne Hills 32.20 30 P **P** **05 20 16.9 -0.1**
baz=249
GUMO Guam 32.28 188 LR LR 05 31 37.5
comp=Z,99nm,19.8s,baz=14,slow=33
QZH2 Quanzhou 32.30 241 *e*P **P** **05 20 19.8 +1.5**
QZH2 S **S** **05 25 23.4 +2.1**
TPUB Ta-pu 32.33 236 P **P** **05 20 19.0 +0.3**
TPUB Ta-pu 32.33 236 P **P** **05 20 19.5 +0.8**
H16K Elim 32.35 37 P **P** **05 20 19.1 +0.7**
baz=258,SNR=20
TWGBT Beinan 32.45 235 P **P** **05 20 19.9 +0.2**
TWG Pinlang 32.45 235 P **P** **05 20 19.2 -0.5**
M15K Kasigluk River 32.49 44 P **P** **05 20 20.2 +0.6**
baz=266,SNR=22
SDPT Sand Point 32.59 54 P **P** **05 20 21.4 +1.0**
baz=274
N15K Kwethluk River 32.75 45 P **P** **05 20 22.8 +0.9**
baz=267,SNR=15
KNMB Chin-men Tao 32.78 240 **P** **05 20 22.4 -0.2**
D17K Noatak River 32.81 31 P **P** **05 20 23.0 +0.7**
baz=252,SNR=68
J16K Anvik River 32.82 40 P **P** **05 20 23.2 +0.8**
baz=262,SNR=7.9
O15K Ungalikthiuk R 32.84 47 IAmb IAmb 05 20 24.4
comp=Z,43nm,0.8s
O15K Ungalikthiuk R 32.84 47 P **P** **05 20 23.4 +0.6**
baz=269,SNR=8.6
I17K Unalakleet 32.87 39 IAmb IAmb 05 20 24.8
comp=Z,29nm,1.1s
I17K Unalakleet 32.87 39 P **P** **05 20 23.7 +0.8**
baz=260,SNR=6.1
XAN Xi'an 32.87 264 ⇓P **P** **05 20 23.8 +0.4**
XAN sP pwP 05 21 00.7 +4.1
XAN PcP **PcP** **05 23 05.4 +0.9**
XAN S **S** **05 25 31.9 +1.7**
XAN pmax pmax
comp=Z,77nm,1.1s
XAN L L
comp=Z,200nm,15.8s
XAN L L
comp=Z,190nm,15.1s
XAN Xi'an 32.87 264 P **P** **05 20 23.7 +0.4**
XAN pP **pP** **05 20 54.4 +1.0**
XAN x x 05 21 00.2
XAN PcP **PcP** **05 23 04.9 +0.4**
RDOG Red Dog Mine 32.98 31 IAmb IAmb 05 20 25.4
comp=Z,54nm,1.1s
RDOG Red Dog Mine 32.98 31 P **P** **05 20 24.2 +0.4**
baz=252,SNR=8.5
C17K DeLong Mountai 33.02 30 P **P** **05 20 24.7 +0.5**
baz=251,SNR=19
E17K Hotham Inlet 33.10 33 P **P** **05 20 25.8 +0.9**
baz=254,SNR=32
L16K Owhat River 33.16 43 IAmb IAmb 05 20 26.9
comp=Z,26nm,0.8s
L16K Owhat River 33.16 43 P **P** **05 20 25.9 +0.5**
baz=265,SNR=14
F17K Baldwin Pennin 33.16 34 P **P** **05 20 26.4 +1.0**
baz=256,SNR=36
G17K Kiwalik Mounta 33.19 36 P **P** **05 20 26.8 +1.1**
baz=258,SNR=81
M16K Timber Creek 33.35 44 P **P** **05 20 28.0 +0.9**
baz=267,SNR=16
H17K Granite Mounta 33.39 37 IAmb IAmb 05 20 29.4
comp=Z,39nm,0.8s
H17K Granite Mounta 33.39 37 P **P** **05 20 28.3 +0.9**
baz=260,SNR=32
N16K Nishlik Lake 33.42 45 P **P** **05 20 28.6 +0.9**
baz=268,SNR=35
J17K VABM Dome 33.52 40 IAmb IAmb 05 20 30.7
comp=Z,47nm,1.1s
J17K VABM Dome 33.52 40 P **P** **05 20 29.7 +1.2**
baz=263,SNR=20
E18K Tukpahlearik C 33.65 32 IAmb IAmb 05 20 33.1
comp=Z,16nm,0.6s
E18K Tukpahlearik C 33.65 32 P **P** **05 20 30.4 +0.8**
baz=255,SNR=20
O16K Kokwok River B 33.74 47 IAmb IAmb 05 20 32.0
comp=Z,23nm,0.8s
O16K Kokwok River B 33.74 47 P **P** **05 20 30.9 +0.4**
baz=270,SNR=6.3
L17K Donlin 33.75 42 P **P** **05 20 31.6 +1.1**
baz=266,SNR=23
C18K Utukok River 33.77 30 P **P** **05 20 31.1 +0.4**
baz=253,SNR=28
P16K Nushagak River 33.79 48 P **P** **05 20 32.0 +1.1**
baz=270
K17K Iditarod 33.79 41 IAmb IAmb 05 20 33.1
comp=Z,41nm,0.8s
K17K Iditarod 33.79 41 P **P** **05 20 32.0 +1.1**
baz=265,SNR=17
F18K Selawik 33.82 34 P **P** **05 20 32.1 +1.0**
baz=258,SNR=30
H18K Honhosa River 34.07 37 P **P** **05 20 34.2 +0.9**
baz=261,SNR=91
G18K Tagagawik 34.08 35 P **P** **05 20 34.3 +0.9**
baz=260,SNR=161
M17K Holitna River 34.11 43 P **P** **05 20 35.0 +1.4**
baz=267,SNR=34
N17K Nushagak Hills 34.20 45 IAmb IAmb 05 20 36.5
comp=Z,33nm,0.8s
N17K Nushagak Hills 34.20 45 P **P** **05 20 35.5 +1.1**
baz=269,SNR=12
O17K Koliganek Bris 34.24 46 P **P** **05 20 35.8 +1.0**
baz=270,SNR=21
A19K Wainwright 34.30 27 P **P** **05 20 35.5 +0.3**
baz=251
C19K Lookout Ridge 34.46 30 P **P** **05 20 37.4 +0.7**
baz=254,SNR=30
Q16K King Salmon 34.49 48 P **P** **05 20 37.5 +0.5**
baz=272
L18K Granite Mounta 34.50 42 IAmb IAmb 05 20 39.4
comp=Z,41nm,0.9s
L18K Granite Mounta 34.50 42 P **P** **05 20 38.4 +1.4**
baz=267,SNR=27
P17K Kvichak River 34.59 47 IAmb IAmb 05 20 41.3
comp=Z,36nm,0.8s
P17K Kvichak River 34.59 47 P **P** **05 20 38.5 +0.7**
baz=272
F19K Shaleruckik Mo 34.60 34 P **P** **05 20 38.2 +0.5**
baz=259,SNR=113
GCSA Galena City Sc 34.64 37 P **P** **05 20 38.2 +0.1**
baz=263,SNR=5.6
ENH Enshi 34.66 258 P **P** **05 20 39.2 +0.4**
ENH Enshi 34.66 258 P **P** **05 20 39.0 +0.2**
R17L Mt. Peulik Vol 34.70 50 P **P** **05 20 39.3 +0.4**
baz=274
G19K Purcell Mounta 34.75 35 P **P** **05 20 39.5 +0.4**
baz=261,SNR=97
D19K Kuna River 34.82 31 P **P** **05 20 40.3 +0.5**
baz=256,SNR=93
N18K Kilae Creek 34.85 45 P **P** **05 20 41.4 +1.4**
baz=270,SNR=21
M18K Stony River 34.89 43 P **P** **05 20 41.4 +1.1**
baz=269,SNR=17
Q17K Contact Creek 34.92 49 P **P** **05 20 40.3 -0.5**
baz=273
E19K Redstone River 34.92 33 P **P** **05 20 41.6 +1.0**
baz=259,SNR=205
J19K Poorman 35.11 39 P **P** **05 20 42.8 +0.6**
baz=265,SNR=82
O18K Koktuh Hills 35.20 46 P **P** **05 20 44.0 +0.9**
baz=272,SNR=7.3
P18K Big Mountain, 35.20 47 P **P** **05 20 43.8 +0.7**
baz=272,SNR=13
CHIR Chirikof Islan 35.28 53 P **P** **05 20 44.8 +1.0**
baz=277
Q18K Katmai Hardscr 35.35 48 P **P** **05 20 44.6 +0.1**
baz=274,SNR=9.5
LZH Lanzhou 35.35 271 P **P** **05 20 46.5 +1.6**
LZH pP pP 05 21 13.7 -1.5
LZH S **S** **05 26 10.0 +1.4**
LZH pmax pmax
comp=Z,170nm,0.9s
LZH pmax pmax
comp=Z,290nm,4.6s
LZH L L
comp=Z,230nm,20.3s
LZH L L
comp=Z,160nm,21.6s
LZH L L
comp=Z,180nm,22.0s
L19K White Mountain 35.36 42 IAmb IAmb 05 20 46.4
comp=Z,46nm,1.4s
L19K White Mountain 35.36 42 P **P** **05 20 45.3 +0.8**
baz=269,SNR=14
D20K Etivluk River 35.41 31 P **P** **05 20 45.5 +0.7**
baz=258,SNR=116
F20K Avaraart Lake 35.43 34 IAmb IAmb 05 20 50.2
comp=Z,27nm,0.8s
F20K Avaraart Lake 35.43 34 P **P** **05 20 45.5 +0.7**
baz=261
E20K Nigu River 35.47 31 P **P** **05 20 46.1 +0.8**
baz=259,SNR=134
B20K Meade River 35.52 28 P **P** **05 20 46.2 +0.6**
baz=255
LZDM Lanzhou Array 35.52 271 P **P** **05 20 48.0 +1.6**
comp=Z,78nm,1.1s,baz=54,slow=7.3,SNR=26
LZDM PcP **PcP** **05 23 12.7 +0.2**
comp=Z,6.8nm,0.5s,baz=160,slow=4.6,SNR=4.1
LZDM S **S** **05 26 12.1 +0.6**
comp=Z,1.6nm,0.3s,baz=67,slow=16,SNR=2.0
comp=Z,78nm,1.1s
N19K Bonanza Creek 35.53 44 P **P** **05 20 47.0 +1.0**
baz=271,SNR=18
H20K Anotleneega Mo 35.56 36 P **P** **05 20 47.0 +0.9**
baz=264,SNR=152
M19K Big River Lodg 35.58 43 IAmb IAmb 05 20 48.4
comp=Z,26nm,0.9s
M19K Big River Lodg 35.58 43 P **P** **05 20 47.1 +0.8**
baz=269,SNR=14
I20K Naaghedeneel 35.67 38 P **P** **05 20 47.6 +0.7**
baz=265,SNR=12
K20K Telida 35.76 40 IAmb IAmb 05 20 49.9
comp=Z,65nm,1.3s
K20K Telida 35.76 40 P **P** **05 20 48.7 +0.9**
baz=268,SNR=27
J20K Nowinta River 35.77 39 P **P** **05 20 48.7 +0.9**
baz=266,SNR=87
A21K Barrow 36.04 26 P **P** **05 20 50.4 +0.4**
baz=254
Q19K Cape Douglas, 36.04 48 P **P** **05 20 49.7 -0.6**
baz=274
C21K Knifeblade Rid 36.15 30 P **P** **05 20 52.1 +1.1**
baz=259,SNR=79
M20K Styx River 36.17 43 IAmb IAmb 05 20 53.8
comp=Z,35nm,0.8s
M20K Styx River 36.17 43 P **P** **05 20 52.7 +1.3**
baz=271
ILSW Iliamna Southw 36.23 46 IAmb IAmb 05 20 54.3
comp=Z,20nm,0.8s
G21K Allakaket 36.23 35 P **P** **05 20 52.8 +1.0**
baz=264,SNR=194
B21K Ikpikpuk River 36.30 29 P **P** **05 20 53.1 +0.9**
baz=258
E21K Killik River 36.31 31 P **P** **05 20 52.8 +0.3**
baz=261
F21K Alatna River 36.32 33 P **P** **05 20 53.2 +0.6**
baz=263
OHAK Old Harbor 36.40 50 P **P** **05 20 54.4 +1.2**
OHAK Old Harbor 36.40 50 IAmb IAmb 05 20 54.2
comp=Z,54nm,1.4s
OHAK Old Harbor 36.40 50 P **P** **05 20 53.8 +0.6**
baz=277
H21K Melozitna Rive 36.44 36 P **P** **05 20 54.5 +0.9**
baz=266,SNR=115
A22K Sinclair Lake 36.48 27 P **P** **05 20 54.0 +0.3**
baz=256
O20K Slope Mountain 36.48 46 P **P** **05 20 54.5 +0.4**
baz=274,SNR=8.3
CHUM Lake Minchumin 36.56 39 P **P** **05 20 56.0 +1.5**
baz=269,SNR=48
GTA2 Gaotai 36.60 278 P **P** **05 20 56.6 +1.2**
GTA2 PcP **PcP** **05 23 16.9 +1.5**
GTA2 S **S** **05 26 28.7 +1.3**
GTA2 ScP **ScP** **05 26 48.6 +0.2**
GTA2 PcS **PcS** **05 27 03.7 +0.2**
GTA2 ScS **ScS** **05 30 56.5 +1.0**
GTA2 pmax pmax
comp=Z,120nm,0.7s
GTA2 L L
comp=Z,380nm,16.5s
GTA2 L L
comp=Z,230nm,17.5s
GTA2 L L
comp=Z,100nm,16.1s
PPLA Purkeypile 36.61 41 P **P** **05 20 56.5 +1.4**
baz=270,SNR=16
SPCR Spurr Chakacha 36.63 44 P **P** **05 20 56.4 +1.1**
baz=272,SNR=9.0
CAST Castle Rocks 36.66 40 P **P** **05 20 56.8 +1.4**
baz=269,SNR=56
SPU Mount Spurr 36.71 44 IAmb IAmb 05 20 58.1
comp=Z,46nm,1.0s
KDAK Kodiak Island 36.71 49 LR LR 05 34 56.6
comp=Z,43nm,20.8s,baz=209,slow=34
KDAK Kodiak Island 36.71 49 P **P** **05 20 55.6 -0.3**
KDAK pmax pmax
comp=Z,61nm,1.0s
KDAK Kodiak Island 36.71 49 **P** **05 20 55.6 -0.3**
KDAK Kodiak Island 36.71 49 P **P** **05 20 55.3 -0.6**
baz=277
KDAK Kodiak Island 36.71 49 P **P** **05 20 55.3 -0.6**
I21K Tanana 36.75 37 P **P** **05 20 57.4 +1.2**
baz=267,SNR=9.3
B22K Teshekpuk Lake 36.84 28 P **P** **05 20 57.2 +0.4**
baz=259,SNR=6.4
F22K John River 36.86 33 P **P** **05 20 58.2 +1.1**
baz=264
SKT Skwentna 36.93 42 IAmb IAmb 05 21 03.1
comp=Z,22nm,1.0s
SKT Skwentna 36.93 42 P **P** **05 20 58.4 +0.7**
baz=272,SNR=10
HOM Homer 37.01 46 P **P** **05 20 59.3 +0.9**
baz=275
SZP Santa 37.02 230 P **P** **05 21 00.9 +2.0**
H22K Ishtalitna Cre 37.04 36 P **P** **05 20 59.9 +1.3**
baz=267,SNR=114
G22K Bettles 37.06 34 P **P** **05 20 59.3 +0.6**
baz=265
L22K Petersville 37.27 41 IAmb IAmb 05 21 01.4
comp=Z,21nm,0.6s
L22K Petersville 37.27 41 P **P** **05 21 00.9 +0.3**
baz=272,SNR=19
MLY Manley 37.27 37 P **P** **05 21 01.8 +1.2**
baz=268,SNR=74
BRSE Bradley Lake S 37.46 46 P **P** **05 21 03.0 +0.8**
baz=275,SNR=8.4
TRF Thorofare Moun 37.46 40 IAmb IAmb 05 21 06.3
comp=Z,24nm,0.8s
TRF Thorofare Moun 37.46 40 P **P** **05 21 02.4 0.0**
baz=271,SNR=26
CUT Chulitna 37.50 42 P **P** **05 21 02.7 +0.2**
baz=272,SNR=5.7
D23K Nanushuk River 37.57 31 IAmb IAmb 05 21 06.0
comp=Z,39nm,0.8s
D23K Nanushuk River 37.57 31 P **P** **05 21 03.9 +0.8**
baz=263,SNR=36
COLD Coldfoot 37.59 34 P **P** **05 21 04.1 +0.9**
baz=266,SNR=105
M22K Willow 37.61 43 IAmb IAmb 05 21 46.2
comp=Z,25nm,0.9s
G23K Bananza Creek 37.63 35 P **P** **05 21 04.4 +0.7**
baz=267,SNR=101
SLKM Skilak Lake 37.65 45 IAmb IAmb 05 21 05.0
comp=Z,27nm,0.8s
C23K Itkillik River 37.71 29 P **P** **05 21 04.8 +0.6**
baz=262
H23K Yukon River 37.79 36 P **P** **05 21 06.4 +1.4**
baz=268,SNR=111
RC01 Rabbit Creek A 37.84 44 P **P** **05 21 05.5 +0.1**
baz=274,SNR=11
I23K Minto, Yukon-K 37.86 37 IAmb IAmb 05 21 07.6
comp=Z,55nm,1.1s
I23K Minto, Yukon-K 37.86 37 P **P** **05 21 06.7 +1.2**
baz=270,SNR=44
E23K Chandalar 37.88 32 P **P** **05 21 06.7 +0.9**
baz=266,SNR=175
O22K Cooper Landing 37.89 45 P **P** **05 21 05.6 -0.2**
baz=275,SNR=17
TOLK Toolik Lake Re 37.94 31 P **P** **05 21 06.9 +0.7**
baz=265,SNR=48
NEA2 Nenana 37.98 38 P **P** **05 21 07.2 +0.6**
baz=271,SNR=73
MCK McKinley 38.06 39 IAmb IAmb 05 21 11.0
comp=Z,36nm,0.9s
MCK McKinley 38.06 39 P **P** **05 21 07.5 +0.3**
baz=272,SNR=23
SEW Seward 38.07 45 IAmb IAmb 05 21 08.4
comp=Z,32nm,0.7s
SEW Seward 38.07 45 P **P** **05 21 06.9 -0.3**
baz=276,SNR=10.0
PMR Palmer 38.09 43 P **P** **05 21 08.4 +1.0**
PMR Palmer 38.09 43 IAmb IAmb 05 21 08.9
comp=Z,23nm,0.9s
PMR Palmer 38.09 43 P **P** **05 21 07.3 -0.1**
baz=274,SNR=12
CD2 Chengdu 38.24 263 P **P** **05 21 09.9 +0.8**
CD2 pmax pmax
comp=Z,190nm,0.6s
D24K Happy Valley 38.26 31 P **P** **05 21 09.6 +0.8**
baz=265
WAT1 Susitna Watana 38.27 41 P **P** **05 21 08.9 -0.2**
baz=273
E24K Your Creek 38.30 32 P **P** **05 21 10.5 +1.2**
baz=267
NRIK Noril'sk 38.32 330 P **P** **05 21 07.8 -1.5**
comp=Z,14nm,0.8s,baz=106,slow=8.7,SNR=13
NRIK PcP **PcP** **05 23 20.5 +0.6**
comp=Z,9.6nm,0.5s,baz=82,slow=4.4,SNR=6.0
comp=Z,14nm,0.8s
NRIK Noril'sk 38.32 330 *c i*P **P** **05 21 07.4 -1.9**
NRIK *i* *PP **pP** **05 21 40.9 +1.3**
NRIK pmax pmax
comp=Z,26nm,1.1s
NRIK Noril'sk 38.32 330 P **P** **05 21 07.7 -1.6**
NRIK IAmb IAmb 05 21 09.5
comp=Z,29nm,1.1s
WRH Wood River Hil 38.41 38 IAmb IAmb 05 21 14.9
comp=Z,34nm,0.8s
KNK Knik Glacier 38.42 43 P **P** **05 21 10.6 +0.3**
baz=275,SNR=13
SML Sawmill 38.45 43 P **P** **05 21 11.0 +0.5**
baz=275,SNR=69
H24K Noodor Dome 38.48 36 P **P** **05 21 12.2 +1.5**
baz=270,SNR=76
COLA College 38.50 38 P **P** **05 21 12.2 +1.4**
COLA College 38.50 38 P **P** **05 21 11.2 +0.4**
COLA pmax pmax
comp=Z,90nm,0.9s
COLA College 38.50 38 P **P** **05 21 11.2 +0.4**
COLA College 38.50 38 P **P** **05 21 11.8 +1.0**
baz=271
COLA College 38.50 38 P **P** **05 21 11.9 +1.0**
F24K Squaw Lake 38.50 33 P **P** **05 21 11.8 +0.8**
baz=268,SNR=91
CCB Clear Creek Bu 38.53 38 IAmb IAmb 05 21 14.2
comp=Z,32nm,1.0s
G24K Hadweenzic Riv 38.65 35 P **P** **05 21 13.6 +1.6**
baz=269,SNR=177
WAT6 Susitna Watana 38.66 41 P **P** **05 21 12.3 -0.2**
baz=274,SNR=14
POKR Poker Plat Res 38.67 37 P **P** **05 21 13.6 +1.3**
baz=271
M23K Glacier View 38.74 42 P **P** **05 21 12.9 0.0**
baz=275,SNR=14
DHY Denali Highway 38.80 40 IAmb IAmb 05 21 14.6
comp=Z,28nm,0.6s
DHY Denali Highway 38.80 40 P **P** **05 21 13.4 -0.1**
baz=274,SNR=31
HDA Harding Lake 38.91 38 IAmb IAmb 05 21 15.3
comp=Z,34nm,0.6s
HDA Harding Lake 38.91 38 P **P** **05 21 14.1 -0.2**
baz=273,SNR=32
ILAR Eielson Array 38.92 38 P **P** **05 21 14.3 0.0**
comp=Z,54nm,0.9s,baz=256,slow=6.7,SNR=124
ILAR PcP **PcP** **05 23 20.6 -1.4**
comp=Z,2.9nm,0.6s,baz=276,slow=3.4,SNR=4.3
ILAR ScP **ScP** **05 26 55.1 -1.4**
comp=Z,2.6nm,0.9s,baz=287,slow=4.5,SNR=8.5
comp=Z,54nm,0.9s
ILAR Eielson Array 38.92 38 **P** **05 21 14.1 -0.3**
SCM Sheep Creek Mo 38.92 42 P **P** **05 21 15.0 +0.5**
baz=276,SNR=16
GYA Guiyang 38.99 255 ⇑P **P** **05 21 16.2 +0.6**
GYA S **S** **05 27 00.9 -2.9**
GYA pmax pmax
comp=Z,81nm,0.8s
P23K Montague Islan 39.10 45 P **P** **05 21 16.0 +0.1**
baz=278
GLI Glacier Island 39.14 44 IAmb IAmb 05 21 17.1
comp=Z,36nm,0.7s
GLI Glacier Island 39.14 44 P **P** **05 21 16.2 0.0**
baz=277,SNR=8.6
D25K Kavik River 39.14 30 P **P** **05 21 16.8 +0.6**
baz=267

G25K	**Bearman Lake**	39.19	35	P	**P**	**05 21 18.1 +1.5**	
	baz=270,SNR=72						
F25K	**Christian Rive**	39.37	33	IAmb	IAmb	05 21 20.4	
	comp=Z,29nm,0.6s						
F25K	**Christian Rive**	39.37	33	P	**P**	**05 21 19.6 +1.5**	
	baz=270,SNR=74						
E25K	**Arctic Village**	39.40	32	P	**P**	**05 21 19.7 +1.4**	
	baz=269,SNR=63						
M24K	**Tolsona, Glenn**	39.44	42	P	**P**	**05 21 19.9 +1.1**	
	baz=276,SNR=18						
FID	**Port Fidalgo**	39.45	44	IAmb	IAmb	05 21 19.8	
	comp=Z,67nm,1.3s						
K24K	**Donnelly Dome**	39.46	39	P	**P**	**05 21 18.8 -0.1**	
	baz=274,SNR=26						
PRP	**Porcupine Dome**	39.46	36	P	**P**	**05 21 19.9 +0.9**	
	baz=273,SNR=53						
J25K	**Salcha River,**	39.58	38	P	**P**	**05 21 19.1 -0.8**	
	baz=274,SNR=22						
KLU	**Klutina**	39.63	43	P	**P**	**05 21 21.1 +0.7**	
	baz=277,SNR=25						
EYAK	**Cordova Ski Ar**	39.84	44	P	**P**	**05 21 23.7 +1.7**	
EYAK	**Cordova Ski Ar**	39.84	44	IAmb	IAmb	05 21 24.3	
	comp=Z,29nm,1.0s						
EYAK	**Cordova Ski Ar**	39.84	44	P	**P**	**05 21 22.7 +0.7**	
	baz=278,SNR=9.1						
HARP	**HAARP**	39.88	41	P	**P**	**05 21 23.3 +1.0**	
	baz=277,SNR=14						
RIDG	**Independent Ri**	39.88	39	IAmb	IAmb	05 21 23.9	
	comp=Z,38nm,0.9s						
RIDG	**Independent Ri**	39.88	39	P	**P**	**05 21 22.2 -0.2**	
	baz=275,SNR=22						
F26K	**Sheenjek River**	39.94	33	P	**P**	**05 21 24.3 +1.5**	
	baz=271,SNR=100						
C27K	**Jago River**	40.09	30	P	**P**	**05 21 24.3 +0.3**	
C27K	**Jago River**	40.09	30	P	**P**	**05 21 25.0 +1.0**	
	baz=269,SNR=54						
G26K	**Porcupine Rive**	40.10	34	P	**P**	**05 21 25.7 +1.6**	
	baz=272						
SCRK	**Sand Creek**	40.23	39	IAmb	IAmb	05 21 28.1	
	comp=Z,30nm,0.7s						
SCRK	**Sand Creek**	40.23	39	P	**P**	**05 21 25.3 -0.1**	
	baz=276,SNR=57						
N25K	**Chitina, Valde**	40.24	43	P	**P**	**05 21 26.2 +0.8**	
	baz=278,SNR=14						
BMRM	**Bremner River**	40.33	43	P	**P**	**05 21 27.1 +0.9**	
	baz=279,SNR=24						
RAGM	**Ragged Mountai**	40.39	44	IAmb	IAmb	05 21 31.8	
	comp=Z,42nm,0.8s						
I26K	**Coal Creek Min**	40.46	37	P	**P**	**05 21 26.4 -0.7**	
	baz=275						
MENT	**Mentasta**	40.47	40	P	**P**	**05 21 29.5 +2.3**	
MENT	**Mentasta**	40.47	40	IAmb	IAmb	05 21 35.1	
	comp=Z,20nm,0.6s						
KAIM	**Kayak Island**	40.59	45	P	**P**	**05 21 29.7 +1.5**	
	baz=280						
L26K	**Log Cabin Wild**	40.63	40	IAmb	IAmb	05 21 30.8	
	comp=Z,34nm,0.7s						
L26K	**Log Cabin Wild**	40.63	40	P	**P**	**05 21 29.8 +1.3**	
	baz=277,SNR=30						
GLB	**Gilahina Butte**	40.64	43	IAmb	IAmb	05 21 34.6	
	comp=Z,15nm,0.7s						
VRDI	**Verde Repeater**	40.84	43	IAmb	IAmb	05 21 32.4	
	comp=Z,30nm,0.8s						
DGZ	**Jazzator, Alta**	40.85	299	*e*P	**P**	**05 21 31.1 +0.4**	
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BERG	**Berg Lake**	40.86	44	IAmb	IAmb	05 21 32.1	
	comp=Z,18nm,0.7s						
M26K	**Nabesna, AK**	40.87	41	P	**P**	**05 21 32.2 +1.6**	
	baz=278,SNR=72						
E27K	**Coleen River**	40.88	32	IAmb	IAmb	05 21 34.5	
	comp=Z,30nm,0.8s						
E27K	**Coleen River**	40.88	32	P	**P**	**05 21 31.8 +1.3**	
	baz=273,SNR=52						
G27K	**Doyon Strip**	40.95	34	IAmb	IAmb	05 21 40.5	
	comp=Z,15nm,0.7s						
G27K	**Doyon Strip**	40.95	34	P	**P**	**05 21 32.4 +1.3**	
	baz=274,SNR=31						
MCARA	**McCarthy VSAT**	41.02	43	IAmb	IAmb	05 21 42.3	
	comp=Z,25nm,0.9s						
MCARA	**McCarthy VSAT**	41.02	43	P	**P**	**05 21 32.9 +1.1**	
	baz=280,SNR=6.5						
H27K	**Steamboat Moun**	41.05	35	IAmb	IAmb	05 21 34.8	
	comp=Z,49nm,0.9s						
H27K	**Steamboat Moun**	41.05	35	P	**P**	**05 21 33.8 +1.8**	
	baz=275,SNR=77						
D27M	**Malcolm River**	41.06	31	IAmb	IAmb	05 21 33.6	
	comp=Z,28nm,0.7s						
D27M	**Malcolm River**	41.06	31	P	**P**	**05 21 33.0 +1.0**	
	baz=272						
CRQM	**Cirque**	41.07	44	P	**P**	**05 21 33.2 +0.9**	
I27K	**Kandik River**	41.08	36	P	**P**	**05 21 33.2 +1.0**	
	baz=276,SNR=17						
CRQE	**Cirque**	41.10	44	P	**P**	**05 21 33.8 +1.3**	
	baz=280,SNR=27						
ZALV	**Zalesovo Beam**	41.12	306	P	**P**	**05 21 31.2 -1.4**	
	comp=Z,3.2nm,0.4s,baz=74,slow=7.0,SNR=23						
ZALV				PcP	**PcP**	**05 23 29.6 +0.5**	
	comp=Z,16nm,0.6s,baz=77,slow=3.1,SNR=20						
ZALV				ScP	**ScP**	**05 27 04.6 -0.7**	
	comp=Z,3.1nm,0.7s,baz=66,slow=5.0,SNR=4.3						
ZALV				PKiKP	**PKiKP**	**05 30 35.0 -1.5**	
	comp=Z,0.9nm,0.6s,baz=205,slow=2.7,SNR=3.7						
ZALV				LR	LR	05 41 13.8	
	comp=Z,55nm,19.1s,baz=58,slow=40						
	comp=Z,3.2nm,0.4s						
TGL	**Tana Glacier**	41.22	44	IAmb	IAmb	05 21 35.7	
	comp=Z,47nm,1.2s						
L27K	**Beaver Creek,**	41.31	40	P	**P**	**05 21 35.8 +1.7**	
	baz=279,SNR=161						
BCAR	**Beaver Creek A**	41.33	40		**P**	**05 21 35.7 +1.4**	
M27K	**Edge Creek, AK**	41.40	41	IAmb	IAmb	05 21 37.4	
	comp=Z,46nm,0.9s						
M27K	**Edge Creek, AK**	41.40	41	P	**P**	**05 21 36.4 +1.5**	
	baz=279,SNR=53						
F28M	**Old Crow**	41.57	33	IAmb	IAmb	05 21 38.7	
	comp=Z,46nm,0.8s						
F28M	**Old Crow**	41.57	33	P	**P**	**05 21 37.5 +1.3**	
	baz=275,SNR=78						
GOMU	**GeErMu**	41.60	277	P	**P**	**05 21 36.6 -0.7**	
GOMU				pmax	pmax		
	comp=Z,32nm,1.0s						
E28M	**Babbage River**	41.62	31	P	**P**	**05 21 37.7 +1.2**	
	baz=274,SNR=53						
BARN	**Barnard Glacie**	41.73	43	P	**P**	**05 21 37.8 +0.1**	
BARN				IAmb	IAmb	05 21 39.9	
	comp=Z,38nm,0.9s						
GRNC	**Granite Creek**	41.75	43	P	**P**	**05 21 38.7 +0.8**	
I28M	**Miner Creek**	41.79	36	P	**P**	**05 21 39.2 +1.1**	
	baz=278,SNR=138						
D28M	**Stokes Point**	41.85	30	P	**P**	**05 21 39.3 +1.0**	
	baz=274						
BVCY	**Beaver Creek**	41.85	41	P	**P**	**05 21 39.6 +1.1**	
	baz=280,SNR=48						
LOGN	**Logan Glacier**	42.09	43	IAmb	IAmb	05 21 53.0	
	comp=Z,32nm,0.8s						
YUK3	**Moose Creek**	42.16	42	P	**P**	**05 21 42.1 +0.9**	
	baz=281,SNR=23						
DAWY	**Dawson**	42.23	38	P	**P**	**05 21 42.1 +0.5**	
DAWY				IAmb	IAmb	05 21 45.9	
	comp=Z,36nm,1.5s						
DAWY	**Dawson**	42.23	38	P	**P**	**05 21 42.3 +0.7**	
	baz=280,SNR=7.5						
E29M	**Blow River**	42.24	32	P	**P**	**05 21 43.1 +1.6**	
	baz=276,SNR=92						
H29M	**Whitestone**	42.32	35	IAmb	IAmb	05 21 44.7	
	comp=Z,47nm,1.0s						
H29M	**Whitestone**	42.32	35	P	**P**	**05 21 43.8 +1.5**	
	baz=278,SNR=46						
PZH	**PanZhiHua**	42.33	260	P	**P**	**05 21 43.5 +0.5**	
PZH				pmax	pmax		
	comp=Z,100nm,0.6s						
G29M	**Pine Creek**	42.37	34	P	**P**	**05 21 44.3 +1.7**	
	baz=278,SNR=87						
O28M	**Mount Upton**	42.49	43	IAmb	IAmb	05 21 48.0	
	comp=Z,26nm,0.8s						
O28M	**Mount Upton**	42.49	43	P	**P**	**05 21 44.7 +0.7**	
	baz=282,SNR=28						
KMI2	**Kunming**	42.52	257	⇓P	**P**	**05 21 45.5 +0.9**	
KMI2				S	**S**	**05 27 58.1 +1.9**	
KMI2				sS	sS	05 28 51.9 +0.2	
KMI2				SS	**SS**	**05 31 09.0 -2.2**	
KMI2				pmax	pmax		
	comp=Z,45nm,1.1s						
KMI2				pmax	pmax		
	comp=Z,98nm,4.3s						
KMI2				L	L		
	comp=Z,140nm,18.7s						
KMI2				L	L		
	comp=Z,130nm,19.5s						
KMI	**Kunming**	42.54	257	P	**P**	**05 21 45.1 +0.4**	
KMI				pP	**pP**	**05 22 17.8 +1.2**	
KMI				PcP	**PcP**	**05 23 35.9 +1.2**	
YUK8	**Steele Glacier**	42.58	42	P	**P**	**05 21 45.5 +0.8**	
	baz=282,SNR=12						
PCA	**Pinnacle**	42.61	44	IAmb	IAmb	05 21 48.9	
	comp=Z,20nm,0.8s						
PINM	**Pinnacle**	42.61	44	P	**P**	**05 21 45.4 +0.7**	
	baz=283,SNR=6.0						
WMQ	**Urumqi**	42.90	291	*e*P	**P**	**05 21 49.0 +1.7**	
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				L	L		
	comp=Z,120nm,19.1s						
BRWY	**Burwash Landin**	42.91	42	P	**P**	**05 21 48.1 +1.0**	
	baz=283,SNR=21						
M29M	**Somme Creek**	42.94	41	P	**P**	**05 21 48.8 +1.3**	
	baz=282,SNR=28						
L29M	**L29M**	42.96	40	IAmb	IAmb	05 21 49.8	
	comp=Z,33nm,0.6s						
L29M	**L29M**	42.96	40	P	**P**	**05 21 49.1 +1.7**	
	baz=282,SNR=55						
EPYK	**Eagle Plains**	42.96	35	P	**P**	**05 21 48.6 +1.2**	
	baz=279,SNR=80						
G30M	**tAoh Zrafi Nji**	43.06	34	P	**P**	**05 21 49.3 +1.1**	
	baz=279,SNR=50						
K29M	**Barlow Dome**	43.08	38	IAmb	IAmb	05 21 50.9	
	comp=Z,33nm,1.1s						
K29M	**Barlow Dome**	43.08	38	P	**P**	**05 21 49.6 +1.1**	
	baz=281,SNR=37						
YUK4	**Talbot Arm**	43.10	42	P	**P**	**05 21 50.0 +1.2**	
	baz=283,SNR=23						
F30M	**Barrier River**	43.13	33	P	**P**	**05 21 50.6 +1.9**	
	baz=279,SNR=200						
ZSN	**Zaisan**	43.25	297	*e*P	**P**	**05 21 51.2 +1.3**	
ZSN	**Zaisan**	43.25	297	*e*P	**P**	**05 21 51.3 +1.3**	
I30M	**Mount Dempster**	43.30	36	P	**P**	**05 21 51.4 +1.1**	
	baz=281,SNR=141						
YUK6	**Outpost Mounta**	43.32	43	P	**P**	**05 21 51.6 +0.9**	
	baz=284,SNR=5.9						
O29M	**Mount Kennedy**	43.38	44	P	**P**	**05 21 52.1 +1.2**	
	baz=284						
J30M	**Hart River**	43.44	37	IAmb	IAmb	05 21 53.5	
	comp=Z,35nm,1.2s						
J30M	**Hart River**	43.44	37	P	**P**	**05 21 52.6 +1.1**	
	baz=281,SNR=37						
M30M	**Minto, Yukon**	43.67	40	P	**P**	**05 21 54.7 +1.5**	
	baz=283						
HYT	**Haines Junctio**	43.76	43		**P**	**05 21 55.5 +1.5**	
HYT	**Haines Junctio**	43.76	43	P	**P**	**05 21 55.7 +1.7**	
	baz=284,SNR=105						
N30M	**Aishikik Lake**	43.80	42	P	**P**	**05 21 55.4 +1.1**	
	baz=284,SNR=12						
G31M	**Satah River**	43.83	34	IAmb	IAmb	05 22 00.7	
	comp=Z,39nm,0.7s						
G31M	**Satah River**	43.83	34	P	**P**	**05 21 55.0 +0.8**	
	baz=281,SNR=49						
INK	**Inuvik**	43.86	32	P	**P**	**05 21 55.4 +0.9**	
INK				pmax	pmax		
	comp=Z,46nm,0.8s						
INK	**Inuvik**	43.86	32		**P**	**05 21 55.4 +0.9**	
INK				IAmb	IAmb	05 21 56.4	
	comp=Z,46nm,0.8s						
INK	**Inuvik**	43.86	32	P	**P**	**05 21 55.4 +0.9**	
	baz=280,SNR=63						
INK	**Inuvik**	43.86	32	P	**P**	**05 21 55.6 +1.1**	
F31M	**Tsiigehtchic**	43.93	33	P	**P**	**05 21 55.8 +0.7**	
	baz=281,SNR=18						
P29M	**Windy Craggy**	43.95	44	IAmb	IAmb	05 21 58.3	
	comp=Z,48nm,0.8s						
P29M	**Windy Craggy**	43.95	44	P	**P**	**05 21 57.2 +1.7**	
	baz=285,SNR=34						
H31M	**Peel River**	44.02	35	IAmb	IAmb	05 21 57.9	
	comp=Z,41nm,0.7s						
H31M	**Peel River**	44.02	35	P	**P**	**05 21 57.0 +1.1**	
	baz=282,SNR=60						
P30M	**Million Dollar**	44.20	44	P	**P**	**05 21 59.4 +1.9**	
	baz=286						
SLVN	**Son La**	44.31	252	P	**P**	**05 22 00.2 +1.4**	
SLVN	**Son La**	44.31	252	P	**P**	**05 21 59.1 +0.3**	
SLVN				IAmb	IAmb	05 22 00.9	
	comp=Z,34nm,0.9s						
N31M	**Braeburn, Yuko**	44.40	41	IAmb	IAmb	05 22 01.9	
	comp=Z,31nm,0.9s						
N31M	**Braeburn, Yuko**	44.40	41	P	**P**	**05 22 00.9 +2.0**	
	baz=285,SNR=26						
O30N	**Mendenhall**	44.44	42	P	**P**	**05 22 00.9 +1.6**	
	baz=286,SNR=23						
PLBC	**Pleasant Camp**	44.67	44	P	**P**	**05 22 02.8 +1.7**	
	baz=287,SNR=15						
M31M	**Drury Creek, Y**	44.85	40	IAmb	IAmb	05 22 04.9	
	comp=Z,24nm,0.8s						
M31M	**Drury Creek, Y**	44.85	40	P	**P**	**05 22 04.0 +1.5**	
	baz=285,SNR=38						
WHY	**Whitehorse**	45.05	42	IAmb	IAmb	05 22 15.4	
	comp=Z,20nm,0.7s						
WHY	**Whitehorse**	45.05	42	P	**P**	**05 22 05.7 +1.5**	
	baz=286,SNR=14						
MK31	**Makanchi Array**	45.12	297	*c i*P	**P**	**05 22 04.4 -0.5**	
MKAR	**Makanchi Array**	45.12	297	P	**P**	**05 22 04.4 -0.5**	
	comp=Z,17nm,0.7s,baz=70,slow=8.5,SNR=43						
MKAR				PcP	**PcP**	**05 23 43.1 +0.3**	
	comp=Z,9.8nm,0.7s,baz=57,slow=4.5,SNR=6.4						
MKAR				ScP	**ScP**	**05 27 21.8 0.0**	
	comp=Z,1.7nm,0.8s,baz=57,slow=4.5,SNR=4.9						
MKAR				LR	LR	05 42 44.7	
	comp=Z,135nm,20.6s,baz=92,slow=38						
	comp=Z,17nm,0.7s						
SKAG	**Skagway**	45.18	44	P	**P**	**05 22 06.6 +1.6**	
	baz=287						
S31K	**Pelican**	45.19	46	P	**P**	**05 22 06.4 +1.2**	
	baz=288						
MAKZ	**Makanchi**	45.31	297	P	**P**	**05 22 05.9 -0.5**	
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
MAKZ	**Makanchi**	45.31	297	P	**P**	**05 22 05.9 -0.5**	
MAKZ				IAmb	IAmb	05 22 09.3	
	comp=Z,16nm,0.8s						
MAKZ	**Makanchi**	45.31	297	P	**P**	**05 22 05.9 -0.5**	
TNCH	**TengChong**	45.50	261	P	**P**	**05 22 09.7 +1.4**	
TNCH				pmax	pmax		
	comp=Z,170nm,0.9s						
N32M	**Quiet Lake**	45.74	41	P	**P**	**05 22 10.4 +0.8**	
	baz=287						
KURK	**Kurchatov**	45.78	303	*c i*P	**P**	**05 22 09.1 -0.9**	
KURK				*i* *PP	**pP**	**05 22 42.2 +0.9**	
KURK				pmax	pmax		
	comp=Z,24nm,0.6s						
KURK	**Kurchatov**	45.78	303	P	**P**	**05 22 09.4 -0.6**	
KURK	**Kurchatov**	45.78	303		**P**	**05 22 09.4 -0.6**	
KURK				IAmb	IAmb	05 22 09.8	
	comp=Z,24nm,0.6s						
KURK	**Kurchatov**	45.78	303	P	**P**	**05 22 09.3 -0.6**	
KURK	**Kurchatov**	45.78	303	*e*P	**P**	**05 22 09.1 -0.9**	
KURK	**Kurchatov**	45.78	303	P	**P**	**05 22 09.1 -0.9**	
KURK				pP	**pP**	**05 22 41.8 +0.5**	
KURBB	**Kurchatov Arra**	45.87	303	P	**P**	**05 22 09.9 -0.8**	
	comp=Z,19nm,0.6s,baz=69,slow=8.7,SNR=97						
KURBB				PcP	**PcP**	**05 23 45.7 +0.4**	
	comp=Z,9.4nm,0.8s,baz=74,slow=3.4,SNR=8.4						
KURBB				ScP	**ScP**	**05 27 24.0 -0.7**	
	comp=Z,1.2nm,0.8s,baz=81,slow=2.3,SNR=4.7						
KURBB				S	S	05 28 33.8 -10	
	comp=Z,2.4nm,1.0s,baz=67,slow=14,SNR=11						
	comp=Z,19nm,0.6s						
A36M	**Sachs Harbour**	45.88	26	P	**P**	**05 22 11.4 +1.0**	
	baz=284,SNR=8.4						
P32M	**Atlin**	45.92	44	P	**P**	**05 22 12.2 +1.2**	
	baz=288,SNR=6.0						
SIT	**Sitka**	45.95	47	P	**P**	**05 22 14.0 +2.9**	
SIT	**Sitka**	45.95	47	P	**P**	**05 22 12.7 +1.6**	
	baz=290,SNR=6.6						
R32K	**Eaglecrest**	45.95	46	P	**P**	**05 22 12.8 +1.6**	
	baz=289,SNR=9.1						
JIS	**Juneau Island**	46.02	45	P	**P**	**05 22 13.7 +2.0**	
MMPY	**Sheldon Lake,**	46.13	39	P	**P**	**05 22 14.3 +1.7**	
	baz=287,SNR=23						
P33M	**Teslin, Yukon**	46.16	43	P	**P**	**05 22 14.4 +1.5**	
	baz=288,SNR=32						
S32K	**Killisnoo**	46.19	47	P	**P**	**05 22 14.7 +1.7**	
	baz=290,SNR=8.6						
Q32M	**Nakina River**	46.83	44	P	**P**	**05 22 20.1 +1.8**	
	baz=290,SNR=5.7						
C36M	**Paulatuk**	46.95	29	IAmb	IAmb	05 22 19.9	
	comp=Z,30nm,0.7s						
C36M	**Paulatuk**	46.95	29	P	**P**	**05 22 19.3 +0.5**	
	baz=287,SNR=29						
R33M	**Jennings River**	47.31	43	P	**P**	**05 22 23.5 +1.6**	
	baz=290,SNR=17						
U33K	**Whale Pass**	47.42	48	P	**P**	**05 22 24.4 +1.8**	
	baz=292,SNR=7.2						
MOKO	**MOKOCHONG**	47.46	265	*e*P	**P**	**05 22 25.4 +1.8**	
CRAG	**Craig**	47.66	49	P	**P**	**05 22 26.1 +1.6**	
	baz=292,SNR=5.2						
WRAK	**Wrangell Islan**	47.70	47	P	**P**	**05 22 26.6 +1.8**	
	baz=292,SNR=6.3						
LSA	**Lhasa**	47.76	271	P	**P**	**05 22 28.2 +2.1**	
LSA	**Lhasa**	47.76	271	IAmb	IAmb	05 22 29.9	
	comp=Z,57nm,1.3s						
LSA	**Lhasa**	47.76	271	P	**P**	**05 22 28.3 +2.1**	
LSA	**Lhasa**	47.76	271	P	**P**	**05 22 27.8 +1.6**	
S34M	**Telegraph Cree**	47.76	45	P	**P**	**05 22 27.2 +1.9**	
	baz=292,SNR=7.1						
WTLY	**Watson Lake, Y**	48.08	42	P	**P**	**05 22 29.1 +1.3**	
	baz=291						
DLBC	**Dease Lake**	48.11	44	P	**P**	**05 22 29.7 +1.7**	
	baz=292,SNR=16						
KOHI	**KOHIMA**	48.12	265	*e*P	**P**	**05 22 29.9 +1.3**	
TDK	**Taldyqorghan**	48.34	296	*e*P	**P**	**05 22 31.3 +1.4**	
TDK				pmax	pmax		
	comp=Z,26nm,0.8s						
TDK	**Taldyqorghan**	48.34	296	*e*P	**P**	**05 22 31.4 +1.4**	
	comp=Z,26nm,0.8s						
V35K	**Ketchikan**	48.51	48	P	**P**	**05 22 32.3 +1.3**	
	baz=293						
SHLS	**Shalkode**	48.54	293	*e*P	**P**	**05 22 30.8 -0.8**	
SHLS	**Shalkode**	48.54	293	*e*P	**P**	**05 22 30.8 -0.8**	
T35M	**Bob Quinn**	48.56	46	IAmb	IAmb	05 22 34.9	
	comp=Z,20nm,0.9s						
T35M	**Bob Quinn**	48.56	46	P	**P**	**05 22 33.6 +2.2**	
	baz=293,SNR=16						
JAY	**Jayapura**	48.67	192	LR	LR	05 41 54.5	
	comp=Z,34nm,19.8s,baz=0.5,slow=34						
GENI	**Genyem**	48.83	192	P	**P**	**05 22 35.6 +1.8**	
GENI	**Genyem**	48.83	192	P	**P**	**05 22 31.4 -2.4**	
	comp=Z,115nm,0.7s						
GENI	**Genyem**	48.83	192	P	**P**	**05 22 34.3 +0.4**	
UZB	**Uzynbulak**	48.83	294	*e*P	**P**	**05 22 35.1 +1.3**	
UZB	**Uzynbulak**	48.83	294	*e*P	**P**	**05 22 35.1 +1.3**	
KKM	**Kota Kinabalu**	48.91	226	P	**P**	**05 22 36.3 +1.7**	
KKM	**Kota Kinabalu**	48.91	226	IAmb	IAmb	05 22 36.6	
	comp=Z,39nm,0.9s						
KKM	**Kota Kinabalu**	48.91	226	P	**P**	**05 22 32.2 -2.4**	
	comp=Z,48nm,1.1s						
KKM	**Kota Kinabalu**	48.91	226	P	**P**	**05 22 35.6 +1.0**	
DIB	**Dawson Inlet,**	48.91	51	IAmb	IAmb	05 22 51.8	
	comp=Z,20nm,1.2s						
MORE	**Moreh**	48.94	263	IAmb	IAmb	05 24 13.3	
	comp=Z,38nm,0.4s						
SIJI	**Sorong**	49.12	204	S	S	05 29 14.7 -16	
	comp=Z,11nm,0.3s,baz=256,slow=22,SNR=4.7						
SIJI	**Sorong**	49.12	204	P	**P**	**05 22 34.6 -1.5**	
	comp=Z,860nmcomp=Z,61nm,0.7s						
WRGLY	**Wrigley**	49.27	37	IAmb	IAmb	05 22 39.2	
	comp=Z,32nm,1.0s						
WRGLY	**Wrigley**	49.27	37	P	**P**	**05 22 38.2 +1.5**	
	baz=293,SNR=7.7						
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 39.5 +1.3**	
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 39.3 +1.1**	
CHTO				pmax	pmax		
	comp=Z,80nm,0.8s						
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 39.6 +1.4**	
CHTO	**Chiang Mai**	49.39	254		**P**	**05 22 39.3 +1.1**	
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 37.1 -1.1**	
	comp=Z,891nmcomp=Z,113nm,0.9s						
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 39.5 +1.3**	
CHTO	**Chiang Mai**	49.39	254	P	**P**	**05 22 39.2 +1.0**	
CHTO				pP	**pP**	**05 23 10.8 -0.1**	
BVAR	**Borovoye Array**	49.51	309	P	**P**	**05 22 38.3 -0.4**	
	comp=Z,6.3nm,0.5s,baz=73,slow=10,SNR=11						
BVAR				PcP	**PcP**	**05 23 58.7 +0.3**	
	comp=Z,12nm,0.5s,baz=79,slow=3.6,SNR=10						
BVAR				PP	**PP**	**05 24 33.4 -0.6**	
	comp=Z,9.0nm,0.7s,baz=38,slow=7.3,SNR=6.7						
BVAR				S	**S**	**05 29 32.7 -2.3**	
	comp=Z,1.1nm,0.6s,baz=74,slow=18,SNR=2.1						
	comp=Z,6.3nm,0.5s						
GUWA	**GUWAHATI**	49.52	267	⇑*i*P	**P**	**05 22 39.9 +0.8**	
BORK	**Borovoye**	49.54	309	*d i*P	**P**	**05 22 38.4 -0.5**	
BORK				*i* *PP	**pwP**	**05 23 14.3 -0.9**	
BORK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BORK	**Borovoye**	49.54	309		**P**	**05 22 38.2 -0.7**	
BORK				IAmb	IAmb	05 23 59.8	
	comp=Z,27nm,1.1s						
BRZS	**Berezniki**	49.55	304	*e*P	**P**	**05 22 40.2 +1.2**	
BRZS	**Berezniki**	49.55	304	*e*P	**P**	**05 22 40.3 +1.2**	
PRZ	**Przheval'sk**	49.55	293	IAmb	IAmb	05 22 42.7	
	comp=Z,29nm,0.8s						
PRZ	**Przheval'sk**	49.55	293	P	**P**	**05 22 41.8 +2.4**	
LIRD	**Liard River Hi**	49.61	42	P	**P**	**05 22 41.1 +1.7**	
	baz=294						
CM31	**Chiang Mai Arr**	49.64	254	P	**P**	**05 22 41.8 +1.7**	
	SNR=16						
CMAR	**Chiang Mai Arr**	49.64	254	P	**P**	**05 22 41.5 +1.3**	
	comp=Z,32nm,0.7s,baz=39,slow=7.4,SNR=148						
CMAR				PcP	**PcP**	**05 24 00.3 +0.9**	
	comp=Z,6.2nm,0.8s,baz=39,slow=2.3,SNR=6.9						
CMAR				LR	LR	05 44 37.2	
	comp=Z,41nm,18.0s,baz=60,slow=37						
	comp=Z,32nm,0.7s						
CMAR	**Chiang Mai Arr**	49.64	254	P	**P**	**05 22 41.1 +0.9**	
WUS	**Wushi**	49.66	291	P	**P**	**05 22 41.4 +1.2**	
SHL	**Shillong**

AAK IAmb IAmb 05 23 00.4
comp=Z,18nm,0.8s
AAK Ala-Archa 51.97 295 P **P** **05 22 58.4 +0.9**
AAK Ala-Archa 51.97 295 P **P** **05 22 58.0 +0.5**
AAK x x 05 23 42.2
KRAI Karang Ratu 52.30 207 P **P** **05 22 58.1 -1.8**
comp=Z,9µmcomp=Z,102nm,1.0s
EKS2 Erkin-Say 52.41 296 P **P** **05 23 00.9 +0.2**
SNR=21
RES Resolute Bay 52.58 18 P **P** **05 23 01.1 -0.1**
NOR Nord 52.69 357 P **P** **05 23 00.9 -1.1**
NOR Nord 52.69 357 *i* P **P** **05 23 00.4 -1.6**
NOR IAmb IAmb 05 23 02.1
comp=Z,24nm,1.0s
SVE Sverdlovsk 52.81 316 *de*P **P** **05 23 02.8 -0.4**
SVE *e*S **S** **05 30 18.1 -2.1**
SVE pmax pmax
comp=Z,70nm,0.7s
SVE Sverdlovsk 52.81 316 *e*P **P** **05 23 02.8 -0.4**
SHBG Sahibganj 52.96 269 *e*P **P** **05 23 06.1 +1.4**
KBS Kingsbay 53.09 351 P **P** **05 23 04.0 -1.0**
KBS pmax pmax
comp=Z,28nm,0.7s
KBS Kingsbay 53.09 351 *e*P **P** **05 23 03.7 -1.2**
KBS IAmb IAmb 05 23 05.1
comp=Z,28nm,0.8s
KBS Kingsbay 53.09 351 P **P** **05 23 04.0 -1.0**
KBS IAmb IAmb 05 23 05.3
comp=Z,28nm,0.7s
KBS Kingsbay 53.09 351 P **P** **05 23 04.7 -0.2**
KBS Kingsbay 53.09 351 *i* P **P** **05 23 03.9 -1.0**
KSH2 Kashi 53.12 291 P **P** **05 23 07.3 +1.4**
KSH2 pmax pmax
comp=Z,33nm,0.9s
SPITS Spitsbergen Ar 53.13 349 P **P** **05 23 03.3 -2.0**
comp=Z,3.9nm,0.5s,baz=50,slow=7.8,SNR=16
comp=Z,3.9nm,0.5s
SPITS Spitsbergen Ar 53.13 349 P **P** **05 23 03.9 -1.4**
SPITS pmax pmax
comp=Z,82nm,1.9s
YKAW3 Yellowknife Wh 53.20 35 P **P** **05 23 06.8 +0.8**
YKAW3 IAmb IAmb 05 23 09.2
comp=Z,26nm,0.7s
YKA Yellowknife Ar 53.24 35 P **P** **05 23 06.8 +0.5**
comp=Z,24nm,0.8s,baz=302,slow=6.9,SNR=82
YKA PcP **PcP** **05 24 12.6 +0.5**
comp=Z,5.8nm,0.8s,baz=302,slow=3.9,SNR=5.6
YKA ScP **ScP** **05 27 56.5 +0.5**
comp=Z,1.6nm,0.9s,baz=302,slow=4.9,SNR=4.0
comp=Z,24nm,0.8s
YKA Yellowknife Ar 53.24 35 P **P** **05 23 07.1 +0.9**
PCI Palu 53.30 218 P **P** **05 23 05.1 -2.2**
comp=Z,173nm,1.1s
DZA Taraz 53.83 297 *e*P **P** **05 23 12.2 +1.3**
DZA pmax pmax
comp=Z,16nm,0.9s
DZA Taraz 53.83 297 *e*P **P** **05 23 12.2 +1.3**
comp=Z,16nm,0.9s
ARK Arkit 54.01 296 P **P** **05 23 13.7 +1.4**
SBUM Sibu 54.02 228 P **P** **05 23 14.0 +1.5**
SBUM Sibu 54.02 228 P **P** **05 23 13.5 +1.0**
SBUM IAmb IAmb 05 23 15.3
comp=Z,14nm,0.9s
SBUM Sibu 54.02 228 P **P** **05 23 11.4 -1.1**
SBUM Sibu 54.02 228 P **P** **05 23 13.5 +1.0**
ARTI Arti 54.11 317 LR LR 05 48 56.7
comp=Z,70nm,19.0s,baz=76,slow=39
ARTI Arti 54.11 317 *c i*P **P** **05 23 11.5 -1.2**
ARTI *PP **pP** **05 23 45.2 +0.2**
ARTI 05 24 14.9
ARTI S **S** **05 30 37.6 -0.2**
ARTI SS **SS** **05 34 16.0 -4.7**
ARTI pmax pmax
comp=Z,58nm,0.7s
ARTI Arti 54.11 317 P **P** **05 23 11.6 -1.2**
ARTI Arti 54.11 317 P **P** **05 23 11.7 -1.0**
ARTI PcP **PcP** **05 24 15.8 +0.2**
OHH Osh 54.17 294 P **P** **05 23 13.0 -0.5**
KK31 Karatay Array 54.22 298 P **P** **05 23 13.9 +0.1**
KK31 pmax pmax
comp=Z,18nm,0.9s
KK31 Karatay Array 54.22 298 P **P** **05 23 13.9 +0.1**
KK31 IAmb IAmb 05 23 15.7
comp=Z,18nm,0.8s
KKAR Karatay Array 54.22 298 P **P** **05 23 14.2 +0.4**
KKAR Karatay Array 54.22 298 P **P** **05 23 14.2 +0.4**
HNLY HANLEY 54.41 283 *ex* x 05 23 17.9
GAYA Gaya 54.91 271 *e*P **P** **05 23 19.8 +0.8**
KDI Kendari 54.93 213 P **P** **05 23 18.6 -0.5**
comp=Z,3µmcomp=Z,168nm,0.9s
PMG Port Moresby 54.93 183 LR LR 05 49 01.0
comp=Z,26nm,18.3s,baz=224,slow=38
GKPR Gorakhpur 54.95 274 *e*P **P** **05 23 20.5 +1.4**
IUG Iuzhnay 55.04 297 *e*P **P** **05 23 20.5 +0.8**
IUG pmax pmax
comp=Z,10.0nm,0.5s
IUG Iuzhnay 55.04 297 *e*P **P** **05 23 20.6 +0.8**
comp=Z,10nm,0.5s
BOK Bokaro 55.10 269 *e*P **P** **05 23 21.6 +1.3**
CHM Chimkent 55.21 297 *e*P **P** **05 23 21.7 +0.9**
CHM pmax pmax
comp=Z,6.0nm,0.3s
CHM Chimkent 55.21 297 *e*P **P** **05 23 21.8 +0.9**
comp=Z,6.1nm,0.3s
MMSI Mamuju 55.30 218 P **P** **05 23 20.0 -1.7**
comp=Z,739nmcomp=Z,55nm,1.2s
JOSI Joshimath 55.32 280 *e*P **P** **05 23 23.9 +1.8**
JOSI IAmb IAmb 05 23 26.3
comp=Z,562nm,0.1s
PTH Pithoragarh 55.46 279 *e*P **P** **05 23 23.5 +0.5**
TULEG Thule 55.59 10 IAmb IAmb 05 23 22.9
comp=Z,35nm,0.8s
TULEG Thule 55.59 10 *i* P **P** **05 23 21.7 -1.3**
TULEG IAmb IAmb 05 23 23.0
comp=Z,29nm,0.7s
KLP Kalpa 55.64 282 *e*P **P** **05 23 24.9 +0.5**
KLP IAmb IAmb 05 23 28.6
comp=Z,80nm,0.5s
LGTI Lohaghat 55.65 279 *e*P **P** **05 23 24.9 +0.5**
BTK Batken 55.69 294 P **P** **05 23 25.1 +0.7**
UTK UTTARKASHI 55.98 281 *e*P **P** **05 23 27.5 +0.8**
TSSA Tissa 56.30 284 *e*P **P** **05 23 29.9 +0.9**
NEEM North Greenlan 56.42 5 *i* P **P** **05 23 28.2 -1.1**
NEEM IAmb IAmb 05 23 29.3
comp=Z,92nm,0.9s
DHRM DHARAMSHALA 56.55 284 *i* P **P** **05 23 31.2 +0.4**
DHRM IAmb IAmb 05 23 36.1
comp=Z,86nm,0.6s
DHRM *eS **S** **05 31 12.3 +1.1**
MANEM Manem 56.55 291 IAmb IAmb 05 23 33.5
comp=Z,80nm,0.7s
VADS Vadso 56.58 339 *e*P **P** **05 23 29.0 -1.1**
VADS IAmb IAmb 05 23 29.5
comp=Z,39nm,1.0s
GAR Garm 56.60 294 P **P** **05 23 31.7 +0.8**
LVZ Lovozero 56.65 336 P **P** **05 23 29.9 -0.9**
LVZ pmax pmax
comp=Z,28nm,0.8s
LVZ Lovozero 56.65 336 P **P** **05 23 29.9 -0.9**
LVZ Lovozero 56.65 336 P **P** **05 23 29.5 -1.2**
comp=Z,53nm,0.9s
LVZ Lovozero 56.65 336 P **P** **05 23 30.1 -0.7**
TKRD Thakurdwara 56.66 279 *e*P **P** **05 23 32.1 +0.8**
THN Thein Dam 56.80 284 *e*P **P** **05 23 33.0 +0.7**
ALBI Allahabad 56.99 274 *e*P **P** **05 23 33.2 -0.4**
BHK Bhakra 57.00 283 *ex* x 05 23 35.1
KIRV Kirov 57.02 322 *c i*P **P** **05 23 32.3 -1.1**
KAPI Kappang 57.03 216 P **P** **05 23 34.6 +0.5**
KAPI Kappang 57.03 216 P **P** **05 23 34.5 +0.5**
KAPI pmax pmax
comp=Z,36nm,0.8s
KAPI Kappang 57.03 216 P **P** **05 23 34.3 +0.3**
KAPI Kappang 57.03 216 P **P** **05 23 34.5 +0.4**
KAPI Kappang 57.03 216 P **P** **05 23 33.3 -0.7**
comp=Z,31nm,0.9s
KAPI Kappang 57.03 216 P **P** **05 23 34.3 +0.3**
AB31 Akbulak array 57.09 309 P **P** **05 23 34.0 -0.1**
AB31 IAmb IAmb 05 23 36.5
comp=Z,15nm,0.8s
ABKAR Akbulak array 57.09 309 P **P** **05 23 33.7 -0.3**
CGRH CHANDIGARH 57.13 282 *e*P **P** **05 23 36.1 +1.5**
JMU Jammu 57.23 285 *e*P **P** **05 23 37.2 +1.9**
POIN Pond Inlet 57.36 15 P **P** **05 23 35.4 -0.2**
KEV Kevo 57.42 340 P **P** **05 23 35.0 -1.0**
KEV pmax pmax
comp=Z,28nm,0.9s
KEV Kevo 57.42 340 P **P** **05 23 35.0 -1.0**
KEV IAmb IAmb 05 23 36.1
comp=Z,28nm,0.9s
KEV Kevo 57.42 340 P **P** **05 23 34.8 -1.3**
DGPR DIGLIPUR 57.44 255 ⇑ *i x* x 05 22 08.2
DGPR IAmb IAmb 05 22 10.1
comp=Z,234nm,1.2s
BWNR Bhubaneshwar 57.46 266 *e*P **P** **05 23 37.7 +0.7**
AKTO Aktyubinsk 57.47 311 LR LR 05 50 25.5
comp=Z,74nm,18.3s,baz=120,slow=38
DAG Danmarks Havn 57.53 357 P **P** **05 23 35.2 -1.5**
DAG Danmarks Havn 57.53 357 *i* P **P** **05 23 34.7 -2.0**
DAG IAmb IAmb 05 23 36.5
comp=Z,11nm,0.8s
CHGR Chuyangaron 57.54 294 ⇑ *i*P **P** **05 23 38.0 +0.5**
CHGR Chuyangaron 57.54 294 P **P** **05 23 38.6 +1.1**
CHGR Chuyangaron 57.54 294 P **P** **05 23 38.3 +0.8**
HAMF Hammerfest 57.55 341 *e*P **P** **05 23 35.7 -1.2**
HAMF IAmb IAmb 05 23 36.0
comp=Z,21nm,0.9s
NIL Nilore 57.77 287 P **P** **05 23 41.2 +2.0**
NIL pmax pmax
comp=Z,126nm,0.7s
NIL Nilore 57.77 287 P **P** **05 23 40.5 +1.3**
NIL Nilore 57.77 287 P **P** **05 23 41.2 +2.0**
NIL Nilore 57.77 287 P **P** **05 23 40.9 +1.8**
BNDA BANDA 57.91 275 *e*P **P** **05 23 40.3 +0.2**
ARA0 ARCESS Array S 57.94 340 *e*P **P** **05 23 38.6 -1.1**
ARA0 IAmb IAmb 05 23 39.3
comp=Z,33nm,1.1s
ARCES ARCESS Array B 57.94 340 P **P** **05 23 38.6 -1.1**
comp=Z,13nm,0.7s,baz=39,slow=8.9,SNR=54
ARCES PcP **PcP** **05 24 30.1 -0.1**
comp=Z,8.2nm,0.8s,baz=28,slow=2.9,SNR=6.2
ARCES LR LR 05 53 19.1
comp=Z,24nm,20.5s,baz=65,slow=41
comp=Z,13nm,0.7s
ARCES ARCESS Array B 57.94 340 P **P** **05 23 38.8 -1.0**
BISR Bishrakh 57.99 279 *e*P **P** **05 23 41.8 +1.1**
NDI New Delhi 58.08 280 *e*P **P** **05 23 41.5 +0.2**
NDI IAmb IAmb 05 23 42.8
comp=Z,87nm,0.7s
JMIU JAMIA UNIVERSI 58.09 280 *e*P **P** **05 23 42.2 +0.8**
NPLP NPLP New Delhi 58.14 280 *e*P **P** **05 23 42.6 +0.9**
AYAN Aya Nagar 58.26 280 *e*P **P** **05 23 43.1 +0.5**
KULM Kulim 58.34 242 P **P** **05 23 45.0 +1.8**
KULM Kulim 58.34 242 P **P** **05 23 44.1 +0.9**
KULM Kulim 58.34 242 P **P** **05 23 42.7 -0.5**
KULM Kulim 58.34 242 P **P** **05 23 44.4 +1.2**
SONA Sohna 58.45 279 *e*P **P** **05 23 43.7 -0.2**
B08A Colville Reser 58.54 51 IAmb IAmb 05 24 34.5
comp=Z,8.3nm,0.7s
KULLO Kullorsuaq 58.64 8 P **P** **05 23 43.6 -0.9**
KULLO Kullorsuaq 58.64 8 *i* P **P** **05 23 43.0 -1.4**
KULLO IAmb IAmb 05 23 44.2
comp=Z,66nm,0.8s
PBA Port Blair 58.66 253 P **P** **05 23 47.2 +1.7**
BLSP Bilaspur 58.80 270 *e*P **P** **05 23 46.5 +0.2**
SHAA Shahritus 58.84 293 P **P** **05 23 48.0 +1.5**
SHAA IAmb IAmb 05 23 48.8
comp=Z,152nm,0.8s
KTK1 Kautokeino 58.87 340 *e*P **P** **05 23 44.8 -1.4**
KTK1 IAmb IAmb 05 23 46.3
comp=Z,25nm,0.7s
J01E Myrtle Point 58.89 59 P **P** **05 23 47.6 +0.9**
KUDL Kundal 58.91 280 *e*P **P** **05 23 47.9 +0.8**
BLKN Baker Lake 58.96 28 P **P** **05 23 47.0 +0.2**
H04A Detroit Lake 59.04 56 IAmb IAmb 05 24 25.1
comp=Z,15nm,1.0s
JETT Jettan, Norway 59.11 341 *e*P **P** **05 23 46.7 -1.1**
JETT IAmb IAmb 05 23 47.8
comp=Z,68nm,0.5s
JHNI Jhansi 59.13 276 *e*P **P** **05 23 48.5 -0.1**
JHNI IAmb IAmb 05 23 50.4
comp=Z,28nm,0.6s
SGF Sodankyl 59.21 338 P **P** **05 23 47.1 -1.4**
G05A Wamic 59.22 55 IAmb IAmb 05 24 43.9
comp=Z,18nm,0.9s
TRO Tromso 59.37 342 *e*P **P** **05 23 48.4 -1.1**
TRO IAmb IAmb 05 23 49.7
comp=Z,53nm,0.8s
I04A Tendick Farm, 59.43 57 IAmb IAmb 05 24 38.4
comp=Z,15nm,1.1s
KLMR Klimovskoe 59.62 328 *e*P **P** **05 23 49.2 -2.2**
KLMR *e*PP **pP** **05 24 25.4 +1.2**
KLMR pmax pmax
comp=Z,46nm,0.9s
WIFE Three Sisters- 59.62 57 IAmb IAmb 05 24 39.7
comp=Z,12nm,0.8s
MSF Maaselka 59.63 336 P **P** **05 23 50.9 -0.5**
F07A Phinny Hill Vi 59.64 54 IAmb IAmb 05 24 01.1
comp=Z,50nm,1.7s
COEN Coen 59.69 187 P **P** **05 23 53.4 +1.1**
comp=Z,121nm,1.0s
COEN Coen 59.69 187 P **P** **05 23 53.1 +0.7**
COEN Coen 59.69 187 P **P** **05 23 53.3 +1.0**
COEN Coen 59.69 187 P **P** **05 23 53.4 +1.0**
SOEI Soe 59.70 209 P **P** **05 23 53.9 +1.3**
SOEI Soe 59.70 209 P **P** **05 23 50.6 -2.0**
comp=Z,2µmcomp=Z,100nm,1.5s
SOEI Soe 59.70 209 P **P** **05 23 52.3 -0.3**
I05D Terrebonne, OR 59.74 56 P **P** **05 23 54.0 +1.4**
I05D IAmb IAmb 05 23 58.9
comp=Z,7.7nm,0.7s
RAGD RAYAGADA 59.78 267 *e*P **P** **05 23 53.6 +0.5**
NEW Newport 59.80 51 P **P** **05 23 53.8 +0.9**
J04A Umpqua Nationa 59.93 58 IAmb IAmb 05 23 56.3
comp=Z,21nm,0.8s
KBL Kabul 60.04 290 P **P** **05 23 55.5 +0.5**
KBL pmax pmax
comp=Z,106nm,1.1s
KBL Kabul 60.04 290 P **P** **05 23 55.5 +0.5**
LBFI Labuhan Bajo, 60.13 214 P **P** **05 23 52.9 -2.5**
KDU Kakadu 60.14 199 P **P** **05 23 55.2 -0.2**
comp=Z,47nm,0.8s
DRS Darwin Rock St 60.27 201 P **P** **05 23 57.3 +1.0**
PINE Pine Mountain 60.29 56 IAmb IAmb 05 24 00.1
comp=Z,13nm,0.7s
J05D Fort Rock, OR 60.42 57 IAmb IAmb 05 25 11.7
comp=Z,13nm,0.9s
UPNV Upernavik 60.44 8 P **P** **05 23 55.9 -0.9**
UPNV Upernavik 60.44 8 *i* P **P** **05 23 55.6 -1.2**
UPNV IAmb IAmb 05 23 57.4
comp=Z,76nm,0.6s
YBH Yreka Blue Hor 60.46 59 LR LR 05 44 51.9
comp=Z,23nm,21.6s,baz=324,slow=31
YBH Yreka Blue Hor 60.46 59 IAmb IAmb 05 24 04.8
comp=Z,19nm,1.6s
GUNA GUNA 60.53 276 *e*P **P** **05 23 57.9 -0.3**
LNOR Lincton Mounta 60.58 53 IAmb IAmb 05 24 06.4
comp=Z,20nm,1.7s
MTN Manton Dam 60.61 201 P **P** **05 23 58.7 +0.1**
comp=Z,112nm,1.0s
MTN Manton Dam 60.61 201 P **P** **05 23 58.8 +0.2**
TPI Tanjungpandan 60.82 230 P **P** **05 23 58.4 -1.8**
comp=Z,87nm,0.8s
K05A Summer Lake 60.95 57 IAmb IAmb 05 24 03.5
comp=Z,16nm,0.9s
OUL Oulu 61.13 336 P **P** **05 24 00.4 -1.2**
PPBI Pangkal Pinang 61.15 231 P **P** **05 24 01.8 -0.6**
BKNR BIKANER 61.20 282 *e*P **P** **05 24 03.0 +0.3**
AJM Ajmer 61.28 279 ⇑ *i*P **P** **05 24 04.2 +0.9**
AJM IAmb IAmb 05 24 06.1
comp=Z,53nm,0.5s
PSI Prapat 61.35 241 P **P** **05 24 06.9 +3.0**
PSI Prapat 61.35 241 P **P** **05 24 04.4 +0.5**
PSI pmax pmax
comp=Z,15nm,1.0s
BHPL Bhopal 61.38 275 ⇑ *i*P **P** **05 24 04.3 +0.3**
RPSI Rantau Prapat 61.43 241 P **P** **05 24 04.4 +0.1**
RPSI IAmb IAmb 05 24 46.0
comp=Z,15nm,1.0s
STEI Steigen 61.55 342 *e*P **P** **05 24 02.8 -1.5**
STEI IAmb IAmb 05 24 03.7
comp=Z,25nm,1.1s
BELG Belogornoye 61.55 317 *c i*P **P** **05 24 03.8 -0.8**
BELG pmax pmax
comp=Z,11nm,0.7s
TWSI Taliwang, Sumb 61.59 217 P **P** **05 24 03.1 -2.2**
comp=Z,79nm,1.0s
NGP Nagpur 61.59 272 *ex* x 05 24 04.3
NGP IAmb IAmb 05 24 06.6
comp=Z,26nm,0.7s
LOF Lofoten 61.74 343 *e*P **P** **05 24 04.0 -1.6**
LOF IAmb IAmb 05 24 05.6
comp=Z,27nm,0.6s
KHKI Kahang-Kahang 61.80 219 P **P** **05 24 05.7 -1.0**
comp=Z,106nm,0.8s
SUMG Summit 61.85 3 P **P** **05 24 07.0 +0.2**
SUMG pmax pmax
comp=Z,60nm,1.0s
SUMG Summit 61.85 3 P **P** **05 24 07.0 +0.2**
SUMG Summit 61.85 3 P **P** **05 24 07.4 +0.6**
SUMG Summit 61.85 3 *i* P **P** **05 24 07.0 +0.2**
SUMG IAmb IAmb 05 24 10.4
comp=Z,41nm,0.9s
O03E Paynes Creek 61.87 60 IAmb IAmb 05 24 12.3
comp=Z,15nm,1.0s
NUUG Nuugaatsiaq 61.92 8 *i* P **P** **05 24 05.1 -1.6**
NUUG IAmb IAmb 05 24 06.6
comp=Z,30nm,1.0s
J08A Circle Bar Ran 61.98 56 P **P** **05 24 07.9 +0.1**
FAUS Fauske 61.99 342 *e*P **P** **05 24 06.4 -0.9**
FAUS IAmb IAmb 05 24 06.4
comp=Z,20nm,0.7s
BKNI Bangkinang 62.03 238 P **P** **05 24 11.6 +3.3**
BKNI Bangkinang 62.03 238 P **P** **05 24 11.4 +3.1**
MSO Missoula 62.39 50 IAmb IAmb 05 24 47.6
comp=Z,21nm,1.2s
WVOR Wild Horse Val 62.45 57 IAmb IAmb 05 24 48.4
comp=Z,12nm,0.9s
WVOR Wild Horse Val 62.45 57 P **P** **05 24 12.1 +1.1**
SAATT Saattut 62.77 8 *i* P **P** **05 24 12.0 -0.4**
SAATT IAmb IAmb 05 24 13.9
comp=Z,188nm,0.7s
VAGH Vaagaholmen 62.97 342 *e*P **P** **05 24 12.6 -1.2**
SANVU Saraoutou 62.99 161 P **P** **05 24 14.8 +0.3**
SANVU Saraoutou 62.99 161 P **P** **05 24 14.8 +0.3**
RAUS Rausandaksla 63.05 342 *e*P **P** **05 24 13.2 -1.2**
SNJI Sawahan-Nganju 63.05 223 P **P** **05 24 14.9 -0.3**
comp=Z,101nm,0.8s
SMRI Semarang 63.05 224 P **P** **05 24 16.4 +1.4**
SMRI Semarang 63.05 224 P **P** **05 24 15.4 +0.3**
SMRI Semarang 63.05 224 P **P** **05 24 14.1 -0.9**
comp=Z,157nm,0.9s
SMRI Semarang 63.05 224 P **P** **05 24 15.9 +0.8**
UDPR Udaipur 63.09 278 *e*P **P** **05 24 15.1 -0.2**
FFC Flin Flon 63.13 38 P **P** **05 24 15.3 +0.2**
FFC pmax pmax
comp=Z,20nm,1.0s
FFC Flin Flon 63.13 38 P **P** **05 24 15.3 +0.2**
FFC IAmb IAmb 05 24 17.1
comp=Z,20nm,0.9s
FFC Flin Flon 63.13 38 P **P** **05 24 15.9 +0.8**
FFC Flin Flon 63.13 38 P **P** **05 24 15.6 +0.5**
FFC PcP **pwP** **05 24 52.0 +0.6**
MOR8 Moi Rana 63.18 341 *e*P **P** **05 24 12.9 -2.4**
AKL Akola 63.33 273 ⇑ *i*P **P** **05 24 17.7 +0.8**
LEIR Leirfjorden 63.53 342 *e*P **P** **05 24 15.7 -1.8**
VJD Vijayawada 63.59 267 *ex* x 05 24 25.8
PAHR Pah Rah Range 63.70 59 IAmb IAmb 05 24 56.4
comp=Z,15nm,1.2s
MTSU Mount Surprise 63.74 185 P **P** **05 24 20.1 +0.7**
comp=Z,22nm,0.8s
MTSU Mount Surprise 63.74 185 P **P** **05 24 20.5 +1.0**
MTSU Mount Surprise 63.74 185 P **P** **05 24 20.3 +0.8**
MOS Moscow 63.79 324 *e*P **P** **05 24 19.2 -0.2**
MOS *e*PP **PcP** **05 24 53.9 -0.1**
MOS *e* 05 24 56.4
MOS *e* 05 26 39.7
MOS *e*PPP PPP 05 28 12.1
MOS *e*S **S** **05 32 38.2 -4.3**
MOS *e* 05 33 57.6
MOS *e*SS **SS** **05 36 55.3 +3.1**
MOS *e*SSS SSS 05 39 51.1
MOS pmax pmax
comp=Z,24nm,0.6s
MOS Moscow 63.79 324 *e*P **P** **05 24 19.2 -0.2**
FINES FINESS Array B 63.83 333 P **P** **05 24 18.3 -1.2**
comp=Z,44nm,0.5s,baz=30,slow=8.4,SNR=268
FINES PcP **pP** **05 24 51.6 -1.2**
comp=Z,14nm,0.7s,baz=44,slow=5.4,SNR=6.4
comp=Z,44nm,0.5s
FINES FINESS Array B 63.83 333 *i* P **P** **05 24 18.2 -1.3**
FINES pmax pmax
comp=Z,44nm,0.5s
FINES FINESS Array B 63.83 333 P **P** **05 24 18.6 -1.0**
EGMT Eagleton 63.84 47 IAmb IAmb 05 24 22.3
comp=Z,14nm,0.8s
SCO Scoresbysund 63.92 357 IAmb IAmb 05 24 21.0
comp=Z,20nm,0.8s
SCO Scoresbysund 63.92 357 P **P** **05 24 19.4 -0.5**
SCO Scoresbysund 63.92 357 *i* P **P** **05 24 20.0 0.0**
SCO IAmb IAmb 05 24 20.7
comp=Z,19nm,0.7s
KNRA Kununurra 63.93 202 P **P** **05 24 20.4 -0.2**
comp=Z,30nm,0.8s
KNRA Kununurra 63.93 202 P **P** **05 24 20.7 0.0**
KNRA IAmb IAmb 05 24 23.5
comp=Z,21nm,0.7s
PNTR Pine Nut 63.95 60 IAmb IAmb 05 24 57.2
comp=Z,12nm,0.8s
KLSI 64.02 231 P **P** **05 24 20.8 -0.6**
DLMT Dillon 64.03 51 IAmb IAmb 05 24 57.3
comp=Z,16nm,0.9s
ILULI Ilulissat 64.36 8 P **P** **05 24 22.8 -0.1**
ILULI Ilulissat 64.36 8 *i* P **P** **05 24 21.9 -1.0**
ILULI IAmb IAmb 05 24 22.8
comp=Z,76nm,0.9s
BOZ Bozeman (W) 64.41 50 IAmb IAmb 05 24 30.1
comp=Z,8.4nm,0.7s
HYB Hyderabad 64.44 269 *i* P **P** **05 24 24.5 +0.3**
OBN Obninsk 64.66 324 ⇑ *i*P **P** **05 24 24.0 -1.0**
OBN pmax pmax
comp=Z,30nm,0.6s
VRH Novokhopyorsk 65.11 319 *e*P **P** **05 24 24.3 -3.7**
VRH pmax pmax
comp=Z,30nm,0.8s
NSS Namsos 65.13 341 *e*P **P** **05 24 26.7 -1.2**
LHV Little Huntoon 65.15 60 IAmb IAmb 05 24 31.0
comp=Z,21nm,0.9s
HEL Helsinki 65.16 333 P P 05 24 41.0 +13
HEL pmax pmax
comp=Z,13nm,0.8s
NVAR Mina Array Bea 65.16 60 P **P** **05 24 29.8 +0.9**
comp=Z,9.3nm,0.8s,baz=288,slow=7.0,SNR=58
NVAR PcP **pP** **05 25 02.1 -1.1**
comp=Z,6.2nm,0.7s,baz=306,slow=6.7,SNR=8.8
comp=Z,9.3nm,0.8s
NVAR Mina Array Bea 65.16 60 P **P** **05 24 30.0 +1.1**
ARBE Arbavere 65.39 332 P **P** **05 24 29.4 -0.3**
LPSR Galich'ya Gora 65.41 321 *e*P **P** **05 24 27.0 -2.9**
LPSR pmax pmax
comp=Z,40nm,0.8s
CTA Charters Tower 65.58 183 P **P** **05 24 32.0 +0.7**
comp=Z,17nm,1.2s
CTA Charters Tower 65.58 183 LR LR 05 53 43.4
comp=Z,25nm,19.2s,baz=13,slow=36
CTA Charters Tower 65.58 183 P **P** **05 24 32.0 +0.7**
CTAO Charters Tower 65.58 183 P **P** **05 24 32.0 +0.7**
CTAO Charters Tower 65.58 183 P **P** **05 24 31.6 +0.3**
CTAO pmax pmax
comp=Z,38nm,1.0s
CTAO Charters Tower 65.58 183 P **P** **05 24 31.6 +0.3**
CTAO Charters Tower 65.58 183 P **P** **05 24 31.6 +0.3**
H17A Grant Village 65.76 51 IAmb IAmb 05 25 12.5
comp=Z,19nm,1.2s
VSU Vasula 65.89 331 *ce*P **P** **05 24 31.0 -1.9**
VSU pmax pmax
comp=Z,44nm,1.3s
FLWY Flagg Ranch 65.89 51 IAmb IAmb 05 25 05.8
comp=Z,10nm,0.8s
VORR Voronezh 65.93 320 *e*P **P** **05 24 34.8 +1.5**
VORR pmax pmax
comp=Z,20nm,0.9s
RLMT Red Lodge 65.98 49 IAmb IAmb 05 25 11.9
comp=Z,18nm,1.4s
FXWY Fox Creek 66.01 52 IAmb IAmb 05 24 36.7
comp=Z,23nm,1.6s
DSP Deep Springs 66.04 61 IAmb IAmb 05 24 36.4
comp=Z,14nm,0.9s
TPH Tonopah 66.04 60 IAmb IAmb 05 24 36.2
comp=Z,17nm,1.0s
MDRS Chennai 66.24 264 *i* x x 05 24 37.1
LOHW Long Hollow 66.25 51 IAmb IAmb 05 25 14.7
comp=Z,23nm,1.5s
VSR Storozhevoye 66.27 320 *e*P **P** **05 24 34.9 -0.6**

VSR pmax pmax
comp=Z,31nm,0.6s
SNOW Snow King Moun 66.27 52 IAmb IAmb 05 25 14.3
comp=Z,13nm,1.1s
VES Vestal, Richgr 66.33 62 IAmb IAmb 05 24 37.8
comp=Z,18nm,1.0s
SOEG Soedalen 66.38 0 *i* P **P 05 24 36.0 +0.1**
SOEG IAmb IAmb 05 24 36.6
comp=Z,33nm,0.8s
VORD Divnogorie 66.39 320 *eP* **P 05 24 34.6 -1.6**
VORD pmax pmax
comp=Z,20nm,0.8s
LAO LASA Array 66.52 47 IAmb IAmb 05 24 40.0
comp=Z,14nm,0.8s
AHID Auburn Hatcher 66.54 52 P **P 05 24 38.7 +1.1**
SFJD Kangerlussuaq 66.55 8 LR LR 05 54 20.8
comp=Z,38nm,20.2s,baz=10.0,slow=36
SFJD Kangerlussuaq 66.55 8 P **P 05 24 37.3 +0.3**
SFJD pmax pmax
comp=Z,44nm,0.8s
SFJD Kangerlussuaq 66.55 8 P **P 05 24 37.3 +0.3**
SFJD Kangerlussuaq 66.55 8 P **P 05 24 36.8 -0.2**
SFJD Kangerlussuaq 66.55 8 *i* P **P 05 24 37.1 +0.1**
SFJD IAmb IAmb 05 24 37.3
comp=Z,44nm,0.8s
CWC Cottonwood Cre 66.57 61 IAmb IAmb 05 24 39.3
comp=Z,39nm,1.9s
QIS Mount Isa 66.58 190 P **P 05 24 37.2 -0.6**
comp=Z,42nm,1.1s
QIS Mount Isa 66.58 190 P **P 05 24 38.3 +0.5**
QIS Mount Isa 66.58 190 P **P 05 24 37.4 -0.3**
WRAB Tennant Creek 66.78 195 P **P 05 24 38.4 -0.6**
WRAB Tennant Creek 66.78 195 *d* P **P 05 24 38.3 -0.7**
WRAB pmax pmax
comp=Z,74nm,0.8s
WRAB Tennant Creek 66.78 195 P **P 05 24 38.7 -0.3**
WRAB Tennant Creek 66.78 195 P **P 05 24 38.6 -0.5**
WRAB Tennant Creek 66.78 195 P **P 05 24 38.5 -0.5**
WRAB PcP **PcP 05 25 07.8 +1.1**
WRAB x x 05 25 24.5
WRA Warramunga Arr 66.80 195 P **P 05 24 38.4 -0.7**
comp=Z,63nm,0.7s,baz=11,slow=6.4,SNR=160
WRA PcP **PcP 05 25 07.5 +0.6**
comp=Z,18nm,0.9s,baz=16,slow=4.7,SNR=8.4
WRA PKiKP **PKiKP 05 31 05.9 -0.4**
comp=Z,0.4nm,0.6s,baz=336,slow=1.7,SNR=4.9
comp=Z,63nm,0.7s
WRA Warramunga Arr 66.80 195 *i* P **P 05 24 36.0 -3.1**
WRA pmax pmax
comp=Z,63nm,0.7s
WRA Warramunga Arr 66.80 195 P **P 05 24 37.8 -1.3**
FRB Frobisher Bay 66.80 17 LR LR 05 57 26.4
comp=Z,24nm,18.8s,baz=314,slow=39
FRB Frobisher Bay 66.80 17 P **P 05 24 38.0 -0.6**
POO Poona 66.99 273 *i* P **P 05 24 40.9 +0.3**
HWUT Hardware Ranch 67.04 54 IAmb IAmb 05 24 42.8
comp=Z,26nm,1.4s
HWUT Hardware Ranch 67.04 54 P **P 05 24 41.9 +1.1**
FITZ Fitzroy Crossi 67.11 205 P **P 05 24 41.6 +0.5**
S11A Rachel 67.20 59 IAmb IAmb 05 24 45.8
comp=Z,18nm,0.6s
DUG Dugway, Tooele 67.26 55 P **P 05 24 43.1 +1.0**
CLC China Lake 67.27 62 IAmb IAmb 05 24 43.6
comp=Z,14nm,0.8s
TPNV Topopah Spring 67.36 60 IAmb IAmb 05 24 44.5
comp=Z,12nm,0.8s
PDAR Pinedale Array 67.39 52 P **P 05 24 43.1 +0.1**
comp=Z,5.7nm,0.6s,baz=277,slow=1.8,SNR=87
PDAR PKP2bc **P'P'bc 05 53 03.4 -7.6**
comp=Z,0.6nm,0.8s,baz=98,slow=2.2,SNR=4.3
comp=Z,5.7nm,0.6s
PDAR Pinedale Array 67.39 52 P **P 05 24 43.9 +0.9**
TCUT Toone Canyon 67.45 54 IAmb IAmb 05 25 21.0
comp=Z,57nm,1.9s
TPO Tropico Hills 67.49 63 IAmb IAmb 05 24 46.1
comp=Z,49nm,1.5s
DGTI Dogotuki 67.58 148 P **P 05 24 45.4 +1.3**
KAD Karad 67.58 272 *eP* **P 05 24 43.6 -0.7**
KAD IAmb IAmb 05 24 46.5
comp=Z,21nm,0.5s
GWY Greenwater Val 67.60 61 IAmb IAmb 05 24 45.8
comp=Z,17nm,0.7s
CCCA Chr Cany lake 67.60 62 IAmb IAmb 05 24 45.9
comp=Z,19nm,0.7s
QSM Queen of Sheba 67.62 61 IAmb IAmb 05 24 45.9
comp=Z,18nm,0.8s
MOL Molde 67.82 342 *eP* **P 05 24 44.6 -0.5**
DOMB Dombas 67.95 341 *eP* **P 05 24 44.9 -1.1**
AKN Aaknes 68.28 342 *eP* **P 05 24 47.4 -0.7**
NB2 NORSAR Subarra 68.32 340 P **P 05 24 47.3 -1.0**
comp=Z,17nm,0.6s,baz=28,slow=6.5
NB2 NORSAR Subarra 68.32 340 P **P 05 24 47.3 -1.0**
NOA NORSAR Array B 68.32 340 P **P 05 24 47.4 -0.8**
comp=Z,21nm,0.5s,baz=29,slow=6.5,SNR=123
NOA LR LR 06 00 02.6
comp=Z,30nm,19.2s,baz=40,slow=40
comp=Z,21nm,0.5s
HFS Hagfors 68.47 338 P **P 05 24 48.0 -1.1**
comp=Z,24nm,0.5s,baz=42,slow=4.6,SNR=158
HFS LR LR 06 00 50.0
comp=Z,26nm,19.1s,baz=35,slow=41
comp=Z,24nm,0.5s
NC602 NORSAR Array S 68.50 339 *eP* **P 05 24 48.3 -1.1**
NORES NORESS Array B 68.50 339 *eP* **P 05 24 48.3 -1.0**
MNK Minsk 68.52 328 *i* P **P 05 24 49.2 -0.4**
comp=E,20nm,0.8s
MNK *i* P **P 05 24 49.2 -0.4**
comp=N,15nm,0.8s
MNK *i* P **P 05 24 49.2 -0.4**
comp=Z,19nm,0.7s,baz=40
MNK *i* pP **pP 05 25 24.3 +1.0**
MNK *i* sP **sP 05 25 41.4 +3.0**
MNK *i* PP **PP 05 27 24.0 +2.0**
MNK *i* PPP PPP 05 29 05.5
MNK *i* S **S 05 33 41.5 +1.8**
MNK *i* sS **sS 05 34 42.5 +4.4**
MNK *i* SS **SS 05 38 11.7 +6.3**
MNK *i* SSS SSS 05 41 29.5
MNK *i* LR LR 05 52 47.6
MNK *i* LRM MLR 05 57 30.6
comp=Z,49nm,16.5s
MNK *i* LRM MLR 05 57 33.9
comp=N,62nm,14.5s
MNK *i* LRM MLR 05 57 51.1
comp=E,127nm,17.6s
MNK Minsk 68.52 328 *i* P **P 05 24 49.1 -0.4**
MNK *i* 05 25 13.7
MNK *i* *P **pP 05 25 24.2 +1.0**
MNK *i* *S **sP 05 25 41.4 +3.0**
MNK *i* 05 27 23.9
MNK *i* PPP PPP 05 29 05.5
MNK *i* S **S 05 33 41.5 +1.8**
MNK *i* SS **SS 05 38 11.6 +6.3**
MNK pmax pmax
comp=Z,19nm,0.7s
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=E,20nm,0.8s
MNK MLR MLR
comp=Z,49nm,17.0s
MNK MLR MLR
comp=N,62nm,15.0s
MNK MLR MLR
comp=E,127nm,18.0s
NAO01 NORSAR Array S 68.57 340 P **P 05 24 49.1 -0.7**
NAO01 IAmb IAmb 05 24 51.3
comp=Z,14nm,0.8s
NAO01 NORSAR Array S 68.57 340 P **P 05 24 48.9 -0.9**
AKT Akhty 68.63 308 *eP* **P 05 24 50.5 -0.2**
AKT *e* 05 25 14.7
AKT *eS* **S 05 33 43.4 +1.7**
AKT pmax pmax
comp=Z,95nm,0.9s
MTPC Mountain Pass 68.74 61 IAmb IAmb 05 24 53.0
comp=Z,52nm,1.9s
AUNRC North Rockhamp 68.77 179 P **P 05 24 52.5 +1.2**
ELS Elsinore Mount 68.80 63 IAmb IAmb 05 24 52.9
comp=Z,23nm,1.4s
ANGG Ammassalik, Gr 68.84 3 IAmb IAmb 05 24 53.4
comp=Z,25nm,0.9s
ANGG Ammassalik, Gr 68.84 3 *i* P **P 05 24 50.8 -0.5**
ANGG IAmb IAmb 05 24 51.1
comp=Z,38nm,1.2s
ULM Lac du Bonnet 68.93 39 P **P 05 24 51.4 -0.8**
comp=Z,4.1nm,0.7s,baz=286,slow=5.2,SNR=10
ULM PKP2bc **P'P'bc 05 53 03.6 -2.4**
comp=Z,3.3nm,1.0s,baz=179,slow=6.6,SNR=3.9
comp=Z,4.1nm,0.7s
ULM Lac du Bonnet 68.93 39 IAmb IAmb 05 24 54.8
comp=Z,34nm,1.8s
P17A Butcher Ranch, 68.93 55 IAmb IAmb 05 24 55.1
comp=Z,20nm,1.1s
MDND Maddock 68.97 42 IAmb IAmb 05 24 54.4
comp=Z,21nm,0.8s
MARNC Mare, Loyalty 69.01 161 P **P 05 24 54.6 +1.8**
LCMT Little Creek M 69.12 58 P **P 05 24 54.0 +0.2**
PABE Paberze 69.15 330 P **P 05 24 53.0 -0.4**
PABE IAmb IAmb 05 24 53.7
comp=Z,44nm,1.2s
PABE Paberze 69.15 330 P **P 05 24 53.1 -0.4**
NUUK Nuuk 69.16 10 P **P 05 24 53.4 0.0**
NUUK Nuuk 69.16 10 *i* P **P 05 24 51.2 -2.1**
NUUK IAmb IAmb 05 24 54.5
comp=Z,80nm,1.0s
NOUC Port Laguerre 69.24 163 P **P 05 24 56.4 +2.1**
SRU San Rafael Swe 69.30 55 IAmb IAmb 05 24 56.4
comp=Z,24nm,0.9s
MALK Mahakanadarawa 69.32 261 P **P 05 24 55.5 +0.4**
SKAR Skarslia 69.32 341 *eP* **P 05 24 53.9 -0.6**
E28A Huff 69.35 44 IAmb IAmb 05 24 56.4
comp=Z,12nm,0.8s
HYA Hoyanger 69.36 342 *eP* **P 05 24 54.3 -0.4**
OSL Oslo 69.40 339 *eP* **P 05 24 55.7 +0.9**
RSSD Black Hills 69.41 48 P **P 05 24 55.4 -0.1**
RSSD pmax pmax
comp=Z,21nm,1.3s
RSSD Black Hills 69.41 48 P **P 05 24 55.4 -0.1**
RSSD IAmb IAmb 05 24 56.8
comp=Z,21nm,1.3s
RSSD Black Hills 69.41 48 P **P 05 24 56.0 +0.5**
PFO Pinyon Flats O 69.42 63 P **P 05 24 55.5 -0.2**
PFO pmax pmax
comp=Z,7.0nm,1.0s
PFO Pinyon Flats O 69.42 63 P **P 05 24 55.5 -0.2**
BELC Belle Mtn. Jos 69.45 62 P **P 05 24 55.9 +0.1**
ERBR Yeremizino-Bor 69.51 315 *eP* **P 05 24 54.7 -1.1**
ERBR *e**PP **pP 05 25 30.4 +0.7**
ERBR *eS* **S 05 33 50.3 -1.4**
ERBR pmax pmax
comp=Z,56nm,0.9s
BORG Borgarnes 69.61 356 LR LR 05 55 08.0
comp=Z,14nm,18.2s,baz=28,slow=36
BORG Borgarnes 69.61 356 P **P 05 24 56.8 +0.7**
BORG Borgarnes 69.61 356 P **P 05 24 56.8 +0.7**
BORG IAmb IAmb 05 24 59.0
comp=Z,20nm,0.7s
KIV Kislovodsk 69.63 312 ⇑P **P 05 24 57.7 +0.9**
KIV Kislovodsk 69.63 312 *i* P **P 05 24 58.4 +1.6**
SNR=7.9
KIV Kislovodsk 69.63 312 *eP* **P 05 24 57.6 +0.9**
KIV *eS* **S 05 33 55.9 +2.5**
KIV pmax pmax
comp=Z,70nm,1.0s
KIV MLR MLR
comp=Z,54nm,17.0s
KIV Kislovodsk 69.63 312 P **P 05 24 58.3 +1.6**
KIV Kislovodsk 69.63 312 P **P 05 24 56.8 +0.1**
KIV Kislovodsk 69.63 312 P **P 05 24 58.2 +1.4**
KIV Kislovodsk 69.63 312 *eP* **P 05 24 57.6 +0.9**
KIV Kislovodsk 69.63 312 P **P 05 24 57.8 +0.9**
KIV x x 05 25 23.2
KBZ Khabaz 69.68 312 P **P 05 24 56.8 -0.1**
comp=Z,60nm,0.9s,baz=48,slow=5.1,SNR=51
KBZ LR LR 06 00 31.4
comp=Z,121nm,18.9s,baz=64,slow=40
comp=Z,60nm,0.9s
KBZ Khabaz 69.68 312 *c i*P **P 05 24 57.7 +0.8**
KBZ pmax pmax
comp=Z,75nm,0.9s
KBZ Khabaz 69.68 312 *eP* **P 05 24 57.7 +0.8**
SUE Sulen 69.77 343 *eP* **P 05 24 57.5 +0.4**
IRM Iron Mountain 69.87 62 IAmb IAmb 05 24 59.8
comp=Z,39nm,1.6s
O20A White River Ci 69.89 53 IAmb IAmb 05 25 00.4
comp=Z,12nm,0.8s
HMU Henry Mountain 69.97 56 IAmb IAmb 05 25 00.6
comp=Z,30nm,0.6s
PALK Pallekele 70.01 260 P **P 05 24 59.5 0.0**
PALK Pallekele 70.01 260 P **P 05 24 59.4 0.0**
PALK pmax pmax
comp=Z,37nm,1.0s
PALK Pallekele 70.01 260 P **P 05 25 00.0 +0.6**
PALK Pallekele 70.01 260 P **P 05 24 59.4 0.0**
PALK IAmb IAmb 05 25 00.8
comp=Z,37nm,0.9s
PALK Pallekele 70.01 260 P **P 05 24 59.0 -0.4**
PALK Pallekele 70.01 260 P **P 05 25 00.0 +0.6**
STRU Stroemstad 70.07 339 *i* P **P 05 24 58.4 -0.6**
LABN Labinsk 70.15 314 *eP* **P 05 24 58.4 -1.4**
LABN *e**PP **pP 05 25 31.3 -2.4**
LABN *eS* **S 05 33 58.2 -1.0**
LABN pmax pmax
comp=Z,63nm,0.8s
KOD Kodaikanal 70.16 264 *eP* **P 05 24 59.9 -0.7**
KOD IAmb IAmb 05 25 02.9
comp=Z,26nm,0.9s
ASK Askoy 70.19 342 *eP* **P 05 24 59.4 -0.3**
BER Bergen 70.25 342 *eP* **P 05 25 00.0 -0.1**
EPLO Experimental L 70.29 38 IAmb IAmb 05 25 04.9
comp=Z,18nm,1.0s
AGMN Agassiz Nation 70.37 40 IAmb IAmb 05 25 03.6
comp=Z,33nm,1.6s
AGMN Agassiz Nation 70.37 40 P **P 05 25 01.1 +0.1**
ODD1 Odda 70.39 341 *eP* **P 05 25 01.0 0.0**
AS15 Alice Springs 70.48 195 P **P 05 25 02.4 +0.5**
comp=Z,118nm,0.9s
AS01 Alice Springs 70.50 195 P **P 05 25 02.9 +0.9**
AS31 Alice Springs 70.51 195 P **P 05 25 02.5 +0.5**
comp=Z,31nm,0.6s,comp=Z,0.0nm
AS31 Alice Springs 70.51 195 P **P 05 25 02.6 +0.5**
AS31 IAmb IAmb 05 25 03.9
comp=Z,22nm,0.7s
ASAR Alice Springs 70.51 195 P **P 05 25 02.6 +0.5**
comp=Z,73nm,0.7s,baz=9.4,slow=5.4,SNR=530
comp=Z,73nm,0.7s
BLYC Blythe 70.53 61 IAmb IAmb 05 25 03.8
comp=Z,15nm,0.7s
PV21 Cone Mtn., Par 70.56 55 IAmb IAmb 05 25 04.2
comp=Z,19nm,0.7s
PV22 Blue Mesa, Par 70.68 54 IAmb IAmb 05 25 04.9
comp=Z,17nm,0.8s
PV04 Paradox Valley 70.71 55 IAmb IAmb 05 25 05.2
comp=Z,19nm,0.8s
PV20 West Nyswonger 70.71 55 IAmb IAmb 05 25 05.0
comp=Z,35nm,0.7s
PV16 Nyswonger Mesa 70.76 55 IAmb IAmb 05 25 05.4
comp=Z,40nm,1.3s
EIDS Eidsvold 70.79 178 P **P 05 25 05.4 +1.8**
comp=Z,54nm,1.4s
EIDS Eidsvold 70.79 178 P **P 05 25 05.5 +1.8**
EIDS Eidsvold 70.79 178 IAmb IAmb 05 25 06.1
comp=Z,30nm,0.8s
EIDS Eidsvold 70.79 178 P **P 05 25 04.9 +1.2**
PV11 David Mesa, Pa 70.80 55 IAmb IAmb 05 25 06.3
comp=Z,28nm,0.8s
GLA Glamis 70.81 62 IAmb IAmb 05 25 05.6
comp=Z,17nm,0.7s
PV05 Paradox Valley 70.82 55 IAmb IAmb 05 25 05.9
comp=Z,27nm,0.8s
PV12 Saucer Basin, 70.82 55 IAmb IAmb 05 25 06.7
comp=Z,22nm,0.8s
TJOU Tjoern 70.83 338 *i* P **P 05 25 02.4 -1.2**
PV03 Paradox Valley 70.84 55 IAmb IAmb 05 25 05.9
comp=Z,17nm,0.7s
BLS5 Blasjo 70.87 341 *eP* **P 05 25 03.7 -0.2**
AK03 Malin Array Si 70.90 324 P **P 05 25 02.8 -1.4**
AK23 Malin Array Si 70.91 325 P **P 05 25 02.8 -1.5**
AKASG Malin Array Be 70.92 324 P **P 05 25 03.5 -0.8**
comp=Z,6.4nm,0.4s,baz=39,slow=6.3,SNR=60
AKASG PKPPKP **P'P'df 05 52 57.2 -4.8**
comp=Z,0.1nm,0.3s,baz=172,slow=1.9,SNR=5.6
AKASG LR LR 05 57 20.1
comp=Z,52nm,19.0s,baz=34,slow=37
comp=Z,6.4nm,0.4s
AKASG Malin Array Be 70.92 324 P **P 05 25 03.5 -0.8**
AKBB Malin Array Si 70.92 324 *c i*P **P 05 25 03.4 -0.9**
AKBB pmax pmax
comp=Z,12nm,0.9s
AKBB Malin Array Si 70.92 324 P **P 05 25 03.5 -0.9**
AKBB IAmb IAmb 05 25 04.5
comp=Z,32nm,1.2s
AKBB Malin Array Si 70.92 324 P **P 05 25 03.2 -1.1**
PV13 Radium Mtn., P 70.92 55 IAmb IAmb 05 25 06.4
comp=Z,28nm,0.6s
AK04 Malin Array Si 70.93 324 P **P 05 25 03.1 -1.2**
KIEV Kiev 70.93 324 ⇑P **P 05 25 03.7 -0.6**
KIEV Kiev 70.93 324 *i* P **P 05 25 03.4 -1.0**
SNR=15
KIEV Kiev 70.93 324 P **P 05 25 03.3 -1.0**
KIEV pmax pmax
comp=Z,26nm,1.2s
KIEV Kiev 70.93 324 P **P 05 25 03.2 -1.1**
KIEV IAmb IAmb 05 25 04.5
comp=Z,26nm,1.2s
KIEV Kiev 70.93 324 P **P 05 25 03.1 -1.3**
comp=Z,75nm,1.1s
KIEV Kiev 70.93 324 P **P 05 25 03.6 -0.8**
KIEV Kiev 70.93 324 P **P 05 25 03.4 -1.0**
KIEV pP **pP 05 25 38.3 0.0**
AK01 Malin Array Si 70.93 324 P **P 05 25 03.1 -1.3**
AK21 Malin Array Si 70.94 325 P **P 05 25 03.2 -1.2**
AK22 Malin Array Si 70.94 325 P **P 05 25 03.2 -1.2**
PV02 Paradox Valley 70.94 55 IAmb IAmb 05 25 06.5
comp=Z,20nm,0.9s
AK08 Malin Array Si 70.96 324 P **P 05 25 03.2 -1.3**
AK11 Malin Array Si 70.96 324 P **P 05 25 03.4 -1.1**
AK02 Malin Array Si 70.96 324 P **P 05 25 03.4 -1.2**
AK09 Malin Array Si 70.96 324 P **P 05 25 03.4 -1.2**
AK15 Malin Array Si 70.97 324 P **P 05 25 03.4 -1.2**
AK18 Malin Array Si 70.97 325 P **P 05 25 03.5 -1.1**
AK20 Malin Array Si 70.97 325 P **P 05 25 03.5 -1.1**
AK10 Malin Array Si 70.99 324 P **P 05 25 03.5 -1.2**
AK19 Malin Array Si 70.99 325 P **P 05 25 03.5 -1.2**
AK05 Malin Array Si 70.99 324 P **P 05 25 03.5 -1.2**
PV15 Paradox Valley 70.99 54 P **P 05 25 04.9 -0.5**
PV15 IAmb IAmb 05 25 06.7
comp=Z,22nm,1.1s
AK12 Malin Array Si 70.99 324 P **P 05 25 03.5 -1.2**
AK16 Malin Array Si 70.99 324 P **P 05 25 03.5 -1.2**
AK17 Malin Array Si 71.00 325 P **P 05 25 03.6 -1.2**
AK06 Malin Array Si 71.02 324 P **P 05 25 03.7 -1.2**
AK14 Malin Array Si 71.02 324 P **P 05 25 03.7 -1.2**
AK07 Malin Array Si 71.04 324 P **P 05 25 03.8 -1.3**
AK13 Malin Array Si 71.06 324 P **P 05 25 03.9 -1.2**
BLEU Blekinge 71.13 335 *i* P **P 05 25 04.4 -1.1**
GNI Garni 71.19 308 LR LR 06 01 15.6
comp=Z,46nm,18.5s,baz=84,slow=40
GNI Garni 71.19 308 P **P 05 25 07.0 +0.6**
GNI Garni 71.19 308 *eP* **P 05 25 08.4 +2.0**
GNI pmax pmax
comp=Z,42nm,1.2s
GNI Garni 71.19 308 P **P 05 25 07.3 +0.9**
GNI Garni 71.19 308 P **P 05 25 07.3 +0.9**
GNI Garni 71.19 308 P **P 05 25 08.7 +2.3**
EPOS Posof 71.33 311 P **P 05 25 09.2 +2.1**
KMY Karmoy 71.33 341 *eP* **P 05 25 07.0 +0.3**
MI28 Mi28,Pidlybu 71.37 325 P **P 05 25 05.5 -1.5**
SOC Sochi 71.41 314 *eP* **P 05 25 07.4 0.0**
SOC *e* 05 27 47.8
SOC *e*PPP PPP 05 29 36.9
SOC *eS* **S 05 34 15.5 +1.7**
SOC pmax pmax
comp=Z,51nm,1.0s
FABU Falkenberg 71.42 337 *i* P **P 05 25 07.4 +0.2**
DEL Delary 71.56 336 *i* P **P 05 25 06.6 -1.4**
DEL IAmb IAmb 05 25 06.8
comp=Z,2.7nm,0.6s
ISCO Idaho Springs 71.58 52 P **P 05 25 10.0 +1.1**
ANN Anapa 71.67 316 *eP* **P 05 25 06.0 -2.9**
ANN *e**PP **pP 05 25 41.2 -1.7**
ANN *eS* **S 05 34 15.9 -0.7**
ANN pmax pmax
comp=Z,59nm,0.9s
SNART Snartemo 71.67 340 *eP* **P 05 25 08.7 +0.1**
SNART Snartemo 71.67 340 *i* P **P 05 25 08.4 -0.2**
RNPP9 Sopachiv 71.69 327 P **P 05 25 07.9 -1.0**
DIGO Kars 71.75 309 P **P 05 25 12.1 +2.2**
RNPP8 Varash 71.76 327 P **P 05 25 08.5 -0.8**
MVCO Mesa Verde 71.76 55 IAmb IAmb 05 25 11.4
comp=Z,16nm,0.8s
MVCO Mesa Verde 71.76 55 P **P 05 25 10.7 +0.7**
LRW Lerwick 71.78 345 *eP* **P 05 25 08.7 -0.6**
LRW IAmb IAmb 05 25 10.2
comp=Z,25nm,0.6s
BATM Batumi 71.81 311 ⇓P **P 05 25 10.2 +0.3**
BATM Batumi 71.81 311 P **P 05 25 10.1 +0.3**
RNPP5 Staryi Chortor 71.83 327 P **P 05 25 08.9 -0.9**
MBWA Marble Bar 71.84 209 P **P 05 25 10.2 +0.1**
comp=Z,81nm,1.0s
MBWA Marble Bar 71.84 209 P **P 05 25 10.5 +0.4**
MBWA Marble Bar 71.84 209 P **P 05 25 10.2 +0.1**
MBWA Marble Bar 71.84 209 P **P 05 25 10.2 +0.1**
MBWA Marble Bar 71.84 209 P **P 05 25 10.2 +0.1**
LUBAR Lubar, Ukraine 72.12 325 P **P 05 25 10.7 -0.8**
QLP Quilpie 72.14 185 P **P 05 25 12.4 +0.6**
comp=Z,126nm,0.9s
QLP Quilpie 72.14 185 P **P 05 25 13.2 +1.5**
QLP Quilpie 72.14 185 P **P 05 25 12.6 +0.9**
BJUU Bjuv 72.14 336 *i* P **P 05 25 11.2 -0.3**
LUNU Lund 72.40 336 *i* P **P 05 25 11.5 -1.5**
BSD Bornholm Skovb 72.41 335 *i* P **P 05 25 12.3 -0.8**
BSD IAmb IAmb 05 25 13.1
comp=Z,22nm,0.5s
IVI Ivigtut 72.45 9 P **P 05 25 13.8 +0.5**
IVI IAmb IAmb 05 25 14.6
comp=Z,40nm,0.8s
EYMN Ely 72.56 38 P **P 05 25 14.3 0.0**
EYMN IAmb IAmb 05 27 06.8
comp=Z,29nm,1.3s
PIX Pinacate 72.67 63 IAmb IAmb 05 25 16.4
comp=Z,20nm,0.9s
K30B Basset 72.70 46 IAmb IAmb 05 25 17.7
comp=Z,55nm,1.2s
WRKA Warakurna 73.02 200 P **P 05 25 17.5 +0.5**
comp=Z,55nm,0.9s
GKP Gorka Klasztor 73.25 332 *e*PKP **P 05 25 17.4 -0.7**
SORM Soroca 73.27 323 ⇓P **P 05 25 19.0 +0.7**
SORM Soroca 73.27 323 P **P 05 25 19.0 +0.7**
NE56 Odesa 73.30 321 P **P 05 25 17.5 -1.0**
ECSD EROS Data Cent 73.40 44 P **P 05 25 19.3 +0.1**
GEVA Gevas 73.42 308 IAmb IAmb 05 25 22.5
comp=Z,15nm,0.6s
INKA Innaminka 73.56 188 IAmb IAmb 05 25 22.2
comp=Z,37nm,0.9s
KOPT Kop Dagi 73.58 311 IAmb IAmb 05 25 25.1
comp=Z,30nm,0.8s
HAKT HAKKARI 73.59 307 P **P 05 25 22.4 +1.6**
KMPD K-Podol'skiy 73.71 325 P **P 05 25 20.0 -0.9**
TUC Tucson 73.80 60 P **P 05 25 21.9 0.0**
TUC pmax pmax
comp=Z,8.0nm,1.0s
TUC Tucson 73.80 60 P **P 05 25 21.9 0.0**
TUC Tucson 73.80 60 P **P 05 25 22.7 +0.8**
GURO Guroymak-BITLI 73.81 309 IAmb IAmb 05 25 25.0
comp=Z,30nm,0.9s
BANOM Banah 73.98 291 *i* P **P 05 25 23.7 +0.8**
SNR=6.0
BANOM Banah 73.98 291 P **P 05 25 24.0 +1.1**
SHME Shamm 74.00 291 *i* P **P 05 25 23.6 +0.6**
SNR=11
SHME Shamm 74.00 291 P **P 05 25 23.8 +0.8**
T25A Trinidad 74.13 53 IAmb IAmb 05 25 25.3
comp=Z,18nm,0.9s
WSAR Wadi Sarin 74.27 287 P **P 05 25 26.0 +1.4**
KWP Kalwaria Pacla 74.33 327 *e*PKP **P 05 25 24.9 +0.3**
KWP Kalwaria Pacla 74.33 327 P **P 05 25 24.2 -0.3**
comp=Z,798nmcomp=Z,79nm,1.1s
MDH Madha 74.41 290 P **P 05 25 25.4 0.0**
BIDO Bidbid 74.42 288 P **P 05 25 27.1 +1.7**
MASF Masafi 74.45 290 P **P 05 25 26.6 +0.9**
MSFE Esma-Masafi 74.46 290 P **P 05 25 26.6 +0.9**
WBK Wadi Bani Khal 74.47 286 P **P 05 25 27.3 +1.5**
JLN Jalan Bani Buh 74.49 286 P **P 05 25 27.4 +1.6**
ANMO Albuquerque 74.53 56 P **P 05 25 26.2 +0.1**
ANMO pmax pmax
comp=Z,8.0nm,0.8s
ANMO Albuquerque 74.53 56 P **P 05 25 26.2 +0.1**
ANMO Albuquerque 74.53 56 P **P 05 25 27.1 +1.0**
MCD Coleburn Disti 74.56 345 *eP* **P 05 25 25.3 -0.4**
MCD IAmb IAmb 05 25 26.3
comp=Z,10nm,0.6s
COCO West Island 74.57 234 P **P 05 25 28.7 +2.5**

COCO West Island 74.57 234 P P 05 25 31.5 +5.3
COCO West Island 74.57 234 P **P** **05 25 28.6 +2.4**
DUN6 Lazy B Ranch 74.66 59 IAmb IAmb 05 25 28.3
comp=Z,34nm,0.8s
VASR Vaslui 74.67 323 ⇑P **P** **05 25 26.4 -0.2**
I37A Lemond, Waseca 74.72 42 IAmb IAmb 05 25 28.9
comp=Z,45nm,0.9s
UOSS Minazif 74.72 290 *i* P **P** **05 25 27.8 +0.7**
SNR=12
UOSS Minazif 74.72 290 P P **05 25 28.0 +0.8**
UOSS Minazif 74.72 290 P **P** **05 25 27.5 +0.4**
UOSS IAmb IAmb 05 25 28.4
comp=Z,36nm,0.8s
UOSS Minazif 74.72 290 P P **05 25 27.8 +0.7**
BSEG Bad Segeberg 74.77 336 *e*P **P** **05 25 27.2 +0.2**
comp=Z,10.0nm,0.9s,baz=28,slow=5.7
SMDO Samad 74.78 287 P **P** **05 25 28.7 +1.0**
HATD Hatta, Dubai 74.84 290 *i* P **P** **05 25 28.8 +0.9**
SNR=11
HATD Hatta, Dubai 74.84 290 P **P** **05 25 29.0 +1.1**
SNR=6.0
HOQ Hoqain 74.92 288 P **P** **05 25 29.4 +1.0**
SNR=6.0
OJC Ojcow 74.92 329 *e*PKP **P** **05 25 28.3 +0.4**
OJC Ojcow 74.92 329 P **P** **05 25 27.8 -0.1**
comp=Z,448nmcomp=Z,42nm,0.9s
OJC Ojcow 74.92 329 P P **05 25 28.2 +0.4**
GIRR Girov 74.97 323 ⇑P **P** **05 25 28.0 -0.2**
BURAR Bucovina Array 74.97 325 ⇑P **P** **05 25 28.5 0.0**
BURAR Bucovina Array 74.97 325 P P **05 25 28.4 0.0**
BURAR Bucovina Array 74.97 325 P P **05 25 28.6 +0.2**
ASHO Ashiyiah 74.99 290 *i* P **P** **05 25 29.5 +0.8**
SNR=9.3
ASHO Ashiyiah 74.99 290 P **P** **05 25 29.8 +1.0**
SNR=6.1
NAZ Nazwa, Dubai 75.04 290 *i* P **P** **05 25 30.0 +1.0**
SNR=6.5
NAZ Nazwa, Dubai 75.04 290 P **P** **05 25 30.1 +1.0**
SOHO SOHO 75.05 289 *i* P **P** **05 25 30.0 +0.9**
SNR=8.0
SOHO SOHO 75.05 289 P **P** **05 25 29.9 +0.9**
STHS Stebnicka Huta 75.06 328 *e*P **P** **05 25 29.5 +0.8**
STHS pmax pmax
comp=Z,28nm,0.7s
STHS Stebnicka Huta 75.06 328 *e*P **P** **05 25 29.5 +0.8**
KOLS Kolonicke sedl 75.06 327 *e*P **P** **05 25 29.1 +0.3**
KOLS pmax pmax
comp=Z,30nm,0.8s
KOLS Kolonicke sedl 75.06 327 P **P** **05 25 29.4 +0.6**
KOLS Kolonicke sedl 75.06 327 *e*P **P** **05 25 29.1 +0.3**
VLDR Vladesti 75.18 322 ⇑P **P** **05 25 30.0 +0.6**
SCHQ Schefferville 75.19 21 P **P** **05 25 29.8 +0.4**
comp=Z,5.5nm,0.6s,baz=320,slow=5.7,SNR=10
SCHQ LR LR 06 00 51.4
comp=Z,17nm,19.9s,baz=288,slow=37
comp=Z,5.5nm,0.6s
KPL Plockton 75.20 346 *e*P **P** **05 25 28.8 -0.6**
KPL IAmb IAmb 05 25 31.1
comp=Z,22nm,0.6s
JMDO Jabal Madar 75.22 287 P **P** **05 25 31.3 +1.2**
FAQ Al Faqa, Dubai 75.25 290 P **P** **05 25 30.8 +0.6**
FAQ Al Faqa, Dubai 75.25 290 P P **05 25 31.0 +0.8**
TESR Tescani 75.26 323 ⇑P **P** **05 25 30.1 +0.2**
TESR Tescani 75.26 323 P **P** **05 25 29.4 -0.5**
comp=Z,839nmcomp=Z,66nm,0.8s
TESR Tescani 75.26 323 P P **05 25 30.1 +0.2**
GHRR 75.30 322 P **P** **05 25 32.1 +2.0**
319A Douglas 75.37 60 IAmb IAmb 05 25 32.7
comp=Z,41nm,0.8s
TLCR 75.37 321 ⇑P **P** **05 25 31.1 +0.5**
TLCR 75.37 321 P **P** **05 25 31.0 +0.5**
ARPR Arapgir-MALATY 75.39 311 IAmb IAmb 05 25 34.2
comp=Z,26nm,0.7s
ARPR Arapgir-MALATY 75.39 311 P **P** **05 25 33.5 +2.4**
NIE Niedzica 75.40 328 *e*PKP **P** **05 25 31.5 +0.8**
NIE Niedzica 75.40 328 P **P** **05 25 30.7 0.0**
comp=Z,17nm,1.0s
121A Cookes Peak, D 75.45 58 IAmb IAmb 05 25 33.6
comp=Z,17nm,0.8s
ASUD Al Ashush, Dub 75.51 290 P **P** **05 25 32.8 +1.2**
ONER Baraj Valea Uz 75.51 323 ⇓P **P** **05 25 31.9 +0.5**
PANC Panciu 75.56 322 ⇓P **P** **05 25 32.8 +1.2**
BSY Bisya 75.57 288 P **P** **05 25 33.2 +1.1**
ARQ Araqi 75.61 289 P **P** **05 25 33.4 +1.1**
KSP Ksiaz 75.61 331 *e*PKP **P** **05 25 31.5 -0.3**
KSP Ksiaz 75.61 331 P **P** **05 25 31.4 -0.4**
comp=Z,471nmcomp=Z,36nm,0.8s
TRPA Tarpa 75.62 326 P **P** **05 25 32.6 +0.7**
ALNE Al Ain 75.62 290 P **P** **05 25 33.4 +1.1**
CFR Carcaliu 75.68 321 ⇓P **P** **05 25 33.1 +0.8**
CFR Carcaliu 75.68 321 P **P** **05 25 33.0 +0.8**
VRI Vrincioaia 75.74 323 ⇑P **P** **05 25 32.7 0.0**
VRI Vrincioaia 75.74 323 P **P** **05 25 32.6 0.0**
VRI Vrincioaia 75.74 323 P **P** **05 25 32.7 0.0**
comp=Z,19nm,1.4s
VRI Vrincioaia 75.74 323 P **P** **05 25 33.9 +1.2**
PLOR Plostina 75.78 323 ⇑P **P** **05 25 33.9 +0.9**
PLOR Plostina 75.78 323 P **P** **05 25 33.9 +0.9**
INVG Invergeldie, C 75.79 345 *e*P **P** **05 25 32.3 -0.5**
INVG IAmb IAmb 05 25 37.5
comp=Z,6.0nm,0.7s
TPGR Topolog 75.81 321 ⇑P **P** **05 25 33.6 +0.6**
OKC Ostrava-Krasne 75.83 330 *e*P **P** **05 25 33.2 +0.1**
OKC Ostrava-Krasne 75.83 330 *e*P **P** **05 25 33.2 +0.1**
OKC Ostrava-Krasne 75.83 330 P **P** **05 25 33.8 +0.8**
ARMA Armidale 75.83 178 P **P** **05 25 34.3 +1.1**
comp=Z,47nm,0.8s
ARMA Armidale 75.83 178 P **P** **05 25 34.6 +1.4**
ARMA Armidale 75.83 178 P **P** **05 25 33.5 +0.3**
ARMA IAmb IAmb 05 25 36.1
comp=Z,29nm,0.8s
ARMA Armidale 75.83 178 P **P** **05 25 34.4 +1.1**
SAHR Sahastru 75.87 323 ⇓P **P** **05 25 34.7 +1.2**
STEB Steborice 75.88 330 *e*P **P** **05 25 33.7 +0.3**
OSTC Ostas 75.88 331 *e*P **P** **05 25 34.1 +0.7**
OSTC Ostas 75.88 331 *e*P **P** **05 25 34.1 +0.7**
FLTG Flechtingen 75.92 335 *e*P **P** **05 25 33.2 -0.3**
comp=Z,31nm,0.6s,baz=28,slow=5.7
LANS Liptovska Anna 75.93 329 *e*P **P** **05 25 34.9 +1.2**
LANS pmax pmax
comp=Z,24nm,0.9s
LANS Liptovska Anna 75.93 329 *e*P **P** **05 25 34.9 +1.2**
OZUR 75.95 323 ⇑P **P** **05 25 35.0 +1.1**
COVR Voineasa-Covas 75.98 323 ⇑P **P** **05 25 34.7 +0.6**
UPC Upice 75.99 331 *e*P **P** **05 25 34.5 +0.5**
UPC Upice 75.99 331 *e*P **P** **05 25 34.5 +0.5**
UPC Upice 75.99 331 P **P** **05 25 34.7 +0.7**
DPC Dobruska-Polom 76.02 331 *e*P **P** **05 25 34.6 +0.4**
DPC Dobruska-Polom 76.02 331 *e*P **P** **05 25 34.6 +0.4**
DPC Dobruska-Polom 76.02 331 P **P** **05 25 33.9 -0.3**
comp=Z,18nm,1.1s
DPC Dobruska-Polom 76.02 331 P **P** **05 25 34.9 +0.7**
N35A Tabor 76.03 45 IAmb IAmb 05 25 37.8
comp=Z,19nm,0.7s
EAB Aberfoyle 76.07 345 *e*P **P** **05 25 34.2 -0.1**
EAB IAmb IAmb 05 25 38.4
comp=Z,5.7nm,0.7s
MORC Moravsky Berou 76.09 330 ⇑P **P** **05 25 35.3 +0.7**
MORC Moravsky Berou 76.09 330 P **P** **05 25 35.3 +0.7**
MORC Moravsky Berou 76.09 330 IAmb IAmb 05 25 36.8
comp=Z,26nm,0.7s
MORC Moravsky Berou 76.09 330 *e*P **P** **05 25 34.5 -0.1**
MORC Moravsky Berou 76.09 330 P **P** **05 25 35.2 +0.6**
KRLC Kraliky 76.10 331 *e*P **P** **05 25 35.0 +0.3**
KRLC Kraliky 76.10 331 *e*P **P** **05 25 35.0 +0.3**
KRLC Kraliky 76.10 331 P **P** **05 25 35.2 +0.5**
RETH Rethem/Aller, 76.10 336 *e*P **P** **05 25 34.8 +0.3**
comp=Z,16nm,0.7s,baz=28,slow=5.7
RETH Rethem/Aller, 76.10 336 P **P** **05 25 34.8 +0.3**
KECS Kecovo 76.11 328 *e*P **P** **05 25 35.2 +0.5**
KECS pmax pmax
comp=Z,26nm,1.1s
KECS Kecovo 76.11 328 *e*P **P** **05 25 35.2 +0.5**
TIRR Tirgusor 76.12 321 ⇓P **P** **05 25 35.1 +0.3**
TIRR Tirgusor 76.12 321 P **P** **05 25 35.1 +0.3**
TIRR Tirgusor 76.12 321 IAmb IAmb 05 25 36.6
comp=Z,16nm,0.9s
TIRR Tirgusor 76.12 321 P **P** **05 25 34.8 0.0**
comp=Z,19nm,1.0s
TIRR Tirgusor 76.12 321 P **P** **05 25 35.8 +1.0**
LAWE Loch Awe, Argy 76.19 346 *e*P **P** **05 25 34.2 -0.7**
LAWE IAmb IAmb 05 25 38.2
comp=Z,11nm,0.8s
TLBR Topalu 76.22 321 ⇓P **P** **05 25 35.8 +0.4**

MHTO MHTO 76.26 286 P **P** **05 25 37.2 +1.2**
SNR=6.5
MAUC Maruska 76.34 330 *e*P **P** **05 25 36.7 +0.7**
BRG Berggiesshubel 76.36 333 *e*P **P** **05 25 36.0 0.0**
comp=Z,9.4nm,0.8s,baz=28,slow=5.7
BRG Berggiesshubel 76.36 333 P **P** **05 25 35.5 -0.5**
BRG Berggiesshubel 76.36 333 ⇓*i*P **P** **05 25 36.0 0.0**
BRG Amp 05 25 37.6
comp=Z,9.4nm,0.8s
BRG Berggiesshubel 76.36 333 S **S** **05 35 09.0 +0.1**
MLR Muntele Rosu 76.37 323 LR LR 06 02 58.9
comp=Z,55nm,18.6s,baz=90,slow=38
MLR Muntele Rosu 76.37 323 ⇓P **P** **05 25 37.1 +0.6**
MLR Muntele Rosu 76.37 323 P **P** **05 25 37.0 +0.6**
MLR Muntele Rosu 76.37 323 IAmb IAmb 05 25 38.7
comp=Z,33nm,1.3s
MLR Muntele Rosu 76.37 323 P **P** **05 25 36.2 -0.2**
comp=Z,25nm,1.2s
MLR Muntele Rosu 76.37 323 P **P** **05 25 37.3 +0.9**
ISR Istrita 76.41 322 P **P** **05 25 36.2 -0.3**
comp=Z,840nmcomp=Z,65nm,1.1s
SCIA State Center 76.42 43 IAmb IAmb 05 25 38.4
comp=Z,31nm,0.8s
PVCC Panska Ves 76.45 332 *e*P **P** **05 25 36.6 0.0**
PVCC Panska Ves 76.45 332 *e*P **P** **05 25 36.6 0.0**
PVCC Panska Ves 76.45 332 P **P** **05 25 37.0 +0.4**
PGBU Glenifferbraes 76.45 345 *e*P **P** **05 25 35.9 -0.5**
PGBU IAmb IAmb 05 25 37.4
comp=Z,46nm,0.5s
AUPHS Peel High Scho 76.49 179 P **P** **05 25 38.1 +1.2**
WIMM Wimmelburg 76.55 335 P **P** **05 25 37.0 -0.1**
CLZ Clausthal 76.60 335 *e*P **P** **05 25 38.1 +0.6**
comp=Z,28nm,0.6s,baz=28,slow=5.7
CLZ Clausthal 76.60 335 P **P** **05 25 37.9 +0.5**
EKA Eskdalemuir Ar 76.66 344 P **P** **05 25 37.5 -0.1**
comp=Z,4.7nm,0.4s,baz=17,slow=4.9,SNR=47
comp=Z,4.7nm,0.4s
ESK Eskdalemuir 76.69 344 *e*P **P** **05 25 37.5 -0.3**
ESK IAmb IAmb 05 25 39.3
comp=Z,7.5nm,0.6s
NEUB Neuenburg 76.74 334 P **P** **05 25 38.3 +0.1**
HSKC Hora Svate Kat 76.75 333 *e*P **P** **05 25 38.2 -0.1**
HSKC Hora Svate Kat 76.75 333 P **P** **05 25 38.5 +0.2**
VOIR 76.79 323 ⇑P **P** **05 25 39.5 +0.8**
VOIR 76.79 323 P **P** **05 25 39.5 +0.8**
VOIR 76.79 323 P **P** **05 25 38.3 -0.4**
comp=Z,25nm,1.0s
VOIR 76.79 323 P **P** **05 25 39.4 +0.7**
PSZ Piszkesteto 76.80 328 ⇑P **P** **05 25 39.4 +0.7**
PSZ Piszkesteto 76.80 328 P **P** **05 25 39.0 +0.3**
PSZ pmax pmax
comp=Z,17nm,1.0s
PSZ Piszkesteto 76.80 328 P **P** **05 25 39.0 +0.3**
PSZ Piszkesteto 76.80 328 P **P** **05 25 39.5 +0.8**
VRAC Vranov 76.81 330 LR LR 06 04 39.8
comp=Z,30nm,18.3s,baz=27,slow=40
VRAC Vranov 76.81 330 ⇑P **P** **05 25 39.3 +0.6**
VRAC Vranov 76.81 330 P **P** **05 25 39.2 +0.6**
VRAC Vranov 76.81 330 *e*P **P** **05 25 39.0 +0.3**
VRAC Vranov 76.81 330 P **P** **05 25 39.4 +0.8**
JAVC Velka Javorina 76.82 330 *e*P **P** **05 25 39.8 +1.0**
JAVC Velka Javorina 76.82 330 P **P** **05 25 40.3 +1.6**
H43A Windswept, Lux 76.89 38 IAmb IAmb 05 25 41.5
comp=Z,15nm,0.8s
JRN Qarnain Island 76.91 292 P **P** **05 25 39.7 +0.2**
PRU Pruhonice 76.92 332 *e*P **P** **05 25 39.5 +0.3**
PRU Pruhonice 76.92 332 *e*P **P** **05 25 39.5 +0.3**
PRU Pruhonice 76.92 332 P **P** **05 25 39.7 +0.5**
IBBN Ibbenburen 76.93 337 *e*P **P** **05 25 39.4 +0.2**
comp=Z,26nm,0.7s,baz=28,slow=5.7
IBBN Ibbnburen 76.93 337 P **P** **05 25 39.2 0.0**
CICN Ciocanesti 76.94 321 ⇑P **P** **05 25 40.3 +0.9**
GTTG Gottingen 76.98 335 *e*P **P** **05 25 40.1 +0.5**
comp=Z,22nm,1.1s,baz=28,slow=5.7
GTTG Gottingen 76.98 335 P **P** **05 25 39.9 +0.4**
CMSA Cobar Meteorol 76.99 183 P **P** **05 25 41.1 +1.4**
comp=Z,38nm,1.1s
CMSA Cobar Meteorol 76.99 183 P **P** **05 25 39.7 +0.1**
CMSA Cobar Meteorol 76.99 183 P **P** **05 25 41.2 +1.6**
ARR Arges 77.02 324 ⇓P **P** **05 25 40.7 +0.8**
ARR Arges 77.02 324 P **P** **05 25 41.8 +1.8**
KRUC Moravsky 77.09 330 *e*P **P** **05 25 40.4 +0.2**
KRUC Moravsky 77.09 330 P **P** **05 25 40.8 +0.6**
KBD Kabd 77.19 299 P **P** **05 25 42.3 +1.2**
SMOL Smolenice 77.20 330 *e*P **P** **05 25 41.9 +1.1**
SMOL pmax pmax
comp=Z,14nm,1.1s
TANN Tannenbergstha 77.22 333 *e*P **P** **05 25 41.2 +0.2**
comp=Z,7.1nm,0.7s,baz=28,slow=5.7
TANN Tannenbergstha 77.22 333 P **P** **05 25 41.3 +0.3**
PLN Plauen 77.26 334 *e*P **P** **05 25 41.4 +0.3**
comp=Z,3.2nm,0.8s,baz=28,slow=5.7
PLN *es*P **pwP** **05 26 18.4 -1.5**
N38A Joes South For 77.26 44 IAmb IAmb 05 25 43.2
comp=Z,18nm,0.8s
MOX Moxa 77.28 334 *e*P **P** **05 25 41.6 +0.3**
comp=Z,25nm,1.2s,baz=28,slow=5.7
MOX *es*P **pwP** **05 26 18.2 -1.7**
MOX Moxa 77.28 334 P **P** **05 25 41.4 +0.1**
AMTX Amarillo 77.29 53 IAmb IAmb 05 25 43.2
comp=Z,36nm,0.8s
MEEK Meekatharra 77.30 208 P **P** **05 25 41.7 +0.2**
comp=Z,39nm,0.9s
MEEK Meekatharra 77.30 208 P **P** **05 25 41.2 -0.3**
MEEK Meekatharra 77.30 208 P **P** **05 25 40.9 -0.6**
LOT Lotru 77.31 324 ⇑P **P** **05 25 42.3 +0.7**
BR131 Keskin Array S 77.32 315 P **P** **05 25 43.1 +1.2**
BRTR Keskin Array B 77.32 315 P **P** **05 25 43.0 +1.1**
comp=Z,5.2nm,0.9s,baz=58,slow=3.1,SNR=14
comp=Z,5.2nm,0.9s
BRTR Keskin Array B 77.32 315 P **P** **05 25 42.2 +0.3**
BRTR Keskin Array B 77.32 315 P **P** **05 25 42.2 +0.3**
BR106 Keskin Array S 77.33 315 P **P** **05 25 41.9 0.0**
comp=Z,61nmcomp=Z,7.5nm,1.0s
BR104 Keskin Array S 77.34 315 P **P** **05 25 41.9 0.0**
comp=Z,7.8nm,1.0s
BR105 Keskin Array S 77.34 315 P **P** **05 25 42.0 0.0**
comp=Z,79nmcomp=Z,8.6nm,1.0s
MSTX Muleshoe 77.34 54 IAmb IAmb 05 25 43.7
comp=Z,15nm,0.8s
MODS Modra-Piesok 77.37 330 *e*P **P** **05 25 43.3 +1.5**
MODS pmax pmax
comp=Z,53nm,1.2s
MODS Modra-Piesok 77.37 330 P **P** **05 25 43.4 +1.5**
MODS Modra-Piesok 77.37 330 *e*P **P** **05 25 43.3 +1.5**
NKC Novy Kostel 77.39 333 *e*P **P** **05 25 41.9 0.0**
NKC Novy Kostel 77.39 333 *e*P **P** **05 25 41.9 0.0**
NKC Novy Kostel 77.39 333 P **P** **05 25 43.3 +0.5**
CLGH Cloghs, Cushen 77.43 346 *e*P **P** **05 25 42.0 0.0**
CLGH IAmb IAmb 05 25 43.7
comp=Z,16nm,0.5s
MNTX Cornudas Mount 77.47 57 P **P** **05 25 43.4 +0.7**
SIRR Siria 77.49 326 ⇓P **P** **05 25 42.8 +0.3**
NOKA Waynoka 77.50 50 IAmb IAmb 05 25 43.7
comp=Z,20nm,1.0s
ZVC Zvikov 77.51 332 *e*P **P** **05 25 42.9 +0.3**
ANDN Andirin 77.56 312 P **P** **05 25 44.9 +1.7**
STKA Stephens Creek 77.58 187 P **P** **05 25 43.8 +0.9**
comp=Z,161nm,1.1s
STKA Stephens Creek 77.58 187 P **P** **05 25 43.8 +0.9**
comp=Z,26nm,0.8s,baz=344,slow=7.3,SNR=34
STKA LR LR 05 58 18.0
comp=Z,36nm,21.7s,baz=20,slow=34
comp=Z,26nm,0.8s
STKA Stephens Creek 77.58 187 P **P** **05 25 43.4 +0.5**
STKA Stephens Creek 77.58 187 P **P** **05 25 42.5 -0.4**
AUDCS Dubbo College 77.61 181 P **P** **05 25 44.8 +1.7**
UBBA Unterbreizbach 77.62 335 *e*P **P** **05 25 43.2 +0.3**
comp=Z,13nm,0.7s,baz=28,slow=5.7
UBBA Unterbreizbach 77.62 335 P **P** **05 25 43.4 +0.4**
IDGL Inch Island, C 77.68 347 P **P** **05 25 42.8 -0.5**
KASTN Kahler Asten 77.73 336 *e*P **P** **05 25 44.2 +0.4**
comp=Z,12nm,0.9s,baz=28,slow=5.7
GZR Gura Zlata 77.76 325 ⇑P **P** **05 25 44.5 +0.3**
GZR Gura Zlata 77.76 325 P **P** **05 25 44.4 +0.3**
BUG Bochum--Univer 77.84 337 *e*P **P** **05 25 44.5 +0.2**
comp=Z,68nm,1.6s,baz=28,slow=5.7
BUG *es*P **pwP** **05 26 21.5 -1.7**
MZR Muzera 77.85 290 *i* P **P** **05 25 45.5 +0.6**
SNR=16
MZR Muzera 77.85 290 P **P** **05 25 45.6 +0.7**
SNR=6.6
ROTZ Rotzenmuhle 77.87 333 *e*P **P** **05 25 45.1 +0.6**
comp=Z,2.7nm,0.6s,baz=28,slow=5.7

ROTZ *es*P **pwP** **05 26 22.0 -1.3**
VLDQ Val d'Or 77.93 30 IAmb IAmb 05 25 50.3
comp=Z,17nm,0.7s
MDUB Mudurnu 77.95 317 IAmb IAmb 05 25 48.1
comp=Z,20nm,0.7s
KHC Kasperske Hory 77.98 332 *c* *i*P **P** **05 25 45.6 +0.4**
KHC pmax pmax
comp=Z,23nm,0.7s
KHC Kasperske Hory 77.98 332 IAmb IAmb 05 25 47.4
comp=Z,21nm,0.7s
KHC Kasperske Hory 77.98 332 *e*P **P** **05 25 45.6 +0.4**
KHC Kasperske Hory 77.98 332 P **P** **05 25 45.2 0.0**
comp=Z,333nmcomp=Z,32nm,0.7s
KHC Kasperske Hory 77.98 332 P **P** **05 25 45.8 +0.5**
CKRC Cesky Krumlov 78.01 332 *e*P **P** **05 25 45.6 +0.3**
CKRC Cesky Krumlov 78.01 332 *e*P **P** **05 25 45.6 +0.3**
TPB28 78.01 57 IAmb IAmb 05 25 47.8
comp=Z,18nm,0.8s
P38A Dawn 78.02 45 IAmb IAmb 05 25 46.5
comp=Z,21nm,1.1s
WINA Alland / Wiene 78.02 330 *i* P **P** **05 25 46.2 +0.9**
SNR=8.5
BZS Buzias 78.04 325 ⇑P **P** **05 25 45.7 +0.2**
BZS Buzias 78.04 325 P **P** **05 25 45.7 +0.2**
BZS Buzias 78.04 325 P **P** **05 25 45.7 +0.2**
CROK Carrier 78.10 49 IAmb IAmb 05 25 47.0
comp=Z,23nm,0.9s
KKUL Konya-Kulu 78.11 315 P **P** **05 25 48.0 +1.9**
GRA3 Grafenberg Arr 78.15 334 P **P** **05 25 47.0 +1.0**
GEC2 GERESS Array S 78.19 332 *e*P **P** **05 25 46.8 +0.4**
comp=Z,12nm,0.6s,baz=28,slow=5.7
GEC2 *es*P **pwP** **05 26 23.4 -1.9**
GERES GERESS Array B 78.19 332 P **P** **05 25 46.5 +0.1**
comp=Z,10nm,0.5s,baz=30,slow=4.5,SNR=68
comp=Z,10nm,0.5s
WET Wettzell 78.20 333 *e*P **P** **05 25 47.2 +0.8**
comp=Z,18nm,0.8s,baz=28,slow=5.7
WET *es*P **pwP** **05 26 23.9 -1.3**
WET Wettzell 78.20 333 P **P** **05 25 47.1 +0.7**
LBWR Ladybower, Pea 78.20 343 *e*P **P** **05 25 46.5 +0.3**
LBWR IAmb IAmb 05 25 47.3
comp=Z,30nm,0.5s
SOP Sopron 78.21 330 P **P** **05 25 47.6 +1.2**
GRA1 Grafenberg Arr 78.24 334 IAmb IAmb 05 25 48.9
comp=Z,38nm,0.7s
GRA1 Grafenberg Arr 78.24 334 P **P** **05 25 47.4 +0.8**
GRF Grafenberg Arr 78.24 334 *e*P **P** **05 25 47.4 +0.8**
comp=Z,37nm,0.7s,baz=28,slow=5.7
GRF *es*P **pwP** **05 26 24.2 -1.2**
GRFO Grafenberg 78.24 334 P **P** **05 25 47.6 +1.0**
GRFO pmax pmax
comp=Z,31nm,0.6s
GRFO Grafenberg 78.24 334 P **P** **05 25 47.6 +1.0**
GRFO IAmb IAmb 05 25 48.8
comp=Z,31nm,0.6s
GRFO Grafenberg 78.24 334 P **P** **05 25 47.4 +0.8**
CONA Conrad Observa 78.25 330 *i* P **P** **05 25 47.7 +1.0**
comp=Z,13nm,0.6s,SNR=16
RONA Rosalia, Austr 78.29 330 *i* P **P** **05 25 48.1 +1.2**
comp=Z,8.2nm,0.6s,SNR=9.3
MPLH Magyarpolny 78.29 329 P **P** **05 25 47.1 +0.2**
comp=Z,60nm,0.7s
MPLH Magyarpolny 78.29 329 P **P** **05 25 47.8 +0.9**
VHRN Van Horn 78.36 58 IAmb IAmb 05 25 49.2
comp=Z,17nm,0.7s
GRB3 Grafenberg Arr 78.36 333 P **P** **05 25 48.0 +0.7**
GRB1 Grafenberg Arr 78.37 333 P **P** **05 25 47.3 0.0**
N41A Harden Midland 78.47 42 IAmb IAmb 05 25 49.4
comp=Z,33nm,1.1s
GRB2 Grafenberg Arr 78.47 333 P **P** **05 25 48.3 +0.4**
128A Castleberry Fa 78.49 55 IAmb IAmb 05 25 49.7
comp=Z,22nm,0.7s
T35A Sooner Cattle 78.57 48 IAmb IAmb 05 25 49.5
comp=Z,34nm,0.9s
FORT Forrest 78.59 199 P **P** **05 25 49.1 +0.6**
comp=Z,92nm,0.8s,comp=Z,0.0nm
TNS Taunus Mts 78.60 336 *e*P **P** **05 25 49.1 +0.5**
comp=Z,14nm,0.6s,baz=28,slow=5.7
TNS *es*P **pwP** **05 26 25.6 -1.8**
TNS Taunus Mts 78.60 336 P **P** **05 25 47.5 -1.1**
DKNS Dickens 78.61 53 IAmb IAmb 05 25 51.6
comp=Z,21nm,0.8s
GRB5 Grafenberg Arr 78.61 333 P **P** **05 25 49.1 +0.5**
GRC4 Grafenberg Arr 78.68 333 P **P** **05 25 49.6 +0.6**
MORH Mrgy, Hungar 78.69 328 ⇓P **P** **05 25 49.2 +0.1**
MORH Mrgy, Hungar 78.69 328 P **P** **05 25 48.5 -0.6**
comp=Z,1nm,1.1s
MORH Mrgy, Hungar 78.69 328 P **P** **05 25 48.9 -0.1**
MDVR Moldovita 78.69 325 ⇓P **P** **05 25 49.1 -0.1**
OK051 E0350 and S346 78.71 49 IAmb IAmb 05 25 50.3
comp=Z,20nm,0.8s
OK048 Pawnee Station 78.72 49 IAmb IAmb 05 25 50.4
comp=Z,30nm,0.9s
POST Post 78.72 54 IAmb IAmb 05 25 50.9
comp=Z,32nm,0.8s
CWF Charnwood Fore 78.74 342 *e*P **P** **05 25 49.3 +0.1**
CWF IAmb IAmb 05 25 50.2
comp=Z,8.2nm,0.5s
GRC1 Grafenberg Arr 78.76 333 P **P** **05 25 49.9 +0.4**
TPB06 Permian Basin 78.78 56 IAmb IAmb 05 25 51.3
comp=Z,13nm,0.7s
HGN Heimansgroeve 78.82 337 P **P** **05 25 50.0 +0.4**
P40A Paris 78.82 44 IAmb IAmb 05 25 51.6
comp=Z,38nm,1.2s
ODSA Odessa 78.82 55 IAmb IAmb 05 25 51.4
comp=Z,25nm,0.8s
GRC3 Grafenberg Arr 78.83 333 P **P** **05 25 49.9 0.0**
129A Stewart Farms, 78.83 55 IAmb IAmb 05 25 51.2
comp=Z,8.3nm,0.8s
MOA Molln 78.86 331 *i* P **P** **05 25 50.6 +0.6**
comp=Z,8.2nm,0.7s,SNR=6.0
MOA Molln 78.86 331 P **P** **05 25 50.9 +0.8**
OK029 Liberty Lake 78.92 50 IAmb IAmb 05 25 51.8
comp=Z,25nm,0.8s
BTNL Ternell 78.92 337 *d*P **P** **05 25 50.4 +0.1**
comp=Z,12nm,0.8s
MEM Membach 78.94 337 *d*P **P** **05 25 50.4 0.0**
comp=Z,14nm,0.8s
ARSA Arzberg 78.94 330 *i* P **P** **05 25 51.0 +0.5**
comp=Z,3.8nm,0.5s
WMOK Wichita Mounta 79.00 51 P **P** **05 25 51.4 +0.4**
QUOK Quay 79.03 49 IAmb IAmb 05 25 52.9
comp=Z,39nm,1.0s
BSTI Sart Tilman 79.08 337 *d*P **P** **05 25 51.6 +0.5**
comp=Z,7.3nm,0.6s
OK052 Battle Ridge R 79.11 49 IAmb IAmb 05 25 52.8
comp=Z,26nm,1.0s
BBOO Buckleboo 79.12 191 P **P** **05 25 52.8 +1.4**
comp=Z,31nm,1.0s
BBOO Buckleboo 79.12 191 P **P** **05 25 52.4 +1.0**
BBOO Buckleboo 79.12 191 P **P** **05 25 52.2 +0.9**
BBOO IAmb IAmb 05 25 53.0
comp=Z,31nm,1.0s
BBOO Buckleboo 79.12 191 P **P** **05 25 52.4 +1.0**
J47A Sunmer 79.15 37 IAmb IAmb 05 25 53.5
comp=Z,18nm,0.9s
AUJCS Jamestown Cent 79.19 189 P **P** **05 25 53.3 +1.6**
BIOA Bad Ischl, Aus 79.21 331 *i* P **P** **05 25 52.8 +0.8**
comp=Z,9.2nm,0.6s
M44A Midewin, Midew 79.23 40 IAmb IAmb 05 25 54.0
comp=Z,34nm,1.2s
DSB Dublin 79.24 345 P **P** **05 25 52.0 +0.1**
TPB05 Hovey Rd 79.25 57 IAmb IAmb 05 25 54.0
comp=Z,20nm,0.8s
MNHN Monahans 79.27 56 IAmb IAmb 05 25 53.8
comp=Z,16nm,0.7s
HLM1 Long Mynd 79.27 343 *e*P **P** **05 25 52.2 +0.1**
HLM1 IAmb IAmb 05 25 54.0
comp=Z,7.0nm,0.6s
BCLA Clavier 79.30 338 *d*P **P** **05 25 52.4 +0.1**
comp=Z,11nm,0.8s
APMT Aspermont 79.31 53 IAmb IAmb 05 25 53.7
comp=Z,27nm,0.7s
HDIL Hopedale 79.32 42 IAmb IAmb 05 25 54.1
comp=Z,52nm,1.1s
FNO Franklin 79.35 50 IAmb IAmb 05 25 54.3
comp=Z,37nm,0.9s
229A Bryant Ranch, 79.35 55 IAmb IAmb 05 25 54.5
comp=Z,15nm,0.8s
HTT Hallett 79.38 189 P **P** **05 25 53.8 +0.9**
comp=Z,22nm,0.9s
HTT Hallett 79.38 189 P **P** **05 25 53.9 +1.1**
DEOK Depew 79.39 49 IAmb IAmb 05 25 54.3
comp=Z,19nm,1.0s
SESA Seetaler Alpe, 79.40 330 *i* P **P** **05 25 54.0 +0.8**
SNR=31

TMB01	**Midkiff**		**79.42**	**55**	IAmb	IAmb	05 25 54.9		
	comp=Z,20nm,1.0s								
BMRD	**Maredsous**		**79.55**	**338**	*d*P	**P**	**05 25 53.8**	**+0.1**	
	comp=Z,15nm,0.8s								
IGLA	**Glengowla, Co**		**79.57**	**347**	P	**P**	**05 25 53.4**	**-0.3**	
SOKA	**Soboth**		**79.61**	**330**	*i* P	**P**	**05 25 54.7**	**+0.5**	
	comp=Z,9.1nm,0.7s,SNR=11								
X34A	**Smith Ranch, M**		**79.61**	**51**	IAmb	IAmb	05 25 56.0		
	comp=Z,19nm,0.8s								
PERS	**Pernice**		**79.62**	**330**	*i* P	**P**	**05 25 54.6**	**+0.4**	
W35A	**Tecumseh**		**79.71**	**50**	IAmb	IAmb	05 25 56.0		
	comp=Z,27nm,1.2s								
LESA	**Schwarzleotal**		**79.76**	**332**	*i* P	**P**	**05 25 55.8**	**+0.7**	
	comp=Z,18nm,0.7s,SNR=13								
DOU	**Dourbes**		**79.78**	**338**	*d*P	**P**	**05 25 54.2**	**-0.8**	
	comp=Z,5.1nm,0.5s								
SGCY	**Sterling City**		**79.78**	**55**	IAmb	IAmb	05 25 56.5		
	comp=Z,32nm,0.8s								
MCH1	**Michaelchurch**		**79.79**	**343**	*e*P	**P**	**05 25 55.1**	**+0.2**	
MCH1					IAmb	IAmb	05 25 58.3		
	comp=Z,15nm,0.7s								
KBA	**Koelnbreinsper**		**79.84**	**331**	*i* P	**P**	**05 25 56.5**	**+0.9**	
	comp=Z,21nm,0.6s,SNR=19								
KBA	**Koelnbreinsper**		**79.84**	**331**	P	**P**	**05 25 56.6**	**+1.0**	
MONM	**Monmouth**		**79.90**	**343**	*e*P	**P**	**05 25 55.7**	**+0.2**	
MONM					IAmb	IAmb	05 25 57.1		
	comp=Z,16nm,0.7s								
SHAO	**Shalim**		**79.90**	**285**	P	**P**	**05 25 58.1**	**+1.9**	
RLO	**Rose Lookout**		**79.92**	**48**	IAmb	IAmb	05 25 56.8		
	comp=Z,13nm,0.7s								
OBKA	**Obir**		**79.92**	**330**	*i* P	**P**	**05 25 56.4**	**+0.5**	
	comp=Z,6.2nm,0.6s								
OBKA	**Obir**		**79.92**	**330**	P	**P**	**05 25 56.5**	**+0.6**	
RDO	**Rodhopi**		**80.04**	**320**	IAmb	IAmb	05 25 59.6		
	comp=Z,18nm,0.8s								
RDO	**Rodhopi**		**80.04**	**320**	P	**P**	**05 25 57.8**	**+1.4**	
ABTX	**Abilene, Hawle**		**80.10**	**53**	IAmb	IAmb	05 25 58.3		
	comp=Z,42nm,1.7s								
MYKA	**Terra Mystica**		**80.13**	**331**	*i* P	**P**	**05 25 56.6**	**-0.4**	
	comp=Z,5.3nm,0.6s								
IWEX	**Carrickbyrne,**		**80.14**	**345**	P	**P**	**05 25 57.3**	**+0.5**	
SADO	**Sadowa**		**80.15**	**33**	LR	LR	06 03 59.0		
	comp=Z,26nm,18.1s,baz=16,slow=37								
TXAR	**Lajitas Array**		**80.20**	**58**	P	**P**	**05 25 58.1**	**+0.4**	
	comp=Z,24nm,0.6s,baz=299,slow=4.2,SNR=485								
TXAR					PKKPbc	**PKKPbc**	**05 44 40.4**	**+2.9**	
	comp=Z,1.5nm,0.9s,baz=143,slow=5.2,SNR=14								
	comp=Z,24nm,0.6s								
WATA	**Walderalm**		**80.20**	**332**	*i* P	**P**	**05 25 58.2**	**+0.7**	
	comp=Z,19nm,0.5s,SNR=8.1								
WTTA	**Wattenberg**		**80.25**	**332**	*i* P	**P**	**05 25 58.6**	**+0.9**	
	comp=Z,25nm,0.5s,SNR=15								
WTTA	**Wattenberg**		**80.25**	**332**	P	**P**	**05 25 58.6**	**+0.9**	
ACOM	**Acomizza, Ital**		**80.25**	**331**	P	**P**	**05 25 57.7**	**-0.1**	
BFO	**Black Forest**		**80.33**	**335**	P	**P**	**05 25 57.9**	**-0.1**	
BFO					pmax	pmax			
	comp=Z,17nm,0.7s								
BFO	**Black Forest**		**80.33**	**335**	P	**P**	**05 25 57.9**	**-0.1**	
BFO					IAmb	IAmb	05 26 01.8		
	comp=Z,17nm,0.7s								
BFO	**Black Forest**		**80.33**	**335**	*e*P	**P**	**05 25 58.3**	**+0.3**	
	comp=Z,8.3nm,0.8s,baz=28,slow=5.7								
BFO					*es*P	**pwP**	**05 26 35.2**	**-1.7**	
RETA	**Reutte**		**80.33**	**333**	*i* P	**P**	**05 25 58.8**	**+0.7**	
	comp=Z,7.7nm,0.6s								
MOTA	**Moosalm**		**80.35**	**333**	*i* P	**P**	**05 25 58.8**	**+0.6**	
	comp=Z,18nm,0.7s,SNR=9.0								
CCM	**Cathedral Cave**		**80.36**	**44**	P	**P**	**05 25 58.2**	**-0.1**	
CCM					pmax	pmax			
	comp=Z,21nm,1.0s								
CCM	**Cathedral Cave**		**80.36**	**44**	P	**P**	**05 25 58.2**	**-0.1**	
CCM					IAmb	IAmb	05 25 59.1		
	comp=Z,21nm,0.9s								
MORW	**Morawa**		**80.40**	**209**	P	**P**	**05 25 58.5**	**+0.1**	
	comp=Z,62nm,1.0s								
MORW	**Morawa**		**80.40**	**209**	P	**P**	**05 25 58.6**	**+0.3**	
MORW	**Morawa**		**80.40**	**209**	IAmb	IAmb	05 25 59.4		
	comp=Z,33nm,0.7s								
MORW	**Morawa**		**80.40**	**209**	P	**P**	**05 25 58.7**	**+0.3**	
AAM	**Ann Arbor**		**80.41**	**37**	P	**P**	**05 25 58.8**	**+0.4**	
AAM					pmax	pmax			
	comp=Z,13nm,1.0s								
AAM	**Ann Arbor**		**80.41**	**37**	P	**P**	**05 25 58.8**	**+0.4**	
ABTA	**Abfaltersbach**		**80.41**	**332**	*i* P	**P**	**05 25 59.5**	**+1.0**	
	comp=Z,2.4nm,0.5s								
SQTA	**Sankt Quirin**		**80.42**	**333**	*i* P	**P**	**05 25 59.1**	**+0.5**	
	comp=Z,16nm,0.8s,SNR=6.2								
LOOK	**Love County**		**80.43**	**51**	IAmb	IAmb	05 25 59.8		
	comp=Z,20nm,0.9s								
OZNA	**Ozona**		**80.52**	**55**	IAmb	IAmb	05 26 00.2		
	comp=Z,15nm,0.7s								
FUSE	**Fusea**		**80.54**	**331**	P	**P**	**05 25 58.5**	**-0.5**	
BOJS	**Bojanci**		**80.54**	**329**	*i* P	**P**	**05 25 59.1**	**+0.1**	
TRQ	**Mont Tremblant**		**80.56**	**29**	IAmb	IAmb	05 26 06.4		
	comp=Z,17nm,0.7s								
DMTO	**DMTO**		**80.58**	**286**	P	**P**	**05 26 00.2**	**+0.5**	
AUDAR	**Daramalan Coll**		**80.62**	**180**	P	**P**	**05 26 01.2**	**+1.8**	
CEY	**Cerknica**		**80.63**	**330**	*i* P	**P**	**05 25 59.2**	**-0.4**	
CNB	**Canberra Magne**		**80.69**	**180**	P	**P**	**05 26 01.1**	**+1.3**	
	comp=Z,0.4nm,1.2s								
N47A	**Urbana**		**80.69**	**39**	IAmb	IAmb	05 26 01.1		
	comp=Z,24nm,1.0s								
AUMTS	**Mt Stromlo**		**80.69**	**180**	P	**P**	**05 26 01.5**	**+1.7**	
CAN	**Canberra**		**80.69**	**180**	P	**P**	**05 26 01.1**	**+1.3**	
	comp=Z,21nm,1.0s								
CAN	**Canberra**		**80.69**	**180**	P	**P**	**05 26 01.5**	**+1.7**	
CAN	**Canberra**		**80.69**	**180**	IAmb	IAmb	05 26 02.2		
	comp=Z,16nm,0.9s								
CAN	**Canberra**		**80.69**	**180**	P	**P**	**05 25 59.0**	**-0.8**	
KMBL	**Kambalda**		**80.72**	**204**	P	**P**	**05 26 00.3**	**+0.4**	
	comp=Z,18nm,1.0s								
HPIG			**80.74**	**61**	IAmb	IAmb	05 26 01.9		
	comp=Z,16nm,0.7s								
HPIG			**80.74**	**61**	P	**P**	**05 26 01.2**	**+0.4**	
FETA	**Feichten**		**80.75**	**333**	*i* P	**P**	**05 26 01.0**	**+0.5**	
	comp=Z,7.0nm,0.8s								
Q44A	**Meyer Farm, Va**		**80.76**	**42**	IAmb	IAmb	05 26 02.5		
	comp=Z,31nm,1.0s								
ECH	**Echery**		**80.78**	**336**	IAmb	IAmb	05 26 03.9		
	comp=Z,19nm,0.7s								
ECH	**Echery**		**80.78**	**336**	P	**P**	**05 26 00.6**	**+0.2**	
DAVA	**Damuels**		**80.79**	**333**	*i* P	**P**	**05 26 01.0**	**+0.4**	
	comp=Z,9.9nm,0.7s								
DAVA	**Damuels**		**80.79**	**333**	P	**P**	**05 26 01.0**	**+0.4**	
AUMAR	**Marden Senior**		**80.85**	**189**	P	**P**	**05 26 02.0**	**+1.4**	
Z35A	**Perchaven, San**		**80.89**	**51**	IAmb	IAmb	05 26 01.8		
	comp=Z,27nm,0.9s								
AUMBR	**Murray Bridge**		**81.03**	**188**	P	**P**	**05 26 02.7**	**+1.2**	
P46A	**Rosedale**		**81.03**	**41**	IAmb	IAmb	05 26 03.9		
	comp=Z,30nm,0.7s								
CSS	**Mathiatis**		**81.13**	**312**	P	**P**	**05 26 03.0**	**+0.6**	
CSS					IAmb	IAmb	05 26 05.0		
	comp=Z,28nm,0.7s								
CSS	**Mathiatis**		**81.13**	**312**	P	**P**	**05 26 02.5**	**+0.1**	
	comp=Z,38nm,0.8s								
CSS	**Mathiatis**		**81.13**	**312**	P	**P**	**05 26 02.8**	**+0.3**	
VAL	**Valentia**		**81.13**	**347**	P	**P**	**05 26 02.5**	**+0.4**	
WHFO	**Wadi Hawf**		**81.23**	**287**	P	**P**	**05 26 03.5**	**+0.3**	
RBK	**Rabkut**		**81.23**	**286**	P	**P**	**05 26 04.4**	**+1.2**	
DAVOX	**Davos/Dischmat**		**81.24**	**333**	LR	LR	06 05 35.4		
	comp=Z,40nm,18.3s,baz=38,slow=38								
T42A	**Van Buren**		**81.24**	**45**	IAmb	IAmb	05 26 03.6		
	comp=Z,32nm,1.6s								
FUORN	**Ofenpass-Fuorn**		**81.26**	**333**	P	**P**	**05 26 03.6**	**+0.4**	
FUORN	**Ofenpass-Fuorn**		**81.26**	**333**	P	**P**	**05 26 04.1**	**+0.9**	
OLIL	**Olney**		**81.33**	**42**	IAmb	IAmb	05 26 05.2		
	comp=Z,40nm,1.4s								
CGRP	**Cima Grappa**		**81.41**	**332**	P	**P**	**05 26 03.3**	**-0.6**	
O48B	**Farmland**		**81.43**	**39**	IAmb	IAmb	05 26 05.7		
	comp=Z,26nm,1.0s								
BRDY	**Brady**		**81.46**	**54**	IAmb	IAmb	05 26 05.3		
	comp=Z,15nm,0.8s								
BOURR	**Bourrignon**		**81.50**	**335**	P	**P**	**05 26 04.8**	**+0.6**	
MMAI	**Mount Meron Ar**		**81.52**	**309**	P	**P**	**05 26 06.2**	**+1.6**	
	comp=Z,22nm,0.6s,baz=27,slow=13,SNR=26								
MMAI					LR	LR	06 05 52.2		
	comp=Z,53nm,21.6s,baz=54,slow=38								
	comp=Z,22nm,0.6s								
D62A	**Allapoint, All**		**81.57**	**25**	IAmb	IAmb	05 28 25.5		
	comp=Z,46nm,1.9s								
BLDU	**Ballidu**		**81.60**	**208**	P	**P**	**05 26 04.8**	**+0.1**	
	comp=Z,61nm,0.8s								
BLDU	**Ballidu**		**81.60**	**208**	P	**P**	**05 26 04.7**	**+0.1**	
BLDU	**Ballidu**		**81.60**	**208**	P	**P**	**05 26 04.7**	**+0.1**	
BNALP	**Bannalp**		**81.61**	**334**	P	**P**	**05 26 05.5**	**+0.6**	
S44A	**Carbondale**		**81.61**	**43**	IAmb	IAmb	05 26 06.0		
	comp=Z,26nm,0.8s								
FCAR	**Ozark Folk Cen**		**81.62**	**46**	IAmb	IAmb	05 26 05.5		
	comp=Z,16nm,0.7s								
PDG	**Podgorica**		**81.64**	**325**	⇑P	**P**	**05 26 05.2**	**+0.3**	
PDG	**Podgorica**		**81.64**	**325**	IAmb	IAmb	05 26 06.3		
	comp=Z,17nm,0.5s								
TUE	**Stuetta**		**81.68**	**333**	P	**P**	**05 26 05.8**	**+0.5**	
TUE	**Stuetta**		**81.68**	**333**	P	**P**	**05 26 05.3**	**-0.1**	
	comp=Z,54nm,0.7s								
TUE	**Stuetta**		**81.68**	**333**	P	**P**	**05 26 06.0**	**+0.7**	
AYDN	**Tasoluk**		**81.75**	**317**	P	**P**	**05 26 07.0**	**+1.3**	
PHP	**Peshkopia**		**81.78**	**324**	P	**P**	**05 26 06.6**	**+0.8**	
WHTX	**Lake Whitney,**		**81.79**	**52**	IAmb	IAmb	05 26 07.2		
	comp=Z,30nm,0.8s								
AUSMG	**Snowy Mountain**		**81.79**	**181**	P	**P**	**05 26 06.5**	**+0.9**	
O49A	**Covington**		**81.85**	**39**	P	**P**	**05 26 05.9**	**-0.2**	
MIAR	**Mount Ida**		**81.92**	**48**	IAmb	IAmb	05 26 07.8		
	comp=Z,24nm,0.9s								
MIAR	**Mount Ida**		**81.92**	**48**	P	**P**	**05 26 07.0**	**+0.5**	
MMLI	**Mount Malkishu**		**81.94**	**309**	P	**P**	**05 26 08.2**	**+1.4**	
TREL	**Terrell**		**81.98**	**51**	IAmb	IAmb	05 26 07.9		
	comp=Z,25nm,0.7s								
M52A	**Chesterland**		**81.99**	**36**	IAmb	IAmb	05 26 15.7		
	comp=Z,16nm,0.7s								
WHAR	**Wooly Hollow**		**82.00**	**47**	IAmb	IAmb	05 26 07.9		
	comp=Z,22nm,0.9s								
AKAS	**Kas**		**82.04**	**315**	IAmb	IAmb	05 26 12.2		
	comp=Z,52nm,1.5s								
SALO	**Salr**		**82.06**	**332**	IAmb	IAmb	05 26 08.2		
	comp=Z,17nm,0.8s								
N51A	**Ashland**		**82.09**	**37**	IAmb	IAmb	05 26 16.0		
	comp=Z,13nm,0.6s								
USIN	**University of**		**82.14**	**42**	IAmb	IAmb	05 26 09.5		
	comp=Z,36nm,1.1s								
KLBR	**Kellerberrin**		**82.16**	**207**	P	**P**	**05 26 07.9**	**+0.4**	
	comp=Z,117nm,0.8s								
KLBR	**Kellerberrin**		**82.16**	**207**	P	**P**	**05 26 06.7**	**-0.9**	
KLBR	**Kellerberrin**		**82.16**	**207**	P	**P**	**05 26 07.6**	**0.0**	
Z38A	**Mt. Pleasant**		**82.17**	**50**	IAmb	IAmb	05 26 09.5		
	comp=Z,49nm,1.1s								
BATG	**Barrst New B**		**82.27**	**24**	IAmb	IAmb	05 26 15.1		
	comp=Z,13nm,0.8s								
MILA	**Mila**		**82.42**	**180**	P	**P**	**05 26 10.9**	**+2.0**	
	comp=Z,18nm,1.2s								
T45A	**Paducah**		**82.44**	**43**	IAmb	IAmb	05 26 11.9		
	comp=Z,30nm,0.7s								
KBN	**Korca**		**82.52**	**323**	P	**P**	**05 26 08.4**	**-1.3**	
WCI	**Wyandotte Cave**		**82.57**	**41**	P	**P**	**05 26 10.1**	**+0.2**	
WCI					pmax	pmax			
	comp=Z,30nm,1.2s								
WCI	**Wyandotte Cave**		**82.57**	**41**	P	**P**	**05 26 10.1**	**+0.2**	
WCI					IAmb	IAmb	05 26 11.1		
	comp=Z,30nm,1.1s								
WCI	**Wyandotte Cave**		**82.57**	**41**	P	**P**	**05 26 10.6**	**+0.7**	
GNAR	**Gosnell**		**82.61**	**45**	IAmb	IAmb	05 26 12.4		
	comp=Z,37nm,0.8s								
RAYN	**Ar Rayn**		**82.61**	**296**	*i* P	**P**	**05 26 11.3**	**+0.9**	
	SNR=14								
RAYN	**Ar Rayn**		**82.61**	**296**	P	**P**	**05 26 10.7**	**+0.3**	
RAYN					pmax	pmax			
	comp=Z,49nm,1.4s								
RAYN	**Ar Rayn**		**82.61**	**296**	P	**P**	**05 26 11.8**	**+1.3**	
RAYN	**Ar Rayn**		**82.61**	**296**	P	**P**	**05 26 10.7**	**+0.3**	
RAYN					IAmb	IAmb	05 26 12.4		
	comp=Z,49nm,1.4s								
RAYN	**Ar Rayn**		**82.61**	**296**	P	**P**	**05 26 11.5**	**+1.1**	
PMOR	**Pomariorio Ree**		**82.70**	**120**	*e*T	T	06 57 05.5		
	comp=Z,23nm,0.2s								
GHAJ	**Ghor Haditha**		**82.73**	**308**	IAmb	IAmb	05 26 13.2		
	comp=Z,50nm,1.1s								
GHAJ	**Ghor Haditha**		**82.73**	**308**	P	**P**	**05 26 12.3**	**+1.5**	
N53A	**Lisbon**		**82.82**	**36**	IAmb	IAmb	05 26 20.0		
	comp=Z,13nm,0.8s								
WLAR	**White Oak Lake**		**82.82**	**48**	IAmb	IAmb	05 26 12.7		
	comp=Z,31nm,0.8s								
MSBI	**Mazada**		**82.84**	**308**	P	**P**	**05 26 12.5**	**+1.2**	
TAOE	**Nuku Hiva Isla**		**82.95**	**110**	*e*LR	LR	05 50 52.8		
	comp=Z,49nm,29.3s								
O52A	**Adamsville**		**82.98**	**37**	IAmb	IAmb	05 26 20.9		
	comp=Z,15nm,0.6s								
P51A	**Williamsport**		**82.99**	**38**	IAmb	IAmb	05 26 20.9		
	comp=Z,15nm,0.8s								
L56A	**Greenwood**		**83.00**	**33**	IAmb	IAmb	05 26 17.1		
	comp=Z,44nm,1.9s								
PAMR	**Moraine State**		**83.01**	**35**	IAmb	IAmb	05 26 21.3		
	comp=Z,13nm,0.8s								
TOO	**Toolangi**		**83.01**	**183**	P	**P**	**05 26 13.6**	**+1.7**	
	comp=Z,8.3nm,1.2s								
TOO	**Toolangi**		**83.01**	**183**	IAmb	IAmb	05 26 14.5		
	comp=Z,24nm,1.6s								
AUKUL	**Kulin High Sch**		**83.04**	**206**	P	**P**	**05 26 12.9**	**+0.8**	
BRAT	**Bairarat**		**83.06**	**184**	P	**P**	**05 26 14.1**	**+2.1**	
O53A	**New Philadelph**		**83.13**	**37**	IAmb	IAmb	05 26 21.6		
	comp=Z,19nm,0.7s								
H62A	**Milan**		**83.15**	**28**	IAmb	IAmb	05 26 20.4		
	comp=Z,13nm,0.7s								
T47A	**Sharon Grove**		**83.19**	**42**	IAmb	IAmb	05 26 15.2		
	comp=Z,45nm,1.3s								
Q51A	**Peebles**		**83.24**	**39**	IAmb	IAmb	05 26 15.1		
	comp=Z,27nm,1.0s								
CCAR	**Cane Creek**		**83.34**	**47**	IAmb	IAmb	05 26 15.7		
	comp=Z,36nm,1.0s								
R50A	**Paris**		**83.42**	**40**	IAmb	IAmb	05 26 16.1		
	comp=Z,16nm,1.1s								
FDMO	**Fiordimonte**		**83.46**	**329**	IAmb	IAmb	05 26 17.9		
	comp=Z,27nm,0.8s								
833A	**Chaparral WMA,**		**83.46**	**56**	IAmb	IAmb	05 26 16.4		
	comp=Z,41nm,1.8s								
MURB	**Monte Urbino**		**83.46**	**330**	IAmb	IAmb	05 26 18.1		
	comp=Z,22nm,0.7s								
WVT	**Waverly**		**83.54**	**43**	P	**P**	**05 26 14.7**	**-0.2**	
WVT					pmax	pmax			
	comp=Z,12nm,0.7s								
WVT	**Waverly**		**83.54**	**43**	P	**P**	**05 26 14.7**	**-0.2**	
WVT					IAmb	IAmb	05 26 16.0		
	comp=Z,12nm,0.7s								
WVT	**Waverly**		**83.54**	**43**	P	**P**	**05 26 15.3**	**+0.4**	
NWAO	**Narrogin (SRO)**		**83.56**	**207**	P	**P**	**05 26 15.4**	**+0.7**	
	comp=Z,85nm,1.0s								
NWAO	**Narrogin (SRO)**		**83.56**	**207**	P	**P**	**05 26 15.7**	**+1.0**	
	comp=Z,49nm,1.0s								
NWAO	**Narrogin (SRO)**		**83.56**	**207**	P	**P**	**05 26 16.6**	**+1.9**	
NWAO	**Narrogin (SRO)**		**83.56**	**207**	P	**P**	**05 26 14.6**	**-0.1**	
NWAO					pmax	pmax			
	comp=Z,53nm,0.9s								
NWAO	**Narrogin (SRO)**		**83.56**	**207**	P	**P**	**05 26 14.6**	**-0.1**	
SGRT	**San Giovanni R**		**83.59**	**327**	IAmb	IAmb	05 26 16.9		
	comp=Z,20nm,0.9s								
KZIT	**Kziot**		**83.68**	**308**	P	**P**	**05 26 17.1**	**+1.4**	
MLDN	**Muldoon**		**83.68**	**53**	IAmb	IAmb	05 26 17.2		
	comp=Z,38nm,0.9s								
PPT2	**Papeete2**		**83.71**	**123**	*e*LR	LR	05 52 42.9		
	comp=Z,101nm,24.0s								
PPT2					*e*LR	LR	05 52 47.3		
	comp=Z,150nm,29.5s								
PPT2					*e*T	T	06 58 42.8		
	comp=Z,7.0nm,0.3s								
BNI	**Bardonecchia**		**83.78**	**334**	P	**P**	**05 26 18.3**	**+2.2**	
M57A	**Sunshine Farm,**		**83.85**	**33**	IAmb	IAmb	05 26 18.1		
	comp=Z,19nm,1.1s								
AQU	**L'Aquila**		**83.94**	**329**	IAmb	IAmb	05 26 19.7		
	comp=Z,21nm,0.8s								
AQU	**L'Aquila**		**83.94**	**329**	P	**P**	**05 26 19.3**	**+2.4**	
HRFI	**Mount Harif**		**83.99**	**307**	P	**P**	**05 26 18.8**	**+1.5**	
CESX	**Cesi**		**84.01**	**329**	IAmb	IAmb	05 26 19.2		
	comp=Z,14nm,0.8s								
KSPA	**Keystone Colle**		**84.18**	**32**	IAmb	IAmb	05 27 47.0		
	comp=Z,28nm,1.6s								
SSB	**Saint Sauveur**		**84.20**	**336**	IAmb	IAmb	05 26 20.8		
	comp=Z,13nm,0.8s								
SSB	**Saint Sauveur**		**84.20**	**336**	P	**P**	**05 26 19.4**	**+1.3**	
U49A	**Red Boiling Sp**		**84.20**	**42**	IAmb	IAmb	05 26 20.6		
	comp=Z,17nm,0.7s								
EIL	**Elat**		**84.32**	**307**	P	**P**	**05 26 20.3**	**+1.4**	
V48A	**Smith Brothers**		**84.34**	**43**	IAmb	IAmb	05 26 19.9		
	comp=Z,13nm,0.8s								
Q54A	**Coxs Mills**		**84.35**	**37**	IAmb	IAmb	05 26 21.1		
	comp=Z,25nm,1.2s								
ISO	**Isola**		**84.45**	**334**	P	**P**	**05 26 20.3**	**+0.8**	
143A	**Socs Landing,**		**84.48**	**48**	IAmb	IAmb	05 26 21.5		
	comp=Z,26nm,1.1s								
ZKR	**Zakros**		**84.59**	**316**	P	**P**	**05 26 19.4**	**-0.8**	
ESCA	**l'Escarene**		**84.67**	**333**	P	**P**	**05 26 21.1**	**+0.6**	
HBVL	**Hebbronville**		**84.83**	**56**	IAmb	IAmb	05 26 23.6		
	comp=Z,17nm,0.8s								
CALF	**Calern**		**84.88**	**334**	P	**P**	**05 26 22.3**	**+0.7**	
ITM	**Ithomi**		**84.89**	**320**	P	**P**	**05 26 21.5**	**-0.2**	
PAGS	**Pennsylvania G**		**84.96**	**34**	IAmb	IAmb	05 26 45.1		
	comp=Z,41nm,1.7s								
RUSF	**Rustrel**		**85.14**	**335**	P	**P**	**05 26 24.8**	**+1.9**	
R55A	**Marlinton**		**85.24**	**37**	IAmb	IAmb	05 26 25.5		
	comp=Z,21nm,1.1s								
TIP	**Timpagrande**		**85.40**	**325**	IAmb	IAmb	05 26 25.4		
	comp=Z,20nm,0.8s								
TIP	**Timpagrande**		**85.40**	**325**	P	**P**	**05 26 23.9**	**-0.4**	
	comp=Z,26nm,1.1s								
TIP	**Timpagrande**		**85.40**	**325**	P	**P**	**05 26 25.0**	**+0.7**	
W50A	**Signal Mountai**		**85.49**	**42**	IAmb	IAmb	05 26 25.7		
	comp=Z,14nm,0.8s								
ARBF	**Arbois**		**85.60**	**335**	P	**P**	**05 26 27.1**	**+2.0**	
CPCT	**Cooper Cave**		**85.66**	**41**	IAmb	IAmb	05 26 26.6		
	comp=Z,14nm,0.8s								
ZAIG	**Zacatecas**		**85.70**	**62**	P	**P**	**05 26 26.9**	**+0.5**	
Z47A	**Carrollton**		**85.78**	**45**	IAmb	IAmb	05 26 27.3		
	comp=Z,26nm,0.9s								
TKL	**Tuckaleechee C**		**85.83**	**41**	IAmb	IAmb	05 26 27.5		
	comp=Z,16nm,0.8s								
U54A	**Nelsons Funny**		**85.99**	**39**	IAmb	IAmb	05 26 37.0		
	comp=Z,13nm,0.8s								
BLA	**Blacksburg**		**86.02**	**38**	IAmb	IAmb	05 26 29.2		
	comp=Z,13nm,1.0s								
BG3	**Lake Jocassee**		**86.76**	**41**	IAmb	IAmb	05 26 33.1		
	comp=Z,16nm,0.8s								
U56A	**King**		**86.76**	**38**	IAmb	IAmb	05 26 32.8		
	comp=Z,13nm,1.0s								
CORO	**Coronation Par**		**86.84**	**182**	P	**P**	**05 26 32.9**	**+2.1**	
Y52A	**Lilburn**		**87.17**	**42**	IAmb	IAmb	05 26 34.3		
	comp=Z,14nm,0.9s								
KMSC	**Kings Mountain**		**87.36**	**39**	IAmb	IAmb	05 26 34.9		
	comp=Z,17nm,1.1s								
PAULI	**Pauline**		**87.41**	**40**	IAmb	IAmb	05 26 35.1		
	comp=Z,18nm,1.1s								
CEST	**Esterri de Car**		**87.59**	**337**	IAmb	IAmb	05 26 37.7		
	comp=Z,18nm,0.8s								
HODGE	**Hodges**		**87.70**	**41**	IAmb	IAmb	05 26 36.9		
	comp=Z,13nm,1.0s								
VAE	**Valguarnera**		**87.80**	**326**	LR	LR	06 11 59.2		
	comp=Z,72nm,19.1s,baz=130,slow=40								
MOO	**Moorlands**		**87.82**	**182**	P	**P**	**05 26 38.0**	**+2.5**	
	comp=Z,59nm,1.1s								
MOO	**Moorlands**		**87.82**	**182**	P	**P**	**05 26 37.5**	**+2.0**	
MOO	**Moorlands**		**87.82**	**182**	P	**P**	**05 26 37.7**	**+2.2**	
GOGA	**Godfrey**		**87.83**	**42**	IAmb	IAmb	05 26 37.7		
	comp=Z,36nm,1.6s								
152A	**Waverly Hall**		**87.85**	**43**	IAmb	IAmb	05 26 37.1		
	comp=Z,17nm,0.9s								
VSL	**Villasalto**		**87.89**	**330**	IAmb	IAmb	05 26 53.7		
	comp=Z,21nm,1.4s								
CORI	**Orista**		**87.95**	**336**	IAmb	IAmb	05 26 39.1		
	comp=Z,14nm,0.7s								
JSC	**Jenkinsville**		**88.11**	**40**	IAmb	IAmb	05 26 39.4		
	comp=Z,30nm,1.5s								
BIRD	**Birdtown, Kers**		**88.16**	**39**	IAmb	IAmb	05 26 38.9		
	comp=Z,11nm,0.9s								
TBI	**Tubuai**		**88.30**	**126**	*e*LR	LR	05 54 47.2		
	comp=Z,702nm,37.8s								
TBI					*e*T	T	07 03 51.5		
	comp=Z,7.3nm,0.3s								
POLO	**Lamas de Olo**		**90.91**	**343**	*e*P	**P**	**05 26 49.3**	**-1.2**	
PVRL	**Vila Real**		**90.99**	**343**	*e*P	**P**	**05 26 50.3**	**-0.5**	
KEST	**Kesra**		**91.26**	**329**	P	**P**	**05 26 52.0**	**-0.2**	

comp=Z,40nm,0.5s,baz=292,slow=3.3,SNR=68
IPMB Ipameri, GO 148.67 34 *e*P **PKPdf 05 33 29.9 +0.3**
TROLL Troll, Antarti 149.41 199 ⇑PKPdf **PKPdf 05 33 29.4 +0.1**
comp=Z,373nm,0.8s
TROLL ⇓PKPbc **PKPbc 05 33 34.3 +0.5**
comp=Z,5μm,0.7s
ARCA Araŭai, MG 149.66 22 *e*P **PKPdf 05 33 28.5 -2.7**
AMBA Amambai (Brazi 149.81 49 *e*P **PKPdf 05 33 31.4 +0.2**
PMNB Patos De Minas 149.84 31 *e*P **PKPdf 05 33 29.6 -1.9**
GUA01 Guaratinga, BA 149.92 18 *e*P **PKPdf 05 33 32.0 +0.5**
DIAM Diamantina, MG 150.54 26 *e*P **PKPdf 05 33 31.2 -1.4**
PLCA Paso Flores 150.67 95 PKP **PKPdf 05 33 31.2 -0.9**
comp=Z,6.0nm,0.9s,baz=238,slow=2.6,SNR=6.9
PLCA PKPbc **PKPbc 05 33 37.6 -0.1**
comp=Z,61nm,0.8s,baz=251,slow=3.2,SNR=114
SNAA Sanae 150.85 198 ⇑PKPdf **PKPdf 05 33 30.2 -1.2**
comp=Z,45nm,0.7s
SNAA ⇓PKPbc **PKPbc 05 33 37.0 -0.2**
comp=Z,1μm,0.6s
SNAA ⇑PP **PP 05 37 16.5 +0.3**
comp=Z,72nm,0.9s
SNAA Sanae 150.85 198 PKP **PKPdf 05 33 29.8 -1.6**
comp=Z,2.4nm,0.9s,baz=175,slow=3.0,SNR=6.3
SNAA PKPbc **PKPbc 05 33 37.1 -0.2**
comp=Z,59nm,0.7s,baz=184,slow=2.7,SNR=156
SNAA PP **PP 05 37 16.9 +0.7**
comp=Z,3.4nm,0.9s,baz=166,slow=4.2,SNR=3.2
SNAA Sanae 150.85 198 **PKiKP 05 33 37.6 -0.2**
TRCB Terra Rica 150.91 45 *e*P **PKPdf 05 33 31.2 -1.8**
CPUP Villa Florida 151.17 57 PKP **PKPdf 05 33 32.4 -0.9**
comp=Z,4.0nm,0.9s,baz=0.0,slow=2.0,SNR=6.0
CPUP PKPbc **PKPbc 05 33 38.7 -0.6**
comp=Z,19nm,0.8s,baz=332,slow=3.1,SNR=32
CPUP Villa Florida 151.17 57 **PKiKP 05 33 39.6 -0.1**
BB19B Bebedouro 151.31 37 *e*P **PKPdf 05 33 32.2 -1.4**
CANS Sao Roque de M 151.47 32 *e*P **PKPdf 05 33 34.4 +0.4**
BSFB Barra de Sao F 151.84 21 *e*P **PKPdf 05 33 34.5 +0.1**
VNA2 Neumayer--Watz 152.35 196 ⇑PKPdf **PKPdf 05 33 33.4 -0.2**
comp=Z,7.1nm,0.7s,baz=114,slow=1.3
VNA2 ⇓PKPbc **PKiKP 05 33 40.7 -0.1**
comp=Z,190nm,0.6s,baz=115,slow=1.9
VNA2 ⇑PP **PP 05 37 25.0 +0.3**
comp=Z,11nm,0.7s,baz=132,slow=6.0
VNA1 Neumayer--Stat 152.75 196 ⇑PKPdf **PKPdf 05 33 33.6 -0.5**
comp=Z,2.1nm,0.4s
VNA1 ⇓PKPbc **PKiKP 05 33 41.7 +0.1**
comp=Z,68nm,1.1s

JMA 09 05:14:53.0±0.2,36.7N±0.6×14.1E±, h48km±3km, MV2.1/29, E OFF IBARAKI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.63**	**315**	P	Pn	05 15 05.4	-0.4
JHO	**Hitachi**	**0.63**	**266**	P	Pn	05 15 05.7	-0.1
JHO				S	Sn	05 15 14.5	-0.4
JFK	**Kawauchi**	**0.81**	**332**	*e*P	Pn	05 15 07.8	-0.3
JFK				*e*S	Sn	05 15 19.1	+0.1
JOTO	**OTAMA OYAMA**	**1.22**	**318**	*e*P	Pn	05 15 15.3	+1.7
JOTO				*e*S	Sn	05 15 31.7	+2.7
JAG	**Ashikaga**	**1.54**	**262**	*e*P	Pn	05 15 19.1	+1.1

*NIED **09** 05:26:10.6, 35.85N×140.94E, h37km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr3.69; Mθθ0.99; Mϕϕ-4.69; Mrθ-3.14; Mθϕ-2.85; Mϕr3.28; Fault plane solution: M06.80000×10^14 NP1: ϕs233.00000°, δ45.00000°, λ147.00000°. NP2: ϕs348.00000°, δ67.00000°, λ50.00000°.*
*JMA **09** 05:26:10.6±0.2, 35.9N±0.5×141.1E±, h37km±1km, MV3.4/28, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
*IDC **09** 05:26:11.2±2.5, 35.77N×141.01E, h46km±21km, mb3.4/5, mbtmp3.6/8, ML3.1/3, MS2.8/1, Error ellipse: s-maj=34.7km s-min=13.3km az=80.0*
ISC 09 05:26:08.1±0.9, 35.80N±0.05×141.23E±0.09, h31km, n24, σ1s61/19, mb3.8/5, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.59**	**287**	P	**Pb**	**05 26 19.8**	**-0.3**
JSMT	**Sammumatsuo**	**0.65**	**257**	⇓*e*P	**Pb**	**05 26 21.0**	**0.0**
JHYU	**Hitachinakayam**	**0.75**	**316**	*e*P	**Pn**	**05 26 22.3**	**-0.2**
JHYU				*e*S	**Sb**	**05 26 30.5**	**-2.2**
I30JP	**ISUMI INFRASON**	**0.89**	**237**	P	**Pb**	**05 26 25.8**	**+0.8**
	baz=50,slow=22						
I30JP				S	**Sn**	**05 26 36.7**	**+0.4**
	baz=73,slow=21						
JHO	**Hitachi**	**0.97**	**327**	*e*P	**Pn**	**05 26 25.7**	**+0.1**
BSO3	**Boso 3**	**1.16**	**211**	*e*P	**Pb**	**05 26 29.4**	**+0.2**
MJAR	**Matsushiro Arr**	**2.55**	**288**	P	**Pn**	**05 26 47.2**	**-0.1**
	1.5nm,0.3s,baz=90,slow=9.9,SNR=22						
	6.4nm,0.3s						
JHJ	**Hachijo jima 2**	**2.93**	**205**	P	**Pn**	**05 26 53.4**	**+0.9**
	21nm,0.3s,baz=324,slow=22,SNR=10						
JHJ				S	**Sn**	**05 27 27.0**	**+0.4**
	128nm,0.3s,baz=253,slow=24,SNR=9.4						
	38nm,0.3s						
JCJ	**Chichijima**	**8.71**	**174**	P	**Pn**	**05 28 11.2**	**-0.8**
	21nm,0.3s,baz=288,slow=20,SNR=6.1						
JCJ				S	**Sn**	**05 29 43.9**	**-5.2**
	61nm,0.7s,baz=105,slow=22,SNR=1.7						
KSRS	**Korea Array**	**10.82**	**283**	P	**Pn**	**05 28 40.5**	**-0.3**
	0.2nm,0.3s,baz=96,slow=14,SNR=1.3						
KSRS				LR	LR	05 32 11.4	
	comp=Z,47nm,20.4s,baz=90,slow=34						
	0.4nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.67**	**119**	T	T	06 01 08.5	
	baz=311,slow=74,SNR=13						
H11N1	**WAKE ISLAND Hy**	**27.67**	**119**	T	T	06 01 04.1	
	baz=311,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**27.68**	**119**	T	T	06 01 04.9	
	baz=311,slow=74,SNR=18						
H11S1	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	06 01 50.8	
	baz=312,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	06 01 50.8	
	baz=312,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**28.35**	**121**	T	T	06 01 48.8	
	baz=312,slow=75,SNR=14						
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**05 34 18.3**	**+0.5**
	0.6nm,0.5s,baz=86,slow=9.3,SNR=4.9						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**46.65**	**309**	P	**P**	**05 34 33.7**	**+0.3**
	0.9nm,0.4s,baz=82,slow=7.5,SNR=6.9						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**50.62**	**32**	P	**P**	**05 35 05.9**	**+2.2**
	0.3nm,0.7s,baz=275,slow=7.5,SNR=2.7						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**55.82**	**188**	P	**P**	**05 35 43.4**	**+1.0**
	0.7nm,0.4s,baz=0.9,slow=7.6,SNR=13						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**59.55**	**188**	P	**P**	**05 36 09.5**	**+1.0**
	0.6nm,0.8s,baz=1.6,slow=8.1,SNR=3.7						
	0.6nm,0.8s						
H03N2	**Juan Fernandez**	**147.02**	**98**	T	T	08 30 17.8	
	baz=290,slow=76,SNR=7.5						
H03N3	**Juan Fernandez**	**147.03**	**98**	T	T	08 30 20.5	
	baz=290,slow=76,SNR=6.3						
H03N1	**Juan Fernandez**	**147.04**	**98**	T	T	08 30 26.0	
	baz=290,slow=76,SNR=6.7						

GCMT 09 05:42:29.0±0.2, 49.49S±0.02×116.26W±0.02, h25km±1km, MW5.0/98, Moment Tensor Solution. s45,c51; s98,c136; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.20±.16; Mθθ1.21±.15; Mϕϕ-1.42±.13; Mrθ0.13±.29; Mθϕ3.47±.09; Mϕr2.15±.31; Best double couple: M04.28300×10^16 NP1: ϕs100.00000°, δ60.00000°, λ0.00000°. NP2: ϕs190.00000°, δ90.00000°, λ-150.00000°. Principal axes: T 4.1030, Plg20.0000°, Azm321.0000°; N 0.3560, Plg60.0000°, Azm190.0000°; P -4.4630, Plg21.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**36.84**	**303**	*e*LR	LR	05 59 22.8	
	3μm,27.0s						
TBI				*e*LR	LR	05 59 36.0	
	995nm,27.5s						
PPT2	**Papeete2**	**41.63**	**308**	*e*SS	SS	05 59 33.4	-2.3
	466nm,27.5s						
PPT2				*e*LR	LR	06 01 26.5	
	752nm,27.2s						
PPT2				*e*LR	LR	06 01 29.0	
	992nm,26.8s						
TAOE	**Nuku Hiva Isla**	**45.16**	**326**	*e*S	S	05 57 10.1	-12
	94nm,26.7s						
TAOE				*e*LR	LR	06 03 19.5	
	709nm,26.8s						

*SFS **09** 05:56:50.0, 35.45N×4.65W, h26km, ML2.9/12, ML2.8/12, MLv2.8/12*
*MDD **09** 05:56:49.8±0.6, 35.45N×4.60W, h70km±16km, Mb3.0/6, Error ellipse: s-maj=4.9km s-min=3.3km az=105.0*
*CNRM **09** 05:56:49.1, 35.33N×4.87W, h77km, ML2.1*
*IGIL **09** 05:56:50.4, 35.45N×4.68W, h25km, ML2.1*
*INMG **09** 05:56:50.1±0.9, 35.46N×4.66W, h31km, ML2.2, Error ellipse: s-maj=2.9km s-min=1.7km az=91.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Tetuan (MARR)*
ISC 09 05:56:49.1±1.2, 35.47N±0.02×4.70W±0.03, h35km, n53, σ1s36/98, 7C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHEFC	**Chefchaouen**	**0.64**	**236**	P	**Pn**	**05 57 03.1**	**+1.4**
CHEFC				S	**Sn**	**05 57 13.4**	**+2.7**
PALE	**Palemas**	**0.67**	**112**	P	**Pn**	**05 57 04.9**	**+2.7**
PALE				S	**Sn**	**05 57 16.5**	**+5.1**
RSA	**Sarsar**	**1.09**	**238**	P	**Pn**	**05 57 09.9**	**+2.0**
RSA				S	**Sn**	**05 57 21.3**	**-0.5**
EMIJ	**Mijas**	**1.10**	**357**	P	**Pn**	**05 57 08.7**	**+0.6**
EMIJ				S	**Sn**	**05 57 23.6**	**+1.6**
EMIJ	**Mijas**	**1.10**	**357**	P	**Pn**	**05 57 08.1**	**0.0**
EMIJ				S	**Sn**	**05 57 23.7**	**+1.6**
AKLM	**AKL**	**1.17**	**144**	P	**Pn**	**05 57 09.4**	**+0.2**
AKLM				S	**Sn**	**05 57 23.3**	**-0.6**
ELGU	**Los Guajares,**	**1.65**	**31**	P	**Pn**	**05 57 15.9**	**+0.2**
ELGU				S	**Sn**	**05 57 35.2**	**-0.4**
ELGU	**Los Guajares,**	**1.65**	**31**	P	**Pn**	**05 57 15.8**	**+0.2**
ELGU				⇑*i*Vmb_VC		05 57 19.9	
	202nm,SNR=2.5						
ELGU				S	**Sn**	**05 57 34.8**	**-0.8**
ESPR	**Espera**	**1.69**	**327**	P	**Pn**	**05 57 18.5**	**+2.5**
ESPR				S	**Sn**	**05 57 38.5**	**+2.0**
ESPR	**Espera**	**1.69**	**327**	S	**Sn**	**05 57 37.6**	**+1.1**
EGOR	**Sierra Gorda,**	**1.71**	**16**	P	**Pn**	**05 57 17.1**	**+0.5**
EGOR				S	**Sn**	**05 57 37.2**	**-0.1**
EGOR	**Sierra Gorda,**	**1.71**	**16**	S	**Sn**	**05 57 36.3**	**-0.9**
LCRM	**LCR**	**1.78**	**184**	P	**Pn**	**05 57 18.3**	**+0.7**
LCRM				S	**Sn**	**05 57 39.9**	**+0.9**
IFR	**Ifrane**	**1.98**	**190**	P	**Pn**	**05 57 20.3**	**+0.1**
IFR				S	**Sn**	**05 57 42.5**	**-1.4**
ZHG	**ZHG**	**2.58**	**219**	P	**Pn**	**05 57 28.8**	**+0.3**
ZHG				S	**Sn**	**05 57 58.1**	**-0.5**
MD31	**MD31**	**2.59**	**181**	P	**Pn**	**05 57 27.3**	**-1.4**
MD31				S	**Sn**	**05 57 56.8**	**-2.2**
MDT	**Midelt**	**2.65**	**178**	P	**Pn**	**05 57 28.7**	**-0.7**
MDT				S	**Sn**	**05 57 58.4**	**-1.9**
ECAB	**El Cabril**	**2.67**	**348**	P	**Pn**	**05 57 30.3**	**+0.6**
ECAB				S	**Sn**	**05 57 59.7**	**-1.0**
ECAB	**El Cabril**	**2.67**	**348**	P	**Pn**	**05 57 30.5**	**+0.8**
ECAB				⇑*i*Vmb_VC		05 57 34.5	
	73nm,SNR=1.5						
ECAB				S	**Sn**	**05 57 59.8**	**-1.0**
EADA	**Adamuz**	**2.70**	**2**	P	**Pn**	**05 57 31.0**	**+1.0**
EADA				S	**Sn**	**05 58 01.5**	**0.0**
EADA	**Adamuz**	**2.70**	**2**	P	**Pn**	**05 57 31.3**	**+1.2**
EADA				⇑*i*Vmb_VC		05 57 35.8	
	76nm,SNR=1.2						
EADA				S	**Sn**	**05 58 00.6**	**-0.9**
EMIN	**Mina Concepcio**	**2.79**	**326**	P	**Pn**	**05 57 31.9**	**+0.6**
EMIN				S	**Sn**	**05 58 02.9**	**-0.9**
EMIN	**Mina Concepcio**	**2.79**	**326**	P	**Pn**	**05 57 32.5**	**+1.2**
EMIN				⇑*i*Vmb_VC		05 57 33.9	
	187nm,SNR=2.8						
EMIN				S	**Sn**	**05 58 03.4**	**-0.4**
EGRO	**El Granado**	**3.05**	**313**	P	**Pn**	**05 57 36.0**	**+1.1**
EGRO				S	**Sn**	**05 58 09.6**	**-0.5**
EGRO	**El Granado**	**3.05**	**313**	P	**Pn**	**05 57 36.0**	**+1.1**
EGRO				⇑*i*Vmb_VC		05 57 36.9	
	397nm,SNR=2.9						
EGRO				S	**Sn**	**05 58 09.6**	**-0.5**
PVAQ	**Vaqueiros**	**3.11**	**309**	⇑*e*P	**Pn**	**05 57 36.8**	**+1.1**
PVAQ				*e*S	**Sn**	**05 58 11.3**	**-0.3**
PVAQ				*i* IAML		05 58 11.9	
PVAQ				*i* IAML		05 58 12.1	
PVAQ				*i* IAML		05 58 12.2	
PVAQ	**Vaqueiros**	**3.11**	**309**	P	**Pn**	**05 57 36.0**	**+0.3**
PVAQ				S	**Sn**	**05 58 11.3**	**-0.3**
PBDV	**Barranco-do-Ve**	**3.16**	**305**	P	**Pn**	**05 57 37.5**	**+1.2**
PBDV				S	**Sn**	**05 58 13.0**	**+0.2**
PBDV	**Barranco-do-Ve**	**3.16**	**305**	⇑*e*P	**Pn**	**05 57 37.6**	**+1.2**
PBDV				*e*S	**Sn**	**05 58 13.1**	**+0.2**
PBDV				*i* IAML		05 58 13.6	
PBDV				*i* IAML		05 58 13.6	
PBDV				*i* IAML		05 58 16.4	
PBAR	**Barrancos**	**3.29**	**326**	P	**Pn**	**05 57 39.2**	**+1.0**
PBAR				S	**Sn**	**05 58 14.8**	**-1.3**
PBAR	**Barrancos**	**3.29**	**326**	*e*P	**Pn**	**05 57 39.4**	**+1.2**
PBAR				*e*S	**Sn**	**05 58 15.3**	**-0.8**
PBAR				*i* IAML		05 58 16.5	
PBAR				*i* IAML		05 58 18.0	
PBAR				*i* IAML		05 58 18.8	
PSIM	**Granatula de C**	**3.43**	**12**	S	**Sn**	**05 58 17.4**	**-2.2**
PCVE	**Castro Verde**	**3.45**	**310**	P	**Pn**	**05 57 40.9**	**+0.5**
PCVE				S	**Sn**	**05 58 19.7**	**-0.4**
PCVE	**Castro Verde**	**3.45**	**310**	*e*P	**Pn**	**05 57 41.5**	**+1.1**
PCVE				*e*S	**Sn**	**05 58 19.6**	**-0.4**
PCVE				*i* IAML		05 58 20.4	
PCVE				*i* IAML		05 58 21.1	
PCVE				*i* IAML		05 58 22.2	
MORF	**Marmelete**	**3.68**	**301**	*e*P	**Pn**	**05 57 44.6**	**+1.0**
MORF				*e*S	**Sn**	**05 58 24.3**	**-1.4**
MORF				IAML		05 58 26.3	
	comp=N,5.2nm,0.1s						
MORF	**Marmelete**	**3.68**	**301**	*e*P	**Pn**	**05 57 44.6**	**+1.0**
MORF				*e*S	**Sn**	**05 58 25.7**	**-0.1**
MORF				*i* IAML		05 58 27.7	
MORF				*i* IAML		05 58 28.2	
MORF				*i* IAML		05 58 29.3	
MESJ	**Messejana**	**3.69**	**311**	*e*P	**Pn**	**05 57 44.8**	**+1.2**
MESJ				*e*S	**Sn**	**05 58 24.6**	**-1.4**
MESJ	**Messejana**	**3.69**	**311**	⇓*e*P	**Pn**	**05 57 44.9**	**+1.2**
MESJ				*e*S	**Sn**	**05 58 25.6**	**-0.3**
MESJ				*i* IAML		05 58 26.8	
MESJ				*i* IAML		05 58 27.2	
MESJ				*i* IAML		05 58 27.8	
PFVI	**Vila Bisbo**	**3.73**	**298**	*e*P	**Pn**	**05 57 45.5**	**+1.4**
PFVI				*e*S	**Sn**	**05 58 26.3**	**-0.6**
EBAD	**Badajoz**	**3.77**	**331**	P	**Pn**	**05 57 45.9**	**+1.2**
EBAD				S	**Sn**	**05 58 26.7**	**-1.2**
EBAD	**Badajoz**	**3.77**	**331**	P	**Pn**	**05 57 45.8**	**+1.0**
EBAD				S	**Sn**	**05 58 26.6**	**-1.3**
PLOUS	**Minas do Lousa**	**3.94**	**312**	*e*P	**Pn**	**05 57 48.1**	**+1.1**
PLOUS				*e*S	**Sn**	**05 58 31.1**	**-0.8**
PLOUS				*i* IAML		05 58 34.0	
PAB	**San Pablo**	**4.08**	**4**	S	**Sn**	**05 58 32.3**	**-3.5**
MOE	**Montemor**	**4.23**	**317**	*e*P	**Pn**	**05 57 52.3**	**+1.3**
MOE				*e*S	**Sn**	**05 58 38.0**	**-0.6**
PARRA	**Arraiolos**	**4.28**	**322**	*e*P	**Pn**	**05 57 52.7**	**+1.0**
PARRA				*e*S	**Sn**	**05 58 38.8**	**-1.6**
PARRA				*i* IAML		05 58 39.1	
PMRV	**Marv??o**	**4.50**	**332**	*e*P	**Pn**	**05 57 55.8**	**+1.0**
PMRV				*e*S	**Sn**	**05 58 43.7**	**-2.2**
PMTG	**Montargil**	**4.57**	**323**	*e*P	**Pn**	**05 57 56.6**	**+1.0**
PMTG				*e*S	**Sn**	**05 58 45.5**	**-2.0**
EPLA	**Plasencia**	**4.72**	**347**	P	**Pn**	**05 57 57.8**	**-0.1**
EPLA				S	**Sn**	**05 58 48.0**	**-3.4**
OUZM	**OUZ**	**4.86**	**201**	P	**Pn**	**05 57 59.9**	**-0.1**
OUK	**Oukaimeden**	**5.01**	**213**	P	**Pn**	**05 57 59.7**	**-2.4**
TIO	**Tiouine**	**5.01**	**206**	P	**Pn**	**05 58 02.4**	**+0.4**
TIO				S	**Sn**	**05 58 57.5**	**-1.3**
MVO	**Moncorvo**	**5.98**	**343**	*e*P	**Pn**	**05 58 16.2**	**+1.0**
POLO	**Lamas de Olo**	**6.38**	**339**	*e*P	**Pn**	**05 58 22.1**	**+1.4**

*IDC **09** 05:57:45.9±3.2, 5.86S×151.49E, h80km±26km, mb3.4/6, mbtmp3.8/7, Error ellipse: s-maj=44.1km s-min=17.8km az=135.0*
ISC 09 05:57:41.2±1.2, 5.9S±0.2×151.7E±0.2, h41km, n8, σ1s91/10, mb3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.73**	**232**	P	**Pn**	**05 59 05.5**	**+1.7**
	10nm,0.4s,baz=90,slow=8.1,SNR=2.5						
PMG				S	**Sn**	**06 00 08.8**	**+0.4**
	17nm,0.4s,baz=169,slow=15,SNR=3.8						
WRA	**Warramunga Arr**	**21.94**	**229**	P	**P**	**06 02 32.2**	**+0.7**
	1.7nm,0.5s,baz=54,slow=9.8,SNR=22						
WRA				S	**S**	**06 06 27.5**	**-4.1**
	0.1nm,0.6s,baz=52,slow=10,SNR=1.1						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**24.65**	**222**	P	**P**	**06 02 59.2**	**+0.9**
	1.0nm,0.6s,baz=44,slow=9.4,SNR=21						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**27.57**	**199**	P	**P**	**06 03 22.8**	**-1.7**
	2.0nm,0.8s,baz=307,slow=9.3,SNR=2.9						
	2.0nm,0.8s						
VNDA	**Vanda**	**71.83**	**178**	P	**P**	**06 08 59.8**	**+0.5**
	0.2nm,0.5s,baz=352,slow=4.5,SNR=5.5						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**83.53**	**22**	P	**P**	**06 10 04.0**	**-0.6**
	0.4nm,0.6s,baz=256,slow=4.5,SNR=5.9						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**84.12**	**180**	P	**P**	**06 10 08.4**	**+0.5**
	0.5nm,0.7s,baz=31,slow=2.9,SNR=1.4						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.57**	**286**	PKPbc	**PKPbc**	**06 17 27.0**	**-0.4**
	0.3nm,0.4s,baz=107,slow=4.8,SNR=4.1						

*SDD **09** 06:02:18.6±2.4, 20.43N×70.85W, h2km±11km, MD3.0, ML2.4, MW2.6, Presumed earthquake*
*OSPL **09** 06:02:22.1±2.1, 20.21N×70.69W, h5km±9km, ML2.2, Presumed earthquake*
ISC 09 06:02:17.6±2.7, 20.4N±0.1×70.71W±0.05, h17km±11km, n11, σ0s64/20, 6C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SODR	**Sosua Marina B**	**0.64**	**169**	⇑*i*P	**Pb**	**06 02 30.6**	**+0.4**
SODR				IAML	**Sn**	**06 02 42.0**	**+0.5**
	comp=N,172nm,0.8s						
SODR				⇑*i*S	**Sn**	**06 02 42.0**	**+0.5**
LOPP1	**Punta Rusia, P**	**0.70**	**222**	*i* P	**Pn**	**06 02 32.8**	**0.0**
LOPP1				*e*S	**Sg**	**06 02 40.9**	**+0.2**
LOPP1				IAML		06 02 42.4	
	comp=Z,73nm,1.0s						
SC01	**Santiago de lo**	**0.95**	**181**	*i* P	**Pb**	**06 02 35.6**	**0.0**
SC01				*e*S	**Sb**	**06 02 47.0**	**-0.9**
GRTK	**Grand Turk**	**1.19**	**341**	*i* P	Pg	06 02 46.0	+5.3
GRTK				IAML		06 03 11.2	
	comp=Z,36nm,1.9s						
REDR	**Restauracion**	**1.37**	**208**	⇓*i*P	**Pg**	**06 02 44.1**	**0.0**
REDR				⇑*i*S	**Sg**	**06 03 02.6**	**+0.6**
REDR				IAML		06 03 04.0	
	comp=N,82nm,0.2s						
SDDR	**Presa de Saban**	**1.50**	**202**	⇓*i*P	**Pn**	**06 02 44.2**	**+0.5**
SDDR				⇓*i*S	**Sn**	**06 03 01.9**	**-1.0**
SDDR				IAML		06 03 04.8	
	comp=N,35nm,0.3s						
SDDR	**Presa de Saban**	**1.50**	**202**	*i* P	**Pn**	**06 02 44.2**	**+0.5**
SDDR				*e*S	**Sn**	**06 03 02.1**	**-0.8**
SDDR				IAML		06 03 04.8	
	comp=Z,393nm,0.3s						
SMDR	**Samana, DR**	**1.79**	**127**	⇑*i*P	**Pb**	**06 02 50.2**	**+0.2**
SMDR				⇓*i*S	**Sg**	**06 03 14.8**	**-0.6**
SMDR				IAML		06 03 25.8	
	comp=N,42nm,0.7s						
LONE3	**El Aguacate, B**	**1.90**	**202**	*i* P	**Pb**	**06 02 51.3**	**-0.7**
LONE3				*e*S	**Sn**	**06 03 14.2**	**+1.1**
LONE3				IAML		06 03 15.6	
	comp=Z,16nm,0.3s						
HATOM	**Hato Mayor del**	**2.02**	**142**	⇑*i*P	**Pb**	**06 02 53.2**	**-0.6**
HATOM				⇑*i*S	**Sb**	**06 03 18.9**	**+0.2**
HATOM				IAML		06 03 22.4	
	comp=N,14nm,1.1s						
LODU1	**El Espartillar**	**2.14**	**200**	*i* P	**Pb**	**06 02 55.9**	**-0.1**
LODU1				IAML		06 03 22.6	
	comp=Z,46nm,0.4s						

IDC 09 06:20:13.7±1.5, 0.74S×124.53E, h0km, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=184.6km s-min=24.0km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.37**	**154**	P	P	06 25 01.5	-1.3
	0.3nm,0.5s,baz=332,slow=11,SNR=8.5						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**24.54**	**159**	P	P	06 25 36.5	+1.2
	0.2nm,0.4s,baz=338,slow=9.1,SNR=4.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.04**	**328**	P	P	06 30 22.9	+0.4
	0.4nm,0.7s,baz=134,slow=6.9,SNR=3.5						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**64.36**	**329**	P	P	06 30 50.7	-0.6
	0.2nm,0.5s,baz=128,slow=6.0,SNR=2.1						
	0.2nm,0.5s						

*SOME **09** 06:22:39.8, 42.73N×80.10E, h25km*
*KRNET **09** 06:22:41.8±0.1, 42.61N×79.92E, h14km, mb2.8*
ISC 09 06:22:34.1±1.8, 42.69N±0.05×80.35E±0.06, h4km±12km, n22, σ1s46/44, 13C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**0.76**	**360**	*e*P	**Pn**	**06 22 51.4**	**-0.3**
	4.7nm,0.1s						
KTMS				*e*S	**Sb**	**06 23 00.6**	**0.0**
	32nm,0.2s						
SHLS	**Shalkode**	**0.80**	**306**	*e*P	Pg	06 22 48.9	-0.7
	71nm,0.2s						
SHLS				*e*S	**Sg**	**06 22 55.2**	**-4.8**
	261nm,0.4s						
PDGK	**Podgornoye**	**0.90**	**316**	⇓P	**Pn**	**06 22 52.9**	**-0.7**
	4.8nm,0.5s						
PDGK				⇑S	**Sg**	**06 23 02.4**	**-0.6**
	46nm,0.8s				

IZV	**Izvestkoviy**	**2.77**	**278**	*e*P		**Pb**	**06 23 25.4**	**+1.1**
	7.6nm,0.2s							
IZV				*e*S		**Sb**	**06 23 58.0**	**-0.7**
	38nm,0.3s							
KTBS	**Karatobe**	**2.87**	**292**	*e*P		**Pb**	**06 23 27.0**	**+1.1**
	1.8nm,0.1s							
KTBS				*e*S		**Sb**	**06 24 01.0**	**-0.4**
	23nm,0.5s							
ULHL	**Ulahol**	**3.07**	**263**⇓	*e*P		**Pb**	**06 23 29.6**	**+0.1**
ULHL			⇓	*i*S		**Sb**	**06 24 05.0**	**-2.4**
KST	**Kastek**	**3.25**	**278**	*e*P		**Pb**	**06 23 34.0**	**+1.7**
	5.9nm,0.2s							
KST				*e*S		**Sb**	**06 24 12.9**	**+0.6**
	17nm,0.8s							
BOOM	**Boomskoye usch**	**3.26**	**268**⇑	*e*P		**Pb**	**06 23 31.7**	**-1.0**
BOOM			⇑	*i*S		**Sn**	**06 24 08.3**	**+2.7**
KRBS	**Karabastau**	**3.57**	**288**	*e*P		**Pb**	**06 23 39.1**	**+1.3**
	1.2nm,0.3s							
KRBS				*e*S		**Sb**	**06 24 21.5**	**+0.1**
	3.9nm,0.4s							
MK31	**Makanchi Array**	**4.33**	**18**	⇓Pn		**Pb**	**06 23 49.7**	**-1.1**
	0.1nm,0.2s,baz=8.4,slow=16,SNR=10							
MK31				⇑Sn		**Sb**	**06 24 40.4**	**-2.9**
	0.8nm,0.6s							
MK31				⇑Lg		Lg	06 24 57.3	
	0.2nm,0.2s,baz=206,slow=29,SNR=5.6							

ASRS ***09*** *06:29:30.0±1.2,54.°13N×86.°43E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 09 06:29:30.3±3.0, 54.°15N×86.°79E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=25.3km s-min=15.9km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**261**	Op I		I	06 36 00.0	
	baz=81,slow=321,SNR=2.8							
ZALV	**Zalesovo Beam**	**1.18**	**261**	Pg		Pg	06 29 51.1	-1.7
	0.8nm,0.3s,baz=80,slow=18,SNR=8.1							
ZALV				Lg		Lg	06 30 09.2	
	1.1nm,0.3s,baz=82,slow=32,SNR=9.6							
KURBB	**Kurchatov Arra**	**6.17**	**238**	Pn		Pn	06 31 02.9	+0.4
	0.1nm,0.3s,baz=54,slow=13,SNR=4.8							
KURBB				Lg		Lg	06 32 50.0	
	baz=44,slow=23,SNR=1.6							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**7.91**	**203**	Pn		Pn	06 31 28.0	+1.6
	0.1nm,0.3s,baz=25,slow=12,SNR=5.1							
	0.5nm,0.7s							

IDC ***09*** *06:39:16.9±2.1,6.°28S×149.°40E, h44km±19km, mb3.9/12, mbtmp4.2/15, ML4.3/2, MS3.5/28, Error ellipse: s-maj=22.4km s-min=13.6km az=101.0*
NEIC ***09*** *06:39:16.6±0.6, 6.°28S±0.°03×149.°43E±0.°09, h35km±2km, mb4.3/13, Error ellipse: s-maj=15.8km s-min=4.9km az=86.0*
ISC 09 06:39:17.1±0.5, 6.°30S±0.°07×149.°37E±0.°09, h49km, n58, σ1§43/45, mb4.0/15, MS3.6/23, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I40PG	**Keravat**	**3.30**	**53**	Op P		**Pn**	**06 40 05.7**	**-0.6**
	baz=267,slow=353							
I40PG				I		I	06 58 10.0	
	baz=235,slow=314,SNR=1.5							
KRVT	**Keravat (AS076**	**3.30**	**53**	LR		LR	06 41 26.3	
	comp=Z,106nm,18.0s,baz=86,slow=40							
RABL	**Rabaul**	**3.48**	**53**			**Pn**	**06 40 07.8**	**-1.1**
PMG	**Port Moresby**	**3.79**	**215**	P		**Pn**	**06 40 13.9**	**+0.9**
	263nm,0.6s,baz=25,slow=5.4,SNR=58							
PMG				S		**Sn**	**06 40 55.4**	**-0.9**
	563nm,0.6s,baz=67,slow=21,SNR=9.7							
PMG				LR		LR	06 41 06.1	
	comp=Z,120nm,21.6s,baz=338,slow=29							
PMG	**Port Moresby**	**3.79**	**215**			**Pn**	**06 40 13.2**	**+0.2**
PMG				Sn		**Sn**	**06 40 57.8**	**+1.5**
JAY	**Jayapura**	**9.42**	**293**	LR		LR	06 44 48.2	
	comp=Z,146nm,21.2s,baz=102,slow=35							
CTA	**Charters Tower**	**14.04**	**192**	P		**Pn**	**06 42 33.0**	**-0.4**
	0.3nm,0.3s,baz=5.0,slow=17,SNR=1.6							
CTA				LR		LR	06 47 53.5	
	comp=Z,180nm,18.7s,baz=36,slow=37							
	2.9nm,0.7s							
SIJI	**Sorong**	**18.85**	**286**	LR		LR	06 52 54.4	
	comp=Z,105nm,19.4s,baz=276,slow=43							
EIDS	**Eidsvold**	**19.04**	**175**	P		**P**	**06 43 35.2**	**-0.1**
EIDS				IAmb		IAmb	06 43 45.0	
	comp=Z,13nm,0.8s							
WB0	**Warramunga Arr**	**19.78**	**226**	P		**P**	**06 43 43.6**	**+0.2**
WB0				IAmb		IAmb	06 43 44.3	
	comp=Z,20nm,0.8s							
WR8	**Warramunga Arr**	**19.82**	**225**	P		**P**	**06 43 44.1**	**+0.2**
WR8				IAmb		IAmb	06 43 44.8	
	comp=Z,17nm,0.8s							
WRAB	**Tennant Creek**	**19.91**	**226**	P		**P**	**06 43 45.0**	**+0.1**
WRA	**Warramunga Arr**	**19.93**	**226**	P		**P**	**06 43 44.8**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=51,slow=11,SNR=106							
WRA				S		**S**	**06 47 19.0**	**-7.8**
	comp=Z,1.8nm,1.0s,baz=55,slow=21,SNR=3.7							
WRA				PcP		**PcP**	**06 48 01.5**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=32,slow=1.9,SNR=9.1							
	comp=Z,21nm,0.7s							
WRA	**Warramunga Arr**	**19.93**	**226**	P		**P**	**06 43 44.5**	**-0.6**
GUMO	**Guam**	**20.25**	**347**	LR		LR	06 50 49.8	
	comp=Z,114nm,19.5s,baz=136,slow=34							
DZM	**Mont Dzumac**	**22.76**	**135**	P		**P**	**06 44 15.2**	**-0.4**
	comp=Z,7.9nm,0.6s,baz=318,slow=16,SNR=5.6							
DZM				LR		LR	06 50 46.3	
	comp=Z,108nm,19.2s,baz=354,slow=30							
	comp=Z,7.9nm,0.6s							
AS31	**Alice Springs**	**22.79**	**219**	P		**P**	**06 44 16.1**	**+0.3**
AS31				IAmb		IAmb	06 44 34.6	
	comp=Z,5.0nm,0.9s							
ASAR	**Alice Springs**	**22.79**	**219**	P		**P**	**06 44 15.9**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=56,slow=9.2,SNR=51							
ASAR				PcP		**PcP**	**06 48 07.3**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=62,slow=2.8,SNR=6.4							
ASAR				LR		LR	06 53 03.6	
	comp=Z,196nm,19.0s,baz=30,slow=36							
	comp=Z,2.8nm,0.6s							
ASAR	**Alice Springs**	**22.79**	**219**			**P**	**06 44 15.8**	**0.0**
INKA	**Innaminka**	**22.84**	**200**	P		**P**	**06 44 16.4**	**+0.1**
INKA				IAmb		IAmb	06 44 43.2	
	comp=Z,11nm,1.1s							
ARMA	**Armidale**	**24.09**	**175**	P		**P**	**06 44 28.9**	**+0.6**
ARMA				IAmb		IAmb	06 44 31.6	
	comp=Z,7.8nm,0.9s							
FITZ	**Fitzroy Crossi**	**25.95**	**241**	LR		LR	06 56 18.7	
	comp=Z,103nm,21.5s,baz=30,slow=39							
STKA	**Stephens Creek**	**26.47**	**195**	P		**P**	**06 44 50.7**	**+0.9**
	comp=Z,5.0nm,0.8s,baz=353,slow=8.5,SNR=6.1							
STKA				LR		LR	06 56 24.8	
	comp=Z,133nm,18.4s,baz=23,slow=39							
	comp=Z,5.0nm,0.8s							
KAPI	**Kappang**	**29.50**	**271**	LR		LR	07 00 04.4	
	comp=Z,76nm,18.5s,baz=98,slow=42							
MSVF	**Nonsavu**	**30.22**	**115**	LR		LR	06 55 50.5	
	comp=Z,67nm,19.1s,baz=164,slow=33							
AFI	**Afiamalu**	**38.95**	**104**	LR		LR	06 59 37.8	
	comp=Z,64nm,19.8s,baz=254,slow=31							
NWAO	**Narrogin (SRO)**	**39.92**	**224**	LR		LR	07 03 39.8	
	comp=Z,165nm,19.2s,baz=120,slow=37							
URZ	**Urewera**	**40.56**	**146**	LR		LR	07 02 09.5	
	comp=Z,98nm,18.5s,baz=298,slow=34							
RPZ	**Rata Peaks**	**41.86**	**156**	LR		LR	07 03 09.6	
	comp=Z,25nm,18.1s,baz=42,slow=34							
MJAR	**Matsushiro Arr**	**43.88**	**347**	P		**P**	**06 47 17.9**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=153,slow=6.3,SNR=2.3							
MJAR				LR		LR	07 05 11.9	
	comp=Z,63nm,18.6s,baz=186,slow=35							
	comp=Z,1.8nm,0.7s							
MJAR	**Matsushiro Arr**	**43.88**	**347**	P		**P**	**06 47 18.8**	**-0.1**
KSRS	**Korea Array**	**47.91**	**337**	P		**P**	**06 47 51.2**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=154,slow=8.4,SNR=15							
KSRS				LR		LR	07 06 34.2	
	comp=Z,62nm,19.8s,baz=150,slow=34							
	comp=Z,3.3nm,0.8s							
KULM	**Kulim**	**49.98**	**282**	P		**P**	**06 48 07.2**	**+0.3**
PETK	**Petropavlovsk-**	**59.60**	**6**	P		**P**	**06 49 16.7**	**+0.9**
	comp=Z,5.5nm,0.5s,baz=177,slow=6.1,SNR=9.6							
PETK				LR		LR	07 09 49.2	
	comp=Z,50nm,21.3s,baz=183,slow=31							
	comp=Z,5.5nm,0.5s							
PETK	**Petropavlovsk-**	**59.60**	**6**	P		**P**	**06 49 16.3**	**+0.5**
LZDM	**Lanzhou Array**	**60.01**	**318**	LR		LR	07 13 54.9	
	comp=Z,40nm,20.3s,baz=180,slow=35							
MA2	**Magadan**	**65.67**	**1**	LR		LR	07 20 41.0	
	comp=Z,24nm,18.3s,baz=224,slow=38							
SONM	**Songino Array**	**65.83**	**330**	P		**P**	**06 49 58.8**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=150,slow=5.3,SNR=3.1							
	comp=Z,0.9nm,0.6s							
VNDA	**Vanda**	**71.49**	**177**	P		**P**	**06 50 33.4**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=332,slow=8.3,SNR=3.1							
	comp=Z,0.6nm,0.7s							
VNDA	**Vanda**	**71.49**	**177**	P		**P**	**06 50 33.7**	**+1.5**
VNDA				IAmb		IAmb	06 50 43.2	
	comp=Z,2.8nm,1.1s							
SBA	**Scott Base**	**72.10**	**176**	P		**P**	**06 50 36.0**	**+0.1**
KDAK	**Kodiak Island**	**79.06**	**28**	LR		LR	07 19 24.3	
	comp=Z,31nm,21.7s,baz=313,slow=30							
MKAR	**Makanchi Array**	**79.23**	**320**	P		**P**	**06 51 16.7**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=102,slow=6.1,SNR=1.4							
	comp=Z,0.9nm,0.8s							
MKAR	**Makanchi Array**	**79.23**	**320**	P		**P**	**06 51 17.1**	**-0.1**
QSPA	**South Pole Qui**	**83.67**	**180**	P		**P**	**06 51 39.7**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=327,slow=1.0,SNR=12							
	comp=Z,1.2nm,0.7s							
QSPA	**South Pole Qui**	**83.67**	**180**	P		**P**	**06 51 40.8**	**+0.2**
ILAR	**Eielson Array**	**84.83**	**23**	P		**P**	**06 51 44.9**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=245,slow=4.6,SNR=7.0							
	comp=Z,1.0nm,0.7s							
BBB	**Bella Bella**	**90.35**	**38**	LR		LR	07 27 00.7	
	comp=Z,26nm,19.4s,baz=221,slow=32							
DLBC	**Dease Lake**	**90.42**	**31**	LR		LR	07 26 58.5	
	comp=Z,30nm,19.6s,baz=234,slow=32							
INK	**Inuvik**	**91.07**	**21**	LR		LR	07 29 08.8	
	comp=Z,37nm,20.2s,baz=56,slow=33							
NVAR	**Mina Array Bea**	**95.69**	**52**	P		**P**	**06 52 38.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=279,slow=3.7,SNR=2.3							
NVAR				LR		LR	07 26 57.8	
	comp=Z,25nm,21.4s,baz=260,slow=30							
	comp=Z,0.2nm,0.3s							
PFO	**Pinyon Flats O**	**96.91**	**57**	LR		LR	07 27 45.9	
	comp=Z,42nm,21.9s,baz=213,slow=30							
ELK	**Elko**	**98.15**	**50**	LR		LR	07 32 30.4	
	comp=Z,37nm,19.6s,baz=320,slow=32							
GERES	**GERESS Array B**	**123.47**	**326**	PKP		**PKPdf**	**06 58 07.8**	**-1.5**
	comp=Z,4.0nm,0.5s,baz=76,slow=4.7,SNR=8.0							
ROSC	**El Rosal**	**136.50**	**90**	PKP		**PKPdf**	**06 58 35.9**	**+0.6**
	comp=Z,7.5nm,0.5s,baz=200,slow=16,SNR=5.6							
LPAZ	**La Paz**	**136.64**	**122**	PKP		**PKPdf**	**06 58 36.8**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=274,slow=3.1,SNR=7.7							
TORD	**Torodi Ar. Bea**	**147.44**	**285**	PKPbc		**PKPbc**	**06 58 56.5**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=62,slow=2.9,SNR=20							
BDFB	**Brasilia**	**152.22**	**142**	PKP		**PKPdf**	**06 59 02.8**	**+0.9**
	comp=Z,4.2nm,1.1s,baz=158,slow=5.4,SNR=4.2							
BDFB				PKPbc		**PKPbc**	**06 59 09.2**	**+0.6**
	comp=Z,9.2nm,0.6s,baz=258,slow=1.4,SNR=24							

KRNET ***09*** *06:39:56.5±0.1, 40.°00N×69.°30E, h6km, mb5.0*
IDC ***09*** *06:39:56.3±0.5, 39.°88N×69.°34E, h0km, mb4.3/33, mbtmp4.4/42, ML4.1/9, MS3.6/29, Error ellipse: s-maj=10.2km s-min=7.2km az=169.0*
ISU ***09*** *06:39:57, 39.°82N×69.°33E, h8km*
MOS ***09*** *06:39:58.2±1.0, 40.°03N×69.°30E, h17km, mb4.8/28, Error ellipse: s-maj=4.6km s-min=3.4km az=57.0*
MOS Felt (IV) at Gulistan; (III) at Dzhizak, Tashkent; (II) at Andizhan, Karshi, Navoi, Namangan, Samarkand, Termez, Ferghana.
BJI ***09*** *06:39:58.0, 40.°24N×69.°39E, h10km, mB4.5/6, mb4.5/25, ML4.4/3, Ms4.0/10, Ms7 3.7/10*
NNC ***09*** *06:39:58.5±1.7, 40.°10N×69.°21E, h8km±6km, mb4.8, mpv4.8, Error ellipse: s-maj=12.0km s-min=7.5km az=19.0*
NEIC ***09*** *06:39:59.5, 40.°07N×69.°43E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 2.98; Mθθ -3.09; Mφφ 0.10; Mrθ -0.84; Mrφ -0.72; Mθφ -0.78; Fault plane solution: M0 3.32000×10^15 NP1: φ89.03000°, δ37.30000°, λ107.77000°. NP2: φ247.09000°, δ54.75000°, λ76.91000°. Principal axes: T 3.2461, Plg76.0000°, Azm115.0000°; N 0.1480, Plg11.0000°, Azm255.0000°; P -3.3941, Plg9.0000°, Azm346.0000°;*
NEIC ***09*** *06:39:59.1±1.6, 40.°06N±0.°04×69.°45E±0.°06, h10km±1km, mb4.5/41, Mwr4.3/18 Error ellipse: s-maj=7.5km s-min=6.8km az=64.0*
GFZ ***09*** *06:39:59.9±0.2, 40.°N±3.°×6.°9E±.°, h10km, M4.5/18, mb4.6/18*
ISC 09 06:39:58.6±0.6, 39.°92N±0.°02×69.°34E±0.°02, h12km±3km, n616, σ1§29/677, mb4.5/77, MS3.6/28, 43C-42D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.15**	**83**	Op *i* PG		**Pb**	**06 40 18.9**	**-1.5**
BTK				S		**Sb**	**06 40 35.2**	**0.0**
BTK	**Batken**	**1.15**	**83**			**Pb**	**06 40 18.5**	**-1.9**
BTK	**Batken**	**1.15**	**83**	⇓*i*P		**Pb**	**06 40 18.9**	**-1.5**
BTK				⇓*i*S		**Sb**	**06 40 35.2**	**0.0**
BTK	**Batken**	**1.15**	**83**	P		**Pb**	**06 40 18.3**	**-2.0**
GAR	**Garm**	**1.19**	**140**	*i* PG		**Pn**	**06 40 20.9**	**-0.3**
GAR				S		**Sg**	**06 40 38.3**	**+1.2**
GAR	**Garm**	**1.19**	**140**			**Pn**	**06 40 20.9**	**-0.3**
GAR				Sn		**Sb**	**06 40 36.3**	**-0.3**
GAR	**Garm**	**1.19**	**140**	⇑*i*P		**Pn**	**06 40 20.9**	**-0.3**
GAR				⇑*i*S		**Sg**	**06 40 38.3**	**+1.2**
GAR	**Garm**	**1.19**	**140**	P		**Pn**	**06 40 21.0**	**-0.3**
CHGR	**Chuyangaron**	**1.27**	**186**	*i* PG		**Pn**	**06 40 22.2**	**-0.1**
CHGR				S		**Sg**	**06 40 40.7**	**+1.1**
CHGR	**Chuyangaron**	**1.27**	**186**			**Pg**	**06 40 23.0**	**-0.1**
CHGR	**Chuyangaron**	**1.27**	**186**	⇓*i*P		**Pn**	**06 40 22.2**	**-0.1**
CHGR				⇓*i*S		**Sg**	**06 40 40.7**	**+1.1**
NZBK	**Nazarbek**	**1.31**	**353**	P		**Pn**	**06 40 23.2**	**+0.5**
NZBK				S		**Sg**	**06 40 43.2**	**+2.4**
TVKS	**Tavaksay**	**1.67**	**8**	P		**Pn**	**06 40 28.0**	**+0.3**
TVKS				S		**Sb**	**06 40 51.0**	**+0.7**
CHMG	**Chimgan**	**1.70**	**17**	P		**Pn**	**06 40 28.8**	**+0.5**
CHMG				S		**Sb**	**06 40 52.3**	**+0.9**
CHRV	**Charvak**	**1.78**	**15**	P		**Pn**	**06 40 29.5**	**+0.3**
CHRV				S		**Sb**	**06 40 53.7**	**+0.3**
FRG	**Fergana**	**1.93**	**76**	P		**Pb**	**06 40 33.3**	**-0.4**
FRG				S		**Sb**	**06 40 57.8**	**+0.1**
DRK	**Karamyk**	**1.95**	**102**⇓	*e*P		**Pb**	**06 40 34.1**	**-0.1**
DRK				⇓*e*S		**Sg**	**06 41 00.8**	**-0.5**
TRKS	**Terek-Say**	**2.11**	**40**	*i* PN		**Pn**	**06 40 34.4**	**+0.5**
TRKS				S		**Sn**	**06 41 01.9**	**+1.8**
TRKS	**Terek-Say**	**2.11**	**40**⇑	*i*P		**Pn**	**06 40 34.4**	**+0.5**
TRKS				⇑*i*S		**Sn**	**06 41 01.9**	**+1.8**
PSK	**Pskem**	**2.15**	**21**	P		**Pn**	**06 40 35.9**	**+1.5**
PSK				S		**Sb**	**06 41 03.7**	**-0.5**
IUG	**luzhnay**	**2.28**	**13**	Pg		**Pn**	**06 40 37.0**	**+0.8**
	1μm,0.5s							
IUG				Lg		Lg	06 41 07.1	
	8μm,0.6s							
IUG	**luzhnay**	**2.28**	**13**	*e*PN		**Pn**	**06 40 36.8**	**+0.6**
IUG				*e*S		**Sn**	**06 41 04.7**	**+0.4**
IUG	**luzhnay**	**2.28**	**13**	*e*P		**Pn**	**06 40 36.9**	**+0.6**
IUG				*e*S		**Sn**	**06 41 04.7**	**+0.4**
CHM	**Chimkent**	**2.40**	**5**	*e*PN		**Pn**	**06 40 38.4**	**+0.7**
CHM				*e*S		**Sn**	**06 41 07.6**	**+0.5**
CHM	**Chimkent**	**2.40**	**5**	*e*P		**Pn**	**06 40 38.5**	**+0.7**
CHM				*e*S		**Sn**	**06 41 07.7**	**+0.5**
SHAA	**Shahritus**	**2.54**	**202**			**Pb**	**06 40 43.6**	**-0.6**
OHH	**Osh**	**2.71**	**76**⇓	*e*P		**Pn**	**06 40 43.7**	**+1.7**
OHH				⇓*e*S		**Sb**	**06 41 18.2**	**-2.0**
OHH	**Osh**	**2.71**	**76**	P		**Pn**	**06 40 41.4**	**-0.6**
ARK	**Arkit**	**2.73**	**46**	*i* PN		**Pn**	**06 40 43.5**	**+1.1**
ARK				S		**Sn**	**06 41 17.9**	**+2.5**
ARK	**Arkit**	**2.73**	**46**⇑	*i*P		**Pn**	**06 40 43.5**	**+1.1**
ARK				⇑*i*S		**Sn**	**06 41 17.9**	**+2.5**
ARK	**Arkit**	**2.73**	**46**	P		**Pn**	**06 40 43.4**	**+1.0**
MANEM	**Manem**	**3.00**	**142**			**Pb**	**06 40 51.4**	**-0.8**
ARSB	**Arslanbob**	**3.11**	**62**	*i* PN		**Pn**	**06 40 48.5**	**+1.0**
ARSB				S		**Sn**	**06 41 27.2**	**+2.5**
ARSB	**Arslanbob**	**3.11**	**62**			**Pn**	**06 40 47.9**	**+0.4**
ARSB	**Arslanbob**	**3.11**	**62**⇓	*i*P		**Pn**	**06 40 48.5**	**+1.0**
ARSB				⇓*i*S		**Sn**	**06 41 27.2**	**+2.5**
BRLS	**Borolday**	**3.13**	**7**	Pg		**Pn**	**06 40 48.1**	**+0.4**
	98nm,0.4s							
BRLS				Lg		Lg	06 41 26.4	
	1μm,0.4s							
BRLS	**Borolday**	**3.13**	**7**	*e*PN		**Pn**	**06 40 44.2**	**-3.5**
BRLS	**Borolday**	**3.13**	**7**	*e*P		**Pn**	**06 40 44.3**	**-3.5**
SFK	**Sufi-Kurgan**	**3.20**	**87**	*i* PN		**Pn**	**06 40 50.9**	**+2.0**
SFK				S		**Sn**	**06 41 30.6**	**+3.5**
SFK	**Sufi-Kurgan**	**3.20**	**87**⇑	*i*P		**Pn**	**06 40 50.9**	**+2.0**
SFK				⇑*i*S		**Sn**	**06 41 30.6**	**+3.5**
KK31	**Karatay Array**	**3.30**	**15**	Pn		**Pn**	**06 40 49.9**	**-0.1**
	20nm,0.5s,baz=197,slow=14,SNR=971							
KK31				Pg		**Pb**	**06 40 59.4**	**+2.4**
	164nm,0.6s,baz=209,slow=17,SNR=33							
KK31				Lg		Lg	06 41 39.6	
	565nm,0.6s,baz=197,slow=28,SNR=10							
KKAR	**Karatay Array**	**3.30**	**15**	PN		**Pn**	**06 40 48.4**	**-1.7**
KKAR	**Karatay Array**	**3.30**	**15**			**Pn**	**06 40 48.4**	**-1.7**
DZA	**Taraz**	**3.32**	**26**	*e*PN		**Sn**	**06 40 51.3**	**+0.9**
DZA				*e*S		**Sn**	**06 41 30.6**	**+0.8**
DZA	**Taraz**	**3.32**	**26**	*e*P		**Pn**	**06 40 51.3**	**+0.9**
DZA				*e*S		**Sn**	**06 41 30.7**	**+0.8**
MNAS	**Manas**	**3.50**	**42**	*i* PN		**Pn**	**06 40 54.3**	**+1.3**
MNAS				S		**Sn**	**06 41 36.2**	**+1.8**
MNAS	**Manas**	**3.50**	**42**⇓	*i*P		**Pn**	**06 40 54.3**	**+1.3**
MNAS				⇓*i*S		**Sn**	**06 41 36.2**	**+1.8**
SALK	**Salom-Alik**	**3.55**	**73**⇓	*e*P		**Pn**	**06 40 55.8**	**+2.1**
SALK				⇓*i*S		**Sn**	**06 41 38.8**	**+3.0**
TMD	**Tamdy-Bulak**	**4.00**	**299**	P		**Pn**	**06 41 01.7**	**+2.0**
TMD				S		**Sn**	**06 41 46.0**	**-0.6**
MRKS	**Merke**	**4.06**	**45**	Pg		**Pb**	**06 41 11.1**	**+1.0**
	112nm,0.7s							
MRKS				Lg		Lg	06 42 05.2	
	878nm,1.3s							
EKS2	**Erkin-Say**	**4.32**	**49**	P		**Pn**	**06 41 05.7**	**+1.5**
	SNR=33							
EKS2	**Erkin-Say**	**4.32**	**49**	*e*PN		**Pn**	**06 41 05.7**	**+1.5**
EKS2				S		**Sn**	**06 41 56.1**	**+1.5**
EKS2	**Erkin-Say**	**4.32**	**49**⇑	*e*P		**Pn**	**06 41 05.7**	**+1.5**
EKS2				⇑*i*S		**Sn**	**06 41 56.1**	**+1.5**
GZLY	**Gazly**	**4.53**	**274**	P		**Pn**	**06 41 08.7**	**+1.8**
UCH	**Uchtor**	**4.54**	**58**	P		**Pn**	**06 41 09.0**	**+1.6**
	SNR=20							
UCH	**Uchtor**	**4.54**	**58**	*e*PN		**Pn**	**06 41 09.1**	**+1.6**
UCH				S		**Sn**	**06 42 01.9**	**+1.5**
UCH	**Uchtor**	**4.54**	**58**⇑	*e*P		**Pn**	**06 41 09.1**	**+1.6**
UCH				⇑*i*S		**Sn**	**06 42 01.9**	**+1.5**
AAK	**Ala-Archa**	**4.74**	**53**	Pn		**Pn**	**06 41 12.5**	**+2.5**
	26nm,0.3s,baz=241,slow=6.5,SNR=80							
AAK				Sn		**Sn**	**06 42 09.9**	**+5.0**
	24nm,0.3s,baz=11,slow=20,SNR=6.0							
AAK				Lg		Lg	06 42 27.5	
	17nm,0.3s,baz=190,slow=17,SNR=4.2							
	108nm,0.6s							
AAK	**Ala-Archa**	**4.74**	**53**	P		**Pn**	**06 41 12.0**	**+2.0**
	SNR=78							
AAK	**Ala-Archa**	**4.74**	**53**	⇑Pn		**Pn**	**06 41 11.4**	**+1.4**
	351nm,0.5s							
AAK				⇑Pg		**Pb**	**06 41 25.3**	**+3.6**
	933nm,0.8s							
AAK				⇓Sn		**Sn**	**06 42 07.1**	**+2.2**
	938nm,0.7s							
AAK				⇓Lg		Lg	06 42 29.7	
	1μm,0.6s							
AAK	**Ala-Archa**	**4.74**	**53**			**Pn**	**06 41 10.8**	**+0.8**
AAK	**Ala-Archa**	**4.74**	**53**⇓	*e*P		**Pn**	**06 41 11.7**	**+1.7**
AAK				⇓*i*S		**Sn**	**06 42 06.3**	**+1.4**
AAK	**Ala-Archa**	**4.74**	**53**	P		**Pn**	**06 41 11.4**	**+1.4**
KSH2	**Kashi**	**4.88**	**97**	Pn		**Pn**	**06 41 14.4**	**+2.5**
KSH2				Sn		**Sn**	**06 42 14.6**	**+6.2**
KSH2				SMN				
	370nm,0.8s							
KSH2				SME				
	500nm,0.9s							
FRU1	**Bishkek**	**4.92**	**52**	*e*PN		**Pn**	**06 41 13.9**	**+1.6**
FRU1				S		**Sn**	**06 42 10.4**	**+1.2**
FRU1	**Bishkek**	**4.92**	**52**			**Pn**	**06 41 14.6**	**+2.2**
FRU1	**Bishkek**	**4.92**	**52**⇓	*e*P		**Pn**	**06 41 13.9**	**+1.6**
FRU1				⇓*i*S		**Sn**	**06 42 10.4**	**+1.2**
JNKS	**Jany-Kuch**	**4.92**	**75**⇑	*i*P	

MDOK Medeo 6.63 58 *e*PN **Pn** 06 41 37.0 +1.1
MDOK Medeo 6.63 58 *e*P **Pn** 06 41 37.1 +1.1
KTBS Karatobe 6.66 53 Pg **Pb** 06 41 56.4 +2.0
KTBS Lg Lg 06 43 23.3
TARG Taragay, Kyrgy 6.67 72 *i* PN **Pn** 06 41 37.9 +1.2
TARG S **Sn** 06 42 52.7 -0.2
TARG Taragay, Kyrgy 6.67 72 **Pn** 06 41 38.2 +1.4
TARG Taragay, Kyrgy 6.67 72⇓*i*P **Pn** 06 41 37.9 +1.2
TARG ⇓*i*S **Sn** 06 42 52.7 -0.2
TARG Taragay, Kyrgy 6.67 72 P **Pn** 06 41 37.9 +1.2
KOTS Kotyrbulak 6.70 58 Pg **Pg** 06 42 04.5 -2.3
86nm,0.8s
KOTS Lg Lg 06 43 37.4
383nm,0.9s
ANVS Anan'yevo 6.89 63 *i* PN **Pn** 06 41 41.4 +1.9
ANVS S **Sn** 06 42 57.6 -0.3
ANVS Anan'yevo 6.89 63⇓*i*P **Pn** 06 41 41.4 +1.9
ANVS ⇓*i*S **Sn** 06 42 57.6 -0.3
NIL Nilore 7.00 152 PN **Pn** 06 41 43.4 +2.4
NIL Nilore 7.00 152 **Pn** 06 41 43.4 +2.4
NIL Nilore 7.00 152 P **Pn** 06 41 45.3 +4.3
PRZ Przheval'sk 7.30 67 *i* P **Pn** 06 41 47.0 +1.9
PRZ S **Sn** 06 43 07.5 -0.5
PRZ Przheval'sk 7.30 67⇑*i*P **Pn** 06 41 47.0 +1.9
PRZ ⇑*i*S **Sn** 06 43 07.5 -0.5
SATY Saty 7.49 62 Pg Pg 06 42 16.8 -5.2
30nm,0.8s
SATY Lg Lg 06 43 57.8
192nm,1.7s
SATY Saty 7.49 62 *e*P **Pn** 06 41 49.1 +1.4
SATY Saty 7.49 62 *e*P **Pn** 06 41 49.2 +1.4
KURS Kuram 7.51 59 Pg Pb 06 42 15.6 +6.9
25nm,1.2s
KURS Lg Lg 06 43 56.1
122nm,1.6s
ARXS Arharly 7.63 53 Pg Pb 06 42 16.7 +5.9
28nm,0.9s
ARXS Lg Lg 06 43 57.4
132nm,1.0s
HRA Herat 7.91 228 **Pn** 06 41 55.2 +1.6
UZB Uzynbulak 7.95 63 Pg Pg 06 42 24.5 -6.2
18nm,0.8s
UZB Lg Lg 06 44 11.4
88nm,1.2s
UZB Uzynbulak 7.95 63 *e*P **Pn** 06 41 55.2 +1.2
UZB Uzynbulak 7.95 63 *e*P **Pn** 06 41 55.3 +1.2
SHLS Shalkode 8.25 64 Pg **Pg** 06 42 34.3 -2.2
21nm,0.7s
SHLS Lg Lg 06 44 28.9
102nm,1.0s
SHLS Shalkode 8.25 64 *e*P Pn 06 42 03.5 +5.3
SHLS Shalkode 8.25 64 *e*P Pn 06 42 03.5 +5.3
PDGK Podgornoye 8.33 63 ⇑Pn **Pn** 06 42 00.1 +0.8
21nm,0.8s
PDGK ⇑Lg Lg 06 44 24.7
142nm,0.9s
PDGK Podgornoye 8.33 63 P **Pn** 06 41 59.0 -0.2
PDGK Podgornoye 8.33 63 **Pn** 06 41 59.0 -0.2
JMU Jammu 8.39 146 *e*P **Pn** 06 42 02.8 +2.8
JMU *e*S **Sn** 06 43 34.5 -0.2
JMU IAML 06 43 44.2
comp=E,255nm,0.6s
JMU IAML 06 43 50.1
comp=E,320nm,0.7s
TDK Taldyqorghan 8.40 50 Pg Pb 06 42 31.0 +7.0
comp=E,22nm,0.1s
TDK Lg Lg 06 44 22.7
comp=E,602nm,1.0s
TDK Taldyqorghan 8.40 50 *e*P **Pn** 06 42 01.3 +1.1
TDK Taldyqorghan 8.40 50 *e*P **Pn** 06 42 01.4 +1.2
DJR Jarkent 8.93 57 Pg Pg 06 42 38.1 -11
comp=E,9.0nm,0.8s
DJR Lg Lg 06 44 34.8
comp=E,45nm,1.3s
TSSA Tissa 8.95 140 *e*P **Pn** 06 42 11.0 +3.2
TSSA *e*S **Sn** 06 43 46.7 -2.0
TSSA IAML 06 43 52.5
comp=E,242nm,0.5s
TSSA IAML 06 43 52.9
comp=N,223nm,1.4s
THN Thein Dam 9.09 143 *e*P **Pn** 06 42 12.1 +2.4
THN IAML 06 43 57.0
comp=E,154nm,0.7s
THN IAML 06 44 02.0
comp=E,204nm,1.0s
KAPS Kapalarasan 9.12 51 Pg Pn 06 42 42.2 +32
KAPS Lg Lg 06 44 41.3
DHRM DHARAMSHALA 9.50 142 *e*P **Pn** 06 42 15.8 +0.4
DHRM IAML 06 44 05.7
comp=E,307nm,0.7s
DHRM IAML 06 44 06.0
comp=E,154nm,0.5s
BRZS Berezniki 10.33 12 Pg Pn 06 43 04.3 +38
comp=E,1.1nm,0.6s
BRZS Lg Lg 06 45 19.7
comp=E,98nm,1.5s
BRZS Berezniki 10.33 12 *e*P **Pn** 06 42 27.0 +0.5
BRZS Berezniki 10.33 12 *e*P **Pn** 06 42 27.1 +0.5
HNLY HANLEY 10.54 130 *e*P **Pn** 06 42 31.1 +1.1
HNLY *ex* x 06 44 30.1
KLP Kalpa 11.06 136 *e*P **Pn** 06 42 39.0 +2.0
KLP *e*S **Sn** 06 44 36.7 -4.0
KLP IAML 06 44 43.0
comp=E,112nm,0.5s
KLP IAML 06 44 43.1
comp=N,66nm,0.6s
AB31 Akbulak array 11.48 327 Pn **Pn** 06 42 39.2 -2.9
comp=N,8.2nm,0.6s,baz=147,slow=12,SNR=218
AB31 ⇑Sn Sn 06 44 40.6 -10
comp=N,22nm,0.7s,baz=149,slow=22,SNR=4.1
AB31 Akbulak array 11.48 327 P **Pn** 06 42 39.3 -2.9
ABKAR Akbulak array 11.48 327 **Pn** 06 42 39.1 -3.0
MAKZ Makanchi 11.48 49 ⇑Pn **Pn** 06 42 41.2 -1.1
comp=N,12nm,1.4s
MAKZ ⇓Lg Lg 06 46 03.9
comp=N,52nm,1.3s
MAKZ Makanchi 11.48 49 P **Pn** 06 42 42.0 -0.3
MAKZ Makanchi 11.48 49 **Pn** 06 42 42.0 -0.3
MAKZ Makanchi 11.48 49 P **Pn** 06 42 43.2 +1.0
MK31 Makanchi Array 11.65 50 Pn **Pn** 06 42 43.7 -1.0
comp=N,3.6nm,0.7s,baz=240,slow=14,SNR=65
MK31 ⇓Lg Lg 06 46 09.0
comp=N,14nm,0.7s,baz=259,slow=24,SNR=4.2
MK31 Makanchi Array 11.65 50 *i* P **Pn** 06 42 44.2 -0.5
MKAR Makanchi Array 11.65 50 Pn **Pn** 06 42 44.5 -0.2
comp=N,0.6nm,0.3s,baz=232,slow=13,SNR=42
MKAR Lg Lg 06 46 00.7
comp=N,0.7nm,0.3s,baz=236,slow=30,SNR=4.3
MKAR LR LR 06 47 30.3
comp=N,149nm,18.1s,baz=218,slow=39
comp=N,5.5nm,0.6s
MKAR Makanchi Array 11.65 50 **Pn** 06 42 43.9 -0.8
UTK UTTARKASHI 11.80 138 *ex* x 06 42 51.5
UTK *ex* x 06 42 52.4
UTK IAML 06 45 00.8
comp=N,117nm,0.4s
UTK IAML 06 45 01.6
comp=E,121nm,0.6s
KURBB Kurchatov Arra 12.49 28 Pn **Pn** 06 42 53.2 -2.9
comp=E,0.1nm,0.3s,baz=217,slow=12,SNR=16
KURBB Lg Lg 06 46 30.5
comp=E,0.3nm,0.3s,baz=218,slow=29,SNR=7.0
KURBB LR LR 06 47 49.8
comp=E,143nm,18.4s,baz=172,slow=38
comp=E,2.8nm,0.7s
KURK Kurchatov 12.60 28 ⇓Pn Pn 06 42 52.5 -5.1
comp=E,3.5nm,0.9s
KURK ⇑Lg Lg 06 46 35.8
comp=E,105nm,1.1s
KURK Kurchatov 12.60 28⇓*i*P **Pn** 06 42 54.5 -3.0
KURK pmax pmax
comp=E,5.0nm,1.0s
KURK Kurchatov 12.60 28 **Pn** 06 42 55.0 -2.6
KURK Kurchatov 12.60 28 P **Pn** 06 42 55.1 -2.4
BVA0 Borovoye Array 13.13 3 Pn **Pn** 06 43 01.9 -2.8
comp=Z,0.3nm,0.5s,baz=175,slow=12,SNR=22
BVA0 Sn **Sn** 06 45 28.4 -2.2
comp=Z,0.7nm,0.9s,baz=173,slow=21,SNR=3.6
BVAR Borovoye Array 13.13 3 Pn **Pn** 06 43 02.7 -2.0
comp=Z,0.4nm,0.3s,baz=178,slow=12,SNR=25
BVAR Sn **Sn** 06 45 24.6 -5.9
comp=Z,0.2nm,0.3s,baz=180,slow=17,SNR=1.9
BVAR Lg Lg 06 46 47.5
comp=Z,0.2nm,0.3s,baz=171,slow=20,SNR=3.5
comp=Z,7.5nm,0.5s

BORK Borovoye 13.14 3*d* *i*P **Pn** 06 43 03.0 -2.0
BORK pmax pmax
comp=Z,8.0nm,0.8s
BORK Borovoye 13.14 3 **Pn** 06 43 02.8 -2.1
AKTO Aktyubinsk 13.18 327 Pn **Pn** 06 43 02.3 -3.2
comp=Z,1.8nm,0.3s,baz=155,slow=14,SNR=15
AKTO Sn Sn 06 45 19.6 -12
comp=Z,1.7nm,0.3s,baz=200,slow=14,SNR=3.5
AKTO Lg Lg 06 46 55.6
comp=Z,0.3nm,0.3s,baz=270,slow=22,SNR=2.0
AKTO LR LR 06 48 49.8
comp=Z,227nm,18.9s,baz=333,slow=40
comp=Z,3.5nm,0.3s
AKTO Aktyubinsk 13.18 327 ⇑Pn **Pn** 06 43 02.9 -2.7
comp=Z,6.2nm,0.8s
AKTO ⇓Sn **Sn** 06 45 26.0 -6.0
comp=Z,20nm,0.8s
ZSN Zaisan 13.51 51 *e*P **Pn** 06 43 11.3 +1.3
ZSN Zaisan 13.51 51 *e*P **Pn** 06 43 11.3 +1.3
AJM Ajmer 14.17 160 *e*P **Pn** 06 43 21.4 +2.3
WMQ Urumqi 14.22 68 *e*P **Pn** 06 43 20.2 +0.4
WMQ pP P 06 43 23.6 -3.6
WMQ pmax pmax
comp=Z,14nm,0.7s
DGZ Jazzator, Alta 16.10 47*d* *i*P **P** 06 43 48.3 +0.2
DGZ pmax pmax
comp=Z,51nm,0.8s
JHNI Jhansi 16.39 149 *ex* x 06 43 44.6
JHNI *ex* x 06 46 38.5
AKT Akhty 16.46 282 *e*P **Pn** 06 43 49.6 +0.2
AKT *e*S **Sn** 06 46 51.8 -0.2
AKT pmax pmax
comp=Z,26nm,0.8s
SEKA Sheki 16.87 282 P **P** 06 43 57.2 +0.6
ZALV Zalesovo Beam 17.51 32 P **Pn** 06 44 00.8 -1.5
comp=Z,3.6nm,0.3s,baz=223,slow=11,SNR=24
ZALV S **Sn** 06 47 15.6 -1.5
comp=Z,1.1nm,0.5s,baz=221,slow=19,SNR=1.5
ZALV Lg Lg 06 49 14.2
baz=216,slow=27
ZALV LR LR 06 51 11.3
comp=Z,105nm,18.9s,baz=216,slow=38
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 17.51 32 P **Pn** 06 44 01.3 -1.1
GANJ Ganja 17.57 280 P **P** 06 44 06.8 +2.5
SVE Sverdlovsk 17.85 344 *e*P **Pn** 06 44 04.1 -2.5
SVE pmax pmax
comp=Z,25nm,0.9s
SVE MLR MLR
comp=Z,538nm,14.0s
ARTI Arti 17.98 340 P **Pn** 06 44 06.2 -2.0
comp=Z,0.8nm,0.3s,baz=162,slow=7.2,SNR=12
ARTI S Sn 06 47 13.6 -15
comp=Z,4.4nm,0.5s,baz=36,slow=20,SNR=1.7
ARTI Lg Lg 06 49 14.6
baz=340,slow=22
ARTI LR LR 06 51 44.1
comp=Z,597nm,18.6s,baz=177,slow=39
comp=Z,7.1nm,0.6s
ARTI Arti 17.98 340*c* *i*P **Pn** 06 44 07.4 -0.8
ARTI S **Sn** 06 47 27.7 -0.8
ARTI pmax pmax
comp=Z,10.0nm,0.8s
ARTI Arti 17.98 340 P **Pn** 06 44 06.0 -2.2
BHPL Bhopal 17.99 155 *e*P **P** 06 44 11.3 +2.3
BHPL IAmb IAmb 06 44 12.8
comp=Z,18nm,0.3s
EVN Everest 18.74 124 P **P** 06 44 16.8 -1.2
EVN Everest 18.74 124 P **P** 06 44 15.7 -2.3
GNI Garni 18.83 279 P **Pn** 06 44 19.5 +0.7
comp=Z,1.2nm,0.3s,baz=161,slow=7.2,SNR=7.0
GNI LR LR 06 53 00.4
comp=Z,56nm,18.4s,baz=100,slow=42
comp=Z,18nm,1.0s
GNI Garni 18.83 279*c* *i*P **Pn** 06 44 21.6 +2.8
GNI pmax pmax
comp=Z,40nm,1.0s
GNI Garni 18.83 279 P **Pn** 06 44 19.7 +0.9
GNI IAmb IAmb 06 44 25.1
comp=Z,37nm,1.1s
GNI Garni 18.83 279 P **Pn** 06 44 19.7 +0.9
comp=Z,574nmcomp=Z,37nm,0.9s
GNI Garni 18.83 279 P **Pn** 06 44 22.1 +3.2
BELG Belogornoye 19.45 317 P **P** 06 44 24.1 -0.6
comp=Z,2.5nm,0.3s,baz=93,slow=1.4,SNR=23
comp=Z,79nm,0.9s
BELG Belogornoye 19.45 317 *e*P **P** 06 44 23.9 -0.9
KBZ Khabaz 20.04 290 P **P** 06 44 30.5 -0.8
comp=Z,8.2nm,0.6s,baz=109,slow=8.8,SNR=10
KBZ LR LR 06 54 24.8
comp=Z,107nm,18.4s,baz=100,slow=43
comp=Z,8.2nm,0.6s
KBZ Khabaz 20.04 290 *e*P **P** 06 44 31.1 -0.2
KBZ pmax pmax
comp=Z,12nm,0.8s
KVAR Kislovodsk Arr 20.19 290 P **P** 06 44 33.1 -0.1
comp=Z,6.4nm,0.6s,baz=85,slow=19,SNR=3.5
KVAR LR LR 06 54 24.8
comp=Z,152nm,19.2s,baz=277,slow=43
comp=Z,6.4nm,0.6s
KIV Kislovodsk 20.20 290 *e*P **P** 06 44 33.4 +0.2
KIV *e*S **S** 06 48 20.5 +0.9
KIV pmax pmax
comp=Z,30nm,1.0s
KIV MLR MLR
comp=Z,35nm,14.0s
KIV Kislovodsk 20.20 290 P **P** 06 44 33.3 +0.1
KIV Kislovodsk 20.20 290 P **P** 06 44 33.6 +0.4
comp=Z,35nm,0.8s
KIV Kislovodsk 20.20 290 P **P** 06 44 34.0 +0.8
EPOS Posof 20.21 283 P Pn 06 44 36.2 +0.9
SHA1 Shidzhatmaz 20.21 290 *e*P **P** 06 44 33.2 -0.3
GEVA Gevas 20.43 274 P **P** 06 44 36.8 +0.9
LSA Lhasa 20.56 113 P **P** 06 44 37.8 +0.1
LSA pmax pmax
comp=Z,19nm,0.7s
LSA Lhasa 20.56 113 **P** 06 44 37.8 +0.1
LSA IAmb IAmb 06 44 45.0
comp=Z,19nm,0.7s
GURO Guroymak-BITLI 21.17 275 P **P** 06 44 43.9 +0.1
BOK Bokaro 21.30 134 *e*P **P** 06 44 46.9 +1.8
BOK IAmb IAmb 06 44 51.4
comp=Z,11nm,0.7s
LABN Labinsk 21.63 292 *e*P **P** 06 44 48.0 -0.6
LABN *e**PP **pP** 06 44 51.2 -1.1
LABN *e*S **S** 06 48 48.7 +0.8
LABN pmax pmax
comp=Z,95nm,0.7s
ERBR Yeremizino-Bor 21.87 295 *e*P **P** 06 44 51.8 +0.6
ERBR *e**PP **pP** 06 44 54.4 -0.5
ERBR pmax pmax
comp=Z,41nm,0.9s
VRH Novokhopyorsk 22.25 310 *e*P **P** 06 44 55.6 +0.5
VRH pmax pmax
comp=Z,30nm,1.0s
KIRV Kirov 22.60 332 P **P** 06 44 58.5 -0.3
comp=Z,35nm,0.7s,baz=150,slow=8.1,SNR=12
KIRV LR LR 06 54 29.4
comp=Z,194nm,20.5s,baz=121,slow=38
comp=Z,35nm,0.7s
KIRV Kirov 22.60 332⇓*i*P **P** 06 44 58.9 +0.2
GTA2 Gaotai 23.36 81 *e*P **P** 06 45 07.9 +0.9
GTA2 pP sP 06 45 13.7 +1.2
GTA2 pmax pmax
comp=Z,5.0nm,1.2s
GTA2 L L
comp=Z,160nm,14.1s
GTA2 L L
comp=Z,100nm,14.1s
GTA2 L L
comp=Z,130nm,15.8s
SHL Shillong 23.67 120 P **P** 06 45 10.5 +0.3
SHL pmax pmax
comp=Z,46nm,1.2s
SHL Shillong 23.67 120 P **P** 06 45 10.5 +0.3
VSR Storozhevoye 23.78 308 *e*P **P** 06 45 10.2 -0.6
VSR pmax pmax
comp=Z,5.0nm,0.8s
VORR Voronezh 23.89 309 *e*P **P** 06 45 09.9 -2.0
VORR pmax pmax
comp=Z,38nm,0.4s
ANN Anapa 23.98 292 *e*P **P** 06 45 14.3 +1.5
ANN *e**PP **pP** 06 45 16.8 +0.1
ANN *e*S **S** 06 49 30.3 +1.0
ANN pmax pmax
comp=Z,46nm,0.7s

LPSR Galich'ya Gora 24.35 312 *e*P **P** 06 45 16.5 +0.4
LPSR pmax pmax
comp=Z,30nm,0.9s
MOY Mondy 24.80 51 *e*P **P** 06 45 22.5 +2.1
MOY pmax pmax
comp=Z,20nm,1.7s
BRDH Bariadhala 25.55 126 LR LR 06 56 46.7
comp=Z,174nm,18.4s,baz=147,slow=40
ZAK Zakamensk 25.91 55 *e*P **P** 06 45 31.0 +0.6
ZAK pmax pmax
comp=Z,20nm,1.2s
RAYN Ar Rayn 25.93 238 P **P** 06 45 32.5 +1.7
RAYN pmax pmax
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 25.93 238 P **P** 06 45 32.5 +1.7
RAYN IAmb IAmb 06 45 37.5
comp=Z,8.8nm,0.8s
RAYN Ar Rayn 25.93 238 P **P** 06 45 32.6 +1.8
MOS Moscow 26.21 318 *e*P **P** 06 45 34.3 +1.3
MOS *e* 06 46 14.3
MOS pmax pmax
comp=Z,35nm,0.7s
TLY Talaya 26.40 52 LR LR 06 56 36.4
comp=Z,93nm,20.8s,baz=126,slow=38
TLY Talaya 26.40 52 P **P** 06 45 35.3 +0.5
OBN Obninsk 26.53 316 P **P** 06 45 34.1 -1.7
comp=Z,19nm,0.6s,baz=26,slow=21,SNR=4.4
comp=Z,19nm,0.6s
OBN Obninsk 26.53 316*c* *i*P **P** 06 45 33.6 -2.2
OBN pmax pmax
comp=Z,20nm,1.1s
OBN MLR MLR
comp=Z,66nm,16.0s
OBN Obninsk 26.53 316 P **P** 06 45 35.5 -0.3
LZDM Lanzhou Array 27.28 87 P **P** 06 45 41.2 -2.0
comp=Z,1.4nm,0.3s,baz=318,slow=6.2,SNR=1.6
comp=Z,1.4nm,0.3s
BR131 Keskin Array S 27.31 281 *e*P **P** 06 45 42.9 -0.3
BRTR Keskin Array B 27.31 281 P **P** 06 45 44.1 +0.8
comp=Z,1.6nm,0.8s,baz=87,slow=8.5,SNR=4.6
comp=Z,1.6nm,0.8s
BRTR Keskin Array B 27.31 281 P **P** 06 45 43.3 0.0
LZH Lanzhou 27.36 87 *e*P **P** 06 45 48.6 +4.9
LZH pP sP 06 45 54.0 +4.7
LZH pmax pmax
comp=Z,17nm,1.0s
LZH L L
comp=Z,180nm,13.1s
LZH L L
comp=Z,180nm,12.9s
LZH L L
comp=Z,210nm,13.4s
SONM Songino Array 27.64 61 P **P** 06 45 46.1 -0.1
comp=Z,1.9nm,0.7s,baz=265,slow=9.3,SNR=9.7
SONM PcP **PcP** 06 49 02.9 -0.2
comp=Z,0.3nm,0.3s,baz=302,slow=3.2,SNR=2.0
comp=Z,1.9nm,0.7s
SONM Songino Array 27.64 61 P **P** 06 45 45.6 -0.5
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 27.64 61 P **P** 06 45 45.6 -0.5
KLMR Klimovskoe 27.87 329 *e*P **P** 06 45 46.9 -0.9
KLMR pmax pmax
comp=Z,13nm,1.2s
KLMR MLR MLR
comp=Z,129nm,11.0s
ULN Ulaanbaatar 28.09 61*d* *i*P **P** 06 45 51.0 +0.9
ULN pmax pmax
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 28.09 61 **P** 06 45 49.9 -0.3
ULN IAmb IAmb 06 45 51.7
comp=Z,7.0nm,0.9s
ULN Ulaanbaatar 28.09 61 P **P** 06 45 51.2 +1.1
CY604 RAF Akrotiri, 28.20 270 P **P** 06 45 52.8 +2.1
NE56 Odesa 28.56 296 P **P** 06 45 54.9 +0.8
CSS Mathiatis 28.89 272 P **P** 06 45 58.0 +0.8
CSS IAmb IAmb 06 46 25.6
comp=Z,3.9nm,0.7s
AK09 Malin Array Si 29.80 304 P **P** 06 46 05.6 +0.5
AK10 Malin Array Si 29.82 304 P **P** 06 46 05.7 +0.4
AK08 Malin Array Si 29.83 304 P **P** 06 46 05.2 -0.1
AK07 Malin Array Si 29.85 304 P **P** 06 46 05.8 +0.3
AKASG Malin Array Be 29.85 305 P **P** 06 46 06.1 +0.5
comp=Z,1.8nm,0.6s,baz=115,slow=7.8,SNR=7.5
AKASG LR LR 07 00 23.3
comp=Z,99nm,18.9s,baz=34,slow=41
comp=Z,1.8nm,0.6s
AKASG Malin Array Be 29.85 305 P **P** 06 46 05.3 -0.2
AKASG pmax pmax
comp=Z,5.0nm,1.2s
AKASG Malin Array Be 29.85 305 P **P** 06 46 05.3 -0.2
AKBB Malin Array Si 29.85 305⇓*i*P **P** 06 46 06.2 +0.7
AKBB pmax pmax
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 29.85 305 P **P** 06 46 05.9 +0.4
AKBB IAmb IAmb 06 46 07.9
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 29.85 305 P **P** 06 46 06.3 +0.7
AK03 Malin Array Si 29.86 305 P **P** 06 46 06.1 +0.5
AK05 Malin Array Si 29.86 304 P **P** 06 46 05.4 -0.2
AK06 Malin Array Si 29.86 304 P **P** 06 46 05.5 -0.1
AK01 Malin Array Si 29.86 305 P **P** 06 46 05.5 -0.1
AK02 Malin Array Si 29.86 305 P **P** 06 46 05.5 -0.1
KIEV Kiev 29.86 305 P **P** 06 46 05.9 +0.3
KIEV pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 29.86 305 P **P** 06 46 05.9 +0.3
KIEV IAmb IAmb 06 46 07.9
comp=Z,5.5nm,0.8s
KIEV Kiev 29.86 305 P **P** 06 46 06.2 +0.6
comp=Z,30nm,0.7s
KIEV Kiev 29.86 305 P **P** 06 46 06.6 +0.9
AK11 Malin Array Si 29.89 305 P **P** 06 46 06.0 +0.2
AK12 Malin Array Si 29.89 304 P **P** 06 46 05.9 0.0
AK16 Malin Array Si 29.92 305 P **P** 06 46 06.4 +0.2
AK18 Malin Array Si 29.95 305 P **P** 06 46 06.4 0.0
AK22 Malin Array Si 29.95 305 P **P** 06 46 06.5 0.0
AK17 Malin Array Si 29.96 305 P **P** 06 46 06.4 -0.1
AK21 Malin Array Si 29.97 305 P **P** 06 46 06.2 -0.4
AK19 Malin Array Si 29.99 305 P **P** 06 46 06.5 -0.3
AK20 Malin Array Si 29.99 305 P **P** 06 46 06.8 0.0
PZH PanZhiHua 30.06 107 P **P** 06 46 10.2 +2.4
TIRR Tirgusor 30.43 292 P **P** 06 46 11.1 +0.4
TIRR pmax pmax
comp=Z,13nm,1.4s
TIRR Tirgusor 30.43 292 P **P** 06 46 11.1 +0.4
TIRR IAmb IAmb 06 46 38.2
comp=Z,13nm,1.4s
LUBAR Lubar, Ukraine 30.73 303 P **P** 06 46 13.0 -0.4
MI28 Mi28,Pidlybu 30.85 305 P **P** 06 46 14.3 -0.1
NRIK Noril'sk 31.03 12 LR LR 07 01 18.9
comp=Z,118nm,19.9s,baz=136,slow=41
KMPD K-Podol'skiy 31.55 300 P **P** 06 46 20.5 -0.1
NACGM Naroch 31.90 312 *e*P **P** 06 46 23.2 -0.3
HHC Hu-ho-hao-te 31.95 74 *e*P **P** 06 46 25.2 +0.8
HHC pmax pmax
comp=Z,6.0nm,0.6s
XAN Xi'an 31.97 88 *e*P **P** 06 46 20.4 -4.1
RNPP5 Staryi Chortor 32.00 305 P **P** 06 46 24.6 +0.1
RNPP9 Sopachiv 32.01 306 P **P** 06 46 24.7 +0.2
RNPP8 Varash 32.02 306 P **P** 06 46 24.9 +0.2
MLR Muntele Rosu 32.07 294 P **P** 06 46 26.2 +0.9
comp=Z,3.6nm,0.7s,baz=24,slow=5.2,SNR=5.0
comp=Z,3.6nm,0.7s
MLR Muntele Rosu 32.07 294 **P** 06 46 26.2 +0.9
MLR IAmb IAmb 06 46 30.5
comp=Z,9.8nm,1.1s
MLR Muntele Rosu 32.07 294 P **P** 06 46 25.7 +0.4
comp=Z,9.2nm,1.3s
MLR Muntele Rosu 32.07 294 P **P** 06 46 28.0 +2.6
VSU Vasula 32.72 319⇑*i*P **P** 06 46 31.2 +0.5
VSU pmax pmax
comp=Z,19nm,0.8s
ARR Arges 33.00 294 P **P** 06 46 35.1 +1.7
CMAR Chiang Mai Arr 33.30 121 P **P** 06 46 35.9 -0.3
comp=Z,0.9nm,0.3s,baz=326,slow=6.3,SNR=4.3
CMAR PcP **PcP** 06 49 19.1 +0.8
comp=Z,0.7nm,0.3s,baz=268,slow=2.8,SNR=1.5
CMAR LR LR 07 03 46.5
comp=Z,42nm,18.8s,baz=195,slow=43
comp=Z,0.9nm,0.3s
FINES FINESS Array B 33.93 324 P **P** 06 46 40.5 -0.8
comp=Z,2.6nm,0.8s,baz=121,slow=7.4,SNR=5.1
FINES LR LR 07 01 03.8
comp=Z,116nm,18.9s,baz=95,slow=37

comp=Z,2.6nm,0.8s
FINES FINESS Array B 33.93 324 P **P** 06 46 41.0 -0.2
FINES FINESS Array B 33.93 324 P **P** 06 46 41.0 -0.2
PALK Pallekele 34.07 160 LR LR 07 01 22.7
comp=Z,140nm,18.6s,baz=240,slow=38
TRPA Tarpa 34.18 300 P **P** 06 46 45.1 +1.5
KOLS Kolonicke sedl 34.31 301 *e*P **P** 06 46 46.7 +1.9
KOLS Kolonicke sedl 34.31 301 *e*P **P** 06 46 46.7 +1.9
NIE Niedzica 35.58 302 P **P** 06 46 55.9 +0.2
comp=Z,3.7nm,1.1s
OJC Ojcow 35.86 303 P **P** 06 46 57.8 -0.3
comp=Z,15nm,0.8s
OJC Ojcow 35.86 303 P **P** 06 46 57.7 -0.3
LANS Liptovska Anna 36.14 302 *e*P **P** 06 47 01.9 +1.4
LANS Liptovska Anna 36.14 302 *e*P **P** 06 47 01.9 +1.4
HILR Hailar Array B 36.46 58 P **P** 06 47 03.9 +0.6
comp=Z,1.5nm,0.5s,baz=238,slow=4.6,SNR=2.3
comp=Z,1.5nm,0.5s
JAVC Velka Javorina 37.35 301 P **P** 06 47 12.0 +1.2
ARCES ARCESS Array B 37.49 336 P **P** 06 47 11.6 -0.1
comp=Z,2.9nm,0.7s,baz=120,slow=8.9,SNR=14
ARCES PP **PP** 06 48 36.7 -0.3
comp=Z,3.3nm,0.8s,baz=119,slow=7.8,SNR=3.4
ARCES LR LR 07 03 39.7
comp=Z,362nm,18.2s,baz=108,slow=38
comp=Z,2.9nm,0.7s
ARCES ARCESS Array B 37.49 336 *e*P **P** 06 47 11.8 +0.1
MODS Modra-Piesok 37.66 301 *e*P **P** 06 47 15.3 +1.9
MODS Modra-Piesok 37.66 301 *e*P **P** 06 47 15.3 +1.9
KRLC Kraliky 37.80 303 P **P** 06 47 14.5 -0.1
VRAC Vranov 38.00 302 P **P** 06 47 16.6 +0.3
comp=Z,2.7nm,0.5s,baz=84,slow=9.4,SNR=4.8
VRAC LR LR 07 04 48.1
comp=Z,57nm,19.5s,baz=100,slow=39
comp=Z,2.7nm,0.5s
KSP Ksiaz 38.05 305 P **P** 06 47 16.9 +0.2
comp=Z,8.3nm,0.9s
DPC Dobruska-Polom 38.08 304 P **P** 06 47 17.2 +0.3
comp=Z,297nmcomp=Z,8.7nm,0.8s
DPC Dobruska-Polom 38.08 304 P **P** 06 47 14.2 -2.8
UPC Upice 38.26 304 P **P** 06 47 19.3 +0.9
BRG Berggiesshubel 39.53 305 *e*P **P** 06 47 30.1 +1.0
BRG Amp 06 47 31.7
comp=Z,7.4nm,0.8s
HFS Hagfors 39.59 320 P **P** 06 47 28.7 -0.7
comp=Z,6.3nm,0.6s,baz=99,slow=9.2,SNR=16
HFS LR LR 07 06 32.1
comp=Z,59nm,19.5s,baz=89,slow=40
comp=Z,6.3nm,0.6s
GERES GERESS Array B 39.95 302 P **P** 06 47 33.7 +1.0
comp=Z,2.3nm,0.7s,baz=69,slow=8.7,SNR=14
GERES PP **PP** 06 49 06.7 +2.3
comp=Z,0.4nm,0.4s,baz=94,slow=5.6,SNR=4.2
comp=Z,2.3nm,0.7s
GERES GERESS Array B 39.95 302 *e*P **P** 06 47 34.0 +1.3
KHC Kasperske Hory 39.99 302 *d i*P **P** 06 47 33.8 +0.9
KHC pmax pmax
comp=Z,7.0nm,0.9s
KHC Kasperske Hory 39.99 302 **P** 06 47 33.3 +0.4
KHC IAmb IAmb 06 47 36.1
comp=Z,5.5nm,0.8s
KHC Kasperske Hory 39.99 302 P **P** 06 47 33.4 +0.4
comp=Z,7.6nm,0.9s
KHC Kasperske Hory 39.99 302 P **P** 06 47 34.0 +1.1
COP Copenhagen 40.13 313 *i* P P 06 47 38.8 +4.9
COP IAmb IAmb 06 47 39.5
comp=Z,57nm,0.3s
PRED Cave del Predi 40.46 298 P **P** 06 47 37.8 +0.9
SABO M.te Sabotino 40.53 298 **P** 06 47 37.8 +0.3
SABO IAmb IAmb 06 47 40.1
comp=Z,16nm,1.0s
NB2 NORSAR Subarra 40.88 321 P **P** 06 47 39.2 -1.0
comp=Z,3.1nm,0.7s,baz=94,slow=8.6
NOA NORSAR Array B 40.88 321 P **P** 06 47 39.5 -0.8
comp=Z,3.2nm,0.7s,baz=94,slow=8.3,SNR=17
NOA PP **PP** 06 49 12.1 -2.2
comp=Z,1.2nm,0.9s,baz=96,slow=10,SNR=3.4
NOA LR LR 07 05 28.3
comp=Z,93nm,18.1s,baz=100,slow=37
comp=Z,3.2nm,0.7s
YAK Yakutsk 42.00 38 *e*P **P** 06 47 49.5 +0.2
YAK *e**PP **pP** 06 47 52.8 -0.5
YAK *e* 06 49 25.3
YAK *e* 06 49 44.5
YAK *e*PPP PPP 06 49 56.4
YAK *e*S **S** 06 54 08.3 +0.7
YAK *e**SS **sS** 06 54 14.7 +0.4
YAK *e*SS **SS** 06 57 15.7 +1.5
YAK *e*SSS SSS 06 57 44.9
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=Z,130nm,6.8s
YAK pmax pmax
comp=N,42nm,5.0s
YAK smax smax
comp=N,47nm,4.0s
YAK smax smax
comp=E,43nm,3.5s
BNX BinXian 42.17 62 ⇓P **P** 06 47 50.8 -0.1
BNX pmax pmax
comp=E,7.0nm,0.9s
DAVOX Davos/Dischmat 42.87 300 P **P** 06 47 56.3 -0.5
comp=E,1.8nm,0.3s,baz=68,slow=5.4,SNR=4.1
DAVOX LR LR 07 08 13.9
comp=E,69nm,20.3s,baz=68,slow=40
comp=E,1.8nm,0.3s
TUE Stuetta 43.30 299 **P** 06 48 00.9 +0.6
TUE Stuetta 43.30 299 P **P** 06 48 00.4 +0.1
comp=E,23nm,1.3s
SPITS Spitsbergen Ar 43.86 346 P **P** 06 48 03.8 -0.4
comp=E,2.7nm,0.7s,baz=101,slow=15,SNR=5.5
SPITS LR LR 07 08 52.4
comp=E,112nm,18.6s,baz=124,slow=40
comp=E,2.7nm,0.7s
SPITS Spitsbergen Ar 43.86 346 P **P** 06 48 05.1 +0.9
SPITS pmax pmax
comp=Z,12nm,1.1s
KLR Kul'dur 44.26 56 *c i*P **P** 06 48 07.7 0.0
KLR pmax pmax
comp=Z,3.0nm,0.9s
SENIN Lac Senin/Sane 44.70 300 **P** 06 48 11.7 +0.2
SENIN IAmb IAmb 06 48 13.5
comp=Z,5.4nm,0.7s
KBS Kingsbay 44.99 347 *i* P **P** 06 48 12.6 -0.6
KSRS Korea Array 45.08 74 P **P** 06 48 13.7 -0.8
comp=Z,2.0nm,0.9s,baz=290,slow=7.0,SNR=11
comp=Z,2.0nm,0.9s
BNI Bardonecchia 45.47 298 P **P** 06 48 18.1 +0.4
BNI pmax pmax
comp=Z,10.0nm,1.2s
BNI Bardonecchia 45.47 298 **P** 06 48 18.1 +0.4
BNI IAmb IAmb 06 48 21.9
comp=Z,9.7nm,1.2s
USRK Ussuriysk Ar. 45.72 63 P **P** 06 48 18.6 -0.8
comp=Z,1.7nm,0.7s,baz=300,slow=6.5,SNR=2.7
comp=Z,1.7nm,0.7s
KEST Kesra 46.80 285 P **P** 06 48 27.7 -0.4
comp=Z,5.9nm,0.9s,baz=114,slow=7.1,SNR=5.9
comp=Z,5.9nm,0.9s
EKA Eskdalemuir Ar 48.95 314 P **P** 06 48 43.5 -0.9
comp=Z,2.6nm,0.7s,baz=89,slow=7.3,SNR=7.0
EKA LR LR 07 12 23.3
comp=Z,49nm,18.4s,baz=185,slow=40
comp=Z,2.6nm,0.7s
TYV Tymovskoe 50.63 52 *e*P P 06 49 02.9 +5.7
TYV pmax pmax
comp=Z,8.0nm,1.1s
TYV pmax pmax
comp=Z,100nm,2.8s
DAG Danmarks Havn 51.08 343 *i* P **P** 06 49 00.0 -0.3
DAG IAmb IAmb 06 49 02.7
comp=Z,5.9nm,0.8s
YSS Yuzhno-Sakhali 51.97 56 *e*P **P** 06 49 08.2 +0.8
YSS pmax pmax
comp=Z,11nm,1.1s
MJAR Matsushiro Arr 52.97 70 P **P** 06 49 13.7 -1.3
comp=Z,0.8nm,0.3s,baz=292,slow=10,SNR=5.3
comp=Z,0.8nm,0.3s
MJAR Matsushiro Arr 52.97 70 P **P** 06 49 14.8 -0.2
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR Matsushiro Arr 52.97 70 **P** 06 49 14.8 -0.2

SCO Scoresbysund 53.40 335 *i* P **P** 06 49 19.4 +1.9
SCO IAmb IAmb 06 49 21.1
comp=Z,5.1nm,0.9s
ESDC Sonseca Array 54.76 295 P **P** 06 49 28.1 0.0
comp=Z,1.2nm,0.6s,baz=76,slow=7.6,SNR=7.6
comp=Z,1.2nm,0.6s
ESDC Sonseca Array 54.76 295 P **P** 06 49 28.4 +0.3
BORG Borgarnes 55.00 328 LR LR 07 13 17.0
comp=Z,39nm,18.4s,baz=88,slow=36
BILL Bilibino 56.13 27 ⇑*i* P **P** 06 49 38.4 +1.0
BILL pmax pmax
comp=Z,4.0nm,1.0s
SUMG Summit 57.40 340 P **P** 06 49 46.6 -0.3
SUMG pmax pmax
comp=Z,7.0nm,0.7s
SUMG Summit 57.40 340 **P** 06 49 46.6 -0.3
SUMG Summit 57.40 340 *i* P **P** 06 49 47.0 +0.1
SUMG IAmb IAmb 06 49 49.1
comp=Z,5.2nm,0.8s
NEEM North Greenlan 57.41 347 *i* P **P** 06 49 46.2 -0.5
NEEM IAmb IAmb 06 49 47.5
comp=Z,4.0nm,0.9s
SFJD Kangerlussuaq 64.10 338 LR LR 07 18 57.9
comp=Z,60nm,18.1s,baz=28,slow=36
A19K Wainwright 64.28 17 P **P** 06 50 32.9 -0.3
baz=319
A21K Barrow 64.35 15 P **P** 06 50 32.6 -1.0
baz=322
TORD Tordi Ar. Bea 64.57 266 P **P** 06 50 35.0 -0.9
comp=Z,5.3nm,0.8s,baz=46,slow=5.9,SNR=19
comp=Z,5.3nm,0.8s
C16K Lisburne Hills 64.68 20 P **P** 06 50 34.8 -1.0
baz=316
A22K Sinclair Lake 64.93 15 P **P** 06 50 36.7 -0.7
baz=324
VOI Vohitsoka 65.01 203 P **P** 06 50 39.8 +1.1
C17K DeLong Mountai 65.08 19 P **P** 06 50 38.1 -0.3
baz=316
B20K Meade River 65.28 16 P **P** 06 50 38.9 -0.8
baz=322
C18K Utukok River 65.43 18 P **P** 06 50 40.2 -0.6
baz=319
C19K Lookout Ridge 65.46 17 P **P** 06 50 40.6 -0.4
baz=320
D17K Noatak River 65.68 19 P **P** 06 50 41.9 -0.4
baz=318
B22K Teshekpuk Lake 65.77 15 P **P** 06 50 41.9 -0.9
baz=325
TNA Tin City 65.91 23 P **P** 06 50 43.0 -0.8
baz=315
GAMB Gambell 65.97 25 P **P** 06 50 43.9 -0.3
baz=313
B21K Ikpikpuk River 66.12 15 P **P** 06 50 44.6 -0.5
baz=324
D19K Kuna River 66.27 17 P **P** 06 50 45.3 -0.8
baz=322,SNR=5.8
D20K Etivluk River 66.43 17 P **P** 06 50 45.8 -1.4
baz=323
F14K Arctic Creek 66.43 22 P **P** 06 50 46.2 -1.0
baz=316
C21K Knifeblade Rid 66.47 16 P **P** 06 50 47.1 -0.3
baz=324
E17K Hotham Inlet 66.47 19 P **P** 06 50 46.4 -1.0
baz=319
E18K Tukpahlearik C 66.51 19 P **P** 06 50 46.8 -0.9
baz=320
C23K Itkillik River 66.72 14 P **P** 06 50 48.4 -0.6
baz=328
F15K North Star Dit 66.74 21 P **P** 06 50 48.6 -0.6
baz=317
E20K Nigu River 66.89 17 P **P** 06 50 49.2 -1.0
baz=323,SNR=5.1
F17K Baldwin Pennin 67.10 20 P **P** 06 50 50.8 -0.6
baz=320
E21K Killik River 67.22 16 P **P** 06 50 51.9 -0.4
baz=325
E19K Redstone River 67.30 18 P **P** 06 50 51.9 -0.8
baz=323
ANM Nome 67.38 22 P **P** 06 50 52.2 -1.0
baz=317
F18K Selawik 67.39 19 P **P** 06 50 52.3 -1.0
baz=321
G15K Niukluk 67.44 22 P **P** 06 50 53.0 -0.7
baz=318
D23K Nanushuk River 67.45 15 P **P** 06 50 53.1 -0.5
baz=328
F19K Shaleruckik Mo 67.67 18 P **P** 06 50 54.8 -0.2
baz=322
A36M Sachs Harbour 67.92 5 P **P** 06 50 56.1 -0.4
baz=348
D25K Kavik River 67.93 13 P **P** 06 50 56.2 -0.5
baz=331
TOLK Toolik Lake Re 67.94 14 P **P** 06 50 56.2 -0.6
baz=329
F20K Avaraart Lake 67.98 17 P **P** 06 50 56.3 -0.6
baz=324
G17K Kiwalik Mounta 67.99 20 P **P** 06 50 56.3 -0.8
baz=321
C27K Jago River 68.10 12 P **P** 06 50 57.1 -0.6
baz=333
G18K Tagagawik 68.19 19 P **P** 06 50 57.5 -0.9
baz=322
H16K Eilm 68.22 21 P **P** 06 50 57.9 -0.7
baz=320
F21K Alatna River 68.34 17 P **P** 06 50 58.8 -0.5
baz=326
F22K John River 68.38 16 P **P** 06 50 59.2 -0.3
baz=327
G19K Purcell Mounta 68.39 18 P **P** 06 50 59.6 0.0
baz=323
E23K Chandalar 68.43 15 P **P** 06 50 59.6 -0.3
baz=329
H17K Granite Mounta 68.62 20 P **P** 06 51 00.6 -0.5
baz=321
E24K Your Creek 68.64 14 P **P** 06 51 00.9 -0.3
baz=330
H18K Honhosa River 68.86 20 P **P** 06 51 02.0 -0.6
baz=322
D27M Malcolm River 68.87 11 P **P** 06 51 02.0 -0.6
baz=335
G21K Alakaket 68.92 17 P **P** 06 51 02.3 -0.6
baz=326
G22K Bettles 69.02 16 P **P** 06 51 03.0 -0.4
baz=327
COLD Coldfoot 69.03 15 P **P** 06 51 02.8 -0.8
baz=328
E25K Arctic Village 69.13 13 P **P** 06 51 04.0 -0.2
baz=332
F24K Squaw Lake 69.23 14 P **P** 06 51 04.3 -0.6
baz=330
SIJI Sorong 69.38 109 P **P** 06 51 06.0 -0.5
comp=Z,8.2nm,0.5s,baz=289,slow=3.2,SNR=5.8
comp=Z,8.2nm,0.5s
H20K Anotleneega Mo 69.45 18 P **P** 06 51 05.7 -0.5
baz=325,SNR=13
G23K Bananza Creek 69.51 16 P **P** 06 51 06.5 0.0
baz=329
K13K Kusilvak Mount 69.55 24 P **P** 06 51 06.7 -0.1
baz=318
GCSA Galena City Sc 69.56 19 P **P** 06 51 06.6 -0.3
baz=324
F25K Christian Rive 69.58 14 P **P** 06 51 07.0 0.0
baz=332,SNR=7.5
E28M Babbage River 69.66 11 P **P** 06 51 07.3 -0.2
baz=337
J16K Anvik River 69.73 22 P **P** 06 51 07.9 0.0
baz=321
E27K Coleen River 69.73 12 P **P** 06 51 08.1 +0.1
baz=335
F26K Sheenjek River 69.76 13 P **P** 06 51 08.0 -0.1
baz=333
H21K Melozitna Rive 69.80 17 P **P** 06 51 08.0 -0.3
baz=327
H22K Ishtalitna Cre 69.92 17 P **P** 06 51 09.1 0.0
baz=328
G24K Hadweenzic Riv 70.03 15 P **P** 06 51 09.5 -0.2
baz=331
E29M Blow River 70.10 10 P **P** 06 51 09.8 -0.3
baz=338
I20K Naaghedeneel 70.12 18 P **P** 06 51 10.0 -0.3
baz=326
G25K Bearman Lake 70.23 14 P **P** 06 51 11.0 +0.1
baz=332
H23K Yukon River 70.37 16 P **P** 06 51 11.7 -0.1
baz=329
G26K Porcupine Rive 70.49 13 P **P** 06 51 12.5 0.0
baz=334
J19K Poorman 70.50 19 P **P** 06 51 12.8 +0.1
baz=325
F28M Old Crow 70.53 11 P **P** 06 51 12.5 -0.3
baz=336
C36M Paulatuk 70.59 5 P **P** 06 51 13.0 -0.1
baz=349
L14K Kuka Creek 70.61 24 P **P** 06 51 13.5 +0.2
baz=320
H24K Noodor Dome 70.70 15 P **P** 06 51 13.9 0.0
baz=330
J20K Nowinta River 70.71 19 P **P** 06 51 14.0 0.0
baz=326,SNR=7.5
L15K Ungalak Mounta 70.72 23 P **P** 06 51 13.6 -0.4
baz=321
INK Inuvik 70.73 9 P **P** 06 51 14.0 0.0
baz=342
MLY Manley 70.79 17 P **P** 06 51 14.1 -0.4
baz=328
K17K Iditarod 70.82 21 P **P** 06 51 14.5 -0.1
baz=323
G27K Doyon Strip 70.98 12 P **P** 06 51 15.4 -0.2
baz=335,SNR=7.6
I23K Minto, Yukon-K 70.99 16 P **P** 06 51 15.5 -0.1
baz=329,SNR=5.5
SPIA Saint Paul Isl 71.09 30 P **P** 06 51 16.1 -0.2
baz=316
F30M Barrier River 71.11 10 P **P** 06 51 15.6 -0.8
baz=340
L17K Donlin 71.29 22 P **P** 06 51 16.8 -0.7
baz=323
L16K Owhat River 71.29 22 P **P** 06 51 17.2 -0.3
baz=322
M14K Bethel 71.30 24 P **P** 06 51 16.9 -0.6
baz=321
CHUM Lake Minchumin 71.40 18 P **P** 06 51 17.9 -0.2
baz=327
FRB Frobisher Bay 71.41 342 LR LR 07 25 42.6
comp=Z,45nm,18.7s,baz=68,slow=38
K20K Telida 71.42 19 P **P** 06 51 18.2 0.0
baz=326
POKR Poker Plat Res 71.42 15 P **P** 06 51 17.8 -0.5
baz=331
PRP Porcupine Dome 71.45 15 P **P** 06 51 18.0 -0.6
baz=332
G29M Pine Creek 71.45 11 P **P** 06 51 17.9 -0.6
baz=338
H27K Steamboat Moun 71.53 13 P **P** 06 51 18.9 0.0
baz=335,SNR=7.6
F31M Tsiigehtchic 71.53 9 P **P** 06 51 19.0 +0.2
baz=341
NEA2 Nenana 71.54 16 P **P** 06 51 19.2 +0.2
baz=330
COLA College 71.55 16 P **P** 06 51 19.6 +0.6
COLA pmax pmax
comp=Z,11nm,0.8s
COLA College 71.55 16 P **P** 06 51 19.6 +0.6
COLA College 71.55 16 P **P** 06 51 18.5 -0.5
baz=331
G30M tAoh Zraii Nji 71.65 10 P **P** 06 51 19.3 -0.4
baz=340
L18K Granite Mounta 71.67 21 P **P** 06 51 19.1 -0.7
baz=324
M15K Kasigluk River 71.73 23 P **P** 06 51 19.7 -0.4
baz=322
CCB Clear Creek Bu 71.76 16 **P** 06 51 19.8 -0.5
CCB IAmb IAmb 06 51 44.6
comp=Z,3.2nm,1.2s
ILAR Eielson Array 71.84 15 P **P** 06 51 20.4 -0.4
comp=Z,2.2nm,0.8s,baz=327,slow=4.9,SNR=21
comp=Z,2.2nm,0.8s
ILAR Eielson Array 71.84 15 P **P** 06 51 20.6 -0.2
ILAR Eielson Array 71.84 15 P **P** 06 51 20.6 -0.2
CAST Castle Rocks 71.85 18 P **P** 06 51 20.5 -0.4
baz=328
G31M Satah River 71.96 10 P **P** 06 51 21.0 -0.4
baz=341
M16K Timber Creek 71.99 22 P **P** 06 51 21.6 -0.1
baz=323
H29M Whitestone 72.05 11 P **P** 06 51 21.5 -0.5
baz=338,SNR=6.4
I26K Coal Creek Min 72.09 14 P **P** 06 51 21.9 -0.3
baz=334
I27K Kandik River 72.09 13 P **P** 06 51 22.2 -0.2
baz=335
M17K Holitna River 72.12 22 P **P** 06 51 22.1 -0.5
baz=324
HDA Harding Lake 72.15 16 P **P** 06 51 22.5 -0.1
baz=331
EPYK Eagle Plains 72.15 11 P **P** 06 51 22.5 -0.1
baz=339
L19K White Mountain 72.19 20 P **P** 06 51 22.0 -1.0
baz=326
TRF Thorofare Moun 72.25 18 P **P** 06 51 22.6 -0.9
baz=329
PPLA Purkeypile 72.27 19 P **P** 06 51 22.5 -1.1
baz=328
J25K Salcha River, 72.29 15 P **P** 06 51 22.7 -0.9
baz=333
MCK McKinley 72.31 17 P **P** 06 51 22.8 -0.8
baz=330
N15K Kwethluk River 72.33 23 P **P** 06 51 23.0 -0.8
baz=322
N16K Nishlik Lake 72.49 23 P **P** 06 51 24.0 -0.7
baz=323
M18K Stony River 72.50 21 P **P** 06 51 24.5 -0.2
baz=325
I28M Miner Creek 72.52 12 P **P** 06 51 24.5 -0.4
baz=337,SNR=8.5
M19K Big River Lodg 72.54 20 P **P** 06 51 24.2 -0.8
baz=326
O14K Tigyukauivet M 72.69 25 P **P** 06 51 25.4 -0.4
baz=322
M20K Styx River 72.89 20 P **P** 06 51 26.7 -0.5
baz=327
N17K Nushagak Hills 72.91 22 P **P** 06 51 27.1 -0.1
baz=324
K24K Donnelly Dome 72.93 15 P **P** 06 51 26.8 -0.5
baz=332,SNR=5.3
L22K Petersville 72.93 18 P **P** 06 51 27.3 -0.1
baz=329
H31M Peel River 73.01 10 P **P** 06 51 27.3 -0.5
baz=341
SCRK Sand Creek 73.13 15 P **P** 06 51 27.7 -0.9
baz=334,SNR=8.6
N18K Kilae Creek 73.15 21 P **P** 06 51 28.2 -0.5
baz=325
RIDG Independent Ri 73.17 15 P **P** 06 51 28.1 -0.7
baz=333
WAT1 Susitna Watana 73.19 17 P **P** 06 51 28.6 -0.3
baz=330
O15K Ungalikthiuk R 73.20 24 P **P** 06 51 28.6 -0.3
baz=323
SKT Skwentna 73.21 19 P **P** 06 51 28.8 -0.2
baz=328,SNR=7.9
DHY Denali Highway 73.23 17 P **P** 06 51 28.6 -0.6
baz=331,SNR=6.7
I30M Mount Dempster 73.28 11 P **P** 06 51 28.7 -0.8
baz=340
O16K Kokwok River B 73.40 23 P **P** 06 51 29.3 -0.8
baz=324
N19K Bonanza Creek 73.43 21 P **P** 06 51 30.2 -0.2
baz=326
O17K Koliganek Bris 73.55 22 P **P** 06 51 30.3 -0.6
baz=324
WAT6 Susitna Watana 73.59 17 P **P** 06 51 30.4 -1.0
baz=331
M22K Willow 73.75 18 P **P** 06 51 31.5 -0.6
baz=329
DAWY Dawson 73.89 13 P **P** 06 51 32.6 -0.4
baz=337
J30M Hart River 73.90 11 P **P** 06 51 32.2 -0.9
baz=340
PMR Palmer 74.13 18 P **P** 06 51 34.3 -0.1
baz=330
SML Sawmill 74.13 18 P **P** 06 51 34.2 -0.3
baz=331,SNR=6.7
P17K Kvichak River 74.22 23 P **P** 06 51 34.2 -0.6
baz=325
M23K Glacier View 74.28 17 P **P** 06 51 35.4 +0.1
baz=331,SNR=5.2
HARP HAARP 74.31 16 P **P** 06 51 35.0 -0.5
baz=333
SCM Sheep Creek Mo 74.34 17 P **P** 06 51 35.0 -0.7
baz=332
M24K Tolsona, Glenn 74.35 16 P **P** 06 51 35.3 -0.4
baz=332
L27K Beaver Creek, 74.37 14 P **P** 06 51 35.5 -0.4
baz=336
K29M Barlow Dome 74.40 12 P **P** 06 51 35.3 -0.8

baz=339
P18K Big Mountain, 74.40 22 P P 06 51 35.8 -0.3
baz=326
KNK Knik Glacier 74.45 18 P P 06 51 36.0 -0.2
baz=331
O20K Slope Mountain 74.55 20 P P 06 51 36.8 -0.1
baz=328
P19K Oil Pt 74.75 21 P P 06 51 37.5 -0.5
baz=327
M26K Nabesna, AK 74.75 15 P P 06 51 37.9 -0.2
baz=335
O22K Cooper Landing 74.95 19 P P 06 51 39.2 +0.1
baz=330
KLU Klutina 74.95 17 P P 06 51 38.6 -0.7
baz=333
L29M L29M 74.99 13 P P 06 51 38.9 -0.5
baz=338
M27K Edge Creek, AK 75.01 14 P P 06 51 39.3 -0.4
baz=336
Q18K Katmai Hardscr 75.09 22 P P 06 51 39.8 -0.4
baz=326
N25K Chitina, Valde 75.14 16 P P 06 51 39.8 -0.5
baz=334
Q17K Contact Creek 75.15 23 P P 06 51 40.1 -0.3
baz=326
BVCY Beaver Creek 75.15 14 P P 06 51 40.2 -0.1
baz=336
GLI Glacier Island 75.23 17 P P 06 51 40.6 -0.2
baz=332
Q19K Cape Douglas, 75.24 21 P P 06 51 40.8 -0.1
baz=327
BLKN Baker Lake 75.45 353 P P 06 51 41.8 -0.1
BLKN IAmb IAmb 06 51 42.2
comp=Z,4.6nm,1.0s
R17L Mt. Peulik Vol 75.53 23 P P 06 51 42.0 -0.6
baz=325
M29M Somme Creek 75.55 13 P P 06 51 42.1 -0.7
baz=338
S14K Fog Glacier 75.60 26 P P 06 51 42.9 -0.2
baz=323
MCARA McCarthy VSAT 75.67 15 P P 06 51 43.0 -0.3
baz=335
M30M Minto, Yukon 75.70 12 P P 06 51 43.3 -0.3
baz=340
BMRM Bremner River 75.71 16 P P 06 51 43.6 -0.1
baz=334
YUK3 Moose Creek 75.81 14 P P 06 51 44.0 -0.4
baz=337,SNR=5.8
EYAK Cordova Ski Ar 75.83 17 P P 06 51 44.3 +0.1
baz=333
P23K Montague Islan 75.94 18 P P 06 51 44.6 -0.2
baz=332
YUK8 Steele Glacier 76.39 14 P P 06 51 47.3 -0.4
baz=337
M31M Drury Creek, Y 76.43 11 P P 06 51 47.3 -0.3
baz=341,SNR=6.8
MMPY Sheldon Lake, 76.47 10 P P 06 51 47.4 -0.5
baz=344
KDAK Kodiak Island 76.51 22 LR LR 07 30 25.5
comp=Z,45nm,18.3s,baz=313,slow=40
YUK4 Talbot Arm 76.54 13 P P 06 51 47.2 -1.3
baz=338
WRGLY Wrigley 76.69 6 P P 06 51 48.5 -0.5
baz=350
KAIM Kayak Island 76.69 17 P P 06 51 48.3 -0.8
baz=334
Q23K Middleton Isla 76.69 18 P P 06 51 48.6 -0.5
baz=333
N30M Aishikik Lake 76.71 13 P P 06 51 48.9 -0.4
baz=339
CHNA Chernabura Isl 76.76 27 P P 06 51 49.0 -0.5
baz=324
OHAK Old Harbor 76.79 22 P P 06 51 49.4 -0.3
baz=328
N31M Braeburn, Yuko 76.90 12 P P 06 51 49.9 -0.4
baz=340
YUK6 Outpost Mounta 76.97 13 P P 06 51 50.2 -0.7
baz=338
SII Sitkinak Islan 77.08 23 P P 06 51 50.8 -0.6
baz=327
HYT Haines Junctio 77.23 13 P P 06 51 51.6 -0.7
baz=339,SNR=7.1
PINM Pinnacle 77.40 15 P P 06 51 52.8 -0.4
baz=337
O30N Mendenhall 77.52 12 P P 06 51 53.1 -0.7
baz=340,SNR=8.4
O29M Mount Kennedy 77.53 14 P P 06 51 53.5 -0.5
baz=338
N32M Quiet Lake 77.63 11 P P 06 51 53.7 -0.7
baz=342
YKAW3 Yellowknife Wh 77.81 2 P P 06 51 55.5 +0.2
YKAW3 IAmb IAmb 06 51 56.0
comp=Z,2.6nm,0.8s
WHY Whitehorse 77.82 12 P 06 51 55.6 0.0
WHY Whitehorse 77.82 12 P P 06 51 54.8 -0.8
baz=341
YKA Yellowknife Ar 77.88 2 P P 06 51 55.6 -0.1
comp=Z,2.6nm,0.8s,baz=354,slow=5.8,SNR=10
comp=Z,2.6nm,0.8s
YKA Yellowknife Ar 77.88 2 P P 06 51 55.1 -0.6
P30M Million Dollar 77.99 13 P P 06 51 55.6 -0.8
baz=340
KNRA Kununurra 78.16 122 P P 06 51 58.6 +0.7
P29M Windy Craggy 78.31 14 P P 06 51 57.7 -0.5
baz=339
SCHQ Schefferville 78.44 336 P P 06 51 58.6 -0.4
comp=Z,4.1nm,0.8s,baz=9.8,slow=5.3,SNR=5.2
comp=Z,4.1nm,0.8s
SCHQ Schefferville 78.44 336 P P 06 51 58.9 -0.1
SCHQ IAmb IAmb 06 51 59.2
comp=Z,5.1nm,0.9s
P33M Teslin, Yukon 78.57 11 P P 06 51 59.2 -0.5
baz=343,SNR=5.6
PLBC Pleasant Camp 78.72 13 P P 06 51 59.7 -0.7
baz=340
SKAG Skagway 78.89 13 P P 06 52 00.0 -1.3
baz=341
P32M Atlin 79.03 12 P P 06 52 00.9 -1.3
baz=342
WTLY Watson Lake, Y 79.21 9 P P 06 52 02.8 -0.3
baz=346
R33M Jennings River 79.62 10 P P 06 52 05.1 -0.5
baz=344
Q32M Nakina River 79.85 11 P P 06 52 06.8 -0.1
baz=343
R32K Eaglecrest 80.15 13 P P 06 52 08.0 -0.3
baz=342
S31K Pelican 80.15 14 P P 06 52 07.8 -0.4
baz=340
DLBC Dease Lake 80.67 10 P P 06 52 10.9 -0.3
baz=345
S32K Killisnoo 80.91 13 P P 06 52 11.8 -0.5
baz=342
S34M Telegraph Cree 81.03 11 P P 06 52 12.9 -0.1
baz=344
SIT Sitka 81.17 13 P P 06 52 13.9 +0.2
baz=341
T35M Bob Quinn 82.05 11 P P 06 52 18.6 +0.1
baz=345
WRAK Wrangell Islan 82.28 12 P P 06 52 20.2 +0.7
baz=343
U33K Whale Pass 82.45 12 P P 06 52 21.2 +0.8
baz=343
WRA Warramunga Arr 84.89 121 P P 06 52 32.5 -1.0
comp=Z,3.0nm,0.7s,baz=321,slow=4.7,SNR=22
comp=Z,3.0nm,0.7s
WRA Warramunga Arr 84.89 121 P P 06 52 33.3 -0.2
WRA Warramunga Arr 84.89 121 P P 06 52 33.2 -0.2
WR8 Warramunga Arr 85.01 121 P P 06 52 33.7 -0.3
WR8 IAmb IAmb 06 52 55.9
comp=Z,6.0nm,1.1s
ASAR Alice Springs 87.27 124 P P 06 52 44.7 -0.5
comp=Z,2.8nm,0.8s,baz=316,slow=4.6,SNR=24
comp=Z,2.8nm,0.8s
ASAR Alice Springs 87.27 124 P P 06 52 45.3 +0.1
ASAR Alice Springs 87.27 124 P P 06 52 45.3 +0.1
ULM Lac du Bonnet 89.27 351 LR LR 07 36 39.2
comp=Z,5.8nm,20.6s,baz=16,slow=38
NEW Newport 92.01 4 LR LR 07 39 34.3
comp=Z,43nm,19.1s,baz=318,slow=39
PDAR Pinedale Array 97.69 359 P Pdif 06 53 34.1 +0.5
comp=Z,0.2nm,0.6s,baz=312,slow=8.8,SNR=2.1
comp=Z,0.2nm,0.6s
QSPA South Pole Qui 129.72 180 PKP PKPdf 06 59 05.3 -1.3
comp=Z,1.7nm,1.0s,baz=270,slow=3.0,SNR=3.5
QSPA South Pole Qui 129.72 180 PKiKP 06 59 07.4 0.0
CPUP Villa Florida 133.96 270 PKP PKPdf 06 59 14.9 -0.9
comp=Z,1.5nm,0.7s,baz=34,slow=7.3,SNR=3.9
CPUP Villa Florida 133.96 270 PKiKP PKPdf 06 59 15.6 -0.2
CPUP Villa Florida 133.96 270 PKPdf 06 59 15.6 -0.2
PLCA Paso Flores 149.59 255 PKPbc PKPbc 06 59 47.6 -0.1
comp=Z,1.4nm,0.6s,baz=76,slow=4.2,SNR=3.7

*ISN **09** 06:46:39.4±2.0,34˚.40N×45˚.53E,h11km±13km, ML3.4, Presumed earthquake*
*TEH **09** 06:46:39.8,34˚.37N×45˚.56E,h7km±32km, ML3.4, Presumed earthquake*
ISC 09 06:46:40.4±1.1,34˚.37N±0˚.04×45˚.52E±0˚.05,h18km,n14, σ1s64/18,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.79**	**65**	Pg	**Pb**	**06 46 54.3**	**-1.4**
IDHR				Sg	**Sg**	**06 47 05.9**	**-0.5**
IGHG	**Ghaleghazi**	**0.87**	**93**	Pg	**Pb**	**06 46 56.5**	**-0.6**
IGHG				Sg	**Sg**	**06 47 09.0**	**0.0**
ILBA	**Ilam Banvizeh**	**0.94**	**142**	Pg	**Pb**	**06 46 57.8**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.26**	**94**	Pg	**Pn**	**06 47 03.1**	**-0.2**
BHD	**Baghdad**	**1.45**	**221**	*e*Pg	**Pn**	**06 47 06.0**	**+0.3**
	baz=40						
BHD				*e*Sg	**Sg**	**06 47 28.0**	**+0.7**
BHD				AML	AML	06 47 36.4	
	comp=E,979nm,0.4s						
SNJK	**Sanadaj _Korde**	**1.66**	**50**	Pg	**Pb**	**06 47 11.2**	**+0.6**
SNQR	**Sonqor, Kerman**	**1.81**	**74**	Pg	**Pg**	**06 47 13.9**	**-1.3**
MAHB	**Mahabad**	**2.39**	**4**	Pn	**Pb**	**06 47 21.8**	**-1.2**
RAFI	**Al-Rafai**	**2.69**	**169**	*e*Pn	**Pn**	**06 47 25.0**	**+2.2**
RAFI				*e*Sn	**Sb**	**06 47 59.0**	**-1.6**
RAFI				AML	AML	06 48 03.7	
	comp=E,213nm,0.2s						
RAFI				AML	AML	06 48 03.8	
	comp=N,192nm,0.2s						
BDRS	**Dareh Seyedi**	**2.82**	**98**	Pn	**Pn**	**06 47 26.7**	**+1.9**
IHSH	**Hashtrud**	**3.25**	**25**	Pn	**Pn**	**06 47 33.3**	**+2.5**
JHBN	**Jahan bin**	**4.81**	**115**	Pn	**Pn**	**06 47 54.1**	**+1.9**
IKLH	**Kolahrood**	**5.15**	**100**	Pn	**Pn**	**06 47 59.7**	**+2.8**
IZEF	**Zefreh**	**5.87**	**103**	Pn	**Pn**	**06 48 08.8**	**+2.1**

*SJA **09** 07:08:06.5±1.2,24˚.20S×67˚.08W,h195km±8km, ML3.2, MW3.5*
*GUC **09** 07:08:07.5±0.7,24˚.16S×67˚.11W,h196km±7km, ML3.6*
*IDC **09** 07:08:12.6±11.0,23˚.68S×66˚.29W,h193km±86km, mb3.2/1, mbtmp3.8/2, MS3.1/2, Error ellipse: s-maj=139.6km s-min=87.9km az=53.0*
ISC 09 07:08:06.8±1.0,24˚.22S±0˚.04×67˚.14W±0˚.04,h192km±8km, n38,σ1s12/54,6C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.73**	**91**	*i* P	**Pn**	**07 08 35.0**	**+0.3**
SALTA				*i* S	**S**	**07 08 55.8**	**-0.3**
SALTA				IAML		07 09 16.2	
	comp=Z,31nm,3.5s						
SLA	**San Lorenzo**	**1.57**	**109**	*i* P	**Pn**	**07 08 41.4**	**+0.7**
SLA				*i* S	**S**	**07 09 06.2**	**-0.7**
SLA				IAML		07 09 07.4	
	comp=Z,13nm,0.8s						
SLA	**San Lorenzo**	**1.57**	**109**	⇓*e*P	**Pn**	**07 08 41.3**	**+0.6**
SLA				*e*S	**S**	**07 09 06.8**	**-0.1**
AF01	**San Pedro de A**	**1.58**	**323**	*i* P	**Pn**	**07 08 42.4**	**+1.5**
AF01				IAML		07 09 19.7	
	comp=Z,83nm,0.1s						
AF01	**San Pedro de A**	**1.58**	**323**	*e*P	**Pn**	**07 08 42.3**	**+1.4**
HJA	**Humahuaca**	**1.88**	**58**	*i* P	**Pn**	**07 08 44.1**	**+0.1**
HJA				*i* S	**S**	**07 09 12.0**	**-0.6**
HJA				IAML		07 09 15.3	
	comp=Z,8.0nm,1.2s						
FSA	**Cafayete**	**2.16**	**151**	*i* P	**Pn**	**07 08 47.2**	**+0.6**
FSA				*i* S	**S**	**07 09 16.3**	**-1.4**
PB06	**IPOC Station P**	**2.69**	**303**	*i* P	**Pn**	**07 08 53.2**	**+0.6**
PB06				IAML		07 09 31.7	
	comp=Z,213nm,0.3s						
PB06	**IPOC Station P**	**2.69**	**303**	⇑*e*P	**Pn**	**07 08 53.9**	**+1.3**
PB06				*e*S	**S**	**07 09 28.0**	**-0.2**
PB14	**IPOC Station P**	**3.00**	**261**	*i* P	**Pn**	**07 08 57.3**	**+1.0**
PB14				IAML		07 09 39.9	
	comp=Z,57nm,0.5s						
PB14	**IPOC Station P**	**3.00**	**261**	*e*P	**Pn**	**07 08 57.4**	**+1.0**
PB14				*e*S	**S**	**07 09 33.9**	**-1.1**
PB14				IAML		07 09 38.8	
	comp=E,76nm,0.2s						
PB09	**IPOC Station P**	**3.09**	**321**	*i* P	**Pn**	**07 08 58.9**	**+1.6**
PB09				IAML		07 09 46.2	
	comp=Z,65nm,0.4s						
PB09	**IPOC Station P**	**3.09**	**321**	*e*P	**Pn**	**07 08 58.9**	**+1.6**
PB09				*e*S	**S**	**07 09 37.0**	**+0.3**
PB09				IAML		07 09 39.2	
	comp=N,74nm,0.3s						
PB05	**IPOC Station P**	**3.12**	**295**	*i* P	**Pn**	**07 08 58.6**	**+0.9**
PB05				*i* S	**S**	**07 09 37.4**	**+0.1**
PB05				IAML		07 09 39.3	
	comp=Z,54nm,0.4s						
PB05	**IPOC Station P**	**3.12**	**295**	⇑*e*P	**Pn**	**07 08 58.5**	**+0.8**
PB05				*e*S	**S**	**07 09 35.7**	**-1.5**
PB05				IAML		07 09 44.5	
	comp=N,104nm,0.5s						
AC02	**Maricunga**	**3.17**	**214**	*i* P	**Pn**	**07 09 00.3**	**+1.8**
AC02	**Maricunga**	**3.17**	**214**	⇑*e*P	**Pn**	**07 09 00.2**	**+1.6**
PB03	**IPOC Station P**	**3.23**	**311**	*i* P	**Pn**	**07 08 59.8**	**+0.8**
PB03				*i* S	**S**	**07 09 39.3**	**-0.4**
PB03				IAML		07 09 40.6	
	comp=Z,125nm,0.1s						
PB03	**IPOC Station P**	**3.23**	**311**	⇑*e*P	**Pn**	**07 08 59.8**	**+0.8**
PB07	**IPOC Station P**	**3.54**	**314**	*i* P	**Pn**	**07 09 03.5**	**+0.6**
PB07				IAML		07 09 48.3	
	comp=Z,99nm,0.2s						
PB07	**IPOC Station P**	**3.54**	**314**	⇑*e*P	**Pn**	**07 09 03.4**	**+0.6**
PB07				*e*S	**S**	**07 09 44.8**	**-1.8**
AC01	**Pan de Azucar**	**3.67**	**238**	*i* P	**Pn**	**07 09 04.7**	**+0.4**
AC01				IAML		07 09 50.6	
	comp=Z,38nm,0.3s						
AC01	**Pan de Azucar**	**3.67**	**238**	*e*P	**Pn**	**07 09 04.5**	**+0.2**
AC01				*e*S	**S**	**07 09 47.9**	**-1.4**
PB02	**IPOC Station P**	**3.84**	**318**	*i* P	**Pn**	**07 09 07.4**	**+0.9**
PB02				IAML		07 09 57.3	
	comp=Z,130nm,0.2s						
PB02	**IPOC Station P**	**3.84**	**318**	⇑*i*P	**Pn**	**07 09 06.7**	**+0.2**
PB02				*e*S	**S**	**07 09 51.1**	**-2.1**
TINO	**Tinogasta**	**3.85**	**186**	*i* P	**Pn**	**07 09 08.1**	**+1.5**
TINO				IAML		07 10 02.4	
	comp=Z,7.0nm,1.4s						
GO03	**Copiapo**	**4.37**	**219**	*i* P	**Pn**	**07 09 13.1**	**0.0**
GO03				IAML		07 10 08.3	
	comp=Z,33nm,0.1s						
GO03	**Copiapo**	**4.37**	**219**	*e*P	**Pn**	**07 09 13.0**	**0.0**
VCA	**Vinchina**	**4.60**	**192**	*i* P	**Pn**	**07 09 17.7**	**+1.6**
VCA				IAML		07 10 29.7	
	comp=Z,14nm,2.9s						
GO01	**Chusmiza**	**4.91**	**337**	*i* P	**Pn**	**07 09 20.5**	**+0.1**
GO01				IAML		07 10 19.4	
	comp=Z,13nm,0.5s						
ACLC	**CERRO LA CRUZ**	**5.19**	**178**	*i* P	**Pn**	**07 09 23.9**	**+0.3**
ACLC				*i* S	**S**	**07 10 22.1**	**-2.1**
ACLC				IAML		07 10 25.3	
	comp=Z,6.9nm,2.4s						
AC04	**Llanos de Chal**	**5.32**	**221**	*i* P	**Pn**	**07 09 24.9**	**-0.1**
AC04				*i* S	**S**	**07 10 25.5**	**-1.3**
AC04				IAML		07 10 32.9	
	comp=Z,20nm,1.1s						
AC05	**El Transito**	**5.39**	**211**	*i* P	**Pn**	**07 09 26.9**	**+0.7**
AC05				*i* S	**S**	**07 10 27.1**	**-1.6**
AC05				IAML		07 10 27.8	
	comp=Z,13nm,1.6s						
CFA	**Coronel Fontan**	**7.42**	**187**	LR	LR	07 13 04.6	
	comp=Z,64nm,21.2s,baz=286,slow=36						
LPAZ	**La Paz**	**7.94**	**353**	P	**Pn**	**07 10 00.7**	**+0.7**
	comp=Z,3.1nm,0.4s,baz=154,slow=7.0,SNR=48						
LPAZ				S	**S**	**07 11 27.1**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=194,slow=4.2,SNR=1.4						
CMIG	**Matias Romero**	**49.18**	**324**	LR	LR	07 35 36.5	
	comp=Z,43nm,20.2s,baz=312,slow=33						
TORD	**Torodi Ar. Bea**	**76.77**	**69**	P	**P**	**07 19 38.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=245,slow=7.1,SNR=2.3						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**146.77**	**40**	PKPbc	**PKiKP**	**07 27 28.3**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=307,slow=4.1,SNR=4.8						

*IDC **09** 07:18:31.9±2.4,61˚.59S×153˚.03E,h0km, mb4.1/5, mbtmp4.1/6,ML4.0/1,MS4.3/39, Error ellipse: s-maj=100.6km s-min=24.2km az=88.0*
*NEIC **09** 07:18:34.2±1.4,61˚.59S±0˚.09×153˚.5E±0˚.2,h10km±1km, mb4.6/29, Error ellipse: s-maj=14.8km s-min=14.2km az=211.0*
*GCMT **09** 07:18:36.2±0.2,61˚.20S±0˚.01×154˚.24E±0˚.03,h15km, MW5.1/106, Moment Tensor Solution. s54,c65; s106,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.15; $M_{\theta\theta}$3.58±.12; $M_{\phi\phi}$-3.03±.14; $M_{r\theta}$-1.95±.41; $M_{\theta\phi}$-4.49±.11; $M_{r\phi}$-0.78±.45; Best double couple: M_o5.96800×10^{16} NP1:ϕ_s341.00000°,δ69.00000°, λ-4.00000°. NP2:ϕ_s73.00000°,δ87.00000°,λ-159.00000°. Principal axes: T 6.1480, Plg12.0000°, Azm205.0000°; N -0.3590, Plg69.0000°, Azm82.0000°; P -5.7880, Plg17.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 09 07:18:34.0±0.5,61.60S±0.06×153.4E±0.1,h10km,n93, σ1s64/49,mb4.5/19,MS4.3/39,4C,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**16.23**	**173**	Pn	**Pn**	**07 22 20.1**	**-1.5**
	0.6nm,0.3s,baz=346,slow=13,SNR=38						
VNDA				Sn	**Sn**	**07 25 15.5**	**-5.8**
	baz=1.9,slow=10,SNR=1.3						
VNDA				LR	LR	07 28 11.6	
	comp=Z,2μm,18.5s,baz=354,slow=36						
	1.9nm,0.5s						
VNDA	**Vanda**	**16.23**	**173**		**Pn**	**07 22 21.0**	**-0.6**
SBA	**Scott Base**	**16.88**	**170**		**Pn**	**07 22 30.3**	**+0.4**
PYZ	**Puysegur Point**	**17.26**	**32**	Pn	**Pn**	**07 22 33.6**	**-1.3**
DCZ	**Deep Cove**	**18.04**	**33**		**P**	**07 22 44.7**	**-0.2**
DCZ				IAmb	IAmb	07 23 06.9	
	comp=Z,55nm,1.3s						
MLZ	**Mavora Lakes**	**18.38**	**34**	P	**P**	**07 22 49.7**	**+0.9**
MLZ				IAmb	IAmb	07 23 01.5	
	comp=Z,81nm,1.5s						
TAU	**Tasmania Unive**	**19.08**	**346**	P	**P**	**07 22 56.1**	**-0.2**
WKZ	**Wanaka**	**19.13**	**36**	P	**Pn**	**07 22 57.6**	**-0.2**
WKZ				IAmb	IAmb	07 23 01.1	
	comp=Z,85nm,1.3s						
RPZ	**Rata Peaks**	**20.73**	**38**	LR	LR	07 29 21.2	
	comp=Z,484nm,21.3s,baz=210,slow=31						
INZ	**Inchbonnie**	**21.75**	**38**	P	**P**	**07 23 26.2**	**+0.9**
INZ				IAmb	IAmb	07 23 48.5	
	comp=Z,56nm,1.3s						
SNZO	**South Karori**	**24.04**	**42**	P	**P**	**07 23 49.1**	**+0.2**
TOO	**Toolangi**	**24.56**	**345**	P	**P**	**07 23 53.2**	**-0.5**
CAN	**Canberra**	**26.45**	**352**	P	**P**	**07 24 10.0**	**-0.9**
CAN				IAmb	IAmb	07 24 17.5	
	comp=Z,13nm,1.3s						
URZ	**Urewera**	**27.59**	**43**	LR	LR	07 35 30.1	
	comp=Z,1μm,18.1s,baz=206,slow=37						
QSPA	**South Pole Qui**	**28.49**	**180**	P	**P**	**07 24 30.9**	**+1.8**
	comp=Z,5.3nm,1.1s,baz=6.0,slow=8.0,SNR=6.5						
QSPA				LR	LR	07 36 25.2	
	comp=Z,721nm,19.2s,baz=16,slow=38						
QSPA	**South Pole Qui**	**28.49**	**180**	P	**P**	**07 24 28.4**	**-0.6**
QSPA				IAmb	IAmb	07 24 33.8	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**30.72**	**340**	P	**P**	**07 24 48.9**	**0.0**
	comp=Z,3.3nm,0.8s,baz=142,slow=8.5,SNR=4.1						
STKA				LR	LR	07 35 28.5	
	comp=Z,548nm,18.3s,baz=161,slow=33						
	comp=Z,3.3nm,0.8s						
BBOO	**Buckleboo**	**30.92**	**331**	P	**P**	**07 24 50.5**	**-0.1**
INKA	**Innaminka**	**34.91**	**340**	P	**P**	**07 25 25.9**	**+0.4**
INKA				IAmb	IAmb	07 25 28.8	
	comp=Z,6.2nm,0.6s						
FORT	**Forrest**	**35.02**	**320**	P	**P**	**07 25 26.8**	**+0.4**
FORT				IAmb	IAmb	07 25 38.3	
	comp=Z,1.1nm,1.1s						
MAW	**Mawson**	**35.96**	**221**	P	**P**	**07 25 32.4**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=82,slow=15,SNR=1.5						
MAW				LR	LR	07 40 45.2	
	comp=Z,1μm,18.3s,baz=112,slow=37						
	comp=Z,0.4nm,0.3s						
MAW	**Mawson**	**35.96**	**221**	P	**P**	**07 25 34.4**	**+0.3**
H01W1	**Cape Leeuwin H**	**36.45**	**299**	T	T	08 04 35.1	
	baz=148,slow=76,SNR=550						
H01W2	**Cape Leeuwin H**	**36.46**	**299**	T	T	08 04 35.3	
	baz=148,slow=76,SNR=600						
H01W3	**Cape Leeuwin H**	**36.47**	**299**	T	T	08 04 36.3	
	baz=148,slow=76,SNR=419						
NWAO	**Narrogin (SRO)**	**36.91**	**304**	LR	LR	07 37 06.2	
	comp=Z,964nm,19.9s,baz=132,slow=30						
RAO	**Raoul Island**	**37.47**	**44**	LR	LR	07 39 30.4	
	comp=Z,872nm,19.1s,baz=205,slow=34						
ASAR	**Alice Springs**	**40.21**	**332**	P	**P**	**07 26 08.6**	**-1.8**
	comp=Z,2.4nm,0.9s,baz=173,slow=7.8,SNR=14						
ASAR				LR	LR	07 40 36.8	
	comp=Z,367nm,19.7s,baz=156,slow=33						
	comp=Z,2.4nm,0.9s						
ASAR	**Alice Springs**	**40.21**	**332**	P	**P**	**07 26 09.3**	**-1.2**
AS31	**Alice Springs**	**40.21**	**332**	P	**P**	**07 26 09.1**	**-1.3**
OUENC	**Ouen Island, N**	**40.24**	**19**	P	**P**	**07 26 09.8**	**-0.8**
ONTNC	**Ouen Toro**	**40.29**	**19**	P	**P**	**07 26 11.2**	**+0.2**
DZM	**Mont Dzumac**	**40.52**	**19**	LR	LR	07 39 44.9	
	comp=Z,770nm,18.5s,baz=182,slow=31						
BELA	**Belgrano 2**	**40.68**	**177**	P	**P**	**07 26 14.2**	**+0.5**
BELA				IAmb	IAmb	07 26 19.8	
	comp=Z,9.3nm,1.1s						
CTA	**Charters Tower**	**41.78**	**350**	LR	LR	07 41 17.5	
	comp=Z,521nm,19.2s,baz=183,slow=33						
WR0	**Warramunga Arr**	**43.66**	**334**	P	**P**	**07 26 37.7**	**-0.8**
WR0				IAmb	IAmb	07 27 01.1	
	comp=Z,13nm,1.4s						
WR8	**Warramunga Arr**	**43.67**	**334**	P	**P**	**07 26 38.3**	**-0.4**
WR8				IAmb	IAmb	07 26 56.0	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**43.72**	**334**	P	**P**	**07 26 36.6**	**-2.4**
	comp=Z,2.5nm,1.0s,baz=162,slow=7.8,SNR=22						
	comp=Z,2.5nm,1.0s						
WRA	**Warramunga Arr**	**43.72**	**334**	P	**P**	**07 26 38.4**	**-0.6**
WB0	**Warramunga Arr**	**43.87**	**334**	P	**P**	**07 26 39.8**	**-0.5**
WB0				IAmb	IAmb	07 26 55.0	
	comp=Z,10nm,1.4s						
TROLL	**Troll, Antarti**	**45.17**	**192**	⇑P	**P**	**07 26 53.8**	**+3.5**
	comp=Z,156nm,0.9s						
SNAA	**Sanae**	**45.99**	**190**	⇑P	**P**	**07 27 00.1**	**+3.4**
	comp=Z,50nm,0.7s						
SNAA	**Sanae**	**45.99**	**190**	P	**P**	**07 26 58.7**	**+2.0**
	comp=Z,5.9nm,1.1s,baz=157,slow=5.3,SNR=6.5						
SNAA				LR	LR	07 47 00.1	
	comp=Z,1μm,19.7s,baz=132,slow=37						
SNAA	**Sanae**	**45.99**	**190**	P	**P**	**07 26 57.2**	**+0.5**
SNAA				IAmb	IAmb	07 27 03.1	
	comp=Z,14nm,1.3s						
VNA2	**Neumayer--Watz**	**47.08**	**188**	⇑P	**P**	**07 27 08.3**	**+3.1**
	comp=Z,2.6nm,0.8s,baz=154,slow=7.8						
VNA1	**Neumayer--Stat**	**47.41**	**188**	⇑P	**P**	**07 27 11.9**	**+4.2**
	comp=Z,17nm,1.3s						
FITZ	**Fitzroy Crossi**	**47.67**	**323**	LR	LR	07 46 06.9	
	comp=Z,404nm,18.2s,baz=170,slow=35						
PMSA	**Palmer Station**	**50.87**	**160**	LR	LR	07 47 42.1	
	comp=Z,254nm,18.6s,baz=200,slow=34						
MTN	**Manton Dam**	**51.29**	**332**	P	**P**	**07 27 38.0**	**+0.1**
MTN				IAmb	IAmb	07 27 40.3	
	comp=Z,13nm,1.1s						
RAR	**Rarotonga**	**51.58**	**60**	LR	LR	07 48 08.4	
	comp=Z,72nm,18.0s,baz=216,slow=34						
HNR	**Honiara**	**52.29**	**8**	LR	LR	07 46 44.5	
	comp=Z,38nm,18.0s,baz=254,slow=32						
PMG	**Port Moresby**	**52.30**	**352**	LR	LR	07 47 23.2	
	comp=Z,538nm,18.3s,baz=165,slow=33						
AFI	**Afiamalu**	**53.77**	**43**	LR	LR	07 49 52.1	
	comp=Z,118nm,19.2s,baz=190,slow=35						
TBI	**Tubuai**	**54.21**	**72**	*e*LQ	LQ	07 40 36.6	
	comp=Z,2μm,27.5s						
TBI				*e*LR	LR	07 42 57.9	
	comp=Z,1μm,26.8s						
KRVT	**Keravat (AS076**	**57.17**	**358**	LR	LR	07 51 14.1	
	comp=Z,14nm,18.2s,baz=67,slow=34						
PPT2	**Papeete2**	**59.18**	**69**	*e*LQ	LQ	07 42 46.8	
	comp=Z,381nm,24.8s						
PPT2				*e*LR	LR	07 45 12.6	
	comp=Z,277nm,25.0s						
PPT2				*e*LR	LR	07 45 12.9

JAGI	**Jajag, Banyuwa**	**60.36**	**314**	P	**P**	07 28 42.5	-0.5
KAPI	**Kappang**	**61.80**	**321**	LR	LR	07 53 21.4	
	comp=Z,306nm,20.3s,baz=164,slow=34						
LEM	**Lembang**	**64.24**	**308**	LR	LR	07 52 41.4	
	comp=Z,266nm,21.1s,baz=190,slow=32						
RPN	**Rapa Nui**	**69.83**	**110**	LR	LR	07 53 19.8	
	comp=Z,124nm,21.6s,baz=16,slow=30						
TAOE	**Nuku Hiva Isla**	**71.13**	**73**	*e*LR	LR	07 50 38.9	
	comp=Z,148nm,27.2s						
DAV	**Davao City (W)**	**71.81**	**331**	LR	LR	08 02 25.8	
	comp=Z,62nm,19.3s,baz=158,slow=37						
PLCA	**Paso Flores**	**71.97**	**146**	LR	LR	07 54 30.0	
	comp=Z,140nm,21.1s,baz=205,slow=30						
PLCA	**Paso Flores**	**71.97**	**146**	P	**P**	**07 29 57.9**	**+0.6**
PLCA				IAmb	IAmb	07 30 04.2	
	comp=Z,4.6nm,1.3s						
GUMO	**Guam**	**75.25**	**351**	LR	LR	08 02 04.8	
	comp=Z,51nm,18.3s,baz=164,slow=35						
H03S1	**Juan Fernandez**	**75.89**	**137**	T	T	08 54 13.6	
	baz=201,slow=74,SNR=69						
H03S2	**Juan Fernandez**	**75.89**	**137**	T	T	08 54 12.3	
	baz=201,slow=74,SNR=65						
H03S3	**Juan Fernandez**	**75.90**	**137**	T	T	08 54 13.3	
	baz=201,slow=74,SNR=53						
SUR	**Sutherland**	**78.81**	**219**	LR	LR	08 05 55.6	
	comp=Z,110nm,18.1s,baz=152,slow=36						
H08S2	**Diego Garcia H**	**79.01**	**274**	T	T	08 58 07.9	
	baz=150,slow=76,SNR=45						
H08S1	**Diego Carcia H**	**79.02**	**274**	T	T	08 58 09.7	
	baz=150,slow=76,SNR=40						
H08S3	**Diego Garcia H**	**79.03**	**274**	T	T	08 58 06.4	
	baz=150,slow=76,SNR=51						
MATP	**Matopo**	**87.25**	**230**	LR	LR	08 06 51.7	
	comp=Z,103nm,18.9s,baz=158,slow=33						
PALK	**Pallekele**	**88.27**	**289**	LR	LR	08 05 00.6	
	comp=Z,153nm,18.6s,baz=190,slow=32						
JCJ	**Chichijima**	**88.85**	**350**	LR	LR	08 07 37.5	
	comp=Z,70nm,21.8s,baz=136,slow=33						
CPUP	**Villa Florida**	**88.92**	**153**	LR	LR	08 08 03.7	
	comp=Z,126nm,18.6s,baz=194,slow=33						
CMAR	**Chiang Mai Arr**	**90.74**	**309**	P	**P**	**07 31 36.9**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=166,slow=5.0,SNR=1.7						
CMAR				LR	LR	08 09 23.3	
	comp=Z,76nm,20.5s,baz=160,slow=34						
	comp=Z,0.8nm,0.3s						
LSZ	**Lusaka**	**92.08**	**232**	LR	LR	08 09 13.8	
	comp=Z,129nm,20.0s,baz=158,slow=33						
TSUM	**Tsumeb**	**92.12**	**221**	LR	LR	08 11 57.0	
	comp=Z,201nm,20.1s,baz=154,slow=35						
LPAZ	**La Paz**	**95.66**	**140**	LR	LR	08 05 34.2	
	comp=Z,138nm,21.3s,baz=156,slow=30						
NNA	**Nana**	**96.76**	**131**	LR	LR	08 06 24.3	
	comp=Z,134nm,20.1s,baz=202,slow=30						
BRDH	**Bariadhala**	**97.36**	**305**	LR	LR	08 16 18.6	
	comp=Z,85nm,18.1s,baz=146,slow=36						
SIV	**San Ignacio**	**97.96**	**147**	LR	LR	08 13 45.1	
	comp=Z,85nm,18.3s,baz=126,slow=34						
MJAR	**Matsushiro Arr**	**98.58**	**348**	LR	LR	08 16 44.4	
	comp=Z,41nm,18.2s,baz=164,slow=35						
MKAR	**Makanchi Array**	**122.14**	**310**	PKP	**PKPdf**	**07 37 26.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=152,slow=3.6,SNR=2.9						
CEL	**Celeste**	**145.02**	**248**	PKPbc	**PKPdf**	**07 38 11.2**	**+0.6**
L59A	**Walton**	**145.41**	**101**	PKPbc	**PKPbc**	**07 38 11.0**	**-0.1**
KEST	**Kesra**	**145.66**	**238**	PKPbc	**PKPdf**	**07 38 11.7**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=90,slow=2.0,SNR=2.2						
AKASG	**Malin Array Be**	**148.08**	**276**	PKPbc	**PKPdf**	**07 38 16.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=107,slow=1.3,SNR=4.5						
ARCES	**ARCESS Array B**	**157.75**	**313**	PKPab	**PKPab**	**07 38 59.9**	**-1.7**
	comp=Z,4.3nm,1.1s,baz=74,slow=5.0,SNR=4.0						

*AFAD **09** 07:26:58.4, 35˚.44N×26˚.47E, h9km±2km, ML2.8*
*IDC **09** 07:27:00.9±1.6, 35˚.32N×27˚.14E, h0km, mb3.7/4, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=44.9km s-min=22.4km az=158.0*
*ISK **09** 07:27:01.6, 35˚.52N×26˚.77E, h5km, ML3.2/20*
*THE **09** 07:27:03.0, 35˚N±18˝×2˝7E±˚, h9km±19km, M3.2/6, MLh3.2/6*
*ATH **09** 07:27:03.0, 35˚.51N×26˚.76E, h14km±1km, ML3.5/16, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 09 07:27:02.1±1.2, 35°.49N±0˙.03×26°.77E±0˙.02, h9km±9km, n87, σ1º07/108, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.33**	**79**	Pg	**Pb**	**07 27 09.3**	**-0.9**
KARP				Sg	**Sb**	**07 27 14.7**	**-0.9**
KARP	**Karpathos**	**0.33**	**79**	P	**Pb**	**07 27 09.6**	**-0.6**
KARP				S	**Sb**	**07 27 15.1**	**-0.5**
KARP	**Karpathos**	**0.33**	**79**	P	**Pb**	**07 27 09.4**	**-0.8**
KARP				S	**Sb**	**07 27 14.7**	**-0.9**
ZKR	**Zakros**	**0.58**	**231**	Pg	**Pb**	**07 27 14.1**	**-0.4**
ZKR				Sg	**Sb**	**07 27 23.7**	**+0.8**
ZKR	**Zakros**	**0.58**	**231**	P	**Pb**	**07 27 14.2**	**-0.3**
ZKR				S	**Sb**	**07 27 22.9**	**0.0**
SIT2	**Siteia**	**0.61**	**243**	P	**Pb**	**07 27 14.8**	**-0.2**
SIT2				S	**Sb**	**07 27 24.0**	**+0.4**
AGNA	**Agios Nikolaos**	**0.91**	**251**	P	**Pn**	**07 27 20.3**	**-0.8**
AGNA				S	**Sn**	**07 27 33.0**	**-1.3**
NPS	**Neapolis**	**0.97**	**257**	P	**Pn**	**07 27 21.7**	**-0.2**
NPS				S	**Sn**	**07 27 34.7**	**-1.2**
NPS	**Neapolis**	**0.97**	**257**	P	**Pn**	**07 27 21.6**	**-0.4**
YAZI	**Mula-Dat§a-**	**1.31**	**25**	P	**Pn**	**07 27 25.8**	**-0.9**
YAZI				S	**Sb**	**07 27 43.5**	**-0.6**
YAZI				IAML		07 27 50.0	
	comp=E,84nm,0.7s						
YAZI				IAML		07 27 52.0	
	comp=N,105nm,0.8s						
ARG	**Arkhangelos**	**1.32**	**56**	Pn	**Pg**	**07 27 27.4**	**-0.1**
ARG				Sn	**Sg**	**07 27 46.3**	**+1.6**
ARG	**Arkhangelos**	**1.32**	**56**	P	**Pg**	**07 27 27.5**	**-0.1**
ARG				S	**Sg**	**07 27 45.2**	**+0.5**
ARG	**Arkhangelos**	**1.32**	**56**	P	**Pg**	**07 27 27.3**	**-0.3**
THERA	**Ancient Thera,**	**1.37**	**310**	P	**Pn**	**07 27 27.0**	**-0.4**
THERA				S	**Sg**	**07 27 47.0**	**+0.8**
THERA	**Ancient Thera,**	**1.37**	**310**	P	**Pb**	**07 27 27.6**	**-0.6**
THR8	**Santorini-Mono**	**1.39**	**312**	P	**Pb**	**07 27 27.8**	**-0.6**
THR8	**Santorini-Mono**	**1.39**	**312**	P	**Pb**	**07 27 27.7**	**-0.6**
IACM	**Heraklion**	**1.40**	**263**	P	**Pb**	**07 27 27.6**	**-0.8**
DAT	**Datca**	**1.40**	**28**	Pn	**Pg**	**07 27 28.8**	**-0.3**
DAT	**Datca**	**1.40**	**28**	P	**Pb**	**07 27 28.6**	**0.0**
DAT				S	**Sg**	**07 27 49.3**	**+2.0**
DAT				IAML		07 27 53.0	
	comp=N,170nm,0.9s						
DAT				IAML		07 27 54.0	
	comp=E,119nm,0.5s						
THR6	**Thira Island,**	**1.41**	**308**	P	**Pb**	**07 27 28.2**	**-0.4**
THR6	**Thira Island,**	**1.41**	**308**	P	**Pb**	**07 27 28.0**	**-0.6**
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pb**	**07 27 28.6**	**-0.5**
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pb**	**07 27 28.4**	**-0.7**
SNT5	**Nea Kammeni, S**	**1.44**	**310**	P	**Pg**	**07 27 29.5**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.44**	**310**	P	**Pg**	**07 27 29.3**	**-0.5**
THR3	**Thira Island,**	**1.44**	**310**	P	**Pn**	**07 27 28.4**	**-0.1**
THR3	**Thira Island,**	**1.44**	**310**	P	**Pn**	**07 27 28.2**	**-0.2**
THR5	**Thira Island,**	**1.48**	**309**	P	**Pn**	**07 27 28.9**	**0.0**
THR5	**Thira Island,**	**1.48**	**309**	P	**Pn**	**07 27 28.7**	**-0.3**
SAP3	**Santorini-Thir**	**1.49**	**310**	P	**Pn**	**07 27 29.2**	**0.0**
IDI	**Anoyia**	**1.55**	**263**	Pn	**Pg**	**07 27 31.7**	**-0.1**
IDI				Sn	**Sg**	**07 27 53.1**	**+1.3**
IDI	**Anoyia**	**1.55**	**263**	P	**Pb**	**07 27 30.0**	**-1.0**
BODT	**Bodrum**	**1.63**	**15**	Pn	**Pb**	**07 27 32.3**	**-0.1**
BODT	**Bodrum**	**1.63**	**15**	P	**Pb**	**07 27 32.2**	**-0.3**
SIVA	**Sivas**	**1.67**	**254**	P	**Pb**	**07 27 31.8**	**-1.2**
TURN	**Turunc**	**1.76**	**43**	Pn	**Pn**	**07 27 32.9**	**+0.1**
TURN	**Turunc**	**1.76**	**43**	P	**Pn**	**07 27 32.1**	**-0.7**
TURN				S	**Sg**	**07 27 57.8**	**-0.8**
DALY	**Dalyan (Mula)**	**2.02**	**48**	Pn	**Pb**	**07 27 37.9**	**-1.2**
DALY	**Dalyan (Mula)**	**2.02**	**48**	P	**Pb**	**07 27 38.3**	**-0.8**
DALY				S	**Sg**	**07 28 09.6**	**+2.4**
DALY				IAML		07 28 17.0	
	comp=N,111nm,0.5s						
DALY				IAML		07 28 19.0	
	comp=E,72nm,0.5s						
YER	**Yerkesik**	**2.05**	**36**	Pn	**Pn**	**07 27 37.7**	**+0.8**
YER	**Yerkesik**	**2.05**	**36**	P	**Pn**	**07 27 37.3**	**+0.4**
VAM	**Vamos**	**2.10**	**269**	P	**Pn**	**07 27 37.6**	**+0.2**
IZZE	**Mula-Seydike**	**2.21**	**64**	P	**Pb**	**07 27 40.7**	**-1.5**
IZZE				S	**Sg**	**07 28 13.2**	**+0.1**
IZZE				IAML		07 28 17.0	
	comp=N,105nm,0.4s						
IZZE				IAML		07 28 28.0	
	comp=E,87nm,0.5s						
SABU	**Mula-Dalaman**	**2.23**	**53**	P	**Pb**	**07 27 41.2**	**-1.4**
SABU				S	**Sg**	**07 28 14.3**	**+0.6**
SABU				IAML		07 28 24.0	
	comp=N,57nm,1.0s						
SABU				IAML		07 28 25.0	
	comp=E,66nm,0.6s						
GCAM	**G?zelcaml?**	**2.24**	**10**	Pn	**Pn**	**07 27 40.8**	**+1.4**
GCAM	**G?zelcaml?**	**2.24**	**10**	P	**Pg**	**07 27 44.8**	**-0.3**
MHLO	**Agia Marina, M**	**2.26**	**303**	P	**Pn**	**07 27 40.0**	**+0.3**
IMMV	**Iera Moni Meta**	**2.27**	**270**	Pn	**Pb**	**07 27 41.7**	**-1.6**
IMMV	**Iera Moni Meta**	**2.27**	**270**	P	**Pn**	**07 27 39.9**	**0.0**
GVD	**Gavdhos**	**2.29**	**254**	Pn	**Pb**	**07 27 41.7**	**-1.9**
GVD	**Gavdhos**	**2.29**	**254**	P	**Pn**	**07 27 40.2**	**+0.2**
AYDN	**Tasoluk**	**2.35**	**22**	P	**Pb**	**07 27 42.8**	**-1.9**
AYDN				IAML		07 28 26.0	
	comp=N,36nm,0.6s						
AYDN				IAML		07 28 30.0	
	comp=E,34nm,0.4s						
AKAS	**Kas**	**2.42**	**71**	Pn	**Pb**	**07 27 43.9**	**-2.1**
CAME	**Cameli-Denizli**	**2.51**	**54**	Pn	**Pn**	**07 27 44.9**	**+1.6**
DNZT	**Denizli-Tavas-**	**2.55**	**45**	P	**Pb**	**07 27 46.5**	**-1.7**
DNZT				S	**Sb**	**07 28 19.1**	**-0.6**
DNZT				IAML		07 28 27.0	
	comp=N,33nm,0.7s						
DNZT				IAML		07 28 38.0	
	comp=E,28nm,0.7s						
KNDR	**Palaiochora Ch**	**2.58**	**265**	Pn	**Pb**	**07 27 46.3**	**-2.3**
KNDR	**Palaiochora Ch**	**2.58**	**265**	P	**Pn**	**07 27 44.2**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**2.62**	**20**	Pn	**Pn**	**07 27 45.9**	**+1.2**
TAVA	**DENIZLI_Tavas**	**2.63**	**41**	P	**Pn**	**07 27 46.7**	**+1.9**
TAVA				S	**Sb**	**07 28 21.0**	**-0.8**
TAVA				IAML		07 28 25.0	
	comp=N,41nm,0.5s						
TAVA				IAML		07 28 29.0	
	comp=E,44nm,0.4s						
CAEL	**Denizli, Camel**	**2.63**	**51**	P	**Pn**	**07 27 46.0**	**+1.1**
CAEL				S	**Sg**	**07 28 24.4**	**-2.3**
CAEL				IAML		07 28 37.0	
	comp=N,107nm,0.9s						
CAEL				IAML		07 28 53.0	
	comp=E,120nm,0.8s						
NAZL	**Nazilli-Aydin**	**2.76**	**26**	Pn	**Pn**	**07 27 48.4**	**+1.8**
ELL	**Elmali**	**2.84**	**63**	Pn	**Pn**	**07 27 49.9**	**+2.1**
ELL	**Elmali**	**2.84**	**63**	P	**Pn**	**07 27 47.7**	**-0.1**
ANKY	**Antikythira Is**	**2.85**	**279**	P	**Pn**	**07 27 47.2**	**-0.5**
APMY	**Acipayam-Deniz**	**2.85**	**45**	Pn	**Pn**	**07 27 49.8**	**+2.0**
CHOS	**Chios island**	**2.95**	**349**	P	**Pn**	**07 27 48.5**	**-0.7**
KTHA	**Kythira Island**	**3.10**	**285**	P	**Pn**	**07 27 50.7**	**-0.6**
KORT	**Korkueli**	**3.27**	**61**	Pn	**Pn**	**07 27 55.8**	**+2.1**
VLI	**Veliai**	**3.33**	**293**	P	**Pn**	**07 27 53.8**	**-0.7**
DION	**Dionisos Attik**	**3.44**	**320**	P	**Pn**	**07 27 55.9**	**-0.1**
KYMI	**Kymi, Euboea I**	**3.79**	**327**	P	**Pn**	**07 28 00.8**	**0.0**
VIL2	**Platees**	**3.91**	**315**	P	**Pn**	**07 28 01.6**	**-0.8**
ITM	**Ithomi**	**4.26**	**295**	P	**Pn**	**07 28 07.4**	**+0.3**
GUR	**Goura**	**4.31**	**306**	P	**Pn**	**07 28 08.2**	**+0.1**
KLV	**Kalavryta, Ach**	**4.50**	**306**	P	**Pn**	**07 28 10.6**	**0.0**
AKMS	**Akamas**	**4.58**	**94**	P	**Pn**	**07 28 12.1**	**+0.4**
ALFC	**Alefka**	**4.78**	**92**	P	**Pn**	**07 28 14.8**	**+0.4**
NATA	**Nata**	**4.81**	**97**	P	**Pn**	**07 28 14.8**	**0.0**
EFP	**Efpalio**	**4.87**	**308**	P	**Pn**	**07 28 15.6**	**0.0**
ANX	**Ano Chora**	**4.96**	**310**	P	**Pn**	**07 28 16.7**	**-0.2**
BRTR	**Keskin Array B**	**6.90**	**50**	Pn	**Pn**	**07 28 43.6**	**0.0**
	0.1nm,0.3s,baz=227,slow=16,SNR=2.0						
	0.6nm,0.8s						
GERES	**GERESS Array B**	**16.46**	**328**	Pn	**P**	**07 30 56.9**	**+0.8**
	0.4nm,0.5s,baz=158,slow=7.2,SNR=3.5						
ESDC	**Sonseca Array**	**24.64**	**289**	P	**P**	**07 32 27.0**	**+3.9**
	0.6nm,0.6s,baz=82,slow=9.3,SNR=5.1						
	0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.71**	**232**	P	**P**	**07 33 27.2**	**+0.8**
	0.2nm,0.4s,baz=47,slow=8.1,SNR=2.6						
	0.2nm,0.4s						
KURBB	**Kurotov Arra**	**39.89**	**51**	P	**P**	**07 34 34.0**	**-2.2**
	0.9nm,0.3s,baz=282,slow=9.0,SNR=1.5						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**42.50**	**57**	P	**P**	**07 34 57.6**	**-0.1**
	0.3nm,0.4s,baz=266,slow=8.0,SNR=4.7						
	0.3nm,0.4s						

*HEL **09** 07:30:12.1±0.1, 63˚.98N×28˚.05E, h0km, ML1.6, Suspected explosion*
*IDC **09** 07:30:12.8±1.8, 63˚.89N×27˚.97E, h0km, mbtmp2.6/2, ML1.8/2, Error ellipse: s-maj=43.0km s-min=8.3km az=98.0*

ISC 09 07:30:11.2±0.8, 63°.96N±0˙.02×28°.16E±0˙.03, h0km, n33, σ1º08/51, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.60**	**195**	PG	**Pg**	**07 30 23.3**	**+0.7**
NIF				SG	**Sg**	**07 30 30.2**	**-0.1**
NIF				smax	smax	07 30 31.3	
	comp=Z,9.8nm,0.2s						
RMF	**Romuvaara**	**0.82**	**71**	PG	**Pb**	**07 30 27.9**	**-0.4**
RMF				SG	**Sb**	**07 30 38.6**	**-1.2**
RMF				smax	smax	07 30 38.8	
	comp=E,6.8nm,0.2s						
OUL	**Oulu**	**1.49**	**320**	PN	**Pb**	**07 30 39.4**	**-0.4**
	baz=134						
SUF	**Sumiainen**	**1.54**	**217**	*e*P	**Pb**	**07 30 40.3**	**-0.4**
SUF	**Sumiainen**	**1.54**	**217**	PN	**Pb**	**07 30 40.3**	**-0.4**
	baz=37						
SUF				smax	smax	07 30 58.0	
	comp=Z,3.2nm,0.2s						
OUF	**Merijarvi**	**1.56**	**287**	PN	**Pn**	**07 30 39.8**	**-0.4**
OUF				smax	smax	07 30 57.2	
	comp=Z,4.8nm,0.2s						
OUF				SN	**Sn**	**07 31 00.5**	**-0.5**
KU1	**Kurvinen**	**1.72**	**20**	PG	**Pb**	**07 30 43.1**	**-0.5**
KU1				SN	**Sg**	**07 31 07.2**	**+0.9**
KU2	**Taivalkoski**	**1.75**	**1**	PG	**Pb**	**07 30 43.4**	**-0.9**
JOF	**Joensuu**	**1.76**	**125**	*e*P	**Pg**	**07 30 44.8**	**-0.2**
JOF	**Joensuu**	**1.76**	**125**	PG	**Pg**	**07 30 44.6**	**-0.4**
	baz=309						
JOF				SG	**Sg**	**07 31 07.7**	**-0.1**
MSF	**Maaselka**	**1.99**	**10**	PG	**Pb**	**07 30 47.2**	**-1.1**
MSF				SG	**Sg**	**07 31 14.0**	**-1.2**
KAF	**Kangasniemi**	**2.04**	**205**	PG	**Pb**	**07 30 48.7**	**-0.4**
	baz=23						
KAF				smax	smax	07 31 12.5	
	comp=Z,6.6nm,0.2s						
KAF				SG	**Sg**	**07 31 16.3**	**-0.4**
OBF8	**Ulkokalla**	**2.10**	**282**	PG	**Pb**	**07 30 49.1**	**-1.0**
	baz=100						
OBF8				smax	smax	07 31 13.0	
	comp=Z,2.8nm,0.2s						
RANF	**Ranua**	**2.14**	**345**	PG	**Pb**	**07 30 50.0**	**-0.8**
	baz=169						
RANF				SG	**Sb**	**07 31 18.0**	**+0.1**
KU6	**Riekki**	**2.20**	**19**	PG	**Pb**	**07 30 51.4**	**-0.4**
	baz=202						
KU6				smax	smax	07 31 17.1	
	comp=Z,2.1nm,0.2s						
KU6				SG	**Sb**	**07 31 19.1**	**-0.5**
KEF	**Keuruu**	**2.34**	**221**	*e*P	**Pb**	**07 30 53.6**	**-0.7**
KEF	**Keuruu**	**2.34**	**221**	PG	**Pb**	**07 30 54.0**	**-0.3**
	baz=33						
KEF				smax	smax	07 31 21.0	
	comp=Z,3.6nm,0.2s						
KEF				SG	**Sb**	**07 31 23.8**	**0.0**
OLKF	**Oulanka, Finla**	**2.42**	**12**	PG	**Pb**	**07 30 55.0**	**-0.7**
OLKF				smax	smax	07 31 23.6	
	comp=Z,2.5nm,0.2s						
OLKF				SG	**Sb**	**07 31 26.8**	**+0.7**
RUF	**Ruokolahti**	**2.57**	**172**	PG	**Pb**	**07 30 57.9**	**-0.3**
RUF				smax	smax	07 31 28.8	
	comp=Z,3.6nm,0.2s						
RUF				SG	**Sb**	**07 31 31.5**	**+1.2**
VAF	**Ylistaro**	**2.63**	**252**	*e*P	**Pb**	**07 30 58.1**	**-1.1**
VAF	**Ylistaro**	**2.63**	**252**	PG	**Pb**	**07 30 58.0**	**-1.1**
VAF				smax	smax	07 31 28.5	
	comp=Z,2.7nm,0.2s						
VAF				SG	**Sb**	**07 31 31.5**	**-0.5**
TOF	**Tornio**	**2.68**	**324**	PG	**Pb**	**07 30 59.5**	**-0.5**
TOF				smax	smax	07 31 29.6	
	comp=Z,0.9nm,0.2s						
TOF				SG	**Sb**	**07 31 33.0**	**-0.3**
FIA0	**FINESS Array S**	**2.71**	**202**	PB	**Pb**	**07 30 59.1**	**-1.3**
	baz=21						
FIA0				smax	smax	07 31 31.9	
	comp=Z,2.8nm,0.2s						
FIA0				SG	**Sb**	**07 31 34.2**	**+0.1**
FINES	**FINESS Array B**	**2.71**	**202**	Pn	**Pb**	**07 30 59.1**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=21,slow=15,SNR=14						
FINES				Lg	Lg	07 31 33.7	
	comp=Z,0.9nm,0.3s,baz=23,slow=26,SNR=15						
	comp=Z,1.9nm,0.5s						
RNF	**Rovaniemi**	**2.81**	**342**	PG	**Pb**	**07 31 02.6**	**+0.4**
RNF				SG	**Sb**	**07 31 36.3**	**-0.7**
BURU	**Burvik**	**3.02**	**285**	PB	**Pn**	**07 31 01.4**	**+1.1**
	baz=96						
BURU				SB	**Sn**	**07 31 38.3**	**+1.1**
UMAU	**Umeaa**	**3.31**	**272**	PB	**Pn**	**07 31 05.2**	**+1.0**
KPF	**Kankaanpaa**	**3.51**	**235**	PB	**Pb**	**07 31 10.5**	**-3.7**
ERTU	**Ertsjaerv**	**3.62**	**319**	PN	**Pn**	**07 31 10.0**	**+1.6**
	baz=136						
ERTU				SB	**Sn**	**07 31 54.4**	**+2.7**
KLF	**Kolari**	**3.72**	**334**	PN	**Pn**	**07 31 11.1**	**+1.3**
VRF	**Varrio**	**3.85**	**8**	SB	**Sb**	**07 32 04.8**	**-2.2**
ARCES	**ARCESS Array B**	**5.70**	**351**	Pn	**Pn**	**07 31 37.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=172,slow=15,SNR=1.4						
ARCES				Sn	**Sn**	**07 32 41.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=168,slow=24,SNR=5.6						
ARCES				Lg	Lg	07 33 06.5	
	comp=Z,0.2nm,0.3s,baz=160,slow=32,SNR=5.4						
	comp=Z,1.0nm,0.8s						
I37NO	**I37NO**	**6.39**	**328**	I	I	08 06 30.0	
	baz=140,slow=320,SNR=7.1						

*ISK **09** 07:44:31.4, 35˚.50N×26˚.77E, h7km, ML3.3/16*
*THE **09** 07:44:31.4, 36˚N±3˝×2˝7E±˚, h0km±4km, M3.3/9, MLh3.3/9*
*ATH **09** 07:44:31.4, 35˚.55N×26˚.78E, h9km±2km, ML3.5/12, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*IDC **09** 07:44:32.5±1.4, 35˚.73N×27˚.03E, h0km, mb3.5/4, mbtmp3.5/6, ML3.2/2, MS3.9/5, Error ellipse: s-maj=36.9km s-min=22.6km az=173.0*
*AFAD **09** 07:44:32.0, 35˚.59N×26˚.86E, h8km±2km, MW3.5*

ISC 09 07:44:31.4±1.1, 35°.55N±0˙.03×26°.77E±0˙.02, h2km±9km, n77, σ1º13/97, mb3.5/3, MS3.9/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.32**	**91**	Pg	**Pg**	**07 44 38.1**	**+0.6**
KARP				Sg	**Sg**	**07 44 43.2**	**+1.5**
KARP	**Karpathos**	**0.32**	**91**	P	**Pg**	**07 44 38.2**	**+0.6**
KARP				S	**Sb**	**07 44 44.0**	**-1.6**
KARP	**Karpathos**	**0.32**	**91**	P	**Pg**	**07 44 37.8**	**+0.3**
KARP				S	**Sg**	**07 44 43.0**	**+1.3**
ZKR	**Zakros**	**0.63**	**226**	Pg	**Pg**	**07 44 43.3**	**-0.1**
ZKR				Sg	**Sg**	**07 44 52.2**	**+0.7**
ZKR	**Zakros**	**0.63**	**226**	P	**Pg**	**07 44 43.0**	**-0.4**
ZKR				S	**Sg**	**07 44 52.0**	**+0.5**
ZKR	**Zakros**	**0.63**	**226**	P	**Pg**	**07 44 43.0**	**-0.4**
ZKR				S	**Sg**	**07 44 51.9**	**+0.4**
SIT2	**Siteia**	**0.64**	**238**	P	**Pg**	**07 44 44.0**	**+0.3**
SIT2				S	**Sg**	**07 44 52.7**	**+0.7**
AGNA	**Agios Nikolaos**	**0.93**	**247**	P	**Pg**	**07 44 49.3**	**+0.1**
NPS	**Neapolis**	**0.99**	**253**	P	**Pg**	**07 44 49.9**	**-0.4**
NPS				S	**Sg**	**07 45 02.7**	**-0.4**
NPS	**Neapolis**	**0.99**	**253**	P	**Pg**	**07 44 50.6**	**-0.3**
YAZI	**Mula-Dat§a-**	**1.26**	**26**	P	**Pn**	**07 44 54.3**	**-1.6**
YAZI				S	**Sb**	**07 45 10.9**	**-1.5**
YAZI				IAML		07 45 19.0	
	comp=E,108nm,1.2s						
YAZI				IAML		07 45 20.0	
	comp=N,154nm,0.9s						
ARG	**Arkhangelos**	**1.29**	**59**	Pn	**Pg**	**07 44 56.6**	**+0.6**
ARG				Sn	**Sn**	**07 45 15.1**	**+0.9**
ARG	**Arkhangelos**	**1.29**	**59**	P	**Pg**	**07 44 56.2**	**+0.2**
ARG				S	**Sn**	**07 45 14.2**	**0.0**
ARG	**Arkhangelos**	**1.29**	**59**	P	**Pn**	**07 44 55.2**	**-1.1**
THERA	**Ancient Thera,**	**1.33**	**308**	P	**Pn**	**07 44 56.3**	**-0.6**
THERA				S	**Sg**	**07 45 15.6**	**+1.6**
THERA	**Ancient Thera,**	**1.33**	**308**	P	**Pn**	**07 44 56.2**	**-0.8**
DAT	**Datca**	**1.34**	**29**	Pn	**Pg**	**07 44 58.1**	**+0.9**
DAT				Sn	**Sg**	**07 45 16.9**	**+2.3**
DAT	**Datca**	**1.34**	**29**	P	**Pn**	**07 44 56.6**	**-0.7**
DAT				S	**Sn**	**07 45 14.5**	**-1.3**
DAT				IAML		07 45 22.0	
	comp=N,169nm,0.6s						
DAT				IAML		07 45 23.0	
	comp=E,170nm,0.7s						
THR8	**Santorini-Mono**	**1.35**	**310**	P	**Pn**	**07 44 56.3**	**-0.9**
**THR8

GUR Goura 4.28 305 P Pn 07 45 37.0 -0.6
KLV Kalavryta, Ach 4.46 305 P Pn 07 45 39.5 -0.6
MMAI Mount Meron Ar 7.58 107 Pn Pn 07 46 21.0 -2.0
1.8nm,0.3s,baz=309,slow=15,SNR=3.7
0.9nm,0.2s
GERES GERESS Array B 16.40 328 Pn P 07 48 23.5 -2.2
baz=150,slow=13,SNR=5.3
0.5nm,0.6s
ESDC Sonseca Array 24.63 289 P P 07 49 56.1 +2.9
0.7nm,0.6s,baz=81,slow=10,SNR=6.1
0.7nm,0.6s
TORD Torodi Ar. Bea 31.75 232 P P 07 51 00.8 +3.8
0.4nm,0.5s,baz=42,slow=9.1,SNR=3.1
0.4nm,0.5s
KURBB Kurchatov Arra 39.85 51 P P 07 52 05.4 -0.8
0.3nm,0.4s,baz=277,slow=8.4,SNR=6.5
0.3nm,0.4s
MKAR Makanchi Array 42.46 57 P P 07 52 27.0 -0.7
0.5nm,0.5s,baz=277,slow=12,SNR=3.0
0.5nm,0.5s
SONM Songino Array 58.22 51 LR LR 08 25 19.9
comp=Z,69nm,18.6s,baz=173,slow=42
YAK Yakutsk 64.88 31 LR LR 08 24 47.3
comp=Z,82nm,21.1s,baz=158,slow=37
INK Inuvik 75.41 353 LR LR 08 34 01.2
comp=Z,85nm,19.2s,baz=167,slow=39
YKA Yellowknife Ar 77.47 343 LR LR 08 31 04.5
comp=Z,126nm,21.0s,baz=216,slow=36
ULM Lac du Bonnet 80.71 327 LR LR 08 35 33.8
comp=Z,46nm,19.0s,baz=220,slow=38

IDC 09 08:08:03.6±2.2, 22°.43S×179°.08W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=162.3km s-min=34.7km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.07	246	P	P		P	08 15 07.7	+0.6
	1.0nm,0.5s,baz=97,slow=8.1,SNR=4.4								
	1.0nm,0.5s								
ASAR	Alice Springs	43.13	259	P	P		P	08 16 05.5	-0.6
	2.0nm,0.5s,baz=100,slow=7.8,SNR=32								
	2.0nm,0.5s								
WRA	Warramunga Arr	43.38	264	P	P		P	08 16 08.0	-0.2
	2.5nm,0.4s,baz=103,slow=8.1,SNR=218								
	2.5nm,0.4s								
TXAR	Lajitas Array	88.94	58	P	P		P	08 21 00.5	0.0
	0.2nm,0.7s,baz=238,slow=5.2,SNR=2.6								
	0.2nm,0.7s								

IDC 09 08:21:19.8±1.4, 30°.35S×179°.78W, h326km±17km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=30.9km s-min=24.1km az=51.0

ISC 09 08:21:18.4±1.0, 30°.4S±0°.1×179°.9W±0°.2, h300km, n6, σ2s78/8, mb3.3/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.07	56	P	P		Pn	08 22 08.7	+3.0
	397nm,0.2s,baz=197,slow=19,SNR=1.9								
RAO				S			S	08 22 39.6	-3.9
	337nm,0.3s,baz=270,slow=20,SNR=1.5								
URZ	Urewera	8.20	197	P			Pn	08 23 16.5	+2.2
	8.2nm,0.3s,baz=94,slow=19,SNR=20								
URZ				S			S	08 24 46.2	-2.3
	30nm,0.5s,baz=17,slow=20,SNR=18								
ASAR	Alice Springs	41.48	268	P			P	08 28 37.2	+0.3
	0.2nm,0.5s,baz=112,slow=8.1,SNR=6.5								
ASAR				PcP			PcP	08 30 26.3	-2.0
	0.2nm,0.5s,baz=99,slow=3.6,SNR=1.7								
	0.2nm,0.5s								
WRA	Warramunga Arr	42.47	273	P			P	08 28 44.3	-0.5
	0.8nm,0.4s,baz=113,slow=8.1,SNR=26								
	0.8nm,0.4s								
QSPA	South Pole Qui	59.69	180	P			P	08 30 51.0	-0.6
	0.9nm,0.6s,baz=24,slow=18,SNR=8.0								
	0.9nm,0.6s								
FINES	FINESS Array B	144.59	339	PKP			PKPbc	08 40 16.1	-1.9
	1.9nm,0.5s,baz=54,slow=3.6,SNR=13								

IDC 09 08:39:08.8±1.6, 15°.36S×173°.92W, h108km±15km, mb3.9/15, mbtmp4.2/16, Error ellipse: s-maj=23.0km s-min=13.7km az=139.0

NEIC 09 08:39:10.4±1.3, 15°.45S±0°.08×173°.83W±0°.04, h121km±6km, mb4.5/37, Error ellipse: s-maj=12.3km s-min=5.0km az=165.0

ISC 09 08:39:08.0±0.4, 15°.45S±0°.07×173°.89W±0°.06, h100km, n92, σ1s12/91, mb4.4/38, 2C-3D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.55	54	P			Pn	08 39 50.4	+2.5
	1μm,0.4s,baz=253,slow=11,SNR=431								
AFI				S			Sn	08 40 19.4	+0.9
	2μm,0.5s,baz=115,slow=17,SNR=21								
AFI	Afiamalu	2.55	54				Pn	08 39 50.9	+3.0
AFI					Sn		Sn	08 40 19.5	+1.0
FUTU	Fugatoga	4.24	285		Pn		Pn	08 40 14.2	+3.8
NIUE	Niue	5.23	134		Pn		Pn	08 40 26.2	+2.3
MSVF	Nonsavu	8.05	252	P			Pn	08 41 09.4	+7.1
	17nm,0.8s,baz=73,slow=19,SNR=6.4								
MSVF	Nonsavu	8.05	252		Pn		Pn	08 41 05.3	+3.0
RAR	Rarotonga	14.58	115		Pn		Pn	08 42 29.1	-0.3
MARNC	Mare, Loyalty	18.16	248		P		Pn	08 43 13.4	-0.4
SANVU	Saraoutou	18.23	267		P		P	08 43 12.7	-0.7
SANVU					IAmb		IAmb	08 43 22.2	
	comp=Z,41nm,0.9s								
OUENC	Ouen Island, N	19.49	246		P		Pn	08 43 27.8	-1.6
OUENC					IAmb		IAmb	08 43 50.3	
	comp=Z,43nm,1.1s								
ONTNC	Ouen Toro	19.80	247		P		P	08 43 30.8	+0.2
ARMA	Armidale	34.91	239		P		P	08 45 50.8	+0.4
ARMA					IAmb		IAmb	08 46 08.1	
	comp=Z,20nm,1.5s								
CAN	Canberra	38.63	232		P		P	08 46 21.9	+0.2
CAN					IAmb		IAmb	08 47 03.5	
	comp=Z,12nm,1.4s								
H11N3	WAKE ISLAND Hy	39.72	331		T		T	09 28 57.1	
	baz=148								
H11N1	WAKE ISLAND Hy	39.72	331		T		T	09 29 08.5	
	baz=148								
H11N2	WAKE ISLAND Hy	39.73	331		T		T	09 28 52.9	
	baz=148								
TOO	Toolangi	42.07	231		P		P	08 46 49.2	-0.9
STKA	Stephens Creek	43.60	240		P		P	08 47 02.7	+0.2
	comp=Z,0.9nm,0.4s,baz=102,slow=9.3,SNR=2.9								
	comp=Z,0.9nm,0.4s								
INKA	Innaminka	43.69	246		P		P	08 47 02.7	-0.5
BBOO	Buckleboo	48.38	240		P		P	08 47 39.8	-0.3
BBOO					IAmb		IAmb	08 48 15.0	
	comp=Z,28nm,1.5s								
WR8	Warramunga Arr	49.22	257		P		P	08 47 46.3	-0.3
WR8					IAmb		IAmb	08 47 55.6	
	comp=Z,7.8nm,1.1s								
WB0	Warramunga Arr	49.33	257		P		P	08 47 47.4	-0.1
WB0					IAmb		IAmb	08 47 47.5	
	comp=Z,5.8nm,0.8s								
WRA	Warramunga Arr	49.37	257		P		P	08 47 47.1	-0.7
	comp=Z,3.0nm,0.7s,baz=92,slow=7.9,SNR=67								
WRA					PcP		PcP	08 49 09.4	+0.4
	comp=Z,0.5nm,0.7s,baz=89,slow=3.4,SNR=2.5								
	comp=Z,3.0nm,0.7s								
WRA	Warramunga Arr	49.37	257		P		P	08 47 47.1	-0.7
AS31	Alice Springs	49.65	252		P		P	08 47 49.5	-0.3
AS31					PcP		PcP	08 49 09.1	-0.8
ASAR	Alice Springs	49.65	252		P		P	08 47 49.4	-0.5
	comp=Z,8.4nm,0.7s,baz=91,slow=7.5,SNR=93								
	comp=Z,8.4nm,0.7s								
ASAR	Alice Springs	49.65	252		P		P	08 47 49.2	-0.7
ASAR					PcP		PcP	08 49 07.9	-2.1
MTN	Manton Dam	53.26	265		P		P	08 48 17.3	+0.5
FAKI	Fak Fak	54.45	278		P		P	08 48 25.9	+0.3
FORT	Forrest	54.97	243		P		P	08 48 28.7	-0.4
FORT					IAmb		IAmb	08 48 29.1	
	comp=Z,19nm,1.4s								
KNRA	Kununurra	55.09	261		P		P	08 48 29.5	-0.6
JCJ	Chichijima	60.05	314		P		P	08 49 03.8	-0.9
SBA	Scott Base	63.17	185		P		P	08 49 24.5	-0.3
SBA					IAmb		IAmb	08 49 48.1	
	comp=Z,5.5nm,1.4s								
VNDA	Vanda	63.28	186		P		P	08 49 25.4	-0.2
MJAR	Matsushiro Arr	68.67	320		P		P	08 50 00.5	-0.2
	comp=Z,1.0nm,0.6s,baz=134,slow=8.7,SNR=2.9								
	comp=Z,1.0nm,0.6s								
MJAR	Matsushiro Arr	68.67	320		P		P	08 49 59.7	-1.1
MAJO	Matsushiro	68.67	320		P		P	08 50 00.3	-0.4
MAJO					IAmb		IAmb	08 50 36.0	
	comp=Z,5.0nm,0.9s								
MJB9	Matsu-Tunnel	68.67	320		P		P	08 50 00.6	-0.2
MJB9					IAmb		IAmb	08 50 37.0	
	comp=Z,4.7nm,0.9s								
AKUT	Akutan	69.65	5		P		P	08 50 05.3	-1.0
JTM	Tennabayashi	69.81	325		P		P	08 50 08.2	+0.5
PETK	Petropavlovsk-	72.53	342		P		P	08 50 23.5	-0.3
	comp=Z,4.2nm,0.9s,baz=159,slow=5.5,SNR=5.4								
	comp=Z,4.2nm,0.9s								
PETK	Petropavlovsk-	72.53	342		P		P	08 50 23.9	0.0
SII	Sitkinak Islan	73.61	11		P		P	08 50 30.5	+0.4
QSPA	South Pole Qui	74.60	180		P		P	08 50 36.4	+0.4
	comp=Z,2.9nm,0.9s,baz=43,slow=1.1,SNR=14								
	comp=Z,2.9nm,0.9s								
QSPA	South Pole Qui	74.60	180		P		P	08 50 36.6	+0.6
QSPA					IAmb		IAmb	08 50 40.1	
	comp=Z,8.9nm,1.4s								
NVAR	Mina Array Bea	74.68	42		P		P	08 50 36.6	-0.5
	comp=Z,0.7nm,0.6s,baz=239,slow=9.3,SNR=6.8								
	comp=Z,0.7nm,0.6s								
NVAR	Mina Array Bea	74.68	42		P		P	08 50 35.9	-1.2
M11K	Mekoryuk	75.82	4		P		P	08 50 42.1	-0.6
KSRS	Korea Array	75.86	316		P		P	08 50 42.1	-1.4
	comp=Z,0.7nm,0.5s,baz=130,slow=6.0,SNR=5.3								
	comp=Z,0.7nm,0.5s								
ILSW	Iliamna Southw	77.02	11		P		P	08 50 50.0	+0.3
ILSW					IAmb		IAmb	08 50 51.7	
	comp=Z,25nm,1.4s								
USRK	Ussuriysk Ar.	77.14	323		P		P	08 50 49.6	-1.0
	comp=Z,3.9nm,0.8s,baz=134,slow=6.2,SNR=5.1								
	comp=Z,3.9nm,0.8s								
N19K	Bonanza Creek	77.58	10		P		P	08 50 53.0	+0.2
N19K					IAmb		IAmb	08 51 02.5	
	comp=Z,7.6nm,1.1s								
NJ2	Nanjing	79.81	307	*eP*			P	08 51 07.0	+1.4
NJ2					pmax		pmax		
	comp=Z,23nm,0.5s								
MNTX	Cornudas Mount	80.63	54		P		P	08 51 09.9	-0.1
BNX	BinXian	80.68	323	⇓	P		P	08 51 10.4	+0.5
BNX					pmax		pmax		
	comp=Z,13nm,0.6s								
CN2	Changchun	80.82	320	*eP*			P	08 51 10.3	-0.4
CN2					pmax		pmax		
	comp=Z,10.0nm,0.7s								
RND	Reindeer	80.97	11		P		P	08 51 11.0	-0.2
RND					IAmb		IAmb	08 51 13.6	
	comp=Z,7.0nm,1.0s								
TXAR	Lajitas Array	81.03	56		P		P	08 51 12.0	-0.3
	comp=Z,0.4nm,0.8s,baz=245,slow=5.9,SNR=5.0								
	comp=Z,0.4nm,0.8s								
TXAR	Lajitas Array	81.03	56		P		P	08 51 11.6	-0.8
ILAR	Eielson Array	82.58	11		P		P	08 51 19.1	-0.4
	comp=Z,1.1nm,0.8s,baz=205,slow=4.9,SNR=14								
	comp=Z,1.1nm,0.8s								
ILAR	Eielson Array	82.58	11				P	08 51 19.7	+0.2
PD31	Pinedale Array	82.61	42		P		P	08 51 20.3	-0.2
PDAR	Pinedale Array	82.61	42		P		P	08 51 19.3	-1.2
	comp=Z,0.9nm,0.7s,baz=258,slow=5.1,SNR=10								
	comp=Z,0.9nm,0.7s								
PDAR	Pinedale Array	82.61	42		P		P	08 51 19.9	-0.6
YMR	Madison River	82.66	40		P		P	08 51 20.6	-0.1
YMR					IAmb		IAmb	08 52 00.4	
	comp=Z,2.4nm,0.6s								
DAWY	Dawson	83.58	15		P		P	08 51 25.2	+0.4
G31M	Satah River	87.16	15		P		P	08 51 43.2	+0.8
G31M					IAmb		IAmb	08 51 43.4	
	comp=Z,9.4nm,1.2s								
MAW	Mawson	87.60	199		P		P	08 51 45.0	+0.4
	comp=Z,4.0nm,0.8s,baz=63,slow=4.5,SNR=4.3								
	comp=Z,4.0nm,0.8s								
GYA	Guiyang	87.65	298	⇑	P		P	08 51 51.8	+6.0
GYA					pmax		pmax		
	comp=Z,15nm,0.6s								
XAN	Xi'an	88.27	306		P		P	08 51 47.4	-1.1
XAN					pmax		pmax		
	comp=Z,13nm,0.7s								
HHC	Hu-ho-hao-te	88.71	313	*eP*			P	08 51 51.8	+1.3
HHC					pmax		pmax		
	comp=Z,10.0nm,0.8s								
YKA	Yellowknife Ar	90.33	24		P		P	08 51 57.1	-0.3
	comp=Z,1.0nm,0.9s,baz=237,slow=4.2,SNR=4.4								
	comp=Z,1.0nm,0.9s								
YKA	Yellowknife Ar	90.33	24		P		P	08 51 56.0	-1.4
YKAW1	Yellowknife Wh	90.37	24		P		P	08 51 56.7	-0.9
YKAW1					IAmb		IAmb	08 51 58.0	
	comp=Z,4.0nm,1.1s								
PZH	PanZhiHua	91.87	297		P		P	08 52 07.1	+1.5
ELIB	Princess Elisa	92.05	185	*dP*			P	08 52 05.7	+0.1
	comp=Z,2.2nm,1.1s								
CMAR	Chiang Mai Arr	92.18	288		P		P	08 52 07.5	+0.5
	comp=Z,0.8nm,0.3s,baz=100,slow=5.4,SNR=7.5								
	comp=Z,0.8nm,0.3s								
VNA2	Neumayer--Watz	93.34	176	⇑	P		P	08 52 11.8	+0.4
	comp=Z,1.1nm,0.7s,baz=170,slow=3.1								
BVAR	Borovoye Array	117.63	322	PKP			PKPdf	08 57 41.4	-0.8
	comp=Z,0.7nm,0.6s,baz=2.9,slow=2.9,SNR=1.7								
ARCES	ARCESS Array B	124.59	352	PKP			PKPdf	08 57 54.1	-1.0
	comp=Z,1.7nm,0.8s,baz=26,slow=1.8,SNR=5.7								
MORC	Moravsky Berou	144.52	347	*e*PKP		PKPbc	08 58 31.2	-0.4	
VRAC	Vranov	145.16	348	*e*PKP		PKPdf	08 58 33.6	-0.2	
BMRD	Maredsous	145.22	2	*d*PKP		PKPdf	08 58 33.5	-0.3	
JAVC	Velka Javorina	145.35	347	*e*PKP		PKPab	08 58 35.1	+0.6	
KRUC	Moravsky	145.43	348	*e*PKP		PKPab	08 58 34.2	-0.5	
MLR	Muntele Rosu	145.71	335	PKPdf		PKPdf	08 58 32.5	-2.5	
KHC	Kasperske Hory	145.85	351	PKPdf		PKPdf	08 58 32.7	-2.3	
BR131	Keskin Array S	145.89	321	PKPdf		PKPdf	08 58 33.6	-1.9	
BRTR	Keskin Array B	145.89	321	PKPbc		PKPbc	08 58 36.0	-0.4	
	comp=Z,7.4nm,0.8s,baz=64,slow=1.7,SNR=26								
BRTR	Keskin Array B	145.89	321	PKPdf		PKPdf	08 58 33.3	-2.3	
GERES	GERESS Array B	146.11	351	PKPbc		PKPab	08 58 37.0	-0.4	
	comp=Z,0.7nm,0.5s,baz=343,slow=3.1,SNR=4.9								
GERES	GERESS Array B	146.11	351	PKPdf		PKPdf	08 58 33.9	-1.7	

IDC 09 08:39:35.6±3.6, 54°.17N×87°.37E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=30.2km s-min=17.9km az=58.0

ASRS 09 08:39:36.0±0.9, 54°.08N×87°.17E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.39	266		I		I	08 48 10.0	
	baz=82,slow=318,SNR=2.4								
ZALV	Zalesovo Beam	1.39	266		Pg		Pn	08 40 02.2	-0.5
	1.3nm,0.3s,baz=81,slow=19,SNR=15								
ZALV					Lg		Lg	08 40 23.6	
	1.2nm,0.3s,baz=82,slow=24,SNR=7.4								
KURBB	Kurchatov Arra	6.32	240		Pn		Pn	08 41 13.5	+3.1
	0.1nm,0.3s,baz=56,slow=13,SNR=2.5								
	0.3nm,0.3s								
MKAR	Makanchi Array	7.93	205		Pn		Pn	08 41 34.4	+1.9
	baz=24,slow=16,SNR=1.7								
MKAR					Sn		Sn	08 43 05.9	+3.1
	baz=28,slow=31,SNR=2.6								
	0.2nm,0.5s								

NDI 09 08:58:06.8±2.6, 22°.71N×93°.58E, h10km, mb4.4, ML4.2, MW4.3, Presumed earthquake

BJI 09 08:58:08.5, 22°.87N×93°.16E, h10km, mB4.8/4, mb4.4/29, Ms3.9/8, Ms7 3.7/10

IDC 09 08:58:10.1±0.7, 23°.10N×93°.46E, h0km, mb3.9/14, mbtmp3.9/16, ML4.4/2, MS3.4/7, Error ellipse: s-maj=19.7km s-min=13.5km az=47.0

NEIC 09 08:58:12.7±0.9, 23°.08N±0°.04×93°.37E±0°.06, h10km±1km, mb4.6/49, Error ellipse: s-maj=9.6km s-min=6.6km az=58.0

GFZ 09 08:58:13.7±0.2, 23°.N±4°.×93°.3E±°, h10km, M4.5/17, mb4.5/17, confirmed

ISC 09 08:58:16.2±1.0, 23°.08N±0°.04×93°.35E±0°.04, h42km±9km, n122, σ1s66/122, mb4.4/38, MS3.4/6, 1C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MORE	Moreh	1.44	37				Pn	08 58 38.6	-1.2
BRDH	Bariadhala	1.62	256		Pn		Pn	08 58 41.3	-1.0
	127nm,0.3s,baz=70,slow=15,SNR=14								
BRDH					Sn		Sn	08 59 05.9	+3.9
	118nm,0.3s,baz=72,slow=20,SNR=3.8								
BELO	BELONIA	1.76	276		IAML			08 59 18.0	
	comp=N,59μm,0.7s								
SILR	SILCHAR	1.76	344	*eP*			Pn	08 58 43.4	-0.9
SILR				*eS*			Sn	08 59 10.0	+4.5
SILR					IAML			08 59 20.8	
	comp=E,1μm,0.0s								
SILR					IAML			08 59 21.0	
	comp=N,1μm,0.4s								
IMP	Imphal	1.82	17	*eP*			Pn	08 58 44.1	-1.1
IMP				*eS*			Sn	08 59 10.5	+3.4
KOHI	KOHIMA	2.71	15	*eP*			Pn	08 58 55.3	-2.2
KOHI				*eS*			Sn	08 59 29.9	+0.8
KOHI					IAML			08 59 32.6	
	comp=N,422nm,0.6s								
KOHI					IAML			08 59 33.0	
	comp=Z,188nm,1.1s								
SHL	Shillong	2.81	332				Pn	08 58 57.2	-1.6
SHL	Shillong	2.81	332	*eP*			Pn	08 58 57.5	-1.3
SHL				*eS*			Sn	08 59 34.5	+2.9
NPW	Naypyitaw	4.19	141	P			Pn	08 59 20.4	+2.8
DHUB	DHUBRI	4.23	314	*eP*			Pn	08 59 15.2	-2.9
DHUB				*ex*			x	09 00 03.0	
ZIRO	ZIRO	4.45	6	*eP*			Pn	08 59 17.7	-3.6
ZIRO				*ex*			x	09 00 07.9	
ZIRO					IAML			09 00 17.2	
	comp=N,751nm,0.4s								
ZIRO					IAML			09 00 17.4	
	comp=E,878nm,0.4s								
TNCH	TengChong	5.11	67		Pg		Pn	08 59 51.9	+22
TNCH					Sg		Sn	09 01 00.8	+33
TNCH					smax		smax		
	comp=N,120nm,0.4s								
TNCH					smax		smax		
	comp=E,100nm,0.4s								
TNCH					LR		LR		
	comp=N,480nm,1.9s								
TNCH					LR		LR		
	comp=E,240nm,1.6s								
CHTO	Chiang Mai	6.74	128		Pn		Pn	08 59 50.4	-2.3
CHTO	Chiang Mai	6.74	128		P		Pn	08 59 55.5	+2.9
LSA	Lhasa	6.88	344		Pn		Pn	08 59 52.6	-2.3
BOK	Bokaro	6.89	277	*eP*			Pn	08 59 51.8	-2.9
BOK				*eS*			Sn	09 01 07.6	-4.3
CM31	Chiang Mai Arr	6.97	130		Pn		Pn	08 59 54.5	-1.3
CMAR	Chiang Mai Arr	6.97	130		Pn		Pn	08 59 54.8	-1.0
	comp=E,1.0nm,0.3s,baz=311,slow=13,SNR=17								
CMAR					Lg		Lg	09 01 49.1	
	comp=E,0.2nm,0.3s,baz=305,slow=25,SNR=1.4								
CMAR					LR		LR	09 02 58.8	
	comp=E,139nm,18.7s,baz=300,slow=42								
	comp=E,4.3nm,0.8s								
CMAR	Chiang Mai Arr	6.97	130		Pn		Pn	08 59 54.3	-1.5
CRAI	Chiangrai	7.12	112		Pn		Pn	08 59 56.3	-1.7
EVN	Everest	7.64	311				Pn	09 00 03.0	-2.5
EVN	Everest	7.64	311		P		Pn	09 00 03.1	-2.5
PBA	Port Blair	11.38	183		Pn		Pn	09 00 54.5	-1.7
GYA	Guiyang	12.55	72	⇑	P		Pn	09 01 16.8	+4.4
GYA					pmax		pmax		
	comp=E,16nm,0.6s								
HYB	Hyderabad	14.98	251	*eP*			P	09 01 50.1	0.0
HYB				*eS*			S	09 04 49.1	+2.8
LZDM	Lanzhou Array	15.66	33		Pn		Pn	09 01 53.7	-0.5
	baz=216,slow=9.0								
	comp=E,1.4nm,0.3s								
LZH	Lanzhou	15.84	33	*eP*			Pn	09 01 45.5	-11
LZH					pP		P	09 01 49.8	-10
LZH					pmax		pmax		
	comp=Z,20nm,1.0s								
LZH					LR		LR		
	comp=N,330nm,12.7s								
LZH					LR		LR		
	comp=E,250nm,12.7s								
LZH					LR		LR		
	comp=Z,440nm,17.5s								
XAN	Xi'an	17.48	48		P		Pn	09 02 11.9	-5.0
XAN					pmax		pmax		
	comp=Z,11nm,1.1s								
XAN					LR		LR		
	comp=N,240nm,15.8s								
XAN					LR		LR		
	comp=E,120nm,14.4s								
XAN					LR		LR		
	comp=Z,150nm,15.8s								
DHRM	DHARAMSHALA	17.63	305	*ex*			x	09 02 12.8	
DHRM					IAmb		IAmb	09 02 18.3	
	comp=Z,11nm,0.3s								
PALK	Pallekele	19.88	220		LR		LR	09 11 05.5	
	comp=Z,88nm,21.3s,baz=267,slow=39								
NIL	Nilore	20.55	305				P	09 02 50.4	-0.8
NIL					IAmb		IAmb	09 02 53.1	
	comp=Z,17nm,0.8s								
NIL	Nilore	20.55	305		P		P	09 02 50.6	-0.6
WMQ	Urumqi	21.20	349	*eP*			P	09 02 58.6	+0.3
WMQ					pP		pP	09 03 03.7	-5.2
WMQ					pmax		pmax		
	comp=Z,13nm,0.7s								
WUS	Wushi	21.61	330		P		P	09 03 02.3	-0.5
KSH2	Kashi	22.03	321		P		P	09 03 09.7	+2.4
KSH2					pmax		pmax		
	comp=Z,9.0nm,1.1s								
TARG	Taragay, Kyrgy	22.69	329				P	09 03 14.6	0.0
TARG					IAmb		IAmb	09 03 28.5	
	comp=Z,12nm,1.2s								
TARG	Taragay, Kyrgy	22.69	329		P		P	09 03 15.8	+1.1
ASAI	AK-SAY(Kyrgyzs	22.73	325		P		P	09 03 15.2	+0.2
PRZ	Przheval'sk	23.00	331		P		P	09 03 17.9	+0.3
PRZ					IAmb		IAmb	09 03 39.5	
	comp=Z,19nm,1.0s								
PDGK	Podgornoye	23.22	334		P		P	09 03 19.3	-0.4
HHC	Hu-ho-hao-te	23.43	37	*eP*			P	09 03 21.2	-0.5
HHC					S		S	09 07 26.3	-5.7
HHC					pmax		pmax		
	comp=Z,14nm,0.7s								
HHC					pmax		pmax		
	comp=Z,50nm,5.9s								
HHC					L		L		
	comp=Z,150nm,13.5s								
HHC					L		L		
	comp=Z,100nm,13.5s								
HHC					L		L

	comp=Z,19nm,0.9s							
SHAA	**Shahritus**		**26.02**	**309**		**P**	**09 03 44.8**	**-0.7**
SHAA					IAmb	IAmb	09 03 49.8	
	comp=Z,17nm,0.7s							
SONM	**Songino Array**		**26.81**	**20**	P	**P**	**09 03 53.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=203,slow=10,SNR=4.0							
	comp=Z,0.9nm,0.5s							
SONM	**Songino Array**		**26.81**	**20**	P	**P**	**09 03 52.7**	**+0.2**
KK31	**Karatay Array**		**27.50**	**322**	P	**P**	**09 03 58.1**	**-0.5**
KKAR	**Karatay Array**		**27.50**	**322**	P	**P**	**09 03 58.0**	**-0.7**
TLY	**Talaya**		**29.64**	**13**	P	**P**	**09 04 18.4**	**+0.9**
KURBB	**Kurchatov Arra**		**29.82**	**341**	P	**P**	**09 04 19.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=156,slow=8.4,SNR=7.3							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**		**29.88**	**341**	P	**P**	**09 04 20.4**	**+0.8**
ZALV	**Zalesovo Beam**		**31.49**	**350**	P	**P**	**09 04 31.8**	**-2.0**
	comp=Z,0.5nm,0.4s,baz=171,slow=7.2,SNR=4.8							
	comp=Z,0.5nm,0.4s							
KSRS	**Korea Array**		**32.91**	**56**	P	**P**	**09 04 43.7**	**-2.8**
	comp=Z,0.4nm,0.6s,baz=259,slow=9.8,SNR=1.4							
KSRS					LR	LR	09 19 29.8	
	comp=Z,58nm,21.2s,baz=240,slow=39							
	comp=Z,0.4nm,0.6s							
HIA	**Hailar**		**33.39**	**32**	P	**P**	**09 04 53.0**	**+2.4**
BVAR	**Borovoye Array**		**34.63**	**336**	P	**P**	**09 05 01.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=123,slow=10,SNR=2.1							
	comp=Z,0.5nm,0.3s							
DGAR	**Diego Garcia**		**36.56**	**216**	P	**P**	**09 05 18.4**	**+0.3**
JMN	**Monobe**		**36.99**	**64**	P	**P**	**09 05 21.7**	**-0.1**
JMN					IAmb	IAmb	09 05 37.4	
	comp=Z,21nm,1.1s							
AB31	**Akbulak array**		**37.04**	**323**	P	**P**	**09 05 22.2**	**+0.2**
ABKAR	**Akbulak array**		**37.04**	**323**		**P**	**09 05 22.1**	**+0.1**
LUWI	**Luwuk**		**37.35**	**126**	P	**P**	**09 05 24.4**	**-0.6**
JAGI	**Jajag, Banyuwa**		**37.39**	**145**	P	**P**	**09 05 25.2**	**0.0**
AKTO	**Aktyubinsk**		**38.73**	**324**	LR	LR	09 22 23.3	
	comp=Z,56nm,20.8s,baz=212,slow=38							
KLR	**Kul'dur**		**39.87**	**39**	LR	LR	09 24 57.6	
	comp=Z,64nm,18.4s,baz=284,slow=40							
FAKI	**Fak Fak**		**45.89**	**119**	P	**P**	**09 06 34.6**	**-0.3**
MBWA	**Marble Bar**		**50.94**	**148**	P	**P**	**09 07 14.7**	**+1.1**
KNRA	**Kununurra**		**51.81**	**135**	P	**P**	**09 07 20.2**	**0.0**
KNRA					IAmb	IAmb	09 07 22.5	
	comp=Z,8.1nm,1.0s							
CY604	**RAF Akrotiri,**		**52.18**	**296**	P	**P**	**09 07 21.8**	**-0.7**
CY604					IAmb	IAmb	09 07 22.1	
	comp=Z,9.2nm,1.3s							
MA2	**Magadan**		**53.99**	**32**	LR	LR	09 32 53.8	
	comp=Z,76nm,18.8s,baz=270,slow=39							
PEA0B	**Petropavlovsk-**		**56.54**	**41**	P	**P**	**09 07 54.6**	**+0.4**
PEA0B					IAmb	IAmb	09 08 36.3	
	comp=Z,12nm,1.1s							
AYDN	**Tasoluk**		**57.27**	**301**	P	**P**	**09 08 00.6**	**+0.8**
WRA	**Warramunga Arr**		**58.55**	**134**	P	**P**	**09 08 08.0**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=317,slow=7.0,SNR=37							
	comp=Z,1.9nm,0.5s							
WRA	**Warramunga Arr**		**58.55**	**134**	P	**P**	**09 08 08.1**	**-0.8**
WRAB	**Tennant Creek**		**58.55**	**134**	P	**P**	**09 08 08.8**	**0.0**
WRAB					IAmb	IAmb	09 08 37.2	
	comp=Z,14nm,1.4s							
WRAB	**Tennant Creek**		**58.55**	**134**	P	**P**	**09 08 08.3**	**-0.5**
WR8	**Warramunga Arr**		**58.67**	**134**	P	**P**	**09 08 09.2**	**-0.4**
WR8					IAmb	IAmb	09 08 11.5	
	comp=Z,4.3nm,0.8s							
BUR08	**Bucovina Ar. S**		**58.74**	**313**	P	**P**	**09 08 10.2**	**+0.2**
FIA1	**FINESS Array S**		**59.15**	**329**	P	**P**	**09 08 13.1**	**+0.7**
FINES	**FINESS Array B**		**59.15**	**329**	P	**P**	**09 08 12.2**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=102,slow=8.4,SNR=3.5							
	comp=Z,1.9nm,0.9s							
FINES	**FINESS Array B**		**59.15**	**329**	P	**P**	**09 08 12.8**	**+0.4**
ARCES	**ARCESS Array B**		**60.85**	**338**	P	**P**	**09 08 25.5**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=119,slow=8.5,SNR=1.9							
	comp=Z,1.6nm,0.8s							
ARCES	**ARCESS Array B**		**60.85**	**338**	P	**P**	**09 08 25.0**	**+1.0**
ARCES					IAmb	IAmb	09 08 33.9	
	comp=Z,10nm,1.2s							
AS31	**Alice Springs**		**60.93**	**137**	P	**P**	**09 08 25.0**	**-0.2**
AS31					IAmb	IAmb	09 08 27.4	
	comp=Z,1.8nm,0.6s							
ASAR	**Alice Springs**		**60.93**	**137**	P	**P**	**09 08 24.9**	**-0.2**
	comp=Z,4.1nm,0.5s,baz=318,slow=6.7,SNR=47							
	comp=Z,4.1nm,0.5s							
ASAR	**Alice Springs**		**60.93**	**137**	P	**P**	**09 08 25.4**	**+0.3**
ABPO	**Ambohimpanom**		**61.47**	**231**	P	**P**	**09 08 29.3**	**+0.2**
HFS	**Hagfors**		**65.15**	**327**	P	**P**	**09 08 53.3**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=79,slow=7.5,SNR=1.3							
	comp=Z,0.6nm,0.4s							
NC405	**NORSAR Array S**		**66.06**	**328**	P	**P**	**09 08 59.9**	**+1.4**
NC405					IAmb	IAmb	09 09 32.7	
	comp=Z,13nm,1.4s							
NC602	**NORSAR Array S**		**66.17**	**328**	P	**P**	**09 09 00.1**	**+0.9**
NOA	**NORSAR Array B**		**66.30**	**328**	P	**P**	**09 08 59.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=86,slow=6.4,SNR=2.0							
	comp=Z,0.3nm,0.5s							
NC204	**NORSAR Array S**		**66.50**	**329**	P	**P**	**09 09 02.6**	**+1.2**
NC204					IAmb	IAmb	09 09 31.3	
	comp=Z,7.2nm,1.2s							
CTAO	**Charters Tower**		**67.11**	**126**	P	**P**	**09 09 06.9**	**+1.1**
QLP	**Quilpie**		**69.71**	**132**	P	**P**	**09 09 24.1**	**+2.2**
EIDS	**Eidsvold**		**73.82**	**127**	P	**P**	**09 09 47.1**	**+0.5**
CMSA	**Cobar Meteorol**		**73.89**	**135**	P	**P**	**09 09 48.9**	**+2.0**
E18K	**Tukpahlearik C**		**74.85**	**23**	P	**P**	**09 09 52.6**	**+0.5**
M11K	**Mekoryuk**		**75.20**	**30**	P	**P**	**09 09 54.5**	**+0.4**
D20K	**Etivluk River**		**75.66**	**21**	P	**P**	**09 09 57.4**	**+0.8**
D20K					IAmb	IAmb	09 10 02.7	
	comp=Z,7.8nm,1.4s							
F20K	**Avaraart Lake**		**76.72**	**22**	P	**P**	**09 10 02.5**	**-0.2**
ARMA	**Armidale**		**77.18**	**131**	P	**P**	**09 10 06.2**	**+0.3**
ILAR	**Eielson Array**		**81.01**	**22**	P	**P**	**09 10 24.9**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=309,slow=5.3,SNR=5.4							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**		**81.01**	**22**	P	**P**	**09 10 26.6**	**+0.3**
TORD	**Torodi Ar. Bea**		**86.43**	**283**	P	**P**	**09 10 54.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=43,slow=4.8,SNR=2.7							
	comp=Z,0.5nm,0.7s							
TXAR	**Lajitas Array**		**125.37**	**18**	PKP	**PKiKP**	**09 17 14.7**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=345,slow=3.4,SNR=1.8							

*ASRS **09** 09:05:21.0±0.7,54.°63N×83.°66E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 09 09:05:12.2±1.7, 54.°58N×83.°78E, h0km, mbtmp2.9/3, ML2.3/2, Error ellipse: s-maj=14.7km s-min=10.0km az=8.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.87**	**136**	I	I	09 10 35.0	
	0.1nm,1.0s,baz=314,slow=323,SNR=14						
ZALV	**Zalesovo Beam**	**0.87**	**136**	Pg	Pg	09 05 28.6	-0.4
	1.1nm,0.3s,baz=319,slow=15,SNR=16						
ZALV				Lg	Lg	09 05 41.8	
	5.9nm,0.3s,baz=321,slow=25,SNR=13						
KURBB	**Kurchatov Arra**	**5.09**	**221**	Pn	Pn	09 06 29.8	+0.1
	0.1nm,0.3s,baz=39,slow=13,SNR=3.9						
KURBB				Lg	Lg	09 07 54.1	
	0.1nm,0.3s,baz=35,slow=33,SNR=6.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.85**	**188**	Pn	Pn	09 07 07.0	-0.6
	0.3nm,0.5s,baz=2.3,slow=7.6,SNR=2.3						
MKAR				Sn	Sn	09 08 36.0	-1.2
	0.1nm,0.3s,baz=1.6,slow=14,SNR=1.5						
MKAR				Lg	Lg	09 09 25.0	
	0.1nm,0.3s,baz=4.2,slow=39,SNR=1.9						
BVAR	**Borovoye Array**	**8.08**	**264**	Pn	Pn	09 07 10.4	-0.4
	0.1nm,0.3s,baz=71,slow=9.3,SNR=2.8						
	0.7nm,0.4s						

IDC 09 09:07:24.4±3.3, 56.°53S×145.°36E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=410.0km s-min=22.6km az=79.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**21.86**	**170**	P	P	09 12 18.4	+0.3
	0.9nm,0.9s,baz=326,slow=8.7,SNR=4.3						
	0.9nm,0.9s						
H01W1	**Cape Leeuwin H**	**30.28**	**302**	T	T	09 46 25.7	
	baz=145,slow=74,SNR=27						
H01W2	**Cape Leeuwin H**	**30.28**	**302**	T	T	09 46 23.1	
	baz=145,slow=74,SNR=34						
H01W3	**Cape Leeuwin H**	**30.29**	**302**	T	T	09 46 26.5	
	baz=145						
QSPA	**South Pole Qui**	**33.57**	**180**	P	P	09 14 05.6	-0.2
	1.7nm,1.0s,baz=341,slow=4.7,SNR=2.3						
	1.7nm,1.0s						
ASAR	**Alice Springs**	**33.88**	**341**	P	P	09 14 08.9	+0.2
	0.7nm,1.0s,baz=163,slow=7.8,SNR=4.6						
	0.7nm,1.0s						
WRA	**Warramunga Arr**	**37.45**	**343**	P	P	09 14 39.0	-0.3
	0.9nm,0.8s,baz=168,slow=8.3,SNR=5.4						
	0.9nm,0.8s						
H08S2	**Diego Garcia H**	**74.23**	**280**	T	T	10 41 42.4	
	baz=146						
H08S1	**Diego Carcia H**	**74.24**	**280**	T	T	10 41 45.2	
	baz=146						
H08S3	**Diego Garcia H**	**74.25**	**280**	T	T	10 41 37.1	
	baz=146						

*IDC **09** 09:13:28.7±1.3, 56.°31S×147.°47E, h0km, mb4.1/8, mbtmp4.1/8, MS3.8/18, Error ellipse: s-maj=91.1km s-min=16.6km az=80.0*

*NEIC **09** 09:13:31.2±1.6, 56.°39S±0.°04×147.°0E±0.°5, h10km±1km, mb4.2/10, Error ellipse: s-maj=49.7km s-min=6.2km az=88.0*

ISC 09 09:13:31.1±0.8, 56.°42S±0.°09×146.°8E±0.°3, h11km, n61, σ0s99/37, mb4.2/10, MS3.8/18, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**18.88**	**357**	P	**Pn**	**09 17 51.9**	**0.0**
TOO				IAmb	IAmb	09 17 56.5	
	comp=Z,6.5nm,1.0s						
CASY	**Casey**	**19.67**	**225**	P	**Pn**	**09 18 02.1**	**+1.0**
RPZ	**Rata Peaks**	**19.98**	**61**	LR	LR	09 24 07.1	
	comp=Z,145nm,20.6s,baz=294,slow=33						
CAN	**Canberra**	**21.16**	**5**	P	**P**	**09 18 19.0**	**+2.8**
CAN				IAmb	IAmb	09 18 29.1	
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**21.84**	**171**	P	**P**	**09 18 23.1**	**0.0**
	comp=Z,2.4nm,1.1s,baz=333,slow=10,SNR=5.9						
VNDA				LR	LR	09 25 59.1	
	comp=Z,133nm,20.1s,baz=346,slow=34						
	comp=Z,2.4nm,1.1s						
VNDA	**Vanda**	**21.84**	**171**	P	**P**	**09 18 23.0**	**0.0**
VNDA				IAmb	IAmb	09 18 46.0	
	comp=Z,15nm,1.4s						
STKA	**Stephens Creek**	**24.80**	**349**	P	**P**	**09 18 52.9**	**-0.1**
	comp=Z,7.4nm,0.9s,baz=166,slow=13,SNR=10						
STKA				LR	LR	09 26 46.5	
	comp=Z,221nm,18.4s,baz=193,slow=32						
	comp=Z,7.4nm,0.9s						
URZ	**Urewera**	**27.10**	**61**	LR	LR	09 28 45.8	
	comp=Z,320nm,21.0s,baz=200,slow=34						
H01W1	**Cape Leeuwin H**	**30.89**	**300**	T	T	09 52 28.3	
	baz=144,slow=75,SNR=160						
H01W2	**Cape Leeuwin H**	**30.90**	**300**	T	T	09 52 28.7	
	baz=144,slow=75,SNR=192						
H01W3	**Cape Leeuwin H**	**30.91**	**300**	T	T	09 52 29.5	
	baz=144,slow=75,SNR=113						
QSPA	**South Pole Qui**	**33.68**	**180**	P	**P**	**09 20 11.6**	**-0.2**
	comp=Z,1.5nm,1.0s,baz=346,slow=7.3,SNR=3.2						
QSPA				LR	LR	09 33 40.2	
	comp=Z,184nm,19.6s,baz=18,slow=36						
	comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**33.68**	**180**	P	**P**	**09 20 12.1**	**+0.3**
QSPA				IAmb	IAmb	09 20 15.1	
	comp=Z,6.2nm,1.4s						
ASAR	**Alice Springs**	**34.05**	**339**	P	**P**	**09 20 15.1**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=172,slow=8.9,SNR=19						
ASAR				PcP	**PcP**	**09 22 51.2**	**-1.5**
	comp=Z,1.5nm,0.9s,baz=145,slow=3.4,SNR=5.1						
ASAR				LR	LR	09 32 12.7	
	comp=Z,112nm,18.6s,baz=197,slow=33						
	comp=Z,3.5nm,0.9s						
ASAR	**Alice Springs**	**34.05**	**339**	P	**P**	**09 20 16.6**	**+1.3**
ASAR					**PcP**	**09 22 51.2**	**-1.5**
AS31	**Alice Springs**	**34.05**	**339**	P	**P**	**09 20 16.3**	**+1.1**
AS31				IAmb	IAmb	09 20 20.4	
	comp=Z,1.4nm,0.9s						
CTA	**Charters Tower**	**36.28**	**359**	LR	LR	09 34 20.0	
	comp=Z,392nm,18.0s,baz=198,slow=35						
RAO	**Raoul Island**	**36.83**	**57**	LR	LR	09 33 35.9	
	comp=Z,158nm,20.5s,baz=267,slow=33						
DZM	**Mont Dzumac**	**37.25**	**31**	LR	LR	09 32 39.1	
	comp=Z,305nm,18.4s,baz=192,slow=31						
WRA	**Warramunga Arr**	**37.59**	**341**	P	**P**	**09 20 44.1**	**-1.4**
	comp=Z,3.7nm,0.9s,baz=169,slow=8.3,SNR=17						
WRA				PcP	**PcP**	**09 23 01.7**	**-1.5**
	comp=Z,1.7nm,0.9s,baz=168,slow=2.8,SNR=5.3						
	comp=Z,3.7nm,0.9s						
WRA	**Warramunga Arr**	**37.59**	**341**	P	**P**	**09 20 44.1**	**-1.4**
WRA					**PcP**	**09 23 01.7**	**-1.5**
MAW	**Mawson**	**37.76**	**218**	LR	LR	09 36 31.8	
	comp=Z,227nm,18.4s,baz=86,slow=36						
MBWA	**Marble Bar**	**40.51**	**319**	P	**P**	**09 21 09.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**41.44**	**329**	P	**P**	**09 21 17.6**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=158,slow=11,SNR=3.8						
	comp=Z,5.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.44**	**329**	P	**P**	**09 21 17.6**	**-0.1**
PMG	**Port Moresby**	**46.90**	**1**	LR	LR	09 39 30.5	
	comp=Z,211nm,20.3s,baz=195,slow=33						
SNAA	**Sanae**	**50.43**	**192**	P	**P**	**09 22 28.8**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=184,slow=5.1,SNR=4.6						
	comp=Z,0.9nm,0.6s						
SNAA	**Sanae**	**50.43**	**192**	P	**P**	**09 22 28.8**	**+0.8**
SNAA				IAmb	IAmb	09 22 35.4	
	comp=Z,6.6nm,1.3s						
KRVT	**Keravat (AS076**	**52.13**	**7**	LR	LR	09 42 48.2	
	comp=Z,8.0nm,20.0s,baz=93,slow=34						
RAR	**Rarotonga**	**52.57**	**71**	LR	LR	09 41 26.1	
	comp=Z,64nm,20.4s,baz=258,slow=32						
H04S2	**CROZET ISLANDS**	**55.09**	**236**	T	T	10 23 44.1	
	baz=140,slow=75,SNR=4.6						
H04S1	**CROZET ISLANDS**	**55.09**	**237**	T	T	10 23 43.1	
	baz=140,slow=75,SNR=5.2						
H04S3	**CROZET ISLANDS**	**55.11**	**237**	T	T	10 23 42.2	
	baz=140,slow=75,SNR=5.5						
PPT2	**Papeete2**	**60.99**	**78**	eLR	LR	09 41 13.9	
	comp=Z,150nm,29.8s						
PPT2				eLR	LR	09 41 26.2	
	comp=Z,200nm,27.2s						
PPT	**Papeete**	**61.01**	**78**	LR	LR	09 43 58.1	
	comp=Z,80nm,20.9s,baz=216,slow=30						
TAOE	**Nuku Hiva Isla**	**73.32**	**81**	eLR	LR	09 46 49.2	
	comp=Z,71nm,28.1s						
H08S2	**Diego Garcia H**	**74.98**	**279**	T	T	10 47 44.8	
	baz=146,slow=75,SNR=11						
H08S1	**Diego Carcia H**	**75.00**	**279**	T	T	10 47 38.4	
	baz=146,slow=75,SNR=9.5						
H08S3	**Diego Garcia H**	**75.00**	**279**	T	T	10 47 45.0	
	baz=146,slow=75,SNR=16						
H03S2	**Juan Fernandez**	**82.08**	**143**	T	T	10 56 56.3	
	baz=202,slow=74,SNR=5.3						
H03S1	**Juan Fernandez**	**82.08**	**143**	T	T	10 57 00.1	
	baz=202,slow=74,SNR=4.7						
H03S3	**Juan Fernandez**	**82.09**	**143**	T	T	10 56 55.4	
	baz=202,slow=74,SNR=6.2						
CMAR	**Chiang Mai Arr**	**84.70**	**315**	P	**P**	**09 26 05.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=156,slow=4.9,SNR=8.3						
CMAR				LR	LR	10 05 45.5	
	comp=Z,18nm,18.4s,baz=215,slow=37						
	comp=Z,0.4nm,0.3s						
LSZ	**Lusaka**	**92.23**	**238**	LR	LR	10 01 53.0	
	comp=Z,114nm,19.3s,baz=158,slow=31						
MJAR	**Matsushiro Arr**	**92.89**	**353**	LR	LR	10 09 18.7	
	comp=Z,20nm,18.1s,baz=136,slow=36						
TSUM	**Tsumeb**	**93.44**	**227**	LR	LR	10 04 42.2	
	comp=Z,86nm,18.9s,baz=150,slow=33						
KSRS	**Korea Array**	**94.88**	**345**	LR	LR	10 09 49.2	
	comp=Z,21nm,19.3s,baz=345,slow=36						
KURBB	**Kurchatov Arra**	**120.65**	**317**	PKP	**PKiKP**	**09 32 22.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=139,slow=1.2,SNR=5.8						
KURK	**Kurchatov**	**120.69**	**317**		**PKiKP**	**09 32 22.6**	**+0.7**
TORD	**Torodi Ar. Bea**	**129.18**	**226**	PKP	**PKPdf**	**09 32 39.1**	**-0.2**
	comp=Z,1.2nm,1.0s,baz=135,slow=3.5,SNR=3.5						
AKASG	**Malin Array Be**	**143.62**	**288**	PKP	**PKPdf**	**09 33 05.0**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=95,slow=2.5,SNR=5.0						
KEST	**Kesra**	**144.72**	**252**	PKPbc	**PKPdf**	**09 33 07.2**	**-0.2**
	comp=Z,14nm,1.0s,baz=135,slow=2.9,SNR=7.8						
KEST	**Kesra**	**144.72**	**252**		**PKPdf**	**09 33 06.7**	**-0.6**
MORC	**Moravsky Berou**	**149.41**	**279**	ePKP	**PKPab**	**09 33 24.0**	**0.0**
KRUC	**Moravsky**	**149.66**	**277**	ePKP	**PKPab**	**09 33 24.3**	**-0.7**
VRAC	**Vranov**	**149.69**	**278**	ePKP	**PKPab**	**09 33 24.5**	**-0.6**
FINES	**FINESS Array B**	**149.94**	**304**	PKPbc	**PKPbc**	**09 33 18.8**	**-1.1**
	comp=Z,6.3nm,0.9s,baz=124,slow=2.5,SNR=4.8						
GERES	**GERESS Array B**	**151.03**	**275**	PKPbc	**PKPbc**	**09 33 22.7**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=150,slow=2.2,SNR=11						
GERES	**GERESS Array B**	**151.03**	**275**		**PKPbc**	**09 33 21.7**	**-1.4**
ARCES	**ARCESS Array B**	**151.61**	**321**	PKPbc	**PKPbc**	**09 33 23.1**	**-0.6**
	comp=Z,5.8nm,0.8s,baz=72,slow=2.9,SNR=4.3						
NOA	**NORSAR Array B**	**156.84**	**300**	PKPab	**PKPab**	**09 33 54.8**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=96,slow=4.4,SNR=3.4						

*IDC **09** 09:14:14.9±1.2, 6.°65S×129.°63E, h0km, mb4.0/5, mbtmp3.9/8, ML3.7/3, Error ellipse: s-maj=76.2km s-min=20.1km az=72.0*

ISC 09 09:14:28.4±1.5, 7.°4S±0.°1×129.°7E±0.°2, h100km, n8, σ3s19/8, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.33**	**200**	Pn	**Pn**	**09 17 09.3**	**+2.0**
	0.3nm,0.3s,baz=24,slow=9.6,SNR=10						
FITZ				Sn	**Sn**	**09 19 09.8**	**-2.1**
	0.7nm,0.3s,baz=31,slow=19,SNR=6.1						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**13.27**	**160**	Pn	**Pn**	**09 17 33.2**	**+0.2**
	0.3nm,0.3s,baz=341,slow=13,SNR=16						
WRA				Sn	**Sn**	**09 19 56.5**	**-2.5**
	0.8nm,0.3s,baz=339,slow=24,SNR=9.2						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**16.68**	**166**	P	**P**	**09 18 18.3**	**+1.4**
	0.4nm,0.3s,baz=348,slow=14,SNR=39						
ASAR				S	**Sn**	**09 21 18.4**	**-3.1**
	0.2nm,0.6s,baz=333,slow=18,SNR=1.0						
	1.1nm,0.6s						
STKA	**Stephens Creek**	**26.78**	**157**	P	**P**	**09 20 03.3**	**+4.2**
	1.2nm,0.7s,baz=345,slow=16,SNR=1.0						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**68.37**	**327**	P	P	09 25 14.6	-4.7
	1.0nm,0.4s,baz=134,slow=5.6,SNR=10						
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**71.79**	**334**	P	P	09 25 33.7	-6.2
	0.8nm,0.4s,baz=123,slow=5.3,SNR=1.7						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**72.67**	**329**	P	P	09 25 39.7	-5.6
	0.4nm,0.4s,baz=126,slow=4.4,SNR=4.8						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**78.22**	**328**	P	**P**	**09 26 14.4**	**-2.6**
	1.4nm,0.7s,baz=114,slow=7.0,SNR=6.6						
	1.4nm,0.7s						

*SOME **09** 09:14:35.2, 43.°40N×69.°85E*

NNC 09 09:14:35.5±3.1, 43.°37N×69.°72E, h0km, mb3.6, mpv3.2, 2C-2D, Error ellipse: s-maj=21.3km s-min=9.9km az=131.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.64**	**115**	⇑P	Pg	09 14 46.6	-1.1
	4.1nm,0.3s,baz=289,slow=16,SNR=29						
KK31				S	Sg	09 14 57.5	+1.4
	3.0nm,0.2s,baz=297,slow=30,SNR=16						
IUG	**Iuzhnay**	**1.25**	**169**	P	Pg	09 14 59.2	-0.2
	32nm,0.3s						
IUG				S	Sb	09 15 16.5	-0.1
	37nm,0.5s						
MRKS	**Merke**	**2.65**	**103**	Pg	Pg	09 15 26.0	-0.3
	3.9nm,0.3s						
MRKS				Lg	Lg	09 16 01.1	
	5.6nm,0.5s						
AAK	**Ala-Archa**	**3.58**	**100**	⇓Lg	Lg	09 16 28.0	
	1.0nm,0.5s						
KST	**Kastek**	**4.58**	**92**	Pg	Pb	09 15 59.0	+2.3
	1.6nm,0.3s						
KST				Lg	Lg	09 16 58.9	
	6.6nm,0.4s						
AB31	**Akbulak array**	**8.96**	**314**	⇓P	Pg	09 17 36.2	+9.3
	0.1nm,0.3s,baz=319,slow=16,SNR=7.8						
AB31				⇑S	Sn	09 17 53.3	-34
	0.3nm,0.3s,baz=22,slow=48,SNR=5.4						

IDC 09 09:18:58.3±2.2, 56.°36S×146.°32E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=265.3km s-min=21.6km az=80.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**21.94**	**171**	P	P	09 23 52.1	-0.8
	2.8nm,1.2s,baz=330,slow=9.9,SNR=2.1						
	2.8nm,1.2s						
STKA	**Stephens Creek**	**24.70**	**350**	P	P	09 24 21.4	+0.6
	2.9nm,1.0s,baz=156,slow=12,SNR=3.1						
	2.9nm,1.0s						
H01W1	**Cape Leeuwin H**	**30.64**	**301**	T	T	09 57 54.0	
	baz=144,slow=75,

AGNA	**Agios Nikolaos**	**0.92**	**251**	P		**Pn**	**09 31 52.9**	**-0.2**
AGNA				S		**Sb**	**09 32 04.7**	**+0.3**
NPS	**Neapolis**	**0.98**	**256**	P		**Pg**	**09 31 50.9**	**-1.4**
NPS				S		**Sb**	**09 32 06.2**	**-0.1**
NPS	**Neapolis**	**0.98**	**256**	P		**Pn**	**09 31 53.7**	**-0.2**
NPS				S		**Sb**	**09 32 06.5**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.30**	**25**	P		**Pg**	**09 31 57.2**	**-1.3**
YAZI				S		**Sb**	**09 32 15.5**	**-0.1**
ARG	**Arkhangelos**	**1.31**	**56**	Pn		**Pb**	**09 31 59.4**	**+0.8**
ARG				Sn		**Sn**	**09 32 18.6**	**+2.2**
ARG	**Arkhangelos**	**1.31**	**56**	P		**Pb**	**09 31 59.4**	**+0.8**
ARG				S		**Sn**	**09 32 18.3**	**+1.9**
ARG	**Arkhangelos**	**1.31**	**56**	P		**Pn**	**09 31 58.6**	**+0.1**
ARG				S		**Sn**	**09 32 16.2**	**-0.2**
THERA	**Ancient Thera,**	**1.37**	**310**	P		**Pn**	**09 31 59.2**	**-0.1**
THERA				S		**Sg**	**09 32 16.4**	**-1.1**
THERA	**Ancient Thera,**	**1.37**	**310**	P		**Pb**	**09 31 59.6**	**0.0**
THERA				S		**Sn**	**09 32 18.1**	**+0.3**
DAT	**Datca**	**1.39**	**28**	Pn		**Pg**	**09 31 59.8**	**-0.4**
DAT	**Datca**	**1.39**	**28**	P		**Pg**	**09 31 59.7**	**-0.4**
DAT	**Datca**	**1.39**	**28**	P		**Pn**	**09 31 59.5**	**-0.2**
DAT				S		**Sg**	**09 32 16.7**	**-1.5**
THR8	**Santorini-Mono**	**1.39**	**311**	P		**Pn**	**09 31 59.5**	**-0.1**
THR8	**Santorini-Mono**	**1.39**	**311**	P		**Pn**	**09 31 59.5**	**-0.1**
THR8				S		**Sn**	**09 32 18.7**	**+0.4**
IACM	**Heraklion**	**1.41**	**263**	P		**Pg**	**09 32 00.7**	**+0.2**
IACM				S		**Sn**	**09 32 18.9**	**+0.2**
THRA	**Thira**	**1.42**	**310**	P		**Pg**	**09 32 00.4**	**-0.4**
THR9	**Santorini-Faro**	**1.44**	**307**	P		**Pb**	**09 32 00.4**	**-0.4**
THR9	**Santorini-Faro**	**1.44**	**307**	P		**Pn**	**09 32 00.1**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.44**	**309**	P		**Pg**	**09 32 01.0**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.44**	**309**	P		**Pg**	**09 32 00.7**	**-0.4**
SNT5				S		**Sn**	**09 32 19.9**	**+0.3**
THR3	**Thira Island,**	**1.44**	**310**	P		**Pn**	**09 31 59.9**	**-0.4**
THR3	**Thira Island,**	**1.44**	**310**	P		**Pn**	**09 32 00.2**	**-0.1**
KLNA	**Kalymnos**	**1.47**	**6**	P		**Pg**	**09 32 01.1**	**-0.6**
THR5	**Thira Island,**	**1.48**	**309**	P		**Pn**	**09 32 00.8**	**0.0**
THR5	**Thira Island,**	**1.48**	**309**	P		**Pb**	**09 32 01.0**	**-0.5**
SAP3	**Santorini-Thir**	**1.49**	**309**	P		**Pn**	**09 32 00.8**	**-0.2**
SAP3				S		**Sn**	**09 32 21.3**	**+0.5**
RODB	**Rodos**	**1.51**	**51**	P		**Pn**	**09 32 01.5**	**+0.3**
RDI1	**Rhodes Town Ha**	**1.51**	**51**	P		**Pn**	**09 32 01.6**	**+0.4**
IDI	**Anoyia**	**1.56**	**263**	Pn		**Pn**	**09 32 01.5**	**-0.4**
	17nm,0.3s,baz=87,slow=19,SNR=21							
IDI				Sn		**Sn**	**09 32 21.7**	**-0.8**
	147nm,0.3s,baz=348,slow=20,SNR=31							
IDI	**Anoyia**	**1.56**	**263**	Pn		**Pb**	**09 32 02.6**	**-0.2**
IDI				Sn		**Sg**	**09 32 23.7**	**+0.2**
IDI	**Anoyia**	**1.56**	**263**	P		**Pg**	**09 32 03.3**	**0.0**
IDI				S		**Sg**	**09 32 23.5**	**0.0**
IDI	**Anoyia**	**1.56**	**263**	P		**Pn**	**09 32 02.2**	**+0.3**
IDI				S		**Sg**	**09 32 23.5**	**0.0**
BODT	**Bodrum**	**1.62**	**15**	Pn		**Pn**	**09 32 03.1**	**+0.3**
BODT	**Bodrum**	**1.62**	**15**	P		**Pg**	**09 32 03.9**	**-0.7**
SIVA	**Sivas**	**1.68**	**254**	P		**Pb**	**09 32 05.0**	**+0.1**
SIVA				S		**Sn**	**09 32 25.6**	**+0.2**
TURN	**Turunc**	**1.74**	**43**	Pn		**Pb**	**09 32 05.5**	**-0.5**
TURN	**Turunc**	**1.74**	**43**	P		**Pn**	**09 32 03.6**	**-0.8**
TURN				S		**Sn**	**09 32 26.6**	**-0.4**
RTHF	**Rethymno-Limin**	**1.88**	**267**	P		**Pn**	**09 32 06.5**	**+0.3**
RTHF				S		**Sn**	**09 32 31.1**	**+0.8**
NAX1	**Naxos Island**	**1.96**	**325**	P		**Pn**	**09 32 07.7**	**+0.3**
DALY	**Dalyan (Mula)**	**2.01**	**49**	Pn		**Pb**	**09 32 09.4**	**-1.1**
DALY	**Dalyan (Mula)**	**2.01**	**49**	P		**Pn**	**09 32 09.9**	**-0.6**
DALY				S		**Sg**	**09 32 38.5**	**+0.4**
YER	**Yerkesik**	**2.04**	**36**	Pn		**Pn**	**09 32 09.4**	**+0.8**
VAM	**Vamos**	**2.10**	**268**	P		**Pn**	**09 32 10.1**	**+0.6**
IZZE	**Mula-Seydike**	**2.20**	**64**	P		**Pn**	**09 32 11.9**	**+1.2**
IZZE				S		**Sb**	**09 32 41.2**	**-0.1**
IZZE				IAML			09 32 48.0	
	comp=N,214nm,0.4s							
IZZE				IAML			09 32 53.0	
	comp=E,137nm,0.4s							
SABU	**Mula-Dalaman**	**2.21**	**53**	P		**Pn**	**09 32 11.7**	**+0.7**
SABU				S		**Sb**	**09 32 42.4**	**+0.6**
GCAM	**G?zelcaml?**	**2.23**	**9**	Pn		**Pn**	**09 32 11.4**	**+0.3**
CHAN	**Chania**	**2.23**	**271**	P		**Pn**	**09 32 12.3**	**+1.2**
CH01	**Chania**	**2.25**	**271**	P		**Pn**	**09 32 11.9**	**+0.6**
MHLO	**Agia Marina, M**	**2.26**	**302**	P		**Pn**	**09 32 12.5**	**+0.9**
IMMV	**Iera Moni Meta**	**2.28**	**270**	P		**Pn**	**09 32 12.6**	**+0.7**
GVD	**Gavdhos**	**2.30**	**254**	P		**Pn**	**09 32 12.8**	**+0.8**
AKAS	**Kas**	**2.41**	**71**	Pn		**Pn**	**09 32 15.7**	**+1.9**
CAME	**Cameli-Denizli**	**2.50**	**54**	Pn		**Pn**	**09 32 16.6**	**+1.6**
KNDR	**Palaiochora Ch**	**2.59**	**265**	P		**Pn**	**09 32 17.3**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**2.60**	**20**	Pn		**Pn**	**09 32 16.9**	**+0.5**
TAVA	**DENIZLI_Tavas**	**2.61**	**41**	P		**Pb**	**09 32 18.8**	**-2.1**
TAVA				S		**Sb**	**09 32 52.6**	**-0.8**
CAEL	**Denizli, Camel**	**2.62**	**51**	P		**Pb**	**09 32 21.3**	**+0.3**
CAEL				S		**Sg**	**09 33 01.0**	**+3.4**
CAEL				IAML			09 33 04.0	
	comp=N,242nm,0.6s							
CAEL				IAML			09 33 22.0	
	comp=E,208nm,0.8s							
ESEN	**Aydn-Nazilli**	**2.62**	**28**	P		**Pn**	**09 32 17.5**	**+1.0**
ESEN				S		**Sn**	**09 32 50.2**	**+1.5**
NAZL	**Nazilli-Aydin**	**2.75**	**26**	Pn		**Pn**	**09 32 19.0**	**+0.7**
DNIZ	**Denizli-Tavas-**	**2.80**	**40**	P		**Pn**	**09 32 20.6**	**+1.5**
DNIZ				S		**Sb**	**09 32 57.5**	**-1.2**
DNIZ				IAML			09 33 12.0	
	comp=N,145nm,0.4s							
DNIZ				IAML			09 33 20.0	
	comp=E,143nm,0.4s							
ELL	**Elmali**	**2.83**	**63**	Pn		**Pn**	**09 32 21.6**	**+2.1**
APMY	**Acipayam-Deniz**	**2.83**	**45**	Pn		**Pn**	**09 32 20.9**	**+1.4**
GOLH	**Golhisar**	**2.84**	**52**	P		**Pn**	**09 32 22.1**	**+2.5**
GOLH				S		**Sb**	**09 32 59.3**	**-0.6**
GOLH				IAML			09 33 07.0	
	comp=E,113nm,0.5s							
GOLH				IAML			09 33 09.0	
	comp=N,145nm,0.7s							
ANKY	**Antikythira Is**	**2.85**	**278**	P		**Pn**	**09 32 20.8**	**+1.1**
CHOS	**Chios island**	**2.94**	**349**	P		**Pn**	**09 32 20.4**	**-0.6**
CHOS	**Chios island**	**2.94**	**349**	P		**Pn**	**09 32 20.9**	**-0.1**
KTHA	**Kythira Island**	**3.11**	**285**	P		**Pn**	**09 32 23.7**	**+0.5**
KTHA	**Kythira Island**	**3.11**	**285**	P		**Pn**	**09 32 24.2**	**+1.0**
KORT	**Korkueli**	**3.25**	**62**	Pn		**Pn**	**09 32 27.7**	**+2.3**
VLI	**Veliai**	**3.34**	**293**	P		**Pn**	**09 32 26.6**	**+0.3**
VLI	**Veliai**	**3.34**	**293**	P		**Pn**	**09 32 26.7**	**+0.3**
VLY	**Voula,Athens**	**3.36**	**315**	P		**Pn**	**09 32 27.9**	**+0.3**
DION	**Dionisos Attik**	**3.44**	**319**	P		**Pn**	**09 32 28.7**	**+0.9**
ATHU	**Athens Univers**	**3.44**	**317**	P		**Pn**	**09 32 28.7**	**+0.9**
MET4	**Agioi Theodoro**	**3.45**	**309**	P		**Pn**	**09 32 28.7**	**+0.8**
MET6	**Megalochori,Me**	**3.46**	**308**	P		**Pn**	**09 32 29.0**	**+1.0**
MET5	**Makryloggos,Me**	**3.47**	**309**	P		**Pn**	**09 32 29.2**	**+1.0**
MET2	**Kameni Chora,**	**3.49**	**308**	P		**Pn**	**09 32 29.2**	**+0.8**
KYMI	**Kymi, Euboea I**	**3.79**	**326**	P		**Pn**	**09 32 33.3**	**+0.7**
LTK	**Loutraki**	**3.96**	**311**	P		**Pn**	**09 32 35.5**	**+0.5**
ITM	**Ithomi**	**4.26**	**295**	P		**Pn**	**09 32 40.1**	**+1.1**
PYL	**PYLOS**	**4.30**	**290**	P		**Pn**	**09 32 40.6**	**+0.9**
GUR	**Goura**	**4.31**	**306**	P		**Pn**	**09 32 40.1**	**+0.2**
KLV	**Kalavryta, Ach**	**4.50**	**306**	P		**Pn**	**09 32 43.2**	**+0.8**
DRO	**Drossia**	**4.75**	**303**	P		**Pn**	**09 32 46.2**	**+0.4**
EFP	**Efpalio**	**4.87**	**308**	P		**Pn**	**09 32 47.9**	**+0.4**
ANX	**Ano Chora**	**4.96**	**310**	P		**Pn**	**09 32 49.3**	**+0.5**
BRTR	**Keskin Array B**	**6.89**	**50**	Pn		**Pn**	**09 33 16.9**	**+1.6**
	0.2nm,0.3s,baz=228,slow=15,SNR=3.2 0.7nm,0.5s							
MMAI	**Mount Meron Ar**	**7.56**	**107**	Pn		**Pn**	**09 33 26.3**	**+1.9**
	2.0nm,0.3s,baz=296,slow=11,SNR=2.8							
MMAI				Sn		**Sn**	**09 34 49.8**	**-0.8**
	4.7nm,0.3s,baz=273,slow=30,SNR=6.1 1.0nm,0.3s							
EIL	**Elat**	**9.02**	**128**	Pn		**Pn**	**09 33 44.5**	**+0.1**
	0.5nm,0.3s,baz=346,slow=12,SNR=6.3							
EIL				Sn		**Sn**	**09 35 22.3**	**-4.0**
	0.9nm,0.3s,baz=349,slow=19,SNR=2.8 1.5nm,0.3s							
ASF	**Jabal al Asfar**	**9.05**	**109**	Pn		**Pn**	**09 33 45.4**	**+0.5**
	0.2nm,0.3s,baz=297,slow=6.8,SNR=2.4							
ASF				Sn		**Sn**	**09 35 25.1**	**-2.1**
	0.1nm,0.3s,baz=294,slow=20,SNR=1.5 1.5nm,0.5s							
AKASG	**Malin Array Be**	**15.30**	**6**	Pn		**Pn**	**09 35 10.3**	**+0.2**
	1.0nm,0.3s,baz=197,slow=11,SNR=5.6 0.2nm,0.2s							
VRAC	**Vranov**	**15.70**	**335**	LR		LR	09 42 14.9	
	comp=Z,27nm,18.3s,baz=154,slow=41							
GERES	**GERESS Array B**	**16.45**	**328**	Pn		**P**	**09 35 27.2**	**-0.7**
	baz=132,slow=18,SNR=5.3 0.3nm,0.3s							
ESDC	**Sonseca Array**	**24.65**	**289**	P		**P**	**09 36 53.6**	**-1.5**
	0.3nm,0.4s,baz=90,slow=9.7,SNR=7.5							
EKA	**Eskdalemuir Ar**	**28.54**	**323**	P		**P**	**09 37 31.9**	**+1.9**
	0.8nm,0.5s,baz=123,slow=10.0,SNR=4.7 0.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**31.73**	**232**	P		**P**	**09 37 60.0**	**+1.5**
	0.4nm,0.3s,baz=36,slow=9.2,SNR=5.1 0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**39.88**	**51**	P		**P**	**09 39 08.2**	**+0.2**
	0.6nm,0.5s,baz=272,slow=8.8,SNR=6.8 0.6nm,0.5s							
MKAR	**Makanchi Array**	**42.48**	**57**	P		**P**	**09 39 30.0**	**+0.4**
	0.4nm,0.3s,baz=295,slow=6.6,SNR=7.1 0.4nm,0.3s							
ZALV	**Zalesovo Beam**	**43.82**	**46**	P		**P**	**09 39 39.7**	**-0.5**
	0.7nm,0.3s,baz=282,slow=7.2,SNR=1.6 0.7nm,0.3s							
SONM	**Songino Array**	**58.25**	**51**	P		**P**	**09 41 28.7**	**-0.3**
	0.8nm,0.5s,baz=280,slow=8.6,SNR=2.4 0.8nm,0.5s							

*IDC **09** 09:36:07.9±0.9, 15°.39S×173°.29W, h0km, mb3.9/8, mbtmp3.9/9, ML4.4/1, MS3.6/11, Error ellipse: s-maj=52.0km s-min=17.2km az=144.0*
*NEIC **09** 09:36:09.9±2.3, 15°.55S±0°.07×173°.03W±0°.09, h10km±1km, mb4.5/15, Error ellipse: s-maj=16.2km s-min=9.8km az=127.0*

ISC 09 09:36:12.5±0.6, **15°.4S**±0°.2×**173°.2W**±0°.1, **h29**km, **n42,**
σ1§**06**/27, **mb4.2**/13, **MS3.7**/11, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.01**	**44**	Pn		**Pn**	**09 36 44.9**	**+0.3**
	124nm,0.3s,baz=235,slow=1.2,SNR=142							
AFI				Sn		**Sn**	**09 37 07.0**	**-1.8**
	152nm,0.3s,baz=233,slow=20,SNR=12							
AFI				LR		LR	09 37 32.0	
	comp=Z,244nm,20.4s,baz=216,slow=41 4.2nm,0.5s							
AFI	**Afiamalu**	**2.01**	**44**			**Pn**	**09 36 45.0**	**+0.4**
NIUE	**Niue**	**4.85**	**140**			Pn	09 37 18.1	-5.4
MSVF	**Nonsavu**	**8.70**	**253**	Pn		Pn	09 38 23.0	+6.5
	0.5nm,0.3s,baz=103,slow=18,SNR=4.5							
MSVF	**Nonsavu**	**8.70**	**253**			**Pn**	**09 38 16.8**	**+0.3**
OUENC	**Ouen Island, N**	**20.11**	**247**	P		**P**	**09 40 44.6**	**+0.5**
HNR	**Honiara**	**26.85**	**280**	LR		LR	09 50 24.8	
	comp=Z,4.5nm,18.9s,baz=230,slow=32							
QRZ	**Quartz Range**	**28.23**	**203**	P		**P**	**09 42 03.5**	**+0.6**
THZ	**Tophouse**	**28.91**	**202**	P		**P**	**09 42 08.3**	**-0.6**
ARMA	**Armidale**	**35.51**	**239**	P		**P**	**09 43 06.1**	**-0.9**
ARMA				IAmb		IAmb	09 43 14.9	
	comp=Z,12nm,1.4s							
H11S2	**WAKE ISLAND Hy**	**39.03**	**329**	T		T	10 25 08.7	
	baz=148							
H11S3	**WAKE ISLAND Hy**	**39.04**	**329**	T		T	10 25 47.3	
	baz=148,slow=74							
H11S1	**WAKE ISLAND Hy**	**39.04**	**329**	T		T	10 25 44.0	
	baz=148,slow=74							
H11N3	**WAKE ISLAND Hy**	**39.97**	**330**	T		T	10 26 28.9	
	baz=150,slow=76,SNR=4.0							
H11N1	**WAKE ISLAND Hy**	**39.98**	**330**	T		T	10 26 27.7	
	baz=150,slow=76,SNR=6.5							
H11N2	**WAKE ISLAND Hy**	**39.99**	**330**	T		T	10 26 29.2	
	baz=150,slow=76,SNR=5.0							
TOO	**Toolangi**	**42.62**	**231**	P		**P**	**09 44 05.6**	**-0.7**
STKA	**Stephens Creek**	**44.20**	**240**	P		**P**	**09 44 18.0**	**-1.2**
	comp=Z,2.6nm,0.7s,baz=85,slow=12,SNR=7.3 comp=Z,2.6nm,0.7s							
INKA	**Innaminka**	**44.31**	**246**	P		**P**	**09 44 16.8**	**-3.2**
INKA				IAmb		IAmb	09 44 52.3	
	comp=Z,3.0nm,0.6s							
MCQ	**Macquarie Isla**	**44.64**	**203**	P		**P**	**09 44 22.1**	**-0.1**
BBOO	**Buckleboo**	**48.98**	**240**	P		**P**	**09 44 55.4**	**-1.2**
WR8	**Warramunga Arr**	**49.87**	**257**	P		**P**	**09 45 04.2**	**+0.6**
WR8				IAmb		IAmb	09 45 28.4	
	comp=Z,8.6nm,1.2s							
WB0	**Warramunga Arr**	**49.98**	**257**	P		**P**	**09 45 05.8**	**+1.4**
WB0				IAmb		IAmb	09 45 26.5	
	comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	**50.01**	**257**	P		**P**	**09 45 05.0**	**+0.3**
WRAB				IAmb		IAmb	09 45 12.8	
	comp=Z,9.1nm,1.3s							
WRA	**Warramunga Arr**	**50.02**	**257**	P		**P**	**09 45 04.3**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=94,slow=7.0,SNR=15 comp=Z,0.9nm,0.9s							
WRA	**Warramunga Arr**	**50.02**	**257**	P		**P**	**09 45 04.3**	**-0.5**
AS31	**Alice Springs**	**50.28**	**252**	P		**P**	**09 45 06.1**	**-0.6**
ASAR	**Alice Springs**	**50.29**	**252**	P		**P**	**09 45 06.0**	**-0.7**
	comp=Z,3.3nm,0.6s,baz=90,slow=7.8,SNR=58							
ASAR				LR		LR	10 05 28.0	
	comp=Z,75nm,18.2s,baz=269,slow=35 comp=Z,3.3nm,0.6s							
FITZ	**Fitzroy Crossi**	**58.39**	**258**	LR		LR	10 10 12.9	
	comp=Z,53nm,18.1s,baz=286,slow=35							
MBWA	**Marble Bar**	**63.54**	**254**	P		**P**	**09 46 41.3**	**+0.6**
PETK	**Petropavlovsk-**	**72.65**	**342**	LR		LR	10 14 04.6	
	comp=Z,26nm,19.8s,baz=211,slow=31							
PFO	**Pinyon Flats O**	**72.77**	**47**	LR		LR	10 12 44.2	
	comp=Z,48nm,18.6s,baz=172,slow=30							
NVAR	**Mina Array Bea**	**74.19**	**42**	P		**P**	**09 47 46.7**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=238,slow=8.2,SNR=9.8							
NVAR				LR		LR	10 12 12.5	
	comp=Z,32nm,20.9s,baz=136,slow=29 comp=Z,1.1nm,0.7s							
QSPA	**South Pole Qui**	**74.68**	**180**	P		**P**	**09 47 49.6**	**+0.4**
	comp=Z,1.8nm,1.1s,baz=76,slow=1.8,SNR=2.8 comp=Z,1.8nm,1.1s							
QSPA	**South Pole Qui**	**74.68**	**180**	P		**P**	**09 47 49.6**	**+0.4**
QSPA				IAmb		IAmb	09 48 30.0	
	comp=Z,5.8nm,1.4s							
KDAK	**Kodiak Island**	**74.86**	**11**	LR		LR	10 12 06.1	
	comp=Z,30nm,20.6s,baz=227,slow=29							
TXAR	**Lajitas Array**	**80.45**	**56**	P		**P**	**09 48 23.2**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=244,slow=4.7,SNR=4.2							
TXAR				LR		LR	10 16 41.3	
	comp=Z,37nm,18.9s,baz=49,slow=30 comp=Z,0.4nm,0.8s							
NEW	**Newport**	**80.58**	**34**	LR		LR	10 17 52.9	
	comp=Z,38nm,21.5s,baz=214,slow=31							
ANMO	**Albuquerque**	**80.65**	**50**	LR		LR	10 18 20.3	
	comp=Z,61nm,19.6s,baz=222,slow=31							
PDAR	**Pinedale Array**	**82.12**	**42**	P		**P**	**09 48 30.0**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=286,slow=2.4,SNR=3.5 comp=Z,0.5nm,0.9s							
ILAR	**Eielson Array**	**82.38**	**11**	P		**P**	**09 48 32.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=209,slow=5.2,SNR=4.2 comp=Z,0.2nm,0.5s							
INK	**Inuvik**	**88.19**	**14**	LR		LR	10 22 39.6	
	comp=Z,36nm,21.4s,baz=186,slow=32							

*HEL **09** 10:00:51.3±0.2, 64°.76N×30°.67E, h0km, ML1.9, Explosion*
*KOLA **09** 10:00:52.1, 64°.79N×30°.76E, h0km, ML2.1, Error ellipse: s-maj=18.4km s-min=12.5km az=160.0, Kostomuksha, Karelia*
*UPP **09** 10:00:52.0±3.2, 64°.57N×30°.46E, h0km, ML1.9, Presumed earthquake*
*IDC **09** 10:00:53.8±2.3, 64°.80N×30°.10E, h0km, mbtmp2.6/2, ML2.0/2, Error ellipse: s-maj=39.2km s-min=7.8km az=97.0*

ISC 09 10:00:50.7±0.9, **64°.77N**±0°.02×**30°.71E**±0°.04, **h0**km, **n38,**
σ1§**40**/55, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.65**	**211**	PG		**Pg**	**10 01 02.4**	**-0.7**
	baz=31							
RMF				SG		**Sg**	**10 01 11.0**	**-0.6**
RMF				smax		smax	10 01 11.3	
	comp=Z,18nm,0.2s							
KU1	**Kurvinen**	**0.93**	**329**	PG		**Pg**	**10 01 08.0**	**-0.5**
MSF	**Maaselka**	**1.34**	**329**	PG		**Pg**	**10 01 15.7**	**-0.6**
MSF				SG		**Sg**	**10 01 33.3**	**-0.3**
KU2	**Taivalkoski**	**1.40**	**313**	PG		**Pg**	**10 01 16.6**	**-0.9**
KU2				SN		**Sn**	**10 01 36.8**	**+0.1**
OLKF	**Oulanka, Finla**	**1.65**	**341**	PG		**Pn**	**10 01 20.8**	**0.0**
OLKF				smax		smax	10 01 40.8	
	comp=Z,7.7nm,0.2s							
OLKF				SN		**Sg**	**10 01 43.5**	**0.0**
JOF	**Joensuu**	**1.88**	**172**	*eP*		**Pn**	**10 01 23.2**	**-0.8**
NIF	**Nilsia**	**1.89**	**224**	PG		**Pn**	**10 01 24.6**	**+0.5**
NIF				smax		smax	10 01 46.8	
	comp=Z,7.3nm,0.2s							
NIF				SN		**Sn**	**10 01 48.6**	**+0.2**
RANF	**Ranua**	**2.06**	**309**	PG		**Pn**	**10 01 27.7**	**+1.2**
	baz=126							
RANF				SG		**Sb**	**10 01 54.3**	**-0.7**
OUL	**Oulu**	**2.07**	**281**	PG		**Pn**	**10 01 27.9**	**+1.3**
	baz=98							
OUL				SG		**Sb**	**10 01 54.2**	**-1.1**
KVDA	**Kovda**	**2.12**	**24**	P		**Pn**	**10 01 27.8**	**+0.5**
KVDA				S		**Sn**	**10 01 54.5**	**+0.1**
RNF	**Rovaniemi**	**2.68**	**316**	PB		**Pn**	**10 01 36.5**	**+1.5**
	baz=129							
RNF				SG		**Sb**	**10 02 12.4**	**-0.4**
SUF	**Sumiainen**	**2.89**	**227**	*eP*		**Pn**	**10 01 39.4**	**+1.5**
SUF	**Sumiainen**	**2.89**	**227**	smax		smax	10 02 15.8	
	comp=Z,3.0nm,0.2s							
SUF				SG		**Sb**	**10 02 18.1**	**-0.8**
APA0	**Apatity Array**	**2.99**	**17**	P		**Pn**	**10 01 40.5**	**+1.3**
APA0				S		**Sn**	**10 02 15.7**	**-0.1**
OBF8	**Ulkokalla**	**3.17**	**265**	PN		**Pn**	**10 01 42.3**	**+0.6**
	baz=79							
OBF8				SG		**Sb**	**10 02 26.6**	**-0.1**
KALU	**Kalix**	**3.27**	**293**	P		**Pn**	**10 01 44.2**	**+1.1**
KALU	**Kalix**	**3.27**	**293**	PN		**Pn**	**10 01 44.8**	**+1.7**
LVZ	**Lovozero**	**3.52**	**25**	SN		**Sn**	**10 02 29.5**	**+0.7**
KLF	**Kolari**	**3.70**	**315**	PN		**Pn**	**10 01 49.5**	**+0.5**
KLF				SG		**Sg**	**10 02 47.3**	**-2.1**
KEF	**Keuruu**	**3.70**	**228**	*eP*		**Pn**	**10 01 51.6**	**+2.6**
RAJF	**Raja-Jooseppi**	**3.84**	**347**	PN		**Pn**	**10 01 51.4**	**+0.5**
FIA0	**FINESS Array S**	**3.95**	**214**	PN		**Pn**	**10 01 53.2**	**+0.8**
FINES	**FINESS Array B**	**3.95**	**214**	Pn		**Pn**	**10 01 53.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=7.6							
FINES				Pg		**Pb**	**10 02 01.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=31,slow=14,SNR=5.2							
FINES				Lg		Lg	10 02 53.1	
	comp=Z,1.2nm,0.3s,baz=32,slow=29,SNR=17 comp=Z,0.4nm,0.4s							
ERTU	**Ertsjaerv**	**3.95**	**301**	P		**Pn**	**10 01 53.4**	**+0.9**
ERTU	**Ertsjaerv**	**3.95**	**301**	PN		**Pn**	**10 01 53.5**	**+1.0**
VAF	**Ylistaro**	**3.95**	**248**	*eP*		**Pn**	**10 01 53.7**	**+1.2**
BURU	**Burvik**	**4.01**	**271**	P		**Pn**	**10 01 53.0**	**-0.3**
BURU				S		**Sn**	**10 02 38.5**	**-2.4**
BURU	**Burvik**	**4.01**	**271**	PN		**Pn**	**10 01 53.0**	**-0.3**
	baz=86							
HARU	**Harads**	**4.29**	**293**	P		**Pn**	**10 01 58.2**	**+1.1**
ODEU	**Stanfors**	**4.32**	**270**	P		**Pn**	**10 01 57.0**	**-0.5**
UMAU	**Umeaa**	**4.45**	**263**	P		**Pn**	**10 01 58.2**	**-1.1**
UMAU	**Umeaa**	**4.45**	**263**	PN		**Pn**	**10 01 59.5**	**+0.2**
UMAU				SG		**Sb**	**10 03 08.0**	**+4.2**
HEF	**Hetta**	**4.60**	**326**	PG		**Pb**	**10 02 12.5**	**+0.3**
	baz=135							
HEF				SG		**Sb**	**10 03 13.0**	**+4.8**
TERR	**Teriberka**	**4.77**	**19**	S		**Sn**	**10 02 57.0**	**-2.6**
LANU	**Lannavaara**	**4.80**	**317**	*eP*		**Pn**	**10 02 05.2**	**+1.1**
ARCES	**ARCESS Array B**	**5.19**	**339**	Pn		**Pn**	**10 02 09.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=155,slow=12,SNR=35							
ARCES				Sn		**Sn**	**10 03 08.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=157,slow=25,SNR=6.9							
ARCES				Lg		Lg	10 03 29.7	
	comp=Z,0.3nm,0.3s,baz=158,slow=29,SNR=6.8 comp=Z,0.5nm,0.2s							
ARCES	**ARCESS Array B**	**5.19**	**339**	P		**Pn**	**10 02 09.2**	**-0.2**
ARCES				S		**Sn**	**10 03 07.7**	**-2.3**
I37NO	**I37NO**	**6.42**	**318**	I		I	10

PSK	**Pskem**	**1.21**	**68**	P		**Pn**	**10 10 52.3**	**+3.6**
PSK				S		**Sn**	**10 11 08.2**	**+2.6**
BRLS	**Borolday**	**1.70**	**24**	P		**Pb**	**10 10 55.7**	**-1.3**
	3.6nm,0.1s							
BRLS				S		**Sn**	**10 11 13.4**	**-4.4**
	88nm,0.2s							
BRLS	**Borolday**	**1.70**	**24**	*e*P		**Pb**	**10 10 55.7**	**-1.3**
	3.6nm,0.1s							
BRLS				*e*S		**Sn**	**10 11 13.4**	**-4.4**
	88nm,0.2s							
KK31	**Karatay Array**	**2.02**	**36**	‖Pn		**Pg**	**10 11 05.5**	**+1.6**
	0.8nm,0.1s							
KK31				Sn		**Sg**	**10 11 28.9**	**-1.2**
	5.5nm,0.2s,baz=222,slow=30,SNR=58							
AGL	**Agalyk**	**2.48**	**218**	S		**Sb**	**10 11 41.3**	**+0.2**
TMD	**Tamdy-Bulak**	**3.19**	**276**	S		**Pg**	**10 11 27.6**	**+1.5**
MRKS	**Merke**	**3.47**	**67**	Pg		**Pg**	**10 11 31.8**	**+0.1**
	2.1nm,0.3s							
MRKS				Lg		Lg	10 12 15.4	
	13nm,0.3s							
MRKS	**Merke**	**3.47**	**67**	*e*P		**Pg**	**10 11 31.8**	**+0.1**
	2.1nm,0.3s							
MRKS				*e*S		**Sg**	**10 12 15.4**	**-1.3**
	13nm,0.3s							
SGDS	**Sogindy**	**4.69**	**63**	Pg		**Pg**	**10 11 53.6**	**-1.3**
	0.8nm,0.1s							
SGDS				Lg		Lg	10 12 52.6	
	5.7nm,0.3s							

*IDC **09** 10:18:04.9±1.3,4°.15S×139°.11E, h0km, mb3.6/4, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=36.1km s-min=16.6km az=130.0*

*DJA **09** 10:18:09.6±0.3,4°.5±2°×13°.9E±°, h10km, M4.2/6, mb5.0/3, MLv3.9/6*

ISC 09 10:18:08.4±1.0,4°.2S±0°.1×139°.1E±0°.2, h24km, n8, σ0s74/9, mb3.6/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GENI	**Genyem**	**1.91**	**32**	P		**Pb**	**10 18 41.5**	**-1.1**
GENI				S		**Sb**	**10 19 07.1**	**+1.0**
JAY	**Jayapura**	**2.30**	**43**	Pn		**Pn**	**10 18 44.8**	**-0.1**
	2.9nm,0.3s,baz=218,slow=12,SNR=14							
JAY				Lg		Lg	10 19 16.6	
	4.1nm,0.3s,baz=142,slow=22,SNR=5.8							
	9.3nm,0.3s							
JAY	**Jayapura**	**2.30**	**43**	P		**Pn**	**10 18 45.4**	**+0.5**
WRA	**Warramunga Arr**	**16.31**	**196**	Pn		**Pn**	**10 21 55.7**	**-0.4**
	0.3nm,0.3s,baz=18,slow=11,SNR=21							
	1.6nm,0.8s							
ASAR	**Alice Springs**	**19.98**	**194**	P		**P**	**10 22 39.9**	**+0.6**
	1.1nm,0.5s,baz=25,slow=9.3,SNR=28							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**71.24**	**323**	P		**P**	**10 29 26.1**	**+0.4**
	0.2nm,0.3s,baz=107,slow=7.7,SNR=1.0							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**75.20**	**325**	P		**P**	**10 29 48.7**	**-0.2**
	0.1nm,0.3s,baz=107,slow=6.4,SNR=4.4							
	0.1nm,0.3s							
BVAR	**Borovoye Array**	**80.79**	**325**	P		**P**	**10 30 19.8**	**-0.1**
	0.5nm,0.3s,baz=112,slow=10,SNR=4.4							
	0.5nm,0.3s							

*NEIC **09** 10:25:13.0±1.7,19°.62S±0°.04×176°.6W±0°.1, h305km±11km, mb4.1/14, Error ellipse: s-maj=15.5km s-min=5.5km az=83.0*

*IDC **09** 10:25:14.9±2.0,19°.73S×176°.84W, h313km±18km, mb3.7/7, mbtmp4.3/10, Error ellipse: s-maj=25.5km s-min=14.3km az=55.0*

ISC 09 10:25:12.7±0.8,19°.7S±0°.1×176°.68W±0°.09, h300km, n28, σ1s08/31, mb4.2/14, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.34**	**290**	P		**Pn**	**10 26 35.8**	**+1.4**
	6.6nm,0.6s,baz=154,slow=21,SNR=4.3							
NIUE	**Niue**	**6.40**	**86**	Pn		**Pn**	**10 26 46.2**	**-0.8**
AFI	**Afiamalu**	**7.39**	**40**	Pn		**Pn**	**10 26 58.2**	**-0.8**
DZM	**Mont Dzumac**	**15.96**	**258**	P		**P**	**10 28 41.5**	**+1.1**
	12nm,0.7s,baz=78,slow=20,SNR=6.1							
URZ	**Urewera**	**19.32**	**195**	P		**P**	**10 29 14.7**	**-1.6**
	3.5nm,0.3s,baz=260,slow=4.6,SNR=6.5							
URZ				S		**S**	**10 32 38.3**	**-0.1**
	6.6nm,0.5s,baz=230,slow=22,SNR=12							
QRZ	**Quartz Range**	**23.04**	**201**	P		**P**	**10 29 51.2**	**-0.9**
EIDS	**Eidsvold**	**30.27**	**253**	P		**P**	**10 30 57.1**	**+0.4**
ARMA	**Armidale**	**30.55**	**243**	P		**P**	**10 30 58.5**	**-0.7**
ARMA				IAmb		IAmb	10 31 10.2	
	comp=Z,14nm,1.4s							
CTA	**Charters Tower**	**34.81**	**263**	P		**P**	**10 31 36.5**	**+0.4**
	comp=Z,6.6nm,0.6s,baz=85,slow=11,SNR=14							
	comp=Z,6.6nm,0.6s							
STKA	**Stephens Creek**	**39.27**	**243**	P		**P**	**10 32 13.6**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=78,slow=10,SNR=5.4							
	comp=Z,1.5nm,0.5s							
BBOO	**Buckleboo**	**44.03**	**243**	P		**P**	**10 32 51.1**	**-0.5**
BBOO				IAmb		IAmb	10 33 27.0	
	comp=Z,15nm,1.4s							
WR8	**Warramunga Arr**	**45.80**	**261**	P		**P**	**10 33 04.7**	**-0.9**
WR8				IAmb		IAmb	10 33 13.7	
	comp=Z,11nm,1.4s							
AS31	**Alice Springs**	**45.92**	**256**	P		**P**	**10 33 06.2**	**-0.3**
ASAR	**Alice Springs**	**45.92**	**256**	P		**P**	**10 33 06.0**	**-0.6**
	comp=Z,7.7nm,0.7s,baz=94,slow=8.4,SNR=113							
ASAR				PcP		**PcP**	**10 34 37.8**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=108,slow=3.8,SNR=6.4							
ASAR				S		**S**	**10 39 25.1**	**-2.9**
	comp=Z,0.3nm,0.6s,baz=94,slow=15,SNR=4.5							
	comp=Z,7.7nm,0.7s							
WB0	**Warramunga Arr**	**45.93**	**261**	P		**P**	**10 33 06.0**	**-0.6**
WB0				IAmb		IAmb	10 33 06.3	
	comp=Z,6.5nm,0.6s							
WRAB	**Tennant Creek**	**45.94**	**261**	P		**P**	**10 33 05.2**	**-1.4**
WRAB				IAmb		IAmb	10 33 06.4	
	comp=Z,8.1nm,1.1s							
WRA	**Warramunga Arr**	**45.95**	**261**	P		**P**	**10 33 05.6**	**-1.1**
	comp=Z,2.3nm,0.3s,baz=96,slow=7.5,SNR=115							
	comp=Z,2.3nm,0.3s							
WRA	**Warramunga Arr**	**45.95**	**261**	P		**P**	**10 33 05.6**	**-1.1**
MTN	**Manton Dam**	**50.40**	**269**	P		**P**	**10 33 39.8**	**-0.8**
KNRA	**Kununurra**	**51.96**	**265**	P		**P**	**10 33 50.7**	**-1.3**
KNRA				IAmb		IAmb	10 34 12.6	
	comp=Z,16nm,1.4s							
FITZ	**Fitzroy Crossi**	**54.37**	**261**	P		**P**	**10 34 09.2**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=78,slow=6.0,SNR=12							
	comp=Z,2.8nm,0.9s							
FITZ	**Fitzroy Crossi**	**54.37**	**261**	P		**P**	**10 34 09.2**	**-0.3**
VNDA	**Vanda**	**58.87**	**185**	P		**P**	**10 34 41.3**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=357,slow=5.7,SNR=4.2							
	comp=Z,1.2nm,1.0s							
VNDA	**Vanda**	**58.87**	**185**	P		**P**	**10 34 41.3**	**+1.3**
VNDA				IAmb		IAmb	10 34 42.6	
	comp=Z,2.6nm,1.1s							
QSPA	**South Pole Qui**	**70.42**	**180**	P		**P**	**10 35 54.9**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=354,slow=0.3,SNR=32							
	comp=Z,3.9nm,0.6s							
QSPA	**South Pole Qui**	**70.42**	**180**	P		**P**	**10 35 56.2**	**+1.6**
QSPA				IAmb		IAmb	10 35 56.9	
	comp=Z,5.7nm,0.8s							
TROLL	**Troll, Antarti**	**88.58**	**180**	⇑P		**P**	**10 37 31.9**	**+0.2**
	comp=Z,85nm,0.4s							
VNA2	**Neumayer--Watz**	**89.36**	**176**	⇑P		**P**	**10 37 35.6**	**+0.5**
	comp=Z,5.5nm,0.6s,baz=183,slow=4.3							

IDC 09 10:44:44.0±2.8,5°.44S×146°.89E, h120km±27km, mb3.2/2, mbtmp3.8/5, MS3.8/1, Error ellipse: s-maj=34.8km s-min=21.1km az=73.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**3.95**	**176**	P		Pn	10 45 43.8	+1.0
	19nm,0.5s,baz=345,slow=16,SNR=8.0							
PMG				S		Sn	10 46 28.8	+0.3
	24nm,0.3s,baz=196,slow=20,SNR=14							
JAY	**Jayapura**	**6.82**	**295**	P		Pn	10 46 21.3	-0.4
	18nm,1.0s,baz=137,slow=19,SNR=5.4							
WRA	**Warramunga Arr**	**18.89**	**219**	P		P	10 48 55.2	-0.1
	2.2nm,0.6s,baz=40,slow=12,SNR=28							
ASAR	**Alice Springs**	**22.02**	**213**	P		P	10 49 29.1	+0.1
	0.8nm,0.5s,baz=52,slow=8.9,SNR=21							
	0.8nm,0.5s							
NWAO	**Narrogin (SRO)**	**38.87**	**222**	LR		LR	11 10 47.1	
	comp=Z,133nm,19.7s,baz=176,slow=40							
ILAR	**Eielson Array**	**85.01**	**23**	P		P	10 57 05.8	-0.1
	0.4nm,0.7s,baz=251,slow=5.1,SNR=5.3							
	0.4nm,0.7s							

DJA 09 10:46:16.9±0.3,11°.5S±4°×12°.5E±°, h10km, M4.1/10, mb4.2/7, MLv4.1/10, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**1.82**	**311**	P		Pn	10 46 46.3	-2.0
SOEI	**Soe**	**1.82**	**335**	P		Pn	10 46 48.6	+0.2
MMRI	**Maumere**	**3.92**	**315**	P		Pn	10 47 17.4	+0.3
DBNI	**Kabupaten Domp**	**7.25**	**293**	P		Pn	10 48 03.6	+0.6
	0.2nm14nm,0.9s							
PLAI	**Plampang**	**7.62**	**289**	P		Pn	10 48 08.3	+0.3
TWSI	**Taliwang, Sumb**	**8.48**	**288**	P		Pn	10 48 19.5	-0.4
	20nm,1.3s							

*NEIC **09** 10:47:19.9±1.2,23°.9S±0°.2×180°.0W±0°.1, h522km±8km, mb4.2/12, Error ellipse: s-maj=24.7km s-min=16.2km az=155.0*

*IDC **09** 10:47:29.2±8.1,22°.19S×179°.34E, h617km±80km, mb3.1/4, mbtmp4.1/5, Error ellipse: s-maj=228.4km s-min=24.2km az=158.0*

ISC 09 10:47:18.1±1.6,23°.7S±0°.1×179°.6W±0°.2, h550km, n19, σ0s58/18, mb4.0/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**5.73**	**166**	P		**P**	**10 48 54.1**	**0.0**
MSVF	**Nonsavu**	**6.33**	**339**	P		**P**	**10 48 60.0**	**0.0**
	9.8nm,0.5s,baz=241,slow=22,SNR=5.5							
RTZ	**Ruatahuna**	**15.18**	**190**	P		**P**	**10 50 28.9**	**-0.4**
MRZ	**Mangatainoka R**	**17.42**	**192**	P		**P**	**10 50 50.5**	**+0.1**
QRZ	**Quartz Range**	**18.34**	**199**	P		**P**	**10 50 59.6**	**+0.8**
THZ	**Tophouse**	**19.10**	**197**	P		**P**	**10 51 06.1**	**+0.2**
CTA	**Charters Tower**	**31.89**	**270**	P		**P**	**10 52 59.3**	**+0.4**
	2.7nm,0.4s,baz=95,slow=8.7,SNR=8.0							
	2.7nm,0.4s							
CTAO	**Charters Tower**	**31.89**	**270**	P		**P**	**10 52 59.2**	**+0.4**
CTAO				IAmb		IAmb	10 53 00.4	
	comp=Z,20nm,1.2s							
BBOO	**Buckleboo**	**39.91**	**247**	P		**P**	**10 54 04.7**	**-0.3**
BBOO				IAmb		IAmb	10 54 25.4	
	comp=Z,24nm,1.4s							
AS31	**Alice Springs**	**42.48**	**260**	P		**P**	**10 54 25.8**	**+0.3**
ASAR	**Alice Springs**	**42.48**	**260**	P		**P**	**10 54 25.6**	**0.0**
	comp=Z,1.7nm,0.5s,baz=94,slow=8.3,SNR=10.0							
	comp=Z,1.7nm,0.5s							
WR8	**Warramunga Arr**	**42.69**	**266**	P		**P**	**10 54 26.6**	**-0.6**
WR8				IAmb		IAmb	10 54 42.9	
	comp=Z,4.8nm,1.1s							
WB0	**Warramunga Arr**	**42.83**	**266**	P		**P**	**10 54 27.7**	**-0.6**
WB0				IAmb		IAmb	10 54 28.5	
	comp=Z,6.1nm,1.0s							
WRAB	**Tennant Creek**	**42.83**	**266**	P		**P**	**10 54 27.2**	**-1.0**
WRAB				IAmb		IAmb	10 54 28.5	
	comp=Z,3.9nm,0.8s							
WRA	**Warramunga Arr**	**42.84**	**266**	P		**P**	**10 54 27.8**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=97,slow=8.4,SNR=19							
	comp=Z,1.6nm,0.4s							
WRA	**Warramunga Arr**	**42.84**	**266**	P		**P**	**10 54 27.8**	**-0.5**
KNRA	**Kununurra**	**49.10**	**269**	P		**P**	**10 55 16.4**	**+0.5**
KNRA				IAmb		IAmb	10 55 37.2	
	comp=Z,12nm,1.1s							
FITZ	**Fitzroy Crossi**	**51.26**	**265**	P		**P**	**10 55 32.9**	**+1.2**
TXAR	**Lajitas Array**	**89.97**	**58**	P		P	10 59 25.1	+5.6
	comp=Z,0.3nm,0.8s,baz=230,slow=5.9,SNR=5.1							
	comp=Z,0.3nm,0.8s							

*IDC **09** 10:57:05.9±2.9,56°.35S×146°.60E, h0km, mb3.4/3, mbtmp3.4/3, MS3.4/5, Error ellipse: s-maj=277.2km s-min=26.3km az=77.0*

ISC 09 10:57:07.2±3.3,56°.4S±0°.6×14°.7E±°, h10km, n17, σ0s64/6, mb3.4/3, MS3.4/5, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RPZ	**Rata Peaks**	**20.07**	**61**	LR		LR	11 07 10.6	
	comp=Z,39nm,19.3s,baz=252,slow=30							
VNDA	**Vanda**	**21.92**	**171**	P		**P**	**11 02 00.5**	**+0.3**
	0.8nm,0.7s,baz=334,slow=9.2,SNR=6.1							
	0.8nm,0.7s							
URZ	**Urewera**	**27.18**	**61**	LR		LR	11 12 21.1	
	comp=Z,105nm,19.1s,baz=222,slow=34							
H01W1	**Cape Leeuwin H**	**30.75**	**301**	T		T	11 36 05.5	
	baz=144,slow=75,SNR=28							
H01W2	**Cape Leeuwin H**	**30.75**	**301**	T		T	11 36 08.3	
	baz=144,slow=75,SNR=43							
H01W3	**Cape Leeuwin H**	**30.77**	**301**	T		T	11 36 09.0	
	baz=144,slow=75,SNR=25							
QSPA	**South Pole Qui**	**33.74**	**180**	LR		LR	11 17 29.2	
	comp=Z,77nm,18.2s,baz=288,slow=36							
ASAR	**Alice Springs**	**33.95**	**339**	P		**P**	**11 03 51.4**	**+0.8**
	0.5nm,0.9s,baz=160,slow=9.5,SNR=5.0							
	0.5nm,0.9s							
CTA	**Charters Tower**	**36.22**	**360**	LR		LR	11 17 17.1	
	comp=Z,94nm,18.5s,baz=210,slow=33							
WRA	**Warramunga Arr**	**37.50**	**341**	P		**P**	**11 04 20.7**	**-0.3**
	0.7nm,0.8s,baz=166,slow=7.7,SNR=7.0							
	0.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**41.32**	**329**	LR		LR	11 20 31.0	
	comp=Z,59nm,19.3s,baz=199,slow=34							
H08S2	**Diego Garcia H**	**74.85**	**279**	T		T	12 31 14.8	
	baz=154							
H08S1	**Diego Garcia H**	**74.86**	**279**	T		T	12 31 14.7	
	baz=154							
H08S3	**Diego Garcia H**	**74.87**	**279**	T		T	12 31 14.4	
	baz=154,SNR=4.5							
FINES	**FINESS Array B**	**149.79**	**305**	PKPbc		**PKPbc**	**11 16 55.8**	**0.0**
	2.1nm,0.9s,baz=100,slow=1.6,SNR=5.0							
GERES	**GERESS Array B**	**150.89**	**275**	PKPbc		**PKiKP**	**11 16 59.1**	**-0.5**
	0.8nm,0.7s,baz=97,slow=4.4,SNR=4.3							
ARCES	**ARCESS Array B**	**151.48**	**321**	PKPbc		**PKiKP**	**11 16 59.8**	**-0.3**
	1.9nm,0.7s,baz=82,slow=2.6,SNR=6.7							

*IDC **09** 11:23:51.7±3.0,21°.33N×144°.04E, h196km±26km, mb3.0/5, mbtmp3.7/7, Error ellipse: s-maj=35.7km s-min=18.7km az=88.0*

ISC 09 11:23:52.1±1.4,21°.4N±0°.1×144°.1E±0°.3, h200km, n7, σ1s09/8, mb3.2/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**5.97**	**344**	P		**Pn**	**11 25 19.6**	**+0.7**
	33nm,0.5s,baz=272,slow=22,SNR=6.2							
JCJ				S		**Sn**	**11 26 26.5**	**-1.2**
	67nm,0.9s,baz=297,slow=23,SNR=1.8							
MJAR	**Matsushiro Arr**	**15.97**	**343**	P		**Pn**	**11 27 26.1**	**0.0**
	0.8nm,0.4s,baz=163,slow=9.7,SNR=6.6							
KSRS	**Korea Array**	**21.28**	**322**	P		**P**	**11 28 23.4**	**+0.5**
	1.4nm,0.7s,baz=148,slow=9.1,SNR=11							
	1.4nm,0.7s							
WRA	**Warramunga Arr**	**42.12**	**194**	P		**P**	**11 31 24.5**	**-0.5**
	0.3nm,0.4s,baz=14,slow=9.0,SNR=9.6							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**55.52**	**313**	P		**P**	**11 33 07.8**	**+1.3**
	0.1nm,0.4s,baz=88,slow=4.8,SNR=1.4							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**58.33**	**317**	P		**P**	**11 33 24.7**	**-1.4**
	0.2nm,0.4s,baz=90,slow=7.9,SNR=4.5							
	0.2nm,0.4s							
YKA	**Yellowknife Ar**	**76.38**	**28**	P		**P**	**11 35 19.2**	**+0.2**
	0.4nm,0.4s,baz=293,slow=5.8,SNR=9.2							
	0.4nm,0.4s							

IDC 09 11:55:15.5±4.1,21°.39N×141°.98E, h240km±99km, mb3.2/3, mbtmp3.9/5, Error ellipse: s-maj=271.3km s-min=21.9km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**5.69**	**2**	P		Pn	11 56 39.6	+0.2
	67nm,0.7s,baz=129,slow=22,SNR=6.2							
JCJ				S		S	11 57 46.5	+0.1
	50nm,0.7s,baz=288,slow=17,SNR=1.5							
MJAR	**Matsushiro Arr**	**15.45**	**349**	P		Pn	11 58 41.9	+0.4
	0.6nm,0.4s,baz=168,slow=9.3,SNR=2.5							
WRA	**Warramunga Arr**	**41.75**	**191**	P		P	12 02 41.4	-0.1
	0.5nm,0.2s,baz=13,slow=9.0,SNR=31							
	0.5nm,0.2s							
ASAR	**Alice Springs**	**45.47**	**190**	P		P	12 03 10.9	-0.1
	0.2nm,0.3s,baz=15,slow=12,SNR=4.8							
	0.2nm,0.3s							
BVAR	**Borovoye Array**	**62.18**	**320**	P		P	12 05 11.1	-0.4
	1.2nm,0.5s,baz=100,slow=7.5,SNR=2.3							
	1.2nm,0.5s							

*MRB **09** 12:11:00.8±0.2,42°.90N×0°.24E, h4km±1km, ML3.0/45, Error ellipse: s-maj=0.8km s-min=0.3km az=33.0*

*STR **09** 12:11:00.5±0.0,42°.93N±0°.10×0°.24E±0°.05, h8km, MLv3.0/18, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*

*MDD **09** 12:11:01.3±0.2,42°.92N×0°.25E, h1km, mb_Lg3.1/62, Error ellipse: s-maj=1.6km s-min=1.0km az=16.0*

*LDG **09** 12:11:01.0±0.0,42°.93N×0°.26E, h2km, Md2.8/2, Ml3.5/14, Error ellipse: s-maj=2.0km s-min=1.5km az=133.0*

*INMG **09** 12:11:01.1±1.3,42°.89N×0°.23E, h0km±2km, ML2.7, Error ellipse: s-maj=2.0km s-min=1.9km az=17.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pireneus (ESP)*

ISC 09 12:11:00.6±0.8,42°.90N±0°.01×0°.23E±0°.01, h11km±5km, n137, σ1s34/264, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RESF	**Ens**	**0.12**	**137**	P		**Pg**	**12 11 03.2**	**-0.5**
RESF				S		**Sg**	**12 11 05.2**	**-0.8**
VIEF	**Viey**	**0.15**	**266**	P		**Pg**	**12 11 04.2**	**0.0**
VIEF				S		**Sg**	**12 11 06.6**	**-0.1**
VIEF	**Viey**	**0.15**	**266**	Pg		**Pg**	**12 11 03.7**	**-0.5**
VIEF				Sg		**Sg**	**12 11 06.0**	**-0.7**
EPF	**Esparros**	**0.16**	**31**	*e*Pg		**Pg**	**12 11 03.3**	**-1.0**
EPF				*e*Sg		**Sg**	**12 11 05.8**	**-1.1**
	1μm,0.2s							
ECHI	**Chisagues Biel**	**0.23**	**186**	Pg		**Pg**	**12 11 05.4**	**-0.2**
ECHI				Sg		**Sg**	**12 11 08.4**	**-0.5**
ECHI	**Chisagues Biel**	**0.23**	**186**	P		**Pg**	**12 11 05.4**	**-0.2**
ECHI				S		**Sg**	**12 11 08.7**	**-0.2**
	2μm,0.1s							
ECHI	**Chisagues Biel**	**0.23**	**186**	Pg		**Pg**	**12 11 05.3**	**-0.2**
ECHI				Sg		**Sg**	**12 11 08.6**	**-0.2**
PYLO	**Lourdes**	**0.29**	**315**	P		**Pg**	**12 11 06.6**	**+0.2**
PYLO				S		**Sg**	**12 11 10.6**	**+0.2**
	1μm,0.2s							
PYLO	**Lourdes**	**0.29**	**315**	Pg		**Pg**	**12 11 06.0**	**-0.4**
PYLO				Sg		**Sg**	**12 11 10.0**	**-0.4**
MELF	**Melles**	**0.39**	**93**	Pg		**Pg**	**12 11 07.7**	**-0.7**
MELF				Sg		**Sg**	**12 11 13.5**	**-0.2**
VIER	**Vielha - Casau**	**0.45**	**114**	P		**Pg**	**12 11 09.3**	**-0.2**
VIER				S		**Sg**	**12 11 15.5**	**0.0**
	942nm,0.6s							
VIES	**Vielha - Hospi**	**0.46**	**115**	P		**Pg**	**12 11 09.5**	**-0.2**
VIES				S		**Sg**	**12 11 15.9**	**+0.1**
	1μm,0.4s							
CARA	**Val d'Aran**	**0.47**	**113**	P		**Pg**	**12 11 09.7**	**-0.2**
CARA				S		**Sg**	**12 11 16.3**	**+0.1**
	883nm,0.6s							
CANF	**Canfranc**	**0.56**	**257**	Pg		**Pg**	**12 11 11.1**	**-0.6**
CANF				Sg		**Sg**	**12 11 19.1**	**0.0**
ETSF	**Etsaut**	**0.58**	**271**	*e*Pg		**Pg**	**12 11 11.1**	**-0.8**
ETSF				*e*Sg		**Sg**	**12 11 19.0**	**-0.5**
	364nm,0.2s							
MLS	**Moulis**	**0.64**	**84**	P		**Pg**	**12 11 12.5**	**-0.5**
MLS				S		**Sg**	**12 11 21.4**	**0.0**
	141nm,0.6s							
MLS	**Moulis**	**0.64**	**84**	Pg		**Pg**	**12 11 11.7**	**-1.3**
CTRE	**Tremp**	**0.70**	**145**	P		**Pg**	**12 11 13.9**	**-0.2**
CTRE				S		**Sg**	**12 11 23.5**	**+0.2**
	90nm,0.4s							
ATE	**Arette**	**0.71**	**286**	P		**Pg**	**12 11 14.2**	**-0.2**
ATE				S		**Sb**	**12 11 24.2**	**-0.5**
	120nm,0.4s							
ATE	**Arette**	**0.71**	**286**	Pg		**Pg**	**12 11 13.5**	**-0.8**
ATE				Sg		**Sb**	**12 11 24.8**	**+0.1**
SALF	**Salau**	**0.72**	**100**	P		**Pg**	**12 11 14.2**	**-0.4**
SALF				S		**Sg**	**12 11 24.3**	**+0.2**
	291nm,0.4s							
SALF	**Salau**	**0.72**	**100**	Pg		**Pg**	**12 11 13.7**	**-0.8**
SALF				Sg		**Sg**	**12 11 23.7**	**-0.3**
URDF	**Urds**	**0.81**	**312**	P		**Pg**	**12 11 16.2**	**-0.1**
URDF				S		**Sg**	**12 11 27.5**	**+0.7**
	160nm,0.6s							
CEST	**Esterri de Car**	**0.81**	**111**	P		**Pg**	**12 11 15.7**	**-0.6**
CEST				S		**Sg**	**12 11 27.1**	**+0.2**
	256nm,0.5s							
CSOR	**Sort**	**0.85**	**128**	P		**Pg**	**12 11 16.6**	**-0.4**
CSOR				S		**Sg**	**12 11 28.1**	**+0.1**
	156nm,0.7s							
CTRM	**Tremp**	**0.88**	**146**	S		**Sb**	**12 11 29.5**	**-0.2**
	188nm,0.3s							
CRAS	**Crastes**	**0.90**	**24**	Pg		**Pg**	**12 11 18.7**	**+0.6**
CRAS				Sg		**Sn**	**12 11 32.4**	**+0.1**
ORDF	**Ordiarp**	**0.91**	**291**	Pg		**Pg**	**12 11 17.8**	**-0.4**
ORDF				Sg		**Sb**	**12 11 31.4**	**+0.9**
MLZA	**Monlezun-d-Arm**	**0.97**	**345**	Pn		**Pg**	**12 11 19.0**	**-0.2**
MLZA				Sn		**Sn**	**12 11 34.4**	**+0.6**
GENF	**Genat**	**0.99**	**94**	P		**Pg**	**12 11 18.9**	**-0.8**
GENF				S		**Sg**	**12 11 32.4**	**-0.3**
GENF	**Genat**	**0.99**	**94**	Pg		**Pg**	**12 11 18.6**	**-1.1**

88nm,0.3s
MTLF Montolieu 1.52 72 Pn **Pn** 12 11 27.1 -0.7
MTLF Pg **Pb** 12 11 29.1 +0.3
EXQUE Queralbs 1.53 110 P **Pn** 12 11 28.4 +0.4
EXQUE S **Sb** 12 11 49.1 +0.7
504nm,0.6s
CBRU Bruguera 1.56 112 P **Pn** 12 11 28.9 +0.4
CBRU S **Sb** 12 11 50.0 +0.6
CORI Orista 1.63 124 P **Pn** 12 11 29.8 +0.5
CORI S **Sb** 12 11 51.4 +0.1
329nm,0.5s
AVIN Avinyo 1.66 129 S **Sb** 12 11 52.2 0.0
363nm,0.4s
EPOB Poblet 1.67 157 Pn **Pb** 12 11 31.3 0.0
EPOB Sn **Sb** 12 11 52.3 -0.1
EPOB *i* IVmb_Lg 12 11 55.4
EPOB Poblet 1.67 157 P **Pn** 12 11 30.3 +0.5
EPOB S **Sb** 12 11 52.4 0.0
99nm,0.6s
FILF Fillols 1.75 100 P **Pn** 12 11 30.0 -1.0
FILF S **Sn** 12 11 51.7 -1.6
114nm,0.7s
FILF Fillols 1.75 100 Pn **Pn** 12 11 31.3 +0.3
FILF Sg **Sb** 12 11 55.7 +1.0
CMON Montserrat 1.77 137 P **Pn** 12 11 31.6 +0.5
CMON S **Sb** 12 11 54.7 -0.5
160nm,0.5s
SLVF La Salvetat-Pe 1.91 47 Pn **Pn** 12 11 31.9 -1.2
CBEU Beuda 1.92 109 P **Pn** 12 11 33.9 +0.7
CBEU S **Sn** 12 11 58.4 +1.0
362nm,0.6s
ERTA Horta de San J 1.94 178 Pg **Pg** 12 11 36.8 -1.0
ERTA Sn **Sn** 12 11 58.3 +0.5
ERTA Sg **Sg** 12 12 02.6 -0.4
ERTA *i* IVmb_Lg 12 12 07.0
ERTA Horta de San J 1.94 178 P **Pn** 12 11 34.0 +0.5
ERTA S **Sb** 12 11 59.4 -0.7
63nm,0.7s
E1202 Enciso (La Rio 1.98 249 Pn **Pn** 12 11 35.0 +0.9
E1202 Pg **Pg** 12 11 38.2 -0.4
E1202 Sn **Sb** 12 12 00.6 -0.7
CFON Fontmartina 1.99 124 P **Pn** 12 11 34.9 +0.6
CFON S **Sn** 12 12 00.3 +1.1
VAN2 Vandellos 2 1.99 167 P **Pn** 12 11 34.9 +0.7
VAN2 S **Sb** 12 12 00.2 -1.4
62nm,0.4s
SJAF Saint Jean de 2.00 101 P **Pn** 12 11 34.6 +0.3
SJAF S **Sn** 12 12 00.2 +0.9
110nm,0.5s
SJAF Saint Jean de 2.00 101 Pn **Pb** 12 11 37.2 +0.2
SJAF Sg **Sg** 12 12 05.8 +0.9
EJON La Jonquera 2.01 102 Pn **Pn** 12 11 34.8 +0.3
EJON Pg **Pb** 12 11 37.8 +0.6
EJON Sn **Sn** 12 12 00.7 +1.0
EJON Sg **Sg** 12 12 04.9 -0.4
EJON *i* IVmb_Lg 12 12 09.2
CGAR Garraf 2.03 141 P **Pn** 12 11 35.4 +0.6
CGAR S **Sn** 12 12 01.4 +1.2
75nm,0.5s
LFF La Frestale 2.08 10 *e*Pg **Pb** 12 11 38.5 +0.2
LFF *e*Sg **Sg** 12 12 06.8 -0.6
169nm,0.3s
EBR Ebro Roquetas 2.08 174 P **Pn** 12 11 36.1 +0.7
EBR S **Sb** 12 12 02.6 -1.6
148nm,0.7s
CLAF Gruissan 2.11 83 P **Pn** 12 11 36.3 +0.4
CLAF S **Sn** 12 12 02.6 +0.6
CMAS Mas de Barbera 2.17 178 P **Pn** 12 11 37.2 +0.5
CMAS S **Sb** 12 12 04.7 -2.0
74nm,0.5s
CCAS Cassa de la Se 2.23 116 P **Pn** 12 11 38.2 +0.7
CCAS S **Sn** 12 12 05.9 +1.0
116nm,0.7s
CBUD Illa de Buda 2.23 168 P **Pn** 12 11 38.1 +0.6
CBUD S **Sn** 12 12 06.3 +1.2
CPAL Palau Saverder 2.25 104 P **Pn** 12 11 38.1 +0.4
CPAL S **Sn** 12 12 06.1 +0.8
50nm,0.9s
BLAN Blanes 2.26 122 S **Sn** 12 12 06.5 +0.9
122nm,1.7s
ALCN Alcanar 2.35 175 P **Pn** 12 11 39.7 +0.6
ALCN S **Sn** 12 12 08.7 +0.8
46nm,0.5s
CFAR Far de la Bany 2.36 172 P **Pn** 12 11 39.6 +0.5
CFAR S **Sn** 12 12 09.4 +1.4
CAF Calviac 2.42 33 *e*Pn **Pn** 12 11 39.0 -1.2
CAF *e*Pg **Pb** 12 11 44.8 +0.5
CAF *e*Sn **Sn** 12 12 08.7 -1.2
CAF *e*Sg **Sb** 12 12 16.9 +2.7
71nm,0.3s
LAJAS L'Hospitalet-d 2.43 63 Pn **Pn** 12 11 39.5 -0.7
RJF Les Rejaudoux 2.58 21 *e*Pn **Pn** 12 11 41.3 -1.0
RJF *e*Pg **Pb** 12 11 48.3 +1.4
RJF *e*Sg **Sb** 12 12 20.9 +2.3
64nm,0.2s
EMOS Mosqueruela 2.58 192 Pn **Pn** 12 11 43.1 +0.6
EMOS Pg **Pb** 12 11 46.5 -0.5
EMOS Sn **Sn** 12 12 14.8 +0.8
EMOS Sg **Sg** 12 12 22.6 -1.0
EMOS *i* IVmb_Lg 12 12 29.6
EMOS Mosqueruela 2.58 192 P **Pn** 12 11 43.2 +0.8
EMOS S **Sn** 12 12 15.2 +1.2
47nm,1.1s
E0901 Celadas (Terue 2.62 203 Pn **Pn** 12 11 43.8 +0.9
E0901 Sn **Sn** 12 12 15.5 +0.8
E0901 *i* IVmb_Lg 12 12 30.2
ALCX Castello 2.63 179 P **Pn** 12 11 43.7 +0.7
ALCX S **Sn** 12 12 16.0 +1.1
79nm,0.6s
CLMF Criteuil-la-Ma 2.64 354 Pg **Pg** 12 11 50.2 -1.1
ETOR Torete 2.69 220 Pn **Pn** 12 11 45.2 +1.4
ETOR Sn **Sn** 12 12 17.6 +1.2
ETOR *i* IVmb_Lg 12 12 33.1
ELAN Lanestosa 2.70 278 Pn **Pn** 12 11 44.3 +0.2
ELAN Sn **Sn** 12 12 17.8 +1.1
ELAN *i* IVmb_Lg 12 12 26.4
LASF Ste Croix 2.89 65 *e*Pn **Pn** 12 11 45.6 -1.0
LASF *e*Pg **Pg** 12 11 54.9 -1.1
LASF *e*Sg **Sg** 12 12 32.2 -1.3
23nm,0.3s
TRBF Trabuc cave 2.97 65 Pn **Pn** 12 11 46.9 -0.8
FRNF Fournols 3.00 33 Pn **Pn** 12 11 46.9 -1.3
YEBES Yebes (Guadala 3.43 227 Pn **Pn** 12 11 54.7 +0.7
YEBES Sn **Sn** 12 12 36.1 +1.3
YEBES *i* IVmb_Lg 12 12 58.2
TCF Toulx Ste Croi 3.68 22 *e*Sg **Sb** 12 12 55.3 +5.2
57nm,0.5s
ETOS Mallorca 3.68 147 Pn **Pn** 12 11 58.0 +0.6
ETOS Sn **Sn** 12 12 40.3 -0.5
ETOS *i* IVmb_Lg 12 12 56.5
ETOS Mallorca 3.68 147 P **Pn** 12 11 58.3 +0.8
ETOS S **Sn** 12 12 41.4 +0.6
15nm,1.7s
MFF Saint Martin d 3.72 356 *e*Pn **Pn** 12 11 56.6 -1.3
MFF *e*Pg **Pg** 12 12 09.6 -2.2
MFF *e*Pg **Pb** 12 12 10.3 +4.1
MFF *e*Sg **Sg** 12 12 56.8 -3.1
26nm,0.3s
MFF *e*Sg **Sb** 12 12 57.0 +5.8
VIVF Saint-Julien-l 3.76 57 *e*Pn **Pn** 12 11 56.8 -1.8
VIVF *e*Pg **Pb** 12 12 09.9 +2.8
VIVF *e*Sg **Sg** 12 12 59.0 -2.5
33nm,0.5s
EIBI Ibiza 3.96 167 Pn **Pn** 12 12 01.7 +0.5
EIBI Sn **Sn** 12 12 46.7 -0.9
EIBI *i* IVmb_Lg 12 12 57.5
GUD Guadarrama 3.98 237 Pn **Pn** 12 12 02.7 +1.1
GUD Sn **Sn** 12 12 46.7 -1.5
GUD *i* IVmb_Lg 12 12 52.9
EARI Arriondas 4.00 278 Pn **Pn** 12 12 03.3 +1.4
EARI Sn **Sn** 12 12 48.7 0.0
EARI *i* IVmb_Lg 12 12 55.7
BGF Bois d'Agland 4.11 26 *e*P **Pn** 12 12 06.9 +3.6
BGF *e*Sg **Sg** 12 13 09.1 -3.4
165nm,0.4s
ETOB Tobarra 4.46 198 Pn **Pn** 12 12 09.2 +1.0
ETOB Sn **Sn** 12 12 59.3 -0.7
ETOB *i* IVmb_Lg 12 13 10.4
AVF Avril sur Loir 4.48 29 *e*P **Pn** 12 12 11.3 +2.9
AVF *e*Sg **Sg** 12 13 20.2 -4.3
18nm,0.3s
ESBB Sonseca Array 4.51 226 Pn **Pn** 12 12 09.5 +0.7
ESBB Sn **Sn** 12 13 00.7 -0.5
ESDC Sonseca Array 4.51 226 Pn **Pn** 12 12 09.4 +0.5
ESDC Sn **Sn** 12 13 00.9 -0.4
ESDC *i* IVmb_Lg 12 13 02.4
SMF Signal de Mont 4.55 33 *e*Pn **Pn** 12 12 09.0 -0.3
SMF *e*P Pb 12 12 12.3 -8.1
SMF *e*Sg **Sg** 12 13 23.0 -3.5
12nm,0.4s
SSF Saint Saulge 4.77 28 *e*P **Pn** 12 12 15.5 +3.1
SSF *e*Sg **Sg** 12 13 29.4 -4.3
23nm,0.5s
PAB San Pablo 4.81 227 Pn **Pn** 12 12 13.9 +0.9
PAB Sn **Sn** 12 13 09.0 +0.4
PAB *i* IVmb_Lg 12 13 10.4
PSIM Granatula de C 5.07 218 Pn **Pn** 12 12 16.3 -0.2
PSIM Sn **Sn** 12 13 13.3 -1.7
LOR Lormes 5.07 29 *e*Sg **Sg** 12 13 39.0 -4.4
14nm,0.4s
ECAL Calabor 5.24 262 Pn **Pn** 12 12 19.5 +0.6
ECAL Sn **Sn** 12 13 18.1 -1.3
ECAL *i* IVmb_Lg 12 13 22.9
PBRG Braganca 5.28 260 *e*Pn **Pn** 12 12 20.9 +1.5
PBRG *e*Sn **Sn** 12 13 18.9 -1.3
PBRG *i* IAML 12 13 24.6
EPON Pontenova 5.42 277 Pn **Pn** 12 12 22.4 +1.1
EPON *i* IVmb_Lg 12 13 22.4
EPON Sn **Sn** 12 13 22.5 -1.1
EPLA Plasencia 5.52 241 Pn **Pn** 12 12 23.4 +0.7
EPLA Sn **Sn** 12 13 25.3 -0.8
EPLA *i* IVmb_Lg 12 13 30.5
QUIF Quistinic 5.56 336 *e*P **Pn** 12 12 26.9 +3.7
MVO Moncorvo 5.67 255 *e*Sn **Sn** 12 13 28.2 -1.8
MVO *i* IAML 12 13 30.6
MVO *i* IAML 12 14 12.8
MVO *i* IAML 12 14 19.8
LDF La Druitiere 5.70 358 *e*Sg **Sg** 12 13 58.5 -5.1
13nm,0.4s
ROSF Rostrenen 5.97 337 *e*Pn **Pn** 12 12 28.0 -0.8
EADA Adamuz 5.97 219 Pn **Pn** 12 12 29.4 +0.4
EADA Sn **Sn** 12 13 35.6 -1.8
EADA *i* IVmb_Lg 12 13 40.4
EAGO Agolada(Pontev 6.12 272 Pn **Pn** 12 12 31.6 +0.7
EAGO *i* IVmb_Lg 12 13 48.9
ELOB Lobios 6.22 263 Pn **Pn** 12 12 31.6 -0.8
ELOB Sn **Sn** 12 13 40.8 -2.8
ELOB *i* IVmb_Lg 12 13 47.0
ECAB El Cabril 6.46 224 Pn **Pn** 12 12 36.3 +0.7
ECAB Sn **Sn** 12 13 47.8 -1.5
ECAB *i* IVmb_Lg 12 13 53.0
PMRV Marv??o 6.71 241 *e*Pn **Pn** 12 12 39.9 +0.9
PMRV *e*Sn **Sn** 12 13 53.9 -1.6
PMRV *i* IAML 12 13 55.4
PMRV *i* IAML 12 13 55.4
PMRV *i* IAML 12 13 55.9
PBAR Barrancos 7.27 232 *e*Pn **Pn** 12 12 48.4 +1.7
PBAR *e*Sn **Sn** 12 14 06.7 -2.5
PARRA Arraiolos 7.47 240 *e*Pn **Pn** 12 12 50.2 +0.7
MOE Montemor 7.84 239 *e*Pn **Pn** 12 12 55.2 +0.6
MOE *e*Sn **Sn** 12 14 21.4 -1.9

*GII **09** 12:25:01.9±0.0,32°.228N±0°.002×36°.347E±0°.002,h0km, confirmed*
*JSO **09** 12:25:06.0±0.5,32°N±4°×3°6E±°,h5km,M3.0/6,MLv3.0/6*
ISC 09 12:25:02.0±1.2,**32°.25N**±0°.04×**36°.34E**±0°.06,**h0km,n14,** σ0§**62**/22,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
HSUJ	**Al Zarqa**	**0.19**	**222**	P		**Pg**	**12 25 06.9**		**+1.2**
ASF	**Jabal al Asfar**	**0.47**	**99**	P		**Pn**	**12 25 15.8**		**-0.4**
QRNJ	**Al-Qirein**	**0.66**	**278**	P		**Pn**	**12 25 18.2**		**-0.4**
ROII	**Roi**	**0.73**	**270**	P		**Pg**	**12 25 16.5**		**+0.5**
MMLI	**Mount Malkishu**	**0.80**	**284**	P		**Pb**	**12 25 18.5**		**-0.4**
MMLI				S		**Sb**	**12 25 31.5**		**+1.1**
KNHM	**Kefar Nahum**	**0.91**	**315**	P		**Pb**	**12 25 20.2**		**-0.4**
KNHM				S		**Sn**	**12 25 35.5**		**-0.3**
MZS	**Mizpe Shalem**	**1.05**	**230**	P		**Pn**	**12 25 23.4**		**-0.6**
MZS				S		**Sb**	**12 25 37.8**		**+0.5**
MMA0B	**Mount Meron ar**	**1.10**	**314**	P		**Pb**	**12 25 24.0**		**-0.1**
MMA0B				S		**Sb**	**12 25 39.9**		**+0.9**
GEM	**Giv'at Ha'Em**	**1.12**	**329**	P		**Pb**	**12 25 24.0**		**-0.3**
GEM				S		**Sn**	**12 25 41.0**		**-0.1**
NATI	**Neve Ativ**	**1.14**	**333**	P		**Pb**	**12 25 24.7**		**+0.2**
NATI				S		**Sn**	**12 25 41.8**		**+0.4**
GHAJ	**Ghor Haditha**	**1.15**	**215**	P		**Pb**	**12 25 24.6**		**-0.2**
GHAJ	**Ghor Haditha**	**1.15**	**215**	P		**Pb**	**12 25 24.3**		**-0.5**
GHAJ				S		**Sn**	**12 25 40.8**		**-1.0**
OFRI	**`Ofer**	**1.21**	**288**	P		**Pg**	**12 25 24.5**		**-0.7**
OFRI				S		**Sn**	**12 25 43.1**		**-0.2**
MSBI	**Mazada**	**1.25**	**222**	P		**Pb**	**12 25 26.3**		**-0.2**

*IDC **09** 12:44:49.6±0.8,3°.45S×141°.15E,h0km,mb3.9/10, mbtmp4.0/12,ML4.2/1,MS3.3/12,Error ellipse: s-maj=27.9km s-min=10.7km az=73.0*
*DJA **09** 12:44:55.3±0.9,3°S±6°×14°1E±°,h44km±8km,M4.7/6, mB4.7/1,mb5.0/3,MLv4.5/6,Mw(mB)3.9/1*
*NEIC **09** 12:44:55.3±1.3,3°.47S±0°.06×140°.97E±0°.07,h35km±1km, mb4.2/22,Error ellipse: s-maj=13.4km s-min=6.8km az=53.0*
ISC 09 12:44:54.7±0.5,**3°.43S**±0°.05×**141°.09E**±0°.06,**h35**km,**n57,** σ1§**30**/55,**mb4.1**/18,**MS3.3**/8,**1D,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
JAY	**Jayapura**	**0.99**	**337**	Pg		**Pn**	**12 45 10.8**		**-1.3**
	99nm,0.3s,baz=162,slow=11,SNR=144								
JAY				Lg		Lg	12 45 22.6		
	249nm,0.3s,baz=304,slow=22,SNR=13								
JAY				LR		LR	12 45 43.9		
	comp=Z,700nm,19.7s,baz=140,slow=53								
JAY	**Jayapura**	**0.99**	**337**	P		**Pn**	**12 45 11.1**		**-1.0**
JAY				S		**Sn**	**12 45 22.5**		**-2.4**
GENI	**Genyem**	**1.24**	**312**	P		**Pn**	**12 45 15.2**		**-0.4**
WAMI	**Wamena**	**2.42**	**259**	P		**Pn**	**12 45 34.2**		**+2.5**
SRPI	**Serui, Papua**	**5.09**	**288**	P		**Pn**	**12 46 09.7**		**+1.2**
	119nm,0.5s								
SRPI				S		**Sn**	**12 47 07.4**		**+1.3**
	119nm,0.5s								
BAKI	**Biak**	**5.45**	**294**	P		**Pn**	**12 46 14.0**		**+0.5**
	0.2nm698nm65nm,0.8s								
BAKI				S		**Sn**	**12 47 17.6**		**+2.5**
	0.2nm698nm65nm,0.8s								
MANU	**Manus Island**	**6.42**	**78**	Pn		**Pn**	**12 46 29.7**		**+3.0**
PMG	**Port Moresby**	**8.46**	**135**	Pn		**Pn**	**12 46 54.5**		**-0.3**
	22nm,0.6s,baz=354,slow=4.8,SNR=7.6								
PMG				LR		LR	12 51 24.2		
	comp=Z,157nm,19.1s,baz=298,slow=47								
PMG	**Port Moresby**	**8.46**	**135**			**Pn**	**12 46 55.4**		**+0.6**
FAKI	**Fak Fak**	**8.84**	**273**	Pn		**Pn**	**12 46 59.1**		**-1.0**
SIJI	**Sorong**	**10.14**	**284**	LR		LR	12 50 53.5		
	comp=Z,79nm,21.8s,baz=118,slow=36								
MTN	**Manton Dam**	**13.58**	**226**			**Pn**	**12 48 03.7**		**-1.3**
KNRA	**Kununurra**	**17.19**	**224**			**Pn**	**12 48 50.8**		**-1.4**
KNRA				IAmb		IAmb	12 49 05.9		
	comp=Z,11nm,0.8s								
CTA	**Charters Tower**	**17.31**	**163**	LR		LR	12 55 46.0		
	comp=Z,117nm,20.5s,baz=25,slow=38								
GUMO	**Guam**	**17.32**	**12**	LR		LR	12 55 25.8		
	comp=Z,30nm,19.1s,baz=200,slow=37								
WB0	**Warramunga Arr**	**17.50**	**201**			**Pn**	**12 48 55.7**		**-0.4**
WR0	**Warramunga Arr**	**17.63**	**201**			**Pn**	**12 48 56.9**		**-0.8**
WR0				IAmb		IAmb	12 49 22.2		
	comp=Z,12nm,0.8s								
WR8	**Warramunga Arr**	**17.64**	**201**			**Pn**	**12 48 57.4**		**-0.4**
WR8				IAmb		IAmb	12 49 22.4		
	comp=Z,13nm,1.1s								
WRAB	**Tennant Creek**	**17.67**	**201**			**Pn**	**12 48 57.9**		**-0.3**
WRAB				IAmb		IAmb	12 49 10.3		
	comp=Z,10nm,0.8s								
WB2	**Warramunga Arr**	**17.68**	**201**			**Pn**	**12 48 58.3**		**0.0**
WB2				IAmb		IAmb	12 49 11.6		
	comp=Z,16nm,1.0s								
WRA	**Warramunga Arr**	**17.69**	**201**	P		**Pn**	**12 48 58.3**		**-0.1**
	comp=Z,0.8nm,0.3s,baz=21,slow=12,SNR=25								
	comp=Z,2.7nm,0.4s								
WRA	**Warramunga Arr**	**17.69**	**201**	P		**Pn**	**12 48 56.5**		**-2.0**
TOLI2	**Tolitoli**	**20.80**	**282**	P		**P**	**12 49 31.9**		**-1.2**
TOLI2				IAmb		IAmb	12 49 47.8		
	comp=Z,7.8nm,0.9s								
FITZ	**Fitzroy Crossi**	**21.02**	**225**	P		**P**	**12 49 35.8**		**+0.4**
	comp=Z,3.2nm,0.7s,baz=39,slow=10.0,SNR=6.8								
FITZ				S		**S**	**12 53 23.4**		**-4.3**
	comp=Z,4.9nm,1.0s,baz=148,slow=8.7,SNR=3.8								
FITZ				LR		LR	12 57 51.2		
	comp=Z,142nm,18.4s,baz=0.5,slow=37								
	comp=Z,3.2nm,0.7s								
AS31	**Alice Springs**	**21.28**	**198**			**P**	**12 49 37.9**		**-0.5**
ASAR	**Alice Springs**	**21.28**	**198**	P		**P**	**12 49 38.5**		**+0.2**
	comp=Z,1.3nm,0.5s,baz=27,slow=11,SNR=27								
ASAR				S		**S**	**12 53 33.1**		**+0.1**
	comp=Z,0.8nm,0.9s,baz=12,slow=28,SNR=2.7								
ASAR				LR		LR	12 58 01.7		
	comp=Z,122nm,21.5s,baz=15,slow=37								
	comp=Z,1.3nm,0.5s								
ASAR	**Alice Springs**	**21.28**	**198**			**P**	**12 49 36.8**		**-1.5**
ASAR						**S**	**12 53 33.1**		**+0.1**
EIDS	**Eidsvold**	**23.84**	**157**			**P**	**12 50 04.9**		**+0.2**
INKA	**Innaminka**	**24.18**	**181**	P		**P**	**12 50 06.6**		**-1.2**
FORT	**Forrest**	**29.86**	**203**	P		**P**	**12 50 57.3**		**-1.6**
CAN	**Canberra**	**32.57**	**168**	P		**P**	**12 51 22.5**		**-0.3**
CAN				IAmb		IAmb	12 51 25.1		
	comp=Z,4.7nm,0.8s								
YOJ	**Yonaguni jima**	**32.83**	**329**	P		**P**	**12 51 24.2**		**-0.9**
MJAR	**Matsushiro Arr**	**39.86**	**356**	LR		LR	13 08 11.6		
	comp=Z,28nm,18.2s,baz=237,slow=35								
KSRS	**Korea Array**	**42.48**	**344**	LR		LR	13 08 13.6		
	comp=Z,17nm,20.1s,baz=175,slow=33								
CMAR	**Chiang Mai Arr**	**46.86**	**299**	P		**P**	**12 53 22.4**		**+0.7**
	comp=Z,0.5nm,0.4s,baz=120,slow=6.6,SNR=5.6								
	comp=Z,0.5nm,0.4s								
TUWZ	**Tuamarina**	**47.95**	**147**	P		**P**	**12 53 30.5**		**+0.6**
BNX	**BinXian**	**50.45**	**348**	||P		**P**	**12 53 49.6**		**+0.7**
BNX				pmax		pmax			
	comp=Z,6.0nm,0.7s								
KLR	**Kul'dur**	**53.07**	**352**	LR		LR	13 15 58.0		
	comp=Z,27nm,18.2s,baz=212,slow=35								
PEA0B	**Petropavlovsk-**	**58.04**	**12**	P		**P**	**12 54 45.0**		**+1.0**
PETK	**Petropavlovsk-**	**58.04**	**12**	P		**P**	**12 54 45.4**		**+1.4**
	comp=Z,1.5nm,0.6s,baz=169,slow=5.3,SNR=9.6								
	comp=Z,1.5nm,0.6s								
PETK	**Petropavlovsk-**	**58.04**	**12**	P		**P**	**12 54 45.2**		**+1.1**
MA2	**Magadan**	**63.28**	**5**	LR		LR	13 18 47.3		
	comp=Z,15nm,21.7s,baz=278,slow=32								
MKAR	**Makanchi Array**	**71.81**	**322**	P		**P**	**12 56 14.8**		**+1.0**
	comp=Z,1.1nm,0.5s,baz=96,slow=8.9,SNR=9.4								
	comp=Z,1.1nm,0.5s								
KSH2	**Kashi**	**73.49**	**312**	P		**P**	**12 56 26.1**		**+1.9**
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.8s								
ZALV	**Zalesovo Beam**	**73.76**	**329**	P		**P**	**12 56 25.3**		**+0.1**
	comp=Z,0.7nm,0.6s,baz=182,slow=1.7,SNR=3.8								
	comp=Z,0.7nm,0.6s								
BOOM	**Boomskoye usch**	**74.32**	**316**	P		**P**	**12 56 29.6**		**+0.6**
BOOM				IAmb		IAmb	12 56 43.8		
	comp=Z,5.2nm,1.0s								
VNDA	**Vanda**	**74.87**	**175**	LR		LR	13 29 37.1		
	comp=Z,70nm,18.2s,baz=260,slow=36								
KURK	**Kurchatov**	**75.67**	**324**	P		**P**	**12 56 36.6**		**+0.2**
KURK				IAmb		IAmb	12 56 37.8		
	comp=Z,1.5nm,0.8s								
KURBB	**Kurchatov Arra**	**75.69**	**324**	P		**P**	**12 56 36.6**		**+0.2**
	comp=Z,0.6nm,0.6s,baz=114,slow=5.1,SNR=4.2								
	comp=Z,0.6nm,0.6s								
BVAR	**Borovoye Array**	**81.26**	**325**	P		**P**	**12 57 07.5**		**+0.4**
	comp=Z,1.5nm,0.5s,baz=86,slow=4.6,SNR=6.6								
	comp=Z,1.5nm,0.5s								
J20K	**Nowinta River**	**82.36**	**24**	P		**P**	**12 57 12.8**		**+0.2**
J20K				IAmb		IAmb	12 57 49.9		
	comp=Z,2.9nm,1.1s								
CAST	**Castle Rocks**	**82.90**	**25**	P		**P**	**12 57 16.5**		**+0.9**
CAST				IAmb		IAmb	12 57 32.5		
	comp=Z,2.4nm,1.1s								
H24K	**Noodor Dome**	**85.44**	**23**	P		**P**	**12 57 29.2**		**+0.7**
H24K				IAmb		IAmb	12 57 31.0		
	comp=Z,3.8nm,1.4s								
ILAR	**Eielson Array**	**85.51**	**24**	P		**P**	**12 57 28.2**		**-0.5**
	comp=Z,0.5nm,0.6s,baz=266,slow=4.8,SNR=5.5								
	comp=Z,0.5nm,0.6s								
C23K	**Itkillik River**	**85.86**	**19**	P		**P**	**12 57 32.0**		**+1.7**
QSPA	**South Pole Qui**	**86.52**	**180**	P		**P**	**12 57 33.1**		**-0.9**
	comp=Z,0.7nm,0.8s,baz=312,slow=1.6,SNR=5.5								
QSPA				LR		LR	13 35 50.4		
	comp=Z,71nm,19.4s,baz=293,slow=35								
	comp=Z,0.7nm,0.8s								
QSPA	**South Pole Qui**	**86.52**	**180**	P		**P**	**12 57 33.1**		**-0.9**

*NEIC **09** 12:49:47.7±2.0, 18°.8S±0°.1×177°.59W±0°.09,h563km±6km, mb4.2/50,Error ellipse: s-maj=17.0km s-min=10.1km az=150.0*
*IDC **09** 12:49:47.4±1.3, 18°.75S×177°.60W,h563km±14km, mb3.5/19,mbtmp4.4/22,Error ellipse: s-maj=13.1km s-min=10.8km az=129.0*
ISC 09 12:49:46.2±0.4,**18°.70S**±0°.08×**177°.58W**±0°.07,**h550**km, **n120,** σ1§**16**/106,**mb4.1**/45,**2D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MSVF	**Nonsavu**	**4.26**	**282**	P		**P**	**12 51 13.4**		**+3.2**
	26nm,0.4s,baz=179,slow=2.0,SNR=69								
MSVF	**Nonsavu**	**4.26**	**282**	P		**P**	**12 51 14.2**		**+4.0**
FUTU	**Fugatoga**	**4.40**	**353**	P		**P**	12 51 16.3		+5.1
NIUE	**Niue**	**7.26**	**94**	P		**P**	**12 51 38.1**		**+1.4**
AFI	**Afiamalu**	**7.33**	**50**	P		**P**	**12 51 38.3**		**+0.8**
	39nm,0.5s,baz=162,slow=2.1,SNR=22								
AFI				S		**S**	**12 53 07.1**		**-1.6**
	27nm,0.5s,baz=155,slow=16,SNR=7.3								
MARNC	**Mare, Loyalty**	**13.80**	**256**	P		**P**	**12 52 43.5**		**+0.2**
MARNC	**Mare, Loyalty**	**13.80**	**256**	P		**P**	**12 52 42.6**		**-0.7**
SANVU	**Saraoutou**	**14.90**	**280**	P		**P**	**12 52 55.8**		**+1.0**
NOUC	**Port Laguerre**	**15.48**	**255**	P		**P**	**12 53 02.2**		**+1.6**
KOUNC	**Koumac, New Ca**	**17.18**	**261**	P		**P**	**12 53 16.5**		**-0.1**
KOUNC	**Koumac, New Ca**	**17.18**	**261**	P		**P**	**12 53 17.9**		**+1.2**
OUZ	**Omahuta**	**18.22**	**204**	P		**P**	**12 53 29.6**		**+3.6**
URZ	**Urewera**	**20.03**	**192**	P		**P**	**12 53 40.8**		**-1.6**
	4.3nm,0.3s,baz=232,slow=2.2,SNR=7.1								
URZ	**Urewera**	**20.03**	**192**	P		**P**	**12 53 40.7**		**-1.7**
BKZ	**Black Stump Fm**	**21.03**	**193**	P		**P**	**12 53 50.2**		**-1.3**
QRZ	**Quartz Range**	**23.63**	**199**	P		**P**	**12 54 15.8**		**+1.2**
THZ	**Tophouse**	**24.38**	**197**	P		**P**	**12 54 20.1**		**-1.3**
FOZ	**Fox Glacier**	**26.94**	**201**	P		**P**	**12 54 43.2**		**-0.6**
JCZ	**Jackson Bay**	**27.77**	**201**	P		**P**	**12 54 52.5**		**+1.3**
WHZ	**Wether Hill Ro**	**29.65**	**201**	P		**P**	**12 55 06.8**		**-0.6**
ARMA	**Armidale**	**30.24**	**241**	P		**P**	**12 55 13.5**		**+0.6**
CTA	**Charters Tower**	**34.10**	**262**	P		**P**	**12 55 47.0**		**+1.3**
	3.4nm,0.6s,baz=79,slow=9.1,SNR=7.5								
	3.4nm,0.6s								
CTAO	**Charters Tower**	**34.10**	**262**	P		**P**	**12 55 43.6**		**-2.1**
TOO	**Toolangi**	**37.29**	**232**	P		**P**	**12 56 12.3**		**+0.4**
STKA	**Stephens Creek**	**38.95**	**242**	P		**P**	**12 56 25.7**		**+0.3**
	2.9nm,0.4s,baz=73,slow=11,SNR=8.5								
	2.9nm,0.4s								
INKA	**Innaminka**	**39.19**	**249**	P		**P**	**12 56 28.2**		**+0.8**
INKA				IAmb		IAmb	12 56 28

comp=Z,12nm,1.1s
KNRA Kununurra 51.20 265 P P 12 57 58.9 -0.5
KNRA IAmb IAmb 12 57 59.5
comp=Z,13nm,0.9s
SIJI Sorong 53.18 283 P P 12 58 14.0 +0.3
comp=Z,13nm,0.3s,baz=192,slow=21,SNR=8.4
comp=Z,13nm,0.3s
FITZ Fitzroy Crossi 53.68 261 P P 12 58 16.7 -0.4
comp=Z,3.4nm,0.4s,baz=118,slow=5.7,SNR=44
comp=Z,3.4nm,0.4s
FITZ Fitzroy Crossi 53.68 261 P P 12 58 16.7 -0.4
MBWA Marble Bar 58.65 256 P P 12 58 50.4 -1.0
MBWA IAmb IAmb 12 59 10.9
comp=Z,21nm,1.4s
SBA Scott Base 59.69 184 P P 12 58 59.1 +1.8
VNDA Vanda 59.73 185 P P 12 58 58.4 +0.8
comp=Z,0.9nm,0.5s,baz=9.5,slow=7.0,SNR=14
comp=Z,0.9nm,0.5s
VNDA Vanda 59.73 185 P P 12 58 58.4 +0.8
MJAR Matsushiro Arr 69.01 323 P P 12 59 56.7 -0.3
comp=Z,1.2nm,0.7s,baz=158,slow=5.8,SNR=3.8
comp=Z,1.2nm,0.7s
MJAR Matsushiro Arr 69.01 323 P P 12 59 56.7 -0.3
UGM Wanagama 70.41 268 P P 13 00 05.6 -0.3
QSPA South Pole Qui 71.36 180 P P 13 00 10.9 +0.3
comp=Z,3.9nm,0.5s,baz=270,slow=0.7,SNR=49
comp=Z,3.9nm,0.5s
QSPA South Pole Qui 71.36 180 P P 13 00 10.7 0.0
QSPA IAmb IAmb 13 00 11.2
comp=Z,5.2nm,0.7s
TWG Pinlang 72.75 302 P P 13 00 17.8 -1.5
PEA0B Petropavlovsk- 74.64 345 P P 13 00 28.8 -0.5
PEA0B IAmb IAmb 13 00 33.5
comp=Z,20nm,1.4s
PETK Petropavlovsk- 74.64 345 P P 13 00 29.3 0.0
comp=Z,3.7nm,0.6s,baz=110,slow=6.7,SNR=22
comp=Z,3.7nm,0.6s
KSRS Korea Array 75.81 318 P P 13 00 37.1 +1.0
comp=Z,0.3nm,0.4s,baz=126,slow=8.0,SNR=2.8
comp=Z,0.3nm,0.4s
NVAR Mina Array Bea 79.45 43 P P 13 00 57.1 +1.0
comp=Z,0.8nm,0.6s,baz=223,slow=8.7,SNR=9.5
comp=Z,0.8nm,0.6s
BELA Belgrano 2 81.28 173 P P 13 01 04.0 -0.7
U15A North Rim 82.46 48 IAmb IAmb 13 01 14.1
comp=Z,1.4nm,0.8s
CAST Castle Rocks 84.24 11 IAmb IAmb 13 01 19.5
comp=Z,4.1nm,0.7s
F10A Beach Ranch, E 84.34 38 IAmb IAmb 13 01 21.9
comp=Z,3.9nm,0.8s
TRF Thorofare Moun 84.61 12 IAmb IAmb 13 01 21.7
comp=Z,6.7nm,0.8s
TXAR Lajitas Array 85.75 57 P P 13 01 29.6 +1.7
comp=Z,1.4nm,0.8s,baz=212,slow=6.6,SNR=12
comp=Z,1.4nm,0.8s
G19K Purcell Mounta 85.98 8 IAmb IAmb 13 01 28.0
comp=Z,7.1nm,1.2s
IL31 86.48 13 IAmb IAmb 13 01 31.2
comp=Z,7.0nm,1.4s
ILAR Eielson Array 86.48 13 P P 13 01 29.6 -0.8
comp=Z,0.7nm,0.4s,baz=221,slow=4.7,SNR=20
comp=Z,0.7nm,0.4s
H22K Ishtalitna Cre 86.63 10 IAmb IAmb 13 01 31.6
comp=Z,2.1nm,0.7s
J25K Salcha River, 86.66 13 IAmb IAmb 13 01 36.0
comp=Z,3.5nm,1.2s
DLMT Dillon 86.76 40 IAmb IAmb 13 01 34.2
comp=Z,4.0nm,0.9s
M30M Minto, Yukon 87.14 18 IAmb IAmb 13 01 34.2
comp=Z,2.0nm,0.8s
L29M L29M 87.19 17 IAmb IAmb 13 01 35.4
comp=Z,3.8nm,1.1s
YHL Hebgen Lake 87.36 41 IAmb IAmb 13 01 37.9
comp=Z,4.5nm,0.9s
PDAR Pinedale Array 87.39 43 P P 13 01 35.9 +0.4
comp=Z,0.6nm,0.6s,baz=219,slow=3.8,SNR=6.9
comp=Z,0.6nm,0.6s
BOZ Bozeman (W) 87.46 40 IAmb IAmb 13 01 44.7
comp=Z,1.9nm,0.3s
K29M Barlow Dome 87.94 17 P P 13 01 38.0 +0.5
K29M IAmb IAmb 13 01 39.2
comp=Z,4.4nm,1.4s
COLD Coldfoot 88.04 10 IAmb IAmb 13 01 38.8
comp=Z,2.0nm,0.7s
F24K Squaw Lake 88.71 11 IAmb IAmb 13 01 41.9
comp=Z,1.9nm,0.7s
TROLL Troll, Antarti 89.52 180 ⇓P P 13 01 43.9 -1.0
comp=Z,131nm,0.4s
SNAA Sanae 89.79 178 P P 13 01 44.1 -1.9
comp=Z,1.2nm,0.7s,baz=221,slow=12,SNR=6.0
comp=Z,1.2nm,0.7s
SNAA Sanae 89.79 178 P P 13 01 44.1 -1.9
SNAA IAmb IAmb 13 01 45.1
comp=Z,2.0nm,0.9s
CMAR Chiang Mai Arr 89.89 289 P P 13 01 48.5 +1.2
comp=Z,1.2nm,0.9s,baz=129,slow=2.6,SNR=8.8
comp=Z,1.2nm,0.9s
CMAR Chiang Mai Arr 89.89 289 P P 13 01 46.5 -0.9
VNA2 Neumayer--Watz 90.35 177 ⇓P P 13 01 47.6 -0.9
comp=Z,4.7nm,0.6s,baz=180,slow=5.1
VNA1 Neumayer--Stat 90.58 176 P P 13 01 49.0 -0.5
comp=Z,4.2nm,0.8s
YKA Yellowknife Ar 94.72 25 P P 13 02 07.9 -0.5
comp=Z,0.5nm,0.7s,baz=241,slow=4.7,SNR=4.1
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 110.25 314 PKiKP PKiKP 13 07 14.3 -1.5
comp=Z,0.7nm,0.4s,baz=211,slow=1.4,SNR=9.5
KURBB Kurchatov Arra 112.99 318 PKiKP PKiKP 13 07 19.0 -1.9
comp=Z,0.8nm,0.7s,baz=90,slow=1.8,SNR=11
BVAR Borovoye Array 117.95 321 PKP PKPdf 13 07 29.1 -1.2
comp=Z,1.7nm,0.4s,baz=151,slow=3.4,SNR=5.1
ARCES ARCESS Array B 127.23 350 PKP PKPdf 13 07 46.6 -1.1
comp=Z,1.4nm,0.4s,baz=29,slow=1.4,SNR=21
FINES FINESS Array B 134.16 344 PKP PKPdf 13 08 00.9 -0.1
comp=Z,1.3nm,0.5s,baz=48,slow=2.8,SNR=9.9
NB2 NORSAR Subarra137.25 354 PKP PKPdf 13 08 07.7 +0.9
comp=Z,0.7nm,0.6s,baz=35,slow=2.6
NOA NORSAR Array B 137.25 355 PKP PKPdf 13 08 07.8 +0.9
comp=Z,0.6nm,0.6s,baz=14,slow=4.0,SNR=3.9
HFS Hagfors 137.83 352 PKhKP PKPpre 13 07 58.0
comp=Z,1.1nm,0.5s,baz=46,slow=4.3,SNR=5.2
AKASG Malin Array Be 141.62 332 PKhKP PKPpre 13 08 09.4
comp=Z,0.9nm,0.4s,baz=42,slow=3.9,SNR=8.2
EKA Eskdalemuir Ar 143.18 5 PKhKP PKPpre 13 08 14.1
comp=Z,2.2nm,0.5s,baz=324,slow=2.7,SNR=14
BRTR Keskin Array B 145.89 315 PKPbc PKPbc 13 08 24.1 -0.7
comp=Z,2.3nm,0.7s,baz=159,slow=3.8,SNR=9.0
BRG Berggiesshubel 146.62 347 *e*P PKPbc 13 08 26.4 +0.1
BRG Amp 13 08 28.6
comp=Z,4.5nm,0.6s
MORC Moravsky Berou 146.70 342 *e*PKP PKPdf 13 08 24.5 +0.6
MMAI Mount Meron Ar 147.23 302 PKPbc PKPbc 13 08 28.8 +0.2
comp=Z,2.3nm,0.4s,baz=47,slow=8.6,SNR=5.6
VRAC Vranov 147.40 343 *e*PKP PKPbc 13 08 28.4 0.0
JAVC Velka Javorina 147.48 341 *e*PKP PKPdf 13 08 25.9 +0.7
KRUC Moravsky 147.68 343 *e*PKP PKPbc 13 08 28.9 -0.2
GERES GERESS Array B 148.57 346 PKPbc PKPbc 13 08 31.4 -0.1
comp=Z,1.8nm,0.7s,baz=5.2,slow=1.5,SNR=12
GERES GERESS Array B 148.57 346 PKPbc 13 08 29.9 -1.5
CONA Conrad Observa 148.85 342 *i* PKP PKPbc 13 08 31.9 -0.2
comp=Z,4.8nm,0.9s
RONA Rosalia, Austr 148.93 342 *i* PKP PKPbc 13 08 32.2 -0.1
comp=Z,5.4nm,0.6s
MOA Molin 149.36 344 *e*PKP PKPbc 13 08 33.1 -0.2
comp=Z,3.0nm,0.7s
SESA Seetaler Alpe, 149.96 343 *i* PKP PKPbc 13 08 34.4 -0.6
SNR=9.0
LESA Schwarzleotal 150.14 346 *i* PKP PKPbc 13 08 34.8 -0.5
comp=Z,4.8nm,0.4s
SOKA Soboth 150.22 342 *i* PKP PKPbc 13 08 34.7 -0.7
comp=Z,3.0nm,0.6s
KBA Koelnbreinsper 150.31 345 *i* PKP PKPbc 13 08 34.3 -1.4
comp=Z,5.4nm,0.5s
WATA Walderalm 150.47 347 *i* PKP PKPbc 13 08 35.5 -0.6
comp=Z,7.8nm,0.5s
RETA Reutte 150.49 348 *i* PKP PKPbc 13 08 35.6 -0.4
comp=Z,2.7nm,0.4s
OBKA Obir 150.52 343 *e*PKP PKPbc 13 08 35.3 -0.9
comp=Z,1.7nm,0.5s
WTTA Wattenberg 150.52 347 *i* PKP PKPbc 13 08 35.8 -0.4
comp=Z,8.2nm,0.4s
MOTA Moosalm 150.56 348 *i* PKP PKPbc 13 08 35.7 -0.7
comp=Z,8.5nm,0.9s
MYKA Terra Mystica 150.65 344 *i* PKP PKPbc 13 08 35.4 -1.0
comp=Z,5.5nm,0.5s
SQTA Sankt Quirin 150.65 348 *i* PKP PKPbc 13 08 36.0 -0.5
comp=Z,9.1nm,0.6s
ABTA Abfaltersbach 150.82 346 *i* PKP PKPbc 13 08 35.8 -1.0
comp=Z,12nm,0.5s
DAVA Damuels 150.84 350 *e*PKP PKPbc 13 08 36.7 -0.2
comp=Z,4.2nm,0.6s
FETA Feichten 150.94 348 *i* PKP PKPbc 13 08 36.9 -0.3
comp=Z,2.9nm,0.5s,SNR=4.7
STAL STALIGIAL 151.23 345 PKPdf PKPdf 13 08 30.2 -1.0

IDC 09 13:35:16.2±1.8,1°25N×126°41E,h0km,mb3.3/4, mbtmp3.3/4,MS2.8/1,Error ellipse: s-maj=176.0km s-min=23.4km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**13.87**	**337**	LR	LR	13 44 11.3	
	comp=Z,42nm,20.9s,baz=178,slow=39						
WRA	**Warramunga Arr**	**22.45**	**160**	P	P	13 40 17.4	+0.4
	0.6nm,0.4s,baz=339,slow=11,SNR=8.1						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**25.82**	**164**	P	P	13 40 49.0	-0.4
	0.1nm,0.5s,baz=343,slow=7.4,SNR=5.9						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**59.41**	**326**	P	P	13 45 20.8	+0.1
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.6						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.65**	**328**	P	P	13 45 49.1	-0.1
	0.1nm,0.3s,baz=130,slow=5.8,SNR=1.7						
	0.1nm,0.3s						

*SGS **09** 13:46:29.1,28°.99N×32°.28E,h14km,Ml3.8*
*IDC **09** 13:46:32.8±8.2,29°.20N×32°.72E,h0km,mb3.5/3, mbtmp3.5/5,ML3.4/2,MS3.0/2,Error ellipse: s-maj=126.0km s-min=43.1km az=150.0*
*GII **09** 13:46:33.8±0.0,29°.20N±0°.02×32°.53E±0°.02,h0km, Mws3.7,confirmed*
*HLW **09** 13:46:33.0,29°.08N×32°.62E,h12km±1km,Ml3.8*
ISC 09 13:46:32.7±1.0,29°.12N±0°.03×32°.61E±0°.02,h12km±7km, n74,σ1°01/98,mb3.5/3,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAF	**Zafarana**	**0.17**	**341**	P	Pb	13 46 37.9	0.0
ZAF				S	Sg	13 46 41.2	+1.7
HRDS	**Abu Rudays**	**0.72**	**124**	P	Pg	13 46 47.2	+0.5
SUZ	**Suez**	**0.75**	**15**	P	Pn	13 46 48.1	-0.9
GRB	**Gharib**	**0.85**	**170**	P	Pg	13 46 48.9	-0.4
HHAG	**Hagoal**	**0.95**	**332**	P	Pn	13 46 51.1	-0.8
HHAG				S	Sn	13 47 04.5	-0.8
KOT	**Kottamia**	**1.06**	**320**	P	Pn	13 46 52.7	-0.6
TR2	**Tor 2**	**1.22**	**126**	P	Pn	13 46 54.2	-1.3
NBNS	**Bani Suef**	**1.26**	**247**	P	Pn	13 46 55.8	-0.3
NBNS				S	Sb	13 47 12.0	-0.5
HLW	**Helwan**	**1.33**	**304**	P	Pn	13 46 57.1	0.0
HLW				S	Sg	13 47 15.4	-0.3
HKAT	**Jabal Katrina**	**1.35**	**116**	P	Pn	13 46 56.4	-1.1
HKAT				S	Sb	13 47 13.5	-1.8
NUB	**Nuweibaa**	**1.78**	**92**	P	Pn	13 47 02.8	-0.5
HDHB	**Dhahab**	**1.80**	**102**	P	Pn	13 47 03.0	-0.5
HBST	**Basata**	**1.86**	**86**	P	Pn	13 47 04.5	+0.2
ASUT		**1.95**	**209**	P	Pn	13 47 05.1	-0.5
RYAN	**Fayoum**	**2.04**	**270**	P	Pn	13 47 06.2	-0.7
TAMRE	**El Minia**	**2.07**	**227**	P	Pn	13 47 07.0	-0.1
TAMRE				S	Sn	13 47 31.5	-1.3
RSHS		**2.08**	**112**	P	Pn	13 47 06.4	-1.1
RSHS				S	Sn	13 47 34.5	+1.2
EIL	**Elat**	**2.11**	**74**	LR	LR	13 48 04.3	
	comp=Z,67nm,18.9s,baz=45,slow=46						
EIL	**Elat**	**2.11**	**74**	P	Pn	13 47 08.4	+0.6
EIL	**Elat**	**2.11**	**74**	P	Pn	13 47 07.4	-0.4
EIL				S	Sb	13 47 35.5	-1.7
HQLS		**2.15**	**84**	P	Pn	13 47 08.4	0.0
HQLS				S	Sb	13 47 37.9	-0.3
JMOS	**Jabal al Moall**	**2.18**	**88**	P	Pn	13 47 08.8	0.0
JMOS				S	Sb	13 47 38.6	-0.6
AQBJ	**Aqaba**	**2.21**	**73**	P	Pn	13 47 10.5	+1.3
YTVT	**Yotvata**	**2.27**	**69**	P	Pn	13 47 10.4	+0.5
YTVT				S	Sn	13 47 38.5	+0.6
BDAS	**Al Bad`**	**2.29**	**107**	P	Pn	13 47 09.5	-0.7
BDAS				S	Sn	13 47 39.8	+1.5
HRFI	**Mount Harif**	**2.30**	**66**	P	Pn	13 47 10.5	0.0
HRFI	**Mount Harif**	**2.30**	**66**	P	Pn	13 47 10.1	-0.4
HRFI				S	Sb	13 47 40.8	-1.8
KZIT	**Kziot**	**2.36**	**40**	P	Pn	13 47 11.9	+0.6
KZIT	**Kziot**	**2.36**	**40**	P	Pn	13 47 11.3	0.0
KZIT				S	Sn	13 47 40.1	0.0
RMNI	**Mount Ramon**	**2.38**	**51**	P	Pn	13 47 11.8	+0.2
RMNI				S	Sn	13 47 41.3	+0.6
AYUS	**`Aynunah**	**2.51**	**111**	P	Pn	13 47 12.7	-0.6
KRABS	**KRABS**	**2.53**	**113**	P	Pn	13 47 12.8	-0.7
JLOS		**2.55**	**98**	P	Pn	13 47 13.8	-0.2
ZFRI	**Zfri**	**2.65**	**57**	P	Pn	13 47 10.4	+0.8
ZFRI				S	Sn	13 47 48.5	+1.2
MWLHS	**Almuwaylih**	**2.90**	**117**	P	Pn	13 47 18.0	-0.6
HSNJ	**Maan**	**2.91**	**66**	P	Pg	13 47 28.3	-0.1
AMAZ	**Amatzia**	**3.12**	**39**	P	Pg	13 47 32.6	0.0
AMAZ	**Amatzia**	**3.12**	**39**	P	Pn	13 47 22.4	+0.7
AMAZ				S	Sn	13 47 58.6	-0.4
MSBI	**Mazada**	**3.23**	**47**	P	Pg	13 47 32.0	-2.6
MSBI	**Mazada**	**3.23**	**47**	P	Pn	13 47 22.9	-0.3
MSBI				S	Sn	13 48 00.8	-0.7
LISJ	**El Lisan**	**3.26**	**49**	P	Pn	13 47 24.3	+0.7
GHAJ	**Ghor Haditha**	**3.36**	**49**	P	Pn	13 47 27.2	+2.3
GHAJ	**Ghor Haditha**	**3.36**	**49**	P	Pn	13 47 25.4	+0.4
DESA	**DESA**	**3.52**	**116**	P	Pn	13 47 27.0	-0.2
TBKS	**Tabuk**	**3.56**	**104**	P	Pn	13 47 28.0	+0.2
ALMO	**Almog**	**3.63**	**42**	P	Pn	13 47 28.7	+0.1
ALMO				S	Sn	13 48 11.2	-0.1
SALP	**Salfit**	**3.69**	**36**	P	Pn	13 47 31.6	+2.1
SLTI	**Sal'it**	**3.75**	**33**	P	Pn	13 47 29.7	-0.7
SLTI				S	Sn	13 48 12.8	-1.6
URD07	**Al Anba**	**3.79**	**111**	P	Pn	13 47 31.6	+0.6
RGMN	**Argaman**	**3.94**	**39**	P	Pn	13 47 32.4	-0.5
RGMN				S	Sn	13 48 19.5	+0.4
GTR	**Jabal at Tayr**	**4.03**	**207**	P	Pn	13 47 33.6	-0.6
OFRI	**`Ofer**	**4.05**	**30**	P	Pn	13 47 35.0	+0.6
OFRI				S	Sn	13 48 20.8	-0.9
AKRG	**Al Kharijah**	**4.06**	**208**	P	Pn	13 47 33.9	-0.7
QRNJ	**Al-Qirein**	**4.10**	**38**	P	Pb	13 47 41.6	-3.1
MMLI	**Mount Malkishu**	**4.10**	**35**	P	Pn	13 47 35.3	+0.1
MMLI				S	Sn	13 48 23.5	+0.4
NADB	**Abo Dabab**	**4.12**	**155**	P	Pn	13 47 35.2	-0.2
URD12	**Shuwaq**	**4.14**	**108**	P	Pn	13 47 35.8	0.0
HFRF	**Wahat Farafira**	**4.28**	**244**	P	Pn	13 47 36.8	-0.8
BIDS	**Bi'r al Bayda'**	**4.45**	**119**	P	Pn	13 47 40.0	+0.1
MMA0B	**Mount Meron ar**	**4.56**	**31**	P	Pn	13 47 42.3	+0.7
MMA0B				S	Sn	13 48 35.0	+0.3
MMAI	**Mount Meron Ar**	**4.56**	**31**	Pn	Pn	13 47 42.0	+0.4
	6.8nm,0.3s,baz=206,slow=12,SNR=26						
MMAI				Sn	Sn	13 48 33.0	-1.7
	9.9nm,0.3s,baz=206,slow=11,SNR=4.0						
	2.4nm,0.3s						
EWJHS	**Al Wajh**	**4.64**	**128**	P	Pn	13 47 41.6	-0.9
QLABS	**Al Qalibar**	**4.84**	**104**	P	Pn	13 47 45.5	0.0
GEM	**Giv'at Ha'Em**	**4.85**	**32**	P	Pn	13 47 47.8	+2.4
GEM	**Giv'at Ha'Em**	**4.85**	**32**	P	Pn	13 47 46.6	+1.2
GEM				S	Sn	13 48 40.8	-0.6
HAGS	**Hagol**	**5.17**	**155**	P	Pn	13 47 49.5	-0.4
KASR	**Kasr**	**5.50**	**175**	P	Pn	13 47 54.1	-0.3
CSS	**Mathiatis**	**5.86**	**6**	P	Pn	13 47 59.7	+0.4
HMSM	**Jabal Masmas**	**6.24**	**186**	P	Pn	13 48 04.1	-0.6
BRTR	**Keskin Array B**	**10.62**	**4**	Pn	Pn	13 49 07.2	+2.5
	0.1nm,0.3s,baz=186,slow=13,SNR=2.3						
	0.3nm,0.3s						
AKASG	**Malin Array Be**	**21.71**	**354**	P	P	13 51 23.5	+0.1
	2.5nm,0.6s,baz=177,slow=11,SNR=13						
	2.5nm,0.6s						
GERES	**GERESS Array B**	**24.46**	**329**	P	P	13 51 52.4	+0.9
	0.3nm,0.3s,baz=153,slow=9.8,SNR=4.7						
	0.3nm,0.3s						
NOA	**NORSAR Array B**	**34.98**	**342**	P	P	13 53 27.4	+2.9
	0.5nm,0.8s,baz=153,slow=8.4,SNR=1.0						
	0.5nm,0.8s						
SONM	**Songino Array**	**58.51**	**49**	LR	LR	14 25 56.4	
	comp=Z,52nm,18.3s,baz=259,slow=40						

*IDC **09** 14:06:46.2±2.4,23°.43S×179°.65W,h546km±34km,mb3.4/6, mbtmp4.3/7,Error ellipse: s-maj=40.8km s-min=23.8km az=23.0*
ISC 09 14:06:44.6±1.5,23°.6S±0°.1×179°.5W±0°.2,h536km,n40, σ1°55/39,mb3.9/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.28**	**338**	P	P	14 08 25.5	+0.1
	2.9nm,0.5s,baz=261,slow=24,SNR=6.7						
NFK	**Norfolk Island**	**12.50**	**242**	P	P	14 09 39.1	+11
HAZ	**Te Kaha**	**14.30**	**189**	P	P	14 09 46.4	-0.4
TOZ	**Tahuroa Road**	**14.72**	**196**	P	P	14 09 54.1	+2.9
URZ	**Urewera**	**14.89**	**190**	P	P	14 09 53.0	0.0
MWZ	**Matawai**	**14.90**	**189**	P	P	14 09 53.2	+0.1
BKZ	**Black Stump Fm**	**15.88**	**191**	P	P	14 10 00.6	-2.7
VRZ	**Vera Road**	**16.22**	**196**	P	P	14 10 08.1	+1.6
NEZ	**North Egmont**	**16.54**	**198**	P	P	14 10 13.2	+3.5
TSZ	**Takapari Road**	**16.85**	**192**	P	P	14 10 10.8	-1.6
BFZ	**Birch Farm**	**17.40**	**191**	P	P	14 10 15.2	-2.3
MRZ	**Mangatainoka R**	**17.50**	**193**	P	P	14 10 15.3	-3.1
OGWZ	**Otaki Gorge**	**17.74**	**193**	P	P	14 10 18.3	-2.3
HOWZ	**Holdsworth Sta**	**17.75**	**193**	P	P	14 10 18.4	-2.3
DUWZ	**D'Urville Isla**	**18.02**	**196**	P	P	14 10 21.7	-1.5
CAW	**Cannon Point**	**18.04**	**193**	P	P	14 10 21.4	-2.0
TCW	**Tory Channel**	**18.32**	**195**	P	P	14 10 25.1	-0.8
QRZ	**Quartz Range**	**18.43**	**199**	P	P	14 10 26.3	-0.6
TKNZ	**Takaka Hill**	**18.50**	**198**	P	P	14 10 26.6	-1.0
NNZ	**Nelson**	**18.55**	**197**	P	P	14 10 26.8	-1.2
TUWZ	**Tuamarina**	**18.60**	**196**	P	P	14 10 28.1	-0.3
THZ	**Tophouse**	**19.19**	**198**	P	P	14 10 32.8	-1.1
DSZ	**Denniston Nort**	**19.50**	**200**	P	P	14 10 36.4	-0.3
KHZ	**Kahutara**	**19.63**	**196**	P	P	14 10 36.4	-1.4
GVZ	**Greta Valley S**	**20.28**	**196**	P	P	14 10 42.9	-0.8
LTZ	**Lake Taylor**	**20.31**	**198**	P	P	14 10 42.4	-1.6
INZ	**Inchbonnie**	**20.50**	**199**	P	P	14 10 44.2	-1.4
WVZ	**Waitaha Valley**	**21.03**	**200**	P	P	14 10 49.7	-0.7
JCZ	**Jackson Bay**	**22.57**	**202**	P	P	14 11 03.6	-0.9
MLZ	**Mavora Lakes**	**23.93**	**202**	P	P	14 11 17.7	+1.2
DCZ	**Deep Cove**	**24.36**	**203**	P	P	14 11 19.7	-0.5
WHZ	**Wether Hill Ro**	**24.45**	**202**	P	P	14 11 21.6	+0.6
MILA	**Mila**	**30.05**	**236**	P	P	14 12 10.5	+0.2
CTA	**Charters Tower**	**31.94**	**270**	P	P	14 12 26.8	+0.1
	7.7nm,0.4s,baz=95,slow=10,SNR=32						
	7.7nm,0.4s						
STKA	**Stephens Creek**	**35.26**	**248**	P	P	14 12 53.9	-0.6
	0.8nm,0.4s,baz=96,slow=9.2,SNR=1.6						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**42.54**	**260**	P	P	14 13 53.0	-0.4
	2.1nm,0.4s,baz=97,slow=7.5,SNR=89						
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**42.89**	**266**	P	P	14 13 55.5	-0.7
	3.2nm,0.5s,baz=96,slow=8.1,SNR=159						
	3.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.32**	**265**	P	P	14 15 00.3	+0.7
	1.8nm,0.5s,baz=102,slow=8.5,SNR=9.6						
	1.8nm,0.5s						
QSPA	**South Pole Qui**	**66.48**	**180**	P	P	14 16 42.7	+1.9
	1.3nm,0.7s,baz=347,slow=1.0,SNR=13						
	1.3nm,0.7s						
HFS	**Hagfors**	**142.35**	**349**	PKP	PKPdf	14 25 15.1	-0.6
	0.6nm,0.3s,baz=48,slow=2.1,SNR=6.8						

*SCB **09** 15:20:09.8±1.2,22°.46S×67°.64W,h167km±18km,MB5.7, ML3.2/2,Error ellipse: s-maj=6.8km s-min=4.3km az=1.0*
*GUC **09** 15:20:10.8±0.8,22°.46S×67°.83W,h191km±10km,ML3.1*
ISC 09 15:20:09.9±1.5,22°.44S±0°.08×67°.61W±0°.07,h167km,n23, σ0°89/28,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.65**	**292**	*e*P	Pn	15 20 43.8	+1.3
PB09				*e*S	Sn	15 21 08.4	+0.8
PB09	**IPOC Station P**	**1.65**	**292**	P	Pn	15 20 43.1	+0.6
PB06	**IPOC Station P**	**1.84**	**261**	*e*P	Pn	15 20 45.0	+0.6
PB06				IAML		15 21 12.9	
	comp=N,140nm,0.1s						
PB06	**IPOC Station P**	**1.84**	**261**	P	Pn	15 20 45.1	+0.6
PB03	**IPOC Station P**	**2.03**	**281**	*e*P	Pn	15 20 47.0	+0.4
PB03				*e*S	Sn	15 21 14.4	-0.4
PB03				IAML		15 21 15.4	
	comp=N,111nm,0.2s						
MOCB	**Mochara**	**2.17**	**58**	P	Pn	15 20 49.6	+1.1
PB02	**IPOC Station P**	**2.40**	**297**	*e*P	Pn	15 20 51.2	+0.3
PB02				*e*S	Sn	15 21 21.5	-1.0
PB02				IAML		15 21 23.6	
	comp=E,100nm,0.1s						
PB02	**IPOC Station P**	**2.40**	**297**	P	Pn	15 20 51.3	+0.5
PB02				S	Sn	15 21 21.7	-0.8
PB02				IAML		15 21 23.5	
	comp=E,89nm,0.2s						
PB05	**IPOC Station P**	**2.44**	**260**	*e*P	Pn	15 20 51.3	+0.1
PB05				IAML		15 21 21.8	
	comp=E,42nm,0.2s						
PB08	**IPOC Station P**	**2.70**	**327**	*e*P	Pn	15 20 56.6	+1.9
PB08				IAML		15 21 34.0	
	comp=E,29nm,0.3s						
PB08	**IPOC Station P**	**2.70**	**327**	P	Pn	15 20 55.5	+0.8
GO01	**Chusmiza**	**3.13**	**331**	IAML		15 21 41.8	
	comp=N,30nm,0.2s						
GO01	**Chusmiza**	**3.13**	**331**	P	Pn	15 21 01.1	+1.0
PB11	**IPOC Station P**	**3.28**	**324**	*e*P	Pn	15 21 01.7	+0.1
PB11				*e*S	Sn	15 21 41.2	-0.6
PB11	**IPOC Station P**	**3.28**	**324**	P	Pn	15 21 01.5	-0.1
PB11				S	Sn	15 21 41.1	-0.7
PB11				IAML		15 21 42.7	
	comp=N,46nm,0.2s						
PB14	**IPOC Station P**	**3.37**	**229**	*e*P	Pn	15 21 02.8	-0.1
PB14				IAML		15 21 42.6	
	comp=E,21nm,0.2s						
PB14	**IPOC Station P**	**3.37**	**229**	P	Pn	15 21 02.7	-0.1
PB16	**IPOC Station P**	**4.45**	**336**	P	Pn	15 21 17.3	+0.2
BBOJ	**La Paz, Jacaqu**	**5.46**	**354**	P	Pn	15 21 30.8	+0.6
SOEJ	**Jacaque**	**5.46**	**354**	P	Pn	15 21 31.0	+0.8
BBOD	**La Paz, Gloria**	**5.84**	**351**	P	Pn	15 21 36.2	+0.9
BBSD	**Serra de San D**	**8.40**	**53**	P	Pn	15 22 07.2	-1.4
SIV	**San Ignacio**	**8.90**	**45**	P	Pn	15 22 13.5	-1.7

*IDC **09** 15:39:31.7±

CMSA	**Cobar Meteorol**	**27.36**	**223**	P	**P**	15 44 57.3	**+1.0**
RTZ	**Ruatahuna**	**27.57**	**163**	P	**P**	15 44 57.5	**-0.7**
BKZ	**Black Stump Fm**	**27.95**	**164**	P	**P**	15 45 04.8	**+3.3**
CAN	**Canberra**	**28.05**	**213**	P	**P**	15 45 02.4	**-0.1**
CAN				IAmb	IAmb	15 45 30.2	
	comp=Z,10nm,1.2s						
QRZ	**Quartz Range**	**28.73**	**171**	P	**P**	15 45 10.2	**+1.9**
INKA	**Innaminka**	**28.92**	**234**	P	**P**	15 45 09.7	**-0.5**
BFZ	**Birch Farm**	**29.32**	**166**	P	**P**	15 45 16.3	**+2.8**
BFZ	**Birch Farm**	**29.32**	**166**	P	**P**	15 45 11.8	**-1.6**
SNZO	**South Karori**	**29.58**	**168**	P	**P**	15 45 17.7	**+2.0**
MSWZ	**Moikau Station**	**29.79**	**167**	P	**P**	15 45 16.4	**-1.3**
STKA	**Stephens Creek**	**30.36**	**226**	P	**P**	15 45 22.5	**-0.4**
	comp=Z,1.0nm,0.3s,baz=39,slow=8.6,SNR=5.6						
	comp=Z,1.0nm,0.3s						
STKA	**Stephens Creek**	**30.36**	**226**	P	**P**	15 45 23.7	**+0.8**
KHZ	**Kahutara**	**30.44**	**170**	P	**P**	15 45 26.4	**+3.1**
JCZ	**Jackson Bay**	**31.60**	**178**	P	**P**	15 45 36.2	**+2.6**
TOO	**Toolangi**	**31.61**	**214**	P	**P**	15 45 34.1	**+0.4**
LBZ	**Lake Benmore**	**31.99**	**176**	P	**P**	15 45 37.3	**+0.4**
WR8	**Warramunga Arr**	**32.08**	**252**	P	**P**	15 45 36.4	**-1.6**
WR8				IAmb	IAmb	15 46 09.3	
	comp=Z,6.7nm,1.2s						
WB0	**Warramunga Arr**	**32.15**	**253**	P	**P**	15 45 37.3	**-1.3**
WB0				IAmb	IAmb	15 46 01.4	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**32.22**	**252**	P	**P**	15 45 37.9	**-1.4**
	comp=Z,0.8nm,0.7s,baz=86,slow=9.1,SNR=9.0						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**32.22**	**252**	P	**P**	15 45 37.9	**-1.4**
AS01	**Alice Springs**	**33.29**	**246**	P	**P**	15 45 49.3	**+0.7**
AS31	**Alice Springs**	**33.34**	**246**	P	**P**	15 45 47.1	**-1.8**
ASAR	**Alice Springs**	**33.34**	**246**	P	**P**	15 45 47.8	**-1.1**
	comp=Z,1.7nm,0.6s,baz=71,slow=10,SNR=46						
ASAR				ScP	**ScP**	15 51 48.0	**-1.1**
	comp=Z,0.5nm,0.8s,baz=77,slow=2.8,SNR=4.3						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**33.34**	**246**	P	**P**	15 45 47.2	**-1.8**
ASAR					**ScP**	15 51 48.0	**-1.1**
BBOO	**Buckleboo**	**34.86**	**229**	P	**P**	15 46 02.5	**+0.7**
BBOO	**Buckleboo**	**34.86**	**229**	P	**P**	15 46 01.7	**-0.1**
KNRA	**Kununurra**	**37.22**	**260**	P	**P**	15 46 21.0	**-1.1**
KNRA				IAmb	IAmb	15 46 59.1	
	comp=Z,9.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.26**	**257**	P	**P**	15 46 46.0	**-1.3**
FORT	**Forrest**	**40.32**	**237**	P	**P**	15 46 46.1	**-1.4**
FORT				IAmb	IAmb	15 46 50.8	
	comp=Z,7.2nm,0.8s						
SOEI	**Soe**	**42.00**	**269**	P	**P**	15 47 02.8	**+1.1**
TOLI2	**Tolitoli**	**47.81**	**283**	P	**P**	15 47 45.7	**-1.5**
MJAR	**Matsushiro Arr**	**55.74**	**332**	P	**P**	15 48 43.5	**-1.9**
MAJO	**Matsushiro**	**55.74**	**332**	P	**P**	15 48 43.4	**-2.0**
MAJO				IAmb	IAmb	15 48 46.3	
	comp=Z,5.0nm,0.9s						
MJB9	**Matsu-Tunnel**	**55.75**	**332**	P	**P**	15 48 44.1	**-1.3**
MJB9				IAmb	IAmb	15 48 47.3	
	comp=Z,5.2nm,1.0s						
JKA	**Kamikawa-asahi**	**60.48**	**340**	P	**P**	15 49 18.0	**0.0**
KSRS	**Korea Array**	**61.69**	**325**	P	**P**	15 49 26.0	**-0.3**
	comp=Z,0.3nm,0.6s,baz=141,slow=6.9,SNR=2.4						
	comp=Z,0.3nm,0.6s						
YSS	**Yuzhno-Sakhali**	**62.95**	**342**	P	**P**	15 49 38.0	**+3.6**
VNDA	**Vanda**	**65.17**	**181**	P	**P**	15 49 49.0	**+0.6**
	comp=Z,0.9nm,0.6s,baz=356,slow=7.4,SNR=11						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	**65.17**	**181**	P	**P**	15 49 48.4	**0.0**
SBA	**Scott Base**	**65.45**	**180**	P	**P**	15 49 51.1	**+0.8**
SBA				IAmb	IAmb	15 49 52.5	
	comp=Z,2.7nm,0.8s						
ADK	**Adak**	**65.56**	**11**	P	**P**	15 49 55.4	**+4.2**
CASY	**Casey**	**65.58**	**202**	P	**P**	15 49 50.9	**-0.4**
CASY				IAmb	IAmb	15 50 26.3	
	comp=Z,11nm,1.4s						
PETK	**Petropavlovsk-**	**65.73**	**354**	P	**P**	15 49 52.4	**0.0**
	comp=Z,1.6nm,0.8s,baz=168,slow=7.0,SNR=2.3						
	comp=Z,1.6nm,0.8s						
ATKA	**Atka Island**	**66.36**	**12**	P	P	15 50 01.9	**+5.6**
HHC	**Hu-ho-hao-te**	**73.66**	**319**	*e*P	**P**	15 50 43.6	**+2.5**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.79**	**294**	P	**P**	15 50 42.9	**+0.7**
	comp=Z,0.5nm,0.6s,baz=126,slow=4.6,SNR=4.8						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.79**	**294**	P	**P**	15 50 42.2	**0.0**
N15K	**Kwethluk River**	**76.97**	**16**	P	**P**	15 50 59.0	**-0.4**
QSPA	**South Pole Qui**	**77.61**	**180**	P	**P**	15 51 03.1	**0.0**
	comp=Z,3.7nm,0.8s,baz=311,slow=1.4,SNR=25						
	comp=Z,3.7nm,0.8s						
QSPA	**South Pole Qui**	**77.61**	**180**	P	**P**	15 51 02.9	**-0.3**
QSPA				IAmb	IAmb	15 51 04.1	
	comp=Z,3.9nm,0.9s						
M16K	**Timber Creek**	**78.00**	**16**	P	**P**	15 51 05.2	**+0.2**
L18K	**Granite Mounta**	**79.60**	**16**	P	**P**	15 51 13.4	**-0.3**
CAST	**Castle Rocks**	**81.86**	**17**	P	**P**	15 51 24.9	**-0.8**
CAST				IAmb	IAmb	15 51 26.7	
	comp=Z,3.6nm,0.7s						
J20K	**Nowinta River**	**81.87**	**16**	P	**P**	15 51 25.8	**+0.1**
BERG	**Berg Lake**	**82.46**	**22**	P	**P**	15 51 28.7	**-0.1**
KHMM	**Horse Mountain**	**82.91**	**46**	P	**P**	15 51 31.7	**-0.2**
DIB	**Dawson Inlet,**	**83.17**	**32**	P	**P**	15 51 32.5	**-0.1**
ILAR	**Eielson Array**	**84.40**	**18**	P	**P**	15 51 37.5	**-1.1**
	comp=Z,3.9nm,0.6s,baz=240,slow=5.0,SNR=59						
	comp=Z,3.9nm,0.6s						
ILAR	**Eielson Array**	**84.40**	**18**		**P**	15 51 37.2	**-1.4**
L04D	**Klamath Falls**	**84.42**	**45**		**P**	15 51 38.9	**-0.5**
L04D				IAmb	IAmb	15 51 40.3	
	comp=Z,6.7nm,0.9s						
D19K	**Kuna River**	**84.42**	**12**	P	**P**	15 51 38.5	**-0.2**
D19K				IAmb	IAmb	15 51 55.5	
	comp=Z,7.7nm,1.4s						
BEKR	**Beckworth**	**84.93**	**48**	P	**P**	15 51 40.5	**-1.6**
BEKR				IAmb	IAmb	15 51 42.4	
	comp=Z,3.0nm,0.8s						
J04A	**Umpqua Nationa**	**84.94**	**44**	P	**P**	15 51 41.0	**-1.1**
I04A	**Tendick Farm,**	**84.94**	**43**	P	**P**	15 51 40.9	**-1.0**
I04A				IAmb	IAmb	15 51 42.0	
	comp=Z,4.2nm,0.5s						
MDPB	**Devils Postpil**	**85.11**	**50**	P	**P**	15 51 41.0	**-2.1**
MDPB				IAmb	IAmb	15 51 44.0	
	comp=Z,4.3nm,1.1s						
HYT	**Haines Junctio**	**85.11**	**24**	P	**P**	15 51 42.1	**-0.3**
HYT				IAmb	IAmb	15 51 47.6	
	comp=Z,6.1nm,1.4s						
NVAR	**Mina Array Bea**	**85.95**	**49**	P	**P**	15 51 47.4	**+0.2**
	comp=Z,1.5nm,0.9s,baz=236,slow=8.4,SNR=4.3						
	comp=Z,1.5nm,0.9s						
NVAR	**Mina Array Bea**	**85.95**	**49**	P	**P**	15 51 46.3	**-0.9**
ELK	**Elko**	**88.92**	**48**	P	**P**	15 52 00.8	**-0.6**
BELA	**Belgrano 2**	**89.05**	**176**	P	**P**	15 52 00.7	**-0.3**
BELA				IAmb	IAmb	15 52 01.9	
	comp=Z,3.6nm,0.7s						
PLID	**Pearl Lake**	**89.70**	**44**		**P**	15 52 03.8	**-1.1**
PLID				IAmb	IAmb	15 52 05.3	
	comp=Z,1.9nm,0.8s						
U15A	**North Rim**	**89.92**	**53**		**P**	15 52 06.2	**0.0**
U15A				IAmb	IAmb	15 52 07.9	
	comp=Z,4.0nm,1.1s						
HLID	**Hailey**	**90.33**	**45**	P	**P**	15 52 07.7	**-0.1**
HLID				IAmb	IAmb	15 52 09.1	
	comp=Z,2.0nm,0.8s						
TROLL	**Troll, Antarti**	**95.15**	**185**	⇑P	**P**	15 52 28.6	**-0.8**
	comp=Z,71nm,0.4s						
MKAR	**Makanchi Array**	**95.36**	**317**	P	**P**	15 52 30.2	**-0.4**
	comp=Z,0.4nm,0.6s,baz=85,slow=6.5,SNR=5.2						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**95.38**	**61**	P	**P**	15 52 30.6	**-0.7**
	comp=Z,0.3nm,0.6s,baz=231,slow=6.2,SNR=5.0						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**95.60**	**27**	P	**P**	15 52 29.4	**-1.9**
	comp=Z,0.7nm,0.6s,baz=261,slow=4.3,SNR=5.5						
	comp=Z,0.7nm,0.6s						
VNA2	**Neumayer--Watz**	**96.79**	**182**	⇑P	**P**	15 52 35.5	**-1.2**
	comp=Z,1.6nm,0.6s,baz=170,slow=4.0						
ARCES	**ARCESS Array B**	**117.95**	**346**	PKP	**PKPdf**	15 57 50.5	**-0.7**
	comp=Z,2.7nm,0.5s,baz=70,slow=2.1,SNR=23						
FINES	**FINESS Array B**	**123.48**	**339**	PKP	**PKPdf**	15 58 01.0	**-1.0**
	comp=Z,3.1nm,1.0s,baz=5.7,slow=3.8,SNR=7.0						
NB2	**NORSAR Subarra**	**128.32**	**345**	PKP	**PKPdf**	15 58 10.4	**-1.0**
	comp=Z,0.4nm,0.5s,baz=43,slow=2.9						
NOA	**NORSAR Array B**	**128.32**	**345**	PKP	**PKPdf**	15 58 10.6	**-0.8**
	comp=Z,0.8nm,0.7s,baz=33,slow=2.0,SNR=5.1						
HFS	**Hagfors**	**128.44**	**343**	PKP	**PKPdf**	15 58 10.5	**-1.0**
	comp=Z,1.1nm,0.8s,baz=270,slow=0.4,SNR=4.0						
KEST	**Kesra**	**149.24**	**323**	PKPbc	**PKPbc**	15 58 54.5	**0.0**
	comp=Z,3.9nm,0.7s,baz=319,slow=4.3,SNR=4.5						
ESDC	**Sonseca Array**	**151.69**	**345**	PKPbc	**PKPbc**	15 58 59.5	**-0.6**
	comp=Z,1.4nm,0.8s,baz=20,slow=3.3,SNR=10						
ESDC	**Sonseca Array**	**151.69**	**345**		**PKPbc**	15 59 00.3	**+0.2**

*IDC **09** 15:52:05.2±3.1, 8.54N×127.52E, h0km, mb3.5/4, mbtmp3.5/4, MS2.5/2, Error ellipse: s-maj=258.2km s-min=24.0km az=67.0*
*MAN **09** 15:52:07.0, 8.21N×127.36E, h33km, MS3.8*
ISC 09 15:52:11.5±1.3, 8.23N±0.07×127.07E±0.10, h35km, n13, σ1§74/15, mb3.4/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.70**	**266**	*i* P	**Pn**	**15 52 23.9**	**-1.0**
BIPH				*i* S	**Sn**	**15 52 35.9**	**+1.3**
TSSP	**Tandag City**	**1.18**	**313**	*e*P	**Pn**	**15 52 30.7**	**-0.8**
TSSP				*e*S	**Sn**	**15 52 47.0**	**+0.7**
DAV	**Davao City (W)**	**1.88**	**232**	LR	LR	15 54 04.9	
	comp=Z,78nm,20.6s,baz=349,slow=50						
KCP	**Kidapawan**	**2.31**	**238**	*e*P	**Pn**	**15 52 47.9**	**+0.8**
CGP	**Cagayan de Oro**	**2.36**	**276**	*e*P	**Pn**	**15 52 48.5**	**+0.8**
CGP				*e*S	**Sn**	**15 53 16.6**	**+1.1**
CTBH	**Cotabato--PC H**	**2.97**	**250**	*e*P	**Pn**	**15 52 57.5**	**+1.3**
CTBH				*i* S	**Sn**	**15 53 26.0**	**-4.6**
PLP	**Palo**	**3.57**	**325**	*e*P	**Pn**	**15 53 04.6**	**+0.2**
SNPH	**Sibulan**	**3.95**	**287**	*e*P	**Pn**	**15 53 11.7**	**+2.0**
GUMO	**Guam**	**18.26**	**72**	LR	LR	16 01 12.9	
	comp=Z,21nm,21.8s,baz=192,slow=31						
WRA	**Warramunga Arr**	**28.90**	**166**	P	**P**	**15 58 08.1**	**+0.9**
	0.5nm,0.8s,baz=348,slow=9.7,SNR=3.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**32.40**	**168**	P	**P**	**15 58 38.5**	**+0.4**
	0.3nm,0.9s,baz=344,slow=9.0,SNR=4.7						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**54.12**	**323**	P	**P**	**16 01 32.6**	**-0.4**
	0.3nm,0.5s,baz=123,slow=8.8,SNR=3.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**58.19**	**326**	P	**P**	**16 02 00.7**	**-1.3**
	0.6nm,0.5s,baz=125,slow=6.7,SNR=6.5						
	0.6nm,0.5s						

*IDC **09** 15:59:32.2±2.8, 20.93S×178.15W, h505km±45km, mb3.1/5, mbtmp4.1/6, Error ellipse: s-maj=102.7km s-min=32.4km az=29.0*
*NEIC **09** 15:59:32.5±1.5, 21.1S±0.4×178.2W±0.3, h495km±28km, mb4.1/12, Error ellipse: s-maj=58.1km s-min=26.6km az=212.0*
ISC 09 15:59:32.6±2.1, 21.0S±0.2×178.3W±0.3, h500km, n22, σ0§51/22, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.80**	**313**	P	**P**	**16 00 57.9**	**0.0**
	24nm,0.7s,baz=260,slow=22,SNR=16						
MSVF	**Nonsavu**	**4.80**	**313**	P	**P**	**16 00 57.6**	**-0.4**
ARMA	**Armidale**	**28.63**	**245**	P	**P**	**16 04 48.6**	**+0.4**
ARMA				IAmb	IAmb	16 04 56.1	
	comp=Z,11nm,1.4s						
CAN	**Canberra**	**32.02**	**237**	P	**P**	**16 05 17.0**	**-0.4**
CTAO	**Charters Tower**	**33.21**	**265**	P	**P**	**16 05 28.2**	**+0.6**
TOO	**Toolangi**	**35.40**	**234**	P	**P**	**16 05 45.6**	**-0.3**
TOO				IAmb	IAmb	16 05 54.0	
	comp=Z,4.2nm,1.2s						
STKA	**Stephens Creek**	**37.35**	**245**	P	**P**	**16 06 01.9**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=90,slow=9.7,SNR=5.1						
	comp=Z,1.3nm,0.4s						
INKA	**Innaminka**	**37.81**	**252**	P	**P**	**16 06 06.0**	**+0.2**
BBOO	**Buckleboo**	**42.11**	**244**	P	**P**	**16 06 39.5**	**-0.9**
WR8	**Warramunga Arr**	**44.15**	**263**	P	**P**	**16 06 56.0**	**-0.5**
WR8				IAmb	IAmb	16 07 04.2	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**44.17**	**257**	P	**P**	**16 06 56.4**	**-0.3**
ASAR	**Alice Springs**	**44.17**	**257**	P	**P**	**16 06 56.9**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=87,slow=8.5,SNR=32						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**44.17**	**257**	P	**P**	**16 06 56.4**	**-0.3**
WRA	**Warramunga Arr**	**44.30**	**263**	P	**P**	**16 06 57.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.0,SNR=51						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.30**	**263**	P	**P**	**16 06 56.9**	**-0.8**
FORT	**Forrest**	**48.87**	**247**	P	**P**	**16 07 31.1**	**-1.1**
FORT				IAmb	IAmb	16 07 38.0	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**50.40**	**267**	P	**P**	**16 07 43.9**	**+0.2**
KNRA				IAmb	IAmb	16 07 45.2	
	comp=Z,4.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.73**	**263**	P	**P**	**16 08 01.0**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=82,slow=6.4,SNR=11						
	comp=Z,1.3nm,0.3s						
SBA	**Scott Base**	**57.33**	**184**	P	**P**	**16 08 32.3**	**+0.6**
MBWA	**Marble Bar**	**57.51**	**258**	P	**P**	**16 08 34.2**	**+0.2**
MBWA				IAmb	IAmb	16 08 34.8	
	comp=Z,5.5nm,0.6s						
QSPA	**South Pole Qui**	**69.04**	**180**	P	**P**	**16 09 47.3**	**-0.2**
	comp=Z,1.2nm,1.0s,baz=316,slow=2.9,SNR=5.1						
	comp=Z,1.2nm,1.0s						
QSPA	**South Pole Qui**	**69.04**	**180**	P	**P**	**16 09 47.1**	**-0.3**
QSPA				IAmb	IAmb	16 09 54.0	
	comp=Z,5.0nm,1.4s						

*LDG **09** 16:03:59.0±0.1, 43.12N×0.50W, h2km, Md2.9/1, Ml3.0/8, Error ellipse: s-maj=1.7km s-min=1.4km az=162.0*
*STR **09** 16:03:59.3±0.0, 43.07N±0.08×0.53W±0.06, h6km, MLv2.2/12, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **09** 16:04:00.5±0.2, 43.06N×0.52W, h0km, mb_Lg2.5/22, Error ellipse: s-maj=2.2km s-min=1.4km az=9.0*
ISC 09 16:03:59.5±1.0, 43.09N±0.02×0.52W±0.02, h3km±9km, n36, σ1§22/73, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.14**	**267**	Pg	**Pg**	**16 04 02.0**	**-0.3**
ATE				Sg	**Sg**	**16 04 04.5**	**+0.4**
ETSF	**Etsaut**	**0.20**	**189**	*e*Pg	**Pg**	**16 04 03.1**	**-0.3**
ETSF				*e*Sg	**Sg**	**16 04 06.0**	**0.0**
	101nm,0.2s						
CANF	**Canfranc**	**0.33**	**180**	Pg	**Pg**	**16 04 05.5**	**-0.4**
CANF				Sg	**Sg**	**16 04 10.4**	**+0.2**
ORDF	**Ordiarp**	**0.33**	**291**	Pg	**Pg**	**16 04 05.6**	**-0.3**
ORDF				Sg	**Sg**	**16 04 11.1**	**+0.9**
PYLO	**Lourdes**	**0.34**	**89**	Pg	**Pg**	**16 04 05.9**	**-0.3**
PYLO				Sg	**Sg**	**16 04 11.0**	**+0.4**
URDF	**Urds**	**0.35**	**351**	Pg	**Pg**	**16 04 06.4**	**+0.1**
IRAF	**Chalets d'Irat**	**0.39**	**261**	Pg	**Pg**	**16 04 06.9**	**-0.2**
VIEF	**Viey**	**0.45**	**118**	Pg	**Pg**	**16 04 07.4**	**-0.7**
VIEF				Sg	**Sg**	**16 04 13.8**	**-0.2**
SJPF	**Ste Jean**	**0.52**	**272**	*e*Pg	**Pg**	**16 04 08.9**	**-0.6**
SJPF				*e*Sg	**Sg**	**16 04 15.9**	**-0.4**
	45nm,0.3s						
OSSF	**Osses**	**0.57**	**287**	Pg	**Pg**	**16 04 09.4**	**-1.1**
EORO	**Oroz-Betelu**	**0.62**	**251**	Pg	**Pg**	**16 04 11.2**	**-0.1**
EORO				Sg	**Sg**	**16 04 19.8**	**+0.5**
EORO				*i* IVmb_Lg		16 04 24.8	
EPF	**Esparros**	**0.63**	**95**	*e*Pg	**Pg**	**16 04 10.9**	**-0.7**
EPF				*e*Sg	**Sg**	**16 04 19.5**	**-0.3**
	37nm,0.2s						
ECHI	**Chisagues Biel**	**0.68**	**129**	Pg	**Pg**	**16 04 11.6**	**-0.9**
ECHI				Sg	**Sg**	**16 04 20.3**	**-1.0**
ECHI				*i* IVmb_Lg		16 04 22.3	
ECHI	**Chisagues Biel**	**0.68**	**129**	Pg	**Pg**	**16 04 11.6**	**-0.9**
ECHI				Sg	**Sg**	**16 04 20.5**	**-0.8**
TERF	**Tercis-les-Bai**	**0.73**	**323**	Pg	**Pg**	**16 04 13.3**	**-0.3**
EALK	**Alkurruntz**	**0.74**	**280**	Pg	**Pg**	**16 04 12.5**	**-1.2**
EALK				Sg	**Sg**	**16 04 23.3**	**+0.1**
EALK				*i* IVmb_Lg		16 04 26.4	
EALK	**Alkurruntz**	**0.74**	**280**	Pg	**Pg**	**16 04 12.4**	**-1.3**
EALK				Sg	**Sg**	**16 04 22.9**	**-0.3**
MLZA	**Monlezun-d-Arm**	**0.79**	**21**	Pg	**Pg**	**16 04 14.5**	**-0.2**
EARA	**Aranguren**	**0.84**	**248**	Pg	**Pg**	**16 04 15.6**	**-0.2**
EARA				Sg	**Sg**	**16 04 26.8**	**+0.1**
EARA				*i* IVmb_Lg		16 04 32.7	
MELF	**Melles**	**0.96**	**103**	Pg	**Pg**	**16 04 16.7**	**-1.3**
MELF				Sg	**Sg**	**16 04 30.5**	**+0.1**
SALF	**Salau**	**1.29**	**104**	Pg	**Pg**	**16 04 23.3**	**-1.1**
ESAC	**San Caprasio**	**1.37**	**179**	Pg	**Pb**	**16 04 25.5**	**-0.3**
ESAC				Sg	**Sn**	**16 04 43.6**	**-0.7**
ESAC				*i* IVmb_Lg		16 04 46.6	
PAND	**Andorre**	**1.62**	**110**	Pg	**Pg**	**16 04 31.3**	**+0.7**
PAND				Sg	**Sg**	**16 04 52.3**	**+0.7**
DUNF	**Dun**	**1.71**	**92**	Pg	**Pg**	**16 04 32.2**	**-0.1**
DUNF				Sg	**Sg**	**16 04 55.8**	**+1.5**
CARF	**Carcanieres**	**1.96**	**100**	Pg	**Pb**	**16 04 36.2**	**+0.2**
CARF				Sg	**Sg**	**16 05 03.5**	**+0.9**
MTLF	**Montolieu**	**2.01**	**82**	*e*Pg	**Pb**	**16 04 36.2**	**-0.6**
MTLF				*e*Sg	**Sb**	**16 05 02.1**	**-0.1**
	16nm,0.3s						
LFF	**La Frestale**	**2.06**	**26**	*e*Pg	**Pb**	**16 04 37.7**	**+0.2**
LFF				*e*Sg	**Sg**	**16 05 05.7**	**+0.1**
	40nm,0.3s						
EPOB	**Poblet**	**2.10**	**145**	Pn	**Pn**	**16 04 35.6**	**-0.1**
EPOB				Pg	**Pg**	**16 04 39.6**	**-0.3**
EPOB				Sn	**Sn**	**16 05 02.5**	**+0.1**
EPOB				Sg	**Sg**	**16 05 06.6**	**-0.5**
EPOB				*i* IVmb_Lg		16 05 07.7	
ERTA	**Horta de San J**	**2.23**	**163**	Pn	**Pn**	**16 04 37.1**	**-0.3**
ERTA				Pg	**Pb**	**16 04 40.2**	**-0.2**
ERTA				Sn	**Sn**	**16 05 04.5**	**-0.9**
ERTA				Sg	**Sg**	**16 05 10.3**	**-0.7**
ERTA				*i* IVmb_Lg		16 05 15.0	
ETOR	**Torete**	**2.55**	**207**	Pn	**Pn**	**16 04 41.7**	**-0.1**
ETOR				Sn	**Sn**	**16 05 12.6**	**-0.7**
ETOR				Sg	**Sg**	**16 05 21.7**	**+0.4**
ETOR				*i* IVmb_Lg		16 05 30.8	
CAF	**Calviac**	**2.61**	**45**	*e*Pn	**Pn**	**16 04 39.7**	**-2.9**
CAF				*e*Pg	**Pb**	**16 04 46.4**	**-0.6**
CAF				*e*Sg	**Sb**	**16 05 20.4**	**+0.9**
	9.2nm,0.2s						
RJF	**Les Rejaudoux**	**2.65**	**33**	*e*Pg	**Pb**	**16 04 47.7**	**+0.1**
RJF				*e*Sg	**Sb**	**16 05 21.5**	**+1.0**
	12nm,0.2s						
LASF	**Ste Croix**	**3.33**	**71**	*e*Sg	**Sb**	**16 05 43.2**	**+3.2**
	4.0nm,0.2s						
MFF	**Saint Martin d**	**3.52**	**4**	*e*Pn	**Pn**	**16 04 53.4**	**-1.7**
MFF				*e*Pg	**Pb**	**16 05 03.5**	**+1.1**
MFF				*e*Pg	**Pb**	**16 05 03.6**	**+1.1**
MFF				*e*Sg	**Sb**	**16 05 48.0**	**+2.5**
	5.8nm,0.2s						
MFF				*e*Sg	**Sg**	**16 05 48.5**	**-4.0**
TCF	**Toulx Ste Croi**	**3.74**	**30**	*e*Sg	**Sb**	**16 05 55.3**	**+3.4**
	8.8nm,0.3s						
VIVF	**Saint-Julien-l**	**4.14**	**63**	*e*Pg	**Pb**	**16 05 13.6**	**+0.6**
VIVF				*e*Sg	**Sb**	**16 06 07.9**	**+4.5**
	3.8nm,0.3s						

*LDG **09** 16:07:27.0±0.1, 43.09N×0.51W, h2km, Md2.5/1, Ml2.7/7, Error ellipse: s-maj=1.3km s-min=0.9km az=174.0*
*STR **09** 16:07:27.2±0.0, 43.05N±0.08×0.53W±0.05, h1km, MLv2.0/15, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **09** 16:07:28.3±0.2, 43.08N×0.56W, h0km, mb_Lg2.2/18, Error ellipse: s-maj=2.4km s-min=1.5km az=12.0*
ISC 09 16:07:27.4±1.0, 43.09N±0.02×0.51W±0.02, h4km±10km, n36, σ1§17/69, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.14**	**269**	Pg	**Pg**	**16 07 30.0**	**-0.2**
ATE				Sg	**Sg**	**16 07 32.5**	**+0.5**
ETSF	**Etsaut**	**0.19**	**191**	*e*Pg	**Pg**	**16 07 31.1**	**0.0**
ETSF				*e*Sg	**Sg**	**16 07 33.9**	**+0.2**
	64nm,0.2s						
CANF	**Canfranc**	**0.32**	**181**	Pg	**Pg**	**16 07 33.5**	**-0.2**
CANF				Sg	**Sg**	**16 07 38.4**	**+0.5**
ORDF	**Ordiarp**	**0.34**	**292**	Pg	**Pg**	**16 07 33.5**	**-0.4**
ORDF				Sg	**Sg**	**16 07 39.3**	**+1.0**
PYLO	**Lourdes**	**0.34**	**88**	Pg	**Pg**	**16 07 33.4**	**-0.5**
PYLO				Sg	**Sg**	**16 07 38.9**	**+0.6**
URDF	**Urds**	**0.35**	**350**	Pg	**Pg**	**16 07 34.7**	**+0.5**
IRAF	**Chalets d'Irat**	**0.39**	**262**	Pg	**Pg**	**16 07 34.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.40**	**29**	P	**Pn**	**16 09 10.2**	**+1.2**
BNDI	**Bandanaira**	**2.40**	**29**	P	**Pn**	**16 09 10.3**	**+1.2**
BNDI				S	**S**	**16 09 47.3**	**+1.7**
BNDI	**Bandanaira**	**2.40**	**29**	P	**Pn**	**16 09 10.8**	**+1.7**
SAUI	**Saumlaki**	**2.85**	**118**	P	**Pn**	**16 09 14.3**	**+0.6**
SAUI	**Saumlaki**	**2.85**	**118**	S	**S**	**16 09 54.3**	**+0.3**
SAUI	**Saumlaki**	**2.85**	**118**		**Pn**	**16 09 13.8**	**+0.2**
SAUI				Sn	**S**	**16 09 49.0**	**-5.0**
SAUI	**Saumlaki**	**2.85**	**118**	P	**Pn**	**16 09 13.9**	**+0.2**
SAUI	**Saumlaki**	**2.85**	**118**	P	**Pn**	**16 09 14.5**	**+0.8**
NLAI	**Namlea**	**3.76**	**334**	P	**Pn**	**16 09 27.0**	**+3.2**
NLAI	**Namlea**	**3.76**	**334**	P	**Pn**	**16 09 27.3**	**+3.5**
FAKI	**Fak Fak**	**5.08**	**43**	P	**Pn**	**16 09 38.9**	**-0.7**
FAKI	**Fak Fak**	**5.08**	**43**		**Pn**	**16 09 37.5**	**-2.1**
FAKI				Sn	**S**	**16 10 33.0**	**-7.9**
FAKI	**Fak Fak**	**5.08**	**43**	P	**Pn**	**16 09 38.2**	**-1.4**
	5.1nm15µm361nm,0.6s						
FAKI	**Fak Fak**	**5.08**	**43**	P	**Pn**	**16 09 38.5**	**-1.1**
SANI	**Sanana**	**5.33**	**329**	P	**Pn**	**16 09 44.3**	**+1.6**
SANI	**Sanana**	**5.33**	**329**	S	**S**	**16 10 47.1**	**+0.7**
SANI	**Sanana**	**5.33**	**329**	P	**Pn**	**16 09 44.2**	**+1.6**
	0.9nm4µm176nm,0.5s						
SANI	**Sanana**	**5.33**	**329**	P	**Pn**	**16 09 44.6**	**+1.9**
SOEI	**Soe**	**5.41**	**235**	P	**Pn**	**16 09 43.9**	**+0.2**
SOEI	**Soe**	**5.41**	**235**	S	**S**	**16 10 46.9**	**-1.4**
SOEI	**Soe**	**5.41**	**235**		**Pn**	**16 09 43.7**	**0.0**
SOEI				Sn	**S**	**16 10 44.7**	**-3.6**
SOEI	**Soe**	**5.41**	**235**	P	**Pn**	**16 09 43.7**	**0.0**
SOEI	**Soe**	**5.41**	**235**	P	**Pn**	**16 09 44.0**	**+0.3**
KMPI	**Kaimana, Papua**	**5.75**	**59**	P	**Pn**	**16 09 46.9**	**-0.9**
DRS	**Darwin Rock St**	**6.13**	**160**	P	**Pn**	**16 09 52.8**	**+0.3**
BATI	**Baumata**	**6.16**	**235**	P	**Pn**	**16 09 50.1**	**-2.7**
	2µm,0.5s,baz=100,slow=1.9,SNR=392						
BATI				S	**S**	**16 11 00.2**	**-4.8**
	1µm,0.5s,baz=16,slow=21,SNR=16						
SIJI	**Sorong**	**6.26**	**24**	P	**Pn**	**16 09 52.7**	**-1.5**
	386nm,0.2s,baz=213,slow=9.3,SNR=514						
SIJI				S	**S**	**16 10 60.0**	**-7.5**
	59nm,0.3s,baz=271,slow=2.5,SNR=3.6						
SIJI	**Sorong**	**6.26**	**24**	P	**Pn**	**16 09 52.6**	**-1.6**
SWI	**Sorong**	**6.26**	**24**	P	**Pn**	**16 09 52.8**	**-1.5**
MTN	**Manton Dam**	**6.59**	**159**		**Pn**	**16 09 57.8**	**-0.6**
MMRI	**Maumere**	**6.75**	**253**	P	**Pn**	**16 10 00.5**	**+0.1**
MMRI	**Maumere**	**6.75**	**253**	S	**S**	**16 11 18.7**	**0.0**
MMRI	**Maumere**	**6.75**	**253**		**Pn**	**16 10 01.8**	**+1.4**
MMRI	**Maumere**	**6.75**	**253**	P	**Pn**	**16 10 01.8**	**+1.4**
	0.8nm3µm104nm,0.5s						
MMRI	**Maumere**	**6.75**	**253**	P	**Pn**	**16 10 02.7**	**+2.3**
TNTI	**Ternate**	**7.50**	**349**	P	**Pn**	**16 10 11.0**	**+1.3**
TNTI	**Ternate**	**7.50**	**349**		**Pn**	**16 10 10.8**	**+1.0**
TNTI	**Ternate**	**7.50**	**349**	P	**Pn**	**16 10 10.4**	**+0.7**
	0.8nm2µm234nm,0.9s						
TNTI	**Ternate**	**7.50**	**349**	P	**Pn**	**16 10 11.0**	**+1.3**
MWPI	**Manokwari, Pap**	**7.75**	**43**	P	**Pn**	**16 10 12.9**	**0.0**
LUWI	**Luwuk**	**8.16**	**313**	Pn	**Pn**	**16 10 16.6**	**-1.6**
LUWI	**Luwuk**	**8.16**	**313**	P	**Pn**	**16 10 19.4**	**+1.3**
	844nm42nm,0.7s						
LUWI	**Luwuk**	**8.16**	**313**	P	**Pn**	**16 10 21.5**	**+3.4**
BSSI	**Bau Bau, Buton**	**8.23**	**273**	P	**Pn**	**16 10 21.2**	**+2.2**
	66nm,1.3s						
SRPI	**Serui, Papua**	**8.84**	**58**	P	**Pn**	**16 10 26.9**	**+0.1**
	2µm175nm,0.8s						
WSI	**Waingapu**	**8.89**	**250**	P	**Pn**	**16 10 26.2**	**-1.2**
MNI	**Manado**	**8.93**	**334**	P	**Pn**	**16 10 29.1**	**+1.1**
KNRA	**Kununurra**	**8.98**	**180**		**Pn**	**16 10 27.8**	**-0.6**
KAPI	**Kappang**	**9.10**	**280**	P	**Pn**	**16 10 30.4**	**+0.3**
	14nm,0.5s,baz=69,slow=12,SNR=3.8						
KAPI	**Kappang**	**9.10**	**280**	Pn	**Pn**	**16 10 29.2**	**-0.8**
KAPI	**Kappang**	**9.10**	**280**	P	**Pn**	**16 10 31.0**	**+1.0**
BAKI	**Biak**	**9.12**	**54**	P	**Pn**	**16 10 31.6**	**+1.3**
	2µm210nm,0.9s						
WAMI	**Wamena**	**10.29**	**75**	P	**Pn**	**16 10 47.3**	**+2.3**
	3µm236nm,0.8s						
DBNI	**Kabupaten Domp**	**10.51**	**259**	P	**Pn**	**16 10 48.0**	**+0.1**
	3µm2µm66nm,0.8s						
PCI	**Palu**	**10.56**	**302**	P	**Pn**	**16 10 50.5**	**+2.0**
	48nm,1.2s						
MMSI	**Mamuju**	**10.57**	**291**	P	**P**	**16 10 52.0**	**-1.5**
	2µm197nm,0.6s						
SGSI	**Sangihe**	**10.76**	**342**	P	**Pn**	**16 10 51.1**	**+0.2**
TOLI2	**Tolitoli**	**11.07**	**314**	P	**Pn**	**16 10 55.3**	**+0.4**
TOLI2	**Tolitoli**	**11.07**	**314**	S	**S**	**16 13 01.0**	**+2.0**
TOLI2	**Tolitoli**	**11.07**	**314**		**Pn**	**16 10 54.8**	**-0.2**
TOLI2	**Tolitoli**	**11.07**	**314**	P	**Pn**	**16 10 56.2**	**+1.2**
PLAI	**Plampang**	**11.09**	**258**	P	**Pn**	**16 10 55.1**	**0.0**
PLAI	**Plampang**	**11.09**	**258**	P	**Pn**	**16 10 54.3**	**-0.8**
	2µm161nm,0.7s						
PLAI	**Plampang**	**11.09**	**258**	P	**Pn**	**16 10 55.7**	**+0.6**
MMPI	**Merauke**	**11.67**	**100**	P	**Pn**	**16 11 02.0**	**-0.3**
	361nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.78**	**195**	P	**Pn**	**16 11 03.0**	**-0.7**
	164nm,0.6s,baz=30,slow=11,SNR=174						
FITZ				S	**S**	**16 13 12.6**	**-2.7**
	32nm,0.4s,baz=77,slow=9.2,SNR=3.5						
FITZ	**Fitzroy Crossi**	**11.78**	**195**	P	**Pn**	**16 11 02.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.78**	**195**		**Pn**	**16 11 01.9**	**-1.8**
FITZ	**Fitzroy Crossi**	**11.78**	**195**	P	**Pn**	**16 11 02.1**	**-1.6**
TWSI	**Taliwang, Sumb**	**11.95**	**259**	P	**Pn**	**16 11 04.9**	**-0.9**
	46nm,0.9s						
GENI	**Genyem**	**12.07**	**71**	P	**Pn**	**16 11 08.4**	**+1.1**
GENI	**Genyem**	**12.07**	**71**	S	**S**	**16 13 25.1**	**+3.2**
GENI	**Genyem**	**12.07**	**71**	P	**Pn**	**16 11 06.9**	**-0.4**
	2µm237nm,1.0s						
GENI	**Genyem**	**12.07**	**71**	P	**Pn**	**16 11 08.3**	**+1.1**
JAY	**Jayapura**	**12.60**	**72**	P	**Pn**	**16 11 13.8**	**-0.1**
	68nm,0.8s,baz=212,slow=11,SNR=25						
JAY	**Jayapura**	**12.60**	**72**	P	**Pn**	**16 11 14.0**	**+0.1**
	84nm,0.8s						
BKB	**Balikpapan**	**12.98**	**294**		**Pn**	**16 11 19.3**	**+0.8**
BKB	**Balikpapan**	**12.98**	**294**	P	**P**	**16 11 22.0**	**+1.7**
	101nm,0.8s						
KHKI	**Kahang-Kahang**	**13.14**	**262**	P	**P**	**16 11 21.4**	**-0.8**
IGBI	**Denpasar**	**13.66**	**260**	P	**Pn**	**16 11 27.0**	**+0.2**
	5µm252nm,0.5s						
KCP	**Kidapawan**	**14.05**	**345**	*i* P	**Pn**	**16 11 31.6**	**-0.1**
WB0	**Warramunga Arr**	**14.15**	**158**	P	**Pn**	**16 11 30.9**	**-1.8**
WRAB	**Tennant Creek**	**14.28**	**158**	P	**Pn**	**16 11 33.6**	**-0.8**
WRAB	**Tennant Creek**	**14.28**	**158**	S	**S**	**16 14 11.9**	**-0.7**
WRAB	**Tennant Creek**	**14.28**	**158**	P	**Pn**	**16 11 33.1**	**-1.4**
WRAB	**Tennant Creek**	**14.28**	**158**	P	**Pn**	**16 11 33.7**	**-0.7**
WRA	**Warramunga Arr**	**14.29**	**158**	P	**Pn**	**16 11 32.5**	**-1.9**
	30nm,0.7s,baz=334,slow=13,SNR=166						
WRA				S	**S**	**16 14 12.2**	**-0.5**
	22nm,0.6s,baz=324,slow=26,SNR=9.3						
WB1	**Warramunga Ar.**	**14.31**	**158**	P	**Pn**	**16 11 34.6**	**-0.1**
WR8	**Warramunga Arr**	**14.36**	**158**	P	**Pn**	**16 11 33.9**	**-1.5**
CTBH	**Cotabato--PC H**	**14.49**	**342**	*eP*	**P**	**16 11 37.4**	**+0.3**
CDOP	**Cateel, Davao**	**14.52**	**351**	*eP*	**Pn**	**16 11 37.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**14.59**	**262**	P	**Pn**	**16 11 37.6**	**-0.5**
JAGI	**Jajag, Banyuwa**	**14.59**	**262**	P	**Pn**	**16 11 36.3**	**-1.9**
JAGI	**Jajag, Banyuwa**	**14.59**	**262**	P	**Pn**	**16 11 36.6**	**-1.5**
	2µm47nm,0.4s						
JAGI	**Jajag, Banyuwa**	**14.59**	**262**	P	**Pn**	**16 11 36.7**	**-1.4**
BIPH	**Bislig**	**14.92**	**351**	*eP*	**Pn**	**16 11 42.0**	**-0.1**
CGP	**Cagayan de Oro**	**15.54**	**345**	*eP*	**P**	**16 11 48.2**	**-0.4**
TSSP	**Tandag City**	**15.79**	**351**	*eP*	**Pn**	**16 11 52.3**	**-0.2**
LSIP	**Lazi, Siquijor**	**16.48**	**342**	*i* P	**Pn**	**16 12 00.5**	**-0.2**
SNPH	**Sibulan**	**16.81**	**341**	*eP*	**Pn**	**16 12 05.7**	**+1.2**
MBWA	**Marble Bar**	**16.87**	**210**	P	**Pn**	**16 12 04.5**	**-0.6**
MBWA	**Marble Bar**	**16.87**	**210**	P	**P**	**16 12 03.8**	**+0.7**
MBWA				IAmb	IAmb	16 12 34.1	
	comp=Z,19nm,0.7s						
MBWA	**Marble Bar**	**16.87**	**210**	P	**Pn**	**16 12 04.3**	**-0.8**
SNJI	**Sawahan-Nganju**	**16.90**	**265**	P	**P**	**16 12 04.7**	**+1.0**
	comp=Z,91nm,0.8s						
TBP	**Tagbilaran**	**16.94**	**343**	*eP*	**Pn**	**16 12 05.4**	**-0.7**
QIS	**Mount Isa**	**17.38**	**144**	P	**Pn**	**16 12 10.4**	**-0.7**
QIS	**Mount Isa**	**17.38**	**144**	S	**S**	**16 15 18.5**	**+2.0**
QIS	**Mount Isa**	**17.38**	**144**	P	**Pn**	**16 12 10.8**	**-0.3**
AS31	**Alice Springs**	**17.63**	**164**	P	**P**	**16 12 12.5**	**+1.0**
AS31				IAmb	IAmb	16 12 17.3	
	comp=Z,16nm,0.7s						
ASAR	**Alice Springs**	**17.64**	**164**	P	**Pn**	**16 12 13.0**	**-1.1**
	comp=Z,42nm,0.5s,baz=345,slow=12,SNR=930						
ASAR				S	**S**	**16 15 20.6**	**-1.0**
	comp=Z,13nm,0.9s,baz=345,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.64**	**164**	P	**P**	**16 12 12.6**	**+1.1**
AS01	**Alice Springs**	**17.65**	**164**	P	**P**	**16 12 12.6**	**+1.0**
KKM	**Kota Kinabalu**	**17.76**	**315**	P	**Pn**	**16 12 15.0**	**-0.8**
KKM	**Kota Kinabalu**	**17.76**	**315**	P	**P**	**16 12 13.2**	**+0.2**
KKM				IAmb	IAmb	16 12 56.6	
	comp=Z,25nm,1.1s						
KKM	**Kota Kinabalu**	**17.76**	**315**	P	**Pn**	**16 12 14.8**	**-1.0**
PLP	**Palo**	**18.09**	**348**	*eP*	**P**	**16 12 17.2**	**+0.8**
UGM	**Wanagama**	**18.13**	**265**	P	**P**	**16 12 17.5**	**+0.6**
UGM	**Wanagama**	**18.13**	**265**	P	**P**	**16 12 16.0**	**-0.9**
UGM	**Wanagama**	**18.13**	**265**	P	**P**	**16 12 16.4**	**-0.5**
	comp=Z,186nm,1.6s						
PMG	**Port Moresby**	**18.43**	**100**	P	**P**	**16 12 20.3**	**+0.2**
	comp=Z,12nm,0.6s,baz=176,slow=5.4,SNR=6.7						
PMG	**Port Moresby**	**18.43**	**100**	P	**Pn**	**16 12 22.0**	**-1.5**
PMG	**Port Moresby**	**18.43**	**100**	P	**Pn**	**16 12 22.3**	**-1.2**
PMG	**Port Moresby**	**18.43**	**100**		**Pn**	**16 12 24.0**	**+0.5**
SBUM	**Sibu**	**18.82**	**298**	P	**Pn**	**16 12 26.4**	**-1.7**
SBUM	**Sibu**	**18.82**	**298**	P	**P**	**16 12 24.3**	**0.0**
SBUM				IAmb	IAmb	16 12 29.9	
	comp=Z,9.5nm,0.8s						
SBUM	**Sibu**	**18.82**	**298**	P	**Pn**	**16 12 26.8**	**-1.3**
SBUM	**Sibu**	**18.82**	**298**	P	**Pn**	**16 12 26.6**	**-1.5**
MANU	**Manus Island**	**19.11**	**77**		**P**	**16 12 25.9**	**-1.6**
BBJI	**Bungbulang**	**20.96**	**266**	P	**P**	**16 12 46.2**	**-1.0**
BBJI	**Bungbulang**	**20.96**	**266**	P	**P**	**16 12 45.8**	**-1.3**
BBJI	**Bungbulang**	**20.96**	**266**	P	**P**	**16 12 45.6**	**-1.6**
	comp=Z,944nmcomp=Z,68nm,0.7s						
BBJI	**Bungbulang**	**20.96**	**266**	P	**P**	**16 12 46.4**	**-0.8**
LEM	**Lembang**	**20.99**	**268**	P	**P**	**16 12 48.8**	**+1.2**
	comp=Z,50nm,0.9s,baz=62,slow=11,SNR=7.4						
	comp=Z,50nm,0.9s						
LEM	**Lembang**	**20.99**	**268**	P	**P**	**16 12 48.2**	**+0.6**
	comp=Z,42nm,0.7s						
GIRL	**Giralia**	**21.19**	**220**	P	**P**	**16 12 49.7**	**+0.5**
TPI	**Tanjungpandan**	**21.38**	**279**	P	**P**	**16 12 53.1**	**+1.9**
	comp=Z,57nm,0.8s						
CTAO	**Charters Tower**	**21.61**	**130**	P	**P**	**16 12 53.1**	**-0.2**
LQP	**Lukban**	**21.83**	**341**	*eP*	**P**	**16 12 55.6**	**+0.1**
MEEK	**Meekatharra**	**22.11**	**205**	P	**P**	**16 12 58.3**	**+0.5**
MEEK	**Meekatharra**	**22.11**	**205**	P	**P**	**16 12 58.4**	**+0.5**
INKA	**Innaminka**	**23.87**	**153**	P	**P**	**16 13 14.2**	**+0.4**
FORT	**Forrest**	**24.02**	**181**	P	**P**	**16 13 15.9**	**+0.8**
FORT				IAmb	IAmb	16 13 35.1	
	comp=Z,12nm,0.7s						
KASI	**Kota Agung**	**24.15**	**271**	P	**P**	**16 13 16.2**	**-0.3**
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**25.33**	**207**	P	**P**	**16 13 27.3**	**+0.3**
MORW	**Morawa**	**25.33**	**207**	P	**P**	**16 13 27.3**	**+0.3**
MORW				IAmb	IAmb	16 14 08.5	
	comp=Z,13nm,0.8s						
MORW	**Morawa**	**25.33**	**207**	P	**P**	**16 13 27.4**	**+0.3**
GUMO	**Guam**	**25.69**	**39**	P	**P**	**16 13 32.0**	**+1.6**
GUMO	**Guam**	**25.69**	**39**	P	**P**	**16 13 29.6**	**-0.8**
MNAI	**Manna**	**25.78**	**274**	P	**P**	**16 13 30.7**	**-0.5**
MYKOM	**Kota Tinggi**	**26.23**	**288**	P	**P**	**16 13 35.5**	**+0.2**
MYKOM	**Kota Tinggi**	**26.23**	**288**	P	**P**	**16 13 35.6**	**+0.3**
	comp=Z,23nm,1.8s						
BLDU	**Ballidu**	**26.39**	**204**	P	**P**	**16 13 36.9**	**+0.4**
BLDU	**Ballidu**	**26.39**	**204**	P	**P**	**16 13 36.9**	**+0.4**
KLBR	**Kellerberrin**	**26.87**	**201**	P	**P**	**16 13 41.5**	**+0.8**
KLBR	**Kellerberrin**	**26.87**	**201**	P	**P**	**16 13 41.2**	**+0.5**
BBOO	**Buckleboo**	**26.91**	**166**	P	**P**	**16 13 42.7**	**+1.6**
BBOO	**Buckleboo**	**26.91**	**166**	P	**P**	**16 13 41.3**	**+0.2**
BBOO				IAmb	IAmb	16 14 21.0	
	comp=Z,30nm,1.2s						
MUN	**Mundaring**	**27.79**	**203**	P	**P**	**16 13 49.9**	**+1.0**
STKA	**Stephens Creek**	**27.82**	**156**	P	**P**	**16 13 50.3**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=326,slow=6.1,SNR=3.8						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**27.82**	**156**	P	**P**	**16 13 50.3**	**+1.1**
NWAO	**Narrogin (SRO)**	**28.26**	**201**	P	**P**	**16 13 53.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**28.26**	**201**	P	**P**	**16 13 53.3**	**+0.3**
NWAO	**Narrogin (SRO)**	**28.26**	**201**	P	**P**	**16 13 53.0**	**0.0**
NWAO				IAmb	IAmb	16 14 13.1	
	comp=Z,34nm,1.4s						
KULM	**Kulim**	**30.45**	**292**	P	**P**	**16 14 13.7**	**+1.1**
KULM	**Kulim**	**30.45**	**292**	P	**P**	**16 14 12.4**	**-0.2**
KULM				IAmb	IAmb	16 14 47.9	
	comp=Z,16nm,1.2s						
KULM	**Kulim**	**30.45**	**292**	P	**P**	**16 14 12.9**	**+0.3**
	comp=Z,9.7nm,0.9s						
YULB	**Yu-li**	**30.73**	**347**	P	**P**	**16 14 16.3**	**+1.4**
YULB	**Yu-li**	**30.73**	**347**	P	**P**	**16 14 11.8**	**-3.1**
YULB				IAmb	IAmb	16 14 38.1	
	comp=Z,21nm,1.2s						
TPUB	**Ta-pu**	**30.80**	**345**	P	**P**	**16 14 16.7**	**+1.2**
TPUB	**Ta-pu**	**30.80**	**345**	P	**P**	**16 14 13.3**	**-2.3**
TPUB	**Ta-pu**	**30.80**	**345**	P	**P**	**16 14 13.6**	**-2.0**
SSLB	**Suanglung**	**31.19**	**346**	P	**P**	**16 14 16.4**	**-2.6**
SSLB				IAmb	IAmb	16 14 20.5	
	comp=Z,32nm,1.4s						
RPSI	**Rantau Prapat**	**31.19**	**286**	P	**P**	**16 14 18.6**	**-0.4**
PSI	**Prapat**	**31.22**	**287**	P	**P**	**16 14 19.5**	**0.0**
	comp=Z,37nm,0.9s						
NACB	**Ninganchiao**	**31.42**	**347**	P	**P**	**16 14 18.7**	**-2.2**
NACB				IAmb	IAmb	16 14 27.8	
	comp=Z,18nm,1.0s						
YHNB	**Yeheng**	**31.94**	**347**	P	**P**	**16 14 26.9**	**+1.3**
YHNB	**Yeheng**	**31.94**	**347**	P	**P**	**16 14 23.5**	**-2.0**
GSI	**Gunungsitoli**	**32.10**	**283**	P	**P**	**16 14 28.3**	**+1.2**
GSI	**Gunungsitoli**	**32.10**	**283**	P	**P**	**16 14 26.2**	**-0.9**
GSI	**Gunungsitoli**	**32.10**	**283**	P	**P**	**16 14 26.4**	**-0.7**
	comp=Z,32nm,0.6s						
GSI	**Gunungsitoli**	**32.10**	**283**	P	**P**	**16 14 27.1**	**0.0**
TPTI		**33.02**	**286**	P	**P**	**16 14 35.3**	**+0.3**
	comp=Z,24nm,0.9s						
JOW	**Kunigami**	**33.28**	**359**	P	**P**	**16 14 38.1**	**+1.1**
JOW	**Kunigami**	**33.28**	**359**	P	**P**	**16 14 36.5**	**-0.5**
JOW	**Kunigami**	**33.28**	**359**	P	**P**	**16 14 37.5**	**+0.5**
MLSI	**Meulaboh, Aceh**	**34.06**	**288**	P	**P**	**16 14 44.7**	**+0.7**
CAN	**Canberra**	**34.08**	**150**	P	**P**	**16 14 45.7**	**+1.8**
CAN	**Canberra**	**34.08**	**150**	P	**P**	**16 14 44.5**	**+0.6**
CAN				IAmb	IAmb	16 15 19.4	
	comp=Z,26nm,1.5s						
TOO	**Toolangi**	**34.35**	**156**	P	**P**	**16 14 48.4**	**+2.3**
BSI	**Banda Aceh**	**35.51**	**289**	P	**P**	**16 14 56.7**	**+0.4**
	comp=Z,28nm,1.1s						
JCJ	**Chichijima**	**35.97**	**21**	P	**P**	**16 15 01.3**	**+1.3**
JCJ	**Chichijima**	**35.97**	**21**	P	**P**	**16 14 58.2**	**-1.8**
JSU	**Suzuyama**	**37.97**	**2**	P	**P**	**16 15 16.7**	**-0.1**
JSU	**Suzuyama**	**37.97**	**2**	P	**P**	**16 15 16.8**	**+0.1**
CM31	**Chiang Mai Arr**	**38.56**	**311**	P	**P**	**16 15 21.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**38.56**	**311**	P	**P**	**16 15 23.2**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=140,slow=7.2,SNR=32						
	comp=Z,3.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.56**	**311**		**P**	**16 15 21.4**	**-0.5**
CHTO	**Chiang Mai**	**38.78**	**311**		**P**	**16 15 24.0**	**+0.3**
CHTO	**Chiang Mai**	**38.78**	**311**	P	**P**	**16 15 24.6**	**+0.9**
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**38.78**	**311**	P	**P**	**16 15 25.1**	**+1.5**
WHN	**Wuhan**	**39.47**	**340**	‖P	**P**	**16 15 30.5**	**+1.3**
NJ2	**Nanjing**	**39.62**	**347**	‖P	**P**	**16 15 31.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,36nm,0.6s						
JMN	**Monobe**	**40.44**	**7**	P	**P**	**16 15 36.4**	**-0.8**
JMN				IAmb	IAmb	16 16 04.7	
	comp=Z,35nm,1.2s						
ENH	**Enshi**	**41.10**	**334**	P	**P**	**16 15 42.3**	**-0.2**
NPW	**Naypyitaw**	**41.47**	**310**	P	**P**	**16 15 46.9**	**+1.2**
JSG	**Sagara**	**42.05**	**12**	P	**P**	**16 15 51.4**	**+1.3**
PZH	**PanZhiHua**	**42.09**	**323**	P	**P**	**16 15 52.3**	**+1.5**
TJN	**Taejon**	**42.81**	**358**	P	**P**	**16 15 56.3**	**+0.1**
KSAR	**Wonju Array Be**	**43.86**	**359**	P	**P**	**16 16 04.8**	**+0.2**
MAJO	**Matsushiro**	**43.86**	**11**	P	**P**	**16 16 04.1**	**-0.5**
MAJO	**Matsushiro**	**43.86**	**11**	P	**P**	**16 16 02.9**	**-1.7**
MAJO				IAmb	IAmb	16 16 04.8	
	comp=Z,17nm,0.8s						
MAJO	**Matsushiro**	**43.86**	**11**	P	**P**	**16 16 03.6**	**-1.1**
MJAR	**Matsushiro Arr**	**43.86**	**11**	P	**P**	**16 16 03.6**	**-1.1**
	comp=Z,13nm,0.8s,baz=188,slow=9.3,SNR=35						
MJAR				ScP	**ScP**	**16 21 13.4**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=223,slow=4.7,SNR=5.0						
	comp=Z,13nm,0.8s						
MJAR	**Matsushiro Arr**	**43.86**	**11**	P	**P**	**16 16 03.3**	**-1.3**
MJAR					**ScP**	**16 21 14.0**	**+0.1**
MJB9	**Matsu-Tunnel**	**43.87**	**11**	P	**P**	**16 16 04.5**	**-0.2**
MJB9				IAmb	IAmb	16 16 05.8	
	comp=Z,17nm,0.8s						
KSRS	**Korea Array**	**43.88**	**359**	P	**P**	**16 16 05.3**	**+0.7**
	comp=Z,6.8nm,0.5s,baz=178,slow=9.3,SNR=60						
KSRS				ScP	**ScP**	**16 21 12.8**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=189,slow=4.4,SNR=6.3						
	comp=Z,6.8nm,0.5s						
KS19	**Wonju Array Si**	**43.92**	**359**	P	**P**	**16 16 04.9**	**-0.2**
XAN	**Xi'an**	**44.61**	**336**	P	**P**	**16 16 10.1**	**-0.5**
XAN				pP	pwP	16 17 05.6	-1.7
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				LR	LR		
	comp=E,190nm,15.8s						
XAN				LR	LR		
	comp=Z,150nm,17.2s						
BJI2	**Beijing**	**47.86**	**347**	P	**P**	**16 16 36.0**	**+0.3**
BJI2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LZDM	**Lanzhou Array**	**48.48**	**333**	P	**P**	**16 16 41.3**	**+0.4**
	comp=Z,5.2nm,0.4s,baz=186,slow=10,SNR=6.8						
	comp=Z,5.2nm,0.4s						
LZH	**Lanzhou**	**48.52**	**333**	*eP*	**P**	**16 16 38.0**	**-3.0**
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JTM	**Tenmabayashi**	**48.54**	**12**	P	**P**	**16 16 41.5**	**+0.7**
JTM	**Tenmabayashi**	**48.54**	**12**	P	**P**	**16 16 40.3**	**-0.5**
JTM				IAmb	IAmb	16 16 42.8	
	comp=Z,21nm,0.9s						
JTM	**Tenmabayashi**	**48.54**	**12**	P	**P**	**16 16 41.2**	**+0.4**
HHC	**Hu-ho-hao-te**	**49.83**	**343**	*eP*	**P**	**16 16 52.4**	**+1.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
PALK	**Pallekele**	**49.89**	**285**	P	**P**	**16 16 51.4**	**-0.2**
PALK				IAmb	IAmb	16 17 26.2	
	comp=Z,26nm,1.4s						
PALK	**Pallekele**	**49.89**	**285**	P	**P**	**16 16 51.1**	**-0.5**
FUNA	**Funafuti**	**50.01**	**96**	P	**P**	**16 16 53.8**	**+1.4**
ERM	**Erimo**	**50.18**	**14**	P	**P**	**16 16 53.4**	**+0.2**
ERM				IAmb	IAmb	16 17 16.7	
	comp=Z,29nm,1.1s						
USA0B	**Ussuriysk Arra**	**50.69**	**3**	P	**P**	**16 16 56.6**	**-0.4**
USRK	**Ussuriysk Ar.**	**50.69**	**3**	P	**P**	**16 16 57.3**	**+0.4**
	comp=Z,11nm,0.8s,baz=184,slow=7.0,SNR=35						
	comp=Z,11nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.69**	**3**		**P**	**16 16 56.7**	**-0.2**
XLT	**XiLinHaoTe**	**51.60**	**348**	*eP*	**P**	**16 17 03.8**	**0.0**
XLT				pP	pP	16 17 56.1	-0.8
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WHZ	**Wether Hill Ro**	**51.69**	**146**	P	**P**	**16 17 05.3**	**+0.9**
WHZ				IAmb	IAmb	16 17 06.6	
	comp=Z,50nm,1.5s						
JKA	**Kamikawa-asahi**	**52.05**	**13**	P	**P**	**16 17

OHAK					IAmb	IAmb	16 21 13.9		
	comp=Z,16nm,1.4s								
B21K	**Ikpikpuk River**	**91.56**	**20**	P	**P**	**16 21 00.5**	**-0.2**		
B21K					IAmb	IAmb	16 21 08.3		
	comp=Z,12nm,1.4s								
DHY	**Denali Highway**	**93.10**	**27**		IAmb	IAmb	16 21 08.7		
	comp=Z,2.8nm,0.7s								
ILAR	**Eielson Array**	**93.56**	**25**	P	**P**	**16 21 08.5**	**-1.5**		
	comp=Z,0.6nm,0.7s,baz=255,slow=4.6,SNR=5.7								
	comp=Z,0.6nm,0.7s								
K27K	**Chicken**	**95.56**	**26**		IAmb	IAmb	16 21 21.0		
	comp=Z,3.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**127.53**	**281**		PKP	**PKiKP**	**16 26 59.3**	**-0.3**	
	comp=Z,0.6nm,0.7s,baz=67,slow=3.4,SNR=2.4								
CPUP	**Villa Florida**	**146.69**	**170**		PKPbc	**PKPab**	**16 27 36.8**	**-0.7**	
	comp=Z,2.3nm,0.5s,baz=209,slow=2.0,SNR=7.0								

*IDC **09** 16:09:07.6±0.5,31˚.67S×58˚.27E, h0km, mb4.6/20, mbtmp4.7/21, ML4.9/1, MS3.8/33, Error ellipse: s-maj=19.3km s-min=14.3km az=72.0*

*BJI **09** 16:09:08.2, 31˚.27S×57˚.81E, h7km, mB4.8/2, mb4.8/26, Ms7 4.4/1*

*NEIC **09** 16:09:08.9±1.3, 31˚.67S±0˚.08×58˚.2E±0˚.1, h10km±1km, mb4.9/98, Error ellipse: s-maj=15.2km s-min=13.0km az=235.0*

*GFZ **09** 16:09:09.5±0.2, 32˚S±4˚×5˚8E±˚, h10km, M4.9/25, mb4.9/25*

*GCMT **09** 16:09:10.9±0.3, 31˚.66S±0˚.03×58˚.16E±0˚.05, h20km±1km, MW4.8/89, Moment Tensor Solution. s22,c23; s89,c116; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.14±.16; Mθθ 1.64±.10; Mϕϕ 0.50±.10; Mrθ 1.09±.18; Mrϕ 0.51±.07; Mθϕ 0.25±.25; Best double couple: Mo2.28000×10^16 NP1: ϕ=66.00000°, δ31.00000°, λ=-96.00000°. NP2: ϕ=253.00000°, δ60.00000°, λ=-87.00000°. Principal axes: T 2.1250, Plg15.0000°, Azm340.0000°; N 0.3120, Plg3.0000°, Azm71.0000°; P -2.4360, Plg75.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 16:09:09.9±0.3, 31˚.65S±0˚.06×58˚.19E±0˚.06, h17km, n394, σ0s97/363, mb4.8/100, MS3.8/34, 8C-15D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RER	**Riviere de l'E**	**10.67**	**348**			**Pn**	**16 11 38.2**	**-3.9**
RER	**Riviere de l'E**	**10.67**	**348**	P		**Pn**	**16 11 39.0**	**-3.1**
FOMA	**Nahampoana Res**	**11.90**	**301**	Pn		**Pn**	**16 11 58.3**	**-0.5**
ROCAM	**Rodrigues Isla**	**12.72**	**23**	Pn		**Pn**	**16 12 10.3**	**+0.2**
VOI	**Vohitsoka**	**14.05**	**311**	P		**Pn**	**16 12 27.1**	**-1.2**
VOI				S		**Sn**	**16 14 59.3**	**-4.7**
VOI	**Vohitsoka**	**14.05**	**311**			**Pn**	**16 12 28.1**	**-0.3**
VOI	**Vohitsoka**	**14.05**	**311**	P		**Pn**	**16 12 30.0**	**+1.6**
H04N2	**CROZET ISLANDS**	**15.32**	**197**	T		T	16 28 40.3	
	baz=23,slow=74,SNR=1326							
H04N1	**CROZET ISLANDS**	**15.32**	**197**	T		T	16 28 29.4	
	baz=23,slow=74,SNR=1182							
H04N3	**CROZET ISLANDS**	**15.33**	**197**	T		T	16 28 28.3	
	baz=23,slow=74,SNR=1889							
ABPO	**Ambohimpanom**	**16.00**	**319**			**Pn**	**16 12 55.2**	**+0.8**
ABPO	**Ambohimpanom**	**16.00**	**319**	P		**P**	**16 12 57.1**	**-0.7**
OPO	**Ambohidratompo**	**16.38**	**320**	Pn		**P**	**16 13 01.1**	**-1.0**
	0.4nm,0.3s,baz=140,slow=12,SNR=22							
OPO				Sn		Sn	16 15 49.9	-11
	0.1nm,0.3s,baz=195,slow=15,SNR=3.6							
	38nm,0.9s							
POGA	**Pongola**	**23.42**	**274**	P		**P**	**16 14 17.2**	**-1.1**
POGA					IAmb	IAmb	16 14 23.3	
	comp=Z,82nm,1.8s							
H08S1	**Diego Carcia H**	**27.34**	**32**	T		T	16 43 18.2	
	baz=207,slow=75,SNR=188							
H08S2	**Diego Garcia H**	**27.35**	**32**	T		T	16 43 18.8	
	baz=207,slow=75,SNR=124							
H08S3	**Diego Garcia H**	**27.36**	**32**	T		T	16 43 21.2	
	baz=207,slow=75,SNR=247							
DGAR	**Diego Garcia**	**27.54**	**32**	P		**P**	**16 14 56.0**	**+0.1**
DGAR	**Diego Garcia**	**27.54**	**32**	P		**P**	**16 14 56.1**	**+0.1**
MATP	**Matopo**	**28.84**	**286**	LR		LR	16 25 08.7	
	comp=Z,130nm,18.6s,baz=94,slow=33							
LBTB	**Lobatse**	**29.37**	**275**	LR		LR	16 25 15.4	
	comp=Z,103nm,19.0s,baz=101,slow=33							
LBTB	**Lobatse**	**29.37**	**275**	P		**P**	**16 15 12.0**	**-0.3**
LBTB					IAmb	IAmb	16 15 27.4	
	comp=Z,50nm,1.9s							
MAKGR	**Makgori**	**29.78**	**273**	P		**P**	**16 15 15.4**	**-0.5**
SUR	**Sutherland**	**31.60**	**259**	LR		LR	16 26 07.0	
	comp=Z,160nm,18.1s,baz=138,slow=32							
LSZ	**Lusaka**	**31.84**	**294**	LR		LR	16 26 22.1	
	comp=Z,165nm,19.8s,baz=134,slow=32							
LSZ	**Lusaka**	**31.84**	**294**	P		**P**	**16 15 34.1**	**-0.1**
LSZ	**Lusaka**	**31.84**	**294**			**P**	**16 15 33.9**	**-0.4**
LSZ					IAmb	IAmb	16 15 38.4	
	comp=Z,39nm,1.8s							
KSANE	**Kasane**	**32.87**	**287**			**P**	**16 15 42.8**	**-0.5**
KSANE					IAmb	IAmb	16 15 45.7	
	comp=Z,17nm,0.8s							
KOOLE	**Kule**	**34.70**	**275**			**P**	**16 15 59.0**	**-0.1**
KIBK	**Kibwezi**	**34.80**	**323**	P		**P**	**16 16 00.2**	**+0.3**
KIBK	**Kibwezi**	**34.80**	**323**	P		**P**	**16 16 00.2**	**+0.3**
KIBK					IAmb	IAmb	16 16 03.0	
	comp=Z,22nm,1.3s							
MAW	**Mawson**	**36.10**	**177**	P		**P**	**16 16 10.9**	**+0.4**
	comp=Z,14nm,0.9s,baz=337,slow=9.5,SNR=11							
MAW				LR		LR	16 26 42.1	
	comp=Z,169nm,20.2s,baz=351,slow=29							
	comp=Z,14nm,0.9s							
MAW	**Mawson**	**36.10**	**177**			**P**	**16 16 10.7**	**+0.3**
MAW	**Mawson**	**36.10**	**177**	P		P	16 16 04.6	-5.8
KMBO	**Kilima Mbogo**	**36.24**	**323**	LR		LR	16 28 43.9	
	comp=Z,80nm,19.1s,baz=99,slow=32							
TSUM	**Tsumeb**	**38.50**	**279**	LR		LR	16 32 23.2	
	comp=Z,102nm,18.1s,baz=107,slow=36							
TSUM	**Tsumeb**	**38.50**	**279**	P		**P**	**16 16 32.0**	**+0.4**
MBAR	**Mbarara**	**40.34**	**315**	LR		LR	16 31 50.7	
	comp=Z,221nm,21.4s,baz=130,slow=34							
LODK	**Lodwar**	**41.09**	**324**	P		**P**	**16 16 54.3**	**+1.3**
LODK	**Lodwar**	**41.09**	**324**			**P**	**16 16 53.8**	**+0.8**
LODK	**Lodwar**	**41.09**	**324**	P		**P**	**16 16 56.0**	**+3.0**
PALK	**Pallekele**	**44.28**	**33**	LR		LR	16 31 45.9	
	comp=Z,114nm,19.0s,baz=236,slow=31							
ATD	**Arta Tunnel**	**45.38**	**339**	LR		LR	16 32 57.4	
	comp=Z,10.0nm,21.3s,baz=128,slow=32							
H01W2	**Cape Leeuwin H**	**46.37**	**110**	T		T	17 06 49.4	
	baz=257,slow=75,SNR=176							
H01W3	**Cape Leeuwin H**	**46.38**	**110**	T		T	17 06 49.8	
	baz=257,slow=75,SNR=186							
H01W1	**Cape Leeuwin H**	**46.39**	**110**	T		T	17 06 50.7	
	baz=257,slow=75,SNR=170							
CASY	**Casey**	**46.51**	**154**			**P**	**16 17 35.6**	**-0.3**
CASY					IAmb	IAmb	16 17 37.4	
	comp=Z,9.7nm,0.9s							
CASY	**Casey**	**46.51**	**154**	P		**P**	**16 17 36.6**	**+0.7**
PPSI	**Pulau Pagai**	**48.71**	**62**	P		**P**	**16 17 52.9**	**-0.8**
SHAO	**Shalim**	**49.45**	**357**	P		**P**	**16 17 59.6**	**+0.5**
TROLL	**Troll, Antarti**	**49.78**	**200**	⇓P		**P**	**16 18 01.5**	**+0.2**
	comp=Z,174nm,0.7s							
TROLL				⇑PcP		**PcP**	**16 19 22.8**	**+0.8**
	comp=Z,95nm,0.7s							
GIRL	**Giralia**	**50.21**	**94**	P		**P**	**16 18 04.3**	**-0.7**
SNAA	**Sanae**	**51.24**	**201**	⇓P		**P**	**16 18 12.5**	**+0.3**
	comp=Z,200nm,0.8s							
SNAA	**Sanae**	**51.24**	**201**	P		**P**	**16 18 12.6**	**+0.3**
	comp=Z,9.4nm,0.9s,baz=87,slow=5.6,SNR=26							
SNAA				LR		LR	16 35 38.8	
	comp=Z,89nm,19.1s,baz=102,slow=31							
	comp=Z,9.4nm,0.9s							
SNAA	**Sanae**	**51.24**	**201**			**P**	**16 18 11.8**	**-0.5**
SNAA					IAmb	IAmb	16 18 13.6	
	comp=Z,13nm,1.0s							
SNAA	**Sanae**	**51.24**	**201**	P		**P**	**16 18 12.7**	**+0.4**
RPSI	**Rantau Prapat**	**51.60**	**56**	P		**P**	**16 18 16.1**	**+0.5**
RPSI					IAmb	IAmb	16 18 20.8	
	comp=Z,16nm,1.2s							
MHTO	**MHTO**	**52.33**	**360**	P		**P**	**16 18 20.3**	**-0.5**
MHTO				P		**P**	**16 18 20.3**	**-0.5**
VNA2	**Neumayer--Watz**	**52.48**	**202**	⇓P		**P**	**16 18 21.9**	**+0.4**
	comp=Z,10nm,0.8s,baz=81,slow=7.1							
VNA2				⇓PcP		**PcP**	**16 19 31.4**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=55,slow=5.3							
VNA2	**Neumayer--Watz**	**52.48**	**202**	P		**P**	**16 18 22.1**	**+0.6**
VNA1	**Neumayer--Stat**	**52.71**	**203**	⇓P		**P**	**16 18 23.7**	**+0.6**
	comp=Z,7.2nm,1.2s							
BSY	**Bisya**	**54.09**	**359**	P		**P**	**16 18 33.8**	**0.0**
BSY				P		**P**	**16 18 33.8**	**0.0**
SMDO	**Samad**	**54.40**	**360**	P		**P**	**16 18 36.3**	**+0.2**
SMDO				P		**P**	**16 18 36.3**	**+0.2**
MZR	**Muzera**	**54.53**	**355**	P		**P**	**16 18 38.3**	**+1.4**
MZR				P		**P**	**16 18 38.3**	**+1.4**
ARQ	**Araqi**	**54.70**	**358**	P		**P**	**16 18 38.6**	**+0.4**
ARQ				P		**P**	**16 18 38.6**	**+0.4**
BIDO	**Bidbid**	**54.86**	**360**	P		**P**	**16 18 41.0**	**+1.7**
BIDO				P		**P**	**16 18 41.0**	**+1.7**
HOQ	**Hoqain**	**54.92**	**359**	P		**P**	**16 18 39.2**	**-0.7**
HOQ				P		**P**	**16 18 39.2**	**-0.7**
MZWR	**Madinat Zayed**	**55.25**	**355**	P		**P**	**16 18 42.8**	**+0.7**
ALNE	**Al Ain**	**55.44**	**357**	P		**P**	**16 18 45.3**	**+1.8**
MBWA	**Marble Bar**	**55.48**	**95**	P		**P**	**16 18 43.1**	**-1.0**
SOHO	**SOHO**	**55.49**	**358**	P		**P**	**16 18 43.8**	**0.0**
SOHO				P		**P**	**16 18 43.8**	**0.0**
ASUD	**Al Ashush, Dub**	**56.02**	**357**	P		**P**	**16 18 48.8**	**+1.1**
ASHO	**Ashiyiah**	**56.05**	**358**	P		**P**	**16 18 49.0**	**+1.0**
	SNR=7.5							
RAYN	**Ar Rayn**	**56.19**	**346**	P		**P**	**16 18 49.7**	**+0.8**
RAYN	**Ar Rayn**	**56.19**	**346**			**P**	**16 18 49.6**	**+0.6**
RAYN					IAmb	IAmb	16 18 51.2	
	comp=Z,12nm,1.0s							
RAYN	**Ar Rayn**	**56.19**	**346**	P		**P**	**16 18 50.5**	**+1.5**
HATD	**Hatta, Dubai**	**56.19**	**358**	P		**P**	**16 18 50.1**	**+1.2**
	SNR=6.5							
UOSS	**Minazif**	**56.31**	**358**	P		**P**	**16 18 49.8**	**+0.1**
UOSS	**Minazif**	**56.31**	**358**	P		**P**	**16 18 49.8**	**+0.1**
UOSS					IAmb	IAmb	16 18 52.5	
	comp=Z,13nm,1.2s							
NAZ	**Nazwa, Dubai**	**56.37**	**357**	P		**P**	**16 18 51.1**	**+0.9**
MDH	**Madha**	**56.66**	**358**	P		**P**	**16 18 51.3**	**-0.9**
MASF	**Masafi**	**56.73**	**358**	P		**P**	**16 18 53.3**	**+0.5**
	SNR=10							
MASF				P		**P**	**16 18 53.3**	**+0.5**
	SNR=10							
QSPA	**South Pole Qui**	**58.52**	**180**	P		**P**	**16 19 05.6**	**+0.5**
	comp=Z,22nm,0.6s,baz=261,slow=1.5,SNR=249							
QSPA					LR	LR	16 42 22.0	
	comp=Z,121nm,18.6s,baz=269,slow=34							
	comp=Z,22nm,0.6s							
QSPA	**South Pole Qui**	**58.52**	**180**			**P**	**16 19 05.1**	**0.0**
QSPA	**South Pole Qui**	**58.52**	**180**	P		**P**	**16 19 05.9**	**+0.8**
BELA	**Belgrano 2**	**59.90**	**194**	P		**P**	**16 19 12.5**	**-1.9**
KBD	**Kabd**	**61.31**	**350**	P		**P**	**16 19 23.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**61.81**	**95**	P		**P**	**16 19 26.6**	**-1.6**
VNDA	**Vanda**	**62.24**	**166**	LR		LR	16 44 30.0	
	comp=Z,107nm,18.2s,baz=257,slow=34							
VNDA	**Vanda**	**62.24**	**166**	P		**P**	**16 19 30.6**	**+0.4**
VNDA					IAmb	IAmb	16 19 31.7	
	comp=Z,8.1nm,1.1s							
NPW	**Naypyitaw**	**62.76**	**41**	P		**P**	**16 19 35.5**	**+1.1**
BRDH	**Bariadhala**	**62.80**	**35**	LR		LR	16 42 40.0	
	comp=Z,107nm,21.6s,baz=170,slow=32							
SBA	**Scott Base**	**63.08**	**167**	P		**P**	**16 19 36.7**	**+0.9**
SBA					IAmb	IAmb	16 19 39.3	
	comp=Z,41nm,1.9s							
CM31	**Chiang Mai Arr**	**63.32**	**44**	P		**P**	**16 19 38.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**63.32**	**44**	P		**P**	**16 19 39.0**	**+0.8**
	comp=Z,8.4nm,0.7s,baz=229,slow=7.0,SNR=40							
CMAR					LR	LR	16 45 09.3	
	comp=Z,80nm,18.0s,baz=210,slow=34							
	comp=Z,8.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**63.32**	**44**	P		**P**	**16 19 38.0**	**-0.2**
CHTO	**Chiang Mai**	**63.60**	**44**			**P**	**16 19 40.4**	**+0.4**
CHTO	**Chiang Mai**	**63.60**	**44**	P		**P**	**16 19 40.8**	**+0.8**
CHTO	**Chiang Mai**	**63.60**	**44**	P		**P**	**16 19 42.9**	**+2.9**
BBOO	**Buckleboo**	**64.37**	**114**	P		**P**	**16 19 43.7**	**-1.3**
HRFI	**Mount Harif**	**65.17**	**338**	P		**P**	**16 19 52.0**	**+2.0**
HRA	**Herat**	**65.79**	**4**	P		**P**	**16 19 53.3**	**-1.0**
GHAJ	**Ghor Haditha**	**66.18**	**339**	P		**P**	**16 19 56.9**	**+0.4**
ASAR	**Alice Springs**	**66.33**	**104**	P		**P**	**16 19 57.7**	**-0.3**
	comp=Z,12nm,0.6s,baz=238,slow=5.9,SNR=9.9							
	comp=Z,12nm,0.6s							
AS31	**Alice Springs**	**66.34**	**104**	P		**P**	**16 19 56.9**	**-1.0**
AS31					IAmb	IAmb	16 19 58.5	
	comp=Z,5.8nm,0.7s							
ASF	**Jabal al Asfar**	**66.60**	**340**	LR		LR	16 44 23.2	
	comp=Z,106nm,21.7s,baz=206,slow=32							
KBL	**Kabul**	**66.62**	**10**	P		**P**	**16 19 59.1**	**-0.4**
KBL					IAmb	IAmb	16 20 01.8	
	comp=Z,9.2nm,0.8s							
KBL	**Kabul**	**66.62**	**10**	P		**P**	**16 20 00.9**	**+1.3**
TOLI2	**Tolitoli**	**67.51**	**74**	P		**P**	**16 20 04.7**	**-0.7**
TOLI2					IAmb	IAmb	16 20 06.8	
	comp=Z,10nm,1.1s							
TOLI2	**Tolitoli**	**67.51**	**74**	P		**P**	**16 20 05.8**	**+0.3**
MMAI	**Mount Meron Ar**	**67.82**	**339**	P		**P**	**16 20 08.8**	**+1.8**
	comp=Z,2.2nm,0.5s,baz=168,slow=5.4,SNR=6.7							
MMAI					LR	LR	16 44 13.6	
	comp=Z,42nm,21.1s,baz=185,slow=31							
	comp=Z,2.2nm,0.5s							
LUWI	**Luwuk**	**67.95**	**77**	P		**P**	**16 20 07.2**	**-1.1**
WRA	**Warramunga Arr**	**68.34**	**101**	P		**P**	**16 20 10.7**	**0.0**
	comp=Z,12nm,0.7s,baz=240,slow=5.3,SNR=11							
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**68.34**	**101**	P		**P**	**16 20 10.7**	**0.0**
WB2	**Warramunga Arr**	**68.35**	**101**	P		**P**	**16 20 09.2**	**-1.6**
WB0	**Warramunga Arr**	**68.46**	**100**	P		**P**	**16 20 10.2**	**-1.3**
SLVN	**Son La**	**68.51**	**46**	P		**P**	**16 20 11.4**	**-0.2**
SLVN					IAmb	IAmb	16 20 15.6	
	comp=Z,9.4nm,1.0s							
STKA	**Stephens Creek**	**69.04**	**115**	P		**P**	**16 20 14.7**	**-0.2**
	comp=Z,9.5nm,0.8s,baz=265,slow=9.6,SNR=4.8							
	comp=Z,9.5nm,0.8s							
CY603	**RAF Akrotiri,**	**69.32**	**339**	P		**P**	**16 20 17.0**	**+1.1**
SHAA	**Shahritus**	**69.47**	**8**	P		**P**	**16 20 17.3**	**0.0**
SHAA					IAmb	IAmb	16 20 41.3	
	comp=Z,13nm,0.9s							
MANEM	**Manem**	**69.98**	**11**	P		**P**	**16 20 19.7**	**-0.9**
MANEM					IAmb	IAmb	16 20 21.9	
	comp=Z,24nm,0.7s							
TORD	**Torodi Ar. Bea**	**70.09**	**300**	P		**P**	**16 20 21.7**	**+0.3**
	comp=Z,2.6nm,1.0s,baz=133,slow=5.4,SNR=8.4							
	comp=Z,2.6nm,1.0s							
TORD	**Torodi Ar. Bea**	**70.09**	**300**	P		**P**	**16 20 21.7**	**+0.3**
TORD					IAmb	IAmb	16 20 25.6	
	comp=Z,9.5nm,1.2s							
INKA	**Innaminka**	**70.14**	**111**	P		**P**	**16 20 21.4**	**-0.3**
HAKT	**HAKKARI**	**70.17**	**348**	P		**P**	**16 20 23.9**	**+2.2**
CSS	**Mathiatis**	**70.26**	**338**	P		**P**	**16 20 22.1**	**0.0**
CHGR	**Chuyangaron**	**70.69**	**9**	P		**P**	**16 20 24.9**	**+0.2**
DBIC	**Dimbokro**	**71.11**	**291**	P		**P**	**16 20 28.4**	**+0.7**
	comp=Z,4.5nm,0.7s,baz=121,slow=6.0,SNR=4.0							
DBIC					LR	LR	16 48 29.4	
	comp=Z,50nm,20.8s,baz=154,slow=33							
	comp=Z,4.5nm,0.7s							
DBIC	**Dimbokro**	**71.11**	**291**	pP		**P**	**16 20 28.2**	**+0.5**
GAR	**Garm**	**71.19**	**10**	P		**P**	**16 20 27.6**	**-0.2**
PZH	**PanZhiHua**	**71.21**	**41**	P		**P**	**16 20 28.4**	**+0.2**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.9s							
DRK	**Karamyk**	**71.89**	**11**	P		**P**	**16 20 32.4**	**+0.2**
DRK					IAmb	IAmb	16 20 34.0	
	comp=Z,10nm,0.6s							
KSH2	**Kashi**	**72.26**	**14**	P		**P**	**16 20 34.7**	**+0.4**
KSH2				pP		pP	16 20 37.2	-1.1
KSH2				sP		sP	16 20 41.1	+1.3
KSH2					pmax	pmax		
	comp=Z,15nm,0.7s							
BTK	**Batken**	**72.30**	**10**	P		**P**	**16 20 35.1**	**+0.7**
BTK					IAmb	IAmb	16 20 38.9	
	comp=Z,6.0nm,0.8s							
ESPZ	**Base Esperanza**	**72.37**	**205**	P		**P**	**16 20 34.2**	**-0.3**
GNI	**Garni**	**72.52**	**349**	LR		LR	16 50 02.6	
	comp=Z,73nm,20.6s,baz=178,slow=34							
GNI	**Garni**	**72.52**	**349**	P		**P**	**16 20 36.7**	**+1.0**
SMAI	**San Martin Ant**	**72.57**	**199**	P		**P**	**16 20 35.4**	**-0.3**
AKAS	**Kas**	**72.65**	**336**	P		**P**	**16 20 36.8**	**+0.2**
ARPR	**Arapgir-MALATY**	**72.76**	**344**	P		**P**	**16 20 37.4**	**+0.1**
CAN	**Canberra**	**73.10**	**121**	P		**P**	**16 20 36.7**	**-2.8**
ARSB	**Arslanbob**	**73.88**	**12**	P		**P**	**16 20 42.8**	**-1.0**
ARSB					IAmb	IAmb	16 20 45.9	
	comp=Z,6.7nm,0.8s							
PMSA	**Palmer Station**	**73.93**	**202**	LR		LR	16 47 07.1	
	comp=Z,73nm,19.2s,baz=92,slow=31							
KIRS	**Kirsehir-Merke**	**73.95**	**341**	⇑P		**P**	**16 20 45.4**	**+1.2**
IUG	**luzhnay**	**74.24**	**9**	*e*P		**P**	**16 20 47.1**	**+1.3**
	comp=Z,8.9nm,0.7s							
CHM	**Chimkent**	**74.35**	**9**	*e*P		**P**	**16 20 47.8**	**+1.5**
	comp=Z,6.3nm,0.6s							
NRN	**Naryn**	**74.55**	**14**	P		**P**	**16 20 46.4**	**-1.5**
BR104	**Keskin Array S**	**74.56**	**341**	P		**P**	**16 20 48.1**	**+0.3**
	comp=Z,4.6nm,1.0s							
BR105	**Keskin Array S**	**74.58**	**341**	P		**P**	**16 20 48.1**	**+0.2**
	comp=Z,58nmcomp=Z,6.1nm,0.8s							
BR105				pP		**pP**	**16 20 52.1**	**+0.1**
	comp=Z,58nmcomp=Z,6.1nm,0.8s							
BRTR	**Keskin Array B**	**74.58**	**341**	P		**P**	**16 20 48.4**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=165,slow=8.3,SNR=16							
	comp=Z,3.1nm,0.7s							
BRTR	**Keskin Array B**	**74.58**	**341**	P		**P**	**16 20 46.8**	**-1.1**
BR131	**Keskin Array S**	**74.58**	**341**	P		**P**	**16 20 46.6**	**-1.3**
BR106	**Keskin Array S**	**74.59**	**341**	P		**P**	**16 20 48.3**	**+0.3**
	comp=Z,44nmcomp=Z,5.1nm,0.8s							
BR106				pP		**pP**	**16 20 52.1**	**+0.1**
	comp=Z,44nmcomp=Z,5.1nm,0.8s							
DAV	**Davao City (W)**	**74.83**	**72**	LR		LR	16 52 53.9	
	comp=Z,20nm,18.1s,baz=220,slow=35							
WUS	**Wushi**	**75.04**	**16**	IAmb		IAmb	16 21 01.9	
	comp=Z,10nm,1.2s							
MANT	**Manisa**	**75.04**	**336**	P		**P**	**16 20 50.6**	**-0.1**
MANT					IAmb	IAmb	16 22 28.8	
	comp=Z,30nm,1.5s							
SIJI	**Sorong**	**75.16**	**82**	P		**P**	**16 20 52.2**	**+0.5**
	comp=Z,17nm,0.9s							
TARG	**Taragay, Kyrgy**	**75.22**	**15**	P		**P**	**16 20 50.9**	**-1.0**
TARG	**Taragay, Kyrgy**	**75.22**	**15**	P		**P**	**16 20 52.6**	**+0.7**
KK31	**Karatay Array**	**75.24**	**9**	P		**P**	**16 20 52.2**	**+0.7**
KK31					IAmb	IAmb	16 20 56.0	
	comp=Z,7.9nm,0.9s							
KKAR	**Karatay Array**	**75.24**	**9**	P		**P**	**16 20 50.9**	**-0.5**
AAK	**Ala-Archa**	**75.42**	**12**	LR		LR	16 50 54.5	
	comp=Z,78nm,22.0s,baz=200,slow=33							
AAK	**Ala-Archa**	**75.42**	**12**	P		**P**	**16 20 52.8**	**+0.1**
AAK					IAmb	IAmb	16 20 57.5	
	comp=Z,20nm,1.4s							
AAK	**Ala-Archa**	**75.42**	**12**	P		**P**	**16 20 54.8**	**+2.0**
KDJ	**Kajisay**	**75.47**	**14**	P		**P**	**16 20 52.5**	**-0.5**
KDJ					IAmb	IAmb	16 20 55.2	
	comp=Z,14nm,0.8s							
BOOM	**Boomskoye usch**	**75.56**	**13**	P		**P**	**16 20 53.5**	**-0.1**
BOOM					IAmb	IAmb	16 20 57.8	
	comp=Z,9.3nm,1.0s							
CD2	**Chengdu**	**75.74**	**39**	*e*P		**P**	**16 20 55.5**	**+0.8**
MDUB	**Mudurnu**	**75.99**	**339**	P		**P**	**16 20 56.1**	**+0.2**
MDUB					IAmb	IAmb	16 21 07.3	
	comp=Z,22nm,1.2s							
PRZ	**Przheval'sk**	**76.07**	**15**	P		**P**	**16 20 56.3**	**-0.2**
TNSS	**Tian-Shan**	**76.29**	**14**	*e*P		**P**	**16 20 59.0**	**+1.1**
KBZ	**Khabaz**	**76.31**	**349**	P		**P**	**16 20 58.7**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=198,slow=3.3,SNR=4.8							
KBZ					LR	LR	16 54 50.9	
	comp=Z,52nm,18.5s,baz=186,slow=36							
	comp=Z,3.5nm,0.8s							
MDOK	**Medeo**	**76.43**	**14**	*e*P		**P**	**16 20 60.0**	**+1.5**
AAA	**Alma-Ata**	**76.45**	**14**	*e*P		**P**	**16 20 59.9**	**+1.5**
KIV	**Kislovodsk**	**76.56**	**349**	P		**P**	**16 20 59.4**	**+0.3**
	comp=Z,8.4nm,1.3s							
SATY	**Saty**	**76.62**	**15**	⇓*i*P		**P**	**16 21 01.0**	**+1.5**
	comp=Z,9.1nm,1.3s							
UZB	**Uzynbulak**	**76.84**	**16**	⇓*i*P		**P**	**16 21 02.3**	**+1.5**
	comp=Z,6.3nm,0.9s							
SHLS	**Shalkode**	**76.95**	**16**	*e*P		**P**	**16 21 03.6**	**+2.2**
	comp=Z,12nm,1.4s							
PDGK	**Podgornoye**	**77.12**	**16**	P		**P**	**16 21 02.1**	**-0.2**
LIT	**Litokhoron**	**78.68**	**333**	P		**P**	**16

NJ2 pmax pmax
comp=Z,12nm,0.5s
LUBAR Lubar, Ukraine 85.59 341 P **P** **16 21 46.6 -0.3**
AK10 Malin Array Si 85.80 342 P **P** **16 21 47.6 -0.3**
AK06 Malin Array Si 85.80 342 P **P** **16 21 47.6 -0.3**
AK09 Malin Array Si 85.80 342 P **P** **16 21 47.6 -0.3**
AK05 Malin Array Si 85.83 342 P **P** **16 21 47.7 -0.3**
AK08 Malin Array Si 85.83 342 P **P** **16 21 47.7 -0.3**
AK02 Malin Array Si 85.86 342 P **P** **16 21 47.9 -0.3**
KIEV Kiev 85.90 342 ⇓P **P** **16 21 49.1 +0.7**
KIEV Kiev 85.90 342 **P** **16 21 49.1 +0.7**
KIEV Kiev 85.90 342 P **P** **16 21 48.1 -0.3**
comp=Z,22nm,0.8s
AKASG Malin Array Be 85.90 342 P **P** **16 21 49.0 +0.6**
comp=Z,1.9nm,0.5s,baz=167,slow=4.2,SNR=8.7
AKASG LR LR 16 58 54.2
comp=Z,21nm,19.3s,baz=174,slow=35
comp=Z,1.9nm,0.5s
AKASG Malin Array Be 85.90 342 P **P** **16 21 48.6 +0.2**
AKBB Malin Array Si 85.90 342 P **P** **16 21 47.7 -0.6**
AKBB IAmb IAmb 16 21 59.2
comp=Z,6.8nm,1.1s
AKBB Malin Array Si 85.90 342 P **P** **16 21 48.1 -0.3**
AK16 Malin Array Si 85.90 342 P **P** **16 21 48.1 -0.3**
AK04 Malin Array Si 85.93 342 P **P** **16 21 48.2 -0.3**
AK18 Malin Array Si 85.96 342 P **P** **16 21 48.4 -0.3**
AK20 Malin Array Si 85.99 342 P **P** **16 21 48.5 -0.3**
AK21 Malin Array Si 86.02 342 P **P** **16 21 48.6 -0.3**
SOKA Soboth 87.15 332 *e*P **P** **16 21 56.6 +1.9**
comp=Z,3.7nm,1.3s
OBKA Obir 87.21 331 *e*P **P** **16 21 56.9 +1.8**
comp=Z,5.5nm,1.3s
OBKA Obir 87.21 331 P **P** **16 21 56.7 +1.6**
MDT Midelt 87.32 311 LR LR 17 01 24.1
comp=Z,80nm,18.2s,baz=68,slow=36
HHC Hu-ho-hao-te 87.38 38 *e*P **P** **16 21 56.8 +0.8**
HHC pmax pmax
comp=Z,15nm,0.7s
NIE Niedzica 87.47 336 P **P** **16 21 55.8 -0.4**
comp=Z,3.0nm,1.9s
RONA Rosalia, Austr 87.49 333 *i* P **P** **16 21 57.7 +1.3**
comp=Z,5.9nm,1.1s
TEOL Teolo 87.51 329 P **P** **16 21 56.0 -0.4**
MODS Modra-Piesok 87.67 334 *e*P **P** **16 21 57.7 +0.5**
ARTI Arti 87.69 0 LR LR 16 58 15.9
comp=Z,43nm,18.8s,baz=176,slow=34
ARTI Arti 87.69 0 P **P** **16 21 57.4 +0.4**
ARTI IAmb IAmb 16 22 08.1
comp=Z,9.9nm,0.9s
CONA Conrad Observa 87.84 333 *i* P **P** **16 21 59.2 +1.1**
comp=Z,4.0nm,0.9s
JAVC Velka Javorina 87.93 335 *e*P **P** **16 21 59.3 +0.9**
KBA Koelnbreinsper 88.16 331 *e*P **P** **16 22 01.8 +2.1**
comp=Z,5.4nm,1.3s
ABTA Abfaltersbach 88.24 331 *i* P **P** **16 22 01.6 +1.6**
comp=Z,4.3nm,0.9s
ZALV Zalesovo Beam 88.31 15 P **P** **16 21 59.5 -0.5**
comp=Z,2.5nm,0.8s,baz=198,slow=4.2,SNR=7.4
ZALV LR LR 16 59 58.0
comp=Z,36nm,18.8s,baz=203,slow=34
comp=Z,2.5nm,0.8s
ZALV Zalesovo Beam 88.31 15 P **P** **16 22 00.4 +0.4**
MOA Molln 88.41 332 *i* P **P** **16 22 01.9 +1.3**
comp=Z,6.8nm,1.0s
BIOA Bad Ischl, Aus 88.53 332 *e*P **P** **16 22 02.8 +1.5**
comp=Z,8.1nm,1.4s
KRUC Moravsky 88.57 334 *e*P **P** **16 22 01.4 0.0**
VRAC Vranov 88.70 334 *e*P **P** **16 22 01.6 -0.4**
LESA Schwarzleotal 88.71 331 *i* P **P** **16 22 03.1 +0.9**
comp=Z,5.3nm,0.6s
MORC Moravsky Berou 88.74 335 *e*P **P** **16 22 02.7 +0.5**
MORC Moravsky Berou 88.74 335 P **P** **16 22 03.5 +1.2**
WTTA Wattenberg 89.02 330 *i* P **P** **16 22 05.1 +1.3**
comp=Z,7.0nm,0.5s
WTTA Wattenberg 89.02 330 P **P** **16 22 05.3 +1.5**
WATA Walderalm 89.10 330 *i* P **P** **16 22 05.1 +1.0**
comp=Z,4.3nm,0.6s
FUORN Ofenpass-Fuorn 89.11 329 P **P** **16 22 04.4 +0.1**
FUORN IAmb IAmb 16 22 15.6
comp=Z,7.9nm,1.1s
SQTA Sankt Quirin 89.17 330 *i* P **P** **16 22 06.0 +1.6**
comp=Z,8.1nm,0.7s
FETA Feichten 89.22 330 *i* P **P** **16 22 06.1 +1.4**
comp=Z,3.9nm,0.8s
MOTA Moosalm 89.31 330 *i* P **P** **16 22 06.2 +1.1**
comp=Z,7.7nm,1.0s
TUE Stuetta 89.39 329 IAmb IAmb 16 22 16.3
comp=Z,7.6nm,1.1s
TUE Stuetta 89.39 329 P **P** **16 22 07.0 +1.4**
GERES GERESS Array B 89.43 332 P **P** **16 22 05.3 -0.2**
comp=Z,1.0nm,0.7s,baz=157,slow=4.4,SNR=8.4
comp=Z,1.0nm,0.7s
RETA Reutte 89.56 330 *i* P **P** **16 22 07.6 +1.4**
comp=Z,4.1nm,0.6s
DAVA Damuels 89.79 329 *i* P **P** **16 22 08.5 +1.1**
comp=Z,4.9nm,0.7s
DAVA Damuels 89.79 329 P **P** **16 22 08.9 +1.6**
KSP Ksiaz 90.08 335 P **P** **16 22 08.0 -0.4**
URZ Urewera 90.15 136 LR LR 16 56 28.2
comp=Z,98nm,18.2s,baz=234,slow=32
SONM Songino Array 90.16 30 P **P** **16 22 08.7 -0.4**
comp=Z,2.1nm,0.7s,baz=224,slow=4.1,SNR=5.2
comp=Z,2.1nm,0.7s
SONM Songino Array 90.16 30 P **P** **16 22 07.8 -1.3**
KIRV Kirov 90.19 355 LR LR 17 04 17.7
comp=Z,44nm,18.0s,baz=179,slow=37
ESDC Sonseca Array 91.41 317 P **P** **16 22 15.9 +0.9**
comp=Z,1.7nm,0.9s,baz=124,slow=2.3,SNR=8.0
comp=Z,1.7nm,0.9s
ESDC Sonseca Array 91.41 317 P **P** **16 22 15.8 +0.8**
XLT XiLinHaoTe 91.89 38 *e*P P 16 22 11.5 -5.7
XLT sP PcP 16 22 19.4 +1.4
XLT pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 92.07 26 LR LR 17 01 07.1
comp=Z,36nm,20.5s,baz=210,slow=34
KSRS Korea Array 94.65 49 LR LR 17 03 44.4
comp=Z,31nm,20.1s,baz=240,slow=35
PPT2 Papeete2 124.26 147 *e*LR LR 17 06 48.6
comp=Z,72nm,31.8s
ILAR Eielson Array 143.40 18 PKhKP PKPpre 16 28 39.5
comp=Z,1.5nm,0.9s,baz=308,slow=2.6,SNR=9.6
ILAR Eielson Array 143.40 18 PKPab 16 28 39.0 +0.3
I27K Kandik River 143.93 14 P **PKPdf** **16 28 42.5 -1.1**
baz=331
L22K Petersville 143.97 22 P PKPbc 16 28 41.8 +0.2
baz=315
H29M Whitestone 143.98 11 P PKPbc 16 28 42.0 +0.5
baz=336
SKT Skwentna 144.10 24 P PKPbc 16 28 41.7 -0.3
baz=314
O18K Koktuh Hills 144.11 28 P **PKPdf** **16 28 43.7 -0.3**
baz=307
I28M Miner Creek 144.39 13 P **PKPdf** **16 28 44.3 -0.1**
baz=333,SNR=7.9
WAT1 Susitna Watana 144.44 21 P **PKPdf** **16 28 44.3 -0.2**
baz=319
K24K Donnelly Dome 144.47 18 P **PKPdf** **16 28 44.9 +0.3**
baz=323
DHY Denali Highway 144.60 20 P PKPbc 16 28 43.6 -0.1
baz=320
CHNA Chernabura Isl 144.67 38 P PKPbc 16 28 44.1 +0.2
baz=295
M22K Willow 144.73 23 P **PKPdf** **16 28 44.3 -0.7**
baz=316
RIDG Independent Ri 144.76 18 P **PKPdf** **16 28 44.4 -0.7**
baz=325
SCRK Sand Creek 144.78 17 P **PKPdf** **16 28 44.8 -0.4**
baz=326
WAT6 Susitna Watana 144.87 21 P **PKPdf** **16 28 45.1 -0.3**
baz=320,SNR=9.5
Q18K Katmai Hardscr 144.91 30 P PKPbc 16 28 44.6 -0.2
baz=306
H31M Peel River 144.97 9 P **PKPdf** **16 28 45.1 -0.3**
baz=341,SNR=18
O20K Slope Mountain 144.98 27 P **PKPdf** **16 28 45.2 -0.4**
baz=310
P19K Oil Pt 145.02 28 P **PKPdf** **16 28 45.3 -0.3**
baz=309
PMR Palmer 145.18 23 P **PKPdf** **16 28 45.9 +0.1**
baz=317,SNR=6.7
I30M Mount Dempster 145.22 11 P **PKPdf** **16 28 45.9 0.0**
baz=338,SNR=43
SML Sawmill 145.28 22 P **PKPdf** **16 28 45.8 -0.2**
baz=318,SNR=7.5
Q19K Cape Douglas, 145.31 29 P **PKPdf** **16 28 46.4 +0.3**
baz=308
RC01 Rabbit Creek A 145.34 24 P **PKPab** **16 28 46.1 0.0**
baz=315
M23K Glacier View 145.48 21 P **PKPab** **16 28 46.8 +0.2**
baz=319,SNR=9.5
KNK Knik Glacier 145.53 22 P **PKPab** **16 28 46.8 0.0**
baz=317
SCM Sheep Creek Mo 145.57 21 P **PKPab** **16 28 47.2 +0.1**
baz=319
J29N Klondike Camp 145.61 13 P **PKPab** **16 28 47.1 0.0**
baz=335
HOM Homer 145.63 27 P **PKPab** **16 28 47.2 0.0**
baz=311
M24K Tolsona, Glenn 145.71 20 P **PKPab** **16 28 47.6 +0.1**
baz=321
L26K Log Cabin Wild 145.74 17 P **PKPab** **16 28 47.6 +0.1**
baz=326
DAWY Dawson 145.74 14 P **PKPab** **16 28 47.5 0.0**
baz=333,SNR=9.9
HARP HAARP 145.77 19 P **PKPab** **16 28 47.4 -0.2**
baz=323
O22K Cooper Landing 145.77 24 P **PKPab** **16 28 47.5 -0.2**
baz=315
J30M Hart River 145.83 11 P **PKPab** **16 28 47.9 -0.1**
baz=338,SNR=19
BRSE Bradley Lake S 145.92 26 P **PKPbc** **16 28 47.6 -0.2**
baz=312
L27K Beaver Creek, 146.08 16 P **PKPab** **16 28 48.7 -0.1**
baz=328,SNR=16
SEW Seward 146.14 25 P **PKPbc** **16 28 48.4 0.0**
baz=315
CHIR Chirikof Islan 146.19 34 P **PKPbc** **16 28 48.6 -0.1**
baz=301
KLU Klutina 146.26 21 P **PKPab** **16 28 49.1 -0.6**
baz=321,SNR=6.6
K29M Barlow Dome 146.30 12 P **PKPab** **16 28 49.2 -0.6**
baz=335,SNR=9.7
M26K Nabesna, AK 146.35 18 P **PKPbc** **16 28 49.0 -0.1**
baz=326
GLI Glacier Island 146.37 22 P **PKPbc** **16 28 48.9 -0.2**
baz=319
KDAK Kodiak Island 146.45 30 P **PKPbc** **16 28 48.9 -0.5**
baz=308
SII Sitkinak Islan 146.47 32 P **PKPbc** **16 28 49.7 +0.1**
baz=304
OHAK Old Harbor 146.49 31 P **PKPab** **16 28 50.0 -0.5**
baz=306
N25K Chitina, Valde 146.56 20 P **PKPab** **16 28 50.6 -0.2**
baz=323,SNR=12
M27K Edge Creek, AK 146.67 17 P **PKPab** **16 28 51.0 -0.3**
baz=328,SNR=7.2
L29M L29M 146.85 14 P **PKPab** **16 28 51.4 -0.5**
baz=334,SNR=11
BVCY Beaver Creek 146.87 16 P **PKPab** **16 28 51.3 -0.6**
baz=329
P23K Montague Islan 146.93 23 P **PKPab** **16 28 51.6 -0.6**
baz=318
EYAK Cordova Ski Ar 147.05 22 P **PKPab** **16 28 51.9 -0.6**
baz=320
BMRM Bremner River 147.07 20 P **PKPab** **16 28 52.1 -0.7**
baz=322
MCARA McCarthy VSAT 147.18 19 P **PKPab** **16 28 52.6 -0.5**
baz=325
M29M Somme Creek 147.38 14 P **PKPab** **16 28 53.0 -1.0**
baz=333,SNR=13
YUK3 Moose Creek 147.51 16 P **PKPab** **16 28 53.5 -1.2**
baz=329
M30M Minto, Yukon 147.59 13 P **PKiKP** **16 28 53.5 -1.2**
baz=336
CRQE Cirque 147.68 19 P **PKiKP** **16 28 53.8 -1.2**
baz=325
YUK8 Steele Glacier 148.11 16 P **PKPbc** **16 28 54.7 +0.4**
baz=330
BRWY Burwash Landin 148.20 16 P **PKiKP** **16 28 55.0 -1.0**
baz=331
YUK4 Talbot Arm 148.31 15 P **PKPbc** **16 28 55.1 +0.3**
baz=332
WRGLY Wrigley 148.38 1 P **PKPbc** **16 28 55.0 +0.4**
baz=357
MMPY Sheldon Lake, 148.42 8 P **PKiKP** **16 28 55.7 -0.7**
baz=344
O28M Mount Upton 148.44 17 P **PKiKP** **16 28 56.0 -0.8**
baz=329
N30M Aishikik Lake 148.55 14 P **PKiKP** **16 28 56.0 -0.7**
baz=334
YUK6 Outpost Mounta 148.74 16 P **PKPbc** **16 28 56.2 +0.3**
baz=332
N31M Braeburn, Yuko 148.78 13 P **PKiKP** **16 28 56.4 -0.7**
baz=336
YKA Yellowknife Ar 148.79 354 PKPbc **PKPbc** **16 28 56.0 +0.3**
comp=Z,8.7nm,0.8s,baz=17,slow=2.5,SNR=40
YKA Yellowknife Ar 148.79 354 **PKPbc** **16 28 55.6 -0.1**
PINM Pinnacle 149.01 18 P **PKiKP** **16 28 57.3 -0.4**
baz=328
HYT Haines Junctio 149.03 15 P **PKiKP** **16 28 57.2 -0.6**
baz=333
O29M Mount Kennedy 149.25 16 P **PKiKP** **16 28 57.6 -0.7**
baz=331
O30N Mendenhall 149.38 14 P **PKiKP** **16 28 57.7 -0.7**
baz=336
WHY Whitehorse 149.72 13 P **PKPbc** **16 28 58.4 +0.2**
baz=337
P30M Million Dollar 149.78 15 P **PKiKP** **16 28 58.6 -0.6**
baz=334
P29M Windy Craggy 150.04 16 P **PKiKP** **16 28 59.4 -0.4**
baz=332
P33M Teslin, Yukon 150.50 11 P **PKPbc** **16 29 00.1 +0.1**
baz=341
PLBC Pleasant Camp 150.52 15 P **PKiKP** **16 29 00.3 -0.4**
baz=334
SKAG Skagway 150.74 14 P **PKiKP** **16 29 01.1 -0.1**
baz=336
P32M Atlin 150.93 12 P **PKiKP** **16 29 01.6 -0.1**
baz=339
R33M Jennings River 151.57 10 P **PKiKP** **16 29 03.4 +0.3**
baz=343
Q32M Nakina River 151.78 11 P **PKiKP** **16 29 03.7 +0.1**
baz=341
DLBC Dease Lake 152.63 9 P **PKiKP** **16 29 05.5 +0.3**
baz=345
ULM Lac du Bonnet 153.22 321 PKPbc **PKiKP** **16 29 06.7 +0.1**
comp=Z,3.6nm,0.7s,baz=47,slow=4.5,SNR=4.5
TXAR Lajitas Array 164.19 266 PKP **PKPdf** **16 29 13.9 +1.1**
comp=Z,0.4nm,0.8s,baz=108,slow=2.8,SNR=4.5
TXAR PKPab **PKPab** **16 30 07.7 +1.1**
comp=Z,0.6nm,0.8s,baz=104,slow=5.3,SNR=4.6
TXAR Lajitas Array 164.19 266 **PKPdf** **16 29 11.6 -1.2**
TXAR **PKPab** **16 30 07.7 +1.1**
PDAR Pinedale Array 165.24 322 PKP **PKPdf** **16 29 13.6 +0.1**
comp=Z,1.0nm,0.9s,baz=126,slow=2.0,SNR=6.4

*IDC **09** 16:35:33.4±1.2,6˚.32S×104˚.40E,h0km,mb3.9/11, mbtmp3.8/12,ML4.5/2,Error ellipse: s-maj=34.8km s-min=12.7km az=37.0*
*NEIC **09** 16:35:36.0±1.4,6˚.2S±0˚.1×104˚.46E±0˚.07,h19km±4km, mb4.5/28,Error ellipse: s-maj=16.2km s-min=8.5km az=201.0*
*DJA **09** 16:35:38.6±0.2,6˚S±2˚×10˚4E±˚,h10km,M4.3/34,mB4.7/1, mb4.6/12,MLv4.1/34,Mw(mB)3.9/1*
ISC 09 16:35:33.6±0.5,**6˚.46S**±0˚.06×**104˚.35E**±0˚.05,**h10**km,**n82,**
σ1§63/69,mb4.3/23,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.94**	**9**	P	**Pn**	**16 35 56.4**	**+3.5**
BLSI	**Bandar Lampung**	**1.40**	**39**	P	**Pg**	**16 36 02.7**	**+2.2**
BLSI				S	**Sn**	**16 36 21.2**	**+3.4**
KLI	**Kotabumi**	**1.66**	**18**	P	Pg	16 36 08.3	+2.8
KLSI		**1.80**	**12**	P	**Pg**	**16 36 09.3**	**+1.2**
MNAI	**Manna**	**2.50**	**326**	P	**Pb**	**16 36 19.5**	**+0.8**
LEM	**Lembang**	**3.27**	**97**	Pn	**Pn**	**16 36 25.8**	**+0.8**
	11nm,0.3s,baz=186,slow=21,SNR=8.2						
LEM				Pg	**Pb**	**16 36 31.2**	**-0.5**
	8.8nm,0.3s,baz=172,slow=22,SNR=7.0						
LEM				Lg	Lg	16 37 17.1	
	7.7nm,0.3s,baz=279,slow=23,SNR=5.9						
	10nm,0.4s						
LEM	**Lembang**	**3.27**	**97**	P	**Pb**	**16 36 30.2**	**-1.6**
KSI	**Kapahiang**	**3.29**	**328**	P	**Pb**	**16 36 31.7**	**-0.5**
BBJI	**Bungbulang**	**3.42**	**107**	Pn	**Pn**	**16 36 25.2**	**-1.9**
BBJI				Sn	**Sn**	**16 37 05.7**	**-2.1**
BBJI	**Bungbulang**	**3.42**	**107**	P	**Pn**	**16 36 31.0**	**+3.9**
PPBI	**Pangkal Pinang**	**4.62**	**23**	P	Pb	16 36 49.5	-5.4
TPI	**Tanjungpandan**	**4.93**	**42**	P	Pn	16 36 51.9	+4.0
PPSI	**Pulau Pagai**	**5.67**	**310**	P	**Pn**	**16 37 02.5**	**+4.5**
DSRI	**Dabo**	**5.94**	**2**	P	Pn	16 37 08.4	+6.7
	0.1nm28nm,0.6s						
UGM	**Wanagama**	**6.29**	**104**	Pn	**Pn**	**16 37 06.7**	**+0.1**
UGM				Sn	**Sn**	**16 38 17.6**	**-1.0**
UGM	**Wanagama**	**6.29**	**104**	P	**Pn**	**16 37 11.1**	**+4.5**
	137nm,1.7s						
SNJI	**Sawahan-Nganju**	**7.47**	**101**	P	Pn	16 37 28.7	+5.9
JAGI	**Jajag, Banyuwa**	**9.92**	**102**	Pn	**Pn**	**16 37 56.0**	**-0.4**
JAGI	**Jajag, Banyuwa**	**9.92**	**102**	P	**Pn**	**16 37 59.1**	**+2.7**
	24nm,1.5s						
GSI	**Gunungsitoli**	**10.26**	**319**	Pn	**Pn**	**16 38 00.1**	**-0.8**
KHKI	**Kahang-Kahang**	**11.32**	**100**	P	**Pn**	**16 38 18.2**	**+2.6**
MMRI	**Maumere**	**17.86**	**98**		**Pn**	**16 39 41.9**	**-0.5**
MMRI				IAmb	IAmb	16 40 10.3	
	comp=Z,58nm,1.4s						
TOLI2	**Tolitoli**	**18.04**	**66**	Pn	**Pn**	**16 39 41.6**	**-3.0**
BATI	**Baumata**	**19.46**	**102**	P	**P**	**16 40 00.9**	**+0.1**
	comp=Z,7.4nm,0.3s,baz=345,slow=3.4,SNR=6.5						
SOEI	**Soe**	**19.98**	**101**	P	**P**	**16 40 06.6**	**+0.1**
SOEI				IAmb	IAmb	16 40 18.7	
	comp=Z,29nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.77**	**121**	P	**P**	**16 40 46.7**	**+0.2**
CM31	**Chiang Mai Arr**	**25.32**	**348**	P	**P**	**16 40 58.8**	**-2.0**
CMAR	**Chiang Mai Arr**	**25.32**	**348**	P	**P**	**16 40 59.5**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=172,slow=9.3,SNR=2.2						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**25.32**	**348**	P	**P**	**16 40 58.1**	**-2.7**
KNRA	**Kununurra**	**25.62**	**113**	P	**P**	**16 41 03.6**	**+0.1**
KNRA				IAmb	IAmb	16 41 21.0	
	comp=Z,6.5nm,0.9s						
CRAI	**Chiangrai**	**26.81**	**352**	P	**P**	**16 41 12.0**	**-2.2**
MTN	**Manton Dam**	**27.14**	**106**	P	**P**	**16 41 16.9**	**-0.3**
MTN				IAmb	IAmb	16 41 36.5	
	comp=Z,29nm,1.4s						
H01W3	**Cape Leeuwin H**	**29.69**	**164**	T	T	17 13 08.9	
	baz=342						
H01W1	**Cape Leeuwin H**	**29.71**	**164**	T	T	17 13 04.4	
	baz=342						
H01W2	**Cape Leeuwin H**	**29.71**	**164**	T	T	17 13 02.9	
	baz=342						
HKPS	**Hong Kong Po S**	**30.12**	**18**	P	**P**	**16 41 41.8**	**-2.0**
H08S2	**Diego Garcia H**	**31.64**	**266**	T	T	17 15 43.1	
	baz=89,slow=75,SNR=24						
H08S3	**Diego Garcia H**	**31.64**	**266**	T	T	17 15 43.0	
	baz=89,slow=75,SNR=23						
H08S1	**Diego Carcia H**	**31.66**	**266**	T	T	17 15 43.2	
	baz=89,slow=75,SNR=26						
WB0	**Warramunga Arr**	**32.03**	**117**	P	**P**	**16 42 00.7**	**0.0**
WB0				IAmb	IAmb	16 42 20.8	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**32.05**	**118**	P	**P**	**16 42 02.0**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=302,slow=9.2,SNR=9.7						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**32.05**	**118**	P	**P**	**16 42 00.0**	**-0.8**
WRAB	**Tennant Creek**	**32.05**	**118**	P	**P**	**16 42 01.0**	**+0.1**
WRAB				IAmb	IAmb	16 42 21.7	
	comp=Z,3.3nm,0.8s						
WR8	**Warramunga Arr**	**32.19**	**118**	P	**P**	**16 42 02.0**	**-0.1**
WR8				IAmb	IAmb	16 42 19.0	
	comp=Z,6.3nm,1.2s						
AS31	**Alice Springs**	**33.15**	**124**	P	**P**	**16 42 11.0**	**+0.5**
ASAR	**Alice Springs**	**33.15**	**124**	P	**P**	**16 42 12.0**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=303,slow=8.2,SNR=7.4						
	comp=Z,0.2nm,0.5s						
HMDM	**Hanimaadhoo**	**33.76**	**292**	P	**P**	**16 42 15.5**	**-0.4**
COEN	**Coen**	**38.88**	**104**	P	**P**	**16 42 59.1**	**-0.6**
STKA	**Stephens Creek**	**42.97**	**131**	P	**P**	**16 43 34.6**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=314,slow=8.2,SNR=5.5						
	comp=Z,1.8nm,0.8s						
EIDS	**Eidsvold**	**48.41**	**118**	P	**P**	**16 44 15.5**	**-0.8**
MSEY	**Mahe Island**	**48.66**	**269**	P	**P**	**16 44 19.2**	**+0.7**
KSRS	**Korea Array**	**48.91**	**25**	P	**P**	**16 44 20.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=233,slow=8.2,SNR=2.0						
	comp=Z,0.3nm,0.5s						
WUS	**Wushi**	**52.73**	**336**	P	**P**	**16 44 48.0**	**-0.8**
WUS				IAmb	IAmb	16 44 50.1	
	comp=Z,6.7nm,1.5s						
MAJO	**Matsushiro**	**53.25**	**34**	P	**P**	**16 44 51.0**	**-1.6**
MAJO				IAmb	IAmb	16 45 00.3	
	comp=Z,7.3nm,1.1s						
MJB9	**Matsu-Tunnel**	**53.25**	**34**	P	**P**	**16 44 52.0**	**-0.6**
MJB9				IAmb	IAmb	16 45 01.3	
	comp=Z,6.8nm,1.1s						
JYT	**Yasato**	**54.15**	**36**	P	**P**	**16 44 57.1**	**-2.1**
PDGK	**Podgornoye**	**54.44**	**338**	P	**P**	**16 45 01.4**	**0.0**
ARSB	**Arslanbob**	**55.56**	**332**	P	**P**	**16 45 08.3**	**-1.2**
ARSB				IAmb	IAmb	16 45 19.6	
	comp=Z,3.6nm,1.1s						
USRK	**Ussuriysk Ar.**	**56.25**	**24**	P	**P**	**16 45 14.5**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=206,slow=5.6,SNR=15						
	comp=Z,2.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**56.25**	**24**	P	**P**	**16 45 14.0**	**-0.1**
MKAR	**Makanchi Array**	**56.52**	**342**	P	**P**	**16 45 16.7**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=142,slow=8.0,SNR=11						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**56.52**	**342**	P	**P**	**16 45 15.7**	**-0.4**
LHI	**Lord Howe Isla**	**56.74**	**124**	P	**P**	**16 45 19.0**	**+1.0**
H04N2	**CROZET ISLANDS**	**59.98**	**220**	T	T	17 51 11.9	
	baz=66,slow=75,SNR=13						
H04N1	**CROZET ISLANDS**	**59.99**	**220**	T	T	17 51 11.9	
	baz=66,slow=75,SNR=11						
H04N3	**CROZET ISLANDS**	**60.00**	**220**	T	T	17 51 11.9	
	baz=66,slow=75,SNR=13						
H04S1	**CROZET ISLANDS**	**60.19**	**219**	T	T	17 51 30.0	
	baz=64,slow=74,SNR=3.3						
H04S3	**CROZET ISLANDS**	**60.21**	**219**	T	T	17 52 02.4	
	baz=64						
H04S2	**CROZET ISLANDS**	**60.21**	**219**	T	T	17 51 33.0	
	baz=64,slow=74,SNR=4.2						
KURBB	**Kurchatov Arra**	**61.08**	**342**	P	**P**	**16 45 48.5**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=154,slow=5.8,SNR=5.9						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**61.13**	**342**	P	**P**	**16 45 47.3**	**-0.7**
KURK				IAmb	IAmb	16 45 49.2	
	comp=Z,1.9nm,0.8s						
ZAA0	**Zalesovo Array**	**62.39**	**347**	P	**P**	**16 45 56.3**	**-0.1**
ZAA0				IAmb	IAmb	16 45 57.7	
	comp=Z,2.8nm,0.9s						
ZALV	**Zalesovo Beam**	**62.39**	**347**	P	**P**	**16 45 56.7**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=154,slow=5.7,SNR=15						
	comp=Z,1.9nm,0.3s						
ZALV	**Zalesovo Beam**	**62.39**	**347**	P	**P**	**16 45 56.2**	**-0.2**
BVAR	**Borovoye Array**	**65.87**	**338**	P	**P**	**16 46 19.1**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=144,slow=5.3,SNR=4.3						
	comp=Z,0.5nm,0.3s						
KIBK	**Kibwezi**	**66.20**	**270**	P	**P**	**16 46 22.1**	**-0.3**
AB31	**Akbulak array**	**67.62**	**330**	P	**P**	**16 46 29.4**	**-1.2**
AB31				IAmb	IAmb	16 46 32.1	
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**67.62**	**330**	P	**P**	**16 46 29.7**	**-0.9**
BURAR	**Bucovina Array**	**87.45**	**318**	P	**P**	**16 48 21.1**	**-0.5**
FINES	**FINESS Array B**	**90.05**	**332**	P	**P**	**16 48 35.6**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=105,slow=4.5,SNR=3.3						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**90.05**	**332**	P	**P**	**16 48 32.8**	**-0.6**
TXAR	**Lajitas Array**	**145.13**	**46**	PKPbc	**PKPab**	**16 55 13.2**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=274,slow=1.5,SNR=7.5						

*IDC **09** 16:36:05.2±0.8,35˚.45N×26˚.84E,h0km,mb3.9/12, mbtmp3.8/22,ML3.7/10,MS3.4/7,Error ellipse: s-maj=18.4km s-min=11.8km az=177.0*
*ATH **09** 16:36:06.7,35˚.55N×26˚.75E,h8km±2km,ML3.9/6,Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*
*ISK **09** 16:36:06.2,35˚.54N×26˚.73E,h3km,ML4.0/26*
*THE **09** 16:36:07.1,36˚N±3˚×2˚7E±˚,h4km±5km,M3.8/13, MLh3.8/13*
*GFZ **09** 16:36:09.2±0.3,35˚N±3˚×2˚7E±˚,h10km,M4.0/22, mb4.0/22*
*GII **09** 16:36:11.4±0.0,35˚.04N±0˚.02×27˚.09E±0˚.04,h0km, Mws3.9,confirmed*
ISC 09 16:36:07.2±1.0,**35˚.48N**±0˚.03×**26˚.81E**±0˚.02,**h12**km±7km,
n174,σ1§56/201,mb3.7/11,MS3.6/4,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.29**	**77**	Pg	**Pb**	**16 36 13.7**	**-0.8**
KARP				Sg	**Sb**	**16 36 19.6**	**+0.2**
KARP	**Karpathos**	**0.29**	**77**	P	**Pb**	**16 36 13.6**	**-0.9**
KARP				S	**Sb**	**16 36 18.8**	**-0.6**
KARP	**Karpathos**	**0.29**	**77**	P	**Pg**	**16 36 13.0**	**-0.2**
KARP	**Karpathos**	**0.29**	**77**	P	**Pb**	**16 36 13.7**	**-0.8**
KARP	**Karpathos**	**0.29**	**77**	P	**Pg**	**16 36 13.4**	**+0.2**
KARP				S	**Sb**	**16 36 18.8**	**-0.6**
ZKR	**Zakros**	**0.61**	**233**	Pg	**Pg**	**16 36 18.2**	**-0.8**

ZKR Sg **Sg** **16 36 27.6 +0.6**
ZKR Zakros 0.61 233 P **Pg** **16 36 18.5 -0.5**
ZKR Zakros 0.61 233 P **Pg** **16 36 18.1 -0.9**
ZKR S **Sg** **16 36 26.6 -0.4**
SIT2 Siteia 0.64 245 P **Pg** **16 36 18.7 -0.9**
SIT2 S **Sg** **16 36 27.5 -0.5**
AGNA Agios Nikolaos 0.94 252 P **Pg** **16 36 24.4 -0.9**
AGNA S **Sg** **16 36 36.5 -1.0**
NPS Neapolis 1.00 258 P **Pg** **16 36 25.2 -1.3**
NPS S **Sg** **16 36 38.2 -1.4**
NPS Neapolis 1.00 258 P **Pg** **16 36 25.4 -1.1**
NPS S **Sg** **16 36 38.9 -0.7**
ARG Arkhangelos 1.30 55 Pn **Pg** **16 36 31.8 -0.3**
ARG Sn **Sn** **16 36 50.2 +1.7**
ARG Arkhangelos 1.30 55 P **Pb** **16 36 31.4 -0.2**
ARG S **Sn** **16 36 49.2 +0.7**
ARG Arkhangelos 1.30 55 P **Pg** **16 36 31.9 -0.2**
ARG Arkhangelos 1.30 55 P **Pb** **16 36 31.4 -0.2**
DAT Datca 1.39 26 Pn **Pb** **16 36 32.7 -0.6**
DAT Datca 1.39 26 P **Pn** **16 36 32.1 -0.5**
DAT S **Sb** **16 36 49.7 -1.4**
THERA Ancient Thera, 1.40 310 P **Pn** **16 36 31.3 -1.3**
THERA S **Sb** **16 36 49.6 -1.5**
THERA Ancient Thera, 1.40 310 P **Pn** **16 36 31.1 -1.6**
THR8 Santorini-Mono 1.42 311 P **Pn** **16 36 31.7 -1.2**
THR8 Santorini-Mono 1.42 311 P **Pn** **16 36 31.8 -1.2**
IACM Heraklion 1.43 264 P **Pg** **16 36 34.4 -0.3**
IACM S **Sn** **16 36 51.7 -0.1**
THRA Thira 1.46 310 P **Pn** **16 36 32.7 -0.7**
SFIR Foira Santorin 1.46 310 P **Pn** **16 36 32.5 -1.0**
SFIR S **Sn** **16 36 51.2 -1.4**
THR9 Santorini-Faro 1.47 307 P **Pn** **16 36 33.0 -0.6**
THR9 Santorini-Faro 1.47 307 P **Pn** **16 36 32.5 -1.0**
SNT5 Nea Kammeni, S 1.47 309 P **Pn** **16 36 33.6 -0.1**
SNT5 S **Sb** **16 36 53.4 +0.2**
SNT5 Nea Kammeni, S 1.47 309 P **Pn** **16 36 33.4 -0.2**
THR2 Thira island, 1.47 311 P **Pn** **16 36 32.8 -0.8**
THR5 Thira Island, 1.51 309 P **Pn** **16 36 33.3 -0.9**
THR5 Thira Island, 1.51 309 P **Pn** **16 36 32.9 -1.2**
SAP3 Santorini-Thir 1.52 309 P **Pn** **16 36 33.7 -0.6**
IDI Anoyia 1.58 264 Pn **Pn** **16 36 34.3 -0.9**
9.3nm,0.3s,baz=4.3,slow=6.6,SNR=73
IDI Sn **Sn** **16 36 55.7 +0.1**
178nm,0.3s,baz=335,slow=18,SNR=20
IDI LR LR 16 37 30.9
comp=Z,907nm,19.7s,baz=128,slow=54
IDI Anoyia 1.58 264 Pn **Pn** **16 36 35.5 +0.3**
IDI Anoyia 1.58 264 P **Pn** **16 36 34.3 -0.9**
IDI S **Sn** **16 36 54.9 -0.7**
IDI Anoyia 1.58 264 P **Pn** **16 36 34.8 -0.4**
BODT Bodrum 1.63 14 Pn **Pn** **16 36 35.8 0.0**
BODT Bodrum 1.63 14 P **Pn** **16 36 35.3 -0.5**
BODT S **Sn** **16 36 54.4 -2.3**
YKAV Yalikavak-Bodr 1.68 13 Pn **Pn** **16 36 36.7 +0.2**
SIVA Sivas 1.70 255 P **Pn** **16 36 37.5 +0.8**
SIVA S **Sb** **16 36 59.9 +0.1**
TURN Turunc 1.74 42 Pn **Pn** **16 36 37.8 +0.6**
DALY Dalyan (Mula) 2.00 48 Pn **Pb** **16 36 42.4 -1.2**
YER Yerkesik 2.04 35 Pn **Pn** **16 36 41.7 +0.3**
YER Yerkesik 2.04 35 P **Pn** **16 36 41.6 +0.1**
YER S **Sn** **16 37 05.0 -1.8**
VAM Vamos 2.13 269 P **Pn** **16 36 43.0 +0.3**
VAM S **Sn** **16 37 06.7 -2.4**
GCAM G?zelcaml? 2.24 9 Pn **Pn** **16 36 44.6 +0.4**
MHLO Agia Marina, M 2.29 302 P **Pn** **16 36 43.9 -1.0**
MHLO S **Sn** **16 37 11.2 -1.9**
IMMV Iera Moni Meta 2.31 270 Pn **Pn** **16 36 45.3 +0.2**
IMMV Iera Moni Meta 2.31 270 P **Pn** **16 36 44.7 -0.4**
IMMV S **Sn** **16 37 14.6 +1.1**
IMMV Iera Moni Meta 2.31 270 P **Pb** **16 36 49.8 +1.0**
GVD Gavdhos 2.32 255 Pn **Pn** **16 36 46.5 +1.2**
GVD Gavdhos 2.32 255 P **Pb** **16 36 50.3 +1.3**
AYDN Tasoluk 2.34 21 P **Pn** **16 36 46.7 +1.1**
AKAS Kas 2.39 71 Pn **Pb** **16 36 48.4 -1.9**
AKAS Kas 2.39 71 P **Pb** **16 36 48.7 -1.6**
CAME Cameli-Denizli 2.49 53 Pn **Pn** **16 36 49.6 +1.9**
GMLD Gumuldur 2.59 2 Pn **Pn** **16 36 49.4 +0.4**
AYDB Zeytinkoy-Aydi 2.61 19 Pn **Pn** **16 36 50.3 +0.9**
KNDR Palaiochora Ch 2.62 266 Pn **Pn** **16 36 50.2 +0.9**
NAZL Nazilli-Aydin 2.75 25 Pn **Pn** **16 36 52.4 +1.2**
ELL Elmali 2.81 62 Pn **Pn** **16 36 54.1 +2.0**
APMY Acipayam-Deniz 2.83 45 Pn **Pn** **16 36 54.3 +2.0**
URLA Izmir 2.88 357 Pn **Pn** **16 36 53.4 +0.4**
ANKY Antikythira Is 2.88 279 P **Pn** **16 36 52.0 -1.0**
BLCB Balcova 2.91 4 Pn **Pn** **16 36 54.4 +1.1**
CHOS Chios island 2.96 348 Pn **Pn** **16 36 54.2 0.0**
CHOS Chios island 2.96 348 P **Pn** **16 36 52.7 -1.5**
ODEM Odemis-Izmir 2.97 20 Pn **Pn** **16 36 55.1 +0.8**
KTHA Kythira Island 3.14 285 Pn **Pn** **16 36 56.9 +0.3**
KORT Korkueli 3.24 61 Pn **Pn** **16 37 00.2 +2.2**
KULA Kula-Manisa 3.37 26 Pn **Pn** **16 37 01.2 +1.4**
ANTB Antalya 3.42 64 Pn **Pn** **16 37 03.1 +2.8**
BASM Basmaki-Afyon 3.56 46 Pn **Pn** **16 37 04.3 +1.8**
GORD Gordes-Manisa 3.59 17 Pn **Pn** **16 37 04.1 +1.3**
BCK Bucak 3.63 56 Pn **Pn** **16 37 05.4 +2.0**
ITM Ithomi 4.29 295 P **Pb** **16 37 19.4 -3.3**
AGG Agios Georgios 5.03 316 P **Pn** **16 37 26.6 +4.1**
CSS Mathiatis 5.36 94 P **Pn** **16 37 27.7 +0.6**
0.2nm388nm19nm,1.1s
CSS Mathiatis 5.36 94 P **Pn** **16 37 28.9 +1.8**
CSS Mathiatis 5.36 94 P **Pn** **16 37 28.8 +1.6**
CSS S **Sn** **16 38 30.1 +1.2**
LIT Litokhoron 5.74 325 P Pn 16 37 39.0 +6.7
SOH Sokhos 5.99 334 P Pn 16 37 41.2 +5.5
SRS Serrai 6.17 337 P Pn 16 37 46.0 +7.8
KNT Kendrikon 6.45 333 P **Pn** **16 37 46.2 +4.1**
BRTR Keskin Array B 6.88 50 Pn **Pn** **16 37 48.2 +0.1**
0.3nm,0.3s,baz=222,slow=15,SNR=9.2
BRTR LR LR 16 41 26.2
comp=Z,177nm,18.1s,baz=227,slow=47
2.3nm,0.8s
MMA0B Mount Meron ar 7.53 107 P **Pn** **16 37 58.5 +1.6**
MMA0B S **Sn** **16 39 22.1 -0.2**
MMAI Mount Meron Ar 7.53 107 Pn **Pn** **16 37 56.5 -0.4**
4.8nm,0.3s,baz=323,slow=14,SNR=14
MMAI Sn **Sn** **16 39 21.7 -0.5**
6.5nm,0.3s,baz=333,slow=29,SNR=9.6
1.6nm,0.2s
GEM Giv'at Ha'Em 7.66 105 P **Pn** **16 37 58.3 -0.4**
GEM Giv'at Ha'Em 7.66 105 P **Pn** **16 37 59.4 +0.7**
GEM S **Sn** **16 39 24.1 -1.4**
NATI Neve Ativ 7.71 104 P **Pn** **16 38 01.5 +2.2**
NATI S **Sn** **16 39 25.4 -1.1**
MMLI Mount Malkishu 7.77 111 P **Pn** **16 38 00.1 -0.1**
MMLI S **Sn** **16 39 26.4 -1.8**
KZIT Kziot 7.82 124 P **Pn** **16 38 00.1 -0.8**
0.2nm546nm17nm,0.7s
KZIT Kziot 7.82 124 P Pn 16 38 01.0 +0.1
KZIT Kziot 7.82 124 P Pn 16 38 00.6 -0.3
KZIT S **Sn** **16 39 26.9 -2.6**
AMAZ Amatzia 7.83 118 P Pn 16 38 01.8 +0.8
AMAZ S **Sn** **16 39 27.9 -1.8**
YITV Yitav 7.99 114 P Pn 16 38 05.0 +1.8
YITV S **Sn** **16 39 32.3 -1.3**
RMNI Mount Ramon 8.26 124 P **Pn** **16 38 07.1 +0.1**
RMNI S **Sn** **16 39 36.6 -3.7**
MSBI Mazada 8.27 118 P **Pn** **16 38 05.0 -1.9**
7.5nm,0.8s
MSBI Mazada 8.27 118 P Pn 16 38 07.3 +0.4
MSBI Mazada 8.27 118 P Pn 16 38 07.2 +0.2
MSBI S **Sn** **16 39 37.6 -2.6**
LISJ El Lisan 8.39 118 P Pn 16 38 07.4 -1.3
17nm,0.8s
GHAJ Ghor Haditha 8.42 117 P **Pn** **16 38 08.6 -0.5**
22nm,1.2s
GHAJ Ghor Haditha 8.42 117 P **Pn** **16 38 09.9 +0.8**
GHAJ Ghor Haditha 8.42 117 P **Pn** **16 38 09.9 +0.8**
ZFRI Zfri 8.57 123 P **Pn** **16 38 11.3 +0.2**
ZFRI S **Sn** **16 39 44.1 -3.7**
HRFI Mount Harif 8.80 126 P **Pn** **16 38 15.4 +1.0**
HRFI S **Sn** **16 39 49.9 -3.6**
TIP Timpagrande 8.81 298 P **Pn** **16 38 17.2 +2.6**
TIP Timpagrande 8.81 298 P **Pn** **16 38 13.1 -1.5**
EIL Elat 8.98 128 Pn **Pn** **16 38 15.6 -1.2**
0.6nm,0.3s,baz=330,slow=6.8,SNR=9.2
EIL Sn **Sn** **16 39 52.8 -5.2**
1.5nm,0.3s,baz=350,slow=15,SNR=4.3
4.3nm,0.7s
EIL Elat 8.98 128 P **Pn** **16 38 17.0 +0.2**
EIL S **Sn** **16 39 54.4 -3.6**
ASF Jabal al Asfar 9.02 109 Pn **Pn** **16 38 16.3 -1.1**
0.5nm,0.3s,baz=254,slow=8.5,SNR=3.3
1.2nm,0.4s
PDG Podgorica 9.10 322 P **Pn** **16 38 19.8 +1.5**
MARCO Tramutola 9.94 302 P **Pn** **16 38 30.3 +0.4**
MLR Muntele Rosu 10.02 357 Pn **Pn** **16 38 32.1 +1.0**
0.2nm,0.3s,baz=161,slow=11,SNR=3.3
2.0nm,0.7s
MLR Muntele Rosu 10.02 357 P **Pn** **16 38 34.2 +3.1**
MPLH Magyarpolny 13.59 332 P **P** **16 39 26.5 -2.2**
KEST Kesra 14.21 276 Pn **Pn** **16 39 30.2 +1.7**
0.3nm,0.3s,baz=338,slow=3.1,SNR=4.8
1.2nm,0.7s
SOKA Soboth 14.26 325 *i* P **P** **16 39 35.1 -1.3**
2.0nm,0.6s
RONA Rosalia, Austr 14.51 331 *i* P **P** **16 39 38.7 -0.3**
4.8nm,0.9s
KBZ Khabaz 14.87 52 Pn **Pn** **16 39 40.0 +2.7**
0.1nm,0.3s,baz=249,slow=4.7,SNR=5.2
2.3nm,1.0s
KIEV Kiev 15.31 6 P **P** **16 39 47.2 -0.6**
AKASG Malin Array Be 15.31 6 Pn **Pn** **16 39 43.7 +0.6**
1.2nm,0.3s,baz=195,slow=10,SNR=9.9
1.0nm,0.5s
KBA Koelnbreinsper 15.36 323 *e*P **P** **16 39 49.2 +0.6**
1.5nm,0.5s
MOA Molln 15.48 327 *e*P **P** **16 39 49.8 -0.1**
2.1nm,0.8s
MOA Molln 15.48 327 P **P** **16 39 53.2 +3.3**
ABTA Abfaltersbach 15.55 321 *e*P **P** **16 39 50.7 0.0**
1.7nm,0.6s
KRUC Moravsky 15.59 334 *e*P **P** **16 39 50.0 -1.0**
KRUC Moravsky 15.59 334 P **P** **16 39 51.5 +0.5**
OJC Ojcow 15.59 343 P **P** **16 39 50.8 -0.2**
BIOA Bad Ischl, Aus 15.65 325 *e*P **P** **16 39 51.9 +0.1**
4.2nm,1.0s
VRAC Vranov 15.72 335 Pn **Pn** **16 39 50.1 +1.6**
0.3nm,0.3s,baz=165,slow=13,SNR=4.0
VRAC LR LR 16 46 58.2
comp=Z,86nm,20.5s,baz=152,slow=41
0.9nm,0.3s
VRAC Vranov 15.72 335 *e*P **P** **16 39 51.1 -1.4**
VRAC Vranov 15.72 335 P **P** **16 39 55.5 +3.0**
MORC Moravsky Berou 15.81 337 *e*P **Pn** **16 39 50.9 +1.2**
MORC Moravsky Berou 15.81 337 P **Pn** **16 39 50.0 +0.4**
LESA Schwarzleotal 15.93 323 *e*P **P** **16 39 55.4 +0.6**
1.4nm,0.5s
TREC Trest 16.11 332 P **P** **16 39 59.7 +2.8**
CKRC Cesky Krumlov 16.20 329 *e*P **P** **16 39 56.2 -1.7**
CKRC AMS AMS 16 46 50.0
comp=Z,100nm,12.1s
KRLC Kraliky 16.32 336 *e*P **P** **16 40 03.9 +4.8**
KRLC Kraliky 16.32 336 P **P** **16 40 02.9 +3.8**
WTTA Wattenberg 16.34 321 *e*P **P** **16 40 00.2 +0.6**
9.5nm,1.6s
WATA Walderalm 16.42 321 *e*P **P** **16 40 01.2 +0.7**
4.3nm,0.5s
GERES GERESS Array B 16.48 328 Pn **Pn** **16 39 58.7 +0.3**
baz=147,slow=13,SNR=13
1.6nm,0.7s
SQTA Sankt Quirin 16.54 320 *i* pP pP 16 40 03.0 -1.4
5.4nm,0.9s
FETA Feichten 16.67 319 *e*P **P** **16 40 03.3 +0.1**
3.5nm,0.8s
MOTA Moosalm 16.67 320 *e*pP pP 16 40 04.4 -1.5
2.9nm,0.9s
FUORN Ofenpass-Fuorn 16.68 317 P **P** **16 40 06.9 +3.5**
DPC Dobruska-Polom 16.70 336 *e*P **P** **16 40 05.1 +1.7**
DPC Dobruska-Polom 16.70 336 P **P** **16 40 05.8 +2.4**
KHC Kasperske Hory 16.75 329 *e*P **P** **16 40 04.2 +0.3**
KHC AMS AMS 16 47 00.0
comp=Z,200nm,11.0s
KHC Kasperske Hory 16.75 329 P **P** **16 40 04.8 +0.9**
RETA Reutte 16.94 320 *e*pP pP 16 40 08.1 -0.7
4.9nm,1.2s
DAVOX Davos/Dischmat 16.99 317 LR LR 16 48 05.9
comp=Z,44nm,20.4s,baz=258,slow=42
PRU Pruhonice 17.04 332 *e*P **P** **16 40 06.5 -0.5**
WET Wettzell 17.07 327 P **P** **16 40 11.3 +3.9**
BRG Berggiesshubel 17.98 333 *e*P **P** **16 40 21.5 +4.1**
BRG Amp 16 40 23.4
comp=Z,3.8nm,1.0s
GTTG Gottingen 20.10 328 P Pn 16 40 43.1 +0.7
OBN Obninsk 20.76 16 LR LR 16 49 18.6
comp=Z,76nm,20.3s,baz=3.0,slow=38
ESDC Sonseca Array 24.68 289 P **P** **16 41 26.7 -1.4**
comp=Z,0.6nm,0.5s,baz=79,slow=9.5,SNR=8.3
comp=Z,0.6nm,0.5s
FINES FINESS Array B 25.99 359 P **P** **16 41 39.5 -0.1**
comp=Z,1.3nm,0.7s,baz=133,slow=13,SNR=3.8
comp=Z,1.3nm,0.7s
EKA Eskdalemuir Ar 28.57 323 P **P** **16 42 03.1 +0.2**
comp=Z,0.3nm,0.4s,baz=120,slow=9.7,SNR=10.0
comp=Z,0.3nm,0.4s
TORD Torodi Ar. Bea 31.74 232 P **P** **16 42 31.8 +0.5**
comp=Z,0.7nm,0.4s,baz=33,slow=8.7,SNR=6.8
comp=Z,0.7nm,0.4s
KURBB Kurchatov Arra 39.87 51 P **P** **16 43 40.7 +0.1**
comp=Z,1.1nm,0.6s,baz=277,slow=8.8,SNR=10
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 42.47 57 P **P** **16 44 02.5 +0.3**
comp=Z,0.6nm,0.4s,baz=271,slow=8.4,SNR=12
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 43.81 46 P **P** **16 44 12.0 -0.8**
comp=Z,0.7nm,0.5s,baz=256,slow=9.0,SNR=5.6
comp=Z,0.7nm,0.5s
PALK Pallekele 56.65 106 LR LR 17 13 46.7
comp=Z,94nm,18.9s,baz=218,slow=40
SONM Songino Array 58.24 51 P **P** **16 46 01.2 -0.4**
comp=Z,1.1nm,0.7s,baz=274,slow=7.0,SNR=4.0
comp=Z,1.1nm,0.7s
TIXI Tiksi 60.39 21 LR LR 17 14 13.8
comp=Z,67nm,21.5s,baz=279,slow=38
SCHQ Schefferville 63.81 320 P **P** **16 46 40.1 +0.9**
comp=Z,2.1nm,0.5s,baz=19,slow=4.0,SNR=6.1
comp=Z,2.1nm,0.5s
CMAR Chiang Mai Arr 65.19 84 P **P** **16 46 48.6 -0.2**
comp=Z,0.6nm,0.4s,baz=301,slow=7.7,SNR=5.1
comp=Z,0.6nm,0.4s
USRK Ussuriysk Ar. 75.66 46 P **P** **16 47 51.3 -1.0**
comp=Z,0.9nm,0.7s,baz=287,slow=5.6,SNR=5.4
comp=Z,0.9nm,0.7s
KSRS Korea Array 77.01 53 P **P** **16 47 59.4 -0.7**
comp=Z,0.5nm,0.7s,baz=301,slow=4.4,SNR=2.9
comp=Z,0.5nm,0.7s
MDP Montagnes des 78.47 268 LR LR 17 24 22.9
comp=Z,21nm,18.0s,baz=18,slow=37

*NEIC **09** 16:37:00.6±1.4, 17°.90N±0°.03×66°.92W±0°.01, h10km±1km, ML3.5/37, Md3.3/13(RSPR), Error ellipse: s-maj=4.7km s-min=2.8km az=12.0*
*OSPL **09** 16:37:01.0±0.6, 17°.92N×66°.93W, h0km±21km, ML3.3, Presumed earthquake*
*SDD **09** 16:37:01.9±1.9, 17°.92N×66°.91W, h0km±14km, MD3.1, ML3.4, MW3.1, Presumed earthquake*
*RSPR **09** 16:37:01.1, 17°.95N×66°.93W, h11km, MD3.2/13*
ISC 09 16:36:59.9±1.0, **17°.91N**±0°.05×**66°.92W**±0°.02, **h17**km±5km, **n53**, **σ0°82/76, 11C-16D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**28**			**Pg**	**16 37 03.5**	**+0.2**
GBPR						**Sg**	**16 37 05.1**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.07**	**28**	⇑*i*P		**Pg**	**16 37 03.5**	**+0.2**
GBPR				*e*S		**Sg**	**16 37 05.1**	**-0.4**
MLPR	**Magueyes Islan**	**0.14**	**295**			**Pb**	**16 37 04.0**	**-0.1**
MLPR						**Sb**	**16 37 06.2**	**-0.6**
MLPR				IAML			16 37 07.0	
	22μm,0.3s							
MLPR	**Magueyes Islan**	**0.14**	**295**	⇓*i*P		**Pb**	**16 37 04.2**	**+0.1**
MLPR				IAML			16 37 06.6	
	comp=N,20μm,0.3s							
MLPR				⇓*i*Sg		**Sb**	**16 37 06.7**	**-0.1**
MLPR	**Magueyes Islan**	**0.14**	**295**	⇑*e*P		**Pb**	**16 37 04.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.21**	**297**			**Pb**	**16 37 05.0**	**-0.3**
CRPR						**Sb**	**16 37 07.5**	**-1.3**
CRPR				IAML			16 37 08.4	
	comp=N,22μm,0.3s							
CRPR				IAML			16 37 08.6	
	comp=N,11μm,0.8s							
CRPR	**Cabo Rojo, PR**	**0.21**	**297**	⇑*e*P		**Pb**	**16 37 05.1**	**-0.2**
LSP	**Las Mesas**	**0.31**	**328**			**Pg**	**16 37 06.8**	**+0.2**
LSP	**Las Mesas**	**0.31**	**328**	⇓*e*P		**Pg**	**16 37 06.8**	**+0.2**
OBIP	**Obispado Ponce**	**0.32**	**66**			**Pb**	**16 37 07.2**	**0.0**
OBIP						**Sb**	**16 37 11.8**	**-0.4**
OBIP	**Obispado Ponce**	**0.32**	**66**	*i* P		**Pb**	**16 37 07.2**	**0.0**
OBIP				*e*S		**Sg**	**16 37 11.2**	**-0.2**
OBIP				IAML			16 37 13.8	
	comp=Z,9μm,0.1s							
OBIP	**Obispado Ponce**	**0.32**	**66**	⇓*i*P		**Pb**	**16 37 07.3**	**0.0**
OBIP				*e*S		**Sb**	**16 37 12.2**	**+0.1**
CELP	**Cerrillos**	**0.36**	**63**			**Pb**	**16 37 07.8**	**-0.1**
CELP						**Sb**	**16 37 13.3**	**+0.1**
CELP				IAML			16 37 14.4	
	comp=Z,4μm,0.3s							
CELP	**Cerrillos**	**0.36**	**63**	⇓*i*P		**Pb**	**16 37 08.1**	**+0.2**
CELP				⇓*i*Sg		**Sb**	**16 37 13.8**	**+0.6**
CELP				IAML			16 37 14.3	
	comp=N,2μm,0.3s							
CELP	**Cerrillos**	**0.36**	**63**	⇓*e*P		**Pb**	**16 37 08.0**	**+0.2**
PRSN	**Puerto Rico Se**	**0.38**	**324**			**Pg**	**16 37 07.8**	**+0.1**
PRSN						**Sg**	**16 37 11.5**	**-1.5**
PRSN	**Puerto Rico Se**	**0.38**	**324**	⇑*e*P		**Pg**	**16 37 07.9**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.39**	**28**			**Pg**	**16 37 08.0**	**+0.1**
UUPR						**Sg**	**16 37 13.2**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.39**	**28**	⇓*e*P		**Pg**	**16 37 08.2**	**+0.2**
AOPR	**Arecibo Observ**	**0.46**	**19**			**Pg**	**16 37 09.3**	**0.0**
AOPR						**Sg**	**16 37 14.5**	**-1.0**
AOPR	**Arecibo Observ**	**0.46**	**19**	⇓*i*P		**Pg**	**16 37 09.4**	**+0.2**
AOPR				⇑*i*Sg		**Sg**	**16 37 15.9**	**+0.4**
AOPR				IAML			16 37 17.0	
	comp=N,9μm,0.3s							
AOPR	**Arecibo Observ**	**0.46**	**19**	⇓*e*P		**Pg**	**16 37 09.3**	**0.0**
AGPR	**Aguadilla, PR**	**0.58**	**341**			**Pb**	**16 37 11.4**	**-0.3**
AGPR						**Sb**	**16 37 18.6**	**-1.2**
AGPR				IAML			16 37 19.7	
	comp=N,3μm,0.2s							
AGPR	**Aguadilla, PR**	**0.58**	**341**	⇑*i*P		**Pb**	**16 37 11.6**	**-0.2**
AGPR				IAML			16 37 19.7	
	comp=N,4μm,0.3s							
AGPR				⇓*i*Sg		**Sb**	**16 37 19.7**	**0.0**
AGPR	**Aguadilla, PR**	**0.58**	**341**	⇑*i*P		**Pb**	**16 37 11.6**	**-0.2**
ECPR	**Experimental S**	**0.66**	**52**			**Pb**	**16 37 12.8**	**-0.3**
ECPR						**Sg**	**16 37 22.1**	**+0.2**
ECPR				IAML			16 37 23.9	
	comp=N,3μm,0.2s							
ECPR				IAML			16 37 26.3	
	comp=N,2μm,0.2s							
ECPR	**Experimental S**	**0.66**	**52**	⇓*e*P		**Pg**	**16 37 13.0**	**0.0**
EMPR	**Esperanza - Ma**	**0.67**	**33**			**Pg**	**16 37 13.7**	**+0.5**
EMPR						**Sg**	**16 37 23.2**	**+1.1**
EMPR	**Esperanza - Ma**	**0.67**	**33**	⇓*i*P		**Pg**	**16 37 13.7**	**+0.5**
EMPR				*e*S		**Sg**	**16 37 23.2**	**+1.1**
IDE	**Isla Desecheo**	**0.71**	**312**			**Pb**	**16 37 13.7**	**-0.2**
IDE						**Sb**	**16 37 22.6**	**-0.8**
IDE	**Isla Desecheo**	**0.71**	**312**	⇑*e*P		**Pb**	**16 37 13.7**	**-0.2**
IDE				*e*S		**Sb**	**16 37 22.6**	**-0.8**
SJG	**San Juan**	**0.76**	**75**			**Sn**	**16 37 25.8**	**-1.0**
SJG	**San Juan**	**0.76**	**75**			**Pg**	**16 37 14.7**	**-0.2**
SJG	**San Juan**	**0.76**	**75**	⇑*i*P		**Pg**	**16 37 14.7**	**0.0**
SJG	**San Juan**	**0.76**	**75**	*i* P		**Pg**	**16 37 14.5**	**-0.2**
SJG				*e*S		**Sn**	**16 37 25.1**	**-1.7**
SJG	**San Juan**	**0.76**	**75**	⇓*i*P		**Pg**	**16 37 14.7**	**0.0**
PDPR	**Patillas Dam,**	**0.86**	**83**			**Pg**	**16 37 16.3**	**-0.3**
HUMP	**Col San Antoni**	**1.04**	**77**			**Pb**	**16 37 19.0**	**-0.5**
HUMP						**Sg**	**16 37 33.4**	**-0.4**
HUMP				IAML			16 37 36.8	
	comp=N,888nm,0.4s							
HUMP	**Col San Antoni**	**1.04**	**77**	⇓*e*P		**Pn**	**16 37 19.3**	**-0.4**
PCDR	**Punta Cana, DR**	**1.52**	**294**			**Pn**	**16 37 25.7**	**-0.6**
PCDR				IAML			16 38 00.5	
	comp=N,495nm,1.1s							
PCDR	**Punta Cana, DR**	**1.52**	**294**	*i* P		**Pn**	**16 37 27.2**	**+0.9**
PCDR				IAML			16 38 00.3	
	comp=Z,201nm,0.7s							
PCDR	**Punta Cana, DR**	**1.52**	**294**	⇑*e*P		**Pn**	**16 37 27.1**	**+0.8**
HIDR	**Higuey Centro**	**1.84**	**292**	⇑*i*P		**Pn**	**16 37 31.7**	**+0.9**
HIDR				IAML			16 38 01.1	
	comp=N,353nm,0.2s							
DR12	**Loma Pena Alta**	**2.50**	**291**			**Pn**	**16 37 40.3**	**+0.4**
HATOM	**Hato Mayor del**	**2.50**	**291**	⇑*i*P		**Pn**	**16 37 42.5**	**+2.7**
HATOM				IAML			16 38 22.6	
	comp=N,71nm,0.6s							
BANI	**BANI**	**3.31**	**279**	Pn		**Pn**	**16 37 51.6**	**+0.5**
BANI	**BANI**	**3.31**	**279**	⇑*i*P		**Pn**	**16 37 52.0**	**+0.9**
BANI				IAML			16 38 53.8	
	comp=N,127nm,0.5s							
SABA	**Saba**	**3.51**	**94**	Pn		**Pn**	**16 37 55.2**	**+1.4**
SMRT	**St. Maarten**	**3.66**	**87**	Pn		**Pn**	**16 37 56.7**	**+0.9**
SC01	**Santiago de lo**	**3.92**	**293**			**Pn**	**16 38 01.4**	**+2.0**
SDDR	**Presa de Saban**	**4.29**	**285**			**Pn**	**16 38 05.6**	**+1.2**
SDDR	**Presa de Saban**	**4.29**	**285**	⇓*i*P		**Pn**	**16 38 07.6**	**+3.2**
SDDR				IAML			16 39 22.8	
	comp=N,27nm,0.7s							
GRTK	**Grand Turk**	**5.35**	**313**	Pn		**Pn**	**16 38 20.1**	**+1.1**

*SJA **09** 16:38:13.0±0.7, 20°.96S×68°.70W, h141km, ML3.5, MW3.5*
*GUC **09** 16:38:14.4±0.7, 20°.97S×68°.69W, h136km±4km, ML3.3*
ISC 09 16:38:14.5±1.9, **20°.98S**±0°.03×**68°.7W**±0°.1, **h136**km±12km, **n27**, **σ0°90/43, 3C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PB08	**IPOC Station P**	**0.92**	**335**	*e*P		**Pn**	**16 38 37.5**	**-0.2**
PB08				IAML			16 38 55.5	
	comp=Z,295nm,0.1s							
PB08				*e*S		**Sn**	**16 38 55.7**	**+0.4**
PB08	**IPOC Station P**	**0.92**	**335**	⇓*e*P		**Pn**	**16 38 37.5**	**-0.2**
PB08				IAML			16 38 55.4	
	comp=N,611nm,0.2s							
PB09	**IPOC Station P**	**0.93**	**210**	*e*P		**Pn**	**16 38 37.7**	**+0.2**
PB09				*e*S		**Sn**	**16 38 55.9**	**+0.8**
PB09				IAML			16 38 56.3	
	comp=Z,345nm,0.5s							
PB09	**IPOC Station P**	**0.93**	**210**	*e*P		**Pn**	**16 38 37.8**	**+0.2**
PB09				*e*S		**Sn**	**16 38 55.5**	**+0.3**
PB09				IAML			16 38 56.3	
	comp=N,460nm,0.2s							
PB02	**IPOC Station P**	**1.13**	**253**	*e*P		**Pn**	**16 38 39.5**	**+0.3**
PB02				*e*S		**Sn**	**16 38 55.7**	**-2.4**
PB02	**IPOC Station P**	**1.13**	**253**	⇑*e*P		**Pn**	**16 38 39.5**	**+0.3**
PB02				*e*S		**Sn**	**16 38 58.2**	**+0.1**
PB07	**IPOC Station P**	**1.30**	**235**	*e*P		**Pn**	**16 38 41.0**	**0.0**
PB07				*e*S		**Sn**	**16 39 02.1**	**+0.9**
PB07				IAML			16 39 02.5	
	comp=Z,582nm,0.4s							
PB07	**IPOC Station P**	**1.30**	**235**	*e*P		**Pn**	**16 38 41.2**	**+0.2**
PB07				*e*S		**Sn**	**16 39 01.3**	**+0.1**
PB07				IAML			16 39 02.5	
	comp=N,656nm,0.1s							
GO01	**Chusmiza**	**1.38**	**342**	*e*P		**Pn**	**16 38 41.3**	**-0.9**
GO01				IAML			16 39 02.1	
	comp=Z,2μm,0.3s							
GO01	**Chusmiza**	**1.38**	**342**	*e*P		**Pn**	**16 38 41.9**	**-0.3**
GO01			

AF01	**San Pedro de A**	**2.03**	**165**	*eP*	Pn	16 38 33.2	-16
AF01				*eS*	Sn	16 39 03.0	-13
AF01				IAML		16 39 03.8	
	comp=Z,327nm,0.4s						
PB05	**IPOC Station P**	**2.30**	**216**	*eP*	**Pn**	**16 38 52.7**	**+0.1**
PB05				*eS*	**Sn**	**16 39 21.7**	**-0.2**
PB05	**IPOC Station P**	**2.30**	**216**	*eP*	**Pn**	**16 38 52.8**	**+0.2**
PB05				IAML		16 39 23.4	
	comp=E,103nm,0.2s						
PB16	**IPOC Station P**	**2.73**	**345**	*eP*	**Pn**	**16 38 58.5**	**0.0**
PB16				IAML		16 39 36.5	
	comp=Z,64nm,0.4s						
PB16	**IPOC Station P**	**2.73**	**345**	*eP*	**Pn**	**16 38 58.9**	**+0.4**
PB16				IAML		16 39 36.6	
	comp=N,66nm,0.3s						
PB12	**IPOC Station P**	**2.79**	**327**	*eP*	**Pn**	**16 38 57.6**	**-1.2**
PB12				IAML		16 39 34.2	
	comp=Z,77nm,0.4s						
AP01	**Chacalluta**	**3.00**	**330**	*eP*	**Pn**	**16 39 05.0**	**+3.7**
AP01				*eS*	**Sn**	**16 39 37.9**	**+0.3**
AP01				IAML		16 39 38.9	
	comp=Z,184nm,0.3s						
PB14	**IPOC Station P**	**3.94**	**203**	*eP*	**Pn**	**16 39 12.5**	**-1.3**
PB14				*eS*	**Sn**	**16 39 58.6**	**-1.2**
PB14				IAML		16 40 09.4	
	comp=Z,34nm,1.6s						

*AEIC **09** 16:42:37.5±1.4, 60.°90N±0.°03×151.°01W±0.°05, h54km±5km, Error ellipse: s-maj=3.9km s-min=3.3km az=206.0*

NEIC 09 16:42:36.3±1.4**, 60.°90N**±0.°03×**151.°02W**±0.°05**, h67**km±5km**, ML3.6**/212**, ML3.3**(AEIC)**, Error ellipse: s-maj=4.0km s-min=3.5km az=198.0, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPN	**Captain Cook N**	**0.15**	**208**		Pn	16 42 47.5	+1.1
CAPN				Sn	Sn	16 42 53.9	+0.2
CAPN				IAML		16 42 57.0	
	comp=N,8μm,0.5s						
CAPN				IAML		16 43 00.2	
	comp=E,5μm,0.3s						
SLKM	**Skilak Lake**	**0.55**	**135**		Pn	16 42 49.3	-0.1
SLKM				Sn	Sn	16 42 57.9	-1.2
SLKM				IAML		16 43 00.5	
	comp=N,3μm,0.3s						
SLKM				IAML		16 43 01.5	
	comp=E,2μm,0.3s						
SPU	**Mount Spurr**	**0.58**	**300**		Pn	16 42 49.2	-0.6
SPCG	**Spurr Capps Gl**	**0.63**	**309**		Pn	16 42 50.0	-0.3
SPCG					Sn	16 43 00.2	-0.5
RC01	**Rabbit Creek A**	**0.65**	**72**		Pn	16 42 50.5	0.0
RC01				Sn	Sn	16 43 00.7	-0.3
RC01				IAML		16 43 02.4	
	comp=N,2μm,0.4s						
RC01				IAML		16 43 03.0	
	comp=E,2μm,0.2s						
SPCR	**Spurr Chakacha**	**0.66**	**298**		Pn	16 42 50.2	-0.4
SPCR					Sn	16 43 00.7	-0.5
SPCP	**Crater Peak Br**	**0.67**	**304**		Pn	16 42 50.6	-0.2
SPCP					Sn	16 43 01.4	-0.1
CKL	**Chakachamna La**	**0.71**	**296**		Pn	16 42 51.0	-0.2
STLK	**Strandline Lak**	**0.72**	**327**		Pn	16 42 51.2	-0.2
STLK				Sn	Sn	16 43 01.7	-0.8
STLK				IAML		16 43 02.5	
	comp=N,942nm,0.4s						
SPBG	**Spurr Blockage**	**0.75**	**300**		Pn	16 42 51.6	-0.2
RDT	**Redoubt**	**0.76**	**245**		Pn	16 42 51.4	-0.4
RDT					Sn	16 43 03.0	-0.1
O22K	**Cooper Landing**	**0.76**	**123**		Pn	16 42 52.0	+0.3
O22K				Sn	Sn	16 43 03.3	+0.3
O22K				IAML		16 43 09.1	
	comp=N,4μm,0.7s						
O22K				IAML		16 43 09.8	
	comp=E,4μm,0.7s						
SPWE	**Spurr West**	**0.84**	**297**		Pn	16 42 52.7	-0.1
DFR	**Drift River**	**0.88**	**250**		Pn	16 42 52.9	-0.3
REF	**Redoubt East F**	**0.93**	**244**		Pn	16 42 53.7	-0.2
REF					Sn	16 43 07.2	+0.2
RDJH	**Redoubt Jeurge**	**0.93**	**252**		Pn	16 42 53.8	-0.1
RDJH					Sn	16 43 07.2	+0.2
SPNN	**North Nagishla**	**0.94**	**301**		Pn	16 42 54.1	0.0
RDSO	**Redoubt South**	**0.96**	**243**		Pn	16 42 54.2	-0.1
M22K	**Willow**	**0.96**	**26**		Pn	16 42 54.5	+0.3
M22K				Sn	Sn	16 43 08.0	+0.7
M22K				IAML		16 43 09.6	
	comp=E,2μm,0.2s						
M22K				IAML		16 43 09.9	
	comp=N,3μm,0.6s						
RED	**Redoubt Volcan**	**0.99**	**242**		Pn	16 42 54.5	-0.1
RED				Sn	Sn	16 43 07.5	-0.7
RED				IAML		16 43 09.3	
	comp=N,1μm,0.7s						
RED				IAML		16 43 10.5	
	comp=E,989nm,0.3s						
NCT	**North Crescent**	**1.00**	**251**		Pn	16 42 54.7	-0.1
NCT					Sn	16 43 08.9	+0.4
SEW	**Seward**	**1.11**	**135**		Pn	16 42 55.5	-0.5
SEW				Sn	Sn	16 43 09.7	-1.0
SEW				IAML		16 43 15.9	
	comp=N,904nm,0.4s						
SEW				IAML		16 43 17.2	
	comp=E,929nm,0.7s						
SKT	**Skwentna**	**1.11**	**347**		Pn	16 42 56.2	0.0
SKT				Sn	Sn	16 43 10.8	-0.2
SKT				IAML		16 43 12.2	
	comp=N,777nm,0.5s						
SKT				IAML		16 43 12.6	
	comp=E,847nm,0.3s						
BRLK	**Bradley Lake**	**1.14**	**177**		Pn	16 42 56.9	+0.4
BRLK				IAML		16 43 16.7	
	comp=N,666nm,0.1s						
BRLK				IAML		16 43 17.2	
	comp=E,652nm,0.4s						
O20K	**Slope Mountain**	**1.14**	**225**		Pn	16 42 57.2	+0.6
PMR	**Palmer**	**1.15**	**52**		Pn	16 42 56.5	0.0
PMR				Sn	Sn	16 43 11.2	-0.4
BRSE	**Bradley Lake S**	**1.17**	**173**		Pn	16 42 57.0	+0.2
HOM	**Homer**	**1.28**	**194**		Pn	16 42 58.8	+0.6
HOM				Sn	Sn	16 43 16.2	+1.5
HOM				IAML		16 43 18.9	
	comp=N,1μm,1.2s						
HOM				IAML		16 43 19.2	
	comp=E,2μm,0.6s						
IVE	**Iliamna Volcan**	**1.33**	**229**		Pn	16 42 59.2	+0.2
GHO	**Glory Hole Cre**	**1.34**	**48**		Pn	16 42 59.1	0.0
GHO				Sn	Sn	16 43 15.9	-0.3
GHO				IAML		16 43 21.4	
	comp=N,558nm,0.5s						
GHO				IAML		16 43 24.0	
	comp=E,606nm,0.6s						
KNK	**Knik Glacier**	**1.34**	**66**		Pn	16 42 59.3	+0.2
KNK				Sn	Sn	16 43 16.2	-0.1
KNK				IAML		16 43 22.0	
	comp=N,676nm,0.3s						
KNK				IAML		16 43 22.5	
	comp=E,827nm,0.6s						
CNPM	**China Poot**	**1.38**	**185**		Pn	16 43 00.0	+0.4
CNPM				Sn	Sn	16 43 16.6	-0.5
CNPM				IAML		16 43 21.8	
	comp=E,834nm,0.6s						
CNPM				IAML		16 43 22.2	
	comp=N,923nm,0.4s						
ILS	**Iliamna Low So**	**1.39**	**228**		Pn	16 43 00.2	+0.4
ILSW	**Iliamna Southw**	**1.40**	**230**		Pn	16 43 00.1	+0.1
ILSW				Sn	Sn	16 43 16.4	-1.2
M20K	**Styx River**	**1.42**	**315**		Pn	16 43 00.6	+0.4
M20K				Sn	Sn	16 43 16.9	-1.3
CUT	**Chulitna**	**1.56**	**13**		Pn	16 43 02.2	+0.3
CUT				Sn	Sn	16 43 20.8	-0.4
CUT				IAML		16 43 24.7	
	comp=E,621nm,0.2s						
CUT				IAML		16 43 28.1	
	comp=N,547nm,0.4s						
SML	**Sawmill**	**1.58**	**54**		Pn	16 43 02.3	-0.1
SML				Sn	Sn	16 43 21.0	-0.9
L22K	**Petersville**	**1.64**	**4**		Pn	16 43 03.4	+0.3
L22K				Sn	Sn	16 43 24.9	+1.6
L22K				IAML		16 43 27.5	
	comp=E,335nm,0.2s						
P19K	**Oil Pt**	**1.67**	**222**		Pn	16 43 04.5	+1.1
N19K	**Bonanza Creek**	**1.70**	**269**		Pn	16 43 03.7	-0.2
N19K				Sn	Sn	16 43 23.3	-1.6
O19K	**Port Alsworth**	**1.78**	**248**		Pn	16 43 04.4	-0.5
O19K				Sn	Sn	16 43 25.6	-0.9
O19K				IAML		16 43 27.4	
	comp=E,593nm,0.3s						
O19K				IAML		16 43 27.8	
	comp=N,546nm,0.4s						
M23K	**Glacier View**	**1.82**	**59**		Pn	16 43 05.6	+0.1
M19K	**Big River Lodg**	**1.91**	**303**		Pn	16 43 07.0	+0.3
M19K				Sn	Sn	16 43 29.4	-0.4
GLI	**Glacier Island**	**1.92**	**89**		Pn	16 43 05.5	-1.2
GLI				Sn	Sn	16 43 28.0	-1.8
GLI				IAML		16 43 30.5	
	comp=E,268nm,0.4s						
GLI				IAML		16 43 31.0	
	comp=N,298nm,0.5s						
AU22	**Augustine Moun**	**1.93**	**218**		Pn	16 43 08.0	+1.1
AUJK	**Augustine Jueg**	**1.96**	**219**		Pn	16 43 08.5	+1.2
AUCH	**Augustine Cone**	**1.96**	**219**		Pn	16 43 08.8	+1.3
AUI	**Augustine Isla**	**1.98**	**219**		Pn	16 43 08.8	+1.2
P23K	**Montague Islan**	**2.00**	**115**		Pn	16 43 07.3	-0.6
P23K				Sn	Sn	16 43 30.7	-1.3
P23K				IAML		16 43 42.4	
	comp=N,236nm,0.5s						
P23K				IAML		16 43 47.2	
	comp=E,223nm,0.8s						
SCM	**Sheep Creek Mo**	**2.01**	**61**		Pn	16 43 08.0	-0.1
SCM				IAML		16 43 41.0	
	comp=N,252nm,0.8s						
SCM				IAML		16 43 43.6	
	comp=E,211nm,0.6s						
PPLA	**Purkeypile**	**2.08**	**345**		Pn	16 43 09.2	+0.1
WAT7	**Susitna Watana**	**2.20**	**27**		Pn	16 43 11.1	+0.4
FID	**Port Fidalgo**	**2.23**	**92**		Pn	16 43 09.3	-1.7
FID				IAML		16 43 38.5	
	comp=N,307nm,0.3s						
FID				IAML		16 43 38.9	
	comp=E,338nm,0.5s						
L19K	**White Mountain**	**2.25**	**307**		Pn	16 43 11.8	+0.6
WAT1	**Susitna Watana**	**2.26**	**30**		Pn	16 43 11.9	+0.4
HIN	**Hinchinbrook I**	**2.28**	**101**		Pn	16 43 10.6	-1.0
HIN				IAML		16 43 40.3	
	comp=E,194nm,0.8s						
WAT6	**Susitna Watana**	**2.30**	**41**		Pn	16 43 12.2	+0.2
O18K	**Koktuh Hills**	**2.33**	**245**		Pn	16 43 11.9	-0.5
Q19K	**Cape Douglas,**	**2.38**	**215**		Pn	16 43 13.8	+0.8
Q19K				IAML		16 43 51.5	
	comp=N,261nm,0.9s						
Q19K				IAML		16 44 06.5	
	comp=E,267nm,1.1s						
N18K	**Kilae Creek**	**2.40**	**267**		Pn	16 43 12.7	-0.6
M18K	**Stony River**	**2.40**	**286**		Pn	16 43 13.2	-0.2
KLU	**Klutina**	**2.54**	**74**		Pn	16 43 14.8	-0.5
KLU				IAML		16 44 50.2	
	comp=N,189nm,0.3s						
KLU				IAML		16 44 51.2	
	comp=E,191nm,0.4s						
DIV	**Divide**	**2.56**	**82**		Pn	16 43 15.0	-0.6
DIV				IAML		16 43 46.8	
	comp=E,247nm,0.3s						
DIV				IAML		16 43 47.1	
	comp=N,379nm,0.4s						
CAST	**Castle Rocks**	**2.58**	**349**		Pn	16 43 16.3	+0.6
CAST				IAML		16 44 57.4	
	comp=N,139nm,0.7s						
CAST				IAML		16 44 57.4	
	comp=E,211nm,0.9s						
TRF	**Thorofare Moun**	**2.58**	**7**		Pn	16 43 16.5	+0.6
TRF				IAML		16 45 01.1	
	comp=E,635nm,0.7s						
P18K	**Big Mountain,**	**2.59**	**236**		Pn	16 43 15.6	-0.3
EYAK	**Cordova Ski Ar**	**2.61**	**95**		Pn	16 43 15.1	-1.0
EYAK				IAML		16 45 03.2	
	comp=E,173nm,0.6s						
EYAK				IAML		16 45 03.3	
	comp=N,323nm,0.6s						
M24K	**Tolsona, Glenn**	**2.62**	**60**		Pn	16 43 16.8	+0.5
KTH	**Kantishna Hill**	**2.67**	**1**		Pn	16 43 17.5	+0.6
RND	**Reindeer**	**2.71**	**21**		Pn	16 43 18.4	+0.8
MID	**Middleton Isla**	**2.76**	**120**	Pn	Pn	16 43 19.2	+1.0
MID				IAML		16 44 28.1	
	comp=N,107nm,1.1s						
DHY	**Denali Highway**	**2.78**	**37**		Pn	16 43 19.1	+0.6
K20K	**Telida**	**2.86**	**331**		Pn	16 43 19.8	+0.3
KAHG	**Katmai Hook Gl**	**3.00**	**218**		Pn	16 43 22.6	+1.1
MCK	**McKinley**	**3.01**	**18**		Pn	16 43 22.8	+1.3
L18K	**Granite Mounta**	**3.02**	**299**		Pn	16 43 22.0	+0.3
Q18K	**Katmai Hardscr**	**3.03**	**224**		Pn	16 43 22.4	+0.5
KARR	**Katmai Rainbow**	**3.05**	**219**		Pn	16 43 23.3	+1.2
N17K	**Nushagak Hills**	**3.06**	**266**		Pn	16 43 21.7	-0.5
CHUM	**Lake Minchumin**	**3.06**	**349**		Pn	16 43 22.9	+0.7
GOAT	**Goat Mountain**	**3.10**	**93**		Pn	16 43 21.7	-1.2
BMRM	**Bremner River**	**3.13**	**86**		Pn	16 43 22.0	-1.2
M17K	**Holitna River**	**3.15**	**282**		Pn	16 43 22.6	-0.9
M17K				IAML		16 43 59.8	
	comp=E,90nm,0.7s						
M17K				IAML		16 44 19.5	
	comp=N,92nm,0.8s						
RAGM	**Ragged Mountai**	**3.16**	**97**		Pn	16 43 22.3	-1.4
KAWH	**Katmai**	**3.17**	**219**		Pn	16 43 24.7	+0.9
HARP	**HAARP**	**3.17**	**59**		Pn	16 43 24.1	+0.3
N25K	**Chitina, Valde**	**3.18**	**74**		Pn	16 43 23.6	-0.4
P17K	**Kvichak River**	**3.21**	**240**		Pn	16 43 23.7	-0.6
P17K				IAML		16 44 03.4	
	comp=N,212nm,0.6s						
P17K				IAML		16 44 04.8	
	comp=E,167nm,0.7s						
KDAK	**Kodiak Island**	**3.23**	**195**		Pn	16 43 23.5	-1.0
KAKN	**Katmai Knife C**	**3.32**	**220**		Pn	16 43 26.6	+0.7
BWN	**Browne**	**3.37**	**12**		Pn	16 43 27.4	+1.0
KABU	**Katmai Buttres**	**3.41**	**221**		Pn	16 43 28.1	+1.0
KAIM	**Kayak Island**	**3.41**	**104**	Pn	Pn	16 43 27.4	+0.3
KAIM				IAML		16 45 38.1	
	comp=N,121nm,0.6s						
KAIM				IAML		16 45 47.7	
	comp=E,122nm,0.7s						
ACHA	**Angle Creek He**	**3.48**	**221**	Pn	Pn	16 43 26.5	-1.5
MGLS	**Mageik Landsli**	**3.48**	**219**		Pn	16 43 29.8	+1.7
GLB	**Gilahina Butte**	**3.53**	**78**		Pn	16 43 28.5	-0.2
GLB				IAML		16 45 36.2	
	comp=E,292nm,0.5s						
ANCK	**Angle Creek**	**3.54**	**222**		Pn	16 43 29.8	+1.0
CAHL	**Cahill**	**3.59**	**219**		Pn	16 43 30.7	+1.1
J20K	**Nowinta River**	**3.60**	**338**		Pn	16 43 29.9	+0.3
J20K				IAML		16 45 44.7	
	comp=N,161nm,0.8s						
J20K				IAML		16 45 56.3	
	comp=E,171nm,1.0s						
Q16K	**King Salmon**	**3.62**	**234**		Pn	16 43 31.6	+1.8
Q17K	**Contact Creek**	**3.62**	**225**		Pn	16 43 30.8	+0.8
BERG	**Berg Lake**	**3.64**	**95**	Pn	Pn	16 43 28.5	-1.6
VRDI	**Verde Repeater**	**3.69**	**82**		Pn	16 43 30.1	-0.9
VRDI				IAML		16 45 44.2	
	comp=E,190nm,0.7s						
L17K	**Donlin**	**3.70**	**293**		Pn	16 43 31.1	+0.1
O16K	**Kokwok River B**	**3.76**	**253**	Pn	Pn	16 43 31.0	-0.8
J19K	**Poorman**	**3.77**	**327**		Pn	16 43 32.2	+0.3
J19K				IAML		16 45 54.2	
	comp=N,87nm,0.6s						
J19K				IAML		16 45 57.6	
	comp=E,92nm,0.9s						
K24K	**Donnelly Dome**	**3.80**	**38**		Pn	16 43 31.2	-1.2
NEA2	**Nenana**	**3.82**	**13**		Pn	16 43 33.0	+0.5
WRH	**Wood River Hil**	**3.83**	**19**		Pn	16 43 33.5	+0.7
N16K	**Nishlik Lake**	**3.84**	**267**		Pn	16 43 32.9	+0.1
CRQM	**Cirque**	**3.86**	**89**	Pn	Pn	16 43 32.5	-0.8
OHAK	**Old Harbor**	**3.87**	**199**	Pn	Pn	16 43 32.0	-1.3
M16K	**Timber Creek**	**3.88**	**275**		Pn	16 43 33.0	-0.4
MCARA	**McCarthy VSAT**	**3.91**	**79**	Pn	Pn	16 43 32.7	-1.0
K17K	**Iditarod**	**3.91**	**301**		Pn	16 43 34.1	+0.3
P16K	**Nushagak River**	**3.97**	**245**	Pn	Pn	16 43 35.3	+0.6
P16K				IAML		16 44 46.5	
	comp=E,67nm,0.8s						
P16K				IAML		16 45 01.1	
	comp=N,63nm,0.8s						
HDA	**Harding Lake**	**3.99**	**26**		Pn	16 43 35.1	+0.2
TGL	**Tana Glacier**	**4.01**	**88**	Pn	Pn	16 43 35.8	+0.5
MENT	**Mentasta**	**4.01**	**56**	Pn	Pn	16 43 35.1	-0.1
CCB	**Clear Creek Bu**	**4.04**	**20**		Pn	16 43 37.9	+2.3
RIDG	**Independent Ri**	**4.05**	**43**		Pn	16 43 37.1	+1.3
M26K	**Nabesna, AK**	**4.11**	**65**		Pn	16 43 36.9	+0.3
MLY	**Manley**	**4.15**	**2**		Pn	16 43 37.7	+0.5
MLY				IAML		16 45 38.4	
	comp=E,127nm,0.5s						
L16K	**Owhat River**	**4.16**	**285**		Pn	16 43 36.6	-0.6
PTPK	**Patty Peak**	**4.17**	**82**		Pn	16 43 37.3	-0.3
I20K	**Naaghedeneel**	**4.22**	**339**	Pn	Pn	16 43 38.0	-0.1
BARK	**Barkley Ridge**	**4.22**	**93**		Pn	16 43 37.0	-1.3
KIAG	**Kiagna River**	**4.23**	**86**		Pn	16 43 37.2	-1.1
BALM	**Baldy**	**4.23**	**84**		Pn	16 43 37.4	-0.9
MDM	**Murphy Dome**	**4.27**	**16**		Pn	16 43 40.1	+1.4
I21K	**Tanana**	**4.32**	**355**	Pn	Pn	16 43 38.8	-0.7
I21K				IAML		16 45 47.9	
	comp=N,73nm,0.8s						
I21K				IAML		16 46 15.8	
	comp=E,79nm,0.9s						
IL31		**4.32**	**24**		Pn	16 43 40.2	+0.8
ILAR	**Eielson Array**	**4.32**	**24**		Pn	16 43 40.1	+0.6
I23K	**Minto, Yukon-K**	**4.33**	**9**		Pn	16 43 41.0	+1.4
I23K				IAML		16 45 50.4	
	comp=E,132nm,1.0s						
SCRK	**Sand Creek**	**4.50**	**44**		Pn	16 43 41.8	-0.1
J17K	**VABM Dome**	**4.54**	**307**		Pn	16 43 42.6	+0.2
J17K				IAML		16 46 26.5	
	comp=E,30nm,0.7s						
J17K				IAML		16 46 38.2	
	comp=N,29nm,0.6s						
GRNC	**Granite Creek**	**4.54**	**88**	Pn	Pn	16 43 42.9	+0.3
GRNC				IAML		16 46 16.9	
	comp=E,122nm,0.7s						
J25K	**Salcha River,**	**4.54**	**32**		Pn	16 43 43.3	+0.8
N15K	**Kwethluk River**	**4.54**	**265**	Pn	Pn	16 43 43.1	+0.6
N15K				IAML		16 45 11.8	
	comp=N,28nm,1.1s						
N15K				IAML		16 45 18.5	
	comp=E,31nm,1.1s						
BARN	**Barnard Glacie**	**4.56**	**84**	Pn	Pn	16 43 42.8	-0.1
M27K	**Edge Creek, AK**	**4.60**	**67**	Pn	Pn	16 43 43.2	-0.2
M27K				IAML		16 46 06.0	
	comp=E,78nm,0.8s						
M27K				IAML		16 46 15.2	
	comp=N,96nm,0.9s						
SII	**Sitkinak Islan**	**4.65**	**202**	Pn	Pn	16 43 43.5	-0.5
SII				IAML		16 44 56.3	
	comp=N,98nm,1.1s						
SII				IAML		16 45 55.9	
	comp=E,95nm,1.2s						
O15K	**Ungalikthiuk R**	**4.74**	**253**	Pn	Pn	16 43 45.4	+0.2
M15K	**Kasigluk River**	**4.74**	**272**		Pn	16 43 44.9	-0.3
BC01	**Beaver Creek A**	**4.85**	**59**		Pn	16 43 46.6	-0.1
H21K	**Melozitna Rive**	**4.85**	**351**		Pn	16 43 47.3	+0.7
H21K				IAML		16 46 00.8	
	comp=N,53nm,0.6s						
H21K				IAML		16 46 18.1	
	comp=E,66nm,0.7s						
L27K	**Beaver Creek,**	**4.85**	**59**		Pn	16 43 46.6	-0.1
L27K				IAML		16 46 02.8	
	comp=N,56nm,0.6s						
L27K				IAML		16 46 08.6	
	comp=E,46nm,0.7s						
BCAR	**Beaver Creek A**	**4.87**	**59**		Pn	16 43 46.4	-0.5
LOGN	**Logan Glacier**	**4.90**	**86**	Pn	Pn	16 43 47.4	-0.1
H20K	**Anotleneega Mo**	**4.93**	**341**		Pn	16 43 48.0	+0.2
H23K	**Yukon River**	**4.99**	**7**		Pn	16 43 49.3	+0.7
H23K				IAML		16 45 54.4	
	comp=E,99nm,1.1s						
H22K	**Ishtalitna Cre**	**5.02**	**358**		Pn	16 43 50.2	+1.2
H22K				IAML		16 45 57.9	
	comp=N,83nm,0.6s						
H22K				IAML		16 46 11.4	
	comp=E,59nm,0.8s						
J16K	**Anvik River**	**5.10**	**302**		Pn	16 43 50.2	+0.1
J16K				IAML		16 46 43.0	
	comp=E,22nm,0.5s						
J16K				IAML		16 47 04.3	
	comp=N,20nm,0.7s						
L15K	**Ungalak Mounta**	**5.11**	**283**		Pn	16 43 50.1	-0.1
H24K	**Noodor Dome**	**5.16**	**15**		Pn	16 43 52.4	+1.6
H24K				IAML		16 46 09.6	
	comp=E,85nm,1.2s						
H24K				IAML		16 46 13.5	
	comp=N,78nm,0.8s						
YUK3	**Moose Creek**	**5.16**	**76**		Pn	16 43 50.9	-0.2
K27K	**Chicken**	**5.20**	**49**	Pn	Pn	16 43 52.4	+1.0
K27K				IAML		16 46 12.7	
	comp=E,69nm,0.5s						
H19K	**Roundabout Mou**	**5.26**	**334**	Pn	Pn	16 43 52.0	-0.2
H19K				IAML		16 46 56.7	
	comp=N,55nm,1.1s						
H19K				IAML		16 47 02.4	
	comp=E,47nm,1.0s						
PRP	**Porcupine Dome**	**5.26**	**26**	Pn	Pn	16 43 53.9	+1.6
IM02	**Indian Mountai**	**5.27**	**348**		Pn	16 43 53.0	+0.6
O28M	**Mount Upton**	**5.30**	**87**	Pn	Pn	16 43 53.4	+0.3
O28M				IAML		16 46 30.9	
	comp=E,48nm,0.6s						
O28M				IAML		16 46 32.6	
	comp=N,71nm,0.6s						
M14K	**Bethel**	**5.36**	**273**	Pn	Pn	16 43 53.5	-0.1
N14K	**Kuskokwak Cree**	**5.38**	**264**	Pn	Pn	16 43 53.9	0.0
N14K				IAML		16 45 41.4	
	comp=E,29nm,1.1s						
N14K				IAML		16 46 49.8	
	comp=N,17nm,1.2s						
PCA	**Pinnacle**	**5.38**	**94**	Pn	Pn	16 43 54.1	+0.1
O14K	**Tigyukauivet M**	**5.39**	**257**	Pn	Pn	16 43 54.3	+0.3
O14K				IAML		16 45 41.7	
	comp=N,16nm,1.2s						
I17K	**Unalakleet**	**5.41**	**308**	Pn	Pn	16 43 54.3	0.0
H18K	**Honhosa River**	**5.42**	**325**		Pn	16 43 54.8	+0.3
L14K	**Kuka Creek**	**5.67**	**280**		Pn	16 43 58.1	+0.2
H17K	**Granite Mounta**	**5.74**	**319**		Pn	16 43 59.6	+0.9
G21K	**Allakaket**	**5.75**	**350**		Pn	16 43 59.5	+0.5
G23K	**Bananza Creek**	**5.85**	**4**		Pn	16 44 01.1	+0.7
G19K	**Purcell Mounta**	**5.92**	**335**	Pn	Pn	16 44 01.8	+0.5
G24K	**Hadweenzic Riv**	**6.03**	**14**	Pn	Pn	16 44 03.4	+0.6
G18K	**Tagagawik**	**6.07**	**329**	Pn	Pn	16 44 03.7	+0.3
M29M	**Somme Creek**	**6.17**	**70**	Pn	Pn	16 44 05.0	+0.1
I27K	**Kandik River**	**6.34**	**38**		Pn	16 44 06.9	-0.3
COLD	**Coldfoot**	**6.37**	**3**	Pn	Pn	16 44 09.6	+2.3
F21K	**Alatna River**	**6.44**	**351**	Pn	Pn	16 44 07.0	-1.4
L29M	**L29M**	**6.46**	**64**	Pn	Pn	16 44 07.3	-1.4
F20K	**Avaraart Lake**	**6.51**	**344**		Pn	16 44 09.6	+0.3
HYT	**Haines Junctio**	**6.60**	**85**	Pn	Pn	16 44 08.8	-

SML				IAML		16 44 40.2
	comp=N,7µm,0.8s					
GHO	**Glory Hole Cre**	**0.56**	**188**		**Pn**	**16 44 30.1 +0.1**
GHO					**Sn**	**16 44 38.6 +0.1**
CUT	**Chulitna**	**0.71**	**277**		**Pn**	**16 44 32.2 +0.4**
CUT					**Sn**	**16 44 42.8 +1.0**
M23K	**Glacier View**	**0.72**	**137**		**Pn**	**16 44 31.9 -0.1**
M23K					**Sn**	**16 44 42.2 +0.1**
PMR	**Palmer**	**0.76**	**194**		**Pn**	**16 44 32.4 0.0**
PMR					**Sn**	**16 44 42.9 +0.1**
PMR				IAML		16 44 44.7
	comp=E,3µm,0.3s					
PMR				IAML		16 44 44.8
	comp=N,2µm,0.3s					
SCM	**Sheep Creek Mo**	**0.83**	**126**		**Pn**	**16 44 33.5 0.0**
SCM					**Sn**	**16 44 45.2 +0.3**
SCM				IAML		16 44 47.4
	comp=E,3µm,1.0s					
SCM				IAML		16 44 47.4
	comp=N,3µm,0.9s					
M22K	**Willow**	**0.86**	**229**		**Pn**	**16 44 34.1 +0.3**
M22K					**Sn**	**16 44 45.8 +0.5**
M22K				IAML		16 44 51.6
	comp=E,5µm,0.6s					
KNK	**Knik Glacier**	**0.93**	**171**		**Pn**	**16 44 35.2 +0.5**
KNK					**Sn**	**16 44 46.6 -0.3**
KNK				IAML		16 44 53.3
	comp=N,4µm,0.3s					
L22K	**Petersville**	**0.96**	**283**	Pn	**Pn**	**16 44 35.9 +0.7**
L22K				Sn	**Sn**	**16 44 48.1 +0.3**
L22K				IAML		16 44 49.3
	comp=E,2µm,0.6s					
L22K				IAML		16 44 49.7
	comp=N,3µm,0.5s					
DHY	**Denali Highway**	**0.99**	**40**		**Pn**	**16 44 35.7 0.0**
DHY				Sn	**Sn**	**16 44 48.0 -0.7**
RND	**Reindeer**	**1.09**	**358**		**Pn**	**16 44 37.5 +0.5**
RND				Sn	**Sn**	**16 44 50.9 -0.1**
RND				IAML		16 44 52.3
	comp=E,3µm,0.7s					
M24K	**Tolsona, Glenn**	**1.23**	**99**		**Pn**	**16 44 40.2 +1.3**
M24K				IAML		16 45 05.7
	comp=N,1µm,0.6s					
RC01	**Rabbit Creek A**	**1.32**	**201**		**Pn**	**16 44 41.2 +1.1**
RC01					**Sn**	**16 44 59.3 +2.7**
TRF	**Thorofare Moun**	**1.33**	**329**		**Pn**	**16 44 40.9 +0.5**
TRF					**Sn**	**16 44 57.9 +0.9**
SKT	**Skwentna**	**1.35**	**256**		**Pn**	**16 44 41.0 +0.5**
SKT				IAML		16 45 02.6
	comp=N,1µm,0.2s					
SKT				IAML		16 45 05.5
	comp=E,1µm,0.2s					
MCK	**McKinley**	**1.42**	**357**		**Pn**	**16 44 42.5 +1.1**
MCK					**Sn**	**16 45 00.0 +1.1**
MCK				IAML		16 45 01.2
	comp=E,2µm,0.5s					
PS11	**TAPS Pump St11**	**1.56**	**98**		**Pn**	**16 44 45.2 +1.9**
KLU	**Klutina**	**1.58**	**121**		**Pn**	**16 44 44.5 +0.8**
KTH	**Kantishna Hill**	**1.58**	**322**		**Pn**	**16 44 44.5 +0.8**
KTH					**Sn**	**16 45 03.9 +0.9**
KTH				IAML		16 45 04.7
	comp=E,1µm,0.8s					
KTH				IAML		16 45 05.2
	comp=N,705nm,0.8s					
GLI	**Glacier Island**	**1.65**	**151**		**Pn**	**16 44 45.5 +0.9**
GLI					**Sn**	**16 45 07.2 +2.6**
STLK	**Strandline Lak**	**1.67**	**242**		**Pn**	**16 44 46.2 +1.2**
STLK				IAML		16 45 12.2
	comp=N,818nm,0.3s					
HARP	**HAARP**	**1.68**	**86**		**Pn**	**16 44 46.2 +1.2**
HARP				IAML		16 45 11.1
	comp=N,2µm,0.6s					
VMT	**TAPS Tl Valdez**	**1.69**	**136**		**Pn**	**16 44 45.8 +0.7**
PPLA	**Purkeypile**	**1.69**	**291**		**Pn**	**16 44 46.2 +1.0**
PS10	**TAPS Pump St10**	**1.76**	**50**		**Pn**	**16 44 47.8 +1.7**
DIV	**Divide**	**1.86**	**129**		**Pn**	**16 44 48.0 +0.5**
DIV					**Sn**	**16 45 10.9 +1.2**
DIV				IAML		16 45 13.6
	comp=E,1µm,0.5s					
SPCG	**Spurr Capps Gl**	**1.86**	**238**		**Pn**	**16 44 49.1 +1.6**
CAST	**Castle Rocks**	**1.88**	**307**		**Pn**	**16 44 48.5 +0.7**
CAST				IAML		16 45 26.4
	comp=N,682nm,1.0s					
CAST				IAML		16 45 27.2
	comp=E,619nm,0.5s					
BWN	**Browne**	**1.88**	**351**		**Pn**	**16 44 48.3 +0.5**
BWN				IAML		16 45 13.5
	comp=N,1µm,0.5s					
BWN				IAML		16 45 25.6
	comp=E,1µm,0.8s					
O22K	**Cooper Landing**	**1.91**	**195**		**Pn**	**16 44 49.3 +1.3**
PS12	**TAPS Pump St12**	**1.91**	**115**		**Pn**	**16 44 49.1 +1.0**
FID	**Port Fidalgo**	**1.92**	**144**		**Pn**	**16 44 49.2 +1.0**
FID					**Sn**	**16 45 13.3 +2.1**
SPU	**Mount Spurr**	**1.94**	**235**		**Pn**	**16 44 50.1 +1.4**
SLKM	**Skilak Lake**	**1.95**	**202**		**Pn**	**16 44 50.2 +1.5**
SLKM				IAML		16 45 20.6
	comp=N,867nm,0.3s					
SPCR	**Spurr Chakacha**	**1.99**	**237**		**Pn**	**16 44 51.1 +1.9**
K24K	**Donnelly Dome**	**2.01**	**41**		**Pn**	**16 44 51.7 +2.2**
SPBG	**Spurr Blockage**	**2.02**	**240**		**Pn**	**16 44 52.0 +2.3**
CKL	**Chakachamna La**	**2.04**	**238**		**Pn**	**16 44 52.0 +1.9**
SPWE	**Spurr West**	**2.09**	**241**		**Pn**	**16 44 52.5 +1.9**
M20K	**Styx River**	**2.10**	**260**		**Pn**	**16 44 52.4 +1.6**
M20K				IAML		16 45 21.1
	comp=N,970nm,0.6s					
M20K				IAML		16 45 21.4
	comp=E,496nm,0.4s					
WRH	**Wood River Hil**	**2.18**	**8**		**Pn**	**16 44 52.1 +0.3**
WRH				IAML		16 45 22.4
	comp=N,418nm,0.5s					
HIN	**Hinchinbrook I**	**2.22**	**150**		**Pn**	**16 44 53.0 +0.7**
HIN				IAML		16 45 33.4
	comp=N,815nm,0.7s					
HDA	**Harding Lake**	**2.25**	**20**	IAML		16 45 24.6
	comp=N,894nm,0.6s					
CHUM	**Lake Minchumin**	**2.25**	**316**		**Pn**	**16 44 53.5 +0.8**
SEW	**Seward**	**2.25**	**189**	Pn	**Pn**	**16 44 54.3 +1.6**
SEW				IAML		16 45 27.7
	comp=N,607nm,0.7s					
SEW				IAML		16 45 33.0
	comp=E,404nm,0.4s					
RIDG	**Independent Ri**	**2.28**	**50**		**Pn**	**16 44 55.8 +2.5**
RIDG				IAML		16 45 26.4
	comp=N,893nm,0.7s					
EYAK	**Cordova Ski Ar**	**2.29**	**140**		**Pn**	**16 44 54.6 +1.2**
EYAK				IAML		16 45 31.1
	comp=N,719nm,0.6s					
EYAK				IAML		16 45 32.8
	comp=E,549nm,0.6s					
CCB	**Clear Creek Bu**	**2.37**	**10**		**Pn**	**16 44 54.7 +0.3**
CCB				IAML		16 45 26.5
	comp=E,471nm,0.9s					
CCB				IAML		16 45 27.0
	comp=N,289nm,0.4s					
BMRM	**Bremner River**	**2.40**	**123**		**Pn**	**16 44 55.6 +0.7**
BMRM				IAML		16 45 33.9
	comp=E,730nm,0.4s					
BMRM				IAML		16 45 34.9
	comp=N,776nm,0.7s					
MENT	**Mentasta**	**2.41**	**73**	Pn	**Pn**	**16 44 55.5 +0.6**
MENT				IAML		16 45 31.1
	comp=N,467nm,0.6s					
MENT				IAML		16 45 43.0
	comp=E,416nm,0.5s					
P23K	**Montague Islan**	**2.42**	**164**		**Pn**	**16 44 56.2 +1.1**
RDT	**Redoubt**	**2.48**	**227**		**Pn**	**16 44 57.4 +1.4**
GLB	**Gilahina Butte**	**2.50**	**108**		**Pn**	**16 44 57.4 +1.1**
GLB				IAML		16 45 32.9
	comp=N,371nm,0.6s					
DFR	**Drift River**	**2.56**	**229**		**Pn**	**16 44 58.9 +1.7**
COLA	**College**	**2.59**	**9**		**Pn**	**16 44 57.8 +0.4**
ILAR	**Eielson Array**	**2.60**	**18**	P	**Pn**	**16 44 58.0 +0.5**
	comp=N,19nm,0.3s,baz=201,slow=14,SNR=29					
ILAR				S	**Sn**	**16 45 30.1 +2.3**
	comp=N,58nm,0.4s,baz=352,slow=30,SNR=3.4					
	comp=N,54nm,0.4s					
RDJH	**Redoubt Jeurge**	**2.61**	**230**		**Pn**	**16 44 59.7 +2.0**
GOAT	**Goat Mountain**	**2.61**	**130**		**Pn**	**16 44 58.7 +1.0**
K20K	**Telida**	**2.65**	**295**	Pn	**Pn**	**16 44 58.8 +0.5**
K20K				IAML		16 45 47.8
	comp=E,283nm,0.7s					
MDM	**Murphy Dome**	**2.66**	**5**		**Pn**	**16 44 59.0 +0.7**
NCT	**North Crescent**	**2.67**	**230**		**Pn**	**16 45 00.7 +2.0**

M19K	**Big River Lodg**	**2.68**	**263**	Pn	**Pn**	**16 45 00.0 +1.3**
M19K				IAML		16 45 49.4
	comp=N,217nm,0.4s					
M19K				IAML		16 45 50.0
	comp=E,240nm,0.6s					
RDSO	**Redoubt South**	**2.68**	**227**		**Pn**	**16 45 00.4 +1.6**
M26K	**Nabesna, AK**	**2.69**	**86**	IAML		16 45 44.2
	comp=E,215nm,0.5s					
M26K				IAML		16 45 49.4
	comp=N,229nm,0.6s					
RED	**Redoubt Volcan**	**2.72**	**227**		**Pn**	**16 45 01.0 +1.8**
RED				IAML		16 45 39.7
	comp=E,362nm,0.4s					
RED				IAML		16 45 49.7
	comp=N,309nm,0.7s					
SCRK	**Sand Creek**	**2.73**	**50**		**Pn**	**16 45 00.2 +0.8**
SCRK				IAML		16 45 42.9
	comp=E,337nm,0.6s					
VRDI	**Verde Repeater**	**2.75**	**111**		**Pn**	**16 44 60.0 +0.2**
VRDI				IAML		16 45 41.8
	comp=N,345nm,0.9s					
J25K	**Salcha River,**	**2.76**	**32**		**Pn**	**16 45 01.7 +1.9**
J25K				IAML		16 45 37.5
	comp=N,567nm,0.5s					
BRSE	**Bradley Lake S**	**2.77**	**201**		**Pn**	**16 45 01.2 +1.4**
RAGM	**Ragged Mountai**	**2.77**	**133**		**Pn**	**16 45 00.9 +1.0**
BRLK	**Bradley Lake**	**2.77**	**203**		**Pn**	**16 45 01.3 +1.4**
BRLK				IAML		16 45 43.9
	comp=E,419nm,0.6s					
BRLK				IAML		16 45 43.9
	comp=N,307nm,0.7s					
I23K	**Minto, Yukon-K**	**2.85**	**355**	IAML		16 45 53.0
	comp=N,189nm,0.7s					
L19K	**White Mountain**	**2.86**	**270**		**Pn**	**16 45 02.5 +1.4**
L19K				IAML		16 45 40.1
	comp=E,293nm,0.3s					
L19K				IAML		16 45 59.6
	comp=N,187nm,0.9s					
MLY	**Manley**	**2.86**	**343**		**Pn**	**16 45 01.8 +0.6**
MLY				IAML		16 45 35.2
	comp=N,274nm,0.5s					
MCARA	**McCarthy VSAT**	**2.88**	**107**		**Pn**	**16 45 02.1 +0.8**
CNPM	**China Poot**	**3.06**	**204**		**Pn**	**16 45 05.2 +1.3**
CNPM				IAML		16 45 51.4
	comp=E,406nm,0.8s					
CNPM				IAML		16 45 52.1
	comp=N,352nm,0.4s					
J20K	**Nowinta River**	**3.07**	**310**		**Pn**	**16 45 04.5 +0.6**
J20K				IAML		16 46 00.9
	comp=N,263nm,0.8s					
IVE	**Iliamna Volcan**	**3.10**	**224**		**Pn**	**16 45 06.1 +1.6**
BERG	**Berg Lake**	**3.11**	**126**		**Pn**	**16 45 05.2 +0.7**
CRQM	**Cirque**	**3.12**	**118**		**Pn**	**16 45 05.6 +0.8**
N19K	**Bonanza Creek**	**3.13**	**244**	Pn	**Pn**	**16 45 06.4 +1.5**
N19K				IAML		16 46 02.3
	comp=N,143nm,0.8s					
MID	**Middleton Isla**	**3.14**	**157**	Pn	**Pn**	**16 45 07.4 +2.5**
MID				IAML		16 45 58.3
	comp=N,285nm,0.9s					
MID				IAML		16 46 22.6
	comp=E,286nm,1.1s					
ILS	**Iliamna Low So**	**3.16**	**223**		**Pn**	**16 45 07.0 +1.6**
ILSW	**Iliamna Southw**	**3.17**	**224**		**Pn**	**16 45 07.2 +1.7**
ILSW				IAML		16 45 48.3
	comp=E,170nm,0.7s					
KAIM	**Kayak Island**	**3.20**	**137**	Pn	**Pn**	**16 45 05.9 +0.2**
KAIM				IAML		16 45 57.2
	comp=N,243nm,1.0s					
KAIM				IAML		16 45 59.0
	comp=E,308nm,0.7s					
I21K	**Tanana**	**3.21**	**335**		**Pn**	**16 45 06.5 +0.7**
M27K	**Edge Creek, AK**	**3.21**	**86**		**Pn**	**16 45 07.9 +1.9**
TGL	**Tana Glacier**	**3.25**	**116**		**Pn**	**16 45 06.8 +0.3**
TGL				IAML		16 45 55.8
	comp=E,408nm,0.7s					
BCAR	**Beaver Creek A**	**3.30**	**74**	Pn	**Pn**	**16 45 08.0 +0.8**
KIAG	**Kiagna River**	**3.36**	**112**		**Pn**	**16 45 08.5 +0.3**
M18K	**Stony River**	**3.45**	**259**		**Pn**	**16 45 10.4 +1.3**
P19K	**Oil Pt**	**3.45**	**221**		**Pn**	**16 45 10.8 +1.5**
K27K	**Chicken**	**3.48**	**58**	IAML		16 46 11.0
	comp=N,113nm,0.7s					
PRP	**Porcupine Dome**	**3.51**	**23**		**Pn**	**16 45 10.9 +0.7**
H23K	**Yukon River**	**3.53**	**355**		**Pn**	**16 45 11.4 +1.1**
H23K				IAML		16 45 52.2
	comp=N,116nm,0.8s					
J19K	**Poorman**	**3.54**	**301**		**Pn**	**16 45 10.9 +0.6**
J19K				IAML		16 46 20.6
	comp=E,105nm,0.8s					
H24K	**Noodor Dome**	**3.55**	**6**		**Pn**	**16 45 11.3 +0.7**
I20K	**Naaghedeneel**	**3.56**	**317**		**Pn**	**16 45 11.2 +0.5**
BARK	**Barkley Ridge**	**3.58**	**120**		**Pn**	**16 45 11.6 +0.6**
BARN	**Barnard Glacie**	**3.61**	**107**		**Pn**	**16 45 12.7 +1.1**
BARN				IAML		16 46 07.7
	comp=E,191nm,0.5s					
BARN				IAML		16 46 09.3
	comp=N,153nm,0.5s					
BVCY	**Beaver Creek**	**3.68**	**85**		**Pn**	**16 45 13.9 +1.5**
L18K	**Granite Mounta**	**3.71**	**272**		**Pn**	**16 45 13.9 +1.2**
GRNC	**Granite Creek**	**3.71**	**112**		**Pn**	**16 45 13.5 +0.5**
GRNC				IAML		16 46 11.5
	comp=N,222nm,0.6s					
AU22	**Augustine Moun**	**3.72**	**219**		**Pn**	**16 45 14.6 +1.8**
AUJK	**Augustine Jueg**	**3.75**	**219**		**Pn**	**16 45 15.3 +2.0**
AUCH	**Augustine Cone**	**3.75**	**220**		**Pn**	**16 45 15.3 +1.9**
AUI	**Augustine Isla**	**3.77**	**219**		**Pn**	**16 45 15.3 +1.7**
N18K	**Kilae Creek**	**3.79**	**247**		**Pn**	**16 45 14.8 +0.9**
YUK3	**Moose Creek**	**3.95**	**94**		**Pn**	**16 45 17.6 +1.4**
LOGN	**Logan Glacier**	**4.00**	**109**	Pn	**Pn**	**16 45 17.6 +0.6**
LOGN				IAML		16 46 22.3
	comp=E,115nm,1.1s					
LOGN				IAML		16 46 24.5
	comp=N,136nm,0.7s					
Q19K	**Cape Douglas,**	**4.17**	**217**		**Pn**	**16 45 20.5 +1.4**
IM02	**Indian Mountai**	**4.30**	**331**		**Pn**	**16 45 21.7 +0.9**
O28M	**Mount Upton**	**4.38**	**107**		**Pn**	**16 45 23.4 +1.2**
G24K	**Hadweenzic Riv**	**4.43**	**7**		**Pn**	**16 45 23.5 +0.9**
G24K				IAML		16 46 42.1
	comp=E,68nm,1.2s					
G24K				IAML		16 46 46.0
	comp=N,63nm,1.0s					
K17K	**Iditarod**	**4.44**	**279**	Pn	**Pn**	**16 45 24.1 +1.3**
K17K				IAML		16 46 16.0
	comp=E,62nm,0.6s					
L17K	**Donlin**	**4.47**	**272**		**Pn**	**16 45 24.3 +1.2**
FYU	**Fort Yukon**	**4.53**	**18**	IAML		16 46 31.1
	comp=N,144nm,0.7s					
I27K	**Kandik River**	**4.55**	**41**		**Pn**	**16 45 26.0 +1.6**
I27K				IAML		16 46 20.5
	comp=E,135nm,0.7s					
I27K				IAML		16 46 41.3
	comp=N,110nm,0.8s					
DAWY	**Dawson**	**4.59**	**63**		**Pn**	**16 45 25.8 +1.0**
DAWY				IAML		16 46 44.4
	comp=N,63nm,0.4s					
DAWY				IAML		16 46 49.1
	comp=E,66nm,0.7s					
H19K	**Roundabout Mou**	**4.67**	**317**		**Pn**	**16 45 26.9 +1.0**
G21K	**Allakaket**	**4.68**	**336**	Pn	**Pn**	**16 45 27.1 +1.0**
G21K				IAML		16 46 21.1
	comp=N,87nm,0.8s					
G21K				IAML		16 46 21.2
	comp=E,55nm,0.8s					
KAHG	**Katmai Hook Gl**	**4.79**	**219**		**Pn**	**16 45 28.9 +1.2**
M29M	**Somme Creek**	**4.79**	**84**		**Pn**	**16 45 28.6 +0.9**
Q18K	**Katmai Hardscr**	**4.81**	**223**		**Pn**	**16 45 29.1 +1.2**
KARR	**Katmai Rainbow**	**4.84**	**220**		**Pn**	**16 45 29.6 +1.4**
J17K	**VABM Dome**	**4.85**	**287**		**Pn**	**16 45 29.3 +0.9**
KDAK	**Kodiak Island**	**4.94**	**205**	P	**Pn**	**16 45 29.3 -0.4**
	comp=E,3.5nm,0.3s,baz=279,slow=13,SNR=0.9					
KDAK				S	**Sn**	**16 46 23.6 -1.8**
	comp=E,17nm,0.3s,baz=270,slow=22,SNR=6.7					
KDAK	**Kodiak Island**	**4.94**	**205**	Pn	**Pn**	**16 45 29.5 -0.1**
KDAK				IAML		16 46 27.2
	comp=E,52nm,0.4s					
KDAK				IAML		16 46 52.4
	comp=E,68nm,1.5s					
L29M	**L29M**	**4.96**	**76**		**Pn**	**16 45 30.4 +0.5**
L29M				IAML		16 46 56.3
	comp=N,62nm,0.4s					
L29M				IAML		16 47 03.7
	comp=E,62nm,0.6s					
COLD	**Coldfoot**	**4.96**	**353**		**Pn**	**16 45 31.0 +1.1**
I28M	**Miner Creek**	**5.00**	**47**	IAML		16 46 59.5
	comp=E,77nm,1.0s					
I28M				IAML		16 47 01.6

	comp=N,89nm,1.0s					
H27K	**Steamboat Moun**	**5.03**	**36**		**Pn**	**16 45 32.0 +1.1**
H27K				IAML		16 46 55.6
	comp=N,92nm,1.2s					
H27K				IAML		16 46 56.1
	comp=E,95nm,1.1s					
L16K	**Owhat River**	**5.09**	**268**		**Pn**	**16 45 32.6 +1.0**
L16K				IAML		16 47 12.7
	comp=E,38nm,1.1s					
G26K	**Porcupine Rive**	**5.11**	**23**	IAML		16 46 50.0
	comp=E,63nm,0.8s					
G26K				IAML		16 46 59.9
	comp=N,84nm,1.1s					
YUK6	**Outpost Mounta**	**5.15**	**101**		**Pn**	**16 45 33.8 +1.1**
F24K	**Squaw Lake**	**5.23**	**4**		**Pn**	**16 45 34.1 +0.5**
F24K				IAML		16 46 38.8
	comp=N,49nm,0.7s					
F24K				IAML		16 46 39.2
	comp=E,30nm,0.6s					
ACHA	**Angle Creek He**	**5.26**	**221**		**Pn**	**16 45 35.4 +1.2**
G19K	**Purcell Mounta**	**5.28**	**320**		**Pn**	**16 45 34.7 +0.4**
G19K				IAML		16 47 12.6
	comp=E,29nm,0.8s					
F21K	**Alatna River**	**5.32**	**340**	IAML		16 46 49.8
	comp=E,30nm,0.8s					
F21K				IAML		16 46 51.6
	comp=N,41nm,0.8s					
ANCK	**Angle Creek**	**5.32**	**222**		**Pn**	**16 45 36.3 +1.3**
K29M	**Barlow Dome**	**5.33**	**68**	IAML		16 47 20.8
	comp=N,32nm,0.8s					
CAHL	**Cahill**	**5.38**	**220**		**Pn**	**16 45 37.2 +1.4**
Q17K	**Contact Creek**	**5.40**	**224**		**Pn**	**16 45 37.2 +1.2**
F22K	**John River**	**5.41**	**346**		**Pn**	**16 45 37.3 +1.4**
BM04	**Burnt Mountain**	**5.42**	**17**		**Pn**	**16 45 37.2 +1.0**
G27K	**Doyon Strip**	**5.44**	**31**		**Pn**	**16 45 37.4 +0.9**
J16K	**Anvik River**	**5.52**	**285**		**Pn**	**16 45 38.2 +0.7**
HYT	**Haines Junctio**	**5.58**	**101**		**Pn**	**16 45 39.1 +0.5**
F20K	**Avaraart Lake**	**5.60**	**331**		**Pn**	**16 45 40.2 +1.6**
OHAK	**Old Harbor**	**5.60**	**206**		**Pn**	**16 45 38.3 -0.4**
P16K	**Nushagak River**	**5.61**	**238**		**Pn**	**16 45 40.7 +1.9**
H17K	**Granite Mounta**	**5.62**	**303**		**Pn**	**16 45 40.4 +1.5**
G18K	**Tagagawik**	**5.62**	**314**		**Pn**	**16 45 39.6 +0.7**
I17K	**Unalakleet**	**5.64**	**291**		**Pn**	**16 45 40.9 +1.7**
F26K	**Sheenjek River**	**5.74**	**18**		**Pn**	**16 45 41.1 +0.6**
F19K	**Shaleruckik Mo**	**5.96**	**323**		**Pn**	**16 45 44.7 +1.1**
E25K	**Arctic Village**	**5.97**	**12**		**Pn**	**16 45 44.5 +0.7**
P29M	**Windy Craggy**	**6.00**	**112**		**Pn**	**16 45 45.9 +1.7**
P30M	**Million Dollar**	**6.11**	**106**		**Pn**	**16 45 47.1 +1.4**
G17K	**Kiwalik Mounta**	**6.14**	**306**		**Pn**	**16 45 47.7 +1.7**
I30M	**Mount Dempster**	**6.21**	**57**		**Pn**	**16 45 48.1 +1.0**
E19K	**Redstone River**	**6.29**	**329**		**Pn**	**16 45 49.8 +1.7**
TOLK	**Toolik Lake Re**	**6.35**	**357**		**Pn**	**16 45 51.3 +2.3**
F18K	**Selawik**	**6.37**	**317**		**Pn**	**16 45 50.6 +1.5**
H16K	**Elim**	**6.47**	**297**		**Pn**	**16 45 52.1 +1.6**
F28M	**Old Crow**	**6.51**	**31**		**Pn**	**16 45 52.5 +1.4**
G29M	**Pine Creek**	**6.51**	**40**		**Pn**	**16 45 53.0 +1.8**
E27K	**Coleen River**	**6.61**	**24**		**Pn**	**16 45 53.2 +0.7**
G16K	**Koyuk River**	**6.75**	**303**		**Pn**	**16 45 55.8 +1.5**
D25K	**Kavik River**	**7.10**	**7**		**Pn**	**16 46 00.6 +1.4**
G30M	**tAoh Zraii Nji**	**7.12**	**44**		**Pn**	**16 45 59.9 +0.5**
E18K	**Tukpahlearik C**	**7.17**	**321**		**Pn**	**16 46 02.0 +1.8**
C21K	**Knifeblade Rid**	**7.29**	**343**		**Pn**	**16 46 04.1 +2.3**
D19K	**Kuna River**	**7.31**	**332**		**Pn**	**16 46 03.6 +1.5**
C23K	**Itkilik River**	**7.58**	**355**		**Pn**	**16 46 07.9 +2.1**
E29M	**Blow River**	**7.58**	**32**		**Pn**	**16 46 07.2 +1.4**
C27K	**Jago River**	**7.61**	**13**		**Pn**	**16 46 07.2 +1.0**
F15K	**North Star Dit**	**7.75**	**303**		**Pn**	**16 46 09.9 +1.7**
C26K	**Camden Bay**	**7.78**	**10**		**Pn**	**16 46 10.4 +1.9**
BESE	**Bessie Mountai**	**7.83**	**112**		**Pn**	**16 46 09.5 +0.3**
MMPY	**Sheldon Lake,**	**8.11**	**80**		**Pn**	**16 46 13.2 +0.1**
INK	**Inuvik**	**8.73**	**40**	P	**Pn**	**16 46 22.6 +1.2**
	comp=N,1.5nm,0.3s,baz=242,slow=16,SNR=12					
INK				S	**Sn**	**16 47 58.4 +0.1**
	comp=N,5.5nm,0.4s,baz=75,slow=10,SNR=7.2					
	comp=N,5.2nm,0.4s					
R33M	**Jennings River**	**9.16**	**101**		**Pn**	**16 46 27.6 +0.1**
WTLY	**Watson Lake, Y**	**9.87**	**94**	Pn	**Pn**	**16 46 37.1 0.0**
DLBC	**Dease Lake**	**10.04**	**104**	LR	LR	16 50 54.6
	comp=N,50nm,18.8s,baz=260,slow=39					
C36M	**Paulatuk**	**12.23**	**44**		**Pn**	**16 47 08.4 -0.9**
MOBC	**Moresby Island**	**12.80**	**128**	Pn	**Pn**	**16 47 16.8 -0.4**
YKAW3	**Yellowknife Wh**	**15.70**	**74**	Pn	**Pn**	**16 47 55.6 0.0**
YKA	**Yellowknife Ar**	**15.72**	**74**	P	**Pn**	**16 47 55.6 -0.3**
	comp=N,0.2nm,0.3s,baz=287,slow=10,SNR=8.8					
	comp=N,0.7nm,0.6s					
YKAW1	**Yellowknife Wh**	**15.78**	**74**	Pn	**Pn**	**16 47 57.1 +0.6**
YKAW1				IAmb	IAmb	16 48 00.2
	comp=Z,2.2nm,0.7s					
ELK	**Elko**	**29.46**	**121**	P	**P**	**16 50 19.9 +2.6**
ELK				IAmb	IAmb	16 50 20.0
	comp=Z,1.4nm,0.8s					
PDAR	**Pinedale Array**	**30.15**	**112**	P	**P**	**16 50 23.1 -0.3**
	comp=Z,0.7nm,0.7s,baz=324,slow=7.3,SNR=8.0					
	comp=Z,0.7nm,0.7s					
NVAR	**Mina Array Bea**	**30.29**	**128**	P	**P**	**16 50 23.7 -0.9**
	comp=Z,0.5nm,0.5s,baz=303,slow=8.3,SNR=3.8					
	comp=Z,0.5nm,0.5s					
TXAR	**Lajitas Array**	**44.04**	**117**	P	**P**	**16 52 22.4 +1.5**
	comp=Z,0.6nm,0.8s,baz=318,slow=5.4,SNR=5.2					
	comp=Z,0.6nm,0.8s					
SONM	**Songino Array**	**55.05**	**307**	P	**P**	**16 53 44.4 -0.2**
	comp=Z,0.6nm,0.4s,baz=22,slow=8.1,SNR=2.9					
	comp=Z,0.6nm,0.4s					
SONM	**Songino Array**	**55.05**	**307**	P	**P**	**16 53 44.4 -0.2**
SONM				IAmb	IAmb	16 53 50.4
	comp=Z,1.6nm,1.0s					
FINES	**FINESS Array B**	**56.49**	**3**	P	**P**	**16 53 53.8 -0.7**
	comp=Z,1.2nm,0.8s,baz=358,slow=6.6,SNR=4.1					
	comp=Z,1.2nm,0.8s					
ZALV	**Zalesovo Beam**	**56.67**	**325**	P	**P**	**16 53 56.4 +0.5**
	comp=Z,0.8nm,0.6s,baz=17,slow=7.7,SNR=3.6			

ASAR	Alice Springs	33.10	246	P	P	16 53 51.9	-0.2
	comp=Z,0.5nm,0.6s,baz=70,slow=9.9,SNR=15						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	33.10	246	P	P	16 53 51.2	-0.8
FAKI	Fak Fak	35.51	283	P	P	16 54 12.3	-0.6
SBA	Scott Base	65.33	180	P	P	16 57 57.9	+1.5
SBA				IAmb	IAmb	16 58 35.9	
	comp=Z,2.3nm,1.2s						
KIWB	Kanaga Island	65.60	11	P	P	16 57 57.1	-1.3
CMAR	Chiang Mai Arr	73.66	294	P	P	16 58 47.9	-0.7
	comp=Z,0.6nm,0.8s,baz=108,slow=5.9,SNR=4.4						
	comp=Z,0.6nm,0.8s						
QSPA	South Pole Qui	77.49	180	P	P	16 59 08.9	-0.9
	comp=Z,0.9nm,0.7s,baz=163,slow=20,SNR=5.7						
	comp=Z,0.9nm,0.7s						
QSPA	South Pole Qui	77.49	180	P	P	16 59 09.6	-0.2
QSPA				IAmb	IAmb	16 59 11.0	
	comp=Z,5.2nm,1.2s						
MK31	Makanchi Array	95.31	317	P	P	17 00 38.2	0.0
MKAR	Makanchi Array	95.31	317	P	P	17 00 39.9	+1.6
	comp=Z,0.5nm,0.6s,baz=100,slow=6.3,SNR=5.4						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	95.31	317	P	P	17 00 39.2	+1.0

NEIC ***09*** *16:51:37.2±1.9,23°.37S±0°.09×179°.8W±0°.1,h516km±6km, mb4.4/90, Error ellipse: s-maj=16.5km s-min=11.7km az=122.0*

IDC ***09*** *16:51:39.0±1.5,23°.36S×179°.79W,h536km±15km, mb3.6/16, mbtmp4.4/17, Error ellipse: s-maj=14.8km s-min=11.1km az=102.0*

NOU ***09*** *16:51:40.1,23°.41S×179°.75W,h559km, mb4.5/47, South of Fiji Islands*

ISC 09 16:51:38.3±0.3,23°.33S±0°.06×179°.84W±0°.06,h532km, n267,σ1s37/249,mb4.3/55,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.16	11	P	P	16 53 12.1	+3.5
MSVF	Nonsavu	5.91	340	P	P	16 53 17.5	+2.1
	6.7nm,0.5s,baz=289,slow=22,SNR=8.7						
MSVF	Nonsavu	5.91	340	P	P	16 53 18.7	+3.3
MSVF	Nonsavu	5.91	340	P	P	16 53 18.1	+2.6
RIZ	Raoul Island	6.14	164	P	P	16 53 20.1	+2.9
RAO	Raoul Island	6.15	164	P	P	16 53 16.0	-1.3
GLKZ	Green Lake	6.16	164	P	P	16 53 18.9	+1.5
GLKZ				S	S	16 54 37.4	-1.1
TAVE	Taveuni	6.59	359	P	P	16 53 25.6	+3.8
NIUE	Niue	10.17	67	P	P	16 53 58.8	+1.0
NIUE	Niue	10.17	67	S	S	16 55 56.1	+3.6
NIUE	Niue	10.17	67		P	16 53 58.1	+0.3
NIUE	Niue	10.17	67	P	P	16 53 58.5	+0.6
NIUE				S	S	16 55 57.2	+4.7
MARNC	Mare, Loyalty	11.37	277	P	P	16 54 13.0	+2.7
MARNC	Mare, Loyalty	11.37	277	P	P	16 54 11.5	+1.2
AFI	Afiamalu	12.09	41	P	P	16 54 15.2	-2.7
	22nm,0.7s,baz=309,slow=3.7,SNR=5.0						
AFI				S	S	16 56 24.9	-4.4
	21nm,0.7s,baz=244,slow=22,SNR=3.9						
AFI	Afiamalu	12.09	41	P	P	16 54 14.4	-3.5
AFI					S	16 56 24.9	-4.4
OUENC	Ouen Island, N	12.31	272	P	P	16 54 16.8	-3.3
YATNC	Mamie plateau,	12.31	273	P	P	16 54 23.0	+2.8
ONTNC	Ouen Toro	12.68	272	P	P	16 54 26.5	+2.5
OUZ	Omahuta	13.16	204	P	P	16 54 34.7	+6.0
WCZ	Waipu Caves	13.54	201	P	P	16 54 35.3	+2.6
MXZ	Matakaoa Point	14.28	186	P	P	16 54 41.1	+0.7
MXZ	Matakaoa Point	14.28	186	P	P	16 54 38.6	-1.8
MXZ	Matakaoa Point	14.28	186	P	P	16 54 40.3	-0.1
SANVU	Saraoutou	14.51	300	P	P	16 54 41.5	-1.7
HAZ	Te Kaha	14.53	188	P	P	16 54 43.0	0.0
PUZ	Puketiti	14.79	186	P	P	16 54 46.2	+0.5
TOZ	Tahuroa Road	14.90	194		P	16 54 46.8	-0.1
TOZ	Tahuroa Road	14.90	194	P	P	16 54 47.8	+0.9
URZ	Urewera	15.11	189	P	P	16 54 45.3	-3.7
	18nm,0.6s,baz=24,slow=1.9,SNR=15						
URZ				S	S	16 57 20.2	-6.0
	8.7nm,0.7s,baz=183,slow=19,SNR=6.4						
URZ	Urewera	15.11	189	P	P	16 54 49.8	+0.8
URZ	Urewera	15.11	189	P	P	16 54 46.2	-2.8
MWZ	Matawai	15.13	188	P	P	16 54 47.4	-1.9
TLZ	Tolley Road	15.47	194	P	P	16 54 53.0	+0.2
MTHZ	Maungataniwha	15.73	190	P	P	16 54 54.9	-0.6
RAHZ	Arahi	15.76	189	P	P	16 54 53.9	-1.9
HIZ	Hauiti	15.80	195	P	P	16 54 56.7	+0.5
HIZ	Hauiti	15.80	195	P	P	16 54 58.5	+2.3
NMHZ	Naumai	15.98	190	P	P	16 54 57.4	-0.6
BKZ	Black Stump Fm	16.09	190	P	P	16 54 58.4	-0.8
BKZ	Black Stump Fm	16.09	190	P	P	16 54 56.0	-3.2
NTVZ	North Tongarir	16.18	193	P	P	16 55 00.7	+0.7
TMVZ	Te Maari	16.19	193	P	P	16 54 58.7	-1.5
SNVZ	South Ngauruho	16.27	193	P	P	16 55 00.6	-0.4
VRZ	Vera Road	16.41	195	P	P	16 55 04.0	+1.9
WNVZ	Wahianoa	16.41	193	P	P	16 54 59.6	-2.8
MOVZ	Moawhango	16.46	192	P	P	16 55 01.6	-1.2
KRHZ	Kereru	16.58	190	P	P	16 55 01.8	-2.1
PNHZ	Pukenui	16.87	191	P	P	16 55 04.6	-1.9
TSZ	Takapari Road	17.05	191	P	P	16 55 07.5	-0.8
BFZ	Birch Farm	17.61	190	P	P	16 55 12.8	-0.6
BFZ	Birch Farm	17.61	190	P	P	16 55 11.4	-1.9
MRZ	Mangatainoka R	17.71	192	P	P	16 55 11.3	-3.0
TCW	Tory Channel	18.50	194	P	P	16 55 20.1	-1.4
SNZO	South Karori	18.51	193	P	P	16 55 21.4	-0.1
QRZ	Quartz Range	18.59	198	P	P	16 55 23.0	+0.7
QRZ	Quartz Range	18.59	198	P	P	16 55 22.2	0.0
NNZ	Nelson	18.72	196	P	P	16 55 23.6	+0.1
TUWZ	Tuamarina	18.79	195	P	P	16 55 22.1	-1.9
THZ	Tophouse	19.36	197	P	P	16 55 29.2	-0.2
DSZ	Denniston Nort	19.65	199	P	P	16 55 30.1	-1.8
DSZ	Denniston Nort	19.65	199	P	P	16 55 32.0	0.0
KHZ	Kahutara	19.82	195	P	P	16 55 33.2	-0.2
KHZ	Kahutara	19.82	195	P	P	16 55 32.8	-0.5
GVZ	Greta Valley S	20.46	195	P	P	16 55 38.1	-1.2
LTZ	Lake Taylor	20.48	197		P	16 55 37.6	-1.8
LTZ	Lake Taylor	20.48	197	P	P	16 55 37.9	-1.5
INZ	Inchbonnie	20.66	198	P	P	16 55 40.0	-1.0
OXZ	Oxford	21.05	197	P	P	16 55 43.5	-1.0
OXZ	Oxford	21.05	197	P	P	16 55 43.5	-1.0
WVZ	Waitaha Valley	21.18	199	P	P	16 55 44.9	-0.9
MQZ	McQueen's Vall	21.25	195	P	P	16 55 45.3	-1.0
RPZ	Rata Peaks	21.68	198	P	P	16 55 48.6	-1.7
	5.5nm,0.6s,baz=5.1,slow=2.4,SNR=16						
	5.5nm,0.6s						
RPZ	Rata Peaks	21.68	198	P	P	16 55 49.9	-0.3
RPZ	Rata Peaks	21.68	198	P	P	16 55 49.9	-0.3
FOZ	Fox Glacier	21.89	201	P	P	16 55 50.1	-2.0
FOZ	Fox Glacier	21.89	201	P	P	16 55 51.2	-0.9
TMZ	Timaru	22.31	197	P	P	16 55 53.8	-2.1
LBZ	Lake Benmore	22.54	199	P	P	16 55 57.6	-0.4
JCZ	Jackson Bay	22.71	202	P	P	16 55 59.2	-0.4
JCZ	Jackson Bay	22.71	202	P	P	16 55 58.6	-1.0
WKZ	Wanaka	23.30	200	P	P	16 56 03.9	-0.9
MSZ	Milford Sound	23.53	202	P	P	16 56 07.8	+1.1
EAZ	Earnscleugh	23.57	199	P	P	16 56 06.3	-0.8
MLZ	Mavora Lakes	24.07	201	P	P	16 56 11.0	-0.7
MLZ	Mavora Lakes	24.07	201	P	P	16 56 13.0	+1.4
WHZ	Wether Hill Ro	24.59	201		P	16 56 16.7	+0.4
WHZ	Wether Hill Ro	24.59	201	P	P	16 56 16.5	+0.3
ARMA	Armidale	26.36	248	P	P	16 56 33.7	+1.5
ARMA	Armidale	26.36	248	P	P	16 56 32.8	+0.6
ARMA				IAmb	IAmb	16 56 35.0	
	comp=Z,12nm,1.1s						
EIDS	Eidsvold	26.55	260	P	P	16 56 34.6	+0.8
EIDS	Eidsvold	26.55	260	P	P	16 56 34.7	+0.9
CAN	Canberra	29.56	239	P	P	16 57 01.7	+1.1
CAN	Canberra	29.56	239	P	P	16 57 00.4	+0.4
CAN				IAmb	IAmb	16 57 02.1	
	comp=Z,15nm,0.8s						
CMSA	Cobar Meteorol	31.57	247	P	P	16 57 17.6	+0.3
CTA	Charters Tower	31.62	269	P	P	16 57 19.1	+1.2
	comp=Z,40nm,0.5s,baz=92,slow=10,SNR=119						
	comp=Z,40nm,0.5s						
CTAO	Charters Tower	31.62	269	P	P	16 57 18.9	+1.0
CTAO	Charters Tower	31.62	269	P	P	16 57 17.9	0.0
QLP	Quilpie	32.67	257	P	P	16 57 27.2	+0.5
TOO	Toolangi	32.88	236	P	P	16 57 28.1	-0.3
XMAS	Kiritimati	33.34	44	P	P	16 57 32.8	+0.3
TAU	Tasmania Unive	33.43	226	P	P	16 57 33.6	+0.7
TAU	Tasmania Unive	33.43	226	P	P	16 57 33.0	+0.1
MTSU	Mount Surprise	33.86	272	P	P	16 57 38.0	+1.1
BRAT	Ballarat	34.08	237	P	P	16 57 38.7	+0.3
PMG	Port Moresby	34.45	288	P	P	16 57 41.6	-0.3
STKA	Stephens Creek	35.07	247	P	P	16 57 47.8	+0.9
	comp=Z,13nm,0.6s,baz=94,slow=10.0,SNR=27						
	comp=Z,13nm,0.6s						
INKA	Innaminka	35.73	255		P	16 57 53.6	+1.2
INKA				IAmb	IAmb	16 57 54.3	
	comp=Z,7.0nm,0.8s						
HTT	Hallett	37.44	245	P	P	16 58 06.8	+0.3
QIS	Mount Isa	37.63	266	P	P	16 58 08.4	+0.2
BBOO	Buckleboo	39.80	246	P	P	16 58 25.4	-0.2
BBOO	Buckleboo	39.80	246	P	P	16 58 24.9	-0.6
AS01	Alice Springs	42.23	260	P	P	16 58 45.1	+0.1
AS31	Alice Springs	42.27	260		P	16 58 44.9	-0.5
AS31				IAmb	IAmb	16 58 46.7	
	comp=Z,6.0nm,0.5s						
ASAR	Alice Springs	42.27	260	P	P	16 58 45.6	+0.2
	comp=Z,19nm,0.8s,baz=94,slow=7.3,SNR=420						
ASAR				ScP	ScP	17 03 28.1	+1.1
	comp=Z,2.0nm,1.0s,baz=104,slow=3.6,SNR=6.1						
ASAR				S	S	17 04 25.5	-2.2
	comp=Z,1.5nm,0.9s,baz=100,slow=14,SNR=9.3						
	comp=Z,19nm,0.8s						
ASAR	Alice Springs	42.27	260		P	16 58 45.1	-0.3
ASAR					ScP	17 03 28.1	+1.1
WR8	Warramunga Arr	42.44	265		P	16 58 45.9	-0.8
WR8				IAmb	IAmb	16 58 47.1	
	comp=Z,12nm,0.9s						
WB0	Warramunga Arr	42.58	266		P	16 58 47.0	-0.8
WRAB	Tennant Creek	42.59	265	P	P	16 58 47.4	-0.4
WRAB	Tennant Creek	42.59	265	P	P	16 58 46.6	-1.2
WRAB				IAmb	IAmb	16 58 48.3	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	42.59	265	P	P	16 58 47.6	-0.2
	comp=Z,17nm,0.6s,baz=94,slow=8.5,SNR=378						
WRA				ScP	ScP	17 03 28.9	+0.6
	comp=Z,1.5nm,0.7s,baz=96,slow=3.7,SNR=7.1						
	comp=Z,17nm,0.6s						
WRA	Warramunga Arr	42.59	265	P	P	16 58 47.3	-0.6
WRA					ScP	17 03 28.9	+0.6
FORT	Forrest	46.65	249		P	16 59 18.5	-0.4
MTN	Manton Dam	47.56	274	P	P	16 59 25.3	-0.7
MTN				IAmb	IAmb	16 59 26.0	
	comp=Z,8.7nm,0.7s						
KHLU	Kahalu`u	48.64	31	P	P	16 59 33.7	-0.3
KNHH	Kane Nui o Ham	48.80	32		P	16 59 35.5	+0.3
KNRA	Kununurra	48.84	269		P	16 59 35.5	0.0
HMH	Humu'ula Sheep	48.84	31	P	P	16 59 35.3	-0.5
FITZ	Fitzroy Crossi	51.02	265	P	P	16 59 51.9	+0.4
FITZ	Fitzroy Crossi	51.02	265	P	P	16 59 51.0	-0.6
SOEI	Soe	54.94	274	P	P	17 00 19.2	-0.4
SOEI				IAmb	IAmb	17 00 33.8	
	comp=Z,29nm,1.0s						
SBA	Scott Base	54.95	183	P	P	17 00 19.5	+0.9
VNDA	Vanda	54.96	185	P	P	17 00 19.6	+0.9
	comp=Z,0.9nm,0.5s,baz=4.5,slow=7.4,SNR=15						
	comp=Z,0.9nm,0.5s						
VNDA	Vanda	54.96	185	P	P	17 00 19.8	+1.2
KLBR	Kellerberrin	55.34	247	P	P	17 00 21.7	-0.4
MEEK	Meekatharra	55.42	253	P	P	17 00 22.2	-0.5
NWAO	Narrogin (SRO)	55.60	245	P	P	17 00 23.6	-0.3
NWAO	Narrogin (SRO)	55.60	245	P	P	17 00 23.3	-0.6
NWAO				IAmb	IAmb	17 00 34.4	
	comp=Z,32nm,1.4s						
NWAO					PcP	17 01 15.5	-0.2
MBWA	Marble Bar	55.62	260	P	P	17 00 23.8	-0.3
MBWA	Marble Bar	55.62	260	P	P	17 00 23.4	-0.7
MBWA				IAmb	IAmb	17 00 24.5	
	comp=Z,14nm,0.8s						
BLDU	Ballidu	56.38	248	P	P	17 00 29.0	-0.3
MUN	Mundaring	56.59	246	P	P	17 00 31.0	+0.3
MORW	Morawa	57.21	250	P	P	17 00 34.9	-0.1
MORW	Morawa	57.21	250	P	P	17 00 34.4	-0.7
MORW				IAmb	IAmb	17 00 58.6	
	comp=Z,25nm,1.4s						
GIRL	Giralia	60.19	256	P	P	17 00 55.3	+0.2
CASY	Casey	60.69	206	P	P	17 00 56.8	-0.9
PLAI	Plampang	61.24	273	P	P	17 01 02.1	-0.1
TOLI2	Tolitoli	62.58	284	P	P	17 01 11.9	+1.0
TOLI2	Tolitoli	62.58	284	P	P	17 01 09.4	-1.5
QSPA	South Pole Qui	66.75	180	P	P	17 01 37.6	+1.0
	comp=Z,1.3nm,0.6s,baz=0.4,slow=1.4,SNR=15						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	66.75	180	P	P	17 01 37.1	+0.6
MJAR	Matsushiro Arr	71.51	325	P	P	17 02 05.7	+0.3
	comp=Z,2.5nm,0.8s,baz=156,slow=5.9,SNR=8.9						
	comp=Z,2.5nm,0.8s						
MJAR	Matsushiro Arr	71.51	325	P	P	17 02 05.0	-0.3
JTM	Tenmabayashi	73.41	330	P	P	17 02 15.8	-0.4
JTM				IAmb	IAmb	17 02 18.1	
	comp=Z,11nm,1.0s						
AMKA	Amchitka	74.38	359	P	P	17 02 20.9	-0.6
KIWB	Kanaga Island	74.89	2	P	P	17 02 23.9	-0.4
ADK	Adak	74.94	2	P	P	17 02 24.7	+0.2
ADK	Adak	74.94	2	P	P	17 02 23.9	-0.7
YSS	Yuzhno-Sakhali	77.68	335	P	P	17 02 40.9	+1.1
YSS				IAmb	IAmb	17 02 42.3	
	comp=Z,7.5nm,0.8s						
UNV	Unalaska Valle	77.71	8	P	P	17 02 39.3	-0.5
KSRS	Korea Array	77.90	320	P	P	17 02 42.6	+1.5
	comp=Z,1.1nm,0.7s,baz=131,slow=5.3,SNR=8.6						
	comp=Z,1.1nm,0.7s						
PETK	Petropavlovsk-	78.58	346	P	P	17 02 45.1	+0.6
	comp=Z,6.4nm,0.7s,baz=106,slow=6.2,SNR=18						
	comp=Z,6.4nm,0.7s						
USRK	Ussuriysk Ar.	80.36	327	P	P	17 02 55.5	+1.4
	comp=Z,2.5nm,0.7s,baz=80,slow=10,SNR=4.3						
	comp=Z,2.5nm,0.7s						
CMB	Columbia Colle	82.69	43		P	17 03 06.5	+0.2
ORV	Oroville	82.92	42		P	17 03 07.5	+0.2
CLC	China Lake	83.19	46		P	17 03 09.6	+0.7
CWC	Cottonwood Cre	83.23	46	P	P	17 03 09.6	+0.5
BELC	Belle Mtn. Jos	83.25	49		P	17 03 09.5	+0.2
MDPB	Devils Postpil	83.28	44	P	P	17 03 09.9	+0.4
MDPB				IAmb	IAmb	17 03 11.9	
	comp=Z,8.6nm,1.3s						
M03C	McCloud	83.61	40		P	17 03 11.6	+0.8
M03C				IAmb	IAmb	17 03 12.8	
	comp=Z,10nm,0.7s						
IRM	Iron Mountain	83.93	49	IAmb	IAmb	17 03 14.9	
	comp=Z,8.6nm,1.3s						
NVAR	Mina Array Bea	84.24	44	P	P	17 03 14.9	+0.8
	comp=Z,1.2nm,0.8s,baz=225,slow=9.0,SNR=4.8						
	comp=Z,1.2nm,0.8s						
J04A	Umpqua Nationa	84.84	38	IAmb	IAmb	17 03 19.2	
	comp=Z,16nm,1.0s						
O18K	Koktuh Hills	85.31	12	P	P	17 03 18.6	0.0
WIFE	Three Sisters-	85.52	38		P	17 03 20.1	-0.1
PINE	Pine Mountain	85.85	38	IAmb	IAmb	17 03 23.7	
	comp=Z,4.2nm,0.8s						
TUC	Tucson	86.06	52	P	P	17 03 23.9	+1.0
TUC				IAmb	IAmb	17 03 25.6	
	comp=Z,4.7nm,0.9s						
I07A	Izee	86.85	39	IAmb	IAmb	17 03 28.6	
	comp=Z,5.6nm,1.0s						
U15A	North Rim	87.12	48		P	17 03 27.5	-0.6
U15A				IAmb	IAmb	17 03 30.3	
	comp=Z,5.9nm,0.8s						
STLK	Strandline Lak	87.49	13	IAmb	IAmb	17 03 28.6	
	comp=Z,3.9nm,0.8s						
ELK	Elko	87.50	43	P	P	17 03 30.0	+0.2
L19K	White Mountain	87.53	11	IAmb	IAmb	17 03 30.3	
	comp=Z,8.8nm,0.8s						
G08A	Pilot Rock	87.89	38		P	17 03 32.0	+0.7
G08A				IAmb	IAmb	17 03 33.2	
	comp=Z,7.8nm,1.1s						
MXC	Moxie City	87.92	37	IAmb	IAmb	17 03 33.2	
	comp=Z,5.8nm,0.8s						
MTPU	Mount Pierson	88.04	47	IAmb	IAmb	17 03 35.0	
	comp=Z,3.0nm,0.8s						
MFID	Camas Ranch	88.63	41	IAmb	IAmb	17 03 36.5	
	comp=Z,5.0nm,0.8s						
L22K	Petersville	88.64	13		P	17 03 33.2	-1.1
L22K				IAmb	IAmb	17 03 34.7	
	comp=Z,5.5nm,0.8s						
CAST	Castle Rocks	89.18	12	IAmb	IAmb	17 03 36.8	
	comp=Z,6.5nm,0.8s						
F10A	Beach Ranch, E	89.27	38	IAmb	IAmb	17 03 38.8	
	comp=Z,2.9nm,0.8s						
TMUT	Trail Mountain	89.34	46	P	P	17 03 38.2	-0.2
TMUT				IAmb	IAmb	17 03 40.6	
	comp=Z,7.2nm,0.8s						
CMAR	Chiang Mai Arr	89.47	290	P	P	17 03 41.2	+2.2
	comp=Z,0.8nm,0.8s,baz=119,slow=3.1,SNR=6.8						
	comp=Z,0.8nm,0.8s						
CMAR	Chiang Mai Arr	89.47	290	P	P	17 03 38.2	-0.8
KTH	Kantishna Hill	89.53	13	IAmb	IAmb	17 03 38.6	
	comp=Z,4.5nm,0.9s						
TRF	Thorofare Moun	89.56	13	P	P	17 03 38.3	-0.4
TRF				IAmb	IAmb	17 03 38.9	
	comp=Z,7.5nm,0.9s						
HLID	Hailey	89.57	41	IAmb	IAmb	17 03 41.1	
	comp=Z,2.5nm,0.8s						
HVU	Hansel Valley	89.62	44	IAmb	IAmb	17 03 41.2	
	comp=Z,2.5nm,0.8s						
SRU	San Rafael Swe	89.70	47	P	P	17 03 39.8	-0.2
SRU				IAmb	IAmb	17 03 41.5	
	comp=Z,6.8nm,0.8s						
MNTX	Cornudas Mount	89.77	55	IAmb	IAmb	17 03 42.1	
	comp=Z,3.6nm,0.9s						
TX31	Lajitas Ar. Si	90.01	58		P	17 03 42.1	+0.6
TX31				IAmb	IAmb	17 03 43.6	
	comp=Z,3.3nm,0.9s						
TXAR	Lajitas Array	90.01	58	P	P	17 03 42.9	+1.4
	comp=Z,1.8nm,0.7s,baz=212,slow=6.6,SNR=25						
	comp=Z,1.8nm,0.7s						
TXAR	Lajitas Array	90.01	58	P	P	17 03 41.8	+0.3
ILAR	Eielson Array	91.44	13	P	P	17 03 46.2	-0.9
	comp=Z,0.8nm,0.8s,baz=224,slow=5.2,SNR=7.3						
	comp=Z,0.8nm,0.8s						
SAND	Sanderson	91.48	58	IAmb	IAmb	17 03 49.5	
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	92.18	44	P	P	17 03 51.1	-0.3
	comp=Z,1.2nm,0.7s,baz=197,slow=4.6,SNR=9.1						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	111.87	313	PKiKP	PKiKP	17 09 11.4	-1.3
	comp=Z,0.6nm,0.6s,baz=214,slow=0.6,SNR=7.4						
KURK	Kurchatov	114.89	317		PKPdf	17 09 17.1	-1.2
KURBB	Kurchatov Arra	114.93	317	PKP	PKPdf	17 09 17.1	-1.3
	comp=Z,0.8nm,0.6s,baz=104,slow=1.8,SNR=9.4						
BVAR	Borovoye Array	120.11	319	PKP	PKPdf	17 09 27.5	-0.9
	comp=Z,1.4nm,0.5s,baz=191,slow=0.2,SNR=8.6						
ARTI	Arti	126.61	324	PKP	PKPdf	17 09 39.8	-0.9
	comp=Z,1.4nm,0.6s,baz=80,slow=3.7,SNR=4.1						
AKTO	Aktyubinsk	127.98	317	PKP	PKPdf	17 09 42.6	-1.0
	comp=Z,1.8nm,0.7s,baz=73,slow=4.5,SNR=5.1						
ARCES	ARCESS Array B	131.36	348	PKP	PKPdf	17 09 48.0	-1.3
	comp=Z,2.8nm,0.9s,baz=333,slow=0.5,SNR=11						
KTK1	Kautokeino	132.22	349	*e*P	PKPdf	17 09 51.0	0.0
FINES	FINESS Array B	137.95	342	PKhKP	PKPpre	17 09 49.2	
	comp=Z,1.9nm,1.0s,baz=52,slow=3.1,SNR=3.5						
FINES				PKP	PKPdf	17 10 01.7	-0.1
	comp=Z,1.0nm,0.6s,baz=48,slow=2.8,SNR=4.9						
NC303	NORSAR Array S	141.34	351		PKPpre	17 10 02.2	
NB2	NORSAR Subarra	141.54	351	PKP	PKPpre	17 10 03.2	
	comp=Z,1.0nm,0.5s,baz=20,slow=3.6						
NOA	NORSAR Array B	141.54	351	PKhKP	PKPpre	17 10 03.5	
	comp=Z,2.1nm,0.7s,baz=16,slow=4.7,SNR=11						
NC602	NORSAR Array S	141.79	351	*e*P	PKPpre	17 10 04.0	
HYA	Hoyanger	141.96	355	*e*P	PKPpre	17 10 04.9	
HFS	Hagfors	142.01	349	PKhKP	PKPpre	17 10 04.7	
	comp=Z,8.8nm,0.4s,baz=64,slow=3.4,SNR=95						
SUE	Sulen	142.16	356	*e*P	PKPpre	17 10 05.5	
ASK	Askoy	142.70	356	*e*P	PKPpre	17 10 07.5	
BER	Bergen	142.79	356	*e*P	PKPpre	17 10 07.8	
KONO	Kongsberg	143.10	352	*e*P	PKPab	17 10 08.5	-0.3
KONO	Kongsberg	143.10	352		PKPab	17 10 08.1	-0.7
ODD1	Odda	143.16	355	*e*P	PKPbc	17 10 09.3	-0.3
LRW	Lerwick	143.21	1	*e*P	PKPab	17 10 08.8	-0.4
BLS5	Blasjo	143.66	355	*e*P	PKPab	17 10 10.8	-0.1
AKASG	Malin Array Be	144.57	328	PKP	PKPdf	17 10 12.8	-1.2
	comp=Z,8.1nm,0.6s,baz=45,slow=4.1,SNR=39						
AKBB	Malin Array Si	144.57	328		PKPdf	17 10 12.7	-1.3
HOMB	Homborsund	144.58	352	*e*P	PKPbc	17 10 14.0	+0.1
KIEV	Kiev	144.58	328		PKPdf	17 10 13.6	-0.4
MCD	Coleburn Disti	145.69	3	*e*P	PKPbc	17 10 16.7	-0.6
KPL	Plockton	145.76	6	*e*P	PKPbc	17 10 17.0	-0.4
DRUM	Mains of Drumt	146.40	3	*e*P	PKPbc	17 10 18.5	-0.7
INVG	Invergeldie, C	146.79	4	*e*P	PKPbc	17 10 19.9	-0.5
LAWE	Loch Awe, Argy	146.85	6	*e*P	PKPab	17 10 23.1	-0.3
EAB	Aberfoyle	147.01	5	*e*P	PKPbc	17 10

LOHW				IAML		16 55 24.7	
	comp=E,7.1nm,0.7s						
LOHW				IAML		16 55 25.4	
	comp=E,8.7nm,0.7s						
FLWY	**Flagg Ranch**	**3.85**	**278**		**Pn**	**16 54 26.4**	**+0.6**
FLWY				IAML		16 55 36.7	
	comp=E,12nm,1.0s						
ISCO	**Idaho Springs**	**3.85**	**182**		**Pn**	**16 54 25.2**	**-0.7**
YHL	**Hebgen Lake**	**4.32**	**288**		**Pn**	**16 54 32.5**	**+0.2**
YHL				IAML		16 55 58.4	
	comp=E,9.6nm,0.8s						
RDMU	**Red Mountain**	**4.37**	**227**		**Pn**	**16 54 33.4**	**+0.5**
RDMU				IAML		16 55 49.3	
	comp=E,9.4nm,0.9s						
BOZ	**Bozeman (W)**	**4.85**	**296**		**Pn**	**16 54 39.5**	**+0.1**
BOZ				IAML		16 55 17.3	
	comp=E,5.1nm,4.6s						
BOZ				IAML		16 56 15.9	
	comp=E,4.1nm,1.1s						
HWUT	**Hardware Ranch**	**4.98**	**248**		**Pn**	**16 54 42.2**	**+0.9**
PV22	**Blue Mesa, Par**	**5.72**	**208**		**Pn**	**16 54 52.2**	**+0.8**
ULM	**Lac du Bonnet**	**9.27**	**41**	Pn	Pn	16 55 46.5	+6.6
	comp=E,0.2nm,0.3s,baz=227,slow=18,SNR=1.2						
ULM				Lg	Lg	16 58 20.8	
	comp=E,0.2nm,0.3s,baz=311,slow=18,SNR=2.2						
	comp=E,0.7nm,0.4s						
I56US	**NEWPORT INFRAS**	**9.37**	**304**	I	I	17 52 30.0	
	baz=115,slow=311,SNR=1.2						

IDC 09 16:57:27.6±2.1, 2°06S × 126°37E, h0 km, mb3.4/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=175.6km s-min=28.4km az=65.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.41**	**157**	P	P	17 01 55.1	-0.4
	0.1nm,0.3s,baz=335,slow=11,SNR=3.7						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**22.69**	**162**	P	P	17 02 31.1	+0.2
	1.1nm,0.6s,baz=344,slow=12,SNR=11						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**62.14**	**327**	P	P	17 07 50.6	0.0
	0.2nm,0.5s,baz=137,slow=8.1,SNR=2.9						
	0.2nm,0.5s						

IDC 09 17:00:17.5±5.0, 28°15N × 87°36E, h0 km, mb3.5/4, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=278.5km s-min=21.5km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.03**	**349**	P	Pn	17 04 42.6	+0.9
	0.1nm,0.3s,baz=185,slow=9.7,SNR=4.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**23.42**	**346**	P	P	17 05 26.3	-1.8
	0.4nm,0.6s,baz=166,slow=9.9,SNR=4.2						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**25.84**	**357**	P	P	17 05 51.1	+0.7
	0.3nm,0.3s,baz=183,slow=5.9,SNR=4.0						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**65.94**	**131**	P	P	17 11 05.7	0.0
	0.7nm,0.8s,baz=326,slow=6.6,SNR=7.6						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**68.32**	**134**	P	P	17 11 20.8	0.0
	0.6nm,0.7s,baz=316,slow=6.0,SNR=7.7						
	0.6nm,0.7s						

*IDC **09** 17:01:02.5±6.5, 2°23S × 101°86E, h173 km±61 km, mb3.8/18, mbtmp4.4/19, Error ellipse: s-maj=33.4km s-min=11.0km az=56.0*
*DJA **09** 17:01:05.8±0.1, 2°S±2°×10°2E±°, h197 km±2 km, M4.4/46, mB5.1/10, mb4.3/30, MLv4.4/46, Mw(mB)4.4/10*
*NEIC **09** 17:01:05.6±2.0, 2°.07S±0°.06×101°.96E±0°.09, h190 km±4 km, mb4.4/40, Error ellipse: s-maj=12.8km s-min=8.5km az=77.0*
*GFZ **09** 17:01:06.0±0.2, 2°S±3°×10°2E±°, h196 km±2 km, M4.1/21, mb4.2/21, Error ellipse: s-maj=7.2km s-min=3.7km az=41.8, confirmed*

ISC 09 17:01:06.1±0.5, 2°.03S±0°.06×102°.04E±0°.05, h200 km, n152, σ0s99/134, mb4.2/33, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.58**	**264**	P	**Pn**	**17 01 34.2**	**+0.6**
MASI	**Maura Aman, Be**	**1.12**	**170**	P	**Pn**	**17 01 36.8**	**-0.1**
SDSI	**Sungai Dareh**	**1.25**	**331**	P	**Pn**	**17 01 36.8**	**-1.0**
JMBI	**JAMBI**	**1.65**	**76**	P	**Pn**	**17 01 40.8**	**-0.4**
JMBI	**JAMBI**	**1.65**	**76**	P	**Pn**	**17 01 40.5**	**-0.6**
KSI	**Kapahiang**	**1.70**	**161**	P	**Pn**	**17 01 42.1**	**+0.3**
UBSI	**University, Be**	**1.73**	**172**	P	**Pn**	**17 01 41.5**	**-0.5**
PDSI	**Padang**	**1.93**	**305**	P	**Pn**	**17 01 43.7**	**-0.3**
PPSI	**Pulau Pagai**	**2.15**	**250**	P	**Pn**	**17 01 47.4**	**+1.2**
PPSI	**Pulau Pagai**	**2.15**	**250**	P	**Pn**	**17 01 46.9**	**+0.6**
PPI	**Padang Panjang**	**2.27**	**314**	P	**Pn**	**17 01 46.6**	**-0.8**
MNAI	**Manna**	**2.49**	**158**		**Pn**	**17 01 48.8**	**-1.1**
MNAI	**Manna**	**2.49**	**158**	P	**Pn**	**17 01 49.5**	**-0.4**
MNAI	**Manna**	**2.49**	**158**	P	**Pn**	**17 01 49.5**	**-0.4**
BKNI	**Bangkinang**	**2.54**	**337**		**Sn**	**17 02 24.0**	**-1.3**
BKNI	**Bangkinang**	**2.54**	**337**	P	**Pn**	**17 01 50.6**	**+0.1**
PMBI	**Palembang**	**2.87**	**108**	Pn	**Pn**	**17 01 52.6**	**-1.6**
PMBI	**Palembang**	**2.87**	**108**	P	**Pn**	**17 01 53.3**	**-1.0**
PMBI	**Palembang**	**2.87**	**108**	P	**Pn**	**17 01 53.2**	**-1.0**
DSRI	**Dabo**	**2.97**	**59**	P	**Pn**	**17 01 54.6**	**-0.8**
DSRI	**Dabo**	**2.97**	**59**	P	**Pn**	**17 01 54.6**	**-0.8**
MDSI	**Maura Dua**	**3.24**	**139**	P	**Pn**	**17 01 58.3**	**-0.4**
MNSI	**Mandailing Nat**	**3.73**	**319**	P	**Pn**	**17 02 05.2**	**+0.6**
KLSI		**3.77**	**135**	P	**Pn**	**17 02 05.2**	**+0.1**
KLSI		**3.77**	**135**	P	**Pn**	**17 02 05.0**	**0.0**
TPRI	**Tanjung Pinang**	**3.84**	**40**	P	**Pn**	**17 02 05.3**	**-0.7**
MYKOM	**Kota Tinggi**	**4.21**	**26**		**Pn**	**17 02 09.2**	**-1.3**
MYKOM	**Kota Tinggi**	**4.21**	**26**	P	**Pn**	**17 02 09.4**	**-1.1**
MYKOM	**Kota Tinggi**	**4.21**	**26**	P	**Pn**	**17 02 09.9**	**-0.6**
PBSI	**Pulau Batu**	**4.24**	**298**	P	**Pn**	**17 02 11.5**	**+0.5**
PBSI	**Pulau Batu**	**4.24**	**298**	P	**Pn**	**17 02 11.4**	**+0.5**
KASI	**Kota Agung**	**4.25**	**145**	P	**Pn**	**17 02 09.2**	**-1.8**
KASI	**Kota Agung**	**4.25**	**145**	P	**Pn**	**17 02 10.0**	**-1.1**
GSI	**Gunungsitoli**	**5.56**	**307**		**Pn**	**17 02 26.8**	**-0.9**
GSI	**Gunungsitoli**	**5.56**	**307**	P	**Pn**	**17 02 27.0**	**-0.7**
	1.0nm35nm,0.4s						
GSI	**Gunungsitoli**	**5.56**	**307**	P	**Pn**	**17 02 27.0**	**-0.7**
RPSI	**Rantau Prapat**	**5.63**	**326**		**Pn**	**17 02 28.6**	**-0.1**
TPI	**Tanjungpandan**	**5.66**	**97**	P	**Pn**	**17 02 29.1**	**+0.1**
PSI	**Prapat**	**5.72**	**327**	P	**Pn**	**17 02 28.8**	**-1.1**
	0.1nm31nm,1.1s						
KCSI	**Kotacane, Aceh**	**6.97**	**322**	P	**Pn**	**17 02 45.3**	**-0.8**
TPTI		**7.16**	**317**	P	**Pn**	**17 02 46.9**	**-1.5**
	0.3nm55nm,0.6s						
TPTI		**7.16**	**317**	P	**Pn**	**17 02 47.4**	**-1.0**
SNSI	**Sinabang, Aceh**	**7.21**	**308**	P	**Pn**	**17 02 49.4**	**+0.2**
	65nm,1.9s						
LEM	**Lembang**	**7.32**	**131**	P	**Pn**	**17 02 48.8**	**-2.0**
KULM	**Kulim**	**7.40**	**349**		**Pn**	**17 02 50.7**	**-1.0**
KULM	**Kulim**	**7.40**	**349**	P	**Pn**	**17 02 51.3**	**-0.3**
	0.1nm25nm,0.9s						
KULM	**Kulim**	**7.40**	**349**	P	**Pn**	**17 02 51.0**	**-0.7**
BBJI	**Bungbulang**	**7.77**	**134**	P	**Pn**	**17 02 53.3**	**-3.2**
	0.1nm17nm,1.2s						
BBJI	**Bungbulang**	**7.77**	**134**	P	**Pn**	**17 02 55.8**	**-0.7**
MLSI	**Meulaboh, Aceh**	**8.42**	**318**	P	**Pn**	**17 03 03.6**	**-1.2**
MLSI	**Meulaboh, Aceh**	**8.42**	**318**	P	**Pn**	**17 03 03.7**	**-1.1**
LHMI	**Lhok Sumawe**	**8.82**	**325**	P	**Pn**	**17 03 09.1**	**-1.0**
	77nm,0.8s						
LHMI	**Lhok Sumawe**	**8.82**	**325**	P	**Pn**	**17 03 09.1**	**-1.0**
BSI	**Banda Aceh**	**10.06**	**318**	P	**Pn**	**17 03 24.0**	**-2.3**
	32nm,1.1s						
SBUM	**Sibu**	**11.11**	**66**		**Pn**	**17 03 41.2**	**+1.4**
SBUM	**Sibu**	**11.11**	**66**	P	**Pn**	**17 03 40.5**	**+0.8**
SBUM	**Sibu**	**11.11**	**66**	P	**Pn**	**17 03 40.9**	**+1.2**
SNJI	**Sawahan-Nganju**	**11.24**	**121**	P	**Pn**	**17 03 39.8**	**-1.8**
	26nm,1.9s						
KHKI	**Kahang-Kahang**	**14.90**	**115**	P	**P**	**17 04 30.0**	**+2.0**
	20nm,0.8s						
TWSI	**Taliwang, Sumb**	**16.20**	**115**	P	**P**	**17 04 42.2**	**-0.2**
	20nm,1.0s						
TWSI	**Taliwang, Sumb**	**16.20**	**115**	P	**P**	**17 04 42.2**	**-0.2**
KKM	**Kota Kinabalu**	**16.27**	**60**	P	**Pn**	**17 04 44.7**	**+0.8**
	19nm,1.1s						
KKM	**Kota Kinabalu**	**16.27**	**60**	P	**P**	**17 04 43.8**	**+0.5**
PBA	**Port Blair**	**16.44**	**326**	P	**Pn**	**17 04 44.9**	**-1.0**
PLAI	**Plampang**	**17.05**	**114**	P	**P**	**17 04 50.7**	**-1.0**
	37nm,1.1s						
PLAI	**Plampang**	**17.05**	**114**	P	**P**	**17 04 51.6**	**-0.1**
KAPI	**Kappang**	**17.93**	**100**	P	**P**	**17 05 01.5**	**+0.3**
	27nm,0.8s,baz=290,slow=8.3,SNR=8.3						
KAPI	**Kappang**	**17.93**	**100**	P	**P**	**17 05 01.5**	**+0.3**
KAPI	**Kappang**	**17.93**	**100**	P	**Pn**	**17 05 05.0**	**+1.6**
	24nm,1.2s						
KAPI	**Kappang**	**17.93**	**100**	P	**P**	**17 05 01.2**	**-0.1**
TOLI2	**Tolitoli**	**19.00**	**81**		**P**	**17 05 13.2**	**+0.3**
TOLI2				IAmb	IAmb	17 05 15.0	
	comp=Z,17nm,0.8s						
TOLI2	**Tolitoli**	**19.00**	**81**	P	**P**	**17 05 13.5**	**+0.6**
CM31	**Chiang Mai Arr**	**20.59**	**352**	P	**P**	**17 05 29.3**	**-0.6**
CM31				IAmb	IAmb	17 05 32.5	
	comp=Z,5.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.59**	**352**	P	**P**	**17 05 29.6**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=183,slow=9.4,SNR=32						
	comp=Z,3.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.59**	**352**	P	**P**	**17 05 31.2**	**+1.4**
LUWI	**Luwuk**	**20.75**	**88**	P	**P**	**17 05 31.9**	**+0.3**
BBSI	**Bau Bau**	**20.77**	**100**	P	**P**	**17 05 32.9**	**+1.0**
CHTO	**Chiang Mai**	**20.94**	**352**		**P**	**17 05 34.1**	**+0.6**
CHTO				IAmb	IAmb	17 05 35.5	
	comp=Z,4.0nm,0.5s						
CHTO	**Chiang Mai**	**20.94**	**352**	P	**P**	**17 05 34.2**	**+0.6**
	comp=Z,5.5nm,0.7s						
CHTO	**Chiang Mai**	**20.94**	**352**	P	**P**	**17 05 33.5**	**0.0**
GTOI	**Gorontalo**	**21.14**	**83**	P	**P**	**17 05 35.7**	**0.0**
	comp=Z,7.4nm,0.8s						
MMRI	**Maumere**	**21.14**	**109**	P	**P**	**17 05 36.0**	**+0.1**
NPW	**Naypyitaw**	**22.43**	**345**	P	**P**	**17 05 48.3**	**-0.2**
SLVN	**Son La**	**23.29**	**4**		**P**	**17 05 57.6**	**+1.3**
SLVN				IAmb	IAmb	17 06 00.1	
	comp=Z,13nm,1.2s						
SOEI	**Soe**	**23.39**	**110**	P	**P**	**17 05 57.8**	**+0.5**
MALK	**Mahakanadarawa**	**23.80**	**296**	P	**P**	**17 05 59.7**	**-1.3**
SGSI	**Sangihe**	**24.16**	**76**	P	**P**	**17 06 03.9**	**-0.3**
H08S2	**Diego Garcia H**	**29.95**	**258**	T	T	17 36 27.1	
	baz=81,slow=75,SNR=27						
H08S3	**Diego Garcia H**	**29.96**	**258**	T	T	17 36 25.2	
	baz=81,slow=75,SNR=47						
H08S1	**Diego Garcia H**	**29.97**	**258**	T	T	17 36 26.6	
	baz=81,slow=75,SNR=17						
WRA	**Warramunga Arr**	**36.23**	**122**	P	**P**	**17 07 49.2**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=298,slow=11,SNR=36						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**36.23**	**122**	P	**P**	**17 07 49.2**	**-1.1**
XAN	**Xi'an**	**36.46**	**10**	P	**P**	**17 07 52.9**	**+0.9**
XAN				pP	pP	17 08 29.6	-4.2
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
ASAR	**Alice Springs**	**37.60**	**128**	P	**P**	**17 08 00.6**	**-1.2**
	comp=Z,3.3nm,0.5s,baz=301,slow=8.0,SNR=108						
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**37.60**	**128**	P	**P**	**17 08 02.3**	**+0.5**
AS31	**Alice Springs**	**37.60**	**128**		**P**	**17 08 02.4**	**+0.5**
GTA2	**Gaotai**	**41.37**	**357**	*eP*	**P**	**17 08 33.8**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**43.55**	**10**	*eP*	**P**	**17 08 53.5**	**+3.2**
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
NIL	**Nilore**	**44.67**	**325**		**P**	**17 08 59.4**	**+0.1**
NIL				IAmb	IAmb	17 08 60.0	
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**47.62**	**133**	P	**P**	**17 09 21.8**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=322,slow=7.1,SNR=8.0						
	comp=Z,0.8nm,0.3s						
KSH2	**Kashi**	**47.66**	**332**	P	**P**	**17 09 22.4**	**-0.2**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MANEM	**Manem**	**48.39**	**327**	IAmb	IAmb	17 09 30.6	
	comp=Z,50nm,0.8s						
TARG	**Taragay, Kyrgy**	**48.79**	**336**		**P**	**17 09 32.4**	**+0.9**
KDJ	**Kajisay**	**49.38**	**336**	IAmb	IAmb	17 09 37.5	
	comp=Z,14nm,0.9s						
DRK	**Karamyk**	**49.76**	**329**	IAmb	IAmb	17 09 41.0	
	comp=Z,15nm,1.0s						
SONM	**Songino Array**	**49.81**	**4**	P	**P**	**17 09 40.6**	**+1.9**
	comp=Z,7.6nm,0.5s,baz=190,slow=9.7,SNR=23						
	comp=Z,7.6nm,0.5s						
SONM	**Songino Array**	**49.81**	**4**	P	**P**	**17 09 40.3**	**+1.5**
SONM				IAmb	IAmb	17 09 41.4	
	comp=Z,6.3nm,0.7s						
ULN	**Ulaanbaatar**	**49.88**	**4**		**P**	**17 09 40.5**	**+1.2**
GAR	**Garm**	**50.18**	**328**		**P**	**17 09 41.1**	**-0.6**
GAR				IAmb	IAmb	17 09 43.4	
	comp=Z,7.6nm,0.9s						
SHAA	**Shahritus**	**50.38**	**325**	IAmb	IAmb	17 09 42.8	
	comp=Z,27nm,0.5s						
CHGR	**Chuyangaron**	**50.56**	**327**	IAmb	IAmb	17 09 44.2	
	comp=Z,16nm,1.0s						
ARSB	**Arslanbob**	**50.59**	**332**	IAmb	IAmb	17 09 46.2	
	comp=Z,9.5nm,0.9s						
BTK	**Batken**	**50.70**	**329**	IAmb	IAmb	17 09 47.0	
	comp=Z,5.4nm,0.6s						
MKAR	**Makanchi Array**	**51.63**	**343**	P	**P**	**17 09 52.5**	**+0.2**
	comp=Z,3.3nm,0.5s,baz=156,slow=8.8,SNR=47						
	comp=Z,3.3nm,0.5s						
MKAR	**Makanchi Array**	**51.63**	**343**		**P**	**17 09 52.2**	**-0.1**
MAKZ	**Makanchi**	**51.74**	**343**	P	**P**	**17 09 52.6**	**-0.4**
KKAR	**Karatay Array**	**53.13**	**331**	P	**P**	**17 10 02.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**53.25**	**27**	P	**P**	**17 10 05.0**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=206,slow=4.2,SNR=11						
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**56.18**	**342**	P	**P**	**17 10 24.5**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=159,slow=6.6,SNR=21						
	comp=Z,2.4nm,0.8s						
KURK	**Kurchatov**	**56.23**	**342**		**P**	**17 10 25.7**	**+0.3**
KURK				IAmb	IAmb	17 10 26.3	
	comp=Z,3.4nm,0.8s						
ZAA0	**Zalesovo Array**	**57.60**	**348**	IAmb	IAmb	17 10 35.8	
	comp=Z,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**57.60**	**348**	P	**P**	**17 10 34.9**	**0.0**
	comp=Z,2.9nm,0.4s,baz=168,slow=5.5,SNR=19						
	comp=Z,2.9nm,0.4s						
ZALV	**Zalesovo Beam**	**57.60**	**348**		**P**	**17 10 34.6**	**-0.3**
BVAR	**Borovoye Array**	**60.93**	**339**	P	**P**	**17 10 57.3**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=145,slow=8.8,SNR=16						
	comp=Z,2.7nm,0.6s						
BORK	**Borovoye**	**60.98**	**339**		**P**	**17 10 57.6**	**-0.5**
BORK				IAmb	IAmb	17 10 58.2	
	comp=Z,2.5nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.99**	**217**	T	T	18 16 58.0	
	baz=61,slow=75,SNR=59						
H04N1	**CROZET ISLANDS**	**62.01**	**217**	T	T	18 16 59.3	
	baz=61,slow=75,SNR=46						
H04N3	**CROZET ISLANDS**	**62.01**	**217**	T	T	18 16 57.9	
	baz=61,slow=75,SNR=42						
H04S1	**CROZET ISLANDS**	**62.26**	**217**	T	T	18 17 15.1	
	baz=60,slow=75,SNR=7.0						
H04S3	**CROZET ISLANDS**	**62.27**	**217**	T	T	18 17 14.9	
	baz=60,slow=75,SNR=9.0						
H04S2	**CROZET ISLANDS**	**62.28**	**217**	T	T	18 17 16.3	
	baz=60,slow=75,SNR=8.5						
AB31	**Akbulak array**	**62.66**	**330**		**P**	**17 11 08.5**	**-0.9**
ABKAR	**Akbulak array**	**62.66**	**330**		**P**	**17 11 08.3**	**-1.1**
AKTO	**Aktyubinsk**	**64.37**	**330**	P	**P**	**17 11 20.2**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=150,slow=2.2,SNR=4.7						
	comp=Z,0.9nm,0.3s						
YAK	**Yakutsk**	**67.27**	**14**	P	**P**	**17 11 38.6**	**-0.2**
ARTI	**Arti**	**68.11**	**336**	P	**P**	**17 11 43.8**	**-0.4**
	comp=Z,3.7nm,0.5s,baz=218,slow=1.8,SNR=6.6						
	comp=Z,3.7nm,0.5s						
ARTI	**Arti**	**68.11**	**336**	P	**P**	**17 11 43.6**	**-0.6**
GURO	**Guroymak-BITLI**	**68.29**	**313**	P	**P**	**17 11 44.3**	**-1.6**
KBZ	**Khabaz**	**69.67**	**318**	P	**P**	**17 11 53.8**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=134,slow=7.7,SNR=4.9						
	comp=Z,3.2nm,0.8s						
ASF	**Jabal al Asfar**	**70.27**	**305**	P	**P**	**17 11 58.3**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=293,slow=23,SNR=4.9						
	comp=Z,0.6nm,0.8s						
BR131	**Keskin Array S**	**74.85**	**312**	P	**P**	**17 12 24.8**	**-0.3**
BR131				IAmb	IAmb	17 12 25.7	
	comp=Z,3.9nm,0.7s						
BRTR	**Keskin Array B**	**74.85**	**312**	P	**P**	**17 12 25.1**	**0.0**
	comp=Z,3.1nm,0.7s,baz=136,slow=7.3,SNR=13						
	comp=Z,3.1nm,0.7s						
BRTR	**Keskin Array B**	**74.85**	**312**	P	**P**	**17 12 25.2**	**+0.2**
AKASG	**Malin Array Be**	**80.76**	**322**	P	**P**	**17 12 57.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=101,slow=4.6,SNR=4.3						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**80.76**	**322**	P	**P**	**17 12 57.0**	**-0.2**
BURAR	**Bucovina Array**	**82.63**	**318**	P	**P**	**17 13 08.8**	**+1.6**
BUR08	**Bucovina Ar. S**	**82.65**	**318**	P	**P**	**17 13 08.6**	**+1.2**
KOLS	**Kolonicke sedl**	**84.80**	**319**	*eP*	**P**	**17 13 20.3**	**+2.2**
FINES	**FINESS Array B**	**85.09**	**332**	P	**P**	**17 13 17.5**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=116,slow=4.4,SNR=4.1						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**87.20**	**340**	P	**P**	**17 13 28.5**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=94,slow=5.0,SNR=4.3						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**87.20**	**340**	P	**P**	**17 13 28.5**	**-0.9**
ARCES				IAmb	IAmb	17 13 33.9	
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	**143.46**	**40**	PKP	PKPbc	17 20 16.0	+0.6
	comp=Z,0.4nm,0.4s,baz=287,slow=0.0,SNR=5.1						

*IDC **09** 17:07:11.1±1.3, 23°.03N × 95°.24E, h0 km, mb3.6/4, mbtmp3.5/5, ML3.2/1, MS2.8/1, Error ellipse: s-maj=62.0km s-min=15.8km az=58.0*
*BKK **09** 17:07:12.7±0.4, 23°N±2°×9°5E±°, h10 km, M3.9/5, mB3.8/1, mb3.5/1, Mjma3.9/5, ML4.2/5, MLv4.0/5, Mw(mB)2.7/1*

ISC 09 17:07:10.8±1.4, 22°.5N±0°.3 × 94°.7E±0°.4, h10 km, n9, σ1s92/10, mb3.6/4, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAI	**Chiengmai2**	**4.79**	**121**	P	**Pn**	**17 08 24.9**	**+1.7**
MHMT	**Maesarieng**	**5.24**	**144**	P	**Pb**	**17 08 42.3**	**-0.2**
CHIO	**Chiang Mai**	**5.39**	**131**	P	**Pn**	**17 08 29.9**	**-1.4**
CM15	**Chiang Mai Arr**	**5.63**	**134**	P	**Pn**	**17 08 34.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**5.64**	**134**	Pn	**Pn**	**17 08 36.5**	**+1.7**
	0.2nm,0.3s,baz=317,slow=12,SNR=5.4						
CMAR				Pg	**Pg**	**17 08 57.2**	**-1.6**
	0.7nm,0.3s,baz=317,slow=14,SNR=10						
CMAR				Lg	Lg	17 10 12.6	
	0.9nm,0.3s,baz=321,slow=30,SNR=4.7						
CMAR				LR	LR	17 10 58.4	
	comp=Z,94nm,20.5s,baz=200,slow=40						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**26.27**	**341**	P	**P**	**17 12 45.5**	**-0.8**
	1.3nm,0.7s,baz=152,slow=9.9,SNR=10						
	1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**30.82**	**340**	P	**P**	**17 13 23.8**	**-2.9**
	0.3nm,0.7s,baz=142,slow=9.8,SNR=4.2						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**35.71**	**335**	P	**P**	**17 14 09.6**	**+0.2**
	0.4nm,0.5s,baz=122,slow=7.2,SNR=3.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**59.64**	**138**	P	**P**	**17 17 17.8**	**+2.4**
	0.4nm,0.6s,baz=322,slow=7.0,SNR=10						
	0.4nm,0.6s						

*IDC **09** 17:14:28.9±1.1, 35°.52N × 26°.75E, h0 km, mb3.6/5, mbtmp3.6/11, ML3.2/6, MS3.0/6, Error ellipse: s-maj=24.4km s-min=14.4km az=164.0*
*ISK **09** 17:14:30.0, 35°.53N × 26°.76E, h4 km, ML3.5/30*
*THE **09** 17:14:30.4, 35°N±5°×2°7E±°, h14 km±11 km, M3.5/15, MLh3.5/15*
*ATH **09** 17:14:30.3, 35°.49N × 26°.77E, h10 km±2 km, ML3.6/25, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 09 17:14:30.4±1.0, 35°.47N±0°.03 × 26°.74E±0°.02, h19 km±4 km, n100, σ1s58/124, mb3.5/4, MS3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.35**	**77**	Pg	**Pg**	**17 14 37.2**	**-0.7**
KARP				Sg	**Sg**	**17 14 42.3**	**-0.8**
KARP	**Karpathos**	**0.35**	**77**	P	**Pg**	**17 14 36.8**	**-1.1**
KARP				S	**Sg**	**17 14 41.8**	**-1.3**
KARP	**Karpathos**	**0.35**	**77**	P	**Pg**	**17 14 36.9**	**-1.1**
ZKR	**Zakros**	**0.56**	**231**	Pg	**Pg**	**17 14 41.4**	**-0.1**
ZKR				Sg	**Sn**	**17 14 51.1**	**-0.8**
ZKR	**Zakros**	**0.56**	**231**	P	**Pb**	**17 14 42.0**	**+0.6**
ZKR	**Zakros**	**0.56**	**231**	P	**Pb**	**17 14 41.8**	**+0.4**
ZKR				S	**Sb**	**17 14 49.9**	**+1.0**
AGNA	**Agios Nikolaos**	**0.88**	**252**	P	**Pn**	**17 14 48.0**	**+0.4**
AGNA				S	**Sn**	**17 15 00.1**	**+0.3**
NPS	**Neapolis**	**0.94**	**258**	P	**Pg**	**17 14 49.0**	**+0.2**
NPS				S	**Sb**	**17 15 00.4**	**+0.2**
**N

VILL	**Villia**	**3.85**	**315**	P		**Pn**	**17 15 29.5**	**+1.0**
VIL2	**Platees**	**3.91**	**316**	P		**Pn**	**17 15 30.1**	**+0.8**
ITM	**Ithomi**	**4.25**	**295**	P		**Pn**	**17 15 34.2**	**+0.2**
ITM	**Ithomi**	**4.25**	**295**	P		**Pn**	**17 15 36.0**	**+2.0**
GUR	**Goura**	**4.31**	**306**	P		**Pn**	**17 15 36.4**	**+1.5**
KLV	**Kalavryta, Ach**	**4.49**	**306**	P		**Pn**	**17 15 39.1**	**+1.7**
AKMS	**Akamas**	**4.60**	**94**	P		**Pn**	**17 15 40.0**	**+1.2**
KALE	**Kalithea**	**4.70**	**310**	P		**Pn**	**17 15 41.9**	**+1.6**
DRO	**Drossia**	**4.74**	**303**	P		**Pn**	**17 15 42.4**	**+1.6**
ALFC	**Alefka**	**4.80**	**92**	P		**Pn**	**17 15 42.7**	**+1.1**
NATA	**Nata**	**4.83**	**97**	P		**Pn**	**17 15 42.9**	**+0.9**
ANX	**Ano Chora**	**4.96**	**310**	P		**Pn**	**17 15 45.5**	**+1.7**
MVOU	**Mavrovouni**	**5.66**	**93**	P		**Pn**	**17 15 54.7**	**+1.3**
BRTR	**Keskin Array B**	**6.93**	**50**	Pn		**Pn**	**17 16 12.3**	**+1.4**
	0.2nm,0.3s,baz=239,slow=14,SNR=3.7							
BRTR				LR		LR	17 19 40.3	
	comp=Z,98nm,22.0s,baz=198,slow=45							
	0.9nm,0.7s							
MMAI	**Mount Meron Ar**	**7.58**	**106**	Pn		**Pn**	**17 16 22.6**	**+2.7**
	1.1nm,0.3s,baz=328,slow=14,SNR=4.4							
MMAI				Sn		**Sn**	**17 17 44.2**	**-1.0**
	3.6nm,0.3s,baz=280,slow=30,SNR=7.0							
MMAI				LR		LR	17 20 18.9	
	comp=Z,48nm,18.1s,baz=296,slow=46							
	0.6nm,0.3s							
EIL	**Elat**	**9.02**	**128**	Pn		**Pn**	**17 16 40.3**	**+0.7**
	0.5nm,0.3s,baz=231,slow=4.9,SNR=5.3							
EIL				Sn		**Sn**	**17 18 15.7**	**-4.9**
	0.9nm,0.3s,baz=313,slow=4.9,SNR=5.8							
	2.3nm,0.6s							
MLR	**Muntele Rosu**	**10.03**	**357**	LR		LR	17 20 53.6	
	comp=Z,34nm,21.9s,baz=195,slow=38							
KBZ	**Khabaz**	**14.92**	**52**	Pn		**P**	**17 18 04.7**	**-0.9**
	0.1nm,0.3s,baz=287,slow=6.4,SNR=4.4							
	3.1nm,0.8s							
AKASG	**Malin Array Be**	**15.33**	**6**	Pn		**Pn**	**17 18 05.7**	**+0.1**
	0.6nm,0.3s,baz=196,slow=11,SNR=7.7							
	0.9nm,0.6s							
GERES	**GERESS Array B**	**16.46**	**328**	Pn		**P**	**17 18 21.9**	**-0.9**
	baz=148,slow=11,SNR=7.9							
	0.8nm,0.8s							
HFS	**Hagfors**	**26.09**	**345**	LR		LR	17 31 47.3	
	comp=Z,23nm,20.6s,baz=138,slow=40							
EKA	**Eskdalemuir Ar**	**28.55**	**323**	P		**P**	**17 20 26.6**	**+2.0**
	0.1nm,0.3s,baz=121,slow=9.6,SNR=4.2							
	0.1nm,0.3s							
TORD	**Torodi Ar. Bea**	**31.69**	**232**	P		**P**	**17 20 55.0**	**+2.3**
	0.3nm,0.4s,baz=31,slow=8.4,SNR=4.1							
	0.3nm,0.4s							
AAK	**Ala-Archa**	**37.36**	**64**	LR		LR	17 38 06.6	
	comp=Z,58nm,18.5s,baz=176,slow=38							
KURBB	**Kurchatov Arra**	**39.92**	**51**	P		**P**	**17 22 04.2**	**+1.2**
	0.5nm,0.6s,baz=278,slow=8.8,SNR=7.2							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**42.52**	**57**	P		**P**	**17 22 25.5**	**+1.0**
	0.7nm,0.5s,baz=267,slow=4.6,SNR=9.4							
	0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**43.86**	**46**	P		**P**	**17 22 35.3**	**+0.2**
	0.8nm,0.5s,baz=263,slow=9.2,SNR=4.9							
	0.8nm,0.5s							
CMAR	**Chiang Mai Arr**	**65.25**	**84**	LR		LR	17 59 42.2	
	comp=Z,36nm,18.2s,baz=190,slow=42							

*NEIC **09** 17:15:11.1±0.6, 47.55N±0.03×92.57W±0.05, h0km±2km, mb_Lg2.8/18, ML2.9/12, Error ellipse: s-maj=6.1km s-min=2.9km az=305.0*
*IDC **09** 17:15:12.6±3.8, 47.53N×92.75W, h0km, mbtmp2.3/1, ML1.2/1, Error ellipse: s-maj=75.6km s-min=26.0km az=54.0*
ISC 09 17:15:08.5±1.0, **47.50N**±0.04×**92.65W**±0.04, **h0**km, **n17**, σ1§**02**/14, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.90**	**60**		**Pb**	**17 15 26.2**	**-0.8**
EYMN				Sg	**Sg**	**17 15 37.9**	**+0.5**
EYMN				IAML		17 15 43.3	
	313nm,1.4s						
E38A	**The Farm, Brul**	**1.17**	**140**		**Pn**	**17 15 33.1**	**+0.9**
E38A				IAML		17 15 53.3	
	168nm,0.6s						
E38A				IAML		17 15 53.7	
	196nm,0.6s						
SPMN	**Marine on St.**	**2.28**	**183**		**Pb**	**17 15 50.2**	**-0.4**
SPMN				IAmb_Lg		17 16 25.7	
	comp=Z,32nm,0.8s						
EPLO	**Experimental L**	**2.29**	**342**		**Pb**	**17 15 50.5**	**-0.2**
EPLO				IAmb_Lg		17 16 25.5	
	comp=Z,16nm,0.8s						
AGMN	**Agassiz Nation**	**2.30**	**291**		**Pb**	**17 15 50.0**	**-0.9**
AGMN				IAML		17 16 26.0	
	comp=Z,106nm,0.6s						
AGMN				IAmb_Lg		17 16 30.0	
	comp=Z,37nm,1.1s						
TBO	**Thunder Bay**	**2.46**	**61**		**Pb**	**17 15 53.5**	**-0.1**
TBO					**Sb**	**17 16 23.1**	**-1.3**
TBO				IAML		17 16 29.9	
	comp=N,67nm,1.8s						
TBO				IAML		17 16 38.8	
	comp=E,100nm,1.4s						
G40A	**Rib Lake**	**2.81**	**142**		**Pb**	**17 15 59.4**	**-0.1**
F33A	**5 Mile Ranch,**	**3.01**	**238**		**Pn**	**17 15 58.1**	**+0.7**
ULM	**Lac du Bonnet**	**3.48**	**323**	Pn	**Pn**	**17 16 05.5**	**+1.7**
	comp=E,0.4nm,0.3s,baz=142,slow=14,SNR=6.8						
ULM				Pg	**Pg**	**17 16 14.3**	**-0.8**
	comp=E,0.4nm,0.3s,baz=143,slow=16,SNR=2.9						
ULM				Sn	**Sn**	**17 16 45.6**	**0.0**
	comp=E,0.5nm,0.3s,baz=145,slow=19,SNR=3.2						
ULM				Lg	Lg	17 16 58.1	
	comp=E,3.2nm,0.3s,baz=40,slow=21,SNR=20						
	comp=E,0.5nm,0.3s						
ULM	**Lac du Bonnet**	**3.48**	**323**		**Pn**	**17 16 05.5**	**+1.7**
ULM				IAmb_Lg		17 17 02.3	
	comp=Z,45nm,1.3s						
I10CA	**LAC DU BONNET**	**3.50**	**322**	I	I	17 35 35.0	
	baz=140,slow=318,SNR=14						
I37A	**Lemond, Waseca**	**3.53**	**189**	IAmb_Lg		17 17 13.9	
	comp=Z,28nm,1.3s						
ECSD	**EROS Data Cent**	**4.68**	**218**	IAmb_Lg		17 17 52.5	
	comp=Z,12nm,1.1s						
JFWS	**Jewell Farm**	**4.89**	**159**	IAmb_Lg		17 17 54.1	
	comp=Z,11nm,1.0s						
E28A	**Huff**	**5.57**	**263**	IAmb_Lg		17 18 10.7	
	comp=Z,23nm,0.9s						
L34A	**Svendsen Farm,**	**6.14**	**207**	IAmb_Lg		17 18 32.3	
	comp=Z,21nm,0.9s						
I56US	**NEWPORT INFRAS**	**6.42**	**282**	I	I	18 55 30.0	
	baz=85,slow=314,SNR=3.2						

*TEH **09** 17:17:05.8, 33.18N×46.20E, h10km±82km, ML2.9, Presumed earthquake*
*ISN **09** 17:17:08.6±1.6, 33.12N×46.46E, h59km, ML2.9, Presumed earthquake*
ISC 09 17:17:06.1±1.2, **33.14N**±0.04×**46.12E**±0.06, **h10**km, **n9**, σ1§**04**/12, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.49**	**8**	Pg	**Pg**	**17 17 14.2**	**-1.5**
IGHG	**Ghaleghazi**	**1.25**	**17**	Pg	**Pn**	**17 17 29.9**	**+0.1**
RAFI	**Al-Rafai**	**1.41**	**180**	*e*Pg	**Pn**	**17 17 32.0**	**+0.2**
	baz=12						
RAFI				*e*Sg	**Sg**	**17 17 52.0**	**+0.6**
BHD	**Baghdad**	**1.47**	**276**	*e*Pn	**Pn**	**17 17 32.0**	**-0.6**
BHD				*e*Sn	**Sg**	**17 17 55.0**	**+1.7**
BHD				AML	AML	17 18 03.0	
	comp=E,148nm,0.4s						
IDHR	**Dehrash**	**1.57**	**8**	Pg	**Pn**	**17 17 34.7**	**+0.4**
IDHR				Sg	**Sg**	**17 17 57.2**	**+0.4**
IBZA	**Bozab**	**1.97**	**47**	Pn	**Pn**	**17 17 40.0**	**+0.2**
SNQR	**Sonqor, Kerman**	**2.12**	**36**	Pn	**Pn**	**17 17 42.5**	**+0.5**
SNJK	**Sanadaj _Korde**	**2.42**	**19**	Pn	**Pn**	**17 17 47.7**	**+1.7**
HGHA	**Hamedan- Ghaye**	**3.26**	**43**	Pn	**Pn**	**17 17 57.9**	**+0.5**

*NEIC **09** 17:17:19.9±0.9, 43.47N±0.05×105.36W±0.06, h0km±1km, ML2.9/38, Error ellipse: s-maj=10.9km s-min=3.0km az=319.0*
*IDC **09** 17:17:21.1±2.1, 43.84N×105.82W, h0km, mbtmp3.3/2, ML2.0/1, Error ellipse: s-maj=63.8km s-min=10.4km az=149.0*
ISC 09 17:17:19.3±1.0, **43.50N**±0.05×**105.30W**±0.05, **h0**km, **n27**, σ1§**33**/26, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.11**	**56**		**Pn**	**17 17 42.4**	**+0.1**
RSSD	**Black Hills**	**1.11**	**56**	Pg	**Pn**	**17 17 42.3**	**0.0**
K22A	**Casper**	**1.23**	**227**		**Pb**	**17 17 42.7**	**-0.9**
K22A				IAML		17 18 06.1	
	143nm,0.2s						
BW06	**Boulder Array**	**3.20**	**258**		**Pn**	**17 18 12.2**	**+1.1**
BW06					**Sn**	**17 18 51.1**	**+1.0**
BW06				IAML		17 19 04.1	
	19nm,0.7s						
PD31	**Pinedale Array**	**3.20**	**258**		**Pn**	**17 18 11.4**	**+0.3**
PDAR	**Pinedale Array**	**3.20**	**258**	Pn	**Pn**	**17 18 12.2**	**+1.1**
	2.1nm,0.4s,baz=76,slow=18,SNR=24						
PDAR				Lg	Lg	17 18 52.8	
	1.9nm,0.3s,baz=71,slow=16,SNR=4.0						
PDAR	**Pinedale Array**	**3.20**	**258**		**Pn**	**17 18 12.8**	**+1.7**
HAYD	**Hayden**	**3.32**	**207**		**Pb**	**17 18 19.2**	**0.0**
HAYD				IAML		17 19 12.1	
	comp=E,19nm,0.9s						
HAYD				IAML		17 19 20.8	
	comp=N,23nm,1.0s						
OGNE	**Ogallala**	**3.52**	**135**		**Pn**	**17 18 16.6**	**+1.2**
ISCO	**Idaho Springs**	**3.71**	**184**		**Pn**	**17 18 20.0**	**+1.9**
YMP	**Mirror Lake Pl**	**3.71**	**291**		**Pb**	**17 18 25.5**	**-0.4**
LOHW	**Long Hollow**	**3.85**	**273**		**Pb**	**17 18 25.5**	**-2.8**
LOHW				IAML		17 19 33.8	
	comp=N,11nm,2.3s						
LOHW				IAML		17 19 47.6	
	comp=N,12nm,2.9s						
GCMT	**Greycliff**	**3.87**	**308**		**Pn**	**17 18 21.9**	**+1.7**
FLWY	**Flagg Ranch**	**3.95**	**280**		**Pb**	**17 18 30.6**	**+0.7**
SNOW	**Snow King Moun**	**3.97**	**271**		**Pb**	**17 18 29.2**	**-1.1**
YPP	**Pitchstone Pla**	**4.05**	**283**		**Pb**	**17 18 32.1**	**+0.4**
YHH	**Holmes Hill**	**4.19**	**290**	Pn	**Pb**	**17 18 34.0**	**-0.2**
K30B	**Basset**	**4.25**	**99**		**Pg**	**17 18 40.1**	**-0.7**
RDMU	**Red Mountain**	**4.32**	**229**		**Pn**	**17 18 28.3**	**+1.8**
RDMU				IAML		17 19 45.5	
	comp=E,13nm,2.5s						
RDMU				IAML		17 19 46.2	
	comp=N,14nm,2.3s						
YHL	**Hebgen Lake**	**4.44**	**290**		**Pb**	**17 18 37.3**	**-1.0**
YHL				IAML		17 19 08.5	
	comp=N,9.4nm,1.8s						
YHL				IAML		17 19 58.0	
	comp=E,10nm,0.7s						
ECR	**Eagle Creek**	**4.45**	**266**		**Pb**	**17 18 36.0**	**-2.5**
BSUT	**Blindstream Ca**	**5.03**	**236**	IAML		17 20 11.4	
	comp=N,6.3nm,3.5s						
BSUT				IAML		17 20 12.6	
	comp=E,8.2nm,2.9s						
P18A	**Preston Nutter**	**5.36**	**225**		**Pn**	**17 18 39.8**	**-1.0**
P18A				IAML		17 20 18.5	
	comp=N,10nm,1.5s						
P18A				IAML		17 20 47.3	
	comp=E,11nm,3.0s						
PV04	**Paradox Valley**	**5.78**	**209**	Pn	**Pn**	**17 18 47.5**	**+0.9**
SRU	**San Rafael Swe**	**5.89**	**224**	Pn	**Pn**	**17 18 49.5**	**+1.5**
ULM	**Lac du Bonnet**	**9.34**	**40**	Pn	**Pn**	**17 19 35.6**	**+0.5**
	comp=E,0.2nm,0.3s,baz=231,slow=12,SNR=1.7						
ULM				Lg	Lg	17 22 05.5	
	comp=E,0.1nm,0.3s,baz=155,slow=20,SNR=1.0						
	comp=E,1.5nm,0.5s						
I56US	**NEWPORT INFRAS**	**9.52**	**304**	I	I	18 14 50.0	
	baz=118,slow=318,SNR=9.1						

*MDD **09** 17:17:60.0±0.2, 42.94N×0.26E, h0km, mb_Lg3.2/36, Error ellipse: s-maj=2.0km s-min=1.1km az=12.0*
*STR **09** 17:17:59.1±0.0, 42.90N±0.09×0.23E±0.05, h13km, MLv3.1/24, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*LDG **09** 17:17:59.4±0.1, 42.95N×0.23E, h2km, Md2.7/1, Ml3.7/13, Error ellipse: s-maj=2.3km s-min=1.7km az=147.0*
*MRB **09** 17:17:59.1±0.1, 42.90N×0.24E, h4km±1km, ML2.8/40, Error ellipse: s-maj=0.7km s-min=0.4km az=26.0*
ISC 09 17:17:58.4±0.8, **42.95N**±0.01×**0.25E**±0.01, **h11**km±5km, **n129**, σ1§**22**/235, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EPF	**Esparros**	**0.11**	**39**	*e*Pg	**Pg**	**17 18 01.9**	**+0.5**
EPF				*e*Sg	**Sg**	**17 18 04.3**	**+0.8**
	6µm,0.2s						
RESF	**Ens**	**0.15**	**154**	P	**Pg**	**17 18 01.6**	**-0.5**
RESF				S	**Sg**	**17 18 03.4**	**-1.1**
VIEF	**Viey**	**0.17**	**249**	P	**Pg**	**17 18 02.5**	**+0.2**
VIEF				S	**Sg**	**17 18 05.0**	**-0.1**
	2µm,0.1s						
VIEF	**Viey**	**0.17**	**249**	Pg	**Pg**	**17 18 02.0**	**-0.3**
VIEF				Sg	**Sg**	**17 18 04.6**	**-0.4**
PYLO	**Lourdes**	**0.26**	**305**	P	**Pb**	**17 18 04.9**	**-0.4**
PYLO				S	**Sb**	**17 18 09.0**	**-0.8**
	1µm,0.3s						
PYLO	**Lourdes**	**0.26**	**305**	Pg	**Pb**	**17 18 04.4**	**-0.9**
PYLO				Sg	**Sb**	**17 18 08.4**	**-1.3**
ECHI	**Chisagues Biel**	**0.28**	**188**	Pg	**Pg**	**17 18 03.7**	**-0.5**
ECHI				Sg	**Sg**	**17 18 06.7**	**-1.4**
ECHI				*i* lVmb_Lg		17 18 07.1	
ECHI	**Chisagues Biel**	**0.28**	**188**	P	**Pg**	**17 18 03.7**	**-0.5**
ECHI				S	**Sg**	**17 18 07.1**	**-1.1**
	4µm,0.1s						
ECHI	**Chisagues Biel**	**0.28**	**188**	Pg	**Pg**	**17 18 03.7**	**-0.5**
ECHI				Sg	**Sg**	**17 18 07.1**	**-1.1**
MELF	**Melles**	**0.38**	**101**	Pg	**Pg**	**17 18 05.9**	**-0.1**
MELF				Sg	**Sb**	**17 18 12.4**	**-0.9**
VIER	**Vielha - Casau**	**0.46**	**121**	Pg	**Pg**	**17 18 07.7**	**+0.1**
VIER				Sg	**Sg**	**17 18 14.3**	**+0.6**
VIER	**Vielha - Casau**	**0.46**	**121**	P	**Pg**	**17 18 07.6**	**+0.1**
VIER				S	**Sg**	**17 18 13.9**	**+0.2**
	606nm,0.2s						
VIES	**Vielha - Hospi**	**0.47**	**121**	Pg	**Pg**	**17 18 07.9**	**+0.2**
VIES				Sg	**Sg**	**17 18 14.6**	**+0.6**
VIES	**Vielha - Hospi**	**0.47**	**121**	P	**Pg**	**17 18 07.8**	**0.0**
VIES				S	**Sg**	**17 18 14.1**	**+0.1**
	718nm,0.2s						
CARA	**Val d'Aran**	**0.48**	**119**	P	**Pg**	**17 18 08.1**	**+0.2**
CARA				S	**Sg**	**17 18 14.6**	**+0.3**
	491nm,0.3s						
CANF	**Canfranc**	**0.59**	**252**	Pg	**Pg**	**17 18 09.5**	**-0.4**
CANF				Sg	**Sg**	**17 18 17.4**	**-0.3**
ETSF	**Etsaut**	**0.59**	**266**	*e*Pg	**Pg**	**17 18 09.6**	**-0.4**
ETSF				*e*Sg	**Sg**	**17 18 17.2**	**-0.6**
	525nm,0.2s						
MLS	**Moulis**	**0.62**	**89**	P	**Pb**	**17 18 10.9**	**-0.4**
MLS				S	**Sb**	**17 18 19.8**	**-0.3**
	49nm,0.2s						
MLS	**Moulis**	**0.62**	**89**	Pg	**Pg**	**17 18 10.1**	**-0.4**
ATE	**Arette**	**0.71**	**282**	P	**Pb**	**17 18 12.5**	**-0.3**
ATE				S	**Sb**	**17 18 22.7**	**+0.1**
	176nm,0.2s						
ATE	**Arette**	**0.71**	**282**	Pg	**Pg**	**17 18 11.9**	**-0.3**
ATE				Sg	**Sb**	**17 18 22.5**	**-0.1**
SALF	**Salau**	**0.72**	**105**	P	**Pg**	**17 18 12.5**	**+0.1**
SALF				S	**Sb**	**17 18 22.4**	**-0.4**
	179nm,0.1s						
SALF	**Salau**	**0.72**	**105**	Pg	**Pg**	**17 18 12.1**	**-0.3**
CTRE	**Tremp**	**0.73**	**148**	P	**Pg**	**17 18 12.4**	**-0.2**
CTRE				S	**Sg**	**17 18 22.1**	**-0.1**
	58nm,0.3s						
URDF	**Urds**	**0.79**	**309**	S	**Sb**	**17 18 25.7**	**+1.0**
	157nm,0.4s						
URDF	**Urds**	**0.79**	**309**	Pn	**Pn**	**17 18 15.9**	**+0.5**
URDF				Sn	**Sn**	**17 18 28.3**	**+1.1**
CEST	**Esterri de Car**	**0.82**	**115**	P	**Pg**	**17 18 14.0**	**-0.2**
CEST				S	**Sb**	**17 18 25.5**	**-0.3**
	166nm,0.2s						
CRAS	**Crastes**	**0.85**	**24**	Pg	**Pn**	**17 18 16.3**	**0.0**
CRAS				Sg	**Sn**	**17 18 29.7**	**+0.8**
CSOR	**Sort**	**0.87**	**131**	P	**Pg**	**17 18 14.9**	**-0.3**
CSOR				S	**Sg**	**17 18 26.4**	**-0.1**
	121nm,0.3s						
ORDF	**Ordiarp**	**0.91**	**288**	Pg	**Pg**	**17 18 13.9**	**-2.0**
MLZA	**Monlezun-d-Arm**	**0.92**	**343**	Pg	**Pn**	**17 18 17.4**	**+0.1**
IRAF	**Chalets d'Irat**	**0.94**	**276**	Pg	**Pg**	**17 18 16.4**	**-0.3**
GENF	**Genat**	**0.98**	**97**	P	**Pb**	**17 18 17.2**	**-0.3**
GENF				S	**Sb**	**17 18 30.9**	**+0.4**
GENF	**Genat**	**0.98**	**97**	Pg	**Pg**	**17 18 16.8**	**-0.5**
PAND	**Andorre**	**1.05**	**113**	P	**Pg**	**17 18 18.2**	**-0.4**
PAND				S	**Sb**	**17 18 32.4**	**-0.1**
	136nm,0.2s						
PAND	**Andorre**	**1.05**	**113**	Pg	**Pg**	**17 18 18.0**	**-0.6**

CORG	**Organya**	**1.07**	**132**	P		**Pg**	**17 18 18.2**	**-0.7**
CORG				S		**Sg**	**17 18 32.7**	**-0.1**
	36nm,0.2s							
EXSEU	**La Seu d''Urge**	**1.07**	**123**	S		**Sb**	**17 18 33.0**	**0.0**
	137nm,0.3s							
ARBS	**La Rabassa**	**1.08**	**117**	P		**Pg**	**17 18 18.7**	**-0.6**
ARBS				S		**Sg**	**17 18 33.3**	**-0.1**
	148nm,0.5s							
SJPF	**Ste Jean**	**1.09**	**279**	*e*Pg		**Pg**	**17 18 18.8**	**-0.6**
SJPF				*e*Sg		**Sb**	**17 18 33.8**	**+0.2**
	184nm,0.3s							
CAVN	**Les Avellanes**	**1.13**	**160**	P		**Pg**	**17 18 19.2**	**-0.9**
CAVN				S		**Sg**	**17 18 33.8**	**-1.0**
	280nm,0.3s							
EORO	**Oroz-Betelu**	**1.14**	**268**	Pg		**Pn**	**17 18 20.4**	**0.0**
EORO				*i* lVmb_Lg			17 18 43.4	
OSSF	**Osses**	**1.15**	**286**	P		**Pb**	**17 18 20.3**	**0.0**
OSSF				S		**Sn**	**17 18 36.0**	**-0.1**
	66nm,0.2s							
OSSF	**Osses**	**1.15**	**286**	Pg		**Pg**	**17 18 19.7**	**-0.7**
OSSF				Sg		**Sn**	**17 18 36.1**	**-0.1**
DUNF	**Dun**	**1.15**	**86**	Pg		**Pb**	**17 18 20.4**	**0.0**
TERF	**Tercis-les-Bai**	**1.23**	**307**	Pg		**Pg**	**17 18 22.0**	**-0.1**
EALK	**Alkurruntz**	**1.31**	**283**	Pg		**Pb**	**17 18 23.2**	**0.0**
EALK				Sg		**Sn**	**17 18 42.2**	**+1.9**
EALK				*i* lVmb_Lg			17 18 47.1	
EALK	**Alkurruntz**	**1.31**	**283**	Pg		**Pn**	**17 18 22.8**	**0.0**
ESAC	**San Caprasio**	**1.33**	**204**	Pg		**Pg**	**17 18 24.0**	**0.0**
ESAC				Sg		**Sn**	**17 18 42.7**	**+2.0**
ESAC				*i* lVmb_Lg			17 18 46.9	
ESAC	**San Caprasio**	**1.33**	**204**	P		**Pn**	**17 18 22.6**	**-0.4**
ESAC				S		**Sb**	**17 18 40.2**	**-0.3**
EARA	**Aranguren**	**1.35**	**263**	Pg		**Pg**	**17 18 24.8**	**+0.4**
EARA				Sg		**Sg**	**17 18 43.7**	**+1.7**
EARA				*i* lVmb_Lg			17 18 49.8	
EARA	**Aranguren**	**1.35**	**263**	Pg		**Pb**	**17 18 23.5**	**-0.2**
CLLI	**Llivia**	**1.36**	**110**	P		**Pb**	**17 18 23.7**	**-0.2**
CLLI				S		**Sg**	**17 18 42.1**	**0.0**
	126nm,0.4s							
FNEB	**Nbias**	**1.37**	**91**	P		**Pb**	**17 18 24.0**	**-0.1**
FNEB				S		**Sg**	**17 18 42.9**	**+0.4**
	64nm,0.2s							
FNEB	**Nbias**	**1.37**	**91**	Pg		**Pb**	**17 18 24.0**	**-0.1**
CARF	**Carcanieres**	**1.39**	**99**	P		**Pn**	**17 18 24.1**	**+0.3**
CARF				S		**Sg**	**17 18 43.4**	**+0.4**
	132nm,0.4s							
CARF	**Carcanieres**	**1.39**	**99**	Pg		**Pb**	**17 18 24.5**	**+0.1**
VALC	**Valcebollere**	**1.44**	**112**	P		**Pb**	**17 18 25.0**	**-0.3**
VALC				S		**Sg**	**17 18 44.6**	**-0.2**
VALC	**Valcebollere**	**1.44**	**112**	Pg		**Pb**	**17 18 25.1**	**-0.3**
MTLF	**Montolieu**	**1.50**	**74**	*e*Pg		**Pg**	**17 18 27.2**	**+0.1**
MTLF				*e*Sg		**Sg**	**17 18 47.1**	**+0.5**
	107nm,0.2s							
MTLF	**Montolieu**	**1.50**	**74**	Pn		**Pn**	**17 18 25.1**	**-0.1**
EXQUE	**Queralbs**	**1.54**	**112**	S		**Sg**	**17 18 47.4**	**-0.4**
CBRU	**Bruguera**	**1.57**	**114**	P		**Pb**	**17 18 27.4**	**-0.2**
CBRU				S		**Sb**	**17 18 48.1**	**+0.6**
CORI	**Orista**	**1.65**	**125**	P		**Pn**	**17 18 28.0**	**+0.7**
CORI				S		**Sb**	**17 18 49.8**	**+0.1**
	284nm,0.3s							
EPOB	**Poblet**	**1.71**	**158**	Pn		**Pb**	**17 18 29.4**	**-0.4**
EPOB				Sn		**Sb**	**17 18 52.0**	**+0.6**
EPOB				*i* lVmb_Lg			17 18 53.4	
EPOB	**Poblet**	**1.71**	**158**	P		**Pn**	**17 18 28.7**	**+0.5**
EPOB				S		**Sn**	**17 18 50.7**	**+0.7**
	59nm,0.3s							
FILF	**Fillols**	**1.75**	**102**	P		**Pn**	**17 18 28.3**	**-0.5**
FILF				S		**Sn**	**17 18 50.0**	**-1.0**
	57nm,0.3s							
FILF	**Fillols**	**1.75**	**102**	Pg		**Pn**	**17 18 29.5**	**+0.8**
SLVF	**La Salvetat-Pe**	**1.87**	**48**	Pn		**Pn**	**17 18 30.3**	**-0.1**
SLVF				Sg		**Sg**	**17 18 59.7**	**+1.2**
CBEU	**Beuda**	**1.92**	**110**	P		**Pn**	**17 18 32.1**	**+0.9**
CBEU				S		**Sb**	**17 18 56.7**	**-0.8**
ERTA	**Horta de San J**	**1.99**	**178**	Pn		**Pn**	**17 18 33.3**	**+1.3**
ERTA				Sn		**Sb**	**17 18 58.9**	**-0.4**
ERTA				*i* lVmb_Lg			17 19 02.2	
ERTA				Sg		**Sg**	**17 19 02.9**	**+0.6**
ERTA	**Horta de San J**	**1.99**	**178**	P		**Pn**	**17 18 32.3**	**+0.3**
ERTA				S		**Sn**	**17 18 57.6**	**+0.7**
	73nm,0.2s							
SJAF	**Saint Jean de**	**2.00**	**102**	P		**Pn**	**17 18 33.1**	**+1.0**
SJAF				S		**Sb**	**17 18 58.8**	**-0.8**
	86nm,0.3s							
SJAF	**Saint Jean de**	**2.00**	**102**	Pg		**Pb**	**17 18 35.3**	**+0.6**
CFON	**Fontmartina**	**2.01**	**125**	P		**Pn**	**17 18 33.2**	**+0.9**
CFON				S		**Sn**	**17 18 58.2**	**+0.7**
E1202	**Enciso (La Rio**	**2.01**	**248**	Pn		**Pb**	**17 18 33.8**	**-1.2**
E1202				Pg		**Pg**	**17 18 36.3**	**-0.7**
E1202				Sn		**Sb**	**

TRBF	**Trabuc cave**	**2.94**	**65**	Pn		**Pn**	**17 18 45.1**	**+0.1**
VERF	**Verneugheol**	**3.23**	**29**	Pn		**Pn**	**17 18 48.1**	**-1.0**
COLF	**Collangettes**	**3.57**	**43**	Pn		**Pn**	**17 18 54.0**	**+0.3**
TCF	**Toulx Ste Croi**	**3.62**	**22**	*e*Sg		**Sg**	**17 19 53.5**	**-1.3**
	49nm,0.3s							
MFF	**Saint Martin d**	**3.67**	**356**	*e*Pn		**Pn**	**17 18 55.2**	**+0.2**
MFF	**Saint Martin d**	**3.67**	**356**	*e*Pn		**Pn**	**17 18 55.7**	**+0.7**
MFF				*e*Pg		**Pg**	**17 19 07.0**	**-1.6**
MFF				*e*Pg		Pb	17 19 08.3	+5.1
MFF				*e*Sg		**Sg**	**17 19 54.0**	**-2.1**
	26nm,0.3s							
MFF				*e*Sg		**Sb**	**17 19 54.2**	**+6.6**
ETOS	**Mallorca**	**3.72**	**148**	P		**Pn**	**17 18 56.4**	**+0.7**
ETOS				S		**Sn**	**17 19 39.5**	**0.0**
	13nm,1.1s							
VIVF	**Saint-Julien-l**	**3.73**	**58**	*e*Pg		**Pg**	**17 19 08.8**	**-1.0**
VIVF				*e*Sg		**Sg**	**17 19 56.1**	**-1.9**
	24nm,0.3s							
EARI	**Arriondas**	**4.01**	**277**	Pn		**Pn**	**17 19 01.1**	**+1.3**
EARI				Sn		**Sn**	**17 19 49.5**	**+2.7**
EARI				*i* IVmb_Lg			17 19 53.3	
GUD	**Guadarrama**	**4.01**	**237**	Pn		**Pn**	**17 19 01.2**	**+1.3**
GUD				Sn		**Sn**	**17 19 49.6**	**+2.6**
GUD				*i* IVmb_Lg			17 19 50.7	
BGF	**Bois d'Agland**	**4.06**	**26**	*e*P		**Pn**	**17 19 04.8**	**+4.4**
BGF				*e*Pg		**Pg**	**17 19 14.4**	**-1.7**
BGF				*e*Sg		**Sg**	**17 20 08.9**	**+0.2**
	160nm,0.4s							
AVF	**Avril sur Loir**	**4.43**	**29**	*e*P		**Pn**	**17 19 09.6**	**+4.0**
AVF				*e*Sg		**Sg**	**17 20 18.3**	**-2.4**
	26nm,0.4s							
SMF	**Signal de Mont**	**4.50**	**33**	*e*Pn		**Pn**	**17 19 05.0**	**-1.5**
SMF				*e*Pg		**Pg**	**17 19 22.1**	**-2.4**
HYF	**Humbligny**	**4.64**	**21**	*e*Sg		**Sg**	**17 20 26.8**	**-0.6**
	165nm,0.4s							
SSF	**Saint Saulge**	**4.72**	**28**	*e*Pn		**Pn**	**17 19 08.7**	**-0.8**
SSF				*e*P		Pb	17 19 14.4	-6.7
SSF				*e*Sg		**Sg**	**17 20 28.3**	**-1.6**
	26nm,0.5s							
LOR	**Lormes**	**5.02**	**29**	*e*Sg		**Sg**	**17 20 36.8**	**-2.8**
	18nm,0.4s							
PBRG	**Braganca**	**5.30**	**260**	*e*Pn		**Pn**	**17 19 19.7**	**+2.1**
PBRG				*e*Sn		**Sn**	**17 20 15.7**	**-2.9**
GRR	**Gorron**	**5.50**	**352**	*e*Pn		**Pn**	**17 19 17.6**	**-2.6**
QUIF	**Quistinic**	**5.52**	**335**	*e*Pn		**Pn**	**17 19 21.0**	**+0.5**
LDF	**La Druitiere**	**5.66**	**358**	*e*Pn		**Pn**	**17 19 21.3**	**-1.0**
MVO	**Moncorvo**	**5.70**	**254**	*e*Pn		**Pn**	**17 19 24.9**	**+1.9**
MVO				*e*Sn		**Sn**	**17 20 26.7**	**-1.8**
ROSF	**Rostrenen**	**5.93**	**337**	*e*Pn		**Pn**	**17 19 25.8**	**-0.3**
POLO	**Lamas de Olo**	**6.18**	**258**	*e*Sn		**Sn**	**17 20 38.4**	**-1.9**
PGF	**Pioggiola**	**6.46**	**91**	*e*Pn		**Pn**	**17 19 33.8**	**+0.3**
PMRV	**Marv??o**	**6.75**	**241**	*e*Pn		**Pn**	**17 19 38.1**	**+0.7**
PMRV				*e*Sn		**Sn**	**17 20 51.4**	**-2.8**
PMRV				IAML			17 20 54.0	
PMRV				IAML			17 20 54.2	
PMRV				IAML			17 20 54.5	
PBAR	**Barrancos**	**7.31**	**232**	*e*Pn		**Pn**	**17 19 47.0**	**+2.0**
PBAR				*e*Sn		**Sn**	**17 21 05.8**	**-2.2**
PMTG	**Montargil**	**7.48**	**242**	*e*Pn		**Pn**	**17 19 49.1**	**+1.6**
PMTG				*e*Sn		**Sn**	**17 21 11.3**	**-1.0**
PARRA	**Arraiolos**	**7.51**	**239**	*e*Pn		**Pn**	**17 19 48.4**	**+0.5**
PARRA				*e*Sn		**Sn**	**17 21 09.8**	**-3.1**
MOE	**Montemor**	**7.88**	**239**	*e*Pn		**Pn**	**17 19 53.4**	**+0.5**
MOE				IAML			17 21 20.0	
MOE				IAML			17 21 20.4	
PVAQ	**Vaqueiros**	**8.23**	**230**	*e*Pn		**Pn**	**17 20 00.1**	**+2.4**
PVAQ				*e*Sn		**Sn**	**17 21 26.0**	**-4.7**
PVAQ				IAML			17 21 28.8	
PVAQ				IAML			17 21 33.7	

*TRN **09** 17:28:03.5, 10°.18N×62°.37W, h18km, MD3.6, Gulf of Paria.*
*FUNV **09** 17:28:10.0, 10°.26N×62°.23W, h26km, MW3.1, Presumed earthquake*
ISC 09 17:28:05.6±3.6, **10°.4N**±0°.1×**62°.3W**±0°.2, **h6**km±14km, **n9,** σ0°67/18, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.82**	**67**	*e*P	**Pg**	**17 28 21.9**	**+0.5**
DMDM				*e*S	**Sn**	**17 28 35.6**	**-0.6**
PSKH	**Kent House, Po**	**0.84**	**69**	*e*P	**Pg**	**17 28 21.6**	**-0.1**
PSKH				*e*S	**Sn**	**17 28 36.6**	**-0.1**
TRN	**Trinidad (W)**	**0.94**	**74**	*e*P	**Pn**	**17 28 26.3**	**+0.8**
TRN				*e*S	**Sn**	**17 28 39.8**	**+0.6**
TRN	**Trinidad (W)**	**0.94**	**74**	*e*P	**Pg**	**17 28 23.9**	**+0.2**
TRN				*e*S	**Sn**	**17 28 38.4**	**-0.8**
GRFF	**Grenada Fort F**	**1.75**	**19**	*e*P	**Pn**	**17 28 35.9**	**-0.8**
GRFF				*e*S	**Sn**	**17 28 59.4**	**0.0**
GRGR	**Grenville**	**1.86**	**21**	*e*P	**Pg**	**17 28 41.8**	**+0.4**
GRGR				*e*S	**Sb**	**17 29 03.6**	**-0.1**
GRGR	**Grenville**	**1.86**	**21**	*e*P	**Pn**	**17 28 38.8**	**+0.7**
GRGR				*e*S	**Sb**	**17 29 03.4**	**-0.3**
GCMP	**Grenada, Carri**	**2.27**	**23**	*e*P	**Pb**	**17 28 46.2**	**-0.8**
GCMP				*e*S	**Sn**	**17 29 13.1**	**+1.1**
GCMP	**Grenada, Carri**	**2.27**	**23**	*e*P	**Pn**	**17 28 43.8**	**+0.1**
GCMP				*e*S	**Sn**	**17 29 12.9**	**+0.8**

*NEIC **09** 17:29:35.3±1.6, 20°.2S±0°.1×178°.6W±0°.2, h614km±7km, mb4.0/12, Error ellipse: s-maj=26.0km s-min=15.7km az=128.0*
*IDC **09** 17:29:36.2±2.2, 20°.08S×178°.83W, h621km±19km, mb3.0/10, mbtmp4.0/11, Error ellipse: s-maj=42.5km s-min=17.8km az=147.0*
ISC 09 17:29:33.8±0.8, **20°.3S**±0°.2×**178°.7W**±0°.1, **h600**km, **n35,** σ0°92/34, **mb3.7**/15, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.01**	**308**	P	**P**	**17 31 01.8**	**+2.3**
	27nm,0.5s,baz=249,slow=22,SNR=26						
MSVF	**Nonsavu**	**4.01**	**308**	P	**P**	**17 31 01.6**	**+2.1**
BBOO	**Buckleboo**	**42.10**	**243**	P	**P**	**17 36 34.8**	**0.0**
WR8	**Warramunga Arr**	**43.87**	**262**	P	**P**	**17 36 48.2**	**-0.5**
WR8				IAmb	IAmb	17 37 03.9	
	comp=Z,9.7nm,1.5s						
AS31	**Alice Springs**	**43.97**	**257**	P	**P**	**17 36 49.9**	**+0.4**
ASAR	**Alice Springs**	**43.97**	**257**	P	**P**	**17 36 49.8**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=96,slow=7.5,SNR=21						
ASAR				PcP	**PcP**	**17 38 21.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=108,slow=3.7,SNR=6.9						
	comp=Z,2.4nm,0.8s						
WB0	**Warramunga Arr**	**44.00**	**262**	P	**P**	**17 36 49.7**	**0.0**
WB0				IAmb	IAmb	17 37 06.4	
	comp=Z,19nm,1.5s						
WRA	**Warramunga Arr**	**44.02**	**262**	P	**P**	**17 36 49.8**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=97,slow=7.5,SNR=34						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**44.02**	**262**	P	**P**	**17 36 49.8**	**-0.1**
MTN	**Manton Dam**	**48.54**	**271**	P	**P**	**17 37 24.2**	**+0.2**
KNRA	**Kununurra**	**50.06**	**266**	P	**P**	**17 37 35.2**	**+0.1**
KNRA				IAmb	IAmb	17 38 06.1	
	comp=Z,11nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.45**	**262**	P	**P**	**17 37 52.4**	**+0.1**
TOLI2	**Tolitoli**	**62.95**	**282**	P	**P**	**17 39 03.7**	**+0.3**
TOLI2				IAmb	IAmb	17 39 31.3	
	comp=Z,3.9nm,1.0s						
MJAR	**Matsushiro Arr**	**69.66**	**324**	P	**P**	**17 39 43.0**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=160,slow=5.7,SNR=5.1						
	comp=Z,0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**69.66**	**324**	P	**P**	**17 39 43.0**	**-1.3**
MJAR				IAmb	IAmb	17 40 27.4	
	comp=Z,3.0nm,1.4s						
QSPA	**South Pole Qui**	**69.80**	**180**	P	**P**	**17 39 45.2**	**+0.4**
QSPA				IAmb	IAmb	17 40 23.5	
	comp=Z,3.2nm,1.1s						
KIWB	**Kanaga Island**	**71.82**	**1**	P	**P**	**17 39 56.5**	**-0.1**
PETK	**Petropavlovsk-**	**75.89**	**346**	P	**P**	**17 40 19.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=126,slow=6.7,SNR=5.9						
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**76.31**	**319**	P	**P**	**17 40 22.7**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=131,slow=8.8,SNR=2.1						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**81.28**	**44**	P	**P**	**17 40 49.4**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=239,slow=7.4,SNR=2.5						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**87.45**	**58**	P	**P**	**17 41 20.2**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=208,slow=7.1,SNR=3.9						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**88.23**	**13**	P	**P**	**17 41 20.8**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=216,slow=4.9,SNR=6.8						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**89.22**	**43**	P	**P**	**17 41 27.5**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=239,slow=4.4,SNR=2.1						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**17 41 27.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=140,slow=2.9,SNR=5.6						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**110.59**	**314**	PKiKP	**PKiKP**	**17 46 57.6**	**-1.5**
	comp=Z,0.1nm,0.5s,baz=146,slow=1.8,SNR=2.0						
KURK	**Kurchatov**	**113.41**	**317**		**PKiKP**	**17 47 02.9**	**-1.4**
KURBB	**Kurchatov Arra**	**113.46**	**317**	PKiKP	**PKiKP**	**17 47 02.9**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=119,slow=2.1,SNR=4.4						
BVAR	**Borovoye Array**	**118.50**	**320**	PKP	**PKPdf**	**17 47 12.9**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=140,slow=6.3,SNR=4.2						
ARCES	**ARCESS Array B**	**128.58**	**349**	PKP	**PKPdf**	**17 47 32.8**	**-0.1**
	comp=Z,2.3nm,1.0s,baz=66,slow=3.0,SNR=3.7						
FINES	**FINESS Array B**	**135.38**	**343**	PKP	**PKPdf**	**17 47 46.1**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=22,slow=2.1,SNR=3.5						
HFS	**Hagfors**	**139.21**	**351**	PKhKP	PKPpre	17 47 46.1	
	comp=Z,0.6nm,0.4s,baz=58,slow=5.6,SNR=6.0						
AKASG	**Malin Array Be**	**142.51**	**331**	PKhKP	PKPpre	17 47 55.2	
	comp=Z,1.5nm,0.4s,baz=42,slow=4.0,SNR=13						
BRTR	**Keskin Array B**	**146.23**	**312**	PKPbc	**PKPbc**	**17 48 08.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=157,slow=5.8,SNR=2.6						
MMAI	**Mount Meron Ar**	**147.16**	**300**	PKPbc	**PKPbc**	**17 48 11.4**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=43,slow=8.6,SNR=4.7						
GERES	**GERESS Array B**	**149.81**	**344**	PKPbc	**PKPbc**	**17 48 16.7**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=324,slow=4.8,SNR=2.8						

*SSNC **09** 17:48:03.9±2.7, 19°.31N×70°.13W, h120km±22km, MD3.5, ML3.4, Presumed earthquake*
*SDD **09** 17:48:07.2±2.4, 19°.56N×70°.22W, h0km±11km, MD3.1, ML3.2, MW3.1, Presumed earthquake*
*OSPL **09** 17:48:07.8±2.6, 19°.52N×70°.18W, h0km±9km, ML3.0, Presumed earthquake*
ISC 09 17:48:04.6±1.1, **19°.63N**±0°.03×**70°.20W**±0°.02, **h5**km±10km, **n37,** σ1°50/54, **14C-12D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.25**	**81**	⇑*i*P	**Pg**	**17 48 12.3**	**+2.7**
CADR				IAML		17 48 17.9	
	comp=N,18μm,0.4s						
SFDR	**San Fco. de Ma**	**0.34**	**186**	⇑*i*P	**Pb**	**17 48 12.5**	**-0.8**
SFDR				⇓*i*Sg	**Sg**	**17 48 17.7**	**+1.9**
SFDR				IAML		17 48 19.2	
	comp=N,5μm,0.3s						
SODR	**Sosua Marina B**	**0.37**	**289**	⇓*i*P	**Pb**	**17 48 15.0**	**+1.3**
SODR				IAML		17 48 31.6	
	comp=N,2μm,0.7s						
SC01	**Santiago de lo**	**0.53**	**248**	⇑*i*P	**Pb**	**17 48 17.0**	**+0.5**
SC01				IAML		17 48 36.6	
	comp=N,1μm,0.4s						
SC01	**Santiago de lo**	**0.53**	**248**	*i* P	**Pb**	**17 48 17.0**	**+0.5**
MADR	**Mao Valverde**	**0.85**	**266**	⇑*i*P	**Pg**	**17 48 21.6**	**+0.6**
MADR				IAML		17 48 44.3	
	comp=N,1μm,0.8s						
ABDR	**Alto Bandera**	**0.91**	**206**	⇑*i*P	**Pg**	**17 48 21.7**	**-0.3**
LOPP1	**Punta Rusia, P**	**0.96**	**284**	*i* P	**Pn**	**17 48 25.6**	**+0.7**
LOPP1				*e*S	**Sn**	**17 48 40.7**	**+1.7**
LOPP1				IAML		17 48 46.2	
	comp=Z,246nm,0.4s						
SMDR	**Samana, DR**	**1.02**	**109**	⇑*i*P	**Pn**	**17 48 24.9**	**-0.7**
SMDR				IAML		17 48 42.5	
	comp=N,356nm,0.4s						
HATOM	**Hato Mayor del**	**1.14**	**137**	⇓*i*P	**Pg**	**17 48 25.5**	**-1.0**
HATOM				IAML		17 48 43.0	
	comp=N,258nm,0.2s						
SDD	**Santo Domingo**	**1.20**	**167**	⇑*i*P	**Pg**	**17 48 27.6**	**0.0**
SDD				⇓*i*Sg	**Sg**	**17 48 41.4**	**-1.8**
SDD				IAML		17 48 45.3	
	comp=N,240nm,0.2s						
SDD	**Santo Domingo**	**1.20**	**167**	*i* P	**Pg**	**17 48 27.0**	**-0.6**
SDD				*e*S	**Sg**	**17 48 41.3**	**-1.8**
SDD				IAML		17 48 44.8	
	comp=Z,3μm,0.1s						
SDDR	**Presa de Saban**	**1.21**	**238**	⇓*i*P	**Pg**	**17 48 27.2**	**-0.6**
SDDR				⇑*i*Sg	**Sg**	**17 48 42.9**	**-0.7**
SDDR				IAML		17 48 44.6	
	comp=N,286nm,0.3s						
SDDR	**Presa de Saban**	**1.21**	**238**	*i* P	**Pg**	**17 48 27.1**	**-0.6**
SDDR				*e*S	**Sg**	**17 48 43.8**	**+0.3**
SDDR				IAML		17 48 44.7	
	comp=Z,4μm,0.2s						
SDDR	**Presa de Saban**	**1.21**	**238**	*e*P	**Pg**	**17 48 26.9**	**-1.0**
SDDR				*e*S	**Sg**	**17 48 43.5**	**0.0**
SDDR				IAML		17 48 44.5	
	comp=Z,186nm,0.4s						
SDDR				IAML		17 48 44.6	
	comp=Z,285nm,0.3s						
REDR	**Restauracion**	**1.21**	**248**	⇑*i*P	**Pn**	**17 48 31.6**	**+3.3**
REDR				⇓*i*Sg	**Sn**	**17 48 51.4**	**+6.2**
REDR				IAML		17 48 54.7	
	comp=N,1μm,0.2s						
LOSC1	**San Cristbal**	**1.22**	**176**	*e*S	**Sg**	**17 48 42.7**	**-1.1**
BANI	**BANI**	**1.24**	**187**	⇑*i*P	**Pg**	**17 48 27.2**	**-1.2**
BANI				⇓*i*Sg	**Sg**	**17 48 44.6**	**+0.1**
BANI				IAML		17 48 46.7	
	comp=N,926nm,0.3s						
MCDR	**Montecristi**	**1.39**	**281**	⇑*i*P	**Pn**	**17 48 29.5**	**-1.3**
MCDR				IAML		17 49 00.9	
	comp=N,274nm,0.6s						
LODA1	**ITESIL, Dajabo**	**1.42**	**267**	*e*S	**Sn**	**17 48 51.9**	**+1.7**
LODA1				IAML		17 48 54.9	
	comp=Z,761nm,0.9s						
LONE3	**El Aguacate, B**	**1.56**	**230**	*i* P	**Pn**	**17 48 34.0**	**+0.7**
LONE3				*e*S	**Sg**	**17 48 55.9**	**+1.0**
LONE3				IAML		17 48 57.5	
	comp=Z,184nm,0.6s						
NEDR	**Neiba UASD**	**1.62**	**225**	⇑*i*P	**Pn**	**17 48 34.2**	**+0.4**
NEDR				IAML		17 49 00.2	
	comp=N,126nm,0.3s						
HGY1	**Higuey**	**1.74**	**126**	⇓*i*P	**Pg**	**17 48 37.9**	**-0.1**
HGY1				⇓*i*Sg	**Sg**	**17 49 00.1**	**-0.5**
HGY1				IAML		17 49 04.2	
	comp=N,478nm,0.3s						
HIDR	**Higuey Centro**	**1.74**	**126**	⇑*i*P	**Pb**	**17 48 36.1**	**-1.0**
HIDR				⇓*i*Sg	**Sg**	**17 49 00.2**	**-0.5**
HIDR				IAML		17 49 04.3	
	comp=N,1μm,0.2s						
LODU1	**El Espartillar**	**1.75**	**224**	*i* P	**Pb**	**17 48 37.1**	**-0.1**
LODU1				IAML		17 49 02.1	
	comp=Z,165nm,0.5s						
PCDR	**Punta Cana, DR**	**2.05**	**122**	⇓*i*P	**Pb**	**17 48 41.8**	**-0.6**
PCDR				IAML		17 49 19.0	
	comp=N,207nm,0.4s						
PCDR	**Punta Cana, DR**	**2.05**	**122**	*i* P	**Pb**	**17 48 41.5**	**-0.8**
PCDR				IAML		17 49 15.4	
	comp=Z,167nm,0.3s						
GRTK	**Grand Turk**	**2.06**	**335**	*i* P	**Pb**	**17 48 42.0**	**-0.6**
GRTK				*e*S	**Sg**	**17 49 10.3**	**-0.7**
GRTK				IAML		17 49 11.7	
	comp=Z,91nm,1.1s						
GRTK	**Grand Turk**	**2.06**	**335**	*e*P	**Pb**	**17 48 41.4**	**-1.3**
GRTK				*e*S	**Sg**	**17 49 09.8**	**-1.3**
GRTK				IAML		17 49 12.0	
	comp=Z,229nm,0.3s						
GRTK				IAML		17 49 12.2	
	comp=Z,214nm,0.3s						
LOBH	**Bahia de las A**	**2.22**	**218**	*i* P	**Pb**	**17 48 44.5**	**-0.8**
LOBH				IAML		17 49 26.1	
	comp=Z,108nm,0.8s						
AGPR	**Aguadilla, PR**	**3.15**	**111**	⇑*i*P	**Pn**	**17 48 56.7**	**+1.8**
AGPR				IAML		17 49 52.8	
	comp=N,81nm,0.4s						
MLPR	**Magueyes Islan**	**3.42**	**118**	⇓*i*P	**Pn**	**17 49 00.2**	**+1.6**
MLPR				IAML		17 50 04.8	
	comp=N,9.9nm,0.3s						
MASC	**Masc**	**3.83**	**279**	IAML		17 50 11.6	
	comp=N,32nm,1.2s						
MASC	**Masc**	**3.83**	**279**	*e*P	**Pn**	**17 49 03.7**	**-0.6**
MASC				*e*S	**Sn**	**17 49 49.7**	**0.0**
MASC				IAML		17 50 05.2	
	comp=E,36nm,0.4s						
MASC				IAML		17 50 07.8	
	comp=N,23nm,0.6s						
QMBU	**Quimbuelo**	**4.37**	**278**	*e*P	**Pn**	**17 49 10.1**	**-1.8**
QMBU				*e*S	**Sn**	**17 50 01.6**	**-1.7**
QMBU				IAML		17 50 18.3	
	comp=N,20nm,0.5s						
QMBU				IAML		17 50 21.2	
	comp=E,25nm,0.4s						
MOAC	**Moa**	**4.58**	**284**	*e*P	**Pn**	**17 49 13.9**	**-0.8**
MOAC				*e*S	**Sn**	**17 50 06.8**	**-1.6**
MOAC				IAML		17 50 33.1	
	comp=N,20nm,1.0s						
MOAC				IAML		17 50 33.1	
	comp=E,21nm,0.5s						
NMDO	**Nuevo Mundo**	**4.59**	**282**	*e*P	**Pn**	**17 49 14.1**	**-0.6**
NMDO				*e*S	**Sn**	**17 50 06.9**	**-1.5**
NMDO				IAML		17 50 27.3	
	comp=N,12nm,0.3s						
NMDO				IAML		17 50 28.1	
	comp=E,12nm,0.6s						

IDC 09 17:55:06.8±1.7, **1°.33S**×**121°.51E, h0**km, **mb3.0**/3, **mbtmp3.1/3, MS3.1/1, Error ellipse: s-maj=411.7km s-min=28.2km az=60.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**19.22**	**94**	LR	LR	18 09 03.3	
	comp=Z,52nm,18.3s,baz=234,slow=44						
WRA	**Warramunga Arr**	**22.35**	**147**	P	P	18 00 06.2	-0.4
	0.1nm,0.4s,baz=321,slow=11,SNR=6.4						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**25.24**	**153**	P	P	18 00 35.1	+0.3
	0.2nm,0.5s,baz=330,slow=8.6,SNR=6.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.98**	**330**	P	P	18 05 08.2	-0.1
	0.2nm,0.6s,baz=120,slow=8.5,SNR=1.5						
	0.2nm,0.6s						

*ISK **09** 18:04:24.9, 35°.51N×26°.74E, h6km, ML3.3/22*
*IDC **09** 18:04:25.1±1.1, 35°.39N×26°.99E, h0km, mb3.7/6, mbtmp3.5/11, ML2.2/3, Error ellipse: s-maj=24.7km s-min=14.3km az=175.0*
*THE **09** 18:04:25.5, 35°.N±4°×2°.7E±°, h11km±5km, M3.2/15, MLh3.2/15*
*ATH **09** 18:04:25.3, 35°.48N×26°.76E, h9km±2km, ML3.5/21, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
ISC 09 18:04:25.6±1.0, **35°.48N**±0°.03×**26°.77E**±0°.02, **h10**km±7km, **n93,** σ1°12/124, **mb3.5**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.33**	**78**	Pg	**Pg**	**18 04 32.1**	**-0.1**
KARP				Sg	**Sb**	**18 04 37.6**	**-1.4**
KARP	**Karpathos**	**0.33**	**78**	P	**Pg**	**18 04 32.1**	**-0.1**
KARP				S	**Sg**	**18 04 37.2**	**+0.7**
KARP	**Karpathos**	**0.33**	**78**	P	**Pg**	**18 04 32.1**	**-0.1**
KARP	**Karpathos**	**0.33**	**78**	P	**Pg**	**18 04 32.1**	**-0.1**
KARP				S	**Sb**	**18 04 37.5**	**-1.4**
ZKR	**Zakros**	**0.58**	**231**	Pg	**Pg**	**18 04 36.5**	**-0.3**
ZKR				Sg	**Sb**	**18 04 45.5**	**-0.6**
ZKR	**Zakros**	**0.58**	**231**	P	**Pg**	**18 04 36.6**	**-0.3**
ZKR	**Zakros**	**0.58**	**231**	P	**Pg**	**18 04 36.4**	**-0.4**
ZKR				S	**Sg**	**18 04 44.5**	**+0.1**
AGNA	**Agios Nikolaos**	**0.91**	**252**	P	**Pb**	**18 04 43.0**	**-0.4**
AGNA				S	**Sb**	**18 04 55.3**	**-0.2**
NPS	**Neapolis**	**0.97**	**257**	P	**Pg**	**18 04 43.9**	**-0.3**
NPS				S	**Sg**	**18 04 56.2**	**-0.5**
NPS	**Neapolis**	**0.97**	**257**	P	**Pg**	**18 04 43.9**	**-0.3**
NPS				S	**Sg**	**18 04 56.3**	**-0.5**
ARG	**Arkhangelos**	**1.33**	**56**	Pn	**Pg**	**18 04 50.5**	**-0.6**
ARG				Sn	**Sg**	**18 05 09.1**	**+0.8**
ARG	**Arkhangelos**	**1.33**	**56**	P	**Pb**	**18 04 50.1**	**-0.5**
ARG				S	**Sb**	**18 05 06.7**	**-1.0**
ARG	**Arkhangelos**	**1.33**	**56**	P	**Pb**	**18 04 50.2**	**-0.5**
ARG				S	**Sg**	**18 05 08.7**	**+0.4**
THERA	**Ancient Thera,**	**1.37**	**311**	P	**Pn**	**18 04 49.5**	**-1.3**
THERA				S	**Sb**	**18 05 07.1**	**-1.9**
THERA	**Ancient Thera,**	**1.37**	**311**	P	**Pn**	**18 04 49.6**	**-1.3**
THR8	**Santorini-Mono**	**1.40**	**312**	P	**Pn**	**18 04 50.0**	**-1.2**
IACM	**Heraklion**	**1.40**	**263**	P	**Pn**	**18 04 50.6**	**-0.5**
IACM				S	**Sg**	**18 05 09.9**	**-0.6**
DAT	**Datca**	**1.41**	**28**	Pn	**Pb**	**18 04 51.4**	**-0.7**
DAT				Sn	**Sg**	**18 05 10.9**	**0.0**
DAT	**Datca**	**1.41**	**28**	P	**Pn**	**18 04 50.2**	**-1.3**
DAT				S	**Sb**	**18 05 09.0**	**-1.1**
THR6	**Thira Island,**	**1.41**	**309**	P	**Pn**	**18 04 50.0**	**-1.4**
THRA	**Thira**	**1.43**	**311**	P	**Pn**	**18 04 51.5**	**-0.2**
THR9	**Santorini-Faro**	**1.44**	**308**	P	**Pn**	**18 04 50.5**	**-1.3**
SNT5	**Nea Kammeni, S**	**1.45**	**310**	P	**Pn**	**18 04 51.8**	**-0.1**
SNT5				S	**Sg**	**18 05 11.2**	**-0.9**
THR2	**Thira island,**	**1.45**	**312**	P	**Pn**	**18 04 50.8**	**-1.1**

MMAI	**Mount Meron Ar**	**7.56**	**107**	Pn		**Pn**	**18 06 14.1**	**-1.9**
	0.4nm,0.3s,baz=327,slow=14,SNR=5.4							
MMAI				Sn		**Sn**	**18 07 40.2**	**-1.6**
	1.3nm,0.3s,baz=303,slow=32,SNR=3.1							
EIL	**Elat**	**9.01**	**128**	Pn		**Pn**	**18 06 34.7**	**-1.1**
	0.1nm,0.3s,baz=58,slow=11,SNR=1.8							
EIL				Sn		**Sn**	**18 08 10.9**	**-6.5**
	0.6nm,0.3s,baz=139,slow=22,SNR=4.1							
	1.5nm,0.6s							
AKASG	**Malin Array Be**	**15.32**	**6**	Pn		**P**	**18 08 04.4**	**-2.2**
	0.6nm,0.6s,baz=196,slow=12,SNR=5.3							
GERES	**GERESS Array B**	**16.46**	**328**	Pn		**P**	**18 08 19.8**	**+0.3**
	baz=157,slow=11,SNR=4.1							
	1.0nm,0.8s							
ESDC	**Sonseca Array**	**24.65**	**289**	P		**P**	**18 09 50.1**	**+3.7**
	0.7nm,0.6s,baz=86,slow=9.6,SNR=5.5							
	0.7nm,0.6s							
EKA	**Eskdalemuir Ar**	**28.55**	**323**	P		**P**	**18 10 25.4**	**+4.0**
	0.7nm,0.6s,baz=108,slow=9.2,SNR=4.1							
	0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**31.71**	**232**	P		**P**	**18 10 52.0**	**+2.3**
	0.5nm,0.7s,baz=58,slow=8.2,SNR=2.9							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**39.90**	**51**	P		**P**	**18 11 58.7**	**-0.9**
	1.5nm,0.2s,baz=276,slow=8.7,SNR=1.4							
	1.5nm,0.2s							
MKAR	**Makanchi Array**	**42.50**	**57**	P		**P**	**18 12 21.0**	**-0.1**
	0.2nm,0.5s,baz=266,slow=6.8,SNR=4.4							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**43.83**	**46**	P		**P**	**18 12 30.9**	**-0.8**
	0.2nm,0.3s,baz=274,slow=8.3,SNR=1.7							
	0.2nm,0.3s							

*JMA **09** 18:07:50.9±0.4,25°N±1°×14°3E±°, h102km, MV3.8/4, IOTO ISLANDS REGION*
*IDC **09** 18:07:51.9±3.1,25°.32N×142°.37E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=157.9km s-min=27.6km az=80.0*
ISC 09 18:07:54.0±1.7, 25°.4N±0°.2×143°.6E±0°.3, h35km, n6, σ1°13/8, mb3.7/4, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.77**	**313**	P		**Pn**	**18 08 21.3**	**-0.8**
JHH2				*e*S		**Sn**	**18 08 44.1**	**+0.6**
CBIJ	**Chichi jima**	**2.10**	**322**	*e*P		**Pn**	**18 08 26.3**	**-0.4**
CBIJ				*e*S		**Sn**	**18 08 53.0**	**+1.3**
WRA	**Warramunga Arr**	**46.00**	**192**	P		**P**	**18 16 14.0**	**-0.1**
	0.2nm,0.4s,baz=8.2,slow=8.5,SNR=4.8							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**49.71**	**192**	P		**P**	**18 16 43.8**	**+1.0**
	0.2nm,0.7s,baz=16,slow=11,SNR=1.6							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**55.13**	**315**	P		**P**	**18 17 21.3**	**-1.4**
	1.4nm,0.2s,baz=90,slow=7.9,SNR=4.9							
	1.4nm,0.2s							
FINES	**FINESS Array B**	**80.00**	**334**	P		**P**	**18 20 00.1**	**+0.7**
	0.5nm,0.4s,baz=48,slow=4.1,SNR=6.8							
	0.5nm,0.4s							

*IDC **09** 18:41:49.5±2.2,1°.80N×126°.40E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=177.5km s-min=27.9km az=66.0*
*DJA **09** 18:41:54.4±0.3,2°N±3°×12°6E±°, h10km, M3.5/11, mb3.9/2, MLv3.2/11*
ISC 09 18:41:56.3±1.2, 1°.72N±0°.09×126°.34E±0°.09, h47km, n7, σ0°65/7, mb3.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.39**	**132**	P		**Pn**	**18 42 19.7**	**+0.5**
MNI	**Manado**	**1.52**	**260**	P		**Pn**	**18 42 21.2**	**+0.1**
SGSI	**Sangihe**	**2.12**	**338**	P		**Pn**	**18 42 29.7**	**+0.5**
GTOI	**Gorontalo**	**3.50**	**252**	P		**Pn**	**18 42 48.8**	**+0.6**
WRA	**Warramunga Arr**	**22.91**	**160**	P		**P**	**18 46 55.6**	**-0.8**
	0.3nm,0.6s,baz=339,slow=11,SNR=7.4							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**26.28**	**164**	P		**P**	**18 47 27.8**	**+0.3**
	0.4nm,0.8s,baz=344,slow=7.5,SNR=8.7							
	0.4nm,0.8s							
MKAR	**Makanchi Array**	**58.99**	**326**	P		**P**	**18 51 50.7**	**-0.4**
	0.1nm,0.5s,baz=122,slow=7.4,SNR=1.8							
	0.1nm,0.5s							

IDC 09 18:42:16.7±2.3, 1°.56N×126°.95E, h0km, mb3.0/3, mbtmp3.0/3, Error ellipse: s-maj=180.2km s-min=28.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.57**	**162**	P		P	18 47 18.8	0.0
	0.3nm,0.4s,baz=340,slow=11,SNR=6.9							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**25.98**	**165**	P		P	18 47 51.3	0.0
	0.1nm,0.3s,baz=346,slow=11,SNR=1.8							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**59.45**	**326**	P		P	18 52 21.4	-0.1
	0.1nm,0.4s,baz=111,slow=8.0,SNR=1.5							
	0.1nm,0.4s							

*IDC **09** 18:50:54.7±0.8, 10°.78N×125°.91E, h0km, mb3.8/12, mbtmp3.8/12, MS3.2/3, Error ellipse: s-maj=39.6km s-min=14.6km az=70.0*
*NEIC **09** 18:51:01.3±1.1, 10°.7N±0°.1×125°.8E±0°.2, h48km±9km, mb4.3/13, Error ellipse: s-maj=25.7km s-min=15.7km az=76.0*
*MAN **09** 18:51:08.0, 10°.49N×125°.52E, h109km, MS3.2*
ISC 09 18:51:07.8±0.7, 10°.47N±0°.04×125°.51E±0°.06, h100km, n49, σ2°35/48, mb3.9/16, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**0.69**	**182**	*e*P		**Pn**	**18 51 29.1**	**+4.1**
SCPH				*i* S		**Sn**	**18 51 31.1**	**-6.9**
PLP	**Palo**	**0.86**	**323**	*e*P		**Pn**	**18 51 28.6**	**+1.8**
PLP				*e*S		**Sn**	**18 51 41.2**	**+0.1**
LLP	**Lapu-Lapu**	**1.53**	**264**	*e*P		**Pn**	**18 51 32.7**	**-1.7**
LLP	**Lapu-Lapu**	**1.53**	**264**	*i* P		**Pn**	**18 51 36.8**	**+2.5**
TSSP	**Tandag City**	**1.57**	**154**	*e*P		**Pn**	**18 51 38.6**	**+3.7**
TSSP				*e*S		**Sn**	**18 51 58.6**	**+3.0**
CGP	**Cagayan de Oro**	**2.16**	**202**	*e*P		**Pn**	**18 51 44.4**	**+2.0**
CGP				*e*S		**Sn**	**18 52 11.0**	**+2.0**
LSIP	**Lazi, Siquijor**	**2.28**	**234**	*i* P		**Pn**	**18 51 46.4**	**+2.4**
LSIP				*i* S		**Sn**	**18 52 13.3**	**+1.5**
BIPH	**Bislig**	**2.42**	**160**	*e*P		**Pn**	**18 51 48.1**	**+2.2**
BIPH				*e*S		**Sn**	**18 52 17.3**	**+2.1**
SNPH	**Sibulan**	**2.51**	**244**	*e*P		**Pn**	**18 51 49.8**	**+2.8**
BUKP	**Musuan**	**2.61**	**190**	*i* P		**Pn**	18 51 53.5	+5.0
MMPH	**Masbate**	**2.63**	**316**	*i* P		**Pn**	**18 51 50.2**	**+1.6**
MMPH				*i* S		**Sn**	**18 52 21.1**	**+1.1**
CDOP	**Cateel, Davao**	**2.82**	**161**	*e*P		**Pn**	**18 51 53.1**	**+1.9**
CDOP				*e*S		**Sn**	**18 52 16.2**	**-8.4**
DCPH	**Dipolog City**	**2.84**	**229**	*i* P		**Pn**	**18 51 53.7**	**+2.3**
ZCP	**Zamboanga City**	**4.89**	**224**	*i* S		**Sn**	**18 53 11.8**	**-2.6**
LQP	**Lukban**	**5.30**	**313**	*e*P		**Pn**	**18 52 27.4**	**+2.6**
PPR	**Puerto Princes**	**6.71**	**265**	*i* P		Pn	18 52 34.3	-9.5
SIJI	**Sorong**	**12.64**	**153**	LR		LR	18 58 55.0	
	comp=Z,50nm,21.5s,baz=265,slow=38							
SBUM	**Sibu**	**15.41**	**240**	P		**P**	**18 54 42.4**	**+0.2**
SBUM				IAmb		IAmb	18 55 22.4	
	comp=Z,9.2nm,1.3s							
SOEI	**Soe**	**20.13**	**184**	P		**P**	**18 55 33.6**	**-0.6**
SOEI				IAmb		IAmb	18 55 51.1	
	comp=Z,39nm,1.1s							
CMAR	**Chiang Mai Arr**	**26.89**	**290**	P		**P**	**18 56 40.2**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=100,slow=7.4,SNR=14							
	comp=Z,1.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**26.89**	**290**	P		**P**	**18 56 38.4**	**-1.3**
MJAR	**Matsushiro Arr**	**28.39**	**22**	P		P	18 56 47.2	-5.5
	comp=Z,0.3nm,0.5s,baz=214,slow=8.8,SNR=1.6							
	comp=Z,0.3nm,0.5s							
MJAR	**Matsushiro Arr**	**28.39**	**22**	P		P	18 56 47.2	-5.5
FITZ	**Fitzroy Crossi**	**28.39**	**180**	P		**P**	**18 56 53.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=349,slow=4.7,SNR=12							
	comp=Z,1.6nm,0.8s							
FITZ	**Fitzroy Crossi**	**28.39**	**180**	P		**P**	**18 56 53.3**	**+0.5**
GSI	**Gunungsitoli**	**29.21**	**254**	P		**P**	**18 57 01.4**	**+1.1**
GSI				IAmb		IAmb	18 57 14.3	
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**31.45**	**164**	P		**P**	**18 57 19.4**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=342,slow=8.9,SNR=7.7							
	comp=Z,0.4nm,0.6s							
WRA	**Warramunga Arr**	**31.45**	**164**	P		**P**	**18 57 19.4**	**-0.5**
WR8	**Warramunga Ar**	**31.50**	**164**	P		**P**	**18 57 19.1**	**-1.4**
WR8				IAmb		IAmb	18 57 51.0	
	comp=Z,14nm,1.4s							
ASAR	**Alice Springs**	**34.91**	**166**	P		**P**	**18 57 50.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=341,slow=7.3,SNR=18							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**34.91**	**166**	P		**P**	**18 57 48.9**	**-1.1**
MORW	**Morawa**	**40.36**	**193**	P		**P**	**18 58 35.4**	**-0.4**
H11N1	**WAKE ISLAND Hy**	**40.90**	**72**	T		T	19 42 16.7	
	baz=265							
H11N2	**WAKE ISLAND Hy**	**40.91**	**72**	T		T	19 42 14.1	
	baz=265,slow=74							
H11N3	**WAKE ISLAND Hy**	**40.92**	**72**	T		T	19 42 18.3	
	baz=265							
FORT	**Forrest**	**41.09**	**177**	P		**P**	**18 58 41.1**	**-0.6**
FORT				IAmb		IAmb	18 58 48.0	
	comp=Z,7.7nm,0.9s							
BBOO	**Buckleboo**	**44.20**	**167**	P		**P**	**18 59 07.1**	**+0.2**
STKA	**Stephens Creek**	**44.84**	**160**	P		**P**	**18 59 12.8**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=339,slow=8.6,SNR=2.1							
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**51.41**	**323**	P		**P**	**19 00 01.9**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=117,slow=8.3,SNR=11							
	comp=Z,0.8nm,0.6s							
MKAR	**Makanchi Array**	**51.41**	**323**	P		**P**	**19 00 01.0**	**-1.6**
ZALV	**Zalesovo Beam**	**54.09**	**332**	P		**P**	**19 00 20.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=125,slow=7.6,SNR=2.2							
	comp=Z,0.3nm,0.3s							
KURK	**Kurchatov**	**55.48**	**326**	P		**P**	**19 00 31.4**	**-0.8**
KURK				IAmb		IAmb	19 01 00.3	
	comp=Z,1.1nm,0.8s							
KURBB	**Kurchatov Arra**	**55.48**	**326**	P		**P**	**19 00 31.4**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=125,slow=6.8,SNR=6.3							
	comp=Z,0.5nm,0.5s							
ARCES	**ARCESS Array B**	**83.75**	**340**	P		**P**	**19 03 24.7**	**-0.7**
	comp=Z,1.8nm,1.0s,baz=81,slow=7.5,SNR=3.9							
	comp=Z,1.8nm,1.0s							
ARCES	**ARCESS Array B**	**83.75**	**340**	P		**P**	**19 03 24.7**	**-0.7**
FINES	**FINESS Array B**	**85.36**	**332**	P		**P**	**19 03 32.3**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=71,slow=4.7,SNR=12							
FINES				LR		LR	19 47 45.5	
	comp=Z,17nm,21.3s,baz=108,slow=40							
	comp=Z,0.6nm,0.3s							
VNDA	**Vanda**	**90.22**	**173**	P		**P**	**19 03 56.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=4.3,slow=7.1,SNR=1.5							
	comp=Z,0.3nm,0.6s							
VNDA	**Vanda**	**90.22**	**173**	P		**P**	**19 03 56.6**	**+0.1**
VNDA				IAmb		IAmb	19 04 39.1	
	comp=Z,1.6nm,1.1s							
HFS	**Hagfors**	**91.52**	**332**	LR		LR	19 46 36.0	
	comp=Z,26nm,20.7s,baz=102,slow=36							

*IDC **09** 18:51:45.1±0.6,6°.47N×125°.17E, h0km, mb3.8/14, mbtmp3.9/16, ML4.4/2, MS3.2/8, Error ellipse: s-maj=16.1km s-min=8.2km az=110.0*
*NEIC **09** 18:51:46.7±1.7,6°.56N±0°.06×125°.13E±0°.04, h9km±4km, mb4.5/21, Error ellipse: s-maj=8.9km s-min=5.7km az=161.0*
*DJA **09** 18:51:48.3±0.6,7°N±5°×12°5E±°, h10km, M4.7/18, mb4.9/18, mB5.2/9, MLv5.0/12, Mw(mB)4.5/9*
*MAN **09** 18:51:48.0,6°.63N×125°.21E, h12km, MS4.7*
MAN INTENSITY III - BANSALAN MAGSAYSAY PADADA SULOP SANTA CRUZ & DAVAO CITY DAVAO DEL SUR; SANTA MARIA DAVAO OCCIDENTAL; MAGPET MAKILALA & KIDAPAWAN CITY COTABATO; COLUMBIO TUPI & TAMPAKAN SOUTH COTABATO; . INTENSITY II - M"LANG PRES ROXAS & TULUNAN COTABATO; ALABEL SARANGANI; KORONADAL CITY.
ISC 09 18:51:46.0±1.4, 6°.60N±0°.04×125°.14E±0°.04, h4km±9km, n88, σ1°62/93, mb4.2/27, MS3.1/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**0.41**	**354**	*i* P		**Pb**	**18 51 56.6**	**+0.6**
KCP				*i* S		**Sb**	**18 52 02.8**	**+0.2**
GSPH	**General Santos**	**0.54**	**200**	*i* P		**Pn**	**18 52 00.5**	**-0.1**
GSPH				*e*S		**Sn**	**18 52 11.2**	**+1.1**
DMPH	**Davao City--Mi**	**0.61**	**37**	*i* P		**Pb**	**18 51 58.9**	**-0.4**
DMPH				*i* S		**Sb**	**18 52 07.3**	**-0.9**
DAV	**Davao City (W)**	**0.65**	**43**	Pg		**Pb**	**18 51 59.4**	**-0.4**
	4µm,0.3s,baz=212,slow=1.6,SNR=174							
DAV				Lg		Lg	18 52 08.9	
	3µm,0.3s,baz=328,slow=23,SNR=12							
DAV	**Davao City (W)**	**0.65**	**43**			**Pb**	**18 51 59.7**	**-0.2**
DAV	**Davao City (W)**	**0.65**	**43**	P		**Pb**	**18 51 59.2**	**-0.7**
DAV	**Davao City (W)**	**0.65**	**43**	P		**Pg**	**18 51 58.0**	**-0.5**
CTBH	**Cotabato--PC H**	**1.08**	**305**	*i* P		**Pn**	**18 52 08.1**	**+0.2**
CTBH				*i* S		**Sn**	**18 52 24.8**	**+1.5**
BUKP	**Musuan**	**1.28**	**357**	*i* P		**Pg**	**18 52 10.2**	**-0.4**
BUKP				*e*S		**Sg**	**18 52 26.3**	**-0.8**
BUKP	**Musuan**	**1.28**	**357**	*e*S		**Pn**	**18 52 10.5**	**-0.2**
CDOP	**Cateel, Davao**	**1.75**	**47**	*i* P		**Pn**	**18 52 16.8**	**-0.3**
CDOP				*e*S		**Sn**	**18 52 39.0**	**-0.9**
CGP	**Cagayan de Oro**	**1.90**	**347**	*i* P		**Pn**	**18 52 18.3**	**-0.9**
CGP				*i* S		**Sn**	**18 52 43.8**	**+0.2**
PAGZ	**Pagadian**	**2.14**	**306**	*i* P		**Pb**	**18 52 24.3**	**-1.0**
PAGZ				*e*S		**Sn**	**18 52 43.1**	**-6.4**
DCPH	**Dipolog City**	**2.65**	**318**	*i* S		**Pg**	**18 52 36.7**	**-0.2**
SGSI	**Sangihe**	**2.92**	**172**	P		**Pn**	**18 52 35.1**	**+1.9**
LSIP	**Lazi, Siquijor**	**2.93**	**329**	*e*P		**Pb**	**18 52 39.8**	**+1.0**
LSIP				*e*S		**Sg**	**18 53 18.5**	**-1.7**
ZCP	**Zamboanga City**	**3.06**	**276**	*i* P		Pn	18 52 30.1	-5.0
SNPH	**Sibulan**	**3.32**	**326**	*e*P		**Pg**	**18 52 50.2**	**+0.5**
TBP	**Tagbilaran**	**3.32**	**338**	*e*P		**Pg**	**18 52 49.7**	**-0.1**
LLP	**Lapu-Lapu**	**3.88**	**343**	*e*S		**Pn**	**18 52 46.7**	**+0.3**
MNI	**Manado**	**5.13**	**183**	P		**Pn**	**18 53 05.7**	**+2.1**
TNTI	**Ternate**	**6.20**	**159**			**Pn**	**18 53 19.0**	**+0.6**
TNTI	**Ternate**	**6.20**	**159**	P		**Pn**	**18 53 21.0**	**+2.6**
	575nm53nm,0.8s							
GTOI	**Gorontalo**	**6.29**	**200**	P		**Pn**	**18 53 20.9**	**+1.3**
TOLI2	**Tolitoli**	**6.97**	**219**			**Pn**	**18 53 28.3**	**-0.6**
LUWI	**Luwuk**	**7.95**	**197**			**Pn**	**18 53 42.4**	**0.0**
LUWI	**Luwuk**	**7.95**	**197**	P		**Pn**	**18 53 46.9**	**+4.6**
	1µm155nm,0.9s							
PCI	**Palu**	**9.14**	**216**	P		**Pn**	**18 54 01.1**	**+2.4**
	26nm,1.1s							
SIJI	**Sorong**	**9.61**	**140**	Pn		**Pn**	**18 54 04.5**	**-0.7**
	0.9nm,0.3s,baz=317,slow=15,SNR=5.5							
SIJI				Sn		**Sn**	**18 55 51.5**	**-2.3**
	0.2nm,0.3s,baz=143,slow=20,SNR=2.4							
	2.6nm,0.4s							
SIJI	**Sorong**	**9.61**	**140**	P		**Pn**	**18 54 09.1**	**+3.8**
NLAI	**Namlea**	**9.96**	**169**	P		Pn	18 54 15.9	+5.8
	944nm62nm,1.1s							
MWPI	**Manokwari, Pap**	**11.61**	**130**	P		**Pn**	**18 54 35.9**	**+3.2**
BATI	**Baumata**	**16.75**	**185**	Pn		**Pn**	**18 55 39.2**	**-2.5**
	5.0nm,0.3s,baz=67,slow=20,SNR=4.5							
BATI				LR		LR	19 03 22.6	
	comp=Z,176nm,19.5s,baz=167,slow=42							
	11nm,0.4s							
MTN	**Manton Dam**	**20.21**	**163**			**P**	**18 56 21.8**	**-0.3**
MTN				IAmb		IAmb	18 56 32.1	
	comp=Z,40nm,1.4s							
GUMO	**Guam**	**20.62**	**69**	LR		LR	19 04 51.4	
	comp=Z,16nm,19.2s,baz=248,slow=38							
KNRA	**Kununurra**	**22.42**	**171**			**P**	**18 56 45.2**	**-0.6**
KNRA				IAmb		IAmb	18 56 47.3	
	comp=Z,22nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.54**	**179**	P		**P**	**18 57 05.9**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=2.0,slow=7.9,SNR=13							
	comp=Z,5.0nm,0.9s							
FITZ	**Fitzroy Crossi**	**24.54**	**179**	P		**P**	**18 57 05.7**	**-1.3**
NJ2	**Nanjing**	**26.00**	**348**	*e*P		**P**	**18 57 22.6**	**+2.6**
NJ2				pmax		pmax		
	comp=Z,15nm,0.6s							
WRA	**Warramunga Arr**	**27.88**	**161**	P		**P**	**18 57 35.2**	**-2.0**
	comp=Z,2.5nm,0.8s,baz=341,slow=9.6,SNR=16							
	comp=Z,2.5nm,0.8s							
WRA	**Warramunga Arr**	**27.88**	**161**	P		**P**	**18 57 34.2**	**-2.9**
CMAR	**Chiang Mai Arr**	**28.11**	**297**	P		**P**	**18 57 39.6**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=106,slow=6.7,SNR=4.4							
CMAR				LR		LR	19 10 38.6	
	comp=Z,33nm,19.4s,baz=90,slow=40							
	comp=Z,0.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**28.11**	**297**	P		**P**	**18 57 38.0**	**-1.2**
PZH	**PanZhiHua**	**29.81**	**314**	P		**P**	**18 57 56.1**	**+1.7**
KSRS	**Korea Array**	**30.82**	**4**	P		**P**	**18 58 03.9**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=185,slow=12,SNR=4.3							
KSRS				LR		LR	19 12 11.4	
	comp=Z,39nm,20.1s,baz=180,slow=40							
	comp=Z,0.8nm,0.9s							

AS31	**Alice Springs**	**31.27**	**164**			**P**	**18 58 06.1**	**-1.1**
ASAR	**Alice Springs**	**31.27**	**164**	P		**P**	**18 58 05.8**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=347,slow=7.7,SNR=18							
ASAR				PcP		**PcP**	**19 01 00.6**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=325,slow=1.9,SNR=2.3							
	comp=Z,1.6nm,0.6s							
ASAR	**Alice Springs**	**31.27**	**164**	P		**P**	**18 58 05.3**	**-1.9**
ASAR						**PcP**	**19 01 00.6**	**-1.2**
MJAR	**Matsushiro Arr**	**32.12**	**20**	LR		LR	19 11 46.6	
	comp=Z,27nm,18.3s,baz=188,slow=37							
HHC	**Hu-ho-hao-te**	**36.20**	**342**	*e*P		**P**	**18 58 51.8**	**+1.8**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.7s							
XLT	**XiLinHaoTe**	**38.00**	**349**	*e*P		**P**	**18 59 07.9**	**+2.7**
XLT				pP		sP	18 59 12.8	+5.5
XLT				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MDJ	**Mudanjiang**	**38.07**	**5**	P		**P**	**18 59 09.7**	**+4.0**
MDJ				pmax		pmax		
	comp=Z,9.0nm,1.2s							
MDJ	**Mudanjiang**	**38.07**	**5**	P		**P**	**18 59 05.5**	**-0.2**
MDJ				IAmb		IAmb	18 59 11.6	
	comp=Z,17nm,1.5s							
GTA2	**Gaotai**	**39.92**	**329**	*e*P		**P**	**18 59 23.3**	**+1.8**
GTA2				pP		sP	18 59 29.6	+6.0
GTA2				pmax		pmax		
	comp=Z,2.0nm,0.8s							
STKA	**Stephens Creek**	**41.36**	**159**	P		**P**	**18 59 32.5**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=353,slow=8.0,SNR=6.3							
	comp=Z,4.9nm,0.8s							
SONM	**Songino Array**	**44.10**	**342**	P		**P**	**18 59 56.9**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=157,slow=7.8,SNR=1.6							
	comp=Z,0.2nm,0.3s							
SONM	**Songino Array**	**44.10**	**342**	P		**P**	**18 59 56.9**	**+1.5**
TLY	**Talaya**	**48.33**	**342**	LR		LR	19 22 06.5	
	comp=Z,66nm,18.4s,baz=158,slow=38							
PETK	**Petropavlovsk-**	**53.43**	**24**	P		**P**	**19 01 06.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=194,slow=5.5,SNR=3.5							
	comp=Z,1.2nm,0.8s							
PETK	**Petropavlovsk-**	**53.43**	**24**	P		**P**	**19 01 06.4**	**-0.6**
PDGK	**Podgornoye**	**54.21**	**320**			**P**	**19 01 11.8**	**-1.3**
MKAR	**Makanchi Array**	**54.31**	**325**	P		**P**	**19 01 14.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=117,slow=6.2,SNR=5.1							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**54.31**	**325**	P		**P**	**19 01 12.2**	**-1.4**
DGAR	**Diego Garcia**	**54.36**	**256**	P		**P**	**19 01 13.9**	**-0.5**
MAKZ	**Makanchi**	**54.50**	**325**	P		**P**	**19 01 14.8**	**-0.1**
KDJ	**Kajisay**	**55.17**	**318**	P		**P**	**19 01 19.2**	**-0.9**
KDJ				IAmb		IAmb	19 01 31.8	
	comp=Z,5.2nm,1.0s							
YAK	**Yakutsk**	**55.42**	**3**	LR		LR	19 28 03.5	
	comp=Z,37nm,18.3s,baz=219,slow=39							
YAK	**Yakutsk**	**55.42**	**3**			**P**	**19 01 22.4**	**+1.2**
ZALV	**Zalesovo Beam**	**57.33**	**333**	P		**P**	**19 01 35.7**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=115,slow=5.1,SNR=1.9							
	comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**57.33**	**333**	P		**P**	**19 01 34.4**	**-0.7**
ARSB	**Arslanbob**	**57.71**	**315**	P		**P**	**19 01 38.1**	**-0.1**
ARSB				IAmb		IAmb	19 01 52.5	
	comp=Z,3.0nm,0.9s							
DRK	**Karamyk**	**57.90**	**313**	P		**P**	**19 01 38.6**	**-1.2**
KURBB	**Kurchatov Arra**	**58.49**	**327**	P		**P**	**19 01 43.1**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=126,slow=6.1,SNR=6.3							
	comp=Z,0.3nm,0.3s							
KURK	**Kurchatov**	**58.49**	**327**			**P**	**19 01 42.7**	**-0.6**
KURK				IAmb		IAmb	19 01 52.1	
	comp=Z,6.7nm,1.4s							
BTK	**Batken**	**58.81**	**313**	P		**P**	**19 01 43.8**	**-2.1**
BTK				IAmb		IAmb	19 01 57.2	
	comp=Z,5.3nm,1.3s							
GAR	**Garm**	**58.83**	**312**	P		**P**	**19 01 44.8**	**-1.3**
KK31	**Karatay Array**	**60.07**

MTO3	**Montecristo**	**1.46**	**34**	P		**Pn**	**19 12 43.8**	**-0.6**
MTO3				S		**Sn**	**19 13 03.4**	**0.0**
MTO3	**Montecristo**	**1.46**	**34**	*i* P		**Pn**	**19 12 43.5**	**-0.8**
APG	**El Apazote**	**1.83**	**352**	*i* P		**Pg**	**19 12 53.9**	**+0.7**

*IDC **09** 19:12:53.7±2.5, 46.2°24′N×107.39′W, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=67.4km s-min=10.1km az=129.0*

*NEIC **09** 19:12:55.5±2.2, 45°87′N±0°02′×106°67′W±0°05, h0km±1km, ML3.2/38, Error ellipse: s-maj=5.6km s-min=4.1km az=293.0*

ISC 09 19:12:55.6±1.0, 45°99′N±0°06′×106°79′W±0°05, h0km, n18, σ0s59/13, Montana

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**0.80**	**29**		**Pb**	**19 13 12.8**	**+0.2**
RLMT	**Red Lodge**	**1.95**	**245**		**Pb**	**19 13 31.5**	**-0.6**
RLMT				IAML		19 14 02.9	
	231nm,0.6s						
RLMT				IAML		19 14 07.5	
	134nm,0.8s						
GCMT	**Greycliff**	**2.02**	**266**		**Pg**	**19 13 34.2**	**-0.2**
YNE	**Yellowstone No**	**2.47**	**248**		**Pb**	**19 13 40.2**	**-0.8**
YNE					**Sb**	**19 14 12.6**	**+0.6**
YNE				IAML		19 14 15.2	
	comp=E,184nm,0.6s						
YNE				IAML		19 14 17.0	
	comp=N,181nm,0.5s						
YMP	**Mirror Lake Pl**	**2.68**	**244**		**Pb**	**19 13 44.5**	**-0.2**
RSSD	**Black Hills**	**2.70**	**133**		**Pn**	**19 13 40.1**	**-0.4**
RSSD				IAML		19 14 17.1	
	comp=N,114nm,0.6s						
RSSD				IAML		19 14 19.7	
	comp=N,118nm,0.6s						
RSSD	**Black Hills**	**2.70**	**133**		**Pn**	**19 13 40.0**	**-0.5**
RSSD					**Sn**	**19 14 13.6**	**-0.3**
EGMT	**Eagleton**	**2.88**	**316**		**Pb**	**19 13 48.1**	**+0.2**
EGMT				IAML		19 14 34.0	
	comp=N,99nm,0.5s						
EGMT				IAML		19 14 36.0	
	comp=N,115nm,0.6s						
YHL	**Hebgen Lake**	**3.30**	**251**	IAML		19 14 55.0	
	comp=N,63nm,1.0s						
K22A	**Casper**	**3.34**	**177**	IAML		19 14 37.1	
	comp=N,46nm,0.5s						
K22A				IAML		19 14 44.4	
	comp=N,76nm,0.6s						
YHB	**Horse Butte**	**3.34**	**250**	IAML		19 14 48.7	
	comp=N,42nm,1.1s						
YHB				IAML		19 14 50.4	
	comp=E,44nm,1.1s						
FLWY	**Flagg Ranch**	**3.36**	**237**	IAML		19 14 49.8	
	comp=E,65nm,1.6s						
BW06	**Boulder Array**	**3.78**	**213**	IAML		19 14 56.5	
	comp=E,29nm,1.0s						
BW06				IAML		19 15 01.2	
	comp=E,35nm,0.8s						
PDAR	**Pinedale Array**	**3.78**	**213**	Pn	**Pn**	**19 13 55.8**	**+0.4**
	comp=E,0.7nm,0.3s,baz=21,slow=14,SNR=8.7						
PDAR				Pg	**Pb**	**19 14 04.5**	**+1.1**
	comp=E,1.8nm,0.3s,baz=31,slow=18,SNR=17						
PDAR				Lg	Lg	19 14 52.9	
	comp=E,6.2nm,0.3s,baz=44,slow=28,SNR=5.5						
	comp=E,0.9nm,0.4s						
FXWY	**Fox Creek**	**3.82**	**234**	IAML		19 15 33.8	
	comp=E,57nm,0.1s						
FXWY				IAML		19 15 54.7	
	comp=E,34nm,0.1s						
MSO	**Missoula**	**5.02**	**282**	IAML		19 15 46.9	
	comp=E,20nm,1.2s						
MSO				IAML		19 15 55.2	
	comp=E,19nm,1.3s						
I56US	**NEWPORT INFRAS**	**7.41**	**292**	I	I	19 54 00.0	
	comp=E,0.1nm,0.9s,baz=105,slow=310,SNR=6.4						
ULM	**Lac du Bonnet**	**8.45**	**56**	Pn	**Pn**	**19 14 58.9**	**-0.4**
	comp=E,0.3nm,0.3s,baz=240,slow=13,SNR=1.5						
ULM				Lg	Lg	19 17 20.8	
	comp=E,0.8nm,0.3s,baz=221,slow=11,SNR=5.3						
	comp=E,1.0nm,0.4s						

*NEIC **09** 19:15:36.8±1.3, 43.71°N±0.06°×105.31°W±0.07, h0km±1km, ML3.6/36, Error ellipse: s-maj=11.3km s-min=7.2km az=150.0*

*IDC **09** 19:15:37.5±1.8, 44.20°N×105.87W, h0km, mbtmp3.6/2, ML2.3/1, Error ellipse: s-maj=63.1km s-min=10.3km az=145.0*

ISC 09 19:15:35.8±1.2, 43°80′N±0°07′×105°28′W±0°06, h0km, n20, σ2s23/16, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.96**	**70**	Pg	**Pn**	**19 15 56.9**	**+0.2**
BW06	**Boulder Array**	**3.29**	**253**		**Pn**	**19 16 30.7**	**+1.9**
PD31	**Pinedale Array**	**3.29**	**253**		**Pn**	**19 16 30.8**	**+2.0**
PDAR	**Pinedale Array**	**3.29**	**253**	Pn	**Pn**	**19 16 30.6**	**+1.9**
	6.9nm,0.3s,baz=65,slow=16,SNR=20						
PDAR				Lg	Lg	19 17 11.9	
	7.2nm,0.3s,baz=67,slow=25,SNR=4.1						
HAYD	**Hayden**	**3.59**	**205**		**Pn**	**19 16 35.5**	**+2.7**
HAYD				IAML		19 18 04.5	
	comp=E,96nm,1.1s						
HAYD				IAML		19 18 07.5	
	comp=N,98nm,1.1s						
YNE	**Yellowstone No**	**3.60**	**291**		**Pn**	**19 16 35.2**	**+2.2**
YNE				IAML		19 17 33.7	
	comp=E,96nm,0.3s						
YNE				IAML		19 17 33.8	
	comp=N,73nm,0.3s						
OGNE	**Ogallala**	**3.73**	**139**		**Pn**	**19 16 37.6**	**+2.9**
LOHW	**Long Hollow**	**3.86**	**269**		**Pn**	**19 16 39.9**	**+3.2**
FLWY	**Flagg Ranch**	**3.92**	**276**		**Pn**	**19 16 40.2**	**+2.7**
FLWY				IAML		19 17 58.4	
	comp=N,78nm,1.3s						
SNOW	**Snow King Moun**	**3.99**	**267**		**Pb**	**19 16 45.9**	**-1.2**
SNOW				IAML		19 18 01.7	
	comp=N,92nm,1.1s						
SNOW				IAML		19 18 01.8	
	comp=N,93nm,1.2s						
ISCO	**Idaho Springs**	**4.00**	**184**		LR	19 17 41.1	
YHH	**Holmes Hill**	**4.12**	**286**		**Pn**	**19 16 41.9**	**+1.6**
O20A	**White River Ci**	**4.27**	**212**		**Pn**	**19 16 43.7**	**+1.5**
ECR	**Eagle Creek**	**4.50**	**263**		**Pn**	**19 16 47.6**	**+2.3**
RDMU	**Red Mountain**	**4.53**	**226**		**Pg**	**19 17 01.1**	**-1.5**
RDMU				IAML		19 18 05.8	
	comp=E,67nm,1.1s						
Q24A	**Divide**	**4.83**	**179**		**Pn**	**19 16 51.2**	**+1.2**
Q24A				IAML		19 18 11.2	
	comp=E,54nm,0.9s						
HWUT	**Hardware Ranch**	**5.12**	**247**	IAML		19 18 31.6	
	comp=E,45nm,1.2s						
HWUT				IAML		19 18 57.6	
	comp=E,37nm,1.1s						
BSUT	**Blindstream Ca**	**5.21**	**233**	IAML		19 18 37.6	
	comp=E,22nm,1.0s						
ULM	**Lac du Bonnet**	**9.10**	**42**	Pn	**Pn**	**19 17 47.8**	**-0.6**
	comp=E,0.5nm,0.3s,baz=222,slow=11,SNR=1.3						
ULM				Lg	Lg	19 20 18.4	
	baz=129,slow=21,SNR=1.2						
	comp=E,3.6nm,0.7s						
I56US	**NEWPORT INFRAS**	**9.37**	**303**	I	I	20 12 20.0	
	baz=114,slow=312,SNR=3.8						

*IDC **09** 19:39:51.8±0.8, 33.84°N×137.12E, h365km±12km, mb2.8/6, mbtmp3.6/9, Error ellipse: s-maj=25.4km s-min=18.3km az=48.0*

*JMA **09** 19:39:51.8±0.2, 34°N±1°×137°7E±°, h364km±2km, MV2.5/23, SE OFF KII PENINSULA*

ISC 09 19:39:51.8±0.8, 33°9′N±0°1×137°10′E±0°10, h364km±7km, n16, σ0s63/18, mb2.9/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	**TONANKAI O.B.S**	**0.16**	**202**	*e*P	**Pn**	**19 40 37.5**	**+0.6**
TTO1	**TONANKAI O.B.S**	**0.37**	**225**	*e*P	**Pn**	**19 40 37.6**	**+0.5**
TTO4	**TONANKAI O.B.S**	**0.38**	**72**	*e*P	**Pn**	**19 40 37.6**	**+0.5**
JIE	**Ise**	**0.60**	**327**	*e*P	**Pn**	**19 40 38.2**	**+0.5**
JHMK	**Hamakita**	**1.07**	**30**	*e*P	**Pn**	**19 40 39.5**	**+0.4**
JTNC	**Tanabenakahech**	**1.24**	**267**	*e*P	**Pn**	**19 40 40.3**	**+0.2**
JTNC				*e*S	**S**	**19 41 18.0**	**-0.9**
JHJ	**Hachijo jima 2**	**2.37**	**108**	P	**Pn**	**19 40 47.0**	**-0.1**
	44nm,0.5s,baz=275,slow=22,SNR=5.4						
JHJ				S	**S**	**19 41 32.2**	**+0.6**
	10nm,0.3s,baz=94,slow=19,SNR=1.2						
MJAR	**Matsushiro Arr**	**2.80**	**19**	P	**Pn**	**19 40 50.5**	**+0.1**
	3.8nm,0.7s,baz=198,slow=10.0,SNR=16						
MJAR				S	**S**	**19 41 36.8**	**-0.9**
	1.8nm,0.7s,baz=218,slow=20,SNR=5.9						
JCJ	**Chichijima**	**8.06**	**146**	P	Pn	19 41 40.8	-6.2
	60nm,0.9s,baz=284,slow=18,SNR=2.3						
JCJ				S	S	19 43 08.9	-12
	51nm,0.7s,baz=273,slow=22,SNR=7.5						
KSRS	**Korea Array**	**8.27**	**298**	P	**Pn**	**19 41 50.2**	**+1.0**
	8.6nm,0.6s,baz=112,slow=12,SNR=36						
SONM	**Songino Array**	**26.87**	**310**	P	**P**	**19 45 01.2**	**+0.6**
	1.3nm,0.6s,baz=127,slow=11,SNR=6.3						
	1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.30**	**255**	P	**P**	**19 46 30.5**	**-0.1**
	0.2nm,0.4s,baz=58,slow=8.4,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**42.89**	**304**	P	**P**	**19 47 15.9**	**+0.2**
	0.3nm,0.3s,baz=91,slow=11,SNR=6.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**45.24**	**310**	P	**P**	**19 47 33.7**	**-0.4**
	0.4nm,0.3s,baz=90,slow=6.7,SNR=6.8						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**53.59**	**183**	P	**P**	**19 48 36.1**	**-0.7**
	0.4nm,0.8s,baz=1.5,slow=7.3,SNR=2.6						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**54.01**	**31**	P	**P**	**19 48 39.5**	**+0.3**
	0.2nm,0.6s,baz=281,slow=7.4,SNR=2.4						
	0.2nm,0.6s						

*NOU **09** 19:54:25.0, 42.47S×173.56E, h16km, ML3.9/16, South Island, New Zealand*

*WEL **09** 19:54:25.9, 42.35S×173.42E, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr0.03; Mθθ1.32; Mϕϕ-1.21; Mrθ0.87; Mθϕ-1.39; Mrϕ0.10; Fault plane solution: M0 2.08000×10^14^ NP1:ϕs68.00000°, δ86.00000°, λ156.00000°. NP2:ϕs160.00000°, δ66.00000°, λ4.00000°. Principal axes: T 2.1600, Plg20.0000°, Azm22.0000°; N -0.1790, Plg66.0000°, Azm239.0000°; P -1.9810, Plg14.0000°, Azm117.0000°; Stations used: DSZ GVZ INZ KHZ LTZ MQZ NNZ OXZ QRZ THZ WEL STRIKE-SLIP FAULTING*

*WEL **09** 19:54:25.9±0.3, 42°S±2°×17°3E±°, h8km±2km, M3.6/33, ML3.5/13, MLv3.6/33 Error ellipse: s-maj=3.0km s-min=2.4km az=125.1*

ISC 09 19:54:25.4±0.9, 42°41′S±0°03′×173°54′E±0°03, h25km±5km, n109, σ1s41/118, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.00**	**157**	P	**Pb**	**19 54 29.2**	**-0.5**
KHZ	**Kahutara**	**0.00**	**157**	S	**Sb**	**19 54 30.9**	**-1.6**
KHZ	**Kahutara**	**0.00**	**157**	P	**Pb**	**19 54 29.1**	**-0.5**
KHZ				S	**Sb**	**19 54 31.4**	**-1.0**
KIKS	**Kaikoura**	**0.11**	**97**	P	**Pb**	**19 54 30.9**	**+0.8**
KIKS				S	**Sb**	**19 54 35.0**	**+1.8**
MOLW	**Molesworth Sta**	**0.38**	**327**	P	**Pb**	**19 54 32.2**	**-1.5**
MOLW				S	**Sb**	**19 54 36.8**	**-2.7**
LOKS	**Mount Lookout**	**0.40**	**354**	P	**Pb**	**19 54 33.3**	**-0.9**
LOKS				S	**Sb**	**19 54 38.8**	**-1.2**
WTMC	**Te Mara Farm W**	**0.41**	**240**	P	**Pb**	**19 54 34.2**	**0.0**
WTMC				S	**Sb**	**19 54 40.7**	**+0.6**
CECS	**Cheviot Emerge**	**0.45**	**206**	P	**Pn**	**19 54 35.9**	**-0.3**
HSES	**Hanmer Springs**	**0.53**	**258**	P	**Pb**	**19 54 35.3**	**-0.9**
HSES				S	**Sb**	**19 54 41.9**	**-1.6**
KEKS	**Kekerengu Vall**	**0.56**	**36**	P	**Pn**	**19 54 37.5**	**-0.4**
GLOS	**29 km south-we**	**0.59**	**21**	P	**Pb**	**19 54 37.2**	**0.0**
WIGC	**Waiau Gorge**	**0.62**	**242**	P	**Pb**	**19 54 37.6**	**0.0**
WIGC				S	**Sb**	**19 54 46.0**	**+0.2**
CULC	**Culverden Airl**	**0.64**	**237**	P	**Pb**	**19 54 38.4**	**+0.3**
GVZ	**Greta Valley S**	**0.67**	**214**	P	**Pn**	**19 54 39.9**	**+0.6**
GVZ				S	**Sn**	**19 54 50.2**	**+1.2**
BSWZ	**Blackbirch Sta**	**0.74**	**20**	P	**Pb**	**19 54 39.9**	**+0.3**
THZ	**Tophouse**	**0.80**	**324**	P	**Pn**	**19 54 40.1**	**-1.1**
THZ				S	**Sb**	**19 54 49.6**	**-1.6**
CMWZ	**Cape Campbell**	**0.83**	**38**	P	**Pn**	**19 54 43.0**	**+1.4**
AMCZ	**Amberley**	**1.00**	**220**	P	**Pb**	**19 54 44.6**	**+0.5**
LTZ	**Lake Taylor**	**1.00**	**248**	P	**Pn**	**19 54 43.6**	**-0.4**
TUWZ	**Tuamarina**	**1.03**	**17**	P	**Pb**	**19 54 45.9**	**+1.4**
MRNZ	**Matariki Terra**	**1.17**	**330**	P	**Pn**	**19 54 46.7**	**+0.5**
NNZ	**Nelson**	**1.20**	**354**	P	**Pn**	**19 54 47.1**	**+0.5**
TCW	**Otry Channel**	**1.32**	**25**	P	**Pn**	**19 54 49.0**	**-0.5**
OKCZ	**Okains Bay**	**1.36**	**195**	P	**Pb**	**19 54 49.3**	**-0.9**
SNZO	**South Karori**	**1.41**	**39**	P	**Pb**	**19 54 50.1**	**-0.8**
SNZO	**South Karori**	**1.41**	**39**	S	**Sb**	**19 55 09.2**	**+0.8**
OXZ	**Oxford**	**1.43**	**230**	P	**Pn**	**19 54 49.5**	**-0.3**
TKNZ	**Takaka Hill**	**1.44**	**342**	P	**Pn**	**19 54 50.9**	**+0.9**
MQZ	**McQueen's Vall**	**1.45**	**206**	P	**Pn**	**19 54 49.6**	**-0.4**
DSZ	**Denniston Nort**	**1.45**	**297**	P	**Pn**	**19 54 50.9**	**+0.8**
WEL	**Wellington**	**1.46**	**40**	P	**Pb**	**19 54 51.4**	**-0.4**
AKCZ	**Akaroa Harbour**	**1.53**	**197**	P	**Pn**	**19 54 51.3**	**+0.2**
PLWZ	**Palliser**	**1.53**	**57**	P	**Pn**	**19 54 51.6**	**+0.4**
INZ	**Inchbonnie**	**1.58**	**258**	P	**Pn**	**19 54 52.6**	**+0.8**
MSWZ	**Moikau Station**	**1.62**	**53**	P	**Pn**	**19 54 52.9**	**+0.5**
DUWZ	**D'Urville Isla**	**1.64**	**10**	P	**Pn**	**19 54 53.5**	**+0.9**
RACZ	**Rakaia**	**1.67**	**217**	P	**Pn**	**19 54 52.6**	**-0.4**
CAW	**Cannon Point**	**1.73**	**42**	P	**Pn**	**19 54 54.7**	**+0.7**
PAWZ	**Paruwai Farm**	**1.75**	**55**	P	**Pn**	**19 54 54.3**	**+0.2**
QRZ	**Quartz Range**	**1.76**	**334**	P	**Pn**	**19 54 55.8**	**+1.5**
QRZ	**Quartz Range**	**1.76**	**334**	S	**Sb**	**19 55 18.3**	**-0.2**
QRZ	**Quartz Range**	**1.76**	**334**	P	**Pn**	**19 54 55.8**	**+1.5**
MHCZ	**Mount Hutt**	**1.83**	**232**	P	**Pn**	**19 54 54.8**	**-0.5**
KIW	**Kapiti Island**	**1.86**	**34**	P	**Pn**	**19 54 56.6**	**+0.9**
TRWZ	**Traveller**	**1.90**	**58**	P	**Pb**	**19 54 57.8**	**-1.6**
WACZ	**Wakanui South**	**1.97**	**218**	P	**Pn**	**19 54 57.0**	**-0.2**
OGWZ	**Otaki Gorge**	**2.01**	**38**	P	**Pn**	**19 54 58.4**	**+0.6**
HOWZ	**Holdsworth Sta**	**2.12**	**45**	P	**Pn**	**19 54 59.5**	**+0.2**
WVZ	**Waitaha Valley**	**2.17**	**251**	P	**Pn**	**19 55 00.6**	**+0.7**
TMWZ	**Te Maipa**	**2.19**	**54**	P	**Pn**	**19 55 00.1**	**-0.1**
RPZ	**Rata Peaks**	**2.24**	**234**	P	**Pn**	**19 55 00.6**	**-0.3**
RPZ	**Rata Peaks**	**2.24**	**234**	P	**Pn**	**19 55 00.7**	**-0.3**
ARCZ	**Arundel**	**2.31**	**228**	P	**Pn**	**19 55 01.4**	**-0.5**
MRZ	**Mangatainoka R**	**2.33**	**42**	P	**Pn**	**19 55 02.2**	**+0.1**
TIWZ	**Tintock**	**2.40**	**48**	P	**Pn**	**19 55 04.0**	**+0.8**
GCSZ	**Gaunt Creek Bo**	**2.53**	**248**	P	**Pn**	**19 55 05.9**	**+1.0**
PRWZ	**Pori Road**	**2.60**	**45**	P	**Pn**	**19 55 06.8**	**+0.9**
BFZ	**Birch Farm**	**2.67**	**51**	P	**Pn**	**19 55 07.5**	**+0.7**
BFZ	**Birch Farm**	**2.67**	**51**	P	**Pn**	**19 55 06.3**	**-0.4**
TMZ	**Timaru**	**2.70**	**222**	P	**Pn**	**19 55 07.1**	**-0.2**
WAZ	**Wanganui**	**2.87**	**23**	P	**Pn**	**19 55 12.6**	**+2.9**
DVHZ	**Dannevirke**	**2.89**	**44**	P	**Pn**	**19 55 09.1**	**-0.8**
FOZ	**Fox Glacier**	**2.95**	**246**	P	**Pn**	**19 55 12.0**	**+1.3**
TSZ	**Takapari Road**	**2.98**	**39**	P	**Pn**	**19 55 11.0**	**-0.1**
NMEZ	**Namu Road**	**3.01**	**5**	P	**Pb**	**19 55 15.2**	**-3.0**
LREZ	**Lake Rotokare**	**3.02**	**13**	P	**Pb**	**19 55 17.6**	**-0.9**
PREZ	**Palmer Road**	**3.10**	**9**	P	**Pn**	**19 55 16.4**	**+3.6**
KHEZ	**Kahui Hut**	**3.14**	**7**	P	**Pn**	**19 55 19.5**	**+2.6**
KHEZ	**Kahui Hut**	**3.14**	**7**	P	**Pn**	**19 55 16.3**	**+3.0**
LBZ	**Lake Benmore**	**3.14**	**230**	P	**Pn**	**19 55 13.3**	**0.0**
NBEZ	**Newall Road No**	**3.15**	**5**	P	**Pn**	**19 55 16.2**	**+2.8**
NEZ	**North Egmont**	**3.17**	**8**	P	**Pb**	**19 55 18.0**	**-3.0**
PNHZ	**Pukenui**	**3.21**	**40**	P	**Pn**	**19 55 13.7**	**-0.5**
MTVZ	**Mangateitei**	**3.36**	**26**	P	**Pn**	**19 55 18.3**	**+1.9**
ODZ	**Otahua Downs**	**3.36**	**218**	P	**Pn**	**19 55 15.9**	**-0.4**
ODZ	**Otahua Downs**	**3.36**	**218**	S	**Sn**	**19 55 56.1**	**+0.7**
ODZ	**Otahua Downs**	**3.36**	**218**	P	**Pn**	**19 55 15.7**	**-0.7**
PKVZ	**Pokaka**	**3.41**	**24**	P	**Pn**	**19 55 19.0**	**+2.0**
VRZ	**Vera Road**	**3.41**	**16**	P	**Pn**	**19 55 19.5**	**+2.5**
MOVZ	**Moawhango**	**3.44**	**30**	P	**Pn**	**19 55 18.2**	**+0.7**
WNVZ	**Wahianoa**	**3.46**	**28**	P	**Pn**	**19 55 19.3**	**+1.5**
TRVZ	**Turoa**	**3.46**	**27**	P	**Pn**	**19 55 19.4**	**+1.4**
MAVZ	**Matarangi**	**3.50**	**27**	P	**Pn**	**19 55 19.9**	**+1.4**
KRHZ	**Kereru**	**3.50**	**39**	P	**Pn**	**19 55 17.6**	**-0.7**
FWVZ	**Far West T-bar**	**3.50**	**27**	P	**Pn**	**19 55 20.0**	**+1.4**
NGZ	**Ngauruhoe**	**3.59**	**27**	P	**Pn**	**19 55 20.9**	**+1.2**
SNVZ	**South Ngauruho**	**3.60**	**27**	P	**Pn**	**19 55 21.1**	**+1.3**
WTVZ	**West Tongariro**	**3.64**	**26**	P	**Pn**	**19 55 21.5**	**+1.2**
KRVZ	**Karewarewa**	**3.68**	**26**	P	**Pn**	**19 55 22.4**	**+1.6**
TMVZ	**Te Maari**	**3.68**	**27**	P	**Pn**	**19 55 22.3**	**+1.5**
MCHZ	**McNeill Hill**	**3.81**	**40**	P	**Pb**	**19 55 27.9**	**-4.0**
JCZ	**Jackson Bay**	**3.85**	**243**	P	**Pn**	**19 55 24.0**	**+0.9**
JCZ	**Jackson Bay**	**3.85**	**243**	S	**Sn**	**19 56 09.4**	**+1.9**
JCZ	**Jackson Bay**	**3.85**	**243**	P	**Pn**	**19 55 23.7**	**+0.6**
BKZ	**Black Stump Fm**	**3.94**	**36**	P	**Pn**	**19 55 25.7**	**+1.3**
BKZ	**Black Stump Fm**	**3.94**	**36**	P	**Pn**	**19 55 23.8**	**-0.6**
HIZ	**Hauiti**	**4.02**	**15**	P	**Pn**	**19 55 27.8**	**+2.4**
HIZ	**Hauiti**	**4.02**	**15**	P	**Pn**	**19 55 27.9**	**+2.4**
TLZ	**Tolley Road**	**4.36**	**21**	P	**Pn**	**19 55 31.8**	**+1.8**
RTZ	**Ruatahuna**	**4.61**	**36**	P	**Pn**	**19 55 37.1**	**+3.5**
TOZ	**Tahuroa Road**	**4.91**	**19**	P	**Pn**	**19 55 38.8**	**+1.1**
URZ	**Urewera**	**4.97**	**35**	P	**Pn**	**19 55 38.5**	**+0.1**
AWAZ	**Awhitu Peninsu**	**5.41**	**9**	P	**Pn**	**19 55 46.6**	**+2.1**
MKAZ	**Moumakai**	**5.45**	**14**	P	**Pn**	**19 55 46.3**	**+1.3**
RUGZ	**Raukumara Rang**	**5.46**	**37**	P	**Pn**	**19 55 45.6**	**+0.4**
ETAZ	**East Tamaki Re**	**5.56**	**12**	P	**Pn**	**19 55 48.4**	**+1.9**
MBAZ	**Motutapu North**	**5.73**	**11**	P	**Pn**	**19 55 51.1**	**+2.2**
WIAZ	**Waiheke Island**	**5.75**	**13**	P	**Pn**	**19 55 50.6**	**+1.5**
ABAZ	**Army Bay**	**5.89**	**10**	P	**Pn**	**19 55 53.1**	**+2.0**

*NEIC **09** 19:58:31.5±0.8, 43.80°N±0.04°×105.39W±0.05, h0km±1km, ML3.4/54, Error ellipse: s-maj=8.4km s-min=4.0km az=41.0*

*IDC **09** 19:58:32.2±1.7, 43.97°N×105.60W, h0km, mbtmp3.7/3, ML3.6/3, Error ellipse: s-maj=57.4km s-min=8.6km az=148.0*

ISC 09 19:58:30.4±1.1, 43°88′N±0°06′×105°45′W±0°07, h0km, n24, σ2s58/15, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K22A	**Casper**	**1.46**	**213**		**Pg**	**19 58 58.4**	**0.0**
K22A				IAML		19 59 23.5	
	517nm,0.3s						
K22A				IAML		19 59 24.1	
	553nm,0.3s						
LAO	**LASA Array**	**2.86**	**349**		**Pb**	**19 59 20.6**	**-1.7**
LAO				IAML		20 00 06.0	
	163nm,0.4s						
RLMT	**Red Lodge**	**3.00**	**296**		**Pb**	**19 59 23.0**	**-1.8**
RLMT				IAML		20 00 16.4	
	85nm,0.3s						
RLMT				IAML		20 00 20.4	
	72nm,0.3s						
BW06	**Boulder Array**	**3.20**	**251**		**Pb**	**19 59 25.3**	**-3.0**
PD31	**Pinedale Array**	**3.20**	**251**		**Pb**	**19 59 25.4**	**-2.9**
PDAR	**Pinedale Array**	**3.20**	**251**	Pn	**Pb**	**19 59 25.7**	**-2.6**
	6.8nm,0.3s,baz=70,slow=16,SNR=79						
PDAR				Lg	Lg	20 00 09.2	
	23nm,0.3s,baz=71,slow=32,SNR=7.7						
	11nm,0.3s						
PDAR	**Pinedale Array**	**3.20**	**251**		**Pn**	**19 59 24.7**	**+2.5**
YMP	**Mirror Lake Pl**	**3.49**	**286**		**Pn**	**19 59 28.1**	**+1.9**
YMP				IAML		20 00 32.4	
	comp=E,105nm,0.3s						
GCMT	**Greycliff**	**3.56**	**304**		**Pb**	**19 59 31.3**	**-3.0**
HAYD	**Hayden**	**3.62**	**202**		**Pn**	**19 59 29.9**	**+1.9**
HAYD				IAML		20 00 24.5	
	comp=E,50nm,0.3s						
LOHW	**Long Hollow**	**3.75**	**268**		**Pn**	**19 59 32.5**	**+2.8**
OGNE	**Ogallala**	**3.87**	**138**	Pn	**Pn**	**19 59 32.9**	**+1.6**
OGNE				IAML		20 00 37.9	
	comp=E,89nm,0.4s						
OGNE				IAML		20 00 42.9	
	comp=E,89nm,0.7s						
FXWY	**Fox Creek**	**4.05**	**268**	IAML		20 01 20.4	
	comp=E,41nm,0.1s						
ISCO	**Idaho Springs**	**4.08**	**182**		**Pn**	**19 59 36.0**	**+1.6**
YHL	**Hebgen Lake**	**4.23**	**285**	IAML		20 00 56.2	
	comp=N,25nm,1.1s						
AHID	**Auburn Hatcher**	**4.27**	**257**	IAML		20 00 57.9	
	comp=N,63nm,0.1s						
O20A	**White River Ci**	**4.29**	**210**	IAML		20 00 47.1	
	comp=N,33nm,0.3s						
O20A				IAML		20 01 04.0	
	comp=N,42nm,1.3s						
E28A	**Huff**	**4.30**	**50**	IAML		20 00 58.1	
	comp=N,65nm,0.5s						
E28A				IAML		20 01 06.0	
	comp=N,65nm,0.9s						
RDMU	**Red Mountain**	**4.51**	**224**	IAML		20 01 01.0	
	comp=E,29nm,1.0s						
RDMU				IAML		20 01 01.7	
	comp=N,26nm,0.9s						
Q24A	**Divide**	**4.92**	**177**	IAML		20 01 09.4	
	comp=E,32nm,0.3s						
Q24A				IAML		20 01 15.8	
	comp=N,20nm,0.4s						
HWUT	**Hardware Ranch**	**5.05**	**245**	IAML		20 01 20.7	
	comp=N,26nm,1.1s						
HWUT				IAML		20 01 32.0	
	comp=N,24nm,1.1s						
ELK	**Elko**	**7.91**	**250**	Pn	**Pn**	**20 00 30.5**	**+3.7**
	comp=N,0.8nm,0.3s,baz=60,slow=12,SNR=12						

SDV	**Santo Domingo**	**3.17**	**50**		**Pn**	20 11 46.0	+0.9
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	20 11 50.5	+0.1
PRAC				S	**Sn**	20 12 32.8	-0.5
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	20 11 50.0	-0.5
PRAC				S	**Sn**	20 12 32.9	-0.3
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	20 11 51.0	+0.3
APAC				S	**Sn**	20 12 32.0	-1.6
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	20 11 50.9	0.0
ORTC				S	**Sn**	20 12 33.3	-0.7
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	20 11 50.9	-0.5
SJCC				S	**Sn**	20 12 34.7	-0.2
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	20 11 50.8	-0.6
SJCC				S	**Sn**	20 12 32.3	-2.6
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*	**Pn**	20 11 51.4	0.0
SJCC				*eS*	**Sn**	20 12 31.9	-3.1
PLMC	**San Jos del P**	**3.71**	**239**	P	**Pn**	20 11 52.4	+0.3
PLMC				S	**Sn**	20 12 35.4	-0.7
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	20 11 53.8	+0.6
URMC				S	**Sn**	20 12 37.4	-0.8
LCBC	**Los crdobas,**	**3.81**	**302**	P	**Pn**	20 11 53.0	-0.2
LCBC				S	**Sn**	20 12 35.3	-2.9
GUVC	**San Jose del G**	**4.30**	**174**	P	**Pn**	20 11 59.0	-0.7
GUVC				S	**Sn**	20 12 48.1	-1.7
SOLC	**Bahia Solano**	**4.33**	**262**	P	**Pn**	20 12 02.6	+2.6
SMRC	**Santa Marta, M**	**4.43**	**345**	P	**Pn**	20 12 01.4	+0.1
SMRC				S	**Sn**	20 12 50.5	-2.3
PIZC	**Pizarro, Choco**	**4.64**	**246**	P	**Pn**	20 12 05.3	+1.2
PIZC				S	**Sn**	20 12 56.7	-0.9
PTAC	**Punta Ardita,**	**4.69**	**274**	P	**Pn**	20 12 04.8	+0.1
PTAC				S	**Sn**	20 12 57.1	-1.7
MACC	**Macarena, Meta**	**4.73**	**189**	P	**Pn**	20 12 03.9	-1.5
MACC				S	**Sn**	20 12 55.2	-4.8
BETC	**Betania**	**4.76**	**210**	P	**Pn**	20 12 05.1	-0.6
BETC				S	**Sn**	20 12 58.0	-2.6
URI	**Uribia**	**4.94**	**13**	P	**Pn**	20 12 07.2	-0.9
URI				S	**Sn**	20 13 03.7	-1.1
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*	**Pn**	20 12 07.2	-0.9
	0.5nm2µm116nm,0.7s						
URIC				*eS*	**Sn**	20 13 02.1	-2.7
	0.5nm2µm116nm,0.7s						
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*	**Pn**	20 12 07.2	-0.9
URIC				*eS*	**Sn**	20 12 59.7	-5.2
JAMC	**Jamundi, Valle**	**5.08**	**225**	P	**Pn**	20 12 09.9	-0.2
	0.2nm3µm76nm,0.4s						
JAMC				S	**Sn**	20 13 07.3	-1.0
	0.2nm3µm76nm,0.4s						
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	20 12 10.8	-1.1
GARC				S	**Sn**	20 13 07.4	-4.3
POPC	**Popayan, Colom**	**5.58**	**220**	P	**Pn**	20 12 16.5	-0.2
	849nm62nm,0.4s						
POPC				S	**Sn**	20 13 17.3	-2.9
	849nm62nm,0.4s						
BBAC	**Balboa, Cauca**	**6.34**	**221**	P	**Pn**	20 12 27.3	+0.5
BBAC				S	**Sn**	20 13 35.5	-2.9
FUNV	**FUNVISIS**	**7.18**	**59**	*eP*	**Pn**	20 12 38.9	+1.0
OTAV	**Otavalo**	**8.47**	**219**		**Pn**	20 12 54.2	-1.3
OTAV				Sn	**Sn**	20 14 28.5	-1.5
BANI	**BANI**	**11.78**	**13**	Pn	**Pn**	20 13 39.5	+0.7
MTDJ	**Mount Denham**	**12.11**	**339**	Pn	**P**	20 13 46.4	-3.0
MTDJ	**Mount Denham**	**12.11**	**339**	*eP*	**P**	20 13 46.1	-3.2
SDDR	**Presa de Saban**	**12.19**	**8**	Pn	**Pn**	20 13 45.9	+1.8
JTS	**Las Juntas de**	**12.21**	**287**	P	**P**	20 13 51.8	+1.2
AOPR	**Arecibo Observ**	**12.99**	**28**	Pn	**Pn**	20 13 52.7	-1.7
SJG	**San Juan**	**13.08**	**31**	P	**Pn**	20 13 55.2	-0.3
	10nm,0.4s,baz=299,slow=19,SNR=1.8						
GTBY	**Guantanamo Bay**	**13.15**	**352**	Pn	**P**	20 13 58.6	-2.2
GTBY	**Guantanamo Bay**	**13.15**	**352**	*eP*	**P**	20 13 59.9	-0.9
ECPR	**Experimental S**	**13.15**	**29**	Pn	**Pn**	20 13 55.7	-0.7
HUMP	**Col San Antoni**	**13.26**	**32**	Pn	**Pn**	20 13 58.4	+0.6
BOAV	**Boa Vista**	**13.29**	**109**	Pn	**Pn**	20 13 57.7	-0.5
RCC	**Rio Carpintero**	**13.31**	**349**	*eP*	**P**	20 14 02.6	0.0
MARVS	**Santiago de Cu**	**13.35**	**348**	*eP*	**P**	20 14 02.6	-0.5
QMBU	**Quimbuelo**	**13.37**	**353**	*eP*	**P**	20 14 02.0	-1.3
NMDO	**Nuevo Mundo**	**13.75**	**353**	*eP*	**P**	20 14 08.4	+0.9
YAR	**Yar**	**13.81**	**347**	*eP*	**P**	20 14 06.8	-1.4
HLGC	**Holguin**	**14.25**	**349**	*eP*	P	20 14 19.0	+5.9
ATAH	**Atahualpa**	**14.87**	**201**	P	**Pn**	20 14 18.5	+0.1
	8.7nm,0.8s,baz=298,slow=19,SNR=4.1						
CCCC	**Cccc**	**14.96**	**343**	*eP*	**P**	20 14 25.3	+4.3
MGV	**Manicaragua**	**16.56**	**337**	*eP*	Pn	20 14 47.5	+8.7
MTO3	**Montecristo**	**17.65**	**296**	P	**Pn**	20 14 51.8	-0.5
APG	**El Apazote**	**18.87**	**297**	P	**P**	20 15 05.0	+0.8
	0.4nm,0.8s,baz=135,slow=8.9,SNR=4.4						
TEIG	**Tepich**	**19.84**	**314**	P	**Pn**	20 15 16.4	-1.3
TEIG				IAmb	IAmb	20 15 20.7	
	comp=Z,13nm,0.7s						
LPAZ	**La Paz**	**23.51**	**168**	P	**P**	20 15 51.2	-1.1
	comp=Z,1.4nm,0.8s,baz=323,slow=5.1,SNR=1.9						
	comp=Z,1.4nm,0.8s						
LPAZ	**La Paz**	**23.51**	**168**	P	**P**	20 15 51.2	-1.1
V48A	**Smith Brothers**	**31.39**	**338**	P	**P**	20 17 03.7	+1.8
WVT	**Waverly**	**32.12**	**337**	P	**P**	20 17 10.0	+1.8
WVT				IAmb	IAmb	20 17 10.6	
	comp=Z,6.0nm,0.7s						
T47A	**Sharon Grove**	**32.61**	**339**	P	**P**	20 17 14.3	+1.8
LCAR	**Lake Charles**	**33.46**	**333**	P	**P**	20 17 21.3	+1.5
LCAR				IAmb	IAmb	20 17 22.3	
	comp=Z,3.9nm,0.6s						
FCAR	**Ozark Folk Cen**	**33.76**	**332**	P	**P**	20 17 23.4	+0.9
FCAR				IAmb	IAmb	20 17 24.3	
	comp=Z,8.3nm,0.9s						
BRDY	**Brady**	**34.32**	**318**	IAmb	IAmb	20 17 28.7	
	comp=Z,2.8nm,0.6s						
BRDY					**P**	20 17 28.7	+1.3
CCM	**Cathedral Cave**	**35.16**	**335**	P	**P**	20 17 35.6	+1.1
SFIN	**Lafayette**	**35.66**	**342**	P	**P**	20 17 40.5	+1.7
S39A	**Bolivar**	**35.78**	**332**	P	**P**	20 17 40.5	+0.7
S39A				IAmb	IAmb	20 17 45.6	
	comp=Z,7.2nm,1.3s						
R40A	**Maddies Statio**	**35.80**	**334**	P	**P**	20 17 40.8	+0.8
R40A				IAmb	IAmb	20 17 41.3	
	comp=Z,4.0nm,0.6s						
TX31	**Lajitas Ar. Si**	**36.46**	**312**		**P**	20 17 47.1	+1.3
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	20 17 47.1	+1.3
	comp=Z,1.2nm,0.4s,baz=128,slow=9.3,SNR=17						
TXAR				PcP	**PcP**	20 20 07.2	+0.6
	comp=Z,0.4nm,0.6s,baz=124,slow=6.0,SNR=4.7						
	comp=Z,1.2nm,0.4s						
WMOK	**Wichita Mounta**	**36.47**	**323**	P	**P**	20 17 46.4	+0.7
WMOK				IAmb	IAmb	20 18 13.5	
	comp=Z,3.0nm,0.7s						
POST	**Post**	**37.09**	**319**	P	**P**	20 17 51.7	+0.7
POST				IAmb	IAmb	20 17 53.0	
	comp=Z,7.0nm,0.8s						
MNTX	**Cornudas Mount**	**38.97**	**314**	IAmb	IAmb	20 18 09.3	
	comp=Z,3.1nm,0.6s						
ANMO	**Albuquerque**	**41.51**	**317**	LR	LR	20 38 30.7	
	comp=Z,16nm,20.0s,baz=80,slow=40						
ULM	**Lac du Bonnet**	**47.27**	**340**	P	**P**	20 19 13.4	+0.3
	comp=Z,5.1nm,0.4s,baz=137,slow=6.7,SNR=11						
	comp=Z,5.1nm,0.4s						
ULM	**Lac du Bonnet**	**47.27**	**340**	P	**P**	20 19 13.2	+0.2
ULM				IAmb	IAmb	20 19 14.6	
	comp=Z,5.3nm,0.8s						
PDAR	**Pinedale Array**	**48.07**	**324**	P	**P**	20 19 20.9	+1.2
	comp=Z,0.8nm,0.4s,baz=126,slow=9.2,SNR=8.9						
PDAR				PcP	**PcP**	20 20 44.5	-0.6
	comp=Z,0.3nm,0.3s,baz=128,slow=3.0,SNR=2.9						
	comp=Z,0.8nm,0.4s						
BGU	**Big Grassy Mou**	**49.14**	**320**		**P**	20 19 29.1	+1.3
BGU				IAmb	IAmb	20 19 29.9	
	comp=Z,4.3nm,0.6s						
ELK	**Elko**	**50.48**	**319**	LR	LR	20 41 14.9	
	comp=Z,34nm,22.0s,baz=78,slow=36						
NVAR	**Mina Array Bea**	**51.48**	**315**	P	**P**	20 19 46.9	+1.3
	comp=Z,0.6nm,0.5s,baz=117,slow=7.0,SNR=4.7						
	comp=Z,0.6nm,0.5s						
MFID	**Camas Ranch**	**52.22**	**321**	IAmb	IAmb	20 19 53.8	
	comp=Z,3.1nm,0.6s						
G08A	**Pilot Rock**	**55.11**	**322**	P	**P**	20 20 13.1	+1.3
G08A				IAmb	IAmb	20 20 13.8	
	comp=Z,3.6nm,0.6s						
PINE	**Pine Mountain**	**55.65**	**319**		**P**	20 20 17.2	+1.4
PINE				IAmb	IAmb	20 20 18.4	
	comp=Z,4.5nm,0.7s						
YBH	**Yreka Blue Hor**	**55.94**	**317**	LR	LR	20 44 33.7	
	comp=Z,25nm,22.0s,baz=63,slow=36						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	20 21 07.9	+0.7
	comp=Z,3.4nm,0.6s,baz=136,slow=6.7,SNR=34						
	comp=Z,3.4nm,0.6s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	20 21 07.5	+0.3
YKAW3	**Yellowknife Wh**	**63.29**	**340**	P	**P**	20 21 08.2	+0.7
YKAW3				IAmb	IAmb	20 21 09.3	
	comp=Z,2.8nm,0.7s						

ILAR	**Eielson Array**	**76.95**	**335**	P	**P**	20 22 31.4	+0.7
	comp=Z,0.5nm,0.7s,baz=100,slow=4.9,SNR=6.5						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**76.95**	**335**	P	**P**	20 22 31.9	+1.2
ZALV	**Zalesovo Beam**	**116.63**	**14**	PKP	**PKPdf**	20 29 19.8	-1.4
	comp=Z,0.4nm,0.4s,baz=343,slow=1.5,SNR=2.2						
ZALV	**Zalesovo Beam**	**116.63**	**14**		**PKPdf**	20 29 19.4	-1.9
KURK	**Kurchatov**	**117.67**	**20**		**PKiKP**	20 29 22.9	-0.5
KURBB	**Kurchatov Arra**	**117.72**	**20**	PKP	**PKiKP**	20 29 22.9	-0.6
	comp=Z,0.2nm,0.4s,baz=322,slow=2.2,SNR=2.2						
MKAR	**Makanchi Array**	**122.28**	**20**	PKP	**PKPdf**	20 29 31.5	-0.9
	comp=Z,0.2nm,0.4s,baz=288,slow=2.6,SNR=4.6						
AS31	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	20 30 26.0	-0.6
ASAR	**Alice Springs**	**149.15**	**234**	PKP	**PKPdf**	20 30 22.1	-0.1
	comp=Z,1.4nm,0.5s,baz=110,slow=3.2,SNR=9.9						
ASAR				PKPbc	**PKPbc**	20 30 25.9	-0.7
	comp=Z,1.4nm,0.5s,baz=117,slow=3.6,SNR=15						
ASAR	**Alice Springs**	**149.15**	**234**		**PKPbc**	20 30 25.3	-1.3
WRA	**Warramunga Arr**	**150.38**	**241**	PKP	**PKPdf**	20 30 23.3	-0.9
	comp=Z,0.1nm,0.3s,baz=107,slow=2.3,SNR=2.0						
WRA				PKPbc	**PKPbc**	20 30 29.2	-0.5
	comp=Z,1.4nm,0.4s,baz=108,slow=2.7,SNR=57						
CMAR	**Chiang Mai Arr**	**153.65**	**17**	PKPbc	**PKiKP**	20 30 36.7	-0.4
	comp=Z,0.6nm,0.4s,baz=322,slow=2.9,SNR=5.7						

*IDC **09** 20:36:24.1±2.9, 9.°28N×142.°40E, h0km, mb3.6/6, mbtmp3.6/6, MS4.2/1, Error ellipse: s-maj=90.9km s-min=32.6km az=84.0*

ISC 09 20:36:29.3±2.7, 9.°3N±0.°2×142.°4E±0.°6, h35km, n13, σ0°71/6, mb3.6/6, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S3	**WAKE ISLAND Hy**	**25.28**	**66**	T	T	21 08 56.1	
	baz=252,slow=75,SNR=586						
H11S2	**WAKE ISLAND Hy**	**25.29**	**66**	T	T	21 09 03.2	
	baz=252,slow=75,SNR=220						
H11S1	**WAKE ISLAND Hy**	**25.29**	**66**	T	T	21 08 55.0	
	baz=252,slow=75,SNR=162						
H11N1	**WAKE ISLAND Hy**	**25.86**	**64**	T	T	21 09 39.2	
	baz=250,slow=75,SNR=103						
H11N2	**WAKE ISLAND Hy**	**25.87**	**64**	T	T	21 09 39.7	
	baz=250,slow=75,SNR=57						
H11N3	**WAKE ISLAND Hy**	**25.87**	**64**	T	T	21 09 40.2	
	baz=250,slow=75,SNR=118						
WRA	**Warramunga Arr**	**30.09**	**195**	P	**P**	20 42 35.6	0.0
	0.5nm,1.0s,baz=13,slow=9.5,SNR=2.1						
	0.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.07**	**287**	P	**P**	20 44 26.1	-0.2
	0.4nm,0.3s,baz=102,slow=8.2,SNR=8.0						
	0.4nm,0.3s						
SONM	**Songino Array**	**48.99**	**328**	P	**P**	20 45 12.0	-0.6
	0.9nm,0.8s,baz=115,slow=6.5,SNR=3.8						
	0.9nm,0.8s						
RAO	**Raoul Island**	**54.12**	**136**	LR	LR	21 06 44.2	
	comp=Z,295nm,21.7s,baz=280,slow=34						
MKAR	**Makanchi Array**	**62.99**	**318**	P	**P**	20 46 53.5	+0.8
	0.2nm,0.6s,baz=111,slow=7.9,SNR=2.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**66.41**	**321**	P	**P**	20 47 15.4	+0.5
	0.4nm,0.6s,baz=113,slow=5.4,SNR=3.6						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**71.84**	**323**	P	**P**	20 47 48.1	-0.4
	0.8nm,0.7s,baz=119,slow=5.1,SNR=4.3						
	0.8nm,0.7s						

*IDC **09** 20:39:43.4±1.6, 35.°19N×26.°81E, h0km, mb3.1/4, mbtmp3.1/7, ML2.9/3, Error ellipse: s-maj=39.0km s-min=22.8km az=152.0*

*ISK **09** 20:39:45.6, 35.°48N×26.°77E, h8km, ML2.9/25*

*THE **09** 20:39:45.8, 36.°N±3.°×2.°7E±.°, h0km±3km, M2.9/9, MLh2.9/9*

*ATH **09** 20:39:45.4, 35.°51N×26.°75E, h12km±3km, ML2.9/6, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*

ISC 09 20:39:45.8±1.0, 35.°52N±0.°03×26.°75E±0.°02, h10km±8km, n60, σ0°97/77, mb2.9/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.34**	**86**	Pg	**Pg**	20 39 52.3	-0.2
KARP				Sg	**Sg**	20 39 57.5	+0.4
KARP	**Karpathos**	**0.34**	**86**	P	**Pg**	20 39 52.4	-0.2
KARP				S	**Sg**	20 39 57.5	+0.4
KARP	**Karpathos**	**0.34**	**86**	P	**Pg**	20 39 52.3	-0.2
KARP				S	**Sg**	20 39 57.4	+0.4
ZKR	**Zakros**	**0.59**	**227**	Pg	**Pg**	20 39 57.3	0.0
ZKR				Sg	**Sg**	20 40 05.9	+0.8
ZKR	**Zakros**	**0.59**	**227**	P	**Pb**	20 39 58.3	0.0
ZKR	**Zakros**	**0.59**	**227**	P	**Pg**	20 39 56.9	-0.4
ZKR				S	**Sg**	20 40 04.7	-0.4
NPS	**Neapolis**	**0.96**	**255**	P	**Pg**	20 40 04.3	0.0
NPS				S	**Sn**	20 40 20.1	+1.0
NPS	**Neapolis**	**0.96**	**255**	P	**Pg**	20 40 04.0	-0.2
ARG	**Arkhangelos**	**1.32**	**58**	Pn	**Pg**	20 40 10.8	-0.3
ARG				Sn	**Sn**	20 40 29.4	+1.5
ARG	**Arkhangelos**	**1.32**	**58**	P	**Pb**	20 40 10.4	-0.2
ARG				S	**Sn**	20 40 28.8	+0.9
ARG	**Arkhangelos**	**1.32**	**58**	P	**Pn**	20 40 09.8	-0.5
THERA	**Ancient Thera,**	**1.33**	**310**	P	**Pn**	20 40 10.0	-0.5
THERA				S	**Sb**	20 40 28.1	+0.1
THERA	**Ancient Thera,**	**1.33**	**310**	P	**Pn**	20 40 09.9	-0.5
THR8	**Santorini-Mono**	**1.35**	**311**	P	**Pn**	20 40 10.5	-0.2
THR8	**Santorini-Mono**	**1.35**	**311**	P	**Pn**	20 40 10.4	-0.4
THR6	**Thira Island,**	**1.37**	**308**	P	**Pn**	20 40 10.8	-0.2
THR6	**Thira Island,**	**1.37**	**308**	P	**Pn**	20 40 10.6	-0.5
DAT	**Datca**	**1.38**	**29**	Pn	**Pg**	20 40 12.1	-0.2
DAT				Sn	**Sg**	20 40 30.8	+0.6
DAT	**Datca**	**1.38**	**29**	P	**Pn**	20 40 11.0	-0.2
DAT				S	**Sb**	20 40 29.2	-0.3
THR9	**Santorini-Faro**	**1.40**	**307**	P	**Pn**	20 40 11.3	-0.1
THR3	**Thira Island,**	**1.40**	**309**	P	**Pn**	20 40 10.9	-0.5
THR3	**Thira Island,**	**1.40**	**309**	P	**Pn**	20 40 10.9	-0.5
SNT5	**Nea Kammeni, S**	**1.41**	**309**	P	**Pb**	20 40 12.1	0.0
SNT5				S	**Sg**	20 40 31.9	+0.9
THR2	**Thira island,**	**1.41**	**311**	P	**Pn**	20 40 11.2	-0.3
THR5	**Thira Island,**	**1.44**	**309**	P	**Pn**	20 40 11.5	-0.5
IDI	**Anoyia**	**1.53**	**262**	Pn	**Pn**	20 40 13.9	+0.6
IDI	**Anoyia**	**1.53**	**262**	P	**Pn**	20 40 13.0	-0.3
IDI				S	**Sb**	20 40 34.9	+1.0
IDI	**Anoyia**	**1.53**	**262**	P	**Pn**	20 40 12.6	-0.7
BODT	**Bodrum**	**1.60**	**16**	Pn	**Pb**	20 40 15.1	-0.4
BODT	**Bodrum**	**1.60**	**16**	P	**Pb**	20 40 15.2	-0.4
BODT				S	**Sg**	20 40 36.9	-0.4
SIVA	**Sivas**	**1.66**	**253**	P	**Pb**	20 40 17.1	+0.6
SIVA				S	**Sg**	20 40 39.9	+0.6
TURN	**Turunc**	**1.74**	**44**	Pn	**Pb**	20 40 16.9	-0.9
MLSB	**Milas**	**1.95**	**25**	Pn	**Pn**	20 40 20.3	+1.2
DALY	**Dalyan (Mula)**	**2.01**	**50**	Pn	**Pb**	20 40 21.3	-1.2
YER	**Yerkesik**	**2.03**	**37**	Pn	**Pn**	20 40 20.3	+0.1
YER	**Yerkesik**	**2.03**	**37**	P	**Pn**	20 40 19.9	-0.2
YER				S	**Sb**	20 40 47.7	-0.5
VAM	**Vamos**	**2.08**	**268**	P	**Pn**	20 40 21.5	+0.7
VAM				S	**Sb**	20 40 49.3	-0.3
GCAM	**G?zelcaml?**	**2.21**	**10**	Pn	**Pn**	20 40 23.9	+1.4
IMMV	**Iera Moni Meta**	**2.26**	**269**	Pn	**Pn**	20 40 24.6	+1.4
GVD	**Gavdhos**	**2.28**	**253**	Pn	**Pn**	20 40 24.4	+0.9
GVD	**Gavdhos**	**2.28**	**253**	P	**Pn**	20 40 28.8	-0.7
AKAS	**Kas**	**2.43**	**72**	Pn	**Pn**	20 40 26.9	+1.2
CAME	**Cameli-Denizli**	**2.51**	**55**	Pn	**Pn**	20 40 27.8	+1.0
KNDR	**Palaiochora Ch**	**2.57**	**264**	Pn	**Pn**	20 40 28.5	+1.1
AYDB	**Zeytinkoy-Aydi**	**2.59**	**20**	Pn	**Pn**	20 40 29.8	+1.9
NAZL	**Nazilli-Aydin**	**2.73**	**27**	Pn	**Pn**	20 40 31.4	+1.6
APMY	**Acipayam-Deniz**	**2.83**	**46**	Pn	**Pn**	20 40 32.7	+1.5
URLA	**Izmir**	**2.83**	**358**	Pn	**Pn**	20 40 33.3	+2.1
ELL	**Elmali**	**2.84**	**64**	Pn	**Pn**	20 40 32.1	+0.8
ODEM	**Odemis-Izmir**	**2.95**	**21**	Pn	**Pn**	20 40 34.7	+1.9
KTHA	**Kythira Island**	**3.08**	**285**	Pn	**Pn**	20 40 36.3	+1.8
KORT	**Korkueli**	**3.27**	**62**	Pn	**Pn**	20 40 38.8	+1.6
KULA	**Kula-Manisa**	**3.36**	**27**	Pn	**Pn**	20 40 40.3	+1.9
BRTR	**Keskin Array B**	**6.89**	**50**	Pn	**Pn**	20 41 29.4	+2.4
	0.1nm,0.3s,baz=228,slow=14,SNR=1.9						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**15.28**	**6**	Pn	**P**	20 43 24.5	-1.8
	0.3nm,0.3s,baz=195,slow=10,SNR=4.5						
	0.1nm,0.2s						
GERES	**GERESS Array B**	**16.42**	**328**	Pn	**P**	20 43 39.5	+0.4
	baz=143,slow=12,SNR=6.6						
	0.8nm,0.7s						
ESDC	**Sonseca Array**	**24.62**	**289**	P	**P**	20 45 06.7	+0.4
	0.2nm,0.5s,baz=89,slow=8.8,SNR=2.0						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**31.72**	**232**	P	**P**	20 46 07.7	-2.3
	0.2nm,0.5s,baz=36,slow=9.6,SNR=1.4						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**39.88**	**51**	P	**P**	20 47 19.4	-0.1
	0.1nm,0.5s,baz=275,slow=8.6,SNR=2.5						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**42.49**	**57**	P	**P**	20 47 41.9	+0.8
	0.1nm,0.4s,baz=270,slow=8.5,SNR=3.8						
	0.1nm,0.4s						

*IDC **09** 20:40:11.2±3.1, 3.°66S×101.°66E, h0km, mb3.8/7, mbtmp3.8/7, MS3.5/1, Error ellipse: s-maj=149.4km s-min=19.1km az=52.0*

*NEIC **09** 20:40:21.1±1.0, 3.°6S±0.°1×101.°8E±0.°1, h71km±7km, mb4.0/9, Error ellipse: s-maj=19.5km s-min=10.1km az=225.0*

*DJA **09** 20:40:23.2±0.2, 3.°S±3.°×10.°2E±.°, h65km±3km, M4.2/30, mB6.5/1, mb4.3/19, MLv4.1/30, Mw(mB)6.2/1*

ISC 09 20:40:21.7±0.8, 3.°49S±0.°08×101.°95E±0.°07, h71km, n54, σ1°38/43, mb4.0/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**0.66**	**104**	P	**Pn**	20 40 37.3	+1.0
KSI				S	**Sn**	20 40 48.3	+1.3
MNAI	**Manna**	**1.32**	**131**		**Pn**	20 40 45.4	+0.8
MNAI				Sn	**Sn**	20 41 02.4	+1.1
MNAI	**Manna**	**1.32**	**131**	P	**Pn**	20 40 45.7	+1.4
PPSI	**Pulau Pagai**	**2.07**	**290**	P	**Pn**	20 40 57.3	+3.0
PMBI	**Palembang**	**2.87**	**79**	Pn	**Pn**	20 41 04.3	-0.8
PMBI	**Palembang**	**2.87**	**79**	P	**Pn**	20 41 05.9	+0.8
KLSI		**3.01**	**113**	P	**Pn**	20 41 09.6	+2.5
KASI	**Kota Agung**	**3.24**	**129**	P	**Pn**	20 41 11.6	+1.4
DSRI	**Dabo**	**3.98**	**41**	P	**Pn**	20 41 22.1	+1.8
PBSI	**Pulau Batu**	**5.01**	**313**	P	**Pn**	20 41 36.5	+2.1
	0.4nm58nm,2.0s						
MYKOM	**Kota Tinggi**	**5.58**	**20**	Pn	**Pn**	20 41 42.9	+0.7
TPI	**Tanjungpandan**	**5.74**	**83**	P	**Pn**	20 41 45.3	+1.0
GSI	**Gunungsitoli**	**6.47**	**317**		**Pn**	20 41 52.6	-1.7
GSI	**Gunungsitoli**	**6.47**	**317**	P	**Pn**	20 41 55.7	+1.4
	0.2nm12nm,0.7s						
BBJI	**Bungbulang**	**6.91**	**125**	Pn	**Pn**	20 42 00.2	-0.2
BBJI	**Bungbulang**	**6.91**	**125**	P	**Pn**	20 42 00.3	-0.1
	0.1nm24nm,1.7s						
TPTI		**8.23**	**325**	P	**Pn**	20 42 19.7	+1.3
	11nm,0.8s						
KULM	**Kulim**	**8.82**	**352**	P	**Pn**	20 42 29.8	+3.3
UGM	**Wanagama**	**9.59**	**118**	P	**Pn**	20 42 37.6	+0.6
SNJI	**Sawahan-Nganju**	**10.65**	**114**	P	**Pn**	20 42 53.1	+1.5
BSI	**Banda Aceh**	**11.13**	**323**	P	**Pn**	20 42 57.0	-1.1
	15nm,1.6s						
JAGI	**Jajag, Banyuwa**	**13.10**	**113**	Pn	**Pn**	20 43 23.3	-1.6
JAGI	**Jajag, Banyuwa**	**13.10**	**113**	P	**Pn**	20 43 22.5	-2.4
	30nm,1.8s						
**P

H11N3	WAKE ISLAND Hy	33.19	47	T	T	21 26 17.8	
	baz=230,slow=76,SNR=46						
MJAR	Matsushiro Arr	39.22	355	P	P	20 52 15.3	+0.1
	0.5nm,0.4s,baz=173,slow=10.0,SNR=2.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	71.76	321	P	P	20 56 10.4	+1.2
	0.5nm,0.6s,baz=106,slow=7.7,SNR=7.2						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	73.56	329	P	P	20 56 20.1	+0.3
	0.5nm,0.5s,baz=101,slow=7.5,SNR=2.5						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	75.58	324	P	P	20 56 30.9	-0.6
	0.2nm,0.8s,baz=98,slow=5.1,SNR=4.5						
	0.2nm,0.8s						
ILAR	Eielson Array	84.55	24	P	P	20 57 20.6	+0.9
	0.5nm,0.9s,baz=256,slow=4.7,SNR=3.2						
ILAR				LR	LR	21 32 43.1	
	comp=Z,21nm,19.6s,baz=305,slow=34						
	0.5nm,0.9s						
QSPA	South Pole Qui	87.22	180	P	P	20 57 32.2	-0.8
	1.4nm,0.9s,baz=210,slow=1.7,SNR=5.1						
	1.4nm,0.9s						

TAP ***09*** *20:51:56.5,24˚.90N×122˚.38E,h18km,ML3.1,C*
JMA ***09*** *20:51:56.6±0.2,25˚.N±2˚×122˚.4E±0˚.6,h4 1km,MV2.7/9,*
NW OFF ISHIGAKIJIMA IS

ISC 09 20:51:55.4±1.2,24˚.93N±0˚.03×122˚.43E±0˚.03,h13km±8km, n82,σ0ˢ75/146,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.41	282	*i* P	Pb	20 52 04.3	-0.1
TWB1				S	Sg	20 52 09.7	+0.8
EGS		0.46	260	*e*P	Pb	20 52 05.6	+0.2
EGS				*e*S	Sg	20 52 11.4	+0.9
SXI1	Grass Mountain	0.53	289	*i* P	Pb	20 52 07.1	+0.5
SXI1				*i* S	Sb	20 52 14.7	+0.5
EOS2	EOS2	0.54	199	P	Pb	20 52 07.1	+0.5
EOS2				S	Sb	20 52 15.0	+0.8
TIPB	Shuangxi	0.55	275	P	Pb	20 52 07.3	+0.4
TIPB				S	Sb	20 52 14.3	-0.4
NWF	Wu-fen Shan	0.60	284	P	Pb	20 52 08.6	+0.7
NWF				S	Sb	20 52 16.6	+0.2
WFSB	Wu-fen Shan	0.60	284	P	Pn	20 52 08.6	-1.1
WFSB				S	Sb	20 52 16.6	+0.3
TWC	Suao	0.61	239	P	Pg	20 52 07.4	+0.1
TWC				S	Sg	20 52 14.5	-1.0
TNOU	National Taiwa	0.63	291	P	Pb	20 52 08.8	+0.5
TNOU				*e*S	Sb	20 52 17.2	+0.1
ESAO	Su ao	0.64	237	P	Pg	20 52 08.1	+0.4
ESAO				S	Sg	20 52 15.3	-0.9
ILA	Ilan	0.64	256	P	Pb	20 52 08.6	+0.2
ILA				S	Sb	20 52 17.7	+0.5
EOS3	EOS3	0.65	189	P	Pb	20 52 09.2	+0.7
EOS3				S	Sb	20 52 18.4	+1.1
JYNG	Yonagunijimaku	0.67	135	P	Pn	20 52 09.5	-1.1
JYNG				S	Sb	20 52 18.8	+0.7
YOJ	Yonaguni jima	0.70	131	P	Pn	20 52 10.4	-0.7
YOJ				S	Sb	20 52 19.6	+0.5
YOJ	Yonaguni jima	0.70	131	P	Pb	20 52 09.8	+0.3
YOJ				*e*S	Sb	20 52 19.1	-0.1
NDS	Dongshan	0.71	246	P	Pb	20 52 09.7	+0.1
NDS				*e*S	Sg	20 52 18.4	-0.1
TWE	Neicheng	0.72	254	P	Pb	20 52 09.8	0.0
TWE				S	Sg	20 52 19.1	+0.3
EWUT	Wuta	0.76	231	P	Pg	20 52 10.3	+0.2
EWUT				S	Sg	20 52 19.2	-0.9
TWA	Mucha	0.77	274	P	Pb	20 52 11.2	+0.5
TWA				S	Sb	20 52 21.2	+0.2
PCYT	Pengchaiyu	0.77	335	P	Pn	20 52 12.5	+0.5
PCYT				*e*S	Sn	20 52 23.1	-0.4
FUSB	Fushanzhiwuyua	0.78	258	P	Pb	20 52 11.9	0.0
FUSB				*e*S	Sg	20 52 21.3	+0.5
NHY	Taipei	0.79	278	*e*P	Pn	20 52 12.3	+0.1
NHY				*e*S	Sb	20 52 22.5	+1.0
YM08	YM08	0.80	289	*e*P	Pb	20 52 11.5	+0.2
YM08				*e*S	Sb	20 52 22.4	+0.3
EOS4	EOS4	0.81	187	*e*P	Pb	20 52 11.5	+0.4
EOS4				*e*S	Sb	20 52 22.0	+0.2
YM01	YM01	0.81	286	*i* P	Pn	20 52 11.8	-0.7
YM01				S	Sb	20 52 22.6	+0.4
NHDH	Xindian Distri	0.82	273	P	Pn	20 52 12.1	-0.6
NHDH				*i* S	Sb	20 52 23.0	+0.5
TWY	Chenhua	0.83	295	P	Pn	20 52 12.9	+0.1
TWY				S	Sn	20 52 23.8	-1.1
ENTT	Nioudou	0.83	250	P	Pb	20 52 12.0	+0.2
ENTT				*e*S	Sg	20 52 22.9	+0.5
ZUZH	Zhuzihu	0.83	287	P	Pb	20 52 12.0	+0.2
ZUZH				*e*S	Sb	20 52 23.0	+0.1
NWLT	Wulai	0.85	260	P	Pb	20 52 13.4	+0.7
NWLT				*e*S	Sg	20 52 23.2	+0.2
ANP	Anpu	0.86	288	*e*P	Pn	20 52 12.6	-0.7
ANP				*e*S	Sb	20 52 23.9	0.0
EAHA	Aohua	0.86	227	P	Pg	20 52 12.1	0.0
NDT	Datong Townshi	0.89	249	P	Pn	20 52 13.3	-0.3
NDT				*e*S	Sg	20 52 24.5	+0.2
LATG	Datong	0.91	245	*i* P	Pb	20 52 13.2	+0.1
LATG				S	Sg	20 52 24.4	-0.4
TWS1	Kuangyinshan	0.93	281	*e*P	Pn	20 52 13.9	-0.3
TWS1				*e*S	Sn	20 52 26.8	-0.7
YHNB	Yeheng	0.99	255	P	Pg	20 52 14.6	+0.1
YHNB				*e*S	Sg	20 52 26.4	-1.0
NSK	Sanguang	1.00	256	P	Pg	20 52 14.9	+0.2
NSK				*e*S	Sg	20 52 25.9	-2.0
ETL	Fush Village	1.06	224	P	Pb	20 52 15.6	0.0
ETL				*e*S	Sb	20 52 28.1	-1.3
NACB	Ninganchiao	1.07	226	P	Pb	20 52 15.4	-0.4
NACB				S	Sb	20 52 28.8	-0.8
NNSB	Datong	1.07	243	P	Pb	20 52 15.9	0.0
NNSB				*e*S	Sb	20 52 29.2	-0.7
NNS	Nan Shan	1.07	243	P	Pb	20 52 16.1	+0.2
NNS				*e*S	Sb	20 52 27.2	-2.8
ETLH	Xiulin Townshi	1.12	230	P	Pb	20 52 16.6	-0.1
ETLH				S	Sb	20 52 30.7	-0.6
TWD	Chiawan	1.13	222	P	Pb	20 52 16.9	+0.1
TWD				*e*S	Sb	20 52 30.7	-0.8
KSHI	Guanxi Townshi	1.15	263	*e*P	Pg	20 52 17.5	0.0
NFF	Wufeng Townshi	1.23	256	P	Pb	20 52 18.4	-0.1
FUSS	Fushou	1.27	238	P	Pg	20 52 19.9	+0.1
FUSS				*e*S	Sb	20 52 35.7	-0.1
ETM	Tongmen	1.28	222	*e*P	Pb	20 52 19.7	+0.3
ETM				*e*S	Sb	20 52 36.1	+0.3
LXIB	Xiulin Townshi	1.29	226	P	Pb	20 52 19.8	+0.2
LXIB				S	Sb	20 52 36.6	+0.3
TEYL	Yanliau Villag	1.30	216	*e*P	Pb	20 52 19.9	+0.2
LIOB	Emei	1.31	258	P	Pn	20 52 19.6	+0.1
WHF	Hehuan Shan	1.31	234	P	Pb	20 52 20.3	+0.1
WHF				*e*S	Sb	20 52 36.9	-0.3
TWT	Tachien	1.32	240	P	Pb	20 52 20.6	+0.4
TWT				*e*S	Sb	20 52 37.7	+0.6
TDCB	Techi	1.34	240	P	Pb	20 52 20.6	+0.2
TDCB				*e*S	Sb	20 52 37.2	-0.3
SHUL	Shoufeng	1.38	215	P	Pn	20 52 20.7	+0.3
OWD	Renai	1.50	230	P	Pb	20 52 23.1	0.0
OWD				*e*S	Sn	20 52 41.7	+0.1
WHP	Taichung City	1.50	245	P	Pg	20 52 24.4	+0.3
WHP				*e*S	Sb	20 52 42.9	+0.9
WUSB	Renai	1.51	232	P	Pb	20 52 23.8	+0.4
WUSB				S	Sb	20 52 43.5	+0.9
WARBT	Fenglin Townsh	1.53	219	P	Pn	20 52 22.3	-0.3
WARBT				*e*S	Sn	20 52 41.6	-0.8
WCS	Beigang Elemen	1.63	238	*e*P	Pg	20 52 26.1	-0.5
WCS				*e*S	Sg	20 52 47.7	-0.1
HGSD	Ruisui	1.70	213	*e*P	Pn	20 52 25.4	+0.6
EHYH	Wanrong	1.73	215	*e*P	Pb	20 52 26.4	-0.7
EHY	Hungye	1.74	216	*e*P	Pn	20 52 24.9	-0.4
SMLT	Sun Moon Lake	1.74	234	*e*P	Pb	20 52 28.0	+0.8
SMLT				*e*S	Sn	20 52 47.6	0.0
JISG	Ishigakijimahi	1.75	101	*e*P	Pn	20 52 24.4	-1.0
TYC	Yuchr	1.76	235	*e*P	Pb	20 52 27.4	-0.1
SSLB	Suanglung	1.76	230	*e*P	Pb	20 52 27.0	-0.6
SSLB				*e*S	Sn	20 52 47.7	-0.2
YULB	Yu-li	1.84	214	*e*P	Pn	20 52 26.2	-0.6
WHYT	Xinyi Township	1.89	230	*e*P	Pb	20 52 29.6	-0.1
WHYT				*e*S	Sb	20 52 54.4	+1.1
WNT	Mingjian	1.90	237	*e*P	Pb	20 52 30.8	+0.8
ALS	Alishan	2.04	227	*e*P	Pb	20 52 31.8	-0.8
ALS				*e*S	Sb	20 52 57.7	-0.4
CHN5	Tsauling	2.07	231	*e*P	Pb	20 52 32.5	-0.4
CHN5				*e*S	Sb	20 52 58.6	-0.1
EDH	Donghe	2.20	208	*e*P	Pn	20 52 31.5	-0.2
WCKO	Fanlu	2.23	229	*e*P	Pb	20 52 34.8	-0.8
WCKO				*e*S	Sb	20 53 03.1	0.0
TPUB	Ta-pu	2.31	226	P	Pb	20 52 35.6	-1.3
TPUB				*e*S	Sb	20 53 05.1	-0.3
STYH	Taoyuan	2.31	221	*e*S	Sb	20 53 05.1	-0.3
WTP	Ta-pu	2.35	225	*e*P	Pb	20 52 36.6	-1.1
WTP				*e*S	Sb	20 53 07.0	+0.3
TWK	Hsinying	2.42	227	P	Pb	20 52 37.3	-1.6
TWK				*e*S	Sb	20 53 07.9	-0.8
CHN1	Nanshi	2.45	225	*e*P	Pb	20 52 37.8	-1.6
SGST	Jiashian	2.49	223	*e*P	Pb	20 52 38.1	-1.9
SGST				*e*S	Sn	20 53 08.0	+2.0
MASBT	Mashibuluo	2.83	216	*e*P	Pn	20 52 42.4	+2.0
MASBT				*e*S	Sn	20 53 16.6	+2.3
EAST	Anshuo	2.92	210	*e*P	Pn	20 52 41.6	0.0
SMST	Manzhou Townsh	3.24	207	*e*P	Pn	20 52 48.8	+2.8

IDC ***09*** *20:55:22.7±1.3,35˚.62N×27˚.07E,h0km,mb3.4/6,*
mbtmp3.3/10,ML2.5/3,MS2.3/1,Error ellipse:
s-maj=28.3km s-min=18.7km az=176.0
THE ***09*** *20:55:22.5,36˚N±4˚×2˚7E±˚,h8km±4km,M3.1/8,MLh3.1/8*
ATH ***09*** *20:55:22.1,35˚.55N×26˚.73E,h7km±1km,ML3.2/7,Latitude*
uncertainty: 2 km; Longitude uncertainty: 0 km
ISK ***09*** *20:55:22.1,35˚.49N×26˚.78E,h7km,ML3.1/23*

ISC 09 20:55:22.5±1.1,35˚.54N±0˚.04×26˚.75E±0˚.02,h6km±8km, n69,σ1ᵍ13/87,mb3.3/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.34	89	Pg	Pg	20 55 28.8	-0.2
KARP				Sg	Sg	20 55 33.9	+0.5
KARP	Karpathos	0.34	89	P	Pg	20 55 28.9	-0.1
KARP				S	Sg	20 55 34.0	+0.5
KARP	Karpathos	0.34	89	P	Pg	20 55 29.1	0.0
KARP				S	Sg	20 55 34.1	+0.6
ZKR	Zakros	0.61	226	Pg	Pg	20 55 33.5	-0.8
ZKR				Sg	Sg	20 55 43.1	+0.9
ZKR	Zakros	0.61	226	P	Pg	20 55 33.9	-0.4
ZKR	Zakros	0.61	226	P	Pg	20 55 33.5	-0.8
ZKR				S	Sg	20 55 42.0	-0.2
NPS	Neapolis	0.97	254	P	Pg	20 55 41.1	-0.1
NPS				S	Sg	20 55 53.5	-0.2
NPS	Neapolis	0.97	254	P	Pg	20 55 40.8	-0.3
NPS				S	Sg	20 55 53.5	-0.2
ARG	Arkhangelos	1.30	59	Pn	Pg	20 55 47.0	-0.5
ARG				Sn	Sn	20 56 05.8	+0.7
ARG	Arkhangelos	1.30	59	P	Pn	20 55 46.8	-0.5
ARG				S	Sn	20 56 04.4	-0.7
ARG	Arkhangelos	1.30	59	P	Pn	20 55 46.7	-0.5
ARG				S	Sn	20 56 04.2	-0.9
THERA	Ancient Thera,	1.32	309	P	Pn	20 55 46.4	-1.2
THERA				S	Sn	20 56 05.8	+0.2
THERA	Ancient Thera,	1.32	309	P	Pn	20 55 46.4	-1.2
THR8	Santorini-Mono	1.34	310	P	Pn	20 55 46.9	-0.9
THR8	Santorini-Mono	1.34	310	P	Pn	20 55 47.1	-0.8
DAT	Datca	1.36	29	Pn	Pg	20 55 48.3	-0.3
THR6	Thira Island,	1.36	307	P	Pn	20 55 47.6	-0.5
THR6	Thira Island,	1.36	307	P	Pn	20 55 47.8	-0.4
THR9	Santorini-Faro	1.39	306	P	Pn	20 55 47.9	-0.6
THR3	Thira Island,	1.40	309	P	Pn	20 55 47.9	-0.7
THR3	Thira Island,	1.40	309	P	Pn	20 55 47.9	-0.7
THR2	Thira island,	1.40	311	P	Pn	20 55 48.0	-0.7
THR5	Thira Island,	1.43	308	P	Pn	20 55 48.4	-0.7
SAP3	Santorini-Thir	1.45	308	P	Pn	20 55 48.9	-0.4
IDI	Anoyia	1.54	261	Pn	Pn	20 55 51.1	+0.5
IDI	Anoyia	1.54	261	P	Pn	20 55 49.5	-1.1
IDI				S	Sn	20 56 09.7	-1.3
IDI	Anoyia	1.54	261	P	Pn	20 55 50.6	0.0
BODT	Bodrum	1.58	16	Pn	Pb	20 55 51.9	-0.3
BODT	Bodrum	1.58	16	P	Pn	20 55 50.9	-0.3
BODT				S	Sn	20 56 11.2	-0.8
SIVA	Sivas	1.67	252	P	Pb	20 55 54.0	+0.3
SIVA				S	Sb	20 56 15.1	+0.1
TURN	Turunc	1.73	44	Pn	Pn	20 55 52.5	-0.6
DALY	Dalyan (Mula)	2.00	50	Pn	Pn	20 55 57.4	+0.6
YER	Yerkesik	2.01	37	Pn	Pn	20 55 57.3	+0.1
YER	Yerkesik	2.01	37	P	Pn	20 55 56.9	-0.3
YER				S	Sb	20 56 23.2	-1.8
GCAM	G?zelcaml?	2.19	10	Pn	Pb	20 56 01.0	-1.5
IMMV	Iera Moni Meta	2.26	269	Pn	Pn	20 56 01.4	+0.9
IMMV	Iera Moni Meta	2.26	269	P	Pn	20 56 00.8	+0.3
IMMV				S	Sn	20 56 27.7	-1.1
IMMV	Iera Moni Meta	2.26	269	P	Pn	20 56 00.7	+0.2
GVD	Gavdhos	2.29	253	Pn	Pn	20 56 01.4	+0.5
AKAS	Kas	2.42	73	Pn	Pn	20 56 03.1	+0.3
CAME	Cameli-Denizli	2.49	55	Pn	Pn	20 56 04.4	+0.8
AYDB	Zeytinkoy-Aydi	2.57	21	Pn	Pn	20 56 05.5	+0.7
KNDR	Palaiochora Ch	2.57	264	Pn	Pn	20 56 06.3	+1.6
NAZL	Nazilli-Aydin	2.71	27	Pn	Pn	20 56 08.2	+1.4
URLA	Izmir	2.81	358	Pn	Pn	20 56 09.9	+1.8
APMY	Acipayam-Deniz	2.82	46	Pn	Pn	20 56 09.2	+1.0
ELL	Elmali	2.83	64	Pn	Pn	20 56 09.2	+0.8
BLCB	Balcova	2.85	5	Pn	Pn	20 56 09.7	+1.2
ODEM	Odemis-Izmir	2.93	21	Pn	Pn	20 56 11.1	+1.4
KTHA	Kythira Island	3.08	284	Pn	Pn	20 56 13.1	+1.4
KORT	Korkueli	3.25	62	Pn	Pn	20 56 14.3	0.0
VLI	Veliai	3.30	292	P	Pn	20 56 14.2	-0.6
VLI				S	Sn	20 56 52.3	-2.1
VLI	Veliai	3.30	292	P	Pn	20 56 14.2	-0.6
VLY	Voula,Athens	3.31	315	P	Pn	20 56 14.9	0.0
VLY	Voula,Athens	3.31	315	P	Pn	20 56 15.1	+0.2
KULA	Kula-Manisa	3.34	27	Pn	Pn	20 56 16.7	+1.3
DION	Dionisos Attik	3.39	319	P	Pn	20 56 15.9	-0.2
ATHU	Athens Univers	3.39	316	P	Pn	20 56 15.4	+0.3
ATHU	Athens Univers	3.39	316	P	Pn	20 56 16.2	+0.1
BRTR	Keskin Array B	6.88	51	Pn	Pn	20 57 05.1	+1.0
	0.1nm,0.3s,baz=213,slow=16,SNR=3.0						
BRTR				LR	LR	20 59 52.1	
	comp=Z,25nm,19.9s,baz=134,slow=41						
	0.4nm,0.5s						
MMAI	Mount Meron Ar	7.59	107	Pn	Pn	20 57 11.8	-2.1
	0.5nm,0.3s,baz=292,slow=14,SNR=2.4						
MMAI				Sn	Sn	20 58 36.1	-4.1
	1.4nm,0.3s,baz=284,slow=31,SNR=6.3						
	0.5nm,0.4s						
AKASG	Malin Array Be	15.26	6	Pn	Pn	20 58 57.1	-1.3
	0.2nm,0.3s,baz=197,slow=12,SNR=3.0						
GERES	GERESS Array B	16.40	328	Pn	P	20 59 15.2	-1.1
	baz=144,slow=9.9,SNR=4.2						
	0.4nm,0.7s						
ESDC	Sonseca Array	24.61	289	P	P	21 00 46.3	+2.5
	0.5nm,0.7s,baz=86,slow=9.2,SNR=4.8						
	0.5nm,0.7s						
EKA	Eskdalemuir Ar	28.49	323	P	P	21 01 21.2	+2.8
	1.3nm,0.9s,baz=132,slow=13,SNR=3.4						
	1.3nm,0.9s						
TORD	Torodi Ar. Bea	31.74	232	P	P	21 01 51.0	+3.5
	0.2nm,0.5s,baz=23,slow=8.4,SNR=1.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	39.87	51	P	P	21 02 55.2	-1.7
	0.2nm,0.5s,baz=276,slow=8.7,SNR=5.6						
	0.2nm,0.5s						
MKAR	Makanchi Array	42.48	57	P	P	21 03 17.2	-1.2
	0.3nm,0.6s,baz=273,slow=7.8,SNR=4.2						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	43.80	46	P	P	21 03 27.6	-1.3
	0.3nm,0.4s,baz=274,slow=6.3,SNR=2.1						
	0.3nm,0.4s						

TEH ***09*** *20:56:17.0,38˚.11N×46˚.40E,h4km±634km,ML2.7,*
Presumed earthquake
AZER ***09*** *20:56:17.1,38˚.27N×46˚.41E,h3km,ml2.4*

ISC 09 20:56:17.4±1.1,38˚.17N±0˚.03×46˚.39E±0˚.02,h7km±10km, n27,σ1ᵍ52/46,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITBZ	Tabriz	0.20	289	Pg	Pg	20 56 20.9	-0.6
IHRS	Heris	0.54	73	Pg	Pg	20 56 27.9	+0.2
IAZR	Azarshahr	0.58	214	Pg	Pg	20 56 27.8	-0.9
ISHB	Shabestar	0.62	281	Pg	Pg	20 56 29.7	+0.4
IMRD	Marand	0.77	316	Pg	Pb	20 56 32.8	-0.3
ORD	Ordubad	0.82	338	P	Pb	20 56 33.9	0.0
ORD				S	Sn	20 56 46.6	-1.2
IHSH	Hashtrud	1.10	141	Pg	Pg	20 56 36.6	-1.9
NAX	Nakhchivan	1.23	325	P	Pn	20 56 41.4	+0.5
NAX				S	Sn	20 56 58.7	+1.0
GRMI	Germi	1.34	61	Pg	Pb	20 56 42.6	-0.3
SBZ	Shahbuz	1.39	332	P	Pb	20 56 44.4	+0.7
SBZ				S	Sn	20 57 04.8	+2.9
QRD	Qoradiz	1.48	29	P	Pg	20 56 46.3	+0.5
QRD				S	Sg	20 57 07.6	+2.5
MAHB	Mahabad	1.50	201	Pg	Pn	20 56 44.4	-0.3
LRK	Lerik	1.60	72	P	Pg	20 56 47.8	-0.4
LRK				S	Sg	20 57 11.1	+2.1
YRD	Yardimli	1.63	62	P	Pg	20 56 48.2	-0.5
YRD				S	Sg	20 57 11.6	+1.7
BLQ	Beylaqan	1.80	30	P	Pg	20 56 52.0	+0.2
BLQ				S	Sg	20 57 17.6	+2.4
GLBA	Clilabad	1.90	55	P	Pg	20 56 54.1	+0.3
GLBA				S	Sg	20 57 19.4	+1.0
ASTR	Astara	1.93	78	P	Pg	20 56 54.0	-0.3
ASTR				S	Sg	20 57 21.4	+2.0
LKRN	Lenkeran, Azer	1.95	73	P	Pg	20 56 54.0	-0.8
LKRN				S	Sg	20 57 22.3	+2.2
HYR	Heyderabad	1.96	323	P	Pg	20 56 54.3	-0.6
HYR				S	Sg	20 57 20.7	+0.4
AGDM	Agdam	2.02	16	P	Pg	20 56 54.9	-1.1
AGDM				S	Sg	20 57 23.0	+0.9
HAKT	HAKKARI	2.21	255	P	Pg	20 56 59.8	+0.2
HAKT				S	Sg	20 57 30.9	+2.6
ZRD	Zardab	2.34	25	P	Pb	20 56 59.7	-0.1
ZRD				S	Sg	20 57 32.7	+0.3
IGDI	IGDIR	2.48	314	P	Pb	20 57 00.9	-1.2
IGDI				S	Sb	20 57 34.0	+1.1
GANJ	Ganja	2.48	359	P	Pb	20 57 01.4	-0.7
GANJ				S	Sg	20 57 34.6	-2.3
GDB	GEDABAY	2.60	349	P	Pb	20 57 02.6	-1.7
GDB				S	Sg	20 57 38.1	-2.7
QZX	Qazax, Azerbai	2.99	345	P	Pb	20 57 07.9	-3.1
QZX				S	Sb	20 57 48.3	+0.6
PQL	Pirkuli	3.12	32	P	Pb	20 57 10.4	-2.9
PQL				S	Sb	20 57 50.0	-1.7

GFZ ***09*** *21:23:02.7±0.3,20˚.5±6˚×17˚.3W±˚,h10km,M4.7/8,*
mb4.7/8,Error ellipse: s-maj=15.0km s-min=9.8km
az=150.1,confirmed
IDC ***09*** *21:23:02.5±0.5,19˚.97S×173˚.66W,h0km,mb4.4/16,*
mbtmp4.4/19,ML4.5/3,MS3.6/10,Error ellipse:
s-maj=19.4km s-min=15.5km az=146.0
BJI ***09*** *21:23:03.4,19˚.74S×173˚.48W,h9km,mB5.1/3,mb4.9/21,*
Ms4.9/1
NEIC ***09*** *21:23:05.2±1.4,19˚.8S±0˚.1×173˚.6W±0˚.1,h10km±1km,*
mb4.8/54,Error ellipse: s-maj=19.5km s-min=13.9km
az=142.0

ISC 09 21:23:04.1±0.4,19˚.77S±0˚.07×173˚.62W±0˚.08,h10km, n192,σ1ᵍ22/191,mb4.8/47,MS3.7/8,31C-13D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.55	79	Pn	Pn	21 23 53.5	-5.8
NIUE	Niue	3.55	79	P	Pn	21 23 51.9	-7.4
AFI	Afiamalu	6.09	17	Pn	Pn	21 24 32.8	-1.5
	14nm,0.3s,baz=178,slow=3.3,SNR=14						
AFI				Sn	Sn	21 25 36.8	-7.3
	6.0nm,0.3s,baz=331,slow=23,SNR=1.3						
AFI	Afiamalu	6.09	17		Pn	21 24 33.3	-1.0
AFI	Afiamalu	6.09	17	P	Pn	21 24 33.4	-0.8
MSVF	Nonsavu	8.15	283	Pn	Pn	21 25 03.4	+0.8
	0.6nm,0.3s,baz=113,slow=12,SNR=5.4						
MSVF				LR	LR	21 28 03.5	
	comp=Z,384nm,19.9s,baz=156,slow=37						
	2.3nm,0.5s						
MSVF	Nonsavu	8.15	283		Pn	21 25 02.1	-0.5
RAR	Rarotonga	13.06	99	LR	LR	21 30 52.3	
	comp=Z,227nm,18.7s,baz=292,slow=36						
MARNC	Mare, Loyalty	17.26	261	Pn	Pn	21 27 05.0	-0.4
OUENC	Ouen Island, N	18.42	258		P	21 27 19.1	-0.6
DZM	Mont Dzumac	18.76	259	P	P	21 27 23.0	-0.6
	0.7nm,0.3s,baz=83,slow=15,SNR=5.7						
	11nm,0.8s						
URZ	Urewera	20.11	202	P	P	21 27 35.0	-3.0
	0.6nm,0.3s,baz=130,slow=3.1,SNR=3.9						
URZ				S	S	21 31 08.1	-16
	5.7nm,0.6s,baz=232,slow=18,SNR=2.7						
	10nm,0.7s						
KOUNC	Koumac, New Ca	20.76	264	P	P	21 27 45.8	+0.6
KOUNC				IAmb	IAmb	21 27 51.5	
	comp=Z,66nm,1.3s						
PPT	Papeete	22.88	88	LR	LR	21 35 25.9	
	comp=Z,166nm,18.1s,baz=212,slow=32						
LTZ	Lake Taylor	25.85	204		P	21 28 36.3	+0.5
LTZ				IAmb	IAmb	21 29 00.1	
	comp=Z,37nm,1.3s						
CTA	Charters Tower	37.66	262	P	P	21 30 18.2	-1.5
	comp=Z,7.3n

BELC Belle Mtn. Jos 76.59 46 P 21 34 56.3 +1.1
BELC IAmb IAmb 21 34 57.0
comp=Z,8.9nm,1.4s
PETK Petropavlovsk- 76.71 343 P P 21 34 56.2 +1.0
comp=Z,6.0nm,0.9s,baz=112,slow=6.6,SNR=6.7
comp=Z,6.0nm,0.9s
NACB Ninganchiao 76.73 302 P P 21 34 56.9 +0.9
TPUB Ta-pu 77.09 301 P 21 34 58.6 +0.5
TPUB Ta-pu 77.09 301 P P 21 34 58.8 +0.7
LEM Lembang 77.18 267 P P 21 34 59.3 +0.3
comp=Z,34nm,0.7s,baz=99,slow=8.1,SNR=7.6
IRM Iron Mountain 77.27 46 P P 21 34 59.5 +0.6
IRM IAmb IAmb 21 35 00.9
comp=Z,8.9nm,1.3s
DSP Deep Springs 77.28 42 P P 21 35 00.4 +1.6
GMN Gold Mountain 77.69 43 P P 21 35 02.4 +1.0
GMN IAmb IAmb 21 35 03.2
comp=Z,12nm,1.8s
NVAR Mina Array Bea 77.71 41 P P 21 35 02.5 +0.9
comp=Z,1.7nm,0.8s,baz=228,slow=10,SNR=6.5
comp=Z,1.7nm,0.8s
KSRS Korea Array 79.14 316 P P 21 35 09.8 +0.7
comp=Z,2.7nm,1.0s,baz=136,slow=6.0,SNR=7.1
comp=Z,2.7nm,1.0s
PRN Pahroc Range 79.18 44 P 21 35 10.2 +0.7
WVOR Wild Horse Val 79.98 38 P P 21 35 14.7 +1.0
MDSI Maura Dua 81.17 268 P P 21 35 20.1 -0.6
MTPU Mount Pierson 81.42 45 P 21 35 22.7 +0.8
BBB Bella Bella 81.87 26 LR LR 22 03 53.2
comp=Z,38nm,19.7s,baz=219,slow=30
NJ2 Nanjing 82.64 308 *e*P **P 21 35 29.4 +1.5**
NJ2 pmax pmax
comp=Z,11nm,0.6s
TMUT Trail Mountain 82.74 44 P P 21 35 29.1 +0.3
H03S2 Juan Fernandez 82.98 123 T T 23 08 09.5
baz=246,slow=74
H03S1 Juan Fernandez 83.00 123 T T 23 08 11.5
baz=246,slow=74
H03S3 Juan Fernandez 83.00 123 T T 23 08 07.3
baz=246
SRU San Rafael Swe 83.09 44 P P 21 35 30.9 +0.5
SRU IAmb IAmb 21 35 32.4
comp=Z,6.5nm,0.9s
HLID Hailey 83.13 39 P 21 35 31.9 +1.4
TXAR Lajitas Array 83.22 56 P P 21 35 31.6 +0.4
comp=Z,0.9nm,0.9s,baz=224,slow=7.0,SNR=7.5
comp=Z,0.9nm,0.9s
PV05 Paradox Valley 83.50 46 P P 21 35 33.2 +0.6
PV05 IAmb IAmb 21 35 35.1
comp=Z,9.6nm,1.0s
P18A Preston Nutter 83.55 44 P P 21 35 32.4 -0.5
P18A IAmb IAmb 21 35 40.2
comp=Z,8.7nm,1.5s
PV10 Paradox Valley 83.69 46 P P 21 35 33.9 +0.3
BSUT Blindstream Ca 83.70 43 P P 21 35 34.5 +0.8
BSUT IAmb IAmb 21 36 03.5
comp=Z,20nm,2.0s
PV18 Skein Mesa, Pa 83.71 46 P 21 35 33.7 0.0
PV20 West Nyswonger 83.72 46 P P 21 35 34.3 +0.6
PV16 Nyswonger Mesa 83.74 46 P P 21 35 34.0 +0.2
PV16 IAmb IAmb 21 35 35.7
comp=Z,8.8nm,1.3s
PV23 Carpenter Ridg 83.75 46 P P 21 35 34.4 +0.5
PV03 Paradox Valley 83.76 46 P P 21 35 34.9 +1.0
PV03 IAmb IAmb 21 35 35.8
comp=Z,9.8nm,1.4s
ANMO Albuquerque 83.77 50 P 21 35 34.1 +0.1
ANMO Albuquerque 83.77 50 P P 21 35 34.9 +0.9
PV02 Paradox Valley 83.81 46 P P 21 35 34.3 +0.1
PV02 IAmb IAmb 21 36 13.2
comp=Z,12nm,1.1s
PV21 Cone Mtn., Par 83.83 45 P P 21 35 35.0 +0.7
BNX BinXian 84.26 323 ⇓P **P 21 35 38.2 +2.2**
BNX pmax pmax
comp=Z,10.0nm,0.9s
S22A 4UR Ranch, Cre 84.88 47 P P 21 35 39.5 -0.2
S22A IAmb IAmb 21 35 42.0
comp=Z,6.0nm,0.9s
TRF Thorofare Moun 84.94 10 P P 21 35 39.4 +0.2
MCK McKinley 85.43 11 P 21 35 41.7 +0.2
MCK IAmb IAmb 21 35 43.6
comp=Z,5.8nm,0.8s
M27K Edge Creek, AK 85.63 14 P P 21 35 44.3 +1.7
M27K IAmb IAmb 21 35 45.2
comp=Z,9.2nm,1.2s
PDAR Pinedale Array 85.65 42 P P 21 35 43.7 +0.4
comp=Z,0.8nm,0.8s,baz=236,slow=5.0,SNR=7.0
comp=Z,0.8nm,0.8s
TIA Tai'an 85.87 311 P P 21 35 47.0 +2.7
TIA pmax pmax
comp=Z,8.0nm,0.9s
BOZ Bozeman (W) 85.92 38 P 21 35 42.8 -1.8
BOZ IAmb IAmb 21 35 47.1
comp=Z,14nm,1.9s
WRH Wood River Hil 86.26 11 P P 21 35 45.9 +0.4
WRH IAmb IAmb 21 35 50.1
comp=Z,7.7nm,1.0s
CCB Clear Creek Bu 86.47 11 P P 21 35 46.6 0.0
ILAR Eielson Array 86.75 11 P P 21 35 48.1 +0.2
comp=Z,1.1nm,1.0s,baz=216,slow=5.6,SNR=7.2
comp=Z,1.1nm,1.0s
ILAR Eielson Array 86.75 11 P 21 35 48.5 +0.5
HEH HeiHe 86.91 327 *e*P **P 21 35 50.1 +1.1**
HEH pmax pmax
comp=Z,6.0nm,1.2s
L29M L29M 87.18 15 P P 21 35 50.0 -0.1
L29M IAmb IAmb 21 35 56.4
comp=Z,5.2nm,1.1s
TROLL Troll, Antarti 88.42 179 ⇓P **P 21 35 55.1 -1.2**
comp=Z,73nm,0.8s
VNA2 Neumayer--Watz 89.04 176 ⇓P **P 21 35 57.9 -1.1**
comp=Z,1.4nm,0.6s,baz=197,slow=3.7
XAN Xi'an 91.00 306 P P 21 36 11.4 +2.5
XAN pmax pmax
comp=Z,7.0nm,1.2s
HHC Hu-ho-hao-te 91.83 313 *e*P **P 21 36 14.6 +2.0**
HHC pmax pmax
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 93.77 288 P P 21 36 24.0 +2.0
comp=Z,2.2nm,0.9s,baz=124,slow=3.0,SNR=13
CMAR LR LR 22 18 58.5
comp=Z,15nm,18.4s,baz=235,slow=36
comp=Z,2.2nm,0.9s
CMAR Chiang Mai Arr 93.77 288 P 21 36 21.7 -0.2
PZH PanZhiHua 94.03 297 P P 21 36 25.2 +2.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
ECSD EROS Data Cent 94.48 45 P 21 36 24.3 -0.3
ECSD IAmb IAmb 21 36 25.6
comp=Z,6.4nm,1.1s
I37A Lemond, Waseca 96.74 46 P P 21 36 35.4 +0.5
LPAZ La Paz 98.50 111 LR LR 22 13 01.2
comp=Z,43nm,18.7s,baz=88,slow=30
WMQ Urumqi 109.57 311 Pdif Pdif 21 37 30.1 -2.1
MKAR Makanchi Array 113.69 313 PKiKP PKiKP 21 41 42.5 -0.5
comp=Z,0.4nm,0.6s,baz=66,slow=1.6,SNR=4.8
KURK Kurchatov 116.24 318 PKPdf 21 41 46.8 -0.8
KURBB Kurchatov Arra 116.30 317 PKP PKPdf 21 41 46.8 -1.0
comp=Z,0.6nm,0.7s,baz=102,slow=1.9,SNR=6.1
BVAR Borovoye Array 121.15 321 PKP PKPdf 21 41 57.0 0.0
comp=Z,1.3nm,0.6s,baz=299,slow=1.5,SNR=6.1
ARCES ARCESS Array B 128.88 351 PKP PKPdf 21 42 11.7 +0.4
comp=Z,3.2nm,1.1s,baz=15,slow=5.3,SNR=4.7
AKASG Malin Array Be 144.23 335 PKP PKPab 21 42 38.9 +0.9
comp=Z,3.0nm,0.6s,baz=40,slow=4.4,SNR=19
KIEV Kiev 144.24 335 ⇑P **PKPab 21 42 38.6 +0.6**
SORM Soroca 146.58 333 ⇑P **PKPbc 21 42 46.5 +0.7**
KWP Kalwaria Pacla 147.47 340 *e*PKP **PKPbc 21 42 49.7 +1.4**
OJC Ojcow 147.79 344 *e*PKP **PKPbc 21 42 50.2 +1.0**
KSP Ksiaz 148.01 348 *e*PKP **PKPbc 21 42 51.4 +1.7**
BURAR Bucovina Array 148.28 335 ⇑P **PKPbc 21 42 52.4 +1.7**
OSTC Ostas 148.30 348⇑ *e*PKP **PKPbc 21 42 51.9 +1.4**
NIE Niedzica 148.38 343 *e*PKP **PKPbc 21 42 50.7 -0.1**
UPC Upice 148.39 348⇑ *e*PKP **PKPbc 21 42 51.9 +1.2**
BRG Berggiesshubel 148.39 351 *e*PKP **PKPbc 21 42 52.1 +1.4**
BRG Amp 21 42 52.9
comp=Z,6.5nm,1.0s
VLDR Vladesti 148.44 330 ⇑P **PKPbc 21 42 51.9 +0.9**
DPC Dobruska-Polom 148.48 348 *e*PKPDF **PKPdf 21 42 44.7 -2.8**
DPC *e*PKP **PKPbc 21 42 51.9 +0.9**
STEB Steborice 148.56 346⇑ *e*PKP **PKPbc 21 42 51.8 +0.6**
TLCR 148.57 329 ⇑P **PKPbc 21 42 51.7 +0.4**
GHRR 148.59 331 ⇑P **PKiKP 21 42 53.9 +1.0**
KRLC Kraliky 148.64 347⇑ *e*PKP **PKPdf 21 42 50.3 +2.5**
MORC Moravsky Berou 148.76 346 *e*PKP **PKPbc 21 42 52.2 +0.4**

ONER Baraj Valea Uz 148.82 333 ⇑P **PKiKP 21 42 53.8 +0.4**
LANS Liptovska Anna 148.86 343 *e*PKP **PKPab 21 42 56.1 +0.2**
CFR Carcaliu 148.91 329 ⇑P **PKPbc 21 42 53.2 +1.1**
TPGR Topolog 149.01 329 ⇑P **PKPbc 21 42 53.9 +1.4**
VRI Vrincioaia 149.04 332 ⇑P **PKPbc 21 42 53.2 +0.7**
PLOR Plostina 149.09 332 ⇑P **PKPbc 21 42 53.5 +0.8**
TURR Turia 149.20 333 ⇑P **PKPbc 21 42 54.6 +1.6**
MEM Membach 149.22 0 *d*PKP **PKPbc 21 42 53.5 +0.6**
BRTR Keskin Array B 149.28 316 PKPbc **PKPbc 21 42 54.4 +0.8**
comp=Z,1.9nm,0.8s,baz=123,slow=4.6,SNR=9.1
BRTR Keskin Array B 149.28 316 PKPbc 21 42 54.1 +0.6
TIRR Tirgusor 149.30 328 ⇓P **PKPbc 21 42 54.1 +0.9**
BOSR Bodos 149.34 333 ⇑P **PKiKP 21 42 55.5 +0.3**
VRAC Vranov 149.41 347 ⇑P **PKPbc 21 42 53.7 +0.3**
VRAC Vranov 149.41 347 *e*PKP **PKPbc 21 42 54.3 +0.9**
TLBR Topalu 149.41 329 ⇓P **PKPbc 21 42 54.8 +1.3**
BMRD Maredsous 149.50 2 *d*PKP **PKPbc 21 42 54.6 +1.1**
DOPR Dopca 149.54 333 ⇑P **PKPbc 21 42 55.0 +1.2**
NEHR Nehoiu 149.57 332 ⇓P **PKPbc 21 42 55.3 +1.3**
JAVC Velka Javorina 149.59 345 *e*PKP **PKiKP 21 42 55.9 +0.9**
CJR Cluj-Napoca 149.65 336 ⇑P **PKPbc 21 42 55.6 +1.5**
MLR Muntele Rosu 149.68 332 ⇑P **PKPbc 21 42 54.8 +0.5**
MLR Muntele Rosu 149.68 332 PKPbc **PKPbc 21 42 54.9 +0.6**
KRUC Moravsky 149.69 347 *e*PKP **PKPbc 21 42 54.8 +0.8**
ZVC Zvikov 149.74 350⇑ *e*PKP **PKPbc 21 42 55.6 +1.4**
MARR Marisel-Cluj 149.86 337 ⇓P **PKPbc 21 42 56.1 +1.4**
DRGR 149.91 337 ⇑P **PKPbc 21 42 55.4 +0.7**
MODS Modra-Piesok 150.13 345 *e*PKP **PKPbc 21 42 56.5 +1.3**
MODS *e* 21 43 03.1
KHC Kasperske Hory 150.14 350 *e*PKPDF **PKPdf 21 42 51.0 +0.8**
KHC ⇑*e*PKP **PKPbc 21 42 56.4 +1.2**
KHC *e*PKPAB **PKPab 21 43 02.6 +1.5**
WLF Walferdange 150.17 0 *d*PKP **PKiKP 21 42 56.8 +0.7**
CKRC Cesky Krumlov 150.32 349⇑ *e*PKP **PKPbc 21 42 56.8 +1.2**
ARR Arges 150.34 334 ⇑P **PKiKP 21 42 57.7 +1.1**
GERES GERESS Array B 150.40 350 PKPbc **PKPbc 21 42 56.9 +1.0**
comp=Z,2.1nm,0.9s,baz=0.0,slow=1.6,SNR=17
GERES GERESS Array B 150.40 350 PKPbc 21 42 56.5 +0.6
LOT Lotru 150.63 335 ⇓P **PKPbc 21 42 56.1 -0.5**
SIRR Siria 150.74 338 ⇑P **PKPbc 21 42 57.7 +1.0**
CONA Conrad Observa 150.87 347 *i* PKiKP **PKPbc 21 42 58.0 +1.0**
comp=Z,3.6nm,0.9s
MMAI Mount Meron Ar 150.95 303 PKPbc **PKPbc 21 42 59.0 +1.2**
comp=Z,4.0nm,0.9s,baz=0.0,slow=8.3,SNR=7.4
RONA Rosalia, Austr 150.99 346 *e*PKiKP **PKPbc 21 42 58.4 +1.1**
comp=Z,3.0nm,0.7s
GZR Gura Zlata 151.07 336 ⇓P **PKPbc 21 42 57.9 +0.3**
CY604 RAF Akrotiri, 151.16 306 PKPbc **PKiKP 21 42 59.2 +1.0**
MOA Molln 151.26 349 *e*PKiKP **PKPbc 21 42 58.8 +0.9**
comp=Z,4.3nm,1.7s
BZS Buzias 151.31 337 ⇑P **PKPbc 21 42 58.9 +0.9**
BIOA Bad Ischl, Aus 151.53 350 *e*PKP **PKPbc 21 42 58.6 +0.1**
comp=Z,2.0nm,0.8s
ARSA Arzberg 151.59 347 *e*PKiKP **PKPbc 21 42 59.7 +1.1**
comp=Z,4.7nm,1.5s
HERR Herculane 151.63 336 ⇑P **PKPdf 21 42 50.4 -2.1**
MORH Mrgy, Hungar 151.76 342 ⇑P **PKPbc 21 42 59.7 +0.7**
LESA Schwarzleotal 151.94 351 *i* PKP **PKPbc 21 42 59.9 +0.4**
comp=Z,2.6nm,1.0s
MDVR Moldovita 151.99 336 ⇓P **PKPbc 21 42 58.7 -1.0**
RETA Reutte 152.12 354 *e*PKP **PKPbc 21 42 59.2 -0.7**
comp=Z,5.7nm,1.8s
KBA Koelnbreinsper 152.17 350 *e*PKP **PKPbc 21 43 00.4 +0.2**
comp=Z,2.4nm,1.0s
WATA Walderalm 152.18 352 *i* PKP **PKPbc 21 43 00.3 +0.2**
comp=Z,2.5nm,1.0s
MOTA Moosalm 152.22 353 *i* PKP **PKPbc 21 43 00.9 +0.6**
comp=Z,3.1nm,0.9s
SOKA Soboth 152.24 347 *e*PKP **PKPbc 21 43 00.2 0.0**
comp=Z,2.5nm,1.0s
WTTA Wattenberg 152.24 352 *i* PKP **PKPbc 21 43 00.9 +0.5**
comp=Z,4.3nm,0.6s
SQTA Sankt Quirin 152.34 353 *e*PKiKP **PKPbc 21 43 01.3 +0.8**
comp=Z,2.3nm,0.8s
DAVA Damuels 152.40 355 *i* PKiKP **PKiKP 21 43 02.1 +1.1**
comp=Z,3.9nm,0.9s
OBKA Obir 152.50 348 *e*PKiKP **PKiKP 21 43 02.6 +1.5**
comp=Z,1.2nm,0.7s
MYKA Terra Mystica 152.55 349 *e*PKP **PKPbc 21 43 00.6 -0.3**
comp=Z,1.4nm,0.5s
FETA Feichten 152.59 354 *i* PKiKP **PKPbc 21 43 01.7 +0.6**
comp=Z,3.5nm,0.8s
ABTA Abfaltersbach 152.62 351 *e*PKP **PKPbc 21 43 01.2 +0.1**
comp=Z,7.2nm,1.2s
TORD Torodi Ar. Bea 172.03 145 PKPab **PKPab 21 44 35.6 -1.3**
comp=Z,1.1nm,0.9s,baz=233,slow=6.6,SNR=3.9

*IDC **09** 21:29:01.5±1.8, 7.°05S×129.°46E, h95km±25km, mb3.0/1, mbtmp3.8/6, Error ellipse: s-maj=28.9km s-min=14.5km az=115.0*
ISC 09 21:29:01.5±0.9, 7.°21S±0.°06×129.°64E±0.°10, h139km, n6, σ3s58/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.50**	**15**	P		**Pn**	**21 30 33.8**	**-1.1**
	7.4nm,0.2s,baz=200,slow=22,SNR=12						
SIJI				S		**Sn**	**21 31 44.7**	**-3.2**
	3.0nm,0.3s,baz=216,slow=23,SNR=1.9						
BATI	**Baumata**	**6.62**	**243**	P		**Pn**	**21 30 36.8**	**+0.3**
	7.2nm,0.3s,baz=233,slow=20,SNR=2.0						
BATI				S		**Sn**	**21 31 48.0**	**-2.7**
	9.3nm,0.4s,baz=87,slow=23,SNR=1.3						
FITZ	**Fitzroy Crossi**	**11.51**	**199**	P		**Pn**	**21 31 43.2**	**+1.5**
	1.1nm,0.3s,baz=26,slow=11,SNR=27						
FITZ				S		**Sn**	**21 33 44.8**	**-4.0**
	3.4nm,0.3s,baz=130,slow=21,SNR=7.8						
WRA	**Warramunga Arr**	**13.46**	**161**	P		**P**	**21 32 10.0**	**-1.4**
	0.5nm,0.4s,baz=339,slow=14,SNR=12						
WRA				S		**Sn**	**21 34 32.1**	**-3.7**
	1.0nm,0.4s,baz=334,slow=24,SNR=7.7						
ASAR	**Alice Springs**	**16.87**	**166**	P		**Pn**	**21 32 55.5**	**+6.0**
	0.5nm,0.4s,baz=340,slow=8.9,SNR=8.6						
ASAR				S		**Sn**	**21 35 56.3**	**-1.6**
	0.3nm,0.4s,baz=324,slow=17,SNR=5.2						
MKAR	**Makanchi Array**	**68.20**	**327**	P		**P**	**21 39 50.3**	**+3.3**
	0.2nm,0.4s,baz=119,slow=8.5,SNR=4.6						
	0.2nm,0.4s						

*NOU **09** 21:36:16.1, 42.°48S×177.°26E, h108km, MLv3.5/7, Off E. Coast of S. Island, N.Z.*
*WEL **09** 21:36:20.0±1.0, 42.°2S±7.°×17.°7E±.°, h33km, M2.9/13, ML2.8/18, MLv2.9/13, Error ellipse: s-maj=9.6km s-min=6.7km az=3.1*
ISC 09 21:36:08.5±3.2, 42.°60S±0.°06×177.°57E±0.°06, h0km±24km, n62, σ2s39/51, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRWZ	**Traveller**	**1.84**	**310**	P		**Pb**	**21 36 43.5**	**+0.4**
TMWZ	**Te Maipa**	**1.95**	**319**	P		**Pb**	**21 36 45.0**	**+0.1**
PLWZ	**Palliser**	**2.00**	**300**	P		**Pb**	**21 36 45.9**	**+0.1**
PLWZ				S		Sn	21 37 06.4	-3.0
PAWZ	**Paruwai Farm**	**2.00**	**307**	P		**Pb**	**21 36 46.0**	**+0.1**
PAWZ				S		Sn	21 37 06.4	-3.0
MSWZ	**Moikau Station**	**2.09**	**304**	P		**Pb**	**21 36 46.9**	**-0.4**
MSWZ				S		Sn	21 37 08.0	-3.6
BFZ	**Birch Farm**	**2.15**	**332**	P		**Pb**	**21 36 48.6**	**+0.2**
BFZ	**Birch Farm**	**2.15**	**332**	P		**Pb**	**21 36 48.5**	**+0.2**
WRCS	**Masterton Wair**	**2.18**	**318**	P		**Pb**	**21 36 49.1**	**+0.2**
TIWZ	**Tintock**	**2.21**	**325**	P		**Pb**	**21 36 49.4**	**0.0**
ANWZ	**Angora Road**	**2.29**	**339**	P		**Pb**	**21 36 50.6**	**-0.1**
HOWZ	**Holdsworth Sta**	**2.29**	**317**	P		**Pb**	**21 36 49.8**	**-0.9**
HOWZ				S		Sn	21 37 13.3	-3.1
PRWZ	**Pori Road**	**2.37**	**329**	P		**Pb**	**21 36 51.7**	**-0.3**
CAW	**Cannon Point**	**2.39**	**308**	P		**Pb**	**21 36 51.2**	**-1.1**
CAW				S		Sn	21 37 15.3	-3.5
FAIS	**Fairfield**	**2.40**	**304**	P		**Pb**	**21 36 51.3**	**-1.3**
FAIS				S		Sn	21 37 15.4	-3.7
PRHZ	**Porangahau**	**2.43**	**343**	P		**Pb**	**21 36 52.4**	**-0.7**
PRHZ				S		**Sn**	**21 37 19.0**	**-0.9**
MRZ	**Mangatainoka R**	**2.44**	**322**	P		**Pb**	**21 36 52.2**	**-1.1**
SNZO	**South Karori**	**2.49**	**300**	P		**Pn**	**21 36 52.6**	**+2.3**
DVHZ	**Dannevirke**	**2.53**	**335**	P		**Pb**	**21 36 53.5**	**-1.3**
DVHZ				S		**Sn**	**21 37 20.3**	**-2.0**
OGWZ	**Otaki Gorge**	**2.53**	**314**	P		**Pb**	**21 36 53.4**	**-1.3**
OGWZ				S		Sn	21 37 19.1	-3.1
POWZ	**Post Office Ro**	**2.58**	**328**	P		**Pb**	**21 36 54.8**	**-0.9**
KIW	**Kapiti Island**	**2.64**	**310**	P		**Pb**	**21 36 55.0**	**-1.6**
KIW				S		Sn	21 37 21.7	-3.3
WPHZ	**Waipukurau**	**2.67**	**341**	P		**Pb**	**21 36 55.9**	**-1.3**

TSZ Takapari Road 2.81 334 P Pb 21 36 57.9 -1.7
TCW Tory Channel 2.82 298 P Pn 21 36 57.5 +2.7
TCW S Sn 21 37 25.7 -3.8
KAHZ Kahuranaki 2.85 349 P Pb 21 36 58.2 -2.1
PNHZ Pukenui 2.87 339 P Pb 21 36 58.5 -2.1
KHZ Kahutara 2.98 272 S Sn 21 37 31.8 -1.6
KRHZ Kereru 3.09 343 P Pb 21 37 01.5 -2.8
DUWZ D'Urville Isla 3.27 302 P Pn 21 37 04.4 +3.4
KWHZ Kaweka Forest 3.29 344 P Pn 21 37 04.4 +3.1
BHHZ Black Hill Sta 3.31 339 P Pn 21 37 04.8 +3.2
GVZ Greta Valley S 3.36 262 P Pn 21 37 04.1 +1.9
WAZ Wanganui 3.44 325 P Pb 21 37 08.1 -2.3
MOVZ Moawhango 3.47 336 P Pb 21 37 07.5 -3.4
OKCZ Okains Bay 3.48 250 P Pn 21 37 05.7 +1.8
BKZ Black Stump Fm 3.52 346 P Pn 21 37 07.2 +2.7
BKZ Black Stump Fm 3.52 346 S Sn 21 37 46.6 -0.3
BKZ Black Stump Fm 3.52 346 P Pn 21 37 07.3 +2.7
THZ Tophouse 3.56 282 P Pn 21 37 07.0 +1.9
MTVZ Mangateitei 3.58 333 P Pb 21 37 09.8 -3.0
WNVZ Wahianoa 3.59 335 P Pb 21 37 09.4 -3.5
FWVZ Far West T-bar 3.67 335 P Pb 21 37 10.8 -3.5
PKVZ Pokaka 3.71 332 P Pb 21 37 11.1 -3.8
SNVZ South Ngauruho 3.71 336 P Pn 21 37 10.7 +3.6
NGZ Ngauruhoe 3.73 336 P Pn 21 37 11.3 +3.9
ETVZ East Tongariro 3.73 337 P Pn 21 37 11.2 +3.7
TMVZ Te Maari 3.75 337 P Pn 21 37 11.6 +3.8
MTHZ Maungataniwha 3.78 351 P Pn 21 37 10.6 +2.5
WTVZ West Tongariro 3.79 336 P Pn 21 37 11.7 +3.5
KRVZ Karewarewa 3.79 337 P Pb 21 37 12.5 -3.9
SNGZ Shannon Statio 3.82 357 P Pn 21 37 11.2 +2.7
MRHZ Matea Rd 3.86 347 P Pn 21 37 12.7 +3.5
TWVZ Taurewa 3.88 335 P Pn 21 37 12.7 +3.3
LTZ Lake Taylor 3.91 266 P Pn 21 37 12.1 +2.3
PREZ Palmer Road 4.15 320 P Pn 21 37 17.1 +4.0
QRZ Quartz Range 4.17 293 S Sn 21 38 00.0 -2.6
QRZ Quartz Range 4.17 293 P Pn 21 37 16.9 +3.6
KHEZ Kahui Hut 4.26 320 P Pb 21 37 19.7 -4.6
MWZ Matawai 4.26 360 P Pn 21 37 16.5 +1.9
URZ Urewera 4.35 355 P Pn 21 37 18.0 +2.2
URZ Urewera 4.35 355 P Pn 21 37 17.9 +2.1
CTZ Chatham Island 4.40 107 P Pn 21 37 18.6 +2.0
CTZ S Sn 21 38 03.0 -5.5

*IDC **09** 21:54:54.9±1.2, 37.°29N×68.°61E, h0km, mb3.6/6, mbtmp3.6/10, ML3.1/4, Error ellipse: s-maj=23.3km s-min=15.9km az=135.0*
*NNC **09** 21:55:00.3±5.3, 37.°79N×68.°27E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=48.9km s-min=34.4km az=148.0*
ISC 09 21:54:59.6±1.2, 37.°4N±0.°1×68.°4E±0.°1, h32km, n13, σ2s19/17, mb3.7/3, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.93**	**15**	Pn		**Pn**	**21 56 26.4**	**+1.1**
	0.8nm,0.2s,baz=199,slow=10,SNR=20						
KK31				⇓Pg		**Pb**	**21 56 45.7**	**+3.5**
	2.0nm,0.4s,baz=196,slow=16,SNR=7.5						
KK31				⇑Sn		**Sn**	**21 57 28.9**	**-3.2**
	3.7nm,0.5s						
KK31				Lg		Lg	21 58 02.9	
	9.7nm,0.6s,baz=191,slow=24,SNR=4.4						
AAK	**Ala-Archa**	**7.03**	**40**	Pn		**Pn**	**21 56 39.4**	**-1.1**
	2.3nm,0.3s,baz=222,slow=7.0,SNR=8.7						
AAK				Sn		**Sn**	**21 58 00.3**	**+0.9**
	baz=30,slow=18						
AAK				Lg		Lg	21 58 35.0	
	0.4nm,0.3s,baz=50,slow=12,SNR=6.0						
	4.6nm,0.4s						
AAK	**Ala-Archa**	**7.03**	**40**	⇑Pn		**Pn**	**21 56 39.7**	**-0.8**
	2.0nm,0.6s						
AAK				⇑Sn		**Sn**	**21 58 01.6**	**+2.2**
	2.2nm,0.8s						
AAK				⇓Lg		Lg	21 58 33.7	
	3.8nm,0.8s						
AB31	**Akbulak array**	**13.34**	**335**	P		**Pn**	**21 58 04.3**	**-2.4**
	0.6nm,0.4s,baz=167,slow=12,SNR=24						
MKAR	**Makanchi Array**	**13.94**	**43**	Pn		**Pn**	**21 58 11.8**	**-3.1**
	0.1nm,0.3s,baz=236,slow=16,SNR=3.8						
	1.3nm,0.7s						
AKTO	**Aktyubinsk**	**15.00**	**334**	Pn		**Pn**	**21 58 28.4**	**-0.8**
	0.1nm,0.3s,baz=224,slow=6.8,SNR=2.0						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**15.70**	**4**	Pn		**Pn**	**21 58 34.1**	**-4.1**
	baz=183,slow=12,SNR=4.1						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**20.07**	**29**	P		**P**	**21 59 30.3**	**+0.2**
	0.8nm,0.3s,baz=224,slow=10,SNR=5.3						
	0.8nm,0.3s						
ARTI	**Arti**	**20.15**	**344**	P		**P**	**21 59 31.9**	**+0.9**
	1.3nm,0.7s,baz=138,slow=21,SNR=1.7						
	1.3nm,0.7s						
HFS	**Hagfors**	**41.06**	**322**	P		**P**	**22 02 40.6**	**+0.7**
	1.0nm,0.7s,baz=99,slow=9.3,SNR=4.3						
	1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**63.66**	**267**	P		**P**	**22 05 28.6**	**+0.6**
	0.4nm,0.7s,baz=50,slow=7.9,SNR=1.9						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**84.25**	**120**	P		**P**	**22 07 27.2**	**-1.1**
	1.1nm,1.2s,baz=311,slow=6.6,SNR=2.2						
	1.1nm,1.2s						
ASAR	**Alice Springs**	**86.49**	**123**	P		**P**	**22 07 40.0**	**+0.6**
	0.1nm,0.5s,baz=311,slow=4.7,SNR=1.2						
	0.1nm,0.5s						

IDC 09 22:03:06.2±328.0, 18.°76S×54.°96W, h0km, Error ellipse: s-maj=128.7km s-min=113.3km az=41.0, Brazil

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I09BR	**BRASILIA INFRA**	**7.33**	**66**	I	I	22 47 20.0	
	baz=244,slow=322,SNR=1.7						
I41PY	**VILLA FLORIDA**	**7.86**	**196**	I	I	22 48 40.0	
	baz=16,slow=320,SNR=2.0						
I08BO	**LAS PENAS INFR**	**13.12**	**279**	I	I	23 23 00.0	
	baz=102,slow=334,SNR=2.0						

*SJA **09** 22:03:31.4±1.0, 33.°64S×70.°19W, h117km±3km, ML3.9, MW3.8*
*GUC **09** 22:03:32.5±0.9, 33.°65S×70.°22W, h104km±2km, ML3.9*
*IDC **09** 22:03:33.4±2.1, 33.°62S×70.°01W, h112km±18km, mb3.4/5, mbtmp3.7/8, MS3.3/1, Error ellipse: s-maj=34.0km s-min=17.3km az=105.0*
ISC 09 22:03:32.9±0.7, 33.°62S±0.°03×70.°21W±0.°04, h111km±4km, n63, σ0s81/98, mb3.6/4, 14C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.23**	**179**	⇓*i*P		**Pn**	**22 03 47.9**	**-0.9**
LMEL				*i* S		**Sn**	**22 03 60.0**	**-0.8**
LMEL				IAML			22 04 05.2	
	comp=E,4μm,0.1s						
MT08	**Bocatoma Ro**	**0.24**	**43**	*e*P		**Pn**	**22 03 48.3**	**-0.7**
MT08				*e*S		**Sn**	**22 04 01.2**	**+0.3**
MT08	**Bocatoma Ro**	**0.24**	**43**	⇓*i*P		**Pn**	**22 03 48.2**	**-0.7**
MT08				*i* S		**Sn**	**22 04 00.6**	**-0.3**

BO04				IAML		22 04 03.8	
	comp=E,7μm,0.5s						
MT05	**Renca**	**0.50**	**297**	*eP*	**Pn**	**22 03 49.0**	**-1.0**
MT05				*eS*	**Sn**	**22 04 03.4**	**+0.6**
MT05				IAML		22 04 04.8	
	comp=Z,3μm,0.5s						
MT05	**Renca**	**0.50**	**297**⇑	*iP*	**Pn**	**22 03 49.6**	**-0.3**
MT05				*iS*	**Sn**	**22 04 02.7**	**-0.1**
MT05				IAML		22 04 04.9	
	comp=E,9μm,0.3s						
PEL	**Peldehue**	**0.62**	**320**	*eP*	**Pn**	**22 03 50.5**	**-0.4**
PEL				*eS*	**Sn**	**22 04 05.0**	**+0.7**
PEL				IAML		22 04 05.0	
	comp=Z,2μm,0.3s						
PEL	**Peldehue**	**0.62**	**320**⇑	*iP*	**Pn**	**22 03 50.4**	**-0.4**
PEL				*iS*	**Sn**	**22 04 04.3**	**0.0**
MT09	**Talagante**	**0.67**	**256**⇑	*iP*	**Pn**	**22 03 50.8**	**-0.5**
MT09				*iS*	**Sn**	**22 04 04.8**	**-0.4**
MT09				IAML		22 04 06.2	
	comp=E,7μm,0.2s						
MT02	**Curacav**	**0.86**	**295**	*eP*	**Pn**	**22 03 52.4**	**-0.4**
MT02				*eS*	**Sn**	**22 04 08.4**	**+0.6**
MT02				IAML		22 04 10.3	
	comp=Z,1μm,0.3s						
MT02	**Curacav**	**0.86**	**295**⇑	*iP*	**Pn**	**22 03 52.5**	**-0.4**
MT02				*iS*	**Sn**	**22 04 07.6**	**-0.2**
MT01	**Popeta**	**0.90**	**254**	*eP*	**Pn**	**22 03 52.0**	**-1.2**
MT01				*eS*	Sn	22 03 52.7	-16
MT01				IAML		22 03 53.1	
	comp=Z,2μm,0.2s						
MT01	**Popeta**	**0.90**	**254**⇑	*iP*	**Pn**	**22 03 52.8**	**-0.4**
MT01				*iS*	**Sn**	**22 04 08.1**	**-0.5**
MT01				IAML		22 04 09.1	
	comp=N,4μm,0.2s						
VA03	**San Esteban**	**0.90**	**341**	*eP*	**Pn**	**22 03 53.4**	**0.0**
VA03				*eS*	**Sn**	**22 04 10.2**	**+1.4**
VA03				IAML		22 04 11.8	
	comp=Z,2μm,0.8s						
VA03	**San Esteban**	**0.90**	**341**⇑	*iP*	**Pn**	**22 03 53.4**	**0.0**
VA03				*iS*	**Sn**	**22 04 09.2**	**+0.4**
VA03				IAML		22 04 10.8	
	comp=E,6μm,0.2s						
BO01	**Tunca**	**1.06**	**223**	*eP*	**Pn**	**22 03 54.5**	**-0.3**
BO01				*eS*	**Sn**	**22 04 11.8**	**+0.4**
BO01				IAML		22 04 13.7	
	comp=Z,746nm,0.2s						
BO01	**Tunca**	**1.06**	**223**⇓	*iP*	**Pn**	**22 03 54.6**	**-0.3**
BO01				*iS*	**Sn**	**22 04 11.1**	**-0.3**
BO02	**Sierra Bellavi**	**1.26**	**202**	*eP*	**Pn**	**22 03 56.6**	**-0.5**
BO02				*eS*	**Sn**	**22 04 17.2**	**+1.7**
BO02				IAML		22 04 21.5	
	comp=Z,2μm,0.1s						
BO02	**Sierra Bellavi**	**1.26**	**202**⇓	*iP*	**Pn**	**22 03 57.2**	**+0.1**
BO02				*iS*	**Sn**	**22 04 15.3**	**-0.2**
BO02				IAML		22 04 21.7	
	comp=E,3μm,0.2s						
AAGR	**Agrelo**	**1.27**	**66**	*eS*	**Pn**	**22 03 56.4**	**-0.9**
AAGR				*eP*	**Pn**	**22 03 56.4**	**-0.9**
AAGR				*eP*		22 03 56.5	
ARCO	**CERRO ARCO**	**1.32**	**54**	*eP*	**Pn**	**22 03 57.1**	**-0.8**
ARCO				*eS*	**Sn**	**22 04 17.9**	**+1.0**
VA01	**Torpederas**	**1.34**	**296**	*eP*	**Pn**	**22 03 58.3**	**+0.3**
VA01				IAML		22 04 20.1	
	comp=Z,506nm,0.6s						
VA01	**Torpederas**	**1.34**	**296**	*iP*	**Pn**	**22 03 58.2**	**+0.3**
VA01				*iS*	**Sn**	**22 04 17.4**	**+0.5**
AVIZ	**Vizcacheras**	**1.42**	**85**	*eP*	**Pn**	**22 03 58.5**	**-0.5**
BO03	**Pichilemu**	**1.70**	**239**	*iP*	**Pn**	**22 04 01.4**	**-0.7**
BO03				*iS*	**Sn**	**22 04 23.8**	**-0.6**
BO03				IAML		22 04 25.1	
	comp=E,711nm,0.3s						
CO04	**Los Peladeros**	**1.70**	**338**⇑	*iP*	**Pn**	**22 04 02.4**	**-0.2**
CO04				*iS*	**Sn**	**22 04 24.5**	**-0.5**
CO04				IAML		22 04 26.3	
	comp=E,2μm,0.2s						
RTLS	**Leoncito**	**1.97**	**23**	*eP*	**Pn**	**22 04 06.8**	**+0.9**
RTLS				*eS*	**Sn**	**22 04 33.4**	**+2.3**
RTLS				IAML		22 04 34.7	
	comp=Z,743nm,0.3s						
GO05	**Hualane**	**1.99**	**225**	*eP*	Pn	22 03 57.1	-8.7
GO05				*eP*		22 04 05.2	
GO05				*eS*	**Sn**	**22 04 30.3**	**-0.7**
GO05				IAML		22 04 31.6	
	comp=Z,492nm,0.1s						
GO05	**Hualane**	**1.99**	**225**	*iP*	**Pn**	**22 04 05.0**	**-0.9**
GO05				*iS*	**Sn**	**22 04 30.2**	**-0.7**
GO05				IAML		22 04 37.4	
	comp=N,937nm,0.7s						
EDS3	**Malargue**	**2.25**	**163**	*eP*	Pn	22 04 00.9	-8.3
ML02	**Panimavida**	**2.36**	**205**	*eP*	**Pn**	**22 04 10.9**	**+0.3**
ML02				*eS*	**Sn**	**22 04 39.4**	**0.0**
ML02				IAML		22 04 45.7	
	comp=Z,213nm,0.4s						
ML02	**Panimavida**	**2.36**	**205**	*iP*	**Pn**	**22 04 10.1**	**-0.4**
ML02				*iS*	**Sn**	**22 04 39.1**	**-0.3**
ML02				IAML		22 04 39.9	
	comp=N,573nm,0.3s						
ZON	**Zonda**	**2.44**	**32**	*eP*	**Pn**	**22 04 11.5**	**-0.2**
ZON				*eS*	**Sn**	**22 04 41.8**	**+0.4**
CO02	**Combarbal**	**2.50**	**344**	*eP*	**Pn**	**22 04 12.1**	**-0.5**
CO02				*eS*	**Sn**	**22 04 43.3**	**+0.3**
CO02				IAML		22 04 46.5	
	comp=Z,366nm,0.1s						
CO02	**Combarbal**	**2.50**	**344**⇑	*iP*	**Pn**	**22 04 12.0**	**-0.6**
CO02				*iS*	**Sn**	**22 04 42.3**	**-0.6**
SJA	**San Juan**	**2.51**	**34**	*eP*	**Pn**	**22 04 13.1**	**+0.5**
CFA	**Coronel Fontan**	**2.61**	**40**	P	**Pn**	**22 04 13.1**	**-0.7**
	comp=Z,11nm,0.2s,baz=231,slow=7.1,SNR=88						
CFA				S	**Sn**	**22 04 43.8**	**-1.5**
	comp=Z,49nm,0.3s,baz=293,slow=22,SNR=30						
CFA	**Coronel Fontan**	**2.61**	**40**	*eP*	**Pn**	**22 04 13.2**	**-0.7**
CFA				*eS*	**Sn**	**22 04 44.7**	**-0.6**
RTLL	**Cerro Villicun**	**2.71**	**33**	*eS*	**Sn**	**22 04 47.6**	**-0.2**
RTLL				IAML		22 04 50.6	
	comp=Z,243nm,0.4s						
CO03	**El Pedregal**	**2.80**	**352**⇑	*iP*	**Pn**	**22 04 16.5**	**0.0**
CO03				*iS*	**Sn**	**22 04 49.3**	**-0.6**
ACAN	**Cantantal**	**2.87**	**63**	IAML		22 04 54.8	
	comp=Z,598nm,0.6s						
GO04	**Tololo Observa**	**3.47**	**352**⇓	*iP*	**Pn**	**22 04 24.4**	**-1.1**
GO04				*iS*	**Sn**	**22 05 02.7**	**-3.4**
CO01	**Juntas del Tor**	**3.63**	**2**	*eP*	**Pn**	**22 04 28.2**	**+0.6**
LCO	**Las Campanas**	**4.61**	**355**	*eS*	**Sn**	**22 05 30.5**	**-3.0**
LCO				IAML		22 05 36.2	
	comp=Z,191nm,0.2s						
ACLC	**CERRO LA CRUZ**	**5.02**	**34**	*eS*	Sn	22 05 30.4	-13
VCA	**Vinchina**	**5.16**	**20**	IAML		22 05 50.9	
	comp=Z,54nm,0.4s						
PLCA	**Paso Flores**	**7.11**	**182**	P	**Pn**	**22 05 15.5**	**+1.2**
	comp=Z,2.2nm,0.9s,baz=7.6,slow=15,SNR=1.9						
LPAZ	**La Paz**	**17.36**	**7**	P	**Pn**	**22 07 29.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=182,slow=9.0,SNR=4.1						
ATAH	**Atahualpa**	**27.42**	**342**	LR	LR	22 19 31.5	
	comp=Z,58nm,18.9s,baz=112,slow=35						
QSPA	**South Pole Qui**	**56.62**	**180**	P	**P**	**22 13 04.0**	**0.0**
	comp=Z,1.2nm,0.8s,baz=274,slow=13,SNR=2.4						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**70.17**	**329**	P	**P**	**22 14 34.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.9,SNR=6.0						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**82.65**	**69**	P	**P**	**22 15 44.0**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=260,slow=5.1,SNR=4.2						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**84.13**	**332**	P	**P**	**22 15 52.8**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.3,SNR=3.7						
	comp=Z,0.3nm,0.4s						
NVAR	**Mina Array Bea**	**84.46**	**324**	P	**P**	**22 15 53.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=124,slow=2.2,SNR=1.9						
	comp=Z,0.6nm,0.8s						
BVAR	**Borovoye Array**	**145.96**	**43**	PKPbc	**PKPab**	**22 22 59.6**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=282,slow=2.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**153.08**	**33**	PKPbc	**PKPbc**	**22 23 16.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=270,slow=1.2,SNR=7.6						
MKAR	**Makanchi Array**	**155.36**	**50**	PKPab	**PKPab**	**22 23 38.1**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=321,slow=3.7,SNR=2.5						

*NNC **09** 22:10:32.4±0.9, 45°.09N×81°.50E, h0km, mb3.3, mpv3.5,*
Error ellipse: s-maj=9.4km s-min=5.0km az=128.0
*SOME **09** 22:10:32.4, 45°.05N×81°.53E, h20km*
ISC 09 22:10:32.2±0.9, 45°.08N±0°.04×81°.56E±0°.04, h10km, n31,
σ1§27/50, 2C, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
DJR	**Jarkent**	**1.46**	**240**	P	**Pg**	**22 10 59.6**	**-0.6**
	11nm,0.1s						
DJR				S	**Sg**	**22 11 19.0**	**-0.3**
	17nm,0.1s						
DJR	**Jarkent**	**1.46**	**240**	*eP*	**Pg**	**22 10 59.6**	**-0.6**
	11nm,0.1s						
DJR				*eS*	**Sg**	**22 11 19.0**	**-0.3**
	17nm,0.1s						
KAPS	**Kapalarasan**	**1.57**	**278**	P	**Pg**	**22 11 01.5**	**-0.8**
	21nm,0.1s						
KAPS				S	**Sg**	**22 11 22.5**	**-0.2**
	119nm,0.1s						
KAPS	**Kapalarasan**	**1.57**	**278**	*eP*	**Pg**	**22 11 01.5**	**-0.8**
	21nm,0.1s						
KAPS				*eS*	**Sg**	**22 11 22.5**	**-0.2**
	119nm,0.1s						
MK31	**Makanchi Array**	**1.79**	**16**	Pn	**Pb**	**22 11 04.1**	**-1.0**
	0.6nm,0.2s,baz=323,slow=3.4,SNR=160						
MK31				Sn	**Sb**	**22 11 27.2**	**-0.5**
	1.2nm,0.2s,baz=202,slow=27,SNR=17						
KNOS	**Konyrlen**	**1.84**	**248**	P	**Pg**	**22 11 06.3**	**-1.2**
	14nm,0.2s						
KNOS				S	**Sg**	**22 11 30.5**	**-0.9**
	79nm,0.2s						
KTMS	**Ketmen**	**1.84**	**208**	P	**Pb**	**22 11 05.5**	**-0.6**
	8.9nm,0.1s						
KTMS				S	**Sg**	**22 11 30.1**	**-1.4**
	22nm,0.2s						
KTMS	**Ketmen**	**1.84**	**208**	*eP*	**Pb**	**22 11 05.5**	**-0.6**
	8.9nm,0.1s						
KTMS				*eS*	**Sg**	**22 11 30.1**	**-1.4**
	22nm,0.2s						
TDK	**Taldyqorghan**	**2.24**	**269**	Pg	**Pb**	**22 11 13.1**	**+0.4**
	41nm,0.3s						
TDK				Lg	Lg	22 11 42.6	
	78nm,0.3s						
TDK	**Taldyqorghan**	**2.24**	**269**	*eP*	**Pb**	**22 11 13.1**	**+0.4**
	41nm,0.3s						
TDK				*eS*	**Sg**	**22 11 42.6**	**-1.4**
	78nm,0.3s						
PDGK	**Podgornoye**	**2.29**	**221**	⇑Pn	**Pn**	**22 11 10.9**	**+0.7**
	2.8nm,0.3s						
PDGK				⇑Sn	**Sb**	**22 11 43.1**	**+0.9**
	48nm,0.6s						
BLB	**Baldybastay**	**2.41**	**247**	Pg	**Pb**	**22 11 16.2**	**+0.5**
	25nm,0.2s						
BLB				Lg	Lg	22 11 48.2	
	58nm,0.3s						
SHLS	**Shalkode**	**2.44**	**219**	Pg	**Pn**	**22 11 12.9**	**+0.7**
	27nm,0.1s						
SHLS				Lg	Lg	22 11 42.3	
	55nm,0.3s						
SHLS	**Shalkode**	**2.44**	**219**	*eP*	**Pn**	**22 11 12.9**	**+0.7**
	27nm,0.1s						
SHLS				*eS*	**Sn**	**22 11 42.3**	**+0.1**
	55nm,0.3s						
UZB	**Uzynbulak**	**2.66**	**224**	Pg	**Pb**	**22 11 19.9**	**0.0**
	3.8nm,0.1s						
UZB				Lg	Lg	22 11 54.0	
	29nm,0.1s						
UZB	**Uzynbulak**	**2.66**	**224**	*eP*	**Pb**	**22 11 19.9**	**0.0**
	3.8nm,0.1s						
UZB				*eS*	**Sb**	**22 11 54.0**	**+1.4**
	29nm,0.1s						
ARXS	**Arharly**	**2.80**	**253**	Pg	**Pb**	**22 11 21.8**	**-0.5**
	5.2nm,0.2s						
ARXS				Lg	Lg	22 11 57.4	
	44nm,0.2s						
ARXS	**Arharly**	**2.80**	**253**	*eP*	**Pb**	**22 11 21.8**	**-0.5**
	5.2nm,0.2s						
ARXS				*eS*	**Sb**	**22 11 57.4**	**+0.7**
	44nm,0.2s						
KURS	**Kuram**	**2.91**	**238**	Pg	**Pb**	**22 11 24.0**	**-0.1**
	2.8nm,0.3s						
KURS				Lg	Lg	22 12 00.7	
	12nm,0.3s						
KURS	**Kuram**	**2.91**	**238**	*eP*	**Pb**	**22 11 24.0**	**-0.1**
	2.8nm,0.3s						
KURS				*eS*	**Sb**	**22 12 00.7**	**+0.9**
	12nm,0.3s						
SATY	**Saty**	**3.04**	**230**	Pg	**Pb**	**22 11 26.3**	**-0.2**
	4.4nm,0.1s						
SATY				Lg	Lg	22 12 05.0	
	28nm,0.2s						
SATY	**Saty**	**3.04**	**230**	*eP*	**Pb**	**22 11 26.2**	**-0.2**
	4.4nm,0.1s						
SATY				*eS*	**Sb**	**22 12 05.0**	**+1.5**
	28nm,0.2s						
ZSN	**Zaisan**	**3.30**	**43**	Pg	**Pb**	**22 11 31.3**	**+0.5**
	3.5nm,0.2s						
ZSN				Lg	Lg	22 12 13.4	
	17nm,0.4s						
ZSN	**Zaisan**	**3.30**	**43**	*eP*	**Pb**	**22 11 31.3**	**+0.5**
	3.5nm,0.2s						
ZSN				*eS*	**Sb**	**22 12 13.4**	**+2.3**
	17nm,0.4s						
KOTS	**Kotyrbulak**	**3.69**	**242**	Pg	**Pb**	**22 11 38.1**	**+0.6**
	3.3nm,0.2s						
KOTS				Lg	Lg	22 12 25.8	
	20nm,0.4s						
KOTS	**Kotyrbulak**	**3.69**	**242**	*eP*	**Pb**	**22 11 38.1**	**+0.6**
	3.3nm,0.2s						
KOTS				*eS*	**Sb**	**22 12 25.8**	**+3.3**
	20nm,0.4s						
KTBS	**Karatobe**	**3.75**	**250**	Pg	**Pb**	**22 11 38.6**	**0.0**
	0.3nm,0.1s						
KTBS				Lg	Lg	22 12 25.8	
	16nm,0.5s						
KTBS	**Karatobe**	**3.75**	**250**	*eP*	**Pb**	**22 11 38.6**	**0.0**
	0.3nm,0.1s						
KTBS				*eS*	**Sb**	**22 12 25.8**	**+1.7**
	16nm,0.5s						
MDOK	**Medeo**	**3.77**	**241**	Pg	**Pb**	**22 11 39.3**	**+0.4**
	3.4nm,0.3s						
MDOK				Lg	Lg	22 12 27.0	
	11nm,0.3s						
KST	**Kastek**	**4.52**	**245**	Pg	**Pb**	**22 11 52.4**	**+0.8**
	0.8nm,0.2s						
KST				Lg	Lg	22 12 49.6	
	8.3nm,0.5s						
KST	**Kastek**	**4.52**	**245**	*eP*	**Pb**	**22 11 53.8**	**+2.1**
	1.0nm,0.3s						
KST				*eS*	**Sg**	**22 12 51.8**	**-5.3**
	8.3nm,0.5s						

*IDC **09** 22:10:58.2±2.3, 6°.02S×130°.49E, h123km±25km, mb3.6/1,*
mbtmp4.0/6, Error ellipse: s-maj=43.3km s-min=20.0km
az=92.0
ISC 09 22:10:56.2±0.9, 6°.12S±0°.06×130°.5E±0°.1, h124km, n6,
σ3§63/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SIJI	**Sorong**	**5.26**	**8**	P	**Pn**	**22 12 13.8**	**+1.0**
	16nm,0.2s,baz=177,slow=18,SNR=34						
SIJI				S	**Sn**	**22 13 07.7**	**-4.8**
	24nm,0.3s,baz=347,slow=23,SNR=14						
BATI	**Baumata**	**7.92**	**239**	P	**Pn**	**22 12 50.9**	**+2.2**
	15nm,0.3s,baz=134,slow=3.1,SNR=4.1						
BATI				S	**Sn**	**22 14 12.4**	**-4.4**
	7.5nm,0.3s,baz=8.6,slow=8.8,SNR=2.1						
FITZ	**Fitzroy Crossi**	**12.83**	**201**	P	**Pn**	**22 13 56.9**	**+2.8**
	1.1nm,0.3s,baz=31,slow=11,SNR=12						
FITZ				S	**Sn**	**22 16 12.9**	**-2.7**
	2.9nm,0.3s,baz=201,slow=19,SNR=12						
WRA	**Warramunga Arr**	**14.23**	**165**	P	**Pn**	**22 14 13.9**	**+1.7**
	0.5nm,0.6s,baz=351,slow=13,SNR=17						
WRA				S	**Sn**	**22 16 44.9**	**-4.6**
	0.9nm,0.5s,baz=335,slow=21,SNR=8.5						
ASAR	**Alice Springs**	**17.75**	**170**	P	**Pn**	**22 14 59.4**	**+3.8**
	2.0nm,0.6s,baz=344,slow=9.3,SNR=24						
ASAR				S	**S**	**22 18 11.3**	**-1.5**
	0.4nm,0.5s,baz=321,slow=16,SNR=4.5						
MKAR	**Makanchi Array**	**67.78**	**326**	P	**P**	**22 21 42.1**	**+1.4**
	0.6nm,0.4s,baz=119,slow=7.6,SNR=16						
	0.6nm,0.4s						

*IDC **09** 23:04:24.6±1.1, 42°.07N×83°.92E, h0km, mb3.7/6,*
mbtmp3.5/10, ML2.8/4, MS3.7/1, Error ellipse:
s-maj=25.1km s-min=13.9km az=68.0
*SOME **09** 23:04:27.9, 42°.15N×83°.58E, h5km*
*NNC **09** 23:04:29.8±1.8, 42°.19N×83°.55E, h0km, mb4.2, mpv3.9,*
Error ellipse: s-maj=15.2km s-min=9.4km az=166.0

ISC 09 23:04:27.0±1.0, 42°.11N±0°.06×83°.60E±0°.04, h15km, n44,
σ2§41/60, mb3.6/5, 3C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
KTMS	**Ketmen**	**2.73**	**300**	Pg	**Pg**	**23 05 19.5**	**+0.1**
	29nm,0.3s						
KTMS				Lg	Lg	23 05 57.2	
	106nm,0.2s						
KTMS	**Ketmen**	**2.73**	**300**	*eP*	**Pg**	**23 05 19.5**	**+0.1**
	29nm,0.3s						
KTMS				*eS*	**Sg**	**23 05 57.2**	**+2.4**
	106nm,0.2s						
SHLS	**Shalkode**	**3.23**	**290**	Pg	**Pb**	**23 05 23.9**	**-0.1**
	97nm,0.2s						
SHLS				Lg	Lg	23 06 05.2	
	426nm,0.3s						
SHLS	**Shalkode**	**3.23**	**290**	*eP*	**Pb**	**23 05 22.2**	**-1.8**
	82nm,0.3s						
SHLS				*eS*	**Sb**	**23 06 01.2**	**-1.9**
	426nm,0.3s						
PDGK	**Podgornoye**	**3.26**	**293**	⇓Pn	**Pb**	**23 05 22.8**	**-1.8**
	0.5nm,0.1s						
PDGK				⇑Pg	**Pg**	**23 05 27.6**	**-1.9**
	14nm,0.4s						
PDGK				⇑Sn	**Sb**	**23 06 00.5**	**-3.7**
	20nm,0.6s						
PDGK				⇑Lg	Lg	23 06 13.7	
	106nm,0.6s						
UZB	**Uzynbulak**	**3.53**	**289**	Pg	**Pg**	**23 05 32.7**	**-2.0**
	14nm,0.3s						
UZB				Lg	Lg	23 06 19.4	
	64nm,0.3s						
UZB	**Uzynbulak**	**3.53**	**289**	*eP*	**Pg**	**23 05 32.6**	**-2.0**
	14nm,0.3s						
UZB				*eS*	**Sg**	**23 06 19.4**	**-0.9**
	64nm,0.3s						
DJR	**Jarkent**	**3.56**	**310**	Pg	**Pg**	**23 05 33.9**	**-1.3**
	17nm,0.3s						
DJR				Lg	Lg	23 06 22.0	
	15nm,0.2s						
DJR	**Jarkent**	**3.56**	**310**	*eP*	**Pg**	**23 05 33.9**	**-1.3**
	17nm,0.3s						
DJR				*eS*	**Sg**	**23 06 22.0**	**+0.8**
	15nm,0.2s						
KNOS	**Konyrlen**	**3.93**	**306**	Pg	**Pg**	**23 05 40.6**	**-1.7**
	18nm,0.3s						
KNOS				Lg	Lg	23 06 33.9	
	49nm,0.2s						
SATY	**Saty**	**3.95**	**286**	Pg	**Pg**	**23 05 40.2**	**-2.4**
	10nm,0.1s						
SATY				Lg	Lg	23 06 32.7	
	41nm,0.1s						
SATY	**Saty**	**3.95**	**286**	*eP*	**Pg**	**23 05 40.2**	**-2.4**
	10nm,0.1s						
SATY				*eS*	**Sg**	**23 06 32.8**	**-1.0**
	41nm,0.1s						
KURS	**Kuram**	**4.22**	**291**	Pg	**Pg**	**23 05 45.1**	**-2.7**
	7.2nm,0.3s						
KURS				Lg	Lg	23 06 41.2	
	43nm,0.6s						
KURS	**Kuram**	**4.22**	**291**	*eP*	**Pg**	**23 05 45.1**	**-2.7**
	7.2nm,0.3s						
KURS				*eS*	**Sg**	**23 06 41.2**	**-1.4**
	43nm,0.6s						
BLB	**Baldybastay**	**4.24**	**300**	Pg	**Pg**	**23 05 44.4**	**-3.8**
	23nm,0.3s						
BLB				Lg	Lg	23 06 40.7	
	70nm,0.5s						
KAPS	**Kapalarasan**	**4.42**	**317**	Pg	**Pb**	**23 05 46.2**	**+1.9**
	5.2nm,0.1s						
KAPS				Lg	Lg	23 06 42.2	
	36nm,0.2s						
KAPS	**Kapalarasan**	**4.42**	**317**	*eP*	**Pg**	**23 05 48.4**	**-3.1**
	4.6nm,0.1s						
KAPS				*eS*	**Sg**	**23 06 46.2**	**-2.5**
	49nm,0.2s						
ARXS	**Arharly**	**4.71**	**298**	Pg	**Pg**	**23 05 56.8**	**-0.4**
	13nm,0.3s						
ARXS				Lg	Lg	23 07 01.1	
	81nm,0.5s						
ARXS	**Arharly**	**4.71**	**298**	*eP*	**Pg**	**23 05 54.7**	**-2.5**
	13nm,0.3s						
ARXS				*eS*	**Sg**	**23 06 57.1**	**-1.2**
	81nm,0.6s						
TDK	**Taldyqorghan**	**4.75**	**309**	Pg	**Pg**	**23 05 56.4**	**-1.5**
	38nm,0.2s						
TDK				Lg	Lg	23 06 60.0	
	51nm,0.2s						
TDK	**Taldyqorghan**	**4.75**	**309**	*eP*	**Pg**	**23 05 54.8**	**-3.1**
	18nm,0.2s						
TDK				*eS*	**Sg**	**23 06 57.1**	**-2.4**
	37nm,0.2s						
MK31	**Makanchi Array**	**4.77**	**349**	Pn	Pn	23 05 42.0	+3.6
	0.1nm,0.2s,baz=160,slow=13,SNR=23						
MK31				Pg	**Pg**	**23 05 55.3**	**-3.1**
	3.2nm,0.3s,baz=161,slow=17,SNR=34						
MK31				Lg	Lg	23 06 55.9	
	18nm,0.5s,baz=165,slow=32,SNR=6.0						
MKAR	**Makanchi Array**	**4.77**	**349**	Pn	**Pn**	**23 05 41.1**	**+2.8**
	0.6nm,0.3s,baz=163,slow=14,SNR=17						
MKAR				Pg	**Pb**	**23 05 52.3**	**+2.0**
	4.0nm,0.3s,baz=167,slow=15,SNR=26						
MKAR				Sn	**Sn**	**23 06 38.0**	**+4.6**
	3.7nm,0.3s,baz=165,slow=23,SNR=4.4						
MKAR				Lg	Lg	23 06 57.4	
	7.3nm,0.3s,baz=171,slow=31,SNR=9.6						
	0.6nm,0.3s						
MDOK	**Medeo**	**4.94**	**284**	Pg	**Pg**	**23 06 00.5**	**-1.2**
	10nm,0.5s						
MDOK				Lg	Lg	23 07 07.2	
	34nm,0.8s						
TNSS	**Tian-Shan**	**5.00**	**283**	Pg	**Pb**	**23 05 56.6**	**+2.2**
	1.4nm,0.2s						
TNSS				Lg	Lg	23 07 00.4	
	4.5nm,0.5s						
TNSS	**Tian-Shan**	**5.00**	**283**	*eP*	**Pg**	**23 05 59.1**	**-3.5**
	1.4nm,0.3s						
TNSS				*eS*	**Sg**	**23 07 04.6**	**-2.8**
	5.4nm,0.5s						
KTBS	**Karatobe**	**5.32**	**290**	Pg	**Pg**	**23 06 06.1**	**-2.7**
	0.3nm,0.1s						
KTBS				Lg	Lg	23 07 17.1	
	31nm,0.4s						
KTBS	**Karatobe**	**5.32**	**290**	*eP*	**Pg**	**23 06 06.1**	**-2.7**
	0.3nm,0.1s						
KTBS				*eS*	**Sg**	**23 07 17.1**	**-0.7**
	31nm,0.4s						
ZSN	**Zaisan**	**5.41**	**9**	Pg	**Pg**

ARTI	**Arti**	**21.62**	**320**	P		**P**	**23 09 18.1**	**+1.8**
	1.1nm,0.4s,baz=108,slow=9.6,SNR=4.1								
	1.1nm,0.4s								
JOW	**Kunigami**	**39.40**	**98**	LR		LR	23 29 08.6		
	comp=Z,97nm,18.8s,baz=198,slow=38								
ARCES	**ARCESS Array B**	**40.20**	**332**	P		**P**	**23 12 03.8**	**+1.4**
	0.9nm,0.7s,baz=105,slow=9.0,SNR=1.4								
	0.9nm,0.7s								
HFS	**Hagfors**	**45.06**	**318**	P		**P**	**23 12 42.8**	**+0.9**
	1.6nm,0.9s,baz=90,slow=3.5,SNR=4.4								
	1.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**75.34**	**275**	P		**P**	**23 16 10.8**	**+0.8**
	0.3nm,0.5s,baz=45,slow=5.2,SNR=5.1								
	0.3nm,0.5s								
WRA	**Warramunga Arr**	**77.50**	**132**	P		**P**	**23 16 20.6**	**-1.4**
	0.3nm,0.6s,baz=332,slow=5.4,SNR=1.8								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**80.27**	**134**	P		**P**	**23 16 36.9**	**-0.3**	
	0.3nm,0.5s,baz=318,slow=4.6,SNR=1.8								
	0.3nm,0.5s								

DJA 09 23:26:01.6±0.6, 3°S±4°×14°0E±°, h12km±6km, M3.5/6, mB6.3/1, MLv3.5/6, Mw(mB)6.0/1, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.68**	**7**	P	Pb	23 26 15.2	-0.2
GENI				S	Sb	23 26 25.8	+1.1
JAY	**Jayapura**	**0.97**	**39**	P	Pg	23 26 19.7	-0.6
JAY				S	Sb	23 26 33.9	+0.7
BAKI	**Biak**	**4.48**	**297**	P	Pn	23 27 09.3	-0.1
MMPI	**Merauke**	**5.17**	**177**	P	Pn	23 27 20.4	+1.5

*MEX **09** 23:27:53.1±0.8, 14.7°73N×92.7°49W, h85km±7km, MD4.0*
*GCG **09** 23:27:54.3±0.8, 14.7°73N×92.7°40W, h64km±12km, MD3.6, ML3.6, Presumed earthquake*

ISC 09 23:27:50.7±1.6, 14°58N±0°09×92°52W±0°06, h79km±10km, n16, σ1°71/28, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.41**	**37**	*i* P	**Pn**	**23 28 04.2**	**+0.5**
THIG				*i* S	**Sn**	**23 28 13.7**	**+0.4**
PATR	**El Naranjo**	**0.60**	**27**	*eP*	**Pn**	**23 28 05.4**	**-0.3**
PATR				*eS*	**Sn**	**23 28 15.4**	**-1.3**
CHUJ	**Union Juarez**	**0.65**	**38**	*eP*	**Pn**	**23 28 06.2**	**+0.1**
CHUJ				*i* S	**Sn**	**23 28 16.3**	**-1.2**
PAVE	**Pavencul**	**0.70**	**28**	*eP*	**Pn**	**23 28 06.6**	**+0.1**
PAVE				*eS*	**Sn**	**23 28 17.6**	**-0.7**
RTAL	**Retalhuleu**	**0.80**	**94**	*i* P	**Pn**	**23 28 09.3**	**+1.9**
RTAL				*i* S	**Sn**	**23 28 21.5**	**+1.6**
QUEO	**Labor Ovalle**	**1.02**	**73**	*i* P	**Pn**	**23 28 12.1**	**+1.9**
QUEO				*i* S	**Sn**	**23 28 26.4**	**+1.6**
STG8	**El Palmar, Qui**	**1.14**	**96**	*i* P	**Pn**	**23 28 09.9**	**-1.7**
STG8				IAML		23 28 24.2	
	comp=E,2μm,0.2s						
STG5	**El Palmar, Qui**	**1.15**	**98**	*i* P	**Pn**	**23 28 10.0**	**-1.6**
STG5				*i* S	**Sn**	**23 28 23.0**	**-4.3**
ESSG	**Sabana Grande**	**1.65**	**96**	*i* P	**Pn**	**23 28 20.2**	**+2.2**
ESSG				*i* S	**Sn**	**23 28 40.2**	**+1.5**
FG16	**Alotenango, Sa**	**1.97**	**99**	*i* P	**Pn**	**23 28 20.4**	**-2.0**
APG	**El Apazote**	**2.04**	**78**	*i* P	**Pn**	**23 28 25.1**	**+1.9**
CARR	**Arriaga**	**2.14**	**321**	*eP*	**Pn**	**23 28 26.1**	**+1.7**
CARR				*eS*	**Sn**	**23 28 50.9**	**+0.8**
TGIG		**2.27**	**345**	*eP*	**Pn**	**23 28 26.1**	**-0.1**
TGIG				*eS*	**Sn**	**23 28 51.2**	**-2.2**
CMIG	**Matias Romero**	**3.38**	**318**	*eP*	**Pn**	**23 28 41.7**	**+0.5**
CMIG				*eS*	**Sn**	**23 29 19.6**	**-0.6**
PETF	**Flores**	**3.46**	**47**	*eP*	**Pn**	**23 28 43.5**	**+1.3**
PETF				*i* S	**Sn**	**23 29 20.4**	**-1.7**
NEUV	**Arroyo Zacate**	**4.43**	**315**	*eS*	**Sn**	**23 29 44.8**	**-1.2**

IDC 09 23:29:05.1±14.0, 6°80S×12°57W, h0km, mb3.4/3, mbtmp3.4/3, MS3.2/4, Error ellipse: s-maj=476.3km s-min=147.3km az=152.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR 2.16**		**242**	T	T	23 31 52.9	
	baz=69,slow=74,SNR=948						
H10N1	**ASCENSION HYDR 2.16**		**241**	T	T	23 31 51.8	
	baz=69,slow=74,SNR=924						
H10N3	**ASCENSION HYDR 2.18**		**241**	T	T	23 31 55.6	
	baz=69,slow=74,SNR=700						
H10S2	**ASCENSION HYDR 2.97**		**224**	T	T	23 32 47.6	
	baz=172,slow=74,SNR=259						
H10S3	**ASCENSION HYDR 2.98**		**224**	T	T	23 32 48.2	
	baz=48,slow=74,SNR=199						
DBIC	**Dimbokro**	**15.44**	**30**	LR	LR	23 37 26.1	
	comp=Z,43nm,18.4s,baz=159,slow=32						
TORD	**Torodi Ar. Bea**	**24.36**	**36**	P	P	23 34 25.1	0.0
	1.0nm,0.6s,baz=216,slow=10,SNR=8.1						
	1.0nm,0.6s						
LBTB	**Lobatse**	**40.73**	**121**	LR	LR	23 50 56.0	
	comp=Z,40nm,19.1s,baz=89,slow=32						
GERES	**GERESS Array B**	**60.00**	**20**	P	P	23 39 13.6	0.0
	0.1nm,0.3s,baz=210,slow=7.3,SNR=1.6						
	0.1nm,0.3s						
VRAC	**Vranov**	**61.40**	**21**	LR	LR	00 05 43.4	
	comp=Z,25nm,18.1s,baz=137,slow=36						
AKASG	**Malin Array Be**	**67.67**	**27**	P	P	23 40 03.9	0.0
	0.1nm,0.3s,baz=229,slow=7.2,SNR=5.0						
AKASG				LR	LR	00 12 47.9	
	comp=Z,19nm,18.2s,baz=142,slow=39						
	0.1nm,0.3s						

*SOME **09** 23:31:21.0, 42°.13N×83°.88E, h10km*
*NNC **09** 23:31:24.2±2.5, 42°.15N×83°.69E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=20.9km s-min=11.8km az=165.0*

ISC 09 23:31:25.8±2.4, 42°2N±0°1×83°61E±0°08, h10km, n20, σ2°09/31, 2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.73**	**300**	Pg	**Pb**	**23 32 13.4**	**-1.4**
	8.9nm,0.3s						
KTMS				Lg	Lg	23 32 51.2	
	25nm,0.2s						
KTMS	**Ketmen**	**2.73**	**300**	*eP*	**Pb**	**23 32 14.2**	**-0.6**
	8.9nm,0.3s						
KTMS				*eS*	**Sg**	**23 32 52.5**	**-1.0**
	61nm,0.3s						
SHLS	**Shalkode**	**3.23**	**290**	Pg	**Pn**	**23 32 19.1**	**+2.5**
	29nm,0.2s						
SHLS				Lg	Lg	23 33 01.1	
	75nm,0.4s						
SHLS	**Shalkode**	**3.23**	**290**	*eP*	**Pn**	**23 32 17.7**	**+1.1**
	29nm,0.2s						
SHLS				*eS*	**Sn**	**23 32 58.5**	**+3.4**
	107nm,0.5s						
PDGK	**Podgornoye**	**3.26**	**293**	⇑Pg	**Pb**	**23 32 23.2**	**-0.6**
	3.7nm,0.4s						
PDGK				⇓Lg	Lg	23 33 10.3	
	23nm,0.6s						
UZB	**Uzynbulak**	**3.53**	**288**	Pg	**Pb**	**23 32 28.8**	**+0.4**
	3.1nm,0.2s						
UZB				Lg	Lg	23 33 17.8	
	26nm,0.3s						
UZB	**Uzynbulak**	**3.53**	**288**	*eP*	**Pb**	**23 32 28.8**	**+0.4**
	3.1nm,0.2s						
UZB				*eS*	**Sg**	**23 33 17.8**	**-1.4**
	26nm,0.3s						
DJR	**Jarkent**	**3.55**	**309**	Pg	**Pb**	**23 32 29.8**	**+1.2**
	2.7nm,0.1s						
DJR				Lg	Lg	23 33 19.6	
	4.5nm,0.3s						
DJR	**Jarkent**	**3.55**	**309**	*eP*	**Pb**	**23 32 28.4**	**-0.2**
	2.7nm,0.1s						
DJR				*eS*	**Sg**	**23 33 16.9**	**-2.7**
	4.5nm,0.2s						
KNOS	**Konyrlen**	**3.92**	**306**	Pg	**Pb**	**23 32 36.7**	**+1.6**
	5.1nm,0.3s						
KNOS				Pg	Pg	23 32 51.5	+11
	5.1nm,0.3s						
KNOS				Lg	Lg	23 33 32.0	
	14nm,0.3s						
KNOS				Lg	Lg	23 33 47.9	
	14nm,0.2s						
SATY	**Saty**	**3.95**	**285**	Pg	**Pb**	**23 32 35.8**	**+0.2**
	2.6nm,0.1s						
SATY				Lg	Lg	23 33 30.5	
	11nm,0.1s						
SATY	**Saty**	**3.95**	**285**	*eP*	**Pb**	**23 32 35.8**	**+0.2**
	2.6nm,0.1s						
SATY				*eS*	**Sg**	**23 33 30.5**	**-2.1**
	11nm,0.1s						
BLB	**Baldybastay**	**4.24**	**299**	Pg	**Pb**	**23 32 41.1**	**+0.7**
	6.4nm,0.4s						
BLB				Pg	**Pg**	**23 32 47.2**	**+0.3**
	3.8nm,0.1s						
BLB				Lg	Lg	23 33 39.5	
	16nm,0.3s						
BLB				Lg	Lg	23 33 40.2	
	19nm,0.7s						
ARXS	**Arharly**	**4.71**	**298**	Pg	**Pb**	**23 32 50.8**	**+2.4**
	3.3nm,0.2s						
ARXS				Pg	**Pg**	**23 32 56.6**	**+0.7**
	2.2nm,0.2s						
ARXS				Lg	Lg	23 33 56.0	
	20nm,0.4s						
ARXS				Lg	Lg	23 33 56.5	
	20nm,0.6s						
ARXS	**Arharly**	**4.71**	**298**	*eP*	**Pb**	**23 32 50.9**	**+2.4**
	3.3nm,0.2s						
ARXS				*eS*	**Sg**	**23 33 56.0**	**-0.9**
	20nm,0.4s						
MK31	**Makanchi Array**	**4.74**	**349**	⇑Pn	**Pn**	**23 32 37.4**	**+0.1**
	baz=337,slow=8.3,SNR=23						
MK31				Pg	**Pb**	**23 32 51.1**	**+2.2**
	1.2nm,0.5s,baz=159,slow=16,SNR=18						
MK31				Lg	Lg	23 33 53.0	
	4.4nm,0.5s,baz=161,slow=29,SNR=4.2						
ZSN	**Zaisan**	**5.38**	**9**	Pg	**Pb**	**23 33 01.3**	**+1.5**
	3.3nm,0.2s						
ZSN				Lg	Lg	23 34 13.5	
	19nm,0.5s						
ZSN	**Zaisan**	**5.38**	**9**	*eP*	**Pb**	**23 33 01.3**	**+1.5**
	3.3nm,0.2s						
ZSN				*eS*	**Sg**	**23 34 13.5**	**-4.9**
	19nm,0.5s						
KST	**Kastek**	**5.72**	**282**	Pg	**Pg**	**23 33 11.1**	**-4.2**
	1.5nm,0.2s						
KST				Lg	Lg	23 34 30.3	
	7.0nm,0.5s						
KST	**Kastek**	**5.72**	**282**	*eP*	**Pg**	**23 33 11.1**	**-4.2**
	1.5nm,0.2s						
KST				*eS*	**Sg**	**23 34 30.3**	**+1.0**
	7.0nm,0.5s						

IDC 09 23:34:17.0±1.6, 14°63S×173°70W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=64.9km s-min=26.1km az=162.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.00**	**69**	Pn	Pn	23 34 52.0	-0.1
	55nm,0.3s,baz=191,slow=3.5,SNR=62						
AFI				Sn	Sn	23 35 12.5	-5.3
	199nm,0.3s,baz=82,slow=23,SNR=21						
H11S2	**WAKE ISLAND Hy 38.16**		**329**	T	T	00 22 32.5	
	baz=146,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy 38.17**		**329**	T	T	00 22 33.6	
	baz=146,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy 38.18**		**329**	T	T	00 22 33.9	
	baz=146,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy 39.10**		**330**	T	T	00 23 44.6	
	baz=146,slow=76,SNR=2.8						
H11N1	**WAKE ISLAND Hy 39.11**		**330**	T	T	00 23 44.1	
	baz=146,slow=76,SNR=4.5						
H11N2	**WAKE ISLAND Hy 39.12**		**330**	T	T	00 23 45.4	
	baz=146,slow=76,SNR=2.7						
WRA	**Warramunga Arr**	**49.74**	**256**	P	P	23 43 11.8	+0.2
	0.5nm,0.8s,baz=92,slow=7.5,SNR=2.2						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**50.08**	**251**	P	P	23 43 13.8	-0.4
	1.4nm,0.5s,baz=88,slow=8.1,SNR=17						
	1.4nm,0.5s						
VNDA	**Vanda**	**64.11**	**186**	P	P	23 44 52.7	+0.1
	0.3nm,0.6s,baz=37,slow=5.1,SNR=3.7						
	0.3nm,0.6s						

*NOU **10** 00:06:51.5, 21°.97S×170°.74E, h0km, mb4.3/12, Southeast of Loyalty Islands*
*IDC **10** 00:06:53.8±7.7, 21°.72S×170°.78E, h135km±46km, mb3.4/2, mbtmp3.9/3, Error ellipse: s-maj=149.9km s-min=51.5km az=159.0*

ISC 10 00:06:49.5±2.2, 22°0S±0°4×171°1E±0°2, h112km, n12, σ0°57/13, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.89**	**280**	P	**Pn**	**00 07 34.4**	**+0.4**
YATNC	**Mamie plateau,**	**3.89**	**268**	P	**Pn**	**00 07 46.9**	**-0.5**
OUENC	**Ouen Island, N**	**3.95**	**263**	P	**Pn**	**00 07 48.4**	**+0.2**
OUENC	**Ouen Island, N**	**3.95**	**263**	S	**Sn**	**00 08 33.2**	**-0.6**
ONTNC	**Ouen Toro**	**4.30**	**265**	P	**Pn**	**00 07 53.7**	**+0.8**
ONTNC	**Ouen Toro**	**4.30**	**265**	S	**Sn**	**00 08 42.4**	**+0.2**
DZM	**Mont Dzumac**	**4.31**	**268**	P	**Pn**	**00 07 53.9**	**+0.8**
DZM	46nm,0.3s,baz=229,slow=23,SNR=114			S	**Sn**	**00 08 41.9**	**-0.5**
	88nm,0.6s,baz=41,slow=15,SNR=16						
NOUC	**Port Laguerre**	**4.44**	**268**	P	**Pn**	**00 07 55.3**	**+0.6**
NOUC	**Port Laguerre**	**4.44**	**268**	S	**Sn**	**00 08 45.8**	**+0.4**
ASAR	**Alice Springs**	**34.25**	**260**	P	**P**	**00 13 25.0**	**+0.1**
	2.0nm,0.7s,baz=89,slow=9.5,SNR=15						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**34.32**	**267**	P	**P**	**00 13 24.9**	**-0.7**
	0.3nm,0.5s,baz=97,slow=8.5,SNR=6.4						
	0.3nm,0.5s						
GERES	**GERESS Array B**	**147.74**	**332**	PKPbc	**PKPbc**	**00 26 21.2**	**0.0**
	0.3nm,0.4s,baz=46,slow=2.8,SNR=3.7						

IDC 10 00:19:14.4±1.9, 54°05S×157°91E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=102.0km s-min=22.3km az=71.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**23.61**	**178**	P	P	00 24 26.2	-0.2
	0.8nm,0.9s,baz=336,slow=8.6,SNR=3.8						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**35.29**	**320**	P	P	00 26 11.3	+0.4
	1.5nm,0.9s,baz=161,slow=9.5,SNR=8.6						
	1.5nm,0.9s						
H01W1	**Cape Leeuwin H**	**35.90**	**284**	T	T	01 05 07.8	
	baz=136,slow=76,SNR=43						
H01W2	**Cape Leeuwin H**	**35.91**	**284**	T	T	01 05 14.2	
	baz=136,slow=76,SNR=64						
H01W3	**Cape Leeuwin H**	**35.92**	**284**	T	T	01 05 15.1	
	baz=136,slow=76,SNR=51						
QSPA	**South Pole Qui**	**36.06**	**180**	P	P	00 26 17.5	+0.2
	1.0nm,0.8s,baz=352,slow=1.3,SNR=6.1						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**38.53**	**323**	P	P	00 26 38.1	-0.4
	1.7nm,0.9s,baz=154,slow=8.0,SNR=4.8						
	1.7nm,0.9s						
H08S2	**Diego Garcia H**	**81.17**	**269**	T	T	02 01 41.0	
	baz=144,slow=76,SNR=13						
H08S1	**Diego Carcia H**	**81.19**	**269**	T	T	02 01 46.1	
	baz=144,slow=76,SNR=9.8						
H08S3	**Diego Garcia H**	**81.19**	**269**	T	T	02 01 45.3	
	baz=144,slow=76,SNR=8.3						
ILAR	**Eielson Array**	**125.84**	**26**	PKP	PKPdf	00 38 15.9	-0.7
	0.2nm,0.7s,baz=243,slow=0.6,SNR=1.6						

*IDC **10** 00:48:54.8±5.7, 17°.03N×104°.34W, h0km, mb3.4/4, mbtmp3.5/6, ML2.9/2, MS3.5/21, Error ellipse: s-maj=92.8km s-min=85.2km az=128.0*
*NEIC **10** 00:48:55.1±1.5, 17°.0N±0°.1×105°.3W±0°.04, h10km±2km, mb4.0/26, Error ellipse: s-maj=21.4km s-min=6.2km az=175.0*

ISC 10 00:48:57.4±2.3, 17°2N±0°2×105°2W±0°2, h10km, n50, σ1°33/33, mb3.8/13, MS3.4/18, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOIG	**Morelia**	**4.56**	**56**		**Pn**	**00 50 06.1**	**-0.6**
ZAIG	**Zacatecas**	**6.11**	**24**		**Pn**	**00 50 29.0**	**+1.0**
TLIG	**Tlapa**	**6.35**	**85**	Pn	**Pn**	**00 50 30.7**	**-0.5**
LPIG	**La Paz**	**8.40**	**326**	Pn	Pn	00 51 07.0	+7.8
	27nm,0.3s,baz=183,slow=3.6,SNR=4.7						
LPIG				LR	LR	00 53 19.9	
	comp=Z,580nm,19.0s,baz=177,slow=30						
TX31	**Lajitas Ar. Si**	**12.20**	**6**		**Pn**	**00 51 52.0**	**+0.6**
TXAR	**Lajitas Array**	**12.20**	**6**	Pn	**Pn**	**00 51 53.3**	**+1.9**
	baz=193,slow=14,SNR=18						
TXAR				LR	LR	00 56 50.5	
	comp=Z,192nm,18.9s,baz=185,slow=39						
	3.0nm,0.9s						
TXAR	**Lajitas Array**	**12.20**	**6**	Pn	**Pn**	**00 51 52.0**	**+0.6**
ALPN	**Alpine**	**13.23**	**6**		**Pn**	**00 52 06.4**	**+0.9**
VHRN	**Van Horn**	**13.57**	**1**		**Pn**	**00 52 10.2**	**+0.1**
POST	**Post**	**16.19**	**11**	P	**Pn**	**00 52 46.9**	**+1.8**
Y22A	**Socorro**	**16.78**	**355**		**Pn**	**00 52 52.3**	**-0.5**
LENM	**Lemitar**	**17.01**	**355**	P	**Pn**	**00 52 55.5**	**-0.1**
ANMO	**Albuquerque**	**17.75**	**357**	P	**Pn**	**00 53 04.2**	**-0.6**
	baz=161,slow=16,SNR=3.2						
ANMO				LR	LR	00 59 43.8	
	comp=Z,176nm,18.4s,baz=178,slow=36						
	1.1nm,1.0s						
WUAZ	**Wupatki**	**19.09**	**344**	P	**P**	**00 53 18.2**	**-2.2**
T25A	**Trinidad**	**19.92**	**2**	P	**P**	**00 53 28.7**	**-0.8**
T25A				IAmb	IAmb	00 53 34.9	
	comp=Z,11nm,1.3s						
LCMT	**Little Creek M**	**21.01**	**342**	P	**P**	**00 53 38.8**	**-2.5**
LCMT				IAmb	IAmb	00 53 47.0	
	comp=Z,5.3nm,1.1s						
PV05	**Paradox Valley**	**21.12**	**351**	P	P	00 53 38.8	-3.8
PV05				IAmb	IAmb	00 53 45.9	
	comp=Z,7.8nm,1.2s						
PV10	**Paradox Valley**	**21.40**	**352**	P	P	00 53 41.0	-4.6
U38A	**Gravette**	**21.46**	**24**	P	**P**	**00 53 45.1**	**-0.9**
U38A				IAmb	IAmb	00 53 57.4	
	comp=Z,4.4nm,0.9s						
R32A	**Long Quarter,**	**21.94**	**14**	P	**P**	**00 53 50.7**	**-0.4**
R32A				IAmb	IAmb	00 53 57.8	
	comp=Z,11nm,0.9s						
PRN	**Pahroc Range**	**21.96**	**339**	P	**P**	**00 53 50.9**	**-0.6**
PRN				IAmb	IAmb	00 53 55.0	
	comp=Z,3.5nm,1.0s						
TPNV	**Topopah Spring**	**22.00**	**336**		**P**	**00 53 51.2**	**-0.7**
TPNV				IAmb	IAmb	00 53 57.8	
	comp=Z,6.4nm,1.1s						
Q16A	**Castle Valley**	**22.30**	**348**	P	**P**	**00 53 54.4**	**-0.8**
Q16A				IAmb	IAmb	00 53 58.8	
	comp=Z,6.8nm,0.9s						
CWC	**Cottonwood Cre**	**22.34**	**332**	P	**P**	**00 53 54.0**	**-1.6**
ISCO	**Idaho Springs**	**22.56**	**359**	P	**P**	**00 53 56.3**	**-1.9**
P17A	**Butcher Ranch,**	**22.75**	**349**	P	**P**	**00 53 58.9**	**-1.1**
KSU1	**Kansas State U**	**23.11**	**17**	P	**P**	**00 54 03.0**	**-0.5**
KSU1				IAmb	IAmb	00 54 12.6	
	comp=Z,9.1nm,1.1s						
NVAR	**Mina Array Bea**	**24.10**	**334**	LR	LR	01 03 09.9	
	comp=Z,65nm,20.3s,baz=196,slow=35						
CCM	**Cathedral Cave**	**24.16**	**28**	P	**P**	**00 54 13.1**	**-0.7**
ELK	**Elko**	**25.05**	**342**	P	**P**	**00 54 23.8**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=176,slow=8.9,SNR=3.1						
ELK				LR	LR	01 03 11.7	
	comp=Z,86nm,21.1s,baz=128,slow=34						
	comp=Z,1.3nm,0.9s						
ELK	**Elko**	**25.05**	**342**	P	**P**	**00 54 20.2**	**-2.0**
ELK				IAmb	IAmb	00 54 26.3	
	comp=Z,3.1nm,1.2s						
P40A	**Paris**	**25.06**	**25**	P	**P**	**00 54 20.6**	**-1.3**
PDAR	**Pinedale Array**	**25.79**	**353**	P	**P**	**00 54 30.8**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=170,slow=9.9,SNR=5.8						
PDAR				LR	LR	01 04 28.8	
	comp=Z,64nm,20.2s,baz=160,slow=36						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**25.79**	**353**	P	**P**	**00 54 27.9**	**-1.0**
FXWY	**Fox Creek**	**26.85**	**351**	P	**P**	**00 54 36.5**	**-1.9**
FXWY				IAmb	IAmb	00 54 57.4	
	comp=Z,4.8nm,1.1s						
YBH	**Yreka Blue Hor**	**28.73**	**332**	LR	LR	01 05 46.2	
	comp=Z,93nm,19.4s,baz=166,slow=35						
NEW	**Newport**	**32.52**	**345**	LR	LR	01 08 03.4	
	comp=Z,76nm,19.8s,baz=166,slow=35						
ULM	**Lac du Bonnet**	**33.85**	**11**	LR	LR	01 09 46.1	
	comp=Z,104nm,20.5s,baz=210,slow=37						
SADO	**Sadowa**	**35.16**	**33**	LR	LR	01 11 25.9	
	comp=Z,59nm,18.2s,baz=277,slow=39						
ATAH	**Atahualpa**	**35.85**	**130**	LR	LR	01 07 45.6	
	comp=Z,63nm,22.0s,baz=300,slow=32						
BBB	**Bella Bella**	**39.35**	**338**	LR	LR	01 11 57.6	
	comp=Z,36nm,20.2s,baz=221,slow=35						
DLBC	**Dease Lake**	**45.11**	**342**	LR	LR	01 16 15.5	
	comp=Z,81nm,18.4s,baz=144,slow=36						
YKA	**Yellowknife Ar**	**45.76**	**354**	P	**P**	**00 57 19.6**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=173,slow=8.0,SNR=5.1						
YKA				LR	LR	01 16 57.2	
	comp=Z,57nm,18.3s,baz=210,slow=37						
	comp=Z,0.3nm,0.8s						
LPAZ	**La Paz**	**49.40**	**130**	LR	LR	01 16 16.2	
	comp=Z,48nm,18.1s,baz=338,slow=34						
ILAR	**Eielson Array**	**55.19**	**340**	P	**P**	**00 58 31.8**	**+1.7**
	comp=Z,0.5nm,1.0s,baz=123,slow=7.2,SNR=4.6						
ILAR				LR	LR	01 24 48.8	
	comp=Z,30nm,20.4s,baz=50,slow=39						
	comp=Z,0.5nm,1.0s						
PPT	**Papeete**	**55.67**	**234**	LR	LR	01 16 03.6	
	comp=Z,29nm,18.8s,baz=6.0,slow=29						
CPUP	**Villa Florida**	**63.50**	**132**	LR	LR	01 25 18.8	
	comp=Z,42nm,18.3s,baz=94,slow=35						
RAR	**Rarotonga**	**65.69**	**237**	LR	LR	01 20 04.7	
	comp=Z,81nm,19.1s,baz=38,slow=28						
PLCA	**Paso Flores**	**65.98**	**152**	LR	LR	01 22 32.9	
	comp=Z,65nm,20.0s,baz=196,slow=31						
NOA	**NORSAR Array B**	**87.19**	**26**	LR	LR	01 40 17.7	
	comp=Z,18nm,20.6s,baz=315,slow=36						

*IDC **10** 00:49:45.5±0.9, 8°.71S×124°.15E, h0km, mb3.9/6, mbtmp3.9/10, ML3.8/4, Error ellipse: s-maj=40.7km s-min=16.3km az=77.0*
*NEIC **10** 00:49:52.0±2.5, 8°.92S±0°.06×123°.76E±0°.03, h50km±8km, mb4.2/11, Error ellipse: s-maj=8.6km s-min=4.1km az=192.0*

ISC 10 00:49:53.3±0.6, 9°07S±0°06×123°87E±0°08, h74km, n36, σ2°26/38, mb4.0/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.79**	**150**		**Pn**	**00 50 09.8**	**+0.1**
SOEI				Sn	**Sn**	**00 50 22.1**	**+0.4**
BATI	**Baumata**	**1.15**	**190**	Pn	**Pn**	**00 50 14.6**	**+0.7**
	83nm,0

PETK	Petropavlovsk-	68.31	21	P	P	01 00 46.0	-0.4
	comp=Z,1.2nm,0.6s,baz=224,slow=6.7,SNR=3.0						
	comp=Z,1.2nm,0.6s						
PETK	Petropavlovsk-	68.31	21	P	P	01 00 47.8	+1.3
AAK	Ala-Archa	68.36	323	P	P	01 00 46.4	-0.8
AAK				IAmb	IAmb	01 00 49.8	
	comp=Z,2.6nm,1.1s						
ZALV	Zalesovo Beam	70.91	337	P	P	01 01 02.5	0.0
	comp=Z,0.9nm,0.6s,baz=105,slow=3.2,SNR=4.9						
	comp=Z,0.9nm,0.6s						
H04N2	CROZET ISLANDS	71.09	224	T	T	02 19 07.0	
	baz=81,slow=76,SNR=6.3						
H04N1	CROZET ISLANDS	71.11	224	T	T	02 18 52.2	
	baz=81,slow=76,SNR=5.8						
H04N3	CROZET ISLANDS	71.11	224	T	T	02 19 09.9	
	baz=81,slow=76,SNR=7.2						
VNDA	Vanda	71.20	172	P	P	01 01 06.8	+2.9
	comp=Z,0.4nm,0.8s,baz=333,slow=4.5,SNR=1.5						
	comp=Z,0.4nm,0.8s						
VNDA	Vanda	71.20	172	P	P	01 01 06.8	+2.9
VNDA				IAmb	IAmb	01 01 21.6	
	comp=Z,2.6nm,1.4s						
KURBB	Kurchatov Arra	71.25	331	P	P	01 01 05.4	+0.9
	comp=Z,0.5nm,0.6s,baz=143,slow=5.1,SNR=11						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	71.27	332	P	P	01 01 05.4	+0.8
KURK				IAmb	IAmb	01 01 07.2	
	comp=Z,1.6nm,0.7s						
QSPA	South Pole Qui	80.92	180	P	P	01 02 04.6	+5.1
	comp=Z,1.6nm,1.1s,baz=326,slow=5.8,SNR=2.3						
	comp=Z,1.6nm,1.1s						
QSPA	South Pole Qui	80.92	180	P	P	01 02 01.0	+1.6
QSPA				IAmb	IAmb	01 02 18.3	
	comp=Z,5.8nm,1.3s						
TORD	Torodi Ar. Bea	123.21	280	PKP	PKiKP	01 08 45.1	+2.3
	comp=Z,0.4nm,0.6s,baz=102,slow=2.1,SNR=2.9						

*SDD **10** 01:03:09.1±2.3, 18°.82N×69°.50W, h87km±8km, MD3.1, ML3.5, MW3.6, Presumed earthquake*
*OSPL **10** 01:03:09.2±1.9, 18°.81N×69°.47W, h84km±10km, ML3.2, Presumed earthquake*

ISC 10 01:03:05.5±1.3, 18°.86N±0°.05×69°.52W±0°.03, h102km±7km, n41, σ1§94/59, 15C-11D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATOM	**Hato Mayor del**	0.15	120	↓*i*P		**Pn**	**Pn**	**01 03 20.0**	**+0.1**
HATOM				↓*i*Sg		**Sn**	**Sn**	**01 03 29.7**	**-0.9**
HATOM				IAML				01 03 30.2	
	comp=N,3μm,0.1s								
SMDR	**Samana, DR**	0.53	36	↑*i*P		**Pn**	**Pn**	**01 03 22.6**	**+0.9**
SMDR				↑*i*S		**Sn**	**Sn**	**01 03 35.6**	**+1.8**
SMDR				IAML				01 03 40.8	
	comp=N,2μm,0.6s								
SD01	**Santo Domingo**	0.55	224	↑*i*P		**Pn**	**Pn**	**01 03 22.2**	**+0.4**
SD01				↓*i*Sg		**Sn**	**Sn**	**01 03 32.7**	**-1.4**
SDD	**Santo Domingo**	0.55	223	↑*i*P		**Pn**	**Pn**	**01 03 22.3**	**+0.4**
SDD				↓*i*Sg		**Sn**	**Sn**	**01 03 33.5**	**-0.7**
SDD				IAML				01 03 34.3	
	comp=N,319nm,0.1s								
SDD	**Santo Domingo**	0.55	223	*i*P		**Pn**	**Pn**	**01 03 22.1**	**+0.2**
SDD				*e*S		**Sn**	**Sn**	**01 03 33.2**	**-1.0**
SDD				IAML				01 03 34.5	
	comp=Z,6μm,0.1s								
LOSC1	**San Cristbal**	0.72	231	*i*P		**Pn**	**Pn**	**01 03 24.0**	**+0.7**
LOSC1				*e*S		**Sn**	**Sn**	**01 03 36.3**	**-0.4**
LOSC1				IAML				01 03 37.8	
	comp=Z,1μm,1.3s								
HGY1	**Higuey**	0.80	109	↓*i*P		**Pn**	**Pn**	**01 03 24.5**	**+0.4**
HGY1				IAML				01 03 38.5	
	comp=N,2μm,0.3s								
HIDR	**Higuey Centro**	0.80	109	↑*i*P		**Pn**	**Pn**	**01 03 24.4**	**+0.3**
HIDR				↓*i*Sg		**Sn**	**Sn**	**01 03 37.2**	**-0.8**
HIDR				IAML				01 03 38.5	
	comp=N,4μm,0.2s								
CADR	**Cabrera**	0.90	334	↑*i*P		**Pn**	**Pn**	**01 03 26.1**	**+1.1**
CADR				IAML				01 03 43.6	
	comp=N,995nm,0.6s								
BANI	**BANI**	0.93	240	↑*i*P		**Pn**	**Pn**	**01 03 26.8**	**+1.3**
BANI				↓*i*Sg		**Sn**	**Sn**	**01 03 41.6**	**+1.2**
BANI				IAML				01 03 45.4	
	comp=N,2μm,0.2s								
ABDR	**Alto Bandera**	1.05	268	↓*i*P		**Pn**	**Pn**	**01 03 28.6**	**+1.6**
PCDR	**Punta Cana, DR**	1.13	108	↑*i*P		**Pn**	**Pn**	**01 03 28.6**	**+1.1**
PCDR				IAML				01 03 49.2	
	comp=N,408nm,0.5s								
PCDR	**Punta Cana, DR**	1.13	108	*i*P		**Pn**	**Pn**	**01 03 28.4**	**+0.9**
PCDR				*e*S		**Sn**	**Sn**	**01 03 43.8**	**-0.3**
PCDR				IAML				01 03 45.6	
	comp=Z,159nm,0.5s								
SC01	**Santiago de lo**	1.28	296	↑*i*P		**Pn**	**Pn**	**01 03 32.5**	**+3.2**
SC01				IAML				01 03 57.2	
	comp=N,497nm,0.5s								
SC01	**Santiago de lo**	1.28	296	*i*P		**Pn**	**Pn**	**01 03 32.2**	**+3.0**
SC01				IAML				01 03 55.2	
	comp=Z,269nm,0.3s								
MADR	**Mao Valverde**	1.66	295	↑*i*P		**Pn**	**Pn**	**01 03 35.3**	**+1.5**
MADR				IAML				01 04 03.6	
	comp=N,479nm,0.3s								
SDDR	**Presa de Saban**	1.68	274	↑*i*P		**Pn**	**Pn**	**01 03 37.6**	**+3.5**
SDDR				IAML				01 04 05.2	
	comp=N,218nm,0.3s								
SDDR	**Presa de Saban**	1.68	274	*i*P		**Pn**	**Pn**	**01 03 37.2**	**+3.1**
SDDR				IAML				01 04 07.1	
	comp=Z,2μm,0.3s								
SDDR	**Presa de Saban**	1.68	274	*e*P		**Pn**	**Pn**	**01 03 37.3**	**+3.1**
SDDR				*e*S		**Sn**	**Sn**	**01 04 01.0**	**+4.9**
SDDR				IAML				01 04 05.2	
	comp=Z,232nm,0.3s								
SDDR				IAML				01 04 05.8	
	comp=Z,196nm,0.5s								
REDR	**Restauracion**	1.80	280	↓*i*P		Pn		01 03 41.7	+6.0
REDR				IAML				01 04 10.7	
	comp=N,358nm,0.1s								
LONE3	**El Aguacate, B**	1.86	262	*i*P		**Pn**	**Pn**	**01 03 39.0**	**+2.5**
LONE3				IAML				01 04 06.6	
	comp=Z,51nm,0.4s								
LOPP1	**Punta Rusia, P**	1.87	302	*i*P		**Pn**	**Pn**	**01 03 38.4**	**+1.9**
LOPP1				*e*S		**Sn**	**Sn**	**01 04 02.8**	**+2.6**
LOPP1				IAML				01 04 14.0	
	comp=Z,127nm,0.4s								
LODU1	**El Espartillar**	1.93	255	*i*P		**Pn**	**Pn**	**01 03 40.1**	**+2.9**
LODU1				IAML				01 04 11.8	
	comp=Z,126nm,0.5s								
LOVI	**El Cajuil, Ovi**	2.05	239	*i*P		**Pn**	**Pn**	**01 03 40.0**	**+1.1**
LOVI				*e*S		**Sn**	**Sn**	**01 04 04.0**	**-0.4**
LOVI				IAML				01 04 06.1	
	comp=Z,146nm,0.8s								
LOBH	**Bahia de las A**	2.25	244	*i*P		**Pn**	**Pn**	**01 03 43.8**	**+2.4**
LOBH				*e*S		**Sn**	**Sn**	**01 04 10.0**	**+1.2**
LOBH				IAML				01 04 11.5	
	comp=Z,90nm,2.0s								
AGPR	**Aguadilla, PR**	2.31	99	↑*i*P		**Pn**	**Pn**	**01 03 43.8**	**+1.6**
AGPR				↓*i*Sg		**Sn**	**Sn**	**01 04 09.6**	**-0.8**
AGPR				IAML				01 04 17.1	
	comp=N,131nm,0.4s								
PRSN	**Puerto Rico Se**	2.34	106	↓*i*P		**Pn**	**Pn**	**01 03 44.5**	**+1.9**
PRSN				IAML				01 04 24.1	
	comp=N,310nm,0.2s								
AOPR	**Arecibo Observ**	2.67	101	↑*i*P		**Pn**	**Pn**	**01 03 49.0**	**+2.0**
AOPR				IAML				01 04 32.3	
	comp=N,369nm,0.2s								
OBIP	**Obispado Ponce**	2.88	106	*i*P		**Pn**	**Pn**	**01 03 51.3**	**+1.6**
OBIP				IAML				01 04 33.4	
	comp=Z,228nm,0.1s								
CELP	**Cerrillos**	2.89	105	↑*i*P		**Pn**	**Pn**	**01 03 52.5**	**+2.6**
CELP				IAML				01 04 33.3	
	comp=N,43nm,0.4s								
GRTK	**Grand Turk**	3.04	330	↑*i*P		**Pn**	**Pn**	**01 03 53.1**	**+1.3**
GRTK				IAML				01 04 29.7	
	comp=N,148nm,0.2s								
GRTK	**Grand Turk**	3.04	330	*i*P		**Pn**	**Pn**	**01 03 53.2**	**+1.3**
GRTK				*e*S		**Sn**	**Sn**	**01 04 28.0**	**+0.3**
GRTK				IAML				01 04 30.1	
	comp=Z,90nm,0.9s								
GRTK	**Grand Turk**	3.04	330	*e*P		**Pn**	**Pn**	**01 03 52.8**	**+0.9**
GRTK				*e*S		**Sn**	**Sn**	**01 04 26.9**	**-0.7**
GRTK				IAML				01 04 29.6	
	comp=Z,166nm,0.2s								
GRTK				IAML				01 04 29.7	
	comp=Z,152nm,0.1s								
SJG	**San Juan**	3.28	103	*i*P		**Pn**	**Pn**	**01 03 55.4**	**+0.4**
MASC	**Masc**	4.64	287	*e*P		**Pn**	**Pn**	**01 04 13.4**	**+0.1**
MASC				*e*S		**Sn**	**Sn**	**01 05 03.6**	**-2.4**
QMBU	**Quimbuelo**	5.17	286	*e*P		Pn		01 04 17.9	-2.7
QMBU				*e*S		**Sn**		**01 05 14.8**	**-4.2**
GTBY	**Guantanamo Bay**	5.39	282	*e*P		Pn		01 04 21.6	-2.0
GTBY				*e*S		**Sn**		**01 05 24.0**	**-0.2**
NMDO	**Nuevo Mundo**	5.42	289	*e*P		Pn		01 04 21.8	-2.1
NMDO				*e*S		**Sn**		**01 05 22.1**	**-3.0**
NMDO				*e*Sg				01 05 25.1	
MOAC	**Moa**	5.43	290	*e*P		**Pn**		**01 04 23.7**	**-0.4**
MOAC				*e*S		**Sn**		**01 05 22.1**	**-3.3**
RCC	**Rio Carpintero**	5.94	282	*e*P		**Pn**		**01 04 29.5**	**-1.5**
RCC				*e*S		**Sn**		**01 05 35.1**	**-2.6**
HLGC	**Holguin**	6.48	289	*e*P		Pn		01 04 45.4	+7.0
HLGC				*e*S		**Sn**		**01 05 50.4**	**-0.5**

IDC 10 01:09:37.9±1.8, 0°.81N×125°.73E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=160.4km s-min=27.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.28	158	P		P	P	01 14 36.8	-0.1
	1.2nm,0.4s,baz=336,slow=11,SNR=23								
	1.2nm,0.4s								
ASAR	**Alice Springs**	25.59	162	P		P		01 15 09.4	+0.3
	0.9nm,0.6s,baz=342,slow=7.9,SNR=11								
ASAR				PcP		PcP		01 18 39.5	-0.9
	0.1nm,0.4s,baz=354,slow=2.8,SNR=1.3								
	0.9nm,0.6s								
MKAR	**Makanchi Array**	59.40	327	P		P		01 19 42.5	+0.2
	0.2nm,0.4s,baz=122,slow=6.4,SNR=2.2								
	0.2nm,0.4s								

*IDC **10** 01:30:07.7±1.6, 2°.70S×67°.98E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=46.2km s-min=28.2km az=49.0*

ISC 10 01:30:09.6±1.7, 2°.7S±0°.3×68°.0E±0°.3, h11km, n10, σ0§99/7, mb4.0/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	37.03	54	P		P	**P**	**01 37 21.0**	**+1.2**
	1.5nm,0.3s,baz=237,slow=9.9,SNR=4.2								
	1.5nm,0.3s								
H04N2	CROZET ISLANDS	45.55	196	T		T	T	02 27 13.3	
	baz=29,slow=74								
H04N1	CROZET ISLANDS	45.55	196	T		T	T	02 27 14.8	
	baz=29								
H04N3	CROZET ISLANDS	45.57	196	T		T	T	02 27 20.2	
	baz=29,slow=74								
KURBB	**Kurchatov Arra**	53.87	8	P		P	**P**	**01 39 31.6**	**-1.2**
	0.7nm,0.9s,baz=207,slow=7.5,SNR=4.8								
	0.7nm,0.9s								
ZALV	**Zalesovo Beam**	58.16	12	P		P	**P**	**01 40 03.1**	**-0.2**
	0.5nm,0.3s,baz=225,slow=3.9,SNR=1.9								
	0.5nm,0.3s								
SONM	**Songino Array**	60.47	29	P		P	**P**	**01 40 19.2**	**-0.5**
	0.9nm,0.7s,baz=239,slow=7.6,SNR=4.4								
	0.9nm,0.7s								
WRA	**Warramunga Arr**	66.89	110	P		P	**P**	**01 41 02.0**	**-0.5**
	0.9nm,0.8s,baz=286,slow=6.2,SNR=4.7								
	0.9nm,0.8s								
ASAR	**Alice Springs**	66.91	114	P		P	**P**	**01 41 02.4**	**-0.3**
	0.8nm,0.8s,baz=282,slow=5.9,SNR=5.1								
	0.8nm,0.8s								
ESDC	**Sonseca Array**	77.91	311	P		P	**P**	**01 42 08.7**	**+0.7**
	1.3nm,1.0s,baz=102,slow=6.6,SNR=5.1								
	1.3nm,1.0s								

*IDC **10** 01:52:17.8±1.1, 2°.90S×68°.04E, h0km, mb4.1/8, mbtmp4.1/8, MS3.6/6, Error ellipse: s-maj=27.8km s-min=22.8km az=23.0*
*NEIC **10** 01:52:21.5±1.7, 2°.72S±0°.08×68°.0E±0°.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=22.1km s-min=10.6km az=246.0*

ISC 10 01:52:20.8±0.8, 2°.70S±0°.10×68°.0E±0°.1, h11km, n37, σ1§39/31, mb4.3/13, MS3.6/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	5.91	58	Pn		**Pn**	**Pn**	**01 53 46.5**	**-1.9**
DGAR	**Diego Garcia**	6.44	137	Pn		**Pn**	**Pn**	**01 53 55.8**	**+0.1**
PALK	**Pallekele**	16.08	52	LR		LR	LR	02 01 05.6	
	comp=Z,106nm,20.5s,baz=227,slow=33								
PALK	**Pallekele**	16.08	52	Pn		**Pn**	**Pn**	**01 56 06.9**	**-0.3**
HYB	**Hyderabad**	22.54	27	*e*P		**P**	**P**	**01 57 22.0**	**+0.9**
HYB				*e*S		**S**	**S**	**02 01 28.9**	**+0.6**
CMAR	**Chiang Mai Arr**	37.01	54	P		**P**	**P**	**01 59 31.7**	**+0.8**
	1.0nm,0.3s,baz=242,slow=10,SNR=8.8								
CMAR				S		**S**	**S**	**02 05 19.4**	**+2.8**
	1.2nm,0.3s,baz=226,slow=20,SNR=2.3								
CMAR				LR		LR		02 14 29.6	
	comp=Z,58nm,18.9s,baz=220,slow=36								
	1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	37.01	54	P		**P**	**P**	**01 59 31.9**	**+1.1**
KBL	**Kabul**	37.06	1	P		**P**	**P**	**01 59 33.0**	**+1.7**
KBL				IAmb		IAmb	IAmb	01 59 34.6	
	comp=Z,7.7nm,1.4s								
CHTO	**Chiang Mai**	37.20	54	P		**P**	**P**	**01 59 33.9**	**+1.4**
CHTO				IAmb		IAmb	IAmb	01 59 34.5	
	comp=Z,5.5nm,0.9s								
MBAR	**Mbarara**	37.31	273	LR		LR	LR	02 13 13.4	
	comp=Z,102nm,19.0s,baz=100,slow=34								
MANEM	**Manem**	40.18	5	P		**P**	**P**	**01 59 57.6**	**0.0**
MANEM				IAmb		IAmb	IAmb	02 00 00.8	
	comp=Z,11nm,0.6s								
LSZ	**Lusaka**	41.17	250	LR		LR	LR	02 13 33.5	
	comp=Z,97nm,21.4s,baz=131,slow=31								
GAR	**Garm**	41.55	3	P		**P**	**P**	**02 00 09.7**	**+1.0**
H04N2	CROZET ISLANDS	45.55	196	T		T	T	02 49 22.8	
	baz=23,slow=74,SNR=4.4								
H04N1	CROZET ISLANDS	45.55	196	T		T	T	02 49 22.9	
	baz=23,slow=74,SNR=4.2								
H04N3	CROZET ISLANDS	45.56	196	T		T	T	02 49 23.2	
	baz=23,slow=74,SNR=5.0								
LBTB	**Lobatse**	46.46	238	LR		LR	LR	02 17 11.6	
	comp=Z,72nm,19.7s,baz=76,slow=32								
GEVA	**Gevas**	46.88	333	P		**P**	**P**	**02 00 50.0**	**-1.5**
PDGK	**Podgornoye**	46.97	11	P		**P**	**P**	**02 00 49.9**	**-2.2**
AB31	**Akbulak array**	52.22	353	P		**P**	**P**	**02 01 32.7**	**+0.9**
ABKAR	**Akbulak array**	52.22	353	P		**P**	**P**	**02 01 32.1**	**+0.3**
SUR	**Sutherland**	53.18	231	LR		LR	LR	02 20 51.3	
	comp=Z,101nm,19.1s,baz=139,slow=32								
KURBB	**Kurchatov Arra**	53.88	8	P		**P**	**P**	**02 01 43.7**	**-0.3**
	comp=Z,1.1nm,0.2s,baz=200,slow=8.0,SNR=6.6								
	comp=Z,1.1nm,0.2s								
KURK	**Kurchatov**	53.98	8	P		**P**	**P**	**02 01 45.5**	**+0.7**
KURK				IAmb		IAmb	IAmb	02 01 46.4	
	comp=Z,6.6nm,1.3s								
ZAA0	**Zalesovo Array**	58.16	12	P		**P**	**P**	**02 02 12.1**	**-2.5**
ZAA0				IAmb		IAmb	IAmb	02 02 15.1	
	comp=Z,2.5nm,0.9s								
ZALV	**Zalesovo Beam**	58.16	12	P		**P**	**P**	**02 02 13.4**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=224,slow=4.0,SNR=4.2								
	comp=Z,0.6nm,0.5s								
ZALV	**Zalesovo Beam**	58.16	12	P		**P**	**P**	**02 02 13.2**	**-1.4**
SONM	**Songino Array**	60.47	29	P		**P**	**P**	**02 02 29.2**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=204,slow=3.2,SNR=7.4								
	comp=Z,1.1nm,0.5s								
SONM	**Songino Array**	60.47	29	P		**P**	**P**	**02 02 31.9**	**+1.1**
SONM				IAmb		IAmb	IAmb	02 02 33.7	
	comp=Z,8.8nm,1.4s								
WRA	**Warramunga Arr**	66.85	110	P		**P**	**P**	**02 03 11.6**	**-1.9**
	comp=Z,4.0nm,1.1s,baz=283,slow=5.7,SNR=9.0								
	comp=Z,4.0nm,1.1s								
WRA	**Warramunga Arr**	66.85	110	P		**P**	**P**	**02 03 13.6**	**+0.1**
ASAR	**Alice Springs**	66.88	114	P		**P**	**P**	**02 03 11.0**	**-2.6**
	comp=Z,2.1nm,0.9s,baz=275,slow=6.0,SNR=9.1								
	comp=Z,2.1nm,0.9s								
ASAR	**Alice Springs**	66.88	114	P		**P**	**P**	**02 03 13.1**	**-0.5**
NRCA	**Norcia**	66.99	319	P		**P**	**P**	**02 03 14.5**	**+0.5**
NRCA				IAmb		IAmb	IAmb	02 03 16.1	
	comp=Z,7.5nm,1.4s								
HFS	**Hagfors**	75.46	335	P		**P**	**P**	**02 04 04.5**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=176,slow=5.9,SNR=5.5								
	comp=Z,1.4nm,0.8s								
ESDC	**Sonseca Array**	77.94	311	P		**P**	**P**	**02 04 19.9**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=93,slow=5.4,SNR=5.4								
	comp=Z,1.4nm,1.0s								
TXAR	**Lajitas Array**	152.35	344	PKPbc	PKiKP		**P**	**02 12 18.5**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=126,slow=1.9,SNR=4.4								

IDC 10 01:53:09.3±3.0, 32°.97S×178°.26W, h0km, mb3.6/2, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=74.7km s-min=45.7km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	6.49	214	Pn		Pn	Pn	01 54 45.7	-0.3
	1.5nm,0.3s,baz=243,slow=5.1,SNR=6.6								
URZ				Sn		Sn	Sn	01 55 56.3	-4.5
	2.0nm,0.3s,baz=233,slow=20,SNR=8.8								
	3.1nm,0.3s								
ASAR	**Alice Springs**	42.82	270	P		P	P	02 01 08.9	-0.3
	0.3nm,0.5s,baz=114,slow=8.5,SNR=1.8								
	0.3nm,0.5s								
WRA	**Warramunga Arr**	44.04	275	P		P	P	02 01 19.1	+0.1
	0.6nm,0.4s,baz=116,slow=7.9,SNR=19								
	0.6nm,0.4s								
FINES	**FINESS Array B**	147.46	338	PKPbc		PKPbc		02 12 53.6	-0.8
	0.4nm,0.4s,baz=54,slow=2.4,SNR=7.2								

*DJA **10** 02:08:04.7±0.2, 7°.5S±4°×11°.2E±°, h218km±2km, M4.4/28, mb4.2/19, mB5.5/6, MLv4.0/28, Mw(mB)4.9/6*
*IDC **10** 02:08:12.1±6.3, 7°.07S×112°.27E, h300km±66km, mb3.4/8, mbtmp4.1/9, Error ellipse: s-maj=57.3km s-min=11.8km az=57.0*

ISC 10 02:08:03.4±0.7, 7°.2S±0°.1×112°.06E±0°.07, h200km, n27, σ1§90/28, mb3.8/8, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNJI	**Sawahan-Nganju**	0.62	209	P		P	**Pn**	**02 08 34.7**	**+3.5**
SMRI	**Semarang**	1.62	276	P		P	**Pn**	**02 08 40.7**	**+2.5**
UGM	**Wanagama**	1.67	246	P		P	**Pn**	**02 08 40.0**	**+1.3**
UGM				S		S	**Sn**	**02 09 08.9**	**+2.9**
YOGI	**Yogyakarta**	1.84	252	P		P	**Pn**	**02 08 42.4**	**+2.1**
JAGI	**Jajag, Banyuwa**	2.41	121	P		P	**Pn**	**02 08 48.6**	**+2.3**
IGBI	**Denpasar**	3.44	117	P		P	**Pn**	**02 09 00.0**	**+1.7**
KHKI	**Kahang-Kahang**	3.69	108	P		P	**Pn**	**02 09 04.8**	**+3.4**
BBJI	**Bungbulang**	4.38	267	P		P	**Pn**	**02 09 10.2**	**+0.2**
TWSI	**Taliwang, Sumb**	5.00	108	P		P	**Pn**	**02 09 18.5**	**+0.6**
	0.3nm19nm,0.8s								
PLAI	**Plampang**	5.88	106	P		P	**Pn**	**02 09 30.7**	**+1.6**
	0.3nm16nm,0.6s								
DBNI	**Kabupaten Domp**	6.32	102	P		P	**Pn**	**02 09 37.6**	**+2.7**
	0.2nm13nm,0.7s								
BKB	**Balikpapan**	7.65	39	P		P	Pn	02 09 58.7	+6.6
	157nm,1.3s								
KASI	**Kota Agung**	7.71	282	P		P	**Pn**	**02 09 53.8**	**+0.9**
	24nm,1.1s								
KLSI		7.72	289	P		P	**Pn**	**02 09 54.2**	**+1.2**
MNAI	**Manna**	9.50	287	P		P	**Pn**	**02 10 16.3**	**+0.1**
EGSI	**Enggano, Bengk**	9.90	280	P		P	**Pn**	**02 10 19.6**	**-1.9**
	5μm69nm,1.2s								
KRAI	**Karang Ratu**	16.72	77	P		P	**P**	**02 11 46.7**	**+1.3**
FITZ	**Fitzroy Crossi**	17.08	130	P		P	**Pn**	**02 11 50.5**	**-0.2**
	2.2nm,0.4s,baz=330,slow=8.0,SNR=7.7								
FITZ				S		S	**S**	**02 14 55.5**	**-1.5**
	3.4nm,0.8s,baz=248,slow=19,SNR=6.7								
TPTI		18.14	305	P		P	**P**	**02 12 01.9**	**+0.9**
	15nm,1.0s								
WRA	**Warramunga Arr**	25.03	123	P		P	**P**	**02 13 09.2**	**-0.1**
	0.7nm,0.3s,baz=295,slow=12,SNR=16								
	0.7nm,0.3s								
ASAR	**Alice Springs**	26.58	130	P		P	**P**	**02 13 23.0**	**-0.3**
	1.9nm,0.6s,baz=305,slow=8.8,SNR=24								
	1.9nm,0.6s								
CMAR	**Chiang Mai Arr**	28.62	333	P		P	**P**	**02 13 41.9**	**+0.5**
	1.1nm,0.3s,baz=166,slow=8.4,SNR=11								
	1.1nm,0.3s								
STKA	**Stephens Creek**	36.86	136	P		P	**P**	**02 14 52.5**	**-0.2**
	5.3nm,0.4s,baz=319,slow=7.7,SNR=14								
	5.3nm,0.4s								
MKAR	**Makanchi Array**	59.95	337	P		P	**P**	**02 17 46.5**	**-2.0**
	0.4nm,0.3s,baz=148,slow=7.6,SNR=9.1								
	0.4nm,0.3s								
ZALV	**Zalesovo Beam**	65.13	343	P		P	**P**	**02 18 19.7**	**-3.0**
	0.7nm,0.4s,baz=159,slow=5.4,SNR=2.9								
	0.7nm,0.4s								
VNDA	**Vanda**	74.84	170	P		P	**P**	**02 19 20.4**	**-1.0**
	0.5nm,0.6s,baz=291,slow=7.6,SNR=2.0								
	0.5nm,0.6s					

IDI				S	Sg	02 33 15.7	0.0		
IDI	**Anoyia**	**1.55**	**263**	P	Pn	**02 32 53.0**	**+0.1**		
BODT	**Bodrum**	**1.62**	**15**	Pn	Pb	**02 32 54.6**	**-0.8**		
BODT	**Bodrum**	**1.62**	**15**	P	Pn	**02 32 54.2**	**+0.3**		
BDRM	**Kayabasi**	**1.66**	**19**	P	Pn	**02 32 53.7**	**-0.6**		
BDRM				S	Sg	**02 33 18.7**	**-0.5**		
BDRM				IAML		02 33 23.0			
	comp=E,94nm,0.6s								
SIVA	**Sivas**	**1.67**	**254**	P	Pb	**02 32 55.8**	**-0.5**		
TURN	**Turunc**	**1.75**	**43**	Pn	Pn	**02 32 56.4**	**+0.9**		
TURN	**Turunc**	**1.75**	**43**	P	Pn	**02 32 56.2**	**+0.7**		
TURN				S	Sb	**02 33 19.1**	**-0.1**		
TURN				IAML		02 33 22.0			
	comp=E,201nm,0.3s								
TURN				IAML		02 33 26.0			
	comp=N,123nm,0.2s								
NAX1	**Naxos Island**	**1.96**	**325**	P	Pn	**02 32 57.9**	**-0.6**		
MLSB	**Milas**	**1.97**	**24**	Pn	Pn	**02 32 58.9**	**+0.3**		
DALY	**Dalyan (Mula)**	**2.02**	**49**	Pn	Pn	**02 33 00.1**	**+0.9**		
DALY	**Dalyan (Mula)**	**2.02**	**49**	P	Pb	**02 33 01.4**	**-0.7**		
DALY				S	Sb	**02 33 27.1**	**+0.2**		
DALY				IAML		02 33 34.0			
	comp=E,123nm,0.6s								
DALY				IAML		02 33 35.0			
	comp=N,94nm,0.2s								
YER	**Yerkesik**	**2.04**	**36**	Pn	Pn	**02 33 00.6**	**+1.0**		
YER	**Yerkesik**	**2.04**	**36**	P	Pn	**02 33 00.6**	**+1.0**		
VAM	**Vamos**	**2.10**	**268**	P	Pn	**02 33 00.9**	**+0.5**		
IZZE	**Mula-Seydike**	**2.20**	**64**	P	Pb	**02 33 04.3**	**-1.0**		
IZZE				S	Sb	**02 33 33.5**	**+1.1**		
IZZE				IAML		02 33 41.0			
	comp=N,199nm,0.6s								
IZZE				IAML		02 33 42.0			
	comp=E,134nm,0.5s								
CHNB	**Souda**	**2.21**	**271**	P	Pn	**02 33 01.6**	**-0.2**		
SABU	**Mula-Dalaman**	**2.22**	**53**	P	Pb	**02 33 04.5**	**-1.1**		
SABU				S	Sg	**02 33 35.0**	**-2.0**		
SABU				IAML		02 33 43.0			
	comp=N,82nm,0.3s								
SABU				IAML		02 33 45.0			
	comp=E,96nm,0.7s								
CHAN	**Chania**	**2.23**	**271**	P	Pn	**02 33 02.3**	**+0.3**		
GCAM	**G?zelcaml?**	**2.23**	**9**	Pn	Pn	**02 33 02.9**	**+0.7**		
CH01	**Chania**	**2.24**	**271**	P	Pn	**02 33 02.4**	**+0.1**		
MHLO	**Agia Marina, M**	**2.26**	**303**	P	Pn	**02 33 02.2**	**-0.3**		
IMMV	**Iera Moni Meta**	**2.28**	**270**	Pn	Pn	**02 33 03.9**	**+1.1**		
IMMV	**Iera Moni Meta**	**2.28**	**270**	P	Pn	**02 33 02.2**	**-0.6**		
IMMV	**Iera Moni Meta**	**2.28**	**270**	P	Pn	**02 33 02.4**	**-0.4**		
GVD	**Gavdhos**	**2.29**	**254**	Pn	Pn	**02 33 04.4**	**+1.4**		
GVD	**Gavdhos**	**2.29**	**254**	P	Pn	**02 33 03.3**	**+0.3**		
AYDN	**Tasoluk**	**2.34**	**22**	P	Pb	**02 33 05.7**	**-1.9**		
AYDN				IAML		02 33 39.0			
	comp=E,63nm,0.4s								
AYDN				IAML		02 33 48.0			
	comp=N,64nm,0.9s								
AKAS	**Kas**	**2.42**	**71**	Pn	Pn	**02 33 06.6**	**+1.8**		
CAME	**Cameli-Denizli**	**2.50**	**54**	Pn	Pn	**02 33 07.5**	**+1.4**		
KNDR	**Palaiochora Ch**	**2.58**	**265**	Pn	Pn	**02 33 08.3**	**+1.3**		
KNDR	**Palaiochora Ch**	**2.58**	**265**	P	Pn	**02 33 07.0**	**0.0**		
AYDB	**Zeytinkoy-Aydi**	**2.61**	**20**	Pn	Pn	**02 33 08.5**	**+1.1**		
TAVA	**DENIZLI_Tavas**	**2.62**	**41**	P	Pb	**02 33 10.1**	**-2.3**		
TAVA				S	Sb	**02 33 42.9**	**-1.5**		
TAVA				IAML		02 33 45.0			
	comp=E,58nm,0.3s								
TAVA				IAML		02 33 47.0			
	comp=N,58nm,0.3s								
ESEN	**Aydn-Nazilli**	**2.62**	**28**	P	Pn	**02 33 08.9**	**+1.3**		
ESEN				S	Sn	**02 33 41.2**	**+2.1**		
ESEN				IAML		02 33 43.0			
	comp=E,33nm,0.6s								
ESEN				IAML		02 33 45.0			
	comp=N,32nm,0.3s								
NAZL	**Nazilli-Aydin**	**2.75**	**26**	Pn	Pn	**02 33 10.9**	**+1.6**		
ELL	**Elmali**	**2.83**	**63**	Pn	Pn	**02 33 12.4**	**+1.9**		
ELL	**Elmali**	**2.83**	**63**	P	Pn	**02 33 11.5**	**+1.0**		
APMY	**Acipayam-Deniz**	**2.84**	**45**	Pn	Pn	**02 33 11.9**	**+1.3**		
ANKY	**Antikythira Is**	**2.85**	**278**	P	Pn	**02 33 10.5**	**-0.2**		
URLA	**Izmir**	**2.86**	**357**	Pn	Pn	**02 33 10.6**	**-0.3**		
CHOS	**Chios island**	**2.94**	**349**	Pn	Pn	**02 33 11.8**	**-0.2**		
CHOS	**Chios island**	**2.94**	**349**	P	Pn	**02 33 11.5**	**-0.5**		
CHOS	**Chios island**	**2.94**	**349**	P	Pn	**02 33 11.5**	**-0.5**		
ODEM	**Odemis-Izmir**	**2.96**	**20**	Pn	Pn	**02 33 13.4**	**+1.1**		
KTHA	**Kythira Island**	**3.11**	**285**	Pn	Pn	**02 33 15.3**	**+1.1**		
KTHA	**Kythira Island**	**3.11**	**285**	P	Pn	**02 33 14.1**	**-0.1**		
KTHA	**Kythira Island**	**3.11**	**285**	P	Pn	**02 33 14.1**	**-0.1**		
KORT	**Korkueli**	**3.26**	**62**	Pn	Pn	**02 33 18.2**	**+1.8**		
VLI	**Veliai**	**3.33**	**293**	P	Pn	**02 33 17.3**	**0.0**		
VLI	**Veliai**	**3.33**	**293**	P	Pn	**02 33 16.9**	**-0.5**		
KULA	**Kula-Manisa**	**3.37**	**26**	Pn	Pn	**02 33 19.4**	**+1.5**		
ANTB	**Antalya**	**3.44**	**65**	Pn	Pn	**02 33 20.8**	**+2.1**		
DION	**Dionisos Attik**	**3.44**	**319**	P	Pn	**02 33 19.6**	**+0.8**		
DION	**Dionisos Attik**	**3.44**	**319**	P	Pn	**02 33 20.8**	**0.0**		
ATHU	**Athens Univers**	**3.44**	**317**	P	Pn	**02 33 19.6**	**+0.8**		
ATHU	**Athens Univers**	**3.44**	**317**	P	Pn	**02 33 18.6**	**-0.2**		
MET6	**Megalochori,Me**	**3.45**	**308**	P	Pn	**02 33 18.7**	**-0.3**		
MET5	**Makryloggos,Me**	**3.47**	**309**	P	Pn	**02 33 19.0**	**-0.2**		
GORD	**Gordes-Manisa**	**3.59**	**18**	Pn	Pn	**02 33 22.4**	**+1.5**		
PRK	**Paraskevi**	**3.76**	**354**	P	Pn	**02 33 22.7**	**-0.6**		
KYMI	**Kymi, Euboea I**	**3.79**	**326**	P	Pn	**02 33 24.0**	**+0.4**		
KYMI	**Kymi, Euboea I**	**3.79**	**326**	P	Pn	**02 33 23.5**	**-0.1**		
VILL	**Villia**	**3.85**	**315**	P	Pn	**02 33 26.0**	**+1.6**		
LTK	**Loutraki**	**3.96**	**311**	P	Pn	**02 33 27.8**	**+1.8**		
VLX	**Vlachokerasia**	**4.00**	**299**	P	Pn	**02 33 28.0**	**+1.3**		
ITM	**Ithomi**	**4.26**	**295**	P	Pn	**02 33 32.4**	**+2.3**		
ITM	**Ithomi**	**4.26**	**295**	P	Pn	**02 33 30.4**	**+0.4**		
PYL	**PYLOS**	**4.30**	**290**	P	Pn	**02 33 31.6**	**+1.0**		
PYL	**PYLOS**	**4.30**	**290**	P	Pn	**02 33 30.5**	**-0.1**		
GUR	**Goura**	**4.31**	**306**	P	Pn	**02 33 32.7**	**+1.9**		
GUR	**Goura**	**4.31**	**306**	P	Pn	**02 33 31.1**	**+0.2**		
LKR	**Lokris**	**4.36**	**317**	P	Pn	**02 33 32.2**	**+0.8**		
ATAL	**Atalanti**	**4.38**	**318**	P	Pn	**02 33 32.7**	**+1.0**		
KLV	**Kalavryta, Ach**	**4.50**	**306**	P	Pn	**02 33 35.1**	**+1.7**		
KLV	**Kalavryta, Ach**	**4.50**	**306**	P	Pn	**02 33 33.5**	**+0.1**		
AMT	**Artemida-Makis**	**4.55**	**298**	P	Pn	**02 33 36.7**	**+2.5**		
AKMS	**Akamas**	**4.58**	**94**	P	Pn	**02 33 35.3**	**+0.8**		
AXAR	**Agios Charalam**	**4.63**	**316**	P	Pn	**02 33 36.9**	**+1.7**		
DRO	**Drossia**	**4.75**	**303**	P	Pn	**02 33 38.7**	**+1.9**		
DRO	**Drossia**	**4.75**	**303**	P	Pn	**02 33 36.8**	**0.0**		
ALFC	**Alefka**	**4.78**	**92**	P	Pn	**02 33 37.9**	**+0.7**		
NATA	**Nata**	**4.81**	**97**	P	Pn	**02 33 38.4**	**+0.8**		
ANX	**Ano Chora**	**4.96**	**310**	P	Pn	**02 33 39.3**	**-0.4**		
RLS	**Riolos of Patr**	**4.97**	**303**	P	Pn	**02 33 39.6**	**-0.1**		
CSS	**Mathiatis**	**5.40**	**94**	P	Pn	**02 33 43.1**	**-2.6**		
CSS				S	Sn	**02 34 45.9**	**-1.6**		
BRTR	**Keskin Array B**	**6.89**	**50**	Pn	Pn	**02 34 08.6**	**+2.2**		
	0.1nm,0.3s,baz=222,slow=14,SNR=4.8								
BRTR				Sn	Sn	**02 35 23.4**	**-1.2**		
	baz=3.5,slow=22 0.4nm,0.5s								
MMA0B	**Mount Meron ar**	**7.56**	**107**	P	Pn	**02 34 13.1**	**-2.4**		
MMA0B				S	Sn	**02 35 40.2**	**-0.8**		
MMAI	**Mount Meron Ar**	**7.56**	**107**	Pn	Pn	**02 34 15.4**	**-0.1**		
	1.6nm,0.3s,baz=330,slow=15,SNR=7.9								
MMAI				Sn	Sn	**02 35 36.4**	**-4.6**		
	1.1nm,0.3s,baz=322,slow=30,SNR=2.1 0.7nm,0.3s								
GEM	**Giv'at Ha'Em**	**7.70**	**105**	P	Pn	**02 34 14.8**	**-2.5**		
GEM				S	Sn	**02 35 43.5**	**-0.7**		
MMLI	**Mount Malkishu**	**7.81**	**111**	P	Pn	**02 34 17.0**	**-1.8**		
MMLI				S	Sn	**02 35 46.1**	**-0.9**		
KZIT	**Kziot**	**7.86**	**123**	P	Pn	**02 34 17.7**	**-1.8**		
KZIT				S	Sn	**02 35 47.2**	**-1.0**		
AMAZ	**Amatzia**	**7.87**	**118**	P	Pn	**02 34 17.5**	**-2.1**		
AMAZ				S	Sn	**02 35 48.2**	**-0.1**		
MZS	**Mizpe Shalem**	**8.20**	**116**	P	Pn	**02 34 21.8**	**-2.3**		
MZS				S	Sn	**02 35 55.9**	**-0.6**		
RMNI	**Mount Ramon**	**8.30**	**124**	P	Pn	**02 34 24.2**	**-1.4**		
RMNI				S	Sn	**02 35 58.6**	**-0.5**		
MSBI	**Mazada**	**8.30**	**118**	P	Pn	**02 34 23.7**	**-1.8**		
MSBI				S	Sn	**02 35 58.4**	**-0.6**		
GHAJ	**Ghor Haditha**	**8.46**	**117**	P	Pn	**02 34 25.9**	**-1.8**		
GHAJ				S	Sn	**02 36 01.9**	**-1.0**		
HRFI	**Mount Harif**	**8.83**	**126**	P	Pn	**02 34 31.0**	**-1.9**		
HRFI				S	Sn	**02 36 11.6**	**-0.6**		
EIL	**Elat**	**9.02**	**128**	Pn	Pn	**02 34 34.2**	**-1.2**		
	0.7nm,0.3s,baz=330,slow=3.1,SNR=14								
EIL				Sn	Sn	**02 36 10.5**	**-6.2**		
	0.9nm,0.3s,baz=219,slow=6.3,SNR=5.1 2.3nm,0.4s								
EIL	**Elat**	**9.02**	**128**	P	Pn	**02 34 33.6**	**-1.9**		
EIL				S	Sn	**02 36 15.6**	**-1.1**		
ASF	**Jabal al Asfar**	**9.05**	**109**	Pn	Pn	**02 34 35.3**	**-0.6**		
	0.2nm,0.3s,baz=300,slow=20,SNR=2.4								
ASF				Sn	Sn	**02 36 13.1**	**-4.5**		
	0.2nm,0.3s,baz=309,slow=22,SNR=1.7 0.7nm,0.4s								
MLR	**Muntele Rosu**	**10.00**	**357**	Pn	Pn	**02 34 49.1**	**+0.1**		
	0.2nm,0.3s,baz=126,slow=23,SNR=1.9								
AKASG	**Malin Array Be**	**15.30**	**6**	Pn	Pn	**02 36 03.5**	**+2.5**		
	0.4nm,0.3s,baz=195,slow=11,SNR=5.1 0.2nm,0.2s								
GERES	**GERESS Array B**	**16.45**	**328**	Pn	P	**02 36 17.9**	**-0.8**		
	baz=150,slow=11,SNR=12 1.3nm,0.7s								
DAVOX	**Davos/Dischmat**	**16.96**	**317**	LR	LR	02 45 30.9			
	comp=Z,14nm,19.6s,baz=74,slow=46								
ESDC	**Sonseca Array**	**24.65**	**289**	P	P	**02 37 44.6**	**-1.1**		
	0.4nm,0.6s,baz=80,slow=9.6,SNR=11 0.4nm,0.6s								
FINES	**FINESS Array B**	**25.97**	**359**	P	P	**02 38 00.8**	**+3.3**		
	4.6nm,1.1s,baz=124,slow=25,SNR=2.1 4.6nm,1.1s								
HFS	**Hagfors**	**26.07**	**345**	P	P	**02 38 00.8**	**+2.4**		
	1.1nm,0.7s,baz=156,slow=11,SNR=2.1 1.1nm,0.7s								
EKA	**Eskdalemuir Ar**	**28.54**	**323**	P	P	**02 38 21.6**	**+1.0**		
	0.2nm,0.3s,baz=117,slow=9.3,SNR=4.7 0.2nm,0.3s								
TORD	**Torodi Ar. Bea**	**31.72**	**232**	P	P	**02 38 49.1**	**0.0**		
	0.5nm,0.7s,baz=35,slow=9.2,SNR=7.0 0.5nm,0.7s								
MKAR	**Makanchi Array**	**42.49**	**57**	P	P	**02 40 21.2**	**+0.9**		
	0.5nm,0.5s,baz=292,slow=9.2,SNR=1.5 0.5nm,0.5s								
ZALV	**Zalesovo Beam**	**43.82**	**46**	P	P	**02 40 30.3**	**-0.6**		
	0.4nm,0.3s,baz=267,slow=11,SNR=2.0 0.4nm,0.3s								

KNET ***10*** *02:36:46.6±0.4, 43.°05N×74.°92E, h12km±5km, ml0.9, Error ellipse: s-maj=5.0km s-min=2.5km az=67.0*
SOME ***10*** *02:36:48.6, 43.°12N×75.°00E, h5km*
NNC ***10*** *02:36:48.4±0.9, 43.°11N×74.°97E, h0km, mpv2.8, Error ellipse: s-maj=9.8km s-min=2.3km az=26.0, Suspected Mining explosion.*

ISC 10 02:36:46.4±0.9, 42.°98N±0.°04×74.°94E±0.°03, h0km, n10, σ0°43/20, 8C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.14**	**277**	⇑P		**Pg**		**02 36 49.9**	**+0.8**
	5.8nm,0.1s								
CHMS				⇑S		**Sg**		**02 36 51.8**	**+0.8**
	16nm,0.1s								
KBK	**Karagaybulak**	**0.33**	**179**	⇑P		**Pb**		**02 36 55.2**	**0.0**
	7.1nm,0.1s								
KBK				⇑S		**Sb**		**02 37 01.2**	**+0.1**
	8.1nm,0.1s								
USP	**Ospenovka**	**0.43**	**311**	⇑P		**Pg**		**02 36 54.8**	**+0.1**
	4.4nm,0.1s								
USP				⇑S		**Sg**		**02 37 00.3**	**0.0**
	7.2nm,0.1s								
AAK	**Ala-Archa**	**0.48**	**224**	⇓P		**Pb**		**02 36 57.1**	**-0.7**
	1.4nm,0.1s								
AAK				⇑S		**Sb**		**02 37 04.7**	**-0.7**
	1.6nm,0.1s								
SGDS	**Sogindy**	**0.52**	**334**	P		**Pg**		**02 36 56.8**	**+0.4**
	1.8nm,0.1s								
SGDS				S		**Sg**		**02 37 02.7**	**-0.6**
	7.4nm,0.1s								
KST	**Kastek**	**0.75**	**85**	P		**Pb**		**02 37 02.6**	**+0.2**
	1.2nm,0.1s								
KST				S		**Sb**		**02 37 12.9**	**-0.4**
	5.2nm,0.6s								
KST	**Kastek**	**0.75**	**85**	*e*P		**Pb**		**02 37 02.6**	**+0.2**
	1.1nm,0.1s								
KST				*e*S		**Sb**		**02 37 12.9**	**-0.4**
	5.2nm,0.6s								
ULHL	**Ulahol**	**1.21**	**127**	⇑P		**Pn**		**02 37 10.6**	**-0.1**
	0.4nm,0.1s								
ULHL				⇓S		**Sn**		**02 37 28.0**	**+0.1**
	0.5nm,0.1s								
KTBS	**Karatobe**	**1.46**	**59**	P		**Pb**		**02 37 14.6**	**+0.1**
	3.9nm,0.1s								
KTBS				S		**Sg**		**02 37 33.2**	**-0.2**
	2.1nm,0.4s								
KTBS	**Karatobe**	**1.46**	**59**	*e*P		**Pb**		**02 37 14.6**	**+0.1**
	0.7nm,0.1s								
KTBS				*e*S		**Sg**		**02 37 33.2**	**-0.2**
	1.2nm,0.2s								

IDC 10 02:48:06.1±1.4, 2.°65S×150.°46E, h0km, mb3.5/4, mbtmp3.6/4, MS2.6/1, Error ellipse: s-maj=93.1km s-min=28.7km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.30**	**221**	P		P	P	02 53 15.5	-0.4
	0.9nm,0.7s,baz=48,slow=9.5,SNR=7.3 0.9nm,0.7s								
ASAR	**Alice Springs**	**26.32**	**216**	P		P	P	02 53 43.3	-0.5
	0.4nm,0.6s,baz=52,slow=9.0,SNR=8.8 0.4nm,0.6s								
RPZ	**Rata Peaks**	**44.79**	**159**	LR		LR	LR	03 13 37.0	
	comp=Z,7.2nm,21.0s,baz=94,slow=34								
ILAR	**Eielson Array**	**81.08**	**23**	P		P	P	03 00 22.4	-0.5
	0.2nm,0.7s,baz=242,slow=5.8,SNR=5.0 0.2nm,0.7s								
QSPA	**South Pole Qui**	**87.29**	**180**	P		P	P	03 00 56.0	+1.4
	0.7nm,0.7s,baz=353,slow=3.1,SNR=5.6 0.7nm,0.7s								

MEX ***10*** *04:00:59.4±0.9, 15.°20N×92.°70W, h102km±9km, MD3.7*
GCG ***10*** *04:00:59.5±0.9, 15.°21N×92.°62W, h90km±13km, MD3.5, Presumed earthquake*

ISC 10 04:01:00.1±1.8, 15.°23N±0.°08×92.°65W±0.°05, h89km±13km, n16, σ0°82/26, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**0.41**	**105**	*e*P		**Pn**	**Pn**	**04 01 13.8**	**-0.6**
PATR				*e*S		**Sn**	**Sn**	**04 01 25.3**	**+0.3**
PAVE	**Pavencul**	**0.46**	**94**	*e*P		**Pn**	**Pn**	**04 01 14.8**	**+0.1**
PAVE				*e*S		**Sn**	**Sn**	**04 01 26.5**	**+0.9**
THIG		**0.49**	**130**	*e*P		**Pn**	**Pn**	**04 01 14.1**	**-0.5**
THIG				*e*S		**Sn**	**Sn**	**04 01 25.6**	**+0.1**
THIG		**0.49**	**130**	*i* P		**Pn**	**Pn**	**04 01 14.1**	**-0.5**
THIG				*i* S		**Sn**	**Sn**	**04 01 25.4**	**0.0**
CHUJ	**Union Juarez**	**0.54**	**104**	*e*P		**Pn**	**Pn**	**04 01 14.7**	**-0.7**
CHUJ				*e*S		**Sn**	**Sn**	**04 01 27.3**	**+0.6**
HUEH	**Huehuetenango**	**1.11**	**85**	*e*P		**Pn**	**Pn**	**04 01 21.5**	**+0.3**
HUEH				*e*S		**Sn**	**Sn**	**04 01 38.5**	**+1.4**
RTAL	**Retalhuleu**	**1.16**	**127**	*e*P		**Pn**	**Pn**	**04 01 21.4**	**-0.1**
RTAL				*e*S		**Sn**	**Sn**	**04 01 37.0**	**-0.7**
STG8	**El Palmar, Qui**	**1.47**	**121**	*i* P		Pn	04 01 21.1	-4.6	
STG5	**El Palmar, Qui**	**1.50**	**123**	*i* P		Pn	04 01 21.1	-4.8	
CARR	**Arriaga**	**1.59**	**310**	*i* P		**Pn**	**Pn**	**04 01 27.6**	**+0.7**
CARR				*i* S		**Sn**	**Sn**	**04 01 47.6**	**+0.4**
TGIG		**1.61**	**344**	*e*P		**Pn**	**Pn**	**04 01 27.1**	**-0.2**
TGIG				*e*S		**Sn**	**Sn**	**04 01 47.0**	**-0.9**
TGIG		**1.61**	**344**	*i* P		**Pn**	**Pn**	**04 01 27.0**	**-0.2**
APG	**El Apazote**	**2.12**	**96**	*i* P		**Pn**	**Pn**	**04 01 34.4**	**+0.3**
CMIG	**Matias Romero**	**2.84**	**311**	*e*P		**Pn**	**Pn**	**04 01 43.0**	**-0.4**
CMIG				*e*S		**Sn**	**Sn**	**04 02 17.3**	**+0.5**
PETF	**Flores**	**3.16**	**57**	*e*P		**Pn**	**Pn**	**04 01 48.3**	**+0.5**
PETF				*e*S		**Sn**	**Sn**	**04 02 23.0**	**-1.5**
SCIG	**Sabancuy**	**3.98**	**20**	*e*P		**Pn**	**Pn**	**04 02 00.1**	**+1.3**
SCIG				*e*S		**Sn**	**Sn**	**04 02 42.5**	**-1.8**

IDC ***10*** *04:26:54.3±0.9, 30.°30N×94.°81E, h0km, mb3.7/11, mbtmp3.7/14, ML3.8/2, Error ellipse: s-maj=38.5km s-min=17.0km az=56.0*
NEIC ***10*** *04:26:56.0±2.4, 30.°4N±0.°1×95.°08E±0.°05, h10km±2km, mb4.1/11, Error ellipse: s-maj=22.0km s-min=6.3km az=6.0*
GFZ ***10*** *04:27:00.2±0.6, 30.°N±5.°×9.°5E±.°, h10km, M4.0/8, mb4.0/8, Error ellipse: s-maj=17.5km s-min=7.9km az=63.5, confirmed*

ISC 10 04:26:57.8±0.7, 30.°44N±0.°09×95.°03E±0.°09, h23km, n43, σ1°33/42, mb3.9/11, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.44**	**259**				**Pn**	**04 27 51.5**	**+1.1**

LSA	**Lhasa**	**3.44**	**259**	P		**Pb**		**04 27 59.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**12.45**	**162**	Pn		**Pn**		**04 29 53.9**	**+0.3**
	0.4nm,0.3s,baz=344,slow=14,SNR=5.2 0.9nm,0.3s								
CMAR	**Chiang Mai Arr**	**12.45**	**162**			**Pn**		**04 29 53.1**	**-0.5**
WUS	**Wushi**	**16.70**	**314**	P		**P**		**04 30 52.9**	**+0.3**
WUS				IAmb		IAmb		04 30 58.9	
	comp=Z,13nm,0.9s								
WUS	**Wushi**	**16.70**	**314**	P		**P**		**04 30 53.5**	**+0.9**
TARG	**Taragay, Kyrgy**	**17.87**	**314**			**Pn**		**04 31 02.5**	**-2.8**
TARG	**Taragay, Kyrgy**	**17.87**	**314**	P		**P**		**04 31 08.2**	**+2.4**
PRZ	**Przheval'sk**	**17.95**	**317**			**Pn**		**04 31 03.0**	**-2.9**
PRZ				IAmb		IAmb		04 31 11.7	
	comp=Z,15nm,1.0s								
KSH2	**Kashi**	**18.17**	**304**	P		**Pn**		**04 31 08.4**	**-0.3**
KSH2				sP		pP		04 31 14.4	-2.2
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
ASAI	**AK-SAY(Kyrgyzs**	**18.28**	**310**	P		**Pn**		**04 31 13.3**	**+3.1**
KDJ	**Kajisay**	**18.48**	**314**	P		**Pn**		**04 31 14.4**	**+1.9**
NIL	**Nilore**	**18.73**	**286**	P		**P**		**04 31 12.7**	**-2.3**
NIL				IAmb		IAmb		04 31 22.9	
	comp=Z,8.6nm,0.8s								
MKAR	**Makanchi Array**	**19.08**	**332**	P		**P**		**04 31 18.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=7.8 comp=Z,0.9nm,0.8s								
MKAR	**Makanchi Array**	**19.08**	**332**	P		**P**		**04 31 17.6**	**-1.1**
SONM	**Songino Array**	**19.45**	**24**	P		**Pn**		**04 31 26.0**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=221,slow=13,SNR=5.7								
BOOM	**Boomskoye usch**	**19.45**	**313**			**P**		**04 31 23.9**	**+0.9**
BOOM				IAmb		IAmb		04 31 45.9	
	comp=Z,8.0nm,1.3s								
BOOM	**Boomskoye usch**	**19.45**	**313**	P		**Pn**		**04 31 25.6**	**+1.4**
ULN	**Ulaanbaatar**	**19.70**	**25**	P		**P**		**04 31 25.4**	**-0.2**
AAK	**Ala-Archa**	**20.45**	**312**	P		**P**		**04 31 33.9**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=120,slow=12,SNR=5.8 comp=Z,1.3nm,0.3s								
AAK	**Ala-Archa**	**20.45**	**312**			**P**		**04 31 34.9**	**+1.1**
AAK				IAmb		IAmb		04 31 45.1	
	comp=Z,11nm,1.2s								
AAK	**Ala-Archa**	**20.45**	**312**	P		Pn		04 31 36.3	+0.4
BTK	**Batken**	**21.92**	**303**			**P**		**04 31 48.9**	**-0.6**
BTK				IAmb		IAmb		04 32 01.7	
	comp=Z,9.2nm,1.0s								
BTK	**Batken**	**21.92**	**303**	P		**P**		**04 31 50.5**	**+0.9**
GAR	**Garm**	**21.99**	**300**			**P**		**04 31 48.5**	**-1.8**
GAR				IAmb		IAmb		04 31 58.2	
	comp=Z,13nm,1.0s								
GAR	**Garm**	**21.99**	**300**	P		**P**		**04 31 49.2**	**-1.1**
KBL	**Kabul**	**22.27**	**287**			**P**		**04 31 53.2**	**-0.4**
KBL	**Kabul**	**22.27**	**287**	P		**P**		**04 31 53.7**	**+0.1**
CHGR	**Chuyangaron**	**22.78**	**298**			**P**		**04 31 56.9**	**-1.9**
CHGR	**Chuyangaron**	**22.78**	**298**	P		**P**		**04 31 57.8**	**-1.0**
KKAR	**Karatay Array**	**23.26**	**310**	P		**P**		**04 32 02.6**	**-1.0**
KURBB	**Kurchatov Area**	**23.64**	**333**	P		**P**		**04 32 06.3**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=142,slow=11,SNR=6.9 comp=Z,1.0nm,0.8s								
ZALV	**Zalesovo Beam**	**24.63**	**345**	P		**P**		**04 32 17.2**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=161,slow=14,SNR=3.8 comp=Z,1.1nm,0.7s								
ZALV	**Zalesovo Beam**	**24.63**	**345**	P		**P**		**04 32 16.4**	**+0.1**
BVAR	**Borovoye Array**	**28.85**	**329**	P		**P**		**04 32 55.6**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=129,slow=12,SNR=4.2 comp=Z,0.8nm,0.3s								
BRTR	**Keskin Array B**	**50.22**	**298**	P		**P**		**04 35 51.4**	**

3.2nm,0.5s,baz=203,slow=17,SNR=5.7
KK31 ⇑Lg Lg 04 59 03.5
15nm,0.8s,baz=206,slow=29
AAK Ala-Archa 7.53 33 Pn **Pn 04 57 40.8 +0.3**
1.0nm,0.3s,baz=214,slow=8.8,SNR=5.1
AAK Sn **Sn 04 59 10.2 +4.2**
0.8nm,0.3s,baz=220,slow=7.3,SNR=1.3
3.6nm,0.5s
MKAR Makanchi Array 14.36 40 Pn **Pn 04 59 13.0 -0.9**
baz=231,slow=12,SNR=8.3
1.3nm,0.9s
KURBB Kurchatov Arra 15.76 23 Pn **Pn 04 59 28.0 -4.5**
0.1nm,0.3s,baz=215,slow=11,SNR=5.2
KURBB Lg Lg 05 04 06.8
baz=211,slow=22,SNR=5.4
0.3nm,0.3s
AKTO Aktyubinsk 16.01 334 Pn **Pn 04 59 35.3 -0.4**
0.3nm,0.3s,baz=77,slow=2.5,SNR=1.6
0.9nm,0.3s
BVAR Borovoye Array 16.59 3 Pn **Pn 04 59 41.1 -2.0**
0.1nm,0.3s,baz=185,slow=13,SNR=5.2
0.7nm,0.4s
ZALV Zalesovo Beam 20.68 27 P **P 05 00 29.6 -0.9**
0.4nm,0.4s,baz=230,slow=12,SNR=1.8
0.4nm,0.4s
KBZ Khabaz 21.11 298 LR LR 05 10 12.0
comp=Z,45nm,21.1s,baz=94,slow=40
ASF Jabal al Asfar 26.70 270 LR LR 05 12 51.0
comp=Z,59nm,19.9s,baz=25,slow=38
MMAI Mount Meron Ar 27.66 273 LR LR 05 14 11.7
comp=Z,40nm,19.8s,baz=118,slow=40
FINES FINESS Array B 36.57 327 LR LR 05 19 13.6
comp=Z,36nm,19.2s,baz=36,slow=38
VRAC Vranov 39.64 306 LR LR 05 21 29.8
comp=Z,17nm,18.5s,baz=87,slow=38
HFS Hagfors 42.05 322 P **P 05 03 44.6 +2.6**
0.9nm,0.7s,baz=93,slow=8.7,SNR=5.4
0.9nm,0.7s
NOA NORSAR Array B 43.38 323 P **P 05 03 54.5 +1.6**
0.2nm,0.4s,baz=96,slow=8.0,SNR=3.3
0.2nm,0.4s
TORD Torodi Ar. Bea 64.02 267 P **P 05 06 25.3 +0.6**
0.5nm,0.9s,baz=47,slow=7.3,SNR=2.1
0.5nm,0.9s
ILAR Eielson Array 75.26 15 P **P 05 07 32.0 -1.2**
0.2nm,0.8s,baz=334,slow=5.3,SNR=2.0
0.2nm,0.8s

IDC ***10*** *04:55:48.1±0.6,7.6°S×106.3°E, h0km, mb4.2/17, mbtmp4.2/17, MS3.4/7, Error ellipse: s-maj=14.6km s-min=12.8km az=32.0*
NEIC ***10*** *04:55:56.6±1.7,7.3°S±0.1°×106.8°E±0.0°8, h46km±6km, mb4.4/15, Error ellipse: s-maj=17.3km s-min=9.6km az=205.0*
DJA ***10*** *04:55:57.3±0.4, 8°S±2°×107°E±°, h20km±3km, M4.7/42, mb4.9/9, mB5.6/3, MLv4.6/42, Mw(mB)5.1/3*
ISC 10 04:55:57.2±0.5, 7.54S±0.09×106.94E±0.06, h63km, n111, σ1°s60/98, mb4.2/25, 1C, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	**0.71**	**84**		**Pn**	**04 56 12.1**	**+0.3**
BBJI					**Sn**	**04 56 22.2**	**-0.4**
BBJI	**Bungbulang**	**0.71**	**84**	P	**Pn**	**04 56 12.1**	**+0.3**
BBJI				S	**Sn**	**04 56 22.1**	**-0.4**
LEM	**Lembang**	**0.98**	**44**	Pg	**Pn**	**04 56 17.2**	**+2.0**
	2µm,0.3s,baz=60,slow=7.2,SNR=378						
LEM				Lg	Lg	04 56 36.0	
	361nm,0.3s,baz=339,slow=14,SNR=8.2						
LEM	**Lembang**	**0.98**	**44**	P	**Pn**	**04 56 17.4**	**+2.2**
TNG	**Tangerang**	**1.39**	**348**	P	**Pn**	**04 56 23.5**	**+3.1**
BLSI	**Bandar Lampung**	**2.73**	**322**	P	**Pn**	**04 56 41.9**	**+3.2**
KASI	**Kota Agung**	**3.14**	**309**	P	**Pn**	**04 56 46.6**	**+2.4**
YOGI	**Yogyakarta**	**3.34**	**95**	P	**Pn**	**04 56 50.1**	**+3.1**
SMRI	**Semarang**	**3.51**	**82**		**Pn**	**04 56 48.6**	**-0.7**
SMRI	**Semarang**	**3.51**	**82**	P	**Pn**	**04 56 51.8**	**+2.5**
UGM	**Wanagama**	**3.57**	**96**		**Pn**	**04 56 51.2**	**+1.0**
UGM	**Wanagama**	**3.57**	**96**	P	**Pn**	**04 56 51.2**	**+1.0**
KLSI		**3.58**	**322**	P	**Pn**	**04 56 54.6**	**+4.4**
LWLI	**Liwa**	**3.80**	**311**	P	**Pn**	**04 56 57.3**	**+3.9**
SNJI	**Sawahan-Nganju**	**4.79**	**93**	P	**Pn**	**04 57 09.8**	**+2.9**
TPI	**Tanjungpandan**	**4.80**	**9**	P	**Pn**	**04 57 10.0**	**+3.0**
MNAI	**Manna**	**5.06**	**308**	P	**Pn**	**04 57 13.4**	**+2.8**
	177nm,1.3s						
EGSI	**Enggano, Bengk**	**5.11**	**295**	P	**Pn**	**04 57 13.1**	**+1.9**
	1.2nm8µm231nm,0.5s						
JAGI	**Jajag, Banyuwa**	**7.21**	**98**		**Pn**	**04 57 41.0**	**+1.0**
JAGI	**Jajag, Banyuwa**	**7.21**	**98**	P	**Pn**	**04 57 43.5**	**+3.6**
PPSI	**Pulau Pagai**	**8.37**	**304**	P	**Pn**	**04 57 58.0**	**+2.2**
TWSI	**Taliwang, Sumb**	**9.92**	**98**	P	**Pn**	**04 58 18.1**	**+1.1**
PLAI	**Plampang**	**10.81**	**98**	P	**Pn**	**04 58 30.8**	**+1.6**
KAPI	**Kappang**	**12.98**	**80**	LR	LR	05 04 54.5	
	comp=Z,88nm,18.0s,baz=252,slow=40						
KAPI	**Kappang**	**12.98**	**80**	Pn	**Pn**	**04 58 59.0**	**+0.1**
MMRI	**Maumere**	**15.19**	**95**	Pn	**P**	**04 59 30.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**21.02**	**122**	P	**P**	**05 00 39.0**	**+3.2**
	2.7nm,0.8s,baz=314,slow=10,SNR=3.9						
	2.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.02**	**122**	P	**P**	**05 00 36.5**	**+0.7**
KNRA	**Kununurra**	**22.84**	**113**	P	**P**	**05 00 56.1**	**+0.8**
KNRA				IAmb	IAmb	05 01 36.0	
	comp=Z,40nm,1.5s						
DAV	**Davao City (W)**	**23.58**	**52**	LR	LR	05 11 26.9	
	comp=Z,55nm,18.9s,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**27.01**	**343**	P	**P**	**05 01 31.4**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=179,slow=8.7,SNR=12						
CMAR				LR	LR	05 14 05.3	
	comp=Z,59nm,19.1s,baz=200,slow=41						
	comp=Z,1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**27.01**	**343**	P	**P**	**05 01 32.1**	**-1.3**
CHTO	**Chiang Mai**	**27.34**	**343**	P	**P**	**05 01 34.6**	**-1.9**
H01W3	**Cape Leeuwin H**	**28.01**	**167**	T	T	05 31 10.7	
	baz=347,slow=76,SNR=129						
H01W1	**Cape Leeuwin H**	**28.02**	**167**	T	T	05 31 17.3	
	baz=347,slow=76,SNR=96						
H01W2	**Cape Leeuwin H**	**28.03**	**167**	T	T	05 31 12.5	
	baz=347,slow=76,SNR=149						
WRA	**Warramunga Arr**	**29.28**	**118**	P	**P**	**05 01 54.9**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=291,slow=10,SNR=22						
WRA				PcP	**PcP**	**05 04 59.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=309,slow=2.9,SNR=1.9						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**29.28**	**118**	P	**P**	**05 01 54.4**	**+0.7**
WR8	**Warramunga Arr**	**29.42**	**118**	P	**P**	**05 01 56.4**	**+1.3**
WR8				IAmb	IAmb	05 02 26.4	
	comp=Z,6.5nm,1.1s						
ASAR	**Alice Springs**	**30.43**	**125**	P	**P**	**05 02 05.4**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=298,slow=8.9,SNR=5.8						
ASAR				PcP	**PcP**	**05 05 02.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=297,slow=3.3,SNR=2.8						
	comp=Z,0.3nm,0.3s						
H08S2	**Diego Garcia H**	**34.14**	**267**	T	T	05 38 08.0	
	baz=91,slow=75,SNR=30						
H08S3	**Diego Garcia H**	**34.15**	**268**	T	T	05 38 14.8	
	baz=91,slow=75,SNR=29						
H08S1	**Diego Carcia H**	**34.16**	**267**	T	T	05 38 11.3	
	baz=91,slow=75,SNR=26						
STKA	**Stephens Creek**	**40.33**	**132**	P	**P**	**05 03 30.8**	**+2.1**
	comp=Z,4.9nm,0.6s,baz=304,slow=7.1,SNR=11						
	comp=Z,4.9nm,0.6s						
KSRS	**Korea Array**	**48.87**	**22**	P	**P**	**05 04 36.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=115,slow=38,SNR=5.9						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	**52.76**	**32**	P	**P**	**05 05 04.9**	**-0.9**
MJAR				IAmb	IAmb	05 05 15.5	
	comp=Z,1.9nm,0.5s						
SONM	**Songino Array**	**55.13**	**360**	P	**P**	**05 05 23.3**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=151,slow=6.6,SNR=1.7						
SONM				PcP	**PcP**	**05 06 24.3**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=182,slow=3.0,SNR=11						
	comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**55.13**	**360**	P	**P**	**05 05 23.3**	**+0.2**
SONM				IAmb	IAmb	05 05 25.9	
	comp=Z,1.8nm,1.1s						
BNX	**BinXian**	**56.12**	**17**	⇑P	**P**	**05 05 28.9**	**-1.1**
BNX				pmax	pmax		
	comp=Z,16nm,0.9s						
KOUNC	**Koumac, New Ca**	**56.86**	**110**	P	**P**	**05 05 38.4**	**+2.6**
BOOM	**Boomskoye usch**	**57.25**	**333**	P	**P**	**05 05 36.4**	**-2.0**
BOOM				IAmb	IAmb	05 05 58.3	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**58.37**	**340**	P	**P**	**05 05 44.3**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=145,slow=7.9,SNR=12						
MKAR				LR	LR	05 35 25.8	
	comp=Z,38nm,18.8s,baz=158,slow=41						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**58.37**	**340**	P	**P**	**05 05 44.1**	**-1.8**
H04N2	**CROZET ISLANDS**	**60.82**	**221**	T	T	06 12 31.0	
	baz=69,slow=76,SNR=42						
H04N1	**CROZET ISLANDS**	**60.83**	**221**	T	T	06 12 32.5	
	baz=69,slow=76,SNR=41						
H04N3	**CROZET ISLANDS**	**60.84**	**221**	T	T	06 12 37.1	
	baz=69,slow=76,SNR=40						
H04S1	**CROZET ISLANDS**	**60.99**	**220**	T	T	06 12 15.4	
	baz=68,slow=76,SNR=15						
H04S3	**CROZET ISLANDS**	**61.01**	**220**	T	T	06 12 42.9	
	baz=68,slow=76,SNR=3.7						
H04S2	**CROZET ISLANDS**	**61.01**	**220**	T	T	06 12 19.6	
	baz=68,slow=76,SNR=4.6						
KURBB	**Kurchatov Arra**	**62.93**	**340**	P	**P**	**05 06 15.0**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=151,slow=6.1,SNR=8.3						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**62.98**	**340**	P	**P**	**05 06 17.0**	**-0.2**
KURK				IAmb	IAmb	05 06 55.5	
	comp=Z,3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**64.03**	**346**	P	**P**	**05 06 21.7**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=149,slow=8.9,SNR=2.6						
ZALV				PcP	**PcP**	**05 06 57.2**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=134,slow=3.6,SNR=2.7						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**64.03**	**346**	P	**P**	**05 06 23.6**	**-0.4**
RPZ	**Rata Peaks**	**66.20**	**135**	LR	LR	05 36 00.8	
	comp=Z,22nm,18.7s,baz=192,slow=36						
BVAR	**Borovoye Array**	**67.83**	**337**	P	**P**	**05 06 47.5**	**-1.1**
	comp=Z,1.7nm,0.4s,baz=148,slow=8.7,SNR=6.1						
	comp=Z,1.7nm,0.4s						
BORK	**Borovoye**	**67.88**	**337**	P	**P**	**05 06 49.0**	**+0.2**
BORK				IAmb	IAmb	05 06 49.4	
	comp=Z,2.5nm,0.5s						
AB31	**Akbulak array**	**69.84**	**329**		**P**	**05 07 00.5**	**-0.6**
AB31				IAmb	IAmb	05 07 01.7	
	comp=Z,9.7nm,0.7s						
ABKAR	**Akbulak array**	**69.84**	**329**		**P**	**05 07 00.1**	**-1.0**
AKTO	**Aktyubinsk**	**71.55**	**329**	P	**P**	**05 07 11.4**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=135,slow=4.7,SNR=4.3						
	comp=Z,1.8nm,0.3s						
YAK	**Yakutsk**	**71.57**	**11**	LR	LR	05 40 07.2	
	comp=Z,46nm,18.4s,baz=239,slow=37						
PETK	**Petropavlovsk-**	**74.09**	**29**	P	**P**	**05 07 25.6**	**-0.9**
ARTI	**Arti**	**75.12**	**334**	P	**P**	**05 07 32.2**	**-0.2**
	comp=Z,10nm,0.6s,baz=144,slow=3.4,SNR=13						
	comp=Z,10nm,0.6s						
ARTI	**Arti**	**75.12**	**334**	P	**P**	**05 07 31.8**	**-0.6**
MMAI	**Mount Meron Ar**	**78.86**	**306**	P	**P**	**05 07 49.5**	**-4.4**
	comp=Z,0.5nm,0.3s,baz=130,slow=5.8,SNR=2.0						
	comp=Z,0.5nm,0.3s						
BRTR	**Keskin Array B**	**82.14**	**312**	P	**P**	**05 08 11.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=146,slow=8.2,SNR=5.6						
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**82.14**	**312**	P	**P**	**05 08 11.0**	**-0.5**
QSPA	**South Pole Qui**	**82.46**	**180**	P	**P**	**05 08 13.9**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=360,slow=2.9,SNR=16						
	comp=Z,0.7nm,0.4s						
QSPA	**South Pole Qui**	**82.46**	**180**	P	**P**	**05 08 14.1**	**+1.4**
QSPA				IAmb	IAmb	05 08 20.8	
	comp=Z,7.1nm,1.4s						
ARCES	**ARCESS Array B**	**94.01**	**340**	P	**P**	**05 09 07.2**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=90,slow=6.6,SNR=4.2						
ARCES				LR	LR	05 56 20.0	
	comp=Z,29nm,19.2s,baz=86,slow=39						
	comp=Z,1.5nm,0.8s						
PDAR	**Pinedale Array**	**132.46**	**36**	PKP	**PKPdf**	**05 15 05.1**	**0.0**
	comp=Z,0.2nm,0.6s,baz=3.9,slow=5.6,SNR=1.9						
CPUP	**Villa Florida**	**143.03**	**204**	PKP	**PKPdf**	**05 15 23.1**	**-1.6**
	comp=Z,3.7nm,1.2s,baz=132,slow=5.8,SNR=3.1						
T35A	**Sooner Cattle**	**143.79**	**33**	PKPdf	PKPbc	05 15 24.1	+0.6
TX31	**Lajitas Ar. Si**	**143.96**	**49**	PKPdf	**PKPdf**	**05 15 25.7**	**-0.7**
TXAR	**Lajitas Array**	**143.96**	**49**	PKP	PKPbc	05 15 25.3	+1.0
	comp=Z,1.0nm,0.8s,baz=214,slow=1.7,SNR=9.2						
TXAR	**Lajitas Array**	**143.96**	**49**		**PKPdf**	**05 15 25.5**	**-0.8**
J57A	**Williamstown**	**144.18**	**4**	PKPdf	**PKPab**	**05 15 23.8**	**-0.1**
R40A	**Maddies Statio**	**144.80**	**27**		**PKPab**	**05 15 26.5**	**+0.1**
S39A	**Bolivar**	**144.81**	**28**		**PKPab**	**05 15 26.4**	**-0.1**
K57A	**Scipio Center**	**144.81**	**4**	PKPdf	PKPbc	05 15 26.5	+0.1
TUL3	**Leonard**	**144.93**	**33**		**PKPab**	**05 15 27.3**	**+0.4**
SFIN	**Lafayette**	**144.97**	**19**		**PKPdf**	**05 15 27.9**	**+0.3**
RLO	**Rose Lookout**	**145.15**	**32**	PKPbc	**PKPdf**	**05 15 28.2**	**+0.1**
U38A	**Gravette**	**145.27**	**31**		**PKPab**	**05 15 28.6**	**+0.4**
L56A	**Greenwood**	**145.31**	**6**	PKPbc	**PKPbc**	**05 15 28.0**	**-0.1**
L59A	**Walton**	**145.44**	**3**		**PKPab**	**05 15 29.1**	**+0.4**
CCM	**Cathedral Cave**	**145.44**	**26**		**PKPab**	**05 15 29.2**	**+0.5**
PLPT	**Palo Pinto**	**145.63**	**40**		**PKPab**	**05 15 30.7**	**+1.0**
PAOC	**Oil Creek Stat**	**145.65**	**9**	PKPdf	**PKPdf**	**05 15 28.8**	**+0.1**
O48B	**Farmland**	**145.67**	**17**	PKPdf	**PKPbc**	**05 15 29.1**	**-0.1**
KSCT	**Kent School, K**	**145.95**	**1**		**PKPab**	**05 15 30.4**	**-0.1**
KSPA	**Keystone Colle**	**146.03**	**4**		**PKPbc**	**05 15 30.4**	**+0.1**
BDFB	**Brasilia**	**146.15**	**227**	PKPbc	**PKPdf**	**05 15 28.5**	**-2.0**
	comp=Z,1.1nm,0.5s,baz=158,slow=5.4,SNR=3.9						
PAMR	**Moraine State**	**146.15**	**10**		**PKPbc**	**05 15 30.9**	**+0.2**
BRDY	**Brady**	**146.17**	**42**		**PKPab**	**05 15 32.4**	**+0.6**
T42A	**Van Buren**	**146.37**	**27**		**PKPbc**	**05 15 31.9**	**+0.5**
N58A	**Sunbury**	**146.68**	**5**		**PKPbc**	**05 15 32.5**	**+0.4**
P52A	**Corning**	**147.02**	**13**	PKPbc	**PKPbc**	**05 15 33.3**	**+0.1**
MIAR	**Mount Ida**	**147.15**	**32**		**PKPbc**	**05 15 34.2**	**+0.5**
WVT	**Waverly**	**148.50**	**23**		**PKPbc**	**05 15 37.6**	**+0.3**
TKL	**Tuckaleechee C**	**150.34**	**18**	PKPbc	**PKiKP**	**05 15 42.7**	**0.0**
V53A	**Saluda**	**150.61**	**16**		**PKPbc**	**05 15 42.8**	**+0.2**

JMA ***10*** *05:23:06.0±0.4,25°N±1°×122.1°E±0.7, h93km±3km, MV2.4/11, TAIWAN REGION*
TAP ***10*** *05:23:06.5,24.70N×122.11E, h86km±1km, ML2.9, B*
ISC 10 05:23:06.9±1.5, 24.69N±0.04×122.11E±0.03, h86km±8km, n64, σ0s64/104, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.23**	**315**	*i* P	**Pn**	**05 23 19.7**	**+0.2**
EGS				*i* S	**Sn**	**05 23 27.2**	**-1.6**
TWC	**Suao**	**0.25**	**252**	*i* P	**Pn**	**05 23 19.3**	**-0.2**
TWC				*i* S	**Sn**	**05 23 28.9**	**0.0**
ESAO	**Su ao**	**0.27**	**245**	*e*S	**Sn**	**05 23 28.8**	**-0.3**
EOS2	**EOS2**	**0.29**	**157**	P	**Pn**	**05 23 20.3**	**+0.7**
ILA	**Ilan**	**0.34**	**284**	*e*S	**Sn**	**05 23 28.9**	**-0.8**
TWB1	**Santiao Chiao**	**0.34**	**341**	*i* P	**Pn**	**05 23 19.8**	**-0.3**
TWB1				*i* S	**Sn**	**05 23 29.8**	**0.0**
NDS	**Dongshan**	**0.36**	**262**	P	**Pn**	**05 23 20.6**	**+0.4**
NDS				S	**Sn**	**05 23 30.1**	**+0.1**
TIPB	**Shuangxi**	**0.38**	**318**	⇑P	**Pn**	**05 23 20.0**	**-0.4**
TIPB				*i* S	**Sn**	**05 23 29.7**	**-0.6**
EWUT	**Wuta**	**0.39**	**231**	P	**Pn**	**05 23 20.3**	**0.0**
EWUT				*i* S	**Sn**	**05 23 30.7**	**+0.4**
TWE	**Neicheng**	**0.40**	**275**	*i* P	**Pn**	**05 23 21.0**	**+0.6**
TWE				*i* S	**Sn**	**05 23 30.5**	**0.0**
EOS3	**EOS3**	**0.44**	**154**	*e*P	**Pn**	**05 23 21.5**	**+0.9**
SXI1	**Grass Mountain**	**0.46**	**333**	P	**Pn**	**05 23 20.4**	**-0.5**
SXI1				S	**Sn**	**05 23 31.0**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.48**	**279**	P	**Pn**	**05 23 21.2**	**+0.1**
FUSB				S	**Sn**	**05 23 31.9**	**+0.2**
EAHA	**Aohua**	**0.49**	**223**	*e*P	**Pn**	**05 23 19.9**	**-1.2**
ENTT	**Nioudou**	**0.50**	**265**	*i* P	**Pn**	**05 23 21.5**	**+0.4**
ENTT				*i* S	**Sn**	**05 23 31.1**	**-0.7**
NDT	**Datong Townshi**	**0.55**	**261**	P	**Pn**	**05 23 21.9**	**+0.3**
NDT				S	**Sn**	**05 23 33.5**	**+0.9**
LATG	**Datong**	**0.55**	**254**	P	**Pn**	**05 23 21.9**	**+0.1**
LATG				*i* S	**Sn**	**05 23 34.0**	**+1.2**
NWLT	**Wulai**	**0.56**	**279**	*e*P	**Pn**	**05 23 21.5**	**-0.2**
NWLT				*e*S	**Sn**	**05 23 32.9**	**+0.2**
EOS4	**EOS4**	**0.59**	**161**	*e*P	**Pn**	**05 23 22.1**	**+0.5**
EOS4				*e*S	**Sn**	**05 23 33.2**	**+0.7**
YHNB	**Yeheng**	**0.67**	**269**	P	**Pn**	**05 23 22.6**	**-0.2**
YHNB				*e*S	**Sn**	**05 23 34.4**	**-0.2**
YM01	**YM01**	**0.67**	**313**	*e*S	**Sn**	**05 23 34.3**	**-0.3**
NSK	**Sanguang**	**0.68**	**269**	*i* P	**Pn**	**05 23 22.6**	**-0.3**
NSK				S	**Sn**	**05 23 34.5**	**-0.4**
ETL	**Fush Village**	**0.69**	**220**	*e*P	**Pn**	**05 23 22.1**	**-0.8**
NACB	**Ninganchiao**	**0.69**	**223**	P	**Pn**	**05 23 22.1**	**-0.8**
NACB				*e*S	**Sn**	**05 23 34.7**	**-0.2**
ZUZH	**Zhuzihu**	**0.70**	**313**	*e*S	**Sn**	**05 23 35.6**	**+0.5**
NNSB	**Datong**	**0.71**	**249**	P	**Pn**	**05 23 23.2**	**-0.1**
NNSB				*e*S	**Sn**	**05 23 35.3**	**-0.1**
NNS	**Nan Shan**	**0.71**	**250**	*i* P	**Pn**	**05 23 23.4**	**+0.1**
NNS				*i* S	**Sn**	**05 23 35.8**	**+0.3**
ETLH	**Xiulin Townshi**	**0.74**	**230**	*e*P	**Pn**	**05 23 23.2**	**-0.4**
ETLH				*e*S	**Sn**	**05 23 35.5**	**-0.5**
TWS1	**Kuangyinshan**	**0.75**	**303**	*i* P	**Pn**	**05 23 23.6**	**+0.1**
TWS1				*i* S	**Sn**	**05 23 36.9**	**+0.9**
TWD	**Chiawan**	**0.76**	**218**	*i* P	**Pn**	**05 23 23.2**	**-0.5**
TWD				*i* S	**Sn**	**05 23 36.5**	**+0.3**
JYNG	**Yonagunijimaku**	**0.80**	**107**	P	**Pn**	**05 23 24.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.85**	**105**	P	**Pn**	**05 23 24.8**	**+0.2**
YOJ				*e*S	**Sn**	**05 23 38.9**	**+1.0**
YOJ	**Yonaguni jima**	**0.85**	**105**	P	**Pn**	**05 23 24.6**	**0.0**
YOJ				*e*S	**Sn**	**05 23 38.6**	**+0.7**
KSHI	**Guanxi Townshi**	**0.85**	**276**	*e*P	**Pn**	**05 23 24.5**	**-0.2**
KSHI				*e*S	**Sn**	**05 23 38.0**	**+0.1**
NCUH	**Zhongli**	**0.89**	**289**	*e*S	**Sn**	**05 23 40.5**	**+2.0**
FUSS	**Fushou**	**0.90**	**241**	*i* P	**Pn**	**05 23 25.2**	**-0.2**
FUSS				*e*S	**Sn**	**05 23 39.2**	**0.0**
ETM	**Tongmen**	**0.91**	**218**	*e*P	**Pn**	**05 23 24.3**	**-1.0**
LXIB	**Xiulin Townshi**	**0.92**	**224**	*e*P	**Pn**	**05 23 24.4**	**-1.1**
LXIB				*e*S	**Sn**	**05 23 39.0**	**-0.4**
TEYL	**Yanliau Villag**	**0.94**	**210**	*e*P	**Pn**	**05 23 25.1**	**-0.4**
WHF	**Hehuan Shan**	**0.94**	**235**	*i* P	**Pn**	**05 23 25.9**	**-0.2**
WHF				*e*S	**Sn**	**05 23 40.3**	**0.0**
TWT	**Tachien**	**0.95**	**243**	*i* P	**Pn**	**05 23 26.6**	**+0.7**
TDCB	**Techi**	**0.97**	**244**	P	**Pn**	**05 23 26.2**	**+0.1**
TDCB				S	**Sn**	**05 23 40.5**	**+0.1**
LIOB	**Emei**	**0.99**	**268**	*e*P	**Pn**	**05 23 26.0**	**-0.3**
LIOB				*i* S	**Sn**	**05 23 40.5**	**-0.3**
NSTT	**Nanjuang**	**1.01**	**267**	*i* P	**Pn**	**05 23 25.7**	**-0.7**
NSTT				*e*S	**Sn**	**05 23 40.4**	**-0.6**
SHUL	**Shoufeng**	**1.02**	**209**	*e*P	**Pn**	**05 23 26.1**	**-0.5**
SHUL				S	**Sn**	**05 23 41.7**	**+0.3**
OWD	**Renai**	**1.12**	**230**	*i* P	**Pn**	**05 23 27.6**	**-0.3**
OWD				*i* S	**Sn**	**05 23 42.7**	**-0.9**
WHP	**Taichung City**	**1.14**	**249**	*e*P	**Pn**	**05 23 28.2**	**+0.2**
WHP				*i* S	**Sn**	**05 23 43.9**	**+0.1**
WUSB	**Renai**	**1.14**	**233**	⇑P	**Pn**	**05 23 27.9**	**-0.1**
WUSB				S	**Sn**	**05 23 43.9**	**-0.1**
WARBT	**Fenglin Townsh**	**1.17**	**215**	*e*P	**Pn**	**05 23 26.7**	**-1.7**
WCS	**Beigang Elemen**	**1.26**	**240**	*e*P	**Pn**	**05 23 29.2**	**-0.2**
HGSD	**Ruisui**	**1.34**	**208**	*e*P	**Pn**	**05 23 30.2**	**-0.3**
HGSD				*e*S	**Sn**	**05 23 48.5**	**+0.3**
SMLT	**Sun Moon Lake**	**1.36**	**234**	*i* P	**Pn**	**05 23 31.1**	**+0.3**
TYC	**Yuchr**	**1.38**	**236**	*i* P	**Pn**	**05 23 31.7**	**+0.8**
SSLB	**Suanglung**	**1.38**	**230**	*i* P	**Pn**	**05 23 31.7**	**+0.7**
SSLB				*i* S	**Sn**	**05 23 49.9**	**+0.7**
YULB	**Yu-li**	**1.49**	**210**	*e*P	**Pn**	**05 23 30.9**	**-1.4**
WHYT	**Xinyi Township**	**1.51**	**230**	*e*P	**Pn**	**05 23 33.8**	**+1.1**
WHYT				*i* S	**Sn**	**05 23 53.7**	**+1.6**
EYUL	**Yuli**	**1.52**	**209**	*e*P	**Pn**	**05 23 32.3**	**-0.4**
FULB	**Fuli**	**1.66**	**207**	*e*P	**Pn**	**05 23 34.0**	**-0.5**
FULB				S	**Sn**	**05 23 55.5**	**0.0**
ALS	**Alishan**	**1.67**	**226**	P	**Pn**	**05 23 35.4**	**+0.5**
JKRS	**Kuro-shima**	**1.79**	**104**	P	**Pn**	**05 23 36.5**	**+0.4**
JIJ	**Ishigaki jima**	**1.88**	**99**	P	**Pn**	**05 23 37.3**	**-0.1**
JIJ				*e*S	**Sn**	**05 23 59.4**	**-1.2**
JIJ	**Ishigaki jima**	**1.88**	**99**	*e*P	**Pn**	**05 23 59.5**	**-1.1**
TPUB	**Ta-pu**	**1.93**	**225**	*e*P	**Pn**	**05 23 38.1**	**0.0**
JISG	**Ishigakijimahi**	**2.01**	**92**	P	**Pn**	**05 23 39.1**	**+0.1**

JMA 10 05:23:37.5±0.2, 25°N±4°×123.2E±0.6, h125km±2km, MV2.0/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

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

	comp=Z,8.0nm,0.3s							
VADS				*e*S		Sn	05 52 48.3	-6.1
VADS	**Vadso**	**6.31**	**117**	P		Pn	05 51 40.6	-1.8
VADS				S		Sn	05 52 45.4	-9.0
HEF	**Hetta**	**6.44**	**142**	Pn		Pn	05 51 43.1	-1.1
HEF				Sn		Sn	05 52 50.1	-7.6
HEF	**Hetta**	**6.44**	**142**	*e*P		Pn	05 51 42.9	-1.4
HEF				*e*S		Sn	05 52 50.6	-7.1
FAUS	**Fauske**	**6.49**	**171**	*e*P		Pn	05 51 43.8	-1.1
FAUS				*e*S		Sn	05 52 51.6	-7.3
FAUS	**Fauske**	**6.49**	**171**	P		Pn	05 51 46.2	+1.4
FAUS				S		Sn	05 52 51.8	-7.0
LANU	**Lannavaara**	**6.50**	**148**	*e*P		Pn	05 51 44.5	-0.6
LANU				*e*S		Sn	05 52 53.8	-5.3
SALU	**Saltoluokta**	**6.71**	**161**	*e*P		Sn	05 51 48.2	+0.3
SALU				*e*S		Sn	05 52 58.2	-6.1
VAGH	**Vaagaholmen**	**7.09**	**178**	Pn		Pn	05 51 51.1	-2.0
KONS	**Konsvik**	**7.33**	**179**	*e*P		Pn	05 51 54.4	-2.0
KONS				IAML			05 52 05.0	
	comp=Z,1.9nm,0.6s							
KONS				*e*S		Sn	05 53 09.8	-10
RAUS	**Rausandaksla**	**7.40**	**176**	*e*S		Sn	05 53 12.8	-8.4
STOK	**Stokkvaagen**	**7.49**	**179**	Pn		Pn	05 51 57.0	-1.7
STOK				Sn		Sn	05 53 13.1	-10
STOK	**Stokkvaagen**	**7.49**	**179**	*e*P		Pn	05 51 56.6	-2.0
MOR8	**Moi Rana**	**7.67**	**175**	*e*S		Sn	05 53 18.0	-10
LEIR	**Leirfjorden**	**7.71**	**179**	Pn		Pn	05 51 59.4	-2.3
LEIR				Sn		Sn	05 53 17.8	-11
LEIR	**Leirfjorden**	**7.71**	**179**	*e*P		Pn	05 51 59.5	-2.2
LEIR				IAML			05 52 07.0	
	comp=Z,2.4nm,0.8s							
LEIR				*e*S		Sn	05 53 18.1	-11
APA0	**Apatity Array**	**9.07**	**123**	Pn		Pn	05 52 16.5	-3.6
	baz=328,slow=16							
APA0				Sn		Sn	05 53 52.1	-10
	baz=316,slow=37							
APA0	**Apatity Array**	**9.07**	**123**	Pn		Pn	05 52 16.5	-3.6
APA0				Sn		Sn	05 53 52.1	-10
APA0	**Apatity Array**	**9.07**	**123**	P		Pn	05 52 16.9	-3.3
APA0				S		Sn	05 53 52.0	-10
OMEGA	**Omega**	**10.17**	**32**	*e*P		Pn	05 52 24.8	-10
OMEGA				*e*S		Sn	05 54 12.9	-16

IDC ***10*** *06:00:19.0±3.1,54˚.49N×86˚.98E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=27.0km s-min=20.0km az=49.0*

ASRS 10 06:00:17.0±0.7,**54˚.40N×86˚.95E, h0**km,**M2.7**(MOS),**The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**251**	I	I	06 08 40.0	
	baz=70,slow=309,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.33**	**251**	Pg	Pn	06 00 43.7	+0.9
	2.0nm,0.3s,baz=68,slow=15,SNR=10						
ZALV				Lg	Lg	06 01 02.7	
	1.8nm,0.3s,baz=62,slow=25,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.38**	**237**	Pn	Pn	06 01 55.6	+3.4
	0.1nm,0.3s,baz=54,slow=14,SNR=6.5						
KURBB				Lg	Lg	06 03 45.5	
	baz=53,slow=28,SNR=1.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.17**	**203**	Pn	Pn	06 02 21.4	+4.6
	0.1nm,0.3s,baz=18,slow=13,SNR=5.0						
MKAR				Lg	Lg	06 04 43.6	
	baz=29,slow=27						
	0.2nm,0.3s						

IDC ***10*** *06:01:41.3±2.6,27˚.99N×55˚.87E, h0km, mb3.8/8, mbtmp3.8/8, MS3.1/1, Error ellipse: s-maj=59.0km s-min=23.3km az=157.0*
TEH ***10*** *06:01:43.4,28˚.11N×55˚.87E, h6km±45km, ML3.4, Presumed earthquake*
DSN ***10*** *06:01:44.3±1.0,28˚.16N×56˚.25E, h10km, ML3.0/8, Error ellipse: s-maj=45.6km s-min=9.3km az=93.0*
OMAN ***10*** *06:01:48.6±1.8,27˚.79N×55˚.81E, h10km, ml3.2/19, Error ellipse: s-maj=16.0km s-min=10.8km az=9.0*

ISC 10 06:01:44.5±0.7,**28˚.10N**±0˚.04×**55˚.96E**±0˚.05,**h16**km,**n59,** σ1§**87**/67,**mb3.7**/7,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.72**	**165**	Pg	**Pg**	**06 01 58.8**	**+0.2**
IBND	**Bandar-abas**	**0.82**	**141**	Pg	**Pn**	**06 02 02.2**	**+0.8**
KHNJ	**Kahnooj**	**1.55**	**95**	Pg	**Pg**	**06 02 13.8**	**-0.5**
NGRK	**Negar Kerman**	**1.68**	**23**	Pg	**Pb**	**06 02 15.4**	**+0.1**
KRBR	**Kerman**	**2.00**	**20**	Pn	**Pb**	**06 02 21.0**	**+0.3**
SHME	**Shamm**	**2.04**	**175**	P	**Pn**	**06 02 19.2**	**+1.0**
SHME	**Shamm**	**2.04**	**175**	P	**Pn**	**06 02 21.4**	**+3.2**
SHME				S	**Sn**	**06 02 47.3**	**+3.9**
JHRM	**Jahrom**	**2.14**	**282**	Pn	**Pn**	**06 02 21.2**	**+1.5**
BANOM	**Banah**	**2.19**	**172**	P	**Pn**	**06 02 20.7**	**+0.6**
BANOM	**Banah**	**2.19**	**172**	P	**Pn**	**06 02 22.7**	**+2.5**
CHMN	**Cheshme madani**	**2.24**	**38**	Pn	**Pb**	**06 02 24.7**	**-0.1**
KHGB	**Koh Gabri**	**2.32**	**11**	Pn	**Pb**	**06 02 25.1**	**-0.9**
KBAM	**BAM**	**2.42**	**64**	Pn	**Pb**	**06 02 26.7**	**-1.1**
UMQ	**Umm Al-Quwin**	**2.58**	**186**	P	**Pn**	**06 02 27.8**	**+2.3**
MASF	**Masafi**	**2.72**	**176**	P	**Pn**	**06 02 30.0**	**+2.4**
MSFE	**Esma-Masafi**	**2.73**	**176**	P	**Pn**	**06 02 29.5**	**+1.8**
MDH	**Madha**	**2.80**	**174**	P	**Pn**	**06 02 30.6**	**+1.9**
MDH	**Madha**	**2.80**	**174**	P	**Pn**	**06 02 31.8**	**+3.2**
	SNR=6.2						
NAZ	**Nazwa, Dubai**	**3.11**	**185**	P	**Pn**	**06 02 34.9**	**+2.1**
NAZ	**Nazwa, Dubai**	**3.11**	**185**	P	**Pn**	**06 02 35.4**	**+2.5**
UOSS	**Minazif**	**3.15**	**176**	P	**Pn**	**06 02 35.0**	**+1.6**
UOSS	**Minazif**	**3.15**	**176**	P	**Pn**	**06 02 34.8**	**+1.4**
UOSS				S	**Sn**	**06 03 10.3**	**-0.3**
HATD	**Hatta, Dubai**	**3.26**	**177**	P	**Pn**	**06 02 36.9**	**+1.9**
HATD	**Hatta, Dubai**	**3.26**	**177**	P	**Pn**	**06 02 37.8**	**+2.8**
	SNR=5.7						
ASHO	**Ashiyiah**	**3.40**	**179**	P	**Pn**	**06 02 38.3**	**+1.4**
ASHO				S	**Sn**	**06 03 20.8**	**+3.9**
ASHO	**Ashiyiah**	**3.40**	**179**	P	**Pn**	**06 02 39.1**	**+2.2**
ASHO				S	**Sn**	**06 03 17.0**	**+0.1**
IMEH	**Mehriz**	**3.49**	**341**	Pn	**Pn**	**06 02 40.4**	**+2.1**
IBAF	**Bafgh**	**3.50**	**354**	Pn	**Pn**	**06 02 40.7**	**+2.3**
ASUD	**Al Ashush, Dub**	**3.50**	**189**	P	**Pn**	**06 02 40.9**	**+2.6**
TAFT	**Taft - Yazd**	**3.93**	**337**	Pn	**Pn**	**06 02 46.6**	**+2.2**
SOHO	**SOHO**	**3.98**	**172**	P	**Pn**	**06 02 47.5**	**+2.6**
ALNE	**Al Ain**	**4.03**	**183**	P	**Pn**	**06 02 48.1**	**+2.5**
HOQ	**Hoqain**	**4.66**	**165**	P	**Pn**	**06 02 54.5**	**+0.3**
ARQ	**Araqi**	**4.77**	**174**	P	**Pn**	**06 02 57.9**	**+2.2**
KLNJ	**Kolanjah**	**4.79**	**308**	Pn	**Pn**	**06 02 58.5**	**+2.2**
BIDO	**Bidbid**	**4.96**	**156**	P	**Pn**	**06 02 58.4**	**+0.1**
SMDO	**Samad**	**5.36**	**159**	P	**Pn**	**06 03 06.7**	**+2.8**
WSAR	**Wadi Sarin**	**5.40**	**153**	P	**Pn**	**06 03 05.4**	**+1.0**
WSAR				S	**Sn**	**06 04 04.5**	**-1.9**
UMZA	**Um Al Zommool**	**5.41**	**188**	P	**Pn**	**06 03 05.0**	**+0.5**
UMZA				S	**Sn**	**06 04 06.1**	**-0.3**
BSY	**Bisya**	**5.45**	**168**	P	**Pn**	**06 03 06.2**	**+1.2**
BSY				S	**Sn**	**06 04 05.8**	**-1.6**
SLWR	**Sila**	**5.55**	**225**	S	**Sn**	**06 04 09.3**	**-0.7**
IBRJ	**Brojen**	**5.57**	**314**	Pn	**Pn**	**06 03 08.5**	**+1.6**
JMDO	**Jabal Madar**	**6.02**	**161**	P	**Pn**	**06 03 14.4**	**+1.5**
WBK	**Wadi Bani Khal**	**6.10**	**153**	P	**Pn**	**06 03 14.9**	**+0.8**
WBK				S	**Sn**	**06 04 23.0**	**-0.6**
JLN	**Jalan Bani Buh**	**6.69**	**151**	P	**Pn**	**06 03 22.8**	**+0.7**
KRSH	**Karshahi**	**6.71**	**332**	Pn	**Pn**	**06 03 24.1**	**+1.5**
QAMS	**Qamsar**	**6.85**	**326**	Pn	**Pn**	**06 03 26.0**	**+1.4**
MHTO	**MHTO**	**7.31**	**165**	P	**Pn**	**06 03 32.3**	**+1.6**
WHFO	**Wadi Hawf**	**10.33**	**192**	P	**Pn**	**06 04 11.4**	**-0.7**
	SNR=13						
WHFO				S	**Sn**	**06 06 03.3**	**-4.3**
RAYN	**Ar Rayn**	**10.46**	**247**	S	**Sn**	**06 06 07.6**	**-3.3**
AAK	**Ala-Archa**	**20.89**	**41**	LR	LR	06 16 01.2	
	comp=Z,49nm,18.4s,baz=160,slow=41						
BRTR	**Keskin Array B**	**21.80**	**308**	P	**P**	**06 06 35.5**	**-0.5**
	1.6nm,0.6s,baz=128,slow=12,SNR=6.0						
	1.6nm,0.6s						
BVAR	**Borovoye Array**	**27.10**	**19**	P	**P**	**06 07 26.8**	**+0.4**
	0.7nm,0.4s,baz=202,slow=7.2,SNR=4.2						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**27.82**	**41**	P	**P**	**06 07 34.4**	**+1.5**
	0.1nm,0.4s,baz=245,slow=6.2,SNR=2.3						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**28.26**	**31**	P	**P**	**06 07 37.2**	**+0.4**
	0.5nm,0.7s,baz=231,slow=8.7,SNR=7.2						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**33.36**	**31**	P	**P**	**06 08 21.4**	**-0.3**
	2.4nm,0.5s,baz=234,slow=8.9,SNR=10						
	2.4nm,0.5s						
FINES	**FINESS Array B**	**38.84**	**338**	P	**P**	**06 09 08.4**	**-0.1**
	1.7nm,0.8s,baz=109,slow=7.3,SNR=4.1						
	1.7nm,0.8s						
HFS	**Hagfors**	**42.88**	**330**	P	**P**	**06 09 41.2**	**-0.6**
	1.3nm,0.9s,baz=134,slow=8.3,SNR=1.8						
	1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**52.52**	**265**	P	**P**	**06 10 55.9**	**-1.4**
	1.0nm,0.6s,baz=57,slow=7.2,SNR=8.3						
	1.0nm,0.6s						

IDC ***10*** *06:06:08.9±1.3,48˚.40N×57˚.92W, h0km, mb3.5/3, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=36.6km s-min=14.7km az=45.0*
OTT ***10*** *06:06:11.1±0.1,48˚.44N×57˚.67W, h18km, MN3.3/11, 57km east from Stephenville Crossing, NI Eastern Background Seismic Zone.*

ISC 10 06:06:10.0±0.8,**48˚.45N**±0˚.05×**57˚.89W**±0˚.05,**h10**km,**n18,** σ1§**88**/31,**Newfoundland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**0.85**	**17**	PG	**Pg**	**06 06 26.2**	**-0.2**
DRLN				SG	**Sg**	**06 06 37.7**	**+0.3**
DRLN				Trac		06 06 46.2	
	comp=Z,196nm,0.2s						
PCAQ	**Pointe Carleto**	**3.56**	**293**	PN	**Pn**	**06 07 06.8**	**+1.5**
PCAQ				SN	**Sn**	**06 07 48.8**	**+1.4**
PCAQ				LG	Lg	06 08 04.5	
PCAQ				Trac		06 08 11.0	
	comp=Z,86nm,0.4s						
SJNN	**Saint John's**	**3.60**	**102**	PN	**Pn**	**06 07 06.0**	**+0.2**
SJNN				SN	**Sn**	**06 07 42.5**	**-5.8**
SJNN				LG	Lg	06 07 59.6	
SJNN				Trac		06 08 05.3	
	comp=Z,50nm,0.3s						
BJBQ	**Baie Johan-Bee**	**3.70**	**302**	PN	**Pn**	**06 07 08.8**	**+1.5**
BJBQ				SN	**Sn**	**06 07 51.8**	**+0.8**
BJBQ				LG	Lg	06 08 10.9	
BJBQ				Trac		06 08 12.5	
	comp=Z,81nm,0.5s						
GBN	**Guysborough**	**3.93**	**221**	PN	**Pn**	**06 07 11.6**	**+1.3**
GBN				SN	**Sn**	**06 07 56.3**	**-0.2**
GBN				LG	Lg	06 08 14.2	
GBN				Trac		06 08 20.2	
	comp=Z,26nm,0.3s						
PMAQ	**Port Menier**	**4.45**	**290**	PN	**Pn**	**06 07 19.6**	**+2.1**
PMAQ				SN	**Sn**	**06 08 09.2**	**0.0**
PMAQ				LG	Lg	06 08 32.0	
PMAQ				Trac		06 08 38.2	
	comp=Z,47nm,0.3s						
SVNB	**Stilesville Qu**	**5.27**	**247**	SN	**Sn**	**06 08 28.8**	**-0.9**
SVNB				LG	Lg	06 08 57.5	
ELNB	**Elgin, New Bru**	**5.59**	**245**	PN	**Pn**	**06 07 32.5**	**-0.7**
ELNB				SN	**Sn**	**06 08 35.9**	**-1.6**
ELNB				Trac		06 09 17.1	
	comp=Z,6.0nm,0.4s						
HSNB	**Heath Steele M**	**5.62**	**261**	PN	**Pn**	**06 07 34.9**	**+1.2**
HSNB				SN	**Sn**	**06 08 37.4**	**-0.9**
HSNB				Trac		06 09 14.0	
	comp=Z,2.7nm,0.1s						
ICQ	**Pointe Anglais**	**6.27**	**283**	PN	**Pn**	**06 07 43.3**	**+0.8**
ICQ				SN	**Sn**	**06 08 53.0**	**-1.1**
ICQ				LG	Lg	06 09 28.7	
ICQ				Trac		06 09 38.1	
	comp=Z,24nm,0.5s						
SNFQ	**Sainte-Felicit**	**6.28**	**278**	PN	**Pn**	**06 07 44.1**	**+1.5**
SNFQ				SN	**Sn**	**06 08 53.1**	**-1.4**
SNFQ				Trac		06 09 36.4	
	comp=Z,20nm,0.4s						
GGN	**Saint George**	**6.99**	**245**	PN	**Pn**	**06 07 52.7**	**+0.3**
GGN				SN	**Sn**	**06 09 09.5**	**-2.4**
GGN				LG	Lg	06 09 52.7	
GGN				Trac		06 10 00.2	
	comp=Z,4.9nm,0.4s						
MCNB	**McAdam**	**7.05**	**250**	PN	**Pn**	**06 07 53.8**	**+0.6**
MCNB				SN	**Sn**	**06 09 11.1**	**-2.2**
MCNB				LG	Lg	06 09 51.8	
MCNB				Trac		06 10 03.8	
	comp=Z,7.4nm,0.4s						
SCHQ	**Schefferville**	**8.47**	**322**	Pn	**Pn**	**06 08 11.4**	**-1.2**
	2.0nm,0.3s,baz=133,slow=14,SNR=4.9						
SCHQ				Sn	**Sn**	**06 09 43.2**	**-5.0**
	1.8nm,0.3s,baz=41,slow=17,SNR=6.2						
SCHQ				Lg	Lg	06 10 32.4	
	3.5nm,0.3s,baz=241,slow=12,SNR=7.8						
	6.7nm,0.5s						
TXAR	**Lajitas Array**	**39.73**	**258**	P	**P**	**06 13 42.7**	**0.0**
	0.1nm,0.4s,baz=39,slow=7.3,SNR=1.7						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**43.50**	**31**	P	**P**	**06 14 14.1**	**+1.1**
	0.8nm,0.7s,baz=269,slow=7.2,SNR=1.6						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**60.20**	**105**	P	**P**	**06 16 17.9**	**-0.3**
	0.5nm,0.5s,baz=312,slow=7.6,SNR=4.3						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**149.90**	**337**	PKPbc	**PKiKP**	**06 26 01.5**	**0.0**
	0.3nm,0.5s,baz=355,slow=2.3,SNR=2.5						

IDC ***10*** *06:11:41.0±1.9,33˚.60S×178˚.77W, h0km, mb3.9/3, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=42.9km s-min=32.1km az=72.0*
WEL ***10*** *06:11:44.9±1.2,34˚.5±12˚×17˚.8W±1˚.6, h227km±22km, M4.3/7, mB4.6/4, ML4.4/7, MLv4.5/7, Mw(mB)3.8/4, Error ellipse: s-maj=23.3km s-min=9.7km az=122.9*

ISC 10 06:11:46.0±1.5,**33˚.86S**±0˚.10×**178˚.5W**±0˚.1,**h37**km,**n39,** σ1§**52**/68,**mb3.8**/3,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.52**	**214**	P	**Pn**	**06 12 51.2**	**-0.6**
MXZ				S	**Sn**	**06 13 44.0**	**+1.0**
WMGZ	**Waiomatatini S**	**4.68**	**211**	P	**Pn**	**06 12 54.4**	**+0.4**
WMGZ				S	**Sn**	**06 13 48.7**	**+1.7**
PKGZ	**Pakihiroa**	**4.87**	**214**	P	**Pn**	**06 12 55.9**	**-0.7**
PKGZ				S	**Sn**	**06 13 52.7**	**+2.0**
HAZ	**Te Kaha**	**4.92**	**217**	P	**Pn**	**06 12 57.4**	**0.0**
HAZ				S	**Sn**	**06 13 57.2**	**+4.1**
PUZ	**Puketiti**	**4.96**	**211**	P	**Pn**	**06 12 56.1**	**-1.8**
PUZ				S	**Sn**	**06 13 55.4**	**+1.4**
RUGZ	**Raukumara Rang**	**5.14**	**216**	P	**Pn**	**06 12 59.7**	**-0.7**
RUGZ				S	**Sn**	**06 14 01.6**	**+3.0**
TWGZ	**Tauwhareparae**	**5.17**	**212**	P	**Pn**	**06 13 02.5**	**+1.7**
CNGZ	**Carnagh Statio**	**5.33**	**209**	P	**Pn**	**06 13 01.7**	**-1.3**
CNGZ				S	**Sn**	**06 14 07.4**	**+4.4**
TKGZ	**Te Karaka**	**5.44**	**212**	P	**Pn**	**06 13 05.9**	**+1.4**
TKGZ				S	**Sn**	**06 14 07.5**	**+1.6**
MWZ	**Matawai**	**5.50**	**215**	P	**Pn**	**06 13 04.3**	**-1.1**
MWZ				S	**Sn**	**06 14 08.0**	**+0.5**
URZ	**Urewera**	**5.65**	**218**	Pn	**Pn**	**06 13 06.1**	**-1.3**
	5.6nm,0.3s,baz=13,slow=14,SNR=19						
URZ				Sn	**Sn**	**06 14 10.8**	**-0.1**
	11nm,0.3s,baz=24,slow=20,SNR=14						
	23nm,0.5s						
URZ	**Urewera**	**5.65**	**218**	P	**Pn**	**06 13 07.4**	**0.0**
URZ				S	**Sn**	**06 14 11.2**	**+0.3**
RAGZ	**Rawiri**	**5.69**	**214**	P	**Pn**	**06 13 06.5**	**-1.4**
RAGZ				S	**Sn**	**06 14 12.8**	**+0.9**
PRGZ	**Paritu Road**	**5.83**	**209**	P	**Pn**	**06 13 07.5**	**-2.4**
PRGZ				S	**Sn**	**06 14 15.9**	**+0.3**
SNGZ	**Shannon Statio**	**5.95**	**213**	P	**Pn**	**06 13 12.0**	**+0.5**
SNGZ				S	**Sn**	**06 14 19.4**	**+0.9**
RTZ	**Ruatahuna**	**5.99**	**216**	P	**Pn**	**06 13 11.9**	**-0.2**
RTZ				S	**Sn**	**06 14 18.7**	**-0.7**
MHGZ	**Mahia Peninsul**	**6.02**	**208**	P	**Pn**	**06 13 13.8**	**+1.3**
MHGZ				S	**Sn**	**06 14 20.1**	**-0.1**
RAHZ	**Arahi**	**6.18**	**214**	P	**Pn**	**06 13 15.3**	**-1.1**
RAHZ				S	**Sn**	**06 14 24.9**	**+1.0**
MTHZ	**Maungataniwha**	**6.24**	**216**	P	**Pn**	**06 13 14.5**	**-1.0**
MTHZ				S	**Sn**	**06 14 25.6**	**0.0**
MRHZ	**Matea Rd**	**6.44**	**218**	P	**Pn**	**06 13 17.9**	**-0.3**
MRHZ				S	**Sn**	**06 14 29.7**	**-0.8**
NMHZ	**Naumai**	**6.45**	**215**	P	**Pn**	**06 13 18.4**	**-0.1**
NMHZ				S	**Sn**	**06 14 31.2**	**+0.4**
ARHZ	**Aropaoanui**	**6.50**	**213**	P	**Pn**	**06 13 19.2**	**+0.2**
ARHZ				S	**Sn**	**06 14 32.2**	**+0.4**
BKZ	**Black Stump Fm**	**6.66**	**216**	P	**Pn**	**06 13 21.1**	**-0.1**
BKZ				S	**Sn**	**06 14 35.0**	**-0.9**
OUZ	**Omahuta**	**6.66**	**256**	P	**Pn**	**06 13 23.0**	**+1.8**
MCHZ	**McNeill Hill**	**6.78**	**213**	P	**Pn**	**06 13 23.0**	**+0.1**
MCHZ				S	**Sn**	**06 14 38.9**	**+0.1**
KWHZ	**Kaweka Forest**	**6.89**	**215**	P	**Pn**	**06 13 23.7**	**-0.8**
KWHZ				S	**Sn**	**06 14 40.6**	**-1.0**
KAHZ	**Kahuranaki**	**6.99**	**211**	P	**Pn**	**06 13 24.7**	**-1.1**
KAHZ				S	**Sn**	**06 14 41.8**	**-2.2**
TMVZ	**Te Maari**	**7.02**	**220**	P	**Pn**	**06 13 26.0**	**-0.3**
NTVZ	**North Tongarir**	**7.03**	**220**	P	**Pn**	**06 13 26.1**	**-0.3**
ETVZ	**East Tongariro**	**7.03**	**220**	P	**Pn**	**06 13 26.5**	**0.0**
ETVZ				S	**Sn**	**06 14 43.4**	**-1.8**
KRHZ	**Kereru**	**7.09**	**214**	P	**Pn**	**06 13 25.9**	**-1.2**
KRHZ				S	**Sn**	**06 14 43.8**	**-2.7**
SNVZ	**South Ngauruho**	**7.11**	**220**	P	**Pn**	**06 13 27.1**	**-0.4**
BHHZ	**Black Hill Sta**	**7.12**	**216**	P	**Pn**	**06 13 26.9**	**-0.7**
BHHZ				S	**Sn**	**06 14 44.3**	**-2.9**
PNHZ	**Pukenui**	**7.38**	**214**	P	**Pn**	**06 13 29.0**	**-2.2**
PNHZ				S	**Sn**	**06 14 50.0**	**-3.8**
RPZ	**Rata Peaks**	**12.77**	**217**	Pn	**Pn**	**06 14 45.5**	**+0.7**
	0.1nm,0.3s,baz=45,slow=10.0,SNR=1.7						
RPZ				Sn	Sn	06 16 53.8	-12
	0.3nm,0.3s,baz=125,slow=22,SNR=7.3						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**42.62**	**271**	P	**P**	**06 19 37.1**	**-1.7**
	0.6nm,0.5s,baz=107,slow=7.8,SNR=7.7						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**43.92**	**276**	P	**P**	**06 19 47.9**	**-1.5**
	1.0nm,0.5s,baz=117,slow=7.8,SNR=16						
	1.0nm,0.5s						
QSPA	**South Pole Qui**	**56.26**	**180**	P	**P**	**06 21 24.9**	**+2.4**
	2.2nm,1.0s,baz=333,slow=4.5,SNR=6.9						
	2.2nm,1.0s						
FINES	**FINESS Array B**	**148.21**	**338**	PKPbc	**PKPbc**	**06 31 26.4**	**-0.7**
	1.1nm,0.5s,baz=60,slow=3.4,SNR=8.2						

BJI ***10*** *06:29:34.5,3˚.33S×67˚.61E, h10km, mB5.9/68, mb5.3/86, Ms5.4/88, Ms7 5.2/85*
NEIC ***10*** *06:29:37.2,2˚.64S×68˚.16E, h12km, Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^17Nm; Mrr1.01; Mθθ-0.39; Mφφ-0.61; Mrθ0.43; Mθφ0.69; Mφr0.18; Fault plane solution: M0 1.21000×10^17 NP1: φs341.30000°, δ45.93000°, λ123.45000°. NP2: φs117.77000°, δ53.16000°, λ60.34000°. Principal axes: T 1.2086, Plg66.0000°, Azm327.0000°; N 0.0002, Plg23.0000°, Azm137.0000°; P -1.2088, Plg4.0000°, Azm228.0000°;*
IDC ***10*** *06:29:40.8±0.4,2˚.60S×68˚.13E, h0km, mb5.0/42, mbtmp5.0/43, ML4.5/1, MS4.8/68 Error ellipse: s-maj=12.3km s-min=9.7km az=40.0*
MOS ***10*** *06:29:40.6±0.9,2˚.61S×68˚.08E, h10km, mb5.6/103, MS4.6/15, Error ellipse: s-maj=6.1km s-min=3.7km az=96.9*
GFZ ***10*** *06:29:42.7,2˚.63S×68˚.05E, h10km, Mw5.3/71, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr0.93; Mθθ-0.33; Mφφ-0.61; Mrθ0.32; Mθθ0.64; Mθr0.26; Fault plane solution: M0 1.12052×10^17 NP1: φs119.16543°, δ49.83308°, λ57.93505°. NP2: φs343.32868°, δ49.63969°, λ122.16777°. Principal axes: T 1.1177, Plg66.0659°, Azm321.4489°; N 0.0056, Plg23.9339°, Azm141.1675°; P -1.1233, Plg0.1044°, Azm231.2138°;*
GCMT ***10*** *06:29:42.5±0.1,2˚.82S±0˚.01×68˚.11E±0˚.01, h12km, MW5.3/149, Moment Tensor Solution. s87,c125; s149,c288; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr1.12±.01; Mθθ-0.42±.01; Mφφ-0.70±.01; Mrθ0.09±.05; Mθφ0.77±.01; Mφr-0.21±.04; Best double couple: M0 1.25300×10^17 NP1:φs316.00000°, δ40.00000°, λ84.00000°. NP2:φs144.00000°, δ50.00000°, λ95.00000°. Principal axes: T 1.1450, Plg83.0000°, Azm88.0000°; N 0.2120, Plg4.0000°, Azm321.0000°; P -1.3600, Plg5.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***10*** *06:29:43.5±1.8,2˚.63S±0˚.08×68˚.17E±0˚.08, h10km±1km, mb5.6/154, Mww5.3/25 Error ellipse: s-maj=14.1km s-min=13.3km az=291.0*
GFZ ***10*** *06:29:43.5±0.2,3˚.5±3˚×6˚8E±˚, h10km, M5.5/42, mb5.3/42*
NEIC ***10*** *06:29:43.5,2˚.64S×68˚.16E, h10km*
BGR ***10*** *06:29:46.9,2˚.95S×67˚.01E, h33km, mb5.5, Ms4.2*

ISC 10 06:29:43.1±0.4,**2˚.67S**±0˚.03×**68˚.09E**±0˚.03,**h11**km±1km, **h11**km:**pP-P, n1012,** σ1§**35**/1107,**mb5.5**/350,**MS5.0**/151, **102C-29D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**5.82**	**57**	P	**Pn**	**06 31 08.3**	**-1.1**
	SNR=5.3						
KAAM				S	**Sn**	**06 32 16.0**	**-0.2**
KAAM	**Kaadhehdhoo**	**5.82**	**57**	P	**Pn**	**06 31 07.1**	**-2.3**
KAAM	**Ka

HYB ep P pP 06 34 44.7 -0.2
HYB es S S 06 38 48.8 -0.4
DMTO DMTO 24.04 328 S S 06 39 18.1 +2.4
RBK Rabkut 24.27 326 P P 06 35 01.3 +0.7
DQM DQM 24.73 336 P P 06 35 05.9 +1.2
DQM P P 06 35 05.9 +1.2
AKL Akola 24.82 20 eP P 06 35 05.8 +0.4
WHFO Wadi Hawf 24.85 326 P P 06 35 07.9 +2.0
VIS Vishakhapatnam 25.22 36⇑ iP P 06 35 09.4 +0.3
VIS IAmb IAmb 06 35 17.5
comp=Z,61nm,1.1s
VIS i x x 06 41 29.5
VIS IAMs_20 IAMs_20 06 43 02.3
comp=Z,6µm,25.5s
MHTO MHTO 25.51 338 P P 06 35 12.3 +0.5
SNR=5.4
MHTO P P 06 35 12.3 +0.5
SNR=5.4
BHUJ Bhuj 25.81 3 i x x 06 42 07.9
OPO Ambohidratompo 25.86 231 LR LR 06 43 13.9
comp=Z,5µm,18.5s,baz=222,slow=31
NGP Nagpur 26.01 24⇑ iP P 06 35 16.0 -0.3
NGP IAMs_20 IAMs_20 06 44 24.5
comp=Z,10µm,16.8s
JLN Jalan Bani Buh 26.08 341 P P 06 35 17.9 +1.0
ABPO Ambohimpanom 26.09 230 P P 06 35 16.9 -0.4
ABPO pmax pmax
comp=Z,124nm,1.8s
ABPO Ambohimpanom 26.09 230 P P 06 35 16.9 -0.4
WBK Wadi Bani Khal 26.65 341 P P 06 35 22.3 +0.2
JMDO Jabal Madar 26.73 339 P P 06 35 23.5 +0.8
JMDO P P 06 35 23.5 +0.8
BHPL Bhopal 27.31 19⇑ iP P 06 35 28.3 +0.2
BHPL i x x 06 42 39.3
BHPL IAMs_20 IAMs_20 06 44 23.0
comp=Z,7µm,22.1s
WSAR Wadi Sarin 27.35 341 LR LR 06 44 29.3
comp=Z,6,6nm,18.1s,baz=169,slow=32
WSAR Wadi Sarin 27.35 341 P P 06 35 29.5 +1.1
SMDO Samad 27.38 340 P P 06 35 28.8 +0.1
SMDO P P 06 35 28.8 +0.1
SMDO S S 06 40 12.4 +3.5
SMDO S S 06 40 12.4 +3.5
BSY Bisya 27.40 338 P P 06 35 29.0 +0.2
BSY P P 06 35 29.0 +0.2
UDPR Udaipur 27.63 11⇑ iP P 06 35 31.4 +0.5
BIDO Bidbid 27.78 340 P P 06 35 33.0 +0.8
BIDO P P 06 35 33.0 +0.8
BIDO S S 06 40 18.7 +3.7
BIDO S S 06 40 18.7 +3.7
HOQ Hoqain 28.12 339 P P 06 35 35.9 +0.6
SNR=7.7
HOQ P P 06 35 35.9 +0.6
SNR=7.7
VOI Vohitsoka 28.18 226 P P 06 35 35.3 -0.7
VOI IAmb IAmb 06 35 46.8
comp=Z,228nm,1.9s
VOI Vohitsoka 28.18 226 P P 06 35 36.3 +0.3
BLSP Bilaspur 28.20 29 eP P 06 35 36.4 +0.4
BLSP IAMs_20 IAMs_20 06 45 25.3
comp=Z,7µm,14.1s
PBA Port Blair 28.34 59 P P 06 35 37.4 +0.1
PBA IAmb IAmb 06 36 14.1
comp=Z,160nm,1.3s
PBA Port Blair 28.34 59 eP P 06 35 39.1 +1.7
PBA IAMs_20 IAMs_20 06 44 56.2
comp=Z,7µm,20.4s
BSI Banda Aceh 28.36 73 P P 06 35 38.7 +1.2
comp=Z,2µmcomp=Z,70nm,1.6s
GUNA GUNA 28.60 18 eP P 06 35 40.1 +0.6
BWNR Bhubaneshwar 28.66 37 eP P 06 35 41.4 +1.3
BWNR IAMs_20 IAMs_20 06 46 22.2
comp=Z,5µm,12.9s
ATD Arta Tunnel 28.79 300 LR LR 06 44 54.9
comp=Z,29nm,21.1s,baz=125,slow=32
SOHO SOHO 28.91 338 i P P 06 35 43.0 +0.7
SNR=15
SOHO SOHO 28.91 338 P P 06 35 43.2 +0.9
SOHO P P 06 35 43.2 +0.9
ALNE Al Ain 29.15 336 P P 06 35 46.2 +1.8
SNR=5.8
ALNE P P 06 35 46.2 +1.8
SNR=5.8
MZR Muzera 29.22 332 i P P 06 35 45.6 +0.5
SNR=8.4
MZR Muzera 29.22 332 P P 06 35 46.5 +1.4
SNR=10.0
DGPR DIGLIPUR 29.25 57⇑ ix x 06 34 17.0
DGPR IAmb IAmb 06 34 25.7
comp=Z,234nm,1.8s
DGPR i x x 06 42 01.9
DGPR IAMs_20 IAMs_20 06 44 12.0
comp=Z,5µm,15.3s
ASHO Ashiyiah 29.59 337 i P P 06 35 49.3 +1.0
SNR=19
ASHO Ashiyiah 29.59 337 P P 06 35 50.1 +1.7
SNR=10
ASHO P P 06 35 50.1 +1.7
SNR=10
AJM Ajmer 29.60 12 eP P 06 35 49.2 +0.7
AJM IAMs_20 IAMs_20 06 46 29.3
comp=Z,4µm,14.1s
TPTI 29.67 79 P P 06 35 49.4 +0.2
comp=Z,1µmcomp=Z,48nm,1.7s
MZWR Madinat Zayed 29.69 333 P P 06 35 50.4 +1.2
HATD Hatta, Dubai 29.69 338 i P P 06 35 50.2 +0.9
SNR=9.6
HATD Hatta, Dubai 29.69 338 P P 06 35 50.2 +0.9
SNR=9.3
HATD P P 06 35 50.2 +0.9
SNR=9.3
GSI Gunungsitoli 29.74 83 P P 06 35 51.7 +1.9
GSI Gunungsitoli 29.74 83 P P 06 35 50.1 +0.3
GSI Gunungsitoli 29.74 83 P P 06 35 52.0 +2.2
comp=Z,63nm,2.5s
GSI Gunungsitoli 29.74 83 P P 06 35 51.8 +1.9
JHNI Jhansi 29.76 19 eP P 06 35 49.8 0.0
JHNI IAMs_20 IAMs_20 06 46 00.5
comp=Z,8µm,18.8s
UOSS Minazif 29.77 338 i P P 06 35 50.0 +0.1
SNR=8.8
UOSS Minazif 29.77 338 P P 06 35 50.6 +0.6
UOSS P P 06 35 50.6 +0.6
UOSS Minazif 29.77 338 P P 06 35 50.1 +0.1
UOSS Minazif 29.77 338 P P 06 35 50.3 +0.3
ASUD Al Ashush, Dub 29.83 336 P P 06 35 51.8 +1.4
SNR=5.4
FAQ Al Faqa, Dubai 29.83 337 i P P 06 35 51.6 +1.1
SNR=5.9
FAQ Al Faqa, Dubai 29.83 337 P P 06 35 51.9 +1.5
SNR=9.1
FAQ P P 06 35 51.9 +1.5
SNR=9.1
LHMI Lhok Sumawe 29.87 75 P P 06 35 51.1 +0.1
KIBK Kibwezi 30.02 270 P P 06 35 52.7 +0.3
SNR=5.2
KIBK Kibwezi 30.02 270 P P 06 35 53.2 +0.8
KIBK Kibwezi 30.02 270 P P 06 35 54.5 +2.1
NAZ Nazwa, Dubai 30.02 337 i P P 06 35 52.9 +0.9
SNR=18
NAZ Nazwa, Dubai 30.02 337 P P 06 35 53.0 +0.9
SNR=11
MSFE Esma-Masafi 30.17 338 i P P 06 35 54.1 +0.6
SNR=18
MASF Masafi 30.18 338 P P 06 35 54.2 +0.7
SNR=12
MASF P P 06 35 54.2 +0.7
SNR=12
GHWR Ruwais 30.33 332 P P 06 35 56.5 +1.6
GHWR P P 06 35 56.5 +1.6
BNDA BANDA 30.39 22 eP P 06 35 54.9 -0.5
BNDA IAMs_20 IAMs_20 06 46 35.2
comp=Z,6µm,12.9s
BANOM Banah 30.63 339 P P 06 35 58.6 +1.1
BANOM Banah 30.63 339 P P 06 35 58.7 +1.2
BANOM P P 06 35 58.7 +1.2
ALBI Allahabad 30.83 25 eP P 06 35 59.4 +0.1
ALBI IAMs_20 IAMs_20 06 47 06.3
comp=Z,8µm,17.6s
KMBO Kilima Mbogo 30.86 272 P P 06 36 01.3 +1.3
baz=92,slow=11
KMBO LR LR 06 45 57.8
comp=Z,1µm,21.6s,baz=98,slow=32
KMBO Kilima Mbogo 30.86 272 i P P 06 36 00.6 +0.6
JRN Qarnain Island 31.18 333 P P 06 36 03.8 +1.5
SNR=9.3
RPSI Rantau Prapat 31.28 80 P P 06 36 04.4 +0.9
RPSI IAmb IAmb 06 36 06.5
comp=Z,174nm,1.9s
PSI Prapat 31.30 80 P P 06 36 04.8 +1.1
PSI Prapat 31.30 80 P P 06 36 04.4 +0.7
PSI pmax pmax
comp=Z,174nm,1.9s
PSI Prapat 31.30 80 P P 06 36 04.3 +0.6
BOK Bokaro 31.49 32⇑ iP P 06 36 05.5 +0.3
BOK i x x 06 44 53.6
BOK IAMs_20 IAMs_20 06 46 34.8
comp=Z,6µm,28.9s
KUDL Kundal 31.68 14⇑ iP P 06 36 07.1 +0.4
SONA Sohna 31.92 15⇑ iP P 06 36 09.1 +0.3
GAYA Gaya 31.98 30 IAMs_20 IAMs_20 06 48 27.9
comp=Z,6µm,12.9s
JMIU JAMIA UNIVERSI 32.29 15 eP P 06 36 12.8 +0.7
JMIU IAMs_20 IAMs_20 06 47 32.7
comp=Z,4µm,21.1s
BHGR Bahadurgarh 32.31 15 IAMs_20 IAMs_20 06 47 35.6
comp=Z,2µm,21.1s
PPI Padang Panjang 32.37 87 P P 06 36 15.2 +2.2
comp=Z,2µmcomp=Z,58nm,1.8s
NDI New Delhi 32.38 15⇑ iP P 06 36 12.8 -0.1
NDI IAmb IAmb 06 36 16.2
comp=Z,13nm,0.7s
JMUI Jamui 32.59 32 eP P 06 36 15.2 +0.4
JMUI IAMs_20 IAMs_20 06 48 16.1
comp=Z,3µm,10.6s
BRCI Bahraich 32.76 23 eP P 06 36 17.4 +1.2
GNR GANAUR 32.76 15 IAMs_20 IAMs_20 06 48 13.8
comp=Z,3µm,14.1s
GKPR Gorakhpur 32.78 26 IAMs_20 IAMs_20 06 48 17.9
comp=Z,5µm,15.3s
BKNI Bangkinang 33.07 85 P P 06 36 17.7 -1.5
LODK Lodwar 33.27 280 P P 06 36 21.8 +0.8
SNR=6.3
LODK Lodwar 33.27 280 P 06 36 21.3 +0.3
LODK Lodwar 33.27 280 P P 06 36 23.6 +2.6
KULM Kulim 33.47 76 P P 06 36 23.7 +1.0
KULM Kulim 33.47 76 P P 06 36 21.7 -1.0
KULM Kulim 33.47 76 P P 06 36 23.4 +0.7
comp=Z,2µmcomp=Z,136nm,1.4s
KULM Kulim 33.47 76 P P 06 36 23.3 +0.7
RAYN Ar Rayn 34.08 321 i P P 06 36 28.2 +0.3
SNR=16
RAYN Ar Rayn 34.08 321 P P 06 36 27.9 0.0
RAYN pmax pmax
comp=Z,28nm,1.2s
RAYN Ar Rayn 34.08 321 P P 06 36 28.1 +0.3
RAYN Ar Rayn 34.08 321 P 06 36 27.9 0.0
RAYN Ar Rayn 34.08 321 P P 06 36 28.2 +0.3
BRDH Bariadhala 34.10 41 LR LR 06 52 26.4
comp=Z,3µm,18.1s,baz=228,slow=40
UTK UTTARKASHI 34.65 16 eP P 06 36 33.3 +0.5
BHK Bhakra 34.78 12 eP P 06 36 35.6 +1.8
JOSI Joshimath 34.80 17 eP P 06 36 35.6 +1.3
JOSI IAMs_20 IAMs_20 06 48 34.3
comp=Z,6µm,24.7s
JPG JALPAIGURI 35.22 33 IAMs_20 IAMs_20 06 48 44.3
comp=Z,2µm,23.5s
KLP Kalpa 35.36 15⇑ iP P 06 36 40.6 +1.5
KLP IAmb IAmb 06 36 41.7
comp=Z,115nm,0.9s
KLP IAMs_20 IAMs_20 06 49 24.8
comp=Z,4µm,17.7s
EVN Everest 35.38 29 P P 06 36 38.5 -1.2
EVN Everest 35.38 29 P P 06 36 40.7 +1.0
DHUB DHUBRI 35.53 35 eP P 06 36 41.1 +0.7
DHUB IAMs_20 IAMs_20 06 49 42.6
comp=Z,3µm,22.1s
DHRM DHARAMSHALA 35.59 12⇑ iP P 06 36 42.3 +1.3
DHRM i x x 06 46 56.0
JMU Jammu 35.83 10 eP P 06 36 44.7 +1.9
MYKOM Kota Tinggi 36.02 83 P P 06 36 45.4 +0.7
MYKOM Kota Tinggi 36.02 83 P P 06 36 44.6 -0.1
MYKOM Kota Tinggi 36.02 83 P P 06 36 45.3 +0.6
comp=Z,2µmcomp=Z,107nm,1.3s
MYKOM Kota Tinggi 36.02 83 P P 06 36 45.6 +0.8
TSSA Tissa 36.12 12⇑ iP P 06 36 46.5 +1.0
SHL Shillong 36.32 38 P P 06 36 46.0 -1.3
SHL pmax pmax
comp=Z,350nm,1.5s
SHL Shillong 36.32 38 P P 06 36 48.9 +1.6
SNR=12
SHL Shillong 36.32 38 P P 06 36 46.0 -1.3
SHL Shillong 36.32 38⇑ iP P 06 36 47.9 +0.6
SHL IAmb IAmb 06 36 53.5
comp=Z,43nm,0.7s
SHL IAMs_20 IAMs_20 06 51 09.6
comp=Z,3µm,18.2s
KASI Kota Agung 36.42 96 P P 06 36 49.0 +0.9
comp=Z,99nm,1.0s
NIL Nilore 36.45 7 P P 06 36 49.2 +1.1
NIL pmax pmax
comp=Z,206nm,1.3s
NIL Nilore 36.45 7 P P 06 36 49.3 +1.2
NIL P P 06 36 49.3 +1.2
NIL S S 06 42 32.6 +2.7
NIL S S 06 42 32.6 +2.7
NIL Nilore 36.45 7 P P 06 36 49.1 +1.1
NIL IAmb IAmb 06 36 50.7
comp=Z,206nm,1.3s
NIL Nilore 36.45 7 P P 06 36 49.5 +1.3
DSRI Dabo 36.53 87 P P 06 36 50.1 +1.0
comp=Z,4µmcomp=Z,113nm,1.4s
KLSI 36.62 94 P P 06 36 51.2 +1.4
GUWA GUWAHATI 36.66 37 eP P 06 36 49.5 -0.5
GUWA IAmb IAmb 06 36 51.0
comp=Z,44nm,1.1s
GUWA IAMs_20 IAMs_20 06 50 22.8
comp=Z,2µm,26.0s
HNLY HANLEY 36.73 15 eP P 06 36 52.7 +1.6
CM31 Chiang Mai Arr 36.92 54 P P 06 36 52.5 +0.2
SNR=32
CM31 P P 06 36 52.5 +0.2
SNR=32
CMAR Chiang Mai Arr 36.92 54 P P 06 36 52.9 +0.5
comp=Z,55nm,1.1s,baz=245,slow=9.8,SNR=137
CMAR PcP PcP 06 39 13.1 -0.8
comp=Z,4.4nm,0.8s,baz=247,slow=4.6,SNR=7.5
CMAR LR LR 06 50 06.0
comp=Z,2µm,21.8s,baz=240,slow=33
comp=Z,55nm,1.1s
CMAR Chiang Mai Arr 36.92 54 P P 06 36 51.9 -0.4
KBL Kabul 37.02 1 P P 06 36 53.9 +0.7
KBL pmax pmax
comp=Z,124nm,1.3s
KBL Kabul 37.02 1 P P 06 36 54.4 +1.2
KBL S S 06 42 44.2 +5.2
KBL Kabul 37.02 1 P P 06 36 53.9 +0.7
KBL IAmb IAmb 06 36 56.1
comp=Z,124nm,1.2s
CHTO Chiang Mai 37.11 54 P P 06 36 54.6 +0.7
CHTO Chiang Mai 37.11 54 P P 06 36 53.5 -0.4
CHTO pmax pmax
comp=Z,405nm,1.7s
CHTO Chiang Mai 37.11 54 S S 06 42 40.5 +0.2
CHTO Chiang Mai 37.11 54 P P 06 36 53.5 -0.4
CHTO Chiang Mai 37.11 54 P P 06 36 54.7 +0.8
comp=Z,2µmcomp=Z,144nm,1.5s
CHTO Chiang Mai 37.11 54 P P 06 36 54.9 +0.9
IMP Imphal 37.11 41 eP P 06 36 55.0 +1.0
IMP IAmb IAmb 06 36 57.2
comp=Z,87nm,1.2s
IMP IAMs_20 IAMs_20 06 52 02.8
comp=Z,4µm,18.2s
KBD Kabd 37.21 330 P P 06 36 55.0 +0.3
HRA Herat 37.26 352 P P 06 36 55.1 -0.1
MBAR Mbarara 37.39 272 LR LR 06 50 50.3
comp=Z,924nm,20.1s,baz=86,slow=34
MBAR Mbarara 37.39 272 P P 06 36 57.0 +0.4
MBAR pmax pmax
comp=Z,137nm,1.7s
MBAR Mbarara 37.39 272 P P 06 36 57.4 +0.8
MBAR S S 06 42 45.7 +0.6
MBAR Mbarara 37.39 272 P P 06 36 57.0 +0.4
MBAR IAmb IAmb 06 37 00.5
comp=Z,137nm,1.6s
MBAR Mbarara 37.39 272 P P 06 36 59.6 +3.0
ZIRO ZIRO 38.95 38 eP P 06 37 09.4 -0.1
ZIRO IAmb IAmb 06 37 12.8
comp=Z,67nm,0.9s
LSA Lhasa 39.02 33 i P P 06 37 11.9 +1.4
SNR=42
LSA Lhasa 39.02 33 S S 06 43 10.4 +0.5
TPI Tanjungpandan 39.52 91 P P 06 37 13.9 -0.4
comp=Z,1µmcomp=Z,39nm,1.6s
LEM Lembang 39.59 97 LR LR 06 50 47.9
comp=Z,2µm,21.0s,baz=232,slow=32
LEM Lembang 39.59 97 P P 06 37 16.7 +1.5
BBJI Bungbulang 39.68 98 P P 06 37 15.1 -0.6
SHAA Shahritus 40.02 0 P P 06 37 18.5 +0.2
SHAA IAmb IAmb 06 37 48.7
comp=Z,137nm,1.3s
MANEM Manem 40.14 4 P P 06 37 19.9 +0.4
MANEM IAmb IAmb 06 37 21.8
comp=Z,516nm,1.3s
TNCH TengChong 40.36 45 P P 06 37 22.6 +1.2
TNCH pmax pmax
comp=Z,300nm,1.5s
TNCH pmax pmax
comp=Z,2µm,3.1s
TNCH L L
comp=Z,2µm,14.4s
TNCH L L
comp=Z,2µm,17.7s
TNCH L L
comp=Z,2µm,19.9s
CHGR Chuyangaron 41.13 1 c iP P 06 37 26.7 -0.7
CHGR pmax pmax
comp=Z,57nm,1.2s
CHGR Chuyangaron 41.13 1 P P 06 37 27.4 0.0
CHGR Chuyangaron 41.13 1 P P 06 37 27.2 -0.2
LSZ Lusaka 41.26 250 LR LR 06 52 34.5
comp=Z,3µm,18.1s,baz=96,slow=33
LSZ Lusaka 41.26 250 P P 06 37 28.6 -0.3
LSZ pmax pmax
comp=Z,147nm,1.5s
LSZ Lusaka 41.26 250 P P 06 37 28.8 -0.1
LSZ P P 06 37 28.8 -0.1
LSZ Lusaka 41.26 250 P P 06 37 28.6 -0.3
LSZ IAmb IAmb 06 37 30.8
comp=Z,147nm,1.5s
LSZ Lusaka 41.26 250 P P 06 37 28.8 -0.1
GAR Garm 41.51 3 P P 06 37 31.1 +0.5
GAR Garm 41.51 3 P P 06 37 30.9 +0.3
DRK Karamyk 42.08 4 P P 06 37 35.0 -0.4
DRK pmax pmax
comp=Z,125nm,1.3s
DRK Karamyk 42.08 4 P P 06 37 35.0 -0.4
DRK IAmb IAmb 06 37 36.5
comp=Z,125nm,1.3s
KSH2 Kashi 42.17 9 P P 06 37 36.1 +0.1
KSH2 pP sP 06 37 40.5 +0.7
KSH2 PcP PcP 06 39 28.6 -1.7
KSH2 pmax pmax
comp=Z,72nm,1.4s
KSH2 pmax pmax
comp=Z,580nm,4.3s
KSH2 L L
comp=Z,2µm,21.6s
KSH2 L L
comp=Z,1µm,17.2s
KSH2 L L
comp=Z,2µm,19.6s
SLVN Son La 42.40 54 P P 06 37 38.9 +0.9
SLVN Son La 42.40 54 P P 06 37 38.0 -0.1
SLVN IAmb IAmb 06 37 40.5
comp=Z,215nm,1.6s
MATP Matopo 42.44 242 LR LR 06 52 59.9
comp=Z,1µm,20.4s,baz=98,slow=33
BTK Batken 42.59 3 P P 06 37 39.4 +0.1
BTK pmax pmax
comp=Z,189nm,1.3s
BTK Batken 42.59 3 P P 06 37 39.4 +0.1
BTK IAmb IAmb 06 37 41.2
comp=Z,189nm,1.3s
DLV Lat 42.69 69 P P 06 37 41.0 +0.4
DLV IAmb IAmb 06 37 42.7
comp=Z,293nm,1.9s
KMI2 Kunming 43.52 48 ⇑P P 06 37 47.7 +0.5
KMI2 sP pwP 06 37 53.0 -0.4
KMI2 PP PP 06 39 31.0 +2.5
KMI2 S S 06 44 18.3 +1.9
KMI2 SS SS 06 47 28.3 -2.8
KMI2 pmax pmax
comp=Z,42nm,1.4s
KMI2 pmax pmax
comp=Z,430nm,4.1s
KMI2 L L
comp=Z,850nm,15.9s
KMI2 L L
comp=Z,2µm,18.3s
KMI2 L L
comp=Z,2µm,18.4s
PZH PanZhiHua 43.56 46 P P 06 37 48.1 +0.6
PZH S S 06 44 20.8 +4.0
PZH pmax pmax
comp=Z,160nm,1.3s
PZH pmax pmax
comp=Z,950nm,3.5s
PZH L L
comp=Z,920nm,19.2s
PZH L L
comp=Z,2µm,18.6s
PZH L L
comp=Z,2µm,18.6s
SNJI Sawahan-Nganju 43.76 98 P P 06 37 49.6 +0.3
comp=Z,2µmcomp=Z,60nm,0.4s
ARSB Arslanbob 44.01 5 P P 06 37 50.2 -0.6
ARSB pmax pmax
comp=Z,59nm,1.5s
ARSB Arslanbob 44.01 5 P P 06 37 50.2 -0.6
ASAI AK-SAY(Kyrgyzs 44.05 9 P P 06 37 52.5 +1.1
ARK Arkit 44.40 4 P P 06 37 53.8 -0.1
NRN Naryn 44.48 8 P P 06 37 54.8 0.0
NRN pmax pmax
comp=Z,48nm,1.2s
NRN Naryn 44.48 8 P P 06 37 54.8 0.0
IUG Iuzhnay 44.64 2 eP P 06 37 55.6 -0.2
IUG pmax pmax
comp=Z,71nm,1.1s
IUG Iuzhnay 44.64 2 eP P 06 37 55.6 -0.2
comp=Z,72nm,1.1s
KSANE Kasane 44.69 247 P P 06 37 57.1 +0.4
KSANE IAmb IAmb 06 37 58.5
comp=Z,112nm,1.4s
CHM Chimkent 44.80 2 eP P 06 37 56.9 -0.1
CHM pmax pmax
comp=Z,90nm,1.1s
CHM MLR MLR
comp=Z,400nm,15.0s
CHM Chimkent 44.80 2 eP P 06 37 56.9 -0.1
comp=Z,90nm,1.1s
CHM LR LR 06 56 57.0
comp=Z,400nm,14.6s
TARG Taragay, Kyrgy 45.06 10 P P 06 37 59.3 -0.3
TARG pmax pmax
comp=Z,76nm,1.5s
TARG Taragay, Kyrgy 45.06 10 P P 06 37 59.3 -0.3
TARG IAmb IAmb 06 38 20.0
comp=Z,76nm,1.5s
TARG Taragay, Kyrgy 45.06 10 P P 06 37 60.0 +0.4
UCH Uchtor 45.06 7 P P 06 38 00.3 +0.7
SNR=49
EIL Elat 45.15 318 LR LR 06 53 52.6
comp=Z,372nm,21.5s,baz=110,slow=32
EIL Elat 45.15 318 P P 06 38 01.4 +1.4
ULHL Ulahol 45.31 9 P P 06 38 01.9 +0.6
SNR=49
HRFI Mount Harif 45.33 318 P P 06 38 03.2 +1.7
KDJ Kajisay 45.34 10 P P 06 38 01.5 0.0
KDJ pmax pmax
comp=Z,119nm,1.4s
KDJ Kajisay 45.34 10 P P 06 38 01.5 0.0
KDJ IAmb IAmb 06 38 03.5
comp=Z,118nm,1.4s
EKS2 Erkin-Say 45.41 6 P P 06 38 03.0 +1.0
SNR=96
DZA Taraz 45.44 3 eP P 06 38 02.1 0.0
DZA pmax pmax
comp=Z,46nm,1.6s
DZA Taraz 45.44 3 eP P 06 38 02.2 0.0
comp=Z,46nm,1.6s
AAK Ala-Archa 45.47 7 LR LR 06 57 04.5
comp=Z,1µm,18.9s,baz=184,slow=36
AAK Ala-Archa 45.47 7 P P 06 38 03.3 +0.9
SNR=22
AAK Ala-Archa 45.47 7 i P P 06 38 03.4 +0.9

SNR=22
AAK Ala-Archa 45.47 7 *ce* P **P 06 38 03.3 +0.9**
AAK pmax pmax
comp=Z,13nm,0.4s
AAK Ala-Archa 45.47 7 P **P 06 38 03.3 +0.9**
AAK P **P 06 38 03.3 +0.9**
AAK S **S 06 44 47.4 +3.3**
AAK S **S 06 44 47.4 +3.3**
AAK S **S 06 44 48.2 +4.1**
AAK S **S 06 44 48.2 +4.1**
AAK Ala-Archa 45.47 7 P **P 06 38 02.8 +0.3**
AAK IAmb IAmb 06 38 04.8
comp=Z,112nm,1.4s
AAK Ala-Archa 45.47 7 P **P 06 38 03.4 +0.9**
BRLS Borolday 45.51 2 *c i* P **P 06 38 00.5 -2.1**
BRLS pmax pmax
comp=Z,46nm,1.4s
BRLS Borolday 45.51 2⇑ *i* P **P 06 38 00.6 -2.1**
comp=Z,46nm,1.4s
KBK Karagaybulak 45.54 7 P **P 06 38 04.1 +1.0**
SNR=42
ASF Jabal al Asfar 45.56 322 LR LR 06 55 36.1
comp=Z,505nm,19.9s,baz=206,slow=34
H04N2 CROZET ISLANDS 45.60 196 T T 07 26 43.7
baz=22,slow=75,SNR=58
H04N1 CROZET ISLANDS 45.61 196 T T 07 26 45.2
baz=22,slow=75,SNR=52
KK31 Karatay Array 45.61 2 *i* P **P 06 38 03.3 -0.1**
KKAR Karatay Array 45.61 2 P **P 06 38 03.4 -0.1**
KKAR Karatay Array 45.61 2 P **P 06 38 03.4 -0.1**
H04N3 CROZET ISLANDS 45.62 196 T T 07 26 43.5
baz=22,slow=75,SNR=39
KHWEE KHWEE 45.62 242 P **P 06 38 03.7 -0.3**
GHAJ Ghor Haditha 45.81 320 P **P 06 38 06.3 +1.2**
GHAJ IAmb IAmb 06 38 07.6
comp=Z,69nm,1.3s
GHAJ Ghor Haditha 45.81 320 P **P 06 38 06.3 +1.2**
CHMS Chumysh 45.85 7 P **P 06 38 06.0 +0.6**
SNR=6.1
TKM2 Tokmak 2 45.88 8 P **P 06 38 06.1 +0.3**
SNR=65
PRZ Przheval'sk 45.90 11 P **P 06 38 06.2 +0.2**
PRZ pmax pmax
comp=Z,209nm,1.9s
PRZ Przheval'sk 45.90 11 P **P 06 38 06.2 +0.2**
PRZ IAmb IAmb 06 38 07.7
comp=Z,209nm,1.9s
HAKT HAKKARI 45.97 333 P **P 06 38 07.1 +0.4**
GOMU GeErMu 46.01 30 P **P 06 38 07.2 +0.1**
GOMU pP sP 06 38 11.0 +0.1
GOMU sP pwP 06 38 14.7 +1.5
GOMU PP **PP 06 39 55.6 +0.5**
GOMU S **S 06 44 48.7 -3.9**
GOMU pmax pmax
comp=Z,39nm,0.9s
GOMU L L
comp=Z,2μm,19.4s
GOMU L L
comp=Z,2μm,19.7s
GOMU L L
comp=Z,4μm,19.0s
USP Ospenovka 46.09 6 P **P 06 38 07.2 0.0**
SNR=12
TNSS Tian-Shan 46.19 9 *e* P **P 06 38 08.1 -0.3**
TNSS Tian-Shan 46.19 9 *e* P **P 06 38 08.2 -0.3**
SGDS Sogindy 46.28 7⇑ *i* P **P 06 38 08.8 0.0**
comp=Z,77nm,1.8s
SGDS *e* S **S 06 44 55.9 +0.2**
KZIT Kziot 46.31 319 P **P 06 38 10.4 +1.3**
MDOK Medeo 46.33 9 *e* P **P 06 38 09.1 -0.2**
MDOK *e* S **S 06 44 56.5 0.0**
MDOK Medeo 46.33 9 *e* P **P 06 38 09.1 -0.2**
MDOK *e* S **S 06 44 56.6 0.0**
MDOK LR LR 06 57 53.6
AAA Alma-Ata 46.35 9 *e* P **P 06 38 09.3 -0.1**
AAA pmax pmax
comp=Z,61nm,1.3s
AAA Alma-Ata 46.35 9 *e* P **P 06 38 09.3 -0.1**
comp=Z,61nm,1.3s
AAA LR LR 06 57 58.2
QIZ Qiongzhong 46.37 61 P **P 06 38 10.7 +0.9**
QIZ PP **PP 06 39 59.5 +0.7**
QIZ S **S 06 44 59.6 +2.1**
QIZ pmax pmax
comp=Z,61nm,1.4s
QIZ pmax pmax
comp=Z,520nm,4.5s
QIZ L L
comp=Z,700nm,18.4s
QIZ L L
comp=Z,2μm,17.0s
QIZ L L
comp=Z,2μm,20.0s
SATY Saty 46.46 10 *c i* P **P 06 38 10.0 -0.2**
SATY *e* S **S 06 44 58.5 +0.2**
SATY pmax pmax
comp=Z,66nm,1.4s
SATY Saty 46.46 10⇑ *i* P **P 06 38 10.0 -0.2**
comp=Z,66nm,1.4s
SATY *e* S **S 06 44 58.5 +0.2**
LBTB Lobatse 46.55 238 LR LR 06 55 32.7
comp=Z,2μm,20.0s,baz=70,slow=33
LBTB Lobatse 46.55 238 P **P 06 38 11.0 -0.3**
LBTB pmax pmax
comp=Z,129nm,1.7s
LBTB Lobatse 46.55 238 P **P 06 38 11.0 -0.3**
LBTB IAmb IAmb 06 38 13.0
comp=Z,129nm,1.7s
MMLI Mount Malkishu 46.65 321 P **P 06 38 13.3 +1.5**
UZB Uzynbulak 46.66 11 *c i* P **P 06 38 11.7 -0.1**
UZB pmax pmax
comp=Z,77nm,1.8s
UZB Uzynbulak 46.66 11⇑ *i* P **P 06 38 11.7 -0.1**
comp=Z,77nm,1.8s
SHLS Shalkode 46.75 11 *e* P **P 06 38 13.2 +0.7**
SHLS pmax pmax
comp=Z,65nm,1.5s
SHLS Shalkode 46.75 11 *e* P **P 06 38 13.2 +0.7**
comp=Z,64nm,1.5s
GEVA Gevas 46.88 333 P **P 06 38 14.2 +0.5**
PDGK Podgornoye 46.92 11 P **P 06 38 13.0 -0.9**
PDGK Podgornoye 46.92 11 P **P 06 38 13.9 0.0**
MMAI Mount Meron Ar 47.05 322 P **P 06 38 15.7 +0.6**
comp=Z,18nm,1.1s,baz=77,slow=7.6,SNR=18
MMAI PcP **PcP 06 39 47.9 +0.7**
comp=Z,3.9nm,0.7s,baz=158,slow=2.7,SNR=6.8
MMAI LR LR 06 56 23.4
comp=Z,412nm,19.7s,baz=128,slow=34
comp=Z,18nm,1.1s
GYA Guiyang 47.19 50⇑ P **P 06 38 15.6 -0.6**
GYA S **S 06 45 07.2 -2.0**
GYA pmax pmax
comp=Z,85nm,1.4s
GYA L L
comp=Z,1μm,16.6s
GYA L L
comp=Z,1μm,17.4s
GYA L L
comp=Z,1μm,30.4s
MAKGR Makgori 47.51 237 P **P 06 38 18.9 0.0**
GURO Guroymak-BITLI 47.55 332 P **P 06 38 18.9 0.0**
CD2 Chengdu 47.63 43 P **P 06 38 19.4 -0.1**
CD2 pP pP 06 38 22.4 +0.2
CD2 S **S 06 45 17.6 +2.3**
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,740nm,4.5s
CD2 L L
comp=Z,2μm,17.8s
CD2 L L
comp=Z,2μm,18.6s
CD2 L L
comp=Z,2μm,17.5s
GNI Garni 47.68 336 LR LR 06 58 13.1
comp=Z,500nm,20.6s,baz=136,slow=36
GNI Garni 47.68 336 P **P 06 38 19.4 -0.4**
GNI Garni 47.68 336 *ce* P **P 06 38 19.9 0.0**
GNI pmax pmax
comp=Z,108nm,1.3s
GNI Garni 47.68 336 P **P 06 38 20.1 +0.2**
GNI P **P 06 38 20.1 +0.2**
GNI Garni 47.68 336 P **P 06 38 20.2 +0.4**
GNI IAmb IAmb 06 38 21.5
comp=Z,100nm,1.2s
GNI Garni 47.68 336 P **P 06 38 19.6 -0.3**
comp=Z,1μmcomp=Z,72nm,1.4s
GNI pP **pP 06 38 22.3 0.0**
comp=Z,1μmcomp=Z,72nm,1.4s
GNI Garni 47.68 336 P **P 06 38 19.5 -0.4**
AKT Akhty 47.69 339 *e* P **P 06 38 19.8 0.0**
AKT *e* 06 39 49.8
AKT *e* PPP PPP 06 40 57.2
AKT pmax pmax
comp=Z,82nm,1.2s
AKT MLR MLR
comp=Z,298nm,18.0s
BTLS Baital 47.79 6 *e* P **P 06 38 20.5 +0.1**
BTLS *e* S **S 06 45 17.5 +0.5**
BTLS Baital 47.79 6 *e* P **P 06 38 20.6 +0.1**
BTLS *e* S **S 06 45 17.6 +0.5**
TDK Taldyqorghan 48.34 10 *e* P **P 06 38 24.6 -0.1**
TDK pmax pmax
comp=Z,48nm,1.1s
TDK MLR MLR
comp=Z,888nm,14.0s
TDK Taldyqorghan 48.34 10 *e* P **P 06 38 24.6 -0.1**
comp=Z,48nm,1.1s
TDK LR LR 06 59 08.7
comp=Z,888nm,14.3s
CY604 RAF Akrotiri, 48.49 322 P **P 06 38 26.5 +0.7**
CY604 IAmb IAmb 06 38 53.0
comp=Z,77nm,1.4s
KKM Kota Kinabalu 48.83 80 P **P 06 38 29.6 +0.5**
KKM Kota Kinabalu 48.83 80 P **P 06 38 29.1 0.0**
KKM Kota Kinabalu 48.83 80 P **P 06 38 29.2 +0.1**
comp=Z,2μmcomp=Z,66nm,1.5s
KKM Kota Kinabalu 48.83 80 P **P 06 38 29.7 +0.5**
GAZ Gaziantep 48.93 327 P **P 06 38 30.4 +0.9**
GAZ IAmb IAmb 06 38 31.9
comp=Z,101nm,1.5s
GRTLG Ghanzi 49.21 244 P **P 06 38 32.5 +0.5**
GRTLG IAmb IAmb 06 38 33.6
comp=Z,128nm,1.6s
KOPT Kop Dagi 49.44 332 P **P 06 38 34.1 +0.6**
GULI GuiLin 49.50 53⇑ P **P 06 38 32.8 -1.2**
GULI S **S 06 45 37.2 -4.5**
GULI pmax pmax
comp=Z,77nm,1.5s
GULI L L
comp=Z,880nm,17.3s
GULI L L
comp=Z,1μm,16.3s
GULI L L
comp=Z,2μm,18.4s
WMQ Urumqi 49.51 19⇑ P **P 06 38 34.4 +0.6**
WMQ PP **PP 06 40 32.6 +4.4**
WMQ S **S 06 45 44.6 +3.1**
WMQ pmax pmax
comp=Z,65nm,1.5s
WMQ pmax pmax
comp=Z,950nm,3.7s
WMQ L L
comp=Z,3μm,19.9s
WMQ L L
comp=Z,2μm,18.9s
WMQ L L
comp=Z,3μm,17.9s
CSS Mathiatis 49.63 322 P **P 06 38 35.2 +0.3**
CSS Mathiatis 49.63 322 P **P 06 38 34.8 0.0**
comp=Z,517nmcomp=Z,12nm,0.8s
CSS Mathiatis 49.63 322 P **P 06 38 35.5 +0.7**
EPOS Posof 49.65 335 P **P 06 38 35.7 +0.7**
ANDN Andirin 49.70 327 P **P 06 38 36.5 +1.1**
ARPR Arapgir-MALATY 49.77 330 P **P 06 38 36.3 +0.4**
ARPR IAmb IAmb 06 39 04.3
comp=Z,48nm,0.7s
ARPR Arapgir-MALATY 49.77 330 P **P 06 38 37.1 +1.2**
KELT Kelkit 50.13 331 P **P 06 38 39.8 +1.1**
MMSI Mamuju 50.76 91 P **P 06 38 42.9 -0.9**
comp=Z,2μmcomp=Z,110nm,1.8s
MAKZ Makanchi 50.76 12 P **P 06 38 42.9 -0.3**
MAKZ pmax pmax
comp=Z,74nm,1.4s
MAKZ Makanchi 50.76 12 P **P 06 38 42.9 -0.3**
MAKZ IAmb IAmb 06 38 43.9
comp=Z,74nm,1.4s
LZDM Lanzhou Array 50.81 38 P **P 06 38 43.8 -0.4**
comp=Z,2.0nm,0.3s,baz=230,slow=8.8,SNR=9.2
LZDM LR LR 07 00 06.3
comp=Z,2μm,20.5s,baz=80,slow=36
comp=Z,2.0nm,0.3s
MK31 Makanchi Array 50.82 13 *ce* P **P 06 38 43.0 -0.6**
MKAR Makanchi Array 50.82 13 P **P 06 38 42.6 -1.0**
comp=Z,5.3nm,0.8s,baz=206,slow=8.1,SNR=23
MKAR PcP **PcP 06 39 59.1 -1.3**
comp=Z,7.3nm,1.1s,baz=186,slow=6.0,SNR=4.9
MKAR LR LR 07 00 02.5
comp=Z,554nm,18.1s,baz=180,slow=36
comp=Z,5.3nm,0.8s
MKAR Makanchi Array 50.82 13 P **P 06 38 42.4 -1.3**
BNN Bunyan 50.89 328 P **P 06 38 44.8 +0.3**
NCK Nalchik 50.96 337 *i* P **P 06 38 43.7 -1.1**
NCK pmax pmax
comp=Z,13nm,0.2s
LZH Lanzhou 50.98 38 P **P 06 38 45.0 -0.2**
LZH sP pwP 06 38 53.3 +1.9
LZH S **S 06 46 01.0 -1.4**
LZH pmax pmax
comp=Z,55nm,1.2s
LZH pmax pmax
comp=Z,770nm,4.3s
LZH L L
comp=Z,2μm,18.5s
LZH L L
comp=Z,540nm,17.9s
LZH L L
comp=Z,3μm,18.9s
GTA2 Gaotai 51.05 31 P **P 06 38 45.4 -0.2**
GTA2 sP pwP 06 38 57.4 +5.7
GTA2 S **S 06 46 03.8 +0.7**
GTA2 pmax pmax
comp=Z,40nm,1.5s
GTA2 pmax pmax
comp=Z,820nm,4.5s
GTA2 L L
comp=Z,3μm,21.6s
GTA2 L L
comp=Z,3μm,20.3s
GTA2 L L
comp=Z,4μm,22.3s
ENH Enshi 51.31 47 P **P 06 38 47.2 -0.4**
KBZ Khabaz 51.43 337 P **P 06 38 47.8 -0.4**
comp=Z,52nm,1.1s,baz=160,slow=4.6,SNR=31
comp=Z,52nm,1.1s
KBZ Khabaz 51.43 337 *ce* P **P 06 38 48.8 +0.6**
KBZ pmax pmax
comp=Z,61nm,1.1s
SHA1 Shidzhatmaz 51.53 337 *ce* P **P 06 38 50.4 +1.1**
KAPI Kappang 51.59 94 P **P 06 38 49.3 -0.6**
comp=Z,3.6nm,0.3s,baz=183,slow=9.4,SNR=3.9
KAPI LR LR 06 58 19.4
comp=Z,1μm,21.5s,baz=272,slow=33
comp=Z,3.6nm,0.3s
TOKA Tokat 51.64 329 P **P 06 38 49.9 0.0**
TOKA IAmb IAmb 06 38 51.6
comp=Z,72nm,1.3s
KVAR Kislovodsk Arr 51.70 337 LR LR 06 57 57.6
comp=Z,209nm,21.4s,baz=80,slow=33
KIV Kislovodsk 51.70 337 ⇓P **P 06 38 51.3 +0.9**
KIV Kislovodsk 51.70 337 *i* P **P 06 38 50.0 -0.3**
SNR=7.2
KIV Kislovodsk 51.70 337 *e* P **P 06 38 50.3 -0.1**
KIV *e* S **S 06 46 12.5 +0.5**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,129nm,17.0s
KIV Kislovodsk 51.70 337 P **P 06 38 50.3 -0.1**
KIV Kislovodsk 51.70 337 P **P 06 38 50.1 -0.3**
comp=Z,488nmcomp=Z,25nm,1.1s
KIV Kislovodsk 51.70 337 P **P 06 38 51.0 +0.5**
TSUM Tsumeb 52.01 248 LR LR 06 59 46.1
comp=Z,2μm,18.2s,baz=80,slow=35
TSUM Tsumeb 52.01 248 P **P 06 38 53.5 +0.3**
TSUM IAmb IAmb 06 38 55.1
comp=Z,88nm,1.3s
TSUM Tsumeb 52.01 248 P P 06 38 47.7 -5.5
ZSN Zaisan 52.03 14 *c i* P **P 06 38 52.7 0.0**
ZSN pmax pmax
comp=Z,93nm,2.0s
ZSN Zaisan 52.03 14⇑ *i* P **P 06 38 52.8 0.0**
comp=Z,93nm,2.0s
KIRS Kirsehir-Merke 52.14 326⇓ P **P 06 38 54.3 +0.5**
AB31 Akbulak array 52.19 353 *i* P **P 06 38 52.8 -1.0**
ABKAR Akbulak array 52.19 353 P **P 06 38 53.5 -0.4**
BSSI Bau Bau, Buton 52.34 96 P **P 06 38 55.0 -0.6**
GOF Gofitskoye 52.49 338 *c i* P **P 06 38 55.8 -0.4**
MORW Morawa 52.55 125 P **P 06 38 57.9 +0.9**
comp=Z,97nm,1.3s
MORW Morawa 52.55 125 P **P 06 38 57.8 +0.9**
MORW Morawa 52.55 125 P **P 06 38 57.0 +0.1**
MORW IAmb IAmb 06 38 59.2
comp=Z,142nm,1.2s
MORW Morawa 52.55 125 P **P 06 38 57.9 +0.9**
BRZS Berezniki 52.59 4 *e* P **P 06 38 56.7 0.0**
BRZS Berezniki 52.59 4 *e* P **P 06 38 56.8 0.0**
SOC Sochi 52.63 334 *e* P **P 06 38 56.0 -1.2**
SOC *e* 06 40 52.5
SOC *e* PPP PPP 06 42 00.1
SOC *e* S **S 06 46 22.9 -1.6**
SOC *e* SS **SS 06 50 03.2 +0.1**
SOC pmax pmax
comp=Z,30nm,1.0s
SOC MLR MLR
comp=Z,224nm,16.0s
BR104 Keskin Array S 52.70 327 P **P 06 38 57.9 0.0**
comp=Z,182nmcomp=Z,17nm,1.1s
BR131 Keskin Array S 52.71 327 *i* P **P 06 38 57.1 -0.9**
BR131 Keskin Array S 52.71 327 P **P 06 38 58.2 +0.2**
SNR=17
BR131 S **S 06 46 28.1 +2.1**
BRTR Keskin Array B 52.71 327 P **P 06 38 57.2 -0.8**
comp=Z,17nm,1.1s,baz=148,slow=9.5,SNR=50
BRTR PcP **PcP 06 40 06.4 -1.4**
comp=Z,8.8nm,1.1s,baz=156,slow=6.5,SNR=3.8
BRTR LR LR 07 00 01.8
comp=Z,298nm,21.7s,baz=132,slow=35
comp=Z,17nm,1.1s
BRTR Keskin Array B 52.71 327 P **P 06 38 57.7 -0.4**
BR105 Keskin Array S 52.72 327 P **P 06 38 58.1 0.0**
comp=Z,212nmcomp=Z,22nm,1.2s
KKUL Konya-Kulu 52.72 326 P **P 06 38 58.5 +0.4**
BR106 Keskin Array S 52.73 327 P **P 06 38 58.2 0.0**
comp=Z,176nmcomp=Z,20nm,1.2s
TOLI2 Tolitoli 52.81 87 P **P 06 38 58.2 -0.9**
TOLI2 Tolitoli 52.81 87 P **P 06 38 57.4 -1.6**
TOLI2 IAmb IAmb 06 38 59.2
comp=Z,206nm,1.6s
TOLI2 Tolitoli 52.81 87 P **P 06 38 58.1 -1.0**
ELL Elmali 52.90 322 P **P 06 38 59.5 0.0**
ELL pmax pmax
comp=Z,44nm,1.1s
ELL Elmali 52.90 322 P **P 06 38 59.5 0.0**
XAN Xi'an 52.99 43⇑ P **P 06 38 59.5 -0.6**
XAN pP sP 06 39 04.2 +0.3
XAN S **S 06 46 29.2 -0.7**
XAN SS **SS 06 50 09.7 +0.4**
XAN pmax pmax
comp=Z,150nm,1.5s
XAN pmax pmax
comp=Z,1μm,3.8s
XAN L L
comp=Z,2μm,20.2s
XAN L L
comp=Z,1μm,21.2s
XAN L L
comp=Z,1μm,22.7s
WIN Windhoek 53.21 244 P **P 06 39 01.9 -0.3**
WIN pmax pmax
comp=Z,48nm,1.0s
WIN Windhoek 53.21 244 P **P 06 39 01.9 -0.3**
WIN IAmb IAmb 06 39 05.1
comp=Z,48nm,1.0s
SUR Sutherland 53.27 231 LR LR 06 58 02.8
comp=Z,4μm,21.5s,baz=64,slow=32
SUR Sutherland 53.27 231 P **P 06 39 02.6 +0.2**
H01W3 Cape Leeuwin H 53.39 133 T T 07 36 43.2
baz=298,slow=75,SNR=8.6
H01W2 Cape Leeuwin H 53.40 133 T T 07 36 48.5
baz=298,slow=75,SNR=8.4
H01W1 Cape Leeuwin H 53.41 133 T T 07 36 40.4
baz=298,slow=75,SNR=8.0
MBWA Marble Bar 53.47 114 P **P 06 39 03.9 +0.1**
comp=Z,97nm,1.5s
MBWA Marble Bar 53.47 114 P **P 06 39 04.5 +0.7**
MBWA Marble Bar 53.47 114 P **P 06 39 04.0 +0.1**
MBWA P **P 06 39 04.0 +0.1**
MBWA Marble Bar 53.47 114 P **P 06 39 03.6 -0.2**
MBWA IAmb IAmb 06 39 05.9
comp=Z,132nm,1.3s
AKTO Aktyubinsk 53.60 352 P **P 06 39 03.1 -1.1**
comp=Z,39nm,1.1s,baz=167,slow=6.3,SNR=56
AKTO LR LR 07 02 25.9
comp=Z,520nm,20.0s,baz=157,slow=37
comp=Z,39nm,1.1s
AKTO Aktyubinsk 53.60 352 P **P 06 39 02.0 -2.2**
BLDU Ballidu 53.65 127 P **P 06 39 05.9 +0.9**
comp=Z,88nm,1.3s
BLDU Ballidu 53.65 127 P **P 06 39 05.6 +0.6**
BLDU Ballidu 53.65 127 P **P 06 39 05.4 +0.4**
MUN Mundaring 53.77 128 P **P 06 39 06.2 +0.5**
comp=Z,48nm,1.4s
MUN Mundaring 53.77 128 P **P 06 39 06.3 +0.5**
KURBB Kurchatov Arra 53.83 8 P **P 06 39 05.2 -0.7**
comp=Z,52nm,1.1s,baz=202,slow=7.8,SNR=131
KURBB PcP **PcP 06 40 08.9 -2.6**
comp=Z,7.8nm,1.0s,baz=206,slow=3.7,SNR=4.7
KURBB LR LR 07 01 05.3
comp=Z,793nm,19.7s,baz=178,slow=35
comp=Z,52nm,1.1s
KURBB Kurchatov Arra 53.83 8 P **P 06 39 04.3 -1.6**
SEM Semipalatinsk 53.89 10 *e* P **P 06 39 06.2 -0.4**
SEM pmax pmax
comp=Z,55nm,1.5s
SEM MLR MLR
comp=Z,354nm,14.0s
SEM Semipalatinsk 53.89 10 *e* P **P 06 39 06.3 -0.4**
comp=Z,54nm,1.5s
SEM LR LR 07 02 50.7
comp=Z,354nm,14.5s
MEEK Meekatharra 53.91 121 P **P 06 39 07.1 0.0**
comp=Z,76nm,1.3s
MEEK Meekatharra 53.91 121 P **P 06 39 07.0 0.0**
MEEK Meekatharra 53.91 121 P **P 06 39 07.4 +0.4**
KARP Karpathos 53.94 319 P **P 06 39 06.8 -0.2**
comp=Z,75nm,1.5s
KURK Kurchatov 53.94 8 P **P 06 39 05.2 -1.4**
KURK 06 40 09.0
KURK Kurchatov 53.94 8 P **P 06 39 06.0 -0.6**
KURK P **P 06 39 06.0 -0.6**
KURK Kurchatov 53.94 8 P **P 06 39 06.1 -0.5**
KURK IAmb IAmb 06 39 07.4
comp=Z,105nm,1.2s
KURK Kurchatov 53.94 8 P **P 06 39 06.2 -0.5**
AUHAR St Anne's Scho 53.96 130 P **P 06 39 08.3 +1.1**
MMRI Maumere 54.17 99 P **P 06 39 07.7 -1.3**
MMRI Maumere 54.17 99 P **P 06 39 06.6 -2.4**
MMRI Maumere 54.17 99 P **P 06 39 07.1 -1.9**
comp=Z,155nm,1.6s
MMRI Maumere 54.17 99 P **P 06 39 06.6 -2.4**
DGZ Jazzator, Alta 54.77 15 *c i* P **P 06 39 11.8 -1.2**
DGZ pmax pmax
comp=Z,38nm,1.1s
MANT Manisa 54.83 322 P **P 06 39 13.2 -0.5**
KLBR Kellerberrin 54.84 127 P **P 06 39 13.6 -0.1**
comp=Z,95nm,1.3s
KLBR Kellerberrin 54.84 127 P **P 06 39 14.2 +0.5**
KLBR Kellerberrin 54.84 127 P **P 06 39 14.1 +0.4**
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 13.8 -0.4**
comp=Z,91nm,1.3s
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 14.3 0.0**
NWAO Narrogin (SRO) 54.93 129 LR LR 06 57 31.6
comp=Z,625nm,21.3s,baz=288,slow=30
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 14.5 +0.2**
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 13.4 -0.9**
NWAO pmax pmax
comp=Z,138nm,1.3s
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 13.9 -0.4**
NWAO Narrogin (SRO) 54.93 129 P **P 06 39 13.4 -0.9**
TGY Tagaytay City 54.96 71 LR LR 07 01 15.5
comp=Z,970nm,20.4s,baz=256,slow=34
GTOI Gorontalo 55.00 87 P **P 06 39 13.8 -1.3**
comp=Z,1μmcomp=Z,64nm,1.5s
WHN Wuhan 55.08 49 P **P 06 39 14.8 -0.5**
WHN sP **pwP 06 39 20.4 -1.1**

WHN S S 06 46 59.2 +1.2
WHN pmax pmax
comp=Z,340nm,1.3s
WHN pmax pmax
comp=Z,2µm,3.9s
WHN L L
comp=Z,4µm,18.3s
WHN L L
comp=Z,2µm,13.3s
WHN L L
comp=Z,3µm,17.4s
IDI Anoyia 55.31 317 P P 06 39 15.9 -1.2
comp=Z,25nm,1.1s,baz=177,slow=14,SNR=2.9
comp=Z,25nm,1.1s
RKGY Rocky Gully 55.40 131 P P 06 39 18.9 +1.3
comp=Z,89nm,2.5s
BVAR Borovoye Array 55.52 2 P P 06 39 16.4 -1.7
comp=Z,26nm,1.1s,baz=163,slow=5.4,SNR=35
comp=Z,26nm,1.1s
BORK Borovoye 55.54 2*c iP* P 06 39 17.6 -0.7
BORK pmax pmax
comp=Z,69nm,1.4s
BORK Borovoye 55.54 2 P P 06 39 17.9 -0.3
BORK IAmb IAmb 06 39 19.2
comp=Z,61nm,1.3s
AUKUL Kulin High Sch 55.55 128 P P 06 39 19.1 +0.3
BATI Baumata 55.66 100 P P 06 39 17.5 -2.4
comp=Z,40nm,0.4s,baz=277,slow=8.1,SNR=4.5
BATI LR LR 07 02 04.5
comp=Z,2µm,20.9s,baz=273,slow=35
comp=Z,40nm,0.4s
LYN LuoYang 55.72 44 P P 06 39 19.5 -0.4
LYN sP pwP 06 39 28.0 +1.9
LYN S S 06 47 08.1 +1.5
LYN SS SS 06 50 53.0 +0.8
LYN pmax pmax
comp=Z,76nm,2.9s
LYN pmax pmax
comp=Z,760nm,3.5s
LYN L L
comp=Z,1µm,22.3s
LYN L L
comp=Z,880nm,20.9s
LYN L L
comp=Z,1µm,22.3s
QZH2 Quanzhou 56.13 58 P P 06 39 24.5 +1.5
QZH2 S S 06 47 16.0 +3.7
QZH2 pmax pmax
comp=Z,310nm,4.1s
QZH2 L L
comp=Z,690nm,15.3s
QZH2 L L
comp=Z,1µm,17.4s
QZH2 L L
comp=Z,2µm,17.6s
SOEI Soe 56.23 100 P P 06 39 24.3 +0.2
SOEI Soe 56.23 100 P P 06 39 22.7 -1.3
SOEI Soe 56.23 100 P P 06 39 23.6 -0.5
comp=Z,87nm,1.2s
SOEI Soe 56.23 100 P P 06 39 23.5 -0.6
SIM Simferopol' 56.24 331 *eP* P 06 39 23.6 +0.2
SIM pmax pmax
comp=Z,100nm,2.0s
TIY Taiyuan 57.42 41 *eP* P 06 39 31.5 -0.6
TIY S S 06 47 31.1 +1.9
TIY L L
comp=Z,840nm,21.3s
TIY L L
comp=Z,640nm,20.6s
TIY L L
comp=Z,800nm,20.6s
TWG Pinlang 57.51 61 P P 06 39 34.0 +1.1
BELG Belogornoye 57.52 345 P P 06 39 29.9 -2.4
comp=Z,74nm,1.1s,baz=112,slow=11,SNR=29
BELG LR LR 07 05 31.3
comp=Z,510nm,20.8s,baz=114,slow=37
comp=Z,74nm,1.1s
BELG Belogornoye 57.52 345*c iP* P 06 39 30.5 -1.8
BELG pmax pmax
comp=Z,21nm,1.3s
TWGBT Beinan 57.52 61 P P 06 39 34.9 +2.0
BTO2 Baotou 57.60 37 *eP* P 06 39 33.7 +0.4
BTO2 pP sP 06 39 38.2 +1.1
BTO2 sP pwP 06 39 40.8 +1.3
BTO2 S S 06 47 33.4 +1.9
BTO2 SS SS 06 51 22.1 +0.3
BTO2 pmax pmax
comp=Z,84nm,2.2s
BTO2 pmax pmax
comp=Z,1µm,6.3s
BTO2 L L
comp=Z,2µm,17.2s
BTO2 L L
comp=Z,1µm,21.8s
BTO2 L L
comp=Z,3µm,18.9s
YULB Yu-li 57.90 60 P P 06 39 37.4 +1.8
YULB Yu-li 57.90 60 P P 06 39 35.5 -0.1
KMBL Kambalda 58.08 126 P P 06 39 36.7 -0.1
comp=Z,36nm,1.3s
ZALV Zalesovo Beam 58.12 12 P P 06 39 35.1 -1.4
comp=Z,17nm,0.8s,baz=215,slow=7.0,SNR=61
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 58.12 12 *i* P P 06 39 35.2 -1.3
ZALV pmax pmax
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 58.12 12 P P 06 39 35.0 -1.5
DAV Davao City (W) 58.18 80 LR LR 07 07 11.7
comp=Z,638nm,18.3s,baz=244,slow=39
VRH Novokhopyorsk 58.19 341 *eP* P 06 39 33.5 -3.5
VRH pmax pmax
comp=Z,30nm,1.1s
EDA Edea 58.26 276 P P 06 39 38.0 -0.2
EDA IAmb IAmb 06 39 40.0
comp=Z,62nm,1.4s
RDO Rodhopi 58.30 323 P P 06 39 37.9 -0.1
YHNB Yeheng 58.39 59 P P 06 39 40.3 +1.2
FITZ Fitzroy Crossi 58.39 110 P P 06 39 38.9 -0.3
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 58.39 110 LR LR 07 01 06.8
comp=Z,580nm,19.6s,baz=292,slow=32
FITZ Fitzroy Crossi 58.39 110 P P 06 39 39.0 -0.1
FITZ Fitzroy Crossi 58.39 110 P P 06 39 38.7 -0.5
NACB Ninganchiao 58.41 60 P P 06 39 41.0 +1.8
HHC Hu-ho-hao-te 58.68 38⇑*iP* P 06 39 41.1 +0.2
HHC pP pwP 06 39 46.5 -0.5
HHC S S 06 47 50.3 +4.7
HHC pmax pmax
comp=Z,51nm,1.5s
HHC pmax pmax
comp=Z,270nm,3.9s
HHC L L
comp=Z,610nm,16.0s
HHC L L
comp=Z,1µm,18.5s
HHC L L
comp=Z,1µm,18.5s
KNGR Kungurtug, Tuv 58.75 21 *i* P P 06 39 40.9 -0.3
KNGR pmax pmax
comp=Z,70nm,1.5s
HNS HongShan 58.77 43 ⇑P P 06 39 41.6 +0.2
HNS PP PP 06 41 57.6 +6.1
HNS S S 06 47 49.8 +3.2
HNS ScS ScS 06 49 30.0 -1.6
HNS pmax pmax
comp=Z,50nm,1.6s
HNS pmax pmax
comp=Z,810nm,3.5s
HNS L L
comp=Z,620nm,19.0s
HNS L L
comp=Z,1µm,20.8s
HNS L L
comp=Z,1µm,20.4s
TIRR Tirgusor 58.78 328 ⇓P P 06 39 40.3 -1.1
TIRR Tirgusor 58.78 328 P P 06 39 41.1 -0.2
TIRR pmax pmax
comp=Z,65nm,1.4s
TIRR Tirgusor 58.78 328 P P 06 39 41.1 -0.2
TIRR IAmb IAmb 06 39 41.7
comp=Z,65nm,1.4s
TIRR Tirgusor 58.78 328 P P 06 39 40.4 -0.9
comp=Z,548nmcomp=Z,34nm,1.5s
VORD Divnogorie 58.82 339 *eP* P 06 39 37.9 -3.6
VORD pmax pmax
comp=Z,80nm,1.1s

NLAI Namlea 58.93 92 P P 06 39 44.6 +1.7
comp=Z,1µmcomp=Z,88nm,1.9s
VSR Storozhevoye 59.07 339 *eP* P 06 39 41.6 -1.6
VSR pmax pmax
comp=Z,126nm,1.3s
NJ2 Nanjing 59.19 50 ⇑P P 06 39 44.3 -0.1
NJ2 sP pwP 06 39 49.6 -1.1
NJ2 S S 06 47 52.8 +0.5
NJ2 pmax pmax
comp=Z,210nm,1.3s
NJ2 pmax pmax
comp=Z,2µm,3.5s
NJ2 L L
comp=Z,2µm,17.1s
NJ2 L L
comp=Z,4µm,16.1s
NJ2 L L
comp=Z,4µm,18.0s
TNTI Ternate 59.36 88 P P 06 39 45.0 -0.9
TNTI Ternate 59.36 88 P P 06 39 44.7 -1.2
TNTI Ternate 59.36 88 P P 06 39 45.1 -0.9
comp=Z,2µmcomp=Z,126nm,1.5s
ARTI Arti 59.39 354 LR LR 07 06 14.2
comp=Z,486nm,19.1s,baz=153,slow=37
ARTI Arti 59.39 354*ceP* P 06 39 45.0 -0.3
ARTI pmax pmax
comp=Z,68nm,1.0s
ARTI Arti 59.39 354 P P 06 39 44.6 -0.7
ARTI IAmb IAmb 06 39 45.9
comp=Z,83nm,1.2s
CFR Carcaliu 59.41 328 ⇑P P 06 39 44.9 -0.8
CFR Carcaliu 59.41 328 P P 06 39 44.8 -0.8
VORR Voronezh 59.43 340 *eP* P 06 39 44.8 -0.9
VORR pmax pmax
comp=Z,79nm,0.5s
LIT Litokhoron 59.57 321 P P 06 39 46.3 -0.7
LIT pmax pmax
comp=Z,69nm,1.4s
LIT Litokhoron 59.57 321 P P 06 39 46.3 -0.7
LIT IAmb IAmb 06 39 47.5
comp=Z,69nm,1.4s
SVE Sverdlovsk 59.61 355*deP* P 06 39 46.4 -0.4
SVE *eS* S 06 47 59.8 +3.0
SVE pmax pmax
comp=Z,99nm,1.4s
SVE MLR MLR
comp=Z,764nm,18.0s
TIA Tai'an 59.84 45 P P 06 39 48.5 -0.3
TIA PcP PcP 06 40 34.7 -0.7
TIA S S 06 48 04.5 +4.0
TIA SS SS 06 52 00.1 +3.2
TIA pmax pmax
comp=Z,54nm,1.6s
TIA pmax pmax
comp=Z,730nm,3.8s
TIA L L
comp=Z,850nm,20.6s
TIA L L
comp=Z,1µm,21.2s
TIA L L
comp=Z,2µm,19.4s
GAMI Galela, Maluku 59.85 86 P P 06 39 48.2 -1.1
ISR Istrita 60.22 327 P P 06 39 51.4 0.0
comp=Z,51nm,1.3s
LPSR Galich'ya Gora 60.30 340 *eP* P 06 39 50.2 -1.5
LPSR pmax pmax
comp=Z,78nm,0.9s
GHRR 60.38 329 P P 06 39 52.6 +0.3
SONM Songino Array 60.40 29 P P 06 39 52.3 -0.3
comp=Z,70nm,1.1s,baz=224,slow=5.8,SNR=125
comp=Z,70nm,1.1s
SONM LR LR 07 05 55.3
comp=Z,4µm,18.5s,baz=222,slow=36
comp=Z,70nm,1.1s
SONM Songino Array 60.40 29 P P 06 39 52.6 0.0
SONM pmax pmax
comp=Z,203nm,1.4s
SONM Songino Array 60.40 29 P P 06 39 52.6 0.0
SAHR Sahastru 60.54 328 ⇑P P 06 39 53.3 -0.2
NEHR Nehoiu 60.55 327 ⇑P P 06 39 53.6 0.0
VRI Vrincioaia 60.60 328 ⇓P P 06 39 53.9 0.0
VRI Vrincioaia 60.60 328 P P 06 39 53.9 0.0
VRI Vrincioaia 60.60 328 P P 06 39 54.1 +0.2
comp=Z,2µmcomp=Z,120nm,1.3s
SSE Sheshan 60.61 52 P P 06 39 53.8 -0.4
SSE S S 06 48 10.9 +0.4
SSE SS SS 06 52 10.8 +1.7
SSE pmax pmax
comp=Z,52nm,1.3s
SSE pmax pmax
comp=Z,260nm,3.3s
SSE L L
comp=Z,310nm,18.6s
PLOR Plostina 60.64 328 ⇑P P 06 39 54.0 -0.3
PLOR Plostina 60.64 328 P P 06 39 53.9 -0.3
ULN Ulaanbaatar 60.73 29*ceP* P 06 39 54.9 0.0
ULN pmax pmax
comp=Z,101nm,1.7s
ULN Ulaanbaatar 60.73 29 P P 06 39 54.1 -0.8
ULN P P 06 39 54.1 -0.8
ULN S S 06 48 15.0 +3.0
ULN S S 06 48 15.0 +3.0
ULN Ulaanbaatar 60.73 29 P P 06 39 55.0 0.0
comp=Z,5µmcomp=Z,202nm,2.8s
MLR Muntele Rosu 60.78 327 P P 06 39 54.0 -1.3
comp=Z,44nm,1.2s,baz=115,slow=1.8,SNR=31
comp=Z,44nm,1.2s
MLR Muntele Rosu 60.78 327 ⇓P P 06 39 55.2 -0.1
MLR Muntele Rosu 60.78 327 P P 06 39 55.0 -0.3
MLR IAmb IAmb 06 39 57.3
comp=Z,103nm,1.4s
MLR Muntele Rosu 60.78 327 P P 06 39 55.2 -0.1
comp=Z,832nmcomp=Z,55nm,1.5s
ZAK Zakamensk 60.85 25 *eP* P 06 39 53.3 -2.3
ZAK pmax pmax
comp=Z,50nm,2.1s
COVR Voineasa-Covas 60.87 328 ⇑P P 06 39 55.3 -0.5
MOY Mondy 60.91 23 *eP* P 06 39 56.1 +0.1
MOY pmax pmax
comp=Z,84nm,3.2s
TESR Tescani 61.07 329 ⇓P P 06 39 55.9 -1.1
TESR Tescani 61.07 329 P P 06 39 56.1 -1.0
comp=Z,62nm,1.4s
KNRA Kununurra 61.07 106 P P 06 39 56.9 -0.7
comp=Z,83nm,1.3s
KNRA Kununurra 61.07 106 P P 06 39 56.5 -1.1
KNRA IAmb IAmb 06 39 58.9
comp=Z,91nm,1.1s
ONER Baraj Valea Uz 61.09 328 ⇓P P 06 39 56.5 -0.7
KEK Kerkira 61.10 319 P P 06 39 56.0 -1.5
KEK IAmb IAmb 06 39 57.0
comp=Z,92nm,1.2s
BJT Baijiatuau 61.12 41 P P 06 39 58.4 +0.9
BJI2 Beijing 61.12 41 P P 06 39 57.9 +0.3
BJI2 pP sP 06 40 02.3 +0.9
BJI2 sP pwP 06 40 05.2 +1.5
BJI2 PP PP 06 42 15.2 +2.9
BJI2 S S 06 48 14.9 -1.9
BJI2 pmax pmax
comp=Z,25nm,1.5s
BJI2 pmax pmax
comp=Z,350nm,4.0s
BJI2 L L
comp=Z,490nm,17.4s
BJI2 L L
comp=Z,230nm,15.9s
BJI2 L L
comp=Z,540nm,15.3s
VOIR 61.23 327 ⇓P P 06 39 57.0 -1.4
VOIR 61.23 327 P P 06 39 56.9 -1.4
VOIR 61.23 327 P P 06 39 56.8 -1.5
comp=Z,497nmcomp=Z,25nm,1.4s
OZUR 61.25 328 ⇓P P 06 39 57.9 -0.5
SORM Soroca 61.30 331 ⇑P P 06 39 57.5 -1.1
SORM Soroca 61.30 331 P P 06 39 57.4 -1.1
DOPR Dopca 61.38 327 ⇑P P 06 39 58.9 -0.4
ARR Arges 61.42 326 ⇑P P 06 39 58.6 -1.0
LOT Lotru 61.95 326 ⇑P P 06 40 01.9 -1.2
TLY Talaya 61.98 24 LR LR 07 06 42.4
comp=Z,3µm,21.7s,baz=210,slow=36
TLY Talaya 61.98 24*ceP* P 06 40 04.2 +1.1
TLY pmax pmax
comp=Z,71nm,1.3s
TLY Talaya 61.98 24 P P 06 40 03.5 +0.3
TLY P P 06 40 03.5 +0.3
TLY S S 06 48 29.8 +2.5

TLY S S 06 48 29.8 +2.5
TLY Talaya 61.98 24 P P 06 40 03.1 0.0
TLY IAmb IAmb 06 40 05.2
comp=Z,70nm,1.3s
WRKA Warakurna 61.98 117 P P 06 40 02.8 -1.0
comp=Z,39nm,1.3s
GZR Gura Zlata 62.47 326 ⇑P P 06 40 06.4 -0.2
GZR Gura Zlata 62.47 326 P P 06 40 06.4 -0.2
KMPD K-Podol'skiy 62.52 330 P P 06 40 04.6 -2.2
BURAR Bucovina Array 62.53 329 ⇓P P 06 40 06.6 -0.5
BURAR Bucovina Array 62.53 329 P P 06 40 06.5 -0.5
BURAR Bucovina Array 62.53 329 P P 06 40 06.5 -0.6
PVY Plav 62.54 322⇑*iP* P 06 40 05.6 -1.6
AK07 Malin Array Si 62.58 333 P P 06 40 05.7 -1.4
AK09 Malin Array Si 62.59 333 P P 06 40 05.7 -1.5
AK10 Malin Array Si 62.60 333 P P 06 40 05.8 -1.4
AK06 Malin Array Si 62.61 333 P P 06 40 05.9 -1.4
AK05 Malin Array Si 62.63 333 P P 06 40 06.0 -1.5
ARCR ARCALIA 62.65 328 ⇓P P 06 40 05.9 -1.7
IRK Irkutsk 62.66 24 *eP* P 06 40 07.5 -0.1
IRK pmax pmax
comp=Z,147nm,1.7s
AKASG Malin Array Be 62.68 333 P P 06 40 05.0 -2.7
comp=Z,11nm,0.9s,baz=126,slow=5.2,SNR=40
AKASG LR LR 07 10 25.7
comp=Z,257nm,18.8s,baz=114,slow=39
comp=Z,11nm,0.9s
AKBB Malin Array Si 62.68 333*ceP* P 06 40 06.6 -1.2
AKBB pmax pmax
comp=Z,56nm,1.3s
AKBB Malin Array Si 62.68 333 P P 06 40 05.8 -2.0
KIEV Kiev 62.68 333 *i P* P 06 40 06.2 -1.6
SNR=10
MDVR Moldovita 62.72 325 ⇓P P 06 40 07.3 -0.9
DRME Dracevica, Mon 62.80 321⇑*iP* P 06 40 07.4 -1.4
DRME Dracevica, Mon 62.80 321⇑*iP* P 06 40 07.5 -1.4
LUBAR Lubar, Ukraine 62.81 332 P P 06 40 06.5 -2.2
KIRV Kirov 62.85 349 LR LR 07 09 40.5
comp=Z,423nm,18.5s,baz=151,slow=38
KIRV Kirov 62.85 349*ceP* P 06 40 08.1 -0.6
TIP Timpagrande 62.87 317 P P 06 40 08.6 -0.8
TIP Timpagrande 62.87 317 P P 06 40 08.8 -0.6
comp=Z,285nmcomp=Z,10nm,2.2s
DRS Darwin Rock St 62.88 103 P P 06 40 10.1 +0.3
PDG Podgorica 62.89 321 ⇑P P 06 40 07.9 -1.5
PDG Podgorica 62.89 321 P P 06 40 08.6 -0.7
PDG IAmb IAmb 06 40 09.4
comp=Z,51nm,1.5s
PDG Podgorica 62.89 321⇑*iP* P 06 40 07.8 -1.5
SJES Sjenica 62.89 322⇑*iP* P 06 40 08.0 -1.5
KOME Kolasin 62.95 322⇑*iP* P 06 40 08.3 -1.6
FORT Forrest 63.01 123 P P 06 40 10.1 -0.4
comp=Z,20nm,0.9s
MARR Marisel-Cluj 63.06 327 ⇑P P 06 40 09.8 -0.8
MTN Manton Dam 63.14 103 P P 06 40 11.0 -0.5
comp=Z,60nm,1.5s
MTN Manton Dam 63.14 103 P P 06 40 10.6 -0.9
MTN IAmb IAmb 06 40 12.7
comp=Z,65nm,1.2s
CEME Cevo 63.16 321⇑*iP* P 06 40 10.1 -1.2
OBN Obninsk 63.16 340*ceP* P 06 40 09.9 -0.9
OBN *e**PP sP 06 40 13.9 -0.3
OBN *SP pwP 06 40 17.0 -1.1
OBN 06 40 49.0
OBN *i* S S 06 48 34.1 -7.9
OBN *e*PS PnS 06 48 51.3 -6.8
OBN *i* SS SS 06 52 43.3 -5.0
OBN pmax pmax
comp=Z,129nm,2.5s
OBN MLR MLR
comp=Z,368nm,21.0s
OBN Obninsk 63.16 340 P P 06 40 10.0 -0.9
comp=Z,57nm,1.3s
SIJI Sorong 63.16 90 P P 06 40 10.5 -1.3
comp=Z,47nm,0.9s,baz=282,slow=5.2,SNR=33
SIJI LR LR 07 06 18.2
comp=Z,171nm,21.3s,baz=264,slow=35
comp=Z,47nm,0.9s
SIJI Sorong 63.16 90 P P 06 40 11.2 -0.6
comp=Z,1µmcomp=Z,79nm,1.5s
XLT XiLinHaoTe 63.17 37 *eP* P 06 40 11.5 +0.2
XLT pP sP 06 40 16.2 +1.0
XLT pmax pmax
comp=Z,44nm,1.6s
XLT pmax pmax
comp=Z,560nm,3.9s
XLT L L
comp=Z,94nm,16.4s
XLT L L
comp=Z,450nm,18.0s
XLT L L
comp=Z,960nm,20.3s
BZS Buzias 63.26 325 ⇑P P 06 40 10.5 -1.4
BZS Buzias 63.26 325 P P 06 40 10.4 -1.4
PLE Pljevlja 63.29 322⇑*iP* P 06 40 11.3 -0.9
MOS Moscow 63.33 341 *eP* P 06 40 11.9 -0.1
MOS *e* 06 42 31.8
MOS *eS* S 06 48 43.9 -0.2
MOS *eSS* SS 06 52 55.5 +4.6
MOS pmax pmax
comp=Z,195nm,1.6s
HCY Herceg Novi 63.37 321⇑*iP* P 06 40 11.3 -1.3
HCY Herceg Novi 63.37 321⇑*iP* P 06 40 11.6 -1.0
UPM Unac-Piva 63.52 322 *eP* P 06 40 12.5 -1.2
UPM Unac-Piva 63.52 322⇑*iP* P 06 40 12.6 -1.2
MI28 MI28_Pidlybu 63.55 333 P P 06 40 11.2 -2.3
BBLS Lazi&#263i 63.57 323⇑*iP* P 06 40 13.3 -0.7
BRY Bratogost 63.59 321⇑*iP* P 06 40 13.3 -0.9
BRY Bratogost 63.59 321⇑*iP* P 06 40 13.3 -0.9
TREB Trebinje 63.61 321 *eP* P 06 40 12.5 -1.6
SIRR Siria 63.62 326 ⇓P P 06 40 13.4 -0.7
RAFF Raffo Rosso 63.65 314 P P 06 40 14.2 -0.3
RAFF IAmb IAmb 06 40 15.6
comp=Z,61nm,1.3s
KLINJ Klinje 63.70 322 *eP* P 06 40 14.1 -0.8
TEKS Tekeris 63.87 323⇑*iP* P 06 40 14.6 -1.3
FRGS Fruska Gora 64.04 324⇑*iP* P 06 40 15.5 -1.5
FAKI Fak Fak 64.07 92 P P 06 40 18.2 +0.4
FAKI Fak Fak 64.07 92 P P 06 40 17.6 -0.2
FAKI Fak Fak 64.07 92 P P 06 40 17.8 0.0
comp=Z,2µmcomp=Z,139nm,1.3s
DL2 Dalian 64.26 44 P P 06 40 18.2 -0.3
DL2 S S 06 48 58.1 +1.8
DL2 pmax pmax
comp=Z,66nm,1.3s
DL2 pmax pmax
comp=Z,910nm,3.9s
DL2 L L
comp=Z,620nm,19.3s
DL2 L L
comp=Z,970nm,17.3s
DL2 L L
comp=Z,2µm,23.6s
RNPP5 Staryi Chortor 64.58 332 P P 06 40 18.9 -1.4
RNPP8 Varash 64.66 332 P P 06 40 19.2 -1.7
RNPP9 Sopachiv 64.69 332 P P 06 40 19.5 -1.6
SGRT San Giovanni R 64.79 319 P P 06 40 21.6 -0.4
DOB Doboj 64.83 323 *eP* P 06 40 13.0 -9.1
KOLS Kolonicke sedl 64.89 329 *eP* P 06 40 21.8 -0.6
KOLS pmax pmax
comp=Z,38nm,1.3s
KOLS Kolonicke sedl 64.89 329 *eP* P 06 40 21.8 -0.6
MAW Mawson 64.92 182 P P 06 40 22.9 +0.7
comp=Z,12nm,2.0s
MAW Mawson 64.92 182 P P 06 40 21.8 -0.4
comp=Z,32nm,1.0s,baz=353,slow=7.5,SNR=29
MAW LR LR 07 01 33.0
comp=Z,1µm,21.5s,baz=355,slow=29
comp=Z,32nm,1.0s
MAW Mawson 64.92 182 P P 06 40 22.8 +0.5
MAW pmax pmax
comp=Z,16nm,1.2s
MAW Mawson 64.92 182 P P 06 40 22.8 +0.5
KWP Kalwaria Pacla 65.10 329 *eP* P 06 40 22.7 -1.0
KWP Kalwaria Pacla 65.10 329 P P 06 40 22.9 -0.9
comp=Z,47nm,1.2s
MORH Mrgy, Hungar 65.31 325 ⇑P P 06 40 24.3 -0.9
MORH Mrgy, Hungar 65.31 325⇑*iP* P 06 40 23.7 -1.5
MORH Mrgy, Hungar 65.31 325 P P 06 40 24.0 -1.2
comp=Z,509nmcomp=Z,34nm,1.3s
BLY Banja Luka 65.39 323 ⇓P P 06 40 24.8 -0.9
BLY Banja Luka 65.39 323 P P 06 40 25.1 -0.7
BLY IAmb IAmb 06 40 26.2
comp=Z,69nm,1.4s

BLY Banja Luka 65.39 323 *e*P P 06 40 24.9 -0.9
PSZ Piszkesteto 65.56 327 ⇑P P 06 40 25.4 -1.6
PSZ Piszkesteto 65.56 327 P P 06 40 25.3 -1.6
PSZ pmax pmax
comp=Z,31nm,1.3s
PSZ Piszkesteto 65.56 327 P P 06 40 25.3 -1.6
MNK Minsk 65.96 336 *i* P P 06 40 28.8 -0.4
comp=E,39nm,0.9s
MNK *i* P P 06 40 28.8 -0.4
comp=N,42nm,0.9s,baz=135
MNK *i* P P 06 40 28.8 -0.4
comp=Z,33nm,0.6s
MNK *i* PcP PcP 06 41 00.1 +0.2
MNK *i* PP PP 06 42 54.1 -0.4
MNK *i* PPP PPP 06 44 27.0
MNK *i* S S 06 49 16.9 +0.4
MNK *i* SS SS 06 53 33.0 +1.1
MNK *i* SSS SSS 06 56 40.4
MNK *i* LQ LQ 07 03 09.5
MNK *i* LR LR 07 09 16.7
MNK *i* LRM MLR 07 10 31.8
comp=N,564nm,22.2s
MNK *i* LRM MLR 07 10 33.7
comp=Z,255nm,20.9s
MNK *i* LRM MLR 07 11 16.1
comp=E,724nm,24.3s
MNK Minsk 65.96 336 *i* P P 06 40 28.7 -0.4
MNK *i* 06 41 00.0
MNK *i* 06 42 54.0
MNK *i* PPP PPP 06 44 27.0
MNK *i* S S 06 49 16.9 +0.4
MNK *i* SS SS 06 53 33.0 +1.1
MNK pmax pmax
comp=Z,33nm,0.6s
MNK pmax pmax
comp=N,42nm,0.9s
MNK pmax pmax
comp=E,39nm,0.9s
MNK MLR MLR
comp=N,564nm,22.0s
MNK MLR MLR
comp=Z,255nm,21.0s
MNK MLR MLR
comp=E,724nm,24.0s
TAM Tamanrasset 65.99 296 P P 06 40 30.2 -0.1
TAM pmax pmax
comp=Z,49nm,1.4s
TAM Tamanrasset 65.99 296 P P 06 40 30.2 -0.1
TAM IAmb IAmb 06 40 31.4
comp=Z,49nm,1.4s
NIE Niedzica 66.22 328 *e*P P 06 40 29.9 -1.1
NIE Niedzica 66.22 328 P P 06 40 29.8 -1.3
comp=Z,9.8nm,1.3s
SRO Srobarova 66.38 326 *e*P P 06 40 31.7 -0.4
SRO Srobarova 66.38 326 *e*P P 06 40 31.7 -0.4
MPLH Magyarpolny 66.47 325 P P 06 40 31.6 -1.1
comp=Z,2μmcomp=Z,134nm,1.3s
LANS Liptovska Anna 66.50 328 *e*P P 06 40 32.3 -0.6
LANS pmax pmax
comp=Z,28nm,1.2s
LANS Liptovska Anna 66.50 328 *e*P P 06 40 32.3 -0.6
BEHE Becsehely 66.54 324 ⇑*i*P P 06 40 31.9 -1.2
AQU L'Aquila 66.61 319 P P 06 40 33.2 -0.6
comp=Z,702nmcomp=Z,35nm,1.6s
CIT Chita 66.63 29 *e*P P 06 40 33.4 -0.3
CIT *e* 06 40 58.0
CIT *e* 06 43 04.4
CIT *e* 06 44 42.8
CIT pmax pmax
comp=Z,321nm,2.4s
KEST Kesra 66.74 311 P P 06 40 34.9 +0.1
comp=Z,7.4nm,1.0s,baz=129,slow=4.3,SNR=14
KEST LR LR 07 06 25.6
comp=Z,169nm,21.7s,baz=14,slow=33
comp=Z,7.4nm,1.0s
KEST Kesra 66.74 311 P P 06 40 35.4 +0.7
SNR=8.7
KEST P P 06 40 35.4 +0.7
SNR=8.7
KEST Kesra 66.74 311 P P 06 40 35.2 +0.4
KEST IAmb IAmb 06 40 36.7
comp=Z,96nm,1.9s
SUJ Sinuiju 66.78 44 P P 06 40 34.5 -0.3
WRA Warramunga Arr 66.78 110 P P 06 40 34.5 -0.8
comp=Z,82nm,1.0s,baz=281,slow=5.8,SNR=120
comp=Z,82nm,1.0s
WRA Warramunga Arr 66.78 110 P P 06 40 34.4 -0.8
WRA pmax pmax
comp=Z,14nm,1.2s
WRA Warramunga Arr 66.78 110 P P 06 40 34.4 -0.9
WRAB Tennant Creek 66.80 110 P P 06 40 34.8 -0.5
WRAB Tennant Creek 66.80 110*ce*P P 06 40 35.1 -0.2
WRAB pmax pmax
comp=Z,206nm,1.3s
WRAB Tennant Creek 66.80 110 P P 06 40 34.4 -0.9
AUALC St Philip's Co 66.80 115 P P 06 40 34.4 -0.9
AS13 Alice Springs 66.80 114 P P 06 40 35.0 -0.3
comp=Z,59nm,1.1s
HJU Haeju 66.81 47 P P 06 40 34.2 -0.8
HJU AmB
comp=Z,744nm,2.0s
ASAR Alice Springs 66.81 115 P P 06 40 34.5 -1.0
comp=Z,43nm,0.9s,baz=282,slow=5.8,SNR=109
ASAR LR LR 07 06 38.5
comp=Z,484nm,20.2s,baz=288,slow=33
comp=Z,43nm,0.9s
ASAR Alice Springs 66.81 115 P P 06 40 34.6 -0.8
ASAR Alice Springs 66.81 115 P P 06 40 34.6 -0.8
AS31 Alice Springs 66.82 115 P P 06 40 35.1 -0.4
comp=Z,19nm,1.1s
AS15 Alice Springs 66.82 114 P P 06 40 35.1 -0.3
comp=Z,56nm,1.1s
AS02 Alice Springs 66.85 115 P P 06 40 35.2 -0.4
comp=Z,69nm,1.1s
AS09 Alice Springs 66.85 115 P P 06 40 35.5 -0.2
comp=Z,68nm,1.1s
AS01 Alice Springs 66.86 115 P P 06 40 35.2 -0.5
comp=Z,69nm,1.2s
AS01 Alice Springs 66.86 115 P P 06 40 35.1 -0.6
AS17 Alice Springs 66.89 114 P P 06 40 35.6 -0.3
comp=Z,68nm,1.1s
SNY Shenyang 66.90 42 ⇑P P 06 40 35.4 -0.1
SNY S S 06 49 28.6 +0.1
SNY pmax pmax
comp=Z,34nm,2.5s
SNY pmax pmax
comp=Z,520nm,3.9s
SNY L L
comp=Z,930nm,18.7s
SNY L L
comp=Z,440nm,18.3s
SNY L L
comp=Z,610nm,26.7s
OJC Ojcow 66.95 329 *e*P P 06 40 33.8 -1.9
OJC Ojcow 66.95 329 P P 06 40 34.4 -1.3
OJC Ojcow 66.95 329 P P 06 40 34.4 -1.3
OJC Ojcow 66.95 329 P P 06 40 34.2 -1.5
comp=Z,25nm,1.6s
BOJS Bojanci 66.95 322 *i* P P 06 40 34.5 -1.3
BOJS *e*S S 06 49 27.8 -1.2
GUMA Gualdo di Mace 66.98 319 P P 06 40 35.1 -0.9
GOLS Golise 66.98 323 *i* P P 06 40 35.0 -1.0
NRCA Norcia 67.02 319 P P 06 40 35.7 -0.6
KLMR Klimovskoe 67.10 345 *e*P P 06 40 34.1 -2.3
KLMR pmax pmax
comp=Z,140nm,1.4s
KLMR MLR MLR
comp=Z,432nm,14.0s
FDMO Fiordimonte 67.13 319 P P 06 40 36.1 -0.9
FDMO IAmb IAmb 06 40 39.0
comp=Z,54nm,1.1s
PYAG Pyongyang 67.23 46 P P 06 40 37.0 -0.6
PYAG S S 06 49 30.4 -2.2
PYAG AmB
comp=Z,696nm,3.1s
SMOL Smolenice 67.26 326 *e*P P 06 40 36.1 -1.6
SMOL pmax pmax
comp=Z,18nm,1.5s
CESX Cesi 67.27 319 P P 06 40 36.6 -1.3
CESX IAmb IAmb 06 40 38.0
comp=Z,45nm,1.2s
MODS Modra-Piesok 67.27 326 *e*P P 06 40 36.4 -1.4
MODS pmax pmax
comp=Z,107nm,1.3s
MODS Modra-Piesok 67.27 326 *e*P P 06 40 36.4 -1.4

JAVC Velka Javorina 67.32 327 *e*P P 06 40 37.5 -0.6
VISS Visnje 67.35 323 *e*P P 06 40 36.9 -1.5
TJN Taejon 67.38 49 P P 06 40 38.3 -0.4
BEL Belsk 67.41 330 *e*P P 06 40 37.8 -0.8
RONA Rosalia, Austr 67.46 325 *i* P P 06 40 37.7 -1.3
comp=Z,35nm,1.2s,SNR=15
MAUC Maruska 67.51 327 *e*P P 06 40 39.3 0.0
MAUC *e*S S 06 49 31.3 -4.4
MURB Monte Urbino 67.60 319 P P 06 40 39.2 -0.8
MURB IAmb IAmb 06 40 45.7
comp=Z,43nm,1.1s
SUW Suwalki 67.65 333 *e*P P 06 40 38.8 -1.2
SUW Suwalki 67.65 333 P P 06 40 38.9 -1.1
SUW Suwalki 67.65 333 P P 06 40 38.9 -1.1
SOKA Soboth 67.67 323 *i* P P 06 40 39.1 -1.4
comp=Z,58nm,1.4s,SNR=18
ARSA Arzberg 67.68 324 P P 06 40 39.6 -0.8
ARSA IAmb IAmb 06 40 40.7
comp=Z,60nm,1.5s
ARSA Arzberg 67.68 324 *e*P P 06 40 39.2 -1.2
comp=Z,77nm,1.3s,SNR=14
TORD Torodi Ar. Bea 67.72 285 P P 06 40 41.4 +0.2
comp=Z,10nm,1.2s,baz=86,slow=4.8,SNR=25
TORD LR LR 07 08 14.1
comp=Z,685nm,21.4s,baz=106,slow=34
comp=Z,10nm,1.2s
TORD Torodi Ar. Bea 67.72 285 P P 06 40 41.2 0.0
TORD IAmb IAmb 06 40 43.5
comp=Z,49nm,1.8s
WINA Alland / Wiene 67.81 325 *i* P P 06 40 40.1 -1.0
SNR=9.0
CONA Conrad Observa 67.83 325 *i* P P 06 40 39.8 -1.6
comp=Z,145nm,1.6s,SNR=33
OBKA Obir 67.88 323 *i* P P 06 40 40.4 -1.3
comp=Z,74nm,1.6s,SNR=11
MORC Moravsky Berou 67.89 327 ⇓P P 06 40 40.9 -0.8
MORC Moravsky Berou 67.89 327 P P 06 40 40.7 -1.0
MORC pmax pmax
comp=Z,52nm,1.3s
MORC Moravsky Berou 67.89 327 P P 06 40 40.7 -1.0
MORC IAmb IAmb 06 40 41.7
comp=Z,52nm,1.3s
MORC Moravsky Berou 67.89 327 *e*P P 06 40 40.1 -1.6
KRUC Moravsky 68.13 326 *e*P P 06 40 41.6 -1.6
VSL Villasalto 68.15 315 P P 06 40 42.8 -0.7
VSL IAmb IAmb 06 40 44.2
comp=Z,48nm,1.3s
VRAC Vranov 68.16 327 *e*P P 06 40 41.8 -1.5
KSAR Wonju Array Be 68.16 48 P P 06 40 43.1 -0.4
KSAR Wonju Array Be 68.16 48 P P 06 40 43.1 -0.4
SESA Seetaler Alpe, 68.17 324 *i* P P 06 40 42.6 -1.2
comp=Z,236nm,1.4s,SNR=34
KSRS Korea Array 68.19 48 P P 06 40 43.1 -0.7
comp=Z,15nm,1.1s,baz=257,slow=8.2,SNR=22
KSRS LR LR 07 11 45.3
comp=Z,1μm,19.4s,baz=245,slow=37
comp=Z,15nm,1.1s
SABO M.te Sabotino 68.19 322 P P 06 40 42.5 -1.2
SABO IAmb IAmb 06 40 43.2
comp=Z,53nm,1.3s
HIA Hailar 68.22 34 P P 06 40 44.2 +0.4
HIA Hailar 68.22 34 *i* P P 06 40 43.1 -0.7
HIA pmax pmax
comp=Z,98nm,1.4s
PABE Paberze 68.29 335 P P 06 40 43.1 -0.8
HILR Hailar Array B 68.38 33 P P 06 40 45.0 +0.2
comp=Z,44nm,0.9s,baz=209,slow=8.5,SNR=36
HILR LR LR 07 11 52.2
comp=Z,1μm,18.3s,baz=260,slow=37
comp=Z,44nm,0.9s
PRED Cave del Predi 68.44 323 P P 06 40 44.0 -1.2
KRLC Kraliky 68.47 327 *e*P P 06 40 43.5 -1.8
KRLC MLR MLR
comp=Z,200nm,17.2s
KRLC Kraliky 68.47 327 *e*P P 06 40 43.5 -1.8
KRLC AMS AMS 07 13 00.0
comp=Z,200nm,17.2s
CASP Castiglione de 68.48 318 P P 06 40 43.9 -1.6
CASP IAmb IAmb 06 40 45.4
comp=Z,50nm,1.1s
MYKA Terra Mystica 68.48 323 *i* P P 06 40 44.2 -1.3
comp=Z,62nm,1.4s,SNR=10
ACRG Accra 68.71 277 P P 06 40 47.2 -0.3
ACRG IAmb IAmb 06 40 49.7
comp=Z,61nm,1.2s
MOA Molln 68.72 324 *i* P P 06 40 45.5 -1.4
comp=Z,101nm,1.6s,SNR=17
HHU Hamhung 68.83 45 P P 06 40 47.3 -0.5
HHU S S 06 49 49.7 -2.1
HHU AmB
comp=Z,446nm,1.8s
DPC Dobruska-Polom 68.87 327 *e*P P 06 40 46.8 -1.0
DPC *e*S S 06 49 45.2 -6.7
DPC MLR MLR
comp=Z,200nm,15.6s
DPC Dobruska-Polom 68.87 327 *e*P P 06 40 46.8 -1.0
DPC *e*S S 06 49 45.2 -6.7
DPC AMS AMS 07 15 00.0
comp=Z,200nm,15.6s
DPC Dobruska-Polom 68.87 327 P P 06 40 46.4 -1.4
comp=Z,291nmcomp=Z,20nm,1.2s
STAL STALIGIAL 68.87 322 P P 06 40 46.6 -1.3
STAL IAmb IAmb 06 40 47.7
comp=Z,63nm,1.5s
KBA Koelnbreinsper 68.88 323 *i* P P 06 40 46.5 -1.7
comp=Z,45nm,1.5s,SNR=12
SYO Syowa Base 68.94 191⇑*e*P P 06 40 42.2 -5.6
SYO Syowa Base 68.94 191⇓*e*P P 06 40 47.9 +0.1
BIOA Bad Ischl, Aus 69.00 324 *i* P P 06 40 47.3 -1.4
comp=Z,98nm,1.4s,SNR=6.6
CN2 Changchun 69.01 41 *e*P P 06 40 48.1 -0.6
CN2 *e*S S 06 49 55.6 +2.0
CN2 SS SS 06 54 26.4 +6.8
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 L L
comp=Z,500nm,17.0s
CN2 L L
comp=Z,1μm,17.0s
CN2 L L
comp=Z,1μm,18.1s
JNU Nakatsue 69.01 53 LR LR 07 12 30.2
comp=Z,1μm,18.5s,baz=222,slow=37
ZCCA Zocca 69.09 320 P P 06 40 48.4 -0.9
TEOL Teolo 69.10 321 P P 06 40 48.4 -0.9
TEOL IAmb IAmb 06 40 49.7
comp=Z,87nm,1.3s
UPC Upice 69.12 327 AMS AMS 07 25 40.0
comp=Z,200nm,17.3s
CHVC Chvalec 69.14 327 *e*P P 06 40 48.6 -0.9
CHVC Chvalec 69.14 327 *e*P P 06 40 48.6 -0.9
KSP Ksiaz 69.15 328 *e*P P 06 40 48.5 -1.0
KSP Ksiaz 69.15 328 P P 06 40 48.5 -1.0
comp=Z,480nmcomp=Z,25nm,1.2s
VSU Vasula 69.22 338*ce*P P 06 40 48.8 -0.9
VSU pmax pmax
comp=Z,124nm,2.5s
ABTA Abfaltersbach 69.22 323 *i* P P 06 40 49.0 -1.1
comp=Z,109nm,1.3s,SNR=20
LESA Schwarzleotal 69.44 323 *i* P P 06 40 49.6 -1.9
comp=Z,29nm,0.8s,SNR=11
GEC2 GERESS Array S 69.54 325 *e*L L 07 15 19.5
comp=Z,171nm,21.4s
GERES GERESS Array B 69.54 325 P P 06 40 50.1 -1.9
comp=Z,1.6nm,0.8s,baz=150,slow=5.6,SNR=14
GERES PP PP 06 43 25.6 -0.4
comp=Z,0.3nm,0.2s,baz=169,slow=7.9,SNR=4.2
comp=Z,1.6nm,0.8s
PRU Pruhonice 69.65 326 *e*S S 06 49 55.9 -5.1
PRU AMS AMS 07 15 40.0
comp=Z,200nm,20.4s
KHC Kasperske Hory 69.75 325*ce*P P 06 40 51.7 -1.6
KHC pmax pmax
comp=Z,17nm,1.0s
KHC Kasperske Hory 69.75 325 P P 06 40 51.8 -1.6
KHC Kasperske Hory 69.75 325 AMS AMS 07 15 10.0
comp=Z,200nm,22.0s
KHC Kasperske Hory 69.75 325 P P 06 40 51.3 -2.0
comp=Z,15nm,1.3s
SALO Salr 69.93 321 P P 06 40 53.6 -0.9
SALO IAmb IAmb 06 40 57.2
comp=Z,41nm,1.1s
WTTA Wattenberg 69.99 323 *i* P P 06 40 53.2 -1.8
comp=Z,128nm,1.7s,SNR=14

GKP Gorka Klasztor 70.01 330 *e*P P 06 40 54.0 -0.7
WATA Walderalm 70.06 323 *i* P P 06 40 53.6 -1.8
comp=Z,84nm,1.2s,SNR=10
BBOO Buckleboo 70.09 124 P P 06 40 55.8 0.0
comp=Z,86nm,1.4s
BBOO Buckleboo 70.09 124 P P 06 40 55.8 0.0
BBOO Buckleboo 70.09 124 P P 06 40 55.3 -0.4
BBOO IAmb IAmb 06 40 56.5
comp=Z,94nm,1.1s
CASY Casey 70.09 163 P P 06 40 54.4 -0.7
CASY IAmb IAmb 06 41 11.5
comp=Z,76nm,1.8s
WET Wettzell 70.16 325 *e*L L 07 15 56.0
comp=Z,132nm,19.9s
SQTA Sankt Quirin 70.23 323 *i* P P 06 40 54.8 -1.6
comp=Z,99nm,1.3s,SNR=17
MOTA Moosalm 70.35 323 *i* P P 06 40 55.3 -1.9
comp=Z,117nm,1.5s,SNR=20
BRG Berggiesshubel 70.43 327 *e*P P 06 40 56.7 -0.7
comp=Z,58nm,1.6s,baz=119,slow=6.1
BRG Berggiesshubel 70.43 327 *e*P P 06 40 52.6 -4.7
BRG Amp 06 40 53.9
comp=Z,5.3nm,0.5s
BRG Berggiesshubel 70.43 327 P P 06 40 57.0 -0.4
BRG Amp 06 40 57.9
comp=Z,20nm,1.1s
BRG Berggiesshubel 70.43 327 Amp 06 41 02.9
comp=Z,13nm,1.0s
BRG Berggiesshubel 70.43 327 Amp 06 41 21.1
comp=Z,17nm,1.2s
BRG Berggiesshubel 70.43 327 S S 06 50 11.0 +0.9
BRG Berggiesshubel 70.43 327 P P 06 41 01.3 +3.9
BRG Berggiesshubel 70.43 327 P PcP 06 41 19.9 +1.2
FETA Feichten 70.43 322 *i* P P 06 40 56.4 -1.3
comp=Z,94nm,1.5s,SNR=24
FUORN Ofenpass-Fuorn 70.54 322 P P 06 40 57.4 -1.1
FUORN IAmb IAmb 06 41 03.9
comp=Z,56nm,1.1s
BOD Bodaibo 70.55 24 *e*P P 06 40 56.5 -1.5
BOD pmax pmax
comp=Z,54nm,2.0s
HSKC Hora Svate Kat 70.58 327 *e*P P 06 40 58.4 +0.1
RETA Reutte 70.62 323 *e*P P 06 40 56.6 -2.2
comp=Z,129nm,1.8s,SNR=11
FUR Furstenfeldbru 70.63 324 *e*P P 06 40 57.5 -1.2
comp=Z,174nm,1.4s,baz=119,slow=6.1
FUR *e*L L 07 11 28.5
comp=Z,135nm,21.9s
DAVOX Davos/Dischmat 70.85 322 LR LR 07 12 26.4
comp=Z,96nm,21.3s,baz=100,slow=36
NKC Novy Kostel 70.94 326 *e*P P 06 41 00.4 -0.1
NKC Novy Kostel 70.94 326 *e*P P 06 41 00.4 -0.1
TANN Tannenbergstha 71.02 326 *e*P P 06 41 00.2 -0.9
comp=Z,24nm,1.4s,baz=119,slow=6.1
TUE Stuetta 71.04 321 P P 06 41 00.4 -1.1
TUE IAmb IAmb 06 41 01.5
comp=Z,58nm,1.4s
TUE Stuetta 71.04 321 P P 06 41 00.1 -1.4
comp=Z,2μmcomp=Z,106nm,1.4s
DAVA Damuels 71.07 322 *i* P P 06 41 00.3 -1.2
comp=Z,184nm,1.3s,SNR=27
BNX BinXian 71.09 40 ⇑P P 06 41 00.5 -1.0
BNX pP pP 06 41 03.6 -0.7
BNX PP PP 06 43 39.1 -0.2
BNX S S 06 50 17.8 -0.2
BNX SS SS 06 54 52.9 +1.3
BNX pmax pmax
comp=Z,52nm,1.2s
BNX pmax pmax
comp=Z,410nm,4.1s
BNX L L
comp=Z,650nm,17.3s
BNX L L
comp=Z,620nm,20.6s
BNX L L
comp=Z,830nm,19.5s
RUE Ruedersdorf 71.34 328 *e*P P 06 41 02.7 -0.1
comp=Z,85nm,1.1s,baz=119,slow=6.1
GRA1 Grafenberg Arr 71.37 325 P P 06 41 02.0 -1.1
GRF Grafenberg Arr 71.37 325 P P 06 41 02.1 -1.1
GRF pmax pmax
comp=Z,110nm,1.2s
GRF Grafenberg Arr 71.37 325 *e*P P 06 41 02.3 -0.8
comp=Z,144nm,1.3s,baz=119,slow=6.1
GRF *e*L L 07 15 31.4
comp=Z,156nm,19.5s
FINES FINESS Array B 71.57 340 P P 06 41 02.9 -1.2
comp=Z,3.4nm,0.9s,baz=141,slow=12,SNR=7.3
FINES LR LR 07 15 35.7
comp=Z,214nm,18.7s,baz=106,slow=38
comp=Z,3.4nm,0.9s
FINES FINESS Array B 71.57 340 P P 06 41 03.1 -0.9
FINES FINESS Array B 71.57 340 P P 06 41 03.1 -0.9
JMN Monobe 71.59 53 P P 06 41 05.8 +1.0
JMN Monobe 71.59 53 P P 06 41 04.5 -0.4
MOX Moxa 71.60 326 *e*P P 06 41 03.9 -0.6
comp=Z,35nm,1.3s,baz=119,slow=6.1
MOX *e*L L 07 16 37.7
comp=Z,104nm,21.9s
QIS Mount Isa 71.76 111 P P 06 41 05.8 -0.4
comp=Z,97nm,1.4s
QIS Mount Isa 71.76 111 P P 06 41 05.5 -0.6
NEUB Neuenburg 71.78 327 *e*P P 06 41 05.1 -0.5
comp=Z,88nm,1.3s,baz=119,slow=6.1
MDJ Mudanjiang 72.06 41 P P 06 41 07.7 +0.3
MDJ Mudanjiang 72.06 41 P P 06 41 07.4 0.0
MDJ S S 06 50 30.6 +1.4
MDJ pmax pmax
comp=Z,81nm,1.5s
MDJ pmax pmax
comp=Z,1μm,3.6s
MDJ L L
comp=Z,680nm,20.6s
MDJ L L
comp=Z,680nm,20.6s
MDJ L L
comp=Z,840nm,20.2s
PSTR Posyet 72.14 44 *i* P P 06 41 04.9 -3.0
BNI Bardonecchia 72.17 319 P P 06 41 06.4 -1.8
BNI pmax pmax
comp=Z,20nm,1.3s
BNI Bardonecchia 72.17 319 P P 06 41 06.4 -1.8
AUJCS Jamestown Cent 72.27 124 P P 06 41 09.3 +0.3
SENIN Lac Senin/Sane 72.29 321 P P 06 41 07.7 -1.3
BFO Black Forest 72.46 323 P P 06 41 09.0 -0.8
BFO pmax pmax
comp=Z,62nm,1.3s
BFO Black Forest 72.46 323 P P 06 41 09.0 -0.8
BFO IAmb IAmb 06 41 10.1
comp=Z,62nm,1.3s
BFO Black Forest 72.46 323 *e*P P 06 41 08.7 -1.0
comp=Z,73nm,1.4s,baz=119,slow=6.1
BFO *e*L L 07 17 05.2
comp=Z,160nm,20.9s
JAY Jayapura 72.53 92 P P 06 41 10.7 -0.2
comp=Z,18nm,1.1s,baz=353,slow=9.8,SNR=2.5
JAY LR LR 07 12 49.6
comp=Z,217nm,21.7s,baz=276,slow=36
comp=Z,18nm,1.1s
AUMAR Marden Senior 72.56 126 P P 06 41 11.3 +0.7
HTT Hallett 72.56 124 P P 06 41 10.7 -0.1
comp=Z,19nm,1.5s
HTT Hallett 72.56 124 P P 06 41 11.3 +0.5
HTT Hallett 72.56 124 P P 06 41 10.9 +0.1
UBBA Unterbreizbach 72.59 326 *e*P P 06 41 09.9 -0.4
comp=Z,58nm,1.5s,baz=119,slow=6.1
FLTG Flechtingen 72.62 327 *e*P P 06 41 09.7 -0.8
comp=Z,62nm,1.4s,baz=119,slow=6.1
ASSE Asse, Remlinge 72.83 327 *e*P P 06 41 11.3 -0.5
comp=Z,70nm,1.5s,baz=119,slow=6.1
CLZ Clausthal 72.86 327 *e*P P 06 41 11.6 -0.4
comp=Z,65nm,1.4s,baz=119,slow=6.1
GTTG Gottingen 72.94 326 *e*P P 06 41 12.1 -0.4
comp=Z,39nm,1.1s,baz=119,slow=6.1
HEH HeiHe 73.04 35 *e*P P 06 41 11.6 -1.5
HEH sP sP 06 41 16.7 -0.3
HEH PP PP 06 43 53.2 -2.6
HEH S S 06 50 39.9 -0.3
HEH pmax pmax
comp=Z,43nm,1.0s
HEH pmax pmax
comp=Z,440nm,4.2s
HEH L L
comp=Z,660nm,15.7s
HEH L L
comp=Z,920nm,15.4s

HEH L L
comp=Z,2µm,16.9s
NRIK Noril'sk 73.08 7 P **P** **06 41 11.9 -1.0**
comp=Z,9.7nm,0.9s,baz=192,slow=4.5,SNR=22
comp=Z,9.7nm,0.9s
NRIK Noril'sk 73.08 7*c i*P **P** **06 41 11.9 -1.0**
NRIK pmax pmax
comp=Z,65nm,1.7s
AUMBR Murray Bridge 73.12 126 P **P** **06 41 13.8 -0.1**
ECH Echery 73.13 322 P **P** **06 41 12.9 -0.8**
ECH pmax pmax
comp=Z,31nm,1.2s
ECH Echery 73.13 322 P **P** **06 41 12.9 -0.8**
TNS Taunus Mts 73.21 325 *e*P **P** **06 41 13.7 -0.5**
comp=Z,80nm,1.4s,baz=119,slow=6.1
TNS *e*L L 07 16 46.2
comp=Z,125nm,21.7s
DBIC Dimbokro 73.40 278 P **P** **06 41 15.7 -0.3**
comp=Z,15nm,1.0s,baz=98,slow=8.5,SNR=4.7
DBIC LR LR 07 11 19.6
comp=Z,396nm,21.7s,baz=132,slow=34
comp=Z,15nm,1.0s
DBIC Dimbokro 73.40 278 P **P** **06 41 15.9 -0.1**
DBIC pmax pmax
comp=Z,26nm,1.1s
DBIC Dimbokro 73.40 278 P **P** **06 41 15.9 -0.1**
USA0B Ussuriysk Arra 73.50 42 *i* P **P** **06 41 14.1 -1.8**
USRK Ussuriysk Ar. 73.50 42 P **P** **06 41 14.4 -1.6**
comp=Z,10nm,1.0s,baz=250,slow=3.9,SNR=20
USRK LR LR 07 16 29.1
comp=Z,552nm,19.7s,baz=240,slow=38
comp=Z,10nm,1.0s
SSB Saint Sauveur 73.65 319 P **P** **06 41 16.2 -0.7**
SSB pmax pmax
comp=Z,33nm,1.2s
SSB Saint Sauveur 73.65 319 P **P** **06 41 16.2 -0.7**
KASTN Kahler Asten 73.66 326 *e*P **P** **06 41 16.3 -0.5**
comp=Z,25nm,1.3s,baz=119,slow=6.1
RETH Rethem/Aller, 73.82 327 *e*P **P** **06 41 17.2 -0.4**
comp=Z,57nm,1.5s,baz=119,slow=6.1
BSEG Bad Segeberg 73.88 329 *e*L L 07 17 08.3
comp=Z,131nm,19.8s
LVZ Lovozero 74.18 347*ce*P **P** **06 41 20.0 +0.5**
LVZ pmax pmax
comp=Z,116nm,2.5s
APA Apatity 74.18 347⇓*e*P **P** **06 41 21.2 +1.8**
APA *e* 06 41 33.9
APA *e* 06 44 05.9
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,941nm,18.8s
WLF Walferdange 74.32 323 P **P** **06 41 19.5 -1.1**
WLF pmax pmax
comp=Z,62nm,1.3s
WLF Walferdange 74.32 323 P **P** **06 41 19.5 -1.1**
WLF IAmb IAmb 06 41 21.2
comp=Z,62nm,1.3s
WLF Walferdange 74.32 323 *d*P **P** **06 41 19.9 -0.8**
comp=Z,20nm,1.2s
WLF Walferdange 74.32 323 *e*P **P** **06 41 19.9 -0.8**
comp=Z,64nm,1.3s,baz=119,slow=6.1
ZEA Zeya 74.51 32 *e*P **P** **06 41 21.5 -0.1**
ZEA *e*S **S** **06 50 57.1 +0.4**
ZEA pmax pmax
comp=Z,300nm,3.5s
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,40nm,1.5s
ZEA smax smax
comp=N,100nm,6.8s
ZEA smax smax
comp=E,200nm,9.4s
ZEA MLR MLR
comp=E,1µm,17.0s
ZEA MLR MLR
comp=N,300nm,15.0s
ZEA MLR MLR
comp=Z,2µm,18.0s
INU Inuyama 74.51 52 P **P** **06 41 22.2 +0.1**
STKA Stephens Creek 74.60 122 P **P** **06 41 22.6 -0.1**
comp=Z,140nm,1.3s
STKA Stephens Creek 74.60 122 P **P** **06 41 21.9 -0.8**
comp=Z,22nm,1.1s,baz=253,slow=7.5,SNR=14
STKA LR LR 07 13 17.5
comp=Z,528nm,18.4s,baz=269,slow=35
comp=Z,22nm,1.1s
STKA Stephens Creek 74.60 122 P **P** **06 41 22.2 -0.5**
STKA Stephens Creek 74.60 122 *i* P **P** **06 41 21.4 -1.3**
ELIB Princess Elisa 74.63 193 *d*P **P** **06 41 22.8 +0.6**
comp=Z,27nm,1.2s
ELIB *d*PP **PP** **06 44 06.1 -2.9**
BHOU Houvegnez 74.69 324 *d*P **P** **06 41 22.7 -0.1**
comp=Z,17nm,1.3s
MEM Membach 74.79 324 *d*P **P** **06 41 23.5 +0.1**
comp=Z,20nm,1.3s
JGF Kuroka 74.84 52 P **P** **06 41 24.2 +0.1**
JGF Kuroka 74.84 52 P **P** **06 41 23.5 -0.6**
JGF IAmb IAmb 06 41 25.1
comp=Z,57nm,1.2s
CEST Esterri de Car 74.99 315 P **P** **06 41 24.8 -0.1**
CEST IAmb IAmb 06 41 26.6
comp=Z,57nm,1.2s
EBR Ebro Roquetas 75.00 313 P **P** **06 41 25.1 +0.3**
EBR Ebro Roquetas 75.00 313 P **P** **06 41 25.1 +0.3**
RCHB Rochefort 75.07 324 *d*P **P** **06 41 24.4 -0.6**
comp=Z,11nm,1.4s
BCLA Clavier 75.12 324 *d*P **P** **06 41 25.2 -0.1**
comp=Z,17nm,1.3s
KLR Kul'dur 75.19 37 LR LR 07 16 51.5
comp=Z,2µm,18.3s,baz=246,slow=38
KLR Kul'dur 75.19 37*ce*P **P** **06 41 24.5 -1.2**
KLR pmax pmax
comp=Z,11nm,1.0s
BGES Gesves 75.24 324 *d*P **P** **06 41 25.6 -0.3**
comp=Z,11nm,1.3s
DOU Dourbes 75.42 323 *d*P **P** **06 41 26.6 -0.4**
comp=Z,11nm,1.5s
HFS Hagfors 75.46 335 P **P** **06 41 25.9 -1.1**
comp=Z,10nm,0.8s,baz=131,slow=8.1,SNR=16
comp=Z,9.0nm,0.8s
MAJO Matsushiro 75.75 51 P **P** **06 41 29.0 -0.2**
MAJO Matsushiro 75.75 51*c i*P **P** **06 41 27.5 -1.7**
MAJO pmax pmax
comp=Z,103nm,2.3s
MAJO Matsushiro 75.75 51 P **P** **06 41 28.7 -0.5**
MAJO IAmb IAmb 06 41 29.5
comp=Z,80nm,1.6s
MJAR Matsushiro Arr 75.75 51 P **P** **06 41 29.1 -0.1**
comp=Z,17nm,1.1s,baz=266,slow=8.2,SNR=45
MJAR LR LR 07 16 11.2
comp=Z,867nm,18.8s,baz=246,slow=37
comp=Z,17nm,1.1s
MJAR Matsushiro Arr 75.75 51 P **P** **06 41 28.9 -0.3**
MJAR pmax pmax
comp=Z,248nm,2.0s
MJAR Matsushiro Arr 75.75 51 P **P** **06 41 28.9 -0.3**
MTSU Mount Surprise 76.09 108 P **P** **06 41 32.4 +0.9**
comp=Z,25nm,1.2s
MTSU Mount Surprise 76.09 108 P **P** **06 41 32.0 +0.5**
CLF Chambon-Foret 76.09 321 P **P** **06 41 31.0 +0.1**
JHJ Hachijo jima 2 76.22 55 LR LR 07 17 22.9
comp=Z,305nm,18.1s,baz=106,slow=38
QLP Quilpie 76.42 117 P **P** **06 41 33.5 +0.3**
comp=Z,110nm,1.4s
QLP Quilpie 76.42 117 P **P** **06 41 33.1 -0.1**
NVL N'lazarevskaya 76.85 196 *e*P **P** **06 41 33.5 -1.2**
NVL *e*S **S** **06 51 26.4 +4.4**
NVL *e*SS **SS** **06 56 21.8 +3.6**
NVL *e*SSS SSS 06 59 32.9
NVL pmax pmax
comp=Z,56nm,0.8s
NVL MLR MLR
comp=Z,344nm,16.0s
KONO Kongsberg 76.98 334*ce*P **P** **06 41 35.9 +0.3**
KONO pmax pmax
comp=Z,56nm,2.5s
KONO Kongsberg 76.98 334 P **P** **06 41 34.9 -0.7**
KONO IAmb IAmb 06 41 36.3
comp=Z,64nm,1.4s
NB2 NORSAR Subarra 76.98 335 P **P** **06 41 34.1 -1.6**
comp=Z,84nm,1.7s,baz=112,slow=6.5
NB2 NORSAR Subarra 76.98 335 P **P** **06 41 34.1 -1.6**
NOA NORSAR Array B 76.98 335 P **P** **06 41 34.5 -1.2**
comp=Z,8.3nm,1.2s,baz=112,slow=6.1,SNR=9.4
comp=Z,8.3nm,1.2s
MDT Midelt 76.98 304 LR LR 07 15 43.8
comp=Z,197nm,20.6s,baz=118,slow=36
JCJ Chichijima 77.11 62 LR LR 07 11 53.5
comp=Z,290nm,21.8s,baz=120,slow=33
BRAT Ballarat 77.16 128 P **P** **06 41 38.7 +1.6**
ARCES ARCESS Array B 77.56 346 P **P** **06 41 37.6 -1.1**
comp=Z,15nm,1.1s,baz=144,slow=7.0,SNR=7.1
ARCES LR LR 07 16 44.3
comp=Z,347nm,21.8s,baz=124,slow=36
comp=Z,15nm,1.1s
GUMO Guam 77.80 76 LR LR 07 12 35.2
comp=Z,256nm,21.6s,baz=249,slow=33
CTA Charters Tower 77.97 110 P **P** **06 41 42.8 +0.7**
comp=Z,17nm,1.6s
CTA Charters Tower 77.97 110 LR LR 07 15 06.4
comp=Z,300nm,18.9s,baz=250,slow=35
CTA Charters Tower 77.97 110 P **P** **06 41 43.1 +1.0**
CTAO Charters Tower 77.97 110 P **P** **06 41 43.1 +1.0**
CTAO Charters Tower 77.97 110 P **P** **06 41 41.7 -0.4**
CTAO pmax pmax
comp=Z,54nm,1.3s
CTAO Charters Tower 77.97 110 P **P** **06 41 41.6 -0.4**
CTAO IAmb IAmb 06 41 57.4
comp=Z,54nm,1.3s
ESDC Sonseca Array 77.98 311 P **P** **06 41 41.7 -0.1**
comp=Z,29nm,1.1s,baz=88,slow=4.9,SNR=75
comp=Z,29nm,1.1s
CMSA Cobar Meteorol 78.04 122 P **P** **06 41 42.0 -0.2**
comp=Z,39nm,1.4s
CMSA Cobar Meteorol 78.04 122 P **P** **06 41 41.7 -0.6**
PAB San Pablo 78.24 311 P **P** **06 41 43.2 -0.1**
PAB pmax pmax
comp=Z,70nm,1.3s
PAB San Pablo 78.24 311 P **P** **06 41 43.2 -0.1**
PAB IAmb IAmb 06 41 44.8
comp=Z,70nm,1.2s
TOO Toolangi 78.39 128 P **P** **06 41 45.4 +1.2**
comp=Z,18nm,1.4s
TOO Toolangi 78.39 128 P **P** **06 41 44.2 +0.1**
TOO pmax pmax
comp=Z,25nm,1.3s
TOO Toolangi 78.39 128 P **P** **06 41 44.2 +0.1**
GRNR Gornyy 78.55 37⇑*i*P **P** **06 41 44.0 -0.6**
GRNR pmax pmax
comp=Z,30nm,1.4s
GRNR MLR MLR
comp=E,460nm,17.0s
GRNR MLR MLR
comp=N,300nm,13.0s
GRNR MLR MLR
comp=Z,610nm,17.0s
PMG Port Moresby 78.79 99 LR LR 07 17 44.6
comp=Z,386nm,19.3s,baz=306,slow=37
PMG Port Moresby 78.79 99 P **P** **06 41 47.4 +0.7**
PMG Port Moresby 78.79 99 *i* P **P** **06 41 46.1 -0.6**
PMG pmax pmax
comp=Z,140nm,1.6s
PMG Port Moresby 78.79 99 P **P** **06 41 46.0 -0.6**
PMG Port Moresby 78.79 99 P **P** **06 41 46.5 -0.2**
comp=Z,79nm,1.2s
JTM Tenmabayashi 78.93 48 P **P** **06 41 45.8 -1.2**
JTM IAmb IAmb 06 41 47.5
comp=Z,145nm,1.6s
YAK Yakutsk 79.44 25 LR LR 07 17 50.5
comp=Z,2µm,21.1s,baz=234,slow=36
YAK Yakutsk 79.44 25 *e*P **P** **06 41 48.1 -1.1**
YAK *e**PP **sP** **06 41 53.8 +0.7**
YAK *e* 06 44 46.8
YAK *e*PPP PPP 06 46 36.3
YAK *e*S **S** **06 51 48.3 -1.7**
YAK *e**SS **sS** **06 51 58.8 +4.1**
YAK *e* 06 52 10.6
YAK *e*SS **SS** **06 56 57.8 +0.3**
YAK *e*SSS SSS 07 00 21.6
YAK pmax pmax
comp=Z,53nm,1.8s
YAK pmax pmax
comp=N,11nm,1.8s
YAK pmax pmax
comp=E,30nm,1.8s
YAK pmax pmax
comp=Z,237nm,3.3s
YAK pmax pmax
comp=N,170nm,5.4s
YAK pmax pmax
comp=E,232nm,5.4s
YAK smax smax
comp=E,50nm,3.6s
YAK smax smax
comp=N,39nm,5.2s
YAK MLR MLR
comp=Z,2µm,23.0s
YAK MLR MLR
comp=N,846nm,19.0s
YAK MLR MLR
comp=E,1µm,26.0s
AULRC Lightning Ridg 79.89 119 P **P** **06 41 52.1 -0.3**
PBAR Barrancos 80.00 309 *e*P **P** **06 41 52.9 +0.1**
PBAR *i* IAmb IAmb 06 41 54.9
comp=E,46nm,1.7s
TROLL Troll, Antarti 80.08 197 ⇑P **P** **06 41 53.1 +0.4**
comp=Z,1µm,1.1s
MOO Moorlands 80.16 132 P **P** **06 41 55.0 +1.4**
comp=Z,46nm,1.5s
MOO Moorlands 80.16 132 P **P** **06 41 54.6 +1.0**
TAU Tasmania Unive 80.30 133 P **P** **06 41 55.3 +1.0**
PVAQ Vaqueiros 80.38 308 *e*P **P** **06 41 55.5 +0.6**
PVAQ *i* IAmb IAmb 06 41 56.9
comp=Z,47nm,1.4s
PVAQ *e*S **S** **06 51 55.3 -5.7**
PVAQ *e*LR LR 07 10 03.8
PVAQ *i* IAMs_20 IAMs_20 07 23 15.0
comp=Z,135nm,18.0s
PBRG Braganca 80.52 313 *e*P **P** **06 41 56.6 +1.0**
PBRG *i* IAmb IAmb 06 41 58.4
comp=Z,78nm,1.5s
PBDV Barranco-do-Ve 80.52 308 *e*P **P** **06 41 56.5 +0.8**
PBDV *i* IAmb IAmb 06 41 58.0
comp=Z,70nm,1.5s
PMRV Marv??o 80.52 311 *e*P **P** **06 41 56.6 +1.0**
PMRV *i* IAmb IAmb 06 41 58.0
comp=Z,72nm,1.4s
PMRV *e*S **SKSac** **06 52 12.6 -1.4**
PMRV *e*LR LR 07 12 52.8
PMRV *i* IAMs_20 IAMs_20 07 22 42.0
comp=Z,143nm,18.0s
PESTR Estremoz 80.56 310 *e*P **P** **06 41 56.4 +0.6**
PESTR *i* IAmb IAmb 06 41 58.3
comp=Z,49nm,1.4s
MVO Moncorvo 80.60 312 *e*P **P** **06 41 57.2 +1.2**
MVO *i* IAmb IAmb 06 41 58.9
comp=Z,48nm,1.5s
MVO *e*S **SKSac** **06 52 10.8 -3.8**
MVO *i* IAMs_20 IAMs_20 07 23 33.1
comp=Z,177nm,20.0s
PBEJ Beja 80.61 309 *e*P **P** **06 41 56.9 +0.8**
PBEJ *i* IAmb IAmb 06 41 58.4
comp=Z,40nm,1.5s
GLAD Gladstone 80.64 131 P **P** **06 41 57.3 +1.1**
PCBR Castelo Branco 80.67 311 *e*P **P** **06 41 56.9 +0.5**
PCBR *i* IAmb IAmb 06 41 58.9
comp=Z,80nm,1.4s
PCVE Castro Verde 80.67 309 *e*P **P** **06 41 57.4 +0.9**
PCVE *i* IAmb IAmb 06 41 58.1
comp=Z,51nm,1.4s
ERM Erimo 80.73 47 P **P** **06 41 57.6 +1.0**
ERM Erimo 80.73 47 *i* P **P** **06 41 55.9 -0.7**
ERM pmax pmax
comp=Z,56nm,1.3s
JEM Erimo 80.73 47 P **P** **06 41 57.7 +1.0**
EVO Evora 80.82 310 *e*P **P** **06 41 58.5 +1.2**
EVO *i* IAmb IAmb 06 41 59.9
comp=Z,62nm,1.4s
MTE Manteigas 80.83 311 *e*P **P** **06 41 58.6 +1.3**
MTE *i* IAmb IAmb 06 41 59.8
comp=Z,67nm,1.4s
MTE *e*S **S** **06 52 10.7 +4.9**
MTE *e*LR LR 07 14 32.4
MTE *i* IAMs_20 IAMs_20 07 22 39.0
comp=Z,179nm,18.0s
MTE Manteigas 80.83 311 P **P** **06 41 58.2 +0.9**
MTE IAmb IAmb 06 41 59.2
comp=Z,59nm,1.3s
MESJ Messejana 80.85 309 *e*P **P** **06 41 57.9 +0.5**
MESJ IAmb IAmb 06 41 59.6
comp=Z,52nm,1.3s
MESJ Messejana 80.85 309 *e*P **P** **06 41 57.9 +0.5**
MESJ Messejana 80.85 309 *e*P **P** **06 41 57.9 +0.5**
PARRA Arraiolos 80.90 310 *e*P **P** **06 41 58.6 +1.0**
PARRA *i* IAmb IAmb 06 42 00.3
comp=Z,103nm,1.4s
CAN Canberra 81.04 125 P **P** **06 41 59.4 +0.8**
comp=Z,24nm,2.1s
CAN Canberra 81.04 125 P **P** **06 41 59.2 +0.6**
CAN Canberra 81.04 125 P **P** **06 41 58.5 -0.1**
CAN pmax pmax
comp=Z,49nm,1.4s
CAN Canberra 81.04 125 P **P** **06 41 58.5 -0.1**
AUMTS Mt Stromlo 81.05 125 P **P** **06 41 59.6 +1.0**
PLOUS Minas do Lousa 81.05 309 *e*P **P** **06 41 59.6 +1.2**
PLOUS *i* IAmb IAmb 06 42 01.1
comp=Z,76nm,1.8s
MOE Montemor 81.08 309 *e*P **P** **06 41 60.0 +1.3**
MOE *i* IAmb IAmb 06 42 01.4
comp=Z,74nm,1.4s
PMTG Montargil 81.09 310 *e*P **P** **06 41 60.0 +1.3**
PMTG *i* IAmb IAmb 06 42 01.2
comp=Z,116nm,1.5s
MORF Marmelete 81.10 308 *e*P **P** **06 41 59.1 +0.4**
MORF IAmb IAmb 06 42 00.2
comp=Z,252nm,2.3s
MORF Marmelete 81.10 308 *e*P **P** **06 41 59.2 +0.4**
AUMHS Melrose High S 81.12 125 P **P** **06 41 59.8 +0.8**
PVIS Viseu 81.15 312 *e*P **P** **06 42 00.7 +1.7**
AUDAR Daramalan Coll 81.16 125 P **P** **06 41 59.6 +0.4**
POLO Lamas de Olo 81.20 312 *e*P **P** **06 41 59.5 +0.2**
POLO *i* IAmb IAmb 06 42 07.2
comp=Z,29nm,2.0s
CNB Canberra Magne 81.34 125 P **P** **06 42 00.7 +0.5**
comp=Z,0.5nm,1.5s
PCAB Cabril 81.44 313 *e*P **P** **06 42 02.0 +1.5**
PCAB *i* IAmb IAmb 06 42 03.5
comp=Z,142nm,1.4s
PCAS Casmilo, Conde 81.48 311 *e*P **P** **06 42 02.1 +1.4**
PCAS *i* IAmb IAmb 06 42 03.0
comp=Z,106nm,1.4s
YSS Yuzhno-Sakhali 81.53 42 P **P** **06 42 00.6 -0.2**
YSS Yuzhno-Sakhali 81.53 42 *e*P **P** **06 41 59.9 -0.9**
YSS *e* 06 45 01.4
YSS *e*S **S** **06 52 08.5 -4.1**
YSS *e*SS **SS** **06 57 28.1 -1.4**
YSS pmax pmax
comp=Z,90nm,1.3s
YSS pmax pmax
comp=Z,300nm,2.7s
YSS MLR MLR
comp=Z,500nm,18.0s
YSS MLR MLR
comp=N,700nm,19.0s
YSS MLR MLR
comp=E,400nm,19.0s
YSS Yuzhno-Sakhali 81.53 42 P **P** **06 42 00.2 -0.6**
SNAA Sanae 81.54 198⇑P **P** **06 42 00.4 -0.1**
comp=Z,373nm,0.9s
SNAA Sanae 81.54 198 P **P** **06 42 00.6 +0.1**
comp=Z,17nm,0.9s,baz=69,slow=5.7,SNR=37
SNAA LR LR 07 11 30.6
comp=Z,944nm,19.6s,baz=112,slow=31
comp=Z,17nm,0.9s
SNAA Sanae 81.54 198*ce*P **P** **06 42 01.3 +0.8**
SNAA pmax pmax
comp=Z,100nm,2.5s
SNAA Sanae 81.54 198 P **P** **06 42 00.9 +0.4**
SNAA IAmb IAmb 06 42 02.3
comp=Z,41nm,1.1s
EKA Eskdalemuir Ar 81.63 327 P **P** **06 42 00.7 -0.5**
comp=Z,11nm,1.1s,baz=118,slow=6.7,SNR=12
EKA PP **PP** **06 45 06.4 -1.4**
comp=Z,0.7nm,0.6s,baz=113,slow=6.4,SNR=3.4
comp=Z,11nm,1.1s
ESK Eskdalemuir 81.65 327 P **P** **06 42 01.4 +0.2**
ESK pmax pmax
comp=Z,48nm,1.4s
ESK Eskdalemuir 81.65 327 P **P** **06 42 01.4 +0.2**
PGAV Gavieira, Arco 81.67 313 *e*S **SKSac** **06 52 23.0 +1.0**
PGAV *e*LR LR 07 12 59.8
PGAV *i* IAMs_20 IAMs_20 07 23 51.9
comp=Z,130nm,18.0s
NKL Nikolayevsk 81.77 35 *e*P **P** **06 42 01.5 -0.4**
NKL *e*S **S** **06 52 15.1 +0.3**
NKL pmax pmax
comp=E,69nm,1.2s
NKL pmax pmax
comp=N,78nm,1.4s
NKL pmax pmax
comp=Z,306nm,1.4s
NKL smax smax
comp=E,235nm,4.1s
NKL smax smax
comp=N,82nm,2.6s
NKL MLR MLR
comp=E,2µm,14.0s
NKL MLR MLR
comp=N,4µm,16.0s
NKL MLR MLR
comp=Z,7µm,17.0s
AUUHS Ulladulla High 82.25 125 P **P** **06 42 05.1 +0.2**
TYV Tymovskoe 82.37 38 *e*P **P** **06 42 05.4 +0.3**
TYV *e*S **S** **06 52 20.6 -0.5**
TYV pmax pmax
comp=Z,30nm,1.5s
TYV pmax pmax
comp=Z,400nm,3.1s
TYV smax smax
comp=N,300nm,4.9s
TYV smax smax
comp=E,300nm,4.9s
AUPHS Peel High Scho 82.46 121 P **P** **06 42 06.7 +0.6**
EIDS Eidsvold 82.53 115 P **P** **06 42 07.0 +0.4**
comp=Z,19nm,1.8s
EIDS Eidsvold 82.53 115 P **P** **06 42 06.9 +0.3**
VNA2 Neumayer--Watz 82.76 199⇑P **P** **06 42 07.0 +0.2**
comp=Z,28nm,0.8s,baz=66,slow=5.1
DSB Dublin 82.89 324 P **P** **06 42 08.1 +0.3**
IWEX Carrickbyrne, 82.91 323 P **P** **06 42 08.4 +0.5**
VNA1 Neumayer--Stat 82.99 199 P **P** **06 42 08.9 +0.9**
comp=Z,50nm,1.1s
ARMA Armidale 83.09 120 P **P** **06 42 09.9 +0.3**
comp=Z,31nm,1.4s
ARMA Armidale 83.09 120 P **P** **06 42 09.8 +0.3**
TIXI Tiksi 83.65 16 LR LR 07 20 34.4
comp=Z,1µm,19.1s,baz=262,slow=36
TIXI Tiksi 83.65 16*ce*P **P** **06 42 11.3 0.0**
TIXI pmax pmax
comp=Z,75nm,1.0s
TIXI Tiksi 83.65 16 P **P** **06 42 10.6 -0.7**
KRVT Keravat (AS076 83.76 94 LR LR 07 20 43.0
comp=Z,20nm,19.2s,baz=181,slow=37
IDGL Inch Island, C 83.97 326 P **P** **06 42 13.9 +0.6**
IGLA Glengowla, Co 84.68 324 P **P** **06 42 17.3 +0.4**
VAL Valentia 84.91 323 P **P** **06 42 17.6 -0.5**
SPITS Spitsbergen Ar 85.27 351 P **P** **06 42 19.2 -0.3**
comp=Z,14nm,1.0s,baz=125,slow=10,SNR=4.9
comp=Z,14nm,1.0s
SPITS Spitsbergen Ar 85.27 351 P **P** **06 42 19.9 +0.4**
SPITS pmax pmax
comp=Z,138nm,1.6s
KBS Kingsbay 86.43 351*ce*P **P** **06 42 27.1 +1.9**
KBS pmax pmax
comp=Z,34nm,1.7s
QSPA South Pole Qui 87.34 180 P **P** **06 42 30.1 +0.1**
comp=Z,57nm,1.2s,baz=274,slow=2.3,SNR=37
QSPA LR LR 07 15 20.5
comp=Z,944nm,21.7s,baz=278,slow=31
comp=Z,57nm,1.2s
PMOZ Porto Moniz, M 87.47 303 *e*LR LR 07 13 13.3
PMOZ *i* IAMs_20 IAMs_20 07 20 44.8
comp=Z,226nm,22.0s
JMIC Jan Mayen 88.15 341 LR LR 07 22 34.9
comp=Z,214nm,21.2s,baz=52,slow=36
VNDA Vanda 88.23 167 P **P** **06 42 34.4 +0.4**
comp=Z,2.8nm,0.9s,baz=273,slow=6.8,SNR=17
VNDA LR LR 07 18 17.5
comp=Z,571nm,18.3s,baz=256,slow=33
comp=Z,2.8nm,0.9s
VNDA Vanda 88.23 167 P **P** **06 42 34.5 +0.5**
VNDA pmax pmax
comp=Z,84nm,2.0s
VNDA Vanda 88.23 167 P **P** **06 42 34.5 +0.5**
VNDA IAmb IAmb 06 42 36.0
comp=Z,84nm,2.0s

MA2	**Magadan**	**88.57**	**30**	LR	LR	07 23 40.2		
	comp=Z,2μm,18.9s,baz=258,slow=37							
MA2	**Magadan**	**88.57**	**30**	P	**P**	**06 42 34.9**	**-1.0**	
MA2	**Magadan**	**88.57**	**30**	*ce*P	**P**	**06 42 35.4**	**-0.4**	
MA2				pmax	pmax			
	comp=Z,84nm,1.7s							
MA2	**Magadan**	**88.57**	**30**	P	**P**	**06 42 34.8**	**-1.0**	
MA2	**Magadan**	**88.57**	**30**	P	**P**	**06 42 34.8**	**-1.0**	
	comp=Z,833nmcomp=Z,52nm,1.5s							
SBA	**Scott Base**	**89.24**	**168**	P	**P**	**06 42 39.9**	**+1.2**	
SBA				pmax	pmax			
	comp=Z,153nm,1.9s							
SBA	**Scott Base**	**89.24**	**168**	P	**P**	**06 42 39.9**	**+1.2**	
SEY	**Seymchan**	**89.75**	**27**	LR	LR	07 24 13.7		
	comp=Z,2μm,21.6s,baz=268,slow=36							
SEY	**Seymchan**	**89.75**	**27**	*ce*P	**P**	**06 42 40.6**	**-0.7**	
SEY				pmax	pmax			
	comp=Z,59nm,2.5s							
HNR	**Honiara**	**91.40**	**99**	LR	LR	07 23 14.0		
	comp=Z,13nm,20.7s,baz=349,slow=35							
DAG	**Danmarks Havn**	**91.83**	**347**	*i* P	**P**	**06 42 50.0**	**-0.7**	
PETK	**Petropavlovsk-**	**91.88**	**37**	LR	LR	07 26 56.0		
	comp=Z,491nm,18.4s,baz=270,slow=37							
BORG	**Borgarnes**	**92.14**	**335**	LR	LR	07 26 45.5		
	comp=Z,290nm,20.5s,baz=85,slow=37							
PET	**Petropavlovsk**	**92.45**	**37**	*e*P	**P**	**06 42 55.6**	**+1.6**	
PET				*e*		06 46 43.5		
PET				*e*		06 53 27.0		
PET				*e*S	**S**	**06 53 56.4**	**-1.4**	
PET				*e*PS	PnS	06 55 12.8	+1.7	
PET				*e*PPS	PPS	06 55 49.2		
PET				*e*SS	**SS**	**07 00 10.7**	**+1.8**	
ILAR	**Eielson Array**	**113.11**	**15**	PP	**PP**	**06 49 11.2**	**+2.0**	
	comp=Z,1.9nm,1.1s,baz=313,slow=6.2,SNR=4.6							
YKA	**Yellowknife Ar**	**120.28**	**1**	PKP	**PKPdf**	**06 48 32.4**	**-1.7**	
	comp=Z,3.2nm,1.0s,baz=3.1,slow=2.3,SNR=8.6							
YKA				PP	**PP**	**06 49 58.1**	**-0.9**	
	comp=Z,11nm,1.1s,baz=359,slow=7.2,SNR=16							
BBSD	**Serra de San D**	**125.69**	**247**	*e*P	**PKPdf**	**06 48 45.3**	**-0.5**	
VILB	**Vilhena**	**126.38**	**252**	*e*P	**PKPdf**	**06 48 46.5**	**-0.7**	
MACA	**Manacapuru-AM**	**128.47**	**264**	*e*P	**PKPdf**	**06 48 50.4**	**-0.8**	
BOAV	**Boa Vista**	**128.67**	**271**	*e*P	**PKPdf**	**06 48 49.3**	**-2.4**	
ULM	**Lac du Bonnet**	**130.68**	**346**	PKP	**PKPdf**	**06 48 53.7**	**-0.7**	
	comp=Z,2.4nm,0.7s,baz=21,slow=5.7,SNR=3.4							
LPAZ	**La Paz**	**132.83**	**245**	PKP	**PKPdf**	**06 48 59.9**	**-0.3**	
	comp=Z,8.2nm,1.2s,baz=51,slow=3.7,SNR=13							
TBI	**Tubuai**	**135.21**	**127**	*e*LR	LR	07 32 13.8		
	comp=Z,3μm,39.8s							
PPT2	**Papeete2**	**137.76**	**120**	*e*SS	SS	07 09 57.8	-7.6	
	comp=Z,244nm,31.2s							
PPT2				*e*LR	LR	07 33 29.7		
	comp=Z,429nm,25.8s							
PPT2				*e*LR	LR	07 33 36.0		
	comp=Z,347nm,25.8s							
CZSB	**Cruzeiro do Su**	**139.55**	**255**	*e*P	**PKPdf**	**06 49 11.0**	**-1.0**	
PDAR	**Pinedale Array**	**140.02**	**357**	PKP	**PKPdf**	**06 49 10.6**	**-1.8**	
	comp=Z,1.9nm,0.8s,baz=27,slow=1.7,SNR=14							
ROSC	**El Rosal**	**142.43**	**274**	PKP	**PKPdf**	**06 49 15.7**	**-2.0**	
	comp=Z,3.2nm,0.3s,baz=93,slow=9.7,SNR=5.1							
NVAR	**Mina Array Bea**	**143.93**	**9**	PKP	PKPbc	06 49 17.4	+0.3	
	comp=Z,6.4nm,1.2s,baz=351,slow=2.6,SNR=16							
ANMO	**Albuquerque**	**147.49**	**352**	PKPbc	**PKPdf**	**06 49 26.3**	**+0.7**	
	comp=Z,12nm,1.2s,baz=47,slow=2.1,SNR=12							
PFO	**Pinyon Flats O**	**148.92**	**7**	PKPbc	**PKPbc**	**06 49 31.6**	**-0.2**	
	comp=Z,18nm,1.2s,baz=352,slow=1.2,SNR=15							
TAOE	**Nuku Hiva Isla**	**149.61**	**112**	*e*LR	LR	07 38 52.7		
	comp=Z,243nm,24.8s							
HDC	**Heredia**	**151.45**	**286**	*e*P	**PKPdf**	**06 49 29.7**	**-2.6**	
TXAR	**Lajitas Array**	**152.34**	**344**	PKP	**PKPdf**	**06 49 32.1**	**-1.2**	
	comp=Z,4.0nm,1.1s,baz=107,slow=1.3,SNR=22							
TXAR				PKPbc	**PKPbc**	**06 49 39.9**	**-0.2**	
	comp=Z,11nm,1.1s,baz=120,slow=1.7,SNR=9.6							
APG	**El Apazote**	**155.56**	**301**	PKPab	**PKPab**	**06 50 04.8**	**+0.7**	
	comp=Z,2.7nm,1.1s,baz=110,slow=15,SNR=16							
CMIG	**Matias Romero**	**157.97**	**312**	PKPab	**PKPab**	**06 50 11.1**	**-3.1**	
	comp=Z,6.6nm,1.1s,baz=59,slow=5.9,SNR=4.2							

*MAN **10** 06:31:49.0,9.°62N×126.°47E,h19km,MS3.6*
MAN INTENSITY III - GENERAL LUNA SURIGAO DEL NORTE.
*IDC **10** 06:31:54.9±3.2,9.°48N×126.°07E,h84km±30km,mb3.9/18, mbtmp4.2/19,MS3.4/1,Error ellipse: s-maj=30.5km s-min=13.8km az=69.0*
*NEIC **10** 06:31:55.5±0.8,9.°48N±0.°08×125.°9E±0.°1,h84km±9km, mb4.4/16,Error ellipse: s-maj=19.6km s-min=11.0km az=107.0*

ISC 10 06:31:49.4±1.4,9.°53N±0.°04×126.°19E±0.°06,h30km±10km, n64,σ1s55/65,mb4.3/25,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSP	**Tandag City**	**0.49**	**179**	*e*P	**Pn**	**06 32 01.8**	**+1.4**
TSSP				*e*S	**Sn**	**06 32 12.1**	**+4.3**
SCPH	**Surigao**	**0.74**	**290**	*i* P	**Pn**	**06 32 06.0**	**+2.2**
SCPH				*i* S	**Sb**	**06 32 08.7**	**-4.8**
BIPH	**Bislig**	**1.35**	**173**	*e*P	**Pb**	**06 32 14.1**	**0.0**
BIPH				*e*S	**Sb**	**06 32 32.2**	**+1.2**
CGP	**Cagayan de Oro**	**1.83**	**234**	*i* P	**Pb**	**06 32 23.2**	**+1.0**
CGP				*i* S	Sb	06 32 50.2	+5.5
PLP	**Palo**	**2.02**	**324**	*e*P	**Pb**	**06 32 23.6**	**-1.8**
PLP				*e*S	**Sb**	**06 32 51.2**	**+1.1**
TBP	**Tagbilaran**	**2.31**	**274**	*e*P	**Pb**	**06 32 30.1**	**-0.2**
TBP				*i* S	**Sb**	**06 33 02.1**	**+3.7**
LLP	**Lapu-Lapu**	**2.33**	**290**	*e*P	**Pb**	**06 32 31.1**	**+0.4**
LLP				*e*S	**Sb**	**06 33 02.5**	**+3.4**
DAV	**Davao City (W)**	**2.52**	**194**	P	**Pb**	**06 32 33.1**	**-0.9**
	157nm,0.3s,baz=42,slow=5.8,SNR=1.7						
DAV				S	**Sn**	**06 32 58.9**	**+0.8**
	361nm,0.4s,baz=1.3,slow=6.9,SNR=4.3						
DAV				LR	LR	06 33 14.6	
	comp=Z,114nm,18.6s,baz=352,slow=33						
KCP	**Kidapawan**	**2.73**	**204**	*i* P	**Pb**	**06 32 37.3**	**-0.4**
KCP				*e*S	**Sb**	**06 33 10.4**	**-0.4**
DCPH	**Dipolog City**	**2.96**	**252**	*i* P	**Pb**	**06 32 39.6**	**-1.9**
DCPH				*i* S	**Sb**	**06 33 17.4**	**+0.2**
CTBH	**Cotabato--PC H**	**3.00**	**220**	*e*P	**Pb**	**06 32 40.4**	**-1.7**
CTBH				*i* S	**Sb**	**06 33 14.6**	**-3.8**
IBAJ	**Ibajay, Aklan**	**4.56**	**300**	*i* P	Pb	06 33 01.3	-7.4
TGY	**Tagaytay City**	**6.86**	**312**	LR	LR	06 36 38.2	
	comp=Z,293nm,19.1s,baz=168,slow=42						
TNTI	**Ternate**	**8.78**	**172**	P	Pn	06 33 59.0	+4.5
TWG	**Pinlang**	**14.10**	**340**	Pn	**Pn**	**06 35 08.8**	**+1.7**
WRA	**Warramunga Arr**	**30.37**	**165**	P	**P**	**06 37 58.2**	**-0.7**
	0.6nm,0.8s,baz=342,slow=8.3,SNR=8.0						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**30.37**	**165**	P	**P**	**06 37 57.5**	**-1.4**
AS31	**Alice Springs**	**33.84**	**167**	P	**P**	**06 38 29.1**	**-0.3**
ASAR	**Alice Springs**	**33.84**	**167**	P	**P**	**06 38 29.2**	**-0.2**
	0.3nm,0.3s,baz=345,slow=6.8,SNR=9.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**33.84**	**167**	P	**P**	**06 38 29.1**	**-0.3**
USRK	**Ussuriysk Ar.**	**34.90**	**7**	P	**P**	**06 38 39.0**	**+0.7**
	2.5nm,0.6s,baz=180,slow=6.9,SNR=6.7						
	2.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**34.90**	**7**	P	**P**	**06 38 39.2**	**+0.9**
H11S3	**WAKE ISLAND Hy**	**40.21**	**73**	T	T	07 22 14.4	
	baz=262,slow=75,SNR=76						
H11S1	**WAKE ISLAND Hy**	**40.22**	**73**	T	T	07 22 14.5	
	baz=262,slow=75,SNR=86						
H11S2	**WAKE ISLAND Hy**	**40.22**	**73**	T	T	07 22 13.2	
	baz=262,slow=75,SNR=134						
H11N1	**WAKE ISLAND Hy**	**40.56**	**71**	T	T	07 22 41.1	
	baz=263,slow=75,SNR=91						
H11N2	**WAKE ISLAND Hy**	**40.57**	**71**	T	T	07 22 42.5	
	baz=263,slow=75,SNR=90						
H11N3	**WAKE ISLAND Hy**	**40.58**	**71**	T	T	07 22 42.8	
	baz=263,slow=75,SNR=84						
STKA	**Stephens Creek**	**43.73**	**161**	P	**P**	**06 39 52.5**	**+0.3**
	1.1nm,0.5s,baz=324,slow=7.5,SNR=3.7						
	1.1nm,0.5s						
PETK	**Petropavlovsk-**	**50.34**	**24**	P	**P**	**06 40 44.0**	**+0.6**
	1.2nm,0.6s,baz=270,slow=3.0,SNR=4.3						
	1.2nm,0.6s						
PETK	**Petropavlovsk-**	**50.34**	**24**	P	**P**	**06 40 44.3**	**+0.9**
DZM	**Mont Dzumac**	**50.44**	**129**	P	**P**	**06 40 44.1**	**-0.7**
	11nm,1.1s,baz=324,slow=13,SNR=2.8						
	11nm,1.1s						
MKAR	**Makanchi Array**	**52.57**	**323**	P	**P**	**06 40 60.0**	**-0.3**
	2.1nm,0.6s,baz=118,slow=7.6,SNR=11						
	2.1nm,0.6s						
MKAR	**Makanchi Array**	**52.57**	**323**	P	**P**	**06 40 59.3**	**-1.0**
PDGK	**Podgornoye**	**52.69**	**318**	P	**P**	**06 41 00.3**	**-1.1**
ZALV	**Zalesovo Beam**	**55.23**	**332**	P	**P**	**06 41 18.7**	**-0.9**
	2.0nm,0.7s,baz=122,slow=5.4,SNR=1.6						
	2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**55.23**	**332**	P	**P**	**06 41 18.5**	**-1.1**
KURK	**Kurchatov**	**56.63**	**326**	P	**P**	**06 41 28.5**	**-1.2**
KURBB	**Kurchatov Arra**	**56.63**	**326**	P	**P**	**06 41 29.0**	**-0.7**
	0.8nm,0.5s,baz=121,slow=7.7,SNR=9.4						
	0.8nm,0.5s						
AKTO	**Aktyubinsk**	**68.84**	**320**	P	**P**	**06 42 50.1**	**-0.9**
	1.3nm,0.5s,baz=34,slow=4.8,SNR=1.8						
	1.3nm,0.5s						
C23K	**Itkillik River**	**78.76**	**21**		**P**	**06 43 49.9**	**+1.0**
C23K				IAmb	IAmb	06 43 50.6	
	comp=Z,4.8nm,0.6s						
I23K	**Minto, Yukon-K**	**79.08**	**25**	P	**P**	**06 43 51.1**	**+0.4**
F24K	**Squaw Lake**	**79.70**	**23**	P	**P**	**06 43 55.3**	**+1.2**
ILAR	**Eielson Array**	**80.13**	**26**	P	**P**	**06 43 56.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=241,slow=5.2,SNR=9.0						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**80.13**	**26**	P	**P**	**06 43 56.5**	**0.0**
I27K	**Kandik River**	**82.30**	**25**		**P**	**06 44 09.2**	**+1.1**
I27K				IAmb	IAmb	06 44 17.3	
	comp=Z,4.9nm,1.2s						
I28M	**Miner Creek**	**83.01**	**25**		**P**	**06 44 12.5**	**+0.7**
I28M				IAmb	IAmb	06 44 14.9	
	comp=Z,2.7nm,0.7s						
HYT	**Haines Junctio**	**84.81**	**29**	P	**P**	**06 44 20.2**	**-0.9**
HYT				IAmb	IAmb	06 44 43.9	
	comp=Z,4.2nm,1.2s						
M30M	**Minto, Yukon**	**84.83**	**27**	P	**P**	**06 44 22.3**	**+1.2**
M30M				IAmb	IAmb	06 44 23.0	
	comp=Z,2.5nm,1.0s						
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**06 44 20.3**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=74,slow=6.2,SNR=10.0						
	comp=Z,2.2nm,0.6s						
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**06 44 19.9**	**-1.0**
BRTR	**Keskin Array B**	**85.94**	**309**	P	**P**	**06 44 26.1**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=104,slow=6.1,SNR=1.9						
	comp=Z,0.5nm,0.5s						
FIA1	**FINESS Array S**	**86.50**	**332**	P	**P**	**06 44 28.3**	**-1.0**
FINES	**FINESS Array B**	**86.50**	**332**	P	**P**	**06 44 28.6**	**-0.6**
	comp=Z,3.6nm,0.6s,baz=76,slow=4.1,SNR=22						
	comp=Z,3.6nm,0.6s						
FINES	**FINESS Array B**	**86.50**	**332**	P	**P**	**06 44 28.5**	**-0.8**
N32M	**Quiet Lake**	**86.86**	**29**	P	**P**	**06 44 31.4**	**+0.2**
N32M				IAmb	IAmb	06 44 57.2	
	comp=Z,4.2nm,0.9s						
C36M	**Paulatuk**	**87.96**	**20**	P	**P**	**06 44 36.2**	**+0.1**
C36M				IAmb	IAmb	06 44 37.2	
	comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**89.21**	**173**	P	**P**	**06 44 41.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=259,slow=5.8,SNR=1.5						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**89.21**	**173**	P	**P**	**06 44 41.3**	**-0.5**
VNDA				IAmb	IAmb	06 44 55.2	
	comp=Z,4.6nm,1.4s						
HFS	**Hagfors**	**92.66**	**332**	P	**P**	**06 44 55.9**	**-2.4**
	comp=Z,2.0nm,0.6s,baz=64,slow=6.8,SNR=6.2						
	comp=Z,2.0nm,0.6s						
NC405	**NORSAR Array S**	**93.13**	**334**	P	**P**	**06 44 58.9**	**-1.6**
NB2	**NORSAR Subarra**	**93.38**	**334**	P	**P**	**06 45 00.1**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=68,slow=5.1						
NOA	**NORSAR Array B**	**93.38**	**334**	P	**P**	**06 44 59.9**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=65,slow=4.5,SNR=4.0						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**94.46**	**24**	P	**P**	**06 45 06.6**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=304,slow=4.7,SNR=4.6						
	comp=Z,0.8nm,0.6s						

*IDC **10** 06:36:18.7±1.1,2.°63S×68.°20E,h0km,mb4.0/9, mbtmp4.0/9,Error ellipse: s-maj=35.0km s-min=24.1km az=46.0*

ISC 10 06:36:20.7±1.2,2.°6S±0.°2×68.°2E±0.°2,h11km,n11, σ1s51/11,mb4.1/9,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**36.80**	**54**	P	**P**	**06 43 30.4**	**+1.4**
	0.9nm,0.3s,baz=242,slow=10,SNR=4.6						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**50.75**	**12**	P	**P**	**06 45 18.6**	**-2.2**
	0.5nm,0.7s,baz=193,slow=5.9,SNR=3.5						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**53.77**	**8**	P	**P**	**06 45 41.3**	**-1.8**
	1.3nm,1.0s,baz=203,slow=7.9,SNR=4.5						
	1.3nm,1.0s						
ZALV	**Zalesovo Beam**	**58.05**	**11**	P	**P**	**06 46 13.6**	**-0.1**
	1.1nm,0.6s,baz=193,slow=5.9,SNR=1.6						
	1.1nm,0.6s						
SONM	**Songino Array**	**60.30**	**29**	P	**P**	**06 46 30.0**	**+0.3**
	2.2nm,0.8s,baz=227,slow=7.9,SNR=6.2						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**66.70**	**110**	P	**P**	**06 47 11.3**	**-1.0**
	1.7nm,0.8s,baz=284,slow=5.9,SNR=6.1						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**66.73**	**115**	P	**P**	**06 47 12.1**	**-0.5**
	1.3nm,0.8s,baz=279,slow=6.4,SNR=8.5						
	1.3nm,0.8s						
HFS	**Hagfors**	**75.47**	**335**	P	**P**	**06 48 06.5**	**+1.8**
	1.1nm,0.8s,baz=129,slow=11,SNR=1.6						
	1.1nm,0.8s						
ESDC	**Sonseca Array**	**78.04**	**311**	P	**P**	**06 48 18.8**	**-1.0**
	1.4nm,0.8s,baz=85,slow=5.1,SNR=8.1						
	1.4nm,0.8s						
BDFB	**Brasilia**	**114.39**	**252**	PKP	**PKiKP**	**06 55 03.4**	**+1.5**
	2.3nm,0.8s,baz=95,slow=7.4,SNR=3.1						
TXAR	**Lajitas Array**	**152.33**	**345**	PKPbc	**PKiKP**	**06 56 17.3**	**-0.7**
	0.5nm,0.9s,baz=332,slow=2.5,SNR=3.1						

ROM 10 06:39:01.8±0.1,42.°707N±0.°004×13.°272E±0.°005, h12km,ML0.9/14,1D,Error ellipse: s-maj=0.4km s-min=0.2km az=268.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM25	**Mosicchio (Ama**	**0.09**	**175**	P	Pg	06 39 04.8	+0.3
RM25				S	Sg	06 39 06.6	+0.2
SMA1	**SAN MARTINO**	**0.09**	**149**	P	Pg	06 39 05.1	+0.5
SMA1				S	Sg	06 39 06.9	+0.3
SMA1				AML	AML		
	comp=N,124μm,0.2s						
SMA1				AML	AML		
	comp=E,138μm,0.3s						
SMA1				AML	AML		
	comp=N,125μm,0.2s						
MTRA	**Matera**	**0.10**	**61**	⇓P	Pg	06 39 05.1	+0.4
MTRA				S	Sg	06 39 07.2	+0.3
MTRA				AML	AML		
	comp=E,91μm,0.3s						
MTRA				AML	AML		
	comp=N,104μm,0.1s						
MTRA				AML	AML		
	comp=N,106μm,0.1s						
MTRA				AML	AML		
	comp=E,80μm,0.2s						
NRCA	**Norcia**	**0.17**	**318**	P	Pg	06 39 06.0	+0.3
NRCA				S	Sg	06 39 09.1	+0.6
MMO1	**Montemonaco**	**0.20**	**12**	P	Pg	06 39 06.6	+0.4
MMO1				S	Sg	06 39 10.0	+0.9
LNSS	**Leonessa**	**0.20**	**239**	P	Pg	06 39 06.8	+0.6
LNSS				S	Sg	06 39 10.1	+0.8
RM33	**Pellescritta (**	**0.20**	**192**	P	Pg	06 39 06.7	+0.4
RM33				S	Sg	06 39 10.1	+0.9
RM33				AML	AML		
	comp=E,67μm,0.7s						
RM33				AML	AML		
	comp=N,14μm,0.2s						
RM33				AML	AML		
	comp=N,73μm,0.4s						
RM33				AML	AML		
	comp=E,15μm,0.1s						
MC2	**Monte Cornacci**	**0.21**	**344**	P	Pg	06 39 06.9	+0.4
MC2				S	Sg	06 39 10.8	+1.1
TERO	**Teramo**	**0.26**	**109**	P	Pg	06 39 07.8	+0.6
TERO				S	Sg	06 39 11.6	+0.8
TERO				AML	AML		
	comp=N,36μm,0.1s						
TERO				AML	AML		
	comp=E,28μm,0.1s						
TERO				AML	AML		
	comp=E,40μm,0.3s						
TERO				AML	AML		
	comp=N,18μm,0.1s						

*IDC **10** 06:42:59.5±3.8,53.°72N×88.°11E,h0km,mbtmp2.8/2, ML2.4/2,Error ellipse: s-maj=38.4km s-min=20.8km az=46.0*

ASRS 10 06:42:57.0±1.0,53.°69N×88.°08E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.95**	**279**	I	I	06 55 20.0	
	0.3nm,1.1s,baz=95,slow=313,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.95**	**279**	Pn	Pg	06 43 34.0	-0.4
	0.9nm,0.3s,baz=97,slow=12,SNR=9.4						
ZALV				Lg	Lg	06 44 01.7	
	2.0nm,0.3s,baz=96,slow=28,SNR=9.0						
KURBB	**Kurchatov Arra**	**6.63**	**246**	Pn	Pn	06 44 39.0	+3.4
	baz=62,slow=14,SNR=4.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.84**	**211**	Pn	Pn	06 44 56.2	+4.0
	0.1nm,0.3s,baz=27,slow=11,SNR=2.4						
	0.2nm,0.3s						

*NEIC **10** 06:49:24.2±1.5,16.°9N±0.°1×105.°5W±0.°1,h10km±2km, mb4.5/18,Error ellipse: s-maj=22.7km s-min=19.1km az=223.0*
*MEX **10** 06:49:28.9±0.3,17.°69N×105.°63W,h10km,MD3.8*
*IDC **10** 06:49:30.5±2.3,17.°81N×105.°70W,h0km,mb3.4/4, mbtmp3.5/5,ML3.7/1,MS3.6/13,Error ellipse: s-maj=110.5km s-min=33.2km az=94.0*

ISC 10 06:49:31.3±1.1,17.°8N±0.°1×105.°33W±0.°08,h10km,n56, σ2s42/47,mb4.5/13,MS3.5/10,Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAR	**Ciudad de Arme**	**1.70**	**47**	*e*P	**Pn**	**06 49 56.4**	**-4.7**
CDAR				*e*S	**Sn**	**06 50 21.7**	**-1.3**
CJM	**Chamela**	**1.73**	**9**	*e*P	**Pn**	**06 49 57.8**	**-3.7**
CJM				*e*S	**Sn**	**06 50 20.2**	**-3.5**
MMIG	**Aquila**	**1.96**	**75**	*e*P	**Pn**	**06 50 01.7**	**-2.9**
CEGR	**Campo Tres**	**2.12**	**41**	*e*P	**Pn**	**06 50 04.7**	**-2.4**
CEGR				*e*S	**Sn**	**06 50 30.7**	**-3.0**
INCO	**Volcan de Coli**	**2.39**	**43**	*e*P	**Pn**	**06 50 09.2**	**-1.7**
INCO				*e*S	**Sn**	**06 50 40.7**	**+0.3**
MOIG	**Morelia**	**4.36**	**64**	Pn	**Pn**	**06 50 36.6**	**-1.3**
MOIG	**Morelia**	**4.36**	**64**	*e*P	**Pn**	**06 50 35.9**	**-2.0**
ZAIG	**Zacatecas**	**5.60**	**27**	Pn	**Pn**	**06 50 57.6**	**+2.6**
UNM	**Universidad Na**	**6.04**	**74**	Pn	**Pn**	**06 50 59.0**	**-2.0**
TLIG	**Tlapa**	**6.45**	**91**	Pn	Pn	06 51 00.8	-5.9
LPIG	**La Paz**	**7.82**	**324**	LR	LR	06 53 44.5	
	comp=Z,1μm,18.9s,baz=164,slow=34						
TXAR	**Lajitas Array**	**11.60**	**7**	Pn	**Pn**	**06 52 20.0**	**+2.8**
	0.1nm,0.3s,baz=196,slow=11,SNR=8.0						
TXAR				LR	LR	06 56 50.0	
	comp=Z,332nm,18.5s,baz=184,slow=38						
	2.0nm,0.9s						
TXAR	**Lajitas Array**	**11.60**	**7**	Pn	**Pn**	**06 52 21.4**	**+4.3**
HSIG		**12.31**	**336**	Pn	**Pn**	**06 52 28.7**	**+1.9**
ALPN	**Alpine**	**12.63**	**7**	Pn	**Pn**	**06 52 35.4**	**+4.1**
HNDO	**Hondo**	**12.94**	**24**	Pn	**Pn**	**06 52 38.6**	**+3.2**
VHRN	**Van Horn**	**12.95**	**1**	Pn	**Pn**	**06 52 38.0**	**+2.4**
TPB01	**Permian Basin**	**13.18**	**6**	Pn	**Pn**	**06 52 42.3**	**+3.6**
EF04	**Eagle Ford 04**	**13.31**	**30**	Pn	**Pn**	**06 52 44.5**	**+4.2**
MNTX	**Cornudas Mount**	**13.86**	**360**	Pn	**Pn**	**06 52 52.2**	**+4.4**
GDL2	**Guadalupe Moun**	**14.38**	**3**	Pn	**Pn**	**06 52 59.1**	**+3.9**
ESQI	**Esquipulas**	**15.69**	**99**	Pn	Pn	06 53 04.7	-8.1
LENM	**Lemitar**	**16.38**	**355**	P	**P**	**06 53 27.1**	**+2.6**
ANMO	**Albuquerque**	**17.12**	**357**	LR	LR	07 00 34.7	
	comp=Z,194nm,20.3s,baz=178,slow=39						
X34A	**Smith Ranch, M**	**18.04**	**20**		**P**	**06 53 44.8**	**+2.1**
X34A				IAmb	IAmb	06 53 53.5	
	comp=Z,46nm,1.3s						
JTS	**Las Juntas de**	**21.11**	**108**	LR	LR	07 00 32.0	
	comp=Z,57nm,20.2s,baz=287,slow=31						
Q16A	**Castle Valley**	**21.66**	**348**	P	**P**	**06 54 22.8**	**+0.4**
SRU	**San Rafael Swe**	**21.73**	**349**	P	**P**	**06 54 23.4**	**+0.5**
OXF	**Oxford**	**21.90**	**37**	P	**P**	**06 54 24.9**	**+0.2**
OXF				IAmb	IAmb	06 54 33.2	
	comp=Z,23nm,1.0s						
ISCO	**Idaho Springs**	**21.94**	**359**		**P**	**06 54 27.0**	**+1.6**
KSU1	**Kansas State U**	**22.56**	**18**	P	**P**	**06 54 34.2**	**+2.5**
KSU1				IAmb	IAmb	06 54 38.5	
	comp=Z,11nm,0.8s						
NVAR	**Mina Array Bea**	**23.49**	**334**	P	**P**	**06 54 40.7**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=157,slow=5.2,SNR=3.9						
	2.0nm,0.8s						
CLTN	**Cedars of Leba**	**

az=154.0

ISC 10 07:10:55.9±0.7,27.7S±0.1×68.1E±0.1,h11km,n54, σ0.69/44,mb4.4/24,MS4.0/9,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAAM	**Kaadhehdhoo**	**5.80**	**57**	Pn	**Pn**	**07 12 20.8**	**-1.1**
PALK	**Pallekele**	**15.98**	**52**	Pn	**Pn**	**07 14 41.9**	**+1.1**
	0.6nm,0.3s,baz=149,slow=10,SNR=1.9						
PALK				LR	LR	07 19 07.3	
	comp=Z,406nm,20.8s,baz=247,slow=31						
	4.8nm,0.7s						
PALK	**Pallekele**	**15.98**	**52**		**Pn**	**07 14 40.5**	**-0.4**
PALK				IAmb	IAmb	07 15 21.7	
	comp=Z,44nm,1.5s						
RER	**Riviere de l'E**	**21.97**	**212**	P	**P**	**07 15 50.5**	**+0.4**
VOI	**Vohitsoka**	**28.20**	**226**	P	**P**	**07 16 49.4**	**+0.5**
UOSS	**Minazif**	**29.79**	**338**	P	**P**	**07 17 03.1**	**+0.3**
UOSS				IAmb	IAmb	07 17 13.7	
	comp=Z,11nm,1.1s						
KMBO	**Kilima Mbogo**	**30.88**	**272**	LR	LR	07 26 33.1	
	comp=Z,81nm,18.8s,baz=108,slow=30						
NIL	**Nilore**	**36.45**	**7**	P	**P**	**07 18 02.3**	**+1.4**
NIL				IAmb	IAmb	07 18 03.2	
	comp=Z,6.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.90**	**54**	P	**P**	**07 18 06.2**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=242,slow=9.9,SNR=11						
CMAR				LR	LR	07 31 07.5	
	comp=Z,89nm,20.5s,baz=230,slow=33						
	comp=Z,1.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.90**	**54**	P	**P**	**07 18 05.0**	**+0.1**
KBL	**Kabul**	**37.02**	**1**	P	**P**	**07 18 06.1**	**+0.1**
CHTO	**Chiang Mai**	**37.09**	**54**	P	**P**	**07 18 07.0**	**+0.4**
CHTO				IAmb	IAmb	07 18 08.9	
	comp=Z,5.9nm,0.8s						
HRA	**Herat**	**37.27**	**352**	P	**P**	**07 18 07.6**	**-0.5**
MBAR	**Mbarara**	**37.42**	**272**	LR	LR	07 32 11.8	
	comp=Z,138nm,19.1s,baz=142,slow=34						
LSA	**Lhasa**	**39.01**	**33**	P	**P**	**07 18 23.3**	**+0.1**
LSA				IAmb	IAmb	07 18 57.4	
	comp=Z,12nm,0.4s						
LEM	**Lembang**	**39.57**	**97**	LR	LR	07 32 09.5	
	comp=Z,210nm,19.4s,baz=198,slow=32						
MANEM	**Manem**	**40.15**	**4**	P	**P**	**07 18 32.8**	**+0.5**
MANEM				IAmb	IAmb	07 18 35.6	
	comp=Z,52nm,1.4s						
LSZ	**Lusaka**	**41.29**	**250**	LR	LR	07 33 17.5	
	comp=Z,148nm,18.8s,baz=102,slow=33						
GAR	**Garm**	**41.51**	**3**	P	**P**	**07 18 43.7**	**+0.4**
GAR				IAmb	IAmb	07 18 45.2	
	comp=Z,14nm,0.9s						
BTK	**Batken**	**42.59**	**3**	P	**P**	**07 18 52.7**	**+0.5**
BTK				IAmb	IAmb	07 18 54.2	
	comp=Z,7.2nm,0.8s						
AAK	**Ala-Archa**	**45.47**	**7**	P	**P**	**07 19 16.7**	**+1.5**
	comp=Z,1.4nm,0.4s,baz=210,slow=8.6,SNR=4.5						
	comp=Z,1.4nm,0.4s						
AAK	**Ala-Archa**	**45.47**	**7**	P	**P**	**07 19 16.1**	**+0.8**
H04N2	**CROZET ISLANDS**	**45.61**	**196**	T	T	08 08 00.3	
	baz=26						
H04N1	**CROZET ISLANDS**	**45.61**	**196**	T	T	08 07 59.9	
	baz=26						
H04N3	**CROZET ISLANDS**	**45.62**	**196**	T	T	08 08 03.2	
	baz=26						
LBTB	**Lobatse**	**46.57**	**238**	LR	LR	07 35 14.4	
	comp=Z,172nm,19.0s,baz=58,slow=32						
PDGK	**Podgornoye**	**46.92**	**11**	P	**P**	**07 19 27.1**	**+0.4**
KOOLE	**Kule**	**50.59**	**242**	P	**P**	**07 19 55.3**	**0.0**
BRTR	**Keskin Array B**	**52.73**	**327**	P	**P**	**07 20 10.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=161,slow=13,SNR=3.9						
	comp=Z,0.5nm,0.4s						
SUR	**Sutherland**	**53.29**	**231**	LR	LR	07 39 13.5	
	comp=Z,186nm,20.3s,baz=96,slow=32						
AKTO	**Aktyubinsk**	**53.61**	**352**	P	**P**	**07 20 16.4**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=176,slow=8.2,SNR=7.6						
	comp=Z,0.8nm,0.3s						
BVAR	**Borovoye Array**	**55.52**	**2**	P	**P**	**07 20 29.9**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=134,slow=8.5,SNR=3.7						
	comp=Z,0.6nm,0.4s						
BELG	**Belogornoye**	**57.53**	**345**	LR	LR	07 46 03.0	
	comp=Z,121nm,20.0s,baz=90,slow=37						
ZALV	**Zalesovo Beam**	**58.11**	**12**	P	**P**	**07 20 48.7**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=204,slow=6.5,SNR=4.9						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**58.11**	**12**		**P**	**07 20 48.6**	**-0.7**
ARTI	**Arti**	**59.40**	**354**	P	**P**	**07 20 58.0**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=210,slow=8.0,SNR=3.6						
	comp=Z,2.3nm,0.5s						
ARTI	**Arti**	**59.40**	**354**	P	**P**	**07 20 58.4**	**+0.2**
SONM	**Songino Array**	**60.39**	**29**	P	**P**	**07 21 05.7**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=230,slow=8.0,SNR=12						
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**60.39**	**29**	P	**P**	**07 21 05.8**	**+0.4**
SONM				IAmb	IAmb	07 21 07.6	
	comp=Z,5.4nm,1.0s						
TLY	**Talaya**	**61.97**	**24**	LR	LR	07 48 05.2	
	comp=Z,130nm,19.2s,baz=206,slow=36						
WRA	**Warramunga Arr**	**66.76**	**110**	P	**P**	**07 21 47.7**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=283,slow=6.0,SNR=17						
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**66.76**	**110**	P	**P**	**07 21 47.8**	**-0.2**
ASAR	**Alice Springs**	**66.79**	**115**	P	**P**	**07 21 47.8**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=284,slow=6.0,SNR=17						
	comp=Z,2.5nm,0.8s						
KSRS	**Korea Array**	**68.17**	**48**	P	**P**	**07 21 56.4**	**0.0**
	comp=Z,1.0nm,0.8s,baz=275,slow=7.2,SNR=2.7						
	comp=Z,1.0nm,0.8s						
HILR	**Hailar Array B**	**68.37**	**33**	P	**P**	**07 21 58.5**	**+1.0**
	comp=Z,2.9nm,0.6s,baz=194,slow=9.2,SNR=4.0						
	comp=Z,2.9nm,0.6s						
HFS	**Hagfors**	**75.47**	**335**	P	**P**	**07 22 39.0**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=191,slow=7.2,SNR=5.4						
	comp=Z,1.9nm,0.9s						
MJB9	**Matsu-Tunnel**	**75.73**	**51**	P	**P**	**07 22 42.7**	**+0.8**
MJB9				IAmb	IAmb	07 22 44.8	
	comp=Z,6.9nm,1.1s						
MAJO	**Matsushiro**	**75.73**	**51**	P	**P**	**07 22 42.4**	**+0.5**
MAJO				IAmb	IAmb	07 22 43.8	
	comp=Z,7.4nm,1.1s						
MJAR	**Matsushiro Arr**	**75.73**	**51**	P	**P**	**07 22 42.2**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=269,slow=7.9,SNR=4.9						
	comp=Z,0.7nm,0.4s						
MJAR	**Matsushiro Arr**	**75.73**	**51**	P	**P**	**07 22 41.9**	**0.0**
NOA	**NORSAR Array B**	**76.99**	**335**	P	**P**	**07 22 48.1**	**-0.4**
	comp=Z,0.7nm,1.0s,baz=115,slow=6.4,SNR=2.7						
	comp=Z,0.7nm,1.0s						
ESDC	**Sonseca Array**	**78.01**	**311**	P	**P**	**07 22 55.1**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=94,slow=4.7,SNR=9.9						
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**140.02**	**357**	PKP	**PKiKP**	**07 30 26.5**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=317,slow=3.7,SNR=2.7						
TXAR	**Lajitas Array**	**152.36**	**344**	PKP	**PKPdf**	**07 30 45.0**	**-1.1**
	comp=Z,1.4nm,1.1s,baz=17,slow=1.3,SNR=4.5						
TXAR				PKPbc	**PKPbc**	**07 30 52.1**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=61,slow=0.6,SNR=5.3						

*IDC **10** 07:25:10.5±3.1,53.63N×87.94E,h0km,mbtmp3.2/2, ML2.4/2,Error ellipse: s-maj=26.2km s-min=16.4km az=66.0*

ASRS 10 07:25:09.0±1.9,53.59N×88.03E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**282**	I	I	07 37 00.0	
	0.2nm,1.0s,baz=97,slow=324,SNR=20						
ZALV	**Zalesovo Beam**	**1.94**	**282**	Pn	Pn	07 25 43.9	+0.7
	0.3nm,0.3s,baz=101,slow=15,SNR=9.4						
ZALV				Lg		07 26 10.3	
	1.1nm,0.3s,baz=102,slow=26,SNR=18						
KURBB	**Kurchatov Arra**	**6.56**	**247**	Pn	Pn	07 26 47.9	+1.2
	0.1nm,0.3s,baz=65,slow=13,SNR=2.8						
KURBB				Lg	Lg	07 28 38.4	
	baz=62,slow=32						
	2.4nm,0.2s						
MKAR	**Makanchi Array**	**7.74**	**211**	Pn	Pn	07 27 05.4	+2.5
	0.1nm,0.3s,baz=32,slow=14,SNR=2.8						
MKAR				Sn	Sn	07 28 33.3	+2.1
	0.1nm,0.3s,baz=32,slow=20,SNR=2.2						
MKAR				Lg	Lg	07 29 14.6	
	baz=20,slow=34,SNR=3.8						
	0.2nm,0.5s						

NNC 10 07:51:28.3±0.4,50.01N×78.75E,h0km,mb3.6,mpv3.1,

13C-7D,Error ellipse: s-maj=4.5km s-min=1.9km az=64.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.60**	**345**	⇓P	Pg	07 51 40.2	+0.4
KUR07				⇑S	Sb	07 51 49.2	-1.4
KUR06	**Kurchatov Arra**	**0.61**	**346**	⇑P	Pg	07 51 40.5	+0.4
KUR06				⇑S	Sg	07 51 49.3	+1.3
KUR14	**Kurchatov Arra**	**0.62**	**350**	⇑P	Pg	07 51 40.4	+0.2
KUR14				⇑S	Sg	07 51 49.4	+1.3
KUR15	**Kurchatov Arra**	**0.62**	**349**	⇓P	Pg	07 51 40.5	+0.2
KUR15				⇑S	Sg	07 51 49.7	+1.3
KURBB	**Kurchatov Arra**	**0.63**	**347**	⇑P	Pg	07 51 40.6	+0.2
	24nm,0.8s						
KURBB				⇑S	Sg	07 51 49.8	+1.2
	75nm,0.6s						
KUR16	**Kurchatov Arra**	**0.64**	**345**	⇑P	Pg	07 51 40.8	+0.1
KUR16				⇑S	Sg	07 51 50.0	+1.0
KUR17	**Kurchatov Arra**	**0.65**	**344**	⇓P	Pg	07 51 40.8	0.0
KUR17				⇓S	Sg	07 51 50.0	+0.8
KURK	**Kurchatov**	**0.71**	**353**	⇓P	Pg	07 51 42.2	+0.1
	2.4nm,0.6s						
KURK				⇓S	Sg	07 51 51.9	+0.6
	17nm,0.9s						
SEM	**Semipalatinsk**	**1.04**	**67**	P	Pg	07 51 48.6	+0.4
	3.1nm,0.1s						
SEM				S	Sb	07 52 03.0	-0.6
	9.6nm,0.1s						
MAKZ	**Makanchi**	**3.85**	**145**	⇑Pg	Pg	07 52 40.0	-2.2
	4.1nm,1.0s						
MAKZ				⇓Lg	Lg	07 53 28.4	
	11nm,0.7s						
MK31	**Makanchi Array**	**3.99**	**142**	⇑Pg	Pb	07 52 41.7	+2.3
	1.2nm,0.6s,baz=326,slow=15,SNR=11						
MK31				⇑Lg	Lg	07 53 33.6	
	4.7nm,0.6s,baz=327,slow=27,SNR=17						
ZSN	**Zaisan**	**4.79**	**120**	Pg	Pg	07 52 57.2	-2.8
	3.9nm,0.2s						
ZSN				Lg	Lg	07 54 00.1	
	7.8nm,0.4s						
KNOS	**Konyrlen**	**5.66**	**177**	Pg	Pg	07 53 12.8	-3.9
	2.2nm,0.3s						
KNOS				Lg	Lg	07 54 26.2	
	3.5nm,0.4s						
ARXS	**Arharly**	**5.83**	**187**	Pg	Pg	07 53 15.5	-4.5
	0.9nm,0.1s						
ARXS				Lg	Lg	07 54 30.8	
	5.2nm,0.8s						

*SJA **10** 07:58:31.6±0.8, 19.90S×68.92W, h124km±3km, ML3.7, MW3.7*

*GUC **10** 07:58:32.5±0.8, 19.94S×69.02W, h120km±3km, ML3.5*

*IDC **10** 07:58:34.9±2.9, 19.87S×68.70W, h145km±25km, mb3.7/4, mbtmp4.0/6, Error ellipse: s-maj=36.3km s-min=26.5km az=91.0*

*VAO **10** 07:58:38.2±1.1, 19.66S×68.31W, h140km, mb4.0, Presumed earthquake*

ISC 10 07:58:31.5±0.7,19.95S±0.03×68.93W±0.06,h126km±6km, n53,σ1.9/56/80,7C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.29**	**228**	*e*P	**Pn**	**07 58 49.8**	**+0.2**
PB08				*e*S	**Sn**	**07 59 04.1**	**+0.9**
PB08				IAML		07 59 05.0	
	comp=Z,2μm,0.2s						
PB08	**IPOC Station P**	**0.29**	**228**	⇑*e*P	**Pn**	**07 58 50.4**	**+0.8**
PB08				*e*S	**Sn**	**07 59 03.7**	**+0.4**
PB08				IAML		07 59 04.2	
	comp=E,6μm,0.4s						
GO01	**Chusmiza**	**0.38**	**317**	*e*P	**Pn**	**07 58 50.6**	**+0.6**
GO01				*e*S	**Sn**	**07 59 04.4**	**+0.4**
GO01				IAML		07 59 06.5	
	comp=Z,3μm,0.3s						
GO01	**Chusmiza**	**0.38**	**317**	*e*P	**Pn**	**07 58 50.7**	**+0.6**
GO01				*e*S	**Sn**	**07 59 04.1**	**0.0**
PB11	**IPOC Station P**	**0.71**	**285**	*e*P	**Pn**	**07 58 52.3**	**+0.6**
PB11				*e*S	**Sn**	**07 59 07.3**	**+0.3**
PB11				IAML		07 59 08.2	
	comp=Z,1μm,0.2s						
PB11	**IPOC Station P**	**0.71**	**285**	⇑*e*P	**Pn**	**07 58 52.3**	**+0.6**
PB11				*e*S	**Sn**	**07 59 07.1**	**+0.1**
PB11				IAML		07 59 07.8	
	comp=N,4μm,0.3s						
TA02	**Huaiquique**	**1.18**	**254**	*e*P	**Pn**	**07 58 56.8**	**+1.0**
TA02				*e*S	**Sn**	**07 59 15.9**	**+1.6**
TA02				IAML		07 59 16.3	
	comp=Z,2μm,0.1s						
TA02	**Huaiquique**	**1.18**	**254**	*e*P	**Pn**	**07 58 56.7**	**+1.0**
TA02				*e*S	**Sn**	**07 59 15.0**	**+0.8**
PSGCX	**Pisagua**	**1.18**	**287**	*e*P	**Pn**	**07 58 56.6**	**+0.7**
PSGCX				*e*S	**Sn**	**07 59 14.8**	**+0.3**
PSGCX				IAML		07 59 15.0	
	comp=Z,1μm,0.6s						
PSGCX	**Pisagua**	**1.18**	**287**	⇑*e*P	**Pn**	**07 58 56.6**	**+0.7**
PSGCX				*e*S	**Sn**	**07 59 14.2**	**-0.2**
PB02	**IPOC Station P**	**1.64**	**213**	*e*P	**Pn**	**07 59 02.3**	**+1.3**
PB02				*e*S	**Sn**	**07 59 25.9**	**+2.3**
PB02				IAML		07 59 34.5	
	comp=Z,953nm,0.3s						
PB02	**IPOC Station P**	**1.64**	**213**	⇑*e*P	**Pn**	**07 59 02.2**	**+1.1**
PB02				*e*S	**Sn**	**07 59 25.1**	**+1.5**
PB02				IAML		07 59 32.4	
	comp=E,914nm,0.3s						
PB16	**IPOC Station P**	**1.69**	**341**	*e*P	**Pn**	**07 59 03.3**	**+1.1**
PB16				*e*S	**Sn**	**07 59 23.4**	**-2.1**
PB16	**IPOC Station P**	**1.69**	**341**	⇓*e*P	**Pn**	**07 59 03.9**	**+1.7**
PB16				*e*S	**Sn**	**07 59 27.1**	**+1.6**
PB09	**IPOC Station P**	**1.86**	**189**	*e*P	**Pn**	**07 59 05.7**	**+1.9**
PB09				*e*S	**Sn**	**07 59 31.4**	**+2.9**
PB09				IAML		07 59 31.6	
	comp=Z,326nm,0.6s						
PB09	**IPOC Station P**	**1.86**	**189**	⇑*e*P	**Pn**	**07 59 05.5**	**+1.7**
PB09				*e*S	**Sn**	**07 59 30.1**	**+1.6**
PB09				IAML		07 59 31.2	
	comp=N,348nm,0.4s						
PB12	**IPOC Station P**	**1.87**	**315**	*e*P	**Pn**	**07 59 04.3**	**+0.4**
PB12				*e*S	**Sn**	**07 59 29.0**	**+0.5**
PB12				IAML		07 59 34.6	
	comp=Z,276nm,0.2s						
PB12	**IPOC Station P**	**1.87**	**315**	*e*P	**Pn**	**07 59 04.2**	**+0.4**
PB12				*e*S	**Sn**	**07 59 28.4**	**-0.1**
PB12				IAML		07 59 32.8	
	comp=E,550nm,0.3s						
PB07	**IPOC Station P**	**1.99**	**207**	*e*P	**Pn**	**07 59 06.4**	**+1.2**
PB07				*e*S	**Sn**	**07 59 32.9**	**+1.8**
PB07				IAML		07 59 42.9	
	comp=Z,238nm,0.8s						
PB07	**IPOC Station P**	**1.99**	**207**	⇑*e*P	**Pn**	**07 59 06.2**	**+0.9**
PB07				*e*S	**Sn**	**07 59 31.6**	**+0.5**
PB07				IAML		07 59 40.3	
	comp=E,395nm,0.2s						
AP01	**Chacalluta**	**2.06**	**319**	*e*P	**Pn**	**07 59 07.2**	**+1.2**
AP01				*e*S	**Sn**	**07 59 34.1**	**+1.7**
AP01				IAML		07 59 37.4	
	comp=Z,584nm,0.2s						
PB03	**IPOC Station P**	**2.23**	**200**	*e*P	**Pn**	**07 59 09.6**	**+1.4**
PB03				*e*S	**Sn**	**07 59 37.8**	**+1.4**
PB03				IAML		07 59 38.7	
	comp=Z,330nm,0.4s						
PB03	**IPOC Station P**	**2.23**	**200**	⇑*e*P	**Pn**	**07 59 09.2**	**+1.0**
PB03				*e*S	**Sn**	**07 59 36.6**	**+0.1**
PB03				IAML		07 59 41.3	
	comp=E,310nm,0.2s						
PB06	**IPOC Station P**	**2.81**	**192**	*e*P	**Pn**	**07 59 16.8**	**+1.1**
PB06				*e*S	**Sn**	**07 59 51.8**	**+2.0**
PB06				IAML		07 59 57.1	
	comp=Z,183nm,0.5s						
AF01	**San Pedro de A**	**3.07**	**167**	*e*P	**Pn**	**07 59 22.0**	**+2.9**
AF01				*e*S	Sn	07 59 40.6	-15
AF01				IAML		08 00 27.6	
	comp=Z,76nm,0.5s						
PB05	**IPOC Station P**	**3.13**	**202**	*e*P	**Pn**	**07 59 20.7**	**+0.9**
PB05				*e*S	**Sn**	**07 59 51.4**	**-5.6**
PB05				IAML		08 00 07.8	
	comp=Z,68nm,1.2s						
LPAZ	**La Paz**	**3.72**	**12**	P	**Pn**	**07 59 30.6**	**+2.5**
	comp=Z,17nm,0.3s,baz=170,slow=4.5,SNR=241						
LPAZ				S	**Sn**	**08 00 14.0**	**+2.4**
	comp=Z,5.5nm,0.6s,baz=124,slow=4.9,SNR=1.4						
LPAZ	**La Paz**	**3.72**	**12**	*e*P	**Pn**	**07 59 30.5**	**+2.5**
HJA	**Humahuaca**	**4.61**	**135**	*e*P	**Pn**	**07 59 37.7**	**-1.9**
PB14	**IPOC Station P**	**4.85**	**196**	*e*P	**Pn**	**07 59 42.3**	**-0.5**
PB14				*e*S	**Sn**	**08 00 36.0**	**-2.3**
PB14				IAML		08 00 39.0	
	comp=Z,24nm,0.8s						
BBSD	**Serra de San D**	**8.35**	**72**	*e*P	**Pn**	**08 00 28.0**	**-1.8**
PTLB	**Pontes e Lacer**	**10.34**	**66**	*e*P	**Pn**	**08 00 55.0**	**-1.5**
COIM	**Forte Coimbra**	**10.48**	**92**	*e*P	**Pn**	**08 00 54.8**	**-3.5**
VILB	**Vilhena**	**10.88**	**52**	*e*P	**Pn**	**08 01 02.5**	**-1.3**
CPUP	**Villa Florida**	**12.41**	**123**	P	**Pn**	**08 01 24.0**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=291,slow=17,SNR=1.4						
SJPY	**San Joaquin**	**12.87**	**115**	*e*P	**Pn**	**08 01 31.0**	**+1.1**
SALV	**Santo Antonio**	**13.22**	**74**	*e*P	**Pn**	**08 01 30.6**	**-3.8**
CLDB	**Colider**	**15.53**	**56**	*e*P	**Pn**	**08 02 02.6**	**-1.2**
FRTB	**Fartura**	**18.31**	**104**	*e*P	**Pn**	**08 02 37.1**	**-0.4**
MACA	**Manacapuru-AM**	**18.52**	**27**	*e*P	**P**	**08 02 37.1**	**-1.2**
SNDB	**Serra Nova Dou**	**18.70**	**68**	*e*P	**P**	**08 02 40.0**	**-0.2**
BB19B	**Bebedouro**	**19.14**	**97**	*e*P	**P**	**08 02 45.2**	**+0.2**
IPMB	**Ipameri, GO**	**19.69**	**88**	*e*P	**P**	**08 02 51.2**	**+0.2**
ITTB	**Itaituba**	**20.12**	**41**	*e*P	**P**	**08 02 54.6**	**-1.0**
BDFB	**Brasilia**	**20.36**	**81**	P	**P**	**08 02 58.4**	**0.0**
	comp=Z,1.8nm,0.5s,baz=264,slow=11,SNR=3.4						
	comp=Z,1.8nm,0.5s						
SMTB	**Santa Maria do**	**23.39**	**65**	*e*P	**P**	**08 03 29.0**	**-0.1**
BOAV	**Boa Vista**	**23.69**	**21**	*e*P	**P**	**08 03 32.0**	**+0.2**
JANB	**Januaria**	**23.96**	**82**	*e*P	**P**	**08 03 33.4**	**-1.0**
SDBA	**SAO DESIDERIO**	**24.24**	**76**	*e*P	**P**	**08 03 37.2**	**+0.3**
DBIC	**Dimbokro**	**68.32**	**74**	P	**P**	**08 09 19.0**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=248,slow=6.8,SNR=5.7						
	comp=Z,4.2nm,0.6s						
QSPA	**South Pole Qui**	**70.24**	**180**	P	**P**	**08 09 33.1**	**+2.4**
	comp=Z,0.9nm,0.5s,baz=201,slow=2.6,SNR=3.7						
	comp=Z,0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.85**	**71**	P	**P**	**08 10 10.5**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=253,slow=5.3,SNR=15						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**134.27**	**211**	PKP	**PKPdf**	**08 17 34.7**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=149,slow=1.8,SNR=6.2						

*IDC **10** 08:15:03.3±0.5,44.09N×115.17W,h0km,mb3.9/7, mbtmp3.7/17,ML3.6/9,MS3.5/4,Error ellipse: s-maj=9.5km s-min=5.5km az=96.0*

*NEIC **10** 08:15:04.3±1.2,44.12N±0.02×115.06W±0.03,h14km±9km, mb3.9/22,ML4.1/114,ML4.3/33(BUT),Mwr3.9/11(SLM), Error ellipse: s-maj=3.4km s-min=3.0km az=194.0*

*NEIC **10** 08:15:04,44.13N×115.07W,h10km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=8.56; $M_{\theta\theta}$7.99; $M_{\phi\phi}$0.57; $M_{r\theta}$4.77; $M_{r\phi}$-2.14; $M_{\theta r}$-1.28; Fault plane solution: $M_0$9.89000×10^{14} NP1:$\phi_1$285.00000°, δ60.00000°,λ-90.00000°. NP2:$\phi_2$105.00000°,δ30.00000°, λ-90.00000°. Principal axes: T 9.8845, Plg15.0000°, Azm15.0000°; N -0.0012, Plg0.0000°, Azm105.0000°; P -9.8833, Plg75.0000°, Azm195.0000°;*

*BUT **10** 08:15:04.5±1.4,44.124N±0.008×115.08W±0.02, h10km±8km Error ellipse: s-maj=2.6km s-min=0.9km az=108.0*

ISC 10 08:15:04.3±0.5,44.12N±0.03×115.09W±0.03,h10km, n119,σ1.9/15/122,mb3.9/9,MS3.8/3,Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HLID	**Hailey**	**0.75**	**139**		**Pg**	**08 15 18.4**	**-0.3**
HLID				Sg	**Sg**	**08 15 28.2**	**-0.3**
HLID				IAML		08 15 28.8	
	6μm,0.2s						
HLID				IAML		08 15 31.6	
	7μm,0.5s						
MFID	**Camas Ranch**	**0.89**	**217**		**Pg**	**08 15 21.4**	**0.0**
MFID				Sg	**Sb**	**08 15 33.5**	**-0.3**
PLID	**Pearl Lake**	**1.16**	**326**		**Pb**	**08 15 26.2**	**-0.4**
PLID					**Sb**	**08 15 41.8**	**-0.1**
PLID				IAML		08 15 46.4	
	3μm,0.6s						
PLID				IAML		08 16 05.4	
	4μm,0.4s						
CNCI	**Crows Nest Can**	**1.20**	**99**		**Pb**	**08 15 26.2**	**-1.1**
BCYI	**Bear Canyon**	**1.23**	**81**		**Pn**	**08 15 27.1**	**-0.8**
BCYI					**Sb**	**08 15 42.8**	**-1.0**
ICI	**Italian Canyon**	**1.56**	**82**		**Pn**	**08 15 32.9**	**+0.5**
BMO	**Blue Mountains**	**1.74**	**295**		**Pn**	**08 15 34.7**	**-0.1**
MCMT	**McKenzie Canyo**	**1.75**	**66**		**Pn**	**08 15 35.0**	**0.0**
MOMT	**Monida**	**1.99**	**75**		**Pb**	**08 15 40.0**	**-0.8**
DLMT	**Dillon**	**2.17**	**54**		**Pn**	**08 15 40.8**	**+0.1**
F10A	**Beach Ranch, E**	**2.39**	**321**		**Pn**	**08 15 44.2**	**+0.6**
HBMT	**Mount Humbug**	**2.43**	**46**		**Pn**	**08 15 44.5**	**+0.2**
BGMT	**Barton Gulch**	**2.44**	**62**		**Pn**	**08 15 45.3**	**+0.8**
CMI	**Centennial Mou**	**2.52**	**80**		**Pb**	**08 15 49.4**	**-0.5**
LRM	**Limekiln Ridge**	**2.53**	**47**		**Pn**	**08 15 45.8**	**0.0**
J08A	**Circle Bar Ran**	**2.57**	**254**		**Pn**	**08 15 46.3**	**+0.2**
BPMT	**Black Pine Rid**	**2.59**	**26**		**Pn**	**08 15 46.6**	**

comp=N,357nm,1.4s
BGU IAML 08 17 20.8
comp=E,539nm,1.0s
YMP Mirror Lake Pl 3.59 78 Pn Pn 08 16 00.8 +0.5
HWUT Hardware Ranch 3.61 133 Pn Pn 08 16 01.4 +0.9
HWUT IAML 08 17 24.3
comp=E,527nm,1.1s
HWUT IAML 08 17 24.3
comp=E,493nm,1.0s
E08A Dider Farm, El 3.67 312 Pn 08 16 00.3 -0.8
JTMT Jette 3.67 9 Pn 08 16 01.4 +0.2
BSMT Bassoo Peak 3.73 3 Pn 08 16 02.8 +0.6
YNE Yellowstone No 3.74 75 Pn 08 16 04.3 +1.9
YNE IAML 08 17 25.6
comp=N,409nm,1.0s
YNE IAML 08 17 28.4
comp=E,284nm,1.2s
F07A Phinny Hill Vi 3.86 299 Pn 08 16 04.9 +1.1
F07A IAML 08 17 21.9
comp=N,278nm,0.8s
F07A IAML 08 17 26.6
comp=E,348nm,0.9s
HAWA Hanford 3.87 307 Pn 08 16 04.3 +0.4
HAWA IAML 08 17 30.8
comp=E,183nm,1.3s
D08A Wollman Farm, 3.98 319 Pn 08 16 06.1 +0.7
D08A IAML 08 17 43.9
comp=N,163nm,1.2s
TCUT Toone Canyon 4.05 137 Pn 08 16 07.4 +0.8
G06A Carlson Farm, 4.11 288 Pn 08 16 08.0 +0.8
G06A IAML 08 17 34.9
comp=N,159nm,1.5s
E07A Sunnyside 4.15 308 Pn 08 16 08.1 +0.4
E07A IAML 08 17 29.7
comp=E,223nm,0.9s
E07A IAML 08 17 50.1
comp=N,314nm,0.8s
GCMT Greycliff 4.20 65 Pn 08 16 10.5 +2.0
CTU Camp Tracy 4.23 143 Pn 08 16 11.2 +2.2
PINE Pine Mountain 4.24 268 Pn 08 16 09.3 +0.2
PINE IAML 08 17 46.6
comp=N,128nm,1.5s
PINE IAML 08 17 53.3
comp=E,135nm,1.2s
BW06 Boulder Array 4.25 107 Pn 08 16 12.9 +3.5
PD31 Pinedale Array 4.25 107 Pn 08 16 12.8 +3.4
PDAR Pinedale Array 4.25 107 Pn Pn 08 16 12.2 +2.8
comp=E,1.2nm,0.3s,baz=290,slow=12,SNR=116
comp=E,11nm,0.7s
C09A Chrisman Ranch 4.29 330 Pn 08 16 10.2 +0.5
LDM Libby Dam 4.33 358 Pn 08 16 11.1 +0.8
NEW Newport 4.38 342 Pn Pn 08 16 12.0 +1.2
comp=E,3.5nm,0.3s,baz=166,slow=12,SNR=34
NEW Lg Lg 08 17 20.6
comp=E,28nm,0.3s,baz=90,slow=4.8,SNR=8.8
comp=E,24nm,0.6s
NEW Newport 4.38 342 Pn 08 16 11.6 +0.7
MXC Moxie City 4.41 306 Pn 08 16 12.7 +1.3
MXC IAML 08 17 49.0
comp=N,138nm,2.1s
MXC IAML 08 18 03.0
comp=E,138nm,1.1s
K05A Summer Lake 4.45 254 Pn 08 16 13.2 +1.1
EPH Ephrata 4.51 317 Pn 08 16 14.2 +1.5
EPH IAML 08 17 40.0
comp=E,129nm,1.1s
EPH IAML 08 17 48.5
comp=N,190nm,1.2s
J05D Fort Rock, OR 4.53 261 Pn 08 16 13.8 +0.7
J05D IAML 08 17 59.8
comp=E,138nm,1.9s
J05D IAML 08 18 00.3
comp=N,133nm,1.2s
G05A Wamic 4.58 286 Pn 08 16 14.2 +0.5
G05A IAML 08 17 52.7
comp=N,180nm,1.3s
G05A IAML 08 17 57.5
comp=E,193nm,1.9s
NLU North Lily Min 4.73 151 Pn 08 16 16.6 +0.7
NLU IAML 08 17 49.0
comp=N,109nm,1.1s
NLU IAML 08 18 01.6
comp=E,182nm,0.9s
WIFE Three Sisters- 4.84 272 Pn 08 16 18.0 +0.5
LTY Liberty 5.01 311 Pn 08 16 19.7 +0.1
LTY IAML 08 18 11.2
comp=N,99nm,1.4s
LTY IAML 08 18 27.7
comp=E,98nm,1.1s
H04A Detroit Lake 5.11 279 Pn 08 16 21.8 +0.8
H04A IAML 08 18 06.7
comp=N,73nm,1.1s
J04A Umpqua Nationa 5.16 263 Pn 08 16 21.8 0.0
LON Longmire 5.41 301 Pn 08 16 26.0 +0.9
BBOR Butler Butte 5.65 260 Pn 08 16 26.9 -1.6
YBH Yreka Blue Hor 6.08 249 Pn Pn 08 16 35.6 +1.3
comp=N,0.4nm,0.3s,baz=56,slow=11,SNR=8.0
YBH Lg Lg 08 18 13.0
comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=0.9
comp=N,0.6nm,0.3s
NVAR Mina Array Bea 6.18 204 Pn Pn 08 16 37.1 +1.3
comp=N,1.7nm,0.3s,baz=16,slow=15,SNR=32
NVAR Pg Pb 08 16 50.8 -1.4
comp=N,6.9nm,0.3s,baz=22,slow=17,SNR=28
NVAR Lg Lg 08 18 17.1
comp=N,8.4nm,0.3s,baz=292,slow=32,SNR=5.2
comp=N,1.7nm,0.5s
PFO Pinyon Flats O 10.55 186 Pn Pn 08 17 37.6 +1.9
comp=N,0.1nm,0.3s,baz=24,slow=20,SNR=1.9
PFO Lg Lg 08 20 39.6
comp=N,0.3nm,0.3s,baz=348,slow=20,SNR=1.7
PFO LR LR 08 21 42.1
comp=N,107nm,18.5s,baz=98,slow=38
comp=N,1.8nm,0.8s
ANMO Albuquerque 11.33 141 Pn Pn 08 17 48.0 +1.6
baz=299,slow=19,SNR=1.9
ANMO Lg Lg 08 21 02.5
comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=2.3
comp=N,0.2nm,0.3s
ULM Lac du Bonnet 14.41 58 Pn Pn 08 18 28.1 -0.3
comp=N,1.4nm,0.6s,baz=263,slow=17,SNR=1.8
ULM Lg Lg 08 22 31.8
comp=N,0.2nm,0.3s,baz=333,slow=18,SNR=4.4
I37A Lemond, Waseca 15.59 83 Pn Pn 08 18 43.1 -1.0
I37A IAmb IAmb 08 19 17.9
comp=Z,14nm,1.2s
WMOK Wichita Mounta 15.68 121 Pn Pn 08 18 45.0 -0.4
OK029 Liberty Lake 15.86 116 Pn Pn 08 18 47.1 -0.5
OK029 IAmb IAmb 08 19 21.5
comp=Z,7.8nm,0.7s
SPMN Marine on St. 15.89 78 Pn Pn 08 18 47.9 0.0
QUOK Quay 16.12 113 Pn Pn 08 18 50.9 -0.1
TUL3 Leonard 16.88 112 Pn Pn 08 19 00.2 -0.4
TUL3 IAmb IAmb 08 19 06.6
comp=Z,5.5nm,0.7s
DLBC Dease Lake 17.05 332 Lg Lg 08 24 00.1
baz=162,slow=20
TX31 Lajitas Ar. Si 17.34 145 Pn Pn 08 19 05.4 -1.2
TXAR Lajitas Array 17.34 145 P P 08 19 08.5 +0.5
comp=Z,0.1nm,0.3s,baz=332,slow=10,SNR=11
comp=Z,0.9nm,0.9s
BRDY Brady 18.02 130 P Pn 08 19 13.7 -1.2
BRDY IAmb IAmb 08 19 18.0
comp=Z,9.1nm,0.9s
R40A Maddies Statio 18.11 101 P Pn 08 19 15.2 -0.8
JCT Junction City 18.22 133 P Pn 08 19 16.0 -1.4
YKA Yellowknife Ar 18.41 1 P Pn 08 19 21.3 +1.9
comp=Z,0.2nm,0.3s,baz=183,slow=12,SNR=9.9
comp=Z,3.2nm,0.8s
FCAR Ozark Folk Cen 19.38 107 P P 08 19 29.8 -0.4
T42A Van Buren 19.52 103 P P 08 19 31.0 -0.8
T42A IAmb IAmb 08 19 33.9
comp=Z,8.2nm,1.0s
X40A Basin Creek Fa 19.68 112 P P 08 19 32.7 -0.8
X40A IAmb IAmb 08 19 39.1
comp=Z,6.6nm,1.0s
Z47A Carrollton 23.65 108 P P 08 20 14.7 -1.0
J30M Hart River 23.71 337 P P 08 20 15.8 -0.5
J30M IAmb IAmb 08 20 26.6
comp=Z,4.1nm,1.1s
ACSO Alum Creek Sta 24.03 88 P P 08 20 19.8 +0.4
Q51A Peebles 24.20 91 P P 08 20 20.0 -1.0
ILAR Eielson Array 27.23 330 P P 08 20 50.1 +2.0
comp=Z,0.7nm,0.8s,baz=114,slow=7.0,SNR=6.7
comp=Z,0.7nm,0.8s
SCHQ Schefferville 32.51 53 P P 08 21 35.8 +0.7
comp=Z,1.7nm,0.9s,baz=291,slow=8.6,SNR=1.8
SCHQ LR LR 08 35 51.6
comp=Z,53nm,18.8s,baz=275,slow=38
comp=Z,1.7nm,0.9s
NOA NORSAR Array B 66.51 25 P P 08 25 54.3 +0.5
comp=Z,0.5nm,0.7s,baz=316,slow=6.6,SNR=3.8
comp=Z,0.5nm,0.7s
HFS Hagfors 67.98 25 P P 08 26 03.5 +0.3
comp=Z,1.9nm,0.8s,baz=290,slow=4.3,SNR=4.3
comp=Z,1.9nm,0.8s
FINES FINESS Array B 70.19 19 P P 08 26 17.3 +0.5
comp=Z,2.1nm,0.9s,baz=8.9,slow=9.8,SNR=2.1
comp=Z,2.1nm,0.9s
LPAZ La Paz 73.82 133 P P 08 26 40.0 +0.1
comp=Z,0.8nm,0.7s,baz=309,slow=6.5,SNR=5.3
comp=Z,0.8nm,0.7s
ESDC Sonseca Array 76.07 48 P P 08 26 52.4 +0.3
comp=Z,0.9nm,0.8s,baz=306,slow=4.5,SNR=5.2
comp=Z,0.9nm,0.8s
ZALV Zalesovo Beam 80.83 348 LR LR 09 08 34.3
comp=Z,37nm,18.9s,baz=204,slow=40
HHC Hu-ho-hao-te 85.58 326 *eP* **P 08 27 41.3 -1.6**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,90nm,5.0s
AAK Ala-Archa 93.20 353 LR LR 09 16 07.4
comp=Z,37nm,18.6s,baz=158,slow=39
QSPA South Pole Qui 133.94 180 PKP **PKPdf 08 34 20.6 +0.1**
comp=Z,0.6nm,0.5s,baz=315,slow=1.4,SNR=7.5

*NEIC **10** 08:15:23.2, 44.°09N×115.°08W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.06; $M_{\theta\theta}$1.19; $M_{\phi\phi}$-1.25; $M_{r\theta}$-0.68; $M_{\theta\phi}$-0.47; $M_{r\phi}$0.58; Fault plane solution: M_o1.58000×10^{15} NP1:ϕ_s326.31000°, δ84.69000°, λ,32.91000°. NP2:ϕ_s232.88000°, δ57.25000°, λ173.68000°. Principal axes: T 1.6653, Plg27.0000°, Azm195.0000°; N -0.1807, Plg57.0000°, Azm334.0000°; P -1.4846, Plg18.0000°, Azm95.0000°;*
*BUT **10** 08:15:24.3±1.5, 44.°13N±0.°02×115.°06W±0.°02, h10km±2km Error ellipse: s-maj=4.0km s-min=3.1km az=187.0*
NEIC 10 08:15:23.2±2.8, 44.°09N±0.°02×115.°08W±0.°02, h10km±2km, mb4.0/16, ML4.0/42, Mwr4.1/49, ML4.4/33(BUT), Error ellipse: s-maj=3.6km s-min=3.0km az=221.0, Western Idaho

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HLID Hailey 0.72 137 Pg Pg 08 15 37.1 0.0
HLID Sg Sb 08 15 47.5 -0.4
HLID IAML 08 15 48.3
9μm,0.5s
MFID Camas Ranch 0.86 219 Pg Pb 08 15 40.9 +0.5
MFID Sg Sb 08 15 52.5 +0.4
CNCI Crows Nest Can 1.19 97 Pn 08 15 47.0 +0.9
CNCI Sn 08 16 02.4 0.0
PLID Pearl Lake 1.19 327 Sn 08 16 02.2 -0.4
BCYI Bear Canyon 1.23 79 Sn 08 16 03.8 +0.3
BMO Blue Mountains 1.76 296 Pn Pn 08 15 53.8 -0.1
F10A Beach Ranch, E 2.42 322 Pn Pn 08 16 03.6 +0.7
J08A Circle Bar Ran 2.56 255 Pn Pn 08 16 05.7 +0.8
J08A IAML 08 17 02.0
comp=N,1μm,0.7s
QLMT Earthquake Lak 2.72 73 Pn Pn 08 16 07.2 0.0
ECR Eagle Creek 2.89 110 Pn Pn 08 16 09.6 0.0
FXWY Fox Creek 2.97 97 Pn Pn 08 16 09.6 -1.1
G08A Pilot Rock 3.01 295 Pn Pn 08 16 10.8 -0.3
I07A Izee 3.19 271 Pn 08 16 13.9 +0.5
I07A IAML 08 17 07.3
comp=E,267nm,0.9s
H17A Grant Village 3.25 83 Pn Pn 08 16 13.2 -1.4
ELK Elko 3.35 182 Pn Pn 08 16 17.6 +1.8
ELK IAML 08 16 49.7
comp=E,394nm,0.6s
ELK IAML 08 16 50.4
comp=E,426nm,1.0s
YMP Mirror Lake Pl 3.59 78 Pn Pn 08 16 19.3 +0.1
YMP IAML 08 17 21.8
comp=N,253nm,1.3s
YMP IAML 08 17 34.4
comp=E,249nm,1.3s
NOQ North Oquirrh 4.08 146 Pn Pn 08 16 25.3 -0.5
NOQ IAML 08 17 32.8
comp=N,202nm,0.9s
NOQ IAML 08 17 35.5
comp=E,187nm,1.1s
PD31 Pinedale Array 4.24 106 Pn Pn 08 16 27.5 -0.5
NEW Newport 4.41 342 Pn Pn 08 16 29.0 -1.2
NEW IAML 08 17 27.7
comp=E,170nm,1.2s
K05A Summer Lake 4.45 254 Pn Pn 08 16 30.4 -0.5
K05A IAML 08 18 06.9
comp=E,121nm,2.4s
K05A IAML 08 18 08.4
comp=N,100nm,2.4s
BSUT Blindstream Ca 4.79 136 Pn Pn 08 16 32.7 -3.0
BSUT IAML 08 18 02.8
comp=E,140nm,2.5s
BSUT IAML 08 18 04.6
comp=N,120nm,0.9s
WIFE Three Sisters- 4.85 272 Pn Pn 08 16 37.0 +0.5
WIFE IAML 08 18 01.8
comp=N,85nm,1.1s
WIFE IAML 08 18 07.1
comp=E,74nm,1.1s
J04A Umpqua Nationa 5.17 263 Pn Pn 08 16 40.5 -0.3
J04A IAML 08 18 18.9
comp=E,149nm,1.2s
PSUT Pine Spring 5.63 170 Pn Pn 08 16 48.9 +1.8
CROK Carrier 15.07 114 Pn Pn 08 18 56.6 +0.4
POST Post 15.28 132 Pn Pn 08 19 00.0 +1.1
POST IAmb IAmb 08 19 02.0
comp=Z,4.0nm,0.7s
T35A Sooner Cattle 15.82 111 Pn Pn 08 19 06.5 +0.5
OK029 Liberty Lake 15.84 116 Pn Pn 08 19 06.5 +0.3
T42A Van Buren 19.50 103 P P 08 19 50.3 -0.1
T42A IAmb IAmb 08 19 53.5
comp=Z,5.2nm,0.9s
VRDI Verde Repeater 23.99 326 P P 08 20 36.8 -1.1
VRDI IAmb IAmb 08 21 15.2
comp=Z,6.0nm,1.2s
ACSO Alum Creek Sta 24.02 88 P P 08 20 39.0 +0.8
P51A Williamsport 24.23 90 P P 08 20 40.1 0.0

*BGSI **10** 08:52:42.2±2.2, 25.°71S×29.°39E, h0km±89km, ML2.7, Presumed earthquake*
*BUL **10** 08:52:52.8±0.5, 25.°60S×28.°44E, h10km, MD3.4, Presumed earthquake*
ISC 10 08:52:54.7±1.8, 25.°33S±0.°08×28.°22E±0.°08, h4km, n11, σ1s33/15, South Africa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LBTB Lobatse 2.40 277 *i* P **Pn 08 53 35.1 +0.2**
LBTB *i* S **Sn 08 54 06.2 +1.5**
LPHEP Lephephe 2.91 312 *i* P **Pn 08 53 42.2 +0.4**
LPHEP *i* S **Sg 08 54 28.3 +0.1**
LPHEP IAML 08 54 48.2
comp=E,32nm,0.5s
MAKGR Makgori 3.13 260 *i* P **Pn 08 53 45.9 +1.0**
MSNA Messina 3.40 29 *i* P Pn 08 53 42.7 -5.8
MSNA *i* S **Sb 08 54 38.1 +1.0**
KDWAN Kaudwane 3.78 300 *i* P **Pn 08 53 55.0 +1.2**
KDWAN *i* S **Sb 08 54 47.6 -0.7**
KDWAN IAML 08 55 11.9
comp=N,34nm,0.4s
BROLN Tlhalogang 4.29 349 *i* P Pn 08 53 55.1 -5.7
BROLN *i* S **Sn 08 54 51.3 0.0**
BROLN IAML 08 55 24.0
comp=E,22nm,0.4s
MATP Matopo 4.88 3 *i* P **Pn 08 54 09.6 +0.5**
MATP *i* S **Sn 08 55 05.0 -1.2**
BLWY Bulawayo 5.17 4 *i* P **Pn 08 54 13.4 +0.3**
BLWY *i* S **Sn 08 55 12.4 -0.9**
UPI Upington 6.92 243 *i* S **Sb 08 56 18.8 +0.2**
AUGR Augrabies 7.75 243 *i* S **Sb 08 56 38.9 -3.5**
ARMS Ukamas 8.05 249 *i* S Sb 08 56 55.2 +4.1

*IDC **10** 08:59:31.8±3.4, 53.°60N×87.°82E, h0km, mbtmp3.0/2, ML3.0/1, Error ellipse: s-maj=28.8km s-min=17.5km az=56.0*
ASRS 10 08:59:29.0±0.8, 53.°55N×87.°63E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I46RU ZALESOVO INFRA 1.72 285 I I 09 10 20.0
0.1nm,1.1s,baz=101,slow=321,SNR=4.4
ZALV Zalesovo Beam 1.72 285 Pg Pg 09 00 03.8 +2.0
1.2nm,0.3s,baz=97,slow=17,SNR=12
ZALV Lg Lg 09 00 30.0
4.0nm,0.3s,baz=98,slow=25,SNR=11
KURBB Kurchatov Arra 6.33 246 Pn Pn 09 01 08.7 +5.3
0.9nm,0.3s,baz=62,slow=14,SNR=0.9
KURBB Lg Lg 09 02 56.4
0.2nm,0.3s,baz=62,slow=28,SNR=4.6
MKAR Makanchi Array 7.58 209 Pn Pn 09 01 26.2 +5.5
0.2nm,0.3s,baz=27,slow=12,SNR=1.7
MKAR Lg Lg 09 03 34.6
baz=32,slow=36
0.2nm,0.3s

*NOU **10** 09:23:02.6, 35.°25S×179.°13E, h421km, ML4.2/8, Off E. Coast of N. Island, N.Z.*
*WEL **10** 09:23:25.6±1.1, 36.°5S±10.°×177.°7E±1.°1, h270km±12km, M3.0/13, ML2.9/7, MLv3.0/13, Error ellipse: s-maj=16.7km s-min=9.9km az=47.3*
ISC 10 09:23:19.0±3.1, 36.°1S±0.°1×177.°6E±0.°1, h326km±16km, n80, σ1s84/88, Off east coast of North Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HAZ Te Kaha 1.66 175 P Pn 09 24 07.1 +1.4
HAZ S S 09 24 40.1 -3.0
GRZ Great Barrier 1.73 264 P Pn 09 24 06.9 +0.7
PKGZ Pakihiroa 1.81 168 P Pn 09 24 08.6 +1.9
WMGZ Waiomatatini S 1.84 159 P Pn 09 24 09.0 +2.1
WMGZ S S 09 24 43.5 -1.8
RUGZ Raukumara Rang 1.86 178 P Pn 09 24 08.0 +0.7
PUZ Puketiti 2.04 165 P Pn 09 24 10.7 +2.3
TWGZ Tauwhareparae 2.10 172 P Pn 09 24 11.1 +2.2
TWGZ S S 09 24 47.6 -1.2
URZ Urewera 2.19 190 P Pn 09 24 10.6 +1.1
URZ Urewera 2.19 190 P Pn 09 24 11.0 +1.5
URZ S S 09 24 47.7 -2.2
MWZ Matawai 2.23 181 P Pn 09 24 11.7 +1.8
MWZ S S 09 24 48.7 -1.9
TOZ Tahuroa Road 2.34 225 P Pn 09 24 13.1 +2.4
TKGZ Te Karaka 2.35 175 P Pn 09 24 13.0 +2.2
RAGZ Rawiri 2.40 183 P Pn 09 24 13.4 +2.1
RTZ Ruatahuna 2.56 191 P Pn 09 24 14.1 +1.4
RTZ S S 09 24 53.3 -2.3
RIGZ Rimuhau 2.61 177 P Pn 09 24 15.6 +2.6
RIGZ S S 09 24 55.1 -1.2
WCZ Waipu Caves 2.63 273 P Pn 09 24 14.2 +0.9
SNGZ Shannon Statio 2.69 184 P Pn 09 24 15.8 +2.1
SNGZ S S 09 24 56.1 -1.4
TLZ Tolley Road 2.77 216 P Pn 09 24 17.7 +3.3
MTHZ Maungataniwha 2.81 192 P Pn 09 24 16.5 +1.6
RAHZ Arahi 2.84 188 P Pn 09 24 17.2 +2.2
MRHZ Matea Rd 2.89 198 P Pn 09 24 17.2 +1.7
NMHZ Naumai 3.06 191 P Pn 09 24 19.6 +2.4
BKZ Black Stump Fm 3.18 196 P Pn 09 24 19.4 +1.1
BKZ Black Stump Fm 3.18 196 P Pn 09 24 19.5 +1.2
HIZ Hauiti 3.25 221 P Pn 09 24 22.9 +4.0
HIZ Hauiti 3.25 221 P Pn 09 24 22.3 +3.4
NTVZ North Tongarir 3.36 206 P Pn 09 24 22.4 +2.3
TMVZ Te Maari 3.36 206 P Pn 09 24 22.3 +2.1
OUZ Omahuta 3.37 284 P Pn 09 24 21.0 +0.8
OUZ Omahuta 3.37 284 P Pn 09 24 20.7 +0.5
ETVZ East Tongariro 3.38 206 P Pn 09 24 22.5 +2.1
WTVZ West Tongariro 3.41 207 P Pn 09 24 22.7 +2.1
OTVZ Oturere 3.42 206 P Pn 09 24 22.9 +2.1
TWVZ Taurewa 3.42 209 P Pn 09 24 23.2 +2.4
KWHZ Kaweka Forest 3.45 195 P Pn 09 24 23.0 +2.1
NGZ Ngauruhoe 3.45 207 P Pn 09 24 23.0 +1.9
COVZ Chateau Observ 3.50 207 P Pn 09 24 23.3 +1.8
TUVZ Tukino 3.52 205 P Pn 09 24 23.7 +1.9
FWVZ Far West T-bar 3.54 207 P Pn 09 24 24.2 +2.1
WHVZ Whangaehu Hut 3.55 206 P Pn 09 24 24.0 +1.8
TRVZ Turoa 3.58 206 P Pn 09 24 24.4 +1.9
WNVZ Wahianoa 3.59 206 P Pn 09 24 24.2 +1.7
BHHZ Black Hill Sta 3.59 199 P Pn 09 24 23.7 +1.3
MOVZ Moawhango 3.61 203 P Pn 09 24 24.2 +1.6
PKVZ Pokaka 3.65 209 P Pn 09 24 25.0 +2.0
KRHZ Kereru 3.67 195 P Pn 09 24 24.7 +1.5
MTVZ Mangateitei 3.69 206 P Pn 09 24 25.3 +1.9
VRZ Vera Road 3.77 216 P Pn 09 24 27.1 +3.0
PNHZ Pukenui 3.96 196 P Pn 09 24 27.2 +0.9
PXZ Pawanui 3.97 188 P Pn 09 24 27.5 +1.3
TSZ Takapari Road 4.16 198 P Pn 09 24 29.4 +1.1
WAZ Wanganui 4.19 209 P Pn 09 24 30.5 +1.9
PRHZ Porangahau 4.23 190 P Pn 09 24 30.7 +1.7
KHUZ Kahui Hut 4.27 221 P Pn 09 24 34.2 +4.7
DVHZ Dannevirke 4.34 195 P Pn 09 24 31.3 +1.1
POWZ Post Office Ro 4.52 198 P Pn 09 24 33.3 +1.1
PRWZ Pori Road 4.63 195 P Pn 09 24 35.0 +1.7
BFZ Birch Farm 4.70 193 P Pn 09 24 34.9 +0.8
BFZ Birch Farm 4.70 193 P Pn 09 24 35.3 +1.3
MRZ Mangatainoka R 4.82 199 P Pn 09 24 36.2 +0.7
TIWZ Tintock 4.86 195 P Pn 09 24 37.3 +1.4
HOWZ Holdsworth Sta 5.06 198 P Pn 09 24 39.0 +0.8
OGWZ Otaki Gorge 5.08 201 P Pn 09 24 39.1 +0.7
TMWZ Te Maipa 5.17 194 P Pn 09 24 41.3 +1.8
KIW Kapiti Island 5.20 203 P Pn 09 24 40.7 +1.0
MTW Mount Morrison 5.31 197 P Pn 09 24 41.7 +0.7
CAW Cannon Point 5.38 201 P Pn 09 24 42.4 +0.6
DUWZ D'Urville Isla 5.51 210 P Pn 09 24 43.5 +0.2
PAWZ Paruwai Farm 5.54 197 P Pn 09 24 44.5 +0.8
MSWZ Moikau Station 5.62 198 P Pn 09 24 45.0 +0.4
TCW Tory Channel 5.72 206 P Pn 09 24 46.6 +0.8
PLWZ Palliser 5.76 198 P Pn 09 24 47.1 +0.6
TUWZ Tuamarina 6.04 207 P Pn 09 24 50.9 +1.6
NNZ Nelson 6.08 212 P Pn 09 24 50.3 +0.4
QRZ Quartz Range 6.17 219 P Pn 09 24 52.2 +1.3
QRZ Quartz Range 6.17 219 P Pn 09 24 51.2 +0.3
BSWZ Blackbirch Sta 6.31 206 P Pn 09 24 53.5 +0.9
MRNZ Matariki Terra 6.50 214 P Pn 09 24 55.1 +0.3
THZ Tophouse 6.73 211 P Pn 09 24 58.2 +0.5
KHZ Kahutara 7.05 205 P Pn 09 25 02.5 +1.2

*ASRS **10** 09:30:38.0±1.5, 54.°30N×86.°87E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 10 09:30:40.4±3.2, 54.°29N×86.°88E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=26.7km s-min=17.8km az=54.0, Southwestern Siberia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I46RU ZALESOVO INFRA 1.26 255 I I 09 38 50.0
baz=74,slow=314,SNR=4.0
ZALV Zalesovo Beam 1.26 255 Pg Pg 09 31 03.5 -1.1
0.9nm,0.3s,baz=76,slow=17,SNR=5.3
ZALV Lg Lg 09 31 21.1
1.6nm,0.3s,baz=73,slow=25,SNR=6.2
KURBB Kurchatov Arra 6.29 238 Pn Pn 09 32 15.6 +1.2
0.1nm,0.3s,baz=52,slow=13,SNR=2.8
KURBB Lg Lg 09 34 00.3
baz=61,slow=35,SNR=1.0
0.7nm,0.2s
MKAR Makanchi Array 8.05 203 Pn Pn 09 32 39.6 +1.0
0.1nm,0.3s,baz=27,slow=14,SNR=5.2
MKAR Lg Lg 09 34 56.5
0.1nm,0.3s,baz=21,slow=29,SNR=1.5
0.2nm,0.3s

*NEIC **10** 09:33:45.9±2.2, 37.°33N±0.°05×71.°84E±0.°06, h145km±7km, mb4.2/18, Error ellipse: s-maj=8.1km s-min=6.2km az=221.0*
*NNC **10** 09:33:46.1±7.1, 37.°73N×71.°63E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=55.1km s-min=41.6km az=167.0*
*IDC **10** 09:33:48.5±6.0, 37.°43N×72.°27E, h152km±48km, mb3.2/3, mbtmp3.8/9, Error ellipse: s-maj=50.5km s-min=30.0km az=32.0*
ISC 10 09:33:44.4±0.7, 37.°25N±0.°04×71.°89E±0.°04, h137km±7km, n64, σ1s78/81, mb4.2/13, 4C-2D, Afghanistan-Tajikistan

border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	0.34	330		Pn	09 34 06.1	+2.2
MANEM				Sn	Sn	09 34 21.0	+2.3
GAR	**Garm**	2.14	325		Pn	09 34 21.5	+0.9
GAR				Sn	Sn	09 34 47.5	-0.9
DRK	**Karamyk**	2.23	358		Pn	09 34 23.6	+1.8
DRK				Sn	Sn	09 34 51.3	+0.7
CHGR	**Chuyangaron**	2.58	304		Pn	09 34 26.6	+0.6
CHGR				Sn	Sn	09 34 56.7	-1.3
BTK	**Batken**	2.92	344		Pn	09 34 32.3	+1.9
BTK				Sn	Sn	09 35 05.8	0.0
SHAA	**Shahritus**	3.02	277		Pn	09 34 32.3	+0.8
SHAA				Sn	Sn	09 35 07.6	-0.3
KSH2	**Kashi**	3.46	56	Pn	Pn	09 34 39.8	+2.5
KSH2				Sn	Sn	09 35 20.6	+2.3
KSH2				smax	smax		
	comp=N,230nm,0.8s						
KSH2				smax	smax		
	comp=E,330nm,0.8s						
KBL	**Kabul**	3.56	221		Pn	09 34 41.8	+3.1
KBL				Sn	Sn	09 35 23.9	+3.1
NIL	**Nilore**	3.76	162		Pn	09 34 43.2	+1.9
ARSB	**Arslanbob**	4.15	11		Pn	09 34 47.1	+0.6
ARSB				Sn	Sn	09 35 32.2	-2.5
JMU	**Jammu**	5.07	151	*e*S	Sn	09 35 54.5	-1.8
JMU				IAML		09 36 01.2	
	comp=E,122nm,0.4s						
JMU				IAML		09 36 01.3	
	comp=N,131nm,0.6s						
NRN	**Naryn**	5.25	36		Pn	09 35 01.1	0.0
TSSA	**Tissa**	5.62	140	*e*P	Pn	09 35 06.8	+0.7
TSSA				*e*S	Sn	09 36 07.2	-2.6
TSSA				IAML		09 36 11.4	
	comp=E,208nm,0.3s						
TSSA				IAML		09 36 11.6	
	comp=N,191nm,0.3s						
AAK	**Ala-Archa**	5.74	20	P	Pn	09 35 09.0	+1.5
	comp=N,9.1nm,0.3s,baz=207,slow=11,SNR=16						
AAK				S	Sn	09 36 09.5	-2.9
	comp=N,8.7nm,0.4s,baz=180,slow=20,SNR=10						
AAK	**Ala-Archa**	5.74	20	⇑P	Pn	09 35 08.4	+0.9
	comp=N,3.4nm,0.5s						
AAK				⇓S	Sn	09 36 09.8	-2.6
	comp=N,6.4nm,0.5s						
AAK	**Ala-Archa**	5.74	20			09 35 08.7	+1.2
THN	**Thein Dam**	5.76	145	*e*P	Pn	09 35 09.0	+1.2
THN				*e*S	Sn	09 36 10.5	-2.3
THN				IAML		09 36 16.7	
	comp=N,136nm,0.1s						
THN				IAML		09 36 16.8	
	comp=E,125nm,0.3s						
KK31	**Karatay Array**	5.94	350	⇓P	Pn	09 35 10.2	+0.2
	comp=E,5.3nm,0.4s						
KK31				⇑S	Sn	09 36 14.4	-2.7
	comp=E,23nm,0.3s,baz=168,slow=22,SNR=25						
KK31	**Karatay Array**	5.94	350		Pn	09 35 10.7	+0.6
KKAR	**Karatay Array**	5.94	350		Pn	09 35 10.6	+0.5
BOOM	**Boomskoye usch**	6.09	30		Pn	09 35 12.7	+0.4
DHRM	**DHARAMSHALA**	6.17	143	*e*P	Pn	09 35 14.3	+0.8
DHRM				*e*S	Sn	09 36 19.7	-3.3
DHRM				IAML		09 36 24.0	
	comp=E,217nm,0.4s						
DHRM				IAML		09 36 27.1	
	comp=E,133nm,0.1s						
TARG	**Taragay, Kyrgy**	6.39	44	Pn	Pn	09 35 17.7	+1.2
HNLY	**HANLEY**	7.33	125	*e*P	Pn	09 35 29.6	+0.4
HNLY				*e*S	Sn	09 36 49.9	-1.4
KLP	**Kalpa**	7.75	136	*ex*	x	09 35 41.5	
KLP				*e*S	Sn	09 36 57.6	-3.7
KLP				IAML		09 37 01.8	
	comp=E,54nm,0.1s						
KLP				IAML		09 37 03.0	
	comp=N,86nm,0.9s						
HRA	**Herat**	8.34	253	Pn	Pn	09 35 43.3	+0.7
KUDL	**Kundal**	9.87	156	*e*P	Pn	09 36 02.5	-0.3
KUDL				*e*S	Sn	09 37 43.8	-8.2
KUDL				IAML		09 37 46.2	
	comp=E,9.4nm,0.8s						
KUDL				IAML		09 37 48.8	
	comp=N,7.4nm,0.3s						
MK31	**Makanchi Array**	12.26	36	Pn	Pn	09 36 34.0	-0.4
MKAR	**Makanchi Array**	12.26	36	P	Pn	09 36 35.5	+1.1
	comp=N,0.3nm,0.5s,baz=212,slow=11,SNR=5.8						
MKAR	**Makanchi Array**	12.26	36	Pn	Pn	09 36 33.3	-1.1
WMQ	**Urumqi**	13.68	56	*e*P	Pn	09 36 55.1	+2.4
KURBB	**Kurchatov Area**	14.19	17	P	Pn	09 37 00.6	+1.7
	comp=N,0.6nm,0.3s,baz=204,slow=11,SNR=9.5						
KURK	**Kurchatov**	14.29	18	Pn	Pn	09 36 59.8	-0.5
AB31	**Akbulak array**	14.80	328	P	Pn	09 37 06.8	+0.2
	comp=N,0.4nm,0.2s,baz=132,slow=14,SNR=62						
AB31				S	Sn	09 39 40.8	-10
	comp=N,8.1nm,0.8s,baz=155,slow=22,SNR=11						
AB31	**Akbulak array**	14.80	328		P	09 37 07.2	-1.8
ABKAR	**Akbulak array**	14.80	328	Pn	Pn	09 37 07.0	+0.3
EVN	**Everest**	15.61	122	Pn	Pn	09 37 16.6	-0.9
EVN				IAmb	IAmb	09 37 23.6	
	comp=Z,4.9nm,0.5s						
BVAR	**Borovoye Array**	15.81	357	P	P	09 37 21.0	+0.8
	comp=Z,1.0nm,0.5s,baz=194,slow=12,SNR=2.1						
BORK	**Borovoye**	15.83	357	Pn	Pn	09 37 17.5	-1.9
AKTO	**Aktyubinsk**	16.51	327	P	P	09 37 30.4	+2.4
	comp=Z,3.1nm,0.4s,baz=130,slow=11,SNR=15						
AKTO	**Aktyubinsk**	16.51	327	⇑P	P	09 37 29.1	+1.2
	comp=Z,4.9nm,0.9s						
AKTO				⇑S	Sn	09 40 25.4	-6.2
	comp=Z,1.0nm,0.5s						
ZAA0	**Zalesovo Array**	18.94	24	P	P	09 37 55.2	+0.7
ZALV	**Zalesovo Beam**	18.94	24	P	P	09 37 55.5	+1.0
	comp=Z,2.0nm,0.5s,baz=221,slow=10,SNR=6.8						
ZALV	**Zalesovo Beam**	18.94	24	P	P	09 37 55.3	+0.8
ARTI	**Arti**	21.18	339	P	P	09 38 17.8	-0.8
HHC	**Hu-ho-hao-te**	30.84	71	*e*P	P	09 39 49.9	+2.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,63nm,4.1s						
MANT	**Manisa**	34.00	286	P	P	09 40 13.5	-1.7
BURAR	**Bucovina Array**	35.48	302	P	P	09 40 26.0	-1.6
HFS	**Hagfors**	42.92	321	P	P	09 41 32.5	+3.4
	comp=Z,0.6nm,0.5s,baz=78,slow=9.0,SNR=5.3						
	comp=Z,0.6nm,0.5s						
NBO00	**NORSAR Array S**	44.43	322	P	P	09 41 41.2	0.0
C19K	**Lookout Ridge**	67.40	18	P	P	09 44 25.8	+1.3
C19K				IAmb	IAmb	09 44 41.2	
	comp=Z,7.7nm,1.4s						
D19K	**Kuna River**	68.21	18	P	P	09 44 31.0	+1.4
D19K				IAmb	IAmb	09 44 51.2	
	comp=Z,5.8nm,1.3s						
G18K	**Tagagawik**	70.04	20	P	P	09 44 42.1	+1.3
G18K				IAmb	IAmb	09 45 07.6	
	comp=Z,7.3nm,1.5s						
INK	**Inuvik**	73.05	10	P	P	09 44 59.2	+0.4
INK				IAmb	IAmb	09 45 14.0	
	comp=Z,3.0nm,1.1s						
C36M	**Paulatuk**	73.06	6	P	P	09 44 59.9	+1.1
C36M				IAmb	IAmb	09 45 02.1	
	comp=Z,7.8nm,1.5s						
G31M	**Satah River**	74.24	10	P	P	09 45 06.9	+1.1
G31M				IAmb	IAmb	09 45 40.0	
	comp=Z,8.9nm,1.5s						
H29M	**Whitestone**	74.25	12	P	P	09 45 07.2	+1.3
H29M				IAmb	IAmb	09 45 20.0	
	comp=Z,3.8nm,1.4s						
YKA	**Yellowknife Ar**	80.46	3	P	P	09 45 41.5	+1.0
	comp=Z,0.5nm,0.6s,baz=355,slow=5.4,SNR=1.9						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	81.79	123	P	P	09 45 49.1	+1.0
	comp=Z,0.2nm,0.6s,baz=330,slow=5.1,SNR=1.8						
	comp=Z,0.2nm,0.6s						
WRA	**Warramunga Arr**	81.79	123	P	P	09 45 49.3	+1.2
WR8	**Warramunga Arr**	81.90	122	P	P	09 45 48.3	-0.4
WR8				IAmb	IAmb	09 46 01.6	
	comp=Z,8.2nm,1.4s						
AS31	**Alice Springs**	84.10	126	P	P	09 45 59.5	-0.5
AS31				IAmb	IAmb	09 46 29.3	
	comp=Z,1.9nm,1.5s						
ASAR	**Alice Springs**	84.10	126	P	P	09 45 59.2	-0.8
LLLB	**Lillooet**	91.67	9	P	P	09 46 35.1	-0.8

*SOME **10** 09:38:04.6, 43°.53N×69°.97E*
NNC 10 09:38:01.4±1.7, 43°.66N×69°.75E, h0km, mb3.7, mpv3.1,

2C, Error ellipse: s-maj=9.8km s-min=8.3km az=142.0,
Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	0.63	174	P	Pn	09 38 19.7	+2.1
	4.2nm,0.2s						
BRLS				S	Sn	09 38 29.9	+1.5
	11nm,0.6s						
KK31	**Karatay Array**	0.78	135	⇑P	Pg	09 38 15.5	-0.9
	1.1nm,0.3s						
KK31				⇑S	Sb	09 38 28.0	-1.1
	12nm,0.3s,baz=318,slow=37,SNR=5.4						
IUG	**Iuzhnay**	1.52	172	P	Pb	09 38 31.1	+0.5
	10nm,0.2s						
IUG				S	Sg	09 38 49.6	-0.7
	40nm,0.8s						
MRKS	**Merke**	2.70	109	Pg	Pb	09 38 51.2	+0.5
	3.0nm,0.3s						
MRKS				Lg	Lg	09 39 24.3	
	9.4nm,0.3s						
BTLS	**Baital**	3.38	64	Pg	Pg	09 39 05.5	-0.6
	12nm,0.5s						
BTLS				Lg	Lg	09 39 48.6	
	5.9nm,0.5s						
SGDS	**Sogindy**	3.55	92	Pg	Pg	09 39 07.4	-2.1
	2.0nm,0.3s						
SGDS				Lg	Lg	09 39 51.7	
	5.1nm,0.3s						
KRBS	**Karabastau**	4.30	87	Pg	Pg	09 39 21.4	-2.3
	2.1nm,0.7s						
KRBS				Lg	Lg	09 40 16.2	
	4.4nm,0.4s						
KST	**Kastek**	4.57	96	Pg	Pg	09 39 26.0	-3.0
	2.5nm,0.4s						
KST				Lg	Lg	09 40 23.7	
	5.9nm,0.4s						
KTBS	**Karatobe**	5.03	87	Pg	Pg	09 39 35.0	-2.7
	0.4nm,0.1s						
KTBS				Lg	Lg	09 40 39.1	
	6.2nm,0.4s						

*NAO **10** 09:51:13.7, 40°.83N×25°.99E, h33km, MB3.2*
*ATH **10** 09:51:17.0, 40°.37N×20°.59E, h8km±1km, ML3.3/37,*
Latitude uncertainty: 0 km; Longitude uncertainty: 1 km
*TIR **10** 09:51:17.6, 40°.33N×20°.48E, h14km±3km, Ml3.2/2*
*THE **10** 09:51:18.4, 40°.N±2°×2°.1E±°, h0km, M3.2/58, MLh3.2/58*
*IDC **10** 09:51:20.0±4.0, 40°.38N×20°.46E, h34km±45km, mb3.2/4,*
mbtmp3.4/9, ML3.4/3, MS2.4/2, Error ellipse: s-maj=21.4km
s-min=18.2km az=75.0
*SKO **10** 09:51:20.1, 40°.32N×20°.89E, h1km, ML3.0*
*PDG **10** 09:51:20.4±0.2, 40°.41N×20°.02E, h4km±1km, ML3.1/11,*
Error ellipse: s-maj=1.4km s-min=1.8km az=0.0
ISC 10 09:51:16.9±1.1, 40°.36N±0°.01×20°.59E±0°.02, h5km±9km,
n173, σ1°13/210, 14C-13D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	0.30	30	⇓Pg	Pb	09 51 24.4	-0.5
KBN				Sg	Sb	09 51 31.0	+0.8
PENT	**Pentalofos**	0.45	112	P	Pg	09 51 25.7	+0.1
PENT				S	Sg	09 51 31.3	-0.1
PENT	**Pentalofos**	0.45	112	P	Pg	09 51 25.6	+0.1
LMS2	**Laimos Florina**	0.63	41	P	Pb	09 51 29.7	-0.8
LMS2				S	Sb	09 51 38.1	-1.5
SRN	**Sarande**	0.66	223	⇑Pg	Pg	09 51 28.8	-0.8
SRN				Sg	Sg	09 51 38.7	-0.5
JAN	**Janina**	0.73	164	P	Pg	09 51 29.6	-1.4
JAN				S	Sg	09 51 41.4	+0.9
JAN	**Janina**	0.73	164	P	Pg	09 51 29.8	-1.1
JAN				S	Sb	09 51 42.0	-0.6
MSVA	**Metsovo**	0.75	142	P	Pg	09 51 31.8	+0.6
MSVA				S	Sg	09 51 42.0	+1.1
OHR	**Ohrid**	0.76	12	*i* Pg	Pn	09 51 33.6	-0.8
OHR				*i* Sg	Sn	09 51 46.2	-0.1
OHR				*e*Lg	Lg	09 51 48.0	
	comp=E,1μm,0.5s						
OHR				*e*Lg	Lg	09 51 54.6	
	comp=N,712nm,0.9s						
VLO	**Vlora**	0.84	277	Pn	Pg	09 51 32.0	-1.0
IGT	**Igoumenitsa**	0.85	194	Pg	Pg	09 51 32.9	-0.4
IGT				Sg	Sb	09 51 45.6	-0.4
IGT	**Igoumenitsa**	0.85	194	P	Pg	09 51 32.5	-0.8
IGT				S	Sb	09 51 45.5	-0.4
IGT	**Igoumenitsa**	0.85	194	P	Pg	09 51 32.4	-0.8
IGT				S	Sg	09 51 45.3	+1.0
KEK	**Kerkira**	0.89	223	P	Pg	09 51 32.4	-1.6
KZN	**Kozani**	0.90	93	P	Pg	09 51 34.4	+0.3
KZN	**Kozani**	0.90	93	P	Pg	09 51 34.5	+0.3
KZN				S	Sb	09 51 47.2	-0.2
PRMD	**Pramanda**	0.92	155	P	Pg	09 51 33.4	-1.1
PRMD				S	Sb	09 51 47.7	-0.2
PRMD	**Pramanda**	0.92	155	P	Pg	09 51 33.4	-1.1
LFKM	**Lefkimmi**	1.00	204	P	Pg	09 51 35.7	-0.4
LFKM				S	Sb	09 51 51.1	+0.9
PRGA	**Parga**	1.09	188	P	Pg	09 51 38.0	+0.2
TIR	**Tirane**	1.13	331	Pg	Pn	09 51 39.4	0.0
TIR				Sg	Sn	09 51 58.1	+2.8
TIR				AML	AML	09 52 04.1	
	comp=N,1.1nm,0.7s						
TETR	**Tetrakomo, Epi**	1.15	153	P	Pg	09 51 37.9	-0.9
TETR	**Tetrakomo, Epi**	1.15	153	P	Pg	09 51 38.0	-0.9
NASA	**Naoussa**	1.16	76	P	Pb	09 51 39.1	-0.3
KTI	**Kastanea**	1.16	88	P	Pg	09 51 39.3	+0.1
ARTB	**Arta**	1.24	166	P	Pg	09 51 40.7	0.0
ART2	**Arta**	1.25	166	P	Pg	09 51 40.5	-0.4
PHP	**Peshkopia**	1.32	355	P	Pb	09 51 43.1	+0.8
PHP				S	Sn	09 52 04.5	+4.2
PHP				AML	AML	09 52 08.7	
	comp=N,2.7nm,0.6s						
PHP	**Peshkopia**	1.32	355	P	Pb	09 51 42.5	+0.2
PHP				S	Sn	09 52 04.7	+4.4
THL	**Klokotos Trika**	1.35	126	P	Pn	09 51 41.8	-0.7
THL				S	Sn	09 52 01.3	+0.5
THL	**Klokotos Trika**	1.35	126	P	Pn	09 51 41.8	-0.7
TYRN	**Tyrnavos**	1.42	117	P	Pn	09 51 43.1	-0.2
TYRN				S	Sn	09 52 03.8	+1.4
TYRN	**Tyrnavos**	1.42	117	P	Pn	09 51 42.9	-0.4
LIT	**Litokhoron**	1.48	100	P	Pn	09 51 44.4	+0.2
LIT	**Litokhoron**	1.48	100	P	Pn	09 51 44.0	-0.2
AMPL	**Ampelaki**	1.52	161	P	Pg	09 51 46.3	+0.3
AMPL	**Ampelaki**	1.52	161	P	Pn	09 51 44.9	+0.2
TSLK	**Tsoukalades, L**	1.54	178	P	Pn	09 51 44.6	-0.3
TSLK				S	Sg	09 52 08.2	+1.9
TSLK	**Tsoukalades, L**	1.54	178	P	Pn	09 51 44.7	-0.3
LKD2	**Lefkada island**	1.57	178	Pn	Pn	09 51 45.7	+0.2
LKD2				Sn	Sg	09 52 08.6	+1.2
LKD2	**Lefkada island**	1.57	178	P	Pb	09 51 46.7	+0.2
LKD2				S	Sg	09 52 08.7	+1.2
LKD2	**Lefkada island**	1.57	178	P	Pn	09 51 45.3	-0.2
NYDR	**Nydri-Lefkada**	1.65	177	P	Pn	09 51 47.2	+0.6
NYDR				S	Sg	09 52 10.3	+0.5
NYDR	**Nydri-Lefkada**	1.65	177	P	Pn	09 51 46.5	-0.1
DRAG	**Dragano-Lefkad**	1.68	180	P	Pb	09 51 48.0	-0.3
DRAG				S	Sb	09 52 10.6	+0.9
DRAG	**Dragano-Lefkad**	1.68	180	P	Pn	09 51 46.9	0.0
EVR	**Evrytania**	1.72	147	P	Pb	09 51 49.3	+0.2
EVR	**Evrytania**	1.72	147	P	Pn	09 51 47.4	-0.3
SKO	**Skopje**	1.73	21	*i* Pg	Pg	09 51 51.0	+0.9
SKO				*e*Sg	Sg	09 52 16.0	+3.5
EVGI	**Lefkada island**	1.74	178	P	Pb	09 51 49.2	-0.2
EVGI				S	Sb	09 52 12.4	+0.9
EVGI	**Lefkada island**	1.74	178	P	Pn	09 51 47.9	+0.1
VAY	**Valandovo**	1.78	57	⇑*i* Pg	Pb	09 51 49.5	-0.5
VAY				*e*Sg	Sb	09 52 12.9	+0.3
VAY				*e*Lg	Lg	09 52 16.5	
	comp=N,157nm,0.7s						
VAY				*e*Lg	Lg	09 52 19.1	
	comp=E,88nm,0.5s						
THE	**Thessaloniki**	1.83	81	Pn	Pn	09 51 48.3	-0.6
THE	**Thessaloniki**	1.83	81	P	Pn	09 51 49.2	+0.2
THE	**Thessaloniki**	1.83	81	P	Pn	09 51 48.4	-0.6
SDA	**Shkodra**	1.88	334	Pn	Pg	09 51 52.0	-0.8
PVO	**Paravola**	1.89	157	P	Pb	09 51 51.8	-0.1
PVO	**Paravola**	1.89	157	P	Pn	09 51 50.4	+0.5
AGG	**Agios Georgios**	1.90	134	P	Pn	09 51 50.9	+0.9
AGG	**Agios Georgios**	1.90	134	P	Pn	09 51 50.2	+0.3
ULC	**Ulcinj**	1.90	328	⇓*i* Pn	Pb	09 51 51.1	-0.9
ULC				*i* Sn	Sb	09 52 16.0	0.0
FSK	**Fiskardo**	1.90	181	P	Pb	09 51 51.4	-0.7
FSK				S	Sb	09 52 17.0	+0.9
FSK	**Fiskardo**	1.90	181	P	Pn	09 51 50.6	+0.6
KNT	**Kendrikon**	1.92	65	P	Pn	09 51 50.3	-0.1
KNT	**Kendrikon**	1.92	65	P	Pn	09 51 50.0	-0.3
HORT	**Hortiatis**	1.93	82	P	Pn	09 51 50.7	+0.3
HORT	**Hortiatis**	1.93	82	P	Pn	09 51 50.3	-0.1
VSK1	**VASILIKIADES**	1.95	181	P	Pb	09 51 53.1	+0.2
ANX	**Ano Chora**	2.04	149	P	Pb	09 51 53.7	-0.9
ANX	**Ano Chora**	2.04	149	P	Pn	09 51 52.7	+0.7
PLEV	**Plevrona-Mesol**	2.05	162	P	Pn	09 51 53.1	+1.1
PLEV	**Plevrona-Mesol**	2.05	162	P	Pn	09 51 52.4	+0.4
DRME	**Dracevica, Mon**	2.11	330	⇓*i* Pn	Pb	09 51 54.6	-1.0
DRME				*i* Sn	Sb	09 52 22.1	0.0
DMLN	**Damoulianata-K**	2.13	185	P	Pb	09 51 55.4	-0.5
DMLN	**Damoulianata-K**	2.13	185	P	Pn	09 51 53.0	-0.1
AGRP	**Agrapidokambos**	2.15	156	P	Pn	09 51 53.4	0.0
SOH	**Sokhos**	2.15	77	P	Pn	09 51 54.2	+0.8
SOH	**Sokhos**	2.15	77	P	Pn	09 51 53.4	-0.1
PLG	**Polygyros**	2.18	89	P	Pn	09 51 54.4	+0.5
PLG	**Polygyros**	2.18	89	P	Pn	09 51 54.0	+0.1
VLS	**Valsamata**	2.18	180	P	Pn	09 51 53.4	-0.5
VLS	**Valsamata**	2.18	180	P	Pn	09 51 53.4	-0.5
EFP	**Efpalio**	2.19	152	P	Pb	09 51 56.2	-0.7
EFP	**Efpalio**	2.19	152	P	Pn	09 51 54.2	+0.3
MG00	**Magoula, Dorid**	2.21	151	P	Pn	09 51 54.7	+0.4
PYRG	**Pyrgos, Dorida**	2.24	150	P	Pn	09 51 54.8	0.0
AXS	**Araxos**	2.25	164	P	Pn	09 51 55.2	+0.4
AXS	**Araxos**	2.25	164	P	Pn	09 51 55.0	+0.3
SERG	**Sergoula**	2.25	149	P	Pb	09 51 57.4	-0.7
SERG	**Sergoula**	2.25	149	P	Pn	09 51 55.0	+0.1
AXAR	**Agios Charalam**	2.26	134	P	Pb	09 51 57.0	-1.1
AXAR	**Agios Charalam**	2.26	134	P	Pn	09 51 55.1	+0.1
PVY	**Plav**	2.28	348	⇑*i* Pn	Pb	09 51 58.2	-0.4
PVY				*i* Sn	Sg	09 52 28.6	-1.5
NEO	**Neokhori**	2.28	117	P	Pn	09 51 55.6	+0.3
NEO	**Neokhori**	2.28	117	P	Pn	09 51 55.3	0.0
PDG	**Podgorica**	2.30	334	⇑P	Pb	09 51 58.5	-0.3
PDG	**Podgorica**	2.30	334	⇓*i* Pn	Pb	09 51 57.6	-1.2
PDG				*i* Sn	Sb	09 52 27.2	-0.3
PDG	**Podgorica**	2.30	334	P	Pn	09 51 55.2	-0.2
KALE	**Kalithea**	2.31	148	P	Pb	09 51 58.1	-1.0
KALE	**Kalithea**	2.31	148	P	Pn	09 51 55.9	+0.2
BUM	**Brajici-Budva**	2.32	327	⇑*i* Pn	Pn	09 51 56.8	+1.0
BUM				*i* Sn	Sn	09 52 25.3	+0.5
PSARO	**Psaromita, Dor**	2.37	148	P	Pn	09 51 57.2	+0.7
AGEO	**AgiosGiorgios,**	2.39	151	P	Pn	09 51 57.3	+0.6
SRS	**Serrai**	2.40	71	P	Pn	09 51 57.1	+0.2
SRS	**Serrai**	2.40	71	P	Pn	09 51 56.9	+0.1
RLS	**Riolos of Patr**	2.40	163	P	Pn	09 51 57.7	+0.8
RLS	**Riolos of Patr**	2.40	163	P	Pn	09 51 57.3	+0.5
PAIG	**Paliouri**	2.41	99	P	Pn	09 51 58.6	+1.7
KKB	**Krupnik**	2.42	52	P	Pn	09 51 58.4	+1.3
ORTH	**Orthonies,Zaky**	2.51	178	P	Pn	09 51 57.8	-0.6
ORTH	**Orthonies,Zaky**	2.51	178	P	Pn	09 51 58.6	+0.2
ATAL	**Atalanti**	2.51	131	P	Pn	09 51 59.1	+0.7
ATAL	**Atalanti**	2.51	131	P	Pn	09 51 58.8	+0.4
CEME	**Cevo**	2.52	331	⇑*i* Pn	Pn	09 51 59.9	+1.3
CEME				*i* Sn	Sn	09 52 31.1	+1.4
LKR	**Lokris**	2.53	132	P	Pn	09 51 59.3	+0.7
LKR	**Lokris**	2.53	132	P	Pn	09 51 59.2	+0.7
DRO	**Drossia**	2.56	160	P	Pn	09 51 60.0	+0.9
DRO	**Drossia**	2.56	160	P	Pn	09 51 59.7	+0.6
IVA	**Berane**	2.56	348	⇓*i* Pn	Pb	09 52 02.4	-1.0
IVA				*i* Sn	Sb	09 52 36.0	+0.8
OUR	**Ouranopolis**	2.59	90	P	Pn	09 52 00.2	+0.7
OUR	**Ouranopolis**	2.59	90	P	Pn	09 51 59.2	-0.3
HCY	**Herceg Novi**	2.61	324	⇑*i* Pn	Pn	09 52 00.5	+0.7
HCY				*i* Sn	Sn	09 52 30.0	+0.4
KOME	**Kolasin**	2.61	342	⇓*i* Pn	Pb	09 52 03.0	-1.3
KOME				*i* Sn	Sb	09 52 34.6	-2.1
KLV	**Kalavryta, Ach**	2.61	152	P	Pn	09 52 02.1	+2.2
KLV	**Kalavryta, Ach**	2.61	152	P	Pn	09 52 00.1	+0.2
LTHK	**Lithakia**	2.66	176	P	Pn	09 52 01.1	+0.7
NVR	**Nevrokopi**	2.67	67	P	Pn	09 52 02.0	+1.4
NVR	**Nevrokopi**	2.67	67	P	Pn	09 52 00.9	+0.3
NKME	**Niksic**	2.70	333	⇑*i* Pn	Pn	09 52 03.0	+2.0
NKME				*i* Sn	Sn	09 52 35.9	+1.8
NOCI	**Noci**	2.72	280	P	Pn	09 52 01.7	+0.4
GUR	**Goura**	2.78	150	P	Pn	09 52 03.7	+1.5
GUR	**Goura**	2.78	150	P	Pn	09 52 02.8	+0.6
AOS2	**Alonissos-2**	2.78	115	P	Pn	09 52 02.2	+0.1
AMT	**Artemida-Makis**	2.96	163	P	Pn	09 52 06.1	+1.5
BRY	**Bratogost**	2.97	329	⇑*i* Pn	Pn	09 52 05.5	+0.7
BRY				*i* Sn	Sn	09 52 42.0	+1.1
LTK	**Loutraki**	2.98	141	P	Pn	09 52

JEG	**Eigenji**	**0.59**	**121**	*eP*	**Pn**	**10 20 52.2**	**+0.8**
JEG				S	**S**	**10 21 26.5**	**-0.3**
JYTA	**Yamagatataniai**	**0.79**	**79**	P	**Pn**	**10 20 52.4**	**+0.5**
JYTA				S	**S**	**10 21 27.2**	**-0.4**
JKSM	**Kasumi**	**0.92**	**279**	P	**Pn**	**10 20 52.9**	**+0.6**
JKG	**Kaga**	**0.94**	**28**	P	**Pn**	**10 20 52.8**	**+0.5**
JKG				*eS*	**S**	**10 21 27.9**	**-0.6**
INU	**Inuyama**	**1.01**	**95**	P	**Pn**	**10 20 53.4**	**+0.7**
JWY	**Kouya**	**1.23**	**187**	*eP*	**Pn**	**10 20 54.4**	**+0.5**
JKN2	**Miekihoku**	**1.27**	**161**	P	**Pn**	**10 20 54.4**	**+0.5**
JKN2				*eS*	**S**	**10 21 30.3**	**-1.0**
JGF	**Kuroka**	**1.29**	**83**	P	**Pn**	**10 20 54.5**	**+0.5**
JIE	**Ise**	**1.30**	**144**	P	**Pn**	**10 20 54.7**	**+0.7**
JTNC	**Tanabenakahech**	**1.63**	**185**	*eP*	**Pn**	**10 20 56.3**	**+0.4**
JTNC				*eS*	**S**	**10 21 34.0**	**-0.9**
HMMJ	**Hamamatsu 2**	**1.69**	**110**	*eP*	**Pn**	**10 20 56.6**	**+0.5**
JNY	**Yasuok**	**1.70**	**92**	*eP*	**Pn**	**10 20 56.5**	**+0.2**
JNY				*eS*	**S**	**10 21 35.7**	**-0.1**
JHMK	**Hamakita**	**1.74**	**111**	*eP*	**Pn**	**10 20 56.7**	**+0.3**
JAI	**Aioi**	**1.98**	**214**	*eP*	**Pn**	**10 20 58.9**	**+0.7**
JAI				*eS*	**S**	**10 21 39.6**	**+0.6**
JSG	**Sagara**	**2.12**	**111**	P	**Pn**	**10 21 00.1**	**+1.1**
JOI	**OKI**	**2.22**	**293**	*eP*	**Pn**	**10 21 00.5**	**+0.7**
MAJO	**Matsushiro**	**2.25**	**60**	P	**Pn**	**10 21 01.8**	**+1.8**
MJAR	**Matsushiro Arr**	**2.25**	**60**	P	**Pn**	**10 20 59.4**	**-0.7**
	1.7nm,0.5s,baz=233,slow=33,SNR=14						
MJAR				S	**S**	**10 21 42.7**	**+0.1**
	0.7nm,0.3s,baz=248,slow=13,SNR=1.8						
JYN	**Shimoh**	**2.26**	**88**	P	**Pn**	**10 21 00.3**	**+0.2**
JMN	**Monobe**	**2.32**	**223**	P	**Pn**	**10 21 01.5**	**+0.8**
JMN	**Monobe**	**2.32**	**223**	*eP*	**Pn**	**10 21 01.5**	**+0.8**
JGT2	**ShimaneMisato**	**2.71**	**263**	*eP*	**Pn**	**10 21 04.1**	**+0.4**
JHT	**Toyohira**	**2.86**	**255**	*eP*	**Pn**	**10 21 06.0**	**+0.9**
JHJ	**Hachijo jima 2**	**4.04**	**124**	P	**Pn**	**10 21 17.5**	**+1.1**
	32nm,0.3s,baz=335,slow=20,SNR=14						
JHJ2	**Mitsune**	**4.07**	**124**	P	**Pn**	**10 21 17.6**	**+0.9**
JTU	**Tsushima**	**5.32**	**262**	P	**Pn**	**10 21 30.5**	**+0.4**
KSRS	**Korea Array**	**6.64**	**290**	P	**Pn**	**10 21 46.5**	**+1.3**
	3.0nm,0.6s,baz=109,slow=12,SNR=16						
JTM	**Tenmabayashi**	**6.77**	**36**	P	**Pn**	**10 21 46.5**	**-0.1**
ERM	**Erimo**	**8.73**	**39**	P	**Pn**	**10 22 09.0**	**-0.7**
JEM	**Erimo**	**8.73**	**39**	P	**Pn**	**10 22 09.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**9.22**	**343**	P	**Pn**	**10 22 16.7**	**+1.2**
	14nm,0.6s,baz=157,slow=11,SNR=23						
JCJ	**Chichijima**	**9.96**	**145**	P	Pn	10 22 18.8	-5.9
	50nm,0.6s,baz=353,slow=17,SNR=21						
JCJ				S	S	10 24 03.7	-14
	54nm,0.3s,baz=100,slow=23,SNR=9.8						
JCJ	**Chichijima**	**9.96**	**145**	P	**Pn**	**10 22 24.7**	**0.0**
KLR	**Kul'dur**	**14.09**	**349**	P	**P**	**10 23 10.3**	**-1.3**
	4.1nm,0.6s,baz=178,slow=6.3,SNR=11						
HILR	**Hailar Array B**	**18.34**	**325**	P	**P**	**10 23 56.9**	**-0.8**
	3.4nm,0.5s,baz=125,slow=13,SNR=5.0						
SONM	**Songino Array**	**25.05**	**309**	P	**P**	**10 25 00.5**	**-0.5**
	1.5nm,0.3s,baz=120,slow=8.5,SNR=9.0						
	1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**39.68**	**314**	P	**P**	**10 27 06.1**	**-0.3**
	1.2nm,0.4s,baz=115,slow=9.7,SNR=4.8						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	**41.13**	**303**	P	**P**	**10 27 18.2**	**-0.2**
	1.6nm,0.6s,baz=90,slow=11,SNR=14						
	1.6nm,0.6s						
NRIK	**Noril'sk**	**42.88**	**337**	P	**P**	**10 27 32.6**	**+0.7**
	4.1nm,0.5s,baz=89,slow=6.7,SNR=5.0						
	4.1nm,0.5s						
KURBB	**Kurchatov Arra**	**43.41**	**309**	P	**P**	**10 27 35.9**	**-0.5**
	1.2nm,0.5s,baz=89,slow=8.6,SNR=24						
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**48.28**	**313**	P	**P**	**10 28 14.5**	**+0.4**
	1.2nm,0.5s,baz=88,slow=11,SNR=4.4						
	1.2nm,0.5s						
ILAR	**Eielson Array**	**53.25**	**31**	P	**P**	**10 28 51.0**	**+0.4**
	0.3nm,0.5s,baz=263,slow=5.6,SNR=8.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**55.10**	**182**	P	**P**	**10 29 03.1**	**-1.2**
	1.0nm,0.5s,baz=358,slow=7.7,SNR=22						
WRA				PcP	**PcP**	**10 30 01.0**	**+0.1**
	0.3nm,0.7s,baz=360,slow=4.2,SNR=1.6						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**58.81**	**182**	P	**P**	**10 29 29.5**	**-0.6**
	0.6nm,0.6s,baz=14,slow=13,SNR=7.7						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**63.84**	**338**	P	**P**	**10 30 02.7**	**-0.2**
	0.8nm,0.4s,baz=56,slow=8.9,SNR=10						
	0.8nm,0.4s						
YKA	**Yellowknife Ar**	**67.42**	**28**	P	**P**	**10 30 25.9**	**+0.3**
	0.6nm,0.8s,baz=69,slow=8.0,SNR=5.3						
	0.6nm,0.8s						
FINES	**FINESS Array B**	**68.04**	**331**	P	**P**	**10 30 28.9**	**-0.6**
	1.8nm,0.9s,baz=83,slow=6.0,SNR=6.8						
	1.8nm,0.9s						
HFS	**Hagfors**	**73.58**	**334**	P	**P**	**10 31 02.5**	**-0.1**
	0.5nm,0.4s,baz=43,slow=5.0,SNR=5.2						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	**73.81**	**335**	P	**P**	**10 31 04.1**	**+0.1**
	0.5nm,0.5s,baz=331,slow=12,SNR=2.7						
	0.5nm,0.5s						
BRTR	**Keskin Array B**	**76.41**	**309**	P	**P**	**10 31 19.2**	**0.0**
	0.3nm,0.4s,baz=74,slow=11,SNR=6.1						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**81.97**	**43**	P	**P**	**10 31 49.3**	**+0.2**
	0.3nm,0.6s,baz=15,slow=3.5,SNR=2.7						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**94.65**	**49**	P	**P**	**10 32 50.5**	**+0.9**
	0.2nm,0.6s,baz=302,slow=2.2,SNR=5.2						
	0.2nm,0.6s						
LPAZ	**La Paz**	**151.38**	**54**	PKPbc	**PKPbc**	**10 39 21.9**	**+0.6**
	0.7nm,0.5s,baz=45,slow=4.3,SNR=2.8						

*SJA **10** 10:27:35.1±0.6,20.°95S×69.°31W,h69km±5km, ML4.1, MW4.0*

*GUC **10** 10:27:37.6±0.7,20.°97S×69.°31W,h60km±5km, ML4.1*

*NEIC **10** 10:27:37.7±1.6,20.°97S±0.°01×69.°37W±0.°06, h60km±6km, mb4.2/8, Mwr4.1/12, ML4.1(GUC), Error ellipse: s-maj=8.5km s-min=1.4km az=98.0*

*NEIC **10** 10:27:37.6,20.°97S×69.°36W, h61km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.09; $M_{\theta\theta}$0.83; $M_{\phi\phi}$-0.92; $M_{r\theta}$-0.25; $M_{\theta\phi}$-1.18; $M_{\phi r}$-0.23; Fault plane solution: $M_0$1.51000×10^{15} NP1:ϕ_s72.07000°, δ85.98000°, λ-168.41000°. NP2:ϕ_s341.25000°, δ78.44000°, λ-4.11000°. Principal axes: T 1.4306, Plg5.0000°, Azm206.0000°; N 0.1418, Plg78.0000°, Azm91.0000°; P -1.5724, Plg11.0000°, Azm297.0000°;*

ISC 10 10:27:37.0±0.7, 20.°97S±0.°03×69.°35W±0.°05, h62km±8km, n76, σ1^{s}48/100, 9C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB02	**IPOC Station P**	**0.61**	**236**	*eP*		**Pn**	**10 27 50.8**	**+0.4**
PB02				*eS*		**Sn**	**10 28 01.8**	**+1.5**
PB02				IAML			10 28 06.0	
	comp=Z,13μm,0.4s							
PB02	**IPOC Station P**	**0.61**	**236**			**Pn**	**10 27 50.8**	**+0.4**
PB02					Sn	**Sn**	**10 28 01.0**	**+0.7**
PB02	**IPOC Station P**	**0.61**	**236**	↑	*iP*	**Pn**	**10 27 50.8**	**+0.4**
PB02					*iS*	**Sn**	**10 28 01.0**	**+0.7**
PB02				IAML			10 28 02.4	
	comp=E,14μm,0.5s							
PB09	**IPOC Station P**	**0.83**	**173**	*eP*		**Pn**	**10 27 52.9**	**-0.2**
PB09				IAML			10 28 07.2	
	comp=Z,12μm,0.7s							
PB09	**IPOC Station P**	**0.83**	**173**			**Pn**	**10 27 53.5**	**+0.4**
PB09					Sn	**Sn**	**10 28 05.7**	**+0.9**
PB09	**IPOC Station P**	**0.83**	**173**	↑	*iP*	**Pn**	**10 27 53.5**	**+0.4**
PB09					*iS*	**Sn**	**10 28 05.8**	**+0.9**
PB09				IAML			10 28 07.6	
	comp=E,15μm,0.3s							
PB08	**IPOC Station P**	**0.85**	**13**	*eP*		**Pn**	**10 27 52.8**	**-0.8**
PB08				*eS*		**Sn**	**10 28 05.9**	**+0.2**
PB08				IAML			10 28 06.7	
	comp=Z,4μm,0.1s							
PB08	**IPOC Station P**	**0.85**	**13**			**Pn**	**10 27 53.2**	**-0.4**
PB08					Sn	**Sn**	**10 28 05.7**	**-0.1**
PB08	**IPOC Station P**	**0.85**	**13**	↑	*iP*	**Pn**	**10 27 53.5**	**-0.1**
PB08					*iS*	**Sn**	**10 28 05.5**	**-0.2**
PB08				IAML			10 28 06.2	
	comp=N,5μm,0.3s							
PB07	**IPOC Station P**	**0.90**	**213**	*eP*		**Pn**	**10 27 53.8**	**-0.2**
PB07				*eS*		**Sn**	**10 28 07.9**	**+1.4**
PB07				IAML			10 28 09.8	
	comp=Z,4μm,0.4s							
PB07	**IPOC Station P**	**0.90**	**213**			**Pn**	**10 27 54.5**	**+0.5**
PB07					Sn	**Sn**	**10 28 07.8**	**+1.3**
PB07	**IPOC Station P**	**0.90**	**213**	↑	*iP*	**Pn**	**10 27 54.5**	**+0.5**
PB07					*iS*	**Sn**	**10 28 07.4**	**+0.8**
PB07				IAML			10 28 08.3	
	comp=E,7μm,0.3s							
TA02	**Huaiquique**	**1.01**	**314**	*eP*		**Pn**	**10 27 55.7**	**+0.5**
TA02				*eS*		**Sn**	**10 28 11.2**	**+2.4**
TA02				IAML			10 28 13.2	
	comp=Z,5μm,0.1s							
TA02	**Huaiquique**	**1.01**	**314**	*eP*		**Pn**	**10 27 55.3**	**+0.1**
TA02				IAML			10 28 11.7	
	comp=N,12μm,0.2s							
PB03	**IPOC Station P**	**1.13**	**199**	*eP*		**Pn**	**10 27 57.5**	**+0.5**
PB03				*eS*		**Sn**	**10 28 15.6**	**+3.7**
PB03				IAML			10 28 17.1	
	comp=Z,2μm,0.4s							
PB03	**IPOC Station P**	**1.13**	**199**			**Pn**	**10 27 57.5**	**+0.5**
PB03					Sn	**Sn**	**10 28 12.4**	**+0.6**
PB03	**IPOC Station P**	**1.13**	**199**	↑	*iP*	**Pn**	**10 27 57.5**	**+0.5**
PB03					*iS*	**Sn**	**10 28 12.3**	**+0.4**
PB11	**IPOC Station P**	**1.24**	**347**	*eP*		**Pn**	**10 27 58.8**	**+0.4**
PB11				*eS*		**Sn**	**10 28 14.4**	**+0.1**
PB11				IAML			10 28 15.8	
	comp=Z,4μm,0.3s							
PB11	**IPOC Station P**	**1.24**	**347**			**Pn**	**10 27 59.0**	**+0.5**
PB11					Sn	**Sn**	**10 28 15.3**	**+1.0**
PB11	**IPOC Station P**	**1.24**	**347**	↓	*iP*	**Pn**	**10 27 58.9**	**+0.4**
PB11					*iS*	**Sn**	**10 28 14.8**	**+0.4**
PB11				IAML			10 28 16.4	
	comp=E,9μm,0.4s							
GO01	**Chusmiza**	**1.31**	**7**	*eP*		**Pn**	**10 27 57.7**	**-1.9**
GO01				*eS*		**Sn**	**10 28 18.1**	**+1.7**
GO01				IAML			10 28 19.2	
	comp=Z,4μm,0.1s							
GO01	**Chusmiza**	**1.31**	**7**			**Pn**	**10 28 00.0**	**+0.4**
GO01					Sn	**Sn**	**10 28 17.5**	**+1.0**
GO01	**Chusmiza**	**1.31**	**7**	↑	*iP*	**Pn**	**10 28 00.0**	**+0.4**
GO01					*iS*	**Sn**	**10 28 16.9**	**+0.5**
PSGCX	**Pisagua**	**1.55**	**332**	*eP*		**Pn**	**10 28 02.1**	**-0.4**
PSGCX				*eS*		**Sn**	**10 28 22.5**	**+0.8**
PSGCX				IAML			10 28 26.1	
	comp=Z,2μm,0.4s							
PSGCX	**Pisagua**	**1.55**	**332**			**Pn**	**10 28 02.3**	**-0.2**
PSGCX					Sn	**Sn**	**10 28 22.0**	**+0.4**
PSGCX	**Pisagua**	**1.55**	**332**	↓	*iP*	**Pn**	**10 28 02.7**	**+0.2**
PSGCX					*iS*	**Sn**	**10 28 21.5**	**-0.2**
PB06	**IPOC Station P**	**1.74**	**187**	*eP*		**Pn**	**10 28 05.2**	**+0.1**
PB06				IAML			10 28 36.0	
	comp=E,1μm,0.3s							
PB06	**IPOC Station P**	**1.74**	**187**			**Pn**	**10 28 05.8**	**+0.7**
PB06					Sn	**Sn**	**10 28 27.2**	**+0.9**
PB06	**IPOC Station P**	**1.74**	**187**	↑	*iP*	**Pn**	**10 28 05.7**	**+0.7**
PB06					*iS*	**Sn**	**10 28 26.8**	**+0.5**
PB06				IAML			10 28 30.5	
	comp=E,2μm,0.4s							
PB05	**IPOC Station P**	**2.03**	**203**	*eP*		**Pn**	**10 28 08.8**	**-0.2**
PB05				IAML			10 28 53.4	
	comp=Z,605nm,0.7s							
PB05	**IPOC Station P**	**2.03**	**203**			**Pn**	**10 28 09.4**	**+0.3**
PB05	**IPOC Station P**	**2.03**	**203**	↑	*iP*	**Pn**	**10 28 09.3**	**+0.3**
PX02	**IPOC Station P**	**2.15**	**338**	*eP*		**Pn**	**10 28 10.3**	**-0.4**
AF01	**San Pedro de A**	**2.25**	**151**	*eP*		Pn	10 27 56.3	-16
AF01				IAML			10 28 58.0	
	comp=Z,1μm,0.4s							
AF01	**San Pedro de A**	**2.25**	**151**			**Pn**	**10 28 15.4**	**+3.2**
AF01	**San Pedro de A**	**2.25**	**151**	*eP*		**Pn**	**10 28 15.8**	**+3.6**
PB12	**IPOC Station P**	**2.52**	**338**	*eP*		**Pn**	**10 28 15.8**	**0.0**
PB12				IAML			10 29 00.3	
	comp=Z,873nm,0.7s							
PB12	**IPOC Station P**	**2.52**	**338**			**Pn**	**10 28 15.9**	**+0.2**
PB12	**IPOC Station P**	**2.52**	**338**	↑	*eP*	**Pn**	**10 28 15.7**	**0.0**
PB16	**IPOC Station P**	**2.63**	**357**	Pn		**Pn**	**10 28 17.4**	**-0.2**
PB16	**IPOC Station P**	**2.63**	**357**	*eP*		**Pn**	**10 28 19.4**	**+1.8**
AP01	**Chacalluta**	**2.75**	**340**	*eP*		**Pn**	**10 28 20.6**	**+1.9**
AP01				IAML			10 29 01.7	
	comp=Z,1μm,0.4s							
AP01	**Chacalluta**	**2.75**	**340**	Pn		**Pn**	**10 28 19.5**	**+0.8**
AP01	**Chacalluta**	**2.75**	**340**	*eP*		**Pn**	**10 28 20.1**	**+1.3**
PB18	**Visviri**	**3.37**	**358**	Pn		**Pn**	**10 28 31.0**	**+3.3**
PB18	**Visviri**	**3.37**	**358**	*eP*		Pn	10 28 32.6	+4.9
PB14	**IPOC Station P**	**3.76**	**195**	Pn		**Pn**	**10 28 32.4**	**-0.5**
PB14	**IPOC Station P**	**3.76**	**195**	*eP*		**Pn**	**10 28 32.2**	**-0.6**
LPAZ	**La Paz**	**4.80**	**14**	*eP*		**Pn**	**10 28 45.6**	**-1.8**
LPAZ	**La Paz**	**4.80**	**14**	Pn		**Pn**	**10 28 48.1**	**+0.7**
AC01	**Pan de Azucar**	**5.28**	**192**	Pn		**Pn**	**10 28 52.9**	**-0.4**
AC02	**Maricunga**	**5.84**	**178**	Pn		**Pn**	**10 29 00.2**	**-1.2**
GO03	**Copiapo**	**6.64**	**187**	Pn		**Pn**	**10 29 10.3**	**-1.7**
AC04	**Llanos de Chal**	**7.37**	**192**	Pn		**Pn**	**10 29 20.1**	**-1.9**
AC05	**El Transito**	**7.87**	**186**	Pn		**Pn**	**10 29 26.7**	**-2.3**
LCO	**Las Campanas**	**8.10**	**188**	Pn		**Pn**	**10 29 29.2**	**-2.9**
CO01	**Juntas del Tor**	**8.99**	**184**	Pn		**Pn**	**10 29 41.5**	**-2.9**
GO04	**Tololo Observa**	**9.25**	**188**	Pn		**Pn**	**10 29 44.5**	**-3.4**
CO03	**El Pedregal**	**9.90**	**187**	Pn		**Pn**	**10 29 52.5**	**-4.1**
CO02	**Combarbal**	**10.29**	**188**	Pn		**Pn**	**10 29 58.6**	**-3.5**
ZON	**Zonda**	**10.55**	**177**	Pn		**Pn**	**10 30 02.4**	**-3.1**
CO04	**Los Peladeros**	**11.12**	**187**	Pn		**Pn**	**10 30 08.9**	**-3.6**
PTLB	**Pontes e Lacer**	**11.15**	**62**			**Pn**	**10 30 13.2**	**-0.5**
VA03	**San Esteban**	**11.79**	**185**	Pn		**Pn**	**10 30 19.9**	**-2.6**
VILB	**Vilhena**	**11.84**	**49**			**Pn**	**10 30 22.7**	**-0.5**
VA01	**Torpederas**	**12.17**	**189**	Pn		**Pn**	**10 30 25.7**	**-1.8**
MT01	**Popeta**	**12.95**	**187**	Pn		**Pn**	**10 30 35.2**	**-3.0**
BI02	**San Fabin de**	**15.72**	**186**	Pn		**Pn**	**10 31 14.5**	**-0.2**
BI02				IAmb		IAmb	10 31 30.4	
	comp=Z,30nm,0.9s							
CPSB	**Cacapava Do Su**	**17.13**	**126**			**Pn**	**10 31 32.9**	**+0.6**
CPSB				IAmb		IAmb	10 31 39.5	
	comp=Z,19nm,1.4s							
BOAV	**Boa Vista**	**24.78**	**21**	P		**P**	**10 32 53.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**38.80**	**3**	P		**P**	**10 34 55.9**	**0.0**
CELP	**Cerrillos**	**38.90**	**4**	P		**P**	**10 34 57.7**	**+0.9**
TXAR	**Lajitas Array**	**59.96**	**325**	P		**P**	**10 37 38.3**	**+1.1**
TX31	**Lajitas Ar. Si**	**59.96**	**325**	P		**P**	**10 37 38.5**	**+1.2**
TX31				IAmb		IAmb	10 38 01.3	
	comp=Z,2.5nm,1.4s							
SNAA	**Sanae**	**62.91**	**161**	P		**P**	**10 37 55.9**	**-0.7**
SNAA				IAmb		IAmb	10 38 25.2	
	comp=Z,1.8nm,1.2s							
QSPA	**South Pole Qui**	**69.22**	**180**	P		**P**	**10 38 37.1**	**0.0**

TAP 10 10:34:33.4, 24.°50N×121.°83E, h11km, ML1.5, 2C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EWUT	**Wuta**	**0.07**	**218**	↑	P	Pg	10 34 36.7	+1.0
EWUT					S	Sg	10 34 38.9	+1.6
ESAO	**Su ao**	**0.08**	**12**	P		Pg	10 34 35.8	+0.1
ESAO					S	Sg	10 34 38.3	+0.8
ENA	**Nanau**	**0.11**	**227**	*eP*		Pb	10 34 36.9	-0.7
ENA					S	Sg	10 34 38.8	+0.7
TWC	**Suao**	**0.11**	**11**	↑	*iP*	Pg	10 34 36.8	+0.6
TWC					*iS*	Sg	10 34 39.2	+1.0
NDS	**Dongshan**	**0.17**	**323**	*i*	P	Pb	10 34 37.9	-0.7
NDS					S	Sg	10 34 41.1	+1.5
TWE	**Neicheng**	**0.26**	**327**	*i*	P	Pb	10 34 39.5	-0.7
TWE					S	Sb	10 34 43.7	-1.0
ENTT	**Nioudou**	**0.27**	**300**	P		Pb	10 34 40.0	-0.4
ENTT					S	Sb	10 34 44.6	-0.5
LATG	**Datong**	**0.28**	**277**	P		Pg	10 34 39.5	+0.5
LATG					S	Sb	10 34 44.4	-0.8
FUSB	**Fushanzhiwuyua**	**0.34**	**320**	P		Pb	10 34 41.4	-0.1
FUSB					S	Sb	10 34 46.8	-0.2
EOS2	**EOS2**	**0.38**	**102**	P		Pb	10 34 42.0	-0.1
NACB	**Ninganchiao**	**0.39**	**213**	P		Pg	10 34 41.2	+0.2
NWLT	**Wulai**	**0.40**	**313**	P		Pg	10 34 41.6	+0.2
NWLT					*eS*	Sg	10 34 46.0	-0.7
NNSB	**Datong**	**0.41**	**260**	P		Pb	10 34 42.4	-0.4
NNSH	**Datong**	**0.41**	**260**	P		Pb	10 34 42.6	-0.2
ETLH	**Xiulin Townshi**	**0.43**	**227**	P		Pg	10 34 42.4	+0.5
YHNB	**Yeheng**	**0.44**	**292**	P		Pb	10 34 43.8	+0.5
NSK	**Sanguang**	**0.46**	**292**	P		Pb	10 34 43.4	-0.2

IDC 10 10:37:58.3±461.0, 52.°94N×63.°42E, h0km, Error ellipse: s-maj=206.8km s-min=91.9km az=68.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I31KZ	**AKTYUBINSK INF**	**4.21**	**235**	I		I	11 04 00.0	
	0.1nm,0.5s,baz=50,slow=310,SNR=4.1							
I43RU	**DUBNA INFRASON**	**15.52**	**295**	I		I	12 14 10.0	
	baz=95,slow=317,SNR=2.5							
I37NO	**I37NO**	**26.21**	**325**	I		I	13 17 20.0	
	baz=102,slow=322,SNR=1.8							

*STR **10** 10:46:27.5±0.7, 44.°4N×4.°4E±*, h0km, MLv2.7/10, LOCSAT earthModelID haslach_taup-2.11 preliminary*

*MDD **10** 10:46:27.7±0.4, 44.°37N×1.°61W, h0km, mb_Lg2.4/14, Error ellipse: s-maj=3.6km s-min=2.4km az=165.0*

ISC 10 10:46:26.0±0.8, 44.°30N±0.°03×1.°61W±0.°03, h0km, n23, σ1^{s}00/38, France

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TERF	**Tercis-les-Bai**	**0.72**	**150**	Pg		**Pb**	**10 46 41.0**	**-0.3**
OSSF	**Osses**	**1.07**	**166**	Pg		**Pn**	**10 46 48.0**	**-0.2**
OSSF				Sg		**Sn**	**10 47 04.2**	**+0.3**
EALK	**Alkurruntz**	**1.08**	**176**	Pg		**Pn**	**10 46 48.2**	**-0.3**
EALK				Sg		**Sn**	**10 47 04.0**	**-0.2**
EALK				*i*	lVmb_Lg		10 47 10.0	
LRVF	**chteau la Riv**	**1.13**	**55**	Pg		**Pb**	**10 46 48.6**	**+0.2**
MLZA	**Monlezun-d-Arm**	**1.17**	**113**	Pg		**Pb**	**10 46 49.0**	**0.0**
ORDF	**Ordiarp**	**1.19**	**156**	Pn		**Pb**	**10 46 49.5**	**+0.1**
ORDF				Sg		**Sn**	**10 47 08.0**	**+1.2**
IRAF	**Chalets d'Irat**	**1.33**	**162**	Pn		**Pg**	**10 46 51.3**	**-0.2**
ATE	**Arette**	**1.38**	**151**	Pn		**Pb**	**10 46 52.9**	**+0.2**
CLMF	**Criteuil-la-Ma**	**1.58**	**39**	Pn		**Pb**	**10 46 54.9**	**-0.3**
CLMF				Pg		**Pg**	**10 46 57.2**	**+0.9**
PYLO	**Lourdes**	**1.65**	**136**	Pn		**Pb**	**10 46 56.9**	**-0.4**
ELAN	**Lanestosa**	**1.70**	**232**	Pn		**Pb**	**10 46 57.3**	**-0.8**
ELAN				Pg		**Pg**	**10 46 60.0**	**+1.4**
ELAN				Sg		**Sg**	**10 47 23.6**	**+3.0**
ELAN				*i*	lVmb_Lg		10 47 26.4	
SDOF	**Saint-Denis-d'**	**1.75**	**4**	Pg		**Pg**	**10 47 00.5**	**+1.0**
CRAS	**Crastes**	**1.78**	**108**	Pg		**Pg**	**10 47 00.3**	**+0.2**
VIEF	**Viey**	**1.85**	**140**	Pg		**Pg**	**10 47 02.1**	**+0.8**
CHIF	**Chize**	**2.02**	**24**	Pn		**Pn**	**10 47 00.6**	**-0.6**
CHIF				Pg		**Pg**	**10 47 04.9**	**+0.3**
ECHI	**Chisagues Biel**	**2.10**	**141**	Pn		**Pn**	**10 47 03.1**	**+0.7**
ECHI				Pg		**Pb**	**10 47 04.9**	**0.0**
ECHI				Sn		**Sg**	**10 47 32.7**	**-0.6**
ECHI				*i*	lVmb_Lg		10 47 40.2	
SALF	**Salau**	**2.55**	**126**	Pn		**Pn**	**10 47 08.4**	**-0.2**
SALF				Pg		**Pb**	**10 47 12.1**	**-0.5**
EARI	**Arriondas**	**2.79**	**250**	Pn		**Pn**	**10 47 11.9**	**0.0**
EARI				Sn		**Sn**	**10 47 43.8**	**-2.5**
EARI				*i*	lVmb_Lg		10 47 46.1	
ETOR	**Torete**	**3.50**	**186**	Pn		**Pn**	**10 47 21.7**	**+0.1**
ETOR				Sn		**Sn**	**10 48 04.3**	**+0.6**
ETOR				Sg		**Sg**	**10 48 16.2**	**-2.0**
ETOR				*i*	lVmb_Lg		10 48 25.1	
OLIV	**Plomelin**	**4.03**	**335**	Pn		**Pn**	**10 47 28.9**	**+0.1**
EPON	**Pontenova**	**4.13**	**258**	Pn		**Pn**	**10 47 30.3**	**0.0**
EPON				Sn		**Sn**	**10 48 17.6**	**-1.6**
EPON				*i*	lVmb_Lg		10 48 22.0	
EAGO	**Agolada(Pontev**	**4.94**	**255**	Pn		**Pn**	**10 47 42.0**	**+0.5**
EAGO				Sn		**Sn**	**10 48 37.5**	**-1.8**
ETOS	**Mallorca**	**5.60**	**142**	Pn		**Pn**	**10 47 50.

OBIP	**Obispado Ponce**	**1.17**	**156**			**Pn**	**11 25 39.9**	**-0.4**
OBIP						**Sb**	**11 25 54.4**	**-1.0**
OBIP	**Obispado Ponce**	**1.17**	**156**	P		**Pn**	**11 25 40.0**	**-0.4**
OBIP	**Obispado Ponce**	**1.17**	**156**	*i* P		**Pn**	**11 25 40.0**	**-0.4**
OBIP				*e*S		**Sn**	**11 25 54.8**	**-1.4**
OBIP				IAML			11 25 55.9	
	comp=Z,11μm,0.1s							
OBIP	**Obispado Ponce**	**1.17**	**156**⇑	*e*P		**Pb**	**11 25 40.1**	**-0.2**
OBIP				*e*S		**Sb**	**11 25 54.6**	**-0.7**
PCDR	**Punta Cana, DR**	**1.35**	**244**			**Pn**	**11 25 43.0**	**+0.1**
PCDR						**Sn**	**11 25 59.2**	**-1.4**
PCDR				IAML			11 26 05.9	
	comp=N,2μm,0.6s							
PCDR	**Punta Cana, DR**	**1.35**	**244**	P		**Pn**	**11 25 43.0**	**+0.1**
PCDR	**Punta Cana, DR**	**1.35**	**244**⇑	*i* P		**Pn**	**11 25 43.0**	**+0.1**
PCDR				⇑*i* S		**Sn**	**11 25 59.9**	**-0.7**
PCDR				IAML			11 26 08.4	
	comp=N,1μm,0.8s							
PCDR	**Punta Cana, DR**	**1.35**	**244**	*i* P		**Pn**	**11 25 42.9**	**+0.1**
PCDR				*e*S		**Sn**	**11 26 00.0**	**-0.6**
PCDR				IAML			11 26 10.2	
	comp=Z,766nm,0.6s							
PCDR	**Punta Cana, DR**	**1.35**	**244**⇑	*e*P		**Pn**	**11 25 43.0**	**+0.1**
PCDR				*e*S		**Sn**	**11 25 59.2**	**-1.4**
SJG	**San Juan**	**1.35**	**137**			**Pb**	**11 25 43.0**	**-0.4**
SJG	**San Juan**	**1.35**	**137**	P		**Pb**	**11 25 43.1**	**-0.3**
SJG	**San Juan**	**1.35**	**137**⇑	*i* P		**Pb**	**11 25 43.2**	**-0.3**
SJG				⇑*i* S		**Sg**	**11 26 02.8**	**+1.2**
SJG	**San Juan**	**1.35**	**137**	*i* P		**Pb**	**11 25 43.2**	**-0.3**
SJG				*e*S		**Sb**	**11 26 00.6**	**0.0**
SJG	**San Juan**	**1.35**	**137**⇑	*e*P		**Pb**	**11 25 43.4**	**0.0**
HUMP	**Col San Antoni**	**1.53**	**129**			**Pb**	**11 25 45.9**	**-0.7**
HUMP						**Sn**	**11 26 03.2**	**-2.1**
HUMP	**Col San Antoni**	**1.53**	**129**	P		**Pn**	**11 25 45.5**	**+0.1**
HUMP	**Col San Antoni**	**1.53**	**129**⇑	*e*P		**Pb**	**11 25 45.9**	**-0.7**
HIDR	**Higuey Centro**	**1.61**	**252**⇑	*i* P		**Pn**	**11 25 46.7**	**+0.3**
HIDR				⇑*i* S		**Sn**	**11 26 06.3**	**-0.8**
HIDR				IAML			11 26 15.1	
	comp=N,2μm,0.2s							
HIDR	**Higuey Centro**	**1.61**	**252**⇑	*e*P		**Pn**	**11 25 47.0**	**+0.5**
HIDR				*e*S		**Sn**	**11 26 06.4**	**-0.8**
SMDR	**Samana, DR**	**1.98**	**275**			**Pn**	**11 25 52.2**	**+0.7**
SMDR						**Sb**	**11 26 17.9**	**-0.7**
SMDR	**Samana, DR**	**1.98**	**275**	P		**Pn**	**11 25 52.2**	**+0.7**
SMDR	**Samana, DR**	**1.98**	**275**⇑	*e*P		**Pn**	**11 25 52.2**	**+0.7**
SMDR				*e*S		**Sb**	**11 26 17.9**	**-0.7**
DR12	**Loma Pena Alta**	**2.18**	**262**	Pn		**Pn**	**11 25 55.3**	**+1.0**
HATOM	**Hato Mayor del**	**2.18**	**262**⇑	*i* P		**Pn**	**11 25 55.8**	**+1.5**
HATOM				⇑*i* S		**Sn**	**11 26 22.5**	**+1.3**
HATOM				IAML			11 26 28.5	
	comp=N,477nm,0.3s							
SDD	**Santo Domingo**	**2.74**	**257**			**Pn**	**11 26 04.4**	**+2.5**
SDD						**Sn**	**11 26 33.6**	**-1.4**
SDD				IAML			11 26 47.1	
	comp=N,771nm,0.6s							
SDD	**Santo Domingo**	**2.74**	**257**	P		**Pb**	**11 26 06.3**	**-0.8**
SDD	**Santo Domingo**	**2.74**	**257**⇑	*e*P		**Pn**	**11 26 04.4**	**+2.5**
SDD				*e*S		**Sn**	**11 26 33.6**	**-1.4**
SFDR	**San Fco. de Ma**	**2.97**	**274**	P		**Pb**	**11 26 12.0**	**+0.9**
BANI	**BANI**	**3.16**	**257**	Pn		**Pn**	**11 26 08.5**	**+0.6**
SC01	**Santiago de lo**	**3.43**	**276**	Pn		**Pn**	**11 26 12.6**	**+1.1**
SDDR	**Presa de Saban**	**3.96**	**269**	*e*P		**Pn**	**11 26 21.4**	**+2.6**
SDDR				*e*Pg		**Pb**	**11 26 27.4**	**-0.6**
SDDR				*e*S		**Sn**	**11 27 09.2**	**+4.0**
GRTK	**Grand Turk**	**4.47**	**303**	*e*P		**Pn**	**11 26 25.0**	**-0.8**
GRTK				*e*S		**Sn**	**11 27 15.8**	**-1.9**
GRTK				IAML			11 27 18.7	
	comp=N,45nm,0.1s							
GRTK				IAML			11 27 19.9	
	comp=N,69nm,0.1s							
MASC	**Masc**	**6.80**	**280**	*e*P		**Pn**	**11 26 55.6**	**-2.1**
MASC				*e*S		**Sn**	**11 28 08.9**	**-6.2**
QMBU	**Quimbuelo**	**7.34**	**280**	*e*P		**Pn**	**11 27 03.3**	**-2.1**
QMBU				*e*S		**Sn**	**11 28 22.2**	**-6.4**
MOAC	**Moa**	**7.55**	**283**	*e*P		**Pn**	**11 27 04.8**	**-3.3**
NMDO	**Nuevo Mundo**	**7.55**	**282**	*e*P		**Pn**	**11 27 04.9**	**-3.2**
NMDO				*e*S		Sn	11 28 24.6	-9.2
RCC	**Rio Carpintero**	**8.15**	**278**	*e*P		**Pn**	**11 27 14.6**	**-1.8**
ROSC	**El Rosal**	**15.84**	**207**	Pn		**P**	**11 29 08.8**	**+3.5**
	comp=N,2.5nm,0.3s,baz=356,slow=22,SNR=4.4							
	comp=N,10nm,0.4s							
JTS	**Las Juntas de**	**19.35**	**246**	LR		LR	11 38 15.1	
	comp=N,20nm,18.9s,baz=54,slow=40							
TXAR	**Lajitas Array**	**34.73**	**294**	P		**P**	**11 32 09.7**	**+1.1**
	comp=N,0.7nm,0.7s,baz=113,slow=9.7,SNR=12							
TXAR				ScP		**ScP**	**11 38 28.7**	**+1.1**
	comp=N,0.4nm,0.7s,baz=117,slow=5.3,SNR=5.9							
	comp=N,0.7nm,0.7s							
TXAR	**Lajitas Array**	**34.73**	**294**	P		**P**	**11 32 09.5**	**+1.0**
TX31	**Lajitas Ar. Si**	**34.73**	**294**	P		**P**	**11 32 09.1**	**+0.6**
TX31				IAmb		IAmb	11 32 21.8	
	comp=Z,1.6nm,1.1s							
SCHQ	**Schefferville**	**35.66**	**0**	LR		LR	11 44 40.9	
	comp=Z,19nm,20.7s,baz=48,slow=33							
VHRN	**Van Horn**	**36.09**	**296**	P		**P**	**11 32 20.9**	**+0.6**
VHRN				IAmb		IAmb	11 32 22.8	
	comp=Z,3.0nm,1.1s							
PB16	**IPOC Station P**	**37.29**	**184**	P		**P**	**11 32 28.6**	**-2.4**
PB16				IAmb		IAmb	11 32 53.8	
	comp=Z,12nm,1.5s							
NVAR	**Mina Array Bea**	**48.18**	**305**	P		**P**	**11 33 58.2**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=99,slow=7.9,SNR=3.7							
	comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**54.21**	**335**	P		**P**	**11 34 43.8**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=118,slow=6.5,SNR=1.8							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**66.01**	**84**	P		**P**	**11 36 08.9**	**+3.7**
	comp=Z,0.5nm,0.7s,baz=271,slow=6.7,SNR=2.1							
	comp=Z,0.5nm,0.7s							

*SNET **10** 11:48:04.8±0.8, 13°.11N×89°.57W, h40km±6km, ML3.6, Presumed earthquake*
*CATAC **10** 11:48:04.7±0.5, 13°N±3°×9°0W±°, h30km±2km, M3.5/24, MLv3.5/24, Error ellipse: s-maj=7.0km s-min=4.3km az=23.0, confirmed*
*GCG **10** 11:48:05.4±0.6, 13°.23N×89°.57W, h54km±5km, MD3.5, ML3.5, MW2.9, Presumed earthquake*

ISC 10 11:48:04.9±2.0, 13°.13N±0°.10×89°.58W±0°.06, h47km±13km, n66, σ0°31/86, 3C-4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**0.44**	**35**	P		**Pn**	**11 48 15.2**	**-0.1**
LALI				S		**Sn**	**11 48 23.1**	**+0.4**
LALI	**Alcalda de L**	**0.44**	**35**	*i* P		**Pn**	**11 48 15.1**	**-0.2**
LALI	**Alcalda de L**	**0.44**	**35**	*e*P		**Pn**	**11 48 15.1**	**-0.2**
LALI				*e*S		**Sn**	**11 48 23.0**	**+0.4**
JAYA	**Jayaque - finc**	**0.54**	**14**	P		**Pn**	**11 48 16.5**	**-0.2**
JAYA	**Jayaque - finc**	**0.54**	**14**	*i* P		**Pn**	**11 48 16.4**	**-0.2**
JAYA				*i* S		**Sn**	**11 48 24.6**	**-0.5**
JAYA	**Jayaque - finc**	**0.54**	**14**	*i* P		**Pn**	**11 48 16.4**	**-0.2**
JAYA				*e*S		**Sn**	**11 48 25.0**	**0.0**
PANCS	**Alcalda de**	**0.62**	**39**	P		**Pn**	**11 48 17.1**	**-0.5**
PANCS	**Alcalda de**	**0.62**	**39**	*e*P		**Pn**	**11 48 17.1**	**-0.5**
PMON	**Piamonte**	**0.64**	**24**	P		**Pn**	**11 48 17.6**	**-0.3**
PMON				S		**Sn**	**11 48 27.6**	**+0.5**
PMON	**Piamonte**	**0.64**	**24**⇓	*e*P		**Pn**	**11 48 17.6**	**-0.3**
LOMA	**Loma Larga**	**0.65**	**38**	P		**Pn**	**11 48 17.7**	**-0.3**
LOMA	**Loma Larga**	**0.65**	**38**⇓	*i* P		**Pn**	**11 48 17.7**	**-0.3**
LOMA				*e*S		**Sn**	**11 48 27.8**	**+0.3**
SEMO	**Seminario San**	**0.67**	**31**	P		**Pn**	**11 48 18.1**	**-0.1**
BOQS	**Boqueron**	**0.67**	**26**	*e*P		**Pn**	**11 48 18.2**	**-0.2**
BOQS				*e*S		**Sn**	**11 48 28.4**	**+0.3**
UEES	**Universidad Ev**	**0.67**	**29**	P		**Pn**	**11 48 18.1**	**-0.2**
UEES				S		**Sn**	**11 48 28.3**	**+0.4**
UEES	**Universidad Ev**	**0.67**	**29**	*e*P		**Pn**	**11 48 17.8**	**-0.5**
PIC2	**El Picacho**	**0.69**	**27**	*e*P		**Pn**	**11 48 18.4**	**+0.1**
CEDA	**San Andres**	**0.69**	**15**	P		**Pn**	**11 48 18.4**	**-0.1**
CEDA				S		**Sn**	**11 48 28.9**	**+0.5**
CEDA	**San Andres**	**0.69**	**15**	*e*P		**Pn**	**11 48 18.5**	**0.0**
CEVE	**Cerro Verde**	**0.70**	**356**	P		**Pn**	**11 48 18.8**	**0.0**
CEVE	**Cerro Verde**	**0.70**	**356**	*e*P		**Pn**	**11 48 18.8**	**0.0**
LFRS	**El Faro**	**0.70**	**46**⇑	*e*P		**Pn**	**11 48 18.5**	**-0.3**
LFRS				*e*S		**Sn**	**11 48 29.0**	**+0.2**
SBLS	**San Blas**	**0.71**	**357**	*e*P		**Pn**	**11 48 18.8**	**-0.1**
SNJE	**San Jose**	**0.74**	**358**	*e*P		**Pn**	**11 48 19.2**	**-0.1**
SJTE	**Alcalda de S**	**0.74**	**49**⇓	*i* P		**Pn**	**11 48 18.8**	**-0.3**
LFU	**La Fuente**	**0.77**	**36**	*e*P		**Pn**	**11 48 19.5**	**0.0**
RTR	**El Retiro**	**0.77**	**355**	*e*P		**Pn**	**11 48 19.8**	**+0.2**
NUBE	**Las Nubes**	**0.79**	**346**	P		**Pn**	**11 48 19.7**	**-0.3**
NUBE	**Las Nubes**	**0.79**	**346**	*i* P		**Pn**	**11 48 19.7**	**-0.3**
NUBE				*i* S		**Sn**	**11 48 31.0**	**+0.1**
NUBE				IAML			11 48 31.4	
	comp=N,2μm,0.3s							
NUBE	**Las Nubes**	**0.79**	**346**	*e*P		**Pn**	**11 48 19.7**	**-0.3**
NUBE				*e*S		**Sn**	**11 48 30.9**	**-0.1**
LBRS	**Las Brisas**	**0.80**	**41**⇑	*e*P		**Pn**	**11 48 20.1**	**+0.1**
FAME	**Alcaldia de Sa**	**0.83**	**329**	P		**Pn**	**11 48 20.0**	**-0.3**
FAME				S		**Sn**	**11 48 31.7**	**+0.2**
COEG	**Centro de Oper**	**0.84**	**54**	P		**Pn**	**11 48 19.9**	**-0.5**
COEG				S		**Sn**	**11 48 31.9**	**0.0**
COEG	**Centro de Oper**	**0.84**	**54**⇓	*i* P		**Pn**	**11 48 20.0**	**-0.5**
UNIC	**Universidad Ca**	**0.85**	**2**	P		**Pn**	**11 48 20.7**	**0.0**
PAVA	**Las Pavas**	**0.85**	**47**	P		**Pn**	**11 48 21.0**	**+0.2**
PAVA				S		**Sn**	**11 48 32.6**	**+0.4**
PAVA	**Las Pavas**	**0.85**	**47**	*e*P		**Pn**	**11 48 20.8**	**0.0**
TECO	**Alcaldia de Te**	**0.88**	**62**	P		**Pn**	**11 48 20.3**	**-0.7**
TECO	**Alcaldia de Te**	**0.88**	**62**	*e*P		**Pn**	**11 48 20.1**	**-0.8**
LOAL	**Lomas de Alarc**	**0.89**	**347**	P		**Pn**	**11 48 21.5**	**+0.4**
LOAL	**Lomas de Alarc**	**0.89**	**347**	*e*P		**Pn**	**11 48 21.5**	**+0.4**
SLOZ	**Alcaldia de Sa**	**0.92**	**347**	P		**Pn**	**11 48 21.5**	**0.0**
SLOZ	**Alcaldia de Sa**	**0.92**	**347**	*e*P		**Pn**	**11 48 21.4**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.01**	**55**	P		**Pn**	**11 48 22.5**	**-0.2**
SCLA				S		**Sn**	**11 48 35.4**	**-0.4**
PQSS	**Presa 15 de Se**	**1.11**	**63**	P		**Pn**	**11 48 23.8**	**-0.3**
PQSS				S		**Sn**	**11 48 38.5**	**+0.3**
TECA	**Tecapa**	**1.11**	**71**	*e*P		**Pn**	**11 48 23.6**	**-0.6**
P5NO	**Presa 5 de nov**	**1.17**	**43**	P		**Pn**	**11 48 24.7**	**-0.2**
LLGN	**La Laguna**	**1.20**	**31**	P		**Pn**	**11 48 25.1**	**-0.3**
PACA	**Pacayal**	**1.27**	**74**	P		**Pn**	**11 48 26.4**	**0.0**
PACA				S		**Sn**	**11 48 42.9**	**+0.5**
PACA	**Pacayal**	**1.27**	**74**	*e*P		**Pn**	**11 48 26.3**	**-0.1**
MTO3	**Montecristo**	**1.28**	**10**	P		**Pn**	**11 48 26.2**	**-0.4**
MTO3				S		**Sn**	**11 48 42.6**	**-0.2**
MTO3	**Montecristo**	**1.28**	**10**	*i* P		**Pn**	**11 48 26.2**	**-0.4**
MTO3	**Montecristo**	**1.28**	**10**⇑	*i* P		**Pn**	**11 48 26.3**	**-0.3**
LCY	**Lacayo**	**1.28**	**77**	*e*P		**Pn**	**11 48 26.7**	**+0.1**
RANC	**El Ranchito**	**1.29**	**76**	P		**Pn**	**11 48 26.9**	**+0.2**
RANC				S		**Sn**	**11 48 43.1**	**+0.2**
RANC	**El Ranchito**	**1.29**	**76**	*e*P		**Pn**	**11 48 26.9**	**+0.2**
ESQI	**Esquipulas**	**1.44**	**9**	P		**Pn**	**11 48 28.4**	**-0.3**
ESQI				S		**Sn**	**11 48 46.8**	**+0.2**
INTP	**Intipuca**	**1.49**	**87**	*e*P		**Pn**	**11 48 28.9**	**-0.3**
LCND	**La Caada**	**1.66**	**84**	P		**Pn**	**11 48 31.5**	**0.0**
LCND	**La Caada**	**1.66**	**84**	*e*P		**Pn**	**11 48 31.5**	**0.0**
CNCH	**Conchagua**	**1.71**	**85**	P		**Pn**	**11 48 32.2**	**-0.1**
CNCH	**Conchagua**	**1.71**	**85**	*e*P		**Pn**	**11 48 32.5**	**+0.1**
MARCA	**Marcala la Paz**	**1.82**	**56**	P		**Pn**	**11 48 33.9**	**+0.1**
MARCA	**Marcala la Paz**	**1.82**	**56**	*i* P		**Pn**	**11 48 33.8**	**-0.1**
CSGN	**Cosiguina Volc**	**1.98**	**94**	P		**Pn**	**11 48 35.8**	**-0.2**
STG8	**El Palmar, Qui**	**2.17**	**308**	*i* P		Pn	11 48 44.2	+5.5

*SOME **10** 12:13:30.3, 43°.70N×82°.32E, h20km*
*NNC **10** 12:13:31.1±1.3, 43°.74N×82°.29E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=11.7km s-min=4.0km az=133.0, Suspected Mining explosion.*

ISC 10 12:13:28.8±1.4, 43°.59N±0°.06×82°.24E±0°.06, h0km, n35, σ1°37/56, 9C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**1.38**	**265**	P		**Pb**	**12 13 56.4**	**+0.8**
	7.2nm,0.1s							
KTMS				S		**Sn**	**12 14 17.4**	**+2.9**
	93nm,0.3s							
KTMS	**Ketmen**	**1.38**	**265**	*e*P		**Pb**	**12 13 56.4**	**+0.8**
	7.2nm,0.1s							
KTMS				*e*S		**Sn**	**12 14 15.2**	**+0.7**
	93nm,0.4s							
DJR	**Jarkent**	**1.91**	**294**	Pg		**Pg**	**12 14 05.8**	**+0.3**
	9.4nm,0.2s							
DJR				Lg		Lg	12 14 34.0	
	56nm,0.3s							
DJR	**Jarkent**	**1.91**	**294**	*e*P		**Pg**	**12 14 05.8**	**+0.3**
	9.4nm,0.2s							
DJR				*e*S		**Sg**	**12 14 31.6**	**+1.3**
	56nm,0.3s							
PDGK	**Podgornoye**	**2.02**	**263**	⇑Pn		**Pb**	**12 14 07.5**	**+1.0**
	4.6nm,0.3s							
PDGK				⇑Sn		**Sg**	**12 14 36.6**	**+3.0**
	54nm,0.6s							
SHLS	**Shalkode**	**2.07**	**259**	Pg		**Pn**	**12 14 04.1**	**-0.8**
	23nm,0.2s							
SHLS				Lg		Lg	12 14 30.5	
	139nm,0.3s							
SHLS	**Shalkode**	**2.07**	**259**	*e*P		**Pn**	**12 14 04.1**	**-0.8**
	23nm,0.2s							
SHLS				*e*S		**Sn**	**12 14 28.9**	**-2.6**
	139nm,0.3s							
KNOS	**Konyrlen**	**2.33**	**290**	Pg		**Pg**	**12 14 13.0**	**-0.5**
	5.1nm,0.1s							
KNOS				Lg		Lg	12 14 45.9	
	62nm,0.2s							
UZB	**Uzynbulak**	**2.38**	**260**	Pg		**Pb**	**12 14 14.0**	**+1.3**
	5.5nm,0.2s							
UZB				Lg		Lg	12 14 47.6	
	40nm,0.2s							
UZB	**Uzynbulak**	**2.38**	**260**	*e*P		**Pb**	**12 14 14.0**	**+1.3**
	5.5nm,0.2s							
UZB				*e*S		**Sg**	**12 14 45.9**	**+0.5**
	40nm,0.2s							
KAPS	**Kapalarasan**	**2.67**	**310**	Pg		**Pg**	**12 14 19.2**	**-0.7**
	1.4nm,0.1s							
KAPS				Lg		Lg	12 14 55.7	
	51nm,0.2s							
KAPS	**Kapalarasan**	**2.67**	**310**	*e*P		**Pg**	**12 14 19.2**	**-0.7**
	1.4nm,0.1s							
KAPS				*e*S		**Sg**	**12 14 54.8**	**+0.3**
	51nm,0.2s							
BLB	**Baldybastay**	**2.76**	**282**	Pg		**Pb**	**12 14 20.7**	**+1.5**
	11nm,0.7s							
BLB				Lg		Lg	12 14 58.3	
	28nm,0.5s							
SATY	**Saty**	**2.84**	**261**	Pg		**Pg**	**12 14 22.8**	**-0.6**
	3.3nm,0.2s							
SATY				Lg		Lg	12 15 02.3	
	35nm,0.2s							
SATY	**Saty**	**2.84**	**261**	*e*P		**Pg**	**12 14 22.8**	**-0.6**
	3.3nm,0.2s							
SATY				*e*S		**Sg**	**12 15 00.7**	**+0.5**
	35nm,0.2s							
KURS	**Kuram**	**2.96**	**269**	Pg		**Pg**	**12 14 24.9**	**-0.6**
	2.8nm,0.3s							
KURS				Lg		Lg	12 15 05.3	
	10nm,0.4s							
KURS	**Kuram**	**2.96**	**269**	*e*P		**Pg**	**12 14 24.9**	**-0.6**
	2.8nm,0.3s							
KURS				*e*S		**Sg**	**12 15 04.1**	**+0.3**
	10nm,0.4s							
TDK	**Taldyqorghan**	**3.09**	**298**	Pg		**Pg**	**12 14 27.6**	**-0.4**
	14nm,0.1s							
TDK				Lg		Lg	12 15 10.1	
	50nm,0.2s							
TDK	**Taldyqorghan**	**3.09**	**298**	*e*P		**Pg**	**12 14 27.6**	**-0.4**
	14nm,0.1s							
TDK				*e*S		**Sg**	**12 15 09.2**	**+1.1**
	50nm,0.2s							
MK31	**Makanchi Array**	**3.20**	**1**	Pn		**Pn**	**12 14 20.7**	**+0.3**
	0.2nm,0.3s,baz=178,slow=15,SNR=23							
MK31				Pg		**Pb**	**12 14 26.5**	**-0.1**
	0.4nm,0.2s,baz=177,slow=16,SNR=19							
MK31				Sn		**Sn**	**12 14 58.5**	**-0.8**
	0.6nm,0.2s,baz=179,slow=24,SNR=4.6							
MK31				⇓Lg		Lg	12 15 05.8	
	1.9nm,0.2s,baz=170,slow=31,SNR=11							
MAKZ	**Makanchi**	**3.22**	**357**	⇑Pn		**Pn**	**12 14 23.8**	**+3.1**
	1.9nm,0.6s							
MAKZ				⇑Pg		**Pg**	**12 14 30.7**	**+0.2**
	2.3nm,0.4s							
MAKZ				⇑Sn		**Sn**	**12 14 59.3**	**-0.5**
	4.9nm,0.8s							
MAKZ				⇑Lg		Lg	12 15 06.4	
	5.7nm,0.7s							
ARXS	**Arharly**	**3.25**	**283**	Pg		**Pb**	**12 14 28.9**	**+1.6**
	1.9nm,0.2s							
ARXS				Lg		Lg	12 15 12.3	
	23nm,0.3s							
ARXS	**Arharly**	**3.25**	**283**	*e*P		**Pb**	**12 14 28.9**	**+1.6**
	1.9nm,0.2s							
ARXS				*e*S		**Sg**	**12 15 11.2**	**-1.9**
	23nm,0.3s							
KOTS	**Kotyrbulak**	**3.75**	**266**	Pg		**Pg**	**12 14 40.2**	**-0.5**
	3.1nm,0.3s							
KOTS				Lg		Lg	12 15 31.7	
	33nm,0.3s							
KOTS	**Kotyrbulak**	**3.75**	**266**	*e*P		**Pg**	**12 14 40.2**	**-0.5**
	3.1nm,0.3s							
KOTS				*e*S		**Sg**	**12 15 30.2**	**+1.0**
	33nm,0.3s							
MDOK	**Medeo**	**3.81**	**265**	Pg		**Pg**	**12 14 41.5**	**-0.3**
	2.4nm,0.2s							
MDOK				Lg		Lg	12 15 34.4	
	15nm,0.7s							
KTBS	**Karatobe**	**4.03**	**274**	Pg		**Pg**	**12 14 44.0**	**-2.0**
	0.1nm,0.1s							
KTBS				Lg		Lg	12 15 38.7	
	9.1nm,0.4s							
KTBS	**Karatobe**	**4.03**	**274**	*e*P		**Pg**	**12 14 44.0**	**-2.0**
	0.1nm,0.1s							
KTBS				*e*S		**Sg**	**12 15 36.9**	**-1.4**
	9.1nm,0.4s							
ZSN	**Zaisan**	**4.28**	**25**	Pg		**Pb**	**12 14 44.9**	**0.0**
	3.6nm,0.2s							
ZSN				Lg		Lg	12 15 38.1	
	8.2nm,0.2s							
ZSN	**Zaisan**	**4.28**	**25**	*e*P		**Pb**	**12 14 44.9**	**0.0**
	3.6nm,0.2s							
ZSN				*e*S		**Sb**	**12 15 38.1**	**+1.0**
	8.2nm,0.2s							
KST	**Kastek**	**4.61**	**265**	Pg		**Pg**	**12 14 55.3**	**-1.9**
	2.0nm,0.5s							
KST				Lg		Lg	12 15 57.6	
	8.2nm,0.5s							
KST	**Kastek**	**4.61**	**265**	*e*P		**Pg**	**12 14 55.3**	**-1.9**
	2.0nm,0.5s							
KST				*e*S		**Sg**	**12 15 56.5**	**-0.4**
	8.2nm,0.5s							
BTLS	**Baital**	**6.05**	**287**	Pg		**Pg**	**12 15 24.1**	**-0.6**
	1.5nm,0.3s							
BTLS				Lg		Lg	12 16 40.0	
	2.7nm,0.4s							
BTLS	**Baital**	**6.05**	**287**	*e*P		**Pg**	**12 15 21.8**	**-3.0**
	1.5nm,0.3s							
BTLS				*e*S		**Sg**	**12 16 41.4**	**-1.8**
	2.7nm,0.4s							
KURBB	**Kurchatov Arra**	**7.47**	**342**	⇑Pn		**Pn**	**12 15 17.4**	**-1.6**
	1.8nm,0.7s							
KURBB				⇑Sn		**Sn**	**12 16 42.6**	**-1.8**
	1.5nm,0.7s							
KURBB				⇑Lg		Lg	12 17 22.7	
	7.4nm,0.7s							

SJA 10 12:19:32.2±0.5, 27°.28S×65°.87W, h21km±4km, ML3.9, MW4.0, Tucuman Province

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AHML	**Horco Molle**	**0.69**	**44**	*e*P		Pb	12 19 41.6	-4.0
AHML				*e*S		Sb	12 19 51.3	-3.4
FSA	**Cafayete**	**1.17**	**355**	*e*P		Pn	12 19 48.6	-5.0
FSA				*e*S		Sb	12 20 00.5	-8.2
TINO	**Tinogasta**	**1.70**	**242**	*e*P		Pb	12 20 02.8	0.0
TINO				*e*S		Sb	12 20 25.6	+1.9
TINO				IAML			12 20 27.2	
	comp=Z,706nm,0.5s							
ACLC	**CERRO LA CRUZ**	**2.34**	**204**	*e*P		Pb	12 20 12.2	-1.6
ACLC				*e*S		Sb	12 20 43.8	+1.5
VCA	**Vinchina**	**2.52**	**234**	*e*P		Pb	12 20 15.0	-1.9
VCA				*e*S		Sb	12 20 47.2	-0.4
VCA				IAML			12 20 52.4	
	comp=Z,566nm,0.7s							
SLA	**San Lorenzo**	**2.57**	**7**	*e*P		Pn	12 20 15.0	+2.2
SLA				*e*S		Sn	12 20 44.0	+0.4
SLA				*e*S		Sb	12 20 47.9	-1.1
AC02	**Maricunga**	**2.94**	**278**	*e*P		Pb	12 20 22.4	-1.9
AC02				*e*S		Sb	12 20 59.9	-0.1
GO03	**Copiapo**	**3.90**	**264**	*e*P		Pb	12 20 39.8	-0.4
GO03				*e*S		Sb	12 21 28.1	+1.1
ACDV	**Cuesta del Vie**	**4.05**	**224**	*

comp=N,1.5nm,0.6s,baz=73,slow=10.0,SNR=5.0
KLR Kul'dur 15.68 276 *i* P **Pn** **12 25 08.7 -0.8**
BILL Bilibino 18.74 12 *i* P **P** **12 25 43.2 -1.8**
BILL pmax pmax
comp=Z,7.0nm,1.4s
YAK Yakutsk 18.77 320 *e*P **P** **12 25 44.3 -1.1**
YAK pmax pmax
comp=Z,14nm,1.0s
KSRS Korea Array 23.68 249 P **P** **12 26 38.0 +1.2**
comp=Z,1.0nm,0.9s,baz=53,slow=10.0,SNR=2.2
comp=Z,1.0nm,0.9s
KSRS Korea Array 23.68 249 P **P** **12 26 38.0 +1.2**
H11N2 WAKE ISLAND Hy 31.50 160 T T 13 01 46.0
baz=348,slow=76,SNR=8.7
H11N1 WAKE ISLAND Hy 31.52 160 T T 13 01 52.1
baz=348,slow=76,SNR=4.5
H11N3 WAKE ISLAND Hy 31.52 160 T T 13 01 47.3
baz=348,slow=76,SNR=14
H11S1 WAKE ISLAND Hy 32.64 161 T T 13 02 25.0
baz=347,slow=76,SNR=31
H11S3 WAKE ISLAND Hy 32.65 161 T T 13 02 24.3
baz=347,slow=76,SNR=38
H11S2 WAKE ISLAND Hy 32.66 161 T T 13 02 26.4
baz=347,slow=76,SNR=32
ILAR Eielson Array 32.80 42 P **P** **12 27 56.7 -1.0**
comp=Z,0.4nm,0.7s,baz=262,slow=6.7,SNR=7.6
comp=Z,0.4nm,0.7s
MK31 Makanchi Array 47.14 296 *i* P **P** **12 29 55.8 -0.6**
NVAR Mina Array Bea 59.28 66 P **P** **12 31 26.6 +0.9**
comp=Z,0.4nm,0.5s,baz=316,slow=6.8,SNR=4.7
comp=Z,0.4nm,0.5s
PDAR Pinedale Array 61.31 57 P **P** **12 31 39.8 +0.4**
comp=Z,0.6nm,0.8s,baz=313,slow=6.1,SNR=4.6
comp=Z,0.6nm,0.8s
TXAR Lajitas Array 74.26 63 P **P** **12 33 01.6 +0.8**
comp=Z,0.8nm,0.6s,baz=299,slow=5.3,SNR=16
comp=Z,0.8nm,0.6s
H03N2 Juan Fernandez 136.84 89 T T 15 13 06.2
baz=313,slow=77,SNR=5.9
H03N1 Juan Fernandez 136.85 89 T T 15 13 07.3
baz=313,slow=77,SNR=4.9
H03N3 Juan Fernandez 136.85 89 T T 15 13 11.0
baz=313,slow=77,SNR=5.8

IDC ***10*** *12:24:44.2±0.8,9.76N×39.97W,h0km,mb4.0/11, mbtmp4.0/11,MS3.3/10,Error ellipse: s-maj=26.3km s-min=19.2km az=172.0*
NEIC ***10*** *12:24:46.2±0.8,9.7N±0.1×39.9W±0.1,h10km±1km, mb4.5/16,Error ellipse: s-maj=22.7km s-min=20.1km az=148.0*
ISC 10 12:24:45.6±0.7,9.7N±0.1×39.9W±0.1,h10km,n40, σ0s66/28,mb4.2/14,MS3.3/10,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAV	**Boa Vista**	**21.72**	**252**	P	**P**	**12 29 37.2**	**0.0**
H10N3	**ASCENSION HYDR**	**30.75**	**124**	T	T	13 03 19.9	
	baz=304,slow=74,SNR=87						
H10N2	**ASCENSION HYDR**	**30.76**	**124**	T	T	13 03 18.6	
	baz=304,slow=74,SNR=86						
H10N1	**ASCENSION HYDR**	**30.77**	**124**	T	T	13 03 21.1	
	baz=304,slow=74,SNR=84						
DBIC	**Dimbokro**	**34.84**	**92**	P	**P**	**12 31 37.2**	**0.0**
	3.3nm,0.6s,baz=295,slow=8.6,SNR=4.8						
	3.3nm,0.6s						
DBIC	**Dimbokro**	**34.84**	**92**	P	**P**	**12 31 36.6**	**-0.6**
LPAZ	**La Paz**	**38.03**	**227**	P	**P**	**12 32 05.8**	**+0.6**
	3.6nm,0.8s,baz=47,slow=3.7,SNR=9.9						
	3.6nm,0.8s						
LPAZ	**La Paz**	**38.03**	**227**	P	**P**	**12 32 04.9**	**-0.2**
CPUP	**Villa Florida**	**39.62**	**205**	LR	LR	12 48 46.6	
	comp=Z,35nm,19.0s,baz=75,slow=36						
TORD	**Torodi Ar. Bea**	**40.91**	**81**	P	**P**	**12 32 28.5**	**0.0**
	3.5nm,0.9s,baz=279,slow=8.5,SNR=9.9						
	3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**40.91**	**81**	P	**P**	**12 32 27.6**	**-0.9**
ESDC	**Sonseca Array**	**43.74**	**41**	P	**P**	**12 32 50.3**	**-1.0**
	0.8nm,0.8s,baz=250,slow=7.2,SNR=4.1						
	0.8nm,0.8s						
TKL	**Tuckaleechee C**	**47.44**	**310**	LR	LR	12 49 20.7	
	comp=Z,31nm,21.5s,baz=118,slow=31						
SADO	**Sadowa**	**48.56**	**323**	LR	LR	12 50 43.8	
	comp=Z,20nm,21.9s,baz=210,slow=32						
SCHQ	**Schefferville**	**49.80**	**340**	LR	LR	12 51 23.6	
	comp=Z,25nm,20.8s,baz=112,slow=32						
FRB	**Frobisher Bay**	**57.65**	**345**	LR	LR	12 55 39.8	
	comp=Z,33nm,19.9s,baz=106,slow=32						
ULM	**Lac du Bonnet**	**61.12**	**323**	P	**P**	**12 34 59.1**	**-1.0**
	4.0nm,0.8s,baz=134,slow=9.8,SNR=5.3						
ULM				LR	LR	12 56 14.7	
	comp=Z,20nm,20.8s,baz=20,slow=31						
	4.0nm,0.8s						
ULM	**Lac du Bonnet**	**61.12**	**323**	P	**P**	**12 34 59.4**	**-0.7**
ULM				IAmb	IAmb	12 35 00.1	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**62.44**	**298**	P	**P**	**12 35 09.1**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=119,slow=6.4,SNR=9.6						
	comp=Z,0.6nm,0.7s						
TX31	**Lajitas Ar. Si**	**62.44**	**298**	P	**P**	**12 35 09.6**	**+0.1**
ALPN	**Alpine**	**62.50**	**299**	P	**P**	**12 35 09.8**	**-0.1**
ALPN				IAmb	IAmb	12 35 11.2	
	comp=Z,4.0nm,0.8s						
SUMG	**Summit**	**62.82**	**1**	P	**P**	**12 35 11.8**	**+0.3**
GDL2	**Guadalupe Moun**	**63.28**	**301**	P	**P**	**12 35 15.2**	**+0.1**
MNTX	**Cornudas Mount**	**64.10**	**300**	P	**P**	**12 35 20.0**	**-0.4**
MNTX				IAmb	IAmb	12 35 23.9	
	comp=Z,4.8nm,1.4s						
SDCO	**Great Sand Dun**	**64.82**	**307**	IAmb	IAmb	12 35 22.6	
	comp=Z,5.8nm,1.5s						
SDCO				P	**P**	**12 35 25.1**	**-0.2**
ANMO	**Albuquerque**	**65.28**	**304**	LR	LR	13 00 59.7	
	comp=Z,32nm,20.5s,baz=28,slow=33						
FFC	**Flin Flon**	**66.13**	**326**	P	**P**	**12 35 33.4**	**+0.3**
PDAR	**Pinedale Array**	**68.52**	**312**	LR	LR	13 01 56.5	
	comp=Z,24nm,21.9s,baz=58,slow=33						
AKASG	**Malin Array Be**	**69.36**	**39**	P	**P**	**12 35 55.0**	**+1.5**
	comp=Z,0.2nm,0.2s,baz=258,slow=6.8,SNR=4.1						
	comp=Z,0.2nm,0.2s						
AKASG	**Malin Array Be**	**69.36**	**39**	P	**P**	**12 35 54.6**	**+1.1**
AKASG				IAmb	IAmb	12 35 57.4	
	comp=Z,2.4nm,1.1s						
BGU	**Big Grassy Mou**	**70.94**	**310**	P	**P**	**12 36 03.4**	**-0.2**
BGU				IAmb	IAmb	12 36 05.5	
	comp=Z,5.2nm,1.1s						
BRTR	**Keskin Array B**	**71.23**	**51**	P	**P**	**12 36 06.8**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=237,slow=4.3,SNR=4.6						
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**71.23**	**51**	P	**P**	**12 36 05.4**	**0.0**
NEW	**Newport**	**74.29**	**317**	LR	LR	13 04 40.0	
	comp=Z,21nm,21.2s,baz=356,slow=32						
YKA	**Yellowknife Ar**	**74.36**	**332**	P	**P**	**12 36 22.8**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=106,slow=5.7,SNR=4.7						
	comp=Z,1.2nm,0.8s						
YBH	**Yreka Blue Hor**	**78.23**	**311**	LR	LR	13 09 23.8	
	comp=Z,16nm,20.5s,baz=346,slow=34						
SNAA	**Sanae**	**84.86**	**169**	P	**P**	**12 37 19.9**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=315,slow=5.3,SNR=4.9						
	comp=Z,1.3nm,0.8s						
SNAA	**Sanae**	**84.86**	**169**	P	**P**	**12 37 20.2**	**0.0**
SNAA				IAmb	IAmb	12 37 21.5	
	comp=Z,2.8nm,1.0s						
ILAR	**Eielson Array**	**88.38**	**336**	P	**P**	**12 37 38.4**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=65,slow=4.3,SNR=8.3						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**88.38**	**336**	P	**P**	**12 37 37.7**	**+0.1**

IDC ***10*** *12:42:07.3±0.9,48.49S×107.18E,h0km,mb4.2/7, mbtmp4.1/7,MS3.9/14,Error ellipse: s-maj=41.9km s-min=18.0km az=107.0*
NEIC ***10*** *12:42:08.3±0.8,48.45S±0.07×106.9E±0.3,h10km±1km, mb4.5/13,Error ellipse: s-maj=37.5km s-min=7.3km az=283.0*
ISC 10 12:42:08.5±0.7,48.5S±0.1×107.0E±0.2,h10km,n46, σ0s66/31,mb4.5/14,MS4.0/15,1C,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.55**	**24**	T	T	13 00 24.0	
	baz=199,slow=74,SNR=148						
H01W1	**Cape Leeuwin H**	**14.56**	**24**	T	T	13 00 26.7	
	baz=199,slow=74,SNR=168						
H01W3	**Cape Leeuwin H**	**14.57**	**24**	T	T	13 00 27.0	
	baz=199,slow=74,SNR=195						
CASY	**Casey**	**17.96**	**175**	P	**Pn**	**12 46 18.0**	**0.0**
BBOO	**Buckleboo**	**26.81**	**65**	P	**P**	**12 47 49.3**	**+0.5**
TAU	**Tasmania Unive**	**28.45**	**94**	P	**P**	**12 48 03.9**	**+0.5**
STKA	**Stephens Creek**	**30.86**	**70**	LR	LR	12 58 32.3	
	comp=Z,221nm,21.2s,baz=214,slow=32						
ASAR	**Alice Springs**	**32.63**	**50**	P	**P**	**12 48 39.9**	**-0.6**
	1.4nm,0.6s,baz=210,slow=8.1,SNR=27						
ASAR				PcP	**PcP**	**12 51 25.7**	**-0.8**
	0.4nm,0.7s,baz=196,slow=1.8,SNR=4.4						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**32.63**	**50**	P	**P**	**12 48 40.1**	**-0.4**
AS31	**Alice Springs**	**32.63**	**50**	P	**P**	**12 48 40.5**	**-0.1**
VNDA	**Vanda**	**35.72**	**162**	P	**P**	**12 49 06.5**	**-0.2**
	1.3nm,0.8s,baz=296,slow=10,SNR=9.4						
VNDA				LR	LR	13 02 26.8	
	comp=Z,353nm,19.7s,baz=290,slow=34						
	1.3nm,0.8s						
VNDA	**Vanda**	**35.72**	**162**	P	**P**	**12 49 07.0**	**+0.2**
VNDA				IAmb	IAmb	12 49 29.2	
	comp=Z,3.2nm,1.1s						
WRA	**Warramunga Arr**	**35.97**	**47**	P	**P**	**12 49 09.0**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=208,slow=9.8,SNR=31						
WRA				PcP	**PcP**	**12 51 36.1**	**0.0**
	comp=Z,1.1nm,1.0s,baz=214,slow=3.0,SNR=3.2						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**35.97**	**47**	P	**P**	**12 49 09.3**	**-0.1**
WRAB	**Tennant Creek**	**35.98**	**47**	P	**P**	**12 49 09.5**	**-0.1**
WRAB				IAmb	IAmb	12 49 15.8	
	comp=Z,8.2nm,0.8s						
WR8	**Warramunga Arr**	**36.04**	**48**	P	**P**	**12 49 09.9**	**-0.1**
WR8				IAmb	IAmb	12 49 18.8	
	comp=Z,8.8nm,0.8s						
WB0	**Warramunga Arr**	**36.15**	**47**	P	**P**	**12 49 09.4**	**-1.5**
WB0				IAmb	IAmb	12 49 16.6	
	comp=Z,8.3nm,0.8s						
LEM	**Lembang**	**41.50**	**1**	LR	LR	13 03 07.0	
	comp=Z,258nm,21.4s,baz=181,slow=30						
QSPA	**South Pole Qui**	**41.67**	**180**	P	**P**	**12 49 56.6**	**-0.3**
	comp=Z,3.0nm,1.0s,baz=306,slow=3.9,SNR=7.7						
QSPA				LR	LR	13 06 00.5	
	comp=Z,320nm,19.4s,baz=319,slow=34						
	comp=Z,3.0nm,1.0s						
QSPA	**South Pole Qui**	**41.67**	**180**	P	**P**	**12 49 56.9**	**-0.1**
QSPA				IAmb	IAmb	12 50 05.4	
	comp=Z,7.8nm,1.2s						
KAPI	**Kappang**	**44.64**	**18**	LR	LR	13 06 24.8	
	comp=Z,106nm,21.0s,baz=218,slow=33						
TROLL	**Troll, Antarti**	**48.88**	**204**	P	**P**	**12 50 54.4**	**+0.4**
	comp=Z,201nm,1.2s						
H08S2	**Diego Garcia H**	**50.04**	**313**	T	T	13 44 46.0	
	baz=151						
H08S1	**Diego Carcia H**	**50.05**	**313**	T	T	13 44 52.0	
	baz=151						
H08S3	**Diego Garcia H**	**50.06**	**313**	T	T	13 44 41.5	
	baz=151						
SNAA	**Sanae**	**50.47**	**203**	P	**P**	**12 51 06.0**	**0.0**
	comp=Z,124nm,0.7s						
SNAA	**Sanae**	**50.47**	**203**	P	**P**	**12 51 06.5**	**+0.5**
	comp=Z,7.1nm,0.9s,baz=139,slow=8.1,SNR=15						
SNAA				LR	LR	13 11 48.8	
	comp=Z,99nm,18.0s,baz=109,slow=35						
	comp=Z,7.1nm,0.9s						
SNAA	**Sanae**	**50.47**	**203**	P	**P**	**12 51 05.6**	**-0.4**
BELA	**Belgrano 2**	**51.75**	**190**	P	**P**	**12 51 14.7**	**-0.8**
BELA				IAmb	IAmb	12 51 20.5	
	comp=Z,7.5nm,0.9s						
VNA2	**Neumayer--Watz**	**52.09**	**202**	⇑P	**P**	**12 51 18.0**	**-0.1**
	comp=Z,6.1nm,0.7s,baz=125,slow=7.0						
VNA1	**Neumayer--Stat**	**52.49**	**202**	P	**P**	**12 51 23.0**	**+2.0**
	comp=Z,11nm,1.2s						
KRVT	**Keravat (AS076**	**58.34**	**56**	LR	LR	13 16 21.8	
	comp=Z,7.0nm,18.9s,baz=83,slow=35						
PALK	**Pallekele**	**60.13**	**330**	LR	LR	13 13 28.3	
	comp=Z,67nm,21.2s,baz=172,slow=31						
SUR	**Sutherland**	**64.22**	**250**	LR	LR	13 15 23.9	
	comp=Z,97nm,18.0s,baz=140,slow=31						
PMSA	**Palmer Station**	**66.89**	**184**	LR	LR	13 21 32.2	
	comp=Z,133nm,18.9s,baz=180,slow=35						
CM31	**Chiang Mai Arr**	**67.01**	**352**	P	**P**	**12 53 01.1**	**-0.4**
CM31				IAmb	IAmb	12 53 41.3	
	comp=Z,2.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**67.01**	**352**	P	**P**	**12 53 01.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=182,slow=5.1,SNR=4.8						
CMAR				LR	LR	13 20 35.9	
	comp=Z,46nm,18.1s,baz=215,slow=34						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**67.01**	**352**	P	**P**	**12 53 00.7**	**-0.8**
MATP	**Matopo**	**67.47**	**264**	LR	LR	13 17 54.1	
	comp=Z,67nm,21.6s,baz=80,slow=32						
TSUM	**Tsumeb**	**75.51**	**257**	LR	LR	13 22 10.1	
	comp=Z,71nm,18.3s,baz=146,slow=32						
MBAR	**Mbarara**	**80.46**	**280**	LR	LR	13 26 59.8	
	comp=Z,78nm,18.3s,baz=134,slow=33						
AAK	**Ala-Archa**	**95.14**	**337**	LR	LR	13 34 58.5	
	comp=Z,89nm,19.9s,baz=162,slow=33						
SONM	**Songino Array**	**95.92**	**360**	P	**P**	**12 55 35.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=190,slow=4.4,SNR=2.1						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**146.05**	**90**	PKPbc	**PKPab**	**13 01 48.6**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=225,slow=5.8,SNR=16						
TXAR	**Lajitas Array**	**149.72**	**118**	PKPbc	**PKPbc**	**13 01 58.2**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=191,slow=6.3,SNR=13						
YKA	**Yellowknife Ar**	**153.13**	**43**	PKPbc	**PKiKP**	**13 02 06.4**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=283,slow=2.4,SNR=5.6						

IDC ***10*** *12:57:00.0±0.7,7.21S×154.00E,h0km,mb4.2/17, mbtmp4.2/20,ML3.4/3,MS3.6/13,Error ellipse: s-maj=23.1km s-min=13.7km az=96.0*
NEIC ***10*** *12:57:01.6±1.0,7.21S±0.07×154.15E±0.09,h10km±1km, mb4.4/23,Error ellipse: s-maj=17.8km s-min=7.8km az=56.0*
ISC 10 12:57:05.1±0.6,7.23S±0.07×154.04E±0.09,h35km,n64, σ0s83/54,mb4.3/27,MS3.6/11,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.55**	**328**	Pn	**Pn**	**12 57 57.1**	**-0.7**
HNR	**Honiara**	**6.24**	**111**	LR	LR	13 00 40.3	
	comp=Z,10nm,20.4s,baz=8.5,slow=35						
PMG	**Port Moresby**	**7.15**	**252**	Pn	**Pn**	**12 58 47.2**	**-0.1**
	8.6nm,0.3s,baz=55,slow=7.1,SNR=20						
PMG				Sn	**Sn**	**13 00 08.4**	**+1.1**
	6.9nm,0.3s,baz=72,slow=19,SNR=4.3						
PMG				LR	LR	13 01 34.1	
	comp=Z,295nm,19.0s,baz=333,slow=38						
	50nm,0.6s						
PMG	**Port Moresby**	**7.15**	**252**		**Pn**	**12 58 47.4**	**+0.2**
JAY	**Jayapura**	**14.09**	**289**	LR	LR	13 06 28.8	
	comp=Z,132nm,18.9s,baz=198,slow=40						
CTA	**Charters Tower**	**14.85**	**210**	Pn	**Pn**	**13 00 30.8**	**-1.8**
	0.3nm,0.3s,baz=29,slow=15,SNR=5.1						
	3.4nm,0.9s						
DZM	**Mont Dzumac**	**19.00**	**142**	P	**P**	**13 01 24.0**	**0.0**
	0.2nm,0.3s,baz=312,slow=15,SNR=2.3						
	10nm,0.8s						
FAKI	**Fak Fak**	**22.12**	**280**	P	**P**	**13 01 57.9**	**+0.1**
FAKI				IAmb	IAmb	13 02 06.8	
	comp=Z,16nm,1.0s						
WB0	**Warramunga Arr**	**22.78**	**235**	P	**P**	**13 02 03.8**	**-1.0**
WB0				IAmb	IAmb	13 02 04.8	
	comp=Z,15nm,1.3s						
WR8	**Warramunga Arr**	**22.79**	**234**	P	**P**	**13 02 03.7**	**-1.2**
WR8				IAmb	IAmb	13 02 10.2	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**22.90**	**235**	P	**P**	**13 02 04.7**	**-1.4**
WRA	**Warramunga Arr**	**22.91**	**235**	P	**P**	**13 02 04.5**	**-1.7**
	comp=Z,3.3nm,0.7s,baz=61,slow=10,SNR=34						
WRA				PcP	**PcP**	**13 05 56.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=71,slow=2.4,SNR=1.7						
	comp=Z,3.3nm,0.7s						
WRA	**Warramunga Arr**	**22.91**	**235**	P	**P**	**13 02 04.1**	**-2.1**
MTN	**Manton Dam**	**23.23**	**254**	P	**P**	**13 02 09.9**	**+0.4**
MTN				IAmb	IAmb	13 02 28.7	
	comp=Z,28nm,1.4s						
INKA	**Innaminka**	**23.98**	**210**		**P**	**13 02 16.8**	**+0.3**
INKA				IAmb	IAmb	13 02 18.0	
	comp=Z,9.8nm,1.1s						
AS31	**Alice Springs**	**25.31**	**228**	P	**P**	**13 02 28.3**	**-0.5**
ASAR	**Alice Springs**	**25.32**	**228**	P	**P**	**13 02 27.9**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=61,slow=9.1,SNR=47						
ASAR				LR	LR	13 11 44.9	
	comp=Z,190nm,20.0s,baz=198,slow=35						
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**25.32**	**228**	P	**P**	**13 02 28.4**	**-0.4**
STKA	**Stephens Creek**	**27.14**	**204**	P	**P**	**13 02 45.6**	**+0.5**
	comp=Z,5.5nm,0.8s,baz=24,slow=12,SNR=8.2						
	comp=Z,5.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.69**	**246**	LR	LR	13 13 58.1	
	comp=Z,256nm,19.1s,baz=26,slow=34						
BATI	**Baumata**	**30.16**	**262**	LR	LR	13 16 51.1	
	comp=Z,321nm,18.8s,baz=242,slow=40						
AFI	**Afiamalu**	**34.22**	**104**	LR	LR	13 14 46.9	
	comp=Z,65nm,21.8s,baz=242,slow=31						
TGY	**Tagaytay City**	**39.09**	**303**	LR	LR	13 19 50.2	
	comp=Z,30nm,21.9s,baz=248,slow=35						
MJAR	**Matsushiro Arr**	**46.00**	**342**	P	**P**	**13 05 23.5**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=162,slow=8.8,SNR=4.3						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	**46.00**	**342**	P	**P**	**13 05 24.3**	**-0.9**
MJAR				IAmb	IAmb	13 05 25.1	
	comp=Z,4.6nm,1.5s						
MAJO	**Matsushiro**	**46.00**	**342**	P	**P**	**13 05 24.7**	**-0.5**
MAJO				IAmb	IAmb	13 05 51.8	
	comp=Z,6.0nm,1.1s						
KSRS	**Korea Array**	**50.71**	**333**	P	**P**	**13 06 01.9**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=155,slow=9.2,SNR=4.3						
	comp=Z,1.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**54.93**	**341**	P	**P**	**13 06 33.2**	**+0.7**
	comp=Z,6.3nm,0.9s,baz=150,slow=7.5,SNR=7.3						
	comp=Z,6.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**60.03**	**296**	P	**P**	**13 07 09.7**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=120,slow=5.8,SNR=4.9						
	comp=Z,0.5nm,0.5s						
PEA0B	**Petropavlovsk-**	**60.18**	**3**	P	**P**	**13 07 09.0**	**-0.3**
PETK	**Petropavlovsk-**	**60.18**	**3**	P	**P**	**13 07 08.9**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=170,slow=5.6,SNR=16						
	comp=Z,1.7nm,0.5s						
PETK	**Petropavlovsk-**	**60.18**	**3**	P	**P**	**13 07 09.0**	**-0.4**
SHEM	**Shemya Is, Ala**	**62.12**	**14**	LR	LR	13 30 16.9	
	comp=Z,39nm,21.6s,baz=303,slow=32						
ULN	**Ulaanbaatar**	**68.69**	**328**	P	**P**	**13 08 05.2**	**-0.2**
SONM	**Songino Array**	**69.02**	**328**	P	**P**	**13 08 07.9**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=134,slow=4.3,SNR=7.9						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**69.02**	**328**		**P**	**13 08 07.7**	**+0.3**
SONM				IAmb	IAmb	13 08 09.7	
	comp=Z,5.8nm,1.2s						
VNDA	**Vanda**	**70.38**	**178**	P	**P**	**13 08 15.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=342,slow=3.2,SNR=5.7						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**70.38**	**178**	P	**P**	**13 08 15.8**	**+0.7**
YAK	**Yakutsk**	**71.58**	**348**	P	**P**	**13 08 23.4**	**+1.0**
M14K	**Bethel**	**76.02**	**21**	P	**P**	**13 08 49.0**	**+0.6**
QSPA	**South Pole Qui**	**82.75**	**180**	P	**P**	**13 09 26.0**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=3.2,slow=1.1,SNR=9.9						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**82.75**	**180**	P	**P**	**13 09 25.7**	**+0.3**
QSPA				IAmb	IAmb	13 09 36.8	
	comp=Z,2.2nm,0.9s						
MK31	**Makanchi Array**	**82.95**	**319**	P	**P**	**13 09 27.1**	**+0.4**
MK31				IAmb	IAmb	13 09 28.8	
	comp=Z,3.0nm,1.1s						
MKAR	**Makanchi Array**	**82.95**	**319**	P	**P**	**13 09 27.7**	**+1.0**
	comp=Z,2.0nm,1.0s,baz=99,slow=7.5,SNR=11						
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**82.95**	**319**		**P**	**13 09 26.9**	**+0.2**
MAKZ	**Makanchi**	**83.16**	**319**	P	**P**	**13 09 27.9**	**+0.2**
MAKZ				IAmb	IAmb	13 09 29.3	
	comp=Z,4.8nm,1.1s						
MAW	**Mawson**	**83.82**	**203**	P	**P**	**13 09 31.2**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=63,slow=2.3,SNR=10.0						
	comp=Z,2.8nm,0.4s						
MAW	**Mawson**	**83.82**	**203**	P	**P**	**13 09 31.4**	**+0.7**
ZAA0	**Zalesovo Array**	**83.84**	**326**	P	**P**	**13 09 30.5**	**-0.5**
ZALV	**Zalesovo Beam**	**83.84**	**326**	P	**P**	**13 09 30.6**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=110,slow=6.9,SNR=8.4						
	comp=Z,2.5nm,0.5s						
ZALV	**Zalesovo Beam**	**83.84**	**326**	P	**P**	**13 09 30.5**	**-0.5**
ILAR	**Eielson Array**	**83.94**	**22**	LR	LR	13 42 53.4	
	comp=Z,21nm,20.1s,baz=272,slow=33						
KURK	**Kurchatov**	**86.43**	**322**	P	**P**	**13 09 44.3**	**+0.3**
KURK				IAmb	IAmb	13 09 44.8	
	comp=Z,3.5nm,1.2s						
KURBB	**Kurchatov Arra**	**86.46**	**322**	P	**P**	**13 09 43.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=97,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.4s						
NRIK	**Noril'sk**	**88.64**	**341**	LR	LR	13 49 43.7	
	comp=Z,22nm,20.4s,baz=184,slow=36						
DLBC	**Dease Lake**	**88.82**	**31**	LR	LR	13 42 50.8	
	comp=Z,22nm,21.6s,baz=324,slow=31						
YBH	**Yreka Blue Hor**	**89.75**	**48**	LR	LR	13 43 54.1	
	comp=Z,26nm,20.9s,baz=290,slow=31						
KK31	**Karatay Array**	**90.18**	**313**	P	**P**	**13 10 01.4**	**-0.7**
KK31				IAmb	IAmb	13 10 07.0	
	comp=Z,3.2nm,1.4s						
KKAR	**Karatay Array**	**90.18**	**313**	P	**P**	**13 10 01.6**	**-0.5**
BVAR	**Borovoye Array**	**91.91**	**323**	P	**P**	**13 10 09.0**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=121,slow=5.6,SNR=2.2						
	comp=Z,0.6nm,0.5s						
NVAR	**Mina Array Bea**	**92.61**	**52**	P	**P**	**13

EPON			*i* IVmb_Lg		13 29 23.4		
ECAL	**Calabor**	**4.51 239**	P	**Pn**	**13 27 41.5**	**-0.1**
ECAL			*i* IVmb_Lg		13 29 36.8		
EAGO	**Agolada(Pontev**	**4.99 253**	P	**Pn**	**13 27 47.7**	**-0.5**
EAGO			*i* IVmb_Lg		13 30 03.6		

*KRSC **10** 13:49:08.5±0.9, 52.74°N×160.33°E, h42km±11km, Ml4.2*
*IDC **10** 13:49:11.2±2.5, 53.04°N×160.30°E, h57km±23km, mb3.3/4, mbtmp3.8/5, ML4.2/1, MS3.3/2, Error ellipse: s-maj=34.6km s-min=18.8km az=2.0*
ISC 10 13:49:10.2±1.1, 52.77N±0.06×160.31E±0.05, h41km±12km, n45, σ1s23/44, mb3.6/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.37**	**332**	*i* P	**Pn**	**13 49 19.7**	**+0.4**
SPN				*eS*	**Sn**	**13 49 25.7**	**0.0**
NLC	**Nalytchevo**	**0.70**	**305**	*i* P	**Pn**	**13 49 23.0**	**-0.6**
NLC				*eS*	**Sn**	**13 49 32.6**	**-0.8**
DALK	**Dalny**	**0.97**	**286**	*eP*	**Pn**	**13 49 27.0**	**-0.4**
SDLR	**Sedlovina**	**1.00**	**301**	*eP*	**Pn**	**13 49 27.5**	**-0.3**
PET	**Petropavlovsk**	**1.03**	**285**	*i* P	**Pn**	**13 49 27.7**	**-0.4**
PET				*eS*	**Sn**	**13 49 41.2**	**-0.2**
SMAR	**Somma**	**1.03**	**299**	*eP*	**Pn**	**13 49 28.1**	**-0.3**
AVH	**Avacha**	**1.07**	**298**	*eP*	**Pn**	**13 49 28.8**	**0.0**
INSR	**Institute**	**1.07**	**287**	*eP*	**Pn**	**13 49 28.4**	**-0.3**
KRER	**Koryakskii**	**1.08**	**300**	*eP*	**Pn**	**13 49 29.0**	**0.0**
KOK	**Koryaka**	**1.13**	**298**	*eP*	**Pn**	**13 49 29.5**	**-0.1**
RUS	**Russkaya**	**1.15**	**253**	*eP*	**Pn**	**13 49 29.3**	**-0.4**
KRX	**Arik**	**1.16**	**301**	*eP*	**Pn**	**13 49 29.8**	**-0.2**
KRMR	**Karymshinskiy**	**1.32**	**273**	*eP*	**Pn**	**13 49 32.1**	**0.0**
KRMR				*eS*	**Sn**	**13 49 48.5**	**0.0**
MTVR	**Mutnovka**	**1.33**	**258**	*eP*	**Pn**	**13 49 32.3**	**0.0**
MTVR				*eS*	**Sn**	**13 49 48.9**	**+0.1**
KII	**Karymskiy**	**1.36**	**338**	*eP*	**Pn**	**13 49 33.5**	**+0.6**
GRL	**Gorelyy**	**1.38**	**262**	*eP*	**Pn**	**13 49 33.4**	**+0.4**
ASAK	**Asacha**	**1.52**	**256**	*eP*	**Pn**	**13 49 35.5**	**+0.6**
PETK	**Petropavlovsk-** 264nm,0.4s,baz=95,slow=20,SNR=1137	**1.61**	**283**	P	**Pn**	**13 49 36.6**	**+0.5**
PETK				S	**Sn**	**13 49 56.2**	**+0.5**
	87nm,0.4s,baz=95,slow=20,SNR=6.2						
PETK				LR	LR	13 50 27.2	
	comp=Z,213nm,19.6s,baz=151,slow=48						
KDTR	**Khodutka, Kamc**	**1.68**	**236**	*eP*	**Pn**	**13 49 37.5**	**+0.5**
KDTR				*eS*	**Sn**	**13 49 58.5**	**+1.4**
GNL	**Ganaly**	**1.69**	**304**	*eP*	**Pn**	**13 49 38.7**	**+1.3**
APC	**Apacha**	**1.92**	**276**	*eP*	**Pn**	**13 49 41.9**	**+1.6**
APC				*eS*	**Sn**	**13 50 05.7**	**+2.6**
MKZ	**Mys Kozlova**	**1.98**	**25**	*eP*	**Pn**	**13 49 41.2**	**+0.1**
MIPR	**Malaya Ipel'ka**	**2.22**	**258**	*eP*	**Pn**	**13 49 45.8**	**+1.3**
TUMD	**Tumrok D**	**2.44**	**1**	*eP*	**Pn**	**13 49 47.4**	**0.0**
TUMR	**Tumrok**	**2.52**	**358**	*eP*	**Pn**	**13 49 50.8**	**+2.1**
PAU	**Pauzhetka**	**2.52**	**240**	*eP*	**Pn**	**13 49 49.6**	**+1.0**
KMNR	**Kamenistaya**	**2.99**	**359**	*eP*	**Pn**	**13 49 57.5**	**+2.4**
KPT	**Kopyto**	**3.20**	**359**	*eP*	Pn	13 50 01.8	+3.8
KOZ	**Kozyrevsk**	**3.30**	**356**	*eP*	**Pn**	**13 50 01.2**	**+1.9**
SKR	**Severo-Kuril's**	**3.34**	**233**	*eP*	**Pn**	**13 50 00.8**	**+1.0**
SRDR	**Sredinnyy**	**3.57**	**355**	*eP*	Pn	13 50 07.2	+4.2
KBTR	**Krutoberegovo**	**3.74**	**22**	*eP*	**Pn**	**13 50 08.1**	**+2.8**
BKI	**Bering**	**4.14**	**52**	*eP*	**Pn**	**13 50 11.7**	**+1.0**
SHEM	**Shemya Is, Ala** 2.8nm,0.3s,baz=285,slow=20,SNR=1.6	**8.37**	**85**	P	**Pn**	**13 51 09.3**	**+0.4**
SHEM				S	**Sn**	**13 52 38.9**	**-3.1**
	49nm,1.0s,baz=239,slow=19,SNR=1.6 26nm,0.6s						
USRK	**Ussuriysk Ar.** 2.2nm,0.6s,baz=50,slow=9.7,SNR=3.3	**20.52**	**257**	P	Pn	13 53 46.0	-1.2
USRK				LR	LR	14 01 25.5	
	comp=Z,60nm,19.9s,baz=217,slow=36 2.2nm,0.6s						
MJAR	**Matsushiro Arr** 1.6nm,0.5s,baz=20,slow=9.3,SNR=7.9 1.6nm,0.5s	**22.45**	**232**	P	**P**	**13 54 06.2**	**+0.6**
H11N2	**WAKE ISLAND Hy** baz=353,slow=76,SNR=66	**33.38**	**169**	T	T	14 31 23.9	
H11N3	**WAKE ISLAND Hy** baz=353,slow=76,SNR=58	**33.39**	**169**	T	T	14 31 25.7	
H11N1	**WAKE ISLAND Hy** baz=353,slow=76,SNR=77	**33.39**	**169**	T	T	14 31 25.1	
H11S1	**WAKE ISLAND Hy** baz=352,slow=76,SNR=8.3	**34.56**	**169**	T	T	14 33 03.3	
H11S3	**WAKE ISLAND Hy** baz=352,slow=76,SNR=15	**34.57**	**169**	T	T	14 32 53.5	
H11S2	**WAKE ISLAND Hy** baz=352,slow=76,SNR=11	**34.58**	**169**	T	T	14 32 47.8	
NRIK	**Noril'sk** comp=Z,50nm,18.4s,baz=183,slow=39	**36.24**	**325**	LR	LR	14 12 21.0	
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=56,slow=7.6,SNR=3.8 0.3nm,0.4s	**48.41**	**296**	P	**P**	**13 57 45.4**	**-2.5**
ASAR	**Alice Springs** 0.3nm,0.9s,baz=18,slow=5.1,SNR=6.0 0.3nm,0.9s	**79.52**	**204**	P	**P**	**14 01 13.5**	**+1.1**

*LVSN **10** 14:04:31.2±2.6, 57.54°N×24.08°E, h0km±199km, ML1.7, Presumed earthquake*
HEL 10 14:04:24.8±1.0, 60.41N×29.63E, h0km, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki** baz=105	**1.04**	**278**	PG	Pg	14 04 42.6	-2.1
VJF				*smax*	*smax*	14 04 56.4	
	comp=Z,2.9nm,0.2s						
VJF				SG	Sg	14 04 56.9	-1.2
RUF	**Ruokolahti**	**1.07**	**342**	PN	Pn	14 04 46.9	-0.2
RUF				SG	Sg	14 04 57.2	-2.1
RUF				*smax*	*smax*	14 04 57.5	
	comp=Z,1.4nm,0.2s						
FIA0	**FINESS Array S** baz=124	**2.02**	**302**	PG	Pb	14 05 02.0	-0.4
FIA0				*smax*	*smax*	14 05 24.9	
	comp=Z,1.5nm,0.2s						
ARBE	**Arbavere**	**2.08**	**244**	*eS*	Sg	14 05 34.4	+2.9
ARBE				AML	AML	14 05 36.4	
	comp=N,37nm,0.2s						
ARBE				AML	AML	14 05 37.3	
	comp=E,43nm,0.2s						
ARBE				AML	AML	14 06 23.1	
	comp=Z,30nm,0.7s						
KAF	**Kangasniemi** baz=136	**2.35**	**318**	PG	Pb	14 05 07.9	0.0
KAF				SN	Sn	14 05 34.2	+0.1
KAF				*smax*	*smax*	14 05 34.2	
	comp=Z,1.7nm,0.2s						
NUR	**Nurmijarvi** comp=Z,1.2nm,0.2s	**2.47**	**275**	*smax*	*smax*	14 05 37.9	
NUR				SG	Sn	14 05 38.4	+1.3
MEF	**Metsahovi**	**2.61**	**268**	*eP*	Pg	14 05 14.0	-0.8
MEF				*eS*	Sb	14 05 45.7	+0.7
MEF				AML	AML	14 05 48.1	
	comp=N,3.6nm,0.5s						
MEF				AML	AML	14 06 02.1	
	comp=Z,5.2nm,0.6s						
MEF				AML	AML	14 06 02.9	
	comp=E,3.5nm,0.8s						
SUF	**Sumiainen** comp=Z,0.7nm,0.2s	**2.86**	**326**	*smax*	*smax*	14 05 49.0	
SUF				SB	Sb	14 05 49.5	-2.5
KEF	**Keuruu**	**2.90**	**310**	SN	Sn	14 05 48.3	+0.7
KEF				*smax*	*smax*	14 05 50.0	
	comp=Z,0.6nm,0.2s						
NIF	**Nilsia** comp=Z,1.2nm,0.2s	**3.12**	**345**	*smax*	*smax*	14 05 56.3	
NIF				SB	Sb	14 05 57.4	-2.1
RAF	**Rauma**	**3.92**	**282**	*eP*	Pn	14 05 28.9	+2.8
RAF				*eS*	Sn	14 06 10.5	-2.1
RAF				AML	AML	14 06 31.6	
	comp=E,1.2nm,0.7s						
RAF				AML	AML	14 06 32.1	
	comp=Z,1.9nm,0.6s						
RAF				AML	AML	14 06 32.3	
	comp=N,2.1nm,0.7s						

*IDC **10** 14:11:10.7±1.1, 14.14°N×96.02E, h0km, mb3.8/9, mbtmp3.8/10, ML4.4/1, MS3.4/1, Error ellipse: s-maj=31.6km s-min=19.3km az=69.0*
*BKK **10** 14:11:11.1±1.1, 14°N±5.5°×97.6E±1°, h12km±9km, M4.0/7, MLv4.0/7*
ISC 10 14:11:12.9±1.1, 14.26N±0.08×96.1E±0.1, h10km, n19, σ1s03/19, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHLT	**Khaolaem Dam**	**2.46**	**77**	P	**Pn**	**14 11 54.0**	**+1.0**
UTHA	**Uthaitani**	**3.47**	**68**	P	**Pn**	**14 12 08.5**	**+1.5**
PHET	**Kaeng Krachan**	**3.67**	**111**	P	**Pn**	**14 12 10.1**	**+0.3**
MHMT	**Maesarieng**	**4.27**	**24**	Sg	Sg	14 13 54.4	+24
CM05	**Chiang Mai Arr**	**4.94**	**33**	P	**Pn**	**14 12 27.7**	**+0.5**
CM04	**Chiang Mai Arr**	**4.95**	**33**	P	**Pn**	**14 12 28.0**	**+0.6**
CMAR	**Chiang Mai Arr** 3.2nm,0.3s,baz=222,slow=15,SNR=14	**4.98**	**33**	Pn	**Pn**	**14 12 28.0**	**+0.2**
CMAR				Pg	**Pb**	**14 12 38.9**	**-1.4**
	3.0nm,0.3s,baz=222,slow=15,SNR=24						
CMAR				Sn	**Sn**	**14 13 25.4**	**-0.1**
	0.5nm,0.3s,baz=204,slow=32,SNR=6.3						
CMAR				Lg	Lg	14 13 54.6	
	0.4nm,0.3s,baz=211,slow=34,SNR=4.4 4.0nm,0.3s						
CHTO	**Chiang Mai**	**5.28**	**31**	P	**Pn**	**14 12 32.8**	**+0.9**
LAMP	**Lampang**	**5.42**	**38**	P	**Pn**	**14 12 34.5**	**+0.7**
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=168,slow=6.2,SNR=3.6 0.5nm,0.8s	**34.44**	**343**	P	**P**	**14 17 59.7**	**-1.0**
KSRS	**Korea Array** comp=Z,52nm,18.9s,baz=205,slow=39	**36.49**	**45**	LR	LR	14 34 42.0	
KURBB	**Kurchatov Arra** 1.0nm,0.2s,baz=157,slow=8.0,SNR=4.9 1.0nm,0.2s	**38.98**	**342**	P	**P**	**14 18 38.4**	**-0.9**
ZALV	**Zalesovo Beam** 1.3nm,0.5s,baz=175,slow=7.4,SNR=4.4 1.3nm,0.5s	**40.59**	**350**	P	**P**	**14 18 52.2**	**-0.4**
BVAR	**Borovoye Array** 0.4nm,0.4s,baz=136,slow=8.2,SNR=2.0 0.4nm,0.4s	**43.73**	**338**	P	**P**	**14 19 17.7**	**-0.6**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=311,slow=7.9,SNR=9.6 0.8nm,0.6s	**50.68**	**131**	P	**P**	**14 20 11.6**	**-1.3**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=310,slow=7.4,SNR=2.4 0.4nm,0.6s	**52.78**	**135**	P	**P**	**14 20 27.7**	**-0.9**
FINES	**FINESS Array B** 1.8nm,1.0s,baz=180,slow=32,SNR=1.6 1.8nm,1.0s	**68.06**	**331**	P	**P**	**14 22 12.9**	**+0.5**
ARCES	**ARCESS Array B** 1.2nm,0.7s,baz=103,slow=6.6,SNR=1.6 1.2nm,0.7s	**69.98**	**339**	P	**P**	**14 22 25.7**	**+1.4**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=307,slow=4.5,SNR=3.0 0.3nm,0.7s	**88.14**	**22**	P	**P**	**14 24 05.4**	**+1.7**

*SJA **10** 14:12:49.0±0.6, 24.29S×70.73W, h36km±2km, ML3.4, MW3.6*
*GUC **10** 14:12:50.9±0.8, 24.34S×70.38W, h50km±3km, ML3.4*
ISC 10 14:12:50.6±1.3, 24.29S±0.02×70.71W±0.08, h26km±13km, n31, σ1s80/51, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.43**	**140**	*eP*	**Pb**	**14 12 60.0**	**-0.1**
PB14				IAML		14 13 08.5	
	comp=Z,3μm,0.2s						
PB14	**IPOC Station P**	**0.43**	**140**	*eP*	**Pb**	**14 13 00.3**	**+0.3**
PB14				*eS*	**Sn**	**14 13 06.5**	**-2.3**
PB14				IAML		14 13 06.9	
	comp=E,4μm,0.2s						
PB05	**IPOC Station P**	**1.51**	**18**	*eP*	**Pn**	**14 13 15.8**	**-0.3**
PB05				*eS*	**Sn**	**14 13 29.4**	**-5.5**
PB05				IAML		14 13 29.9	
	comp=Z,265nm,0.4s						
PB05	**IPOC Station P**	**1.51**	**18**	*eP*	**Pn**	**14 13 16.4**	**+0.3**
PB05				*eS*	**Sn**	**14 13 34.8**	**-0.2**
AC01	**Pan de Azucar**	**1.85**	**177**	*eP*	**Pn**	**14 13 20.4**	**-0.4**
AC01				*eS*	**Sb**	**14 13 47.3**	**+0.7**
AC01				IAML		14 13 48.3	
	comp=Z,227nm,0.2s						
AC01	**Pan de Azucar**	**1.85**	**177**	*eP*	**Pn**	**14 13 20.5**	**-0.2**
AC01				*eS*	**Sn**	**14 13 43.2**	**-0.1**
AC01				IAML		14 13 48.4	
	comp=N,518nm,0.5s						
PB06	**IPOC Station P**	**1.89**	**34**	*eP*	**Pn**	**14 13 21.3**	**-0.2**
PB06				*eS*	**Sn**	**14 13 44.6**	**+0.1**
PB06				IAML		14 13 46.1	
	comp=Z,234nm,0.2s						
PB06	**IPOC Station P**	**1.89**	**34**	*eP*	**Pn**	**14 13 20.7**	**-0.7**
PB06				*eS*	**Sn**	**14 13 43.1**	**-1.5**
PB06				IAML		14 13 47.3	
	comp=E,406nm,0.2s						
PB03	**IPOC Station P**	**2.40**	**22**	*eP*	**Pn**	**14 13 28.1**	**-0.4**
PB03				*eS*	**Sb**	**14 14 02.0**	**-0.5**
PB03				IAML		14 14 04.0	
	comp=Z,190nm,0.4s						
PB03	**IPOC Station P**	**2.40**	**22**	*eP*	**Pn**	**14 13 28.2**	**-0.3**
PB03				*eS*	**Sn**	**14 13 57.5**	**+0.4**
PB03				IAML		14 14 03.7	
	comp=E,208nm,0.2s						
PB07	**IPOC Station P**	**2.66**	**17**	*eP*	**Pn**	**14 13 32.1**	**0.0**
PB07				*eS*	**Sb**	**14 14 14.5**	**+4.4**
PB07				IAML		14 14 22.3	
	comp=Z,151nm,0.4s						
PB07	**IPOC Station P**	**2.66**	**17**	*eP*	**Pn**	**14 13 32.0**	**0.0**
PB07				IAML		14 14 19.5	
	comp=E,188nm,0.3s						
AF01	**San Pedro de A**	**2.68**	**61**	*eP*	**Pn**	**14 13 31.1**	**-1.2**
AF01				*eS*	**Sn**	**14 14 02.3**	**-1.8**
AF01				IAML		14 14 21.9	
	comp=Z,312nm,0.6s						
PB09	**IPOC Station P**	**2.83**	**29**	*eP*	**Pn**	**14 13 34.6**	**+0.3**
PB09				*eS*	**Sn**	**14 14 08.6**	**+0.9**
PB09				IAML		14 14 21.8	
	comp=Z,107nm,0.6s						
PB09	**IPOC Station P**	**2.83**	**29**	*eP*	**Pn**	**14 13 34.8**	**+0.4**
AC02	**Maricunga**	**2.91**	**151**	*eP*	**Pn**	**14 13 36.3**	**+0.5**
AC02				*eS*	**Sn**	**14 14 11.0**	**+0.9**
AC02				IAML		14 14 15.3	
	comp=Z,192nm,0.2s						
AC02	**Maricunga**	**2.91**	**151**	*eP*	**Pn**	**14 13 36.2**	**+0.5**
PB02	**IPOC Station P**	**3.05**	**14**	*eP*	**Pn**	**14 13 37.3**	**0.0**
PB02				*eS*	**Sn**	**14 14 17.6**	**+4.5**
PB02				IAML		14 14 34.7	
	comp=Z,144nm,0.4s						
PB02	**IPOC Station P**	**3.05**	**14**	*eP*	**Pn**	**14 13 37.4**	**+0.1**
PB02				IAML		14 14 30.4	
	comp=E,175nm,0.4s						
GO03	**Copiapo**	**3.32**	**173**	*eP*	**Pn**	**14 13 41.0**	**+0.1**
GO03				*eS*	**Sb**	**14 14 30.4**	**+1.7**
GO03				IAML		14 14 31.5	
	comp=Z,169nm,0.3s						
GO03	**Copiapo**	**3.32**	**173**	*eP*	**Pn**	**14 13 40.9**	**0.0**
AC04	**Llanos de Chal**	**3.91**	**185**	*eP*	**Pn**	**14 13 47.0**	**-2.0**
AC04				*eS*	**Sb**	**14 14 45.4**	**-0.4**
AC04				IAML		14 15 02.8	
	comp=Z,43nm,0.5s						
AC04	**Llanos de Chal**	**3.91**	**185**	*eP*	**Pn**	**14 13 46.9**	**-2.2**
SALTA		**3.99**	**90**	*eP*	**Pn**	**14 13 50.3**	**-0.3**
SALTA				*eP*		14 13 54.9	
PB08	**IPOC Station P**	**4.38**	**20**	*eP*	**Pn**	**14 13 56.3**	**+0.5**
PB08				*eS*	**Sb**	**14 14 59.0**	**-0.5**
PB08				IAML		14 15 10.2	
	comp=Z,32nm,0.5s						
AC05	**El Transito**	**4.54**	**175**	*eP*	**Pn**	**14 13 59.2**	**+1.3**
AC05				*eS*	**Sn**	**14 14 55.7**	**+5.7**
AC05				IAML		14 15 16.0	
	comp=Z,30nm,0.5s						
PB11	**IPOC Station P**	**4.61**	**12**	*eP*	**Pn**	**14 13 58.4**	**-0.5**
PB11				*eS*	**Sb**	**14 15 05.8**	**-0.4**
PB11				IAML		14 15 23.2	
	comp=Z,32nm,0.5s						
FSA	**Cafayete**	**4.65**	**114**	*eP*	**Pn**	**14 14 00.2**	**+0.8**
LCO	**Las Campanas**	**4.70**	**180**	*eP*	**Pn**	**14 13 59.1**	**-1.0**
LCO				*eS*	**Sb**	**14 15 04.9**	**-3.8**
LCO				IAML		14 15 16.6	
	comp=Z,95nm,0.7s						
PSGCX	**Pisagua**	**4.70**	**7**	*eP*	**Pn**	**14 13 59.2**	**-0.8**
PSGCX				IAML		14 15 36.3	
	comp=Z,12nm,0.7s						
GO01	**Chusmiza**	**4.81**	**17**	*eP*	**Pn**	**14 14 03.2**	**+1.3**
GO01				IAML		14 15 27.7	
	comp=Z,26nm,0.5s						

*ISK **10** 14:52:18.7, 38.84N×26.20E, h5km, ML2.8/27*

*AFAD **10** 14:52:18.9, 38.85N×26.16E, h7km±4km, ML2.5*
ISC 10 14:52:19.0±1.3, 38.83N±0.02×26.17E±0.04, h9km±12km, n37, σ0s76/48, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARB	**zmir-Karabur**	**0.25**	**132**	P	**Pb**	**14 52 25.2**	**-0.5**
KARB				IAML		14 52 29.0	
	comp=N,971nm,0.2s						
KARB				S	**Sb**	**14 52 29.2**	**-0.9**
KARB				IAML		14 52 31.0	
	comp=E,885nm,0.4s						
KRBN	**Karaburun**	**0.38**	**129**	Pg	**Pb**	**14 52 27.6**	**-0.3**
KRBN				Sg	**Sb**	**14 52 33.9**	**0.0**
FOCM	**Foa**	**0.45**	**105**	Pg	**Pg**	**14 52 28.2**	**+0.4**
FOCM				Sg	**Sb**	**14 52 35.4**	**-0.5**
CHOS	**Chios island**	**0.46**	**192**	Pg	**Pg**	**14 52 28.4**	**+0.5**
URLA	**Izmir**	**0.58**	**145**	P	**Pg**	**14 52 30.5**	**+0.3**
URLA				S	**Sb**	**14 52 39.4**	**-0.1**
URLA				IAML		14 52 42.0	
	comp=E,210nm,0.5s						
URLA				IAML		14 52 43.0	
	comp=N,203nm,0.3s						
DKL	**Dikili**	**0.62**	**67**	Pg	**Pb**	**14 52 31.3**	**-0.7**
AYVA	**Ayvalik**	**0.62**	**40**	P	**Pg**	**14 52 31.0**	**-0.1**
AYVA				S	**Sg**	**14 52 39.1**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**0.65**	**156**	P	**Pb**	**14 52 32.2**	**-0.2**
ZEYE				S	**Sb**	**14 52 41.3**	**-0.3**
ZEYE				IAML		14 52 45.0	
	comp=N,183nm,0.5s						
ZEYE				IAML		14 52 46.0	
	comp=E,235nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.67**	**358**	P	**Pg**	**14 52 31.5**	**-0.5**
KOCA				S	**Sb**	**14 52 43.0**	**+0.7**
KOCA				IAML		14 52 45.0	
	comp=N,243nm,0.4s						
ZEDA	**zmir-Bergama**	**0.72**	**79**	P	**Pb**	**14 52 33.5**	**-0.2**
ZEDA				S	**Sg**	**14 52 42.5**	**+0.3**
ZEDA				IAML		14 52 54.0	
	comp=N,255nm,0.5s						
BLCB	**Balcova**	**0.81**	**123**	Pg	**Pb**	**14 52 35.8**	**+0.5**
CAMT	**Merkez**	**0.89**	**95**	P	**Pn**	**14 52 37.3**	**-0.5**
CAMT				S	**Sb**	**14 52 49.8**	**+1.1**
CAMT				IAML		14 52 52.0	
	comp=N,183nm,0.4s						
CAMT				IAML		14 52 52.0	
	comp=E,251nm,0.6s						
EZNE	**Ezine-Canakkal**	**0.93**	**9**	Pg	**Pn**	**14 52 38.3**	**0.0**
DGB	**zmir**	**0.96**	**144**	P	**Pg**	**14 52 36.5**	**-0.9**
DGB				S	**Sb**	**14 52 50.6**	**+0.1**
BUHA	**Balikesir, Bur**	**0.97**	**46**	P	**Pb**	**14 52 37.6**	**-0.4**
BUHA				S	**Sb**	**14 52 51.3**	**+0.4**
BUHA				IAML		14 52 54.0	
	comp=E,170nm,0.4s						
BUHA				IAML		14 52 55.0	
	comp=N,156nm,0.8s						
EZN	**Ezine**	**1.00**	**7**	Pg	**Pb**	**14 52 38.6**	**+0.1**
SOMA	**Soma-Manisa**	**1.11**	**73**	Pn	**Pn**	**14 52 40.7**	**0.0**
COMU	**Canakkale**	**1.29**	**10**	Pn	**Pb**	**14 52 43.2**	**-0.2**
CANM	**Can-anakkale**	**1.36**	**30**	Pn	**Pg**	**14 52 45.8**	**+0.7**
GADA	**Gvkgeada**	**1.37**	**351**	Pn	**Pn**	**14 52 44.0**	**-0.3**
YENI	**Yenice-Canakka**	**1.38**	**37**	Pn	**Pg**	**14 52 46.5**	**+1.0**
BALB	**Balikesir**	**1.55**	**58**	Pn	**Pg**	**14 52 48.2**	**-0.6**
GORD	**Gordes-Manisa**	**1.57**	**87**	Pn	**Pb**	**14 52 47.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.58**	**8**	Pn	**Pg**	**14 52 49.2**	**-0.1**
ODEM	**Odemis-Izmir**	**1.59**	**110**	Pn	**Pb**	**14 52 48.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.61**	**123**	Pn	**Pb**	**14 52 49.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.69**	**44**	Pn	**Pb**	**14 52 50.1**	**-0.1**
KRBG	**Karabiga-Canak**	**1.78**	**29**	Pn	**Pb**	**14 52 51.7**	**-0.2**
ERIK	**Erikli-Kesan**	**1.85**	**8**	Pn	**Pb**	**14 52 52.3**	**-0.8**
ENEZ	**Enez**	**1.90**	**360**	Pn	**Pb**	**14 52 53.9**	**0.0**
KULA	**Kula-Manisa**	**1.97**	**98**	Pn	**Pb**	**14 52 54.2**	**-0.9**
ALN	**Alexandroupoli**	**2.06**	**357**	Pn	**Pb**	**14 52 55.6**	**-1.0**
MRMT	**Marmara Adasi**	**2.08**	**31**	Pn	**Pb**	**14 52 55.7**	**-1.3**
GAZK	**Gazikoy-TEKIRD**	**2.11**	**25**	Pn	**Pb**	**14 52 56.2**	**-1.2**
KCTX	**Karacabey (Bur**	**2.21**	**49**	Pn	**Pb**	**14 52 57.7**	**-1.5**
RDO	**Rodhopi**	**2.36**	**348**	Pn	**Pb**	**14 53 00.1**	**-1.6**
EDRB	**Edirne**	**3.04**	**8**	Pn	**Pn**	**14 53 09.8**	**+2.5**

*BKK **10** 15:09:06.3±6.5, 14°N±33°×97.5E±4°, h10km, M3.7/9, mB4.1/5, mb4.1/5, Mjma3.4/9, MLv3.9/7, Mw(mB)3.1/5*
*IDC **10** 15:09:12.1±1.8, 14.16N×95.56E, h0km, mb3.5/3, mbtmp3.6/4, ML4.1/1, MS3.5/1, Error ellipse: s-maj=38.2km s-min=23.5km az=89.0*
ISC 10 15:09:14.3±1.6, 14.3N±0.1×95.9E±0.2, h10km, n14, σ0s97/15, mb3.5/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHLT	**Khaolaem Dam**	**2.70**	**79**	P	**Pn**	**15 09 57.8**	**0.0**
UTHA	**Uthaitani**	**3.70**	**69**	P	**Pn**	**15 10 11.3**	**-0.2**
MHMT	**Maesarieng**	**4.36**	**27**	P	**Pn**	**15 10 19.5**	**-1.2**
CM13	**Chiang Mai Arr**	**5.06**	**35**	P	**Pn**	**15 10 31.3**	**+1.0**
CM05	**Chiang Mai Arr** 0.1nm0.1nm158nm15nm,0.6s	**5.06**	**35**	P	**Pn**	**15 10 31.5**	**+1.1**
CM04	**Chiang Mai Arr** 0.1nm0.1nm14nm,0.6s	**5.08**	**36**	P	**Pn**	**15 10 31.8**	**+1.2**
CM01	**Chiang Mai Arr**	**5.08**	**35**	P	**Pn**	**15 10 31.9**	**+1.2**
CM02	**Chiang Mai Arr** 0.1nm0.1nm158nm15nm,0.6s	**5.09**	**35**	P	**Pn**	**15 10 31.8**	**+1.1**
CMAR	**Chiang Mai Arr** 1.7nm,0.3s,baz=223,slow=15,SNR=18	**5.11**	**35**	Pn	**Pn**	**15 10 32.3**	**+1.3**
CMAR				Pg	**Pb**	**15 10 43.3**	**-0.5**
	1.7nm,0.3s,baz=221,slow=15,SNR=23						
CMAR				Sn	**Sn**	**15 11 29.9**	**-0.1**
	0.4nm,0.3s,baz=203,slow=33,SNR=5.6						
CMAR				Lg	Lg	15 12 03.6	
	baz=222,slow=24 3.0nm,0.3s						
CM09	**Chiang Mai Arr**	**5.12**	**36**	P	**Pn**	**15 10 32.2**	**+1.0**
KURBB	**Kurchat

0.5nm,0.5s,baz=116,slow=6.6,SNR=2.0
0.5nm,0.5s
VNDA Vanda 72.39 178 P **P** **15 32 26.0 +1.1**
0.9nm,0.9s,baz=326,slow=8.5,SNR=5.2
0.9nm,0.9s
ILAR Eielson Array 83.09 22 P **P** **15 33 23.8 -0.9**
0.3nm,0.7s,baz=241,slow=6.3,SNR=4.5
0.3nm,0.7s
QSPA South Pole Qui 84.67 180 P **P** **15 33 33.3 +0.3**
1.9nm,0.7s,baz=336,slow=1.2,SNR=11
1.9nm,0.7s
BBB Bella Bella 88.26 37 LR LR 16 02 50.4
comp=Z,132nm,21.8s,baz=194,slow=28
TORD Torodi Ar. Bea 149.23 287 PKPbc **PKPbc** **15 40 48.1 -0.9**
0.4nm,0.7s,baz=76,slow=1.4,SNR=1.9

*IDC **10** 15:26:37.0±2.8,34˚.92N×22˚.33E,h0km,mb3.8/9, mbtmp3.7/15,ML3.5/5,MS3.0/2,Error ellipse: s-maj=53.1km s-min=18.4km az=28.0*
*ATH **10** 15:26:46.5,35˚.26N×22˚.61E,h22km±5km,ML3.6/30, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **10** 15:26:49.3,35˚N±3˚×2˚3E±˚,h23km±8km,M3.4/14, MLh3.4/14*
ISC 10 15:26:44.1±1.5,**35˚22N**±0˚.05×**22˚.53E**±0˚.05,**h32**km±9km, **n76**,σ1§**96**/91,**mb3.9**/9,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.90**	**89**	P	**Pn**	**15 27 02.8**	**+2.4**
KNDR				S	**Sn**	**15 27 13.8**	**+1.5**
KNDR	**Palaiochora Ch**	**0.90**	**89**	P	**Pn**	**15 27 02.4**	**+1.9**
KNDR				S	**Sb**	**15 27 12.9**	**+0.1**
ANKY	**Antikythira Is**	**0.90**	**44**	P	**Pn**	**15 27 01.5**	**+1.0**
ANKY				S	**Sb**	**15 27 12.0**	**-0.9**
ANKY	**Antikythira Is**	**0.90**	**44**	P	**Pn**	**15 27 01.6**	**+1.1**
ANKY				S	**Sn**	**15 27 13.4**	**+1.0**
KTHA	**Kythira Island**	**1.12**	**23**	P	**Pb**	**15 27 06.1**	**+1.2**
KTHA	**Kythira Island**	**1.12**	**23**	P	**Pb**	**15 27 06.3**	**+1.4**
IMMV	**Iera Moni Meta**	**1.21**	**78**	P	**Pb**	**15 27 07.0**	**+0.6**
IMMV				S	**Sb**	**15 27 20.4**	**-1.3**
IMMV	**Iera Moni Meta**	**1.21**	**78**	P	**Pb**	**15 27 06.7**	**+0.2**
IMMV				S	**Sn**	**15 27 21.9**	**+1.9**
CH01	**Chania**	**1.25**	**76**	P	**Pb**	**15 27 07.6**	**+0.5**
CH01				S	**Sn**	**15 27 23.1**	**+2.1**
CHAN	**Chania**	**1.27**	**76**	P	**Pb**	**15 27 07.6**	**+0.2**
CHAN				S	**Sb**	**15 27 23.1**	**-0.4**
CHNB	**Souda**	**1.28**	**78**	P	**Pb**	**15 27 08.2**	**+0.5**
CHNB				S	**Sb**	**15 27 24.3**	**+0.5**
GVD	**Gavdhos**	**1.33**	**106**	P	**Pb**	**15 27 08.9**	**+0.4**
GVD				S	**Sb**	**15 27 26.5**	**+1.2**
GVD	**Gavdhos**	**1.33**	**106**	P	**Pb**	**15 27 08.7**	**+0.1**
GVD				S	**Sb**	**15 27 26.1**	**+0.9**
NPS1	**Neapolis Lacon**	**1.36**	**18**	P	**Pb**	**15 27 10.2**	**+1.3**
VAM	**Vamos**	**1.38**	**82**	P	**Pb**	**15 27 09.5**	**+0.2**
VAM	**Vamos**	**1.38**	**82**	P	**Pb**	**15 27 09.9**	**+0.7**
MNVA	**Monemvasia**	**1.52**	**16**	P	**Pb**	**15 27 12.2**	**+0.5**
VLI	**Veliai**	**1.53**	**12**	P	**Pb**	**15 27 12.5**	**+0.7**
VLI				S	**Sb**	**15 27 30.7**	**-0.1**
VLI	**Veliai**	**1.53**	**12**	P	**Pb**	**15 27 12.2**	**+0.3**
PYL	**PYLOS**	**1.79**	**339**	P	**Pn**	**15 27 15.5**	**+2.7**
SIVA	**Sivas**	**1.88**	**96**	P	**Pn**	**15 27 16.5**	**+2.6**
IDI	**Anoyia**	**1.93**	**87**	Pn	**Pn**	**15 27 16.0**	**+1.2**
	55nm,0.4s,baz=282,slow=14,SNR=86						
IDI				Sn	**Sb**	**15 27 42.7**	**+0.3**
	29nm,0.3s,baz=145,slow=20,SNR=5.9						
IDI	**Anoyia**	**1.93**	**87**	P	**Pn**	**15 27 17.2**	**+2.5**
IDI				S	**Sn**	**15 27 39.6**	**+1.7**
IDI	**Anoyia**	**1.93**	**87**	P	**Pn**	**15 27 17.3**	**+2.5**
ITM	**Ithomi**	**2.01**	**346**	P	**Pb**	**15 27 20.6**	**+0.5**
ITM	**Ithomi**	**2.01**	**346**	P	**Pb**	**15 27 19.2**	**-0.9**
IACM	**Heraklion**	**2.08**	**87**	S	**Sn**	**15 27 43.8**	**+2.3**
MHLO	**Agia Marina, M**	**2.11**	**45**	P	**Pn**	**15 27 19.9**	**+2.8**
MHLO				S	**Sn**	**15 27 43.2**	**+0.9**
MHLO	**Agia Marina, M**	**2.11**	**45**	P	**Pn**	**15 27 18.9**	**+1.7**
MET6	**Megalochori,Me**	**2.46**	**15**	P	**Pn**	**15 27 24.3**	**+2.4**
MET2	**Kameni Chora,**	**2.47**	**15**	P	**Pn**	**15 27 24.3**	**+2.2**
MET5	**Makryloggos,Me**	**2.49**	**15**	P	**Pn**	**15 27 24.5**	**+2.2**
MET4	**Agioi Theodoro**	**2.50**	**16**	P	**Pn**	**15 27 24.7**	**+2.3**
NPS	**Neapolis**	**2.52**	**88**	P	**Pn**	**15 27 25.8**	**+2.9**
NPS	**Neapolis**	**2.52**	**88**	P	**Pn**	**15 27 25.8**	**+2.9**
SNT5	**Nea Kammeni, S**	**2.61**	**62**	P	**Pn**	**15 27 26.7**	**+2.7**
SNT5	**Nea Kammeni, S**	**2.61**	**62**	P	**Pn**	**15 27 26.1**	**+2.1**
THR3	**Thira Island,**	**2.62**	**62**	P	**Pn**	**15 27 25.8**	**+1.7**
THR3	**Thira Island,**	**2.62**	**62**	P	**Pn**	**15 27 25.8**	**+1.7**
THERA	**Ancient Thera,**	**2.65**	**64**	P	**Pn**	**15 27 26.1**	**+1.5**
THERA	**Ancient Thera,**	**2.65**	**64**	P	**Pn**	**15 27 25.9**	**+1.3**
GUR	**Goura**	**2.71**	**357**	P	**Pb**	**15 27 29.8**	**-2.2**
GUR	**Goura**	**2.71**	**357**	P	**Pn**	**15 27 29.6**	**+4.1**
DRO	**Drossia**	**2.80**	**347**	P	**Pn**	**15 27 30.5**	**+3.8**
VLY	**Voula,Athens**	**2.82**	**21**	P	**Pn**	**15 27 29.3**	**+2.5**
LTK	**Loutraki**	**2.82**	**7**	P	**Pn**	**15 27 30.5**	**+3.6**
KLV	**Kalavryta, Ach**	**2.83**	**354**	P	**Pb**	**15 27 32.2**	**-1.8**
KLV	**Kalavryta, Ach**	**2.83**	**354**	P	**Pn**	**15 27 30.4**	**+3.3**
ATHU	**Athens Univers**	**2.92**	**20**	P	**Pn**	**15 27 31.0**	**+2.7**
PTL	**Penteli**	**3.02**	**20**	P	**Pn**	**15 27 31.6**	**+2.0**
VIL2	**Platees**	**3.04**	**11**	P	**Pn**	**15 27 31.6**	**+1.6**
DION	**Dionisos Attik**	**3.06**	**21**	P	**Pn**	**15 27 32.0**	**+1.7**
AXS	**Araxos**	**3.11**	**343**	P	**Pn**	**15 27 34.6**	**+3.8**
KALE	**Kalithea**	**3.18**	**354**	P	**Pn**	**15 27 35.0**	**+3.1**
KARY	**Karystos**	**3.20**	**28**	P	**Pn**	**15 27 33.1**	**+1.0**
EFP	**Efpalio**	**3.24**	**351**	P	**Pn**	**15 27 36.3**	**+3.7**
VLS	**Valsamata**	**3.34**	**333**	P	**Pn**	**15 27 36.8**	**+2.7**
ANX	**Ano Chora**	**3.40**	**352**	P	**Pn**	**15 27 38.3**	**+3.3**
LKR	**Lokris**	**3.44**	**6**	P	**Pn**	**15 27 38.1**	**+2.7**
AXAR	**Agios Charalam**	**3.54**	**2**	P	**Pn**	**15 27 39.4**	**+2.6**
KYMI	**Kymi, Euboea I**	**3.63**	**20**	P	**Pn**	**15 27 40.1**	**+2.0**
BRTR	**Keskin Array B**	**9.90**	**60**	Pn	**Pn**	**15 29 07.2**	**+2.9**
	0.1nm,0.3s,baz=240,slow=12,SNR=9.1						
BRTR				LR	LR	15 33 43.9	
	comp=Z,63nm,19.8s,baz=206,slow=42 1.9nm,0.7s						
MMAI	**Mount Meron Ar**	**10.89**	**98**	P	**Pn**	**15 29 14.9**	**-3.0**
	1.5nm,0.3s,baz=316,slow=13,SNR=6.7						
MMAI				Sn	Sn	15 31 09.2	-9.5
	0.9nm,0.3s,baz=260,slow=40,SNR=1.7 1.0nm,0.4s						
EIL	**Elat**	**11.86**	**114**	Pn	**Pn**	**15 29 27.8**	**-3.2**
	0.8nm,0.3s,baz=312,slow=3.6,SNR=7.0						
EIL				Sn	Sn	15 31 31.6	-10
	1.3nm,0.3s,baz=299,slow=19,SNR=6.1 2.8nm,0.5s						
ASF	**Jabal al Asfar**	**12.35**	**100**	Sn	**Sn**	**15 31 53.7**	**-0.5**
	0.2nm,0.3s,baz=311,slow=20,SNR=1.7						
GERES	**GERESS Array B**	**15.10**	**337**	Pn	**Pn**	**15 30 15.0**	**0.0**
	baz=155,slow=9.6,SNR=3.0 0.2nm,0.4s						
AKASG	**Malin Array Be**	**16.22**	**15**	Pn	**Pn**	**15 30 29.6**	**+0.3**
	0.8nm,0.3s,baz=209,slow=12,SNR=1.6 0.2nm,0.3s						
HFS	**Hagfors**	**25.58**	**350**	P	**P**	**15 32 09.9**	**-0.1**
	1.0nm,0.3s,baz=161,slow=9.4,SNR=8.6 1.0nm,0.3s						
FINES	**FINESS Array B**	**26.34**	**4**	P	**P**	**15 32 16.7**	**-0.1**
	0.4nm,0.3s,baz=173,slow=10,SNR=7.1						
FINES				LR	LR	15 44 06.2	
	comp=Z,45nm,19.2s,baz=138,slow=39 0.4nm,0.3s						
NOA	**NORSAR Array B**	**26.84**	**348**	P	**P**	**15 32 21.3**	**0.0**
	0.3nm,0.6s,baz=158,slow=7.2,SNR=4.4 0.3nm,0.6s						
ARCES	**ARCESS Array B**	**34.41**	**2**	P	**P**	**15 33 27.8**	**-0.2**
	2.0nm,0.9s,baz=180,slow=11,SNR=4.0 2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**42.76**	**51**	P	**P**	**15 34 37.9**	**-0.4**
	1.2nm,0.5s,baz=275,slow=8.7,SNR=12 1.2nm,0.5s						
MKAR	**Makanchi Array**	**45.53**	**56**	P	**P**	**15 35 00.4**	**-0.2**
	1.7nm,0.6s,baz=274,slow=7.8,SNR=18 1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**46.52**	**46**	P	**P**	**15 35 07.1**	**-1.1**
	0.6nm,0.3s,baz=272,slow=8.8,SNR=3.4 0.6nm,0.3s						
SONM	**Songino Array**	**61.10**	**50**	P	**P**	**15 36 55.2**	**+0.1**
	0.5nm,0.4s,baz=280,slow=8.9,SNR=4.3 0.5nm,0.4s						
ILAR	**Eielson Array**	**79.99**	**355**	P	**P**	**15 38 50.3**	**+0.6**
	0.4nm,0.8s,baz=5.7,slow=1.8,SNR=3.2 0.4nm,0.8s						

*ATH **10** 15:43:04.4,40˚.53N×20˚.72E,h12km±3km,ML2.8/9, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **10** 15:43:05.8,40˚.5N±0˚.7×2˚1E±˚,h1km±1km,M2.7/15, MLh2.7/15*
*TIR **10** 15:43:06.1,40˚.54N×20˚.67E,h2km,Ml3.4/1*
*BEO **10** 15:43:07.1±0.4,40˚.56N×20˚.83E,h0km,ML2.5/7*
*SKO **10** 15:43:07.8,40˚.55N×20˚.85E,h9km,ML2.8*
*PDG **10** 15:43:14.9±0.2,40˚.80N×19˚.87E,h13km,ML2.7/11,Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
ISC 10 15:43:05.2±0.8,**40˚57N**±0˚.02×**20˚.85E**±0˚.02,**h14**km±5km, **n59**,σ1§**22**/97,**6C-5D**,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.07**	**323**	P	**Pg**	**15 43 08.4**	**+0.3**
KBN				S	**Sg**	**15 43 10.1**	**0.0**
KBN				AML	AML	15 43 11.0	
	44nm,0.3s						
KBN	**Korca**	**0.07**	**323**	P	**Pg**	**15 43 08.4**	**+0.3**
KBN				S	**Sg**	**15 43 10.0**	**-0.1**
LMS2	**Laimos Florina**	**0.35**	**40**	P	**Pb**	**15 43 13.5**	**+0.2**
LMS2				S	**Sn**	**15 43 20.4**	**-2.4**
PENT	**Pentalofos**	**0.43**	**149**	P	**Pg**	**15 43 13.9**	**0.0**
PENT				S	**Sg**	**15 43 20.1**	**+0.4**
PENT	**Pentalofos**	**0.43**	**149**	P	**Pg**	**15 43 13.8**	**0.0**
PENT				S	**Sb**	**15 43 20.4**	**-0.7**
OHR	**Ohrid**	**0.55**	**356**	*i* Pg	**Pn**	**15 43 18.2**	**-0.5**
OHR				*i* Sg	**Sn**	**15 43 26.9**	**-0.7**
OHR				*e*Lg	Lg	15 43 27.4	
	comp=N,396nm,0.7s						
OHR				*e*Lg	Lg	15 43 27.6	
	comp=E,932nm,0.6s						
KPRO	**Kipourio**	**0.73**	**147**	P	**Pg**	**15 43 19.2**	**-0.2**
KPRO				S	**Sb**	**15 43 30.0**	**+0.5**
KPRO	**Kipourio**	**0.73**	**147**	P	**Pg**	**15 43 19.2**	**-0.2**
KPRO				S	**Sb**	**15 43 29.4**	**-0.2**
KZN	**Kozani**	**0.75**	**110**	P	**Pb**	**15 43 20.5**	**+0.4**
KZN				S	**Sn**	**15 43 32.1**	**-0.6**
KZN	**Kozani**	**0.75**	**110**	P	**Pb**	**15 43 20.5**	**+0.4**
KZN				S	**Sn**	**15 43 32.2**	**-0.6**
JAN	**Janina**	**0.91**	**180**	P	**Pb**	**15 43 21.8**	**-1.0**
JAN				S	**Sb**	**15 43 34.3**	**-0.4**
JAN	**Janina**	**0.91**	**180**	P	**Pb**	**15 43 21.5**	**-1.2**
JAN				S	**Sb**	**15 43 33.3**	**-1.4**
SRN	**Sarande**	**0.94**	**224**	P	**Pb**	**15 43 23.0**	**-0.3**
SRN				S	**Sb**	**15 43 35.5**	**-0.1**
KTI	**Kastanea**	**0.98**	**100**	P	**Pn**	**15 43 25.0**	**+0.3**
VLO	**Vlora**	**1.03**	**265**	P	**Pn**	**15 43 25.9**	**+0.6**
VLO				S	**Sn**	**15 43 44.0**	**+4.5**
PRMD	**Pramanda**	**1.05**	**169**	P	**Pb**	**15 43 24.7**	**-0.6**
PRMD				S	**Sg**	**15 43 39.5**	**+0.2**
PRMD	**Pramanda**	**1.05**	**169**	P	**Pb**	**15 43 24.6**	**-0.6**
PRMD				S	**Sb**	**15 43 38.4**	**-0.5**
TIR	**Tirane**	**1.08**	**317**	P	**Pg**	**15 43 26.2**	**+0.2**
TIR				S	**Sn**	**15 43 41.4**	**+0.7**
IGT	**Igoumenitsa**	**1.10**	**201**	P	**Pg**	**15 43 26.5**	**0.0**
IGT				S	**Sn**	**15 43 42.1**	**+0.7**
IGT	**Igoumenitsa**	**1.10**	**201**	P	**Pb**	**15 43 25.9**	**-0.2**
IGT				S	**Sb**	**15 43 40.2**	**-0.2**
IGT	**Igoumenitsa**	**1.10**	**201**	*e*Pg	**Pn**	**15 43 26.1**	**-0.2**
IGT				*e*Sg	**Sn**	**15 43 42.4**	**+1.1**
IGT	**Igoumenitsa**	**1.10**	**201**	P	**Pb**	**15 43 24.7**	**-1.4**
PHP	**Peshkopia**	**1.16**	**345**	P	**Pg**	**15 43 27.6**	**0.0**
KEK	**Kerkira**	**1.17**	**224**	P	**Pn**	**15 43 26.9**	**-0.2**
KEK				P	**Pn**	**15 43 26.9**	**-0.2**
KEK				S	**Sn**	**15 43 42.8**	**-0.1**
KEK				S	**Sg**	**15 43 43.2**	**+0.2**
KEK	**Kerkira**	**1.17**	**224**	P	**Pn**	**15 43 26.7**	**-0.5**
KEK	**Kerkira**	**1.17**	**224**	P	**Pn**	**15 43 25.0**	**-2.2**
TETR	**Tetrakomo, Epi**	**1.26**	**165**	P	**Pb**	**15 43 28.7**	**-0.1**
TETR	**Tetrakomo, Epi**	**1.26**	**165**	P	**Pn**	**15 43 28.2**	**-0.4**
LIT	**Litokhoron**	**1.34**	**110**	P	**Pg**	**15 43 31.6**	**+0.6**
LIT	**Litokhoron**	**1.34**	**110**	P	**Pg**	**15 43 31.7**	**+0.8**
THL	**Klokotos Trika**	**1.34**	**138**	P	**Pg**	**15 43 30.5**	**-0.5**
THL				S	**Sg**	**15 43 49.8**	**+1.3**
THL	**Klokotos Trika**	**1.34**	**138**	P	**Pn**	**15 43 29.3**	**-0.2**
TYRN	**Tyrnavos**	**1.36**	**128**	P	**Pg**	**15 43 31.2**	**-0.3**
TYRN	**Tyrnavos**	**1.36**	**128**	P	**Pg**	**15 43 31.8**	**+0.4**
VAY	**Valandovo**	**1.51**	**59**	*i* Pg	**Pg**	**15 43 34.6**	**+0.4**
VAY				*i* Sg	**Sg**	**15 43 57.6**	**+3.8**
VAY				*e*Lg	Lg	15 43 57.8	
	comp=N,62nm,0.7s						
VAY				*e*Lg	Lg	15 43 59.1	
	comp=E,52nm,0.5s						
HORT	**Hortiatis**	**1.72**	**88**	P	**Pb**	**15 43 36.8**	**+0.2**
LKD2	**Lefkada island**	**1.78**	**185**	P	**Pg**	**15 43 39.6**	**+0.2**
LKD2				S	**Sg**	**15 44 04.4**	**+2.0**
SDA	**Shkodra**	**1.80**	**326**	P	**Pg**	**15 43 39.5**	**-0.2**
SDA				S	**Sg**	**15 44 04.8**	**+1.8**
ULC	**Ulcinj**	**1.84**	**320**	⇓*i* Pg	**Pb**	**15 43 39.2**	**+0.5**
ULC				*i* Sg	**Sn**	**15 43 57.8**	**-1.8**
AGG	**Agios Georgios**	**1.92**	**143**	P	**Pb**	**15 43 39.5**	**-0.5**
PLG	**Polygyros**	**1.99**	**95**	P	**Pb**	**15 43 40.8**	**-0.5**
DRME	**Dracevica, Mon**	**2.04**	**323**	⇑*i* Pg	**Pb**	**15 43 42.3**	**+0.2**
DRME				*i* Sg	**Sn**	**15 44 04.5**	**0.0**
PVY	**Plav**	**2.13**	**342**	⇑*i* Pn	**Pg**	**15 43 45.4**	**+0.1**
PVY				*i* Sn	**Sb**	**15 44 11.6**	**+1.5**
PDG	**Podgorica**	**2.21**	**328**	⇑*i* Pn	**Pb**	**15 43 45.3**	**+0.3**
PDG				*i* Sn	**Sn**	**15 44 09.5**	**+0.9**
BUM	**Brajici-Budva**	**2.27**	**320**	⇓*i* Pn	**Pb**	**15 43 44.8**	**-1.2**
BUM				*i* Sn	**Sn**	**15 44 08.8**	**-1.4**
BOSS	**Bosilegrad**	**2.29**	**32**	*e*Pn	**Pb**	**15 43 45.1**	**-1.1**
BARS	**Barje**	**2.36**	**18**	*e*Pn	**Pb**	**15 43 47.0**	**-0.6**
IVA	**Berane**	**2.41**	**343**	⇓*i* Pn	**Pg**	**15 43 50.7**	**-0.7**
IVA				*i* Sn	**Sb**	**15 44 18.3**	**+0.2**
CEME	**Cevo**	**2.45**	**324**	⇑*i* Pn	**Pb**	**15 43 47.7**	**-1.4**
CEME				*i* Sn	**Sn**	**15 44 14.2**	**-0.4**
KOME	**Kolasin**	**2.49**	**337**	⇑*i* Pn	**Pb**	**15 43 50.4**	**+0.6**
KOME				*i* Sn	**Sb**	**15 44 18.5**	**-1.8**
HCY	**Herceg Novi**	**2.58**	**318**	⇑*i* Pn	**Pn**	**15 43 48.6**	**+2.1**
HCY				*i* Sn	**Sn**	**15 44 15.2**	**-2.5**
NKME	**Niksic**	**2.62**	**328**	⇓*i* Pn	**Pb**	**15 43 50.5**	**-1.4**
NKME				*i* Sn	**Sn**	**15 44 18.7**	**-0.2**
SELS	**Selova**	**2.66**	**4**	*e*Pn	**Pb**	**15 43 51.7**	**-0.9**
SJES	**Sjenica**	**2.77**	**347**	*e*Pn	**Pb**	**15 43 53.4**	**-1.2**
BRY	**Bratogost**	**2.90**	**324**	⇓*i* Pn	**Pb**	**15 43 54.4**	**-2.4**
BRY				*i* Sn	**Sn**	**15 44 24.5**	**-1.4**
GOCS	**Kraljevo Serbi**	**2.99**	**0**	*e*Pn	**Pb**	**15 43 56.4**	**-2.0**
ZAPS	**Zavoj**	**3.02**	**26**	*e*Pn	**Pb**	**15 43 56.6**	**-2.1**
STON	**Ston**	**3.29**	**315**	*e*Pn	**Pn**	**15 43 58.5**	**+2.2**
ZAGS	**Zajecar**	**3.40**	**17**	*e*Pn	**Pb**	**15 44 01.4**	**-3.9**

*PRE **10** 16:03:22.5±2.3,11˚.86S×34˚.67E,h5km,ML3.7, Presumed earthquake*
*IDC **10** 16:03:38.0±3.7,7˚.98S×34˚.09E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=96.5km s-min=37.8km az=9.0*
ISC 10 16:03:21.5±0.9,**10˚5S**±0˚.2×**32˚2E**±0˚.2,**h10**km,**n14**, σ1§**66**/13,**mb3.7**/5,**Zambia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.22**	**219**	*e*P	**Pb**	**16 05 09.6**	**-0.4**
LSZ				*e*S	**Sb**	**16 06 27.0**	**+2.5**
LSZ				IAML		16 07 15.5	
	comp=Z,227nm,0.7s						
MUSN	**Musina, Limpop**	**11.99**	**191**	*e*P	Pn	16 06 07.3	-5.3
MUSN				*e*S	Sn	16 08 06.9	-20
MUSN				IAML		16 08 15.0	
	comp=Z,9.6nm,0.6s						
LEPH	**Lephalale, Lim**	**13.99**	**197**	*e*P	**Pn**	**16 06 39.2**	**-0.9**
LBTB	**Lobatse**	**15.80**	**203**	*e*P	**P**	**16 07 06.3**	**-1.9**
HRAO	**HartRAO**	**15.96**	**195**	*e*P	**Pn**	**16 07 04.8**	**-1.5**
GRAF	**Camdeboo Natio**	**22.88**	**197**	*e*P	**P**	**16 08 25.5**	**+0.2**
BRAK	**Brakfontein**	**22.93**	**201**	*e*P	**P**	**16 08 26.6**	**+0.7**
GRAN	**Grantham**	**23.66**	**202**	*e*P	**P**	**16 08 31.6**	**-1.6**
TORD	**Torodi Ar. Bea**	**38.33**	**307**	P	P	16 11 01.4	+19
	comp=Z,0.4nm,0.6s,baz=114,slow=8.4,SNR=2.8 comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**49.93**	**1**	P	**P**	**16 12 15.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=167,slow=7.6,SNR=4.4 comp=Z,0.3nm,0.6s						
BVAR	**Borovoye Array**	**71.11**	**23**	P	**P**	**16 14 40.9**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=212,slow=7.0,SNR=2.3 comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**71.78**	**67**	P	**P**	**16 14 47.4**	**+2.6**
	comp=Z,0.6nm,0.8s,baz=264,slow=6.5,SNR=4.4 comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**72.36**	**34**	P	**P**	**16 14 45.8**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=216,slow=6.0,SNR=4.1 comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**72.90**	**29**	P	**P**	**16 14 50.2**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=228,slow=6.6,SNR=5.2 comp=Z,0.7nm,0.9s						

*IDC **10** 16:12:06.0±1.4,48˚.90S×108˚.26E,h0km,mb3.9/6, mbtmp3.8/6,MS3.8/3,Error ellipse: s-maj=59.3km s-min=20.3km az=114.0*
ISC 10 16:12:07.4±1.1,**48˚9S**±0˚.2×**108˚2E**±0˚.3,**h10**km,**n12**, σ0§**97**/8,**mb3.9**/6,**MS3.8**/3,**Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.67**	**20**	T	T	16 30 18.3	
	baz=198,slow=74,SNR=151						
H01W1	**Cape Leeuwin H**	**14.68**	**20**	T	T	16 30 17.6	
	baz=198,slow=74,SNR=116						
H01W3	**Cape Leeuwin H**	**14.69**	**20**	T	T	16 30 20.5	
	baz=198,slow=74,SNR=135						
ASAR	**Alice Springs**	**32.32**	**48**	P	**P**	**16 18 36.7**	**0.0**
	1.0nm,0.7s,baz=209,slow=8.3,SNR=14 1.0nm,0.7s						
VNDA	**Vanda**	**35.06**	**162**	P	**P**	**16 18 59.7**	**-0.2**
	0.6nm,0.8s,baz=301,slow=8.1,SNR=3.7						
VNDA				LR	LR	16 32 23.2	
	comp=Z,164nm,19.5s,baz=282,slow=35 0.6nm,0.8s						
WRA	**Warramunga Arr**	**35.71**	**45**	P	**P**	**16 19 05.4**	**-0.6**
	2.0nm,0.7s,baz=210,slow=8.1,SNR=18 2.0nm,0.7s						
QSPA	**South Pole Qui**	**41.22**	**180**	P	**P**	**16 19 53.4**	**+1.3**
	0.7nm,0.8s,baz=338,slow=5.4,SNR=5.4						
QSPA				LR	LR	16 36 16.0	
	comp=Z,112nm,19.3s,baz=308,slow=35 0.7nm,0.8s						
CTA	**Charters Tower**	**41.85**	**60**	LR	LR	16 35 56.2	
	comp=Z,96nm,20.1s,baz=246,slow=34						
SNAA	**Sanae**	**50.36**	**203**	P	**P**	**16 21 03.3**	**-0.7**
	2.0nm,0.7s,baz=102,slow=9.3,SNR=6.6 2.0nm,0.7s						
VNA2	**Neumayer--Watz**	**51.98**	**202**	P	**P**	**16 21 14.8**	**-1.3**
	baz=129,slow=7.2						
MKAR	**Makanchi Array**	**97.95**	**342**	P	**P**	**16 25 43.5**	**+0.6**
	0.1nm,0.3s,baz=153,slow=4.7,SNR=2.8 0.1nm,0.3s						
TXAR	**Lajitas Array**	**148.81**	**117**	PKPbc	**PKPbc**	**16 31 55.0**	**-0.1**
	1.7nm,0.7s,baz=184,slow=3.9,SNR=13						

*MEX **10** 16:24:34.7±0.4,15˚.49N×94˚.70W,h17km±12km,MD4.5*
*IDC **10** 16:24:38.6±3.8,15˚.76N×94˚.51W,h50km±25km,mb3.5/5, mbtmp3.7/7,ML2.6/1,MS3.3/10,Error ellipse: s-maj=47.0km s-min=9.5km az=40.0*
ISC 10 16:24:31.6±2.9,**15˚50N**±0˚.05×**94˚76W**±0˚.02,**h16**km±19km, **n47**,σ2§**37**/68,**mb3.9**/5,**MS3.2**/9,**Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CARR	**Arriaga**	**1.10**	**48**	*e*P	**Pb**	**16 24 52.0**	**-0.4**
CARR				*e*S	**Sb**	**16 25 04.7**	**-1.8**
HUIG	**Huatulco**	**1.32**	**282**	*e*P	**Pn**	**16 24 55.9**	**+0.4**
HUIG				*e*S	**Sb**	**16 25 10.7**	**-2.1**
CMIG	**Matias Romero**	**1.59**	**356**	P	**Pb**	**16 25 00.0**	**-0.5**
	718nm,0.6s,baz=169,slow=11,SNR=1047						
CMIG				S	**Sn**	**16 25 18.4**	**-0.8**
	449nm,0.4s,baz=60,slow=22,SNR=5.4						
CMIG				LR	LR	16 25 48.7	
	comp=Z,666nm,19.3s,baz=194,slow=51						
CMIG	**Matias Romero**	**1.59**	**356**	*i* P	**Pb**	**16 25 00.1**	**-0.5**
CMIG				*e*S	**Sn**	**16 25 18.8**	**-0.4**
TGIG		**2.02**	**51**	*e*P	**Pb**	**16 25 06.8**	**-1.3**
TGIG				*e*S	**Sb**	**16 25 32.5**	**-0.6**
PEIG	**Puerto Escondi**	**2.35**	**282**	*e*P	**Pn**	**16 25 10.3**	**+0.7**
PEIG				*i* S	**Sn**	**16 25 35.0**	**-3.1**
NEUV	**Arroyo Zacate**	**2.42**	**336**	*e*P	**Pn**	**16 25 11.4**	**+0.9**
NEUV				*e*S	**Sb**

*IDC **10** 16:42:05.0±3.0,34˚.68S×179˚.67W,h0km,mb3.6/2, mbtmp3.7/3,ML3.4/1,Error ellipse: s-maj=68.5km s-min=44.9km az=124.0*

*WEL **10** 16:42:12.7±1.0,35˚.S±6˚×18˚.0W±˚,h12km,M3.7/7, ML3.5/8,MLv3.7/7,Error ellipse: s-maj=11.8km s-min=7.0km az=101.6*

*NOU **10** 16:42:36.9,36˚.87S×179˚.48E,h78km,MLv3.7/6,Off E. Coast of N. Island, N.Z.*

ISC 10 16:42:10.4±1.7,34˚.95S±0˚.09×179˚.6W±0˚.1,h43km,n37, σ1°67/49,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.11**	**213**	P	**Pn**	**16 42 57.9**	**+1.0**
MXZ	**Matakaoa Point**	**3.11**	**213**	P	**Pn**	**16 42 58.0**	**+1.0**
MXZ				S	**Sn**	**16 43 32.1**	**-0.7**
WMGZ	**Waiomatatini S**	**3.28**	**209**	P	**Pn**	**16 43 01.2**	**+1.9**
PKGZ	**Pakihiroa**	**3.46**	**212**	P	**Pn**	**16 43 03.1**	**+1.2**
PKGZ				S	**Sn**	**16 43 42.3**	**+0.7**
HAZ	**Te Kaha**	**3.51**	**216**	P	**Pn**	**16 43 04.2**	**+1.7**
HAZ				S	**Sn**	**16 43 46.0**	**+3.2**
PUZ	**Puketiti**	**3.56**	**209**	P	**Pn**	**16 43 04.1**	**+0.9**
PUZ				S	**Sn**	**16 43 44.4**	**+0.3**
RUGZ	**Raukumara Rang**	**3.73**	**215**	P	**Pn**	**16 43 06.3**	**+0.8**
TWGZ	**Tauwhareparae**	**3.77**	**211**	P	**Pn**	**16 43 07.0**	**+0.9**
TWGZ				S	**Sn**	**16 43 49.6**	**+0.4**
CNGZ	**Carnagh Statio**	**3.94**	**206**	P	**Pn**	**16 43 09.9**	**+1.5**
TKGZ	**Te Karaka**	**4.04**	**210**	P	**Pn**	**16 43 09.8**	**+0.1**
TKGZ				S	**Sn**	**16 43 55.9**	**0.0**
MWZ	**Matawai**	**4.09**	**214**	P	**Pn**	**16 43 10.7**	**+0.2**
MWZ				S	**Sn**	**16 43 57.6**	**+0.4**
URZ	**Urewera**	**4.24**	**218**	Pn	**Pn**	**16 43 12.9**	**+0.5**
	2.0nm,0.3s,baz=242,slow=2.8,SNR=26						
URZ				Sn	**Sn**	**16 43 59.2**	**-1.3**
	3.4nm,0.3s,baz=315,slow=23,SNR=6.6 6.8nm,0.3s						
URZ	**Urewera**	**4.24**	**218**	P	**Pn**	**16 43 12.8**	**+0.5**
URZ	**Urewera**	**4.24**	**218**	P	**Pn**	**16 43 12.9**	**+0.5**
URZ				S	**Sn**	**16 43 59.4**	**-1.2**
GRZ	**Great Barrier**	**4.24**	**251**	P	**Pn**	**16 43 13.5**	**+1.1**
RAGZ	**Rawiri**	**4.28**	**213**	P	**Pn**	**16 43 13.6**	**+0.5**
RAGZ				S	**Sn**	**16 44 01.4**	**-0.3**
RIGZ	**Rimuhau**	**4.31**	**209**	P	**Pn**	**16 43 13.7**	**+0.2**
RIGZ				S	**Sn**	**16 44 02.4**	**-0.1**
SNGZ	**Shannon Statio**	**4.55**	**212**	P	**Pn**	**16 43 17.7**	**+1.0**
SNGZ				S	**Sn**	**16 44 07.9**	**-0.4**
RTZ	**Ruatahuna**	**4.58**	**216**	P	**Pn**	**16 43 17.6**	**+0.4**
KNZ	**Kokohu**	**4.62**	**208**	P	**Pn**	**16 43 17.3**	**-0.3**
MKAZ	**Moumakai**	**4.77**	**242**	P	**Pn**	**16 43 21.4**	**+1.7**
TOZ	**Tahuroa Road**	**4.84**	**234**	P	**Pn**	**16 43 22.4**	**+1.8**
WCZ	**Waipu Caves**	**5.05**	**257**	P	**Pn**	**16 43 24.8**	**+1.2**
BKZ	**Black Stump Fm**	**5.24**	**216**	P	**Pn**	**16 43 26.4**	**+0.1**
BKZ	**Black Stump Fm**	**5.24**	**216**	P	**Pn**	**16 43 25.1**	**-1.2**
OUZ	**Omahuta**	**5.59**	**265**	P	**Pn**	**16 43 31.4**	**+0.3**
HIZ	**Hauiti**	**5.70**	**230**	P	**Pn**	**16 43 36.0**	**+3.4**
PXZ	**Pawanui**	**5.80**	**208**	P	**Pn**	**16 43 31.7**	**-2.2**
BFZ	**Birch Farm**	**6.60**	**209**	P	**Pn**	**16 43 43.2**	**-1.7**
BFZ	**Birch Farm**	**6.60**	**209**	P	**Pn**	**16 43 41.9**	**-3.0**
MRZ	**Mangatainoka R**	**6.86**	**212**	P	**Pn**	**16 43 46.0**	**-2.4**
THZ	**Tophouse**	**9.00**	**219**	P	**Pn**	**16 44 13.4**	**-4.4**
CTZ	**Chatham Island**	**9.07**	**166**	P	**Pn**	**16 44 23.1**	**+4.4**
CTZ	**Chatham Island**	**9.07**	**166**	P	**Pn**	**16 44 22.2**	**+3.5**
ASAR	**Alice Springs**	**41.75**	**273**	P	**P**	**16 49 55.7**	**0.0**
	0.4nm,0.4s,baz=116,slow=7.4,SNR=26 0.4nm,0.4s						
WRA	**Warramunga Arr**	**43.16**	**278**	P	**P**	**16 50 06.4**	**-0.7**
	0.3nm,0.4s,baz=118,slow=7.7,SNR=12 0.3nm,0.4s						
FINES	**FINESS Array B**	**148.86**	**336**	PKPbc	**PKPbc**	**17 01 52.5**	**0.0**
	0.5nm,0.5s,baz=50,slow=3.0,SNR=6.5						

*GFZ **10** 17:06:22.2±0.3,6˚.S±5˚×10˚.5W±1˚.1,h10km,M4.6/17, mb4.6/17*

*IDC **10** 17:06:27.8±0.8,4˚.74S×105˚.1W,h0km,mb4.2/10, mbtmp4.2/10,MS3.7/17,Error ellipse: s-maj=43.4km s-min=17.2km az=67.0*

*NEIC **10** 17:06:30.4±1.6,4˚.72S±0˚.10×105˚.1W±0˚.1,h10km±1km, mb4.7/244,Error ellipse: s-maj=25.2km s-min=5.3km az=231.0*

ISC 10 17:06:29.7±0.6,4˚.7S±0˚.1×105˚.1W±0˚.1,h13km,n428, σ0°76/316,**mb4.6**/117,**MS3.8**/17,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**15.33**	**75**	Pn	**Pn**	**17 10 06.0**	**0.0**
RPN	**Rapa Nui**	**22.63**	**190**	P	P	17 11 13.5	-17
CMIG	**Matias Romero**	**23.92**	**25**	LR	LR	17 18 53.0	
	comp=Z,84nm,20.8s,baz=181,slow=31						
MTO3	**Montecristo**	**24.60**	**39**		**P**	**17 11 49.3**	**-0.8**
JTS	**Las Juntas de**	**25.00**	**53**	LR	LR	17 19 04.4	
	comp=Z,162nm,20.2s,baz=213,slow=30						
ATAH	**Atahualpa**	**26.66**	**96**	LR	LR	17 20 07.2	
	comp=Z,416nm,19.2s,baz=248,slow=31						
ZAIG	**Zacatecas**	**27.45**	**5**	P	**P**	**17 12 17.4**	**+1.5**
NNA	**Nana**	**28.84**	**106**	LR	LR	17 20 51.4	
	comp=Z,279nm,21.8s,baz=266,slow=30						
LPIG	**La Paz**	**29.11**	**350**	LR	LR	17 21 04.9	
	comp=Z,113nm,21.9s,baz=203,slow=30						
ROSC	**El Rosal**	**32.17**	**73**	LR	LR	17 23 44.5	
	comp=Z,81nm,20.7s,baz=242,slow=32						
TXAR	**Lajitas Array**	**33.91**	**2**	P	**P**	**17 13 13.6**	**+1.0**
	1.6nm,0.8s,baz=185,slow=11,SNR=16						
TXAR				PcP	**PcP**	**17 15 51.5**	**+0.3**
	0.8nm,0.8s,baz=178,slow=4.9,SNR=5.3						
TXAR				LR	LR	17 24 34.4	
	comp=Z,82nm,20.1s,baz=210,slow=32 1.6nm,0.8s						
TX31	**Lajitas Ar. Si**	**33.91**	**2**		**P**	**17 13 13.1**	**+0.5**
SAND	**Sanderson**	**34.61**	**5**		**P**	**17 13 19.1**	**+0.4**
ALPN	**Alpine**	**34.94**	**2**		**P**	**17 13 21.8**	**+0.1**
ALPN				IAmb	IAmb	17 13 23.9	
	comp=Z,13nm,1.1s						
TAOE	**Nuku Hiva Isla**	**35.04**	**261**	eLR	LR	17 22 37.4	
	comp=Z,460nm,25.9s						
VHRN	**Van Horn**	**35.33**	**0**		**P**	**17 13 25.5**	**+0.6**
VHRN				IAmb	IAmb	17 13 27.0	
	comp=Z,11nm,1.2s						
OZNA	**Ozona**	**35.66**	**6**		**P**	**17 13 28.4**	**+0.6**
PECS	**Pecos**	**35.93**	**2**		**P**	**17 13 30.3**	**+0.3**
PECS				IAmb	IAmb	17 13 32.4	
	comp=Z,8.0nm,1.1s						
MNHN	**Monahans**	**35.95**	**3**		**P**	**17 13 30.5**	**+0.3**
MNHN				IAmb	IAmb	17 13 32.0	
	comp=Z,9.1nm,1.1s						
TPB28		**36.21**	**1**	P	**P**	**17 13 33.2**	**+0.7**
TPB28				IAmb	IAmb	17 13 35.0	
	comp=Z,6.2nm,1.1s						
MNTX	**Cornudas Mount**	**36.24**	**360**		**P**	**17 13 32.7**	**+0.1**
MNTX				IAmb	IAmb	17 13 34.2	
	comp=Z,11nm,1.2s						
MNTX	**Cornudas Mount**	**36.24**	**360**	P	**P**	**17 13 31.8**	**-0.8**
BRDY	**Brady**	**36.29**	**9**		**P**	**17 13 32.7**	**-0.4**
SGCY	**Sterling City**	**36.65**	**6**		**P**	**17 13 35.6**	**-0.5**
SDV	**Santo Domingo**	**36.92**	**69**	LR	LR	17 26 11.8	
	comp=Z,163nm,21.1s,baz=278,slow=32						
121A	**Cookes Peak, D**	**37.15**	**356**		**P**	**17 13 40.5**	**-0.2**
121A				IAmb	IAmb	17 13 43.7	
	comp=Z,10nm,1.1s						
DUN6	**Lazy B Ranch**	**37.28**	**354**	P	**P**	**17 13 42.1**	**+0.5**
H03N2	**Juan Fernandez**	**37.53**	**143**	T	T	17 53 55.2	
	baz=317,slow=77,SNR=27						
H03N1	**Juan Fernandez**	**37.55**	**143**	T	T	17 53 58.8	
	baz=317,slow=77,SNR=38						
H03N3	**Juan Fernandez**	**37.55**	**143**	T	T	17 53 55.9	
	baz=317,slow=77,SNR=35						
POST	**Post**	**37.75**	**5**		**P**	**17 13 45.5**	**-0.1**
POST				IAmb	IAmb	17 13 47.7	
	comp=Z,14nm,1.1s						
SN07	**Snyder 07**	**37.83**	**6**	IAmb	IAmb	17 13 47.4	
	comp=Z,13nm,1.0s						
PLPT	**Palo Pinto**	**37.90**	**9**	P	**P**	**17 13 46.9**	**+0.3**
PLPT				IAmb	IAmb	17 13 48.6	
	comp=Z,19nm,1.2s						
LPAZ	**La Paz**	**38.03**	**110**	P	**P**	**17 13 48.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=284,slow=5.8,SNR=1.5						
LPAZ				LR	LR	17 27 07.6	
	comp=Z,73nm,18.7s,baz=276,slow=33 comp=Z,0.4nm,0.3s						
LPAZ	**La Paz**	**38.03**	**110**	P	**P**	**17 13 48.6**	**-0.2**
APMT	**Aspermont**	**38.15**	**7**	IAmb	IAmb	17 13 50.4	
	comp=Z,20nm,1.3s						
113A	**Mohawk Valley,**	**38.20**	**348**	P	**P**	**17 13 49.9**	**+0.7**
Y22A	**Socorro**	**38.51**	**357**		**P**	**17 13 52.1**	**+0.1**
Y22A				IAmb	IAmb	17 13 55.2	
	comp=Z,16nm,1.1s						
CRNM	**Carthage**	**38.51**	**358**	P	**P**	**17 13 52.4**	**+0.3**
MSTX	**Muleshoe**	**38.56**	**3**		**P**	**17 13 52.7**	**+0.3**
MSTX				IAmb	IAmb	17 13 55.7	
	comp=Z,15nm,0.9s						
LENM	**Lemitar**	**38.74**	**358**		**P**	**17 13 54.1**	**+0.2**
AC01	**Pan de Azucar**	**39.26**	**126**	P	P	17 13 43.5	-15
X16A	**Lo Mia Camp, P**	**39.41**	**352**		**P**	**17 14 00.2**	**+0.7**
BC3	**Big Chuckawall**	**39.42**	**346**		**P**	**17 14 00.7**	**+1.0**
ANMO	**Albuquerque**	**39.49**	**358**	LR	LR	17 27 30.8	
	comp=Z,27nm,18.4s,baz=6.5,slow=32						
ANMO	**Albuquerque**	**39.49**	**358**		**P**	**17 14 01.0**	**+0.7**
ANMO	**Albuquerque**	**39.49**	**358**	P	**P**	**17 14 01.6**	**+1.3**
PFO	**Pinyon Flats O**	**39.63**	**345**	LR	LR	17 26 41.1	
	comp=Z,122nm,18.5s,baz=172,slow=31						
PFO	**Pinyon Flats O**	**39.63**	**345**	P	**P**	**17 14 02.1**	**+0.7**
WMOK	**Wichita Mounta**	**39.71**	**8**	P	**P**	**17 14 01.4**	**-0.5**
IRM	**Iron Mountain**	**39.84**	**347**	P	**P**	**17 14 03.7**	**+0.7**
BELC	**Belle Mtn. Jos**	**39.89**	**346**		**P**	**17 14 04.2**	**+0.7**
W35A	**Tecumseh**	**40.43**	**10**	P	**P**	**17 14 07.8**	**0.0**
W13A	**Hualapai Mount**	**40.48**	**349**		**P**	**17 14 09.3**	**+0.7**
MIAR	**Mount Ida**	**40.56**	**15**	IAmb	IAmb	17 14 10.2	
	comp=Z,9.8nm,0.8s						
MIAR	**Mount Ida**	**40.56**	**15**	P	**P**	**17 14 09.6**	**+0.7**
CO01	**Juntas del Tor**	**41.48**	**131**	P	P	17 13 59.3	-18
CCCA	**Chr Cany lake**	**41.68**	**345**	P	**P**	**17 14 19.5**	**+1.3**
CCCA				IAmb	IAmb	17 14 21.2	
	comp=Z,14nm,1.5s						
MVCO	**Mesa Verde**	**41.85**	**356**	IAmb	IAmb	17 14 21.9	
	comp=Z,14nm,1.1s						
MVCO	**Mesa Verde**	**41.85**	**356**	P	**P**	**17 14 20.9**	**+1.1**
QSM	**Queen of Sheba**	**41.97**	**346**	P	**P**	**17 14 21.7**	**+1.2**
VA01	**Torpederas**	**42.00**	**136**	P	P	17 14 04.7	-16
PKCU	**Pink Cliffs**	**42.50**	**351**		**P**	**17 14 25.9**	**+0.7**
PKCU				IAmb	IAmb	17 14 28.5	
	comp=Z,18nm,1.3s						
LCAR	**Lake Charles**	**42.65**	**17**		**P**	**17 14 25.4**	**-0.5**
LCAR				IAmb	IAmb	17 14 27.5	
	comp=Z,13nm,0.8s						
PV05	**Paradox Valley**	**42.76**	**355**	IAmb	IAmb	17 14 29.6	
	comp=Z,13nm,1.0s						
PV01	**Paradox Valley**	**42.78**	**356**	P	**P**	**17 14 27.6**	**+0.3**
HMU	**Henry Mountain**	**42.78**	**353**	P	**P**	**17 14 28.7**	**+1.3**
PV13	**Radium Mtn., P**	**42.82**	**356**	P	**P**	**17 14 28.4**	**+0.7**
PV13				IAmb	IAmb	17 14 30.3	
	comp=Z,14nm,1.2s						
PV02	**Paradox Valley**	**42.86**	**356**	P	**P**	**17 14 28.3**	**+0.3**
PV18	**Skein Mesa, Pa**	**42.91**	**356**	IAmb	IAmb	17 14 30.3	
	comp=Z,15nm,1.1s						
PV12	**Saucer Basin,**	**42.98**	**356**	IAmb	IAmb	17 14 39.2	
	comp=Z,26nm,1.2s						
PV15	**Paradox Valley**	**42.98**	**356**	IAmb	IAmb	17 14 31.2	
	comp=Z,10nm,1.1s						
PV23	**Carpenter Ridg**	**43.13**	**355**	IAmb	IAmb	17 15 02.8	
	comp=Z,13nm,1.2s						
PV22	**Blue Mesa, Par**	**43.19**	**356**		**P**	**17 14 31.0**	**+0.3**
T42A	**Van Buren**	**43.56**	**16**	IAmb	IAmb	17 14 34.4	
	comp=Z,9.4nm,0.8s						
DSP	**Deep Springs**	**43.58**	**345**	P	**P**	**17 14 34.6**	**+1.1**
BO02	**Sierra Bellavi**	**43.60**	**138**	P	**P**	**17 14 35.3**	**+1.4**
BO02				IAmb	IAmb	17 14 37.9	
	comp=Z,16nm,1.1s						
S39A	**Bolivar**	**43.61**	**14**	IAmb	IAmb	17 14 35.8	
	comp=Z,14nm,1.0s						
WVT	**Waverly**	**43.75**	**20**		**P**	**17 14 35.0**	**+0.1**
WVT				IAmb	IAmb	17 14 36.2	
	comp=Z,20nm,1.2s						
WVT	**Waverly**	**43.75**	**20**	P	**P**	**17 14 33.4**	**-1.6**
SRU	**San Rafael Swe**	**43.92**	**354**	IAmb	IAmb	17 14 38.8	
	comp=Z,10nm,1.2s						
P17A	**Butcher Ranch,**	**44.30**	**354**	IAmb	IAmb	17 14 42.6	
	comp=Z,8.8nm,1.0s						
ISCO	**Idaho Springs**	**44.32**	**359**	IAmb	IAmb	17 14 49.0	
	comp=Z,10nm,1.1s						
ISCO	**Idaho Springs**	**44.32**	**359**	P	**P**	**17 14 41.0**	**+1.2**
P18A	**Preston Nutter**	**44.40**	**354**	IAmb	IAmb	17 14 50.4	
	comp=Z,11nm,1.1s						
CPCT	**Cooper Cave**	**44.40**	**24**		**P**	**17 14 39.8**	**-0.4**
R40A	**Maddies Stadio**	**44.44**	**14**	IAmb	IAmb	17 14 41.7	
	comp=Z,11nm,0.8s						
LHV	**Little Huntoon**	**44.55**	**345**	P	**P**	**17 14 42.6**	**+1.3**
LHV				IAmb	IAmb	17 14 51.5	
	comp=Z,9.6nm,1.1s						
SIV	**San Ignacio**	**44.62**	**108**	LR	LR	17 30 45.1	
	comp=Z,169nm,20.0s,baz=290,slow=33						
NVAR	**Mina Array Bea**	**44.66**	**345**	P	**P**	**17 14 44.4**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=177,slow=7.4,SNR=6.2 comp=Z,0.6nm,0.3s						
BG3	**Lake Jocassee**	**44.69**	**26**	P	**P**	**17 14 41.8**	**-0.7**
U49A	**Red Boiling Sp**	**44.84**	**22**	IAmb	IAmb	17 14 44.9	
	comp=Z,9.6nm,0.9s						
MPU	**Maple Canyon**	**44.94**	**353**	IAmb	IAmb	17 14 54.8	
	comp=Z,18nm,1.4s						
WAKR	**Walker**	**45.03**	**344**	IAmb	IAmb	17 14 48.8	
	comp=Z,7.5nm,1.2s						
DUG	**Dugway, Tooele**	**45.27**	**352**		**P**	**17 14 48.0**	**+0.8**
DUG				IAmb	IAmb	17 14 50.0	
	comp=Z,6.8nm,1.1s						
DUG	**Dugway, Tooele**	**45.27**	**352**	P	**P**	**17 14 49.0**	**+1.8**
PPT2	**Papeete2**	**45.34**	**250**	eLR	LR	17 27 14.9	
	comp=Z,172nm,29.0s						
PPT2				eLR	LR	17 27 25.0	
	comp=Z,227nm,27.8s						
BSUT	**Blindstream Ca**	**45.35**	**354**	IAmb	IAmb	17 14 50.4	
	comp=Z,6.8nm,1.2s						
PNTR	**Pine Nut**	**45.63**	**344**	IAmb	IAmb	17 14 53.4	
	comp=Z,10nm,1.1s						
P40A	**Paris**	**45.66**	**14**		**P**	**17 14 50.0**	**-0.1**
Q44A	**Meyer Farm, Va**	**45.90**	**18**		**P**	**17 14 52.1**	**0.0**
HWUT	**Hardware Ranch**	**46.50**	**353**	IAmb	IAmb	17 14 59.1	
	comp=Z,7.2nm,1.1s						
HWUT	**Hardware Ranch**	**46.50**	**353**	P	**P**	**17 14 58.5**	**+1.6**
TBI	**Tubuai**	**46.60**	**242**	eLR	LR	17 27 50.7	
	comp=Z,722nm,27.2s						
HVU	**Hansel Valley**	**46.83**	**352**	IAmb	IAmb	17 15 02.3	
	comp=Z,6.1nm,1.1s						
PLCA	**Paso Flores**	**47.37**	**144**	P	**P**	**17 15 04.0**	**+0.2**
	comp=Z,2.0nm,1.0s,baz=291,slow=11,SNR=1.7						
PLCA				LR	LR	17 29 51.0	
	comp=Z,146nm,21.7s,baz=284,slow=30 comp=Z,2.0nm,1.0s						
BW06	**Boulder Array**	**47.46**	**356**	IAmb	IAmb	17 15 12.7	
	comp=Z,5.7nm,1.1s						
PD31	**Pinedale Array**	**47.46**	**356**	IAmb	IAmb	17 15 12.7	
	comp=Z,5.2nm,1.0s						
PDAR	**Pinedale Array**	**47.46**	**356**	P	**P**	**17 15 04.5**	**0.0**
	comp=Z,2.4nm,0.8s,baz=166,slow=6.9,SNR=20 comp=Z,2.4nm,0.8s						
LOHW	**Long Hollow**	**48.38**	**355**	IAmb	IAmb	17 15 23.4	
	comp=Z,8.6nm,1.3s						
FXWY	**Fox Creek**	**48.45**	**354**	IAmb	IAmb	17 15 16.1	
	comp=Z,8.6nm,1.1s						
RSSD	**Black Hills**	**48.65**	**1**		**P**	**17 15 14.0**	**+0.4**
RSSD	**Black Hills**	**48.65**	**1**	P	**P**	**17 15 14.7**	**+1.1**
HLID	**Hailey**	**48.81**	**351**	IAmb	IAmb	17 15 17.2	
	comp=Z,8.0nm,1.3s						
HLID	**Hailey**	**48.81**	**351**	P	**P**	**17 15 15.3**	**+0.5**
ECSD	**EROS Data Cent**	**48.85**	**8**	IAmb	IAmb	17 15 18.3	
	comp=Z,10nm,1.4s						
ECSD	**EROS Data Cent**	**48.85**	**8**	P	**P**	**17 15 15.1**	**+0.1**
MFID	**Camas Ranch**	**48.91**	**350**	IAmb	IAmb	17 15 17.8	
	comp=Z,7.7nm,1.2s						
K05A	**Summer Lake**	**49.37**	**345**	P	**P**	**17 15 19.4**	**+0.2**
K05A				IAmb	IAmb	17 15 22.1	
	comp=Z,15nm,1.5s						
BCYI	**Bear Canyon**	**49.40**	**352**	IAmb	IAmb	17 15 21.9	
	comp=Z,10nm,1.3s						
RLMT	**Red Lodge**	**49.78**	**356**	IAmb	IAmb	17 15 24.1	
	comp=Z,16nm,1.3s						
I07A	**Izee**	**50.30**	**347**		**P**	**17 15 27.3**	**+1.1**
I07A				IAmb	IAmb	17 15 36.4	
	comp=Z,9.8nm,1.4s						
CPUP	**Villa Florida**	**50.40**	**120**	P	**P**	**17 15 28.0**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=278,slow=11,SNR=5.4 comp=Z,1.8nm,0.6s						
CPUP	**Villa Florida**	**50.40**	**120**	P	**P**	**17 15 28.0**	**+0.9**
CPUP				IAmb	IAmb	17 15 36.6	
	comp=Z,8.3nm,1.1s						
MDP	**Montagnes des**	**53.29**	**80**	LR	LR	17 36 22.5	
	comp=Z,108nm,18.6s,baz=134,slow=34						
AGMN	**Agassiz Nation**	**53.43**	**8**	IAmb	IAmb	17 15 50.3	
	comp=Z,10nm,0.9s						
AGMN	**Agassiz Nation**	**53.43**	**8**	P	**P**	**17 15 49.2**	**-0.1**
LDM	**Libby Dam**	**53.72**	**352**	IAmb	IAmb	17 16 00.4	
	comp=Z,9.3nm,1.1s						
EYMN	**Ely**	**53.81**	**11**		**P**	**17 15 51.0**	**-1.1**
EYMN	**Ely**	**53.81**	**11**	P	**P**	**17 15 52.4**	**+0.3**
BUKO	**Buck Lake**	**54.97**	**22**	P	**P**	**17 15 59.5**	**-1.1**
ULM	**Lac du Bonnet**	**55.35**	**7**	P	**P**	**17 16 02.8**	**-0.4**
	comp=Z,13nm,1.1s,baz=194,slow=8.1,SNR=7.9 comp=Z,13nm,1.1s						
BDFB	**Brasilia**	**57.05**	**105**	LR	LR	17 38 11.1	
	comp=Z,133nm,21.4s,baz=309,slow=33						
FFC	**Flin Flon**	**59.31**	**2**	P	**P**	**17 16 30.2**	**-0.8**
BATG	**Bathurst New B**	**62.16**	**29**		**P**	**17 16 50.1**	**-0.6**
FCC	**Fort Churchill**	**63.91**	**6**		**P**	**17 17 01.3**	**-0.7**
CRAG	**Craig**	**64.31**	**343**	P	**P**	**17 17 06.5**	**+1.8**
	baz=149						
T35M	**Bob Quinn**	**64.84**	**345**	P	**P**	**17 17 09.8**	**+1.6**
	baz=152						
U33K	**Whale Pass**	**64.86**	**343**	P	**P**	**17 17 09.2**	**+0.9**
	baz=149						
S34M	**Telegraph Cree**	**65.89**	**345**	P	**P**	**17 17 15.5**	**+0.6**
	baz=151						
DLBC	**Dease Lake**	**66.08**	**346**	P	**P**	**17 17 17.1**	**+0.8**
	baz=153						
LIRD	**Liard River Hi**	**66.09**	**348**	P	**P**	**17 17 17.1**	**+0.9**
	baz=157						
AFI	**Afiamalu**	**66.26**	**257**	LR	LR	17 37 59.2	
	comp=Z,56nm,20.0s,baz=129,slow=29						
SIT	**Sitka**	**66.31**	**343**	P	**P**	**17 17 17.9**	**+0.3**
	baz=147						
KOTAN	**Kotaneelee Air**	**66.38**	**350**	P	**P**	**17 17 18.3**	**+0.3**
	baz=159						
S32K	**Killisnoo**	**66.44**	**343**	P	**P**	**17 17 18.9**	**+0.4**
	baz=148						
Q32M	**Nakina River**	**67.09**	**345**	P	**P**	**17 17 23.5**	**+0.5**
	baz=150						
R33M	**Jennings River**	**67.15**	**346**	IAmb	IAmb	17 17 25.5	
	comp=Z,9.9nm,0.9s						
R33M	**Jennings River**	**67.15**	**346**	P	**P**	**17 17 23.9**	**+0.7**
	baz=152						
S31K	**Pelican**	**67.34**	**343**	P	**P**	**17 17 24.3**	**+0.1**
	baz=146						
YKA	**Yellowknife Ar**	**67.44**	**355**	P	**P**	**17 17 24.3**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=166,slow=6.2,SNR=12 comp=Z,2.9nm,0.8s						
P32M	**Atlin**	**68.01**	**345**	P	**P**	**17 17 29.0**	**+0.5**
	baz=149						
P33M	**Teslin, Yukon**	**68.32**	**346**	P	**P**	**17 17 31.0**	**+0.5**
	baz=150						
TGTN	**Hyland Airport**	**68.47**	**348**	P	**P**	**17 17 32.8**	**+1.4**
	baz=155						
PLBC	**Pleasant Camp**	**68.62**	**343**	P	**P**	**17 17 32.8**	**+0.5**
	baz=146						
RCBR	**Riachuelo**	**68.87**	**94**	LR	LR	17 45 51.9	
	comp=Z,34nm,19.3s,baz=247,slow=34						
P29M	**Windy Craggy**	**69.16**	**343**	P	**P**	**17 17 36.5**	**+0.8**
	baz=145						
WHY	**Whitehorse**	**69.23**	**345**	P	**P**	**17 17 36.5**	**+0.3**
	baz=148						
P30M	**Million Dollar**	**69.35**	**344**	P	**P**	**17 17 38.1**	**+1.3**
	baz=146						
O30N	**Mendenhall**	**69.65**	**344**	P	**P**	**17 17 39.6**	**+0.9**
	baz=147						
O29M	**Mount Kennedy**	**69.96**	**343**	P	**P**	**17 17 41.2**	**+0.5**
	baz=144						
MMPY	**Sheldon Lake,**	**70.08**	**347**	IAmb	IAmb	17 17 44.0	
	comp=Z,7.3nm,1.1s						
MMPY	**Sheldon Lake,**	**70.08**	**347**	P	**P**	**17 17 42.1**	**+0.8**
	baz=152						
HYT	**Haines Junctio**	**70.08**	**344**	IAmb	IAmb	17 17 44.2	
	comp=Z,6.4nm,1.0s						
HYT	**Haines Junctio**	**70.08**	**344**	P	**P**	**17 17 41.9**	**+0.4**
	baz=145						
N31M	**Braeburn, Yuko**	**70.17**	**345**	P	**P**	**17 17 42.4**	**+0.6**
	baz=147						
PINM	**Pinnacle**	**70.29**	**342**	P	**P**	**17 17 43.5**	**+0.8**
	baz=142						
YUK6	**Outpost Mounta**	**70.42**	**343**	P	**P**	**17 17 44.4**	**+0.7**
	baz=145						
M31M	**Drury Creek, Y**	**70.43**	**346**	IAmb	IAmb	17 17 53.9	
	comp=Z,6.8nm,1.3s						
M31M	**Drury Creek, Y**	**70.43**	**346**	P	**P**	**17 17 44.7**	**+1.2**
	baz=149						
N30M	**Aishikik Lake**	**70.49**	**344**	P	**P**	**17 17 44.2**	**+0.3**
N30M				IAmb	IAmb	17

	baz=140						
H31M	**Peel River**	73.53 348	P	P	17 18 02.2	+0.3	
	baz=150,SNR=10						
SCM	**Sheep Creek Mo**	73.87 341	P	P	17 18 04.2	+0.1	
	baz=136						
SLKM	**Skilak Lake**	73.94 339		P	17 18 04.4	-0.1	
KNK	**Knik Glacier**	73.95 340	P	P	17 18 04.7	+0.2	
	baz=135						
M23K	**Glacier View**	73.97 340	P	P	17 18 04.7	+0.1	
	baz=136,SNR=5.8						
PAX	**Paxson**	74.11 342	P	P	17 18 05.7	+0.2	
	baz=138						
RC01	**Rabbit Creek A**	74.17 339	P	P	17 18 06.0	+0.3	
	baz=133						
SML	**Sawmill**	74.18 340	P	P	17 18 06.2	+0.2	
	baz=135						
Q19K	**Cape Douglas,**	74.22 336	P	P	17 18 06.4	+0.2	
	baz=129						
PMR	**Palmer**	74.30 340	P	P	17 18 07.3	+0.7	
	baz=134						
SCRK	**Sand Creek**	74.42 343	IAmb	IAmb	17 18 08.8		
	comp=Z,8.1nm,1.2s						
SCRK	**Sand Creek**	74.42 343	P	P	17 18 07.1	-0.2	
	baz=140,SNR=5.8						
CHNA	**Chernabura Isl**	74.46 331	P	P	17 18 07.6	+0.1	
	baz=123						
G31M	**Satah River**	74.48 348		P	17 18 07.5	+0.1	
G31M			IAmb	IAmb	17 18 08.9		
	comp=Z,6.7nm,0.8s						
G31M	**Satah River**	74.48 348	P	P	17 18 07.7	+0.3	
	baz=150						
RIDG	**Independent Ri**	74.50 343	P	P	17 18 07.6	-0.1	
	baz=139,SNR=10						
I28M	**Miner Creek**	74.50 346	IAmb	IAmb	17 18 09.9		
	comp=Z,5.5nm,1.0s						
I28M	**Miner Creek**	74.50 346	P	P	17 18 07.8	0.0	
	baz=144,SNR=8.0						
P19K	**Oil Pt**	74.52 337	P	P	17 18 08.2	+0.4	
	baz=130						
EPYK	**Eagle Plains**	74.52 347	IAmb	IAmb	17 18 09.3		
	comp=Z,11nm,1.0s						
EPYK	**Eagle Plains**	74.52 347	P	P	17 18 08.2	+0.4	
	baz=147,SNR=6.9						
WAT6	**Susitna Watana**	74.54 341	P	P	17 18 08.5	+0.4	
	baz=136						
O20K	**Slope Mountain**	74.56 337	P	P	17 18 07.7	-0.5	
	baz=130						
R17L	**Mt. Peulik Vol**	74.56 334	P	P	17 18 07.5	-0.6	
	baz=126						
Q18K	**Katmai Hardscr**	74.60 335	P	P	17 18 08.3	-0.1	
	baz=128						
Q17K	**Contact Creek**	74.73 335	P	P	17 18 09.3	+0.1	
	baz=127						
M22K	**Willow**	74.76 340	P	P	17 18 09.6	+0.4	
	baz=133						
H29M	**Whitestone**	74.76 347	P	P	17 18 09.7	+0.6	
	baz=146,SNR=9.4						
DHY	**Denali Highway**	74.78 341	IAmb	IAmb	17 18 10.8		
	comp=Z,8.0nm,1.1s						
DHY	**Denali Highway**	74.78 341	P	P	17 18 09.4	-0.1	
	baz=136						
K24K	**Donnelly Dome**	74.82 343	P	P	17 18 10.4	+0.8	
	baz=138						
G30M	**tAoh Zrail Nji**	74.93 348	IAmb	IAmb	17 18 14.4		
	comp=Z,5.8nm,1.2s						
G30M	**tAoh Zrail Nji**	74.93 348	P	P	17 18 11.2	+1.0	
	baz=148						
I27K	**Kandik River**	75.05 345	P	P	17 18 11.3	+0.4	
	baz=142,SNR=12						
SPU	**Mount Spurr**	75.06 338	IAmb	IAmb	17 18 12.2		
	comp=Z,8.1nm,1.0s						
C36M	**Paulatuk**	75.07 353	P	P	17 18 11.1	+0.3	
	baz=160						
STLK	**Strandline Lak**	75.19 339	P	P	17 18 12.0	+0.2	
STLK			IAmb	IAmb	17 18 13.0		
	comp=Z,4.7nm,0.9s						
I26K	**Coal Creek Min**	75.22 344	IAmb	IAmb	17 18 13.1		
	comp=Z,6.7nm,0.9s						
I26K	**Coal Creek Min**	75.22 344	P	P	17 18 12.2	+0.4	
	baz=141						
CUT	**Chulitna**	75.25 340	P	P	17 18 12.3	+0.3	
	baz=133						
G29M	**Pine Creek**	75.26 347	P	P	17 18 12.5	+0.4	
	baz=146,SNR=8.4						
J25K	**Salcha River,**	75.30 343	IAmb	IAmb	17 18 13.9		
	comp=Z,7.1nm,1.0s						
J25K	**Salcha River,**	75.30 343	P	P	17 18 12.5	+0.1	
	baz=138,SNR=10						
Q16K	**King Salmon**	75.31 335	P	P	17 18 12.6	+0.2	
	baz=126						
F30M	**Barrier River**	75.38 348	IAmb	IAmb	17 18 14.5		
	comp=Z,6.0nm,1.0s						
F30M	**Barrier River**	75.38 348	P	P	17 18 12.9	+0.3	
	baz=148						
SKT	**Skwentna**	75.41 339	P	P	17 18 12.8	-0.1	
SKT	**Skwentna**	75.41 339	P	P	17 18 13.2	+0.2	
	baz=132,SNR=9.2						
O18K	**Koktuh Hills**	75.42 336	P	P	17 18 12.5	-0.6	
	baz=128						
L22K	**Petersville**	75.51 340	P	P	17 18 13.1	-0.5	
	baz=133,SNR=8.9						
P17K	**Kvichak River**	75.52 335	P	P	17 18 13.6	0.0	
	baz=127						
H27K	**Steamboat Moun**	75.52 346	IAmb	IAmb	17 18 15.2		
	comp=Z,9.3nm,1.1s						
H27K	**Steamboat Moun**	75.52 346	P	P	17 18 13.9	+0.3	
	baz=142,SNR=17						
INK	**Inuvik**	75.54 349		P	17 18 13.6	+0.1	
INK			IAmb	IAmb	17 18 15.0		
	comp=Z,6.7nm,0.9s						
INK	**Inuvik**	75.54 349	P	P	17 18 14.0	+0.5	
	baz=151						
INK	**Inuvik**	75.54 349	P	P	17 18 13.6	+0.1	
HDA	**Harding Lake**	75.61 343	P	P	17 18 14.3	+0.2	
	baz=137						
N19K	**Bonanza Creek**	75.73 337	P	P	17 18 14.2	-0.8	
	baz=129						
MCK	**McKinley**	75.74 341	IAmb	IAmb	17 18 16.4		
	comp=Z,6.4nm,1.0s						
MCK	**McKinley**	75.74 341	P	P	17 18 14.9	+0.1	
	baz=135						
IL31		75.86 343	IAmb	IAmb	17 18 16.5		
	comp=Z,6.5nm,0.9s						
ILAR	**Eielson Array**	75.86 343	P	P	17 18 15.8	+0.3	
	comp=Z,5.2nm,1.0s,baz=154,slow=5.0,SNR=33						
	comp=Z,5.2nm,1.0s						
ILAR	**Eielson Array**	75.86 343		P	17 18 15.0	-0.5	
M20K	**Styx River**	75.91 339	IAmb	IAmb	17 18 24.3		
	comp=Z,6.0nm,0.9s						
M20K	**Styx River**	75.91 339	P	P	17 18 15.8	-0.1	
	baz=130						
TRF	**Thorofare Moun**	75.98 341	IAmb	IAmb	17 18 20.0		
	comp=Z,5.2nm,1.0s						
TRF	**Thorofare Moun**	75.98 341	P	P	17 18 16.5	+0.1	
	baz=133						
G27K	**Doyon Strip**	76.02 346	P	P	17 18 16.9	+0.5	
	baz=142						
PRP	**Porcupine Dome**	76.02 344	P	P	17 18 16.9	+0.3	
	baz=138						
O17K	**Koliganek Bris**	76.14 336	P	P	17 18 17.7	+0.6	
	baz=126						
N18K	**Kilae Creek**	76.20 337	P	P	17 18 17.6	+0.1	
	baz=128						
PPLA	**Purkeypile**	76.24 340	P	P	17 18 17.6	-0.3	
	baz=131,SNR=5.8						
F28M	**Old Crow**	76.25 347	IAmb	IAmb	17 18 18.7		
	comp=Z,4.9nm,0.8s						
F28M	**Old Crow**	76.25 347	P	P	17 18 17.2	-0.4	
	baz=144,SNR=7.2						
POKR	**Poker Plat Res**	76.27 343	P	P	17 18 18.1	+0.3	
	baz=136						
M19K	**Big River Lodg**	76.39 338	P	P	17 18 18.1	-0.4	
	baz=129						
NEA2	**Nenana**	76.39 342	IAmb	IAmb	17 18 19.9		
	comp=Z,7.5nm,1.0s						
NEA2	**Nenana**	76.39 342	P	P	17 18 18.5	0.0	
	baz=135,SNR=7.5						
O16K	**Kokwok River B**	76.44 335	P	P	17 18 18.5	-0.3	
	baz=125						
E29M	**Blow River**	76.46 348	P	P	17 18 19.2	+0.4	
	baz=146						
CAST	**Castle Rocks**	76.56 340	P	P	17 18 18.8	-0.7	
	baz=132,SNR=11						
N17K	**Nushagak Hills**	76.62 336	P	P	17 18 19.8	0.0	
	baz=126						
G26K	**Porcupine Rive**	76.65 345	P	P	17 18 20.3	+0.4	
	baz=140						
M18K	**Stony River**	76.67 338	P	P	17 18 19.4	-0.7	
	baz=128						
L19K	**White Mountain**	76.73 338	P	P	17 18 20.0	-0.5	
L19K	**White Mountain**	76.73 338	P	P	17 18 20.2	-0.3	
	baz=129,SNR=8.9						
I23K	**Minto, Yukon-K**	76.87 342	P	P	17 18 21.8	+0.7	
	baz=134						
H24K	**Noodor Dome**	76.92 343	P	P	17 18 21.5	-0.1	
	baz=136,SNR=15						
CHUM	**Lake Minchumin**	76.94 341	P	P	17 18 21.8	+0.2	
	baz=131						
O15K	**Ungalikthiuk R**	76.94 334	P	P	17 18 21.0	-0.7	
	baz=124						
E28M	**Babbage River**	76.98 348	P	P	17 18 21.6	-0.1	
	baz=145						
E27K	**Coleen River**	77.10 347	IAmb	IAmb	17 18 24.0		
	comp=Z,7.7nm,1.2s						
E27K	**Coleen River**	77.10 347	P	P	17 18 22.9	+0.4	
	baz=142,SNR=7.3						
G25K	**Bearman Lake**	77.11 345	P	P	17 18 23.2	+0.7	
	baz=138						
K20K	**Telida**	77.19 340	P	P	17 18 22.6	-0.5	
	baz=130						
MLY	**Manley**	77.21 342	IAmb	IAmb	17 18 24.6		
	comp=Z,7.9nm,1.0s						
MLY	**Manley**	77.21 342	P	P	17 18 23.5	+0.4	
	baz=133,SNR=9.8						
N16K	**Nishlik Lake**	77.23 336	P	P	17 18 22.8	-0.5	
	baz=125						
M17K	**Holitna River**	77.23 337	P	P	17 18 23.5	+0.2	
	baz=126						
F26K	**Sheenjek River**	77.32 346	IAmb	IAmb	17 18 25.2		
	comp=Z,4.2nm,0.9s						
F26K	**Sheenjek River**	77.32 346	P	P	17 18 24.6	+0.9	
	baz=140,SNR=6.5						
H23K	**Yukon River**	77.40 343	P	P	17 18 24.4	+0.2	
	baz=134						
L18K	**Granite Mounta**	77.43 338		P	17 18 24.2	-0.2	
L18K	**Granite Mounta**	77.43 338	P	P	17 18 24.1	-0.3	
	baz=127,SNR=5.0						
G24K	**Hadweenzic Riv**	77.44 344	P	P	17 18 25.1	+0.7	
	baz=137,SNR=9.4						
UNV	**Unalaska Valle**	77.50 328	P	P	17 18 24.8	-0.2	
	baz=117						
N15K	**Kwethluk River**	77.60 335	P	P	17 18 25.9	+0.5	
	baz=124						
F25K	**Christian Rive**	77.61 345	IAmb	IAmb	17 18 27.8		
	comp=Z,6.8nm,1.0s						
F25K	**Christian Rive**	77.61 345	P	P	17 18 26.6	+1.2	
	baz=138,SNR=9.2						
M16K	**Timber Creek**	77.61 336	P	P	17 18 25.9	+0.5	
	baz=125						
I21K	**Tanana**	77.70 342	IAmb	IAmb	17 18 27.6		
	comp=Z,6.2nm,1.0s						
I21K	**Tanana**	77.70 342	P	P	17 18 26.6	+0.8	
	baz=132						
A36M	**Sachs Harbour**	77.70 354	P	P	17 18 26.9	+1.2	
	baz=159						
J20K	**Nowinta River**	77.75 340	IAmb	IAmb	17 18 26.6		
	comp=Z,5.0nm,0.8s						
J20K	**Nowinta River**	77.75 340	P	P	17 18 26.0	-0.2	
	baz=130,SNR=5.6						
D27M	**Malcolm River**	77.81 348	P	P	17 18 26.8	+0.3	
	baz=143						
E25K	**Arctic Village**	77.99 346	P	P	17 18 28.5	+1.0	
	baz=139,SNR=7.6						
H22K	**Ishtalitna Cre**	77.99 342	P	P	17 18 27.4	-0.1	
	baz=133						
L17K	**Donlin**	77.99 337	P	P	17 18 27.9	+0.3	
	baz=126						
J19K	**Poorman**	78.13 340	P	P	17 18 28.5	+0.2	
	baz=128						
F24K	**Squaw Lake**	78.14 345	IAmb	IAmb	17 18 38.3		
	comp=Z,7.1nm,1.1s						
F24K	**Squaw Lake**	78.14 345	P	P	17 18 29.2	+0.9	
	baz=136,SNR=6.0						
N14K	**Kuskokwak Cree**	78.14 335	P	P	17 18 28.7	+0.3	
	baz=122						
G23K	**Bananza Creek**	78.16 343	P	P	17 18 28.9	+0.5	
	baz=134						
L16K	**Owhat River**	78.21 337		P	17 18 28.2	-0.5	
L16K	**Owhat River**	78.21 337	P	P	17 18 29.7	+1.0	
	baz=124						
I20K	**Naaghedeneel**	78.25 341	P	P	17 18 29.2	+0.3	
	baz=130						
H21K	**Melozitna Rive**	78.27 342	IAmb	IAmb	17 18 30.3		
	comp=Z,11nm,1.2s						
H21K	**Melozitna Rive**	78.27 342	P	P	17 18 29.1	0.0	
	baz=131,SNR=8.5						
K17K	**Iditarod**	78.33 338	P	P	17 18 29.9	+0.4	
	baz=126						
COLD	**Coldfoot**	78.57 344	P	P	17 18 32.0	+1.4	
	baz=134						
M14K	**Bethel**	78.70 335	P	P	17 18 31.3	-0.1	
	baz=122						
E24K	**Your Creek**	78.70 345	IAmb	IAmb	17 18 41.5		
	comp=Z,7.2nm,1.3s						
E24K	**Your Creek**	78.70 345	P	P	17 18 32.2	+0.7	
	baz=136,SNR=5.3						
C27K	**Jago River**	78.71 347	P	P	17 18 32.1	+0.7	
	baz=141						
G22K	**Bettles**	78.73 343	P	P	17 18 32.1	+0.6	
	baz=133						
H20K	**Anotleneega Mo**	78.83 341	P	P	17 18 33.0	+0.9	
	baz=129						
E23K	**Chandalar**	78.99 344	P	P	17 18 34.3	+1.3	
	baz=135,SNR=9.2						
L15K	**Ungalak Mounta**	78.99 336	P	P	17 18 33.5	+0.5	
	baz=122						
J17K	**VABM Dome**	79.02 338	P	P	17 18 34.2	+1.1	
	baz=125						
GCSA	**Galena City Sc**	79.03 340	P	P	17 18 34.1	+0.9	
	baz=127						
G21K	**Allakaket**	79.05 342	IAmb	IAmb	17 18 35.0		
	comp=Z,5.5nm,0.9s						
G21K	**Allakaket**	79.05 342	P	P	17 18 34.1	+0.8	
	baz=131						
D25K	**Kavik River**	79.09 346	P	P	17 18 33.1	-0.5	
D25K			IAmb	IAmb	17 18 35.3		
	comp=Z,6.3nm,0.9s						
D25K	**Kavik River**	79.09 346	P	P	17 18 34.2	+0.7	
	baz=138,SNR=9.9						
M13K	**Dall Lake**	79.11 335	P	P	17 18 34.2	+0.5	
	baz=120						
L14K	**Kuka Creek**	79.31 336	P	P	17 18 35.2	+0.5	
	baz=121						
F22K	**John River**	79.32 343	P	P	17 18 35.7	+1.0	
	baz=132,SNR=8.3						
H19K	**Roundabout Mou**	79.36 341	IAmb	IAmb	17 18 44.3		
	comp=Z,7.3nm,1.3s						
H19K	**Roundabout Mou**	79.36 341	P	P	17 18 35.6	+0.6	
	baz=128						
TOLK	**Toolik Lake Re**	79.39 345	P	P	17 18 36.2	+1.0	
	baz=135,SNR=8.4						
F21K	**Alatna River**	79.51 343	IAmb	IAmb	17 18 38.2		
	comp=Z,7.5nm,1.1s						
F21K	**Alatna River**	79.51 343	P	P	17 18 36.8	+1.0	
	baz=131,SNR=7.3						
J16K	**Ak River**	79.52 338	P	P	17 18 36.3	+0.4	
	baz=124						
D24K	**Happy Valley**	79.56 345	P	P	17 18 37.1	+1.0	
	baz=136						
H18K	**Honhosa River**	79.78 340	P	P	17 18 38.9	+1.6	
	baz=126						
I17K	**Unalakleet**	79.89 338	P	P	17 18 38.4	+0.5	
	baz=124						
D23K	**Nanushuk River**	79.91 345	IAmb	IAmb	17 18 40.7		
	comp=Z,12nm,1.0s						
D23K	**Nanushuk River**	79.91 345	P	P	17 18 38.5	+0.5	
	baz=134,SNR=12						
G19K	**Purcell Mounta**	79.94 341	IAmb	IAmb	17 18 40.4		
	comp=Z,8.2nm,1.1s						
G19K	**Purcell Mounta**	79.94 341	P	P	17 18 39.0	+0.8	
	baz=127						
F20K	**Avaraart Lake**	80.07 342	IAmb	IAmb	17 18 41.3		
	comp=Z,6.2nm,1.1s						
F20K	**Avaraart Lake**	80.07 342	P	P	17 18 39.9	+1.0	
	baz=129,SNR=5.5						
G18K	**Tagagawik**	80.31 340	IAmb	IAmb	17 18 42.9		
	comp=Z,8.6nm,1.1s						
G18K	**Tagagawik**	80.31 340	P	P	17 18 40.7	+0.6	
	baz=126						
K13K	**Kusilvak Mount**	80.42 336	P	P	17 18 41.4	+0.7	
	baz=120						
E21K	**Killik River**	80.45 344	IAmb	IAmb	17 18 43.5		
	comp=Z,6.7nm,0.9s						
E21K	**Killik River**	80.45 344	P	P	17 18 41.5	+0.6	
	baz=130,SNR=5.0						
C23K	**Itkillik River**	80.49 345	IAmb	IAmb	17 18 43.0		
	comp=Z,7.2nm,1.0s						
C23K	**Itkillik River**	80.49 345	P	P	17 18 41.5	+0.5	
	baz=134						
F19K	**Shaleruckik Mo**	80.58 341	P	P	17 18 42.7	+1.1	
	baz=127						
G17K	**Kiwalik Mounta**	80.77 340	P	P	17 18 43.5	+0.9	
	baz=124						
E19K	**Redstone River**	80.79 342	P	P	17 18 43.4	+0.7	
	baz=127						
SPIA	**Saint Paul Isl**	80.84 330	P	P	17 18 43.6	+0.5	
	baz=114						
E20K	**Nigu River**	80.97 343	P	P	17 18 44.7	+1.0	
	baz=128						
F18K	**Selawik**	81.05 341	P	P	17 18 45.0	+1.0	
	baz=125						
C21K	**Knifeblade Rid**	81.14 344	P	P	17 18 45.6	+1.1	
	baz=130						
G16K	**Koyuk River**	81.31 339	P	P	17 18 45.8	+0.3	
	baz=122						
D20K	**Etivluk River**	81.37 343	P	P	17 18 46.3	+0.5	
	baz=128						
B21K	**Ikpikpuk River**	81.39 344		P	17 18 44.1	-1.7	
B21K	**Ikpikpuk River**	81.39 344	P	P	17 18 46.2	+0.4	
	baz=130						
B22K	**Teshekpuk Lake**	81.55 345	P	P	17 18 46.8	+0.2	
	baz=131						
G15K	**Niukluk**	81.71 338	P	P	17 18 48.3	+0.7	
	baz=120						
E18K	**Tukpahlearik C**	81.82 341	P	P	17 18 49.1	+1.0	
	baz=124						
ANM	**Nome**	81.99 338	P	P	17 18 50.0	+0.9	
	baz=119						
E17K	**Hotham Inlet**	82.03 341	P	P	17 18 49.7	+0.4	
	baz=123						
F15K	**North Star Dit**	82.29 339	P	P	17 18 50.7	+0.1	
	baz=120						
B20K	**Meade River**	82.32 344	P	P	17 18 51.4	+0.7	
	baz=128						
A22K	**Sinclair Lake**	82.37 345	P	P	17 18 51.5	+0.6	
	baz=130						
C19K	**Lookout Ridge**	82.47 343	P	P	17 18 52.6	+1.0	
	baz=125						
C18K	**Utukok River**	82.69 342	P	P	17 18 52.7	-0.1	
	baz=124						
D17K	**Noatak River**	82.78 341	P	P	17 18 53.8	+0.6	
	baz=122						
F14K	**Arctic Creek**	82.78 338	P	P	17 18 53.5	+0.3	
	baz=118						
C17K	**DeLong Mountai**	83.22 342	P	P	17 18 55.9	+0.5	
	baz=122						
TNA	**Tin City**	83.42 338	P	P	17 18 56.3	-0.2	
	baz=117						
C16K	**Lisburne Hills**	83.80 341	P	P	17 18 58.2	-0.2	
	baz=120						
GAMB	**Gambell**	84.13 336	P	P	17 19 00.1	-0.1	
	baz=113						
QSPA	**South Pole Qui**	85.32 180	P	P	17 19 07.2	+0.8	
	comp=Z,2.1nm,0.9s,baz=141,slow=0.9,SNR=9.7						
	comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	85.32 180	P	P	17 19 07.2	+0.8	
QSPA			IAmb	IAmb	17 19 20.0		
	comp=Z,4.0nm,1.1s						
H11N3	**WAKE ISLAND Hy**	89.70 290	T	T	18 58 38.5		
	baz=96,slow=75						
H11N2	**WAKE ISLAND Hy**	89.71 290	T	T	18 58 39.5		
	baz=96,slow=75						
H11N1	**WAKE ISLAND Hy**	89.72 290	T	T	18 58 40.4		
	baz=96,slow=75						
H11S2	**WAKE ISLAND Hy**	89.78 288	T	T	18 58 43.0		
	baz=93,slow=74						
H11S1	**WAKE ISLAND Hy**	89.79 288	T	T	18 58 46.2		
	baz=93,slow=74						
H11S3	**WAKE ISLAND Hy**	89.80 288	T	T	18 58 46.1		
	baz=93,slow=74						
BRTR	**Keskin Array B**	129.05 41	PKP		PKPdf	17 25 38.0	0.0
	comp=Z,0.5nm,0.6s,baz=267,slow=2.5,SNR=4.1						
SONM	**Songino Array**	129.29 333	PKP		PKPdf	17 25 37.1	-1.2
	comp=Z,0.5nm,0.5s,baz=73,slow=2.0,SNR=4.0						
NJ2	**Nanjing**	130.74 309	*eP*		PKPdf	17 25 36.0	-5.3
NJ2			pmax		pmax		
	comp=Z,22nm,0.6s						
HHC	**Hu-ho-hao-te**	131.30 323	*eP*		PKPdf	17 25 32.9	-9.4
KURK	**Kurchatov**	134.07 357			PKPdf	17 25 46.8	-0.2
KURBB	**Kurchatov Arra**	134.17 357	PKP		PKPdf	17 25 46.8	-0.4
	comp=Z,0.7nm,0.8s,baz=7.8,slow=1.8,SNR=7.8						
MKAR	**Makanchi Array**	137.62 352	PKP		PKPdf	17 25 51.5	-2.3
	comp=Z,0.5nm,0.9s,baz=0.0,slow=0.1,SNR=3.9						
KSH2	**Kashi**	145.75 359	PKPbc		PKPab	17 26 10.2	+0.8
PZH	**PanZhiHua**	146.44 313	PKPbc		PKPdf	17 26 02.8	-7.4
CMAR	**Chiang Mai Arr**	152.85 302	PKPbc		PKPbc	17 26 28.0	+0.4
	comp=Z,1.4nm,0.8s,baz=66,slow=1.9,SNR=5.6						
CMAR	**Chiang Mai Arr**	152.85 302	PKPdf		PKPdf	17 26 17.9	-2.5
CMAR					PKPbc	17 26 28.0	+0.4

*KRSC **10** 17:07:08.3±0.8, 51.75°N×158.41°E, h64km±8km, Ml4.2*
*IDC **10** 17:07:11.6±1.7, 51.96°N×158.13°E, h75km±14km, mb3.4/14, mbtmp3.7/17, MS2.9/2, Error ellipse: s-maj=20.3km s-min=14.2km az=143.0*

ISC 10 17:07:09.6±0.8, 51.77°N±0.05×158°39E±0.05, h62km±7km, n57, σ1°48/61, mb3.6/13, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	0.20	281	*i* P		Pn	17 07 19.6	+0.3
KDTR				*i* S		Sn	17 07 26.4	+0.1
RUS	**Russkaya**	0.67	7	*i* P		Pn	17 07 23.6	0.0
RUS				*e*S		Sn	17 07 33.6	-0.2
ASAK	**Asacha**	0.68	334	*e*P		Pn	17 07 24.5	+0.6
MTVR	**Mutnovka**	0.72	350	*e*P		Pn	17 07 24.9	+0.5
GRL	**Gorelyy**	0.81	346	*e*P		Pn	17 07 26.1	+0.7
GRL				*e*S		Sn	17 07 38.1	+1.1
PAU	**Pauzhetka**	1.03	253	*e*P		Pn	17 07 28.8	+0.8
PAU				*e*S		Sn	17 07 43.7	+2.0
KRMR	**Karymshinskiy**	1.07	352	*e*P		Pn	17 07 29.5	+0.8
KRMR				*e*S		Sn	17 07 44.2	+1.5
MIPR	**Malaya Ipel'ka**	1.13	297	*e*P		Pn	17 07 30.1	+0.8
MIPR				*e*S		Sn	17 07 45.3	+1.2
PET	**Petropavlovsk**	1.27	7	*e*P		Pn	17 07 31.4	+0.3
PET				*e*S		Sn	17 07 46.7	-0.6
DALK	**Dalny**	1.28	10	*e*P		Pn	17 07 31.7	+0.4
INSR	**Institute**	1.30	6	*e*P		Pn	17 07 32.3	+0.6
INSR				*e*S		Sn	17 07 49.2	+1.0
APC	**Apacha**	1.38	327	*i* P		Pn	17 07 33.4	+0.8
APC				*e*S		Sn	17 07 51.3	+1.3
PETK	**Petropavlovsk-**	1.40	343	P		Pn	17 07 33.9	+0.9
	59nm,0.4s,baz=141,slow=16,SNR=516							
PETK				S		Sn	17 07 48.1	-2.6
	87nm,0.5s,baz=157,slow=17,SNR=13							
AVH	**Avacha**	1.51	8	*e*P		Pn	17 07 35.9	+1.3
SMAR	**Somma**	1.52	9	*e*P		Pn	17 07 35.4	+0.7
NLC	**Nalytchevo**	1.52	22	*e*P		Pn	17 07 34.0	-0.5
KOK	**Koryaka**	1.53	6	*e*P		Pn	17 07 36.4	+1.6
SDLR	**Sedlovina**	1.54	11	*e*P		Pn	17 07 35.4	+0.4
KRER	**Koryakskii**	1.55	8	*e*P		Pn	17 07 36.2	+1.0
KRX	**Arik**	1.60	6	*e*P		Pn	17 07 36.9	+1.1
SPN	**Mys Shipunski**	1.66	36	*e*P		Pn	17 07 38.1	+1.6
SPN				*e*S		Sn	17 07 57.7	+0.9
SKR	**Severo-Kuril's**	1.79	234	*e*P		Pn	17 07 38.7	+0.4
SKR				*e*S		Sn	17

0.5nm,0.6s
H11N2 WAKE ISLAND Hy 32.66 165 T T 17 48 11.3
baz=351
H11N3 WAKE ISLAND Hy 32.68 165 T T 17 48 46.3
baz=351,slow=74
H11N1 WAKE ISLAND Hy 32.68 165 T T 17 48 49.1
baz=351,slow=74
H11S1 WAKE ISLAND Hy 33.83 166 T T 17 50 14.6
baz=351,slow=76,SNR=24
H11S3 WAKE ISLAND Hy 33.84 166 T T 17 50 15.5
baz=351,slow=76,SNR=24
H11S2 WAKE ISLAND Hy 33.85 166 T T 17 50 00.6
baz=351,slow=76,SNR=22
YKA Yellowknife Ar 44.85 41 P **P** **17 15 17.6 +0.6**
0.6nm,0.5s,baz=289,slow=7.4,SNR=3.7
0.6nm,0.5s
KURBB Kurchatov Arra 47.65 302 P **P** **17 15 39.1 -0.1**
0.2nm,0.3s,baz=62,slow=7.8,SNR=4.6
0.2nm,0.3s
MKAR Makanchi Array 47.79 296 P **P** **17 15 38.3 -2.0**
0.2nm,0.5s,baz=60,slow=6.9,SNR=2.2
0.2nm,0.5s
SPITS Spitsbergen Ar 48.27 350 P **P** **17 15 42.5 -1.1**
8.0nm,0.9s,baz=29,slow=12,SNR=1.7
8.0nm,0.9s
BVAR Borovoye Array 50.39 308 P **P** **17 15 58.9 -1.2**
0.7nm,0.5s,baz=74,slow=7.3,SNR=2.5
0.7nm,0.5s
NVAR Mina Array Bea 57.19 68 P **P** **17 16 51.6 +1.4**
0.9nm,0.7s,baz=322,slow=9.9,SNR=4.1
0.9nm,0.7s
PDAR Pinedale Array 59.09 59 P **P** **17 17 04.8 +1.4**
1.0nm,0.7s,baz=312,slow=2.4,SNR=8.0
1.0nm,0.7s
NOA NORSAR Array B 64.51 343 P **P** **17 17 37.3 -2.0**
0.1nm,0.4s,baz=14,slow=3.5,SNR=1.6
NOA LR LR 17 50 39.6
comp=Z,5.8nm,18.3s,baz=100,slow=41
0.1nm,0.4s
TXAR Lajitas Array 72.13 65 P **P** **17 18 28.7 +1.2**
0.8nm,0.5s,baz=301,slow=5.2,SNR=15
0.8nm,0.5s
EKA Eskdalemuir Ar 72.17 349 P **P** **17 18 26.4 -0.8**
0.2nm,0.3s,baz=16,slow=5.8,SNR=3.5
0.2nm,0.3s
WRA Warramunga Arr 74.44 203 P **P** **17 18 41.2 +0.4**
0.6nm,0.6s,baz=18,slow=6.2,SNR=5.6
0.6nm,0.6s
ASAR Alice Springs 78.13 203 P **P** **17 19 03.0 +1.3**
0.4nm,0.5s,baz=16,slow=5.0,SNR=19
0.4nm,0.5s
H03N2 Juan Fernandez 135.26 89 T T 19 56 46.0
baz=314,slow=77,SNR=204
H03N1 Juan Fernandez 135.27 89 T T 19 56 47.3
baz=314,slow=77,SNR=185
H03N3 Juan Fernandez 135.27 89 T T 19 56 47.1
baz=314,slow=77,SNR=163

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*IDC **10** 17:11:45.0±0.4,17°.34S×173°.86W,h0^{km},mb4.7/23, mbtmp4.7/25,ML4.4/2,MS3.6/35,Error ellipse: s-maj=16.5km s-min=14.1km az=117.0*

*NEIC **10** 17:11:46.8±1.2,17°.25S±0°.10×173°.96W±0°.10,h10^{km}±1km, mb5.1/380,Error ellipse: s-maj=19.2km s-min=12.1km az=139.0*

*GCMT **10** 17:11:57.8±0.3,17°.55S±0°.03×174°.22W±0°.02,h12^{km}, MW5.1/92,Moment Tensor Solution. s4,c4; s92,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.66±.12; M$_{\theta\theta}$-1.98±.11; M$_{\phi\phi}$-0.67±.08; M$_{r\theta}$-0.41±.32; M$_{\theta\phi}$-0.54±.08; M$_{\phi r}$-5.39±.30; Best double couple: M$_o$5.72300×10^{16} NP1:ϕ_s190.00000°,δ81.00000°,λ82.00000°. Principal axes: T 6.6360, Plg54.0000°, Azm90.0000°; N -1.8170, Plg8.0000°, Azm191.0000°; P -4.8090, Plg35.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **10** 17:11:57.3±0.2,17°.5S±4°×17°4W±°,h94^{km},M5.0/26, mb5.0/26*

*NOU **10** 17:12:51.6,20°.42S×178°.94W,h229^{km},mb4.8/20,Fiji Islands Region*

ISC 10 17:11:56.8±0.6,17°28S±0°.07×174°.14W±0°.06,h91^{km}±4km, h93^{km}:pP-P,n790,σ1§08/606,mb4.9/214,21C-18D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.05**	**35**	Pn	Pn	17 12 49.2	-7.4
	60nm,0.3s,baz=187,slow=1.9,SNR=84						
AFI				Sn	Sn	17 13 29.1	-14
	326nm,0.3s,baz=58,slow=23,SNR=14						
AFI				LR	LR	17 13 57.5	
	comp=Z,538nm,21.3s,baz=254,slow=34						
	404nm,0.6s						
AFI	**Afiamalu**	**4.05**	**35**	P	Pn	17 12 49.3	-7.3
AFI				S	Sn	17 13 29.3	-14
NIUE	**Niue**	**4.39**	**115**	P	Pn	17 12 51.5	-10
NIUE				S	Sn	17 13 31.9	-19
NIUE				T	T	17 16 29.6	
MSVF	**Nonsavu**	**7.46**	**265**	Pn	Pn	17 13 53.1	+10
	8.6nm,0.3s,baz=108,slow=14,SNR=98						
MSVF				Sn	**Sn**	**17 15 01.2**	**-5.1**
	baz=3.5,slow=19						
MSVF	**Nonsavu**	**7.46**	**265**	P	Pn	17 13 53.5	+10
FUNA	**Funafuti**	**10.85**	**322**	Pn	Pn	17 14 24.4	-4.9
RAO	**Raoul Island**	**12.41**	**196**	Sn	Sn	17 16 51.5	-15
	41nm,0.3s,baz=45,slow=23,SNR=1.6						
GLKZ	**Green Lake**	**12.42**	**196**	P	Pn	17 14 43.6	-6.6
GLKZ				S	Sn	17 16 55.2	-12
RAR	**Rarotonga**	**14.12**	**108**	Pn	Pn	17 15 03.6	-9.0
	8.9nm,0.3s,baz=245,slow=6.1,SNR=32						
RAR				Sn	Sn	17 17 24.7	-23
	0.9nm,0.3s,baz=140,slow=22,SNR=1.2						
RAR				LR	LR	17 19 25.3	
	comp=Z,177nm,19.5s,baz=276,slow=33						
	162nm,0.8s						
RAR	**Rarotonga**	**14.12**	**108**		Pn	17 15 02.5	-10
RAR	**Rarotonga**	**14.12**	**108**	P	Pn	17 15 03.4	-9.3
RAR				S	Sn	17 17 28.1	-20
MARNC	**Mare, Loyalty**	**17.33**	**253**	P	P	17 15 38.6	-14
MARNC	**Mare, Loyalty**	**17.33**	**253**		**P**	**17 15 52.0**	**-1.0**
MARNC				IAmb	IAmb	17 16 00.2	
	comp=Z,175nm,0.7s						
OUENC	**Ouen Island, N**	**18.60**	**251**	P	**P**	**17 16 06.6**	**-0.4**
DZM	**Mont Dzumac**	**18.89**	**252**	P	**Pn**	**17 16 14.4**	**+2.5**
	comp=Z,320nm,0.9s,baz=81,slow=18,SNR=8.4						
DZM				LR	LR	17 21 22.7	
	comp=Z,152nm,21.9s,baz=84,slow=30						
ONTNC	**Ouen Toro**	**18.93**	**252**	P	**P**	**17 16 10.3**	**-0.3**
NOUC	**Port Laguerre**	**19.02**	**252**	P	P	17 15 58.9	-13
KOUNC	**Koumac, New Ca**	**20.66**	**258**	P	**P**	**17 16 28.7**	**-0.7**
OUZ	**Omahuta**	**20.95**	**209**	P	**P**	**17 16 25.8**	**-6.5**
OUZ	**Omahuta**	**20.95**	**209**	P	**P**	**17 16 32.9**	**+0.6**
OUZ	**Omahuta**	**20.95**	**209**	P	**P**	**17 16 32.0**	**-0.3**
GRZ	**Great Barrier**	**21.03**	**204**	P	**P**	**17 16 34.5**	**+1.4**
WCZ	**Waipu Caves**	**21.21**	**207**	P	**P**	**17 16 36.3**	**+1.2**
MXZ	**Matakaoa Point**	**21.27**	**197**	P	**P**	**17 16 37.8**	**+2.1**
MXZ	**Matakaoa Point**	**21.27**	**197**	P	**P**	**17 16 37.0**	**+1.3**
WMGZ	**Waiomatatini S**	**21.48**	**196**	P	**P**	**17 16 38.8**	**+0.8**
HAZ	**Te Kaha**	**21.60**	**198**	P	**P**	**17 16 40.3**	**+1.0**
PKGZ	**Pakihiroa**	**21.62**	**197**	P	**P**	**17 16 40.4**	**+0.9**
WIAZ	**Waiheke Island**	**21.63**	**204**	P	**P**	**17 16 41.4**	**+1.8**
PUZ	**Puketiti**	**21.76**	**196**	P	**P**	**17 16 41.0**	**0.0**
RUGZ	**Raukumara Rang**	**21.82**	**198**	P	**P**	**17 16 43.4**	**+1.6**
ETAZ	**East Tamaki Re**	**21.85**	**204**	P	**P**	**17 16 44.5**	**+2.6**
WHRZ	**Whale Island**	**21.93**	**199**	P	**P**	**17 16 45.1**	**+2.2**
WTAZ	**Waiatarua**	**21.97**	**205**	P	**P**	**17 16 44.0**	**+0.8**
AWAZ	**Awhitu Peninsu**	**22.05**	**204**	P	**P**	**17 16 45.1**	**+1.0**
CNGZ	**Carnagh Statio**	**22.16**	**196**	P	**P**	**17 16 46.6**	**+1.4**
MWZ	**Matawai**	**22.21**	**198**	P	**P**	**17 16 46.0**	**+0.2**
TKGZ	**Te Karaka**	**22.22**	**197**	P	**P**	**17 16 46.1**	**+0.2**
EDRZ	**Edgecumbe**	**22.24**	**199**	P	**P**	**17 16 48.7**	**+2.5**
URZ	**Urewera**	**22.26**	**198**	P	**P**	**17 16 46.4**	**+0.1**
URZ	**Urewera**	**22.26**	**198**	P	**P**	**17 16 46.6**	**+0.3**
URZ	**Urewera**	**22.26**	**198**	P	**P**	**17 16 45.1**	**-1.2**
KMRZ	**Kaimai**	**22.27**	**201**	P	**P**	**17 16 48.6**	**+2.2**
TOZ	**Tahuroa Road**	**22.32**	**202**		**P**	**17 16 47.8**	**+0.9**
TOZ	**Tahuroa Road**	**22.32**	**202**	P	**P**	**17 16 48.6**	**+1.8**
RAGZ	**Rawiri**	**22.39**	**198**	P	**P**	**17 16 47.7**	**-0.1**
UTU	**Utuhina**	**22.48**	**200**	P	**P**	**17 16 52.0**	**+3.4**
RIGZ	**Rimuhau**	**22.49**	**197**	P	**P**	**17 16 50.1**	**+1.4**
HLRZ	**Highlands Stat**	**22.50**	**200**	P	**P**	**17 16 50.8**	**+2.0**
RRRZ	**Republican Roa**	**22.52**	**199**	P	**P**	**17 16 51.1**	**+2.0**
RTZ	**Ruatahuna**	**22.63**	**198**		**P**	**17 16 49.8**	**-0.5**
RTZ				IAmb	IAmb	17 16 51.8	
	comp=Z,96nm,1.1s						
RTZ	**Ruatahuna**	**22.63**	**198**	P	**P**	**17 16 50.3**	**0.0**
HRRZ	**Handcock Road**	**22.64**	**200**	P	**P**	**17 16 51.6**	**+1.2**
KNZ	**Kokohu**	**22.81**	**197**	P	**P**	**17 16 54.2**	**+2.2**
TLZ	**Tolley Road**	**22.84**	**201**	P	**P**	**17 16 54.1**	**+1.7**
HIZ	**Hauiti**	**23.24**	**202**	P	**P**	**17 16 54.0**	**-2.2**
HIZ	**Hauiti**	**23.24**	**202**	P	**P**	**17 16 56.0**	**-0.2**
HIZ	**Hauiti**	**23.24**	**202**	P	**P**	**17 16 58.3**	**+2.1**
HIZ	**Hauiti**	**23.24**	**202**	P	**P**	**17 16 56.0**	**-0.2**
BKZ	**Black Stump Fm**	**23.29**	**199**	P	**P**	**17 16 57.0**	**+0.4**
BKZ	**Black Stump Fm**	**23.29**	**199**	P	**P**	**17 16 54.8**	**-1.9**
BKZ	**Black Stump Fm**	**23.29**	**199**	P	**P**	**17 16 54.9**	**-1.7**
PAE	**Paea**	**23.43**	**95**	*eT*	T	17 40 33.5	
	comp=Z,42nm,0.3s						
PPT2	**Papeete2**	**23.44**	**94**	*eP*	**P**	**17 17 04.2**	**+5.9**
	comp=Z,194nm,27.8s						
PPT2				*es*	sS	17 21 54.5	+16
	comp=Z,1μm,29.8s						
PPT2				*eT*	T	17 40 32.9	
	comp=Z,9.8nm,0.3s						
PPT	**Papeete**	**23.44**	**94**	LR	LR	17 24 19.6	
	comp=Z,36nm,18.5s,baz=287,slow=33						
TVO	**Taravao**	**23.74**	**95**	*eT*	T	17 40 47.0	
	comp=Z,15nm,0.3s						
VRZ	**Vera Road**	**23.82**	**202**	P	**P**	**17 17 04.0**	**+2.6**
TBI	**Tubuai**	**23.90**	**109**	*eP*	P	17 17 11.3	+9.0
	comp=Z,977nm,31.2s						
TBI				*es*	sS	17 22 06.1	+19
	comp=Z,5μm,33.0s						
TBI				*eT*	T	17 41 00.1	
	comp=Z,14nm,0.3s						
PWZ	**Pawanui**	**23.98**	**197**	P	**P**	**17 17 06.7**	**+3.9**
PXZ	**Pawanui**	**23.98**	**197**	P	**P**	**17 17 04.2**	**+1.4**
TSZ	**Takapari Road**	**24.27**	**199**	P	**P**	**17 17 05.7**	**+0.3**
BFZ	**Birch Farm**	**24.76**	**198**	P	**P**	**17 17 12.5**	**+2.7**
BFZ	**Birch Farm**	**24.76**	**198**	P	**P**	**17 17 10.1**	**+0.2**
BFZ	**Birch Farm**	**24.76**	**198**	P	**P**	**17 17 09.7**	**-0.2**
MRZ	**Mangatainoka R**	**24.94**	**199**		**P**	**17 17 10.7**	**-0.8**
MRZ	**Mangatainoka R**	**24.94**	**199**	P	**P**	**17 17 11.4**	**-0.1**
XMAS	**Kiritimati**	**25.30**	**42**	P	**P**	**17 17 14.0**	**-1.0**
PMOR	**Pomariorio Ree**	**25.31**	**89**	*eT*	T	17 42 52.2	
	comp=Z,8.4nm,0.4s						
VAH	**Vaihoa**	**25.53**	**89**	*eT*	T	17 42 51.5	
	comp=Z,15nm,0.2s						
SNZO	**South Karori**	**25.80**	**200**	P	**P**	**17 17 20.1**	**+0.8**
QRZ	**Quartz Range**	**26.13**	**203**	P	**P**	**17 17 23.8**	**+1.5**
QRZ	**Quartz Range**	**26.13**	**203**		**P**	**17 17 23.1**	**+0.8**
QRZ	**Quartz Range**	**26.13**	**203**	P	**P**	**17 17 24.4**	**+2.1**
QRZ	**Quartz Range**	**26.13**	**203**	P	**P**	**17 17 22.9**	**+0.5**
TKNZ	**Takaka Hill**	**26.15**	**203**	P	**P**	**17 17 23.3**	**+0.8**
TUWZ	**Tuamarina**	**26.16**	**201**	P	**P**	**17 17 22.5**	**0.0**
NNZ	**Nelson**	**26.16**	**202**	P	**P**	**17 17 24.1**	**+1.5**
HNR	**Honiara**	**26.36**	**284**	LR	LR	17 27 00.3	
	comp=Z,7.8nm,18.1s,baz=196,slow=34						
THZ	**Tophouse**	**26.81**	**202**		**P**	**17 17 28.3**	**-0.2**
THZ				IAmb	IAmb	17 17 35.5	
	comp=Z,36nm,0.7s						
THZ	**Tophouse**	**26.81**	**202**	P	**P**	**17 17 28.9**	**+0.4**
KHZ	**Kahutara**	**27.18**	**200**	P	**P**	**17 17 34.2**	**+2.6**
KHZ	**Kahutara**	**27.18**	**200**		**P**	**17 17 30.5**	**-1.1**
KHZ				IAmb	IAmb	17 17 40.6	
	comp=Z,30nm,0.7s						
KHZ	**Kahutara**	**27.18**	**200**	P	**P**	**17 17 31.2**	**-0.4**
DSZ	**Denniston Nort**	**27.20**	**203**	P	**P**	**17 17 33.6**	**+1.6**
GVZ	**Greta Valley S**	**27.83**	**200**	P	**P**	**17 17 42.4**	**+4.9**
LTZ	**Lake Taylor**	**27.93**	**202**		**P**	**17 17 37.0**	**-1.5**
LTZ				IAmb	IAmb	17 17 45.0	
	comp=Z,40nm,0.7s						
LTZ	**Lake Taylor**	**27.93**	**202**	P	**P**	**17 17 37.0**	**-1.5**
INZ	**Inchbonnie**	**28.18**	**203**	P	**P**	**17 17 40.0**	**-0.6**
INZ	**Inchbonnie**	**28.18**	**203**	P	**P**	**17 17 40.0**	**-0.6**
OXZ	**Oxford**	**28.49**	**201**	P	**P**	**17 17 41.9**	**-1.5**
OXZ	**Oxford**	**28.49**	**201**	P	**P**	**17 17 46.9**	**+3.5**
MQZ	**McQueen's Vall**	**28.62**	**200**	P	**P**	**17 17 49.1**	**+4.6**
WVZ	**Waitaha Valley**	**28.75**	**203**	P	**P**	**17 17 45.9**	**+0.2**
RPZ	**Rata Peaks**	**29.18**	**202**	P	**P**	**17 17 51.8**	**+2.3**
RPZ	**Rata Peaks**	**29.18**	**202**		**P**	**17 17 49.6**	**+0.1**
RPZ	**Rata Peaks**	**29.18**	**202**	P	**P**	**17 17 50.0**	**+0.5**
FOZ	**Fox Glacier**	**29.49**	**204**	P	**P**	**17 17 51.3**	**-0.9**
FOZ				IAmb	IAmb	17 18 02.2	
	comp=Z,34nm,0.8s						
FOZ	**Fox Glacier**	**29.49**	**204**	P	**P**	**17 17 53.2**	**+1.0**
TMZ	**Timaru**	**29.78**	**202**	P	**P**	**17 17 58.1**	**+3.3**
JCZ	**Jackson Bay**	**30.35**	**205**	P	**P**	**17 18 01.0**	**+1.0**
JCZ	**Jackson Bay**	**30.35**	**205**	P	**P**	**17 17 59.9**	**-0.1**
MSZ	**Milford Sound**	**31.19**	**205**	P	**P**	**17 18 09.2**	**+2.0**
MLZ	**Mamora Lakes**	**31.69**	**204**	P	**P**	**17 18 11.4**	**-0.3**
WHZ	**Wether Hill Ro**	**32.20**	**204**	P	**P**	**17 18 13.1**	**+2.1**
EIDS	**Eidsvold**	**33.30**	**250**	P	**P**	**17 18 26.0**	**0.0**
EIDS				pP	**pwP**	**17 18 49.8**	**+0.5**
ARMA	**Armidale**	**33.79**	**241**	P	**P**	**17 18 31.8**	**+1.5**
	comp=Z,20nm,1.2s						
ARMA	**Armidale**	**33.79**	**241**		**P**	**17 18 30.1**	**-0.1**
ARMA	**Armidale**	**33.79**	**241**	P	**P**	**17 18 31.2**	**+0.9**
TAOE	**Nuku Hiva Isla**	**34.11**	**80**	*eSS*	SS	17 26 31.6	+7.6
	comp=Z,499nm,27.2s						
TAOE				*eT*	T	17 53 46.0	
	comp=Z,89nm,0.2s						
KRVT	**Keravat (AS076**	**35.56**	**287**	LR	LR	17 32 14.8	
	comp=Z,18nm,19.6s,baz=32,slow=34						
CNB	**Canberra Magne**	**37.06**	**234**	P	**P**	**17 18 59.1**	**+0.9**
	comp=Z,0.3nm,2.0s						
CAN	**Canberra**	**37.34**	**234**	P	**P**	**17 18 59.9**	**-0.7**
CTA	**Charters Tower**	**37.56**	**259**	LR	LR	17 32 54.5	
	comp=Z,209nm,21.0s,baz=74,slow=34						
CTAO	**Charters Tower**	**37.56**	**259**	P	**P**	**17 19 02.4**	**-0.2**
CTAO	**Charters Tower**	**37.56**	**259**	P	**P**	**17 19 02.6**	**0.0**
MILA	**Mila**	**37.82**	**231**	P	**P**	**17 19 04.5**	**-0.1**
CMSA	**Cobar Meteorol**	**39.01**	**241**	P	**P**	**17 19 15.6**	**+1.0**
	comp=Z,7nm,1.0s						
CMSA	**Cobar Meteorol**	**39.01**	**241**	P	**P**	**17 19 15.0**	**+0.5**
MTSU	**Mount Surprise**	**39.52**	**262**	P	**P**	**17 19 20.4**	**+1.4**
MTSU	**Mount Surprise**	**39.52**	**262**	P	**P**	**17 19 19.0**	**0.0**
QLP	**Quilpie**	**39.56**	**249**	P	**P**	**17 19 20.0**	**+0.8**
	comp=Z,57nm,0.8s						
QLP	**Quilpie**	**39.56**	**249**	P	**P**	**17 19 16.4**	**-2.8**
QLP	**Quilpie**	**39.56**	**249**	P	**P**	**17 19 20.5**	**+1.2**
QLP				pP	**pwP**	**17 19 42.8**	**+0.3**
H11S2	**WAKE ISLAND Hy**	**40.23**	**331**	T	T	18 02 55.4	
	baz=145,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**40.24**	**331**	T	T	18 02 54.2	
	baz=145,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**40.25**	**331**	T	T	18 02 49.1	
	baz=145,slow=76,SNR=14						
TOO	**Toolangi**	**40.74**	**232**	P	**P**	**17 19 29.9**	**+1.1**
	comp=Z,4.5nm,1.0s						
TOO	**Toolangi**	**40.74**	**232**		**P**	**17 19 28.6**	**-0.3**
H11N3	**WAKE ISLAND Hy**	**41.21**	**332**	T	T	18 03 28.2	
	baz=152,slow=76,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**41.21**	**332**	T	T	18 03 39.5	
	baz=152,slow=76,SNR=8.7						
H11N2	**WAKE ISLAND Hy**	**41.23**	**332**	T	T	18 03 46.2	
	baz=152,slow=76,SNR=6.4						
STKA	**Stephens Creek**	**42.50**	**242**	P	**P**	**17 19 44.7**	**+1.4**
	comp=Z,105nm,1.2s						
STKA	**Stephens Creek**	**42.50**	**242**	P	**P**	**17 19 43.6**	**+0.3**
	comp=Z,18nm,1.1s,baz=49,slow=7.9,SNR=12						
STKA				LR	LR	17 36 26.8	
	comp=Z,128nm,18.4s,baz=96,slow=35						
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**42.50**	**242**	P	**P**	**17 19 43.8**	**+0.5**
INKA	**Innaminka**	**42.75**	**248**		**P**	**17 19 44.6**	**-0.8**
HTT	**Hallett**	**44.97**	**240**	P	**P**	**17 20 04.3**	**+1.1**
	comp=Z,10.0nm,1.0s						
JAY	**Jayapura**	**46.69**	**283**	LR	LR	17 38 34.5	
	comp=Z,103nm,20.5s,baz=204,slow=34						
GENI	**Genyem**	**47.16**	**283**	P	**P**	**17 20 22.3**	**+1.8**
	comp=Z,987nmcomp=Z,63nm,1.2s						
WR8	**Warramunga Arr**	**48.59**	**258**	P	**P**	**17 20 31.2**	**-0.3**
WR8				IAmb	IAmb	17 20 60.0	
	comp=Z,15nm,0.9s						
WB0	**Warramunga Arr**	**48.71**	**259**	P	**P**	**17 20 31.9**	**-0.6**
WB0				IAmb	IAmb	17 20 59.0	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**48.74**	**258**	P	**P**	**17 20 33.4**	**+0.8**
WRAB	**Tennant Creek**	**48.74**	**258**	P	**P**	**17 20 33.5**	**+0.8**
WRAB				pP	**pwP**	**17 20 56.4**	**-1.0**
WRA	**Warramunga Arr**	**48.75**	**258**	P	**P**	**17 20 33.4**	**+0.7**
	comp=Z,6.2nm,0.6s,baz=95,slow=6.9,SNR=97						
WRA				PcP	**PcP**	**17 21 57.4**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=93,slow=4.0,SNR=1.7						
WRA				S	**S**	**17 27 26.9**	**-2.1**
	comp=Z,0.8nm,0.9s,baz=94,slow=14,SNR=5.3						
	comp=Z,6.2nm,0.6s						
WRA	**Warramunga Arr**	**48.75**	**258**		**P**	**17 20 31.9**	**-0.8**
WRA					**PcP**	**17 21 55.6**	**-1.0**
AS17	**Alice Springs**	**48.79**	**253**	P	**P**	**17 20 34.0**	**+0.9**
	comp=Z,104nm,0.7s						
AS01	**Alice Springs**	**48.83**	**253**	P	**P**	**17 20 33.9**	**+0.6**
AS31	**Alice Springs**	**48.87**	**253**	P	**P**	**17 20 34.5**	**+0.9**
	comp=Z,23nm,0.9s,comp=Z,0.0nm						
AS31	**Alice Springs**	**48.87**	**253**		**P**	**17 20 33.8**	**+0.1**
AS31				IAmb	IAmb	17 20 59.2	
	comp=Z,15nm,0.7s						
ASAR	**Alice Springs**	**48.87**	**253**	P	**P**	**17 20 34.5**	**+0.9**
	comp=Z,37nm,0.6s,baz=88,slow=8.5,SNR=681						
ASAR				PcP	**PcP**	**17 21 58.1**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=94,slow=4.9,SNR=0.7						
ASAR				S	**S**	**17 27 30.1**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=89,slow=17,SNR=9.4						
	comp=Z,37nm,0.6s						
ASAR	**Alice Springs**	**48.87**	**253**		**P**	**17 20 33.2**	**-0.5**
GUMO	**Guam**	**50.78**	**305**	LR	LR	17 40 25.9	
	comp=Z,23nm,19.9s,baz=118,slow=34						
WRKA	**Warakurna**	**53.90**	**251**	P	**P**	**17 21 11.3**	**+0.1**
	comp=Z,22nm,1.1s						
KNRA	**Kununurra**	**54.60**	**263**		**P**	**17 21 17.0**	**+0.7**
KNRA				IAmb	IAmb	17 21 41.9	
	comp=Z,25nm,1.1s						
SIJI	**Sorong**	**56.09**	**281**	LR	LR	17 46 16.2	
	comp=Z,38nm,19.3s,baz=253,slow=37						
SIJI	**Sorong**	**56.09**	**281**	P	**P**	**17 21 29.1**	**+2.1**
	comp=Z,587nmcomp=Z,63nm,1.1s						
FITZ	**Fitzroy Crossi**	**57.14**	**259**	LR	LR	17 44 08.9	
	comp=Z,212nm,19.8s,baz=72,slow=34						
RPN	**Rapa Nui**	**60.24**	**112**	LR	LR	17 40 52.1	
	comp=Z,84nm,21.4s,baz=5.5,slow=29						
JCJ	**Chichijima**	**61.16**	**315**	LR	LR	17 44 19.5	
	comp=Z,48nm,20.2s,baz=94,slow=32						
SBA	**Scott Base**	**61.33**	**185**		**P**	**17 22 02.5**	**+0.2**
SBA				IAmb	IAmb	17 22 05.8	
	comp=Z,15nm,0.9s						
VNDA	**Vanda**	**61.45**	**186**	P	**P**	**17 22 03.6**	**+0.5**
	comp=Z,5.5nm,0.9s,baz=11,slow=6.7,SNR=26						
	comp=Z,5.5nm,0.9s						
VNDA	**Vanda**	**61.45**	**186**	P	**P**	**17 22 03.3**	**+0.2**
VNDA				IAmb	IAmb	17 22 27.4	
	comp=Z,13nm,1.1s						
KLBR	**Kellerberrin**	**62.74**	**243**	P	**P**	**17 22 13.1**	**+0.5**
	comp=Z,30nm,0.8s						
TOLI2	**Tolitoli**	**66.62**	**279**		**P**	**17 22 37.3**	**-0.8**
TOLI2				IAmb	IAmb	17 23 05.1	
	comp=Z,19nm,1.0s						
MJAR	**Matsushiro Arr**	**69.92**	**321**	P	**P**	**17 22 59.4**	**+1.1**
	comp=Z,3.7nm,1.0s,baz=161,slow=5.6,SNR=7.9						
	comp=Z,3.7nm,1.0s						
MJAR	**Matsushiro Arr**	**69.92**	**321**	P	**P**	**17 22 58.2**	**0.0**
JOW	**Kunigami**	**71.03**	**307**	LR	LR	17 49 19.7	
	comp=Z,75nm,20.6s,baz=191,slow=32						
UNV	**Unalaska Valle**	**71.14**	**5**	IAmb	IAmb	17 23 05.9	
	comp=Z,20nm,0.9s						
UNV	**Unalaska Valle**	**71.14**	**5**	P	**P**	**17 23 04.7**	**-0.5**
	baz=188						
TGY	**Tagaytay City**	**71.25**	**292**	LR	LR	17 50 52.7	
	comp=Z,56nm,21.0s,baz=232,slow=33						
QSPA	**South Pole Qui**	**72.78**	**180**	P	**P**	**17 23 15.8**	**+0.6**
	comp=Z,14nm,0.8s,baz=39,slow=1.5,SNR=78						
	comp=Z,14nm,0.8s						
QSPA	**South Pole Qui**	**72.78**	**180**	P	**P**	**17 23 15.3**	**+0.1**
QSPA	**South Pole Qui**	**72.78**	**180**	P	**P**	**17 23 16.1**	**+0.9**
QSPA				pP	**pP**	**17 23 37.9**	**-0.6**
CHNA	**Chernabura Isl**	**72.89**	**9**	P	**P**	**17 23 15.3**	**-0.3**
	baz=195						
SDPT	**Sand Point**	**73.27**	**8**	P	**P**	**17 23 17.3**	**-0.5**
	baz=194						
CBX	**Cerro Bola**	**73.87**	**48**	P	**P**	**17 23 20.2**	**-1.9**
MWC	**Mount Wilson**	**73.95**	**46**	IAmb	IAmb	17 23 23.0	
	comp=Z,19nm,1.1s						
VTX	**Valle De La Tr**	**74.00**	**49**	P	**P**	**17 23 21.1**	**-1.7**
VTX				IAmb	IAmb	17 23 23.5	
	comp=Z,36nm,1.5s						
ELS	**Elsinore Mount**	**74.06**	**46**	P	**P**	**17 23 21.2**	**-1.9**
VES	**Vestal, Richgr**	**74.19**	**44**	P	**P**	**17 23 22.1**	**-1.6**
PETK	**Petropavlovsk-**	**74.20**	**343**	P	**P**	**17 23 24.9**	**+1.6**
	comp=Z,6.9nm,0.8s,baz=125,slow=7.5,SNR=17						
PETK				LR	LR	17 49 43.4	

GMN	**Gold Mountain**	**76.22**	**43**	IAmb	IAmb	17 23 36.5	
	comp=Z,18nm,1.2s						
OHAK	**Old Harbor**	**76.23**	**12**	P	**P**	**17 23 34.8**	**-0.1**
	baz=201						
WCT	**Wildcat Mounta**	**76.36**	**44**	IAmb	IAmb	17 23 37.2	
	comp=Z,22nm,1.4s						
I03D	**Drain, OR**	**76.42**	**35**	IAmb	IAmb	17 23 37.5	
	comp=Z,22nm,1.3s						
TPNV	**Topopah Spring**	**76.70**	**44**	IAmb	IAmb	17 23 39.3	
	comp=Z,15nm,1.1s						
Q17K	**Contact Creek**	**76.76**	**10**	P	**P**	**17 23 37.9**	**-0.2**
	baz=198						
KDAK	**Kodiak Island**	**76.89**	**12**	LR	LR	17 49 07.2	
	comp=Z,50nm,21.9s,baz=173,slow=29						
KDAK	**Kodiak Island**	**76.89**	**12**	P	**P**	**17 23 39.5**	**+0.9**
	baz=201						
BUCK	**Buck Mountain**	**76.94**	**35**	IAmb	IAmb	17 23 40.7	
	comp=Z,19nm,1.0s						
I04A	**Tendick Farm,**	**77.00**	**36**	IAmb	IAmb	17 23 40.4	
	comp=Z,12nm,0.9s						
KSRS	**Korea Array**	**77.00**	**316**	P	**P**	**17 23 42.3**	**+2.6**
	comp=Z,4.7nm,1.0s,baz=129,slow=6.3,SNR=11						
	comp=Z,4.7nm,1.0s						
P16K	**Nushagak River**	**77.18**	**8**	P	**P**	**17 23 40.3**	**+0.1**
	baz=196						
K05A	**Summer Lake**	**77.19**	**37**	IAmb	IAmb	17 23 42.3	
	comp=Z,24nm,0.9s						
Q18K	**Katmai Hardscr**	**77.27**	**10**	P	**P**	**17 23 41.2**	**+0.2**
	baz=199						
H04D	**Lebanon**	**77.29**	**35**	IAmb	IAmb	17 23 42.4	
	comp=Z,22nm,1.2s						
Y14A	**Wickenburg**	**77.33**	**48**	IAmb	IAmb	17 23 42.5	
	comp=Z,17nm,1.2s						
J05D	**Fort Rock, OR**	**77.34**	**37**	IAmb	IAmb	17 23 43.0	
	comp=Z,21nm,0.8s						
WIFE	**Three Sisters-**	**77.50**	**36**	P	**P**	**17 23 42.0**	**-0.6**
WIFE				IAmb	IAmb	17 23 43.7	
	comp=Z,12nm,0.8s						
P17K	**Kvichak River**	**77.57**	**9**	P	**P**	**17 23 42.2**	**-0.2**
	baz=197						
M11K	**Mekoryuk**	**77.66**	**4**	P	**P**	**17 23 43.8**	**+1.0**
	baz=188						
H04A	**Detroit Lake**	**77.69**	**35**	IAmb	IAmb	17 23 44.1	
	comp=Z,12nm,0.8s						
O16K	**Kokwok River B**	**77.71**	**8**	IAmb	IAmb	17 23 43.9	
	comp=Z,25nm,1.4s						
O16K	**Kokwok River B**	**77.71**	**8**	P	**P**	**17 23 42.6**	**-0.5**
	baz=196						
PRN	**Pahroc Range**	**77.75**	**44**	IAmb	IAmb	17 23 45.5	
	comp=Z,26nm,1.2s						
Q19K	**Cape Douglas,**	**77.78**	**11**	P	**P**	**17 23 43.0**	**-0.6**
	baz=200						
M13K	**Dall Lake**	**77.91**	**5**	P	**P**	**17 23 45.6**	**+1.3**
	baz=191						
I05D	**Terrebonne, OR**	**77.94**	**36**	P	**P**	**17 23 44.8**	**-0.2**
P18K	**Big Mountain,**	**77.94**	**10**	P	**P**	**17 23 44.6**	**0.0**
	baz=198						
N15K	**Kwethluk River**	**78.01**	**7**	P	**P**	**17 23 45.2**	**+0.3**
	baz=194						
O17K	**Koliganek Bris**	**78.02**	**9**	P	**P**	**17 23 45.3**	**+0.4**
	baz=197						
TUC	**Tucson**	**78.13**	**51**	P	**P**	**17 23 44.8**	**-1.4**
TUC				IAmb	IAmb	17 23 47.4	
	comp=Z,25nm,1.3s						
TUC	**Tucson**	**78.13**	**51**	P	**P**	**17 23 46.3**	**+0.1**
E03A	**Lebam**	**78.16**	**33**	IAmb	IAmb	17 23 47.2	
	comp=Z,24nm,0.9s						
WVOR	**Wild Horse Val**	**78.34**	**39**	IAmb	IAmb	17 23 52.9	
	comp=Z,9.2nm,0.7s						
M14K	**Bethel**	**78.38**	**6**		**P**	**17 23 47.4**	**+0.6**
M14K	**Bethel**	**78.38**	**6**	P	**P**	**17 23 48.1**	**+1.3**
	baz=192,SNR=6.7						
O18K	**Koktuh Hills**	**78.39**	**10**	P	**P**	**17 23 47.3**	**+0.3**
	baz=198,SNR=7.3						
HOOD	**Mount Hood Mea**	**78.39**	**35**	IAmb	IAmb	17 23 48.3	
	comp=Z,22nm,1.2s						
M15K	**Kasigluk River**	**78.46**	**7**	P	**P**	**17 23 48.4**	**+1.1**
	baz=193,SNR=12						
N16K	**Nishlik Lake**	**78.47**	**8**	P	**P**	**17 23 47.8**	**+0.4**
	baz=195						
P19K	**Oil Pt**	**78.53**	**11**	P	**P**	**17 23 47.8**	**+0.1**
	baz=200						
N17K	**Nushagak Hills**	**78.73**	**8**	P	**P**	**17 23 49.0**	**+0.1**
	baz=197						
LCMT	**Little Creek M**	**78.75**	**45**	IAmb	IAmb	17 23 50.8	
	comp=Z,22nm,1.4s						
O19K	**Port Alsworth**	**78.86**	**10**	P	**P**	**17 23 49.4**	**-0.1**
	baz=199						
L14K	**Kuka Creek**	**78.89**	**6**	IAmb	IAmb	17 23 52.2	
	comp=Z,21nm,1.1s						
L14K	**Kuka Creek**	**78.89**	**6**	P	**P**	**17 23 51.1**	**+1.5**
	baz=191,SNR=7.0						
CCUT	**Cedar City**	**78.96**	**45**	P	**P**	**17 23 50.0**	**-0.9**
M16K	**Timber Creek**	**78.98**	**7**	P	**P**	**17 23 51.5**	**+1.3**
	baz=195						
O20K	**Slope Mountain**	**79.04**	**11**	P	**P**	**17 23 50.5**	**-0.1**
	baz=201						
N18K	**Kilae Creek**	**79.07**	**9**	P	**P**	**17 23 50.6**	**-0.1**
	baz=198						
BRSE	**Bradley Lake S**	**79.08**	**12**	P	**P**	**17 23 51.1**	**+0.4**
	baz=203,SNR=5.3						
U15A	**North Rim**	**79.11**	**46**	IAmb	IAmb	17 23 53.2	
	comp=Z,23nm,1.2s						
WUAZ	**Wupatki**	**79.28**	**48**	P	**P**	**17 23 50.9**	**-1.8**
WUAZ				IAmb	IAmb	17 23 54.0	
	comp=Z,21nm,1.2s						
K13K	**Kusilvak Mount**	**79.30**	**5**	P	**P**	**17 23 52.2**	**+0.3**
	baz=189						
RED	**Redoubt Volcan**	**79.33**	**11**	IAmb	IAmb	17 23 53.0	
	comp=Z,24nm,1.0s						
L15K	**Ungalak Mounta**	**79.33**	**6**	P	**P**	**17 23 52.6**	**+0.6**
	baz=192						
N19K	**Bonanza Creek**	**79.42**	**10**	IAmb	IAmb	17 23 53.6	
	comp=Z,21nm,1.0s						
N19K	**Bonanza Creek**	**79.42**	**10**	P	**P**	**17 23 52.5**	**-0.1**
	baz=199,SNR=7.8						
ELK	**Elko**	**79.46**	**41**	LR	LR	17 51 13.7	
	comp=Z,78nm,21.4s,baz=254,slow=30						
M17K	**Holitna River**	**79.54**	**8**	IAmb	IAmb	17 23 55.7	
	comp=Z,28nm,1.1s						
M17K	**Holitna River**	**79.54**	**8**	P	**P**	**17 23 53.3**	**+0.1**
	baz=196,SNR=8.9						
L16K	**Owhat River**	**79.58**	**7**	IAmb	IAmb	17 23 56.1	
	comp=Z,27nm,1.1s						
L16K	**Owhat River**	**79.58**	**7**	P	**P**	**17 23 54.5**	**+1.1**
	baz=194,SNR=10.0						
PGC	**Sidney**	**79.61**	**31**	P	**P**	**17 23 53.0**	**-0.8**
PGC				IAmb	IAmb	17 23 54.8	
	comp=Z,20nm,0.8s						
CBB	**Campbell River**	**79.61**	**30**	IAmb	IAmb	17 23 55.1	
	comp=Z,23nm,1.0s						
HPIG		**79.64**	**58**	IAmb	IAmb	17 23 55.4	
	comp=Z,36nm,1.6s						
HPIG		**79.64**	**58**	P	**P**	**17 23 54.2**	**-0.6**
SEW	**Seward**	**79.67**	**12**	P	**P**	**17 23 54.6**	**+0.7**
	baz=204						
Q23K	**Middleton Isla**	**79.73**	**14**	P	**P**	**17 23 55.1**	**+0.9**
	baz=207						
M18K	**Stony River**	**79.85**	**9**	P	**P**	**17 23 55.0**	**+0.1**
	baz=198,SNR=7.0						
BBB	**Bella Bella**	**79.88**	**27**	LR	LR	17 54 29.4	
	comp=Z,18nm,18.5s,baz=208,slow=32						
MXC	**Moxie City**	**79.92**	**34**	P	**P**	**17 23 54.9**	**-0.7**
L17K	**Donlin**	**80.14**	**7**	P	**P**	**17 23 58.1**	**+1.7**
	baz=195,SNR=14						
SPCR	**Spurr Chakacha**	**80.16**	**11**	P	**P**	**17 23 56.3**	**-0.4**
	baz=201						
SMAI	**San Martin Ant**	**80.28**	**159**		**P**	**17 23 56.6**	**-0.7**
CRAG	**Craig**	**80.34**	**22**	P	**P**	**17 23 57.5**	**-0.1**
	baz=220						
L18K	**Granite Mounta**	**80.43**	**8**	P	**P**	**17 23 58.7**	**+0.7**
	baz=197,SNR=6.7						
121A	**Cookes Peak, D**	**80.46**	**52**	P	**P**	**17 23 58.0**	**-1.1**
M19K	**Big River Lodg**	**80.46**	**9**	P	**P**	**17 23 58.1**	**-0.1**
	baz=199						
ZAIG	**Zacatecas**	**80.50**	**63**	IAmb	IAmb	17 24 01.0	
	comp=Z,22nm,1.2s						
ZAIG	**Zacatecas**	**80.50**	**63**	P	**P**	**17 23 60.0**	**+0.4**
RC01	**Rabbit Creek A**	**80.52**	**12**	IAmb	IAmb	17 23 59.7	
	comp=Z,34nm,1.2s						
RC01	**Rabbit Creek A**	**80.52**	**12**	P	**P**	**17 23 57.9**	**-0.5**
	baz=204						
HIN	**Hinchinbrook I**	**80.56**	**14**	IAmb	IAmb	17 23 59.8	
	comp=Z,28nm,1.1s						
KAIM	**Kayak Island**	**80.63**	**15**	P	**P**	**17 23 58.8**	**-0.3**
	baz=209						
M20K	**Styx River**	**80.64**	**10**	P	**P**	**17 23 58.7**	**-0.5**
	baz=200						
L19K	**White Mountain**	**80.66**	**9**	P	**P**	**17 23 59.6**	**+0.3**
	baz=199						
K17K	**Iditarod**	**80.70**	**7**	P	**P**	**17 24 00.5**	**+1.1**
	baz=195						
DUG	**Dugway, Tooele**	**80.72**	**43**	P	**P**	**17 23 59.6**	**-0.7**
NJ2	**Nanjing**	**80.73**	**308**	eP	**P**	**17 24 00.0**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
EPH	**Ephrata**	**80.77**	**34**	P	**P**	**17 23 59.7**	**-0.6**
EPH				IAmb	IAmb	17 24 00.9	
	comp=Z,14nm,0.9s						
V35K	**Ketchikan**	**80.79**	**23**	P	**P**	**17 24 00.2**	**+0.2**
	baz=221						
SIT	**Sitka**	**80.82**	**20**	P	**P**	**17 24 00.0**	**-0.1**
	baz=217						
U33K	**Whale Pass**	**80.84**	**22**	P	**P**	**17 23 60.0**	**-0.3**
	baz=220						
EYAK	**Cordova Ski Ar**	**80.87**	**14**	P	**P**	**17 24 00.3**	**-0.1**
	baz=207						
FID	**Port Fidalgo**	**80.88**	**13**	IAmb	IAmb	17 24 02.1	
	comp=Z,26nm,1.5s						
D08A	**Wollman Farm,**	**80.96**	**35**	IAmb	IAmb	17 24 02.2	
	comp=Z,16nm,0.9s						
J16K	**Anvik River**	**81.00**	**6**	P	**P**	**17 24 02.4**	**+1.4**
	baz=193,SNR=12						
SKT	**Skwentna**	**81.01**	**11**	P	**P**	**17 24 00.4**	**-0.8**
	baz=202,SNR=5.3						
KNK	**Knik Glacier**	**81.06**	**12**	P	**P**	**17 24 01.2**	**-0.3**
	baz=205						
PMR	**Palmer**	**81.09**	**12**	IAmb	IAmb	17 24 02.7	
	comp=Z,39nm,1.4s						
PMR	**Palmer**	**81.09**	**12**	P	**P**	**17 24 01.3**	**-0.2**
	baz=204						
F10A	**Beach Ranch, E**	**81.25**	**36**	IAmb	IAmb	17 24 03.2	
	comp=Z,14nm,0.8s						
S31K	**Pelican**	**81.25**	**19**	P	**P**	**17 24 02.2**	**-0.2**
	baz=216						
J17K	**VABM Dome**	**81.27**	**7**	IAmb	IAmb	17 24 05.1	
	comp=Z,20nm,1.0s						
J17K	**VABM Dome**	**81.27**	**7**	P	**P**	**17 24 03.7**	**+1.3**
	baz=195,SNR=8.6						
GHO	**Glory Hole Cre**	**81.30**	**12**	IAmb	IAmb	17 24 03.9	
	comp=Z,21nm,1.0s						
TMUT	**Trail Mountain**	**81.31**	**44**	P	**P**	**17 24 02.4**	**-1.2**
DIV	**Divide**	**81.38**	**13**	IAmb	IAmb	17 24 04.2	
	comp=Z,25nm,1.0s						
S32K	**Killisnoo**	**81.40**	**20**	P	**P**	**17 24 03.0**	**-0.1**
	baz=218						
PLID	**Pearl Lake**	**81.44**	**37**	IAmb	IAmb	17 24 04.9	
	comp=Z,33nm,2.0s						
SML	**Sawmill**	**81.45**	**12**	P	**P**	**17 24 03.4**	**-0.1**
	baz=205						
BMRM	**Bremner River**	**81.50**	**14**	IAmb	IAmb	17 24 05.1	
	comp=Z,28nm,1.1s						
BMRM	**Bremner River**	**81.50**	**14**	P	**P**	**17 24 03.9**	**+0.1**
	baz=208,SNR=8.1						
HLID	**Hailey**	**81.53**	**39**	P	**P**	**17 24 04.3**	**-0.2**
HLID				pP	**pP**	**17 24 27.7**	**-0.4**
M23K	**Glacier View**	**81.56**	**12**	P	**P**	**17 24 04.2**	**+0.2**
	baz=206						
CUT	**Chulitna**	**81.63**	**11**	P	**P**	**17 24 04.2**	**-0.1**
	baz=203						
L22K	**Petersville**	**81.65**	**11**	IAmb	IAmb	17 24 05.2	
	comp=Z,27nm,1.1s						
L22K	**Petersville**	**81.65**	**11**	P	**P**	**17 24 04.3**	**-0.3**
	baz=203						
LLLB	**Lillooet**	**81.66**	**31**	P	**P**	**17 24 04.3**	**-0.5**
LLLB				IAmb	IAmb	17 24 05.6	
	comp=Z,15nm,0.9s						
KLU	**Klutina**	**81.67**	**13**	P	**P**	**17 24 04.9**	**+0.2**
	baz=207						
SRU	**San Rafael Swe**	**81.67**	**45**	IAmb	IAmb	17 24 06.5	
	comp=Z,28nm,1.6s						
CRQE	**Cirque**	**81.67**	**15**	P	**P**	**17 24 04.7**	**-0.1**
	baz=210						
SCM	**Sheep Creek Mo**	**81.68**	**12**	IAmb	IAmb	17 24 05.9	
	comp=Z,24nm,1.0s						
SCM	**Sheep Creek Mo**	**81.68**	**12**	P	**P**	**17 24 04.6**	**-0.1**
	baz=206,SNR=6.2						
KLR	**Kul'dur**	**81.71**	**328**	P	**P**	**17 24 07.2**	**+2.2**
	comp=Z,1.3nm,0.8s,baz=148,slow=9.9,SNR=3.6						
	comp=Z,1.3nm,0.8s						
P17A	**Butcher Ranch,**	**81.71**	**44**	IAmb	IAmb	17 24 06.9	
	comp=Z,35nm,1.7s						
Y22A	**Socorro**	**81.72**	**51**	IAmb	IAmb	17 24 06.9	
	comp=Z,26nm,1.5s						
MA2	**Magadan**	**81.73**	**343**	LR	LR	17 54 36.9	
	comp=Z,35nm,20.1s,baz=225,slow=31						
PPLA	**Purkeypile**	**81.75**	**10**	P	**P**	**17 24 05.3**	**+0.1**
	baz=201						
VHRN	**Van Horn**	**81.83**	**54**	IAmb	IAmb	17 24 07.3	
	comp=Z,17nm,0.9s						
PINM	**Pinnacle**	**81.84**	**16**	P	**P**	**17 24 06.3**	**+0.6**
	baz=213						
ANM	**Nome**	**81.86**	**4**	P	**P**	**17 24 06.2**	**+0.7**
	baz=188						
K20K	**Telida**	**81.89**	**9**	P	**P**	**17 24 06.2**	**+0.5**
	baz=199						
CRNM	**Carthage**	**81.89**	**51**	P	**P**	**17 24 05.3**	**-1.4**
MNTX	**Cornudas Mount**	**81.91**	**53**	IAmb	IAmb	17 24 07.5	
	comp=Z,27nm,1.4s						
MNTX	**Cornudas Mount**	**81.91**	**53**	P	**P**	**17 24 06.5**	**-0.1**
BNX	**BinXian**	**81.99**	**323**	↑P	**P**	**17 24 08.6**	**+2.0**
BNX				pmax	pmax		
	comp=Z,12nm,0.9s						
GRNC	**Granite Creek**	**81.99**	**15**	IAmb	IAmb	17 24 07.8	
	comp=Z,15nm,1.0s						
VRDI	**Verde Repeater**	**82.00**	**14**	IAmb	IAmb	17 24 07.8	
	comp=Z,14nm,1.0s						
TLIG	**Tlapa**	**82.04**	**69**	IAmb	IAmb	17 24 09.1	
	comp=Z,27nm,1.3s						
R32K	**Eaglecrest**	**82.06**	**20**	P	**P**	**17 24 07.8**	**+1.2**
	baz=218						
N25K	**Chitina, Valde**	**82.07**	**14**	P	**P**	**17 24 06.7**	**0.0**
	baz=208,SNR=7.7						
GLB	**Gilahina Butte**	**82.10**	**14**	IAmb	IAmb	17 24 08.2	
	comp=Z,14nm,1.1s						
PV05	**Paradox Valley**	**82.14**	**46**	IAmb	IAmb	17 24 09.4	
	comp=Z,28nm,1.4s						
P29M	**Windy Craggy**	**82.16**	**18**	IAmb	IAmb	17 24 09.0	
	comp=Z,16nm,0.8s						
P29M	**Windy Craggy**	**82.16**	**18**	P	**P**	**17 24 07.8**	**+0.5**
	baz=215,SNR=5.6						
M24K	**Tolsona, Glenn**	**82.17**	**13**	P	**P**	**17 24 08.0**	**+0.7**
	baz=207,SNR=6.0						
H16K	**Elim**	**82.17**	**5**	P	**P**	**17 24 08.3**	**+1.2**
	baz=192						
BSUT	**Blindstream Ca**	**82.23**	**43**	P	**P**	**17 24 08.0**	**-0.6**
BSUT				IAmb	IAmb	17 24 10.6	
	comp=Z,22nm,1.7s						
MCARA	**McCarthy VSAT**	**82.24**	**15**	P	**P**	**17 24 07.9**	**+0.3**
	baz=210						
TX31	**Lajitas Ar. Si**	**82.25**	**56**	IAmb	IAmb	17 24 09.9	
	comp=Z,32nm,1.5s						
TXAR	**Lajitas Array**	**82.25**	**56**	P	**P**	**17 24 08.7**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=222,slow=6.6,SNR=33						
TXAR				LR	LR	17 52 18.7	
	comp=Z,46nm,21.2s,baz=286,slow=30						
	comp=Z,3.3nm,0.8s						
TXAR	**Lajitas Array**	**82.25**	**56**		**P**	**17 24 07.8**	**-0.6**
BELA	**Belgrano 2**	**82.25**	**172**	IAmb	IAmb	17 24 08.1	
	comp=Z,14nm,1.0s						
CAST	**Castle Rocks**	**82.26**	**10**	P	**P**	**17 24 06.7**	**-1.0**
	baz=201,SNR=10.0						
LOGN	**Logan Glacier**	**82.26**	**16**	IAmb	IAmb	17 24 09.2	
	comp=Z,15nm,1.0s						
WAT6	**Susitna Watana**	**82.27**	**12**	P	**P**	**17 24 07.7**	**-0.3**
	baz=205,SNR=12						
J19K	**Poorman**	**82.28**	**8**	P	**P**	**17 24 08.4**	**+0.7**
	baz=198,SNR=7.4						
BARN	**Barnard Glacie**	**82.30**	**15**	IAmb	IAmb	17 24 09.5	
	comp=Z,22nm,1.0s						
PV17	**East Wray Mesa**	**82.33**	**46**	IAmb	IAmb	17 24 09.8	
	comp=Z,32nm,1.6s						
WAT1	**Susitna Watana**	**82.34**	**12**	P	**P**	**17 24 07.7**	**-0.4**
	baz=205						
PV20	**West Nyswonger**	**82.35**	**46**	IAmb	IAmb	17 24 09.8	
	comp=Z,22nm,1.0s						
PV13	**Radium Mtn., P**	**82.37**	**46**	P	**P**	**17 24 07.8**	**-1.3**
PV13				IAmb	IAmb	17 24 10.0	
	comp=Z,43nm,1.8s						
G15K	**Niukluk**	**82.38**	**4**	P	**P**	**17 24 09.2**	**+1.0**
	baz=190,SNR=5.6						
PV03	**Paradox Valley**	**82.39**	**46**	IAmb	IAmb	17 24 10.1	
	comp=Z,25nm,1.5s						
PLBC	**Pleasant Camp**	**82.42**	**18**	P	**P**	**17 24 08.7**	**+0.1**
	baz=216,SNR=6.6						
O28M	**Mount Upton**	**82.43**	**16**	IAmb	IAmb	17 26 16.8	
	comp=Z,14nm,0.8s						
O28M	**Mount Upton**	**82.43**	**16**	P	**P**	**17 24 09.3**	**+0.3**
	baz=213,SNR=6.4						
PV02	**Paradox Valley**	**82.45**	**46**	P	**P**	**17 24 07.7**	**-1.9**
PV02				IAmb	IAmb	17 24 09.8	
	comp=Z,24nm,1.1s						
O29M	**Mount Kennedy**	**82.47**	**17**	IAmb	IAmb	17 24 10.7	
	comp=Z,12nm,0.9s						
O29M	**Mount Kennedy**	**82.47**	**17**	P	**P**	**17 24 09.4**	**+0.4**
	baz=214,SNR=5.5						
PV01	**Paradox Valley**	**82.53**	**46**	IAmb	IAmb	17 24 10.1	
	comp=Z,11nm,1.0s						
T35M	**Bob Quinn**	**82.53**	**23**	P	**P**	**17 24 09.8**	**+0.6**
	baz=222						
ANMO	**Albuquerque**	**82.55**	**50**	LR	LR	17 53 04.5	
	comp=Z,33nm,21.8s,baz=264,slow=30						
ANMO	**Albuquerque**	**82.55**	**50**	P	**P**	**17 24 09.1**	**-0.9**
ANMO	**Albuquerque**	**82.55**	**50**	P	**P**	**17 24 10.1**	**0.0**
KTH	**Kantishna Hill**	**82.58**	**10**	IAmb	IAmb	17 24 10.9	
	comp=Z,18nm,1.1s						
TPB28		**82.58**	**54**	IAmb	IAmb	17 24 11.3	
	comp=Z,21nm,1.4s						
TRF	**Thorofare Moun**	**82.59**	**11**	P	**P**	**17 24 09.5**	**-0.1**
	baz=203,SNR=25						
HARP	**HAARP**	**82.64**	**13**	P	**P**	**17 24 10.0**	**+0.3**
	baz=208						
NEW	**Newport**	**82.65**	**34**	LR	LR	17 52 24.4	
	comp=Z,32nm,21.5s,baz=216,slow=30						
CHUM	**Lake Minchumin**	**82.66**	**10**	P	**P**	**17 24 09.3**	**-0.4**
	baz=201,SNR=11						
J20K	**Nowinta River**	**82.66**	**9**	IAmb	IAmb	17 24 11.5	
	comp=Z,26nm,1.1s						
J20K	**Nowinta River**	**82.66**	**9**	P	**P**	**17 24 10.3**	**+0.6**
	baz=199,SNR=22						
H17K	**Granite Mounta**	**82.68**	**6**	IAmb	IAmb	17 24 12.0	
	comp=Z,35nm,1.7s						
H17K	**Granite Mounta**	**82.68**	**6**	P	**P**	**17 24 10.5**	**+0.6**
	baz=194						
ALPN	**Alpine**	**82.70**	**55**	IAmb	IAmb	17 24 11.8	
	comp=Z,18nm,1.1s						
F14K	**Arctic Creek**	**82.71**	**3**	P	**P**	**17 24 10.8**	**+0.9**
	baz=188						
TNA	**Tin City**	**82.72**	**3**	P	**P**	**17 24 10.9**	**+0.9**
	baz=186						
SKAG	**Skagway**	**82.74**	**19**	IAmb	IAmb	17 24 12.3	
	comp=Z,26nm,1.3s						
SKAG	**Skagway**	**82.74**	**19**	P	**P**	**17 24 10.7**	**+0.5**
	baz=217						
P30M	**Million Dollar**	**82.79**	**18**	P	**P**	**17 24 11.4**	**+0.8**
	baz=216						
DHY	**Denali Highway**	**82.79**	**12**	IAmb	IAmb	17 24 11.8	
	comp=Z,16nm,1.3s						
DHY	**Denali Highway**	**82.79**	**12**	P	**P**	**17 24 10.5**	**-0.1**
	baz=206,SNR=6.5						
TPB01	**Permian Basin**	**82.83**	**55**	IAmb	IAmb	17 24 12.2	
	comp=Z,14nm,0.8s						
GCSA	**Galena City Sc**	**82.83**	**7**	P	**P**	**17 24 11.4**	**+0.8**
	baz=197						
G16K	**Koyuk River**	**82.91**	**5**	P	**P**	**17 24 11.7**	**+0.8**
	baz=191,SNR=5.1						
GDL2	**Guadalupe Moun**	**82.91**	**53**	P	**P**	**17 24 10.8**	**-1.1**
S34M	**Telegraph Cree**	**82.92**	**22**	P	**P**	**17 24 11.7**	**+0.6**
	baz=221						
YUK8	**Steele Glacier**	**82.97**	**16**	P	**P**	**17 24 11.9**	**+0.1**
	baz=213,SNR=9.8						
F15K	**North Star Dit**	**83.05**	**4**	P	**P**	**17 24 12.1**	**+0.4**
	baz=189						
H18K	**Honhosa River**	**83.06**	**7**	P	**P**	**17 24 12.1**	**+0.4**
	baz=195						
YUK6	**Outpost Mounta**	**83.06**	**17**	P	**P**	**17 24 12.4**	**+0.3**
	baz=214						
PAX	**Paxson**	**83.08**	**13**	P	**P**	**17 24 12.0**	**-0.1**
	baz=208						
MCK	**McKinley**	**83.09**	**11**	P	**P**	**17 24 12.1**	**+0.1**
	baz=204,SNR=16						
M26K	**Nabesna, AK**	**83.13**	**14**	IAmb	IAmb	17 24 13.8	
	comp=Z,22nm,1.1s						
M26K	**Nabesna, AK**	**83.13**	**14**	P	**P**	**17 24 12.6**	**+0.3**
	baz=210,SNR=17						
AHID	**Auburn Hatcher**	**83.15**	**41**	P	**P**	**17 24 13.2**	**+0.1**
G17K	**Kiwalik Mounta**	**83.16**	**6**	P	**P**	**17 24 13.2**	**+0.9**
	baz=193,SNR=6.2						
I20K	**Naaghedeneel**	**83.20**	**8**	P	**P**	**17 24 13.2**	**+0.8**
	baz=199						
HYT	**Haines Junctio**	**83.21**	**17**	IAmb	IAmb	17 24 14.6	
	comp=Z,24nm,1.2s						
HYT	**Haines Junctio**	**83.21**	**17**	P	**P**	**17 24 13.4**	**+0.6**
	baz=215,SNR=9.0						
YUK3	**Moose Creek**	**83.21**	**15**	P	**P**	**17 24 13.2**	**+0.3**
	baz=212,SNR=12						
BRWY	**Burwash Landin**	**83.24**	**16**	P	**P**	**17 24 13.3**	**+0.4**
	baz=214						
YUK4	**Talbot Arm**	**83.32**	**16**	P	**P**	**17 24 14.1**	**+0.6**
	baz=214						
Q32M	**Nakina River**	**83.33**	**20**	IAmb	IAmb	17 24 15.1	
	comp=Z,15nm,1.1s						
Q32M	**Nakina River**	**83.33**	**20**	P	**P**	**17 24 14.0**	**+0.5**
	baz=220						
P32M	**Atlin**	**83.35**	**19**	P	**P**	**17 24 13.9**	**+0.5**
	baz=219						
M27K	**Edge Creek, AK**	**83.36**	**15**	P	**P**	**17 24 14.2**	**+0.7**
	comp=Z,11nm,0.9s,baz=24						
S22A	**4UR Ranch, Cre**	**83.56**	**47**	IAmb	IAmb	17 24 16.0	
	comp=Z,11nm,0.9s						
O30N	**Mendenhall**	**83.57**	**18**	IAmb	IAmb	17 24 16.2	
	comp=Z,16nm,1.0s						
O30N	**Mendenhall**	**83.57**	**18**	P	**P**	**17 24 14.8**	**+0.2**
	baz=216,SNR=13						
L26K	**Log Cabin Wild**	**83.60**	**14**	IAmb	IAmb	17 24 16.3	
	comp=Z,13nm,1.0s						
L26K	**Log Cabin Wild**	**83.60**	**14**	P	**P**	**17 24 15.5**	**+0.9**
	baz=210,SNR=6.1						
MSO	**Missoula**	**83.61**	**37**	IAmb	IAmb	17 24 15.4	
	comp=Z,19nm,1.4s						
H19K	**Roundabout Mou**	**83.64**	**7**	P	**P**	**17 24 15.6**	**+0.9**
	baz=197,SNR=15						
FXWY	**Fox Creek**	**83.65**	**41**	IAmb	IAmb	17 24 16.7	
	comp=Z,16nm,1.4s						
BVCY	**Beaver Creek**	**83.65**	**15**	P	**P**	**17 24 15.6**	**+0.6**
	baz=212,SNR=8.9	

comp=Z,25nm,20.7s,baz=264,slow=30
comp=Z,2.9nm,0.6s
PDAR Pinedale Array 84.13 42 P 17 24 16.7 -1.4
G19K Purcell Mounta 84.16 7 P P 17 24 18.5 +1.1
baz=196,SNR=17
N31M Braeburn, Yuko 84.23 17 IAmb IAmb 17 24 19.6
comp=Z,20nm,1.0s
N31M Braeburn, Yuko 84.23 17 P P 17 24 18.4 +0.5
baz=217,SNR=7.7
H21K Melozitna Rive 84.25 9 P P 17 24 18.7 +0.9
baz=200,SNR=19
M29M Somme Creek 84.28 16 IAmb IAmb 17 24 19.7
comp=Z,14nm,1.0s
M29M Somme Creek 84.28 16 P P 17 24 18.4 +0.2
baz=214,SNR=13
SCRK Sand Creek 84.29 13 IAmb IAmb 17 24 19.7
comp=Z,14nm,1.0s
SCRK Sand Creek 84.29 13 P P 17 24 18.6 +0.3
baz=209,SNR=20
I23K Minto, Yukon-K 84.32 10 P P 17 24 18.2 +0.1
baz=204,SNR=13
F18K Selawik 84.33 6 P P 17 24 18.5 +0.3
baz=194,SNR=5.4
COLA College 84.33 11 P P 17 24 17.7 -0.5
COLA College 84.33 11 P P 17 24 18.3 +0.1
baz=205
COLA College 84.33 11 P P 17 24 18.2 0.0
ILAR Eielson Array 84.42 11 P P 17 24 18.4 -0.2
comp=Z,9.4nm,1.0s,baz=208,slow=5.8,SNR=54
ILAR LR LR 17 53 50.3
comp=Z,25nm,19.9s,baz=346,slow=30
comp=Z,9.4nm,1.0s
ILAR Eielson Array 84.42 11 P 17 24 18.0 -0.7
TMB01 Midkiff 84.45 55 IAmb IAmb 17 24 19.8
comp=Z,5.3nm,0.8s
128A Castleberry Fa 84.53 54 IAmb IAmb 17 24 20.8
comp=Z,13nm,0.9s
J25K Salcha River, 84.57 12 P P 17 24 19.8 +0.3
baz=208,SNR=31
E17K Hotham Inlet 84.61 5 P P 17 24 20.7 +1.1
baz=192,SNR=7.8
POKR Poker Plat Res 84.63 11 P P 17 24 19.8 0.0
baz=206
H22K Ishtalitna Cre 84.68 9 P P 17 24 20.6 +0.5
baz=202,SNR=34
F19K Shaleruckik Mo 84.75 6 P P 17 24 21.1 +0.8
baz=196,SNR=28
K27K Chicken 84.75 14 IAmb IAmb 17 24 22.6
comp=Z,19nm,1.2s
H03S2 Juan Fernandez 84.76 124 T T 18 57 26.0
baz=250,slow=75,SNR=27
N32M Quiet Lake 84.77 19 P P 17 24 20.9 +0.3
baz=219
H03S1 Juan Fernandez 84.77 124 T T 18 57 30.0
baz=250,slow=75,SNR=47
H03S3 Juan Fernandez 84.78 124 T T 18 57 33.0
baz=250,slow=75,SNR=47
M30M Minto, Yukon 84.84 16 P P 17 24 21.0 +0.1
baz=216
OZNA Ozona 84.90 56 IAmb IAmb 17 24 26.0
comp=Z,21nm,1.5s
H23K Yukon River 84.91 10 P P 17 24 21.5 +0.3
baz=204
L29M L29M 84.92 16 P P 17 24 22.1 +0.7
baz=214,SNR=38
G21K Allakaket 84.96 8 P P 17 24 22.4 +1.0
baz=200
129A Stewart Farms, 85.01 54 IAmb IAmb 17 24 23.2
comp=Z,11nm,0.9s
E18K Tukpahlearik C 85.05 5 P P 17 24 22.8 +1.0
baz=193
D17K Noatak River 85.12 4 P P 17 24 23.5 +1.3
baz=191,SNR=5.4
CMIG Matias Romero 85.18 71 LR LR 17 52 53.9
comp=Z,55nm,21.8s,baz=180,slow=29
F20K Avaraart Lake 85.19 7 P P 17 24 23.3 +0.8
baz=198,SNR=18
H24K Noodor Dome 85.20 11 P P 17 24 21.9 -0.7
baz=205,SNR=7.5
M31M Drury Creek, Y 85.20 18 P P 17 24 22.9 +0.2
baz=218,SNR=7.6
PRP Porcupine Dome 85.34 12 P P 17 24 23.8 +0.3
baz=207
WTLY Watson Lake, Y 85.37 21 P P 17 24 24.0 +0.4
baz=223
HBVL Hebbronville 85.41 60 P P 17 24 23.7 -0.9
HBVL IAmb IAmb 17 24 25.6
comp=Z,16nm,1.1s
E19K Redstone River 85.41 6 P P 17 24 24.7 +1.1
baz=196
DAWY Dawson 85.41 15 P P 17 24 23.1 -0.7
DAWY Dawson 85.41 15 P P 17 24 24.2 +0.5
baz=213,SNR=7.5
RDOG Red Dog Mine 85.49 4 P P 17 24 24.9 +0.9
baz=191
C16K Lisburne Hills 85.55 3 P P 17 24 25.6 +1.4
baz=188
G22K Bettles 85.62 9 P P 17 24 25.8 +1.1
baz=202
F21K Alatna River 85.63 8 IAmb IAmb 17 24 26.4
comp=Z,14nm,0.9s
F21K Alatna River 85.63 8 P P 17 24 25.5 +0.8
baz=200,SNR=18
I26K Coal Creek Min 85.63 13 P P 17 24 25.6 +0.9
baz=210
G23K Bananza Creek 85.65 9 IAmb IAmb 17 24 26.6
comp=Z,21nm,1.0s
G23K Bananza Creek 85.65 9 P P 17 24 25.5 +0.6
baz=203,SNR=23
K29M Barlow Dome 85.69 15 IAmb IAmb 17 24 27.1
comp=Z,19nm,1.0s
K29M Barlow Dome 85.69 15 P P 17 24 25.8 +0.6
baz=215,SNR=17
MAW Mawson 85.79 199 P P 17 24 26.6 +0.9
comp=Z,3.5nm,0.6s,baz=133,slow=7.9,SNR=6.1
comp=Z,3.5nm,0.6s
LIRD Liard River Hi 85.81 22 P P 17 24 25.8 0.0
baz=226
C17K DeLong Mountai 85.88 4 P P 17 24 26.6 +0.6
baz=191
SN07 Snyder 07 85.94 54 IAmb IAmb 17 24 27.1
comp=Z,13nm,0.7s
J29N Klondike Camp 86.02 15 P P 17 24 27.4 +0.6
baz=214
G24K Hadweenzic Riv 86.06 10 P P 17 24 26.9 0.0
baz=206
AMTX Amarillo 86.06 52 IAmb IAmb 17 24 29.3
comp=Z,13nm,1.1s
F22K John River 86.08 8 P P 17 24 27.7 +0.8
baz=201,SNR=11
COLD Coldfoot 86.10 9 IAmb IAmb 17 24 29.3
comp=Z,16nm,1.0s
COLD Coldfoot 86.10 9 P P 17 24 27.7 +0.7
baz=203
DKNS Dickens 86.15 53 IAmb IAmb 17 24 28.8
comp=Z,9.8nm,0.9s
C18K Utukok River 86.20 5 IAmb IAmb 17 24 28.7
comp=Z,21nm,1.3s
C18K Utukok River 86.20 5 P P 17 24 28.1 +0.5
baz=192,SNR=5.6
I27K Kandik River 86.21 13 IAmb IAmb 17 24 29.9
comp=Z,17nm,1.2s
I27K Kandik River 86.21 13 P P 17 24 27.8 +0.1
baz=211,SNR=12
BJI2 Beijing 86.24 314 P P 17 24 29.2 +0.9
BJI2 pmax pmax
comp=Z,1.0nm,0.4s
BJI2 pmax pmax
comp=Z,57nm,5.3s
BILL Bilibino 86.27 353 P P 17 24 28.1 +0.3
BILL IAmb IAmb 17 24 29.8
comp=Z,18nm,1.0s
E20K Nigu River 86.29 7 P P 17 24 28.6 +0.5
baz=197
D19K Kuna River 86.32 6 P P 17 24 28.6 +0.5
baz=195
G25K Bearman Lake 86.36 11 P P 17 24 29.2 +1.0
baz=207
I28M Miner Creek 86.45 14 IAmb IAmb 17 24 30.2
comp=Z,14nm,1.1s
I28M Miner Creek 86.45 14 P P 17 24 29.2 +0.3
baz=213,SNR=16
MMPY Sheldon Lake, 86.45 18 IAmb IAmb 17 24 30.6
comp=Z,17nm,1.1s
MMPY Sheldon Lake, 86.45 18 P P 17 24 29.6 +0.7
baz=221,SNR=14
TGTN Hyland Airport 86.58 20 P P 17 24 30.0 +0.4
baz=223

J30M Hart River 86.59 15 IAmb IAmb 17 24 31.2
comp=Z,11nm,0.9s
J30M Hart River 86.59 15 P P 17 24 30.0 +0.3
baz=216,SNR=13
APMT Aspermont 86.63 54 IAmb IAmb 17 24 30.3
comp=Z,16nm,1.0s
EGMT Eagleton 86.65 37 IAmb IAmb 17 24 30.9
comp=Z,19nm,1.2s
D20K Etivluk River 86.68 6 P P 17 24 30.5 +0.6
baz=197
BRDY Brady 86.72 56 IAmb IAmb 17 24 31.3
comp=Z,13nm,1.0s
E21K Killik River 86.72 7 IAmb IAmb 17 24 31.7
comp=Z,16nm,1.1s
E21K Killik River 86.72 7 P P 17 24 30.1 0.0
baz=199,SNR=9.1
F24K Squaw Lake 86.73 10 P P 17 24 29.9 -0.3
F24K IAmb IAmb 17 24 32.4
comp=Z,19nm,1.4s
F24K Squaw Lake 86.73 10 P P 17 24 31.0 +0.8
baz=205,SNR=17
H27K Steamboat Moun 86.77 13 IAmb IAmb 17 24 32.4
comp=Z,20nm,1.1s
H27K Steamboat Moun 86.77 13 P P 17 24 31.1 +0.7
baz=211,SNR=19
C19K Lookout Ridge 86.78 5 P P 17 24 31.4 +1.0
baz=194
G26K Porcupine Rive 86.95 11 P P 17 24 32.1 +0.9
baz=209,SNR=16
E23K Chandalar 86.96 9 IAmb IAmb 17 24 33.2
comp=Z,18nm,1.4s
E23K Chandalar 86.96 9 P P 17 24 31.9 +0.6
baz=204,SNR=10
KOTAN Kotaneelee Air 87.06 23 P P 17 24 32.3 +0.4
baz=227
I30M Mount Dempster 87.10 15 P P 17 24 32.4 +0.2
baz=216,SNR=28
E24K Your Creek 87.14 9 P P 17 24 33.0 +0.8
baz=204
F25K Christian Rive 87.18 11 P P 17 24 33.4 +1.1
baz=207,SNR=7.4
G27K Doyon Strip 87.24 12 P P 17 24 33.4 +0.8
baz=211,SNR=7.3
C21K Knifeblade Rid 87.31 7 P P 17 24 33.4 +0.6
baz=199,SNR=6.6
H29M Whitestone 87.45 14 P P 17 24 34.2 +0.5
baz=214,SNR=20
EDM Edmonton 87.45 32 P P 17 24 32.5 -1.5
TOLK Toolik Lake Re 87.50 9 P P 17 24 34.3 +0.4
baz=204,SNR=9.2
F26K Sheenjek River 87.53 11 IAmb IAmb 17 24 36.6
comp=Z,16nm,1.4s
F26K Sheenjek River 87.53 11 P P 17 24 34.8 +0.7
baz=209,SNR=7.6
D23K Nanushuk River 87.64 8 IAmb IAmb 17 24 36.5
comp=Z,6.5nm,0.8s
D23K Nanushuk River 87.64 8 P P 17 24 35.4 +0.9
baz=202,SNR=11
E25K Arctic Village 87.66 10 P P 17 24 35.5 +0.9
baz=207,SNR=6.8
A19K Wainwright 87.73 4 P P 17 24 35.8 +0.9
baz=193
B21K Ikpikpuk River 87.77 7 IAmb IAmb 17 25 22.6
comp=Z,33nm,2.0s
B21K Ikpikpuk River 87.77 7 P P 17 24 36.0 +0.9
baz=199
B20K Meade River 87.88 6 P P 17 24 36.1 +0.6
baz=196
EPYK Eagle Plains 87.95 14 P P 17 24 36.1 0.0
baz=216,SNR=6.9
XLT XiLinHaoTe 88.01 317 eP P 17 24 39.0 +2.1
XLT pmax pmax
comp=Z,6.0nm,0.9s
XLT pmax pmax
comp=Z,83nm,4.8s
H31M Peel River 88.08 15 IAmb IAmb 17 25 03.6
comp=Z,8.9nm,1.2s
H31M Peel River 88.08 15 P P 17 24 36.6 0.0
baz=218
D24K Happy Valley 88.08 9 P P 17 24 37.0 +0.4
baz=204
G29M Pine Creek 88.10 13 IAmb IAmb 17 24 38.3
comp=Z,16nm,1.4s
G29M Pine Creek 88.10 13 P P 17 24 37.0 +0.2
baz=214,SNR=5.3
F28M Old Crow 88.30 12 P P 17 24 38.4 +0.7
baz=213
HILR Hailar Array B 88.40 323 P P 17 24 40.1 +1.6
comp=Z,1.1nm,0.3s,baz=151,slow=6.4,SNR=3.9
comp=Z,1.1nm,0.3s
E27K Coleen River 88.44 12 P P 17 24 39.1 +0.8
baz=211
C23K Itkillik River 88.46 8 IAmb IAmb 17 24 40.2
comp=Z,12nm,0.8s
C23K Itkillik River 88.46 8 P P 17 24 38.6 +0.3
baz=202,SNR=12
G30M tAoh Zraii Nji 88.57 14 P P 17 24 38.8 -0.1
baz=216,SNR=12
B22K Teshekpuk Lake 88.59 7 P P 17 24 39.0 +0.1
baz=200
D25K Avik River 88.61 10 P P 17 24 39.0 -0.1
baz=206,SNR=8.5
PLCA Paso Flores 88.78 132 P P 17 24 40.4 -0.4
comp=Z,3.7nm,1.0s,baz=294,slow=1.3,SNR=4.0
comp=Z,3.7nm,1.0s
G31M Satah River 88.98 15 P P 17 24 41.0 +0.2
baz=218,SNR=8.7
A22K Sinclair Lake 89.05 6 P P 17 24 41.7 +0.7
baz=198,SNR=6.6
XAN Xi'an 89.15 306 P P 17 24 43.8 +1.3
XAN pP pwP 17 25 10.0 +1.2
XAN pmax pmax
comp=Z,7.0nm,1.0s
F30M Barrier River 89.18 14 IAmb IAmb 17 24 43.4
comp=Z,16nm,1.6s
F30M Barrier River 89.18 14 P P 17 24 42.3 +0.6
baz=216
E28M Babbage River 89.20 12 P P 17 24 42.4 +0.5
baz=213,SNR=6.2
C27K Jago River 89.31 10 IAmb IAmb 17 24 45.5
comp=Z,8.2nm,0.9s
C27K Jago River 89.31 10 P P 17 24 42.8 +0.4
baz=209,SNR=11
HNVL Huntsville, TX 89.35 58 P P 17 24 42.9 -0.6
E29M Blow River 89.36 13 P P 17 24 42.8 +0.3
baz=214
C26K Camden Bay 89.37 10 P P 17 24 43.5 +0.9
baz=208,SNR=5.3
D27M Malcolm River 89.47 11 P P 17 24 44.0 +0.8
baz=212
F31M Tsiigehtchic 89.52 14 P P 17 24 43.5 +0.2
baz=218
HHC Hu-ho-hao-te 89.78 313 eP P 17 24 43.8 -1.5
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,58nm,5.0s
ELIB Princess Elisa 90.21 185 dP P 17 24 45.6 -1.3
comp=Z,21nm,0.8s
ELIB dPcP PcP 17 24 47.4 -0.6
INK Inuvik 90.25 14 IAmb IAmb 17 24 47.9
comp=Z,10.0nm,1.1s
INK Inuvik 90.25 14 P P 17 24 47.3 +0.6
baz=218
INK Inuvik 90.25 14 P P 17 24 46.7 0.0
MT01 Popeta 90.78 126 P P 17 24 49.9 -0.3
TROLL Troll, Antarti 90.91 179 ⇓P P 17 24 49.7 -0.4
comp=Z,353nm,0.7s
SNAA Sanae 91.08 177 P P 17 24 50.1 -0.8
comp=Z,6.0nm,0.8s,baz=198,slow=5.1,SNR=15
comp=Z,6.0nm,0.8s
VNA2 Neumayer--Watz 91.54 176 ⇓P P 17 24 52.9 0.0
comp=Z,7.2nm,0.7s,baz=180,slow=3.6
VNA2 Neumayer--Watz 91.54 176 P P 17 24 53.0 0.0
VNA1 Neumayer--Stat 91.75 175 P P 17 24 53.9 +0.1
comp=Z,11nm,1.0s
MT08 Bocatoma Ro 91.89 126 P P 17 24 54.4 -1.3
YKA Yellowknife Ar 92.10 24 P P 17 24 53.7 -1.7
comp=Z,1.5nm,0.9s,baz=236,slow=3.9,SNR=8.1
YKA LR LR 17 57 22.1
comp=Z,22nm,21.9s,baz=338,slow=30
comp=Z,1.5nm,0.9s
YKA Yellowknife Ar 92.10 24 P 17 24 54.8 -0.6
CD2 Chengdu 92.18 302 eP P 17 24 55.5 -1.1
JTS Las Juntas de 92.24 80 LR LR 17 58 56.5
comp=Z,26nm,18.9s,baz=201,slow=31
JTS Las Juntas de 92.24 80 P 17 24 56.4 -0.9
JTS Las Juntas de 92.24 80 P P 17 24 58.0 +0.8

PZH PanZhiHua 92.48 297 P P 17 24 58.0 -0.2
PZH pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 92.53 288 P P 17 24 59.7 +1.3
comp=Z,1.0nm,0.7s,baz=118,slow=2.4,SNR=8.9
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 92.53 288 P P 17 24 58.5 +0.1
ECSD EROS Data Cent 93.08 45 IAmb IAmb 17 25 01.4
comp=Z,6.5nm,1.1s
C36M Paulatuk 93.35 16 IAmb IAmb 17 25 02.9
comp=Z,8.3nm,1.1s
C36M Paulatuk 93.35 16 P P 17 25 01.4 +0.4
baz=227
ATAH Atahualpa 93.36 98 LR LR 17 56 58.7
comp=Z,42nm,19.9s,baz=244,slow=29
CFA Coronel Fontan 93.98 125 P P 17 25 03.6 -1.5
comp=Z,4.7nm,0.7s,baz=255,slow=2.8,SNR=14
comp=Z,4.7nm,0.7s
T42A Van Buren 94.85 53 IAmb IAmb 17 28 19.9
comp=Z,13nm,1.6s
A36M Sachs Harbour 94.88 14 P P 17 25 08.4 +0.3
baz=226
AGMN Agassiz Nation 95.17 41 IAmb IAmb 17 25 09.3
comp=Z,9.6nm,1.3s
SONM Songino Array 95.76 318 P P 17 25 14.0 +1.2
comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=3.0
comp=Z,0.5nm,0.6s
SONM Songino Array 95.76 318 P P 17 25 14.0 +1.2
ULM Lac du Bonnet 95.83 39 P P 17 25 11.0 -1.9
comp=Z,3.3nm,0.7s,baz=251,slow=1.7,SNR=4.5
ULM LR LR 18 01 15.3
comp=Z,62nm,21.9s,baz=310,slow=31
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 95.83 39 IAmb IAmb 17 25 12.3
comp=Z,14nm,1.3s
CZSB Cruzeiro do Su 98.53 101 P P 17 25 25.2 -0.7
LPAZ La Paz 99.83 110 P Pdif 17 25 30.2 -2.2
comp=Z,1.0nm,0.8s,baz=239,slow=5.9,SNR=3.9
comp=Z,1.0nm,0.8s
LPAZ La Paz 99.83 110 Pdif 17 25 30.2 -2.2
LPAZ IAmb IAmb 17 25 34.3
comp=Z,7.5nm,1.6s
TKL Tuckaleechee C 100.16 56 LR LR 18 03 50.7
comp=Z,40nm,21.1s,baz=212,slow=31
BLA Blacksburg 103.14 55 Pdif 17 25 42.2 -3.7
ZALV Zalesovo Beam 110.26 322 PKiKP PKiKP 17 30 18.3 +0.4
comp=Z,0.3nm,0.4s,baz=5.7,slow=1.4,SNR=3.6
MKAR Makanchi Array 111.62 314 PKiKP PKiKP 17 30 21.2 +0.4
comp=Z,1.2nm,0.7s,baz=104,slow=0.2,SNR=11
KURK Kurchatov 114.07 318 PKiKP 17 30 25.3 +0.1
KURBB Kurchatov Arra 114.13 318 PKP PKPdf 17 30 25.3 0.0
comp=Z,1.4nm,0.8s,baz=94,slow=2.0,SNR=16
BVAR Borovoye Array 118.91 321 PKP PKiKP 17 30 35.4 +0.8
comp=Z,7.2nm,0.7s,baz=116,slow=1.7,SNR=24
ARTI Arti 124.65 328 PKPdf 17 30 44.6 -0.8
ARCES ARCESS Array B 126.36 352 PKP PKiKP 17 30 49.3 +0.5
comp=Z,1.7nm,0.8s,baz=46,slow=3.5,SNR=4.3
FINES FINESS Array B 133.61 347 PKhKP PKPpre 17 30 56.0
comp=Z,2.7nm,1.0s,baz=15,slow=7.9,SNR=5.3
FINES PKP PKPdf 17 31 02.8 +0.5
comp=Z,1.5nm,0.7s,baz=330,slow=4.8,SNR=4.6
NACGM Naroch 139.15 342 ePKP PKiKP 17 31 13.9 -1.1
comp=Z,9.0nm,0.9s,baz=32
EKA Eskdalemuir Ar 141.39 8 PKhKP PKPpre 17 31 10.1
comp=Z,0.3nm,0.3s,baz=301,slow=37,SNR=2.0
AKASG Malin Array Be 141.77 336 PKhKP PKPpre 17 31 12.8
comp=Z,0.2nm,0.3s,baz=43,slow=3.1,SNR=4.1
AKBB Malin Array Si 141.77 336 PKP PKPdf 17 31 17.1 -0.5
AK11 Malin Array Si 141.81 336 PKP PKPdf 17 31 17.3 -0.4
SORM Soroca 144.15 334 ⇑P PKPbc 17 31 20.6 +0.4
FLTG Flechtingen 144.77 354 ePKPbc PKPbc 17 31 22.2 +0.2
baz=8.3,slow=3.0
KWP Kalwaria Pacla 144.97 341 ePKP PKPdf 17 31 23.4 +0.1
IBBN Ibbenburen 145.02 358 ePKPbc PKPdf 17 31 23.6 +0.3
baz=8.3,slow=3.0
ASSE Asse, Remlinge 145.02 355 ePKPbc PKPdf 17 31 23.7 +0.5
baz=8.3,slow=3.0
OJC Ojcow 145.28 344 ePKP PKPab 17 31 25.0 +1.1
CLZ Clausthal 145.33 355 ePKPbc PKPab 17 31 24.8 +0.7
baz=8.3,slow=3.0
KSP Ksiaz 145.49 348 ePKP PKPab 17 31 25.5 +0.8
KSP Ksiaz 145.49 348 PKP PKPab 17 31 25.3 +0.6
VASR Vaslui 145.55 333 ⇓P PKPab 17 31 26.4 +1.3
GTTG Gottingen 145.66 355 ePKPbc PKPab 17 31 25.8 +0.6
baz=8.3,slow=3.0
KOLS Kolonicke sedl 145.72 341 ePKP PKiKP 17 31 28.0 -0.8
OSTC Ostas 145.78 348 ePKP PKPab 17 31 27.2 +1.4
BURAR Bucovina Array 145.82 336 ⇓P PKPab 17 31 27.4 +1.3
BURAR Bucovina Array 145.82 336 PKPdf 17 31 23.7 -1.3
NEUB Neuenburg 145.82 353 ePKPbc PKPab 17 31 26.2 +0.3
baz=8.3,slow=3.0
BRG Berggiesshubel 145.87 351 ePKPbc PKPab 17 31 26.5 +0.4
baz=8.3,slow=3.0
BRG Berggiesshubel 145.87 351 i PKP PKPab 17 31 26.5 +0.5
BRG Amp 17 31 27.9
comp=Z,28nm,1.1s
BRG Berggiesshubel 145.87 351 P PKiKP 17 31 31.9 +2.9
BRG Amp 17 31 33.8
comp=Z,4.7nm,0.9s
BRG pPKP pPKPab 17 31 51.2 +1.0
BRG Amp 17 31 53.9
comp=Z,4.6nm,0.8s
NIE Niedzica 145.87 343 ePKP PKPab 17 31 27.3 +1.1
BUG Bochum--Univer 145.90 358 ePKPbc PKPab 17 31 26.2 0.0
baz=8.3,slow=3.0
DPC Dobruska-Polom 145.95 348 ePKP PKPab 17 31 27.6 +1.1
DPC epPKP pPKPab 17 31 52.4 +1.8
STEB Steborice 146.04 346 ePKP PKPab 17 31 27.8 +1.0
STEB epPKP pPKPdf 17 31 50.3 +0.2
KASTN Kahler Asten 146.09 357 ePKPbc PKPab 17 31 27.1 +0.2
baz=8.3,slow=3.0
KRLC Kraliky 146.12 347 ePKP PKPab 17 31 28.0 +0.9
TESR Tescani 146.14 334 ⇑P PKPab 17 31 28.3 +1.0
BNN Bunyan 146.16 316 PKPdf 17 31 25.2 -0.7
GHRR 146.17 333 ⇑P PKPab 17 31 28.4 +1.1
TLCR 146.19 330 ⇑P PKPab 17 31 28.4 +0.9
HSKC Hora Svate Kat 146.20 351 ePKP PKPab 17 31 27.8 +0.4
MORC Moravsky Berou 146.24 346 ⇑P PKPab 17 31 28.5 +1.0
MORC Moravsky Berou 146.24 346 PKPdf 17 31 24.0 -1.6
MORC Moravsky Berou 146.24 346 ePKP PKPab 17 31 27.6 0.0
LANS Liptovska Anna 146.34 344 ePKP PKiKP 17 31 29.7 -0.4
UBBA Unterbreizbach 146.38 355 ePKPbc PKPab 17 31 28.1 +0.3
baz=8.3,slow=3.0
ONER Baraj Valea Uz 146.39 334 ⇑P PKPab 17 31 27.9 -0.3
MOX Moxa 146.40 353 ePKPbc PKPab 17 31 28.2 +0.1
baz=8.3,slow=3.0
MOX eL L 18 39 00.4
comp=Z,33nm,21.4s
PLN Plauen 146.49 353 ePKPbc PKPab 17 31 28.6 +0.1
baz=8.3,slow=3.0
CFR Carcaliu 146.51 331 ⇑P PKPab 17 31 29.5 +0.8
TANN Tannenbergstha 146.52 352 ePKPbc PKPab 17 31 28.6 0.0
baz=8.3,slow=3.0
UCC Uccle 146.54 2 dPKP PKPab 17 31 28.8 +0.1
MAUC Maruska 146.56 346 ePKP PKPab 17 31 29.6 +0.8
MAUC epPKP pPKPab 17 31 53.9 +1.0
VRI Vrincioaia 146.62 333 ⇑P PKPbc 17 31 27.7 -0.2
TPGR Topolog 146.62 330 ⇑P PKPab 17 31 29.7 +0.5
PRU Pruhonice 146.63 350 ePKP PKPab 17 31 29.3 +0.3
PLOR Plostina 146.66 333 ⇑P PKPab 17 31 29.7 +0.3
SAHR Sahastru 146.74 333 ⇓P PKPab 17 31 30.2 +0.5
MEM Membach 146.75 360 dPKP PKPab 17 31 29.0 -0.5
TURR Turia 146.77 334 ⇑P PKiKP 17 31 30.7 -0.4
BTNL Ternell 146.77 360 dPKP PKPab 17 31 29.3 -0.3
BSTI Sart Tilman 146.78 0 dPKP PKPab 17 31 29.4 -0.2
COVR Voineasa-Covas 146.85 334 ⇑P PKPab 17 31 29.7 -0.4
BCLA Clavier 146.94 1 dPKP PKPab 17 31 29.8 -0.5
BGES Gesves 146.97 1 dPKP PKPab 17 31 29.8 -0.5
BHOU Houvegnez 147.01 360 dPKP PKPab 17 31 30.6 0.0
BMRD Maredsous 147.04 1 dPKP PKPab 17 31 30.2 -0.4
TNS Taunus Mts 147.07 357 ePKPbc PKPab 17 31 31.2 +0.4
baz=8.3,slow=3.0
DOPR Dopca 147.10 335 ⇑P PKiKP 17 31 31.7 0.0
BR131 Keskin Array S 147.12 319 PKPdf 17 31 25.7 -1.8
BRTR Keskin Array B 147.12 319 PKPbc PKPbc 17 31 29.2 -0.6
comp=Z,9.4nm,0.9s,baz=110,slow=1.4,SNR=29
BRTR Keskin Array B 147.12 319 PKPdf 17 31 25.7 -1.8
TREC Trest 147.12 348 AMS AMS 18 30 50.0
comp=Z,100nm,19.4s
CJR Cluj-Napoca 147.18 337 ⇑P PKPab 17 31 31.1 -0.2
RCHB Rochefort 147.20 1 dPKiKP PKPbc 17 31 30.1 +0.7
ZVC Zvikov 147.22 350 ePKP PKPab 17 31 31.1 -0.3
MLR Muntele Rosu 147.25 333 ⇑P PKiKP 17 31 32.3 +0.1
DOU Dourbes 147.25 2 dPKP PKPbc 17 31 30.5 +0.9
KIRS Kirsehir-Merke 147.28 317 ⇑P PKPab 17 31 32.2 +0.1

PSZ	Piszkesteto	147.34	342			PKPdf	17 31 26.1	-1.4
GRF	Grafenberg Arr	147.38	354	*e*	PKPbc	PKPab	17 31 31.3	-0.7
	baz=8.3,slow=3.0							
GRF				*e*	L	L	18 32 11.5	
	comp=Z,44nm,18.9s							
MARR	Marisel-Cluj	147.39	338	⇑	P	PKPbc	17 31 30.4	+0.2
DRGR		147.43	338	⇑	P	PKPbc	17 31 29.1	-1.2
KHC	Kasperske Hory	147.62	351	*e*	PKP	PKiKP	17 31 32.0	-0.7
KHC				*e*	pPKP	pPKPbc	17 31 55.7	+0.5
KHC					AMS	AMS	18 28 40.0	
	comp=Z,100nm,24.4s							
WLF	Walferdange	147.69	360	*d*	PKP	PKiKP	17 31 31.9	-0.9
WLF	Walferdange	147.69	360	*e*	PKPbc	PKiKP	17 31 32.3	-0.4
	baz=8.3,slow=3.0							
WET	Wettzell	147.71	351	*e*	PKPbc	PKiKP	17 31 32.3	-0.6
	baz=8.3,slow=3.0							
CKRC	Cesky Krumlov	147.80	349	*e*	PKP	PKiKP	17 31 32.6	-0.4
GEC2	GERESS Array S	147.87	350	*e*	PKPbc	PKPbc	17 31 32.4	+0.9
	baz=8.3,slow=3.0							
GERES	GERESS Array B	147.87	350		PKPbc	PKPbc	17 31 32.4	+0.9
	comp=Z,6.7nm,0.8s,baz=4.1,slow=1.9,SNR=51							
ARR	Arges	147.89	335	⇑	P	PKPbc	17 31 31.1	-0.4
LODK	Lodwar	147.95	248			PKPbc	17 31 31.9	-0.7
WINA	Alland / Wiene	148.13	347	*i*	PKP	PKiKP	17 31 33.9	+0.1
	SNR=7.3							
CONA	Conrad Observa	148.35	347	*i*	PKP	PKiKP	17 31 34.2	-0.1
	comp=Z,19nm,0.8s,SNR=14							
RONA	Rosalia, Austr	148.47	346	*i*	PKP	PKiKP	17 31 34.9	+0.4
	comp=Z,19nm,0.9s,SNR=8.3							
STU	Stuttgart	148.47	356	*e*	PKPbc	PKiKP	17 31 33.9	-0.5
	baz=8.3,slow=3.0							
MOA	Molln	148.74	349	*i*	PKP	PKiKP	17 31 34.8	-0.2
	comp=Z,12nm,1.2s,SNR=7.4							
FUR	Furstenfeldbru	148.88	353	*e*	PKPbc	PKiKP	17 31 35.0	-0.3
	baz=8.3,slow=3.0							
BFO	Black Forest	148.97	357			PKPbc	17 31 33.7	-0.5
BFO	Black Forest	148.97	357	*e*	PKPbc	PKiKP	17 31 35.1	-0.4
	baz=8.3,slow=3.0							
BIOA	Bad Ischl, Aus	149.00	350	*e*	PKiKP	PKiKP	17 31 35.1	-0.5
	comp=Z,12nm,1.2s							
ARSA	Arzberg	149.07	347	*i*	PKiKP	PKiKP	17 31 35.5	-0.2
	comp=Z,12nm,1.1s,SNR=6.3							
MMAI	Mount Meron Ar	149.14	306		PKPbc	PKiKP	17 31 37.5	+1.1
	comp=Z,7.0nm,0.7s,baz=40,slow=14,SNR=15							
SESA	Seetaler Alpe,	149.39	348	*i*	PKiKP	PKiKP	17 31 36.2	-0.4
	SNR=12							
LESA	Schwarzleotal	149.42	351	*i*	PKiKP	PKiKP	17 31 36.3	-0.2
	comp=Z,14nm,1.4s,SNR=5.9							
RETA	Reutte	149.60	353	*i*	PKiKP	PKiKP	17 31 37.2	+0.3
	comp=Z,12nm,0.8s,SNR=6.7							
KBA	Koelnbreinsper	149.65	350	*i*	PKiKP	PKPbc	17 31 36.3	+0.2
	comp=Z,11nm,1.0s,SNR=6.2							
WATA	Walderalm	149.66	352	*i*	PKiKP	PKiKP	17 31 37.0	-0.1
	comp=Z,22nm,1.3s,SNR=8.1							
MOTA	Moosalm	149.71	353	*i*	PKiKP	PKiKP	17 31 37.2	0.0
	comp=Z,31nm,1.1s,SNR=11							
SOKA	Soboth	149.71	347	*i*	PKiKP	PKPbc	17 31 36.6	+0.5
	comp=Z,15nm,1.0s,SNR=15							
WTTA	Wattenberg	149.72	352	*i*	PKiKP	PKiKP	17 31 37.2	-0.1
	comp=Z,17nm,0.6s,SNR=14							
SQTA	Sankt Quirin	149.82	353	*i*	PKiKP	PKiKP	17 31 37.8	+0.4
	comp=Z,27nm,1.2s,SNR=10							
DAVA	Damuels	149.89	355	*i*	PKiKP	PKiKP	17 31 37.8	+0.2
	comp=Z,31nm,1.0s,SNR=12							
OBKA	Obir	149.97	348	*i*	PKiKP	PKiKP	17 31 37.3	-0.4
	comp=Z,13nm,1.7s,SNR=5.8							
MYKA	Terra Mystica	150.03	349	*i*	PKiKP	PKiKP	17 31 37.4	-0.4
	comp=Z,9.8nm,0.7s,SNR=8.5							
FETA	Feichten	150.07	353	*i*	PKiKP	PKiKP	17 31 38.6	+0.6
	comp=Z,29nm,1.1s,SNR=15							
ABTA	Abfaltersbach	150.10	351	*i*	PKiKP	PKiKP	17 31 37.6	-0.3
	comp=Z,34nm,1.0s,SNR=11							
BLY	Banja Luka	151.01	343	⇑	P	PKPbc	17 31 38.7	-0.5
SSB	Saint Sauveur	152.06	2		PKPdf	PKPdf	17 31 33.3	-1.8
SSB						PKPbc	17 31 40.2	-1.5
ESDC	Sonseca Array	156.11	19		PKPab	PKPab	17 32 09.5	+0.9
	comp=Z,1.8nm,1.1s,baz=299,slow=2.6,SNR=5.0							
ESDC	Sonseca Array	156.11	19		PKPdf	PKPdf	17 31 38.4	-2.5
ESDC						pPKPdf	17 32 06.3	+0.5
TORD	Torodi Ar. Bea	174.25	135		PKP	PKPdf	17 31 56.0	-0.7
	comp=Z,3.5nm,1.0s,baz=256,slow=4.3,SNR=9.7							
TORD					PKPab	PKPab	17 33 28.1	-0.9
	comp=Z,4.6nm,0.9s,baz=260,slow=5.0,SNR=11							
TORD					PP	PP	17 37 19.0	-1.6
	comp=Z,1.4nm,1.1s,baz=249,slow=4.6,SNR=3.7							

*ISK **10** 17:12:18.0,38˚.84N×25˚.29E,h5km,ML2.2/14*
*AFAD **10** 17:12:19.8,38˚.86N×25˚.44E,h7km±5km,ML2.1*
ISC 10 17:12:18.3±2.2,38˚.86N±0˚.04×25˚.3E±0˚.1,h4km±11km,n22, σ0ˢ80/34,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.74	129	Pg		Pg	Pg	17 12 32.4	-0.1
KARB	zmir-Karabur	0.87	102	P		Pg	Pg	17 12 35.5	+0.4
KARB				S		Sb	Sb	17 12 47.6	-0.4
KARB				IAML				17 12 49.0	
	comp=N,75nm,0.4s								
KARB				IAML				17 12 49.0	
	comp=E,73nm,0.5s								
KOCA	Canakkale, Ayv	0.91	44	P		Pb	Pb	17 12 36.7	+0.1
KOCA				S		Sb	Sb	17 12 48.6	-0.4
KOCA				IAML				17 12 52.0	
	comp=N,83nm,0.4s								
KOCA				IAML				17 12 56.0	
	comp=E,123nm,0.6s								
KRBN	Karaburun	1.00	105	Pg		Pb	Pb	17 12 38.1	0.0
KRBN				Sg		Sn	Sn	17 12 52.6	-1.0
ZEYE	Izmir, Urla-Ze	1.11	123	P		Pg	Pg	17 12 39.8	+0.2
ZEYE				S		Sg	Sg	17 12 52.9	-1.1
ZEYE				IAML				17 12 55.0	
	comp=E,36nm,0.2s								
ZEYE				IAML				17 13 00.0	
	comp=N,46nm,0.7s								
URLA	Izmir	1.11	116	P		Pg	Pg	17 12 39.2	-0.4
URLA				S		Sg	Sg	17 12 53.7	-0.4
URLA				IAML				17 13 01.0	
	comp=E,56nm,0.7s								
URLA				IAML				17 13 02.0	
	comp=N,41nm,0.7s								
BOZC	Bozcaada	1.14	30	P		Pg	Pg	17 12 40.2	+0.1
BOZC				S		Sb	Sb	17 12 56.1	+0.4
BOZC				IAML				17 13 00.0	
	comp=E,41nm,0.2s								
BOZC				IAML				17 13 02.0	
	comp=N,60nm,0.6s								
EZN	Ezine	1.24	38	Pn		Pn	Pn	17 12 42.6	+0.2
EZN				Sn		Sn	Sn	17 13 00.6	+1.0
DKL	Dikili	1.25	80	Pn		Pn	Pn	17 12 42.9	+0.3
DKL				Sn		Sn	Sn	17 13 01.0	+1.1
BAYC	CANAKKALE_Bayr	1.30	47	P		Pn	Pn	17 12 43.0	-0.2
BAYC				S		Sg	Sg	17 12 59.7	-0.3
ZEDA	zmir-Bergama	1.38	85	P		Pg	Pg	17 12 45.1	+0.5
ZEDA				S		Sb	Sb	17 13 01.6	-0.9
ZEDA				IAML				17 13 05.0	
	comp=E,30nm,0.8s								
GADA	Gvkgeada	1.41	18	Pn		Pn	Pn	17 12 45.2	+0.5
BLCB	Balcova	1.43	109	Pn		Pg	Pg	17 12 46.2	+0.6
COMU	Canakkale	1.53	35	Pn		Pn	Pn	17 12 46.9	+0.5
COMU				Sn		Sg	Sg	17 13 07.9	+0.5
CANM	Can-anakkale	1.77	49	Pn		Pb	Pb	17 12 50.9	-0.4
GELI	Tayfur-Gelibol	1.78	30	Pn		Pn	Pn	17 12 50.3	+0.5
LAPS	Lapseki, ANA	1.82	40	P		Pb	Pb	17 12 51.6	-0.6
LAPS				S		Sn	Sn	17 13 11.7	-2.3
LAPS				IAML				17 13 19.0	
	comp=E,22nm,0.5s								
ERIK	Erikli-Kesan	2.03	26	Pn		Pn	Pn	17 12 53.7	+0.4
BALB	Balikesir	2.14	68	Pn		Pn	Pn	17 12 55.9	+1.2
AYDB	Zeytinkoy-Aydi	2.21	113	Pn		Pn	Pn	17 12 56.7	+0.8
GORD	Gordes-Manisa	2.23	88	Pn		Pn	Pn	17 12 57.3	+1.2
ODEM	Odemis-Izmir	2.23	104	Pn		Pn	Pn	17 12 57.5	+1.4

ATH 10 17:12:27.1,38˚.58N×24˚.83E,h16km±3km,ML2.0/5, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KYMI	Kymi, Euboea I	0.58	276	P		Pg		17 12 37.6	-0.9
KYMI				S		Sg		17 12 46.3	+0.1
KARY	Karystos	0.63	210	P		Pg		17 12 38.1	-1.3
KARY				S		Sg		17 12 48.0	+0.2
DION	Dionisos Attik	0.87	235	P		Pg		17 12 44.0	+0.1
DION				S		Sb		17 12 55.0	-0.2
PTL	Penteli	0.93	236	P		Pb		17 12 45.0	+0.1
PTL				S		Sb		17 12 57.0	+0.1
AOS2	Alonissos-2	0.96	307	P		Pg		17 12 45.6	-0.1
AOS2				S		Sb		17 12 58.0	+0.2
EFSA	Agios Efstrati	0.97	7	P		Pb		17 12 45.5	0.0
ATHU	Athens Univers	1.03	234	P		Pg		17 12 47.0	+0.1
ATHU				S		Sg		17 13 00.2	-0.2
VLY	Voula,Athens	1.09	229	P		Pb		17 12 47.7	0.0
VLY				S		Sg		17 13 02.1	-0.4
VIL2	Platees	1.28	254	P		Pn		17 12 49.9	-0.5

*IDC **10** 17:16:40.2±0.7,44˚.76S×35˚.85E,h0km,mb4.1/13, mbtmp4.1/14,ML3.9/1,MS4.1/5,Error ellipse: s-maj=26.6km s-min=16.8km az=58.0*
*NEIC **10** 17:16:40.5±1.0,44˚.55S±0˚.08×35˚.8E±0˚.1,h10km±1km, mb4.4/19,Error ellipse: s-maj=19.1km s-min=10.8km az=296.0*
ISC 10 17:16:40.7±0.5,44˚.58S±0˚.08×35˚.9E±0˚.1,h10km,n48, σ1ˢ21/39,mb4.1/16,MS3.8/4,Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H04S3	CROZET ISLANDS	11.43	107	T		T	T	17 30 50.8	
	baz=274								
H04S2	CROZET ISLANDS	11.44	107	T		T	T	17 30 47.0	
	baz=274								
H04S1	CROZET ISLANDS	11.45	107	T		T	T	17 30 46.9	
	baz=274								
GRHM	Grahamstown, E	13.48	324	Pn		Pn	Pn	17 19 49.9	-2.1
SUR	Sutherland	16.92	311	P		Pn	Pn	17 20 38.1	+0.5
	0.4nm,0.3s,baz=137,slow=13,SNR=2.8								
SUR				S		Sn		17 23 34.5	-11
	17nm,1.1s,baz=233,slow=2.4,SNR=1.6								
SUR				LR		LR		17 25 51.7	
	comp=Z,302nm,20.0s,baz=144,slow=32								
	15nm,1.1s								
SUR	Sutherland	16.92	311				Pn	17 20 36.4	-1.2
SUR				IAmb		IAmb		17 21 05.7	
	comp=Z,21nm,1.2s								
POGA	Pongola	17.52	348				Pn	17 20 43.4	-1.7
POGA				IAmb		IAmb		17 21 25.9	
	comp=Z,30nm,1.3s								
MAKGR	Makgori	20.76	331	P		P	P	17 21 20.0	-1.8
MAKGR				IAmb		IAmb		17 21 33.1	
	comp=Z,24nm,1.2s								
LBTB	Lobatse	21.23	333	P		P	P	17 21 28.6	+1.8
	comp=Z,9.3nm,0.7s,baz=156,slow=10,SNR=12								
LBTB				LR		LR		17 28 37.4	
	comp=Z,348nm,19.8s,baz=153,slow=34								
	comp=Z,9.3nm,0.7s								
LBTB	Lobatse	21.23	333	P		P	P	17 21 25.7	-1.2
LBTB				IAmb		IAmb		17 21 38.6	
	comp=Z,26nm,1.1s								
FOMA	Nahampoana Res	21.55	28	P		P	P	17 21 29.2	-0.9
VOI	Vohitsoka	24.35	25				P	17 21 59.4	+0.5
MATP	Matopo	24.85	343	LR		LR		17 30 51.3	
	comp=Z,337nm,19.2s,baz=131,slow=34								
KOOLE	Kule	25.08	324	P		P	P	17 22 04.4	-1.1
MAW	Mawson	27.11	158	P		P	P	17 22 23.0	-0.3
	comp=Z,1.8nm,0.6s,baz=291,slow=15,SNR=3.8								
	comp=Z,1.8nm,0.6s								
MAW	Mawson	27.11	158	P		P	P	17 22 21.9	-1.5
LSZ	Lusaka	29.93	345	P		P	P	17 22 49.5	+0.5
LSZ				IAmb		IAmb		17 22 57.4	
	comp=Z,5.7nm,0.7s								
TROLL	Troll, Antarti	31.74	199	P		P	P	17 23 03.5	-1.0
	comp=Z,114nm,0.8s								
SNAA	Sanae	32.85	201	P		P	P	17 23 13.6	-0.7
	comp=Z,0.6nm,0.5s,baz=97,slow=8.6,SNR=3.9								
	comp=Z,0.6nm,0.5s								
VNA2	Neumayer--Watz	33.72	204	P		P	P	17 23 22.4	+0.6
	comp=Z,2.3nm,1.0s,baz=57,slow=9.1								
QSPA	South Pole Qui	45.63	180	P		P	P	17 25 00.9	-0.1
	comp=Z,2.4nm,0.6s,baz=272,slow=1.0,SNR=8.5								
	comp=Z,2.4nm,0.6s								
QSPA	South Pole Qui	45.63	180	P		P	P	17 25 00.7	-0.3
QSPA				IAmb		IAmb		17 25 01.7	
	comp=Z,13nm,1.5s								
VNDA	Vanda	53.74	167	P		P	P	17 26 02.4	0.0
	comp=Z,1.0nm,0.8s,baz=251,slow=8.5,SNR=4.2								
	comp=Z,1.0nm,0.8s								
VNDA	Vanda	53.74	167	P		P	P	17 26 02.6	+0.2
SBA	Scott Base	54.23	169	P		P	P	17 26 05.9	0.0
H10S2	ASCENSION HYDR	56.14	293	T		T	T	18 27 34.2	
	baz=84,slow=74,SNR=205								
H10S3	ASCENSION HYDR	56.15	293	T		T	T	18 27 30.8	
	baz=136,slow=74,SNR=158								
TORD	Torodi Ar. Bea	65.30	323	P		P	P	17 27 25.9	+3.0
	comp=Z,1.0nm,0.6s,baz=163,slow=7.0,SNR=4.9								
	comp=Z,1.0nm,0.6s								
TRQA	Tornquist	69.36	237	P		P	P	17 27 47.5	-1.0
MBWA	Marble Bar	71.20	101	P		P	P	17 27 59.7	-0.3
CPUP	Villa Florida	74.16	249	P		P	P	17 28 17.8	+0.3
	comp=Z,0.5nm,0.3s,baz=172,slow=7.1,SNR=2.9								
	comp=Z,0.5nm,0.3s								
BBOO	Buckleboo	74.29	121	P		P	P	17 28 17.0	-1.2
TOO	Toolangi	76.47	130	P		P	P	17 28 30.8	+0.1
TOO				IAmb		IAmb		17 29 14.1	
	comp=Z,4.0nm,1.5s								
FITZ	Fitzroy Crossi	77.37	103	P		P	P	17 28 37.4	+1.4
	comp=Z,2.3nm,1.0s,baz=191,slow=10,SNR=1.6								
	comp=Z,2.3nm,1.0s								
STKA	Stephens Creek	78.30	123	P		P	P	17 28 41.8	+0.8
	comp=Z,1.5nm,0.5s,baz=180,slow=5.1,SNR=1.9								
	comp=Z,1.5nm,0.5s								
ASAR	Alice Springs	79.19	112	P		P	P	17 28 46.7	+0.7
	comp=Z,1.0nm,0.6s,baz=225,slow=5.2,SNR=18								
	comp=Z,1.0nm,0.6s								
ASAR	Alice Springs	79.19	112	P		P	P	17 28 44.6	-1.5
AS31	Alice Springs	79.19	112	P		P	P	17 28 45.3	-0.8
AS31				IAmb		IAmb		17 28 55.0	
	comp=Z,2.8nm,1.5s								
WRA	Warramunga Arr	82.06	110	P		P	P	17 29 01.2	-0.2
	comp=Z,1.3nm,0.9s,baz=227,slow=5.0,SNR=5.5								
	comp=Z,1.3nm,0.9s								
WRA	Warramunga Arr	82.06	110	P		P	P	17 29 01.2	-0.2
SIV	San Ignacio	83.77	254	P		P	P	17 29 10.8	+0.4
	comp=Z,0.6nm,0.4s,baz=139,slow=6.5,SNR=4.3								
	comp=Z,0.6nm,0.4s								
BRTR	Keskin Array B	83.95	358	P		P	P	17 29 12.8	+2.1
	comp=Z,0.7nm,0.7s,baz=165,slow=6.0,SNR=3.7								
	comp=Z,0.7nm,0.7s								
BRTR	Keskin Array B	83.95	358	P		P	P	17 29 09.7	-1.0
KVAR	Kislovodsk Arr	88.36	5	LR		LR	LR	18 08 18.1	
	comp=Z,28nm,21.2s,baz=64,slow=35								
DZM	Mont Dzumac	99.78	134	LR		LR		18 07 18.1	
	comp=Z,758nm,20.7s,baz=48,slow=30								
TXAR	Lajitas Array	144.65	258	PKP			PKPdf	17 36 18.4	+0.7
	comp=Z,1.0nm,0.7s,baz=144,slow=5.5,SNR=13								
TXAR	Lajitas Array	144.65	258				PKPbc	17 36 16.6	+0.2
YKA	Yellowknife Ar	155.26	327	PKPab			PKPab	17 37 00.5	+2.2
	comp=Z,2.0nm,1.0s,baz=49,slow=4.7,SNR=6.6								

WEL 10 17:23:02.3±1.3,32˚S±26˚×17˚9W±5˚7,h420km±23km, M3.8/5,ML3.9/7,MLv3.8/5,Error ellipse: s-maj=80.7km s-min=10.4km az=114.2,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.84	198	P		P		17 24 33.6	0.0
MXZ				S		S		17 25 47.4	-1.1
WMGZ	Waiomatatini S	6.06	197	P		P		17 24 37.0	+1.1
WMGZ				S		S		17 25 52.6	-0.1
HAZ	Te Kaha	6.17	201	P		P		17 24 37.2	+0.1
HAZ				S		S		17 25 57.1	+2.2
PKGZ	Pakihiroa	6.19	199	P		P		17 24 37.1	-0.2
PKGZ				S		S		17 25 55.8	+0.4
PUZ	Puketiti	6.34	197	P		P		17 24 39.9	+1.0
PUZ				S		S		17 25 59.2	+1.0
RUGZ	Raukumara Rang	6.40	201	P		P		17 24 39.3	-0.4
CNGZ	Carnagh Statio	6.74	196	P		P		17 24 44.9	+1.2
MWZ	Matawai	6.79	201	P		P		17 24 43.6	-0.6
MWZ				S		S		17 26 08.5	+1.4
URZ	Urewera	6.85	204	P		P		17 24 43.5	-1.4
URZ				S		S		17 26 09.3	+0.9
RAHZ	Arahi	7.46	202	P		P		17 24 51.0	-0.6
RAHZ				S		S		17 26 18.3	-2.3
BKZ	Black Stump Fm	7.88	204	P		P		17 24 54.7	-1.4
BKZ				S		S		17 26 30.5	+1.3
KAHZ	Kahuranaki	8.33	200	P		P		17 25 01.3	+0.3
KAHZ				S		S		17 26 36.8	-1.7
PXZ	Pawanui	8.55	200	P		P		17 25 03.1	-0.2
PXZ				S		S		17 26 44.8	+1.9
PNHZ	Pukenui	8.65	203	P		P		17 25 03.5	-1.0
PNHZ				S		S		17 26 45.5	+0.5
OGWZ	Otaki Gorge	9.81	205	P		P		17 25 14.6	-2.7
OGWZ				S		S		17 27 10.0	+1.3

*IDC **10** 17:29:32.1±0.7,44˚.69S×35˚.96E,h0km,mb4.1/11, mbtmp4.1/12,ML3.6/1,MS4.0/12,Error ellipse: s-maj=30.7km s-min=17.0km az=64.0*
*NEIC **10** 17:29:33.9±1.4,44˚.7S±0˚.1×35˚.9E±0˚.2,h10km±1km, mb4.4/12,Error ellipse: s-maj=25.2km s-min=17.1km az=70.0*
ISC 10 17:29:33.6±0.6,44˚.67S±0˚.09×35˚.8E±0˚.1,h10km,n40, σ1ˢ05/28,mb4.1/12,MS4.0/11,Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRHM	Grahamstown, E	13.53	324	Pn		Pn	Pn	17 32 40.5	-5.1
SUR	Sutherland	16.96	311	Pn		Pn	Pn	17 33 29.7	-1.3
	0.2nm,0.3s,baz=157,slow=15,SNR=3.4								
SUR				LR		LR		17 38 32.1	
	comp=Z,324nm,21.2s,baz=146,slow=32								
	3.2nm,0.8s								
SUR	Sutherland	16.96	311				Pn	17 33 28.1	-2.9
SUR				IAmb		IAmb		17 34 07.2	
	comp=Z,41nm,1.4s								
POGA	Pongola	17.60	348				Pn	17 33 39.1	+0.2
POGA				IAmb		IAmb		17 34 02.1	
	comp=Z,32nm,1.4s								
LBTB	Lobatse	21.30	334	P		P	P	17 34 20.6	+0.2
	comp=Z,5.0nm,0.6s,baz=154,slow=10,SNR=11								
LBTB				LR		LR		17 41 09.3	
	comp=Z,441nm,21.1s,baz=156,slow=33								
	comp=Z,5.0nm,0.6s								
LBTB	Lobatse	21.30	334	P		P	P	17 34 19.7	-0.7
LBTB				IAmb		IAmb		17 34 33.4	
	comp=Z,13nm,1.1s								
VOI	Vohitsoka	24.43	25	P		P	P	17 34 52.7	+0.2
KOOLE	Kule	25.14	324	P		P	P	17 34 59.0	+0.1
MAW	Mawson	27.04	157	P		P	P	17 35 15.3	-0.3
	comp=Z,3.1nm,0.8s,baz=334,slow=2.9,SNR=4.4								
MAW				LR		LR		17 43 31.0	
	comp=Z,152nm,19.7s,baz=298,slow=31								
	comp=Z,3.1nm,0.8s								
MAW	Mawson	27.04	157	P		P	P	17 35 14.8	-0.8
OPO	Ambohidratompo	27.70	24	LR		LR		17 44 27.5	
	comp=Z,346nm,21.5s,baz=224,slow=32								
TSUM	Tsumeb	29.60	323	LR		LR		17 48 11.0	
	comp=Z,241nm,18.0s,baz=153,slow=38								
LSZ	Lusaka	30.00	345	LR		LR		17 46 30.3	
	comp=Z,408nm,21.3s,baz=148,slow=34								
TROLL	Troll, Antarti	31.65	199	P		P	P	17 35 57.5	+0.9
	comp=Z,112nm,0.7s								
SNAA	Sanae	32.77	201	P		P	P	17 36 06.5	+0.1
	comp=Z,2.0nm,0.9s,baz=63,slow=5.0,SNR=5.4								
	comp=Z,2.0nm,0.9s								
VNA2	Neumayer--Watz	33.63	204	P		P	P	17 36 14.7	+0.8
	comp=Z,2.3nm,0.9s,baz=54,slow=8.9								
MBAR	Mbarara	44.11	353	LR		LR		17 56 19.4	
	comp=Z,409nm,19.8s,baz=158,slow=36								
QSPA	South Pole Qui	45.55	180	P		P	P	17 37 52.4	-0.8
	comp=Z,3.6nm,0.7s,baz=249,slow=1.7,SNR=29								
	comp=Z,3.6nm,0.7s								
QSPA	South Pole Qui	45.55	180	P		P	P	17 37 52.1	-1.1
QSPA				IAmb		IAmb		17 37 54.0	
	comp=Z,4.8nm,0.8s								
VNDA	Vanda	53.66	167	P		P	P	17 38 54.6	-0.1
	comp=Z,2.2nm,0.8s,baz=239,slow=7.0,SNR=9.8								
	comp=Z,2.2nm,0.8s								
VNDA	Vanda	53.66	167	P		P	P	17 38 53.6	-1.1
SBA	Scott Base	54.15	169	P		P	P	17 38 59.0	+0.7
PMSA	Palmer Station	54.51	211	LR		LR		17 58 40.6	
	comp=Z,186nm,20.1s,baz=128,slow=32								
H10S2	ASCENSION HYDR	56.15	293	T		T	T	18 40 27.1	
	baz=84,slow=74,SNR=213								
H10S3	ASCENSION HYDR	56.17	293	T		T	T	18 40 23.9	
	baz=136,slow=74,SNR=189								
DBIC	Dimbokro	62.83	313	LR		LR		18 03 47.3	
	comp=Z,49nm,19.0s,baz=166,slow=33								
TORD	Torodi Ar. Bea	65.36	323	P		P	P	17 40 16.1	0.0
	comp=Z,1.1nm,0.5s,baz=159,slow=6.9,SNR=9.6								

	comp=Z,6.7nm,1.1s							
VNDA	**Vanda**	**53.66**	**167**	P		**P**	**17 40 33.1**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=230,slow=8.5,SNR=4.6							
	comp=Z,1.6nm,0.9s							
VNDA	**Vanda**	**53.66**	**167**	P		**P**	**17 40 33.1**	**-0.2**
VNDA				IAmb		IAmb	17 40 38.0	
	comp=Z,3.6nm,1.2s							
H10S2	**ASCENSION HYDR**	**56.09**	**294**	T		T	18 41 41.0	
	baz=84,slow=74,SNR=20							
H10S3	**ASCENSION HYDR**	**56.10**	**294**	T		T	18 41 40.8	
	baz=136,slow=74,SNR=23							
TORD	**Torodi Ar. Bea**	**65.33**	**323**	P		**P**	**17 41 55.8**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=167,slow=6.3,SNR=4.5							
	comp=Z,1.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**65.33**	**323**	P		**P**	**17 41 55.8**	**+1.3**
CPUP	**Villa Florida**	**74.03**	**249**	P		**P**	**17 42 49.8**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=121,slow=5.9,SNR=2.9							
	comp=Z,0.7nm,0.5s							
CPUP	**Villa Florida**	**74.03**	**249**	P		**P**	**17 42 49.8**	**+1.6**
CPUP				IAmb		IAmb	17 43 04.4	
	comp=Z,10nm,1.4s							
ASAR	**Alice Springs**	**79.24**	**113**	P		**P**	**17 43 17.6**	**-0.2**
	comp=Z,1.2nm,1.0s,baz=226,slow=5.6,SNR=6.0							
	comp=Z,1.2nm,1.0s							
ASAR	**Alice Springs**	**79.24**	**113**	P		**P**	**17 43 17.0**	**-0.8**
TXAR	**Lajitas Array**	**144.53**	**258**	PKP		**PKPdf**	**17 50 49.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=139,slow=5.3,SNR=7.4							
TXAR	**Lajitas Array**	**144.53**	**258**			**PKPab**	**17 50 47.5**	**+0.2**

*IDC **10** 17:38:12.2±1.0, 45.03°S×35.78°E, h0km, mb4.0/7, mbtmp4.0/7, MS3.6/2, Error ellipse: s-maj=53.1km s-min=21.7km az=65.0*
*NEIC **10** 17:38:12.6±1.1, 45.0°S±0.1°×35.8°E±0.3°, h10km±1km, mb4.1/9, Error ellipse: s-maj=40.0km s-min=19.2km az=68.0*

ISC 10 17:38:13.2±0.6, 44.8°S±0.1°×36.1°E±0.2°, h10km, n25, σ1§40/23, mb4.0/7, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRHM	**Grahamstown, E**	**13.77**	**324**	Pn	**Pn**	**17 41 27.6**	**-0.8**
LBTB	**Lobatse**	**21.52**	**333**	P	**P**	**17 43 02.0**	**-0.4**
	1.8nm,0.6s,baz=156,slow=12,SNR=4.4						
LBTB				LR	LR	17 50 00.3	
	comp=Z,157nm,19.5s,baz=149,slow=33						
	1.8nm,0.6s						
LBTB	**Lobatse**	**21.52**	**333**	P	**P**	**17 43 02.0**	**-0.4**
LBTB				IAmb	IAmb	17 43 17.5	
	comp=Z,14nm,1.2s						
MAW	**Mawson**	**26.82**	**157**	P	**P**	**17 43 52.0**	**-1.2**
	comp=Z,3.0nm,0.3s,baz=299,slow=19,SNR=7.7						
MAW				LR	LR	17 53 21.0	
	comp=Z,94nm,18.5s,baz=36,slow=34						
	comp=Z,3.0nm,0.3s						
TROLL	**Troll, Antarti**	**31.55**	**199**	P	**P**	**17 44 37.5**	**+2.1**
	comp=Z,136nm,1.0s						
VNA2	**Neumayer--Watz**	**33.55**	**204**	P	**P**	**17 44 54.5**	**+1.8**
	baz=36,slow=5.2						
VNA1	**Neumayer--Stat**	**33.69**	**205**	P	**P**	**17 44 56.5**	**+2.7**
MSEY	**Mahe Island**	**43.46**	**29**	P	**P**	**17 46 17.9**	**+1.4**
CASY	**Casey**	**43.97**	**146**	P	**P**	**17 46 20.2**	**+0.2**
QSPA	**South Pole Qui**	**45.38**	**180**	P	**P**	**17 46 30.9**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=250,slow=10.0,SNR=4.1						
	comp=Z,2.1nm,1.0s						
QSPA	**South Pole Qui**	**45.38**	**180**	P	**P**	**17 46 29.3**	**-2.2**
QSPA				IAmb	IAmb	17 46 33.4	
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**53.47**	**167**	P	**P**	**17 47 32.0**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=254,slow=7.7,SNR=7.0						
	comp=Z,1.7nm,0.9s						
VNDA	**Vanda**	**53.47**	**167**	P	**P**	**17 47 32.0**	**-0.8**
VNDA				IAmb	IAmb	17 47 36.0	
	comp=Z,2.5nm,1.1s						
H10S2	**ASCENSION HYDR**	**56.37**	**293**	T	T	18 49 08.2	
	baz=136,slow=74,SNR=114						
H10S3	**ASCENSION HYDR**	**56.39**	**293**	T	T	18 49 09.4	
	baz=84,slow=74,SNR=89						
TORD	**Torodi Ar. Bea**	**65.59**	**323**	P	**P**	**17 48 59.0**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=157,slow=7.2,SNR=3.2						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.59**	**323**	P	**P**	**17 48 56.0**	**-1.2**
BBOO	**Buckleboo**	**74.04**	**120**	P	**P**	**17 49 48.7**	**-0.5**
ASAR	**Alice Springs**	**78.95**	**112**	P	**P**	**17 50 19.2**	**+1.9**
	comp=Z,1.0nm,1.0s,baz=217,slow=4.4,SNR=4.8						
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**78.95**	**112**	P	**P**	**17 50 17.5**	**+0.3**
AS31	**Alice Springs**	**78.96**	**112**	P	**P**	**17 50 16.7**	**-0.6**
AS31				IAmb	IAmb	17 50 51.7	
	comp=Z,1.6nm,1.1s						
WRA	**Warramunga Arr**	**81.83**	**110**	P	**P**	**17 50 34.0**	**+1.3**
	comp=Z,1.2nm,1.1s,baz=223,slow=4.8,SNR=3.4						
	comp=Z,1.2nm,1.1s						
WRA	**Warramunga Arr**	**81.83**	**110**	P	**P**	**17 50 31.7**	**-1.0**
TXAR	**Lajitas Array**	**144.75**	**258**	PKP	**PKPdf**	**17 57 50.6**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=122,slow=2.9,SNR=7.9						
TXAR	**Lajitas Array**	**144.75**	**258**		**PKPab**	**17 57 48.0**	**-1.1**

*IDC **10** 17:39:21.2±1.1, 2.90°S×139.10°E, h0km, mb3.8/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=19.1km s-min=12.4km az=141.0*
*DJA **10** 17:39:25.5±0.2, 3°S±3°×137°9E±°, h10km, M3.9/12, mb4.1/6, MLv3.8/12*

ISC 10 17:39:27.3±0.8, 3.01°S±0.08°×139.13°E±0.05°, h46km, n13, σ2§29/18, mb3.9/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.11**	**68**	P	**Pn**	**17 39 45.4**	**-1.1**
GENI				S	**Sn**	**17 40 01.6**	**+0.9**
JAY	**Jayapura**	**1.65**	**73**	Pg	**Pn**	**17 39 52.4**	**-1.4**
	5.9nm,0.3s,baz=233,slow=15,SNR=44						
JAY				Lg	Lg	17 40 12.3	
	7.5nm,0.3s,baz=102,slow=20,SNR=6.7						
JAY	**Jayapura**	**1.65**	**73**	P	**Pn**	**17 39 52.1**	**-1.7**
SRPI	**Serui, Papua**	**3.10**	**291**	P	**Pn**	**17 40 12.7**	**-1.1**
SRPI				S	**Sn**	**17 40 49.5**	**-0.2**
BAKI	**Biak**	**3.52**	**301**	P	**Pn**	**17 40 19.5**	**0.0**
BAKI				S	**Sn**	**17 40 59.5**	**-0.5**
MWPI	**Manokwari, Pap**	**5.49**	**292**	P	**Pn**	**17 40 49.4**	**+2.8**
	0.1nm27nm,0.9s						
FAKI	**Fak Fak**	**6.88**	**271**	P	**Pn**	**17 41 05.6**	**0.0**
	27nm,1.2s						
SIJI	**Sorong**	**8.14**	**285**	P	**Pn**	**17 41 22.4**	**-0.6**
	8.2nm,0.8s						
WRA	**Warramunga Arr**	**17.47**	**195**	P	**Pn**	**17 43 28.4**	**+0.6**
	0.5nm,0.3s,baz=18,slow=13,SNR=27						
WRA				S	**Sn**	**17 46 35.7**	**-5.7**
	0.6nm,1.0s,baz=29,slow=24,SNR=1.5						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**21.15**	**193**	P	**P**	**17 44 10.2**	**+1.5**
	3.5nm,0.6s,baz=6.6,slow=9.5,SNR=26						
ASAR				S	**S**	**17 48 06.6**	**+5.0**
	0.5nm,0.7s,baz=9.8,slow=24,SNR=2.7						
	3.5nm,0.6s						
KLR	**Kul'dur**	**52.42**	**354**	P	**P**	**17 48 35.2**	**+0.2**
	1.1nm,0.5s,baz=201,slow=8.6,SNR=4.4						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**70.28**	**322**	P	**P**	**17 50 36.0**	**+0.1**
	0.4nm,0.5s,baz=109,slow=8.1,SNR=4.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**17 52 01.2**	**-1.0**
	0.5nm,0.7s,baz=265,slow=6.2,SNR=3.4						
	0.5nm,0.7s						

DJA 10 17:42:04.8±0.2, 2°N±2°×97°E±°, h42km±9km, M4.1/25, mB5.7/3, mb4.7/7, MLv3.7/25, Mw(mB)5.2/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.57**	**287**	P	Pn	17 42 18.4	+1.9
SNSI				S	Sn	17 42 27.5	+2.6
TPTI		**1.06**	**17**	P	Pn	17 42 22.1	-1.1
TPTI				S	Sn	17 42 35.6	-1.2
GSI	**Gunungsitoli**	**1.17**	**143**	P	Pn	17 42 24.7	0.0
MLSI	**Meulaboh, Aceh**	**2.07**	**347**	P	Pn	17 42 37.6	+0.6
PBSI	**Pulau Batu**	**2.68**	**148**	P	Pn	17 42 45.6	+0.1
LHMI	**Lhok Sumawe**	**2.97**	**1**	P	Pn	17 42 50.1	+0.6
BSI	**Banda Aceh**	**3.60**	**334**	P	Pn	17 42 57.6	-0.5
KULM	**Kulim**	**4.84**	**51**	P	Pn	17 43 15.0	-0.1
PPSI	**Pulau Pagai**	**5.88**	**148**	P	Pn	17 43 28.7	-0.7
MNAI	**Manna**	**8.94**	**137**	P	Pn	17 44 10.8	-0.7
	433nm,1.6s						

IDC 10 17:43:33.6±7.7, 18.87°S×176.40°W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=333.2km s-min=41.5km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.34**	**260**	P	P	17 52 01.4	-0.4
	0.2nm,0.3s,baz=98,slow=7.2,SNR=8.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**46.38**	**255**	P	P	17 52 02.2	+0.1
	1.0nm,0.6s,baz=88,slow=8.6,SNR=17						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**86.40**	**12**	P	P	17 56 17.4	0.0
	0.2nm,0.5s,baz=206,slow=5.2,SNR=1.9						
	0.2nm,0.5s						

*BER **10** 17:48:11.4±2.0, 81.60°N×4.54°W, h10km, Mw3.7, ML1.6(DNK), Confirmed Earthquake*
*DNK **10** 17:48:11.5±4.3, 81.74°N×3.95°W, h34km±38km, ML1.6, Presumed earthquake*

ISC 10 17:48:07.7±1.2, 81.53°N±0.08°×4.56°W±0.05°, h10km, n13, σ2§91/23, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**1.79**	**278**	*eP*	**Pb**	**17 48 40.7**	**+0.3**
NOR				*eS*	**Sn**	**17 49 00.6**	**-0.7**
NOR				IAMLHF		17 49 03.6	
	comp=Z,8.8nm,0.2s						
NOR	**Nord**	**1.79**	**278**	*i* P	**Pn**	**17 48 40.0**	**+1.5**
NOR				*i* S	**Sn**	**17 49 00.4**	**-0.8**
NOR				IAML		17 49 03.2	
	comp=Z,12nm,0.5s						
KBS	**Kingsbay**	**3.82**	**125**	*eP*	**Pn**	**17 49 08.3**	**+1.9**
KBS				IAML		17 49 09.0	
	comp=Z,8.5nm,0.2s						
KBS				*eS*	**Sn**	**17 49 50.0**	**-1.4**
KBS	**Kingsbay**	**3.82**	**125**	*i* P	**Pn**	**17 49 07.9**	**+1.5**
KBS				*i* S	**Sn**	**17 49 49.6**	**-1.8**
BRBB	**Barentsburg B**	**4.76**	**126**	*eP*	**Pn**	**17 49 22.7**	**+3.3**
BRBA	**Barentsburg A**	**4.79**	**127**	*eP*	**Pn**	**17 49 23.1**	**+3.4**
BRBA				IAML		17 49 23.7	
	comp=Z,23nm,0.1s						
SPA0	**Spitsbergen Ar**	**4.96**	**122**	*eP*	**Pn**	**17 49 24.4**	**+2.3**
SPA0				IAML		17 49 26.1	
	comp=Z,6.6nm,0.4s						
SPA0				*eS*	**Sn**	**17 50 17.6**	**-1.8**
DAG	**Danmarks Havn**	**5.45**	**216**	*eP*	**Pn**	**17 49 31.8**	**+3.1**
DAG				*eS*	**Sn**	**17 50 29.7**	**-1.6**
DAG				IAMLHF		17 50 39.3	
	comp=Z,3.4nm,0.2s						
DAG	**Danmarks Havn**	**5.45**	**216**	*i* P	**Pn**	**17 49 31.0**	**+2.3**
DAG				*i* S	**Sn**	**17 50 29.6**	**-1.7**
DAG				IAML		17 50 40.6	
	comp=Z,1.9nm,0.3s						
HSPB	**Hornsund (broa**	**5.85**	**130**	*eP*	**Pn**	**17 49 37.1**	**+2.9**
HSPB				IAML		17 49 39.4	
	comp=Z,5.2nm,0.3s						
DBG	**Daneborg**	**7.91**	**212**	*e*	**Pn**	**17 50 04.8**	**+2.3**
DBG				*eS*	**Sn**	**17 51 26.9**	**-5.0**
DBG	**Daneborg**	**7.91**	**212**	*i* P	**Pn**	**17 50 05.0**	**+2.5**
DBG				*i* S	**Sn**	**17 51 31.5**	**-0.4**
DBG				IAML		17 51 50.3	
	comp=Z,1.0nm,0.4s						
NEEM	**North Greenlan**	**9.13**	**268**	*i* P	**Pn**	**17 50 21.7**	**+2.2**
NEEM				*i* S	**Sn**	**17 51 55.0**	**-7.4**
NEEM				IAML		17 51 57.8	
	comp=Z,1.6nm,0.3s						

*IDC **10** 17:54:58.0±1.1, 34.57°N×83.60°E, h0km, mb3.5/7, mbtmp3.6/8, ML2.9/1, MS3.3/1, Error ellipse: s-maj=31.9km s-min=20.9km az=45.0*

ISC 10 17:55:03.3±1.0, 34.7°N±0.1°×83.7°E±0.2°, h35km, n8, σ1§40/8, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.14**	**356**	Pn	**Pn**	**17 57 52.3**	**-1.4**
	0.1nm,0.3s,baz=165,slow=12,SNR=7.5						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**20.62**	**337**	P	**P**	**17 59 40.1**	**+0.7**
	0.5nm,0.4s,baz=148,slow=14,SNR=4.9						
	0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**21.12**	**136**	P	**P**	**17 59 45.7**	**+0.6**
	0.4nm,0.3s,baz=311,slow=9.1,SNR=5.8						
	0.4nm,0.3s						
SONM	**Songino Array**	**21.46**	**45**	P	**P**	**17 59 50.5**	**+1.9**
	1.2nm,0.8s,baz=235,slow=9.9,SNR=7.6						
	1.2nm,0.8s						
BRTR	**Keskin Array B**	**39.74**	**292**	P	**P**	**18 02 33.8**	**+1.1**
	1.0nm,0.9s,baz=60,slow=5.8,SNR=4.5						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**51.99**	**324**	P	**P**	**18 04 08.6**	**-0.2**
	0.5nm,0.8s,baz=85,slow=7.1,SNR=3.4						
NOA				LR	LR	18 26 51.7	
	comp=Z,30nm,20.5s,baz=160,slow=37						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**72.59**	**130**	P	**P**	**18 06 25.7**	**-1.5**
	0.4nm,0.7s,baz=327,slow=6.0,SNR=5.7						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.10**	**276**	P	**P**	**18 06 47.5**	**-0.2**
	0.9nm,0.6s,baz=43,slow=4.8,SNR=4.9						
	0.9nm,0.6s						

*SSNC **10** 18:08:53.1±2.1, 19.48°N×78.19°W, h20km±16km, MD3.7, ML3.2, MW3.5, Presumed earthquake*
*CATAC **10** 18:08:53.2±1.0, 20°N±6°×7°8W±°, h10km±10km, M3.6/7, MLv3.6/7, Error ellipse: s-maj=13.8km s-min=10.0km az=23.7, confirmed*
*JSN **10** 18:08:54.8±1.0, 19.58°N×78.01°W, h30km±219km, MD4.5, Presumed earthquake*
*OSPL **10** 18:08:54.4±2.0, 19.43°N×78.04°W, h0km±999km, ML3.1, Presumed earthquake*

ISC 10 18:08:52.1±1.0, 19.49°N±0.03°×78.14°W±0.04°, h20km±9km, n32, σ1§67/59, 5C-1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVJ	**Coleyville**	**1.39**	**155**	*i* P	**Pn**	**18 09 17.5**	**+1.1**
CVJ				*i* S	**Sn**	**18 09 34.5**	**+0.3**
MTDJ	**Mount Denham**	**1.39**	**155**	P	**Pn**	**18 09 17.6**	**+1.2**
MTDJ				S	**Sn**	**18 09 34.2**	**0.0**
MTDJ	**Mount Denham**	**1.39**	**155**	*i* P	**Pn**	**18 09 17.4**	**+1.0**
MTDJ				*eS*	**Sn**	**18 09 34.5**	**+0.4**
MTDJ				IAML		18 09 35.7	
	comp=Z,414nm,0.2s						
MTDJ	**Mount Denham**	**1.39**	**155**	*eP*	**Pn**	**18 09 17.4**	**+1.0**
MTDJ				*eS*	**Sn**	**18 09 30.5**	**-3.7**
MTDJ				*eSg*	**Sb**	**18 09 33.9**	**-0.7**
MTDJ				IAML		18 09 35.3	
	comp=Z,1μm,0.4s						
MTDJ				IAML		18 09 35.5	
	comp=Z,938nm,0.3s						
MCJ	**Malvern**	**1.62**	**165**	*i* P	**Pn**	**18 09 17.0**	**-2.6**
MCJ				*i* P	**Pb**	**18 09 22.0**	**+0.6**
MCJ				*i* S	**Sn**	**18 09 41.6**	**+1.8**
BNJ	**Bonny Gate**	**1.62**	**136**	*i* P	**Pn**	**18 09 20.4**	**+0.8**
BNJ				*i* S	**Sn**	**18 09 39.4**	**-0.5**
CHIV	**Chivirico**	**1.69**	**73**	P	**Pn**	**18 09 20.2**	**-0.4**
CHIV				S	**Sn**	**18 09 39.1**	**-2.5**
CHIV	**Chivirico**	**1.69**	**73**	*eP*	**Pn**	**18 09 19.8**	**-0.7**
CHIV				*eS*	**Sn**	**18 09 37.4**	**-4.2**
CHIV				IAML		18 09 39.8	
	comp=E,212nm,0.1s						
CHIV				IAML		18 09 40.4	
	comp=N,158nm,0.0s						
CCCC	**Cccc**	**1.73**	**12**	*eP*	**Pn**	**18 09 21.7**	**+0.6**
CCCC				*eS*	**Sn**	**18 09 43.3**	**+0.7**
CCCC				IAML		18 09 50.9	
	comp=N,141nm,0.4s						
CCCC				IAML		18 09 53.7	
	comp=E,256nm,0.5s						
LCCY	**Blossom Villag**	**1.84**	**276**	*eP*	Pn	18 09 20.5	-2.0
LCCY				*eS*	**Sn**	**18 09 41.0**	**-4.2**
LCCY				IAML		18 09 42.1	
	comp=N,294nm,0.5s						
LCCY				IAML		18 09 43.0	
	comp=E,316nm,0.6s						
YAR	**Yar**	**1.89**	**62**	*eP*	**Pn**	**18 09 23.3**	**+0.1**
YAR				*eS*	**Sn**	**18 09 45.5**	**-1.0**
YAR				IAML		18 09 51.4	
	comp=E,140nm,1.2s						
YAR				IAML		18 09 56.7	
	comp=N,117nm,1.1s						
STH	**Stony Hill**	**1.89**	**138**	*i* P	**Pn**	**18 09 24.1**	**+0.8**
STH				*i* P	**Pn**	**18 09 24.1**	**+0.8**
GWJ	**Greenwich**	**1.94**	**136**	*i* P	**Pn**	**18 09 24.6**	**+0.5**
GWJ				*i* P	**Pb**	**18 09 25.1**	**-1.8**
PCJ	**Portland Cotta**	**1.98**	**152**	*i* P	**Pn**	**18 09 26.4**	**+2.0**
MARVS	**Santiago de Cu**	**2.17**	**76**	*eP*	**Pn**	**18 09 26.6**	**-0.4**
MARVS				*eS*	**Sn**	**18 09 50.5**	**-2.9**
MARVS				IAML		18 09 52.9	
	comp=E,67nm,0.2s						
MARVS				IAML		18 09 53.1	
	comp=N,68nm,0.1s						
RCC	**Rio Carpintero**	**2.35**	**77**	*eP*	**Pn**	**18 09 28.9**	**-0.8**
RCC				*eS*	**Sn**	**18 09 55.6**	**-2.4**
RCC				IAML		18 09 58.0	
	comp=N,45nm,0.1s						
RCC				IAML		18 09 58.0	
	comp=E,53nm,0.2s						
HLGC	**Holguin**	**2.40**	**54**	*eP*	**Pn**	**18 09 30.7**	**+0.5**
PINC	**Pinares de May**	**2.42**	**65**	*eP*	**Pn**	**18 09 31.5**	**+1.0**
PINC				*eS*	**Sn**	**18 09 58.8**	**-0.8**
PINC				IAML		18 09 59.6	
	comp=E,108nm,0.6s						
PINC				IAML		18 09 59.6	
	comp=N,112nm,0.3s						
FSCY	**Frank Sound, G**	**2.88**	**267**	*eP*	Pn	18 09 35.2	-1.6
FSCY				*eS*	Sn	18 10 05.1	-5.8
GTBY	**Guantanamo Bay**	**2.89**	**81**	P	**Pn**	**18 09 36.9**	**0.0**
GTBY				S	**Sn**	**18 10 09.9**	**-1.2**
GTBY	**Guantanamo Bay**	**2.89**	**81**	*i* P	**Pn**	**18 09 37.8**	**+0.9**
GTBY				*eS*	**Sn**	**18 10 10.0**	**-1.1**
GTBY				IAML		18 10 14.0	
	comp=Z,49nm,0.8s						
GTBY	**Guantanamo Bay**	**2.89**	**81**	*eP*	**Pn**	**18 09 37.7**	**+0.8**
GTBY				*eS*	**Sn**	**18 10 09.9**	**-1.2**
MGV	**Manicaragua**	**3.12**	**327**	*eP*	**Pn**	**18 09 39.9**	**-0.3**
MGV				*eS*	**Sn**	**18 10 16.2**	**-0.7**
NMDO	**Nuevo Mundo**	**3.15**	**70**	P	**Pn**	**18 09 40.7**	**+0.1**
NMDO				S	**Sn**	**18 10 18.6**	**+1.0**
QMBU	**Quimbuelo**	**3.21**	**77**	P	**Pn**	**18 09 41.7**	**+0.2**
QMBU				S	**Sn**	**18 10 18.4**	**-0.7**
QMBU	**Quimbuelo**	**3.21**	**77**	*eP*	**Pn**	**18 09 41.1**	**-0.3**
QMBU				*eS*	**Sn**	**18 10 16.7**	**-2.4**
CAIB	**Caibarien**	**3.23**	**338**	P	**Pn**	**18 09 44.0**	**+2.3**
CAIB				S	**Sb**	**18 10 29.7**	**+1.9**
MASC	**Masc**	**3.74**	**79**	P	**Pn**	**18 09 50.4**	**+1.7**
MASC				S	**Sn**	**18 10 35.6**	**+3.4**
MASC	**Masc**	**3.74**	**79**	*i* P	**Pn**	**18 09 51.1**	**+2.4**
MASC				*eS*	**Sn**	**18 10 33.2**	**+1.1**
MASC				IAML		18 10 39.1	
	comp=Z,33nm,0.5s						
MASC	**Masc**	**3.74**	**79**	*eP*	**Pn**	**18 09 49.7**	**+1.0**
MASC				*eS*	**Sn**	**18 10 31.5**	**-0.7**
SDDR	**Presa de Saban**	**6.49**	**93**	P	**Pn**	**18 10 29.3**	**+2.6**
TEIG	**Tepich**	**9.57**	**276**	P	**Pn**	**18 11 08.9**	**+0.2**
TEIG				S	Sn	18 12 47.9	-7.9

*IDC **10** 18:16:35.9±0.5, 6.43°N×125.19°E, h0km, mb4.2/23, mbtmp4.2/27, ML4.3/5, MS3.8/37, Error ellipse: s-maj=13.1km s-min=7.9km az=102.0*
*NEIC **10** 18:16:38.4±1.9, 6.62°N±0.04°×125.30°E±0.06°, h27km±5km, mb4.8/71, Error ellipse: s-maj=9.5km s-min=3.7km az=118.0*
*MAN **10** 18:16:39.0, 6.64°N×125.28E, h18km, MS4.8*
MAN INTENSITY V - KIBLAWAN BANSALAN MAGSAYSAY MALALAG AND MATANAO DAVAO DEL SUR; . INTENSITY IV - SULOP AND DIGOS CITY DAVAO DEL SUR; KIDAPAWAN CITY; TUPI POLOMOLOK AND KORONADAL CITY SOUTH COTABATO; ANTIPAS AND MAKILALA COTABATO; STA. MARIA DAVAO OCCIDENTAL; . INTENSITY III - DAVAO CITY; GENERAL SANTOS CITY; TAMPAKAN SOUTH COTABATO; ALABEL SARANGANI; M'LANG TULUNAN AND MAGPET COTABATO; COLUMBIO SULTAN KUDARAT; MALITA DAVAO OCCIDENTAL; . INTENSITY II - PRES. ROXAS AND MATALAM COTABATO; BAGUMBAYAN ISULAN AND ESPERANZA SULTAN KUDARAT.
*GFZ **10** 18:16:40.4±0.2, 7°N±2°×127°5E±°, h10km, M4.9/27, mb5.0/27*
*DJA **10** 18:16:40.4±0.5, 7°N±4°×127°5E±°, h20km±6km, M4.9/46, mB5.4/31, mb5.2/46, MLv5.5/13, Mw(mB)4.8/31, MwMwp4.5/1, Mwp4.9/1*
*GCMT **10** 18:16:42.4±0.3, 6.57°N±0.02°×125.15°E±0.02°, h27km±2km, MW4.9/70, Moment Tensor Solution. s18,c18; s70,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.66±.16; $M_{\theta\theta}$1.45±.09; $M_{\phi\phi}$-2.11±.11; $M_{r\theta}$-1.44±.23; $M_{r\phi}$-0.85±.07; $M_{\theta\phi}$-0.79±.23; Best double couple: M_{o}2.62700×10^{16} NP1:ϕ_s332.00000°, δ49.00000°, λ14.00000°. NP2: ϕ_s233.00000°, δ80.00000°, λ138.00000°. Principal axes: T 2.5580, Plg36.0000°, Azm183.0000°; N 0.1410, Plg47.0000°, Azm41.0000°; P -2.6970, Plg20.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **10** 18:16:45.5, 7.21°N×124.97E, h30km, mB5.1/12, mb4.5/56, Ms4.3/32, Ms7 4.0/32*

ISC 10 18:16:38.2±0.3, 6.56°N±0.03°×125.35°E±0.04°, h20km±2km, n238, σ2§11/223, mb4.7/71, MS4.0/46, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.51**	**330**	*i* P	**Pb**	**18 16 48.1**	**-0.5**
KCP				*i* S	**Sb**	**18 16 54.4**	**-1.2**
DAV	**Davao City (W)**	**0.56**	**24**	Pg	**Pn**	**18 16 51.1**	**+0.1**
	5μm,0.3s,baz=218,slow=1.6,SNR=382						
DAV				Lg	Lg	18 17 00.6	
	5μm,0.3s,baz=256,slow=22,SNR=7.7						
DAV	**Davao City (W)**	**0.56**	**24**		**Pn**	**18 16 50.8**	**-0.2**
DAV				Sg	**Sb**	**18 16 56.8**	**-0.1**
DAV	**Davao City (W)**	**0.56**

958nm74nm,0.7s
SANI Sanana 8.58 176 P **Pn** **18 18 44.0 +2.6**
TGY Tagaytay City 8.66 330 Pn **Pn** **18 18 44.1 +1.6**
13nm,0.3s,baz=163,slow=14,SNR=1.0
KKM Kota Kinabalu 9.09 267 Pn **Pn** **18 18 48.4 -0.1**
PCI Palu 9.23 217 P **Pn** **18 18 53.3 +3.0**
PCI S **Sn** **18 20 33.7 -0.1**
SIJI Sorong 9.45 141 Pn **Pn** **18 18 55.2 +1.9**
4.3nm,0.3s,baz=331,slow=13,SNR=1.1
SIJI Sn **Sn** **18 20 39.8 +0.6**
0.1nm,0.3s,baz=322,slow=23,SNR=1.2
8.2nm,0.8s
SIJI Sorong 9.45 141 P Pn 18 19 00.6 +7.2
29nm,0.7s
NLAI Namlea 9.89 170 P Pn 18 19 05.1 +5.8
1µm121nm,0.7s
KDI Kendari 10.80 195 P **Pn** **18 19 14.2 +2.4**
54nm,1.0s
MMSI Mamuju 11.21 215 P **Pn** **18 19 20.4 +2.9**
MWPI Manokwari, Pap 11.43 130 P Pn 18 19 26.6 +6.2
92nm,1.3s
FAKI Fak Fak 11.67 144 Pn **Pn** **18 19 24.6 +0.9**
KAPI Kappang 12.78 206 Pn **Pn** **18 19 37.4 -1.6**
1.0nm,0.3s,baz=26,slow=12,SNR=7.2
2.8nm,0.3s
KAPI Kappang 12.78 206 Pn **Pn** **18 19 37.7 -1.2**
BAKI Biak 13.21 125 P **P** **18 19 51.4 -3.3**
38nm,0.8s
SRPI Serui, Papua 13.72 127 P **P** **18 19 57.6 -2.7**
60nm,0.9s
MMRI Maumere 15.41 192 Pn **Pn** **18 20 14.1 -0.5**
SOEI Soe 16.24 184 **Pn** **18 20 25.2 -0.3**
SOEI IAmb IAmb 18 20 30.6
comp=Z,77nm,1.5s
SOEI Soe 16.24 184 P **P** **18 20 29.4 +0.9**
comp=Z,145nm,1.1s
TWG Pinlang 16.68 346 P **Pn** **18 20 28.3 -2.6**
BATI Baumata 16.74 186 Pn **Pn** **18 20 31.7 0.0**
comp=Z,1.7nm,0.3s,baz=109,slow=6.0,SNR=5.2
BATI LR LR 18 27 30.1
comp=Z,408nm,20.1s,baz=270,slow=39
comp=Z,32nm,0.7s
PLAI Plampang 17.05 206 P **P** **18 20 41.1 +3.8**
TPUB Ta-pu 17.25 345 P **Pn** **18 20 34.7 -3.4**
TPUB Ta-pu 17.25 345 P **P** **18 20 46.1 +6.6**
GENI Genyem 17.37 121 P **P** **18 20 47.6 +6.8**
DLV Lat 17.48 289 P **Pn** **18 20 37.5 -3.6**
SSLB Suanglung 17.64 347 P **Pn** **18 20 38.3 -4.7**
SSLB Suanglung 17.64 347 P **P** **18 20 50.3 +6.5**
JAY Jayapura 17.79 120 P **P** **18 20 45.5 0.0**
comp=Z,0.2nm,0.3s,baz=288,slow=19,SNR=1.9
JAY LR LR 18 27 47.7
comp=Z,258nm,19.1s,baz=356,slow=38
comp=Z,9.5nm,0.9s
JAGI Jajag, Banyuwa 18.64 217 **P** **18 20 53.7 -1.1**
JAGI IAmb IAmb 18 21 05.7
comp=Z,93nm,1.2s
JAGI Jajag, Banyuwa 18.64 217 P **Pn** **18 21 00.3 +5.1**
QZH2 Quanzhou 19.39 341 P Pn 18 21 11.9 +7.7
QZH2 S S 18 24 53.2 +12
QZH2 pmax pmax
comp=Z,410nm,5.4s
QZH2 LR LR
comp=Z,600nm,20.2s
QIZ Qiongzhong 19.53 311 P **P** **18 21 02.8 -1.8**
QIZ sP **sP** **18 21 13.0 +0.1**
QIZ L L
comp=Z,430nm,16.9s
QIZ L L
comp=Z,300nm,15.5s
QIZ L L
comp=Z,490nm,16.7s
SNJI Sawahan-Nganju 19.66 224 P **P** **18 21 05.0 -1.3**
comp=Z,60nm,1.1s
TPI Tanjungpandan 19.94 243 P **Pn** **18 21 11.0 +0.1**
MTN Manton Dam 20.12 163 **P** **18 21 09.6 -1.4**
MTN IAmb IAmb 18 21 22.3
comp=Z,35nm,1.1s
JOW Kunigami 20.35 8 LR LR 18 28 26.5
comp=Z,274nm,21.9s,baz=174,slow=35
GUMO Guam 20.44 69 LR LR 18 29 34.1
comp=Z,53nm,19.8s,baz=228,slow=38
UGM Wanagama 20.62 226 P **P** **18 21 14.3 -2.3**
MYKOM Kota Tinggi 21.95 258 **P** **18 21 28.4 -2.4**
MYKOM Kota Tinggi 21.95 258 P **P** **18 21 35.9 +5.0**
KNRA Kununurra 22.35 171 **P** **18 21 33.7 -1.4**
BBJI Bungbulang 22.49 232 P **P** **18 21 34.6 -2.1**
BLSI Bandar Lampung 23.30 240 P **P** **18 21 46.9 +1.8**
FITZ Fitzroy Crossi 24.50 179 **P** **18 21 55.2 -1.2**
SLVN Son La 25.42 307 P **P** **18 22 04.1 -0.6**
SLVN IAmb IAmb 18 22 19.6
comp=Z,28nm,1.5s
JCJ Chichijima 25.95 36 LR LR 18 32 27.7
comp=Z,98nm,19.7s,baz=227,slow=36
NJ2 Nanjing 26.08 347 *eP* **P** **18 22 10.8 +0.3**
NJ2 pmax pmax
comp=Z,14nm,0.6s
RPSI Rantau Prapat 26.61 263 P **P** **18 22 13.8 -1.8**
RPSI IAmb IAmb 18 22 26.0
comp=Z,14nm,0.9s
PMG Port Moresby 26.91 126 LR LR 18 34 14.6
comp=Z,164nm,19.5s,baz=299,slow=39
PMG Port Moresby 26.91 126 P **P** **18 22 16.7 -1.5**
JNU Nakatsue 26.92 10 LR LR 18 32 10.1
comp=Z,119nm,21.8s,baz=189,slow=34
WB0 Warramunga Arr 27.64 161 **P** **18 22 23.6 -1.1**
WRAB Tennant Creek 27.78 162 P **P** **18 22 25.2 -0.8**
WRAB IAmb IAmb 18 23 07.3
comp=Z,14nm,0.8s
WRAB Tennant Creek 27.78 162 P **P** **18 22 26.8 +0.8**
WRA Warramunga Arr 27.78 162 P **P** **18 22 26.4 +0.4**
comp=Z,7.0nm,0.8s,baz=336,slow=9.9,SNR=34
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 27.78 162 **P** **18 22 24.9 -1.1**
WR8 Warramunga Arr 27.85 161 **P** **18 22 25.5 -1.1**
WR8 IAmb IAmb 18 22 48.8
comp=Z,21nm,0.9s
MBWA Marble Bar 28.09 191 P **P** **18 22 27.4 -1.4**
MBWA IAmb IAmb 18 22 58.6
comp=Z,45nm,1.6s
JMN Monobe 28.17 15 P **P** **18 22 27.0 -2.4**
GSI Gunungsitoli 28.18 261 P **P** **18 22 27.0 -2.8**
GSI IAmb IAmb 18 23 04.2
comp=Z,22nm,0.9s
CMAR Chiang Mai Arr 28.31 297 P **P** **18 22 31.6 +0.8**
comp=Z,1.5nm,0.7s,baz=113,slow=7.3,SNR=13
CMAR LR LR 18 34 48.4
comp=Z,114nm,18.3s,baz=105,slow=39
comp=Z,1.5nm,0.7s
CMAR Chiang Mai Arr 28.31 297 P **P** **18 22 27.9 -2.9**
CHTO Chiang Mai 28.44 298 **P** **18 22 29.5 -2.5**
CHTO Chiang Mai 28.44 298 P **P** **18 22 33.7 +1.7**
KMI2 Kunming 28.45 313 P **P** **18 22 33.9 +1.7**
KMI2 pmax pmax
comp=Z,11nm,1.0s
KMI2 L L
comp=Z,250nm,14.8s
KMI2 L L
comp=Z,160nm,22.1s
KMI2 L L
comp=Z,330nm,17.3s
PZH PanZhiHua 29.98 314 P **P** **18 22 47.4 +1.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
QIS Mount Isa 30.38 153 P **P** **18 22 50.9 +1.9**
KSRS Korea Array 30.84 4 P **P** **18 22 54.6 +1.7**
comp=Z,2.4nm,0.9s,baz=181,slow=10.0,SNR=8.0
KSRS LR LR 18 34 45.8
comp=Z,168nm,21.2s,baz=210,slow=35
comp=Z,2.4nm,0.9s
AS31 Alice Springs 31.18 165 **P** **18 22 54.5 -1.7**
ASAR Alice Springs 31.18 165 P **P** **18 22 57.1 +0.9**
comp=Z,3.5nm,0.7s,baz=345,slow=6.8,SNR=55
comp=Z,3.5nm,0.7s
ASAR Alice Springs 31.18 165 **P** **18 22 54.6 -1.6**
XAN Xi'an 31.29 333 P **P** **18 22 58.2 +1.2**
XAN pP sP 18 23 06.2 +0.5
XAN S **S** **18 28 03.8 +0.9**
XAN pmax pmax
comp=Z,14nm,1.0s
XAN L L
comp=Z,120nm,16.5s
XAN L L
comp=Z,390nm,18.5s
XAN L L
comp=Z,210nm,15.1s

MJAR Matsushiro Arr 32.08 20 P **P** **18 23 05.4 +1.5**
comp=Z,3.0nm,1.1s,baz=202,slow=9.2,SNR=2.2
MJAR LR LR 18 34 27.7
comp=Z,111nm,20.7s,baz=210,slow=33
comp=Z,3.0nm,1.1s
MJAR Matsushiro Arr 32.08 20 P **P** **18 23 01.6 -2.3**
HNS HongShan 32.19 344 ⇑P **P** **18 23 06.8 +2.0**
HNS pmax pmax
comp=Z,10.0nm,0.7s
HNS L L
comp=Z,190nm,19.0s
HNS L L
comp=Z,280nm,20.8s
HNS L L
comp=Z,260nm,20.6s
JSD Sado 33.45 19 P P 18 23 21.6 +5.7
BJI2 Beijing 34.32 347 P **P** **18 23 24.8 +1.4**
BJI2 pP **sP** **18 23 32.1 0.0**
BJI2 sP **pP** **18 23 35.4 +5.8**
BJI2 PP **PP** **18 24 40.4 -0.9**
BJI2 S **S** **18 28 49.4 -0.4**
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
BJI2 pmax pmax
comp=Z,46nm,4.1s
BJI2 L L
comp=Z,56nm,19.8s
BJI2 L L
comp=Z,130nm,26.7s
BJI2 L L
comp=Z,91nm,19.1s
LZDM Lanzhou Array 35.36 329 P **P** **18 23 34.7 +1.8**
comp=Z,2.5nm,0.3s,baz=149,slow=12,SNR=1.7
LZDM LR LR 18 39 25.5
comp=Z,185nm,18.7s,baz=275,slow=39
comp=Z,2.5nm,0.3s
LZH Lanzhou 35.38 329 *eP* **P** **18 23 36.0 +3.1**
LZH pP sP 18 23 44.7 +3.1
LZH pmax pmax
comp=Z,34nm,1.0s
LZH L L
comp=Z,280nm,16.8s
LZH L L
comp=Z,280nm,16.1s
LZH L L
comp=Z,340nm,17.9s
HHC Hu-ho-hao-te 36.30 342 *eP* **P** **18 23 42.8 +2.2**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.9s
HHC L L
comp=Z,200nm,17.7s
HHC L L
comp=Z,130nm,13.5s
HHC L L
comp=Z,230nm,18.5s
INKA Innaminka 37.21 157 **P** **18 23 46.7 -1.6**
FORT Forrest 37.22 176 P **P** **18 23 47.3 -1.0**
QLP Quilpie 37.70 152 P **P** **18 23 53.6 +1.1**
USA0B Ussuriysk Arra 37.94 8 P **P** **18 23 51.8 -2.6**
USA0B IAmb IAmb 18 24 05.2
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 37.94 8 P **P** **18 23 56.2 +1.9**
comp=Z,5.2nm,0.9s,baz=202,slow=9.4,SNR=6.1
comp=Z,5.2nm,0.9s
USRK Ussuriysk Ar. 37.94 8 P **P** **18 23 52.5 -1.8**
HNR Honiara 37.96 114 P **P** **18 23 51.9 -3.0**
XLT XiLinHaoTe 38.07 349 *eP* **P** **18 23 57.2 +1.6**
XLT pP sP 18 24 07.7 +3.4
XLT S **S** **18 29 45.7 -1.6**
XLT pmax pmax
comp=Z,6.0nm,0.8s
XLT pmax pmax
comp=Z,79nm,4.9s
XLT L L
comp=Z,240nm,21.7s
XLT L L
comp=Z,140nm,21.4s
MDJ Mudanjiang 38.09 5 P **P** **18 23 57.6 +2.0**
MDJ pmax pmax
comp=Z,15nm,1.2s
MDJ Mudanjiang 38.09 5 P **P** **18 23 54.6 -0.9**
MDJ Mudanjiang 38.09 5 P **P** **18 23 57.3 +1.7**
MDJ S **S** **18 29 54.2 +6.8**
MDJ pmax pmax
comp=Z,15nm,1.2s
MDJ L L
comp=Z,140nm,14.4s
MDJ L L
comp=Z,160nm,17.2s
MDJ L L
comp=Z,220nm,20.6s
ERM Erimo 38.69 21 P **P** **18 23 57.8 -2.8**
ERM IAmb IAmb 18 24 08.8
comp=Z,30nm,1.1s
BNX BinXian 39.07 2 ⇓P **P** **18 24 06.6 +2.8**
BNX pmax pmax
comp=Z,12nm,1.3s
NWAO Narrogin (SRO) 40.02 191 P **P** **18 24 11.2 -0.6**
comp=Z,8.1nm,1.0s,baz=24,slow=8.8,SNR=2.2
comp=Z,8.1nm,1.0s
GTA2 Gaotai 40.06 329 P **P** **18 24 14.6 +2.2**
GTA2 pP sP 18 24 20.7 -0.4
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
GTA2 L L
comp=Z,220nm,17.5s
GTA2 L L
comp=Z,210nm,19.2s
GTA2 L L
comp=Z,270nm,17.2s
BBOO Buckleboo 40.46 166 P **P** **18 24 13.9 -1.6**
BBOO Buckleboo 40.46 166 P **P** **18 24 17.5 +2.0**
STKA Stephens Creek 41.25 159 P **P** **18 24 22.5 +0.4**
comp=Z,16nm,0.8s,baz=335,slow=6.6,SNR=19
STKA LR LR 18 43 11.8
comp=Z,110nm,18.9s,baz=305,slow=39
comp=Z,16nm,0.8s
STKA Stephens Creek 41.25 159 P **P** **18 24 24.4 +2.3**
WAKE Wake Island 42.08 68 P **P** **18 24 26.9 -2.2**
EVN Everest 42.23 305 P **P** **18 24 27.8 -3.2**
EVN IAmb IAmb 18 24 46.4
comp=Z,11nm,0.8s
EVN Everest 42.23 305 P P 18 24 35.8 +4.8
CMSA Cobar Meteorol 42.58 154 P **P** **18 24 35.4 +2.4**
HILR Hailar Array B 43.11 355 P **P** **18 24 38.7 +1.7**
comp=Z,0.8nm,0.3s,baz=188,slow=8.7,SNR=2.1
comp=Z,0.8nm,0.3s
HEH HeiHe 43.58 2 *eP* **P** **18 24 42.9 +2.1**
HEH pmax pmax
comp=Z,19nm,1.2s
HEH L L
comp=Z,150nm,17.8s
HEH L L
comp=Z,130nm,17.1s
HEH L L
comp=Z,210nm,19.4s
SONM Songino Array 44.19 342 P **P** **18 24 47.9 +1.9**
comp=Z,0.2nm,0.3s,baz=162,slow=4.5,SNR=6.3
SONM LR LR 18 44 32.4
comp=Z,213nm,21.9s,baz=159,slow=38
comp=Z,0.2nm,0.3s
SONM Songino Array 44.19 342 P **P** **18 24 43.0 -2.9**
CAN Canberra 47.24 153 P **P** **18 25 08.0 -2.1**
CAN Canberra 47.24 153 P **P** **18 25 12.8 +2.6**
TOO Toolangi 47.76 158 P **P** **18 25 13.3 -0.8**
TOO IAmb IAmb 18 25 27.7
comp=Z,26nm,1.8s
TLY Talaya 48.43 342 LR LR 18 47 00.0
comp=Z,137nm,21.8s,baz=146,slow=38
DZM Mont Dzumac 49.30 126 P **P** **18 25 27.8 +1.5**
comp=Z,7.6nm,0.8s,baz=331,slow=17,SNR=2.1
comp=Z,7.6nm,0.8s
WMQ Urumqi 49.63 325 *eP* **P** **18 25 29.0 +0.5**
WMQ L L
comp=Z,250nm,24.2s
WMQ L L
comp=Z,290nm,15.3s
WMQ L L
comp=Z,130nm,18.3s
PETK Petropavlovsk- 53.38 24 P **P** **18 25 57.7 +1.4**
comp=Z,4.1nm,0.9s,baz=232,slow=3.6,SNR=4.6
comp=Z,4.1nm,0.9s
PETK Petropavlovsk- 53.38 24 P **P** **18 25 54.2 -2.0**
ZSN Zaisan 53.40 327 *eP* **P** **18 25 58.7 +2.2**

SHLS Shalkode 54.31 320 ⇑*iP* **P** **18 26 03.6 +0.1**
comp=Z,11nm,0.8s
PDGK Podgornoye 54.37 320 P **P** **18 26 02.5 -1.4**
MKAR Makanchi Array 54.46 325 P **P** **18 26 05.2 +0.8**
comp=Z,0.6nm,0.5s,baz=138,slow=7.5,SNR=14
MKAR LR LR 18 50 27.7
comp=Z,144nm,20.5s,baz=146,slow=37
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 54.46 325 P **P** **18 26 02.7 -1.7**
UZB Uzynbulak 54.59 319 ⇑*iP* **P** **18 26 07.4 +2.0**
comp=Z,8.8nm,1.0s
MAKZ Makanchi 54.65 325 P **P** **18 26 03.9 -1.8**
MAKZ IAmb IAmb 18 26 34.8
comp=Z,9.7nm,1.1s
MAKZ Makanchi 54.65 325 P P 18 26 11.1 +5.4
PRZ Przheval'sk 54.68 319 P **P** **18 26 04.4 -1.9**
PRZ Przheval'sk 54.68 319 P **P** **18 26 08.9 +2.6**
TARG Taragay, Kyrgy 54.74 317 P **P** **18 26 04.6 -2.4**
TARG IAmb IAmb 18 26 28.9
comp=Z,7.3nm,1.0s
SATY Saty 54.94 319 *eP* **P** **18 26 10.2 +2.1**
comp=Z,8.8nm,1.2s
NIL Nilore 55.13 307 P **P** **18 26 07.3 -2.2**
NIL Nilore 55.13 307 P **P** **18 26 11.3 +1.8**
KSH2 Kashi 55.23 314 P **P** **18 26 12.4 +2.1**
KSH2 pP sP 18 26 18.4 -0.7
KSH2 pmax pmax
comp=Z,4.0nm,0.7s
KDJ Kajisay 55.34 318 P **P** **18 26 08.4 -2.6**
KDJ IAmb IAmb 18 26 23.3
comp=Z,13nm,0.9s
KDJ Kajisay 55.34 318 P **P** **18 26 13.0 +2.0**
YAK Yakutsk 55.45 2 LR LR 18 52 07.3
comp=Z,99nm,19.6s,baz=203,slow=38
YAK Yakutsk 55.45 2 P **P** **18 26 09.2 -1.9**
YAK Yakutsk 55.45 2 P P 18 26 17.7 +6.5
NRN Naryn 55.84 316 P **P** **18 26 12.7 -2.1**
NRN IAmb IAmb 18 26 26.8
comp=Z,14nm,1.3s
TDK Taldyqorghan 55.86 321 *eP* **P** **18 26 16.6 +2.1**
comp=Z,13nm,1.1s
MDOK Medeo 55.88 319 *eP* **P** **18 26 16.9 +2.1**
TNSS Tian-Shan 55.89 319 *eP* **P** **18 26 17.1 +1.9**
AAA Alma-Ata 55.98 319 *eP* **P** **18 26 17.5 +2.0**
comp=Z,12nm,1.0s
BOOM Boomskoye usch 56.32 318 P **P** **18 26 17.1 -0.9**
BOOM Boomskoye usch 56.32 318 P **P** **18 26 19.8 +1.8**
MA2 Magadan 56.33 15 P **P** **18 26 16.0 -1.5**
MA2 IAmb IAmb 18 26 31.1
comp=Z,9.2nm,0.9s
AAK Ala-Archa 57.35 317 LR LR 18 53 20.8
comp=Z,166nm,21.9s,baz=122,slow=38
AAK Ala-Archa 57.35 317 P **P** **18 26 22.6 -2.7**
AAK IAmb IAmb 18 26 40.3
comp=Z,14nm,1.5s
AAK Ala-Archa 57.35 317 P P 18 26 33.6 +8.2
ZAA0 Zalesovo Array 57.46 333 P **P** **18 26 23.9 -1.7**
ZALV Zalesovo Beam 57.46 333 P **P** **18 26 26.6 +1.0**
comp=Z,0.7nm,0.5s,baz=134,slow=6.4,SNR=3.7
ZALV LR LR 18 52 54.3
comp=Z,108nm,18.7s,baz=142,slow=38
comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam 57.46 333 P **P** **18 26 23.5 -2.1**
MANEM Manem 57.54 311 P **P** **18 26 24.6 -2.2**
MANEM IAmb IAmb 18 26 36.6
comp=Z,54nm,1.5s
SEM Semipalatinsk 57.59 328 *eP* **P** **18 26 28.7 +1.8**
SGDS Sogindy 57.59 318 *eP* **P** **18 26 29.1 +2.2**
ARSB Arslanbob 57.89 315 P **P** **18 26 27.6 -1.5**
ARSB IAmb IAmb 18 26 40.6
comp=Z,11nm,1.0s
DRK Karamyk 58.08 313 P **P** **18 26 27.7 -2.9**
KURBB Kurchatov Arra 58.63 327 P **P** **18 26 35.4 +1.5**
comp=Z,1.3nm,0.8s,baz=126,slow=6.1,SNR=12
comp=Z,1.3nm,0.8s
KURK Kurchatov 58.63 327 P **P** **18 26 31.4 -2.5**
KURK IAmb IAmb 18 26 41.7
comp=Z,8.9nm,0.8s
KURK Kurchatov 58.63 327 P **P** **18 26 35.0 +1.2**
BTLS Baital 58.64 320 *eP* **P** **18 26 36.3 +2.3**
KBL Kabul 58.73 307 P P 18 26 40.8 +5.6
BTK Batken 58.98 313 P **P** **18 26 35.3 -1.4**
GAR Garm 59.01 312 P **P** **18 26 36.2 -0.8**
GAR Garm 59.01 312 P **P** **18 26 38.3 +1.4**
DZA Taraz 59.60 316 *eP* **P** **18 26 43.2 +2.3**
comp=Z,6.0nm,1.1s
KK31 Karatay Array 60.24 316 P **P** **18 26 44.5 -0.7**
KK31 IAmb IAmb 18 26 55.2
comp=Z,12nm,1.1s
KKAR Karatay Array 60.24 316 P **P** **18 26 44.0 -1.3**
CHM Chimkent 60.60 315 *eP* **P** **18 26 49.9 +2.2**
comp=Z,9.5nm,1.4s
BRZS Berezniki 61.60 324 *eP* **P** **18 26 56.5 +2.2**
BVAR Borovoye Array 64.21 327 P **P** **18 27 12.9 +1.3**
comp=Z,1.2nm,0.8s,baz=120,slow=8.8,SNR=16
comp=Z,1.2nm,0.8s
RPZ Rata Peaks 64.85 145 LR LR 18 56 27.2
comp=Z,27nm,18.6s,baz=291,slow=37
TIXI Tiksi 65.05 1 LR LR 18 55 27.7
comp=Z,144nm,21.7s,baz=210,slow=36
URZ Urewera 65.54 137 P **P** **18 27 21.6 +1.1**
comp=Z,5.9nm,0.9s,baz=297,slow=2.3,SNR=2.2
URZ LR LR 18 56 56.2
comp=Z,108nm,18.6s,baz=276,slow=37
comp=Z,5.9nm,0.9s
AFI Afiamalu 65.62 108 LR LR 18 54 12.8
comp=Z,38nm,19.1s,baz=270,slow=34
RTZ Ruatahuna 65.63 138 P **P** **18 27 21.8 +0.6**
NRIK Noril'sk 67.37 346 LR LR 18 58 48.7
comp=Z,211nm,19.7s,baz=156,slow=38
AB31 Akbulak array 69.10 320 P **P** **18 27 41.6 -1.3**
AB31 IAmb IAmb 18 28 01.9
comp=Z,7.9nm,1.1s
ABKAR Akbulak array 69.10 320 P **P** **18 27 42.3 -0.6**
AKTO Aktyubinsk 70.60 321 LR LR 19 01 05.0
comp=Z,59nm,19.9s,baz=176,slow=38
ARTI Arti 71.91 327 LR LR 19 01 04.4
comp=Z,105nm,20.8s,baz=115,slow=37
RAYN Ar Rayn 78.12 293 P **P** **18 28 35.9 -0.6**
GNI Garni 78.63 310 LR LR 19 06 13.3
comp=Z,31nm,21.8s,baz=115,slow=38
KBZ Khabaz 80.05 313 P **P** **18 28 45.9 -0.7**
comp=Z,0.6nm,0.4s,baz=135,slow=1.4,SNR=2.2
KBZ LR LR 19 10 34.5
comp=Z,37nm,18.1s,baz=105,slow=40
comp=Z,0.6nm,0.4s
B21K Ikpikpuk River 80.42 20 P **P** **18 28 48.2 +0.1**
B21K IAmb IAmb 18 29 03.6
comp=Z,8.0nm,0.8s
CAST Castle Rocks 80.84 27 P **P** **18 28 50.5 0.0**
L22K Petersville 81.39 28 P **P** **18 28 53.3 -0.2**
L22K IAmb IAmb 18 29 13.2
comp=Z,9.9nm,1.0s
C23K Itkillik River 81.82 20 P **P** **18 28 56.0 +0.4**
C23K IAmb IAmb 18 29 09.5
comp=Z,7.7nm,0.8s
F24K Squaw Lake 82.74 23 P **P** **18 29 01.2 +0.7**
F24K IAmb IAmb 18 29 14.5
comp=Z,14nm,1.6s
ILAR Eielson Array 83.16 26 P **P** **18 29 04.4 +1.8**
comp=Z,0.4nm,0.7s,baz=231,slow=4.5,SNR=9.7
comp=Z,0.4nm,0.7s
ILAR Eielson Array 83.16 26 P **P** **18 29 01.2 -1.5**
E27K Coleen River 85.10 22 P **P** **18 29 12.1 -0.3**
E27K IAmb IAmb 18 29 54.3
comp=Z,5.2nm,1.0s
H27K Steamboat Moun 85.31 24 P **P** **18 29 11.9 -1.7**
H27K IAmb IAmb 18 29 26.2
comp=Z,6.7nm,1.2s
I28M Miner Creek 86.04 25 P **P** **18 29 16.4 -0.9**
I28M IAmb IAmb 18 29 30.3
comp=Z,10nm,1.1s
VNDA Vanda 86.39 173 P **P** **18 29 17.8 -0.8**
comp=Z,1.2nm,0.9s,baz=316,slow=7.2,SNR=6.2
comp=Z,1.2nm,0.9s
VNDA Vanda 86.39 173 P **P** **18 29 19.1 +0.5**
VNDA IAmb IAmb 18 29 29.8
comp=Z,4.0nm,1.1s
BRTR Keskin Array B 87.17 309 P **P** **18 29 25.3 +1.9**
comp=Z,0.4nm,0.8s,baz=76,slow=5.2,SNR=4.3
comp=Z,0.4nm,0.8s
ARCES ARCESS Array B 87.33 340 LR LR 19 14 41.1
comp=Z,58nm,18.7s,baz=87,slow=40
SPITS Spitsbergen Ar 87.45 349 LR LR 19 14 02.3
comp=Z,61nm,18.1s,baz=76,slow=39
FINES FINESS Array B 88.70 332 P **P** **18 29 29.4 -0.6**

comp=Z,1.4nm,0.9s,baz=36,slow=6.3,SNR=5.0
FINES LR LR 19 13 11.7
comp=Z,62nm,18.7s,baz=82,slow=38
comp=Z,1.4nm,0.9s
AKASG **Malin Array Be 88.84 321** LR LR 19 12 54.9
comp=Z,52nm,20.0s,baz=98,slow=38
MLR Muntele Rosu 91.92 316 LR LR 19 16 09.0
comp=Z,50nm,19.4s,baz=51,slow=39
DLBC Dease Lake 92.03 31 LR LR 19 07 27.8
comp=Z,35nm,21.0s,baz=194,slow=33
HFS Hagfors 94.89 332 LR LR 19 14 54.5
comp=Z,82nm,21.7s,baz=63,slow=37
RES Resolute Bay 95.28 10 LR LR 19 15 52.4
comp=Z,28nm,20.4s,baz=4.5,slow=37
NOA NORSAR Array B 95.66 333 LR LR 19 17 11.6
comp=Z,91nm,19.1s,baz=65,slow=38
VRAC Vranov 97.08 321 LR LR 19 16 26.5
comp=Z,47nm,19.4s,baz=46,slow=37
TORD Torodi Ar. Bea 120.71 289 PKP **PKiKP 18 35 30.6 +0.6**
comp=Z,0.6nm,0.7s,baz=84,slow=3.7,SNR=4.5
TXAR Lajitas Array 120.91 50 PKP **PKiKP 18 35 30.4 +0.2**
comp=Z,0.2nm,0.6s,baz=297,slow=4.5,SNR=3.7

*JMA **10** 18:19:29.8±0.1, 34.7N±0.3×137.6E±0.2, h30km, MV3.7/39, HAMANAKO LAKE REGION*
JMA Felt II J1 at HAMANAKO LAKE REGION .
*NIED **10** 18:19:29.8, 34.67N×137.56E, h30km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.75; $M_{\theta\theta}$1.03; $M_{\phi\phi}$-0.28; $M_{r\theta}$-1.22; $M_{\theta\phi}$-2.06; $M_{\phi r}$-1.05; Fault plane solution: $M_0$2.76000×10^{14} NP1: ϕ_s345.00000°, δ59.00000°, λ-22.00000°. NP2:ϕ_s86.00000°, δ71.00000°, λ-147.00000°.*
ISC 10 18:19:29.6±0.9, 34°66N±0.04×137°58E±0.03, h29km±7km, n23, σ0°84/34, 2D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHMK	**Hamakita**	**0.22**	**44**	*i*	P		**Pb**	**18 19 35.8**	**+0.1**
JHMK					S		**Sb**	**18 19 40.0**	**+0.1**
HMMJ	**Hamamatsu 2**	**0.23**	**32**	*i*	P		**Pb**	**18 19 36.1**	**+0.1**
HMMJ					S		**Sb**	**18 19 40.5**	**+0.2**
JSSY	**Shinshiroyabe**	**0.26**	**347**	*i*	P		**Pb**	**18 19 36.6**	**+0.2**
JSSY					S		**Sb**	**18 19 41.4**	**+0.4**
JKKG	**Kakegawa**	**0.35**	**69**	*i*	P		**Pb**	**18 19 37.8**	**+0.2**
JKKG					S		**Sb**	**18 19 43.5**	**+0.5**
JKKS	**Kakegawashinom**	**0.35**	**75**	*i*	P		**Pb**	**18 19 38.2**	**+0.6**
JKKS					S		**Sn**	**18 19 44.5**	**-0.3**
JAA	**Atsumi**	**0.36**	**266**	*i*	P		**Pb**	**18 19 37.8**	**+0.1**
JAA					S		**Sb**	**18 19 43.6**	**+0.4**
TTO5	**TONANKAI O.B.S**	**0.42**	**164**	*i*	P		**Pb**	**18 19 39.1**	**+0.5**
TTO5					X			18 19 46.8	
JSG	**Sagara**	**0.50**	**88**		P		**Pb**	**18 19 40.3**	**+0.3**
JSG	**Sagara**	**0.50**	**88**		S		**Sn**	**18 19 49.2**	**+0.7**
SHZ3	**Shizuoka 3**	**0.66**	**52**	*i*	P		**Pb**	**18 19 42.1**	**-0.5**
SHZ3					S		**Sb**	**18 19 51.3**	**-0.2**
JIE	**Ise**	**0.77**	**250**	*i*	P		**Pn**	**18 19 43.3**	**-1.2**
JIE					S		**Sb**	**18 19 53.6**	**-0.9**
INU	**Inuyama**	**0.83**	**326**		P		**Pn**	**18 19 44.9**	**-0.4**
INU	**Inuyama**	**0.83**	**326**		S		**Sb**	**18 19 56.0**	**-0.2**
TSUJ	**Tsu 2**	**0.95**	**273**		P		**Pn**	**18 19 46.1**	**-0.9**
TSUJ					*eS*		**Sn**	**18 19 58.6**	**-1.1**
JGF	**Kuroka**	**0.95**	**349**		P		**Pn**	**18 19 46.2**	**-0.9**
TTO2	**TONANKAI O.B.S**	**1.03**	**206**	*i*	P		**Pn**	**18 19 47.0**	**-0.8**
JIZS	**Izushimoda**	**1.07**	**87**		P		**Pn**	**18 19 47.7**	**-1.0**
JIZS					*eS*		**Sn**	**18 20 01.1**	**-1.6**
JYN	**Shimob**	**1.15**	**43**	*i*	P		**Pn**	**18 19 49.8**	**-0.1**
JYTA	**Yamagatataniai**	**1.16**	**324**	⇓*i*	P		**Pn**	**18 19 49.8**	**-0.1**
JYTA				⇓	S		**Sn**	**18 20 04.9**	**+0.2**
TTO1	**TONANKAI O.B.S**	**1.23**	**213**		P		**Pn**	**18 19 49.6**	**-0.9**
MAJO	**Matsushiro**	**1.95**	**15**		P		**Pn**	**18 20 01.8**	**+1.1**
JHJ2	**Mitsune**	**2.42**	**129**		P		**Pb**	**18 20 14.0**	**+1.6**
JMN	**Monobe**	**3.20**	**254**		P		**Pb**	**18 20 28.1**	**+2.3**

*KNET **10** 18:57:46.2±0.5, 42.20N×75.28E, h19km±4km, ml1.8, Error ellipse: s-maj=4.1km s-min=2.4km az=2.0*
*NNC **10** 18:57:47.9±0.9, 42.29N×75.25E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=7.9km s-min=2.2km az=1.0*
*SOME **10** 18:57:49.5, 42.30N×75.28E, h20km*
KRNET 10 18:57:46.5±0.1, 42°20N×75°30E, h20km, mb3.0, 34C-21D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.53**	**330**		P		Pb	18 57 57.5	+0.4
KBK	43nm,0.1s,SNR=93				⇓S		Sb	18 58 04.0	-0.4
KBK	228nm,0.2s **Karagaybulak**	**0.53**	**330**	⇑*i*	P		Pb	18 57 56.8	-0.3
KBK				⇑*i*	S		Sb	18 58 04.1	-0.3
BOOM	**Boomskoye usch**	**0.55**	**58**	⇑*i*	P		Pb	18 57 57.4	-0.2
BOOM				⇑*i*	S		Sb	18 58 05.2	0.0
UCH	**Uchtor**	**0.59**	**273**	⇑P			Pb	18 57 57.9	-0.5
UCH	5.1nm,0.2s,SNR=14			⇑S			Sb	18 58 06.0	-0.4
UCH	15nm,0.1s **Uchtor**	**0.59**	**273**	⇓*i*	P		Pb	18 57 57.8	-0.6
UCH				⇓*i*	S		Sb	18 58 06.1	-0.3
ULHL	**Ulahol**	**0.70**	**86**	⇑P			Pb	18 58 00.2	+0.1
ULHL	17nm,0.1s,SNR=7.2			⇓S			Sb	18 58 09.8	+0.4
ULHL	34nm,0.1s **Ulahol**	**0.70**	**86**	⇑*i*	P		Pb	18 57 59.8	-0.3
ULHL				⇑*i*	S		Sb	18 58 09.5	+0.1
AAK	**Ala-Archa**	**0.74**	**306**	⇑P			Pb	18 58 00.7	-0.1
AAK	16nm,0.3s,SNR=9.6			⇑S			Sb	18 58 10.7	+0.1
AAK	16nm,0.2s **Ala-Archa**	**0.74**	**306**	⇑P			Pb	18 58 01.0	+0.2
AAK	2.2nm,0.5s			⇑S			Sb	18 58 09.8	-0.7
AAK	3.2nm,0.4s **Ala-Archa**	**0.74**	**306**	⇑*i*	P		Pb	18 58 00.5	-0.3
AAK				⇑*i*	S		Sb	18 58 10.6	+0.1
TKM2	**Tokmak 2**	**0.75**	**17**	⇓P			Pb	18 58 01.4	+0.4
TKM2	14nm,0.1s,SNR=54			⇓S			Sb	18 58 12.0	+1.0
TKM2	54nm,0.1s **Tokmak 2**	**0.75**	**17**	⇑*i*	P		Pb	18 58 00.8	-0.2
TKM2				⇑*i*	S		Sb	18 58 11.2	+0.3
FRU1	**Bishkek**	**0.79**	**321**	⇑*i*	P		Pb	18 58 01.7	+0.2
FRU1				⇑*i*	S		Sn	18 58 12.8	-0.9
CHMS	**Chumysh**	**0.89**	**333**	⇓P			Pn	18 58 03.9	0.0
CHMS	5.5nm,0.1s,SNR=6.0			⇓S			Sn	18 58 16.1	-0.3
CHMS	34nm,0.1s **Chumysh**	**0.89**	**333**	⇓*i*	P		Pb	18 58 03.1	-0.2
CHMS				⇓*i*	S		Sb	18 58 15.3	+0.4
NRN	**Naryn**	**0.93**	**146**	⇑*i*	P		Pb	18 58 03.8	-0.3
NRN				⇑*i*	S		Sb	18 58 16.3	+0.2
KST	**Kastek**	**0.97**	**30**		P		Pn	18 58 05.5	+0.4
KST	12nm,0.1s				S		Sn	18 58 19.0	+0.6
KST	32nm,0.3s **Kastek**	**0.97**	**30**	*eP*			Pn	18 58 05.5	+0.4
KST	12nm,0.1s				*eS*		Sb	18 58 17.1	-0.1
USP	32nm,0.3s **Ospenovka**	**1.22**	**331**	⇑P			Pb	18 58 09.5	+0.7
USP	5.4nm,0.1s,SNR=13			⇑S			Sn	18 58 26.1	+1.8
USP	23nm,0.2s **Ospenovka**	**1.22**	**331**	⇓*i*	P		Pb	18 58 08.9	0.0
USP				⇓*i*	S		Sn	18 58 25.3	+0.9
EKS2	**Erkin-Say**	**1.22**	**293**	⇓P			Pb	18 58 09.4	+0.5
EKS2	3.7nm,0.2s,SNR=17			⇓S			Sn	18 58 25.8	+1.3
EKS2	6.3nm,0.2s **Erkin-Say**	**1.22**	**293**	⇓*i*	P		Pb	18 58 08.9	0.0
EKS2				⇓*i*	S		Sn	18 58 25.3	+0.8
IZV	**Izvestkoviy**	**1.28**	**49**		P		Pn	18 58 09.6	+0.3
IZV	5.3nm,0.1s				S		Sb	18 58 26.7	+0.6
IZV	32nm,0.4s **Izvestkoviy**	**1.28**	**49**	*eP*			Pb	18 58 11.1	+1.1
IZV	5.3nm,0.1s				*eS*		Sb	18 58 26.5	+0.5
SGDS	32nm,0.4s **Sogindy**	**1.34**	**339**		P		Pb	18 58 12.4	+1.4
SGDS	3.2nm,0.1s				S		Sb	18 58 30.1	+2.2
	15nm,0.1s								

KDJ	**Kajisay**	**1.40**	**92**	⇑*i*	P		Pb	18 58 12.4	+0.4
KDJ				⇑*i*	S		Sb	18 58 31.2	+1.7
TNSS	**Tian-Shan**	**1.47**	**55**		P		Pb	18 58 15.8	+2.3
TNSS	1.2nm,0.1s				S		Sb	18 58 35.7	+3.8
TNSS	2.9nm,0.2s **Tian-Shan**	**1.47**	**55**	*eP*			Pb	18 58 15.8	+2.3
TNSS	1.2nm,0.1s				*eS*		Sb	18 58 34.9	+3.0
KRBS	2.9nm,0.2s **Karabastau**	**1.52**	**10**		P		Pb	18 58 15.4	+1.4
KRBS	3.9nm,0.2s				S		Sb	18 58 35.8	+3.0
KRBS	2.5nm,0.1s **Karabastau**	**1.52**	**10**	*eP*			Pb	18 58 15.4	+1.4
KRBS	3.9nm,0.2s				*eS*		Sb	18 58 34.3	+1.4
MRKS	2.5nm,0.1s **Merke**	**1.63**	**290**		P		Pb	18 58 17.9	+2.0
MRKS	0.9nm,0.1s				S		Sb	18 58 39.5	+3.5
MRKS	8.6nm,0.3s **Merke**	**1.63**	**290**	*eP*			Pb	18 58 17.9	+2.0
MRKS	0.9nm,0.1s				*eS*		Sb	18 58 38.5	+2.4
KOTS	8.6nm,0.3s **Kotyrbulak**	**1.69**	**52**		P		Pb	18 58 20.4	+3.5
KOTS	5.5nm,0.2s				S		Sb	18 58 41.8	+4.1
KOTS	19nm,0.5s **Kotyrbulak**	**1.69**	**52**	*eP*			Pb	18 58 20.4	+3.5
KOTS	5.5nm,0.2s				*eS*		Sb	18 58 42.3	+4.5
SALK	19nm,0.5s **Salom-Alik**	**1.72**	**221**	⇑*eP*			Pb	18 58 18.0	+0.4
SALK				⇑*eS*			Sb	18 58 41.1	+2.3
SALK	**Salom-Alik**	**1.72**	**221**	⇑*eP*			Sb	18 58 41.6	+2.8
KTBS	**Karatobe**	**1.82**	**33**		P		Pb	18 58 19.9	+0.8
KTBS	3.8nm,0.1s				S		Sb	18 58 43.4	+2.0
KTBS	23nm,0.3s **Karatobe**	**1.82**	**33**	*eP*			Pb	18 58 19.9	+0.8
KTBS	3.8nm,0.1s				*eS*		Sb	18 58 42.0	+0.6
ANVS	23nm,0.3s **Anan'yevo**	**1.84**	**71**	⇓*i*	P		Pb	18 58 19.8	+0.2
ANVS				⇓*i*	S		Sb	18 58 44.1	+1.8
TARG	**Taragay, Kyrgy**	**1.93**	**103**	⇑*i*	P		Pb	18 58 21.1	0.0
TARG				⇑*i*	S		Sb	18 58 46.2	+1.3
PRZ	**Przheval'sk**	**2.31**	**82**	⇓*eP*			Pb	18 58 26.2	-1.4
PRZ				⇓*eS*			Sb	18 58 55.9	+0.1
SATY	**Saty**	**2.44**	**68**		Pg		Pb	18 58 32.1	+2.3
SATY	3.5nm,0.2s				Lg		Lg	18 59 03.5	
SATY	11nm,0.2s **Saty**	**2.44**	**68**	*eP*			Pb	18 58 32.1	+2.3
SATY	3.5nm,0.2s				*eS*		Sb	18 59 02.8	+3.3
KURS	11nm,0.2s **Kuram**	**2.47**	**58**		Pg		Pb	18 58 34.0	+3.8
KURS	5.6nm,0.5s				Lg		Lg	18 59 07.1	
KURS	16nm,0.5s **Kuram**	**2.47**	**58**	*eP*			Pb	18 58 34.0	+3.8
KURS	5.6nm,0.5s				*eS*		Sb	18 59 06.2	+6.0
ARXS	16nm,0.5s **Arharly**	**2.73**	**42**		Pg		Pb	18 58 37.2	+2.6
ARXS	4.1nm,0.2s				Lg		Lg	18 59 12.4	
ARXS	35nm,0.3s **Arharly**	**2.73**	**42**	*eP*			Pb	18 58 37.2	+2.6
ARXS	4.1nm,0.2s				*eS*		Sb	18 59 11.2	+3.5
UZB	35nm,0.3s **Uzynbulak**	**2.90**	**70**		Pg		Pb	18 58 39.9	+2.3
UZB	4.3nm,0.4s				Lg		Lg	18 59 17.2	
UZB	10nm,0.3s **Uzynbulak**	**2.90**	**70**	*eP*			Pb	18 58 39.9	+2.3
UZB	4.3nm,0.4s				*eS*		Sb	18 59 16.3	+3.5
BTLS	10nm,0.3s **Baital**	**2.98**	**343**		Pg		Pb	18 58 41.5	+2.6
BTLS	2.0nm,0.2s				Lg		Lg	18 59 20.0	
BTLS	13nm,0.3s **Baital**	**2.98**	**343**	*eP*			Pb	18 58 41.5	+2.6
BTLS	2.0nm,0.2s				*eS*		Sb	18 59 18.6	+3.8
SHLS	13nm,0.3s **Shalkode**	**3.21**	**71**		Pg		Pb	18 58 51.6	+8.7
SHLS	4.0nm,0.5s				Lg		Lg	18 59 36.9	
SHLS	13nm,0.4s **Shalkode**	**3.21**	**71**	*eP*			Pb	18 58 51.6	+8.7
SHLS	4.0nm,0.5s				*eS*		Sb	18 59 36.1	+15
PDGK	13nm,0.4s **Podgornoye**	**3.28**	**69**	⇑Pg			Pb	18 58 46.6	+2.5
PDGK	3.0nm,0.7s			⇑Lg			Lg	18 59 30.1	
DJR	8.3nm,0.7s **Jarkent**	**3.91**	**55**		Pg		Pb	18 59 00.9	+6.2
DJR	2.9nm,0.3s				Lg		Lg	18 59 48.9	
DJR	4.1nm,0.3s **Jarkent**	**3.91**	**55**	*eP*			Pb	18 59 00.2	+5.5
DJR	2.9nm,0.3s				*eS*		Sb	18 59 50.4	+8.8
MK31	4.1nm,0.3s **Makanchi Array**	**6.78**	**45**	⇓Pn			Pn	18 59 30.1	+5.2
MK31	0.1nm,0.2s,baz=219,slow=15,SNR=8.1			⇑Sn			Sn	19 00 46.6	+5.1
MK31	0.1nm,0.2s,baz=222,slow=25,SNR=4.5			⇑Lg			Lg	19 01 22.2	
	0.1nm,0.2s								

*KRNET **10** 18:58:10.7±0.1, 41.96N×72.15E, h12km, mb2.5*
*ISU **10** 18:58:12, 41.90N×72.06E, h13km*
ISC 10 18:58:10.7±1.1, 41°98N±0.03×72°12E±0.03, h7km±11km, n14, σ0°60/25, 10C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.21**	**213**	⇑*eP*			**Pg**	**18 58 15.0**	**+0.1**
ARK				⇑*eS*			**Sg**	**18 58 18.1**	**+0.3**
MNAS	**Manas**	**0.59**	**29**	⇓*eP*			**Pg**	**18 58 22.1**	**+0.1**
MNAS				⇓*eS*			**Sg**	**18 58 30.1**	**+0.4**
ARSB	**Arslanbob**	**0.92**	**135**	⇑*eP*			**Pg**	**18 58 27.6**	**-0.7**
ARSB				⇑*eS*			**Sg**	**18 58 39.9**	**-0.4**
PSK	**Pskem**	**1.30**	**268**		P		**Pn**	**18 58 34.9**	**-0.5**
PSK					S		**Sg**	**18 58 52.3**	**-0.2**
OHH	**Osh**	**1.54**	**161**	⇑*eP*			**Pn**	**18 58 38.9**	**+0.3**
OHH				⇑*eS*			**Sb**	**18 58 59.4**	**+0.2**
FRG	**Fergana**	**1.62**	**189**		S		**Sg**	**18 59 04.6**	**+1.9**
CHMG	**Chimgan**	**1.63**	**256**		P		**Pn**	**18 58 40.2**	**+0.2**
CHMG					S		**Sb**	**18 59 01.9**	**-0.1**
KK31	**Karatay Array**	**1.64**	**314**	⇑P			**Pn**	**18 58 40.3**	**+0.4**
KK31	0.9nm,0.2s,baz=155,slow=15,SNR=8.1			⇓S			**Sb**	**18 59 02.2**	**+0.2**
CHRV	4.2nm,0.2s,baz=151,slow=28,SNR=13 **Charvak**	**1.65**	**259**		P		**Pb**	**18 58 41.5**	**0.0**
CHRV					S		**Sg**	**18 59 03.5**	**-0.3**
SALK	**Salom-Alik**	**1.68**	**130**	⇑*eS*			**Sb**	**18 59 03.8**	**+0.3**
UCH	**Uchtor**	**1.80**	**81**	⇑*eP*			**Pb**	**18 58 43.7**	**-0.6**
UCH				⇑*eS*			**Sb**	**18 59 07.8**	**+0.6**
TVKS	**Tavaksay**	**1.89**	**259**		P		**Pb**	**18 58 45.4**	**-0.1**
TVKS					S		**Sb**	**18 59 09.8**	**+0.6**
BTK	**Batken**	**2.15**	**208**	⇓*eP*			**Pb**	**18 58 49.3**	**-0.7**
BTK				⇓*eS*			**Sb**	**18 59 17.4**	**+0.4**
NZBK	**Nazarbek**	**2.37**	**252**		S		**Sg**	**18 59 26.1**	**-0.8**

*KRNET **10** 19:05:40.8±0.1, 42.12N×78.75E, h14km, mb3.0*
*SOME **10** 19:05:40.9, 42.15N×78.77E, h10km*
*NNC **10** 19:05:41.9±0.8, 42.21N×78.82E, h0km, mb3.0, mpv3.1, Error ellipse: s-maj=5.5km s-min=2.5km az=162.0*
ISC 10 19:05:41.0±1.4, 42°11N±0.04×78°71E±0.03, h8km±10km, n40, σ1°19/71, 15C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.44**	**328**	⇓*eP*			**Pg**	**19 05 50.1**	**+0.5**
PRZ				⇓*eS*			**Sb**	**19 05 56.7**	**-1.4**

TARG	**Taragay, Kyrgy**	**0.78**	**241**	⇑*iP*			**Pg**	**19 05 56.4**	**+0.4**
TARG				⇑*iS*			**Sb**	**19 06 08.1**	**+0.2**
SATY	**Saty**	**0.98**	**347**		P		**Pg**	**19 05 59.6**	**-0.2**
SATY	11nm,0.1s				S		**Sg**	**19 06 12.9**	**+0.4**
SATY	29nm,0.1s **Saty**	**0.98**	**347**	*eP*			**Pg**	**19 05 59.6**	**-0.2**
SATY	11nm,0.1s				*eS*		**Sg**	**19 06 12.9**	**+0.4**
ANVS	30nm,0.1s **Anan'yevo**	**1.03**	**311**	⇑*iP*			**Pb**	**19 06 00.8**	**-0.4**
ANVS				⇑*iS*			**Sn**	**19 06 15.6**	**-1.1**
UZB	**Uzynbulak**	**1.06**	**12**		P		**Pb**	**19 05 59.9**	**-1.8**
UZB	2.4nm,0.2s				S		**Sb**	**19 06 13.5**	**-2.4**
KDJ	30nm,0.3s **Kajisay**	**1.14**	**272**	⇑*iP*			**Pn**	**19 06 02.9**	**-0.6**
KDJ				⇑*iS*			**Sn**	**19 06 19.1**	**-0.3**
SHLS	**Shalkode**	**1.19**	**27**		P		**Pg**	**19 06 05.4**	**+1.6**
SHLS	4.7nm,0.1s				S		**Sn**	**19 06 22.8**	**+2.4**
SHLS	18nm,0.1s **Shalkode**	**1.19**	**27**	*eP*			**Pg**	**19 06 05.4**	**+1.6**
SHLS	4.7nm,0.1s				*eS*		**Sn**	**19 06 22.8**	**+2.4**
PDGK	20nm,0.3s **Podgornoye**	**1.35**	**25**	⇑P			**Pn**	**19 06 04.6**	**-1.7**
PDGK	1.4nm,0.5s			⇑S			**Sb**	**19 06 21.3**	**-2.8**
KURS	8.8nm,0.5s **Kuram**	**1.44**	**344**		P		**Pg**	**19 06 07.9**	**-0.6**
KURS	1.9nm,0.1s				S		**Sg**	**19 06 27.2**	**0.0**
KURS	3.8nm,0.7s **Kuram**	**1.44**	**344**	*eP*			**Pg**	**19 06 07.9**	**-0.6**
KURS	1.9nm,0.1s				*eS*		**Sg**	**19 06 27.2**	**0.0**
TNSS	4.1nm,0.2s **Tian-Shan**	**1.60**	**306**		P		**Pg**	**19 06 11.6**	**-0.2**
TNSS	0.9nm,0.3s				S		**Sg**	**19 06 33.3**	**+0.7**
TNSS	6.5nm,0.2s **Tian-Shan**	**1.60**	**306**	*eP*			**Pg**	**19 06 11.6**	**-0.2**
TNSS	0.8nm,0.1s				*eS*		**Sg**	**19 06 33.3**	**+0.7**
MDOK	6.6nm,0.2s **Medeo**	**1.62**	**311**		Pg		**Pg**	**19 06 11.9**	**-0.1**
MDOK	3.7nm,0.2s				Lg		Lg	19 06 32.9	
MDOK	16nm,0.3s **Medeo**	**1.62**	**311**	*eP*			**Pg**	**19 06 11.9**	**-0.1**
MDOK	1.9nm,0.2s				*eS*		**Sg**	**19 06 33.9**	**+0.8**
KOTS	16nm,0.3s **Kotyrbulak**	**1.63**	**314**		P		**Pb**	**19 06 11.6**	**+0.2**
KOTS	2.3nm,0.2s				S		**Sg**	**19 06 33.8**	**+0.4**
KOTS	33nm,0.2s **Kotyrbulak**	**1.63**	**314**	*eP*			**Pb**	**19 06 11.6**	**+0.2**
KOTS	1.6nm,0.1s				*eS*		**Sg**	**19 06 33.8**	**+0.4**
KTMS	34nm,0.3s **Ketmen**	**1.80**	**41**		P		**Pb**	**19 06 13.1**	**-1.3**
KTMS	1.6nm,0.1s				S		**Sb**	**19 06 36.0**	**-1.1**
KTMS	4.6nm,0.3s **Ketmen**	**1.80**	**41**	*eP*			**Pb**	**19 06 13.1**	**-1.3**
KTMS	0.9nm,0.2s				*eS*		**Sb**	**19 06 36.0**	**-1.1**
IZV	2.8nm,0.1s **Izvestkoviy**	**1.81**	**302**		P		**Pg**	**19 06 15.4**	**-0.2**
IZV	8.4nm,0.1s				S		**Sg**	**19 06 40.0**	**+0.9**
IZV	57nm,0.2s **Izvestkoviy**	**1.81**	**302**	*eP*			**Pg**	**19 06 15.4**	**-0.2**
IZV					*eS*		**Sg**	**19 06 40.0**	**+0.9**
ULHL	**Ulahol**	**1.84**	**275**	⇑*iP*			**Pb**	**19 06 15.5**	**+0.4**
ULHL				⇑*iS*			**Sg**	**19 06 41.0**	**+0.8**
BLB	**Baldybastay**	**2.00**	**355**		Pg		**Pb**	**19 06 17.5**	**-0.2**
BLB	38nm,0.3s				Lg		Lg	19 06 43.8	
BOOM	7.9nm,0.2s **Boomskoye usch**	**2.09**	**281**	⇑*iP*			**Pb**	**19 06 19.4**	**+0.1**
BOOM				⇑*iS*			**Sg**	**19 06 47.5**	**-0.7**
NRN	**Naryn**	**2.14**	**253**	⇑*iP*			**Pb**	**19 06 20.5**	**+0.3**
NRN				⇑*iS*			**Sg**	**19 06 49.3**	**-0.4**
KTBS	**Karatobe**	**2.19**	**318**		Pg		**Pb**	**19 06 21.0**	**+0.1**
KTBS	1.7nm,0.1s				Lg		Lg	19 06 49.9	
KTBS	25nm,0.3s **Karatobe**	**2.19**	**318**	*eP*			**Pb**	**19 06 21.0**	**+0.1**
KTBS	1.8nm,0.1s				*eS*		**Sg**	**19 06 49.9**	**-1.5**
ARXS	18nm,0.3s **Arharly**	**2.20**	**343**		Pg		**Pb**	**19 06 20.6**	**-0.5**
ARXS	5.2nm,0.4s				Lg		Lg	19 06 49.6	
ARXS	16nm,0.5s **Arharly**	**2.20**	**343**	*eP*			**Pb**	**19 06 20.6**	**-0.5**
ARXS	2.6nm,0.4s				*eS*		**Sb**	**19 06 49.2**	**+0.6**
KST	14nm,0.2s **Kastek**	**2.24**	**296**		Pg		**Pb**	**19 06 22.6**	**+0.9**
KST	6.5nm,0.3s				Lg		Lg	19 06 52.7	
KST	35nm,0.6s **Kastek**	**2.24**	**296**	*eP*			**Pb**	**19 06 22.6**	**+0.9**
KST	5.2nm,0.2s				*eS*		**Sg**	**19 06 52.7**	**-0.2**
KNOS	35nm,0.6s **Konyrlen**	**2.28**	**8**		Pg		**Pb**	**19 06 21.5**	**-0.9**
KNOS	2.8nm,0.2s				Lg		Lg	19 06 51.2	
DJR	18nm,0.2s **Jarkent**	**2.36**	**19**		Pg		**Pb**	**19 06 22.8**	**-1.0**
DJR	5.5nm,0.2s				Lg		Lg	19 06 53.7	
TKM2	23nm,0.3s **Tokmak 2**	**2.44**	**290**	⇓*i*	P		**Pb**	**19 06 24.3**	**-1.0**
TKM2				⇓*i*	S		**Sb**	**19 06 56.0**	**+0.3**
KRBS	**Karabastau**	**2.74**	**306**		Pg		**Pb**	**19 06 30.4**	**+0.1**
KRBS	1.6nm,0.4s				Lg		Lg	19 07 07.2	
KRBS	37nm,0.3s **Karabastau**	**2.74**	**306**	*eP*			**Pb**	**19 06 30.4**	**+0.1**
KRBS	1.6nm,0.4s				*eS*		**Sb**	**19 07 06.3**	**+2.2**
UCH	37nm,0.3s **Uchtor**	**3.12**	**274**	⇓*i*	P		**Pb**	**19 06 33.8**	**-3.3**
UCH				⇓*i*	S		**Sb**	**19 07 12.6**	**-2.9**
SGDS	**Sogindy**	**3.29**	**295**		Pg		**Pb**	**19 06 40.8**	**+1.1**
SGDS	0.6nm,0.2s				Lg		Lg	19 07 23.9	
MK31	5.5nm,0.5s **Makanchi Array**	**5.34**	**27**	⇓Pn			**Pn**	**19 07 03.5**	**+2.5**
MK31	0.1nm,0.2s,baz=210,slow=14,SNR=5.5			⇓Sn			**Sn**	**19 08 04.5**	**+1.8**
MK31	0.3nm,0.3s			⇑Lg			Lg	19 08 26.5	
	0.1nm,0.2s,baz=207,slow=29,SNR=4.2								

*ISK **10** 19:07:24.1, 35.91N×31.34E, h11km, ML3.5/44*
*IDC **10** 19:07:24.7±1.2, 35.82N×31.17E, h58km±16km, mb3.5/6, mbtmp3.6/13, MS2.6/1, Error ellipse: s-maj=12.3km s-min=9.8km az=46.0

KEPZ	**Antalya-Kepez**	**0.97**	**12**	P	**Pn**	**19 07 43.1**	**-0.7**
KEPZ				S	**Sn**	**19 07 54.5**	**-2.2**
ANTB	**Antalya**	**1.10**	**330**	Pn	**Pn**	**19 07 45.8**	**+0.3**
DEMR	**Demre-Antalya**	**1.20**	**284**	Pn	**Pn**	**19 07 47.1**	**+0.3**
AKMS	**Akamas**	**1.23**	**139**	P	**Pn**	**19 07 47.8**	**+0.5**
AKMS				S	**Sn**	**19 08 05.1**	**+2.2**
AKMS				AML	AML	19 08 13.7	
	2.9nm,0.4s						
AKMS				AML	AML	19 08 14.7	
	1.9nm,0.3s						
ALFC	**Alefka**	**1.29**	**127**	P	**Pn**	**19 07 47.7**	**-0.4**
ALFC				S	**Sn**	**19 08 05.1**	**+0.7**
ALFC				AML	AML	19 08 13.0	
	2.2nm,0.2s						
ALFC				AML	AML	19 08 18.2	
	2.5nm,0.2s						
KORT	**Korkueli**	**1.32**	**323**	Pn	**Pn**	**19 07 48.9**	**+0.3**
KORT	**Korkueli**	**1.32**	**323**	P	**Pn**	**19 07 49.2**	**+0.6**
BOZY	**Bozyazi-Mersin**	**1.33**	**83**	Pn	**Pn**	**19 07 48.5**	**-0.1**
HDMB	**Hadim**	**1.37**	**42**	Pn	**Pn**	**19 07 49.5**	**+0.2**
ELL	**Elmali**	**1.41**	**305**	Pn	**Pn**	**19 07 50.5**	**+0.8**
ELL	**Elmali**	**1.41**	**305**	P	**Pn**	**19 07 52.0**	**+2.2**
ELL				S	**Sn**	**19 08 10.8**	**+3.5**
AKAS	**Kas**	**1.44**	**282**	Pn	**Pn**	**19 07 50.2**	**+0.1**
AKAS	**Kas**	**1.44**	**282**	P	**Pn**	**19 07 49.5**	**-0.6**
ERMK	**Ermenek**	**1.44**	**61**	P	**Pn**	**19 07 51.2**	**+0.9**
ERMK				S	**Sn**	**19 08 12.8**	**+4.6**
TEKE	**Tekeli-Mersin**	**1.45**	**82**	Pn	**Pn**	**19 07 50.4**	**+0.2**
SEYD	**Seydisehir-KON**	**1.51**	**15**	Pn	**Pn**	**19 07 51.8**	**+0.7**
BUCA	**Burdur, Bucak-**	**1.51**	**336**	P	**Pn**	**19 07 51.6**	**+0.4**
SEDI	**Konya, Seydise**	**1.54**	**12**	P	**Pn**	**19 07 51.8**	**+0.3**
SEDI				S	**Sn**	**19 08 10.2**	**-0.2**
NATA	**Nata**	**1.54**	**139**	P	**Pn**	**19 07 54.6**	**+3.1**
NATA				S	**Sn**	**19 08 16.2**	**+5.9**
NATA				AML	AML	19 08 24.5	
	3.4nm,0.4s						
NATA				AML	AML	19 08 25.5	
	3.8nm,0.5s						
BERE	**Bereket-Mersin**	**1.57**	**75**	Pn	**Pn**	**19 07 52.7**	**+0.7**
TROD	**Troodos**	**1.60**	**128**	P	**Pn**	**19 07 52.7**	**+0.3**
TROD				S	**Sn**	**19 08 13.0**	**+1.0**
TROD				AML	AML	19 08 30.6	
	0.9nm,0.7s						
TROD				AML	AML	19 08 33.7	
	1.1nm,0.8s						
BCK	**Bucak**	**1.63**	**338**	Pn	**Pn**	**19 07 53.8**	**+1.1**
XYLS	**Xyliatos**	**1.68**	**123**	*e*P	**Pn**	**19 07 52.8**	**-0.6**
XYLS				S	**Sn**	**19 08 13.7**	**0.0**
XYLS				AML	AML	19 08 15.8	
	1.1nm,0.2s						
XYLS				AML	AML	19 08 25.8	
	1.4nm,0.4s						
YORU	**Yoruktepe-Mers**	**1.68**	**82**	Pn	**Pn**	**19 07 54.4**	**+1.0**
KNIK	**Mula-Seydike**	**1.69**	**303**	P	**Pn**	**19 07 55.1**	**+1.5**
KNIK				S	**Sn**	**19 08 15.2**	**+1.2**
OREN	**Orenkoy-Mersin**	**1.73**	**81**	Pn	**Pn**	**19 07 54.8**	**+0.8**
APOL	**The Sanctuary**	**1.78**	**135**	P	Pn	19 07 59.2	+4.5
IZZE	**Mula-Seydike**	**1.78**	**286**	P	**Pn**	**19 07 55.2**	**+0.5**
IZZE				S	**Sn**	**19 08 16.4**	**+0.2**
AKK1	**Akkuyu-Mersin**	**1.79**	**83**	Pn	**Pn**	**19 07 56.4**	**+1.6**
AKK2	**Akkuyu-Mersin**	**1.80**	**83**	Pn	**Pn**	**19 07 55.9**	**+1.0**
GULN	**MERSIN_Gulnar**	**1.80**	**82**	P	**Pn**	**19 07 56.2**	**+1.3**
GULN				S	**Sn**	**19 08 18.2**	**+1.5**
TEPK	**Tepekoy-MERSIN**	**1.80**	**81**	Pn	**Pn**	**19 07 56.0**	**+0.9**
KKBE	**Karaman, Kazim**	**1.81**	**45**	P	**Pn**	**19 07 57.0**	**+1.9**
BECE	**Buyukeceli-Mer**	**1.81**	**83**	Pn	**Pn**	**19 07 56.3**	**+0.9**
BECE	**Buyukeceli-Mer**	**1.81**	**83**	Pn	**Pn**	**19 07 56.2**	**+1.1**
ATHAL	**Athalassa**	**1.86**	**115**	P	**Pn**	**19 07 56.2**	**+0.4**
ATHAL				S	**Sn**	**19 08 18.8**	**+0.7**
ATHAL				AML	AML	19 08 31.1	
	1.8nm,0.7s						
ATHAL				AML	AML	19 08 44.0	
	1.6nm,0.8s						
YESI	**Yesilovacik-Me**	**1.88**	**82**	Pn	**Pn**	**19 07 57.4**	**+1.4**
CSS	**Mathiatis**	**1.90**	**121**	Pn	**Pn**	**19 07 55.7**	**-0.6**
CSS	**Mathiatis**	**1.90**	**121**	P	**Pn**	**19 07 55.7**	**-0.6**
CSS				S	**Sn**	**19 08 16.8**	**-2.3**
CSS				AML	AML	19 08 38.6	
	0.7nm,1.0s						
CSS				AML	AML	19 08 39.1	
	0.5nm,0.3s						
CSS	**Mathiatis**	**1.90**	**121**	P	**Pn**	**19 07 55.5**	**-0.8**
CSS				S	**Sn**	**19 08 20.1**	**+1.0**
TISA	**Tisan-Mersin**	**1.90**	**83**	Pn	**Pn**	**19 07 58.3**	**+1.9**
LFK	**Lefkose**	**1.91**	**110**	Pn	**Pn**	**19 07 56.9**	**+0.4**
IKL	**Isikli**	**1.92**	**81**	Pn	**Pn**	**19 07 58.4**	**+1.8**
CAME	**Cameli-Denizli**	**1.92**	**302**	Pn	**Pn**	**19 07 58.2**	**+1.4**
GOLH	**Golhisar**	**1.93**	**312**	P	**Pn**	**19 07 59.5**	**+2.7**
GOLH				S	**Sn**	**19 08 22.6**	**+2.7**
KARG	**Kargicak-Mersi**	**1.93**	**82**	Pn	**Pn**	**19 07 57.8**	**+1.0**
ASGA	**Asgata**	**1.94**	**126**	P	**Pn**	**19 07 58.4**	**+1.4**
KRMN	**Karaman**	**1.97**	**51**	Pn	**Pn**	**19 07 59.2**	**+1.8**
KEBE	**Keben-Mersin**	**1.98**	**75**	Pn	**Pn**	**19 07 59.5**	**+2.0**
KMR	**Konya-Meram**	**1.99**	**24**	P	**Pn**	**19 07 59.3**	**+1.6**
KMER				S	**Sn**	**19 08 22.9**	**+1.3**
BRDR	**BURDUR-Merkez**	**2.02**	**330**	P	**Pn**	**19 08 00.0**	**+1.9**
BAGO	**Egridir - ISPA**	**2.08**	**348**	P	**Pn**	**19 07 59.7**	**+0.7**
MVOU	**Mavrovouni**	**2.09**	**116**	P	**Pn**	**19 07 58.0**	**-0.9**
MVOU				S	**Sn**	**19 08 20.9**	**-2.8**
MVOU				AML	AML	19 08 37.1	
	0.6nm,0.5s						
MVOU				AML	AML	19 08 38.9	
	1.3nm,0.6s						
SABU	**Mula-Dalaman**	**2.10**	**295**	P	**Pn**	**19 07 59.4**	**+0.2**
SABU				S	**Sn**	**19 08 23.4**	**-0.8**
SILI	**Silifke-Mersin**	**2.13**	**78**	Pn	**Pn**	**19 08 01.2**	**+1.7**
KONT	**Konya--Tatoy**	**2.15**	**22**	Pn	**Pn**	**19 08 01.7**	**+1.9**
KONT	**Konya--Tatoy**	**2.15**	**22**	P	**Pn**	**19 08 00.9**	**+1.0**
SLFK	**Silifke-Mersin**	**2.15**	**77**	Pn	**Pn**	**19 08 01.7**	**+1.9**
DOGA	**KONYA_Doganhis**	**2.17**	**7**	P	**Pn**	**19 08 01.5**	**+1.3**
DOGA				S	**Sn**	**19 08 27.3**	**+1.4**
BASM	**Basmaki-Afyon**	**2.22**	**333**	Pn	**Pn**	**19 08 02.5**	**+1.7**
APMY	**Acipayam-Deniz**	**2.24**	**313**	Pn	**Pn**	**19 08 02.1**	**+1.1**
YVAC	**Isparta, Yalva**	**2.32**	**358**	P	**Pn**	**19 08 03.1**	**+0.9**
YVAC				S	**Sn**	**19 08 30.5**	**+1.0**
EREN	**Erenkoy**	**2.34**	**99**	Pn	**Pn**	**19 08 03.9**	**+1.6**
EREN	**Erenkoy**	**2.34**	**99**	P	**Pn**	**19 08 03.5**	**+1.2**
EREN				S	**Sn**	**19 08 31.7**	**+1.9**
LADK	**Ladik-KONYA**	**2.39**	**20**	Pn	**Pn**	**19 08 04.8**	**+1.6**
OSC1	**CSNet OBS 1**	**2.44**	**181**	P	**Pn**	**19 08 05.3**	**+1.5**
KZIL	**AFYON_Kizioren**	**2.50**	**338**	P	**Pn**	**19 08 05.0**	**+0.4**
KZIL				S	**Sn**	**19 08 34.7**	**+0.8**
SDAG	**Sultandagi-AFY**	**2.51**	**352**	Pn	**Pn**	**19 08 06.3**	**+1.5**
ARG	**Arkhangelos**	**2.62**	**277**	P	**Pn**	**19 08 06.0**	**-0.1**
KDHN	**Kadinhani**	**2.64**	**13**	P	**Pn**	**19 08 07.2**	**+0.6**
ALIN	**Konya, Altinte**	**2.65**	**27**	P	**Pn**	**19 08 07.5**	**+0.8**
ALIN				S	**Sn**	**19 08 38.5**	**+0.9**
YESY	**Yesilyurt**	**2.66**	**46**	Pn	**Pn**	**19 08 08.9**	**+2.1**
KERG	**Konya-Eregli**	**2.67**	**56**	P	**Pn**	**19 08 09.4**	**+2.4**
KURO	**Afyon-Bolvadin**	**2.80**	**353**	P	**Pn**	**19 08 09.2**	**+0.5**
KURO				S	**Sn**	**19 08 40.5**	**-0.8**
KIZT	**Kizilcal**	**2.96**	**8**	Pn	**Pn**	**19 08 12.2**	**+1.3**
CBEY	**Konya-Cihanbey**	**2.97**	**22**	P	**Pn**	**19 08 12.4**	**+1.4**
CBEY				S	**Sn**	**19 08 47.0**	**+1.6**
BYAT	**Afyon-Bayat**	**3.01**	**355**	P	**Pn**	**19 08 12.4**	**+0.9**
BYAT				S	**Sn**	**19 08 46.3**	**-0.1**
GULE	**Gulek**	**3.07**	**63**	P	Pn	19 08 16.1	+3.7
KRTS	**Karatas**	**3.32**	**78**	Pn	**Pn**	**19 08 17.6**	**+1.9**
GULA	**Gulagac**	**3.33**	**43**	Pn	**Pn**	**19 08 17.9**	**+1.9**
KULU	**Kulu**	**3.36**	**23**	Pn	**Pn**	**19 08 18.2**	**+1.8**
CMRD	**Camardi-Nigde**	**3.39**	**59**	Pn	Pn	19 08 20.9	+4.0
SERE	**Sereflikochisa**	**3.47**	**30**	Pn	**Pn**	**19 08 19.3**	**+1.3**
BRTR	**Keskin Array B**	**4.18**	**25**	P	**Pn**	**19 08 28.5**	**+0.7**
	4.6nm,0.3s,baz=197,slow=15,SNR=54						
BRTR				S	**Sn**	**19 09 18.3**	**+2.9**
	6.6nm,0.4s,baz=211,slow=26,SNR=12						
BRTR				LR	LR	19 10 22.4	
	comp=Z,77nm,19.9s,baz=106,slow=41						
BEIL	**Beino**	**4.20**	**108**	*e*P	**Pn**	**19 08 30.8**	**+2.8**
MMAI	**Mount Meron Ar**	**4.45**	**130**	P	**Pn**	**19 08 31.9**	**+0.5**
	3.2nm,0.4s,baz=327,slow=15,SNR=22						
MMAI				S	**Sn**	**19 09 20.6**	**-1.3**
	5.8nm,0.4s,baz=322,slow=28,SNR=10						
MMA0B	**Mount Meron ar**	**4.45**	**130**	P	**Pn**	**19 08 34.0**	**+2.7**
MMA0B				S	**Sn**	**19 09 22.7**	**+0.8**
OFRI	**`Ofer**	**4.48**	**137**	P	**Pn**	**19 08 34.0**	**+2.2**
OFRI				S	**Sn**	**19 09 22.7**	**0.0**
GEM	**Giv'at Ha'Em**	**4.49**	**126**	P	**Pn**	**19 08 34.5**	**+2.6**
GEM				S	**Sn**	**19 09 23.6**	**+0.8**
NATI	**Neve Ativ**	**4.51**	**125**	P	**Pn**	**19 08 34.9**	**+2.9**
NATI				S	**Sn**	**19 09 24.0**	**+0.8**
ZEFT	**Zefat**	**4.54**	**130**	P	**Pn**	**19 08 35.1**	**+2.5**
ZEFT				S	**Sn**	**19 09 24.9**	**+0.8**
KNHM	**Kefar Nahum**	**4.65**	**130**	P	**Pn**	**19 08 36.5**	**+2.5**
KNHM				S	**Sn**	**19 09 27.2**	**+0.5**
KSHT	**Keshet**	**4.73**	**127**	P	**Pn**	**19 08 38.0**	**+2.8**
KSHT				S	**Sn**	**19 09 29.9**	**+1.1**
SLTI	**Sal'it**	**4.80**	**139**	P	**Pn**	**19 08 38.3**	**+2.2**
SLTI				S	**Sn**	**19 09 30.6**	**+0.1**
MMLI	**Mount Malkishu**	**4.87**	**135**	P	**Pn**	**19 08 39.2**	**+2.1**
MMLI				S	**Sn**	**19 09 32.1**	**0.0**
ROII	**Roi**	**5.04**	**136**	P	**Pn**	**19 08 41.8**	**+2.3**
ROII				S	**Sn**	**19 09 36.5**	**+0.1**
RGMN	**Argaman**	**5.12**	**136**	P	**Pn**	**19 08 42.6**	**+2.2**
RGMN				S	**Sn**	**19 09 38.4**	**+0.1**
YITV	**Yitav**	**5.24**	**139**	P	**Pn**	**19 08 44.3**	**+2.3**
YITV				S	**Sn**	**19 09 41.1**	**0.0**
IDI	**Anoyia**	**5.30**	**265**	P	**Pn**	**19 08 41.0**	**-2.0**
	19nm,0.3s,baz=55,slow=16,SNR=60						
IDI				S	Sn	19 09 36.5	-6.2
	24nm,0.5s,baz=272,slow=16,SNR=7.0						
AMAZ	**Amatzia**	**5.32**	**145**	P	**Pn**	**19 08 45.3**	**+2.1**
AMAZ				S	**Sn**	**19 09 42.9**	**-0.3**
ALMO	**Almog**	**5.38**	**139**	P	**Pn**	**19 08 46.3**	**+2.3**
ALMO				S	**Sn**	**19 09 44.5**	**-0.1**
MZS	**Mizpe Shalem**	**5.52**	**141**	P	**Pn**	**19 08 48.2**	**+2.2**
MZS				S	**Sn**	**19 09 48.1**	**0.0**
KZIT	**Kziot**	**5.64**	**152**	P	**Pn**	**19 08 49.5**	**+1.9**
KZIT	**Kziot**	**5.64**	**152**	P	**Pn**	**19 08 49.6**	**+2.0**
KZIT				S	**Sn**	**19 09 50.5**	**-0.6**
KZIT				S		19 09 50.5	
MSBI	**Mazada**	**5.71**	**143**	P	**Pn**	**19 08 50.5**	**+2.0**
MSBI				S	**Sn**	**19 09 52.5**	**-0.2**
GHAJ	**Ghor Haditha**	**5.82**	**142**	P	**Pn**	**19 08 52.1**	**+2.1**
GHAJ				S	**Sn**	**19 09 55.3**	**-0.1**
ASF	**Jabal al Asfar**	**5.95**	**128**	P	**Pn**	**19 08 55.2**	**+3.2**
	2.2nm,0.3s,baz=292,slow=18,SNR=9.4						
ASF				S	**Sn**	**19 09 59.4**	**+0.5**
	2.5nm,0.4s,baz=296,slow=24,SNR=8.8						
RMNI	**Mount Ramon**	**6.06**	**151**	P	**Pn**	**19 08 55.4**	**+2.0**
RMNI				S	**Sn**	**19 10 01.3**	**-0.1**
HRFI	**Mount Harif**	**6.66**	**151**	P	**Pn**	**19 09 03.8**	**+2.1**
HRFI				S	**Sn**	**19 10 16.1**	**-0.2**
EIL	**Elat**	**6.96**	**153**	P	**Pn**	**19 09 04.8**	**-0.9**
	3.6nm,0.7s,baz=337,slow=13,SNR=8.0						
EIL				S	**Sn**	**19 10 20.2**	**-3.3**
	7.9nm,0.5s,baz=315,slow=21,SNR=4.9						
EIL	**Elat**	**6.96**	**153**	P	**Pn**	**19 09 07.5**	**+1.8**
MLR	**Muntele Rosu**	**10.37**	**338**	P	**Pn**	**19 09 53.6**	**+1.2**
	1.4nm,0.6s,baz=155,slow=19,SNR=3.0						
AKASG	**Malin Array Be**	**14.82**	**355**	P	**Pn**	**19 10 54.0**	**+1.4**
	0.2nm,0.3s,baz=179,slow=9.3,SNR=9.4						
GERES	**GERESS Array B**	**18.27**	**320**	P	**P**	**19 11 34.6**	**-1.0**
	0.1nm,0.3s,baz=124,slow=8.7,SNR=7.1						
FINES	**FINESS Array B**	**25.73**	**354**	P	**P**	**19 12 50.1**	**-1.5**
	1.0nm,0.4s,baz=157,slow=10,SNR=20						
	1.0nm,0.4s						
HFS	**Hagfors**	**26.75**	**340**	P	**P**	**19 12 58.9**	**-1.9**
	0.9nm,0.8s,baz=108,slow=9.3,SNR=1.6						
	0.9nm,0.8s						
ARCES	**ARCESS Array B**	**33.80**	**356**	P	**P**	**19 14 01.1**	**-1.8**
	2.4nm,1.0s,baz=169,slow=7.4,SNR=4.6						
	2.4nm,1.0s						
MKAR	**Makanchi Array**	**39.11**	**58**	P	**P**	**19 14 48.0**	**-0.5**
	0.2nm,0.4s,baz=262,slow=8.8,SNR=2.5						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**40.81**	**47**	P	**P**	**19 15 02.0**	**-0.4**
	0.5nm,0.3s,baz=279,slow=8.3,SNR=1.9						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**61.48**	**87**	P	**P**	**19 17 37.1**	**-0.8**
	0.4nm,0.6s,baz=289,slow=9.1,SNR=5.1						
	0.4nm,0.6s						

DJA 10 19:45:04.2±0.3, 9°S±5′×11°7E±°, h71km±9km, M4.0/18, mb4.3/8, MLv3.9/18, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.48**	**50**	P	Pn	19 45 18.3	+1.3
TWSI	**Taliwang, Sumb**	**0.65**	**308**	P	Pn	19 45 19.2	+0.6
KHKI	**Kahang-Kahang**	**1.93**	**293**	P	Pn	19 45 35.9	+0.9
IGBI	**Denpasar**	**2.25**	**278**	P	Pn	19 45 39.7	+0.5
LBFI	**Labuhan Bajo,**	**2.55**	**75**	P	Pn	19 45 44.1	+0.8
WSI	**Waingapu**	**2.91**	**101**	P	Pn	19 45 48.7	+0.5
JAGI	**Jajag, Banyuwa**	**3.28**	**281**	P	Pn	19 45 52.5	-0.7
BSSI	**Bau Bau, Buton**	**4.27**	**46**	P	Pn	19 46 07.4	+0.6
KAPI	**Kappang**	**4.72**	**30**	P	Pn	19 46 13.2	+0.3
SNJI	**Sawahan-Nganju**	**5.74**	**283**	P	Pn	19 46 27.3	+0.2
	0.2nm38nm,2.9s						
BATI	**Baumata**	**6.27**	**100**	P	Pn	19 46 33.9	-0.2
	0.2nm33nm,1.2s						
UGM	**Wanagama**	**6.91**	**280**	P	Pn	19 46 43.4	+0.5
	220nm,2.0s						

*DJA **10** 19:48:12.6±0.2, 12°S±3′×11°7E±°, h10km, M4.4/21, mB5.3/1, mb4.3/19, MLv4.4/21, Mw(mB)4.7/1*
*IDC **10** 19:48:20.9±1.5, 11°.80S×118°.31E, h0km, mb3.8/2, mbtmp3.6/6, ML3.5/4, MS3.2/1, Error ellipse: s-maj=34.2km s-min=22.7km az=47.0*

ISC 10 19:48:12.6±0.9, 11°49S±0°08×117°56E±0°07, h10km, n32, σ1s77/31, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**2.65**	**5**	P	**Pn**	**19 48 55.9**	**+0.4**
PLAI	**Plampang**	**2.65**	**5**	P	**Pn**	**19 48 55.6**	**+0.1**
TWSI	**Taliwang, Sumb**	**2.81**	**346**	P	**Pn**	**19 48 57.2**	**-0.5**
WSI	**Waingapu**	**3.25**	**56**	P	**Pn**	**19 49 04.0**	**+0.3**
IGBI	**Denpasar**	**3.56**	**318**	P	**Pn**	**19 49 06.2**	**-1.8**
KHKI	**Kahang-Kahang**	**3.65**	**328**	P	**Pn**	**19 49 10.3**	**+1.1**
LBFI	**Labuhan Bajo,**	**3.77**	**38**	P	**Pn**	**19 49 12.8**	**+1.9**
JAGI	**Jajag, Banyuwa**	**4.50**	**312**	P	**Pn**	**19 49 19.7**	**-1.2**
JAGI	**Jajag, Banyuwa**	**4.50**	**312**	P	**Pn**	**19 49 18.9**	**-2.0**
MMRI	**Maumere**	**5.41**	**59**	P	**Pn**	**19 49 35.2**	**+1.7**
	0.2nm28nm,0.4s						
BSSI	**Bau Bau, Buton**	**6.05**	**29**	P	**Pn**	**19 49 44.5**	**+2.2**
	0.3nm47nm,1.5s						
BATI	**Baumata**	**6.13**	**79**	Pn	**Pn**	**19 49 42.1**	**-1.4**
	2.2nm,0.3s,baz=258,slow=14,SNR=2.4						
BATI				Sn	**Sn**	**19 50 50.5**	**-3.2**
	3.2nm,0.3s,baz=90,slow=20,SNR=2.4						
	10nm,0.4s						
BATI	**Baumata**	**6.13**	**79**	P	**Pn**	**19 49 41.8**	**-1.6**
	0.2nm24nm,0.9s						
KAPI	**Kappang**	**6.79**	**19**	P	**Pn**	**19 49 53.0**	**+0.6**
	0.1nm12nm,1.4s						
SNJI	**Sawahan-Nganju**	**6.80**	**302**	P	**Pn**	**19 49 54.2**	**+1.5**
	0.2nm38nm,2.1s						
SOEI	**Soe**	**6.82**	**76**	P	**Pn**	**19 49 55.6**	**+2.7**
SOEI	**Soe**	**6.82**	**76**	P	**Pn**	**19 49 54.8**	**+1.9**
	0.1nm29nm,1.6s						
UGM	**Wanagama**	**7.79**	**297**	P	**Pn**	**19 50 05.5**	**-0.7**
MBWA	**Marble Bar**	**9.84**	**168**	P	**Pn**	**19 50 32.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**10.21**	**131**	Pn	**Pn**	**19 50 39.3**	**-0.1**
	0.5nm,0.3s,baz=312,slow=9.6,SNR=15						
FITZ				Sn		19 52 24.3	-10
	0.3nm,0.3s,baz=187,slow=23,SNR=6.8						
	1.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.21**	**131**	P	**Pn**	**19 50 40.0**	**+0.7**
MEEK	**Meekatharra**	**15.10**	**176**	P	**Pn**	**19 51 45.1**	**-1.1**
MORW	**Morawa**	**17.55**	**184**	P	**P**	**19 52 17.5**	**-1.1**
WRA	**Warramunga Arr**	**18.20**	**120**	P	**P**	**19 52 26.3**	**+0.4**
	0.1nm,0.3s,baz=299,slow=14,SNR=7.3						
WRA				S	Sn	19 55 36.0	-13
	0.2nm,0.8s,baz=241,slow=13,SNR=1.1						
	0.3nm,0.8s						
WRAB	**Tennant Creek**	**18.20**	**120**	P	**P**	**19 52 27.2**	**+1.3**
BLDU	**Ballidu**	**19.05**	**182**	P	**Pn**	**19 52 35.3**	**-0.5**
ASAR	**Alice Springs**	**19.71**	**130**	P	**Pn**	**19 52 44.9**	**+0.9**
	0.1nm,0.3s,baz=314,slow=13,SNR=11						
ASAR				S	S	19 56 14.6	-10
	0.7nm,1.1s,baz=301,slow=23,SNR=2.3						
	0.9nm,0.8s						
MTKN	**Mount Kenneth**	**20.41**	**184**	P	**P**	**19 52 49.8**	**-0.1**
MUN	**Mundaring**	**20.43**	**183**	P	**P**	**19 52 50.1**	**-0.1**
NWAO	**Narrogin (SRO)**	**21.34**	**181**	P	**P**	**19 53 05.4**	**+5.4**
	3.8nm,0.7s,baz=12,slow=13,SNR=1.5						
NWAO				S	S	19 56 43.0	-14
	7.4nm,1.0s,baz=4.5,slow=11,SNR=1.7						
	3.8nm,0.7s						
RPZ	**Rata Peaks**	**56.01**	**135**	LR	LR	20 22 04.5	
	comp=Z,22nm,18.1s,baz=292,slow=37						
MKAR	**Makanchi Array**	**66.04**	**334**	P	P	19 59 13.5	+14
	0.6nm,0.7s,baz=155,slow=5.6,SNR=6.1						
	0.6nm,0.7s						

IDC 10 20:13:45.0±999.0, 50°.64N×72°.42E, h0km, Error ellipse: s-maj=596.6km s-min=168.0km az=106.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**9.17**	**274**	I	I	21 06 40.0	
	0.2nm,0.8s,baz=82,slow=308,SNR=12						
I43RU	**DUBNA INFRASON**	**21.54**	**300**	I	I	22 22 25.0	
	baz=92,slow=317,SNR=10						
I37NO	**I37NO**	**31.28**	**326**	I	I	23 24 35.0	
	baz=97,slow=321,SNR=0.6						

*IDC **10** 20:14:03.9±0.6, 27°.58N×53°.44E, h0km, mb4.5/37, mbtmp4.5/43, ML4.0/7, MS3.8/46, Error ellipse: s-maj=13.7km s-min=10.2km az=13.0*
*GII **10** 20:14:04.8±0.0, 27°.75N×53°.50E, h0km, confirmed*
*MOS **10** 20:14:05.6±1.1, 27°.63N×53°.54E, h19km, mb5.0/59, Error ellipse: s-maj=4.7km s-min=3.3km az=101.4*
*TEH **10** 20:14:05.8, 27°.58N×53°.50E, h13km±18km, ML4.5, Presumed earthquake*
*NEIC **10** 20:14:06.6±1.6, 27°.76N±0°.02×53°.53′.51E±0°.08, h10km±1km, mb4.9/193, Error ellipse: s-maj=11.7km s-min=3.2km az=76.0*
*DSN **10** 20:14:07.5±0.5, 27°.64N×53°.48E, h10km, mb5.4/4, ML4.4/20, Error ellipse: s-maj=6.7km s-min=5.4km az=42.0*
*GFZ **10** 20:14:07.8±0.3, 28°N±5°×5°.4E±°, h10km, M4.5/24, mb4.8/24*
*THR **10** 20:14:07.5±0.4, 27°.59N×53°.41E, h16km±5km, ML4.6, Presumed earthquake*
*OMAN **10** 20:14:08.8±0.1, 27°.53N×53°.44E, h10km, mb4.3/14, ml4.9/16, Error ellipse: s-maj=1.6km s-min=1.1km az=265.0*
*BGR **10** 20:14:27.8, 28°.22N×50°.61E, h33km, mb4.6, Ms3.4*

ISC 10 20:14:06.4±0.5, 27°.66N±0°.03×53°.45E±0°.03, h14km±2km, h14km:pP-P, n852, σ1s39/848, mb4.8/217, MS3.9/58, 49C-34D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.14**	**263**	Pg	**Pg**	**20 14 09.5**	**-0.4**
LMD1	**Lamerd**	**0.41**	**219**	*e*Pg	**Pg**	**20 14 14.7**	**+0.2**
LMD1				*e*Sg	**Sb**	**20 14 22.2**	**+0.7**
LMD1				IAML		20 14 30.0	
	comp=Z,60μm,1.0s						
LMD1	**Lamerd**	**0.41**	**219**	Pg	**Pg**	**20 14 14.4**	**-0.2**
JHRM	**Jahrom**	**0.85**	**7**	Pg	**Pb**	**20 14 23.5**	**+0.4**
QIR1	**Qir**	**0.89**	**336**	Pg	**Pb**	**20 14 24.0**	**+0.2**
DSBU	**Dashti - Bushe**	**2.06**	**290**	Pn	**Pb**	**20 14 42.7**	**-1.0**
SHI	**Shiraz**	**2.14**	**338**	Pn	**Pb**	**20 14 44.1**	**-1.1**
BNDS	**Bandar-Abbas**	**2.43**	**95**	*e*Pn	**Pn**	**20 14 45.7**	**-0.2**
BNDS				IAML		20 15 42.9	
	comp=Z,2μm,1.0s						
GENO	**Geno**	**2.43**	**95**	Pn	**Pn**	**20 14 46.2**	**+0.3**
KAZ2	**Kazeron-Fars-I**	**2.50**	**322**	Pn	**Pn**	**20 14 49.1**	**+2.3**
IBND	**Bandar-abas**	**2.75**	**94**	Pn	**Pn**	**20 14 50.4**	**+0.3**
JRN	**Qarnain Island**	**2.76**	**191**	P	**Pn**	**20 14 52.0**	**+1.7**
	SNR=14						
SHME	**Shamm**	**2.89**	**123**	*e*P	**Pn**	**20 14 52.4**	**+0.3**
	SNR=15						
UMQ

BSY S Sn 20 16 40.6 -1.7
GTMR Gotvand 6.10 323 *e*Pn Pn 20 15 36.5 +0.3
GTMR IAML 20 18 00.0
comp=Z,210nm,1.0s
SMDO Samad 6.18 137 P Pn 20 15 39.1 +1.6
SNR=19
SMDO S Sn 20 16 49.1 +1.0
WSAR Wadi Sarin 6.42 132 P Pn 20 15 41.6 +0.9
SNR=25
BSRN Basiran 6.54 48 *e*Pn Pn 20 15 42.5 +0.1
BSRN IAML 20 17 50.6
comp=Z,100nm,1.0s
CHBR Chabahar 6.62 106 *e*Pn Pn 20 15 43.8 +0.4
CHBR IAML 20 17 12.1
comp=Z,82nm,1.0s
CHBR Chabahar 6.62 106 Pn Pn 20 15 43.5 +0.2
TABS Tabas 6.76 27 *e*Pn Pn 20 15 46.7 +1.4
TABS IAML 20 18 11.8
comp=Z,130nm,1.0s
KHMZ Khomeyn 6.77 334 *e*Pn Pn 20 15 46.7 +1.1
KHMZ IAML 20 17 10.8
comp=Z,110nm,1.0s
GHVR GHOM 7.05 345 *e*Pn Pn 20 15 51.2 +1.9
GHVR IAML 20 16 59.7
comp=Z,920nm,1.0s
WBK Wadi Bani Khal 7.09 134 P Pn 20 15 50.4 +0.5
SNR=117
NGCH Negor - Chabah 7.25 107 Pn Pn 20 15 52.7 +0.6
ASAO Ashtian 7.47 338 *e*Pn Pn 20 15 56.3 +1.0
ASAO IAML 20 17 27.5
comp=Z,100nm,1.0s
JLN Jalan Bani Buh 7.70 134 P Pn 20 15 59.0 +0.8
SNR=10
MHTO MHTO 7.81 147 P Pn 20 16 00.5 +0.7
SNR=30
MHTO S Sn 20 17 25.0 -3.1
SNR=20
SRVN Saravan 7.95 90 Pn Pn 20 16 02.6 +0.9
DAMV Damavand 8.05 351 *e*Pn Pn 20 16 04.3 +1.1
RAYN Ar Rayn 8.27 242 *i* P Pn 20 16 06.9 +0.7
SNR=60
RAYN Ar Rayn 8.27 242 P Pn 20 16 07.0 +0.9
RAYN Ar Rayn 8.27 242 *e*Pn Pn 20 16 06.5 +0.4
RAYN Ar Rayn 8.27 242 P Pn 20 16 06.8 +0.7
SHRT Shahrakht 8.39 43 *e*Pn Pn 20 16 09.5 +1.8
CHTH Charan 8.46 347 *e*Pn Pn 20 16 09.6 +0.7
THKV Tehran--Karaj 8.52 346 *e*Pn Pn 20 16 11.4 +1.8
DQM DQM 8.55 153 P Pn 20 16 11.3 +1.4
SHRO Shahrood 8.59 14 *e*Pn Pn 20 16 12.1 +1.6
ILBA Ilam Banvizeh 8.62 315 *e*Pn Pn 20 16 10.4 -0.5
SNGE Sanandaj 9.06 326 *e*Pn Pn 20 16 18.4 +1.3
WHFO Wadi Hawf 9.70 178 P Pn 20 16 25.0 -0.7
SNR=25
WHFO S Sn 20 18 08.9 -5.6
SHAO Shalim 9.79 168 *i* P Pn 20 16 27.2 +0.2
SNR=10
SHAO Shalim 9.79 168 P Pn 20 16 27.0 0.0
SNR=10
DMTO DMTO 9.99 172 P Pn 20 16 28.6 -1.1
SNR=11
HRA Herat 10.09 46 Pn 20 16 28.8 -2.3
RBK Rabkut 10.13 176 P Pn 20 16 31.0 -0.6
SNR=6.1
MRVT Maraveh tapeh 10.22 12 *e*Pn Pn 20 16 34.9 +2.1
SRSL SARDASHT 10.91 323 *e*Pn Pn 20 16 41.9 -0.5
GRMI Germi 12.05 339 *e*Pn Pn 20 17 01.0 +3.1
HAKT HAKKARI 12.83 323 P Pn 20 17 28.5 -0.2
GEVA Gevas 13.74 323 Pn Pn 20 17 19.4 -1.6
GNI Garni 14.40 332 Pn Pn 20 17 32.5 +2.5
comp=Z,3.1nm,0.3s,baz=100,slow=1.5,SNR=15
GNI Lg Lg 20 21 38.9
comp=Z,0.3nm,0.3s,baz=141,slow=20,SNR=0.9
GNI LR LR 20 22 37.1
comp=Z,155nm,21.1s,baz=146,slow=36
comp=Z,3.6nm,0.6s
GNI Garni 14.40 332 *i* P Pn 20 17 31.8 +1.8
GNI Garni 14.40 332 Pn 20 17 27.6 -2.4
GNI Garni 14.40 332 P P 20 17 38.5 +1.6
AKT Akhty 14.57 343 *e*P Pn 20 17 33.1 +0.8
AKT *e*S Sn 20 20 15.6 +2.0
AKT pmax pmax
comp=Z,31nm,1.6s
KBL Kabul 15.01 59 P Pn 20 17 36.6 -1.8
KBL Kabul 15.01 59 P P 20 17 41.8 -2.0
SNR=32
KBL Kabul 15.01 59 Pn 20 17 36.6 -1.8
KBL Kabul 15.01 59 P P 20 17 41.6 -2.2
ASF Jabal al Asfar 15.04 291 Pn Pn 20 17 36.1 -2.6
comp=Z,0.9nm,0.3s,baz=104,slow=18,SNR=6.0
ASF Sn Sn 20 20 17.7 -7.6
comp=Z,0.5nm,0.3s,baz=109,slow=18,SNR=3.0
ASF Lg Lg 20 21 59.0
comp=Z,0.1nm,0.3s,baz=107,slow=19,SNR=0.5
comp=Z,2.8nm,0.5s
DIGO Kars 15.21 329 P Pn 20 17 43.1 +2.0
SHAA Shahritus 15.81 48 Pn 20 17 45.1 -3.6
SHAA IAmb IAmb 20 17 54.4
comp=Z,236nm,1.3s
GHAJ Ghor Haditha 15.99 287 Pn 20 17 48.7 -2.3
GHAJ Ghor Haditha 15.99 287 P P 20 17 53.1 -1.4
GHAJ Ghor Haditha 15.99 287 P Pn 20 17 49.5 -1.5
MAK Makhachkala 16.02 344 *e*P Pn 20 17 48.8 -2.5
MAK *e*S Sn 20 20 46.8 -1.8
MAK pmax pmax
comp=Z,187nm,1.4s
MAK MLR MLR
comp=Z,412nm,16.0s
MSBI Mazada 16.17 287 P Pn 20 17 52.2 -1.1
ZFRI Zfri 16.23 285 P Pn 20 17 53.0 -1.1
GEM Giv'at Ha'Em 16.30 294 P Pn 20 17 53.7 -1.4
HRFI Mount Harif 16.31 283 P P 20 17 57.0 -1.1
HRFI Mount Harif 16.31 283 P Pn 20 17 54.0 -1.2
MMLI Mount Malkishu 16.32 291 P P 20 18 00.0 +1.8
MMLI Mount Malkishu 16.32 291 P Pn 20 17 54.3 -1.0
KOPT Kop Dagi 16.34 322 Pn Pn 20 17 52.6 -3.2
EIL Elat 16.36 281 Pn Pn 20 17 54.6 -1.3
comp=Z,0.5nm,0.3s,baz=98,slow=2.3,SNR=8.3
EIL Sn Sn 20 20 50.4 -6.9
comp=Z,0.1nm,0.3s,baz=18,slow=17,SNR=2.0
EIL Lg Lg 20 22 38.5
comp=Z,0.3nm,0.3s,baz=38,slow=18,SNR=1.5
comp=Z,2.4nm,0.6s
EIL Elat 16.36 281 P P 20 18 00.6 +1.9
EIL Elat 16.36 281 P Pn 20 17 55.0 -0.8
EPOS Posof 16.38 330 P P 20 18 01.9 +3.0
HWQ Hawqa 16.39 298 *e*P Pn 20 17 56.9 +0.6
MMA0B Mount Meron ar 16.47 293 P Pn 20 17 56.0 -1.2
MMAI Mount Meron Ar 16.47 293 Pn Pn 20 17 55.9 -1.3
comp=Z,1.2nm,0.3s,baz=97,slow=12,SNR=8.9
MMAI Sn Sn 20 20 52.4 -7.5
comp=Z,0.2nm,0.3s,baz=90,slow=39,SNR=3.8
MMAI Lg Lg 20 22 44.9
baz=96,slow=15
comp=Z,1.4nm,0.4s
BHL Bhannes 16.51 297 *e*P Pn 20 17 58.7 +1.0
RMNI Mount Ramon 16.59 285 P Pn 20 17 57.6 -1.2
SLTI Sal'it 16.59 290 P Pn 20 17 57.3 -1.5
GAZ Gaziantep 16.66 309 Pn 20 17 58.3 -1.2
OFRI `Ofer 16.72 292 P Pn 20 17 59.3 -1.1
KZIT Kziot 16.94 286 P P 20 18 05.5 +0.5
KZIT Kziot 16.94 286 P Pn 20 18 02.2 -0.8
ARPR Arapgir-MALATY 16.99 316 Pn 20 18 02.2 -1.6
ARPR Arapgir-MALATY 16.99 316 P Pn 20 18 04.6 +0.8
CHGR Chuyangaron 17.10 46 P Pn 20 18 03.3 -1.9
CHGR pmax pmax
comp=Z,117nm,1.2s
CHGR Chuyangaron 17.10 46 Pn 20 18 03.3 -1.9
CHGR IAmb IAmb 20 18 11.0
comp=Z,117nm,1.2s
ANDN Andirin 17.46 309 P P 20 18 13.2 +2.3
CY604 RAF Akrotiri, 17.54 297 P Pn 20 18 10.4 +0.1
NCK Nalchik 17.70 336 *i* P P 20 18 14.6 +1.2
GAR Garm 18.04 47 Pn 20 18 14.9 -1.9
GAR IAmb IAmb 20 18 21.2
comp=Z,128nm,1.2s
GAR Garm 18.04 47 P Pn 20 18 15.8 -1.1
NIL Nilore 18.04 66 P Pn 20 18 15.9 -1.0
NIL pmax pmax
comp=Z,271nm,1.4s
NIL Nilore 18.04 66 P Pn 20 18 16.2 -0.7
NIL Nilore 18.04 66 Pn 20 18 15.9 -1.0
NIL Nilore 18.04 66 P Pn 20 18 17.2 +0.4
KBZ Khabaz 18.16 335 P Pn 20 18 16.6 -1.5
comp=Z,0.7nm,0.3s,baz=170,slow=9.1,SNR=17

KBZ S Sn 20 21 40.1 -0.4
comp=Z,1.3nm,0.6s,baz=180,slow=5.1,SNR=1.2
KBZ LR LR 20 26 30.2
comp=Z,148nm,20.6s,baz=145,slow=41
comp=Z,7.7nm,0.8s
KBZ Khabaz 18.16 335 *ce*P P 20 18 20.5 +2.1
MANEM Manem 18.22 53 Pn 20 18 17.9 -1.4
MANEM IAmb IAmb 20 18 27.2
comp=Z,46nm,0.8s
SHA1 Shidzhatmaz 18.26 334 *ce*P P 20 18 22.8 +3.0
KVAR Kislovodsk Arr 18.43 335 P Pn 20 18 22.5 +0.9
baz=90,slow=20
comp=Z,6.9nm,0.9s
KIV Kislovodsk 18.43 335 ⇑P Pn 20 18 24.5 +2.9
KIV Kislovodsk 18.43 335 *i* P Pn 20 18 24.0 +2.4
SNR=9.3
KIV Kislovodsk 18.43 335 *e*P Pn 20 18 23.2 +1.6
KIV *e*S S 20 21 50.9 -0.9
KIV pmax pmax
comp=Z,71nm,1.1s
KIV MLR MLR
comp=Z,49nm,14.0s
KIV Kislovodsk 18.43 335 P P 20 18 21.4 -0.1
KIV Kislovodsk 18.43 335 P 20 18 21.5 -0.1
KIV IAmb IAmb 20 18 28.8
comp=Z,71nm,0.9s
KIV Kislovodsk 18.43 335 P Pn 20 18 24.0 +2.4
BNN Bunyan 18.45 312 P 20 18 21.6 -0.1
CSS Mathiatis 18.65 298 P 20 18 24.0 0.0
CSS Mathiatis 18.65 298 P Pn 20 18 25.1 +0.8
ATD Arta Tunnel 18.88 214 P P 20 18 27.0 +0.4
comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=3.6
ATD Lg Lg 20 24 05.7
baz=105,slow=18,SNR=1.8
ATD LR LR 20 26 46.2
comp=Z,13nm,18.9s,baz=8.5,slow=40
ATD Arta Tunnel 18.88 214 P Pn 20 18 27.1 -0.1
ATD IAmb IAmb 20 18 32.5
comp=Z,107nm,1.6s
BTK Batken 18.96 45 P P 20 18 25.8 -1.6
BTK pmax pmax
comp=Z,98nm,1.4s
BTK Batken 18.96 45 P P 20 18 25.8 -1.6
BTK IAmb IAmb 20 18 30.7
comp=Z,98nm,1.4s
VSLR Vesyoloye 19.14 329 *i* P Pn 20 18 30.9 +0.8
GOF Gofitskoye 19.25 337 *ce*P Pn 20 18 32.9 +1.4
DRK Karamyk 19.27 48 P P 20 18 28.9 -2.1
DRK pmax pmax
comp=Z,53nm,1.4s
DRK Karamyk 19.27 48 P P 20 18 28.9 -2.1
SOC Sochi 19.38 329 *d* P Pn 20 18 33.8 +0.8
SOC *e* 20 22 10.7
SOC pmax pmax
comp=Z,17nm,0.7s
SOC MLR MLR
comp=Z,165nm,13.0s
CHM Chimkent 19.68 38 *e*P P 20 18 35.7 +0.6
CHM Chimkent 19.68 38 *e*P P 20 18 35.7 +0.6
LABN Labinsk 19.78 332 *e*P Pn 20 18 37.7 0.0
LABN *e*S Sn 20 22 21.1 +1.3
LABN pmax pmax
comp=Z,62nm,0.9s
IUG Iuzhnay 19.80 39 *e*P P 20 18 36.9 +0.4
IUG Iuzhnay 19.80 39 *e*P P 20 18 36.9 +0.4
KIRS Kirsehir-Merke 19.88 310 ⇓P Pn 20 18 40.3 +1.2
BRLS Borolday 20.29 37 *e*P P 20 18 39.4 -2.4
BRLS Borolday 20.29 37 *e*P P 20 18 39.5 -2.4
BR131 Keskin Array S 20.36 311 *i* P P 20 18 43.9 +1.2
BR131 Keskin Array S 20.36 311 P P 20 18 41.6 -1.1
BR131 Keskin Array S 20.36 311 P 20 18 41.5 -1.3
BRTR Keskin Array B 20.36 311 P P 20 18 43.7 +1.0
comp=Z,4.2nm,0.6s,baz=132,slow=13,SNR=16
BRTR LR LR 20 29 06.7
comp=Z,138nm,19.3s,baz=124,slow=44
comp=Z,4.2nm,0.6s
BRTR Keskin Array B 20.36 311 *i* P Pn 20 18 44.4 -0.4
BRTR pmax pmax
comp=Z,5.0nm,0.6s
BRTR Keskin Array B 20.36 311 P 20 18 41.9 -0.9
KKUL Konya-Kulu 20.58 309 P Pn 20 18 48.1 +0.7
KK31 Karatay Array 20.70 37 P P 20 18 45.8 -0.4
KK31 pmax pmax
comp=Z,62nm,1.1s
KK31 Karatay Array 20.70 37 P 20 18 45.8 -0.4
KK31 IAmb IAmb 20 18 53.1
comp=Z,62nm,1.1s
KKAR Karatay Array 20.70 37 P P 20 18 45.4 -0.8
KKAR Karatay Array 20.70 37 P 20 18 45.4 -0.8
ERBR Yeremizino-Bor 20.76 334 *e*P P 20 18 47.0 +0.2
ERBR *e*S S 20 22 38.8 +0.6
ERBR pmax pmax
comp=Z,54nm,1.0s
DZA Taraz 21.01 39 *e*P P 20 18 50.0 +0.4
DZA Taraz 21.01 39 *e*P P 20 18 50.0 +0.4
ARSB Arslanbob 21.03 45 P P 20 18 49.7 -0.3
ARSB pmax pmax
comp=Z,154nm,1.6s
ARSB Arslanbob 21.03 45 P 20 18 49.7 -0.3
ANN Anapa 21.37 327 *e*P P 20 18 54.7 +1.3
ANN *e*S Sn 20 22 58.6 +0.6
ANN pmax pmax
comp=Z,38nm,0.8s
ANN MLR MLR
comp=Z,159nm,14.0s
KSH2 Kashi 21.67 52 P P 20 18 55.7 -1.2
KSH2 pmax pmax
comp=Z,21nm,1.0s
KSH2 L L
comp=Z,350nm,12.7s
KSH2 L L
comp=Z,380nm,10.0s
KSH2 L L
comp=Z,390nm,14.4s
ELL Elmali 21.84 300 P P 20 18 59.0 +0.3
ELL pmax pmax
comp=Z,48nm,0.9s
ELL Elmali 21.84 300 P 20 18 59.0 +0.3
ELL IAmb IAmb 20 19 04.1
comp=Z,48nm,0.9s
AKAS Kas 21.93 299 P P 20 18 59.6 0.0
AKAS IAmb IAmb 20 19 09.6
comp=Z,33nm,0.9s
AB31 Akbulak array 22.14 11 P 20 19 00.6 -1.1
AB31 IAmb IAmb 20 19 06.3
comp=Z,73nm,1.3s
ABKAR Akbulak array 22.14 11 P 20 19 00.7 -0.9
EKS2 Erkin-Say 22.29 43 P P 20 19 05.2 +1.7
SNR=20
MDUB Mudurnu 22.36 311 IAmb IAmb 20 19 09.2
comp=Z,54nm,1.2s
UCH Uchtor 22.49 44 P P 20 19 06.5 +0.5
SNR=11
AAK Ala-Archa 22.70 43 P P 20 19 08.6 +0.7
comp=Z,10.0nm,1.1s,baz=233,slow=12,SNR=20
AAK LR LR 20 29 21.8
comp=Z,471nm,18.5s,baz=247,slow=40
comp=Z,10.0nm,1.1s
AAK Ala-Archa 22.70 43 *i* P P 20 19 08.9 +0.9
SNR=9.8
AAK Ala-Archa 22.70 43 *ce*P P 20 19 06.5 -1.4
AAK pmax pmax
comp=Z,51nm,1.7s
AAK Ala-Archa 22.70 43 P 20 19 07.3 -0.6
AAK IAmb IAmb 20 19 21.6
comp=Z,95nm,1.8s
AAK Ala-Archa 22.70 43 P P 20 19 09.7 +1.8
FRU1 Bishkek 22.88 43 P P 20 19 09.5 -0.2
FRU1 pmax pmax
comp=Z,98nm,1.8s
FRU1 Bishkek 22.88 43 P P 20 19 09.5 -0.2
FRU1 IAmb IAmb 20 19 21.7
comp=Z,98nm,1.8s
KBK Karagaybulak 22.99 44 P P 20 19 12.6 +1.7
SNR=19
AKTO Aktyubinsk 23.01 7 P P 20 19 11.3 +0.4
comp=Z,7.1nm,0.8s,baz=192,slow=11,SNR=18
AKTO LR LR 20 30 11.5
comp=Z,464nm,18.7s,baz=202,slow=42
comp=Z,7.1nm,0.8s
NRN Naryn 23.02 48 P P 20 19 10.4 -1.0
NRN pmax pmax
comp=Z,48nm,1.4s
NRN Naryn 23.02 48 P 20 19 10.4 -1.0
NRN IAmb IAmb 20 19 21.1

comp=Z,48nm,1.4s
CHMS Chumysh 23.07 43 P P 20 19 12.1 +0.6
SNR=5.8
USP Ospenovka 23.07 42 P P 20 19 11.6 0.0
SNR=11
ARG Arkhangelos 23.08 298 P P 20 19 12.3 +0.6
ARG pmax pmax
comp=Z,101nm,1.4s
ARG Arkhangelos 23.08 298 P P 20 19 12.3 +0.6
SIM Simferopol' 23.16 323 *e*P P 20 19 14.5 +2.1
SIM *e*S S 20 23 28.2 +4.7
SIM pmax pmax
comp=Z,83nm,1.1s
SIM smax smax
comp=N,210nm,6.7s
SIM MLR MLR
comp=Z,90nm,16.0s
SGDS Sogindy 23.25 42 ⇑*i* P P 20 19 13.9 +0.4
SGDS *e*S S 20 23 25.8 +0.4
MANT Manisa 23.42 304 P 20 19 14.8 -0.7
MANT IAmb IAmb 20 19 40.7
comp=Z,99nm,2.0s
BOOM Boomskoye usch 23.52 45 P P 20 19 14.9 -1.4
BOOM pmax pmax
comp=Z,31nm,1.2s
BOOM Boomskoye usch 23.52 45 P P 20 19 14.8 -1.4
BOOM IAmb IAmb 20 19 18.9
comp=Z,31nm,1.2s
TKM2 Tokmak 2 23.54 44 P P 20 19 17.2 +0.7
SNR=11
KARP Karpathos 23.68 296 P P 20 19 18.8 +0.9
BTLS Baital 23.89 38 *e*P P 20 19 20.4 +0.8
BTLS Baital 23.89 38 *e*P P 20 19 20.5 +0.8
KDJ Kajisay 24.13 47 IAmb IAmb 20 19 30.6
comp=Z,72nm,1.8s
TARG Taragay, Kyrgy 24.35 48 IAmb IAmb 20 19 30.1
comp=Z,33nm,1.4s
TARG Taragay, Kyrgy 24.35 48 P P 20 19 25.8 +1.4
TNSS Tian-Shan 24.44 45 *e*P P 20 19 25.6 +0.4
TNSS Tian-Shan 24.44 45 *e*P P 20 19 25.6 +0.4
AAA Alma-Ata 24.51 45 *e*P P 20 19 26.2 +0.8
AAA Alma-Ata 24.51 45 *e*P P 20 19 26.3 +0.8
MDOK Medeo 24.57 45 *e*P P 20 19 26.8 +0.7
MDOK *e*S S 20 23 47.3 +0.6
MDOK Medeo 24.57 45 *e*P P 20 19 26.9 +0.7
MDOK *e*S S 20 23 47.3 +0.6
WUS Wushi 25.07 51 P P 20 19 29.8 -0.9
WUS IAmb IAmb 20 19 36.5
comp=Z,32nm,1.2s
BELG Belogornoye 25.09 352 P P 20 19 30.5 0.0
comp=Z,50nm,1.0s,baz=146,slow=1.5,SNR=6.8
BELG S S 20 23 54.0 -0.5
comp=Z,10nm,0.7s,baz=350,slow=19,SNR=2.3
comp=Z,50nm,1.0s
BELG Belogornoye 25.09 352 *i* P P 20 19 31.0 +0.5
BELG pmax pmax
comp=Z,12nm,1.1s
PRZ Przheval'sk 25.09 47 IAmb IAmb 20 19 36.7
comp=Z,31nm,1.2s
VRH Novokhopyorsk 25.14 342 *e*P P 20 19 29.0 -1.9
VRH pmax pmax
comp=Z,20nm,0.8s
HYB Hyderabad 25.28 108 *e*P P 20 19 32.8 +0.2
HYB *e*S S 20 23 59.5 +1.3
SATY Saty 25.37 46 *e*P P 20 19 33.9 +0.5
SATY Saty 25.37 46 *e*P P 20 19 33.1 -0.3
IDI Anoyia 25.46 295 P 20 19 34.4 +0.2
IDI IAmb IAmb 20 19 56.2
comp=Z,29nm,0.9s
VORD Divnogorie 25.64 339 *e*P P 20 19 34.3 -1.2
VORD pmax pmax
comp=Z,40nm,1.0s
UZB Uzynbulak 25.81 47 *c* *i*P P 20 19 38.1 +0.8
UZB Uzynbulak 25.81 47 ⇑*i*P P 20 19 38.2 +0.8
VSR Storozhevoye 25.89 339 *e*P P 20 19 36.4 -1.4
VSR pmax pmax
comp=Z,20nm,0.9s
JURR Jurilovca 26.02 318 ⇓P P 20 19 40.6 +1.6
ALN Alexandroupoli 26.09 308 P P 20 19 39.7 -0.1
ALN pmax pmax
comp=Z,26nm,1.0s
ALN Alexandroupoli 26.09 308 P 20 19 39.6 -0.1
ALN IAmb IAmb 20 19 43.7
comp=Z,26nm,1.0s
ALN Alexandroupoli 26.09 308 P P 20 19 41.0 +1.2
SHLS Shalkode 26.10 47 *c* *i*P P 20 19 43.1 +3.2
SHLS pmax pmax
comp=Z,26nm,1.5s
SHLS Shalkode 26.10 47 ⇑*i*P P 20 19 43.2 +3.2
comp=Z,26nm,1.5s
TIRR Tirgusor 26.13 317 ⇑P P 20 19 41.2 +1.2
TIRR Tirgusor 26.13 317 P P 20 19 41.2 +1.2
TIRR Tirgusor 26.13 317 IAmb IAmb 20 19 42.1
comp=Z,26nm,0.8s
TIRR Tirgusor 26.13 317 P P 20 19 41.2 +1.2
PDGK Podgornoye 26.20 47 P P 20 19 40.1 -0.8
PDGK Podgornoye 26.20 47 P 20 19 40.1 -0.8
VORR Voronezh 26.28 340 *e*P P 20 19 41.6 +0.3
VORR pmax pmax
comp=Z,66nm,0.4s
TLCR 26.28 318 ⇓P P 20 19 43.1 +1.7
TLCR 26.28 318 P P 20 19 43.1 +1.7
TPGR Topolog 26.34 317 ⇑P P 20 19 43.2 +1.2
TDK Taldyqorghan 26.37 42 *e*P P 20 19 42.5 +0.3
TDK pmax pmax
comp=Z,25nm,1.2s
TDK Taldyqorghan 26.37 42 *e*P P 20 19 42.6 +0.3
comp=Z,25nm,1.2s
TLBR Topalu 26.40 316 ⇑P P 20 19 44.3 +1.8
RDO Rodhopi 26.54 308 P P 20 19 45.6 +1.8
CFR Carcaliu 26.68 318 ⇓P P 20 19 46.1 +1.1
CFR Carcaliu 26.68 318 P P 20 19 46.1 +1.1
LOZB Loznitsa 26.75 313 ⇓P P 20 19 47.3 +1.7
NEGRR Negrea 27.03 318 ⇑P P 20 19 49.2 +1.1
VLDR Vladesti 27.07 319 ⇓P P 20 19 50.3 +1.8
LPSR Galich'ya Gora 27.17 340 *e*P P 20 19 50.0 +0.7
LPSR pmax pmax
comp=Z,47nm,0.9s
TUDR 27.18 318 ⇑P P 20 19 51.6 +2.1
GHRR 27.59 319 ⇑P P 20 19 55.2 +2.1
GHRR 27.59 319 P P 20 19 55.3 +2.1
ISR Istrita 27.61 316 ⇑P P 20 19 55.4 +1.9
ISR Istrita 27.61 316 P P 20 19 55.4 +1.9
ODBI Odobesti 27.63 318 ⇑P P 20 19 56.0 +2.4
SAHR Sahastru 27.84 318 ⇓P P 20 19 57.9 +2.4
VRI Vrincioaia 27.88 318 ⇓P P 20 19 57.9 +2.0
VRI Vrincioaia 27.88 318 P P 20 19 57.8 +2.0
VRI Vrincioaia 27.88 318 P P 20 19 57.7 +1.9
SRS Serrai 27.91 307 P P 20 19 58.0 +1.9
PLOR Plostina 27.92 318 ⇓P P 20 19 58.4 +2.2
PLOR Plostina 27.92 318 P P 20 19 58.4 +2.2
SOH Sokhos 27.98 306 P P 20 19 58.8 +1.9
MLR Muntele Rosu 28.16 317 P P 20 19 59.7 +1.2
comp=Z,9.4nm,0.5s,baz=102,slow=3.5,SNR=20
MLR LR LR 20 33 32.3
comp=Z,236nm,20.5s,baz=114,slow=41
comp=Z,9.4nm,0.5s
MLR Muntele Rosu 28.16 317 ⇓P P 20 20 01.0 +2.4
MLR Muntele Rosu 28.16 317 P P 20 20 00.9 +2.4
MLR Muntele Rosu 28.16 317 IAmb IAmb 20 20 03.3
comp=Z,42nm,1.4s
MLR Muntele Rosu 28.16 317 P P 20 20 02.3 +3.8
COVR Voinesa-Covas 28.19 317 ⇓P P 20 20 01.2 +2.6
TESR Tescani 28.27 319 ⇑P P 20 20 00.3 +1.1
BORK Borovoye 28.29 22 *i* P P 20 20 00.4 +1.1
BORK pmax pmax
comp=Z,34nm,1.4s
BORK Borovoye 28.29 22 P 20 19 59.6 +0.2
BORK IAmb IAmb 20 20 01.3
comp=Z,14nm,0.9s
BVAR Borovoye Array 28.29 22 P P 20 20 00.1 +0.7
comp=Z,19nm,0.8s,baz=212,slow=7.8,SNR=96
BVAR PcP PcP 20 23 11.9 -0.3
comp=Z,1.6nm,0.5s,baz=214,slow=2.5,SNR=7.3
comp=Z,19nm,0.8s
ONER Baraj Valea Uz 28.33 318 ⇑P P 20 20 01.8 +2.0
TURR Turia 28.41 318 ⇑P P 20 20 01.5 +1.0
OZUR 28.57 317 ⇓P P 20 20 03.4 +1.4
MTUR Matau 28.58 315 ⇑P P 20 20 04.6 +2.4
MTUR Matau 28.58 315 P P 20 20 04.5 +2.4
BOSR Bodos 28.63 317 ⇓P P 20 20 04.5 +2.0
VOIR 28.69 316 ⇑P P 20 20 05.1 +2.0
VOIR 28.69 316 P P 20 20 05.1 +2.0
DOPR Dopca 28.74 317 ⇑P P 20 20 05.1 +1.7

ARR Arges 28.91 315 ⇓P **P 20 20 07.1 +2.0**
ARR Arges 28.91 315 P **P 20 20 06.8 +1.7**
ARTI Arti 28.93 6 P **P 20 20 05.4 +0.4**
comp=Z,5.3nm,1.2s,baz=176,slow=13,SNR=3.9
ARTI LR LR 20 34 13.0
comp=Z,271nm,19.0s,baz=191,slow=42
comp=Z,5.3nm,1.2s
ARTI Arti 28.93 6 *i* P **P 20 20 03.5 -1.5**
ARTI pmax pmax
comp=Z,11nm,1.1s
ARTI Arti 28.93 6 P **P 20 20 04.8 -0.2**
PRAR RASCA 28.97 320 ⇑P **P 20 20 06.4 +0.8**
MDB Medias 29.44 317 ⇑P **P 20 20 11.6 +2.0**
MDB Medias 29.44 317 P **P 20 20 11.6 +2.0**
MAKZ Makanchi 29.44 42 P **P 20 20 10.2 +0.5**
MAKZ Makanchi 29.44 42 **P 20 08.9 -0.8**
AKASG Malin Array Be 29.46 328 P **P 20 20 09.6 -0.1**
comp=Z,6.8nm,0.6s,baz=134,slow=8.3,SNR=36
AKASG S **S 20 25 05.3 +1.9**
comp=Z,0.1nm,0.3s,baz=136,slow=15,SNR=1.6
AKASG LR LR 20 34 30.4
comp=Z,98nm,18.2s,baz=132,slow=42
comp=Z,6.8nm,0.6s
AKASG Malin Array Be 29.46 328 *ce*P **P 20 20 09.6 -0.1**
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKASG Malin Array Be 29.46 328 P **P 20 20 08.5 -1.2**
AKASG **S 20 25 05.3 +1.9**
AKBB Malin Array Si 29.46 328 P **P 20 20 09.4 -0.3**
AKBB pmax pmax
comp=Z,28nm,1.1s
AKBB Malin Array Si 29.46 328 **P 20 20 09.4 -0.3**
AKBB IAmb IAmb 20 20 10.7
comp=Z,28nm,1.1s
KIEV Kiev 29.46 328 *i* P **P 20 20 10.0 +0.2**
SNR=14
KIEV Kiev 29.46 328 P **P 20 20 09.8 0.0**
KIEV Kiev 29.46 328 **P 20 20 09.8 0.0**
EVN Everest 29.46 82 P **P 20 20 09.1 -1.7**
LOT Lotru 29.49 315 ⇑P **P 20 20 11.1 +0.8**
SVE Sverdlovsk 29.60 8 *eP* **P 20 20 12.7 +1.8**
MK31 Makanchi Array 29.62 42 *ce*P **P 20 20 12.0 +0.7**
MKAR Makanchi Array 29.62 42 P **P 20 20 11.7 +0.4**
comp=Z,2.3nm,0.4s,baz=240,slow=11,SNR=37
MKAR PcP **PcP 20 23 14.7 -1.0**
comp=Z,0.3nm,0.4s,baz=244,slow=3.1,SNR=1.8
MKAR LR LR 20 33 40.0
comp=Z,222nm,18.8s,baz=228,slow=40
comp=Z,2.3nm,0.4s
MKAR Makanchi Array 29.62 42 **P 20 20 10.7 -0.6**
MKAR **PcP 20 23 14.8 -1.0**
LODK Lodwar 29.65 219 P **P 20 20 13.9 +2.0**
BURAR Bucovina Array 29.69 320 ⇓P **P 20 20 13.8 +1.8**
BURAR Bucovina Array 29.69 320 P **P 20 20 13.5 +1.5**
BURAR Bucovina Array 29.69 320 **P 20 20 12.7 +0.7**
BURAR IAmb IAmb 20 20 15.5
comp=Z,8.8nm,0.6s
KURBB Kurchatov Arra 29.81 33 P **P 20 20 13.5 +0.6**
comp=Z,4.8nm,0.8s,baz=233,slow=8.8,SNR=29
KURBB LR LR 20 33 29.1
comp=Z,332nm,19.3s,baz=166,slow=39
comp=Z,4.8nm,0.8s
KURK Kurchatov 29.91 33 *ce*P **P 20 20 15.0 +1.2**
KURK pmax pmax
comp=Z,16nm,1.7s
KURK Kurchatov 29.91 33 P **P 20 20 09.5 -4.3**
KURK Kurchatov 29.91 33 **P 20 20 13.1 -0.7**
ARCR ARCALIA 29.92 318 ⇓P **P 20 20 16.0 +2.1**
OBN Obninsk 30.05 341 P **P 20 20 15.6 +0.7**
comp=Z,6.3nm,0.3s,baz=131,slow=20,SNR=5.6
OBN LR LR 20 35 31.2
comp=Z,133nm,19.4s,baz=192,slow=43
comp=Z,6.3nm,0.3s
OBN Obninsk 30.05 341 ⇓*i*P **P 20 20 16.0 +1.1**
OBN *SP **sP 20 20 21.0 -0.1**
OBN PPP PPP 20 21 26.0
OBN *i* S **S 20 25 18.2 +5.5**
OBN pmax pmax
comp=Z,38nm,1.7s
OBN MLR MLR
comp=Z,103nm,18.0s
OBN Obninsk 30.05 341 P **P 20 20 14.4 -0.5**
GZR Gura Zlata 30.09 314 ⇓P **P 20 20 16.4 +0.8**
GZR Gura Zlata 30.09 314 P **P 20 20 17.9 +2.3**
HERR Herculane 30.11 313 ⇑P **P 20 20 16.8 +1.2**
CJR Cluj-Napoca 30.19 317 ⇓P **P 20 20 18.5 +2.1**
CJR Cluj-Napoca 30.19 317 P **P 20 20 18.4 +2.1**
MOS Moscow 30.30 342 *eP* **P 20 20 18.3 +1.2**
MOS *e* 20 21 17.3
MOS pmax pmax
comp=Z,24nm,0.7s
MARR Marisel-Cluj 30.46 317 ⇑P **P 20 20 20.5 +1.7**
MDVR Moldovita 30.53 312 ⇓P **P 20 20 21.0 +1.6**
BMR Baia Mare 30.72 319 ⇓P **P 20 20 23.0 +2.0**
BMR Baia Mare 30.72 319 P **P 20 20 22.9 +2.0**
BZS Buzias 30.93 314 ⇑P **P 20 20 24.2 +1.3**
BZS Buzias 30.93 314 P **P 20 20 24.1 +1.3**
KIRV Kirov 31.04 356 P **P 20 20 24.7 +1.0**
comp=Z,18nm,0.5s,baz=178,slow=4.0,SNR=11
KIRV LR LR 20 35 34.7
comp=Z,112nm,20.6s,baz=165,slow=42
comp=Z,18nm,0.5s
KIRV Kirov 31.04 356 *ce*P **P 20 20 25.1 +1.5**
SIRR Siria 31.18 315 ⇑P **P 20 20 27.3 +2.3**
ZSN Zaisan 31.48 43 *eP* **P 20 20 28.0 +0.4**
ZSN Zaisan 31.48 43 *eP* **P 20 20 28.0 +0.4**
KOLS Kolonicke sedl 32.05 320 *eP* **P 20 20 35.0 +2.3**
KOLS pmax pmax
comp=Z,50nm,1.0s
KOLS Kolonicke sedl 32.05 320 *eP* **P 20 20 35.0 +2.3**
KWP Kalwaria Pacla 32.17 321 *eP* **P 20 20 34.8 +1.1**
TIP Timpagrande 32.51 300 ⇑P **P 20 20 38.4 +1.5**
TIP Timpagrande 32.51 300 **P 20 20 37.2 +0.3**
TIP IAmb IAmb 20 20 39.5
comp=Z,23nm,1.5s
KMBO Kilima Mbogo 32.58 211 LR LR 20 34 00.0
comp=Z,241nm,19.2s,baz=96,slow=37
MNK Minsk 32.67 332 *i* P **P 20 20 37.5 -0.5**
comp=E,10.0nm,0.8s
MNK *i* P **P 20 20 37.5 -0.5**
comp=N,17nm,1.0s
MNK *i* P **P 20 20 37.5 -0.5**
comp=Z,12nm,0.8s,baz=134
MNK *i* PP **PP 20 21 45.5 -6.4**
MNK *i* PPP PPP 20 21 55.0
MNK *i* S **S 20 25 54.8 +1.0**
MNK *i* SS **SnSn 20 27 49.9 +1.1**
MNK *i* SSS SSS 20 28 08.0
MNK *i* LQ LQ 20 31 15.8
MNK *i* LR LR 20 33 35.0
MNK *i* LRM MLR 20 35 22.9
comp=E,184nm,20.2s
MNK *i* LRM MLR 20 35 22.9
comp=Z,211nm,20.3s
MNK *i* LRM MLR 20 35 24.8
comp=N,104nm,18.7s
MNK Minsk 32.67 332 *i* P **P 20 20 37.5 -0.5**
MNK *i* 20 21 45.5
MNK *i* S **S 20 25 54.7 +1.0**
MNK *i* SS **SnSn 20 27 49.9 +1.1**
MNK pmax pmax
comp=N,17nm,1.0s
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK MLR MLR
comp=Z,211nm,20.0s
MNK MLR MLR
comp=E,184nm,20.0s
MNK MLR MLR
comp=N,104nm,19.0s
PALK Pallekele 32.82 123 LR LR 20 33 02.1
comp=N,169nm,19.1s,baz=18,slow=35
PALK Pallekele 32.82 123 P **P 20 20 39.6 -0.2**
PALK pmax pmax
comp=Z,41nm,1.4s
PALK Pallekele 32.82 123 P **P 20 20 39.6 -0.2**
KECS Kecovo 32.88 318 *eP* **P 20 20 41.9 +2.0**
PSZ Piszkesteto 32.98 317 ⇓P **P 20 20 42.3 +1.3**
PSZ Piszkesteto 32.98 317 P **P 20 20 42.2 +1.3**
MORH Mrgy, Hungar 33.07 313 ⇑P **P 20 20 42.9 +1.2**
KIBK Kibwezi 33.31 209 P **P 20 20 46.5 +2.4**
KIBK IAmb IAmb 20 20 59.4
comp=Z,21nm,1.5s
NACGM Naroch 33.41 332 *eP* **P 20 20 44.4 -0.1**
LANS Liptovska Anna 33.78 319 *eP* **P 20 20 49.7 +1.9**
LANS pmax pmax
comp=Z,21nm,0.8s
LANS Liptovska Anna 33.78 319 *eP* **P 20 20 49.7 +1.9**
SRO Srobarova 33.90 316 *eP* **P 20 20 50.5 +1.7**
SRO pmax pmax
comp=Z,22nm,1.1s
SRO Srobarova 33.90 316 *eP* **P 20 20 50.5 +1.7**
DGZ Jazzator, Alta 34.03 40 *i* P **P 20 20 50.0 -0.2**
DGZ pmax pmax
comp=Z,17nm,1.6s
OJC Ojcow 34.09 321 *eP* **P 20 20 51.3 +0.8**
BEHE Becsehely 34.37 313 IAmb IAmb 20 20 58.1
comp=Z,14nm,0.9s
SUW Suwalki 34.42 328 *eP* **P 20 20 53.4 +0.1**
KLMR Klimovskoe 34.51 348 *eP* **P 20 20 52.2 -1.7**
KLMR pmax pmax
comp=Z,23nm,1.3s
KLMR MLR MLR
comp=Z,196nm,13.0s
JAVC Velka Javorina 34.72 317 *eP* **P 20 20 57.6 +1.6**
SMOL Smolenice 34.73 317 *eP* **P 20 20 57.0 +1.0**
SMOL pmax pmax
comp=Z,7.0nm,1.2s
MODS Modra-Piesok 34.76 316 *eP* **P 20 20 57.1 +0.8**
MODS pmax pmax
comp=Z,37nm,1.3s
MODS Modra-Piesok 34.76 316 *eP* **P 20 20 57.1 +0.8**
MAUC Maruska 34.84 318 *eP* **P 20 20 58.3 +1.3**
OKC Ostrava-Krasne 34.86 319 *eP* **P 20 20 57.9 +0.8**
OKC Ostrava-Krasne 34.86 319 *eP* **P 20 20 57.9 +0.8**
ZAA0 Zalesovo Array 34.90 33 **P 20 20 55.7 -1.7**
ZAA0 IAmb IAmb 20 20 58.6
comp=Z,37nm,1.5s
ZALV Zalesovo Beam 34.90 33 P **P 20 20 57.5 0.0**
comp=Z,11nm,0.5s,baz=232,slow=9.0,SNR=40
ZALV LR LR 20 36 39.4
comp=Z,194nm,18.3s,baz=226,slow=39
comp=Z,11nm,0.5s
ZALV Zalesovo Beam 34.90 33 *i* P **P 20 20 57.7 +0.2**
ZALV pmax pmax
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 34.90 33 **P 20 20 56.6 -0.9**
PABE Paberze 35.02 331 *eP* **P 20 20 58.7 +0.3**
BOJS Bojanci 35.07 311 *i* P **P 20 21 00.1 +1.1**
RONA Rosalia, Austr 35.12 315 *i* P **P 20 21 00.0 +0.6**
comp=Z,7.0nm,0.7s,SNR=7.3
STEB Steborice 35.12 319 *eP* **P 20 21 00.1 +0.7**
STEB *epP* **pP 20 21 03.1 -0.7**
DOBS Dobrina 35.12 312 *i* P **P 20 21 00.6 +1.1**
MORC Moravsky Berou 35.18 319 ⇑P **P 20 21 00.8 +0.8**
MORC Moravsky Berou 35.18 319 P **P 20 21 00.8 +0.8**
MORC Moravsky Berou 35.18 319 IAmb IAmb 20 21 01.8
comp=Z,26nm,1.0s
MORC Moravsky Berou 35.18 319 *eP* **P 20 21 00.6 +0.6**
WINA Alland / Wiene 35.40 315 *i* P **P 20 21 02.8 +0.9**
SNR=5.2
PDKS Podkum 35.41 312 *i* P **P 20 21 03.3 +1.4**
ARSA Arzberg 35.45 314 *i* P **P 20 21 03.4 +1.1**
comp=Z,9.5nm,1.0s,SNR=8.3
CONA Conrad Observa 35.47 315 *i* P **P 20 21 03.1 +0.5**
comp=Z,10nm,1.0s,SNR=7.2
VRAC Vranov 35.55 318 P **P 20 21 03.8 +0.7**
comp=Z,8.7nm,0.8s,baz=111,slow=9.5,SNR=14
VRAC LR LR 20 38 38.2
comp=Z,59nm,18.5s,baz=95,slow=41
comp=Z,8.7nm,0.8s
VRAC Vranov 35.55 318 ⇓P **P 20 21 04.5 +1.4**
VRAC Vranov 35.55 318 *eP* **P 20 21 03.9 +0.8**
KRUC Moravsky 35.57 317 *eP* **P 20 21 03.9 +0.6**
MBAR Mbarara 35.57 222 LR LR 20 37 01.1
comp=Z,177nm,18.1s,baz=36,slow=39
MBAR Mbarara 35.57 222 *ce*P **P 20 21 08.5 +4.7**
MBAR pmax pmax
comp=Z,4.0nm,0.7s
MBAR Mbarara 35.57 222 P **P 20 21 05.2 +1.4**
SOKA Soboth 35.58 313 *i* P **P 20 21 04.5 +1.0**
comp=Z,5.3nm,1.0s,SNR=5.1
KRLC Kraliky 35.76 319 *eP* **P 20 21 05.6 +0.7**
KRLC *e*PP **pP 20 21 08.8 -0.5**
KRLC Kraliky 35.76 319 *eP* **P 20 21 05.6 +0.7**
KRLC *ep*P **pP 20 21 08.8 -0.5**
OBKA Obir 35.84 312 *i* P **P 20 21 07.0 +1.3**
comp=Z,8.8nm,1.5s,SNR=7.3
FDMO Fiordimonte 35.95 306 IAmb IAmb 20 21 09.3
comp=Z,29nm,1.4s
VSU Vasula 35.98 336 *ce*P **P 20 21 06.7 +0.1**
VSU pmax pmax
comp=Z,18nm,1.0s
SESA Seetaler Alpe, 36.02 313 *i* P **P 20 21 08.7 +1.3**
SNR=7.7
DPC Dobruska-Polom 36.14 319 *eP* **P 20 21 09.2 +1.0**
DPC Dobruska-Polom 36.14 319 *eP* **P 20 21 09.2 +1.0**
TREC Trest 36.21 317 *eP* **P 20 21 10.1 +1.3**
TREC MLR MLR
comp=Z,200nm,13.9s
TREC Trest 36.21 317 *eP* **P 20 21 10.1 +1.3**
TREC AMS AMS 20 38 00.0
comp=Z,200nm,13.9s
CESX Cesi 36.23 305 IAmb IAmb 20 21 11.4
comp=Z,23nm,1.3s
OSTC Ostas 36.29 319 *eP* **P 20 21 10.3 +0.9**
OSTC Ostas 36.29 319 *eP* **P 20 21 10.3 +0.9**
SABO M.te Sabotino 36.31 311 IAmb IAmb 20 21 10.8
comp=Z,13nm,0.7s
KSP Ksiaz 36.37 320 *eP* **P 20 21 10.8 +0.7**
CHVC Chvalec 36.39 319 *eP* **P 20 21 11.1 +0.8**
CHVC Chvalec 36.39 319 *eP* **P 20 21 11.1 +0.8**
MURB Monte Urbino 36.40 306 IAmb IAmb 20 21 14.5
comp=Z,33nm,1.3s
MOA Molln 36.45 314 *i* P **P 20 21 11.6 +0.7**
comp=Z,12nm,0.9s,SNR=7.5
MYKA Terra Mystica 36.47 312 *i* P **P 20 21 12.8 +1.6**
comp=Z,13nm,1.4s
CKRC Cesky Krumlov 36.76 316 *eP* **P 20 21 14.0 +0.5**
CKRC Cesky Krumlov 36.76 316 *eP* **P 20 21 14.0 +0.5**
BIOA Bad Ischl, Aus 36.80 314 *i* P **P 20 21 14.7 +0.9**
comp=Z,12nm,0.6s,SNR=14
KBA Koelnbreinsper 36.80 313 *i* P **P 20 21 15.3 +1.3**
comp=Z,17nm,1.1s
ARBE Arbavere 36.96 337 *eP* **P 20 21 15.5 +0.5**
STAL STALIGIAL 36.98 311 IAmb IAmb 20 21 16.9
comp=Z,19nm,1.1s
PRU Pruhonice 37.04 318 *eP* **P 20 21 19.0 +3.2**
PRU Pruhonice 37.04 318 *eP* **P 20 21 19.0 +3.2**
ZVC Zvikov 37.05 317 *eP* **P 20 21 16.9 +1.0**
GEC2 GERESS Array S 37.14 316 *eP* **P 20 21 17.1 +0.3**
comp=Z,2.8nm,0.8s,baz=111,slow=8.5
GERES GERESS Array B 37.14 316 P **P 20 21 16.8 0.0**
comp=Z,1.6nm,0.5s,baz=111,slow=7.8,SNR=17
GERES PcP **PcP 20 23 36.6 -0.3**
comp=Z,0.8nm,0.6s,baz=132,slow=1.5,SNR=4.7
GERES ScP **ScP 20 27 23.6 -0.1**
comp=Z,0.3nm,0.7s,baz=108,slow=3.2,SNR=4.3
GERES LR LR 20 40 20.0
comp=Z,62nm,18.3s,baz=142,slow=42
comp=Z,1.8nm,0.5s
ABTA Abfaltersbach 37.25 312 *i* P **P 20 21 18.7 +0.9**
comp=Z,19nm,1.1s,SNR=16
KHC Kasperske Hory 37.32 316 *ce*P **P 20 21 19.0 +0.8**
KHC pmax pmax
comp=Z,17nm,1.0s
KHC Kasperske Hory 37.32 316 *eP* **P 20 21 19.0 +0.8**
KHC *ep*P **pP 20 21 22.6 0.0**
KHC AMS AMS 20 41 00.0
comp=Z,100nm,16.1s
LESA Schwarzleotal 37.34 313 *i* P **P 20 21 19.0 +0.5**
comp=Z,11nm,0.7s,SNR=12
LESA *e*S **S 20 27 07.2 +1.3**
comp=Z,4.0nm,1.6s
ZCCA Zocca 37.72 308 IAmb IAmb 20 21 28.0
comp=Z,14nm,0.8s
BRG Berggiesshubel 37.74 319 *eP* **P 20 21 22.1 +0.4**
comp=Z,7.4nm,0.9s,baz=111,slow=8.5
BRG Berggiesshubel 37.74 319 *eP* **P 20 21 22.1 +0.4**
BRG Amp 20 21 23.2
comp=Z,7.4nm,0.9s
WET Wettzell 37.75 316 *eP* **P 20 21 21.9 0.0**
comp=Z,6.0nm,0.8s,baz=111,slow=8.5
WET *e*L L 20 38 24.6
comp=Z,85nm,18.6s
HSKC Hora Svate Kat 37.94 318 *eP* **P 20 21 23.9 +0.5**
WTTA Wattenberg 37.97 312 *i* P **P 20 21 24.4 +0.5**
comp=Z,54nm,1.5s,SNR=21
WTTA *e*S **S 20 27 19.2 +3.5**
comp=Z,5.4nm,1.2s
WATA Walderalm 38.03 313 *i* P **P 20 21 24.5 +0.1**
comp=Z,14nm,0.6s,SNR=19
WATA *e*S **S 20 27 17.5 +1.0**
comp=Z,7.6nm,1.4s
MEF Metsahovi 38.08 337 *eP* **P 20 21 24.8 +0.4**
KEST Kesra 38.12 293 P **P 20 21 25.1 -0.2**
comp=Z,3.3nm,0.9s,baz=99,slow=19,SNR=4.3
comp=Z,3.3nm,0.9s
JOF Joensuu 38.13 344 *eP* **P 20 21 25.4 +0.5**
VSL Villasalto 38.22 300 IAmb IAmb 20 21 29.1
comp=Z,25nm,1.4s
SQTA Sankt Quirin 38.24 312 *i* P **P 20 21 26.4 +0.3**
comp=Z,24nm,0.5s,SNR=26
SQTA *e*S **S 20 27 21.3 +1.7**
comp=Z,3.2nm,0.8s
SALO Salr 38.30 310 IAmb IAmb 20 21 28.6
comp=Z,20nm,0.9s
MOTA Moosalm 38.34 312 *i* P **P 20 21 27.1 0.0**
comp=Z,34nm,1.1s,SNR=15
MOTA *e*S **S 20 27 22.8 +1.5**
comp=Z,6.8nm,1.4s
FINES FINESS Array B 38.43 339 P **P 20 21 27.5 +0.2**
comp=Z,6.7nm,0.4s,baz=136,slow=11,SNR=75
FINES PcP **PcP 20 23 40.1 -0.3**
comp=Z,1.6nm,0.6s,baz=144,slow=2.6,SNR=2.0
FINES LR LR 20 40 42.7
comp=Z,110nm,18.7s,baz=140,slow=42
comp=Z,6.7nm,0.4s
FINES FINESS Array B 38.43 339 *i* P **P 20 21 27.6 +0.3**
FINES pmax pmax
comp=Z,7.0nm,0.4s
TANN Tannenbergstha 38.44 318 *eP* **P 20 21 28.1 +0.4**
comp=Z,2.7nm,0.8s,baz=111,slow=8.5
FUR Furstenfeldbru 38.46 314 *eP* **P 20 21 28.4 +0.6**
comp=Z,42nm,1.1s,baz=111,slow=8.5
FUR *e*L L 20 41 10.1
comp=Z,57nm,18.2s
RUE Ruedersdorf 38.48 321 *eP* **P 20 21 28.7 +0.9**
comp=Z,78nm,1.4s,baz=111,slow=8.5
FETA Feichten 38.50 312 *i* P **P 20 21 28.9 +0.5**
comp=Z,26nm,0.8s,SNR=18
FETA *e*S **S 20 27 21.7 -2.0**
comp=Z,5.1nm,1.7s
RETA Reutte 38.60 313 *i* P **P 20 21 29.0 -0.1**
comp=Z,10nm,0.6s,SNR=10
RETA *e*S **S 20 27 23.2 -1.8**
comp=Z,1.7nm,0.8s
GRA1 Grafenberg Arr 38.95 316 IAmb IAmb 20 21 33.6
comp=Z,17nm,0.8s
GRF Grafenberg Arr 38.95 316 *eP* **P 20 21 32.5 +0.5**
comp=Z,17nm,0.8s,baz=111,slow=8.5
GRF *e*L L 20 40 19.9
comp=Z,47nm,19.4s
GRFO Grafenberg 38.95 316 P **P 20 21 32.9 +0.9**
GRFO Grafenberg 38.95 316 P **P 20 21 32.9 +0.9**
DAVOX Davos/Dischmat 39.01 311 LR LR 20 41 01.0
comp=Z,105nm,18.0s,baz=80,slow=41
MOX Moxa 39.03 318 *eP* **P 20 21 33.1 +0.4**
comp=Z,4.2nm,1.0s,baz=111,slow=8.5
MOX *e*L L 20 41 45.5
comp=Z,87nm,20.0s
BSD Bornholm Skovb 39.05 325 *i* P **P 20 21 32.5 -0.2**
BSD IAmb IAmb 20 21 32.8
comp=Z,3.3nm,0.3s
DAVA Damuels 39.13 312 *i* P **P 20 21 34.0 +0.3**
comp=Z,59nm,0.4s,SNR=41
DAVA *e*ScP **ScP 20 27 28.6 -2.7**
comp=Z,3.4nm,0.9s
NEUB Neuenburg 39.13 318 *eP* **P 20 21 34.2 +0.8**
comp=Z,8.4nm,0.8s,baz=111,slow=8.5
BLEU Blekinge 39.21 327 *i* P **P 20 21 34.4 +0.5**
KEF Keuruu 39.35 339 *eP* **P 20 21 35.5 +0.4**
SUF Sumiainen 39.38 341 *eP* **P 20 21 35.6 +0.3**
RAF Rauma 39.57 336 *eP* **P 20 21 36.9 -0.1**
AAL Aland 39.66 334 *eP* **P 20 21 37.4 -0.4**
FLTG Flechtingen 39.85 320 *eP* **P 20 21 40.2 +0.8**
comp=Z,39nm,1.3s,baz=111,slow=8.5
GTA2 Gaotai 39.95 61 P **P 20 21 41.8 +1.2**
GTA2 pmax pmax
comp=Z,28nm,1.0s
GTA2 L L
comp=Z,220nm,13.7s
GTA2 L L
comp=Z,140nm,15.1s
GTA2 L L
comp=Z,160nm,15.8s
LUNU Lund 40.04 325 *i* P **P 20 21 42.0 +1.1**
UBBA Unterbreizbach 40.06 317 *eP* **P 20 21 42.1 +1.1**
comp=Z,9.2nm,1.2s,baz=111,slow=8.5
GORT1 Trebel 40.06 321 *eP* **P 20 21 42.5 +1.4**
comp=Z,35nm,1.1s,baz=111,slow=8.5
CLZ Clausthal 40.17 319 *eP* **P 20 21 43.4 +1.2**
comp=Z,17nm,0.8s,baz=111,slow=8.5
DEL Delary 40.23 327 *i* P **P 20 21 42.8 +0.4**
DEL IAmb IAmb 20 21 48.6
comp=Z,0.3nm,0.3s
TNCH TengChong 40.31 83 P **P 20 21 44.4 +0.6**
TNCH pmax pmax
comp=Z,24nm,1.0s
GTTG Gottingen 40.31 318 *eP* **P 20 21 44.6 +1.3**
comp=Z,12nm,1.0s,baz=111,slow=8.5
KNGR Kungurtug, Tuv 40.36 43 *i* P **P 20 21 44.3 +0.5**
KNGR pmax pmax
comp=Z,43nm,1.3s
UPP Uppsala 40.40 333 ⇑*eP* **P 20 21 44.1 +0.3**
BFO Black Forest 40.40 313 P **P 20 21 43.3 -0.8**
BFO pmax pmax
comp=Z,29nm,1.8s
BFO Black Forest 40.40 313 **P 20 21 43.3 -0.8**
BFO Black Forest 40.40 313 *eL* L 20 42 09.1
comp=Z,53nm,18.0s
BJUU Bjuv 40.45 326 *i* P **P 20 21 45.2 +0.9**
SENIN Lac Senin/Sane 40.66 310 **P 20 21 46.1 -0.4**
VAF Ylistaro 40.69 339 *eP* **P 20 21 46.3 +0.2**
TNS Taunus Mts 40.82 316 *eL* L 20 43 42.8
comp=Z,66nm,18.8s
BSEG Bad Segeberg 40.97 322 *eL* L 20 40 46.8
comp=Z,40nm,19.0s
FABU Falkenberg 41.04 327 *i* P **P 20 21 49.8 +0.7**
RETH Rethem/Aller, 41.07 320 *eP* **P 20 21 51.0 +1.6**
comp=Z,31nm,1.4s,baz=111,slow=8.5
KASTN Kahler Asten 41.13 317 *eP* **P 20 21 51.6 +1.5**
comp=Z,19nm,1.1s,baz=111,slow=8.5
ONAU Onsala 41.61 327 *i* P **P 20 21 53.5 -0.3**
APA Apatity 41.74 349 *eP* P 20 22 05.7 +11
APA *e* 20 23 34.3
APA pmax pmax
comp=Z,40nm,1.1s
APA MLR MLR
comp=Z,809nm,4.0s
BUG Bochum--Univer 41.88 317 *eP* **P 20 21 57.4 +1.3**
comp=Z,13nm,1.1s,baz=111,slow=8.5
TJOU Tjoern 42.05 328 *i* P **P 20 21 57.5 +0.1**
WLF Walferdange 42.11 315 *dP* **P 20 21 58.3 +0.2**
comp=Z,9.9nm,0.9s
WLF Walferdange 42.11 315 *eP* **P 20 21 58.5 +0.4**
comp=Z,14nm,0.9s,baz=111,slow=8.5
HFS Hagfors 42.18 332 P **P 20 21 58.5 0.0**
comp=Z,6.4nm,0.6s,baz=126,slow=7.4,SNR=35
HFS LR LR 20 42 56.9
comp=Z,99nm,20.9s,baz=118,slow=41
comp=Z,6.4nm,0.6s
BHOU Houvegnez 42.37 316 *dP* **P 20 22 01.3 +1.1**
comp=Z,5.6nm,0.9s
MEM Membach 42.43 316 *dP* **P 20 22 03.6 +3.0**
CHTO Chiang Mai 42.52 92 P **P 20 22 01.3 -0.5**
CHTO pmax pmax
comp=Z,11nm,0.9s
CHTO Chiang Mai 42.52 92 **P 20 22 01.3 -0.5**
CM31 Chiang Mai Arr 42.65 92 P **P 20 22 01.5 -1.4**
CMAR Chiang Mai Arr 42.65 92 P **P 20 22 03.1 +0.3**
comp=Z,2.8nm,0.9s,baz=291,slow=8.0,SNR=17
CMAR PcP **PcP 20 23 55.1 +0.2**
comp=Z,0.9nm,0.8s,baz=287,slow=2.8,SNR=3.1
CMAR LR LR 20 41 56.5
comp=Z,68nm,18.2s,baz=180,slow=39
comp=Z,2.8nm,0.9s
CMAR Chiang Mai Arr 42.65 92 *ce*P **P 20 22 03.5 +0.6**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 42.65 92 **P 20 22 02.2 -0.7**
CMAR **PcP 20 23 53.9 -1.0**
STRU Stroemstad 42.73 329 *i* P **P 20 22 02.5 -0.4**
MOY Mondy 42.76 43 *eP* **P 20 22 04.9 +1.4**

MOY pmax pmax
comp=Z,31nm,2.3s
RCHB Rochefort 42.81 315 *d*P **P 20 22 03.8 +0.1**
comp=Z,8.3nm,0.9s
BCLA Clavier 42.82 315 *d*P **P 20 22 04.6 +0.7**
BGES Gesves 42.95 315 *d*P **P 20 22 05.7 +0.8**
comp=Z,5.2nm,1.1s
LZDM Lanzhou Array 43.10 66 P **P 20 22 07.0 +0.3**
comp=Z,3.1nm,0.3s,baz=229,slow=6.6,SNR=4.1
comp=Z,3.1nm,0.3s
BMRD Maredsous 43.13 315 *d*P **P 20 22 07.2 +0.8**
comp=Z,7.3nm,1.0s
DOU Dourbes 43.19 315 *d*P **P 20 22 07.2 +0.4**
comp=Z,11nm,1.2s
LZH Lanzhou 43.21 66 *e*P **P 20 22 08.1 +0.7**
LZH pP sP 20 22 14.7 +1.0
LZH pmax pmax
comp=Z,32nm,1.1s
LZH L L
comp=Z,220nm,19.2s
LZH L L
comp=Z,240nm,16.8s
LZH L L
comp=Z,200nm,17.2s
OSL Oslo 43.37 330 *e*P **P 20 22 08.7 +0.7**
OSL lAmb lAmb 20 22 13.6
comp=Z,14nm,0.6s
NC602 NORSAR Array S 43.41 331 *e*P **P 20 22 09.9 +1.5**
TAM Tamanrasset 43.42 275 P **P 20 22 09.5 +0.3**
TAM pmax pmax
comp=Z,118nm,0.2s
TAM Tamanrasset 43.42 275 P **P 20 22 09.5 +0.3**
UCC Uccle 43.49 316 lAmb lAmb 20 22 14.0
comp=Z,15nm,0.9s
UCC Uccle 43.49 316 *d*P **P 20 22 10.4 +1.2**
comp=Z,13nm,1.0s
NC405 NORSAR Array S 43.53 332 P **P 20 22 09.1 -0.3**
NC405 lAmb lAmb 20 22 12.4
comp=Z,24nm,1.2s
HOMB Homborsund 43.63 327 *e*P **P 20 22 10.3 0.0**
HOMB lAmb lAmb 20 22 20.1
comp=Z,11nm,0.8s
HOMB Homborsund 43.63 327 *i* P **P 20 22 10.6 +0.3**
NB2 NORSAR Subarra 43.70 332 P **P 20 22 10.5 -0.3**
comp=Z,2.6nm,0.7s,baz=121,slow=8.6
NB2 NORSAR Subarra 43.70 332 P **P 20 22 10.5 -0.3**
NOA NORSAR Array B 43.70 332 P **P 20 22 10.1 -0.7**
comp=Z,2.9nm,0.7s,baz=120,slow=8.1,SNR=20
NOA PcP **PcP 20 23 57.1 -0.6**
comp=Z,0.9nm,0.7s,baz=130,slow=4.1,SNR=3.6
NOA LR LR 20 44 01.9
comp=Z,82nm,19.4s,baz=125,slow=41
comp=Z,2.9nm,0.7s
CD2 Chengdu 43.70 73 *e*P **P 20 22 10.0 -1.3**
ZAK Zakamensk 43.86 45 *e*P **P 20 22 12.5 +0.1**
ZAK *e* 20 23 54.7
ZAK pmax pmax
comp=Z,12nm,2.1s
ZAK pmax pmax
comp=Z,9.0nm,1.8s
KMI2 Kunming 43.99 82 P **P 20 22 13.1 -0.8**
KMI2 sP pP 20 22 19.3 +0.9
KMI2 pmax pmax
comp=Z,14nm,1.4s
KMI2 L L
comp=Z,140nm,8.3s
KMI2 L L
comp=Z,200nm,10.1s
KMI2 L L
comp=Z,180nm,21.1s
TLY Talaya 44.37 43 LR LR 20 42 40.3
comp=Z,204nm,19.4s,baz=242,slow=39
CEST Esterri de Car 44.53 304 lAmb lAmb 20 22 20.5
comp=Z,22nm,1.3s
LANU Lannavaara 44.57 344‖ *e*P **P 20 22 18.3 +0.6**
VADS Vadso 44.70 349 *e*P **P 20 22 19.5 +0.9**
SKAR Skarslia 44.78 330 *e*P **P 20 22 19.8 +0.3**
SKAR lAmb lAmb 20 22 23.6
comp=Z,6.6nm,0.8s
ARA0 ARCESS Array S 44.94 347 *e*P **P 20 22 21.2 +0.5**
ARCES ARCESS Array B 44.94 347 P **P 20 22 19.4 -1.2**
comp=Z,3.4nm,0.8s,baz=145,slow=8.1,SNR=8.9
ARCES LR LR 20 43 55.2
comp=Z,69nm,18.3s,baz=116,slow=40
comp=Z,3.4nm,0.8s
ARCES ARCESS Array B 44.94 347 P **P 20 22 19.4 -1.2**
KTK1 Kautokeino 45.02 345 *e*P **P 20 22 21.0 -0.3**
SONM Songino Array 45.47 49 P **P 20 22 25.8 +0.5**
comp=Z,4.0nm,1.0s,baz=261,slow=8.4,SNR=28
SONM LR LR 20 42 17.6
comp=Z,174nm,21.7s,baz=264,slow=37
comp=Z,4.0nm,1.0s
SONM Songino Array 45.47 49 P **P 20 22 24.9 -0.4**
SONM pmax pmax
comp=Z,10.0nm,1.2s
SONM Songino Array 45.47 49 **P 20 22 24.9 -0.4**
RAUS Rausandaksla 45.71 339 *e*P **P 20 22 27.1 +0.4**
LEIR Leirfjorden 45.81 338 *e*P **P 20 22 27.3 -0.2**
LEIR lAmb lAmb 20 22 31.3
comp=Z,24nm,1.2s
ULN Ulaanbaatar 45.91 49*ce*P **P 20 22 29.7 +0.9**
ULN pmax pmax
comp=Z,12nm,1.7s
FAUS Fauske 45.93 341 *e*P **P 20 22 28.8 +0.4**
MOL Molde 45.97 332 *e*P **P 20 22 29.8 +1.0**
STOK Stokkvaagen 45.98 339 *e*P **P 20 22 29.2 +0.4**
KONS Konsvik 46.04 339 *e*P **P 20 22 29.7 +0.3**
JETT Jettan, Norway 46.09 345 *e*P **P 20 22 30.3 +0.5**
SLVN Son La 46.09 86 P **P 20 22 29.8 -0.6**
SLVN lAmb lAmb 20 23 46.8
comp=Z,15nm,1.5s
VAGH Vaagaholmen 46.13 339 *e*P **P 20 22 30.4 +0.3**
NRIK Noril'sk 46.19 16 P **P 20 22 31.4 +1.0**
comp=Z,3.5nm,0.4s,baz=216,slow=5.9,SNR=8.6
NRIK LR LR 20 45 47.1
comp=Z,141nm,19.1s,baz=200,slow=41
comp=Z,3.5nm,0.4s
NRIK Noril'sk 46.19 16 *i* P **P 20 22 31.0 +0.6**
NRIK pmax pmax
comp=Z,21nm,1.3s
NRIK Noril'sk 46.19 16 **P 20 22 30.4 0.0**
NRIK lAmb lAmb 20 22 32.9
comp=Z,20nm,1.2s
STEI Steigen 46.30 341 *e*P **P 20 22 31.2 -0.1**
TRO Tromso 46.50 344 *e*P **P 20 22 33.1 +0.2**
ABPO Ambohimpanom 46.79 188 P **P 20 22 37.6 +1.7**
ABPO pmax pmax
comp=Z,47nm,1.6s
ABPO Ambohimpanom 46.79 188 P **P 20 22 37.5 +1.7**
LOF Lofoten 46.92 341 *e*P **P 20 22 36.0 -0.3**
BTO2 Baotou 47.71 59 *e*P **P 20 22 44.1 +1.1**
BTO2 pP **sP 20 22 48.7 -0.5**
BTO2 sP **pP 20 22 51.1 +3.6**
BTO2 S **S 20 29 38.5 -0.4**
BTO2 pmax pmax
comp=Z,43nm,0.8s
BTO2 pmax pmax
comp=Z,230nm,6.9s
ROCAM Rodrigues Isla 48.10 167 P **P 20 22 46.4 +0.5**
ESDC Sonseca Array 48.52 300 P **P 20 22 49.4 +0.2**
comp=Z,5.2nm,1.1s,baz=83,slow=7.3,SNR=17
comp=Z,5.2nm,1.1s
ESDC Sonseca Array 48.52 300 **P 20 22 49.3 +0.1**
PAB San Pablo 48.83 300 P **P 20 22 51.7 +0.1**
PAB pmax pmax
comp=Z,20nm,1.3s
PAB San Pablo 48.83 300 P **P 20 22 51.7 +0.1**
PAB lAmb lAmb 20 22 53.4
comp=Z,20nm,1.3s
EKA Eskdalemuir Ar 48.86 321 P **P 20 22 51.2 -0.2**
comp=Z,0.8nm,0.4s,baz=99,slow=8.1,SNR=9.3
comp=Z,0.8nm,0.4s
HHC Hu-ho-hao-te 48.98 59 *e*P **P 20 22 52.4 -0.4**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,53nm,4.7s
LSZ Lusaka 49.21 213 LR LR 20 44 22.1
comp=Z,156nm,19.1s,baz=67,slow=37
LSZ Lusaka 49.21 213 P **P 20 22 56.5 +1.8**
LSZ pmax pmax
comp=Z,27nm,1.8s
LSZ Lusaka 49.21 213 **P 20 22 56.5 +1.8**
LSZ lAmb lAmb 20 23 10.6
comp=Z,27nm,1.8s
GSI Gunungsitoli 49.68 114 P **P 20 22 58.9 +0.6**
GSI lAmb lAmb 20 22 60.0
comp=Z,19nm,1.1s
VOI Vohitsoka 49.69 188 P **P 20 22 59.9 +1.7**
MD01 Midelt array s 50.01 291 P **P 20 23 01.2 +0.5**
KULM Kulim 50.02 108 P **P 20 23 01.4 +0.5**
KULM lAmb lAmb 20 23 58.2
comp=Z,16nm,1.3s
TORD Torodi Ar. Bea 50.27 264 P **P 20 23 02.7 0.0**
comp=Z,4.0nm,0.9s,baz=61,slow=8.2,SNR=17
comp=Z,4.0nm,0.9s
TORD Torodi Ar. Bea 50.27 264 P **P 20 23 02.7 0.0**
DSB Dublin 50.43 318 P **P 20 23 03.8 +0.3**
PBRG Braganca 50.48 303 *e*P **P 20 23 04.1 0.0**
ILTH Belurgan, Co L 50.49 319 P **P 20 23 04.0 +0.1**
IWEX Carrickbyrne, 50.59 316 P **P 20 23 04.7 0.0**
MVO Moncorvo 50.75 302 *e*P **P 20 23 07.1 +0.9**
MVO *i* lAmb lAmb 20 23 09.8
comp=Z,28nm,1.7s
PBAR Barrancos 51.06 298 *e*P **P 20 23 08.5 +0.1**
PBAR *i* lAmb lAmb 20 23 10.2
comp=Z,28nm,1.4s
IDGL Inch Island, C 51.29 320 P **P 20 23 10.3 +0.4**
PVAQ Vaqueiros 51.69 297 *e*P **P 20 23 13.8 +0.6**
PVAQ *i* lAmb lAmb 20 23 17.5
comp=Z,24nm,1.7s
XLT XiLinHaoTe 52.13 54 *e*P **P 20 23 16.9 +0.4**
XLT sP sP 20 23 24.5 +1.7
XLT pmax pmax
comp=Z,6.0nm,1.1s
XLT pmax pmax
comp=Z,91nm,5.0s
XLT L L
comp=Z,170nm,12.2s
XLT L L
comp=Z,190nm,12.6s
IGLA Glengowla, Co 52.24 318 P **P 20 23 17.5 +0.5**
VAL Valentia 52.70 316 P **P 20 23 20.9 +0.5**
KSANE Kasane 52.85 215 P **P 20 23 24.1 +2.1**
SPITS Spitsbergen Ar 53.29 351 P **P 20 23 24.1 -0.4**
comp=Z,5.4nm,0.7s,baz=119,slow=12,SNR=4.0
SPITS LR LR 20 52 17.7
comp=Z,39nm,19.5s,baz=124,slow=43
comp=Z,5.4nm,0.7s
MATP Matopo 53.55 209 LR LR 20 48 44.6
comp=Z,159nm,19.3s,baz=100,slow=39
NJ2 Nanjing 56.13 68 *e*P **P 20 23 45.0 -0.7**
NJ2 pmax pmax
comp=Z,30nm,0.9s
POGA Pongola 58.54 203 P **P 20 24 03.5 +0.8**
ZEA Zeya 58.77 42 *e*P **P 20 24 05.3 +1.3**
ZEA MLR MLR
comp=E,100nm,16.0s
ZEA MLR MLR
comp=Z,100nm,18.0s
LBTB Lobatse 58.84 210 LR LR 20 51 32.9
comp=Z,140nm,18.6s,baz=36,slow=38
LBTB Lobatse 58.84 210 P **P 20 24 05.6 +0.7**
LBTB pmax pmax
comp=Z,70nm,1.8s
LBTB Lobatse 58.84 210 **P 20 24 05.6 +0.7**
CN2 Changchun 58.87 54 *e*P **P 20 24 04.2 -0.7**
CN2 *e*S **S 20 32 02.6 -7.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 L L
comp=Z,200nm,11.0s
CN2 L L
comp=Z,300nm,11.0s
CN2 L L
comp=Z,200nm,10.0s
DBIC Dimbokro 58.92 261 P **P 20 24 04.4 -1.2**
comp=Z,7.8nm,0.7s,baz=62,slow=6.3,SNR=6.5
DBIC LR LR 20 51 55.0
comp=Z,101nm,18.1s,baz=9.5,slow=39
comp=Z,7.8nm,0.7s
HEH HeiHe 59.25 46 *e*P **P 20 24 07.1 -0.2**
HEH pmax pmax
comp=Z,8.0nm,1.3s
TIXI Tiksi 59.42 21 LR LR 20 53 34.4
comp=Z,106nm,18.2s,baz=276,slow=40
TIXI Tiksi 59.42 21 *i* P **P 20 24 07.4 -0.8**
TIXI pmax pmax
comp=Z,19nm,1.4s
YAK Yakutsk 59.55 32 LR LR 20 52 36.7
comp=Z,242nm,18.8s,baz=256,slow=39
YAK Yakutsk 59.55 32 *e*P **P 20 24 08.3 -0.9**
YAK *e**PP **pP 20 24 11.5 -2.3**
YAK *e* 20 24 56.0
YAK *e* 20 26 18.0
YAK *e*S **S 20 32 18.0 -0.5**
YAK *e* 20 33 58.5
YAK *e*SS **SS 20 36 14.1 +0.7**
YAK pmax pmax
comp=Z,22nm,1.5s
YAK pmax pmax
comp=N,1.0nm,1.0s
YAK pmax pmax
comp=E,15nm,2.0s
YAK pmax pmax
comp=Z,115nm,4.2s
YAK pmax pmax
comp=N,66nm,5.7s
YAK pmax pmax
comp=E,87nm,5.2s
YAK smax smax
comp=N,31nm,4.6s
YAK smax smax
comp=E,24nm,2.7s
YAK MLR MLR
comp=Z,231nm,18.0s
YAK MLR MLR
comp=E,192nm,20.0s
YAK MLR MLR
comp=N,54nm,17.0s
YAK Yakutsk 59.55 32 **P 20 24 08.3 -0.9**
KOOLE Kule 59.72 216 P **P 20 24 11.6 +0.6**
MAKGR Makgori 59.89 210 P **P 20 24 12.2 +0.1**
BNX BinXian 59.91 51 ⇑P **P 20 24 11.1 -0.9**
BNX pmax pmax
comp=N,6.0nm,1.2s
TPUB Ta-pu 60.14 78 P **P 20 24 13.0 -0.9**
SSLB Suanglung 60.26 77 P **P 20 24 14.7 -0.1**
YHNB Yeheng 60.33 76 P **P 20 24 15.6 +0.3**
KSRS Korea Array 62.06 60 P **P 20 24 25.8 -0.9**
comp=N,1.7nm,0.7s,baz=284,slow=6.1,SNR=4.5
comp=N,1.7nm,0.7s
KLR Kul'dur 62.19 47 LR LR 20 54 00.6
comp=N,164nm,18.4s,baz=276,slow=38
KLR Kul'dur 62.19 47 *e*P **P 20 24 25.3 -2.1**
KLR pmax pmax
comp=Z,7.0nm,1.3s
SUMG Summit 64.44 341 P **P 20 24 42.1 -0.4**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG Summit 64.44 341 **P 20 24 42.1 -0.4**
SUMG lAmb lAmb 20 24 48.7
comp=Z,12nm,1.0s
JNU Nakatsue 65.60 64 LR LR 20 56 29.7
comp=Z,89nm,18.3s,baz=222,slow=39
SUR Sutherland 67.30 210 LR LR 20 56 39.6
comp=Z,167nm,19.6s,baz=344,slow=38
SEY Seymchan 69.66 29*ce*P **P 20 25 16.3 +1.0**
SEY pmax pmax
comp=Z,30nm,1.7s
YSS Yuzhno-Sakhali 69.89 47 *e*P **P 20 25 16.6 -0.4**
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS MLR MLR
comp=Z,300nm,19.0s
MA2 Magadan 70.13 32 LR LR 21 00 03.2
comp=Z,89nm,19.3s,baz=276,slow=39
MA2 Magadan 70.13 32*ce*P **P 20 25 19.2 +1.0**
MA2 pmax pmax
comp=Z,21nm,1.7s
MA2 Magadan 70.13 32 P **P 20 25 17.8 -0.4**
MA2 lAmb lAmb 20 25 19.4
comp=Z,13nm,1.1s
MJAR Matsushiro Arr 70.19 58 P **P 20 25 18.6 -0.4**
comp=Z,0.9nm,0.5s,baz=297,slow=7.9,SNR=4.2
MJAR LR LR 20 58 54.0
comp=Z,49nm,19.9s,baz=286,slow=38
comp=Z,0.9nm,0.5s
MJAR Matsushiro Arr 70.19 58 P **P 20 25 18.6 -0.4**
BILL Bilibino 72.64 21*ce*P **P 20 25 35.1 +1.9**
BILL pmax pmax
comp=Z,23nm,1.7s
RES Resolute Bay 75.85 352 LR LR 21 03 07.9
comp=Z,63nm,20.6s,baz=25,slow=39
PETK Petropavlovsk- 76.31 37 P **P 20 25 53.8 -1.1**
comp=Z,3.7nm,1.1s,baz=305,slow=10,SNR=3.9
PETK LR LR 21 02 44.4
comp=Z,118nm,18.5s,baz=281,slow=38
comp=Z,3.7nm,1.1s
A21K Barrow 79.06 9 P **P 20 26 10.6 +0.8**
baz=333
A22K Sinclair Lake 79.58 9 P **P 20 26 13.6 +0.9**
baz=335
C16K Lisburne Hills 80.15 14 P **P 20 26 17.0 +1.2**
baz=326
B20K Meade River 80.15 10 P **P 20 26 16.8 +1.0**
baz=333
B22K Teshekpuk Lake 80.41 9 lAmb lAmb 20 26 19.3
comp=Z,23nm,1.2s
B22K Teshekpuk Lake 80.41 9 P **P 20 26 18.3 +1.2**
baz=336,SNR=6.4
C17K DeLong Mountai 80.42 13 P **P 20 26 18.0 +0.7**
baz=328
C19K Lookout Ridge 80.55 11 P **P 20 26 18.6 +0.5**
baz=331
A36M Sachs Harbour 80.62 360 P **P 20 26 18.7 +0.4**
baz=1.1
C18K Utukok River 80.65 12 P **P 20 26 18.9 +0.3**
baz=329
B21K Ikpikpuk River 80.89 10 **P 20 26 20.4 +0.7**
B21K Ikpikpuk River 80.89 10 P **P 20 26 20.8 +1.0**
baz=335,SNR=11
D17K Noatak River 81.10 13 P **P 20 26 21.5 +0.6**
baz=328
C23K Itkillik River 81.24 8 P **P 20 26 22.9 +1.2**
baz=338,SNR=12
C21K Knifeblade Rid 81.29 10 P **P 20 26 22.9 +1.0**
baz=335,SNR=5.8
D19K Kuna River 81.34 11 lAmb lAmb 20 26 24.0
comp=Z,18nm,1.3s
D19K Kuna River 81.34 11 P **P 20 26 22.9 +0.6**
baz=332
D20K Etivluk River 81.40 11 lAmb lAmb 20 26 24.5
comp=Z,13nm,1.2s
D20K Etivluk River 81.40 11 P **P 20 26 23.2 +0.7**
baz=333,SNR=7.2
TNA Tin City 81.78 16 P **P 20 26 25.1 +0.6**
baz=324
E18K Tukpahlearik C 81.83 13 lAmb lAmb 20 26 26.3
comp=Z,23nm,1.5s
E18K Tukpahlearik C 81.83 13 P **P 20 26 25.1 +0.3**
baz=330
E17K Hotham Inlet 81.88 13 P **P 20 26 25.2 +0.2**
baz=329
E20K Nigu River 81.88 11 P **P 20 26 25.9 +0.7**
baz=334,SNR=5.9
D23K Nanushuk River 82.05 9 lAmb lAmb 20 26 28.3
comp=Z,14nm,1.4s
D23K Nanushuk River 82.05 9 P **P 20 26 26.9 +1.0**
baz=338,SNR=5.8
E21K Killik River 82.07 10 P **P 20 26 26.2 +0.2**
baz=336
D24K Happy Valley 82.11 8 P **P 20 26 27.3 +1.0**
baz=340
GAMB Gambell 82.20 19 P **P 20 26 27.6 +0.8**
baz=321
C27K Jago River 82.20 6 P **P 20 26 27.9 +1.2**
baz=345,SNR=12
D25K Kavik River 82.23 7 lAmb lAmb 20 26 29.1
comp=Z,12nm,1.3s
D25K Kavik River 82.23 7 P **P 20 26 28.1 +1.2**
baz=342,SNR=8.7
F14K Arctic Creek 82.24 16 P **P 20 26 27.6 +0.6**
baz=325
E19K Redstone River 82.42 11 **P 20 26 27.8 -0.1**
E19K lAmb lAmb 20 26 29.1
comp=Z,22nm,1.7s
E19K Redstone River 82.42 11 P **P 20 26 28.1 +0.2**
baz=333,SNR=5.3
F15K North Star Dit 82.44 15 P **P 20 26 28.4 +0.4**
baz=326
TOLK Toolik Lake Re 82.50 8 P **P 20 26 29.6 +1.2**
baz=340,SNR=7.3
F17K Baldwin Pennin 82.55 13 P **P 20 26 28.8 +0.3**
baz=329
F18K Selawik 82.73 13 P **P 20 26 29.7 +0.2**
baz=331
D27M Malcolm River 82.81 5 P **P 20 26 30.8 +0.8**
baz=347
F19K Shaleruckik Mo 82.88 12 P **P 20 26 30.2 -0.1**
baz=332,SNR=6.1
E23K Chandalar 83.04 9 lAmb lAmb 20 26 33.5
comp=Z,9.7nm,1.2s
E23K Chandalar 83.04 9 P **P 20 26 31.8 +0.6**
baz=340,SNR=8.7
F20K Avaraart Lake 83.05 11 P **P 20 26 31.5 +0.3**
baz=334
E24K Your Creek 83.17 8 lAmb lAmb 20 26 34.2
comp=Z,11nm,1.2s
E24K Your Creek 83.17 8 P **P 20 26 32.8 +0.9**
baz=340,SNR=9.7
G15K Niukluk 83.18 15 P **P 20 26 32.3 +0.5**
baz=327
F22K John River 83.20 10 P **P 20 26 32.9 +0.9**
baz=337,SNR=14
G16K Koyuk River 83.22 14 P **P 20 26 32.7 +0.7**
baz=328
ANM Nome 83.22 16 P **P 20 26 32.9 +0.8**
baz=326
SCHQ Schefferville 83.24 330 P **P 20 26 32.4 0.0**
comp=Z,7.8nm,0.9s,baz=49,slow=6.6,SNR=9.1
comp=Z,7.8nm,0.9s
F21K Alatna River 83.26 10 P **P 20 26 32.8 +0.5**
baz=336,SNR=7.6
C36M Paulatuk 83.27 359 **P 20 26 31.3 -0.9**
C36M lAmb lAmb 20 26 33.2
comp=Z,12nm,1.4s
C36M Paulatuk 83.27 359 P **P 20 26 32.1 -0.1**
baz=2.2
FITZ Fitzroy Crossi 83.37 114 **P 20 26 33.1 -0.4**
E25K Arctic Village 83.47 7 P **P 20 26 34.1 +0.7**
baz=343,SNR=11
G17K Kiwalik Mounta 83.49 14 P **P 20 26 33.8 +0.4**
baz=330
G18K Tagagawik 83.55 13 P **P 20 26 33.8 0.0**
baz=332
E28M Babbage River 83.55 5 lAmb lAmb 20 26 35.9
comp=Z,9.9nm,1.4s
E28M Babbage River 83.55 5 P **P 20 26 34.5 +0.7**
baz=348
G19K Purcell Mounta 83.62 12 P **P 20 26 34.5 +0.4**
baz=333,SNR=8.0
COLD Coldfoot 83.74 9 lAmb lAmb 20 26 36.9
comp=Z,8.7nm,1.2s
COLD Coldfoot 83.74 9 P **P 20 26 35.4 +0.6**
baz=339
F24K Squaw Lake 83.77 8 P **P 20 26 36.1 +1.1**
baz=341
E27K Coleen River 83.80 6 lAmb lAmb 20 26 40.0
comp=Z,7.7nm,1.2s
E27K Coleen River 83.80 6 P **P 20 26 36.1 +1.0**
baz=347,SNR=6.0
G22K Bettles 83.84 10 P **P 20 26 36.0 +0.8**
baz=338
E29M Blow River 83.88 4 lAmb lAmb 20 26 37.5
comp=Z,8.5nm,1.2s
E29M Blow River 83.88 4 P **P 20 26 36.2 +0.8**
baz=350
H16K Elim 83.89 15 P **P 20 26 36.1 +0.6**
baz=329
G21K Allakaket 83.91 11 lAmb lAmb 20 26 37.0
comp=Z,11nm,1.4s
G21K Allakaket 83.91 11 P **P 20 26 36.0 +0.4**
baz=336,SNR=5.4
F25K Christian Rive 83.97 7 lAmb lAmb 20 26 38.7
comp=Z,12nm,1.5s
F25K Christian Rive 83.97 7 P **P 20 26 37.0 +1.0**
baz=343,SNR=7.0
F26K Sheenjek River 84.03 7 P **P 20 26 37.3 +1.1**
baz=344
H17K Granite Mounta 84.14 14 P **P 20 26 37.3 +0.5**
baz=331
INK Inuvik 84.19 3 P **P 20 26 37.6 +0.6**
baz=354
G23K Bananza Creek 84.25 9 lAmb lAmb 20 26 39.6
comp=Z,7.1nm,1.2s
G23K Bananza Creek 84.25 9 P **P 20 26 38.4 +0.9**
baz=339,SNR=6.9

H18K	**Honhosa River**	**84.26**	**13**	P	**P**	**20 26 37.9 +0.4**
	baz=332					
H19K	**Roundabout Mou**	**84.29**	**12**	IAmb	IAmb	20 26 39.4
	comp=Z,11nm,1.4s					
H19K	**Roundabout Mou**	**84.29**	**12**	P	**P**	**20 26 38.1 +0.5**
	baz=334					
F28M	**Old Crow**	**84.50**	**5**	IAmb	IAmb	20 26 40.5
	comp=Z,8.8nm,1.2s					
F28M	**Old Crow**	**84.50**	**5**	P	**P**	**20 26 39.4 +0.7**
	baz=348					
G24K	**Hadweenzic Riv**	**84.60**	**8**	P	**P**	**20 26 40.3 +1.2**
	baz=341,SNR=12					
H20K	**Anotleneega Mo**	**84.61**	**11**	P	**P**	**20 26 39.7 +0.5**
	baz=335					
F30M	**Barrier River**	**84.77**	**4**	P	**P**	**20 26 40.8 +0.8**
	baz=352					
G26K	**Porcupine Rive**	**84.79**	**7**	P	**P**	**20 26 41.2 +1.2**
	baz=345					
H21K	**Melozitna Rive**	**84.81**	**11**	P	**P**	**20 26 41.0 +0.7**
	baz=337,SNR=7.3					
H22K	**Ishtalitna Cre**	**84.82**	**10**	P	**P**	**20 26 41.7 +1.4**
	baz=338,SNR=12					
I17K	**Unalakleet**	**84.88**	**14**	P	**P**	**20 26 41.4 +0.9**
	baz=330					
GCSA	**Galena City Sc**	**84.92**	**13**	P	**P**	**20 26 41.2 +0.5**
	baz=333					
F31M	**Tsiigehtchic**	**85.04**	**3**	P	**P**	**20 26 41.8 +0.5**
	baz=354					
G27K	**Doyon Strip**	**85.14**	**6**	P	**P**	**20 26 42.3 +0.4**
G27K				IAmb	IAmb	20 26 44.3
	comp=Z,14nm,1.4s					
G27K	**Doyon Strip**	**85.14**	**6**	P	**P**	**20 26 42.9 +1.1**
	baz=347					
H23K	**Yukon River**	**85.15**	**9**	P	**P**	**20 26 42.2 +0.2**
	baz=340					
I20K	**Naaghedeneel**	**85.31**	**12**	P	**P**	**20 26 43.7 +1.0**
	baz=335					
G29M	**Pine Creek**	**85.33**	**5**	IAmb	IAmb	20 26 44.4
	comp=Z,12nm,1.2s					
G29M	**Pine Creek**	**85.33**	**5**	P	**P**	**20 26 43.2 +0.4**
	baz=350					
H24K	**Noodor Dome**	**85.37**	**9**	IAmb	IAmb	20 26 45.5
	comp=Z,8.2nm,1.2s					
H24K	**Noodor Dome**	**85.37**	**9**	P	**P**	**20 26 44.3 +1.2**
	baz=341,SNR=6.4					
G30M	**tAoh Zraii Nji**	**85.38**	**4**	P	**P**	**20 26 43.3 +0.3**
	baz=351,SNR=6.9					
I21K	**Tanana**	**85.39**	**10**	P	**P**	**20 26 44.0 +0.9**
	baz=338					
J16K	**Anvik River**	**85.43**	**15**	P	**P**	**20 26 44.2 +0.9**
	baz=330,SNR=5.5					
G31M	**Satah River**	**85.54**	**3**	P	**P**	**20 26 44.2 +0.5**
	baz=353,SNR=5.6					
K13K	**Kusilvak Mount**	**85.60**	**17**	P	**P**	**20 26 44.8 +0.6**
	baz=327					
J17K	**VABM Dome**	**85.67**	**14**	IAmb	IAmb	20 26 46.2
	comp=Z,15nm,1.4s					
J17K	**VABM Dome**	**85.67**	**14**	P	**P**	**20 26 45.1 +0.6**
	baz=331					
H27K	**Steamboat Moun**	**85.71**	**6**	IAmb	IAmb	20 26 47.1
	comp=Z,14nm,1.3s					
H27K	**Steamboat Moun**	**85.71**	**6**	P	**P**	**20 26 45.8 +1.0**
	baz=347					
MLY	**Manley**	**85.72**	**10**	P	**P**	**20 26 45.5 +0.7**
	baz=339,SNR=6.9					
I23K	**Minto, Yukon-K**	**85.82**	**9**	IAmb	IAmb	20 26 47.3
	comp=Z,18nm,1.5s					
I23K	**Minto, Yukon-K**	**85.82**	**9**	P	**P**	**20 26 46.0 +0.8**
	baz=340					
J19K	**Poorman**	**85.83**	**12**	IAmb	IAmb	20 26 47.2
	comp=Z,11nm,1.2s					
J19K	**Poorman**	**85.83**	**12**	P	**P**	**20 26 46.0 +0.6**
	baz=334,SNR=6.5					
J20K	**Nowinta River**	**85.94**	**12**	IAmb	IAmb	20 26 47.9
	comp=Z,13nm,1.2s					
J20K	**Nowinta River**	**85.94**	**12**	P	**P**	**20 26 46.7 +0.8**
	baz=336,SNR=7.4					
EPYK	**Eagle Plains**	**85.95**	**4**	P	**P**	**20 26 46.2 +0.3**
	baz=351					
PRP	**Porcupine Dome**	**85.98**	**8**	P	**P**	**20 26 47.0 +0.8**
	baz=343					
H29M	**Whitestone**	**85.99**	**5**		**P**	**20 26 45.7 -0.3**
H29M	**Whitestone**	**85.99**	**5**	P	**P**	**20 26 46.4 +0.3**
	baz=350					
POKR	**Poker Plat Res**	**86.12**	**9**	P	**P**	**20 26 47.5 +0.7**
	baz=342					
I27K	**Kandik River**	**86.32**	**6**	IAmb	IAmb	20 26 50.4
	comp=Z,14nm,1.5s					
I27K	**Kandik River**	**86.32**	**6**	P	**P**	**20 26 48.3 +0.6**
	baz=347					
NEA2	**Nenana**	**86.39**	**10**	P	**P**	**20 26 48.2 +0.2**
	baz=340					
K17K	**Iditarod**	**86.44**	**14**	P	**P**	**20 26 49.2 +0.9**
	baz=332					
I26K	**Coal Creek Min**	**86.45**	**7**	P	**P**	**20 26 48.9 +0.6**
	baz=345					
ILAR	**Eielson Array**	**86.52**	**9**	P	**P**	**20 26 48.0 -0.7**
	comp=Z,1.3nm,0.8s,baz=338,slow=5.5,SNR=11					
ILAR				LR	LR	21 11 39.5
	comp=Z,34nm,18.8s,baz=283,slow=40					
	comp=Z,1.3nm,0.8s					
CHUM	**Lake Minchumin**	**86.53**	**11**	P	**P**	**20 26 49.8 +1.0**
	baz=337					
L14K	**Kuka Creek**	**86.61**	**17**	P	**P**	**20 26 50.1 +1.0**
	baz=328					
L15K	**Ungalak Mounta**	**86.61**	**16**	P	**P**	**20 26 50.1 +0.8**
	baz=329					
I28M	**Miner Creek**	**86.62**	**6**	IAmb	IAmb	20 26 54.0
	comp=Z,14nm,1.4s					
I28M	**Miner Creek**	**86.62**	**6**	P	**P**	**20 26 49.4 +0.1**
	baz=348					
H31M	**Peel River**	**86.65**	**3**	P	**P**	**20 26 49.6 +0.3**
	baz=353,SNR=6.3					
K20K	**Telida**	**86.70**	**12**	P	**P**	**20 26 50.0 +0.3**
	baz=336,SNR=10					
HDA	**Harding Lake**	**86.86**	**9**	P	**P**	**20 26 50.7 +0.3**
	baz=342					
J25K	**Salcha River,**	**86.87**	**8**	IAmb	IAmb	20 26 52.0
	comp=Z,14nm,1.2s					
J25K	**Salcha River,**	**86.87**	**8**	P	**P**	**20 26 50.7 +0.2**
	baz=343					
L17K	**Donlin**	**86.95**	**14**	P	**P**	**20 26 51.6 +0.7**
	baz=332					
CAST	**Castle Rocks**	**87.00**	**11**	P	**P**	**20 26 51.3 +0.2**
	baz=338,SNR=14					
L16K	**Owhat River**	**87.06**	**15**		**P**	**20 26 51.9 +0.5**
L16K				IAmb	IAmb	20 26 53.5
	comp=Z,14nm,1.2s					
L16K	**Owhat River**	**87.06**	**15**	P	**P**	**20 26 52.4 +1.1**
	baz=331,SNR=5.4					
KTH	**Kantishna Hill**	**87.07**	**11**	IAmb	IAmb	20 26 53.4
	comp=Z,7.3nm,1.2s					
I30M	**Mount Dempster**	**87.11**	**4**	IAmb	IAmb	20 26 53.1
	comp=Z,13nm,1.4s					
I30M	**Mount Dempster**	**87.11**	**4**	P	**P**	**20 26 51.9 +0.1**
	baz=351,SNR=8.8					
MCK	**McKinley**	**87.22**	**10**	IAmb	IAmb	20 26 53.8
	comp=Z,9.4nm,1.0s					
MCK	**McKinley**	**87.22**	**10**	P	**P**	**20 26 52.0 -0.2**
	baz=340					
L18K	**Granite Mounta**	**87.22**	**14**	P	**P**	**20 26 52.8 +0.7**
	baz=334					
M13K	**Dall Lake**	**87.23**	**17**	P	**P**	**20 26 53.0 +0.9**
	baz=328					
TRF	**Thorofare Moun**	**87.27**	**10**	P	**P**	**20 26 52.7 +0.1**
	baz=339					
M14K	**Bethel**	**87.30**	**17**	P	**P**	**20 26 53.5 +0.9**
	baz=329					
PPLA	**Purkeypile**	**87.47**	**11**	P	**P**	**20 26 53.5 -0.1**
	baz=337					
K24K	**Donnelly Dome**	**87.59**	**8**	P	**P**	**20 26 53.9 -0.1**
	baz=343					
L19K	**White Mountain**	**87.63**	**13**	IAmb	IAmb	20 26 56.0
	comp=Z,13nm,1.3s					
L19K	**White Mountain**	**87.63**	**13**	P	**P**	**20 26 54.9 +0.7**
	baz=335,SNR=5.5					
SCRK	**Sand Creek**	**87.65**	**8**	P	**P**	**20 26 55.0 +0.6**
	baz=345					
M15K	**Kasigluk River**	**87.66**	**16**	P	**P**	**20 26 55.2 +0.9**
	baz=330					
J30M	**Hart River**	**87.76**	**4**	IAmb	IAmb	20 26 56.8
	comp=Z,12nm,1.5s					
J30M	**Hart River**	**87.76**	**4**	P	**P**	**20 26 55.4 +0.6**
	baz=351,SNR=6.1					
RIDG	**Independent Ri**	**87.77**	**8**	P	**P**	**20 26 55.4 +0.5**
	baz=344					
M17K	**Holitna River**	**87.79**	**14**	P	**P**	**20 26 55.9 +0.9**
	baz=333					
DAWY	**Dawson**	**88.03**	**6**		**P**	**20 26 56.8 +0.7**
DAWY				IAmb	IAmb	20 26 57.8
	comp=Z,12nm,1.4s					
DAWY	**Dawson**	**88.03**	**6**	P	**P**	**20 26 56.7 +0.7**
	baz=349					
M18K	**Stony River**	**88.06**	**14**	P	**P**	**20 26 56.8 +0.6**
	baz=334					
L22K	**Petersville**	**88.06**	**11**	P	**P**	**20 26 56.9 +0.6**
	baz=339					
DHY	**Denali Highway**	**88.07**	**9**	IAmb	IAmb	20 26 59.4
	comp=Z,7.3nm,1.4s					
DHY	**Denali Highway**	**88.07**	**9**	P	**P**	**20 26 57.3 +0.9**
	baz=342					
N15K	**Kwethluk River**	**88.27**	**16**	P	**P**	**20 26 56.7 -0.5**
	baz=331					
K29M	**Barlow Dome**	**88.40**	**5**	P	**P**	**20 26 58.4 +0.5**
	baz=350					
PAX	**Paxson**	**88.43**	**9**	P	**P**	**20 26 58.1 0.0**
	baz=343					
SKT	**Skwentna**	**88.44**	**12**	P	**P**	**20 26 59.0 +1.0**
	baz=338					
WAT6	**Susitna Watana**	**88.49**	**10**	P	**P**	**20 26 59.3 +0.9**
	baz=341					
N18K	**Kilae Creek**	**88.78**	**14**	P	**P**	**20 27 00.4 +0.7**
	baz=334					
L27K	**Beaver Creek,**	**88.78**	**7**	P	**P**	**20 27 00.5 +0.8**
	baz=346					
BCAR	**Beaver Creek A**	**88.78**	**7**		**P**	**20 26 59.5 -0.2**
N19K	**Bonanza Creek**	**88.95**	**13**	P	**P**	**20 27 01.4 +0.9**
	baz=336					
L29M	**L29M**	**89.08**	**5**	P	**P**	**20 27 01.9 +0.8**
	baz=350					
O16K	**Kokwok River B**	**89.25**	**15**	P	**P**	**20 27 03.0 +1.1**
	baz=332					
M26K	**Nabesna, AK**	**89.29**	**8**	P	**P**	**20 27 03.0 +0.9**
	baz=345					
M27K	**Edge Creek, AK**	**89.46**	**7**	IAmb	IAmb	20 27 10.4
	comp=Z,7.0nm,1.3s					
M27K	**Edge Creek, AK**	**89.46**	**7**	P	**P**	**20 27 03.8 +0.8**
	baz=346					
YKA	**Yellowknife Ar**	**89.66**	**354**	P	**P**	**20 27 03.7 0.0**
	comp=Z,2.1nm,0.8s,baz=11,slow=4.4,SNR=12					
YKA				LR	LR	21 13 53.4
	comp=Z,25nm,18.5s,baz=38,slow=40					
	comp=Z,2.1nm,0.8s					
YKA	**Yellowknife Ar**	**89.66**	**354**	*ce*P	**P**	**20 27 04.5 +0.8**
YKA				pmax	pmax	
	comp=Z,2.0nm,0.8s					
YKA	**Yellowknife Ar**	**89.66**	**354**		**P**	**20 27 02.2 -1.5**
O18K	**Koktuh Hills**	**89.67**	**14**	P	**P**	**20 27 04.6 +0.8**
	baz=335					
M29M	**Somme Creek**	**89.71**	**6**	P	**P**	**20 27 04.6 +0.5**
	baz=349					
P17K	**Kvichak River**	**90.00**	**15**	P	**P**	**20 27 05.6 +0.3**
	baz=334					
YUK3	**Moose Creek**	**90.18**	**7**	P	**P**	**20 27 07.3 +0.9**
	baz=348					
BMRM	**Bremner River**	**90.48**	**9**	P	**P**	**20 27 07.7 +0.1**
	baz=344					
Q19K	**Cape Douglas,**	**90.85**	**14**	P	**P**	**20 27 09.8 +0.4**
	baz=336					
HYT	**Haines Junctio**	**91.39**	**5**	P	**P**	**20 27 12.6 +0.6**
	baz=350					
WRA	**Warramunga Arr**	**91.40**	**112**	P	**P**	**20 27 11.8 -0.7**
	comp=Z,1.1nm,0.6s,baz=303,slow=4.7,SNR=17					
WRA				PKKPbc	**PKKPbc**	**20 44 33.9 +0.5**
	comp=Z,0.3nm,0.5s,baz=120,slow=2.2,SNR=4.9					
	comp=Z,1.1nm,0.6s					
WRA	**Warramunga Arr**	**91.40**	**112**	*i* P	**P**	**20 27 12.0 -0.5**
WRA				pmax	pmax	
	comp=Z,1.0nm,0.5s					
WRA	**Warramunga Arr**	**91.40**	**112**	P	**P**	**20 27 11.8 -0.7**
KDAK	**Kodiak Island**	**92.12**	**14**	LR	LR	21 14 54.3
	comp=Z,35nm,18.7s,baz=326,slow=40					
ASAR	**Alice Springs**	**92.83**	**115**	P	**P**	**20 27 18.1 -1.0**
	comp=Z,2.2nm,0.9s,baz=305,slow=4.6,SNR=21					
	comp=Z,2.2nm,0.9s					
PLBC	**Pleasant Camp**	**92.83**	**5**	P	**P**	**20 27 18.8 +0.3**
	baz=351					
DLBC	**Dease Lake**	**94.19**	**2**	LR	LR	21 17 06.1
	comp=Z,19nm,19.4s,baz=345,slow=40					
SADO	**Sadowa**	**95.94**	**328**	LR	LR	21 13 04.0
	comp=Z,25nm,18.4s,baz=328,slow=37					
QSPA	**South Pole Qui**	**117.50**	**180**	PKP	**PKPdf**	**20 32 50.5 -0.7**
	comp=Z,0.6nm,0.5s,baz=213,slow=2.3,SNR=7.2					
TXAR	**Lajitas Array**	**119.25**	**337**	PKP	**PKPdf**	**20 32 55.7 -0.2**
	comp=Z,0.2nm,0.6s,baz=15,slow=2.2,SNR=4.0					

TEH ***10*** *20:22:05.5,27.66N×53.40E,h14km±29km,ML3.1, Presumed earthquake*
IDC ***10*** *20:22:09.1±14.0,28.34N×53.62E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=279.6km s-min=35.7km az=1.0*
ISC 10 20:22:05.9±1.1,27.68N±0.07×53.4E±0.1,h12km±8km,n14, σ1s07/14,mb3.6/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.08**	**238**	Pg	**Pg**		**20 22 08.0**	**-0.6**
KHL1				Sg	**Sg**		**20 22 11.1**	**+0.6**
LMD1	**Lamerd**	**0.39**	**209**	Pg	**Pg**		**20 22 13.5**	**-0.2**
JHRM	**Jahrom**	**0.84**	**12**	Pg	**Pg**		**20 22 21.6**	**-0.5**
QIR1	**Qir**	**0.84**	**340**	Pg	**Pb**		**20 22 22.5**	**0.0**
KRBR	**Kerman**	**3.75**	**52**	Pn	**Pn**		**20 23 05.3**	**+1.5**
KHGB	**Koh Gabri**	**3.82**	**45**	Pn	**Pn**		**20 23 05.1**	**+0.4**
IMEH	**Mehriz**	**3.85**	**16**	Pn	**Pn**		**20 23 07.0**	**+1.8**
IBAF	**Bafgh**	**4.34**	**26**	Pn	**Pn**		**20 23 13.1**	**+1.3**
BRTR	**Keskin Array B**	**20.30**	**311**	P	Pn		20 26 44.9	+1.2
	0.3nm,0.4s,baz=122,slow=10,SNR=2.8							
	0.3nm,0.4s							
BVAR	**Bovoye Array**	**28.30**	**22**	P	**P**		**20 27 58.5**	**-0.5**
	1.2nm,0.7s,baz=218,slow=8.8,SNR=6.1							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**29.64**	**42**	P	**P**		**20 28 10.5**	**-0.6**
	0.3nm,0.6s,baz=234,slow=9.2,SNR=2.5							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**29.82**	**33**	P	**P**		**20 28 12.6**	**0.0**
	0.2nm,0.2s,baz=236,slow=8.4,SNR=1.0							
	0.2nm,0.2s							
ZALV	**Zalesovo Beam**	**34.92**	**33**	P	**P**		**20 28 55.8**	**-1.4**
	0.9nm,0.6s,baz=236,slow=10,SNR=3.7							
	0.9nm,0.6s							
FINES	**FINESS Array B**	**38.38**	**339**	P	**P**		**20 29 26.2**	**-0.4**
	0.7nm,0.6s,baz=146,slow=8.8,SNR=7.2							
	0.7nm,0.6s							

IDC 10 20:45:29.3±1.5,17.39N×148.47E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=58.8km s-min=28.2km az=99.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.61**	**201**	P	P		20 53 02.5	-0.2
	0.6nm,0.8s,baz=20,slow=8.6,SNR=10							
	0.6nm,0.8s							
ZALV	**Zalesovo Beam**	**60.65**	**323**	P	P		20 55 41.9	-0.2
	1.1nm,0.6s,baz=100,slow=7.5,SNR=4.0							
	1.1nm,0.6s							
MKAR	**Makanchi Array**	**61.26**	**314**	P	P		20 55 46.3	-0.1
	0.2nm,0.6s,baz=85,slow=7.2,SNR=1.9							
	0.2nm,0.6s							
ILAR	**Eielson Array**	**63.66**	**26**	P	P		20 56 01.7	-0.4
	0.4nm,0.8s,baz=255,slow=4.8,SNR=4.1							
	0.4nm,0.8s							
FINES	**FINESS Array B**	**89.16**	**336**	P	P		20 58 27.2	+0.6
	0.6nm,0.5s,baz=60,slow=3.4,SNR=8.8							
	0.6nm,0.5s							

IDC ***10*** *21:03:30.7±1.1,26.06N×103.22E,h0km,mb3.7/11, mbtmp3.7/12,MS3.2/1,Error ellipse: s-maj=27.7km s-min=18.4km az=91.0*
ISC 10 21:03:31.7±0.9,26.1N±0.1×103.3E±0.2,h6km,n13, σ0s69/12,mb3.7/11,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.60**	**208**	Pn	**Pn**		**21 05 37.3**	**+0.6**
	0.1nm,0.3s,baz=32,slow=14,SNR=12							
CMAR				Pg	Pg		21 06 06.2	-10
	baz=22,slow=16,SNR=5.7							
CMAR				Lg	Lg		21 08 00.5	
	0.1nm,0.3s,baz=21,slow=27,SNR=1.6							
SONM	**Songino Array**	**21.82**	**6**	P	**P**		**21 08 25.2**	**+0.5**
	0.5nm,0.3s,baz=179,slow=6.9,SNR=5.4							
	0.5nm,0.3s							
KSRS	**Korea Array**	**23.76**	**56**	P	**P**		**21 08 44.7**	**-0.1**
	1.0nm,0.8s,baz=241,slow=9.8,SNR=1.6							
	1.0nm,0.8s							
MKAR	**Makanchi Array**	**26.50**	**327**	P	**P**		**21 09 09.5**	**-0.3**
	1.7nm,1.1s,baz=128,slow=9.3,SNR=6.5							
	1.7nm,1.1s							
KURBB	**Kurchatov Arra**	**30.94**	**329**	P	**P**		**21 09 50.3**	**+1.0**
	1.6nm,0.9s,baz=138,slow=9.1,SNR=18							
	1.6nm,0.9s							
ZALV	**Zalesovo Beam**	**30.98**	**339**	P	**P**		**21 09 50.8**	**+1.2**
	2.5nm,0.9s,baz=141,slow=9.3,SNR=8.7							
	2.5nm,0.9s							
MJAR	**Matsushiro Arr**	**31.47**	**62**	LR	LR		21 23 45.7	
	comp=Z,39nm,18.3s,baz=266,slow=39							
BVAR	**Borovoye Array**	**36.38**	**326**	P	**P**		**21 10 35.9**	**-0.7**
	0.7nm,0.7s,baz=118,slow=12,SNR=6.5							
	0.7nm,0.7s							
WRA	**Warramunga Arr**	**54.84**	**144**	P	**P**		**21 13 02.5**	**-0.4**
	0.6nm,1.0s,baz=326,slow=7.5,SNR=2.1							
	0.6nm,1.0s							
AKASG	**Malin Array Be**	**60.31**	**315**	P	**P**		**21 13 41.0**	**-0.2**
	0.2nm,0.3s,baz=71,slow=7.4,SNR=2.4							
	0.2nm,0.3s							
FINES	**FINESS Array B**	**61.32**	**328**	P	**P**		**21 13 48.3**	**+0.5**
	1.6nm,0.8s,baz=87,slow=9.9,SNR=4.2							
	1.6nm,0.8s							
NOA	**NORSAR Array B**	**68.47**	**328**	P	**P**		**21 14 34.5**	**0.0**
	1.2nm,1.0s,baz=75,slow=6.3,SNR=3.2							
	1.2nm,1.0s							
GERES	**GERESS Array B**	**70.53**	**316**	P	**P**		**21 14 47.0**	**-0.5**
	0.4nm,0.6s,baz=95,slow=3.3,SNR=4.0							
	0.4nm,0.6s							

IDC ***10*** *21:11:50.4±1.5,54.84N×112.04E,h0km,mb3.4/4, mbtmp3.6/10,ML3.6/6,MS3.3/5,Error ellipse: s-maj=18.6km s-min=17.2km az=165.0*
MOS ***10*** *21:11:51.9±1.1,54.87N×111.81E,h9km,mb3.9/2,Error ellipse: s-maj=11.3km s-min=6.9km az=68.8*
BYKL ***10*** *21:11:52.8±0.1,54.89N×111.72E,h4km±2km*
ISC 10 21:11:52.4±1.1,54.93N±0.03×111.86E±0.02,h4km±8km, n75,σ2s53/139,mb3.8/3,MS3.3/4,6C-7D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.40**	**263**	⇑*i*Pg	**Pg**		**21 11 58.7**	**-1.5**
YLYR				Pmax			21 12 01.7	
	1μm,0.4s							
YLYR				*e*Sg	**Sg**		**21 12 03.4**	**-2.1**
YLYR				Smax			21 12 05.4	
	37μm,0.7s							
KMO	**Kumora**	**1.03**	**339**	⇑*i*PG	**Pg**		**21 12 11.7**	**-0.5**
KMO				*e*			21 12 24.7	
KMO				pmax	pmax			
	comp=Z,728nm,0.4s							
KMO				smax	smax			
	comp=N,3μm,0.9s							
KMO	**Kumora**	**1.03**	**339**	⇑*i*Pg	**Pg**		**21 12 11.7**	**-0.5**
KMO				Pmax			21 12 12.9	
	comp=N,734nm,0.4s							
KMO				*e*Sg	**Sg**		**21 12 25.5**	**-0.1**
KMO				Smax			21 12 35.7	
	comp=N,3μm,0.7s							
UKT	**Uakit**	**1.16**	**60**	⇓*i*PG	**Pg**		**21 12 15.0**	**+0.4**
UKT				*e*			21 12 32.1	
UKT				pmax	pmax			
	comp=Z,456nm,0.3s							
UKT				smax	smax			
	comp=N,2μm,0.5s							
UKT	**Uakit**	**1.16**	**60**	⇓*i*Pg	**Pg**		**21 12 15.1**	**+0.4**
	comp=N,1μm,0.6s							
UKT				⇓*i*Pg	**Pg**		**21 12 15.1**	**+0.4**
	comp=N,3μm,0.6s							
UKT				⇓*i*Pg	**Pg**		**21 12 15.1**	**+0.4**
	comp=N,2μm,0.6s							
UKT				*e*			21 12 18.1	
UKT				max			21 12 18.5	
	comp=N,312nm,0.2s							
UKT				*e*Sg	**Sn**		**21 12 32.4**	**+0.4**
UKT				*e*			21 12 37.4	
UKT				max			21 12 39.5	
	comp=N,2μm,0.5s							
NIZB	**Nizh Angarsk**	**1.57**	**304**	*e*PG	**Pn**		**21 12 20.8**	**-0.3**
NIZB				*e*			21 12 40.5	
NIZB				pmax	pmax			
	comp=Z,247nm,0.6s							
NIZB				smax	smax			
	comp=N,851nm,0.3s							
NIZB	**Nizh Angarsk**	**1.57**	**304**	*e*Pg	**Pn**		**21 12 20.8**	**-0.3**
NIZB				Pmax			21 12 23.0	
	comp=N,191nm,0.3s							
NIZB				*e*Sg	**Sn**		**21 12 40.7**	**-1.2**
NIZB				Smax			21 12 48.2	
	comp=N,850nm,0.4s							
SYVR	**Suvo**	**1.67**	**221**	*e*PN	**Pn**		**21 12 21.5**	**-1.0**
SYVR				*e*			21 12 44.0	
SYVR				pmax	pmax			
	comp=Z,1μm,0.7s							
SYVR				smax	smax			
	comp=E,2μm,0.6s							
SYVR	**Suvo**	**1.67**	**221**	⇑*i*Pg	**Pn**		**21 12 21.6**	**-1.0**
	comp=E,212nm,0.8s							
SYVR				⇑*i*Pg	**Pn**		**21 12 21.6**	**-1.0**
	comp=E,276nm,0.8s							
SYVR				⇓*i*Pg	**Pn**		**21 12 21.6**	**-1.0**
	comp=E,350nm,0.8s							
SYVR				Pmax			21 12 24.3	
	comp=E,987nm,0.6s							
SYVR				*e*Sg	**Sn**		**21 12 42.9**	**-1.6**
SYVR				*e*			21 12 45.9	
SYVR				max			21 12 48.7	
	comp=E,2μm,0.6s							
MXMB	**Maximikha**	**2.48**	**229**	*e*Pn	**Pn**		**21 12 33.1**	**-0.5**
MXMB				*e*			21 12 35.6	
MXMB				*e*Pg	**Pb**		**21 12 36.3**	**-1.2**
MXMB				*e*			21 12 38.7	
MXMB				*e*Sg	**Sb**		**21 13 07.7**	**-0.7**
NLYR	**Nelyaty**	**2.68**	**53**	⇓*i*PN	**Pn**		**21 12 38.6**	**+2.2**
NLYR				*e*			21 12 42.0	
NLYR				*e*S	**Sn**		**21 13 10.2**	**+0.8**
NLYR				*e*			21 13 18.6	
NLYR				pmax	pmax			
	comp=Z,249nm,1.2s							
NLYR				smax	smax			
	comp=E,2μm,1.4s							
NLYR	**Nelyaty**	**2.68**	**53**	⇓*i*Pn	**Pn**		**21 12 38.6**	**+2.2**
NLYR				*e*Pg	**Pb**		**21 12 42.2**	**+1.2**
NLYR				*e*			21 12 44.6	
NLYR				max			21 12 47.2	
	comp=E,227nm,1.0s							
NLYR				*e*			21 13 14.8	
NLYR				*e*Sg	**Sg**		**21 13 18.9**	**+0.3**
NLYR				Smax			21 13 24.1	
	comp=E,2μm,1.4s							
OGRR	**Ongureny**	**2.81**	**245**	*e*Pn	**Pn**		**21 12 37.6**	**-0.6**
OGRR				*e*Pg	**Pb**		**21 12 41.7**

BOD				*e*			21 12 49.9		
BOD				*e*			21 13 31.5		
BOD				pmax	pmax				
	comp=Z,100nm,0.4s								
BOD				smax	smax				
	comp=N,588nm,1.0s								
BOD	**Bodaibo**	**3.14**	**22**	*e*Pn	**Pn**		**21 12 44.0**	**+1.4**	
BOD				*e*Pg	**Pb**		**21 12 49.5**	**+0.8**	
BOD				*e*PgPg	**Pg**		**21 12 53.3**	**+0.8**	
BOD				max			21 12 55.2		
	comp=N,100nm,0.5s								
BOD				*e*Sn	**Sn**		**21 13 23.2**	**+2.7**	
BOD				*e*Sg	**Sg**		**21 13 31.3**	**-1.8**	
BOD				Smax			21 13 39.7		
	comp=N,612nm,1.0s								
TRG	**Tyrgan**	**3.92**	**239**	*e*PN	**Pn**		**21 12 52.9**	**-0.5**	
TRG				*e*			21 13 02.5		
TRG				*e*			21 13 49.7		
TRG				pmax	pmax				
	comp=Z,45nm,0.4s								
TRG				smax	smax				
	comp=E,278nm,0.8s								
TRG	**Tyrgan**	**3.92**	**239**	*e*Pn	**Pn**		**21 12 52.7**	**-0.7**	
TRG				*e*Pg	**Pb**		**21 13 01.2**	**-0.9**	
TRG				Pmax			21 13 07.1		
	comp=E,45nm,0.4s								
TRG				*e*			21 13 49.9		
TRG				*e*Sg	**Sb**		**21 13 51.1**	**+1.3**	
TRG				Smax			21 14 03.0		
	comp=E,275nm,0.9s								
UUDB	**Ulan-Yde**	**3.96**	**221**	*e*Pn	**Pn**		**21 12 53.8**	**-0.2**	
UUDB				*e*Pg	**Pb**		**21 13 03.0**	**+0.2**	
UUDB				Pmax			21 13 04.7		
	comp=E,240nm,0.6s								
UUDB				*e*Sg	**Sb**		**21 13 54.3**	**+3.2**	
UUDB				Smax			21 14 00.7		
	comp=E,1μm,1.2s								
FFNB	**Fofonovo**	**4.19**	**229**	*e*Pn	**Pn**		**21 12 56.6**	**-0.6**	
FFNB				*e*Pg	**Pb**		**21 13 06.6**	**-0.1**	
FFNB				*e*Sg	**Sb**		**21 14 00.2**	**+2.5**	
KAB	**Kabansk**	**4.24**	**229**	*e*Pg	**Pb**		**21 13 06.8**	**-0.7**	
KAB				Pmax			21 13 25.6		
	comp=E,153nm,1.3s								
KAB				*e*Sg	**Sb**		**21 14 00.4**	**+1.4**	
KAB				Smax			21 14 19.8		
	comp=E,1μm,1.0s								
STDB	**Stepnoy Dvoret**	**4.28**	**232**	*e*Pn	**Pn**		**21 12 57.6**	**-0.8**	
STDB				*e*Pg	**Pb**		**21 13 07.8**	**-0.5**	
STDB				*e*Sg	**Sb**		**21 14 02.9**	**+2.6**	
HRMR	**Khuramsha**	**4.42**	**224**	*e*Pn	**Pn**		**21 12 59.8**	**-0.6**	
HRMR				*e*Pg	**Pb**		**21 13 10.8**	**+0.1**	
HRMR				max			21 13 13.2		
	comp=E,198nm,0.6s								
HRMR				*e*			21 13 14.6		
HRMR				*e*Sg	**Sb**		**21 14 07.6**	**+3.2**	
HRMR				Smax			21 14 17.6		
	comp=E,759nm,0.9s								
TUP	**Tupik**	**4.73**	**93**	*e*PN	**Pn**		**21 13 06.1**	**+1.6**	
TUP				*e*			21 13 18.7		
TUP				*e*S	**Sn**		**21 14 00.0**	**+0.2**	
TUP				*e*			21 14 21.8		
TUP				pmax	pmax				
	comp=Z,38nm,0.4s								
TUP				smax	smax				
	comp=N,792nm,0.7s								
TUP	**Tupik**	**4.73**	**93**	*e*Pn	**Pn**		**21 13 06.3**	**+1.8**	
TUP				*e*Pg	**Pb**		**21 13 18.2**	**+2.3**	
TUP				Pmax			21 13 21.1		
	comp=N,38nm,0.4s								
TUP				*e*Sn	**Sn**		**21 14 00.2**	**+0.4**	
TUP				*e*Sg	**Sg**		**21 14 21.7**	**-2.4**	
TUP				Smax			21 14 27.5		
	comp=N,790nm,1.0s								
BGT	**Bolshoye Golou**	**4.81**	**236**	*e*Pn	**Pn**		**21 13 04.6**	**-1.1**	
BGT				*e*Pg	**Pb**		**21 13 17.4**	**+0.1**	
BGT				Pmax			21 13 27.1		
	comp=N,28nm,0.1s								
BGT				*e*Sg	**Sb**		**21 14 18.9**	**+3.4**	
BGT				Smax			21 14 28.6		
	comp=N,180nm,0.8s								
KHNR	**Khani**	**4.99**	**63**	*e*Pn	**Pn**		**21 13 10.9**	**+2.8**	
KHNR				*e*Pg	**Pb**		**21 13 23.8**	**+3.5**	
KHNR				*e*Sn	**Sn**		**21 14 07.6**	**+1.4**	
KHNR				*e*Sg	**Sg**		**21 14 30.5**	**-1.9**	
LSTR	**Listvyanka**	**5.20**	**237**	*e*Pn	**Pn**		**21 13 10.3**	**-0.7**	
LSTR				*e*Pg	**Pb**		**21 13 25.0**	**+1.1**	
LSTR				Pmax			21 13 33.6		
	comp=N,13nm,0.6s								
LSTR				*e*Sg	**Sb**		**21 14 30.9**	**+4.2**	
LSTR				Smax			21 14 41.0		
	comp=N,151nm,1.3s								
KPC	**Khapcheranga**	**5.24**	**176**	*e*Pn	**Pn**		**21 13 11.2**	**-0.4**	
KPC				*e*			21 13 26.6		
KPC				*e*			21 14 33.7		
KPC				pmax	pmax				
	comp=Z,17nm,0.3s								
KPC				smax	smax				
	comp=E,963nm,1.3s								
KPC	**Khapcheranga**	**5.24**	**176**	*e*Pn	**Pn**		**21 13 11.7**	**+0.1**	
KPC				*e*Pg	**Pb**		**21 13 27.1**	**+2.5**	
KPC				Pmax			21 13 35.0		
	comp=E,18nm,0.6s								
KPC				*e*Sg	**Sb**		**21 14 34.7**	**+6.8**	
KPC				Smax			21 14 37.9		
	comp=E,963nm,1.1s								
IRK	**Irkutsk**	**5.26**	**242**	*e*PN	**Pn**		**21 13 14.7**	**+3.0**	
IRK				*e*			21 13 24.4		
IRK				*e*			21 14 32.6		
IRK				pmax	pmax				
	comp=Z,42nm,0.2s								
IRK				smax	smax				
	comp=N,407nm,1.1s								
IRK	**Irkutsk**	**5.26**	**242**	*e*	**Pn**		**21 13 14.8**	**+3.0**	
IRK				*e*Pg	**Pb**		**21 13 24.8**	**-0.1**	
IRK				Pmax			21 13 28.3		
	comp=N,43nm,0.1s								
IRK				*e*Sg	**Sb**		**21 14 31.8**	**+3.5**	
IRK				Smax			21 14 36.3		
	comp=N,407nm,1.1s								
IVK	**Ivanovka**	**5.45**	**238**	*e*Pn	**Pn**		**21 13 15.3**	**+0.9**	
IVK				*e*Pg	**Pb**		**21 13 29.0**	**+0.9**	
IVK				Pmax			21 14 05.2		
	comp=N,36nm,0.9s								
IVK				*e*Sg	**Sb**		**21 14 38.7**	**+5.0**	
IVK				Smax			21 14 46.2		
	comp=N,310nm,1.5s								
YKLR	**Yuktali**	**5.78**	**69**	*e*Pn	**Pn**		**21 13 21.3**	**+2.4**	
YKLR				*e*Pg	**Pb**		**21 13 37.8**	**+4.1**	
YKLR				*e*Sg	**Sg**		**21 14 54.9**	**-3.0**	
TLY	**Talaya**	**5.90**	**240**	Pn	**Pn**		**21 13 19.4**	**-1.3**	
	comp=N,0.9nm,0.3s,baz=71,slow=18,SNR=3.3								
TLY				Sn	**Sn**		**21 14 27.8**	**-0.8**	
	comp=N,1.3nm,0.3s,baz=62,slow=17,SNR=4.1								
TLY				Lg	Lg		21 14 49.9		
	comp=N,2.7nm,0.3s,baz=114,slow=20,SNR=10.0								
	comp=N,4.1nm,0.5s								
TLY	**Talaya**	**5.90**	**240**	*e*Pg	**Pb**		**21 13 36.9**	**+1.1**	
TLY				Pmax			21 13 46.5		
	comp=N,12nm,0.6s								
TLY				*e*Sg	**Sb**		**21 14 52.2**	**+5.4**	
TLY				Smax			21 15 16.4		
	comp=N,153nm,1.6s								
ARS	**Arshan**	**6.39**	**246**	*e*Pn	**Pn**		**21 13 26.8**	**-0.6**	
ARS				*e*Pg	**Pb**		**21 13 45.2**	**+1.0**	
ARS				Pmax			21 13 48.3		
	comp=N,43nm,0.7s								
ARS				*e*			21 15 04.8		
ARS				*e*Sg	**Sb**		**21 15 07.5**	**+6.5**	
ARS				Smax			21 15 13.0		
	comp=N,539nm,0.9s								
ZAK	**Zakamensk**	**6.92**	**232**	*e*PG	**Pb**		**21 13 54.6**	**+1.4**	
ZAK				*e*			21 15 24.3		
ZAK				pmax	pmax				
	comp=Z,11nm,0.7s								
ZAK				smax	smax				
	comp=N,137nm,1.3s								
ZAK	**Zakamensk**	**6.92**	**232**	*e*Pn	**Pn**		**21 13 34.1**	**-0.6**	
ZAK				*e*Pg	**Pb**		**21 13 56.4**	**+3.2**	
ZAK				Pmax			21 14 15.1		
	comp=N,18nm,1.5s								
ZAK				*e*Sg	**Sb**		**21 15 24.6**	**+8.4**	
ZAK				*e*			21 15 28.8		
ZAK				*e*			21 15 39.6		
ZAK				max			21 15 44.2		

	comp=N,136nm,1.4s								
HILR	**Hailar Array B**	**7.24**	**135**	Pn	Pn		21 13 34.4	-4.6	
	baz=325,slow=12								
HILR				Lg	Lg		21 15 37.0		
	baz=325,slow=27								
	comp=N,1.5nm,0.3s								
MOY	**Mondy**	**7.28**	**248**	*e*PN	**Pn**		**21 13 41.9**	**+2.2**	
MOY				*e*			21 14 03.9		
MOY				*e*S	**Sn**		**21 15 00.6**	**-2.2**	
MOY				*e*			21 15 35.0		
MOY	**Mondy**	**7.28**	**248**	*e*Pn	**Pn**		**21 13 39.0**	**-0.7**	
MOY				*e*Pg	**Pb**		**21 14 02.5**	**+3.1**	
MOY				Pmax			21 14 07.0		
	comp=N,20nm,1.0s								
MOY				*e*			21 15 07.6		
MOY				*e*Sg	**Sb**		**21 15 35.3**	**+8.7**	
MOY				*e*			21 15 48.5		
MOY				max			21 15 51.6		
	comp=N,347nm,1.8s								
HIA	**Hailar**	**7.46**	**136**	*e*Pg	**Pb**		**21 14 06.9**	**+4.5**	
HIA				Pmax			21 14 16.3		
	comp=N,17nm,0.5s								
HIA				*e*Sg	**Sg**		**21 15 44.4**	**-7.4**	
HIA				Smax			21 16 05.3		
	comp=N,152nm,1.6s								
ORL	**Orlik**	**7.54**	**256**	*e*	**Pn**		**21 13 43.8**	**+0.7**	
ORL				*e*Pg	**Pb**		**21 14 05.7**	**+2.0**	
ORL				Pmax			21 14 08.2		
	comp=N,23nm,1.2s								
ORL				*e*			21 15 07.3		
ORL				*e*Sg	Sb		21 15 42.9	+9.0	
ORL				Smax			21 15 50.3		
	comp=N,314nm,1.2s								
CLNS	**Chul'man**	**7.58**	**70**	*e*Sn	**Sn**		**21 15 09.1**	**-0.9**	
CLNS				*e*Sg	**Sg**		**21 15 49.8**	**-5.7**	
ULN	**Ulaanbaatar**	**7.68**	**205**	*i* PN	**Pn**		**21 13 45.9**	**+0.7**	
ULN	**Ulaanbaatar**	**7.68**	**205**	*e*Pn	**Pn**		**21 13 45.6**	**+0.4**	
ULN				*e*Pg	**Pb**		**21 14 09.9**	**+3.7**	
ULN				Pmax			21 14 12.4		
	comp=N,45nm,1.0s								
ULN				*e*Sg	Sg		21 15 49.3	-10	
ULN				*e*			21 16 03.9		
ULN				max			21 16 04.4		
	comp=N,279nm,1.6s								
SONM	**Songino Array**	**7.88**	**208**	Pn	**Pn**		**21 13 47.6**	**-0.3**	
	comp=N,1.8nm,0.3s,baz=19,slow=13,SNR=24								
SONM				Sn	**Sn**		**21 15 17.5**	**0.0**	
	comp=N,1.4nm,0.3s,baz=25,slow=22,SNR=4.9								
SONM				Lg	Lg		21 15 58.4		
	comp=N,3.7nm,0.3s,baz=19,slow=28,SNR=12								
SONM				LR	LR		21 16 58.6		
	comp=N,114nm,20.2s,baz=206,slow=39								
	comp=N,2.5nm,0.4s								
SONM	**Songino Array**	**7.88**	**208**	*e*PN	**Pn**		**21 13 48.2**	**+0.3**	
SONM				pmax	pmax				
	comp=Z,2.0nm,0.3s								
KNGR	**Kungurtug, Tuv**	**9.71**	**249**	*i* P	**Pn**		**21 14 11.7**	**-1.2**	
YAK	**Yakutsk**	**11.70**	**45**	Lg	Lg		21 17 52.5		
	comp=Z,1.3nm,0.3s,baz=327,slow=3.1,SNR=8.7								
YAK	**Yakutsk**	**11.70**	**45**	*i* P	**Pn**		**21 14 41.5**	**+1.5**	
KLR	**Kul'dur**	**13.48**	**107**	Pn	**Pn**		**21 15 00.3**	**-4.0**	
	comp=Z,0.2nm,0.3s,baz=305,slow=14,SNR=6.7								
KLR				Sn	**Sn**		**21 17 27.5**	**-6.9**	
	comp=Z,0.1nm,0.3s,baz=282,slow=16,SNR=2.8								
KLR				Lg	Lg		21 18 50.1		
	comp=Z,0.2nm,0.3s,baz=315,slow=7.1,SNR=5.9								
	comp=Z,0.4nm,0.6s								
KLR	**Kul'dur**	**13.48**	**107**	*i* P	**Pn**		**21 15 05.2**	**+0.9**	
ZALV	**Zalesovo Beam**	**15.73**	**278**	Pn	**Pn**		**21 15 32.9**	**-1.7**	
	comp=Z,0.2nm,0.3s,baz=76,slow=12,SNR=11								
ZALV				Lg	Lg		21 20 00.5		
	comp=Z,0.1nm,0.3s,baz=69,slow=28,SNR=5.2								
	comp=Z,3.8nm,0.9s								
ZALV	**Zalesovo Beam**	**15.73**	**278**	*i* P	**Pn**		**21 15 33.7**	**-0.9**	
ZALV				pmax	pmax				
	comp=Z,4.0nm,0.9s								
NRIK	**Noril'sk**	**18.17**	**332**	P	**Pn**		**21 16 03.3**	**-2.0**	
	comp=Z,0.2nm,0.3s,baz=129,slow=7.7,SNR=2.5								
NRIK				S	**Sn**		**21 19 19.3**	**-8.8**	
	comp=Z,4.2nm,0.8s,baz=174,slow=18,SNR=2.7								
NRIK				Lg	Lg		21 21 19.8		
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=2.4								
	comp=Z,3.6nm,0.8s								
NRIK	**Noril'sk**	**18.17**	**332**	*i* P	**P**		**21 16 05.8**	**+0.2**	
TIXI	**Tiksi**	**18.31**	**17**	Lg	Lg		21 21 25.3		
	baz=180,slow=19								
MK31	**Makanchi Array**	**20.24**	**259**	*i* P	**P**		**21 16 28.7**	**+0.3**	
MKAR	**Makanchi Array**	**20.24**	**259**	P	**P**		**21 16 28.6**	**+0.2**	
	comp=Z,0.4nm,0.6s,baz=58,slow=9.5,SNR=4.8								
MKAR				Lg	Lg		21 22 23.6		
	baz=46,slow=27,SNR=1.9								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**20.24**	**259**	*e*P	Pn		21 16 32.2	+1.9	
KURK	**Kurchatov**	**20.40**	**272**	P	**P**		**21 16 30.7**	**+0.5**	
KURBB	**Kurchatov Arra**	**20.49**	**272**	P	**P**		**21 16 30.2**	**-0.9**	
	comp=Z,1.1nm,0.7s,baz=67,slow=11,SNR=8.3								
KURBB				Lg	Lg		21 22 33.0		
	baz=67,slow=26,SNR=2.9								
	comp=Z,1.1nm,0.7s								
KSRS	**Korea Array**	**20.63**	**141**	LR	LR		21 25 19.8		
	comp=Z,39nm,18.5s,baz=240,slow=40								
BVAR	**Borovoye Array**	**24.21**	**283**	P	**P**		**21 17 09.3**	**-0.6**	
	comp=Z,0.9nm,0.6s,baz=69,slow=8.0,SNR=5.4								
	comp=Z,0.9nm,0.6s								
BORK	**Borovoye**	**24.24**	**283**	*i* P	**P**		**21 17 10.7**	**+0.5**	
BORK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
FINES	**FINESS Array B**	**42.56**	**315**	P	**P**		**21 19 49.8**	**+0.9**	
	comp=Z,1.9nm,0.9s,baz=56,slow=6.1,SNR=3.5								
	comp=Z,1.9nm,0.9s								
FINES	**FINESS Array B**	**42.56**	**315**	*i* P	**P**		**21 19 51.7**	**+2.9**	
FINES				pmax	pmax				
	comp=Z,1.0nm,0.8s								
GNI	**Garni**	**45.85**	**280**	LR	LR		21 44 31.2		
	comp=Z,40nm,19.7s,baz=113,slow=43								
AKASG	**Malin Array Be**	**47.37**	**301**	LR	LR		21 42 15.0		
	comp=Z,30nm,18.4s,baz=75,slow=38								
VAE	**Valguarnera**	**64.20**	**299**	LR	LR		21 54 39.3		
	comp=Z,70nm,18.8s,baz=142,slow=40								

DJA 10 21:14:23.7±0.2, 10°S±3°×11°7E±°, h10km, M4.2/19, mB6.4/1, mb4.2/9, MLv4.1/19, Mw(mB)6.1/1, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.85**	**5**	P	Pg	21 14 40.2	+0.1
TWSI				S	Sg	21 14 50.8	-0.4
PLAI	**Plampang**	**1.22**	**52**	P	Pn	21 14 45.5	-1.3
KHKI	**Kahang-Kahang**	**1.70**	**316**	P	Pn	21 14 54.1	+0.7
IGBI	**Denpasar**	**1.81**	**295**	P	Pn	21 14 53.7	-1.3
JAGI	**Jajag, Banyuwa**	**2.85**	**293**	P	Pn	21 15 08.3	-1.0
LBFI	**Labuhan Bajo,**	**3.24**	**70**	P	Pn	21 15 15.4	+0.8
WSI	**Waingapu**	**3.44**	**92**	P	Pn	21 15 17.0	-0.4
BSSI	**Bau Bau, Buton**	**5.00**	**47**	P	Pn	21 15 39.8	+0.9
SNJI	**Sawahan-Nganju**	**5.31**	**289**	P	Pn	21 15 43.7	+0.5
	0.2nm34nm,0.4s						
MMRI	**Maumere**	**5.44**	**80**	P	Pn	21 15 45.5	+0.5
	0.2nm36nm,1.3s						
UGM	**Wanagama**	**6.43**	**285**	P	Pn	21 15 58.8	+0.2
MMSI	**Mamuju**	**7.17**	**17**	P	Pn	21 16 09.1	+0.4
	0.1nm11nm,1.4s						

IDC 10 21:20:16.1±4.0, 4°97N×123°26E, h0km, mb3.9/4, mbtmp3.9/4, MS3.2/1, Error ellipse: s-maj=149.7km s-min=66.5km az=80.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.04**	**174**	P	P	21 25 23.2	+0.1
	0.7nm,0.3s,baz=4.9,slow=11,SNR=9.0						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**27.04**	**157**	P	P	21 26 00.1	-0.3
	1.0nm,0.3s,baz=335,slow=9.1,SNR=44						
WRA				PcP	PcP	21 29 21.6	-0.3
	0.3nm,1.0s,baz=332,slow=2.1,SNR=1.6						
	1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.27**	**301**	LR	LR	21 36 38.1	
	comp=Z,46nm,19.9s,baz=210,slow=36						
ASAR	**Alice Springs**	**30.29**	**160**	P	P	21 26 29.1	-0.2
	0.5nm,0.3s,baz=340,slow=8.5,SNR=11						
	0.5nm,0.3s						
STKA	**Stephens Creek**	**40.59**	**156**	P	P	21 27 57.9	+0.3
	1.9nm,0.8s,baz=336,slow=17,SNR=6.6						
	1.9nm,0.8s						

IDC 10 21:27:28.4±3.4, 4°94S×103°14E, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=161.5km s-min=22.4km az=52.0

DJA 10 21:27:34.9±0.8, 5°S±3°×10°3E±°, h20km±7km, M3.9/20, mb4.3/7, MLv3.8/20

ISC 10 21:27:35.7±0.9, 5°12S±0°09×103°04E±0°09, h59km, n19, σ0°97/13, mb3.3/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.76**	**354**	P	**Pn**	**21 27 50.5**	**-0.1**
KASI	**Kota Agung**	**1.51**	**106**	P	**Pn**	**21 28 00.5**	**+0.1**
KSI	**Kapahiang**	**1.52**	**343**	P	**Pn**	**21 28 01.6**	**+0.9**
PPSI	**Pulau Pagai**	**3.82**	**308**	P	**Pn**	**21 28 33.9**	**+1.9**
BBJI	**Bungbulang**	**5.14**	**117**	P	**Pn**	**21 28 50.7**	**+0.5**
	0.1nm26nm,1.6s						
TPI	**Tanjungpandan**	**5.17**	**63**	P	**Pn**	**21 28 51.4**	**+0.9**
	0.1nm9.4nm,1.3s						
UGM	**Wanagama**	**7.94**	**111**	P	**Pn**	**21 29 29.7**	**+1.2**
COCO	**West Island**	**9.32**	**221**	P	**Pn**	**21 29 47.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**23.77**	**350**	P	**P**	**21 32 41.6**	**-1.4**
	0.4nm,0.7s,baz=175,slow=11,SNR=2.2						
	0.4nm,0.7s						
H01W3	**Cape Leeuwin H**	**31.35**	**162**	T	T	22 06 59.1	
	baz=340						
H01W2	**Cape Leeuwin H**	**31.36**	**162**	T	T	22 06 58.7	
	baz=340						
H01W1	**Cape Leeuwin H**	**31.36**	**162**	T	T	22 07 00.7	
	baz=340						
WRA	**Warramunga Arr**	**33.83**	**119**	P	**P**	**21 34 12.4**	**-0.3**
	0.3nm,0.6s,baz=292,slow=9.9,SNR=6.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**34.99**	**125**	P	**P**	**21 34 23.1**	**+0.5**
	0.1nm,0.3s,baz=301,slow=8.1,SNR=6.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**54.86**	**343**	P	**P**	**21 36 59.7**	**-0.3**
	0.2nm,0.6s,baz=153,slow=9.7,SNR=2.2						
	0.2nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.19**	**219**	T	T	22 42 22.2	
	baz=65						
H04N1	**CROZET ISLANDS**	**60.20**	**219**	T	T	22 42 22.8	
	baz=65						
H04N3	**CROZET ISLANDS**	**60.21**	**219**	T	T	22 42 21.6	
	baz=65						
BVAR	**Borovoye Array**	**64.15**	**339**	P	**P**	**21 38 03.5**	**-0.4**
	0.4nm,0.5s,baz=132,slow=8.3,SNR=2.5						
	0.4nm,0.5s						

SJA 10 21:33:23.9±1.1, 28°62S×71°30W, h30km±3km, ML3.7, MW3.6

GUC 10 21:33:24.8±0.9, 28°64S×71°39W, h36km±6km, ML3.7

IDC 10 21:33:29.6±4.0, 28°73S×71°26W, h70km±31km, mb3.5/2, mbtmp3.7/6, ML3.6/4, MS2.9/3, Error ellipse: s-maj=47.8km s-min=20.6km az=74.0

ISC 10 21:33:23.9±1.8, 28°56S±0°03×71°41W±0°08, h25km±12km, n31, σ1s14/38, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.46**	**40**	*e*P	**Pn**	**21 33 34.3**	**-0.7**
AC04				*e*S	**Sn**	**21 33 41.4**	**-0.9**
AC04				IAML		21 33 42.2	
	comp=Z,5μm,0.5s						
AC04	**Llanos de Chal**	**0.46**	**40**	⇓*i*P	**Pn**	**21 33 34.9**	**-0.1**
AC04				*i* S	**Sn**	**21 33 41.9**	**-0.4**
AC04				IAML		21 33 42.4	
	comp=E,6μm,0.2s						
LCO	**Las Campanas**	**0.77**	**126**	*e*P	**Pn**	**21 33 38.5**	**-0.9**
LCO				*e*S	**Sb**	**21 33 48.1**	**-0.8**
LCO				IAML		21 33 48.9	
	comp=Z,7μm,0.3s						
LCO	**Las Campanas**	**0.77**	**126**	*e*P	**Pn**	**21 33 38.4**	**-0.9**
LCO				*e*S	**Sb**	**21 33 48.1**	**-0.8**
AC05	**El Transito**	**1.03**	**106**	*e*P	**Pn**	**21 33 41.5**	**-1.4**
AC05				*e*P		21 33 42.7	
AC05				*e*S	**Sb**	**21 33 55.8**	**-0.7**
AC05				IAML		21 33 57.4	
	comp=Z,1μm,0.9s						
AC05	**El Transito**	**1.03**	**106**	⇓*i*P	**Pb**	**21 33 42.9**	**-0.3**
AC05				*e*S	**Sb**	**21 33 56.2**	**-0.2**
CO05	**La Serena**	**1.36**	**174**	*e*P	**Pn**	**21 33 47.3**	**0.0**
CO05				*e*S	**Sn**	**21 34 03.3**	**-1.2**
CO05				IAML		21 34 05.9	
	comp=E,2μm,0.5s						
GO03	**Copiapo**	**1.42**	**47**	*e*P	**Pb**	**21 33 49.7**	**0.0**
GO03				*e*S	**Sb**	**21 34 08.5**	**+1.2**
GO03				IAML		21 34 13.7	
	comp=Z,1μm,0.5s						
GO03	**Copiapo**	**1.42**	**47**	⇑*i*P	**Pb**	**21 33 49.8**	**0.0**
GO03				*e*S	**Sb**	**21 34 08.6**	**+1.2**
GO03				IAML		21 34 10.7	
	comp=E,2μm,0.4s						
GO04	**Tololo Observa**	**1.69**	**162**	*e*P	**Pn**	**21 33 52.4**	**+0.4**
GO04				*e*S	**Sn**	**21 34 13.6**	**+0.6**
GO04				IAML		21 34 19.0	
	comp=Z,1μm,0.8s						
GO04	**Tololo Observa**	**1.69**	**162**	*e*P	**Pn**	**21 33 52.5**	**+0.4**
GO04				*e*S	**Sn**	**21 34 12.6**	**-0.4**
CO01	**Juntas del Tor**	**1.82**	**141**	*e*P	**Pn**	**21 33 55.0**	**+1.1**
CO01				IAML		21 34 19.9	
	comp=E,1μm,0.5s						
CO06	**Fray Jorge**	**2.11**	**185**	*e*P	**Pn**	**21 33 56.9**	**-0.7**
AC01	**Pan de Azucar**	**2.51**	**17**	*e*P	**Pn**	**21 34 03.4**	**+0.3**
AC02	**Maricunga**	**2.66**	**50**	*e*P	**Pb**	**21 34 08.4**	**-2.7**
AC02				IAML		21 34 53.4	
	comp=E,509nm,0.4s						
CO02	**Combarbal**	**2.66**	**172**	⇓*e*P	**Pn**	**21 34 05.3**	**+0.1**
CO04	**Los Peladeros**	**3.49**	**174**

0.7nm,0.5s
ZALV Zalesovo Beam 26.27 23 P P 21 45 55.4 +1.3
0.4nm,0.4s,baz=220,slow=10,SNR=2.1
0.4nm,0.4s
ARCES ARCESS Array B 45.70 341 P P 21 48 39.1 -0.5
3.8nm,1.2s,baz=133,slow=6.7,SNR=4.7
3.8nm,1.2s

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*NEIC **10** 22:40:27.0±0.5, 54°.99S±0°.04×141°.0W±0°.2, h10km±1km, mb5.0/39, Error ellipse: s-maj=18.0km s-min=4.1km az=248.0*
*IDC **10** 22:40:28.3±0.5, 55°.19S×140°.82W, h0km, mb4.6/11, mbtmp4.6/11, MS3.8/28, Error ellipse: s-maj=20.2km s-min=15.0km az=172.0*
*GFZ **10** 22:40:29.8±0.3, 55°.5S±7°.4×14°.1W±°, h10km, M4.9/14, mb4.9/14*
ISC 10 22:40:28.0±0.3, 55°.01S±0°.08×140°.91W±0°.07, h10km, n302, σ2°32/268, mb5.0/31, MS3.9/28, 4D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTZ	**Chatham Island**	**25.55**	**281**	P	**P**	**22 45 53.5**	**-3.2**
SBA	**Scott Base**	**29.14**	**200**		**P**	**22 46 28.3**	**-0.2**
VNDA	**Vanda**	**30.04**	**201**	P	**P**	**22 46 37.9**	**+1.4**
	1.2nm,0.9s,baz=65,slow=8.0,SNR=6.7						
VNDA				LR	LR	22 55 26.0	
	comp=Z,209nm,18.4s,baz=69,slow=30						
	1.2nm,0.9s						
VNDA	**Vanda**	**30.04**	**201**	P	**P**	**22 46 34.5**	**-2.0**
TBI	**Tubuai**	**32.26**	**345**	*e*LR	LR	22 55 10.4	
	2μm,29.8s						
TBI				*e*T	T	23 21 03.5	
	17nm,0.4s						
TUWZ	**Tuamarina**	**32.40**	**276**	P	**P**	**22 46 55.0**	**-2.6**
RPZ	**Rata Peaks**	**32.63**	**270**	LR	LR	22 57 27.4	
	comp=Z,22nm,20.3s,baz=67,slow=31						
RPZ	**Rata Peaks**	**32.63**	**270**	P	**P**	**22 46 57.3**	**-2.3**
RPZ	**Rata Peaks**	**32.63**	**270**	P	**P**	**22 47 02.9**	**+3.2**
SMAI	**San Martin Ant**	**35.10**	**141**	P	**P**	**22 47 19.8**	**-1.0**
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**22 47 23.1**	**+1.6**
	16nm,1.0s,baz=71,slow=4.1,SNR=24						
QSPA				LR	LR	22 59 23.4	
	comp=Z,275nm,20.1s,baz=66,slow=32						
	16nm,1.0s						
QSPA	**South Pole Qui**	**35.15**	**180**		**P**	**22 47 20.4**	**-1.1**
QSPA				IAmb	IAmb	22 47 28.4	
	comp=Z,32nm,1.1s						
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**22 47 23.8**	**+2.3**
RPN	**Rapa Nui**	**36.09**	**52**	LR	LR	22 58 33.2	
	comp=Z,218nm,21.7s,baz=5.5,slow=30						
RAR	**Rarotonga**	**36.62**	**330**	LR	LR	23 00 04.7	
	comp=Z,133nm,19.5s,baz=110,slow=32						
PMSA	**Palmer Station**	**37.37**	**137**	LR	LR	22 58 40.3	
	comp=Z,164nm,19.1s,baz=218,slow=29						
PPT2	**Papeete2**	**37.94**	**346**	*e*S	**S**	**22 53 31.5**	**-5.8**
	comp=Z,89nm,25.5s						
PPT2				*e*LR	LR	22 57 55.7	
	comp=Z,376nm,29.0s						
PPT2				*e*LR	LR	22 57 59.7	
	comp=Z,422nm,25.5s						
PPT	**Papeete**	**37.96**	**346**	LR	LR	23 00 12.2	
	comp=Z,124nm,18.8s,baz=180,slow=31						
MG05	**Puerto Natales**	**39.50**	**114**	P	**P**	**22 47 59.5**	**+1.2**
VAH	**Vaihoa**	**40.03**	**350**	*e*T	T	23 30 46.6	
	comp=Z,13nm,0.3s						
BELA	**Belgrano 2**	**40.11**	**162**		**P**	**22 48 02.3**	**-0.8**
BELA				IAmb	IAmb	22 48 04.3	
	comp=Z,22nm,0.9s						
ESPZ	**Base Esperanza**	**40.76**	**137**	P	**P**	**22 48 08.3**	**-0.2**
ESPZ				IAmb	IAmb	22 48 51.3	
	comp=Z,131nm,1.9s						
COYC	**Coyhaique**	**43.28**	**107**	P	**P**	**22 48 29.6**	**+0.2**
LL05	**Los Muermos**	**45.18**	**102**	P	**P**	**22 48 43.5**	**-1.2**
TAOE	**Nuku Hiva Isla**	**46.04**	**1**	*e*LR	LR	23 01 55.8	
	comp=Z,484nm,28.5s						
PLCA	**Paso Flores**	**47.27**	**103**	LR	LR	23 03 26.8	
	comp=Z,45nm,21.0s,baz=192,slow=29						
H03S2	**Juan Fernandez**	**47.29**	**90**	T	T	23 39 40.0	
	baz=222,slow=74,SNR=53						
H03S1	**Juan Fernandez**	**47.30**	**90**	T	T	23 39 41.3	
	baz=222,slow=74,SNR=60						
H03S3	**Juan Fernandez**	**47.31**	**90**	T	T	23 39 40.2	
	baz=222,slow=74,SNR=52						
AFI	**Afiamalu**	**47.52**	**318**	LR	LR	23 04 40.6	
	comp=Z,82nm,21.1s,baz=32,slow=30						
H03N3	**Juan Fernandez**	**47.57**	**90**	T	T	23 39 59.6	
	baz=225,slow=72,SNR=52						
H03N2	**Juan Fernandez**	**47.57**	**90**	T	T	23 39 57.2	
	baz=225,slow=72,SNR=69						
H03N1	**Juan Fernandez**	**47.59**	**90**	T	T	23 39 59.2	
	baz=225,slow=72,SNR=59						
CASY	**Casey**	**47.67**	**211**		**P**	**22 49 01.0**	**-2.8**
CASY	**Casey**	**47.67**	**211**	P	**P**	**22 49 06.3**	**+2.5**
MSVF	**Nonsavu**	**48.58**	**303**	LR	LR	23 05 58.9	
	comp=Z,88nm,21.6s,baz=154,slow=31						
VNA2	**Neumayer--Watz**	**50.09**	**162**	||P	**P**	**22 49 21.9**	**-0.5**
	comp=Z,37nm,0.6s,baz=207,slow=7.9						
VNA2	**Neumayer--Watz**	**50.09**	**162**	P	**P**	**22 49 22.1**	**-0.3**
VNA1	**Neumayer--Stat**	**50.16**	**161**	||P	**P**	**22 49 22.4**	**-0.5**
	comp=Z,34nm,0.8s						
SNAA	**Sanae**	**50.22**	**164**	P	**P**	**22 49 22.9**	**-0.5**
	comp=Z,17nm,0.9s,baz=218,slow=6.0,SNR=40						
SNAA				LR	LR	23 09 29.8	
	comp=Z,78nm,18.4s,baz=205,slow=35						
	comp=Z,17nm,0.9s						
TROLL	**Troll, Antarti**	**50.71**	**166**	||P	**P**	**22 49 27.4**	**+0.1**
	comp=Z,517nm,0.9s						
AUMHS	**Melrose High S**	**50.80**	**262**	P	P	22 49 33.4	+5.1
CAN	**Canberra**	**50.88**	**262**	P	**P**	**22 49 28.0**	**-1.0**
TOO	**Toolangi**	**51.28**	**258**		**P**	**22 49 30.6**	**-1.2**
BO02	**Sierra Bellavi**	**51.28**	**97**		**P**	**22 49 30.7**	**-1.2**
BO02				IAmb	IAmb	22 49 34.6	
	comp=Z,16nm,0.7s						
MT09	**Talagante**	**51.90**	**96**	P	**P**	**22 49 35.0**	**-1.6**
MT09				IAmb	IAmb	22 49 45.3	
	comp=Z,40nm,1.4s						
ELIB	**Princess Elisa**	**52.85**	**174**	*d*P	**P**	**22 49 42.3**	**-1.0**
	comp=Z,22nm,0.9s						
ARMA	**Armidale**	**52.95**	**269**	P	**P**	**22 49 42.8**	**-1.6**
ARMA				IAmb	IAmb	22 49 49.6	
	comp=Z,15nm,1.2s						
AUDCS	**Dubbo College**	**53.33**	**265**	P	P	22 49 51.5	+4.4
CO02	**Combarbal**	**53.77**	**94**	P	**P**	**22 49 49.4**	**-1.1**
TRQA	**Tornquist**	**53.91**	**107**	P	**P**	**22 49 50.6**	**-0.7**
ZON	**Zonda**	**54.85**	**96**	P	**P**	**22 49 57.2**	**-1.1**
ZON				IAmb	IAmb	22 50 00.4	
	comp=Z,9.8nm,0.9s						
CMSA	**Cobar Meteorol**	**55.53**	**263**	P	P	22 50 06.7	+3.6
AULRC	**Lightning Ridg**	**55.78**	**266**	P	P	22 50 09.5	+4.5
MAW	**Mawson**	**56.42**	**191**	P	**P**	**22 50 10.1**	**+1.2**
	comp=Z,20nm,0.9s,baz=173,slow=8.1,SNR=20						
MAW				LR	LR	23 11 36.1	
	comp=Z,122nm,20.5s,baz=104,slow=33						
	comp=Z,20nm,0.9s						
MAW	**Mawson**	**56.42**	**191**		**P**	**22 50 08.2**	**-0.7**
MAW	**Mawson**	**56.42**	**191**	P	**P**	**22 50 09.6**	**+0.7**
STKA	**Stephens Creek**	**57.61**	**260**	P	**P**	**22 50 21.1**	**+3.2**
	comp=Z,9.3nm,0.8s,baz=120,slow=6.5,SNR=14						
STKA				LR	LR	23 11 47.9	
	comp=Z,141nm,20.4s,baz=225,slow=33						
	comp=Z,9.3nm,0.8s						
AC01	**Pan de Azucar**	**57.81**	**90**	P	**P**	**22 50 19.4**	**0.0**
AC02	**Maricunga**	**58.13**	**92**		**P**	**22 50 20.1**	**-2.2**
AC02				IAmb	IAmb	22 50 28.3	
	comp=Z,14nm,0.9s						
AC02	**Maricunga**	**58.13**	**92**	P	**P**	**22 50 21.0**	**-1.3**
PB14	**IPOC Station P**	**59.09**	**89**	P	**P**	**22 50 28.2**	**-0.6**
QLP	**Quilpie**	**60.09**	**266**	P	**P**	**22 50 38.7**	**+3.5**
INKA	**Innaminka**	**61.21**	**262**		**P**	**22 50 40.7**	**-2.1**
INKA				IAmb	IAmb	22 50 46.9	
	comp=Z,11nm,0.8s						
SALTA		**61.74**	**92**	P	**P**	**22 50 47.5**	**+0.4**
PB02	**IPOC Station P**	**61.95**	**87**	P	**P**	**22 50 46.6**	**-1.4**
PB11	**IPOC Station P**	**63.31**	**87**	P	**P**	**22 50 54.9**	**-2.3**
PB11				IAmb	IAmb	22 51 00.2	
	comp=Z,16nm,0.9s						
PB16	**IPOC Station P**	**64.53**	**86**	P	**P**	**22 51 03.1**	**-2.6**
PB16				IAmb	IAmb	22 51 12.3	
	comp=Z,17nm,1.2s						
PB16	**IPOC Station P**	**64.53**	**86**	P	**P**	**22 51 05.8**	**+0.1**
CPUP	**Villa Florida**	**65.27**	**101**	P	**P**	**22 51 10.2**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=238,slow=7.7,SNR=6.6						
CPUP				LR	LR	23 14 12.8	
	comp=Z,35nm,20.9s,baz=132,slow=31						
	comp=Z,2.8nm,0.7s						
CPUP	**Villa Florida**	**65.27**	**101**	P	**P**	**22 51 08.8**	**-0.9**
CPUP				IAmb	IAmb	22 51 14.2	
	comp=Z,7.2nm,1.1s						
NNA	**Nana**	**65.47**	**75**	LR	LR	23 13 14.3	
	comp=Z,148nm,18.6s,baz=187,slow=30						
FORT	**Forrest**	**65.96**	**250**	P	**P**	**22 51 11.4**	**-2.7**
FORT				IAmb	IAmb	22 51 46.8	
	comp=Z,13nm,0.8s						
LPAZ	**La Paz**	**66.94**	**86**	P	**P**	**22 51 23.8**	**+2.4**
	comp=Z,12nm,1.0s,baz=206,slow=3.6,SNR=22						
LPAZ				LR	LR	23 13 29.7	
	comp=Z,76nm,21.7s,baz=128,slow=30						
	comp=Z,12nm,1.0s						
LPAZ	**La Paz**	**66.94**	**86**		**P**	**22 51 19.7**	**-1.7**
LPAZ				IAmb	IAmb	22 51 27.9	
	comp=Z,19nm,1.2s						
LPAZ	**La Paz**	**66.94**	**86**	P	**P**	**22 51 21.8**	**+0.5**
QIS	**Mount Isa**	**67.43**	**266**	P	**P**	**22 51 26.6**	**+2.9**
AS01	**Alice Springs**	**68.22**	**260**	P	**P**	**22 51 30.2**	**+1.5**
AUALC	**St Philip's Co**	**68.24**	**260**	P	**P**	**22 51 30.6**	**+1.8**
AS31	**Alice Springs**	**68.25**	**260**		**P**	**22 51 26.3**	**-2.5**
ASAR	**Alice Springs**	**68.25**	**260**	P	**P**	**22 51 30.4**	**+1.6**
	comp=Z,11nm,0.7s,baz=138,slow=6.7,SNR=98						
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**68.25**	**260**		**P**	**22 51 27.4**	**-1.5**
H01W1	**Cape Leeuwin H**	**69.91**	**238**	T	T	00 08 30.7	
	baz=143,slow=75,SNR=23						
H01W2	**Cape Leeuwin H**	**69.92**	**238**	T	T	00 08 32.6	
	baz=143,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**69.93**	**238**	T	T	00 08 34.2	
	baz=143,slow=75,SNR=18						
WR8	**Warramunga Arr**	**70.83**	**263**		**P**	**22 51 43.3**	**-1.4**
WR8				IAmb	IAmb	22 51 47.9	
	comp=Z,18nm,1.1s						
WRA	**Warramunga Arr**	**70.93**	**262**	P	**P**	**22 51 47.4**	**+1.9**
	comp=Z,8.5nm,0.9s,baz=146,slow=5.4,SNR=44						
	comp=Z,8.5nm,0.9s						
WRA	**Warramunga Arr**	**70.93**	**262**	P	**P**	**22 51 44.7**	**-0.7**
WRAB	**Tennant Creek**	**70.93**	**262**	P	**P**	**22 51 47.4**	**+2.0**
CZSB	**Cruzeiro do Su**	**71.27**	**76**	P	**P**	**22 51 46.0**	**-1.4**
PTLB	**Pontes e Lacer**	**72.79**	**92**	P	**P**	**22 51 55.1**	**-1.4**
PTLB				IAmb	IAmb	22 52 01.1	
	comp=Z,24nm,1.9s						
VILB	**Vilhena**	**74.17**	**90**	P	**P**	**22 52 02.1**	**-2.6**
VILB				IAmb	IAmb	22 52 07.4	
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**77.32**	**257**	LR	LR	23 23 39.9	
	comp=Z,142nm,18.4s,baz=330,slow=34						
FITZ	**Fitzroy Crossi**	**77.32**	**257**		**P**	**22 52 21.9**	**-0.8**
FITZ				IAmb	IAmb	22 52 26.1	
	comp=Z,16nm,1.9s						
FITZ	**Fitzroy Crossi**	**77.32**	**257**	P	**P**	**22 52 25.6**	**+2.8**
CLDB	**Colider**	**78.38**	**92**	P	**P**	**22 52 29.1**	**+0.5**
BDFB	**Brasilia**	**78.99**	**101**	P	**P**	**22 52 33.4**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=137,slow=2.6,SNR=4.2						
BDFB				LR	LR	23 24 35.1	
	comp=Z,51nm,18.9s,baz=131,slow=34						
	comp=Z,1.3nm,0.3s						
BDFB	**Brasilia**	**78.99**	**101**	IAmb	IAmb	22 52 34.8	
	comp=Z,11nm,1.2s						
JTS	**Las Juntas de**	**80.08**	**56**	LR	LR	23 19 53.1	
	comp=Z,53nm,20.0s,baz=194,slow=30						
ROSC	**El Rosal**	**80.82**	**68**	P	**P**	**22 52 45.4**	**+3.0**
	comp=Z,22nm,0.2s,baz=338,slow=19,SNR=17						
ROSC	**El Rosal**	**80.82**	**68**	P	**P**	**22 52 45.4**	**+3.0**
ROSC				IAmb	IAmb	22 52 50.1	
	comp=Z,15nm,0.8s						
CMIG	**Matias Romero**	**81.74**	**44**	LR	LR	23 21 22.3	
	comp=Z,67nm,21.6s,baz=180,slow=30						
LPIG	**La Paz**	**83.04**	**28**	LR	LR	23 20 40.0	
	comp=Z,57nm,21.0s,baz=228,slow=29						
BOAV	**Boa Vista**	**86.44**	**81**		**P**	**22 53 08.5**	**-2.2**
BOAV				IAmb	IAmb	22 53 16.5	
	comp=Z,11nm,0.9s						
TXAR	**Lajitas Array**	**89.89**	**32**	P	**P**	**22 53 30.0**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=186,slow=7.0,SNR=4.7						
TXAR				LR	LR	23 25 36.4	
	comp=Z,42nm,20.6s,baz=294,slow=30						
	comp=Z,0.4nm,0.8s						
PFO	**Pinyon Flats O**	**90.73**	**20**	LR	LR	23 26 31.5	
	comp=Z,84nm,18.2s,baz=186,slow=30						
VHRN	**Van Horn**	**90.86**	**30**		**P**	**22 53 31.2**	**-0.2**
SUR	**Sutherland**	**91.55**	**165**	P	**P**	**22 53 32.8**	**-2.2**
MDP	**Montagnes des**	**93.14**	**86**	LR	LR	23 29 43.2	
	comp=Z,54nm,19.9s,baz=190,slow=32						
ANMO	**Albuquerque**	**94.36**	**28**	LR	LR	23 27 35.5	
	comp=Z,60nm,21.3s,baz=256,slow=30						
NVAR	**Mina Array Bea**	**95.07**	**18**	LR	LR	23 27 12.9	
	comp=Z,68nm,20.3s,baz=198,slow=29						
YBH	**Yreka Blue Hor**	**97.62**	**14**	LR	LR	23 28 23.6	
	comp=Z,77nm,20.9s,baz=192,slow=29						
LBTB	**Lobatse**	**99.46**	**168**	LR	LR	23 36 07.0	
	comp=Z,52nm,18.7s,baz=104,slow=34						
Q18K	**Katmai Hardscr**	**113.88**	**352**	P	**PKiKP**	**22 59 07.5**	**+1.8**
	baz=171						
N14K	**Kuskwak Cree**	**115.78**	**349**	P	**PKiKP**	**22 59 10.8**	**+1.7**
	baz=167						
N17K	**Nushagak Hills**	**115.92**	**351**	P	**PKiKP**	**22 59 10.8**	**+1.4**
	baz=170						
YUK8	**Steele Glacier**	**115.96**	**1**	P	**PKiKP**	**22 59 11.4**	**+1.6**
	baz=181						
N18K	**Kilae Creek**	**115.96**	**352**	P	**PKiKP**	**22 59 11.3**	**+1.8**
	baz=170						
RC01	**Rabbit Creek A**	**115.97**	**355**	P	**PKiKP**	**22 59 11.3**	**+1.8**
	baz=174						
N19K	**Bonanza Creek**	**115.98**	**353**	P	**PKiKP**	**22 59 11.4**	**+1.8**
	baz=171						
KLU	**Klutina**	**116.23**	**357**	P	**PKiKP**	**22 59 12.1**	**+2.0**
	baz=177						
M15K	**Kasigluk River**	**116.43**	**349**	P	**PKiKP**	**22 59 12.0**	**+1.6**
	baz=168						
M16K	**Timber Creek**	**116.57**	**350**	P	**PKiKP**	**22 59 12.6**	**+1.9**
	baz=169						
SML	**Sawmill**	**116.62**	**356**	P	**PKiKP**	**22 59 13.1**	**+2.3**
	baz=175						
M18K	**Stony River**	**116.76**	**352**	P	**PKiKP**	**22 59 13.6**	**+2.6**
	baz=170						
M11K	**Mekoryuk**	**116.80**	**346**	P	**PKiKP**	**22 59 13.8**	**+2.7**
	baz=164						
M17K	**Holitna River**	**116.80**	**351**	P	**PKiKP**	**22 59 13.7**	**+2.6**
	baz=170						
M24K	**Tolsona, Glenn**	**116.85**	**357**	P	**PKiKP**	**22 59 13.5**	**+2.2**
	baz=177						
M20K	**Styx River**	**116.95**	**354**	P	**PKiKP**	**22 59 13.8**	**+2.3**
	baz=172						
SKT	**Skwentna**	**116.95**	**354**	P	**PKiKP**	**22 59 14.0**	**+2.5**
	baz=173						
M31M	**Drury Creek, Y**	**116.99**	**3**	P	**PKiKP**	**22 59 14.1**	**+2.6**
	baz=184						
M27K	**Edge Creek, AK**	**117.03**	**359**	P	**PKiKP**	**22 59 14.4**	**+2.7**
	baz=179						
M19K	**Big River Lodg**	**117.06**	**353**	P	**PKiKP**	**22 59 14.9**	**+3.3**
	baz=171						
M26K	**Nabesna, AK**	**117.08**	**359**	P	**PKiKP**	**22 59 14.7**	**+3.0**
	baz=179						
BVCY	**Beaver Creek**	**117.09**	**0**	P	**PKiKP**	**22 59 14.7**	**+3.1**
	baz=180						
HARP	**HAARP**	**117.12**	**358**	P	**PKiKP**	**22 59 14.7**	**+3.0**
	baz=177						
M29M	**Somme Creek**	**117.13**	**1**	P	**PKiKP**	**22 59 14.6**	**+2.7**
	baz=182						
L14K	**Kuka Creek**	**117.28**	**348**	P	**PKiKP**	**22 59 15.1**	**+3.2**
	baz=166						
M30M	**Minto, Yukon**	**117.29**	**2**	P	**PKiKP**	**22 59 15.1**	**+3.0**
	baz=183						
L19K	**White Mountain**	**117.37**	**353**	P	**PKiKP**	**22 59 15.0**	**+2.8**
	baz=171						
WAT6	**Susitna Watana**	**117.38**	**356**	P	**PKiKP**	**22 59 15.0**	**+2.6**
	baz=176						
L22K	**Petersville**	**117.45**	**355**		**PKiKP**	**22 59 13.7**	**+1.2**
L22K	**Petersville**	**117.45**	**355**	P	**PKiKP**	**22 59 15.6**	**+3.2**
	baz=174						
L15K	**Ungalak Mounta**	**117.47**	**349**	P	**PKiKP**	**22 59 15.4**	**+3.0**
	baz=167						
L18K	**Granite Mounta**	**117.55**	**352**	P	**PKiKP**	**22 59 15.7**	**+3.2**
	baz=170						
L17K	**Donlin**	**117.60**	**351**	P	**PKiKP**	**22 59 15.9**	**+3.3**
	baz=169						
L27K	**Beaver Creek,**	**117.74**	**360**	P	**PKiKP**	**22 59 16.0**	**+3.1**
	baz=180						
L29M	**L29M**	**117.80**	**1**	P	**PKiKP**	**22 59 16.2**	**+3.1**
	baz=182						
DHY	**Denali Highway**	**117.86**	**357**	P	**PKiKP**	**22 59 16.3**	**+3.0**
	baz=176						
PPLA	**Purkeypile**	**117.90**	**354**	P	**PKiKP**	**22 59 16.6**	**+3.2**
	baz=173						
K13K	**Kusilvak Mount**	**118.09**	**348**	P	**PKiKP**	**22 59 17.0**	**+3.5**
	baz=165						
K17K	**Iditarod**	**118.18**	**351**	P	**PKiKP**	**22 59 16.9**	**+3.2**
	baz=169						
TRF	**Thorofare Moun**	**118.35**	**355**	P	**PKiKP**	**22 59 17.2**	**+2.9**
	baz=174						
CAST	**Castle Rocks**	**118.42**	**354**	P	**PKiKP**	**22 59 17.4**	**+3.2**
	baz=173						
RIDG	**Independent Ri**	**118.46**	**358**	P	**PKiKP**	**22 59 17.5**	**+3.2**
	baz=178						
K20K	**Telida**	**118.48**	**353**	P	**PKiKP**	**22 59 17.4**	**+3.1**
	baz=172						
MCK	**McKinley**	**118.57**	**356**	P	**PKiKP**	**22 59 17.3**	**+2.8**
	baz=175						
SCRK	**Sand Creek**	**118.68**	**358**	P	**PKiKP**	**22 59 17.4**	**+2.6**
	baz=178						
CHUM	**Lake Minchumin**	**118.89**	**354**	P	**PKiKP**	**22 59 17.9**	**+2.8**
	baz=173						
J17K	**VABM Dome**	**118.92**	**351**	P	**PKiKP**	**22 59 18.1**	**+3.0**
	baz=168						
J16K	**Anvik River**	**118.95**	**350**	P	**PKiKP**	**22 59 18.3**	**+3.1**
	baz=167						
PETK	**Petropavlovsk-**	**119.07**	**323**	PKP	**PKiKP**	**22 59 17.6**	**+1.8**
	comp=Z,1.4nm,0.6s,baz=100,slow=4.6,SNR=4.7						
HDA	**Harding Lake**	**119.18**	**357**	P	**PKiKP**	**22 59 18.5**	**+2.9**
	baz=176						
J19K	**Poorman**	**119.22**	**353**	P	**PKiKP**	**22 59 18.5**	**+2.8**
	baz=170						
J20K	**Nowinta River**	**119.30**	**353**	P	**PKiKP**	**22 59 18.5**	**+2.6**
	baz=171						
J30M	**Hart River**	**119.31**	**2**	P	**PKiKP**	**22 59 18.6**	**+2.5**
	baz=183						
J25K	**Salcha River,**	**119.34**	**358**	P	**PKiKP**	**22 59 18.3**	**+2.2**
	baz=177						
NEA2	**Nenana**	**119.44**	**356**	P	**PKiKP**	**22 59 18.9**	**+2.7**
	baz=175						
ILAR	**Eielson Array**	**119.54**	**357**	PKP	**PKiKP**	**22 59 19.1**	**+2.8**
	comp=Z,2.4nm,0.9s,baz=224,slow=1.7,SNR=19						
ILAR	**Eielson Array**	**119.54**	**357**		**PKiKP**	**22 59 16.4**	**+0.1**
POKR	**Poker Plat Res**	**119.91**	**357**	P	**PKiKP**	**22 59 19.6**	**+2.6**
	baz=176						
I20K	**Naaghedeneel**	**119.93**	**353**	P	**PKiKP**	**22 59 19.5**	**+2.5**
	baz=171						
MLY	**Manley**	**119.95**	**355**	P	**PKiKP**	**22 59 19.3**	**+2.1**
	baz=174						
I30M	**Mount Dempster**	**119.96**	**2**	P	**PKiKP**	**22 59 19.9**	**+2.6**
	baz=183						
I26K	**Coal Creek Min**	**120.00**	**359**	P	**PKiKP**	**22 59 19.7**	**+2.5**
	baz=179						
I23K	**Minto, Yukon-K**	**120.01**	**356**	P	**PKiKP**	**22 59 19.7**	**+2.5**
	baz=174						
I28M	**Miner Creek**	**120.14**	**0**	P	**PKiKP**	**22 59 20.3**	**+2.6**
	baz=181						
I21K	**Tanana**	**120.16**	**355**	P	**PKiKP**	**22 59 20.1**	**+2.6**
	baz=173						
I27K	**Kandik River**	**120.29**	**360**	P	**PKiKP**	**22 59 20.4**	**+2.6**
	baz=180						
H17K	**Granite Mounta**	**120.50**	**351**	P	**PKiKP**	**22 59 21.0**	**+2.8**
	baz=168						
H18K	**Honhosa River**	**120.58**	**352**	P	**PKiKP**	**22 59 21.0**	**+2.6**
	baz=168						
H31M	**Peel River**	**120.59**	**3**	P	**PKiKP**	**22 59 21.5**	**+3.1**
	baz=184						
H24K	**Noodor Dome**	**120.64**	**357**	P	**PKiKP**	**22 59 21.2**	**+2.6**
	baz=175						
H20K	**Anotleneega Mo**	**120.65**	**353**	P	**PKiKP**	**22 59 21.4**	**+2.9**
	baz=171						
H21K	**Melozitna River**	**120.68**	**354**	P	**PKiKP**	**22 59 21.4**	**+2.9**
	baz=172						
H23K	**Yukon River**	**120.69**	**356**	P	**PKiKP**	**22 59 21.5**	**+2.9**
	baz=174						
ANM	**Nome**	**120.72**	**348**	P	**PKiKP**	**22 59 21.7**	**+3.1**
	baz=164						
H19K	**Roundabout Mou**	**120.80**	**353**	P	**PKiKP**	**22 59 22.0**	**+3.3**
	baz=170						
GAMB	**Gambell**	**120.83**	**345**	P	**PKiKP**	**22 59 22.0**	**+3.2**
	baz=160						
H22K	**Ishtalitna Cre**	**120.84**	**355**	P	**PKiKP**	**22 59 22.1**	**+3.2**
	baz=173						
H27K	**Steamboat Moun**	**120.92**	**360**	P	**PKiKP**	**22 59 22.1**	**+3.0**
	baz=180						
H29M	**Whitestone**	**120.92**	**1**	P	**PKiKP**	**22 59 21.9**	**+2.9**
	baz=182						
G15K	**Niukluk**	**120.98**	**349**	P	**PKiKP**	**22 59 22.0**	**+2.8**
	baz=165						
EPYK	**Eagle Plains**	**121.10**	**2**	P	**PKiKP**	**22 59 22.3**	**+2.9**
	baz=183						
G17K	**Kiwalik Mounta**	**121.13**	**351**	P	**PKiKP**	**22 59 22.5**	**+3.1**
	baz=167						
G16K	**Koyuk River**	**121.19**	**350**	P	**PKiKP**	**22 59 21.9**	**+2.4**
	baz=166						
NJ2	**Nanjing**	**121.24**	**282**	*e*P	**PKiKP**	**22 59 20.0**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,23nm,0.7s						
G18K	**Tagagawik**	**121.33**	**352**	P	**PKiKP**	**22 59 22.6**	**+2.8**
	baz=168						
G19K	**Purcell Mounta**	**121.45**	**352**	P	**PKiKP**	**22 59 22.8**	**+2.8**
	baz=169						
G24K	**Hadweenzic Riv**	**121.49**	**357**	P	**PKiKP**	**22 59 22.6**	**+2

	baz=173							
E29M	**Blow River**	123.11	1			**PKiKP**	22 59 22.2	-1.0
E29M	**Blow River**	123.11	1	P		**PKiKP**	22 59 25.4	+2.2
	baz=182							
INK	**Inuvik**	123.13	3	P		**PKiKP**	22 59 25.6	+2.4
	baz=185							
E28M	**Babbage River**	123.31	1	P		**PKiKP**	22 59 26.2	+2.5
	baz=181,SNR=5.6							
E20K	**Nigu River**	123.47	353	P		**PKiKP**	22 59 26.6	+2.6
	baz=170							
D17K	**Noatak River**	123.50	350	P		**PKiKP**	22 59 26.6	+2.6
	baz=165							
TOLK	**Toolik Lake Re**	123.51	356	P		**PKiKP**	22 59 26.4	+2.3
	baz=174							
E21K	**Killik River**	123.52	354	P		**PKiKP**	22 59 26.4	+2.3
	baz=171							
D19K	**Kuna River**	123.85	352	P		**PKiKP**	22 59 27.4	+2.6
	baz=168							
D23K	**Nanushuk River**	123.88	356	P		**PKiKP**	22 59 27.4	+2.6
	baz=173							
D27M	**Malcolm River**	123.95	360	P		**PKiKP**	22 59 27.7	+2.7
	baz=180							
D20K	**Etivluk River**	123.95	353			**PKiKP**	22 59 24.1	-0.8
D20K	**Etivluk River**	123.95	353	P		**PKiKP**	22 59 27.6	+2.6
	baz=169							
D24K	**Happy Valley**	123.99	357	P		**PKiKP**	22 59 27.2	+2.2
	baz=175							
D25K	**Kavik River**	124.09	358	P		**PKiKP**	22 59 27.5	+2.3
	baz=176							
C18K	**Utukok River**	124.25	351	P		**PKiKP**	22 59 27.8	+2.2
	baz=166							
C17K	**DeLong Mountai**	124.27	350	P		**PKiKP**	22 59 27.9	+2.3
	baz=165							
C21K	**Knifeblade Rid**	124.28	354	P		**PKiKP**	22 59 28.0	+2.4
	baz=170							
C16K	**Lisburne Hills**	124.29	349	P		**PKiKP**	22 59 28.1	+2.6
	baz=163							
C27K	**Jago River**	124.35	359	P		**PKiKP**	22 59 28.1	+2.5
	baz=178							
C19K	**Lookout Ridge**	124.56	352	P		**PKiKP**	22 59 28.4	+2.2
	baz=167							
C26K	**Camden Bay**	124.66	358	P		**PKiKP**	22 59 28.8	+2.6
	baz=177							
C36M	**Paulatuk**	124.66	7	P		**PKiKP**	22 59 29.1	+2.8
	baz=192							
B21K	**Ikpikpuk River**	124.72	354	P		**PKiKP**	22 59 28.8	+2.5
	baz=170							
C23K	**Itkillik River**	124.74	356			**PKiKP**	22 59 25.6	-0.9
C23K	**Itkillik River**	124.74	356	P		**PKiKP**	22 59 29.1	+2.7
	baz=173							
SCHQ	**Schefferville**	125.12	43	PKP		**PKiKP**	22 59 29.2	+1.5
	comp=Z,2.0nm,0.8s,baz=269,slow=5.6,SNR=4.0							
KMI2	**Kunming**	125.25	264	PKP		**PKiKP**	22 59 28.8	-0.4
B20K	**Meade River**	125.27	353	P		**PKiKP**	22 59 30.0	+2.3
	baz=169							
B22K	**Teshekpuk Lake**	125.37	355	P		**PKiKP**	22 59 30.0	+2.3
	baz=171							
A22K	**Sinclair Lake**	126.11	354	P		**PKiKP**	22 59 31.4	+2.3
	baz=170							
A21K	**Barrow**	126.53	354	P		**PKiKP**	22 59 32.3	+2.3
	baz=169							
PZH	**PanZhiHua**	126.87	264	PKP		**PKPdf**	22 59 30.4	-1.3
A36M	**Sachs Harbour**	127.18	6	P		**PKiKP**	22 59 33.6	+2.4
	baz=191							
CD2	**Chengdu**	129.03	270	PKP		**PKiKP**	22 59 35.0	-1.3
TORD	**Torodi Ar. Bea**	129.09	130	PKP		**PKiKP**	22 59 36.7	-0.1
	comp=Z,1.6nm,0.8s,baz=180,slow=2.3,SNR=5.6							
HHC	**Hu-ho-hao-te**	131.62	285	*eP*		**PKPdf**	22 59 37.1	-3.2
SONM	**Songino Array**	138.92	289	PKhKP		PKPpre	22 59 47.5	
	comp=Z,0.4nm,0.5s,baz=91,slow=1.7,SNR=4.0							
NEEM	**North Greenlan**	142.87	21	*i* P		**PKiKP**	23 00 09.2	+5.8
SUMG	**Summit**	144.78	31			PKPbc	23 00 02.1	-0.7
SUMG	**Summit**	144.78	31	*i* P		**PKiKP**	23 00 05.0	-2.5
WMQ	**Urumqi**	147.11	271	*e*PKPbc		**PKPdf**	23 00 08.1	-0.1
WMQ				PKPab		**PKPab**	23 00 14.6	+2.6
PAB	**San Pablo**	147.33	100			**PKPbc**	23 00 10.0	-1.2
UOSS	**Minazif**	147.41	210			**PKPdf**	23 00 09.5	+0.3
ESDC	**Sonseca Array**	147.63	100	PKPbc		**PKPab**	23 00 14.2	0.0
	comp=Z,8.9nm,1.0s,baz=241,slow=2.0,SNR=39							
ESDC	**Sonseca Array**	147.63	100			**PKPbc**	23 00 11.9	0.0
NIL	**Nilore**	148.04	242			**PKPbc**	23 00 11.6	-1.6
RAYN	**Ar Rayn**	148.19	191			**PKPbc**	23 00 13.1	-0.8
NOR	**Nord**	148.89	14	*i* P		**PKPab**	23 00 17.3	-0.8
DAG	**Danmarks Havn**	150.03	23	*i* P		**PKiKP**	23 00 18.0	+0.3
DBG	**Daneborg**	150.07	28	*i* P		**PKiKP**	23 00 19.4	+1.5
KSH2	**Kashi**	150.94	252	PKPbc		**PKiKP**	23 00 22.5	+1.5
KEST	**Kesra**	151.91	121	PKPbc		**PKiKP**	23 00 24.1	+1.2
	comp=Z,7.0nm,0.9s,baz=32,slow=3.4,SNR=8.4							
KEST				PKPab		**PKPab**	23 00 32.5	+0.7
	comp=Z,3.0nm,0.8s,baz=153,slow=2.3,SNR=4.8							
KEST	**Kesra**	151.91	121			**PKPbc**	23 00 21.7	-0.9
MKAR	**Makanchi Array**	151.94	271	PKPbc		**PKiKP**	23 00 24.1	+1.5
	comp=Z,4.1nm,0.8s,baz=120,slow=8.6,SNR=23							
MKAR				PKPab		**PKPab**	23 00 33.7	+2.1
	comp=Z,6.8nm,0.7s,baz=113,slow=4.7,SNR=20							
MKAR				PP		**PP**	23 04 06.7	+2.7
	comp=Z,1.3nm,0.8s,baz=137,slow=6.3,SNR=6.4							
MKAR	**Makanchi Array**	151.94	271			**PKiKP**	23 00 21.7	-0.9
MAKZ	**Makanchi**	152.13	271			**PKPdf**	23 00 13.8	-2.2
NRN	**Naryn**	152.28	256			**PKPbc**	23 00 21.7	-1.9
ZALV	**Zalesovo Beam**	153.77	287	PKPbc		**PKiKP**	23 00 27.3	+1.2
	comp=Z,2.1nm,0.8s,baz=116,slow=3.4,SNR=6.7							
ZALV				PKPab		**PKPab**	23 00 41.0	+1.9
	comp=Z,3.4nm,0.7s,baz=120,slow=2.8,SNR=10							
ZALV	**Zalesovo Beam**	153.77	287			**PKPbc**	23 00 23.9	-2.1
ZALV						**PKPab**	23 00 41.0	+1.9
HRA	**Herat**	153.84	228	PKPbc		**PKiKP**	23 00 26.7	-0.5
AAK	**Ala-Archa**	153.91	256			**PKPbc**	23 00 25.2	-1.7
KURK	**Kurchatov**	155.98	276			PKPbc	23 00 32.6	
KURBB	**Kurchatov Arra**	156.00	276	PKPbc		PKPbc	23 00 32.5	
	comp=Z,1.3nm,0.2s,baz=110,slow=2.1,SNR=6.3							
BVAR	**Borovoye Array**	161.58	277	PKPab		**PKPab**	23 01 13.8	+0.9
	comp=Z,2.6nm,0.8s,baz=115,slow=4.9,SNR=11							
GERES	**GERESS Array B**	163.22	101	PKPab		**PKPab**	23 01 21.0	+0.6
	comp=Z,0.6nm,0.7s,baz=237,slow=4.6,SNR=6.4							
BRTR	**Keskin Array B**	164.28	164	PKPab		**PKPab**	23 01 24.1	-1.0
	comp=Z,2.2nm,1.0s,baz=179,slow=11,SNR=9.0							

*JMA **10** 22:48:55.5±0.1,23.3°N±0.6°×122.0°E±0.5,h45km,MV2.8/12, TAIWAN REGION*
*TAP **10** 22:48:56.1,23.26°N×122.04°E,h37km,ML3.2,D*
ISC 10 22:48:56.3±5.0,23.24°N±0.02°×122.05°E±0.03,h37km±5km, n123,σ1§34/213,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ECBN	**Changbin**	0.56	278	*i* P		**Pn**	22 49 06.7	-1.1
ECBN				*i* S		**Sn**	22 49 14.4	-1.5
CHKH	**Chenggong**	0.60	266	*i* P		**Pn**	22 49 07.0	-1.5
CHKH				*i* S		**Sn**	22 49 14.9	-2.1
HGSD	**Ruisui**	0.63	294	*i* P		**Pn**	22 49 07.2	-1.7
HGSD				S		**Sn**	22 49 15.3	-2.4
CHKT	**Chengkung**	0.64	258	*i* P		**Pn**	22 49 07.6	-1.5
CHKT				S		**Sn**	22 49 15.7	-2.2
TEGC	**Jichi Village**	0.66	315	P		**Pn**	22 49 08.1	-1.2
TEGC				S		**Sn**	22 49 17.2	-1.3
EYUL	**Yuli**	0.68	280	*i* P		**Pn**	22 49 08.4	-1.1
EYUL				*i* S		**Sn**	22 49 17.9	-1.0
FULB	**Fuli**	0.70	267	*i* P		**Pn**	22 49 08.2	-1.5
FULB				S		**Sn**	22 49 17.2	-2.1
EHYH	**Wanrong**	0.70	292	P		**Pn**	22 49 08.5	-1.2
EHYH				*e*S		**Sn**	22 49 18.9	-0.3
TWF1	**Yuli**	0.70	280	*i* P		**Pn**	22 49 08.6	-1.2
TWF1				*e*S		**Sn**	22 49 18.1	-1.3
SHUL	**Shoufeng**	0.71	321	*i* P		**Pn**	22 49 08.8	-1.1
SHUL				S		**Sn**	22 49 18.3	-1.2
YULB	**Yu-li**	0.71	283	P		**Pn**	22 49 08.7	-1.1
YULB	**Yu-li**	0.71	283	S		**Sn**	22 49 18.9	-0.7
YULB	**Yu-li**	0.71	283	P		**Pn**	22 49 08.8	-1.1
YULB				*e*S		**Sn**	22 49 19.0	-0.5
EHY	**Hungye**	0.72	292	P		**Pn**	22 49 09.0	-1.0
EHY				S		**Sn**	22 49 18.5	-1.3
EDH	**Donghe**	0.73	249	*i* P		**Pn**	22 49 08.9	-1.2
EDH				S		**Sn**	22 49 18.2	-1.9
TEYL	**Yanliau Villag**	0.75	327	*e*P		**Pn**	22 49 08.8	-1.7
TEYL				S		**Sn**	22 49 20.2	-0.3
LDUT	**Ludao**	0.77	224	P		**Pn**	22 49 09.7	-1.0
LDUT				S		**Sn**	22 49 19.1	-2.0
WARBT	**Fenglin Townsh**	0.78	308	*i* P		**Pn**	22 49 09.5	-1.2
WARBT				*e*S		**Sn**	22 49 19.6	-1.6
ECS	**Chishang**	0.78	260	*e*P		**Pn**	22 49 10.2	-0.5
ECS				*e*S		**Sn**	22 49 21.3	+0.1
EHD	**Haiduan**	0.78	264	*e*P		**Pn**	22 49 10.0	-0.8
EHD				*e*S		**Sn**	22 49 20.3	-1.0
ESL	**Shilin**	0.81	316	*e*S		**Sn**	22 49 19.4	-2.6
HWA	**Hwalien**	0.84	331	*e*S		**Sn**	22 49 21.8	-1.1
ETM	**Tongmen**	0.89	325	*e*P		**Pn**	22 49 10.9	-1.4
ETM				*e*S		**Sn**	22 49 21.5	-2.5
LONT	**Longtian**	0.91	249	P		**Pn**	22 49 12.3	-0.3
LONT				*e*S		**Sn**	22 49 24.5	0.0
EOS4	**EOS4**	0.92	16	*e*P		**Pn**	22 49 12.0	-0.3
EOS4				*e*S		**Sn**	22 49 23.4	-0.7
TWD	**Chiawan**	0.94	334	P		**Pn**	22 49 11.8	-1.1
TWD				*e*S		**Sn**	22 49 23.0	-2.2
ELDTW	**Lidau**	0.95	267	P		**Pn**	22 49 12.1	-1.1
ELDTW				S		**Sn**	22 49 23.6	-2.1
TTN	**Taitung**	0.96	240	*e*S		**Sn**	22 49 25.2	-0.4
LXIB	**Xiulin Townshi**	0.98	323	*i* P		**Pn**	22 49 12.6	-1.1
LXIB				*i* S		**Sn**	22 49 24.4	-1.9
TWGBT	**Beinan**	0.98	245	P		**Pn**	22 49 13.0	-0.6
TWGBT	**Beinan**	0.98	245	*e*P		**Pn**	22 49 12.9	-0.6
TWGBT				*e*S		**Sn**	22 49 25.3	-1.0
TWG	**Pinlang**	0.99	246	*e*P		**Pn**	22 49 13.1	-0.6
TWG				S		**Sn**	22 49 25.3	-1.1
ETL	**Fush Village**	1.00	337	P		**Pn**	22 49 12.7	-1.1
ETL				S		**Sn**	22 49 25.0	-1.7
NACB	**Ninganchiao**	1.02	336	P		**Pn**	22 49 12.9	-1.2
NACB	**Ninganchiao**	1.02	336	P		**Pn**	22 49 12.9	-1.2
NACB				S		**Sn**	22 49 25.1	-2.1
EOS3	**EOS3**	1.07	13	P		**Pn**	22 49 14.9	+0.2
EOS3				S		**Sn**	22 49 28.2	0.0
OWD	**Renai**	1.07	312	P		**Pn**	22 49 14.2	-0.8
OWD				S		**Sn**	22 49 26.8	-1.9
ETLH	**Xiulin Townshi**	1.10	332	*e*P		**Pn**	22 49 14.2	-1.0
ETLH				S		**Sn**	22 49 27.7	-1.6
EAHA	**Aohua**	1.12	345	*e*P		**Pn**	22 49 14.7	-0.9
EAHA				*e*S		**Sn**	22 49 28.4	-1.3
WUSB	**Renai**	1.14	312	*e*P		**Pn**	22 49 15.5	-0.3
WUSB				*e*S		**Sn**	22 49 28.6	-1.6
SSLB	**Suanglung**	1.15	299	P		**Pn**	22 49 16.7	+0.9
SSLB	**Suanglung**	1.15	299	*e*P		**Pn**	22 49 15.4	-0.4
SSLB				*e*S		**Sn**	22 49 29.0	-1.3
WHF	**Hehuan Shan**	1.16	322	P		**Pn**	22 49 15.5	-0.9
WHF				*e*S		**Sn**	22 49 29.3	-1.8
STYH	**Taoyuan**	1.17	267	P		**Pn**	22 49 16.0	-0.2
STYH				S		**Sn**	22 49 30.4	-0.5
ALS	**Alishan**	1.18	284	*i* P		**Pn**	22 49 16.6	+0.2
ALS				S		**Sn**	22 49 31.7	+0.3
EOS2	**EOS2**	1.19	8	*e*P		**Pn**	22 49 15.8	-0.5
EOS2				*e*S		**Sn**	22 49 31.0	-0.1
WHYT	**Xinyi Township**	1.19	293	P		**Pn**	22 49 16.6	+0.2
WHYT				S		**Sn**	22 49 30.9	-0.6
ECL	**Taimali**	1.19	238	*i* P		**Pn**	22 49 15.5	-0.9
ECL				S		**Sn**	22 49 29.8	-1.6
EWUT	**Wuta**	1.23	348	S		**Sn**	22 49 31.1	-1.2
SMLT	**Sun Moon Lake**	1.24	302	*e*P		**Pn**	22 49 19.4	+2.2
SMLT				*e*S		**Sn**	22 49 32.5	-0.1
FUSS	**Fushou**	1.25	324	*e*P		**Pn**	22 49 17.2	-0.3
FUSS				*e*S		**Sn**	22 49 31.8	-1.4
LAY	**Lan-yu**	1.28	201	*e*P		**Pn**	22 49 17.2	-0.4
LAY				*e*S		**Sn**	22 49 31.3	-2.2
TYC	**Yuchr**	1.28	302	*e*P		**Pn**	22 49 19.0	+1.3
TWT	**Tachien**	1.29	322	P		**Pn**	22 49 18.1	+0.1
TWT				S		**Sn**	22 49 33.0	-1.1
LYUB	**Lan-yu**	1.30	199	*e*S		**Sn**	22 49 31.4	-2.6
TDCB	**Techi**	1.30	321	P		**Pn**	22 49 18.1	0.0
TDCB				S		**Sn**	22 49 33.1	-1.2
TPUB	**Ta-pu**	1.31	273	P		**Pn**	22 49 18.9	+0.9
TPUB	**Ta-pu**	1.31	273	P		**Pn**	22 49 18.9	+0.9
TPUB				*e*S		**Sn**	22 49 35.8	+1.5
CHN5	**Tsauling**	1.31	286	P		**Pn**	22 49 19.4	+1.2
CHN5				*e*S		**Sn**	22 49 35.9	+1.4
SLGT	**Liugui**	1.31	260	*e*P		**Pn**	22 49 18.6	+0.5
SLGT				*e*S		**Sn**	22 49 35.7	+1.3
WTP	**Ta-pu**	1.32	271	P		**Pn**	22 49 19.1	+0.9
WTP				*e*S		**Sn**	22 49 36.0	+1.4
WCS	**Beigang Elemen**	1.33	308	*e*P		**Pn**	22 49 18.5	+0.2
WCS				*e*S		**Sn**	22 49 34.2	-0.5
NNSB	**Datong**	1.33	333	P		**Pn**	22 49 18.2	-0.3
NNSB				S		**Sn**	22 49 33.9	-1.2
WCKO	**Fanlu**	1.34	279	*e*P		**Pn**	22 49 20.1	+1.6
WCKO				*e*S		**Sn**	22 49 37.4	+2.3
NNS	**Nan Shan**	1.35	333	P		**Pn**	22 49 18.5	-0.2
NNS				S		**Sn**	22 49 34.4	-1.1
SGST	**Jiashian**	1.36	264	P		**Pn**	22 49 19.8	+1.1
SGST				*e*S		**Sn**	22 49 36.7	+1.1
LATG	**Datong**	1.38	340	*e*P		**Pn**	22 49 18.9	-0.3
LATG				*e*S		**Sn**	22 49 34.7	-1.0
TWC	**Suao**	1.38	352	*e*P		**Pn**	22 49 19.2	+0.2
TWC				*e*S		**Sn**	22 49 35.3	-0.7
SSD	**Sandimen**	1.39	250	P		**Pn**	22 49 19.2	0.0
SSD				S		**Sn**	22 49 35.1	-1.3
EAST	**Anshuo**	1.40	233	P		**Pn**	22 49 19.1	-0.2
CHN1	**Nanshi**	1.40	268	*i* P		**Pn**	22 49 20.7	+1.4
CHN1				S		**Sn**	22 49 38.8	+2.2
WNT	**Mingjian**	1.41	297	*e*S		**Sn**	22 49 38.6	+1.9
NDS	**Dongshan**	1.43	348	*e*P		**Pn**	22 49 19.5	-0.2
NDS				S		**Sn**	22 49 36.8	-0.4
TWK	**Hsinying**	1.44	272	*i* P		**Pn**	22 49 21.1	+1.2
TWK				S		**Sn**	22 49 39.7	+2.2
MASBT	**Mashibuluo**	1.45	245	*i* P		**Pn**	22 49 20.1	+0.2
MASBT				S		**Sn**	22 49 37.4	-0.3
NDT	**Datong Townshi**	1.45	340	*e*P		**Pn**	22 49 20.1	+0.2
NDT				*e*S		**Sn**	22 49 37.2	-0.5
WHP	**Taichung City**	1.45	316	*e*P		**Pn**	22 49 21.2	+1.1
WHP				*e*S		**Sn**	22 49 38.0	+0.8
WDLH	**Douliu**	1.46	288	*e*S		**Sn**	22 49 40.6	+2.6
ENTT	**Nioudou**	1.47	343	P		**Pn**	22 49 20.3	0.0
ENTT				S		**Sn**	22 49 37.9	-0.3
SCST	**Cishan**	1.48	257	P		**Pn**	22 49 22.2	+1.9
SCST				*e*S		**Sn**	22 49 42.8	+4.4
YOJ	**Yonaguni jima**	1.50	36	P		**Pn**	22 49 20.7	0.0
YOJ	**Yonaguni jima**	1.50	36	*i* P		**Pn**	22 49 20.8	+0.1
YOJ				S		**Sn**	22 49 39.3	+0.2
YOJ	**Yonaguni jima**	1.50	36	*e*P		**Pn**	22 49 20.8	+0.1
CHY	**Chiayi**	1.52	280	*e*P		**Pn**	22 49 22.9	+2.0
CHY				*e*S		**Sn**	22 49 41.9	+2.5
TWE	**Neicheng**	1.52	347	P		**Pn**	22 49 21.3	+0.4
TWE				*e*S		**Sn**	22 49 39.5	+0.1
TCU	**Taichung**	1.55	306	*e*S		**Sn**	22 49 44.1	+3.9
YHNB	**Yeheng**	1.56	337	P		**Pn**	22 49 22.6	+1.1
YHNB	**Yeheng**	1.56	337	P		**Pn**	22 49 21.6	0.0
YHNB				*e*S		**Sn**	22 49 38.3	-1.1
NSK	**Sanguang**	1.57	336	P		**Pn**	22 49 21.8	+0.1
NSK				*e*S		**Sn**	22 49 39.5	-1.3
SCZT	**Fangliau**	1.57	237	*e*P		**Pn**	22 49 22.9	+1.3
FUSB	**Fushanzhiwuyua**	1.57	345	P		**Pn**	22 49 22.0	+0.2
FUSB				S		**Sn**	22 49 40.7	-0.3
WCHH	**Zhanghua**	1.60	302	S		**Sn**	22 49 45.7	+4.1
EGS		1.61	356	*e*P		**Pn**	22 49 22.9	+0.8
EGS				*e*S		**Sn**	22 49 41.9	+0.3
WCH1	**Changhua City**	1.61	301	S		**Sn**	22 49 46.2	+4.5
TWQ1	**Liyutan**	1.61	314	*e*P		**Pn**	22 49 23.7	+1.5
TWQ1				*e*S		**Sn**	22 49 44.0	+2.3
NWLT	**Wulai**	1.61	342	*e*P		**Pn**	22 49 22.4	+0.1
NWLT				S		**Sn**	22 49 41.3	-0.6
NFF	**Wufeng Townshi**	1.63	329	*e*P		**Pn**	22 49 24.2	+1.7
NFF				*e*S		**Sn**	22 49 42.5	+0.1
ICHU	**Yijhu**	1.63	275	S		**Sn**	22 49 44.2	+2.0
SMST	**Manzhou Townsh**	1.65	223	*e*P		**Pn**	22 49 22.5	-0.2
SMST				*e*S		**Sn**	22 49 42.6	+1.0
WRL	**Guolierlin Hig**	1.67	294	*e*P		**Pn**	22 49 24.2	+1.2
WRL				*e*S		**Sn**	22 49 45.1	+1.8
NSTT	**Nanjuang**	1.69	326	*e*P		**Pn**	22 49 24.8	+1.5
NSTT				*e*S		**Sn**	22 49 44.3	+0.6
LIOB	**Emei**	1.69	326	P		**Pn**	22 49 24.9	+1.6
LIOB				*e*S		**Sn**	22 49 44.8	+1.0
TSEB	**Hengchuen, Pin**	1.70	219	*e*S		**Sn**	22 49 46.2	+2.3
TWKBT	**Hengchun**	1.72	222	*e*P		**Pn**	22 49 25.0	+1.2
TWKBT				*e*S		**Sn**	22 49 44.4	-0.1
TWK1	**Hengchun**	1.73	222	P		**Pn**	22 49 25.0	+1.2
KSHI	**Guanxi Townshi**	1.73	333	*e*P		**Pn**	22 49 26.5	+2.7
KSHI				*e*S		**Sn**	22 49 46.5	+1.8
TIPB	**Shuangxi**	1.74	353	*e*P		**Pn**	22 49 24.9	+0.9
TIPB				*e*S		**Sn**	22 49 45.2	+0.2
HATJ	**Hateruma jima**	1.81	63	*e*P		**Pn**	22 49 25.0	+0.1
HATJ				*e*S		**Sn**	22 49 46.5	0.0
SXI1	**Grass Mountain**	1.86	355	P		**Pn**	22 49 26.4	+0.7
SXI1				S		**Sn**	22 49 48.2	+0.2
IRIF	**Iriomote-Funau**	1.89	54	*e*P		**Pn**	22 49 26.7	+0.7
IRIF				*e*S		**Sn**	22 49 49.4	+0.8
ZUZH	**Zhuzihu**	1.97	347	*e*P		**Pn**	22 49 27.9	+0.6
ZUZH				S		**Sn**	22 49 50.5	-0.2
YM08	**YM08**	1.99	348	*e*S		**Sn**	22 49 51.1	0.0
JKRS	**Kuro-shima**	2.05	61	*e*P		**Pn**	22 49 28.7	+0.4
WDGT	**Dungji**	2.20	271	P		**Pn**	22 49 31.0	+0.7
WDGT				*e*S		**Sn**	22 49 56.5	+0.3
JIJ	**Ishigaki jima**	2.22	59	*e*P		**Pn**	22 49 30.8	+0.2
PHUB	**P'eng-hu**	2.29	277	P		**Pn**	22 49 32.1	+0.5
PHUB				*e*S		**Sn**	22 49 58.9	+0.3
PNG	**Penghu**	2.31	279	*e*S		**Sn**	22 49 59.1	0.0
VCHM	**Qimei**	2.41	270	*e*P		**Pn**	22 49 33.3	+0.1
VCHM				*e*S		**Sn**	22 50 01.7	+0.2
JISG	**Ishigakijimahi**	2.47	57	P		**Pn**	22 49 33.9	-0.1
VWUC	**VWUC**	2.95	307	P		**Pn**	22 49 40.9	+0.3
VWUC				*e*S		**Sn**	22 50 13.4	-1.3
PTMZ	**Houxiangcun**	3.22	304	S		**Sn**	22 50 20.1	-1.4
MATB	**Ma-tsu**	3.48	327	*e*S		**Sn**	22 50 25.6	-2.2
KNMB	**Chin-men Tao**	3.57	291	*e*S		**Sn**	22 50 28.3	-1.7

*TEH **10** 22:50:41.7,38.38N×45.26E,h11km±23km,ML3.1, Presumed earthquake*
*NSSP **10** 22:50:42.1,38.45N×45.40E,h10km,Ms3.3*
*AZER **10** 22:50:42.7,38.47N×45.30E,h10km,ml3.2*
*TIF **10** 22:50:43.0,38.45N×45.31E,h14km±2km*
ISC 10 22:50:42.9±1.1,38.43N±0.03°×45.39E±0.02,h11km±9km, n52,σ1§64/94,1C-1D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ISHB	**Shabestar**	0.23	130	Sg		**Sg**	22 50 52.9	+1.7
IMRD	**Marand**	0.37	41	Pg		**Pb**	22 50 51.7	0.0
IMRD				Sg		**Sb**	22 50 58.3	+0.7
ORD	**Ordubad**	0.68	43	P		**Pb**	22 50 57.3	+0.3
ORD				S		**Sb**	22 51 07.7	+1.2
NAX	**Nakhchivan**	0.74	6	P		**Pb**	22 50 58.2	+0.2
NAX				S		**Sn**	22 51 09.4	-1.5
IAZR	**Azarshahr**	0.88	148	Pg		**Pg**	22 50 59.0	-1.0
ALVK	**Alvank**	0.91	56	*e*P		**Pg**	22 51 00.5	+0.1
ALVK				*e*S		**Sb**	22 51 13.2	+0.5
SBZ	**Shahbuz**	0.97	7	P		**Pb**	22 51 02.0	+0.1
SBZ				S		**Sn**	22 51 17.0	+0.4
EGVZ	**Egvard**	1.20	48	*e*P		**Pb**	22 51 05.7	-0.1
EGVZ				*e*S		**Sn**	22 51 22.3	+0.2
GRS	**Goris**	1.29	34	⇑*i* P		**Pg**	22 51 08.0	+0.2
GRS				⇓*i* S		**Sn**	22 51 26.0	+1.5
IHRS

s-min=17.5km az=74.0

ISC 10 23:05:23.0±1.0, 29°33'N±0°04'×130°06'E±0°08, h53km±9km, n23, σ1ˢ19/27, mb3.6/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.54**	**342**	*i* P	**Pn**	**23 05 34.6**	**-0.3**
JNN				S	**Sn**	**23 05 43.4**	**-0.2**
JTAJ	**Takarajima**	**0.77**	**257**	*i* P	**Pn**	**23 05 37.7**	**-0.2**
JTAJ				*e*S	**Sn**	**23 05 48.3**	**-0.3**
JYAK	**Yakushimahirau**	**0.99**	**23**	P	**Pn**	**23 05 40.7**	**+0.1**
JYAK				*e*S	**Sn**	**23 05 53.9**	**+0.2**
JAM	**Amami Oshima**	**1.00**	**204**	P	**Pn**	**23 05 40.6**	**-0.2**
JAM				*e*S	**Sn**	**23 05 53.5**	**-0.4**
JZK	**Kikaishima**	**1.01**	**185**	P	**Pn**	**23 05 42.6**	**+1.5**
JKC	**Kuchinoerabu**	**1.14**	**6**	P	**Pn**	**23 05 43.0**	**+0.3**
JKC				*e*S	**Sn**	**23 05 57.3**	**0.0**
JMTN	**Minamitane**	**1.29**	**34**	P	**Pn**	**23 05 45.6**	**+0.8**
JAMN	**Amaminishikomi**	**1.33**	**216**	*i* P	**Pn**	**23 05 45.1**	**-0.2**
JAMN				*e*S	**Sn**	**23 06 01.4**	**-0.6**
JTN	**Tanegashima 3**	**1.54**	**31**	*e*P	**Pn**	**23 05 49.2**	**+1.0**
JTK	**Tokunoshima**	**1.82**	**213**	P	**Pn**	**23 05 52.2**	**+0.2**
JTK				*e*S	**Sn**	**23 06 13.3**	**-0.7**
JTSR	**Tashiro 2**	**1.98**	**22**	*e*P	**Pn**	**23 05 55.4**	**+1.2**
JOKE	**Okinoerabujima**	**2.36**	**214**	*e*P	**Pn**	**23 05 59.6**	**+0.2**
KSRS	**Korea Array**	**8.30**	**348**	P	Pn	23 07 26.1	+5.4
	1.9nm,0.8s,baz=171,slow=16,SNR=5.2						
KSRS				LR	LR	23 10 51.3	
	comp=Z,24nm,21.9s,baz=240,slow=39						
MJAR	**Matsushiro Arr**	**9.93**	**41**	P	**Pn**	**23 07 40.9**	**-2.1**
	0.6nm,0.7s,baz=239,slow=16,SNR=1.6						
SONM	**Songino Array**	**25.98**	**322**	P	**P**	**23 10 51.9**	**+1.0**
	0.5nm,0.5s,baz=155,slow=14,SNR=4.3						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.35**	**256**	LR	LR	23 25 03.6	
	comp=Z,21nm,19.6s,baz=220,slow=38						
PETK	**Petropavlovsk-**	**31.22**	**33**	P	P	23 11 30.5	-6.7
	0.4nm,0.3s,baz=246,slow=11,SNR=2.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**40.77**	**309**	P	**P**	**23 13 01.6**	**+2.6**
	0.3nm,0.8s,baz=101,slow=7.6,SNR=2.8						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**49.10**	**316**	P	**P**	**23 14 05.8**	**+0.7**
	1.4nm,0.9s,baz=97,slow=9.2,SNR=5.0						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**49.16**	**175**	P	**P**	**23 14 06.1**	**+0.4**
	0.5nm,0.5s,baz=353,slow=8.2,SNR=6.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**52.82**	**176**	P	**P**	**23 14 34.0**	**+0.8**
	0.3nm,0.5s,baz=8.6,slow=14,SNR=6.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**60.95**	**29**	P	**P**	**23 15 27.2**	**-3.1**
	0.2nm,0.7s,baz=283,slow=6.4,SNR=4.8						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**70.98**	**330**	P	**P**	**23 16 33.3**	**-1.4**
	0.9nm,0.8s,baz=57,slow=7.0,SNR=4.5						
	0.9nm,0.8s						

*IDC **10** 23:09:32.5±1.1, 11°60'N×142°97'E, h0km, mb3.6/6, mbtmp3.7/7, ML3.8/1, MS3.2/2, Error ellipse: s-maj=36.4km s-min=19.9km az=108.0*

ISC 10 23:09:37.1±1.1, 11°6'N±0°2×143°0'E±0°2, h32km, n9, σ1ˢ06/8, mb3.6/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.72**	**42**	Pn	**Pn**	**23 10 17.3**	**-1.4**
	17nm,0.3s,baz=173,slow=20,SNR=1.5						
GUMO				Sn	**Sn**	**23 10 52.1**	**+1.6**
	18nm,0.3s,baz=18,slow=23,SNR=1.4						
	50nm,0.3s						
PMG	**Port Moresby**	**21.23**	**169**	LR	LR	23 21 43.8	
	comp=Z,73nm,18.6s,baz=166,slow=34						
WRA	**Warramunga Arr**	**32.44**	**195**	P	**P**	**23 16 04.4**	**-0.2**
	0.9nm,0.7s,baz=17,slow=9.7,SNR=7.3						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**36.12**	**194**	P	**P**	**23 16 37.1**	**+0.7**
	0.4nm,0.6s,baz=14,slow=8.3,SNR=6.3						
	0.4nm,0.6s						
AFI	**Afiamalu**	**51.49**	**118**	LR	LR	23 36 51.9	
	comp=Z,26nm,21.7s,baz=44,slow=32						
MKAR	**Makanchi Array**	**61.70**	**317**	P	**P**	**23 19 52.9**	**+0.6**
	0.2nm,0.5s,baz=87,slow=8.1,SNR=3.0						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**65.00**	**321**	P	**P**	**23 20 14.2**	**+0.2**
	0.4nm,0.6s,baz=107,slow=7.6,SNR=4.2						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**70.39**	**322**	P	**P**	**23 20 47.5**	**-0.5**
	0.7nm,0.4s,baz=100,slow=7.5,SNR=2.9						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**71.17**	**25**	P	**P**	**23 20 52.7**	**+0.2**
	0.3nm,0.5s,baz=253,slow=5.9,SNR=4.1						
	0.3nm,0.5s						

*IDC **10** 23:13:22.2±1.5, 52°33'N×179°14'E, h162km±13km, mb3.5/17, mbtmp4.0/21, Error ellipse: s-maj=21.5km s-min=10.3km az=176.0*

*AEIC **10** 23:13:22.9±2.5, 52°09'N±0°05×179°10'E±0°07, h187km±4km, Error ellipse: s-maj=9.3km s-min=3.5km az=140.0*

*NEIC **10** 23:13:23.6±2.0, 52°2'N±0°1×179°09'E±0°08, h175km±6km, mb4.2/127, ML4.0/14, ML3.7(AEIC), Error ellipse: s-maj=16.3km s-min=7.4km az=182.0*

ISC 10 23:13:22.9±0.6, 52°24'N±0°09×179°05'E±0°03, h172km±6km, n215, σ0ˢ99/216, mb4.1/56, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CETU	**Semis' Tuman**	**0.39**	**135**		**Pn**	**23 13 47.1**	**+0.8**
CEAP	**Semis' Anvil P**	**0.41**	**126**		**Pn**	**23 13 47.2**	**+0.9**
LSPA	**Little Sitkin**	**0.41**	**226**		**Pn**	**23 13 47.3**	**+1.0**
LSNW	**Little Sitkin**	**0.43**	**230**		**Pn**	**23 13 47.2**	**+0.8**
LSSE	**Little Sitkin**	**0.43**	**224**		**Pn**	**23 13 47.5**	**+1.0**
CEPE	**Semis' Perret**	**0.46**	**127**		**Pn**	**23 13 47.3**	**+0.7**
CESW	**Semis' Southwe**	**0.47**	**137**		**Pn**	**23 13 46.9**	**+0.4**
CESW					**Sn**	**23 14 05.0**	**+0.3**
CERB	**Semis' Cerberu**	**0.47**	**131**		**Sn**	**23 14 06.2**	**+1.5**
CERAA	**Semis' Rag'd T**	**0.52**	**131**		**Pn**	**23 13 47.3**	**+0.6**
AMKA	**Amchitka**	**0.88**	**170**		**Pn**	**23 13 48.7**	**-0.1**
AMKA				Sn	**Sn**	**23 14 07.7**	**-1.1**
GASW	**Gareloi Southw**	**1.38**	**109**		**Pn**	**23 13 52.9**	**0.0**
GANO	**Gareloi North**	**1.39**	**107**		**Pn**	**23 13 53.0**	**-0.1**
GANE	**Gareloi Northe**	**1.41**	**107**		**Pn**	**23 13 53.2**	**0.0**
GANE					**Sn**	**23 14 16.8**	**+0.1**
GALAA	**Gareloi Lava P**	**1.43**	**109**		**Pn**	**23 13 53.7**	**+0.2**
GAEA	**Gareloi East**	**1.44**	**108**		**Sn**	**23 14 18.2**	**+1.1**
GAKI	**Gareloi-Kavalg**	**1.49**	**117**		**Sn**	**23 14 17.6**	**-0.4**
TASE	**Tanaga Southea**	**1.84**	**102**		**Sn**	**23 14 25.0**	**+0.3**
TAFP	**Tanaga Falls P**	**1.86**	**99**		**Sn**	**23 13 57.6**	**-0.2**
TAFP					**Sn**	**23 14 24.7**	**-0.2**
TAFL	**Tanaga Flats**	**1.95**	**103**		**Sn**	**23 14 27.0**	**+0.5**
TAPA	**Tanaga Point A**	**1.98**	**101**		**Sn**	**23 14 27.5**	**+0.2**
KICM	**Kanaga Island**	**2.34**	**97**		**Sn**	**23 14 34.2**	**-0.1**
KIMD	**Kanaga Island**	**2.35**	**100**		**Sn**	**23 14 33.0**	**-1.6**
KIWB	**Kanaga Island**	**2.38**	**98**		**Pn**	**23 14 03.1**	**-0.5**
KIWB				Sn	**Sn**	**23 14 33.9**	**-1.3**
KIWB				IAML		23 14 35.8	
	comp=N,569nm,0.7s						
KIWB				IAML		23 14 36.7	
	comp=E,387nm,0.5s						
KINC	**Kanaga Island**	**2.38**	**96**		**Pn**	**23 14 03.4**	**-0.2**
KIRH	**Kanaga Island**	**2.41**	**97**		**Pn**	**23 14 03.6**	**-0.3**
ADK	**Adak**	**2.66**	**96**		**Pn**	**23 14 05.8**	**-1.1**
ADK				Sn	**Sn**	**23 14 39.5**	**-1.6**
ADK				IAML		23 14 40.6	
	comp=E,394nm,0.3s						
ADK				IAML		23 14 41.5	
	comp=E,331nm,0.2s						
ADAG	**Mount Adagdak**	**2.69**	**94**		**Pn**	**23 14 06.8**	**-0.6**
GSSP	**Great Sitkin S**	**2.94**	**91**		**Pn**	**23 14 09.7**	**-0.7**
GSCK	**Great Sitkin C**	**2.96**	**93**		**Pn**	**23 14 09.9**	**-0.7**
GSTR	**Great Sitkin T**	**3.02**	**91**	Pn	**Pn**	**23 14 10.2**	**-1.1**
GSTR				IAML		23 14 50.5	
	comp=E,343nm,0.7s						
GSMY	**Great Sitkin M**	**3.02**	**92**		**Pn**	**23 14 10.7**	**-0.7**
SHEM	**Shemya Is, Ala**	**3.07**	**281**	P	**Pn**	**23 14 11.3**	**-0.5**
	comp=E,33nm,0.2s,baz=179,slow=3.2,SNR=17						
SHEM				S	**Sn**	**23 14 49.4**	**-0.5**
	comp=E,178nm,0.3s,baz=280,slow=2.7,SNR=5.0						
SHEM	**Shemya Is, Ala**	**3.07**	**281**	Pn	**Pn**	**23 14 11.0**	**-0.8**
SHEM				Sn	**Sn**	**23 14 49.9**	**-0.1**
SHEM				IAML		23 14 52.4	
	comp=N,275nm,0.3s						
SMY	**Shemya**	**3.07**	**281**	Pn	**Pn**	**23 14 11.6**	**-0.2**
SMY					**Sn**	**23 14 50.0**	**+0.1**
SMY				IAML		23 14 52.4	
	comp=E,383nm,0.3s						
SMY				IAML		23 14 53.0	
	comp=N,327nm,0.3s						
GSIG	**Igitkin Island**	**3.11**	**93**		**Pn**	**23 14 11.6**	**-0.9**
KOWE	**Korovin West**	**4.11**	**86**		**Pn**	**23 14 24.8**	**-0.3**
ATKA	**Atka Island**	**4.15**	**88**	Pn	**Pn**	**23 14 24.7**	**-0.9**
OKTU	**Okmok Mt. Tuli**	**7.91**	**77**		**Pn**	**23 15 15.9**	**+1.0**
SPIA	**Saint Paul Isl**	**7.92**	**47**	Pn	**Pn**	**23 15 15.5**	**+0.5**
MGOD	**Makushin Gods**	**8.63**	**74**		**Pn**	**23 15 24.7**	**+0.3**
MREP	**Makushin Rep't**	**8.71**	**74**		**Pn**	**23 15 26.1**	**+0.7**
MNAT	**Makushin Natee**	**8.75**	**74**		**Pn**	**23 15 26.8**	**+0.8**
UNV	**Unalaska Valle**	**8.85**	**74**	Pn	**Pn**	**23 15 28.2**	**+0.9**
ZRO	**Akutan Zero**	**9.18**	**72**		**Pn**	**23 15 33.1**	**+1.4**
AHB	**Akutan Harbor**	**9.28**	**72**		**Pn**	**23 15 34.4**	**+1.5**
AKUT	**Akutan**	**9.31**	**72**	Pn	**Pn**	**23 15 31.2**	**-2.0**
SDPT	**Sand Point**	**12.49**	**68**	Pn	**Pn**	**23 16 13.6**	**-1.0**
CNBA	**Chernabura Isl**	**12.96**	**70**	Pn	**Pn**	**23 16 17.8**	**-2.8**
PEA0B	**Petropavlovsk-**	**12.98**	**282**	Pn	**Pn**	**23 16 19.3**	**-1.6**
PETK	**Petropavlovsk-**	**12.98**	**282**	P	**Pn**	**23 16 21.4**	**+0.6**
	comp=N,2.5nm,0.5s,baz=91,slow=15,SNR=7.7						
PETK				S	**Sn**	**23 18 39.7**	**-5.1**
	comp=N,1.7nm,0.4s,baz=100,slow=27,SNR=5.1						
PETK	**Petropavlovsk-**	**12.98**	**282**	Pn	**Pn**	**23 16 19.4**	**-1.5**
N14K	**Kuskokwak Cree**	**13.18**	**47**		**Pn**	**23 16 24.5**	**+1.2**
M14K	**Bethel**	**13.47**	**43**		**Pn**	**23 16 27.8**	**+0.9**
L14K	**Kuka Creek**	**13.49**	**40**		**P**	**23 16 28.8**	**-1.7**
O15K	**Ungalikthiuk R**	**13.74**	**51**		**Pn**	**23 16 31.0**	**+0.6**
N15K	**Kwethluk River**	**14.01**	**47**		**Pn**	**23 16 33.9**	**+0.1**
P16K	**Nushagak River**	**14.59**	**53**	Pn	**Pn**	**23 16 40.8**	**-0.1**
O16K	**Kokwok River B**	**14.72**	**51**	Pn	**Pn**	**23 16 42.3**	**-0.2**
M16K	**Timber Creek**	**14.89**	**45**		**P**	**23 16 45.8**	**-0.2**
L16K	**Owhat River**	**14.99**	**42**		**P**	**23 16 46.9**	**-0.2**
P17K	**Kvichak River**	**15.40**	**54**	P	**P**	**23 16 51.9**	**+0.2**
J16K	**Anvik River**	**15.41**	**36**		**P**	**23 16 51.4**	**-0.4**
J16K				IAmb	IAmb	23 16 55.1	
	comp=Z,4.7nm,0.7s						
N17K	**Nushagak Hills**	**15.48**	**48**		**P**	**23 16 52.3**	**-0.3**
N17K				IAmb	IAmb	23 16 56.1	
	comp=Z,9.9nm,0.9s						
M17K	**Holitna River**	**15.71**	**45**		**P**	**23 16 56.1**	**+1.0**
ACHA	**Angle Creek He**	**15.73**	**58**	P	**P**	**23 16 55.4**	**-0.1**
ACHA				IAmb	IAmb	23 17 00.6	
	comp=Z,9.2nm,0.8s						
J17K	**VABM Dome**	**16.04**	**37**		**P**	**23 16 59.1**	**+0.4**
J17K				IAmb	IAmb	23 17 01.7	
	comp=Z,9.6nm,1.0s						
N18K	**Kilae Creek**	**16.13**	**49**	P	**Pn**	**23 17 00.4**	**+0.6**
N18K				IAmb	IAmb	23 17 06.5	
	comp=Z,5.3nm,0.6s						
O18K	**Koktuh Hills**	**16.19**	**52**	P	**Pn**	**23 17 00.7**	**+0.1**
O18K				IAmb	IAmb	23 17 04.8	
	comp=Z,15nm,0.8s						
L18K	**Granite Mounta**	**16.39**	**43**		**Pn**	**23 17 03.9**	**+1.0**
L18K				IAmb	IAmb	23 17 06.7	
	comp=Z,12nm,1.2s						
OHAK	**Old Harbor**	**16.67**	**62**	P	**P**	**23 17 04.3**	**-1.4**
H17K	**Granite Mounta**	**16.67**	**32**		**Pn**	**23 17 06.5**	**+0.2**
H17K				IAmb	IAmb	23 17 09.6	
	comp=Z,6.5nm,0.7s						
Q19K	**Cape Douglas,**	**16.74**	**56**	P	**Pn**	**23 17 07.1**	**-0.1**
N19K	**Bonanza Creek**	**16.82**	**49**		**Pn**	**23 17 10.1**	**+1.8**
BILL	**Bilibino**	**17.01**	**343**	P	**Pn**	**23 17 10.7**	**+0.4**
KDAK	**Kodiak Island**	**17.11**	**60**	P	**P**	**23 17 09.4**	**-1.1**
	comp=Z,10nm,0.4s,baz=272,slow=4.1,SNR=23						
KDAK	**Kodiak Island**	**17.11**	**60**		**P**	**23 17 09.3**	**-1.2**
H18K	**Honhosa River**	**17.32**	**33**		**Pn**	**23 17 14.1**	**0.0**
H18K				IAmb	IAmb	23 17 15.6	
	comp=Z,6.3nm,0.8s						
MA2	**Magadan**	**17.36**	**306**	P	**Pn**	**23 17 14.8**	**+0.2**
	comp=Z,3.8nm,0.5s,baz=140,slow=17,SNR=2.0						
MA2	**Magadan**	**17.36**	**306**	P	**Pn**	**23 17 14.8**	**+0.2**
MA2				IAmb	IAmb	23 17 15.2	
	comp=Z,14nm,1.4s						
J19K	**Poorman**	**17.66**	**38**	P	**Pn**	**23 17 17.1**	**-0.9**
J19K				IAmb	IAmb	23 17 21.0	
	comp=Z,7.8nm,1.0s						
G18K	**Tagagawik**	**17.69**	**31**	P	**Pn**	**23 17 18.6**	**+0.1**
G18K				IAmb	IAmb	23 17 21.4	
	comp=Z,11nm,1.2s						
K20K	**Telida**	**17.98**	**41**	P	**P**	**23 17 20.4**	**+0.4**
SPU	**Mount Spurr**	**18.07**	**49**	P	**Pn**	**23 17 22.1**	**-0.8**
SPU				IAmb	IAmb	23 17 27.1	
	comp=Z,6.5nm,0.9s						
CNPM	**China Poot**	**18.07**	**55**		**P**	**23 17 21.0**	**0.0**
E18K	**Tukpahlearik C**	**18.18**	**25**	P	**Pn**	**23 17 23.4**	**-0.7**
H19K	**Roundabout Mou**	**18.19**	**34**	P	**Pn**	**23 17 24.1**	**-0.1**
STLK	**Strandline Lak**	**18.26**	**48**	P	**Pn**	**23 17 25.2**	**0.0**
STLK				IAmb	IAmb	23 17 30.1	
	comp=Z,11nm,0.6s						
BRLK	**Bradley Lake**	**18.29**	**54**		**P**	**23 17 22.4**	**-1.0**
SLKM	**Skilak Lake**	**18.77**	**52**		**P**	**23 17 28.3**	**-0.3**
CAST	**Castle Rocks**	**18.82**	**42**	P	**Pn**	**23 17 30.3**	**-1.3**
CAST				IAmb	IAmb	23 17 31.6	
	comp=Z,7.2nm,0.7s						
L22K	**Petersville**	**19.06**	**46**	P	**P**	**23 17 32.5**	**+0.8**
L22K				IAmb	IAmb	23 17 38.2	
	comp=Z,7.8nm,0.6s						
RC01	**Rabbit Creek A**	**19.13**	**50**	P	**P**	**23 17 33.2**	**+0.7**
RC01				IAmb	IAmb	23 17 36.4	
	comp=Z,10nm,0.9s						
E19K	**Redstone River**	**19.14**	**28**	P	**Pn**	**23 17 34.2**	**-1.2**
F20K	**Avaraart Lake**	**19.34**	**30**	P	**P**	**23 17 35.6**	**+1.0**
KTH	**Kantishna Hill**	**19.35**	**43**		**P**	**23 17 35.3**	**+0.3**
KTH				IAmb	IAmb	23 17 40.0	
	comp=Z,8.2nm,0.8s						
H21K	**Melozitna River**	**19.54**	**36**	P	**Pn**	**23 17 38.6**	**-1.6**
H21K				IAmb	IAmb	23 17 39.2	
	comp=Z,9.2nm,0.8s						
I21K	**Tanana**	**19.61**	**38**	P	**P**	**23 17 38.8**	**+1.2**
I21K				IAmb	IAmb	23 17 40.0	
	comp=Z,12nm,1.1s						
GHO	**Glory Hole Cre**	**19.67**	**49**	P	**P**	**23 17 39.3**	**+0.9**
GHO				IAmb	IAmb	23 17 41.3	
	comp=Z,9.6nm,0.7s						
C19K	**Lookout Ridge**	**19.68**	**23**	P	**Pn**	**23 17 41.7**	**-0.2**
G21K	**Allakaket**	**19.74**	**33**	P	**P**	**23 17 40.3**	**+1.2**
G21K				IAmb	IAmb	23 17 41.1	
	comp=Z,11nm,1.1s						
KNK	**Knik Glacier**	**19.80**	**50**	P	**P**	**23 17 40.8**	**+1.0**
SML	**Sawmill**	**19.95**	**49**	P	**P**	**23 17 42.5**	**+1.1**
MLY	**Manley**	**20.02**	**39**	P	**P**	**23 17 42.7**	**+0.7**
MLY				IAmb	IAmb	23 17 43.6	
	comp=Z,8.4nm,1.4s						
P23K	**Montague Islan**	**20.06**	**54**	P	**P**	**23 17 43.3**	**+0.8**
F21K	**Alatna River**	**20.15**	**31**		**P**	**23 17 44.4**	**+1.0**
F21K				IAmb	IAmb	23 17 45.4	
	comp=Z,8.0nm,0.8s						
D20K	**Etivluk River**	**20.16**	**26**	P	**P**	**23 17 44.9**	**+1.4**
H22K	**Ishtalitna Cre**	**20.17**	**36**	P	**P**	**23 17 44.8**	**+1.2**
SCM	**Sheep Creek Mo**	**20.42**	**49**	P	**P**	**23 17 46.3**	**-0.2**
HIN	**Hinchinbrook I**	**20.56**	**53**	P	**P**	**23 17 47.7**	**-0.2**
I23K	**Minto, Yukon-K**	**20.59**	**39**	P	**P**	**23 17 48.1**	**0.0**
I23K				IAmb	IAmb	23 17 52.7	
	comp=Z,2.5nm,0.5s						
FID	**Port Fidalgo**	**20.62**	**52**	P	**P**	**23 17 47.6**	**-0.9**
FID				IAmb	IAmb	23 17 50.5	
	comp=Z,8.8nm,0.9s						
DHY	**Denali Highway**	**20.71**	**45**	P	**P**	**23 17 49.2**	**-0.4**
DHY				IAmb	IAmb	23 17 51.8	
	comp=Z,10nm,0.8s						
H23K	**Yukon River**	**20.81**	**37**	P	**P**	**23 17 51.9**	**+1.4**
H23K				IAmb	IAmb	23 17 53.7	
	comp=Z,6.0nm,0.9s						
WRH	**Wood River Hil**	**20.84**	**41**	P	**P**	**23 17 50.4**	**-0.4**
B20K	**Meade River**	**20.93**	**23**	P	**P**	**23 17 52.5**	**+0.8**
B20K				IAmb	IAmb	23 17 55.6	
	comp=Z,13nm,1.4s						
KLU	**Klutina**	**21.01**	**50**	P	**P**	**23 17 52.9**	**+0.1**
KLU				IAmb	IAmb	23 17 56.9	
	comp=Z,7.1nm,0.8s						
M24K	**Tolsona, Glenn**	**21.01**	**48**	P	**P**	**23 17 53.9**	**+1.1**
CCB	**Clear Creek Bu**	**21.02**	**41**		**P**	**23 17 52.8**	**+0.1**
DIV	**Divide**	**21.02**	**51**	P	**P**	**23 17 52.1**	**-0.8**
DIV				IAmb	IAmb	23 17 53.7	
	comp=Z,5.2nm,0.5s						
G23K	**Bananza Creek**	**21.04**	**35**	P	**P**	**23 17 54.0**	**+1.0**
G23K				IAmb	IAmb	23 17 54.6	
	comp=Z,5.8nm,0.6s						
E22K	**Anaktuvuk Pass**	**21.19**	**30**	P	**P**	**23 17 55.4**	**+0.9**
E22K				IAmb	IAmb	23 17 57.5	
	comp=Z,16nm,1.4s						
COLD	**Coldfoot**	**21.23**	**33**	P	**P**	**23 17 56.1**	**+1.2**
HDA	**Harding Lake**	**21.29**	**42**	P	**P**	**23 17 55.5**	**-0.1**
B21K	**Ikpikpuk River**	**21.30**	**25**	P	**P**	**23 17 56.7**	**+1.1**
B21K				IAmb	IAmb	23 17 57.9	
	comp=Z,4.7nm,0.5s						
IL31		**21.43**	**41**	P	**P**	**23 17 56.3**	**-0.8**
ILAR	**Eielson Array**	**21.43**	**41**	P	**P**	**23 17 55.1**	**-2.1**
	comp=Z,1.2nm,0.5s,baz=250,slow=11,SNR=15						
	comp=Z,1.2nm,0.5s						
ILAR	**Eielson Array**	**21.43**	**41**	P	**P**	**23 17 56.1**	**-1.0**
H24K	**Noodor Dome**	**21.44**	**38**	P	**P**	**23 17 57.4**	**+0.1**
H24K				IAmb	IAmb	23 17 59.9	
	comp=Z,10nm,1.4s						
RAGM	**Ragged Mountai**	**21.46**	**53**	P	**P**	**23 17 57.0**	**-0.4**
PAX	**Paxson**	**21.52**	**46**	P	**P**	**23 17 58.2**	**0.0**
PAX				IAmb	IAmb	23 17 59.6	
	comp=Z,6.2nm,0.7s						
KAIM	**Kayak Island**	**21.54**	**55**	P	**P**	**23 17 58.8**	**+0.5**
BMRM	**Bremner River**	**21.56**	**52**	P	**P**	**23 17 58.2**	**-0.4**
BMRM				IAmb	IAmb	23 18 04.3	
	comp=Z,6.0nm,0.8s						
K24K	**Donnelly Dome**	**21.60**	**44**	P	**P**	**23 17 58.9**	**0.0**
K24K				IAmb	IAmb	23 17 59.5	
	comp=Z,5.0nm,0.6s						
E23K	**Chandalar**	**21.84**	**32**	P	**P**	**23 18 01.9**	**+0.5**
E23K				IAmb	IAmb	23 18 02.7	
	comp=Z,5.8nm,0.7s						
BERG	**Berg Lake**	**21.94**	**54**	P	**P**	**23 18 02.0**	**-0.4**
G24K	**Hadweenzic Riv**	**21.94**	**36**	P	**P**	**23 18 03.6**	**+1.2**
G24K				IAmb	IAmb	23 18 05.2	
	comp=Z,13nm,0.9s						
RIDG	**Independent Ri**	**21.98**	**44**	P	**P**	**23 18 02.1**	**-0.7**
RIDG				IAmb	IAmb	23 18 05.7	
	comp=Z,7.5nm,1.3s						
D23K	**Nanushuk River**	**22.00**	**29**	P	**P**	**23 18 03.5**	**+0.5**
D23K				IAmb	IAmb	23 18 04.6	
	comp=Z,7.0nm,0.9s						
GLB	**Gilahina Butte**	**22.01**	**51**		**P**	**23 18 02.3**	**-0.8**
VRDI	**Verde Repeater**	**22.15**	**51**		**P**	**23 18 04.0**	**-0.7**
F24K	**Squaw Lake**	**22.16**	**34**	P	**P**	**23 18 05.5**	**+1.1**
E24K	**Your Creek**	**22.22**	**32**	P	**P**	**23 18 06.2**	**+1.1**
CRQM	**Cirque**	**22.25**	**53**	P	**P**	**23 18 05.9**	**+0.3**
MENT	**Mentasta**	**22.30**	**47**	P	**P**	**23 18 06.5**	**+0.7**
MENT				IAmb	IAmb	23 18 07.6	
	comp=Z,9.7nm,1.1s						
C23K	**Itkillik River**	**22.52**	**27**		**P**	**23 18 08.1**	**+0.3**
C23K				IAmb	IAmb	23 18 09.9	
	comp=Z,4.7nm,0.6s						
D24K	**Happy Valley**	**22.67**	**30**	P	**P**	**23 18 10.0**	**+0.9**
D24K				IAmb	IAmb	23 18 10.8	
	comp=Z,11nm,0.8s						
F25K	**Christian Rive**	**22.97**	**35**	P	**P**	**23 18 13.1**	**+1.1**
M27K	**Edge Creek, AK**	**23.04**	**49**	P	**P**	**23 18 13.9**	**+1.1**
M27K				IAmb	IAmb	23 18 15.3	
	comp=Z,5.3nm,0.8s						
L27K	**Beaver Creek,**	**23.17**	**47**	P	**P**	**23 18 14.7**	**+0.9**
BCAR	**Beaver Creek A**	**23.19**	**47**		**P**	**23 18 14.0**	**0.0**
E25K	**Arctic Village**	**23.21**	**33**	IAmb	IAmb	23 18 16.3	
	comp=Z,3.4nm,0.6s						
K27K	**Chicken**	**23.24**	**44**	P	**P**	**23 18 15.0**	**+0.6**
K27K				IAmb	IAmb	23 18 17.3	
	comp=Z,4.8nm,0.7s						
G26K	**Porcupine Rive**	**23.39**	**37**	IAmb	IAmb	23 18 18.5	
	comp=Z,15nm,1.2s						
D25K	**Kavik River**	**23.50**	**30**	IAmb	IAmb	23 18 18.9	
	comp=Z,7.4nm,0.8s						
F26K	**Sheenjek River**	**23.53**	**35**	IAmb	IAmb	23 18 20.0	
	comp=Z,7.0nm,0.7s						
PCA	**Pinnacle**	**23.64**	**55**	P	**P**	**23 18 19.7**	**+1.5**
G27K	**Doyon Strip**	**24.13**	**38**	P	**P**	**23 18 23.1**	**+0.5**
DAWY	**Dawson**	**24.41**	**45**		**P**

KURK Kurchatov 57.45 312 P P 23 22 54.0 +0.7
KURK IAmb IAmb 23 23 35.5
comp=Z,3.9nm,1.4s
KURBB Kurchatov Arra 57.56 312 P P 23 22 54.0 0.0
comp=Z,0.4nm,0.4s,baz=41,slow=6.9,SNR=4.2
comp=Z,0.4nm,0.4s
WMQ Urumqi 57.75 301 *e*P **P 23 22 58.5 +2.9**
WMQ PcP **PcP 23 23 45.6 -0.8**
MKAR Makanchi Array 58.45 307 P P 23 22 60.0 -0.4
comp=Z,0.3nm,0.3s,baz=46,slow=6.4,SNR=16
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 59.36 318 P P 23 23 06.5 0.0
comp=Z,0.8nm,0.3s,baz=48,slow=7.5,SNR=7.3
comp=Z,0.8nm,0.3s
TXAR Lajitas Array 59.83 80 P P 23 23 10.0 -0.2
comp=Z,1.6nm,0.6s,baz=306,slow=5.6,SNR=27
comp=Z,1.6nm,0.6s
PZH PanZhiHua 61.90 278 P P 23 23 25.6 +1.4
PZH pmax pmax
comp=Z,10.0nm,0.6s
AB31 Akbulak array 66.43 321 P P 23 23 54.2 +1.1
ABKAR Akbulak array 66.43 321 P P 23 23 54.0 +0.8
HFS Hagfors 67.36 352 P P 23 23 58.7 -0.1
comp=Z,6.8nm,1.1s,baz=64,slow=6.6,SNR=3.2
comp=Z,6.8nm,1.1s
EKA Eskdalemuir Ar 72.77 1 P P 23 24 32.2 +0.4
comp=Z,1.0nm,0.8s,baz=354,slow=5.8,SNR=1.9
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 74.30 341 P P 23 24 39.7 -1.1
comp=Z,0.3nm,0.3s,baz=23,slow=6.6,SNR=3.6
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 74.30 341 P P 23 24 39.7 -1.1
WRA Warramunga Arr 81.74 222 P P 23 25 22.1 -0.1
comp=Z,0.4nm,0.6s,baz=26,slow=5.1,SNR=3.4
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 81.74 222 P P 23 25 22.1 -0.1
ASAR Alice Springs 85.25 221 P P 23 25 40.7 +0.7
comp=Z,0.2nm,0.3s,baz=27,slow=6.7,SNR=1.5
comp=Z,0.2nm,0.3s

MCSM ***10*** *23:32:41.6±0.6,35°N±5°×2°3E±°, h36km±5km, mb4.2, mB4.2, MLv4.3, Mw(mB)3.2*
GFZ ***10*** *23:32:42.8±0.4,35°N±4°×2°3E±°, h89km±5km, M3.9/35, mb4.2/35, Error ellipse: s-maj=8.8km s-min=3.7km az=29.1, confirmed*
NAO ***10*** *23:32:42.2,35°.51N×24°.84E, h33km, MB3.8*
ATH ***10*** *23:32:44.5,35°.24N×22°.80E, h21km±3km, ML3.8/11, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
NEIC ***10*** *23:32:44.4±2.4, 35°.33N±0°.08×22°.87E±0.07, h36km±8km, mb4.1/25, Error ellipse: s-maj=11.8km s-min=7.0km az=202.0*
THE ***10*** *23:32:45.9,35°N±3°×2°3E±°, h18km±7km, M3.7/11, MLh3.7/11*
ISK ***10*** *23:32:45.9, 34°.97N×23°.20E, h74km, ML3.9/11*
IDC ***10*** *23:32:46.3±1.4, 35°.49N×22°.87E, h50km±13km, mb3.7/18, mbtmp3.9/28, ML3.3/9, MS3.1/11, Error ellipse: s-maj=17.2km s-min=10.2km az=14.0*
AFAD ***10*** *23:32:47.1, 34°.90N×23°.50E, h6km±4km, MW4.0*
ISC 10 23:32:44.6±0.5, 35°.26N±0°.05×22°.85E±0°.04, h51km, n333, **σ1§88/370, mb4.1/28, MS3.1/5, 13C-11D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.64**	**92**	Pg	**Pn**	**23 32 59.0**	**+1.5**
KNDR				Sg	**Sn**	**23 33 08.8**	**+1.9**
KNDR	**Palaiochora Ch**	**0.64**	**92**	P	**Pn**	**23 32 58.0**	**+0.5**
KNDR				S	**Sn**	**23 33 09.2**	**+2.4**
KNDR	**Palaiochora Ch**	**0.64**	**92**	P	**Pn**	**23 32 58.3**	**+0.7**
KNDR				S	**Sn**	**23 33 06.9**	**0.0**
ANKY	**Antikythira Is**	**0.71**	**31**	P	**Pn**	**23 32 58.8**	**+0.3**
ANKY				S	**Sn**	**23 33 08.6**	**+0.1**
ANKY	**Antikythira Is**	**0.71**	**31**	P	**Pn**	**23 32 58.8**	**+0.3**
ANKY				S	**Sn**	**23 33 08.7**	**+0.2**
IMMV	**Iera Moni Meta**	**0.95**	**78**	P	**Pn**	**23 33 02.8**	**+1.2**
IMMV				S	**Sn**	**23 33 16.1**	**+1.9**
IMMV	**Iera Moni Meta**	**0.95**	**78**	P	**Pn**	**23 33 02.6**	**+1.0**
IMMV	**Iera Moni Meta**	**0.95**	**78**	P	**Pn**	**23 33 03.1**	**+1.5**
IMMV				S	**Sn**	**23 33 16.6**	**+2.5**
CHAN	**Chania**	**1.01**	**75**	P	**Pn**	**23 33 04.0**	**+1.6**
CHAN				S	**Sn**	**23 33 17.3**	**+1.7**
KTHA	**Kythira Island**	**1.01**	**10**	P	**Pn**	**23 33 04.1**	**+1.6**
KTHA	**Kythira Island**	**1.01**	**10**	P	**Pn**	**23 33 03.8**	**+1.4**
CHNB	**Souda**	**1.02**	**77**	P	**Pn**	**23 33 04.5**	**+1.9**
CHNB				S	**Sn**	**23 33 16.9**	**+1.0**
GVD	**Gavdhos**	**1.10**	**112**	P	**Pn**	**23 33 04.9**	**+1.2**
GVD				S	**Sn**	**23 33 21.1**	**+3.3**
GVD	**Gavdhos**	**1.10**	**112**	P	**Pn**	**23 33 04.6**	**+1.0**
GVD	**Gavdhos**	**1.10**	**112**	P	**Pn**	**23 33 04.8**	**+1.2**
GVD				S	**Sn**	**23 33 19.4**	**+1.6**
VAM	**Vamos**	**1.11**	**82**	P	**Pn**	**23 33 05.7**	**+1.8**
VAM				S	**Sn**	**23 33 22.4**	**+4.3**
VAM	**Vamos**	**1.11**	**82**	P	**Pn**	**23 33 05.8**	**+2.0**
VAM				S	**Sn**	**23 33 21.2**	**+3.0**
MNVA	**Monemvasia**	**1.43**	**6**	P	**Pn**	**23 33 10.5**	**+2.4**
MNVA				S	**Sn**	**23 33 27.6**	**+1.8**
VLI	**Veliai**	**1.46**	**3**	P	**Pn**	**23 33 10.8**	**+2.3**
VLI				S	**Sn**	**23 33 30.1**	**+3.6**
VLI	**Veliai**	**1.46**	**3**	P	**Pn**	**23 33 10.6**	**+2.1**
VLI				S	**Sn**	**23 33 29.3**	**+2.9**
SIVA	**Sivas**	**1.63**	**98**	P	**Pn**	**23 33 12.3**	**+1.5**
SIVA	**Sivas**	**1.63**	**98**	P	**Pn**	**23 33 12.3**	**+1.5**
IDI	**Anoyia**	**1.67**	**88**	P	**Pn**	**23 33 13.2**	**+1.7**
	73nm,0.5s,baz=303,slow=15,SNR=80						
IDI				S	**Sn**	**23 33 33.6**	**+1.8**
	217nm,0.6s,baz=178,slow=17,SNR=3.7						
IDI				LR	LR	23 34 11.6	
	comp=Z,492nm,18.6s,baz=294,slow=51						
IDI	**Anoyia**	**1.67**	**88**	P	**Pn**	**23 33 13.1**	**+1.7**
IDI	**Anoyia**	**1.67**	**88**		**Pn**	**23 33 12.5**	**+1.1**
IDI					**Sn**	**23 33 32.0**	**+0.3**
IDI	**Anoyia**	**1.67**	**88**	P	**Pn**	**23 33 13.2**	**+1.7**
IACM	**Heraklion**	**1.82**	**88**	S	**Sn**	**23 33 38.1**	**+2.9**
PYL	**PYLOS**	**1.86**	**332**	P	**Pn**	**23 33 14.8**	**+0.8**
PYL	**PYLOS**	**1.86**	**332**	P	**Pn**	**23 33 15.1**	**+1.1**
MHLO	**Agia Marina, M**	**1.90**	**41**	P	**Pn**	**23 33 15.7**	**+1.1**
MHLO				S	**Sn**	**23 33 40.7**	**+3.4**
MHLO	**Agia Marina, M**	**1.90**	**41**	P	**Pn**	**23 33 16.1**	**+1.5**
ITM	**Ithomi**	**2.06**	**339**	Pn	Pn	23 33 24.9	+8.2
ITM	**Ithomi**	**2.06**	**339**	P	**Pn**	**23 33 18.6**	**+1.9**
ITM	**Ithomi**	**2.06**	**339**	Pn	**Pn**	**23 33 17.4**	**+0.7**
ITM				Sn	**Sn**	**23 33 40.8**	**-0.4**
ITM	**Ithomi**	**2.06**	**339**	P	**Pn**	**23 33 17.4**	**+0.7**
ITM	**Ithomi**	**2.06**	**339**	P	**Pn**	**23 33 18.7**	**+2.0**
NPS	**Neapolis**	**2.26**	**89**	P	**Pn**	**23 33 21.2**	**+1.7**
NPS	**Neapolis**	**2.26**	**89**	P	**Pn**	**23 33 21.7**	**+2.2**
THR9	**Santorini-Faro**	**2.31**	**61**	P	**Pn**	**23 33 21.8**	**+1.6**
MET3	**Ano Fanari,Met**	**2.33**	**7**	P	**Pn**	**23 33 22.4**	**+1.9**
THR6	**Thira Island,**	**2.34**	**61**	P	**Pn**	**23 33 21.9**	**+1.3**
SAP3	**Santorini-Thir**	**2.34**	**59**	P	**Pn**	**23 33 21.2**	**+0.6**
THR3	**Thira Island,**	**2.37**	**60**	P	**Pn**	**23 33 22.1**	**+1.1**
THERA	**Ancient Thera,**	**2.40**	**62**	P	**Pn**	**23 33 22.0**	**+0.5**
THERA	**Ancient Thera,**	**2.40**	**62**	P	**Pn**	**23 33 22.1**	**+0.7**
VLY	**Voula,Athens**	**2.70**	**16**	P	**Pn**	**23 33 27.5**	**+2.0**
ZKR	**Zakros**	**2.76**	**92**	P	**Pn**	**23 33 27.2**	**+0.9**
KARP	**Karpathos**	**3.53**	**84**		**Pn**	**23 33 37.7**	**+0.7**
KARP				Sn	**Sn**	**23 34 18.0**	**+0.5**
KARP	**Karpathos**	**3.53**	**84**	Pn	**Pn**	**23 33 37.7**	**+0.7**
KARP	**Karpathos**	**3.53**	**84**	P	**Pn**	**23 33 35.2**	**-1.8**
KARP	**Karpathos**	**3.53**	**84**	P	**Pn**	**23 33 37.7**	**+0.7**
AGG	**Agios Georgios**	**3.78**	**354**	P	**Pn**	**23 33 41.5**	**+1.2**
LKD2	**Lefkada island**	**3.93**	**334**	P	**Pn**	**23 33 42.8**	**+0.4**
YAZI	**Mula-Dat§a-**	**4.00**	**68**	P	**Pn**	**23 33 43.7**	**+0.5**
BODT	**Bodrum**	**4.03**	**62**	Pn	**Pn**	**23 33 45.4**	**+1.6**
CHOS	**Chios island**	**4.04**	**39**	P	**Pn**	**23 33 44.2**	**+0.2**
DAT	**Datca**	**4.11**	**68**	Pn	**Pn**	**23 33 45.9**	**+1.0**
URLA	**Izmir**	**4.31**	**43**	P	**Pn**	**23 33 49.2**	**+1.6**
URLA				S	**Sn**	**23 34 43.7**	**+7.0**
ARG	**Arkhangelos**	**4.40**	**76**	Pn	**Pn**	**23 33 49.7**	**+0.9**
ARG	**Arkhangelos**	**4.40**	**76**		**Pn**	**23 33 49.6**	**+0.9**
ARG				Sn	**Sn**	**23 34 38.1**	**-0.6**
ARG	**Arkhangelos**	**4.40**	**76**	P	**Pn**	**23 33 49.1**	**+0.4**
TURN	**Turunc**	**4.63**	**69**	Pn	**Pn**	**23 33 53.2**	**+1.3**
TURN	**Turunc**	**4.63**	**69**	P	**Pn**	**23 33 53.5**	**+1.6**
TURN				S	**Sn**	**23 34 41.5**	**-2.8**
PAIG	**Paliouri**	**4.71**	**8**	P	**Pn**	**23 33 54.2**	**+1.2**
AYDN	**Tasoluk**	**4.71**	**58**	P	**Pn**	**23 33 55.1**	**+2.0**
AYDN	**Tasoluk**	**4.71**	**58**	P	**Pn**	**23 33 53.9**	**+0.8**
YER	**Yerkesik**	**4.78**	**65**	Pn	**Pn**	**23 33 55.8**	**+1.8**
LIT	**Litokhoron**	**4.84**	**357**		**Pn**	**23 33 55.0**	**+0.2**
LIT				Sn	**Sn**	**23 34 50.5**	**+0.9**
LIT	**Litokhoron**	**4.84**	**357**	P	**Pn**	**23 33 55.0**	**+0.2**
DALY	**Dalyan (Mula)**	**4.95**	**70**	Pn	**Pn**	**23 33 57.5**	**+1.1**
DALY	**Dalyan (Mula)**	**4.95**	**70**	P	**Pn**	**23 33 58.6**	**+2.2**
DALY				S	**Sn**	**23 34 50.9**	**-1.5**
KEK	**Kerkira**	**5.06**	**332**		**Pn**	**23 33 56.9**	**-1.0**
KEK	**Kerkira**	**5.06**	**332**	P	**Pn**	**23 33 57.1**	**-0.7**
ESEN	**Aydn-Nazilli**	**5.10**	**59**	P	**Pn**	**23 34 00.1**	**+1.7**
SRN	**Sarande**	**5.14**	**335**	P	**Pn**	**23 33 58.3**	**-0.6**
SABU	**Mula-Dalaman**	**5.20**	**71**	P	**Pn**	**23 34 01.1**	**+1.3**
SABU				S	**Sn**	**23 34 56.5**	**-1.9**
IZZE	**Mula-Seydike**	**5.31**	**75**	P	**Pn**	**23 34 01.4**	**+0.1**
IZZE				S	**Sn**	**23 34 55.4**	**-5.8**
HORT	**Hortiatis**	**5.33**	**2**	P	**Pn**	**23 34 02.0**	**+0.4**
KIRA	**zmir-Kiraz**	**5.33**	**55**	P	**Pn**	**23 34 03.5**	**+1.7**
THE	**Thessaloniki**	**5.36**	**1**	P	**Pn**	**23 34 01.9**	**-0.1**
TAVA	**DENIZLI_Tavas**	**5.37**	**64**	P	**Pn**	**23 34 04.8**	**+2.7**
SULTU	**Buldan**	**5.51**	**58**	P	**Pn**	**23 34 06.5**	**+2.3**
CAEL	**Denizli, Camel**	**5.55**	**69**	P	**Pn**	**23 34 06.3**	**+1.6**
SOH	**Sokhos**	**5.57**	**4**	P	**Pn**	**23 34 05.1**	**+0.2**
AKAS	**Kas**	**5.58**	**78**	Pn	**Pn**	**23 34 05.1**	**+0.1**
AKAS	**Kas**	**5.58**	**78**		**Pn**	**23 34 05.2**	**+0.1**
AKAS	**Kas**	**5.58**	**78**	P	**Pn**	**23 34 05.2**	**+0.1**
AKAS				S	**Sn**	**23 35 04.4**	**-3.6**
AKAS	**Kas**	**5.58**	**78**	P	**Pn**	**23 34 05.2**	**+0.1**
KBN	**Korca**	**5.60**	**344**	P	**Pn**	**23 34 04.7**	**-0.5**
MANT	**Manisa**	**5.60**	**53**	Pn	**Pn**	**23 34 05.3**	**-0.2**
APMY	**Acipayam-Deniz**	**5.66**	**65**	Pn	**Pn**	**23 34 07.3**	**+1.2**
KNIK	**Mula-Seydike**	**5.67**	**72**	P	**Pn**	**23 34 07.3**	**+1.0**
KNIK				S	**Sn**	**23 35 05.8**	**-4.5**
GOLH	**Golhisar**	**5.77**	**68**	P	**Pn**	**23 34 09.2**	**+1.5**
GOLH				S	**Sn**	**23 35 07.7**	**-5.0**
BALY	**Balya**	**5.86**	**39**	P	**Pn**	**23 34 09.7**	**+0.8**
SRS	**Serrai**	**5.88**	**5**	P	**Pn**	**23 34 08.0**	**-1.0**
KNT	**Kendrikon**	**5.89**	**0**	P	**Pn**	**23 34 09.2**	**0.0**
ELL	**Elmali**	**5.91**	**73**	Pn	**Pn**	**23 34 09.9**	**+0.2**
ELL	**Elmali**	**5.91**	**73**		**Pn**	**23 34 10.3**	**+0.6**
INCE	**Denizli-Bozkur**	**5.95**	**64**	P	**Pn**	**23 34 12.0**	**+1.9**
INCE				S	**Sn**	**23 35 15.0**	**-1.9**
VAY	**Valandovo**	**6.05**	**358**	*i* Pn	**Pn**	**23 34 11.9**	**+0.4**
OHR	**Ohrid**	**6.06**	**345**	*i* Pn	**Pn**	**23 34 12.9**	**+1.3**
ALN	**Alexandroupoli**	**6.17**	**23**		**Pn**	**23 34 13.2**	**+0.2**
ALN	**Alexandroupoli**	**6.17**	**23**	P	**Pn**	**23 34 13.6**	**+0.6**
AKUM	**Antalya-Kumluc**	**6.18**	**78**	P	**Pn**	**23 34 13.6**	**+0.3**
AKUM				S	**Sn**	**23 35 18.4**	**-4.2**
TIP	**Timpagrande**	**6.24**	**311**	⇑P	**Pn**	**23 34 12.0**	**-2.1**
TIP	**Timpagrande**	**6.24**	**311**		**Pn**	**23 34 13.2**	**-0.8**
TIP	**Timpagrande**	**6.24**	**311**	P	**Pn**	**23 34 13.7**	**-0.4**
RDO	**Rodhopi**	**6.25**	**19**		**Pn**	**23 34 14.8**	**+0.7**
RDO	**Rodhopi**	**6.25**	**19**	P	**Pn**	**23 34 14.2**	**+0.1**
KORT	**Korkueli**	**6.31**	**72**	Pn	**Pn**	**23 34 15.5**	**+0.3**
CEL	**Celeste**	**6.33**	**300**		**Pn**	**23 34 14.9**	**-0.4**
CEL	**Celeste**	**6.33**	**300**	P	**Pn**	**23 34 13.8**	**-1.6**
PHP	**Peshkopia**	**6.69**	**344**	P	**Pn**	**23 34 20.2**	**0.0**
RAFF	**Raffo Rosso**	**7.13**	**288**		**Pn**	**23 34 25.3**	**-0.9**
VAE	**Valguarnera**	**7.16**	**290**	P	**Pn**	**23 34 28.1**	**+1.5**
	2.6nm,0.3s,baz=40,slow=7.9,SNR=2.0						
VAE				S	**Sn**	**23 35 45.2**	**-1.4**
	12nm,0.6s,baz=210,slow=9.9,SNR=4.1						
	4.6nm,0.3s						
MATE	**Matera**	**7.24**	**320**	⇑P	**Pn**	**23 34 26.1**	**-1.6**
MATE	**Matera**	**7.24**	**320**	P	**Pn**	**23 34 26.7**	**-1.0**
DRME	**Dracevica, Mon**	**7.48**	**339**	*e*Pn	**Pn**	**23 34 30.0**	**-1.1**
MARCO	**Tramutola**	**7.51**	**314**	P	**Pn**	**23 34 30.7**	**-0.8**
PDG	**Podgorica**	**7.69**	**340**	⇓P	**Pn**	**23 34 32.7**	**-1.1**
PDG	**Podgorica**	**7.69**	**340**		**Pn**	**23 34 32.3**	**-1.5**
PDG	**Podgorica**	**7.69**	**340**	*e*Pn	**Pn**	**23 34 32.4**	**-1.4**
PDG	**Podgorica**	**7.69**	**340**	P	**Pn**	**23 34 32.3**	**-1.5**
HCY	**Herceg Novi**	**7.94**	**336**	*e*Pn	**Pn**	**23 34 34.9**	**-2.4**
CLTB	**Caltabellotta**	**8.10**	**289**	P	**Pn**	**23 34 37.0**	**-2.6**
TREB	**Trebinje**	**8.23**	**336**	*e*Pn	**Pn**	**23 34 39.1**	**-2.1**
PLVB	**Pleven**	**8.23**	**9**	⇑P	**Pn**	**23 34 40.6**	**-0.7**
SJES	**Sjenica**	**8.29**	**345**	*e*Pn	**Pn**	**23 34 41.2**	**-1.1**
BRY	**Bratogost**	**8.33**	**338**	*e*Pn	**Pn**	**23 34 40.7**	**-2.1**
UPM	**Unac-Piva**	**8.50**	**340**	*e*Pn	**Pn**	**23 34 43.8**	**-1.3**
SGRT	**San Giovanni R**	**8.54**	**321**		**Pn**	**23 34 44.2**	**-1.5**
KLINJ	**Klinje**	**8.56**	**339**	*e*Pn	**Pn**	**23 34 43.1**	**-2.8**
CSS	**Mathiatis**	**8.60**	**89**	Pn	**Pn**	**23 34 44.5**	**-1.9**
CSS	**Mathiatis**	**8.60**	**89**	Pn	**Pn**	**23 34 45.8**	**-0.5**
	9.1nm,0.7s						
CSS	**Mathiatis**	**8.60**	**89**	P	**Pn**	**23 34 45.3**	**-1.1**
LOZB	**Loznitsa**	**8.60**	**19**	⇓P	**Pn**	**23 34 47.2**	**+0.8**
KKUL	**Konya-Kulu**	**8.93**	**61**	P	**Pn**	**23 34 51.2**	**+0.2**
BBLS	**Lazi&#263i**	**8.99**	**344**	*e*Pn	**Pn**	**23 34 49.9**	**-1.9**
BBLS	**Lazi&#263i**	**8.99**	**344**	P	**Pn**	**23 34 49.9**	**-1.9**
MDVR	**Moldovita**	**9.55**	**355**	⇓P	**Pn**	**23 34 59.1**	**-0.3**
HERR	**Herculane**	**9.62**	**358**	⇑P	**Pn**	**23 34 59.3**	**-0.9**
TEKS	**Tekeris**	**9.62**	**346**	*e*Pn	**Pn**	**23 34 57.7**	**-2.6**
ICOR	**Ion Corvin**	**9.63**	**22**	⇑P	**Pn**	**23 35 01.3**	**+0.9**
CY604	**RAF Akrotiri,**	**9.64**	**92**	Pn	**Pn**	**23 34 59.7**	**-0.6**
KIRS	**Kirsehir-Merke**	**9.64**	**63**	⇑P	**Pn**	**23 35 01.9**	**+1.2**
BR105	**Keskin Array S**	**9.64**	**59**	Pn	**Pn**	**23 35 00.5**	**-0.3**
	66nm8.8nm,0.9s						
BR106	**Keskin Array S**	**9.65**	**59**	Pn	**Pn**	**23 35 00.7**	**-0.2**
	61nm7.8nm,0.8s						
BR131	**Keskin Array S**	**9.66**	**59**		**Pn**	**23 34 60.0**	**-1.1**
BRTR	**Keskin Array B**	**9.66**	**59**	P	**Pn**	**23 35 01.3**	**+0.2**
	0.4nm,0.3s,baz=225,slow=15,SNR=18						
BRTR				LR	LR	23 39 30.5	
	comp=Z,84nm,18.9s,baz=232,slow=42						
	2.5nm,0.6s						
BRTR	**Keskin Array B**	**9.66**	**59**		**Pn**	**23 34 59.5**	**-1.5**
GZR	**Gura Zlata**	**10.12**	**360**	⇓P	**Pn**	**23 35 07.7**	**+0.5**
TIRR	**Tirguor**	**10.13**	**23**	Pn	**Pn**	**23 35 09.1**	**+1.9**
FRGS	**Fruska Gora**	**10.15**	**348**	*e*Pn	**Pn**	**23 35 04.9**	**-2.7**
FRGS	**Fruska Gora**	**10.15**	**348**	P	**Pn**	**23 35 05.2**	**-2.4**
ARR	**Arges**	**10.19**	**7**	⇑P	**Pn**	**23 35 08.5**	**+0.4**
ARR	**Arges**	**10.19**	**7**	P	**Pn**	**23 35 08.5**	**+0.4**
LOT	**Lotru**	**10.20**	**4**	⇑P	**Pn**	**23 35 08.0**	**-0.4**
LOT	**Lotru**	**10.20**	**4**	P	**Pn**	**23 35 07.9**	**-0.4**
ISR	**Istrita**	**10.24**	**15**	P	**Pn**	**23 35 08.8**	**-0.1**
	18nm,0.9s						
CIDE	**Kastamonu/Cide**	**10.30**	**47**	⇑P	**Pn**	**23 35 11.8**	**+2.3**
VOIR		**10.30**	**9**	⇓P	**Pn**	**23 35 10.4**	**+0.7**
VOIR		**10.30**	**9**	P	**Pn**	**23 35 09.4**	**-0.3**
	6.0nm,1.6s						
VOIR		**10.30**	**9**	P	**Pn**	**23 35 09.2**	**-0.5**
BZS	**Buzias**	**10.39**	**355**	⇓P	**Pn**	**23 35 09.7**	**-1.1**
BZS	**Buzias**	**10.39**	**355**	P	**Pn**	**23 35 09.1**	**-1.6**
BLY	**Banja Luka**	**10.42**	**337**	⇓P	**Pn**	**23 35 09.9**	**-1.4**
BLY	**Banja Luka**	**10.42**	**337**		**Pn**	**23 35 08.6**	**-2.6**
BLY	**Banja Luka**	**10.42**	**337**	*e*Pn	**Pn**	**23 35 08.4**	**-2.8**
BLY	**Banja Luka**	**10.42**	**337**	P	**Pn**	**23 35 08.4**	**-2.8**
MLR	**Muntele Rosu**	**10.49**	**12**	P	**Pn**	**23 35 12.7**	**+0.4**
	0.1nm,0.3s,baz=174,slow=21,SNR=3.8						
MLR				LR	LR	23 40 03.0	
	comp=Z,68nm,18.6s,baz=164,slow=43						
	1.4nm,0.5s						
MLR	**Muntele Rosu**	**10.49**	**12**	⇓P	**Pn**	**23 35 13.5**	**+1.2**
MLR	**Muntele Rosu**	**10.49**	**12**		**Pn**	**23 35 12.2**	**0.0**
MLR	**Muntele Rosu**	**10.49**	**12**	P	**Pn**	**23 35 13.0**	**+0.7**
	7.0nm,1.1s						
MLR	**Muntele Rosu**	**10.49**	**12**	P	**Pn**	**23 35 11.4**	**-0.9**
NEHR	**Nehoiu**	**10.49**	**13**	⇓P	**Pn**	**23 35 12.9**	**+0.7**
KZIT	**Kziot**	**10.62**	**111**	P	**Pn**	**23 35 11.7**	**-2.3**
	16nm,1.0s						
KZIT	**Kziot**	**10.62**	**111**	P	**Pn**	**23 35 11.5**	**-2.5**
MMAI	**Mount Meron Ar**	**10.64**	**99**	P	**Pn**	**23 35 10.9**	**-3.5**
	0.8nm,0.4s,baz=288,slow=12,SNR=9.0						
MMAI				S	**Sn**	**23 37 04.2**	**-8.0**
	2.3nm,0.5s,baz=280,slow=20,SNR=6.9						
NRCA	**Norcia**	**10.69**	**318**		**Pn**	**23 35 15.1**	**+0.1**
GUMA	**Gualdo di Mace**	**10.73**	**319**	Pn	**Pn**	**23 35 14.8**	**-0.7**
AMAZ	**Amatzia**	**10.75**	**107**	P	**Pn**	**23 35 14.0**	**-1.8**
SALP	**Salfit**	**10.77**	**104**	P	**Pn**	**23 35 14.0**	**-2.1**
	11nm,0.8s						
GEM	**Giv'at Ha'Em**	**10.80**	**97**	P	**Pn**	**23 35 13.8**	**-2.7**
FDMO	**Fiordimonte**	**10.84**	**319**		**Pn**	**23 35 17.4**	**+0.4**
PLOR	**Plostina**	**10.96**	**14**	⇑P	**Pn**	**23 35 19.4**	**+0.7**
QRNJ	**Al-Qirein**	**10.98**	**102**	P	**Pn**	**23 35 16.9**	**-2.1**
	9µm548nm,0.7s						
VRI	**Vrincioaia**	**10.99**	**14**	⇑P	**Pn**	**23 35 20.2**	**+1.1**
VRI	**Vrincioaia**	**10.99**	**14**	Pn	**Pn**	**23 35 20.3**	**+1.2**
	7.6nm,1.0s						
VRI	**Vrincioaia**	**10.99**	**14**	P	**Pn**	**23 35 19.4**	**+0.4**
KEST	**Kesra**	**11.02**	**276**	P	**Pn**	**23 35 20.8**	**+1.2**
	0.1nm,0.3s,baz=57,slow=18,SNR=2.1						
KEST				S	**Sn**	**23 37 15.1**	**-6.2**
	0.8nm,0.6s,baz=24,slow=22,SNR=1.5						
KEST				LR	LR	23 39 51.5	
	comp=Z,43nm,20.7s,baz=290,slow=39						
	1.5nm,0.8s						
VLDR	**Vladesti**	**11.29**	**19**	⇓P	**Pn**	**23 35 24.8**	**+1.7**
GHAJ	**Ghor Haditha**	**11.35**	**107**	Pn	**Pn**	**23 35 22.2**	**-1.8**
MORH	**Mrgy, Hungar**	**11.39**	**345**	⇑P	**Pn**	**23 35 23.4**	**-1.2**
MORH	**Mrgy, Hungar**	**11.39**	**345**	*e*Pn	**Pn**	**23 35 21.0**	**-3.5**
MORH	**Mrgy, Hungar**	**11.39**	**345**	P	**Pn**	**23 35 21.3**	**-3.2**
HRFI	**Mount Harif**	**11.52**	**113**	P	**Pn**	**23 35 23.8**	**-2.5**
	11nm,1.1s						
DRGR		**11.52**	**360**	⇑P	**Pn**	**23 35 26.4**	**0.0**
EIL	**Elat**	**11.64**	**115**	P	**Pn**	**23 35 26.1**	**-1.9**
	2.2nm,0.4s,baz=281,slow=1.7,SNR=7.3						
EIL				S	Sn	23 37 25.6	-11
	5.6nm,0.6s,baz=312,slow=15,SNR=3.6						
EIL	**Elat**	**11.64**	**115**	P	**Pn**	**23 35 25.6**	**-2.4**
	11nm,0.8s						
BOJS	**Bojanci**	**11.75**	**333**	*i* Pn	**Pn**	**23 35 27.2**	**-2.2**
BOJS				*e*Sn	Sn	23 37 29.0	-10
ASF	**Jabal al Asfar**	**12.10**	**101**	P	Pn	23 35 27.1	-7.2
	0.4nm,0.3s,baz=310,slow=12,SNR=1.8						
ASF				S	Sn	23 37 37.2	-10
	0.7nm,0.3s,baz=105,slow=17,SNR=1.5						
BEHE	**Becsehely**	**12.10**	**340**	Pn	**Pn**	**23 35 32.9**	**-1.2**
BEHE	**Becsehely**	**12.10**	**340**	*e*Pn	**Pn**	**23 35 31.7**	**-2.5**
LEGS	**Legarje**	**12.11**	**334**	*i* Pn	**Pn**	**23 35 31.6**	**-2.7**
VISS	**Visnje**	**12.16**	**332**	*e*Pn	**Pn**	**23 35 32.7**	**-2.3**
BUR08	**Bucovina Ar. S**	**12.50**	**7**	Pn	**Pn**	**23 35 36.7**	**-2.9**
MPLH	**Magyarpolny**	**12.55**	**343**	P	**Pn**	**23 35 38.3**	**-1.9**
	14nm,1.2s						
MPLH	**Magyarpolny**	**12.55**	**343**	P	**Pn**	**23 35 39.2**	**-1.0**
SABO	**M.te Sabotino**	**12.79**	**330**	Pn	**Pn**	**23 35 42.0**	**-1.7**
SOKA	**Soboth**	**12.83**	**335**	*i* Pn	**Pn**	**23 35 41.9**	**-2.4**
	1.0nm,0.4s,SNR=5.4						
SOKA				*e*Sn	**Sn**	**23 37 59.6**	**-6.0**
	1.0nm,0.7s						
TRPA	**Tarpa**	**12.86**	**359**	P	**Pn**	**23 35 43.8**	**-0.7**
OBKA	**Obir**	**12.86**	**333**	*i* Pn	**Pn**	**23 35 42.4**	**-2.2**
	0.4nm,0.2s						
OBKA				*e*Sn	**Sn**	**23 37 59.0**	**-7.3**
	9.0nm,1.2s						
ARSA	**Arzberg

comp=Z,2.9nm,0.4s
FINES FINESS Array B 26.28 4 P P 23 38 14.5 -0.4
comp=Z,0.8nm,0.5s,baz=185,slow=8.7,SNR=13
FINES PcP **PcP 23 41 42.1 +2.2**
comp=Z,0.9nm,0.7s,baz=228,slow=1.7,SNR=3.3
comp=Z,0.8nm,0.5s
FINES FINESS Array B 26.28 4 P P 23 38 14.1 -0.8
FINES **PcP 23 41 42.1 +2.2**
NC602 NORSAR Array S 26.51 348 *e*P **P 23 38 17.2 +0.2**
NC602 IAmb IAmb 23 38 19.0
comp=Z,100nm,2.4s
NAO01 NORSAR Array S 26.73 347 P P 23 38 19.0 0.0
NB2 NORSAR Subarra 26.85 347 P P **23 38 20.5 +0.4**
comp=Z,0.6nm,0.4s,baz=155,slow=9.3
NB2 NORSAR Subarra 26.85 347 P P 23 38 20.5 +0.4
NOA NORSAR Array B 26.85 347 P P 23 38 20.4 +0.4
comp=Z,0.3nm,0.3s,baz=151,slow=9.2,SNR=12
NOA LR LR 23 50 53.9
comp=Z,29nm,18.8s,baz=105,slow=41
comp=Z,0.3nm,0.3s
EKA Eskdalemuir Ar 26.89 326 P P 23 38 21.3 +0.9
comp=Z,0.3nm,0.3s,baz=122,slow=8.4,SNR=5.4
comp=Z,0.3nm,0.3s
ESK Eskdalemuir 26.90 326 P P 23 38 20.2 -0.3
TORD Torodi Ar. Bea 29.15 226 P P 23 38 43.2 +2.2
comp=Z,1.1nm,0.7s,baz=27,slow=7.7,SNR=7.9
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea 29.15 226 P P 23 38 43.2 +2.2
AKTO Aktyubinsk 29.58 48 LR LR 23 53 05.4
comp=Z,44nm,20.6s,baz=196,slow=41
NSS Namsos 30.04 351 *e*P **P 23 38 49.5 +1.2**
AB31 Akbulak array 30.48 51 P P 23 38 52.2 -0.2
AB31 IAmb IAmb 23 39 13.0
comp=Z,2.2nm,1.2s
ABKAR Akbulak array 30.48 51 P P 23 38 51.5 -0.8
VAGH Vaagaholmen 32.00 353 *e*P **P 23 39 06.8 +1.3**
ARTI Arti 32.01 38 P **P 23 39 04.7 -1.1**
FAUS Fauske 32.46 355 *e*P **P 23 39 10.6 +1.0**
STEI Steigen 33.00 355 *e*P **P 23 39 15.4 +1.0**
STEI IAmb IAmb 23 39 16.0
comp=Z,8.3nm,0.6s
ARA0 ARCESS Array S 34.36 2 *e*P **P 23 39 26.1 0.0**
ARCES ARCESS Array B 34.36 2 P P 23 39 24.8 -1.4
comp=Z,1.2nm,0.6s,baz=186,slow=8.5,SNR=8.2
ARCES LR LR 23 55 06.7
comp=Z,78nm,18.6s,baz=110,slow=39
comp=Z,1.2nm,0.6s
ARCES ARCESS Array B 34.36 2 P P 23 39 25.2 -0.9
CHGR Chuyangaron 36.86 71 P P 23 39 47.5 -0.6
KK31 Karatay Array 37.35 63 P P 23 39 51.6 -0.5
KK31 IAmb IAmb 23 39 53.6
comp=Z,1.7nm,0.5s
KKAR Karatay Array 37.35 63 P P 23 39 51.9 -0.2
BVAR Borovoye Array 37.65 47 P P 23 39 54.2 -0.3
comp=Z,0.9nm,0.4s,baz=228,slow=6.6,SNR=5.0
comp=Z,0.9nm,0.4s
GAR Garm 37.70 70 P P 23 39 55.6 +0.4
ARSB Arslanbob 39.36 66 P P 23 40 09.8 +0.6
ARSB IAmb IAmb 23 40 50.4
comp=Z,7.5nm,1.3s
BOOM Boomskoye usch 41.38 63 P P 23 40 26.2 +0.3
BOOM IAmb IAmb 23 40 43.0
comp=Z,11nm,1.4s
NRN Naryn 41.59 65 P P 23 40 28.2 +0.4
NRN IAmb IAmb 23 40 30.3
comp=Z,3.0nm,0.9s
KURBB Kurchatov Arra 42.53 51 P P 23 40 34.9 0.0
comp=Z,1.7nm,0.3s,baz=279,slow=8.8,SNR=7.7
comp=Z,1.7nm,0.3s
KURK Kurchatov 42.59 51 P P 23 40 34.9 -0.5
KURK IAmb IAmb 23 40 53.8
comp=Z,5.0nm,1.4s
SPITS Spitsbergen Ar 43.11 358 P P 23 40 39.0 -0.3
comp=Z,5.8nm,0.8s,baz=158,slow=12,SNR=11
comp=Z,5.8nm,0.8s
PDGK Podgornoye 43.84 62 P P 23 40 46.2 +0.5
MKAR Makanchi Array 45.30 56 P P 23 40 57.6 +0.4
comp=Z,2.8nm,0.6s,baz=279,slow=6.7,SNR=34
comp=Z,2.8nm,0.6s
MKAR Makanchi Array 45.30 56 P P 23 40 57.1 -0.1
ZAA0 Zalesovo Array 46.30 46 P P 23 41 04.0 -1.0
ZAA0 IAmb IAmb 23 41 33.4
comp=Z,5.5nm,1.3s
ZALV Zalesovo Beam 46.30 46 P P 23 41 04.6 -0.4
comp=Z,2.3nm,0.4s,baz=267,slow=8.1,SNR=9.9
comp=Z,2.3nm,0.4s
ZALV Zalesovo Beam 46.30 46 P P 23 41 04.2 -0.7
SONM Songino Array 60.88 50 P P 23 42 52.8 +0.9
comp=Z,0.3nm,0.4s,baz=287,slow=5.2,SNR=2.6
comp=Z,0.3nm,0.4s
SONM Songino Array 60.88 50 P P 23 42 52.8 +0.9
SONM IAmb IAmb 23 43 05.2
comp=Z,3.0nm,1.5s
HHC Hu-ho-hao-te 67.15 55 *e*P **P 23 43 33.6 +0.4**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,88nm,4.6s
BLKN Baker Lake 69.81 336 P P 23 43 49.7 +0.6
BLKN IAmb IAmb 23 44 10.8
comp=Z,6.5nm,1.4s
YKA Yellowknife Ar 76.76 341 P P 23 44 31.2 +1.0
comp=Z,0.5nm,0.5s,baz=32,slow=5.2,SNR=7.0
comp=Z,0.5nm,0.5s
KSRS Korea Array 79.71 51 P P 23 44 46.5 -0.5
comp=Z,0.6nm,0.4s,baz=307,slow=4.8,SNR=1.9
comp=Z,0.6nm,0.4s
ILAR Eielson Array 79.97 356 P P 23 44 49.8 +1.9
comp=Z,0.3nm,0.8s,baz=355,slow=2.9,SNR=2.1
comp=Z,0.3nm,0.8s
PETK Petropavlovsk- 83.65 25 P P 23 45 08.8 +1.4
comp=Z,0.4nm,0.6s,baz=302,slow=2.7,SNR=1.2
comp=Z,0.4nm,0.6s
SHEM Shemya Is, Ala 88.86 17 LR LR 00 28 46.6
comp=Z,39nm,20.2s,baz=348,slow=38
WRA Warramunga Arr 118.48 95 PKP **PKiKP 23 51 29.8 +2.8**
comp=Z,0.5nm,1.0s,baz=298,slow=1.2,SNR=2.0
ASAR Alice Springs 119.93 99 PKP **PKiKP 23 51 32.6 +2.8**
comp=Z,0.1nm,0.3s,baz=309,slow=1.9,SNR=1.3

PRU 10 23:35:04.1, 50.13N×18.29E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STEB	**Steborice**	**0.39**	**240**	*e*P	G	23 35 10.2	-1.3
STEB				*e*S	G	23 35 16.4	-0.1
MORC	**Moravsky Berou**	**0.60**	**234**	*e*P	G	23 35 15.9	+0.4
MORC				*e*S	G	23 35 22.8	-0.5
MAUC	**Maruska**	**0.82**	**202**	*e*P	G	23 35 18.6	-1.2
MAUC				*e*S	G	23 35 31.2	+0.7
KRLC	**Kraliky**	**0.97**	**267**	*e*S	G	23 35 34.3	-1.0
DPC	**Dobruska-Polom**	**1.28**	**281**	*e*P	G	23 35 27.2	-1.5
DPC				*e*S	G	23 35 45.5	+0.2

AFAD ***10*** *23:44:33.8, 35.94N×30.41E, h9km±4km, ML2.6*
IDC ***10*** *23:44:34.3±1.7, 35.83N×30.23E, h0km, mb3.2/2, mbtmp3.0/5, ML2.7/3, Error ellipse: s-maj=36.0km s-min=23.1km az=124.0*
ISK ***10*** *23:44:34.7, 36.02N×30.27E, h5km, ML2.6/23*
ISC 10 23:44:34.3±1.3, 35.95N±0.04×30.36E±0.02, h1km±10km, n46, σ1°46/62, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.38**	**358**	P	**Pb**	**23 44 42.1**	**-1.7**
AKUM				S	**Sg**	**23 44 47.0**	**+0.6**
AKUM				IAML		23 44 48.0	
	comp=E,984nm,0.2s						
AKUM				IAML		23 44 53.0	
	comp=N,958nm,0.4s						
DEMR	**Demre-Antalya**	**0.47**	**309**	Pg	**Pg**	**23 44 42.3**	**-0.9**
AKAS	**Kas**	**0.67**	**295**	Pg	**Pg**	**23 44 47.2**	**0.0**
AKAS				Sg	**Sg**	**23 44 56.0**	**+0.1**
AKAS	**Kas**	**0.67**	**295**	P	**Pg**	**23 44 46.7**	**-0.5**
AKAS				S	**Sb**	**23 44 58.2**	**-0.6**
AKAS				IAML		23 45 03.0	
	comp=N,376nm,0.3s						
AKAS				IAML		23 45 03.0	
	comp=E,260nm,0.3s						
KEMT	**Kemer-ANTALYA**	**0.68**	**14**	Pg	**Pb**	**23 44 47.4**	**-1.4**
KEMT				Sg	**Sb**	**23 44 57.7**	**-1.0**
ELL	**Elmali**	**0.88**	**336**	Pg	**Pg**	**23 44 49.8**	**-1.3**
ANTB	**Antalya**	**0.98**	**14**	Pg	**Pn**	**23 44 53.9**	**-1.2**
IZZE	**Mula-Seydike**	**1.04**	**299**	P	**Pn**	**23 44 55.5**	**-0.5**
IZZE				S	**Sn**	**23 45 10.4**	**-0.7**
IZZE				IAML		23 45 14.0	
	comp=N,174nm,0.5s						
IZZE				IAML		23 45 15.0	
	comp=E,130nm,0.7s						
KORT	**Korkueli**	**1.05**	**360**	Pg	**Pn**	**23 44 54.7**	**-1.6**
KORT				Sg	**Sn**	**23 45 09.2**	**-2.5**
KORT	**Korkueli**	**1.05**	**360**	P	**Pg**	**23 44 53.8**	**-0.6**
KORT				IAML		23 45 19.0	
	comp=E,120nm,0.6s						
KNIK	**Mula-Seydike**	**1.10**	**325**	P	**Pn**	**23 44 57.5**	**+0.6**
KNIK				S	**Sn**	**23 45 15.6**	**+2.8**
CAME	**Cameli-Denizli**	**1.31**	**320**	Pn	**Pb**	**23 44 59.0**	**-0.7**
KEPZ	**Antalya-Kepez**	**1.39**	**46**	P	**Pg**	**23 45 02.9**	**+2.0**
KEPZ				S	**Sg**	**23 45 21.5**	**+2.7**
SABU	**Mula-Dalaman**	**1.42**	**308**	P	**Pb**	**23 45 01.2**	**-0.3**
SABU				S	**Sg**	**23 45 20.8**	**+0.9**
GOLH	**Golhisar**	**1.44**	**334**	P	**Pg**	**23 45 03.5**	**+1.6**
GOLH				S	**Sg**	**23 45 25.1**	**+4.6**
GOLH				IAML		23 45 37.0	
	comp=N,95nm,0.9s						
GOLH				IAML		23 45 37.0	
	comp=E,65nm,0.9s						
GAZI	**Gazipasa**	**1.61**	**79**	Pn	**Pg**	**23 45 05.9**	**+0.7**
DALY	**Dalyan (Mula)**	**1.63**	**303**	Pn	**Pb**	**23 45 04.4**	**-0.6**
DALY	**Dalyan (Mula)**	**1.63**	**303**	P	**Pg**	**23 45 06.0**	**+0.5**
DALY				S	**Sg**	**23 45 27.3**	**+0.8**
DALY				IAML		23 45 31.0	
	comp=E,65nm,0.8s						
APMY	**Acipayam-Deniz**	**1.74**	**331**	Pn	**Pb**	**23 45 05.9**	**-1.2**
ARG	**Arkhangelos**	**1.83**	**279**	Pn	**Pn**	**23 45 06.8**	**0.0**
INCE	**Denizli-Bozkur**	**1.87**	**341**	P	**Pg**	**23 45 09.9**	**-0.2**
INCE				S	**Sg**	**23 45 35.8**	**+1.5**
SEDI	**Konya, Seydise**	**1.88**	**36**	P	**Pg**	**23 45 10.5**	**+0.3**
SEDI				S	**Sg**	**23 45 36.6**	**+2.1**
SEYD	**Seydisehir-KON**	**1.88**	**39**	Pn	**Pg**	**23 45 09.3**	**-1.0**
TURN	**Turunc**	**1.90**	**297**	Pn	**Pb**	**23 45 08.1**	**-1.5**
TAVA	**DENIZLI_Tavas**	**1.91**	**323**	P	**Pg**	**23 45 10.5**	**-0.4**
TAVA				S	**Sg**	**23 45 36.3**	**+0.7**
TAVA				IAML		23 45 40.0	
	comp=E,44nm,0.6s						
TAVA				IAML		23 45 44.0	
	comp=N,43nm,0.7s						
DNIZ	**Denizli-Tavas-**	**1.98**	**328**	P	**Pg**	**23 45 12.3**	**0.0**
DNIZ				S	**Sg**	**23 45 39.3**	**+1.4**
BASM	**Basmaki-Afyon**	**1.98**	**353**	Pn	**Pb**	**23 45 09.6**	**-1.6**
HDMB	**Hadim**	**2.00**	**59**	Pn	**Pg**	**23 45 11.4**	**-1.1**
YER	**Yerkesik**	**2.05**	**306**	Pn	**Pn**	**23 45 10.2**	**+0.3**
MULA	**Mugla, Merkez-**	**2.10**	**309**	P	**Pb**	**23 45 13.2**	**+0.1**
MULA				S	**Sg**	**23 45 40.8**	**-0.8**
MULA				IAML		23 45 46.0	
	comp=E,56nm,0.5s						
TEKE	**Tekeli-Mersin**	**2.24**	**84**	Pn	**Pg**	**23 45 15.2**	**-2.1**
DAT	**Datca**	**2.38**	**290**	Pn	**Pn**	**23 45 15.0**	**+0.6**
MLSB	**Milas**	**2.47**	**304**	Pn	**Pn**	**23 45 16.3**	**+0.6**
SDAG	**Sultandagi-AFY**	**2.53**	**10**	Pn	**Pb**	**23 45 17.8**	**-2.7**
KONT	**Konya--Tatoy**	**2.56**	**38**	Pn	**Pb**	**23 45 18.9**	**-2.1**
NAZL	**Nazilli-Aydin**	**2.61**	**321**	Pn	**Pn**	**23 45 18.2**	**+0.7**
BODT	**Bodrum**	**2.69**	**295**	Pn	**Pn**	**23 45 19.5**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.81**	**316**	Pn	**Pn**	**23 45 21.2**	**+0.8**
KULA	**Kula-Manisa**	**2.90**	**333**	Pn	**Pn**	**23 45 22.1**	**+0.5**
ODEM	**Odemis-Izmir**	**2.96**	**323**	Pn	**Pn**	**23 45 23.2**	**+0.8**
GCAM	**G?zelcaml?**	**3.06**	**306**	Pn	**Pn**	**23 45 24.6**	**+0.9**
BRTR	**Keskin Array B**	**4.58**	**34**	Pn	Pb	23 45 49.2	-6.3
	0.2nm,0.3s,baz=214,slow=15,SNR=5.8						
BRTR				Sn	**Sn**	**23 46 41.9**	**+3.2**
	0.1nm,0.3s,baz=217,slow=19,SNR=1.2						
	0.3nm,0.5s						
MMAI	**Mount Meron Ar**	**5.09**	**124**	Pn	**Pn**	**23 45 53.2**	**+1.4**
	0.4nm,0.3s,baz=304,slow=13,SNR=1.7						
	0.4nm,0.4s						
EIL	**Elat**	**7.36**	**147**	Pn	**Pn**	**23 46 21.5**	**-1.3**
	0.1nm,0.3s,baz=141,slow=23,SNR=1.2						
	1.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**34.34**	**236**	P	**P**	**23 51 21.4**	**-1.2**
	0.6nm,0.9s,baz=57,slow=7.4,SNR=2.9						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**39.79**	**58**	P	**P**	**23 52 10.3**	**+1.6**
	0.1nm,0.4s,baz=263,slow=10.0,SNR=1.5						
	0.1nm,0.4s						

GCG ***11*** *00:19:33.2±1.1, 12.84N×90.46W, h26km, MD3.7, Presumed earthquake*
SNET ***11*** *00:19:42.3±4.5, 13.35N×90.14W, h14km, ML2.8, Presumed earthquake*
ISC 11 00:19:37.7±2.5, 13.1N±0.1×90.16W±0.06, h29km, n15, σ0°87/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**0.90**	**50**	*i* P	**Pb**	**00 19 55.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.90**	**50**	*e*P	**Pb**	**00 19 55.0**	**+0.2**
NUBE	**Las Nubes**	**0.90**	**24**	*e*P	**Pn**	**00 19 54.2**	**-0.3**
SBLS	**San Blas**	**0.92**	**34**	*e*P	**Pb**	**00 19 55.1**	**-0.2**
SBLS				*e*S	**Sn**	**00 20 08.7**	**+1.4**
SNJE	**San Jose**	**0.95**	**34**	*e*P	**Pb**	**00 19 55.6**	**-0.2**
RTR	**El Retiro**	**0.96**	**31**	*e*P	**Pb**	**00 19 55.6**	**-0.2**
SLOZ	**Alcalita de Sa**	**1.01**	**21**	*e*P	**Pb**	**00 19 58.0**	**+1.3**
PMON	**Piamonte**	**1.03**	**52**	*e*P	**Pb**	**00 19 56.9**	**-0.2**
LOMA	**Loma Larga**	**1.11**	**59**	*e*P	**Pn**	**00 19 57.0**	**-0.5**
RBDL	**Robledal**	**1.13**	**24**	*i* P	**Pb**	**00 19 58.2**	**-0.5**
RBDL				*e*S	**Sb**	**00 20 12.5**	**-0.6**
MTO3	**Montecristo**	**1.53**	**30**	*i* P	**Pb**	**00 20 04.4**	**-1.0**
MTO3	**Montecristo**	**1.53**	**30**	*e*P	**Pb**	**00 20 04.5**	**-1.0**
STG5	**El Palmar, Qui**	**1.76**	**319**	*i* P	**Pb**	**00 20 08.1**	**-1.2**
STG8	**El Palmar, Qui**	**1.79**	**320**	*i* P	**Pn**	**00 20 08.3**	**+1.4**
APG	**El Apazote**	**1.94**	**351**	*i* P	**Pn**	**00 20 08.7**	**-0.2**

IDC 11 00:33:08.2±1.8, 2.29N×124.54E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=227.0km s-min=23.6km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.09**	**157**	P	P	00 38 25.5	-0.2
	0.7nm,0.6s,baz=336,slow=11,SNR=7.4						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**27.36**	**161**	P	P	00 38 56.0	+0.7
	0.4nm,0.6s,baz=338,slow=9.5,SNR=1.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**57.52**	**327**	P	P	00 42 59.1	-0.3
	0.1nm,0.5s,baz=113,slow=7.5,SNR=1.9						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**61.80**	**329**	P	P	00 43 28.6	-0.2
	0.3nm,0.6s,baz=127,slow=6.6,SNR=4.2						
	0.3nm,0.6s						

IDC ***11*** *00:43:46.7±1.2, 15.14S×66.85E, h0km, mb4.0/12, mbtmp4.0/12, Error ellipse: s-maj=40.2km s-min=22.8km az=39.0*
NEIC ***11*** *00:43:48.8±1.2, 15.05S±0.09×66.9E±0.1, h10km±1km, mb4.5/25, Error ellipse: s-maj=22.7km s-min=5.3km az=128.0*
ISC 11 00:43:49.0±0.6, 15.1S±0.1×66.9E±0.1, h16km, n72, σ1°31/64, mb4.2/38, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**5.70**	**216**	Pn	**Pn**	**00 45 10.4**	**-2.7**
H08S1	**Diego Carcia H**	**9.23**	**37**	T	T	00 55 26.2	
	baz=216,slow=76,SNR=426						
H08S2	**Diego Garcia H**	**9.24**	**37**	T	T	00 55 27.1	
	baz=216,slow=76,SNR=734						
H08S3	**Diego Garcia H**	**9.25**	**37**	T	T	00 55 24.6	
	baz=216,slow=76,SNR=787						
DGAR	**Diego Garcia**	**9.41**	**36**	Pn	**Pn**	**00 46 01.6**	**-2.4**
PALK	**Pallekele**	**26.13**	**33**	P	**P**	**00 49 21.4**	**-1.3**
KIBK	**Kibwezi**	**31.16**	**291**	P	**P**	**00 50 06.6**	**-1.0**
KIBK				IAmb	IAmb	00 50 06.7	
	comp=Z,12nm,1.4s						
H04N2	**CROZET ISLANDS**	**33.43**	**199**	T	T	01 25 55.2	
	baz=29,slow=75,SNR=127						
H04N1	**CROZET ISLANDS**	**33.43**	**199**	T	T	01 25 56.2	
	baz=29,slow=75,SNR=62						
H04N3	**CROZET ISLANDS**	**33.45**	**199**	T	T	01 25 55.0	
	baz=29,slow=75,SNR=75						
CRZF	**Crozet Islands**	**33.65**	**199**	P	**P**	**00 50 30.1**	**+1.2**
POGA	**Pongola**	**34.86**	**244**	P	**P**	**00 50 39.7**	**-0.1**
KSANE	**Kasane**	**40.05**	**260**	P	**P**	**00 51 24.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**45.94**	**44**	P	**P**	**00 52 12.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=236,slow=8.8,SNR=5.0						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**45.94**	**44**	P	**P**	**00 52 11.4**	**-0.1**
CHTO	**Chiang Mai**	**46.19**	**44**	P	**P**	**00 52 12.6**	**-0.9**
H01W3	**Cape Leeuwin H**	**46.63**	**124**	T	T	01 42 07.0	
	baz=283,slow=75,SNR=35						
H01W2	**Cape Leeuwin H**	**46.63**	**124**	T	T	01 42 07.2	
	baz=283,slow=75,SNR=38						
H01W1	**Cape Leeuwin H**	**46.64**	**124**	T	T	01 42 08.3	
	baz=283,slow=75,SNR=43						
BTK	**Batken**	**55.02**	**4**	P	**P**	**00 53 21.3**	**+1.4**
BTK				IAmb	IAmb	00 53 28.1	
	comp=Z,7.3nm,1.4s						
ARSB	**Arslanbob**	**56.45**	**5**	P	**P**	**00 53 30.4**	**+0.2**
ARSB				IAmb	IAmb	00 53 48.3	
	comp=Z,8.6nm,1.4s						
KKAR	**Karatay Array**	**58.04**	**3**	P	**P**	**00 53 40.5**	**-0.8**
GURO	**Guroymak-BITLI**	**58.26**	**337**	P	**P**	**00 53 42.9**	**-0.1**
GURO				IAmb	IAmb	00 53 52.8	
	comp=Z,2.9nm,0.9s						
GNI	**Garni**	**58.74**	**340**	P	**P**	**00 53 45.5**	**-0.8**
PDGK	**Podgornoye**	**59.31**	**11**	P	**P**	**00 53 50.2**	**0.0**
MKAR	**Makanchi Array**	**63.17**	**12**	P	**P**	**00 54 15.1**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=206,slow=7.7,SNR=6.0						
	comp=Z,1.2nm,1.0s						
MKAR	**Makanchi Array**	**63.17**	**12**	P	**P**	**00 54 16.0**	**-0.2**
ASAR	**Alice Springs**	**63.29**	**109**	P	**P**	**00 54 17.2**	**-0.4**
	comp=Z,1.1nm,1.0s,baz=264,slow=5.8,SNR=5.8						
	comp=Z,1.1nm,1.0s						
ASAR	**Alice Springs**	**63.29**	**109**	P	**P**	**00 54 17.5**	**-0.1**
WRA	**Warramunga Arr**	**64.12**	**105**	P	**P**	**00 54 24.1**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=273,slow=6.1,SNR=9.2						
	comp=Z,2.2nm,1.0s						
WRA	**Warramunga Arr**	**64.12**	**105**	P	**P**	**00 54 24.1**	**+1.0**
AB31	**Akbulak array**	**64.40**	**355**	P	**P**	**00 54 23.8**	**-0.3**
ABKAR	**Akbulak array**	**64.40**	**355**	P	**P**	**00 54 24.0**	**-0.2**
KURBB	**Kurchatov Arra**	**66.26**	**8**	P	**P**	**00 54 36.7**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=202,slow=6.6,SNR=8.4						
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**66.36**	**8**	P	**P**	**00 54 36.7**	**-0.2**
KURK				IAmb	IAmb	00 54 39.9	
	comp=Z,3.8nm,1.1s						
BVAR	**Borovoye Array**	**67.94**	**2**	P	**P**	**00 54 47.5**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=167,slow=7.0,SNR=12						
	comp=Z,2.3nm,0.8s						
BORK	**Borovoye**	**67.96**	**2**	P	**P**	**00 54 46.4**	**-0.6**
BORK				IAmb	IAmb	00 54 49.9	
	comp=Z,2.6nm,0.9s						
ZAA0	**Zalesovo Array**	**70.49**	**11**	P	**P**	**00 55 02.7**	**+0.1**
ZAA0				IAmb	IAmb	00 55 15.5	
	comp=Z,9.0nm,1.5s						
ZALV	**Zalesovo Beam**	**70.49**	**11**	P	**P**	**00 55 03.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=197,slow=4.6,SNR=5.3						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**70.49**	**11**	P	**P**	**00 55 02.5**	**-0.2**
TIP	**Timpagrande**	**71.47**	**321**	P	**P**	**00 55 09.6**	**+0.6**
TIP				IAmb	IAmb	00 55 19.3	
	comp=Z,4.7nm,1.2s						
SONM	**Songino Array**	**71.92**	**27**	P	**P**	**00 55 12.8**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=224,slow=6.0,SNR=6.9						
	comp=Z,1.4nm,0.9s						
SONM	**Songino Array**	**71.92**	**27**	P	**P**	**00 55 11.7**	**0.0**
PDG	**Podgorica**	**72.10**	**325**	P	**P**	**00 55 12.6**	**-0.1**
PDG				IAmb	IAmb	00 55 21.2	
	comp=Z,5.9nm,1.0s						
AKASG	**Malin Array Be**	**73.39**	**336**	P	**P**	**00 55 20.7**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=144,slow=5.1,SNR=5.4						
	comp=Z,1.6nm,0.8s						
AKASG	**Malin Array Be**	**73.39**	**336**	P	**P**	**00 55 20.7**	**+0.6**
RONA	**Rosalia, Austr**	**77.13**	**328**	*e*P	**P**	**00 55 43.8**	**+2.0**
	comp=Z,2.2nm,1.0s						
SOKA	**Soboth**	**77.14**	**326**	*e*P	**P**	**00 55 43.5**	**+1.5**
	comp=Z,2.2nm,1.3s						
ARSA	**Arzberg**	**77.24**	**327**	P	**P**	**00 55 42.0**	**-0.5**
ARSA				IAmb	IAmb	00 55 56.8	
	comp=Z,4.8nm,1.1s						
ARSA	**Arzberg**	**77.24**	**327**	*e*P	**P**	**00 55 44.6**	**+2.1**
	comp=Z,3.5nm,1.0s						
OBKA	**Obir**	**77.30**	**326**	*e*P	**P**	**00 55 44.1**	**+1.3**
	comp=Z,1.0nm,0.7s						
CONA	**Conrad Observa**	**77.50**	**328**	*e*P	**P**	**00 55 45.8**	**+1.9**
	comp=Z,0.7nm,0.7s						
KSAR	**Wonju Array Be**	**77.54**	**45**	P	**P**	**00 55 44.0**	**-0.2**
SESA	**Seetaler Alpe,**	**77.67**	**326**	*e*P	**P**	**00 55 47.1**	**+2.1**
	comp=Z,7.4nm,1.0s						
MORC	**Moravsky Berou**	**77.86**	**330**	P	**P**	**00 55 44.8**	**-1.1**
MORC				IAmb	IAmb	00 55 47.8	
	comp=Z,4.2nm,1.2s						
MOA	**Molln**	**78.28**	**327**	*e*P	**P**	**00 55 50.2**	**+1.9**
	comp=Z,4.5nm,1.0s						
ABTA	**Abfaltersbach**	**78.56**	**325**	*e*P	**P**	**00 55 51.8**	**+2.0**
	comp=Z,1.7nm,0.8s						
LESA	**Schwarzleotal**	**78.87**	**326**	*e*P	**P**	**00 55 52.9**	**+1.4**
	comp=Z,5.4nm,1.4s						
GERES	**GERESS Array B**	**79.20**	**327**	P	**P**	**00 55 52.7**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=155,slow=6.6,SNR=4.3						
	comp=Z,0.4nm,0.9s						
WTTA	**Wattenberg**	**79.35**	**325**	*e*P	**P**	**00 55 56.7**	**+2.4**
	comp=Z,0.4nm,0.4s						
WATA	**Walderalm**	**79.42**	**325**	*e*P	**P**	**00 55 57.2**	**+2.6**
	comp=Z,0.3nm,0.3s						
SQTA	**Sankt Quirin**	**79.56**	**325**	*e*P	**P**	**00 55 57.8**	**+2.4**
	comp=Z,6.9nm,1.1s						
MOTA	**Moosalm**	**79.69**	**325**	*e*P	**P**	**00 55 58.1**	**+2.0**
	comp=Z,0.1nm,0.3s						
FETA	**Feichten**	**79.71**	**325**	*e*P	**P**	**00 55 58.9**	**+2.7**
	comp=Z,2.3nm,1.1s						
RETA	**Reutte**	**79.96**	**325**	*e*P	**P**	**00 55 58.9**	**+1.4**
	comp=Z,5.6nm,2.3s						
DAVA	**Damuels**	**80.33**	**325**	*e*P	**P**	**00 56 00.2**	**+0.6**
	comp=Z,3.6nm,1.1s						
MJAR	**Matsushiro Arr**	**84.52**	**50**	P	**P**	**00 56 23.3**	**+1.7**
	comp=Z,1.5nm,0.7s,baz=237,slow=5.2,SNR=4.8						
	comp

CALO3				*e*S		**Sn**	**00 45 52.5 +1.7**
CBOC	**Ciudad Bolivar**	**3.79**	**150**	P		**Pn**	**00 45 25.4 -0.7**
CBOC				S		**Sn**	**00 46 08.2 -1.3**

IDC 11 00:51:42.9±2.3, 6.72S×129.33E, *h*0km, mb3.6/1, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=140.8km s-min=33.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.02**	**160**	Pn	Pn	00 55 02.2	-0.8
	0.1nm,0.3s,baz=339,slow=13,SNR=0.8						
WRA				Sn	Sn	00 57 31.2	-8.3
	0.1nm,0.3s,baz=330,slow=23,SNR=2.7 0.5nm,0.8s						
ASAR	**Alice Springs**	**17.42**	**166**	P	Pn	00 55 48.1	+0.6
	baz=339,slow=13,SNR=5.0 0.6nm,0.8s						
MKAR	**Makanchi Array**	**67.63**	**327**	P	P	01 02 41.7	0.0
	0.5nm,0.8s,baz=117,slow=5.5,SNR=3.8 0.5nm,0.8s						

IDC 11 00:55:23.4±1.4, 15.13S×66.69E, h0km, mb4.0/12, mbtmp4.0/12, MS3.9/33, Error ellipse: s-maj=43.3km s-min=23.9km az=40.0
NEIC 11 00:55:26.0±1.1, 14.97S±0.10×66.68E±0.2, h10km±1km, mb4.5/19, Error ellipse: s-maj=32.5km s-min=11.0km az=246.0
GCMT 11 00:55:31.0±0.4, 15.07S±0.05×66.79E±0.05, h19km±1km, MW4.8/84, Moment Tensor Solution. s8,c8; s84,c101; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.19±.19; Mθθ=0.91±.12; Mφφ=1.28±.12; Mrθ=-0.13±.36; Mθφ=-0.62±.07; Mφr=0.85±.33; Best double couple: Mo=2.13800×10^16 NP1:ϕs=317.00000°,δ35.00000°,λ=-103.00000°. NP2: ϕs=153.00000°,δ56.00000°,λ=-81.00000°. Principal axes: T 1.8890, Plg11.0000°, Azm236.0000°; N 0.5010, Plg7.0000°, Azm328.0000°; P -2.3870, Plg77.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 11 00:55:26.5±1.0, 15.1S±0.2×66.8E±0.2, h19km, n88, σ0.985/50, mb4.3/33, MS4.0/34, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.30**	**38**	T	T	01 06 58.7	
	baz=216,slow=76,SNR=813						
H08S2	**Diego Garcia H**	**9.31**	**38**	T	T	01 07 01.6	
	baz=216,slow=76,SNR=1654						
H08S3	**Diego Garcia H**	**9.32**	**38**	T	T	01 07 00.2	
	baz=216,slow=76,SNR=1616						
PALK	**Pallekele**	**26.19**	**33**	LR	LR	01 09 13.6	
	comp=Z,347nm,21.2s,baz=221,slow=32						
KMBO	**Kilima Mbogo**	**32.27**	**293**	LR	LR	01 12 50.2	
	comp=Z,186nm,18.9s,baz=106,slow=32						
H04N2	**CROZET ISLANDS**	**33.40**	**199**	T	T	01 37 25.3	
	baz=29,slow=75,SNR=224						
H04N1	**CROZET ISLANDS**	**33.40**	**199**	T	T	01 37 38.7	
	baz=29,slow=75,SNR=210						
H04N3	**CROZET ISLANDS**	**33.42**	**199**	T	T	01 37 25.3	
	baz=29,slow=75,SNR=223						
ATD	**Arta Tunnel**	**35.51**	**317**	LR	LR	01 15 21.6	
	comp=Z,8.4nm,20.3s,baz=254,slow=34						
MATP	**Matopo**	**36.75**	**256**	LR	LR	01 17 17.2	
	comp=Z,222nm,18.1s,baz=86,slow=36						
LSZ	**Lusaka**	**37.18**	**265**	LR	LR	01 16 26.3	
	comp=Z,761nm,20.5s,baz=110,slow=34						
MBAR	**Mbarara**	**38.38**	**289**	LR	LR	01 16 36.4	
	comp=Z,268nm,18.4s,baz=110,slow=33						
LBTB	**Lobatse**	**39.75**	**249**	LR	LR	01 16 54.1	
	comp=Z,371nm,19.7s,baz=78,slow=32						
BRDH	**Bariadhala**	**44.78**	**34**	LR	LR	01 20 15.1	
	comp=Z,256nm,21.2s,baz=160,slow=33						
SUR	**Sutherland**	**45.05**	**239**	LR	LR	01 17 52.6	
	comp=Z,284nm,19.8s,baz=122,slow=30						
CMAR	**Chiang Mai Arr**	**46.03**	**45**	P	**P**	**01 03 50.5 +1.3**	
	1.2nm,0.3s,baz=240,slow=9.5,SNR=6.7						
CMAR				LR	LR	01 20 17.4	
	comp=Z,284nm,21.7s,baz=225,slow=32 1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.03**	**45**	P	**P**	**01 03 49.1 0.0**	
H01W3	**Cape Leeuwin H**	**46.76**	**124**	T	T	01 53 51.8	
	baz=283,slow=75,SNR=58						
H01W2	**Cape Leeuwin H**	**46.76**	**124**	T	T	01 53 39.0	
	baz=283,slow=75,SNR=62						
H01W1	**Cape Leeuwin H**	**46.77**	**124**	T	T	01 53 40.2	
	baz=283,slow=75,SNR=80						
TSUM	**Tsumeb**	**47.03**	**258**	LR	LR	01 22 03.5	
	comp=Z,206nm,21.1s,baz=138,slow=34						
NWAO	**Narrogin (SRO)**	**48.93**	**121**	LR	LR	01 21 30.0	
	comp=Z,121nm,20.6s,baz=238,slow=32						
MAW	**Mawson**	**52.51**	**182**	LR	LR	01 21 34.5	
	comp=Z,117nm,21.0s,baz=14,slow=30						
KAPI	**Kappang**	**53.02**	**85**	LR	LR	01 23 47.3	
	comp=Z,291nm,21.8s,baz=260,slow=32						
ASF	**Jabal al Asfar**	**55.03**	**329**	LR	LR	01 26 57.1	
	comp=Z,52nm,18.8s,baz=206,slow=34						
FITZ	**Fitzroy Crossi**	**56.32**	**102**	LR	LR	01 26 21.6	
	comp=Z,234nm,20.1s,baz=296,slow=33						
AAK	**Ala-Archa**	**57.90**	**7**	LR	LR	01 29 32.1	
	comp=Z,91nm,18.9s,baz=172,slow=35						
GNI	**Garni**	**58.67**	**340**	LR	LR	01 29 51.9	
	comp=Z,42nm,19.6s,baz=137,slow=35						
DAV	**Davao City (W)**	**62.33**	**74**	LR	LR	01 30 56.6	
	comp=Z,60nm,21.1s,baz=322,slow=34						
KBZ	**Khabaz**	**62.49**	**341**	LR	LR	01 32 17.4	
	comp=Z,32nm,19.3s,baz=149,slow=35						
MKAR	**Makanchi Array**	**63.19**	**12**	P	**P**	**01 05 53.4 +0.2**	
	0.6nm,0.8s,baz=213,slow=8.2,SNR=4.9 0.6nm,0.8s						
MKAR	**Makanchi Array**	**63.19**	**12**	P	**P**	**01 05 52.7 -0.6**	
ASAR	**Alice Springs**	**63.44**	**109**	P	**P**	**01 05 56.2 +0.7**	
	1.2nm,0.9s,baz=268,slow=7.3,SNR=6.1						
ASAR				LR	LR	01 31 05.6	
	comp=Z,148nm,18.5s,baz=298,slow=34 1.2nm,0.9s						
ASAR	**Alice Springs**	**63.44**	**109**	P	**P**	**01 05 55.8 +0.3**	
WRA	**Warramunga Arr**	**64.27**	**105**	P	**P**	**01 06 01.4 +0.4**	
	1.8nm,1.0s,baz=270,slow=5.7,SNR=6.6 1.8nm,1.0s						
WRA	**Warramunga Arr**	**64.27**	**105**	P	**P**	**01 06 01.5 +0.4**	
KURBB	**Kurchatov Arra**	**66.26**	**8**	P	**P**	**01 06 13.5 +0.3**	
	1.1nm,0.9s,baz=204,slow=6.7,SNR=7.7						
KURBB				LR	LR	01 33 30.6	
	comp=Z,93nm,18.9s,baz=182,slow=34 1.1nm,0.9s						
KURK	**Kurchatov**	**66.37**	**8**	P	**P**	**01 06 14.0 +0.1**	
KURK				IAmb	IAmb	01 06 20.9	
	comp=Z,1.9nm,0.8s						
BVAR	**Borovoye Array**	**67.93**	**2**	P	**P**	**01 06 24.1 +0.3**	
	comp=Z,2.5nm,0.9s,baz=163,slow=5.6,SNR=9.4 comp=Z,2.5nm,0.9s						
BORK	**Borovoye**	**67.95**	**2**	P	**P**	**01 06 24.2 +0.3**	
BORK				IAmb	IAmb	01 06 31.2	
	comp=Z,2.8nm,0.8s						
SNAA	**Sanae**	**69.37**	**198**	LR	LR	01 30 24.9	
	comp=Z,128nm,19.7s,baz=66,slow=30						
ZALV	**Zalesovo Beam**	**70.50**	**11**	P	**P**	**01 06 39.4 -0.3**	
	comp=Z,0.4nm,0.3s,baz=213,slow=4.6,SNR=4.8						
ZALV				LR	LR	01 36 56.8	
	comp=Z,45nm,18.9s,baz=190,slow=35 comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**70.50**	**11**	P	**P**	**01 06 38.5 -1.1**	
MLR	**Muntele Rosu**	**70.72**	**331**	LR	LR	01 35 17.5	
	comp=Z,53nm,21.7s,baz=131,slow=34						
MLR	**Muntele Rosu**	**70.72**	**331**	P	**P**	**01 06 41.8 +0.4**	
MLR				IAmb	IAmb	01 07 09.2	
	comp=Z,8.6nm,1.5s						
ARTI	**Arti**	**71.57**	**355**	P	**P**	**01 06 45.5 -0.6**	
ARTI				IAmb	IAmb	01 06 49.4	
	comp=Z,7.5nm,1.3s						
RAFF	**Raffo Rosso**	**71.67**	**318**	P	**P**	**01 06 46.9 -0.3**	
SONM	**Songino Array**	**71.96**	**27**	P	**P**	**01 06 48.6 -0.2**	
	comp=Z,1.0nm,0.9s,baz=231,slow=4.6,SNR=5.0 comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**71.96**	**27**	P	**P**	**01 06 48.2 -0.7**	
PDG	**Podgorica**	**72.00**	**325**	P	**P**	**01 06 49.3 +0.3**	
PDG				IAmb	IAmb	01 07 25.7	
	comp=Z,11nm,1.4s						
TOO	**Toolangi**	**72.11**	**125**	P	**P**	**01 06 49.8 -0.2**	
TOO				IAmb	IAmb	01 07 15.8	
	comp=Z,3.1nm,1.4s						
ULN	**Ulaanbaatar**	**72.28**	**27**	P	**P**	**01 06 50.8 +0.1**	

BUR08	**Bucovina Ar. S**	**72.67**	**332**	P	**P**	**01 06 53.0**	**0.0**
BUR08				IAmb	IAmb	01 06 57.1	
	comp=Z,6.2nm,1.4s						
AKASG	**Malin Array Be**	**73.31**	**336**	P	**P**	**01 06 57.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=124,slow=4.9,SNR=2.5 comp=Z,0.7nm,0.7s						
AKASG	**Malin Array Be**	**73.31**	**336**	P	**P**	**01 06 57.2**	**+0.7**
QSPA	**South Pole Qui**	**74.97**	**180**	LR	LR	01 36 30.8	
	comp=Z,48nm,18.8s,baz=288,slow=33						
NRCA	**Norcia**	**75.77**	**322**	P	**P**	**01 07 11.8**	**+0.6**
NRCA				IAmb	IAmb	01 07 47.7	
	comp=Z,7.2nm,1.2s						
OJC	**Ojcow**	**77.00**	**331**	P	**P**	**01 07 18.2**	**+0.3**
RONA	**Rosalia, Austr**	**77.03**	**328**	*e*P	**P**	**01 07 19.5**	**+1.3**
	comp=Z,1.7nm,0.9s						
SOKA	**Soboth**	**77.05**	**326**	*e*P	**P**	**01 07 19.5**	**+1.1**
	comp=Z,4.1nm,1.5s						
CASP	**Castiglione de**	**77.09**	**321**	P	**P**	**01 07 18.5**	**-0.1**
ARSA	**Arzberg**	**77.15**	**327**	*e*P	**P**	**01 07 20.1**	**+1.3**
	comp=Z,3.3nm,1.0s						
OBKA	**Obir**	**77.20**	**326**	*e*P	**P**	**01 07 22.2**	**+2.9**
	comp=Z,2.1nm,1.1s						
CONA	**Conrad Observa**	**77.40**	**328**	*e*P	**P**	**01 07 21.3**	**+0.9**
	comp=Z,3.7nm,1.3s						
KSRS	**Korea Array**	**77.66**	**46**	LR	LR	01 40 46.1	
	comp=Z,101nm,21.4s,baz=235,slow=35						
JNU	**Nakatsue**	**77.72**	**51**	LR	LR	01 42 58.9	
	comp=Z,67nm,18.6s,baz=226,slow=37						
MYKA	**Terra Mystica**	**77.77**	**326**	*e*P	**P**	**01 07 23.6**	**+1.2**
	comp=Z,0.1nm,0.3s						
VRAC	**Vranov**	**77.93**	**329**	LR	LR	01 41 27.5	
	comp=Z,23nm,21.9s,baz=93,slow=36						
MOA	**Molln**	**78.19**	**327**	*e*P	**P**	**01 07 25.7**	**+1.0**
	comp=Z,6.9nm,1.2s						
KBA	**Koelnbreinsper**	**78.20**	**326**	*e*P	**P**	**01 07 26.3**	**+1.4**
	comp=Z,0.3nm,0.4s						
BIOA	**Bad Ischl, Aus**	**78.42**	**327**	*e*P	**P**	**01 07 26.4**	**+0.4**
	comp=Z,0.7nm,0.5s						
ABTA	**Abfaltersbach**	**78.46**	**325**	*e*P	**P**	**01 07 27.4**	**+1.2**
	comp=Z,5.1nm,1.3s						
PRMA	**PARMA**	**78.55**	**323**	P	**P**	**01 07 26.5**	**-0.1**
LESA	**Schwarzleotal**	**78.78**	**326**	*e*P	**P**	**01 07 27.1**	**-0.8**
	comp=Z,1.8nm,0.8s						
GERES	**GERESS Array B**	**79.10**	**327**	P	**P**	**01 07 29.4**	**-0.3**
KHC	**Kasperske Hory**	**79.34**	**328**	P	**P**	**01 07 31.0**	**0.0**
KHC				IAmb	IAmb	01 07 34.3	
	comp=Z,3.0nm,1.0s						
SENIN	**Lac Senin/Sane**	**81.19**	**323**	P	**P**	**01 07 41.4**	**+0.1**
SENIN				IAmb	IAmb	01 08 20.1	
	comp=Z,8.4nm,1.4s						
MDT	**Midelt**	**83.09**	**307**	LR	LR	01 45 59.0	
	comp=Z,52nm,19.7s,baz=122,slow=36						
USRK	**Ussuriysk Ar.**	**83.63**	**41**	LR	LR	01 44 13.8	
	comp=Z,69nm,21.4s,baz=278,slow=35						
MJAR	**Matsushiro Arr**	**84.62**	**50**	P	**P**	**01 07 59.1**	**0.0**
	comp=Z,1.7nm,0.9s,baz=262,slow=7.6,SNR=5.3						
MJAR				LR	LR	01 45 43.9	
	comp=Z,64nm,20.7s,baz=242,slow=36 comp=Z,1.7nm,0.9s						
MJAR	**Matsushiro Arr**	**84.62**	**50**	P	**P**	**01 07 58.2**	**-0.8**
MJAR				IAmb	IAmb	01 08 06.8	
	comp=Z,5.5nm,1.3s						
ESDC	**Sonseca Array**	**85.33**	**313**	P	**P**	**01 08 03.9**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=88,slow=5.9,SNR=5.8 comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**85.33**	**313**	P	**P**	**01 08 02.7**	**+0.2**
NRIK	**Norilsk**	**85.51**	**7**	LR	LR	01 46 32.5	
	comp=Z,52nm,20.4s,baz=178,slow=36						
HFS	**Hagfors**	**86.20**	**336**	P	**P**	**01 08 06.7**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=128,slow=5.1,SNR=4.2 comp=Z,3.3nm,0.9s						
PMSA	**Palmer Station**	**92.08**	**199**	LR	LR	01 40 18.3	
	comp=Z,91nm,21.5s,baz=130,slow=29						
PDAR	**Pinedale Array**	**152.26**	**354**	PKPbc	**PKPbc**	**01 15 20.2**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=332,slow=2.7,SNR=4.1						
TXAR	**Lajitas Array**	**163.31**	**330**	PKPab	**PKPab**	**01 16 17.7**	**-1.4**
	comp=Z,0.7nm,1.1s,baz=27,slow=4.3,SNR=2.9						

IDC 11 00:58:04.1±1.8, 15.07S×66.89E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=66.2km s-min=29.9km az=48.0

ISC 11 00:58:06.6±1.7, 15.1S±0.4×66.9E±0.4, h16km, n18, σ0.991/9, mb3.7/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.24**	**37**	T	T	01 09 33.6	
	baz=216,slow=76,SNR=21						
H08S2	**Diego Garcia H**	**9.25**	**37**	T	T	01 09 49.2	
	baz=216,slow=76,SNR=30						
H08S3	**Diego Garcia H**	**9.26**	**37**	T	T	01 09 43.3	
	baz=216,slow=76,SNR=23						
H04N2	**CROZET ISLANDS**	**33.43**	**199**	T	T	01 40 18.9	
	baz=29						
H04N1	**CROZET ISLANDS**	**33.44**	**199**	T	T	01 40 20.1	
	baz=29						
H04N3	**CROZET ISLANDS**	**33.45**	**199**	T	T	01 40 19.5	
	baz=29						
H01W3	**Cape Leeuwin H**	**46.66**	**124**	T	T	01 56 31.7	
	baz=282,slow=74						
H01W2	**Cape Leeuwin H**	**46.66**	**124**	T	T	01 56 26.4	
	baz=282						
H01W1	**Cape Leeuwin H**	**46.67**	**124**	T	T	01 56 31.6	
	baz=282,slow=74						
MKAR	**Makanchi Array**	**63.17**	**12**	P	**P**	**01 08 34.6**	**+0.8**
	0.2nm,0.5s,baz=205,slow=6.4,SNR=2.5 0.2nm,0.5s						
ASAR	**Alice Springs**	**63.32**	**109**	P	**P**	**01 08 36.2**	**+0.8**
	0.3nm,0.6s,baz=257,slow=11,SNR=1.8 0.3nm,0.6s						
WRA	**Warramunga Arr**	**64.15**	**105**	P	**P**	**01 08 40.4**	**-0.5**
	0.5nm,0.8s,baz=269,slow=5.8,SNR=2.3 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**66.25**	**8**	P	**P**	**01 08 54.1**	**+0.3**
	0.4nm,0.7s,baz=204,slow=6.9,SNR=4.4 0.4nm,0.7s						
BVAR	**Borovoye Array**	**67.93**	**2**	P	**P**	**01 09 04.0**	**-0.4**
	0.6nm,0.6s,baz=168,slow=7.6,SNR=4.7 0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**70.49**	**11**	P	**P**	**01 09 18.6**	**-1.6**
	0.2nm,0.3s,baz=197,slow=4.6,SNR=3.5 0.2nm,0.3s						
ESDC	**Sonseca Array**	**85.42**	**313**	P	**P**	**01 10 44.2**	**+0.5**
	0.6nm,1.0s,baz=116,slow=5.4,SNR=2.9 0.6nm,1.0s						
HFS	**Hagfors**	**86.25**	**336**	P	**P**	**01 10 46.7**	**-0.5**
	2.9nm,1.0s,baz=124,slow=5.5,SNR=1.8 2.9nm,1.0s						
PDAR	**Pinedale Array**	**152.28**	**354**	PKPbc	**PKiKP**	**01 18 02.1**	**-0.5**
	0.5nm,0.7s,baz=45,slow=2.5,SNR=4.2						

IDC 11 01:03:43.8±0.9, 28.17N×139.03E, h503km±17km, mb2.8/7, mbtmp3.7/9, Error ellipse: s-maj=36.3km s-min=19.3km az=68.0
JMA 11 01:03:45.5±0.2, 28°N±1'×13°9'E±', h515km, MV3.9/23, W OFF OGASAWARA

ISC 11 01:03:44.6±0.8, 28°18'N±0'.09×139°2'E±0'.1, h526km, n18, σ1.938/23, mb3.1/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.83**	**112**	*e*P	**P**	**01 04 57.2**	**+0.6**
CBIJ				*e*S	**S**	**01 05 53.4**	**-1.8**
JCJ	**Chichijima**	**2.83**	**112**	P	**P**	**01 04 55.4**	**-1.3**
	27nm,0.4s,baz=317,slow=19,SNR=17						
JCJ				S	**S**	**01 05 52.9**	**-2.3**
	35nm,0.6s,baz=276,slow=22,SNR=2.2						
JHH2	**Haha-jima-NKT2**	**3.03**	**120**	*e*P	**P**	**01 04 58.5**	**+0.6**
BSO1	**Boso 1**	**6.62**	**13**	*e*P	**P**	**01 05 28.9**	**+1.7**
BSO1				*e*S	**S**	**01 06 52.1**	**+0.6**
BSO3	**Boso 3**	**6.69**	**9**	*e*P	**P**	**01 05 28.6**	**+0.4**
BSO4	**Boso 4**	**6.85**	**8**	*e*P	**P**	**01 05 30.5**	**+0.6**
BSO4				*e*S	**S**	**01 06 55.0**	**-1.3**
JYT	**Yasato**	**8.06**	**6**	P	**P**	**01 05 42.3**	**+0.2**
JAG	**Ashikaga**	**8.22**	**1**	P	**P**	**01 05 43.4**	**-0.3**
MJAR	**Matsushiro Arr**	**8.38**	**354**	P	**P**	**01 05 43.9**	**-1.5**
	2.5nm,0.6s,baz=180,slow=12,SNR=6.1						
JHO	**Hitachi**	**8.48**	**7**	P	**P**	**01 05 47.1**	**+0.8**
JHO				S	**S**	**01 07 23.2**	**-3.1**
JFK	**Kawauchi**	**9.26**	**8**	*e*P	**P**	**01 05 55.7**	**+1.3**
SONM	**Songino Array**	**32.13**	**317**	P	**P**	**01 09 27.1**	**-1.5**
	0.2nm,0.3s,baz=141,slow=5.5,SNR=1.8 0.2nm,0.3s						
MKAR	**Makanchi Array**	**47.77**	**309**	P	**P**	**01 11 34.0**	**+0.2**
	0.1nm,0.4s,baz=84,slow=5.9,SNR=1.8 0.1nm,0.4s						
WRA	**Warramunga Arr**	**48.08**	**186**	P	**P**	**01 11 36.9**	**+0.5**
	0.2nm,0.3s,baz=2.0,slow=7.6,SNR=5.0 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**50.41**	**314**	P	**P**	**01 11 53.5**	**+0.2**
	0.7nm,0.4s,baz=92,slow=7.9,SNR=9.0 0.7nm,0.4s						
BVAR	**Borovoye Array**	**55.47**	**317**	P	**P**	**01 12 29.7**	**+0.4**
	1.1nm,0.4s,baz=92,slow=7.2,SNR=7.9 1.1nm,0.4s						
YKA	**Yellowknife Ar**	**72.42**	**28**	P	**P**	**01 14 19.2**	**+2.2**
	0.2nm,0.6s,baz=288,slow=5.5,SNR=1.5 0.2nm,0.6s						
FINES	**FINESS Array B**	**75.81**	**333**	P	**P**	**01 14 36.3**	**+0.1**
	0.5nm,0.3s,baz=62,slow=5.5,SNR=6.1 0.5nm,0.3s						

SOME 11 01:04:40.0, 42.33N×81.17E, h10km
NNC 11 01:04:42.4±8.9, 42.15N×80.68E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=67.4km s-min=36.8km az=3.0

ISC 11 01:04:36.3±3.4, 42.3N±0.1×81.39E±0.09, h10km, n7, σ1.964/14, 2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**1.76**	**308**	P	**Pb**	**01 05 09.7**	**+1.0**
PDGK				S	**Sn**	**01 05 28.9**	**-0.5**
UZB	**Uzynbulak**	**1.95**	**298**	*e*P	**Pg**	**01 05 13.8**	**+0.1**
	2.1nm,0.2s						
UZB				*e*S	**Sg**	**01 05 38.3**	**-0.8**
	1.9nm,0.2s						
SATY	**Saty**	**2.34**	**291**	*e*P	**Pb**	**01 05 19.3**	**+0.7**
	1.5nm,0.2s						
SATY				*e*S	**Sg**	**01 05 47.9**	**-3.5**
	5.2nm,0.1s						
DJR	**Jarkent**	**2.38**	**331**	*e*P	**Pb**	**01 05 21.4**	**+2.2**
	1.0nm,0.3s						
DJR				*e*S	**Sg**	**01 05 51.1**	**-1.5**
	1.1nm,0.1s						
ARXS	**Arharly**	**3.25**	**308**	*e*P	**Pb**	**01 05 35.4**	**+1.2**
	0.4nm,0.2s						
ARXS				*e*S	**Sb**	**01 06 14.8**	**+1.0**
	1.4nm,0.2s						
MAKZ	**Makanchi**	**4.56**	**5**	⇓Pn	**Pb**	**01 05 55.5**	**-1.1**
	4.9nm,2.0s						
MAKZ				⇑Sn	**Sb**	**01 06 52.2**	**+0.6**
	2.0nm,1.8s						
MK31	**Makanchi Array**	**4.58**	**8**	Pn	**Pb**	**01 05 56.4**	**-0.3**
	baz=184,slow=14,SNR=6.0						
MK31				⇑Sn	**Sb**	**01 06 53.8**	**+1.9**
	0.4nm,0.8s,baz=185,slow=24						

IDC 11 01:30:15.2±1.3, 4.13N×125.99E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=103.6km s-min=17.6km az=71.0
DJA 11 01:30:33.6±0.7, 4°N±5'×12°6E±', h130km±5km, M4.3/12, mB5.0/2, mb4.3/5, MLv4.2/12, Mw(mB)4.4/2
MAN 11 01:30:34.0, 3.94N×126.19E, h32km, MS3.2

ISC 11 01:30:26.3±1.0, 4.2N±0.1×126.7E±0.1, h100km, n11, σ1.986/12, mb3.7/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.27**	**247**	P	**Pn**	**01 30 53.0**	**+3.2**
SGSI				S	**Sn**	**01 31 08.8**	**+1.2**
TNTI	**Ternate**	**3.45**	**169**	P	Pn	01 31 24.9	+6.8
GTOI	**Gorontalo**	**5.10**	**226**	P	**Pn**	**01 31 37.9**	**-2.5**
SANI	**Sanana**	**6.23**	**187**	P	**Pn**	**01 31 55.2**	**-0.6**
	0.2nm2μm18nm,0.8s						
NLAI	**Namlea**	**7.38**	**177**	P	**Pn**	**01 32 13.2**	**+1.8**
	2μm46nm,1.0s						
FITZ	**Fitzroy Crossi**	**22.16**	**183**	P	**P**	**01 35 12.8**	**-1.4**
	3.0nm,0.4s,baz=358,slow=8.9,SNR=18 3.0nm,0.4s						
WRA	**Warramunga Arr**	**25.12**	**163**	P	**P**	**01 35 43.3**	**+1.2**
	1.4nm,0.3s,baz=340,slow=10,SNR=32 1.4nm,0.3s						
ASAR	**Alice Springs**	**28.55**	**166**	P	**P**	**01 36 13.9**	**+1.1**
	0.8nm,0.6s,baz=343,slow=7.5,SNR=9.9 0.8nm,0.6s						
SONM	**Songino Array**	**46.87**	**341**	P	**P**	**01 38 47.1**	**+0.5**
	0.2nm,0.3s,baz=156,slow=7.6,SNR=2.1 0.2nm,0.3s						
MKAR	**Makanchi Array**	**57.18**	**325**	P	**P**	**01 40 01.3**	**-1.6**
	0.3nm,0.4s,baz=108,slow=7.8,SNR=3.7						
MKAR				PcP	**PcP**	**01 40 56.1**	**-0.3**
	0.5nm,0.6s,baz=130,slow=3.5,SNR=4.1 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**61.35**	**327**	P	**P**	**01 40 30.1**	**-1.5**
	0.5nm,0.7s,baz=128,slow=6.2,SNR=6.4 0.5nm,0.7s						

OSPL 11 01:43:24.7±1.6, 18.76N×70.29W, h102km±12km, ML2.4, Presumed earthquake
SDD 11 01:43:25.1±2.5, 18.70N×70.42W, h99km±12km, MD3.0, ML2.4, MW3.0, Presumed earthquake

ISC 11 01:43:24.5±1.7, 18.81N±0.05×70.33W±0.04, h95km±11km, n21, σ1.946/33, 20C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABDR	**Alto Bandera**	**0.28**	**272**	IAML		01 43 47.7	
	comp=E,0.1nm,0.0s						
ABDR				⇑*i*S	**Sn**	**01 43 48.5**	**-1.0**
BANI	**BANI**	**0.41**	**184**	⇑*i*P	**Pn**	**01 43 39.4**	**+0.1**
BANI				⇑*i*S	**Sn**	**01 43 49.2**	**-1.1**
BANI				IAML		01 43 53.1	
	comp=N,267nm,0.3s						
SDD	**Santo Domingo**	**0.52**	**131**	⇑*i*S	**Sn**	**01 43 50.4**	**-1.0**
SDD				IAML		01 43 52.8	
	comp=N,38nm,0.3s						
SDD	**Santo Domingo**	**0.52**	**131**	*i* P	**Pn**	**01 43 39.7**	**-0.2**
SDD				*e*S	**Sn**	**01 43 50.5**	**-0.9**
SDD				IAML		01 43 53.0	
	comp=Z,938nm,0.1s						
SC01	**Santiago de lo**	**0.73

comp=Z,45nm,2.5s
MCDR Montecristi 1.66 311 ⇑*i*P S **Sn 01 44 13.4 -0.3**
MCDR IAML 01 44 26.1
comp=N,80nm,1.9s
PCDR Punta Cana, DR 1.87 99 ⇑*i*P **Pn 01 43 56.1 +0.9**
PCDR ⇑*i*S **Sn 01 44 19.5 +1.0**
PCDR IAML 01 44 36.1
comp=N,73nm,2.3s
GRTK Grand Turk 2.80 344 ⇑*i*P **Pn 01 44 06.2 -1.2**
GRTK ⇑*i*S **Sn 01 44 37.2 -3.2**
GRTK IAML 01 44 46.8
comp=N,49nm,3.4s

*SDD **11** 02:12:13.4±2.6,26°16N×70°74W,h16*km*±7*km*, MD3.1, ML2.7, MW3.3, Presumed earthquake*
*SSNC **11** 02:12:13.2±1.8,20°15N×70°84W,h5*km*±13*km*, MD3.5, ML2.7, MW3.3, Presumed earthquake*
*OSPL **11** 02:12:13.1±2.7,20°19N×70°70W,h6*km*±10*km*, ML2.7, Presumed earthquake*
ISC 11 02:12:11.3±1.2,20.17N±0.03×70.77W±0.03,h18km**±6**km**, n28,σ1ᵍ24/49,22C-1D,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.32**	**213**	⇑*i*P	**Pg**	**02 12 18.3**	**+0.1**
LUDR				⇑*i*S	**Sb**	**02 12 24.5**	**+1.1**
LUDR				IAML		02 12 27.6	
	comp=E,2μm,0.3s						
SODR	**Sosua Marina B**	**0.45**	**157**	⇑*i*P	**Pb**	**02 12 20.8**	**+0.1**
SODR				⇑*i*S	**Sb**	**02 12 27.7**	**+0.7**
SODR				IAML		02 12 36.1	
	comp=N,714nm,0.6s						
LOPP1	**Punta Rusia, P**	**0.51**	**233**	*i* P	**Pb**	**02 12 22.6**	**+0.9**
LOPP1				*e*S	**Sn**	**02 12 31.9**	**-0.1**
LOPP1				IAML		02 12 35.1	
	comp=Z,216nm,0.4s						
MADR	**Mao Valverde**	**0.68**	**208**	⇓*i*P	**Pb**	**02 12 25.0**	**+0.5**
MADR				⇑*i*S	**Sn**	**02 12 36.2**	**+0.1**
MADR				IAML		02 12 42.9	
	comp=N,379nm,0.5s						
SC01	**Santiago de lo**	**0.74**	**177**	⇑*i*P	**Pg**	**02 12 25.2**	**-0.5**
SC01				⇑*i*S	**Sn**	**02 12 37.3**	**-0.3**
SC01				IAML		02 12 41.0	
	comp=N,354nm,0.5s						
SC01	**Santiago de lo**	**0.74**	**177**	*i* P	**Pb**	**02 12 26.2**	**+0.6**
SC01				*e*S	**Sn**	**02 12 38.1**	**+0.5**
SC01				IAML		02 12 41.1	
	comp=Z,179nm,0.4s						
MCDR	**Montecristi**	**0.88**	**252**	⇑*i*P	**Pb**	**02 12 28.5**	**+0.4**
MCDR				⇑*i*S	**Sn**	**02 12 43.0**	**+1.8**
MCDR				IAML		02 12 44.9	
	comp=N,124nm,0.2s						
LODA1	**ITESIL, Dajabo**	**1.08**	**235**	⇑*i*S	**Sb**	**02 12 45.7**	**+0.5**
LODA1				IAML		02 12 49.3	
	comp=N,1μm,3.9s						
REDR	**Restauracion**	**1.16**	**211**	⇑*i*P	**Pg**	**02 12 33.7**	**0.0**
REDR				⇑*i*S	**Sg**	**02 12 50.8**	**+1.9**
REDR				IAML		02 12 54.2	
	comp=N,489nm,0.1s						
SDDR	**Presa de Saban**	**1.28**	**203**	⇑*i*P	**Pn**	**02 12 34.3**	**0.0**
SDDR				⇑*i*S	**Sb**	**02 12 50.1**	**-0.9**
SDDR				IAML		02 12 54.9	
	comp=N,160nm,0.3s						
SDDR	**Presa de Saban**	**1.28**	**203**	*i* P	**Pn**	**02 12 34.3**	**0.0**
SDDR				*e*S	**Sg**	**02 12 52.2**	**-0.5**
SDDR				IAML		02 12 54.9	
	comp=Z,2μm,0.3s						
SDDR	**Presa de Saban**	**1.28**	**203**	*e*P	**Pn**	**02 12 34.2**	**0.0**
SDDR				*e*S	**Sn**	**02 12 51.8**	**+0.8**
SDDR				IAML		02 12 54.1	
	comp=Z,151nm,0.4s						
SDDR				IAML		02 12 55.0	
	comp=Z,165nm,0.4s						
ABDR	**Alto Bandera**	**1.35**	**174**	⇑*i*P	**Pn**	**02 12 35.8**	**+0.2**
ABDR				⇑*i*S	**Sb**	**02 12 51.9**	**-1.6**
ABDR				IAML		02 12 55.7	
	comp=E,2.7nm,0.3s						
GRTK	**Grand Turk**	**1.38**	**346**	⇑*i*P	**Pn**	**02 12 36.2**	**+0.5**
GRTK				⇑*i*S	**Sb**	**02 12 54.8**	**+0.9**
GRTK				IAML		02 12 57.9	
	comp=N,113nm,0.6s						
GRTK	**Grand Turk**	**1.38**	**346**	*i* P	**Pn**	**02 12 36.2**	**+0.5**
GRTK				*e*S	**Sg**	**02 12 55.6**	**-0.4**
GRTK				IAML		02 13 00.3	
	comp=Z,79nm,0.7s						
GRTK	**Grand Turk**	**1.38**	**346**	*e*P	**Pn**	**02 12 35.8**	**+0.1**
GRTK				*e*S	**Sb**	**02 12 55.4**	**+1.5**
GRTK				IAML		02 12 57.7	
	comp=Z,121nm,0.3s						
GRTK				IAML		02 12 58.4	
	comp=Z,119nm,0.2s						
LONE3	**El Aguacate, B**	**1.69**	**203**	*i* P	**Pb**	**02 12 41.2**	**-0.6**
LONE3				*e*S	**Sb**	**02 13 04.1**	**+1.3**
LONE3				IAML		02 13 04.6	
	comp=Z,58nm,0.4s						
SMDR	**Samana, DR**	**1.72**	**120**	⇑*i*P	**Pn**	**02 12 40.5**	**+0.1**
SMDR				IAML		02 13 09.9	
	comp=N,118nm,0.6s						
BANI	**BANI**	**1.81**	**168**	⇑*i*P	**Pb**	**02 12 43.1**	**-0.8**
BANI				IAML		02 13 13.1	
	comp=N,186nm,0.7s						
SDD	**Santo Domingo**	**1.88**	**155**	*i* P	**Pn**	**02 12 43.6**	**+1.1**
HATOM	**Hato Mayor del**	**1.89**	**136**	⇑*i*P	**Pn**	**02 12 43.1**	**+0.3**
HATOM				⇑*i*S	**Sn**	**02 13 06.5**	**+0.2**
HATOM				IAML		02 13 09.5	
	comp=N,40nm,0.3s						
LODU1	**El Espartillar**	**1.92**	**200**	*i* P	**Pb**	**02 12 45.7**	**-0.2**
LODU1				IAML		02 13 12.7	
	comp=Z,183nm,0.4s						
LOVI	**El Cajuil, Ovi**	**2.42**	**194**	*i* P	**Pb**	**02 12 52.9**	**-1.5**
LOVI				IAML		02 13 28.1	
	comp=Z,73nm,0.8s						
LOBH	**Bahia de las A**	**2.44**	**200**	*i* P	**Pb**	**02 12 53.3**	**-1.3**
LOBH				IAML		02 13 35.6	
	comp=Z,58nm,3.7s						
MASC	**Masc**	**3.25**	**271**	*e*P	**Pn**	**02 13 02.5**	**+1.0**
MASC				*e*S	**Sn**	**02 13 36.2**	**-3.6**
QMBU	**Quimbuelo**	**3.80**	**271**	*e*P	**Pn**	**02 13 07.9**	**-1.1**
QMBU				*e*S	**Sn**	**02 13 51.7**	**-1.6**
NMDO	**Nuevo Mundo**	**3.98**	**276**	*e*P	**Pn**	**02 13 09.1**	**-2.3**
NMDO				*e*S	**Sn**	**02 13 56.2**	**-1.4**
GTBY	**Guantanamo Bay**	**4.09**	**267**	*e*P	**Pn**	**02 13 16.7**	**+3.7**
GTBY				*e*S	**Sn**	**02 13 58.6**	**-1.8**

*IDC **11** 02:18:26.3±2.0,5°13S×154°03E,h0*km*,mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=74.3km s-min=31.6km az=112.0*
ISC 11 02:18:40.1±1.8,5°2S±0°3×153°8E±0°5,h105km**,n7, σ1ᵍ03/7,mb3.4/5,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.94**	**231**	P	**P**	**02 23 43.3**	**-1.4**
	0.3nm,0.4s,baz=49,slow=9.6,SNR=11 0.3nm,0.4s						
ASAR	**Alice Springs**	**26.53**	**224**	P	**P**	**02 24 09.4**	**+1.2**
	0.2nm,0.5s,baz=36,slow=11,SNR=2.1 0.2nm,0.5s						
MKAR	**Makanchi Array**	**81.32**	**319**	P	**P**	**02 30 45.3**	**+0.2**
	0.6nm,0.8s,baz=101,slow=6.0,SNR=3.8 0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**82.08**	**326**	P	**P**	**02 30 48.3**	**-0.5**
	0.9nm,0.5s,baz=99,slow=9.2,SNR=4.3 0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**84.77**	**322**	P	**P**	**02 31 03.0**	**+0.3**
	0.6nm,0.8s,baz=106,slow=3.7,SNR=4.5 0.6nm,0.8s						
LPAZ	**La Paz**	**133.31**	**118**	PKP	**PKPdf**	**02 37 45.1**	**-0.5**
	0.6nm,0.3s,baz=243,slow=1.9,SNR=8.8						
TORD	**Torodi Ar. Bea**	**151.41**	**288**	PKPbc	**PKiKP**	**02 38 23.8**	**+0.6**
	1.2nm,1.1s,baz=59,slow=1.7,SNR=4.8						

TRN 11 02:56:11.6,17°52N×61°37W,h19km**,MD3.7,South-east of Barbuda.,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.42**	**290**	*e*P	Pn	02 56 22.0	-0.6
ANWB				*e*S	Sn	02 56 29.8	-0.1
MBWH	**Windy Hill**	**1.10**	**225**	*e*P	Pg	02 56 33.5	+0.4
MBWH				*e*S	Sg	02 56 50.3	+2.7
DHSZ	**Broadband at M**	**1.30**	**197**	*e*P	Pb	02 56 36.1	+0.6
DHSZ				*e*S	Sg	02 56 54.3	+0.4
SKI	**Saint Kitts**	**1.32**	**262**	*e*P	Pg	02 56 36.8	-0.4
SKI				*e*S	Sg	02 56 55.1	+0.7
MMLZ	**Guadeloupe Bro**	**1.50**	**191**	*e*P	Pb	02 56 39.5	+0.6
MMLZ				*e*S	Sg	02 56 58.9	-1.2
MAGL	**Barre de l'île**	**1.57**	**177**	*e*P	Pb	02 56 39.8	-0.3
MAGL				*e*S	Sb	02 57 00.6	+1.1
TBG	**Guadaloupe-3**	**1.68**	**189**	*e*P	Pb	02 56 41.9	-0.1
TBG				*e*S	Sg	02 57 04.6	-1.4
DSLB	**Salisbury**	**2.08**	**181**	*e*P	Pb	02 56 48.3	-0.5
DSLB				*e*S	Sb	02 57 14.1	0.0

*JMA **11** 03:24:25.8±0.3,26°N±2°×12°6E±°,h119*km*±4*km*, MV3.1/24, NW OFF MIYAKOJIMA ISLAND*
*IDC **11** 03:24:40.1±11.0,26°09N×125°49E,h250*km*±113*km*, mb3.1/10, mbtmp3.7/10, Error ellipse: s-maj=45.7km s-min=15.8km az=69.0*
ISC 11 03:24:26.5±0.8,26°09N±0°07×125°86E±0°06,h125km**±7**km**, n31,σ1ᵍ68/46,mb3.5/10,Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.86**	**74**	P	**Pn**	**03 24 47.6**	**+0.1**
JKE				*e*S	**Sn**	**03 25 03.5**	**-0.1**
JAGN	**Aguni-jima**	**1.33**	**68**	P	**Pn**	**03 24 52.6**	**+0.3**
JAGN				*e*S	**Sn**	**03 25 11.6**	**-0.4**
JOGS	**Gusukube**	**1.39**	**197**	*e*P	**Pn**	**03 24 53.3**	**+0.4**
JIRJ	**Irabujima**	**1.39**	**206**	P	**Pn**	**03 24 52.7**	**-0.3**
JIRJ				*e*S	**Sn**	**03 25 11.6**	**-1.5**
JMJ2	**Miyako jima3**	**1.43**	**200**	*e*P	**Pn**	**03 24 53.7**	**+0.3**
JMJ2				S	**Sn**	**03 25 14.0**	**+0.1**
JJT3	**Tamagusuku3**	**1.73**	**88**	*e*P	**Pn**	**03 24 57.8**	**+1.0**
JJT3				*e*S	**Sn**	**03 25 21.6**	**+1.6**
JTJ	**Tarama**	**1.79**	**216**	P	**Pn**	**03 24 57.1**	**-0.5**
JTJ				S	**Sn**	**03 25 19.5**	**-1.7**
JNTH	**Nagotoyohara**	**1.99**	**77**	*e*P	**Pn**	**03 25 00.6**	**+0.7**
JISG	**Ishigakijimahi**	**2.05**	**223**	P	**Pn**	**03 25 00.2**	**-0.6**
JISG				S	**Sn**	**03 25 24.3**	**-2.8**
JIH	**Iheya**	**2.11**	**63**	*e*P	**Pn**	**03 25 00.9**	**-0.5**
JOW	**Kunigami**	**2.29**	**71**	P	**Pn**	**03 25 03.9**	**+0.2**
JOW				*e*S	**Sn**	**03 25 30.8**	**-1.5**
JIJ	**Ishigaki jima**	**2.32**	**222**	*e*P	**Pn**	**03 25 03.1**	**-1.0**
JKRS	**Kuro-shima**	**2.50**	**223**	*e*P	**Pn**	**03 25 05.9**	**-0.5**
JKRS				*e*S	**Sn**	**03 25 34.9**	**-2.2**
JYRO	**Yoronjima**	**2.50**	**68**	P	**Pn**	**03 25 06.6**	**+0.2**
JYRO				S	**Sn**	**03 25 35.3**	**-1.8**
IRIF	**Iriomote-Funau**	**2.61**	**228**	*e*P	**Pn**	**03 25 07.3**	**-0.4**
IRIF				*e*S	**Sn**	**03 25 37.8**	**-1.8**
JOKE	**Okinoerabujima**	**2.73**	**62**	*e*P	**Pn**	**03 25 08.9**	**-0.5**
JOKE				*e*S	**Sn**	**03 25 40.7**	**-1.8**
JTK	**Tokunoshima**	**3.23**	**58**	P	**Pn**	**03 25 16.1**	**+0.1**
JTK				*e*S	**Sn**	**03 25 51.4**	**-2.7**
JAMN	**Amaminishikomi**	**3.65**	**53**	*e*P	**Pn**	**03 25 21.0**	**-0.3**
JAMN				*e*S	**Sn**	**03 26 01.2**	**-2.7**
JAM	**Amami Oshima**	**4.05**	**54**	*e*S	**Sn**	**03 26 11.4**	**-2.2**
JMZ	**Minamidaito 2**	**4.84**	**92**	*e*S	**Sn**	**03 26 27.5**	**-4.8**
JKDJ	**Kitadaitoujima**	**4.89**	**90**	P	**Pn**	**03 25 37.6**	**-0.5**
JKDJ				*e*S	**Sn**	**03 26 29.1**	**-4.7**
SONM	**Songino Array**	**26.56**	**330**	P	**P**	**03 29 55.6**	**+2.9**
	0.7nm,0.4s,baz=144,slow=11,SNR=4.6 0.7nm,0.4s						
MKAR	**Makanchi Array**	**40.05**	**313**	P	**P**	**03 31 48.4**	**-1.0**
	0.3nm,0.4s,baz=94,slow=10,SNR=6.6 0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**41.08**	**324**	P	**P**	**03 31 57.1**	**-0.6**
	0.6nm,0.4s,baz=160,slow=9.3,SNR=2.6 0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**43.49**	**317**	P	**P**	**03 32 15.9**	**-1.3**
	0.2nm,0.4s,baz=108,slow=3.0,SNR=2.4 0.2nm,0.4s						
WRA	**Warramunga Arr**	**46.50**	**169**	P	**P**	**03 32 42.7**	**+1.4**
	0.4nm,0.6s,baz=348,slow=7.8,SNR=2.3 0.4nm,0.6s						
ASAR	**Alice Springs**	**50.08**	**170**	P	**P**	**03 33 10.7**	**+1.9**
	0.4nm,0.7s,baz=353,slow=7.4,SNR=5.4 0.4nm,0.7s						
ILAR	**Eielson Array**	**65.56**	**28**	P	**P**	**03 34 56.7**	**+0.3**
	0.2nm,0.6s,baz=278,slow=6.1,SNR=2.1 0.2nm,0.6s						
FINES	**FINESS Array B**	**71.93**	**330**	P	**P**	**03 35 35.6**	**-0.3**
	1.8nm,0.9s,baz=57,slow=7.0,SNR=4.7 1.8nm,0.9s						
HFS	**Hagfors**	**77.94**	**332**	P	**P**	**03 36 10.1**	**-0.4**
	2.2nm,0.9s,baz=62,slow=5.5,SNR=1.5 2.2nm,0.9s						
YKA	**Yellowknife Ar**	**79.53**	**24**	P	**P**	**03 36 20.0**	**+0.9**
	0.4nm,0.4s,baz=305,slow=5.4,SNR=7.0 0.4nm,0.4s						

*NEIC **11** 03:27:28.7±1.2,21°7S±0°1×178°9W±0°2,h518*km*±11*km*, mb4.3/13, Error ellipse: s-maj=24.1km s-min=16.3km az=54.0*
*IDC **11** 03:27:29.4±6.5,21°75S×178°87W,h539*km*,68*km*, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=38.4km s-min=21.2km az=56.0*
ISC 11 03:27:27.8±0.9,21°7S±0°1×179°0W±0°2,h500km**,n31, σ1ᵍ42/29,mb4.0/14,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.77**	**324**	P	**P**	**03 28 55.5**	**+2.5**
TOZ	**Tahuroa Road**	**16.70**	**195**	P	**P**	**03 30 58.7**	**+3.1**
TOZ				IAmb	IAmb	03 31 05.6	
	comp=Z,20nm,1.4s						
URZ	**Urewera**	**16.87**	**190**	P	**P**	**03 30 56.8**	**-0.5**
	comp=Z,5.1nm,0.6s,baz=254,slow=2.4,SNR=6.2						
URZ				S	S	03 33 38.2	-11
	comp=Z,2.2nm,0.7s,baz=19,slow=18,SNR=1.4						
HNR	**Honiara**	**23.57**	**298**	P	**P**	**03 31 58.8**	**0.0**
EIDS	**Eidsvold**	**27.61**	**256**	P	**P**	**03 32 36.0**	**+1.5**
EIDS				IAmb	IAmb	03 32 59.1	
	comp=Z,16nm,1.5s						
ARMA	**Armidale**	**27.69**	**246**	P	**P**	**03 32 34.6**	**-0.6**
ARMA				IAmb	IAmb	03 33 02.3	
	comp=Z,20nm,1.5s						
CTAO	**Charters Tower**	**32.42**	**266**	P	**P**	**03 33 17.5**	**+1.3**
CTAO				IAmb	IAmb	03 33 18.3	
	comp=Z,6.0nm,0.9s						
PATS	**Pohnpei**	**35.99**	**319**	P	**P**	**03 33 45.4**	**-0.8**
STKA	**Stephens Creek**	**36.41**	**245**	P	**P**	**03 33 49.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=89,slow=12,SNR=4.1 comp=Z,1.1nm,0.5s						
AS31	**Alice Springs**	**43.31**	**258**	P	**P**	**03 34 45.6**	**+0.4**
ASAR	**Alice Springs**	**43.32**	**258**	P	**P**	**03 34 45.4**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=97,slow=7.8,SNR=39						
ASAR				PcP	**pwP**	**03 36 20.9**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=94,slow=3.6,SNR=7.2 comp=Z,4.3nm,0.8s						
WR8	**Warramunga Arr**	**43.34**	**263**	P	**P**	**03 34 45.1**	**-0.3**
WR8				IAmb	IAmb	03 35 17.6	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**43.49**	**263**	P	**P**	**03 34 45.9**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=95,slow=7.9,SNR=47 comp=Z,2.8nm,0.6s						
WRA	**Warramunga Arr**	**43.49**	**263**	P	**P**	**03 34 46.0**	**-0.6**
FORT	**Forrest**	**47.95**	**248**	P	**P**	**03 35 20.1**	**-0.4**
FORT				IAmb	IAmb	03 35 48.8	
	comp=Z,13nm,1.1s						
MTN	**Manton Dam**	**48.21**	**272**	P	**P**	**03 35 21.9**	**-0.8**
MTN				IAmb	IAmb	03 35 47.2	
	comp=Z,11nm,1.1s						
MBWA	**Marble Bar**	**56.66**	**258**	P	**P**	**03 36 21.1**	**-2.2**
VNDA	**Vanda**	**56.68**	**185**	P	**P**	03 36 18.6	-3.9
	comp=Z,0.5nm,0.5s,baz=24,slow=7.1,SNR=2.6 comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	**68.41**	**180**	P	**P**	**03 37 37.7**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=21,slow=6.6,SNR=8.9 comp=Z,1.1nm,0.6s						
QSPA	**South Pole Qui**	**68.41**	**180**	P	**P**	**03 37 38.6**	**-0.3**
PETK	**Petropavlovsk-**	**77.14**	**346**	P	**P**	**03 38 28.3**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=159,slow=6.0,SNR=2.6 comp=Z,1.2nm,0.8s						
PETK	**Petropavlovsk-**	**77.14**	**346**	P	**P**	**03 38 28.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**03 39 31.8**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=125,slow=4.5,SNR=5.4 comp=Z,0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**03 39 31.6**	**-0.5**
ILAR	**Eielson Array**	**89.66**	**13**	P	**P**	**03 39 29.6**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=212,slow=3.2,SNR=2.1 comp=Z,0.3nm,0.8s						
HFS	**Hagfors**	**140.52**	**350**	PKhKP	PKPpre	03 45 50.7	
	comp=Z,1.7nm,0.8s,baz=54,slow=2.6,SNR=7.3						
AKASG	**Malin Array Be**	**143.53**	**330**	PKP	PKPab	03 46 00.3	-3.0
	comp=Z,1.0nm,0.4s,baz=43,slow=4.0,SNR=6.3						
BRTR	**Keskin Array B**	**146.87**	**310**	PKPbc	**PKPdf**	**03 46 11.3**	**0.0**
	comp=Z,0.9nm,0.6s,baz=66,slow=3.4,SNR=5.3						
BRTR	**Keskin Array B**	**146.87**	**310**		**PKPdf**	**03 46 11.1**	**-0.1**
MMAI	**Mount Meron Ar**	**147.51**	**298**	PKPbc	**PKPdf**	**03 46 14.0**	**+1.6**
	comp=Z,0.7nm,0.4s,baz=69,slow=4.6,SNR=4.2						
GERES	**GERESS Array B**	**151.03**	**342**	PKPbc	**PKPdf**	**03 46 21.5**	**+4.0**
	comp=Z,0.4nm,0.6s,baz=48,slow=1.6,SNR=5.5						

*SOME **11** 03:35:00.3,42°63N×82°50E,h15*km*
NNC **11** 03:35:06.4±7.0,42°38N×82°15E,h0*km*,mb3.0,mpv2.5, Error ellipse: s-maj=55.2km s-min=24.9km az=150.0*
ISC 11 03:34:58.7±3.4,42°5N±0°1×82°7E±0°1,h25km**±21**km**, n9, σ1ᵍ13/18,6C-1D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.00**	**300**	*e*P	**Pb**	**03 35 34.5**	**+0.1**
	4.4nm,0.3s						
KTMS				*e*S	**Sb**	**03 35 59.3**	**+0.4**
	14nm,0.2s						
SHLS	**Shalkode**	**2.50**	**287**	*e*P	**Pn**	**03 35 38.7**	**+0.9**
	9.7nm,0.1s						
SHLS				*e*S	**Sn**	**03 36 06.4**	**-1.1**
	79nm,0.5s						
PDGK	**Podgornoye**	**2.53**	**291**	⇑Pn	**Pb**	**03 35 43.6**	**+0.2**
	1.2nm,0.3s						
PDGK				⇓Sn	**Sb**	**03 36 14.0**	**-0.1**
	14nm,0.9s						
UZB	**Uzynbulak**	**2.81**	**285**	*e*P	**Pb**	**03 35 47.2**	**-1.0**
	1.8nm,0.1s						
UZB				*e*S	**Sb**	**03 36 20.8**	**-1.3**
	12nm,0.6s						
DJR	**Jarkent**	**2.83**	**312**	*e*P	**Pb**	**03 35 48.3**	**-0.3**
	1.6nm,0.1s						
DJR				*e*S	**Sb**	**03 36 23.1**	**+0.2**
	3.7nm,0.5s						
SATY	**Saty**	**3.23**	**282**	*e*P	**Pb**	**03 35 55.7**	**+0.3**
	2.0nm,0.2s						
SATY				*e*S	**Sb**	**03 36 35.2**	**+0.8**
	7.8nm,0.1s						
KAPS	**Kapalarasan**	**3.72**	**320**	*e*P	**Pb**	**03 36 03.1**	**-0.6**
	1.9nm,0.1s						
KAPS				*e*S	**Sb**	**03 36 48.2**	**-0.2**
	10.0nm,0.2s						
MK31	**Makanchi Array**	**4.33**	**356**	Pn	**Pb**	**03 36 12.8**	**-1.3**
	0.1nm,0.2s,baz=185,slow=12,SNR=10						
MK31				⇑Sn	**Sb**	**03 37 08.3**	**+2.3**
	0.1nm,0.3s,baz=190,slow=25						
MK31				⇑Lg	Lg	03 37 26.6	
	1.4nm,0.6s,baz=188,slow=28						
MAKZ	**Makanchi**	**4.37**	**353**	⇑Pn	**Pb**	**03 36 13.1**	**-1.6**
	2.8nm,1.1s						
MAKZ				⇑Sn	**Sb**	**03 37 08.3**	**+1.3**
	1.9nm,1.0s						
MAKZ				⇑Lg	Lg	03 37 28.8	
	1.7nm,0.9s						

HEL 11 03:42:28.0±0.5,67°82N×20°20E,h0km**,ML0.6, Suspected explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.71**	**71**	PG	Pg	03 42 41.1	-0.5
LANU				SG	Sg	03 42 50.1	-0.8
HEF	**Hetta**	**1.42**	**64**	PG	Pn	03 42 53.4	-1.7
HEF				smax	smax	03 43 10.8	
	comp=Z,0.4nm,0.2s						
HEF				SB	Sg	03 43 11.9	-1.7
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	Pn	03 42 54.9	-1.1
	baz=331						
ERTU				SG	Sg	03 43 15.4	-0.4
KLF	**Kolari**	**1.56**	**110**	PG	Pn	03 42 55.6	-1.4
	baz=293						
KLF				smax	smax	03 43 14.9	
	comp=Z,0.3nm,0.2s						
KLF				SG	Sn	03 43 16.9	-1.0
TOF	**Tornio**	**2.39**	**135**	smax	smax	03 43 38.7	
	comp=Z,0.2nm,0.2s						
TOF				SB	Sb	03 43 40.8	-0.9
RNF	**Rovaniemi**	**2.57**	**116**	PB	Pn	03 43 11.7	+0.9
RNF				SG	Sb	03 43 46.2	-0.8

KRSC 11 03:55:50.6±1.8,49°61N×157°11E,h50km**±28**km**,Ml3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.25**	**330**	*e*P	Pn	03 56 12.3	+0.7
SKR				*e*S	Sn	03 56 27.7	+0.4
PAU	**Pauzhetka**	**1.87**	**354**	*e*P	Pn	03 56 22.8	+2.8
PAU				*e*S	Sn	03 56 46.1	+3.7
KDTR	**Khodutka, Kamc**	**2.29**	**15**	*e*P	Pn	03 56 28.6	+2.9
KDTR				*e*S	Sn	03 56 56.2	+3.5
ASAK	**Asacha**	**2.82**	**10**	*e*P	Pn	03 56 37.1	+3.9
MTVR	**Mutnovka**	**2.96**	**13**	*e*P	Pn	03 56 38.4	+3.3
RUS	**Russkaya**	**2.96**	**17**	*e*P	Pn	03 56 38.2	+3.2
GRL	**Gorelyy**	**3.01**	**11**	*e*P	Pn	03 56 38.7	+2.9
KOK	**Koryaka**	**3.81**	**14**	*e*P	Pn	03 56 51.5	+4.8
SDLR	**Sedlovina**	**3.84**	**16**	*e*P	Pn	03 56 50.8	+3.6
SPN	**Mys Shipunski**	**3.94**	**27**	*e*P	Pn	03 56 52.9	+4.4
GNL	**Ganaly**	**4.12**	**7**	*e*P	Pn	03 56 56.0	+4.9
MKZ	**Mys Kozlova**	**5.71**	**28**	*e*P	Pn	03 57 15.3	+2.6

IDC 11 04:01:37.6±10.0,21°72S×176°48W,h0km**,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=466.7km s-min=40.6km az=146.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**

*NNC **11** 04:19:49.9±4.4,36°.25N×69°.90E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=37.8km s-min=36.0km az=68.0*
*IDC **11** 04:20:05.7±2.8,36°.56N×70°.64E,h266km±27km,mb3.2/15, mbtmp4.0/21,Error ellipse: s-maj=19.1km s-min=10.7km az=17.0*
*BJI **11** 04:20:05.3,36°.63N×70°.71E,h269km,mB4.4/3,mb4.3/15*
*NEIC **11** 04:20:06.1±1.5,36°.66N±0°.07×70°.67E±0°.08,h268km±7km, mb4.3/11,Error ellipse: s-maj=10.7km s-min=9.0km az=203.0*
*GFZ **11** 04:20:06.3±0.3,37°N±4°×7°1E±°,h269km±4km,M4.2/10, mb4.1/10*

ISC 11 04:20:06.0±0.5,**36°.61N**±0°.05×**70°.72E**±0°.05,**h268**km,**n114,** σ1§**45**/119,**mb3.6**/21,**4C-4D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.21**	**39**		**Pn**	**04 20 44.8**	**+0.4**
SHAA	**Shahritus**	**2.28**	**296**		**Pn**	**04 20 51.8**	**-0.8**
CHGR	**Chuyangaron**	**2.39**	**329**		**Pn**	**04 20 52.6**	**-1.0**
CHGR	**Chuyangaron**	**2.39**	**329**	P	**Pn**	**04 20 52.8**	**-0.8**
GAR	**Garm**	**2.41**	**353**		**Pn**	**04 20 53.1**	**-0.6**
GAR	**Garm**	**2.41**	**353**	P	**Pn**	**04 20 53.2**	**-0.6**
KBL	**Kabul**	**2.47**	**214**		**Pn**	**04 20 54.4**	**-0.2**
KBL	**Kabul**	**2.47**	**214**	P	**Pn**	**04 20 54.4**	**-0.2**
DRK	**Karamyk**	**3.00**	**16**	P	**Pn**	**04 20 59.9**	**+0.1**
BTK	**Batken**	**3.45**	**1**		**Pn**	**04 21 04.6**	**+0.2**
BTK	**Batken**	**3.45**	**1**	P	**Pn**	**04 21 04.9**	**+0.4**
NIL	**Nilore**	**3.61**	**144**		**Pn**	**04 21 07.1**	**+0.8**
NIL	**Nilore**	**3.61**	**144**	P	**Pn**	**04 21 07.4**	**+1.1**
SRNI	**Srinagar**	**4.20**	**126**	*e*S	**S**	**04 22 05.7**	**-1.0**
SRNI	comp=N,2μm,0.6s			IAML		04 22 06.4	
SRNI	comp=E,1μm,0.7s			IAML		04 22 07.1	
OHH	**Osh**	**4.24**	**22**	P	**Pn**	**04 21 11.7**	**-1.6**
KSH2	**Kashi**	**4.60**	**55**	P	**Pn**	**04 21 18.0**	**+0.3**
KSH2				S	**S**	**04 22 11.6**	**-3.3**
KSH2	comp=E,330nm,0.5s			SMN			
KSH2	comp=E,170nm,0.5s			SME			
ARSB	**Arslanbob**	**5.03**	**20**		**Pn**	**04 21 21.6**	**-1.2**
JMU	**Jammu**	**5.10**	**137**	*ex*	x	04 20 25.4	
JMU				*e*S	**S**	**04 22 24.6**	**-1.2**
JMU	comp=E,140nm,0.3s			IAML		04 22 27.1	
JMU	comp=N,234nm,0.4s			IAML		04 22 27.2	
ARK	**Arkit**	**5.28**	**10**	P	**Pn**	**04 21 24.7**	**-1.0**
IUG	**Iuzhnay**	**5.56**	**355**	*i*P	**Pn**	**04 21 28.4**	**-0.8**
IUG				*e*S	**S**	**04 22 33.3**	**-2.5**
CHM	**Chimkent**	**5.77**	**352**	*e*P	**Pn**	**04 21 31.1**	**-0.5**
TSSA	**Tissa**	**5.84**	**128**	*e*P	**Pn**	**04 21 33.3**	**+0.4**
TSSA				*e*S	**S**	**04 22 38.9**	**-3.5**
TSSA	comp=N,295nm,0.4s			IAML		04 22 40.1	
TSSA	comp=E,264nm,0.4s			IAML		04 22 40.5	
TSSA	comp=E,126nm,0.6s			IAML		04 22 41.4	
THN	**Thein Dam**	**5.88**	**134**	*e*P	**Pn**	**04 21 33.8**	**+0.7**
THN				*e*S	**S**	**04 22 40.8**	**-2.2**
THN	comp=E,192nm,0.5s			IAML		04 22 41.9	
ASAI	**AK-SAY(Kyrgyzs**	**6.25**	**45**	P	**Pn**	**04 21 37.4**	**-0.5**
DZA	**Taraz**	**6.30**	**4**	*e*P	**Pn**	**04 21 37.6**	**-0.5**
DHRM	**DHARAMSHALA**	**6.33**	**132**	*e*P	**Pn**	**04 21 39.4**	**+0.5**
DHRM	comp=E,341nm,0.4s			IAML		04 22 52.6	
DHRM	comp=N,211nm,0.2s			IAML		04 22 53.7	
NRN	**Naryn**	**6.34**	**39**	Pn	**Pn**	**04 21 37.4**	**-1.5**
UCH	**Uchtor**	**6.34**	**26**	P	**Pn**	**04 21 38.1**	**-0.9**
BRLS	SNR=46 **Borolday**	**6.45**	**354**	*e*P	**Pn**	**04 21 36.3**	**-3.7**
EKS2	**Erkin-Say**	**6.49**	**20**	P	**Pn**	**04 21 40.5**	**-0.1**
KK31	SNR=7.5 **Karatay Array**	**6.49**	**359**	⇓P	Pn	04 21 33.2	-7.3
KK31	comp=N,1.5nm,0.3s,baz=188,slow=13,SNR=43			⇑S	**S**	**04 22 53.2**	**-3.2**
KK31	comp=N,12nm,0.7s,baz=190,slow=21				**Pn**	**04 21 39.1**	**-1.3**
KKAR	**Karatay Array**	**6.49**	**359**		**Pn**	**04 21 39.4**	**-1.1**
AAK	**Ala-Archa**	**6.69**	**25**	P	**Pn**	**04 21 42.6**	**-0.5**
AAK	comp=N,16nm,0.5s,baz=196,slow=6.7,SNR=23			S	**S**	**04 22 59.2**	**-2.0**
AAK	comp=N,22nm,0.7s,baz=125,slow=23,SNR=12			P	**Pn**	**04 21 42.9**	**-0.2**
AAK	SNR=12 **Ala-Archa**	**6.69**	**25**	⇑P	Pn	04 21 38.0	-5.2
AAK	comp=N,4.3nm,0.5s			⇑S	**S**	**04 23 01.1**	**-0.1**
AAK	comp=N,41nm,0.9s			P	**Pn**	**04 21 43.1**	**0.0**
ULHL	**Ulahol**	**7.07**	**35**	P	**Pn**	**04 21 47.6**	**-0.3**
BOOM	SNR=8.8 **Boomskoye usch**	**7.13**	**33**		**Pn**	**04 21 47.9**	**-0.6**
BOOM	**Boomskoye usch**	**7.13**	**33**	P	**Pn**	**04 21 48.6**	**+0.1**
TKM2	**Tokmak 2**	**7.34**	**29**	P	**Pn**	**04 21 50.8**	**-0.4**
TARG	SNR=13 **Taragay, Kyrgy**	**7.51**	**45**		**Pn**	**04 21 53.4**	**-0.2**
TARG	**Taragay, Kyrgy**	**7.51**	**45**	P	**Pn**	**04 21 57.6**	**+4.0**
HNLY	**HANLEY**	**7.79**	**117**	*e*P	**Pn**	**04 21 58.4**	**+1.0**
TNSS	**Tian-Shan**	**8.01**	**35**	*e*P	**Pn**	**04 21 59.9**	**0.0**
KLP	**Kalpa**	**8.04**	**127**	*e*P	**Pn**	**04 21 59.7**	**-0.5**
KLP				*e*S	**S**	**04 23 27.6**	**-4.8**
KLP	comp=E,100nm,0.2s			IAML		04 23 31.4	
KLP	comp=N,56nm,0.6s			IAML		04 23 31.7	
WUS	**Wushi**	**8.06**	**53**		**Pn**	**04 21 58.8**	**-1.3**
WUS	**Wushi**	**8.06**	**53**	P	**Pn**	**04 21 59.0**	**-1.2**
AAA	**Alma-Ata**	**8.13**	**34**	*e*P	**Pn**	**04 22 01.3**	**+0.4**
SATY	**Saty**	**8.74**	**40**	*e*P	**Pn**	**04 22 09.1**	**+0.4**
KPKS	**Kokpek**	**9.18**	**39**	*e*P	**Pn**	**04 22 14.5**	**+0.4**
SHLS	**Shalkode**	**9.38**	**43**	*e*P	**P**	**04 22 20.1**	**-2.4**
PDGK	**Podgornoye**	**9.51**	**42**	⇓P	**Pn**	**04 22 18.6**	**+0.3**
PDGK	comp=N,7.4nm,0.9s,baz=316,slow=25 **Podgornoye**	**9.51**	**42**		**Pn**	**04 22 18.4**	**+0.1**
KUDL	**Kundal**	**9.74**	**148**	*e*P	**Pn**	**04 22 21.3**	**+0.1**
KUDL				*e*S	S	04 24 02.9	-8.2
KUDL	comp=E,17nm,0.4s			IAML		04 24 05.6	
TDK	**Taldyqorghan**	**10.21**	**32**	*e*P	**Pn**	**04 22 27.4**	**+0.6**
MAKZ	**Makanchi**	**13.20**	**36**	P	**P**	**04 23 07.0**	**+2.2**
MAKZ	**Makanchi**	**13.20**	**36**		**Pn**	**04 23 03.5**	**-0.3**
MAKZ	**Makanchi**	**13.20**	**36**	P	**Pn**	**04 23 03.2**	**-0.5**
MK31	**Makanchi Array**	**13.34**	**37**	P	**P**	**04 23 09.0**	**+2.7**
MKAR	comp=E,2.4nm,0.5s,baz=221,slow=13,SNR=25 **Makanchi Array**	**13.34**	**37**	P	**Pn**	**04 23 04.1**	**-1.3**
MKAR	comp=E,5.6nm,0.6s,baz=221,slow=13,SNR=15 **Makanchi Array**	**13.34**	**37**		**Pn**	**04 23 03.2**	**-2.2**
BRZS	**Berezniki**	**13.45**	**5**	*e*P	**Pn**	**04 23 06.3**	**-0.3**
WMQ	**Urumqi**	**14.82**	**56**	*e*P	**Pn**	**04 23 25.0**	**+1.6**
WMQ	comp=E,15nm,0.7s			pmax	pmax		
AB31	**Akbulak array**	**14.88**	**332**	P	**P**	**04 23 22.4**	**-0.9**
AB31	comp=E,0.4nm,0.5s,baz=142,slow=12,SNR=10 **Akbulak array**	**14.88**	**332**	P	**P**	**04 23 21.3**	**-2.0**
ABKAR	**Akbulak array**	**14.88**	**332**	P	**P**	**04 23 22.4**	**-0.8**
ZSN	**Zaisan**	**15.07**	**40**	*e*P	**Pn**	**04 23 26.8**	**+0.6**
KURBB	**Kurchatov Arra**	**15.10**	**19**	P	**P**	**04 23 24.8**	**-0.8**
KURBB	comp=E,10.0nm,1.0s,baz=210,slow=11,SNR=16 **Kurchatov Arra**	**15.10**	**19**	⇓P	**Pn**	**04 23 30.3**	**+3.9**
KURK	comp=E,10nm,0.7s **Kurchatov**	**15.21**	**19**	⇓P	**Pn**	**04 23 32.0**	**+4.3**
KURK	comp=E,3.5nm,0.9s **Kurchatov**	**15.21**	**19**		**Pn**	**04 23 27.3**	**-0.4**
KURK	comp=E,8.7nm,0.9s			IAmb	IAmb	04 23 29.4	
KURK	**Kurchatov**	**15.21**	**19**	P	**Pn**	**04 23 27.2**	**-0.5**
EVN	**Everest**	**16.10**	**118**		**Pn**	**04 23 39.7**	**+0.5**
EVN	comp=Z,9.5nm,0.6s			IAmb	IAmb	04 23 42.0	
EVN	**Everest**	**16.10**	**118**	P	**Pn**	**04 23 40.2**	**+1.0**
BVAR	**Borovoye Array**	**16.42**	**359**	P	**P**	**04 23 40.1**	**0.0**
AKTO	comp=Z,2.9nm,0.5s,baz=167,slow=9.0,SNR=8.6 **Aktyubinsk**	**16.58**	**330**	P	**P**	**04 23 41.9**	**0.0**
UOSS	comp=Z,7.2nm,0.8s,baz=150,slow=10,SNR=10 **Minazif**	**17.02**	**231**	P	**P**	**04 23 48.1**	**+1.1**
ZAA0	**Zalesovo Array** comp=Z,20nm,1.5s	**19.91**	**25**	IAmb	IAmb	04 24 20.8	
ZALV	**Zalesovo Beam** comp=Z,5.2nm,0.4s,baz=220,slow=11,SNR=25	**19.91**	**25**	P	**P**	**04 24 17.5**	**-0.2**
ZALV	**Zalesovo Beam**	**19.91**	**25**	P	**P**	**04 24 17.2**	**-0.5**
KBZ	**Khabaz** comp=Z,1.7nm,0.7s,baz=107,slow=11,SNR=5.0 comp=Z,1.7nm,0.7s	**22.35**	**297**	P	**P**	**04 24 41.4**	**-0.1**
GTA2	**Gaotai**	**23.01**	**74**	*e*P	**P**	**04 24 51.5**	**+3.7**
GTA2	comp=Z,6.0nm,0.8s			pmax	pmax		
SONM	**Songino Array** comp=Z,2.2nm,0.7s,baz=258,slow=9.5,SNR=14 comp=Z,2.2nm,0.7s	**28.46**	**56**	P	**P**	**04 25 38.4**	**+1.8**
SONM	**Songino Array**	**28.46**	**56**	P	**P**	**04 25 38.3**	**+1.8**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.7s,baz=92,slow=9.8,SNR=4.4 comp=Z,0.8nm,0.7s	**29.19**	**288**	P	**P**	**04 25 43.8**	**+0.8**
BRTR	**Keskin Array B**	**29.19**	**288**	P	**P**	**04 25 43.4**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,1.9nm,0.7s,baz=303,slow=8.3,SNR=11 comp=Z,1.9nm,0.7s	**30.70**	**118**	P	**P**	**04 25 58.0**	**+1.6**
HHC	**Hu-ho-hao-te**	**31.94**	**70**	*e*P	**P**	**04 26 08.4**	**+1.3**
HHC	comp=Z,17nm,0.6s			pmax	pmax		
HHC	comp=Z,34nm,4.5s			pmax	pmax		
AKASG	**Malin Array Be** comp=Z,0.4nm,0.5s,baz=79,slow=2.0,SNR=1.5 comp=Z,0.4nm,0.5s	**32.70**	**309**	P	**P**	**04 26 14.0**	**+0.6**
FINES	**FINESS Array B** comp=Z,1.6nm,0.8s,baz=114,slow=8.7,SNR=5.3 comp=Z,1.6nm,0.8s	**37.27**	**326**	P	**P**	**04 26 52.2**	**+0.2**
FINES	**FINESS Array B**	**37.27**	**326**	P	**P**	**04 26 51.0**	**-1.1**
ARCES	**ARCESS Array B** comp=Z,0.8nm,0.6s,baz=104,slow=5.1,SNR=4.8 comp=Z,0.8nm,0.6s	**40.96**	**338**	P	**P**	**04 27 22.9**	**+0.5**
HEH	**HeiHe**	**42.37**	**53**	*e*P	**P**	**04 27 33.5**	**-0.5**
HEH	comp=Z,8.0nm,0.8s			pmax	pmax		
HFS	**Hagfors** comp=Z,2.5nm,0.8s,baz=91,slow=12,SNR=14 comp=Z,2.5nm,0.8s	**42.84**	**322**	P	**P**	**04 27 37.6**	**-0.1**
NB2	**NORSAR Subarra** comp=Z,0.4nm,0.4s,baz=100,slow=7.9	**44.16**	**323**	P	**P**	**04 27 47.9**	**-0.3**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.5s,baz=108,slow=7.1,SNR=4.1 comp=Z,0.4nm,0.5s	**44.16**	**323**	P	**P**	**04 27 47.9**	**-0.3**
KSRS	**Korea Array** comp=Z,1.6nm,0.5s,baz=272,slow=6.9,SNR=6.6 comp=Z,1.6nm,0.5s	**45.06**	**71**	P	**P**	**04 27 56.3**	**+0.8**
NACB	**Ninganchiao**	**45.13**	**91**	P	**P**	**04 27 56.2**	**0.0**
NACB	comp=Z,13nm,0.9s			IAmb	IAmb	04 27 58.4	
BKNI	**Bangkinang**	**45.74**	**135**	P	**P**	**04 28 00.4**	**-0.6**
BKNI	**Bangkinang**	**45.74**	**135**	P	**P**	**04 28 01.1**	**0.0**
SZP	**Santa**	**47.62**	**100**	P	**P**	**04 28 13.4**	**-2.2**
TORD	**Torodi Ar. Bea** comp=Z,2.8nm,0.5s,baz=51,slow=6.3,SNR=51 comp=Z,2.8nm,0.5s	**65.49**	**268**	P	**P**	**04 30 19.6**	**-1.5**
C19K	**Lookout Ridge**	**68.30**	**17**	P	**P**	**04 30 39.3**	**+1.4**
J16K	**Anvik River**	**72.40**	**22**	P	**P**	**04 31 03.8**	**+1.1**
J16K	comp=Z,11nm,1.4s			IAmb	IAmb	04 31 38.4	
CAST	**Castle Rocks**	**74.66**	**18**	P	**P**	**04 31 16.7**	**+0.9**
CAST	comp=Z,6.6nm,1.4s			IAmb	IAmb	04 31 17.5	
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=357,slow=3.3,SNR=4.4 comp=Z,0.2nm,0.5s	**74.74**	**16**	P	**P**	**04 31 15.7**	**-0.5**
ILAR	**Eielson Array**	**74.74**	**16**	P	**P**	**04 31 16.1**	**-0.1**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,baz=353,slow=5.2,SNR=5.0 comp=Z,0.4nm,0.6s	**81.15**	**2**	P	**P**	**04 31 51.6**	**+0.3**
WRA	**Warramunga Arr** comp=Z,0.5nm,0.7s,baz=324,slow=4.9,SNR=6.7 comp=Z,0.5nm,0.7s	**82.24**	**122**	P	**P**	**04 31 56.1**	**-1.5**
WRA	**Warramunga Arr**	**82.24**	**122**	P	**P**	**04 31 57.1**	**-0.5**
WB2	**Warramunga Arr**	**82.25**	**122**	P	**P**	**04 31 56.3**	**-1.4**
WB2	comp=Z,9.3nm,1.3s			IAmb	IAmb	04 31 57.0	
ASAR	**Alice Springs** comp=Z,0.6nm,0.5s,baz=312,slow=4.7,SNR=9.5 comp=Z,0.6nm,0.6s	**84.50**	**125**	P	**P**	**04 32 08.3**	**-0.7**
ASAR	**Alice Springs**	**84.50**	**125**	P	**P**	**04 32 08.7**	**-0.3**

*IDC **11** 04:53:22.5±1.0,35°.76N×27°.53E,h0km,mb3.9/7, mbtmp3.7/11,ML3.3/3,MS4.3/1,Error ellipse: s-maj=25.1km s-min=15.2km az=160.0*
*AFAD **11** 04:53:22.7,35°.58N×27°.46E,h7km±2km,MW3.6*
*ISK **11** 04:53:25.4,35°.70N×27°.49E,h10km,ML3.5/29*
*ATH **11** 04:53:25.4,35°.67N×27°.53E,h17km±1km,ML3.6/13, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **11** 04:53:26.0,36°N±4°×2°8E±°,h11km±4km,M3.4/19, MLh3.4/19*

ISC 11 04:53:25.3±1.0,**35°.65N**±0°.03×**27°.53E**±0°.02,**h18**km±4km, **n130,** σ1§**20**/161,**mb3.6**/6,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.32**	**252**	Pg	**Pg**	**04 53 32.4**	**+0.3**
KARP				Sg	**Sg**	**04 53 36.9**	**+0.1**
KARP	**Karpathos**	**0.32**	**252**	P	**Pg**	**04 53 32.4**	**+0.3**
KARP				S	**Sb**	**04 53 37.6**	**+0.3**
KARP	**Karpathos**	**0.32**	**252**	P	**Pg**	**04 53 32.4**	**+0.3**
KARP				S	**Sb**	**04 53 37.3**	**0.0**
ARG	**Arkhangelos**	**0.75**	**40**	Pg	**Pb**	**04 53 39.9**	**+0.1**
ARG				Sg	**Sb**	**04 53 50.6**	**+1.0**
ARG	**Arkhangelos**	**0.75**	**40**	P	**Pg**	**04 53 39.8**	**-0.1**
ARG				S	**Sb**	**04 53 50.2**	**+0.6**
ARG	**Arkhangelos**	**0.75**	**40**	P	**Pg**	**04 53 39.7**	**-0.3**
ARG				S	**Sg**	**04 53 49.5**	**-0.4**
RODB	**Rodos**	**0.98**	**35**	P	**Pg**	**04 53 43.5**	**-0.7**
RODB				S	**Sb**	**04 53 56.6**	**+0.4**
RDI1	**Rhodes Town Ha**	**0.98**	**35**	P	**Pg**	**04 53 43.6**	**-0.7**
RDI1				S	**Sb**	**04 53 56.8**	**+0.4**
YAZI	**Mula-Dat§a-**	**1.03**	**357**	P	**Pg**	**04 53 44.6**	**-0.8**
YAZI				S	**Sb**	**04 53 58.4**	**+0.5**
DAT	**Datca**	**1.08**	**2**	Pg	**Pg**	**04 53 45.6**	**-0.7**
DAT				Sg	**Sb**	**04 54 00.4**	**+1.0**
DAT	**Datca**	**1.08**	**2**	S	**Sn**	**04 54 01.4**	**+1.1**
ZKR	**Zakros**	**1.20**	**244**	Pn	**Pb**	**04 53 48.2**	**+0.8**
ZKR				Sn	**Sn**	**04 54 05.2**	**+2.2**
ZKR	**Zakros**	**1.20**	**244**	P	**Pb**	**04 53 48.2**	**+0.8**
ZKR				S	**Sn**	**04 54 04.7**	**+1.7**
ZKR	**Zakros**	**1.20**	**244**	P	**Pb**	**04 53 47.6**	**+0.1**
ZKR				S	**Sb**	**04 54 03.5**	**+0.9**
SIT2	**Siteia**	**1.24**	**250**	P	**Pn**	**04 53 47.9**	**+0.2**
SIT2				S	**Sb**	**04 54 04.8**	**+0.9**
TURN	**Turunc**	**1.27**	**27**	Pn	**Pn**	**04 53 48.3**	**+0.2**
TURN				Sn	**Sn**	**04 54 06.6**	**+2.0**
TURN	**Turunc**	**1.27**	**27**	P	**Pn**	**04 53 48.3**	**+0.2**
TURN				S	**Sn**	**04 54 07.1**	**+2.4**
KLNA	**Kalymnos**	**1.38**	**341**	P	**Pn**	**04 53 49.7**	**0.0**
BODA	**Bodrum-Mula**	**1.39**	**357**	Pn	**Pn**	**04 53 50.3**	**+0.5**
BODT	**Bodrum**	**1.43**	**353**	Pn	**Pb**	**04 53 51.6**	**+0.3**
BODT				Sn	**Sn**	**04 54 09.8**	**+1.2**
BODT	**Bodrum**	**1.43**	**353**	P	**Pn**	**04 53 51.1**	**+0.8**
BODT				S	**Sg**	**04 54 11.1**	**-0.3**
DALY	**Dalyan (Mula)**	**1.48**	**37**	Pn	**Pb**	**04 53 52.6**	**+0.4**
DALY	**Dalyan (Mula)**	**1.48**	**37**	P	**Pb**	**04 53 52.8**	**+0.5**
DALY				S	**Sg**	**04 54 13.9**	**+0.8**
YKAV	**Yalikavak-Bodr**	**1.49**	**352**	Pn	**Pb**	**04 53 51.9**	**+0.7**
YKAV				Sn	**Sb**	**04 54 11.5**	**+0.5**
IZZE	**Mula-Seydike**	**1.58**	**60**	P	**Pb**	**04 53 54.2**	**+0.1**
YER	**Yerkesik**	**1.60**	**22**	Pn	**Pn**	**04 53 54.1**	**+1.3**
YER				Sn	**Sb**	**04 54 15.0**	**+0.6**
YER	**Yerkesik**	**1.60**	**22**	P	**Pn**	**04 53 53.8**	**+0.9**
NPS	**Neapolis**	**1.61**	**257**	P	**Pn**	**04 53 53.9**	**+1.1**
NPS				S	**Sn**	**04 54 14.8**	**+1.6**
NPS	**Neapolis**	**1.61**	**257**	P	**Pn**	**04 53 54.1**	**+1.2**
NPS				S	**Sn**	**04 54 14.1**	**+0.9**
SABU	**Mula-Dalaman**	**1.65**	**44**	P	**Pb**	**04 53 55.5**	**+0.3**
SABU				S	**Sb**	**04 54 16.2**	**+0.5**
MULA	**Mugla, Merkez-**	**1.73**	**21**	P	**Pb**	**04 53 57.1**	**+0.5**
DIDI	**Didim-Aydin**	**1.74**	**352**	Pn	**Pn**	**04 53 55.4**	**+0.8**
AKAS	**Kas**	**1.78**	**70**	Pn	**Pb**	**04 53 57.4**	**-0.1**
AKAS	**Kas**	**1.78**	**70**	P	**Pn**	**04 53 56.5**	**+1.2**
THERA	**Ancient Thera,**	**1.82**	**294**	P	**Pn**	**04 53 55.8**	**+0.1**
THERA	**Ancient Thera,**	**1.82**	**294**	P	**Pn**	**04 53 55.5**	**-0.1**
DDIM	**Aydin, Didim**	**1.82**	**353**	P	**Pb**	**04 53 58.2**	**+0.1**
THR8	**Santorini-Mono**	**1.83**	**295**	P	**Pn**	**04 53 56.0**	**+0.2**
THR8	**Santorini-Mono**	**1.83**	**295**	P	**Pn**	**04 53 55.8**	**0.0**
THRA	**Thira**	**1.87**	**295**	P	**Pn**	**04 53 56.1**	**-0.3**
THRA	**Thira**	**1.87**	**295**	P	**Pn**	**04 53 56.5**	**+0.2**
THR6	**Thira Island,**	**1.87**	**293**	P	**Pn**	**04 53 56.8**	**+0.4**
THR6	**Thira Island,**	**1.87**	**293**	P	**Pn**	**04 53 56.5**	**+0.1**
SFIR	**Foira Santorin**	**1.87**	**295**	P	**Pn**	**04 53 56.8**	**+0.3**
THR2	**Thira island,**	**1.88**	**296**	P	**Pn**	**04 53 56.7**	**+0.2**
THR2	**Thira island,**	**1.88**	**296**	P	**Pn**	**04 53 56.5**	**0.0**
THR3	**Thira Island,**	**1.89**	**294**	P	**Pn**	**04 53 56.8**	**+0.1**
THR3	**Thira Island,**	**1.89**	**294**	P	**Pn**	**04 53 56.5**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.89**	**294**	P	**Pn**	**04 53 58.0**	**+1.3**
SNT5	**Nea Kammeni, S**	**1.89**	**294**	P	**Pn**	**04 53 57.2**	**+0.6**
THR9	**Santorini-Faro**	**1.90**	**293**	P	**Pn**	**04 53 57.2**	**+0.4**
THR9	**Santorini-Faro**	**1.90**	**293**	P	**Pn**	**04 53 57.0**	**+0.2**
CAME	**Cameli-Denizli**	**1.93**	**47**	Pn	**Pn**	**04 53 59.1**	**+1.7**
THR5	**Thira Island,**	**1.93**	**294**	P	**Pn**	**04 53 57.6**	**+0.3**
THR5	**Thira Island,**	**1.93**	**294**	P	**Pn**	**04 53 57.0**	**-0.2**
SAP3	**Santorini-Thir**	**1.94**	**295**	P	**Pn**	**04 53 57.3**	**0.0**
SAP3	**Santorini-Thir**	**1.94**	**295**	P	**Pn**	**04 53 57.5**	**+0.2**
AYDN	**Tasoluk**	**2.03**	**8**	P	**Pn**	**04 53 59.2**	**+0.5**
AYDN				S	**Sn**	**04 54 23.6**	**0.0**
KNIK	**Mula-Seydike**	**2.04**	**53**	P	**Pn**	**04 54 01.0**	**+2.2**
CAEL	**Denizli, Camel**	**2.06**	**44**	P	**Pb**	**04 54 02.0**	**-0.3**
CAEL				S	**Sg**	**04 54 32.5**	**+0.7**
GCAM	**G?zelcaml?**	**2.06**	**353**	Pn	**Pn**	**04 53 59.9**	**+0.9**
TAVA	**DENIZLI_Tavas**	**2.13**	**31**	P	**Pb**	**04 54 03.3**	**-0.1**
TAVA				S	**Sg**	**04 54 33.0**	**-0.9**
IDI	**Anoyia** 31nm,0.3s,baz=61,slow=19,SNR=66	**2.19**	**261**	Pn	**Pn**	**04 54 01.0**	**+0.2**
IDI	14nm,0.3s,baz=310,slow=20,SNR=8.4			Sn	**Sn**	**04 54 28.0**	**+0.6**
IDI	**Anoyia**	**2.19**	**261**	Pn	**Pn**	**04 54 02.2**	**+1.4**
IDI	**Anoyia**	**2.19**	**261**	P	**Pn**	**04 54 01.4**	**+0.6**
IDI	**Anoyia**	**2.19**	**261**	P	**Pn**	**04 54 01.4**	**+0.6**
ELL	**Elmali**	**2.21**	**60**	Pn	**Pn**	**04 54 03.3**	**+2.0**
ELL	**Elmali**	**2.21**	**60**	P	**Pn**	**04 54 02.4**	**+1.1**
ESEN	**Aydn-Nazilli**	**2.25**	**17**	P	**Pn**	**04 54 02.2**	**+0.6**
NAX1	**Naxos Island**	**2.27**	**310**	P	**Pn**	**04 54 01.7**	**-0.1**
GOLH	**Golhisar**	**2.28**	**45**	P	**Pb**	**04 54 05.6**	**-0.4**
GOLH				S	**Sb**	**04 54 36.5**	**+2.6**
APMY	**Acipayam-Deniz**	**2.31**	**38**	Pn	**Pn**	**04 54 04.5**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**2.31**	**7**	Pn	**Pn**	**04 54 03.8**	**+1.2**
AKUM	**Antalya-Kumluc**	**2.38**	**73**	P	**Pn**	**04 54 05.0**	**+1.7**
AKUM				S	**Sn**	**04 54 34.3**	**+2.2**
NAZL	**Nazilli-Aydin**	**2.39**	**15**	Pn	**Pn**	**04 54 05.1**	**+1.5**
SULTU	**Buldan**	**2.60**	**22**	P	**Pb**	**04 54 09.8**	**-1.7**
KEMT	**Kemer-ANTALYA**	**2.63**	**68**	Pn	**Pn**	**04 54 08.8**	**+2.0**
KIRA	**zmir-Kiraz**	**2.64**	**15**	P	**Pn**	**04 54 08.1**	**+1.0**
KORT	**Korkueli**	**2.65**	**58**	Pn	**Pn**	**04 54 09.6**	**+2.4**
KORT	**Korkueli**	**2.65**	**58**	P	**Pn**	**04 54 10.3**	**+3.1**
ODEM	**Odemis-Izmir**	**2.66**	**9**	Pn	**Pn**	**04 54 08.5**	**+1.2**
VAM	**Vamos**	**2.73**	**266**	P	**Pn**	**04 54 08.7**	**+0.5**
MHLO	**Agia Marina, M**	**2.74**	**293**	P	**Pn**	**04 54 08.5**	**+0.2**
BLCB	**Balcova**	**2.76**	**352**	Pn	**Pn**	**04 54 09.8**	**+1.1**
URLA	**Izmir**	**2.81**	**345**	Pn	**Pn**	**04 54 10.8**	**+1.4**
ANTB	**Antalya**	**2.82**	**63**	Pn	**Pn**	**04 54 12.1**	**+2.7**
IMMV	**Iera Moni Meta**	**2.90**	**267**	Pn	**Pn**	**04 54 12.5**	**+1.9**
IMMV	**Iera Moni Meta**	**2.90**	**267**	P	**Pn**	**04 54 11.3**	**+0.7**
IMMV	**Iera Moni Meta**	**2.90**	**267**	P	**Pn**	**04 54 10.8**	**+0.2**
GVD	**Gavdhos**	**2.93**	**255**	Pn	**Pn**	**04 54 13.6**	**+2.6**
GVD	**Gavdhos**	**2.93**	**255**	P	**Pn**	**04 54 13.7**	**+2.7**
CHOS	**Chios island**	**2.98**	**337**	Pn	**Pn**	**04 54 13.5**	**+1.8**
CHOS	**Chios island**	**2.98**	**337**	P	**Pn**	**04 54 13.4**	**+1.6**
CHOS	**Chios island**	**2.98**	**337**	P	**Pn**	**04 54 11.9**	**+0.2**
KULA	**Kula-Manisa**	**3.00**	**17**	Pn	**Pn**	**04 54 13.9**	**+1.9**
BASM	**Basmaki-Afyon**	**3.04**	**41**	Pn	**Pn**	**04 54 15.2**	**+2.7**
BCK	**Bucak**	**3.06**	**53**	Pn	**Pn**	**04 54 14.9**	**+2.1**
KNDR	**Palaiochora Ch**	**3.22**	**264**	Pn	**Pn**	**04 54 17.3**	**+2.4**
GORD	**Gordes-Manisa**	**3.30**	**9**	Pn	**Pn**	**04 54 17.6**	**+1.5**
ANKY	**Antikythira Is**	**3.45**	**275**	P	**Pn**	**04 54 18.5**	**+0.4**
KTHA	**Kythira Island**	**3.68**	**281**	Pn	**Pn**	**04 54 23.3**	**+2.0**
KTHA	**Kythira Island**	**3.68**	**281**	P	**Pn**	**04 54 22.4**	**+1.1**
VLY	**Voula,Athens**	**3.72**	**307**	P	**Pn**	**04 54 23.3**	**+1.4**
VLY	**Voula,Athens**	**3.72**	**307**	P	**Pn**	**04 54 22.1**	**+0.3**
DION	**Dionisos Attik**	**3.77**	**311**	P	**Pn**	**04 54 23.8**	**+1.3**
DION	**Dionisos Attik**	**3.77**	**311**	P	**Pn**	**04 54 22.6**	**+0.1**
ATHU	**Athens Univers**	**3.79**	**309

DHRM IAML 05 00 23.1
comp=E,54nm,0.5s
NRN Naryn 6.59 39 Pn 04 59 06.9 -2.6
UCH Uchtor 6.59 27 P **Pn 04 59 08.6 -1.0**
SNR=71
KK31 Karatay Array 6.70 360 P Pn 04 59 05.8 -4.9
comp=E,11nm,0.2s,baz=194,slow=14,SNR=306
KK31 ⇑S **S 05 00 19.6 -7.4**
comp=E,33nm,0.5s,baz=189,slow=24
KK31 Karatay Array 6.70 360 Pn 04 59 09.5 -1.1
KKAR Karatay Array 6.70 360 Pn 04 59 09.3 -1.4
EKS2 Erkin-Say 6.74 21 P **Pn 04 59 10.4 -0.9**
SNR=22
AAK Ala-Archa 6.94 25 P **Pn 04 59 13.0 -0.9**
comp=E,15nm,0.3s,baz=167,slow=4.7,SNR=19
AAK S **S 05 00 27.9 -4.9**
comp=E,9.3nm,0.4s,baz=323,slow=22,SNR=11
AAK Ala-Archa 6.94 25 P **Pn 04 59 13.2 -0.7**
SNR=16
AAK Ala-Archa 6.94 25 ⇓P **Pn 04 59 14.3 +0.4**
comp=E,3.5nm,0.4s
AAK ⇑S **S 05 00 36.4 +3.6**
comp=E,4.8nm,0.5s
AAK Ala-Archa 6.94 25 Pn 04 59 13.2 -0.7
KBK Karagaybulak 7.12 27 P **Pn 04 59 15.9 -0.3**
SNR=6.5
ULHL Ulahol 7.32 35 P **Pn 04 59 18.2 -0.7**
SNR=11
CHMS Chumysh 7.35 25 P **Pn 04 59 18.6 -0.5**
SNR=9.0
BOOM Boomskoye usch 7.38 33 Pn 04 59 18.9 -0.7
USP Ospenovka 7.51 23 P **Pn 04 59 19.9 -1.2**
SNR=10
TKM2 Tokmak 2 7.59 29 P **Pn 04 59 21.9 -0.5**
SNR=18
TARG Taragay, Kyrgy 7.76 44 Pn 04 59 23.7 -1.1
KLP Kalpa 8.03 125 *eS* **S 05 00 56.7 -2.4**
KUDL Kundal 9.64 147 *ex* x 04 58 33.1
KUDL *eS* **S 05 01 29.4 -7.5**
MAKZ Makanchi 13.45 36 Pn 05 00 36.7 -0.5
MK31 Makanchi Array 13.59 37 P P 05 00 48.7 +7.4
comp=E,1.9nm,0.8s,baz=213,slow=11,SNR=16
MKAR Makanchi Array 13.59 37 P **Pn 05 00 38.2 -0.8**
comp=E,2.3nm,0.7s,baz=207,slow=12,SNR=15
MKAR Makanchi Array 13.59 37 Pn 05 00 38.9 -0.1
AB31 Akbulak array 15.00 332 P **Pn 05 00 53.6 -2.7**
comp=E,1.8nm,0.7s,baz=149,slow=13,SNR=19
AB31 Akbulak array 15.00 332 P **P 05 00 58.4 +1.6**
ABKAR Akbulak array 15.00 332 P **Pn 05 00 57.9 +1.7**
WMQ Urumqi 15.06 55 *eP* **P 05 00 57.1 -0.5**
WMQ pmax pmax
comp=Z,13nm,0.7s
KURBB Kurchatov Arra 15.34 20 P **Pn 05 00 58.7 -1.7**
comp=Z,0.6nm,0.4s,baz=208,slow=10,SNR=5.4
BVAR Borovoye Array 16.63 360 P **P 05 01 15.6 +0.9**
comp=Z,1.0nm,0.5s,baz=182,slow=19,SNR=1.9
AKTO Aktyubinsk 16.69 331 P **P 05 01 15.3 -0.1**
comp=Z,1.7nm,0.4s,baz=152,slow=7.0,SNR=5.8
ZAA0 Zalesovo Array 20.16 25 P **P 05 01 51.7 -1.3**
ZAA0 IAmb IAmb 05 01 54.0
comp=Z,3.1nm,0.8s
ZALV Zalesovo Beam 20.16 25 P **P 05 01 53.0 +0.1**
comp=Z,2.4nm,0.5s,baz=222,slow=11,SNR=9.7
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 20.16 25 P **P 05 01 52.8 -0.2**
SONM Songino Array 28.70 55 P **P 05 03 14.1 +1.6**
comp=Z,0.3nm,0.3s,baz=243,slow=9.5,SNR=3.7
comp=Z,0.3nm,0.3s
HHC Hu-ho-hao-te 32.14 69 *eP* **P 05 03 44.0 +1.2**
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,100nm,5.6s
AKBB Malin Array Si 32.73 309 P **P 05 03 47.9 +0.3**
AKBB IAmb IAmb 05 04 13.3
comp=Z,2.6nm,0.7s
FIA1 FINESS Array S 37.37 326 P **P 05 04 28.1 +1.1**
FINES FINESS Array B 37.37 326 P **P 05 04 28.3 +1.2**
comp=Z,1.9nm,0.6s,baz=122,slow=8.0,SNR=12
comp=Z,1.9nm,0.6s
FINES FINESS Array B 37.37 326 P **P 05 04 28.5 +1.5**
ARCES ARCESS Array B 41.10 338 P **P 05 04 59.3 +1.5**
comp=Z,1.8nm,0.7s,baz=95,slow=7.3,SNR=6.1
comp=Z,1.8nm,0.7s
HFS Hagfors 42.92 322 P **P 05 05 13.9 +1.2**
comp=Z,1.6nm,0.5s,baz=98,slow=9.1,SNR=8.5
comp=Z,1.6nm,0.5s
NC303 NORSAR Array S 44.19 323 P **P 05 05 24.1 +1.4**
NB2 NORSAR Subarra 44.24 323 P **P 05 05 24.3 +1.1**
comp=Z,0.5nm,0.5s,baz=98,slow=7.9
NOA NORSAR Array B 44.24 323 P **P 05 05 24.3 +1.1**
comp=Z,0.5nm,0.5s,baz=97,slow=7.7,SNR=4.0
comp=Z,0.5nm,0.5s
SUMG Summit 61.04 341 P **P 05 07 26.3 -0.1**
TORD Torodi Ar. Bea 65.35 268 P **P 05 07 54.5 -0.6**
comp=Z,0.8nm,0.4s,baz=51,slow=6.3,SNR=17
comp=Z,0.8nm,0.4s
C19K Lookout Ridge 68.54 17 P **P 05 08 16.2 +1.8**
C19K IAmb IAmb 05 08 16.9
comp=Z,3.0nm,0.8s
J16K Anvik River 72.65 22 P **P 05 08 40.6 +1.4**
J16K IAmb IAmb 05 08 53.2
comp=Z,8.3nm,1.4s
J20K Nowinta River 73.75 19 P **P 05 08 47.1 +1.4**
J20K IAmb IAmb 05 09 11.0
comp=Z,3.2nm,1.3s
C36M Paulatuk 74.02 5 P **P 05 08 47.9 +0.9**
G27K Doyon Strip 74.21 13 P **P 05 08 50.9 +2.5**
ILAR Eielson Array 74.98 16 P **P 05 08 53.1 +0.3**
comp=Z,0.5nm,0.8s,baz=298,slow=4.7,SNR=5.7
comp=Z,0.5nm,0.8s
H29M Whitestone 75.31 12 P **P 05 08 56.2 +1.6**
H29M IAmb IAmb 05 09 33.2
comp=Z,6.2nm,1.4s
YKA Yellowknife Ar 81.37 2 P **P 05 09 29.0 +1.2**
comp=Z,0.5nm,0.7s,baz=352,slow=5.1,SNR=5.4
comp=Z,0.5nm,0.7s
YKA Yellowknife Ar 81.37 2 P **P 05 09 28.6 +0.8**
WRA Warramunga Arr 82.25 122 P **P 05 09 32.8 -0.2**
comp=Z,0.3nm,0.4s,baz=325,slow=4.9,SNR=7.7
comp=Z,0.3nm,0.4s
WRA Warramunga Arr 82.25 122 P **P 05 09 33.4 +0.4**
WR8 Warramunga Arr 82.37 121 P **P 05 09 33.6 -0.1**
ASAR Alice Springs 84.50 125 P **P 05 09 44.6 +0.2**
comp=Z,0.5nm,0.6s,baz=314,slow=5.3,SNR=8.9
comp=Z,0.5nm,0.6s

*ISK **11** 05:09:27.4,36°.78N×34°.70E,h22km, ML2.8/23*
*AFAD **11** 05:09:27.6,36°.76N×34°.67E,h43km±1km, ML2.3*
ISC 11 05:09:28.5±1.2,36.75N±0°.03×34°.69E±0°.03,h23km±13km, n34,σ0°60/54,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GULE	**Gulek**	**0.54**	**8**	P		**Pb**	**05 09 39.5**	**+0.1**
GULE				S		**Sb**	**05 09 48.1**	**+1.2**
GULE				IAML			05 09 50.0	
	comp=E,159nm,0.3s							
GULE				IAML			05 09 52.0	
	comp=N,118nm,0.4s							
CAYT	**Sariam**	**0.66**	**50**	P		**Pb**	**05 09 41.8**	**+0.4**
CAYT				IAML			05 09 52.0	
	comp=N,254nm,0.2s							
CAYT				S		**Sn**	**05 09 52.3**	**+0.3**
CAYT				IAML			05 09 54.0	
	comp=E,162nm,0.2s							
SLFK	**Silifke-Mersin**	**0.70**	**239**	Pg		**Pb**	**05 09 42.2**	**+0.2**
SLFK				Sg		**Sn**	**05 09 52.9**	**-0.1**
SILI	**Silifke-Mersin**	**0.73**	**238**	Pg		**Pb**	**05 09 42.6**	**+0.1**
SILI				Sg		**Sn**	**05 09 53.9**	**+0.2**
YURE	**YUREGIR**	**0.76**	**84**	P		**Pn**	**05 09 44.1**	**+0.2**
YURE				S		**Sn**	**05 09 54.3**	**-0.4**
KERG	**Konya-Eregli**	**0.80**	**326**	P		**Pb**	**05 09 43.6**	**-0.2**
KERG				S		**Sn**	**05 09 55.4**	**-0.4**
KEBE	**Keben-Mersin**	**0.84**	**249**	Pg		**Pb**	**05 09 44.7**	**+0.2**
KEBE				Sg		**Sn**	**05 09 57.2**	**+0.5**
CMRD	**Camardi-Nigde**	**0.94**	**15**	Pg		**Pb**	**05 09 45.6**	**-0.7**
CMRD				Sg		**Sb**	**05 09 57.6**	**-0.7**
IKL	**Isikli**	**0.96**	**238**	Pg		**Pb**	**05 09 45.7**	**-0.7**
IKL				Sg		**Sn**	**05 10 00.3**	**+0.8**
KARG	**Kargicak-Mersi**	**0.96**	**236**	Pg		**Pb**	**05 09 46.6**	**+0.1**
TISA	**Tisan-Mersin**	**1.00**	**234**	Pg		**Pb**	**05 09 46.6**	**-0.6**
TISA				Sg		**Sn**	**05 10 01.3**	**+0.7**
YESI	**Yesilovacik-Me**	**1.01**	**237**	Pg		**Pb**	**05 09 46.6**	**-0.7**
YESI				Sg		**Sn**	**05 10 01.2**	**+0.5**
TEPK	**Tepekoy-MERSIN**	**1.06**	**241**	Pn		**Pn**	**05 09 47.2**	**-0.8**
GULN	**MERSIN_Gulnar**	**1.08**	**239**	P		**Pn**	**05 09 48.0**	**-0.3**
GULN				S		**Sb**	**05 10 02.0**	**-0.3**
BECE	**Buyukeceli-Mer**	**1.09**	**237**	Pn		**Pn**	**05 09 47.9**	**-0.5**
AKK1	**Akkuyu-Mersin**	**1.11**	**237**	Pn		**Pn**	**05 09 48.0**	**-0.6**
OREN	**Orenkoy-Mersin**	**1.13**	**242**	Pn		**Pn**	**05 09 48.6**	**-0.3**
KOZT	**Kozan**	**1.17**	**51**	Pn		**Pn**	**05 09 48.6**	**-0.9**
KOZT				Sn		**Sb**	**05 10 03.9**	**-0.8**
YORU	**Yoruktepe-Mers**	**1.19**	**240**	Pn		**Pn**	**05 09 49.5**	**-0.4**
KRMN	**Karaman**	**1.22**	**291**	Pn		**Pn**	**05 09 49.8**	**-0.4**
BERE	**Bereket-Mersin**	**1.25**	**252**	Pn		**Pn**	**05 09 50.4**	**-0.3**
TAHT	**Tahtakopru-Hat**	**1.26**	**107**	Pn		**Pn**	**05 09 50.7**	**-0.1**
EREN	**Erenkoy**	**1.29**	**199**	Pn		**Pn**	**05 09 50.4**	**-0.7**
EREN				Sn		**Sn**	**05 10 07.4**	**-0.3**
YAYL	**Yayladag**	**1.35**	**122**	P		**Pn**	**05 09 52.4**	**+0.3**
YAYL				S		**Sb**	**05 10 10.8**	**+0.6**
YAYL				IAML			05 10 12.0	
	comp=N,27nm,0.3s							
YAYL				IAML			05 10 13.0	
	comp=E,29nm,0.4s							
TEKE	**Tekeli-Mersin**	**1.41**	**245**	Pn		**Pn**	**05 09 52.9**	**+0.1**
YAHY	**KAYSERI_Yahyal**	**1.44**	**22**	P		**Pn**	**05 09 53.0**	**-0.3**
YAHY				S		**Sn**	**05 10 12.4**	**+0.7**
HASA	**Hatay-Hassa-Ha**	**1.45**	**90**	P		**Pn**	**05 09 53.2**	**-0.1**
HASA				S		**Sn**	**05 10 10.8**	**-0.7**
HASA				IAML			05 10 13.0	
	comp=N,53nm,0.3s							
HASA				IAML			05 10 17.0	
	comp=E,40nm,0.3s							
KKBE	**Karaman, Kazim**	**1.48**	**289**	P		**Pb**	**05 09 54.9**	**-0.5**
KKBE				S		**Sn**	**05 10 12.5**	**+0.1**
SAIM	**ADANA**	**1.65**	**42**	P		**Pn**	**05 09 57.2**	**+1.0**
SAIM				S		**Sn**	**05 10 17.7**	**+0.9**
SAIM				IAML			05 10 25.0	
	comp=E,29nm,0.4s							
LFK	**Lefkose**	**1.74**	**213**	Pn		**Pn**	**05 09 57.7**	**+0.3**
HDMB	**Hadim**	**1.78**	**277**	Pn		**Pn**	**05 09 58.0**	**-0.1**
GAZI	**Gazipasa**	**1.98**	**256**	Pn		**Pn**	**05 10 01.4**	**+0.7**
GAZI	**Gazipasa**	**1.98**	**256**	P		**Pn**	**05 10 02.1**	**+1.4**
GAZI				S		**Sn**	**05 10 25.8**	**+1.0**
GAZI				IAML			05 10 31.0	
	comp=E,19nm,0.3s							
GAZI				IAML			05 10 40.0	
	comp=N,26nm,0.8s							
SARI	**SarD1z-Kayseri**	**2.15**	**39**	Pn		**Pn**	**05 10 02.7**	**-0.4**

*IDC **11** 05:10:31.6±0.9,20°.30N×70°.47W,h0km,mb3.7/7, mbtmp3.8/11,ML3.0/4,Error ellipse: s-maj=32.0km s-min=17.5km az=48.0*
*NEIC **11** 05:10:32.3±1.2,20°.21N±0°.03×70°.81W±0°.05,h10km±1km, mb4.1/13,Error ellipse: s-maj=8.7km s-min=4.6km az=62.0*
*CATAC **11** 05:10:33.8±0.6,20°N±2°×7°1W±°,h17km±5km,M4.3/9, mb4.2/2,MLv4.3/9,Error ellipse: s-maj=5.8km s-min=4.2km az=62.7,confirmed*
*PTWC **11** 05:10:33,20°.20N×70°.90W,h15km,MI4.1/9,DOMINICAN REPUBLIC REGION*
*SSNC **11** 05:10:33.8±1.9,20°.20N×70°.71W,h5km,MD4.1,ML3.8, Presumed earthquake*
*OSPL **11** 05:10:34.5±1.9,20°.18N×70°.77W,h0km±8km,ML3.8, Presumed earthquake*
*SDD **11** 05:10:35.3±2.9,20°.16N×70°.73W,h15km±11km,MD3.3, ML3.9,MW3.9,Presumed earthquake*
ISC 11 05:10:33.1±1.0,20°.21N±0°.02×70°.80W±0°.02,h16km±7km, n112,σ1§51/153,mb4.0/11,25C-2D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUDR	**Luperon**	**0.35**	**204**	⇑*i*	P	**Pb**	**05 10 40.0**	**-0.8**
LUDR				⇑*e*	Sg	**Sb**	**05 10 47.9**	**+1.8**
LUDR				IAML			05 10 49.4	
	comp=E,31µm,0.3s							
SODR	**Sosua Marina B**	**0.50**	**155**	⇑*i*	P	**Pb**	**05 10 42.7**	**-0.8**
SODR				IAML			05 10 54.1	
	comp=N,16µm,0.8s							
LOPP1	**Punta Rusia, P**	**0.52**	**226**	*i*	P	**Pb**	**05 10 43.7**	**0.0**
LOPP1				IAML			05 10 54.1	
	comp=Z,4µm,0.8s							
MADR	**Mao Valverde**	**0.70**	**204**	⇑*i*	P	**Pg**	**05 10 46.3**	**-0.5**
MADR				⇑*e*	Sg	**Sn**	**05 10 58.0**	**-0.8**
MADR				IAML			05 10 59.5	
	comp=N,9µm,1.1s							
SC01	**Santiago de lo**	**0.78**	**175**			**Pg**	**05 10 47.3**	**-1.0**
SC01	**Santiago de lo**	**0.78**	**175**	P		**Pg**	**05 10 47.4**	**-0.9**
SC01				S		**Sn**	**05 11 00.4**	**-0.4**
SC01	**Santiago de lo**	**0.78**	**175**	P		**Pb**	**05 10 47.7**	**-0.6**
SC01	**Santiago de lo**	**0.78**	**175**	⇑*i*	P	**Pb**	**05 10 47.6**	**-0.7**
SC01				IAML			05 11 03.1	
	comp=N,6µm,0.5s							
SC01	**Santiago de lo**	**0.78**	**175**	*i*	P	**Pb**	**05 10 47.8**	**-0.6**
SC01				*e*	S	**Sb**	**05 10 58.4**	**-0.3**
SC01				IAML			05 11 04.3	
	comp=Z,3µm,1.0s							
MCDR	**Montecristi**	**0.86**	**249**	P		**Pb**	**05 10 50.1**	**+0.4**
MCDR	**Montecristi**	**0.86**	**249**	⇑*i*	P	**Pb**	**05 10 50.1**	**+0.4**
MCDR				⇑*e*	Sg	**Sn**	**05 11 04.8**	**+1.9**
MCDR				IAML			05 11 07.1	
	comp=N,2µm,0.7s							
CADR	**Cabrera**	**0.97**	**124**	⇑*i*	P	**Pg**	**05 10 50.2**	**-1.7**
CADR				⇑*i*	S	**Sb**	**05 11 03.6**	**-0.6**
CADR				IAML			05 11 10.1	
	comp=N,3µm,0.6s							
LODA1	**ITESIL, Dajabo**	**1.08**	**232**	⇑*i*	P	**Pn**	**05 10 53.4**	**-0.1**
LODA1				⇑*i*	S	**Sn**	**05 11 08.8**	**+0.7**
LODA1				IAML			05 11 11.5	
	comp=N,8µm,0.3s							
LODA1	**ITESIL, Dajabo**	**1.08**	**232**	*i*	P	**Pg**	**05 10 54.0**	**+0.1**
LODA1				*e*	S	**Sn**	**05 11 08.6**	**+0.5**
LODA1				IAML			05 11 11.9	
	comp=Z,3µm,1.1s							
REDR	**Restauracion**	**1.18**	**208**	⇑*i*	P	**Pg**	**05 10 55.8**	**-0.1**
REDR				⇓*e*	Sg	**Sn**	**05 11 13.8**	**+3.1**
REDR				IAML			05 11 15.6	
	comp=N,5µm,0.8s							
LONA1	**Toro Cenizo, N**	**1.21**	**133**	*i*	P	Pg	05 11 03.5	+7.1
LONA1				*e*	S	**Sn**	**05 11 19.2**	**+7.9**
SDDR	**Presa de Saban**	**1.31**	**201**			**Pn**	**05 10 55.9**	**-0.8**
SDDR				Sn		**Sb**	**05 11 13.8**	**0.0**
SDDR	**Presa de Saban**	**1.31**	**201**	P		**Pn**	**05 10 56.1**	**-0.7**
SDDR				S		**Sb**	**05 11 13.6**	**-0.2**
SDDR	**Presa de Saban**	**1.31**	**201**	P		**Pn**	**05 10 56.0**	**-0.7**
SDDR	**Presa de Saban**	**1.31**	**201**	⇑*i*	P	**Pn**	**05 10 56.0**	**-0.7**
SDDR				IAML			05 11 16.3	
	comp=N,2µm,0.8s							
SDDR	**Presa de Saban**	**1.31**	**201**	*i*	P	**Pn**	**05 10 56.0**	**-0.7**
SDDR				*e*	S	**Sn**	**05 11 14.0**	**+0.2**
SDDR				IAML			05 11 16.9	
	comp=Z,32µm,0.3s							
SDDR	**Presa de Saban**	**1.31**	**201**	*e*	P	**Pn**	**05 10 56.0**	**-0.7**
SDDR				*e*	S	**Sb**	**05 11 13.6**	**-0.2**
SDDR				IAML			05 11 16.1	
	comp=Z,2µm,0.4s							
SDDR				IAML			05 11 16.1	
	comp=Z,2µm,0.3s							
GRTK	**Grand Turk**	**1.33**	**347**			**Pg**	**05 10 57.6**	**-1.2**
GRTK	**Grand Turk**	**1.33**	**347**	P		**Pg**	**05 10 57.9**	**-0.8**
GRTK				S		**Sg**	**05 11 17.3**	**+1.2**
GRTK	**Grand Turk**	**1.33**	**347**	P		**Pb**	**05 10 57.0**	**-0.6**
GRTK	**Grand Turk**	**1.33**	**347**	⇑*i*	P	**Pg**	**05 10 57.5**	**-1.2**
GRTK				⇑*i*	S	**Sg**	**05 11 17.6**	**+1.5**
GRTK				IAML			05 11 22.5	
	comp=N,2µm,0.3s							
GRTK	**Grand Turk**	**1.33**	**347**	*i*	P	**Pg**	**05 10 58.0**	**-0.8**
GRTK				*e*	S	**Sg**	**05 11 17.6**	**+1.5**
GRTK				IAML			05 11 20.7	
	comp=Z,1µm,1.1s							
GRTK	**Grand Turk**	**1.33**	**347**	*e*	P	**Pg**	**05 10 57.9**	**-0.8**
GRTK				*e*	S	**Sg**	**05 11 17.3**	**+1.2**
GRTK				IAML			05 11 21.2	
	comp=Z,1µm,0.3s							
GRTK				IAML			05 11 22.6	
	comp=Z,2µm,0.2s							
ABDR	**Alto Bandera**	**1.40**	**173**	⇑*i*	P	**Pn**	**05 10 57.0**	**-1.3**
ABDR				⇑*i*	S	**Sn**	**05 11 15.9**	**-0.7**
ABDR				IAML			05 11 16.7	
	comp=E,36nm,0.3s							
LONE3	**El Aguacate, B**	**1.71**	**201**	*i*	P	**Pb**	**05 11 03.2**	**-1.1**
LONE3				*e*	S	**Sb**	**05 11 25.7**	**+0.1**
LONE3				IAML			05 11 27.6	
	comp=Z,968nm,0.3s							
SMDR	**Samana, DR**	**1.77**	**121**	P		**Pn**	**05 11 02.5**	**-0.6**
SMDR	**Samana, DR**	**1.77**	**121**	⇑*i*	P	**Pn**	**05 11 02.4**	**-0.7**
SMDR				IAML			05 11 31.6	
	comp=N,1µm,0.8s							
NEDR	**Neiba UASD**	**1.81**	**199**	⇓*e*	Pg	**Pb**	**05 11 05.0**	**-0.9**
NEDR				IAML			05 11 32.6	
	comp=N,677nm,0.7s							
BANI	**BANI**	**1.86**	**167**			**Pn**	**05 11 04.2**	**-0.1**
BANI	**BANI**	**1.86**	**167**	⇑*i*	P	**Pn**	**05 11 04.5**	**+0.1**
BANI				IAML			05 11 35.2	
	comp=N,3µm,0.5s							
LOSC1	**San Cristbal**	**1.91**	**160**	*i*	P	**Pb**	**05 11 05.8**	**-1.7**
LOSC1				IAML			05 11 35.8	
	comp=Z,1µm,2.4s							
SDD	**Santo Domingo**	**1.94**	**154**			**Pn**	**05 11 05.0**	**-0.2**
SDD				Sn		**Sn**	**05 11 29.4**	**+0.1**
SDD	**Santo Domingo**	**1.94**	**154**	P		**Pn**	**05 11 04.9**	**-0.4**
SDD	**Santo Domingo**	**1.94**	**154**	P		**Pn**	**05 11 05.3**	**+0.1**
SDD	**Santo Domingo**	**1.94**	**154**	⇑*i*	P	**Pn**	**05 11 04.9**	**-0.4**
SDD				⇑*e*	Sg	**Sb**	**05 11 31.1**	**-0.7**
SDD				IAML			05 11 35.8	
	comp=N,991nm,0.8s							
SDD	**Santo Domingo**	**1.94**	**154**	*i*	P	**Pn**	**05 11 05.4**	**+0.1**
SDD				*e*	S	**Sn**	**05 11 29.9**	**+0.6**
SDD				IAML			05 11 34.6	
	comp=Z,4µm,0.3s							
DR12	**Loma Pena Alta**	**1.95**	**136**			**Pn**	**05 11 05.1**	**-0.5**
HATOM	**Hato Mayor del**	**1.95**	**136**	⇑*i*	P	**Pn**	**05 11 05.0**	**-0.5**
HATOM				IAML			05 11 31.0	
	comp=N,596nm,1.1s							
LODU1	**El Espartillar**	**1.96**	**199**	*i*	P	**Pb**	**05 11 07.5**	**-0.8**
LODU1				IAML			05 11 34.6	
	comp=Z,3µm,0.4s							
LGNH	**Logne**	**2.40**	**226**	P		**Pn**	**05 11 12.5**	**+0.8**
LGNH				S		**Sn**	**05 11 39.2**	**-1.6**
LGNH	**Logne**	**2.40**	**226**	P		**Pn**	**05 11 10.6**	**-1.1**
LOVI	**El Cajuil, Ovi**	**2.46**	**193**	*i*	P	**Pb**	**05 11 14.9**	**-2.0**
LOVI				IAML			05 11 58.0	
	comp=Z,323nm,1.1s							
LOBH	**Bahia de las A**	**2.47**	**199**	*i*	P	**Pb**	**05 11 15.1**	**-1.9**
LOBH				IAML			05 11 56.0	
	comp=Z,395nm,1.0s							
HIDR	**Higuey Centro**	**2.54**	**129**	⇑*i*	P	**Pn**	**05 11 13.9**	**+0.2**
HIDR				IAML			05 11 55.9	
	comp=N,676nm,0.3s							
PCDR	**Punta Cana, DR**	**2.84**	**126**			**Pn**	**05 11 17.2**	**-0.6**
PCDR	**Punta Cana, DR**	**2.84**	**126**	⇑*i*	P	**Pn**	**05 11 18.8**	**+1.0**
PCDR				IAML			05 12 17.2	
	comp=N,462nm,0.7s							
PCDR	**Punta Cana, DR**	**2.84**	**126**	*i*	P	**Pn**	**05 11 18.6**	**+0.8**
PCDR				IAML			05 12 01.1	
	comp=Z,186nm,1.6s							
MASC	**Masc**	**3.22**	**270**	P		**Pn**	**05 11 22.3**	**-0.7**
MASC				S		**Sn**	**05 12 01.6**	**+0.6**
MASC	**Masc**	**3.22**	**270**	*e*P		**Pn**	**05 11 22.4**	**-0.6**
MASC				*e*S		**Sn**	**05 12 01.5**	**+0.4**
QMBU	**Quimbuelo**	**3.77**	**270**	P		**Pn**	**05 11 29.7**	**-0.8**
QMBU				S		**Sn**	**05 12 14.2**	**-0.4**
QMBU	**Quimbuelo**	**3.77**	**270**	P		**Pn**	**05 11 30.2**	**+0.3**
QMBU	**Quimbuelo**	**3.77**	**270**	*e*P		**Pn**	**05 11 29.8**	**-0.8**
QMBU				*e*S		**Sn**	**05 12 14.8**	**+0.3**
AGPR	**Aguadilla, PR**	**3.89**	**116**	Pn		**Pn**	**05 11 32.0**	**-0.2**
MOAC	**Moa**	**3.92**	**277**	*e*P		**Pn**	**05 11 31.7**	**-1.0**
MOAC				*e*S		**Sn**	**05 12 18.4**	**0.0**
NMDO	**Nuevo Mundo**	**3.94**	**276**			**Pn**	**05 11 31.9**	**-0.9**
NMDO	**Nuevo Mundo**	**3.94**	**276**	P		**Pn**	**05 11 31.7**	**-1.1**
NMDO				S		**Sn**	**05 12 18.4**	**-0.3**
NMDO	**Nuevo Mundo**	**3.94**	**276**	*e*P		**Pn**	**05 11 31.2**	**-1.6**
NMDO				*e*S		**Sn**	**05 12 17.8**	**-0.9**
PRSN	**Puerto Rico Se**	**3.98**	**119**			**Pn**	**05 11 33.5**	**0.0**
GTBY	**Guantanamo Bay**	**4.06**	**267**	P		**Pn**	**05 11 36.5**	**+1.9**
GTBY				S		**Sn**	**05 12 20.7**	**-1.1**
GTBY	**Guantanamo Bay**	**4.06**	**267**	*e*P		**Pn**	**05 11 34.4**	**-0.1**
GTBY				*e*S		**Sn**	**05 12 19.6**	**-2.1**
CRPR	**Cabo Rojo, PR**	**4.12**	**122**			**Pn**	**05 11 36.1**	**+0.8**
CRPR	**Cabo Rojo, PR**	**4.12**	**122**	P		**Pn**	**05 11 37.6**	**+2.2**
MLPR	**Magueyes Islan**	**4.20**	**121**			**Pn**	**05 11 35.9**	**-0.5**
AOPR	**Arecibo Observ**	**4.25**	**115**			**Pn**	**05 11 39.2**	**+2.0**
AOPR	**Arecibo Observ**	**4.25**	**115**	P		**Pn**	**05 11 40.7**	**+3.5**
UUPR	**Utuado, UPR, P**	**4.32**	**116**			**Pn**	**05 11 38.3**	**+0.1**
OBIP	**Obispado Ponce**	**4.51**	**118**			**Pn**	**05 11 41.1**	**+0.3**
CELP	**Cerrillos**	**4.52**	**117**			**Pn**	**05 11 41.1**	**+0.2**
ECPR	**Experimental S**	**4.60**	**113**			**Pn**	**05 11 40.8**	**-1.1**
RCC	**Rio Carpintero**	**4.61**	**268**	*e*P		**Pn**	**05 11 42.4**	**+0.4**
RCC				*e*S		**Sn**	**05 12 35.8**	**+0.6**
MARVS	**Santiago de Cu**	**4.80**	**268**	*e*P		**Pn**	**05 11 43.5**	**-1.2**
MARVS				*e*S		**Sn**	**05 12 38.6**	**-1.3**
SJG	**San Juan**	**4.87**	**115**	Pn		**Pn**	**05 11 44.0**	**-1.7**
	comp=Z,2.2nm,0.3s,baz=314,slow=9.1,SNR=9.1							
SJG				Sn		**Sn**	**05 12 39.0**	**-2.7**
	comp=Z,4.3nm,0.3s,baz=171,slow=22,SNR=5.6							
	comp=Z,4.7nm,0.3s							
SJG	**San Juan**	**4.87**	**115**	Pn		**Pn**	**05 11 45.7**	**0.0**
SJG	**San Juan**	**4.87**	**115**	P		**Pn**	**05 11 46.9**	**+1.2**
SJG				S		**Sn**	**05 12 39.5**	**-2.2**
HLGC	**Holguin**	**4.97**	**279**	*e*P		**Pn**	**05 11 47.9**	**+0.8**
HLGC				*e*S		**Sn**	**05 12 47.6**	**+3.3**
HUMP	**Col San Antoni**	**5.11**	**113**			**Pn**	**05 11 47.7**	**-1.3**
CHIV	**Chivirico**	**5.28**	**268**	Pn		**Pn**	**05 11 50.4**	**-0.9**
CHIV	**Chivirico**	**5.28**	**268**	P		**Pn**	**05 11 50.6**	**-0.7**
CHIV				S		**Sn**	**05 12 51.5**	**-0.4**
CHIV	**Chivirico**	**5.28**	**268**	*e*P		**Pn**	**05 11 51.4**	**+0.1**
LMGC	**

comp=Z,3.1nm,1.1s,baz=296,slow=6.9,SNR=1.8
comp=Z,3.1nm,1.1s
BRTR Keskin Array B 87.82 48 P **P** **05 23 22.4 +0.3**
comp=Z,0.4nm,0.5s,baz=323,slow=6.0,SNR=1.9
comp=Z,0.4nm,0.5s

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*IDC **11** 05:18:52.5±1.1,21°.01S×179°.10W,h620km±11km, mb3.5/11,mbtmp4.5/14,Error ellipse: s-maj=19.1km s-min=11.5km az=143.0*
*NEIC **11** 05:18:53.1±0.8,20°.92S±0°.07×179°.1W±0°.1,h620km±11km, mb4.3/21,Error ellipse: s-maj=21.2km s-min=6.7km az=110.0*
ISC 11 05:18:52.1±0.6,**20°.94S**±0°.09×**179°.01W**±0°.08,**h619**km, **n52**,σ1**s24/59**,**mb4.2**/24,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.22**	**318**	P		**P**	**05 20 21.3**	**+0.6**
	92nm,0.6s,baz=166,slow=3.5,SNR=64							
MSVF				S		**S**	**05 21 34.1**	**+1.3**
	16nm,0.8s,baz=269,slow=23,SNR=1.6							
MSVF	**Nonsavu**	**4.22**	**318**			**P**	**05 20 21.5**	**+0.9**
AFI	**Afiamalu**	**9.82**	**46**	P		**P**	**05 21 08.0**	**-1.6**
	19nm,0.4s,baz=140,slow=4.9,SNR=5.5							
AFI				S		**S**	**05 22 58.7**	**-3.8**
	28nm,0.6s,baz=229,slow=19,SNR=2.6							
AFI	**Afiamalu**	**9.82**	**46**	P		**P**	**05 21 07.9**	**-1.8**
MARNC	**Mare, Loyalty**	**12.10**	**265**	P		**P**	**05 21 31.4**	**-0.4**
DZM	**Mont Dzumac**	**13.59**	**263**	P		**P**	**05 21 45.6**	**-0.9**
	5.5nm,0.7s,baz=107,slow=17,SNR=1.9							
SANVU	**Saraoutou**	**14.19**	**290**	P		**P**	**05 21 52.5**	**+0.3**
URZ	**Urewera**	**17.59**	**190**	P		**P**	**05 22 20.7**	**-2.2**
	5.8nm,0.6s,baz=281,slow=4.8,SNR=5.5							
URZ				S		**S**	**05 25 15.8**	**+1.8**
	6.0nm,0.6s,baz=55,slow=23,SNR=9.3							
WHZ	**Wether Hill Ro**	**27.10**	**200**	P		**P**	**05 23 48.3**	**+0.8**
EIDS	**Eidsvold**	**27.82**	**255**	P		**P**	**05 23 54.2**	**+0.1**
EIDS				IAmb		IAmb	05 24 36.3	
	comp=Z,6.8nm,1.1s							
CTA	**Charters Tower**	**32.51**	**265**	P		**P**	**05 24 34.5**	**+0.3**
	comp=Z,12nm,0.4s,baz=92,slow=12,SNR=9.0							
	comp=Z,12nm,0.4s							
CTAO	**Charters Tower**	**32.51**	**265**	P		**P**	**05 24 34.2**	**-0.1**
PMG	**Port Moresby**	**34.53**	**284**	P		**P**	**05 24 51.1**	**0.0**
STKA	**Stephens Creek**	**36.75**	**244**	P		**P**	**05 25 09.7**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=89,slow=11,SNR=4.7							
	comp=Z,2.1nm,0.6s							
WR8	**Warramunga Arr**	**43.45**	**263**			**P**	**05 26 01.9**	**-0.8**
WR8				IAmb		IAmb	05 26 03.3	
	comp=Z,12nm,1.1s							
AS31	**Alice Springs**	**43.50**	**257**			**P**	**05 26 02.6**	**-0.4**
ASAR	**Alice Springs**	**43.50**	**257**	P		**P**	**05 26 02.5**	**-0.5**
	comp=Z,14nm,0.8s,baz=97,slow=7.6,SNR=160							
ASAR				PcP		**PcP**	**05 27 36.5**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=107,slow=4.2,SNR=6.4							
ASAR				ScP		**ScP**	**05 30 31.6**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=97,slow=4.4,SNR=10							
ASAR				S		**S**	**05 31 46.5**	**-2.1**
	comp=Z,2.9nm,0.9s,baz=97,slow=15,SNR=14							
	comp=Z,14nm,0.8s							
WRA	**Warramunga Arr**	**43.61**	**263**	P		**P**	**05 26 03.1**	**-0.7**
	comp=Z,8.4nm,0.5s,baz=98,slow=8.6,SNR=130							
WRA				ScP		**ScP**	**05 30 31.4**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=86,slow=3.4,SNR=2.3							
WRA				S		**S**	**05 31 46.2**	**-3.8**
	comp=Z,1.3nm,0.8s,baz=97,slow=13,SNR=6.0							
	comp=Z,8.4nm,0.5s							
WRA	**Warramunga Arr**	**43.61**	**263**			**P**	**05 26 02.6**	**-1.2**
KNRA	**Kununurra**	**49.69**	**267**	P		**P**	**05 26 49.0**	**-0.4**
MORW	**Morawa**	**58.79**	**248**	P		**P**	**05 27 52.0**	**-0.8**
MORW				IAmb		IAmb	05 28 07.2	
	comp=Z,29nm,1.5s							
TOLI2	**Tolitoli**	**62.77**	**283**	P		**P**	**05 28 19.1**	**0.0**
TOLI2				IAmb		IAmb	05 28 19.4	
	comp=Z,8.1nm,0.9s							
MJAR	**Matsushiro Arr**	**70.00**	**324**	P		**P**	**05 29 02.8**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=156,slow=6.4,SNR=7.4							
	comp=Z,2.5nm,0.6s							
TPUB	**Ta-pu**	**73.42**	**304**			**P**	**05 29 21.6**	**-1.5**
PETK	**Petropavlovsk-**	**76.45**	**346**	P		**P**	**05 29 39.6**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=157,slow=5.9,SNR=5.2							
	comp=Z,2.0nm,0.7s							
PETK	**Petropavlovsk-**	**76.45**	**346**	P		**P**	**05 29 39.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**78.80**	**326**	P		**P**	**05 29 53.1**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=131,slow=5.6,SNR=4.4							
	comp=Z,3.1nm,0.6s							
ESJX	**Sierra Juarez**	**80.07**	**50**	P		**P**	**05 30 00.3**	**+1.0**
O02D	**Mt. Diablo Mer**	**80.22**	**40**	P		**P**	**05 30 01.2**	**+1.4**
O02D				IAmb		IAmb	05 30 02.5	
	comp=Z,11nm,1.2s							
M02C	**Callahan**	**80.92**	**39**			**P**	**05 30 04.6**	**+1.2**
M02C				IAmb		IAmb	05 30 06.0	
	comp=Z,8.9nm,1.0s							
MPMC	**Manual Prospec**	**81.20**	**46**	P		**P**	**05 30 05.7**	**+0.6**
M03C	**McCloud**	**81.29**	**40**	P		**P**	**05 30 06.4**	**+1.1**
M03C				IAmb		IAmb	05 30 07.3	
	comp=Z,9.6nm,0.8s							
L04D	**Klamath Falls**	**81.76**	**39**	P		**P**	**05 30 08.5**	**+0.8**
L04D				IAmb		IAmb	05 30 09.6	
	comp=Z,6.3nm,0.8s							
NVAR	**Mina Array Bea**	**81.99**	**44**	P		**P**	**05 30 10.0**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=225,slow=8.5,SNR=13							
	comp=Z,1.7nm,0.7s							
K05A	**Summer Lake**	**82.89**	**39**			**P**	**05 30 14.7**	**+1.2**
K05A				IAmb		IAmb	05 30 15.3	
	comp=Z,4.5nm,0.7s							
J05D	**Fort Rock, OR**	**83.03**	**38**	P		**P**	**05 30 15.1**	**+1.0**
J05D				IAmb		IAmb	05 30 16.2	
	comp=Z,8.0nm,0.7s							
PINE	**Pine Mountain**	**83.51**	**38**			**P**	**05 30 17.2**	**+0.7**
PINE				IAmb		IAmb	05 30 18.6	
	comp=Z,6.4nm,0.9s							
I07A	**Izee**	**84.51**	**39**	P		**P**	**05 30 22.3**	**+1.0**
XAN	**Xi'an**	**87.65**	**308**	P		**P**	**05 30 37.3**	**+1.0**
XAN				pmax		pmax		
	comp=Z,11nm,0.8s							
TXAR	**Lajitas Array**	**88.08**	**58**	P		**P**	**05 30 39.9**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=220,slow=6.0,SNR=26							
	comp=Z,2.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**88.98**	**315**	*e*P		**P**	**05 30 44.9**	**+2.5**
HHC				pmax		pmax		
	comp=Z,13nm,0.6s							
HHC				pmax		pmax		
	comp=Z,110nm,4.9s							
CMAR	**Chiang Mai Arr**	**89.37**	**290**	P		**P**	**05 30 46.0**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=132,slow=3.6,SNR=10							
	comp=Z,1.4nm,0.3s							
PDAR	**Pinedale Array**	**89.92**	**44**	P		**P**	**05 30 47.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=216,slow=4.5,SNR=10							
	comp=Z,0.8nm,0.7s							
ARCES	**ARCESS Array B**	**129.17**	**349**	PKP		**PKPdf**	**05 36 50.1**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=29,slow=2.6,SNR=3.6							
FINES	**FINESS Array B**	**135.92**	**343**	SKPbc		**SKPbc**	**05 39 38.3**	**+0.4**
	comp=Z,2.2nm,1.0s,baz=335,slow=3.2,SNR=7.3							
AKASG	**Malin Array Be**	**142.93**	**330**	PKhKP		PKPpre	05 37 13.1	
	comp=Z,4.3nm,0.4s,baz=43,slow=4.1,SNR=26							
BRTR	**Keskin Array B**	**146.42**	**311**	PKPbc		**PKPbc**	**05 37 24.9**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=137,slow=3.2,SNR=6.2							
MMAI	**Mount Meron Ar**	**147.20**	**299**	PKPbc		**PKPbc**	**05 37 27.7**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=94,slow=4.3,SNR=5.6							
KOLS	**Kolonicke sedl**	**147.29**	**334**	*e*PKP		**PKPbc**	**05 37 27.6**	**+0.4**
KOLS				*e*			05 37 31.6	
MODS	**Modra-Piesok**	**149.66**	**338**	*e*PKP		**PKiKP**	**05 37 34.5**	**+0.8**
MODS				*e*			05 37 42.4	
SRO	**Srobarova**	**149.76**	**337**	*e*PKP		**PKiKP**	**05 37 34.3**	**+0.4**
GERES	**GERESS Array B**	**150.35**	**343**	PKPbc		**PKPbc**	**05 37 34.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=45,slow=2.1,SNR=5.9							

IDC 11 05:34:20.1±2.7,**6°.61S**×**129°.92E**,**h132**km±37km,**mb3.6**/1, **mbtmp4.0**/5,**Error ellipse: s-maj=68.1km s-min=20.7km az=89.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.86**	**13**	P		Pn	05 35 45.0	+0.2
	9.3nm,0.3s,baz=194,slow=13,SNR=28							
SIJI				S		Sn	05 36 47.5	-3.4
	14nm,0.2s,baz=229,slow=19,SNR=7.1							
FITZ	**Fitzroy Crossi**	**12.15**	**200**	P		Pn	05 37 08.7	-0.3
	2.2nm,0.3s,baz=18,slow=14,SNR=28							
FITZ				S		Sn	05 39 17.2	-5.8
	1.8nm,0.4s,baz=38,slow=20,SNR=2.3							
WRA	**Warramunga Arr**	**13.93**	**162**	P		Pn	05 37 30.8	-1.1
	1.1nm,0.7s,baz=347,slow=13,SNR=13							
WRA				S		Sn	05 39 59.5	-6.3
	1.3nm,0.4s,baz=338,slow=22,SNR=7.6							
ASAR	**Alice Springs**	**17.38**	**168**	P		Pn	05 38 15.3	+0.6
	1.3nm,0.6s,baz=347,slow=13,SNR=19							
ASAR				S		S	05 41 21.5	-6.9
	0.5nm,0.5s,baz=359,slow=26,SNR=4.5							
MKAR	**Makanchi Array**	**67.86**	**327**	P		P	05 45 04.1	-0.1
	0.8nm,0.5s,baz=122,slow=7.0,SNR=5.3							
	0.8nm,0.5s							

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*CATAC **11** 05:42:29.0±0.6,10°.N×3°.8°6W±°, h11km±3km,M3.0/13, MLv3.0/13,Error ellipse: s-maj=7.3km s-min=3.7km az=43.5,confirmed*
*UCR **11** 05:42:32.6±0.7,10°.44N×86°.22W,h19km±16km,MW3.9, Presumed earthquake*
ISC 11 05:42:29.2±2.3,**10°.38N**±0°.06×**86°.41W**±0°.08,**h12**km±12km, **n37**,σ0**s62/47**,**Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	**0.82**	**98**	*e*P		**Pg**	**05 42 45.1**	**+0.1**
ALIBA	**Liberia Airpor**	**0.87**	**76**	*e*P		**Pb**	**05 42 46.8**	**+0.5**
JUD3	**Juan Diaz 3**	**0.88**	**104**	*e*P		**Pb**	**05 42 46.1**	**-0.3**
CMARA	**Lajas Hojancha**	**1.03**	**110**	P		**Pb**	**05 42 48.2**	**-0.8**
CMARA				S		**Sn**	**05 43 05.0**	**+1.1**
LAPC	**Finca la Perla**	**1.03**	**68**	*e*P		**Pb**	**05 42 47.5**	**-1.5**
LCRUZ	**La Cruz**	**1.03**	**47**	*e*P		**Pb**	**05 42 49.1**	**+0.1**
GPS2	**Hotel Rincn d**	**1.10**	**70**	*e*P		**Pb**	**05 42 49.7**	**-0.5**
GPS1	**Guardaparques**	**1.11**	**69**	*e*P		**Pb**	**05 42 50.0**	**-0.4**
BUAI	**Buenos Aires**	**1.17**	**65**	*e*P		**Pb**	**05 42 51.2**	**-0.1**
CARN	**Rivas**	**1.19**	**47**	P		**Pb**	**05 42 51.4**	**-0.2**
CARN				S		**Sg**	**05 43 07.9**	**+0.5**
CARN	**Rivas**	**1.19**	**47**	*e*P		**Pb**	**05 42 51.4**	**-0.2**
MESS	**Mesas**	**1.25**	**73**	*e*P		**Pn**	**05 42 51.8**	**-0.7**
CUI	**Cuipilapa**	**1.25**	**77**	*e*P		**Pn**	**05 42 52.0**	**-0.6**
HORNC	**Hornillas**	**1.25**	**74**	*e*P		**Pn**	**05 42 51.9**	**-0.7**
CLARA	**Aguas Claras**	**1.28**	**71**	*e*P		**Pn**	**05 42 52.4**	**-0.4**
CNAS	**Canas**	**1.29**	**87**	*e*P		**Pb**	**05 42 53.8**	**+0.4**
OMA1	**El SSO del Vol**	**1.36**	**34**	P		**Pn**	**05 42 54.1**	**+0.1**
MORN	**Al O del Volca**	**1.38**	**33**	P		**Pn**	**05 42 54.5**	**+0.2**
JTS	**Las Juntas de**	**1.43**	**93**	P		**Pn**	**05 42 54.3**	**-0.7**
JTS				S		**Sg**	**05 43 15.9**	**+0.5**
JTS	**Las Juntas de**	**1.43**	**93**	*e*P		**Pn**	**05 42 54.2**	**-0.8**
UPAL	**Upala**	**1.47**	**69**	P		**Pn**	**05 42 55.0**	**-0.4**
UPAL				S		**Sg**	**05 43 15.9**	**-0.5**
COTE	**Lago Cote**	**1.48**	**82**	*e*P		**Pn**	**05 42 55.5**	**-0.1**
QUEB	**Quebradon, Cot**	**1.50**	**80**	*e*P		**Pn**	**05 42 56.0**	**0.0**
MAS3	**Al N del Volca**	**1.65**	**8**	P		Pg	05 43 04.7	+3.8
ARE1	**Arenal 1**	**1.66**	**87**	*e*P		**Pn**	**05 42 58.7**	**+0.5**
UNAN	**Cigeo UNAN**	**1.73**	**4**	P		**Pn**	**05 42 58.3**	**-0.8**
UNAN				S		**Sn**	**05 43 21.3**	**+0.2**
SAPS	**Ciudad Sandino**	**1.78**	**0**	P		**Pn**	**05 42 58.8**	**-1.0**
SAPS				S		**Sn**	**05 43 22.9**	**+0.5**
WILN	**Americas 2**	**1.79**	**7**	S		**Sn**	**05 43 22.6**	**+0.1**
APQ2	**Apoyeque**	**1.81**	**2**	S		**Sn**	**05 43 22.9**	**-0.2**
TRB2	**Turrubares**	**1.98**	**103**	S		**Sb**	**05 43 29.6**	**-0.3**
ACON	**Acoyapa**	**1.99**	**37**	P		**Pn**	**05 43 02.7**	**0.0**
ACON				S		**Sb**	**05 43 29.4**	**-0.7**
ACON	**Acoyapa**	**1.99**	**37**	*e*P		**Pn**	**05 43 02.8**	**+0.1**
COVE	**Coope Vega, Sa**	**2.00**	**80**	P		**Pn**	**05 43 04.3**	**+1.5**
MOM2	**El Cardon**	**2.05**	**358**	P		**Pn**	**05 43 03.7**	**+0.2**
MOM2				S		**Sn**	**05 43 28.8**	**-0.2**
MACN	**El Madrono**	**2.09**	**353**	P		**Pn**	**05 43 04.5**	**+0.4**
MACN				S		**Sn**	**05 43 30.3**	**+0.2**
ROCN	**Rota Cerro Neg**	**2.16**	**351**	P		**Pn**	**05 43 06.1**	**+1.2**
ROCN				S		**Sn**	**05 43 31.6**	**-0.1**
BOAB	**BOACO BROADBAN**	**2.19**	**19**	P		**Pn**	**05 43 05.5**	**+0.1**
BOAB				S		**Sn**	**05 43 33.3**	**+1.0**

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*IDC **11** 05:50:08.4±0.9,44°.89S×35°.82E,h0km,mb4.0/8, mbtmp4.1/9,ML3.7/1,MS3.8/23,Error ellipse: s-maj=35.4km s-min=20.0km az=65.0*
*NEIC **11** 05:50:09.8±1.5,44°.76S±0°.05×35°.9E±0°.2,h10km±2km, mb4.1/11,Error ellipse: s-maj=18.6km s-min=8.6km az=98.0*
ISC 11 05:50:09.8±0.6,**44°.8S**±0°.1×**35°.8E**±0°.1,**h10**km,**n48**, σ1**s07/27**,**mb4.2**/10,**MS3.9**/22,**3D**,**Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**11.41**	**104**	Pn		**Pn**	**05 52 53.2**	**+0.6**
GRHM	**Grahamstown, E**	**13.58**	**324**	Pn		**Pn**	**05 53 19.8**	**-2.7**
SUR	**Sutherland**	**16.98**	**312**	P		**Pn**	**05 54 07.2**	**-0.3**
	0.3nm,0.3s,baz=141,slow=18,SNR=1.6							
SUR				L		LR	05 58 55.0	
	comp=Z,173nm,19.3s,baz=135,slow=31							
	17nm,1.1s							
SUR	**Sutherland**	**16.98**	**312**			**Pn**	**05 54 06.9**	**-0.6**
SUR				IAmb		IAmb	05 54 29.2	
	comp=Z,7.1nm,0.9s							
POGA	**Pongola**	**17.69**	**348**			**Pn**	**05 54 16.4**	**+0.2**
POGA				IAmb		IAmb	05 54 58.7	
	comp=Z,11nm,1.1s							
LBTB	**Lobatse**	**21.36**	**334**	P		**P**	**05 54 57.9**	**+0.5**
	comp=Z,6.2nm,0.7s,baz=164,slow=12,SNR=4.5							
LBTB				LR		LR	06 01 56.5	
	comp=Z,216nm,20.6s,baz=142,slow=33							
	comp=Z,6.2nm,0.7s							
LBTB	**Lobatse**	**21.36**	**334**	P		**P**	**05 54 57.5**	**+0.2**
LBTB				IAmb		IAmb	05 55 02.8	
	comp=Z,4.9nm,0.7s							
KHWEE	**KHWEE**	**24.30**	**336**	P		**P**	**05 55 27.5**	**+0.1**
KHWEE				IAmb		IAmb	05 55 35.6	
	comp=Z,15nm,1.1s							
MATP	**Matopo**	**25.01**	**344**	LR		LR	06 04 19.6	
	comp=Z,148nm,18.1s,baz=132,slow=34							
KOOLE	**Kule**	**25.19**	**324**	P		**P**	**05 55 36.5**	**+1.0**
MAW	**Mawson**	**26.97**	**157**	LR		LR	06 03 44.9	
	comp=Z,33nm,20.3s,baz=350,slow=30							
KSANE	**Kasane**	**28.32**	**338**	P		**P**	**05 56 03.6**	**-0.2**
LSZ	**Lusaka**	**30.09**	**345**	LR		LR	06 06 25.2	
	comp=Z,126nm,18.6s,baz=144,slow=32							
TROLL	**Troll, Antarti**	**31.54**	**199**	||P		**P**	**05 56 32.3**	**+0.4**
	comp=Z,183nm,0.7s							
SNAA	**Sanae**	**32.65**	**201**	P		**P**	**05 56 41.7**	**+0.2**
	comp=Z,3.4nm,1.0s,baz=86,slow=2.6,SNR=6.2							
SNAA				LR		LR	06 06 24.5	
	comp=Z,151nm,21.9s,baz=50,slow=30							
	comp=Z,3.4nm,1.0s							
VNA2	**Neumayer--Watz**	**33.52**	**204**	||P		**P**	**05 56 49.7**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=57,slow=8.4							
VNA1	**Neumayer--Stat**	**33.65**	**205**	||P		**P**	**05 56 51.8**	**+1.7**
	comp=Z,8.5nm,1.2s							
MBAR	**Mbarara**	**44.20**	**353**	LR		LR	06 15 28.8	
	comp=Z,177nm,21.1s,baz=167,slow=34							
QSPA	**South Pole Qui**	**45.45**	**180**	P		**P**	**05 58 27.3**	**-1.3**
	comp=Z,3.7nm,0.9s,baz=234,slow=1.1,SNR=14							
QSPA				LR		LR	06 15 35.3	
	comp=Z,149nm,21.9s,baz=254,slow=34							
	comp=Z,3.7nm,0.9s							
QSPA	**South Pole Qui**	**45.45**	**180**	P		**P**	**05 58 27.9**	**-0.7**
QSPA				IAmb		IAmb	05 58 30.0	
	comp=Z,4.4nm,1.1s							
VNDA	**Vanda**	**53.58**	**167**	P		**P**	**05 59 28.1**	**-2.2**
	comp=Z,1.6nm,0.9s,baz=218,slow=7.0,SNR=5.6							
VNDA				LR		LR	06 20 25.1	
	comp=Z,126nm,21.1s,baz=232,slow=34							
	comp=Z,1.6nm,0.9s							
SBA	**Scott Base**	**54.06**	**169**	P		**P**	**05 59 34.3**	**+0.5**
PMSA	**Palmer Station**	**54.40**	**211**	LR		LR	06 18 08.6	
	comp=Z,88nm,20.3s,baz=144,slow=31							
H10S2	**ASCENSION HYDR**	**56.14**	**294**	T		T	07 00 33.9	
	baz=136,slow=74,SNR=118							
H10S3	**ASCENSION HYDR**	**56.16**	**294**	T		T	07 00 35.1	
	baz=84,slow=74,SNR=122							
TORD	**Torodi Ar. Bea**	**65.41**	**323**	P		**P**	**06 00 53.5**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=160,slow=6.8,SNR=4.7							
	comp=Z,1.2nm,0.6s							
PALK	**Pallekele**	**65.68**	**50**	LR		LR	06 20 17.8	
	comp=Z,95nm,21.6s,baz=118,slow=28							
CPUP	**Villa Florida**	**74.03**	**249**	P		**P**	**06 01 46.1**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=130,slow=10.0,SNR=4.2							
	comp=Z,1.3nm,0.7s							
CPUP	**Villa Florida**	**74.03**	**249**	P		**P**	**06 01 46.3**	**+0.5**
CPUP				IAmb		IAmb	06 01 55.1	
	comp=Z,3.0nm,1.1s							
EIL	**Elat**	**74.08**	**359**	LR		LR	06 33 10.2	
	comp=Z,62nm,20.0s,baz=98,slow=35							
ASF	**Jabal al Asfar**	**76.58**	**1**	LR		LR	06 35 55.6	
	comp=Z,48nm,18.6s,baz=26,slow=36							
MMAI	**Mount Meron Ar**	**77.42**	**360**	LR		LR	06 33 58.0	
	comp=Z,58nm,21.4s,baz=124,slow=34							
ASAR	**Alice Springs**	**79.19**	**112**	P		**P**	**06 02 15.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=235,slow=5.7,SNR=3.2							
	comp=Z,0.6nm,0.8s							
ASAR	**Alice Springs**	**79.19**	**112**	P		**P**	**06 02 13.8**	**-1.3**
AS31	**Alice Springs**	**79.19**	**112**	P		**P**	**06 02 13.9**	**-1.2**
WRA	**Warramunga Arr**	**82.07**	**110**	P		**P**	**06 02 30.1**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=232,slow=5.0,SNR=3.2							
	comp=Z,0.7nm,0.9s							
WRA	**Warramunga Arr**	**82.07**	**110**	P		**P**	**06 02 30.1**	**-0.4**
VAE	**Valguarnera**	**84.11**	**343**	LR		LR	06 40 11.9	
	comp=Z,42nm,18.3s,baz=136,slow=36							
GNI	**Garni**	**84.92**	**7**	LR		LR	06 39 43.4	
	comp=Z,38nm,20.2s,baz=152,slow=35							
MDT	**Midelt**	**85.50**	**327**	LR		LR	06 41 23.2	
	comp=Z,69nm,19.3s,baz=104,slow=36							
LPAZ	**La Paz**	**88.20**	**249**	LR		LR	06 37 58.7	
	comp=Z,54nm,18.3s,baz=77,slow=32							
MLR	**Muntele Rosu**	**90.30**	**353**	LR		LR	06 44 54.3	
	comp=Z,35nm,20.9s,baz=102,slow=36							
ESDC	**Sonseca Array**	**91.34**	**330**	LR		LR	06 45 01.5	
	comp=Z,69nm,18.8s,baz=134,slow=36							
MDP	**Montagnes des**	**92.42**	**275**	LR		LR	06 36 43.6	
	comp=Z,38nm,21.6s,baz=104,slow=30							
DAVOX	**Davos/Dischmat**	**93.98**	**343**	LR		LR	06 48 23.7	
	comp=Z,59nm,19.3s,baz=98,slow=37							
AKASG	**Malin Array Be**	**95.26**	**356**	LR		LR	06 51 20.5	
	comp=Z,31nm,18.8s,baz=68,slow=38							
TXAR	**Lajitas Array**	**144.54**	**258**	PKP		PKPbc	06 09 46.2	+1.1
	comp=Z,0.7nm,0.7s,baz=151,slow=5.8,SNR=10							
ULM	**Lac du Bonnet**	**147.34**	**297**	PKPbc		**PKPbc**	**06 09 54.3**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=88,slow=4.9,SNR=5.0							

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*IDC **11** 05:53:35.1±2.0,17°.48N×105°.54W,h0km,mb3.4/5, mbtmp3.5/8,ML3.5/3,MS3.4/21,Error ellipse: s-maj=58.2km s-min=23.2km az=54.0*
*NEIC **11** 05:53:39.6±1.4,17°.6N±0°.1×105°.15W±0°.05,h10km±2km, mb4.2/37,Error ellipse: s-maj=22.7km s-min=3.6km az=200.0*
*MEX **11** 05:53:39.8±0.4,17°.78N×105°.24W,h10km,MD4.4*
ISC 11 05:53:39.9±1.0,**17°.84N**±0°.07×**105°.07W**±0°.07,**h10**km,**n90**, σ2**s24/89**,**mb3.8**/8,**MS3.4**/16,**Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**1.48**	**42**	*e*P		**Pn**	**05 54 05.2**	**-1.5**
CDAR				*e*S		**Sn**	**05 54 24.8**	**-1.4**
CJM	**Chamela**	**1.65**	**1**	*e*P		**Pn**	**05 54 06.1**	**-2.8**
CJM				*e*S		**Sn**	**05 54 27.5**	**-2.7**
MMIG	**Aquila**	**1.70**	**75**	*e*P		**Pn**	**05 54 08.5**	**-1.1**
MMIG				*e*S		**Sn**	**05 54 31.3**	**0.0**
CEGR	**Campo Tres**	**1.92**	**36**	*e*P		**Pn**	**05 54 11.8**	**-1.1**
CEGR				*e*S		**Sn**	**05 54 36.3**	**-0.9**
INCO	**Volcan de Coli**	**2.17**	**39**	*e*P		**Pn**	**05 54 16.2**	**-0.4**
INCO				*e*S		**Sn**	**05 54 42.8**	**-0.9**
ZIIG	**Zihuatanejo**	**3.44**	**93**	*e*P		**Pn**	**05 54 32.5**	**-1.1**
ZIIG				*e*S		**Sn**	**05 55 15.2**	**+0.8**
MOIG	**Morelia**	**4.10**	**63**			**Pn**	**05 54 44.4**	**+1.5**
MOIG	**Morelia**	**4.10**	**63**	*e*P		**Pn**	**05 54 44.0**	**+1.1**
CAIG	**El Cayaco**	**4.65**	**99**	*e*S		**Sn**	**05 55 42.3**	**-2.0**
MEIG	**Mezcala**	**5.19**	**88**	*e*P		**Pn**	**05 54 58.6**	**+0.9**
MEIG				*e*S		**Sn**	**05 56 00.2**	**+2.6**
TOVM	**TOLUCA**	**5.31**	**73**	*e*P		**Pn**	**05 55 02.6**	**+3.0**
PLIG	**Platanillo**

comp=Z,10nm,0.9s
S39A Bolivar 22.30 25 P **P 05 58 39.3 +1.8**
T42A Van Buren 22.74 30 P **P 05 58 44.4 +2.3**
T42A IAmb IAmb 05 58 46.5
comp=Z,8.3nm,1.0s
GLAT Glass 23.06 34 P **P 05 58 47.8 +2.3**
CCM Cathedral Cave 23.50 28 P **P 05 58 51.3 +1.4**
NVAR Mina Array Bea 23.55 333 P **P 05 58 50.1 -0.6**
comp=Z,0.4nm,0.7s,baz=161,slow=9.4,SNR=4.2
NVAR LR LR 06 07 42.2
comp=Z,84nm,19.6s,baz=189,slow=36
comp=Z,0.4nm,0.7s
P40A Paris 24.39 25 P 05 59 00.0 +1.7
ELK Elko 24.45 341 LR LR 06 07 44.8
comp=Z,89nm,21.1s,baz=140,slow=34
T47A Sharon Grove 24.78 36 P **P 05 59 03.2 +1.3**
N38A Joes South For 25.04 22 P **P 05 59 05.9 +1.6**
PDAR Pinedale Array 25.14 352 P **P 05 59 04.5 -0.9**
comp=Z,0.4nm,0.5s,baz=168,slow=9.0,SNR=6.0
PDAR LR LR 06 09 10.5
comp=Z,44nm,18.5s,baz=227,slow=37
comp=Z,0.4nm,0.5s
YBH Yreka Blue Hor 28.20 331 LR LR 06 10 17.8
comp=Z,90nm,18.6s,baz=152,slow=35
NEW Newport 31.90 345 LR LR 06 12 35.3
comp=Z,62nm,19.4s,baz=242,slow=36
EPLO Experimental L 33.05 14 P 06 00 15.4 0.0
ULM Lac du Bonnet 33.16 11 LR LR 06 14 29.0
comp=Z,67nm,18.1s,baz=262,slow=37
SADO Sadowa 34.52 33 LR LR 06 16 09.3
comp=Z,54nm,20.4s,baz=249,slow=39
ATAH Atahualpa 36.19 131 LR LR 06 12 20.3
comp=Z,117nm,19.8s,baz=290,slow=31
DLBC Dease Lake 44.50 342 LR LR 06 20 58.5
comp=Z,90nm,19.0s,baz=224,slow=37
YKA Yellowknife Ar 45.10 354 P 06 01 54.6 -1.5
comp=Z,0.3nm,0.7s,baz=167,slow=7.3,SNR=2.8
YKA LR LR 06 20 31.9
comp=Z,52nm,19.0s,baz=308,slow=36
comp=Z,0.3nm,0.7s
SCHQ Schefferville 47.06 29 LR LR 06 23 11.6
comp=Z,40nm,20.9s,baz=56,slow=37
LPAZ La Paz 49.74 131 P 06 02 30.8 -2.7
comp=Z,0.9nm,0.7s,baz=326,slow=6.3,SNR=4.7
comp=Z,0.9nm,0.7s
FRB Frobisher Bay 52.18 20 LR LR 06 24 31.3
comp=Z,37nm,20.9s,baz=300,slow=35
KDAK Kodiak Island 53.00 330 LR LR 06 21 32.4
comp=Z,42nm,21.0s,baz=304,slow=32
ILAR Eielson Array 54.59 339 P 06 03 06.2 -2.0
comp=Z,0.7nm,1.0s,baz=152,slow=6.1,SNR=6.7
comp=Z,0.7nm,1.0s
PPT Papeete 56.18 234 LR LR 06 20 41.5
comp=Z,29nm,20.1s,baz=308,slow=29
NOA NORSAR Array B 86.52 26 LR LR 06 45 02.6
comp=Z,12nm,18.5s,baz=85,slow=36

IDC ***11*** *06:12:28.8±0.8,31.55S×71.91W,h0km,mb3.9/6, mbtmp3.8/11,ML3.8/5,Error ellipse: s-maj=23.8km s-min=22.1km az=136.0*
SJA ***11*** *06:12:29.6±0.7,31.64S×72.00W,h16km±2km,ML4.0, MW4.0*
GUC ***11*** *06:12:33.8±0.8,31.71S×71.68W,h32km±2km,ML4.1*
NEIC ***11*** *06:12:34.9±1.2,31.68S±0.04×71.7W±0.1,h35km±1km, mb4.2/8,ML4.1(GUC),Error ellipse: s-maj=19.2km s-min=6.4km az=97.0*
ISC 11 06:12:29.7±1.2,31.64S±0.02×71.78W±0.03,h5km±8km, n129,σ1§75/174,mb4.1/7,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CO04	**Los Peladeros**	**0.79**	**121**			**Pn**	**06 12 47.4**	**-0.4**
CO04	**Los Peladeros**	**0.79**	**121**	*eP*		**Pn**	**06 12 47.5**	**-0.4**
CO04				*i* S		**Sb**	**06 12 56.6**	**-0.7**
CO04				IAML			06 12 57.6	
	comp=N,31μm,0.2s							
CO02	**Combarbal**	**0.79**	**57**	*eP*		**Pn**	**06 12 48.1**	**+0.4**
CO02				*eS*		**Sn**	**06 12 59.0**	**-0.9**
CO02				IAML			06 13 03.1	
	comp=Z,4μm,0.2s							
CO02	**Combarbal**	**0.79**	**57**			**Pn**	**06 12 48.3**	**+0.6**
CO02	**Combarbal**	**0.79**	**57**	*eP*		**Pn**	**06 12 48.4**	**+0.7**
CO02				*i* S		**Sb**	**06 12 58.1**	**+1.0**
CO02				IAML			06 13 00.0	
	comp=E,21μm,0.1s							
CO06	**Fray Jorge**	**0.97**	**7**			**Pn**	**06 12 52.3**	**+2.3**
CO03	**El Pedregal**	**1.23**	**50**	*eP*		**Pn**	**06 12 55.4**	**+1.7**
CO03				*eS*		**Sn**	**06 13 11.1**	**+0.4**
CO03				IAML			06 13 13.7	
	comp=Z,2μm,0.7s							
CO03	**El Pedregal**	**1.23**	**50**			**Pn**	**06 12 55.1**	**+1.4**
CO03	**El Pedregal**	**1.23**	**50**	*eP*		**Pn**	**06 12 55.2**	**+1.6**
CO03				*i* S		**Sn**	**06 13 10.8**	**+0.1**
CO03				IAML			06 13 19.4	
	comp=E,3μm,0.2s							
VA01	**Torpederas**	**1.38**	**176**	*eP*		**Pn**	**06 12 56.4**	**+0.7**
VA01				*eS*		**Sn**	**06 13 16.0**	**+1.7**
VA01	**Torpederas**	**1.38**	**176**			**Pn**	**06 12 56.7**	**+1.1**
VA01	**Torpederas**	**1.38**	**176**	*eP*		**Pn**	**06 12 56.5**	**+0.9**
VA01				*i* S		**Sg**	**06 13 13.1**	**-1.1**
ROCH	**El Roble**	**1.48**	**154**	*eP*		**Pn**	**06 12 58.0**	**+0.7**
ROCH				*eP*		**Pn**	**06 12 57.9**	**+0.7**
ROCH				*i* S		**Sg**	**06 13 16.4**	**-0.7**
ROCH				*i* S		**Sg**	**06 13 16.5**	**-0.7**
ROCH				IAML			06 13 20.1	
	comp=N,5μm,0.3s							
VA03	**San Esteban**	**1.53**	**137**	*eP*		**Pb**	**06 12 58.8**	**+0.1**
VA03				*eS*		**Sg**	**06 13 18.7**	**-0.1**
VA03				IAML			06 13 21.9	
	comp=Z,3μm,0.3s							
VA03	**San Esteban**	**1.53**	**137**			**Pb**	**06 12 58.7**	**+0.1**
VA03	**San Esteban**	**1.53**	**137**	*eP*		**Pb**	**06 12 58.7**	**+0.1**
VA03				*i* S		**Sb**	**06 13 17.3**	**-1.0**
VA03				IAML			06 13 21.6	
	comp=E,7μm,0.2s							
GO04	**Tololo Observa**	**1.69**	**30**	*eP*		**Pg**	**06 13 02.7**	**+0.5**
GO04				*eS*		**Sg**	**06 13 25.5**	**+1.5**
GO04				IAML			06 13 28.4	
	comp=Z,5μm,0.3s							
GO04	**Tololo Observa**	**1.69**	**30**			**Pg**	**06 13 02.6**	**+0.5**
GO04	**Tololo Observa**	**1.69**	**30**	*eP*		**Pg**	**06 13 02.6**	**+0.5**
GO04				*i* S		**Sg**	**06 13 25.4**	**+1.4**
MT02	**Curacav**	**1.70**	**162**	*eP*		**Pn**	**06 13 00.3**	**+0.2**
MT02				*eS*		**Sg**	**06 13 25.8**	**+1.3**
MT02				IAML			06 13 28.1	
	comp=Z,792nm,0.3s							
MT02	**Curacav**	**1.70**	**162**			**Pn**	**06 13 01.2**	**+1.0**
MT02	**Curacav**	**1.70**	**162**	*eP*		**Pn**	**06 13 01.1**	**+1.0**
MT02				*i* S		**Sn**	**06 13 22.0**	**-0.3**
PEL	**Peldehue**	**1.76**	**149**	*eP*		**Pn**	**06 12 56.9**	**-4.1**
PEL				*eS*		**Sb**	**06 13 25.2**	**+0.3**
PEL				IAML			06 13 31.4	
	comp=Z,789nm,0.3s							
PEL	**Peldehue**	**1.76**	**149**			**Pn**	**06 13 02.0**	**+1.1**
PEL	**Peldehue**	**1.76**	**149**	*eP*		**Pn**	**06 13 02.1**	**+1.1**
PEL				*i* S		**Sn**	**06 13 24.0**	**+0.3**
CO05	**La Serena**	**1.78**	**15**			**Pb**	**06 13 03.6**	**+0.8**
CO05	**La Serena**	**1.78**	**15**	*eP*		**Pg**	**06 13 03.8**	**0.0**
CO05				*i* S		**Sg**	**06 13 28.0**	**+1.1**
CO05				IAML			06 13 36.4	
	comp=E,3μm,0.4s							
MT10	**Hacienda Santa**	**1.94**	**148**	*eP*		**Pb**	**06 13 05.2**	**-0.4**
MT10				*i* S		**Sn**	**06 13 29.2**	**+1.0**
MT10				IAML			06 13 32.3	
	comp=E,4μm,0.3s							
MT05	**Renca**	**1.95**	**154**	*eP*		**Pn**	**06 13 00.3**	**-3.3**
MT05				*eP*		**Pn**	**06 13 05.4**	**+1.7**
MT05				*eS*		**Sg**	**06 13 33.0**	**+0.4**
MT05				IAML			06 13 35.0	
	comp=Z,622nm,0.3s							
MT05	**Renca**	**1.95**	**154**			**Pn**	**06 13 05.1**	**+1.5**
MT05	**Renca**	**1.95**	**154**	*eP*		**Pn**	**06 13 05.3**	**+1.7**
MT05				*i* S		**Sn**	**06 13 29.7**	**+1.1**
MT05				IAML			06 13 37.9	
	comp=E,4μm,0.4s							
VA05	**Santo Domingo**	**2.02**	**176**			**Pn**	**06 13 05.4**	**+1.0**
VA05	**Santo Domingo**	**2.02**	**176**	*eP*		**Pn**	**06 13 05.3**	**+0.9**
VA05				*i* S		**Sn**	**06 13 28.3**	**-1.6**
MT14	**Cerro Cal¡n**	**2.04**	**149**	*eP*		**Pn**	**06 13 06.6**	**+1.8**
MT14				*i* S		**Sn**	**06 13 31.6**	**+0.9**
MT14				IAML			06 13 43.1	
	comp=E,2μm,0.4s							
MT16	**CCHEN**		**2.07**	**150**		**Pn**	**06 13 06.7**	**+1.4**
MT16	**CCHEN**		**2.07**	**150**	*eP*	**Pn**	**06 13 07.0**	**+1.8**
MT16					*i* S	**Sn**	**06 13 31.9**	**+0.4**
MT16					IAML		06 13 34.0	
	comp=N,713nm,0.5s							
RTLS	**Leoncito**		**2.12**	**95**	*eP*	**Pg**	**06 13 10.0**	**-0.4**
RTLS					*eS*	**Sg**	**06 13 37.1**	**-0.7**
RTLS					IAML		06 13 40.3	
	comp=Z,2μm,0.5s							
MT03	**Universidad Ad**		**2.13**	**150**	*eP*	**Pn**	**06 13 08.1**	**+2.0**
MT03					*eS*	**Sb**	**06 13 34.9**	**-0.9**
MT03					IAML		06 13 43.4	
	comp=Z,1μm,0.2s							
MT03	**Universidad Ad**		**2.13**	**150**		**Pn**	**06 13 07.5**	**+1.4**
MT03	**Universidad Ad**		**2.13**	**150**	*eP*	**Pn**	**06 13 08.0**	**+1.8**
MT03					*i* S	**Sn**	**06 13 33.1**	**0.0**
MT03					IAML		06 13 44.1	
	comp=E,4μm,0.2s							
CO01	**Juntas del Tor**		**2.20**	**42**	*eP*	**Pb**	**06 13 09.9**	**-0.2**
CO01					*eS*	**Sg**	**06 13 39.8**	**-0.7**
CO01					IAML		06 13 41.2	
	comp=Z,826nm,0.1s							
CO01	**Juntas del Tor**		**2.20**	**42**		**Pb**	**06 13 09.9**	**-0.2**
CO01	**Juntas del Tor**		**2.20**	**42**	*eP*	**Pb**	**06 13 10.3**	**+0.1**
CO01					*i* S	**Sb**	**06 13 38.1**	**+0.2**
CO01					IAML		06 13 43.0	
	comp=E,923nm,0.3s							
MT09	**Talagante**		**2.23**	**163**		**Pn**	**06 13 09.3**	**+1.8**
MT09	**Talagante**		**2.23**	**163**	*eP*	**Pn**	**06 13 09.2**	**+1.8**
MT09					*i* S	**Sn**	**06 13 36.4**	**+0.9**
MT09					IAML		06 13 42.7	
	comp=N,1μm,0.2s							
MT01	**Popeta**		**2.26**	**169**	*eP*	**Pn**	**06 13 09.1**	**+1.3**
MT01					*eS*	Sn	06 13 25.6	-10
MT01					IAML		06 13 42.6	
	comp=Z,489nm,0.6s							
MT01	**Popeta**		**2.26**	**169**		**Pn**	**06 13 09.2**	**+1.3**
MT01	**Popeta**		**2.26**	**169**	*eP*	**Pn**	**06 13 09.0**	**+1.3**
MT12	**Pirque**		**2.33**	**154**	*eP*	**Pn**	**06 13 10.6**	**+1.8**
MT12					*i* S	**Sn**	**06 13 38.3**	**+0.5**
MT12					IAML		06 13 49.8	
	comp=N,3μm,0.7s							
MT08	**Bocatoma Ro**		**2.33**	**141**	*eP*	**Pb**	**06 13 12.0**	**-0.4**
MT08					*eS*	**Sg**	**06 13 43.5**	**-1.3**
MT08					IAML		06 13 56.2	
	comp=Z,469nm,0.5s							
MT08	**Bocatoma Ro**		**2.33**	**141**	*eP*	**Pb**	**06 13 12.0**	**-0.4**
MT08					*i* S	**Sb**	**06 13 41.2**	**-0.4**
MT08					IAML		06 13 49.5	
	comp=N,1μm,0.4s							
AROD	**Rodeo**		**2.46**	**54**	*eP*	**Pg**	**06 13 15.8**	**-1.2**
AROD					*eS*	**Sg**	**06 13 49.0**	**0.0**
BO04	**La Punta**		**2.54**	**158**		**Pn**	**06 13 13.1**	**+1.5**
BO04	**La Punta**		**2.54**	**158**	*eP*	**Pn**	**06 13 13.6**	**+1.9**
BO04					*i* S	**Sn**	**06 13 43.5**	**+0.6**
ACCO	**Cerro Coronel**		**2.55**	**66**	*eP*	**Pb**	**06 13 17.1**	**+0.9**
ACCO					*eS*	**Sg**	**06 13 54.0**	**+2.3**
ACCO					IAML		06 13 57.9	
	comp=Z,602nm,0.5s							
ZON	**Zonda**		**2.65**	**89**	*eP*	**Pb**	**06 13 17.7**	**+0.1**
ZON					*eS*	**Sb**	**06 13 51.5**	**+1.0**
ZON					IAML		06 14 04.8	
	comp=Z,529nm,0.6s							
ARCO	**CERRO ARCO**		**2.69**	**117**	*eP*	**Pb**	**06 13 19.0**	**+0.5**
ARCO					*eS*	**Sg**	**06 14 00.0**	**+3.8**
ARCO					IAML		06 14 01.6	
	comp=Z,394nm,0.4s							
ACDV	**Cuesta del Vie**		**2.71**	**58**	*eP*	**Pb**	**06 13 19.3**	**+0.4**
ACDV					*eS*	**Sg**	**06 13 57.2**	**+0.2**
ACDV					IAML		06 14 04.3	
	comp=Z,414nm,0.9s							
SJA	**San Juan**		**2.75**	**88**	*eP*	**Pb**	**06 13 18.9**	**-0.4**
SJA					IAML		06 14 04.9	
	comp=Z,395nm,0.3s							
LCO	**Las Campanas**		**2.78**	**20**	*eP*	**Pn**	**06 13 17.7**	**+2.6**
LCO					*eS*	**Sn**	**06 13 50.9**	**+1.7**
LCO					IAML		06 14 02.3	
	comp=Z,1μm,0.3s							
LCO	**Las Campanas**		**2.78**	**20**		**Pn**	**06 13 17.4**	**+2.3**
LCO	**Las Campanas**		**2.78**	**20**	*eP*	**Pn**	**06 13 17.8**	**+2.6**
BO01	**Tunca**		**2.80**	**168**	*eP*	**Pn**	**06 13 17.1**	**+1.9**
BO01					*eS*	**Sn**	**06 13 51.5**	**+2.0**
BO01					IAML		06 14 06.7	
	comp=Z,211nm,0.3s							
BO01	**Tunca**		**2.80**	**168**		**Pn**	**06 13 16.1**	**+0.9**
BO01	**Tunca**		**2.80**	**168**	*eP*	**Pn**	**06 13 16.4**	**+1.2**
RTLL	**Cerro Villicun**		**2.84**	**85**	*eP*	**Pb**	**06 13 20.6**	**-0.3**
RTLL					*eS*	**Sb**	**06 13 55.0**	**-0.9**
RTLL					IAML		06 14 06.5	
	comp=Z,445nm,0.4s							
BO03	**Pichilemu**		**2.85**	**183**	*eP*	**Pn**	**06 13 16.2**	**+0.4**
AAGR	**Agrelo**		**2.88**	**121**	*eP*	**Pb**	**06 13 21.6**	**-0.1**
AAGR					*eS*	**Sg**	**06 14 02.8**	**+0.5**
AAGR					IAML		06 14 08.8	
	comp=Z,413nm,1.6s							
CFA	**Coronel Fontan**		**3.02**	**90**	Pn	**Pb**	**06 13 21.4**	**-2.6**
	comp=Z,20nm,0.3s,baz=262,slow=11,SNR=170							
CFA					Sn	**Sb**	**06 14 00.5**	**-0.7**
	comp=Z,54nm,0.3s,baz=50,slow=17,SNR=12							
	comp=Z,54nm,0.3s							
CFA	**Coronel Fontan**		**3.02**	**90**	*eP*	**Pb**	**06 13 22.5**	**-1.5**
CFA					*eS*	**Sb**	**06 14 00.3**	**-0.9**
CFA					IAML		06 14 12.2	
	comp=Z,357nm,0.6s							
AC05	**El Transito**		**3.08**	**25**	*eP*	**Pn**	**06 13 22.4**	**+3.2**
AC05					*eS*	**Sn**	**06 13 59.2**	**+2.7**
AC05					IAML		06 14 11.5	
	comp=Z,287nm,0.8s							
AC05	**El Transito**		**3.08**	**25**		**Pn**	**06 13 22.3**	**+3.2**
AC05	**El Transito**		**3.08**	**25**	*eP*	**Pn**	**06 13 22.6**	**+3.4**
BO02	**Sierra Bellavi**		**3.25**	**165**	*eP*	**Pn**	**06 13 23.4**	**+1.9**
BO02					*eS*	**Sb**	**06 14 06.2**	**-1.7**
BO02					IAML		06 14 12.1	
	comp=Z,310nm,0.3s							
BO02	**Sierra Bellavi**		**3.25**	**165**		**Pn**	**06 13 23.2**	**+1.7**
BO02	**Sierra Bellavi**		**3.25**	**165**	*eP*	**Pn**	**06 13 23.1**	**+1.7**
AVIZ	**Vizcacheras**		**3.30**	**124**	*eP*	**Pn**	**06 13 23.1**	**+0.9**
GO05	**Hualane**		**3.36**	**182**	*eP*	**Pn**	**06 13 23.5**	**+0.6**
GO05					*eS*	**Sg**	**06 14 20.2**	**+2.4**
GO05					IAML		06 14 30.1	
	comp=Z,129nm,1.1s							
GO05	**Hualane**		**3.36**	**182**		**Pn**	**06 13 23.2**	**+0.2**
GO05	**Hualane**		**3.36**	**182**	*eP*	**Pn**	**06 13 23.2**	**+0.2**
AC04	**Llanos de Chal**		**3.48**	**10**	*eP*	**Pn**	**06 13 26.4**	**+1.9**
AC04					*eS*	**Sg**	**06 14 20.6**	**-1.0**
AC04					IAML		06 14 32.0	
	comp=Z,299nm,0.6s							
AC04	**Llanos de Chal**		**3.48**	**10**		**Pn**	**06 13 26.4**	**+1.9**
AC04	**Llanos de Chal**		**3.48**	**10**	*eP*	**Pn**	**06 13 26.5**	**+1.9**
AVFE	**Valle Fertil**		**3.83**	**76**	*eP*	**Pn**	**06 13 33.1**	**+3.7**
AVFE					*eS*	**Sb**	**06 14 19.5**	**-5.1**
AVFE					IAML		06 14 29.4	
	comp=Z,413nm,0.6s							
ML02	**Panimavida**		**4.12**	**176**	*eP*	**Pn**	**06 13 34.9**	**+1.5**
ML02					*eS*	**Sb**	**06 14 35.2**	**+2.3**
ML02					IAML		06 14 45.8	
	comp=Z,187nm,0.7s							
ML02	**Panimavida**		**4.12**	**176**		**Pn**	**06 13 34.2**	**+0.9**
VCA	**Vinchina**		**4.24**	**48**	*eP*	**Pb**	**06 13 40.8**	**-4.0**
VCA					*eS*	**Sb**	**06 14 30.6**	**-5.8**
GO03	**Copiapo**		**4.25**	**19**	*eP*	**Pn**	**06 13 37.5**	**+2.2**
GO03					*eS*	**Sb**	**06 14 31.5**	**-5.2**
GO03					IAML		06 14 53.8	
	comp=Z,287nm,1.1s							
GO03	**Copiapo**		**4.25**	**19**		**Pn**	**06 13 37.2**	**+2.0**
ACLC	**CERRO LA CRUZ**		**4.71**	**63**	*eP*	**Pn**	**06 13 45.6**	**+4.0**
ACLC					*eS*	**Sn**	**06 14 41.6**	**+4.9**
ACLC					IAML		06 14 48.9	
	comp=Z,206nm,0.9s							
BI02	**San Fabin de**		**5.03**	**175**		**Pn**	**06 13 47.2**	**+1.4**
TINO	**Tinogasta**		**5.11**	**47**	*eP*	**Pn**	**06 13 50.5**	**+3.5**
TINO					*eS*	**Sn**	**06 14 52.6**	**+6.2**
TINO					IAML		06 15 03.2	
	comp=Z,361nm,0.7s							
AC02	**Maricunga**		**5.32**	**26**		**Pn**	**06 13 52.7**	**+2.4**
AC01	**Pan de Azucar**		**5.57**	**11**	Pn	**Pn**	**06 13 53.9**	**+0.6**
TCA	**Tanti**		**6.14**	**89**	*eP*	**Pn**	**06 14 03.0**	**+1.8**
H03N1	**Juan Fernandez**		**6.29**	**252**	T	T	06 20 45.2	
	baz=79,slow=73,SNR=7384							
H03N3	**Juan Fernandez**		**6.30**	**251**	T	T	06 20 46.0	
	baz=79,slow=73,SNR=4997							
H03N2	**Juan Fernandez**		**6.30**	**252**	T	T	06 20 47.4	
	baz=79,slow=73,SNR=4369							
H03S3	**Juan Fernandez**		**6.39**	**248**	T	T	06 20 56.3	
	baz=69,slow=74,SNR=19							
H03S1	**Juan Fernandez**		**6.39**	**248**	T	T	06 20 55.5	
	baz=69,slow=74,SNR=17							
H03S2	**Juan Fernandez**		**6.41**	**248**	T	T	06 20 51.6	
	baz=69,slow=74,SNR=24							
PLCA	**Paso Flores**		**9.13**	**174**	Pn	**Pn**	**06 14 43.7**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=337,slow=11,SNR=8.0							
	comp=Z,3.2nm,1.0s							
CPUP	**Villa Florida**		**13.70**	**71**	Pn	**Pn**	**06 15 46.6**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=232,slow=9.2,SNR=4.7							
	comp=Z,0.5nm,0.5s							
LPAZ	**La Paz**		**15.64**	**13**	Pn	**Pn**	**06 16 09.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=201,slow=8.4,SNR=4.7							
	comp=Z,2.0nm,1.1s							
LPAZ	**La Paz**		**15.64**	**13**	Pn	**Pn**	**06 16 10.4**	**-1.1**
GO08	**Villa O'Higgin**		**16.82**	**182**	Pn	**Pn**	**06 16 25.1**	**-0.7**
GO08					IAmb	IAmb	06 16 41.8	
	comp=Z,25nm,1.5s							
SIV	**San Ignacio**		**18.38**	**35**	P	**Pn**	**06 16 45.2**	**-0.3**
	baz=212,slow=13,SNR=1.8							
	comp=Z,1.1nm,0.5s							
PTLB	**Pontes e Lacer**		**19.82**	**38**	P	**P**	**06 17 02.3**	**+1.0**
BDFB	**Brasilia**		**26.88**	**59**	P	**P**	**06 18 10.5**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=240,slow=8.1,SNR=3.1							
	comp=Z,3.9nm,1.0s							
BDFB	**Brasilia**		**26.88**	**59**	P	**P**	**06 18 10.7**	**-1.1**
BDFB					IAmb	IAmb	06 18 14.4	
	comp=Z,9.4nm,1.4s							
SDV	**Santo Domingo**		**40.31**	**2**	P	**P**	**06 20 09.1**	**+0.7**
SDV					IAmb	IAmb	06 20 52.6	
	comp=Z,4.7nm,1.1s							
QSPA	**South Pole Qui**		**58.59**	**180**	P	**P**	**06 22 27.7**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=256,slow=0.7,SNR=6.2							
	comp=Z,0.8nm,0.7s							
QSPA	**South Pole Qui**		**58.59**	**180**	P	**P**	**06 22 27.7**	**+0.3**
TXAR	**Lajitas Array**		**67.80**	**330**	P	**P**	**06 23 28.4**	**-0.4**
	comp=Z,0.5nm,1.1s,baz=160,slow=4.1,SNR=4.1							
	comp=Z,0.5nm,1.1s							
DBIC	**Dimbokro**		**74.22**	**72**	P	**P**	**06 24 07.2**	**-0.9**
	comp=Z,2.5nm,0.5s,baz=221,slow=6.1,SNR=4.0							
	comp=Z,2.5nm,0.5s							
DBIC	**Dimbokro**		**74.22**	**72**	P	**P**	**06 24 07.4**	**-0.6**
NVAR	**Mina Array Bea**		**82.08**	**325**	P	**P**	**06 24 50.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=128,slow=4.4,SNR=2.3							
	comp=Z,0.4nm,0.7s							
TORD	**Torodi Ar. Bea**		**83.20**	**70**	P	**P**	**06 24 56.9**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=230,slow=4.8,SNR=4.4							
	comp=Z,1.1nm,0.8s							
TORD	**Torodi Ar. Bea**		**83.20**	**70**	P	**P**	**06 24 56.9**	**-0.5**
TORD					IAmb	IAmb	06 24 58.6	
	comp=Z,2.3nm,1.1s							
WRA	**Warramunga Arr**		**122.92**	**210**	PKP	**PKPdf**	**06 31 26.8**	**-0.9**
	comp=Z,1.2nm,1.1s,baz=163,slow=1.4,SNR=5.3							
H11S2	**WAKE ISLAND Hyd**		**26.00**	**271**	T	T	08 50 27.0	
	baz=117,slow=75,SNR=128							
H11S1	**WAKE ISLAND Hyd**		**26.01**	**271**	T	T	08 50 28.0	
	baz=117,slow=75,SNR=133							
H11S3	**WAKE ISLAND Hyd**		**26.01**	**271**	T	T	08 50 28.5	
	baz=117,slow=75,SNR=129							
H11N3	**WAKE ISLAND Hyd**		**26.35**	**272**	T	T	08 50 53.7	
	baz=116,slow=75,SNR=177							
H11N1	**WAKE ISLAND Hyd**		**26.36**	**272**	T	T	08 50 57.6	
	baz=116,slow=75,SNR=51							
H11N2	**WAKE ISLAND Hyd**		**26.36**	**272**	T	T	08 50 56.9	
	baz=116,slow=75,SNR=304							
BVAR	**Borovoye Array**		**145.38**	**41**	PKPbc	**PKPbc**	**06 32 08.9**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=316,slow=4.1,SNR=6.6							
KURBB	**Kurchatov Arra**		**150.97**	**41**	PKPbc	**PKPbc**	**06 32 23.1**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=296,slow=3.0,SNR=10							
ZALV	**Zalesovo Beam**		**152.10**	**30**	PKPbc	**PKPbc**	**06 32 25.7**	**0.0**
	comp=Z,2.6nm,0.5s,baz=306,slow=3.5,SNR=12							

IDC 11 06:35:54.9±9.0,30.42S×178.12W,h0km,mb3.3/2, mbtmp3.3/2,Error ellipse: s-maj=382.9km s-min=60.7km az=156.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ASAR	**Alice Springs**	**43.00**	**267**	P		P	06 43 56.4	+0.1
	0.2nm,0.5s,baz=106,slow=7.5,SNR=4.1							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**43.99**	**272**	P		P	06 44 04.0	-0.3
	0.2nm,0.4s,baz=113,slow=7.9,SNR=4.6							
	0.2nm,0.4s							
FINES	**FINESS Array B**	**145.13**	**340**	PKPbc		PKPbc	06 55 32.2	-0.9
	2.5nm,0.9s,baz=64,slow=3.2,SNR=5.2							

IDC ***11*** *06:43:12.3±3.0,4.63S×103.19E,h0km,mb3.6/7, mbtmp3.6/7,Error ellipse: s-maj=139.7km s-min=21.7km az=52.0*
DJA ***11*** *06:43:26.0±0.3,5.5S±2.×10.3E±.,h64km±4km,M3.6/18, MLv3.6/18*
ISC 11 06:43:24.1±0.9,4.74S±0.08×103.36E±0.05,h96km±7km, n15,σ0§86/21,mb3.7/7,Southern Sumatera

| Code | Station Name | Δ° | AZ° | Phase | ID | ISC

GTOI S **Sn** 07 18 02.9 -2.5
LUWI Luwuk 2.30 121 P **Pn** 07 17 38.6 +0.9
LUWI Luwuk 2.30 121 **Pn** 07 17 38.4 +0.7
LUWI Luwuk 2.30 121 P **Pn** 07 17 38.7 +1.0
LUWI Luwuk 2.30 121 P **Pn** 07 17 38.1 +0.5
MMSI Mamuju 3.39 214 P **Pn** 07 17 51.2 -0.8
MMSI S **Sn** 07 18 30.2 -1.6
MMSI Mamuju 3.39 214 P **Pn** 07 17 51.3 -0.7
PMSI Majene 4.08 207 P **Pn** 07 17 59.2 -2.0
PMSI Majene 4.08 207 P **Pn** 07 17 59.2 -2.0
BKB Balikpapan 4.15 250 **Pn** 07 18 01.1 -0.9
BKB Balikpapan 4.15 250 P **Pn** 07 18 01.5 -0.5
BKB Balikpapan 4.15 250 P **Pn** 07 18 01.4 -0.6
SPSI Sidrap Palu 4.21 194 P **Pn** 07 18 02.8 -0.1
SPSI Sidrap Palu 4.21 194 P **Pn** 07 18 02.5 -0.4
MNI Manado 4.24 72 P **Pn** 07 18 02.8 -0.5
KKSI Kolaka, Sulawe 4.37 169 P **Pn** 07 18 05.5 +0.4
KKSI Kolaka, Sulawe 4.37 169 P **Pn** 07 18 05.1 +0.1
KDI Kendari 4.46 156 P **Pn** 07 18 06.7 +0.4
TARAI Tarakan 4.52 314 P **Pn** 07 18 05.5 -1.5
KAPI Kappang 5.23 192 P **Pn** 07 18 16.8 +0.2
37nm,0.5s,baz=349,slow=8.2,SNR=16
KAPI S **Sn** 07 19 14.9 -1.0
38nm,0.6s,baz=294,slow=10,SNR=4.1
KAPI Kappang 5.23 192 P **Pn** 07 18 17.0 +0.4
KAPI Kappang 5.23 192 S **Sn** 07 19 16.9 +1.0
KAPI Kappang 5.23 192 **Pn** 07 18 16.2 -0.4
KAPI Kappang 5.23 192 P **Pn** 07 18 16.5 -0.1
39nm,1.2s
KAPI Kappang 5.23 192 P **Pn** 07 18 17.0 +0.4
SANI Sanana 5.63 113 P **Pn** 07 18 21.0 -1.0
SANI Sanana 5.63 113 S **Sn** 07 19 23.7 -1.7
SANI Sanana 5.63 113 P **Pn** 07 18 20.6 -1.4
0.5nm2µm143nm,1.1s
SANI Sanana 5.63 113 P **Pn** 07 18 20.9 -1.0
SGSI Sangihe 5.89 53 P **Pn** 07 18 24.5 -1.0
132nm,0.6s
SGSI Sangihe 5.89 53 P **Pn** 07 18 24.6 -0.9
BSSI Bau Bau, Buton 6.26 183 P **Pn** 07 18 31.1 +0.6
0.4nm90nm,0.9s
NLAI Namlea 7.14 118 P **Pn** 07 18 44.4 +2.0
KKM Kota Kinabalu 7.43 322 P **Pn** 07 18 47.0 +0.5
KKM Kota Kinabalu 7.43 322 S **Sn** 07 20 08.4 -1.0
KKM Kota Kinabalu 7.43 322 **Pn** 07 18 46.0 -0.5
KKM Kota Kinabalu 7.43 322 P **Pn** 07 18 46.5 0.0
2µm195nm,0.9s
KKM Kota Kinabalu 7.43 322 P **Pn** 07 18 47.2 +0.7
AAI Ambon 8.31 117 P **Pn** 07 18 56.0 -2.3
KRAI Karang Ratu 8.34 114 P **Pn** 07 18 57.8 -0.8
DAV Davao City (W) 8.37 35 LR LR 07 23 00.1
comp=Z,32nm,18.2s,baz=190,slow=43
LBFI Labuhan Bajo, 8.62 186 P **Pn** 07 19 03.1 +0.7
SOEI Soe 10.43 161 P **Pn** 07 19 27.4 +0.4
SOEI Soe 10.43 161 **Pn** 07 19 29.8 +2.8
SOEI Soe 10.43 161 P **Pn** 07 19 27.6 +0.7
SIJI Sorong 10.51 96 P **Pn** 07 19 28.7 +0.6
11nm,0.7s,baz=240,slow=22,SNR=2.1
BATI Baumata 10.67 165 LR LR 07 24 23.7
comp=Z,558nm,20.6s,baz=80,slow=41
FAKI Fak Fak 11.84 105 Pn **Pn** 07 19 44.9 -0.9
FAKI Fak Fak 11.84 105 P **Pn** 07 19 43.1 -2.7
KPJI Karang Pucung 13.98 238 P **P** 07 20 15.6 -2.0
LEM Lembang 14.87 242 P **P** 07 20 27.5 -0.3
44nm,1.0s,baz=126,slow=23,SNR=4.1
BBJI Bungbulang 15.14 240 Pn **Pn** 07 20 29.2 +0.8
DRS Darwin Rock St 16.02 142 P **P** 07 20 40.9 +0.6
MTN Manton Dam 16.48 142 P **P** 07 20 45.9 +0.4
KNRA Kununurra 17.58 154 **Pn** 07 20 58.9 +0.6
FITZ Fitzroy Crossi 18.75 166 P **P** 07 21 11.1 +0.8
21nm,0.7s,baz=359,slow=8.6,SNR=25
FITZ Fitzroy Crossi 18.75 166 P **Pn** 07 21 11.8 -0.3
FITZ Fitzroy Crossi 18.75 166 **Pn** 07 21 11.4 -0.7
FITZ Fitzroy Crossi 18.75 166 P **P** 07 21 10.7 +0.4
BKNI Bangkinang 19.76 271 P **P** 07 21 22.2 +0.7
KULM Kulim 20.76 285 P Pn 07 21 34.1 -1.6
KULM Kulim 20.76 285 **P** 07 21 32.4 +0.2
KULM Kulim 20.76 285 P **P** 07 21 31.9 -0.3
RPSI Rantau Prapat 22.01 277 P **P** 07 21 44.1 -1.5
PSI Prapat 22.02 277 P **P** 07 21 48.8 +3.0
GSI Gunungsitoli 23.25 273 P **P** 07 21 58.8 +1.1
GSI Gunungsitoli 23.25 273 **P** 07 21 57.3 -0.4
GSI Gunungsitoli 23.25 273 P **P** 07 21 58.9 +1.2
WB0 Warramunga Arr 23.86 147 **P** 07 22 03.0 -0.1
WRAB Tennant Creek 23.97 147 P **P** 07 22 04.4 +0.3
WRAB Tennant Creek 23.97 147 P **P** 07 22 03.2 -0.9
WRA Warramunga Arr 23.97 147 P **P** 07 22 04.1 0.0
32nm,0.8s,baz=327,slow=9.5,SNR=143
WRA PcP **PcP** 07 25 42.2 -1.3
0.4nm,0.4s,baz=322,slow=1.9,SNR=2.9
WRA ScP **ScP** 07 29 08.8 -2.5
0.5nm,0.9s,baz=322,slow=3.1,SNR=1.8
32nm,0.8s
WRA Warramunga Arr 23.97 147 **P** 07 22 03.6 -0.6
WR8 Warramunga Arr 24.07 147 **P** 07 22 05.0 -0.1
AS31 Alice Springs 26.88 153 **P** 07 22 30.6 +0.2
ASAR Alice Springs 26.88 153 P **P** 07 22 30.9 +0.5
11nm,0.7s,baz=326,slow=8.3,SNR=106
ASAR PcP **PcP** 07 25 48.2 -1.8
0.7nm,0.4s,baz=337,slow=2.3,SNR=7.0
ASAR ScP **ScP** 07 29 15.7 -3.8
0.5nm,0.9s,baz=341,slow=3.4,SNR=2.2
11nm,0.7s
ASAR Alice Springs 26.88 153 **P** 07 22 31.0 +0.6
AUALC St Philip's Co 26.89 153 P **P** 07 22 31.5 +1.0
AS01 Alice Springs 26.90 153 P **P** 07 22 31.4 +0.8
GUMO Guam 27.32 60 LR LR 07 33 30.5
comp=Z,32nm,20.0s,baz=143,slow=36
CMAR Chiang Mai Arr 28.14 311 P **P** 07 22 43.3 +1.5
2.2nm,0.4s,baz=133,slow=6.4,SNR=10
2.2nm,0.4s
MORW Morawa 29.41 189 P **P** 07 22 52.3 -0.5
NJ2 Nanjing 31.79 357 *eP* **P** 07 23 16.4 +2.7
NJ2 pmax pmax
comp=Z,41nm,0.6s
PZH PanZhiHua 31.99 326 P **P** 07 23 18.2 +2.4
CTA Charters Tower 32.03 130 LR LR 07 38 29.9
comp=Z,93nm,19.8s,baz=236,slow=40
NWAO Narrogin (SRO) 33.07 186 P **P** 07 23 24.9 0.0
JCJ Chichijima 33.77 36 P **P** 07 23 30.7 -0.4
QLP Quilpie 34.87 141 P **P** 07 23 41.8 +1.2
XAN Xi'an 35.51 343 P **P** 07 23 48.3 +2.2
XAN pmax pmax
comp=Z,7.0nm,0.9s
STKA Stephens Creek 37.44 150 P **P** 07 24 02.5 0.0
18nm,0.7s,baz=324,slow=8.6,SNR=26
18nm,0.7s
STKA Stephens Creek 37.44 150 P **P** 07 24 03.3 +0.9
STKA Stephens Creek 37.44 150 P **P** 07 24 01.5 -0.9
HTT Hallett 37.50 155 P **P** 07 24 04.3 +1.3
KSRS Korea Array 37.70 9 P **P** 07 24 05.5 +1.0
3.1nm,0.7s,baz=189,slow=10,SNR=11
3.1nm,0.7s
LZH Lanzhou 39.08 338 *eP* **P** 07 24 16.7 +0.4
LZH pP pP 07 24 41.5 -1.5
LZH pmax pmax
comp=Z,15nm,1.0s
CMSA Cobar Meteorol 39.36 145 P **P** 07 24 19.8 +1.3
CMSA Cobar Meteorol 39.36 145 P **P** 07 24 18.8 +0.3
MJAR Matsushiro Arr 39.65 22 P **P** 07 24 19.5 -1.4
2.1nm,0.8s,baz=194,slow=9.6,SNR=6.1
MJAR PcP **PcP** 07 26 25.0 -0.6
2.8nm,1.0s,baz=212,slow=4.3,SNR=4.5
2.1nm,0.8s
BJT Baijiatuau 39.91 354 P **P** 07 24 24.5 +1.6
BJT Baijiatuau 39.91 354 P **P** 07 24 23.4 +0.5
BJI2 Beijing 39.91 354 P **P** 07 24 24.3 +1.4
BJI2 pP **pP** 07 24 50.6 +0.9
BJI2 sP **sP** 07 25 02.0 -1.2
BJI2 PP **PnPn** 07 26 00.9 -0.7
BJI2 PcP **PcP** 07 26 28.2 +1.9
BJI2 S **S** 07 30 22.0 +2.9
BJI2 pmax pmax
comp=Z,6.0nm,0.7s
BJI2 L L
comp=N,61nm,17.1s
BJI2 L L
comp=E,65nm,15.6s
BJI2 L L
comp=Z,51nm,21.1s
HHC Hu-ho-hao-te 41.37 349 *eP* **P** 07 24 35.8 +0.7
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,25nm,4.6s

AUDCS Dubbo College 41.57 143 P **P** 07 24 38.4 +1.7
ARMA Armidale 42.23 139 P **P** 07 24 44.3 +2.0
ARMA IAmb IAmb 07 25 19.0
comp=Z,24nm,1.4s
EVN Everest 42.72 313 P **P** 07 24 47.4 +0.5
GTA2 Gaotai 43.62 336 *eP* **P** 07 24 55.3 +1.9
GTA2 pmax pmax
comp=Z,6.0nm,0.8s
XLT XiLinHaoTe 43.77 355 *eP* **P** 07 24 55.6 +1.2
XLT pmax pmax
comp=Z,15nm,0.7s
XLT pmax pmax
comp=Z,49nm,3.6s
TOO Toolangi 43.91 151 P **P** 07 24 57.6 +2.0
AUMTS Mt Stromlo 44.01 146 P **P** 07 24 58.5 +2.1
CAN Canberra 44.01 146 P **P** 07 24 58.2 +1.8
CAN Canberra 44.01 146 P **P** 07 24 57.7 +1.2
CAN IAmb IAmb 07 24 59.2
comp=Z,17nm,0.7s
CAN Canberra 44.01 146 P **P** 07 24 57.9 +1.5
CAN pP **pP** 07 25 24.6 +1.1
AUMHS Melrose High S 44.09 146 P **P** 07 24 59.1 +2.1
MDJ Mudanjiang 44.96 9 P **P** 07 25 04.5 +0.7
MDJ pmax pmax
comp=Z,31nm,0.9s
MDJ Mudanjiang 44.96 9 P **P** 07 25 03.9 +0.2
MDJ pP **pP** 07 25 31.9 +0.8
USRK Ussuriysk Ar. 44.98 11 P **P** 07 25 04.0 +0.1
comp=Z,7.8nm,0.7s,baz=190,slow=7.8,SNR=7.2
comp=Z,7.8nm,0.7s
ULN Ulaanbaatar 49.01 348 P **P** 07 25 36.1 +0.7
ULN Ulaanbaatar 49.01 348 P **P** 07 25 35.8 +0.4
ULN Ulaanbaatar 49.01 348 P **P** 07 25 36.4 +1.0
SONM Songino Array 49.12 347 P **P** 07 25 37.0 +0.8
comp=Z,14nm,0.7s,baz=170,slow=8.5,SNR=93
comp=Z,14nm,0.7s
SONM Songino Array 49.12 347 P **P** 07 25 37.4 +1.2
HILR Hailar Array B 49.23 359 P **P** 07 25 37.4 +0.5
comp=Z,1.5nm,0.4s,baz=175,slow=7.9,SNR=4.4
comp=Z,1.5nm,0.4s
HEH HeiHe 50.24 6 *eP* **P** 07 25 44.8 +0.4
HEH pmax pmax
comp=Z,44nm,0.7s
TLY Talaya 53.35 347 P **P** 07 26 08.6 +1.0
TLY IAmb IAmb 07 26 09.9
comp=Z,9.6nm,0.9s
TLY Talaya 53.35 347 P **P** 07 26 08.2 +0.7
TLY Talaya 53.35 347 P **P** 07 26 08.8 +1.2
TLY pP **pP** 07 26 37.8 +2.1
TLY PcP **PcP** 07 27 12.3 -1.2
WUS Wushi 55.52 323 P **P** 07 26 24.0 +0.3
ZSN Zaisan 56.54 331 *eP* **P** 07 26 31.4 +0.8
SHLS Shalkode 56.55 325 *eP* **P** 07 26 29.8 -1.1
PDGK Podgornoye 56.64 325 P **P** 07 26 32.4 +0.8
KSH2 Kashi 56.69 319 P **P** 07 26 33.6 +1.6
KSH2 pmax pmax
comp=Z,4.0nm,0.6s
UZB Uzynbulak 56.80 324 *eP* **P** 07 26 32.8 0.0
comp=Z,6.1nm,1.4s
ASAI AK-SAY(Kyrgyzs 57.03 321 P **P** 07 26 34.4 -0.2
SATY Saty 57.11 324 *eP* **P** 07 26 35.4 +0.6
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 57.35 329 P **P** 07 26 37.5 +1.2
comp=Z,4.9nm,0.5s,baz=128,slow=8.7,SNR=62
MKAR PcP **PcP** 07 27 28.4 -0.7
comp=Z,3.4nm,0.7s,baz=124,slow=4.5,SNR=7.8
comp=Z,4.9nm,0.5s
MKAR Makanchi Array 57.35 329 P **P** 07 26 37.2 +0.8
MAKZ Makanchi 57.52 329 P **P** 07 26 37.8 +0.3
MAKZ IAmb IAmb 07 26 39.5
comp=Z,9.4nm,1.1s
MAKZ Makanchi 57.52 329 P **P** 07 26 37.2 -0.4
MAKZ Makanchi 57.52 329 P **P** 07 26 38.1 +0.6
TNSS Tian-Shan 57.96 323 *eP* **P** 07 26 41.6 +0.4
AAA Alma-Ata 58.08 323 *eP* **P** 07 26 42.3 +0.7
TDK Taldyqorghan 58.28 326 *eP* **P** 07 26 43.8 +0.9
KBL Kabul 59.17 311 P **P** 07 26 49.2 -0.3
KBL IAmb IAmb 07 26 52.0
comp=Z,7.1nm,0.7s
AAK Ala-Archa 59.24 322 P **P** 07 26 50.7 +1.0
AAK IAmb IAmb 07 26 52.2
comp=Z,6.8nm,0.8s
AAK Ala-Archa 59.24 322 P **P** 07 26 49.9 +0.1
AAK Ala-Archa 59.24 322 P **P** 07 26 51.1 +1.4
ARSB Arslanbob 59.51 320 P **P** 07 26 51.7 +0.1
ARSB IAmb IAmb 07 26 53.6
comp=Z,7.8nm,0.9s
SGDS Sogindy 59.60 322 *eP* **P** 07 26 52.8 +0.7
GAR Garm 60.17 316 P **P** 07 26 55.6 -0.5
GAR IAmb IAmb 07 26 57.5
comp=Z,14nm,1.3s
SEM Semipalatinsk 60.78 332 *eP* **P** 07 27 00.8 +0.7
BTLS Noital 60.82 324 *eP* **P** 07 27 01.2 +0.9
CHGR Chuyangaron 60.83 315 P **P** 07 27 00.3 -0.2
CHGR IAmb IAmb 07 27 29.7
comp=Z,13nm,1.1s
PEA0B Petropavlovsk- 61.04 24 P **P** 07 27 01.8 +0.2
PEA0B IAmb IAmb 07 27 02.3
comp=Z,16nm,1.1s
PETK Petropavlovsk- 61.04 24 P **P** 07 27 01.8 +0.2
comp=Z,6.8nm,0.8s,baz=219,slow=4.3,SNR=16
comp=Z,6.8nm,0.8s
PETK Petropavlovsk- 61.04 24 P **P** 07 27 02.0 +0.4
ZAA0 Zalesovo Array 61.29 337 P **P** 07 27 03.1 -0.1
ZAA0 IAmb IAmb 07 27 04.0
comp=Z,9.4nm,0.9s
ZALV Zalesovo Beam 61.29 337 P **P** 07 27 03.1 -0.2
comp=Z,7.4nm,0.7s,baz=133,slow=6.0,SNR=28
comp=Z,7.4nm,0.7s
ZALV Zalesovo Beam 61.29 337 P **P** 07 27 02.9 -0.3
DZA Taraz 61.36 320 *eP* **P** 07 27 05.1 +1.1
comp=Z,5.5nm,0.5s
KURBB Kurchatov Arra 61.75 331 P **P** 07 27 07.1 +0.7
comp=Z,8.4nm,0.7s,baz=140,slow=6.4,SNR=58
comp=Z,8.4nm,0.7s
KURK Kurchatov 61.77 331 P **P** 07 27 06.9 +0.4
KURK Kurchatov 61.77 331 P **P** 07 27 06.3 -0.2
KURK Kurchatov 61.77 331 P **P** 07 27 07.2 +0.6
KURK pP **pP** 07 27 35.9 +0.3
KK31 Karatay Array 61.99 320 P **P** 07 27 08.7 +0.5
KKAR Karatay Array 61.99 320 P **P** 07 27 08.5 +0.3
YAK Yakutsk 62.09 5 P **P** 07 27 08.0 -0.4
CHM Chimkent 62.20 319 *eP* **P** 07 27 10.3 +0.7
comp=Z,7.0nm,0.5s
BRLS Borolday 62.38 320 *eP* **P** 07 27 11.1 +0.2
TUWZ Tuamarina 63.30 138 P **P** 07 27 17.5 +0.6
MA2 Magadan 63.70 16 P **P** 07 27 19.9 +0.7
MA2 Magadan 63.70 16 P **P** 07 27 19.4 +0.2
MA2 IAmb IAmb 07 27 20.7
comp=Z,17nm,1.1s
MA2 Magadan 63.70 16 P **P** 07 27 21.4 +2.2
comp=Z,16nm,1.2s
MA2 Magadan 63.70 16 P **P** 07 27 20.1 +0.9
MA2 Magadan 63.70 16 P **P** 07 27 19.4 +0.2
BRZS Berezniki 64.35 328 *eP* **P** 07 27 24.4 +0.7
CASY Casey 66.89 185 P **P** 07 27 38.0 -0.3
CASY IAmb IAmb 07 27 39.2
comp=Z,11nm,1.1s
BVAR Borovoye Array 67.23 330 P **P** 07 27 42.6 +0.5
comp=Z,8.7nm,0.9s,baz=138,slow=9.1,SNR=33
comp=Z,8.7nm,0.9s
BORK Borovoye 67.28 330 P **P** 07 27 42.7 +0.4
BORK IAmb IAmb 07 27 44.1
comp=Z,15nm,1.1s
DRV Dumont d'Urvil 68.05 172 P **P** 07 27 46.9 0.0
AB31 Akbulak array 71.28 323 P **P** 07 28 06.7 -0.4
ABKAR Akbulak array 71.28 323 P **P** 07 28 07.0 -0.1
NRIK Noril'sk 72.59 348 P **P** 07 28 14.0 -0.5
comp=Z,3.8nm,0.5s,baz=131,slow=6.0,SNR=5.7
comp=Z,3.8nm,0.5s
NRIK Noril'sk 72.59 348 P **P** 07 28 14.4 -0.1
ARTI Arti 74.95 329 P **P** 07 28 27.4 -1.2
ARTI pP **pP** 07 28 57.7 -0.8
MAW Mawson 78.40 199 P **P** 07 28 47.8 +0.1
comp=Z,3.3nm,0.9s,baz=76,slow=4.2,SNR=3.8
comp=Z,3.3nm,0.9s
BELG Belogornoye 79.67 323 LR LR 08 08 02.3
comp=Z,94nm,20.1s,baz=97,slow=38
GEVA Gevas 80.29 309 P **P** 07 28 59.0 +0.2
GEVA IAmb IAmb 07 29 00.9
comp=Z,9.9nm,0.8s
VNDA Vanda 80.70 172 P **P** 07 28 59.9 -0.1
comp=Z,1.4nm,0.7s,baz=316,slow=6.4,SNR=10
comp=Z,1.4nm,0.7s
VNDA Vanda 80.70 172 P **P** 07 28 59.5 -0.5

VNDA x x 07 29 25.0
GURO Guroymak-BITLI 81.12 309 P **P** **07 29 03.3 +0.1**
GURO IAmb IAmb 07 29 04.8
comp=Z,9.8nm,0.7s
KBZ Khabaz 81.16 314 P **P** **07 29 02.6 -0.4**
comp=Z,2.9nm,0.8s,baz=104,slow=1.6,SNR=5.6
comp=Z,2.9nm,0.8s
L14K Kuka Creek 83.42 28 P **P** **07 29 15.2 +0.8**
L14K IAmb IAmb 07 29 16.1
comp=Z,12nm,1.0s
M14K Bethel 83.64 29 P **P** **07 29 15.9 +0.3**
N15K Kwethluk River 84.45 30 P **P** **07 29 20.4 +0.6**
N15K IAmb IAmb 07 29 51.7
comp=Z,9.7nm,1.0s
ASF Jabal al Asfar 84.75 302 LR LR 08 13 15.7
comp=Z,50nm,19.9s,baz=25,slow=40
H17K Granite Mounta 85.33 25 P **P** **07 29 24.2 +0.1**
J17K VABM Dome 85.44 26 P **P** **07 29 24.6 0.0**
E18K Tukpahlearik C 85.49 22 P **P** **07 29 25.3 +0.5**
C19K Lookout Ridge 86.16 21 P **P** **07 29 28.6 +0.5**
J20K Nowinta River 87.70 26 P **P** **07 29 35.5 -0.1**
BRTR Keskin Array B 87.72 310 P **P** **07 29 34.9 -1.6**
comp=Z,3.0nm,0.9s,baz=130,slow=5.0,SNR=10
comp=Z,3.0nm,0.9s
KDAK Kodiak Island 88.06 32 LR LR 08 05 06.7
comp=Z,34nm,21.3s,baz=331,slow=33
KKUL Konya-Kulu 88.26 309 P **P** **07 29 37.6 -1.4**
LVZ Lovozero 88.41 338 P **P** **07 29 37.4 -1.6**
LVZ pP **pP** **07 30 08.2 -1.4**
C23K Itkillik River 89.37 20 P **P** **07 29 43.6 +0.3**
C23K IAmb IAmb 07 29 44.8
comp=Z,12nm,1.5s
QSPA South Pole Qui 90.08 180 P **P** **07 29 46.2 -0.7**
comp=Z,1.4nm,0.7s,baz=264,slow=2.3,SNR=6.1
comp=Z,1.4nm,0.7s
H24K Noodor Dome 90.41 24 P **P** **07 29 48.1 -0.3**
ILAR Eielson Array 90.86 25 P **P** **07 29 48.2 -2.3**
comp=Z,0.6nm,0.7s,baz=257,slow=4.7,SNR=7.6
comp=Z,0.6nm,0.7s
AKASG Malin Array Be 90.89 321 P **P** **07 29 49.0 -1.9**
comp=Z,1.3nm,0.6s,baz=72,slow=4.6,SNR=5.3
comp=Z,1.3nm,0.6s
C27K Jago River 91.78 20 P **P** **07 29 54.8 +0.2**
C27K IAmb IAmb 07 30 43.9
comp=Z,14nm,1.9s
I27K Kandik River 93.01 24 P **P** **07 30 00.4 -0.1**
I27K IAmb IAmb 07 30 01.7
comp=Z,6.0nm,0.9s
F28M Old Crow 93.42 22 P **P** **07 30 01.6 -0.7**
F28M IAmb IAmb 07 30 02.5
comp=Z,2.6nm,0.8s
HYT Haines Junctio 95.57 29 P **P** **07 30 12.1 -0.2**
PDAR Pinedale Array 117.91 40 PKP **PKPdf** **07 35 32.8 -1.1**
comp=Z,0.2nm,0.6s,baz=264,slow=2.7,SNR=3.2
TORD Torodi Ar. Bea 118.25 285 PKP **PKPdf** **07 35 34.4 -0.4**
comp=Z,0.3nm,0.4s,baz=162,slow=30,SNR=2.0
SCHQ Schefferville 124.84 5 PKP **PKPdf** **07 35 45.5 -1.0**
comp=Z,2.8nm,0.7s,baz=334,slow=4.1,SNR=4.5
TXAR Lajitas Array 128.46 51 PKP **PKPdf** **07 35 53.4 -0.8**
comp=Z,0.1nm,0.3s,baz=333,slow=1.4,SNR=2.0
LPAZ La Paz 161.70 152 PKP **PKPdf** **07 36 48.2 -1.1**
comp=Z,1.6nm,1.0s,baz=207,slow=7.2,SNR=4.6

NNC ***11*** *07:33:43.5±7.0, 38.71N×72.16E, h0km, mb4.4, mpv4.5, Error ellipse: s-maj=49.8km s-min=30.5km az=1.0*

ISC 11 07:33:40.5±1.3, 37.52N±0.10×72.6E±0.2, h10km, n11, σ1s70/15, 1C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
IUG	**luzhnay** 226nm,0.3s	**5.04**	**337**		Pg	**Pn**	**07 34 55.6**	**-0.6**
IUG					Lg	Lg	07 35 47.4	
	14nm,0.2s							
JMU	**Jammu**	**5.06**	**158**	*eP*		**Pn**	**07 34 59.0**	**+2.5**
JMU				*eS*		**Sn**	**07 35 56.0**	**+1.0**
JMU					IAML		07 36 07.1	
	comp=N,71nm,0.7s							
JMU					IAML		07 36 07.7	
	comp=E,64nm,0.7s							
AAK	**Ala-Archa** comp=E,0.9nm,0.3s	**5.31**	**15**	⇓Pg		**Pn**	**07 35 01.8**	**+1.7**
AAK				⇑Lg		Lg	07 36 01.7	
	comp=E,6.2nm,0.5s							
DZA	**Taraz** comp=E,148nm,0.1s	**5.46**	**350**	Pg		**Pn**	**07 35 01.6**	**-0.4**
DZA					Lg	Lg	07 35 57.2	
	comp=E,107nm,0.3s							
TSSA	**Tissa**	**5.49**	**147**	*eP*		**Pn**	**07 35 03.5**	**+1.0**
TSSA				*eS*		**Sn**	**07 36 04.8**	**-1.1**
THN	**Thein Dam**	**5.68**	**152**	*eP*		**Pn**	**07 35 06.4**	**+1.4**
THN				*eS*		**Sn**	**07 36 09.4**	**-0.9**
KK31	**Karatay Array** comp=E,3.4nm,0.2s,baz=160,slow=11,SNR=50	**5.81**	**345**	Pg		**Pn**	**07 35 05.3**	**-1.4**
KK31				⇓Lg		Lg	07 36 07.0	
	comp=E,20nm,0.4s,baz=164,slow=23							
BRLS	**Borolday** comp=E,47nm,0.2s	**5.91**	**340**	Pg		Pn	07 35 03.4	-4.7
BRLS					Lg	Lg	07 36 02.8	
	comp=E,18nm,0.4s							
DHRM	**DHARAMSHALA**	**6.06**	**149**	*eP*		**Pn**	**07 35 11.0**	**+0.6**
DHRM				*eS*		**Sn**	**07 36 17.6**	**-2.4**
DHRM					IAML		07 36 21.8	
	comp=N,79nm,0.6s							
DHRM					IAML		07 36 22.1	
	comp=E,74nm,0.7s							
HNLY	**HANLEY**	**7.03**	**130**	*eP*		**Pn**	**07 35 24.8**	**+0.8**
HNLY					IAML		07 36 50.0	
	comp=E,6.8nm,0.5s							
HNLY					IAML		07 36 50.3	
	comp=N,11nm,0.3s							
KLP	**Kalpa**	**7.56**	**140**	*eP*		**Pn**	**07 35 31.3**	**+0.2**
KLP				*eS*		**Sn**	**07 36 53.8**	**-3.2**

NIED ***11*** *07:34:09.2, 37.02N×142.06E, h43km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-8.54; Mθθ0.66; Mφφ7.88; Mrθ2.90; Mrφ1.64; Mθφ1.25; Fault plane solution: M₀8.92000×10¹⁴ NP1: φs358.00000°, δ41.00000°, λ-112.00000°. NP2: φs207.00000°, δ53.00000°, λ-72.00000°.*

JMA ***11*** *07:34:09.2±0.3, 37.0N±0.8×14.2E±, h43km, MD4.4/38, MV4.0/38, E OFF FUKUSHIMA PREF*

MOS ***11*** *07:34:10.4±1.4, 36.95N×142.17E, h34km, mb4.3/10, Error ellipse: s-maj=10.6km s-min=7.9km az=96.9*

NEIC ***11*** *07:34:12.8±1.2, 36.92N±0.05×142.1E±0.1, h36km±5km, mb4.2/22, Error ellipse: s-maj=13.0km s-min=7.8km az=96.0*

IDC ***11*** *07:34:21.7±1.9, 36.63N×141.06E, h90km±18km, mb3.5/14, mbtmp3.9/17, MS3.2/5, Error ellipse: s-maj=18.9km s-min=11.2km az=66.0*

ISC 11 07:34:08.5±1.6, 36.92N±0.05×142.01E±0.05, h9km±9km, n104, σ1s76/94, mb4.1/32, 3C-2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.98**	**281**	*i* P		**Pg**	**07 34 27.1**	**-0.4**
JFK	**Kawauchi**	**1.01**	**297**	*i* P		**Pg**	**07 34 27.0**	**-0.9**
JFK				*eS*		**Sg**	**07 34 39.5**	**-1.7**
JFFD	**Fukushimafurud**	**1.17**	**279**	*i* P		**Pb**	**07 34 29.8**	**-1.2**
JFFD				*eS*		**Sb**	**07 34 44.5**	**-1.7**
JHO	**Hitachi**	**1.19**	**256**	*i* P		**Pn**	**07 34 30.6**	**-0.9**
JHO				*eS*		**Sb**	**07 34 45.7**	**-1.1**
JMM	**Marumori**	**1.35**	**315**	*i* P		**Pn**	**07 34 31.7**	**-1.9**
JOTO	**OTAMA OYAMA**	**1.48**	**296**	*i* P		**Pn**	**07 34 34.9**	**-0.5**
JIO	**Ouri**	**1.62**	**341**	*i* P		**Pn**	**07 34 34.5**	**-2.8**
JSB	**Shiboa** comp=N,8.0nm,1.0s,comp=E,7.0nm,0.8s	**1.67**	**272**	A		A	07 34 37.4	
JYAR	**Yonezawaarcadi** comp=N,10.0nm,1.3s,comp=E,9.0nm,1.5s	**1.79**	**304**	A		A	07 34 38.2	
JOU	**Okura**	**1.80**	**324**	*eP*		**Pn**	**07 34 38.4**	**-1.3**
JOU					A	A	07 34 38.4	
	comp=N,13nm,0.8s,comp=E,7.0nm,1.1s							
JOFO	**Osakifurukawao** comp=N,11nm,2.8s,comp=E,10.0nm,2.1s	**1.90**	**333**	A		A	07 34 39.0	
JFY	**Yanaizu**	**1.90**	**286**	*eP*		**Pn**	**07 34 41.3**	**+0.1**
JFY				*eS*		**Sn**	**07 35 05.2**	**-0.1**
JYS	**Shirataka**	**2.02**	**311**	*i* P		**Pn**	**07 34 42.3**	**-0.5**
JAG	**Ashikaga**	**2.11**	**257**	*i* P		**Pn**	**07 34 44.2**	**+0.2**
JMK	**Ichinoseki**	**2.13**	**343**	*eP*		**Pn**	**07 34 42.2**	**-2.1**
JKT	**Katashina**	**2.22**	**267**	P		**Pn**	**07 34 46.6**	**+1.1**

JKT eS Sn 07 35 14.4 +1.3
MJA0 Matsu Arr-Jizo 3.04 264 eP Pn 07 34 58.6 +1.7
MJA0 pmax pmax
comp=Z,3.0nm,0.3s
MJAR Matsushiro Arr 3.07 264 P Pn 07 34 57.6 +0.3
comp=Z,29nm,0.5s,baz=91,slow=16,SNR=108
MJAR S Sn 07 35 25.8 -8.4
comp=Z,12nm,0.6s,baz=99,slow=30,SNR=2.9
MJAR Matsushiro Arr 3.07 264 Pn 07 34 59.1 +1.9
MAJO Matsushiro 3.07 264 ⇓*i*P Pn 07 34 58.7 +1.4
MAJO pmax pmax
comp=Z,35nm,0.4s
MAJO Matsushiro 3.07 264 Pn 07 34 58.5 +1.2
MJB9 Matsu-Tunnel 3.08 264 Pn 07 34 59.9 +2.6
JSG Sagara 3.83 235 Pn Pn 07 35 09.6 +2.0
JTM Tenmabayashi 3.94 350 Pn Pn 07 35 09.1 0.0
JGF Kuroka 3.98 252 Pn 07 35 12.1 +2.3
JHJ2 Mitsune 4.20 206 Pn Pn 07 35 13.9 +1.2
JHJ Hachijo jima 2 4.20 206 P Pn 07 35 15.0 +2.2
comp=Z,44nm,0.4s,baz=155,slow=24,SNR=9.3
JHJ S Sn 07 35 59.0 -3.0
comp=Z,70nm,0.3s,baz=80,slow=22,SNR=5.7
INU Inuyama 4.33 250 Pn 07 35 16.6 +2.1
ERM Erimo 5.17 10 *i*P Pn 07 35 23.9 -2.2
ERM Erimo 5.17 10 Pn Pn 07 35 23.7 -2.4
JKA Kamikawa-asahi 7.21 3 Pn Pn 07 35 54.0 0.0
ASAJ Asahikawa 7.21 3 P Pn 07 35 54.0 -0.1
KUR Kuril'sk 9.41 26 P Pn 07 36 23.4 -0.8
KUR S Sn 07 38 00.5 -10
KUR smax smax
comp=N,44nm,0.7s
KUR smax smax
comp=E,37nm,0.4s
JCJ Chichijima 9.79 179 P Pn 07 36 28.3 -1.2
comp=E,24nm,0.6s,baz=353,slow=21,SNR=7.6
JCJ S Sn 07 38 11.2 -8.4
comp=E,21nm,0.5s,baz=265,slow=24,SNR=1.5
YSS Yuzhno-Sakhali 10.05 3 eP Pn 07 36 29.0 -3.9
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,100nm,16.0s
USRK Ussuriysk Ar. 10.53 317 P Pn 07 36 45.1 +5.5
comp=Z,4.4nm,0.9s,baz=93,slow=11,SNR=3.5
USRK LR LR 07 40 39.9
comp=Z,125nm,18.2s,baz=196,slow=37
KSRS Korea Array 11.25 277 LR LR 07 40 48.5
comp=Z,33nm,21.9s,baz=175,slow=37
KLR Kul'dur 14.39 332 LR LR 07 42 53.2
comp=Z,82nm,19.7s,baz=211,slow=36
KLR Kul'dur 14.39 332 *i*P Pn 07 37 33.7 +1.3
KLR pmax pmax
comp=Z,1.0nm,1.0s
PEA0B Petropavlovsk- 19.55 29 P P 07 38 36.7 +0.3
PEA0B pmax pmax
comp=Z,8.0nm,1.2s
PEA0B Petropavlovsk- 19.55 29 P 07 38 36.6 +0.3
PETK Petropavlovsk- 19.55 29 P P 07 38 36.7 +0.3
PETK Petropavlovsk- 19.55 29 P 07 38 36.7 +0.3
PET Petropavlovsk 19.87 31 *i*P Pn 07 38 41.7 +0.3
PET pmax pmax
comp=Z,25nm,0.9s
PET Petropavlovsk 19.87 31 P P 07 38 40.2 +0.4
SSLB Suanglung 22.33 240 P P 07 39 06.9 +0.3
SSLB IAmb IAmb 07 39 41.4
comp=Z,14nm,1.1s
TPUB Ta-pu 22.87 240 P P 07 39 13.7 +1.3
YAK Yakutsk 26.29 347 LR LR 07 50 33.1
comp=Z,106nm,19.1s,baz=216,slow=37
SEY Seymchan 26.82 11 eP P 07 39 49.0 +0.2
SEY pmax pmax
comp=Z,2.0nm,1.0s
H11N2 WAKE ISLAND Hy 27.68 121 T T 08 08 56.9
baz=314,slow=75,SNR=92
H11N1 WAKE ISLAND Hy 27.69 121 T T 08 08 55.2
baz=314,slow=75,SNR=97
H11N3 WAKE ISLAND Hy 27.70 121 T T 08 08 58.2
baz=314,slow=75,SNR=81
HKPS Hong Kong Po S 28.15 247 P P 07 40 01.0 -0.2
SONM Songino Array 28.25 304 P P 07 40 01.6 -0.3
comp=Z,0.9nm,0.6s,baz=104,slow=9.4,SNR=5.0
comp=Z,0.9nm,0.6s
SONM Songino Array 28.25 304 eP P 07 40 02.7 +0.7
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 28.25 304 P P 07 40 01.7 -0.2
H11S1 WAKE ISLAND Hy 28.40 124 T T 08 09 51.2
baz=316,slow=76,SNR=57
H11S3 WAKE ISLAND Hy 28.40 124 T T 08 09 51.5
baz=316,slow=76,SNR=61
H11S2 WAKE ISLAND Hy 28.41 124 T T 08 09 55.6
baz=316,slow=76,SNR=48
DGZ Jazzator, Alta 40.84 306 ⇓*i*P P 07 41 53.3 +2.6
DGZ pmax pmax
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 41.93 256 *c*eP P 07 41 59.0 -0.7
CMAR pmax pmax
comp=Z,2.0nm,0.3s
ZAA0 Zalesovo Array 42.34 312 P P 07 42 03.2 +0.5
ZALV Zalesovo Beam 42.34 312 P P 07 42 02.8 +0.1
comp=Z,1.4nm,0.6s,baz=104,slow=6.3,SNR=6.6
comp=Z,1.4nm,0.6s
ZALV Zalesovo Beam 42.34 312 eP P 07 42 05.1 +2.4
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 42.34 312 P P 07 42 02.1 -0.6
MK31 Makanchi Array 44.58 302 *c*iP P 07 42 22.6 +1.7
MKAR Makanchi Array 44.58 302 P P 07 42 20.8 -0.1
comp=Z,1.6nm,0.7s,baz=89,slow=9.6,SNR=14
comp=Z,1.6nm,0.7s
MKAR Makanchi Array 44.58 302 eP P 07 42 22.7 +1.8
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 44.58 302 P P 07 42 20.4 -0.5
MAKZ Makanchi 44.79 302 P P 07 42 23.6 +1.1
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 44.79 302 P P 07 42 23.6 +1.1
MAKZ IAmb IAmb 07 42 25.1
comp=Z,1.9nm,0.8s
N18K Kilae Creek 45.16 38 P P 07 42 25.5 +0.2
N18K IAmb IAmb 07 42 46.5
comp=Z,3.9nm,1.2s
KURK Kurchatov 46.38 308 *i*P P 07 42 35.4 +0.4
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURK Kurchatov 46.38 308 P P 07 42 34.8 -0.2
KURK IAmb IAmb 07 43 02.2
comp=Z,3.6nm,0.9s
KURBB Kurchatov Arra 46.45 308 P P 07 42 35.0 -0.5
comp=Z,1.1nm,0.4s,baz=82,slow=8.1,SNR=12
comp=Z,1.1nm,0.4s
E22K Anaktuvuk Pass 47.49 28 P P 07 42 44.2 +0.7
E22K IAmb IAmb 07 43 12.6
comp=Z,5.2nm,1.5s
C23K Itkillik River 48.10 25 P P 07 42 48.1 -0.1
C23K IAmb IAmb 07 42 49.0
comp=Z,6.3nm,1.2s
ILAR Eielson Array 49.34 32 P P 07 43 05.2 +7.5
comp=Z,0.9nm,0.7s,baz=267,slow=6.2,SNR=9.5
ILAR LR LR 08 04 57.1
comp=Z,36nm,20.6s,baz=270,slow=37
comp=Z,0.9nm,0.7s
ILAR Eielson Array 49.34 32 P P 07 42 57.7 0.0
F25K Christian Rive 49.80 29 P P 07 43 01.5 +0.3
F25K IAmb IAmb 07 43 30.1
comp=Z,2.1nm,1.2s
F26K Sheenjek River 50.37 28 P P 07 43 05.8 +0.2
F26K IAmb IAmb 07 43 16.4
comp=Z,1.8nm,0.8s
C27K Jago River 50.49 26 P P 07 43 06.9 +0.5
C27K IAmb IAmb 07 43 42.5
comp=Z,2.8nm,1.1s
BVAR Borovoye Array 51.00 312 P P 07 43 10.5 -0.1
comp=Z,0.8nm,0.5s,baz=238,slow=42,SNR=3.1
comp=Z,0.8nm,0.5s
E27K Coleen River 51.31 28 P P 07 43 13.1 +0.4
E27K IAmb IAmb 07 43 22.2
comp=Z,2.2nm,0.9s
E29M Blow River 52.66 27 P P 07 43 23.4 +0.7
E29M IAmb IAmb 07 43 32.8
comp=Z,2.9nm,1.1s
I30M Mount Dempster 53.73 31 P P 07 43 31.0 +0.3
I30M IAmb IAmb 07 43 40.5
comp=Z,2.5nm,0.8s
H31M Peel River 54.45 30 P P 07 43 35.6 -0.3

CHGR Chuyangaron 56.14 296 *i*P P 07 43 50.9 +2.3
CHGR pmax pmax
comp=Z,9.0nm,0.9s
WB0 Warramunga Arr 56.83 189 P P 07 43 53.1 -0.3
ARTI Arti 56.87 319 *c*iP P 07 43 53.2 -0.1
ARTI 07 45 56.2
ARTI S S 07 51 46.5 -0.3
ARTI SS SS 07 55 27.0 -7.4
ARTI pmax pmax
comp=Z,2.0nm,0.8s
WRAB Tennant Creek 57.00 189 *i*P P 07 43 57.3 +2.7
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WRA Warramunga Arr 57.01 189 P P 07 43 54.7 0.0
comp=Z,1.8nm,0.6s,baz=5.1,slow=7.2,SNR=4.9
comp=Z,1.8nm,0.6s
WRA Warramunga Arr 57.01 189 P P 07 43 54.6 -0.1
AB31 Akbulak array 58.38 310 P P 07 44 03.6 -0.5
ABKAR Akbulak array 58.38 310 P P 07 44 03.5 -0.6
ASAR Alice Springs 60.74 189 P P 07 44 21.0 +0.4
comp=Z,1.1nm,0.7s,baz=13,slow=6.7,SNR=17
comp=Z,1.1nm,0.7s
ASAR Alice Springs 60.74 189 P P 07 44 20.1 -0.5
YKA Yellowknife Ar 63.67 30 P P 07 44 47.4 +7.7
comp=Z,0.7nm,0.6s,baz=302,slow=6.0,SNR=5.1
comp=Z,0.7nm,0.6s
OBN Obninsk 68.47 323 eP P 07 45 12.4 +1.7
OBN *e* 07 45 37.5
OBN *e* 07 47 44.2
OBN ePPP PPP 07 49 23.2
OBN pmax pmax
comp=Z,4.0nm,0.9s
NVAR Mina Array Bea 74.68 53 P P 07 45 56.8 +8.0
comp=Z,0.4nm,0.7s,baz=268,slow=7.0,SNR=3.8
comp=Z,0.4nm,0.7s
AKASG Malin Array Be 74.68 323 P P 07 45 51.8 +3.5
comp=Z,0.6nm,0.4s,baz=47,slow=5.8,SNR=5.1
comp=Z,0.6nm,0.4s
PDAR Pinedale Array 77.41 46 P P 07 46 12.0 +7.7
comp=Z,0.5nm,0.9s,baz=264,slow=1.3,SNR=3.5
comp=Z,0.5nm,0.9s
GERES GERESS Array B 83.06 329 P P 07 46 36.7 +2.2
comp=Z,0.1nm,0.3s,baz=28,slow=3.2,SNR=3.6
comp=Z,0.1nm,0.3s
TXAR Lajitas Array 89.82 53 P P 07 47 14.5 +6.5
comp=Z,0.3nm,0.7s,baz=314,slow=4.3,SNR=3.9
comp=Z,0.3nm,0.7s

BER 11 08:06:07.3±1.0, 72.64N×8.60E, h10km, Mw3.5,
Confirmed Earthquake, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRO	**Tromso**	**4.51**	**127**	*e*P	Pn	08 07 14.1	-1.3
LOF	**Lofoten**	**4.82**	**157**	*e*P	Pn	08 07 17.6	-2.3
LOF				IAML		08 07 20.3	
	comp=Z,2.9nm,0.9s						
JETT	**Jettan, Norway**	**4.93**	**123**	*e*P	Pn	08 07 20.3	-1.0
JETT				IAML		08 07 27.9	
	comp=Z,1.4nm,0.6s						
JETT				*e*S	Sn	08 08 12.5	-5.8
VAGH	**Vaagaholmen**	**6.15**	**162**	*e*P	Pn	08 07 35.9	-2.2
VAGH				IAML		08 07 40.0	
	comp=Z,2.9nm,0.7s						
KONS	**Konsvik**	**6.37**	**163**	*e*P	Pn	08 07 38.7	-2.3
KONS				IAML		08 07 40.4	
	comp=Z,3.5nm,1.1s						
STOK	**Stokkvaagen**	**6.52**	**164**	*e*P	Pn	08 07 40.7	-2.4
STOK				IAML		08 07 44.1	
	comp=Z,2.2nm,1.1s						
KEV	**Kevo**	**6.60**	**107**	*e*P	Pn	08 07 40.8	-3.4
LEIR	**Leirfjorden**	**6.75**	**164**	*e*P	Pn	08 07 43.5	-2.7
LEIR				IAML		08 07 45.0	
	comp=Z,2.0nm,0.7s						

*SKHL **11** 08:41:19.3±0.0, 46.80N×153.20E, h135km±5km, mb4.9/4, msh5.4/4*
*JMA **11** 08:41:25.6±0.7, 46.6N×6.3×153.4E±0.3, h150km, n15, σ3.00/23, Kuril Islands*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**4.00**	**252**	*e*P	**Pn**	**08 42 18.5**	**+2.4**
REI				*e*S	**Sn**	**08 43 02.9**	**0.0**
REI				A	A	08 43 05.5	
	10.0nm,0.6s						
REI				A	A	08 43 05.5	
	20nm,0.6s						
KUR	**Kuril'sk**	**4.11**	**252**	*e*P	**Pn**	**08 42 19.6**	**+2.0**
KUR				AMB	AMB	08 42 22.0	
	30nm,0.3s						
KUR				*e*S	**Sn**	**08 43 04.8**	**-0.7**
KUR				A	A	08 43 09.4	
	30nm,0.2s						
KUR				A	A	08 43 09.4	
	30nm,0.2s						
SKR	**Severo-Kuril's**	**4.45**	**23**	*e*P	**Pn**	**08 42 24.0**	**+2.0**
SKR				AMB	AMB	08 42 26.1	
	30nm,0.3s						
SKR				*e*S	**Sn**	**08 43 11.5**	**-1.9**
SKR				A	A	08 43 12.5	
	60nm,0.2s						
SKR				A	A	08 43 12.5	
	50nm,0.2s						
SHO	**Shikotan**	**5.40**	**242**	*e*P	Pn	08 42 49.8	+15
SHO				AMB	AMB	08 42 50.4	
	30nm,0.3s						
SHO				*e*S	Sn	08 43 48.1	+12
SHO				A	A	08 43 50.4	
	30nm,0.2s						
SHO				A	A	08 43 50.4	
	20nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.92**	**247**	*i*P	**Pn**	**08 42 44.6**	**+3.1**
YUK				AMB	AMB	08 42 45.5	
	110nm,0.5s						
YUK				*e*S	**Sn**	**08 43 48.9**	**+0.6**
YUK				A	A	08 43 53.3	
	50nm,0.3s						
YUK				A	A	08 43 53.3	
	50nm,0.3s						
NEM2	**Nemuro 2**	**6.34**	**242**	P	**Pn**	**08 42 49.4**	**+2.3**
NEM2				*e*S	**Sn**	**08 43 55.2**	**-3.2**
NMR	**Nemuro--Hokkai**	**6.34**	**242**	*i*P	**Pn**	**08 42 49.4**	**+2.3**
NMR				*i*S	**Sn**	**08 43 56.6**	**-1.9**
JRA	**Rausu**	**6.43**	**248**	P	**Pn**	**08 42 51.3**	**+2.9**
JNK	**Nakash**	**6.86**	**247**	P	**Pn**	**08 42 57.1**	**+3.1**
AKK	**Akkeshi**	**7.08**	**243**	*e*P	**Pn**	**08 42 59.4**	**+2.5**
JAK	**Akkeshi**	**7.18**	**243**	P	**Pn**	**08 43 00.3**	**+2.0**
JAK				*e*S	**Sn**	**08 44 14.3**	**-4.2**
JTKR	**Abashiri--Toko**	**7.21**	**252**	*e*P	**Pn**	**08 43 01.2**	**+2.6**
JOB	**Onbets**	**7.76**	**245**	*e*P	**Pn**	**08 43 08.5**	**+2.4**
JOB				*e*S	**Sn**	**08 44 28.1**	**-4.5**
JKK2	**Kamakawa 2**	**8.01**	**254**	*e*P	**Pn**	**08 43 12.5**	**+3.1**
JCH	**Churui**	**8.21**	**245**	P	**Pn**	**08 43 13.7**	**+1.6**
JCH				*e*S	**Sn**	**08 44 37.3**	**-6.1**

*IDC **11** 08:54:50.5±0.9, 54.71N×111.79E, h0km, mb3.5/7, mbtmp3.7/13, ML3.7/6, MS3.2/1, Error ellipse: s-maj=17.0km s-min=15.1km az=18.0*
*MOS **11** 08:54:50.1±0.8, 54.81N×111.71E, h9km, mb3.7/1, Error ellipse: s-maj=11.6km s-min=8.0km az=76.5*
*BYKL **11** 08:54:51.6±0.1, 54.88N×111.71E, h9km±2km*
ISC 11 08:54:50.9±1.1, 54.91N±0.02×111.78E±0.02, h3km±8km, n58, σ2.9 11/110, mb3.7/5, 4C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.36**	**265**	⇑*i*PG	**Pg**	**08 54 57.1**	**-0.7**
YLYR				*e*		08 55 01.5	
YLYR				pmax	pmax		
	comp=Z,4μm,0.3s						
YLYR				smax	smax		
	comp=N,10μm,0.4s						
YLYR	**Ulyunkhan**	**0.36**	**265**	⇑*i*Pg	**Pg**	**08 54 57.1**	**-0.7**
YLYR				*e*Sg	**Sg**	**08 55 01.8**	**-0.7**
YLYR				Pmax			
	comp=N,4μm,0.3s						
YLYR				Smax			
	comp=N,10μm,0.4s						
KMO	**Kumora**	**1.03**	**342**	⇑*i*PG	**Pg**	**08 55 10.1**	**-0.7**
KMO				*e*		08 55 24.0	
KMO				pmax	pmax		
	comp=Z,486nm,0.5s						
KMO				smax	smax		
	comp=N,1μm,0.7s						
KMO	**Kumora**	**1.03**	**342**	⇑*i*Pg	**Pg**	**08 55 10.1**	**-0.7**
KMO				*e*Sg	**Sb**	**08 55 24.7**	**-0.8**
KMO				Pmax			
	comp=N,487nm,0.5s						
KMO				Smax			
	comp=N,1μm,0.1s						
UKT	**Uakit**	**1.21**	**60**	*e*PG	**Pg**	**08 55 14.2**	**+0.1**
UKT				*e*		08 55 31.6	
UKT				pmax	pmax		
	comp=Z,291nm,0.3s						
UKT				smax	smax		
	comp=E,1μm,0.4s						
UKT	**Uakit**	**1.21**	**60**	*e*Pg	**Pg**	**08 55 13.7**	**-0.4**
UKT				*e*		08 55 16.4	
UKT				*e*Sg	**Sn**	**08 55 31.5**	**-0.3**
UKT				*e*		08 55 35.5	
UKT				max			
	comp=E,291nm,0.3s						
UKT				max			
	comp=E,1μm,0.3s						
NIZB	**Nizh Angarsk**	**1.54**	**305**	*e*PG	**Pn**	**08 55 18.8**	**-0.6**
NIZB				*e*		08 55 39.9	
NIZB				pmax	pmax		
	comp=Z,212nm,0.3s						
NIZB				smax	smax		
	comp=E,1μm,0.6s						
NIZB	**Nizh Angarsk**	**1.54**	**305**	*e*Pg	**Pn**	**08 55 19.0**	**-0.4**
NIZB				*e*		08 55 20.6	
NIZB				*e*Sg	**Sn**	**08 55 39.4**	**-0.5**
NIZB				*e*		08 55 43.1	
NIZB				max			
	comp=E,217nm,0.3s						
NIZB				max			
	comp=E,785nm,0.3s						
SVKR	**Severomuysk**	**1.58**	**39**	*e*PN	**Pg**	**08 55 21.7**	**+0.6**
SVKR				*e*		08 55 44.2	
SVKR				pmax	pmax		
	comp=Z,360nm,0.2s						
SVKR				smax	smax		
	comp=N,2μm,0.8s						
SVKR	**Severomuysk**	**1.58**	**39**	*e*Pg	**Pg**	**08 55 21.8**	**+0.6**
SVKR				*e*Sg	**Sg**	**08 55 43.4**	**+1.8**
SVKR				Pmax			
	comp=N,362nm,0.2s						
SVKR				Smax			
	comp=N,2μm,0.5s						
SYVR	**Suvo**	**1.63**	**221**	*e*PG	**Pn**	**08 55 19.9**	**-0.6**
SYVR				*e*		08 55 40.5	
SYVR				pmax	pmax		
	comp=Z,383nm,0.8s						
SYVR				smax	smax		
	comp=N,2μm,0.6s						
SYVR	**Suvo**	**1.63**	**221**	*e*Pg	**Pn**	**08 55 20.0**	**-0.6**
SYVR				*e*Sg	**Sn**	**08 55 41.3**	**-0.8**
SYVR				Pmax			
	comp=N,344nm,0.5s						
SYVR				Smax			
	comp=N,2μm,0.6s						
MXMB	**Maximikha**	**2.43**	**229**	*e*Pn	**Pn**	**08 55 31.8**	**+0.2**
MXMB				*e*Pg	**Pb**	**08 55 33.8**	**-1.5**
MXMB				*e*Sg	**Sn**	**08 56 04.6**	**+2.8**
NLYR	**Nelyaty**	**2.73**	**53**	*e*PN	**Pn**	**08 55 37.0**	**+1.3**
NLYR				*e*		08 55 41.5	
NLYR				*e*		08 56 17.7	
NLYR				pmax	pmax		
	comp=Z,68nm,0.7s						
NLYR				smax	smax		
	comp=N,721nm,0.8s						
NLYR	**Nelyaty**	**2.73**	**53**	⇓*i*Pn	**Pn**	**08 55 37.0**	**+1.3**
NLYR				*e*Pg	**Pb**	**08 55 41.1**	**+0.7**
NLYR				*e*Sg	**Sg**	**08 56 18.4**	**-0.1**
NLYR				Pmax			
	comp=N,21nm,1.1s						
NLYR				Smax			
	comp=N,722nm,0.8s						
OGRR	**Ongureny**	**2.76**	**244**	*e*PN	**Pn**	**08 55 35.8**	**-0.3**
OGRR				*e*		08 55 40.1	
OGRR				*e*		08 56 14.1	
OGRR				pmax	pmax		
	comp=Z,93nm,0.4s						
OGRR				smax	smax		
	comp=N,478nm,0.5s						
OGRR	**Ongureny**	**2.76**	**244**	*e*Pn	**Pn**	**08 55 36.0**	**-0.1**
OGRR				*e*		08 55 38.1	
OGRR				*e*Pg	**Pb**	**08 55 40.8**	**-0.1**
OGRR				*e*Sn	**Sn**	**08 56 09.4**	**-0.6**
OGRR				*e*Sg	**Sb**	**08 56 16.3**	**+1.1**
OGRR				*e*		08 56 18.0	
OGRR				Pmax			
	comp=N,93nm,0.4s						
OGRR				max			
	comp=N,485nm,0.5s						
GORB	**Goryachinsk**	**2.82**	**228**	*e*Pn	**Pn**	**08 55 36.9**	**-0.1**
GORB				*e*Pg	**Pb**	**08 55 41.1**	**-0.9**
GORB				*e*Sg	**Sb**	**08 56 17.9**	**+0.9**
UZR	**Uzur**	**2.86**	**238**	*e*Pn	**Pn**	**08 55 37.2**	**-0.3**
UZR				*e*Pg	**Pb**	**08 55 41.3**	**-1.3**
UZR				*e*Sn	**Sn**	**08 56 11.9**	**-0.5**
UZR				*e*Sg	**Sb**	**08 56 18.4**	**+0.4**
UZR				Pmax			
	comp=N,36nm,0.2s						
UZR				Smax			
	comp=N,398nm,0.6s						
KELR	**Kotokel**	**3.07**	**227**	*e*Pn	**Pn**	**08 55 40.1**	**-0.3**
KELR				*e*Pg	**Pb**	**08 55 45.9**	**-0.3**
KELR				*e*Sg	**Sb**	**08 56 25.8**	**+1.7**
CIT	**Chita**	**3.08**	**159**	*e*Pg	**Pb**	**08 55 46.5**	**+0.1**
CIT				*e*Sg	**Sb**	**08 56 26.7**	**+2.3**
CIT				Pmax			
	comp=N,123nm,0.2s						
CIT				Smax			
	comp=N,1μm,0.4s						
BOD	**Bodaibo**	**3.17**	**22**	*e*PN	**Pg**	**08 55 49.9**	**-1.7**
BOD				*e*		08 56 30.8	
BOD				pmax	pmax		
	comp=Z,33nm,0.4s						
BOD				smax	smax		
	comp=N,278nm,1.9s						
BOD	**Bodaibo**	**3.17**	**22**	*e*Pn	**Pn**	**08 55 43.1**	**+1.4**
BOD				*e*Pg	**Pb**	**08 55 49.2**	**+1.3**
BOD				*e*Sn	**Sn**	**08 56 20.1**	**+0.1**
BOD				*e*		08 56 30.0	
BOD				*e*Sg	**Sg**	**08 56 30.9**	**-1.8**
BOD				Pmax			
	comp=N,32nm,0.4s						
BOD				Smax			
	comp=N,268nm,1.1s						
TRG	**Tyrgan**	**3.87**	**238**	*e*PN	**Pn**	**08 55 51.1**	**-0.3**
TRG				*e*		08 55 58.6	
TRG				*e*S	**Sn**	**08 56 32.3**	**-5.1**
TRG				*e*		08 56 48.0	
TRG				pmax	pmax		
	comp=Z,23nm,0.3s						
TRG				smax	smax		
	comp=E,190nm,0.3s						
TRG	**Tyrgan**	**3.87**	**238**	*e*Pn	**Pn**	**08 55 51.0**	**-0.3**
TRG				*e*Pg	**Pb**	**08 55 59.7**	**-0.2**
TRG				*e*Sn	**Sn**	**08 56 35.9**	**-1.5**
TRG				*e*Sg	**Sb**	**08 56 49.2**	**+2.1**
TRG				Pmax			
	comp=E,21nm,0.2s						
TRG				Smax			
	comp=E,189nm,0.4s						
UUDB	**Ulan-Yde**	**3.92**	**221**	*e*Pn	**Pn**	**08 55 51.8**	**-0.2**
UUDB				*e*Pg	**Pb**	**08 56 00.5**	**-0.2**
UUDB				*e*Sg	**Sb**	**08 56 52.2**	**+3.7**
UUDB				Pmax			
	comp=E,44nm,0.5s						
UUDB				Smax			
	comp=E,476nm,1.5s						
FFNB	**Fofonovo**	**4.15**	**228**	*e*Pg	**Pb**	**08 56 04.9**	**+0.4**
FFNB				*e*Sg	**Sb**	**08 56 59.4**	**+4.4**
CRS	**Chara**	**4.16**	**59**	*e*Pn	**Pn**	**08 55 56.9**	**+1.5**
CRS				*e*Pg	**Pb**	**08 56 07.4**	**+2.6**
CRS				*e*Sg	**Sg**	**08 57 01.8**	**-2.7**
CRS				Pmax			
	comp=E,50nm,0.8s						
CRS				Smax			
	comp=E,269nm,0.4s						

KAB Kabansk 4.19 229 *e*Pg **Pb** 08 56 06.1 +0.8
KAB *e*Sg **Sb** 08 57 00.8 +4.5
KAB Pmax
comp=E,129nm,0.3s
KAB Smax
comp=E,986nm,0.7s
STDB Stepnoy Dvoret 4.24 232 *e*Pg **Pb** 08 56 06.5 +0.4
STDB *e*Sg **Sb** 08 57 00.5 +2.9
HRMR Khuramsha 4.38 223 *e*Pn **Pn** 08 55 58.3 -0.1
HRMR *e*Pg **Pb** 08 56 09.0 +0.5
HRMR *e*Sg **Sb** 08 57 06.3 +4.6
HRMR Pmax
comp=E,68nm,0.5s
HRMR Smax
comp=E,506nm,0.3s
BGT Bolshoye Golou 4.76 236 *e*Pn **Pn** 08 56 03.6 0.0
BGT *e*Pg **Pb** 08 56 16.2 +1.1
BGT *e*Sg **Sb** 08 57 17.7 +4.9
BGT Pmax
comp=E,17nm,0.3s
BGT Smax
comp=E,115nm,0.6s
TUP Tupik 4.77 92 *e*PN **Pn** 08 56 04.4 +0.7
TUP *e* 08 56 17.6
TUP *e* 08 57 20.7
TUP pmax pmax
comp=Z,41nm,0.4s
TUP smax smax
comp=N,562nm,0.7s
TUP Tupik 4.77 92 *e*Pn **Pn** 08 56 04.6 +0.9
TUP *e* 08 56 14.0
TUP *e*Pg **Pb** 08 56 17.7 +2.5
TUP *e*Sn **Sn** 08 56 59.7 +0.2
TUP *e*Sg **Sg** 08 57 20.7 -3.4
TUP Pmax
comp=N,31nm,0.6s
TUP Smax
comp=N,564nm,0.7s
KHNR Khani 5.03 63 *e*Pg **Pb** 08 56 21.7 +2.0
KHNR *e*Sg **Sg** 08 57 28.6 -3.9
LSTR Listvyanka 5.15 237 *e*Pn **Pn** 08 56 07.9 -1.1
LSTR *e*Pg **Pb** 08 56 23.0 +1.3
LSTR *e*Sg **Sb** 08 57 28.9 +5.0
LSTR Pmax
comp=N,13nm,0.4s
LSTR Smax
comp=N,107nm,1.3s
IRK Irkutsk 5.21 242 *e* Pg 08 57 21.7 +51
IRK *e*Sg **Sb** 08 57 31.7 +6.1
IRK Smax
comp=N,401nm,0.5s
KPC Khapcheranga 5.23 176 *e*PN **Pn** 08 56 09.3 -0.7
KPC *e* 08 56 24.6
KPC *e* 08 57 31.3
KPC pmax pmax
comp=Z,27nm,0.6s
KPC smax smax
comp=E,231nm,0.9s
KPC Khapcheranga 5.23 176 *e*Pn **Pn** 08 56 09.4 -0.6
KPC *e*Pg **Pb** 08 56 25.0 +2.0
KPC *e* 08 56 28.8
KPC *e*Sn **Sn** 08 57 08.1 -2.7
KPC *e*Sg **Sb** 08 57 32.4 +6.3
KPC max
comp=E,27nm,0.4s
KPC Smax
comp=E,226nm,0.9s
IVK Ivanovka 5.40 238 *e*Pn **Pn** 08 56 12.4 +0.1
IVK *e*Pg **Pb** 08 56 27.8 +2.0
IVK *e* 08 57 33.4
IVK *e*Sg **Sb** 08 57 36.7 +5.7
IVK Pmax
comp=E,17nm,0.3s
IVK Smax
comp=E,209nm,0.9s
TLY Talaya 5.85 240 Pn **Pn** 08 56 16.8 -1.8
comp=E,1.4nm,0.3s,baz=32,slow=12,SNR=2.3
TLY Pg **Pb** 08 56 32.5 -1.1
comp=E,1.9nm,0.3s,baz=247,slow=18,SNR=2.5
TLY Lg Lg 08 57 46.1
comp=E,8.2nm,0.3s,baz=150,slow=12,SNR=7.0
comp=E,5.4nm,0.5s
HILR Hailar Array B 7.26 134 Pn **Pn** 08 56 35.7 -2.2
baz=326,slow=13
HILR Sn **Sn** 08 57 57.7 -3.0
baz=319,slow=18
HILR Lg Lg 08 58 34.5
baz=332,slow=31
comp=E,1.7nm,0.3s
SONM Songino Array 7.84 208 Pn **Pn** 08 56 44.8 -1.2
comp=E,1.9nm,0.3s,baz=26,slow=12,SNR=31
SONM Sn **Sn** 08 58 11.9 -3.4
comp=E,1.7nm,0.3s,baz=353,slow=26,SNR=5.2
SONM Lg Lg 08 58 54.5
comp=E,3.2nm,0.3s,baz=21,slow=28,SNR=16
comp=E,2.6nm,0.3s
YAK Yakutsk 11.75 45 Sn **Sn** 08 59 44.8 -5.9
comp=E,2.7nm,0.3s,baz=293,slow=8.0,SNR=1.4
KLR Kul'dur 13.51 107 Pn **Pn** 08 58 03.0 -0.4
comp=E,0.2nm,0.3s,baz=307,slow=12,SNR=4.9
KLR Lg Lg 09 01 56.7
comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=5.7
comp=E,1.5nm,0.6s
KLR Kul'dur 13.51 107 P **Pn** 08 58 03.0 -0.4
ZALV Zalesovo Beam 15.69 278 Pn **Pn** 08 58 32.0 -0.7
comp=E,0.3nm,0.3s,baz=87,slow=7.7,SNR=7.2
ZALV Lg Lg 09 03 02.9
baz=304,slow=19
comp=E,3.0nm,1.0s
USRK Ussuriysk Ar. 16.87 121 LR LR 09 05 27.7
comp=E,94nm,21.9s,baz=214,slow=38
NRIK Noril'sk 18.16 332 P **P** 08 59 05.8 +1.6
comp=E,0.3nm,0.3s,baz=120,slow=12,SNR=4.4
NRIK Lg Lg 09 04 20.9
comp=E,0.1nm,0.3s,baz=28,slow=18,SNR=1.6
comp=E,2.9nm,0.5s
MKAR Makanchi Array 20.19 259 P **P** 08 59 27.6 +1.0
comp=E,0.4nm,0.4s,baz=66,slow=4.1,SNR=2.8
MKAR Lg Lg 09 05 26.8
comp=E,0.4nm,0.3s,baz=127,slow=41,SNR=1.4
comp=E,0.4nm,0.4s
KURK Kurchatov 20.36 272 P **P** 08 59 29.2 +0.9
KURBB Kurchatov Arra 20.45 272 P **P** 08 59 29.2 -0.1
comp=E,0.8nm,0.6s,baz=63,slow=11,SNR=5.7
comp=E,0.8nm,0.6s
BVAR Borovoye Array 24.17 283 P **P** 09 00 08.0 -0.2
comp=E,0.8nm,0.4s,baz=59,slow=16,SNR=5.0
comp=E,0.8nm,0.4s
BVAR Borovoye Array 24.17 283 P **P** 09 00 08.0 -0.2
FINES FINESS Array B 42.54 315 P **P** 09 02 48.3 +1.0
comp=E,1.3nm,0.8s,baz=53,slow=6.4,SNR=4.1
comp=E,1.3nm,0.8s
ILAR Eielson Array 46.45 35 P **P** 09 03 19.9 +1.3
comp=E,0.5nm,0.9s,baz=322,slow=8.3,SNR=4.9
comp=E,0.5nm,0.9s
NOA NORSAR Array B 48.57 320 P **P** 09 03 36.3 +1.2
comp=E,0.5nm,0.7s,baz=101,slow=18,SNR=1.6
comp=E,0.5nm,0.7s
WRA Warramunga Arr 77.00 158 P **P** 09 06 44.2 -0.7
comp=E,0.6nm,1.0s,baz=345,slow=5.8,SNR=5.1
comp=E,0.6nm,1.0s

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*BJI **11** 09:01:44.5, 12°.59N×125°.75E, h12km, mB5.0/14, mb4.5/48, Ms4.5/44, Ms7 4.3/43*
*MAN **11** 09:01:44.0, 12°.75N×125°.83E, h15km, MS4.5*
MAN INTENSITY III - MAPANAS NORTHERN SAMAR.
*GFZ **11** 09:01:46.4±0.1, 13°N±2°×12°6E±°, h10km, M4.9/54, mb4.8/54, Error ellipse: s-maj=6.3km s-min=3.2km az=81.4, confirmed*
*NEIC **11** 09:01:46.8±1.2, 12°.64N±0°.07×125°.62E±0°.08, h10km±1km, mb4.9/59, Error ellipse: s-maj=14.5km s-min=10.7km az=292.0*
*GCMT **11** 09:01:50.8±0.3, 12°.72N±0°.03×125°.68E±0°.02, h16km±1km, MW4.9/82, Moment Tensor Solution. s14,c17; s82,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.87±.16; $M_{\theta\theta}$-0.27±.08; $M_{\phi\phi}$-1.61±.10; $M_{r\theta}$0.05±.23; $M_{\theta\phi}$0.48±.04; $M_{\phi r}$2.28±.32; Best double couple: M_o2.91100×10^{16} NP1:ϕ_s152.00000°, δ21.00000°, λ66.00000°. NP2: ϕ_s357.00000°, δ71.00000°, λ99.00000°. Principal axes: T 3.0190, Plg63.0000°, Azm280.0000°; N -0.2200, Plg8.0000°, Azm174.0000°; P -2.8040, Plg26.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **11** 09:01:54.6±1.9, 12°.58N×125°.54E, h77km±17km, mb4.0/19, mbtmp4.4/22, MS3.9/43 Error ellipse: s-maj=18.8km s-min=8.1km az=72.0*
*DJA **11** 09:01:55.2±0.7, 13°N±4°×12°6E±°, h91km±6km, M5.0/36, mB5.5/16, mb4.8/36, MLv5.5/1, Mw(mB)4.9/16, MwMwp4.6/1, Mwp5.0/1*

ISC 11 09:01:49.6±0.3, 12°.62N±0°.03×125°.70E±0°.04, h33km, n261, σ1°67/237, mb4.7/73, MS4.0/51, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PLP	**Palo**	**1.61**	**206**	*e*P	**Pn**	**09 02 14.8**	**-0.9**
PLP				*e*S	**Sb**	**09 02 39.0**	**+0.4**
MMPH	**Masbate**	**2.04**	**263**	*e*P	**Pn**	**09 02 21.6**	**-0.1**
MMPH				*e*S	**Sb**	**09 02 49.0**	**-2.2**
SCPH	**Surigao**	**2.83**	**184**	*e*P	**Pn**	**09 02 32.2**	**-0.3**
LLP	**Lapu-Lapu**	**2.85**	**217**	*e*P	**Pn**	**09 02 32.9**	**+0.1**
LLP				*i* S	**Sb**	**09 03 15.7**	**+1.4**
TBP	**Tagbilaran**	**3.42**	**212**	*i* P	**Pn**	**09 02 41.3**	**+0.6**
TBP				*i* S	**Sb**	**09 03 31.3**	**+0.5**
IBAJ	**Ibajay, Aklan**	**3.54**	**257**	*i* P	**Pn**	**09 02 39.9**	**-2.5**
IBAJ				*e*S	**Sn**	**09 03 27.2**	**+4.1**
TSSP	**Tandag City**	**3.58**	**172**	*e*P	**Pn**	**09 02 42.5**	**-0.4**
TSSP				*e*S	**Sn**	**09 03 24.6**	**+0.5**
JAP	**San Jose, Anti**	**4.12**	**244**	*e*P	**Pn**	**09 02 54.5**	**+4.3**
CGP	**Cagayan de Oro**	**4.25**	**194**	*e*P	**Pn**	**09 02 52.8**	**+0.7**
CGP				*e*S	**Sb**	**09 03 50.0**	**-4.6**
BIPH	**Bislig**	**4.45**	**172**	*e*P	**Pn**	**09 02 57.0**	**+2.2**
BIPH				*e*S	**Sn**	**09 03 43.8**	**-1.7**
DCPH	**Dipolog City**	**4.63**	**210**	*i* P	**Pn**	**09 03 00.5**	**+3.3**
TGY	**Tagaytay City**	**4.87**	**288**	P	**Pn**	**09 03 03.4**	**+2.8**
	144nm,0.4s,baz=127,slow=12,SNR=3.3						
TGY				S	**Sn**	**09 03 58.1**	**+2.2**
	628nm,0.9s,baz=329,slow=8.3,SNR=3.1						
TGY				LR	LR	09 05 02.2	
	comp=Z,2μm,18.1s,baz=110,slow=40						
TGY	**Tagaytay City**	**4.87**	**288**	*e*P	Pn	09 03 06.2	+5.7
QVPH	**Quezon City--P**	**4.95**	**295**	*e*P	**Pn**	**09 03 01.6**	**0.0**
QVPH				*e*S	Sb	09 04 30.0	+15
DMPH	**Davao City--Mi**	**5.50**	**182**	*e*P	Pn	09 03 18.0	+8.7
DMPH				*i* S	**Sb**	**09 04 39.1**	**+8.5**
DAV	**Davao City (W)**	**5.51**	**181**	P	**Pn**	**09 03 13.5**	**+4.1**
	301nm,0.4s,baz=20,slow=12,SNR=1.4						
DAV				S	**Sn**	**09 04 17.0**	**+5.2**
	172nm,0.3s,baz=289,slow=16,SNR=1.7						
DAV				LR	LR	09 05 45.2	
	comp=Z,3μm,18.6s,baz=20,slow=42						
DAV	**Davao City (W)**	**5.51**	**181**		**Pn**	**09 03 08.8**	**-0.6**
DAV	**Davao City (W)**	**5.51**	**181**	P	**Pn**	**09 03 13.7**	**+4.3**
DAV	**Davao City (W)**	**5.51**	**181**	P	**Pb**	**09 03 24.0**	**-1.2**
KCP	**Kidapawan**	**5.61**	**186**	*e*P	Pb	09 03 20.5	-6.3
GAMI	**Galela, Maluku**	**10.91**	**169**	P	Pn	09 04 31.6	+8.1
TWG	**Pinlang**	**11.06**	**337**	Pn	**Pn**	**09 04 23.8**	**-1.8**
KKM	**Kota Kinabalu**	**11.41**	**236**	P	**Pn**	**09 04 29.7**	**-0.8**
YULB	**Yu-li**	**11.50**	**339**	P	**Pn**	**09 04 30.5**	**-1.1**
SSLB	**Suanglung**	**11.99**	**339**	P	**Pn**	**09 04 36.7**	**-1.6**
NACB	**Ninganchiao**	**12.13**	**342**	P	**Pn**	**09 04 39.2**	**-1.0**
GTOI	**Gorontalo**	**12.20**	**193**	P	**Pn**	**09 04 45.9**	**+4.7**
TOLI2	**Tolitoli**	**12.43**	**203**	P	**Pn**	**09 04 45.7**	**+1.4**
YHNB	**Yeheng**	**12.67**	**342**	Pn	**Pn**	**09 04 45.6**	**-1.9**
YHNB	**Yeheng**	**12.67**	**342**	P	**Pn**	**09 04 47.1**	**-0.5**
JOW	**Kunigami**	**14.35**	**9**	LR	LR	09 11 23.8	
	comp=Z,450nm,18.0s,baz=176,slow=40						
JOW	**Kunigami**	**14.35**	**9**	Pn	**Pn**	**09 05 10.6**	**+0.1**
SWI	**Sorong**	**14.48**	**157**	P	**Pn**	**09 05 10.7**	**-1.7**
SANI	**Sanana**	**14.57**	**179**	P	**Pn**	**09 05 13.0**	**-0.6**
MWPI	**Manokwari, Pap**	**15.80**	**148**	P	**Pn**	**09 05 29.9**	**+0.2**
NLAI	**Namlea**	**15.81**	**175**	P	**P**	**09 05 34.9**	**+1.5**
	76nm,0.7s						
NLAI	**Namlea**	**15.81**	**175**	P	**Pn**	**09 05 31.0**	**+1.1**
KRAI	**Karang Ratu**	**16.06**	**170**	P	**Pn**	**09 05 34.0**	**+0.9**
MSAI	**Masohi**	**16.18**	**168**	P	**Pn**	**09 05 35.2**	**+0.6**
AAI	**Ambon**	**16.39**	**171**	P	**Pn**	**09 05 36.9**	**-0.4**
QIZ	**Qiongzhong**	**16.53**	**295**	P	**Pn**	**09 05 37.1**	**-2.0**
QIZ				S	**Sn**	**09 08 42.1**	**+0.4**
QIZ				L	L		
	comp=N,470nm,16.0s						
QIZ				L	L		
	comp=E,420nm,10.8s						
QIZ				L	L		
	comp=Z,680nm,17.0s						
MMSI	**Mamuju**	**16.64**	**204**	P	**P**	**09 05 44.6**	**+2.0**
	791nm28nm,1.2s						
MMSI	**Mamuju**	**16.64**	**204**	P	**Pn**	**09 05 39.9**	**-0.5**
SPSI	**Sidrap Palu**	**17.50**	**200**	P	**Pn**	**09 05 52.2**	**+1.1**
BNDI	**Bandanaira**	**17.53**	**166**	P	**Pn**	**09 05 51.1**	**-0.5**
KAPI	**Kappang**	**18.49**	**199**	P	**Pn**	**09 06 04.6**	**+1.2**
	8.5nm,0.3s,baz=28,slow=5.0,SNR=6.3						
KAPI	**Kappang**	**18.49**	**199**		**P**	**09 06 02.1**	**-0.8**
KAPI	**Kappang**	**18.49**	**199**	P	**Pn**	**09 06 04.5**	**+1.2**
KAPI	**Kappang**	**18.49**	**199**	P	**P**	**09 06 02.2**	**-0.8**
GUMO	**Guam**	**18.70**	**85**	LR	LR	09 11 31.4	
	comp=Z,268nm,20.4s,baz=262,slow=31						
GUMO	**Guam**	**18.70**	**85**	P	**P**	**09 06 05.3**	**0.0**
SSE	**Sheshan**	**18.86**	**348**	P	**P**	**09 06 07.7**	**+0.8**
SSE				S	**Sn**	**09 09 38.8**	**+1.0**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,140nm,3.5s						
SSE				L	L		
	comp=N,190nm,13.9s						
SSE				L	L		
	comp=E,190nm,14.3s						
JSU	**Suzuyama**	**19.30**	**12**	P	**P**	**09 06 11.0**	**-0.9**
BSSI	**Bau Bau, Buton**	**19.34**	**196**	P	**P**	**09 06 12.2**	**-0.2**
NJ2	**Nanjing**	**20.34**	**343**	*e*P	**P**	**09 06 24.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
WHN	**Wuhan**	**20.70**	**331**	P	Pn	09 06 29.5	0.0
WHN				S	Sn	09 10 21.9	-0.4
WHN				L	L		
	comp=N,870nm,9.3s						
WHN				L	L		
	comp=E,1μm,11.5s						
WHN				L	L		
	comp=Z,2μm,18.8s						
JCJ	**Chichijima**	**21.12**	**45**	LR	LR	09 14 35.1	
	comp=Z,207nm,18.8s,baz=227,slow=36						
JAY	**Jayapura**	**21.17**	**134**	LR	LR	09 16 42.6	
	comp=Z,169nm,18.0s,baz=356,slow=42						
LBFI	**Labuhan Bajo,**	**21.74**	**196**	P	**P**	**09 06 39.9**	**+1.5**
JTU	**Tsushima**	**22.07**	**8**	P	**P**	**09 06 43.1**	**+1.4**
SOEI	**Soe**	**22.27**	**184**		**P**	**09 06 45.3**	**+1.1**
SOEI				lAmb	lAmb	09 06 56.5	
	comp=Z,48nm,0.8s						
SOEI	**Soe**	**22.27**	**184**	P	**P**	**09 06 44.5**	**+0.3**
	comp=Z,63nm,0.9s						
SOEI	**Soe**	**22.27**	**184**	P	**P**	**09 06 44.5**	**+0.3**
SLVN	**Son La**	**22.55**	**296**		**P**	**09 06 45.6**	**-1.6**
PLAI	**Plampang**	**22.71**	**201**	P	**P**	**09 06 48.5**	**-0.2**
BATI	**Baumata**	**22.77**	**185**	P	**P**	**09 06 48.2**	**-1.2**
ENH	**Enshi**	**23.11**	**322**	P	**P**	**09 06 51.0**	**-1.8**
ENH				lAmb	lAmb	09 06 54.2	
	comp=Z,35nm,1.3s						
ENH	**Enshi**	**23.11**	**322**	P	**P**	**09 06 53.1**	**+0.2**
ABJI	**Asem Bagus**	**23.26**	**210**	P	**P**	**09 06 54.4**	**-0.1**
TPI	**Tanjungpandan**	**23.55**	**231**	P	**P**	**09 06 55.4**	**-1.9**
	comp=Z,61nm,1.4s						
TJN	**Taejon**	**23.71**	**3**	P	**P**	**09 06 57.8**	**-0.7**
JAGI	**Jajag, Banyuwa**	**23.89**	**209**		**P**	**09 07 00.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**23.89**	**209**	P	**P**	**09 07 01.5**	**+1.1**
	comp=Z,157nm,1.4s						
JAGI	**Jajag, Banyuwa**	**23.89**	**209**	P	**P**	**09 07 00.6**	**+0.2**
MYKOM	**Kota Tinggi**	**24.17**	**245**	P	**P**	**09 07 04.7**	**+1.6**
NGJI	**Ngawi**	**24.38**	**216**	P	**P**	**09 07 05.6**	**+0.6**
SNJI	**Sawahan-Nganju**	**24.55**	**215**	P	**P**	**09 07 08.2**	**+1.5**
SMRI	**Semarang**	**24.73**	**219**	P	**P**	**09 07 08.0**	**-0.3**
INCN	**Inchon**	**24.78**	**2**	P	**P**	**09 07 09.4**	**+1.0**
KSRS	**Korea Array**	**24.81**	**4**	P	**P**	**09 07 09.4**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=182,slow=9.6,SNR=6.7						
KSRS				LR	LR	09 17 51.5	
	comp=Z,231nm,18.9s,baz=200,slow=38						
	comp=Z,2.1nm,0.8s						
INU	**Inuyama**	**24.84**	**22**	P	**P**	**09 07 09.8**	**+0.9**
LYN	**LuoYang**	**24.93**	**333**	P	**P**	**09 07 12.1**	**+2.3**
LYN				sS	sS	09 11 38.8	-5.6
LYN				SS	**SnSn**	**09 12 32.8**	**+12**
LYN				pmax	pmax		
	comp=Z,66nm,1.3s						
LYN				pmax	pmax		
	comp=Z,470nm,5.6s						
LYN				L	L		
	comp=Z,410nm,11.0s						
LYN				L	L		
	comp=Z,660nm,15.5s						
LYN				L	L		
	comp=Z,400nm,12.7s						
KMI2	**Kunming**	**24.99**	**303**	P	**P**	**09 07 10.6**	**-0.2**
KMI2				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI2				L	L		
	comp=Z,340nm,12.3s						
KMI2				L	L		
	comp=Z,260nm,17.3s						
KMI2				L	L		
	comp=Z,490nm,15.8s						
PCJI	**Pacitan**	**25.22**	**216**	P	**P**	**09 07 12.9**	**+0.4**
MTN	**Manton Dam**	**25.86**	**168**	P	**P**	**09 07 18.4**	**-0.1**
KPJI	**Karang Pucung**	**25.90**	**221**	P	**P**	**09 07 18.0**	**-0.8**
MJAR	**Matsushiro Arr**	**26.34**	**23**	LR	LR	09 17 54.9	
	comp=Z,364nm,18.2s,baz=206,slow=36						
PZH	**PanZhiHua**	**26.40**	**305**	P	**P**	**09 07 25.3**	**+1.9**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
CM31	**Chiang Mai Arr**	**26.41**	**286**	P	**P**	**09 07 22.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**26.41**	**286**	P	**P**	**09 07 22.2**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=94,slow=7.3,SNR=18						
CMAR				LR	LR	09 18 44.1	
	comp=Z,212nm,18.2s,baz=95,slow=38						
	comp=Z,1.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**26.41**	**286**		**P**	**09 07 21.8**	**-1.6**
DL2	**Dalian**	**26.43**	**353**	P	**P**	**09 07 20.2**	**-3.1**
DL2				*e*S	**S**	**09 11 54.7**	**-0.1**
DL2				pmax	pmax		
	comp=Z,16nm,0.8s						
DL2				pmax	pmax		
	comp=Z,240nm,4.8s						
DL2				L	L		
	comp=Z,350nm,13.7s						
DL2				L	L		
	comp=Z,640nm,13.4s						
DL2				L	L		
	comp=Z,690nm,12.5s						
HNS	**HongShan**	**26.57**	**340**	⇓P	**P**	**09 07 25.2**	**+0.6**
HNS				S	**S**	**09 11 56.0**	**-1.0**
HNS				SS	**SnSn**	**09 13 08.8**	**+7.9**
HNS				pmax	pmax		
	comp=Z,13nm,0.9s						
HNS				L	L		
	comp=Z,290nm,12.3s						
HNS				L	L		
	comp=Z,460nm,16.7s						
HNS				L	L		
	comp=Z,400nm,15.7s						
JYT	**Yasato**	**26.89**	**27**	P	**P**	**09 07 25.9**	**-1.6**
CD2	**Chengdu**	**27.23**	**315**	P	**P**	**09 07 30.5**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				L	L		
	comp=Z,900nm,15.2s						
CD2				L	L		
	comp=Z,1μm,15.9s						
CD2				L	L		
	comp=Z,570nm,14.6s						
KNRA	**Kununurra**	**28.27**	**174**		**P**	**09 07 40.1**	**0.0**
KNRA				lAmb	lAmb	09 07 52.2	
	comp=Z,26nm,1.1s						
BJT	**Baijiatuau**	**28.56**	**345**	P	**P**	**09 07 41.7**	**-0.7**
LZH	**Lanzhou**	**30.56**	**324**	*e*P	**P**	**09 08 02.2**	**+1.8**
LZH				sP	sP	09 08 12.6	+0.8
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				L	L		
	comp=Z,450nm,16.0s						
LZH				L	L		
	comp=Z,250nm,15.3s						
LZH				L	L		
	comp=Z,530nm,15.3s						
HHC	**Hu-ho-hao-te**	**30.74**	**339**	*e*P	**P**	**09 08 03.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,50nm,5.7s						
HHC				L	L		
	comp=Z,140nm,16.9s						
HHC				L	L		
	comp=Z,210nm,16.5s						
HHC				L	L		
	comp=Z,220nm,16.9s						
KRVT	**Keravat (AS076**	**31.10**	**121**	LR	LR	09 19 54.0	
	comp=Z,23nm,18.5s,baz=66,slow=35						
USRK	**Ussuriysk Ar.**	**31.93**	**9**	LR	LR	09 21 44.6	
	comp=Z,114nm,18.6s,baz=214,slow=37						
BNX	**BinXian**	**33.04**	**2**	⇓P	**P**	**09 08 22.4**	**+0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.4s						
WB0	**Warramunga Arr**	**33.30**	**165**	P	**P**	**09 08 23.4**	**-1.0**
WB0				lAmb	lAmb	09 08 24.6	
	comp=Z,39nm,1.8s						
WRAB	**Tennant Creek**	**33.45**	**165**	P	**P**	**09 08 24.0**	**-1.7**
WRA	**Warramunga Arr**	**33.45**	**165**	P	**P**	**09 08 25.3**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=343,slow=9.3,SNR=13						
WRA				PcP	**PcP**	**09 11 06.3**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=339,slow=3.2,SNR=9.7						
	comp=Z,2.3nm,0.6s						
WRA	**Warramunga Arr**	**33.45**	**165**	P	**P**	**09 08 23.5**	**-2.2**
WB2	**Warramunga Arr**	**33.46**	**165**	P	**P**	**09 08 24.7**	**-1.1**
WB2				lAmb	lAmb	09 08 26.2	
	comp=Z,39nm,1.7s						
WR8	**Warramunga Arr**	**33.51**	**165**	P	**P**	**09 08 25.9**	**-0.3**
WR8				lAmb	lAmb	09 08 44.9	
	comp=Z,43nm,1.9s						
WR0	**Warramunga Arr**	**33.52**	**165**	P	**P**	**09 08 25.8**	**-0.5**
WR0				lAmb	lAmb	09 08 26.7	
	comp=Z,11nm,1.1s						
BRDH	**Bariadhala**	**33.89**	**292**	LR	LR	09 24 20.8	
	comp=Z,378nm,18.1s,baz=158,slow=40						
GTA2	**Gaotai**	**35.24**	**324**	*e*P	**P**	**09 08 41.4**	**+0.2**
GTA2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA2				L	L		
	comp=Z,190nm,16.2s						
GTA2				L	L		
	comp=Z,180nm,17.1s						
GTA2				L	L		
	comp=Z,290nm,15.9s						
KLR	**Kul'dur**	**36.85**	**7**	P	**P**	**09 08 55.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=294,slow=3.1,SNR=4.2						
KLR				LR	LR	09 25 47.7	
	comp=Z,98nm,19.1s,baz=210,slow=39						
	comp=Z,0.5nm,0.4s						
AS31	**Alice Springs**	**36.94**	**167**	P	**P**	**09 08 54.9**	**-0.9**
ASAR	**Alice Springs**	**36.94**	**167**	P	**P**	**09 08 55.9**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=346,slow=7.1,SNR=30						
ASAR				PcP	**PcP**	**09 11 16.4**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=338,slow=2.7,SNR=6.6						
ASAR				S	**S**	**09 14 36.5**	**-2.4**
	comp=Z,0.7nm,0.8s,baz=349,slow=18,SNR=5.7						
	comp=Z,2.6nm,0.7s						
ASAR	**Alice Springs**	**36.94**	**167**	P	**P**	**09 08 55.5**	**-0.3**
CTAO	**Charters Tower**	**38.28**	**148**	P	**P**	**09 09 07.0**	**-0.2**
ULN	**Ulaanbaatar**	**38.44**	**340**	P	**P**	**09 09 08.8**	**+0.4**
ULN				lAmb	lAmb	09 09 10.3	
	comp=Z,27nm,1.9s						
ULN	**Ulaanbaatar**	**38.44**	**340**	P	**P**	**09 09 08.0**	**-0.4**
	comp=Z,23nm,1.1s						
ULN	**Ulaanbaatar**	**38.44**	**340**	P	**P**	**09 09 07.5**	**-0.9**
SONM	**Songino Array**	**38.64**	**339**	P	**P**	**09 09 10.3**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=155,slow=9.0,SNR=7.1						
SONM				LR	LR	09 25 57.2	
	comp=Z,85nm,19.4s,baz=191,slow=37						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**38.64**	**339**	P	**P**	**09 09 10.1**	**+0.1**
EVN	**Everest**	**39.34**	**299**	P	**P**	**09 09 15.9**	**-0.9**
EVN				lAmb	lAmb	09 09 28.8	
	comp=Z,48nm,1.9s						
EVN	**Everest**	**39.34**	**299**	P	**P**	**09 09 15.5**	**-1.3**
MEEK	**Meekatharra**	**39.62**	**190**	P	**P**	**09 09 16.6**	**-1.7**
H11S3	**WAKE ISLAND Hy**	**39.85**	**76**	T	T	09 52 26.6	
	baz=268,slow=74,SNR=16						
H11S1	**WAKE ISLAND Hy**	**39.86**	**76**	T	T	09 52 39.5	
	baz=268,slow=74,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**39.87**	**76**	T	T	09 52 43.0	
	baz=268,slow=74,SNR=12						
H11N1	**WAK

baz=266,slow=75,SNR=44
H11N3 **WAKE ISLAND Hy** 40.12 74 T T 09 52 48.2
baz=266,slow=75,SNR=67
HNR **Honiara** 40.46 121 LR LR 09 26 51.8
comp=Z,4.7nm,18.4s,baz=18,slow=37
MORW **Morawa** 42.48 193 P P 09 09 40.1 -1.6
INKA **Innaminka** 42.69 160 P P 09 09 44.1 +0.7
TLY **Talaya** 42.85 340 LR LR 09 29 35.6
comp=Z,213nm,18.1s,baz=163,slow=39
QLP **Quilpie** 42.93 155 P P 09 09 45.0 -0.5
FORT **Forrest** 43.20 177 P P 09 09 48.4 +0.8
FORT IAmb IAmb 09 09 49.3
comp=Z,14nm,0.8s
PALK **Pallekele** 44.60 268 LR LR 09 31 01.9
comp=Z,144nm,18.9s,baz=92,slow=39
KLBR **Kellerberrin** 44.61 190 P P 09 09 57.3 -1.6
WMQ **Urumqi** 45.05 321 eP P 09 10 04.6 +2.2
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ L L
comp=Z,290nm,22.1s
WMQ L L
comp=Z,490nm,19.1s
WMQ L L
comp=Z,190nm,19.1s
NWAO **Narrogin (SRO)** 46.00 190 P P 09 10 09.4 -0.5
BBOO **Buckleboo** 46.24 168 P P 09 10 12.9 +1.1
STKA **Stephens Creek** 46.79 161 P P 09 10 16.8 +0.6
comp=Z,8.1nm,0.9s,baz=328,slow=7.4,SNR=9.8
STKA PcP PcP 09 11 48.0 -1.0
comp=Z,3.5nm,0.8s,baz=315,slow=5.7,SNR=2.2
STKA LR LR 09 31 21.9
comp=Z,106nm,21.3s,baz=267,slow=38
comp=Z,8.1nm,0.9s
STKA **Stephens Creek** 46.79 161 P P 09 10 15.8 -0.3
PETK **Petropavlovsk-** 47.76 26 P P 09 10 24.7 +1.3
comp=Z,3.5nm,1.0s,baz=242,slow=3.2,SNR=6.2
PETK LR LR 09 30 47.1
comp=Z,102nm,19.2s,baz=224,slow=36
comp=Z,3.5nm,1.0s
PETK **Petropavlovsk-** 47.76 26 P P 09 10 23.1 -0.3
CMSA **Cobar Meteorol** 47.91 157 P P 09 10 25.7 +0.8
PET **Petropavlovsk** 48.10 26 P P 09 10 26.4 +0.3
PET **Petropavlovsk** 48.10 26 P P 09 10 27.5 +1.4
comp=Z,25nm,1.6s
PET **Petropavlovsk** 48.10 26 P P 09 10 27.7 +1.6
ZSN **Zaisan** 48.65 324 eP P 09 10 30.8 +0.3
YAK **Yakutsk** 49.42 2 LR LR 09 32 49.2
comp=Z,128nm,19.9s,baz=204,slow=38
ARMA **Armidale** 49.53 150 P P 09 10 37.9 +0.4
SANVU **Saraoutou** 49.64 123 P P 09 10 38.0 -0.4
MKAR **Makanchi Array** 49.84 322 P P 09 10 40.1 +0.5
comp=Z,6.6nm,1.1s,baz=113,slow=9.3,SNR=21
MKAR PcP PcP 09 11 59.3 -0.6
comp=Z,2.2nm,0.8s,baz=106,slow=4.8,SNR=2.0
MKAR LR LR 09 33 36.6
comp=Z,170nm,18.1s,baz=150,slow=38
comp=Z,6.6nm,1.1s
MKAR **Makanchi Array** 49.84 322 P P 09 10 38.9 -0.6
MAKZ **Makanchi** 50.04 322 P P 09 10 41.6 +0.5
MAKZ IAmb IAmb 09 10 45.6
comp=Z,26nm,1.6s
MAKZ **Makanchi** 50.04 322 P P 09 10 41.4 +0.4
SHLS **Shalkode** 50.06 316 eP P 09 10 39.3 -2.1
comp=Z,11nm,1.1s
PDGK **Podgornoye** 50.11 317 P P 09 10 41.7 -0.1
UZB **Uzynbulak** 50.35 316 eP P 09 10 43.7 0.0
comp=Z,11nm,1.3s
MA2 **Magadan** 50.44 16 P P 09 10 43.8 -0.1
TARG **Taragay, Kyrgy** 50.67 314 P P 09 10 46.5 +0.1
SATY **Saty** 50.74 316 eP P 09 10 46.6 0.0
comp=Z,7.1nm,1.3s
ASAI **AK-SAY(Kyrgyzs** 51.30 313 P P 09 10 50.7 -0.4
KSH2 **Kashi** 51.46 310 P P 09 10 53.0 +0.9
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
KSH2 L L
comp=Z,690nm,22.3s
KSH2 L L
comp=Z,350nm,18.5s
KSH2 L L
comp=Z,450nm,14.4s
TDK **Taldyqorghan** 51.49 318 eP P 09 10 52.3 +0.2
comp=Z,8.4nm,0.7s
TNSS **Tian-Shan** 51.72 315 eP P 09 10 54.1 -0.2
AAA **Alma-Ata** 51.81 316 eP P 09 10 54.5 0.0
NRN **Naryn** 51.84 313 P 09 10 54.7 -0.4
NRN IAmb IAmb 09 10 56.6
comp=Z,14nm,1.4s
NIL **Nilore** 51.98 303 P P 09 10 55.4 -0.5
NIL IAmb IAmb 09 10 57.6
comp=Z,14nm,0.9s
NIL **Nilore** 51.98 303 P P 09 10 55.1 -0.8
BOOM **Boomskoye usch** 52.23 314 P P 09 10 57.5 -0.3
BOOM IAmb IAmb 09 12 14.6
comp=Z,16nm,1.5s
BOOM **Boomskoye usch** 52.23 314 P P 09 10 57.1 -0.7
ZAA0 **Zalesovo Array** 52.31 331 P P 09 10 57.6 -0.4
ZAA0 IAmb IAmb 09 10 59.0
comp=Z,17nm,1.6s
ZALV **Zalesovo Beam** 52.31 331 P P 09 10 57.7 -0.3
comp=Z,1.9nm,0.7s,baz=116,slow=6.8,SNR=9.4
ZALV LR LR 09 35 06.0
comp=Z,110nm,18.4s,baz=178,slow=38
comp=Z,1.9nm,0.7s
ZALV **Zalesovo Beam** 52.31 331 P 09 10 57.1 -0.8
CAN **Canberra** 52.54 156 P P 09 11 00.5 +0.6
CAN IAmb IAmb 09 11 04.3
comp=Z,19nm,1.1s
CAN **Canberra** 52.54 156 P P 09 11 01.3 +1.4
TOO **Toolangi** 53.27 160 P 09 11 05.3 +0.1
AAK **Ala-Archa** 53.29 314 LR LR 09 37 39.4
comp=Z,241nm,18.8s,baz=126,slow=40
SGDS **Sogindy** 53.46 315 eP P 09 11 06.7 0.0
SEY **Seymchan** 53.70 15 P P 09 11 09.5 +1.5
comp=Z,2.1nm,1.0s,baz=193,slow=11,SNR=4.4
comp=Z,2.1nm,1.0s
KURK **Kurchatov** 53.83 325 P P 09 11 08.6 -0.6
KURK IAmb IAmb 09 11 21.1
comp=Z,13nm,0.8s
KURK **Kurchatov** 53.83 325 P P 09 11 08.8 -0.4
KURBB **Kurchatov Arra** 53.84 325 P P 09 11 09.8 +0.5
comp=Z,2.9nm,0.5s,baz=121,slow=7.3,SNR=33
comp=Z,2.9nm,0.5s
OHH **Osh** 53.90 311 P P 09 11 09.0 -1.0
MILA **Mila** 54.11 157 P P 09 11 12.9 +1.4
BTLS **Baital** 54.38 317 eP P 09 11 13.6 +0.2
GAR **Garm** 55.38 309 P P 09 11 20.5 -0.4
GAR IAmb IAmb 09 11 21.9
comp=Z,18nm,1.1s
SHEM **Shemya Is, Ala** 55.50 33 LR LR 09 32 43.8
comp=Z,35nm,19.9s,baz=18,slow=33
KBL **Kabul** 55.57 303 P P 09 11 21.7 -0.7
DZA **Taraz** 55.59 314 eP P 09 11 22.2 0.0
comp=Z,4.0nm,0.4s
KK31 **Karatay Array** 56.23 314 P P 09 11 26.7 0.0
KKAR **Karatay Array** 56.23 314 P P 09 11 26.4 -0.3
IUG **Iuzhnay** 56.32 312 eP P 09 11 27.7 +0.1
comp=Z,7.2nm,1.2s
CHM **Chimkent** 56.67 313 eP P 09 11 30.3 +0.3
comp=Z,7.0nm,0.5s
BRLS **Boroldaу** 56.69 313 eP P 09 11 30.3 +0.3
comp=Z,6.5nm,1.2s
BRZS **Berezniki** 56.99 322 eP P 09 11 32.1 +0.1
BVAR **Borovoye Array** 59.43 325 P P 09 11 48.8 -0.3
comp=Z,5.6nm,0.9s,baz=123,slow=7.9,SNR=17
comp=Z,5.6nm,0.9s
BORK **Borovoye** 59.48 325 P P 09 11 49.2 -0.1
BORK IAmb IAmb 09 11 50.6
comp=Z,11nm,1.0s
NRIK **Noril'sk** 61.62 346 P P 09 12 03.5 -0.2
comp=Z,5.7nm,0.9s,baz=150,slow=6.5,SNR=7.6
NRIK LR LR 09 42 43.4
comp=Z,254nm,18.1s,baz=162,slow=40
comp=Z,5.7nm,0.9s
NRIK **Noril'sk** 61.62 346 P P 09 12 04.0 +0.4
AB31 **Akbulak array** 64.75 319 P P 09 12 24.5 -0.2
AB31 IAmb IAmb 09 12 25.9
comp=Z,22nm,1.8s
ABKAR **Akbulak array** 64.75 319 P P 09 12 24.1 -0.7
AKTO **Aktyubinsk** 66.18 320 LR LR 09 41 38.9
comp=Z,150nm,18.9s,baz=116,slow=36
ARTI **Arti** 67.06 326 P P 09 12 38.8 -0.7
AFI **Afiamalu** 67.32 111 LR LR 09 35 30.3
comp=Z,53nm,20.4s,baz=135,slow=30
D20K **Etivluk River** 73.85 22 P P 09 13 21.6 +0.8
D20K IAmb IAmb 09 13 25.9
comp=Z,34nm,2.0s
G21K **Allakaket** 74.84 24 P 09 13 27.7 +1.2
KDAK **Kodiak Island** 75.01 33 LR LR 09 43 45.8
comp=Z,57nm,20.2s,baz=308,slow=33
GNI **Garni** 75.11 308 LR LR 09 52 01.6
comp=Z,46nm,18.0s,baz=110,slow=40
RAYN **Ar Rayn** 76.19 291 P P 09 13 34.7 -0.5
RAYN IAmb IAmb 09 13 37.5
comp=Z,6.9nm,1.1s
KBZ **Khabaz** 76.22 312 P P 09 13 34.6 -0.2
comp=Z,10nm,1.2s,baz=84,slow=4.5,SNR=12
KBZ LR LR 09 49 29.4
comp=Z,75nm,18.6s,baz=90,slow=38
comp=Z,10nm,1.2s
KVAR **Kislovodsk Arr** 76.35 312 LR LR 09 51 44.1
comp=Z,144nm,18.8s,baz=268,slow=39
KIV **Kislovodsk** 76.36 312 P P 09 13 36.3 +0.5
comp=Z,16nm,1.0s
H23K **Yukon River** 76.44 25 P P 09 13 35.9 +0.2
H23K IAmb IAmb 09 13 49.1
comp=Z,11nm,1.6s
GEVA **Gevas** 76.56 307 P 09 13 36.7 -0.5
ILAR **Eielson Array** 77.58 26 P P 09 13 42.9 +0.7
comp=Z,0.2nm,0.6s,baz=259,slow=5.5,SNR=1.9
G26K **Porcupine Rive** 78.69 24 P P 09 13 48.4 +0.1
I27K **Kandik River** 79.72 25 P P 09 13 54.3 +0.3
I27K IAmb IAmb 09 14 07.0
comp=Z,19nm,1.8s
F28M **Old Crow** 80.12 23 P P 09 13 55.7 -0.4
I28M **Miner Creek** 80.44 25 P P 09 13 57.8 -0.1
I28M IAmb IAmb 09 14 07.5
comp=Z,19nm,2.0s
G29M **Pine Creek** 80.95 23 P 09 14 00.5 0.0
G29M IAmb IAmb 09 14 09.0
comp=Z,16nm,1.6s
SPITS **Spitsbergen Ar** 81.62 349 LR LR 09 55 34.3
comp=Z,74nm,19.6s,baz=94,slow=39
L29M **L29M** 81.63 27 P 09 14 04.0 -0.2
L29M IAmb IAmb 09 14 17.8
comp=Z,10nm,1.4s
ARCES **ARCESS Array B** 81.81 340 P P 09 14 05.5 +0.5
comp=Z,3.2nm,0.8s,baz=72,slow=4.0,SNR=6.3
comp=Z,3.2nm,0.8s
INK **Inuvik** 82.32 22 P P 09 14 08.7 +1.0
FINES **FINESS Array B** 83.57 332 P P 09 14 12.1 -2.1
comp=Z,4.1nm,1.0s,baz=62,slow=4.8,SNR=6.2
comp=Z,4.1nm,1.0s
BR131 **Keskin Array S** 83.62 309 P P 09 14 14.1 -1.1
BR131 IAmb IAmb 09 14 16.4
comp=Z,17nm,1.9s
BRTR **Keskin Array B** 83.62 309 LR LR 09 57 15.2
comp=Z,47nm,18.0s,baz=144,slow=40
BRTR **Keskin Array B** 83.62 309 P P 09 14 14.5 -0.8
AK09 **Malin Array Si** 84.39 320 P P 09 14 18.7 0.0
AKASG **Malin Array Be** 84.41 321 P P 09 14 17.9 -0.8
comp=Z,2.6nm,0.8s,baz=66,slow=4.4,SNR=17
comp=Z,2.6nm,0.8s
AKASG **Malin Array Be** 84.41 321 P P 09 14 18.4 -0.4
AKBB **Malin Array Si** 84.41 321 P P 09 14 18.2 -0.5
AKBB **Malin Array Si** 84.41 321 P P 09 14 18.6 -0.1
KIEV **Kiev** 84.42 321 P P 09 14 18.0 -0.8
EIL **Elat** 84.50 299 LR LR 09 55 06.3
comp=Z,159nm,19.9s,baz=99,slow=38
MI28 **Mi28,Pidlybu** 85.31 321 P P 09 14 22.1 -1.2
LUBAR **Lubar, Ukraine** 85.50 320 P P 09 14 23.6 -0.7
RNPP9 **Sopachiv** 86.27 322 P P 09 14 28.8 +0.8
KMPD **K-Podol'skiy** 86.67 319 P P 09 14 29.0 -1.1
DLBC **Dease Lake** 86.67 31 LR LR 09 50 54.4
comp=Z,23nm,19.9s,baz=306,slow=34
BURAR **Bucovina Array** 87.73 318 P P 09 14 35.6 +0.2
BURAR IAmb IAmb 09 14 37.2
comp=Z,5.6nm,1.2s
BUR08 **Bucovina Ar. S** 87.73 318 P P 09 14 35.1 -0.3
MLR **Muntele Rosu** 87.83 316 LR LR 09 57 27.1
comp=Z,82nm,20.7s,baz=87,slow=38
PPT **Papeete** 88.82 108 LR LR 09 45 01.3
comp=Z,35nm,22.0s,baz=318,slow=29
PPT2 **Papeete2** 88.83 108 eLR LR 09 42 43.2
comp=Z,154nm,30.5s
PPT2 eLR LR 09 42 47.9
comp=Z,128nm,31.0s
BBB **Bella Bella** 89.80 36 LR LR 09 47 49.0
comp=Z,30nm,21.6s,baz=218,slow=31
PMOR **Pomariorio Ree** 89.81 105 eT T 10 54 33.3
comp=Z,1.7nm,0.2s
TBI **Tubuai** 90.28 114 eLR LR 09 43 37.3
comp=Z,744nm,37.8s
NOA **NORSAR Array B** 90.42 334 LR LR 09 58 09.2
comp=Z,74nm,18.0s,baz=80,slow=37
JMIC **Jan Mayen** 91.03 346 LR LR 10 00 10.6
comp=Z,59nm,20.1s,baz=34,slow=38
VNDA **Vanda** 92.31 173 P P 09 14 55.7 -0.2
comp=Z,3.0nm,1.0s,baz=323,slow=5.0,SNR=6.2
comp=Z,3.0nm,1.0s
VNDA **Vanda** 92.31 173 P P 09 14 56.3 +0.4
VNDA IAmb IAmb 09 14 58.4
comp=Z,12nm,1.5s
VRAC **Vranov** 92.58 322 LR LR 10 00 01.3
comp=Z,54nm,18.1s,baz=76,slow=38
YBH **Yreka Blue Hor** 97.17 45 LR LR 09 55 43.3
comp=Z,25nm,19.2s,baz=307,slow=33
DAVOX **Davos/Dischmat** 97.73 321 LR LR 10 02 55.6
comp=Z,56nm,19.0s,baz=76,slow=38
BORG **Borgarnes** 98.93 346 LR LR 10 05 34.4
comp=Z,83nm,18.7s,baz=36,slow=39
TXAR **Lajitas Array** 116.70 48 PKP PKPdf 09 20 31.8 +0.5
baz=177,slow=2.4,SNR=4.5
PLCA **Paso Flores** 148.57 156 PKPbc PKPbc 09 21 34.0 +0.5
comp=Z,5.6nm,1.1s,baz=315,slow=2.9,SNR=3.4

*SNET **11** 09:07:16.0± 1.7, 13°.47N× 88°.49W, h15km± 18km, ML1.8, Presumed earthquake*
*CATAC **11** 09:07:17.5± 0.5, 14°.3N± 3°.9W± °, h5km± 1km, M2.1/7, MLv2.1/7, Error ellipse: s-maj=5.8km s-min=3.2km az=11.6, confirmed*
*GCG **11** 09:07:18.1± 0.6, 13°.60N× 88°.48W, h13km± 999km, MD3.5, Presumed earthquake*
ISC 11 09:07:17.3± 0.9, 13°.55N± 0°.04× 88°.51W± 0°.03, h9km± 7km, n15, σ0.58/23, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TECA	**Tecapa**	0.06	178	↓*i* P	Pg	09 07 18.5	-1.0
PQSS	**Presa 15 de Se**	0.09	324	P	Pg	09 07 19.9	+0.2
PQSS				S	Sg	09 07 21.8	+0.4
PACA	**Pacayal**	0.19	114	P	Pg	09 07 21.7	+0.3
PACA				S	Sg	09 07 25.5	+1.2
PACA	**Pacayal**	0.19	114	*e*P	Pg	09 07 21.7	+0.3
PACA				*e*S	Sg	09 07 24.1	-0.1
PACA				*e*S	Sb	09 07 24.2	0.0
RANC	**El Ranchito**	0.24	119	P	Pg	09 07 22.6	+0.4
TECO	**Alcaldia de Te**	0.27	267	P	Pg	09 07 22.8	0.0
TECO	**Alcaldia de Te**	0.27	267	↑*i* P	Pg	09 07 22.8	0.0
TECO				*e*S	Sg	09 07 26.9	+0.5
TECO				IAML		09 07 27.0	
	comp=Z,84nm,0.1s						
PAVA	**Las Pavas**	0.45	291	P	Pg	09 07 27.0	+0.9
PAVA				S	Sb	09 07 34.0	-0.3
PAVA	**Las Pavas**	0.45	291	*e*P	Pg	09 07 26.7	+0.6
PAVA				*i* Sg	Sb	09 07 33.8	-0.5
PAVA				IAML		09 07 35.8	
	comp=Z,103nm,0.3s						
MARCA	**Marcala la Paz**	0.76	37	P	Pg	09 07 31.9	-0.1
MARCA	**Marcala la Paz**	0.76	37	*i* P	Pg	09 07 31.5	-0.4
MARCA				*i* S	Sg	09 07 42.2	+0.4
JAYA	**Jayaque - finc**	0.92	277	*i* P	Pg	09 07 34.9	-0.2
MTO3	**Montecristo**	1.19	316	*i* P	Pn	09 07 39.1	-1.1
NUBE	**Las Nubes**	1.29	286	*i* P	Pn	09 07 41.6	0.0
ESQI	**Esquipulas**	1.29	321	P	Pb	09 07 42.1	+0.3

*DJA **11** 09:15:02.3± 0.3, 8°.5S× 2°.1× 10°.6E± °, h10km, M4.3/26, mB6.0/1, mb4.7/5, MLv4.1/26, Mw(mB)5.6/1*
*NEIC **11** 09:15:03.9± 1.0, 8°.18S± 0°.10× 106°.44E± 0°.07, h35km± 5km, mb4.2/12, Error ellipse: s-maj=14.8km s-min=9.7km az=198.0*
*IDC **11** 09:15:06.9± 4.4, 8°.20S× 106°.50E, h59km± 39km, mb3.7/10, mbtmp4.0/10, MS3.9/2, Error ellipse: s-maj=35.0km s-min=13.9km az=64.0*
ISC 11 09:15:03.6± 0.7, 8°.28S± 0°.07× 106°.42E± 0°.08, h35km, n41, σ1.9/18/42, mb4.2/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	1.46	56		Pn	09 15 26.3	-1.2
BBJI	**Bungbulang**	1.46	56	P	Pn	09 15 26.3	-1.2
LEM	**Lembang**	1.86	40	P	Pn	09 15 34.4	+1.3
	651nm,0.5s,baz=157,slow=22,SNR=56						
LEM				S	Sn	09 15 57.1	+1.5
	199nm,0.4s,baz=196,slow=23,SNR=6.1						
LEM	**Lembang**	1.86	40	P	Pn	09 15 34.3	+1.1
LEM				S	Sn	09 15 58.0	+2.4
KASI	**Kota Agung**	3.34	325	P	Pn	09 15 55.6	+2.3
KLSI		3.94	335	P	Pn	09 16 04.0	+2.4
UGM	**Wanagama**	4.08	85	Pn	Pn	09 16 03.5	0.0
UGM	**Wanagama**	4.08	85	P	Pn	09 16 03.0	-0.5
SMRI	**Semarang**	4.16	73	Pn	Pn	09 16 03.5	-1.2
SNJI	**Sawahan-Nganju**	5.31	85	P	Pn	09 16 22.5	+2.0
	0.2nm26nm,0.5s						
JAGI	**Jajag, Banyuwa**	7.65	92		Pn	09 16 53.6	+0.9
JAGI	**Jajag, Banyuwa**	7.65	92	P	Pn	09 16 53.5	+0.9
GSI	**Gunungsitoli**	12.98	317	Pn	Pn	09 18 04.0	-1.7
GIRL	**Giralia**	16.14	153	Pn	Pn	09 18 47.2	-0.7
GIRL				IAmb	IAmb	09 18 50.0	
	comp=Z,18nm,1.0s						
KKM	**Kota Kinabalu**	17.25	35	P	Pn	09 18 59.1	-2.9
KKM				IAmb	IAmb	09 19 00.7	
	comp=Z,35nm,1.1s						
SOEI	**Soe**	17.68	96		Pn	09 19 06.6	-0.8
FITZ	**Fitzroy Crossi**	21.08	120	P	P	09 19 46.0	+1.0
	comp=Z,4.0nm,1.0s,baz=298,slow=8.0,SNR=7.7						
	comp=Z,4.0nm,1.0s						
KNRA	**Kununurra**	23.04	111	P	P	09 20 05.9	-0.1
KNRA				IAmb	IAmb	09 20 32.9	
	comp=Z,8.1nm,1.1s						
MTN	**Manton Dam**	24.70	103	P	P	09 20 20.9	-0.8
MTN				IAmb	IAmb	09 20 37.1	
	comp=Z,11nm,1.1s						
NWAO	**Narrogin (SRO)**	26.50	159	LR	LR	09 30 41.6	
	comp=Z,108nm,20.6s,baz=285,slow=35						
WRA	**Warramunga Arr**	29.40	116	P	P	09 21 04.1	+0.2
	comp=Z,0.4nm,0.6s,baz=288,slow=11,SNR=12						
WRA				PcP	PcP	09 24 10.3	+0.8
	comp=Z,0.2nm,0.5s,baz=314,slow=2.0,SNR=1.6						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	29.40	116	P	P	09 21 03.4	-0.5
WR8	**Warramunga Arr**	29.54	116	P	P	09 21 05.7	+0.5
WR8				IAmb	IAmb	09 21 09.3	
	comp=Z,4.8nm,1.1s						
FORT	**Forrest**	30.16	141	P	P	09 21 10.2	-0.3
ASAR	**Alice Springs**	30.44	123	P	P	09 21 13.6	+0.4
	comp=Z,0.3nm,0.5s,baz=298,slow=8.7,SNR=8.5						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	30.44	123	P	P	09 21 13.2	+0.1
AS31	**Alice Springs**	30.44	123	P	P	09 21 13.0	-0.1
STKA	**Stephens Creek**	40.23	131	P	P	09 22 38.1	+1.0
	comp=Z,1.8nm,0.8s,baz=315,slow=13,SNR=1.8						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	58.89	341	P	P	09 24 59.3	+0.3
	comp=Z,1.0nm,0.5s,baz=145,slow=8.2,SNR=7.5						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	58.89	341	P	P	09 24 58.4	-0.6
MAKZ	**Makanchi**	59.01	341	P	P	09 24 59.2	-0.6
KURBB	**Kurchatov Arra**	63.45	341	P	P	09 25 30.0	+0.2
	comp=Z,1.2nm,0.6s,baz=152,slow=5.7,SNR=6.8						
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	64.62	346	P	P	09 25 37.2	-0.2
	comp=Z,0.5nm,0.4s,baz=167,slow=5.1,SNR=2.8						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	64.62	346	P	P	09 25 36.5	-0.9
MAW	**Mawson**	65.99	197	P	P	09 25 47.7	+1.6
	comp=Z,3.3nm,0.5s,baz=266,slow=21,SNR=9.8						
	comp=Z,3.3nm,0.5s						
MAW	**Mawson**	65.99	197	P	P	09 25 46.3	+0.3
BVAR	**Borovoye Array**	68.32	338	P	P	09 26 01.9	+0.8
	comp=Z,1.7nm,0.5s,baz=116,slow=10,SNR=8.9						
	comp=Z,1.7nm,0.5s						
AB31	**Akbulak array**	70.21	330		P	09 26 12.3	-0.6
AB31				IAmb	IAmb	09 26 30.4	
	comp=Z,2.0nm,0.8s						
ABKAR	**Akbulak array**	70.21	330		P	09 26 12.9	0.0
ARTI	**Arti**	75.57	335	P	P	09 26 44.4	-0.1
	comp=Z,2.2nm,0.4s,baz=115,slow=3.6,SNR=4.1						
	comp=Z,2.2nm,0.4s						
MATP	**Matopo**	75.89	251	LR	LR	09 54 22.1	
	comp=Z,141nm,18.9s,baz=89,slow=31						

*SOME **11** 09:20:24.4, 44°.57N× 82°.10E, h10km*
*NNC **11** 09:20:26.4± 1.4, 44°.63N× 82°.06E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=15.1km s-min=6.1km az=128.0, Suspected Mining explosion.*
ISC 11 09:20:24.9± 1.7, 44.63N± 0°.06× 82°.16E± 0°.08, h0km, n17, σ0.96/24, 2C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	1.72	261	P	Pb	09 20 57.2	-0.2
	9.7nm,0.2s						
DJR				S	Sg	09 21 20.8	+0.6
	8.6nm,0.2s						
DJR	**Jarkent**	1.72	261	*e*P	Pb	09 20 57.2	-0.2
	9.7nm,0.2s						
DJR				*e*S	Sg	09 21 20.8	+0.6
	8.6nm,0.2s						
KAPS	**Kapalarasan**	2.09	289	Pg	Pb	09 21 03.1	-0.7
KAPS				Lg	Lg	09 21 30.5	
KAPS	**Kapalarasan**	2.09	289	*e*P	Pb	09 21 03.1	-0.7
KAPS				*e*S	Sb	09 21 30.5	+0.1
KNOS	**Konyrlen**	2.15	264	Pg	Pb	09 21 04.6	-0.2
	9.4nm,0.3s						
KNOS				Lg	Lg	09 21 32.5	
	14nm,0.3s						
MK31	**Makanchi Array**	2.16	2	Pn	Pb	09 21 04.6	-0.3
	3.1nm,0.3s,baz=104,slow=1.2,SNR=125						
MK31				⇑Lg	Lg	09 21 33.0	
	0.6nm,0.2s,baz=179,slow=15,SNR=15						
MAKZ	**Makanchi**	2.18	357	⇓Pn	Pb	09 21 04.4	-0.8
	3.0nm,0.3s						
MAKZ				Lg	Lg	09 21 33.1	
PDGK	**Podgornoye**	2.33	237	⇑Pg	Pb	09 21 07.0	-0.7
	4.1nm,0.5s						
PDGK				⇓Lg	Lg	09 21 37.1	
	10nm,0.6s						
SHLS	**Shalkode**	2.44	234	Pg	Pn	09 21 06.8	+0.7
	16nm,0.3s						
SHLS				Lg	Lg	09 21 37.0	
	16nm,0.6s						
SHLS	**Shalkode**	2.44	234	*e*P	Pn	09 21 06.8	+0.7
	16nm,0.3s						
SHLS				*e*S	Sn	09 21 37.0	+0.2
	16nm,0.6s						
BLB	**Baldybastay**	2.69	260	Pg	Pb	09 21 13.4	-0.7
	3.2nm,0.2s						
BLB				Lg	Lg	09 21 48.4	
	14nm,0.3s						
UZB	**Uzynbulak**	2.71	238	Pg	Pb	09 21 12.8	-1.5
	3.4nm,0.3s						
UZB				Lg	Lg	09 21 47.2	
	1.4nm,0.4s						
UZB	**Uzynbulak**	2.71	238	*e*P	Pb	09 21 12.8	-1.5
	3.4nm,0.3s						
UZB				*e*S	Sb	09 21 47.2	-1.0
	1.4nm,0.4s						
ARXS	**Arharly**	3.13	264	Pg	Pb	09 21 19.7	-1.7
	3.5nm,0.5s						
ARXS				Lg	Lg	09 21 59.2	
	9.2nm,0.6s						
ARXS	**Arharly**	3.13	264	*e*P	Pb	09 21 19.7	-1.7
	3.5nm,0.5s						
ARXS				*e*S	Sb	09 21 59.2	-1.0
	9.2nm,0.6s						
SATY	**Saty**	3.14	241	Pg	Pb	09 21 21.3	-0.3
	3.7nm,0.2s						
SATY				Lg	Lg	09 22 01.9	
	9.3nm,0.3s						
SATY	**Saty**	3.14	241	*e*P	Pb	09 21 21.3	-0.3
	3.7nm,0.2s						
SATY				*e*S	Sb	09 22 01.9	+1.5
	9.3nm,0.3s						

*MEX **11** 09:24:52.5± 0.5, 13°.67N× 93°.30W, h10km± 331km, MD4.2*
*CATAC **11** 09:24:53.2± 0.5, 14°.N± 3°.× 9°.3W± °, h30km, M3.8/15, mb3.9/1, mB4.2/1, MLv3.7/15, Mw(mB)3.3/1, Error ellipse: s-maj=7.3km s-min=3.9km az=36.3, confirmed*
*GCG **11** 09:24:55.5± 1.5, 13°.77N× 92°.94W, h36km± 999km, MD4.4,*

Presumed earthquake
ISC 11 09:24:51.1±1.9, 13°59N±0°06×93°17W±0°03, h35km±4km, n54, σ2ᵖ03/84, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
THIG		**1.58**	**34**	*eP*		**Pn**	**09 25 17.2**	**+0.5**
THIG				*eS*		**Sn**	**09 25 36.1**	**+0.2**
RTAL	**Retalhuleu**	**1.71**	**57**	P		**Pn**	**09 25 19.8**	**+1.2**
RTAL				S		**Sb**	**09 25 40.7**	**-2.4**
RTAL	**Retalhuleu**	**1.71**	**57**	*eP*		**Pn**	**09 25 19.7**	**+1.2**
RTAL				*eS*		**Sb**	**09 25 41.1**	**-2.0**
PATR	**El Naranjo**	**1.77**	**31**	*eP*		**Pn**	**09 25 19.7**	**+0.2**
PATR				*eS*		**Sn**	**09 25 41.4**	**+0.4**
CHUJ	**Union Juarez**	**1.82**	**34**	*eP*		**Pn**	**09 25 20.5**	**+0.3**
CHUJ				*eS*		**Sn**	**09 25 42.5**	**+0.4**
PAVE	**Pavencul**	**1.86**	**31**	*eP*		**Pn**	**09 25 21.6**	**+0.7**
PAVE				*eS*		**Sn**	**09 25 43.5**	**+0.2**
STG5	**El Palmar, Qui**	**1.94**	**65**	*i P*		**Pn**	**09 25 21.2**	**-0.6**
STG8	**El Palmar, Qui**	**1.96**	**64**	*i P*		**Pn**	**09 25 21.5**	**-0.7**
QUEO	**Labor Ovalle**	**2.05**	**51**	*i P*		**Pn**	**09 25 25.0**	**+1.6**
QUEO				*i S*		**Sn**	**09 25 47.8**	**-0.2**
HUEH	**Huehuetenango**	**2.36**	**43**	P		**Pn**	**09 25 30.0**	**+2.4**
HUEH	**Huehuetenango**	**2.36**	**43**	*eP*		**Pn**	**09 25 29.9**	**+2.3**
HUEH				*eS*		**Sb**	**09 25 58.1**	**-3.9**
HUEH	**Huehuetenango**	**2.36**	**43**	*i P*		**Pn**	**09 25 29.9**	**+2.3**
FG8	**Yepocapa, Chim**	**2.62**	**75**	*i P*		**Pn**	**09 25 27.8**	**-3.4**
FG16	**Alotenango, Sa**	**2.67**	**75**	*i P*		**Pn**	**09 25 29.6**	**-2.3**
CARR	**Arriaga**	**2.74**	**345**	*eP*		**Pn**	**09 25 35.7**	**+3.0**
CARR				*eS*		**Sn**	**09 26 04.0**	**-0.6**
APG	**El Apazote**	**2.98**	**61**	*i P*		**Pn**	**09 25 37.3**	**+1.2**
FAME	**Alcaldia de Sa**	**3.08**	**85**	P		**Pn**	**09 25 39.1**	**+1.8**
FAME				S		**Sn**	**09 26 11.5**	**-1.4**
TGIG		**3.17**	**1**	*eP*		**Pn**	**09 25 41.4**	**+2.7**
TGIG				*eS*		**Sn**	**09 26 17.3**	**+1.9**
TGIG		**3.17**	**1**	*i P*		**Pn**	**09 25 41.4**	**+2.7**
TGIG				*i S*		**Sn**	**09 26 15.7**	**+0.3**
NUBE	**Las Nubes**	**3.31**	**84**	P		**Pn**	**09 25 42.8**	**+2.2**
NUBE				S		**Sn**	**09 26 18.9**	**0.0**
NUBE	**Las Nubes**	**3.31**	**84**	*i P*		**Pn**	**09 25 42.3**	**+1.6**
LOAL	**Lomas de Alarc**	**3.32**	**83**	S		**Sn**	**09 26 19.3**	**+0.4**
SLOZ	**Alcaldia de Sa**	**3.32**	**82**	P		**Pn**	**09 25 43.1**	**+2.4**
SLOZ				S		**Sn**	**09 26 20.2**	**+1.3**
JUAM	**Asuncion Mita**	**3.44**	**77**	*i P*		**Pn**	**09 25 44.1**	**+1.7**
CEVE	**Cerro Verde**	**3.45**	**86**	S		**Sn**	**09 26 22.8**	**+0.2**
HUIG	**Huatulco**	**3.58**	**308**	*eP*		**Pn**	**09 25 45.6**	**+1.4**
HUIG				*eS*		**Sn**	**09 26 21.7**	**-3.6**
JAYA	**Jayaque - finc**	**3.62**	**89**	P		**Pn**	**09 25 44.6**	**-0.3**
JAYA				S		**Sn**	**09 26 25.4**	**-1.1**
MTO3	**Montecristo**	**3.78**	**77**	P		**Pn**	**09 25 48.5**	**+1.3**
MTO3				S		**Sn**	**09 26 31.1**	**+0.4**
MTO3	**Montecristo**	**3.78**	**77**	*i P*		**Pn**	**09 25 48.5**	**+1.3**
UEES	**Universidad Ev**	**3.82**	**88**	S		**Sn**	**09 26 31.5**	**0.0**
ESQI	**Esquipulas**	**3.84**	**75**	P		**Pn**	**09 25 48.1**	**+0.2**
ESQI				S		**Sn**	**09 26 30.6**	**-1.3**
CMIG	**Matias Romero**	**3.86**	**335**	*eP*		**Pn**	**09 25 50.1**	**+2.1**
CMIG				*eS*		**Sn**	**09 26 31.1**	**-1.1**
LOMA	**Loma Larga**	**3.89**	**89**	P		**Pn**	**09 25 49.8**	**+1.3**
LOMA				S		**Sn**	**09 26 33.2**	**+0.1**
PAVA	**Las Pavas**	**4.12**	**88**	P		**Pn**	**09 25 51.1**	**-0.6**
PAVA				S		**Sn**	**09 26 38.0**	**-0.8**
COEG	**Centro de Oper**	**4.17**	**89**	P		**Pn**	**09 25 53.7**	**+1.3**
COEG				S		**Sn**	**09 26 40.6**	**+0.6**
SCLA	**Alcaldia de Sa**	**4.32**	**88**	S		**Sn**	**09 26 43.2**	**-0.5**
PQSS	**Presa 15 de Se**	**4.48**	**89**	P		**Pn**	**09 26 00.3**	**+3.6**
PQSS				S		**Sn**	**09 26 47.5**	**0.0**
PEIG	**Puerto Escondi**	**4.53**	**302**	*eP*		**Pn**	**09 25 59.7**	**+2.4**
PEIG				*eS*		**Sn**	**09 26 45.5**	**-3.4**
PETF	**Flores**	**4.59**	**43**	P		**Pn**	**09 26 00.1**	**+2.0**
PETF				S		**Sn**	**09 26 53.2**	**+2.8**
PETF	**Flores**	**4.59**	**43**	*eP*		**Pn**	**09 26 01.5**	**+3.3**
PETF				*eS*		**Sn**	**09 26 52.2**	**+1.8**
PACA	**Pacayal**	**4.71**	**91**	S		**Sn**	**09 26 53.2**	**-0.4**
NEUV	**Arroyo Zacate**	**4.82**	**329**	*eP*		**Pn**	**09 26 05.7**	**+3.4**
NEUV				*eS*		**Sn**	**09 26 55.2**	**-0.8**
VHO	**Vista Hermosa**	**4.88**	**316**	*eP*		**Pn**	**09 26 06.0**	**+3.6**
VHO				*eS*		Sn	09 26 51.0	-6.8
LCND	**La Caada**	**5.14**	**92**	P		**Pn**	**09 26 07.6**	**+1.9**
CNCH	**Conchagua**	**5.20**	**93**	P		**Pn**	**09 26 05.0**	**-1.6**
CNCH				S		**Sn**	**09 27 05.3**	**-0.2**
YOIG	**Yosondua**	**5.33**	**308**	*eP*		Pn	09 26 13.1	+4.6
YOIG				*eS*		**Sn**	**09 27 05.9**	**-3.0**
CSGN	**Cosiguina Volc**	**5.50**	**96**	S		**Sn**	**09 27 11.8**	**-0.9**
SCIG	**Sabancuy**	**5.68**	**19**	*eP*		**Pn**	**09 26 15.3**	**+2.2**
SCIG				*eS*		**Sn**	**09 27 15.9**	**-1.2**
TXIG	**Tlaxiaco**	**5.74**	**310**	*eP*		Pn	09 26 19.5	+5.3
TXIG				*eS*		**Sn**	**09 27 15.8**	**-3.2**
TOIG	**Toxpalan**	**5.84**	**321**	*eP*		Pn	09 26 21.0	+5.5
TOIG				*eS*		**Sn**	**09 27 20.5**	**-0.8**
MGIG	**Malinaltepec**	**6.40**	**305**	*eP*		**Pn**	**09 26 27.0**	**+3.9**
MGIG				*eS*		**Sn**	**09 27 30.7**	**-4.4**
FTIG	**Fresnillo de T**	**6.43**	**313**	*eP*		Pn	09 26 28.8	+5.3
FTIG				*eS*		**Sn**	**09 27 33.1**	**-2.6**
TLIG	**Tlapa**	**6.53**	**308**	*eP*		Pn	09 26 29.1	+4.2
TLIG				*eS*		**Sn**	**09 27 34.7**	**-3.6**
CRIG	**Cruz Grande**	**6.55**	**299**	*eP*		**Pn**	**09 26 28.4**	**+3.3**
CRIG				*eS*		Sn	09 27 32.8	-5.9

*IDC **11** 09:25:39.6±1.7, 7.°53S×128.°05E, h128km±16km, mb3.8/5, mbtmp4.3/9, Error ellipse: s-maj=20.3km s-min=13.1km az=110.0*
ISC 11 09:25:40.1±0.7, 7.°59S±0.°08×128.°1E±0.°1, h142km, n12, σ1ᵖ17/14, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
BATI	**Baumata**	**5.11**	**239**	P		**Pn**	**09 26 54.3**	**-0.6**
	268nm,0.4s,baz=93,slow=1.5,SNR=37							
BATI				S		**Sn**	**09 27 52.7**	**-0.6**
	69nm,0.3s,baz=68,slow=20,SNR=5.8							
SIJI	**Sorong**	**7.38**	**25**	P		**Pn**	**09 27 24.8**	**-0.5**
	13nm,0.3s,baz=199,slow=13,SNR=14							
SIJI				S		**Sn**	**09 28 46.8**	**-1.1**
	5.4nm,0.4s,baz=230,slow=23,SNR=1.8							
FITZ	**Fitzroy Crossi**	**10.72**	**193**	P		**Pn**	**09 28 08.7**	**-1.1**
	9.9nm,0.4s,baz=16,slow=10,SNR=72							
FITZ				S		Sn	09 29 59.9	-8.4
	15nm,0.9s,baz=79,slow=21,SNR=5.4							
WRA	**Warramunga Arr**	**13.68**	**154**	P		**Pn**	**09 28 46.2**	**-2.1**
	2.4nm,0.6s,baz=332,slow=13,SNR=27							
WRA				S		Sn	09 31 08.7	-11
	4.7nm,0.5s,baz=333,slow=23,SNR=11							
ASAR	**Alice Springs**	**16.92**	**161**	P		**P**	**09 29 29.2**	**+1.0**
	2.4nm,0.7s,baz=341,slow=9.8,SNR=26							
ASAR				S		S	09 32 28.1	-9.2
	1.3nm,0.6s,baz=345,slow=26,SNR=4.9							
STKA	**Stephens Creek**	**27.23**	**154**	P		**P**	**09 31 12.7**	**+1.7**
	1.8nm,0.6s,baz=333,slow=8.4,SNR=5.3							
	1.8nm,0.6s							
SONM	**Songino Array**	**58.43**	**343**	P		**P**	**09 35 21.9**	**+0.8**
	1.5nm,0.8s,baz=153,slow=7.3,SNR=7.9							
	1.5nm,0.8s							
MKAR	**Makanchi Array**	**67.71**	**328**	P		**P**	**09 36 22.0**	**-0.2**
	0.3nm,0.3s,baz=110,slow=6.3,SNR=2.1							
	0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**71.30**	**335**	P		**P**	**09 36 44.0**	**-0.1**
	0.8nm,0.5s,baz=126,slow=7.5,SNR=4.1							
	0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**72.05**	**329**	P		**P**	**09 36 49.0**	**+0.4**
	2.7nm,0.2s,baz=131,slow=5.3,SNR=5.0							
	2.7nm,0.2s							
TXAR	**Lajitas Array**	**126.83**	**59**	PKP		**PKPdf**	**09 44 28.8**	**+0.9**
	0.1nm,0.4s,baz=280,slow=3.2,SNR=2.0							
LPAZ	**La Paz**	**151.34**	**146**	PKPbc		**PKiKP**	**09 45 20.6**	**+1.3**
	1.0nm,0.4s,baz=26,slow=3.7,SNR=9.0							

*WEL **11** 09:30:49.0±0.8, 45.°5S±4.°×16.°8E±.°, h65km±7km, M3.4/12, ML3.3/13, MLv3.4/12, Error ellipse: s-maj=6.1km s-min=4.3km az=119.0*
*NOU **11** 09:30:50.7, 44.°83S×167.°99E, h84km, MLv3.7/13, South Island, New Zealand*
ISC 11 09:30:47.5±1.7, 44.°89S±0.°04×167.°70E±0.°07, h86km±11km, n45, σ0ᵖ99/60, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.27**	**37**	P		**Pn**	**09 31 00.4**	**+0.2**
MSZ				S		**Sn**	**09 31 09.3**	**-0.4**
MLZ	**Mavora Lakes**	**0.56**	**149**	P		**Pn**	**09 31 02.4**	**+0.1**
MLZ				S		**Sn**	**09 31 13.1**	**-0.4**
DCZ	**Deep Cove**	**0.69**	**214**	P		**Pn**	**09 31 02.8**	**-0.8**
DCZ				S		**Sn**	**09 31 14.1**	**-1.5**
WKZ	**Wanaka**	**0.94**	**87**	P		**Pn**	**09 31 07.4**	**+1.2**
WKZ				S		**Sn**	**09 31 21.4**	**+1.1**
WHZ	**Wether Hill Ro**	**1.02**	**170**	P		**Pn**	**09 31 07.2**	**+0.1**
WHZ				S		**Sn**	**09 31 21.4**	**-0.5**
JCZ	**Jackson Bay**	**1.12**	**44**	P		**Pn**	**09 31 09.2**	**+0.7**
JCZ	**Jackson Bay**	**1.12**	**44**	S		**Sn**	**09 31 24.2**	**0.0**
JCZ	**Jackson Bay**	**1.12**	**44**	P		**Pn**	**09 31 09.0**	**+0.5**
JCZ				S		**Sn**	**09 31 26.7**	**+2.4**
EAZ	**Earnscleugh**	**1.19**	**107**	P		**Pn**	**09 31 10.3**	**+1.2**
EAZ				S		**Sn**	**09 31 25.8**	**+0.3**
PYZ	**Puysegur Point**	**1.47**	**209**	P		**Pn**	**09 31 14.8**	**+2.3**
TUZ	**Tuapeka**	**1.73**	**129**	P		**Pn**	**09 31 17.1**	**+1.2**
TUZ				S		**Sn**	**09 31 37.0**	**-0.5**
LBZ	**Lake Benmore**	**1.84**	**75**	P		**Pn**	**09 31 18.0**	**+0.5**
LBZ				S		**Sn**	**09 31 39.7**	**-0.5**
SYZ	**Scrubby Hill**	**1.93**	**149**	P		**Pn**	**09 31 19.7**	**+1.1**
SYZ				S		**Sn**	**09 31 42.3**	**0.0**
APZ	**The Paps**	**1.95**	**174**	P		**Pn**	**09 31 19.5**	**+0.6**
APZ				S		**Sn**	**09 31 42.4**	**-0.5**
FOZ	**Fox Glacier**	**2.04**	**49**	P		**Pn**	**09 31 19.9**	**-0.1**
ODZ	**Otahua Downs**	**2.09**	**95**	P		**Pn**	**09 31 20.6**	**-0.1**
ODZ	**Otahua Downs**	**2.09**	**95**	S		**Sn**	**09 31 45.0**	**-1.2**
ODZ	**Otahua Downs**	**2.09**	**95**	P		**Pn**	**09 31 21.4**	**+0.7**
ODZ				S		**Sn**	**09 31 44.6**	**-1.6**
HHSZ	**Highcliff Hill**	**2.27**	**117**	P		**Pn**	**09 31 24.5**	**+1.4**
HHSZ				S		**Sn**	**09 31 49.4**	**-1.0**
TMZ	**Timaru**	**2.41**	**79**	P		**Pn**	**09 31 25.1**	**+0.1**
TMZ				S		**Sn**	**09 31 52.0**	**-1.8**
GCSZ	**Gaunt Creek Bo**	**2.46**	**51**	P		**Pn**	**09 31 25.7**	**+0.1**
ARCZ	**Arundel**	**2.66**	**71**	P		**Pn**	**09 31 28.1**	**-0.2**
ARCZ				S		**Sn**	**09 31 58.1**	**-1.6**
RPZ	**Rata Peaks**	**2.68**	**65**	P		**Pn**	**09 31 28.7**	**+0.1**
RPZ	**Rata Peaks**	**2.68**	**65**	S		**Sn**	**09 31 59.9**	**-0.2**
RPZ	**Rata Peaks**	**2.68**	**65**	P		**Pn**	**09 31 28.9**	**+0.3**
WVZ	**Waitaha Valley**	**2.84**	**51**	P		**Pn**	**09 31 31.0**	**+0.2**
MHCZ	**Mount Hutt**	**3.09**	**65**	P		**Pn**	**09 31 34.8**	**+0.7**
WACZ	**Wakanui South**	**3.11**	**74**	P		**Pn**	**09 31 34.2**	**-0.1**
RACZ	**Rakaia**	**3.39**	**72**	P		**Pn**	**09 31 38.6**	**+0.5**
INZ	**Inchbonnie**	**3.47**	**53**	P		**Pn**	**09 31 39.7**	**+0.5**
OXZ	**Oxford**	**3.49**	**65**	P		**Pn**	**09 31 39.1**	**-0.4**
MQZ	**McQueen's Vall**	**3.75**	**73**	P		**Pn**	**09 31 42.8**	**-0.1**
LTZ	**Lake Taylor**	**3.92**	**59**	P		**Pn**	**09 31 44.6**	**-0.8**
GVZ	**Greta Valley S**	**4.30**	**65**	P		**Pn**	**09 31 50.2**	**-0.3**
DSZ	**Dennistoun Nort**	**4.34**	**45**	P		**Pn**	**09 31 51.1**	**0.0**
KHZ	**Kahutara**	**4.90**	**62**	P		**Pn**	**09 31 59.6**	**+0.9**
KHZ	**Kahutara**	**4.90**	**62**	S		**Sn**	**09 32 52.5**	**-1.6**
THZ	**Tophouse**	**4.92**	**52**	P		**Pn**	**09 31 58.4**	**-0.5**
QRZ	**Quartz Range**	**5.39**	**43**	P		**Pn**	**09 32 05.4**	**+0.1**
QRZ	**Quartz Range**	**5.39**	**43**	S		**Sn**	**09 33 04.8**	**-1.2**
QRZ	**Quartz Range**	**5.39**	**43**	P		**Pn**	**09 32 05.8**	**+0.4**
TKNZ	**Takaka Hill**	**5.45**	**47**	P		**Pn**	**09 32 07.7**	**+1.5**
HIZ	**Hauiti**	**8.32**	**42**	P		**Pn**	**09 32 47.2**	**+2.0**
HIZ	**Hauiti**	**8.32**	**42**	S		**Sn**	**09 34 16.4**	**-1.1**
OUZ	**Omahuta**	**10.66**	**27**	P		**Pn**	**09 33 18.8**	**+1.7**

*KRNET **11** 09:43:20.6±0.1, 39.°46N×72.°44E, h14km, mb3.4*
*SOME **11** 09:43:25.6, 39.°53N×72.°67E, h5km*
*NNC **11** 09:43:30.5±2.3, 39.°77N×72.°60E, h14km±13km, mb3.7, mpv3.3, Error ellipse: s-maj=15.7km s-min=11.2km az=1.0*
ISC 11 09:43:21.9±0.9, 39.°55N±0.°04×72.°42E±0.°03, h10km, n47, σ2ᵖ33/80, 30C-20D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DRK	**Karamyk**	**0.49**	**262**	⇓*iP*		**Pg**	**09 43 30.4**	**-1.1**
DRK				⇓*iS*		**Sg**	**09 43 37.8**	**-0.2**
SFK	**Sufi-Kurgan**	**0.95**	**61**	⇑*iP*		**Pg**	**09 43 39.5**	**-0.7**
SFK				⇑*iS*		**Sb**	**09 43 53.7**	**+0.3**
OHH	**Osh**	**1.01**	**16**	⇑*iP*		**Pn**	**09 43 41.5**	**-0.7**
OHH				⇑*iS*		**Sn**	**09 43 57.2**	**+0.6**
BTK	**Batken**	**1.34**	**293**	⇑*iP*		**Pg**	**09 43 46.9**	**-0.7**
BTK				⇑*iS*		**Sg**	**09 44 06.2**	**+1.3**
SALK	**Salom-Alik**	**1.71**	**38**	⇑*iP*		**Pg**	**09 43 53.8**	**-0.9**
SALK				⇑*iS*		**Sg**	**09 44 18.1**	**+1.3**
GAR	**Garm**	**1.73**	**252**	⇓*iP*		**Pb**	**09 43 52.6**	**-1.2**
GAR				⇓*iS*		**Sg**	**09 44 16.0**	**-1.4**
ARSB	**Arslanbob**	**1.82**	**13**	⇑*iP*		**Pg**	**09 43 56.2**	**-0.6**
ARSB				⇑*iS*		**Sg**	**09 44 22.3**	**+1.8**
TRKS	**Terek-Say**	**2.21**	**334**	⇑*iP*		**Pb**	**09 44 01.1**	**-0.9**
TRKS				⇑*iS*		**Sg**	**09 44 30.4**	**-2.4**
ARK	**Arkit**	**2.27**	**351**	⇓*iP*		**Pb**	**09 44 03.0**	**-0.1**
ARK				⇓*iS*		**Sg**	**09 44 33.8**	**-1.1**
MNAS	**Manas**	**2.93**	**1**	⇓*iP*		**Pb**	**09 44 12.1**	**-2.3**
MNAS				⇓*iS*		**Sb**	**09 44 49.6**	**-0.7**
UCH	**Uchtor**	**3.11**	**30**	⇓*iP*		**Pb**	**09 44 14.3**	**-3.2**
UCH				⇓*iS*		**Sb**	**09 44 53.8**	**-1.8**
MRKS	**Merke**	**3.25**	**10**	Pg		**Pg**	**09 44 24.3**	**+0.2**
	16nm,0.3s							
MRKS				Lg		Lg	09 45 06.7	
	40nm,0.4s							
MRKS	**Merke**	**3.25**	**10**	*eP*		**Pg**	**09 44 24.3**	**+0.2**
	16nm,0.3s							
MRKS				*eS*		**Sg**	**09 45 06.7**	**+0.5**
	40nm,0.4s							
EKS2	**Erkin-Say**	**3.27**	**18**	⇓*eP*		**Pb**	**09 44 16.5**	**-3.6**
EKS2				⇓*iS*		**Sb**	**09 44 57.6**	**-2.4**
NRN	**Naryn**	**3.31**	**54**	⇑*iP*		**Pn**	**09 44 16.3**	**+2.2**
NRN				⇑*iS*		**Sn**	**09 44 57.0**	**+3.3**
AAK	**Ala-Archa**	**3.46**	**26**	⇑Pn		**Pb**	**09 44 21.2**	**-2.1**
	1.7nm,0.4s							
AAK				⇑Lg		Lg	09 45 11.6	
	11nm,0.6s							
AAK	**Ala-Archa**	**3.46**	**26**	⇓*iP*		**Pn**	**09 44 19.1**	**+3.1**
AAK				⇓*iS*		**Sb**	**09 45 01.8**	**-3.6**
KBK	**Karagaybulak**	**3.64**	**31**	⇓*iP*		**Pn**	**09 44 21.7**	**+3.2**
KBK				⇓*iS*		**Sb**	**09 45 06.1**	**-4.6**
FRU1	**Bishkek**	**3.66**	**26**	⇑*iP*		**Pn**	**09 44 21.9**	**+3.3**
FRU1				⇑*iS*		**Sb**	**09 45 06.9**	**-4.2**
KK31	**Karatay Array**	**3.83**	**339**	⇑Pn		**Pb**	**09 44 26.2**	**-3.4**
	2.1nm,0.2s,baz=148,slow=11,SNR=62							
KK31				⇑Lg		Lg	09 45 26.1	
	3.2nm,0.2s,baz=149,slow=22							
CHMS	**Chumysh**	**3.86**	**26**	⇓*iP*		**Pn**	**09 44 24.7**	**+3.3**
CHMS				⇓*iS*		**Sn**	**09 45 11.4**	**+4.5**
ULHL	**Ulahol**	**3.95**	**46**	⇑*iP*		**Pn**	**09 44 25.6**	**+2.8**
ULHL				⇑*iS*		**Sn**	**09 45 13.2**	**+3.9**
BOOM	**Boomskoye usch**	**3.96**	**41**	⇑*eP*		**Pn**	**09 44 26.0**	**+3.1**
BOOM				⇑*iS*		**Sn**	**09 45 13.7**	**+4.1**
USP	**Ospenovka**	**4.03**	**22**	⇑*iP*		**Pn**	**09 44 26.9**	**+3.2**
USP				⇑*iS*		**Sn**	**09 45 15.5**	**+4.6**
TKM2	**Tokmak 2**	**4.13**	**34**	⇑*iP*		**Pn**	**09 44 28.4**	**+3.2**
TKM2				⇑*iS*		**Sn**	**09 45 18.0**	**+4.3**
SGDS	**Sogindy**	**4.23**	**22**	Pg		**Pg**	**09 44 44.4**	**+1.4**
	1.6nm,0.3s							
SGDS				Lg		Lg	09 45 40.6	
	16nm,0.5s							
KST	**Kastek**	**4.39**	**36**	Pg		**Pg**	**09 44 46.0**	**+0.1**
	4.0nm,0.7s							
KST				Lg		Lg	09 45 43.4	
	12nm,0.4s							
KST	**Kastek**	**4.39**	**36**	*eP*		**Pg**	**09 44 46.0**	**+0.1**
	4.0nm,0.7s							
KST				*eS*		**Sg**	**09 45 43.4**	**+0.6**
	12nm,0.4s							
KDJ	**Kajisay**	**4.43**	**53**	⇓*iP*		**Pn**	**09 44 32.4**	**+3.0**
KDJ				⇓*iS*		**Sn**	**09 45 24.6**	**+3.5**
TARG	**Taragay, Kyrgy**	**4.63**	**60**	⇑*iP*		**Pn**	**09 44 35.1**	**+2.7**
TARG				⇑*iS*		**Sn**	**09 45 29.3**	**+2.9**
IZV	**Izvestkoviy**	**4.70**	**41**	Pg		**Pg**	**09 44 51.1**	**-0.8**
	3.0nm,0.4s							
IZV				Lg		Lg	09 45 52.2	
	19nm,0.7s							
IZV	**Izvestkoviy**	**4.70**	**41**	*eP*		**Pg**	**09 44 51.1**	**-0.8**
	3.0nm,0.4s							
IZV				*eS*		**Sg**	**09 45 52.2**	**-0.6**
	19nm,0.7s							
KRBS	**Karabastau**	**4.80**	**29**	Pg		**Pg**	**09 44 53.6**	**-0.3**
	2.7nm,0.4s							
KRBS				Lg		Lg	09 45 56.8	
	10.0nm,0.7s							
KRBS	**Karabastau**	**4.80**	**29**	*eP*		**Pg**	**09 44 53.6**	**-0.3**
	2.7nm,0.4s							
KRBS				*eS*		**Sg**	**09 45 56.8**	**+0.7**
	10.0nm,0.7s							
TNSS	**Tian-Shan**	**4.87**	**43**	Pg		**Pg**	**09 44 55.0**	**-0.2**
	0.7nm,0.4s							
TNSS				Lg		Lg	09 45 58.4	
	3.0nm,0.6s							
TNSS	**Tian-Shan**	**4.87**	**43**	*eP*		**Pg**	**09 44 55.0**	**-0.2**
	0.7nm,0.4s							
TNSS				*eS*		**Sg**	**09 45 58.4**	**+0.1**
	3.0nm,0.6s							
KOTS	**Kotyrbulak**	**5.09**	**42**	Pg		**Pg**	**09 44 59.3**	**-0.2**
	5.7nm,0.5s							
KOTS				Lg		Lg	09 46 06.3	
	29nm,0.9s							
KOTS	**Kotyrbulak**	**5.09**	**42**	*eP*		**Pg**	**09 44 59.3**	**-0.2**
	5.7nm,0.5s							
KOTS				*eS*		**Sg**	**09 46 06.3**	**+0.8**
	29nm,0.9s							
KTBS	**Karatobe**	**5.24**	**36**	Pg		**Pg**	**09 45 00.4**	**-1.9**
	2.0nm,0.7s							
KTBS				Lg		Lg	09 46 08.2	
	6.7nm,0.5s							
KTBS	**Karatobe**	**5.24**	**36**	*eP*		**Pg**	**09 45 00.4**	**-1.9**
	2.0nm,0.7s							
KTBS				*eS*		**Sg**	**09 46 08.2**	**-1.9**
	6.7nm,0.5s							
SATY	**Saty**	**5.71**	**50**	Pg		**Pg**	**09 45 10.3**	**-0.9**
	1.9nm,0.6s							
SATY				Lg		Lg	09 46 24.7	
	12nm,0.6s							
SATY	**Saty**	**5.71**	**50**	*eP*		**Pg**	**09 45 10.3**	**-0.9**
	1.9nm,0.6s							
SATY				*eS*		**Sg**	**09 46 24.7**	**-0.4**
	12nm,0.6s							
UZB	**Uzynbulak**	**6.13**	**52**	Pg		**Pg**	**09 45 16.5**	**-2.8**
	2.4nm,0.4s							
UZB				Lg		Lg	09 46 36.1	
	6.1nm,0.7s							
UZB	**Uzynbulak**	**6.13**	**52**	*eP*		**Pg**	**09 45 16.4**	**-2.8**
	2.4nm,0.4s							
UZB				*eS*		**Sg**	**09 46 36.1**	**-2.5**
	6.1nm,0.7s							
ARXS	**Arharly**	**6.16**	**39**	Pg		**Pg**	**09 45 17.7**	**-2.2**
	1.6nm,0.6s							
ARXS				Lg		Lg	09 46 37.7	
	4.4nm,0.7s							
ARXS	**Arharly**	**6.16**	**39**	*eP*		**Pg**	**09 45 17.7**	**-2.2**
	1.6nm,0.6s							
ARXS				*eS*		**Sg**	**09 46 37.7**	**-1.9**
	4.4nm,0.7s							
DJR	**Jarkent**	**7.28**	**47**	Pg		**Pg**	**09 45 37.5**	**-3.7**
	0.5nm,0.4s							
DJR				Lg		Lg	09 47 11.9	
	2.8nm,0.8s							

*IDC **11** 10:37:46.5±0.7, 50.°27S×112.°50E, h0km, mb4.6/11, mbtmp4.5/11, MS4.3/37, Error ellipse: s-maj=30.7km s-min=16.0km az=102.0*
*BJI **11** 10:37:46.1, 50.°48S×112.°27E, h10km, mB5.3/6, mb4.9/23, Ms4.9/5, Ms7 4.7/8*
*NEIC **11** 10:37:48.4±0.8, 50.°26S±0.°07×112.°4E±0.°2, h10km±1km, mb4.9/31, Error ellipse: s-maj=21.1km s-min=7.6km az=297.0*
*GFZ **11** 10:37:49.3±0.3, 50.°S±4.°×11.°2E±.°, h10km, M4.9/14, mb4.9/14*
*GCMT **11** 10:37:50.4±0.2, 50.°30S±0.°01×112.°52E±0.°03, h13km, MW5.0/112, Moment Tensor Solution. s42,c50; s112,c164; Duration: 0 Moment tensor: Scale 10¹⁶

QSPA					IAmb	IAmb	10 45 28.6		
	comp=Z,21nm,0.8s								
CTA	**Charters Tower**	**40.26**	**54**	LR	LR	LR	11 02 13.7		
	comp=Z,455nm,18.3s,baz=226,slow=36								
MTN	**Manton Dam**	**40.35**	**29**	P	**P**	**P**	**10 45 25.3**	**-0.9**	
MTN					IAmb	IAmb	10 45 28.0		
	comp=Z,24nm,1.2s								
BATI	**Baumata**	**41.03**	**17**	LR	LR	LR	11 02 59.6		
	comp=Z,776nm,18.1s,baz=152,slow=37								
BATI	**Baumata**	**41.03**	**17**	P	**P**	**P**	**10 45 33.5**	**+1.7**	
DSZ	**Denniston Nort**	**41.07**	**102**	P	**P**	**P**	**10 45 31.5**	**-0.5**	
SOEI	**Soe**	**41.59**	**18**	P	**P**	**P**	**10 45 37.5**	**+1.0**	
	comp=Z,40nm,1.3s								
JAGI	**Jajag, Banyuwa**	**41.72**	**2**	P	**P**	**P**	**10 45 36.4**	**-1.1**	
JAGI					IAmb	IAmb	10 45 43.7		
	comp=Z,56nm,1.1s								
LBFI	**Labuhan Bajo,**	**42.14**	**11**	P	**P**	**P**	**10 45 42.3**	**+1.4**	
SNJI	**Sawahan-Nganju**	**42.39**	**359**	P	**P**	**P**	**10 45 45.3**	**+2.2**	
	comp=Z,52nm,1.3s								
ELIB	**Princess Elisa**	**42.94**	**207**	*d*P	**P**	**P**	**10 45 47.4**	**+0.4**	
	comp=Z,11nm,1.1s								
LEM	**Lembang**	**43.53**	**353**	LR	LR	LR	10 59 48.6		
	comp=Z,847nm,22.0s,baz=154,slow=30								
KAPI	**Kappang**	**45.55**	**10**	LR	LR	LR	11 05 36.7		
	comp=Z,416nm,18.5s,baz=186,slow=37								
RTZ	**Ruatahuna**	**46.11**	**101**	P	**P**	**P**	**10 46 12.4**	**-0.3**	
URZ	**Urewera**	**46.40**	**101**	P	**P**	**P**	**10 46 14.3**	**-0.6**	
	comp=Z,12nm,0.9s,baz=281,slow=3.5,SNR=4.7								
URZ					LR	LR	11 03 43.1		
	comp=Z,158nm,18.9s,baz=266,slow=34								
	comp=Z,12nm,0.9s								
TROLL	**Troll, Antarti**	**48.60**	**203**	⇓P	**P**	**P**	**10 46 32.5**	**+0.8**	
	comp=Z,523nm,0.9s								
PMG	**Port Moresby**	**49.83**	**47**	LR	LR	LR	11 06 27.0		
	comp=Z,348nm,19.3s,baz=224,slow=34								
SNAA	**Sanae**	**50.12**	**202**	P	**P**	**P**	**10 46 42.5**	**-0.7**	
	comp=Z,13nm,0.9s,baz=139,slow=8.4,SNR=20								
SNAA					LR	LR	11 06 50.8		
	comp=Z,679nm,19.3s,baz=96,slow=35								
	comp=Z,13nm,0.9s								
BELA	**Belgrano 2**	**50.49**	**189**	P	**P**	**P**	**10 46 45.7**	**-0.3**	
TOLI2	**Tolitoli**	**51.71**	**11**	P	**P**	**P**	**10 46 54.9**	**-0.8**	
TOLI2					IAmb	IAmb	10 46 57.2		
	comp=Z,19nm,1.2s								
TOLI2	**Tolitoli**	**51.71**	**11**	P	**P**	**P**	**10 46 55.4**	**-0.3**	
VNA2	**Neumayer--Watz**	**51.71**	**201**	⇓P	**P**	**P**	**10 46 55.2**	**+0.1**	
	comp=Z,7.9nm,0.8s,baz=128,slow=7.4								
VNA2	**Neumayer--Watz**	**51.71**	**201**	P	**P**	**P**	**10 46 55.5**	**+0.4**	
SIJI	**Sorong**	**51.78**	**24**	LR	LR	LR	11 10 57.5		
	comp=Z,218nm,18.4s,baz=204,slow=38								
VNA1	**Neumayer--Stat**	**52.11**	**201**	⇓P	**P**	**P**	**10 46 58.8**	**+0.7**	
	comp=Z,27nm,1.0s								
JAY	**Jayapura**	**53.27**	**36**	LR	LR	LR	11 08 52.9		
	comp=Z,632nm,20.1s,baz=186,slow=35								
H08S2	**Diego Garcia H**	**53.96**	**308**	T	T	T	11 45 22.3		
	baz=149,slow=76								
H08S1	**Diego Carcia H**	**53.97**	**308**	T	T	T	11 45 15.5		
	baz=149								
H08S3	**Diego Garcia H**	**53.98**	**308**	T	T	T	11 45 23.8		
	baz=149,slow=76								
RPSI	**Rantau Prapat**	**54.07**	**343**	P	**P**	**P**	**10 47 12.3**	**-0.8**	
RPSI					IAmb	IAmb	10 47 20.3		
	comp=Z,9.8nm,1.1s								
KULM	**Kulim**	**56.31**	**346**	P	**P**	**P**	**10 47 30.0**	**+0.7**	
	comp=Z,18nm,1.2s								
HNR	**Honiara**	**56.44**	**61**	LR	LR	LR	11 09 58.2		
	comp=Z,7.1nm,18.8s,baz=310,slow=34								
KRVT	**Keravat (AS076**	**56.50**	**49**	LR	LR	LR	11 11 39.0		
	comp=Z,36nm,18.4s,baz=116,slow=36								
DAV	**Davao City (W)**	**58.26**	**15**	LR	LR	LR	11 12 18.6		
	comp=Z,238nm,20.6s,baz=174,slow=36								
SMAI	**San Martin Ant**	**61.89**	**180**	P	**P**	**P**	**10 48 07.2**	**-0.1**	
PALK	**Pallekele**	**63.63**	**324**	LR	LR	LR	11 10 11.4		
	comp=Z,315nm,20.1s,baz=136,slow=31								
TGY	**Tagaytay City**	**64.56**	**9**	LR	LR	LR	11 16 33.1		
	comp=Z,102nm,20.1s,baz=200,slow=36								
PMSA	**Palmer Station**	**65.23**	**182**	LR	LR	LR	11 16 21.7		
	comp=Z,181nm,21.6s,baz=179,slow=36								
SUR	**Sutherland**	**66.86**	**247**	LR	LR	LR	11 13 04.2		
	comp=Z,189nm,18.9s,baz=136,slow=32								
LBTB	**Lobatse**	**69.26**	**256**	LR	LR	LR	11 12 39.4		
	comp=Z,258nm,21.8s,baz=128,slow=30								
CMAR	**Chiang Mai Arr**	**69.50**	**346**	P	**P**	**P**	**10 48 57.9**	**+0.9**	
	comp=Z,3.9nm,0.9s,baz=195,slow=5.6,SNR=23								
CMAR					LR	LR	11 15 19.9		
	comp=Z,156nm,21.2s,baz=190,slow=32								
	comp=Z,3.9nm,0.9s								
CMAR	**Chiang Mai Arr**	**69.50**	**346**		**P**	**P**	**10 48 56.2**	**-0.7**	
GUMO	**Guam**	**69.67**	**34**	LR	LR	LR	11 19 05.6		
	comp=Z,168nm,18.9s,baz=198,slow=36								
CHTO	**Chiang Mai**	**69.85**	**346**	P	**P**	**P**	**10 48 58.2**	**-0.9**	
CHTO					IAmb	IAmb	10 49 00.8		
	comp=Z,12nm,1.6s								
CHTO	**Chiang Mai**	**69.85**	**346**	P	**P**	**P**	**10 48 58.6**	**-0.5**	
	comp=Z,6.0nm,1.7s								
CHTO	**Chiang Mai**	**69.85**	**346**	P	**P**	**P**	**10 49 00.0**	**+0.9**	
MATP	**Matopo**	**70.78**	**261**	LR	LR	LR	11 15 06.1		
	comp=Z,191nm,18.5s,baz=96,slow=32								
LSZ	**Lusaka**	**74.79**	**264**	LR	LR	LR	11 17 38.6		
	comp=Z,237nm,19.2s,baz=126,slow=32								
LSZ	**Lusaka**	**74.79**	**264**	P	**P**	**P**	**10 49 29.3**	**+0.2**	
LSZ	**Lusaka**	**74.79**	**264**	P	**P**	**P**	**10 49 30.4**	**+1.3**	
KSANE	**Kasane**	**74.84**	**260**	P	**P**	**P**	**10 49 29.1**	**-0.2**	
KSANE					IAmb	IAmb	10 49 36.9		
	comp=Z,10nm,0.8s								
KMI2	**Kunming**	**75.61**	**351**	P	**P**	**P**	**10 49 35.2**	**+1.7**	
KMI2					sP	pwP	10 49 41.4	+1.2	
KMI2					pmax	pmax			
	comp=Z,23nm,1.3s								
KMI2					L	L			
	comp=Z,340nm,19.7s								
KMI2					L	L			
	comp=Z,250nm,21.7s								
KMI2					L	L			
	comp=Z,460nm,22.7s								
PZH	**PanZhiHua**	**77.06**	**350**	P	**P**	**P**	**10 49 44.1**	**+2.5**	
TBI	**Tubuai**	**77.29**	**111**	*e*LR	LR	LR	11 13 35.2		
	comp=Z,925nm,30.5s								
JOW	**Kunigami**	**78.06**	**14**	LR	LR	LR	11 27 10.6		
	comp=Z,57nm,18.9s,baz=202,slow=38								
TSUM	**Tsumeb**	**78.52**	**254**	LR	LR	LR	11 19 25.4		
	comp=Z,306nm,18.2s,baz=153,slow=32								
ENH	**Enshi**	**80.27**	**357**	P	**P**	**P**	**10 50 00.1**	**+1.1**	
EVN	**Everest**	**81.18**	**337**	P	**P**	**P**	**10 50 03.9**	**-0.8**	
EVN	**Everest**	**81.18**	**337**	P	**P**	**P**	**10 50 05.5**	**+0.8**	
CD2	**Chengdu**	**81.23**	**352**	P	**P**	**P**	**10 50 05.4**	**+1.2**	
CD2					pmax	pmax			
	comp=Z,20nm,0.9s								
CD2					L	L			
	comp=Z,320nm,12.1s								
CD2					L	L			
	comp=Z,470nm,12.7s								
CD2					L	L			
	comp=Z,280nm,15.2s								
JCJ	**Chichijima**	**81.43**	**27**	LR	LR	LR	11 25 24.6		
	comp=Z,92nm,20.6s,baz=158,slow=35								
PPT	**Papeete**	**81.61**	**107**	LR	LR	LR	11 20 53.3		
	comp=Z,60nm,21.9s,baz=191,slow=32								
LSA	**Lhasa**	**81.87**	**341**	P	**P**	**P**	**10 50 09.2**	**+1.0**	
NJ2	**Nanjing**	**82.19**	**5**	*e*P	**P**	**P**	**10 50 11.1**	**+2.0**	
NJ2					pmax	pmax			
	comp=Z,3.0nm,0.5s								
XAN	**Xi'an**	**84.04**	**357**	P	**P**	**P**	**10 50 19.3**	**+0.6**	
XAN					pmax	pmax			
	comp=Z,16nm,1.5s								
LZH	**Lanzhou**	**86.36**	**353**	*e*P	**P**	**P**	**10 50 31.2**	**+0.7**	
LZH					sP	pwP	10 50 40.6	+3.4	
LZH					pmax	pmax			
	comp=Z,19nm,1.1s								
LZH					L	L			
	comp=Z,150nm,16.0s								
LZH					L	L			
	comp=Z,270nm,14.8s								
LZH					L	L			
	comp=Z,280nm,20.3s								
KSAR	**Wonju Array Be**	**88.42**	**12**	P	**P**	**P**	**10 50 39.1**	**-1.0**	
KSRS	**Korea Array**	**88.44**	**12**	P	**P**	**P**	**10 50 38.6**	**-1.6**	
	comp=Z,2.1nm,1.0s,baz=183,slow=2.4,SNR=4.2								
KSRS					LR	LR	11 30 37.5		
	comp=Z,47nm,20.4s,baz=185,slow=36								
	comp=Z,2.1nm,1.0s								
PLCA	**Paso Flores**	**89.30**	**178**	LR	LR	LR	11 31 03.9		
	comp=Z,216nm,20.3s,baz=173,slow=36								
MJAR	**Matsushiro Arr**	**89.41**	**20**	P	**P**	**P**	**10 50 44.2**	**-0.6**	
	comp=Z,2.7nm,1.1s,baz=208,slow=8.0,SNR=4.4								
MJAR					LR	LR	11 27 29.1		
	comp=Z,100nm,21.8s,baz=202,slow=33								
	comp=Z,2.7nm,1.1s								
MJAR	**Matsushiro Arr**	**89.41**	**20**	P	**P**	**P**	**10 50 44.7**	**-0.2**	
MJAR					IAmb	IAmb	10 50 50.3		
	comp=Z,16nm,1.6s								
HHC	**Hu-ho-hao-te**	**90.78**	**359**	*e*P	**P**	**P**	**10 50 53.6**	**+2.3**	
HHC					pmax	pmax			
	comp=Z,6.0nm,0.6s								
HHC					pmax	pmax			
	comp=Z,78nm,4.4s								
RAYN	**Ar Rayn**	**94.27**	**302**	P	**P**	**P**	**10 51 06.5**	**-1.2**	
CN2	**Changchun**	**94.40**	**9**	P	**P**	**P**	**10 51 09.7**	**+1.9**	
WMQ	**Urumqi**	**96.21**	**342**	*e*P	**P**	**P**	**10 51 16.2**	**+0.1**	
WMQ					pmax	pmax			
	comp=Z,16nm,0.9s								
WMQ					L	L			
	comp=Z,87nm,22.3s								
SONM	**Songino Array**	**97.90**	**356**	P	**P**	**P**	**10 51 21.4**	**-2.4**	
	comp=Z,0.3nm,0.6s,baz=152,slow=4.3,SNR=3.8								
	comp=Z,0.3nm,0.6s								
AAK	**Ala-Archa**	**98.34**	**333**	LR	LR	LR	11 30 40.6		
	comp=Z,179nm,21.8s,baz=173,slow=32								
CFA	**Coronel Fontan**	**98.45**	**179**	LR	LR	LR	11 37 09.3		
	comp=Z,110nm,18.8s,baz=173,slow=36								
MODS	**Modra-Piesok**	**127.64**	**303**	*e*PKP	**PKiKP**		**10 56 55.2**	**+1.7**	
ILAR	**Eielson Array**	**138.07**	**39**	PKP	**PKPdf**		**10 57 10.8**	**-1.2**	
	comp=Z,0.6nm,0.9s,baz=259,slow=2.3,SNR=5.0								
ILAR	**Eielson Array**	**138.07**	**39**		**PKPdf**		**10 57 12.1**	**0.0**	
NVAR	**Mina Array Bea**	**142.49**	**88**	PKP	**PKPdf**		**10 57 18.6**	**-2.6**	
	comp=Z,2.0nm,0.9s,baz=193,slow=2.6,SNR=5.6								
TXAR	**Lajitas Array**	**145.69**	**114**	PKPbc	**PKPbc**		**10 57 27.4**	**+0.1**	
	comp=Z,11nm,1.2s,baz=197,slow=3.9,SNR=30								
PDAR	**Pinedale Array**	**150.43**	**88**	PKPbc	**PKPbc**		**10 57 38.9**	**-0.9**	
	comp=Z,1.6nm,1.1s,baz=245,slow=3.1,SNR=5.2								
YKA	**Yellowknife Ar**	**151.92**	**46**	PKPbc	**PKPbc**		**10 57 41.5**	**-0.7**	
	comp=Z,2.7nm,0.8s,baz=278,slow=2.1,SNR=19								
YKA	**Yellowknife Ar**	**151.92**	**46**		**PKPbc**		**10 57 42.3**	**+0.1**	

*SOME **11** 10:44:30.3,41°.82N×81°.27E,h10km*
*NNC **11** 10:44:31.6±2.0,41°.82N×81°.23E,h0km,mb3.7,mpv3.3,*
Error ellipse: s-maj=13.7km s-min=10.2km az=161.0
ISC 11 10:44:33.8±3.3,41°.90N±0°.10×81°.09E±0°.08,h4km±16km,
n29,σ1°59/46,2C-6D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**1.64**	**341**	P		**Pn**	**10 45 02.7**	**-0.9**
	19nm,0.3s							
KTMS				S		**Sb**	**10 45 26.4**	**+0.6**
	50nm,0.3s							
KTMS	**Ketmen**	**1.64**	**341**	*e*P		**Pn**	**10 45 02.7**	**-0.9**
	19nm,0.3s							
KTMS				*e*S		**Sb**	**10 45 26.4**	**+0.6**
	50nm,0.3s							
SHLS	**Shalkode**	**1.74**	**317**	P		**Pn**	**10 45 02.4**	**-2.6**
	42nm,0.3s							
SHLS				S		**Sn**	**10 45 25.6**	**-2.1**
	126nm,0.4s							
SHLS	**Shalkode**	**1.74**	**317**	*e*P		**Pn**	**10 45 02.4**	**-2.6**
	42nm,0.3s							
SHLS				*e*S		**Sn**	**10 45 25.6**	**-2.1**
	126nm,0.4s							
PDGK	**Podgornoye**	**1.86**	**321**	⇓Pn		**Pb**	**10 45 07.9**	**-0.4**
	34nm,0.5s							
PDGK				⇓Sn		**Sg**	**10 45 34.9**	**+1.5**
	38nm,0.5s							
UZB	**Uzynbulak**	**1.98**	**310**	Pg		**Pb**	**10 45 10.7**	**+0.3**
	20nm,0.6s							
UZB				Lg		Lg	10 45 39.8	
	57nm,0.4s							
UZB	**Uzynbulak**	**1.98**	**310**	*e*P		**Pb**	**10 45 10.7**	**+0.3**
	20nm,0.6s							
UZB				*e*S		**Sg**	**10 45 39.8**	**+2.6**
	57nm,0.4s							
SATY	**Saty**	**2.30**	**301**	Pg		**Pb**	**10 45 16.4**	**+0.5**
	20nm,0.7s							
SATY				Lg		Lg	10 45 49.6	
	95nm,0.7s							
SATY	**Saty**	**2.30**	**301**	*e*P		**Pb**	**10 45 16.4**	**+0.5**
	20nm,0.7s							
SATY				*e*S		**Sg**	**10 45 49.6**	**+2.0**
	95nm,0.7s							
DJR	**Jarkent**	**2.62**	**339**	Pg		**Pb**	**10 45 20.6**	**-0.7**
	6.3nm,0.4s							
DJR				Lg		Lg	10 45 56.6	
	20nm,0.6s							
DJR	**Jarkent**	**2.62**	**339**	*e*P		**Pb**	**10 45 20.6**	**-0.7**
	6.3nm,0.4s							
DJR				*e*S		**Sg**	**10 45 56.6**	**-1.1**
	20nm,0.6s							
KNOS	**Konyrlen**	**2.83**	**331**	Pg		**Pb**	**10 45 23.6**	**-1.4**
	4.5nm,0.4s							
KNOS				Lg		Lg	10 46 02.2	
	48nm,0.4s							
BLB	**Baldybastay**	**2.92**	**320**	Pg		**Pb**	**10 45 26.1**	**-0.3**
	6.1nm,0.6s							
BLB				Lg		Lg	10 46 06.3	
	24nm,0.4s							
KOTS	**Kotyrbulak**	**3.23**	**296**	Pg		**Pb**	**10 45 33.0**	**+1.2**
	7.7nm,0.3s							
KOTS				Lg		Lg	10 46 17.8	
	24nm,0.5s							
KOTS	**Kotyrbulak**	**3.23**	**296**	*e*P		**Pb**	**10 45 33.0**	**+1.2**
	7.7nm,0.3s							
KOTS				*e*S		**Sg**	**10 46 17.8**	**+0.3**
	24nm,0.5s							
TNSS	**Tian-Shan**	**3.27**	**292**	Pg		**Pb**	**10 45 33.3**	**+0.6**
	1.1nm,0.4s							
TNSS				Lg		Lg	10 46 18.2	
	4.7nm,0.8s							
TNSS	**Tian-Shan**	**3.27**	**292**	*e*P		**Pb**	**10 45 33.2**	**+0.6**
	1.1nm,0.4s							
TNSS				*e*S		**Sg**	**10 46 18.2**	**-0.6**
	4.7nm,0.8s							
ARXS	**Arharly**	**3.33**	**315**	Pg		**Pb**	**10 45 32.6**	**-0.8**
	7.3nm,0.6s							
ARXS				Lg		Lg	10 46 18.0	
	11nm,0.4s							
ARXS	**Arharly**	**3.33**	**315**	*e*P		**Pb**	**10 45 32.6**	**-0.8**
	7.3nm,0.6s							
ARXS				*e*S		**Sb**	**10 46 18.0**	**+3.7**
	11nm,0.4s							
IZV	**Izvestkoviy**	**3.50**	**290**	Pg		**Pb**	**10 45 36.7**	**+0.3**
	3.4nm,0.4s							
IZV				Lg		Lg	10 46 24.3	
	20nm,0.8s							
IZV	**Izvestkoviy**	**3.50**	**290**	*e*P		**Pb**	**10 45 36.7**	**+0.3**
	3.4nm,0.4s							
IZV				*e*S		**Sg**	**10 46 24.3**	**-1.9**
	20nm,0.8s							
KTBS	**Karatobe**	**3.72**	**301**	Pg		**Pb**	**10 45 39.9**	**-0.1**
	1.1nm,0.3s							
KTBS				Lg		Lg	10 46 29.7	
	14nm,0.7s							
KTBS	**Karatobe**	**3.72**	**301**	*e*P		**Pb**	**10 45 39.9**	**-0.1**
	1.1nm,0.3s							
KTBS				*e*S		**Sb**	**10 46 29.7**	**+4.2**
	14nm,0.7s							
KST	**Kastek**	**3.96**	**289**	Pg		**Pb**	**10 45 44.7**	**+0.5**
	3.5nm,0.4s							
KST				Lg		Lg	10 46 38.4	
	20nm,0.8s							
KST	**Kastek**	**3.96**	**289**	*e*P		**Pb**	**10 45 44.7**	**+0.5**
	3.5nm,0.4s							
KST				*e*S		**Sg**	**10 46 38.4**	**-2.6**
	20nm,0.8s							
KRBS	**Karabastau**	**4.37**	**296**	Pg		**Pb**	**10 45 52.3**	**+1.1**
	1.9nm,0.6s							
KRBS				Lg		Lg	10 46 51.0	
	4.8nm,0.7s							
KRBS	**Karabastau**	**4.37**	**296**	*e*P		**Pb**	**10 45 52.3**	**+1.1**
	1.9nm,0.6s							
KRBS				*e*S		**Sg**	**10 46 51.0**	**-3.1**
	4.8nm,0.7s							
MAKZ	**Makanchi**	**4.95**	**7**	⇓Pn		**Pn**	**10 45 48.5**	**-0.5**
	1.6nm,0.6s							
MAKZ				⇑Sn		**Sn**	**10 46 47.2**	**+0.5**
	2.7nm,0.6s							
MAKZ				⇑Lg		Lg	10 47 09.3	
	13nm,1.4s							
MK31	**Makanchi Array**	**4.97**	**10**	⇓Pn		**Pn**	**10 45 50.0**	**+0.8**
	0.1nm,0.2s,baz=184,slow=14,SNR=24							
MK31				⇓Sn		**Sn**	**10 46 48.5**	**+1.3**
	0.9nm,0.5s,baz=182,slow=27							
MK31				⇓Lg		Lg	10 47 09.5	
	3.2nm,0.5s,baz=193,slow=29							

*IDC **11** 10:44:37.7±1.0,38°.26N×26°.38W,h0km,mb3.8/16,*
mbtmp3.8/17,ML3.8/1,MS3.3/18,Error ellipse:
s-maj=27.3km s-min=18.7km az=176.0
*SVSA **11** 10:44:41.5±1.3,38°.04N×26°.43W,h2km±3km,*
ML4.2(INMG),Error ellipse: s-maj=5.2km s-min=1.3km
az=33.0,#DIST_RANGE: LOCAL #IPMA_REGION: Fossa de Hirondelle
ISC 11 10:44:37.4±1.4,37°.94N±0°.08×26°.56W±0°.05,h6km±8km,
n83,σ1°88/75,mb3.8/16,MS3.2/16,5C,Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSET	**Sete Cidades**	**0.67**	**99**	*e*S		**Sg**	**10 44 59.7**	**+0.6**
PSET				*i* IAML			10 45 01.2	
PSET				*i* IAML			10 45 01.5	
PSET				*i* IAML			10 45 09.1	
PDA	**Ponta Delgada**	**0.73**	**105**	*e*S		**Sg**	**10 45 01.8**	**+0.7**
PDA				*i* IAML			10 45 03.3	
PDA				*i* IAML			10 45 04.5	
POVGA	**Lagoa**	**0.79**	**104**	⇑*i*P		**Pg**	**10 44 53.8**	**+1.2**
POVGA				*i* IAML			10 45 07.4	
CMLA	**Cha da Macela**	**0.84**	**102**	⇑*i*P		**Pg**	**10 44 54.2**	**+0.7**
CMLA				*e*S		**Sg**	**10 45 04.1**	**-0.3**
CMLA				*i* IAML			10 45 05.2	
CMLA				*i* IAML			10 45 05.7	
CMLA				*i* IAML			10 45 08.8	
PCALD	**Caldeiras da R**	**0.86**	**99**	*e*P		**Pg**	**10 44 54.3**	**+0.4**
PCALD				*e*S		**Sg**	**10 45 04.3**	**-0.8**
PSCM	**Serra do Cume**	**0.88**	**330**	⇑*e*P		**Pg**	**10 44 55.2**	**+0.9**
PSCM				*e*S		**Sg**	**10 45 05.7**	**0.0**
PSCM				*i* IAML			10 45 06.8	
PSCM				*i* IAML			10 45 06.8	
PSCM				*i* IAML			10 45 15.1	
ADH	**Angra Heroismo**	**0.89**	**324**	*e*P		**Pg**	**10 44 55.8**	**+1.3**
ADH				*e*S		**Sg**	**10 45 06.6**	**+0.5**
ADH				*i* IAML			10 45 07.2	
ADH				*i* IAML			10 45 08.2	
ADH				*i* IAML			10 45 09.0	
PGRON	**Lagoa das Cont**	**0.95**	**100**	⇑*i*P		**Pg**	**10 44 55.7**	**0.0**
PGRON				*e*S		**Sg**	**10 45 06.9**	**-1.2**
PGRON				*i* IAML			10 45 07.7	
PGRON				*i* IAML			10 45 08.5	
PGRON				*i* IAML			10 45 10.8	
PAGU	**Agualva, Azore**	**0.96**	**330**	*e*P		**Pg**	**10 44 56.5**	**+0.6**
PAGU				*e*S		**Sg**	**10 45 07.9**	**-0.4**
PAGU				*i* IAML			10 45 08.7	
PAGU				*i* IAML			10 45 09.1	
PAGU				*i* IAML			10 45 09.4	
PSBA	**Serra de Santa**	**1.02**	**324**	*e*P		**Pg**	**10 44 57.8**	**+0.7**
PSBA				*e*S		**Sg**	**10 45 10.1**	**-0.2**
PSBA				*i* IAML			10 45 11.9	
PSBA				*i* IAML			10 45 15.6	
PSBA				*i* IAML			10 45 16.4	
PPOV	**Povoa§£o**	**1.06**	**100**	*e*P		**Pg**	**10 44 57.1**	**-0.6**
PPOV				*e*S		**Sg**	**10 45 09.3**	**-2.2**
PPOV				*i* IAML			10 45 09.7	
PPOV				*i* IAML			10 45 10.4	
PPOV				*i* IAML			10 45 11.2	
BART	**Pico Bartolome**	**1.11**	**98**	⇑*e*P		**Pg**	**10 44 57.5**	**-1.3**
BART				*e*S		**Sg**	**10 45 10.7**	**-2.5**
BART				*i* IAML			10 45 13.7	
BART				*i* IAML			10 45 16.9	
BART				*i* IAML			10 45 17.5	
PNOR2	**Nordeste**	**1.12**	**95**	*e*P		Pn	10 45 10.2	+11
PNOR2				*e*S		**Sn**	**10 45 22.4**	**+7.0**
PNOR2				*i* IAML			10 45 24.1	
PNOR2				*i* IAML			10 45 24.7	
PNOR2				*i* IAML			10 45 25.4	
PMAN	**Manadas**	**1.39**	**300**	*e*P		**Pn**	**10 45 04.0**	**+0.7**
PMAN				*e*S		**Sn**	**10 45 20.1**	**-1.9**
PMAN				*i* IAML			10 45 21.0	
PMAN				*i* IAML			10 45 21.2	
PMAN				*i* IAML			10 45 23.1	
PPNO	**Prainha do Nor**	**1.44**	**292**	*e*P		**Pn**	**10 45 05.0**	**+0.8**
PPNO				*e*S		**Sn**	**10 45 21.9**	**-1.5**
PPNO				*i* IAML			10 45 23.0	
PPNO				*i* IAML			10 45 24.9	
PPNO				*i* IAML			10 45 25.7	
PSMN	**Pico do Norte,**	**1.51**	**128**	*e*P		**Pn**	**10 45 04.7**	**-0.4**
PSMN				*e*S		**Sn**	**10 45 21.3**	**-3.7**
PSMN				*i* IAML			10 45 22.6	
PSMN				*i* IAML			10 45 22.7	
PSMN				*i* IAML			10 45 24.0	
ROSA	**Rosais**	**1.54**	**301**	*e*P		**Pn**	**10 45 05.8**	**+0.4**
ROSA				*e*S		**Sn**	**10 45 23.9**	**-1.7**
ROSA				*i* IAML			10 45 24.7	
ROSA				*i* IAML			10 45 25.2	
ROSA				*i* IAML			10 45 26.8	
PGRA	**Graciosa**	**1.56**	**315**	*e*P		**Pn**	**10 45 05.3**	**-0.3**
PGRA				*e*S		**Sn**	**10 45 22.9**	**-3.3**
PGRA				*i* IAML			10 45 26.7	
PGRA				*i* IAML			10 45 35.5

comp=Z,87nm,18.1s,baz=322,slow=35
VRAC Vranov 32.82 56 LR LR 11 04 47.0
comp=Z,18nm,18.0s,baz=163,slow=37
NOA NORSAR Array B 32.97 33 LR LR 11 03 25.4
comp=Z,43nm,18.0s,baz=250,slow=35
HFS Hagfors 33.69 36 P P 10 51 16.1 -2.8
1.2nm,0.7s,baz=242,slow=9.3,SNR=1.3
1.2nm,0.7s
TORD Torodi Ar. Bea 35.23 127 P **P 10 51 35.6 +2.8**
2.4nm,0.8s,baz=311,slow=10,SNR=8.8
2.4nm,0.8s
MLR Muntele Rosu 39.31 62 P **P 10 52 07.6 +0.3**
0.8nm,0.3s,baz=319,slow=11,SNR=1.5
MLR LR LR 11 09 20.0
comp=Z,42nm,19.3s,baz=189,slow=38
0.8nm,0.3s
SADO Sadowa 39.47 297 LR LR 11 06 12.4
comp=Z,39nm,21.3s,baz=50,slow=33
SJG San Juan 39.77 251 LR LR 11 04 34.4
comp=Z,32nm,19.4s,baz=105,slow=30
FINES FINESS Array B 39.87 37 P **P 10 52 11.4 -0.1**
3.0nm,0.9s,baz=262,slow=2.8,SNR=1.4
FINES LR LR 11 06 58.5
comp=Z,41nm,20.4s,baz=94,slow=34
3.0nm,0.9s
MDP Montagnes des 40.41 223 LR LR 11 05 26.5
comp=Z,28nm,18.2s,baz=77,slow=31
AK14 Malin Array Si 40.89 53 P **P 10 52 22.5 +2.4**
AK12 Malin Array Si 40.91 53 P **P 10 52 22.8 +2.5**
AK04 Malin Array Si 40.92 53 P **P 10 52 22.8 +2.5**
AK11 Malin Array Si 40.92 53 P **P 10 52 22.8 +2.4**
KIEV Kiev 40.95 53 P **P 10 52 23.1 +2.5**
AK02 Malin Array Si 40.95 53 P **P 10 52 23.0 +2.4**
AK05 Malin Array Si 40.95 53 P **P 10 52 23.0 +2.4**
AK06 Malin Array Si 40.95 54 P **P 10 52 23.0 +2.4**
AK01 Malin Array Si 40.95 53 P **P 10 52 23.1 +2.5**
AK03 Malin Array Si 40.95 53 P **P 10 52 23.1 +2.5**
AK07 Malin Array Si 40.95 54 P **P 10 52 23.1 +2.5**
AKASG Malin Array Be 40.95 53 P P 10 52 17.8 -2.8
0.2nm,0.3s,baz=280,slow=7.3,SNR=1.2
AKASG LR LR 11 07 41.4
comp=Z,37nm,21.0s,baz=302,slow=34
0.2nm,0.3s
AKBB Malin Array Si 40.95 53 P **P 10 52 23.1 +2.5**
ARCES ARCESS Array B 41.92 25 P **P 10 52 27.0 -1.3**
1.2nm,0.7s,baz=258,slow=6.6,SNR=1.7
ARCES LR LR 11 05 58.2
comp=Z,48nm,21.8s,baz=106,slow=31
1.2nm,0.7s
H10N2 ASCENSION HYDR 46.90 164 T T 11 43 21.3
baz=347,slow=75,SNR=44
H10N3 ASCENSION HYDR 46.91 164 T T 11 43 20.4
baz=347,slow=75,SNR=33
H10N1 ASCENSION HYDR 46.92 164 T T 11 43 21.3
baz=347,slow=75,SNR=42
SDV Santo Domingo 49.06 245 LR LR 11 11 01.8
comp=Z,31nm,21.3s,baz=71,slow=32
KBZ Khabaz 51.48 60 P **P 10 53 42.1 -1.4**
0.9nm,0.7s,baz=270,slow=9.5,SNR=1.9
0.9nm,0.7s
KIRV Kirov 51.55 40 LR LR 11 13 50.2
comp=Z,44nm,19.9s,baz=193,slow=34
ROSC El Rosal 54.48 245 LR LR 11 14 20.5
comp=Z,49nm,21.8s,baz=69,slow=33
YKA Yellowknife Ar 56.30 326 P **P 10 54 17.8 -0.7**
0.3nm,0.7s,baz=53,slow=7.0,SNR=4.3
0.3nm,0.7s
PDAR Pinedale Array 60.98 303 P **P 10 54 52.6 +0.9**
0.1nm,0.4s,baz=46,slow=7.6,SNR=2.3
0.1nm,0.4s
TXAR Lajitas Array 63.10 287 P **P 10 55 08.5 +2.4**
0.7nm,0.8s,baz=79,slow=7.7,SNR=8.2
0.7nm,0.8s
BVAR Borovoye Array 64.52 42 P **P 10 55 14.3 -0.7**
0.3nm,0.3s,baz=298,slow=7.1,SNR=5.0
0.3nm,0.3s
MBAR Mbarara 65.12 112 LR LR 11 23 37.7
comp=Z,107nm,18.2s,baz=132,slow=36
KURBB Kurchatov Arra 70.07 41 P **P 10 55 48.8 -1.3**
0.7nm,0.8s,baz=310,slow=5.8,SNR=5.1
0.7nm,0.8s
ZALV Zalesovo Beam 71.13 36 P **P 10 55 55.3 -1.2**
0.3nm,0.3s,baz=324,slow=9.8,SNR=4.2
0.3nm,0.3s
MKAR Makanchi Array 74.38 42 P **P 10 56 15.1 -0.9**
0.8nm,0.7s,baz=305,slow=4.3,SNR=4.0
0.8nm,0.7s
QSPA South Pole Qui 127.82 180 PKP **PKPdf 11 03 42.7 -0.3**
0.4nm,0.6s,baz=240,slow=1.8,SNR=1.2

*IDC **11** 10:53:15.4±2.6,5°.03S×153°.20E, h52km±20km, mb4.0/15, mbtmp4.3/16, ML2.7/1, Error ellipse: s-maj=23.7km s-min=12.7km az=72.0*
*NEIC **11** 10:53:15.0±0.9,5°.02S±0°.08×153°.2E±0°.1, h47km±8km, mb4.3/25, Error ellipse: s-maj=14.7km s-min=11.6km az=98.0*
ISC 11 10:53:14.3±0.5,**5°.06S**±0°.06×**153°.20E**±0°.08,**h43**km,**n51,**
σ0s81/55,mb4.2/26,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.34**	**310**		**Pn**	**10 53 36.9**	**+0.2**
I40PG	**Keravat**	**1.40**	**303**	P	**Pn**	**10 53 38.3**	**+0.9**
	baz=116,slow=19						
I40PG				S	**Sn**	**10 53 56.1**	**+1.4**
	baz=135,slow=520						
PMG	**Port Moresby**	**7.38**	**234**	P	**Pn**	**10 55 00.2**	**+0.6**
	6.4nm,0.3s,baz=50,slow=8.1,SNR=18						
PMG				S	**Sn**	**10 56 21.4**	**-0.7**
	30nm,0.7s,baz=17,slow=18,SNR=2.8						
	42nm,0.6s						
PMG	**Port Moresby**	**7.38**	**234**		**Pn**	**10 54 59.4**	**-0.3**
PATS	**Pohnpei**	**12.87**	**23**	Pn	**Pn**	**10 56 14.3**	**-0.5**
FAKI	**Fak Fak**	**21.00**	**275**	P	**P**	**10 57 53.8**	**-0.7**
FAKI				IAmb	IAmb	10 57 54.0	
	comp=Z,9.8nm,0.7s						
DZM	**Mont Dzumac**	**21.23**	**144**	P	**P**	**10 57 57.2**	**+0.4**
	comp=Z,28nm,0.9s,baz=272,slow=9.0,SNR=22						
	comp=Z,28nm,0.9s						
OUENC	**Ouen Island, N**	**21.73**	**144**	P	**P**	**10 58 01.8**	**-0.2**
SIJI	**Sorong**	**22.29**	**280**	P	**P**	**10 58 06.8**	**-1.4**
	comp=Z,30nm,0.5s,baz=117,slow=15,SNR=16						
	comp=Z,30nm,0.5s						
MTN	**Manton Dam**	**23.11**	**249**	P	**P**	**10 58 16.7**	**-0.1**
MTN				IAmb	IAmb	10 58 21.6	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	**23.43**	**230**	P	**P**	**10 58 19.2**	**-0.7**
WB0				IAmb	IAmb	10 58 21.1	
	comp=Z,9.4nm,0.9s						
WR0	**Warramunga Arr**	**23.43**	**229**		**P**	**10 58 19.6**	**-0.3**
WR0				IAmb	IAmb	10 58 34.0	
	comp=Z,8.6nm,0.6s						
WR8	**Warramunga Arr**	**23.46**	**229**		**P**	**10 58 19.6**	**-0.6**
WR8				IAmb	IAmb	10 58 34.2	
	comp=Z,8.7nm,0.5s						
WRAB	**Tennant Creek**	**23.56**	**229**	P	**P**	**10 58 19.7**	**-1.4**
WRAB				IAmb	IAmb	10 58 22.2	
	comp=Z,7.1nm,0.8s						
WB2	**Warramunga Arr**	**23.56**	**229**	P	**P**	**10 58 20.9**	**-0.3**
WB2				IAmb	IAmb	10 58 29.3	
	comp=Z,8.2nm,0.5s						
WRA	**Warramunga Arr**	**23.57**	**229**	P	**P**	**10 58 20.5**	**-0.8**
	comp=Z,3.4nm,0.5s,baz=52,slow=10,SNR=46						
WRA				PcP	**PcP**	**11 02 06.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=56,slow=2.4,SNR=5.0						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**23.57**	**229**	P	**P**	**10 58 20.0**	**-1.3**
INKA	**Innaminka**	**25.48**	**206**		**P**	**10 58 38.6**	**0.0**
KNRA	**Kununurra**	**26.21**	**244**		**P**	**10 58 45.1**	**-0.3**
AS31	**Alice Springs**	**26.23**	**223**	P	**P**	**10 58 45.3**	**-0.2**
ASAR	**Alice Springs**	**26.23**	**223**	P	**P**	**10 58 45.0**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=57,slow=9.0,SNR=26						
ASAR				PcP	**PcP**	**11 02 13.1**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=81,slow=0.9,SNR=4.7						
	comp=Z,2.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**29.88**	**242**		**P**	**10 59 17.5**	**-0.7**
FORT	**Forrest**	**34.84**	**220**	P	**P**	**11 00 00.8**	**-0.6**
MBWA	**Marble Bar**	**36.19**	**241**	P	**P**	**11 00 12.9**	**-0.2**
PETK	**Petropavlovsk-**	**58.07**	**3**	P	**P**	**11 03 02.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=158,slow=4.5,SNR=6.6						
	comp=Z,1.1nm,0.5s						
PETK	**Petropavlovsk-**	**58.07**	**3**	P	**P**	**11 03 03.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**58.34**	**295**	P	**P**	**11 03 06.0**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=120,slow=6.0,SNR=7.7						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**66.75**	**328**	P	**P**	**11 04 02.4**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=147,slow=4.5,SNR=3.8						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**66.75**	**328**	P	**P**	**11 04 01.3**	**-0.1**
CASY	**Casey**	**67.89**	**197**	P	**P**	**11 04 08.9**	**+0.8**
CASY				IAmb	IAmb	11 04 37.5	
	comp=Z,1.8nm,1.1s						
VNDA	**Vanda**	**72.56**	**178**	P	**P**	**11 04 38.2**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=330,slow=6.1,SNR=8.0						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**72.56**	**178**	P	**P**	**11 04 37.5**	**+0.9**
VNDA				IAmb	IAmb	11 04 56.8	
	comp=Z,1.9nm,1.0s						
O14K	**Tigyukauivet M**	**73.54**	**22**	P	**P**	**11 04 42.4**	**-0.1**
M16K	**Timber Creek**	**75.58**	**22**	P	**P**	**11 04 53.9**	**-0.5**
M16K				IAmb	IAmb	11 05 02.2	
	comp=Z,5.0nm,1.1s						
MKAR	**Makanchi Array**	**80.78**	**319**	P	**P**	**11 05 23.7**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=102,slow=5.4,SNR=4.9						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**80.78**	**319**	P	**P**	**11 05 23.1**	**-0.4**
MLY	**Manley**	**80.98**	**21**	P	**P**	**11 05 23.6**	**-0.6**
ZAA0	**Zalesovo Array**	**81.58**	**326**	P	**P**	**11 05 27.0**	**-0.6**
ZAA0				IAmb	IAmb	11 05 27.7	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**81.58**	**326**	P	**P**	**11 05 27.1**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=109,slow=5.9,SNR=7.4						
	comp=Z,1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**81.58**	**326**	P	**P**	**11 05 26.9**	**-0.7**
ILAR	**Eielson Array**	**82.25**	**22**	P	**P**	**11 05 29.1**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=240,slow=5.4,SNR=5.3						
	comp=Z,0.5nm,0.8s						
KURK	**Kurchatov**	**84.21**	**322**	P	**P**	**11 05 39.9**	**-1.4**
KURK				IAmb	IAmb	11 05 44.9	
	comp=Z,1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**84.24**	**322**	P	**P**	**11 05 40.1**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=108,slow=3.9,SNR=6.2						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**84.90**	**180**	P	**P**	**11 05 45.0**	**+0.4**
	comp=Z,3.4nm,0.5s,baz=304,slow=0.9,SNR=40						
	comp=Z,3.4nm,0.5s						
QSPA	**South Pole Qui**	**84.90**	**180**	P	**P**	**11 05 45.5**	**+0.8**
NRIK	**Noril'sk**	**86.33**	**341**	P	**P**	**11 05 51.0**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=122,slow=3.9,SNR=2.6						
	comp=Z,3.3nm,0.6s						
NRIK	**Noril'sk**	**86.33**	**341**	P	**P**	**11 05 50.9**	**-0.6**
BVAR	**Borovoye Array**	**89.68**	**323**	P	**P**	**11 06 06.8**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=84,slow=6.1,SNR=4.9						
	comp=Z,1.5nm,0.8s						
GERES	**GERESS Array B**	**124.48**	**329**	PKP	**PKiKP**	**11 12 10.0**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=106,slow=1.3,SNR=8.5						
GERES	**GERESS Array B**	**124.48**	**329**		**PKiKP**	**11 12 10.8**	**+1.3**
TORD	**Torodi Ar. Bea**	**150.76**	**288**	PKPbc	**PKPbc**	**11 13 02.8**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=59,slow=2.3,SNR=11						

*BER **11** 11:10:52.3±0.7, 67°.36N×30°.96E, h0km, Suspected explosion*
*HEL **11** 11:10:52.3±0.1, 67°.66N×30°.45E, h0km, ML1.7, Explosion*
*KOLA **11** 11:10:54.8, 67°.55N×30°.50E, h0km, ML2.2, Error ellipse: s-maj=3.8km s-min=2.2km az=40.0, Kovdor City, Mines*
*IDC **11** 11:10:56.1±2.3, 67°.58N×29°.64E, h0km, mbtmp3.2/3, ML1.8/3, Error ellipse: s-maj=31.1km s-min=9.4km az=78.0*
ISC 11 11:10:52.9±0.8,**67°.55N**±0°.03×**30°.44E**±0°.02,**h0**km,**n37,**
σ1s00/50,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**0.37**	**303**	*e*S	**Sg**	**11 11 02.6**	**-2.3**
VRF				smax	smax	11 11 03.7	
	comp=Z,18nm,0.2s						
APA0	**Apatity Array**	**0.98**	**85**	P	**Pg**	**11 11 11.5**	**-0.2**
APA0				S	**Sg**	**11 11 24.0**	**-0.4**
APA	**Apatity**	**1.14**	**88**	P	**Pg**	**11 11 14.2**	**-0.6**
APA				S	**Sb**	**11 11 30.0**	**-0.8**
RAJF	**Raja-Jooseppi**	**1.23**	**320**	*e*PN	**Pg**	**11 11 15.4**	**-1.0**
KVDA	**Kovda**	**1.28**	**131**	P	**Pg**	**11 11 17.0**	**-0.4**
KVDA				S	**Sb**	**11 11 33.9**	**-1.0**
OLKF	**Oulanka, Finla**	**1.30**	**199**	*e*PG	**Pg**	**11 11 17.8**	**0.0**
OLKF				smax	smax	11 11 34.3	
	comp=Z,8.1nm,0.2s						
OLKF				*e*S	**Sb**	**11 11 35.0**	**-0.4**
SGF	**Sodankyl**	**1.51**	**268**	*e*PN	**Pn**	**11 11 21.1**	**0.0**
SGF				*e*SN	**Sg**	**11 11 40.9**	**-0.4**
KU6	**Riekki**	**1.55**	**188**	*e*PG	**Pn**	**11 11 22.0**	**+0.3**
KU6				smax	smax	11 11 41.5	
	comp=Z,5.1nm,0.2s						
KU6				*e*S	**Sn**	**11 11 42.7**	**+0.3**
MSF	**Maaselka**	**1.74**	**199**	*e*PG	**Pb**	**11 11 25.4**	**-0.2**
MSF				*e*S	**Sg**	**11 11 48.4**	**-0.2**
RNF	**Rovaniemi**	**1.97**	**243**	*e*PG	**Pn**	**11 11 28.7**	**+1.2**
RNF				*e*SG	**Sb**	**11 11 54.6**	**-0.1**
KU1	**Kurvinen**	**2.02**	**190**	*e*PG	**Pb**	**11 11 30.3**	**-0.3**
KU2	**Taivalkoski**	**2.05**	**206**	*e*PG	**Pb**	**11 11 30.6**	**-0.3**
RANF	**Ranua**	**2.11**	**225**	*e*PG	**Pb**	**11 11 31.6**	**-0.5**
TERR	**Teriberka**	**2.40**	**44**	P	**Pn**	**11 11 33.7**	**+0.4**
TERR				S	**Sn**	**11 12 05.6**	**+2.2**
KLF	**Kolari**	**2.52**	**266**	*e*PB	**Pn**	**11 11 36.0**	**+0.9**
KLF				smax	smax	11 12 06.9	
	comp=Z,3.3nm,0.2s						
KLF				*e*SG	**Sb**	**11 12 10.3**	**-0.2**
VADS	**Vadso**	**2.61**	**352**	*e*P	**Pn**	**11 11 36.6**	**+0.3**
VADS	**Vadso**	**2.61**	**352**	P	**Pn**	**11 11 37.1**	**+0.8**
VADS				S	**Sn**	**11 12 09.1**	**+0.4**
ARA0	**ARCESS Array S**	**2.69**	**320**	*e*P	**Pn**	**11 11 39.3**	**+1.9**
ARCES	**ARCESS Array B**	**2.69**	**320**	Pn	**Pn**	**11 11 38.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=142,slow=16,SNR=6.7						
ARCES				Lg	Lg	11 12 12.9	
	comp=Z,0.6nm,0.3s,baz=138,slow=31,SNR=9.0						
	comp=Z,1.3nm,0.2s						
ARCES	**ARCESS Array B**	**2.69**	**320**	P	**Pn**	**11 11 39.3**	**+1.8**
ARCES				S	**Sn**	**11 12 11.9**	**+1.2**
HEF	**Hetta**	**2.70**	**292**	*e*P	**Pn**	**11 11 38.3**	**+0.8**
HEF	**Hetta**	**2.70**	**292**	*e*PB	**Pn**	**11 11 38.2**	**+0.7**
HEF				smax	smax	11 12 10.6	
	comp=Z,4.1nm,0.2s						
TOF	**Tornio**	**2.83**	**241**	*e*P	**Pn**	**11 11 39.9**	**+0.6**
TOF				smax	smax	11 12 17.0	
	comp=Z,1.8nm,0.2s						
TOF				*e*SG	**Sb**	**11 12 21.6**	**+2.1**
KTK1	**Kautokeino**	**3.05**	**302**	*e*P	**Pn**	**11 11 43.4**	**+1.0**
KTK1	**Kautokeino**	**3.05**	**302**	*e*PB	**Pn**	**11 11 44.0**	**+1.6**
OUL	**Oulu**	**3.08**	**219**	*e*PG	**Pb**	**11 11 49.3**	**+0.8**
OUL				*e*SB	**Sb**	**11 12 26.0**	**-0.5**
LANU	**Lannavaara**	**3.24**	**283**	*e*P	**Pn**	**11 11 45.6**	**+0.5**
RMF	**Romuvaara**	**3.35**	**184**	*e*P	**Pn**	**11 11 47.4**	**+1.0**
HAMF	**Hammerfest**	**3.94**	**325**	*e*P	**Pn**	**11 11 55.6**	**+1.2**
OUF	**Merijarvi**	**3.96**	**219**	*e*P	**Pn**	**11 11 55.7**	**+0.9**
JETT	**Jettan, Norway**	**4.20**	**303**	*e*P	**Pn**	**11 11 59.5**	**+1.4**
I37NO	**I37NO**	**4.65**	**295**	I	I	11 39 20.0	
	baz=104,slow=317,SNR=1.8						
STEI	**Steigen**	**5.79**	**281**	*e*P	**Pn**	**11 12 20.1**	**+0.3**
FAUS	**Fauske**	**5.83**	**275**	S	**Sn**	**11 13 27.8**	**0.0**
FINES	**FINESS Array B**	**6.41**	**199**	Pn	**Pn**	**11 12 29.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=20,slow=13,SNR=1.9						
FINES				Lg	Lg	11 14 11.3	
	comp=Z,0.2nm,0.3s,baz=13,slow=32,SNR=5.1						
	comp=Z,1.6nm,0.8s						
KONS	**Konsvik**	**6.86**	**269**	*e*P	**Pn**	**11 12 34.2**	**-0.3**
HFS	**Hagfors**	**10.45**	**233**	Pn	**Pn**	**11 13 21.8**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=1.5						
	comp=Z,2.4nm,1.0s						

*IDC **11** 11:11:34.5±1.0, 6°.49N×125°.27E, h0km, mb3.7/6, mbtmp3.7/6, MS4.0/1, Error ellipse: s-maj=29.1km s-min=8.5km az=109.0*
*NEIC **11** 11:11:35.7±1.6, 6°.6N±0°.1×125°.2E±0°.1, h10km±2km, mb4.3/9, Error ellipse: s-maj=28.5km s-min=3.5km az=130.0*
*MAN **11** 11:11:36.0, 6°.56N×125°.48E, h13km, MS3.9*
*DJA **11** 11:11:37.8±0.9, 7°.N±18°×12°.5E±°, h17km±26km, M4.5/8, mb4.6/8, mB5.0/4, MLv4.4/7, Mw(mB)4.3/4*
ISC 11 11:11:36.7±1.1,**6°.59N**±0°.03×**125°.41E**±0°.04,**h16**km±8km,
n40,σ1s57/54,mb4.0/11,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**0.50**	**11**	*i* P	**Pb**	**11 11 47.5**	**+0.4**
DMPH				*i* S	**Sb**	**11 11 55.1**	**+0.9**
DAV	**Davao City (W)**	**0.51**	**19**	Pg	**Pb**	**11 11 48.0**	**+0.8**
	1μm,0.3s,baz=247,slow=7.2,SNR=42						
DAV				Lg	Lg	11 11 55.3	
	766nm,0.3s,baz=255,slow=23,SNR=7.3						
DAV	**Davao City (W)**	**0.51**	**19**	Pg	**Pb**	**11 11 48.0**	**+0.8**
DAV					**Sb**	**11 11 54.0**	**-0.3**
DAV	**Davao City (W)**	**0.51**	**19**	P	**Pb**	**11 11 47.6**	**+0.4**
DAV	**Davao City (W)**	**0.51**	**19**	P	**Pg**	**11 11 46.0**	**-0.8**
KCP	**Kidapawan**	**0.52**	**323**	*i* P	**Pg**	**11 11 47.6**	**+0.5**
KCP				*i* S	**Sb**	**11 11 55.5**	**+0.5**
GSPH	**General Santos**	**0.68**	**223**	*e*P	**Pg**	**11 11 50.1**	**+0.1**
GSPH				*i* S	**Sg**	**11 12 00.4**	**+1.3**
CTBH	**Cotabato--PC H**	**1.31**	**299**	*i* P	**Pn**	**11 12 00.6**	**+0.2**
CTBH				*i* S	**Sn**	**11 12 19.5**	**+1.9**
BIPH	**Bislig**	**1.84**	**31**	*e*P	**Pg**	**11 12 11.6**	**-0.6**
BIPH				*e*S	**Sb**	**11 12 32.6**	**-0.2**
CGP	**Cagayan de Oro**	**1.98**	**339**	*i* P	**Pb**	**11 12 12.0**	**-0.4**
CGP				*i* S	**Sb**	**11 12 38.4**	**+1.5**
TSSP	**Tandag City**	**2.56**	**18**	*e*P	**Pn**	**11 12 19.1**	**+1.5**
TSSP				*e*S	**Sn**	**11 12 50.7**	**+2.3**
DCPH	**Dipolog City**	**2.84**	**314**	*i* P	**Pb**	**11 12 25.7**	**-1.4**
DCPH				*i* S	**Sg**	**11 13 08.2**	**+0.1**
SGSI	**Sangihe**	**2.89**	**178**	P	**Pn**	**11 12 23.5**	**+1.4**
SGSI				S	**Sn**	**11 12 59.5**	**+3.0**
SCPH	**Surigao**	**3.17**	**1**	*e*P	**Pb**	**11 12 30.0**	**-2.7**
SCPH				*e*S	**Sn**	**11 13 07.0**	**+3.5**
TBP	**Tagbilaran**	**3.44**	**334**	*e*P	**Pb**	**11 12 35.1**	**-2.2**
TBP				*e*S	**Sg**	**11 13 28.8**	**+1.5**
LLP	**Lapu-Lapu**	**3.97**	**339**	*e*P	**Pb**	**11 12 44.0**	**-2.3**
LLP				*i* S	**Sg**	**11 13 43.9**	**-0.3**
PLP	**Palo**	**4.56**	**355**	*e*P	**Pn**	**11 12 47.0**	**+1.8**
PLP				*e*S	**Sn**	**11 13 42.4**	**+4.5**
GTOI	**Gorontalo**	**6.38**	**202**	P	**Pn**	**11 13 11.0**	**+0.9**
	0.2nm952nm29nm,0.8s						
TOLI2	**Tolitoli**	**7.14**	**220**	Pn	**Pn**	**11 13 20.4**	**-0.1**
LUWI	**Luwuk**	**8.03**	**199**	P	**Pn**	**11 13 35.9**	**+3.2**
	72nm,0.9s						
SANI	**Sanana**	**8.60**	**176**	P	**Pn**	**11 13 41.6**	**+1.0**
MTN	**Manton Dam**	**20.13**	**164**	P	**P**	**11 16 10.2**	**0.0**
MTN				IAmb	IAmb	11 16 12.1	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**22.37**	**171**	P	**P**	**11 16 34.4**	**0.0**
KNRA				IAmb	IAmb	11 16 41.8	
	comp=Z,8.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.53**	**179**	P	**P**	**11 16 56.3**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=358,slow=8.4,SNR=13						
	comp=Z,1.9nm,0.4s						
WB0	**Warramunga Arr**	**27.64**	**162**	P	**P**	**11 17 24.3**	**+0.4**
WB0				IAmb	IAmb	11 17 39.5	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**27.79**	**162**	P	**P**	**11 17 25.4**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=340,slow=10,SNR=10						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**27.79**	**162**	P	**P**	**11 17 24.6**	**-0.6**
WR8	**Warramunga Arr**	**27.86**	**161**	P	**P**	**11 17 25.8**	**0.0**
WR8				IAmb	IAmb	11 17 58.5	
	comp=Z,9.2nm,1.3s						
AS31	**Alice Springs**	**31.19**	**165**	P	**P**	**11 17 54.4**	**-1.0**
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**11 17 55.4**	**0.0**
	comp=Z,0.8nm,0.6s,baz=349,slow=7.7,SNR=20						
ASAR				PcP	**PcP**	**11 20 50.3**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=342,slow=2.5,SNR=1.3						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**11 17 54.6**	**-0.8**
NWAO	**Narrogin (SRO)**	**40.06**	**191**	LR	LR	11 37 08.7	
	comp=Z,228nm,20.1s,baz=64,slow=38						
STKA	**Stephens Creek**	**41.25**	**159**	P	**P**	**11 19 19.3**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=343,slow=13,SNR=6.0						
	comp=Z,1.1nm,0.6s						
PEA0B	**Petropavlovsk-**	**53.32**	**24**	P	**P**	**11 20 53.2**	**-1.8**
PETK	**Petropavlovsk-**	**53.32**	**24**	P	**P**	**11 20 53.4**	**-1.6**
MKAR	**Makanchi Array**	**54.47**	**325**	P	**P**	**11 21 04.6**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=116,slow=9.9,SNR=1.8						
	comp=Z,0.2nm,0.5s						
AAK	**Ala-Archa**	**57.38**	**317**	P	**P**	**11 21 22.7**	**-1.9**
AAK	**Ala-Archa**	**57.38**	**317**	⇑Pn	**P**	**11 21 23.1**	**-1.5**
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**58.64**	**327**	P	**P**	**11 21 32.0**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=125,slow=5.7,SNR=2.7						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	**58.64**	**327**	P	**P**	**11 21 31.4**	**-1.7**
KURK				IAmb	IAmb	11 21 51.6	
	comp=Z,1.7nm,0.9s						

*SOME **11** 11:20:48.0, 44°.45N×74°.00E*
NNC 11 11:20:50.3±0.8,**44°.38N×73°.97E,h0**km,**mb2.8,mpv2.5,**
1C-2D,Error ellipse: s-maj=7.6km s-min=4.8km az=84.0,
Suspected Mining explosion.,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTLS	**Baital**	**0.67**	**4**	P	Pg	**11 21 02.2**	**-0.8**
	0.9nm,0.2s						
BTLS				S	Sg	11 21 12.2	+0.5
	6.3nm,0.2s						
SGDS	**Sogindy**	**1.04**	**153**	P	Pg	11 21 08.8	-1.4
	0.5nm,0.0s						
SGDS				S	Sg	11 21 23.4	-0.3
	4.4nm,0.4s						
KRBS	**Karabastau**	**1.40**	**118**	P	Pg	11 21 16.7	-0.5
	4.2nm,0.4s						
KRBS				S	Sn

SKR	**Severo-Kuril's**	**4.26**	**29**	⇓*i*PN	**Pn**	**11 50 10.8 +0.5**
SKR				pmax	pmax	
	comp=Z,4.0nm,0.4s					
SKR	**Severo-Kuril's**	**4.26**	**29**	*e*P	**Pn**	**11 50 10.5 +0.2**
SKR				AMB	AMB	11 50 19.8
	comp=Z,60nm,0.3s					
SKR				*e*S	**Sn**	**11 50 57.3 -1.3**
SKR				A	A	11 51 00.8
	comp=Z,190nm,0.3s					
SKR				A	A	11 51 00.8
	comp=Z,140nm,0.3s					
SHO	**Shikotan**	**5.29**	**236**	*e*P	Pn	11 50 33.9 +9.4
SHO				AMB	AMB	11 50 45.5
	comp=Z,40nm,0.2s					
SHO				*e*S	**Sn**	**11 51 31.1 +7.0**
SHO				A	A	11 51 56.0
	comp=Z,260nm,0.5s					
SHO				A	A	11 51 56.0
	comp=Z,200nm,0.5s					
YUK	**Yuzh-Kuril'sk**	**5.76**	**242**	*e*PN	**Pn**	**11 50 30.4 -0.5**
YUK				S	**Sn**	**11 51 35.3 -0.3**
YUK				pmax	pmax	
	comp=Z,84nm,0.4s					
YUK				pmax	pmax	
	comp=E,18nm,0.2s					
YUK				smax	smax	
	comp=E,178nm,0.6s					
YUK				smax	smax	
	comp=N,107nm,0.4s					
YUK	**Yuzh-Kuril'sk**	**5.76**	**242**	*e*P	**Pn**	**11 50 30.6 -0.3**
YUK				AMB	AMB	11 50 31.9
	comp=N,80nm,0.4s					
YUK				*e*S	**Sn**	**11 51 33.9 -1.7**
YUK				A	A	11 51 50.3
	comp=N,270nm,0.5s					
YUK				A	A	11 51 50.3
	comp=N,240nm,0.5s					
RUSJ	**Misakicho**	**6.10**	**244**	*e*PN	**Pn**	**11 50 36.3 +0.7**
RUSJ				S	**Sn**	**11 51 46.7 +2.8**
NMR	**Nemuro--Hokkai**	**6.23**	**237**	⇑*i*PN	Pn	11 50 33.6 -3.7
NMR	**Nemuro--Hokkai**	**6.23**	**237**	*i* P	Pn	11 50 33.6 -3.7
PEA0B	**Petropavlovsk-**	**6.85**	**25**	*i* PN	**Pn**	**11 50 47.0 +1.2**
PEA0B	**Petropavlovsk-**	**6.85**	**25**	Pn	**Pn**	**11 50 44.9 -0.9**
PETK	**Petropavlovsk-**	**6.85**	**25**	P	**Pn**	**11 50 47.3 +1.5**
	comp=N,3.8nm,0.8s,baz=178,slow=12,SNR=9.6					
PETK				S	**Sn**	**11 52 01.1 -1.3**
	comp=N,3.4nm,0.7s,baz=221,slow=18,SNR=1.0					
PETK	**Petropavlovsk-**	**6.85**	**25**	Pn	**Pn**	**11 50 44.9 -0.9**
YSS	**Yuzhno-Sakhali**	**6.94**	**273**	*e*PN	**Pn**	**11 50 49.8 +2.7**
YSS				*e*S	**Sn**	**11 52 06.6 +2.1**
YSS				pmax	pmax	
	comp=Z,20nm,0.8s					
YSS				MLR	MLR	
	comp=Z,300nm,14.0s					
YSS				MLR	MLR	
	comp=N,100nm,16.0s					
YSS				MLR	MLR	
	comp=E,200nm,16.0s					
YSS	**Yuzhno-Sakhali**	**6.94**	**273**	Pn	**Pn**	**11 50 48.4 +1.4**
YSS	**Yuzhno-Sakhali**	**6.94**	**273**	*e*P	**Pn**	**11 50 49.7 +2.7**
YSS				*e*S	**Sn**	**11 52 06.5 +2.1**
PET	**Petropavlovsk**	**7.08**	**29**	*i* PN	**Pn**	**11 50 51.1 +2.2**
PET	**Petropavlovsk**	**7.08**	**29**	Pn	**Pn**	**11 50 47.6 -1.3**
PET	**Petropavlovsk**	**7.08**	**29**	*e*P	**Pn**	**11 50 50.5 +1.6**
PET				*e*S	**Sn**	**11 52 06.7 -1.1**
TYV	**Tymovskoe**	**7.77**	**304**	*e*PN	**Pn**	**11 51 01.4 +3.0**
TYV				pmax	pmax	
	comp=Z,16nm,1.0s					
TYV				pmax	pmax	
	comp=Z,100nm,4.3s					
TYV	**Tymovskoe**	**7.77**	**304**	*e*P	**Pn**	**11 51 00.9 +2.5**
JKA	**Kamikawa-asahi**	**7.78**	**252**	Pn	**Pn**	**11 50 57.9 -0.7**
JKA	**Kamikawa-asahi**	**7.78**	**252**	*e*P	**Pn**	**11 50 57.9 -0.7**
ASAJ	**Asahikawa**	**7.78**	**252**	PN	**Pn**	**11 50 57.9 -0.7**
ERM	**Erimo**	**8.56**	**238**	PN	**Pn**	**11 51 07.1 -2.1**
ERM	**Erimo**	**8.56**	**238**	Pn	**Pn**	**11 51 07.1 -2.1**
JTM	**Tenmabayashi**	**10.55**	**238**	Pn	Pn	11 51 31.7 -4.7
MA2	**Magadan**	**12.66**	**355**	P	**Pn**	**11 52 05.3 +0.2**
	comp=Z,4.7nm,0.5s,baz=144,slow=11,SNR=7.4					
MA2				S	Sn	11 54 15.5 -8.8
	comp=Z,1.2nm,0.5s,baz=55,slow=19,SNR=1.6					
MA2				LR	LR	11 56 30.1
	comp=Z,89nm,21.2s,baz=214,slow=35					
MA2	**Magadan**	**12.66**	**355**	PN	**Pn**	**11 52 02.3 -2.9**
MA2	**Magadan**	**12.66**	**355**		**Pn**	**11 52 02.3 -2.9**
MA2					Sn	11 54 15.5 -8.8
MA2	**Magadan**	**12.66**	**355**	P	**Pn**	**11 52 04.1 -1.1**
	comp=Z,9.1nm,0.8s					
KLR	**Kul'dur**	**14.30**	**287**	P	**Pn**	**11 52 27.7 +0.4**
	comp=Z,0.4nm,0.5s,baz=98,slow=10,SNR=7.6					
KLR				LR	LR	11 58 13.3
	comp=Z,117nm,19.9s,baz=171,slow=38					
KLR	**Kul'dur**	**14.30**	**287**	⇓*i*P	**Pn**	**11 52 28.9 +1.7**
KLR				pmax	pmax	
	comp=Z,7.0nm,2.5s					
KLR	**Kul'dur**	**14.30**	**287**	*e*P	**Pn**	**11 52 28.9 +1.7**
SHEM	**Shemya Is, Ala**	**14.80**	**59**	LR	LR	11 57 24.7
	comp=Z,53nm,20.9s,baz=92,slow=33					
USA0B	**Ussuriysk Arra**	**14.90**	**267**	P	**Pn**	**11 52 34.9 -0.2**
USA0B	**Ussuriysk Arra**	**14.90**	**267**	Pn	**Pn**	**11 52 34.9 -0.2**
USRK	**Ussuriysk Ar.**	**14.90**	**267**	P	**Pn**	**11 52 35.0 -0.1**
	comp=Z,2.2nm,0.5s,baz=66,slow=13,SNR=5.4					
USRK				LR	LR	11 58 28.7
	comp=Z,77nm,18.2s,baz=292,slow=38					
USRK	**Ussuriysk Ar.**	**14.90**	**267**	P	**Pn**	**11 52 35.0 -0.1**
USRK	**Ussuriysk Ar.**	**14.90**	**267**	*e*P	**Pn**	**11 52 35.0 -0.1**
MJAR	**Matsushiro Arr**	**15.11**	**232**	P	**Pn**	**11 52 36.2 -1.8**
	comp=Z,1.5nm,0.9s,baz=42,slow=8.6,SNR=9.1					
MJAR				LR	LR	11 58 23.4
	comp=Z,50nm,21.5s,baz=148,slow=37					
MJAR	**Matsushiro Arr**	**15.11**	**232**	P	**Pn**	**11 52 37.3 -0.7**
MJAR				pmax	pmax	
	comp=Z,5.0nm,1.4s					
MJAR	**Matsushiro Arr**	**15.11**	**232**	Pn	**Pn**	**11 52 37.3 -0.7**
MAJO	**Matsushiro**	**15.12**	**232**	*i* P	**Pn**	**11 52 37.3 -0.7**
MAJO	**Matsushiro**	**15.12**	**232**	Pn	**Pn**	**11 52 35.0 -3.0**
MAJO				IAmb	IAmb	11 52 42.8
	comp=Z,22nm,1.4s					
SEY	**Seymchan**	**15.97**	**359**	P	**Pn**	**11 52 48.1 -0.6**
	comp=Z,0.3nm,0.3s,baz=149,slow=12,SNR=3.8					
SEY	**Seymchan**	**15.97**	**359**	*i* P	**Pn**	**11 52 49.2 +0.5**
SEY	**Seymchan**	**15.97**	**359**	*e*P	**Pn**	**11 52 49.2 +0.5**
HEH	**HeiHe**	**17.13**	**290**	*e*P	**P**	**11 53 05.4 +1.2**
HEH				pmax	pmax	
	comp=Z,15nm,0.9s					
ZEA	**Zeya**	**17.63**	**302**	*e*P	**Pn**	**11 53 10.2 +0.8**
ZEA	**Zeya**	**17.63**	**302**	*e*P	**Pn**	**11 53 10.2 +0.8**
YAK	**Yakutsk**	**20.03**	**327**	LR	LR	12 01 18.1
	comp=Z,113nm,18.9s,baz=213,slow=36					
YAK	**Yakutsk**	**20.03**	**327**	*i* P	**P**	**11 53 37.2 +1.4**
YAK				pmax	pmax	
	comp=Z,10.0nm,0.9s					
YAK	**Yakutsk**	**20.03**	**327**	*e*P	**P**	**11 53 37.2 +1.4**
KSRS	**Korea Array**	**20.73**	**252**	P	**P**	**11 53 43.0 -0.6**
	comp=Z,1.5nm,0.7s,baz=62,slow=8.8,SNR=11					
KSRS				LR	LR	12 00 36.4
	comp=Z,38nm,19.8s,baz=45,slow=33					
	comp=Z,1.5nm,0.7s					
JNU	**Nakatsue**	**21.72**	**238**	LR	LR	12 03 04.5
	comp=Z,96nm,20.2s,baz=228,slow=39					
GAMB	**Gambell**	**25.71**	**36**	P	**P**	**11 54 32.8 +0.5**
	baz=246					
UNV	**Unalaska Valle**	**26.46**	**60**	P	**P**	**11 54 39.3 0.0**
	baz=272					
M11K	**Mekoryuk**	**27.16**	**45**	P	**P**	**11 54 46.3 +0.8**
	baz=259					
TIXI	**Tiksi**	**27.19**	**344**	LR	LR	12 06 26.0
	comp=Z,78nm,19.2s,baz=234,slow=38					
TNA	**Tin City**	**27.91**	**34**	P	**P**	**11 54 52.5 +0.3**
	baz=247					
K13K	**Kusilvak Mount**	**28.21**	**42**	P	**P**	**11 54 55.3 +0.4**
	baz=258					
ANM	**Nome**	**28.58**	**37**	P	**P**	**11 54 58.0 -0.1**
	baz=252					
L14K	**Kuka Creek**	**29.03**	**44**	P	**P**	**11 55 02.3 +0.2**
	baz=261					
F15K	**North Star Dit**	**29.23**	**35**	P	**P**	**11 55 04.2 +0.2**
	baz=251					
G15K	**Niukluk**	**29.25**	**36**	P	**P**	**11 55 04.5 +0.3**
	baz=253					
M14K	**Bethel**	**29.29**	**45**	P	**P**	**11 55 05.0 +0.6**
	baz=262					
N14K	**Kuskokwak Cree**	**29.33**	**47**	P	**P**	**11 55 05.2 +0.4**
	baz=264					
O14K	**Tigyukauivet M**	**29.49**	**48**	P	**P**	**11 55 06.9 +0.7**
	baz=266					
H11N2	**WAKE ISLAND Hy**	**29.51**	**152**	T	T	12 26 31.8
	baz=340,slow=76,SNR=266					
H11N1	**WAKE ISLAND Hy**	**29.52**	**152**	T	T	12 26 39.4
	baz=340,slow=76,SNR=226					
H11N3	**WAKE ISLAND Hy**	**29.52**	**152**	T	T	12 26 33.0
	baz=340,slow=76,SNR=158					
L15K	**Ungalak Mounta**	**29.64**	**44**	P	**P**	**11 55 07.9 +0.3**
	baz=261					
H16K	**Elim**	**29.90**	**38**	P	**P**	**11 55 09.9 +0.1**
	baz=255					
SDPT	**Sand Point**	**29.90**	**56**	P	**P**	**11 55 10.2 +0.3**
	baz=273					
M15K	**Kasigluk River**	**29.90**	**46**	P	**P**	**11 55 10.6 +0.7**
	baz=264					
C16K	**Lisburne Hills**	**29.92**	**30**	P	**P**	**11 55 10.5 +0.6**
	baz=246					
HHC	**Hu-ho-hao-te**	**30.13**	**274**	*e*P	**P**	**11 55 13.5 +1.2**
HHC				pmax	pmax	
	comp=Z,6.0nm,0.6s					
HHC				pmax	pmax	
	comp=Z,150nm,4.9s					
HHC				LR	LR	
	comp=N,110nm,15.9s					
HHC				LR	LR	
	comp=E,130nm,15.9s					
HHC				LR	LR	
	comp=Z,110nm,15.1s					
N15K	**Kwethluk River**	**30.15**	**47**	P	**P**	**11 55 12.5 +0.4**
	baz=265					
O15K	**Ungalikthiuk R**	**30.22**	**49**	P	**P**	**11 55 13.1 +0.3**
	baz=267					
J16K	**Anvik River**	**30.31**	**41**	P	**P**	**11 55 14.1 +0.6**
	baz=260					
S14K	**Fog Glacier**	**30.37**	**54**	P	**P**	**11 55 14.4 +0.2**
	baz=272					
I17K	**Unalakleet**	**30.39**	**39**	P	**P**	**11 55 14.5 +0.4**
	baz=258					
CHNA	**Chernabura Isl**	**30.45**	**57**	P	**P**	**11 55 14.7 0.0**
	baz=275					
D17K	**Noatak River**	**30.49**	**32**	P	**P**	**11 55 15.6 +0.6**
	baz=250					
H11S1	**WAKE ISLAND Hy**	**30.60**	**154**	T	T	12 27 54.8
	baz=341,slow=76,SNR=290					
L16K	**Owhat River**	**30.60**	**44**	P	**P**	**11 55 16.4 +0.4**
	baz=263					
H11S3	**WAKE ISLAND Hy**	**30.61**	**154**	T	T	12 27 53.4
	baz=341,slow=76,SNR=295					
H11S2	**WAKE ISLAND Hy**	**30.61**	**154**	T	T	12 27 51.9
	baz=341,slow=76,SNR=215					
C17K	**DeLong Mountai**	**30.74**	**30**	P	**P**	**11 55 17.8 +0.6**
	baz=248					
E17K	**Hotham Inlet**	**30.75**	**33**	P	**P**	**11 55 17.9 +0.6**
	baz=252					
G17K	**Kiwalik Mounta**	**30.77**	**36**	P	**P**	**11 55 18.1 +0.6**
	baz=256					
F17K	**Baldwin Pennin**	**30.78**	**34**	P	**P**	**11 55 18.2 +0.7**
	baz=254					
M16K	**Timber Creek**	**30.78**	**45**	P	**P**	**11 55 17.9 +0.2**
	baz=265					
N16K	**Nishlik Lake**	**30.83**	**46**	P	**P**	**11 55 18.4 +0.3**
	baz=266					
H17K	**Granite Mounta**	**30.94**	**37**	P	**P**	**11 55 19.6 +0.6**
	baz=258					
J17K	**VABM Dome**	**31.01**	**41**	P	**P**	**11 55 20.4 +0.8**
	baz=261					
SONM	**Songino Array**	**31.11**	**289**	P	**P**	**11 55 19.3 -1.6**
	comp=Z,0.2nm,0.3s,baz=70,slow=9.6,SNR=3.6					
SONM				LR	LR	12 09 06.4
	comp=Z,82nm,18.2s,baz=177,slow=39					
	comp=Z,0.2nm,0.3s					
O16K	**Kowok River B**	**31.12**	**48**	P	**P**	**11 55 21.3 +0.6**
	baz=268					
P16K	**Nushagak River**	**31.16**	**49**	P	**P**	**11 55 21.8 +0.8**
	baz=269					
L17K	**Donlin**	**31.20**	**43**	P	**P**	**11 55 22.2 +0.8**
	baz=264					
K17K	**Iditarod**	**31.27**	**42**	P	**P**	**11 55 22.3 +0.4**
	baz=263					
E18K	**Tukpahlearik C**	**31.30**	**33**	P	**P**	**11 55 22.5 +0.3**
	baz=253					
F18K	**Selawik**	**31.43**	**34**	P	**P**	**11 55 24.1 +0.8**
	baz=255					
C18K	**Utukok River**	**31.48**	**30**	P	**P**	**11 55 24.2 +0.4**
C18K	**Utukok River**	**31.48**	**30**	P	**P**	**11 55 24.2 +0.4**
	baz=250					
N17K	**Nushagak Hills**	**31.61**	**46**	P	**P**	**11 55 25.2 +0.2**
	baz=267					
H18K	**Honhosa River**	**31.63**	**37**	P	**P**	**11 55 25.7 +0.7**
	baz=259					
O17K	**Koliganek Bris**	**31.64**	**48**	P	**P**	**11 55 25.1 0.0**
	baz=269					
G18K	**Tagagawik**	**31.66**	**36**	P	**P**	**11 55 25.9 +0.6**
	baz=257					
TLY	**Talaya**	**31.93**	**297**	LR	LR	12 09 15.8
	comp=Z,54nm,18.1s,baz=165,slow=38					
L18K	**Granite Mounta**	**31.96**	**43**	P	**P**	**11 55 28.2 +0.2**
	baz=265					
P17K	**Kvichak River**	**31.96**	**49**	P	**P**	**11 55 28.7 +0.6**
	baz=270					
R17L	**Mt. Peulik Vol**	**32.05**	**52**	P	**P**	**11 55 29.2 +0.3**
	baz=273					
A19K	**Wainwright**	**32.08**	**27**	P	**P**	**11 55 29.6 +0.7**
	baz=248					
GCSA	**Galena City Sc**	**32.18**	**38**	P	**P**	**11 55 30.0 +0.1**
	baz=261					
C19K	**Lookout Ridge**	**32.18**	**30**	P	**P**	**11 55 30.1 +0.2**
	baz=251					
F19K	**Shaleruckit Mo**	**32.22**	**34**	P	**P**	**11 55 30.5 +0.3**
	baz=257					
N18K	**Kilae Creek**	**32.26**	**46**	P	**P**	**11 55 30.7 0.0**
	baz=268					
Q17K	**Contact Creek**	**32.27**	**50**	P	**P**	**11 55 30.8 -0.2**
	baz=272					
M18K	**Stony River**	**32.32**	**44**	P	**P**	**11 55 30.9 -0.3**
	baz=267					
G19K	**Purcell Mounta**	**32.34**	**36**	P	**P**	**11 55 31.2 -0.1**
	baz=258					
H19K	**Roundabout Mou**	**32.48**	**37**	P	**P**	**11 55 32.6 +0.1**
H19K	**Roundabout Mou**	**32.48**	**37**	P	**P**	**11 55 32.9 +0.3**
	baz=260,SNR=7.0					
D19K	**Kuna River**	**32.51**	**31**	P	**P**	**11 55 33.1 +0.2**
	baz=254					
E19K	**Redstone River**	**32.57**	**33**	P	**P**	**11 55 34.5 +1.3**
	baz=256					
P18K	**Big Mountain,**	**32.58**	**48**	P	**P**	**11 55 33.9 +0.4**
	baz=271					
O18K	**Kokhth Hills**	**32.59**	**48**	P	**P**	**11 55 34.0 +0.4**
	baz=270					
J19K	**Poorman**	**32.62**	**40**	P	**P**	**11 55 34.4 +0.7**
	baz=263					
Q18K	**Katmai Hardscr**	**32.72**	**50**	P	**P**	**11 55 35.1 +0.3**
	baz=272					
M19K	**Big River Lodg**	**33.02**	**44**	P	**P**	**11 55 37.9 +0.6**
	baz=268					
O19K	**Port Alsworth**	**33.03**	**47**	P	**P**	**11 55 38.5 +1.2**
	baz=270					
F20K	**Avaraart Lake**	**33.05**	**34**	P	**P**	**11 55 38.5 +1.0**
	baz=258					
D20K	**Etivluk River**	**33.10**	**31**	P	**P**	**11 55 39.0 +1.0**
	baz=255					
H20K	**Anotleneega Mo**	**33.12**	**37**	P	**P**	**11 55 39.0 +0.8**
	baz=262					
E20K	**Nigu River**	**33.14**	**32**	P	**P**	**11 55 39.4 +1.1**
	baz=256					
K20K	**Telida**	**33.25**	**41**	P	**P**	**11 55 40.4 +1.1**
	baz=266					
B20K	**Meade River**	**33.27**	**29**		**P**	**11 55 40.1 +0.7**
B20K	**Meade River**	**33.27**	**29**	P	**P**	**11 55 40.4 +1.0**
	baz=253,SNR=5.1					
J20K	**Nowinta River**	**33.28**	**40**	P	**P**	**11 55 40.2 +0.7**
	baz=264					
SII	**Sitkinak Islan**	**33.32**	**54**	P	**P**	**11 55 40.6 +0.6**
	baz=276					
M20K	**Styx River**	**33.62**	**44**	P	**P**	**11 55 42.4 -0.2**
	baz=269					
OHAK	**Old Harbor**	**33.74**	**52**	P	**P**	**11 55 43.9 +0.4**
	baz=276					
G21K	**Allakaket**	**33.83**	**35**	P	**P**	**11 55 45.2 +0.9**
	baz=262					
C21K	**Knifeblade Rid**	**33.85**	**31**	P	**P**	**11 55 45.0 +0.6**
	baz=256					
A21K	**Barrow**	**33.85**	**26**	P	**P**	**11 55 45.6 +1.3**
	baz=251					
O20K	**Slope Mountain**	**33.88**	**47**	P	**P**	**11 55 45.8 +0.9**
	baz=272					
F21K	**Alatna River**	**33.94**	**34**	P	**P**	**11 55 45.9 +0.6**
	baz=261					
E21K	**Killik River**	**33.98**	**32**	P	**P**	**11 55 45.9 +0.3**
	baz=258					
H21K	**Melozitna Rive**	**34.00**	**37**	P	**P**	**11 55 44.7 -1.1**
H21K				IAmb	IAmb	11 55 47.1
	comp=Z,2.8nm,0.8s					
H21K	**Melozitna Rive**	**34.00**	**37**	P	**P**	**11 55 46.0 +0.2**
	baz=264					
B21K	**Ikpikpuk River**	**34.02**	**30**		**P**	**11 55 46.4 +0.6**
B21K	**Ikpikpuk River**	**34.02**	**30**	P	**P**	**11 55 46.5 +0.6**
	baz=256,SNR=11					
KDAK	**Kodiak Island**	**34.06**	**51**	P	**P**	**11 55 46.6 +0.2**
	baz=276					
CHUM	**Lake Minchumin**	**34.06**	**40**	P	**P**	**11 55 47.1 +0.8**
	baz=267					
PPLA	**Purkeypile**	**34.08**	**42**	P	**P**	**11 55 46.9 +0.3**
	baz=268					
CAST	**Castle Rocks**	**34.14**	**41**	P	**P**	**11 55 47.9 +0.8**
	baz=268					
A22K	**Sinclair Lake**	**34.27**	**27**	P	**P**	**11 55 49.1 +1.2**
	baz=254,SNR=6.3					
I21K	**Tanana**	**34.30**	**38**	P	**P**	**11 55 49.1 +0.8**
	baz=265					
F22K	**John River**	**34.49**	**34**	P	**P**	**11 55 50.8 +0.8**
	baz=262					
CAPN	**Captain Cook N**	**34.58**	**46**	P	**P**	**11 55 51.7 +0.9**
	baz=272					
B22K	**Teshekpuk Lake**	**34.59**	**29**		**P**	**11 55 51.2 +0.4**
B22K	**Teshekpuk Lake**	**34.59**	**29**	P	**P**	**11 55 51.6 +0.9**
	baz=256					
H22K	**Ishtalitna Cre**	**34.61**	**37**	P	**P**	**11 55 51.7 +0.6**
	baz=265					
G22K	**Bettles**	**34.67**	**35**	P	**P**	**11 55 52.8 +1.3**
	baz=263					
L22K	**Petersville**	**34.73**	**43**	P	**P**	**11 55 52.8 +0.6**
	baz=270					
MLY	**Manley**	**34.81**	**38**	P	**P**	**11 55 53.7 +0.9**
	baz=266					
BRSE	**Bradley Lake S**	**34.85**	**48**	P	**P**	**11 55 54.0 +0.8**
	baz=274					
TRF	**Thorofare Moun**	**34.95**	**41**	P	**P**	**11 55 54.9 +0.7**
	baz=269					
COLD	**Coldfoot**	**35.21**	**34**	P	**P**	**11 55 56.3 +0.1**
COLD				IAmb	IAmb	11 55 58.3
	comp=Z,3.6nm,0.8s					
COLD	**Coldfoot**	**35.21**	**34**	P	**P**	**11 55 56.9 +0.7**
	baz=264					
G23K	**Bananza Creek**	**35.23**	**35**	P	**P**	**11 55 57.1 +0.7**
G23K				IAmb	IAmb	11 55 58.1
	comp=Z,4.2nm,1.1s					
G23K	**Bananza Creek**	**35.23**	**35**	P	**P**	**11 55 57.5 +1.1**
	baz=265					
D23K	**Nanushuk River**	**35.26**	**31**	P	**P**	**11 55 57.2 +0.6**
	baz=261					
H23K	**Yukon River**	**35.36**	**37**	P	**P**	**11 55 58.1 +0.6**
	baz=266					
C23K	**Itkillik River**	**35.43**	**30**		**P**	**11 55 58.9 +0.9**
C23K	**Itkillik River**	**35.43**	**30**	P	**P**	**11 55 58.9 +0.9**
	baz=260,SNR=6.3					
NEA2	**Nenana**	**35.51**	**39**	P	**P**	**11 55 59.4 +0.6**
NEA2				IAmb	IAmb	11 56 13.5
	comp=Z,3.0nm,0.7s					
NEA2	**Nenana**	**35.51**	**39**	P	**P**	**11 55 59.6 +0.8**
	baz=269					
E23K	**Chandalar**	**35.52**	**33**		**P**	**11 55 59.6 +0.6**
E23K				IAmb	IAmb	11 56 01.1
	comp=Z,6.0nm,1.1s					
E23K	**Chandalar**	**35.52**	**33**	P	**P**	**11 55 59.9 +0.9**
	baz=263,SNR=7.0					
PMR	**Palmer**	**35.52**	**44**	P	**P**	**11 55 59.3 +0.4**
	baz=273					
MCK	**McKinley**	**35.56**	**41**	P	**P**	**11 55 59.8 +0.5**
	baz=270					
TOLK	**Toolik Lake Re**	**35.61**	**32**	P	**P**	**11 56 00.5 +0.8**
	baz=262					
WAT1	**Susitna Watana**	**35.75**	**42**	P	**P**	**11 56 01.5 +0.6**
	baz=272					
KNK	**Knik Glacier**	**35.86**	**45**	P	**P**	**11 56 02.6 +0.8**
	baz=274					
SML	**Sawmill**	**35.89**	**44**	P	**P**	**11 56 03.1 +0.9**
	baz=273					
D24K	**Happy Valley**	**35.95**	**31**	P	**P**	**11 56 03.5 +1.1**
	baz=262					
E24K	**Your Creek**	**35.95**	**33**	P	**P**	**11 56 02.9 +0.3**
E24K				IAmb	IAmb	11 56 04.7
	comp=Z,6.1nm,1.2s					
E24K	**Your Creek**	**35.95**	**33**	P	**P**	**11 56 03.5 +1.0**
	baz=264,SNR=6.9					
H24K	**Noodor Dome**	**36.04**	**37**	P	**P**	**11 56 03.7 +0.3**
	baz=268					
F24K	**Squaw Lake**	**36.13**	**34**	IAmb	IAmb	11 56 07.5
	comp=Z,2.5nm,0.7s					
F24K	**Squaw Lake**	**36.13**	**34**	P	**P**	**11 56 05.4 +1.3**
	baz=266					
WAT6	**Susitna Watana**	**36.13**	**42**	P	**P**	**11 56 04.7 +0.4**
	baz=273					
G24K	**Hadweenzic Riv**	**36.24**	**35**		**P**	**11 56 05.9 +0.9**
G24K				IAmb	IAmb	11 56 07.0
	comp=Z,4.0nm,0.7s					
G24K	**Hadweenzic Riv**	**36.24**	**35**	P	**P**	**11 56 06.2 +1.2**
	baz=267,SNR=6.6					
DHY	**Denali Highway**	**36.27**	**42**	P	**P**	**11 56 06.2 +0.7**
	baz=272					
SCM	**Sheep Creek Mo**	**36.37**	**44**	P	**P**	**11 56 06.6 +0.4**
	baz=274					
ILAR	**Eielson Array**	**36.45**	**39**	P	**P**	**11 56 07.0 +0.3**
	comp=Z,1.0nm,0.8s,baz=274,slow=9.0,SNR=10					
	comp=Z,1.0nm,0.8s					
ILAR	**Eielson Array**	**36.45**	**39**	P	**P**	**11 56 07.6 +0.8**
ILAR	**Eielson Array**	**36.45**	**39**	P	**P**	**11 56 07.6 +0.8**
P23K	**Montague Islan**	**36.50**	**47**	P	**P**	**11 56 07.9 +0.6**
	baz=276					
G25K	**Bearman Lake**	**36.79**	**35**	P	**P**	**11 56 10.7 +1.1**
	baz=268					
D25K	**Kavik River**	**36.83**	**31**	IAmb	IAmb	11 56 11.8
	comp=Z,4.3nm,0.7s					
D25K	**Kavik River**	**36.83**	**31**	P	**P**	**11 56 10.6 +0.5**
	baz=265,SNR=9.1					
M24K	**Tolsona, Glenn**	**36.89**	**43**	P	**P**	**11 56 10.7 +0.1**
	baz=275					
K24K	**Donnelly Dome**	**36.96**	**40**	P	**P**	**11 56 11.7 +0.5**
	baz=273					
F25K	**Christian Rive**	**36.99**	**34**	P	**P**	**11 56 12.3 +0.8**
	baz=268					
PRP	**Porcupine Dome**	**37.02**	**38**	P	**P**	**11 56 12.3 +0.5**
	baz=271					
E25K	**Arctic Village**	**37.04**	**33**	P	**P**	**11 56 12.5 +0.6**
	baz=267					
KLU	**Klutina**	**37.06**	**44**	P	**P**	**11 56 12.4 +0.2**
	baz=276					
J25K	**Salcha River,**	**37.10**	**39**	P	**P**	**11 56 12.7 +0.2**
	baz=272					
PAX	**Paxson**	**37.15**	**42**	P	**P**	**11 56 13.3 +0.4**
	baz=274					
EYAK	**Cordova Ski Ar**	**37.25**	**46**	P	**P**	**11 56 14.0 +0.4**
	baz=277					
RIDG	**Independent Ri**	**37.38**	**40**	P	**P**	**11 56 15.8 +1.0**
	baz=274					

H27K	Steamboat Moun	38.63	36			P	11 56 26.8	+1.5
H27K	Steamboat Moun	38.63	36	P		P	11 56 25.5	+0.3
	baz=273							
I27K	Kandik River	38.64	37	P		P	11 56 25.2	-0.1
	baz=274							
D27M	Malcolm River	38.75	31	P		P	11 56 26.5	+0.2
	baz=270							
L27K	Beaver Creek,	38.79	41	P		P	11 56 26.9	+0.3
	baz=277							
M27K	Edge Creek, AK	38.86	42	P		P	11 56 27.7	+0.4
	baz=278							
F28M	Old Crow	39.20	34	P		P	11 56 30.6	+0.5
	baz=273							
E28M	Babbage River	39.28	32	P		P	11 56 31.6	+0.9
	baz=272							
BVCY	Beaver Creek	39.32	42	P		P	11 56 31.8	+0.7
	baz=279							
I28M	Miner Creek	39.35	37			P	11 56 32.4	+1.1
I28M					IAmb	IAmb	11 56 33.5	
	comp=Z,2.9nm,0.7s							
I28M	Miner Creek	39.35	37	P		P	11 56 31.4	0.0
	baz=276,SNR=6.7							
D28M	Stokes Point	39.54	31	P		P	11 56 33.7	+1.0
	baz=272							
YUK3	Moose Creek	39.61	43	P		P	11 56 34.4	+0.7
	baz=280							
DAWY	Dawson	39.74	40	P		P	11 56 35.8	+1.2
	baz=278							
E29M	Blow River	39.90	33	P		P	11 56 36.7	+0.9
	baz=274							
H29M	Whitestone	39.91	36	P		P	11 56 36.6	+0.7
	baz=276							
O28M	Mount Upton	39.92	45	P		P	11 56 36.9	+0.5
	baz=281							
G29M	Pine Creek	39.97	35	IAmb		IAmb	11 56 39.2	
	comp=Z,5.2nm,0.9s							
G29M	Pine Creek	39.97	35	P		P	11 56 37.2	+0.7
	baz=276							
PINM	Pinnacle	40.03	46	P		P	11 56 37.7	+0.7
	baz=282							
YUK8	Steele Glacier	40.03	44	P		P	11 56 37.6	+0.4
	baz=281							
BRWY	Burwash Landin	40.36	44	P		P	11 56 40.1	+0.4
	baz=281							
M29M	Somme Creek	40.42	42	P		P	11 56 40.6	+0.4
	baz=280							
L29M	L29M	40.45	41	P		P	11 56 41.2	+0.8
	baz=280,SNR=5.3							
YUK4	Talbot Arm	40.54	44	P		P	11 56 41.9	+0.5
	baz=282							
EPYK	Eagle Plains	40.55	36	P		P	11 56 42.4	+1.1
	baz=277							
K29M	Barlow Dome	40.59	40	P		P	11 56 42.0	+0.3
	baz=280							
G30M	tAoh Zraii Nji	40.67	35			P	11 56 43.2	+1.0
G30M	tAoh Zraii Nji	40.67	35	P		P	11 56 42.7	+0.5
	baz=277							
F30M	Barrier River	40.76	34	P		P	11 56 43.9	+1.0
	baz=277							
O29M	Mount Kennedy	40.80	45	P		P	11 56 44.3	+0.9
	baz=283							
I30M	Mount Dempster	40.86	37			P	11 56 45.1	+1.3
I30M					IAmb	IAmb	11 56 45.7	
	comp=Z,4.3nm,0.7s							
I30M	Mount Dempster	40.86	37	P		P	11 56 44.1	+0.2
	baz=279,SNR=8.5							
J30M	Hart River	40.98	38	P		P	11 56 45.3	+0.4
	baz=280							
M30M	Minto, Yukon	41.15	41	P		P	11 56 46.8	+0.6
	baz=282							
HYT	Haines Junctio	41.20	44	P		P	11 56 47.5	+0.8
	baz=283							
N30M	Aishikik Lake	41.25	43	P		P	11 56 47.4	+0.3
	baz=283							
P29M	Windy Craggy	41.37	46	P		P	11 56 48.5	+0.5
	baz=284							
G31M	Satah River	41.44	35	P		P	11 56 49.0	+0.6
	baz=279							
INK	Inuvik	41.52	33	P		P	11 56 49.7	+0.6
INK					pmax	pmax		
	comp=Z,3.0nm,0.8s							
INK	Inuvik	41.52	33			P	11 56 49.6	+0.6
INK	Inuvik	41.52	33	P		P	11 56 49.5	+0.5
	baz=278,SNR=5.2							
F31M	Tsiigehtchic	41.56	34	P		P	11 56 50.2	+0.8
	baz=279							
H31M	Peel River	41.60	36	IAmb		IAmb	11 56 51.8	
	comp=Z,4.7nm,1.0s							
H31M	Peel River	41.60	36	P		P	11 56 50.7	+0.9
	baz=280							
P30M	Million Dollar	41.63	45	P		P	11 56 50.5	+0.4
	baz=284							
N31M	Braeburn, Yuko	41.86	43	P		P	11 56 52.5	+0.6
	baz=284							
O30N	Mendenhall	41.88	44	P		P	11 56 52.9	+0.6
	baz=284							
PLBC	Pleasant Camp	42.09	46	P		P	11 56 54.1	+0.2
	baz=285							
M31M	Drury Creek, Y	42.33	42	P		P	11 56 56.4	+0.6
	baz=284							
ZALV	Zalesovo Beam	42.34	306	P		P	11 56 53.2	-2.8
	comp=Z,0.4nm,0.4s,baz=74,slow=5.1,SNR=1.3							
ZALV					PcP	PcP	11 58 47.5	-0.9
	comp=Z,0.3nm,0.4s,baz=48,slow=2.2,SNR=3.9							
ZALV					LR	LR	12 15 42.3	
	comp=Z,86nm,18.2s,baz=136,slow=38							
	comp=Z,0.4nm,0.4s							
ZALV	Zalesovo Beam	42.34	306	P		P	11 56 56.0	0.0
ZALV						PcP	11 58 47.5	-0.9
R31K	City Hall, Gus	42.69	47	P		P	11 56 59.7	+1.0
	baz=287							
P33M	Teslin, Yukon	43.60	44	P		P	11 57 06.6	+0.4
	baz=287							
MMPY	Sheldon Lake,	43.63	41	P		P	11 57 06.6	+0.3
	baz=286							
Q32M	Nakina River	44.25	46	P		P	11 57 11.4	-0.1
	baz=289							
C36M	Paulatuk	44.68	30	P		P	11 57 15.0	+0.4
	baz=285,SNR=5.6							
R33M	Jennings River	44.74	45	P		P	11 57 15.7	+0.4
	baz=289							
DLBC	Dease Lake	45.53	46	P		P	11 57 21.9	+0.4
	baz=291							
V35K	Ketchikan	45.87	50	P		P	11 57 24.5	+0.4
	baz=292							
T35M	Bob Quinn	45.95	48	P		P	11 57 25.6	+0.8
	baz=292							
MK31	Makanchi Array	46.70	297	*i* P		P	11 57 30.3	-0.5
MKAR	Makanchi Array	46.70	297	P		P	11 57 28.9	-1.9
	comp=Z,1.2nm,0.8s,baz=66,slow=9.4,SNR=6.5							
MKAR					PcP	PcP	11 59 02.7	-0.8
	comp=Z,0.5nm,0.6s,baz=57,slow=5.3,SNR=2.2							
MKAR					LR	LR	12 18 19.2	
	comp=Z,102nm,18.3s,baz=146,slow=38							
	comp=Z,1.2nm,0.8s							
MKAR	Makanchi Array	46.70	297	P		P	11 57 30.6	-0.2
KURK	Kurchatov	47.10	303	*i* P		P	11 57 33.7	-0.2
KURK					pmax	pmax		
	comp=Z,2.0nm,1.0s							
KURK	Kurchatov	47.10	303	P		P	11 57 33.3	-0.6
KURK	Kurchatov	47.10	303	*e*P		P	11 57 33.7	-0.2
KURBB	Kurchatov Arra	47.19	303	P		P	11 57 32.4	-2.1
	comp=Z,1.5nm,0.8s,baz=67,slow=8.2,SNR=5.5							
	comp=Z,1.5nm,0.8s							
BVAR	Borovoye Array	50.59	309	P		P	11 57 59.7	-0.8
	comp=Z,0.6nm,0.5s,baz=57,slow=11,SNR=3.6							
BVAR					PcP	PcP	11 59 17.1	-0.4
	comp=Z,0.8nm,0.5s,baz=101,slow=1.5,SNR=3.6							
	comp=Z,0.6nm,0.5s							
YKA	Yellowknife Ar	50.81	37	P		P	11 58 02.4	+0.3
	comp=Z,1.5nm,0.8s,baz=298,slow=6.9,SNR=8.6							
YKA					PcP	PcP	11 59 17.6	-0.5
	comp=Z,0.4nm,0.6s,baz=295,slow=3.3,SNR=3.8							
YKA					LR	LR	12 22 12.1	
	comp=Z,70nm,20.7s,baz=50,slow=39							
	comp=Z,1.5nm,0.8s							
YKA	Yellowknife Ar	50.81	37	P		P	11 58 02.0	-0.1
CHTO	Chiang Mai	52.03	256	P		P	11 58 11.8	0.0
CHTO					pmax	pmax		
	comp=Z,4.0nm,0.8s							
CHTO	Chiang Mai	52.03	256	P		P	11 58 11.8	0.0
CHTO					IAmb	IAmb	11 58 12.6	
	comp=Z,3.9nm,0.8s							
CMAR	Chiang Mai Arr	52.28	256	P		P	11 58 14.2	+0.5
	comp=Z,2.3nm,0.9s,baz=34,slow=7.4,SNR=12							
	comp=Z,2.3nm,0.9s							
CMAR	Chiang Mai Arr	52.28	256	P		P	11 58 13.9	+0.2
AAK	Ala-Archa	53.59	296	*i* P		P	11 58 24.1	+0.9
AAK					pmax	pmax		
	comp=Z,1.0nm,0.9s							
AAK	Ala-Archa	53.59	296	*e*P		P	11 58 24.1	+0.9
KK31	Karatay Array	55.75	299	P		P	11 58 39.0	+0.4
KK31					pmax	pmax		
	comp=Z,2.0nm,1.2s							
KK31	Karatay Array	55.75	299	P		P	11 58 39.0	+0.4
KKAR	Karatay Array	55.75	299	P		P	11 58 38.6	-0.1
KKAR	Karatay Array	55.75	299	P		P	11 58 38.5	-0.1
KRPM	Rodgers	57.30	63	P		P	11 58 50.5	+0.8
AB31	Akbulak array	58.15	310			P	11 58 54.8	-0.7
ABKAR	Akbulak array	58.15	310	P		P	11 58 54.6	-0.9
AKTO	Aktyubinsk	58.45	312	LR		LR	12 26 18.1	
	comp=Z,64nm,18.4s,baz=103,slow=38							
PLID	Pearl Lake	59.65	55			P	11 59 07.0	+0.7
SUMG	Summit	60.46	4	P		P	11 59 12.0	+0.4
SUMG					pmax	pmax		
	comp=Z,16nm,0.9s							
SUMG	Summit	60.46	4			P	11 59 12.0	+0.4
BOZ	Bozeman (W)	61.75	53	P		P	11 59 21.2	+0.8
BOZ					pmax	pmax		
	comp=Z,3.0nm,0.9s							
BOZ	Bozeman (W)	61.75	53	P		P	11 59 21.2	+0.8
BOZ					IAmb	IAmb	11 59 21.6	
	comp=Z,2.5nm,0.8s							
NVAR	Mina Array Bea	62.45	62	P		P	11 59 25.0	-0.3
	comp=Z,0.7nm,0.7s,baz=289,slow=7.1,SNR=7.1							
	comp=Z,0.7nm,0.7s							
NVAR	Mina Array Bea	62.45	62	P		P	11 59 25.4	+0.1
FIA1	FINESS Array S	63.75	335	P		P	11 59 32.8	-0.4
FINES	FINESS Array B	63.75	335	P		P	11 59 32.1	-1.1
	comp=Z,2.8nm,0.5s,baz=32,slow=7.4,SNR=20							
	comp=Z,2.8nm,0.5s							
FINES	FINESS Array B	63.75	335	P		P	11 59 32.8	-0.4
FINES	FINESS Array B	63.75	335	P		P	11 59 32.8	-0.4
FINES				PcP		PcP	12 00 08.6	-0.2
PD31	Pinedale Array	64.72	54	P		P	11 59 40.4	+0.2
PD31					IAmb	IAmb	11 59 41.7	
	comp=Z,1.6nm,0.9s							
PDAR	Pinedale Array	64.72	54	P		P	11 59 40.6	+0.4
	comp=Z,1.3nm,0.8s,baz=310,slow=1.8,SNR=12							
	comp=Z,1.3nm,0.8s							
OBN	Obninsk	65.02	325	*e*P		P	11 59 41.6	0.0
OBN				*e*'PP		pP	11 59 56.2	-0.9
OBN				*e*'SP		sP	12 00 02.5	-1.1
OBN				*e*			12 00 13.5	
OBN				*e*			12 02 07.2	
OBN				*e*PPP		PPP	12 03 38.4	
OBN				pmax		pmax		
	comp=Z,5.0nm,0.9s							
OBN				MLR		MLR		
	comp=Z,55nm,16.0s							
OBN	Obninsk	65.02	325	*e*P		P	11 59 41.6	0.0
NB2	NORSAR Subarra	67.94	341	P		P	11 59 59.5	-0.8
	comp=Z,4.3nm,0.7s,baz=30,slow=6.5							
NOA	NORSAR Array B	67.94	341	P		P	11 59 59.9	-0.4
	comp=Z,3.3nm,0.7s,baz=28,slow=6.4,SNR=12							
	comp=Z,3.3nm,0.7s							
HFS	Hagfors	68.17	339	P		P	12 00 01.2	-0.5
	comp=Z,5.9nm,0.5s,baz=56,slow=5.6,SNR=35							
	comp=Z,5.9nm,0.5s							
WRA	Warramunga Arr	68.70	199	P		P	12 00 03.0	-2.3
	comp=Z,0.8nm,1.0s,baz=17,slow=6.9,SNR=4.5							
	comp=Z,0.8nm,1.0s							
WRA	Warramunga Arr	68.70	199	*i* P		P	12 00 05.5	+0.2
WRA					pmax	pmax		
	comp=Z,1.0nm,1.0s							
WRA	Warramunga Arr	68.70	199	P		P	12 00 05.2	-0.2
KBZ	Khabaz	70.58	314	P		P	12 00 15.9	-0.8
	comp=Z,2.7nm,0.9s,baz=18,slow=3.2,SNR=4.6							
	comp=Z,2.7nm,0.9s							
KBZ	Khabaz	70.58	314	⇑*i* P		P	12 00 18.4	+1.7
KBZ					pmax	pmax		
	comp=Z,3.0nm,0.9s							
KBZ	Khabaz	70.58	314	*e*P		P	12 00 18.4	+1.7
AK03	Malin Array Si	71.24	326	P		P	12 00 19.7	-0.9
AKASG	Malin Array Be	71.26	326	P		P	12 00 19.9	-0.9
	comp=Z,3.2nm,0.4s,baz=35,slow=6.2,SNR=19							
	comp=Z,3.2nm,0.4s							
AKASG	Malin Array Be	71.26	326	P		P	12 00 20.2	-0.5
AKASG					pmax	pmax		
	comp=Z,5.0nm,1.5s							
AKASG	Malin Array Be	71.26	326	P		P	12 00 20.2	-0.5
AKASG					IAmb	IAmb	12 00 21.2	
	comp=Z,4.8nm,1.4s							
AKBB	Malin Array Si	71.26	326	P		P	12 00 20.1	-0.6
AK04	Malin Array Si	71.26	326	P		P	12 00 19.9	-0.9
AK21	Malin Array Si	71.27	326	P		P	12 00 20.0	-0.8
AK22	Malin Array Si	71.27	326	P		P	12 00 20.0	-0.8
KIEV	Kiev	71.27	326	P		P	12 00 19.9	-0.9
	comp=Z,32nm,0.8s							
AK01	Malin Array Si	71.27	326	P		P	12 00 20.0	-0.8
AK11	Malin Array Si	71.30	326	P		P	12 00 20.1	-0.9
GNI	Garni	72.26	310	LR		LR	12 33 59.0	
	comp=Z,40nm,20.8s,baz=112,slow=37							
ASAR	Alice Springs	72.40	198	P		P	12 00 27.1	-0.7
	comp=Z,0.8nm,0.7s,baz=11,slow=5.3,SNR=11							
	comp=Z,0.8nm,0.7s							
LUBAR	Lubar, Ukraine	72.44	326	P		P	12 00 26.7	-1.2
KMPD	K-Podol'skiy	74.04	326	P		P	12 00 36.1	-1.2
KOLS	Kolonicke sedl	75.27	329	*e*P		P	12 00 44.7	+0.2
KOLS	Kolonicke sedl	75.27	329	*e*P		P	12 00 44.6	+0.1
EKA	Eskdalemuir Ar	76.06	346	P		P	12 00 46.9	-1.9
	comp=Z,0.4nm,0.5s,baz=25,slow=5.5,SNR=2.0							
	comp=Z,0.4nm,0.5s							
MODS	Modra-Piesok	77.46	331	*e*P		P	12 00 57.9	+1.0
MODS	Modra-Piesok	77.46	331	*e*P		P	12 00 57.9	+1.0
TXAR	Lajitas Array	77.50	60	P		P	12 00 57.4	-0.2
	comp=Z,0.8nm,0.7s,baz=302,slow=4.6,SNR=14							
	comp=Z,0.8nm,0.7s							
KHC	Kasperske Hory	77.95	334	⇓*i* P		P	12 00 59.5	-0.1
KHC					pmax	pmax		
	comp=Z,2.0nm,1.0s							
BR131	Keskin Array S	78.11	317	⇑*i* P		P	12 01 01.2	+0.4
BRTR	Keskin Array B	78.11	317	P		P	12 01 01.0	+0.2
	comp=Z,2.0nm,0.9s,baz=22,slow=4.0,SNR=6.6							
	comp=Z,2.0nm,0.9s							
BRTR	Keskin Array B	78.11	317	P		P	12 01 00.6	-0.2
GERES	GERESS Array B	78.17	334	P		P	12 01 00.5	-0.4
	comp=Z,0.8nm,0.6s,baz=28,slow=6.0,SNR=6.2							
	comp=Z,0.8nm,0.6s							
GERES	GERESS Array B	78.17	334	P		P	12 01 00.8	-0.1
GERES	GERESS Array B	78.17	334	P		P	12 01 00.8	-0.1
CONA	Conrad Observa	78.31	332	*e*P		P	12 01 02.3	+0.6
	comp=Z,2.7nm,0.8s							
RONA	Rosalia, Austr	78.37	332	*e*P		P	12 01 02.8	+0.9
	comp=Z,2.9nm,0.9s							
MOA	Molln	78.88	333	*e*P		P	12 01 04.8	0.0
	comp=Z,1.8nm,1.0s							
ARSA	Arzberg	79.01	332	*e*P		P	12 01 05.8	+0.3
	comp=Z,2.7nm,1.3s							
BIOA	Bad Ischl, Aus	79.21	333	*e*P		P	12 01 07.1	+0.5
	comp=Z,2.6nm,0.7s							
SESA	Seetaler Alpe,	79.44	332	*e*P		P	12 01 08.3	+0.3
	comp=Z,6.8nm,0.6s							
SOKA	Soboth	79.67	332	*e*P		P	12 01 09.3	+0.1
	comp=Z,1.5nm,0.8s							
LESA	Schwarzleotal	79.75	334	*e*P		P	12 01 10.1	+0.6
	comp=Z,4.0nm,1.2s							
KBA	Koelnbreinsper	79.85	333	*e*P		P	12 01 10.8	+0.6
	comp=Z,1.7nm,0.6s							
SQTA	Sankt Quirin	80.36	335	*e*P		P	12 01 13.1	+0.2
	comp=Z,5.5nm,1.5s							
ASF	Jabal al Asfar	82.42	310	LR		LR	12 43 40.5	
	comp=Z,30nm,18.4s,baz=206,slow=40							
MMAI	Mount Meron Ar	82.54	311	P		P	12 01 24.8	+0.2
	comp=Z,2.9nm,0.7s,baz=31,slow=9.1,SNR=3.8							
	comp=Z,2.9nm,0.7s							
H03N2	Juan Fernandez	138.90	90	T		T	14 43 51.3	
	baz=308,slow=77,SNR=12							
H03N1	Juan Fernandez	138.92	90	T		T	14 43 53.2	
	baz=308,slow=77,SNR=9.4							
H03N3	Juan Fernandez	138.92	90	T		T	14 43 23.7	
	baz=308,slow=77,SNR=17							

*NOU **11** 12:01:11.6,27˚.39S×172˚.44W,h30km,mB5.6/13,*
Kermadec Islands Region
*GFZ **11** 12:01:34.8±0.2,28˚S±3˚×17˚6W±˚,h10km,M4.8/19,*
mb4.8/19
*IDC **11** 12:01:37.0±0.4,27˚.44S×176˚.27W,h0km,mb4.7/19,*
mbtmp4.6/22,ML5.3/2,MS4.2/26,Error ellipse:
s-maj=17.2km s-min=13.5km az=106.0
*BJI **11** 12:01:37.5,27˚.56S×176˚.07W,h9km,mB5.5/2,mb5.3/17,*
Ms5.0/2,Ms7 4.7/3
*NEIC **11** 12:01:38.5±1.8,27˚.33S±0˚.08×176˚.1W±0˚.1,h10km±1km,*
mb4.9/162,Error ellipse: s-maj=18.0km s-min=11.5km
az=119.0

ISC 11 12:01:41.7±0.3,27.72S±0˚04×176˚.17W±0˚06,h35km,
n292,o219/192,mb4.9/105,MS4.4/27,4C-1D,Kermadec
Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RAO	Raoul Island	2.17	225	Pn		Pn	12 02 18.4	+3.0
	538nm,0.3s,baz=176,slow=12,SNR=16							
RAO				Sn		Sn	12 02 47.1	+6.1
	830nm,0.3s,baz=73,slow=23,SNR=9.4							
	1µm,0.3s							
RAO	Raoul Island	2.17	225	Pn		Pn	12 02 19.0	+3.7
RAO	Raoul Island	2.17	225	P		Pn	12 02 18.7	+3.4
RAO				S		Sn	12 02 49.8	+8.8
RAO	Raoul Island	2.17	225	P		Pn	12 02 19.2	+3.8
RIZ	Raoul Island	2.17	225	P		Pn	12 02 18.4	+3.0
RIZ				S		Sn	12 02 49.1	+8.1
GLKZ	Green Lake	2.18	225	P		Pn	12 02 19.1	+3.6
GLKZ				S		Sn	12 02 49.1	+7.9
NIUE	Niue	10.33	35	Pn		Pn	12 04 00.5	-7.0
NIUE	Niue	10.33	35	P		Pn	12 03 56.6	-11
MXZ	Matakaoa Point	10.86	204	Pn		Pn	12 04 11.4	-3.3
MXZ	Matakaoa Point	10.86	204	P		Pn	12 04 09.5	-5.2
MXZ				S		Sn	12 06 12.7	-2.3
WMGZ	Waiomatatini S	11.05	203	P		Pn	12 04 13.2	-4.1
WMGZ				S		Sn	12 06 12.6	-7.0
HAZ	Te Kaha	11.23	205	P		Pn	12 04 15.0	-4.7
HAZ				S		Sn	12 06 25.5	+1.6
MSVF	Nonsavu	11.28	331	Pn		Pn	12 04 16.7	-3.8
	0.9nm,0.3s,baz=143,slow=16,SNR=4.7							
MSVF				Sn		Sn	12 06 14.7	-11
	baz=187,slow=23							
	4.1nm,0.6s							
MSVF	Nonsavu	11.28	331	P		Pn	12 04 14.6	-5.9
MSVF	Nonsavu	11.28	331	Pn		Pn	12 04 15.6	-4.9
MSVF	Nonsavu	11.28	331	P		Pn	12 04 17.3	-3.2
PUZ	Puketiti	11.33	203	P		Pn	12 04 15.9	-5.3
PUZ				S		Sn	12 06 23.7	-2.9
RUGZ	Raukumara Rang	11.45	205	P		Pn	12 04 18.2	-4.6
RUGZ				S		Sn	12 06 29.2	-0.3
WCZ	Waipu Caves	11.49	222	P		Pn	12 04 30.3	+6.9
OUZ	Omahuta	11.49	227	P		Pn	12 04 31.7	+8.4
OUZ	Omahuta	11.49	227	P		Pn	12 04 30.9	+7.5
OUZ	Omahuta	11.49	227	P		Pn	12 04 25.5	+2.1
MWZ	Matawai	11.83	205	P		Pn	12 04 27.5	-0.5
URZ	Urewera	11.93	206	Pn		Pn	12 04 24.0	-5.2
	1.7nm,0.3s,baz=27,slow=12,SNR=10							
URZ				Sn		Sn	12 06 35.1	-5.8
	2.0nm,0.3s,baz=181,slow=23,SNR=7.8							
URZ	Urewera	11.93	206	P		Pn	12 04 26.8	-2.4
URZ	Urewera	11.93	206	P		Pn	12 04 22.3	-7.0
URZ				S		Sn	12 06 39.5	-1.5
URZ	Urewera	11.93	206	P		Pn	12 04 28.8	-0.5
RIGZ	Rimuhau	12.07	203	P		Pn	12 04 29.7	-1.6
RIGZ				S		Sn	12 06 43.5	-1.2
BKZ	Black Stump Fm	12.95	206	P		Pn	12 04 41.3	-2.0
BKZ	Black Stump Fm	12.95	206	P		Pn	12 04 42.4	-0.9
BKZ				S		Sn	12 07 00.7	-5.4
BKZ	Black Stump Fm	12.95	206	P		Pn	12 04 41.8	-1.5
HIZ	Hauiti	13.12	213	P		Pn	12 04 44.4	-1.2
HIZ	Hauiti	13.12	213	P		Pn	12 04 45.5	-0.1
BHHZ	Black Hill Sta	13.40	207	P		Pn	12 04 48.3	-1.1
BHHZ				S		Sn	12 07 13.2	-3.9
PXZ	Pawanui	13.57	203	P		Pn	12 04 47.4	-4.3
PXZ				S		Sn	12 07 13.9	-7.3
WPHZ	Waipukurau	13.75	205	P		Pn	12 04 52.9	-1.3
WPHZ				S		Sn	12 07 20.1	-5.5
TSZ	Takapari Road	13.93	206	P		Pn	12 04 53.0	-3.6
TSZ				S		Sn	12 07 22.1	-7.8
NFK	Norfolk Island	14.05	261	P		Pn	12 04 59.5	+1.2
POWZ	Post Office Ro	14.29	206	P		Pn	12 05 04.4	+2.9
AFI	Afiamalu	14.34	17	Pn		Pn	12 04 49.9	-12
	4.0nm,0.3s,baz=83,slow=16,SNR=3.8							
AFI				Sn		Sn	12 07 19.0	-21
	5.9nm,0.3s,baz=50,slow=16,SNR=6.3							
AFI	Afiamalu	14.34	17	Pn		Pn	12 04 52.0	-10
AFI	Afiamalu	14.34	17	P		Pn	12 04 52.7	-10
MRZ	Mangatainoka R	14.59	206	P		Pn	12 05 02.5	-3.1
HOWZ	Holdsworth Sta	14.82	205	P		Pn	12 05 02.0	-6.7
HOWZ				S		Sn	12 07 41.6	-10
TMWZ	Te Maipa	14.87	204	P		Pn	12 05 05.6	-3.7
OGWZ	Otaki Gorge	14.89	206	P		Pn	12 05 04.8	-4.7
OGWZ				S		Sn	12 07 43.1	-10
TRWZ	Traveller	15.20	204	S		Sn	12 07 51.8	-9.0
PAWZ	Paruwai Farm	15.28	205	P		Pn	12 05 14.5	-0.3
MSWZ	Moikau Station	15.37	205	P		P	12 05 19.8	-0.5
SNZO	South Karori	15.49	207	P		Pn	12 05 13.2	-4.3
SNZO	South Karori	15.49	207	P		Pn	12 05 17.9	+0.4
PLWZ	Palliser	15.50	205	P		P	12 05 21.4	-0.3
MARNC	Mare, Loyalty	15.65	290	P		P	12 05 26.2	+2.8
TUWZ	Tuamarina	15.90	208	P		Pn	12 05 20.3	-2.5
NNZ	Nelson	15.97	210	P		Pn	12 05 21.4	-2.3
BSWZ	Blackbirch Sta	16.17	208	P		P	12 05 28.5	-0.5
RAR	Rarotonga	16.26	70	Pn		Pn	12 05 17.9	-10
	2.9nm,0.3s,baz=276,slow=8.4,SNR=4.0

MTSU	Mount Surprise	37.48	276	P		P		12 08 52.5	+0.2
INKA	Innaminka	37.99	260	P		P		12 08 56.8	+0.3
TAOE	Nuku Hiva Isla	38.80	68	*e*LR		LR		12 19 23.9	
	comp=Z,333nm,21.7s								
PMG	Port Moresby	39.04	291	P		P		12 09 07.4	+2.0
	comp=Z,20nm,0.9s								
QIS	Mount Isa	40.81	270	P		P		12 09 19.8	-0.3
BBOO	Buckleboo	41.30	251	P		P		12 09 22.7	-1.3
BBOO	Buckleboo	41.30	251	P		P		12 09 24.7	+0.7
AS31	Alice Springs	44.93	263	P		P		12 09 52.6	-0.9
ASAR	Alice Springs	44.93	263	P		P		12 09 52.9	-0.7
	comp=Z,3.7nm,0.7s,baz=97,slow=6.9,SNR=41								
ASAR				PcP		PcP		12 11 35.0	+0.4
	comp=Z,1.1nm,0.8s,baz=108,slow=4.0,SNR=1.9								
	comp=Z,3.7nm,0.7s								
ASAR	Alice Springs	44.93	263	P		P		12 09 52.7	-0.8
WR8	Warramunga Arr	45.54	269	P		P		12 09 57.3	-1.0
WR8				IAmb		IAmb		12 10 00.4	
	comp=Z,29nm,1.6s								
WRAB	Tennant Creek	45.68	269	P		P		12 09 58.7	-0.7
WRA	Warramunga Arr	45.68	269	P		P		12 09 58.2	-1.3
	comp=Z,5.9nm,0.7s,baz=104,slow=8.0,SNR=40								
WRA				PcP		PcP		12 11 38.3	+1.1
	comp=Z,4.6nm,1.0s,baz=101,slow=4.3,SNR=4.6								
	comp=Z,5.9nm,0.7s								
WRA	Warramunga Arr	45.68	269			P		12 09 58.2	-1.3
WB0	Warramunga Arr	45.70	269	P		P		12 09 58.4	-1.2
WB0				IAmb		IAmb		12 10 00.7	
	comp=Z,14nm,1.0s								
JAY	Jayapura	48.20	294	LR		LR		12 28 55.5	
	comp=Z,164nm,21.6s,baz=219,slow=34								
VNDA	Vanda	50.92	186	P		P		12 10 40.9	+1.9
	comp=Z,3.3nm,1.1s,baz=20,slow=6.4,SNR=7.0								
	comp=Z,3.3nm,1.1s								
VNDA	Vanda	50.92	186	P		P		12 10 42.1	+3.1
MTN	Manton Dam	51.23	276	P		P		12 10 41.7	-0.6
MTN				IAmb		IAmb		12 12 27.4	
	comp=Z,23nm,1.3s								
KNRA	Kununurra	52.18	271	P		P		12 10 49.2	-0.1
KNRA				IAmb		IAmb		12 12 26.7	
	comp=Z,20nm,1.2s								
GUMO	Guam	55.79	312	LR		LR		12 32 36.8	
	comp=Z,104nm,21.2s,baz=156,slow=34								
SIJI	Sorong	56.92	289	P		P		12 11 21.0	-2.7
	comp=Z,16nm,0.7s,baz=120,slow=15,SNR=5.5								
SIJI				LR		LR		12 36 36.3	
	comp=Z,124nm,18.1s,baz=235,slow=37								
	comp=Z,16nm,0.7s								
SIJI	Sorong	56.92	289	P		P		12 11 21.9	-1.9
	comp=Z,697nmcomp=Z,25nm,0.7s								
MBWA	Marble Bar	58.16	261	P		P		12 11 31.9	-0.6
MBWA				PcP		PcP		12 12 21.6	-2.2
CASY	Casey	58.25	207	P		P		12 11 34.9	+2.5
CASY	Casey	58.25	207	P		P		12 11 33.5	+1.2
RPN	Rapa Nui	58.62	106	LR		LR		12 30 10.1	
	comp=Z,97nm,21.4s,baz=272,slow=29								
MORW	Morawa	58.87	251	P		P		12 11 36.3	-1.0
BATI	Baumata	58.96	275	LR		LR		12 35 53.5	
	comp=Z,644nm,19.5s,baz=234,slow=35								
QSPA	South Pole Qui	62.38	180	P		P		12 12 03.8	+3.1
	comp=Z,17nm,1.0s,baz=40,slow=1.7,SNR=30								
QSPA				LR		LR		12 35 14.1	
	comp=Z,266nm,20.5s,baz=36,slow=32								
	comp=Z,17nm,1.0s								
QSPA	South Pole Qui	62.38	180	P		P		12 12 03.6	+2.8
JCJ	Chichijima	67.61	320	LR		LR		12 35 55.5	
	comp=Z,56nm,21.4s,baz=151,slow=31								
SMAI	San Martin Ant	71.31	158	P		P		12 12 59.1	+1.8
BELA	Belgrano 2	72.21	172	P		P		12 13 04.1	+1.5
BELA				IAmb		IAmb		12 13 05.4	
	comp=Z,24nm,1.7s								
LEM	Lembang	74.67	270	P		P		12 13 18.7	+0.3
	comp=Z,49nm,0.8s,baz=49,slow=7.4,SNR=6.4								
	comp=Z,49nm,0.8s								
MAW	Mawson	75.37	200	P		P		12 13 23.9	+2.6
	comp=Z,12nm,1.0s,baz=140,slow=5.5,SNR=12								
	comp=Z,12nm,1.0s								
MAW	Mawson	75.37	200	P		P		12 13 24.0	+2.8
MAW	Mawson	75.37	200	P		P		12 13 22.2	+0.9
JOW	Kunigami	76.09	311	P		P		12 13 25.0	-1.0
MJAR	Matsushiro Arr	77.00	324	P		P		12 13 30.4	-0.5
	comp=Z,6.4nm,0.9s,baz=158,slow=5.8,SNR=13								
	comp=Z,6.4nm,0.9s								
MJAR	Matsushiro Arr	77.00	324	P		P		12 13 29.9	-1.0
MAJO	Matsushiro	77.00	324	P		P		12 13 30.5	-0.4
MAJO				IAmb		IAmb		12 13 37.1	
	comp=Z,13nm,0.9s								
MAJO	Matsushiro	77.00	324	P		P		12 13 29.4	-1.5
MJB9	Matsu-Tunnel	77.00	324	P		P		12 13 30.2	-0.7
MJB9				IAmb		IAmb		12 13 38.1	
	comp=Z,13nm,0.9s								
JSU	Suzuyama	77.81	315	P		P		12 13 34.6	-1.0
ELIB	Princess Elisa	79.68	186	*d*P		P		12 13 48.2	+2.7
	comp=Z,9.5nm,0.9s								
TROLL	Troll, Antarti	80.54	180	⇑P		P		12 13 52.5	+2.3
	comp=Z,379nm,0.7s								
H03S2	Juan Fernandez	80.59	123	T		T		13 42 49.7	
	baz=242,slow=74,SNR=4.6								
H03S1	Juan Fernandez	80.61	123	T		T		13 42 48.0	
	baz=242,slow=74,SNR=5.2								
H03S3	Juan Fernandez	80.61	123	T		T		13 42 44.4	
	baz=242,slow=74,SNR=5.0								
SNAA	Sanae	80.78	178	P		P		12 13 53.0	+1.7
	comp=Z,5.1nm,1.0s,baz=186,slow=3.8,SNR=7.8								
	comp=Z,5.1nm,1.0s								
VNA2	Neumayer--Watz	81.31	176	⇑P		P		12 13 56.0	+1.9
	comp=Z,7.1nm,0.8s,baz=182,slow=4.6								
VNA1	Neumayer--Stat	81.53	176	⇑P		P		12 13 57.3	+2.1
	comp=Z,9.6nm,0.9s								
LPIG	La Paz	81.75	57	LR		LR		12 44 28.3	
	comp=Z,181nm,18.1s,baz=256,slow=32								
BFSC	Mount Baldy Ra	82.85	45	IAmb		IAmb		12 14 15.1	
	comp=Z,10nm,1.3s								
PLCA	Paso Flores	83.14	133	P		P		12 14 06.2	+1.8
	comp=Z,4.2nm,1.0s,baz=257,slow=5.6,SNR=4.0								
	comp=Z,4.2nm,1.0s								
PFO	Pinyon Flats O	83.21	47	LR		LR		12 44 47.9	
	comp=Z,299nm,18.8s,baz=234,slow=31								
PFO	Pinyon Flats O	83.21	47	P		P		12 14 03.9	-0.8
ISA	Isabella, Lake	83.27	44	IAmb		IAmb		12 14 52.5	
	comp=Z,10.0nm,1.1s								
KSRS	Korea Array	83.38	318	P		P		12 14 04.3	-0.9
	comp=Z,3.2nm,0.8s,baz=134,slow=6.1,SNR=10.0								
KSRS				LR		LR		12 49 39.9	
	comp=Z,42nm,18.6s,baz=75,slow=35								
	comp=Z,3.2nm,0.8s								
PEA0B	Petropavlovsk-	83.64	345	P		P		12 14 05.8	-0.4
PEA0B				IAmb		IAmb		12 15 08.2	
	comp=Z,15nm,1.1s								
PETK	Petropavlovsk-	83.64	345	P		P		12 14 05.5	-0.7
	comp=Z,5.9nm,0.9s,baz=134,slow=6.4,SNR=8.4								
PETK				LR		LR		12 48 26.4	
	comp=Z,114nm,18.6s,baz=158,slow=34								
	comp=Z,5.9nm,0.9s								
PETK	Petropavlovsk-	83.64	345	P		P		12 14 06.0	-0.3
BELC	Belle Mtn. Jos	83.75	46	IAmb		IAmb		12 14 09.3	
	comp=Z,9.1nm,1.1s								
BC3	Big Chuckawall	83.89	47	IAmb		IAmb		12 14 28.1	
	comp=Z,8.0nm,1.2s								
AFDM	Forest Hills D	83.98	40	IAmb		IAmb		12 14 20.8	
	comp=Z,8.1nm,1.2s								
GSC	Goldstone, Bar	84.07	45	IAmb		IAmb		12 14 28.6	
	comp=Z,6.9nm,1.1s								
MPMC	Manual Prospec	84.13	44	IAmb		IAmb		12 14 44.6	
	comp=Z,9.5nm,1.3s								
IRM	Iron Mountain	84.40	47	IAmb		IAmb		12 14 12.9	
	comp=Z,10nm,1.2s								
QSM	Queen of Sheba	84.45	44	IAmb		IAmb		12 14 12.6	
	comp=Z,9.6nm,1.2s								
WAKR	Walker	84.57	41	IAmb		IAmb		12 14 13.6	
	comp=Z,15nm,1.3s								
M02C	Callahan	84.62	37	IAmb		IAmb		12 14 36.0	
	comp=Z,12nm,1.1s								
MPK	Martis Peak	84.75	40	IAmb		IAmb		12 14 39.9	
	comp=Z,15nm,1.2s								
PNTR	Pine Nut	84.86	41	IAmb		IAmb		12 14 36.6	
	comp=Z,10nm,1.0s								
YBH	Yreka Blue Hor	84.94	37	LR		LR		12 44 40.7	
	comp=Z,65nm,21.2s,baz=250,slow=30								
YBH	Yreka Blue Hor	84.94	37	IAmb		IAmb		12 14 27.4	
	comp=Z,6.3nm,0.9s								
LHV	Little Huntoon	84.95	42	IAmb		IAmb		12 14 26.2	
	comp=Z,10nm,1.1s								
BEKR	Beckworth	84.95	40	IAmb		IAmb		12 14 43.8	
	comp=Z,11nm,1.4s								
MTPC	Mountain Pass	84.97	46	IAmb		IAmb		12 14 26.7	
	comp=Z,13nm,1.4s								
WCT	Wildcat Mounta	85.14	44	IAmb		IAmb		12 14 16.5	
	comp=Z,15nm,1.8s								
NVAR	Mina Array Bea	85.18	42	P		P		12 14 15.5	+0.8
	comp=Z,4.4nm,0.9s,baz=221,slow=8.2,SNR=15								
NVAR				LR		LR		12 48 51.2	
	comp=Z,305nm,18.1s,baz=216,slow=33								
	comp=Z,4.4nm,0.9s								
NVAR	Mina Array Bea	85.18	42	P		P		12 14 13.4	-1.3
NV11	Mina Array Sit	85.27	42	IAmb		IAmb		12 14 16.7	
	comp=Z,6.5nm,1.1s								
TPNV	Topopah Spring	85.47	44	IAmb		IAmb		12 14 30.3	
	comp=Z,8.9nm,1.1s								
TPH	Tonopah	85.60	43	IAmb		IAmb		12 14 43.9	
	comp=Z,6.0nm,0.6s								
Y14A	Wickenburg	85.66	48	IAmb		IAmb		12 14 19.0	
	comp=Z,7.4nm,1.1s								
NJ2	Nanjing	85.75	310	*e*P		P		12 14 17.9	+0.5
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
USRK	Ussuriysk Ar.	85.84	325	P		P		12 14 17.8	+0.3
	comp=Z,5.9nm,0.9s,baz=127,slow=3.3,SNR=6.4								
	comp=Z,5.9nm,0.9s								
TUC	Tucson	86.18	50	P		P		12 14 20.3	+0.7
TUC				IAmb		IAmb		12 14 22.1	
	comp=Z,13nm,1.1s								
S11A	Rachel	86.22	44	IAmb		IAmb		12 14 31.9	
	comp=Z,8.1nm,0.9s								
J04A	Umpqua Nationa	86.31	36	IAmb		IAmb		12 14 44.5	
	comp=Z,15nm,1.1s								
PRN	Pahroc Range	86.50	44	IAmb		IAmb		12 14 23.5	
	comp=Z,11nm,1.1s								
I04A	Tendick Farm,	86.53	36	IAmb		IAmb		12 15 00.6	
	comp=Z,27nm,1.9s								
X16A	Lo Mia Camp, P	86.99	48	IAmb		IAmb		12 14 44.0	
	comp=Z,6.8nm,1.0s								
WIFE	Three Sisters-	87.03	36	IAmb		IAmb		12 14 52.1	
	comp=Z,7.5nm,1.1s								
U15A	North Rim	87.64	46	IAmb		IAmb		12 14 29.3	
	comp=Z,6.3nm,1.0s								
WUAZ	Wupatki	87.69	48	IAmb		IAmb		12 14 29.2	
	comp=Z,7.8nm,1.1s								
SZCU	Shurtz Canyon	87.84	45	IAmb		IAmb		12 15 32.4	
	comp=Z,19nm,1.8s								
E03A	Lebam	87.89	33	IAmb		IAmb		12 14 40.2	
	comp=Z,7.8nm,0.8s								
WHN	Wuhan	88.04	306	P		P		12 14 27.9	-0.7
X18A	Snowflake	88.05	49	IAmb		IAmb		12 14 48.9	
	comp=Z,8.0nm,1.3s								
I07A	Izee	88.26	37	IAmb		IAmb		12 15 16.0	
	comp=Z,13nm,1.7s								
GNW	Green Mountain	88.97	33	IAmb		IAmb		12 14 34.4	
	comp=Z,7.3nm,1.1s								
CN2	Changchun	89.00	322	P		P		12 14 36.4	+3.6
BNX	BinXian	89.25	324	⇑P		P		12 14 36.1	+2.2
BNX				PcP		PcP		12 14 37.3	+2.0
BNX				pP		pP		12 14 39.3	-4.1
BNX				S		S		12 25 25.4	+4.7
BNX				sS		pS		12 25 30.9	-1.9
BNX				pmax		pmax			
	comp=Z,7.0nm,0.8s								
BNX				L		L			
	comp=Z,160nm,11.2s								
TIA	Tai'an	89.35	312	P		P		12 14 36.4	+1.8
TIA				pmax		pmax			
	comp=Z,11nm,0.8s								
TIA				pmax		pmax			
	comp=Z,190nm,4.0s								
G08A	Pilot Rock	89.36	36	IAmb		IAmb		12 14 36.1	
	comp=Z,7.0nm,1.0s								
MXC	Moxie City	89.54	35	IAmb		IAmb		12 14 36.9	
	comp=Z,6.5nm,1.0s								
KLR	Kul'dur	89.56	329	LR		LR		12 51 30.9	
	comp=Z,100nm,18.6s,baz=210,slow=34								
TX31	Lajitas Ar. Si	89.58	56	IAmb		IAmb		12 14 38.0	
	comp=Z,6.7nm,1.2s								
TXAR	Lajitas Array	89.58	56	P		P		12 14 36.2	+0.2
	comp=Z,2.1nm,0.9s,baz=208,slow=8.3,SNR=19								
TXAR				LR		LR		12 49 34.0	
	comp=Z,148nm,18.2s,baz=280,slow=32								
	comp=Z,2.1nm,0.9s								
TXAR	Lajitas Array	89.58	56	P		P		12 14 36.8	+0.8
SBM	South Baldy	89.61	51	P		P		12 14 35.3	-1.1
MNTX	Cornudas Mount	89.61	54	IAmb		IAmb		12 14 55.5	
	comp=Z,13nm,1.7s								
Y22A	Socorro	89.74	51	IAmb		IAmb		12 14 38.8	
	comp=Z,2.2nm,1.1s								
E07A	Sunnyside	89.75	35	P		P		12 14 35.4	-0.8
HAWA	Hanford	89.80	35	IAmb		IAmb		12 14 38.2	
	comp=Z,10nm,1.2s								
LTY	Liberty	89.81	34	P		P		12 14 36.8	+0.2
N19K	Bonanza Creek	89.97	10	IAmb		IAmb		12 14 38.4	
	comp=Z,5.5nm,0.9s								
TMUT	Trail Mountain	90.04	45	IAmb		IAmb		12 14 42.8	
	comp=Z,5.7nm,0.9s								
L16K	Owhat River	90.13	8	IAmb		IAmb		12 14 40.0	
	comp=Z,6.8nm,1.0s								
CMIG	Matias Romero	90.38	71	LR		LR		12 48 05.0	
	comp=Z,94nm,18.1s,baz=276,slow=31								
EPH	Ephrata	90.41	35	IAmb		IAmb		12 14 51.6	
	comp=Z,7.7nm,1.0s								
E09A	Wood Farm, Sta	90.59	36	IAmb		IAmb		12 14 41.9	
	comp=Z,10nm,1.0s								
ANMO	Albuquerque	90.65	50	LR		LR		12 51 19.3	
	comp=Z,158nm,18.1s,baz=269,slow=33								
ANMO	Albuquerque	90.65	50	P		P		12 14 41.5	+0.6
ANMO	Albuquerque	90.65	50	P		P		12 14 41.2	+0.3
ANMO				IAmb		IAmb		12 14 42.7	
	comp=Z,5.0nm,1.1s								
PV05	Paradox Valley	90.66	47	IAmb		IAmb		12 14 43.0	
	comp=Z,6.3nm,1.1s								
F10A	Beach Ranch, E	90.72	37	IAmb		IAmb		12 14 41.7	
	comp=Z,8.5nm,0.9s								
PV19	Morning Glory	90.87	46	IAmb		IAmb		12 15 51.6	
	comp=Z,14nm,1.4s								
PV10	Paradox Valley	90.87	46	IAmb		IAmb		12 15 06.5	
	comp=Z,8.4nm,1.1s								
PV18	Skein Mesa, Pa	90.88	47	IAmb		IAmb		12 14 59.8	
	comp=Z,11nm,1.2s								
PV13	Radium Mtn., P	90.89	47	IAmb		IAmb		12 14 54.4	
	comp=Z,6.0nm,1.1s								
PV20	West Nyswonger	90.90	46	IAmb		IAmb		12 14 43.5	
	comp=Z,8.6nm,1.1s								
PV02	Paradox Valley	90.97	47	IAmb		IAmb		12 14 58.9	
	comp=Z,11nm,1.1s								
L18K	Granite Mountain	90.98	9	IAmb		IAmb		12 14 43.3	
	comp=Z,5.5nm,1.1s								
LYN	LuoYang	91.57	309	P		P		12 14 47.5	+2.5
LYN				SKS		SKSac		12 25 15.5	+0.6
LYN				S		ScS		12 25 48.9	+3.7
LYN				sS		pS		12 25 54.0	-0.9
LYN				pmax		pmax			
	comp=Z,10.0nm,0.7s								
LYN				L		L			
	comp=Z,260nm,11.4s								
LYN				L		L			
	comp=Z,280nm,17.2s								
LYN				L		L			
	comp=Z,390nm,14.4s								
NEW	Newport	92.27	35	LR		LR		12 53 03.5	
	comp=Z,167nm,18.0s,baz=244,slow=34								
HEH	HeiHe	92.29	328	*e*P		P		12 14 42.2	-5.7
SNOW	Snow King Moun	92.78	42	IAmb		IAmb		12 14 52.3	
	comp=Z,6.5nm,1.1s								
LOHW	Long Hollow	92.96	41	IAmb		IAmb		12 14 52.9	
	comp=Z,6.8nm,1.4s								
PDAR	Pinedale Array	93.09	43	P		P		12 14 51.9	-0.3
	comp=Z,1.0nm,0.8s,baz=222,slow=2.0,SNR=8.5								
PDAR				LR		LR		12 53 46.7	
	comp=Z,113nm,18.1s,baz=260,slow=34								
	comp=Z,1.0nm,0.8s								
TRF	Thorofare Moun	93.15	11	IAmb		IAmb		12 14 53.5	
	comp=Z,5.0nm,0.8s								
FLWY	Flagg Ranch	93.18	41	IAmb		IAmb		12 15 05.2	
	comp=Z,7.2nm,0.9s								
YHL	Hebgen Lake	93.36	40	IAmb		IAmb		12 14 55.6	
	comp=Z,7.7nm,1.2s								
RND	Reindeer	93.36	12	IAmb		IAmb		12 14 54.6	
	comp=Z,6.6nm,0.9s								
BOZ	Bozeman (W)	93.55	39	IAmb		IAmb		12 14 55.6	
	comp=Z,5.5nm,1.0s								
ATAH	Atahualpa	93.55	100	LR		LR		12 48 05.8	
	comp=Z,152nm,19.6s,baz=213,slow=30								
MCK	McKinley	93.65	12	IAmb		IAmb		12 14 55.7	
	comp=Z,7.2nm,1.1s								
CMAR	Chiang Mai Arr	94.05	289	P		P		12 14 58.1	+1.3
	comp=Z,1.4nm,0.3s,baz=139,slow=3.5,SNR=21								
	comp=Z,1.4nm,0.3s								
CMAR	Chiang Mai Arr	94.05	289	P		P		12 14 57.0	+0.1
CHTO	Chiang Mai	94.21	289	P		P		12 14 56.8	-0.7
CHTO				IAmb		IAmb		12 15 01.7	
	comp=Z,6.8nm,0.9s								
CHTO	Chiang Mai	94.21	289	P		P		12 14 58.9	+1.3
WRH	Wood River Hil	94.48	12	IAmb		IAmb		12 14 58.9	
	comp=Z,4.2nm,0.9s								
CCB	Clear Creek Bu	94.69	12	P		P		12 14 58.5	-0.1
ILAR	Eielson Array	94.97	12	P		P		12 14 59.6	-0.3
	comp=Z,1.4nm,0.9s,baz=226,slow=4.7,SNR=8.5								
	comp=Z,1.4nm,0.9s								
ILAR	Eielson Array	94.97	12	P		P		12 14 59.3	-0.6
PZH	PanZhiHua	95.51	297	P		P		12 15 05.1	+1.6
HHC	Hu-ho-hao-te	95.55	313	*e*P		P		12 15 04.2	+0.9
HHC				S		S		12 26 15.5	-2.1
HHC				sS		pS		12 26 26.9	-3.0
HHC				pmax		pmax			
	comp=Z,5.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,42nm,4.6s								
HHC				L		L			
	comp=Z,93nm,19.4s								
HHC				L		L			
	comp=Z,130nm,19.6s								
HHC				L		L			
	comp=Z,120nm,19.2s								
CD2	Chengdu	96.03	302	P		P		12 15 08.4	+2.7
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
LPAZ	La Paz	97.74	113	LR		LR		12 51 00.9	
	comp=Z,82nm,20.5s,baz=142,slow=30								
ZALV	Zalesovo Beam	117.08	319	PKP		PKPdf		12 20 22.1	-0.5
	comp=Z,0.7nm,0.6s,baz=117,slow=2.0,SNR=4.9								
MKAR	Makanchi Array	117.26	311	PKP		PKPdf		12 20 23.0	-0.2
	comp=Z,1.1nm,0.8s,baz=19,slow=4.1,SNR=4.5								
KURBB	Kurchatov Arra	120.38	315	PKP		PKPdf		12 20 28.6	-0.4
	comp=Z,1.7nm,1.0s,baz=105,slow=2.2,SNR=6.0								
BVAR	Borovoye Array	125.58	317	PKP		PKiKP		12 20 39.3	0.0
	comp=Z,1.6nm,0.6s,baz=108,slow=3.8,SNR=9.7								
ARTI	Arti	132.10	322	PKP		PKPdf		12 20 50.8	-0.4
	comp=Z,3.7nm,0.8s,baz=95,slow=5.1,SNR=5.8								
AKTO	Aktyubinsk	133.43	314	PKP		PKPdf		12 20 53.3	-0.7
	comp=Z,1.2nm,0.4s,baz=176,slow=4.9,SNR=5.3								
ARCES	ARCESS Array B	136.29	349	PKP		PKPdf		12 20 58.1	-0.7
	comp=Z,9.8nm,1.3s,baz=11,slow=1.2,SNR=6.5								
BELG	Belogornoye	139.27	319	PKP		PKPdf		12 21 04.1	-0.5
	comp=Z,31nm,0.8s,baz=153,slow=3.6,SNR=3.8								
H10N3	ASCENSION HYDR	140.45	151	T		T		15 00 13.6	
	baz=200,slow=75,SNR=8.9								
H10N1	ASCENSION HYDR	140.46	151	T		T		15 00 14.0	
	baz=200,slow=75,SNR=11								
H10N2	ASCENSION HYDR	140.47	151	T		T		15 00 15.0	
	baz=200,slow=75,SNR=9.3								
FINES	FINESS Array B	143.13	342	PKhKP		PKPpre		12 21 07.8	
	comp=Z,4.1nm,0.8s,baz=118,slow=2.8,SNR=6.2								
KBZ	Khabaz	144.85	307	PKP		PKPdf		12 21 14.5	-0.4
	comp=Z,2.9nm,0.8s,baz=40,slow=1.5,SNR=6.5								
NB2	NORSAR Subarra	146.31	354	PKP		PKPbc		12 21 17.9	-0.2
	comp=Z,20nm,1.1s,baz=13,slow=4.6								
NOA	NORSAR Array B	146.31	354	PKPbc		PKPbc		12 21 17.9	-0.2
	comp=Z,3.4nm,0.9s,baz=6.3,slow=4.0,SNR=23								
HFS	Hagfors	146.90	351	PKPbc		PKPbc		12 21 19.4	-0.4
	comp=Z,14nm,0.8s,baz=29,slow=3.4,SNR=17								
AK03	Malin Array Si	150.02	327	PKP		PKPdf		12 21 22.4	-0.9
AKASG	Malin Array Be	150.04	327	PKP		PKPdf		12 21 23.8	+0.5
	comp=Z,6.9nm,0.8s,baz=46,slow=3.4,SNR=4.4								
AKASG				PKPbc		PKPbc		12 21 28.4	+0.1
	comp=Z,11nm,0.9s,baz=45,slow=2.5,SNR=25								
AKBB	Malin Array Si	150.04	327	PKP		PKPdf		12 21 22.4	-0.9
AK01	Malin Array Si	150.05	327	PKP		PKPdf		12 21 22.5	-0.8
KIEV	Kiev	150.05	327	PKP		PKPdf		12 21 22.4	-0.9
AK04	Malin Array Si	150.05	327	PKP		PKPdf		12 21 22.5	-0.8
AK09	Malin Array Si	150.06	327	PKP		PKPdf		12 21 22.5	-0.8
AK08	Malin Array Si	150.07	327	PKP		PKPdf		12 21 22.5	-0.8
AK22	Malin Array Si	150.07	327	PKP		PKPdf		12 21 22.5	-0.8
AK21	Malin Array Si	150.08	327	PKP		PKPdf		12 21 22.5	-0.8
EKA	Eskdalemuir Ar	151.94

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.33**	**313**	*e*P	Pg	12 52 07.7	+5.0
GSPH				*i* S	Sn	12 52 23.3	-3.6
DMPH	**Davao City--Mi**	**2.83**	**336**	*e*P	Pg	12 52 12.3	+0.2
DMPH				*i* S	Sb	12 52 44.5	+0.1
KCP	**Kidapawan**	**2.95**	**328**	*i* P	Pn	12 52 07.7	+1.5
KCP				*e*S	Sn	12 52 43.3	+1.0
BIPH	**Bislig**	**3.69**	**356**	*e*P	Pn	12 52 18.8	+2.6
BIPH				*e*S	Sn	12 52 59.2	-1.3
CGP	**Cagayan de Oro**	**4.40**	**334**	*e*P	Pb	12 52 33.3	-2.8
CGP				*e*S	Sn	12 53 19.7	+1.8
TSSP	**Tandag City**	**4.56**	**354**	*e*P	Pn	12 52 30.6	+2.5
TSSP				*e*S	Sb	12 53 28.5	-5.8
SCPH	**Surigao**	**5.39**	**348**	*e*P	Pn	12 52 42.2	+2.6
SCPH				*e*S	Sb	12 53 51.6	-6.8

NIED ***11*** *13:11:53.6, 38°.89N×141°.97E, h49km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.85; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-2.45; $M_{r\theta}$1.38; $M_{\theta\phi}$-0.88; $M_{r\phi}$3.89; Fault plane solution: $M_0$5.00000×10^{14} NP1: ϕ_s201.00000°,δ17.00000°,λ91.00000°. NP2:ϕ_s20.00000°, δ73.00000°,λ90.00000°.*

JMA ***11*** *13:11:53.6±0.1, 38°.9N±0°.3×142°.0E±0°.6, h49km, MD3.8/37, MV3.9/37, KINKAZAN REGION*

JMA Felt II J1 at KINKAZAN REGION .

IDC ***11*** *13:11:55.5±1.2, 38°.84N×142°.03E, h72km±8km, mb3.6/11, mbtmp3.9/15, MS3.2/2, Error ellipse: s-maj=19.9km s-min=11.0km az=104.0*

NEIC ***11*** *13:11:55.9±2.0, 38°.97N±0°.07×142°.0E±0°.1, h70km±9km, mb4.6/11, Error ellipse: s-maj=15.5km s-min=9.0km az=113.0*

ISC 11 13:11:54.1±0.8, 38°.88N±0°.05×142°.01E±0°.08, h56km±6km, n56, σ1s62/59, mb4.2/18, 15D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.34**	**307**	⇓*i*P	**Pn**	**13 12 02.9**	**-1.2**
OFUJ				A	A	13 12 02.9	
	comp=N,6.0nm,0.5s,comp=E,19nm,0.4s						
OFUJ				⇓S	**Sn**	**13 12 09.1**	**-2.1**
JKMT	**Kesennumamotoy**	**0.42**	**261**	⇓*i*P	**Pn**	**13 12 03.7**	**-1.2**
JKMT				A	A	13 12 03.7	
	comp=N,8.0nm,0.3s,comp=E,11nm,0.7s						
JKMT				⇓*i*S	**Sn**	**13 12 10.4**	**-2.3**
JMK	**Ichinoseki**	**0.62**	**277**	⇓*i*P	**Pn**	**13 12 06.0**	**-1.1**
JMK				⇓S	**Sn**	**13 12 14.8**	**-1.8**
JIO	**Ouri**	**0.67**	**231**	⇓*i*P	**Pn**	**13 12 06.5**	**-1.1**
JIO				⇓*i*S	**Sn**	**13 12 15.2**	**-2.4**
JOM	**Ohasama**	**0.82**	**317**	⇓*i*P	**Pn**	**13 12 08.6**	**-0.9**
JOM				A	A	13 12 08.6	
	comp=N,7.0nm,0.3s,comp=E,10.0nm,0.4s						
JOM				⇓S	**Sn**	**13 12 19.4**	**-1.5**
JOFO	**Osakifurukawao**	**0.90**	**253**	A	A	13 12 09.8	
	comp=N,13nm,1.6s,comp=E,10.0nm,0.3s						
JOU	**Okura**	**1.17**	**245**	⇓*i*P	**Pn**	**13 12 13.2**	**-1.0**
JRG	**Rokugo**	**1.19**	**296**	⇓*i*P	**Pn**	**13 12 13.5**	**-1.0**
JYK	**Kaneyama**	**1.29**	**272**	⇓*i*P	**Pn**	**13 12 14.9**	**-0.9**
JMM	**Marumori**	**1.39**	**224**	⇓*i*P	**Pn**	**13 12 15.9**	**-1.2**
JMM				⇓S	**Sn**	**13 12 33.0**	**-1.5**
JTM	**Tenmabayashi**	**2.04**	**339**	Pn	**Pn**	**13 12 25.6**	**-0.4**
JTM				Sn	Sn	13 12 39.5	-11
ERM	**Erimo**	**3.25**	**15**	Pn	**Pn**	**13 12 42.6**	**0.0**
MJAR	**Matsushiro Arr**	**3.81**	**233**	P	**Pn**	**13 12 51.7**	**+1.4**
	comp=E,6.2nm,0.5s,baz=36,slow=12,SNR=35						
MJAR				S	**Sn**	**13 13 36.4**	**+2.6**
	comp=E,8.3nm,0.8s,baz=43,slow=17,SNR=6.2						
MJAR	**Matsushiro Arr**	**3.81**	**233**		**Pn**	**13 12 52.1**	**+1.8**
MAJO	**Matsushiro**	**3.81**	**233**	Pn	**Pn**	**13 12 52.4**	**+2.2**
MJB9	**Matsu-Tunnel**	**3.81**	**234**	Pn	**Pn**	**13 12 53.7**	**+3.4**
JGF	**Kuroka**	**4.95**	**230**	Pn	**Pn**	**13 13 07.5**	**+1.6**
JKA	**Kamikawa-asahi**	**5.25**	**5**	Pn	**Pn**	**13 13 11.4**	**+1.4**
INU	**Inuyama**	**5.32**	**230**	Pn	**Pn**	**13 13 13.2**	**+2.2**
JHJ	**Hachijo jima 2**	**6.02**	**198**	P	**Pn**	**13 13 21.9**	**+1.3**
	comp=E,79nm,0.8s,baz=40,slow=18,SNR=1.5						
JHJ				S	**Sn**	**13 14 26.7**	**-1.4**
	comp=E,104nm,1.0s,baz=60,slow=17,SNR=1.7						
USA0B	**Ussuriysk Arra**	**9.20**	**308**	Pn	**Pn**	**13 14 04.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**9.20**	**308**	P	**Pn**	**13 14 07.0**	**+3.0**
	comp=E,5.9nm,0.7s,baz=116,slow=13,SNR=6.5						
USRK				LR	LR	13 16 49.2	
	comp=E,119nm,19.5s,baz=265,slow=32						
USRK	**Ussuriysk Ar.**	**9.20**	**308**	Pn	**Pn**	**13 14 04.8**	**+0.8**
KSRS	**Korea Array**	**11.18**	**267**	P	**Pn**	**13 14 34.5**	**+3.3**
	comp=E,1.0nm,0.6s,baz=86,slow=17,SNR=4.8						
KLR	**Kul'dur**	**12.70**	**328**	LR	LR	13 19 34.8	
	comp=E,98nm,19.1s,baz=230,slow=36						
YULB	**Yu-li**	**23.43**	**235**	P	**P**	**13 16 57.2**	**-1.1**
YULB				IAmb	IAmb	13 17 22.2	
	comp=Z,13nm,1.3s						
SONM	**Songino Array**	**27.20**	**301**	P	**P**	**13 17 31.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=99,slow=8.9,SNR=1.9 comp=Z,0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.74**	**124**	T	T	13 48 11.1	
	baz=317,slow=75,SNR=437						
H11N1	**WAKE ISLAND Hy**	**28.75**	**125**	T	T	13 48 11.8	
	baz=317,slow=75,SNR=725						
H11N3	**WAKE ISLAND Hy**	**28.76**	**124**	T	T	13 48 12.4	
	baz=317,slow=75,SNR=507						
AMKA	**Amchitka**	**28.80**	**52**	P	**P**	**13 17 47.4**	**+0.9**
AMKA				IAmb	IAmb	13 17 55.5	
	comp=Z,51nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.52**	**126**	T	T	13 49 08.0	
	baz=319,slow=76,SNR=108						
H11S3	**WAKE ISLAND Hy**	**29.52**	**126**	T	T	13 49 02.4	
	baz=319,slow=76,SNR=171						
H11S2	**WAKE ISLAND Hy**	**29.54**	**126**	T	T	13 49 09.3	
	baz=319,slow=76,SNR=122						
PATS	**Pohnpei**	**35.13**	**151**	P	**P**	**13 18 43.1**	**+0.8**
M11K	**Mekoryuk**	**38.52**	**39**	P	**P**	**13 19 09.8**	**-0.8**
KKM	**Kota Kinabalu**	**40.16**	**222**	P	**P**	**13 19 23.9**	**-1.0**
KKM				IAmb	IAmb	13 19 41.3	
	comp=Z,44nm,1.3s						
ZALV	**Zalesovo Beam**	**41.05**	**311**	P	**P**	**13 19 31.4**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=82,slow=11,SNR=7.0						
ZALV				pP	**pP**	**13 19 49.3**	**+3.1**
	comp=Z,1.7nm,0.5s,baz=83,slow=8.8,SNR=5.7 comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**41.05**	**311**	P	**P**	**13 19 30.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**42.44**	**254**	P	**P**	**13 19 43.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=44,slow=7.9,SNR=1.3 comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**43.56**	**301**	P	**P**	**13 19 52.2**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=85,slow=9.5,SNR=15						
MKAR				pP	**pP**	**13 20 10.1**	**+3.2**
	comp=Z,1.1nm,0.8s,baz=81,slow=7.5,SNR=3.8 comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**43.56**	**301**	P	**P**	**13 19 50.5**	**-1.8**
ILSW	**Iliamna Southw**	**44.99**	**40**	P	**P**	**13 20 02.2**	**-1.4**
ILSW				IAmb	IAmb	13 20 29.2	
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	**45.19**	**307**	P	**P**	**13 20 04.9**	**-0.3**
KURK				IAmb	IAmb	13 20 05.5	
	comp=Z,3.3nm,0.6s						
KURBB	**Kurchatov Arra**	**45.26**	**307**	P	**P**	**13 20 05.7**	**-0.1**
	comp=Z,3.0nm,0.4s,baz=80,slow=8.1,SNR=31						
KURBB				pP	**pP**	**13 20 23.1**	**+2.8**
	comp=Z,2.1nm,0.7s,baz=82,slow=7.9,SNR=5.8 comp=Z,3.0nm,0.4s						
ILAR	**Eielson Array**	**47.69**	**33**	P	**P**	**13 20 25.8**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=260,slow=5.7,SNR=4.8 comp=Z,0.4nm,0.8s						
SCRK	**Sand Creek**	**49.01**	**34**	P	**P**	**13 20 35.4**	**+0.5**
BVAR	**Borovoye Array**	**49.70**	**311**	P	**P**	**13 20 39.9**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=64,slow=8.5,SNR=5.6 comp=Z,1.7nm,0.4s						
O29M	**Mount Kennedy**	**52.16**	**38**	P	**P**	**13 20 59.5**	**+0.8**
O29M				IAmb	IAmb	13 21 04.7	
	comp=Z,7.2nm,0.7s						
AB31	**Akbulak array**	**57.12**	**309**	P	**P**	**13 21 34.1**	**-0.5**
AB31				IAmb	IAmb	13 21 35.0	
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**58.95**	**188**	P	**P**	**13 21 47.2**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=7.8,slow=7.7,SNR=12 comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**58.95**	**188**	P	**P**	**13 21 46.2**	**-1.5**
ASAR	**Alice Springs**	**62.68**	**188**	P	**P**	**13 22 12.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=9.9,slow=3.8,SNR=2.1 comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**67.41**	**332**	P	**P**	**13 22 42.8**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=47,slow=6.9,SNR=5.0 comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**67.41**	**332**	P	**P**	**13 22 41.8**	**-1.4**
HFS	**Hagfors**	**72.60**	**336**	P	**P**	**13 23 14.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=52,slow=12,SNR=1.2 comp=Z,0.7nm,0.5s						

TRN ***11*** *13:17:38.9, 10°.90N×62°.42W, h58km, MD3.7, North of the Paria peninsula.*

FUNV ***11*** *13:17:39.4, 10°.93N×62°.31W, h25km, MW3.7, Presumed earthquake*

ISC 11 13:17:39.9±3.6, 10°.9N±0°.1×62°.3W±0°.2, h68km±28km, n14, σ0s56/27, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.78**	**108**	*e*P	**Pn**	**13 17 55.8**	**+0.2**
DMDM				*e*S	**Sn**	**13 18 07.9**	**+0.6**
PSKH	**Kent House, Po**	**0.81**	**108**	*e*P	**Pn**	**13 17 56.2**	**+0.2**
PSKH				*e*S	**Sn**	**13 18 08.4**	**+0.5**
TRN	**Trinidad (W)**	**0.94**	**108**	⇑*e*P	**Pn**	**13 17 57.0**	**-0.5**
TRN				*e*S	**Sn**	**13 18 07.7**	**-0.9**
TRN	**Trinidad (W)**	**0.94**	**108**	*e*P	**Pn**	**13 17 57.4**	**-0.1**
TRN				*e*S	**Sn**	**13 18 10.1**	**-0.5**
GRFF	**Grenada Fort F**	**1.24**	**27**	*e*P	**Pn**	**13 18 01.3**	**-0.1**
GRFF				*e*S	**Sn**	**13 18 17.9**	**+0.5**
GRGR	**Grenville**	**1.35**	**28**	*e*P	**Pn**	**13 18 02.5**	**-0.4**
GRGR				*e*S	**Sn**	**13 18 19.9**	**-0.2**
GRGR	**Grenville**	**1.35**	**28**	*e*P	**Pn**	**13 18 02.8**	**-0.1**
GRGR				*e*S	**Sn**	**13 18 20.3**	**+0.2**
GCMP	**Grenada, Carri**	**1.77**	**29**	*e*P	**Pn**	**13 18 08.0**	**-0.4**
GCMP				*e*S	**Sn**	**13 18 29.2**	**-0.8**
GCMP	**Grenada, Carri**	**1.77**	**29**	*e*P	**Pn**	**13 18 08.4**	**+0.1**
GCMP				*e*S	**Sn**	**13 18 30.2**	**+0.3**
SLAC	**Saint Lucia, A**	**3.25**	**25**	*e*P	**Pn**	**13 18 29.3**	**+0.8**
SLAC				*e*S	**Sn**	**13 19 06.3**	**+0.2**
SLCP	**Castries, St.**	**3.31**	**23**	*e*P	**Pn**	**13 18 30.0**	**+0.6**
SLCP				*e*S	**Sn**	**13 19 07.0**	**-0.6**
SLBI	**Saint Lucia, B**	**3.33**	**23**	*e*P	**Pn**	**13 18 29.5**	**-0.1**
SLBI				*e*S	**Sn**	**13 19 08.1**	**0.0**
BBGH	**Gun Hill**	**3.47**	**51**	*e*P	**Pn**	**13 19 12.0**	**+0.5**
BIM	**Bigot**	**3.76**	**19**	*e*P	**Pn**	**13 18 36.1**	**+0.6**
BIM				*e*S	**Sn**	**13 19 17.1**	**-1.4**

KRNET ***11*** *13:19:37.8±0.1, 42°.37N×72°.94E, h19km, mb1.8*

SOME ***11*** *13:19:37.0, 42°.50N×72°.97E, h5km*

NNC ***11*** *13:19:38.4±1.4, 42°.49N×72°.97E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=19.1km s-min=3.8km az=173.0*

ISC 11 13:19:37.2±1.4, 42°.42N±0°.07×72°.94E±0°.04, h4km±16km, n12, σ1s66/20, 7C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAS	**Manas**	**0.33**	**283**	⇑*e*P	**Pg**	**13 14 49.9**	**+1.3**
MNAS				⇑*e*S	**Sg**	**13 19 49.8**	**+1.8**
MRKS	**Merke**	**0.39**	**32**	*e*P	Pg	13 19 41.7	-3.1
MRKS				*e*S	**Sg**	**13 19 44.7**	**-5.2**
EKS2	**Erkin-Say**	**0.66**	**68**	⇑*e*P	**Pb**	**13 19 50.8**	**-0.6**
EKS2				⇑*e*S	**Sb**	**13 20 00.3**	**-0.7**
ARK	**Arkit**	**0.95**	**230**	⇑*e*P	**Pb**	**13 19 55.1**	**-1.2**
ARK				⇑*e*S	**Sb**	**13 20 07.6**	**-1.8**
SGDS	**Sogindy**	**1.61**	**50**	P	**Pb**	**13 20 07.1**	**-0.5**
	0.6nm,0.3s						
SGDS				S	**Sb**	**13 20 28.4**	**0.0**
	2.3nm,0.5s						
KK31	**Karatay Array**	**1.92**	**292**	⇑P	**Pb**	**13 20 11.9**	**-0.8**
	2.2nm,0.5s,baz=102,slow=16,SNR=28						
KK31				⇓S	**Sb**	**13 20 38.0**	**+0.9**
	2.8nm,0.5s,baz=110,slow=26,SNR=8.1						
KST	**Kastek**	**2.31**	**73**	Pg	**Pb**	**13 20 20.5**	**+1.0**
	2.8nm,0.4s						
KST				Lg	Lg	13 20 52.1	
	8.5nm,0.8s						
KST	**Kastek**	**2.31**	**73**	*e*P	**Pb**	**13 20 20.5**	**+1.0**
	2.8nm,0.4s						
KST				*e*S	**Sg**	**13 20 52.1**	**+0.7**
	8.5nm,0.8s						
KRBS	**Karabastau**	**2.38**	**56**	Pg	**Pb**	**13 20 20.7**	**+0.2**
	1.1nm,0.3s						
KRBS				Lg	Lg	13 20 51.6	
	6.1nm,0.6s						
KRBS	**Karabastau**	**2.38**	**56**	*e*P	**Pb**	**13 20 20.7**	**+0.2**
	1.1nm,0.3s						
KRBS				*e*S	**Sb**	**13 20 51.6**	**+1.3**
	6.1nm,0.6s						
KTBS	**Karatobe**	**3.03**	**63**	Pg	**Pb**	**13 20 31.3**	**-0.4**
	0.8nm,0.5s						
KTBS				Lg	Lg	13 21 10.0	
	2.2nm,0.9s						
KTBS	**Karatobe**	**3.03**	**63**	*e*P	**Pb**	**13 20 31.3**	**-0.4**
	0.8nm,0.5s						
KTBS				*e*S	**Sb**	**13 21 10.0**	**+0.9**
	2.2nm,0.9s						

OSPL ***11*** *13:23:21.3±1.2, 18°.87N×73°.77W, h31km±999km, ML3.3, Presumed earthquake*

SSNC ***11*** *13:23:24.7±1.2, 18°.72N×73°.51W, h20km±11km, MD3.0, ML1.9, Presumed earthquake*

ISC 11 13:23:23.5±2.2, 18°.8N±0°.1×73°.49W±0°.06, h24km±19km, n9, σ0s72/18, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**1.54**	**333**	*e*P	**Pb**	**13 23 50.9**	**-0.5**
MASC				*e*S	**Sn**	**13 24 08.2**	**-0.4**
MASC				*e*Sg	**Sb**	**13 24 11.4**	**+1.0**
MASC				IAML		13 24 12.9	
	comp=N,14nm,0.4s						
MASC				IAML		13 24 13.5	
	comp=E,14nm,0.2s						
QMBU	**Quimbuelo**	**1.87**	**318**	*e*P	**Pn**	**13 23 54.3**	**+0.3**
QMBU				*e*S	**Sn**	**13 24 15.5**	**-1.4**
QMBU				IAML		13 24 20.3	
	comp=E,14nm,0.3s						
QMBU				IAML		13 24 23.2	
	comp=N,10nm,0.6s						
GTBY	**Guantanamo Bay**	**1.90**	**306**	*e*P	**Pn**	**13 23 54.5**	**+0.1**
GTBY				*e*S	**Sn**	**13 24 18.0**	**+0.5**
LONE3	**El Aguacate, B**	**1.93**	**95**	*i* P	**Pn**	**13 23 54.9**	**-0.1**
LONE3				*e*S	**Sn**	**13 24 19.4**	**+0.8**
LOBH	**Bahia de las A**	**1.99**	**118**	*i* P	**Pn**	**13 23 54.8**	**-0.8**
LOBH				*e*S	**Sn**	**13 24 19.7**	**0.0**
LOBH				IAML		13 24 23.1	
	comp=Z,59nm,2.6s						
SDDR	**Presa de Saban**	**2.09**	**85**	*i* P	**Pn**	**13 23 57.0**	**-0.1**
SDDR				*e*S	**Sn**	**13 24 22.2**	**-0.2**
SDDR				IAML		13 24 23.6	
	comp=Z,385nm,0.6s						
SDDR	**Presa de Saban**	**2.09**	**85**	*e*P	**Pn**	**13 23 56.8**	**-0.2**
LOVI	**El Cajuil, Ovi**	**2.25**	**116**	*i* P	**Pn**	**13 23 58.6**	**-0.5**
LOVI				*e*S	**Sn**	**13 24 27.4**	**+1.3**
RCC	**Rio Carpintero**	**2.40**	**300**	*e*P	**Pn**	**13 24 01.3**	**0.0**
RCC				*e*S	**Sn**	**13 24 30.3**	**+0.4**

CNRM ***11*** *13:41:05.0, 34°.66N×3°.30W, h0km, ML2.6*

MDD ***11*** *13:41:06.7±0.6, 35°.03N×3°.57W, h0km, mb_Lg2.0/10, Error ellipse: s-maj=6.1km s-min=4.0km az=141.0*

ISC 11 13:41:04.3±1.3, 34°.88N±0°.04×3°.37W±0°.05, h9km±10km, n16, σ1s17/29, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMEL	**Melilla**	**0.54**	**38**	P	**Pb**	**13 41 17.0**	**+1.0**
EMEL				S	**Sb**	**13 41 25.5**	**+1.6**
EMEL				*i* lVmb_Lg		13 41 28.2	
AKLM	**AKL**	**0.55**	**229**	P	**Pg**	**13 41 14.9**	**-0.1**
AKLM				S	**Sb**	**13 41 24.1**	**-0.1**
PALE	**Palemas**	**0.58**	**306**	P	**Pn**	**13 41 19.8**	**+1.0**
PALE				S	**Sn**	**13 41 30.6**	**+2.1**
EALB	**Alboran**	**1.10**	**14**	P	**Pg**	**13 41 24.9**	**-0.5**
EALB				S	**Sg**	**13 41 38.7**	**-1.0**
EALB				*i* lVmb_Lg		13 41 43.7	
LCRM	**LCR**	**1.71**	**227**	P	**Pb**	**13 41 35.8**	**-0.3**
LCRM				S	**Sg**	**13 42 00.7**	**+1.2**
SICH	**Sidi Chahed**	**1.79**	**245**	P	**Pg**	**13 41 38.5**	**0.0**
SICH				S	**Sg**	**13 42 01.1**	**-0.7**
ELGU	**Los Guajares,**	**2.00**	**354**	P	**Pn**	**13 41 37.8**	**-0.6**
ELGU				S	**Sn**	**13 42 02.2**	**-1.4**
ELGU				*i* lVmb_Lg		13 42 05.8	
EMIJ	**Mijas**	**2.04**	**326**	P	**Pn**	**13 41 37.6**	**-1.3**
EMIJ				S	**Sn**	**13 42 01.4**	**-3.0**
EMIJ				*i* lVmb_Lg		13 42 08.6	
EBER	**Berja**	**2.06**	**11**	P	**Pn**	**13 41 39.3**	**+0.1**
EBER				S	**Sn**	**13 42 04.6**	**-0.5**
EBER				*i* lVmb_Lg		13 42 13.9	
MDT	**Midelt**	**2.30**	**207**	P	**Pn**	**13 41 42.4**	**-0.1**
MDT				S	**Sn**	**13 42 09.7**	**-1.3**
MD31	**MD31**	**2.31**	**210**	P	**Pn**	**13 41 42.4**	**-0.3**
MD31				S	**Sn**	**13 42 11.1**	**-0.2**
EQES	**Quesada**	**2.93**	**5**	P	**Pn**	**13 41 51.1**	**-0.2**
EQES				S	**Sn**	**13 42 25.6**	**-1.1**
EQES				*i* lVmb_Lg		13 42 42.1	
EMUR	**La Murta**	**3.42**	**29**	P	**Pn**	**13 41 58.5**	**+0.6**
EMUR				*i* lVmb_Lg		13 43 33.2	
EADA	**Adamuz**	**3.43**	**344**	P	**Pn**	**13 41 57.1**	**-0.9**
EADA				*i* lVmb_Lg		13 43 24.7	
PVAQ	**Vaqueiros**	**4.33**	**307**	*e*P	**Pn**	**13 42 10.1**	**-0.3**
PVAQ				*e*S	**Sn**	**13 43 02.0**	**+1.0**
PBAR	**Barrancos**	**4.43**	**319**	*e*P	**Pn**	**13 42 13.5**	**+1.9**

IDC 11 13:43:39.6±55.0, 17°.97S×176°.94W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=1021.0km s-min=164.5km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.83**	**242**	P	P	13 51 15.8	+0.9
	1.2nm,0.4s,baz=82,slow=8.9,SNR=3.8 1.2nm,0.4s						
WRA	**Warramunga Arr**	**46.00**	**259**	P	P	13 52 04.8	-0.3
	1.4nm,0.4s,baz=98,slow=7.4,SNR=30 1.4nm,0.4s						
ASAR	**Alice Springs**	**46.12**	**254**	P	P	13 52 05.5	-0.6
	2.4nm,0.6s,baz=91,slow=7.6,SNR=58 2.4nm,0.6s						

IDC ***11*** *13:48:26.9±0.7, 44°.11N×115°.12W, h0km, mbtmp3.1/7, ML3.3/7, Error ellipse: s-maj=9.4km s-min=6.0km az=84.0*

NEIC ***11*** *13:48:27.7±1.6, 44°.131N±0°.010×115°.08W±0°.03, h10km±2km, ML3.3/126, ML3.8/31(BUT), Error ellipse: s-maj=3.3km s-min=3.1km az=114.0*

BUT ***11*** *13:48:28.3±1.7, 44°.13N±0°.02×115°.08W±0°.02, h8km±8km, Error ellipse: s-maj=3.3km s-min=2.4km az=183.0*

ISC 11 13:48:28.2±0.8, 44°.14N±0°.03×115°.10W±0°.03, h10km, n62, σ1s21/41, Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLID	**Hailey**	**0.76**	**139**		**Pg**	**13 48 42.0**	**-1.0**
HLID				Sg	**Sg**	**13 48 52.3**	**-0.7**
HLID				IAML		13 48 52.7	
	2µm,0.2s						
HLID				IAML		13 48 57.0	
	1µm,0.3s						
MFID	**Camas Ranch**	**0.90**	**216**		**Pg**	**13 48 45.2**	**-0.3**
MFID					**Sg**	**13 48 58.1**	**+1.0**
PLID	**Pearl Lake**	**1.14**	**326**		**Pg**	**13 48 50.0**	**-0.3**
PLID					**Sg**	**13 49 05.7**	**+0.6**
PLID				IAML		13 49 09.5	
	862nm,0.4s						
PLID				IAML		13 49 09.9	
	522nm,0.6s						
CNCI	**Crows Nest Can**	**1.21**	**100**		**Pb**	**13 48 50.2**	**-1.0**
BCYI	**Bear Canyon**	**1.23**	**82**		**Pb**	**13 48 51.0**	**-0.7**
BCYI				Sg	**Sb**	**13 49 07.8**	**+0.1**
ICI	**Italian Canyon**	**1.56**	**82**		**Pn**	**13 48 56.6**	**+0.3**
BMO	**Blue Mountains**	**1.73**	**295**		**Pn**	**13 48 58.7**	**+0.2**
MCMT	**McKenzie Canyo**	**1.75**	**66**		**Pn**	**13 48 59.1**	**+0.2**
MOMT	**Monida**	**1.99**	**76**		**Pn**	**13 49 03.6**	**+1.4**
DLMT	**Dillon**	**2.16**	**55**		**Pn**	**13 49 04.7**	**+0.3**
F10A	**Beach Ranch, E**	**2.37**	**321**		**Pn**	**13 49 08.2**	**+0.9**
F10A				IAML		13 49 51.3	
	comp=E,245nm,0.3s						
VCMT	**Victor**	**2.39**	**15**		**Pn**	**13 49 08.2**	**+0.6**
HBMT	**Mount Humbug**	**2.42**	**46**		**Pn**	**13 49 08.3**	**+0.2**
LRM	**Limekiln Ridge**	**2.52**	**47**		**Pn**	**13 49 09.5**	**+0.1**
J08A	**Circle Bar Ran**	**2.57**	**253**		**Pn**	**13 49 10.1**	**+0.1**
J08A				IAML		13 49 58.1	
	comp=N,182nm,0.8s						
BPMT	**Black Pine Rid**	**2.58**	**26**		**Pn**	**13 49 10.5**	**+0.2**
BUT	**Butte**	**2.59**	**43**		**Pn**	**13 49 10.8**	**+0.4**
BUT				IAML		13 49 49.8	
	comp=N,220nm,0.7s						
QLMT	**Earthquake Lak**	**2.72**	**74**		**Pn**	**13 49 13.3**	**+1.2**
MSO	**Missoula**	**2.81**	**16**		**Pn**	**13 49 13.8**	**+0.5**
MSO				IAML		13 50 06.6	
	comp=N,137nm,0.9s						
MSO				IAML		13 50 08.4	
	comp=N,101nm,0.9s						
LNOR	**Lincton Mounta**	**2.84**	**309**		**Pn**	**13 49 14.8**	**+1.0**
YHB	**Horse Butte**	**2.86**	**76**		**Pn**	**13 49 14.5**	**+0.4**
YHB				IAML		13 50 04.8	
	comp=N,168nm,0.9s						
BOZ	**Bozeman (W)**	**2.87**	**58**		**Pn**	**13 49 14.6**	**+0.5**
YHL	**Hebgen Lake**	**2.89**	**74**		**Pn**	**13 49 16.2**	**+1.6**
HVU	**Hansel

comp=N,70nm,0.7s
G06A Carlson Farm, 4.10 287 IAML 13 50 42.0
comp=E,27nm,1.8s
G06A IAML 13 50 45.1
comp=N,31nm,1.0s
PDAR Pinedale Array 4.26 107 Pn **Pn** **13 49 37.2 +3.8**
comp=N,0.6nm,0.3s,baz=289,slow=12,SNR=34
PDAR Lg Lg 13 50 38.1
comp=N,1.2nm,0.3s,baz=303,slow=19,SNR=4.6
comp=N,3.1nm,0.6s
RLMT Red Lodge 4.28 75 IAML 13 50 48.9
comp=N,53nm,0.3s
DUG Dugway, Tooele 4.29 156 IAML 13 50 49.4
comp=N,44nm,1.5s
DUG IAML 13 50 53.5
comp=N,49nm,0.8s
NEW Newport 4.36 342 Pn **Pn** **13 49 35.9 +1.4**
comp=N,1.2nm,0.3s,baz=167,slow=14,SNR=16
NEW Sn **Sn** **13 50 24.8 -0.5**
comp=N,0.9nm,0.3s,baz=172,slow=16,SNR=4.2
NEW Lg Lg 13 50 42.7
comp=N,3.4nm,0.3s,baz=90,slow=11,SNR=6.0
comp=N,3.0nm,0.4s
NEW Newport 4.36 342 IAML 13 50 51.3
comp=N,28nm,1.1s
NEW IAML 13 50 55.6
comp=N,46nm,1.3s
I05D Terrebonne, OR 4.49 275 IAML 13 50 56.9
comp=N,42nm,1.0s
I05D IAML 13 50 58.5
comp=E,29nm,1.0s
EPH Ephrata 4.50 317 IAML 13 50 59.2
comp=N,19nm,0.8s
EPH IAML 13 51 03.6
comp=E,17nm,1.1s
J05D Fort Rock, OR 4.53 261 IAML 13 50 58.9
comp=N,18nm,1.6s
J05D IAML 13 51 10.8
comp=E,22nm,2.2s
NLU North Lily Min 4.75 151 IAML 13 51 05.5
comp=E,16nm,1.1s
WIFE Three Sisters- 4.84 271 IAML 13 51 05.6
comp=N,16nm,1.2s
WIFE IAML 13 51 09.1
comp=E,21nm,0.8s
LTY Liberty 4.99 311 IAML 13 51 36.1
comp=N,13nm,1.3s
H04A Detroit Lake 5.11 279 IAML 13 51 08.5
comp=N,17nm,0.8s
H04A IAML 13 51 15.3
comp=E,16nm,1.0s
B08A Colville Reser 5.14 327 IAML 13 51 17.9
comp=E,25nm,0.9s
J04A Umpqua Nationa 5.16 262 IAML 13 51 18.1
comp=E,25nm,1.7s
YBH Yreka Blue Hor 6.08 249 Pn **Pn** **13 49 59.8 +1.6**
comp=E,0.2nm,0.3s,baz=63,slow=14,SNR=2.2
YBH Lg Lg 13 51 39.1
comp=E,0.1nm,0.3s,baz=101,slow=16,SNR=1.5
comp=E,0.5nm,0.3s
NVAR Mina Array Bea 6.20 204 Pn **Pn** **13 50 01.7 +1.8**
comp=E,0.5nm,0.3s,baz=20,slow=12,SNR=5.4
NVAR Lg Lg 13 51 42.4
comp=E,1.2nm,0.3s,baz=27,slow=32,SNR=2.9
comp=E,0.3nm,0.3s
ULM Lac du Bonnet 14.41 58 Lg Lg 13 55 54.8
comp=E,0.1nm,0.3s,baz=195,slow=19,SNR=4.2
TXAR Lajitas Array 17.36 145 P **Pn** **13 52 30.8 +0.1**
baz=323,slow=14,SNR=2.9
comp=E,0.1nm,0.4s
YKA Yellowknife Ar 18.39 1 P **P** **13 52 44.1 +1.1**
baz=184,slow=11,SNR=4.3
comp=E,0.5nm,0.8s

AUST 11 14:37:43.8±0.5,28°S±3°×11°4E±°, h10km, ML2.7/5, ML3.7/1, MLv4.2/1, Error ellipse: s-maj=10.4km s-min=6.8km az=85.1, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORW	**Morawa**	**2.05**	**138**	P	Pn	14 38 19.7	+1.3
MORW				S	Sn	14 38 44.6	+0.6
CVQOZ	**Cooralya Stati**	**3.11**	**353**	P	Pn	14 38 32.7	-0.2
BLDU	**Ballidu**	**3.63**	**148**	P	Pn	14 38 40.4	+0.3
BLDU				S	Sn	14 39 20.7	-2.3
MEEK	**Meekatharra**	**3.80**	**77**	P	Pn	14 38 44.2	+1.8
MEEK				S	Sn	14 39 27.1	-0.1
BCON	**Beacon, Wester**	**4.00**	**135**	P	Pn	14 38 45.0	-0.3
BCON				S	Sn	14 39 30.3	-2.1
WATNG	**Wattoning, WA**	**4.55**	**135**	P	Pn	14 38 52.7	0.0
MUN	**Mundaring**	**4.67**	**162**	P	Pn	14 38 54.0	-0.3
GIRL	**Giralia**	**4.89**	**357**	P	Pn	14 38 57.2	-0.2
KLBR	**Kellerberrin**	**4.94**	**145**	P	Pn	14 38 57.5	-0.6
NWAO	**Narrogin (SRO)**	**5.87**	**157**	P	Pn	14 39 10.4	-0.5
	comp=Z,17nm,1.7s,comp=Z,45µmcomp=Z,0.1nmcomp=Z,124µm						
RKGY	**Rocky Gully**	**7.36**	**164**	P	Pn	14 39 31.1	-0.2
	comp=Z,61nm,1.4s,comp=Z,0.1nm						
FORT	**Forrest**	**12.30**	**108**	P	Pn	14 40 38.6	-0.5
	comp=Z,14nm,1.0s						

IDC 11 14:47:45.5±2.1,5°15S×152°58E, h0km, mb3.3/4, mbtmp3.5/5, ML1.0/1, Error ellipse: s-maj=105.9km s-min=21.7km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.84**	**231**	Pn	Pn	14 49 28.1	+1.0
	0.2nm,0.3s,baz=22,slow=19,SNR=3.2						
PMG				Sn	Sn	14 50 46.4	+0.6
	1.0nm,0.3s,baz=44,slow=22,SNR=4.8						
	21nm,1.1s						
WRA	**Warramunga Arr**	**23.05**	**229**	P	P	14 52 52.8	+0.1
	0.5nm,1.0s,baz=54,slow=10.0,SNR=2.8						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**25.75**	**223**	P	P	14 53 17.5	-0.5
	0.3nm,0.7s,baz=53,slow=9.2,SNR=1.9						
	0.3nm,0.7s						
PETK	**Petropavlovsk-**	**58.20**	**4**	P	P	14 57 41.8	+0.5
	0.3nm,0.5s,baz=166,slow=5.9,SNR=4.1						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**82.56**	**22**	P	P	15 00 09.7	-0.4
	0.5nm,0.9s,baz=247,slow=5.7,SNR=5.9						
	0.5nm,0.9s						

*IDC **11** 15:02:37.3±2.0,0°04S×123°01E, h127km±21km, mb3.3/9, mbtmp3.8/12, MS3.7/1, Error ellipse: s-maj=16.3km s-min=13.5km az=76.0*
*DJA **11** 15:02:42.0±0.4,0°S±3°×12°3E±°, h127km±4km, M4.6/18, mB5.0/2, mb4.9/2, MLv4.5/18, Mw(mB)4.3/2*
ISC 11 15:02:40.2±0.6,0°15S±0°06×123°07E±0°07, h162km, n20, σ1§58/25, mb3.5/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.79**	**355**	P	**Pn**	**15 03 03.8**	**-0.7**
GTOI				S	**Sn**	**15 03 21.6**	**-1.7**
LUWI	**Luwuk**	**0.93**	**199**	P	**Pn**	**15 03 04.9**	**-0.7**
LUWI				S	**Sn**	**15 03 22.9**	**-2.2**
PCI	**Palu**	**3.32**	**257**	P	**Pn**	**15 03 34.1**	**+2.0**
SANI	**Sanana**	**3.47**	**123**	P	**Pn**	**15 03 31.5**	**-2.5**
KDI	**Kendari**	**3.81**	**187**	P	**Pn**	**15 03 40.4**	**+2.1**
NLAI	**Namlea**	**5.06**	**127**	P	**Pn**	**15 03 54.5**	**-0.1**
	2µm13nm,0.9s						
KAPI	**Kappang**	**5.86**	**214**	P	**Pn**	**15 04 02.0**	**-3.2**
	4.9nm,0.3s,baz=131,slow=13,SNR=2.0						
KAPI				S	**Sn**	**15 05 10.4**	**-1.3**
	12nm,0.4s,baz=247,slow=22,SNR=6.0						
KCP	**Kidapawan**	**7.39**	**16**	*eP*	**Pn**	**15 04 27.1**	**+1.5**
SIJI	**Sorong**	**8.22**	**95**	P	**Pn**	**15 04 35.3**	**-1.3**
	4.4nm,0.5s,baz=236,slow=23,SNR=8.9						
SIJI				S	**Sn**	**15 06 07.7**	**-0.7**
	4.2nm,0.7s,baz=202,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**18.01**	**172**	P	**P**	**15 06 39.5**	**+0.7**
	5.8nm,0.8s,baz=2.6,slow=9.0,SNR=15						
WRA	**Warramunga Arr**	**22.55**	**151**	P	**P**	**15 07 28.2**	**+1.3**
	1.3nm,0.5s,baz=332,slow=10,SNR=28						
WRA				PcP	**PcP**	**15 11 15.8**	**+1.0**
	0.3nm,0.8s,baz=334,slow=2.5,SNR=1.7						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**25.63**	**157**	P	**P**	**15 07 56.5**	**+1.7**
	0.2nm,0.4s,baz=330,slow=8.9,SNR=7.4						
ASAR				PcP	**PcP**	**15 11 22.9**	**+1.4**
	0.3nm,0.3s,baz=343,slow=1.8,SNR=8.3						
	0.2nm,0.4s						

CMAR Chiang Mai Arr 30.07 309 P **P** **15 08 33.1 -1.3**
0.3nm,0.4s,baz=124,slow=9.0,SNR=2.1
0.3nm,0.4s
STKA Stephens Creek 36.09 153 P **P** **15 09 28.1 +1.7**
0.8nm,0.4s,baz=336,slow=12,SNR=1.7
0.8nm,0.4s
MJAR Matsushiro Arr 39.12 19 P **P** **15 09 50.4 -1.5**
0.8nm,0.5s,baz=201,slow=7.5,SNR=4.2
0.8nm,0.5s
LZDM Lanzhou Array 40.20 335 LR LR 15 25 21.7
comp=Z,98nm,21.0s,baz=55,slow=34
USRK Ussuriysk Ar. 44.87 9 P **P** **15 10 38.6 +0.3**
1.0nm,0.5s,baz=205,slow=7.5,SNR=4.4
1.0nm,0.5s
SONM Songino Array 49.95 345 P **P** **15 11 18.3 +0.7**
0.7nm,0.6s,baz=157,slow=9.1,SNR=4.2
0.7nm,0.6s
MKAR Makanchi Array 58.78 328 P **P** **15 12 21.5 +0.2**
0.3nm,0.4s,baz=120,slow=8.4,SNR=7.9
0.3nm,0.4s
KURBB Kurchatov Arra 63.13 330 P **P** **15 12 50.4 -0.2**
0.2nm,0.3s,baz=141,slow=6.3,SNR=4.0
0.2nm,0.3s

*IDC **11** 15:04:14.1±1.2,32°00N×137°85E, h365km±13km, mb2.7/3, mbtmp3.5/5, Error ellipse: s-maj=32.6km s-min=14.6km az=67.0*
*JMA **11** 15:04:16.5±0.4,32°N±3°×13°8E±°, h373km, MV3.4/28, FAR S OFF TOKAI DISTRICT*
ISC 11 15:04:14.3±1.0,32°11N±0°09×138°08E±0°09, h380km, n13, σ2§17/19, mb2.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.75**	**55**	P	**Pn**	**15 05 08.0**	**+1.2**
	54nm,0.4s,baz=320,slow=13,SNR=7.8						
JHJ				S	**Sn**	**15 05 50.9**	**+1.8**
	46nm,0.3s,baz=211,slow=9.2,SNR=1.9						
TTO2	**TONANKAI O.B.S**	**1.84**	**332**	*eP*	**Pn**	**15 05 08.8**	**+1.9**
JKN2	**Miekihoku**	**2.60**	**325**	P	**Pn**	**15 05 12.6**	**0.0**
JKN2				*eS*	**S**	**15 05 56.9**	**-2.9**
JTNC	**Tanabenakahech**	**2.68**	**310**	P	**Pn**	**15 05 13.5**	**+0.2**
JTNC				*eS*	**S**	**15 05 58.5**	**-2.4**
JWY	**Kouya**	**2.96**	**316**	*eP*	**Pn**	**15 05 16.2**	**+0.6**
JYN	**Shimob**	**3.40**	**6**	*eP*	**Pn**	**15 05 20.8**	**+1.4**
JAI	**Aioi**	**3.48**	**300**	*eP*	**Pn**	**15 05 20.2**	**+0.1**
JHU2	**Hanno**	**3.85**	**15**	P	**Pn**	**15 05 23.4**	**-0.1**
JHU2				*eS*	**S**	**15 06 15.1**	**-4.5**
MJAR	**Matsushiro Arr**	**4.42**	**1**	P	**Pn**	**15 05 29.1**	**-0.1**
	3.3nm,0.6s,baz=185,slow=12,SNR=15						
MJAR				S	**S**	**15 06 27.0**	**-3.0**
	1.4nm,0.6s,baz=262,slow=18,SNR=4.2						
JCJ	**Chichijima**	**6.15**	**143**	P	**Pn**	**15 05 47.7**	**-0.1**
	30nm,0.7s,baz=324,slow=19,SNR=7.8						
JCJ				S	**S**	**15 07 00.2**	**-3.7**
	19nm,0.3s,baz=285,slow=20,SNR=11						
MKAR	**Makanchi Array**	**44.59**	**306**	P	**P**	**15 11 50.9**	**+0.6**
	0.3nm,0.4s,baz=84,slow=9.4,SNR=4.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**47.02**	**311**	P	**P**	**15 12 09.3**	**+0.4**
	0.3nm,0.4s,baz=91,slow=9.4,SNR=4.4						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**55.12**	**30**	P	**P**	**15 13 10.8**	**+2.6**
	0.3nm,0.7s,baz=280,slow=6.2,SNR=4.9						
	0.3nm,0.7s						

KRSC 11 15:12:39.1±1.4,53°85N×168°93E, h31km±27km, MI4.2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.19**	**309**	*eP*	Pn	15 13 14.4	+1.1
BKI				*eS*	Sb	15 13 43.0	-1.8
KBTR	**Krutoberegovo**	**4.24**	**306**	*eP*	Pn	15 13 44.8	+3.3
MKZ	**Mys Kozlova**	**4.29**	**282**	*eP*	Pn	15 13 46.3	+4.2
TUMR	**Tumrok**	**5.31**	**289**	*eP*	Pn	15 14 01.7	+5.4
TUMR				*eS*	Sn	15 15 01.7	+5.3
SPN	**Mys Shipunski**	**5.37**	**266**	*eP*	Pn	15 14 02.1	+5.0
SPN				*eS*	Sn	15 15 04.0	+6.2
KMNR	**Kamenistaya**	**5.38**	**294**	*eP*	Pn	15 14 02.5	+5.3
KMNR				*eS*	Sn	15 15 04.4	+6.3
KII	**Karymskiy**	**5.60**	**276**	*eP*	Pn	15 14 05.5	+5.2
NLC	**Nalytchevo**	**5.76**	**267**	*eP*	Pn	15 14 07.1	+4.7
NLC				*eS*	Sn	15 15 11.9	+4.6
SRDR	**Sredinnyy**	**5.84**	**299**	*eS*	Sn	15 15 14.2	+4.8
SDLR	**Sedlovina**	**6.01**	**269**	*eP*	Pn	15 14 10.9	+4.9
SMAR	**Somma**	**6.07**	**269**	*eP*	Pn	15 14 11.7	+4.9
KRER	**Koryakskii**	**6.09**	**269**	*eP*	Pn	15 14 12.3	+5.2
AVH	**Avacha**	**6.10**	**269**	*eP*	Pn	15 14 12.0	+4.9
DALK	**Dalny**	**6.14**	**266**	*eP*	Pn	15 14 12.5	+5.0
KRX	**Arik**	**6.14**	**270**	*eP*	Pn	15 14 12.8	+5.0
KOK	**Koryaka**	**6.16**	**269**	*eP*	Pn	15 14 12.8	+4.8
PET	**Petropavlovsk**	**6.20**	**266**	*eP*	Pn	15 14 13.7	+5.3
RUS	**Russkaya**	**6.43**	**261**	*eP*	Pn	15 14 16.8	+5.3
GNL	**Ganaly**	**6.52**	**273**	*eP*	Pn	15 14 18.7	+5.8
KRMR	**Karymshinskiy**	**6.55**	**265**	*eP*	Pn	15 14 18.9	+5.7
KRMR				*eS*	Sn	15 15 32.1	+5.3
MTVR	**Mutnovka**	**6.61**	**262**	*eP*	Pn	15 14 19.8	+5.6
MTVR				*eS*	Sn	15 15 32.8	+4.4
GRL	**Gorelyy**	**6.65**	**263**	*eP*	Pn	15 14 20.0	+5.3
ASAK	**Asacha**	**6.80**	**262**	*eP*	Pn	15 14 22.2	+5.4
KDTR	**Khodutka, Kamc**	**6.89**	**257**	*eP*	Pn	15 14 22.8	+5.0
KDTR				*eS*	Sn	15 15 38.5	+3.4
APC	**Apacha**	**7.10**	**267**	*eP*	Pn	15 14 26.2	+5.4
SKR	**Severo-Kuril's**	**8.47**	**253**	*eP*	Pn	15 14 45.0	+5.4

*KRNET **11** 15:27:50.4±0.1,41°02N×75°26E, h20km, mb3.5*
*SOME **11** 15:27:51.3,41°02N×75°32E, h15km*
*NNC **11** 15:27:52.0±0.9,41°08N×75°30E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=6.1km s-min=3.6km az=7.0*
*KNET **11** 15:27:53.8±0.3,41°24N×75°31E, h2km±2km, ml2.8, Error ellipse: s-maj=2.1km s-min=1.0km az=151.0*
ISC 11 15:27:50.6±1.2,41°05N±0°02×75°20E±0°02, h0km±10km, n67, σ1§19/115, 44C-29D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.71**	**58**	⇑*iP*	**Pg**	**15 28 03.2**	**-1.1**
NRN				⇑*iS*	**Sg**	**15 28 12.8**	**-0.7**
SALK	**Salom-Alik**	**1.06**	**261**	⇓*iP*	**Pg**	**15 28 10.6**	**-0.3**
SALK				⇓*iS*	**Sg**	**15 28 25.8**	**+1.2**
UCH	**Uchtor**	**1.28**	**337**	⇓P	**Pg**	**15 28 16.0**	**+0.8**
	49nm,0.2s,SNR=30						
UCH				⇓S	**Sn**	**15 28 33.8**	**-0.5**
	99nm,0.2s						
UCH	**Uchtor**	**1.28**	**337**	⇑*iP*	**Pn**	**15 28 15.2**	**-1.0**
UCH				⇑*iS*	**Sn**	**15 28 33.2**	**-1.1**
ULHL	**Ulahol**	**1.43**	**33**	⇓P	**Pn**	**15 28 17.4**	**-0.6**
	18nm,0.2s,SNR=16						
ULHL				⇓S	**Sb**	**15 28 35.7**	**-1.3**
	37nm,0.2s						
ULHL	**Ulahol**	**1.43**	**33**	⇑*iP*	**Pn**	**15 28 16.7**	**-1.2**
ULHL				⇑*iS*	**Sb**	**15 28 35.6**	**-1.3**
BOOM	**Boomskoye usch**	**1.54**	**21**	⇑*iP*	**Pn**	**15 28 19.0**	**-0.5**
BOOM				⇑*iS*	**Sb**	**15 28 39.9**	**-0.3**
KBK	**Karagaybulak**	**1.61**	**353**	⇓P	**Pb**	**15 28 21.6**	**+0.2**
	28nm,0.1s,SNR=25						
KBK				⇓S	**Sg**	**15 28 43.1**	**+0.7**
	226nm,0.2s						
KBK	**Karagaybulak**	**1.61**	**353**	⇓*iP*	**Pn**	**15 28 20.6**	**+0.1**
KBK				⇓*iS*	**Sg**	**15 28 42.8**	**+0.3**
SFK	**Sufi-Kurgan**	**1.66**	**232**	⇓*iP*	**Pn**	**15 28 20.9**	**-0.3**
SFK				⇓*iS*	**Sb**	**15 28 43.2**	**-0.5**
AAK	**Ala-Archa**	**1.67**	**342**	⇓P	**Pg**	**15 28 23.0**	**+0.4**
	74nm,0.5s,SNR=30						
AAK				⇓S	**Sg**	**15 28 45.3**	**+1.0**
	97nm,0.3s						
AAK	**Ala-Archa**	**1.67**	**342**	⇑P	**Pg**	**15 28 23.1**	**+0.5**
	6.6nm,0.4s						
AAK				⇓S	**Sg**	**15 28 45.2**	**+1.0**
	27nm,0.5s						
AAK	**Ala-Archa**	**1.67**	**342**	⇑*iP*	**Pb**	**15 28 21.9**	**-0.4**
AAK				⇑*iS*	**Sg**	**15 28 44.6**	**+0.4**
ARSB	**Arslanbob**	**1.69**	**280**	⇑*iP*	**Pb**	**15 28 22.4**	**-0.3**
ARSB				⇑*iS*	**Sg**	**15 28 45.6**	**+0.5**
FRU1	**Bishkek**	**1.81**	**347**	⇑*iP*	**Pb**	**15 28 24.3**	**-0.3**
FRU1				⇑*iS*	**Sg**	**15 28 48.9**	**+0.2**
KDJ	**Kajisay**	**1.83**	**53**	⇑*iP*	**Pn**	**15 28 23.6**	**+0.1**
KDJ				⇑*iS*	**Sb**	**15 28 47.8**	**-0.9**
TKM2	**Tokmak 2**	**1.89**	**9**	⇓P	**Pb**	**15 28 26.1**	**0.0**
	19nm,0.2s,SNR=32						
TKM2				⇑S	**Sg**	**15 28 51.1**	**-0.3**
	98nm,0.1s						
TKM2	**Tokmak 2**	**1.89**	**9**	⇑*iP*	**Pb**	**15 28 25.0**	**-1.1**
TKM2				⇑*iS*	**Sb**	**15 28 50.1**	**-0.2**
EKS2	**Erkin-Say**	**1.93**	**327**	⇑P	**Pg**	**15 28 28.0**	**+0.4**
	31nm,0.4s,SNR=12						
EKS2				⇑S	**Sg**	**15 28 54.1**	**+1.6**
	22nm,0.2s						
EKS2	**Erkin-Say**	**1.93**	**327**	⇑*iP*	**Pb**	**15 28 25.7**	**-1.0**
EKS2				⇑*iS*	**Sb**	**15 28 51.4**	**+0.1**
KSH2	**Kashi**	**1.93**	**171**	Pn	**Pb**	**15 28 26.4**	**-0.3**
KSH2				Sn	**Sg**	**15 28 53.9**	**+1.4**
KSH2				smax	smax		
	comp=N,56nm,0.4s						
KSH2				smax	smax		
	comp=E,77nm,0.4s						
CHMS	**Chumysh**	**1.97**	**350**	⇑P	**Pg**	**15 28 28.4**	**-0.1**
	comp=E,54nm,0.4s,SNR=18						
CHMS				⇓S	**Sg**	**15 28 54.3**	**+0.3**
	comp=E,64nm,0.2s						
CHMS	**Chumysh**	**1.97**	**350**	⇑*iP*	**Pn**	**15 28 26.1**	**+0.8**
CHMS				⇑*iS*	**Sb**	**15 28 52.2**	**-0.4**
KST	**Kastek**	**2.07**	**16**	Pg	**Pb**	**15 28 29.9**	**+0.8**
	comp=E,22nm,0.7s						
KST				Lg	Lg	15 28 57.9	
	comp=E,147nm,0.8s						
KST	**Kastek**	**2.07**	**16**	*eP*	**Pb**	**15 28 29.9**	**+0.8**
	comp=E,22nm,0.7s						
KST				*eS*	**Sg**	**15 28 57.9**	**+0.8**
	comp=E,147nm,0.8s						
TARG	**Taragay, Kyrgy**	**2.07**	**70**	⇑*iP*	**Pn**	**15 28 26.6**	**-0.4**
TARG				⇑*iS*	**Sn**	**15 28 53.2**	**-0.6**
MRKS	**Merke**	**2.24**	**320**	Pg	**Pg**	**15 28 33.4**	**-0.2**
	comp=E,20nm,0.3s						
MRKS				Lg	Lg	15 29 03.6	
	comp=E,73nm,0.4s						
MRKS	**Merke**	**2.24**	**320**	*eP*	**Pg**	**15 28 33.4**	**-0.2**
	comp=E,20nm,0.3s						
MRKS				*eS*	**Sg**	**15 29 03.6**	**+0.9**
	comp=E,73nm,0.4s						
IZV	**Izvestkoviy**	**2.24**	**28**	Pg	**Pb**	**15 28 31.5**	**-0.6**
	comp=E,15nm,0.7s						
IZV				Lg	Lg	15 29 00.7	
	comp=E,47nm,0.3s						
IZV	**Izvestkoviy**	**2.24**	**28**	*eP*	**Pb**	**15 28 31.5**	**-0.6**
	comp=E,15nm,0.7s						
IZV				*eS*	**Sb**	**15 29 00.7**	**+0.2**
	comp=E,47nm,0.3s						
MTBS	**Maitube**	**2.27**	**23**	Pg	**Pb**	**15 28 33.1**	**+0.6**
	comp=E,10nm,0.1s						
MTBS				Lg	Lg	15 29 03.2	
	comp=E,69nm,0.2s						
MTBS	**Maitube**	**2.27**	**23**	*eP*	**Pb**	**15 28 33.1**	**+0.6**
	comp=E,10nm,0.1s						
MTBS				*eS*	**Sg**	**15 29 03.2**	**-0.3**
	comp=E,69nm,0.2s						
USP	**Ospenovka**	**2.27**	**347**	⇑P	**Pb**	**15 28 33.2**	**+0.7**
	comp=E,99nm,0.3s,SNR=98						
USP				⇑S	**Sg**	**15 29 02.9**	**-0.7**
	comp=E,133nm,0.3s						
USP	**Ospenovka**	**2.27**	**347**	⇑*iP*	**Pn**	**15 28 30.4**	**+1.0**
USP				⇑*iS*	**Sb**	**15 28 59.5**	**-1.7**
SGDS	**Sogindy**	**2.43**	**350**	Pg	**Pb**	**15 28 36.6**	**+1.3**
	comp=E,6.5nm,0.3s						
SGDS				Lg	Lg	15 29 09.3	
	comp=E,209nm,0.7s						
MNAS	**Manas**	**2.47**	**306**	⇓*eP*	**Pn**	**15 28 33.4**	**+1.1**
MNAS				⇓*iS*	**Sb**	**15 29 04.7**	**-2.4**
MDOK	**Medeo**	**2.52**	**33**	Pg	**Pb**	**15 28 35.9**	**-0.9**
	comp=E,3.9nm,0.6s						
MDOK				Lg	Lg	15 29 08.4	
	comp=E,57nm,0.6s						
ANVS	**Anan'yevo**	**2.52**	**46**	⇑*iP*	**Pn**	**15 28 33.2**	**+0.1**
ANVS				⇑*iS*	**Sn**	**15 29 04.6**	**0.0**
KNDC	**Almaty**	**2.53**	**31**	⇑Pg	**Pb**	**15 28 37.2**	**+0.3**
	comp=E,36nm,0.4s						
KNDC				⇑Lg	Lg	15 29 11.5	
	comp=E,160nm,1.1s						
ARK	**Arkit**	**2.54**	**288**	⇓*iP*	**Pn**	**15 28 34.4**	**+1.1**
ARK				⇓*iS*	**Sn**	**15 29 06.3**	**+1.3**
KOTS	**Kotyrbulak**	**2.60**	**32**	Pg	**Pb**	**15 28 37.8**	**-0.4**
	comp=E,14nm,0.5s						
KOTS				Lg	Lg	15 29 11.5	
	comp=E,81nm,0.7s						
KOTS	**Kotyrbulak**	**2.60**	**32**	*eP*	**Pb**	**15 28 37.8**	**-0.4**
	comp=E,14nm,0.5s						
KOTS				*eS*	**Sb**	**15 29 11.5**	**+0.7**
	comp=E,81nm,0.7s						
KRBS	**Karabastau**	**2.66**	**7**	Pg	**Pb**	**15 28 40.6**	**+1.4**
	comp=E,11nm,0.3s						
KRBS				Lg	Lg	15 29 16.6	
	comp=E,142nm,0.3s						
KRBS	**Karabastau**	**2.66**	**7**	*eP*	**Pb**	**15 28 40.6**	**+1.4**
	comp=E,11nm,0.3s						
KRBS				*eS*	**Sg**	**15 29 16.6**	**+0.4**
	comp=E,142nm,0.3s						
PRZ	**Przheval'sk**	**2.79**	**58**	⇓*iP*	**Pn**	**15 28 36.7**	**0.0**
PRZ				⇓*iS*	**Sn**	**15 29 10.6**	**-0.5**
KTBS	**Karatobe**	**2.88**	**22**	Pg	**Pb**	**15 28 43.4**	**+0.6**
	comp=E,0.3nm,0.1s						
KTBS				Lg	Lg	15 29 21.4	
	comp=E,92nm,0.6s						
KTBS	**Karatobe**	**2.88**	**22**	*eP*	**Pb**	**15 28 43.4**	**+0.6**
	comp=E,0.3nm,0.1s						
KTBS				*eS*	**Sg**	**15 29 21.4**	**-1.6**
	comp=E,92nm,0.6s						
DRK	**Karamyk**	**3.04**	**240**	⇓*iP*	**Pn**	**15 28 40.8**	**+0.6**
DRK				⇓*iS*	**Sn**	**15 29 17.5**	**+0.1**
TRKS	**Terek-Say**	**3.10**	**280**	⇓*iP*	**Pn**	**15 28 41.5**	**+0.6**
TRKS				⇓*iS*	**Sn**	**15 29 18.7**	**+0.1**
SATY	**Saty**	**3.12**	**49**	Pg	**Pb**	**15 28 48.5**	**+1.5**
	comp=E,15nm,0.1s						
SATY				Lg	Lg	15 29 29.4	
	comp=E,48nm,0.4s						
SATY	**Saty**	**3.12**	**49**	*eP*	**Pb**	**15 28 48.5**	**+1.5**
	comp=E,15nm,0.1s						
SATY				*eS*	**Sg**	**15 29 29.4**	**-1.4**
	comp=E,48nm,0.4s						
BTK	**Batken**	**3.48**	**255**	⇑*iP*	**Pn**	**15 28 47.0**	**+0.9**
BTK				⇑*iS*	**Sn**	**15 29 28.3**	**+0.2**
UZB	**Uzynbulak**	**3.53**	**52**	Pg	**Pb**	**15 28 53.7**	**-0.3**
	comp=E,4.1nm,0.2s						
UZB				Lg	Lg	15 29 39.0	
	comp=E,18nm,0.4s						
UZB	**Uzynbulak**	**3.53**	**52**	*eP*	**Pb**	**15 28 53.7**	**-0.3**
	comp=E,4.1nm,0.2s						
UZB				*eS*	**Sb**	**15 29 39.0**	**+1.5**
	comp=E,

GAR				⇓*i*S		Sn	15 29 47.1	-0.5	
KNOS	**Konyrlen**	**4.42**	**40**	Pg		**Pb**	**15 29 11.4**	**+2.2**	
	comp=E,1.4nm,0.5s								
KNOS				Lg		Lg	15 30 08.7		
	comp=E,8.4nm,0.5s								
DJR	**Jarkent**	**4.71**	**44**	Pg		**Pb**	**15 29 16.4**	**+2.3**	
	comp=E,2.5nm,0.4s								
DJR				Lg		Lg	15 30 17.4		
	comp=E,3.2nm,0.7s								
DJR	**Jarkent**	**4.71**	**44**	*e*P		**Pb**	**15 29 16.4**	**+2.3**	
	comp=E,2.5nm,0.4s								
DJR				*e*S		**Sg**	**15 30 17.4**	**-4.5**	
	comp=E,3.2nm,0.7s								

*FUNV **11** 15:36:17.0, 7°.25N×73°.20W, h5km, MW3.0, Presumed earthquake*
*RSNC **11** 15:36:19.4±0.0, 7°N±1°×7°.3W±°, h142km±2km, M2.5, ML2.2*
ISC 11 15:36:16.0±1.5,**6°.82N**±0°.04×**73°.02W**±0°.05,**h160**km±9km,
n24,σ1°**25**/43,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**215**	P		**Pn**	**15 36 38.3**	**+0.4**
BARC				P		**Pn**	**15 36 38.3**	**+0.4**
BARC				S		**Sn**	**15 36 53.5**	**-1.2**
PAMC	**Pamplona, Colo**	**0.61**	**32**	P		**Pn**	**15 36 41.5**	**+1.9**
PAMC				S		**Sn**	**15 36 58.8**	**+1.2**
RUSC	**La Rusia**	**0.92**	**184**	P		**Pn**	**15 36 42.0**	**+0.3**
RUSC				S		**Sn**	**15 37 00.5**	**-0.8**
RUSC	**La Rusia**	**0.92**	**184**	*e*P		**Pn**	**15 36 41.8**	**+0.1**
RUSC				*e*S		**Sn**	**15 37 00.5**	**-0.8**
OCAC	**Ocana**	**1.44**	**348**	P		**Pn**	**15 36 48.3**	**+2.4**
OCAC				S		**Sn**	**15 37 09.5**	**+0.6**
PTBC	**PUERTO BERRIO,**	**1.45**	**259**	P		**Pn**	**15 36 45.0**	**-0.8**
PTBC				S		**Sn**	**15 37 05.6**	**-3.1**
SPBC	**San Pablo de B**	**1.56**	**222**	P		**Pn**	**15 36 47.0**	**0.0**
SPBC				S		**Sn**	**15 37 09.5**	**-1.4**
NORC	**Norcasia**	**2.22**	**236**	P		**Pn**	**15 36 54.1**	**-0.2**
NORC				S		**Sn**	**15 37 22.5**	**-1.4**
CHIC	**Chingaza**	**2.29**	**198**	P		**Pn**	**15 36 56.2**	**+0.7**
CHIC				S		**Sn**	**15 37 26.4**	**+0.4**
ROSC	**El Rosal**	**2.35**	**213**	P		**Pn**	**15 36 58.3**	**+2.1**
CVER	**Cruz Verde, Cu**	**2.51**	**205**	P		**Pn**	**15 36 59.8**	**+1.6**
HELC	**Santa Helena**	**2.57**	**256**	P		**Pn**	**15 36 59.9**	**+1.1**
HELC				S		**Sn**	**15 37 32.7**	**+1.0**
HELC	**Santa Helena**	**2.57**	**256**	*e*P		**Pn**	**15 36 58.9**	**+0.1**
HELC				*e*S		**Sn**	**15 37 30.5**	**-1.3**
UREC	**San Jos de Ur**	**2.66**	**291**	P		**Pn**	**15 36 58.7**	**-0.8**
UREC				S		**Sn**	**15 37 31.3**	**-1.9**
VILC	**Villavicencio,**	**2.77**	**194**	P		**Pn**	**15 37 01.5**	**+0.4**
VILC				S		**Sn**	**15 37 36.5**	**+0.5**
GUY2C	**Guyana, Caldas**	**2.82**	**236**	P		**Pn**	**15 37 03.0**	**+1.1**
GUY2C				S		**Sn**	**15 37 38.1**	**+0.7**
SDV	**Santo Domingo**	**3.13**	**49**	*e*P		**Pn**	**15 37 04.8**	**-0.8**
SDV				*e*S		**Sn**	**15 37 41.4**	**-2.7**
DBBC	**Dabeiba**	**3.17**	**274**	P		**Pn**	**15 37 07.0**	**+1.0**
PRAC	**Prado**	**3.60**	**211**	P		**Pn**	**15 37 11.8**	**+0.4**
PRAC				S		**Sn**	**15 37 52.9**	**-1.6**
ORTC	**Ortega, Tolima**	**3.64**	**218**	P		**Pn**	**15 37 12.3**	**+0.3**
ORTC				S		**Sn**	**15 37 56.3**	**+0.8**
APAC	**Apartado, Choc**	**3.69**	**287**	P		**Pn**	**15 37 12.8**	**+0.3**
SJCC	**San Jacinto, C**	**3.73**	**325**	P		**Pn**	**15 37 14.5**	**+1.4**
PLMC	**San Jos del P**	**3.76**	**240**	P		**Pn**	**15 37 14.1**	**+0.6**
PLMC				S		**Sn**	**15 37 58.2**	**0.0**
URMC	**La Uribe, Meta**	**3.80**	**201**	P		**Pn**	**15 37 14.3**	**+0.3**

*MAN **11** 16:02:13.0, 5°.58N×126°.24E, h71km, MS3.9*
*IDC **11** 16:02:15.2±1.0, 5°.75N×126°.24E, h114km±13km, mb3.3/5, mbtmp3.6/6, MS2.8/1, Error ellipse: s-maj=96.8km s-min=11.6km az=61.0*
ISC 11 16:02:15.3±0.8,**5°.59N**±0°.06×**126°.04E**±0°.09,**h116**km,**n15,**
σ**2**°**25**/20,**mb3.5/5,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.19**	**294**	*e*P		**Pn**	**16 02 37.6**	**-1.5**
GSPH				*i*S		**Sn**	**16 02 55.6**	**-1.5**
DAV	**Davao City (W)**	**1.54**	**343**	P		**Pn**	**16 02 41.4**	**-1.5**
	152nm,0.3s,baz=215,slow=16,SNR=6.6							
DAV				S		**Sn**	**16 03 02.5**	**-1.4**
	161nm,0.4s,baz=195,slow=20,SNR=1.9							
DMPH	**Davao City--Mi**	**1.57**	**340**	*i*P		**Pn**	**16 02 41.7**	**-1.7**
DMPH				*i*S		**Sn**	**16 03 04.6**	**-0.1**
CTBH	**Cotabato--PC H**	**2.41**	**312**	*i*P		Pn	16 03 01.9	+8.1
BIPH	**Bislig**	**2.59**	**7**	*e*P		**Pn**	**16 02 54.9**	**-1.3**
BIPH				*e*S		**Sn**	**16 03 26.9**	**-0.7**
CGP	**Cagayan de Oro**	**3.14**	**335**	*e*P		**Pn**	**16 03 05.5**	**+2.1**
CGP				*e*S		**Sn**	**16 03 44.9**	**+4.5**
TSSP	**Tandag City**	**3.43**	**3**	*e*P		**Pn**	**16 03 06.4**	**-0.8**
TSSP				*e*S		**Sn**	**16 03 51.5**	**+4.2**
SCPH	**Surigao**	**4.20**	**353**	*e*P		Pn	16 03 10.4	-7.0
SCPH				*e*S		**Sn**	**16 04 00.6**	**-5.0**
SIJI	**Sorong**	**8.27**	**141**	P		**Pn**	**16 04 11.5**	**-1.1**
	2.0nm,0.6s,baz=297,slow=18,SNR=1.1							
SIJI				S		**Sn**	**16 05 44.6**	**+0.2**
	3.9nm,0.9s,baz=0.0,slow=20,SNR=1.8							
GUMO	**Guam**	**20.18**	**65**	LR		LR	16 14 41.5	
	comp=Z,30nm,19.3s,baz=208,slow=37							
WRA	**Warramunga Arr**	**26.66**	**162**	P		**P**	**16 07 44.0**	**+0.5**
	0.4nm,0.5s,baz=343,slow=10,SNR=4.8 0.4nm,0.5s							
ASAR	**Alice Springs**	**30.08**	**166**	P		**P**	**16 08 14.8**	**+0.9**
	0.4nm,0.4s,baz=345,slow=7.1,SNR=24 0.4nm,0.4s							
STKA	**Stephens Creek**	**40.10**	**159**	P		**P**	**16 09 41.1**	**+1.5**
	1.2nm,0.5s,baz=337,slow=8.9,SNR=7.2 1.2nm,0.5s							
MKAR	**Makanchi Array**	**55.64**	**325**	P		**P**	**16 11 39.3**	**0.0**
	0.3nm,0.5s,baz=118,slow=6.9,SNR=7.2 0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**59.81**	**327**	P		**P**	**16 12 08.0**	**-0.3**
	0.2nm,0.5s,baz=132,slow=5.7,SNR=7.8 0.2nm,0.5s							

*IDC **11** 16:14:37.6±1.6, 53°.94N×163°.55W, h0km, mb3.7/9, mbtmp3.7/12, ML3.5/3, Error ellipse: s-maj=39.7km s-min=18.2km az=174.0*
*AEIC **11** 16:14:41.3±1.6, 53°.80N±0°.03×163°.28W±0°.04, h33km±7km, Error ellipse: s-maj=5.0km s-min=2.4km az=147.0*
*NEIC **11** 16:14:43.4±2.3, 53°.90N±0°.06×163°.32W±0°.03, h35km±2km, ML3.4/12, ML3.3(AEIC), Error ellipse: s-maj=10.7km s-min=3.1km az=343.0*
ISC 11 16:14:39.3±2.0,**53°.79N**±0°.08×**163°.25W**±0°.04,
h14km±11km,**n75,**σ1°**39**/76,**mb3.6**/9,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**1.03**	**335**			**Pg**	**16 14 59.1**	**0.0**
SSLS						**Sg**	**16 15 11.6**	**-1.0**
ISNN	**Isanotski Nort**	**1.09**	**344**			**Pg**	**16 15 00.3**	**-0.1**
ISNN						**Sg**	**16 15 13.7**	**-1.0**
SSBA	**Shishaldin**	**1.11**	**333**			**Pg**	**16 15 00.1**	**-0.7**
SSBA						**Sg**	**16 15 14.4**	**-0.9**
SSLN	**Shishaldin Nor**	**1.12**	**337**			**Pg**	**16 15 00.8**	**-0.1**
SSLN						**Sg**	**16 15 16.1**	**+0.6**
DT1	**Dutton Round H**	**1.44**	**23**			**Pn**	**16 15 05.1**	**+0.1**
DT1						**Sn**	**16 15 23.3**	**-0.3**
DTNA	**Dutton South F**	**1.48**	**23**			**Pn**	**16 15 06.0**	**+0.4**
DTNA						**Sn**	**16 15 24.6**	**-0.2**
AKSA	**Akutan Strait**	**1.49**	**285**			**Pn**	**16 15 06.0**	**+0.4**
AKUT	**Akutan**	**1.53**	**284**	P		**Pn**	**16 15 06.5**	**+0.3**
AKUT	**Akutan**	**1.53**	**284**			**Pn**	**16 15 06.9**	**+0.7**
AKUT				Sn		**Sn**	**16 15 26.3**	**+0.4**
AKUT				IAML			16 15 32.8	
	comp=N,424nm,0.9s							
AKUT				IAML			16 15 33.7	
	comp=E,408nm,0.8s							
AHB	**Akutan Harbor**	**1.55**	**283**			**Pn**	**16 15 06.9**	**+0.4**
DOL	**Dolgoi Island**	**1.59**	**30**			**Sn**	**16 15 27.9**	**+0.7**
ZRO	**Akutan Zero**	**1.64**	**282**			**Pn**	**16 15 08.1**	**+0.3**
LVA	**Lava Point**	**1.69**	**284**			**Pn**	**16 15 09.1**	**+0.7**
LVA				IAML			16 15 46.1	
	comp=N,752nm,0.7s							
LVA				IAML			16 15 47.8	
	comp=E,262nm,0.9s							
AKRB	**Akutan Reef Bi**	**1.70**	**283**			**Pn**	**16 15 09.6**	**+1.0**
PS4A	**Pavlof South-4**	**1.76**	**27**			**Pn**	**16 15 10.1**	**+0.7**
PS4A						**Sn**	**16 15 32.9**	**+1.3**
PN7A	**Pavlof North-7**	**1.80**	**23**			**Pn**	**16 15 11.2**	**+1.2**
UNV	**Unalaska Valle**	**1.93**	**273**	P		**Pn**	**16 15 11.9**	**+0.2**
UNV	**Unalaska Valle**	**1.93**	**273**			**Pn**	**16 15 12.1**	**+0.4**
MNAT	**Makushin Natee**	**2.04**	**274**			**Pn**	**16 15 13.9**	**+0.7**
MGOD	**Makushin Gods**	**2.15**	**272**			**Pn**	**16 15 15.4**	**+0.7**
SDPT	**Sand Point**	**2.25**	**45**	P		**Pn**	**16 15 17.1**	**+1.1**
SDPT	**Sand Point**	**2.25**	**45**			**Pn**	**16 15 17.4**	**+1.4**
SDPT						**Sn**	**16 15 43.8**	**+0.2**
SDPT				IAML			16 15 52.0	
	comp=E,436nm,1.1s							
CNBA	**Chernabura Isl**	**2.38**	**63**			**Pn**	**16 15 18.5**	**+0.7**
CNBA				IAML			16 16 09.7	
	comp=N,88nm,0.8s							
CHNA	**Chernabura Isl**	**2.38**	**62**	P		**Pn**	**16 15 18.8**	**+0.9**
OKFG	**Magazine Ridge**	**2.81**	**264**			**Pn**	**16 15 26.1**	**+2.4**
OKNC	**Okmok New Cone**	**2.92**	**266**			**Pn**	**16 15 27.0**	**+1.7**
VNKR	**Veniaminof 5**	**3.17**	**43**			**Pn**	**16 15 30.6**	**+1.8**
VNFG	**Fog Glacier, M**	**3.29**	**39**			**Pn**	**16 15 32.5**	**+2.1**
ANPB	**Aniakchak Plen**	**4.15**	**41**			**Pn**	**16 15 43.4**	**+1.2**
SPIA	**Saint Paul Isl**	**5.23**	**313**	P		**Pn**	**16 15 59.6**	**+2.6**
O14K	**Tigyukauivet M**	**5.59**	**11**			**Pn**	**16 16 03.4**	**+1.5**
O15K	**Ungalikthiuk R**	**5.73**	**18**			**Pn**	**16 16 05.2**	**+1.5**
P16K	**Nushagak River**	**6.01**	**27**			**Pn**	**16 16 09.4**	**+1.7**
Q17K	**Contact Creek**	**6.09**	**40**			**Pn**	**16 16 10.1**	**+1.1**
ANCK	**Angle Creek**	**6.20**	**41**			**Pn**	**16 16 11.8**	**+1.4**
N14K	**Kuskokwak Cree**	**6.21**	**7**			**Pn**	**16 16 12.6**	**+2.2**
KABU	**Katmai Buttres**	**6.33**	**42**			**Pn**	**16 16 13.8**	**+1.6**
O16K	**Kokwok River B**	**6.48**	**24**			**Pn**	**16 16 15.3**	**+1.2**
OHAK	**Old Harbor**	**6.62**	**55**	P		**Pn**	**16 16 15.4**	**-0.6**
OHAK	**Old Harbor**	**6.62**	**55**			**Pn**	**16 16 15.5**	**-0.6**
N15K	**Kwethluk River**	**6.63**	**14**			**Pn**	**16 16 17.9**	**+1.8**
Q18K	**Katmai Hardscr**	**6.70**	**40**			**Pn**	**16 16 18.4**	**+1.2**
O17K	**Koliganek Bris**	**6.89**	**27**			**Pn**	**16 16 20.9**	**+1.2**
M14K	**Bethel**	**7.02**	**5**			**Pn**	**16 16 23.4**	**+1.9**
M15K	**Kasigluk River**	**7.07**	**10**			**Pn**	**16 16 22.9**	**+0.7**
N16K	**Nishlik Lake**	**7.13**	**18**			**Pn**	**16 16 24.6**	**+1.5**
KDAK	**Kodiak Island**	**7.22**	**52**	Pn		**Pn**	**16 16 24.6**	**+0.3**
	comp=N,0.6nm,0.3s,baz=228,slow=14,SNR=6.5							
KDAK				Sn		**Sn**	**16 17 40.4**	**-5.6**
	comp=N,0.7nm,0.3s,baz=150,slow=20,SNR=8.5 comp=N,2.0nm,0.4s							
KDAK	**Kodiak Island**	**7.22**	**52**			**Pn**	**16 16 24.7**	**+0.4**
N17K	**Nushagak Hills**	**7.52**	**24**			**Pn**	**16 16 29.4**	**+1.1**
L14K	**Kuka Creek**	**7.58**	**2**			**Pn**	**16 16 30.5**	**+1.3**
M16K	**Timber Creek**	**7.62**	**16**			**Pn**	**16 16 31.0**	**+1.3**
L16K	**Owhat River**	**8.20**	**13**			**Pn**	**16 16 38.7**	**+1.1**
M17K	**Holitna River**	**8.24**	**20**			**Pn**	**16 16 39.8**	**+1.5**
J20K	**Nowinta River**	**11.41**	**20**			**Pn**	**16 17 23.2**	**+1.5**
KLU	**Klutina**	**12.04**	**43**			**Pn**	**16 17 29.0**	**-1.3**
ILAR	**Eielson Array**	**13.77**	**30**	Pn		**Pn**	**16 17 52.0**	**-1.8**
	baz=226,slow=14,SNR=4.1 comp=N,0.2nm,0.6s							
DLBC	**Dease Lake**	**18.97**	**62**	P		**Pn**	**16 19 02.1**	**+1.5**
	comp=N,0.2nm,0.3s,baz=273,slow=17,SNR=2.0 comp=N,0.5nm,0.3s							
PETK	**Petropavlovsk-**	**23.07**	**284**	P		**P**	**16 19 44.0**	**-0.2**
	comp=N,1.3nm,0.7s,baz=85,slow=14,SNR=10 comp=N,1.3nm,0.7s							
YKA	**Yellowknife Ar**	**26.50**	**51**	P		**P**	**16 20 17.9**	**+2.1**
	comp=N,0.4nm,0.6s,baz=272,slow=8.6,SNR=4.4 comp=N,0.4nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**40.98**	**226**	T		T	17 06 12.6	
	baz=26,slow=76,SNR=30							
H11N3	**WAKE ISLAND Hy**	**40.99**	**226**	T		T	17 06 13.2	
	baz=26,slow=76,SNR=35							
H11N1	**WAKE ISLAND Hy**	**41.00**	**226**	T		T	17 06 14.2	
	baz=26,slow=76,SNR=33							
H11S1	**WAKE ISLAND Hy**	**42.15**	**225**	T		T	17 07 45.7	
	baz=25,slow=76,SNR=44							
H11S2	**WAKE ISLAND Hy**	**42.17**	**225**	T		T	17 07 47.1	
	baz=25,slow=76,SNR=51							
H11S3	**WAKE ISLAND Hy**	**42.17**	**225**	T		T	17 07 47.7	
	baz=25,slow=76,SNR=51							
TXAR	**Lajitas Array**	**49.11**	**95**	P		**P**	**16 23 27.9**	**+1.6**
	comp=N,0.3nm,0.6s,baz=303,slow=5.2,SNR=5.5 comp=N,0.3nm,0.6s							
SONM	**Songino Array**	**53.68**	**303**	P		**P**	**16 23 59.6**	**-0.7**
	comp=N,0.5nm,0.8s,baz=35,slow=3.5,SNR=2.8 comp=N,0.5nm,0.8s							
ARCES	**ARCESS Array B**	**56.82**	**356**	P		**P**	**16 24 20.5**	**-2.0**
	comp=N,1.7nm,0.8s,baz=20,slow=11,SNR=2.9 comp=N,1.7nm,0.8s							
KURBB	**Kurchatov Arra**	**63.78**	**321**	P		**P**	**16 25 09.1**	**-1.3**
	comp=N,0.9nm,0.8s,baz=33,slow=6.8,SNR=5.9 comp=N,0.9nm,0.8s							
BVAR	**Borovoye Array**	**64.60**	**327**	P		**P**	**16 25 14.9**	**-0.8**
	comp=N,1.4nm,0.6s,baz=46,slow=8.3,SNR=7.2 comp=N,1.4nm,0.6s							
FINES	**FINESS Array B**	**64.88**	**355**	P		**P**	**16 25 15.9**	**-1.5**
	comp=N,3.4nm,1.1s,baz=9.7,slow=9.9,SNR=4.6 comp=N,3.4nm,1.1s							
ESDC	**Sonseca Array**	**85.21**	**16**	P		**P**	**16 27 14.7**	**-0.4**
	comp=N,0.3nm,0.7s,baz=340,slow=4.0,SNR=2.1 comp=N,0.3nm,0.7s							
H03N2	**Juan Fernandez**	**113.10**	**115**	T		T	18 36 31.4	
	baz=323,slow=77,SNR=10.0							
H03N1	**Juan Fernandez**	**113.11**	**115**	T		T	18 36 38.0	
	baz=323,slow=77,SNR=14							
H03N3	**Juan Fernandez**	**113.12**	**115**	T		T	18 36 36.7	
	baz=323,slow=77,SNR=11							

*SOME **11** 16:49:42.0, 41°.87N×81°.20E, h10km*
*NNC **11** 16:49:43.5±1.8, 41°.85N×81°.19E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=12.2km s-min=9.6km az=172.0*
ISC 11 16:49:46.9±3.6,**41°.9N**±0°.1×**80°.95E**±0°.09,**h16**km±15km,
n18,σ1°**36**/29,**5C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.59**	**344**	P		**Pn**	**16 50 13.9**	**-0.6**
	7.3nm,0.2s							
KTMS				S		**Sb**	**16 50 36.9**	**+0.9**
	17nm,0.2s							
KTMS	**Ketmen**	**1.59**	**344**	*e*P		**Pn**	**16 50 13.9**	**-0.6**
	7.3nm,0.2s							
KTMS				*e*S		**Sb**	**16 50 36.9**	**+0.9**
	17nm,0.2s							
SHLS	**Shalkode**	**1.66**	**319**	P		**Pn**	**16 50 13.2**	**-2.3**
	12nm,0.2s							
SHLS				S		**Sn**	**16 50 36.0**	**-0.5**
	40nm,0.3s							
SHLS	**Shalkode**	**1.66**	**319**	*e*P		**Pn**	**16 50 13.2**	**-2.3**
	12nm,0.2s							
SHLS				*e*S		**Sn**	**16 50 36.0**	**-0.5**
	40nm,0.3s							
PDGK	**Podgornoye**	**1.78**	**323**	⇑Pn		**Pb**	**16 50 18.4**	**-0.8**
	10.0nm,0.5s							
PDGK				⇑Sn		**Sg**	**16 50 45.4**	**+1.1**
	19nm,0.5s							
UZB	**Uzynbulak**	**1.89**	**311**	Pg		**Pb**	**16 50 21.4**	**+0.4**
UZB				Lg		Lg	16 50 49.9	
UZB	**Uzynbulak**	**1.89**	**311**	*e*P		**Pb**	**16 50 21.4**	**+0.4**
UZB				*e*S		**Sg**	**16 50 49.9**	**+2.2**
SATY	**Saty**	**2.20**	**302**	Pg		**Pb**	**16 50 27.1**	**+0.7**
SATY				Lg		Lg	16 50 59.6	
SATY	**Saty**	**2.20**	**302**	*e*P		**Pb**	**16 50 27.1**	**+0.7**
SATY				*e*S		**Sg**	**16 50 59.6**	**+1.8**
DJR	**Jarkent**	**2.56**	**341**	Pg		**Pb**	**16 50 31.9**	**-0.6**
	2.2nm,0.3s							
DJR				Lg		Lg	16 51 07.9	
	7.4nm,0.4s							
DJR	**Jarkent**	**2.56**	**341**	*e*P		**Pb**	**16 50 31.9**	**-0.6**
	2.2nm,0.3s							
DJR				*e*S		**Sg**	**16 51 07.9**	**-1.4**
	7.4nm,0.4s							
KNOS	**Konyrlen**	**2.77**	**333**	Pg		**Pb**	**16 50 34.8**	**-1.3**
	1.1nm,0.1s							
KNOS				Lg		Lg	16 51 12.9	
	7.6nm,0.3s							
BLB	**Baldybastay**	**2.84**	**321**	Pg		**Pb**	**16 50 37.2**	**-0.1**
	1.4nm,0.2s							
BLB				Lg		Lg	16 51 17.0	
	8.3nm,0.3s							
MDOK	**Medeo**	**3.14**	**295**	Pg		**Pb**	**16 50 43.0**	**+0.5**
MDOK				Lg		Lg	16 51 26.7	
ARXS	**Arharly**	**3.25**	**316**	Pg		**Pb**	**16 50 44.1**	**0.0**
	1.7nm,0.2s							
ARXS				Lg		Lg	16 51 28.9	
	4.4nm,0.4s							
ARXS	**Arharly**	**3.25**	**316**	*e*P		**Pb**	**16 50 44.1**	**0.0**
	1.7nm,0.2s							
ARXS				*e*S		**Sg**	**16 51 28.9**	**-2.2**
	4.4nm,0.4s							
MAKZ	**Makanchi**	**4.95**	**8**	⇑Pn		**Pn**	**16 50 59.9**	**-0.6**
	3.1nm,1.1s							
MAKZ				⇑Sn		**Sn**	**16 51 59.7**	**+2.3**
	5.4nm,1.4s							
MAKZ				⇓Lg		Lg	16 52 22.1	
	5.3nm,1.3s							
MK31	**Makanchi Array**	**4.97**	**11**	Pn		**Pn**	**16 50 59.9**	**-1.0**
	4.7nm,1.4s,baz=187,slow=15,SNR=24							
MK31				⇑Sn		**Sn**	**16 52 00.5**	**+2.5**
	0.4nm,0.5s,baz=176,slow=24							
MK31				⇓Lg		Lg	16 52 21.8	
	1.3nm,0.6s,baz=176,slow=24							

*IDC **11** 16:51:05.2±1.9, 5°.02S×101°.57E, h0km, mb3.6/8, mbtmp3.6/9, ML3.9/1, MS3.6/1, Error ellipse: s-maj=72.8km s-min=16.5km az=51.0*
*DJA **11** 16:51:12.1±0.4, 5°.3S×10°.2E±°, h10km, M4.5/20, mb5.0/2, MLv4.3/20*
ISC 11 16:51:12.5±1.1,**4°.70S**±0°.08×**101°.9E**±0°.1,**h37**km,**n31,**
σ1°**75**/19,**mb3.7/8,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
UBSI	**University, Be**	**1.00**	**21**	P		**Sn**	**16 51 42.5**	**-0.2**
MNAI	**Manna**	**1.09**	**72**	P		**Pn**	**16 51 30.8**	**-0.5**
MNAI				S		**Sn**	**16 51 43.8**	**-1.3**
KSI	**Kapahiang**	**1.24**	**33**	P		**Pn**	**16 51 33.0**	**-0.4**
MASI	**Maura Aman, Be**	**1.58**	**12**	P		**Pn**	**16 51 39.4**	**+1.4**
MDSI	**Maura Dua**	**2.27**	**85**	P		**Pn**	**16 51 46.7**	**-0.7**
KASI	**Kota Agung**	**2.70**	**108**	P		**Pn**	**16 51 53.7**	**+0.3**
KASI				S		**Sn**	**16 52 26.4**	**+1.6**
PDSI	**Padang**	**4.03**	**339**	P		Pn	16 52 21.7	+10
DBJI	**Dramaga**	**5.16**	**111**	P		Pn	16 52 34.8	+7.6
LEM	**Lembang**	**6.06**	**111**	Pn		**Pn**	**16 52 38.4**	**-1.3**
	3.1nm,0.3s,baz=205,slow=14,SNR=6.6							
LEM				Sn		**Sn**	**16 53 53.1**	**+5.2**
	2.1nm,0.3s,baz=281,slow=20,SNR=1.2 7.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**23.19**	**353**	P		**P**	**16 56 17.3**	**+1.2**
	0.2nm,0.3s,baz=169,slow=9.6,SNR=2.0 0.2nm,0.3s							
TGY	**Tagaytay City**	**26.55**	**45**	LR		LR	17 08 25.9	
	comp=Z,108nm,19.3s,baz=46,slow=38							
H08S2	**Diego Garcia H**	**29.39**	**263**	T		T	17 27 50.2	
	baz=86,slow=75,SNR=22							
H08S3	**Diego Garcia H**	**29.40**	**263**	T		T	17 27 50.9	
	baz=86,slow=75,SNR=26							
H08S1	**Diego Carcia H**	**29.41**	**263**	T		T	17 27 53.8	
	baz=86,slow=75,SNR=11							
H01W3	**Cape Leeuwin H**	**32.10**	**161**	T		T	17 31 30.6	
	baz=338,slow=76,SNR=5.9							
H01W2	**Cape Leeuwin H**	**32.11**	**161**	T		T	17 31 30.1	
	baz=338,slow=76,SNR=11							
H01W1	**Cape Leeuwin H**	**32.11**	**161**	T		T	17 31 31.8	
	baz=338,slow=76,SNR=5.9							
WRA	**Warramunga Arr**	**35.01**	**118**	P		**P**	**16 58 00.4**	**-1.4**
	0.2nm,0.5s,baz=304,slow=8.9,SNR=7.8 0.2nm,0.5s							
ASAR	**Alice Springs**	**36.15**	**125**	P		**P**	**16 58 10.8**	**-0.7**
	0.3nm,0.3s,baz=298,slow=7.7,SNR=15 0.3nm,0.3s							
STKA	**Stephens Creek**	**45.95**	**131**	P		**P**	**16 59 31.6**	**-0.5**
	0.4nm,0.3s,baz=310,slow=5.3,SNR=3.9 0.4nm,0.3s							
SONM	**Songino Array**	**52.46**	**4**	P		**P**	**17 00 23.5**	**+1.8**
	0.5nm,0.5s,baz=201,slow=9.4,SNR=2.0 0.5nm,0.5s							
MKAR	**Makanchi Array**	**54.13**	**343**	P		**P**	**17 00 33.6**	**-0.3**
	0.4nm,0.5s,baz=146,slow=8.2,SNR=6.4 0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**58.67**	**343**	P		**P**	**17 01 04.3**	**-1.7**
	0.2nm,0.3s,baz=132,slow=2.6,SNR=1.3 0.2nm,0.3s							
H04N2	**CROZET ISLANDS**	**59.82**	**218**	T		T	18 05 56.7	
	baz=63,slow=75,SNR=102							
H04N1	**CROZET ISLANDS**	**59.83**	**218**	T		T	18 05 57.9	
	baz=63,slow=75,SNR=116							
H04N3	**CROZET ISLANDS**	**59.84**	**218**	T		T	18 05 56.5	
	baz=63,slow=75,SNR=99							
H04S1	**CROZET ISLANDS**	**60.07**	**217**	T		T	18 06 14.5	
	baz=61,slow=76,SNR=7.4							
H04S3	**CROZET ISLANDS**	**60.08**	**217**	T		T	18 06 13.1	
	baz=61,slow=76,SNR=20							
H04S2	**CROZET IS

EOS2				*i* S		Sn	17 09 09.5	+0.4
ETL	**Fush Village**	**0.31**	**237**	P		Pn	17 09 03.7	-0.1
ETL				S		Sn	17 09 09.8	+0.4
NACB	**Ninganchiao**	**0.33**	**242**	P		Pb	17 09 02.9	0.0
NACB				S		Sn	17 09 09.2	-0.5
NDS	**Dongshan**	**0.35**	**330**	P		Pb	17 09 03.6	+0.3
NDS				S		Sn	17 09 09.9	-0.5
EOS3	**EOS3**	**0.38**	**96**	P		Pb	17 09 03.9	+0.5
EOS3				S		Sn	17 09 11.2	+0.4
TWD	**Chiawan**	**0.38**	**229**	P		Pn	17 09 04.5	-0.1
TWD				*e*S		Sn	17 09 11.0	0.0
LATG	**Datong**	**0.41**	**301**	*i* P		Pb	17 09 04.5	+0.3
LATG				S		Sn	17 09 11.7	-0.2
ETLH	**Xiulin Townshi**	**0.41**	**253**	*i* P		Pb	17 09 04.6	+0.4
ETLH				S		Sn	17 09 11.4	-0.5
EOS4	**EOS4**	**0.43**	**119**	P		Pb	17 09 04.2	+0.1
EOS4				S		Sn	17 09 12.6	+0.8
ENTT	**Nioudou**	**0.44**	**315**	*e*P		Pb	17 09 04.9	+0.3
ENTT				S		Sn	17 09 12.5	-0.2
TWE	**Neicheng**	**0.45**	**331**	*e*P		Pb	17 09 05.1	+0.3
TWE				*e*S		Sn	17 09 12.8	0.0
ILA	**Ilan**	**0.46**	**341**	*e*S		Sn	17 09 13.8	+0.7
NNSB	**Datong**	**0.49**	**282**	*i* P		Pb	17 09 05.8	+0.4
NNSB				*e*S		Sb	17 09 12.5	0.0
NNSH	**Datong**	**0.49**	**282**	P		Pb	17 09 05.7	+0.3
NNSH				S		Sn	17 09 13.3	-0.7
NNS	**Nan Shan**	**0.50**	**283**	P		Pb	17 09 05.8	+0.1
NNS				*e*S		Sn	17 09 14.3	0.0
EGS		**0.52**	**2**	P		Pb	17 09 06.2	+0.4
EGS				S		Sn	17 09 14.2	-0.3
FUSB	**Fushanzhiwuyua**	**0.52**	**326**	*i* P		Pb	17 09 06.3	+0.4
FUSB				*i* S		Sn	17 09 14.6	-0.1
ETM	**Tongmen**	**0.52**	**227**	P		Pn	17 09 06.6	+0.1
ETM				S		Sn	17 09 14.8	+0.2
LXIB	**Xiulin Townshi**	**0.55**	**236**	*e*P		Pn	17 09 06.9	-0.2
LXIB				*e*S		Sn	17 09 15.8	+0.4
NWLT	**Wulai**	**0.58**	**320**	P		Pb	17 09 06.8	-0.1
NWLT				S		Sn	17 09 16.1	-0.1
YHNB	**Yeheng**	**0.59**	**305**	*e*P		Pn	17 09 07.9	+0.2
YHNB				S		Sn	17 09 16.6	+0.1
NSK	**Sanguang**	**0.61**	**305**	P		Pb	17 09 07.4	0.0
NSK				S		Sn	17 09 16.6	-0.3
FUSS	**Fushou**	**0.61**	**263**	*i* P		Pb	17 09 07.8	+0.3
FUSS				*i* S		Sn	17 09 17.0	-0.2
WHF	**Hehuan Shan**	**0.61**	**253**	*i* P		Pb	17 09 07.9	+0.2
WHF				S		Sn	17 09 17.2	-0.3
SHUL	**Shoufeng**	**0.62**	**211**	P		Pn	17 09 08.2	+0.1
SHUL				*e*S		Sn	17 09 18.2	+1.1
TIPB	**Shuangxi**	**0.65**	**353**	*i* P		Pn	17 09 08.3	-0.1
TIPB				S		Sn	17 09 18.0	+0.3
ESL	**Shilin**	**0.67**	**220**	P		Pb	17 09 08.0	-0.3
ESL				S		Sn	17 09 18.3	0.0
TWT	**Tachien**	**0.67**	**264**	P		Pn	17 09 09.1	+0.2
TWT				S		Sn	17 09 19.5	+0.9
TWB1	**Santiao Chiao**	**0.68**	**6**	*i* P		Pn	17 09 08.9	0.0
TWB1				S		Sn	17 09 18.5	0.0
TDCB	**Techi**	**0.69**	**264**	*e*P		Pn	17 09 09.2	+0.1
TDCB				S		Sn	17 09 19.2	+0.3
TWA	**Mucha**	**0.71**	**336**	*e*P		Pn	17 09 10.2	+0.8
TWA				S		Sn	17 09 19.7	+0.3
TATO	**Taipei**	**0.75**	**329**	*e*P		Pb	17 09 08.1	-1.6
TATO				S		Sn	17 09 21.0	+0.7
SXI1	**Grass Mountain**	**0.76**	**358**	*e*P		Pn	17 09 10.8	+0.7
SXI1				*e*S		Sn	17 09 22.0	+1.3
OWD	**Renai**	**0.77**	**241**	P		Pb	17 09 09.7	-0.3
OWD				S		Sb	17 09 20.3	+0.1
WARBT	**Fenglin Townsh**	**0.77**	**218**	P		Pb	17 09 08.6	-0.5
WARBT				S		Sb	17 09 20.8	0.0
NFF	**Wufeng Townshi**	**0.78**	**293**	*e*P		Pn	17 09 11.9	+1.5
WUSB	**Renai**	**0.80**	**245**	*e*P		Pn	17 09 11.0	+0.4
WUSB				*e*S		Sn	17 09 22.0	+0.5
KSHI	**Guanxi Townshi**	**0.80**	**304**	P		Pb	17 09 11.8	+1.2
KSHI				S		Sn	17 09 21.4	-0.2
YM01	**YM01**	**0.87**	**339**	P		Pn	17 09 10.9	-0.6
YM01				*e*S		Sn	17 09 25.4	+2.1
LIOB	**Emei**	**0.87**	**291**	*e*P		Pb	17 09 12.8	+1.1
WHP	**Taichung City**	**0.88**	**267**	*e*P		Pb	17 09 13.2	+1.3
WHP				S		Sn	17 09 24.8	+1.2
NSTT	**Nanjuang**	**0.88**	**290**	P		Pn	17 09 11.4	-0.2
NSTT				*e*S		Sn	17 09 24.9	+1.4
TWS1	**Kuangyinshan**	**0.89**	**330**	P		Pb	17 09 12.1	+0.1
TWS1				S		Sn	17 09 23.9	+0.2
ZUZH	**Zhuzihu**	**0.89**	**338**	P		Pn	17 09 11.5	-0.3
ZUZH				S		Sn	17 09 25.2	+1.4
HGSD	**Ruisui**	**0.94**	**208**	P		Pb	17 09 13.2	+0.3
HGSD				S		Sb	17 09 26.0	+0.9
DPDB	**Guoxing**	**0.94**	**252**	P		Pn	17 09 12.4	-0.2
DPDB				S		Sn	17 09 25.1	0.0
EHYH	**Wanrong**	**0.98**	**212**	P		Pn	17 09 13.1	+0.1
EHYH				S		Sb	17 09 26.2	+0.1
SSLB	**Suanglung**	**1.03**	**239**	*e*P		Pb	17 09 16.9	+2.6
SSLB				*e*S		Sb	17 09 29.6	+2.2
YULB	**Yu-li**	**1.09**	**211**	P		Pn	17 09 14.3	-0.1
YULB				S		Sn	17 09 28.6	+0.1
EYUL	**Yuli**	**1.12**	**209**	P		Pn	17 09 14.9	+0.1
EYUL				S		Sb	17 09 29.7	-0.3
WHYT	**Xinyi Township**	**1.15**	**237**	P		Pb	17 09 16.1	-0.4
FULB	**Fuli**	**1.26**	**207**	P		Pn	17 09 17.1	+0.3
FULB				S		Sn	17 09 32.8	0.0
ALS	**Alishan**	**1.30**	**231**	*e*P		Pb	17 09 20.4	+1.3
ALS				*e*S		Sb	17 09 36.0	+0.5
ELDTW	**Lidau**	**1.40**	**216**	P		Pn	17 09 19.7	+0.9
ELDTW				*e*S		Sn	17 09 35.7	-0.7
TPUB	**Ta-pu**	**1.56**	**229**	P		Pn	17 09 21.1	+0.2
TPUB				*e*S		Sn	17 09 40.6	+0.5
TWGBT	**Beinan**	**1.69**	**207**	P		Pn	17 09 23.0	+0.3
TWGBT				*e*S		Sn	17 09 42.8	-0.6

IDC ***11*** *17:09:31.8±1.3,27.°03S×178.°60E,h611km±15km, mb3.5/13,mbtmp4.5/17, Error ellipse: s-maj=17.7km s-min=12.1km az=56.0*

NEIC ***11*** *17:09:31.8±1.6,27.°1S±0.°1×178.°7E±0.°1,h621km±7km, mb4.4/38, Error ellipse: s-maj=17.5km s-min=14.4km az=80.0*

ISC 11 17:09:31.2±0.5**,27.°18S**±0.°06×**178.°50E**±0.°09**,h600**km**, n101,**σ1**79/**108**,mb4.2/29,3C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**3.77**	**124**	P		**P**	**17 10 56.7**	**+1.8**
RAO	**Raoul Island**	**3.78**	**124**	P		**P**	**17 10 56.6**	**+1.5**
	232nm,0.3s,baz=263,slow=23,SNR=2.1							
RAO	**Raoul Island**	**3.78**	**124**	P		**P**	**17 10 56.3**	**+1.2**
RAO	**Raoul Island**	**3.78**	**124**	P		**P**	**17 10 56.7**	**+1.7**
GLKZ	**Green Lake**	**3.78**	**124**	P		**P**	**17 10 58.5**	**+3.5**
GLKZ				S		**S**	**17 12 05.8**	**+2.2**
MSVF	**Nonsavu**	**9.41**	**357**	P		**P**	**17 11 43.5**	**-0.8**
	5.1nm,0.5s,baz=245,slow=23,SNR=7.5							
MXZ	**Matakaoa Point**	**10.36**	**181**	P		**P**	**17 11 55.0**	**+1.7**
MXZ				S		**S**	**17 13 46.7**	**-3.4**
HAZ	**Te Kaha**	**10.57**	**183**	P		**P**	**17 11 56.2**	**+0.8**
HAZ				S		**S**	**17 13 49.5**	**-4.4**
WMGZ	**Waiomatatini S**	**10.62**	**180**	P		**P**	**17 11 58.2**	**+2.4**
WMGZ				S		**S**	**17 13 50.4**	**-4.3**
PKGZ	**Pakihiroa**	**10.67**	**182**	P		**P**	**17 12 00.2**	**+3.8**
RUGZ	**Raukumara Rang**	**10.78**	**183**	P		**P**	**17 12 00.3**	**+2.6**
PUZ	**Puketiti**	**10.87**	**181**	P		**P**	**17 12 01.4**	**+3.0**
PUZ				S		**S**	**17 13 52.6**	**-6.8**
MARNC	**Mare, Loyalty**	**11.10**	**298**	P		**P**	**17 12 03.0**	**+2.1**
URZ	**Urewera**	**11.12**	**186**	P		**P**	**17 12 01.9**	**+1.1**
	10nm,0.3s,baz=260,slow=2.7,SNR=29							
URZ	**Urewera**	**11.12**	**186**	P		**P**	**17 12 01.6**	**+0.8**
URZ				S		**S**	**17 13 58.8**	**-5.0**
MWZ	**Matawai**	**11.16**	**184**	P		**P**	**17 12 02.0**	**+0.7**
MWZ				S		**S**	**17 14 03.2**	**-1.5**
TKGZ	**Te Karaka**	**11.25**	**183**	P		**P**	**17 12 04.2**	**+2.1**
CNGZ	**Carnagh Statio**	**11.28**	**181**	P		**P**	**17 12 04.1**	**+1.7**
RTZ	**Ruatahuna**	**11.48**	**186**	P		**P**	**17 12 05.4**	**+0.9**
RTZ	**Ruatahuna**	**11.48**	**186**	P		**P**	**17 12 06.5**	**+1.9**
QUENC	**Quen Island, N**	**11.60**	**292**	P		**P**	**17 12 06.9**	**+1.0**
SNGZ	**Shannon Statio**	**11.62**	**185**	P		**P**	**17 12 08.0**	**+2.1**
MRHZ	**Matea Rd**	**11.76**	**188**	P		**P**	**17 12 09.2**	**+1.8**
BKZ	**Black Stump Fm**	**12.08**	**187**	P		**P**	**17 12 10.5**	**0.0**
BKZ				S		**S**	**17 14 20.0**	**-1.5**
DZM	**Mont Dzumac**	**12.08**	**292**	P		**P**	**17 12 13.1**	**+2.2**
	17nm,0.6s,baz=147,slow=7.9,SNR=23							
TMVZ	**Te Maari**	**12.14**	**190**	P		**P**	**17 12 13.8**	**+2.6**
TWVZ	**Taurewa**	**12.14**	**191**	P		**P**	**17 12 14.0**	**+2.8**
ETVZ	**East Tongariro**	**12.15**	**190**	P		**P**	**17 12 13.7**	**+2.3**
TUVZ	**Tukino**	**12.29**	**190**	P		**P**	**17 12 14.7**	**+1.9**
FWVZ	**Far West T-bar**	**12.30**	**191**	P		**P**	**17 12 15.0**	**+2.0**
VRZ	**Vera Road**	**12.32**	**194**	P		**P**	**17 12 16.7**	**+3.8**
WNVZ	**Wahianoa**	**12.36**	**191**	P		**P**	**17 12 15.4**	**+1.9**
PKVZ	**Pokaka**	**12.37**	**191**	P		**P**	**17 12 15.0**	**+1.5**
MOVZ	**Moawhango**	**12.41**	**190**	P		**P**	**17 12 15.0**	**+1.1**
BHHZ	**Black Hill Sta**	**12.45**	**189**	P		**P**	**17 12 14.8**	**+0.5**
KAHZ	**Kahuranaki**	**12.66**	**186**	P		**P**	**17 12 17.2**	**+0.8**
PXZ	**Pawanui**	**12.89**	**186**	P		**P**	**17 12 19.9**	**+1.3**
TCW	**Tory Channel**	**14.43**	**193**	P		**P**	**17 12 34.0**	**+0.2**
TKNZ	**Takaka Hill**	**14.56**	**197**	P		**P**	**17 12 36.0**	**+0.8**
KOUNC	**Koumac, New Ca**	**14.57**	**294**	P		**P**	**17 12 37.2**	**+1.7**
NNZ	**Nelson**	**14.63**	**195**	P		**P**	**17 12 35.8**	**+0.1**
SANVU	**Saraoutou**	**15.70**	**316**	P		**P**	**17 12 44.7**	**-1.2**
LTZ	**Lake Taylor**	**16.38**	**196**	P		**P**	**17 12 52.2**	**+0.4**
AMCZ	**Amberley**	**16.66**	**195**	P		**P**	**17 12 54.8**	**+0.5**
OXZ	**Oxford**	**16.95**	**196**	P		**P**	**17 12 57.5**	**+0.5**
OXZ				IAmb	IAmb		17 13 00.8	
	comp=Z,19nm,0.7s							
WHZ	**Wether Hill Ro**	**20.48**	**201**	P		**P**	**17 13 29.5**	**+0.5**
WHZ				IAmb	IAmb		17 13 42.2	
	comp=Z,24nm,1.1s							
ARMA	**Armidale**	**23.75**	**256**	P		**P**	**17 14 00.8**	**+2.3**
ARMA				IAmb	IAmb		17 14 17.4	
	comp=Z,13nm,1.1s							
EIDS	**Eidsvold**	**24.64**	**268**	P		**P**	**17 14 07.4**	**+1.2**
CAN	**Canberra**	**26.42**	**245**	P		**P**	**17 14 23.9**	**+2.0**
CAN				IAmb	IAmb		17 14 25.3	
	comp=Z,16nm,1.4s							
TOO	**Toolangi**	**29.61**	**241**	P		**P**	**17 14 50.7**	**+1.1**
TAU	**Tasmania Unive**	**29.75**	**230**	P		**P**	**17 14 52.5**	**+1.8**
CTA	**Charters Tower**	**30.31**	**276**	P		**P**	**17 14 57.0**	**+1.2**
	comp=Z,14nm,0.4s,baz=97,slow=10,SNR=58							
	comp=Z,14nm,0.4s							
CTAO	**Charters Tower**	**30.31**	**276**	P		**P**	**17 14 56.9**	**+1.2**
STKA	**Stephens Creek**	**32.35**	**253**	P		**P**	**17 15 14.1**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=90,slow=9.9,SNR=13							
	comp=Z,1.8nm,0.3s							
INKA	**Innaminka**	**33.42**	**260**	P		**P**	**17 15 23.2**	**+1.2**
INKA				IAmb	IAmb		17 15 24.4	
	comp=Z,5.7nm,1.1s							
BBOO	**Buckleboo**	**37.00**	**251**	P		**P**	**17 15 51.6**	**+0.1**
MANU	**Manus Island**	**38.91**	**305**	P		**P**	**17 16 06.9**	**-0.2**
MANU				IAmb	IAmb		17 16 14.2	
	comp=Z,27nm,1.2s							
ASAR	**Alice Springs**	**40.27**	**265**	P		**P**	**17 16 18.7**	**+0.7**
	comp=Z,4.8nm,0.4s,baz=100,slow=7.2,SNR=27							
	comp=Z,4.8nm,0.4s							
ASAR	**Alice Springs**	**40.27**	**265**	P		**P**	**17 16 18.4**	**+0.4**
WR8	**Warramunga Arr**	**40.80**	**270**	P		**P**	**17 16 21.8**	**-0.4**
WR8				IAmb	IAmb		17 16 22.4	
	comp=Z,9.2nm,0.6s							
WRAB	**Tennant Creek**	**40.94**	**270**	P		**P**	**17 16 23.0**	**-0.3**
WRAB				IAmb	IAmb		17 17 01.0	
	comp=Z,9.7nm,0.7s							
WRA	**Warramunga Arr**	**40.95**	**270**	P		**P**	**17 16 23.2**	**-0.1**
	comp=Z,8.3nm,0.5s,baz=106,slow=7.8,SNR=9.6							
	comp=Z,8.3nm,0.5s							
WRA	**Warramunga Arr**	**40.95**	**270**	P		**P**	**17 16 22.9**	**-0.4**
WB0	**Warramunga Arr**	**40.96**	**271**	P		**P**	**17 16 23.0**	**-0.4**
WB0				IAmb	IAmb		17 16 23.9	
	comp=Z,9.4nm,0.6s							
FORT	**Forrest**	**43.98**	**253**	P		**P**	**17 16 46.3**	**-0.5**
FAKI	**Fak Fak**	**50.34**	**290**	P		**P**	**17 17 33.8**	**-0.8**
VNDA	**Vanda**	**51.02**	**185**	P		**P**	**17 17 39.8**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=9.8,slow=8.4,SNR=8.2							
	comp=Z,0.5nm,0.4s							
VNDA	**Vanda**	**51.02**	**185**	P		**P**	**17 17 39.5**	**+1.0**
SIJI	**Sorong**	**52.29**	**292**	P		**P**	**17 17 48.4**	**-0.2**
	comp=Z,23nm,0.7s,baz=87,slow=6.9,SNR=14							
	comp=Z,23nm,0.7s							
MBWA	**Marble Bar**	**53.55**	**263**	P		**P**	**17 17 56.9**	**-0.5**
MBWA				IAmb	IAmb		17 18 07.3	
	comp=Z,13nm,1.1s							
SOEI	**Soe**	**53.86**	**278**	P		**P**	**17 18 00.5**	**+0.6**
SOEI				IAmb	IAmb		17 18 05.5	
	comp=Z,46nm,1.2s							
MORW	**Morawa**	**54.54**	**252**	P		**P**	**17 18 03.9**	**-0.4**
MORW				IAmb	IAmb		17 18 24.5	
	comp=Z,17nm,1.4s							
MMRI	**Maumere**	**56.15**	**278**	P		**P**	**17 18 14.8**	**-0.8**
TNTI	**Ternate**	**56.43**	**291**	P		**P**	**17 18 16.5**	**-1.1**
TNTI				IAmb	IAmb		17 18 22.0	
	comp=Z,12nm,0.9s							
CASY	**Casey**	**56.59**	**207**	P		**P**	**17 18 17.5**	**-0.3**
GIRL	**Giralia**	**57.91**	**259**	P		**P**	**17 18 27.5**	**0.0**
TOLI2	**Tolitoli**	**62.16**	**287**	P		**P**	**17 18 54.3**	**-1.4**
QSPA	**South Pole Qui**	**62.92**	**180**	P		**P**	**17 19 00.7**	**+0.9**
	comp=Z,4.8nm,0.5s,baz=215,slow=1.1,SNR=73							
	comp=Z,4.8nm,0.5s							
QSPA	**South Pole Qui**	**62.92**	**180**	P		**P**	**17 19 00.4**	**+0.6**
QSPA				IAmb	IAmb		17 19 01.4	
	comp=Z,6.0nm,0.8s							
JMZ	**Minamidaito 2**	**69.64**	**315**	P		**P**	**17 19 39.5**	**-2.2**
BELA	**Belgrano 2**	**73.36**	**173**	P		**P**	**17 20 01.5**	**-1.1**
BELA				IAmb	IAmb		17 20 03.1	
	comp=Z,6.0nm,0.8s							
SMAI	**San Martin Ant**	**73.54**	**159**	P		**P**	**17 20 03.5**	**-0.2**
MJAR	**Matsushiro Arr**	**73.86**	**327**	P		**P**	**17 20 03.8**	**-2.2**
	comp=Z,1.1nm,0.7s,baz=164,slow=6.1,SNR=2.0							
	comp=Z,1.1nm,0.7s							
MJAR	**Matsushiro Arr**	**73.86**	**327**	P		**P**	**17 20 04.7**	**-1.3**
MAJO	**Matsushiro**	**73.86**	**327**	P		**P**	**17 20 04.1**	**-1.9**
MAJO				IAmb	IAmb		17 20 20.3	
	comp=Z,11nm,1.2s							
MAW	**Mawson**	**74.22**	**201**	P		**P**	**17 20 07.5**	**0.0**
ESPZ	**Base Esperanza**	**79.72**	**158**	P		**P**	**17 20 37.1**	**-0.3**
ESPZ				IAmb	IAmb		17 20 57.1	
	comp=Z,32nm,1.5s							
KSRS	**Korea Array**	**79.91**	**321**	P		**P**	**17 20 38.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=139,slow=5.5,SNR=1.7							
	comp=Z,0.4nm,0.7s							
TROLL	**Troll, Antarti**	**81.05**	**181**	⇑P		**P**	**17 20 44.2**	**-0.2**
	comp=Z,322nm,0.4s							
SNAA	**Sanae**	**81.42**	**180**	P		**P**	**17 20 45.8**	**-0.4**
	comp=Z,4.2nm,0.5s,baz=197,slow=6.8,SNR=10							
	comp=Z,4.2nm,0.5s							
PETK	**Petropavlovsk-**	**81.97**	**348**	P		**P**	**17 20 48.5**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=163,slow=4.8,SNR=4.5							
	comp=Z,0.9nm,0.5s							
VNA2	**Neumayer--Watz**	**82.09**	**178**	⇑P		**P**	**17 20 49.2**	**-0.3**
	comp=Z,9.2nm,0.6s,baz=178,slow=5.2							
VNA1	**Neumayer--Stat**	**82.33**	**178**	⇑P		**P**	**17 20 50.2**	**-0.5**
	comp=Z,5.2nm,0.9s							
PLCA	**Paso Flores**	**86.95**	**135**	P		**P**	**17 21 14.3**	**+0.5**
	comp=Z,6.1nm,1.2s,baz=234,slow=7.3,SNR=4.6							
	comp=Z,6.1nm,1.2s							
PLCA	**Paso Flores**	**86.95**	**135**	P		**P**	**17 21 14.4**	**+0.5**
PLCA				IAmb	IAmb		17 21 46.3	
	comp=Z,17nm,1.4s							
CMAR	**Chiang Mai Arr**	**89.41**	**291**	P		**P**	**17 21 26.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=122,slow=6.8,SNR=2.2							
	comp=Z,0.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**89.41**	**291**	P		**P**	**17 21 23.5**	**-2.0**
FINES	**FINESS Array B**	**141.06**	**339**	PKhKP	PKPpre		17 27 46.5	
	comp=Z,2.7nm,0.9s,baz=45,slow=3.7,SNR=5.4							
HFS	**Hagfors**	**145.44**	**347**	PKPbc		**PKPdf**	**17 28 00.8**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=59,slow=3.6,SNR=16							
AKASG	**Malin Array Be**	**146.88**	**324**	PKPbc		**PKPdf**	**17 28 05.5**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=47,slow=3.9,SNR=8.0							
BRTR	**Keskin Array B**	**148.32**	**302**	PKPbc		**PKPbc**	**17 28 10.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=100,slow=1.6,SNR=3.0							

IDC ***11*** *17:12:14.3±1.5,7.°17S×129.°17E,h133km±13km,mb3.6/9, mbtmp4.1/14, Error ellipse: s-maj=16.5km s-min=11.2km az=95.0*

NEIC ***11*** *17:12:16.4±2.2,7.°13S±0.°05×129.°23E±0.°06,h150km±8km, mb4.4/23, Error ellipse: s-maj=9.7km s-min=6.6km az=125.0*

GFZ ***11*** *17:12:16.6±0.2,7.°S±2.°×12.°9E±.°,h160km±4km,M4.2/20, mb4.3/20, Error ellipse: s-maj=5.2km s-min=5.1km az=152.0,confirmed*

DJA ***11*** *17:12:17.0±0.6,7.°S±4.°×12.°9E±.°,h182km±19km,M4.4/13, mB4.9/5,mb4.4/5,MLv4.5/13,Mw(mB)4.2/5*

ISC 11 17:12:15.0±0.4**,7.°26S**±0.°04×**129.°26E**±0.°04**,h150**km**,n116,**σ**35/124,mb4.2/17,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.14**	**110**	P		**Pn**	**17 12 54.4**	**+2.5**
SAUI	**Saumlaki**	**2.14**	**110**	P		**Sn**	**17 13 22.7**	**+2.5**
SAUI	**Saumlaki**	**2.14**	**110**			**Pn**	**17 12 54.0**	**+2.1**
SAUI						Sn		**17 13 21.5**	**+1.3**
SAUI	**Saumlaki**	**2.14**	**110**	P		**Pn**	**17 12 54.6**	**+2.7**
SAUI	**Saumlaki**	**2.14**	**110**	P		**Pn**	**17 12 54.0**	**+2.1**
BNDI	**Bandanaira**	**2.79**	**13**	P		**Pn**	**17 13 03.1**	**+3.3**
BNDI	**Bandanaira**	**2.79**	**13**	P		**Pn**	**17 13 01.6**	**+1.8**
BNDI	**Bandanaira**	**2.79**	**13**	P		**Pn**	**17 13 01.2**	**+1.4**
NLAI	**Namlea**	**4.53**	**332**	P		Pn	17 13 27.6	+5.3
NLAI	**Namlea**	**4.53**	**332**	P		**Pn**	**17 13 24.8**	**+2.4**
FAKI	**Fak Fak**	**5.23**	**35**	P		**Pn**	**17 13 31.8**	**+0.2**
FAKI	**Fak Fak**	**5.23**	**35**			**Pn**	**17 13 30.7**	**-0.8**
FAKI						Sn	**17 14 26.6**	**-4.7**
FAKI	**Fak Fak**	**5.23**	**35**	P		**Pn**	**17 13 33.0**	**+1.4**
	0.6nm2µm25nm,0.5s							
FAKI	**Fak Fak**	**5.23**	**35**	P		**Pn**	**17 13 30.8**	**-0.8**
DRS	**Darwin Rock St**	**5.39**	**163**	P		**Pn**	**17 13 35.9**	**+2.2**
SOEI	**Soe**	**5.53**	**243**	P		**Pn**	**17 13 38.9**	**+3.2**
SOEI	**Soe**	**5.53**	**243**	S		**Sn**	**17 14 39.8**	**+1.2**
SOEI	**Soe**	**5.53**	**243**			**Pn**	**17 13 38.5**	**+2.8**
SOEI						Sn	**17 14 39.8**	**+1.2**
SOEI	**Soe**	**5.53**	**243**	P		**Pn**	**17 13 38.9**	**+3.2**
SOEI	**Soe**	**5.53**	**243**	P		**Pn**	**17 13 38.4**	**+2.7**
MTN	**Manton Dam**	**5.85**	**162**			**Pn**	**17 13 41.2**	**+1.4**
MTN						Sn	**17 14 43.3**	**-2.8**
MTN	**Manton Dam**	**5.85**	**162**	P		**Pn**	**17 13 41.5**	**+1.8**
BATI	**Baumata**	**6.26**	**242**	P		**Pn**	**17 13 45.1**	**-0.2**
	146nm,0.5s,baz=167,slow=1.0,SNR=84							
BATI				S		**Sn**	**17 14 52.9**	**-3.1**
	122nm,0.4s,baz=87,slow=21,SNR=13							
BATI	**Baumata**	**6.26**	**242**	P		**Pn**	**17 13 44.7**	**-0.6**
BATI	**Baumata**	**6.26**	**242**	P		**Pn**	**17 13 44.8**	**-0.6**
SIJI	**Sorong**	**6.65**	**18**	P		**Pn**	**17 13 49.9**	**-0.7**
	4.3nm,0.2s,baz=32,slow=16,SNR=30							
SIJI				S		**Sn**	**17 15 00.7**	**-4.6**
	18nm,0.2s,baz=89,slow=23,SNR=20							
SIJI	**Sorong**	**6.65**	**18**	P		**Pn**	**17 13 49.8**	**-0.7**
SWI	**Sorong**	**6.65**	**17**	P		**Pn**	**17 13 49.8**	**-0.7**
BBSI	**Bau Bau**	**6.88**	**284**	P		**Pn**	**17 13 56.7**	**+3.2**
MMRI	**Maumere**	**7.09**	**258**	P		**Pn**	**17 13 59.5**	**+3.1**
MMRI	**Maumere**	**7.09**	**258**	S		**Sn**	**17 15 17.2**	**+1.3**
MMRI	**Maumere**	**7.09**	**258**	Pn		**Pn**	**17 13 56.5**	**+0.1**
MMRI	**Maumere**	**7.09**	**258**	P		**Pn**	**17 13 59.3**	**+2.9**
KNRA	**Kununurra**	**8.38**	**183**			**Pn**	**17 14 14.1**	**+0.5**
LBFI	**Labuhan Bajo,**	**9.37**	**262**	P		Pn	17 14 31.6	+4.9
WBSI	**Waikabubak, Su**	**10.05**	**256**	P		**Pn**	**17 14 37.6**	**+1.7**
DBNI	**Kabupaten Domp**	**10.92**	**263**	P		**Pn**	**17 14 49.2**	**+1.9**
FITZ	**Fitzroy Crossi**	**11.34**	**198**	P		**Pn**	**17 14 52.5**	**-0.3**
	4.3nm,0.3s,baz=19,slow=11,SNR=61							
FITZ				S		**Sn**	**17 16 50.4**	**-7.8**
	12nm,0.3s,baz

comp=Z,1.0nm,0.7s,baz=324,slow=7.3,SNR=6.9
comp=Z,1.0nm,0.7s

VNDA	**Vanda**	**72.28**	**173**	P	**P**	**17 23 25.9**	**+2.3**
KURBB	**Kurchatov Arra**	**72.35**	**329**	P	**P**	**17 23 23.3**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=126,slow=4.7,SNR=2.3 comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**72.36**	**329**	P	**P**	**17 23 24.3**	**-0.1**
KURK				IAmb	IAmb	17 23 37.3	
	comp=Z,2.5nm,0.4s						
AB31	**Akbulak array**	**82.25**	**322**	P	**P**	**17 24 20.1**	**+0.5**
ABKAR	**Akbulak array**	**82.25**	**322**	P	**P**	**17 24 20.5**	**+0.9**
QSPA	**South Pole Qui**	**82.72**	**180**	P	**P**	**17 24 23.4**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=316,slow=0.7,SNR=15 comp=Z,1.3nm,0.6s						
QSPA	**South Pole Qui**	**82.72**	**180**	P	**P**	**17 24 23.1**	**+1.1**
QSPA				IAmb	IAmb	17 24 32.8	
	comp=Z,5.9nm,1.4s						
AKTO	**Aktyubinsk**	**83.83**	**322**	P	**P**	**17 24 28.9**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=267,slow=4.1,SNR=1.6 comp=Z,1.0nm,0.3s						
LPAZ	**La Paz**	**150.96**	**144**	PKPbc	**PKiKP**	**17 31 53.6**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=50,slow=5.4,SNR=4.7						

*JMA **11** 17:38:13.4±0.1, 37.4N±0.4×139.9E±0.5, h122km, MV3.1/37, WESTERN FUKUSHIMA PREF*
*IDC **11** 17:38:14.6±1.3, 37.27N×139.77E, h131km±12km, mb3.2/9, mbtmp3.7/11, Error ellipse: s-maj=19.9km s-min=12.0km az=65.0*
ISC 11 17:38:13.6±0.8, 37.35N±0.04×139.89E±0.06, h123km±6km, n27, σ0959/37, mb3.5/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFY	**Yanaizu**	**0.16**	**290**	*i* P	**Pn**	**17 38 30.3**	**-0.1**
JFY				S	**Sn**	**17 38 42.8**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.41**	**60**	*i* P	**Pn**	**17 38 31.2**	**-0.1**
JOTO				S	**Sn**	**17 38 44.9**	**+0.1**
JNS	**Sasagawa**	**0.65**	**316**	*i* P	**Pn**	**17 38 32.3**	**-0.5**
JNS				S	**Sn**	**17 38 46.1**	**-1.2**
JUON	**Uonuma**	**0.68**	**258**	P	**Pn**	**17 38 32.8**	**-0.3**
JUON				S	**Sn**	**17 38 47.6**	**-0.1**
JKT	**Katashina**	**0.78**	**221**	*i* P	**Pn**	**17 38 34.2**	**+0.2**
JFK	**Kawauchi**	**0.79**	**89**	*i* P	**Pn**	**17 38 33.5**	**-0.4**
JYS	**Shirataka**	**0.88**	**9**	*i* P	**Pn**	**17 38 34.7**	**0.0**
JYS				S	**Sn**	**17 38 50.6**	**0.0**
JMM	**Marumori**	**0.88**	**54**	*i* P	**Pn**	**17 38 34.5**	**-0.2**
JIZZ	**Izumozaki**	**0.95**	**281**	*i* P	**Pn**	**17 38 35.9**	**+0.5**
JIZZ				*e*S	**Sn**	**17 38 52.8**	**+1.0**
JAG	**Ashikaga**	**0.99**	**201**	*i* P	**Pn**	**17 38 36.0**	**+0.3**
JAG				*e*S	**Sn**	**17 38 53.7**	**+1.3**
JAW	**Awa shima**	**1.21**	**335**	P	**Pn**	**17 38 37.7**	**-0.2**
JAW				S	**Sn**	**17 38 55.2**	**-1.2**
JRY	**Ryogami san**	**1.55**	**211**	*i* P	**Pn**	**17 38 42.1**	**+0.3**
MJAR	**Matsushiro Arr**	**1.57**	**239**	P	**Pn**	**17 38 42.2**	**+0.2**
	50nm,0.5s,baz=43,slow=11,SNR=206						
MJAR				S	**Sn**	**17 39 02.9**	**-0.7**
	8.9nm,0.6s,baz=55,slow=17,SNR=7.5						
MAT	**Matsushiro**	**1.57**	**240**	*i* P	**Pn**	**17 38 42.3**	**+0.3**
JYK	**Kaneyama**	**1.60**	**13**	P	**Pn**	**17 38 42.5**	**+0.1**
JYK				S	**Sn**	**17 39 04.2**	**-0.2**
JMK	**Ichinoseki**	**1.91**	**33**	*i* P	**Pn**	**17 38 46.1**	**+0.1**
JHJ	**Hachijo jima 2**	**4.23**	**181**	P	**Pn**	**17 39 15.4**	**-0.8**
	94nm,0.6s,baz=172,slow=17,SNR=2.0						
JHJ				S	**Sn**	**17 40 03.7**	**-1.1**
	50nm,0.3s,baz=113,slow=23,SNR=6.7						
KSRS	**Korea Array**	**9.52**	**274**	P	**Pn**	**17 40 27.6**	**+0.1**
	3.7nm,0.9s,baz=91,slow=14,SNR=8.0						
PETK	**Petropavlovsk-**	**20.05**	**33**	P	Pn	17 42 39.6	-0.1
	1.3nm,0.8s,baz=218,slow=11,SNR=3.3 1.3nm,0.8s						
SONM	**Songino Array**	**26.60**	**304**	P	**P**	**17 43 40.3**	**-0.1**
	0.9nm,0.5s,baz=109,slow=8.7,SNR=9.3 0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**40.80**	**312**	P	**P**	**17 45 41.7**	**-0.9**
	0.4nm,0.4s,baz=104,slow=6.1,SNR=2.8 0.4nm,0.4s						
MKAR	**Makanchi Array**	**42.92**	**302**	P	**P**	**17 46 00.2**	**+0.3**
	0.4nm,0.5s,baz=85,slow=11,SNR=5.8 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**44.84**	**308**	P	**P**	**17 46 14.5**	**-0.7**
	1.4nm,0.6s,baz=82,slow=7.8,SNR=18 1.4nm,0.6s						
ILAR	**Eielson Array**	**49.88**	**32**	P	**P**	**17 46 54.9**	**+0.9**
	0.5nm,0.8s,baz=278,slow=7.9,SNR=4.7 0.5nm,0.8s						
WRA	**Warramunga Arr**	**57.23**	**186**	P	**P**	**17 47 47.6**	**-0.4**
	0.3nm,0.3s,baz=346,slow=8.0,SNR=8.9 0.3nm,0.3s						
ASAR	**Alice Springs**	**60.95**	**186**	P	**P**	**17 48 13.8**	**+0.1**
	0.2nm,0.9s,baz=354,slow=4.5,SNR=6.1 0.2nm,0.9s						
YKA	**Yellowknife Ar**	**64.14**	**30**	P	**P**	**17 48 34.8**	**+0.4**
	0.3nm,0.6s,baz=308,slow=6.7,SNR=2.6 0.3nm,0.6s						

NNC 11 17:42:42.9±11.0, 37.18N×70.46E, h0km, mb3.6, mpv3.1, 1C-1D, Error ellipse: s-maj=99.0km s-min=87.5km az=56.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.92**	**0**	⇑P	Pn	17 44 11.5	-0.3
	0.7nm,0.3s,baz=182,slow=13,SNR=15						
KK31				⇓S	Sn	17 45 21.6	+1.2
	1.0nm,0.3s,baz=179,slow=25						
MK31	**Makanchi Array**	**13.01**	**39**	P	Pn	17 45 50.4	+1.4
	3.6nm,1.2s,baz=86,slow=9.4,SNR=4.5						
AB31	**Akbulak array**	**14.28**	**331**	P	Pn	17 46 05.2	-1.1
	0.3nm,0.5s,baz=137,slow=13,SNR=4.3						

*IDC **11** 17:43:43.2±11.0, 0.03N×124.04E, h130km±117km, mb2.9/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=96.4km s-min=23.9km az=72.0*
*DJA **11** 17:43:43.8±0.4, 0.5S±3.3×12.4E±, h68km±8km, M4.3/14, mB4.9/2, mb4.4/4, MLv4.3/14, Mw(mB)4.2/2*
ISC 11 17:43:41.9±1.3, 0.1S±0.2×124.03E±0.08, h110km, n6, σ2923/7, mb3.0/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.54**	**234**	P	**Pn**	**17 44 11.6**	**+2.3**
KDI	**Kendari**	**4.05**	**200**	P	**Pn**	**17 44 40.1**	**-1.9**
SIJI	**Sorong**	**7.28**	**96**	P	**Pn**	**17 45 27.1**	**+1.5**
	0.6nm,0.3s,baz=338,slow=22,SNR=1.8						
SIJI				S	**Sn**	**17 46 48.8**	**+2.0**
	4.6nm,0.9s,baz=183,slow=23,SNR=2.5 1.9nm,0.2s						
WRA	**Warramunga Arr**	**22.12**	**153**	P	**P**	**17 48 29.6**	**+0.8**
	0.3nm,0.5s,baz=336,slow=8.6,SNR=2.7 0.3nm,0.5s						
ASAR	**Alice Springs**	**25.28**	**158**	P	**P**	**17 48 59.2**	**+0.9**
	0.4nm,0.7s,baz=336,slow=10,SNR=7.6 0.4nm,0.7s						
MKAR	**Makanchi Array**	**59.27**	**328**	P	**P**	**17 53 30.2**	**-1.8**
	0.3nm,0.5s,baz=125,slow=8.6,SNR=3.8 0.3nm,0.5s						

*NOU **11** 17:46:22.0, 39.35S×176.51E, h35km, MLv3.6/16, North Island, New Zealand*
*WEL **11** 17:46:22.9±0.4, 39.3S±3.1×17.6E±, h37km±5km, M3.4/87, ML3.6/22, MLv3.4/87, Error ellipse: s-maj=3.8km s-min=3.4km az=54.7*
ISC 11 17:46:22.7±1.2, 39.30S±0.03×176.50E±0.03, h52km±5km, n159, σ0992/170, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.13**	**358**	P	**Pn**	**17 46 29.6**	**-1.4**
BKZ	**Black Stump Fm**	**0.13**	**358**	S	**Sn**	**17 46 36.1**	**-0.8**
BKZ	**Black Stump Fm**	**0.13**	**358**	P	**Pn**	**17 46 30.2**	**-0.8**
BKZ				S	**Sn**	**17 46 35.7**	**-1.2**
KFHS	**Kaweka Forest**	**0.14**	**190**	P	**Pn**	**17 46 30.6**	**-0.5**
KWHZ	**Kaweka Forest**	**0.14**	**204**	P	**Pn**	**17 46 30.8**	**-0.4**
KWHZ				S	**Sn**	**17 46 36.7**	**-0.4**
MCHZ	**McNeill Hill**	**0.21**	**134**	P	**Pn**	**17 46 31.8**	**+0.4**
MCHZ				S	**Sn**	**17 46 38.9**	**+1.2**
NMHZ	**Naumai**	**0.31**	**51**	P	**Pn**	**17 46 32.3**	**0.0**
NMHZ				S	**Sn**	**17 46 39.1**	**0.0**
NAAS	**Napier Airport**	**0.34**	**121**	P	**Pn**	**17 46 32.5**	**+0.1**
NAAS				S	**Sn**	**17 46 41.1**	**+1.7**
NCDS	**Napier Civil D**	**0.36**	**125**	P	**Pn**	**17 46 33.0**	**+0.5**
NCDS				S	**Sn**	**17 46 41.6**	**+1.9**
KRHZ	**Kereru**	**0.36**	**196**	P	**Pn**	**17 46 33.0**	**+0.3**
NCHS	**Napier Colenso**	**0.38**	**124**	P	**Pn**	**17 46 33.2**	**+0.4**
NCHS				S	**Sn**	**17 46 41.8**	**+1.8**
NGHS	**Napier Girls H**	**0.38**	**121**	P	**Pn**	**17 46 33.2**	**+0.4**
NGHS				S	**Sn**	**17 46 41.9**	**+1.9**
NSPS	**Napier St Paul**	**0.38**	**121**	P	**Pn**	**17 46 33.2**	**+0.4**
ARHZ	**Aropaoanui**	**0.39**	**85**	P	**Pn**	**17 46 33.2**	**+0.3**
ARHZ				S	**Sn**	**17 46 41.6**	**+1.4**
BHHZ	**Black Hill Sta**	**0.39**	**240**	P	**Pn**	**17 46 33.3**	**+0.3**
BHHZ				S	**Sn**	**17 46 40.7**	**+0.4**
HCDS	**Hastings Civil**	**0.44**	**143**	P	**Pn**	**17 46 34.0**	**+0.6**
MRHZ	**Matea Rd**	**0.47**	**352**	P	**Pn**	**17 46 33.6**	**-0.2**
MRHZ				S	**Sn**	**17 46 41.4**	**-0.3**
HNPS	**Havelock North**	**0.48**	**142**	P	**Pn**	**17 46 34.5**	**+0.6**
HATZ	**Hinemaiaia**	**0.51**	**322**	P	**Pn**	**17 46 34.1**	**-0.2**
WAKS	**Wakarara Rangi**	**0.51**	**202**	P	**Pn**	**17 46 35.1**	**+0.7**
MTHZ	**Maungataniwha**	**0.52**	**31**	P	**Pn**	**17 46 34.3**	**-0.1**
CKHZ	**Cape Kidnapper**	**0.58**	**129**	P	**Pn**	**17 46 35.8**	**+0.7**
KAHZ	**Kahuranaki**	**0.58**	**150**	P	**Pn**	**17 46 35.9**	**+0.8**
MOVZ	**Moawhango**	**0.59**	**259**	P	**Pn**	**17 46 35.9**	**+0.6**
RITZ	**Rihia Road**	**0.59**	**302**	P	**Pn**	**17 46 35.7**	**+0.4**
RAHZ	**Arahi**	**0.59**	**51**	P	**Pn**	**17 46 35.7**	**+0.4**
WHHZ	**Waihua**	**0.61**	**69**	P	**Pn**	**17 46 36.1**	**+0.6**
ETVZ	**East Tongariro**	**0.63**	**284**	P	**Pn**	**17 46 36.3**	**+0.5**
TMVZ	**Te Maari**	**0.64**	**286**	P	**Pn**	**17 46 36.4**	**+0.5**
TUVZ	**Tukino**	**0.66**	**272**	P	**Pn**	**17 46 36.9**	**+0.7**
PNHZ	**Pukenui**	**0.66**	**200**	P	**Pn**	**17 46 37.1**	**+1.0**
OTVZ	**Oturere**	**0.66**	**281**	P	**Pn**	**17 46 36.8**	**+0.6**
NTVZ	**North Tongariro**	**0.67**	**287**	P	**Pn**	**17 46 36.8**	**+0.5**
SNVZ	**South Ngauruho**	**0.67**	**279**	P	**Pn**	**17 46 37.0**	**+0.6**
KRVZ	**Karewarewa**	**0.69**	**285**	P	**Pn**	**17 46 37.1**	**+0.4**
WNVZ	**Waihianoa**	**0.70**	**267**	P	**Pn**	**17 46 37.4**	**+0.6**
KATZ	**Kakaramea**	**0.70**	**297**	P	**Pn**	**17 46 37.1**	**+0.4**
WHVZ	**Whangaehu Hut**	**0.70**	**271**	P	**Pn**	**17 46 37.5**	**+0.6**
NGZ	**Ngauruhoe**	**0.71**	**279**	P	**Pn**	**17 46 37.4**	**+0.6**
RATZ	**Rangitukua**	**0.71**	**307**	P	**Pn**	**17 46 37.0**	**+0.3**
MAVZ	**Matarangi**	**0.73**	**272**	P	**Pn**	**17 46 37.7**	**+0.5**
ARAZ	**Aratiatia Land**	**0.73**	**336**	P	**Pn**	**17 46 37.5**	**+0.6**
WTVZ	**West Tongariro**	**0.73**	**284**	P	**Pn**	**17 46 37.6**	**+0.6**
FWVZ	**Far West T-bar**	**0.73**	**273**	P	**Pn**	**17 46 37.7**	**+0.5**
TRVZ	**Turoa**	**0.74**	**269**	P	**Pn**	**17 46 37.8**	**+0.6**
ALRZ	**Allen Road**	**0.74**	**351**	P	**Pn**	**17 46 36.8**	**-0.3**
COVZ	**Chateau Observ**	**0.75**	**277**	P	**Pn**	**17 46 37.9**	**+0.6**
POIZ	**Poihipi**	**0.76**	**331**	P	**Pn**	**17 46 38.0**	**+0.6**
WHTZ	**Whakaora**	**0.76**	**326**	P	**Pn**	**17 46 37.9**	**+0.5**
WPHZ	**Waipukurau**	**0.77**	**183**	P	**Pn**	**17 46 38.2**	**+0.7**
RTZ	**Ruatahuna**	**0.78**	**29**	P	**Pn**	**17 46 37.7**	**0.0**
PXZ	**Pawanui**	**0.79**	**159**	P	**Pn**	**17 46 38.3**	**+0.6**
PRRZ	**Plateau Road**	**0.80**	**354**	P	**Pn**	**17 46 37.6**	**-0.2**
MTVZ	**Mangateitei**	**0.80**	**263**	P	**Pn**	**17 46 38.7**	**+0.7**
WPRZ	**Whakapapatarin**	**0.82**	**341**	P	**Pn**	**17 46 37.8**	**-0.4**
SNGZ	**Shannon Statio**	**0.83**	**52**	P	**Pn**	**17 46 38.8**	**+0.5**
WATZ	**Wairara**	**0.83**	**314**	P	**Pn**	**17 46 38.5**	**+0.1**
MUGZ	**Murupara**	**0.84**	**15**	P	**Pn**	**17 46 38.2**	**-0.3**
TWVZ	**Taurewa**	**0.85**	**285**	P	**Pn**	**17 46 38.8**	**+0.2**
TSZ	**Takapari Road**	**0.87**	**208**	P	**Pn**	**17 46 39.5**	**+0.7**
PKVZ	**Pokaka**	**0.89**	**270**	P	**Pn**	**17 46 39.9**	**+0.7**
HRRZ	**Handcock Road**	**0.92**	**349**	P	**Pn**	**17 46 39.3**	**-0.2**
KNZ	**Kokohu**	**0.95**	**74**	P	**Pn**	**17 46 39.7**	**-0.1**
RRRZ	**Republican Roa**	**0.95**	**1**	P	**Pn**	**17 46 39.6**	**-0.3**
KUTZ	**Kaahu Road**	**0.96**	**327**	P	**Pn**	**17 46 40.1**	**0.0**
PRHZ	**Porangahau**	**0.98**	**174**	P	**Pn**	**17 46 40.6**	**+0.4**
HSRZ	**Hossack Road**	**1.00**	**349**	P	**Pn**	**17 46 40.6**	**0.0**
DVHZ	**Dannevirke**	**1.03**	**194**	P	**Pn**	**17 46 41.3**	**+0.3**
HLRZ	**Highlands Stat**	**1.05**	**354**	P	**Pn**	**17 46 41.9**	**+0.7**
TARZ	**Mount Tarawera**	**1.06**	**0**	P	**Pn**	**17 46 41.4**	**0.0**
RAGZ	**Raviri**	**1.07**	**42**	P	**Pn**	**17 46 41.8**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.10**	**83**	P	**Pn**	**17 46 41.9**	**0.0**
URZ	**Urewera**	**1.14**	**25**	P	**Pn**	**17 46 41.9**	**-0.5**
URZ	**Urewera**	**1.14**	**25**	S	**Sn**	**17 46 57.8**	**+0.8**
URZ	**Urewera**	**1.14**	**25**	P	**Pn**	**17 46 42.2**	**-0.2**
PRGZ	**Paritu Road**	**1.14**	**71**	P	**Pn**	**17 46 42.2**	**-0.2**
UTU	**Utuhina**	**1.14**	**348**	P	**Pn**	**17 46 42.5**	**+0.1**
RIGZ	**Rimuhau**	**1.15**	**60**	P	**Pn**	**17 46 42.9**	**+0.3**
ANWZ	**Angora Road**	**1.16**	**181**	P	**Pn**	**17 46 43.0**	**+0.3**
OMRZ	**Omania**	**1.19**	**355**	P	**Pn**	**17 46 42.8**	**-0.4**
EDRZ	**Edgecumbe**	**1.20**	**9**	P	**Pn**	**17 46 43.1**	**-0.2**
NGRZ	**Ngongotaha**	**1.22**	**348**	P	**Pn**	**17 46 43.4**	**0.0**
TLZ	**Tolley Road**	**1.22**	**322**	P	**Pn**	**17 46 43.4**	**-0.1**
POWZ	**Post Office Ro**	**1.23**	**207**	P	**Pn**	**17 46 44.0**	**+0.4**
MWZ	**Matawai**	**1.25**	**40**	P	**Pn**	**17 46 43.8**	**-0.1**
WAZ	**Wanganui**	**1.26**	**248**	P	**Pn**	**17 46 45.8**	**+1.8**
OHWZ	**Ohakea**	**1.29**	**225**	P	**Pn**	**17 46 46.1**	**+1.7**
LIRZ	**Kahenatueins R**	**1.29**	**356**	P	**Pn**	**17 46 44.2**	**-0.1**
MARZ	**Manawahe**	**1.31**	**6**	P	**Pn**	**17 46 44.5**	**-0.3**
PRWZ	**Pori Road**	**1.32**	**198**	P	**Pn**	**17 46 45.1**	**+0.2**
TKGZ	**Te Karaka**	**1.36**	**51**	P	**Pn**	**17 46 45.1**	**-0.2**
VRZ	**Vera Road**	**1.36**	**277**	P	**Pn**	**17 46 46.2**	**+0.9**
BFZ	**Birch Farm**	**1.40**	**188**	P	**Pn**	**17 46 46.9**	**+1.0**
OPRZ	**Ohinepanea**	**1.45**	**2**	P	**Pn**	**17 46 46.0**	**-0.6**
WHRZ	**Whale Island**	**1.48**	**15**	P	**Pn**	**17 46 47.1**	**0.0**
HIZ	**Hauiti**	**1.50**	**301**	P	**Pn**	**17 46 47.5**	**+0.2**
HIZ	**Hauiti**	**1.50**	**301**	S	**Sn**	**17 47 06.6**	**+0.9**
HIZ	**Hauiti**	**1.50**	**301**	P	**Pn**	**17 46 47.7**	**+0.4**
KMRZ	**Kaimai**	**1.51**	**343**	P	**Pn**	**17 46 47.2**	**-0.2**
MRZ	**Mangatainoka R**	**1.54**	**207**	P	**Pn**	**17 46 47.6**	**-0.2**
TIWZ	**Tintock**	**1.55**	**197**	P	**Pn**	**17 46 48.3**	**+0.3**
CNGZ	**Carnagh Statio**	**1.56**	**59**	P	**Pn**	**17 46 48.4**	**+0.3**
TGRZ	**Tauranga**	**1.57**	**353**	P	**Pn**	**17 46 48.0**	**-0.3**
TWGZ	**Tauwhareparae**	**1.61**	**47**	P	**Pn**	**17 46 49.4**	**+0.6**
RUGZ	**Raukumara Rang**	**1.62**	**35**	P	**Pn**	**17 46 48.7**	**-0.3**
LRRZ	**Lake Rotokare**	**1.63**	**264**	P	**Pn**	**17 46 51.3**	**+2.2**
TOZ	**Tahuna Road**	**1.75**	**333**	P	**Pn**	**17 46 50.5**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.77**	**205**	P	**Pn**	**17 46 50.1**	**-0.8**
DREZ	**Durham Road**	**1.79**	**273**	P	**Pn**	**17 46 53.2**	**+2.1**
PREZ	**Palmer Road**	**1.81**	**268**	P	**Pn**	**17 46 53.8**	**+2.2**
OGWZ	**Otaki Gorge**	**1.83**	**213**	P	**Pn**	**17 46 51.3**	**-0.4**
HAZ	**Te Kaha**	**1.84**	**34**	P	**Pn**	**17 46 51.0**	**-0.9**
PUZ	**Puketiti**	**1.84**	**49**	P	**Pn**	**17 46 51.2**	**-0.8**
NEZ	**North Egmont**	**1.86**	**270**	P	**Pn**	**17 46 54.9**	**+2.6**
TMWZ	**Te Maipa**	**1.87**	**194**	P	**Pn**	**17 46 51.4**	**-0.9**
PKGZ	**Pakihiroa**	**1.89**	**42**	P	**Pn**	**17 46 52.2**	**-0.4**
KHEZ	**Kahui Hut**	**1.93**	**269**	S	**Sn**	**17 47 16.5**	**+0.2**
KHEZ	**Kahui Hut**	**1.93**	**269**	P	**Pn**	**17 46 55.9**	**+2.8**
KIW	**Kapiti Island**	**1.98**	**217**	P	**Pn**	**17 46 53.6**	**-0.3**
MTW	**Mount Morrison**	**2.01**	**202**	P	**Pn**	**17 46 53.0**	**-1.3**
NBEZ	**Newall Road No**	**2.04**	**270**	P	**Pn**	**17 46 57.1**	**+2.5**
WMGZ	**Waiomatatini S**	**2.10**	**46**	P	**Pn**	**17 46 54.9**	**-0.6**
CAIZ	**Cannon Point**	**2.12**	**211**	P	**Pn**	**17 46 54.4**	**-1.1**
TRWZ	**Traveller**	**2.19**	**196**	P	**Pn**	**17 46 55.4**	**-1.0**
MXZ	**Matakaoa Point**	**2.24**	**40**	P	**Pn**	**17 46 57.1**	**-0.2**
MXZ	**Matakaoa Point**	**2.24**	**40**	S	**Sn**	**17 47 24.6**	**+0.8**
MXZ	**Matakaoa Point**	**2.24**	**40**	P	**Pn**	**17 46 57.1**	**-0.2**
MSWZ	**Moikau Station**	**2.32**	**204**	P	**Pn**	**17 46 56.8**	**-1.7**
MKAZ	**Moumakai**	**2.43**	**334**	P	**Pn**	**17 46 60.0**	**0.0**
SNZO	**South Karori**	**2.44**	**214**	P	**Pn**	**17 46 58.4**	**-1.6**
SNZO	**South Karori**	**2.44**	**214**	S	**Sn**	**17 47 27.3**	**-1.3**
PLWZ	**Palliser**	**2.46**	**202**	P	**Pn**	**17 46 58.5**	**-2.0**
DUWZ	**D'Urville Isla**	**2.48**	**232**	P	**Pn**	**17 47 00.3**	**-0.5**
TCW	**Tory Channel**	**2.56**	**221**	P	**Pn**	**17 47 00.5**	**-1.3**
ETAZ	**East Tamaki Re**	**2.65**	**332**	P	**Pn**	**17 47 03.2**	**+0.3**
AWAZ	**Awhitu Peninsu**	**2.66**	**326**	P	**Pn**	**17 47 03.8**	**+0.6**
WIAZ	**Waiheke Island**	**2.72**	**336**	P	**Pn**	**17 47 05.1**	**+1.2**
WTAZ	**Waiatarua**	**2.80**	**327**	P	**Pn**	**17 47 05.9**	**+0.8**
MBAZ	**Motutapu North**	**2.82**	**333**	P	**Pn**	**17 47 06.0**	**+0.7**
TUWZ	**Tuamarina**	**2.89**	**222**	P	**Pn**	**17 47 04.9**	**-1.4**
RVAZ	**Riverhead Bore**	**2.94**	**328**	P	**Pn**	**17 47 07.4**	**+0.5**
ABAZ	**Army Bay**	**3.00**	**333**	P	**Pn**	**17 47 08.8**	**+1.1**
NNZ	**Nelson**	**3.06**	**230**	P	**Pn**	**17 47 07.7**	**-0.9**
BSWZ	**Blackbirch Sta**	**3.14**	**219**	P	**Pn**	**17 47 07.9**	**-1.7**
GRZ	**Great Barrier**	**3.15**	**345**	P	**Pn**	**17 47 10.0**	**+0.2**
TKNZ	**Takaka Hill**	**3.22**	**236**	P	**Pn**	**17 47 09.8**	**-1.0**
QRZ	**Quartz Range**	**3.41**	**242**	P	**Pn**	**17 47 11.9**	**-1.5**
QRZ	**Quartz Range**	**3.41**	**242**	S	**Sn**	**17 47 52.1**	**-0.4**
QRZ	**Quartz Range**	**3.41**	**242**	P	**Pn**	**17 47 12.1**	**-1.3**
MRNZ	**Matariki Terra**	**3.55**	**232**	P	**Pn**	**17 47 14.3**	**-1.0**
THZ	**Tophouse**	**3.68**	**227**	P	**Pn**	**17 47 15.3**	**-1.9**
WCZ	**Waipu Caves**	**3.76**	**332**	P	**Pn**	**17 47 19.0**	**+0.8**
KHZ	**Kahutara**	**3.84**	**215**	P	**Pn**	**17 47 19.3**	**0.0**
KHZ	**Kahutara**	**3.84**	**215**	P	**Pn**	**17 47 16.8**	**-2.5**
DSZ	**Denniston Nort**	**4.33**	**234**	P	**Pn**	**17 47 24.2**	**-1.9**
OUZ	**Omahuta**	**4.68**	**329**	P	**Pn**	**17 47 31.9**	**+1.1**
OUZ	**Omahuta**	**4.68**	**329**	P	**Pn**	**17 47 32.1**	**+1.3**
CTZ	**Chatham Island**	**6.81**	**133**	P	**Pn**	**17 47 59.2**	**-0.8**
CTZ	**Chatham Island**	**6.81**	**133**	P	**Pn**	**17 47 59.0**	**-0.9**

*IDC **11** 17:48:39.6±1.9, 1.56N×126.41E, h0km, mb3.3/4,*

mbtmp3.4/4, Error ellipse: s-maj=185.9km s-min=22.8km az=66.0
*DJA **11** 17:48:44.1±0.3, 2.1N±4.4×12.6E±, h10km, M3.1/7, MLv3.1/7*
ISC 11 17:48:41.5±1.4, 1.8N±0.2×126.6E±0.2, h10km, n6, σ1949/7, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**140**	P	**Pb**	**17 49 05.9**	**+0.6**
TNTI				S	**Sg**	**17 49 22.9**	**+0.9**
MNI	**Manado**	**1.75**	**260**	P	**Pn**	**17 49 12.6**	**+0.6**
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**17 53 43.2**	**-2.1**
	0.4nm,0.4s,baz=339,slow=11,SNR=8.4 0.4nm,0.4s						
ASAR	**Alice Springs**	**26.25**	**165**	P	**P**	**17 54 15.5**	**-1.6**
	0.2nm,0.4s,baz=344,slow=11,SNR=12 0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**17 58 42.7**	**+0.6**
	0.1nm,0.3s,baz=118,slow=8.3,SNR=1.9 0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**17 59 10.5**	**-0.2**
	0.2nm,0.2s,baz=127,slow=6.5,SNR=1.3 0.2nm,0.2s						

*NEIC **11** 18:17:06.2±1.4, 20.2S±0.1×178.8W±0.2, h631km±8km, mb4.1/23, Error ellipse: s-maj=20.9km s-min=15.8km az=73.0*
*IDC **11** 18:17:07.7±1.4, 20.13S×178.96W, h648km±16km, mb3.1/9, mbtmp4.1/11, Error ellipse: s-maj=16.1km s-min=14.9km az=149.0*
ISC 11 18:17:08.6±0.6, 20.1S±0.1×178.9W±0.1, h665km, n43, σ1903/48, mb3.9/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.72**	**309**	P	**P**	**18 18 34.2**	**-3.1**
	31nm,0.5s,baz=232,slow=21,SNR=21						
MSVF	**Nonsavu**	**3.72**	**309**	P	**P**	**18 18 33.7**	**-3.7**
DZM	**Mont Dzumac**	**13.79**	**259**	P	**P**	**18 20 04.3**	**+0.6**
	3.6nm,0.6s,baz=114,slow=21,SNR=5.6						
MLZ	**Mavora Lakes**	**27.36**	**200**	P	**P**	**18 22 03.8**	**-0.6**
CTAO	**Charters Tower**	**32.66**	**264**	P	**P**	**18 22 49.9**	**+0.1**
INKA	**Innaminka**	**37.51**	**250**	P	**P**	**18 23 30.0**	**+0.5**
INKA				IAmb	IAmb	18 24 08.4	
	comp=Z,5.4nm,1.5s						
WAKE

HAZ	**Te Kaha**	**10.60**	**195**	P	**Pn**	**18 27 09.2**	**-2.7**
HAZ				S	**S**	**18 29 09.0**	**-1.7**
PKGZ	**Pakihiroa**	**10.64**	**194**	P	**Pn**	**18 27 10.4**	**-2.0**
PKGZ				S	**S**	**18 29 05.4**	**-6.2**
PUZ	**Puketiti**	**10.80**	**193**	P	**Pn**	**18 27 12.8**	**-1.6**
PUZ				S	**S**	**18 29 11.8**	**-3.5**
RUGZ	**Raukumara Rang**	**10.82**	**196**	P	**Pn**	**18 27 13.0**	**-1.8**
RUGZ				S	**S**	**18 29 13.4**	**-2.7**
MWZ	**Matawai**	**11.21**	**196**	P	**Pn**	**18 27 18.6**	**-1.0**
MWZ				S	**S**	**18 29 21.6**	**-3.4**
URZ	**Urewera**	**11.24**	**197**	P	**Pn**	**18 27 17.8**	**-2.1**
	1.9nm,0.3s,baz=270,slow=4.8,SNR=9.4						
URZ				S	**S**	**18 29 24.1**	**-1.5**
	8.7nm,0.3s,baz=217,slow=22,SNR=13						
URZ	**Urewera**	**11.24**	**197**	P	**Pn**	**18 27 20.3**	**+0.4**
URZ				S	**S**	**18 29 22.8**	**-2.8**
NIUE	**Niue**	**11.65**	**45**	Pn	Pn	18 27 19.6	-5.7
BKZ	**Black Stump Fm**	**12.26**	**198**	P	**Pn**	**18 27 32.7**	**0.0**
BKZ				S	**S**	**18 29 47.4**	**-1.8**
KAHZ	**Kahuranaki**	**12.75**	**196**	P	**Pn**	**18 27 37.1**	**-1.6**
KAHZ				S	**S**	**18 29 53.5**	**-7.1**
DZM	**Mont Dzumac**	**14.56**	**289**	P	P	18 28 07.8	+6.7
	baz=137,slow=18						
CTAO	**Charters Tower**	**32.84**	**275**	P	**P**	**18 30 59.7**	**+3.2**
CTAO				IAmb	IAmb	18 31 14.2	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**42.73**	**264**	P	**P**	**18 32 22.2**	**+3.2**
ASAR	**Alice Springs**	**42.73**	**264**	P	**P**	**18 32 21.4**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=88,slow=6.9,SNR=11						
	comp=Z,0.2nm,0.5s						
WR8	**Warramunga Arr**	**43.31**	**270**	P	**P**	**18 32 25.3**	**+1.6**
WR8				IAmb	IAmb	18 32 40.0	
	comp=Z,4.2nm,1.2s						
WRA	**Warramunga Arr**	**43.46**	**270**	P	**P**	**18 32 26.7**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=106,slow=7.0,SNR=5.6						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**43.46**	**270**	P	**P**	**18 32 26.3**	**+1.5**
KNRA	**Kununurra**	**49.94**	**272**	P	**P**	**18 33 17.2**	**+2.3**
KNRA				IAmb	IAmb	18 33 54.6	
	comp=Z,14nm,1.2s						
QSPA	**South Pole Qui**	**62.55**	**180**	P	**P**	**18 34 45.7**	**+2.6**
	comp=Z,1.4nm,1.0s,baz=104,slow=1.8,SNR=5.1						
	comp=Z,1.4nm,1.0s						
QSPA	**South Pole Qui**	**62.55**	**180**	P	**P**	**18 34 45.7**	**+2.6**
QSPA				IAmb	IAmb	18 35 20.7	
	comp=Z,4.2nm,1.4s						
MJAR	**Matsushiro Arr**	**75.57**	**325**	P	**P**	**18 36 02.7**	**-0.5**
	comp=Z,4.6nm,0.8s,baz=164,slow=4.9,SNR=14						
	comp=Z,4.6nm,0.8s						
MJAR	**Matsushiro Arr**	**75.57**	**325**	P	**P**	**18 36 02.6**	**-0.5**
MJAR				IAmb	IAmb	18 36 02.9	
	comp=Z,4.2nm,1.1s						
MAJO	**Matsushiro**	**75.57**	**325**	P	**P**	**18 36 02.7**	**-0.4**
MJB9	**Matsu-Tunnel**	**75.58**	**325**	P	**P**	**18 36 02.5**	**-0.7**
JSU	**Suzuyama**	**76.15**	**317**		**P**	**18 36 06.5**	**0.0**
O02D	**Mt. Diablo Mer**	**85.08**	**40**	P	**P**	**18 36 52.2**	**-1.5**
O02D				IAmb	IAmb	18 36 53.6	
	comp=Z,8.8nm,1.1s						
TXAR	**Lajitas Array**	**91.36**	**58**	P	**P**	**18 37 21.8**	**-2.0**
	comp=Z,0.4nm,0.9s,baz=326,slow=4.2,SNR=2.6						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**95.30**	**13**	P	**P**	**18 37 38.3**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=193,slow=3.7,SNR=2.5						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**142.27**	**341**	PKhKP	PKPpre	18 43 42.6	
	comp=Z,3.2nm,1.0s,baz=106,slow=4.2,SNR=7.0						
NB2	**NORSAR Subarra**	**145.86**	**351**	PKP	**PKPdf**	**18 43 53.4**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=24,slow=3.1						
NOA	**NORSAR Array B**	**145.86**	**351**	PKPbc	**PKPdf**	**18 43 53.1**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=355,slow=1.0,SNR=4.7						
HFS	**Hagfors**	**146.35**	**349**	PKPbc	**PKPdf**	**18 43 54.8**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=89,slow=1.4,SNR=8.0						
AKASG	**Malin Array Be**	**148.66**	**325**	PKPbc	**PKPbc**	**18 44 02.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=47,slow=3.9,SNR=4.8						
MMAI	**Mount Meron Ar**	**150.15**	**289**	PKPbc	**PKPbc**	**18 44 07.4**	**0.0**
	comp=Z,2.0nm,0.7s,baz=250,slow=2.9,SNR=2.1						
BRTR	**Keskin Array B**	**150.64**	**303**	PKPbc	**PKPbc**	**18 44 07.9**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=48,slow=2.1,SNR=2.6						
EKA	**Eskdalemuir Ar**	**152.05**	**5**	PKPbc	**PKPbc**	**18 44 09.1**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=343,slow=2.6,SNR=5.4						

*IDC **11** 18:26:23.4±1.8, 59.98N×153.52W, h135km±31km, mb3.5/1, mbtmp3.8/5, MS2.6/1, Error ellipse: s-maj=40.4km s-min=20.0km az=110.0*
*NEIC **11** 18:26:24.2±1.3, 60.03N±0.04×153.20W±0.07, h147km±3km, ML3.2/182, ML3.0(AEIC), Error ellipse: s-maj=6.0km s-min=5.5km az=179.0*
*AEIC **11** 18:26:26.4±1.4, 60.02N±0.04×153.22W±0.06, h133km±4km, Error ellipse: s-maj=5.5km s-min=4.6km az=189.0*

ISC 11 18:26:24.0±0.8, 60.03N±0.03×153.18W±0.03, h147km±6km, n189, σ0.98 98/221, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILSW	**Iliamna Southw**	**0.05**	**159**		**Pn**	**18 26 43.5**	**-0.4**
ILSW				Sn	**Sn**	**18 26 57.5**	**-1.5**
ILSW				IAML		18 26 59.2	
	comp=E,260nm,0.7s						
ILSW				IAML		18 26 59.7	
	comp=N,261nm,0.5s						
IVE	**Iliamna Volcan**	**0.08**	**97**		**Pn**	**18 26 43.8**	**0.0**
IVE					**Sn**	**18 26 58.2**	**-0.7**
ILS	**Iliamna Low So**	**0.09**	**142**		**Pn**	**18 26 43.8**	**-0.1**
ILS					**Sn**	**18 26 58.2**	**-0.7**
O20K	**Slope Mountain**	**0.28**	**78**		**Pn**	**18 26 44.5**	**+0.4**
O20K					**Sn**	**18 26 59.2**	**-0.4**
P19K	**Oil Pt**	**0.38**	**184**		**Pn**	**18 26 44.7**	**+0.2**
P19K					**Sn**	**18 26 59.5**	**-0.5**
RED	**Redoubt Volcan**	**0.44**	**27**	Pn	**Pn**	**18 26 44.9**	**+0.1**
NCT	**North Crescent**	**0.55**	**13**		**Pn**	**18 26 45.6**	**+0.3**
NCT					**Sn**	**18 27 00.8**	**-0.9**
RDJH	**Redoubt Jeurge**	**0.60**	**18**		**Sn**	**18 27 01.5**	**-0.7**
O19K	**Port Alsworth**	**0.60**	**287**		**Pn**	**18 26 45.3**	**-0.1**
O19K				Sn	**Sn**	**18 27 00.3**	**-1.5**
O19K				IAML		18 27 01.3	
	comp=E,486nm,0.5s						
DFR	**Drift River**	**0.62**	**23**		**Sn**	**18 27 01.6**	**-0.7**
AU22	**Augustine Moun**	**0.67**	**188**		**Pn**	**18 26 46.2**	**+0.3**
AU22					**Sn**	**18 27 01.9**	**-0.6**
AUW	**Augustine West**	**0.68**	**193**		**Sn**	**18 27 02.1**	**-0.6**
HOM	**Homer**	**0.86**	**115**		**Pn**	**18 26 48.0**	**+0.8**
HOM				Sn	**Sn**	**18 27 04.9**	**-0.1**
N19K	**Bonanza Creek**	**1.02**	**321**		**Pn**	**18 26 48.9**	**+0.1**
N19K				Sn	**Sn**	**18 27 06.0**	**-1.6**
N19K				IAML		18 27 07.4	
	comp=E,152nm,1.0s						
N19K				IAML		18 27 07.4	
	comp=N,186nm,0.6s						
O18K	**Koktuh Hills**	**1.04**	**261**		**Pn**	**18 26 48.6**	**-0.2**
O18K				Sn	**Sn**	**18 27 05.7**	**-2.0**
CNPM	**China Poot**	**1.10**	**116**		**Pn**	**18 26 50.0**	**+0.6**
CNPM				Sn	**Sn**	**18 27 07.8**	**-0.9**
CNPM				IAML		18 27 09.8	
	comp=E,790nm,0.3s						
Q19K	**Cape Douglas,**	**1.13**	**192**		**Pn**	**18 26 49.7**	**+0.1**
Q19K				Sn	**Sn**	**18 27 08.2**	**-1.0**
Q19K				IAML		18 27 09.0	
	comp=E,421nm,0.7s						
Q19K				IAML		18 27 14.0	
	comp=N,743nm,0.8s						
BRLK	**Bradley Lake**	**1.18**	**102**		**Pn**	**18 26 50.8**	**+0.7**
BRLK				Sn	**Sn**	**18 27 09.1**	**-1.0**
BRLK				IAML		18 27 10.1	
	comp=N,752nm,0.6s						
BRLK				IAML		18 27 11.1	
	comp=E,687nm,0.2s						
P18K	**Big Mountain,**	**1.22**	**239**		**Pn**	**18 26 50.2**	**-0.3**
CAPN	**Captain Cook N**	**1.25**	**53**		**Pn**	**18 26 53.1**	**+2.5**
SPCR	**Spurr Chakacha**	**1.27**	**22**		**Sn**	**18 27 12.1**	**+0.4**
SPU	**Mount Spurr**	**1.28**	**25**		**Pn**	**18 26 51.6**	**+0.5**
SPBG	**Spurr Blockage**	**1.30**	**17**		**Sn**	**18 27 12.4**	**+0.1**
N18K	**Kilae Creek**	**1.50**	**297**		**Pn**	**18 26 53.5**	**+0.2**
N18K				Sn	**Sn**	**18 27 13.4**	**-2.3**
SLKM	**Skilak Lake**	**1.55**	**71**		**Pn**	**18 26 54.2**	**+0.4**
SLKM				Sn	**Sn**	**18 27 15.4**	**-1.3**
STLK	**Strandline Lak**	**1.62**	**23**		**Pn**	**18 26 55.5**	**+0.9**
STLK				Sn	**Sn**	**18 27 17.4**	**-0.7**
STLK				IAML		18 27 22.4	
	comp=N,82nm,0.4s						
STLK				IAML		18 27 22.8	
	comp=E,71nm,0.4s						
Q18K	**Katmai Hardscr**	**1.67**	**215**		**Pn**	**18 26 55.5**	**+0.2**
Q18K					**Sn**	**18 27 18.0**	**-1.2**
KAHG	**Katmai Hook Gl**	**1.69**	**205**		**Pn**	**18 26 55.9**	**+0.4**
KAHG					**Sn**	**18 27 18.6**	**-0.9**
O22K	**Cooper Landing**	**1.78**	**74**		**Pn**	**18 26 56.5**	**+0.2**
O22K				Sn	**Sn**	**18 27 19.8**	**-1.4**
P17K	**Kvichak River**	**1.86**	**245**		**Pn**	**18 26 58.0**	**+0.8**
P17K				Sn	**Sn**	**18 27 22.3**	**-0.3**
P17K				IAML		18 27 24.8	
	comp=E,161nm,0.8s						
P17K				IAML		18 27 27.7	
	comp=N,188nm,1.0s						
M20K	**Styx River**	**1.86**	**1**		**Pn**	**18 26 58.4**	**+1.0**
M20K				Sn	**Sn**	**18 27 22.0**	**-1.0**
SEW	**Seward**	**1.87**	**86**		**Pn**	**18 26 57.7**	**+0.4**
SEW				Sn	**Sn**	**18 27 21.5**	**-1.4**
SEW				IAML		18 27 23.9	
	comp=N,88nm,0.3s						
SEW				IAML		18 27 26.1	
	comp=E,114nm,0.3s						
M18K	**Stony River**	**1.96**	**320**		**Pn**	**18 26 58.6**	**+0.2**
M18K					**Sn**	**18 27 23.8**	**-1.1**
M19K	**Big River Lodg**	**1.98**	**343**		**Pn**	**18 26 59.2**	**+0.6**
M19K				Sn	**Sn**	**18 27 24.3**	**-0.9**
O17K	**Koliganek Bris**	**1.99**	**264**		**Pn**	**18 26 59.6**	**+0.9**
O17K					**Sn**	**18 27 24.9**	**-0.6**
RC01	**Rabbit Creek A**	**2.01**	**56**		**Pn**	**18 26 59.1**	**+0.1**
RC01				Sn	**Sn**	**18 27 24.9**	**-1.0**
RC01				IAML		18 27 27.1	
	comp=N,400nm,0.3s						
N17K	**Nushagak Hills**	**2.06**	**286**		**Pn**	**18 26 59.8**	**+0.2**
N17K				Sn	**Sn**	**18 27 25.6**	**-1.3**
SKT	**Skwentna**	**2.12**	**22**		**Pn**	**18 27 01.0**	**+0.7**
SKT				Sn	**Sn**	**18 27 27.3**	**-1.0**
SKT				IAML		18 27 29.6	
	comp=E,130nm,0.5s						
SKT				IAML		18 27 30.4	
	comp=N,106nm,0.5s						
ACHA	**Angle Creek He**	**2.13**	**212**		**Pn**	**18 27 00.9**	**+0.3**
ACHA				Sn	**Sn**	**18 27 28.4**	**-0.2**
Q17K	**Contact Creek**	**2.25**	**219**		**Pn**	**18 27 02.3**	**+0.3**
CAHL	**Cahill**	**2.26**	**210**		**Pn**	**18 27 02.7**	**+0.6**
KDAK	**Kodiak Island**	**2.27**	**172**	P	**Pn**	**18 27 01.4**	**-0.7**
	comp=N,29nm,0.3s,baz=357,slow=7.7,SNR=190						
KDAK				S	**Sn**	**18 27 29.8**	**-1.6**
	comp=N,58nm,0.3s,baz=125,slow=23,SNR=44						
KDAK	**Kodiak Island**	**2.27**	**172**		**Pn**	**18 27 01.3**	**-0.7**
KDAK				IAML		18 27 31.2	
	comp=N,274nm,0.3s						
KDAK				IAML		18 27 31.3	
	comp=N,235nm,0.3s						
M22K	**Willow**	**2.29**	**39**	Pn	**Pn**	**18 27 00.0**	**-2.2**
M22K				Sn	**Sn**	**18 27 31.1**	**-0.6**
L19K	**White Mountain**	**2.31**	**340**		**Pn**	**18 27 03.0**	**+0.4**
L19K				IAML		18 27 32.8	
	comp=N,30nm,0.7s						
KJL	**Kejulik**	**2.33**	**213**		**Pn**	**18 27 03.8**	**+0.8**
M17K	**Holitna River**	**2.51**	**305**		**Pn**	**18 27 05.5**	**+0.5**
M17K				IAML		18 27 38.4	
	comp=E,41nm,0.9s						
O16K	**Kokwok River B**	**2.52**	**262**		**Pn**	**18 27 05.6**	**+0.4**
PMR	**Palmer**	**2.53**	**50**	P	**Pn**	**18 27 05.6**	**+0.4**
PMR	**Palmer**	**2.53**	**50**	Pn	**Pn**	**18 27 05.8**	**+0.6**
PMR				IAML		18 27 37.7	
	comp=E,104nm,0.3s						
PMR				IAML		18 27 37.8	
	comp=N,114nm,0.4s						
P16K	**Nushagak River**	**2.65**	**250**	Pn	**Pn**	**18 27 08.2**	**+1.5**
P16K				IAML		18 27 42.7	
	comp=E,48nm,1.1s						
P16K				IAML		18 27 43.3	
	comp=N,45nm,0.7s						
KNK	**Knik Glacier**	**2.70**	**57**		**Pn**	**18 27 08.9**	**+1.4**
GHO	**Glory Hole Cre**	**2.72**	**48**		**Pn**	**18 27 07.8**	**+0.1**
GHO				IAML		18 27 41.0	
	comp=E,146nm,0.6s						
GHO				IAML		18 27 45.8	
	comp=N,135nm,0.6s						
L22K	**Petersville**	**2.76**	**24**		**Pn**	**18 27 08.8**	**+0.6**
L22K				IAML		18 27 46.6	
	comp=N,71nm,0.4s						
L22K				IAML		18 27 48.3	
	comp=E,75nm,0.5s						
CUT	**Chulitna**	**2.77**	**29**		**Pn**	**18 27 08.9**	**+0.7**
L18K	**Granite Mounta**	**2.78**	**324**		**Pn**	**18 27 08.6**	**+0.2**
L18K				IAML		18 27 43.0	
	comp=N,26nm,0.8s						
OHAK	**Old Harbor**	**2.81**	**181**	P	**Pn**	**18 27 07.6**	**-1.2**
OHAK	**Old Harbor**	**2.81**	**181**		**Pn**	**18 27 07.7**	**-1.2**
OHAK				IAML		18 27 42.0	
	comp=N,53nm,0.4s						
OHAK				IAML		18 27 42.7	
	comp=E,45nm,0.3s						
PLK1	**Peulik 1**	**2.85**	**220**		**Pn**	**18 27 10.2**	**+0.9**
P23K	**Montague Islan**	**2.90**	**88**		**Pn**	**18 27 10.9**	**+1.1**
R17L	**Mt. Peulik Vol**	**2.92**	**216**		**Pn**	**18 27 10.9**	**+0.8**
PPLA	**Purkeypile**	**2.92**	**9**		**Pn**	**18 27 11.1**	**+0.9**
PPLA				IAML		18 27 49.3	
	comp=E,35nm,1.0s						
PPLA				IAML		18 28 17.9	
	comp=N,23nm,1.0s						
SML	**Sawmill**	**2.96**	**51**		**Pn**	**18 27 10.7**	**-0.1**
SML				IAML		18 27 49.6	
	comp=N,142nm,0.7s						
SML				IAML		18 27 54.9	
	comp=E,107nm,0.7s						
PLBL	**Peulik Blue Cr**	**3.00**	**221**		**Pn**	**18 27 12.2**	**+1.0**
M16K	**Timber Creek**	**3.03**	**292**		**Pn**	**18 27 11.5**	**0.0**
GLI	**Glacier Island**	**3.13**	**72**	Pn	**Pn**	**18 27 13.3**	**+0.5**
HIN	**Hinchinbrook I**	**3.35**	**81**		**Pn**	**18 27 15.8**	**+0.1**
HIN				IAML		18 27 56.0	
	comp=N,120nm,0.4s						
HIN				IAML		18 27 56.6	
	comp=E,116nm,0.4s						
K20K	**Telida**	**3.37**	**353**		**Pn**	**18 27 15.7**	**-0.2**
SCM	**Sheep Creek Mo**	**3.38**	**55**		**Pn**	**18 27 15.7**	**-0.4**
FID	**Port Fidalgo**	**3.40**	**75**		**Pn**	**18 27 15.4**	**-0.9**
CAST	**Castle Rocks**	**3.44**	**8**		**Pn**	**18 27 17.6**	**+0.8**
N15K	**Kwethluk River**	**3.47**	**275**	Pn	**Pn**	**18 27 17.9**	**+0.8**
O15K	**Ungalikthiuk R**	**3.48**	**259**	Pn	**Pn**	**18 27 18.7**	**+1.3**
O15K				IAML		18 28 01.9	
	comp=N,21nm,1.2s						
L16K	**Owhat River**	**3.51**	**301**		**Pn**	**18 27 17.4**	**-0.3**
MID	**Middleton Isla**	**3.51**	**97**	Pn	**Pn**	**18 27 18.2**	**+0.4**
MID				IAML		18 28 01.9	
	comp=N,56nm,0.6s						
MID				IAML		18 28 32.6	
	comp=E,75nm,1.2s						
SII	**Sitkinak Islan**	**3.52**	**189**	Pn	**Pn**	**18 27 16.2**	**-1.6**
SII				IAML		18 27 59.0	
	comp=N,65nm,0.9s						
SII				IAML		18 28 03.0	
	comp=E,80nm,0.6s						
K17K	**Iditarod**	**3.66**	**320**		**Pn**	**18 27 19.8**	**+0.2**
KTH	**Kantishna Hill**	**3.70**	**16**		**Pn**	**18 27 20.5**	**+0.3**
KTH				IAML		18 28 06.0	
	comp=N,18nm,0.7s						
KTH				IAML		18 28 07.9	
	comp=E,30nm,0.8s						
TRF	**Thorofare Moun**	**3.70**	**21**		**Pn**	**18 27 20.6**	**+0.4**
TRF				IAML		18 28 05.8	
	comp=N,45nm,0.5s						
TRF				IAML		18 28 08.0	
	comp=E,46nm,0.6s						
EYAK	**Cordova Ski Ar**	**3.73**	**79**	P	**Pn**	**18 27 21.7**	**+1.1**
EYAK	**Cordova Ski Ar**	**3.73**	**79**		**Pn**	**18 27 21.0**	**+0.4**
EYAK				IAML		18 28 04.8	
	comp=N,47nm,0.6s						
EYAK				IAML		18 28 07.0	
	comp=E,42nm,0.4s						
DIV	**Divide**	**3.82**	**70**		**Pn**	**18 27 22.7**	**+1.0**
DIV				IAML		18 28 09.1	
	comp=E,55nm,0.4s						
KLU	**Klutina**	**3.85**	**64**		**Pn**	**18 27 22.5**	**+0.3**
RND	**Reindeer**	**3.97**	**29**		**Pn**	**18 27 23.7**	**+0.1**
RND				IAML		18 28 10.6	
	comp=E,27nm,0.3s						
RND				IAML		18 28 12.1	
	comp=N,32nm,0.5s						
M24K	**Tolsona, Glenn**	**3.99**	**55**		**Pn**	**18 27 24.1**	**+0.1**
ANNE	**Aniakchak Nort**	**4.04**	**222**		**Pn**	**18 27 25.1**	**+0.5**
ANNW	**Aniakchak Nort**	**4.05**	**223**		**Pn**	**18 27 26.2**	**+1.4**
DHY	**Denali Highway**	**4.13**	**40**		**Pn**	**18 27 26.4**	**+0.5**
DHY				IAML		18 28 16.7	
	comp=E,68nm,0.5s						
J19K	**Poorman**	**4.14**	**345**		**Pn**	**18 27 26.9**	**+0.9**
O14K	**Tigyukauivet M**	**4.18**	**263**	Pn	**Pn**	**18 27 25.9**	**-0.5**
J20K	**Nowinta River**	**4.19**	**354**		**Pn**	**18 27 27.3**	**+0.8**
MCK	**McKinley**	**4.23**	**27**		**Pn**	**18 27 27.6**	**+0.6**
MCK				IAML		18 28 19.6	
	comp=N,19nm,0.3s						
MCK				IAML		18 28 19.8	
	comp=E,21nm,0.5s						
GOAT	**Goat Mountain**	**4.24**	**79**		**Pn**	**18 27 27.6**	**+0.3**
RAGM	**Ragged Mountai**	**4.26**	**81**		**Pn**	**18 27 28.0**	**+0.5**
N14K	**Kuskokwak Cree**	**4.28**	**272**	Pn	**Pn**	**18 27 29.2**	**+1.5**
N14K				IAML		18 29 16.2	
	comp=E,6.9nm,1.2s						
N14K				IAML		18 29 19.0	
	comp=N,11nm,1.2s						
BMRM	**Bremner River**	**4.34**	**74**		**Pn**	**18 27 29.2**	**+0.6**
BMRM				IAML		18 28 19.9	
	comp=E,66nm,0.3s						
J17K	**VABM Dome**	**4.39**	**323**		**Pn**	**18 27 29.3**	**+0.1**
KAIM	**Kayak Island**	**4.40**	**88**		**Pn**	**18 27 30.2**	**+0.9**
KAIM				IAML		18 28 25.4	
	comp=N,48nm,0.5s						
KAIM				IAML		18 28 29.6	
	comp=E,47nm,1.0s						
CHIR	**Chirikof Islan**	**4.41**	**198**	P	**Pn**	**18 27 28.2**	**-1.3**
CHIR	**Chirikof Islan**	**4.41**	**198**	Pn	**Pn**	**18 27 28.2**	**-1.3**
CHIR				IAML		18 28 18.9	
	comp=N,34nm,0.8s						
CHIR				IAML		18 30 34.6	
	comp=E,28nm,1.2s						
M14K	**Bethel**	**4.42**	**283**	Pn	**Pn**	**18 27 30.4**	**+0.9**
N25K	**Chitina, Valde**	**4.49**	**66**		**Pn**	**18 27 32.2**	**+1.6**
BWN	**Browne**	**4.51**	**21**		**Pn**	**18 27 31.3**	**+0.5**
BWN				IAML		18 28 45.8	
	comp=N,24nm,0.6s						
BWN				IAML		18 29 02.4	
	comp=E,24nm,0.9s						
HARP	**HAARP**	**4.55**	**55**	Pn	**Pn**	**18 27 31.1**	**-0.2**
PAX	**Paxson**	**4.73**	**48**		**Pn**	**18 27 33.6**	**-0.1**
PAX				IAML		18 28 30.1	
	comp=N,39nm,0.4s						
PAX				IAML		18 28 30.3	
	comp=E,30nm,0.7s						
BERG	**Berg Lake**	**4.74**	**81**	Pn	**Pn**	**18 27 34.2**	**+0.4**
GLB	**Gilahina Butte**	**4.81**	**69**		**Pn**	**18 27 34.6**	**-0.2**
GLB				IAML		18 28 30.3	
	comp=N,28nm,0.7s						
GLB				IAML		18 28 33.2	
	comp=E,26nm,0.6s						
J16K	**Anvik River**	**4.82**	**316**	Pn	**Pn**	**18 27 34.8**	**0.0**
I20K	**Naaghedeneel**	**4.83**	**353**		**Pn**	**18 27 35.6**	**+0.7**
I20K				IAML		18 28 15.6	
	comp=N,20nm,0.9s						
I20K				IAML		18 29 30.8	
	comp=E,19nm,1.1s						
L14K	**Kuka Creek**	**4.86**	**290**		**Pn**	**18 27 36.1**	**+0.8**
L14K				IAML		18 29 41.5	
	comp=N,6.1nm,1.0s						
L14K				IAML		18 29 59.4	
	comp=E,6.9nm,1.2s						
VRDI	**Verde Repeater**	**4.94**	**72**		**Pn**	**18 27 36.0**	**-0.6**
VRDI				IAML		18 28 33.9	
	comp=N,42nm,0.6s						
VRDI				IAML		18 28 35.6	
	comp=E,24nm,0.4s						
NEA2	**Nenana**	**4.97**	**21**		**Pn**	**18 27 36.5**	**-0.2**
NEA2				IAML		18 28 33.8	
	comp=N,7.7nm,0.8s						
NEA2				IAML		18 28 42.7	
	comp=E,6.5nm,0.8s						
CRQM	**Cirque**	**5.03**	**77**	Pn	**Pn**	**18 27 37.5**	**-0.3**
VNFG	**Fog Glacier, M**	**5.05**	**225**	Pn	**Pn**	**18 27 38.8**	**+0.8**
VNFG				IAML		18 29 18.0	
	comp=E,43nm,1.2s						
WRH	**Wood River Hil**	**5.05**	**26**		**Pn**	**18 27 38.0**	**0.0**
WRH				IAML		18 28 35.2	
	comp=N,9.1nm,0.6s						
WRH				IAML		18 28 37.9	
	comp=E,10nm,0.8s						
M13K	**Dall Lake**	**5.09**	**279**	Pn	**Pn**	**18 27 40.3**	**+1.9**
M13K				IAML		18 29 16.8	
	comp=N,6.2nm,1.1s						
M13K				IAML		18 29 47.9	
	comp=E,6.1nm,1.2s						
MLY	**Manley**	**5.15**	**12**		**Pn**	**18 27 39.6**	**+0.4**
MLY				IAML		18 29 19.0	
	comp=N,4.1nm,1.0s						
K24K	**Donnelly Dome**	**5.15**	**40**		**Pn**	**18 27 39.5**	**+0.2**
MCARA	**McCarthy VSAT**	**5.17**	**70**	Pn	**Pn**	**18 27 39.6**	**+0.2**
TGL	**Tana Glacier**	**5.18**	**77**	Pn	**Pn**	**18 27 41.5**	**+1.7**
TGL				IAML		18 28 39.8	
	comp=N,32nm,0.3s						
I21K	**Tanana**	**5.20**	**6**	Pn	**Pn**	**18 27 40.5**	**+0.6**
I21K				IAML		18 30 18.9	
	comp=E,26nm,0.1s						
I21K				IAML		18 30 19.0	
	comp=N,10nm,0.1s						
I17K	**Unalakleet**	**5.25**	**321**	Pn	**Pn**	**18 27 41.0**	**+0.5**
I17K				IAML		18 29 33.0	
	comp=N,6.9nm,1.0s						
I17K				IAML		18 30 05.3	
	comp=E,7.5nm,1.1s						
CCB	**Clear Creek Bu**	**5.27**	**26**		**Pn**	**18 27 40.5**	**-0.2**
CCB				IAML		18 28 41.4	
	comp=E,9.2nm,0.5s						
CCB				IAML		18 28

E20K	**Nigu River**	**8.37**	**352**		**Pn**	**18 28 24.5**	**+2.3**
F26K	**Sheenjek River**	**8.66**	**23**		**Pn**	**18 28 25.6**	**-0.3**
E25K	**Arctic Village**	**8.77**	**19**		**Pn**	**18 28 27.1**	**-0.4**
H29M	**Whitestone**	**9.12**	**41**	Pn	**Pn**	**18 28 32.5**	**+0.4**
D25K	**Kavik River**	**9.77**	**14**		**Pn**	**18 28 40.9**	**+0.2**
SIT	**Sitka**	**9.79**	**100**	P	Pn	18 28 46.6	+5.6
P33M	**Teslin, Yukon**	**10.15**	**80**	Pn	**Pn**	**18 28 45.6**	**-0.4**
B20K	**Meade River**	**10.16**	**352**	Pn	**Pn**	**18 28 45.0**	**-0.9**
B22K	**Teshekpuk Lake**	**10.36**	**360**	Pn	**Pn**	**18 28 47.2**	**-1.3**
U33K	**Whale Pass**	**11.30**	**101**	Pn	**Pn**	**18 29 01.4**	**+0.4**
CRAG	**Craig**	**11.63**	**104**	P	**P**	**18 29 11.1**	**-1.6**
CRAG	**Craig**	**11.63**	**104**	Pn	**Pn**	**18 29 05.0**	**-0.3**
INK	**Inuvik**	**11.87**	**37**	P	**Pn**	**18 29 10.4**	**+2.1**
	comp=E,1.4nm,0.3s,baz=225,slow=16,SNR=3.8						
DLBC	**Dease Lake**	**11.95**	**88**	P	**P**	**18 29 16.3**	**0.0**
	comp=E,2.0nm,0.3s,baz=261,slow=10.0,SNR=10						
KIWB	**Kanaga Island**	**15.65**	**249**		**Pn**	**18 29 56.3**	**0.0**
YKA	**Yellowknife Ar**	**18.52**	**66**	P	**P**	**18 30 30.9**	**+2.2**
	comp=E,0.5nm,0.6s,baz=278,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**57.30**	**323**	P	**P**	**18 35 55.8**	**0.0**
	comp=E,0.7nm,0.5s,baz=30,slow=6.9,SNR=3.6						
	comp=E,0.7nm,0.5s						

JMA ***11*** *18:30:13.3±0.1,38°.8N±0°.4×140°.5E±0°.6,h141km, MV3.3/40,NORTHERN YAMAGATA PREF*

IDC ***11*** *18:30:14.6±3.9,38°.69N×140°.43E,h157km±30km,mb3.3/7, mbtmp3.6/9,Error ellipse: s-maj=45.1km s-min=18.2km az=62.0*

ISC 11 18:30:13.2±0.8,38°.76N±0°.05×140°.51E±0°.07,h143km±6km, n26,σ0°58/35,mb3.4/7,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.20**	**322**	P		**Pn**	**18 30 32.5**	**-0.2**
JYK				*eS*		**Sn**	**18 30 46.9**	**-0.7**
JOFO	**Osakifurukawao**	**0.35**	**117**	P		**Pn**	**18 30 33.5**	**+0.4**
JOFO				*eS*		**Sn**	**18 30 49.4**	**+1.2**
JOU	**Okura**	**0.41**	**164**	*i* P		**Pn**	**18 30 33.6**	**+0.1**
JOU				*eS*		**Sn**	**18 30 48.9**	**+0.1**
JMK	**Ichinoseki**	**0.58**	**71**	*i* P		**Pn**	**18 30 34.2**	**0.0**
JRG	**Rokugo**	**0.64**	**8**	*i* P		**Pn**	**18 30 34.8**	**+0.1**
JRG				*eS*		**Sn**	**18 30 51.1**	**+0.1**
JYS	**Shirataka**	**0.65**	**213**	P		**Pn**	**18 30 34.5**	**-0.2**
JYA	**Atsumi**	**0.65**	**255**	*i* P		**Pn**	**18 30 34.5**	**-0.2**
JYA				*eS*		**Sn**	**18 30 50.6**	**-0.3**
JIO	**Ouri**	**0.72**	**115**	*i* P		**Pn**	**18 30 35.0**	**-0.2**
JIO				S		**Sn**	**18 30 51.1**	**-0.7**
JMM	**Marumori**	**0.92**	**166**	*i* P		**Pn**	**18 30 36.6**	**-0.1**
JMM				*eS*		**Sn**	**18 30 54.2**	**-0.4**
JOM	**Ohasama**	**0.93**	**40**	*i* P		**Pn**	**18 30 37.1**	**+0.3**
JOM				*eS*		**Sn**	**18 30 54.5**	**-0.2**
JAW	**Awa shima**	**1.04**	**253**	*i* P		**Pn**	**18 30 37.5**	**-0.2**
JOTO	**OTAMA OYAMA**	**1.21**	**187**	P		**Pn**	**18 30 39.5**	**+0.1**
JOTO				*eS*		**Sn**	**18 30 59.3**	**0.0**
JNS	**Sasagawa**	**1.33**	**225**	P		**Pn**	**18 30 40.3**	**-0.3**
JNS				*eS*		**Sn**	**18 31 00.3**	**-1.0**
JANG	**Nango**	**1.78**	**25**	*i* P		**Pn**	**18 30 45.6**	**+0.1**
JANG				*eS*		**Sn**	**18 31 09.2**	**-0.9**
MJAR	**Matsushiro Arr**	**2.88**	**220**	P		**Pn**	**18 30 59.1**	**+0.3**
	4.2nm,0.7s,baz=29,slow=14,SNR=12							
MJAR				S		**Sn**	**18 31 34.6**	**+0.7**
	2.2nm,0.7s,baz=12,slow=18,SNR=4.1							
KSRS	**Korea Array**	**10.01**	**266**	P		**Pn**	**18 32 35.0**	**+1.6**
	0.4nm,0.5s,baz=83,slow=13,SNR=1.5							
SONM	**Songino Array**	**26.25**	**301**	P		**P**	**18 35 35.4**	**+0.4**
	0.5nm,0.5s,baz=106,slow=7.8,SNR=4.4							
	0.5nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**29.66**	**122**	T		T	19 06 45.5	
	baz=316,slow=75,SNR=8.7							
H11N1	**WAKE ISLAND Hy**	**29.67**	**122**	T		T	19 06 47.0	
	baz=316,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**29.68**	**122**	T		T	19 06 48.1	
	baz=316,slow=75,SNR=10							
MKAR	**Makanchi Array**	**42.61**	**300**	P		**P**	**18 37 54.8**	**-0.3**
	1.2nm,0.6s,baz=82,slow=9.3,SNR=8.1							
	1.2nm,0.6s							
KURBB	**Kurchatov Arra**	**44.39**	**306**	P		**P**	**18 38 08.7**	**-0.5**
	3.0nm,0.4s,baz=80,slow=7.9,SNR=40							
	3.0nm,0.4s							
BVAR	**Borovoye Array**	**48.89**	**311**	P		**P**	**18 38 43.9**	**-0.3**
	1.0nm,0.5s,baz=87,slow=7.5,SNR=4.2							
	1.0nm,0.5s							
WRA	**Warramunga Arr**	**58.68**	**187**	P		**P**	**18 39 54.7**	**-1.0**
	0.2nm,0.4s,baz=2.9,slow=6.8,SNR=2.4							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**62.41**	**187**	P		**P**	**18 40 20.4**	**-0.4**
	0.1nm,0.4s,baz=353,slow=8.5,SNR=4.7							
	0.1nm,0.4s							
TXAR	**Lajitas Array**	**89.62**	**52**	P		**P**	**18 42 55.6**	**+0.6**
	0.1nm,0.5s,baz=320,slow=6.7,SNR=2.3							
	0.1nm,0.5s							

IDC ***11*** *18:30:38.1±1.3,31°.15N×110°.45E,h0km,mb3.8/7, mbtmp3.7/8,ML3.7/1,MS3.6/3,Error ellipse: s-maj=61.8km s-min=22.0km az=63.0*

ISC 11 18:30:43.4±1.4,31°.1N±0°.2×110°.4E±0°.3,h35km,n11, σ0°29/8,mb3.7/7,Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**16.24**	**101**	LR		LR	18 41 04.9	
	comp=Z,105nm,18.5s,baz=66,slow=39							
CMAR	**Chiang Mai Arr**	**16.31**	**222**	Pn		**Pn**	**18 34 29.8**	**0.0**
	0.1nm,0.3s,baz=30,slow=9.5,SNR=14							
	0.9nm,0.7s							
MKAR	**Makanchi Array**	**26.68**	**314**	P		**P**	**18 36 18.6**	**-0.5**
	1.3nm,0.6s,baz=110,slow=10,SNR=11							
	1.3nm,0.6s							
ZALV	**Zalesovo Beam**	**29.29**	**329**	P		**P**	**18 36 42.0**	**-0.3**
	1.2nm,0.8s,baz=122,slow=7.4,SNR=5.5							
	1.2nm,0.8s							
KURBB	**Kurchatov Arra**	**30.63**	**319**	P		**P**	**18 36 54.1**	**0.0**
	0.3nm,0.5s,baz=118,slow=9.7,SNR=6.0							
	0.3nm,0.5s							
BVAR	**Borovoye Array**	**36.22**	**319**	P		**P**	**18 37 43.1**	**+0.3**
	0.7nm,0.6s,baz=108,slow=9.5,SNR=3.5							
	0.7nm,0.6s							
ASAR	**Alice Springs**	**58.95**	**155**	P		**P**	**18 40 39.4**	**0.0**
	0.1nm,0.4s,baz=340,slow=6.8,SNR=8.0							
	0.1nm,0.4s							
ARCES	**ARCESS Array B**	**59.45**	**336**	P		**P**	**18 40 42.4**	**+0.2**
	1.6nm,1.0s,baz=91,slow=8.1,SNR=1.6							
	1.6nm,1.0s							
FINES	**FINESS Array B**	**60.53**	**327**	P		**P**	**18 40 49.7**	**-0.1**
	1.9nm,0.9s,baz=63,slow=5.6,SNR=3.7							
	1.9nm,0.9s							
NWAO	**Narrogin (SRO)**	**64.03**	**174**	LR		LR	19 11 56.6	
	comp=Z,131nm,18.7s,baz=302,slow=39							
NOA	**NORSAR Array B**	**67.50**	**329**	LR		LR	19 15 18.7	
	comp=Z,31nm,20.3s,baz=70,slow=40							

IDC ***11*** *18:53:31.5±2.5,27°.95N×56°.82E,h0km,mb3.6/9, mbtmp3.6/9,Error ellipse: s-maj=55.5km s-min=23.8km az=154.0*

TEH ***11*** *18:53:36.8,28°.07N×56°.82E,h23km±29km,ML3.4, Presumed earthquake*

OMAN ***11*** *18:53:37.0±0.1,28°.06N×56°.56E,h10km,ml3.2/17,Error ellipse: s-maj=1.3km s-min=1.0km az=24.0*

ISC 11 18:53:36.8±0.6,28°.13N±0°.03×56°.76E±0°.04,h24km,n47, σ1°55/63,mb3.5/8,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.70**	**196**	Pg		**Pb**	**18 53 50.4**	**0.0**
KHNJ	**Kahnooj**	**0.86**	**102**	Pg		**Pb**	**18 53 51.7**	**-1.4**
KHNJ				Sg		**Sb**	**18 54 03.8**	**-0.4**
GENO	**Geno**	**0.89**	**216**	Pg		**Pb**	**18 53 53.8**	**+0.1**
NGRK	**Negar Kerman**	**1.51**	**359**	Pg		**Pb**	**18 54 05.4**	**+1.0**
KBAM	**BAM**	**1.80**	**56**	Pg		**Pn**	**18 54 07.4**	**+1.0**
KRBR	**Kerman**	**1.85**	**0**	Pn		**Pb**	**18 54 10.3**	**+0.3**
CHMN	**Cheshme madani**	**1.86**	**21**	Pn		**Pb**	**18 54 09.9**	**-0.4**
SHME	**Shamm**	**2.14**	**195**	P		**Pn**	**18 54 12.9**	**+1.9**
SHME				S		**Sn**	**18 54 38.0**	**+1.2**
	SNR=17							
BANOM	**Banah**	**2.23**	**191**	P		**Pn**	**18 54 12.5**	**+0.2**
BANOM				S		**Sn**	**18 54 40.5**	**+1.4**
JASK	**Jask - Hormozg**	**2.46**	**156**	Pn		**Pn**	**18 54 16.4**	**+1.0**
MASF	**Masafi**	**2.80**	**191**	P		**Pn**	**18 54 20.8**	**+0.8**
MASF				S		**Sn**	**18 54 54.9**	**+1.8**
MDH	**Madha**	**2.85**	**188**	P		**Pn**	**18 54 22.1**	**+1.4**
UOSS	**Minazif**	**3.21**	**189**	P		**Pn**	**18 54 26.4**	**+0.7**
UOSS				S		**Sn**	**18 55 03.8**	**+0.7**
NAZ	**Nazwa, Dubai**	**3.28**	**198**	P		**Pn**	**18 54 28.3**	**+1.6**
NAZ				S		**Sn**	**18 55 05.8**	**+1.0**
HATD	**Hatta, Dubai**	**3.33**	**190**	P		**Pn**	**18 54 28.8**	**+1.3**
HATD				S		**Sn**	**18 55 08.7**	**+2.3**
ASHO	**Ashiyiah**	**3.48**	**191**	P		**Pn**	**18 54 30.9**	**+1.3**
ASHO				S		**Sn**	**18 55 12.1**	**+2.0**
FAQ	**Al Faqa, Dubai**	**3.53**	**197**	P		**Pn**	**18 54 31.4**	**+1.4**
	SNR=5.4							
IBAF	**Bafgh**	**3.60**	**344**	Pn		**Pn**	**18 54 34.2**	**+3.0**
ASUD	**Al Ashush, Dub**	**3.71**	**200**	P		**Pn**	**18 54 34.4**	**+1.8**
	SNR=15							
ASUD				S		**Sn**	**18 55 16.7**	**+1.0**
IMEH	**Mehriz**	**3.75**	**331**	Pn		**Pn**	**18 54 36.1**	**+2.8**
ZHSF	**Zahedan**	**3.82**	**66**	Pn		**Pn**	**18 54 35.5**	**+1.2**
AJN	**Ajban**	**3.89**	**205**	P		**Pn**	**18 54 36.8**	**+1.8**
AJN				S		**Sn**	**18 55 19.7**	**-0.3**
SOHO	**SOHO**	**3.98**	**183**	P		**Pn**	**18 54 38.1**	**+1.8**
ALNE	**Al Ain**	**4.15**	**193**	P		**Pn**	**18 54 40.2**	**+1.5**
ALNE				S		**Sn**	**18 55 26.9**	**+0.3**
TAFT	**Taft - Yazd**	**4.23**	**329**	Pn		**Pn**	**18 54 43.1**	**+3.1**
HOQ	**Hoqain**	**4.55**	**174**	P		**Pn**	**18 54 46.0**	**+1.8**
HOQ				S		**Sn**	**18 55 37.6**	**+1.2**
BIDO	**Bidbid**	**4.75**	**165**	P		**Pn**	**18 54 48.0**	**+1.1**
BIDO				S		**Sn**	**18 55 43.9**	**+2.6**
ARQ	**Araqi**	**4.78**	**183**	P		**Pn**	**18 54 48.8**	**+1.5**
	SNR=5.5							
ARQ				S		**Sn**	**18 55 44.5**	**+2.7**
DSBU	**Dashti - Bushe**	**4.85**	**274**	Pn		**Pn**	**18 54 50.4**	**+2.0**
WSAR	**Wadi Sarin**	**5.15**	**160**	P		**Pn**	**18 54 53.7**	**+1.3**
SMDO	**Samad**	**5.18**	**167**	P		**Pn**	**18 54 54.7**	**+1.8**
SMDO				S		**Sn**	**18 55 52.5**	**+0.5**
KLNJ	**Kolanjah**	**5.34**	**304**	Pn		**Pn**	**18 54 58.0**	**+2.7**
WBK	**Wadi Bani Khal**	**5.85**	**159**	P		**Pn**	**18 55 03.2**	**+1.2**
SLWR	**Sila**	**6.09**	**230**	P		**Pn**	**18 55 04.1**	**-1.1**
SLWR				S		**Sn**	**18 56 11.5**	**-2.6**
JLN	**Jalan Bani Buh**	**6.42**	**157**	P		**Pn**	**18 55 10.7**	**+0.8**
ZNGN	**Zangian**	**6.48**	**309**	Pn		**Pn**	**18 55 14.0**	**+3.1**
MHTO	**MHTO**	**7.19**	**171**	P		**Pn**	**18 55 21.4**	**+0.9**
RAYN	**Ar Rayn**	**11.12**	**248**	P		**Pn**	**18 56 12.9**	**-1.5**
BRTR	**Keskin Array B**	**22.33**	**307**	P		**P**	**18 58 33.6**	**+0.7**
	0.7nm,0.7s,baz=113,slow=10,SNR=4.8							
	0.7nm,0.7s							
BVAR	**Borovoye Array**	**26.85**	**18**	P		**P**	**18 59 15.2**	**-0.1**
	0.5nm,0.6s,baz=200,slow=9.7,SNR=4.3							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**27.34**	**40**	P		**P**	**18 59 19.4**	**-0.4**
	0.1nm,0.3s,baz=245,slow=10,SNR=1.0							
	0.1nm,0.3s							
ZALV	**Zalesovo Beam**	**32.97**	**31**	P		**P**	**19 00 08.7**	**-0.8**
	0.6nm,0.3s,baz=238,slow=8.5,SNR=4.4							
	0.6nm,0.3s							
FINES	**FINESS Array B**	**39.08**	**337**	P		**P**	**19 01 01.9**	**+0.3**
	0.9nm,0.4s,baz=132,slow=8.9,SNR=14							
	0.9nm,0.4s							
HFS	**Hagfors**	**43.20**	**330**	P		**P**	**19 01 34.7**	**-0.8**
	1.9nm,0.8s,baz=132,slow=10,SNR=5.8							
	1.9nm,0.8s							
EKA	**Eskdalemuir Ar**	**50.37**	**320**	P		**P**	**19 02 31.0**	**-0.7**
	0.2nm,0.3s,baz=84,slow=7.4,SNR=6.4							
	0.2nm,0.3s							
ESDC	**Sonseca Array**	**50.83**	**300**	P		**P**	**19 02 34.6**	**-1.0**
	0.2nm,0.5s,baz=75,slow=7.7,SNR=1.7							
	0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**53.22**	**266**	P		**P**	**19 02 52.5**	**-1.1**
	1.3nm,0.5s,baz=64,slow=7.6,SNR=20							
	1.3nm,0.5s							

MOS ***11*** *18:58:05.9±1.0,59°.04S×25°.75W,h58km,mb5.4/11,Error ellipse: s-maj=20.0km s-min=10.9km az=109.1*

GFZ ***11*** *18:58:05.9±0.2,59°.S±3°×2°.6W±°,h52km,M5.2/39, mb5.4/39*

IDC ***11*** *18:58:05.9±1.6,58°.99S×25°.88W,h48km±13km,mb4.7/14, mbtmp4.9/15,ML4.7/1,MS4.1/36,Error ellipse: s-maj=17.3km s-min=12.6km az=70.0*

NEIC ***11*** *18:58:06.5±1.3,59°.09S±0°.05×25°.7W±0°.2,h57km±4km, mb5.3/99,Error ellipse: s-maj=12.9km s-min=7.6km az=79.0*

GCMT ***11*** *18:58:08.5±0.3,59°.15S±0°.02×25°.01W±0°.04,h47km±1km, MW5.0/64,Moment Tensor Solution. s61,c78; s64,c77; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.74±.17; Mθθ0.22±.13; Mϕϕ-3.96±.11; Mrθ-0.64±.11; Mθϕ0.04±.09; Mϕr0.35±.13; Best double couple: M0 3.92200×10^16 NP1:ϕs189.00000°,δ43.00000°,λ104.00000°. NP2: ϕs350.00000°,δ48.00000°,λ77.00000°. Principal axes: T 3.8660, Plg80.0000°, Azm194.0000°; N 0.1130, Plg10.0000°, Azm359.0000°; P -3.9770, Plg3.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 18:58:06.5±0.5,59°.08S±0°.05×25°.68W±0°.05,h57km±4km, h57km:pP-P,n699,σ0°96/708,mb5.2/67,MS4.1/36,8C-7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.65**	**304**	P		**Pn**	**18 59 58.6**	**+3.5**
HOPE	**Hope Point**	**7.65**	**304**			**Pn**	**18 59 58.6**	**+3.5**
ORCD	**Orcadas**	**9.71**	**252**	Pn		**Pn**	**19 00 26.4**	**+3.1**
VNA1	**Neumayer--Stat**	**13.68**	**155**	⇑P		**Pn**	**19 01 15.0**	**-2.4**
	comp=Z,237nm,0.3s							
VNA2	**Neumayer--Watz**	**14.08**	**155**	⇑P		**Pn**	**19 01 19.6**	**-3.2**
	comp=Z,64nm,0.3s,baz=314,slow=13							
VNA2				⇓PcP		**PcP**	**19 06 39.8**	**+1.6**
	comp=Z,14nm,0.6s,baz=322,slow=3.8							
VNA2	**Neumayer--Watz**	**14.08**	**155**	P		**Pn**	**19 01 19.8**	**-2.9**
ESPZ	**Base Esperanza**	**15.58**	**241**	P		**P**	**19 01 44.6**	**-0.8**
SNAA	**Sanae**	**15.65**	**153**	P		**Pn**	**19 01 41.5**	**-1.6**
	comp=Z,145nm,0.5s,baz=309,slow=14,SNR=227							
SNAA				LR		LR	19 06 22.8	
	comp=Z,748nm,22.0s,baz=304,slow=32							
SNAA				PcP		**PcP**	**19 06 41.2**	**+0.7**
	comp=Z,6.4nm,0.6s,baz=228,slow=5.0,SNR=4.3							
TROLL	**Troll, Antarti**	**17.18**	**150**	⇑P		**Pn**	**19 02 00.8**	**-1.6**
	comp=Z,4μm,0.7s							
PMSA	**Palmer Station**	**18.70**	**236**	P		**P**	**19 02 19.6**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=90,slow=7.5,SNR=10							
PMSA				LR		LR	19 08 45.0	
	comp=Z,516nm,18.1s,baz=75,slow=34							
	comp=Z,9.8nm,0.9s							
PMSA	**Palmer Station**	**18.70**	**236**	P		**P**	**19 02 19.9**	**+0.1**
PMSA	**Palmer Station**	**18.70**	**236**	P		**P**	**19 02 19.0**	**-0.8**
BELA	**Belgrano 2**	**19.12**	**186**			**P**	**19 02 23.9**	**-0.5**
BELA					IAmb	IAmb	19 02 28.4	
	comp=Z,153nm,1.4s							
NVL	**N'lazarevskaya**	**19.31**	**142**	*eP*		**P**	**19 02 25.8**	**-0.7**
NVL				*eS*		**S**	**19 05 58.2**	**-3.5**
NVL					pmax	pmax		
	comp=Z,8.0nm,0.8s							
NVL					MLR	MLR		
	comp=Z,431nm,18.0s							
EFI	**East Falkland**	**19.68**	**278**	*i* P		**Pn**	**19 02 31.3**	**-1.2**
EFI					pmax	pmax		
	comp=Z,104nm,1.0s							
EFI	**East Falkland**	**19.68**	**278**	P		**P**	**19 02 29.8**	**-0.8**
EFI					IAmb	IAmb	19 02 33.8	
	comp=Z,158nm,1.1s							
EFI	**East Falkland**	**19.68**	**278**	P		**P**	**19 02 30.8**	**+0.2**
SMAI	**San Martin Ant**	**20.11**	**226**	P		**P**	**19 02 35.2**	**+0.1**
ELIB	**Princess Elisa**	**23.18**	**143**	*dP*		**P**	**19 03 07.8**	**-0.2**
	comp=Z,13nm,0.8s							
MG02	**Cerro Sombrero**	**24.82**	**265**	P		**P**	**19 03 21.9**	**-1.1**
MG02	**Cerro Sombrero**	**24.82**	**265**	P		**P**	**19 03 22.3**	**-0.7**
MG03	**Isla Dawson**	**24.91**	**262**			**P**	**19 03 23.2**	**-0.5**
GO10	**Punta Arenas**	**25.56**	**263**	P		**P**	**19 03 29.2**	**-0.6**
GO10					IAmb	IAmb	19 03 43.0	
	comp=Z,264nm,1.5s							
GO10	**Punta Arenas**	**25.56**	**263**	P		**P**	**19 03 29.8**	**0.0**
MG05	**Puerto Natales**	**27.11**	**265**			**P**	**19 03 42.4**	**-1.3**
MG05					IAmb	IAmb	19 03 43.4	
	comp=Z,30nm,0.6s							
MG05	**Puerto Natales**	**27.11**	**265**	P		**P**	**19 03 42.7**	**-1.0**
GO09	**Cerro Castillo**	**27.26**	**266**	P		**P**	**19 03 43.6**	**-1.5**
GO09	**Cerro Castillo**	**27.26**	**266**	P		**P**	**19 03 43.8**	**-1.3**
GO08	**Villa O'Higgin**	**29.07**	**270**	P		**P**	**19 04 01.2**	**0.0**
GO08	**Villa O'Higgin**	**29.07**	**270**	P		**P**	**19 04 01.5**	**+0.3**
COYC	**Coyhaique**	**30.72**	**275**	P		**P**	**19 04 14.7**	**-1.1**
QSPA	**South Pole Qui**	**31.16**	**180**	P		**P**	**19 04 20.7**	**+1.0**
	comp=Z,50nm,0.6s,baz=211,slow=1.6,SNR=758							
QSPA					PcP	**PcP**	**19 07 13.9**	**+0.8**
	comp=Z,12nm,0.7s,baz=182,slow=4.3,SNR=3.6							
QSPA					PKiKP	**PKiKP**	**19 14 41.3**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=261,slow=0.9,SNR=5.5							
QSPA					LR	LR	19 16 24.3	
	comp=Z,411nm,20.2s,baz=212,slow=35							
	comp=Z,50nm,0.6s							
QSPA	**South Pole Qui**	**31.16**	**180**	P		**P**	**19 04 20.4**	**+0.7**
QSPA					IAmb	IAmb	19 04 22.1	
	comp=Z,56nm,0.6s							
QSPA						**PcP**	**19 07 13.9**	**+0.8**
QSPA						ScS	19 14 41.3	-6.6
QSPA	**South Pole Qui**	**31.16**	**180**	P		**P**	**19 04 18.0**	**-1.8**
QSPA	**South Pole Qui**	**31.16**	**180**	P		**P**	**19 04 21.3**	**+1.5**
QSPA					PcP	**PcP**	**19 07 14.2**	**+1.0**
TRQA	**Tornquist**	**31.33**	**296**	P		**P**	**19 04 21.4**	**+0.2**
TRQA					pmax	pmax		
	comp=Z,37nm,0.8s							
TRQA	**Tornquist**	**31.33**	**296**	P		**P**	**19 04 21.4**	**+0.2**
TRQA					IAmb	IAmb	19 04 25.9	
	comp=Z,37nm,0.8s							
PLCA	**Paso Flores**	**33.41**	**283**	P		**P**	**19 04 39.2**	**-0.3**
	comp=Z,10.0nm,0.8s,baz=130,slow=6.9,SNR=13							
PLCA					LR	LR	19 18 59.0	
	comp=Z,250nm,18.2s,baz=152,slow=38							
	comp=Z,10.0nm,0.8s							
PLCA	**Paso Flores**	**33.41**	**283**	P		**P**	**19 04 39.4**	**-0.2**
PLCA					pmax	pmax		
	comp=Z,25nm,1.1s							
PLCA	**Paso Flores**	**33.41**	**283**			**P**	**19 04 39.4**	**-0.2**
PLCA	**Paso Flores**	**33.41**	**283**	*eP*		**P**	**19 04 39.6**	**0.0**
PLCA	**Paso Flores**	**33.41**	**283**	P		**P**	**19 04 39.0**	**-0.5**
LL05	**Los Muermos**	**34.39**	**279**	P		**P**	**19 04 49.1**	**+1.2**
LL05				pP		**pP**	**19 05 02.2**	**+0.3**
LR05	**Currie**	**34.52**	**282**	P		**P**	**19 04 48.0**	**-1.0**
LR05					IAmb	IAmb	19 04 59.3	
	comp=Z,54nm,1.1s							
PSAL	**Palomas, Salto**	**35.32**	**308**	*eP*		**P**	**19 04 54.9**	**-1.1**
LR04	**Corral**	**35.50**	**281**	P		**P**	**19 04 56.3**	**-1.1**
BI02	**San Fabin de**	**36.90**	**287**			**P**	**19 05 08.4**	**-1.2**
BI02	**San Fabin de**	**36.90**	**287**	P		**P**	**19 05 08.9**	**-0.7**
MAW	**Mawson**	**37.25**	**141**	P		**P**	**19 05 12.3**	**+0.3**
	comp=Z,1.6nm,1.0s							
MAW	**Mawson**	**37.25**	**141**	P		**P**	**19 05 12.1**	**0.0**
	comp=Z,7.3nm,0.6s,baz=230,slow=8.5,SNR=22							
MAW					PcP	**PcP**	**19 07 31.7**	**+1.4**
	comp=Z,5.8nm,0.6s,baz=235,slow=1.9,SNR=8.9							
MAW					LR	LR	19 18 53.4	
	comp=Z,361nm,19.4s,baz=262,slow=33							
	comp=Z,7.3nm,0.6s							
MAW	**Mawson**	**37.25**	**141**	P		**P**	**19 05 12.0**	**0.0**
MAW						**PcP**	**19 07 31.7**	**+1.4**
ML02	**Panimavida**	**37.69**	**288**			**P**	**19 05 15.0**	**-1.1**
ML02					IAmb	IAmb	19 05 21.6	
	comp=Z,25nm,0.6s							
ML02	**Panimavida**	**37.69**	**288**	P		**P**	**19 05 15.6**	**-0.5**
BI05	**Punta Hualpn**	**37.79**	**285**	P		**P**	**19 05 16.2**	**-0.8**
PET01	**Itanhaem-SP**	**37.96**	**327**	*eP*		**P**	**19 05 17.0**	**-1.5**
BO02	**Sierra Bellavi**	**38.15**	**289**			**P**	**19 05 18.5**	**-1.6**
BO02					IAmb	IAmb	19 05 25.2	
	comp=Z,26nm,0.7s							
BO02	**Sierra Bellavi**	**38.15**	**289**	P		**P**	**19 05 19.1**	**-1.0**
GO05	**Hualane**	**38.54**	**288**	P		**P**	**19 05 23.2**	**-0.1**
GO05					IAmb	IAmb	19 05 28.7	
	comp=Z,31nm,0.7s							
GO05	**Hualane**	**38.54**	**288**	P		**P**	**19 05 23.2**	**-0.1**
BO01	**Tunca**	**38.62**	**289**	P		**P**	**19 05 24.5**	**+0.5**
BO04	**La Punta**	**38.72**	**290**	P		**P**	**19 05 24.0**	**-0.9**
BO04					IAmb	IAmb	19 05 28.0	
	comp=Z,62nm,0.8s							
BO03	**Pichilemu**	**38.97**	**288**	P		**P**	**19 05 27.2**	**+0.4**
PTGB	**Pitanga**	**39.03**	**320**	*eP*

VNDA PcP **PcP** **19 07 52.2 +1.6**
comp=Z,5.0nm,0.8s,baz=234,slow=5.6,SNR=3.4
VNDA LR LR 19 22 59.2
comp=Z,145nm,21.7s,baz=194,slow=34
comp=Z,30nm,0.6s
VNDA Vanda 43.57 182 P **P** **19 06 05.2 +1.1**
VNDA IAmb IAmb 19 06 07.2
comp=Z,32nm,0.6s
VNDA **PcP** **19 07 52.2 +1.6**
VNDA Vanda 43.57 182 P **P** **19 06 06.1 +2.0**
GUA01 Guaratinga, BA 43.69 340 *e*P **P** **19 06 05.5 -0.1**
AC04 Llanos de Chal 43.73 295 P **P** **19 06 05.8 -0.2**
AC04 Llanos de Chal 43.73 295 P **P** **19 06 06.7 +0.8**
GO03 Copiapo 43.85 296 P **P** **19 06 06.8 -0.2**
AC02 Maricunga 43.99 298 P **P** **19 06 07.7 -1.0**
AC02 Maricunga 43.99 298 P **P** **19 06 08.9 +0.2**
AQDB Aquidauana 44.19 318 *e*P **P** **19 06 07.8 -1.9**
IPMB Ipameri, GO 44.22 328 *e*P **P** **19 06 09.6 -0.4**
CCD Concordia, Ant 44.54 169 P **P** **19 06 13.2 +0.9**
BDQN Bodoquena, MS 44.59 316 *e*P **P** **19 06 11.7 -1.1**
CMC01 Camacan, BA 44.84 341 *e*P **P** **19 06 15.0 +0.2**
AC01 Pan de Azucar 45.25 297 P **P** **19 06 18.1 0.0**
AC01 IAmb IAmb 19 07 32.7
comp=Z,62nm,1.2s
COIM Forte Coimbra 45.46 315 *e*P **P** **19 06 18.2 -1.6**
H04S2 CROZET ISLANDS 45.64 110 T T 19 56 43.9
baz=226,slow=75,SNR=25
H04S3 CROZET ISLANDS 45.65 110 T T 19 56 45.1
baz=226,slow=75,SNR=19
H04S1 CROZET ISLANDS 45.66 110 T T 19 56 46.6
baz=226,slow=75,SNR=16
JANB Januaria 46.07 335 *e*P **P** **19 06 24.5 -0.1**
BDFB Brasilia 46.40 330 P **P** **19 06 26.4 -1.0**
comp=Z,2.3nm,0.4s,baz=150,slow=8.7,SNR=5.0
BDFB PKiKP **PKiKP** **19 14 56.1 -0.2**
comp=Z,1.0nm,0.3s,baz=91,slow=27,SNR=1.8
BDFB LR LR 19 22 52.3
comp=Z,170nm,21.6s,baz=152,slow=32
comp=Z,2.3nm,0.4s
BDFB Brasilia 46.40 330 P **P** **19 06 26.2 -1.2**
PB14 IPOC Station P 46.47 298 P **P** **19 06 26.2 -1.9**
PB14 IAmb IAmb 19 06 28.2
comp=Z,16nm,0.7s
PP1B Ponte de Pedra 46.59 320 *e*P **P** **19 06 27.5 -1.2**
ARAG Araguaiana, MT 47.40 325 *e*P **P** **19 06 34.5 -0.5**
PB06 IPOC Station P 47.76 300 P **P** **19 06 37.2 -0.7**
PB06 IAmb IAmb 19 06 59.1
comp=Z,83nm,1.8s
PB05 IPOC Station P 47.91 299 P **P** **19 06 38.2 -0.9**
PB05 IAmb IAmb 19 07 09.7
comp=Z,19nm,0.9s
KOOLE Kule 48.40 62 P **P** **19 06 42.5 -0.4**
KOOLE IAmb IAmb 19 06 45.4
comp=Z,16nm,0.7s
PB09 IPOC Station P 48.41 301 P **P** **19 06 42.6 -0.4**
PB03 IPOC Station P 48.41 300 P **P** **19 06 41.7 -1.3**
PB03 IAmb IAmb 19 06 48.6
comp=Z,13nm,0.6s
SALV Santo Antonio 48.44 320 *e*P **P** **19 06 42.0 -1.0**
PB07 IPOC Station P 48.75 300 P **P** **19 06 43.8 -1.9**
PB07 IAmb IAmb 19 06 51.2
comp=Z,75nm,1.5s
PB07 IPOC Station P 48.75 300 P **P** **19 06 45.8 +0.2**
SDBA SAO DESIDERIO 48.76 335 *e*P **P** **19 06 45.0 -0.6**
BBSD Serra de San D 48.99 314 *e*P **P** **19 06 45.6 -1.7**
PB02 IPOC Station P 49.11 301 P **P** **19 06 47.4 -0.9**
LBTB Lobatse 49.22 69 P **P** **19 06 48.8 -0.3**
LBTB pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 49.22 69 P **P** **19 06 48.8 -0.3**
NBPN Ponto Novo - B 49.37 341 *e*P **P** **19 06 49.8 -0.4**
PB08 IPOC Station P 49.82 302 P **P** **19 06 53.6 -0.4**
PB08 IAmb IAmb 19 06 56.3
comp=Z,36nm,1.6s
PB08 PcP **PcP** **19 08 11.9 -2.1**
PTLB Pontes e Lacer 50.05 316 P **P** **19 06 54.0 -1.3**
PTLB Pontes e Lacer 50.05 316 *e*P **P** **19 06 54.0 -1.3**
GO01 Chusmiza 50.25 302 P **P** **19 06 55.3 -2.1**
GO01 IAmb IAmb 19 06 58.9
comp=Z,40nm,1.6s
GO01 Chusmiza 50.25 302 P **P** **19 06 57.5 +0.1**
SIV San Ignacio 50.26 314 LR LR 19 28 28.9
comp=Z,124nm,19.9s,baz=113,slow=36
GRTLG Ghanzi 50.28 62 P **P** **19 06 57.0 -0.2**
GRTLG IAmb IAmb 19 08 24.2
comp=Z,50nm,1.9s
POGA Pongola 50.29 77 P **P** **19 06 56.9 -0.2**
PB11 IPOC Station P 50.37 302 P **P** **19 06 56.4 -1.6**
PB11 IPOC Station P 50.37 302 P **P** **19 06 58.2 +0.3**
PB11 pP **pP** **19 07 12.9 +0.4**
TSUM Tsumeb 50.55 57 LR LR 19 23 46.7
comp=Z,241nm,21.9s,baz=160,slow=30
TSUM Tsumeb 50.55 57 P **P** **19 06 58.4 -0.9**
TSUM IAmb IAmb 19 07 40.3
comp=Z,30nm,1.5s
TSUM Tsumeb 50.55 57 P **P** **19 06 59.1 -0.2**
TSUM pP **pP** **19 07 14.3 +0.8**
H10S2 ASCENSION HYDR 50.71 14 T T 20 01 41.5
baz=32,slow=74,SNR=33
H10S3 ASCENSION HYDR 50.72 14 T T 20 01 31.4
baz=188,slow=74,SNR=188
PSGCX Pisagua 50.72 301 P **P** **19 06 59.1 -1.5**
PSGCX IAmb IAmb 19 07 25.4
comp=Z,94nm,2.0s
PSGCX PcP **PcP** **19 08 16.2 -0.8**
PSGCX Pisagua 50.72 301 P **P** **19 06 59.6 -1.0**
NBTA Tacaratu-PE 50.73 344 *e*P **P** **19 07 00.0 -0.5**
CASY Casey 50.78 159 P **P** **19 07 00.6 +0.4**
CASY IAmb IAmb 19 07 02.3
comp=Z,15nm,0.7s
CASY PcP **PcP** **19 08 17.5 +1.2**
CASY Casey 50.78 159 P **P** **19 06 59.8 -0.4**
CASY Casey 50.78 159 P **P** **19 07 01.3 +1.1**
CASY PcP **PcP** **19 08 17.7 +1.3**
SNDB Serra Nova Dou 50.79 327 *e*P **P** **19 07 00.3 -0.6**
PB16 IPOC Station P 51.57 303 P **P** **19 07 07.2 -0.2**
PB12 IPOC Station P 51.68 302 P **P** **19 07 07.5 -0.1**
H10N1 ASCENSION HYDR 51.83 14 T T 20 03 27.4
baz=188,slow=74
H10N3 ASCENSION HYDR 51.83 14 T T 20 03 34.9
baz=188
H10N2 ASCENSION HYDR 51.85 14 T T 20 04 14.8
baz=188,slow=74
PAF Port-aux-Franc 52.18 125 P **P** **19 07 09.8 -1.1**
PB18 Visviri 52.22 303 P **P** **19 07 12.1 -0.1**
NBMA Muriti-CE 52.56 344 *e*P **P** **19 07 14.3 +0.1**
VILB Vilhena 52.74 316 *e*P **P** **19 07 13.9 -1.6**
LPAZ La Paz 52.80 306 P **P** **19 07 15.9 -0.7**
comp=Z,3.6nm,0.6s,baz=110,slow=4.3,SNR=19
LPAZ LR LR 19 30 25.4
comp=Z,60nm,21.4s,baz=139,slow=37
comp=Z,3.6nm,0.6s
LPAZ La Paz 52.80 306 P **P** **19 07 15.0 -1.6**
LPAZ PcP **PcP** **19 08 25.1 -0.4**
LPAZ La Paz 52.80 306 *e*P **P** **19 07 15.9 -0.7**
LPAZ La Paz 52.80 306 P **P** **19 07 16.2 -0.4**
SMTB Santa Maria do 52.81 332 *e*P **P** **19 07 16.1 +0.1**
NBPV Pedro Velho 53.05 348 *e*P **P** **19 07 17.9 +0.2**
CLDB Colider 53.19 322 *e*P **P** **19 07 16.7 -2.1**
RCBR Riachuelo 53.70 347 P **P** **19 07 24.3 +1.7**
RCBR pmax pmax
comp=Z,30nm,1.0s
RCBR Riachuelo 53.70 347 P **P** **19 07 24.3 +1.7**
RCBR PcP **PcP** **19 08 28.7 +0.6**
RCBR IAmb IAmb 19 08 30.3
comp=Z,30nm,1.0s
RCBR Riachuelo 53.70 347 *e*P **P** **19 07 24.7 +2.1**
DRV Dumont d'Urvil 54.11 173 P **P** **19 07 25.6 +0.7**
DRV PcP **PcP** **19 08 29.4 +0.6**
MATP Matopo 54.51 69 LR LR 19 27 01.1
comp=Z,313nm,19.6s,baz=219,slow=32
NBPS Pedro II - PI 55.90 341 *e*P **P** **19 07 38.9 +0.4**
NBMO Morrinhos-CE 56.73 343 *e*P **P** **19 07 44.6 +0.3**
LSZ Lusaka 58.79 66 LR LR 19 30 10.0
comp=Z,243nm,19.0s,baz=196,slow=33
LSZ Lusaka 58.79 66 P **P** **19 07 58.7 -0.2**
LSZ pmax pmax
comp=Z,14nm,0.7s
LSZ Lusaka 58.79 66 P **P** **19 07 58.7 -0.2**
LSZ IAmb IAmb 19 08 00.2
comp=Z,13nm,0.7s
LSZ Lusaka 58.79 66 P **P** **19 07 59.5 +0.5**
LSZ Lusaka 58.79 66 P **P** **19 07 59.1 +0.1**
NNA Nana 60.43 299 ǁ *i*P **P** **19 08 11.0 +0.9**
NNA *i* *PP **pP** **19 08 25.1 +0.1**
NNA pmax pmax
comp=Z,29nm,1.0s
NNA Nana 60.43 299 P **P** **19 08 10.4 +0.3**
RPN Rapa Nui 63.95 260 LR LR 19 30 25.6
comp=Z,47nm,20.6s,baz=190,slow=30
ATAH Atahualpa 65.41 300 LR LR 19 36 05.4
comp=Z,82nm,22.0s,baz=164,slow=35
OPO Ambohidratompo 65.45 85 LR LR 19 34 13.5
comp=Z,67nm,18.2s,baz=95,slow=33
BOAV Boa Vista 67.18 322 P **P** **19 08 52.5 -1.9**
MDP Montagnes des 67.49 331 LR LR 19 35 24.9
comp=Z,110nm,22.0s,baz=110,slow=33
DBIC Dimbokro 67.63 22 P **P** **19 08 57.4 +0.2**
comp=Z,13nm,0.7s,baz=203,slow=7.7,SNR=18
DBIC LR LR 19 31 53.3
comp=Z,56nm,19.5s,baz=156,slow=30
comp=Z,13nm,0.7s
DBIC Dimbokro 67.63 22 P **P** **19 08 57.1 0.0**
DBIC IAmb IAmb 19 08 58.5
comp=Z,14nm,0.8s
DBIC Dimbokro 67.63 22 P **P** **19 08 57.7 +0.5**
MBAR Mbarara 72.87 61 LR LR 19 38 49.6
comp=Z,155nm,19.1s,baz=192,slow=34
MBAR Mbarara 72.87 61 *e*P **P** **19 09 28.5 -1.0**
MBAR *i* *PP **pP** **19 09 45.0 +0.4**
MBAR pmax pmax
comp=Z,17nm,1.6s
MBAR Mbarara 72.87 61 P **P** **19 09 33.0 +3.5**
ROSC El Rosal 74.44 309 LR LR 19 42 47.1
comp=Z,156nm,21.8s,baz=99,slow=36
WHZ Wether Hill Ro 74.79 190 P **P** **19 09 39.6 -0.6**
WHZ Wether Hill Ro 74.79 190 P **P** **19 09 40.7 +0.6**
MLZ Mavora Lakes 75.29 190 P **P** **19 09 42.6 -0.5**
MLZ Mavora Lakes 75.29 190 P **P** **19 09 44.0 +0.8**
TORD Torodi Ar. Bea 75.34 28 P **P** **19 09 44.4 +0.9**
comp=Z,34nm,0.6s,baz=194,slow=6.3,SNR=161
comp=Z,34nm,0.6s
TORD Torodi Ar. Bea 75.34 28 P **P** **19 09 43.9 +0.4**
TORD **P** **19 09 44.4 +0.9**
TORD IAmb IAmb 19 09 45.3
comp=Z,23nm,0.7s
ODZ Otahua Downs 75.37 192 P **P** **19 09 43.6 +0.1**
ODZ IAmb IAmb 19 10 56.3
comp=Z,98nm,1.7s
ODZ Otahua Downs 75.37 192 P **P** **19 09 45.3 +1.8**
KMBO Kilima Mbogo 75.42 67 P **P** **19 09 46.0 +1.5**
baz=42,slow=15
KMBO LR LR 19 40 07.8
comp=Z,277nm,18.8s,baz=111,slow=33
KMBO Kilima Mbogo 75.42 67 P **P** **19 09 46.0 +1.5**
TMZ Timaru 75.98 192 P **P** **19 09 47.4 +0.4**
LBZ Lake Benmore 76.06 192 P **P** **19 09 48.0 +0.5**
MQZ McQueen's Vall 76.46 194 P **P** **19 09 50.2 +0.5**
MQZ IAmb IAmb 19 10 41.5
comp=Z,104nm,1.7s
MQZ McQueen's Vall 76.46 194 P **P** **19 09 51.0 +1.3**
SDV Santo Domingo 76.72 314 LR LR 19 43 17.3
comp=Z,208nm,21.9s,baz=122,slow=35
FOZ Fox Glacier 76.95 192 P **P** **19 09 53.1 +0.6**
WVZ Waitaha Valley 77.30 192 P **P** **19 09 56.5 +2.0**
LTZ Lake Taylor 77.42 193 P **P** **19 09 56.5 +1.3**
INZ Inchbonnie 77.57 193 P **P** **19 09 56.4 +0.4**
KHZ Kahutara 77.62 194 P **P** **19 09 58.5 +2.3**
TAU Tasmania Unive 78.20 175 P **P** **19 10 00.1 +0.6**
TAU Tasmania Unive 78.20 175 P **P** **19 09 59.5 0.0**
TAU pmax pmax
comp=Z,32nm,0.8s
TAU Tasmania Unive 78.20 175 P **P** **19 09 59.5 0.0**
TAU IAmb IAmb 19 10 00.8
comp=Z,32nm,0.8s
TAU Tasmania Unive 78.20 175 P **P** **19 09 59.9 +0.4**
TAU PcP **pP** **19 10 13.6 -0.9**
THZ Tophouse 78.34 194 **P** **19 10 00.8 +0.5**
THZ Tophouse 78.34 194 P **P** **19 10 01.1 +0.8**
DSZ Denniston Nort 78.49 193 P **P** **19 10 00.5 -0.7**
LODK Lodwar 78.53 63 **P** **19 10 02.1 +0.4**
TMWZ Te Maipa 78.58 196 P **P** **19 10 03.5 +1.9**
CAW Cannon Point 78.70 196 P **P** **19 10 03.6 +1.3**
TCW Tory Channel 78.71 195 P **P** **19 10 03.3 +1.0**
MRNZ Matariki Terra 78.72 194 P **P** **19 10 02.2 -0.1**
NNZ Nelson 78.82 195 P **P** **19 10 04.0 +1.1**
HOWZ Holdsworth Sta 78.84 196 P **P** **19 10 04.5 +1.4**
BFZ Birch Farm 78.94 197 P **P** **19 10 05.0 +1.3**
TKNZ Takaka Hill 79.05 194 P **P** **19 10 04.1 -0.2**
MRZ Mangatainoka R 79.06 196 P **P** **19 10 05.3 +1.0**
DUWZ D'Urville Isla 79.16 195 P **P** **19 10 06.0 +1.2**
QRZ Quartz Range 79.31 194 P **P** **19 10 04.5 -1.2**
KAHZ Kahuranaki 79.72 197 P **P** **19 10 09.9 +1.9**
WAZ Wanganui 80.04 196 P **P** **19 10 12.0 +2.4**
WNVZ Wahianoa 80.37 197 P **P** **19 10 12.9 +1.3**
BKZ Black Stump Fm 80.39 197 P **P** **19 10 13.3 +1.7**
TRVZ Turoa 80.40 197 P **P** **19 10 13.3 +1.5**
WHVZ Whangaehu Hut 80.41 197 P **P** **19 10 13.5 +1.6**
MAVZ Matarangi 80.43 197 P **P** **19 10 13.7 +1.6**
PKVZ Pokaka 80.44 196 P **P** **19 10 13.2 +1.3**
FWVZ Far West T-bar 80.44 197 P **P** **19 10 13.5 +1.4**
COVZ Cloudseed Observ 80.50 197 P **P** **19 10 13.9 +1.6**
NGZ Ngauruhoe 80.52 197 P **P** **19 10 13.4 +1.1**
TMVZ Te Maari 80.56 197 P **P** **19 10 13.9 +1.3**
KHEZ Kahui Hut 80.62 195 P **P** **19 10 13.4 +0.6**
TWVZ Taurewa 80.64 197 P **P** **19 10 13.7 +0.7**
NBEZ Newall Road No 80.67 195 P **P** **19 10 13.3 +0.3**
VRZ Vera Road 80.69 196 P **P** **19 10 13.8 +0.7**
RTZ Ruatahuna 80.85 198 IAmb IAmb 19 10 23.7
comp=Z,27nm,0.7s
MWZ Matawai 81.04 198 P **P** **19 10 17.2 +2.2**
URZ Urewera 81.18 198 P **P** **19 10 16.7 +1.0**
comp=Z,11nm,0.7s,baz=147,slow=0.9,SNR=8.9
URZ LR LR 19 41 18.0
comp=Z,121nm,21.9s,baz=226,slow=32
comp=Z,11nm,0.7s
HIZ Hauiti 81.28 196 P **P** **19 10 16.3 +0.1**
HIZ Hauiti 81.28 196 P **P** **19 10 16.3 +0.1**
TLZ Tolley Road 81.36 197 P **P** **19 10 17.5 +0.8**
RUGZ Raukumara Rang 81.38 198 P **P** **19 10 18.7 +1.8**
HAZ Te Kaha 81.56 199 P **P** **19 10 18.8 +1.1**
TOZ Tahuroa Road 81.95 197 IAmb IAmb 19 10 20.9
comp=Z,21nm,0.7s
TOZ Tahuroa Road 81.95 197 P **P** **19 10 20.3 +0.6**
NWAO Narrogin (SRO) 83.29 149 LR LR 19 45 16.6
comp=Z,163nm,18.7s,baz=156,slow=34
NWAO Narrogin (SRO) 83.29 149 P **P** **19 10 25.8 -1.0**
NWAO pmax pmax
comp=Z,39nm,1.4s
NWAO Narrogin (SRO) 83.29 149 P **P** **19 10 25.8 -1.0**
NWAO IAmb IAmb 19 12 07.3
comp=Z,39nm,1.4s
TOO Toolangi 83.42 173 P **P** **19 10 27.8 +0.2**
comp=Z,4.3nm,0.8s
TOO Toolangi 83.42 173 P **P** **19 10 27.7 +0.2**
TOO pmax pmax
comp=Z,3.0nm,0.8s
TOO Toolangi 83.42 173 P **P** **19 10 27.7 +0.2**
SJG San Juan 83.74 322 LR LR 19 46 47.5
comp=Z,62nm,21.9s,baz=120,slow=35
CELP Cerrillos 83.85 321 P **P** **19 10 28.2 -1.4**
CELP IAmb IAmb 19 11 53.9
comp=Z,49nm,1.4s
WCZ Waipu Caves 83.88 196 P **P** **19 10 29.7 -0.1**
MUN Mundaring 83.91 148 P **P** **19 10 30.2 +0.2**
comp=Z,38nm,1.1s
OUZ Omahuta 84.69 196 P **P** **19 10 33.8 -0.1**
AUMBR Murray Bridge 85.30 168 P **P** **19 10 37.8 +0.8**
TBI Tubuai 85.78 230 *e*LR LR 19 37 55.6
comp=Z,510nm,25.5s
CAN Canberra 85.84 176 P **P** **19 10 40.4 +0.6**
CAN pmax pmax
comp=Z,38nm,1.4s
CAN Canberra 85.84 176 P **P** **19 10 40.4 +0.6**
CAN IAmb IAmb 19 10 41.3
comp=Z,38nm,1.4s
CAN Canberra 85.84 176 P **P** **19 10 40.4 +0.6**
HTT Hallett 86.95 167 P **P** **19 10 45.8 +0.6**
comp=Z,10nm,1.6s
HTT Hallett 86.95 167 P **P** **19 10 45.9 +0.7**
AUJCS Jamestown Cent 87.14 167 P **P** **19 10 46.4 +0.3**
BBOO Buckleboo 87.20 165 P **P** **19 10 46.0 -0.4**
FORT Forrest 87.85 158 P **P** **19 10 50.1 +0.6**
comp=Z,36nm,0.8s
FORT Forrest 87.85 158 P **P** **19 10 50.1 +0.6**
STKA Stephens Creek 88.77 169 P **P** **19 10 54.6 +0.8**
comp=Z,117nm,0.8s
STKA Stephens Creek 88.77 169 P **P** **19 10 54.4 +0.5**
comp=Z,12nm,0.7s,baz=148,slow=4.7,SNR=29
STKA LR LR 19 49 25.5
comp=Z,200nm,19.3s,baz=256,slow=35
comp=Z,12nm,0.7s
STKA Stephens Creek 88.77 169 P **P** **19 10 54.3 +0.5**
STKA Stephens Creek 88.77 169 P **P** **19 10 53.7 -0.2**
AUDCS Dubbo College 88.91 175 P **P** **19 10 55.0 +0.5**
CMSA Cobar Meteorol 89.44 173 P **P** **19 10 57.7 +0.7**
comp=Z,28nm,1.2s
CMSA Cobar Meteorol 89.44 173 P **P** **19 10 57.6 +0.7**
CMSA Cobar Meteorol 89.44 173 P **P** **19 10 57.1 +0.1**
MEEK Meekatharra 89.62 149 P **P** **19 10 57.9 -0.1**
TIO Tiouine 90.97 16 P **P** **19 11 04.8 +0.8**
PPT2 Papeete2 91.00 232 *e*LR LR 19 40 15.1
comp=Z,135nm,29.5s
PPT2 *e*LR LR 19 40 23.2
comp=Z,156nm,23.8s
PPT Papeete 91.02 232 LR LR 19 44 44.2
comp=Z,54nm,19.8s,baz=179,slow=31
RAR Rarotonga 91.56 222 LR LR 19 46 01.0
comp=Z,62nm,18.6s,baz=214,slow=31
AULRC Lightning Ridg 91.67 174 P **P** **19 11 08.1 +0.7**
MDT Midelt 93.22 18 LR LR 19 47 13.1
comp=Z,66nm,21.6s,baz=222,slow=32
WRKA Warakurna 93.47 156 P **P** **19 11 15.2 -0.6**
comp=Z,5.3nm,0.7s
TEIG Tepich 94.08 303 P **P** **19 11 17.4 -0.9**
TEIG IAmb IAmb 19 11 19.1
comp=Z,13nm,0.8s
QLP Quilpie 94.25 171 P **P** **19 11 20.0 +0.7**
CMIG Matias Romero 94.29 296 LR LR 19 48 19.9
comp=Z,46nm,21.6s,baz=180,slow=32
AUALC St Philip's Co 95.82 161 P **P** **19 11 26.4 -0.2**
ASAR Alice Springs 95.85 161 P **P** **19 11 26.8 0.0**
comp=Z,9.8nm,0.6s,baz=183,slow=4.3,SNR=67
ASAR PP **PP** **19 15 19.2 +1.0**
comp=Z,1.3nm,0.9s,baz=184,slow=7.4,SNR=5.7
ASAR PKiKP **PKiKP** **19 16 05.8 +0.1**
comp=Z,0.6nm,0.6s,baz=177,slow=1.9,SNR=5.2
ASAR PKiP **PKKPbc** **19 28 14.6 +2.1**
comp=Z,2.0nm,0.6s,baz=13,slow=2.2,SNR=30
ASAR LR LR 19 52 48.7
comp=Z,210nm,19.3s,baz=269,slow=34
comp=Z,9.8nm,0.6s
ASAR Alice Springs 95.85 161 P **P** **19 11 26.6 -0.1**
AS31 Alice Springs 95.85 161 P **P** **19 11 26.3 -0.5**
AS31 Alice Springs 95.85 161 **P** **19 11 25.8 -0.9**
AS31 IAmb IAmb 19 11 27.5
comp=Z,3.7nm,0.7s
AS01 Alice Springs 95.86 161 P **P** **19 11 26.6 -0.2**
AS17 Alice Springs 95.86 161 P **P** **19 11 26.3 -0.5**
AS15 Alice Springs 95.88 161 P **P** **19 11 26.5 -0.4**
KEST Kesra 98.85 28 LR LR 19 50 52.7
comp=Z,50nm,21.7s,baz=314,slow=32
WRA Warramunga Arr 99.56 161 P **Pdif** **19 11 43.0 -0.4**
comp=Z,1.2nm,0.8s,baz=197,slow=4.4,SNR=5.3
WRA PP **PP** **19 15 49.1 +2.3**
comp=Z,1.0nm,0.9s,baz=188,slow=6.1,SNR=3.5
WRA PKiKP **PKiKP** **19 16 12.8 +0.5**
comp=Z,0.5nm,0.7s,baz=212,slow=1.9,SNR=1.9
WRA PKiP **PKKPdf** **19 28 04.6 -0.5**
comp=Z,1.5nm,0.7s,baz=352,slow=2.8,SNR=16
comp=Z,1.2nm,0.8s
WRA Warramunga Arr 99.56 161 **Pdif** **19 11 43.0 -0.4**
WRAB Tennant Creek 99.58 161 *c* iP **Pdif** **19 11 43.6 +0.1**
WRAB *i* *PP **pwP** **19 12 00.8 -1.6**
WRAB pmax pmax
comp=Z,6.0nm,0.8s
FITZ Fitzroy Crossi 99.58 152 LR LR 19 55 29.5
comp=Z,219nm,18.9s,baz=334,slow=34
ESDC Sonseca Array 100.04 17 P **Pdif** **19 11 45.4 +0.5**
comp=Z,0.6nm,0.8s,baz=192,slow=4.2,SNR=3.5
ESDC LR LR 19 51 20.7
comp=Z,60nm,20.4s,baz=136,slow=32
comp=Z,0.6nm,0.8s
TXAR Lajitas Array 108.88 295 PKiKP **PKiKP** **19 16 29.2 +0.2**
comp=Z,0.4nm,0.7s,baz=147,slow=3.5,SNR=4.9
TXAR PKKPbc **PKKPbc** **19 27 34.1 -0.9**
comp=Z,0.1nm,0.6s,baz=24,slow=3.4,SNR=3.9
GERES GERESS Array B 112.29 27 PKiKP **PKiKP** **19 16 34.6 -0.1**
comp=Z,0.3nm,0.5s,baz=183,slow=2.3,SNR=6.9
EKA Eskdalemuir Ar 115.48 14 PKKPbc PKKPbc 19 27 14.1 +0.4
comp=Z,0.4nm,0.4s,baz=343,slow=2.3,SNR=7.5
KBZ Khabaz 116.94 49 PKP **PKiKP** **19 16 43.7 0.0**
comp=Z,0.6nm,0.5s,baz=200,slow=1.0,SNR=4.3
KBZ Khabaz 116.94 49 *i* PKiKP **PKiKP** **19 16 44.3 +0.6**
AKT Akhty 117.02 54 *i* PKiKP **PKiKP** **19 16 44.3 +0.2**
AKT pmax pmax
comp=Z,3.0nm,0.6s
KIV Kislovodsk 117.05 49 *i* PKiKP **PKPdf** **19 16 42.7 -1.4**
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,49nm,22.0s
KIEV Kiev 118.16 36 PKiKP **PKPdf** **19 16 45.7 -0.1**
KIEV Kiev 118.16 36 **PKPdf** **19 16 45.7 -0.1**
AKASG Malin Array Be 118.17 36 PKP **PKPdf** **19 16 45.4 -0.4**
comp=Z,2.2nm,0.6s,baz=245,slow=1.4,SNR=9.4
AKASG Malin Array Be 118.17 36 **PKPdf** **19 16 45.1 -0.7**
AKBB Malin Array Si 118.17 36 *i* PKiKP **PKPdf** **19 16 45.3 -0.5**
AKBB Malin Array Si 118.17 36 **PKPdf** **19 16 45.1 -0.7**
SCHO Schefferville 118.27 334 PKP **PKPdf** **19 16 45.5 -0.4**
comp=Z,5.8nm,0.7s,baz=162,slow=2.4,SNR=8.5
RDMU Red Mountain 120.86 298 **PKPdf** **19 16 51.1 -0.6**
RSSD Black Hills 121.27 304 PKiKP **PKPdf** **19 16 51.2 -1.1**
RSSD Black Hills 121.27 304 **PKPdf** **19 16 51.2 -1.1**
VORD Divnogorie 121.69 42 *e*PKiKP **PKPdf** **19 16 51.0 -1.6**
VORD pmax pmax
comp=Z,6.0nm,1.0s
VSR Storozhevoye 121.85 42 *e*PKiKP **PKPdf** **19 16 50.8 -2.1**
VSR pmax pmax
comp=Z,4.0nm,0.9s
VORR Voronezh 122.25 42 *e*PKiKP **PKPdf** **19 16 52.4 -1.2**
VORR pmax pmax
comp=Z,8.0nm,0.8s
PDAR Pinedale Array 122.61 300 PKP **PKPdf** **19 16 53.7 -1.3**
comp=Z,0.7nm,0.4s,baz=128,slow=5.6,SNR=10
NIL Nilore 122.63 78 PKiKP **PKPdf** **19 16 54.7 -0.4**
NIL Nilore 122.63 78 **PKPdf** **19 16 54.7 -0.4**
VRH Novokhopyorsk 122.74 44 *e*PKiKP **PKPdf** **19 16 53.3 -1.3**
VRH pmax pmax
comp=Z,8.0nm,0.8s
HFS Hagfors 122.79 22 PKP **PKPdf** **19 16 53.0 -1.4**
comp=Z,2.4nm,0.6s,baz=134,slow=6.4,SNR=5.9
LPSR Galich'ya Gora 122.93 41 *e*PKiKP **PKPdf** **19 16 53.3 -1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
ULM Lac du Bonnet 122.98 314 PKP **PKPdf** **19 16 54.2 -0.9**
comp=Z,9.9nm,0.6s,baz=124,slow=2.5,SNR=22
NB2 NORSAR Subarra 123.17 20 PKPdf **PKiKP** **19 16 55.3 -0.1**
comp=Z,5.2nm,1.0s,baz=202,slow=1.9
NOA NORSAR Array B 123.17 20 PKP **PKiKP** **19 16 55.5 +0.1**
comp=Z,4.8nm,0.9s,baz=199,slow=1.8,SNR=12
CM31 Chiang Mai Arr 123.23 111 **PKPdf** **19 16 55.8 -0.8**
CMAR Chiang Mai Arr 123.23 111 PKP **PKiKP** **19 16 57.1 +0.3**
comp=Z,6.4nm,0.8s,baz=226,slow=3.8,SNR=39
CMAR Chiang Mai Arr 123.23 111 **PKPdf** **19 16 56.1 -0.5**
NVAR Mina Array Bea 123.28 290 PKP **PKiKP** **19 16 56.8 +0.2**
comp=Z,1.8nm,0.5s,baz=132,slow=2.8,SNR=15
NVAR Mina Array Bea 123.28 290 **PKPdf** **19 16 56.2 -0.2**
OBN Obninsk 124.25 38 *i* PKiKP **PKiKP** **19 16 57.5 -0.1**
OBN *e* 19 17 13.0
OBN *e* 19 18 43.2
OBN pmax pmax
comp=Z,15nm,0.8s
CHGR Chuyangaron 124.53 71 ǁ *i*PKiKP **PKiKP** **19 16 59.5 +0.6**
MOS Moscow 125.10 38 *i* PKiKP **PKPdf** **19 16 53.2 -5.8**
FINES FINESS Array B 126.69 28 PKP **PKPdf** **19 17 01.7 -0.1**
comp=Z,6.4nm,0.6s,baz=170,slow=1.5,SNR=46
CHM Chimkent 127.56 69 *e*PKiKP **PKPdf** **19 17 04.3 +0.1**
CHM Chimkent 127.56 69 *e*PKP **PKPdf** **19 17 04.3 +0.1**
IUG Iuzhnay 127.64 69 *e*PKiKP **PKPdf** **19 17 04.5 0.0**
IUG Iuzhnay 127.64 69 *e*PKP **PKPdf** **19 17 04.5 0.0**
KSH2 Kashi 128.08 76 PKP **PKiKP** **19 17 06.2 +0.1**
BRLS Borolday 128.22 68 *e*PKiKP **PKPdf** **19 17 04.9 -0.5**
BRLS Borolday 128.22 68 *e*PKP **PKPdf** **19 17 04.9 -0.5**
ABKAR Akbulak array 128.40 56 **PKPdf** **19 17 05.3 -0.2**
TNCH TengChong 128.58 106 PKP **PKiKP** **19 17 08.3 +0.8**
KKAR Karatay Array 128.60 69 PKiKP **PKPdf** **19 17 05.5 -0.6**
KKAR Karatay Array 128.60 69 **PKPdf** **19 17 05.5 -0.6**
DZA Taraz 128.83 69 *e*PKiKP **PKPdf** **19 17 06.6 0.0**
DZA Taraz 128.83 69 *e*PKP **PKPdf** **19 17 06.6 0.0**
FAUS Fauske 129.71 19 *e*P **PKPdf** **19 17 07.7 +0.3**
AAK Ala-Archa 130.18 72 *d* iPKiKP **PKiKP** **19 17 09.9 -0.3**
AAK Ala-Archa 130.18 72 **PKPdf** **19 17 08.8 -0.6**

STEI Steigen 130.20 19 eP PKiKP 19 17 08.8 -0.3
SGDS Sogindy 130.85 71 ePKP PKPdf 19 17 10.5 0.0
PZH PanZhiHua 131.40 108 PKP PKPdf 19 17 12.1 0.0
TNSS Tian-Shan 131.69 73 ePKIKP PKPdf 19 17 12.0 -0.5
TNSS Tian-Shan 131.69 73 ePKP PKPdf 19 17 12.0 -0.5
BTLS Baital 131.74 69 ePKIKP PKPdf 19 17 12.2 +0.2
BTLS Baital 131.74 69 ePKP PKPdf 19 17 12.2 +0.2
AAA Alma-Ata 131.80 73 ePKIKP PKPdf 19 17 12.3 0.0
AAA Alma-Ata 131.80 73 ePKP PKPdf 19 17 12.4 0.0
MDOK Medeo 131.83 73 ePKIKP PKPdf 19 17 12.3 -0.1
MDOK Medeo 131.83 73 ePKP PKPdf 19 17 12.4 -0.1
SATY Saty 132.43 74 ePKIKP PKPdf 19 17 13.4 -0.1
SATY Saty 132.43 74 ePKP PKPdf 19 17 13.5 -0.1
JETT Jettan, Norway 132.53 20 eP PKPdf 19 17 12.2 -0.6
KTK1 Kautokeino 132.58 22 eP PKPdf 19 17 12.9 0.0
UZB Uzynbulak 132.80 75 ePKIKP PKPdf 19 17 14.1 -0.1
UZB Uzynbulak 132.80 75 ePKP PKPdf 19 17 14.2 -0.1
ARTI Arti 133.00 49 i PKIKP PKPdf 19 17 14.4 +0.4
SHLS Shalkode 133.03 75 ePKIKP PKPdf 19 17 14.9 +0.2
SHLS Shalkode 133.03 75 ePKP PKPdf 19 17 15.0 +0.2
ARA0 ARCESS Array S 133.46 22 eP PKiKP 19 17 15.2 -0.6
ARCES ARCESS Array B 133.46 22 PKhKP PKPpre 19 16 58.4
comp=Z,1.5nm,0.6s,baz=207,slow=1.4,SNR=5.6
ARCES PKP PKPdf 19 17 14.4 -0.1
comp=Z,9.2nm,0.7s,baz=212,slow=1.1,SNR=18
TDK Taldyqorghan 133.84 73 ePKIKP PKPdf 19 17 16.0 0.0
TDK Taldyqorghan 133.84 73 ePKP PKPdf 19 17 16.0 0.0
BLKN Baker Lake 134.03 325 PKPdf 19 17 15.5 -0.1
BORK Borovoye 135.66 59 i PKIKP PKPdf 19 17 19.1 0.0
BORK Borovoye 135.66 59 PKPdf 19 17 18.6 -0.5
BVAR Borovoye Array 135.68 59 PKhKP PKPpre 19 17 05.6
comp=Z,0.7nm,0.6s,baz=219,slow=3.8,SNR=4.3
BVAR PKP PKPdf 19 17 19.5 +0.4
comp=Z,6.6nm,0.6s,baz=248,slow=1.6,SNR=27
BVAR SKPbc SKPbc 19 20 46.5 +1.1
comp=Z,2.1nm,0.8s,baz=252,slow=3.9,SNR=6.3
MK31 Makanchi Array 137.03 73 ePKIKP PKiKP 19 17 23.1 -0.6
MKAR Makanchi Array 137.03 73 PKhKP PKPpre 19 17 10.3
comp=Z,1.0nm,0.6s,baz=231,slow=1.9,SNR=8.3
MKAR PKP PKPdf 19 17 21.0 -0.9
comp=Z,2.1nm,0.7s,baz=227,slow=11,SNR=8.3
MKAR SKPbc SKPbc 19 20 50.0 +0.3
comp=Z,2.0nm,0.9s,baz=233,slow=1.2,SNR=6.3
MKAR Makanchi Array 137.03 73 PKIKP PKPdf 19 17 21.0 -0.9
MKAR Makanchi Array 137.03 73 PKPpre 19 17 13.6
MKAR PKPdf 19 17 20.8 -1.1
WMQ Urumqi 137.66 81 ePKP PKiKP 19 17 24.6 -0.6
KURBB Kurchatov Arra 137.81 67 PKhKP PKPpre 19 17 16.7
comp=Z,2.1nm,0.2s,baz=236,slow=3.6,SNR=5.2
KURBB PKP PKPdf 19 17 23.7 +0.6
comp=Z,2.2nm,0.3s,baz=232,slow=2.3,SNR=8.7
KURBB SKPbc SKPbc 19 20 52.4 +0.6
comp=Z,0.7nm,0.8s,baz=227,slow=3.7,SNR=4.7
KURK Kurchatov 137.91 67 PKIKP PKPdf 19 17 23.7 +0.4
KURK Kurchatov 137.91 67 PKPpre 19 17 16.7
KURK SKPbc 19 20 52.4 +0.3
ZSN Zaisan 138.75 75 ePKIKP PKPdf 19 17 25.1 +0.1
ZSN Zaisan 138.75 75 ePKP PKPdf 19 17 25.2 +0.1
YKA Yellowknife Ar 138.94 315 PKhKP PKPpre 19 17 18.5
comp=Z,0.8nm,0.8s,baz=125,slow=3.4,SNR=5.2
YKA PKP PKPdf 19 17 25.2 +0.4
comp=Z,23nm,0.6s,baz=132,slow=2.5,SNR=124
YKA SKPbc SKPbc 19 20 54.0 -0.6
comp=Z,1.2nm,0.9s,baz=122,slow=3.1,SNR=4.1
YKA Yellowknife Ar 138.94 315 PKPpre 19 17 18.5
YKA PKPdf 19 17 24.4 -0.5
SPITS Spitsbergen Ar 139.37 12 PKP PKPdf 19 17 25.7 +0.4
comp=Z,5.1nm,0.6s,baz=157,slow=4.7,SNR=2.8
LZDM Lanzhou Array 140.03 102 PKP PKPdf 19 17 28.7 +0.5
comp=Z,1.7nm,0.4s,baz=270,slow=2.9,SNR=1.6
LZH Lanzhou 140.21 103 ePKP PKPdf 19 17 20.8 -7.5
GTA2 Gaotai 140.72 95 ePKP PKPdf 19 17 27.7 -1.3
XAN Xi'an 141.10 110 PKP PKiKP 19 17 32.4 -0.1
KOTAN Kotaneelee Air 141.17 308 P PKPdf 19 17 30.2 +1.2
baz=126
DGZ Jazzator, Alta 141.52 74 ⇓i PKIKP PKPdf 19 17 28.9 -1.3
V35K Ketchikan 141.61 298 P PKPdf 19 17 31.0 +1.1
baz=127
T35M Bob Quinn 141.98 301 P PKPdf 19 17 31.8 +1.2
baz=126
CRAG Craig 142.38 297 P PKPdf 19 17 32.4 +1.1
baz=126
WRAK Wrangell Islan 142.59 299 P PKPdf 19 17 32.5 +0.9
baz=126
WRGLY Wrigley 142.67 312 P PKPdf 19 17 32.8 +1.3
baz=122
DLBC Dease Lake 142.72 303 P PKPdf 19 17 33.1 +1.2
baz=124
U33K Whale Pass 142.76 298 P PKPdf 19 17 33.0 +1.1
baz=126
ZALV Zalesovo Beam 142.90 67 PKhKP PKPpre 19 17 28.0
comp=Z,2.4nm,0.5s,baz=254,slow=3.1,SNR=12
ZALV SKPbc SKiKP 19 21 05.9 -0.5
comp=Z,0.5nm,0.6s,baz=264,slow=4.3,SNR=2.5
WTLY Watson Lake, Y 143.12 306 P PKPdf 19 17 33.6 +1.1
baz=123
R33M Jennings River 143.66 304 P PKPdf 19 17 34.5 +0.9
baz=123
TGTN Hyland Airport 143.67 308 P PKPdf 19 17 34.4 +0.9
baz=122
Q32M Nakina River 143.98 302 P PKPdf 19 17 35.0 +0.7
baz=123
NJ2 Nanjing 144.03 123 ePKP PKPdf 19 17 36.1 +1.1
S32K Killisnoo 144.19 299 P PKPdf 19 17 35.5 +1.1
baz=124
SIT Sitka 144.30 298 P PKPdf 19 17 35.6 +1.1
baz=124
R32K Eaglecrest 144.60 300 P PKPdf 19 17 34.9 -0.2
baz=122
P33M Teslin, Yukon 144.88 304 P PKPdf 19 17 35.9 +0.2
baz=121
P32M Atlin 144.95 303 P PKPdf 19 17 36.1 +0.3
baz=121
S31K Pelican 145.21 299 P PKPdf 19 17 36.8 +0.7
baz=122
MMPY Sheldon Lake, 145.44 308 P PKPab 19 17 37.5 +0.6
baz=119
N32M Quiet Lake 145.47 305 P PKPab 19 17 37.5 +0.4
baz=120
SKAG Skagway 145.59 302 P PKPab 19 17 37.8 +0.3
baz=121
C36M Paulatuk 145.83 321 P PKPab 19 17 38.2 0.0
baz=115
WHY Whitehorse 145.99 304 P PKPbc 19 17 38.4 -0.1
baz=119
PLBC Pleasant Camp 146.04 301 P PKPbc 19 17 38.7 +0.2
baz=120
M31M Drury Creek, Y 146.52 306 P PKPbc 19 17 39.5 -0.4
baz=118
O30N Mendenhall 146.57 303 P PKPbc 19 17 39.5 -0.6
baz=119
HNS HongShan 146.59 113 ⇑PKPbc PKPbc 19 17 41.3 +0.5
P30M Million Dollar 146.63 302 P PKPbc 19 17 39.6 -0.8
baz=119
P29M Windy Craggy 146.73 301 P PKPbc 19 17 39.7 -0.9
baz=119
TIA Tai'an 146.75 117 PKPbc PKPbc 19 17 41.8 +0.4
N31M Braeburn, Yuko 146.77 305 P PKPbc 19 17 39.8 -0.9
baz=118
BTO2 Baotou 146.81 104 ePKPbc PKPbc 19 17 42.1 +0.5
BTO2 PP PP 19 21 12.9 +6.4
KNGR Kungurtug, Tuv 147.15 79 i PKIKP PKPdf 19 17 39.8 -0.1
A36M Sachs Harbour 147.20 326 P PKPbc 19 17 41.2 -0.3
baz=110
HYT Haines Junctio 147.20 303 P PKPdf 19 17 40.5 +0.8
baz=118
N30M Aishikik Lake 147.32 304 P PKPbc 19 17 41.2 -1.0
baz=117
YUK6 Outpost Mounta 147.63 303 P PKPdf 19 17 41.6 +1.1
baz=117
M30M Minto, Yukon 147.69 306 P PKPbc 19 17 43.9 +0.7
baz=116,SNR=26
HHC Hu-ho-hao-te 147.73 105 ePKPbc PKPbc 19 17 44.5 +0.4
HHC L L
comp=Z,120nm,18.0s
HHC L L
comp=Z,96nm,18.6s
YUK4 Talbot Arm 147.94 303 P PKPbc 19 17 44.6 +0.5
baz=116
H31M Peel River 148.03 312 P PKPbc 19 17 44.5 +0.5
baz=112
PINM Pinnacle 148.07 300 P PKPbc 19 17 44.9 +0.6
baz=117
J30M Hart River 148.33 310 P PKPbc 19 17 45.2 +0.3
baz=113,SNR=11
M29M Somme Creek 148.34 305 P PKPbc 19 17 45.6 +0.6
baz=115,SNR=26
O28M Mount Upton 148.35 302 P PKPbc 19 17 45.6 +0.3
baz=116,SNR=6.2
YUK8 Steele Glacier 148.39 303 P PKPbc 19 17 45.6 +0.3
baz=116,SNR=6.3
F31M Tsiigehtchic 148.41 316 P PKPbc 19 17 45.1 +0.3
baz=110,SNR=7.9
G31M Satah River 148.42 314 P PKPbc 19 17 45.2 +0.4
baz=111,SNR=17
L29M L29M 148.47 307 P PKPbc 19 17 45.5 +0.3
baz=114,SNR=23
K29M Barlow Dome 148.52 308 P PKPbc 19 17 45.7 +0.3
baz=114,SNR=14
I30M Mount Dempster 148.60 311 P PKPbc 19 17 46.1 +0.6
baz=112
INK Inuvik 148.63 317 P PKiKP 19 17 46.0 -0.8
baz=109
YUK3 Moose Creek 148.91 303 P PKPbc 19 17 46.8 +0.2
baz=115
J29N Klondike Camp 149.04 309 P PKiKP 19 17 47.5 -0.4
baz=112
EPYK Eagle Plains 149.14 313 P PKiKP 19 17 47.6 -0.4
baz=110
G30M tAoh Zraii Nji 149.16 314 P PKiKP 19 17 47.6 -0.5
baz=110
F30M Barrier River 149.21 315 P PKPbc 19 17 47.3 +0.4
baz=109
BVCY Beaver Creek 149.34 304 P PKiKP 19 17 47.9 -0.6
baz=114,SNR=7.3
BJI2 Beijing 149.35 111 ⇓PKPbc PKPbc 19 17 47.0 -1.1
DAWY Dawson 149.37 308 P PKiKP 19 17 48.1 -0.5
baz=112
MOY Mondy 149.55 80 ePKHKP PKPpre 19 17 43.8
MOY pmax pmax
comp=Z,39nm,1.7s
CRQE Cirque 149.63 300 P PKPbc 19 17 48.4 +0.1
baz=115
H29M Whitestone 149.72 312 P PKPbc 19 17 48.4 +0.2
baz=109,SNR=14
M27K Edge Creek, AK 149.75 304 P PKPbc 19 17 48.8 +0.3
baz=113,SNR=13
G29M Pine Creek 149.81 313 P PKiKP 19 17 49.1 -0.2
baz=108
MCARA McCarthy VSAT 149.86 302 P PKiKP 19 17 49.5 -0.1
baz=114
ZAK Zakamensk 149.96 84 ePKIKP PKPdf 19 17 43.9 -0.5
ZAK pmax pmax
comp=Z,27nm,1.2s
SONM Songino Array 149.99 91 PKP PKPdf 19 17 45.2 +0.6
comp=Z,16nm,0.8s,baz=210,slow=2.7,SNR=31
SONM PKPbc PKPbc 19 17 49.7 +0.2
comp=Z,5.4nm,0.7s,baz=225,slow=4.5,SNR=8.7
SONM Songino Array 149.99 91 PKIKP PKPbc 19 17 48.8 -0.8
SONM Songino Array 149.99 91 PKPdf 19 17 43.5 -1.0
SONM PKPbc 19 17 48.8 -0.8
L27K Beaver Creek, 150.00 305 P PKiKP 19 17 49.7 -0.2
baz=112
I28M Miner Creek 150.07 310 P PKiKP 19 17 49.9 -0.1
baz=109,SNR=8.6
E29M Blow River 150.20 316 P PKiKP 19 17 49.6 -0.4
baz=106,SNR=6.1
M26K Nabesna, AK 150.25 304 P PKiKP 19 17 49.9 -0.5
baz=112
ULN Ulaanbaatar 150.35 91 c i PKIKP PKPbc 19 17 50.3 -0.2
BMRM Bremner River 150.39 300 P PKiKP 19 17 50.6 -0.2
baz=114,SNR=5.4
Q23K Middleton Isla 150.54 297 P PKiKP 19 17 50.7 -0.2
baz=116
L26K Log Cabin Wild 150.63 305 P PKiKP 19 17 51.0 -0.2
baz=111,SNR=6.4
N25K Chitina, Valde 150.64 301 P PKiKP 19 17 51.1 -0.2
baz=113
F28M Old Crow 150.71 314 P PKPbc 19 17 50.6 +0.1
baz=106,SNR=8.6
EYAK Cordova Ski Ar 150.74 299 P PKiKP 19 17 51.3 0.0
baz=114,SNR=5.1
D28M Stokes Point 150.74 318 P PKiKP 19 17 51.2 +0.1
baz=104
I27K Kandik River 150.79 310 P PKiKP 19 17 51.5 +0.1
baz=108,SNR=6.0
NRIK Noril'sk 150.80 42 PKP PKPdf 19 17 45.2 +0.2
comp=Z,1.6nm,0.4s,baz=41,slow=5.8,SNR=1.3
NRIK PKPbc PKPbc 19 17 50.9 +0.2
comp=Z,12nm,0.8s,baz=260,slow=0.5,SNR=10.0
NRIK Noril'sk 150.80 42 PKPdf 19 17 44.5 -0.5
NRIK PKPbc 19 17 49.8 -0.9
E28M Babbage River 150.84 316 P PKPbc 19 17 50.9 0.0
baz=104,SNR=25
TLY Talaya 150.91 82 ⇑i PKIKP PKiKP 19 17 52.1 0.0
H27K Steamboat Moun 150.94 311 P PKiKP 19 17 51.6 -0.1
baz=107,SNR=18
DL2 Dalian 151.01 120 PKPbc PKPbc 19 17 52.3 +0.2
G27K Doyon Strip 151.16 312 P PKPbc 19 17 51.5 -0.1
baz=106,SNR=7.5
KLU Kluting 151.18 301 P PKiKP 19 17 52.1 -0.3
baz=112,SNR=6.3
HARP HAARP 151.18 303 P PKiKP 19 17 52.3 0.0
baz=111
SCRK Sand Creek 151.23 306 P PKiKP 19 17 52.1 -0.3
baz=109,SNR=20
P23K Montague Islan 151.26 297 P PKiKP 19 17 52.5 0.0
baz=114,SNR=5.4
E27K Coleen River 151.48 315 P PKPbc 19 17 52.5 +0.1
baz=104,SNR=25
D27M Malcolm River 151.49 318 P PKiKP 19 17 52.9 +0.1
baz=102,SNR=33
RIDG Independent Ri 151.51 305 P PKiKP 19 17 53.1 +0.1
baz=109,SNR=26
PAX Paxson 151.52 304 P PKPbc 19 17 52.7 +0.1
baz=110,SNR=10
M24K Tolsona, Glenn 151.52 302 P PKiKP 19 17 53.1 +0.1
baz=111,SNR=8.5
IRK Irkutsk 151.55 82 ePKIKP PKPbc 19 17 52.6 -0.3
IRK pmax pmax
comp=Z,16nm,2.9s
K24K Donnelly Dome 151.93 305 P PKiKP 19 17 54.0 +0.2
baz=108
SCM Sheep Creek Mo 151.93 301 P PKiKP 19 17 54.1 +0.2
baz=111,SNR=8.1
G26K Porcupine Rive 152.00 312 P PKiKP 19 17 54.0 +0.2
baz=104,SNR=7.7
J25K Salcha River, 152.00 307 P PKiKP 19 17 53.9 -0.1
baz=107,SNR=9.3
M23K Glacier View 152.09 301 P PKiKP 19 17 54.3 +0.1
baz=111
XLT XiLinHaoTe 152.24 106 ePKPbc PKiKP 19 17 55.4 +0.2
XLT pPKP PKPab 19 18 05.3 +0.3
SEW Seward 152.25 297 P PKiKP 19 17 54.7 +0.2
baz=113
KNK Knik Glacier 152.29 300 P PKiKP 19 17 54.8 +0.2
baz=111
F26K Sheenjek River 152.31 314 P PKiKP 19 17 55.0 +0.5
baz=102
PRP Porcupine Dome 152.32 309 P PKiKP 19 17 54.8 0.0
baz=105,SNR=10
SML Sawmill 152.37 300 P PKiKP 19 17 54.7 -0.1
baz=110,SNR=5.7
WAT6 Susitna Watana 152.37 302 P PKiKP 19 17 55.0 +0.1
baz=109
DHY Denali Highway 152.38 303 P PKiKP 19 17 55.1 +0.2
baz=109,SNR=6.1
KSRS Korea Array 152.45 130 PKP PKPdf 19 17 49.0 +0.5
comp=Z,0.6nm,0.7s,baz=0.0,slow=1.8,SNR=2.4
KSRS PKPbc PKiKP 19 17 55.9 +0.2
comp=Z,4.2nm,0.7s,baz=197,slow=2.2,SNR=24
KSRS Korea Array 152.45 130 PKIKP PKPdf 19 17 49.0 +0.5
C27K Jago River 152.51 318 P PKiKP 19 17 55.3 +0.4
baz=99,SNR=18
HDA Harding Lake 152.60 306 P PKiKP 19 17 55.2 +0.1
baz=106
PMR Palmer 152.65 300 P PKiKP 19 17 55.5 +0.2
baz=110
ILAR Eielson Array 152.67 307 PKP PKPdf 19 17 47.3 -0.7
comp=Z,1.6nm,0.9s,baz=287,slow=0.9,SNR=11
ILAR PKPbc PKPbc 19 17 55.0 -0.1
comp=Z,16nm,0.9s,baz=146,slow=1.3,SNR=55
ILAR Eielson Array 152.67 307 PKIKP PKPbc 19 17 54.5 -0.6
ILAR Eielson Array 152.67 307 PKPdf 19 17 43.7 -4.2
ILAR PKPbc 19 17 54.5 -0.6
BRSE Bradley Lake S 152.71 295 P PKiKP 19 17 55.5 0.0
baz=113
RC01 Rabbit Creek A 152.75 298 P PKiKP 19 17 55.7 +0.1
baz=111
KDAK Kodiak Island 152.78 291 P PKiKP 19 17 55.9 +0.2
baz=116
WAT1 Susitna Watana 152.81 302 P PKiKP 19 17 56.2 +0.5
baz=108
F25K Christian Rive 152.85 313 P PKiKP 19 17 56.4 +0.7
baz=101,SNR=12
G25K Bearman Lake 152.85 311 P PKiKP 19 17 56.2 +0.7
baz=103,SNR=14
OHAK Old Harbor 152.88 289 P PKiKP 19 17 56.5 +0.7
baz=116
E25K Arctic Village 152.92 314 P PKiKP 19 17 55.9 +0.2
baz=100,SNR=5.1
C26K Camden Bay 152.97 318 P PKiKP 19 17 55.9 +0.2
baz=98,SNR=6.8
POKR Poker Plat Res 152.99 308 P PKiKP 19 17 55.8 -0.1
baz=105
SII Sitkinak Islan 153.02 287 P PKiKP 19 17 56.3 +0.1
baz=117
HOM Homer 153.10 295 P PKPbc 19 17 56.0 -0.2
baz=113
COLA College 153.10 307 P PKiKP 19 17 56.1 0.0
baz=105
M22K Willow 153.15 300 P PKiKP 19 17 56.5 +0.2
baz=110
MCK McKinley 153.24 304 P PKiKP 19 17 56.7 +0.1
baz=106,SNR=7.5
CAPN Captain Cook N 153.28 297 P PKiKP 19 17 56.7 +0.1
baz=111
H24K Noodor Dome 153.34 309 P PKiKP 19 17 56.7 0.0
baz=103,SNR=6.4
G24K Hadweenzic Riv 153.37 311 P PKiKP 19 17 56.9 +0.2
baz=102,SNR=15
CHIR Chirikof Islan 153.39 285 P PKiKP 19 17 56.9 -0.1
baz=118
D25K Kavik River 153.40 317 P PKiKP 19 17 56.7 0.0
baz=98,SNR=6.8
CUT Chulitna 153.43 301 P PKiKP 19 17 57.0 +0.1
baz=108
NEA2 Nenana 153.53 306 P PKiKP 19 17 57.1 0.0
baz=105,SNR=7.8
F24K Squaw Lake 153.68 313 P PKiKP 19 17 58.0 +0.7
baz=100
L22K Petersville 153.69 301 P PKiKP 19 17 57.9 +0.4
baz=108
O20K Slope Mountain 153.71 295 P PKiKP 19 17 58.0 +0.3
baz=111
TRF Thorofare Moun 153.75 303 P PKiKP 19 17 58.1 +0.3
baz=106
Q19K Cape Douglas, 153.76 292 P PKiKP 19 17 58.7 +1.0
baz=113
I23K Minto, Yukon-K 153.79 307 P PKiKP 19 17 58.1 +0.6
baz=104
P19K Oil Pt 153.84 294 P PKiKP 19 17 58.5 +0.6
baz=112
SKT Skwentna 153.86 300 P PKiKP 19 17 57.8 0.0
baz=108
E24K Your Creek 154.00 314 P PKiKP 19 17 58.8 +0.8
baz=98
H23K Yukon River 154.01 309 P PKiKP 19 17 58.8 +0.7
baz=102
D24K Happy Valley 154.25 316 P PKiKP 19 17 59.2 +0.7
baz=96
Q18K Katmai Hardscr 154.31 291 P PKiKP 19 17 59.0 0.0
baz=113
MLY Manley 154.33 307 P PKiKP 19 17 59.6 +0.8
baz=103
G23K Bananza Creek 154.37 311 P PKiKP 19 17 59.4 +0.6
baz=100
E23K Chandalar 154.41 314 P PKiKP 19 17 59.1 +0.2
baz=97
PPLA Purkeypile 154.42 302 P PKiKP 19 17 59.4 +0.2
baz=106
TOLK Toolik Lake Re 154.47 315 P PKiKP 19 17 59.3 +0.4
baz=96
CAST Castle Rocks 154.51 303 P PKiKP 19 17 59.2 0.0
baz=105,SNR=6.5
COLD Coldfoot 154.52 312 P PKiKP 19 17 59.9 +0.9
baz=99
M20K Styx River 154.55 299 P PKiKP 19 17 59.5 +0.2
baz=108
O19K Port Alsworth 154.55 295 P PKiKP 19 18 00.3 +1.1
baz=110
R17L Mt. Peulik Vol 154.55 288 P PKiKP 19 17 59.6 +0.2
baz=114
Q17K Contact Creek 154.58 290 P PKiKP 19 17 59.7 +0.1
baz=113
P18K Big Mountain, 154.69 293 P PKiKP 19 17 59.8 +0.2
baz=111
CHUM Lake Minchumin 154.73 304 P PKiKP 19 18 00.0 +0.5
baz=104
H22K Ishtalitna Cre 154.76 309 P PKiKP 19 17 59.8 +0.2
baz=100
N19K Bonanza Creek 154.83 296 P PKiKP 19 18 00.2 +0.3
baz=109
O18K Koktuh Hills 154.85 294 P PKiKP 19 18 00.3 +0.3
baz=110
I21K Tanana 154.88 307 P PKiKP 19 18 00.4 +0.6
baz=102
D23K Nanushuk River 154.90 316 P PKiKP 19 18 00.6 +0.8
baz=94
CHNA Chernabura Isl 154.92 281 P PKiKP 19 18 00.4 +0.2
baz=119
C23K Itkillik River 154.93 318 P PKiKP 19 18 00.6 +0.8
baz=93
G22K Bettles 154.98 311 P PKiKP 19 18 01.5 +1.5
baz=98
L20K Farewell, AK 155.06 300 P PKPdf 19 18 01.5 +10
baz=106
Q16K King Salmon 155.11 290 P PKPdf 19 18 01.4 +10
baz=112
MJAR Matsushiro Arr 155.12 148 PKP PKPdf 19 17 52.7 +0.3
comp=Z,1.3nm,0.8s,baz=135,slow=12,SNR=2.2
MJAR PKPbc PKPbc 19 18 01.7
comp=Z,1.9nm,0.6s,baz=172,slow=3.0,SNR=4.5
MJAR PKPab PKPab 19 18 17.4 +0.2
comp=Z,4.1nm,0.6s,baz=179,slow=4.9,SNR=9.2
M19K Big River Lodg 155.12 299 P PKPdf 19 18 01.9 +10
baz=107
P17K Kvichak River 155.20 292 P PKPdf 19 18 01.9 +10
baz=111
E22K Anaktuvuk Pass 155.24 314 P PKPdf 19 18 02.0 +10
baz=95
H21K Melozitna Rive 155.30 308 P PKPab 19 18 17.4 +0.1
baz=100
F22K John River 155.32 312 P PKPab 19 18 17.5 +0.1
baz=96
K20K Telida 155.37 302 P PKPab 19 18 17.7 0.0
baz=104
L19K White Mountain 155.41 299 P PKPab 19 18 18.0 +0.1
baz=106
N18K Kilae Creek 155.44 295 P PKPab 19 18 18.1 +0.1
baz=108
S14K Fog Glacier 155.57 284 P PKPab 19 18 17.9 -0.9
baz=116
J20K Nowinta River 155.58 304 P PKPab 19 18 18.0 -0.5
baz=102
M18K Stony River 155.66 297 P PKPab 19 18 18.7 -0.2
baz=107
O17K Koliganek Bris 155.71 293 P PKPab 19 18 19.1 -0.1
baz=110
G21K Allakaket 155.72 310 P PKPab 19 18 19.2 +0.1
baz=98
F21K Alatna River 155.79 311 P PKPab 19 18 19.2 -0.2
baz=96
I20K Naaghedeneel 155.84 305 P PKPab 19 18 19.7 +0.1
baz=100
N17K Nushagak Hills 156.00 294 P PKPab 19 18 20.5 +0.1
baz=108
E21K Killik River 156.06 314 P PKPab 19 18 20.7 +0.2
baz=93
H20K Anotleneega Mo 156.13 307 P PKPab 19 18 21.4 +0.5
baz=99
O16K Kokwok River B 156.13 292 P PKPab 19 18 20.9 -0.1
baz=110
J19K Poorman 156.18 303 P PKPab 19 18 22.1 +1.0
baz=102
L18K Granite Mounta 156.25 299 P PKPab 19 18 22.0 +0.6
baz=105
M17K Holitna River 156.38 296 P PKPab 19 18 22.7 +0.7
baz=106
C21K Knifeblade Rid 156.38 316 P PKPab 19 18 22.8 +1.0
baz=90
A22K Sinclair Lake 156.38 321 P PKPab 19 18 22.8 +1.0
baz=86
CN2 Changchun 156.64 118 PKP PKPdf 19 17 54.6 +0.5
F20K Avaraart Lake 156.65 311 P PKPab 19 18 23.1 +0.1
baz=94
N16K Nishlik Lake 156.73 294 P PKPab 19 18 24.0 +0.4
baz=107
H19K Roundabout Mou 156.78 307 P PKPab 19 18 23.9 +0.3
baz=97
GCSA Galena City Sc 156.85 305 P PKPab 19 18 24.3 +0.4

baz=99
E20K **Nigu River** 156.88 314 P PKPab 19 18 24.5 +0.4
baz=91
L17K **Donlin** 156.96 298 P PKPab 19 18 24.5 0.0
baz=104
M16K **Timber Creek** 156.98 295 P PKPab 19 18 25.1 +0.4
baz=106
K17K **Iditarod** 157.10 299 P PKPab 19 18 25.1 0.0
baz=103
G19K **Purcell Mounta** 157.11 308 P PKPab 19 18 25.1 0.0
baz=95
E19K **Redstone River** 157.25 312 P PKPab 19 18 25.7 +0.1
baz=92
L16K **Owhat River** 157.40 297 P PKPab 19 18 26.5 +0.1
baz=104
F19K **Shaleruckik Mo** 157.44 310 P PKPab 19 18 26.6 +0.2
baz=93
H18K **Honhosa River** 157.53 306 P PKPab 19 18 26.8 -0.2
baz=97
O14K **Tigyukauivet M** 157.55 290 P PKPab 19 18 27.2 +0.1
baz=109
J17K **VABM Dome** 157.58 301 P PKPab 19 18 27.2 0.0
baz=100
D19K **Kuna River** 157.59 314 P PKPab 19 18 27.9 +0.7
baz=89
M15K **Kasigluk River** 157.70 294 P PKPab 19 18 27.8 0.0
baz=106
G18K **Tagagawik** 157.73 308 P PKPab 19 18 28.3 +0.5
baz=95
HILR **Hailar Array B** 157.94 100 PKPab PKPab 19 18 29.9 +0.7
comp=Z,11nm,0.7s,baz=204,slow=3.3,SNR=9.9
N14K **Kuskokwak Cree** 157.96 291 P PKPab 19 18 29.1 +0.2
baz=107
UNV **Unalaska Valle** 157.98 273 P PKPab 19 18 29.2 +0.1
baz=120
H17K **Granite Mounta** 158.16 305 P PKPab 19 18 29.8 +0.2
baz=96
F18K **Selawik** 158.17 309 P PKPab 19 18 29.8 +0.2
baz=92
J16K **Anvik River** 158.24 300 P PKPab 19 18 30.3 +0.3
baz=100
M14K **Bethel** 158.32 293 P PKPab 19 18 30.5 +0.1
baz=105
L15K **Ungalak Mounta** 158.32 296 P PKPab 19 18 30.7 +0.3
baz=103
A19K **Wainwright** 158.50 319 P PKPab 19 18 31.5 +0.6
baz=82
E18K **Tukpahlearik C** 158.55 312 P PKPab 19 18 31.9 +0.7
baz=89
C18K **Utukok River** 158.72 315 P PKPab 19 18 32.5 +0.5
baz=85
F17K **Baldwin Pennin** 158.81 309 P PKPab 19 18 32.9 +0.6
baz=91
L14K **Kuka Creek** 158.81 295 P PKPab 19 18 33.1 +0.6
baz=103
M13K **Dall Lake** 158.90 292 P PKPab 19 18 33.8 +0.8
baz=105
E17K **Hotham Inlet** 159.03 311 P PKPab 19 18 33.6 +0.2
baz=89
H16K **Elim** 159.12 304 P PKPab 19 18 34.3 +0.4
baz=95
G16K **Koyuk River** 159.22 306 P PKPab 19 18 34.4 +0.2
baz=93
RDOG **Red Dog Mine** 159.40 313 P PKPab 19 18 34.8 -0.1
baz=85
C17K **DeLong Mountai** 159.46 315 P PKPab 19 18 35.2 0.0
baz=84
D17K **Noatak River** 159.49 312 P PKPab 19 18 36.9 +1.5
baz=86
USRK **Ussuriysk Ar.** 159.80 128 PKPab PKPab 19 18 37.5 +0.2
comp=Z,2.1nm,0.5s,baz=205,slow=3.4,SNR=9.0
K13K **Kusilvak Mount** 159.85 296 P PKPab 19 18 37.5 +0.5
baz=100
G15K **Niukluk** 159.92 305 P PKPab 19 18 38.2 +1.0
baz=92
F15K **North Star Dit** 160.19 307 P PKPab 19 18 38.7 +0.2
baz=90
M11K **Mekoryuk** 160.26 291 P PKPab 19 18 40.0 +1.1
baz=104
C16K **Lisburne Hills** 160.28 314 P PKPab 19 18 40.3 +1.6
baz=82
ANM **Nome** 160.47 303 P PKPab 19 18 41.3 +1.6
baz=92
SPIA **Saint Paul Isl** 161.33 280 P PKPab 19 18 43.8 +0.1
baz=111
TNA **Tin City** 161.55 306 P PKPab 19 18 44.6 +0.3
baz=87
HEH **HeiHe** 162.21 108 *e*PKP PKPdf 19 17 59.7 -0.6
ZEA **Zeya** 164.16 98 *e*PKP2 PKPab 19 18 56.1 -0.1
PETK **Petropavlovsk-** 173.72 199 PKPab PKPab 19 18 38.5 +0.1
comp=Z,6.1nm,0.8s,baz=142,slow=5.9,SNR=8.7
PETK **Petropavlovsk-** 173.72 199 PKIKP PKPdf 19 18 06.8 -1.3
PETK 19 19 37.5
PETK **Petropavlovsk-** 173.72 199 PKPdf 19 18 06.8 -1.3
PETK PKPab 19 19 37.5 -1.0

IDC 11 19:09:22.2±2.5, 17°.89S×178°.79W, h586km±22km, mb3.2/4, mbtmp4.1/5, Error ellipse: s-maj=109.6km s-min=28.7km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.02**	**273**	P	P	19 10 40.5	0.0
	28nm,0.7s,baz=128,slow=12,SNR=14						
STKA	**Stephens Creek**	**38.32**	**241**	P	P	19 15 54.0	-0.1
	2.9nm,0.5s,baz=84,slow=9.6,SNR=8.4						
	2.9nm,0.5s						
WRA	**Warramunga Arr**	**44.28**	**260**	P	P	19 16 40.8	-0.5
	1.0nm,0.5s,baz=95,slow=7.6,SNR=15						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**44.45**	**254**	P	P	19 16 42.8	+0.2
	9.8nm,0.6s,baz=93,slow=7.7,SNR=148						
	9.8nm,0.6s						
TXAR	**Lajitas Array**	**86.29**	**58**	P	P	19 21 03.1	-0.1
	0.2nm,0.6s,baz=245,slow=4.9,SNR=2.8						
	0.2nm,0.6s						

IDC 11 19:11:17.6±2.4, 30°.02S×176°.15W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=74.8km s-min=37.7km az=18.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.72**	**296**	Pn	Pb	19 11 49.7	-0.4
	55nm,0.3s,baz=67,slow=24,SNR=2.1						
RAO				Sn	Sn	19 12 11.2	-0.2
	419nm,0.3s,baz=72,slow=22,SNR=11						
CTA	**Charters Tower**	**35.33**	**277**	P	P	19 18 16.1	+1.3
	3.1nm,0.9s,baz=124,slow=7.3,SNR=1.3						
	3.1nm,0.9s						
ASAR	**Alice Springs**	**44.73**	**266**	P	P	19 19 32.5	-0.5
	0.3nm,0.5s,baz=109,slow=8.1,SNR=2.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**45.69**	**271**	P	P	19 19 39.2	-1.3
	0.5nm,0.6s,baz=110,slow=8.0,SNR=3.2						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**145.32**	**341**	PKPbc	PKPbc	19 30 55.5	-0.9
	5.4nm,1.0s,baz=46,slow=4.0,SNR=6.0						

*IDC **11** 19:31:23.9±1.0, 13°.23N×145°.11E, h44km±7km, mb4.0/20, mbtmp4.2/21, ML3.8/1, MS3.5/7, Error ellipse: s-maj=18.3km s-min=12.5km az=94.0*

*NEIC **11** 19:31:24.2±1.4, 13°.17N±0°.06×145°.02E±0°.03, h45km±6km, mb4.8/79, Error ellipse: s-maj=9.5km s-min=4.3km az=164.0*

ISC 11 19:31:24.9±0.4, 13°.15N±0°.06×145°.02E±0°.08, h57km, n370, o0872/365, mb4.7/64, MS3.5/8, 1C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.46**	**341**	P	Pn	19 31 35.3	-1.0
	2μm,0.3s,baz=112,slow=5.8,SNR=1294						
GUMO				S	Sn	19 31 43.6	-0.8
	7μm,0.3s,baz=312,slow=21,SNR=24						
GUMO	**Guam**	**0.46**	**341**		Pn	19 31 35.3	-1.0
GUMO				Sn	Sn	19 31 41.3	-3.2
DPSS	**Saipan**	**2.21**	**20**		Pn	19 31 58.4	-0.8
PATS	**Pohnpei**	**14.51**	**114**	Pn	Pn	19 34 40.4	-6.8
SIJI	**Sorong**	**19.50**	**225**	P	Pn	19 35 49.8	+0.5
	0.3nm,0.3s,baz=47,slow=9.1,SNR=7.2						
	3.3nm,0.8s						
DAV	**Davao City (W)**	**20.07**	**254**	LR	LR	19 42 36.2	
	comp=Z,111nm,21.4s,baz=23,slow=33						
FAKI	**Fak Fak**	**20.39**	**219**		P	19 35 57.3	+0.1
FAKI				IAmb	IAmb	19 36 05.1	
	comp=Z,136nm,1.9s						
H11S3	**WAKE ISLAND Hy**	**21.50**	**73**	T	T	19 58 49.2	
	baz=259,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**21.52**	**73**	T	T	19 58 42.0	
	baz=259,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**21.52**	**73**	T	T	19 58 50.2	
	baz=259,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**21.95**	**70**	T	T	19 59 11.2	
	baz=257,slow=75,SNR=48						
H11N2	**WAKE ISLAND Hy**	**21.96**	**70**	T	T	19 59 12.3	
	baz=257,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**21.97**	**70**	T	T	19 59 11.3	
	baz=257,slow=75,SNR=57						
JSU	**Suzuyama**	**22.66**	**326**	P	P	**19 36 22.8**	**+1.3**
JSU				IAmb	IAmb	19 36 37.0	
	comp=Z,48nm,1.5s						
TGY	**Tagaytay City**	**23.43**	**275**	LR	LR	19 47 02.1	
	comp=Z,73nm,18.0s,baz=280,slow=40						
MJAR	**Matsushiro Arr**	**24.08**	**346**	P	P	**19 36 33.9**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=171,slow=11,SNR=5.3						
MJAR				LR	LR	19 45 55.9	
	comp=Z,120nm,18.3s,baz=180,slow=36						
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**24.08**	**346**	P	P	**19 36 34.2**	**-0.9**
MAJO	**Matsushiro**	**24.08**	**346**	P	P	**19 36 34.2**	**-0.9**
YULB	**Yu-li**	**24.69**	**298**	P	P	**19 36 40.2**	**-0.6**
SSLB	**Suanglung**	**25.12**	**298**	P	P	**19 36 44.6**	**-0.1**
LUWI	**Luwuk**	**26.19**	**239**	P	P	**19 36 53.2**	**-1.2**
LUWI				IAmb	IAmb	19 37 13.3	
	comp=Z,37nm,0.8s						
TOLI2	**Tolitoli**	**26.82**	**245**	P	P	**19 37 00.4**	**+0.3**
KSRS	**Korea Array**	**28.62**	**331**	P	P	**19 37 15.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=149,slow=10,SNR=5.2						
	comp=Z,1.0nm,0.6s						
MTN	**Manton Dam**	**29.27**	**209**	P	P	**19 37 20.1**	**-1.8**
MTN				IAmb	IAmb	19 37 21.0	
	comp=Z,30nm,1.6s						
NJ2	**Nanjing**	**30.48**	**312**	*e*P	P	**19 37 32.4**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SOEI	**Soe**	**30.70**	**223**	P	P	**19 37 34.8**	**0.0**
SOEI				IAmb	IAmb	19 38 10.4	
	comp=Z,34nm,1.2s						
USRK	**Ussuriysk Ar.**	**32.90**	**343**	LR	LR	19 50 07.0	
	comp=Z,128nm,21.4s,baz=192,slow=34						
WB0	**Warramunga Arr**	**34.34**	**198**	P	P	**19 38 05.7**	**-0.8**
WB0				IAmb	IAmb	19 38 30.0	
	comp=Z,22nm,1.6s						
WR8	**Warramunga Arr**	**34.49**	**198**		P	**19 38 07.4**	**-0.3**
WR8				IAmb	IAmb	19 39 06.8	
	comp=Z,21nm,1.6s						
WRA	**Warramunga Arr**	**34.53**	**198**	P	P	**19 38 08.5**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=22,slow=9.6,SNR=28						
	comp=Z,1.8nm,0.6s						
WRA	**Warramunga Arr**	**34.53**	**198**	P	P	**19 38 06.9**	**-1.1**
BNX	**BinXian**	**35.75**	**339**	⇑P	P	**19 38 21.6**	**+3.3**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**36.47**	**212**	P	P	**19 38 25.0**	**+0.4**
AS31	**Alice Springs**	**38.17**	**197**	P	P	**19 38 38.2**	**-0.9**
ASAR	**Alice Springs**	**38.17**	**197**	P	P	**19 38 39.6**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=23,slow=9.6,SNR=23						
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**38.17**	**197**	P	P	**19 38 38.4**	**-0.8**
EIDS	**Eidsvold**	**38.74**	**171**	P	P	**19 38 42.9**	**-0.9**
EIDS				IAmb	IAmb	19 39 09.9	
	comp=Z,24nm,1.7s						
HEH	**HeiHe**	**39.70**	**342**	*e*P	P	**19 38 52.0**	**+0.4**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**40.20**	**320**	*e*P	P	**19 38 56.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,61nm,5.0s						
HHC				LR	LR		
	comp=N,150nm,14.5s						
HHC				LR	LR		
	comp=E,110nm,14.9s						
HHC				LR	LR		
	comp=Z,200nm,14.7s						
PETK	**Petropavlovsk-**	**41.12**	**12**	PcP	**PcP**	**19 41 02.7**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=241,slow=3.0,SNR=2.3						
MBWA	**Marble Bar**	**42.19**	**216**	P	P	**19 39 12.1**	**-0.3**
PZH	**PanZhiHua**	**42.62**	**295**	P	P	**19 39 14.8**	**-1.3**
LZH	**Lanzhou**	**43.41**	**309**	*e*P	P	**19 39 25.5**	**+3.1**
LZH				pP	sP	19 39 41.3	-2.3
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZDM	**Lanzhou Array**	**43.48**	**309**	P	P	**19 39 22.1**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=111,slow=7.9,SNR=1.7						
	comp=Z,1.2nm,0.4s						
KULM	**Kulim**	**44.43**	**264**	P	P	**19 39 31.7**	**+1.1**
KULM				IAmb	IAmb	19 39 40.5	
	comp=Z,21nm,1.2s						
CMAR	**Chiang Mai Arr**	**44.56**	**283**	P	P	**19 39 32.8**	**+1.2**
	comp=Z,2.5nm,0.7s,baz=89,slow=7.9,SNR=22						
CMAR				PcP	**PcP**	**19 41 15.2**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=97,slow=3.5,SNR=2.4						
CMAR				LR	LR	19 58 29.0	
	comp=Z,48nm,20.2s,baz=190,slow=36						
	comp=Z,2.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.56**	**283**	P	P	**19 39 30.3**	**-1.3**
STKA	**Stephens Creek**	**44.89**	**184**	P	P	**19 39 34.0**	**0.0**
	comp=Z,1.3nm,0.6s,baz=334,slow=10,SNR=5.2						
	comp=Z,1.3nm,0.6s						
MNAI	**Manna**	**45.25**	**250**	P	P	**19 39 36.4**	**-0.8**
BBOO	**Buckleboo**	**46.50**	**190**	P	P	**19 39 46.7**	**+0.1**
MA2	**Magadan**	**46.54**	**4**	P	P	**19 39 46.0**	**-0.6**
MA2				IAmb	IAmb	19 40 33.2	
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**47.17**	**325**	P	P	**19 39 53.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=140,slow=8.9,SNR=6.2						
SONM				PcP	**PcP**	**19 41 23.7**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=149,slow=4.3,SNR=6.4						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**47.17**	**325**	P	P	**19 39 52.6**	**+0.7**
GSI	**Gunungsitoli**	**48.42**	**260**	P	P	**19 40 00.2**	**-1.7**
KIWB	**Kanaga Island**	**49.11**	**30**	P	P	**19 40 06.9**	**+0.3**
ADK	**Adak**	**49.36**	**30**	P	P	**19 40 08.3**	**-0.2**
ADK	**Adak**	**49.36**	**30**	P	P	**19 40 09.1**	**+0.6**
YAK	**Yakutsk**	**50.04**	**351**	P	P	**19 40 13.8**	**+0.3**
TOO	**Toolangi**	**50.45**	**180**	P	P	**19 40 17.7**	**+0.7**
ATKA	**Atka Island**	**50.79**	**31**	P	P	**19 40 19.2**	**-0.2**
SPIA	**Saint Paul Isl**	**55.49**	**28**	P	P	**19 40 54.2**	**+0.3**
	baz=236						
UNV	**Unalaska Valle**	**55.61**	**33**	P	P	**19 40 54.5**	**-0.3**
UNV	**Unalaska Valle**	**55.61**	**33**	P	P	**19 40 54.8**	**+0.1**
	baz=242						
LVA	**Lava Point**	**56.01**	**32**	P	P	**19 40 57.2**	**-0.4**
AKUT	**Akutan**	**56.13**	**32**	P	P	**19 40 58.2**	**-0.2**
GAMB	**Gambell**	**58.83**	**21**	P	P	**19 41 17.6**	**+0.3**
	baz=239						
M11K	**Mekoryuk**	**59.00**	**26**	P	P	**19 41 18.8**	**+0.3**
	baz=239						
SDPT	**Sand Point**	**59.43**	**33**		P	**19 41 21.1**	**-0.4**
SDPT	**Sand Point**	**59.43**	**33**	P	P	**19 41 21.6**	**+0.1**
	baz=247,SNR=6.6						
CNBA	**Chernabura Isl**	**59.70**	**33**		P	**19 41 23.8**	**+0.3**
CHNA	**Chernabura Isl**	**59.70**	**33**	P	P	**19 41 23.7**	**+0.2**
	baz=248,SNR=5.9						
M13K	**Dall Lake**	**60.24**	**27**	P	P	**19 41 27.4**	**+0.4**
	baz=242						
S14K	**Fog Glacier**	**60.27**	**32**	P	P	**19 41 28.0**	**+0.5**
	baz=247						
K13K	**Kusilvak Mount**	**60.44**	**25**	P	P	**19 41 29.0**	**+0.6**
	baz=240						
TCW	**Tory Channel**	**60.47**	**155**	P	P	**19 41 28.4**	**-0.4**
O14K	**Tigyukauivet M**	**60.65**	**28**	P	P	**19 41 30.3**	**+0.5**
O14K				IAmb	IAmb	19 41 40.0	
	comp=Z,12nm,1.2s						
O14K	**Tigyukauivet M**	**60.65**	**28**	P	P	**19 41 30.5**	**+0.7**
	baz=244						
N14K	**Kuskokwak Cree**	**60.75**	**28**	P	P	**19 41 30.7**	**+0.2**
	baz=244						
L14K	**Kuka Creek**	**60.97**	**26**	P	P	**19 41 32.2**	**+0.2**
	baz=242						
M14K	**Bethel**	**61.01**	**27**	P	P	**19 41 32.5**	**+0.3**
	baz=243						
TNA	**Tin City**	**61.20**	**20**	P	P	**19 41 34.1**	**+0.6**
	baz=234						
O15K	**Ungalikthiuk R**	**61.29**	**29**	P	P	**19 41 34.5**	**+0.3**
O15K	**Ungalikthiuk R**	**61.29**	**29**	P	P	**19 41 34.7**	**+0.5**
	baz=246						
M15K	**Kasigluk River**	**61.54**	**27**	P	P	**19 41 36.2**	**+0.4**
	baz=244						
ANM	**Nome**	**61.54**	**22**	P	P	**19 41 36.5**	**+0.6**
	baz=238						
N15K	**Kwethluk River**	**61.58**	**28**		P	**19 41 36.4**	**+0.2**
N15K				IAmb	IAmb	19 41 38.1	
	comp=Z,7.2nm,0.7s						
N15K	**Kwethluk River**	**61.58**	**28**	P	P	**19 41 36.6**	**+0.4**
	baz=245						
L15K	**Ungalak Mounta**	**61.63**	**26**	P	P	**19 41 37.2**	**+0.7**
	baz=243						
F14K	**Arctic Creek**	**61.70**	**21**	P	P	**19 41 37.5**	**+0.6**
	baz=236						
MKAR	**Makanchi Array**	**61.91**	**316**	P	P	**19 41 39.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=101,slow=6.7,SNR=6.7						
MKAR				PcP	**PcP**	**19 42 19.4**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=110,slow=5.3,SNR=4.1						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**61.91**	**316**	P	P	**19 41 39.5**	**+0.9**
ZALV	**Zalesovo Beam**	**62.07**	**325**	P	P	**19 41 39.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=7.6,SNR=1.7						
ZALV				PcP	**PcP**	**19 42 19.1**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=116,slow=3.4,SNR=4.8						
	comp=Z,0.2nm,0.3s						
P16K	**Nushagak River**	**62.10**	**29**	P	P	**19 41 40.1**	**+0.5**
	baz=248						
MAKZ	**Makanchi**	**62.12**	**316**	P	P	**19 41 41.6**	**+1.5**
CHIR	**Chirikof Islan**	**62.17**	**33**	P	P	**19 41 40.6**	**+0.4**
	baz=251						
G15K	**Niukluk**	**62.26**	**22**	P	P	**19 41 41.4**	**+0.8**
	baz=239						
O16K	**Kokwok River B**	**62.27**	**29**		P	**19 41 40.9**	**+0.1**
O16K				IAmb	IAmb	19 41 42.1	
	comp=Z,6.8nm,0.8s						
O16K	**Kokwok River B**	**62.27**	**29**	P	P	**19 41 41.4**	**+0.6**
	baz=247,SNR=5.2						
N16K	**Nishlik Lake**	**62.31**	**28**	P	P	**19 41 41.5**	**+0.4**
	baz=246						
R17L	**Mt. Peulik Vol**	**62.39**	**31**	P	P	**19 41 42.1**	**+0.4**
	baz=250						
F15K	**North Star Dit**	**62.41**	**21**	P	P	**19 41 42.4**	**+0.7**
	baz=238						
M16K	**Timber Creek**	**62.45**	**27**	P	P	**19 41 42.7**	**+0.8**
	baz=246						
L16K	**Owhat River**	**62.51**	**26**	P	P	**19 41 43.1**	**+0.7**
	baz=245						
J16K	**Anvik River**	**62.73**	**24**	P	P	**19 41 44.3**	**+0.5**
	baz=243						
H16K	**Elim**	**62.74**	**23**	P	P	**19 41 44.2**	**+0.3**
	baz=241						
O17K	**Koliganek Bris**	**62.80**	**29**	P	P	**19 41 45.1**	**+0.7**
	baz=248,SNR=7.8						
Q17K	**Contact Creek**	**62.84**	**31**	P	P	**19 41 45.0**	**+0.2**
	baz=250						
P17K	**Kvichak River**	**62.90**	**30**	P	P	**19 41 45.8**	**+0.8**
	baz=249						
I17K	**Unalakleet**	**62.97**	**24**	P	P	**19 41 46.4**	**+1.0**
	baz=243						
N17K	**Nushagak Hills**	**63.05**	**28**		P	**19 41 46.6**	**+0.7**
N17K				IAmb	IAmb	19 41 47.9	
	comp=Z,5.9nm,0.8s						
N17K	**Nushagak Hills**	**63.05**	**28**	P	P	**19 41 46.7**	**+0.7**
	baz=248,SNR=5.9						
G16K	**Koyuk River**	**63.07**	**22**	P	P	**19 41 46.8**	**+0.8**
	baz=249						
SII	**Sitkinak Islan**	**63.16**	**33**	P	P	**19 41 47.5**	**+0.6**
	baz=252						
L17K	**Donlin**	**63.19**	**26**	P	P	**19 41 47.6**	**+0.7**
	baz=246						
M17K	**Holitna River**	**63.27**	**27**		P	**19 41 47.4**	**-0.1**
M17K				IAmb	IAmb	19 41 49.5	
	comp=Z,6.4nm,0.8s						
M17K	**Holitna River**	**63.27**	**27**	P	P	**19 41 47.8**	**+0.3**
	baz=247						
J17K	**VABM Dome**	**63.40**	**25**	P	P	**19 41 48.7**	**+0.5**
	baz=244						
Q18K	**Katmai Hardscr**	**63.41**	**30**	P	P	**19 41 48.4**	**-0.2**
	baz=251						
K17K	**Iditarod**	**63.43**	**26**		P	**19 41 48.5**	**0.0**
K17K				IAmb	IAmb	19 41 51.0	
	comp=Z,6.5nm,0.7s						
K17K	**Iditarod**	**63.43**	**26**	P	P	**19 41 48.7**	**+0.2**
	baz=246						
P18K	**Big Mountain,**	**63.55**	**30**	P	P	**19 41 49.6**	**+0.2**
	baz=250						
C16K	**Lisburne Hills**	**63.59**	**18**	P	P	**19 41 49.5**	**+0.1**
	baz=236						
N18K	**Kilae Creek**	**63.70**	**28**	P	P	**19 41 50.5**	**+0.2**
	baz=249						
O18K	**Koktuh Hills**	**63.72**	**29**	P	P	**19 41 50.6**	**+0.1**
	baz=250						
G17K	**Kiwalik Mounta**	**63.74**	**22**	P	P	**19 41 51.0**	**+0.5**
	baz=242						
H17K	**Granite Mounta**	**63.76**	**23**	P	P	**19 41 51.0**	**+0.4**
	baz=243						
OHAK	**Old Harbor**	**63.83**	**32**	P	P	**19 41 51.5**	**+0.3**
	baz=253						
L18K	**Granite Mounta**	**63.92**	**26**	P	P	**19 41 52.0**	**+0.3**
	baz=247						
F17K	**Baldwin Pennin**	**63.98**	**21**	P	P	**19 41 52.8**	**+0.8**
	baz=241						
D17K	**Noatak River**	**64.00**	**20**	P	P	**19 41 53.0**	**+0.9**
	baz=238						
M18K	**Stony River**	**64.02**	**27**	P	P	**19 41 52.9**	**+0.5**
	baz=248						
E17K	**Hotham Inlet**	**64.10**	**20**	P	P	**19 41 53.2**	**+0.4**
	baz=240						
Q19K	**Cape Douglas,**	**64.17**	**30**	P	P	**19 41 53.7**	**+0.2**
	baz=252						
RDOG	**Red Dog Mine**	**64.24**	**19**	P	P	**19 41 54.2**	**+0.4**
	baz=238						
O19K	**Port Alsworth**	**64.26**	**29**	P	P	**19 41 54.4**	**+0.5**
	baz=250						
KDAK	**Kodiak Island**	**64.36**	**32**	P	P	**19 41 54.2**	**-0.5**
	comp=Z,6.0nm,0.6s,baz=279,slow=5.1,SNR=10						
	comp=Z,6.0nm,0.6s						
KDAK	**Kodiak Island**	**64.36**	**32**	P	P	**19 41 54.7**	**0.0**
KDAK	**Kodiak Island**	**64.36**	**32**	P	P	**19 41 55.0**	**+0.4**
	baz=253						
KDAK	**Kodiak Island**	**64.36**	**32**	P	P	**19 41 55.2**	**+0.6**
KDAK				pP	pP	**19 42 06.9**	**-2.7**
C17K	**DeLong Mountai**	**64.38**	**19**	P	P	**19 41 55.1**	**+0.4**
	baz=238						
N19K	**Bonanza Creek**	**64.39**	**28**	P	P	**19 41 55.3**	**+0.3**
	baz=250						
H18K	**Honhosa River**	**64.44**	**23**	P	P	**19 41 55.5**	**+0.4**
	baz=244						
P19K	**Oil Pt**	**64.60**	**30**	P	P	**19 41 56.5**	**+0.2**
	baz=252						
F18K	**Selawik**	**64.62**	**21**	P	P	**19 41 56.8**	**+0.6**
	baz=242						
G18K	**Tagagawik**	**64.66**	**22**	P	P	**19 41 56.6**	**+0.1**
	baz=244						
E18K	**Tukpahlearik C**	**64.68**	**20**	P	P	**19 41 57.1**	**+0.5**
	baz=241						
L19K	**White Mountain**	**64.70**	**27**	P	P	**19 41 57.4**	**+0.5**
	baz=249,SNR=5.9						
M19K	**Big River Lodg**	**64.81**	**27**	P	P	**19 41 57.9**	**+0.4**
	baz=250						
GCSA	**Galena City Sc**	**64.85**	**24**	P	P	**19 41 58.2**	**+0.6**
	baz=246						
KURK	**Kurchatov**	**65.02**	**320**		P	**19 41 58.7**	**-0.3**
KURK	**Kurchatov**	**65.02**	**320**	P	P	**19 41 59.7**	**+0.7**
KURK				pP	pP	**19 42 12.0**	**-2.1**
O20K	**Slope Mountain**	**65.03**	**29**	P	P	**19 41 59.3**	**+0.2**
	baz=252						
J19K	**Poorman**	**65.05**	**25**	P	P	**19 41 59.4**	**+0.4**
	baz=248,SNR=8.9						
KURBB	**Kurchatov Arra**	**65.06**	**320**	P	P	**19 41 59.3**	**0.0**
	comp=Z,2.9nm,0.7s,baz=103,slow=6.5,SNR=27						
	comp=Z,2.9nm,0.7s						
C18K	**Utukok River**	**65.09**	**19**	P	P	**19 41 59.8**	**+0.5**
	baz=240						
H19K	**Roundabout Mou**	**65.33**	**23**	P	P	**19 42 01.3**	**+0.5**
	baz=246						
G19K	**Purcell Mounta**	**65.35**	**22**		P	**19 42 00.7**	**-0.3**
G19K				IAmb	IAmb	19 42 02.6	
	comp=Z,5.4nm,0.8s						
G19K	**Purcell Mounta**	**65.35**	**22**	P	P	**19 42 01.3**	**+0.3**
	baz=245,SNR=5.9						
M20K	**Styx River**	**65.36**	**27**	P	P	**19 42 01.7**	**+0.4**
	baz=251						
K20K	**Telida**	**65.46**	**26**	P	P	**19 42 02.4**	**+0.6**
	baz=249						
CNPM	**China Poot**	**65

baz=249,SNR=6.7
I20K Naaghedeneel 65.81 24 P P 19 42 04.6 +0.6
baz=248
C19K Lookout Ridge 65.83 19 P P 19 42 04.2 +0.2
baz=242
E19K Redstone River 65.86 21 P 19 42 04.0 -0.2
E19K IAmb IAmb 19 42 37.0
comp=Z,6.0nm,0.8s
E19K Redstone River 65.86 21 P P 19 42 04.9 +0.7
baz=244
H20K Anotleneega Mo 65.92 23 P P 19 42 05.0 +0.3
baz=248,SNR=6.3
D19K Kuna River 66.02 20 P P 19 42 05.7 +0.4
baz=243
PPLA Purkeypile 66.11 26 P P 19 42 06.5 +0.4
baz=251,SNR=5.3
SKT Skwentna 66.11 28 P P 19 42 06.1 +0.2
baz=252
F20K Avaraart Lake 66.22 22 P P 19 42 07.0 +0.5
baz=246
SLKM Skilak Lake 66.30 29 P P 19 42 07.0 -0.1
SLKM IAmb IAmb 19 42 07.9
comp=Z,8.7nm,0.7s
CAST Castle Rocks 66.32 26 P P 19 42 07.6 +0.3
CAST IAmb IAmb 19 42 08.8
comp=Z,6.7nm,0.6s
CAST Castle Rocks 66.32 26 P P 19 42 07.9 +0.6
baz=251,SNR=14
CHUM Lake Minchumin 66.38 25 P P 19 42 08.2 +0.6
baz=251,SNR=6.5
O22K Cooper Landing 66.53 29 P P 19 42 08.9 +0.4
baz=255
E20K Nigu River 66.56 20 P P 19 42 09.3 +0.5
baz=245
SEW Seward 66.56 30 P P 19 42 09.2 +0.4
baz=255
D20K Etivluk River 66.61 20 P P 19 42 09.6 +0.6
baz=245
L22K Petersville 66.62 27 P P 19 42 08.6 -0.7
L22K IAmb IAmb 19 42 26.2
comp=Z,7.6nm,1.2s
L22K Petersville 66.62 27 P P 19 42 09.7 +0.5
baz=253
RC01 Rabbit Creek A 66.68 29 P P 19 42 10.1 +0.5
baz=254
H21K Melozitna Rive 66.78 24 P P 19 42 10.7 +0.5
baz=250
G21K Allakaket 66.82 23 P P 19 42 11.1 +0.6
baz=249
I21K Tanana 66.94 24 P P 19 42 11.6 +0.5
baz=251
B20K Meade River 67.00 18 P P 19 42 12.0 +0.6
baz=244
F21K Alatna River 67.09 22 P P 19 42 12.5 +0.4
baz=248
PMR Palmer 67.10 28 P P 19 42 12.3 +0.1
baz=255
TRF Thorofare Moun 67.10 26 P P 19 42 12.2 -0.2
baz=253
GHO Glory Hole Cre 67.24 28 P P 19 42 13.3 +0.1
GHO IAmb IAmb 19 43 51.5
comp=Z,6.3nm,0.6s
KNK Knik Glacier 67.36 29 P P 19 42 14.0 0.0
baz=256
E21K Killik River 67.38 20 P P 19 42 14.2 +0.2
baz=247
MLY Manley 67.39 24 P P 19 42 14.6 +0.5
MLY Manley 67.39 24 P P 19 42 14.2 +0.1
baz=252,SNR=7.8
C21K Knifeblade Rid 67.39 20 P P 19 42 14.4 +0.4
baz=246
H22K Ishtalitna Cre 67.42 23 P P 19 42 14.2 0.0
baz=251
SML Sawmill 67.52 28 P P 19 42 14.9 -0.1
baz=255,SNR=6.7
P23K Montague Islan 67.53 30 P P 19 42 15.0 0.0
baz=257
B21K Ikpikpuk River 67.64 19 P P 19 42 15.8 +0.4
baz=246
F22K John River 67.67 22 P P 19 42 16.0 +0.2
baz=250,SNR=7.6
WAT1 Susitna Watana 67.69 27 P P 19 42 16.1 +0.1
baz=255
G22K Bettles 67.71 22 P P 19 42 16.4 +0.4
baz=250
A21K Barrow 67.75 17 P P 19 42 16.7 +0.6
baz=244
MCK McKinley 67.76 26 P P 19 42 16.6 +0.2
baz=254
NEA2 Nenana 67.94 25 P P 19 42 17.9 +0.4
baz=254
WAT6 Susitna Watana 67.98 27 P P 19 42 18.2 +0.2
baz=256
I23K Minto, Yukon-K 67.98 25 P P 19 42 18.4 +0.6
baz=253,SNR=5.6
SCM Sheep Creek Mo 67.99 28 P P 19 42 18.2 +0.2
SCM Sheep Creek Mo 67.99 28 P P 19 42 18.2 +0.2
baz=256,SNR=7.1
E22K Anaktuvuk Pass 68.02 21 P P 19 42 18.5 +0.5
baz=250
HIN Hinchinbrook I 68.06 30 P P 19 42 18.6 +0.2
HIN IAmb IAmb 19 42 22.2
comp=Z,15nm,1.1s
A22K Sinclair Lake 68.09 18 P P 19 42 19.0 +0.7
baz=245
H23K Yukon River 68.11 24 P P 19 42 19.3 +0.7
baz=253
G23K Bananza Creek 68.20 23 P P 19 42 19.6 +0.4
baz=252,SNR=7.3
DHY Denali Highway 68.27 27 P P 19 42 20.2 +0.4
DHY IAmb IAmb 19 43 09.8
comp=Z,15nm,1.9s
DHY Denali Highway 68.27 27 P P 19 42 20.2 +0.4
baz=256
COLD Coldfoot 68.29 22 P P 19 42 20.3 +0.6
baz=252,SNR=6.1
B22K Teshekpuk Lake 68.30 19 P P 19 42 20.5 +0.9
baz=247
EYAK Cordova Ski Ar 68.45 30 P P 19 42 21.5 +0.7
baz=258
KLU Klutina 68.57 29 P P 19 42 21.9 +0.4
baz=258
M24K Tolsona, Glenn 68.58 28 P P 19 42 21.9 +0.3
baz=257
D23K Nanushuk River 68.69 20 P P 19 42 22.7 +0.6
baz=250,SNR=6.2
POKR Poker Plat Res 68.76 25 P P 19 42 23.4 +0.7
baz=255
E23K Chandalar 68.77 21 P P 19 42 23.2 +0.4
baz=252,SNR=13
H24K Noodor Dome 68.77 24 P P 19 42 23.2 +0.4
baz=254
ILAR Eielson Array 68.90 25 P P 19 42 21.9 -1.5
comp=Z,2.8nm,0.7s,baz=250,slow=5.8,SNR=26
comp=Z,2.8nm,0.7s
ILAR Eielson Array 68.90 25 P P 19 42 22.4 -1.1
TOLK Toolik Lake Re 68.97 21 P P 19 42 24.4 +0.5
baz=252
KAIM Kayak Island 68.99 31 P P 19 42 24.6 +0.5
baz=260
C23K Itkillik River 69.01 20 P P 19 42 24.6 +0.5
baz=250,SNR=5.4
BMRM Bremner River 69.09 29 P P 19 42 25.1 +0.3
baz=259
PAX Paxson 69.09 27 P P 19 42 25.0 +0.2
baz=258
HARP HAARP 69.11 28 P P 19 42 25.1 +0.2
baz=258
K24K Donnelly Dome 69.14 26 P P 19 42 25.0 0.0
baz=257
G24K Hadweenzic Riv 69.16 23 P P 19 42 25.4 +0.3
baz=254,SNR=5.6
E24K Your Creek 69.18 22 P P 19 42 25.8 +0.5
baz=253,SNR=6.9
N25K Chitina, Valde 69.21 29 P P 19 42 25.8 +0.2
baz=259
F24K Squaw Lake 69.24 22 P P 19 42 26.2 +0.6
baz=254,SNR=5.6
D24K Happy Valley 69.39 20 P P 19 42 27.0 +0.6
baz=252
J25K Salcha River, 69.49 26 P P 19 42 27.6 +0.3
baz=257
RIDG Independent Ri 69.53 27 P P 19 42 28.1 +0.6
baz=258
PRP Porcupine Dome 69.64 25 P P 19 42 28.9 +0.7
baz=257
VRDI Verde Repeater 69.68 29 P 19 42 27.3 -1.4
G25K Bearman Lake 69.71 23 P P 19 42 29.4 +1.0
baz=256
CRQE Cirque 69.78 30 P P 19 42 29.8 +0.6
baz=261
KKAR Karatay Array 69.85 311 P P 19 42 30.3 +0.5
MCARA McCarthy VSAT 69.91 29 P P 19 42 30.4 +0.6
baz=260
SCRK Sand Creek 69.95 26 P P 19 42 30.7 +0.6
baz=259
GAR Garm 70.01 307 P P 19 42 32.2 +1.2
F25K Christian Rive 70.09 22 P P 19 42 31.6 +0.7
baz=256,SNR=5.9
M26K Nabesna, AK 70.10 28 P P 19 42 31.8 +0.8
baz=260
E25K Arctic Village 70.25 22 P P 19 42 32.5 +0.8
baz=256
D25K Kavik River 70.27 21 P P 19 42 32.4 +0.5
baz=254,SNR=9.7
BVAR Borovoye Array 70.36 322 P P 19 42 33.0 +0.2
comp=Z,2.5nm,0.6s,baz=103,slow=8.7,SNR=17
comp=Z,2.5nm,0.6s
BORK Borovoye 70.41 322 P P 19 42 32.6 -0.3
GRNC Granite Creek 70.42 30 P P 19 42 33.7 +0.5
GRNC IAmb IAmb 19 42 34.8
comp=Z,8.8nm,0.7s
M27K Edge Creek, AK 70.61 28 P P 19 42 34.8 +0.5
baz=261
G26K Porcupine Rive 70.64 23 P P 19 42 34.8 +0.6
baz=258
F26K Sheenjek River 70.67 22 P P 19 42 35.0 +0.6
baz=257,SNR=8.2
L27K Beaver Creek, 70.74 27 P P 19 42 35.4 +0.6
baz=261
BCAR Beaver Creek A 70.76 27 P P 19 42 35.1 +0.1
C26K Camden Bay 70.92 20 P P 19 42 36.4 +0.6
baz=256
PINM Pinnacle 71.08 31 P P 19 42 37.7 +0.7
baz=263
BVCY Beaver Creek 71.08 28 P P 19 42 37.6 +0.7
baz=262
YUK3 Moose Creek 71.19 29 P P 19 42 38.7 +0.9
baz=263,SNR=9.4
O28M Mount Upton 71.19 30 P P 19 42 38.3 +0.3
baz=263,SNR=12
I27K Kandik River 71.25 25 P P 19 42 38.7 +0.7
baz=260
C27K Jago River 71.26 21 P P 19 42 38.5 +0.7
baz=257,SNR=5.0
H27K Steamboat Moun 71.39 24 P P 19 42 39.4 +0.6
baz=260,SNR=11
G27K Doyon Strip 71.44 24 P P 19 42 39.8 +0.8
baz=260
YUK8 Steele Glacier 71.46 30 P P 19 42 40.2 +0.6
baz=263
E27K Coleen River 71.71 22 P P 19 42 41.5 +0.8
baz=259
BRWY Burwash Landin 71.82 29 P P 19 42 42.4 +1.0
baz=264
I28M Miner Creek 71.91 25 P P 19 42 42.7 +0.7
baz=262,SNR=6.8
O29M Mount Kennedy 71.94 31 P P 19 42 43.1 +0.8
baz=265,SNR=5.7
DAWY Dawson 71.96 27 P P 19 42 43.1 +0.8
baz=263
YUK4 Talbot Arm 72.00 30 P P 19 42 43.8 +1.0
baz=264,SNR=5.8
YUK6 Outpost Mounta 72.10 30 P P 19 42 43.8 +0.4
baz=265
D27M Malcolm River 72.13 21 P P 19 42 43.8 +0.6
baz=260
M29M Somme Creek 72.19 28 P P 19 42 44.3 +0.6
baz=264,SNR=11
F28M Old Crow 72.26 23 P P 19 42 44.9 +1.0
baz=261,SNR=8.4
P29M Windy Craggy 72.30 31 P P 19 42 45.0 +0.7
baz=266
L29M L29M 72.41 28 P P 19 42 45.8 +0.8
baz=264,SNR=11
HYT Haines Junctio 72.51 30 P 19 42 46.6 +1.0
HYT IAmb IAmb 19 42 48.4
comp=Z,11nm,0.9s
HYT Haines Junctio 72.51 30 P P 19 42 46.3 +0.7
baz=266,SNR=16
E28M Babbage River 72.53 22 P P 19 42 46.1 +0.6
baz=261,SNR=5.1
H29M Whitestone 72.65 24 P P 19 42 46.5 +0.2
baz=263
P30M Million Dollar 72.72 31 P P 19 42 46.8 -0.1
baz=266
N30M Aishikik Lake 72.75 29 P P 19 42 47.6 +0.6
baz=266,SNR=5.9
K29M Barlow Dome 72.76 27 P P 19 42 47.7 +0.6
baz=265,SNR=7.2
G29M Pine Creek 72.88 24 P P 19 42 48.3 +0.7
baz=263
D28M Stokes Point 72.93 21 P P 19 42 48.4 +0.6
baz=262
M30M Minto, Yukon 72.98 28 P 19 42 48.6 +0.3
M30M Minto, Yukon 72.98 28 P P 19 42 48.7 +0.3
baz=266,SNR=6.9
S31K Pelican 72.98 33 P P 19 42 48.9 +0.6
baz=268
PLBC Pleasant Camp 72.99 32 P P 19 42 48.9 +0.6
baz=267,SNR=6.5
E29M Blow River 73.10 22 P P 19 42 49.5 +0.6
baz=263
O30N Mendenhall 73.19 30 P P 19 42 49.9 +0.3
baz=267
J30M Hart River 73.34 26 P P 19 42 50.8 +0.2
baz=266,SNR=5.5
I30M Mount Dempster 73.37 26 P P 19 42 51.3 +0.6
baz=265
N31M Braeburn, Yuko 73.38 29 P P 19 42 51.6 +0.9
baz=267
SIT Sitka 73.44 34 P P 19 42 52.0 +0.9
baz=269
SKAG Skagway 73.52 32 P P 19 42 52.2 +0.7
baz=268
G30M tAoh Zraii Nji 73.59 24 P P 19 42 52.5 +0.7
baz=265
WHY Whitehorse 73.78 30 P P 19 42 53.5 +0.4
baz=268
F30M Barrier River 73.81 23 P P 19 42 53.7 +0.6
baz=265,SNR=5.5
S32K Killisnoo 73.86 34 P P 19 42 54.1 +0.6
baz=269
M31M Drury Creek, Y 74.08 29 P P 19 42 55.2 +0.5
baz=268
H31M Peel River 74.26 25 P P 19 42 56.3 +0.6
baz=267
P32M Atlin 74.34 31 P P 19 42 57.0 +0.6
baz=269
G31M Satah River 74.35 24 P P 19 42 56.8 +0.7
baz=267,SNR=10
F31M Tsiigehtchic 74.58 23 P P 19 42 58.0 +0.5
baz=267
U33K Whale Pass 74.66 35 P P 19 42 59.4 +1.3
U33K IAmb IAmb 19 43 00.6
comp=Z,13nm,0.8s
U33K Whale Pass 74.66 35 P P 19 42 58.9 +0.7
baz=271
CRAG Craig 74.67 36 P P 19 42 59.0 +0.8
baz=271
N32M Quiet Lake 74.67 30 P P 19 42 58.9 +0.7
baz=269
INK Inuvik 74.71 22 P P 19 42 59.2 +0.9
baz=267
P33M Teslin, Yukon 74.80 31 P P 19 42 59.7 +0.7
baz=270
Q32M Nakina River 75.08 32 P P 19 43 01.5 +0.7
baz=271
WRAK Wrangell Islan 75.08 35 P P 19 43 01.3 +0.7
WRAK IAmb IAmb 19 43 03.0
comp=Z,14nm,0.8s
WRAK Wrangell Islan 75.08 35 P P 19 43 01.6 +1.0
baz=271,SNR=5.4
V35K Ketchikan 75.53 36 P P 19 43 04.5 +1.3
baz=272
MMPY Sheldon Lake, 75.54 28 P P 19 43 04.1 +0.9
baz=271
S34M Telegraph Cree 75.70 33 P P 19 43 05.3 +1.1
baz=272,SNR=9.1
R33M Jennings River 75.74 32 P P 19 43 05.8 +1.3
baz=272,SNR=8.4
T35M Bob Quinn 76.22 34 P P 19 43 08.5 +1.4
baz=273,SNR=8.2
DLBC Dease Lake 76.27 33 P P 19 43 08.4 +1.0
baz=273,SNR=11
WTLY Watson Lake, Y 76.81 31 P P 19 43 11.3 +0.8
baz=273
AB31 Akbulak array 76.97 318 P P 19 43 11.3 -0.2
ABKAR Akbulak array 76.97 318 P P 19 43 11.4 -0.1
TGTN Hyland Airport 76.98 29 P P 19 43 12.2 +0.8
baz=274
A36M Sachs Harbour 77.51 19 P P 19 43 15.0 +0.9
baz=274
HOLB Holberg 77.97 41 P P 19 43 16.8 -0.4
C36M Paulatuk 78.12 21 P P 19 43 18.0 +0.5
baz=276
LIRD Liard River Hi 78.23 31 P P 19 43 19.3 +0.9
baz=276
WRGLY Wrigley 79.06 27 P P 19 43 23.7 +1.0
baz=277
KOTAN Kotaneelee Air 79.17 31 P P 19 43 24.2 +0.7
baz=277,SNR=6.5
GNW Green Mountain 81.86 43 P 19 43 39.1 +0.9
GNW IAmb IAmb 19 43 40.9
comp=Z,11nm,0.9s
BBOR Butler Butte 82.84 48 P P 19 43 43.5 -0.1
I04A Tendick Farm, 82.86 47 P P 19 43 44.4 +0.8
I04A IAmb IAmb 19 43 45.7
comp=Z,8.6nm,1.1s
M02C Callahan 83.01 49 P 19 43 45.1 +0.7
M02C IAmb IAmb 19 43 46.9
comp=Z,8.3nm,1.1s
YKA Yellowknife Ar 83.18 27 P P 19 43 44.7 0.0
comp=Z,3.9nm,0.7s,baz=288,slow=5.2,SNR=20
comp=Z,3.9nm,0.7s
YKA Yellowknife Ar 83.18 27 P P 19 43 44.1 -0.6
WIFE Three Sisters- 83.22 46 P 19 43 46.5 +0.9
WIFE IAmb IAmb 19 43 48.7
comp=Z,12nm,0.9s
O03E Paynes Creek 84.01 50 P 19 43 49.2 -0.4
O03E IAmb IAmb 19 44 06.2
comp=Z,10nm,1.1s
BEKR Beckworth 85.18 50 P 19 43 55.7 +0.1
BEKR IAmb IAmb 19 43 57.7
comp=Z,4.5nm,0.9s
NEW Newport 85.45 42 P P 19 43 57.5 +0.8
comp=Z,7.3nm,0.7s,baz=312,slow=3.7,SNR=14
comp=Z,7.3nm,0.7s
BMO Blue Mountains 86.19 45 P P 19 44 00.7 +0.2
BMO IAmb IAmb 19 44 02.6
comp=Z,8.8nm,0.9s
PLID Pearl Lake 87.03 44 P 19 44 04.6 0.0
PLID IAmb IAmb 19 44 06.6
comp=Z,6.2nm,0.8s
NVAR Mina Array Bea 87.08 51 P P 19 44 06.3 +1.3
comp=Z,1.8nm,0.7s,baz=257,slow=6.2,SNR=8.5
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 87.55 342 P P 19 44 07.0 +0.6
comp=Z,4.8nm,0.9s,baz=51,slow=7.9,SNR=6.4
comp=Z,4.8nm,0.9s
ARCES ARCESS Array B 87.55 342 P P 19 44 05.9 -0.5
TPH Tonopah 87.99 51 P P 19 44 10.1 +0.7
TPH IAmb IAmb 19 44 19.4
comp=Z,14nm,1.7s
HLID Hailey 88.54 46 P 19 44 11.7 -0.2
HLID IAmb IAmb 19 44 14.9
comp=Z,5.5nm,0.9s
ELK Elko 88.75 49 P 19 44 12.8 -0.2
MCMT McKenzie Canyo 89.24 44 P P 19 44 15.6 +0.3
PFO Pinyon Flats O 89.76 56 LR LR 20 18 15.4
comp=Z,48nm,19.7s,baz=253,slow=31
DUG Dugway, Tooele 90.68 48 P 19 44 22.0 +0.1
DUG IAmb IAmb 19 44 25.0
comp=Z,4.5nm,1.0s
FINES FINESS Array B 91.62 335 P P 19 44 24.9 -0.7
comp=Z,1.8nm,0.8s,baz=57,slow=5.1,SNR=8.7
comp=Z,1.8nm,0.8s
FINES FINESS Array B 91.62 335 P P 19 44 24.4 -1.2
PDAR Pinedale Array 92.16 45 P P 19 44 28.9 +0.1
comp=Z,0.6nm,0.8s,baz=224,slow=6.2,SNR=5.4
comp=Z,0.6nm,0.8s
PDAR Pinedale Array 92.16 45 P P 19 44 27.4 -1.4
NOA NORSAR Array B 97.51 339 LR LR 20 31 48.6
comp=Z,24nm,20.9s,baz=100,slow=37
TORD Torodi Ar. Bea 135.24 304 PKP PKiKP 19 50 40.9 +0.2
comp=Z,0.4nm,0.5s,baz=40,slow=2.6,SNR=5.0
DBIC Dimbokro 144.18 302 PKP PKPbc 19 50 54.5 +0.8
comp=Z,6.8nm,0.6s,baz=75,slow=2.7,SNR=9.7
DBIC Dimbokro 144.18 302 PKPab 19 50 53.8 +0.5
PB08 IPOC Station P 146.57 107 PKPbc PKPbc 19 51 01.2 -0.2
LPAZ La Paz 147.80 100 PKPbc PKPbc 19 51 04.7 -0.6
comp=Z,2.4nm,0.8s,baz=284,slow=2.3,SNR=9.1
LPAZ La Paz 147.80 100 PKPbc 19 51 04.4 -0.8

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*IDC **11** 19:37:08.9±0.8, 52°.97S×22°.50E, h0km, mb3.9/9, mbtmp4.0/9, MS3.7/13, Error ellipse: s-maj=38.2km s-min=19.1km az=80.0*
*NEIC **11** 19:37:10.3±1.3, 53°.0S±0°.1×22°.7E±0°.3, h10km±1km, mb4.3/12, Error ellipse: s-maj=26.4km s-min=20.7km az=89.0*
ISC 11 19:37:10.3±0.6, 52°.94S±0°.09×22°.6E±0°.2, h10km, n45, σ0°99/30, mb4.0/10, MS3.6/13, 1C, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04S2	**CROZET ISLANDS**	**19.72**	**84**	T	T	20 02 17.9	
baz=242							
H04S3	**CROZET ISLANDS**	**19.72**	**84**	T	T	20 02 17.6	
baz=242							
H04S1	**CROZET ISLANDS**	**19.74**	**84**	T	T	20 02 20.2	
baz=242							
SUR	**Sutherland**	**20.59**	**356**	P	P	**19 41 50.4 +0.9**	
11nm,1.0s,baz=333,slow=16,SNR=1.9							
SUR				LR	LR	19 47 43.6	
comp=Z,139nm,20.3s,baz=134,slow=31							
11nm,1.0s							
SUR	**Sutherland**	**20.59**	**356**	P	P	**19 41 48.7 -0.7**	
SUR				IAmb	IAmb	19 42 12.1	
comp=Z,48nm,1.4s							
TROLL	**Troll, Antarti**	**21.05**	**197**	⇑P	P	**19 41 54.0 -0.2**	
comp=Z,264nm,0.7s							
SNAA	**Sanae**	**21.87**	**201**	P	P	**19 42 02.3 -0.5**	
comp=Z,7.9nm,0.8s,baz=42,slow=8.1,SNR=12							
SNAA				LR	LR	19 48 35.2	
comp=Z,123nm,20.8s,baz=44,slow=32							
comp=Z,7.9nm,0.8s							
VNA2	**Neumayer--Wat**	**22.47**	**205**	P	P	**19 42 11.0 +1.7**	
baz=32,slow=11							
VNA1	**Neumayer--Stat**	**22.54**	**207**	P	P	**19 42 13.4 +3.5**	
MAW	**Mawson**	**24.17**	**143**	P	P	**19 42 27.4 +1.1**	
comp=Z,2.3nm,0.8s,baz=298,slow=12,SNR=3.6							
comp=Z,2.3nm,0.8s							
MAW	**Mawson**	**24.17**	**143**	P	P	**19 42 26.6 +0.4**	
LBTB	**Lobatse**	**27.98**	**6**	LR	LR	19 52 11.4	
comp=Z,144nm,19.8s,baz=120,slow=32							
LBTB	**Lobatse**	**27.98**	**6**	P	P	**19 43 01.0 -0.1**	
LBTB				IAmb	IAmb	19 43 21.1	
comp=Z,3.0nm,1.1s							
BELA	**Belgrano 2**	**32.09**	**200**	P	P	**19 43 35.7 -1.2**	
BELA				IAmb	IAmb	19 43 45.1	
comp=Z,2.4nm,0.9s							
MATP	**Matopo**	**32.77**	**10**	LR	LR	19 55 08.6	
comp=Z,128nm,20.1s,baz=168,slow=33							
TSUM	**Tsumeb**	**33.90**	**351**	LR	LR	19 55 14.5	
comp=Z,56nm,21.8s,baz=151,slow=32							
TSUM	**Tsumeb**	**33.90**	**351**	P	P	**19 43 53.1 -0.2**	
TSUM				IAmb	IAmb	19 43 58.2	
comp=Z,6.0nm,1.1s							
QSPA	**South Pole Qui**	**37.29**	**180**	P	P	**19 44 22.1 0.0**	
comp=Z,4.2nm,0.7s,baz=265,slow=2.2,SNR=37							
QSPA				LR	LR	19 57 56.8	
comp=Z,92nm,21.7s,baz=260,slow=34							
comp=Z,4.2nm,0.7s							
QSPA	**South Pole Qui**	**37.29**	**180**	P	P	**19 44 21.6 -0.5**	
QSPA				IAmb	IAmb	19 44 25.1	
comp=Z,5.2nm,0.8s							
LSZ	**Lusaka**	**37.83**	**9**	LR	LR	19 58 45.8	
comp=Z,122nm,18.1s,baz=141,slow=34							
AIS	**Amsterdam Isla**	**40.42**	**91**	P	P	**19 44 48.5 +0.1**	
PMSA	**Palmer Station**	**42.76**	**219**	LR	LR	20 00 31.7	
comp=Z,84nm,18.1s,baz=158,slow=33							
VNDA	**Vanda**	**47.37**	**169**	P	P	**19 45 43.9 +0.1**	
comp=Z,0.5nm,0.6s,baz=233,slow=6.6,SNR=5.6							
comp=Z,0.5nm,0.6s							
VNDA	**Vanda**	**47.37**	**169**	P	P	**19 45 43.9 +0.1**	
VNDA				IAmb	IAmb	19 46 06.0	
comp=Z,3.5nm,1.2s							
USHA	**Ushuaia**	**50.00**	**229**	LR	LR	20 03 43.8	
comp=Z,676nm,21.4s,baz=91,slow=32							
MBAR	**Mbarara**	**52.59**	**10**	LR	LR	20 07 47.8	
comp=Z,47nm,18.1s,baz=130,slow=35							

KMBO	**Kilima Mbogo**	**53.05**	**18**	LR	LR	20 08 56.1		
	comp=Z,92nm,18.6s,baz=103,slow=36							
H10S2	**ASCENSION HYDR**	**53.20**	**312**	T	T	20 43 58.4		
	baz=152,slow=74,SNR=6.0							
H10S3	**ASCENSION HYDR**	**53.22**	**312**	T	T	20 44 03.1		
	baz=68,slow=74,SNR=4.7							
CPUP	**Villa Florida**	**63.52**	**261**	LR	LR	20 09 23.3		
	comp=Z,29nm,21.5s,baz=114,slow=30							
TORD	**Torodi Ar. Bea**	**68.24**	**338**	P	**P**	**19 48 11.3**	**+0.3**	
	comp=Z,1.0nm,0.8s,baz=178,slow=6.9,SNR=4.6							
	comp=Z,1.0nm,0.8s							
CO01	**Juntas del Tor**	**68.24**	**249**	P	**P**	**19 48 11.0**	**-0.3**	
ASAR	**Alice Springs**	**83.31**	**121**	P	**P**	**19 49 37.4**	**0.0**	
	comp=Z,0.5nm,0.7s,baz=208,slow=5.2,SNR=7.3							
	comp=Z,0.5nm,0.7s							
ASAR	**Alice Springs**	**83.31**	**121**	P	**P**	**19 49 36.2**	**-1.2**	
AS31	**Alice Springs**	**83.32**	**121**	P	**P**	**19 49 36.3**	**-1.1**	
WRA	**Warramunga Arr**	**86.60**	**119**	P	**P**	**19 49 54.1**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=206,slow=3.6,SNR=2.2							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**86.60**	**119**	P	**P**	**19 49 54.1**	**+0.2**	
WB0	**Warramunga Arr**	**86.77**	**119**	P	**P**	**19 49 54.2**	**-0.5**	
BRTR	**Keskin Array B**	**92.78**	**8**	P	**P**	**19 50 23.2**	**+0.8**	
	comp=Z,0.5nm,0.7s,baz=182,slow=5.6,SNR=3.6							
	comp=Z,0.5nm,0.7s							
ROSC	**El Rosal**	**98.03**	**267**	LR	LR	20 29 42.8		
	comp=Z,161nm,18.1s,baz=244,slow=32							
PDAR	**Pinedale Array**	**146.92**	**272**	PKPbc	**PKPbc**	**19 56 51.5**	**-1.0**	
	comp=Z,0.7nm,0.8s,baz=106,slow=5.3,SNR=5.7							
PDAR	**Pinedale Array**	**146.92**	**272**		**PKPdf**	**19 56 50.6**	**+0.1**	
GWY	**Greenwater Val**	**147.05**	**256**	PKPbc	**PKPbc**	**19 56 52.7**	**-0.2**	
NVAR	**Mina Array Bea**	**149.52**	**257**	PKPbc	**PKPbc**	**19 56 58.9**	**-0.6**	
	comp=Z,1.0nm,0.6s,baz=47,slow=2.4,SNR=5.5							
NVAR	**Mina Array Bea**	**149.52**	**257**		**PKPbc**	**19 56 58.5**	**-1.0**	

NOU 11 20:02:48.1, 10.74S×164.86E, h3km, mb4.8/14, Santa Cruz Islands Region, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**2.92**	**275**	P	Pn	20 03 34.8	-0.7
HURO	**Huro Makira**	**2.92**	**275**	S	Sn	20 04 11.9	+0.8
NGOA	**Tingoa Renbel**	**4.78**	**260**	P	Pn	20 04 00.1	-0.9
HNR	**Honiara**	**5.01**	**285**	P	Pn	20 04 05.2	+1.0
SANVU	**Saraoutou**	**5.21**	**154**	P	Pn	20 04 06.2	-0.7
SAVO	**Savo Central**	**5.22**	**287**	P	Pn	20 04 08.1	+1.0
TATA	**Tatamba Isabel**	**5.51**	**295**	P	Pn	20 04 10.1	-1.0
KOUNC	**Koumac, New Ca**	**9.77**	**183**	P	Pn	20 05 10.5	+0.9
NOUC	**Port Laguerre**	**11.38**	**173**	P	Pn	20 05 32.7	+1.0
YATNC	**Mamie plateau,**	**11.42**	**170**	P	Pn	20 05 32.1	-0.2
ONTNC	**Ouen Toro**	**11.60**	**173**	P	Pn	20 05 35.6	+0.9

*MDD **11** 20:03:07.5±0.8, 35°.38N×4°.54W, h6km±4km, mb_Lg2.4/8, Error ellipse: s-maj=6.1km s-min=3.8km az=105.0*
*SFS **11** 20:03:09.8, 35°.33N×4°.63W, h22km, ML3.0/12, ML3.0/12, ML3.0/12*
*CNRM **11** 20:03:09.9, 35°.25N×4°.64W, h85km, ML1.5*
*INMG **11** 20:03:11.8±1.1, 35°.53N×4°.74W, h11km, ML1.9, Error ellipse: s-maj=4.1km s-min=3.3km az=116.0,*
#DIST_RANGE: REGIONAL #IPMA_REGION: Alboran
*IGIL **11** 20:03:12.4, 35°.62N×4°.77W, h0km, ML2.1*

ISC 11 20:03:07.5±1.4, 35°.36N±0°.02×4°.65W±0°.03, h17km±10km, n54, σ1s73/100, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.60**	**104**	P	**Pn**	**20 03 24.1**	**+2.8**
PALE				S	**Sn**	**20 03 35.3**	**+4.6**
SMIR	**Smir Dam**	**0.68**	**298**	P	Pn	20 03 27.5	+5.2
SMIR				S	**Sn**	**20 03 38.9**	**+6.4**
AKLM	**AKL**	**1.07**	**142**	P	**Pn**	**20 03 29.2**	**+1.4**
AKLM				S	**Sb**	**20 03 42.0**	**+0.7**
RSA	**Sarsar**	**1.07**	**244**	P	**Pn**	**20 03 31.3**	**+3.5**
RSA				S	**Sn**	**20 03 45.4**	**+3.1**
EMIJ	**Mijas**	**1.21**	**355**	P	**Pg**	**20 03 30.6**	**-0.3**
EMIJ				S	**Sg**	**20 03 46.0**	**-0.6**
EMIJ	**Mijas**	**1.21**	**355**	Pg	**Pg**	**20 03 30.6**	**-0.3**
EMIJ				Sg	**Sb**	**20 03 45.8**	**+0.5**
EMIJ				*i* lVmb_Lg		20 03 47.0	
EMAL	**Malaga-Limoner**	**1.41**	**7**	P	**Pb**	**20 03 33.3**	**-0.1**
EMAL				S	**Sn**	**20 03 50.5**	**-0.1**
ELGU	**Los Guajares,**	**1.72**	**29**	P	**Pn**	**20 03 37.0**	**+0.3**
ELGU				S	**Sn**	**20 03 57.3**	**-1.0**
ELGU	**Los Guajares,**	**1.72**	**29**	Pg	**Pn**	**20 03 37.0**	**+0.3**
ELGU				Sg	**Sn**	**20 03 56.9**	**-1.4**
ELGU				*i* lVmb_Lg		20 04 01.4	
ESPR	**Espera**	**1.79**	**327**	P	**Pb**	**20 03 39.3**	**-0.7**
ESPR				S	**Sn**	**20 04 01.6**	**+1.6**
EGOR	**Sierra Gorda,**	**1.80**	**14**	P	**Pn**	**20 03 38.9**	**+0.9**
EGOR				S	**Sn**	**20 04 01.5**	**+1.1**
IFR	**Ifrane**	**1.88**	**192**	P	**Pn**	**20 03 39.6**	**+0.5**
IFR				S	**Sn**	**20 04 00.7**	**-1.8**
EBER	**Berja**	**2.09**	**42**	P	**Pn**	**20 03 42.3**	**+0.3**
EBER				S	**Sn**	**20 04 08.1**	**+0.3**
CZD	**Col de Zad**	**2.35**	**188**	P	**Pn**	**20 03 45.6**	**0.0**
CZD				S	**Sn**	**20 04 12.8**	**-1.3**
MD31	**MD31**	**2.49**	**182**	P	**Pn**	**20 03 48.0**	**+0.6**
MD31				S	**Sn**	**20 04 16.1**	**-1.2**
ZHG	**ZHG**	**2.52**	**221**	P	**Pn**	**20 03 48.9**	**+1.1**
MDT	**Midelt**	**2.54**	**179**	P	**Pn**	**20 03 47.6**	**-0.4**
MDT				S	**Sn**	**20 04 16.7**	**-2.0**
ECAB	**El Cabril**	**2.78**	**347**	Pn	**Pn**	**20 03 53.1**	**+1.9**
ECAB				Sn	**Sn**	**20 04 23.4**	**-1.1**
ECAB				*i* lVmb_Lg		20 04 28.9	
EADA	**Adamuz**	**2.80**	**1**	P	**Pn**	**20 03 52.8**	**+1.2**
EADA				S	**Sn**	**20 04 24.4**	**-0.6**
EADA	**Adamuz**	**2.80**	**1**	Pn	**Pn**	**20 03 53.1**	**+1.5**
EADA				Sn	**Sn**	**20 04 24.4**	**-0.6**
EADA				*i* lVmb_Lg		20 04 27.4	
AVE	**Averroes**	**3.08**	**229**	S	**Sn**	**20 04 29.8**	**-2.0**
EGRO	**El Granado**	**3.15**	**314**	P	**Pn**	**20 03 57.4**	**+1.0**
EGRO				S	**Sn**	**20 04 32.7**	**-0.9**
EGRO	**El Granado**	**3.15**	**314**	Pn	**Pn**	**20 03 57.8**	**+1.5**
EGRO				Sn	**Sn**	**20 04 33.0**	**-0.5**
EGRO				*i* lVmb_Lg		20 04 34.2	
PVAQ	**Vaqueiros**	**3.21**	**310**	*e*P	**Pn**	**20 03 58.6**	**+1.5**
PVAQ				*e*S	**Sn**	**20 04 34.1**	**-0.8**
PVAQ				*i* IAML		20 04 34.5	
PVAQ				*i* IAML		20 04 34.6	
PVAQ				*i* IAML		20 04 36.9	
PVAQ	**Vaqueiros**	**3.21**	**310**	P	**Pn**	**20 03 58.6**	**+1.5**
PBDV	**Barranco-do-Ve**	**3.25**	**306**	P	**Pn**	**20 03 59.1**	**+1.3**
PBDV				S	**Sn**	**20 04 35.1**	**-0.9**
PBDV	**Barranco-do-Ve**	**3.25**	**306**	*e*P	**Pn**	**20 03 59.3**	**+1.6**
PBDV				*e*S	**Sn**	**20 04 35.3**	**-0.7**
PBDV				*i* IAML		20 04 36.2	
PBDV				*i* IAML		20 04 36.4	
PBDV				*i* IAML		20 04 36.5	
PBAR	**Barrancos**	**3.40**	**326**	P	**Pn**	**20 04 00.9**	**+1.1**
PBAR				S	**Sn**	**20 04 38.5**	**-1.2**
PBAR	**Barrancos**	**3.40**	**326**	*e*P	**Pn**	**20 04 01.2**	**+1.4**
PBAR				*e*S	**Sn**	**20 04 38.2**	**-1.5**
PBAR				*i* IAML		20 04 40.0	
PBAR				*i* IAML		20 04 40.7	
PBAR				*i* IAML		20 04 43.5	
PSIM	**Granatula de C**	**3.53**	**11**	Pn	**Pn**	**20 04 02.9**	**+1.4**
PSIM				Sn	**Sn**	**20 04 41.8**	**-1.1**
PCVE	**Castro Verde**	**3.55**	**311**	P	**Pn**	**20 04 02.9**	**+1.1**
PCVE				S	**Sn**	**20 04 42.3**	**-1.0**
PCVE	**Castro Verde**	**3.55**	**311**	*e*P	**Pn**	**20 04 03.7**	**+1.9**
PCVE				*e*S	**Sn**	**20 04 42.6**	**-0.7**
PCVE				*i* IAML		20 04 43.2	
PCVE				*i* IAML		20 04 44.3	
PCVE				*i* IAML		20 04 45.7	
PBEJ	**Beja**	**3.71**	**317**	*e*P	**Pn**	**20 04 05.9**	**+1.9**
PBEJ				*e*S	**Sn**	**20 04 46.2**	**-1.2**
PBEJ				*i* IAML		20 04 46.6	
PBEJ				*i* IAML		20 04 47.5	
PBEJ				*i* IAML		20 04 52.8	
MORF	**Marmelete**	**3.77**	**302**	*e*P	**Pn**	**20 04 06.7**	**+1.8**
MORF				*e*S	**Sn**	**20 04 47.0**	**-1.9**
MORF				IAML		20 04 49.6	
	comp=N,7.4nm,0.1s						
MORF	**Marmelete**	**3.77**	**302**	*e*P	**Pn**	**20 04 06.3**	**+1.4**
MORF				*e*S	**Sn**	**20 04 48.0**	**-0.9**
MORF				*i* IAML		20 04 48.7	
MORF				*i* IAML		20 04 49.9	
MORF				*i* IAML		20 04 51.2	
MESJ	**Messejana**	**3.79**	**312**	*e*P	**Pn**	**20 04 06.7**	**+1.6**
MESJ				*e*S	**Sn**	**20 04 46.7**	**-2.6**
MESJ				IAML		20 04 49.7	
	comp=N,3.4nm,0.3s						
MESJ	**Messejana**	**3.79**	**312**	*e*P	**Pn**	**20 04 06.8**	**+1.6**
MESJ				*e*S	**Sn**	**20 04 47.9**	**-1.5**
MESJ				*i* IAML		20 04 49.5	
MESJ				*i* IAML		20 04 51.0	
MESJ				*i* IAML		20 04 51.3	
PFVI	**Vila Bisbo**	**3.81**	**299**	*e*P	**Pn**	**20 04 07.8**	**+2.3**
PFVI				*e*S	**Sn**	**20 04 48.5**	**-1.3**
PFVI				*i* IAML		20 04 50.7	
PFVI				*i* IAML		20 04 50.7	
EBAD	**Badajoz**	**3.88**	**332**	P	**Pn**	**20 04 07.5**	**+1.1**
EBAD				S	**Sn**	**20 04 49.6**	**-1.9**
EBAD	**Badajoz**	**3.88**	**332**	Pn	**Pn**	**20 04 07.8**	**+1.4**
EBAD				Sn	**Sn**	**20 04 50.4**	**-1.1**
EBAD				*i* lVmb_Lg		20 04 53.9	
PTEO	**Sao Teotonio**	**3.94**	**305**	*e*P	**Pn**	**20 04 09.1**	**+1.9**
PTEO				*e*S	**Sn**	**20 04 52.0**	**-1.1**
PTEO				*i* IAML		20 04 52.9	
PTEO				*i* IAML		20 04 54.0	
PLOUS	**Minas do Lousa**	**4.04**	**312**	*e*P	**Pn**	**20 04 09.9**	**+1.4**
PLOUS				*e*S	**Sn**	**20 04 53.7**	**-1.7**
PLOUS				*i* IAML		20 04 55.5	
PLOUS				*i* IAML		20 04 55.7	
PLOUS				*i* IAML		20 04 56.0	
EVO	**Evora**	**4.16**	**321**	P	**Pn**	**20 04 11.2**	**+1.1**
EVO				S	**Sn**	**20 04 57.2**	**-1.1**
EVO	**Evora**	**4.16**	**321**	*e*P	**Pn**	**20 04 11.5**	**+1.3**
EVO				*e*S	**Sn**	**20 04 57.4**	**-0.9**
EVO				*i* IAML		20 04 57.7	
EVO				*i* IAML		20 04 57.9	
EVO				*i* IAML		20 04 57.9	
PAB	**San Pablo**	**4.18**	**3**	Sn	**Sn**	**20 04 55.7**	**-3.5**
PAB				*i* lVmb_Lg		20 04 59.7	
PESTR	**Estremoz**	**4.21**	**327**	P	**Pn**	**20 04 12.5**	**+1.5**
PESTR				S	**Sn**	**20 04 57.4**	**-2.4**
PESTR	**Estremoz**	**4.21**	**327**	*e*P	**Pn**	**20 04 12.8**	**+1.8**
PESTR				*e*S	**Sn**	**20 04 58.0**	**-1.9**
MOE	**Montemor**	**4.33**	**318**	*e*S	**Sn**	**20 05 01.0**	**-1.6**
MOE				*i* IAML		20 05 02.5	
PARRA	**Arraiolos**	**4.38**	**323**	*e*P	**Pn**	**20 04 14.8**	**+1.5**
PARRA				*e*S	**Sn**	**20 05 01.7**	**-2.3**
PARRA				*i* IAML		20 05 01.9	
PARRA				*i* IAML		20 05 03.5	
PARRA				*i* IAML		20 05 03.9	
PMRV	**Marv??o**	**4.61**	**333**	*e*P	**Pn**	**20 04 17.8**	**+1.4**
PMTG	**Montargil**	**4.67**	**323**	*e*P	**Pn**	**20 04 18.7**	**+1.5**
PMTG				*e*S	**Sn**	**20 05 09.7**	**-2.0**
TIO	**Tiouine**	**4.94**	**207**	P	**Pn**	**20 04 21.7**	**+0.6**
TIO				S	**Sn**	**20 05 14.5**	**-3.3**
PCBR	**Castelo Branco**	**5.00**	**334**	*e*P	**Pn**	**20 04 23.2**	**+1.4**
PSARD	**Sardoal**	**5.07**	**328**	*e*P	**Pn**	**20 04 24.2**	**+1.4**
PSARD				*e*S	**Sn**	**20 05 18.1**	**-2.9**

*IDC **11** 20:05:24.2±1.9, 17°.00S×179°.11W, h561km±18km, mb3.1/5, mbtmp4.0/6, Error ellipse: s-maj=103.3km s-min=20.6km az=154.0*

ISC 11 20:05:23.6±1.5, 16°.8S±0°.9×179°.2W±0°.5, h550km, n6, σ1s00/6, mb3.5/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.82**	**250**	P	**P**	**20 06 39.1**	**+1.4**
	51nm,0.7s,baz=72,slow=20,SNR=21						
STKA	**Stephens Creek**	**38.55**	**240**	P	**P**	**20 11 59.0**	**-0.7**
	1.6nm,0.4s,baz=65,slow=9.5,SNR=8.7						
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.14**	**258**	P	**P**	**20 12 43.4**	**-0.7**
	0.9nm,0.6s,baz=96,slow=7.9,SNR=16						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**44.41**	**253**	P	**P**	**20 12 45.9**	**-0.2**
	8.6nm,0.6s,baz=92,slow=7.6,SNR=212						
	8.6nm,0.6s						
TXAR	**Lajitas Array**	**86.01**	**58**	P	**P**	**20 17 06.4**	**-0.2**
	0.4nm,0.7s,baz=241,slow=4.9,SNR=7.3						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**87.04**	**44**	P	**P**	**20 17 11.3**	**0.0**
	0.2nm,0.5s,baz=248,slow=8.2,SNR=3.0						
	0.2nm,0.5s						

TAP 11 20:12:13.2, 23°.63N×120°.76E, h15km, ML2.0, 11C-3D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	**Tsauling**	**0.08**	**248**	⇑*i*P	Pg	20 12 16.7	+0.3
CHN5				*i* S	Sg	20 12 19.3	+0.8
WHYT	**Xinyi Township**	**0.11**	**52**	⇓P	Pb	20 12 17.4	+0.2
WHYT				S	Sb	20 12 20.2	+0.5
ALS	**Alishan**	**0.12**	**158**	⇓*i*P	Pb	20 12 17.8	+0.3
ALS				*i* S	Sb	20 12 20.9	+0.7
WGK	**Gukeng**	**0.19**	**289**	*i* P	Pb	20 12 18.5	+0.1
WGK				*i* S	Sb	20 12 22.5	+0.7
WDLH	**Douliu**	**0.21**	**287**	⇓P	Pb	20 12 18.8	0.0
WDLH				S	Sb	20 12 23.1	+0.7
WDL	**Douliou City**	**0.22**	**294**	P	Pb	20 12 19.1	+0.2
WDL				S	Sb	20 12 23.8	+1.1
WCKO	**Fanlu**	**0.23**	**216**	P	Pb	20 12 19.0	-0.2
WCKO				S	Sb	20 12 23.2	+0.1
SSLB	**Suanglung**	**0.24**	**49**	P	Pg	20 12 19.9	+0.2
SSLB	**Suanglung**	**0.24**	**49**	⇑P	Pb	20 12 19.2	-0.2
SSLB				S	Sb	20 12 23.3	-0.1
WNT	**Mingjian**	**0.26**	**345**	⇑*i*P	Pb	20 12 19.9	+0.3
WNT				*i* S	Sb	20 12 24.4	+0.5
SMLT	**Sun Moon Lake**	**0.29**	**27**	⇑*i*P	Pb	20 12 20.2	0.0
SMLT				*i* S	Sb	20 12 25.4	+0.6
TYC	**Yuchr**	**0.29**	**19**	⇑*i*P	Pb	20 12 20.3	+0.1
TYC				*i* S	Sb	20 12 25.6	+0.8
CHY	**Chiayi**	**0.33**	**247**	*e*P	Pb	20 12 20.9	+0.2
CHY				S	Sb	20 12 26.9	+1.0
TPUB	**Ta-pu**	**0.34**	**200**	P	Pg	20 12 20.6	+0.2
TPUB	**Ta-pu**	**0.34**	**200**	⇑P	Pb	20 12 20.8	-0.3
TPUB				*i* S	Sb	20 12 26.7	+0.4
WTP	**Ta-pu**	**0.40**	**199**	⇑*i*P	Pb	20 12 21.8	-0.3
WTP				*i* S	Sb	20 12 28.3	+0.3
TWK	**Hsinying**	**0.43**	**214**	⇑*i*P	Pb	20 12 22.5	-0.1
TWK				*e*S	Sb	20 12 28.7	-0.2
WRL	**Guolierlin Hig**	**0.44**	**308**	*e*P	Pg	20 12 21.7	-0.5
WRL				*i* S	Sb	20 12 29.1	0.0
RLNB	**Erlin**	**0.45**	**306**	*i* S	Sb	20 12 29.9	+0.6
WCS	**Beigang Elemen**	**0.45**	**18**	*i* P	Pb	20 12 22.9	0.0
WCS				S	Sb	20 12 29.7	+0.3
STYH	**Taoyuan**	**0.45**	**178**	⇑P	Pg	20 12 22.6	+0.2
STYH				S	Sb	20 12 29.4	-0.1
WCH1	**Changhua City**	**0.48**	**337**	*e*S	Sb	20 12 31.4	+1.1
CHN1	**Nanshi**	**0.49**	**205**	⇑*i*P	Pb	20 12 23.3	-0.2
CHN1				*e*S	Sb	20 12 30.8	+0.3
WCHH	**Zhanghua**	**0.49**	**338**	*e*S	Sb	20 12 31.6	+1.2
WSF	**Szhu**	**0.49**	**272**	*i* P	Pg	20 12 23.2	+0.2
WSF				*i* S	Sb	20 12 31.1	+0.6
WUSB	**Renai**	**0.49**	**42**	⇑P	Pb	20 12 23.5	-0.2
WUSB				*i* S	Sb	20 12 30.4	-0.3
WSL	**Shuilin Townsh**	**0.49**	**258**	*i* P	Pb	20 12 23.4	-0.2
WSL				*e*S	Sb	20 12 31.0	+0.4
ELDTW	**Lidau**	**0.50**	**151**	*i* P	Pb	20 12 23.8	+0.1
ELDTW				*e*S	Sb	20 12 31.0	+0.1
OWD	**Renai**	**0.51**	**50**	*i* P	Pb	20 12 24.0	+0.1
OWD				*i* S	Sb	20 12 30.8	-0.3
ICHU	**Yijhu**	**0.51**	**239**	*e*P	Pb	20 12 24.0	+0.1
ICHU				*e*S	Sb	20 12 31.6	+0.6
TCU	**Taichung**	**0.52**	**352**	*e*P	Pg	20 12 23.5	-0.2
TCU				*e*S	Sb	20 12 32.1	+0.6
EHY	**Hungye**	**0.53**	**103**	*i* P	Pb	20 12 24.8	+0.5
EHY				*i* S	Sb	20 12 32.8	+1.0
YULB	**Yu-li**	**0.55**	**115**	P	Pb	20 12 24.5	-0.1
YULB	**Yu-li**	**0.55**	**115**	P	Pb	20 12 24.8	+0.2
YULB				*i* S	Sb	20 12 32.8	+0.6
EHYH	**Wanrong**	**0.56**	**104**	*e*P	Pb	20 12 25.1	+0.4
EHYH				*i* S	Sb	20 12 33.1	+0.6
SGST	**Jiashian**	**0.56**	**196**	*e*P	Pg	20 12 23.9	-0.5
SGST				*e*S	Sg	20 12 32.1	+0.2
TWF1	**Yuli**	**0.57**	**119**	*i* P	Pb	20 12 25.2	+0.4
TWF1				*i* S	Sb	20 12 33.4	+0.7
CHN8	**Yiju**	**0.57**	**241**	*e*S	Sb	20 12 34.3	+1.4
WARBT	**Fenglin Townsh**	**0.59**	**81**	P	Pb	20 12 25.6	+0.4
WARBT				S	Sb	20 12 33.5	+0.2
EYUL	**Yuli**	**0.59**	**118**	*e*P	Pb	20 12 25.9	+0.7
HGSD	**Ruisui**	**0.63**	**102**	*e*P	Pn	20 12 26.9	-0.7
EHD	**Haiduan**	**0.63**	**139**	*e*P	Pb	20 12 26.6	+0.6
EHD				*e*S	Sb	20 12 34.8	+0.3
ESL	**Shilin**	**0.65**	**73**	P	Pb	20 12 26.9	+0.7
ESL				S	Sb	20 12 35.5	+0.4
FULB	**Fuli**	**0.65**	**131**	*e*P	Pn	20 12 27.8	-0.1
WHP	**Taichung City**	**0.67**	**15**	P	Pb	20 12 27.0	+0.3
WHP				S	Sb	20 12 36.8	+1.0
WHF	**Hehuan Shan**	**0.70**	**42**	*i* P	Pb	20 12 27.8	+0.4
WHF				*e*S	Sb	20 12 37.1	+0.2
ECBN	**Changbin**	**0.71**	**116**	*e*P	Pn	20 12 29.2	+0.5
TWQ1	**Liyutan**	**0.72**	**1**	P	Pb	20 12 27.6	+0.1
LXIB	**Xiulin Townshi**	**0.72**	**57**	*e*P	Pb	20 12 28.0	+0.5
LXIB				*i* S	Sb	20 12 37.9	+0.6
TDCB	**Techi**	**0.72**	**31**	*e*P	Pb	20 12 27.6	0.0
TDCB				*e*S	Sg	20 12 36.1	-1.0
WDJ	**Dajia District**	**0.73**	**352**	*e*P	Pb	20 12 27.7	+0.1
TWT	**Tachien**	**0.73**	**32**	P	Pg	20 12 27.2	-0.4
FUSS	**Fushou**	**0.76**	**36**	*e*P	Pg	20 12 28.3	+0.1
SCST	**Cishan**	**0.78**	**198**	*e*P	Pn	20 12 29.3	-0.3
TSCK	**Chigu Township**	**0.78**	**232**	*e*P	Pb	20 12 28.6	+0.1
TWG	**Pinlang**	**0.85**	**160**	P	Pg	20 12 30.2	+0.4
TWGBT	**Beinan**	**0.86**	**160**	P	Pn	20 12 30.6	-0.2
TWGBT	**Beinan**	**0.86**	**160**	*e*P	Pg	20 12 30.3	+0.4
TWGBT				S	Sn	20 12 43.6	+0.6
ETLH	**Xiulin Townshi**	**0.88**	**49**	*e*P	Pb	20 12 27.7	-2.6
SSD	**Sandimen**	**0.88**	**187**	P	Pg	20 12 30.6	+0.2
NNSB	**Datong**	**0.98**	**36**	*e*P	Pb	20 12 31.9	-0.2
MASBT	**Mashibuluo**	**1.02**	**186**	*e*P	Pb	20 12 32.6	+0.1
ECL	**Taimali**	**1.04**	**170**	*e*P	Pb	20 12 31.8	-1.1
LIOB	**Emei**	**1.04**	**13**	*e*P	Pg	20 12 33.6	+0.2
LIOB				S	Sn	20 12 48.0	+0.4
NFF	**Wufeng Townshi**	**1.05**	**18**	P	Pn	20 12 33.3	+0.1
NFF				*i* S	Sg	20 12 47.3	-0.2
PHUB	**P'eng-hu**	**1.09**	**264**	*e*P	Pb	20 12 33.2	-0.6
PNG	**Penghu**	**1.10**	**267**	P	Pb	20 12 33.5	-0.5
LATG	**Datong**	**1.15**	**38**	*e*P	Pb	20 12 34.2	-0.7
YHNB	**Yeheng**	**1.18**	**28**	*e*P	Pb	20 12 35.7	+0.2
EAST	**Anshuo**	**1.24**	**176**	*e*P	Pg	20 12 37.2	0.0
ENTT	**Nioudou**	**1.25**	**36**	*e*P	Pn	20 12 36.0	-0.1
SCZT	**Fangliau**	**1.25**	**186**	*e*P	Pg	20 12 37.1	-0.4
NWLT	**Wulai**	**1.33**	**31**	*e*P	Pg	20 12 39.8	+0.8
FUSB	**Fushanzhiwuyua**	**1.36**	**34**	*e*P	Pg	20 12 39.3	-0.2
SLIU	**Shizi**	**1.40**	**178**	*e*P	Pg	20 12 40.5	+0.2

*IDC **11** 20:14:00.7±2.0, 32°.02N×140°.31E, h61km±15km, mb3.3/11, mbtmp3.5/13, MS3.4/1, Error ellipse: s-maj=27.0km s-min=18.3km az=81.0*
*JMA **11** 20:14:03.4±0.3, 32°.3N±0°.6×14°.1E±°, h36km, MV3.8/31, E OFF HACHIJOJIMA ISLAND*

ISC 11 20:14:02.1±0.9, 32°.13N±0°.08×140°.54E±0°.08, h73km, n36, σ1s39/35, mb3.5/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**0.74**	**297**	P	**Pn**	**20 14 18.3**	**+0.6**
JHCJ	**Hachijojimakas**	**1.13**	**326**	P	**Pn**	**20 14 22.4**	**-0.1**
JHCJ				S	**Sn**	**20 14 36.0**	**-1.7**
JHJ2	**Mitsune**	**1.16**	**328**	*i* P	**Pn**	**20 14 22.8**	**0.0**
JHJ	**Hachijo jima 2**	**1.18**	**327**	P	**Pn**	**20 14 22.6**	**-0.4**
	493nm,0.2s,baz=78,slow=20,SNR=93						
JHJ				S	**Sn**	**20 14 35.9**	**-2.7**
	430nm,0.3s,baz=114,slow=19,SNR=17						
JMKN	**Mikurajimanish**	**1.93**	**336**	*e*S	**Sn**	**20 14 55.2**	**-1.2**
JMYK	**Miyake Tsubota**	**2.10**	**337**	P	**Pn**	**20 14 36.1**	**+1.0**
JMYK				S	**Sn**	**20 15 00.1**	**-0.3**
BSO3	**Boso 3**	**2.67**	**359**	P	**Pn**	**20 14 43.0**	**+0.4**
BSO3				S	**Sn**	**20 15 12.2**	**-1.5**
JIM2	**Oshima 3**	**2.75**	**341**	*e*S	**Sn**	**20 15 15.6**	**-0.4**
JIZS	**Izushimoda**	**2.94**	**332**	P	**Pn**	**

TWB1	**Santiao Chiao**	**0.71**	**324**	P	**Pn**	**20 22 23.7 -0.6**
TWB1				S	**Sn**	**20 22 33.1 -1.2**
TWE	**Neicheng**	**0.77**	**292**	P	**Pn**	**20 22 24.9 -0.2**
TWE				*eS*	**Sn**	**20 22 34.0 -1.7**
TIPB	**Shuangxi**	**0.78**	**313**	*eP*	**Pn**	**20 22 24.8 -0.5**
TIPB				*eS*	**Sn**	**20 22 34.7 -1.4**
ETL	**Fush Village**	**0.81**	**250**	*eP*	**Pn**	**20 22 24.7 -0.9**
NACB	**Ninganchiao**	**0.82**	**252**	P	**Pn**	**20 22 25.4 -0.5**
NACB				S	**Sn**	**20 22 36.6 -0.5**
ENTT	**Nioudou**	**0.83**	**284**	*eP*	**Pn**	**20 22 26.9 +0.9**
ENTT				*eS*	**Sn**	**20 22 36.1 -1.2**
SXI1	**Grass Mountain**	**0.84**	**321**	*i* P	**Pn**	**20 22 25.8 -0.4**
SXI1				S	**Sn**	**20 22 36.4 -1.2**
FUSB	**Fushanzhiwuyua**	**0.85**	**292**	*eP*	**Pn**	**20 22 26.2 -0.1**
FUSB				S	**Sn**	**20 22 36.5 -1.2**
LATG	**Datong**	**0.85**	**277**	*eP*	**Pn**	**20 22 26.9 +0.6**
LATG				*eS*	**Sn**	**20 22 39.2 +1.4**
TWD	**Chiawan**	**0.86**	**246**	P	**Pn**	**20 22 25.8 -0.6**
TWD				S	**Sn**	**20 22 37.2 -0.7**
NDT	**Datong Townshi**	**0.87**	**281**	*eP*	**Pn**	**20 22 27.1 +0.6**
NWF	**Wu-fen Shan**	**0.88**	**316**	*i* P	**Pn**	**20 22 25.9 -0.8**
NWF				S	**Sn**	**20 22 36.9 -1.6**
WFSB	**Wu-fen Shan**	**0.88**	**316**	P	**Pn**	**20 22 26.3 -0.3**
WFSB				*eS*	**Sn**	**20 22 37.5 -0.9**
ETLH	**Xiulin Townshi**	**0.91**	**256**	*eP*	**Pn**	**20 22 26.9 -0.3**
ETLH				S	**Sn**	**20 22 38.8 -0.5**
NWLT	**Wulai**	**0.93**	**292**	*eP*	**Pn**	**20 22 27.4 +0.1**
NWLT				*eS*	**Sn**	**20 22 38.5 -1.1**
TWA	**Mucha**	**0.96**	**305**	*eP*	**Pn**	**20 22 27.2 -0.4**
TWA				S	**Sn**	**20 22 39.0 -1.2**
TEYL	**Yanliau Villag**	**0.96**	**234**	*eP*	**Pn**	**20 22 26.7 -1.0**
TEYL				*eS*	**Sn**	**20 22 39.2 -1.2**
NNSB	**Datong**	**0.97**	**270**	*i* P	**Pn**	**20 22 28.2 +0.2**
NNSB				*i* S	**Sn**	**20 22 41.1 +0.3**
NNS	**Nan Shan**	**0.98**	**270**	P	**Pn**	**20 22 28.4 +0.3**
NNS				S	**Sn**	**20 22 41.3 +0.2**
NHDH	**Xindian Distri**	**0.99**	**302**	*eP*	**Pn**	**20 22 28.0 -0.1**
NHDH				*eS*	**Sn**	**20 22 40.5 -0.6**
ETM	**Tongmen**	**0.99**	**242**	*eP*	**Pn**	**20 22 27.1 -1.0**
ETM				*eS*	**Sn**	**20 22 40.0 -1.1**
YHNB	**Yeheng**	**1.01**	**283**	P	**Pn**	**20 22 28.8 +0.4**
YHNB				S	**Sn**	**20 22 41.2 -0.3**
NSK	**Sanguang**	**1.02**	**284**	*eP*	**Pn**	**20 22 29.6 +0.9**
NSK				*eS*	**Sn**	**20 22 42.2 +0.3**
LXIB	**Xiulin Townshi**	**1.03**	**247**	*eP*	**Pn**	**20 22 28.5 -0.3**
LXIB				*eS*	**Sn**	**20 22 41.5 -0.8**
SHUL	**Shoufeng**	**1.04**	**232**	*i* P	**Pn**	**20 22 28.3 -0.4**
SHUL				S	**Sn**	**20 22 42.0 -0.2**
YM01	**YM01**	**1.07**	**312**	*eP*	**Pn**	**20 22 27.9 -1.3**
YM01				*eS*	**Sn**	**20 22 42.3 -0.7**
YM08	**YM08**	**1.08**	**314**	*eP*	**Pn**	**20 22 28.6 -0.8**
YM08				*eS*	**Sn**	**20 22 42.8 -0.5**
ZUZH	**Zhuzihu**	**1.09**	**311**	P	**Pn**	**20 22 29.1 -0.5**
ZUZH				*eS*	**Sn**	**20 22 42.4 -1.2**
FUSS	**Fushou**	**1.12**	**260**	*eP*	**Pn**	**20 22 30.4 +0.3**
ESL	**Shilin**	**1.12**	**236**	*eP*	**Pn**	**20 22 28.9 -0.9**
ESL				*eS*	**Sn**	**20 22 43.5 -0.7**
WHF	**Hehuan Shan**	**1.12**	**255**	*eP*	**Pn**	**20 22 29.4 -0.9**
TWS1	**Kuangyinshan**	**1.15**	**305**	*eP*	**Pn**	**20 22 29.8 -0.4**
TWS1				*eS*	**Sn**	**20 22 44.8 0.0**
IRIF	**Iriomote-Funau**	**1.17**	**95**	P	**Pn**	**20 22 30.5 0.0**
IRIF				S	**Sn**	**20 22 45.3 -0.1**
TWT	**Tachien**	**1.18**	**261**	P	**Pn**	**20 22 31.8 +1.0**
TWT				S	**Sn**	**20 22 45.5 -0.4**
TDCB	**Techi**	**1.19**	**261**	*i* P	**Pn**	**20 22 31.7 +0.7**
TDCB				*eS*	**Sn**	**20 22 45.4 -0.8**
KSHI	**Guanxi Townshi**	**1.21**	**286**	*eP*	**Pn**	**20 22 32.3 +1.3**
KSHI				*eS*	**Sn**	**20 22 49.3 +2.9**
WARBT	**Fenglin Townsh**	**1.21**	**234**	P	**Pn**	**20 22 30.0 -1.1**
WARBT				*eS*	**Sn**	**20 22 44.9 -1.5**
NFF	**Wufeng Townshi**	**1.23**	**279**	*eP*	**Pn**	**20 22 33.0 +1.6**
NFF				*eS*	**Sn**	**20 22 48.2 +1.3**
PCYT	**Pengchaiyu**	**1.23**	**344**	P	**Pn**	**20 22 31.4 -0.1**
OWD	**Renai**	**1.26**	**248**	P	**Pn**	**20 22 31.6 -0.3**
OWD				*eS*	**Sn**	**20 22 47.5 -0.3**
HATJ	**Hateruma jima**	**1.29**	**107**	*eS*	**Sn**	**20 22 48.4 0.0**
WUSB	**Renai**	**1.30**	**250**	*i* P	**Pn**	**20 22 32.5 +0.1**
WUSB				*eS*	**Sn**	**20 22 48.4 -0.2**
LIOB	**Emei**	**1.32**	**279**	*eP*	**Pn**	**20 22 34.3 +1.6**
LIOB				*eS*	**Sn**	**20 22 51.2 +2.0**
HGSD	**Ruisui**	**1.33**	**225**	*eP*	**Pn**	**20 22 31.7 -1.1**
NSTT	**Nanjuang**	**1.33**	**279**	*eP*	**Pn**	**20 22 33.6 +0.8**
EHYH	**Wanrong**	**1.38**	**227**	P	**Pn**	**20 22 33.0 -0.4**
WHP	**Taichung City**	**1.38**	**264**	*eP*	**Pn**	**20 22 34.6 +1.1**
WHP				*eS*	**Sn**	**20 22 51.9 +1.1**
EHY	**Hungye**	**1.39**	**228**	*eP*	**Pn**	**20 22 32.3 -1.2**
EHY				*eS*	**Sn**	**20 22 47.5 -3.2**
JKRS	**Kuro-shima**	**1.44**	**98**	*eP*	**Pn**	**20 22 35.1 +0.9**
JKRS				S	**Sn**	**20 22 52.6 +0.7**
ECBN	**Changbin**	**1.44**	**220**	*eP*	**Pn**	**20 22 32.9 -1.4**
WCS	**Beigang Elemen**	**1.46**	**255**	*eP*	**Pn**	**20 22 34.9 +0.5**
WCS				*eS*	**Sn**	**20 22 55.0 +2.7**
YULB	**Yu-li**	**1.48**	**226**	*eP*	**Pn**	**20 22 34.0 -0.8**
YULB				*eS*	**Sn**	**20 22 51.3 -1.8**
EYUL	**Yuli**	**1.50**	**224**	*eP*	**Pn**	**20 22 34.1 -0.9**
EYUL				*eS*	**Sn**	**20 22 53.0 -0.5**
TWF1	**Yuli**	**1.51**	**225**	*eP*	**Pn**	**20 22 34.3 -1.0**
SSLB	**Suanglung**	**1.51**	**245**	*eP*	**Pn**	**20 22 34.9 -0.3**
SMLT	**Sun Moon Lake**	**1.52**	**249**	*eP*	**Pn**	**20 22 35.5 +0.1**
SMLT				*eS*	**Sn**	**20 22 57.0 +2.8**
JJJ	**Ishigaki jima**	**1.54**	**92**	P	**Pn**	**20 22 35.7 +0.1**
JJJ				S	**Sn**	**20 22 54.0 -0.5**
WHYT	**Xinyi Township**	**1.64**	**243**	*eP*	**Pn**	**20 22 36.6 -0.3**
WHYT				*eS*	**Sn**	**20 22 59.6 +2.7**
CHKT	**Chengkung**	**1.66**	**217**	*eP*	**Pn**	**20 22 35.9 -1.4**
CHKT				*eS*	**Sn**	**20 22 54.1 -3.3**
JISG	**Ishigakijimahi**	**1.70**	**85**	P	**Pn**	**20 22 37.9 +0.1**
ELDTW	**Lidau**	**1.81**	**227**	*eS*	**Sn**	**20 22 59.1 -2.1**
CHN5	**Tsauling**	**1.82**	**243**	*eP*	**Pn**	**20 22 41.6 +2.0**
CHN5				*eS*	**Sn**	**20 23 04.7 +3.1**
WDLH	**Douliu**	**1.90**	**247**	*eP*	**Pn**	**20 22 42.1 +1.6**
WDLH				*eS*	**Sn**	**20 23 06.0 +2.7**
WCKO	**Fanlu**	**1.96**	**240**	*eS*	**Sn**	**20 23 07.3 +2.5**
LDUT	**Ludao**	**1.97**	**207**	*eP*	**Pn**	**20 22 40.2 -1.4**
LDUT				*eS*	**Sn**	**20 23 02.1 -3.0**
STYH	**Taoyuan**	**1.99**	**231**	*eP*	**Pn**	**20 22 42.2 +0.5**
STYH				*eS*	**Sn**	**20 23 05.8 +0.4**
TPUB	**Ta-pu**	**2.02**	**236**	*eP*	**Pn**	**20 22 43.2 +1.1**
TPUB				*eS*	**Sn**	**20 23 07.2 +1.0**
JTJ	**Tarama**	**2.06**	**84**	*eS*	**Sn**	**20 23 07.7 +0.5**
SGST	**Jiashian**	**2.18**	**232**	*eS*	**Sn**	**20 23 11.5 +1.3**
WSL	**Shuilin Townsh**	**2.23**	**246**	*eP*	**Pn**	**20 22 46.6 +1.6**
WSL				*eS*	**Sn**	**20 23 13.1 +1.8**
ECL	**Taimali**	**2.29**	**217**	*eS*	**Sn**	**20 23 09.9 -3.0**
SSD	**Sandimen**	**2.37**	**225**	*eP*	**Pn**	**20 22 49.0 +2.0**
SSD				*eS*	**Sn**	**20 23 15.7 +0.8**
MASBT	**Mashibuluo**	**2.47**	**223**	*eP*	**Pn**	**20 22 48.8 +0.5**
MASBT				*eS*	**Sn**	**20 23 19.4 +2.2**
EAST	**Anshuo**	**2.52**	**216**	*eP*	**Pn**	**20 22 49.2 +0.2**
LAY	**Lan-yu**	**2.53**	**199**	*eP*	**Pn**	**20 22 47.0 -2.2**

NEIC ***11*** *20:26:43.6±1.8, 6°.83N±0°.07×73°.08W±0°.05, h152km±6km, mb4.6/73, Error ellipse: s-maj=12.0km s-min=1.5km az=146.0*

IDC ***11*** *20:26:43.2±0.5, 6°.82N×73°.02W, h157km±5km, mb3.6/12, mbtmp4.2/15, MS3.3/1, Error ellipse: s-maj=11.9km s-min=7.0km az=131.0*

RSNC ***11*** *20:26:44.6±0.0, 7°.1N±1°×7°.3W±°, h147km±1km, M4.8, mB5.3, mb5.0, ML4.5, MLv5.2, Mw(mB)4.7*

CATAC ***11*** *20:26:44.5±0.3, 7°.1N±2°×7°.3W±°, h144km±3km, M4.9/12, mb4.9/10, mB5.2/7, MLv5.2/12, Mw(mB)4.5/7, Error ellipse: s-maj=6.3km s-min=4.0km az=89.6, confirmed*

FUNV ***11*** *20:26:45.5, 7°.17N×73°.22W, h4km, MW4.3, Presumed earthquake*

GFZ ***11*** *20:27:00.6±0.1, 9°.1N±2°×7°.4W±°, h170km, M4.6/37, mb4.6/37*

ISC 11 20:26:42.8±0.5, **6°.86N**±0°.03×**73°.07W**±0°.03, **h152**km±4km, **n492**, σ1°.**16**/532, **mb4.6**/49, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**202**	P		**Pn**	**Pn**	**20 27 04.5**	**+0.6**
BARC				S		**Sn**	**Sn**	**20 27 19.6**	**-0.4**
PAMC	**Pamplona, Colo**	**0.60**	**38**	P		**Pn**	**Pn**	**20 27 07.3**	**+1.7**
PAMC				S		**Sn**	**Sn**	**20 27 24.2**	**+1.3**
BRJC	**Barrancabermej**	**0.68**	**280**	P		**Pn**	**Pn**	**20 27 06.2**	**+0.8**
BRJC				S		**Sn**	**Sn**	**20 27 23.2**	**+0.6**
RUSC	**La Rusia**	**0.96**	**181**	P		**Pn**	**Pn**	**20 27 08.6**	**+0.5**
RUSC				S		**Sn**	**Sn**	**20 27 27.0**	**-0.4**
RUSC	**La Rusia**	**0.96**	**181**	P		**Pn**	**Pn**	**20 27 08.4**	**+0.3**
RUSC				S		**Sn**	**Sn**	**20 27 26.2**	**-1.2**
RUSC	**La Rusia**	**0.96**	**181**	*eP*		**Pn**	**Pn**	**20 27 08.4**	**+0.3**
RUSC				*eS*		**Sn**	**Sn**	**20 27 26.2**	**-1.2**
OCAC	**Ocana**	**1.39**	**350**	P		**Pn**	**Pn**	**20 27 12.6**	**+1.0**
OCAC				S		**Sn**	**Sn**	**20 27 34.5**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.41**	**257**	P		**Pn**	**Pn**	**20 27 10.9**	**-0.8**
PTBC				S		**Sn**	**Sn**	**20 27 31.8**	**-1.9**
SPBC	**San Pablo de B**	**1.56**	**220**	P		**Pn**	**Pn**	**20 27 13.3**	**0.0**
SPBC				S		**Sn**	**Sn**	**20 27 35.6**	**-1.1**
NORC	**Norcasia**	**2.20**	**234**	P		**Pn**	**Pn**	**20 27 20.1**	**-0.5**
NORC				S		**Sn**	**Sn**	**20 27 48.2**	**-1.4**
CHIC	**Chingaza**	**2.31**	**197**	P		**Pn**	**Pn**	**20 27 22.3**	**+0.1**
CHIC				S		**Sn**	**Sn**	**20 27 51.7**	**-0.8**
ROSC	**El Rosal**	**2.36**	**212**	P		**Pn**	**Pn**	**20 27 24.3**	**+1.4**
ROSC	3µm,0.4s,baz=100,slow=19,SNR=878			S		**Sn**	**Sn**	**20 27 53.9**	**+0.4**
ROSC	5µm,0.3s,baz=22,slow=19,SNR=11 **El Rosal**	**2.36**	**212**				**Pn**	**20 27 24.2**	**+1.4**
ROSC						Sn	**Sn**	**20 27 51.0**	**-2.5**
ROSC	**El Rosal**	**2.36**	**212**	P		**Pn**	**Pn**	**20 27 24.2**	**+1.4**
ROSC				S		**Sn**	**Sn**	**20 27 53.5**	**0.0**
BOG	**Bogota**	**2.43**	**204**	P		**Pn**	**Pn**	**20 27 24.5**	**+0.9**
BOG				S		**Sn**	**Sn**	**20 27 53.5**	**-1.5**
CVER	**Cruz Verde, Cu**	**2.53**	**203**	P		**Pn**	**Pn**	**20 27 25.8**	**+0.9**
CVER				S		**Sn**	**Sn**	**20 27 55.8**	**-1.5**
HELC	**Santa Helena**	**2.53**	**255**	P		**Pn**	**Pn**	**20 27 26.2**	**+1.4**
HELC				S		**Sn**	**Sn**	**20 27 58.0**	**+1.0**
HELC	**Santa Helena**	**2.53**	**255**	P		**Pn**	**Pn**	**20 27 24.0**	**-0.8**
HELC				S		**Sn**	**Sn**	**20 27 58.1**	**+1.0**
HELC	**Santa Helena**	**2.53**	**255**	*eP*		**Pn**	**Pn**	**20 27 25.4**	**+0.6**
HELC				*eS*		**Sn**	**Sn**	**20 27 56.3**	**-0.8**
MEDEC	**Medelln, Ant**	**2.57**	**257**	P		**Pn**	**Pn**	**20 27 25.4**	**+0.3**
MEDEC				S		**Sn**	**Sn**	**20 27 57.3**	**-0.3**
URMC	**San Jos de Ur**	**2.59**	**290**	P		**Pn**	**Pn**	**20 27 24.1**	**-1.2**
URMC				S		**Sn**	**Sn**	**20 27 55.1**	**-2.9**
GUY2C	**Guyana, Caldas**	**2.80**	**235**	P		**Pn**	**Pn**	**20 27 28.4**	**+0.1**
GUY2C				S		**Sn**	**Sn**	**20 28 02.2**	**-1.1**
VILC	**Villavicencio,**	**2.80**	**193**	P		**Pn**	**Pn**	**20 27 27.7**	**-0.3**
VILC				S		**Sn**	**Sn**	**20 28 02.2**	**-0.6**
PTGC	**Puerto Gaitan,**	**2.81**	**160**	P		**Pn**	**Pn**	**20 27 27.6**	**-0.3**
PTGC				S		**Sn**	**Sn**	**20 28 00.7**	**-2.0**
CMAN1	**Manizales, Cal**	**3.02**	**234**	P		**Pn**	**Pn**	**20 27 31.3**	**+0.5**
CMAN1				S		**Sn**	**Sn**	**20 28 02.2**	**-0.7**
CBOC	**Ciudad Bolivar**	**3.08**	**251**	P		**Pn**	**Pn**	**20 27 31.8**	**+0.3**
CBOC				S		**Sn**	**Sn**	**20 28 08.4**	**-0.8**
DBBC	**Dabeiba**	**3.12**	**273**	P		**Pn**	**Pn**	**20 27 32.1**	**+0.2**
DBBC				S		**Sn**	**Sn**	**20 28 07.4**	**-2.4**
SDV	**Santo Domingo**	**3.15**	**50**	P		**Pn**	**Pn**	**20 27 33.9**	**+1.6**
SDV	1µm,0.4s,baz=240,slow=13,SNR=764			S		**Sn**	**Sn**	**20 28 10.9**	**+0.3**
SDV	985nm,0.5s,baz=270,slow=20,SNR=22 **Santo Domingo**	**3.15**	**50**				**Pn**	**20 27 33.7**	**+1.3**
SDV						Sn	**Sn**	**20 28 09.7**	**-0.9**
SDV	**Santo Domingo**	**3.15**	**50**	*eP*		**Pn**	**Pn**	**20 27 33.8**	**+1.5**
SDV				*eS*		**Sn**	**Sn**	**20 28 10.4**	**-0.2**
ARMEC	**Armenia, Quind**	**3.44**	**228**	P		**Pn**	**Pn**	**20 27 37.0**	**+0.8**
ARMEC				S		**Sn**	**Sn**	**20 28 17.1**	**-0.4**
PRAC	**Prado**	**3.61**	**210**	P		**Pn**	**Pn**	**20 27 40.0**	**+1.8**
PRAC				S		**Sn**	**Sn**	**20 28 21.7**	**+0.6**
PRAC	**Prado**	**3.61**	**210**	P		**Pn**	**Pn**	**20 27 37.4**	**-0.8**
PRAC				S		**Sn**	**Sn**	**20 28 19.7**	**-1.4**
APAC	**Apartado, Choc**	**3.63**	**287**	P		**Pn**	**Pn**	**20 27 38.5**	**+0.2**
APAC				S		**Sn**	**Sn**	**20 28 19.6**	**-1.8**
ORTC	**Ortega, Tolima**	**3.64**	**217**	P		**Pn**	**Pn**	**20 27 38.3**	**-0.3**
ORTC				S		**Sn**	**Sn**	**20 28 20.9**	**-1.0**
SJCC	**San Jacinto, C**	**3.67**	**326**	P		**Pn**	**Pn**	**20 27 38.6**	**-0.3**
SJCC				S		**Sn**	**Sn**	**20 28 19.7**	**-2.7**
SJCC	**San Jacinto, C**	**3.67**	**326**	P		**Pn**	**Pn**	**20 27 38.3**	**-0.6**
SJCC				S		**Sn**	**Sn**	**20 28 19.4**	**-3.0**
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*		**Pn**	**Pn**	**20 27 38.8**	**-0.1**
SJCC				*eS*		**Sn**	**Sn**	**20 28 16.0**	**-6.4**
PLMC	**San Jos del P**	**3.74**	**239**	P		**Pn**	**Pn**	**20 27 40.0**	**+0.2**
PLMC				S		**Sn**	**Sn**	**20 28 23.6**	**-0.5**
URMC	**La Uribe, Meta**	**3.82**	**200**	P		**Pn**	**Pn**	**20 27 40.9**	**0.0**
URMC				S		**Sn**	**Sn**	**20 28 24.8**	**-1.2**
LCBC	**Los crdobas,**	**3.82**	**301**	P		**Pn**	**Pn**	**20 27 41.3**	**+0.5**
LCBC				S		**Sn**	**Sn**	**20 28 26.6**	**+0.7**
GUVC	**San Jose del G**	**4.31**	**174**	P		**Pn**	**Pn**	**20 27 46.3**	**-1.0**
SOLC	**Bahia Solano**	**4.35**	**262**	P		**Pn**	**Pn**	**20 27 48.4**	**+0.6**
SMRC	**Santa Marta, M**	**4.42**	**345**	P		**Pn**	**Pn**	**20 27 49.0**	**+0.3**
PIZC	**Pizarro, Choco**	**4.66**	**246**	P		**Pn**	**Pn**	**20 27 52.7**	**+0.9**
PTAC	**Punta Ardita,**	**4.71**	**274**	P		**Pn**	**Pn**	**20 27 51.4**	**-1.1**
MACC	**Macarena, Meta**	**4.75**	**189**	P		**Pn**	**Pn**	**20 27 51.3**	**-1.7**
BETC	**Betania**	**4.78**	**210**	P		**Pn**	**Pn**	**20 27 52.7**	**-0.7**
URI	**Uribia**	**4.93**	**12**	P		**Pn**	**Pn**	**20 27 54.9**	**-0.5**
URIC	**Uribia, Colomb**	**4.93**	**12**	P		**Pn**	**Pn**	**20 27 54.8**	**-0.6**
URIC				S		**Sn**	**Sn**	**20 28 49.6**	**-2.4**
URIC	**Uribia, Colomb**	**4.93**	**12**	*eP*		**Pn**	**Pn**	**20 27 54.7**	**-0.6**
URIC				*eS*		**Sn**	**Sn**	**20 28 46.2**	**-5.7**
JAMC	**Jamundi, Valle**	**5.10**	**225**	P		**Pn**	**Pn**	**20 27 57.3**	**-0.5**
GARC	1.3nm4µm108nm,0.9s **Garzon, Huila**	**5.23**	**208**	P		**Pn**	**Pn**	**20 27 58.5**	**-1.2**
POPC	**Popayan, Colom**	**5.59**	**220**	P		**Pn**	**Pn**	**20 28 04.1**	**-0.4**
GR1C	2µm88nm,0.6s **Gorgona, Isla**	**6.36**	**233**	P		**Pn**	**Pn**	**20 28 12.6**	**-1.8**
BCIP	**Isla Barro Col**	**7.08**	**289**			**Pn**	**Pn**	**20 28 22.2**	**-1.8**
BCIP	**Isla Barro Col**	**7.08**	**289**	P		**Pn**	**Pn**	**20 28 23.2**	**-0.8**
BCIP				S		**Sn**	**Sn**	**20 29 41.4**	**-1.9**
BCIP	**Isla Barro Col**	**7.08**	**289**	P		**Pn**	**Pn**	**20 28 22.7**	**-1.2**
TULM	**Tulcn-Chalpat**	**7.71**	**218**	P		**Pn**	**Pn**	**20 28 34.2**	**+1.4**
IMBA	**Imbabura, San**	**8.30**	**218**	P		**Pn**	**Pn**	**20 28 43.4**	**+2.6**
OTAV	**Otavalo**	**8.49**	**219**	Pn		**Pn**	**Pn**	**20 28 42.3**	**-1.0**
PULU	**Pululahua**	**8.69**	**219**	P		**Pn**	**Pn**	**20 28 48.5**	**+2.7**
ANTS	**Antisana-Sarah**	**8.90**	**215**	P		**Pn**	**Pn**	**20 28 50.4**	**+1.5**
SLOR	**San Lorenzo -**	**9.28**	**216**			**Pn**	**Pn**	**20 28 52.9**	**-1.0**
SLOR	**San Lorenzo -**	**9.28**	**216**	P		**Pn**	**Pn**	**20 28 53.7**	**-0.1**
BRU2	**Volcan**	**9.72**	**282**			**Pn**	**Pn**	**20 28 59.2**	**-0.1**
BRU2	**Volcan**	**9.72**	**282**	P		**Pn**	**Pn**	**20 28 59.5**	**+0.2**
BRU2	**Volcan**	**9.72**	**282**	P		**Pn**	**Pn**	**20 29 00.4**	**+1.0**
TRT2	**Tortugero**	**11.16**	**290**	P		**Pn**	**Pn**	**20 29 17.4**	**-0.7**
HDC	**Heredia**	**11.36**	**287**	Pn		**Pn**	**Pn**	**20 29 21.4**	**+0.5**
HDC	**Heredia**	**11.36**	**287**	P		**Pn**	**Pn**	**20 29 22.6**	**+1.7**
BLUN	**Bluefields**	**11.73**	**297**	P		**Pn**	**Pn**	**20 29 21.8**	**-3.8**
BANI	**BANI**	**11.76**	**13**	Pn		**Pn**	**Pn**	**20 29 25.8**	**-0.3**
MTDJ	**Mount Denham**	**12.10**	**339**			**Pn**	**Pn**	**20 29 31.4**	**+0.8**
MTDJ	**Mount Denham**	**12.10**	**339**	P		**P**	**P**	**20 29 33.9**	**-2.9**
MTDJ	**Mount Denham**	**12.10**	**339**	*i* P		**Pn**	**Pn**	**20 29 32.7**	**+2.1**
MTDJ	comp=Z,4µm,1.0s			IVmB_BB				20 29 34.9	
MTDJ				IAmb		IAmb		20 29 34.9	
SDDR	comp=Z,250nm,0.7s **Presa de Saban**	**12.17**	**8**				**Pn**	**20 29 32.0**	**+0.6**
SDDR	**Presa de Saban**	**12.17**	**8**	P			**Pn**	**20 29 31.8**	**+0.4**
SDDR	**Presa de Saban**	**12.17**	**8**	*i* P			**Pn**	**20 29 33.8**	**+2.4**
SDDR				IAmb		IAmb		20 29 40.5	
SDDR	comp=Z,74nm,0.8s **Presa de Saban**	**12.17**	**8**	P			**Pn**	**20 29 31.8**	**+0.4**
JTS	**Las Juntas de**	**12.23**	**287**	P			**Pn**	**20 29 33.4**	**+1.2**
JTS	comp=Z,6.1nm,0.4s,baz=149,slow=4.8,SNR=13			S			**Sn**	**20 31 49.4**	**+1.9**
JTS	comp=Z,2.6nm,0.3s,baz=162,slow=20,SNR=1.6 **Las Juntas de**	**12.23**	**287**				**Pn**	**20 29 32.5**	**+0.4**
JTS	**Las Juntas de**	**12.23**	**287**	P			**Pn**	**20 29 33.5**	**+1.4**
DR12	**Loma Pena Alta**	**12.39**	**17**	Pn			**Pn**	**20 29 32.7**	**-1.5**
PCDR	**Punta Cana, DR**	**12.45**	**21**	Pn			**Pn**	**20 29 35.6**	**+0.6**
PRSN	**Puerto Rico Se**	**12.68**	**27**	Pn			**Pn**	**20 29 36.8**	**-1.1**
JUD3	**Juan Diaz 3**	**12.76**	**286**	Pn			**Pn**	**20 29 38.7**	**-0.3**
OBIP	**Obispado Ponce**	**12.78**	**29**	Pn			**Pn**	**20 29 37.8**	**-1.3**
CELP	**Cerrillos**	**12.82**	**29**	Pn			**Pn**	**20 29 37.7**	**-2.0**
CARN	**Rivas**	**13.02**	**290**	Pn			**Pn**	**20 29 41.9**	**-0.4**
SJG	**San Juan**	**13.06**	**30**	P			**Pn**	**20 29 41.4**	**-1.4**
SJG	comp=Z,11nm,0.5s,baz=204,slow=20,SNR=7.7			S			Sn	20 31 56.9	-11
SJG	comp=Z,3.8nm,0.4s,baz=180,slow=20,SNR=1.2 **San Juan**	**13.06**	**30**	Pn			**Pn**	**20 29 42.4**	**-0.4**
GTBY	**Guantanamo Bay**	**13.14**	**352**				**Pn**	**20 29 44.5**	**+0.7**
GTBY	**Guantanamo Bay**	**13.14**	**352**	*i* P			**P**	**20 29 47.9**	**-0.3**
GTBY	comp=Z,110nm,0.7s			IAmb		IAmb		20 29 48.8	
HUMP	**Col San Antoni**	**13.24**	**31**	Pn			**Pn**	**20 29 44.0**	**-1.1**
BOAV	**Boa Vista**	**13.27**	**109**				**Pn**	**20 29 44.0**	**-1.5**
MASC	**Masc**	**13.28**	**355**	*i* P			**P**	**20 29 48.2**	**-1.6**
MASC	comp=Z,62nm,0.9s			IAmb		IAmb		20 29 53.3	
RCC	**Rio Carpintero**	**13.30**	**349**	*i* P			**Pn**	**20 29 46.8**	**+1.0**
RCC	comp=Z,3µm,1.0s			IVmB_BB				20 29 51.2	
RCC				IAmb		IAmb		20 29 51.3	
MARVS	comp=Z,180nm,0.5s **Santiago de Cu**	**13.35**	**348**	*i* P			**Pn**	**20 29 48.0**	**+1.6**
MARVS				IVmB_BB				20 29 51.9	
MARVS	comp=Z,1µm,1.0s			IAmb		IAmb		20 29 51.9	
QMBU	comp=Z,64nm,0.7s **Quimbuelo**	**13.37**	**353**	*i* P			**Pn**	**20 29 48.2**	**+1.5**
QMBU				IAmb		IAmb		20 30 00.6	
SIUN	comp=Z,53nm,0.8s **Universidad Ur**	**13.37**	**302**	Pn			**Pn**	**20 29 46.8**	**0.0**
CHIV	**Chivirico**	**13.44**	**346**	Pn			**Pn**	**20 29 45.8**	**-1.7**
CHIV	**Chivirico**	**13.44**	**346**	*i* P			**Pn**	**20 29 45.8**	**-1.7**
CHIV				IAmb		IAmb		20 30 05.9	
CHIV	comp=Z,29nm,1.1s			IVmB_BB				20 30 45.2	
BOAB	comp=Z,1µm,1.0s **BOACO BROADBAN**	**13.60**	**295**	Pn			**Pn**	**20 29 48.9**	**-0.7**
BOAB	**BOACO BROADBAN**	**13.60**	**295**	P			**Pn**	**20 29 46.7**	**-2.9**
LMGC	**Las Mercedes**	**13.67**	**344**	*i* P			**Pn**	**20 29 52.2**	**+1.7**
LMGC				IAmb		IAmb		20 29 56.8	
NMDO	comp=Z,37nm,1.0s **Nuevo Mundo**	**13.74**	**352**				**Pn**	**20 29 52.3**	**+0.9**
NMDO	**Nuevo Mundo**	**13.74**	**352**	*i* P			**P**	**20 29 54.5**	**-0.5**
NMDO				IAmb		IAmb		20 30 00.1	
PINC	comp=Z,46nm,0.7s **Pinares de May**	**13.80**	**349**	*i* P			**Pn**	**20 29 53.3**	**+1.2**
PINC				IAmb		IAmb		20 29 58.0	
PINC

JFWS Jewell Farm 38.97 340 P P 20 33 54.7 +0.6
MNTX Cornudas Mount 38.98 314 P P 20 33 55.4 +0.9
SCIA State Center 39.21 336 P P 20 33 56.3 +0.1
RTBA Rita Blanca 40.01 322 P 20 34 03.2 +0.2
RTBA IAmb IAmb 20 34 04.9
comp=Z,19nm,1.3s
D62A Allapoint, All 40.22 4 P 20 34 06.0 +1.6
D62A IAmb IAmb 20 34 07.2
comp=Z,20nm,0.8s
BATG Bathurst New B 40.72 7 P 20 34 09.6 +1.1
BATG IAmb IAmb 20 34 10.7
comp=Z,23nm,0.9s
LDAQ Lac Daran 40.99 2 P P 20 34 11.9 +1.1
LDAQ IAmb IAmb 20 34 13.3
comp=Z,11nm,1.0s
121A Cookes Peak, D 41.15 313 P 20 34 13.2 +0.7
VLDQ Val d'Or 41.27 356 P 20 34 14.9 +1.9
VLDQ IAmb IAmb 20 34 16.2
comp=Z,14nm,1.2s
ANMO Albuquerque 41.52 317 P 20 34 16.3 +0.8
ANMO Albuquerque 41.52 317 P P 20 34 17.4 +1.9
ECSD EROS Data Cent 42.13 334 P 20 34 19.9 -0.2
ECSD IAmb IAmb 20 34 21.0
comp=Z,16nm,1.1s
ECSD EROS Data Cent 42.13 334 P P 20 34 20.1 -0.1
SDCO Great Sand Dun 42.55 321 P P 20 34 25.4 +1.5
TUC Tucson 43.26 311 P P 20 34 30.5 +1.0
TUC Tucson 43.26 311 P P 20 34 31.3 +1.8
S22A 4UR Ranch, Cre 43.38 320 P 20 34 31.8 +1.1
S22A IAmb IAmb 20 34 34.0
comp=Z,14nm,1.2s
EYMN Ely 43.85 342 P 20 34 34.0 +0.2
EYMN Ely 43.85 342 P P 20 34 34.5 +0.7
TBO Thunder Bay 43.88 344 P 20 34 34.0 -0.1
TBO IAmb IAmb 20 34 35.6
comp=Z,15nm,0.8s
ISCO Idaho Springs 43.90 323 P 20 34 35.2 +0.4
ISCO Idaho Springs 43.90 323 P P 20 34 35.3 +0.5
MVCO Mesa Verde 44.16 318 P P 20 34 38.3 +1.5
AGMN Agassiz Nation 45.60 339 P P 20 34 48.4 +0.7
RSSD Black Hills 45.93 329 P 20 34 51.1 +0.4
RSSD Black Hills 45.93 329 P P 20 34 51.8 +1.2
SRU San Rafael Swe 46.54 319 P P 20 34 56.4 +0.9
SRU IAmb IAmb 20 34 57.7
comp=Z,8.9nm,0.8s
ULM Lac du Bonnet 47.26 340 P P 20 35 00.7 +0.1
comp=Z,23nm,0.6s,baz=142,slow=9.5,SNR=32
ULM LR LR 20 57 28.9
comp=Z,34nm,18.9s,baz=1.0,slow=39
ULM Lac du Bonnet 47.26 340 P 20 35 00.4 -0.2
PDAR Pinedale Array 48.07 324 P P 20 35 07.8 +0.5
comp=Z,3.0nm,0.6s,baz=133,slow=7.4,SNR=28
PDAR ScP ScP 20 40 12.9 -0.1
comp=Z,0.2nm,0.5s,baz=190,slow=3.0,SNR=2.1
comp=Z,3.0nm,0.6s
PDAR Pinedale Array 48.07 324 P 20 35 07.5 +0.2
SCHQ Schefferville 48.10 5 P P 20 35 07.8 +0.8
comp=Z,22nm,0.8s,baz=183,slow=9.5,SNR=23
comp=Z,22nm,0.8s
HWUT Hardware Ranch 48.60 322 P 20 35 11.2 0.0
HWUT IAmb IAmb 20 35 13.3
comp=Z,5.8nm,0.7s
HWUT Hardware Ranch 48.60 322 P P 20 35 12.1 +0.8
DUG Dugway, Tooele 48.61 319 P P 20 35 12.9 +1.5
AHID Auburn Hatcher 48.98 323 P P 20 35 15.0 +0.8
LOHW Long Hollow 49.19 324 P P 20 35 16.2 +0.4
LOHW IAmb IAmb 20 35 17.8
comp=Z,6.7nm,0.7s
ELK Elko 50.48 319 P 20 35 25.4 -0.2
BOZ Bozeman (W) 50.98 326 P P 20 35 29.4 +0.3
HLID Hailey 51.43 322 P P 20 35 33.9 +1.3
NVAR Mina Array Bea 51.49 315 P P 20 35 34.3 +1.1
comp=Z,2.2nm,0.8s,baz=101,slow=6.4,SNR=12
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 51.49 315 P P 20 35 33.1 -0.1
FFC Flin Flon 53.07 339 P 20 35 44.2 0.0
FFC IAmb IAmb 20 35 44.9
comp=Z,7.0nm,0.5s
FFC Flin Flon 53.07 339 P P 20 35 44.6 +0.4
YBH Yreka Blue Hor 55.94 316 P 20 36 04.4 -0.9
EDM Edmonton 56.61 332 P 20 36 09.2 -0.5
NRS Narsarsuaq 57.98 15 P P 20 36 19.9 +0.8
NLWA Neilton Lookou 59.10 322 P P 20 36 28.4 +1.1
NLWA IAmb IAmb 20 36 30.3
comp=Z,11nm,0.9s
ILON Igloolik, Nuna 62.69 357 P P 20 36 50.8 -0.2
ILON IAmb IAmb 20 37 24.8
comp=Z,11nm,1.3s
YKA Yellowknife Ar 63.24 340 P P 20 36 55.1 +0.4
comp=Z,12nm,0.6s,baz=137,slow=6.6,SNR=90
YKA Yellowknife Ar 63.24 340 P 20 36 54.8 0.0
T35M Bob Quinn 66.80 330 P P 20 37 19.2 +1.3
baz=115
V35K Ketchikan 66.83 328 P P 20 37 18.6 +0.6
baz=113
DLBC Dease Lake 67.31 331 P P 20 37 22.3 +1.1
baz=116,SNR=5.1
WTLY Watson Lake, Y 67.49 333 P P 20 37 23.7 +1.4
baz=117
S34M Telegraph Cree 67.62 331 P P 20 37 23.9 +0.8
baz=114,SNR=5.8
WRAK Wrangell Islan 67.63 329 P P 20 37 24.3 +1.2
baz=113
CRAG Craig 67.68 328 P P 20 37 24.4 +1.0
baz=112
U33K Whale Pass 67.92 328 P P 20 37 25.9 +1.1
baz=112
TGTN Hyland Airport 67.93 335 P P 20 37 26.3 +1.3
baz=118
R33M Jennings River 68.16 332 P P 20 37 27.7 +1.1
baz=115,SNR=7.9
Q32M Nakina River 68.59 331 P 20 37 30.3 +1.0
Q32M IAmb IAmb 20 37 31.9
comp=Z,6.2nm,0.9s
Q32M Nakina River 68.59 331 P P 20 37 30.7 +1.4
baz=114,SNR=5.6
SUMG Summit 68.94 11 P 20 37 32.2 +0.7
SUMG Summit 68.94 11 *i* P P 20 37 31.0 -0.5
SUMG IAmb IAmb 20 37 33.2
comp=Z,31nm,0.8s
S32K Killisnoo 69.16 329 P P 20 37 33.2 +0.7
baz=111
P33M Teslin, Yukon 69.35 333 P P 20 37 34.7 +0.8
baz=114,SNR=7.3
SIT Sitka 69.39 329 P P 20 37 35.2 +1.2
baz=110
P32M Atlin 69.52 332 P P 20 37 35.6 +0.7
baz=113
MMPY Sheldon Lake, 69.68 335 P P 20 37 37.2 +1.4
baz=116
N32M Quiet Lake 69.85 333 P P 20 37 37.8 +1.0
baz=114
S31K Pelican 70.16 330 P P 20 37 39.7 +1.0
baz=110
WHY Whitehorse 70.47 333 P P 20 37 41.6 +0.9
baz=112
C36M Paulatuk 70.57 343 P P 20 37 42.6 +1.6
baz=125
PLBC Pleasant Camp 70.73 331 P P 20 37 43.2 +1.0
baz=110
M31M Drury Creek, Y 70.84 334 P P 20 37 44.0 +1.2
baz=113,SNR=6.7
O30N Mendenhall 71.06 332 P P 20 37 45.3 +1.0
baz=111,SNR=12
N31M Braeburn, Yuko 71.18 333 P P 20 37 45.8 +0.9
baz=111
P30M Million Dollar 71.24 332 P P 20 37 46.4 +1.1
baz=110
P29M Windy Craggy 71.45 331 P P 20 37 47.7 +1.1
baz=109
NEEM North Greenlan 71.51 5 *i* P P 20 37 43.4 -3.5
NEEM IAmb IAmb 20 37 48.2
comp=Z,23nm,0.9s
HYT Haines Junctio 71.73 332 P P 20 37 49.4 +1.0
baz=110
N30M Aishikik Lake 71.76 333 P P 20 37 49.6 +1.2
baz=110,SNR=8.7
M30M Minto, Yukon 72.02 334 P P 20 37 50.7 +0.8
baz=111,SNR=20
O29M Mount Kennedy 72.07 332 P P 20 37 51.7 +1.3
baz=108
YUK6 Outpost Mounta 72.17 332 P P 20 37 51.8 +0.8
baz=109
H31M Peel River 72.25 338 P P 20 37 52.3 +1.1
baz=114,SNR=8.1
A36M Sachs Harbour 72.41 345 P P 20 37 52.1 +0.2
baz=125
YUK4 Talbot Arm 72.43 333 P P 20 37 53.4 +0.8
baz=109
J30M Hart River 72.55 336 P P 20 37 54.1 +1.0
baz=112
G31M Satah River 72.68 339 P P 20 37 54.2 +0.6
baz=114,SNR=5.3
M29M Somme Creek 72.70 334 P P 20 37 54.5 +0.5
baz=109
F31M Tsiigehtchic 72.71 339 P P 20 37 54.8 +1.0
baz=115,SNR=8.1
K29M Barlow Dome 72.77 335 P P 20 37 55.5 +1.1
baz=110,SNR=11
L29M L29M 72.78 334 P P 20 37 55.1 +0.7
baz=110
PINM Pinnacle 72.80 331 P P 20 37 55.2 +0.6
baz=107
I30M Mount Dempster 72.81 337 P P 20 37 55.8 +1.2
baz=112,SNR=8.4
YUK8 Steele Glacier 72.92 332 P P 20 37 56.7 +1.2
baz=108
O28M Mount Upton 72.97 332 P P 20 37 56.9 +1.0
baz=107
EKA Eskdalemuir Ar 73.01 34 P P 20 37 54.7 -1.1
comp=Z,0.3nm,0.5s,baz=258,slow=3.3,SNR=3.5
comp=Z,0.3nm,0.5s
INK Inuvik 73.01 340 P 20 37 55.9 +0.3
INK Inuvik 73.01 340 P P 20 37 56.2 +0.7
baz=116
J29N Klondike Camp 73.27 336 P P 20 37 58.4 +1.1
baz=110
EPYK Eagle Plains 73.36 338 P P 20 37 58.8 +1.0
baz=112,SNR=5.0
YUK3 Moose Creek 73.39 333 P P 20 37 59.3 +1.1
baz=107,SNR=13
G30M tAoh Zraii Nji 73.41 339 P P 20 37 59.6 +1.5
baz=112
F30M Barrier River 73.50 339 P P 20 37 59.2 +0.7
baz=113,SNR=10
DAWY Dawson 73.62 335 P P 20 38 00.2 +0.9
baz=109
TORD Torodi Ar. Bea 73.68 78 P P 20 37 58.3 -2.2
comp=Z,0.3nm,0.4s,baz=276,slow=5.2,SNR=5.1
comp=Z,0.3nm,0.4s
BVCY Beaver Creek 73.75 333 P P 20 38 01.2 +1.1
baz=107
H29M Whitestone 73.93 337 P P 20 38 01.8 +0.7
baz=110,SNR=7.1
G29M Pine Creek 74.05 338 P P 20 38 02.1 +0.4
baz=111,SNR=5.7
M27K Edge Creek, AK 74.19 333 P P 20 38 04.0 +1.2
baz=106,SNR=13
I28M Miner Creek 74.29 336 P P 20 38 04.3 +1.1
baz=108,SNR=8.2
CRQE Cirque 74.34 331 P P 20 38 04.8 +1.1
baz=104
BCAR Beaver Creek A 74.35 334 P P 20 38 04.9 +1.4
L27K Beaver Creek, 74.36 334 P P 20 38 04.8 +1.2
baz=106
MCARA McCarthy VSAT 74.46 332 P P 20 38 05.9 +1.8
baz=104
E29M Blow River 74.53 340 P P 20 38 04.9 +0.5
baz=111,SNR=24
M26K Nabesna, AK 74.71 333 P P 20 38 06.0 +0.3
baz=105
KAIM Kayak Island 74.78 330 P P 20 38 06.0 -0.1
baz=103
F28M Old Crow 74.96 339 P P 20 38 07.4 +0.4
baz=109,SNR=7.2
I27K Kandik River 75.00 336 P P 20 38 08.3 +1.0
baz=107,SNR=11
L26K Log Cabin Wild 75.02 334 P P 20 38 08.0 +0.6
baz=105
BMRM Bremner River 75.11 331 P P 20 38 09.2 +1.2
baz=103
H27K Steamboat Moun 75.15 337 P P 20 38 08.9 +0.8
baz=107
E28M Babbage River 75.17 340 P P 20 38 08.4 +0.3
baz=110,SNR=9.5
N25K Chitina, Valde 75.25 332 P P 20 38 09.6 +0.8
baz=103
G27K Doyon Strip 75.37 338 P P 20 38 10.5 +1.1
baz=107
SCRK Sand Creek 75.54 334 P P 20 38 11.5 +1.0
SCRK Sand Creek 75.54 334 P P 20 38 11.2 +0.7
baz=104,SNR=10
EYAK Cordova Ski Ar 75.56 331 P P 20 38 11.0 +0.5
baz=102
DAG Danmarks Havn 75.61 11 *i* P P 20 38 05.3 -5.2
DAG IAmb IAmb 20 38 10.7
comp=Z,11nm,0.9s
E27K Coleen River 75.76 339 P P 20 38 12.3 +0.7
baz=108,SNR=7.4
KLU Klutina 75.84 332 P P 20 38 13.2 +1.0
baz=102
RIDG Independent Ri 75.85 334 P P 20 38 12.8 +0.6
RIDG IAmb IAmb 20 38 14.4
comp=Z,9.6nm,0.9s
RIDG Independent Ri 75.85 334 P P 20 38 13.1 +0.9
baz=104,SNR=9.6
PAX Paxson 75.95 333 P P 20 38 13.6 +0.8
baz=103,SNR=5.3
M24K Tolsona, Glenn 76.09 332 P P 20 38 14.5 +1.0
baz=102
G26K Porcupine Rive 76.22 338 P P 20 38 14.8 +0.7
baz=105
P23K Montague Islan 76.27 330 P P 20 38 15.2 +0.7
baz=100
K24K Donnelly Dome 76.27 334 P P 20 38 15.6 +1.1
baz=103
J25K Salcha River, 76.28 335 P P 20 38 15.5 +0.9
baz=103,SNR=7.7
F26K Sheenjek River 76.55 338 P P 20 38 17.4 +1.4
baz=105
PRP Porcupine Dome 76.55 336 P P 20 38 16.5 +0.3
baz=103
SCM Sheep Creek Mo 76.57 332 P P 20 38 16.8 +0.5
SCM IAmb IAmb 20 38 18.8
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 76.57 332 P P 20 38 17.1 +0.8
baz=101,SNR=9.0
M23K Glacier View 76.75 332 P P 20 38 18.3 +1.1
baz=100
DHY Denali Highway 76.82 333 P P 20 38 18.0 +0.3
baz=101
WAT6 Susitna Watana 76.89 333 P P 20 38 18.6 +0.3
baz=100,SNR=6.0
HDA Harding Lake 76.90 335 P P 20 38 18.9 +0.9
baz=102,SNR=6.7
C27K Jago River 76.91 340 P P 20 38 19.0 +1.0
baz=106
ILAR Eielson Array 76.95 335 P P 20 38 18.1 -0.1
comp=Z,1.5nm,0.7s,baz=104,slow=5.8,SNR=16
comp=Z,1.5nm,0.7s
ILAR Eielson Array 76.95 335 P P 20 38 18.0 -0.3
KNK Knik Glacier 77.02 331 P P 20 38 19.4 +0.6
baz=100
SML Samill 77.03 332 P P 20 38 19.6 +0.8
baz=100,SNR=5.0
G25K Bearman Lake 77.06 337 P P 20 38 19.9 +1.1
baz=103
F25K Christian Rive 77.08 338 P P 20 38 20.0 +1.0
baz=104,SNR=7.2
E25K Arctic Village 77.18 338 P P 20 38 20.1 +0.6
baz=104
POKR Poker Plat Res 77.25 335 P P 20 38 20.7 +0.8
baz=101
SEW Seward 77.30 330 P P 20 38 21.0 +0.8
baz=98
WAT1 Susitna Watana 77.31 333 P P 20 38 21.1 +0.7
baz=100
PMR Palmer 77.37 332 P P 20 38 21.8 +1.1
baz=99
C26K Camden Bay 77.39 340 P P 20 38 21.9 +1.3
baz=105
H24K Noodor Dome 77.57 336 P P 20 38 22.5 +0.8
baz=101,SNR=5.9
G24K Hadweenzic Riv 77.58 337 P P 20 38 22.8 +1.1
baz=102
RC01 Rabbit Creek A 77.58 331 P P 20 38 22.7 +0.8
baz=98
MCK McKinley 77.63 334 P P 20 38 23.0 +0.9
baz=100
SLKM Skilak Lake 77.74 330 P P 20 38 23.3 +0.5
SLKM IAmb IAmb 20 38 24.2
comp=Z,9.4nm,0.9s
D25K Kavik River 77.75 340 P P 20 38 23.6 +0.9
baz=103,SNR=13
NEA2 Nenana 77.84 335 P P 20 38 24.2 +1.0
baz=100,SNR=7.0
BRSE Bradley Lake S 77.89 330 P P 20 38 24.6 +1.0
baz=97
F24K Squaw Lake 77.90 338 P P 20 38 24.1 +0.6
baz=102
TRF Thorofare Moun 78.19 333 P P 20 38 26.1 +0.8
baz=98
E24K Your Creek 78.23 338 P P 20 38 26.4 +1.0
baz=101
H23K Yukon River 78.24 336 P P 20 38 26.3 +0.9
baz=100
L22K Petersville 78.27 332 P P 20 38 26.7 +1.0
baz=98
SKT Skwentna 78.56 332 P P 20 38 27.5 +0.3
SKT IAmb IAmb 20 38 28.9
comp=Z,6.0nm,0.7s
SKT Skwentna 78.56 332 P P 20 38 28.1 +0.8
baz=97,SNR=5.6
D24K Happy Valley 78.56 339 P P 20 38 28.1 +1.0
baz=101
G23K Bananza Creek 78.58 337 P P 20 38 28.4 +1.1
baz=99,SNR=8.7
MLY Manley 78.61 335 P P 20 38 28.2 +0.7
baz=98,SNR=6.8
KDAK Kodiak Island 78.64 328 P P 20 38 27.9 +0.2
baz=95
E23K Chandalar 78.65 338 P P 20 38 28.1 +0.4
baz=100
COLD Coldfoot 78.73 337 P P 20 38 29.2 +1.2
baz=99,SNR=7.1
TOLK Toolik Lake Re 78.73 339 P P 20 38 29.3 +1.2
baz=100
SPCR Spurr Chakacha 78.79 331 P P 20 38 29.0 +0.5
baz=96
O20K Slope Mountain 78.88 330 P P 20 38 29.5 +0.4
baz=96
OHAK Old Harbor 78.97 327 P P 20 38 29.7 +0.2
baz=94
PPLA Purkeypile 78.97 333 P 20 38 30.0 +0.4
PPLA IAmb IAmb 20 38 30.7
comp=Z,9.5nm,0.6s
PPLA Purkeypile 78.97 333 P P 20 38 29.6 -0.1
baz=97,SNR=9.3
CAST Castle Rocks 78.98 333 P P 20 38 29.7 +0.2
CAST IAmb IAmb 20 38 30.8
comp=Z,6.5nm,0.8s
CAST Castle Rocks 78.98 333 P P 20 38 29.8 +0.2
baz=97,SNR=12
H22K Ishtalitna Cre 79.00 336 P P 20 38 30.3 +0.7
baz=98
CHUM Lake Minchumin 79.14 334 P P 20 38 30.5 +0.2
baz=97,SNR=5.2
P19K Oil Pt 79.14 329 P P 20 38 30.7 +0.2
baz=95
I21K Tanana 79.15 335 P P 20 38 30.9 +0.5
baz=97
D23K Nanushuk River 79.19 339 P P 20 38 31.6 +1.0
baz=99
G22K Bettles 79.19 337 P P 20 38 31.2 +0.7
baz=98
M20K Styx River 79.30 332 P P 20 38 31.9 +0.6
baz=96,SNR=5.9
C23K Itkillik River 79.30 340 P P 20 38 31.7 +0.6
baz=99,SNR=6.6
SII Sitkinak Islan 79.41 326 P P 20 38 32.2 +0.2
baz=94
E22K Anaktuvuk Pass 79.47 338 P P 20 38 32.6 +0.5
baz=98
F22K John River 79.53 337 P P 20 38 32.7 +0.3
baz=98
H21K Melozitna Rive 79.55 335 P P 20 38 32.8 +0.3
baz=97
O19K Port Alsworth 79.73 330 P P 20 38 34.0 +0.4
baz=94
N19K Bonanza Creek 79.86 331 P P 20 38 34.1 -0.3
baz=94
K20K Telida 79.86 333 P P 20 38 34.4 +0.1
baz=95
M19K Big River Lodg 79.89 332 P P 20 38 34.9 +0.4
baz=94
G21K Allakaket 79.93 336 P P 20 38 35.4 +0.8
baz=96
J20K Nowinta River 79.97 334 P P 20 38 35.1 +0.2
baz=95,SNR=8.3
Q18K Katmai Hardscr 79.98 328 P P 20 38 34.8 -0.4
baz=93
F21K Alatna River 80.00 337 P P 20 38 35.8 +0.8
baz=96,SNR=9.8
L19K White Mountain 80.13 332 P P 20 38 36.3 +0.5
baz=94
P18K Big Mountain, 80.14 329 P P 20 38 36.0 +0.2
baz=93
O18K Koktuh Hills 80.15 330 P P 20 38 36.4 +0.4
baz=93
I20K Naaghedeneel 80.17 335 P P 20 38 36.6 +0.7
baz=95
CHIR Chirikof Islan 80.17 325 P P 20 38 36.2 +0.2
baz=92
E21K Killik River 80.31 338 P P 20 38 37.1 +0.5
baz=96
B22K Teshekpuk Lake 80.33 340 P P 20 38 37.2 +0.6
baz=97
H20K Anotleneega Mo 80.39 335 P P 20 38 37.4 +0.3
baz=95
Q17K Contact Creek 80.42 328 P P 20 38 38.0 +0.5
baz=92
N18K Kilae Creek 80.54 330 P P 20 38 37.8 -0.1
baz=93,SNR=5.2
M18K Stony River 80.55 331 P P 20 38 37.9 -0.1
baz=93,SNR=5.1
J19K Poorman 80.60 334 P P 20 38 38.9 +0.7
baz=94
R17L Mt. Peulik Vol 80.65 327 P P 20 38 39.2 +0.6
baz=92
B21K Ikpikpuk River 80.66 339 P P 20 38 38.9 +0.6
baz=96,SNR=6.7
C21K Knifeblade Rid 80.67 339 P P 20 38 39.2 +0.7
baz=95
P17K Kvichak River 80.75 329 P P 20 38 39.2 +0.1
baz=92
F20K Avaraart Lake 80.85 337 P P 20 38 40.4 +1.0
baz=94
A22K Sinclair Lake 80.91 341 P P 20 38 40.7 +1.1
baz=95
L18K Granite Mounta 80.99 332 P P 20 38 40.9 +0.6
baz=92
H19K Roundabout Mou 81.05 335 P P 20 38 41.2 +0.7
baz=93
O17K Koliganek Bris 81.10 329 P P 20 38 41.1 +0.2
baz=92
E20K Nigu River 81.11 338 P P 20 38 41.2 +0.3
baz=94,SNR=11
N17K Nushagak Hills 81.17 330 P P 20 38 41.5 +0.2
baz=92
NOA NORSAR Array B 81.27 29 P P 20 38 43.1 +1.3
comp=Z,0.8nm,0.8s,baz=269,slow=5.4,SNR=3.3
comp=Z,0.8nm,0.8s
D20K Etivluk River 81.30 338 P P 20 38 42.5 +0.7
baz=94,SNR=5.0
M17K Holitna River 81.32 331 P P 20 38 42.7 +0.7
baz=92
G19K Purcell Mounta 81.34 336 P P 20 38 42.3 +0.2
baz=93
E19K Redstone River 81.46 337 P P 20 38 43.3 +0.6
baz=93
P16K Nushagak River 81.54 329 P P 20 38 43.1 -0.1
baz=91
B20K Meade River 81.57 340 P P 20 38 44.2 +1.0
baz=93
O16K Kokwok River B 81.60 329 P P 20 38 43.8 +0.2
baz=91
F19K Shaleruckik Mo 81.65 337 P P 20 38 44.3 +0.7
baz=92
L17K Donlin 81.74 332 P P 20 38 44.8 +0.6
baz=91
K17K Iditarod 81.76 332 P P 20 38 45.2 +0.9
baz=91
H18K Honhosa River 81.84 335 P P 20 38 45.8 +1.1
baz=91
D19K Kuna River 81.84 338 P P 20 38 45.2 +0.5
baz=92,SNR=5.4
G18K Tagagawik 81.97 336 P P 20 38 45.8 +0.4
baz=91
M16K Timber Creek 82.05 331 P P 20 38 46.8 +0.9
baz=90
J17K VABM Dome 82.12 333 P P 20 38 47.6 +1.4
baz=90

L16K	**Owhat River**	**82.30**	**331**	P		**P**		**20 38 48.3**	**+1.1**
	baz=90								
S14K	**Fog Glacier**	**82.39**	**326**	P		**P**		**20 38 48.5**	**+0.6**
	baz=89								
F18K	**Selawik**	**82.39**	**336**	P		**P**		**20 38 48.4**	**+0.9**
	baz=90								
C19K	**Lookout Ridge**	**82.39**	**339**	P		**P**		**20 38 48.6**	**+1.1**
	baz=91								
CHNA	**Chernabura Isl**	**82.43**	**324**	P		**P**		**20 38 48.4**	**+0.4**
	baz=89								
O15K	**Ungalikthiuk R**	**82.49**	**329**	P		**P**		**20 38 49.0**	**+0.8**
	baz=89								
H17K	**Granite Mounta**	**82.49**	**335**	P		**P**		**20 38 49.0**	**+0.9**
	baz=90								
N15K	**Kwethluk River**	**82.61**	**330**	P		**P**		**20 38 49.3**	**+0.5**
	baz=89								
E18K	**Tukpahlearik C**	**82.76**	**337**	P		**P**		**20 38 50.0**	**+0.5**
	baz=90								
GERES	**GERESS Array B**	**82.76**	**42**	P		**P**		**20 38 49.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=266,slow=3.8,SNR=7.8								
	comp=Z,0.4nm,0.6s								
G17K	**Kiwalik Mounta**	**82.80**	**335**	P		**P**		**20 38 49.9**	**+0.2**
	baz=89								
J16K	**Anvik River**	**82.81**	**333**	P		**P**		**20 38 49.6**	**-0.1**
	baz=89								
I17K	**Unalakleet**	**82.84**	**334**	P		**P**		**20 38 50.1**	**+0.3**
	baz=89								
M15K	**Kasigluk River**	**82.90**	**330**	P		**P**		**20 38 50.6**	**+0.3**
	baz=89								
A19K	**Wainwright**	**82.91**	**340**	P		**P**		**20 38 50.6**	**+0.5**
	baz=90								
SDPT	**Sand Point**	**82.93**	**325**	P		**P**		**20 38 50.6**	**+0.1**
	baz=88								
C18K	**Utukok River**	**82.97**	**338**	P		**P**		**20 38 50.5**	**-0.1**
	baz=89								
F17K	**Baldwin Pennin**	**83.03**	**336**	P		**P**		**20 38 50.9**	**+0.1**
	baz=89								
O14K	**Tigyukauivet M**	**83.23**	**329**	P		**P**		**20 38 51.9**	**-0.1**
	baz=88								
E17K	**Hotham Inlet**	**83.24**	**337**	P		**P**		**20 38 52.4**	**+0.5**
	baz=88								
L15K	**Ungalak Mounta**	**83.26**	**331**	P		**P**		**20 38 52.3**	**+0.2**
	baz=88								
N14K	**Kuskokwak Cree**	**83.42**	**330**	P		**P**		**20 38 53.0**	**0.0**
	baz=88								
H16K	**Elim**	**83.49**	**334**	P		**P**		**20 38 53.3**	**+0.1**
	baz=88								
G16K	**Koyuk River**	**83.51**	**335**	P		**P**		**20 38 53.1**	**-0.2**
	baz=88								
M14K	**Bethel**	**83.52**	**330**	P		**P**		**20 38 53.7**	**+0.3**
	baz=88								
C17K	**DeLong Mountai**	**83.71**	**338**	P		**P**		**20 38 55.1**	**+0.8**
	baz=87								
D17K	**Noatak River**	**83.71**	**337**	P		**P**		**20 38 55.0**	**+0.7**
	baz=87								
L14K	**Kuka Creek**	**83.84**	**331**	P		**P**		**20 38 55.5**	**+0.4**
	baz=87								
M13K	**Dall Lake**	**84.22**	**330**	P		**P**		**20 38 57.0**	**0.0**
	baz=86								
G15K	**Niukluk**	**84.24**	**335**	P		**P**		**20 38 56.9**	**-0.2**
	baz=86								
F15K	**North Star Dit**	**84.45**	**335**	P		**P**		**20 38 58.4**	**+0.3**
	baz=86								
C16K	**Lisburne Hills**	**84.52**	**338**	P		**P**		**20 38 58.5**	**+0.1**
	baz=85								
K13K	**Kusilvak Mount**	**84.75**	**332**	P		**P**		**20 38 59.8**	**+0.2**
	baz=85								
ANM	**Nome**	**84.85**	**334**	P		**P**		**20 39 00.1**	**0.0**
	baz=85								
F14K	**Arctic Creek**	**85.16**	**335**	P		**P**		**20 39 02.1**	**+0.5**
	baz=84								
M11K	**Mekoryuk**	**85.64**	**330**	P		**P**		**20 39 04.2**	**+0.2**
	baz=84								
TNA	**Tin City**	**85.81**	**335**	P		**P**		**20 39 05.1**	**+0.3**
	baz=83								
UNV	**Unalaska Valle**	**86.54**	**324**	P		**P**		**20 39 08.4**	**-0.2**
	baz=83								
ARCES	**ARCESS Array B**	**86.62**	**20**	P		**P**		**20 39 08.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=284,slow=3.6,SNR=5.2								
	comp=Z,1.1nm,0.6s								
ARCES	**ARCESS Array B**	**86.62**	**20**	P		**P**		**20 39 08.6**	**-0.2**
GAMB	**Gambell**	**87.70**	**334**	P		**P**		**20 39 14.1**	**+0.1**
	baz=79								
ZALV	**Zalesovo Beam**	**116.62**	**14**	PKP		**PKPdf**		**20 45 08.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=343,slow=1.5,SNR=5.1								
ZALV	**Zalesovo Beam**	**116.62**	**14**			**PKPdf**		**20 45 07.9**	**-0.9**
KURBB	**Kurchatov Arra**	**117.70**	**20**	PKP		**PKPdf**		**20 45 11.0**	**0.0**
	comp=Z,0.3nm,0.2s,baz=318,slow=2.4,SNR=4.7								
MK31	**Makanchi Array**	**122.27**	**20**	PKPdf		**PKPdf**		**20 45 19.0**	**-1.0**
MKAR	**Makanchi Array**	**122.27**	**20**	PKP		**PKPdf**		**20 45 19.2**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=325,slow=1.6,SNR=11								
MKAR	**Makanchi Array**	**122.27**	**20**			**PKPdf**		**20 45 19.3**	**-0.6**
SONM	**Songino Array**	**125.54**	**0**	PKP		**PKiKP**		**20 45 26.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=346,slow=3.0,SNR=2.7								
SONM	**Songino Array**	**125.54**	**0**			**PKPdf**		**20 45 26.1**	**-0.3**
HHC	**Hu-ho-hao-te**	**132.33**	**355**	*e*P		**PKPdf**		**20 45 39.4**	**-0.1**
GTA2	**Gaotai**	**133.41**	**8**	*e*PKP		**PKPdf**		**20 45 42.2**	**+0.6**
NJ2	**Nanjing**	**139.67**	**344**	*e*P		**PKPdf**		**20 45 52.5**	**-0.7**
NJ2				pmax		pmax			
	comp=Z,11nm,0.8s								
PZH	**PanZhiHua**	**146.46**	**8**	PKPbc		**PKPdf**		**20 46 05.6**	**+0.2**
ASAR	**Alice Springs**	**149.17**	**234**	PKPbc		**PKPbc**		**20 46 13.0**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=121,slow=3.4,SNR=19								
ASAR				pPKPbc		**pPKPbc**		**20 46 55.0**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=115,slow=3.6,SNR=3.7								
ASAR	**Alice Springs**	**149.17**	**234**			**PKPdf**		**20 46 09.6**	**-0.3**
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc		**PKPbc**		**20 46 16.6**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=110,slow=2.2,SNR=24								
WRA				pPKPbc		**pPKPbc**		**20 46 59.0**	**+1.1**
	comp=Z,1.3nm,0.4s,baz=106,slow=2.9,SNR=3.4								
CMAR	**Chiang Mai Arr**	**153.64**	**17**	PKP		**PKPdf**		**20 46 16.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=352,slow=0.7,SNR=4.4								
CMAR				PKPbc		**PKPbc**		**20 46 24.2**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=352,slow=2.2,SNR=10								
CMAR	**Chiang Mai Arr**	**153.64**	**17**			**PKPdf**		**20 46 15.8**	**-0.9**
CMAR				PKPbc		**PKPbc**		**20 46 23.5**	**-1.1**

*IDC **11** 20:45:50.8±2.2,0°.81S×126°.82E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=188.2km s-min=27.0km az=66.0*
*DJA **11** 20:45:54.2±0.3,0°.S±2°×12°.7E±°, h43km±42km, M3.3/10, MLv3.3/10*

ISC 11 20:45:53.4±1.3, 0°.43S±0°.06×126°.7E±0°.1, h35km, n6, σ1°53/7, Southern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**29**	P	P		**Pn**	**20 46 16.6**	**+0.6**
TNTI				S	S		**Sn**	**20 46 33.4**	**+0.6**
MNI	**Manado**	**2.63**	**315**	P	P		**Pn**	**20 46 34.1**	**+0.7**
NLAI	**Namlea**	**2.82**	**172**	P	P		**Pn**	**20 46 37.5**	**+1.5**
NLAI				S	S		**Sn**	**20 47 09.0**	**+0.2**
WRA	**Warramunga Arr**	**20.79**	**159**	P	P		**P**	**20 50 29.9**	**-1.8**
	0.3nm,0.4s,baz=338,slow=11,SNR=2.1								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**24.14**	**164**	P	P		**P**	**20 51 04.6**	**-1.7**
	0.6nm,0.5s,baz=343,slow=10,SNR=14								
	0.6nm,0.5s								
MKAR	**Makanchi Array**	**60.96**	**327**	P	P		P	20 56 08.4	+5.3
	0.2nm,0.5s,baz=122,slow=5.4,SNR=4.8								
	0.2nm,0.5s								

IDC 11 20:46:12.2±3.4, 48°.44S×107°.24E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=175.4km s-min=24.8km az=121.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.47**	**23**	T	T		T	21 04 32.5	
	baz=199,slow=74,SNR=22								
H01W1	**Cape Leeuwin H**	**14.48**	**23**	T	T		T	21 04 41.1	
	baz=199,slow=74,SNR=26								
H01W3	**Cape Leeuwin H**	**14.48**	**23**	T	T		T	21 04 38.9	
	baz=199,slow=74,SNR=21								
ASAR	**Alice Springs**	**32.50**	**50**	P	P		P	20 52 42.9	-1.6
	0.4nm,0.8s,baz=215,slow=8.8,SNR=4.5								
	0.4nm,0.8s								
WRA	**Warramunga Arr**	**35.84**	**47**	P	P		P	20 53 14.4	+0.8
	1.0nm,0.7s,baz=210,slow=8.4,SNR=6.4								
	1.0nm,0.7s								
QSPA	**South Pole Qui**	**41.69**	**180**	P	P		P	20 54 02.2	-0.2
	1.1nm,0.9s,baz=322,slow=19,SNR=3.1								
	1.1nm,0.9s								
SNAA	**Sanae**	**50.55**	**203**	P	P		P	20 55 11.3	-0.6
	1.1nm,0.6s,baz=129,slow=6.5,SNR=2.2								
	1.1nm,0.6s								
TXAR	**Lajitas Array**	**149.60**	**118**	PKPbc		PKPbc		21 06 04.1	+0.5
	0.4nm,0.8s,baz=202,slow=3.6,SNR=4.4								

*IDC **11** 20:54:24.6±0.6,4°.66S×102°.76E, h0km, mb4.3/25, mbtmp4.3/25, MS3.7/1, Error ellipse: s-maj=26.4km s-min=11.3km az=48.0*
*BJI **11** 20:54:26.7,5°.48S×102°.78E, h78km, mB4.9/5, mb4.7/33*
*NEIC **11** 20:54:32.7±1.6,4°.73S±0°.05×102°.75E±0°.07, h61km±4km, mb4.6/49, Error ellipse: s-maj=10.5km s-min=7.0km az=107.0*
*GFZ **11** 20:54:32.4±0.4,5°.S±4°×10°.3E±°, h63km±3km, M4.4/23, mb4.6/23, Error ellipse: s-maj=11.3km s-min=4.0km az=39.7, confirmed*
*DJA **11** 20:54:33.5±0.5,5°.S±4°×10°.3E±°, h37km±6km, M4.6/19, mb4.4/1, MLv4.7/19*

ISC 11 20:54:32.5±0.9, 4°.75S±0°.06×102°.77E±0°.06, h64km±6km, n180, σ1°08/178, mb4.5/54, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.43**	**26**	P	P		**Pn**	**20 54 43.7**	**-0.4**
MNAI	**Manna**	**0.43**	**26**				**Pn**	**20 54 44.0**	**0.0**
MNAI					Sn		**Sn**	**20 54 52.1**	**-0.3**
MNAI	**Manna**	**0.43**	**26**	P	P		**Pn**	**20 54 44.1**	**0.0**
MNAI					S		**Sn**	**20 54 52.5**	**0.0**
MNAI	**Manna**	**0.43**	**26**	P	P		**Pn**	**20 54 43.7**	**-0.4**
UBSI	**University, Be**	**1.10**	**333**	P	P		**Pn**	**20 54 51.0**	**-1.0**
KSI	**Kapahiang**	**1.10**	**351**	P	P		**Pn**	**20 54 53.1**	**+1.0**
LHSI	**Lahat**	**1.18**	**40**	P	P		**Pn**	**20 54 53.5**	**+0.4**
MDSI	**Maura Dua**	**1.43**	**80**	P	P		**Pn**	**20 54 56.5**	**+0.2**
MASI	**Maura Aman, Be**	**1.68**	**342**	P	P		**Pn**	**20 55 01.1**	**+1.3**
KASI	**Kota Agung**	**1.89**	**114**	P	P		**Pn**	**20 55 03.0**	**+0.5**
KASI	**Kota Agung**	**1.89**	**114**	P	P		**Pn**	**20 55 02.3**	**-0.1**
BLSI	**Bandar Lampung**	**2.54**	**104**	P	P		**Pn**	**20 55 11.8**	**+0.4**
BLSI	**Bandar Lampung**	**2.54**	**104**	P	P		**Pn**	**20 55 11.5**	**0.0**
PMBI	**Palembang**	**2.70**	**48**	P	P		**Pn**	**20 55 15.9**	**+2.4**
PMBI	**Palembang**	**2.70**	**48**				**Pn**	**20 55 13.1**	**-0.4**
PMBI	**Palembang**	**2.70**	**48**	P	P		**Pn**	**20 55 13.8**	**+0.3**
PMBI	**Palembang**	**2.70**	**48**	P	P		**Pn**	**20 55 12.6**	**-0.9**
KRJI	**Kerinci**	**2.94**	**334**	P	P		**Pn**	**20 55 19.3**	**+2.4**
JMBI	**JAMBI**	**3.21**	**16**	P	P		**Pn**	**20 55 21.8**	**+1.2**
PPSI	**Pulau Pagai**	**3.38**	**306**	P	P		**Pn**	**20 55 24.7**	**+1.8**
CGJI	**Cibinong**	**3.45**	**123**	P	P		**Pn**	**20 55 23.7**	**-0.1**
SDSI	**Sungai Dareh**	**4.02**	**341**	P	P		**Pn**	**20 55 32.6**	**+1.1**
DBJI	**Dramaga**	**4.35**	**115**	P	P		**Pn**	**20 55 37.4**	**+1.2**
PDSI	**Padang**	**4.45**	**329**	P	P		**Pn**	**20 55 38.3**	**+0.8**
DSRI	**Dabo**	**4.61**	**23**	P	P		**Pn**	**20 55 40.7**	**+1.0**
DSRI	**Dabo**	**4.61**	**23**	P	P		**Pn**	**20 55 40.9**	**+1.2**
PPI	**Padang Panjang**	**4.88**	**331**	P	P		**Pn**	**20 55 44.1**	**+0.8**
LEM	**Lembang**	**5.25**	**113**	Pn	Pn		**Pn**	**20 55 48.7**	**+0.1**
	5.9nm,0.3s,baz=306,slow=19,SNR=4.6								
LEM					Sn		**Sn**	**20 56 50.8**	**+2.9**
	5.4nm,0.3s,baz=149,slow=17,SNR=3.7								
BKNI	**Bangkinang**	**5.33**	**341**	Pn			**Pn**	**20 55 48.7**	**-0.8**
BBJI	**Bungbulang**	**5.55**	**119**	P	P		**Pn**	**20 55 53.7**	**+1.0**
BBJI	**Bungbulang**	**5.55**	**119**	Pn	Pn		**Pn**	**20 55 53.0**	**+0.3**
MNSI	**Mandailing Nat**	**6.36**	**330**	P	P		**Pn**	**20 56 03.6**	**0.0**
MYKOM	**Kota Tinggi**	**6.58**	**9**	P	P		**Pn**	**20 56 09.5**	**+2.8**
MYKOM	**Kota Tinggi**	**6.58**	**9**				**Pn**	**20 56 07.3**	**+0.6**
MYKOM	**Kota Tinggi**	**6.58**	**9**	P	P		**Pn**	**20 56 07.6**	**+0.9**
GSI	**Gunungsitoli**	**7.94**	**319**	P	P		**Pn**	**20 56 25.5**	**+0.2**
GSI	**Gunungsitoli**	**7.94**	**319**	Pn	Pn		**Pn**	**20 56 24.8**	**-0.5**
UGM	**Wanagama**	**8.32**	**113**	P	P		**Pn**	**20 56 32.6**	**+2.0**
UGM	**Wanagama**	**8.32**	**113**	Pn	Pn		**Pn**	**20 56 31.2**	**+0.6**
RPSI	**Rantau Prapat**	**8.33**	**332**	Pn	Pn		**Pn**	**20 56 29.1**	**-1.5**
KULM	**Kulim**	**10.19**	**348**	P	P		**Pn**	**20 56 58.5**	**+2.4**
KULM	**Kulim**	**10.19**	**348**	S	S		**Sn**	**20 58 54.7**	**+5.8**
KULM	**Kulim**	**10.19**	**348**	Pn	Pn		**Pn**	**20 56 55.7**	**-0.4**
MLSI	**Meulaboh, Aceh**	**10.98**	**325**	P	P		**Pn**	**20 57 05.6**	**-1.3**
JAGI	**Jajag, Banyuwa**	**11.90**	**109**	P	P		**Pn**	**20 57 20.0**	**+0.6**
JAGI	**Jajag, Banyuwa**	**11.90**	**109**	Pn	Pn		**Pn**	**20 57 18.5**	**-0.9**
BKB	**Balikpapan**	**14.53**	**77**	Pn	Pn		**Pn**	**20 57 54.5**	**-0.9**
PLAI	**Plampang**	**15.44**	**106**	P	P		**Pn**	**20 58 08.3**	**+1.7**
SPSI	**Sidrap Palu**	**16.97**	**88**	P	P		**Pn**	**20 58 24.3**	**-1.5**
KKM	**Kota Kinabalu**	**17.18**	**52**				**Pn**	**20 58 27.7**	**-0.9**
TOLI2	**Tolitoli**	**18.91**	**73**				**P**	**20 58 47.0**	**-1.3**
TOLI2	**Tolitoli**	**18.91**	**73**	P	P		**Pn**	**20 58 49.4**	**-0.1**
APSI	**Ampana**	**19.24**	**79**	P	P		**P**	**20 58 52.1**	**+0.3**
MMRI	**Maumere**	**19.72**	**102**	P	P		**P**	**20 58 56.1**	**-1.0**
MMRI					IAmb		IAmb	20 59 14.9	
	comp=Z,33nm,0.9s								
BATI	**Baumata**	**21.41**	**106**	P	P		**P**	**20 59 13.0**	**-2.4**
	comp=Z,16nm,0.4s,baz=233,slow=20,SNR=7.5								
	comp=Z,16nm,0.4s								
BATI	**Baumata**	**21.41**	**106**	P	P		**P**	**20 59 15.2**	**-0.2**
SOEI	**Soe**	**21.89**	**104**	P	P		**P**	**20 59 18.7**	**-1.9**
SOEI					IAmb		IAmb	20 59 46.2	
	comp=Z,27nm,1.1s								
CM31	**Chiang Mai Arr**	**23.36**	**351**	P	P		**P**	**20 59 33.7**	**-2.0**
CMAR	**Chiang Mai Arr**	**23.36**	**351**	P	P		**P**	**20 59 33.9**	**-1.8**
	comp=Z,2.8nm,0.8s,baz=171,slow=9.6,SNR=4.6								
CMAR					PcP		**PcP**	**21 03 22.3**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=180,slow=4.2,SNR=5.1								
	comp=Z,2.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**23.36**	**351**	P	P		**P**	**20 59 34.0**	**-1.6**
CHTO	**Chiang Mai**	**23.71**	**351**	P	P		**P**	**20 59 37.3**	**-1.6**
CHTO	**Chiang Mai**	**23.71**	**351**	P	P		**P**	**20 59 37.9**	**-1.0**
SLVN	**Son La**	**25.94**	**2**	P	P		**P**	**20 59 58.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**26.00**	**123**	P	P		**P**	**20 59 59.8**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=293,slow=7.6,SNR=7.6								
	comp=Z,5.2nm,0.9s								
FITZ	**Fitzroy Crossi**	**26.00**	**123**	P	P		**P**	**20 59 59.5**	**-0.2**
KNRA	**Kununurra**	**27.75**	**115**	P	P		**P**	**21 00 14.7**	**-0.8**
KNRA					IAmb		IAmb	21 00 30.4	
	comp=Z,24nm,1.4s								
MTN	**Manton Dam**	**29.14**	**108**	P	P		**P**	**21 00 25.9**	**-1.9**
MTN					IAmb		IAmb	21 00 45.5	
	comp=Z,26nm,1.4s								
H08S2	**Diego Garcia H**	**30.23**	**263**	T	T		T	21 31 35.7	
	baz=87,slow=75								
H08S3	**Diego Garcia H**	**30.24**	**263**	T	T		T	21 31 36.1	
	baz=87,SNR=7.8								
H08S1	**Diego Garcia H**	**30.25**	**263**	T	T		T	21 31 37.0	
	baz=87,slow=75								
H01W3	**Cape Leeuwin H**	**31.78**	**162**	T	T		T	21 34 11.0	
	baz=340,slow=76,SNR=18								
H01W2	**Cape Leeuwin H**	**31.80**	**162**	T	T		T	21 34 17.8	
	baz=340,slow=76								
H01W1	**Cape Leeuwin H**	**31.80**	**162**	T	T		T	21 34 15.8	
	baz=340,slow=76,SNR=27								
WB0	**Warramunga Arr**	**34.22**	**119**	P	P		**P**	**21 01 12.3**	**-0.1**
WB0					IAmb		IAmb	21 01 24.9	
	comp=Z,7.2nm,1.3s								
WRA	**Warramunga Arr**	**34.24**	**119**	P	P		**P**	**21 01 13.1**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=294,slow=8.4,SNR=18								
WRA					PcP		**PcP**	**21 03 48.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=304,slow=2.8,SNR=2.7								
	comp=Z,0.6nm,0.3s								
WRA	**Warramunga Arr**	**34.24**	**119**	P	P		**P**	**21 01 12.9**	**+0.3**
AS31	**Alice Springs**	**35.42**	**125**				**P**	**21 01 22.9**	**+0.2**
AS31					IAmb		IAmb	21 01 30.2	
	comp=Z,2.2nm,0.4s								
ASAR	**Alice Springs**	**35.42**	**125**	P	P		**P**	**21 01 23.3**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=298,slow=8.4,SNR=27								
ASAR					PcP		**PcP**	**21 03 52.5**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=298,slow=2.7,SNR=5.1								
	comp=Z,1.5nm,0.7s								
ASAR	**Alice Springs**	**35.42**	**125**	P			**P**	**21 01 23.0**	**+0.3**
ASAR							**PcP**	**21 03 52.2**	**+0.7**
XAN	**Xi'an**	**39.01**	**8**	P	P		**P**	**21 01 52.6**	**-0.4**
XAN					pmax		pmax		
	comp=Z,11nm,0.6s								
LYN	**LuoYang**	**40.14**	**12**	P	P		**P**	**21 02 03.4**	**+1.1**
LYN					pmax		pmax		
	comp=Z,17nm,0.5s								
LZDM	**Lanzhou Array**	**40.50**	**1**	P	P		**P**	**21 02 05.6**	**0.0**
	comp=Z,3.2nm,0.4s,baz=183,slow=13,SNR=8.8								
	comp=Z,3.2nm,0.4s								
LZH	**Lanzhou**	**40.63**	**1**	*e*P	P		**P**	**21 02 07.4**	**+0.9**
LZH					pP		pP	21 02 21.9	-0.6
LZH					pmax		pmax		
	comp=Z,15nm,1.0s								
JMZ	**Minamidaito 2**	**41.05**	**41**	P	P		**P**	**21 02 08.5**	**-1.4**
BBOO	**Buckleboo**	**41.77**	**136**	P	P		**P**	**21 02 15.7**	**-0.1**
MTSU	**Mount Surprise**	**42.72**	**112**	P	P		**P**	**21 02 24.3**	**+0.6**
GTA2	**Gaotai**	**44.10**	**357**	*e*P	P		**P**	**21 02 35.1**	**+0.5**
GTA2					pmax		pmax		
	comp=Z,4.0nm,0.6s								
CTA	**Charters Tower**	**44.95**	**114**	P	P		**P**	**21 02 42.5**	**+0.8**
	comp=Z,5.4nm,0.7s,baz=282,slow=10,SNR=7.1								
CTA					LR		LR	21 23 14.3	
	comp=Z,101nm,20.5s,baz=264,slow=38								
	comp=Z,5.4nm,0.7s								
CTAO	**Charters Tower**	**44.95**	**114**	P	P		**P**	**21 02 41.5**	**-0.2**
CTAO					IAmb		IAmb	21 02 52.9	
	comp=Z,22nm,1.4s								
CTAO	**Charters Tower**	**44.95**	**114**	P	P		**P**	**21 02 40.5**	**-1.2**
STKA	**Stephens Creek**	**45.27**	**131**	P	P		**P**	**21 02 45.4**	**+1.4**
	comp=Z,6.4nm,0.7s,baz=315,slow=9.7,SNR=15								
	comp=Z,6.4nm,0.7s								
STKA	**Stephens Creek**	**45.27**	**131**	P	P		**P**	**21 02 45.2**	**+1.2**
HHC	**Hu-ho-hao-te**	**46.09**	**9**	*e*P	P		**P**	**21 02 52.6**	**+2.3**
HHC					pmax		pmax		
	comp=Z,9.0nm,0.6s								
HHC					pmax		pmax		
	comp=Z,52nm,4.7s								
NIL	**Nilore**	**47.30**	**326**				**P**	**21 02 59.5**	**-0.4**
NIL	**Nilore**	**47.30**	**326**	P	P		**P**	**21 02 58.5**	**-1.4**
KSRS	**Korea Array**	**48.08**	**27**	P	P		**P**	**21 03 06.2**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=217,slow=7.2,SNR=6.6								
	comp=Z,1.2nm,0.7s								
CMSA	**Cobar Meteorol**	**48.25**	**129**	P	P		**P**	**21 03 06.8**	**-0.5**
WMQ	**Urumqi**	**50.22**	**346**	*e*P	P		**P**	**21 03 23.3**	**+1.2**
WMQ					pmax		pmax		
	comp=Z,32nm,0.7s								
KSH2	**Kashi**	**50.39**	**333**	P	P		**P**	**21 03 23.3**	**-0.3**
KSH2					pP		pP	21 03 39.0	-1.0
KSH2					pmax		pmax		
	comp=Z,5.0nm,0.8s								
WUS	**Wushi**	**50.54**	**337**	P	P		**P**	**21 03 24.0**	**-0.8**
WUS	**Wushi**	**50.54**	**337**	P	P		**P**	**21 03 24.8**	**+0.1**
EIDS	**Eidsvold**	**50.61**	**119**	P	P		**P**	**21 03 25.1**	**-0.2**
EIDS					IAmb		IAmb	21 03 36.3	
	comp=Z,9.3nm,1.3s								
MANEM	**Manem**	**51.06**	**328**				**P**	**21 03 28.2**	**-0.6**
MANEM					IAmb		IAmb	21 03 32.1	
	comp=Z,20nm,0.7s								
INU	**Inuyama**	**51.24**	**36**	P	P		**P**	**21 03 29.2**	**-0.7**
ASAI	**AK-SAY(Kyrgyzs**	**51.41**	**335**	P	P		**P**	**21 03 31.9**	**+0.4**
TARG	**Taragay, Kyrgy**	**51.55**	**336**	P	P		**P**	**21 03 32.6**	**0.0**
TARG	**Taragay, Kyrgy**	**51.55**	**336**	P	P		**P**	**21 03 31.7**	**-0.9**
PRZ	**Przheval'sk**	**51.96**	**337**	P	P		**P**	**21 03 36.1**	**+0.7**
NRN	**Naryn**	**52.06**	**335**	P	P		**P**	**21 03 35.9**	**-0.4**
NRN					IAmb		IAmb	21 03 37.3	
	comp=Z,3.0nm,0.6s								
KDJ	**Kajisay**	**52.14**	**336**	P	P		**P**	**21 03 36.9**	**+0.2**
KDJ	**Kajisay**	**52.14**	**336**	P	P		**P**	**21 03 36.5**	**-0.3**
PDGK	**Podgornoye**	**52.28**	**339**				**P**	**21 03 37.5**	**-0.2**
SONM	**Songino Array**	**52.45**	**3**	P	P		**P**	**21 03 39.4**	**+0.6**
	comp=Z,5.6nm,0.7s,baz=185,slow=8.5,SNR=41								
SONM					PcP		**PcP**	**21 04 48.6**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=184,slow=4.2,SNR=4.9								
	comp=Z,5.6nm,0.7s								
SONM	**Songino Array**	**52.45**	**3**				**P**	**21 03 38.8**	**0.0**
SONM			

BURAR	**Bucovina Array**	**85.13**	**318**	P	**P**	**21 07 02.5**	**+0.7**
BURAR				IAmb	IAmb	21 07 05.0	
	comp=Z,2.4nm,0.8s						
BUR08	**Bucovina Ar. S**	**85.15**	**318**	P	**P**	**21 07 02.3**	**+0.3**
BUR08				IAmb	IAmb	21 07 06.5	
	comp=Z,5.8nm,1.4s						
KOLS	**Kolonicke sedl**	**87.32**	**319**	*eP*	**P**	**21 07 15.2**	**+2.7**
FINES	**FINESS Array B**	**87.81**	**332**	P	**P**	**21 07 14.7**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=108,slow=7.5,SNR=14						
	comp=Z,2.4nm,0.9s						
FINES	**FINESS Array B**	**87.81**	**332**	P	**P**	**21 07 14.2**	**-0.3**
SRO	**Srobarova**	**89.76**	**318**	*eP*	**P**	**21 07 24.3**	**+0.3**
ARCES	**ARCESS Array B**	**89.98**	**340**	P	**P**	**21 07 25.6**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=105,slow=5.9,SNR=5.1						
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**92.92**	**319**	P	**P**	**21 07 39.9**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=106,slow=3.5,SNR=5.0						
	comp=Z,0.4nm,0.7s						
GERES	**GERESS Array B**	**92.92**	**319**	P	**P**	**21 07 38.8**	**0.0**
HFS	**Hagfors**	**93.62**	**330**	P	**P**	**21 07 42.5**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=77,slow=9.0,SNR=0.9						
	comp=Z,0.8nm,0.7s						
BDFB	**Brasilia**	**144.69**	**234**	PKP	**PKPdf**	**21 14 04.1**	**+0.9**
	comp=Z,2.4nm,0.3s,baz=150,slow=5.0,SNR=4.4						
BDFB	**Brasilia**	**144.69**	**234**		**PKPab**	**21 14 02.0**	**0.0**
TXAR	**Lajitas Array**	**145.01**	**43**	PKP	**PKPdf**	**21 14 03.5**	**0.0**
	comp=Z,2.1nm,0.4s,baz=324,slow=2.0,SNR=74						
HHAR	**Hobbs**	**145.06**	**24**	PKPbc	**PKPbc**	**21 14 01.8**	**-0.9**
S44A	**Carbondale**	**145.42**	**17**	PKPbc	**PKPbc**	**21 14 03.0**	**-0.8**
T42A	**Van Buren**	**145.45**	**20**	PKPbc	**PKPdf**	**21 14 03.4**	**-0.5**
WCI	**Wyandotte Cave**	**145.66**	**13**	PKPdf	**PKPdf**	**21 14 03.8**	**-0.4**

*IDC **11** 21:00:56.2±1.4,2.°94S×136.°50E, h0km, mb3.7/3, mbtmp3.8/6, ML3.5/3, Error ellipse: s-maj=29.5km s-min=25.4km az=24.0*
*DJA **11** 21:01:03.3±0.4,3.°3S×13.°6E±.°, h64km±9km, M3.9/8, mB4.8/1, mb3.7/1, MLv4.0/8, Mw(mB)4.0/1*
ISC 11 21:01:00.0±0.8,**3.°12S**±0.°06×**136.°48E**±0.°07,**h34**km,**n12,** σ**2**^{s}**12**/**17**,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.26**	**349**	P	**Pn**	**21 01 21.0**	**-0.3**
SRPI				S	**Sn**	**21 01 35.5**	**-1.6**
BAKI	**Biak**	**1.95**	**349**	P	**Pn**	**21 01 32.2**	**+1.4**
BAKI				S	**Sn**	**21 01 53.2**	**-0.9**
MWPI	**Manokwari, Pap**	**3.27**	**312**	P	**Pn**	**21 01 50.2**	**+1.3**
FAKI	**Fak Fak**	**4.23**	**273**	P	**Pn**	**21 02 03.6**	**+1.5**
JAY	**Jayapura**	**4.26**	**82**	Pn	**Pn**	**21 02 03.3**	**+0.7**
	0.3nm,0.3s,baz=288,slow=20,SNR=1.4						
JAY				Sn	**Sn**	**21 02 51.4**	**+0.1**
	1.3nm,0.3s,baz=300,slow=20,SNR=1.4						
	5.7nm,0.6s						
SIJI	**Sorong**	**5.67**	**293**	Pn	**Pn**	**21 02 23.0**	**+1.0**
	2.5nm,0.3s,baz=198,slow=19,SNR=16						
SIJI				Sn	**Sn**	**21 03 23.9**	**-2.0**
	0.6nm,0.3s,baz=165,slow=12,SNR=1.9						
	6.1nm,0.3s						
SIJI	**Sorong**	**5.67**	**293**	P	**Pn**	**21 02 23.1**	**+1.1**
WRA	**Warramunga Arr**	**16.85**	**187**	Pn	**Pn**	**21 04 51.8**	**-1.7**
	0.5nm,0.3s,baz=7.4,slow=12,SNR=18						
WRA				Sn	Sn	21 07 52.5	-7.3
	0.3nm,0.3s,baz=5.9,slow=23,SNR=5.7						
FITZ	**Fitzroy Crossi**	**18.29**	**215**	P	**P**	**21 05 13.0**	**+1.9**
	0.4nm,0.3s,baz=33,slow=12,SNR=9.4						
FITZ				S	Sn	21 08 26.1	-8.5
	3.3nm,0.7s,baz=86,slow=16,SNR=1.7						
	3.3nm,0.6s						
ASAR	**Alice Springs**	**20.58**	**187**	P	**P**	**21 05 38.9**	**+2.7**
	10nm,0.8s,baz=11,slow=12,SNR=85						
ASAR				S	**S**	**21 09 18.9**	**-5.7**
	0.2nm,0.5s,baz=8.9,slow=26,SNR=1.5						
	10nm,0.8s						
CMAR	**Chiang Mai Arr**	**42.73**	**302**	P	**P**	**21 08 54.0**	**-0.3**
	0.4nm,0.5s,baz=116,slow=8.8,SNR=1.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**68.77**	**323**	P	**P**	**21 12 01.1**	**+0.3**
	0.3nm,0.8s,baz=123,slow=5.3,SNR=2.0						
	0.3nm,0.8s						

*AZER **11** 21:28:32.5,38.°45N×45.°12E, h10km, ml3.0*
*AFAD **11** 21:28:32.0,38.°40N×45.°09E, h6km±4km, ML2.5*
*TEH **11** 21:28:33.6,38.°32N×45.°21E, h8km±79km, ML2.9, Presumed earthquake*
ISC 11 21:28:31.9±1.1,**38.°41N**±0.°02×**45.°11E**±0.°02,**h2**km±10km, **n47**, σ**1**^{s}**77**/**84**,**Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.41**	**107**	Pg	**Pb**	**21 28 42.0**	**-0.1**
IMRD	**Marand**	**0.56**	**56**	Pg	**Pb**	**21 28 44.3**	**-0.2**
IMRD				Sg	**Sb**	**21 28 52.5**	**-0.6**
NAX	**Nakhchivan**	**0.82**	**21**	P	**Pb**	**21 28 49.2**	**+0.2**
NAX				S	**Sb**	**21 29 00.9**	**+0.3**
ITBZ	**Tabriz**	**0.83**	**102**	Pg	**Pg**	**21 28 47.3**	**-0.6**
ORD	**Ordubad**	**0.86**	**53**	P	**Pb**	**21 28 56.6**	**-0.1**
ORD				S	**Sn**	**21 29 02.4**	**-2.2**
OZAP	**Van, Ozalp-Mer**	**0.91**	**287**	P	**Pb**	**21 28 50.4**	**-0.2**
OZAP				S	**Sg**	**21 29 01.3**	**-0.1**
IAZR	**Azarshahr**	**1.00**	**136**	Pg	**Pg**	**21 28 51.1**	**0.0**
YOVA	**Hakkari_Yksek**	**1.04**	**219**	P	**Pg**	**21 28 51.1**	**-0.8**
YOVA				S	**Sn**	**21 29 07.7**	**-1.4**
YOVA				IAML		21 29 13.0	
	comp=E,100nm,0.5s						
SBZ	**Shahbuz**	**1.05**	**19**	P	**Pn**	**21 28 53.0**	**-0.8**
SBZ				S	**Sn**	**21 29 08.4**	**-0.7**
HYR	**Heyderabad**	**1.33**	**351**	P	**Pg**	**21 28 57.3**	**-0.1**
HYR				S	**Sn**	**21 29 15.8**	**-0.1**
VMUR	**Van-Muradiye**	**1.34**	**296**	P	**Pn**	**21 28 56.2**	**-1.6**
VMUR				S	**Sn**	**21 29 16.2**	**-0.1**
VMUR				IAML		21 29 21.0	
	comp=E,105nm,0.5s						
VMUR				IAML		21 29 22.0	
	comp=N,76nm,0.4s						
TVAN	**Van**	**1.34**	**276**	P	**Pg**	**21 28 58.4**	**+0.7**
TVAN				S	**Sn**	**21 29 17.6**	**+1.1**
TVAN				IAML		21 29 28.0	
	comp=N,70nm,0.7s						
TVAN				IAML		21 29 30.0	
	comp=E,110nm,0.6s						
HAKT	**HAKKARI**	**1.40**	**233**	P	**Pn**	**21 28 57.9**	**-0.8**
HAKT				S	**Sg**	**21 29 17.2**	**+0.4**
HAKT	**HAKKARI**	**1.40**	**233**	P	**Pn**	**21 28 58.3**	**-0.4**
HAKT				S	**Sg**	**21 29 22.5**	**+5.7**
IHRS	**Heris**	**1.52**	**93**	Pg	**Pb**	**21 29 00.6**	**-0.4**
GEVA	**Gevas**	**1.62**	**267**	P	**Pb**	**21 29 02.3**	**-0.3**
GEVA				S	**Sg**	**21 29 24.5**	**+0.6**
CUKT	**Cukurca**	**1.66**	**226**	P	**Pb**	**21 29 03.1**	**-0.2**
CUKT				S	**Sb**	**21 29 24.1**	**-0.7**
CUKT				IAML		21 29 36.0	
	comp=N,70nm,0.9s						
CUKT				IAML		21 29 36.0	
	comp=E,63nm,1.2s						
IGDI	**IGDIR**	**1.67**	**331**	P	**Pb**	**21 29 03.2**	**-0.2**
IGDI	**IGDIR**	**1.67**	**331**	P	**Pb**	**21 29 03.5**	**0.0**
IGDI				S	**Sg**	**21 29 29.1**	**+3.6**
MAHB	**Mahabad**	**1.70**	**164**	Pg	**Pn**	**21 29 02.9**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.91**	**283**	P	**Pb**	**21 29 08.0**	**+0.3**
ADCV				S	**Sg**	**21 29 33.1**	**-0.4**
ADCV				IAML		21 29 38.0	
	comp=N,44nm,0.9s						
QRD	**Qoradiz**	**2.02**	**58**	P	**Pb**	**21 29 08.8**	**-0.6**
QRD				S	**Sg**	**21 29 36.0**	**-0.8**
IHSH	**Hashtrud**	**2.03**	**122**	Pn	**Pb**	**21 29 09.1**	**-0.6**
KOTA	**Agri, Merkez-K**	**2.04**	**314**	P	**Pg**	**21 29 10.9**	**-0.1**
KOTA				S	**Sg**	**21 29 37.0**	**-0.4**
DORK	**Agr/Tutak/Do**	**2.07**	**299**	P	**Pb**	**21 29 10.0**	**-0.3**
DORK				S	**Sn**	**21 29 33.3**	**-1.0**
ISRB	**Sarab**	**2.10**	**105**	Pn	**Pb**	**21 29 10.2**	**-0.6**
AGDM	**Agdam**	**2.30**	**42**	P	**Pb**	**21 29 13.7**	**-0.5**
AGDM				S	**Sg**	**21 29 45.1**	**-0.7**
SIRN	**Sirnak**	**2.32**	**248**	P	**Pb**	**21 29 13.1**	**-1.5**
SIRN				S	**Sg**	**21 29 46.7**	**+0.3**
SIRN				IAML		21 30 04.0	
	comp=E,31nm,0.7s						
SIRN				IAML		21 30 13.0	
	comp=N,30nm,1.0s						
GDB	**GEDABAY**	**2.37**	**12**	P	**Pb**	**21 29 15.2**	**-0.2**
GDB				S	**Sg**	**21 29 47.5**	**-0.4**
GANJ	**Ganja**	**2.42**	**22**	P	**Pb**	**21 29 15.3**	**-1.0**
GANJ				S	**Sb**	**21 29 47.2**	**+0.5**
BRDA	**Brd**	**2.45**	**40**	P	**Pb**	**21 29 15.2**	**-1.5**
BRDA				S	**Sg**	**21 29 53.6**	**+2.9**
YRD	**Yardimli**	**2.50**	**77**	P	**Pb**	**21 29 16.5**	**-1.2**
YRD				S	**Sb**	**21 29 50.1**	**+1.0**
LRK	**Lerik**	**2.54**	**84**	P	**Pb**	**21 29 16.6**	**-1.8**
LRK				S	**Sg**	**21 29 53.8**	**+0.2**
SRTM	**Siirt_Merkez**	**2.55**	**262**	P	**Pb**	**21 29 18.5**	**+0.1**
SRTM				IAML		21 29 59.0	
	comp=N,30nm,0.8s						
SRTM				IAML		21 30 06.0	
	comp=E,23nm,0.8s						
QZX	**Qazax, Azerbai**	**2.66**	**4**	P	**Pb**	**21 29 19.6**	**-0.7**
QZX				S	**Sg**	**21 29 54.9**	**-2.4**
GLBA	**Clilabad**	**2.69**	**71**	P	**Pb**	**21 29 19.4**	**-1.5**
GLBA				S	**Sb**	**21 29 54.0**	**-0.4**
ZRD	**Zardab**	**2.73**	**46**	P	**Pb**	**21 29 19.5**	**-2.1**
ZRD				S	**Sb**	**21 29 55.0**	**-0.5**
LKRN	**Lenkeran, Azer**	**2.89**	**83**	P	**Pb**	**21 29 21.3**	**-3.0**
LKRN				S	**Sb**	**21 30 01.2**	**+1.2**
ASTR	**Astara**	**2.89**	**86**	P	**Pb**	**21 29 21.6**	**-2.6**
ASTR				S	**Sb**	**21 30 00.0**	**0.0**
KDMR	**Kurdemir**	**3.09**	**49**	S	**Sb**	**21 30 04.3**	**-1.4**
SEKA	**Sheki**	**3.23**	**29**	P	**Pb**	**21 29 26.9**	**-3.1**
SEKA				S	**Sb**	**21 30 09.9**	**0.0**
QBL	**Gabala**	**3.29**	**39**	P	**Pn**	**21 29 27.4**	**+2.7**
QBL				S	**Sb**	**21 30 08.6**	**-3.1**
IML	**Ismayilli**	**3.36**	**44**	P	**Pn**	**21 29 28.4**	**+2.8**
IML				S	**Sb**	**21 30 12.7**	**-1.0**
PQL	**Pirkuli**	**3.59**	**47**	P	**Pn**	**21 29 31.2**	**+2.4**
PQL				S	**Sb**	**21 30 15.5**	**-4.9**
XNQ	**Khinaliq**	**3.62**	**39**	P	**Pn**	**21 29 31.7**	**+2.5**
XNQ				S	**Sb**	**21 30 17.6**	**-3.5**
ATGJ	**Altiaghaj**	**3.84**	**49**	P	**Pn**	**21 29 35.5**	**+3.4**
ATGJ				S	**Sn**	**21 30 21.4**	**+3.4**
SIZA	**Siyzn**	**3.95**	**46**	P	**Pn**	**21 29 37.4**	**+3.7**
SIZA				S	**Sn**	**21 30 24.2**	**+3.4**

*IDC **11** 21:32:06.8±1.0, 18.°43N×147.°30E, h0km, mb4.0/13, mbtmp4.0/15, ML3.3/2, Error ellipse: s-maj=36.2km s-min=15.1km az=89.0*
*NEIC **11** 21:32:12.8±0.8, 18.°50N±0.°10×147.°2E±0.°2, h32km±7km, mb4.4/16, Error ellipse: s-maj=31.4km s-min=12.3km az=104.0*
ISC 11 21:32:11.4±0.7,**18.°45N**±0.°06×**147.°5E**±0.°1,**h35**km,**n43,** σ**1**^{s}**32**/**43**,**mb4.2**/**20**,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.57**	**207**	Pn	**Pn**	**21 33 05.0**	**+0.7**
DPSS				Sn	**Sn**	**21 33 46.2**	**+0.9**
GUMO	**Guam**	**5.44**	**208**	Pn	**Pn**	**21 33 28.5**	**-1.5**
	4.7nm,0.3s,baz=45,slow=14,SNR=1.7						
GUMO				Sn	**Sn**	**21 34 31.2**	**-0.2**
	8.7nm,0.3s,baz=0.0,slow=20,SNR=1.3						
	26nm,0.3s						
GUMO	**Guam**	**5.44**	**208**		**Pn**	**21 33 29.9**	**-0.1**
GUMO				Sn	**Sn**	**21 34 30.8**	**-0.6**
PATS	**Pohnpei**	**15.65**	**136**	Pn	**Pn**	**21 35 45.4**	**-4.0**
H11S3	**WAKE ISLAND Hy**	**18.24**	**87**	T	T	21 55 03.5	
	baz=265,slow=78,SNR=33						
H11S1	**WAKE ISLAND Hy**	**18.25**	**87**	T	T	21 55 04.9	
	baz=265,slow=78,SNR=22						
H11S2	**WAKE ISLAND Hy**	**18.25**	**87**	T	T	21 55 02.4	
	baz=265,slow=78,SNR=25						
H11N1	**WAKE ISLAND Hy**	**18.41**	**83**	T	T	21 55 19.9	
	baz=265,slow=74,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**18.41**	**83**	T	T	21 55 18.3	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**18.42**	**83**	T	T	21 55 20.4	
	baz=265,slow=74,SNR=4.1						
INU	**Inuyama**	**19.21**	**333**	P	**P**	**21 36 27.8**	**-4.6**
INU				IAmb	IAmb	21 36 30.7	
	comp=Z,43nm,1.5s						
MJAR	**Matsushiro Arr**	**19.78**	**338**	P	**Pn**	**21 36 39.7**	**-0.6**
	baz=163,slow=9.8,SNR=5.1						
	comp=Z,2.8nm,0.7s						
KSRS	**Korea Array**	**25.53**	**322**	P	**P**	**21 37 36.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=142,slow=9.2,SNR=7.8						
	comp=Z,1.4nm,0.6s						
FAKI	**Fak Fak**	**25.99**	**217**	P	**P**	**21 37 42.7**	**+1.6**
KKM	**Kota Kinabalu**	**32.86**	**252**	P	**P**	**21 38 41.5**	**-0.9**
KLR	**Kul'dur**	**33.22**	**341**	P	**P**	**21 38 45.5**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=150,slow=8.1,SNR=5.3						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**40.27**	**199**	P	**P**	**21 39 45.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=20,slow=8.0,SNR=9.5						
WRA				PcP	**PcP**	**21 41 49.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=20,slow=3.2,SNR=2.2						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**40.27**	**199**	P	**P**	**21 39 44.4**	**-0.8**
AS31	**Alice Springs**	**43.90**	**198**	P	**P**	**21 40 15.9**	**+1.0**
ASAR	**Alice Springs**	**43.90**	**198**	P	**P**	**21 40 14.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=21,slow=6.7,SNR=11						
ASAR				PcP	**PcP**	**21 42 02.2**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=24,slow=3.3,SNR=2.4						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**43.90**	**198**	P	**P**	**21 40 15.4**	**+0.6**
SONM	**Songino Array**	**44.39**	**321**	P	**P**	**21 40 19.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.3,SNR=4.3						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**44.39**	**321**	P	**P**	**21 40 18.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**45.91**	**278**	P	**P**	**21 40 29.8**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=79,slow=10,SNR=1.9						
	comp=Z,0.6nm,0.3s						
BBOO	**Buckleboo**	**52.13**	**192**	P	**P**	**21 41 19.9**	**+1.6**
ZALV	**Zalesovo Beam**	**59.23**	**322**	P	**P**	**21 42 09.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=83,slow=4.5,SNR=5.3						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**59.23**	**322**	P	**P**	**21 42 08.4**	**-0.7**
MKAR	**Makanchi Array**	**59.84**	**314**	P	**P**	**21 42 13.4**	**0.0**
	comp=Z,0.6nm,0.7s,baz=99,slow=7.9,SNR=5.9						
MKAR				PcP	**PcP**	**21 42 60.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=78,slow=5.3,SNR=4.9						
	comp=Z,0.6nm,0.7s						
MAKZ	**Makanchi**	**60.06**	**314**	P	**P**	**21 42 15.2**	**+0.3**
MAKZ				IAmb	IAmb	21 42 36.2	
	comp=Z,3.0nm,1.0s						
D20K	**Etivluk River**	**60.85**	**20**	P	**P**	**21 42 21.4**	**+1.4**
D20K				IAmb	IAmb	21 42 24.9	
	comp=Z,5.5nm,1.2s						
E22K	**Anaktuvuk Pass**	**62.25**	**22**	P	**P**	**21 42 31.6**	**+2.1**
E22K				IAmb	IAmb	21 42 42.5	
	comp=Z,2.4nm,0.9s						
KURK	**Kurchatov**	**62.57**	**318**	P	**P**	**21 42 31.9**	**+0.1**
KURK				IAmb	IAmb	21 42 32.8	
	comp=Z,3.9nm,0.8s						
KURBB	**Kurchatov Arra**	**62.62**	**318**	P	**P**	**21 42 32.2**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=97,slow=7.2,SNR=57						
	comp=Z,4.9nm,0.8s						
ILAR	**Eielson Array**	**63.13**	**26**	P	**P**	**21 42 36.3**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=261,slow=6.7,SNR=4.5						
	comp=Z,0.6nm,0.9s						
G24K	**Hadweenzic Riv**	**63.40**	**24**	P	**P**	**21 42 38.6**	**+1.6**
BVAR	**Borovoye Array**	**67.73**	**320**	P	**P**	**21 43 05.7**	**+0.4**
	comp=Z,6.2nm,0.7s,baz=91,slow=8.6,SNR=26						
	comp=Z,6.2nm,0.7s						
BORK	**Borovoye**	**67.77**	**321**	P	**P**	**21 43 06.0**	**+0.5**
BORK				IAmb	IAmb	21 43 07.0	
	comp=Z,4.5nm,0.8s						
KK31	**Karatay Array**	**68.21**	**310**	P	**P**	**21 43 08.4**	**-0.1**
KK31				IAmb	IAmb	21 43 10.1	
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**68.21**	**310**	P	**P**	**21 43 08.7**	**+0.1**
AB31	**Akbulak array**	**74.66**	**317**	P	**P**	**21 43 47.2**	**-0.1**
AB31				IAmb	IAmb	21 43 48.1	
	comp=Z,3.2nm,1.0s						
ABKAR	**Akbulak array**	**74.66**	**317**	P	**P**	**21 43 47.3**	**+0.1**
ARCES	**ARCESS Array B**	**83.24**	**343**	P	**P**	**21 44 35.9**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=61,slow=5.4,SNR=5.9						
	comp=Z,0.5nm,0.5s						
FINES	**FINESS Array B**	**87.80**	**336**	P	**P**	**21 44 56.0**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=55,slow=5.3,SNR=7.2						
	comp=Z,3.8nm,0.9s						

*AZER **11** 21:32:40.6,38.°40N×45.°07E, h11km, ml2.8*
*AFAD **11** 21:32:41.2,38.°39N×45.°13E, h11km±2km, ML2.4*
*TEH **11** 21:32:42.8,38.°31N×45.°19E, h4km±113km, ML2.9, Presumed earthquake*
ISC 11 21:32:41.3±1.1,**38.°39N**±0.°03×**45.°14E**±0.°02,**h11**km±10km, **n37**, σ**1**^{s}**19**/**59**,**Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.39**	**106**	Pg	**Pb**	**21 32 51.3**	**+0.9**
IMRD	**Marand**	**0.55**	**54**	Pg	**Pb**	**21 32 53.6**	**+0.5**
IMRD				Sg	**Sb**	**21 33 02.3**	**+1.3**
ITBZ	**Tabriz**	**0.81**	**101**	Pg	**Pg**	**21 32 56.5**	**-0.4**
NAX	**Nakhchivan**	**0.83**	**19**	P	**Pb**	**21 32 58.3**	**+0.5**
NAX				S	**Sn**	**21 33 10.8**	**-0.5**
ORD	**Ordubad**	**0.86**	**51**	P	**Pn**	**21 32 58.9**	**-0.5**
ORD				S	**Sn**	**21 33 11.4**	**-0.6**
OZAP	**Van, Ozalp-Mer**	**0.94**	**287**	P	**Pb**	**21 32 59.6**	**-0.2**
OZAP				S	**Sn**	**21 33 13.0**	**-1.2**
IAZR	**Azarshahr**	**0.97**	**137**	Pg	**Pg**	**21 33 00.2**	**+0.1**
YOVA	**Hakkari_Yksek**	**1.04**	**220**	P	**Pg**	**21 33 01.0**	**-0.5**
SBZ	**Shahbuz**	**1.06**	**18**	P	**Pn**	**21 33 02.2**	**0.0**
SBZ				S	**Sn**	**21 33 16.9**	**0.0**
HYR	**Heyderabad**	**1.35**	**351**	P	**Pb**	**21 33 06.3**	**-0.3**
HYR				S	**Sg**	**21 33 25.6**	**+0.9**
VMUR	**Van-Muradiye**	**1.36**	**297**	P	**Pn**	**21 33 06.4**	**-0.1**
VMUR				S	**Sg**	**21 33 26.8**	**+1.4**
VMUR				IAML		21 33 30.0	
	comp=E,66nm,0.5s						
VMUR				IAML		21 33 32.0	
	comp=N,51nm,0.4s						
TVAN	**Van**	**1.37**	**276**	P	**Pg**	**21 33 07.3**	**-0.3**
TVAN				S	**Sg**	**21 33 25.3**	**-0.1**
TVAN				IAML		21 33 38.0	
	comp=N,47nm,0.5s						
TVAN				IAML		21 33 40.0	
	comp=E,63nm,0.6s						
HAKT	**HAKKARI**	**1.40**	**234**	P	**Pb**	**21 33 07.5**	**-0.1**
HAKT				S	**Sg**	**21 33 28.0**	**+1.5**
HAKT				IAML		21 33 33.0	
	comp=E,44nm,0.5s						
HAKT	**HAKKARI**	**1.40**	**234**	P	**Pb**	**21 33 07.7**	**0.0**
HAKT				S	**Sg**	**21 33 27.6**	**+1.0**
IHRS	**Heris**	**1.50**	**92**	Pg	**Pg**	**21 33 10.4**	**+0.3**
CUKT	**Cukurca**	**1.67**	**227**	P	**Pn**	**21 33 09.8**	**-0.8**
CUKT				IAML		21 33 45.0	
	comp=N,44nm,1.0s						
CUKT				IAML		21 33 46.0	
	comp=E,37nm,0.7s						
IGDI	**IGDIR**	**1.69**	**331**	P	**Pb**	**21 33 12.5**	**0.0**
IGDI				S	**Sg**	**21 33 35.0**	**-0.8**
IGDI	**IGDIR**	**1.69**	**331**	P	**Pb**	**21 33 11.8**	**-0.6**
IGDI				S	**Sg**	**21 33 38.2**	**+2.5**
IHSH	**Hashtrud**	**2.00**	**122**	Pn	**Pb**	**21 33 18.4**	**+0.5**
QRD	**Qoradiz**	**2.01**	**57**	P	**Pb**	**21 33 18.3**	**+0.5**
QRD				S	**Sg**	**21 33 45.0**	**-0.9**
KOTA	**Agri, Merkez-K**	**2.06**	**314**	P	**Pb**	**21 33 19.6**	**+0.7**
KOTA				S	**Sg**	**21 33 45.9**	**-1.8**
ISRB	**Sarab**	**2.07**	**105**	Pn	**Pg**	**21 33 20.3**	**-0.8**
DORK	**Agr/Tutak/Do**	**2.09**	**299**	P	**Pb**	**21 33 19.9**	**+0.5**
AGDM	**Agdam**	**2.30**	**41**	P	**Pb**	**21 33 22.7**	**-0.1**
AGDM				S	**Sg**	**21 33 53.3**	**-1.9**
SIRN	**Sirnak**	**2.33**	**248**	P	**Pg**	**21 33 26.1**	**+0.1**
SIRN				IAML		21 34 13.0	
	comp=E,23nm,0.7s						
SIRN				IAML		21 34 21.0	
	comp=N,23nm,1.0s						
GDB	**GEDABAY**	**2.38**	**11**	P	**Pb**	**21 33 24.8**	**+0.6**
GDB				S	**Sb**	**21 33 55.5**	**+1.9**
GANJ	**Ganja**	**2.43**	**22**	P	**Pb**	**21 33 24.5**	**-0.6**
GANJ				S	**Sg**	**21 33 58.5**	**-1.0**
BRDA	**Brd**	**2.45**	**40**	P	**Pb**	**21 33 24.2**	**-1.1**
BRDA				S	**Sg**	**21 34 02.9**	**+2.9**
YRD	**Yardimli**	**2.48**	**77**	P	**Pb**	**21 33 25.6**	**-0.5**
YRD				S	**Sb**	**21 33 58.7**	**+1.9**
LRK	**Lerik**	**2.52**	**83**	P	**Pb**	**21 33 25.8**	**-0.9**
LRK				S	**Sb**	**21 33 59.2**	**+1.4**
SRTM	**Siirt_Merkez**	**2.57**	**262**	P	**Pb**	**21 33 25.5**	**-1.9**
SRTM				IAML		21 34 08.0	
	comp=N,16nm,0.9s						
QZX	**Qazax, Azerbai**	**2.67**	**4**	P	**Pb**	**21 33 26.7**	**-2.4**
QZX				S	**Sb**	**21 34 02.1**	**+0.2**
GLBA	**Clilabad**	**2.68**	**70**	P	**Pb**	**21 33 28.4**	**-0.8**
GLBA				S	**Sg**	**21 34 06.1**	**-1.3**
ZRD	**Zardab**	**2.73**	**45**	P	**Pn**	**21 33 26.7**	**+1.7**
ASTR	**Astara**	**2.87**	**85**	P	**Pb**	**21 33 30.8

MwMwp5.0/2,Mwp5.3/2
ISC 11 21:53:01.3₀0.4,5°**56S**₀0.04×**154°23E**₀0.04,**h171**km,3km,
h172km:**pP-P,n546,**₀1**s92/554,mb4.8/100,2D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.47**	**303**	**P**	**Pn**	**21 53 42.6**	**-0.5**
RABL				Sn	**Sn**	**21 54 14.6**	**-1.0**
KRVT	**Keravat (AS076**	**2.52**	**299**	LR	LR	21 54 35.7	
	comp=Z,513nm,21.4s,baz=299,slow=38						
I40PG	**Keravat**	**2.54**	**299**	P	**Pn**	**21 53 44.1**	**+0.1**
	baz=116,slow=18						
I40PG				S	**Sn**	**21 54 16.0**	**-1.1**
	baz=85,slow=413						
TATA	**Tatamba Isabel**	**6.20**	**117**	P	**Pn**	**21 54 31.2**	**+0.3**
SAVO	**Savo Central**	**6.59**	**123**	P	**Pn**	**21 54 38.4**	**+2.4**
HNR	**Honiara**	**6.85**	**125**	P	**Pn**	**21 54 38.4**	**-1.0**
	3.3nm,0.3s,baz=302,slow=5.1,SNR=4.2						
HNR	**Honiara**	**6.85**	**125**	P	**Pn**	**21 54 41.5**	**+2.1**
HNR	**Honiara**	**6.85**	**125**	Pn	**Pn**	**21 54 38.8**	**-0.7**
MANU	**Manus Island**	**7.69**	**297**		**Pn**	**21 54 49.2**	**-1.4**
PMG	**Port Moresby**	**7.99**	**241**	P	**Pn**	**21 54 54.9**	**+0.4**
	65nm,0.8s,baz=65,slow=7.0,SNR=18						
PMG				S	**Sn**	**21 56 27.6**	**+3.6**
	125nm,0.8s,baz=56,slow=18,SNR=6.5						
PMG				LR	LR	21 57 52.1	
	comp=Z,547nm,19.0s,baz=29,slow=37						
PMG	**Port Moresby**	**7.99**	**241**	P	**Pn**	**21 54 56.9**	**+2.4**
PMG	**Port Moresby**	**7.99**	**241**	S	**Sn**	**21 56 27.9**	**+3.9**
PMG	**Port Moresby**	**7.99**	**241**	P	**Pn**	**21 54 56.8**	**+2.3**
PMG	**Port Moresby**	**7.99**	**241**		**Pn**	**21 54 53.1**	**-1.4**
PMG	**Port Moresby**	**7.99**	**241**	P	**Pn**	**21 54 57.7**	**+3.2**
	2.8nm7µm7µm414nm,1.0s						
PMG	**Port Moresby**	**7.99**	**241**	P	**Pn**	**21 54 55.7**	**+1.2**
NGOA	**Tingoa Renbel**	**8.29**	**136**	P	**Pn**	**21 54 59.3**	**+0.8**
HURO	**Huro Makira**	**9.03**	**123**	P	**Pn**	**21 55 10.0**	**+1.8**
PATS	**Pohnpei**	**12.96**	**18**	Pn	**Pn**	**21 55 59.1**	**-0.2**
COEN	**Coen**	**13.72**	**232**	P	**Pn**	**21 56 11.4**	**-0.6**
	comp=Z,176nm,0.9s						
COEN	**Coen**	**13.72**	**232**	P	**Pn**	**21 56 05.8**	**-3.2**
JAY	**Jayapura**	**13.83**	**282**	P	**Pn**	**21 56 10.2**	**-0.1**
	comp=Z,73nm,1.0s,baz=110,slow=6.7,SNR=16						
JAY				LR	LR	22 01 51.6	
	comp=Z,956nm,18.6s,baz=358,slow=38						
JAY	**Jayapura**	**13.83**	**282**	P	**Pn**	**21 56 10.8**	**+0.5**
GENI	**Genyem**	**14.33**	**281**	P	**P**	**21 56 18.2**	**-0.6**
	comp=Z,2µmcomp=Z,143nm,0.7s						
GENI	**Genyem**	**14.33**	**281**	P	**Pn**	**21 56 15.6**	**-1.0**
MTSU	**Mount Surprise**	**15.82**	**217**	P	**P**	**21 56 37.4**	**+2.2**
	comp=Z,225nm,0.9s						
MTSU	**Mount Surprise**	**15.82**	**217**	P	**P**	**21 56 37.4**	**+2.2**
MTSU	**Mount Surprise**	**15.82**	**217**	P	**P**	**21 56 35.8**	**+0.6**
SANVU	**Saraoutou**	**16.09**	**129**	P	**P**	**21 56 39.7**	**+1.5**
SANVU	**Saraoutou**	**16.09**	**129**		**Pn**	**21 56 36.8**	**-1.4**
SANVU	**Saraoutou**	**16.09**	**129**	P	**Pn**	**21 56 38.0**	**-0.1**
CTA	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 43.4**	**+1.5**
	comp=Z,75nm,0.9s						
CTA	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 43.6**	**+1.7**
	comp=Z,185nm,0.9s,baz=28,slow=14,SNR=95						
CTA				S	**S**	**21 59 43.8**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=347,slow=14,SNR=1.6						
CTA				LR	LR	22 01 58.1	
	comp=Z,712nm,21.6s,baz=22,slow=33						
CTA	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 43.0**	**+1.1**
CTAO	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 43.3**	**+1.4**
CTAO	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 41.8**	**-0.1**
CTAO	**Charters Tower**	**16.40**	**208**	P	**Pn**	**21 56 42.2**	**+0.4**
KOUNC	**Koumac, New Ca**	**17.82**	**148**	P	**Pn**	**21 56 58.4**	**-0.4**
KOUNC	**Koumac, New Ca**	**17.82**	**148**		**P**	**21 56 56.2**	**-0.9**
SRPI	**Serui, Papua**	**18.32**	**281**	P	**Pn**	**21 57 05.8**	**+1.0**
	comp=Z,134nm,1.2s						
BAKI	**Biak**	**18.60**	**283**	P	**Pn**	**21 57 11.4**	**+3.3**
EIDS	**Eidsvold**	**19.93**	**188**	P	**P**	**21 57 21.1**	**+1.1**
	comp=Z,23nm,1.3s						
EIDS	**Eidsvold**	**19.93**	**188**	P	**P**	**21 57 21.5**	**+1.5**
EIDS	**Eidsvold**	**19.93**	**188**	P	**P**	**21 57 20.3**	**+0.3**
EIDS	**Eidsvold**	**19.93**	**188**	P	**P**	**21 57 19.7**	**-0.3**
NOUC	**Port Laguerre**	**20.17**	**146**	P	**P**	**21 57 22.7**	**+0.1**
DZM	**Mont Dzumac**	**20.23**	**145**	P	**P**	**21 57 22.5**	**-0.8**
	comp=Z,169nm,0.4s,baz=352,slow=10,SNR=136						
ONTNC	**Ouen Toro**	**20.42**	**146**	P	**P**	**21 57 25.6**	**+0.4**
ONTNC	**Ouen Toro**	**20.42**	**146**		**P**	**21 57 24.4**	**-0.9**
YATNC	**Mamie plateau,**	**20.47**	**144**	P	**P**	**21 57 26.7**	**+0.9**
QIS	**Mount Isa**	**20.60**	**222**	P	**P**	**21 57 27.3**	**0.0**
	comp=Z,177nm,0.8s						
QIS	**Mount Isa**	**20.60**	**222**	P	**P**	**21 57 27.2**	**0.0**
QIS	**Mount Isa**	**20.60**	**222**	P	**P**	**21 57 26.1**	**-1.0**
MARNC	**Mare, Loyalty**	**20.72**	**141**	P	**P**	**21 57 29.3**	**+0.9**
MARNC	**Mare, Loyalty**	**20.72**	**141**		**P**	**21 57 27.9**	**-0.6**
OUENC	**Ouen Island, N**	**20.73**	**145**	P	**P**	**21 57 29.3**	**+0.8**
OUENC	**Ouen Island, N**	**20.73**	**145**	P	**P**	**21 57 27.8**	**-0.7**
GUMO	**Guam**	**21.17**	**334**	P	**P**	**21 57 31.9**	**-1.4**
	comp=Z,23nm,0.4s,baz=180,slow=20,SNR=1.1						
	comp=Z,23nm,0.4s						
FAKI	**Fak Fak**	**22.08**	**276**	P	**P**	**21 57 42.3**	**-0.5**
FAKI	**Fak Fak**	**22.08**	**276**	P	**P**	**21 57 41.3**	**-1.5**
FAKI				IAmb	IAmb	21 57 43.3	
	comp=Z,46nm,0.9s						
KDU	**Kakadu**	**22.61**	**250**	P	**P**	**21 57 46.6**	**-1.1**
	comp=Z,101nm,1.0s						
QLP	**Quilpie**	**22.99**	**203**	P	**P**	**21 57 50.9**	**-0.2**
	comp=Z,199nm,0.8s						
QLP	**Quilpie**	**22.99**	**203**	P	**P**	**21 57 51.6**	**+0.6**
QLP	**Quilpie**	**22.99**	**203**	P	**P**	**21 57 51.0**	**-0.1**
SIJI	**Sorong**	**23.39**	**281**	P	**P**	**21 57 54.4**	**-0.5**
	comp=Z,22nm,0.5s,baz=107,slow=17,SNR=11						
	comp=Z,22nm,0.5s						
SIJI	**Sorong**	**23.39**	**281**	P	**P**	**21 57 56.7**	**+1.8**
MTN	**Manton Dam**	**23.91**	**251**	P	**P**	**21 57 59.2**	**-0.4**
	comp=Z,56nm,0.8s						
MTN	**Manton Dam**	**23.91**	**251**	P	**P**	**21 57 58.9**	**-0.7**
WR0	**Warramunga Arr**	**23.91**	**231**	P	**P**	**21 57 59.5**	**-0.1**
WB0	**Warramunga Arr**	**23.92**	**232**	P	**P**	**21 57 59.0**	**-0.7**
DRS	**Darwin Rock St**	**24.02**	**252**	P	**P**	**21 58 00.9**	**+0.3**
WRAB	**Tennant Creek**	**24.05**	**232**	P	**P**	**21 58 00.5**	**-0.3**
WRAB	**Tennant Creek**	**24.05**	**232**	P	**P**	**21 58 00.4**	**-0.4**
WRAB	**Tennant Creek**	**24.05**	**232**	P	**P**	**21 58 00.9**	**0.0**
WRA	**Warramunga Arr**	**24.06**	**232**	P	**P**	**21 58 00.3**	**-0.7**
	comp=Z,131nm,0.8s,baz=54,slow=9.3,SNR=207						
WRA				S	**S**	**22 02 04.2**	**-1.7**
	comp=Z,11nm,0.9s,baz=53,slow=16,SNR=6.0						
WRA				ScP	**ScP**	**22 04 59.9**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=59,slow=2.4,SNR=3.9						
WRA	**Warramunga Arr**	**24.06**	**232**	P	**P**	**21 58 00.3**	**-0.7**
WRA				IAmb	IAmb	21 58 03.2	
	comp=Z,19nm,0.9s						
ARMA	**Armidale**	**24.85**	**185**	P	**P**	**21 58 09.3**	**+1.2**
	comp=Z,27nm,0.8s						
ARMA	**Armidale**	**24.85**	**185**	P	**P**	**21 58 09.4**	**+1.3**
ARMA	**Armidale**	**24.85**	**185**	P	**P**	**21 58 08.3**	**+0.2**
ARMA				IAmb	IAmb	21 58 17.2	
	comp=Z,67nm,1.6s						
ARMA	**Armidale**	**24.85**	**185**	P	**P**	**21 58 08.6**	**+0.5**
INKA	**Innaminka**	**25.52**	**209**	P	**P**	**21 58 13.2**	**-0.8**
INKA				IAmb	IAmb	21 58 15.6	
	comp=Z,34nm,0.6s						
LHI	**Lord Howe Isla**	**26.23**	**171**	P	**P**	**21 58 20.7**	**+0.3**
AS17	**Alice Springs**	**26.54**	**225**	P	**P**	**21 58 22.2**	**-1.1**
	comp=Z,32nm,0.8s						
AS01	**Alice Springs**	**26.56**	**225**	P	**P**	**21 58 23.9**	**+0.3**
AS15	**Alice Springs**	**26.57**	**225**	P	**P**	**21 58 22.7**	**-1.0**
	comp=Z,45nm,0.8s						
AS09	**Alice Springs**	**26.59**	**225**	P	**P**	**21 58 21.3**	**-2.5**
	comp=Z,59nm,0.8s						
AS31	**Alice Springs**	**26.60**	**225**	P	**P**	**21 58 23.0**	**-0.8**
	comp=Z,11nm,0.6s						
AS31	**Alice Springs**	**26.60**	**225**	P	**P**	**21 58 22.7**	**-1.1**
AS31				IAmb	IAmb	21 59 20.0	
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**26.60**	**225**	P	**P**	**21 58 22.6**	**-1.2**
	comp=Z,18nm,0.8s,baz=49,slow=8.8,SNR=103						
ASAR				S	**S**	**22 02 42.4**	**-3.7**
	comp=Z,3.6nm,0.4s,baz=54,slow=14,SNR=9.0						
ASAR				ScP	**ScP**	**22 05 07.3**	**-0.4**
	comp=Z,3.5nm,1.1s,baz=56,slow=3.0,SNR=5.2						
	comp=Z,18nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.87**	**27**	T	T	22 27 28.2	
	baz=208,slow=76,SNR=268						
H11S2	**WAKE ISLAND Hy**	**26.87**	**27**	T	T	22 27 17.2	
	baz=208,slow=76,SNR=250						
H11S1	**WAKE ISLAND Hy**	**26.89**	**27**	T	T	22 27 18.1	
	baz=208,slow=76,SNR=14						
KNRA	**Kununurra**	**26.95**	**246**	P	**P**	**21 58 25.9**	**-1.1**
	comp=Z,58nm,0.8s						
KNRA	**Kununurra**	**26.95**	**246**	P	**P**	**21 58 25.9**	**-1.1**
KNRA				IAmb	IAmb	21 58 28.6	
	comp=Z,41nm,0.8s						
CMSA	**Cobar Meteorol**	**27.06**	**196**	P	**P**	**21 58 27.6**	**-0.2**
	comp=Z,26nm,0.9s						
CMSA	**Cobar Meteorol**	**27.06**	**196**	P	**P**	**21 58 28.8**	**+1.0**
CMSA	**Cobar Meteorol**	**27.06**	**196**	P	**P**	**21 58 28.9**	**+1.0**
NLAI	**Namlea**	**27.15**	**274**	P	**P**	**21 58 30.1**	**+1.3**
	comp=Z,1µmcomp=Z,154nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**28.03**	**26**	T	T	22 28 44.2	
	baz=211,slow=76,SNR=6.6						
H11N3	**WAKE ISLAND Hy**	**28.04**	**26**	T	T	22 28 47.4	
	baz=211,SNR=10.0						
H11N2	**WAKE ISLAND Hy**	**28.05**	**26**	T	T	22 28 45.3	
	baz=211,slow=76,SNR=5.3						
SANI	**Sanana**	**28.39**	**276**	P	**P**	21 58 46.8	+6.9
SANI	**Sanana**	**28.39**	**276**	P	**P**	**21 58 40.0**	**+0.1**
STKA	**Stephens Creek**	**28.74**	**203**	P	**P**	**21 58 42.2**	**-0.5**
	comp=Z,71nm,0.7s						
STKA	**Stephens Creek**	**28.74**	**203**	P	**P**	**21 58 41.9**	**-0.8**
	comp=Z,14nm,0.6s,baz=26,slow=13,SNR=29						
STKA				LR	LR	22 08 47.9	
	comp=Z,521nm,21.6s,baz=9.2,slow=33						
	comp=Z,14nm,0.6s						
STKA	**Stephens Creek**	**28.74**	**203**	P	**P**	**21 58 43.2**	**+0.5**
STKA	**Stephens Creek**	**28.74**	**203**	P	**P**	**21 58 42.2**	**-0.5**
STKA				pP	**pP**	**21 59 17.2**	**+0.5**
YNG	**Young**	**29.11**	**190**	P	**P**	**21 58 46.2**	**+0.2**
	comp=Z,1.4nm,0.7s						
CNB	**Canberra Magne**	**29.95**	**188**	P	**P**	**21 58 53.8**	**+0.3**
	comp=Z,0.4nm,1.4s						
SOEI	**Soe**	**29.98**	**260**	P	**P**	**21 58 53.3**	**-0.8**
CAN	**Canberra**	**30.01**	**189**	P	**P**	**21 58 55.2**	**+1.2**
CAN	**Canberra**	**30.01**	**189**	P	**P**	**21 58 53.8**	**-0.2**
CAN				IAmb	IAmb	21 59 10.9	
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.58**	**243**	P	**P**	**21 58 58.0**	**-1.2**
	comp=Z,25nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.58**	**243**	P	**P**	**21 58 57.9**	**-1.2**
	comp=Z,102nm,0.7s,baz=73,slow=8.3,SNR=77						
FITZ				LR	LR	22 10 50.9	
	comp=Z,364nm,21.9s,baz=62,slow=35						
FITZ	**Fitzroy Crossi**	**30.58**	**243**	P	**P**	**21 58 59.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**30.58**	**243**	P	**P**	**21 58 57.7**	**-1.5**
FITZ				IAmb	IAmb	21 59 00.3	
	comp=Z,18nm,0.7s						
FITZ	**Fitzroy Crossi**	**30.58**	**243**	P	**P**	**21 58 57.7**	**-1.5**
BATI	**Baumata**	**30.62**	**259**	P	**P**	**21 58 58.2**	**-1.4**
	comp=Z,43nm,0.8s,baz=78,slow=19,SNR=6.8						
	comp=Z,43nm,0.8s						
HTT	**Hallett**	**31.18**	**205**	P	**P**	**21 59 03.4**	**-0.9**
	comp=Z,10nm,0.8s						
HTT	**Hallett**	**31.18**	**205**	P	**P**	**21 59 05.0**	**+0.7**
WRKA	**Warakurna**	**31.52**	**229**	P	**P**	**21 59 04.7**	**-2.8**
	comp=Z,38nm,0.8s						
KDI	**Kendari**	**31.54**	**271**	P	**P**	**21 59 08.8**	**+1.1**
	comp=Z,27nm,0.9s						
LUWI	**Luwuk**	**31.72**	**277**	P	**P**	**21 59 07.4**	**-1.9**
LUWI	**Luwuk**	**31.72**	**277**	P	**P**	**21 59 10.9**	**+1.7**
	comp=Z,40nm,1.0s						
LUWI	**Luwuk**	**31.72**	**277**	P	**P**	**21 59 08.8**	**-0.5**
GTOI	**Gorontalo**	**31.78**	**280**	P	**P**	**21 59 11.3**	**+1.5**
	comp=Z,49nm,0.7s						
MMRI	**Maumere**	**31.89**	**263**	P	**P**	**21 59 08.8**	**-1.9**
BBOO	**Buckleboo**	**31.98**	**210**	P	**P**	**21 59 08.5**	**-2.7**
	comp=Z,48nm,0.8s						
BBOO	**Buckleboo**	**31.98**	**210**	P	**P**	**21 59 11.6**	**+0.3**
BBOO	**Buckleboo**	**31.98**	**210**	P	**P**	**21 59 09.3**	**-2.0**
BBOO	**Buckleboo**	**31.98**	**210**	P	**P**	**21 59 11.6**	**+0.3**
TOO	**Toolangi**	**32.85**	**193**	P	**P**	**21 59 17.3**	**-1.5**
TOLI2	**Tolitoli**	**34.06**	**280**	P	**P**	**21 59 28.8**	**-0.8**
TOLI2	**Tolitoli**	**34.06**	**280**	P	**P**	**21 59 27.9**	**-1.7**
TOLI2				IAmb	IAmb	21 59 35.1	
	comp=Z,14nm,0.9s						
TOLI2	**Tolitoli**	**34.06**	**280**	P	**P**	**21 59 28.7**	**-0.8**
KAPI	**Kappang**	**34.34**	**269**	P	**P**	**21 59 30.7**	**-1.3**
	comp=Z,20nm,0.9s,baz=89,slow=8.1,SNR=11						
	comp=Z,20nm,0.9s						
KAPI	**Kappang**	**34.34**	**269**	P	**P**	**21 59 30.4**	**-1.6**
KAPI				IAmb	IAmb	21 59 33.2	
	comp=Z,28nm,1.1s						
KAPI	**Kappang**	**34.34**	**269**	P	**P**	**21 59 32.9**	**+0.9**
KAPI	**Kappang**	**34.34**	**269**	P	**P**	**21 59 31.3**	**-0.6**
KAPI	**Kappang**	**34.34**	**269**	P	**P**	**21 59 31.8**	**-0.1**
KAPI				pP	**pP**	**22 00 04.4**	**-2.6**
MGBR	**Mount Gambier**	**34.36**	**199**	P	**P**	**21 59 31.4**	**-0.4**
OUZ	**Omahuta**	**34.50**	**151**	P	**P**	**21 59 34.2**	**+1.1**
PCI	**Palu**	**34.64**	**276**	P	**P**	**21 59 36.8**	**+2.2**
FORT	**Forrest**	**35.14**	**221**	P	**P**	**21 59 38.0**	**-0.6**
	comp=Z,67nm,0.8s						
FORT	**Forrest**	**35.14**	**221**	P	**P**	**21 59 37.2**	**-1.4**
GLAD	**Gladstone**	**35.72**	**188**	P	**P**	**21 59 43.9**	**+0.6**
PLAI	**Plampang**	**36.30**	**263**	P	**P**	**21 59 47.8**	**-1.0**
MBWA	**Marble Bar**	**36.85**	**242**	P	**P**	**21 59 51.8**	**-1.5**
	comp=Z,51nm,0.9s						
MBWA	**Marble Bar**	**36.85**	**242**	P	**P**	**21 59 52.8**	**-0.5**
MBWA	**Marble Bar**	**36.85**	**242**	P	**P**	**21 59 51.6**	**-1.7**
MBWA				IAmb	IAmb	21 59 53.8	
	comp=Z,47nm,1.0s						
MBWA	**Marble Bar**	**36.85**	**242**	P	**P**	**21 59 51.7**	**-1.6**
MOO	**Moorlands**	**37.26**	**189**	P	**P**	**21 59 58.0**	**+1.5**
	comp=Z,34nm,1.1s						
MOO	**Moorlands**	**37.26**	**189**	P	**P**	**21 59 57.1**	**+0.6**
TOZ	**Tahuroa Road**	**37.44**	**152**	P	**P**	**21 59 57.2**	**-0.7**
TAU	**Tasmania Unive**	**37.70**	**188**	P	**P**	**22 00 00.5**	**+0.4**
TAU	**Tasmania Unive**	**37.70**	**188**	P	**P**	**21 59 59.4**	**-0.7**
TAU				IAmb	IAmb	22 00 14.5	
	comp=Z,27nm,1.0s						
HIZ	**Hauiti**	**37.77**	**153**	P	**P**	**22 00 01.1**	**+0.3**
HIZ	**Hauiti**	**37.77**	**153**	P	**P**	**22 00 00.3**	**-0.5**
TGY	**Tagaytay City**	**38.38**	**301**	LR	LR	22 14 17.5	
	comp=Z,260nm,21.8s,baz=302,slow=33						
URZ	**Urewera**	**38.62**	**151**	P	**P**	**22 00 08.9**	**+1.0**
URZ	**Urewera**	**38.62**	**151**	P	**P**	**22 00 08.9**	**+1.0**
MXZ	**Matakaoa Point**	**38.69**	**149**	P	**P**	**22 00 08.0**	**-0.5**
QRZ	**Quartz Range**	**38.76**	**158**	P	**P**	**22 00 09.2**	**+0.2**
QRZ	**Quartz Range**	**38.76**	**158**	P	**P**	**22 00 08.4**	**-0.6**
QRZ				IAmb	IAmb	22 00 11.6	
	comp=Z,33nm,0.7s						
RTZ	**Ruatahuna**	**38.84**	**151**	P	**P**	**22 00 09.5**	**-0.4**
BKZ	**Black Stump Fm**	**39.05**	**152**	P	**P**	**22 00 11.9**	**+0.4**
KKM	**Kota Kinabalu**	**39.66**	**286**	P	**P**	**22 00 15.9**	**-1.1**
KKM				IAmb	IAmb	22 01 15.1	
	comp=Z,16nm,1.0s						
KMBL	**Kambalda**	**39.73**	**226**	P	**P**	**22 00 15.9**	**-1.4**
	comp=Z,35nm,1.0s						
JAGI	**Jajag, Banyuwa**	**39.87**	**263**	P	**P**	**22 00 18.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**39.87**	**263**	P	**P**	**22 00 17.5**	**-1.2**
MEEK	**Meekatharra**	**39.91**	**234**	P	**P**	**22 00 15.5**	**-3.3**
	comp=Z,72nm,0.8s						
MEEK	**Meekatharra**	**39.91**	**234**	P	**P**	**22 00 18.9**	**+0.1**
MEEK	**Meekatharra**	**39.91**	**234**	P	**P**	**22 00 18.1**	**-0.6**
SNZO	**South Karori**	**40.03**	**156**	P	**P**	**22 00 20.3**	**+0.8**
BSWZ	**Blackbirch Sta**	**40.04**	**157**	P	**P**	**22 00 19.7**	**+0.1**
JCZ	**Jackson Bay**	**40.44**	**164**	P	**P**	**22 00 24.0**	**+1.0**
KHZ	**Kahutara**	**40.51**	**158**	P	**P**	**22 00 23.5**	**+0.1**
KHZ	**Kahutara**	**40.51**	**158**	P	**P**	**22 00 23.5**	**+0.1**
RPZ	**Rata Peaks**	**40.79**	**161**	P	**P**	**22 00 26.2**	**+0.4**
RPZ	**Rata Peaks**	**40.79**	**161**	P	**P**	**22 00 25.3**	**-0.4**
ODZ	**Otahua Downs**	**41.87**	**163**	P	**P**	**22 00 35.0**	**+0.5**
ODZ	**Otahua Downs**	**41.87**	**163**	P	**P**	**22 00 35.7**	**+1.2**
GIRL	**Giralia**	**42.16**	**242**	P	**P**	**22 00 37.0**	**-0.3**
	comp=Z,69nm,1.7s						
GIRL	**Giralia**	**42.16**	**242**	P	**P**	**22 00 36.5**	**-0.7**
SYZ	**Scrubby Hill**	**42.81**	**165**	P	**P**	**22 00 42.6**	**+0.5**
KLBR	**Kellerberrin**	**42.85**	**228**	P	**P**	**22 00 41.7**	**-1.0**
	comp=Z,98nm,0.8s						
KLBR	**Kellerberrin**	**42.85**	**228**	P	**P**	**22 00 42.0**	**-0.7**
KLBR	**Kellerberrin**	**42.85**	**228**	P	**P**	**22 00 40.6**	**-2.1**
MORW	**Morawa**	**43.00**	**233**	P	**P**	**22 00 42.8**	**-1.2**
	comp=Z,42nm,0.8s						
MORW	**Morawa**	**43.00**	**233**	P	**P**	**22 00 43.9**	**0.0**
MORW	**Morawa**	**43.00**	**233**	P	**P**	**22 00 42.4**	**-1.5**
MORW				IAmb	IAmb	22 00 44.5	
	comp=Z,28nm,0.8s						
MORW	**Morawa**	**43.00**	**233**	P	**P**	**22 00 42.7**	**-1.2**
YULB	**Yu-li**	**43.15**	**313**	P	**P**	**22 00 44.5**	**-0.6**
YULB				IAmb	IAmb	22 00 47.3	
	comp=Z,11nm,0.8s						
BLDU	**Ballidu**	**43.17**	**230**	P	**P**	**22 00 44.6**	**-0.7**
	comp=Z,28nm,1.6s						
BLDU	**Ballidu**	**43.17**	**230**	P	**P**	**22 00 44.9**	**-0.4**
NACB	**Ninganchiao**	**43.42**	**314**	P	**P**	**22 00 46.8**	**-0.5**
NACB	**Ninganchiao**	**43.42**	**314**	P	**P**	**22 00 46.4**	**-0.9**
NACB				IAmb	IAmb	22 01 32.7	
	comp=Z,24nm,1.0s						
TPUB	**Ta-pu**	**43.58**	**312**	P	**P**	**22 00 47.3**	**-1.3**
TPUB	**Ta-pu**	**43.58**	**312**	P	**P**	**22 00 47.5**	**-1.1**
TPUB				IAmb	IAmb	22 01 46.5	
	comp=Z,102nm,2.0s						
SSLB	**Suanglung**	**43.64**	**313**	P	**P**	**22 00 47.1**	**-2.0**
SSLB	**Suanglung**	**43.64**	**313**	P	**P**	**22 00 48.5**	**-0.5**
SSLB				IAmb	IAmb	22 00 50.2	
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**43.90**	**227**	P	**P**	**22 00 48.2**	**-2.9**
	comp=Z,15nm,0.8s,baz=59,slow=8.1,SNR=6.5						
	comp=Z,15nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.90**	**227**	P	**P**	**22 00 51.7**	**+0.7**
NWAO	**Narrogin (SRO)**	**43.90**	**227**	P	**P**	**22 00 52.2**	**+1.2**
NWAO	**Narrogin (SRO)**	**43.90**	**227**	P	**P**	**22 00 49.9**	**-1.2**
NWAO				IAmb	IAmb	22 01 12.3	
	comp=Z,100nm,1.8s						
NWAO	**Narrogin (SRO)**	**43.90**	**227**	P	**P**	**22 00 47.8**	**-3.2**
MUN	**Mundaring**	**44.19**	**229**	P	**P**	**22 00 53.1**	**-0.3**
	comp=Z,46nm,0.9s						
MUN	**Mundaring**	**44.19**	**229**	P	**P**	**22 00 53.7**	**+0.3**
MJAR	**Matsushiro Arr**	**44.48**	**342**	P	**P**	**22 00 53.1**	**-2.5**
	comp=Z,0.9nm,0.6s,baz=162,slow=6.6,SNR=4.1						
	comp=Z,0.9nm,0.6s						
RKGY	**Rocky Gully**	**44.94**	**225**	P	**P**	**22 00 58.9**	**-0.4**
	comp=Z,68nm,1.4s						
BBJI	**Bungbulang**	**46.31**	**265**	P	**P**	**22 01 10.0**	**-0.4**
BBJI	**Bungbulang**	**46.31**	**265**	P	**P**	**22 01 07.6**	**-2.8**
TPI	**Tanjungpandan**	**46.53**	**271**	P	**P**	**22 01 13.4**	**+1.4**
	comp=Z,42nm,0.9s						
KSRS	**Korea Array**	**49.32**	**332**	P	**P**	**22 01 30.8**	**-2.2**
	comp=Z,4.7nm,1.0s,baz=153,slow=7.3,SNR=11						
KSRS				pP	**pP**	**22 02 11.8**	**+1.6**
	comp=Z,5.4nm,0.8s,baz=147,slow=8.7,SNR=6.3						
	comp=Z,4.7nm,1.0s						
KSAR	**Wonju Array Be**	**49.33**	**332**	P	**P**	**22 01 32.2**	**-0.9**
KS19	**Wonju Array Si**	**49.38**	**332**	P	**P**	**22 01 32.2**	**-1.4**
KS19				IAmb	IAmb	22 01 35.1	
	comp=Z,80nm,2.0s						
QIZ	**Qiongzhong**	**50.08**	**300**	P	**P**	**22 01 40.1**	**+1.0**
QIZ				S	**S**	**22 08 41.5**	**+4.0**
QIZ				L	L		
	comp=Z,280nm,11.3s						
QIZ				L	L		
	comp=Z,420nm,12.5s						
QIZ				L	L		
	comp=Z,430nm,19.5s						
NJ2	**Nanjing**	**50.33**	**320**	*e*P	**P**	**22 01 42.5**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
JKA	**Kamikawa-asahi**	**50.54**	**349**	P	**P**	**22 01 41.6**	**-0.6**
JKA				IAmb	IAmb	22 02 58.8	
	comp=Z,35nm,1.3s						
USRK	**Ussu

SPIA **Saint Paul Isl** 68.86 20 P P 22 03 49.0 +2.0
baz=218
SDPT **Sand Point** 71.28 25 P P 22 04 01.5 -0.3
SDPT IAmb IAmb 22 05 07.6
comp=Z,28nm,0.8s
SDPT **Sand Point** 71.28 25 P P 22 04 03.3 +1.6
baz=228
CHNA **Chernabura Isl** 71.32 26 P P 22 04 03.7 +1.7
baz=229
CCD **Concordia, Ant** 71.72 188 P P 22 04 04.6 0.0
CCD PcP PcP 22 04 20.5 -2.2
CCD x x 22 04 47.2
CCD x2 22 04 47.2
VNDA **Vanda** 72.03 178 P P 22 04 04.3 -1.7
comp=Z,12nm,0.6s,baz=338,slow=8.1,SNR=99
VNDA S S 22 13 16.6 +3.3
comp=Z,0.5nm,0.9s,baz=34,slow=3.6,SNR=3.4
comp=Z,12nm,0.6s
VNDA **Vanda** 72.03 178 P P 22 04 05.9 -0.1
VNDA IAmb IAmb 22 04 08.5
comp=Z,14nm,0.8s
VNDA **Vanda** 72.03 178 P P 22 04 05.9 -0.1
VNDA PcP PcP 22 04 26.5 +3.1
S14K **Fog Glacier** 72.29 25 P P 22 04 09.8 +1.9
baz=229
SBA **Scott Base** 72.56 177 P P 22 04 08.4 -0.6
SBA IAmb IAmb 22 04 12.7
comp=Z,27nm,1.2s
M11K **Mekoryuk** 72.68 19 P P 22 04 12.1 +2.1
baz=222
O14K **Tigyukauivet M** 73.61 22 P P 22 04 15.9 +0.4
O14K IAmb IAmb 22 04 21.7
comp=Z,10nm,0.7s
O14K **Tigyukauivet M** 73.61 22 P P 22 04 17.4 +2.0
baz=227
M13K **Dall Lake** 73.67 20 P P 22 04 18.0 +2.2
baz=224
CHIR **Chirikof Islan** 73.70 27 P P 22 04 18.0 +1.9
baz=233
GAMB **Gambell** 73.73 15 P P 22 04 18.1 +2.0
baz=216
N14K **Kuskokwak Cree** 73.91 21 P P 22 04 18.6 +1.4
baz=226
O15K **Ungalikthiuk R** 74.10 23 P P 22 04 19.9 +1.6
baz=228
K13K **Kusilvak Mount** 74.34 19 P P 22 04 21.6 +1.9
baz=223
M14K **Bethel** 74.39 21 P P 22 04 21.4 +1.4
M14K IAmb IAmb 22 05 08.4
comp=Z,11nm,0.9s
M14K **Bethel** 74.39 21 P P 22 04 22.0 +2.0
baz=226
PALK **Pallekele** 74.46 279 LR LR 22 41 57.9
comp=Z,140nm,18.7s,baz=102,slow=40
R17L **Mt. Peulik Vol** 74.49 25 P P 22 04 23.4 +2.7
baz=232
L14K **Kuka Creek** 74.56 20 P P 22 04 22.5 +1.6
baz=225
N15K **Kwethluk River** 74.67 22 P P 22 04 24.0 +2.4
baz=228
P16K **Nushagak River** 74.72 23 P P 22 04 24.4 +2.5
baz=230
SII **Sitkinak Islan** 74.79 27 P P 22 04 23.8 +1.4
baz=234
M15K **Kasigluk River** 74.81 21 P P 22 04 24.5 +2.1
baz=227
O16K **Kokwok River B** 75.04 23 P P 22 04 25.8 +2.0
baz=230
Q17K **Contact Creek** 75.08 25 P P 22 04 26.2 +2.0
baz=232
L15K **Ungalak Mounta** 75.21 20 P P 22 04 26.7 +2.1
baz=226
ACHA **Angle Creek He** 75.29 25 P P 22 04 25.6 +0.3
N16K **Nishlik Lake** 75.36 22 P P 22 04 27.9 +2.3
baz=229
P17K **Kvichak River** 75.44 24 P P 22 04 27.8 +1.8
baz=231
O17K **Koliganek Bris** 75.55 23 P P 22 04 28.7 +2.1
baz=230
OHAK **Old Harbor** 75.58 26 P P 22 04 29.1 +2.3
baz=235
M16K **Timber Creek** 75.65 21 P P 22 04 27.9 +0.6
M16K IAmb IAmb 22 05 16.0
comp=Z,9.4nm,0.8s
M16K **Timber Creek** 75.65 21 P P 22 04 29.3 +2.0
baz=228,SNR=6.9
Q18K **Katmai Hardscr** 75.69 25 P P 22 04 29.4 +1.8
baz=233,SNR=6.0
L16K **Owhat River** 75.93 21 P P 22 04 30.7 +1.9
baz=228
N17K **Nushagak Hills** 75.99 22 P P 22 04 30.7 +1.5
baz=230
P18K **Big Mountain,** 76.05 24 P P 22 04 31.7 +2.1
baz=232
ANM **Nome** 76.08 17 P P 22 04 31.6 +2.0
baz=222
TNA **Tin City** 76.14 15 P P 22 04 32.2 +2.4
baz=219
KDAK **Kodiak Island** 76.21 26 P P 22 04 29.9 -0.6
comp=Z,7.3nm,1.0s,baz=249,slow=5.1,SNR=5.1
KDAK LR LR 22 33 54.4
comp=Z,66nm,21.6s,baz=228,slow=32
comp=Z,7.3nm,1.0s
KDAK **Kodiak Island** 76.21 26 P P 22 04 32.6 +2.1
baz=235
O18K **Koktuh Hills** 76.34 24 P P 22 04 33.1 +1.9
baz=232
Q19K **Cape Douglas,** 76.42 25 P P 22 04 34.1 +2.4
baz=234
M17K **Holitna River** 76.46 22 P P 22 04 34.8 +3.0
baz=230
N18K **Kilae Creek** 76.58 23 P P 22 04 32.5 0.0
N18K **Kilae Creek** 76.58 23 P P 22 04 35.0 +2.5
baz=232
J16K **Anvik River** 76.62 19 P P 22 04 35.1 +2.5
baz=226
L17K **Donlin** 76.63 21 P P 22 04 35.1 +2.3
baz=229
I17K **Unalakleet** 77.01 19 P P 22 04 37.1 +2.3
baz=226
K17K **Iditarod** 77.01 20 P P 22 04 37.3 +2.5
baz=229
P19K **Oil Pt** 77.02 24 P P 22 04 37.0 +2.0
baz=234
H16K **Elim** 77.05 18 P P 22 04 36.7 +1.6
baz=225
M18K **Stony River** 77.12 22 P P 22 04 38.1 +2.6
baz=231
F15K **North Star Dit** 77.13 16 P P 22 04 37.1 +1.6
baz=222
J17K **VABM Dome** 77.20 20 P P 22 04 38.5 +2.6
baz=228
N19K **Bonanza Creek** 77.21 23 P P 22 04 38.5 +2.4
baz=233
L18K **Granite Mounta** 77.26 21 P P 22 04 38.8 +2.5
baz=230
WMQ **Urumqi** 77.26 317 *e*P P 22 04 38.1 +1.3
WMQ L L
comp=Z,120nm,19.5s
O20K **Slope Mountain** 77.52 24 P P 22 04 39.8 +1.9
baz=235
G16K **Koyuk River** 77.56 17 P P 22 04 40.8 +3.0
baz=224
HOM **Homer** 77.68 25 P P 22 04 41.0 +2.3
baz=236
L19K **White Mountain** 77.91 22 P P 22 04 41.1 +1.2
L19K IAmb IAmb 22 05 29.6
comp=Z,8.9nm,0.8s
L19K **White Mountain** 77.91 22 P P 22 04 42.1 +2.2
baz=232
M19K **Big River Lodg** 77.91 22 P P 22 04 42.8 +2.9
baz=233
H17K **Granite Mounta** 77.98 18 P P 22 04 42.2 +2.0
baz=227
HYB **Hyderabad** 78.09 289 *e*P P 22 04 41.0 -0.8
BRSE **Bradley Lake S** 78.11 25 P P 22 04 43.5 +2.5
baz=236
G17K **Kiwalik Mounta** 78.14 18 P P 22 04 43.7 +2.6
baz=226
M20K **Styx River** 78.38 23 P P 22 04 44.6 +2.0
baz=234
H18K **Honhosa River** 78.61 18 P P 22 04 45.6 +2.0
baz=228
F17K **Baldwin Pennin** 78.62 17 P P 22 04 46.2 +2.5
baz=225
J19K **Poorman** 78.76 20 P P 22 04 46.3 +1.8
baz=231
GCSA **Galena City Sc** 78.82 19 P P 22 04 47.3 +2.6
baz=230
TIXI **Tiksi** 78.83 352 P P 22 04 45.0 +0.3
SEW **Seward** 78.85 25 P P 22 04 47.2 +2.2
baz=238
C16K **Lisburne Hills** 78.88 14 P P 22 04 47.3 +2.3
baz=221
K20K **Telida** 78.91 21 P P 22 04 47.9 +2.6
baz=233
E17K **Hotham Inlet** 78.92 16 P P 22 04 48.2 +3.0
baz=225,SNR=7.9
G18K **Tagagawik** 79.02 18 P P 22 04 48.5 +2.6
baz=228
D17K **Noatak River** 79.03 15 P P 22 04 48.8 +3.0
baz=223
SKT **Skwentna** 79.05 23 P P 22 04 48.8 +2.6
baz=235
F18K **Selawik** 79.20 17 P P 22 04 49.7 +3.0
baz=227
RC01 **Rabbit Creek A** 79.27 24 P P 22 04 50.2 +2.9
baz=237
PPLA **Purkeypile** 79.33 22 P P 22 04 50.0 +2.3
baz=235
RDOG **Red Dog Mine** 79.33 15 P P 22 04 50.7 +3.2
baz=224
J20K **Nowinta River** 79.38 20 P P 22 04 50.7 +2.8
baz=232,SNR=11
H19K **Roundabout Mou** 79.46 19 P P 22 04 49.2 +1.0
H19K **Roundabout Mou** 79.46 19 P P 22 04 50.8 +2.6
baz=230,SNR=5.8
E18K **Tukpahlearik C** 79.50 16 P P 22 04 51.9 +3.5
baz=226
C17K **DeLong Mountai** 79.57 15 P P 22 04 52.0 +3.1
baz=223
I20K **Naaghedeneel** 79.65 20 P P 22 04 52.4 +3.1
baz=232
L22K **Petersville** 79.65 23 P P 22 04 52.1 +2.7
baz=236
G19K **Purcell Mounta** 79.66 18 P P 22 04 52.2 +2.9
baz=230
CAST **Castle Rocks** 79.67 22 P P 22 04 52.3 +2.9
baz=235,SNR=5.6
P23K **Montague Islan** 79.67 26 P P 22 04 51.9 +2.4
baz=240
PMR **Palmer** 79.78 24 P P 22 04 52.9 +2.9
baz=238
Q23K **Middleton Isla** 79.85 27 P P 22 04 53.1 +2.6
baz=240
CHUM **Lake Minchumin** 79.86 21 P P 22 04 53.2 +2.8
baz=234
F19K **Shaleruckik Mo** 79.91 17 P P 22 04 54.2 +3.6
baz=229
H20K **Anotleneega Mo** 79.95 19 P P 22 04 53.7 +2.8
baz=232
KNK **Knik Glacier** 79.96 24 P P 22 04 53.7 +2.6
baz=238
C18K **Utukok River** 80.20 15 P P 22 04 54.4 +2.1
baz=225
SML **Sawmill** 80.22 24 P P 22 04 55.2 +2.6
baz=238
TRF **Thorofare Moun** 80.35 22 P P 22 04 55.9 +2.5
baz=236
E19K **Redstone River** 80.48 17 P P 22 04 55.9 +2.2
baz=229,SNR=9.0
SCM **Sheep Creek Mo** 80.64 24 P P 22 04 56.0 +1.2
baz=239
EYAK **Cordova Ski Ar** 80.66 26 P P 22 04 57.5 +2.7
baz=241
F20K **Avaraart Lake** 80.66 18 P P 22 04 57.3 +2.7
baz=231
WAT1 **Susitna Watana** 80.68 23 P P 22 04 58.1 +3.2
baz=238
I21K **Tanana** 80.73 20 P P 22 04 58.0 +2.9
baz=234
H21K **Melozitna Rive** 80.73 20 P P 22 04 58.0 +2.9
baz=234
WAT6 **Susitna Watana** 80.86 23 P P 22 04 58.3 +2.3
baz=239
D19K **Kuna River** 80.92 16 P P 22 04 59.0 +2.9
baz=228
C19K **Lookout Ridge** 80.94 15 P P 22 04 58.6 +2.5
baz=227
MCK **McKinley** 81.01 22 P P 22 04 59.4 +2.8
baz=238,SNR=5.8
G21K **Allakaket** 81.02 19 P P 22 04 57.7 +1.1
G21K **Allakaket** 81.02 19 P P 22 04 59.2 +2.6
baz=233,SNR=6.8
MLY **Manley** 81.08 21 P P 22 04 57.0 0.0
MLY **Manley** 81.08 21 P P 22 04 59.8 +2.8
baz=236,SNR=6.1
M24K **Tolsona, Glenn** 81.25 24 P P 22 05 00.7 +2.7
baz=240
DHY **Denali Highway** 81.26 23 P P 22 05 00.4 +2.3
baz=239,SNR=7.5
E20K **Nigu River** 81.30 17 P P 22 05 01.1 +3.0
baz=230,SNR=6.6
A19K **Wainwright** 81.33 14 P P 22 05 01.0 +2.8
baz=225
H22K **Ishtalitna Cre** 81.35 20 P P 22 05 00.7 +2.3
baz=235
BMRM **Bremner River** 81.36 26 P P 22 05 00.7 +2.1
baz=242
NEA2 **Nenana** 81.43 21 P P 22 05 01.1 +2.3
baz=237
F21K **Alatna River** 81.46 18 P P 22 05 01.1 +2.2
baz=233
D20K **Etivluk River** 81.48 16 P P 22 05 01.6 +2.6
baz=230
I23K **Minto, Yukon-K** 81.63 21 P P 22 05 02.4 +2.7
baz=237
N25K **Chitina, Valde** 81.66 25 P P 22 05 03.1 +2.9
baz=242
HARP **HAARP** 81.81 24 P P 22 05 03.4 +2.5
baz=241
MKAR **Makanchi Array** 81.83 319 P P 22 05 00.5 -0.8
comp=Z,0.5nm,0.5s,baz=93,slow=5.1,SNR=10
MKAR pP pP 22 05 42.0 -0.2
comp=Z,7.7nm,1.1s,baz=96,slow=6.7,SNR=4.9
comp=Z,0.5nm,0.5s
G22K **Bettles** 81.90 19 P P 22 05 04.0 +2.8
baz=235
CRQE **Cirque** 81.92 26 P P 22 05 03.6 +2.0
baz=243
CCB **Clear Creek Bu** 81.92 22 P P 22 05 02.5 +1.1
H23K **Yukon River** 81.94 20 P P 22 05 04.4 +2.9
baz=237
PAX **Paxson** 81.96 24 P P 22 05 04.8 +3.1
baz=241
VRDI **Verde Repeater** 81.97 26 P P 22 05 03.6 +1.6
VRDI IAmb IAmb 22 06 10.5
comp=Z,17nm,1.6s
COLA **College** 82.02 21 P P 22 05 03.5 +1.6
COLA **College** 82.02 21 P P 22 05 05.2 +3.3
F22K **John River** 82.03 18 P P 22 05 04.8 +2.9
baz=234
MAKZ **Makanchi** 82.04 319 P P 22 05 02.9 +0.5
E21K **Killik River** 82.06 17 P P 22 05 04.3 +2.3
baz=232
HDA **Harding Lake** 82.11 22 P P 22 05 04.7 +2.3
baz=239
B20K **Meade River** 82.18 15 P P 22 05 05.3 +2.8
baz=229
MCARA **McCarthy VSAT** 82.23 26 P P 22 05 05.6 +2.6
baz=243
K24K **Donnelly Dome** 82.25 23 P P 22 05 05.4 +2.3
baz=240
G23K **Bananza Creek** 82.27 19 P P 22 05 05.1 +1.9
baz=236,SNR=6.7
C21K **Knifeblade Rid** 82.27 16 P P 22 05 04.8 +1.7
baz=231
POKR **Poker Plat Res** 82.30 21 P P 22 05 04.7 +1.3
baz=239
IL31 82.32 22 P P 22 05 04.8 +1.4
ILAR **Eielson Array** 82.32 22 P P 22 05 02.4 -1.1
comp=Z,2.8nm,0.7s,baz=250,slow=6.0,SNR=24
ILAR pP pP 22 05 44.5 -0.9
comp=Z,1.9nm,0.8s,baz=254,slow=5.3,SNR=2.4
ILAR LR LR 22 36 08.4
comp=Z,77nm,21.0s,baz=240,slow=31
comp=Z,2.8nm,0.7s
ILAR **Eielson Array** 82.32 22 P P 22 05 04.5 +1.0
COLD **Coldfoot** 82.50 19 P P 22 05 04.7 +0.3
COLD **Coldfoot** 82.50 19 P P 22 05 07.1 +2.7
baz=236
E22K **Anaktuvuk Pass** 82.52 18 P P 22 05 06.9 +2.5
baz=234
H24K **Noodor Dome** 82.52 21 P P 22 05 05.2 +0.7
H24K **Noodor Dome** 82.52 21 P P 22 05 07.0 +2.5
baz=238
ZALV **Zalesovo Beam** 82.57 326 P P 22 05 04.2 -0.7
comp=Z,1.1nm,0.7s,baz=118,slow=5.2,SNR=7.1
ZALV pP pP 22 05 45.7 -0.3
comp=Z,1.9nm,0.6s,baz=108,slow=4.5,SNR=3.1
comp=Z,1.1nm,0.7s
ZALV **Zalesovo Beam** 82.57 326 P P 22 05 04.7 -0.3
RIDG **Independent Ri** 82.58 23 P P 22 05 06.0 +1.1
RIDG IAmb IAmb 22 06 08.7
comp=Z,16nm,1.3s
RIDG **Independent Ri** 82.58 23 P P 22 05 07.5 +2.6
baz=241
B21K **Ikpikpuk River** 82.61 16 P P 22 05 07.4 +2.6
baz=231
M26K **Nabesna, AK** 82.70 25 P P 22 05 08.5 +3.0
baz=243
J25K **Salcha River,** 82.81 22 P P 22 05 09.2 +3.1
baz=241,SNR=11
PINM **Pinnacle** 82.91 27 P P 22 05 09.4 +2.8
baz=246
SCRK **Sand Creek** 83.03 23 P P 22 05 08.0 +0.7
SCRK **Sand Creek** 83.03 23 P P 22 05 09.9 +2.6
baz=242,SNR=5.5
G24K **Hadweenzic Riv** 83.11 20 P P 22 05 09.6 +2.1
baz=238
E23K **Chandalar** 83.15 18 P P 22 05 10.6 +2.8
baz=236
M27K **Edge Creek, AK** 83.15 25 P P 22 05 10.2 +2.3
baz=244,SNR=12
PRP **Porcupine Dome** 83.20 21 P P 22 05 10.7 +2.6
baz=240
O28M **Mount Upton** 83.21 27 P P 22 05 10.6 +2.2
baz=246
D23K **Nanushuk River** 83.34 17 P P 22 05 11.5 +2.9
baz=235,SNR=15
B22K **Teshekpuk Lake** 83.38 16 P P 22 05 11.1 +2.4
baz=232
A22K **Sinclair Lake** 83.39 15 P P 22 05 10.7 +1.9
baz=231
F24K **Squaw Lake** 83.41 19 P P 22 05 10.1 +1.0
F24K **Squaw Lake** 83.41 19 P P 22 05 11.4 +2.3
baz=238
L27K **Beaver Creek,** 83.48 24 P P 22 05 11.3 +1.8
baz=244
TOLK **Toolik Lake Re** 83.49 18 P P 22 05 11.6 +2.2
baz=236,SNR=5.1
YUK3 **Moose Creek** 83.51 26 P P 22 05 11.7 +1.8
baz=246
E24K **Your Creek** 83.52 19 P P 22 05 11.5 +2.0
baz=237
BVCY **Beaver Creek** 83.60 25 P P 22 05 12.5 +2.4
baz=245
YUK8 **Steele Glacier** 83.61 26 P P 22 05 13.2 +2.8
baz=246
G25K **Bearman Lake** 83.62 20 P P 22 05 13.0 +2.9
baz=240
O29M **Mount Kennedy** 83.76 27 P P 22 05 14.1 +3.0
baz=247
C23K **Itkillik River** 83.86 17 P P 22 05 14.4 +3.2
baz=235
P29M **Windy Craggy** 83.89 28 P P 22 05 14.4 +2.8
baz=248
BRWY **Burwash Landin** 83.97 26 P P 22 05 14.8 +2.8
baz=247
D24K **Happy Valley** 84.00 18 P P 22 05 15.1 +3.2
baz=237
S31K **Pelican** 84.02 30 P P 22 05 15.1 +2.8
baz=250
YUK6 **Outpost Mounta** 84.10 27 P P 22 05 15.5 +2.5
baz=248
YUK4 **Talbot Arm** 84.13 27 P P 22 05 16.7 +3.7
baz=247
KDJ **Kajisay** 84.17 313 P P 22 05 13.4 -0.2
KDJ IAmb IAmb 22 06 01.1
comp=Z,7.8nm,0.8s
SIT **Sitka** 84.17 31 P P 22 05 15.2 +2.2
baz=250
F25K **Christian Rive** 84.19 20 P P 22 05 15.1 +2.1
baz=240
QSPA **South Pole Qui** 84.41 180 P P 22 05 13.8 -0.5
comp=Z,19nm,0.6s,baz=7.5,slow=0.1,SNR=111
QSPA LR LR 22 35 57.7
comp=Z,67nm,21.7s,baz=8.5,slow=30
comp=Z,19nm,0.6s
QSPA **South Pole Qui** 84.41 180 P P 22 05 13.7 -0.7
QSPA IAmb IAmb 22 05 16.6
comp=Z,21nm,0.7s
QSPA **South Pole Qui** 84.41 180 P P 22 05 13.9 -0.4
QSPA **South Pole Qui** 84.41 180 P P 22 05 13.6 -0.7
P30M **Million Dollar** 84.44 28 P P 22 05 17.3 +2.8
baz=249
HYT **Haines Junctio** 84.44 27 P P 22 05 15.3 +0.8
HYT IAmb IAmb 22 06 04.9
comp=Z,9.1nm,0.8s
HYT **Haines Junctio** 84.44 27 P P 22 05 17.7 +3.2
baz=248,SNR=11
E25K **Arctic Village** 84.47 19 P P 22 05 17.5 +3.1
baz=240
PLBC **Pleasant Camp** 84.48 29 P P 22 05 17.8 +3.2
baz=249
G26K **Porcupine Rive** 84.51 20 P P 22 05 17.4 +2.9
baz=242
M29M **Somme Creek** 84.64 26 P P 22 05 18.6 +3.2
baz=247
I27K **Kandik River** 84.68 22 P P 22 05 17.9 +2.4
baz=244
S32K **Killisnoo** 84.69 31 P P 22 05 18.2 +2.5
baz=251
F26K **Sheenjek River** 84.74 20 P P 22 05 19.1 +3.4
baz=242
KSH2 **Kashi** 84.74 310 P P 22 05 16.8 +0.2
KSH2 pP pP 22 05 56.9 -1.5
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
D25K **Kavik River** 84.83 18 P P 22 05 19.5 +3.3
baz=239
CRAG **Craig** 84.83 33 P P 22 05 19.4 +3.0
baz=252
N30M **Aishikik Lake** 84.87 27 P P 22 05 18.9 +2.4
baz=249
DAWY **Dawson** 84.89 24 P P 22 05 20.0 +3.4
baz=246
SKAG **Skagway** 84.98 29 P P 22 05 19.9 +2.9
baz=250
H27K **Steamboat Moun** 84.98 21 P P 22 05 19.4 +2.4
baz=244
U33K **Whale Pass** 85.03 32 P P 22 05 20.1 +2.7
baz=252
L29M **L29M** 85.03 25 P P 22 05 20.1 +2.8
baz=248
O30N **Mendenhall** 85.07 28 P P 22 05 19.9 +2.4
baz=250
G27K **Doyon Strip** 85.19 21 P P 22 05 20.9 +2.9
baz=244
KURK **Kurchatov** 85.24 322 P P 22 05 18.3 -0.2
KURK IAmb IAmb 22 06 18.7
comp=Z,12nm,1.3s
I28M **Miner Creek** 85.24 22 P P 22 05 21.2 +2.8
baz=246
KURBB **Kurchatov Arra** 85.27 322 P P 22 05 16.9 -1.8
comp=Z,0.6nm,0.7s,baz=103,slow=4.6,SNR=7.5
KURBB pP pP 22 05 59.1 -1.2
comp=Z,3.1nm,0.9s,baz=109,slow=3.8,SNR=7.8
comp=Z,0.6nm,0.7s
M30M **Minto, Yukon** 85.40 26 P P 22 05 20.8 +1.6
baz=249
MAW **Mawson** 85.43 203 P P 22 05 19.1 0.0
comp=Z,4.6nm,0.6s
MAW **Mawson** 85.43 203 P P 22 05 18.3 -0.8
comp=Z,15nm,0.6s,baz=97,slow=8.2,SNR=63
MAW LR LR 22 41 33.1
comp=Z,139nm,18.6s,baz=70,slow=34
comp=Z,15nm,0.6s
MAW **Mawson** 85.43 203 P P 22 05 18.8 -0.3
MAW **Mawson** 85.43 203 P P 22 05 19.1 0.0
N31M **Braeburn, Yuko** 85.46 27 P P 22 05 22.1 +2.6
baz=250
WRAK **Wrangell Islan** 85.53 32 P P 22 05 22.0 +2.1
baz=253
K29M **Barlow Dome** 85.57 24 P P 22 05 22.5 +2.5
baz=248
C26K **Camden Bay** 85.57 18 P P 22 05 22.5 +2.7
baz=241
WHY **Whitehorse** 85.59 28 P P 22 05 22.6 +2.4
baz=251
V35K **Ketchikan** 85.62 33 P P 22 05 22.4 +2.1
baz=254
C27K **Jago River** 85.80 18 P P 22 05 24.0 +3.1
baz=242

P32M	**Atlin**	**85.80**	**29**	P		**P**	**22 05 23.6**	**+2.4**
	baz=252							
E27K	**Coleen River**	**85.82**	**20**	P		**P**	**22 05 24.0**	**+2.9**
	baz=244,SNR=8.9							
H29M	**Whitestone**	**86.14**	**22**	P		**P**	**22 05 25.7**	**+3.0**
	baz=247							
F28M	**Old Crow**	**86.16**	**21**	P		**P**	**22 05 26.2**	**+3.5**
	baz=246,SNR=10							
Q32M	**Nakina River**	**86.31**	**30**	P		**P**	**22 05 26.8**	**+2.9**
	baz=253							
J30M	**Hart River**	**86.32**	**24**	P		**P**	**22 05 27.1**	**+3.3**
	baz=249,SNR=12							
M31M	**Drury Creek, Y**	**86.33**	**26**	P		**P**	**22 05 26.5**	**+2.8**
	baz=251							
P33M	**Teslin, Yukon**	**86.42**	**29**	P		**P**	**22 05 27.3**	**+3.1**
	baz=252							
D27M	**Malcolm River**	**86.49**	**19**	P		**P**	**22 05 27.5**	**+3.1**
	baz=244							
I30M	**Mount Dempster**	**86.53**	**23**	P		**P**	**22 05 27.7**	**+2.9**
	baz=249,SNR=5.5							
G29M	**Pine Creek**	**86.54**	**21**	P		**P**	**22 05 27.0**	**+2.4**
	baz=247							
N32M	**Quiet Lake**	**86.58**	**28**	P		**P**	**22 05 27.3**	**+2.3**
	baz=252							
S34M	**Telegraph Cree**	**86.59**	**31**	P		**P**	**22 05 26.9**	**+1.9**
	baz=254							
E28M	**Babbage River**	**86.69**	**20**	P		**P**	**22 05 27.7**	**+2.4**
	baz=246							
T35M	**Bob Quinn**	**86.80**	**32**	P		**P**	**22 05 28.0**	**+1.9**
	baz=255							
EPYK	**Eagle Plains**	**86.82**	**22**	P		**P**	**22 05 28.8**	**+2.8**
	baz=249,SNR=8.4							
BBB	**Bella Bella**	**86.83**	**37**	LR		LR	22 38 16.8	
	comp=Z,48nm,20.3s,baz=280,slow=31							
R33M	**Jennings River**	**87.08**	**30**	P		**P**	**22 05 30.0**	**+2.5**
	baz=254							
NRIK	**Noril'sk**	**87.14**	**341**	P		**P**	**22 05 27.4**	**0.0**
	comp=Z,3.9nm,0.7s,baz=112,slow=5.4,SNR=4.2							
	comp=Z,3.9nm,0.7s							
NRIK	**Noril'sk**	**87.14**	**341**	P		**P**	**22 05 27.7**	**+0.3**
E29M	**Blow River**	**87.16**	**20**	P		**P**	**22 05 30.2**	**+2.6**
	baz=247							
G30M	**tAoh Zraii Nji**	**87.23**	**22**	P		**P**	**22 05 30.3**	**+2.3**
	baz=249							
DLBC	**Dease Lake**	**87.30**	**31**	P		**P**	**22 05 28.8**	**+0.3**
	comp=Z,2.9nm,1.0s,baz=208,slow=17,SNR=4.0							
DLBC				LR		LR	22 41 12.4	
	comp=Z,49nm,18.9s,baz=242,slow=33							
	comp=Z,2.9nm,1.0s							
DLBC	**Dease Lake**	**87.30**	**31**	P		**P**	**22 05 31.0**	**+2.5**
	baz=255							
H31M	**Peel River**	**87.53**	**23**	P		**P**	**22 05 32.6**	**+3.2**
	baz=251,SNR=5.9							
F30M	**Barrier River**	**87.61**	**21**	P		**P**	**22 05 33.0**	**+3.3**
	baz=249							
MMPY	**Sheldon Lake,**	**87.84**	**26**	P		**P**	**22 05 34.1**	**+3.1**
	baz=254							
G31M	**Satah River**	**87.93**	**22**	P		**P**	**22 05 34.3**	**+3.1**
	baz=251							
F31M	**Tsiigehtchic**	**88.29**	**22**	P		**P**	**22 05 35.4**	**+2.5**
	baz=251							
YBH	**Yreka Blue Hor**	**88.49**	**48**	LR		LR	22 39 00.7	
	comp=Z,191nm,21.5s,baz=280,slow=31							
INK	**Inuvik**	**88.65**	**21**	P		**P**	**22 05 37.2**	**+2.6**
	baz=252							
KOTAN	**Kotaneelee Air**	**90.66**	**30**	P		**P**	**22 05 45.9**	**+1.7**
	baz=260							
BVAR	**Borovoye Array**	**90.70**	**323**	P		**P**	**22 05 43.8**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=101,slow=7.5,SNR=7.7							
BVAR				pP		**pP**	**22 06 25.4**	**-1.0**
	comp=Z,7.5nm,0.8s,baz=94,slow=5.5,SNR=14							
	comp=Z,1.4nm,0.7s							
NVAR	**Mina Array Bea**	**91.43**	**52**	LR		LR	22 41 17.3	
	comp=Z,75nm,20.2s,baz=230,slow=32							
C36M	**Paulatuk**	**92.23**	**21**	P		**P**	**22 05 52.8**	**+1.6**
	baz=260							
A36M	**Sachs Harbour**	**92.31**	**18**	P		**P**	**22 05 54.0**	**+2.4**
	baz=259							
PFO	**Pinyon Flats O**	**92.46**	**57**	LR		LR	22 43 23.6	
	comp=Z,72nm,18.4s,baz=246,slow=33							
YKA	**Yellowknife Ar**	**95.42**	**28**	P		**P**	**22 06 03.4**	**-2.6**
	comp=Z,0.4nm,0.8s,baz=266,slow=4.7,SNR=4.2							
YKA				pP		**pP**	**22 06 49.5**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=269,slow=4.4,SNR=5.5							
	comp=Z,0.4nm,0.8s							
ELIB	**Princess Elisa**	**96.42**	**194**	*d*P		**P**	**22 06 10.1**	**-0.5**
LPIG	**La Paz**	**97.21**	**66**	LR		LR	22 45 19.2	
	comp=Z,84nm,18.9s,baz=242,slow=32							
PDAR	**Pinedale Array**	**98.30**	**48**	LR		LR	22 48 19.9	
	comp=Z,67nm,18.6s,baz=294,slow=34							
NOA	**NORSAR Array B**	**118.10**	**341**	PKP		**PKPdf**	**22 11 26.4**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=51,slow=2.0,SNR=2.0							
GERES	**GERESS Array B**	**125.44**	**329**	PKP		**PKiKP**	**22 11 43.3**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=75,slow=1.1,SNR=10							
EKA	**Eskdalemuir Ar**	**127.15**	**344**	PKP		**PKiKP**	**22 11 46.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=32,slow=3.4,SNR=2.7							
LPAZ	**La Paz**	**132.81**	**118**	PKP		**PKPdf**	**22 11 56.7**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=225,slow=2.9,SNR=3.6							
BDFB	**Brasilia**	**149.52**	**134**	PKPbc		**PKPbc**	**22 12 30.2**	**-1.3**
	comp=Z,2.5nm,0.5s,baz=207,slow=4.5,SNR=4.2							
BDFB	**Brasilia**	**149.52**	**134**			**PKPdf**	**22 12 28.8**	**+2.0**
TORD	**Torodi Ar. Bea**	**151.90**	**288**	PKPbc		**PKiKP**	**22 12 37.6**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=82,slow=2.4,SNR=8.5							
TORD				pPKPbc		**pPKPbc**	**22 13 18.8**	**-2.4**
	comp=Z,5.7nm,0.7s,baz=73,slow=1.6,SNR=2.2							

FUNV ***11*** *21:55:34.2, 11˚.07N×70˚.60W, h22km, MW3.6, Presumed earthquake*
RSNC ***11*** *21:55:35.1±1.0, 11˚N±3˚×7˚1W±˚, h0km, M2.6, ML2.5*
ISC 11 21:55:33.4±2.6, 10˚.89N±0˚.10×70˚.8W±0˚.2, h18km, n8, σ1§44/16, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**1.46**	**304**	P	**Pb**	**21 55 59.5**	**-0.6**
URIC				S	**Sg**	**21 56 18.7**	**-2.0**
URIC	**Uribia, Colomb**	**1.46**	**304**	*e*P	**Pb**	**21 55 59.6**	**-0.4**
URIC				*e*S	**Sb**	**21 56 17.7**	**-0.6**
SDV	**Santo Domingo**	**1.99**	**177**	*e*P	**Pb**	**21 56 08.7**	**-0.6**
SDV				*e*S	**Sb**	**21 56 34.3**	**+0.5**
SMRC	**Santa Marta, M**	**3.42**	**275**	P	**Pn**	**21 56 28.5**	**+2.6**
SMRC				S	**Sn**	**21 57 04.9**	**-1.1**
PAMC	**Pamplona, Colo**	**4.02**	**209**	P	**Pn**	**21 56 35.5**	**+1.0**
PAMC				S	**Sn**	**21 57 20.3**	**-1.1**
SJCC	**San Jacinto, C**	**4.47**	**258**	P	**Pn**	**21 56 41.8**	**+1.5**
SJCC				S	**Sn**	**21 57 33.8**	**+1.9**
SJCC	**San Jacinto, C**	**4.47**	**258**	*e*P	**Pn**	**21 56 41.4**	**+1.1**
SJCC				*e*S	**Sn**	**21 57 32.2**	**+0.3**
RUSC	**La Rusia**	**5.47**	**205**	*e*P	**Pn**	**21 56 55.7**	**+1.1**
RUSC				*e*S	**Sn**	**21 57 55.6**	**-1.8**

CNRM ***11*** *22:16:51.8, 34˚.52N×4˚.71W, h2km, ML2.8*
INMG ***11*** *22:16:55.9±1.0, 34˚.37N×5˚.11W, h11km±18km, ML2.0, Error ellipse: s-maj=12.9km s-min=6.4km az=83.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Fez (Marr)*
ISC 11 22:16:55.1±1.2, 34˚.44N±0˚.04×4˚.91W±0˚.10, h17km, n17, σ1§13/24, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.48**	**225**	P	**Pg**	**22 17 04.3**	**-0.4**
SICH				S	**Sn**	**22 17 13.7**	**-1.4**
LCRM	**LCR**	**0.76**	**177**	P	**Pg**	**22 17 08.8**	**-1.1**
LCRM				S	**Sn**	**22 17 23.3**	**+1.1**
MD31	**MD31**	**1.57**	**175**	P	**Pn**	**22 17 22.7**	**+0.4**
MD31				S	**Sb**	**22 17 44.6**	**+1.1**
MDT	**Midelt**	**1.64**	**171**	P	**Pn**	**22 17 22.1**	**-1.2**
MDT				S	**Sg**	**22 17 48.0**	**0.0**
TISM	**Timmit**	**3.00**	**206**	P	**Pn**	**22 17 42.8**	**+0.9**
PVAQ	**Vaqueiros**	**3.73**	**323**	*e*P	**Pn**	**22 17 51.3**	**-0.6**
PVAQ				*e*S	**Sn**	**22 18 33.9**	**-1.6**
PVAQ				*i* IAML		22 18 37.3	
PVAQ				*i* IAML		22 18 37.5	
PVAQ				*i* IAML		22 18 37.6	
PVAQ	**Vaqueiros**	**3.73**	**323**	P	**Pn**	**22 17 50.8**	**-1.1**
PCVE	**Castro Verde**	**4.07**	**322**	*e*P	**Pn**	**22 17 57.1**	**+0.6**
OUK	**Oukaimeden**	**4.07**	**218**	P	**Pn**	**22 17 58.3**	**+1.3**
PBAR	**Barrancos**	**4.10**	**336**	*e*P	**Pn**	**22 17 58.2**	**+1.2**
PBAR				*e*S	**Sn**	**22 18 44.0**	**-0.6**
PBAR				*i* IAML		22 18 49.7	
PLOUS	**Minas do Lousa**	**4.57**	**323**	*e*P	**Pn**	**22 18 04.1**	**+0.7**
PESTR	**Estremoz**	**4.91**	**335**	*e*P	**Pn**	**22 18 09.0**	**+0.9**
MOE	**Montemor**	**4.93**	**327**	*e*P	**Pn**	**22 18 08.7**	**+0.4**
PARRA	**Arraiolos**	**5.04**	**331**	*e*P	**Pn**	**22 18 10.2**	**+0.4**
PARRA				*e*S	**Sn**	**22 19 07.7**	**0.0**
PMTG	**Montargil**	**5.33**	**331**	*e*P	**Pn**	**22 18 16.7**	**+2.8**
PCBR	**Castelo Branco**	**5.77**	**340**	*e*P	**Pn**	**22 18 20.6**	**+0.8**
PSARD	**Sardoal**	**5.77**	**334**	*e*P	**Pn**	**22 18 20.2**	**+0.3**

MOS ***11*** *22:38:22.8±1.4, 39˚.73N×118˚.57E, h9km, mb5.0/39, MS4.7/23, Error ellipse: s-maj=5.4km s-min=4.1km az=126.3*
IDC ***11*** *22:38:22.8±0.5, 39˚.75N×118˚.50E, h0km, mb4.3/26, mbtmp4.3/34, ML4.4/8, MS4.2/65, Error ellipse: s-maj=13.1km s-min=11.5km az=25.0*
BJI ***11*** *22:38:23.4, 39˚.78N×118˚.44E, h10km, mB4.9/21, mb4.5/50, ML5.3/28, Ms5.0/67, Ms7 4.7/63*
NEIC ***11*** *22:38:24.4±0.9, 39˚.77N±0˚.06×118˚.43E±0˚.07, h10km±1km, mb4.8/110, Error ellipse: s-maj=9.5km s-min=8.5km az=176.0*
GCMT ***11*** *22:38:25.4±0.2, 39˚.77N±0˚.01×118˚.52E±0˚.01, h23km±1km, MW5.0/120, Moment Tensor Solution. s45,c57; s120,c200; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.82±.11; Mθθ3.59±.09; Mϕϕ-2.78±.08; Mrθ-0.13±.12; Mθϕ-1.23±.07; Mϕr0.42±.12; Best double couple: Ms3.45300×10¹⁶ NP1:ϕs236.00000°, δ81.00000°, λ-175.00000°. NP2:ϕs145.00000°, δ85.00000°, λ-9.00000°. Principal axes: T 3.8280, Plg3.0000°, Azm191.0000°; N -0.7570, Plg80.0000°, Azm295.0000°; P -3.0780, Plg10.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
GFZ ***11*** *22:38:26.7±0.2, 40˚N±3˚×11˚8E±˚, h10km, M4.6/26, mb4.8/26*
BGR ***11*** *22:38:32.2, 39˚.78N×118˚.69E, h33km, mb4.9, Ms4.6*
ISC 11 22:38:24.8±0.3, 39˚.84N±0˚.03×118˚.49E±0˚.02, h12km, n678, σ1§64/684, mb4.7/114, MS4.4/87, 27C-28D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJI2	**Beijing**	**1.79**	**276**	Pn	**Pn**	**22 38 54.8**	**-0.8**
BJI2				Pg	**Pb**	**22 38 56.9**	**-0.7**
BJI2				Sn	**Sn**	**22 39 17.8**	**-0.4**
BJI2				Sg	**Sb**	**22 39 21.0**	**+1.0**
BJI2				SMN			
	5μm,0.6s						
BJI2				SME			
	14μm,0.7s						
BJT	**Baijiatuau**	**1.79**	**276**		**Pn**	**22 38 54.8**	**-0.8**
BJT				Sn	**Sn**	**22 39 17.4**	**-0.9**
DL2	**Dalian**	**2.61**	**110**	Pn	**Pn**	**22 39 06.5**	**-0.2**
DL2				Pg	**Pb**	**22 39 12.7**	**+1.3**
DL2				Sn	**Sn**	**22 39 39.8**	**+1.5**
DL2				Sg	**Sb**	**22 39 45.0**	**+1.6**
DL2				SMN			
	8μm,0.7s						
DL2				SME			
	4μm,0.4s						
TIA	**Tai'an**	**3.78**	**197**	Pn	**Pn**	**22 39 20.8**	**-2.1**
TIA				Pg	**Pb**	**22 39 32.0**	**+0.5**
TIA				Sn	**Sn**	**22 40 06.0**	**-1.3**
TIA				Sg	**Sb**	**22 40 20.8**	**+3.6**
TIA				SMN			
	2μm,0.7s						
TIA				SME			
	4μm,0.8s						
HNS	**HongShan**	**3.84**	**232**	⇑Pn	**Pn**	**22 39 22.0**	**-1.6**
HNS				Pg	**Pb**	**22 39 32.7**	**+0.3**
HNS				Sn	**Sn**	**22 40 06.2**	**-2.4**
HNS				Sg	**Sb**	**22 40 20.2**	**+1.4**
HNS				SMN			
	12μm,0.9s						
HNS				SME			
	10μm,0.9s						
SNY	**Shenyang**	**4.34**	**61**	⇑Pn	**Pn**	**22 39 30.7**	**+0.1**
SNY				Sn	**Sn**	**22 40 26.4**	**+5.3**
SNY				Sg	**Sg**	**22 40 44.8**	**+0.7**
SNY				SMN			
	9μm,0.8s						
SNY				SME			
	4μm,0.9s						
XLT	**XiLinHaoTe**	**4.44**	**337**	*e*Pn	**Pn**	**22 39 32.4**	**+0.4**
XLT				Pg	**Pg**	**22 39 47.4**	**-2.4**
XLT				Sg	**Sg**	**22 40 44.1**	**-3.1**
XLT				SMN			
	870nm,0.9s						
TIY	**Taiyuan**	**5.19**	**248**	Pn	**Pn**	**22 39 42.3**	**0.0**
TIY				*e*Pg	**Pb**	**22 39 58.0**	**+2.5**
TIY				Sg	**Sb**	**22 41 01.4**	**+3.6**
TIY				SMN			
	6μm,0.8s						
TIY				SME			
	5μm,1.0s						
HHC	**Hu-ho-hao-te**	**5.39**	**283**	*e*Pn	**Pn**	**22 39 48.6**	**+3.5**
HHC				Pg	**Pb**	**22 40 01.7**	**+2.8**
HHC				Sg	**Sg**	**22 41 11.9**	**-5.8**
HHC				SMN			
	2μm,1.0s						
HHC				SME			
	3μm,0.9s						
CN2	**Changchun**	**6.53**	**50**	Pn	**Pn**	**22 39 56.9**	**-3.8**
CN2				Pg	Pg	22 40 24.7	-5.1
CN2				Sn	**Sn**	**22 41 17.2**	**+2.1**
CN2				Sg	**Sg**	**22 41 46.7**	**-7.7**
CN2				L	L		
	comp=N,22μm,7.0s						
CN2				L	L		
	comp=E,22μm,7.0s						
CN2				L	L		
	comp=Z,5μm,6.0s						
BTO2	**Baotou**	**6.64**	**281**	*e*Pn	**Pn**	**22 40 01.7**	**-0.7**
BTO2				Sn	**Sn**	**22 41 18.1**	**0.0**
BTO2				L	L		
	comp=N,16μm,6.0s						
BTO2				L	L		
	comp=E,17μm,7.9s						
BTO2				L	L		
	comp=Z,18μm,11.7s						
INCN	**Inchon**	**6.79**	**108**	P	**Pn**	**22 40 02.8**	**-1.5**
INCN	**Inchon**	**6.79**	**108**		**Pn**	**22 40 02.8**	**-1.5**
INCN	**Inchon**	**6.79**	**108**	P	**Pn**	**22 40 04.5**	**+0.2**
LYN	**LuoYang**	**7.14**	**224**	Pn	**Pn**	**22 40 07.7**	**-1.3**
LYN				Sn	**Sn**	**22 41 32.7**	**+2.7**
LYN				SMN			
	380nm,1.0s						
LYN				SME			
	310nm,1.2s						
LYN				L	L		
	comp=N,4μm,4.4s						
LYN				L	L		
	comp=E,8μm,4.2s						
LYN				L	L		
	comp=Z,6μm,10.8s						
KS19	**Wonju Array Si**	**7.70**	**105**		**Pn**	**22 40 17.0**	**+0.3**
KSAR	**Wonju Array Be**	**7.73**	**105**	P	**Pn**	**22 40 16.9**	**-0.3**
KSAR	**Wonju Array Be**	**7.73**	**105**		**Pn**	**22 40 16.9**	**-0.3**
KSRS	**Korea Array**	**7.76**	**105**	Pn	**Pn**	**22 40 17.1**	**-0.5**
	42nm,0.3s,baz=290,slow=13,SNR=496						
KSRS				Sn	**Sn**	**22 41 40.5**	**-4.8**
	6.1nm,0.3s,baz=286,slow=27,SNR=4.2						
KSRS				Lg	Lg	22 42 25.3	
	9.1nm,0.3s,baz=288,slow=29,SNR=5.2						
KSRS				LR	LR	22 43 13.7	
	comp=Z,712nm,21.1s,baz=285,slow=38						
	110nm,0.4s						
NJ2	**Nanjing**	**7.78**	**178**	*e*Pn	**Pn**	**22 40 20.3**	**+2.5**
NJ2				SMN			
	940nm,1.3s						
NJ2				SME			
	1μm,1.2s						
NJ2				L	L		
	comp=N,9μm,8.1s						
NJ2				L	L		
	comp=E,7μm,6.0s						
NJ2				L	L		
	comp=Z,11μm,12.7s						
TJN	**Taejon**	**7.80**	**114**	*d i*P	**Pn**	**22 40 18.2**	**+0.1**
TJN	**Taejon**	**7.80**	**114**		**Pn**	**22 40 17.7**	**-0.4**
BNX	**BinXian**	**8.81**	**45**	⇓P	**Pn**	**22 40 32.4**	**+0.5**
BNX				SMN			
	2μm,1.4s						
BNX				SME			
	1μm,1.1s						
SSE	**Sheshan**	**9.00**	**165**	P	**Pn**	**22 40 34.2**	**-0.3**
SSE				S	**Sn**	**22 42 15.8**	**0.0**
SSE				SS	**SnSn**	**22 42 29.0**	**+1.5**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,80nm,3.5s						
HIA	**Hailar**	**9.47**	**5**	P	**Pn**	**22 40 42.2**	**+1.3**
HIA	**Hailar**	**9.47**	**5**		**Pn**	**22 40 42.2**	**+1.3**
MDJ	**Mudanjiang**	**9.52**	**56**	Pn	**Pn**	**22 40 42.7**	**+1.1**
MDJ	**Mudanjiang**	**9.52**	**56**	P	Pn	22 40 49.5	+7.9
MDJ				L	L		
	comp=N,10μm,4.0s						
MDJ				L	L		
	comp=E,7μm,9.9s						
MDJ				L	L		
	comp=Z,4μm,11.2s						
XAN	**Xi'an**	**9.60**	**236**	P	**Pn**	**22 40 41.0**	**-1.8**
XAN				S	**Sn**	**22 42 29.3**	**-1.3**
XAN				SMN			
	850nm,1.1s						
XAN				SME			
	450nm,1.0s						
XAN				L	L		
	comp=N,12μm,14.4s						
XAN				L	L		
	comp=E,12μm,14.6s						
XAN				L	L		
	comp=Z,8μm,11.2s						
PSTR	**Posyet**	**9.69**	**69**	⇓*e*P	**Pn**	**22 40 47.6**	**+3.6**
HILR	**Hailar Array B**	**9.76**	**5**	Pn	**Pn**	**22 40 46.8**	**+1.9**
	baz=260,slow=24						
HILR				Sn	**Sn**	**22 42 29.8**	**-4.6**
	baz=161,slow=22						
HILR				Lg	Lg	22 43 34.9	
	baz=186,slow=30						
	16nm,0.4s						
WHN	**Wuhan**	**9.87**	**201**	P	**Pn**	**22 40 45.0**	**-1.5**
WHN				pP		22 40 48.2	
WHN				S	**Sn**	**22 42 32.8**	**-4.5**
WHN				L	L		
	comp=N,10μm,14.4s						
WHN				L	L		
	comp=E,12μm,10.5s						
WHN				L	L		
	comp=Z,10μm,13.0s						
USA0B	**Ussuriysk Arra**	**10.94**	**62**	P	**Pn**	**22 41 01.0**	**-0.2**
USA0B	**Ussuriysk Arra**	**10.94**	**62**	Pn	**Pn**	**22 41 00.9**	**-0.2**
USRK	**Ussuriysk Ar.**	**10.94**	**62**	Pn	**Pn**	**22 41 02.5**	**+1.3**
	1.1nm,0.3s,baz=248,slow=13,SNR=12						
USRK				Sn	**Sn**	**22 42 55.5**	**-7.9**
	1.0nm,0.3s,baz=246,slow=14,SNR=4.2						
USRK				Lg	Lg	22 44 12.5	
	3.7nm,0.3s,baz=253,slow=26,SNR=7.5						
USRK				LR	LR	22 45 00.8	
	comp=Z,492nm,21.7s,baz=252,slow=36						
	3.2nm,0.4s						
USRK	**Ussuriysk Ar.**	**10.94**	**62**		**Pn**	**22 41 01.8**	**+0.6**
ULN	**Ulaanbaatar**	**11.50**	**318**	*c i*P	**Pn**	**22 41 08.1**	**-0.8**
ULN	**Ulaanbaatar**	**11.50**	**318**		**Pn**	**22 41 07.8**	**-1.1**
ULN	**Ulaanbaatar**	**11.50**	**318**	P	**Pn**	**22 41 08.2**	**-0.8**
SONM	**Songino Array**	**11.83**	**316**	Pn	**Pn**	**22 41 12.2**	**-1.1**
	3.2nm,0.3s,baz=134,slow=14,SNR=58						
SONM				Sn	Sn	22 43 15.6	-10
	2.6nm,0.3s,baz=137,slow=28,SNR=6.5						
SONM				Lg	Lg	22 44 37.6	
	4.9nm,0.3s,baz=126,slow=23,SNR=4.2						
SONM				LR	LR	22 46 27.4	
	comp=Z,588nm,20.6s,baz=130,slow=41						
	8.7nm,0.4s						
SONM	**Songino Array**	**11.83**	**316**		**Pn**	**22 41 11.9**	**-1.4**
JNU	**Nakatsue**	**12.01**	**120**	LR	LR	22 46 00.3	
	comp=Z,570nm,19.3s,baz=311,slow=38						
ENH	**Enshi**	**12.06**	**220**	Pn	**Pn**	**22 41 15.4**	**-1.1**
LZH	**Lanzhou**	**12.15**	**257**	*e*P	**Pn**	**22 41 19.8**	**+1.9**
LZH				sP	P	22 41 29.6	-1.0
LZH				pmax	pmax		
	comp=Z,38nm,0.9s						
LZH				L	L		
	comp=N,9μm,5.7s						
LZH				L	L		
	comp=E,5μm,5.2s						
LZH				L	L		
	comp=Z,4μm,8.9s						
HEH	**HeiHe**	**12.16**	**28**	*e*P	**Pn**	**22 41 19.1**	**+1.3**
HEH				S	**Sn**	**22 43 37.0**	**+3.7**
HEH				L	L		
	comp=N,5μm,5.1s						
HEH				L	L		
	comp=E,8μm,5.7s						
HEH				L	L		
	comp=Z,5μm,7.8s						
LZDM	**Lanzhou Array**	**12.31**	**256**	Pn	**Pn**	**22 41 17.9**	**-2.3**
	baz=77,slow=9.3						
LZDM				Lg	Lg	22 44 46.9	
	baz=114,slow=18						
LZDM				LR	LR	22 45 40.0	
	comp=Z,420nm,20.3s,baz=50,slow=36						
	0.8nm,0.3s						
CNSH	**ChangSha**	**12.51**	**203**	P	**Pn**	**22 41 20.9**	**-1.7**
CNSH				S	**Sn**	**22 43 41.6**	**-0.2**
CNSH				L	L		
	comp=N,2μm,14.3s						
CNSH				L	L		
	comp=E,4μm,12.8s						
CIT	**Chita**	**12.65**	**346**	*e*P	**Pn**	**22 41 26.8**	**+2.3**
CIT				pmax	pmax		
	comp=Z,35nm,1.3s						
KLR	**Kul'dur**	**13.31**	**41**	Pn	**Pn**	**22 41 34.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=231,slow=15,SNR=6.5						
KLR				Lg	Lg	22 45 22.7	
	comp=Z,1.4nm,0.3s,baz=230,slow=14,SNR=4.7						
KLR				LR	LR	22 47 36.6	
	comp=Z,524nm,18.6s,baz=230,slow=41						
	comp=Z,1.2nm,0.4s						
KLR	**Kul'dur**	**13.31**	**41**	*de*P	**Pn**	**22 41 36.3**	**+2.9**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
JMN	**Monobe**	**13.75**	**112**	Pn	**Pn**	**22 41 39.0**	**-0.6**
GTA2	**Gaotai**	**14.44**	**275**	*e*P	**Pn**	**22 41 49.7**	**+0.7**
GTA2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA2				L	L		
	comp=Z,2μm,9.2s						
GTA2				L	L		
	comp=Z,2μm,11.4s						
GTA2				L	L		
	comp=Z,2μm,10.5s						
QZH2	**Quanzhou**	**14.85**	**180**	*e*P	**Pn**	**22 41 55.8**	**+1.2**
QZH2				pmax	pmax		
	comp=Z,50nm,0.8s						
QZH2				pmax	pmax		
	comp=Z,260nm,8.9s						
QZH2				L	L		
	comp=Z,2μm,13.4s						
QZH2				L	L		
	comp=Z,2μm,12.7s						
QZH2				L	L		
	comp=Z,3μm,13.6s						
CD2	**Chengdu**	**14.94**	**238**	P	**Pn**	**22 41 55.3**	**-0.6**
CD2				S	**Sn**	**22 44 41.7**	**+0.3**
CD2				pmax	pmax		
	comp=Z,80nm,1.0s						
CD2				pmax	pmax		
	comp=Z,260nm,3.5s						
CD2				L	L		
	comp=Z,2μm,8.3s						
CD2				L	L		
	comp=Z,2μm,8.3

comp=Z,60nm,1.1s
ZEA MLR MLR
comp=E,3μm,6.0s
ZEA MLR MLR
comp=N,2μm,8.0s
ZEA MLR MLR
comp=Z,2μm,6.0s
JOW Kunigami 15.32 145 LR LR 22 47 37.4
comp=Z,457nm,21.9s,baz=3.5,slow=36
JOW Kunigami 15.32 145 Pn Pn 22 41 60.0 -0.9
JOW IAmb IAmb 22 42 07.6
comp=Z,43nm,1.0s
JOW Kunigami 15.32 145 P **P 22 42 07.0 +1.3**
YHNB Yeheng 15.32 170 Pn Pn 22 41 58.0 -3.0
KNMB Chin-men Tao 15.33 180 Pn **Pn 22 41 59.5 -1.5**
KNMB IAmb IAmb 22 42 07.6
comp=Z,34nm,0.8s
INU Inuyama 15.35 101 Pn **Pn 22 42 01.2 0.0**
INU IAmb IAmb 22 42 09.1
comp=Z,54nm,1.0s
INU Inuyama 15.35 101 P **Pn 22 42 01.6 +0.3**
JGF Kuroka 15.52 100 Pn Pn 22 42 03.0 -0.4
JGF Kuroka 15.52 100 P **P 22 42 06.8 -1.0**
TLY Talaya 15.69 324 Pn **Pn 22 42 05.1 -0.5**
comp=Z,1.2nm,0.3s,baz=347,slow=4.9,SNR=10.0
TLY Sn **Sn 22 44 55.2 -4.2**
comp=Z,1.2nm,0.3s,baz=214,slow=20,SNR=5.8
TLY Lg Lg 22 46 37.7
comp=Z,0.3nm,0.3s,baz=58,slow=23,SNR=4.0
comp=Z,4.2nm,0.6s
TLY Talaya 15.69 324 Pn 22 42 04.5 -1.1
TLY Talaya 15.69 324 P **P 22 42 08.8 -0.9**
IRK Irkutsk 15.81 326 *e*P **P 22 42 09.4 -1.6**
NACB Ninganchiao 15.84 170 Pn **Pn 22 42 06.9 -0.8**
NACB IAmb IAmb 22 42 13.1
comp=Z,84nm,2.0s
NACB Ninganchiao 15.84 170 P **P 22 42 11.2 -0.2**
MJB9 Matsu-Tunnel 15.84 96 Pn 22 42 08.1 +0.4
MJB9 IAmb IAmb 22 42 15.1
comp=Z,75nm,1.0s
MAJO Matsushiro 15.85 96⇓ *e*P **P 22 42 11.4 -0.1**
MAJO Matsushiro 15.85 96 Pn Pn 22 42 08.1 +0.4
MAJO IAmb IAmb 22 42 15.1
comp=Z,77nm,1.0s
MAJO Matsushiro 15.85 96 P **P 22 42 13.2 +1.7**
MJAR Matsushiro Arr 15.85 96 Pn **Pn 22 42 08.7 +0.9**
comp=Z,0.3nm,0.3s,baz=287,slow=12,SNR=67
MJAR LR LR 22 48 02.2
comp=Z,354nm,18.8s,baz=295,slow=37
comp=Z,6.8nm,1.1s
MJAR Matsushiro Arr 15.85 96 Pn 22 42 08.0 +0.2
MJAR IAmb IAmb 22 42 15.3
comp=Z,75nm,1.0s
GULI GuiLin 16.03 208 P **Pn 22 42 10.1 0.0**
GULI S **Sn 22 45 12.0 +4.2**
GULI pmax pmax
comp=Z,140nm,0.9s
GULI L L
comp=Z,2μm,16.3s
GULI L L
comp=Z,5μm,15.2s
GULI L L
comp=Z,2μm,11.1s
SSLB Suanglung 16.14 172 Pn **Pn 22 42 10.1 -1.4**
SSLB Suanglung 16.14 172 P **P 22 42 15.0 +0.2**
YULB Yu-li 16.57 171 Pn Pn 22 42 15.3 -1.7
YULB Yu-li 16.57 171 P **P 22 42 20.4 +0.8**
TPUB Ta-pu 16.59 173 Pn 22 42 14.7 -2.6
TPUB IAmb IAmb 22 42 23.8
comp=Z,65nm,1.3s
TPUB Ta-pu 16.59 173 P **P 22 42 19.6 -0.2**
GYA Guiyang 16.60 220⇑ P **Pn 22 42 17.5 +0.1**
GYA pmax pmax
comp=Z,22nm,1.2s
GRNR Gornyy 16.64 43⇓ *i*P **Pn 22 42 17.6 -0.2**
GRNR pmax pmax
comp=Z,2.0nm,0.9s
GRNR MLR MLR
comp=E,1μm,11.0s
GRNR MLR MLR
comp=N,1μm,10.0s
GRNR MLR MLR
comp=Z,1μm,10.0s
GZH2 Guangzhou 16.65 196 P **Pn 22 42 18.7 +0.7**
GZH2 S **Sn 22 45 23.5 +0.7**
GZH2 L L
comp=Z,1μm,10.4s
GZH2 L L
comp=Z,2μm,9.1s
MOY Mondy 16.95 320 *e*P **P 22 42 24.0 +0.3**
MOY pmax pmax
comp=Z,35nm,1.4s
TWG Pinlang 17.11 172 Pn 22 42 22.4 -1.5
TWG IAmb IAmb 22 42 30.3
comp=Z,190nm,2.0s
TWG Pinlang 17.11 172 P **P 22 42 26.7 +1.2**
JTM Tenmabayashi 17.24 80 Pn 22 42 24.6 -0.8
JTM IAmb IAmb 22 42 29.4
comp=Z,105nm,1.0s
KNGR Kungurtug, Tuv 18.21 313⇓ *e*P **P 22 42 38.8 +1.1**
BOD Bodaibo 18.23 352 *e*P **P 22 42 39.0 +1.4**
BOD pmax pmax
comp=Z,28nm,1.5s
ASAJ Asahikawa 18.40 69 P **P 22 42 38.4 -1.3**
ASAJ pmax pmax
comp=Z,61nm,1.3s
JKA Kamikawa-asahi 18.41 69 P **P 22 42 38.4 -1.3**
JKA IAmb IAmb 22 42 46.3
comp=Z,60nm,1.3s
JKA Kamikawa-asahi 18.41 69 P **P 22 42 39.0 -0.8**
ERM Erimo 18.75 75 P **P 22 42 43.0 -0.5**
ERM pmax pmax
comp=Z,58nm,1.1s
ERM Erimo 18.75 75 P **P 22 42 43.0 -0.5**
ERM IAmb IAmb 22 42 52.7
comp=Z,58nm,1.1s
YSS Yuzhno-Sakhali 18.97 60 *e*P **Pn 22 42 49.3 +2.8**
YSS *e*S **S 22 46 20.0 -0.9**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS pmax pmax
comp=Z,200nm,3.6s
YSS smax smax
comp=N,700nm,7.5s
YSS smax smax
comp=E,200nm,7.2s
YSS MLR MLR
comp=N,2μm,14.0s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=E,1μm,12.0s
YSS Yuzhno-Sakhali 18.97 60 P **P 22 42 45.9 +0.1**
YSS IAmb IAmb 22 42 52.9
comp=Z,97nm,1.7s
YSS Yuzhno-Sakhali 18.97 60 P **Pn 22 42 49.9 +3.4**
GOMU GeErMu 18.99 266 P **P 22 42 44.6 -2.0**
GOMU pP pP 22 42 49.4 -0.6
GOMU sP sP 22 42 54.6 +3.0
GOMU S **Sn 22 46 16.8 -3.1**
GOMU pmax pmax
comp=Z,10.0nm,0.6s
GOMU L L
comp=Z,820nm,9.7s
GOMU L L
comp=Z,1μm,9.7s
GOMU L L
comp=Z,1μm,9.4s
UGL Uglegorsk 19.13 53 *e*P **Pn 22 42 50.7 +2.3**
UGL *e*S **S 22 46 24.3 +0.1**
UGL pmax pmax
comp=Z,90nm,1.1s
UGL smax smax
comp=E,400nm,5.6s
UGL smax smax
comp=N,700nm,4.9s
UGL MLR MLR
comp=E,2μm,13.0s
UGL MLR MLR
comp=N,2μm,12.0s
UGL MLR MLR
comp=Z,3μm,11.0s
PZH PanZhiHua 19.28 231 P **P 22 42 49.6 0.0**
PZH S **S 22 46 28.0 +0.2**
PZH pmax pmax
comp=Z,20nm,1.6s
PZH L L
comp=Z,1μm,18.6s
PZH L L
comp=Z,2μm,18.4s
PZH L L
comp=Z,1μm,16.3s
KMI2 Kunming 19.73 227⇑ P **P 22 42 54.6 +0.1**
KMI2 S **S 22 46 34.8 -2.1**
KMI2 pmax pmax
comp=Z,43nm,0.9s
KMI2 pmax pmax
comp=Z,250nm,5.5s
KMI2 L L
comp=Z,2μm,16.2s
KMI2 L L
comp=Z,3μm,19.4s
KMI2 L L
comp=Z,2μm,17.7s
TYV Tymovskoe 20.15 49 *e*P Pn 22 43 01.5 +0.9
TYV *e*S Sn 22 46 50.9 +3.8
TYV pmax pmax
comp=Z,13nm,1.3s
TYV pmax pmax
comp=Z,300nm,3.2s
TYV smax smax
comp=N,500nm,5.0s
TYV smax smax
comp=E,300nm,5.0s
TYV MLR MLR
comp=Z,3μm,20.0s
NKL Nikolayevsk 20.15 41 *e*P **P 22 42 59.2 +0.5**
NKL *e*S Sn 22 46 48.3 +1.2
NKL pmax pmax
comp=N,113nm,0.8s
NKL pmax pmax
comp=E,76nm,0.8s
NKL pmax pmax
comp=Z,211nm,0.9s
NKL smax smax
comp=E,122nm,2.2s
NKL smax smax
comp=N,226nm,3.8s
NKL MLR MLR
comp=E,3μm,7.0s
NKL MLR MLR
comp=N,2μm,9.0s
NKL MLR MLR
comp=Z,4μm,11.0s
QIZ Qiongzhong 22.04 202 P **P 22 43 17.8 -1.5**
QIZ IAmb IAmb 22 43 36.2
comp=Z,65nm,1.1s
QIZ Qiongzhong 22.04 202 P **P 22 43 19.0 -0.3**
QIZ S **S 22 47 23.0 +0.7**
QIZ pmax pmax
comp=Z,19nm,1.3s
QIZ pmax pmax
comp=Z,320nm,4.5s
QIZ L L
comp=Z,900nm,11.4s
QIZ L L
comp=Z,2μm,12.7s
QIZ L L
comp=Z,2μm,10.8s
SLVN Son La 22.26 218 P **P 22 43 19.6 -2.2**
SLVN IAmb IAmb 22 43 40.5
comp=Z,29nm,1.1s
TNCH TengChong 22.34 235 P **P 22 43 23.2 +0.5**
TNCH S **S 22 47 21.6 -6.6**
TNCH pmax pmax
comp=Z,21nm,1.0s
TNCH pmax pmax
comp=Z,230nm,5.3s
TNCH L L
comp=Z,3μm,15.4s
TNCH L L
comp=Z,3μm,16.8s
TNCH L L
comp=Z,2μm,13.9s
WMQ Urumqi 23.22 290 *e*P **P 22 43 35.6 +3.9**
WMQ S **S 22 47 45.0 +1.6**
WMQ pmax pmax
comp=Z,35nm,1.7s
WMQ pmax pmax
comp=Z,380nm,3.7s
WMQ L L
comp=Z,1μm,10.5s
WMQ L L
comp=Z,1μm,12.9s
WMQ L L
comp=Z,550nm,15.1s
YAK Yakutsk 23.24 13 P **P 22 43 31.5 -0.2**
comp=Z,36nm,1.0s,baz=17,slow=6.5,SNR=13
YAK LR LR 22 52 10.4
comp=Z,338nm,18.1s,baz=206,slow=36
comp=Z,36nm,1.0s
YAK Yakutsk 23.24 13 *e*P **P 22 43 30.8 -0.8**
YAK *e*PPP PPP 22 44 03.7
YAK *e* 22 47 19.5
YAK *e*S **S 22 47 43.1 -0.2**
YAK *e*SSS SSS 22 48 32.2
YAK *e* 22 54 43.8
YAK pmax pmax
comp=Z,40nm,1.0s
YAK pmax pmax
comp=N,22nm,1.2s
YAK pmax pmax
comp=E,18nm,1.4s
YAK pmax pmax
comp=Z,79nm,2.2s
YAK pmax pmax
comp=E,95nm,2.7s
YAK pmax pmax
comp=N,103nm,2.3s
YAK smax smax
comp=E,136nm,2.3s
YAK smax smax
comp=N,126nm,2.2s
YAK MLR MLR
comp=Z,559nm,11.0s
YAK MLR MLR
comp=N,346nm,11.0s
YAK MLR MLR
comp=E,193nm,11.0s
YAK Yakutsk 23.24 13 P **P 22 43 31.1 -0.5**
YAK IAmb IAmb 22 43 46.0
comp=Z,43nm,0.9s
YAK Yakutsk 23.24 13 P **P 22 43 32.0 +0.3**
JCJ Chichijima 23.42 116 LR LR 22 52 50.6
comp=Z,197nm,19.4s,baz=0.0,slow=37
DGZ Jazzator, Alta 24.00 305⇓ *e*P **P 22 43 41.7 +2.3**
DGZ pmax pmax
comp=Z,10.0nm,1.0s
LSA Lhasa 24.55 254 P **P 22 43 43.2 -1.7**
LSA pmax pmax
comp=Z,22nm,0.8s
LSA Lhasa 24.55 254 P **P 22 43 43.2 -1.7**
LSA IAmb IAmb 22 43 52.1
comp=Z,22nm,0.8s
ZSN Zaisan 25.34 299 *e*P **P 22 43 54.6 +3.2**
ZSN Zaisan 25.34 299 *e*P **P 22 43 54.7 +3.2**
TGY Tagaytay City 25.73 175 LR LR 22 54 28.7
comp=Z,480nm,18.6s,baz=52,slow=38
ZAA0 Zalesovo Array 26.69 313 P **P 22 44 03.6 +0.1**
ZALV Zalesovo Beam 26.69 313 P **P 22 44 04.0 +0.4**
comp=Z,3.2nm,0.9s,baz=109,slow=8.0,SNR=9.6
ZALV LR LR 22 55 19.8
comp=Z,490nm,19.1s,baz=112,slow=38
comp=Z,3.2nm,0.9s
ZALV Zalesovo Beam 26.69 313 *i*P **P 22 44 06.1 +2.6**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 26.69 313 P **P 22 44 03.6 +0.1**
CHTO Chiang Mai 26.89 224 P **P 22 44 04.1 -1.6**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO Chiang Mai 26.89 224 P **P 22 44 04.1 -1.6**
CHTO Chiang Mai 26.89 224 P **P 22 44 05.5 -0.2**
MK31 Makanchi Array 27.06 297⇑ *e*P **P 22 44 07.5 +0.5**
MKAR Makanchi Array 27.06 297 P **P 22 44 07.5 +0.4**
comp=Z,2.5nm,0.9s,baz=90,slow=11,SNR=11
MKAR LR LR 22 55 23.7
comp=Z,928nm,18.7s,baz=90,slow=38
comp=Z,2.5nm,0.9s
CM31 Chiang Mai Arr 27.19 224 P **P 22 44 07.6 -0.8**
CMAR Chiang Mai Arr 27.19 224 P **P 22 44 07.8 -0.5**
comp=Z,3.1nm,0.6s,baz=31,slow=8.1,SNR=14
CMAR LR LR 22 55 48.0
comp=Z,397nm,20.3s,baz=55,slow=38
comp=Z,3.1nm,0.6s
CMAR Chiang Mai Arr 27.19 224 *i*P **P 22 44 11.1 +2.8**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 27.19 224 P **P 22 44 06.5 -1.8**
MAKZ Makanchi 27.27 297 P **P 22 44 08.1 -0.8**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 27.27 297 P **P 22 44 08.1 -0.8**
MAKZ Makanchi 27.27 297 P **P 22 44 12.7 +3.7**
MA2 Magadan 28.29 35 LR LR 22 55 10.2
comp=Z,385nm,18.2s,baz=244,slow=36
MA2 Magadan 28.29 35⇓ *e*P **P 22 44 21.8 +4.0**
MA2 pmax pmax
comp=Z,14nm,0.8s
MA2 Magadan 28.29 35 P **P 22 44 18.6 +0.8**
MA2 IAmb IAmb 22 44 28.5
comp=Z,13nm,0.8s
MA2 Magadan 28.29 35 P **P 22 44 22.0 +4.2**
SEM Semipalatinsk 28.68 304 *e*P **P 22 44 24.9 +3.2**
SEM pmax pmax
comp=Z,18nm,1.4s
SEM Semipalatinsk 28.68 304 *e*P **P 22 44 24.9 +3.2**
comp=Z,18nm,1.4s
EVN Everest 28.69 255 P **P 22 44 20.2 -2.2**
EVN IAmb IAmb 22 45 03.9
comp=Z,11nm,1.0s
PDGK Podgornoye 29.20 290 P **P 22 44 25.6 -0.6**
PDGK Podgornoye 29.20 290 P **P 22 44 25.6 -0.6**
SHLS Shalkode 29.24 289 *e*P **P 22 44 27.0 +0.4**
SHLS Shalkode 29.24 289 *e*P **P 22 44 27.0 +0.4**
UZB Uzynbulak 29.56 289 *e*P **P 22 44 32.7 +3.2**
UZB Uzynbulak 29.56 289 *e*P **P 22 44 32.7 +3.2**
PEA0B Petropavlovsk- 29.68 50 P **P 22 44 30.8 +0.5**
PEA0B pmax pmax
comp=Z,79nm,2.0s
PEA0B Petropavlovsk- 29.68 50 P **P 22 44 30.8 +0.5**
PETK Petropavlovsk- 29.68 50 P **P 22 44 30.4 +0.1**
comp=Z,1.7nm,0.7s,baz=252,slow=4.5,SNR=8.0
PETK LR LR 22 57 01.9
comp=Z,458nm,20.8s,baz=247,slow=38
comp=Z,1.7nm,0.7s
PETK Petropavlovsk- 29.68 50 P **P 22 44 30.1 -0.1**
WUS Wushi 29.71 285 P **P 22 44 30.3 -0.6**
WUS IAmb IAmb 22 45 22.6
comp=Z,20nm,1.4s
KURK Kurchatov 29.74 305⇓ *i*P **P 22 44 32.3 +1.5**
KURK pmax pmax
comp=Z,13nm,1.1s
KURK Kurchatov 29.74 305 P **P 22 44 30.8 0.0**
KURK Kurchatov 29.74 305 P **P 22 44 32.6 +1.8**
KURBB Kurchatov Arra 29.79 305 P **P 22 44 32.1 +0.8**
comp=Z,5.6nm,0.6s,baz=95,slow=9.8,SNR=34
KURBB LR LR 22 57 30.0
comp=Z,555nm,21.7s,baz=154,slow=38
comp=Z,5.6nm,0.6s
TDK Taldyqorghan 29.81 293 *e*P **P 22 44 34.8 +3.2**
TDK Taldyqorghan 29.81 293 *e*P **P 22 44 34.8 +3.2**
SATY Saty 30.02 289 *e*P **P 22 44 36.6 +3.1**
SATY pmax pmax
comp=Z,12nm,1.7s
SATY Saty 30.02 289 *e*P **P 22 44 36.6 +3.1**
comp=Z,12nm,1.7s
TARG Taragay, Kyrgy 30.66 287 P **P 22 44 39.2 -0.4**
TARG pmax pmax
comp=Z,10.0nm,1.1s
TARG Taragay, Kyrgy 30.66 287 P **P 22 44 39.2 -0.4**
TARG IAmb IAmb 22 45 16.1
comp=Z,10nm,1.1s
TARG Taragay, Kyrgy 30.66 287 P **P 22 44 41.1 +1.5**
SEY Seymchan 30.70 30⇑ *e*P **P 22 44 40.9 +1.7**
SEY pmax pmax
comp=Z,8.0nm,1.2s
MDOK Medeo 30.99 290 *e*P **P 22 44 45.2 +3.1**
MDOK Medeo 30.99 290 *e*P **P 22 44 45.2 +3.1**
AAA Alma-Ata 31.08 290 *e*P **P 22 44 46.1 +3.3**
AAA Alma-Ata 31.08 290 *e*P **P 22 44 46.1 +3.3**
TNSS Tian-Shan 31.08 290 *e*P **P 22 44 46.0 +2.8**
TNSS Tian-Shan 31.08 290 *e*P **P 22 44 46.0 +2.8**
NRN Naryn 32.05 287 P **P 22 44 51.6 -0.1**
NRN pmax pmax
comp=Z,4.0nm,0.9s
NRN Naryn 32.05 287 P **P 22 44 51.6 -0.1**
TIXI Tiksi 32.31 6 LR LR 22 59 39.2
comp=Z,457nm,18.7s,baz=224,slow=39
TIXI Tiksi 32.31 6⇓ *e*P **P 22 44 53.3 +0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.7s
TIXI Tiksi 32.31 6 P **P 22 44 52.1 -1.1**
TIXI IAmb IAmb 22 45 20.8
comp=Z,7.0nm,0.8s
SGDS Sogindy 32.69 291 *e*P **P 22 45 00.2 +3.2**
BTLS Baital 32.89 294 *e*P **P 22 45 01.9 +3.3**
BTLS Baital 32.89 294 *e*P **P 22 45 02.0 +3.3**
KSH2 Kashi 32.90 283 P **P 22 44 58.4 -0.6**
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
KSH2 pmax pmax
comp=Z,210nm,9.4s
KSH2 L L
comp=Z,950nm,14.8s
KSH2 L L
comp=Z,1μm,15.8s
KSH2 L L
comp=Z,580nm,12.0s
AAK Ala-Archa 32.92 289 LR LR 22 59 24.2
comp=Z,641nm,18.0s,baz=82,slow=38
AAK Ala-Archa 32.92 289⇓ *e*P **P 22 44 59.9 +0.7**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 32.92 289 P **P 22 44 58.0 -1.1**
DAV Davao City (W) 33.24 167 LR LR 22 58 42.1
comp=Z,311nm,20.4s,baz=334,slow=37
BRZS Berezniki 33.51 303 *e*P **P 22 45 07.3 +3.3**
BRZS Berezniki 33.51 303 *e*P **P 22 45 07.3 +3.3**
NRIK Noril'sk 33.80 341 P **P 22 45 07.2 +0.9**
comp=Z,3.0nm,0.5s,baz=107,slow=12,SNR=4.6
comp=Z,3.0nm,0.5s
NRIK Noril'sk 33.80 341⇓ *e*P **P 22 45 07.5 +1.2**
NRIK pmax pmax
comp=Z,20nm,2.0s
NRIK Noril'sk 33.80 341 P **P 22 45 05.3 -1.0**
NRIK IAmb IAmb 22 45 15.9
comp=Z,6.5nm,0.7s
ARSB Arslanbob 34.29 288 P **P 22 45 09.9 -1.2**
ARSB pmax pmax
comp=Z,26nm,0.6s
ARSB Arslanbob 34.29 288 P **P 22 45 09.9 -1.2**
ARK Arkit 34.93 289 P **P 22 45 19.0 +2.4**
GUMO Guam 34.95 131 LR LR 22 57 55.3
comp=Z,150nm,20.3s,baz=334,slow=34
BVAR Borovoye Array 35.00 308 P **P 22 45 18.0 +1.1**
comp=Z,2.7nm,0.4s,baz=98,slow=9.1,SNR=12
comp=Z,2.7nm,0.4s
BORK Borovoye 35.04 308*d* *i*P **P 22 45 19.1 +1.9**
BORK pmax pmax
comp=Z,11nm,0.9s
BORK Borovoye 35.04 308 P **P 22 45 16.2 -1.0**
BORK IAmb IAmb 22 45 44.2
comp=Z,8.8nm,0.8s
KK31 Karatay Array 35.71 291 P **P 22 45 22.1 -1.0**
KK31 pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 35.71 291 P **P 22 45 22.1 -1.0**
KKAR Karatay Array 35.71 291 P **P 22 45 22.5 -0.6**
KKAR Karatay Array 35.71 291 P **P 22 45 22.5 -0.6**
BTK Batken 36.20 286 P **P 22 45 27.5 +0.1**
BTK pmax pmax
comp=Z,6.0nm,1.1s
BTK Batken 36.20 286 P **P 22 45 27.5 +0.1**
BTK Batken 36.20 286 P **P 22 45 28.9 +1.5**
MANEM Manem 36.29 282 P **P 22 45 27.9 -0.5**
MANEM IAmb IAmb 22 45 44.2
comp=Z,34nm,1.4s
NIL Nilore 36.47 275 P **P 22 45 29.4 -0.3**
NIL pmax pmax
comp=Z,69nm,1.7s
NIL Nilore 36.47 275 P **P 22 45 29.4 -0.3**
NIL Nilore 36.47 275 P **P 22 45 31.5 +1.8**
GAR Garm 36.87 285 P **P 22 45 32.3 -0.8**
GAR IAmb IAmb 22 46 34.2
comp=Z,21nm,1.3s
CHGR Chuyangaron 37.83 284⇓ *e*P **P 22 45 41.6 +0.3**
CHGR pmax pmax

comp=Z,16nm,0.6s
CHGR Chuyangaron 37.83 284 P P 22 45 40.1 -1.2
BILL Bilibino 38.20 27⇓ eP P 22 45 45.8 +1.9
BILL pmax pmax
comp=Z,12nm,1.3s
TOLI2 Tolitoli 38.60 176 P P 22 45 45.7 -2.1
SHAA Shahritus 38.95 283 P P 22 45 49.3 -1.4
SHAA IAmb IAmb 22 46 29.7
comp=Z,78nm,1.6s
KBL Kabul 39.34 278 P P 22 45 52.9 -1.3
KBL pmax pmax
comp=Z,8.0nm,1.1s
KBL Kabul 39.34 278 P P 22 45 52.9 -1.3
SHEM Shemya Is, Ala 39.55 52 LR LR 23 03 30.1
comp=Z,332nm,18.2s,baz=265,slow=38
SVE Sverdlovsk 40.69 314 eP P 22 46 06.3 +1.5
SVE pmax pmax
comp=Z,11nm,1.0s
SVE MLR MLR
comp=Z,939nm,12.0s
AB31 Akbulak array 41.81 303 P P 22 46 14.1 0.0
ABKAR Akbulak array 41.81 303 P P 22 46 13.5 -0.7
ARTI Arti 41.95 314 LR LR 23 03 33.9
comp=Z,678nm,18.2s,baz=88,slow=36
ARTI Arti 41.95 314 *c i*P **P 22 46 16.0 +0.8**
ARTI 22 48 11.3
ARTI S **S 22 52 32.6 -0.6**
ARTI SS **SS 22 55 32.3 -7.3**
ARTI pmax pmax
comp=Z,6.0nm,0.8s
ARTI MLR MLR
comp=Z,692nm,16.0s
ARTI Arti 41.95 314 P P 22 46 15.1 -0.1
ARTI IAmb IAmb 22 46 59.9
comp=Z,13nm,0.7s
AKTO Aktyubinsk 42.84 305 LR LR 23 05 05.4
comp=Z,810nm,18.8s,baz=85,slow=37
HRA Herat 44.56 281 P P 22 46 35.9 -0.9
KAPI Kappang 44.65 178 LR LR 23 05 42.2
comp=Z,219nm,20.0s,baz=293,slow=37
GAMB Gambell 46.39 35 P P 22 46 50.3 -0.3
baz=274
KIRV Kirov 46.56 318⇑ *eP* **P 22 46 52.3 +0.3**
JAY Jayapura 46.82 149 LR LR 23 06 09.9
comp=Z,144nm,18.8s,baz=310,slow=36
PALK Pallekele 46.85 236 LR LR 23 07 14.9
comp=Z,232nm,20.9s,baz=102,slow=37
TNA Tin City 47.87 33 P P 22 47 01.2 -0.9
baz=275
F14K Arctic Creek 48.54 33 P P 22 47 07.3 0.0
baz=277
C16K Lisburne Hills 48.64 29 P P 22 47 08.2 +0.1
baz=275
F15K North Star Dit 49.20 32 P P 22 47 11.7 -0.8
baz=278
M11K Mekoryuk 49.40 39 P P 22 47 13.5 -0.4
baz=281
C17K DeLong Mountai 49.42 28 P P 22 47 14.2 +0.2
baz=277
D17K Noatak River 49.55 29 P P 22 47 15.5 +0.4
baz=278
G15K Niukluk 49.56 33 P P 22 47 14.1 -1.1
baz=279
K13K Kusilvak Mount 49.83 37 P P 22 47 17.4 +0.1
baz=281
A19K Wainwright 49.95 26 P P 22 47 17.9 -0.1
baz=277
BATI Baumata 50.02 173 LR LR 23 12 01.7
comp=Z,837nm,20.4s,baz=303,slow=40
C18K Utukok River 50.12 28 P P 22 47 19.7 +0.3
C18K IAmb IAmb 22 47 57.7
comp=Z,11nm,0.9s
C18K Utukok River 50.12 28 P P 22 47 19.1 -0.4
baz=278
E17K Hotham Inlet 50.12 30 P P 22 47 18.9 -0.5
baz=279
G16K Koyuk River 50.20 32 P P 22 47 19.5 -0.5
baz=280
H16K Elim 50.38 33 P P 22 47 20.9 -0.5
baz=281
F17K Baldwin Pennin 50.46 31 P P 22 47 21.0 -1.0
baz=280
E18K Tukpahlearik C 50.53 30 P P 22 47 23.5 +1.0
E18K IAmb IAmb 22 47 31.2
comp=Z,6.4nm,0.8s
E18K Tukpahlearik C 50.53 30 P P 22 47 21.6 -0.9
baz=280
C19K Lookout Ridge 50.62 27 P P 22 47 22.5 -0.7
baz=280
M13K Dall Lake 50.77 39 P P 22 47 24.3 -0.1
baz=283
UNV Unalaska Valle 50.80 48 P P 22 47 24.0 -0.7
baz=286
G17K Kiwalik Mounta 50.88 32 P P 22 47 24.6 -0.5
baz=282
L14K Kuka Creek 50.88 38 P P 22 47 24.7 -0.4
baz=283
F18K Selawik 51.06 31 P P 22 47 26.4 -0.1
baz=282
KLMR Klimovskoe 51.06 322 *eP* **P 22 47 26.0 -0.5**
KLMR pmax pmax
comp=Z,11nm,0.7s
I17K Unalakleet 51.20 34 P P 22 47 27.7 +0.1
baz=283
A21K Barrow 51.23 24 P P 22 47 27.6 -0.1
baz=280
D19K Kuna River 51.26 28 P P 22 47 29.0 +1.0
D19K IAmb IAmb 22 48 06.3
comp=Z,21nm,1.1s
D19K Kuna River 51.26 28 P P 22 47 28.8 +0.8
baz=281
B20K Meade River 51.30 26 P P 22 47 28.7 +0.5
B20K IAmb IAmb 22 48 06.7
comp=Z,14nm,0.9s
B20K Meade River 51.30 26 P P 22 47 27.9 -0.3
baz=281
H17K Granite Mounta 51.30 33 P P 22 47 28.1 -0.3
baz=283
L15K Ungalak Mounta 51.35 37 P P 22 47 28.8 0.0
baz=284
M14K Bethel 51.36 38 P P 22 47 28.8 0.0
baz=284
J16K Anvik River 51.38 35 P P 22 47 29.3 +0.4
baz=283
G18K Tagagawik 51.60 31 P P 22 47 30.8 +0.2
baz=283
N14K Kuskokwak Cree 51.70 39 P P 22 47 31.6 +0.3
baz=285
F19K Shaleruckik Mo 51.74 30 P P 22 47 32.2 +0.6
F19K IAmb IAmb 22 47 50.5
comp=Z,8.8nm,0.8s
F19K Shaleruckik Mo 51.74 30 P P 22 47 31.9 +0.3
baz=283,SNR=8.8
D20K Etivluk River 51.75 28 P P 22 47 32.3 +0.6
D20K IAmb IAmb 22 48 01.0
comp=Z,11nm,0.8s
D20K Etivluk River 51.75 28 P P 22 47 32.2 +0.6
baz=282
E19K Redstone River 51.80 29 P P 22 47 32.7 +0.6
baz=283
A22K Sinclair Lake 51.82 25 P P 22 47 32.5 +0.4
baz=282
MAK Makhachkala 51.87 298 *eP* **P 22 47 31.3 -1.6**
MAK *e* 22 49 28.3
MAK *eS* **S 22 54 54.0 -1.1**
MAK *eSS* **SS 22 58 29.6 -1.9**
MAK *eSSS* SSS 23 00 08.7
MAK pmax pmax
comp=Z,14nm,0.4s
MAK MLR MLR
comp=Z,941nm,14.0s
H18K Honhosa River 51.89 32 P P 22 47 32.6 -0.2
baz=284
M15K Kasigluk River 51.98 38 P P 22 47 33.4 0.0
baz=285
E20K Nigu River 52.01 28 P P 22 47 33.2 -0.5
baz=283,SNR=6.1
J17K VARM Dome 52.02 34 P P 22 47 33.3 -0.4
baz=284
APA Apatity 52.08 331⇓ *eP* **P 22 47 34.4 +0.3**
APA *e* 22 48 45.6
APA *e* 22 49 32.6
APA pmax pmax
comp=Z,6.0nm,0.9s
APA MLR MLR
comp=Z,644nm,12.3s
O14K Tigyukauivet M 52.09 40 P P 22 47 33.3 -1.0
baz=286
G19K Purcell Mounta 52.16 31 P P 22 47 34.3 -0.5
baz=284
B21K Ikpikpuk River 52.24 26 P P 22 47 35.1 -0.2
baz=284
L16K Owhat River 52.27 37 P P 22 47 35.2 -0.4
baz=285
AKT Akhty 52.29 296 *eP* **P 22 47 37.0 +0.8**
AKT *e* 22 48 47.9
AKT *e* 22 49 35.3
AKT *eS* **S 22 55 02.2 +1.0**
AKT pmax pmax
comp=Z,17nm,0.9s
AKT MLR MLR
comp=Z,570nm,16.0s
C21K Knifeblade Rid 52.30 27 P P 22 47 36.4 +0.7
baz=284
N15K Kwethluk River 52.41 39 P P 22 47 36.8 +0.2
baz=286
F20K Avaraart Lake 52.47 30 P P 22 47 37.8 +0.8
F20K Avaraart Lake 52.47 30 P P 22 47 36.4 -0.6
baz=284
B22K Teshekpuk Lake 52.47 25 P P 22 47 36.5 -0.4
baz=284
K17K Iditarod 52.53 35 P P 22 47 37.3 -0.3
baz=286
H19K Roundabout Mou 52.57 32 P P 22 47 38.6 +0.8
H19K Roundabout Mou 52.57 32 P P 22 47 37.3 -0.5
baz=285,SNR=9.2
GCSA Galena City Sc 52.60 33 P P 22 47 37.6 -0.4
baz=285
VRH Novokhopyorsk 52.63 310 *eP* **P 22 47 41.8 +3.3**
VRH pmax pmax
comp=Z,7.0nm,0.9s
L17K Donlin 52.70 36 P P 22 47 38.1 -0.7
baz=286
M16K Timber Creek 52.70 37 P P 22 47 38.9 +0.1
baz=286
E21K Kilik River 52.76 28 P P 22 47 39.3 +0.1
baz=285
O15K Ungalikthiuk R 52.82 40 P P 22 47 39.5 -0.2
baz=287
N16K Nishlik Lake 52.95 38 P P 22 47 40.7 0.0
baz=287
H20K Anotleneega Mo 53.21 31 P P 22 47 42.0 -0.6
baz=286
F21K Alatna River 53.27 29 P P 22 47 43.5 +0.5
F21K IAmb IAmb 22 48 12.2
comp=Z,9.8nm,1.2s
F21K Alatna River 53.27 29 P P 22 47 42.6 -0.3
baz=286
M17K Holitna River 53.30 37 P P 22 47 42.9 -0.3
baz=287
J19K Poorman 53.34 33 P P 22 47 44.5 +1.0
J19K IAmb IAmb 22 48 15.9
comp=Z,11nm,1.1s
J19K Poorman 53.34 33 P P 22 47 43.0 -0.4
baz=287
L18K Granite Mounta 53.40 36 P P 22 47 43.6 -0.3
baz=287
MOS Moscow 53.46 316 *eP* **P 22 47 48.1 +3.6**
MOS pmax pmax
comp=Z,31nm,0.6s
MOS MLR MLR
comp=Z,300nm,12.0s
G21K Allakaket 53.46 30 P P 22 47 45.0 +0.6
G21K IAmb IAmb 22 48 33.4
comp=Z,8.6nm,1.1s
G21K Allakaket 53.46 30 P P 22 47 44.7 +0.4
baz=287
C23K Itkillik River 53.53 26 P P 22 47 45.3 +0.5
C23K IAmb IAmb 22 48 01.6
comp=Z,7.5nm,0.9s
C23K Itkillik River 53.53 26 P P 22 47 44.3 -0.5
baz=287
O16K Kokwok River B 53.54 39 P P 22 47 44.7 -0.3
baz=288
I20K Naaghedeneel 53.58 32 P P 22 47 45.1 -0.1
baz=287
E22K Anaktuvuk Pass 53.62 28 P P 22 47 45.7 +0.2
baz=287
F22K John River 53.67 29 P P 22 47 46.4 +0.5
baz=287
KRVT Keravat (AS076 53.67 137 LR LR 23 10 42.4
comp=Z,13nm,19.0s,baz=206,slow=36
N17K Nushagak Hills 53.68 38 P P 22 47 46.1 0.0
baz=288
P16K Nushagak River 53.76 40 P P 22 47 47.8 +1.1
baz=288
SPB2 Spitsbergen Ar 53.77 346 P P 22 47 46.6 +0.2
SPA0 Spitsbergen Ar 53.77 346 *eP* **P 22 47 47.2 +0.7**
SPITS Spitsbergen Ar 53.77 346 P P 22 47 46.0 -0.4
comp=Z,8.2nm,0.8s,baz=81,slow=10,SNR=8.1
SPITS LR LR 23 14 21.2
comp=Z,199nm,18.7s,baz=57,slow=40
comp=Z,8.2nm,0.8s
SPITS Spitsbergen Ar 53.77 346 P P 22 47 46.6 +0.1
SPITS pmax pmax
comp=Z,125nm,1.6s
D23K Nanushuk River 53.77 27 P P 22 47 47.3 +0.8
baz=287,SNR=5.9
LPSR Galich'ya Gora 53.79 312 *eP* **P 22 47 49.9 +3.0**
LPSR pmax pmax
comp=Z,9.0nm,0.8s
J20K Nowinta River 53.90 33 P P 22 47 48.6 +1.0
baz=288
O17K Koliganek Bris 53.96 39 P P 22 47 48.9 +0.9
baz=289
H21K Melozitna Rive 53.99 31 P P 22 47 49.4 +1.1
baz=288,SNR=7.8
M18K Stony River 54.01 36 P P 22 47 49.1 +0.7
baz=288
G22K Bettles 54.10 29 P P 22 47 49.2 +0.2
baz=288
VSR Storozhevoye 54.14 310 *eP* **P 22 47 52.8 +3.3**
VSR pmax pmax
comp=Z,6.0nm,0.8s
K20K Telida 54.19 34 P P 22 47 50.2 +0.4
baz=288
L19K White Mountain 54.23 35 P P 22 47 50.7 +0.7
baz=289
OBN Obninsk 54.23 315 LR LR 23 11 15.2
comp=Z,464nm,18.3s,baz=120,slow=36
OBN Obninsk 54.23 315 *eP* **P 22 47 53.0 +2.9**
OBN *e* 22 48 56.8
OBN *e* 22 49 54.1
OBN *ePPP* PPP 22 51 03.8
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,428nm,18.0s
N18K Kilae Creek 54.24 37 P P 22 47 49.5 -0.7
baz=289
TOLK Toolik Lake Re 54.25 27 P P 22 47 49.4 -0.7
baz=289
ARA0 ARCESS Array S 54.32 334 *eP* **P 22 47 53.6 +3.0**
ARCES ARCESS Array B 54.32 334 P P 22 47 51.4 +0.8
comp=Z,1.1nm,0.6s,baz=58,slow=5.6,SNR=2.1
ARCES LR LR 23 14 28.0
comp=Z,138nm,21.0s,baz=72,slow=40
comp=Z,1.1nm,0.6s
ARCES ARCESS Array B 54.32 334 P P 22 47 50.7 +0.1
CHNA Chernabura Isl 54.33 45 P P 22 47 51.0 +0.2
baz=290
D24K Happy Valley 54.34 26 P P 22 47 50.9 +0.1
baz=289
E23K Chandalar 54.42 28 P 22 47 52.0 +0.5
E23K IAmb IAmb 22 49 06.6
comp=Z,7.5nm,0.9s
E23K Chandalar 54.42 28 P P 22 47 51.3 -0.1
baz=289
P17K Kvichak River 54.47 39 P P 22 47 52.6 +0.8
baz=290
I21K Tanana 54.47 31 P P 22 47 52.4 +0.7
baz=289
H22K Ishtalitna Cre 54.47 30 P P 22 47 51.7 -0.1
baz=289
COLD Coldfoot 54.48 29 P P 22 47 51.1 -0.7
baz=289
M19K Big River Lodg 54.52 35 P P 22 47 52.1 -0.1
baz=289
KBZ Khabaz 54.66 301 P P 22 47 54.8 +1.4
comp=Z,3.9nm,0.8s,baz=86,slow=3.6,SNR=12
KBZ LR LR 23 11 26.0
comp=Z,444nm,18.6s,baz=68,slow=36
comp=Z,3.9nm,0.8s
KBZ Khabaz 54.66 301⇑ *i*P **P 22 47 56.2 +2.8**
KBZ pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 54.71 301⇑ P P 22 47 53.1 -0.8
KIV Kislovodsk 54.71 301 *eP* **P 22 47 56.2 +2.3**
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,229nm,17.0s
KIV Kislovodsk 54.71 301 P 22 47 53.5 -0.5
KIV Kislovodsk 54.71 301 P P 22 47 55.1 +1.2
comp=Z,24nm,0.9s
KIV Kislovodsk 54.71 301 P P 22 47 55.3 +1.4
G23K Bananza Creek 54.72 29 P P 22 47 53.5 -0.1
baz=290
CHUM Lake Minchumin 54.76 33 P P 22 47 53.4 -0.4
baz=290
SHA1 Shidzhatmaz 54.81 301 *d i*P **P 22 47 56.8 +1.9**
E24K Your Creek 54.82 27 P P 22 47 55.0 +0.7
baz=290
O18K Koktuh Hills 54.84 38 P P 22 47 54.4 -0.1
baz=290
N19K Bonanza Creek 54.85 37 P P 22 47 53.4 -1.3
baz=290
GNI Garni 54.90 296 LR LR 23 12 10.8
comp=Z,298nm,18.1s,baz=72,slow=37
GNI Garni 54.90 296 *deP* **P 22 47 59.7 +4.2**
GNI pmax pmax
comp=Z,14nm,1.1s
P18K Big Mountain, 54.98 39 P P 22 47 54.8 -0.8
baz=290
MLY Manley 55.01 31 P P 22 47 55.2 -0.6
baz=290
CAST Castle Rocks 55.02 33 P P 22 47 55.5 -0.3
baz=290,SNR=8.3
R17L Mt. Peulik Vol 55.05 41 P P 22 47 55.5 -0.6
baz=291
Q17K Contact Creek 55.06 40 P P 22 47 55.8 -0.4
baz=290
M20K Styx River 55.09 35 P P 22 47 55.4 -1.0
baz=290,SNR=5.1
D25K Kavik River 55.11 26 P P 22 47 55.6 -0.8
baz=291
PPLA Purkeypile 55.15 34 P P 22 47 57.3 +0.4
PPLA Purkeypile 55.15 34 P P 22 47 56.6 -0.3
baz=290
H23K Yukon River 55.21 30 P P 22 47 57.0 -0.1
baz=290
F24K Squaw Lake 55.23 28 P P 22 47 57.0 -0.2
baz=291
Q18K Katmai Hardscr 55.35 39 P P 22 47 57.8 -0.5
baz=291
C26K Camden Bay 55.37 25 P P 22 47 57.5 -0.7
baz=292
ERBR Yeremizino-Bor 55.43 304 *eP* **P 22 47 59.9 +0.9**
ERBR *e*PP* **pP 22 48 02.6 -0.3**
ERBR *eS* **S 22 55 45.5 +2.1**
ERBR pmax pmax
comp=Z,9.0nm,0.9s
ERBR MLR MLR
comp=N,651nm,13.0s
ERBR MLR MLR
comp=Z,430nm,16.0s
ERBR MLR MLR
comp=E,381nm,9.0s
KTH Kantishna Hill 55.46 33 P 22 47 59.7 +0.7
I23K Minto, Yukon-K 55.52 31 P P 22 47 58.9 -0.4
baz=291
G24K Hadweenzic Riv 55.67 29 P P 22 47 59.3 -1.1
baz=292
LABN Labinsk 55.71 302 *eP* **P 22 48 02.2 +1.2**
LABN *e*PP* **pP 22 48 05.5 +0.6**
LABN *eS* **S 22 55 48.9 +1.7**
LABN pmax pmax
comp=Z,14nm,0.7s
LABN MLR MLR
comp=N,576nm,12.0s
LABN MLR MLR
comp=Z,645nm,16.0s
LABN MLR MLR
comp=E,761nm,17.0s
PMG Port Moresby 55.74 145 LR LR 23 09 31.9
comp=E,148nm,21.4s,baz=286,slow=34
TRF Thorofare Moun 55.76 33 P P 22 48 00.7 -0.6
baz=291
SKT Skwentna 55.76 35 P P 22 48 00.2 -0.9
baz=291
E25K Arctic Village 55.83 27 P P 22 48 01.2 -0.4
baz=292
NEA2 Nenana 55.84 31 P P 22 48 01.4 -0.2
baz=292
H24K Noodor Dome 55.84 30 P P 22 48 01.6 -0.2
baz=292
P19K Oil Pt 55.84 38 P P 22 48 01.2 -0.6
baz=292
C27K Jago River 55.87 25 P P 22 48 01.6 -0.2
baz=293
L22K Petersville 55.89 34 P P 22 48 02.2 +0.1
baz=292,SNR=6.0
Q19K Cape Douglas, 55.91 39 P P 22 48 02.4 +0.1
baz=292
O20K Slope Mountain 55.97 37 P P 22 48 02.4 -0.3
baz=292
JETT Jettan, Norway 55.98 335 *eP* **P 22 48 06.0 +3.3**
F25K Christian Rive 56.00 27 P P 22 48 02.4 -0.4
baz=292
KNRA Kununurra 56.05 168 P P 22 48 02.7 -0.9
G25K Bearman Lake 56.16 28 P P 22 48 03.4 -0.4
baz=293
CUT Chulitna 56.16 34 P P 22 48 03.2 -0.7
baz=292
MCK McKinley 56.22 32 P P 22 48 04.4 0.0
baz=292
COLA College 56.22 31 *deP* **P 22 48 05.6 +1.3**
COLA pmax pmax
comp=Z,21nm,1.0s
COLA College 56.22 31 P P 22 48 03.8 -0.5
baz=292
COLA College 56.22 31 P P 22 48 06.1 +1.8
POKR Poker Plat Res 56.29 30 P P 22 48 04.9 0.0
baz=293
CAPN Captain Cook N 56.38 36 P P 22 48 05.7 +0.2
baz=292
TRO Tromso 56.43 336 *eP* **P 22 48 08.3 +2.6**
M22K Willow 56.47 35 P P 22 48 06.7 +0.6
M22K Willow 56.47 35 P P 22 48 06.8 +0.7
baz=293
F26K Sheenjek River 56.49 27 P P 22 48 06.4 +0.1
baz=294
SII Sitkinak Islan 56.55 42 P P 22 48 06.2 -0.6
baz=293
ILAR Eielson Array 56.64 31 P P 22 48 08.2 +0.9
comp=Z,1.8nm,0.8s,baz=282,slow=6.3,SNR=17
ILAR LR LR 23 13 36.7
comp=Z,148nm,18.1s,baz=274,slow=37
comp=Z,1.8nm,0.8s
ILAR Eielson Array 56.64 31 P P 22 48 07.2 -0.1
VSLR Vesyoloye 56.66 301⇓ *eP* **P 22 48 10.1 +2.3**
VSLR pmax pmax
comp=Z,9.0nm,1.0s
WAT1 Susitna Watana 56.73 33 P P 22 48 08.5 +0.5
baz=293
HDA Harding Lake 56.76 31 P P 22 48 08.5 +0.3
baz=293
PRP Porcupine Dome 56.87 30 P P 22 48 09.1 0.0
baz=294,SNR=9.4
KDAK Kodiak Island 56.87 40 LR LR 23 14 46.7
comp=Z,204nm,18.7s,baz=280,slow=38
KDAK Kodiak Island 56.87 40 P P 22 48 09.6 +0.5
baz=293
D27M Malcolm River 56.91 25 P P 22 48 08.6 -0.7
baz=295
G26K Porcupine Rive 56.92 28 P P 22 48 09.7 +0.5
baz=294
PMR Palmer 56.97 35 P P 22 48 09.4 -0.2
baz=293
FIA1 FINESS Array S 57.04 325 P P 22 48 09.9 -0.3
FINES FINESS Array B 57.04 325 P P 22 48 10.4 +0.2
comp=Z,7.0nm,0.6s,baz=64,slow=6.2,SNR=40
FINES LR LR 23 13 57.6
comp=Z,252nm,19.8s,baz=70,slow=37
comp=Z,7.0nm,0.6s
FINES FINESS Array B 57.04 325 P 22 48 10.2 0.0
DHY Denali Highway 57.12 33 P P 22 48 10.5 -0.5
baz=294
E27K Coleen River 57.16 26 P P 22 48 11.1 +0.1
baz=296
WAT6 Susitna Watana 57.17 33 P P 22 48 10.7 -0.6

baz=294
SML Sawmill 57.23 34 P P 22 48 12.1 +0.5
SML IAmb IAmb 22 48 20.9
comp=Z,10.0nm,0.7s
SML Sawmill 57.23 34 P P 22 48 11.6 -0.1
baz=294
J25K Salcha River, 57.30 31 P P 22 48 12.0 -0.1
baz=295
SEW Seward 57.42 36 P P 22 48 13.1 +0.2
baz=294
K24K Donnelly Dome 57.47 32 P P 22 48 13.7 +0.4
baz=295
GURO Guroymak-BITLI 57.49 295 P P 22 48 13.6 -0.3
GURO IAmb IAmb 22 48 25.8
comp=Z,8.2nm,0.7s
M23K Glacier View 57.50 34 P P 22 48 13.6 +0.1
baz=294
SCM Sheep Creek Mo 57.65 34 P P 22 48 15.2 +0.6
SCM pmax pmax
comp=Z,15nm,0.7s
SCM Sheep Creek Mo 57.65 34 P P 22 48 15.2 +0.6
SCM Sheep Creek Mo 57.65 34 P P 22 48 13.7 -0.9
baz=295
E28M Babbage River 57.66 25 P P 22 48 14.1 -0.4
baz=297
G27K Doyon Strip 57.74 27 P P 22 48 14.7 -0.4
baz=296,SNR=14
ANN Anapa 57.77 304 *eP* **P 22 48 17.3 +1.7**
ANN *e**PP **sP 22 48 21.6 +0.6**
ANN *eS* **S 22 56 17.0 +2.7**
ANN pmax pmax
comp=Z,26nm,1.0s
ANN MLR MLR
comp=N,351nm,16.0s
ANN MLR MLR
comp=E,219nm,16.0s
ANN MLR MLR
comp=Z,352nm,12.0s
RIDG Independent Ri 57.88 31 P P 22 48 15.3 -0.9
baz=296
PAX Paxson 57.95 32 P P 22 48 17.6 +0.8
PAX pmax pmax
comp=Z,5.0nm,1.1s
PAX Paxson 57.95 32 P P 22 48 17.6 +0.8
PAX Paxson 57.95 32 P P 22 48 16.1 -0.7
baz=295
F28M Old Crow 58.00 26 P P 22 48 16.9 0.0
baz=297,SNR=10.0
FITZ Fitzroy Crossi 58.02 172 P P 22 48 16.5 -1.0
FITZ IAmb IAmb 22 49 02.1
comp=Z,13nm,1.9s
M24K Tolsona, Glenn 58.03 34 P P 22 48 17.0 -0.2
baz=295
H27K Steamboat Moun 58.05 28 P P 22 48 17.3 -0.1
baz=297
SCRK Sand Creek 58.12 31 P P 22 48 17.8 -0.2
baz=296,SNR=11
E29M Blow River 58.29 25 P P 22 48 18.8 -0.1
baz=298
I27K Kandik River 58.30 29 P P 22 48 19.1 0.0
baz=297
HARP HAARP 58.33 33 P P 22 48 18.4 -1.0
baz=296
P23K Montague Islan 58.40 36 P P 22 48 19.7 -0.2
baz=296
LOF Lofoten 58.85 335 *eP* **P 22 48 23.9 +1.1**
EYAK Cordova Ski Ar 58.90 35 P P 22 48 23.4 +0.1
baz=297
N25K Chitina, Valde 58.92 34 P P 22 48 23.8 +0.2
baz=297
G29M Pine Creek 58.96 27 P P 22 48 24.3 +0.6
baz=299
I28M Miner Creek 58.99 29 P P 22 48 24.1 +0.1
baz=298
MNK Minsk 59.10 317 *i* P **P 22 48 28.4 +3.6**
comp=E,7.0nm,1.2s
MNK *i* P **P 22 48 28.4 +3.6**
comp=N,7.0nm,0.8s
MNK *i* P **P 22 48 28.4 +3.6**
comp=Z,6.0nm,0.7s,baz=64
MNK *i* PP **PP 22 50 39.0 +4.1**
MNK *i* PPP PPP 22 51 59.2
MNK *i* S **S 22 56 35.0 +3.6**
MNK *i* SS **SS 23 00 32.1 +7.3**
MNK *i* SSS SSS 23 03 09.3
MNK *i* LQ LQ 23 09 46.6
MNK *i* LR LR 23 14 16.8
MNK *i* LRM MLR 23 16 12.5
comp=Z,204nm,16.0s
MNK Minsk 59.10 317 *i* P **P 22 48 28.3 +3.6**
MNK *i* 22 50 39.0
MNK *i* PPP PPP 22 51 59.2
MNK *i* S **S 22 56 34.9 +3.6**
MNK *i* SS **SS 23 00 32.1 +7.3**
MNK pmax pmax
comp=Z,6.0nm,0.7s
MNK pmax pmax
comp=E,7.0nm,1.2s
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK MLR MLR
comp=Z,204nm,16.0s
H29M Whitestone 59.18 27 P P 22 48 25.3 +0.1
baz=299
BMRM Bremner River 59.21 34 P P 22 48 25.8 +0.3
baz=297
M26K Nabesna, AK 59.23 32 P P 22 48 25.6 0.0
baz=298
F30M Barrier River 59.37 25 P P 22 48 26.6 +0.1
baz=301
L27K Beaver Creek, 59.40 31 P P 22 48 27.0 +0.3
baz=298
BCAR Beaver Creek A 59.41 31 P P 22 48 27.1 +0.2
G30M tAoh Zraii Nji 59.55 26 P P 22 48 27.8 +0.1
baz=300
EPYK Eagle Plains 59.69 27 P P 22 48 28.2 -0.5
baz=300
MCARA McCarthy VSAT 59.70 33 P P 22 48 28.3 -0.4
baz=298
M27K Edge Creek, AK 59.71 32 P P 22 48 28.0 -1.0
baz=299
INK Inuvik 59.74 24 LR LR 23 18 26.8
comp=Z,112nm,18.5s,baz=266,slow=40
INK Inuvik 59.74 24 P P 22 48 29.2 +0.3
INK pmax pmax
comp=Z,7.0nm,1.1s
INK Inuvik 59.74 24 P P 22 48 29.2 +0.3
INK IAmb IAmb 22 49 14.1
comp=Z,7.0nm,1.1s
INK Inuvik 59.74 24 P P 22 48 27.8 -1.1
baz=302
INK Inuvik 59.74 24 P P 22 48 30.1 +1.3
KAIM Kayak Island 59.77 35 P P 22 48 28.6 -0.7
baz=298
DAWY Dawson 59.87 30 P P 22 48 29.6 -0.4
baz=300
CRQE Cirque 59.97 34 P P 22 48 30.9 +0.1
baz=298
A36M Sachs Harbour 59.97 19 P P 22 48 30.0 -0.5
baz=307
LEIR Leirfjorden 60.02 333 *eP* **P 22 48 34.9 +4.0**
AKASG Malin Array Be 60.08 313 P P 22 48 32.3 +0.7
comp=Z,0.7nm,0.5s,baz=51,slow=6.5,SNR=9.1
AKASG LR LR 23 16 02.6
comp=Z,240nm,18.2s,baz=60,slow=38
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 60.08 313 *i* P **P 22 48 36.2 +4.6**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 60.08 313 P P 22 48 31.3 -0.3
AKASG IAmb IAmb 22 49 24.3
comp=Z,8.8nm,1.6s
AKBB Malin Array Si 60.08 313 *eP* **P 22 48 34.3 +2.7**
AKBB pmax pmax
comp=Z,18nm,2.5s
BVCY Beaver Creek 60.10 32 P P 22 48 31.9 +0.3
baz=299
F31M Tsiigehtchic 60.13 25 P P 22 48 31.9 +0.3
F31M Tsiigehtchic 60.13 25 P P 22 48 32.0 +0.4
baz=302
G31M Satah River 60.23 26 P P 22 48 32.6 +0.3
baz=302
I30M Mount Dempster 60.40 28 P P 22 48 33.8 +0.1
baz=301
YUK3 Moose Creek 60.58 32 P P 22 48 34.9 -0.2
baz=300
K29M Barlow Dome 60.69 30 P P 22 48 36.0 +0.3
baz=301,SNR=8.8
J30M Hart River 60.75 29 P 22 48 36.6 +0.5
J30M Hart River 60.75 29 P P 22 48 35.8 -0.3
baz=302
H31M Peel River 60.81 27 P P 22 48 36.2 -0.2
baz=303
L29M L29M 60.84 30 P P 22 48 35.7 -0.9
baz=301,SNR=9.9
M29M Somme Creek 61.05 31 P P 22 48 37.4 -0.7
baz=301,SNR=7.8
YUK8 Steele Glacier 61.11 33 P P 22 48 37.8 -1.1
baz=301
WB0 Warramunga Arr 61.13 163 P P 22 48 37.6 -1.4
WB0 IAmb IAmb 22 49 09.9
comp=Z,11nm,1.1s
O28M Mount Upton 61.20 33 P P 22 48 39.1 -0.3
baz=300
WRA Warramunga Arr 61.29 163 P P 22 48 39.2 -0.8
comp=Z,1.1nm,0.5s,baz=348,slow=7.7,SNR=13
comp=Z,1.1nm,0.5s
WRA Warramunga Arr 61.29 163 P P 22 48 39.2 -0.8
PINM Pinnacle 61.52 34 P P 22 48 40.6 -0.7
baz=301
YUK4 Talbot Arm 61.55 32 P P 22 48 40.6 -1.0
baz=301
M30M Minto, Yukon 61.64 31 P P 22 48 41.5 -0.5
baz=302
SORM Soroca 61.80 311 ⇓P **P 22 48 43.5 +0.2**
SORM Soroca 61.80 311 ⇓P **P 22 48 43.5 +0.2**
YUK6 Outpost Mounta 61.87 33 P P 22 48 43.3 -0.6
baz=302
C36M Paulatuk 61.92 21 P P 22 48 43.9 +0.2
baz=309,SNR=9.6
N30M Aishikik Lake 62.12 32 P P 22 48 45.3 0.0
baz=302
O29M Mount Kennedy 62.12 33 P P 22 48 45.5 0.0
baz=302
HYT Haines Junctio 62.29 32 P P 22 48 47.4 +0.8
HYT Haines Junctio 62.29 32 P P 22 48 46.6 0.0
baz=302
RAYN Ar Rayn 62.61 279 ⇑P **P 22 48 52.3 +3.1**
RAYN Ar Rayn 62.61 279 P P 22 48 47.2 -2.0
N31M Braeburn, Yuko 62.63 31 P P 22 48 49.2 +0.4
baz=304
BR131 Keskin Array S 62.65 300 ⇓*eP* **P 22 48 49.7 +0.4**
BR131 Keskin Array S 62.65 300 P 22 48 48.2 -1.1
BR131 IAmb IAmb 22 49 41.4
comp=Z,5.8nm,1.1s
BRTR Keskin Array B 62.65 300 P P 22 48 49.0 -0.3
comp=Z,1.2nm,0.6s,baz=72,slow=5.3,SNR=7.1
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 62.65 300 *i* P **P 22 48 50.4 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 62.65 300 P 22 48 48.7 -0.7
M31M Drury Creek, Y 62.78 30 P P 22 48 49.6 -0.1
baz=304
P29M Windy Craggy 62.84 34 P P 22 48 50.4 +0.3
baz=303
P30M Million Dollar 62.90 33 P P 22 48 51.2 +0.6
baz=303
O30N Mendenhall 62.90 32 P P 22 48 51.2 +0.6
baz=304
HFS Hagfors 63.00 327 P P 22 48 51.0 -0.1
comp=Z,1.3nm,0.4s,baz=79,slow=7.6,SNR=20
HFS LR LR 23 16 27.2
comp=Z,657nm,19.7s,baz=56,slow=36
comp=Z,1.3nm,0.4s
HFS Hagfors 63.00 327 P P 22 48 51.0 -0.1
JMIC Jan Mayen 63.19 343 LR LR 23 17 38.4
comp=Z,79nm,22.0s,baz=55,slow=37
NC405 NORSAR Array S 63.26 329 P P 22 48 53.0 +0.1
WHY Whitehorse 63.46 32 P P 22 48 54.7 +0.4
baz=304
NB2 NORSAR Subarra 63.50 329 P P 22 48 54.5 0.0
comp=Z,1.2nm,0.6s,baz=52,slow=6.5
NB2 NORSAR Subarra 63.50 329 P P 22 48 54.5 0.0
NOA NORSAR Array B 63.50 329 P P 22 48 54.6 0.0
comp=Z,1.6nm,0.6s,baz=55,slow=7.8,SNR=9.1
NOA LR LR 23 20 30.3
comp=Z,148nm,18.7s,baz=60,slow=40
comp=Z,1.6nm,0.6s
PLBC Pleasant Camp 63.52 33 P P 22 48 55.3 +0.7
baz=304
MMPY Sheldon Lake, 63.73 29 P P 22 48 56.6 +0.6
baz=306
BURAR Bucovina Array 63.89 311 ⇑P **P 22 48 57.9 +0.6**
BURAR Bucovina Array 63.89 311 ⇑P **P 22 48 57.9 +0.6**
BURAR Bucovina Array 63.89 311 P P 22 48 57.2 -0.1
N32M Quiet Lake 63.90 31 P P 22 48 57.1 0.0
baz=306
VRI Vrincioaia 63.90 309 ⇑P **P 22 48 57.7 +0.3**
VRI Vrincioaia 63.90 309 ⇑P **P 22 48 57.7 +0.3**
PLOR Plostina 63.95 309 ⇓P **P 22 48 58.2 +0.5**
PLOR Plostina 63.95 309 ⇓P **P 22 48 58.2 +0.5**
SAHR Sahastru 64.00 309 ⇑P **P 22 48 58.9 +0.8**
ASF Jabal al Asfar 64.30 291 LR LR 23 19 32.3
comp=Z,181nm,18.7s,baz=26,slow=38
S31K Pelican 64.42 35 P P 22 49 00.3 -0.2
baz=305
P32M Atlin 64.55 32 P P 22 49 01.6 +0.1
baz=306
P33M Teslin, Yukon 64.55 32 P P 22 49 01.3 -0.2
baz=306
MLR Muntele Rosu 64.56 309 LR LR 23 19 35.5
comp=Z,307nm,20.6s,baz=58,slow=38
MLR Muntele Rosu 64.56 309 ⇑P **P 22 49 02.5 +0.7**
MLR Muntele Rosu 64.56 309 ⇑P **P 22 49 02.5 +0.7**
MLR Muntele Rosu 64.56 309 P P 22 49 01.2 -0.6
MLR IAmb IAmb 22 49 32.1
comp=Z,4.0nm,0.8s
DOPR Dopca 64.64 310 ⇓P **P 22 49 03.4 +1.2**
ARCR ARCALIA 64.66 311 ⇑P **P 22 49 04.1 +1.8**
AS31 Alice Springs 64.80 164 P P 22 49 02.1 -1.3
ASAR Alice Springs 64.80 164 P P 22 49 02.8 -0.6
comp=Z,1.3nm,0.8s,baz=343,slow=6.0,SNR=13
comp=Z,1.3nm,0.8s
ASAR Alice Springs 64.80 164 P P 22 49 02.9 -0.5
ASAR Alice Springs 64.80 164 P P 22 49 02.9 -0.5
BMR Baia Mare 64.85 312 P P 22 49 07.9 +4.4
KOLS Kolonicke sedl 64.87 314 *eP* **P 22 49 04.8 +1.2**
KOLS Kolonicke sedl 64.87 314 P P 22 49 05.6 +2.0
KOLS Kolonicke sedl 64.87 314 eP P 22 49 04.8 +1.2
MMAI Mount Meron Ar 64.92 293 LR LR 23 21 18.4
comp=Z,171nm,18.6s,baz=46,slow=40
R32K Eaglecrest 64.98 34 P P 22 49 04.2 0.0
baz=306,SNR=9.1
SIT Sitka 65.34 35 P P 22 49 05.3 -1.2
baz=306
ARR Arges 65.41 309 ⇑P **P 22 49 08.4 +1.1**
ARR Arges 65.41 309 P P 22 49 09.6 +2.3
S32K Killisnoo 65.43 35 P P 22 49 06.5 -0.6
baz=306
OJC Ojcow 65.52 316 P P 22 49 07.8 0.0
OJC Ojcow 65.52 316 P 22 49 07.8 0.0
OJC Ojcow 65.52 316 P P 22 49 08.5 +0.7
Q32M Nakina River 65.53 33 P P 22 49 06.6 -1.4
baz=307
MARR Marisel-Cluj 65.60 311 ⇑P **P 22 49 08.8 +0.2**
R33M Jennings River 65.79 32 P P 22 49 08.5 -1.1
baz=308
WRGLY Wrigley 66.11 26 P P 22 49 10.7 -0.7
baz=312
RGN Rugen 66.34 322 *eL* L 23 15 25.6
comp=Z,260nm,21.3s
OKC Ostrava-Krasne 66.62 316 AMS AMS 23 19 50.0
comp=Z,300nm,10.8s
SIRR Siria 66.67 311 ⇑P **P 22 49 15.9 +0.7**
SUMG Summit 66.73 353 P P 22 49 15.7 -0.1
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 66.73 353 P P 22 49 15.7 -0.1
SUMG IAmb IAmb 22 49 32.1
comp=Z,6.2nm,0.8s
DLBC Dease Lake 66.77 32 LR LR 23 19 11.2
comp=Z,225nm,19.1s,baz=249,slow=37
DLBC Dease Lake 66.77 32 P P 22 49 14.4 -1.4
baz=309
MORC Moravsky Berou 66.98 316 ⇑P **P 22 49 19.0 +1.8**
MORC Moravsky Berou 66.98 316 ⇑P **P 22 49 19.0 +1.8**
MORC Moravsky Berou 66.98 316 P P 22 49 17.6 +0.4
MORC IAmb IAmb 22 50 01.6
comp=Z,3.8nm,0.9s
MORC Moravsky Berou 66.98 316 *eP* **P 22 49 17.6 +0.4**
BZS Buzias 67.05 311 ⇑P **P 22 49 18.9 +1.1**
BZS Buzias 67.05 311 ⇑P **P 22 49 18.9 +1.1**
MAUC Maruska 67.06 316 *eP* **P 22 49 22.3 +4.5**
EIL Elat 67.06 290 LR LR 23 21 24.8
comp=Z,183nm,18.0s,baz=42,slow=38
KRLC Kraliky 67.21 317 *eP* **P 22 49 21.3 +2.6**
KRLC MLR MLR
comp=Z,400nm,12.1s
KRLC Kraliky 67.21 317 *eP* **P 22 49 21.3 +2.6**
KRLC AMS AMS 23 20 00.0
comp=Z,400nm,12.1s
OSTC Ostas 67.23 317 AMS AMS 23 20 00.0
comp=Z,600nm,12.5s
CRAG Craig 67.28 36 P P 22 49 17.7 -1.3
baz=308
DPC Dobruska-Polom 67.29 317 *eP* **P 22 49 22.3 +3.1**
DPC MLR MLR
comp=Z,400nm,16.7s
DPC Dobruska-Polom 67.29 317 *eP* **P 22 49 22.3 +3.1**
DPC AMS AMS 23 19 10.0
comp=Z,400nm,16.7s
CHVC Chvalec 67.29 318 *eP* **P 22 49 20.5 +1.3**
CHVC MLR MLR
comp=Z,700nm,12.9s
CHVC Chvalec 67.29 318 *eP* **P 22 49 20.5 +1.3**
CHVC AMS AMS 23 20 10.0
comp=Z,700nm,12.9s
UPC Upice 67.36 318 AMS AMS 23 20 10.0
comp=Z,700nm,11.8s
VRAC Vranov 67.75 316 *eP* **P 22 49 19.3 -2.8**
MODS Modra-Piesok 67.93 315 *eP* **P 22 49 26.6 +3.3**
MODS Modra-Piesok 67.93 315 *eP* **P 22 49 26.6 +3.3**
KRUC Moravsky 68.00 316 *eP* **P 22 49 20.6 -3.1**
PVCC Panska Ves 68.10 318 AMS AMS 23 20 40.0
comp=Z,600nm,14.6s
BSEG Bad Segeberg 68.12 323 *eL* L 23 19 12.7
comp=Z,145nm,19.9s
BRG Berggiesshubel 68.21 319 *eP* P 22 49 30.3 +5.3
BRG Amp 22 49 32.5
comp=Z,8.4nm,1.3s
PRU Pruhonice 68.43 318 *eP* **P 22 49 30.5 +4.1**
PRU AMS AMS 23 20 50.0
comp=Z,600nm,14.1s
HSKC Hora Svate Kat 68.63 319 AMS AMS 23 20 30.0
comp=Z,500nm,14.0s
RONA Rosalia, Austr 68.86 315 *ep*P **P 22 49 30.8 +1.7**
comp=Z,5.2nm,1.3s
ZVC Zvikov 68.94 317 *eP* **P 22 49 30.5 +0.9**
ZVC AMS AMS 23 21 10.0
comp=Z,500nm,12.1s
CONA Conrad Observa 68.96 315 *eP* **P 22 49 29.4 -0.4**
comp=Z,8.6nm,1.3s
CKRC Cesky Krumlov 69.25 317 *eP* **P 22 49 32.0 +0.5**
CKRC AMS AMS 23 19 00.0
comp=Z,300nm,15.1s
NKC Novy Kostel 69.36 319 AMS AMS 23 20 50.0
comp=Z,600nm,13.2s
KHC Kasperske Hory 69.45 317 *eP* **P 22 49 35.6 +2.8**
KHC MLR MLR
comp=Z,500nm,11.5s
KHC Kasperske Hory 69.45 317 *eP* **P 22 49 35.6 +2.8**
KHC AMS AMS 23 21 30.0
comp=Z,500nm,11.5s
YKA Yellowknife Ar 69.48 23 P P 22 49 33.1 +0.5
comp=Z,4.4nm,0.6s,baz=326,slow=5.6,SNR=33
YKA LR LR 23 23 17.9
comp=Z,186nm,19.7s,baz=312,slow=39
comp=Z,4.4nm,0.6s
YKA Yellowknife Ar 69.48 23 P 22 49 32.5 -0.1
MOX Moxa 69.53 319 *eL* L 23 17 25.6
comp=Z,488nm,20.6s
ARSA Arzberg 69.55 315 *eP* **P 22 49 32.4 -1.0**
comp=Z,5.2nm,1.6s
GEC2 GERESS Array S 69.56 317 *eL* L 23 19 09.6
comp=Z,285nm,21.7s
GERES GERESS Array B 69.56 317 P P 22 49 34.2 +0.7
comp=Z,1.0nm,0.7s,baz=53,slow=6.9,SNR=9.2
comp=Z,1.0nm,0.7s
GERES GERESS Array B 69.56 317 P P 22 49 33.1 -0.4
WET Wettzell 69.81 318 *eL* L 23 19 52.3
comp=Z,344nm,19.5s
MOA Molln 69.86 316 *ep*P **P 22 49 35.9 +0.6**
comp=Z,6.3nm,1.7s
SESA Seetaler Alpe, 70.15 315 *eP* **P 22 49 35.8 -1.5**
comp=Z,9.4nm,0.8s
BIOA Bad Ischl, Aus 70.30 316 *eP* **P 22 49 36.9 -1.1**
comp=Z,8.3nm,1.5s
GRF Grafenberg Arr 70.32 319 *eP* **P 22 49 42.2 +4.1**
comp=Z,7.8nm,0.8s,baz=57,slow=5.7
GRF *eL* L 23 19 45.4
comp=Z,314nm,20.0s
FORT Forrest 70.82 171 P P 22 49 40.6 -0.5
LESA Schwarzleotal 70.97 316 *eP* **P 22 49 42.1 -0.1**
comp=Z,0.2nm,0.3s
FUR Furstenfeldbru 71.25 318 *eL* L 23 22 52.1
comp=Z,336nm,19.1s
TNS Taunus Mts 71.36 320 *eL* L 23 18 43.1
comp=Z,430nm,20.2s
WATA Walderalm 71.61 317 *eP* **P 22 49 44.4 -1.7**
comp=Z,1.3nm,0.7s
WTTA Wattenberg 71.63 317 *eP* **P 22 49 46.0 -0.3**
comp=Z,2.4nm,0.7s
BBB Bella Bella 71.66 37 LR LR 23 21 50.5
comp=Z,79nm,19.1s,baz=308,slow=36
BFO Black Forest 72.65 319 P P 22 49 52.2 0.0
BFO pmax pmax
comp=Z,25nm,1.9s
BFO Black Forest 72.65 319 P P 22 49 52.2 0.0
BFO IAmb IAmb 22 49 58.6
comp=Z,25nm,1.9s
BFO Black Forest 72.65 319 *eL* L 23 20 17.0
comp=Z,378nm,19.9s
BLKN Baker Lake 72.67 15 P P 22 49 52.3 +0.4
FUORN Ofenpass-Fuorn 72.76 317 P 22 49 52.7 -0.5
FUORN IAmb IAmb 22 49 59.1
comp=Z,5.8nm,0.8s
EKA Eskdalemuir Ar 72.97 329 P P 22 49 54.9 +1.0
comp=Z,1.2nm,0.8s,baz=52,slow=4.3,SNR=4.0
EKA LR LR 23 23 11.7
comp=Z,254nm,18.4s,baz=40,slow=37
comp=Z,1.2nm,0.8s
VAE Valguarnera 76.25 307 LR LR 23 26 04.9
comp=Z,167nm,18.7s,baz=290,slow=38
RAFF Raffo Rosso 76.45 307 P P 22 50 14.1 -0.3
FRB Frobisher Bay 76.60 3 LR LR 23 27 45.0
comp=Z,125nm,18.4s,baz=327,slow=39
FCC Fort Churchill 78.08 17 P P 22 50 23.3 +0.2
FCC pmax pmax
comp=Z,8.0nm,0.9s
FCC Fort Churchill 78.08 17 P 22 50 23.3 +0.2
FCC IAmb IAmb 22 50 30.0
comp=Z,8.0nm,0.9s
NEW Newport 79.39 34 LR LR 23 26 58.1
comp=Z,158nm,19.1s,baz=319,slow=37
FFC Flin Flon 79.63 23 P P 22 50 31.4 -0.4
FFC pmax pmax
comp=Z,7.0nm,0.7s
FFC Flin Flon 79.63 23 P 22 50 31.4 -0.4
FFC IAmb IAmb 22 50 38.7
comp=Z,7.0nm,0.7s
KEST Kesra 80.47 309 LR LR 23 31 16.9
comp=Z,286nm,18.2s,baz=42,slow=39
YBH Yreka Blue Hor 81.63 42 LR LR 23 28 15.8
comp=Z,89nm,18.1s,baz=321,slow=37
KMBO Kilima Mbogo 83.98 264 LR LR 23 30 44.1
comp=Z,148nm,18.8s,baz=96,slow=37
HLID Hailey 84.22 36 P 22 50 57.2 +0.9
ESDC Sonseca Array 85.01 319 P P 22 51 00.2 0.0
comp=Z,1.3nm,0.7s,baz=29,slow=4.5,SNR=7.0
comp=Z,1.3nm,0.7s
ESDC Sonseca Array 85.01 319 P P 22 50 59.8 -0.4
ULM Lac du Bonnet 85.34 21 P P 22 51 00.8 -0.8
comp=Z,5.6nm,0.9s,baz=328,slow=4.7,SNR=6.2
ULM LR LR 23 35 04.8
comp=Z,111nm,18.1s,baz=344,slow=40
comp=Z,5.6nm,0.9s
ULM Lac du Bonnet 85.34 21 P 22 51 00.8 -0.8
ULM IAmb IAmb 22 51 08.2
comp=Z,6.5nm,0.8s
SCHQ Schefferville 85.59 3 LR LR 23 33 22.4
comp=Z,145nm,18.1s,baz=346,slow=38
NVAR Mina Array Bea 86.34 41 P P 22 51 07.7 +0.6
comp=Z,0.7nm,0.8s,baz=267,slow=3.0,SNR=3.5
NVAR LR LR 23 29 15.8
comp=Z,97nm,19.5s,baz=325,slow=35
comp=Z,0.7nm,0.8s
NVAR Mina Array Bea 86.34 41 P P 22 51 06.8 -0.3
EPLO Experimental L 86.45 20 P 22 51 06.5 -0.6
EPLO IAmb IAmb 22 51 13.6

	comp=Z,5.2nm,0.7s								
PDAR	**Pinedale Array**	**86.98**	**33**	P		**P**	**22 51 10.2**	**0.0**	
	comp=Z,0.3nm,0.6s,baz=12,slow=1.8,SNR=4.3								
PDAR				LR		LR	23 31 28.7		
	comp=Z,68nm,18.0s,baz=328,slow=37								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**86.98**	**33**	P		**P**	**22 51 09.7**	**-0.5**	
RSSD	**Black Hills**	**88.05**	**29**	P		**P**	**22 51 15.6**	**+0.3**	
RSSD				pmax		pmax			
	comp=Z,8.0nm,1.0s								
RSSD	**Black Hills**	**88.05**	**29**			**P**	**22 51 15.6**	**+0.3**	
MBAR	**Mbarara**	**88.65**	**268**	LR		LR	23 32 43.9		
	comp=Z,94nm,19.3s,baz=64,slow=37								
HMU	**Henry Mountain**	**90.39**	**37**	P		**P**	**22 51 27.3**	**+0.9**	
HMU				IAmb		IAmb	22 51 49.1		
	comp=Z,8.7nm,1.1s								
ECSD	**EROS Data Cent**	**90.97**	**25**			**P**	**22 51 28.2**	**-0.5**	
PFO	**Pinyon Flats O**	**91.00**	**43**	LR		LR	23 32 11.5		
	comp=Z,83nm,18.6s,baz=318,slow=36								
I37A	**Lemond, Waseca**	**91.71**	**22**	P		**P**	**22 51 32.2**	**+0.1**	
SADO	**Sadowa**	**94.29**	**12**	LR		LR	23 38 25.4		
	comp=Z,82nm,18.2s,baz=3.0,slow=38								
ANMO	**Albuquerque**	**94.81**	**36**	LR		LR	23 37 15.0		
	comp=Z,93nm,19.2s,baz=336,slow=37								
M65A	**Busby, Falmout**	**98.55**	**7**	P		**P**	**22 52 00.7**	**-2.7**	
	baz=353								
LSZ	**Lusaka**	**99.84**	**258**	LR		LR	23 40 22.9		
	comp=Z,73nm,18.6s,baz=74,slow=37								
PPT2	**Papeete2**	**102.50**	**102**	eLR		LR	23 25 47.2		
	comp=Z,127nm,32.0s								
PPT2				*e*LR		LR	23 25 51.4		
	comp=Z,128nm,27.8s								
QSPA	**South Pole Qui**	**129.59**	**180**	PKP		**PKPdf**	**22 57 31.1**	**-1.5**	
	comp=Z,1.0nm,1.0s,baz=286,slow=1.8,SNR=2.3								
QSPA	**South Pole Qui**	**129.59**	**180**			**PKPdf**	**22 57 32.0**	**-0.6**	
CZSB	**Cruzeiro do Su**	**146.49**	**20**	PKPdf		**PKPdf**	**22 58 03.8**	**-1.2**	

*SOME **11** 22:44:53.6,42.°75N×82.°87E,h15km*
*NNC **11** 22:45:02.0±4.4,42.°46N×82.°18E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=40.9km s-min=23.3km az=173.0
ISC 11 22:44:57.5±2.7,42.°7N±0.°1×82.°6E±0.°1,h10km,n14,
σ0s93/19,2C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**1.76**	**295**	Pg		**Pb**	**22 45 29.7**	**-0.3**
KTMS	9.8nm,0.2s			Lg		Lg	22 45 55.9	
	73nm,0.2s							
KTMS	**Ketmen**	**1.76**	**295**	*e*P		**Pb**	**22 45 29.7**	**-0.3**
KTMS	9.8nm,0.2s							
				*e*S		**Sg**	**22 45 55.9**	**+1.7**
	73nm,0.2s							
SHLS	**Shalkode**	**2.31**	**282**	Pg		**Pn**	**22 45 35.3**	**-0.4**
	14nm,0.2s							
SHLS				Lg		Lg	22 46 05.3	
	85nm,0.3s							
SHLS	**Shalkode**	**2.31**	**282**	*e*P		**Pn**	**22 45 35.3**	**-0.4**
	14nm,0.2s							
SHLS				*e*S		**Sn**	**22 46 05.3**	**+1.0**
	85nm,0.3s							
PDGK	**Podgornoye**	**2.32**	**286**	⇑Pn		**Pb**	**22 45 40.2**	**+0.6**
	8.1nm,0.7s							
PDGK				⇓Lg		Lg	22 46 13.0	
	35nm,0.6s							
UZB	**Uzynbulak**	**2.63**	**280**	Pg		**Pb**	**22 45 44.8**	**+0.1**
	3.6nm,0.2s							
UZB				Lg		Lg	22 46 21.5	
	19nm,0.2s							
UZB	**Uzynbulak**	**2.63**	**280**	*e*P		**Pb**	**22 45 44.8**	**+0.1**
	3.6nm,0.2s							
UZB				*e*S		**Sg**	**22 46 21.5**	**-0.4**
	19nm,0.2s							
KNOS	**Konyrlen**	**2.94**	**305**	Pg		**Pb**	**22 45 51.7**	**+1.5**
	3.2nm,0.6s							
KNOS				Lg		Lg	22 46 33.7	
	6.3nm,0.4s							
SATY	**Saty**	**3.06**	**278**	Pg		**Pb**	**22 45 52.4**	**+0.2**
	1.9nm,0.1s							
SATY				Lg		Lg	22 46 34.9	
	6.8nm,0.1s							
SATY	**Saty**	**3.06**	**278**	*e*P		**Pb**	**22 45 52.4**	**+0.2**
	1.9nm,0.1s							
SATY				*e*S		**Sg**	**22 46 34.9**	**-1.1**
	6.8nm,0.1s							
KAPS	**Kapalarasan**	**3.44**	**319**	Pg		**Pb**	**22 45 59.0**	**+0.4**
	2.4nm,0.1s							
KAPS				Lg		Lg	22 46 45.8	
	12nm,0.2s							
KAPS	**Kapalarasan**	**3.44**	**319**	*e*P		**Pb**	**22 45 59.0**	**+0.4**
	2.4nm,0.1s							
KAPS				*e*S		**Sg**	**22 46 45.8**	**-2.2**
	12nm,0.2s							
MK31	**Makanchi Array**	**4.07**	**357**	Pn		**Pb**	**22 46 09.7**	**+0.5**
	7.6nm,1.2s,baz=189,slow=12,SNR=22							
MK31				⇓Lg		Lg	22 47 18.0	
	1.9nm,0.6s,baz=191,slow=32							
MAKZ	**Makanchi**	**4.10**	**354**	⇓Pn		**Pb**	**22 46 09.9**	**+0.2**
	25nm,1.9s							
MAKZ				⇑Lg		Lg	22 47 18.7	
	6.8nm,1.1s							

IDC 11 22:55:23.4±3.8,5.°17S×153.°02E,h0km,mb3.3/3,
mbtmp3.3/3,Error ellipse: s-maj=135.9km
s-min=36.9km az=112.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.38**	**229**	P		P	23 00 33.7	-0.2
	0.7nm,0.7s,baz=54,slow=9.8,SNR=6.9							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**26.04**	**223**	P		P	23 00 58.6	0.0
	0.5nm,1.0s,baz=56,slow=9.4,SNR=6.7							
	0.5nm,1.0s							
MKAR	**Makanchi Array**	**80.75**	**319**	P		P	23 07 39.1	+0.3
	0.2nm,0.5s,baz=105,slow=7.0,SNR=1.6							
	0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**150.63**	**288**	PKPbc		PKPbc	23 15 18.1	-0.5
	0.2nm,0.4s,baz=98,slow=1.5,SNR=5.0							

*IDC **11** 23:15:50.1±6.6,36.°02N×140.°36E,h62km±49km,mb3.3/5,*
mbtmp3.6/5,Error ellipse: s-maj=65.7km s-min=23.8km
az=63.0
*JMA **11** 23:15:52.7±0.1,36.°0N±0.°3×140.°1E±0.°3,h61km,MV3.3/39,*
SOUTHERN IBARAKI PREF
JMA Felt I J1 at SOUTHERN IBARAKI PREF .
ISC 11 23:15:51.9±1.0,36.°00N±0.°05×140.°11E±0.°05,h69km±8km,
n18,σ0s77/25,mb3.6/5,8D,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JYT	**Yasato**	**0.24**	**16**	P		**Pn**	**23 16 02.6**	**+0.1**
JYT				S		**Sn**	**23 16 09.9**	**-0.5**
JIHU	**Itakohorinouch**	**0.34**	**95**	P		**Pn**	**23 16 03.9**	**+0.8**
JAG	**Ashikaga**	**0.68**	**309**	⇓P		**Pn**	**23 16 06.8**	**+0.2**
JAG				⇓S		**Sn**	**23 16 16.9**	**-0.3**
JRY	**Ryogami san**	**0.98**	**271**	⇓P		**Pn**	**23 16 10.5**	**+0.4**
JRY				⇓S		**Sn**	**23 16 24.0**	**+0.3**
JKT	**Katashina**	**1.03**	**318**	P		**Pn**	**23 16 11.0**	**+0.1**
JKT				S		**Sn**	**23 16 25.3**	**+0.3**
JOD2	**Odawara 2**	**1.11**	**229**	⇓P		**Pn**	**23 16 12.0**	**+0.2**
JOD2				⇓S		**Sn**	**23 16 25.7**	**-0.9**
BSO3	**Boso 3**	**1.24**	**165**	P		**Pn**	**23 16 14.6**	**+1.4**
JYN	**Shimob**	**1.37**	**249**	⇓P		**Pn**	**23 16 15.9**	**+0.8**
JYN				⇓S		**Sn**	**23 16 33.2**	**+0.6**
JFY	**Yanaizu**	**1.44**	**347**	P		**Pn**	**23 16 16.7**	**+0.6**
JUON	**Uonuma**	**1.48**	**325**	P		**Pn**	**23 16 17.3**	**+0.8**
JFK	**Kawauchi**	**1.50**	**24**	P		**Pn**	**23 16 17.3**	**+0.5**
JOTO	**OTAMA OYAMA**	**1.57**	**6**	P		**Pn**	**23 16 18.6**	**+0.8**
MJAR	**Matsushiro Arr**	**1.63**	**290**	P		**Pn**	**23 16 18.9**	**+0.3**
	49nm,0.3s,baz=88,slow=9.4,SNR=355							
MJAR				S		**Sn**	**23 16 40.4**	**+1.6**
	13nm,0.3s,baz=84,slow=22,SNR=3.8							
ZALV	**Zalesovo Beam**	**41.85**	**313**	P		**P**	**23 23 35.2**	**+0.4**
	0.7nm,0.5s,baz=110,slow=9.3,SNR=3.9							
	0.7nm,0.5s							
MKAR	**Makanchi Array**	**43.79**	**303**	P		**P**	**23 23 50.6**	**-0.1**
	0.6nm,0.7s,baz=90,slow=9.7,SNR=5.0							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**45.82**	**309**	P		**P**	**23 24 06.6**	**-0.1**
	1.7nm,0.9s,baz=85,slow=8.4,SNR=9.1							
	1.7nm,0.9s							
WRA	**Warramunga Arr**	**55.90**	**187**	P		**P**	**23 25 21.6**	**-1.1**
	0.5nm,0.8s,baz=3.0,slow=7.3,SNR=1.2							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**59.63**	**187**	P		**P**	**23 25 47.9**	**-0.9**
	0.3nm,0.7s,baz=12,slow=9.0,SNR=1.8							
	0.3nm,0.7s							

*IDC **11** 23:17:58.5±1.0,2.°32S×24.°33E,h0km,mb3.8/11,*
mbtmp3.9/15,ML3.5/4,Error ellipse: s-maj=26.7km
s-min=20.8km az=80.0
*NEIC **11** 23:17:59.2±1.5,2.°35S±0.°10×24.°4E±0.°1,h10km±1km,*
mb4.4/17,Error ellipse: s-maj=18.2km s-min=16.3km
az=283.0
ISC 11 23:17:58.4±0.5,2.°42S±0.°06×24.°38E±0.°08,h10km,n42,
σ1s88/44,mb4.1/15,Zaire

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MBAR	**Mbarara**	**6.61**	**74**	Pn		**Pn**	**23 19 36.5**	**+0.6**
	3.6nm,0.3s,baz=323,slow=1.3,SNR=28							
MBAR				Sn		**Sn**	**23 20 48.9**	**-2.5**
	9.8nm,0.3s,baz=7.7,slow=24,SNR=4.3							
MBAR				Lg		Lg	23 21 23.7	
	13nm,0.3s,baz=25,slow=22,SNR=4.3							
	8.8nm,0.2s							
MBAR	**Mbarara**	**6.61**	**74**			**Pn**	**23 19 35.3**	**-0.6**
LODK	**Lodwar**	**12.42**	**62**			**Pn**	**23 20 53.3**	**-2.1**
KMBO	**Kilima Mbogo**	**12.93**	**85**	Lg		Lg	23 24 45.2	
	baz=165,slow=19							
LSZ	**Lusaka**	**13.32**	**164**	Pn		**Pn**	**23 21 09.8**	**+2.1**
	0.4nm,0.3s,baz=355,slow=11,SNR=13							
LSZ				Sn		**Sn**	**23 23 36.7**	**+0.6**
	0.2nm,0.3s,baz=5.5,slow=16,SNR=1.9							
LSZ				Lg		Lg	23 25 01.6	
	0.5nm,0.3s,baz=232,slow=15,SNR=1.1							
	4.4nm,0.5s							
LSZ	**Lusaka**	**13.32**	**164**			**Pn**	**23 21 08.8**	**+1.0**
KIBK	**Kibwezi**	**13.66**	**90**	Pn		**Pn**	**23 21 11.0**	**-1.4**
KSANE	**Kasane**	**15.30**	**177**	Pn		**Pn**	**23 21 36.6**	**+1.9**
KSANE				IAmb		IAmb	23 21 46.5	
	comp=Z,16nm,0.7s							
EDA	**Edea**	**15.49**	**293**			**Pn**	**23 21 35.1**	**-2.1**
TSUM	**Tsumeb**	**17.95**	**201**	P		**P**	**23 22 11.2**	**+2.2**
TSUM	comp=Z,0.9nm,0.3s,baz=18,slow=13,SNR=17			S		**Sn**	**23 25 21.1**	**-7.8**
	comp=Z,2.8nm,0.8s,baz=134,slow=20,SNR=1.8							
TSUM				Lg		Lg	23 27 22.0	
	comp=Z,0.2nm,0.3s,baz=312,slow=18,SNR=3.7							
	comp=Z,2.9nm,0.4s							
TSUM	**Tsumeb**	**17.95**	**201**	P		**Pn**	**23 22 08.6**	**+0.1**
MATP	**Matopo**	**18.34**	**168**	P		**Pn**	**23 22 16.3**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=344,slow=10,SNR=12							
	comp=Z,5.1nm,0.8s							
GRTLG	**Ghanzi**	**19.08**	**189**			**P**	**23 22 22.8**	**+1.4**
KHWEE	**KHWEE**	**19.44**	**177**			**P**	**23 22 26.1**	**+0.8**
KHWEE				IAmb		IAmb	23 22 58.8	
	comp=Z,29nm,1.1s							
KOOLE	**Kule**	**20.85**	**191**	P		**P**	**23 22 42.5**	**+1.8**
KOOLE				IAmb		IAmb	23 23 04.0	
	comp=Z,9.7nm,0.8s							
WIN	**Windhoek**	**21.24**	**199**	P		**P**	**23 22 46.4**	**+1.4**
WIN				IAmb		IAmb	23 23 07.8	
	comp=Z,9.8nm,1.0s							
LBTB	**Lobatse**	**22.49**	**177**	P		**P**	**23 22 58.6**	**+0.3**
LBTB				IAmb		IAmb	23 23 25.2	
	comp=Z,17nm,1.1s							
MAKGR	**Makgori**	**23.26**	**179**	P		**P**	**23 23 06.8**	**+0.5**
MAKGR				IAmb		IAmb	23 23 10.0	
	comp=Z,19nm,1.4s							
POGA	**Pongola**	**25.76**	**165**	P		**P**	**23 23 28.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**27.31**	**305**	P		**P**	**23 23 43.1**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=125,slow=8.7,SNR=16							
	comp=Z,1.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**27.31**	**305**	P		**P**	**23 23 43.7**	**+0.1**
LIT	**Litokhoron**	**42.35**	**358**	P		**P**	**23 25 53.0**	**+0.2**
LIT				IAmb		IAmb	23 25 54.7	
	comp=Z,6.7nm,0.8s							
BRTR	**Keskin Array B**	**42.79**	**11**	P		**P**	**23 25 55.9**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=181,slow=10,SNR=3.7							
	comp=Z,0.9nm,0.7s							
NRCA	**Norcia**	**46.18**	**349**	P		**P**	**23 26 21.9**	**-1.6**
MLR	**Muntele Rosu**	**47.72**	**1**	P		**P**	**23 26 34.3**	**-1.2**
MLR				IAmb		IAmb	23 26 42.2	
	comp=Z,2.5nm,0.8s							
ESDC	**Sonseca Array**	**49.31**	**331**	P		**P**	**23 26 48.1**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=150,slow=7.5,SNR=4.1							
	comp=Z,0.5nm,0.6s							
BURAR	**Bucovina Array**	**49.83**	**1**	P		**P**	**23 26 51.6**	**-0.1**
GERES	**GERESS Array B**	**51.90**	**351**	P		**P**	**23 27 08.3**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=170,slow=7.0,SNR=3.7							
	comp=Z,0.3nm,0.8s							
ABKAR	**Akbulak array**	**59.95**	**26**	P		**P**	**23 28 04.6**	**-0.2**
KKAR	**Karaty Array**	**61.41**	**37**	P		**P**	**23 28 15.0**	**+0.1**
HFS	**Hagfors**	**62.93**	**354**	P		**P**	**23 28 26.6**	**+1.8**
	comp=Z,1.7nm,0.8s,baz=177,slow=7.2,SNR=1.8							
	comp=Z,1.7nm,0.8s							
FINES	**FINESS Array B**	**63.70**	**1**	P		**P**	**23 28 32.4**	**+2.6**
	comp=Z,4.0nm,1.0s,baz=126,slow=2.6,SNR=4.0							
	comp=Z,4.0nm,1.0s							
FINES	**FINESS Array B**	**63.70**	**1**	P		**P**	**23 28 30.4**	**+0.6**
NOA	**NORSAR Array B**	**64.10**	**353**	P		**P**	**23 28 34.4**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=168,slow=6.5,SNR=2.3							
	comp=Z,0.4nm,0.6s							
NC303	**NORSAR Array S**	**64.26**	**353**	P		**P**	**23 28 34.2**	**+0.6**
KURBB	**Kurchatov Arra**	**70.10**	**33**	P		**P**	**23 29 11.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=244,slow=6.7,SNR=5.4							
	comp=Z,0.3nm,0.5s							
MKAR	**Makanchi Array**	**70.48**	**38**	P		**P**	**23 29 16.1**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=245,slow=5.7,SNR=2.5							
	comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**70.48**	**38**	P		**P**	**23 29 13.1**	**-0.2**
ARCES	**ARCESS Array B**	**71.82**	**0**	P		**P**	**23 29 23.1**	**+2.1**
	comp=Z,3.2nm,1.1s,baz=188,slow=8.1,SNR=2.2							
	comp=Z,3.2nm,1.1s							
ARCES	**ARCESS Array B**	**71.82**	**0**	P		**P**	**23 29 21.0**	**+0.1**
ARCES				IAmb		IAmb	23 29 45.9	
	comp=Z,5.4nm,1.3s							
ZALV	**Zalesovo Beam**	**75.08**	**32**	P		**P**	**23 29 40.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=250,slow=6.6,SNR=3.7							
	comp=Z,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**75.08**	**32**	P		**P**	**23 29 40.6**	**+0.2**

*IDC **11** 23:24:46.4±0.9,13.°77N×120.°97E,h121km±9km,mb3.4/8,*
mbtmp3.7/8,Error ellipse: s-maj=120.2km s-min=16.2km
az=66.0
*MAN **11** 23:24:47.0,13.°77N±0.°50E,h99km,MS3.3*
ISC 11 23:24:44.9±1.0,13.°58N±0.°10×120.°2E±0.°1,h100km,n12,
σ1s14/16,mb3.8/8,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PGP	**Puerto Galera**	**0.71**	**96**	*e*P		**Pn**	**23 25 03.8**	**+1.3**
PGP				*e*S		**Sn**	**23 25 15.8**	**+0.2**
TGY	**Tagaytay City**	**0.86**	**53**	P		**Pn**	**23 25 05.3**	**+1.3**
	330nm,0.3s,baz=240,slow=5.9,SNR=5.2							
TGY				S		**Sn**	**23 25 18.2**	**0.0**
	4μm,0.5s,baz=340,slow=23,SNR=15							
TGY	**Tagaytay City**	**0.86**	**53**	*e*P		**Pn**	**23 25 05.2**	**+1.3**
TGY				*e*S		**Sn**	**23 25 18.6**	**+0.4**
QVPH	**Quezon City--P**	**1.33**	**37**	*i* P		**Pn**	**23 25 08.9**	**-0.3**
QVPH				*e*S		**Sn**	**23 25 26.1**	**-1.4**
SONM	**Songino Array**	**36.04**	**344**	P		**P**	**23 31 36.9**	**+0.2**
	0.6nm,0.5s,baz=164,slow=10,SNR=6.1							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**36.09**	**157**	P		**P**	**23 31 35.9**	**-1.4**
	0.7nm,1.1s,baz=342,slow=9.1,SNR=1.7							
	0.7nm,1.1s							
ASAR	**Alice Springs**	**39.36**	**160**	P		**P**	**23 32 03.5**	**-1.4**
	0.4nm,0.8s,baz=337,slow=7.7,SNR=5.8							
	0.4nm,0.8s							
MKAR	**Makanchi Array**	**45.86**	**324**	P		**P**	**23 32 58.1**	**+0.9**
	0.7nm,0.7s,baz=124,slow=7.5,SNR=5.5							
	0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**48.95**	**333**	P		**P**	**23 33 21.1**	**+0.1**
	0.5nm,0.3s,baz=116,slow=6.7,SNR=4.3							
	0.5nm,0.3s							
KURBB	**Kurchatov Arra**	**50.03**	**326**	P		**P**	**23 33 30.8**	**+1.6**
	1.9nm,0.8s,baz=128,slow=7.5,SNR=14							
	1.9nm,0.8s							
BVAR	**Borovoye Array**	**55.61**	**326**	P		**P**	**23 34 11.4**	**+1.1**
	0.5nm,0.4s,baz=114,slow=6.6,SNR=5.3							
	0.5nm,0.4s							
ARCES	**ARCESS Array B**	**79.03**	**339**	P		**P**	**23 36 36.7**	**-1.0**
	1.5nm,0.8s,baz=68,slow=6.7,SNR=4.9							
	1.5nm,0.8s							

*IDC **12** 00:00:51.7±2.2,9.°19S×123.°79E,h0km,mb3.3/1,*
mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=219.7km
s-min=33.8km az=56.0
*DJA **12** 00:01:03.6±0.7,9.°S±3.°×12.°4E±.°,h68km±10km,M3.0/6,*
MLv3.0/6
ISC 12 00:01:03.3±1.3,9.°3S±0.°1×124.°0E±0.°1,h100km,n6,
σ0s93/7,Timor region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**0.49**	**149**	P		**Pn**	**00 01 19.5**	**+0.3**
SOEI				S		**Sn**	**00 01 31.8**	**+0.8**
BATI	**Baumata**	**0.93**	**202**	P		**Pn**	**00 01 22.2**	**-0.8**
BATI				S		**Sn**	**00 01 39.1**	**+1.3**
MMRI	**Maumere**	**1.89**	**292**	P		**Pn**	**00 01 34.7**	**+0.3**
WRA	**Warramunga Arr**	**14.52**	**138**	Pn		Pn	00 04 21.1	-3.0
	0.2nm,0.3s,baz=315,slow=15,SNR=2.4							
WRA				Sn		Sn	00 06 54.6	-9.5
	0.3nm,0.3s,baz=318,slow=26,SNR=5.3							
	0.5nm,0.5s							
ASAR	**Alice Springs**	**17.10**	**148**	P		**Pn**	**00 04 56.0**	**-0.2**
	0.1nm,0.3s,baz=319,slow=11,SNR=11							
ASAR				S		Sn	00 07 57.5	-9.1
	0.4nm,0.7s,baz=314,slow=21,SNR=4.4							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**67.11**	**330**	P		**P**	**00 11 45.6**	**-0.6**
	0.2nm,0.6s,baz=141,slow=7.4,SNR=2.4							
	0.2nm,0.6s							

*IDC **12** 00:04:37.5±0.9,5.°53S×151.°43E,h0km,mb3.9/10,*
mbtmp4.0/11,ML2.2/1,MS3.6/14,Error ellipse:
s-maj=36.4km s-min=18.5km az=109.0
*NEIC **12** 00:04:40.4±2.1,5.°84S±0.°07×151.°2E±0.°1,h10km±1km,*
mb4.4/13,Error ellipse: s-maj=22.9km s-min=5.2km
az=116.0
ISC 12 00:04:43.5±0.6,5.°70S±0.°08×151.°2E±0.°1,h35km,n42,
σ1s65/32,mb4.1/16,MS3.7/12,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.77**	**32**			**Pn**	**00 05 13.4**	**+1.8**
RABL				Sn		**Sn**	**00 05 36.3**	**+3.4**
MANU	**Manus Island**	**5.30**	**313**	Pn		**Pn**	**00 06 00.7**	**+0.5**
PMG	**Port Moresby**	**5.46**	**227**	Pn		**Pn**	**00 06 04.6**	**+2.2**
	4.7nm,0.3s,baz=24,slow=15,SNR=16							
PMG				Sn		**Sn**	**00 07 09.4**	**+5.4**
	7.5nm,0.3s,baz=139,slow=21,SNR=6.3							
PMG				LR		LR	00 07 59.5	
	comp=Z,236nm,19.5s,baz=9.5,slow=35							
	110nm,0.9s							
PMG	**Port Moresby**	**5.46**	**227**			**Pn**	**00 06 00.8**	**-1.5**
HNR	**Honiara**	**9.40**	**114**	LR		LR	00 09 59.5	
	comp=Z,10nm,21.4s,baz=6.0,slow=35							
CTA	**Charters Tower**	**15.09**	**198**	LR		LR	00 13 54.8	
	comp=Z,195nm,19.0s,baz=32,slow=36							
GUMO	**Guam**	**20.18**	**342**	LR		LR	00 15 22.5	
	comp=Z,91nm,21.6s,baz=120,slow=32							
MTN	**Manton Dam**	**21.05**	**249**	P		**P**	**00 09 24.2**	**-0.4**
MTN				IAmb		IAmb	00 09 50.7	
	comp=Z,26nm,1.2s							
WB0	**Warramunga Arr**	**21.53**	**228**	P		**P**	**00 09 27.8**	**-2.0**
WB0				IAmb		IAmb	00 09 52.9	
	comp=Z,17nm,1.2s							
WRA	**Warramunga Arr**	**21.68**	**228**	P		**P**	**00 09 32.7**	**+1.3**
	comp=Z,5.1nm,1.0s,baz=52,slow=11,SNR=15							
	comp=Z,5.1nm,1.0s							
WRA	**Warramunga Arr**	**21.68**	**228**	P		**P**	**00 09 29.9**	**-1.5**
INKA	**Innaminka**	**24.08**	**203**	P		**P**	**00 09 54.5**	**-1.2**
INKA				IAmb		IAmb	00 09 57.8	
	comp=Z,7.9nm,1.1s							
KNRA	**Kununurra**	**24.17**	**244**	P		**P**	**00 09 57.1**	**+0.4**
AS31	**Alice Springs**	**24.43**	**221**	P		**P**	**00 09 58.7**	**-0.4**
ASAR	**Alice Springs**	**24.44**	**221**	P		**P**	**00 10 00.5**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=56,slow=9.5,SNR=18							
	comp=Z,2.2nm,0.8s							
ASAR	**Alice Springs**	**24.44**	**221**	P		**P**	**00 09 58.2**	**-0.9**
STKA	**Stephens Creek**	**27.56**	**198**	P		**P**	**00 10 28.1**	**+0.9**
	comp=Z,3.9nm,0.9s,baz=24,slow=14,SNR=3.9							
STKA				LR		LR	00 22 07.0	
	comp=Z,156nm,18.2s,baz=306,slow=38							
	comp=Z,3.9nm,0.9s							
JCJ	**Chichijima**	**33.76**	**345**	LR		LR	00 24 16.2	
	comp=Z,31nm,20.3s,baz=88,slow=35							
KSRS	**Korea Array**	**48.12**	**335**	LR		LR	00 34 23.8	
	comp=Z,27nm,18.1s,baz=215,slow=37							
RAR	**Rarotonga**	**49.86**	**113**	LR		LR	00 32 40.7	
	comp=Z,33nm,18.1s,baz=254,slow=34							
MA2	**Magadan**	**65.07**	**360**	LR		L

NEW Sn **Sn** **00 23 48.7 -3.4**
0.6nm,0.3s,baz=122,slow=12,SNR=3.1
NEW Lg Lg 00 24 26.5
0.8nm,0.3s,baz=85,slow=21,SNR=1.8
1.8nm,0.6s
DLBC Dease Lake 8.21 294 Pn **Pn** **00 22 34.8 +1.3**
0.3nm,0.3s,baz=84,slow=18,SNR=2.0
DLBC Lg Lg 00 24 52.3
0.2nm,0.3s,baz=226,slow=16,SNR=1.7
0.7nm,0.3s
ULM Lac du Bonnet 13.16 107 Pn **Pn** **00 23 39.4 -1.9**
0.6nm,0.4s,baz=299,slow=15,SNR=1.2
ULM Sn Sn 00 25 52.0 -16
0.3nm,0.3s,baz=34,slow=22,SNR=2.5
ULM Lg Lg 00 27 20.4
0.4nm,0.3s,baz=206,slow=22,SNR=4.2
PDAR Pinedale Array 13.67 160 Pn **Pn** **00 23 49.1 +0.6**
0.1nm,0.3s,baz=358,slow=19,SNR=3.1
0.4nm,0.8s
INK Inuvik 14.95 334 Pn **Pn** **00 24 05.5 +0.1**
0.4nm,0.3s,baz=148,slow=5.7,SNR=5.8
INK Sn **Sn** **00 26 44.8 -6.0**
0.3nm,0.3s,baz=193,slow=7.3,SNR=4.0
1.4nm,0.3s
ILAR Eielson Array 17.66 313 P **P** **00 24 45.1 +3.9**
0.1nm,0.3s,baz=114,slow=10,SNR=5.1
0.3nm,0.5s
SCHQ Schefferville 27.37 71 P **P** **00 26 21.8 +2.3**
1.5nm,0.8s,baz=320,slow=16,SNR=1.8
1.5nm,0.8s
TXAR Lajitas Array 27.85 157 P **P** **00 26 25.1 +1.1**
1.0nm,1.2s,baz=354,slow=10,SNR=3.1
1.0nm,1.2s

NOU 12 00:20:42.3, 21.63S×169.91E, h0km, mb3.9/15,
Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.76**	**275**	P		Pn 00 21 13.4	-0.6
MARNC	**Mare, Loyalty**	**1.76**	**275**	S		Sb 00 21 38.1	+0.1
YATNC	**Mamie plateau,**	**2.84**	**261**	P		Pn 00 21 27.9	-1.0
YATNC	**Mamie plateau,**	**2.84**	**261**	S		Sn 00 22 03.5	-0.3
OUENC	**Ouen Island, N**	**2.95**	**254**	P		Pn 00 21 31.2	+0.7
OUENC	**Ouen Island, N**	**2.95**	**254**	S		Sn 00 22 06.5	-0.2
ONTNC	**Ouen Toro**	**3.28**	**257**	P		Pn 00 21 34.8	-0.2
ONTNC	**Ouen Toro**	**3.28**	**257**	S		Sn 00 22 15.1	+0.4
NOUC	**Port Laguerre**	**3.38**	**261**	P		Pn 00 21 36.1	-0.3
NOUC	**Port Laguerre**	**3.38**	**261**	S		Sn 00 22 17.5	+0.2
KOUNC	**Koumac, New Ca**	**5.36**	**281**	P		Pn 00 22 04.7	+1.1

*SOME **12** 00:28:44.6, 40.92N×75.32E, h10km, MS3.9*
*IDC **12** 00:28:45.5±0.8, 40.91N×75.21E, h0km, mb3.9/17, mbtmp3.9/23, ML3.2/6, MS3.3/10, Error ellipse: s-maj=12.6km s-min=12.0km az=50.0*
*BJI **12** 00:28:46.4, 41.06N×75.26E, h8km, mB4.5/2, mb4.4/14, ML4.0/9, Ms3.8/9, Ms7 3.6/7*
*KRNET **12** 00:28:46.0±0.1, 40.99N×75.27E, h22km, mb4.7*
*NNC **12** 00:28:47.5±0.8, 41.04N×75.28E, h0km, mb4.9, mpv4.5, Error ellipse: s-maj=5.9km s-min=3.6km az=3.0*
*NEIC **12** 00:28:48.9±1.9, 41.12N±0.03×75.32E±0.03, h12km±5km, mb4.3/21, Error ellipse: s-maj=4.3km s-min=2.5km az=222.0*
*KNET **12** 00:28:51.2±0.8, 41.27N×75.30E, h29km±3km, ml3.9, Error ellipse: s-maj=6.1km s-min=3.8km az=22.0*
*BGR **12** 00:28:57.6, 41.48N×74.67E, h33km, mb4.2, Ms3.3*
ISC 12 00:28:46.7±1.1, 41.03N±0.02×75.27E±0.02, h1km±7km, n194, σ1§54/264, mb4.3/30, **MS3.4**/7, **42C-43D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**0.68**	**53**	Pg	**Pg**	**00 28 59.1**	**-0.6**
NRN				Sg	**Sg**	**00 29 08.4**	**-0.1**
NRN	**Naryn**	**0.68**	**53**	⇓*i*P	**Pg**	**00 28 58.9**	**-0.8**
NRN				⇓*i*S	**Sg**	**00 29 08.4**	**-0.1**
SALK	**Salom-Alik**	**1.11**	**263**	⇓*i*P	**Pg**	**00 29 06.4**	**-1.6**
SALK				⇓*i*S	**Sg**	**00 29 21.3**	**-1.1**
UCH	**Uchtor**	**1.32**	**335**	⇓P	**Pg**	**00 29 11.8**	**-0.3**
476nm,0.1s,SNR=465							
UCH				⇓S	**Sg**	**00 29 27.9**	**-1.3**
820nm,0.2s							
UCH	**Uchtor**	**1.32**	**335**	⇓*i*P	**Pg**	**00 29 11.1**	**-1.0**
UCH				⇓*i*S	**Sg**	**00 29 29.3**	**0.0**
ULHL	**Ulahol**	**1.41**	**31**	⇑P	**Pn**	**00 29 12.9**	**-0.9**
233nm,0.2s,SNR=278							
ULHL				⇑S	**Sg**	**00 29 29.7**	**-2.5**
616nm,0.3s							
ULHL	**Ulahol**	**1.41**	**31**	⇓*i*P	**Pn**	**00 29 12.5**	**-1.3**
ULHL				⇓*i*S	**Sg**	**00 29 32.0**	**-0.1**
BOOM	**Boomskoye usch**	**1.54**	**19**		**Pn**	**00 29 15.3**	**-0.2**
BOOM				Sn	**Sn**	**00 29 35.2**	**-1.1**
BOOM	**Boomskoye usch**	**1.54**	**19**	⇓*i*P	**Pn**	**00 29 15.0**	**-0.5**
BOOM				⇓*i*S	**Sn**	**00 29 36.1**	**-0.2**
KBK	**Karagaybulak**	**1.64**	**352**	⇓P	**Pn**	**00 29 17.8**	**+0.9**
330nm,0.1s,SNR=407							
KBK				⇓S	**Sn**	**00 29 37.8**	**-1.0**
1µm,0.2s							
KBK	**Karagaybulak**	**1.64**	**352**	⇑*i*P	**Pn**	**00 29 16.6**	**-0.3**
KBK				⇑*i*S	**Sn**	**00 29 39.0**	**+0.2**
SFK	**Sufi-Kurgan**	**1.69**	**234**	⇓*i*P	**Pn**	**00 29 16.4**	**-1.2**
SFK				⇓*i*S	**Sn**	**00 29 38.7**	**-1.3**
AAK	**Ala-Archa**	**1.71**	**340**	Pn	**Pn**	**00 29 18.4**	**+0.6**
39nm,0.3s,baz=162,slow=13,SNR=204							
AAK				Lg	Lg	00 29 41.1	
225nm,0.3s,baz=22,slow=11,SNR=14							
AAK	**Ala-Archa**	**1.71**	**340**	⇓P	**Pn**	**00 29 18.7**	**+0.9**
495nm,0.3s,SNR=169							
AAK				⇑S	**Sn**	**00 29 40.0**	**-0.4**
1µm,0.5s							
AAK	**Ala-Archa**	**1.71**	**340**	⇓P	**Pn**	**00 29 18.6**	**+0.7**
2µm,0.6s							
AAK				⇑S	**Sb**	**00 29 41.5**	**+0.4**
7µm,0.6s							
AAK	**Ala-Archa**	**1.71**	**340**		**Pn**	**00 29 18.6**	**+0.7**
AAK				Sn	**Sn**	**00 29 40.9**	**+0.5**
AAK	**Ala-Archa**	**1.71**	**340**	⇓*i*P	**Pn**	**00 29 17.7**	**-0.1**
AAK				⇓*i*S	**Sn**	**00 29 40.9**	**+0.5**
ARSB	**Arslanbob**	**1.75**	**280**		**Pn**	**00 29 18.9**	**+0.5**
ARSB	**Arslanbob**	**1.75**	**280**	⇓*e*P	**Pn**	**00 29 17.9**	**-0.5**
ARSB				⇓*i*S	**Sn**	**00 29 41.3**	**-0.2**
KDJ	**Kajisay**	**1.80**	**52**		**Pn**	**00 29 19.9**	**+0.7**
KDJ	**Kajisay**	**1.80**	**52**	⇓*i*P	**Pn**	**00 29 19.2**	**+0.1**
KDJ				⇓*i*S	**Sb**	**00 29 43.4**	**-0.4**
FRU1	**Bishkek**	**1.84**	**345**		**Pb**	**00 29 21.6**	**+0.4**
FRU1	**Bishkek**	**1.84**	**345**	⇓*i*P	**Pn**	**00 29 19.9**	**+0.3**
FRU1				⇓*i*S	**Sn**	**00 29 44.7**	**+1.1**
KSH2	**Kashi**	**1.90**	**173**	Pn	**Pb**	**00 29 21.8**	**-0.4**
KSH2				Sn	**Sg**	**00 29 48.6**	**+1.0**
KSH2				SMN			
760nm,0.6s							
KSH2				SME			
790nm,0.7s							
TKM2	**Tokmak 2**	**1.90**	**7**	⇑P	**Pn**	**00 29 21.5**	**+1.0**
429nm,0.3s,SNR=616							
TKM2				⇑S	**Sn**	**00 29 45.1**	**-0.2**
992nm,0.2s							
TKM2	**Tokmak 2**	**1.90**	**7**	⇑*i*P	**Pn**	**00 29 20.7**	**+0.1**
TKM2				⇑*i*S	**Sn**	**00 29 45.8**	**+0.5**
OHH	**Osh**	**1.96**	**256**	⇑*i*P	**Pn**	**00 29 20.6**	**-0.6**
OHH				⇑*i*S	**Sn**	**00 29 45.7**	**-0.7**
EKS2	**Erkin-Say**	**1.98**	**326**	⇓P	**Pb**	**00 29 23.2**	**-0.4**
543nm,0.7s,SNR=62							
EKS2				⇑S	**Sn**	**00 29 47.5**	**+0.5**
503nm,0.5s							
EKS2	**Erkin-Say**	**1.98**	**326**	⇑*i*P	**Pn**	**00 29 21.5**	**0.0**
EKS2				⇑*i*S	**Sn**	**00 29 47.4**	**+0.5**
CHMS	**Chumysh**	**2.00**	**349**	⇑P	**Pn**	**00 29 23.3**	**+1.6**
515nm,0.3s,SNR=109							
CHMS				⇓S	**Sn**	**00 29 47.8**	**+0.3**
455nm,0.2s							
CHMS	**Chumysh**	**2.00**	**349**	⇑*i*P	**Pn**	**00 29 21.9**	**+0.1**
CHMS				⇑*i*S	**Sn**	**00 29 48.0**	**+0.5**
TARG	**Taragay, Kyrgy**	**2.03**	**69**		**Pn**	**00 29 23.5**	**+1.0**
TARG	**Taragay, Kyrgy**	**2.03**	**69**	⇑*i*P	**Pn**	**00 29 22.3**	**-0.1**
TARG				⇑*i*S	**Sn**	**00 29 48.5**	**-0.2**
KST	**Kastek**	**2.08**	**14**	Pg	**Pb**	**00 29 25.4**	**+0.1**
385nm,0.7s							
KST				Lg	Lg	00 29 54.1	
2µm,0.5s							
KST	**Kastek**	**2.08**	**14**	*e*P	**Pb**	**00 29 25.4**	**+0.1**
385nm,0.7s							
KST				*e*S	**Sg**	**00 29 54.1**	**+0.7**
2µm,0.5s							
MTBS	**Maitube**	**2.27**	**22**	Pg	**Pb**	**00 29 28.3**	**-0.2**
225nm,0.5s							
MTBS				Lg	Lg	00 29 59.6	
832nm,0.3s							
MTBS	**Maitube**	**2.27**	**22**	*e*P	**Pb**	**00 29 28.3**	**-0.2**
225nm,0.5s							
MTBS				*e*S	**Sg**	**00 29 59.6**	**0.0**
832nm,0.3s							
MRKS	**Merke**	**2.30**	**319**	Pg	**Pb**	**00 29 29.0**	**-0.1**
786nm,0.5s							
MRKS				Lg	Lg	00 29 60.0	
955nm,0.6s							
MRKS	**Merke**	**2.30**	**319**	*e*P	**Pb**	**00 29 29.0**	**-0.1**
786nm,0.5s							
MRKS				*e*S	**Sb**	**00 29 60.0**	**+2.0**
955nm,0.6s							
USP	**Ospenovka**	**2.31**	**346**	⇑P	**Pn**	**00 29 27.5**	**+1.5**
2µm,0.4s,SNR=440							
USP				⇓S	**Sn**	**00 29 55.2**	**+0.2**
2µm,0.5s							
USP	**Ospenovka**	**2.31**	**346**	⇑*i*P	**Pn**	**00 29 26.2**	**+0.2**
USP				⇑*i*S	**Sn**	**00 29 55.4**	**+0.4**
TNSS	**Tian-Shan**	**2.36**	**31**	Pg	**Pb**	**00 29 30.2**	**-0.1**
117nm,0.6s							
TNSS				Lg	Lg	00 30 02.8	
308nm,0.6s							
TNSS	**Tian-Shan**	**2.36**	**31**	*e*P	**Pb**	**00 29 29.8**	**-0.5**
TNSS				*e*S	**Sb**	**00 29 58.9**	**-1.2**
TNSS	**Tian-Shan**	**2.36**	**31**	*e*P	**Pb**	**00 29 30.2**	**-0.1**
117nm,0.6s							
TNSS				*e*S	**Sg**	**00 30 02.8**	**+0.3**
308nm,0.6s							
SGDS	**Sogindy**	**2.47**	**349**	Pg	**Pb**	**00 29 32.2**	**+0.3**
269nm,0.5s							
SGDS				Lg	Lg	00 30 06.4	
4µm,0.7s							
SGDS	**Sogindy**	**2.47**	**349**	*e*P	**Pb**	**00 29 30.8**	**-1.1**
SGDS				*e*S	**Sn**	**00 30 00.8**	**+1.8**
AAA	**Alma-Ata**	**2.50**	**29**	Pg	**Pb**	**00 29 32.4**	**0.0**
351nm,0.6s							
AAA				Lg	Lg	00 30 07.9	
68nm,0.3s							
AAA	**Alma-Ata**	**2.50**	**29**	*e*P	**Pb**	**00 29 31.9**	**-0.5**
AAA	**Alma-Ata**	**2.50**	**29**	*e*P	**Pb**	**00 29 32.4**	**0.0**
351nm,0.6s							
AAA				*e*S	**Sg**	**00 30 07.9**	**+1.0**
68nm,0.3s							
ANVS	**Anan'yevo**	**2.50**	**45**	⇑*i*P	**Pn**	**00 29 28.9**	**+0.2**
ANVS				⇑*i*S	**Sn**	**00 30 00.1**	**+0.1**
MDOK	**Medeo**	**2.51**	**31**	Pg	**Pb**	**00 29 32.8**	**+0.1**
326nm,0.7s							
MDOK				Lg	Lg	00 30 07.5	
2µm,0.8s							
MDOK	**Medeo**	**2.51**	**31**	*e*P	**Pb**	**00 29 31.6**	**-1.0**
KNDC	**Almaty**	**2.52**	**29**	⇑Pn	**Pb**	**00 29 32.3**	**-0.5**
1µm,0.7s							
KNDC				⇓Lg	Lg	00 30 07.5	
5µm,0.7s							
MNAS	**Manas**	**2.53**	**306**	⇓*i*P	**Pn**	**00 29 29.2**	**+0.1**
MNAS				⇓*i*S	**Sn**	**00 30 00.5**	**-0.2**
ARK	**Arkit**	**2.60**	**288**	⇑*i*P	**Pn**	**00 29 29.9**	**-0.2**
ARK				⇑*i*S	**Sn**	**00 30 01.9**	**-0.6**
KRBS	**Karabastau**	**2.68**	**6**	Pg	**Pb**	**00 29 35.8**	**+0.3**
1µm,0.5s							
KRBS				Lg	Lg	00 30 12.4	
2µm,0.4s							
KRBS	**Karabastau**	**2.68**	**6**	*e*P	**Pb**	**00 29 35.8**	**+0.3**
1µm,0.5s							
KRBS				*e*S	**Sg**	**00 30 12.4**	**-0.4**
2µm,0.4s							
PRZ	**Przheval'sk**	**2.75**	**57**		**Pn**	**00 29 33.9**	**+1.7**
PRZ	**Przheval'sk**	**2.75**	**57**	⇑*i*P	**Pn**	**00 29 32.3**	**+0.1**
PRZ				⇑*i*S	**Sn**	**00 30 06.1**	**-0.1**
KTBS	**Karatobe**	**2.88**	**21**	Pg	**Pb**	**00 29 38.5**	**-0.4**
3.4nm,0.1s							
KTBS				Lg	Lg	00 30 17.4	
2µm,0.5s							
KTBS	**Karatobe**	**2.88**	**21**	*e*P	**Pb**	**00 29 38.5**	**-0.4**
3.4nm,0.1s							
KTBS				*e*S	**Sg**	**00 30 17.4**	**-1.7**
2µm,0.5s							
WUS	**Wushi**	**2.98**	**85**		**Pn**	**00 29 36.6**	**+1.2**
DRK	**Karamyk**	**3.08**	**241**		**Pn**	**00 29 38.9**	**+2.2**
DRK	**Karamyk**	**3.08**	**241**	⇓*i*P	**Pn**	**00 29 36.3**	**-0.5**
DRK				⇓*i*S	**Sn**	**00 30 12.8**	**-1.6**
SATY	**Saty**	**3.09**	**48**	Pg	**Pb**	**00 29 43.0**	**+0.4**
300nm,0.7s							
SATY				Lg	Lg	00 30 25.1	
824nm,0.4s							
SATY	**Saty**	**3.09**	**48**	*e*P	**Pb**	**00 29 39.8**	**-2.7**
SATY	**Saty**	**3.09**	**48**	*e*P	**Pb**	**00 29 43.0**	**+0.4**
300nm,0.7s							
SATY				*e*S	**Sg**	**00 30 25.1**	**-0.8**
824nm,0.4s							
TRKS	**Terek-Say**	**3.15**	**280**	⇑*i*P	**Pn**	**00 29 37.0**	**-0.7**
TRKS				⇑*i*S	**Sn**	**00 30 14.3**	**-1.8**
KURS	**Kuram**	**3.26**	**40**	Pg	**Pb**	**00 29 45.6**	**+0.1**
137nm,0.7s							
KURS				Lg	Lg	00 30 29.2	
356nm,1.1s							
KURS	**Kuram**	**3.26**	**40**	*e*P	**Pb**	**00 29 45.6**	**+0.1**
137nm,0.7s							
KURS				*e*S	**Sg**	**00 30 29.2**	**-2.3**
356nm,1.1s							
DZA	**Taraz**	**3.48**	**304**	Pg	**Pb**	**00 29 51.7**	**+2.6**
60nm,0.4s							
DZA				Lg	Lg	00 30 39.5	
633nm,0.7s							
DZA	**Taraz**	**3.48**	**304**	*e*P	**Pn**	**00 29 44.6**	**+2.6**
DZA	**Taraz**	**3.48**	**304**	*e*P	**Pb**	**00 29 48.8**	**-0.3**
60nm,0.4s							
DZA				*e*S	**Sb**	**00 30 34.1**	**+2.2**
633nm,0.7s							
UZB	**Uzynbulak**	**3.50**	**52**	Pg	**Pb**	**00 29 49.3**	**-0.3**
122nm,0.5s							
UZB				Lg	Lg	00 30 35.6	
517nm,0.7s							
UZB	**Uzynbulak**	**3.50**	**52**	*e*P	**Pn**	**00 29 44.7**	**+2.3**
UZB	**Uzynbulak**	**3.50**	**52**	*e*P	**Pb**	**00 29 49.3**	**-0.3**
122nm,0.5s							
UZB				*e*S	**Sb**	**00 30 35.6**	**+3.0**
517nm,0.7s							
BTK	**Batken**	**3.53**	**255**		**Pn**	**00 29 44.0**	**+1.2**
BTK	**Batken**	**3.53**	**255**	⇑*i*P	**Pn**	**00 29 42.4**	**-0.4**
BTK				⇑*e*S	**Sn**	**00 30 23.5**	**-1.8**
ARXS	**Arharly**	**3.70**	**30**	Pg	**Pb**	**00 29 52.9**	**0.0**
150nm,0.6s							
ARXS				Lg	Lg	00 30 42.8	
914nm,0.8s							
ARXS	**Arharly**	**3.70**	**30**	*e*P	**Pb**	**00 29 52.9**	**0.0**
150nm,0.6s							
ARXS				*e*S	**Sg**	**00 30 42.9**	**-2.6**
914nm,0.8s							
SHLS	**Shalkode**	**3.77**	**54**	Pg	**Pg**	**00 29 59.7**	**+0.7**
116nm,0.5s							
SHLS				Lg	Lg	00 30 53.4	
496nm,0.5s							
SHLS	**Shalkode**	**3.77**	**54**	*e*P	**Pb**	**00 29 52.5**	**-1.7**
SHLS				*e*S	**Sb**	**00 30 40.3**	**-0.1**
SHLS	**Shalkode**	**3.77**	**54**	*e*P	**Pg**	**00 29 59.7**	**+0.7**
116nm,0.5s							
SHLS				*e*S	**Sg**	**00 30 53.4**	**+5.6**
496nm,0.5s							
PDGK	**Podgornoye**	**3.88**	**52**	⇓Pn	**Pn**	**00 29 49.0**	**+1.3**
12nm,0.5s							
PDGK				⇓Pg	**Pg**	**00 30 00.7**	**-0.4**
332nm,0.6s							
PDGK				⇓Lg	Lg	00 30 49.2	
567nm,1.1s							
PDGK	**Podgornoye**	**3.88**	**52**		**Pn**	**00 29 49.0**	**+1.3**
IUG	**luzhnay**	**4.09**	**288**	Pg	**Pb**	**00 30 00.7**	**+1.2**
74nm,0.6s							
IUG				Lg	Lg	00 30 55.5	
315nm,0.7s							
IUG	**luzhnay**	**4.09**	**288**	*e*P	**Pn**	**00 29 54.0**	**+3.5**
IUG	**luzhnay**	**4.09**	**288**	*e*P	**Pb**	**00 30 00.7**	**+1.2**
74nm,0.6s							
IUG				*e*S	**Sg**	**00 30 55.5**	**-2.5**
315nm,0.7s							
KK31	**Karatay Array**	**4.11**	**302**	Pn	**Pn**	**00 29 51.2**	**+0.5**
0.7nm,0.4s,baz=116,slow=10,SNR=370							
KK31				⇑Pg	**Pb**	**00 30 01.3**	**+1.5**
24nm,0.4s,baz=124,slow=12,SNR=146							
KK31				⇑Lg	Lg	00 30 57.4	
159nm,0.7s,baz=122,slow=29,SNR=7.4							
KK31	**Karatay Array**	**4.11**	**302**		**Pn**	**00 29 51.6**	**+0.9**
KKAR	**Karatay Array**	**4.11**	**302**		**Pn**	**00 29 50.9**	**+0.3**
BTLS	**Baital**	**4.11**	**348**	Pg	**Pb**	**00 30 03.3**	**+3.4**
89nm,0.5s							
BTLS				Lg	Lg	00 31 00.8	
557nm,0.6s							
BTLS	**Baital**	**4.11**	**348**	*e*P	**Pb**	**00 30 03.3**	**+3.4**
89nm,0.5s							
BTLS				*e*S	**Sg**	**00 31 00.8**	**+2.1**
557nm,0.6s							
GAR	**Garm**	**4.31**	**244**		**Pn**	**00 29 56.0**	**+2.4**
GAR	**Garm**	**4.31**	**244**	⇑*i*P	**Pn**	**00 29 53.3**	**-0.3**
GAR				⇑*i*S	**Sn**	**00 30 42.2**	**-2.4**
CHM	**Chimkent**	**4.44**	**289**	*e*P	**Pn**	**00 29 58.5**	**+3.3**
CHM	**Chimkent**	**4.44**	**289**	*e*P	**Pb**	**00 30 08.9**	**+3.4**
62nm,0.4s							
CHM				*e*S	**Sg**	**00 31 09.3**	**+0.1**
344nm,0.5s							
MANEM	**Manem**	**4.46**	**220**		**Pn**	**00 29 59.7**	**+3.9**
BRLS	**Borolday**	**4.52**	**298**	Pg	**Pb**	**00 30 09.6**	**+2.8**
42nm,0.7s							
BRLS				Lg	Lg	00 31 11.5	
102nm,0.6s							
BRLS	**Borolday**	**4.52**	**298**	*e*P	**Pn**	**00 29 59.4**	**+3.1**
BRLS	**Borolday**	**4.52**	**298**	*e*P	**Pb**	**00 30 09.6**	**+2.8**
42nm,0.7s							
BRLS				*e*S	**Sg**	**00 31 11.5**	**-0.3**
102nm,0.6s							
TDK	**Taldyorghan**	**4.58**	**29**	*e*P	**Pn**	**00 29 59.5**	**+2.2**
DJR	**Jarkent**	**4.69**	**44**	Pg	**Pb**	**00 30 11.6**	**+1.9**
192nm,0.6s							
DJR				Lg	Lg	00 31 14.6	
114nm,0.5s							
DJR	**Jarkent**	**4.69**	**44**	*e*P	**Pb**	**00 30 11.6**	**+1.9**
192nm,0.6s							
DJR				*e*S	**Sg**	**00 31 14.6**	**-2.6**
114nm,0.5s							
KAPS	**Kapalarasan**	**5.20**	**34**	Pg	**Pb**	**00 30 21.8**	**+3.4**
39nm,0.5s							
KAPS				Lg	Lg	00 31 31.9	
142nm,0.5s							
KAPS	**Kapalarasan**	**5.20**	**34**	*e*P	**Pb**	**00 30 21.8**	**+3.4**
39nm,0.5s							
KAPS				*e*S	**Sg**	**00 31 31.9**	**-1.7**
142nm,0.5s							
CHGR	**Chuyangaron**	**5.27**	**245**		**Pn**	**00 30 08.1**	**+1.4**
CHGR	**Chuyangaron**	**5.27**	**245**	⇓*i*P	**Pn**	**00 30 06.3**	**-0.4**
CHGR				⇓*i*S	**Sn**	**00 31 05.0**	**-3.2**
SHAA	**Shahritus**	**6.54**	**240**		**Pn**	**00 30 24.3**	**+0.2**
MAKZ	**Makanchi**	**7.53**	**38**	⇓Pn	**Pn**	**00 30 39.5**	**+1.8**
0.7nm,0.5s							
MAKZ				⇓Lg	Lg	00 32 45.7	
48nm,1.1s							
MAKZ	**Makanchi**	**7.53**	**38**		**Pn**	**00 30 38.2**	**+0.5**
NIL	**Nilore**	**7.54**	**193**		**Pn**	**00 30 40.4**	**+2.6**
MK31	**Makanchi Array**	**7.67**	**39**	⇑Pn	**Pn**	**00 30 41.2**	**+1.7**
1.2nm,0.7s,baz=215,slow=15,SNR=36							
MK31				⇑Lg	Lg	00 32 49.4	
19nm,0.7s,baz=219,slow=30,SNR=3.6							
MKAR	**Makanchi Array**	**7.67**	**39**	Pn	**Pn**	**00 30 41.4**	**+1.8**
0.3nm,0.3s,baz=216,slow=15,SNR=9.9							
MKAR				Lg	Lg	00 32 49.6	
2.6nm,0.3s,baz=220,slow=28,SNR=5.5							
MKAR				LR	LR	00 34 13.8	
comp=Z,48nm,20.5s,baz=194,slow=42							
1.6nm,0.8s							
MKAR	**Makanchi Array**	**7.67**	**39**		**Pn**	**00 30 40.3**	**+0.7**
KBL	**Kabul**	**8.14**	**219**		**Pn**	**00 30 49.3**	**+3.1**
TSSA	**Tissa**	**8.21**	**175**	*e*P	**Pn**	**00 30 48.6**	**+1.4**
TSSA				*e*S	**Sn**	**00 32 23.2**	**+2.6**
TSSA				IAML		00 32 27.8	
comp=E,91nm,0.6s							
TSSA				IAML		00 32 34.4	
comp=E,91nm,1.9s							
JMU	**Jammu**	**8.24**	**183**	*ex*	x	00 30 26.9	
JMU				*e*S	**Sn**	**00 32 23.3**	**+2.0**
THN	**Thein Dam**	**8.58**	**177**	*e*P	**Pn**	**00 30 54.7**	**+2.6**
THN				*e*S	**Sn**	**00 32 31.3**	**+1.7**
THN				IAML		00 32 40.1	
comp=E,42nm,0.9s							
THN				IAML		00 32 40.2	
comp=N,36nm,0.9s							
DHRM	**DHARAMSHALA**	**8.80**	**174**	*e*P	**Pn**	**00 30 56.4**	**+1.0**
DHRM				*e*S	**Sn**	**00 32 35.2**	**-0.2**
DHRM				IAML		00 32 42.3	
comp=N,84nm,1.1s							
DHRM				IAML		00 32 42.5	
comp=E,132nm,0.9s							
ZSN	**Zaisan**	**9.41**	**44**	*e*P	**Pn**	**00 31 06.4**	**+3.1**
WMQ	**Urumqi**	**9.60**	**69**	P	**Pn**	**00 31 06.1**	**0.0**
WMQ				S	**Sn**	**00 32 59.1**	**+4.5**
WMQ				SMN			
comp=E,24nm,1.7s							
WMQ				SME			
comp=E,28nm,1.7s							
BHK	**Bhakra**	**9.66**	**174**	*e*P	**Pn**	**00 31 10.9**	**+4.0**
BHK				*e*S	**Sn**	**00 32 56.9**	**+0.9**
KURBB	**Kurchatov Arra**	**9.86**	**12**	Pn	**Pn**	**00 31 10.1**	**+0.6**
comp=E,0.2nm,0.3s,baz=209,slow=11,SNR=7.2							
KURBB				Lg	Lg	00 33 57.1	
comp=E,1.1nm,0.3s,baz=197,slow=28,SNR=9.6							
KURBB				LR	LR	00 35 29.9	
comp=E,73nm,19.7s,baz=166,slow=40							
comp=E,0.9nm,0.2s							
KURBB	**Kurchatov Arra**	**9.86**	**12**	⇓Pn	**Pn**	**00 31 12.7**	**+3.2**
comp=E,8.9nm,0.6s							
KURBB				⇑Lg	Lg	00 34 00.9	
comp=E,304nm,0.8s							
KURK	**Kurchatov**	**9.96**	**12**	⇓Pn	**Pn**	**00 31 12.7**	**+1.7**
comp=E,1.7nm,0.8s							
KURK				⇑Lg	Lg	00 34 03.2	
comp=E,152nm,1.1s							
KURK	**Kurchatov**	**9.96**

ULN				IAmb	IAmb	00 34 00.6		
	comp=Z,7.5nm,1.3s							
KBZ	**Khabaz**	**23.99**	**287**	P	**P**	**00 34 01.7**	**-1.0**	
	comp=Z,0.7nm,0.5s,baz=83,slow=7.1,SNR=3.6							
	comp=Z,0.7nm,0.5s							
KVAR	**Kislovodsk Arr**	**24.11**	**288**	LR	LR	00 46 21.7		
	comp=Z,30nm,18.9s,baz=114,slow=44							
KIV	**Kislovodsk**	**24.12**	**288**	P	**P**	**00 34 05.3**	**+1.2**	
KIV				IAmb	IAmb	00 34 34.3		
	comp=Z,6.5nm,0.6s							
HHC	**Hu-ho-hao-te**	**27.29**	**78**	*e*P	**P**	**00 34 32.0**	**-0.9**	
HHC				pmax	pmax			
	comp=Z,11nm,0.5s							
RAYN	**Ar Rayn**	**30.43**	**244**	P	**P**	**00 35 02.8**	**+2.0**	
BR131	**Keskin Array S**	**31.53**	**282**	P	**P**	**00 35 10.3**	**-0.2**	
BR131				IAmb	IAmb	00 35 14.9		
	comp=Z,5.0nm,0.9s							
BRTR	**Keskin Array B**	**31.53**	**282**	P	**P**	**00 35 10.5**	**0.0**	
	comp=Z,3.5nm,0.9s,baz=90,slow=8.5,SNR=18							
	comp=Z,3.5nm,0.9s							
BRTR	**Keskin Array B**	**31.53**	**282**	P	**P**	**00 35 09.6**	**-0.9**	
AKASG	**Malin Array Be**	**33.01**	**303**	P	**P**	**00 35 22.1**	**-1.1**	
	comp=Z,0.1nm,0.2s,baz=81,slow=7.8,SNR=1.7							
	comp=Z,0.1nm,0.2s							
AKASG	**Malin Array Be**	**33.01**	**303**	P	**P**	**00 35 22.1**	**-1.1**	
AKASG				IAmb	IAmb	00 35 26.4		
	comp=Z,3.0nm,1.2s							
MNK	**Minsk**	**33.91**	**310**	*i* P	**P**	**00 35 33.4**	**+2.4**	
	comp=E,14nm,0.8s							
MNK				*i* P	**P**	**00 35 33.4**	**+2.4**	
	comp=N,4.0nm,0.5s							
MNK				*i* P	**P**	**00 35 33.4**	**+2.4**	
	comp=Z,6.0nm,0.6s,baz=93							
MNK				*i* PP	**PP**	**00 36 46.1**	**-1.4**	
MNK				*i* PPP	PPP	00 36 57.3		
MNK				*i* S	**S**	**00 40 58.6**	**+2.4**	
MNK				*i* SS	**SnSn**	**00 43 05.4**	**+4.3**	
MNK				*i* SSS	SSS	00 43 21.1		
MNK				*i* LQ	LQ	00 46 46.9		
MNK				*i* LR	LR	00 49 21.6		
MNK				*i* LRM	MLR	00 51 29.7		
	comp=N,31nm,18.0s							
MNK				*i* LRM	MLR	00 52 12.1		
	comp=E,54nm,19.2s							
MLR	**Muntele Rosu**	**35.74**	**294**	P	**P**	**00 35 48.2**	**+1.1**	
MLR				IAmb	IAmb	00 35 52.5		
	comp=Z,3.9nm,0.8s							
FINES	**FINESS Array B**	**35.80**	**322**	P	**P**	**00 35 46.8**	**-0.4**	
	comp=Z,2.6nm,0.9s,baz=116,slow=8.7,SNR=6.1							
FINES				LR	LR	00 50 51.1		
	comp=Z,60nm,19.7s,baz=124,slow=37							
	comp=Z,2.6nm,0.9s							
FINES	**FINESS Array B**	**35.80**	**322**	P	**P**	**00 35 47.4**	**+0.2**	
BUR08	**Bucovina Ar. S**	**35.89**	**298**	P	**P**	**00 35 48.8**	**+0.5**	
HEH	**HeiHe**	**36.92**	**58**	*e*P	**P**	**00 35 57.5**	**+0.6**	
HEH				pmax	pmax			
	comp=Z,8.0nm,0.8s							
KOLS	**Kolonicke sedl**	**37.64**	**300**	*e*P	**P**	**00 36 06.0**	**+2.9**	
YAK	**Yakutsk**	**38.34**	**38**	P	**P**	**00 36 07.5**	**-1.3**	
ARCES	**ARCESS Array B**	**38.37**	**334**	P	**P**	**00 36 09.1**	**+0.1**	
	comp=Z,1.3nm,0.6s,baz=107,slow=6.6,SNR=10							
	comp=Z,1.3nm,0.6s							
KLR	**Kul'dur**	**39.85**	**59**	LR	LR	00 54 03.9		
	comp=Z,138nm,18.9s,baz=232,slow=38							
TIXI	**Tiksi**	**40.31**	**23**	P	**P**	**00 36 24.3**	**-0.9**	
TIXI				IAmb	IAmb	00 36 25.8		
	comp=Z,6.3nm,0.9s							
KSRS	**Korea Array**	**40.42**	**77**	LR	LR	00 55 46.5		
	comp=Z,65nm,18.7s,baz=215,slow=40							
HFS	**Hagfors**	**41.72**	**319**	P	**P**	**00 36 36.1**	**-0.8**	
	comp=Z,3.4nm,0.8s,baz=112,slow=6.6,SNR=8.5							
	comp=Z,3.4nm,0.8s							
NC405	**NORSAR Array S**	**42.67**	**320**	P	**P**	**00 36 44.6**	**0.0**	
NC405				IAmb	IAmb	00 36 52.0		
	comp=Z,12nm,1.1s							
NB2	**NORSAR Subarra**	**42.92**	**320**	P	**P**	**00 36 45.8**	**-0.9**	
	comp=Z,0.5nm,0.6s,baz=105,slow=6.9							
NOA	**NORSAR Array B**	**42.92**	**320**	P	**P**	**00 36 45.6**	**-1.1**	
	comp=Z,1.2nm,0.8s,baz=103,slow=6.7,SNR=3.8							
NOA				LR	LR	00 55 11.9		
	comp=Z,43nm,19.4s,baz=90,slow=37							
	comp=Z,1.2nm,0.8s							
GERES	**GERESS Array B**	**43.21**	**302**	P	**P**	**00 36 49.5**	**+0.2**	
	comp=Z,1.6nm,0.8s,baz=69,slow=7.3,SNR=12							
	comp=Z,1.6nm,0.8s							
GERES	**GERESS Array B**	**43.21**	**302**	P	**P**	**00 36 49.1**	**-0.2**	
MOX	**Moxa**	**44.11**	**305**	*e*L	L	00 56 27.2		
	comp=Z,46nm,20.8s							
CLUD	**Cludinico**	**44.37**	**299**	*e*Pg	**P**	**00 37 01.6**	**+3.0**	
GRF	**Grafenberg Arr**	**44.58**	**304**	*e*P	**P**	**00 37 00.6**	**+0.3**	
	comp=Z,4.9nm,0.9s,baz=80,slow=6.9							
GRF				*e*L	L	00 58 19.8		
	comp=Z,28nm,20.8s							
MJAR	**Matsushiro Arr**	**48.33**	**74**	P	**P**	**00 37 28.7**	**-1.1**	
	comp=Z,3.0nm,0.8s,baz=294,slow=7.6,SNR=5.8							
	comp=Z,3.0nm,0.8s							
EKA	**Eskdalemuir Ar**	**51.44**	**314**	P	**P**	**00 37 52.8**	**-0.4**	
	comp=Z,1.8nm,0.8s,baz=74,slow=8.2,SNR=4.1							
	comp=Z,1.8nm,0.8s							
ESDC	**Sonseca Array**	**58.34**	**297**	P	**P**	**00 38 42.0**	**-1.5**	
	comp=Z,1.1nm,0.9s,baz=53,slow=7.0,SNR=5.6							
	comp=Z,1.1nm,0.9s							
C19K	**Lookout Ridge**	**62.99**	**19**	P	**P**	**00 39 14.7**	**0.0**	
E18K	**Tukpahlearik C**	**63.94**	**21**	P	**P**	**00 39 20.6**	**-0.3**	
SFJD	**Kangerlussuaq**	**64.72**	**339**	LR	LR	01 07 00.2		
	comp=Z,39nm,21.7s,baz=17,slow=35							
F21K	**Alatna River**	**65.91**	**19**	P	**P**	**00 39 33.4**	**-0.4**	
F21K				IAmb	IAmb	00 39 34.4		
	comp=Z,6.2nm,1.4s							
F24K	**Squaw Lake**	**66.96**	**17**	P	**P**	**00 39 40.0**	**-0.5**	
F24K				IAmb	IAmb	00 39 40.9		
	comp=Z,1.2nm,0.7s							
G24K	**Hadweenzic Riv**	**67.73**	**17**	P	**P**	**00 39 45.3**	**-0.1**	
G24K				IAmb	IAmb	00 39 46.4		
	comp=Z,2.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**69.14**	**269**	P	**P**	**00 39 53.0**	**-1.9**	
	comp=Z,2.0nm,0.8s,baz=46,slow=4.5,SNR=8.3							
	comp=Z,2.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**69.14**	**269**		**P**	**00 39 55.1**	**+0.1**	
TORD				IAmb	IAmb	00 40 00.7		
	comp=Z,1.8nm,0.9s							
ILAR	**Eielson Array**	**69.48**	**18**	P	**P**	**00 39 55.5**	**-0.8**	
	comp=Z,1.6nm,0.7s,baz=318,slow=5.6,SNR=19							
	comp=Z,1.6nm,0.7s							
ILAR	**Eielson Array**	**69.48**	**18**	P	**P**	**00 39 54.9**	**-1.5**	
RIDG	**Independent Ri**	**70.83**	**18**	P	**P**	**00 40 03.6**	**-1.1**	
YKA	**Yellowknife Ar**	**76.52**	**5**	P	**P**	**00 40 37.7**	**-0.3**	
	comp=Z,2.4nm,0.8s,baz=348,slow=5.5,SNR=11							
	comp=Z,2.4nm,0.8s							
YKA	**Yellowknife Ar**	**76.52**	**5**	P	**P**	**00 40 36.8**	**-1.3**	
WRA	**Warramunga Arr**	**81.71**	**125**	P	**P**	**00 41 04.6**	**-2.4**	
	comp=Z,1.4nm,1.1s,baz=331,slow=5.1,SNR=2.9							
	comp=Z,1.4nm,1.1s							
ASAR	**Alice Springs**	**84.26**	**128**	P	**P**	**00 41 18.6**	**-1.6**	
	comp=Z,0.4nm,0.8s,baz=310,slow=5.8,SNR=3.0							
	comp=Z,0.4nm,0.8s							

IDC 12 00:32:01.6±332.0, 23°.18N×158°.04W, h0km, Error ellipse: s-maj=144.0km s-min=84.4km az=162.0, Hawaiian Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I59US	**HAWAII INFRASO**	**4.09**	**150**	I	I	00 58 20.0	
	baz=332,slow=323,SNR=5.9						
I58US	**Midway Islands**	**18.13**	**290**	I	I	02 24 50.0	
	0.1nm,0.6s,baz=104,slow=309,SNR=2.0						
I60US	**Wake Island**	**33.13**	**270**	I	I	03 51 50.0	
	baz=76,slow=307,SNR=0.5						

*IDC **12** 00:36:21.9±2.1, 32°.90S×66°.94W, h0km, mbtmp3.6/4, ML3.6/4, Error ellipse: s-maj=21.8km s-min=17.3km az=66.0*
*SJA **12** 00:36:21.1±0.7, 32°.60S×66°.63W, h5km±3km, ML3.6, MW3.3*

ISC 12 00:36:22.8±0.8, 32°.75S±0°.04×66°.66W±0°.03, h10km, n32, σ2s14/49, San Luis Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACAN	**Cantantal**	**0.65**	**316**	*e*P	**Pg**	**00 36 33.2**	**-2.3**
ACAN				IAML		00 36 43.7	
	comp=Z,4μm,0.2s						
MRA	**San Martin**	**0.86**	**68**	*e*P	**Pg**	**00 36 35.9**	**-3.6**
MRA				*e*S	**Sg**	**00 36 49.1**	**-1.5**
MRA				IAML		00 36 52.7	
	comp=Z,2μm,0.3s						
AVIZ	**Vizcaberas**	**1.72**	**245**	*e*P	**Pg**	**00 36 55.4**	**-0.4**
CFA	**Coronel Fontan**	**1.76**	**310**	Pn	**Pn**	**00 36 52.6**	**-0.9**
	comp=Z,12nm,0.3s,baz=143,slow=15,SNR=378						
CFA				Lg	Lg	00 37 15.4	
	comp=Z,91nm,0.3s,baz=236,slow=11,SNR=24						
CFA	**Coronel Fontan**	**1.76**	**310**	*e*P	Pn	00 36 47.4	-6.1
CFA				*e*P	**Pb**	**00 36 52.0**	**-3.3**
CFA				*e*S	**Sb**	**00 37 15.8**	**-1.7**
CFA				IAML		00 37 17.1	
	comp=Z,480nm,0.2s						
AAGR	**Agrelo**	**1.86**	**259**	*e*P	**Pb**	**00 36 55.9**	**-1.0**
AAGR				*e*S	**Sg**	**00 37 23.4**	**+0.9**
AAGR				IAML		00 37 32.0	
	comp=Z,380nm,0.5s						
ARCO	**CERRO ARCO**	**1.92**	**267**	*e*P	**Pb**	**00 36 56.5**	**-1.6**
ARCO				*e*S	**Sg**	**00 37 24.3**	**-0.3**
ARCO				IAML		00 37 25.9	
	comp=Z,595nm,0.5s						
SJA	**San Juan**	**2.02**	**307**	*e*S	**Sb**	**00 37 23.8**	**-1.2**
SJA				IAML		00 37 25.2	
	comp=Z,413nm,0.2s						
ZON	**Zonda**	**2.09**	**304**	*e*P	**Pn**	**00 36 58.2**	**+0.2**
ZON				*e*S	**Sb**	**00 37 25.2**	**-1.9**
ZON				IAML		00 37 28.7	
	comp=Z,433nm,0.4s						
RTLL	**Cerro Villicun**	**2.10**	**312**	*e*P	**Pb**	**00 36 58.6**	**-2.4**
RTLL				*e*S	**Sb**	**00 37 25.5**	**-1.6**
RTLL				IAML		00 37 27.7	
	comp=Z,619nm,0.3s						
TCA	**Tanti**	**2.25**	**52**	*e*P	**Pb**	**00 37 01.6**	**-2.0**
TCA				*e*S	**Sg**	**00 37 35.9**	**+0.8**
TCA				IAML		00 37 39.4	
	comp=Z,395nm,0.4s						
RTLS	**Leoncito**	**2.43**	**292**	*e*P	**Pn**	**00 37 03.5**	**+0.6**
RTLS				*e*S	**Sb**	**00 37 36.1**	**-0.8**
RTLS				IAML		00 37 40.0	
	comp=Z,1μm,0.6s						
PIL	**Pilar**	**2.59**	**66**	*e*S	**Sg**	**00 37 45.9**	**-0.1**
ACCO	**Cerro Coronel**	**2.98**	**316**	*e*P	**Pn**	**00 37 06.2**	**-4.2**
ACCO				*e*S	**Sn**	**00 37 48.2**	**+1.8**
ACCO				IAML		00 37 55.4	
	comp=Z,198nm,0.6s						
VA03	**San Esteban**	**3.28**	**269**	*e*P	**Pn**	**00 37 16.9**	**+2.5**
VA03				*e*S	**Sb**	**00 37 59.5**	**-1.7**
VA03				IAML		00 38 07.6	
	comp=Z,273nm,0.4s						
MT03	**Universidad Ad**	**3.32**	**256**	*e*P	**Pn**	**00 37 17.2**	**+2.3**
MT03				*e*S	**Sg**	**00 38 09.3**	**-0.1**
MT03				IAML		00 38 15.3	
	comp=Z,109nm,0.3s						
ACDV	**Cuesta del Vie**	**3.32**	**320**	*e*P	**Pn**	**00 37 16.1**	**+1.0**
ACDV				*e*S	**Sn**	**00 37 57.2**	**+2.5**
ACDV				IAML		00 38 02.7	
	comp=Z,80nm,0.6s						
ACLC	**CERRO LA CRUZ**	**3.32**	**356**	*e*P	**Pn**	**00 37 16.0**	**+0.9**
ACLC				*e*S	**Sb**	**00 37 59.0**	**-3.6**
ACLC				IAML		00 38 18.8	
	comp=Z,75nm,0.3s						
PEL	**Peldehue**	**3.41**	**262**	*e*P	**Pn**	**00 37 17.9**	**+1.8**
PEL				*e*S	**Sb**	**00 38 02.7**	**-2.2**
PEL				IAML		00 38 08.1	
	comp=Z,122nm,1.1s						
MT05	**Renca**	**3.49**	**258**	*e*P	**Pn**	**00 37 15.7**	**-1.5**
MT05				IAML		00 38 12.2	
	comp=Z,73nm,0.5s						
AROD	**Rodeo**	**3.52**	**316**	*e*P	Pn	00 37 02.9	-15
MT02	**Curacav**	**3.80**	**261**	*e*P	**Pn**	**00 37 17.5**	**-4.0**
MT02				*e*P	Pb	00 37 22.6	-7.4
MT02				*e*S	**Sb**	**00 38 17.5**	**+1.4**
MT02				IAML		00 38 23.0	
	comp=Z,58nm,0.6s						
CO02	**Combarbal**	**4.00**	**292**	*e*P	**Pn**	**00 37 25.6**	**+1.3**
CO02				*e*S	**Sb**	**00 38 24.0**	**+2.0**
CO02				IAML		00 38 27.8	
	comp=Z,297nm,0.6s						
MT01	**Popeta**	**4.00**	**253**	*e*P	**Pn**	**00 37 25.4**	**+1.1**
MT01				*e*S	**Sg**	**00 38 28.2**	**-3.2**
VCA	**Vinchina**	**4.22**	**341**	*e*P	**Pn**	**00 37 27.6**	**+0.2**
VCA				*e*S	**Sb**	**00 38 30.7**	**+2.4**
GO04	**Tololo Observa**	**4.37**	**305**	*e*S	**Sb**	**00 38 35.2**	**+2.4**
TINO	**Tinogasta**	**4.74**	**350**	*e*P	**Pn**	**00 37 37.1**	**+2.6**
LCO	**Las Campanas**	**5.10**	**316**	*e*S	**Sb**	**00 38 53.3**	**-0.3**
PLCA	**Paso Flores**	**8.56**	**200**	Pn	**Pn**	**00 38 23.9**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=16,slow=19,SNR=1.8						
PLCA				Lg	Lg	00 40 46.5	
	comp=Z,0.5nm,0.3s,baz=282,slow=20,SNR=4.8						
	comp=Z,2.2nm,0.8s						
CPUP	**Villa Florida**	**10.34**	**54**	Pn	**Pn**	**00 38 55.3**	**+4.1**
	comp=Z,0.4nm,0.3s,baz=237,slow=6.0,SNR=3.1						
CPUP				Lg	Lg	00 41 58.0	
	comp=Z,0.5nm,0.3s,baz=294,slow=8.0,SNR=4.4						
	comp=Z,1.2nm,0.3s						
LPAZ	**La Paz**	**16.45**	**355**	Pn	**P**	**00 40 18.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=174,slow=10,SNR=5.8						
	comp=Z,0.9nm,0.7s						
SIV	**San Ignacio**	**17.44**	**18**	P	**P**	**00 40 30.0**	**+2.4**
	baz=195,slow=16,SNR=1.7						
SIV				Lg	Lg	00 45 40.5	
	baz=137,slow=21,SNR=1.6						
	comp=Z,0.5nm,0.6s						

*TEH **12** 00:45:33.6, 35°.62N×52°.63E, h8km±15km, ML3.6, Presumed earthquake*

ISC 12 00:45:33.8±1.1, 35°.64N±0°.03×52°.61E±0°.03, h16km±9km, n26, σ2s44/28, 2C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFIR	**Firoozkooh**	**0.12**	**91**	Pg	**Pg**	**00 45 36.3**	**-1.3**
ILAS	**Lasjerd**	**0.39**	**133**	Pg	**Pg**	**00 45 41.4**	**-0.3**
IALA	**Alasht**	**0.47**	**20**	Pg	**Pg**	**00 45 43.5**	**+0.2**
IDMV	**Damavand**	**0.48**	**262**	Pg	**Pg**	**00 45 43.1**	**-0.3**
IPRN	**Peran**	**0.64**	**340**	Pg	**Pg**	**00 45 46.6**	**+0.2**
IVRN	**Varamin**	**0.97**	**228**	Pg	**Pb**	**00 45 52.5**	**+0.2**
TEHA	**Amirabad Tehra**	**1.00**	**276**	Pg	**Pg**	**00 45 53.3**	**+0.1**
IANJ	**Anjilo**	**1.08**	**99**	Pg	**Pg**	**00 45 53.9**	**-0.8**
IHSB	**Hasanabad**	**1.11**	**260**	Pg	**Pb**	**00 45 55.4**	**+0.7**
MZPU	**Pul - Mazandar**	**1.16**	**314**	Pg	**Pb**	**00 45 56.5**	**+0.9**
IGLO	**Ghaloghah**	**1.31**	**49**	Pg	**Pg**	**00 45 58.9**	**-0.1**
ISFB	**Sefidab**	**1.32**	**193**	Pg	**Pn**	**00 45 58.2**	**+0.5**
IQOM	**Qom**	**1.49**	**238**	Pg	**Pn**	**00 46 01.2**	**+1.0**
KRSH	**Karshahi**	**1.72**	**193**	Pg	**Pb**	**00 46 05.0**	**0.0**
IGZV	**Ghazvin**	**2.08**	**292**	Pn	**Pb**	**00 46 11.7**	**+0.5**
ANAR	**Anarak**	**2.62**	**159**	Pn	**Pn**	**00 46 17.9**	**+2.4**
IZEF	**Zefreh**	**2.75**	**185**	Pn	**Pn**	**00 46 20.4**	**+2.9**
MRVT	**Maraveh tapeh**	**3.44**	**53**	Pn	**Pn**	**00 46 30.3**	**+3.5**
TNSJ	**Nastanj**	**3.69**	**116**	Pn	**Pn**	**00 46 33.0**	**+2.7**
SBZV	**Sabzevar**	**4.12**	**78**	Pn	**Pn**	**00 46 39.0**	**+2.8**
SNQR	**Sonqor, Kerman**	**4.15**	**261**	Pn	**Pn**	**00 46 39.8**	**+3.0**
TKDS	**Koohdasht(Taba**	**4.24**	**117**	Pn	**Pn**	**00 46 40.6**	**+2.9**
TPRV	**Parvadeh(Tabas**	**4.26**	**127**	Pn	**Pn**	**00 46 41.0**	**+2.8**
IEMG	**Emamgholi**	**5.17**	**68**	Pn	**Pn**	**00 46 53.9**	**+3.0**
AB31	**Akbulak array**	**14.63**	**19**	⇑Pn	**Pn**	**00 48 59.6**	**-0.3**
	1.4nm,0.8s,baz=216,slow=13,SNR=7.9						
AB31				⇓Sn	**Sn**	**00 51 37.9**	**-3.7**
	2.3nm,0.9s,baz=210,slow=22,SNR=6.2						
AKTO	**Aktyubinsk**	**15.29**	**13**	⇓Pn	**Pn**	**00 49 06.3**	**-2.6**
	1.6nm,0.8s						
AKTO				⇑Sn	**Sn**	**00 51 51.6**	**-6.4**
	2.1nm,1.2s						

*IDC **12** 00:55:05.3±1.5, 34°.44N×24°.23E, h0km, mb3.6/5, mbtmp3.6/6, ML2.2/1, MS3.0/1, Error ellipse: s-maj=34.8km s-min=26.4km az=138.0*
*THE **12** 00:55:09.6, 35°.N±7°×2°.4E±°, h0km±2km, M2.9/10, MLh2.9/10*
*ATH **12** 00:55:09.0, 34°.71N×24°.02E, h16km±1km, ML2.9/9, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 12 00:55:07.0±2.1, 34°.57N±0°.08×24°.03E±0°.05, h7km±12km, n31, σ1s30/38, mb3.4/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.27**	**11**	P	**Pg**	**00 55 13.1**	**+0.7**
GVD				S	**Sg**	**00 55 18.3**	**+2.2**
GVD	**Gavdhos**	**0.27**	**11**	P	**Pg**	**00 55 13.1**	**+0.7**
GVD				S	**Sg**	**00 55 16.3**	**+0.3**
KNDR	**Palaiochora Ch**	**0.74**	**334**	P	**Pg**	**00 55 21.2**	**-0.1**
KNDR				S	**Sb**	**00 55 34.6**	**+2.0**
KNDR				S	**Sg**	**00 55 29.7**	**-1.3**
SIVA	**Sivas**	**0.79**	**55**	P	**Pg**	**00 55 22.2**	**+0.1**
VAM	**Vamos**	**0.85**	**10**	P	**Pg**	**00 55 23.5**	**+0.2**
VAM	**Vamos**	**0.85**	**10**	P	**Pg**	**00 55 23.2**	**-0.1**
VAM				S	**Sg**	**00 55 32.8**	**-1.5**
IMMV	**Iera Moni Meta**	**0.89**	**358**	P	**Pg**	**00 55 23.4**	**-0.7**
IMMV				S	**Sb**	**00 55 36.8**	**-0.1**
IMMV	**Iera Moni Meta**	**0.89**	**358**	P	**Pg**	**00 55 23.2**	**-0.9**
IMMV				S	**Sg**	**00 55 33.7**	**-2.0**
CH01	**Chania**	**0.95**	**360**	P	**Pg**	**00 55 24.8**	**-0.4**
CHAN	**Chania**	**0.95**	**1**	P	**Pg**	**00 55 24.8**	**-0.5**
CHAN				S	**Sg**	**00 55 34.8**	**-2.7**
IDI	**Anoyia**	**1.01**	**44**	P	**Pg**	**00 55 26.3**	**-0.1**
IDI	**Anoyia**	**1.01**	**44**	P	**Pb**	**00 55 26.5**	**-0.4**
ANKY	**Antikythira Is**	**1.43**	**336**	P	**Pg**	**00 55 34.9**	**+0.5**
ANKY	**Antikythira Is**	**1.43**	**336**	P	**Pg**	**00 55 32.6**	**-1.7**
NPS	**Neapolis**	**1.48**	**62**	P	**Pg**	**00 55 34.5**	**-0.8**
KTHA	**Kythira Island**	**1.86**	**335**	P	**Pn**	**00 55 42.1**	**+2.7**
KTHA	**Kythira Island**	**1.86**	**335**	P	**Pn**	**00 55 39.2**	**-0.1**
ZKR	**Zakros**	**1.88**	**73**	P	**Pn**	**00 55 41.0**	**+1.3**
SNT5	**Nea Kammeni, S**	**2.15**	**31**	P	**Pn**	**00 55 44.5**	**+1.2**
THERA	**Ancient Thera,**	**2.15**	**33**	P	**Pn**	**00 55 44.4**	**+1.1**
THR8	**Santorini-Mono**	**2.18**	**32**	P	**Pn**	**00 55 44.3**	**+0.5**
VLI	**Veliai**	**2.32**	**338**	P	**Pn**	**00 55 47.9**	**+2.2**
VLI	**Veliai**	**2.32**	**338**	P	**Pn**	**00 55 45.3**	**-0.4**
GERES	**GERESS Array B**	**16.19**	**335**	Pn	**P**	**00 58 59.0**	**+0.7**
	baz=160,slow=12,SNR=8.1						
	0.9nm,0.8s						
HFS	**Hagfors**	**26.45**	**348**	P	**P**	**01 00 43.2**	**-1.2**
	2.9nm,1.0s,baz=151,slow=9.9,SNR=2.1						
	2.9nm,1.0s						
NOA	**NORSAR Array B**	**27.74**	**347**	LR	LR	01 12 51.0	
	comp=Z,28nm,19.2s,baz=5.0,slow=38						
EKA	**Eskdalemuir Ar**	**28.00**	**326**	P	**P**	**01 01 00.5**	**+2.2**
	0.4nm,0.7s,baz=100,slow=8.1,SNR=3.8						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.40**	**229**	P	**P**	**01 01 10.7**	**-0.4**
	1.0nm,0.7s,baz=42,slow=8.8,SNR=7.2						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**42.22**	**51**	P	**P**	**01 02 59.5**	**-1.0**
	0.2nm,0.5s,baz=277,slow=8.6,SNR=4.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**44.88**	**56**	P	**P**	**01 03 20.9**	**-1.2**
	0.3nm,0.7s,baz=278,slow=8.5,SNR=3.5						
	0.3nm,0.7s						

*NEIC **12** 00:59:48.8±2.0, 18°.4S±0°.2×178°.0W±0°.1, h589km±8km, mb4.3/19, Error ellipse: s-maj=28.8km s-min=13.0km az=149.0*
*IDC **12** 00:59:49.8±1.8, 18°.05S×178°.17W, h601km±19km, mb3.4/8, mbtmp4.3/10, Error ellipse: s-maj=30.9km s-min=17.9km az=146.0*

ISC 12 00:59:48.3±0.6, 18°.1S±0°.2×178°.1W±0°.1, h590km, n41, σ0s91/43, mb4.2/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.70**	**275**	P	**P**	**01 01 13.0**	**+1.9**
	176nm,0.7s,baz=130,slow=4.4,SNR=87						
AFI	**Afiamalu**	**7.37**	**56**	P	**P**	**01 01 40.3**	**-1.1**
DZM	**Mont Dzumac**	**15.06**	**252**	P	**P**	**01 02 58.5**	**+1.0**
	3.6nm,0.6s,baz=96,slow=10,SNR=15						
EIDS	**Eidsvold**	**29.49**	**250**	P	**P**	**01 05 05.5**	**-0.7**
EIDS				IAmb	IAmb	01 05 07.0	
	comp=Z,4.2nm,0.7s						
ARMA	**Armidale**	**30.11**	**240**	P	**P**	**01 05 11.3**	**-0.3**
ARMA				IAmb	IAmb	01 05 38.7	
	comp=Z,16nm,1.4s						
CTAO	**Charters Tower**	**33.72**	**261**	P	**P**	**01 05 41.3**	**-0.9**
CTAO				IAmb	IAmb	01 05 43.0	
	comp=Z,6.5nm,0.7s						
CAN	**Canberra**	**33.83**	**233**	P	**P**	**01 05 43.3**	**+0.3**
TOO	**Toolangi**	**37.28**	**231**	P	**P**	**01 06 12.0**	**+0.5**
TOO				IAmb	IAmb	01 06 13.7	
	comp=Z,4.5nm,1.1s						
STKA	**Stephens Creek**	**38.80**	**241**	P	**P**	**01 06 24.6**	**+0.8**
	comp=Z,5.5nm,0.5s,baz=99,slow=11,SNR=9.4						
	comp=Z,5.5nm,0.5s						
INKA	**Innaminka**	**38.95**	**248**	P	**P**	**01 06 25.3**	**+0.2**
INKA				IAmb	IAmb	01 06 27.1	
	comp=Z,3.9nm,0.6s						
BBOO	**Buckleboo**	**43.58**	**241**	P	**P**	**01 07 01.1**	**-0.4**
WB0	**Warramunga Arr**	**44.87**	**

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.14**	**7**	P	Pn	01 21 09.0	-4.3
GLKZ				S	**Sn**	**01 21 56.8**	**-5.0**
RAO	**Raoul Island**	**4.15**	**7**	Pn	**Pn**	**01 21 12.5**	**-1.0**
	48nm,0.3s,baz=76,slow=23,SNR=2.7						
RAO				Sn	**Sn**	**01 21 57.8**	**-4.3**
	107nm,0.3s,baz=109,slow=24,SNR=3.5						
	173nm,0.4s						
RAO	**Raoul Island**	**4.15**	**7**		Pn	01 21 08.5	-5.0
MXZ	**Matakaoa Point**	**4.92**	**211**	P	**Pn**	**01 21 23.1**	**-1.0**
MXZ	**Matakaoa Point**	**4.92**	**211**	Pn	**Pn**	**01 21 23.2**	**-1.0**
MXZ	**Matakaoa Point**	**4.92**	**211**	P	**Pn**	**01 21 22.7**	**-1.4**
MXZ				S	**Sn**	**01 22 20.0**	**-1.1**
WMGZ	**Waiomatatini S**	**5.09**	**209**	P	**Pn**	**01 21 26.7**	**+0.3**
WMGZ				S	**Sn**	**01 22 25.2**	**-0.1**
PKGZ	**Pakihiroa**	**5.27**	**211**	P	**Pn**	**01 21 27.9**	**-1.1**
PKGZ				S	**Sn**	**01 22 29.0**	**-0.8**
HAZ	**Te Kaha**	**5.32**	**214**	P	**Pn**	**01 21 29.7**	**+0.2**
HAZ				S	**Sn**	**01 22 32.4**	**+1.6**
PUZ	**Puketiti**	**5.37**	**209**	P	**Pn**	**01 21 28.9**	**-1.5**
PUZ				S	**Sn**	**01 22 31.8**	**-0.5**
RUGZ	**Raukumara Rang**	**5.53**	**213**	P	**Pn**	**01 21 32.2**	**-0.4**
RUGZ				S	**Sn**	**01 22 36.5**	**+0.1**
TWGZ	**Tauwhareparae**	**5.58**	**210**	P	**Pn**	**01 21 32.6**	**-0.6**
TWGZ				S	**Sn**	**01 22 37.3**	**0.0**
CNGZ	**Carnagh Statio**	**5.75**	**207**	P	**Pn**	**01 21 34.4**	**-1.1**
TKGZ	**Te Karaka**	**5.85**	**209**	P	**Pn**	**01 21 36.9**	**0.0**
TKGZ				S	**Sn**	**01 22 43.4**	**-0.7**
MWZ	**Matawai**	**5.90**	**212**	P	**Pn**	**01 21 36.0**	**-1.7**
MWZ				S	**Sn**	**01 22 43.8**	**-1.6**
URZ	**Urewera**	**6.04**	**215**	Pn	**Pn**	**01 21 39.2**	**-0.2**
	8.9nm,0.3s,baz=257,slow=3.4,SNR=62						
URZ				Sn	**Sn**	**01 22 43.3**	**-5.3**
	11nm,0.3s,baz=40,slow=24,SNR=11						
	34nm,0.5s						
URZ	**Urewera**	**6.04**	**215**	P	**Pn**	**01 21 39.0**	**-0.4**
URZ	**Urewera**	**6.04**	**215**	S	**Sn**	**01 22 45.9**	**-2.6**
URZ	**Urewera**	**6.04**	**215**	P	**Pn**	**01 21 39.1**	**-0.3**
URZ				S	**Sn**	**01 22 47.0**	**-1.6**
RIGZ	**Rimuhau**	**6.12**	**209**	P	**Pn**	**01 21 41.0**	**+0.4**
PRGZ	**Paritu Road**	**6.26**	**207**	P	**Pn**	**01 21 39.6**	**-2.9**
WCZ	**Waipu Caves**	**6.43**	**245**	P	**Pn**	**01 21 47.4**	**+2.6**
OUZ	**Omahuta**	**6.80**	**252**	P	**Pn**	**01 21 53.8**	**+3.9**
OUZ	**Omahuta**	**6.80**	**252**	P	**Pn**	**01 21 54.0**	**+4.1**
BKZ	**Black Stump Fm**	**7.05**	**214**	P	**Pn**	**01 21 52.2**	**-1.2**
BKZ	**Black Stump Fm**	**7.05**	**214**	S	**Sn**	**01 23 10.5**	**-3.1**
CTZ	**Chatham Island**	**10.44**	**172**	P	**Pn**	**01 22 39.3**	**-0.5**
NFK	**Norfolk Island**	**12.39**	**287**	P	**Pn**	**01 23 09.1**	**+2.5**
	comp=Z,67nm,1.4s						
MSVF	**Nonsavu**	**15.89**	**348**	Pn	**Pn**	**01 23 55.8**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=4.1						
	comp=Z,13nm,0.8s						
DZM	**Mont Dzumac**	**17.44**	**306**	P	**P**	**01 24 15.2**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=115,slow=16,SNR=7.2						
	comp=Z,12nm,0.8s						
NOUC	**Port Laguerre**	**17.51**	**306**	P	**P**	**01 24 19.7**	**+4.1**
RAR	**Rarotonga**	**20.54**	**59**	LR	LR	01 32 28.6	
	comp=Z,70nm,18.8s,baz=261,slow=36						
CAN	**Canberra**	**26.85**	**257**	P	**P**	**01 25 49.2**	**-1.7**
TBI	**Tubuai**	**27.35**	**76**	*e*LR	LR	01 32 52.5	
	comp=Z,742nm,33.8s						
EIDS	**Eidsvold**	**27.62**	**279**	P	**P**	**01 25 59.0**	**+1.2**
	comp=Z,13nm,1.3s						
EIDS	**Eidsvold**	**27.62**	**279**	P	**P**	**01 26 00.0**	**+2.1**
EIDS	**Eidsvold**	**27.62**	**279**		**P**	**01 25 58.8**	**+1.0**
EIDS				IAmb	IAmb	01 26 14.4	
	comp=Z,10nm,0.9s						
TAU	**Tasmania Unive**	**28.36**	**240**	P	**P**	**01 26 05.1**	**+0.8**
MOO	**Moorlands**	**28.39**	**241**	P	**P**	**01 26 06.0**	**+1.4**
	comp=Z,29nm,0.9s						
CMSA	**Cobar Meteorol**	**30.19**	**264**	P	**P**	**01 26 22.4**	**+1.7**
	comp=Z,5.3nm,0.7s						
PPT2	**Papeete2**	**30.34**	**66**	*e*LR	LR	01 34 03.5	
	comp=Z,80nm,21.2s						
PPT2				*e*LR	LR	01 34 05.1	
	comp=Z,118nm,25.2s						
PPT	**Papeete**	**30.35**	**66**	LR	LR	01 38 25.5	
	comp=Z,84nm,18.3s,baz=246,slow=36						
QLP	**Quilpie**	**32.86**	**272**	P	**P**	**01 26 46.8**	**+2.6**
	comp=Z,21nm,1.0s						
STKA	**Stephens Creek**	**33.51**	**261**	P	**P**	**01 26 50.6**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=24,slow=5.6,SNR=3.5						
	comp=Z,3.0nm,0.9s						
CTA	**Charters Tower**	**33.99**	**284**	P	**P**	**01 26 55.7**	**+1.5**
	comp=Z,5.2nm,0.7s						
CTA	**Charters Tower**	**33.99**	**284**	P	**P**	**01 26 54.9**	**+0.7**
	comp=Z,8.3nm,0.5s,baz=119,slow=10,SNR=24						
CTA				LR	LR	01 39 43.5	
	comp=Z,149nm,18.8s,baz=242,slow=35						
	comp=Z,8.3nm,0.5s						
CTAO	**Charters Tower**	**33.99**	**284**	P	**P**	**01 26 56.1**	**+2.0**
CTAO	**Charters Tower**	**33.99**	**284**	P	**P**	**01 26 55.6**	**+1.5**
CTAO				IAmb	IAmb	01 26 57.6	
	comp=Z,22nm,1.3s						
QIS	**Mount Isa**	**39.22**	**278**	P	**P**	**01 27 40.0**	**+1.2**
AS17	**Alice Springs**	**42.55**	**270**	P	**P**	**01 28 06.2**	**-0.1**
	comp=Z,24nm,0.8s						
AS09	**Alice Springs**	**42.58**	**270**	P	**P**	**01 28 06.5**	**0.0**
	comp=Z,28nm,0.8s						
AS01	**Alice Springs**	**42.58**	**270**	P	**P**	**01 28 06.5**	**0.0**
AS31	**Alice Springs**	**42.62**	**270**	P	**P**	**01 28 06.8**	**-0.1**
	comp=Z,9.0nm,0.7s						
AS31	**Alice Springs**	**42.62**	**270**		**P**	**01 28 06.7**	**-0.1**
ASAR	**Alice Springs**	**42.62**	**270**	P	**P**	**01 28 06.6**	**-0.2**
	comp=Z,16nm,0.7s,baz=111,slow=7.4,SNR=197						
ASAR				PcP	**PcP**	**01 29 58.5**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=118,slow=3.9,SNR=6.1						
ASAR				S	**S**	**01 34 25.1**	**-4.8**
	comp=Z,0.8nm,0.8s,baz=117,slow=16,SNR=6.1						
	comp=Z,16nm,0.7s						
ASAR	**Alice Springs**	**42.62**	**270**		**P**	**01 28 06.8**	**0.0**
AS15	**Alice Springs**	**42.63**	**270**	P	**P**	**01 28 07.1**	**+0.2**
	comp=Z,20nm,0.7s						
WR8	**Warramunga Arr**	**43.74**	**276**		**P**	**01 28 15.4**	**-0.5**
WR8				IAmb	IAmb	01 28 16.3	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**43.88**	**276**	P	**P**	**01 28 16.5**	**-0.5**
WRA	**Warramunga Arr**	**43.88**	**276**	P	**P**	**01 28 16.5**	**-0.5**
	comp=Z,11nm,0.6s,baz=116,slow=7.6,SNR=102						
WRA				PcP	**PcP**	**01 30 02.7**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=117,slow=2.7,SNR=3.0						
WRA				S	**S**	**01 34 40.9**	**-7.5**
	comp=Z,0.7nm,0.8s,baz=118,slow=13,SNR=2.7						
	comp=Z,11nm,0.6s						
WRA	**Warramunga Arr**	**43.88**	**276**		**P**	**01 28 16.1**	**-0.9**
FORT	**Forrest**	**44.95**	**258**	P	**P**	**01 28 24.5**	**-0.9**
FORT				IAmb	IAmb	01 28 55.6	
	comp=Z,52nm,1.9s						
WRKA	**Warakurna**	**46.76**	**266**	P	**P**	**01 28 37.5**	**-2.4**
	comp=Z,5.3nm,0.8s						
MTN	**Manton Dam**	**50.11**	**282**	P	**P**	**01 29 05.1**	**-0.6**
KNRA	**Kununurra**	**50.58**	**277**	P	**P**	**01 29 08.8**	**-0.5**
CASY	**Casey**	**52.32**	**209**	P	**P**	**01 29 22.4**	**+0.7**
CASY				IAmb	IAmb	01 29 23.5	
	comp=Z,10nm,0.7s						
QSPA	**South Pole Qui**	**56.73**	**180**	P	**P**	**01 29 54.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=210,slow=1.5,SNR=8.9						
	comp=Z,1.9nm,0.8s						
QSPA	**South Pole Qui**	**56.73**	**180**	P	**P**	**01 29 55.4**	**+1.5**
QSPA				IAmb	IAmb	01 30 07.8	
	comp=Z,7.2nm,0.9s						
RPN	**Rapa Nui**	**59.09**	**104**	LR	LR	01 51 52.8	
	comp=Z,76nm,18.5s,baz=234,slow=32						
MAW	**Mawson**	**69.38**	**201**	P	**P**	**01 31 18.1**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=99,slow=9.0,SNR=3.6						
	comp=Z,1.6nm,0.7s						
MAW	**Mawson**	**69.38**	**201**	P	**P**	**01 31 16.9**	**-0.8**
TROLL	**Troll, Antarti**	**74.89**	**180**	⇑P	P	01 32 00.2	+9.4
	comp=Z,204nm,0.9s						
SNAA	**Sanae**	**75.19**	**179**	P	**P**	**01 31 53.3**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=158,slow=11,SNR=1.6						
	comp=Z,0.9nm,0.6s						
PETK	**Petropavlovsk-**	**88.59**	**346**	P	**P**	**01 33 02.9**	**+0.2**
	comp=Z,5.0nm,0.9s,baz=158,slow=5.4,SNR=6.1						
	comp=Z,5.0nm,0.9s						
PETK	**Petropavlovsk-**	**88.59**	**346**	P	**P**	**01 33 03.0**	**+0.2**
NVAR	**Mina Array Bea**	**90.70**	**43**	P	**P**	**01 33 15.8**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=258,slow=4.7,SNR=2.0						
	comp=Z,0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**122.81**	**312**	PKP	**PKPdf**	**01 39 04.9**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=110,slow=1.7,SNR=9.2						
BVAR	**Borovoye Array**	**128.21**	**314**	PKP	**PKPdf**	**01 39 14.9**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=191,slow=0.7,SNR=3.7						
ARCES	**ARCESS Array B**	**141.40**	**347**	PKP	**PKPdf**	**01 39 40.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=90,slow=1.2,SNR=4.0						
GEVA	**Gevas**	**146.17**	**290**	PKPdf	**PKPbc**	**01 39 50.7**	**-0.1**
KBZ	**Khabaz**	**146.34**	**300**	PKPbc	**PKPbc**	**01 39 50.6**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=176,slow=4.1,SNR=11						
GURO	**Guroymak-BITLI**	**146.99**	**291**		**PKPbc**	**01 39 52.8**	**-0.4**
FIA1	**FINESS Array S**	**147.77**	**338**		**PKPbc**	**01 39 53.3**	**-1.1**
FINES	**FINESS Array B**	**147.77**	**338**	PKPbc	**PKPbc**	**01 39 53.9**	**-0.5**
	comp=Z,4.0nm,0.6s,baz=34,slow=3.4,SNR=27						
FINES	**FINESS Array B**	**147.77**	**339**		**PKPbc**	**01 39 53.7**	**-0.7**
KOPT	**Kop Dagi**	**148.24**	**293**		**PKPbc**	**01 39 57.0**	**+0.3**
NB2	**NORSAR Subarra**	**151.62**	**350**	PKP	**PKiKP**	**01 40 05.6**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=17,slow=4.1						
NOA	**NORSAR Array B**	**151.62**	**350**	PKPbc	**PKiKP**	**01 40 06.1**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=22,slow=4.7,SNR=6.7						
MMAI	**Mount Meron Ar**	**151.71**	**279**	PKPbc	**PKiKP**	**01 40 05.6**	**+0.1**
	comp=Z,6.9nm,0.9s,baz=55,slow=7.6,SNR=4.6						
HFS	**Hagfors**	**152.06**	**347**	PKPbc	**PKiKP**	**01 40 06.3**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=135,slow=1.0,SNR=13						
AKASG	**Malin Array B+**	**153.34**	**319**	PKPbc	**PKiKP**	**01 40 08.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=56,slow=2.7,SNR=5.7						
BR131	**Keskin Array S**	**153.52**	**293**		**PKPbc**	**01 40 08.2**	**-0.8**
BRTR	**Keskin Array B**	**153.52**	**293**	PKPbc	**PKPbc**	**01 40 08.8**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=144,slow=3.2,SNR=10						
BRTR	**Keskin Array B**	**153.52**	**293**		**PKPbc**	**01 40 08.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**159.85**	**181**	PKPab	**PKPab**	**01 40 48.5**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=178,slow=3.2,SNR=9.8						
GERES	**GERESS Array B**	**162.07**	**333**	PKPab	**PKPab**	**01 40 56.9**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=20,slow=4.3,SNR=5.0						
FUORN	**Ofenpass-Fuorn**	**165.19**	**336**	PKPab	**PKPab**	**01 41 11.3**	**-0.6**

*RSNC **12** 01:20:23.9±0.0, 7.7°N±1.1°×7.7°W±.1°, h148km±2km, M2.5, ML2.2*
*FUNV **12** 01:20:25.7, 7.7°N×73.2°W, h5km, MW2.6, Presumed earthquake*
ISC 12 01:20:21.9±1.5, 6.87N±0.03°×73.16W±0.05, h159km±8km, n25, σ1°§44/50, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**184**	P	**Pn**	**01 20 44.0**	**+0.2**
BARC				S	**Sn**	**01 20 59.3**	**-1.2**
BRJC	**Barrancabermej**	**0.59**	**281**	P	**Pn**	**01 20 45.8**	**+1.1**
BRJC				S	**Sn**	**01 21 03.1**	**+1.0**
PAMC	**Pamplona, Colo**	**0.66**	**44**	P	**Pn**	**01 20 46.7**	**+1.0**
PAMC				S	**Sn**	**01 21 04.1**	**+0.2**
RUSC	**La Rusia**	**0.97**	**175**	P	**Pn**	**01 20 47.9**	**0.0**
RUSC				S	**Sn**	**01 21 06.5**	**-1.3**
RUSC	**La Rusia**	**0.97**	**175**	*e*P	**Pn**	**01 20 47.6**	**-0.3**
RUSC				*e*S	**Sn**	**01 21 05.6**	**-2.2**
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	P	**Pn**	**01 20 50.4**	**-0.1**
PTBC				S	**Sn**	**01 21 11.3**	**-1.0**
OCAC	**Ocana**	**1.37**	**353**	P	**Pn**	**01 20 51.9**	**+0.8**
OCAC				S	**Sn**	**01 21 14.4**	**+0.8**
SPBC	**San Pablo de B**	**1.51**	**217**	P	**Pn**	**01 20 52.8**	**+0.4**
SPBC				S	**Sn**	**01 21 15.3**	**-0.5**
NORC	**Norcasia**	**2.13**	**233**	P	**Pn**	**01 21 00.1**	**+0.9**
NORC				S	**Sn**	**01 21 27.0**	**-1.0**
CHIC	**Chingaza**	**2.29**	**194**	P	**Pn**	**01 21 01.9**	**+0.5**
CHIC				S	**Sn**	**01 21 30.9**	**-1.0**
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**01 21 03.6**	**+1.9**
ROSC				S	**Sn**	**01 21 33.7**	**+1.3**
HELC	**Santa Helena**	**2.44**	**254**	P	**Pn**	**01 21 04.1**	**+0.9**
HELC				S	**Sn**	**01 21 34.9**	**-0.1**
HELC	**Santa Helena**	**2.44**	**254**	*e*P	**Pn**	**01 21 06.0**	**+2.8**
HELC				*e*S	**Sn**	**01 21 36.4**	**+1.4**
GUY2C	**Guyana, Caldas**	**2.73**	**233**	P	**Pn**	**01 21 08.6**	**+1.8**
GUY2C				S	**Sn**	**01 21 42.2**	**+0.8**
VILC	**Villavicencio,**	**2.79**	**191**	P	**Pn**	**01 21 07.5**	**+0.4**
VILC				S	**Sn**	**01 21 40.6**	**-1.6**
CBOC	**Ciudad Bolivar**	**3.00**	**251**	P	**Pn**	**01 21 11.5**	**+1.7**
CBOC				S	**Sn**	**01 21 46.6**	**-0.3**
DBBC	**Dabeiba**	**3.03**	**273**	P	**Pn**	**01 21 10.3**	**+0.2**
DBBC				S	**Sn**	**01 21 44.3**	**-3.1**
SDV	**Santo Domingo**	**3.21**	**51**	*e*P	**Pn**	**01 21 14.0**	**+1.5**
SDV				*e*S	**Sn**	**01 21 50.9**	**-0.9**
APAC	**Apartado, Choc**	**3.54**	**287**	P	**Pn**	**01 21 17.7**	**+1.2**
APAC				S	**Sn**	**01 21 57.8**	**-1.2**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**01 21 17.2**	**+0.3**
PRAC				S	**Sn**	**01 21 58.9**	**-0.8**
ORTC	**Ortega, Tolima**	**3.59**	**215**	P	**Pn**	**01 21 18.1**	**+0.8**
ORTC				S	**Sn**	**01 22 00.5**	**+0.2**
SJCC	**San Jacinto, C**	**3.61**	**327**	P	**Pn**	**01 21 18.1**	**+0.6**
SJCC				S	**Sn**	**01 21 59.3**	**-1.5**
SJCC	**San Jacinto, C**	**3.61**	**327**	*e*P	**Pn**	**01 21 17.8**	**+0.3**
SJCC				*e*S	**Sn**	**01 21 57.0**	**-3.7**
PLMC	**San Jos del P**	**3.66**	**238**	P	**Pn**	**01 21 19.5**	**+1.3**
PLMC				S	**Sn**	**01 21 57.8**	**-4.1**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**01 21 20.6**	**+0.8**
URMC				S	**Sn**	**01 22 04.2**	**-0.7**

*IDC **12** 01:33:04.5±0.8, 20.0°S×66.0°E, h0km, mb3.9/13, mbtmp3.9/13, MS4.1/47, Error ellipse: s-maj=27.7km s-min=19.8km az=70.0*
*NEIC **12** 01:33:06.5±1.5, 20.4°S±0.2°×66.0°E±0.1°, h10km±1km, mb4.6/21, Error ellipse: s-maj=27.6km s-min=17.9km az=207.0*
*GCMT **12** 01:33:11.5±0.2, 20.2°S±0.0°×66.2°E±0.0°, h12km, MW5.0/115, Moment Tensor Solution. s28,c31; s115,c161; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.95±.08; Mθθ 0.76±.08; Mϕϕ 2.19±.07; Mrθ-2.99±.29; Mθϕ-1.44±.06; Mrϕ 0.37±.28; Best double couple: M=4.19700×10^16 NP1:ϕs 348.00000°, δ 32.00000°, λ -45.00000°. NP2:ϕs 118.00000°, δ 68.00000°, λ -114.00000°. Principal axes: T 3.7580, Plg 19.0000°, Azm 226.0000°; N 0.8750, Plg 22.0000°, Azm 128.0000°; P -4.6360, Plg 60.0000°, Azm 353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 12 01:33:07.1±0.6, 20.2°S±0.1°×66.0°E±0.1°, h10km, n91, σ1°§52/41, mb4.4/22, MS4.2/47, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**2.53**	**279**	Pn	**Pn**	**01 33 47.8**	**-0.5**
H08S1	**Diego Carcia H**	**13.94**	**28**	T	T	01 50 27.7	
	baz=205,slow=76,SNR=10						
H08S2	**Diego Garcia H**	**13.95**	**28**	T	T	01 50 23.0	
	baz=205,slow=76,SNR=9.8						
H08S3	**Diego Garcia H**	**13.96**	**28**	T	T	01 50 23.4	
	baz=205,slow=76,SNR=235						
OPO	**Ambohidratompo**	**17.84**	**272**	LR	LR	01 42 25.0	
	comp=Z,228nm,20.3s,baz=300,slow=31						
H04N2	**CROZET ISLANDS**	**28.43**	**201**	T	T	02 09 08.9	
	baz=30,slow=75,SNR=274						
H04N1	**CROZET ISLANDS**	**28.44**	**201**	T	T	02 09 05.9	
	baz=30,slow=75,SNR=263						
H04N3	**CROZET ISLANDS**	**28.45**	**201**	T	T	02 09 04.6	
	baz=30,slow=75,SNR=393						
PALK	**Pallekele**	**30.86**	**29**	LR	LR	01 49 26.0	
	comp=Z,410nm,20.4s,baz=191,slow=32						
MATP	**Matopo**	**35.14**	**263**	LR	LR	01 52 43.6	
	comp=Z,308nm,19.1s,baz=92,slow=34						
LSZ	**Lusaka**	**36.31**	**271**	LR	LR	01 53 24.9	
	comp=Z,514nm,21.1s,baz=116,slow=34						
LBTB	**Lobatse**	**37.53**	**255**	LR	LR	01 52 55.7	
	comp=Z,358nm,21.6s,baz=87,slow=32						
ATD	**Arta Tunnel**	**38.89**	**322**	LR	LR	01 54 29.1	
	comp=Z,5.1nm,19.0s,baz=110,slow=33						
MBAR	**Mbarara**	**39.61**	**295**	LR	LR	01 54 25.1	
	comp=Z,190nm,21.7s,baz=116,slow=32						
SUR	**Sutherland**	**42.04**	**244**	LR	LR	01 55 00.8	
	comp=Z,558nm,20.4s,baz=98,slow=31						
TSUM	**Tsumeb**	**45.49**	**263**	LR	LR	01 59 05.8	
	comp=Z,520nm,18.9s,baz=150,slow=34						
NWAO	**Narrogin (SRO)**	**47.13**	**117**	LR	LR	01 56 45.3	
	comp=Z,429nm,22.0s,baz=252,slow=30						
MAW	**Mawson**	**47.46**	**182**	P	**P**	**01 41 43.5**	**+1.7**
	2.7nm,1.0s,baz=6.5,slow=8.7,SNR=1.9						
	2.7nm,1.0s						
BRDH	**Bariadhala**	**49.39**	**32**	LR	LR	02 00 09.8	
	comp=Z,346nm,21.8s,baz=174,slow=33						
CMAR	**Chiang Mai Arr**	**50.16**	**42**	P	**P**	**01 42 02.5**	**-0.6**
	0.7nm,0.3s,baz=235,slow=6.7,SNR=5.4						
	0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**50.16**	**42**	P	P	01 42 08.2	+5.0
KBL	**Kabul**	**54.49**	**3**	P	**P**	**01 42 35.0**	**-0.2**
KBL				IAmb	IAmb	01 42 51.1	
	comp=Z,9.8nm,1.4s						
FITZ	**Fitzroy Crossi**	**56.10**	**99**	LR	LR	02 02 08.7	
	comp=Z,246nm,21.6s,baz=322,slow=31						
TOLI2	**Tolitoli**	**57.63**	**75**	P	**P**	**01 43 00.7**	**+2.7**
TOLI2				IAmb	IAmb	01 43 07.1	
	comp=Z,5.8nm,1.1s						
EIL	**Elat**	**57.90**	**328**	LR	LR	02 03 48.4	
	comp=Z,183nm,22.0s,baz=114,slow=32						
ARSB	**Arslanbob**	**61.52**	**6**	P	**P**	**01 43 24.4**	**0.0**
ARSB				IAmb	IAmb	01 43 45.5	
	comp=Z,7.8nm,1.2s						
ASAR	**Alice Springs**	**62.54**	**107**	P	**P**	**01 43 30.9**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=270,slow=6.0,SNR=8.7						
ASAR				LR	LR	02 06 14.4	
	comp=Z,658nm,21.3s,baz=290,slow=32						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**62.54**	**107**	P	**P**	**01 43 30.3**	**-1.3**
AS31	**Alice Springs**	**62.54**	**107**	P	**P**	**01 43 30.9**	**-0.7**
AAK	**Ala-Archa**	**62.98**	**7**	LR	LR	02 09 47.3	
	comp=Z,161nm,19.6s,baz=166,slow=35						
KK31	**Karatay Array**	**63.10**	**4**	P	**P**	**01 43 36.3**	**+1.6**
KK31				IAmb	IAmb	01 43 46.7	
	comp=Z,6.4nm,1.4s						
KKAR	**Karatay Array**	**63.10**	**4**	P	**P**	**01 43 35.1**	**+0.4**
GAZ	**Gaziantep**	**63.18**	**334**	P	**P**	**01 43 38.7**	**+3.3**
GNI	**Garni**	**63.21**	**342**	LR	LR	02 09 19.8	
	comp=Z,68nm,20.6s,baz=140,slow=34						
PRZ	**Przheval'sk**	**63.38**	**10**	P	**P**	**01 43 38.8**	**+1.9**
WRA	**Warramunga Arr**	**63.72**	**103**	P	**P**	**01 43 37.4**	**-2.1**
	comp=Z,2.1nm,1.1s,baz=260,slow=5.6,SNR=4.8						
	comp=Z,2.1nm,1.1s						
WRA	**Warramunga Arr**	**63.72**	**103**	P	**P**	**01 43 40.4**	**+0.9**
TGY	**Tagaytay City**	**63.84**	**62**	LR	LR	02 07 13.5	
	comp=Z,142nm,21.1s,baz=210,slow=32						
SNAA	**Sanae**	**64.38**	**199**	LR	LR	02 07 50.0	
	comp=Z,144nm,18.2s,baz=78,slow=32						
PDGK	**Podgornoye**	**64.39**	**11**	P	**P**	**01 43 42.4**	**-1.0**
DAV	**Davao City (W)**	**64.50**	**71**	LR	LR	02 08 39.0	
	comp=Z,188nm,20.3s,baz=194,slow=33						
SIJI	**Sorong**	**66.52**	**82**	LR	LR	02 13 06.2	
	comp=Z,83nm,19.7s,baz=123,slow=36						
BRTR	**Keskin Array B**	**66.82**	**333**	P	**P**	**01 43 57.1**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=177,slow=6.2,SNR=5.3						
BRTR				LR	LR	02 10 25.8	
	comp=Z,76nm,21.7s,baz=66,slow=34						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**66.82**	**333**	P	**P**	**01 43 58.7**	**-0.6**
KBZ	**Khabaz**	**67.04**	**342**	LR	LR	02 13 52.0	
	comp=Z,47nm,18.1s,baz=136,slow=37						
STKA	**Stephens Creek**	**67.71**	**117**	LR	LR	02 11 14.7	
	comp=Z,198nm,18.6s,baz=232,slow=34						
MKAR	**Makanchi Array**	**68.25**	**12**	P	**P**	**01 44 05.5**	**-2.5**
	comp=Z,0.6nm,0.9s,baz=188,slow=6.7,SNR=4.4						
	comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**68.25**	**12**	P	**P**	**01 44 07.8**	**-0.2**
AB31	**Akbulak array**	**69.33**	**356**	P	**P**	**01 44 14.7**	**+0.2**
AB31				IAmb	IAmb	01 44 25.4	
	comp=Z,4.3nm,1.2s						
ABKAR	**Akbulak array**	**69.33**	**356**	P	**P**	**01 44 14.9**	**+0.4**
QSPA	**South Pole Qui**	**69.94**	**180**	P	**P**	**01 44 17.8**	**-0.6**
	comp=Z,2.1nm,1.1s,baz=77,slow=4.9,SNR=3.9						
QSPA				LR	LR	02 10 06.9	
	comp=Z,100nm,21.8s,baz=276,slow=32						
	comp=Z,2.1nm,1.1s						
QSPA	**South Pole

1.3nm,0.9s,baz=108,slow=7.9,SNR=4.8
1.3nm,0.9s
QSPA South Pole Qui 62.87 180 P P 01 50 29.7 -0.5
1.7nm,0.9s,baz=57,slow=3.3,SNR=6.1
1.7nm,0.9s
AKASG Malin Array Be 149.57 327 PKPbc PKPbc 01 59 54.1 +0.5
0.4nm,0.5s,baz=63,slow=2.5,SNR=1.9

GFZ ***12*** *01:43:09.7±0.3, 18°S±5°×17°W±°, h535km±5km, M4.6/19, mb4.6/19, Error ellipse: s-maj=10.0km s-min=8.1km az=162.6, confirmed*
IDC ***12*** *01:43:10.5±0.9, 18°.16S×178°.28W, h533km±10km, mb3.8/20, mbtmp4.7/23, Error ellipse: s-maj=13.3km s-min=10.0km az=162.0*
NEIC ***12*** *01:43:10.6±2.3, 18°.17S±0°.08×178°.24W±0°.10, h525km±5km, mb4.5/176, Error ellipse: s-maj=16.3km s-min=7.7km az=131.0*
NOU ***12*** *01:43:15.1, 18°.005S×178°.25W, h493km, MLv4.3/5, Fiji Islands Region*
ISC 12 01:43:12.1±0.3, 18°.20S±0°.07×178°.33W±0°.06, h550km, n598, σ1°93/530, mb4.5/114, 49C-31D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.46**	**266**	P	P	01 44 15.0	-2.4
TAVE	**Taveuni**	**2.11**	**314**	P	P	01 44 20.1	-2.3
DGTI	**Dogotuki**	**2.64**	**315**	P	P	01 44 22.4	-2.7
MSVF	**Nonsavu**	**3.47**	**277**	P	**P**	**01 44 29.3**	**-1.0**
	650nm,0.7s,baz=125,slow=7.0,SNR=222						
MSVF				S	**S**	**01 45 30.3**	**-3.7**
	15nm,0.7s,baz=204,slow=22,SNR=0.4						
MSVF	**Nonsavu**	**3.47**	**277**	P	**P**	**01 44 29.4**	**-0.9**
MSVF	**Nonsavu**	**3.47**	**277**		**P**	**01 44 29.7**	**-0.6**
MSVF	**Nonsavu**	**3.47**	**277**	P	**P**	**01 44 29.6**	**-0.7**
FUTU	**Fugatoga**	**3.88**	**3**	P	P	01 44 30.5	-2.7
FUTU	**Fugatoga**	**3.88**	**3**	P	P	01 44 29.8	-3.4
FUTU	**Fugatoga**	**3.88**	**3**	P	P	01 44 29.6	-3.6
AFI	**Afiamalu**	**7.61**	**57**	P	P	01 44 59.9	-6.2
	27nm,0.3s,baz=175,slow=3.0,SNR=9.9						
AFI				S	S	01 46 27.9	-12
	42nm,0.4s,baz=176,slow=18,SNR=6.7						
AFI	**Afiamalu**	**7.61**	**57**	P	P	01 44 59.8	-6.3
AFI	**Afiamalu**	**7.61**	**57**	P	P	01 44 59.7	-6.5
FUNA	**Funafuti**	**9.91**	**346**	P	P	01 45 26.5	-2.8
DZM	**Mont Dzumac**	**14.80**	**252**	P	P	01 46 17.3	-2.4
	6.4nm,1.0s,baz=106,slow=19,SNR=1.7						
KOUNC	**Koumac, New Ca**	**16.57**	**259**	P	**P**	**01 46 35.1**	**-1.8**
KOUNC				IAmb	IAmb	01 47 09.2	
	comp=Z,19nm,0.9s						
RAR	**Rarotonga**	**17.73**	**103**	P	**P**	**01 46 45.5**	**-2.0**
	comp=Z,68nm,0.8s,baz=258,slow=8.0,SNR=10						
RAR	**Rarotonga**	**17.73**	**103**	P	**P**	**01 46 45.5**	**-2.0**
RAR	**Rarotonga**	**17.73**	**103**	P	**P**	**01 46 45.1**	**-2.4**
OUZ	**Omahuta**	**18.41**	**201**	P	**P**	**01 46 53.2**	**-0.3**
URZ	**Urewera**	**20.38**	**190**	P	**P**	**01 47 08.5**	**-2.9**
TARA	**Tarawa**	**21.25**	**335**	P	**P**	**01 47 17.9**	**-1.8**
PPT	**Papeete**	**27.36**	**93**	P	**P**	**01 48 12.3**	**-1.5**
	comp=Z,34nm,0.7s,baz=248,slow=2.3,SNR=6.3						
	comp=Z,34nm,0.7s						
PPTF	**Pamatai, Papee**	**27.37**	**93**	P	**P**	**01 48 12.3**	**-1.7**
PPTF	**Pamatai, Papee**	**27.37**	**93**	P	**P**	**01 48 11.6**	**-2.4**
EIDS	**Eidsvold**	**29.23**	**250**	P	**P**	**01 48 30.0**	**0.0**
EIDS				IAmb	IAmb	01 48 30.6	
	comp=Z,6.6nm,0.7s						
EIDS	**Eidsvold**	**29.23**	**250**	P	**P**	**01 48 29.3**	**-0.7**
MLZ	**Mavora Lakes**	**29.35**	**200**	P	**P**	**01 48 30.8**	**0.0**
ARMA	**Armidale**	**29.86**	**240**	P	**P**	**01 48 36.3**	**+0.8**
ARMA				IAmb	IAmb	01 48 36.6	
	comp=Z,6.4nm,0.6s						
ARMA	**Armidale**	**29.86**	**240**	P	**P**	**01 48 35.0**	**-0.5**
CTA	**Charters Tower**	**33.47**	**261**	P	**P**	**01 49 06.2**	**-0.1**
	comp=Z,10nm,0.6s,baz=98,slow=11,SNR=14						
	comp=Z,10nm,0.6s						
CTAO	**Charters Tower**	**33.47**	**261**	P	**P**	**01 49 06.2**	**-0.1**
CTAO				IAmb	IAmb	01 49 07.0	
	comp=Z,9.7nm,0.7s						
CTAO	**Charters Tower**	**33.47**	**261**	P	**P**	**01 49 05.7**	**-0.6**
CAN	**Canberra**	**33.58**	**233**	P	**P**	**01 49 07.7**	**+0.6**
CAN				IAmb	IAmb	01 49 38.4	
	comp=Z,18nm,1.3s						
CAN	**Canberra**	**33.58**	**233**	P	**P**	**01 49 07.5**	**+0.4**
PMG	**Port Moresby**	**34.58**	**280**	P	**P**	**01 49 16.0**	**+0.3**
CMSA	**Cobar Meteorol**	**35.07**	**241**	P	**P**	**01 49 19.6**	**+0.1**
MTSU	**Mount Surprise**	**35.45**	**264**	P	**P**	**01 49 22.2**	**-0.7**
QLP	**Quilpie**	**35.50**	**250**	P	**P**	**01 49 22.4**	**-0.7**
TOO	**Toolangi**	**37.04**	**231**		**P**	**01 49 36.5**	**+0.7**
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**01 49 48.2**	**+0.1**
	comp=Z,8.8nm,0.5s,baz=89,slow=6.9,SNR=20						
	comp=Z,8.8nm,0.5s						
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**01 49 48.5**	**+0.4**
INKA	**Innaminka**	**38.70**	**248**		**P**	**01 49 50.5**	**+1.1**
JAY	**Jayapura**	**43.06**	**286**	P	**P**	**01 50 24.6**	**+0.4**
BBOO	**Buckleboo**	**43.33**	**241**	P	**P**	**01 50 26.4**	**+0.4**
BBOO				IAmb	IAmb	01 50 27.0	
	comp=Z,18nm,0.9s						
BBOO	**Buckleboo**	**43.33**	**241**	P	**P**	**01 50 26.2**	**+0.2**
POHA	**Pohakuloa**	**43.86**	**32**	P	**P**	**01 50 29.2**	**-1.3**
WR8	**Warramunga Arr**	**44.50**	**260**		**P**	**01 50 34.4**	**-0.9**
WR8				IAmb	IAmb	01 50 37.1	
	comp=Z,8.7nm,0.7s						
WRA	**Warramunga Arr**	**44.65**	**260**	P	**P**	**01 50 35.4**	**-1.0**
	comp=Z,4.8nm,0.4s,baz=95,slow=7.2,SNR=53			PcP			
WRA				PcP	**PcP**	**01 52 07.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=87,slow=4.2,SNR=4.7						
	comp=Z,4.8nm,0.4s						
WRA	**Warramunga Arr**	**44.65**	**260**		**P**	**01 50 35.5**	**-1.0**
WRA					**PcP**	**01 52 07.0**	**-0.3**
AS31	**Alice Springs**	**44.78**	**255**		**P**	**01 50 37.3**	**-0.1**
AS31				IAmb	IAmb	01 50 38.3	
	comp=Z,15nm,0.7s						
ASAR	**Alice Springs**	**44.78**	**255**	P	**P**	**01 50 37.3**	**-0.1**
	comp=Z,51nm,0.6s,baz=89,slow=8.2,SNR=738						
ASAR				PcP	**PcP**	**01 52 07.0**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=100,slow=4.7,SNR=6.1						
ASAR				S	**S**	**01 56 34.5**	**-0.4**
	comp=Z,1.8nm,1.0s,baz=88,slow=14,SNR=10						
	comp=Z,51nm,0.6s						
SMPI	**Sarmi**	**45.09**	**286**	P	**P**	**01 50 39.7**	**-0.2**
MTN	**Manton Dam**	**48.86**	**269**	P	**P**	**01 51 07.9**	**-0.3**
MTN				IAmb	IAmb	01 51 08.4	
	comp=Z,21nm,1.1s						
MTN	**Manton Dam**	**48.86**	**269**	P	**P**	**01 51 07.0**	**-1.2**
FORT	**Forrest**	**49.95**	**245**	P	**P**	**01 51 15.6**	**-0.4**
KNRA	**Kununurra**	**50.53**	**264**	P	**P**	**01 51 20.0**	**-0.4**
KNRA				IAmb	IAmb	01 51 20.9	
	comp=Z,21nm,0.7s						
FAKI	**Fak Fak**	**50.70**	**281**	P	**P**	**01 51 21.3**	**-0.5**
FAKI	**Fak Fak**	**50.70**	**281**	P	**P**	**01 51 20.8**	**-1.0**
SIJI	**Sorong**	**52.37**	**283**	P	**P**	**01 51 33.8**	**0.0**
	comp=Z,38nm,0.7s,baz=101,slow=5.4,SNR=7.7						
	comp=Z,38nm,0.7s						
SIJI	**Sorong**	**52.37**	**283**	P	**P**	**01 51 33.5**	**-0.3**
SWI	**Sorong**	**52.38**	**283**	P	**P**	**01 51 33.9**	**0.0**
FITZ	**Fitzroy Crossi**	**53.05**	**261**	P	**P**	**01 51 38.7**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=154,slow=6.4,SNR=4.1						
	comp=Z,7.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.05**	**261**	P	**P**	**01 51 38.9**	**+0.3**
KRAI	**Karang Ratu**	**54.17**	**279**	P	**P**	**01 51 46.6**	**0.0**
MBWA	**Marble Bar**	**58.07**	**256**	P	**P**	**01 52 13.2**	**-0.2**
MBWA				IAmb	IAmb	01 52 37.2	
	comp=Z,51nm,1.4s						
VNDA	**Vanda**	**60.16**	**185**	P	**P**	**01 52 27.0**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=2.4,slow=4.8,SNR=1.5						
VNDA	**Vanda**	**60.16**	**185**	P	**P**	**01 52 27.3**	**+0.9**
MORW	**Morawa**	**60.43**	**246**	P	**P**	**01 52 28.6**	**-0.4**
MORW				IAmb	IAmb	01 52 40.4	
	comp=Z,26nm,1.2s						
TOLI2	**Tolitoli**	**62.84**	**281**	P	**P**	**01 52 45.8**	**+0.8**
GIRL	**Giralia**	**62.88**	**253**	P	**P**	**01 52 46.2**	**+1.1**
CASY	**Casey**	**65.90**	**205**	P	**P**	**01 53 03.2**	**-0.1**
CASY				IAmb	IAmb	01 53 19.6	
	comp=Z,22nm,1.5s						
MJAR	**Matsushiro Arr**	**68.18**	**323**	P	**P**	**01 53 17.3**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=158,slow=5.7,SNR=14						
	comp=Z,4.2nm,0.6s						
MJAR	**Matsushiro Arr**	**68.18**	**323**	P	**P**	**01 53 17.4**	**-0.6**
MAJO	**Matsushiro**	**68.18**	**323**	P	**P**	**01 53 16.8**	**-1.1**
MAJO				IAmb	IAmb	01 53 46.9	
	comp=Z,20nm,1.4s						
MJB9	**Matsu-Tunnel**	**68.19**	**323**	P	**P**	**01 53 16.8**	**-1.1**
MJB9				IAmb	IAmb	01 53 46.9	
	comp=Z,20nm,1.4s						
UGM	**Wanagama**	**69.71**	**268**	P	**P**	**01 53 27.5**	**-0.1**
KIWB	**Kanaga Island**	**69.76**	**1**	P	**P**	**01 53 26.2**	**-0.8**
ADK	**Adak**	**69.80**	**1**	P	**P**	**01 53 25.9**	**-1.3**
YOJ	**Yonaguni jima**	**71.17**	**305**	P	**P**	**01 53 35.2**	**-0.7**
QSPA	**South Pole Qui**	**71.86**	**180**	P	**P**	**01 53 39.8**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=106,slow=0.6,SNR=8.4						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**71.86**	**180**	P	**P**	**01 53 39.8**	**+0.4**
UNV	**Unalaska Valle**	**72.47**	**7**	P	**P**	**01 53 41.0**	**-1.7**
UNV	**Unalaska Valle**	**72.47**	**7**	P	**P**	**01 53 41.1**	**-1.7**
	baz=192						
TPUB	**Ta-pu**	**72.47**	**302**		**P**	**01 53 42.4**	**-1.2**
PEA0B	**Petropavlovsk-**	**73.98**	**345**		**P**	**01 53 51.2**	**-0.2**
PEA0B				IAmb	IAmb	01 53 51.9	
	comp=Z,14nm,0.8s						
PETK	**Petropavlovsk-**	**73.98**	**345**	P	**P**	**01 53 50.9**	**-0.6**
	comp=Z,11nm,0.7s,baz=125,slow=6.8,SNR=21						
	comp=Z,11nm,0.7s						
PETK	**Petropavlovsk-**	**73.98**	**345**		**P**	**01 53 51.1**	**-0.4**
CHNA	**Chernabura Isl**	**74.48**	**11**	P	**P**	**01 53 52.5**	**-1.7**
	baz=198						
SDPT	**Sand Point**	**74.81**	**10**	P	P	01 53 54.2	-1.8
	baz=198						
KSRS	**Korea Array**	**74.97**	**318**	P	**P**	**01 53 58.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=130,slow=6.7,SNR=5.8						
	comp=Z,1.1nm,0.6s						
SPIA	**Saint Paul Isl**	**75.39**	**5**	P	**P**	**01 53 58.3**	**-1.0**
	baz=188						
S14K	**Fog Glacier**	**75.87**	**11**	P	**P**	**01 54 00.8**	**-1.3**
	baz=198						
CHIR	**Chirikof Islan**	**76.20**	**13**	P	**P**	**01 54 02.8**	**-1.0**
	baz=202						
USRK	**Ussuriysk Ar.**	**76.89**	**326**	P	**P**	**01 54 08.7**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=174,slow=3.5,SNR=4.7						
	comp=Z,1.2nm,0.5s						
SII	**Sitkinak Islan**	**77.19**	**13**	P	**P**	**01 54 08.3**	**-0.9**
	baz=203						
R17L	**Mt. Peulik Vol**	**77.73**	**12**	P	**P**	**01 54 11.2**	**-0.9**
	baz=201						
OHAK	**Old Harbor**	**78.00**	**14**	P	**P**	**01 54 13.2**	**-0.3**
OHAK				IAmb	IAmb	01 54 13.7	
	comp=Z,21nm,0.7s						
OHAK	**Old Harbor**	**78.00**	**14**	P	**P**	**01 54 12.7**	**-0.8**
	baz=204						
CMB	**Columbia Colle**	**78.00**	**43**		**P**	**01 54 14.3**	**+0.2**
NJ2	**Nanjing**	**78.18**	**309**	*e*P	**P**	**01 54 18.5**	**+3.4**
NJ2				pmax	pmax		
	comp=Z,34nm,0.5s						
Q17K	**Contact Creek**	**78.41**	**12**	P	**P**	**01 54 14.8**	**-1.1**
	baz=202						
M02C	**Callahan**	**78.42**	**39**		**P**	**01 54 17.1**	**+0.8**
O14K	**Tigyukauivet M**	**78.43**	**9**	P	**P**	**01 54 14.5**	**-1.2**
	baz=196						
MDJ	**Mudanjiang**	**78.46**	**325**	P	**P**	**01 54 17.5**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,14nm,0.8s						
O15K	**Ungalikthiuk R**	**78.58**	**10**	P	**P**	**01 54 15.3**	**-1.3**
	baz=198						
KDAK	**Kodiak Island**	**78.67**	**14**	P	**P**	**01 54 16.5**	**-0.5**
KDAK				IAmb	IAmb	01 54 18.2	
	comp=Z,19nm,0.8s						
KDAK	**Kodiak Island**	**78.67**	**14**	P	**P**	**01 54 16.3**	**-0.7**
	baz=205						
YBH	**Yreka Blue Hor**	**78.70**	**39**		**P**	**01 54 18.1**	**+0.3**
P16K	**Nushagak River**	**78.74**	**11**	P	**P**	**01 54 16.3**	**-1.1**
	baz=200						
WAKR	**Walker**	**78.88**	**43**		**P**	**01 54 19.2**	**+0.2**
M11K	**Mekoryuk**	**78.92**	**6**	P	**P**	**01 54 17.6**	**-0.8**
	baz=192						
Q18K	**Katmai Hardscr**	**78.94**	**12**	P	**P**	**01 54 17.5**	**-1.2**
	baz=202,SNR=17						
N14K	**Kuskokwak Cree**	**79.02**	**8**	P	**P**	**01 54 18.5**	**-0.4**
	baz=196,SNR=9.8						
P17K	**Kvichak River**	**79.18**	**11**	P	**P**	**01 54 18.7**	**-1.1**
	baz=201,SNR=14						
DSP	**Deep Springs**	**79.23**	**45**		**P**	**01 54 21.0**	**+0.5**
O16K	**Kokwok River B**	**79.26**	**10**	P	**P**	**01 54 18.4**	**-1.7**
	baz=199,SNR=11						
M13K	**Dall Lake**	**79.27**	**8**	P	**P**	**01 54 20.2**	**0.0**
	baz=194						
N15K	**Kwethluk River**	**79.48**	**9**		**P**	**01 54 21.2**	**-0.2**
N15K				IAmb	IAmb	01 54 22.1	
	comp=Z,13nm,0.7s						
N15K	**Kwethluk River**	**79.48**	**9**	P	**P**	**01 54 21.1**	**-0.3**
	baz=198,SNR=6.7						
Q19K	**Cape Douglas,**	**79.48**	**13**	P	**P**	**01 54 20.5**	**-1.0**
	baz=204						
NVAR	**Mina Array Bea**	**79.58**	**44**	P	**P**	**01 54 22.9**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=223,slow=8.8,SNR=29						
	comp=Z,4.2nm,0.7s						
P18K	**Big Mountain,**	**79.59**	**12**	P	**P**	**01 54 20.8**	**-1.2**
	baz=202,SNR=30						
O17K	**Koliganek Bris**	**79.60**	**11**	P	**P**	**01 54 20.7**	**-1.2**
	baz=200						
M14K	**Bethel**	**79.78**	**8**	IAmb	IAmb	01 54 23.5	
	comp=Z,27nm,1.1s						
M14K	**Bethel**	**79.78**	**8**	P	**P**	**01 54 22.5**	**-0.3**
	baz=196,SNR=6.6						
M15K	**Kasigluk River**	**79.90**	**9**	P	**P**	**01 54 23.2**	**-0.4**
	baz=197,SNR=9.8						
N16K	**Nishlik Lake**	**79.98**	**10**	P	**P**	**01 54 23.7**	**-0.3**
	baz=199,SNR=9.5						
O18K	**Koktuh Hills**	**80.02**	**12**	P	**P**	**01 54 23.3**	**-0.9**
	baz=202,SNR=40						
KVN	**Kaiserville**	**80.06**	**43**		**P**	**01 54 25.1**	**-0.1**
P19K	**Oil Pt**	**80.23**	**13**	P	**P**	**01 54 24.3**	**-1.1**
	baz=204						
L14K	**Kuka Creek**	**80.25**	**8**	IAmb	IAmb	01 54 26.2	
	comp=Z,15nm,0.9s						
L14K	**Kuka Creek**	**80.25**	**8**	P	**P**	**01 54 25.2**	**-0.2**
	baz=195						
N17K	**Nushagak Hills**	**80.29**	**10**		**P**	**01 54 24.5**	**-1.1**
N17K	**Nushagak Hills**	**80.29**	**10**	P	**P**	**01 54 24.8**	**-0.8**
	baz=200,SNR=5.5						
BNX	**BinXian**	**80.37**	**325**	⇑P	**P**	**01 54 25.0**	**-1.4**
BNX				pmax	pmax		
	comp=Z,14nm,0.8s						
K05A	**Summer Lake**	**80.38**	**39**		**P**	**01 54 27.4**	**+0.6**
K05A				IAmb	IAmb	01 54 28.1	
	comp=Z,19nm,1.0s						
M16K	**Timber Creek**	**80.47**	**9**	P	**P**	**01 54 26.8**	**+0.2**
	baz=198,SNR=25						
O19K	**Port Alsworth**	**80.51**	**12**	P	**P**	**01 54 25.6**	**-1.1**
	baz=203,SNR=9.0						
HOM	**Homer**	**80.58**	**13**	P	**P**	**01 54 26.3**	**-0.8**
	baz=206						
K13K	**Kusilvak Mount**	**80.60**	**7**	IAmb	IAmb	01 54 28.6	
	comp=Z,17nm,0.6s						
K13K	**Kusilvak Mount**	**80.60**	**7**	P	**P**	**01 54 26.8**	**-0.3**
	baz=193,SNR=6.3						
N18K	**Kilae Creek**	**80.67**	**11**	P	**P**	**01 54 26.4**	**-1.2**
	baz=202,SNR=6.0						
L15K	**Ungalak Mounta**	**80.73**	**8**	P	**P**	**01 54 27.3**	**-0.6**
	baz=196,SNR=8.5						
O20K	**Slope Mountain**	**80.75**	**13**	P	**P**	**01 54 27.0**	**-1.1**
	baz=205						
H04A	**Point Lake**	**80.78**	**37**	IAmb	IAmb	01 54 29.0	
	comp=Z,11nm,0.6s						
BRSE	**Bradley Lake S**	**80.85**	**14**	P	**P**	**01 54 27.9**	**-0.7**
	baz=206,SNR=6.2						
L16K	**Owhat River**	**81.05**	**9**	IAmb	IAmb	01 54 30.5	
	comp=Z,25nm,1.1s						
L16K	**Owhat River**	**81.05**	**9**	P	**P**	**01 54 29.5**	**0.0**
	baz=198,SNR=18						
N19K	**Bonanza Creek**	**81.05**	**12**	P	**P**	**01 54 28.1**	**-1.6**
	baz=203,SNR=9.7						
M17K	**Holitna River**	**81.07**	**10**	P	**P**	**01 54 30.0**	**+0.3**
	baz=200,SNR=22						
M18K	**Stony River**	**81.43**	**11**	P	**P**	**01 54 30.6**	**-0.9**
	baz=202,SNR=9.4						
SEW	**Seward**	**81.47**	**14**	P	**P**	**01 54 30.4**	**-1.3**
	baz=208						
WVOR	**Wild Horse Val**	**81.58**	**40**	P	**P**	**01 54 32.6**	**-0.2**
WVOR				IAmb	IAmb	01 54 34.0	
	comp=Z,11nm,1.0s						
L17K	**Donlin**	**81.63**	**9**	P	**P**	**01 54 32.8**	**+0.3**
	baz=199,SNR=22						
Q23K	**Middleton Isla**	**81.65**	**16**	P	**P**	**01 54 31.3**	**-1.2**
	baz=210						
SPCR	**Spurr Chakacha**	**81.86**	**12**	P	**P**	**01 54 32.0**	**-1.7**
	baz=205						
BELA	**Belgrano 2**	**81.87**	**173**		**P**	**01 54 33.4**	**-0.2**
GAMB	**Gambell**	**81.87**	**3**	P	**P**	**01 54 33.6**	**0.0**
	baz=186						
P23K	**Montague Islan**	**81.87**	**15**	P	**P**	**01 54 32.3**	**-1.5**
	baz=209						
L18K	**Granite Mounta**	**81.97**	**10**	IAmb	IAmb	01 54 35.2	
	comp=Z,18nm,0.7s						
L18K	**Granite Mounta**	**81.97**	**10**	P	**P**	**01 54 34.4**	**+0.2**
	baz=201,SNR=21						
I07A	**Izee**	**81.99**	**39**		**P**	**01 54 35.4**	**+0.5**
I07A				IAmb	IAmb	01 54 36.0	
	comp=Z,12nm,0.8s						
M19K	**Big River Lodg**	**82.08**	**11**	P	**P**	**01 54 33.6**	**-1.2**
	baz=203						
K17K	**Iditarod**	**82.18**	**9**	IAmb	IAmb	01 54 35.7	
	comp=Z,9.4nm,0.7s						
K17K	**Iditarod**	**82.18**	**9**	P	**P**	**01 54 35.0**	**-0.3**
	baz=199,SNR=8.5						
L19K	**White Mountain**	**82.25**	**11**	IAmb	IAmb	01 54 36.9	
	comp=Z,15nm,1.0s						
L19K	**White Mountain**	**82.25**	**11**	P	**P**	**01 54 34.9**	**-0.7**
	baz=202						
RC01	**Rabbit Creek A**	**82.28**	**14**	P	**P**	**01 54 34.7**	**-1.1**
	baz=207						
M20K	**Styx River**	**82.30**	**12**	P	**P**	**01 54 34.8**	**-1.1**
	baz=204						
J16K	**Anvik River**	**82.40**	**8**	IAmb	IAmb	01 54 37.4	
	comp=Z,20nm,0.8s						
J16K	**Anvik River**	**82.40**	**8**	P	**P**	**01 54 36.3**	**0.0**
	baz=197,SNR=9.5						
KAIM	**Kayak Island**	**82.58**	**16**	P	**P**	**01 54 36.5**	**-0.8**
	baz=212						
SKT	**Skwentna**	**82.70**	**12**	P	P	01 54 35.9	-2.0
	baz=206,SNR=5.7						
J17K	**VABM Dome**	**82.71**	**9**	IAmb	IAmb	01 54 38.8	
	comp=Z,12nm,0.7s						
J17K	**VABM Dome**	**82.71**	**9**	P	**P**	**01 54 37.9**	**0.0**
	baz=198,SNR=9.7						
CRAG	**Craig**	**82.75**	**24**	P	**P**	**01 54 36.8**	**-1.5**
	baz=223						
EYAK	**Cordova Ski Ar**	**82.77**	**16**	P	**P**	**01 54 37.3**	**-0.9**
	baz=211						
KNK	**Knik Glacier**	**82.86**	**14**	P	**P**	**01 54 37.6**	**-1.1**
	baz=208						
PMR	**Palmer**	**82.87**	**14**	P	**P**	**01 54 37.8**	**-0.9**
PMR	**Palmer**	**82.87**	**14**	P	**P**	**01 54 37.5**	**-1.2**
	baz=208,SNR=11						
I17K	**Unalakleet**	**82.96**	**8**	P	**P**	**01 54 38.5**	**-0.7**
	baz=197						
ANM	**Nome**	**83.11**	**6**	P	**P**	**01 54 39.4**	**-0.5**
	baz=192						
SIT	**Sitka**	**83.12**	**22**	P	**P**	**01 54 39.3**	**-0.8**
	baz=221						
HEH	**HeiHe**	**83.20**	**328**	*e*P	**P**	**01 54 40.7**	**+0.1**
U33K	**Whale Pass**	**83.23**	**24**	P	**P**	**01 54 39.5**	**-1.1**
	baz=223						
SML	**Sawmill**	**83.24**	**14**	P	**P**	**01 54 39.5**	**-1.2**
	baz=208						
V35K	**Ketchikan**	**83.24**	**25**	P	**P**	**01 54 39.7**	**-1.0**
	baz=224						
CUT	**Chulitna**	**83.35**	**13**	P	**P**	**01 54 39.9**	**-1.2**
	baz=207,SNR=5.9						
L22K	**Petersville**	**83.35**	**12**	P	**P**	**01 54 39.6**	**-1.7**
	baz=206,SNR=16						
M23K	**Glacier View**	**83.36**	**14**	P	**P**	**01 54 39.9**	**-1.4**
	baz=209						
PPLA	**Purkeypile**	**83.40**	**12**	P	**P**	**01 54 40.1**	**-1.5**
	baz=205						
BMRM	**Bremner River**	**83.42**	**16**	P	**P**	**01 54 40.7**	**-0.8**
	baz=212,SNR=5.7						
K20K	**Telida**	**83.48**	**11**	P	**P**	**01 54 41.2**	**-0.6**
	baz=203,SNR=31						
SCM	**Sheep Creek Mo**	**83.49**	**14**	P	**P**	**01 54 41.2**	**-0.8**
	baz=209,SNR=22						
S31K	**Pelican**	**83.50**	**21**	P	**P**	**01 54 41.5**	**-0.4**
	baz=220						
H16K	**Elim**	**83.50**	**7**	P	**P**	**01 54 41.3**	**-0.5**
	baz=195						
MAW	**Mawson**	**83.61**	**200**	P	**P**	**01 54 42.0**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=143,slow=5.1,SNR=2.0						
	comp=Z,0.6nm,0.4s						
MAW	**Mawson**	**83.61**	**200**	P	**P**	**01 54 42.0**	**-0.4**
CRQE	**Cirque**	**83.64**	**17**	P	**P**	**01 54 41.9**	**-0.9**
	baz=213,SNR=7.5						
G15K	**Niukluk**	**83.65**	**6**	P	**P**	**01 54 42.1**	**-0.5**
	baz=194						
S32K	**Killisnoo**	**83.70**	**22**	P	**P**	**01 54 42.2**	**-0.7**
	baz=221						
WRAK	**Wrangell Islan**	**83.75**	**24**	P	**P**	**01 54 43.0**	**-0.2**
	baz=223						
J19K	**Poorman**	**83.81**	**10**	IAmb	IAmb	01 54 44.0	
	comp=Z,8.8nm,0.8s						
J19K	**Poorman**	**83.81**	**10**	P	**P**	**01 54 43.0**	**-0.4**
	baz=202,SNR=10						
TNA	**Tin City**	**83.88**	**4**	P	**P**	**01 54 43.0**	**-0.7**
	baz=190						
CAST	**Castle Rocks**	**83.90**	**12**	P	P	01 54 41.8	-2.1
	baz=205,SNR=41						
PINM	**Pinnacle**	**83.90**	**18**	P	**P**	**01 54 43.0**	**-1.0**
	baz=216						
F14K	**Arctic Creek**	**83.92**	**5**	P	**P**	**01 54 43.2**	**-0.7**

YUK3	**Moose Creek** baz=216	85.20	17	P		P	01 54 50.1	-0.4
BRWY	**Burwash Landin** baz=217	85.28	18	P		P	01 54 50.3	-0.4
S34M	**Telegraph Cree** baz=224	85.28	23	P		P	01 54 50.8	+0.1
M27K	**Edge Creek, AK** baz=214,SNR=22	85.30	16	P		P	01 54 50.4	-0.5
HYT	**Haines Junctio** baz=218	85.31	19	P		P	01 54 50.7	-0.3
H20K	**Anotleneega Mo** baz=202,SNR=5.9	85.32	10	P		P	01 54 50.6	-0.2
F17K	**Baldwin Pennin** baz=196	85.36	7	P		P	01 54 50.4	-0.4
YUK4	**Talbot Arm** baz=218	85.38	18	P		P	01 54 51.1	-0.2
L26K	**Log Cabin Wild** comp=Z,12nm,1.0s	85.48	15	IAmb		IAmb	01 54 52.0	
L26K	**Log Cabin Wild** baz=213	85.48	15	P		P	01 54 51.2	-0.4
I21K	**Tanana** comp=Z,26nm,1.4s	85.52	11	IAmb		IAmb	01 54 51.8	
I21K	**Tanana** baz=205,SNR=9.1	85.52	11	P		P	01 54 50.4	-1.3
NEA2	**Nenana** baz=208,SNR=5.3	85.55	12	P		P	01 54 49.9	-2.0
K24K	**Donnelly Dome** baz=211,SNR=15	85.56	14	P		P	01 54 51.4	-0.6
P32M	**Atlin** baz=222	85.59	21	P		P	01 54 52.0	-0.2
G19K	**Purcell Mounta** baz=200,SNR=6.3	85.60	9	P		P	01 54 51.1	-1.0
MLY	**Manley** baz=206,SNR=14	85.61	11	P		P	01 54 50.5	-1.7
BVCY	**Beaver Creek** baz=215	85.62	17	P		P	01 54 51.8	-0.5
Q32M	**Nakina River** baz=223,SNR=17	85.63	22	P		P	01 54 52.5	-0.1
F18K	**Selawik** baz=198	85.70	7	P		P	01 54 51.3	-1.1
NEW	**Newport** comp=Z,5.4nm,0.8s	85.70	36	IAmb		IAmb	01 54 53.2	
O30N	**Mendenhall** baz=220	85.70	19	P		P	01 54 52.2	-0.6
RIDG	**Independent Ri** baz=212,SNR=12	85.72	14	P		P	01 54 52.0	-0.8
H21K	**Melozitna Rive** baz=204,SNR=7.9	85.81	10	P		P	01 54 52.4	-0.8
HDA	**Harding Lake** baz=210,SNR=9.1	85.83	13	P		P	01 54 51.8	-1.3
CCB	**Clear Creek Bu**	85.85	13			P	01 54 51.8	-1.5
L27K	**Beaver Creek,** baz=214	85.89	16	P		P	01 54 52.7	-0.8
BCAR	**Beaver Creek A**	85.91	16			P	01 54 53.4	-0.3
E17K	**Hotham Inlet** baz=196,SNR=5.3	85.91	6	P		P	01 54 52.9	-0.6
N30M	**Aishikik Lake** baz=219	85.93	19	P		P	01 54 53.1	-0.7
I23K	**Minto, Yukon-K** baz=207,SNR=8.3	85.98	12	P		P	01 54 52.7	-1.2
WHY	**Whitehorse** comp=Z,13nm,0.8s	86.00	20	IAmb		IAmb	01 54 55.0	
WHY	**Whitehorse** baz=221	86.00	20	P		P	01 54 53.1	-1.2
DLBC	**Dease Lake** baz=225,SNR=6.2	86.07	23	P		P	01 54 53.4	-1.2
TX31	**Lajitas Ar. Si**	86.09	58			P	01 54 56.6	+1.2
TX31	comp=Z,10nm,1.5s			IAmb		IAmb	01 54 58.0	
TXAR	**Lajitas Array** comp=Z,2.0nm,0.7s,baz=217,slow=6.3,SNR=24	86.09	58	P		P	01 54 56.4	+1.0
TXAR	comp=Z,2.0nm,0.7s **Lajitas Array**	86.09	58			P	01 54 56.7	+1.3
SCRK	**Sand Creek** comp=Z,6.4nm,1.0s	86.12	14	IAmb		IAmb	01 54 55.0	
SCRK	**Sand Creek** baz=212,SNR=9.4	86.12	14	P		P	01 54 53.8	-1.0
IL31	comp=Z,8.4nm,0.7s	86.15	13	IAmb		IAmb	01 54 54.2	
ILAR	**Eielson Array** comp=Z,4.3nm,0.4s,baz=224,slow=4.9,SNR=70	86.15	13	P		P	01 54 53.2	-1.5
F19K	comp=Z,4.3nm,0.4s **Shaleruckik Mo** comp=Z,4.8nm,0.7s	86.16	8	IAmb		IAmb	01 54 54.5	
F19K	**Shaleruckik Mo** baz=199,SNR=7.6	86.16	8	P		P	01 54 53.6	-1.0
H22K	**Ishtalitna Cre** comp=Z,10nm,1.0s	86.28	11	IAmb		IAmb	01 54 55.4	
H22K	**Ishtalitna Cre** baz=206,SNR=13	86.28	11	P		P	01 54 54.4	-0.9
M29M	**Somme Creek** comp=Z,6.8nm,0.8s	86.30	17	IAmb		IAmb	01 54 56.1	
M29M	**Somme Creek** baz=218,SNR=16	86.30	17	P		P	01 54 55.2	-0.4
POKR	**Poker Plat Res** baz=209	86.34	13	P		P	01 54 54.0	-1.6
J25K	**Salcha River,** comp=Z,7.0nm,0.5s	86.35	14	IAmb		IAmb	01 54 55.5	
J25K	**Salcha River,** baz=211,SNR=17	86.35	14	P		P	01 54 54.8	-1.0
N31M	**Braeburn, Yuko** comp=Z,12nm,0.9s	86.35	19	IAmb		IAmb	01 54 56.5	
N31M	**Braeburn, Yuko** baz=220	86.35	19	P		P	01 54 55.4	-0.4
P33M	**Teslin, Yukon** baz=223	86.35	21	P		P	01 54 55.2	-0.7
E18K	**Tukpahlearik C** comp=Z,7.5nm,0.9s	86.37	7	IAmb		IAmb	01 54 56.3	
E18K	**Tukpahlearik C** baz=197,SNR=7.4	86.37	7	P		P	01 54 54.9	-0.8
D17K	**Noatak River** baz=194	86.38	6	P		P	01 54 55.2	-0.5
R33M	**Jennings River** comp=Z,21nm,1.4s	86.41	22	IAmb		IAmb	01 54 57.2	
R33M	**Jennings River** baz=224,SNR=11	86.41	22	P		P	01 54 56.3	+0.1
G21K	**Allakaket** comp=Z,8.7nm,0.8s	86.48	10	IAmb		IAmb	01 54 56.4	
G21K	**Allakaket** baz=204,SNR=15	86.48	10	P		P	01 54 55.5	-0.8
XAN	**Xi'an**	86.49	307	P		P	01 54 58.3	+1.2
XAN	comp=Z,23nm,1.0s			pmax		pmax		
H23K	**Yukon River** baz=207	86.55	11	P		P	01 54 55.4	-1.2
K27K	**Chicken** comp=Z,10nm,1.1s	86.63	15	IAmb		IAmb	01 54 57.9	
F20K	**Avaraart Lake** baz=201,SNR=7.0	86.64	9	P		P	01 54 56.0	-1.0
RDOG	**Red Dog Mine** baz=195	86.75	6	P		P	01 54 56.1	-1.4
C16K	**Lisburne Hills** baz=192	86.75	5	P		P	01 54 56.1	-1.3
E19K	**Redstone River** comp=Z,9.8nm,0.7s	86.82	8	IAmb		IAmb	01 54 58.0	
E19K	**Redstone River** baz=200,SNR=14	86.82	8	P		P	01 54 57.0	-0.8
LDM	**Libby Dam** comp=Z,11nm,0.7s	86.82	36	IAmb		IAmb	01 54 59.0	
DLMT	**Dillon** baz=203	86.83	40	IAmb		IAmb	01 54 59.7	
H24K	**Noodor Dome** baz=209	86.88	12	P		P	01 54 56.3	-1.9
M30M	**Minto, Yukon** baz=219,SNR=32	86.89	18	P		P	01 54 57.3	-1.0
L29M	**L29M** baz=218,SNR=15	86.93	17	P		P	01 54 58.1	-0.3
N32M	**Quiet Lake** baz=222	86.96	20	P		P	01 54 57.7	-1.0
SNOW	**Snow King Moun** comp=Z,8.9nm,1.0s	87.06	42	IAmb		IAmb	01 55 01.1	
PRP	**Porcupine Dome** comp=Z,5.0nm,0.7s	87.09	13	IAmb		IAmb	01 55 05.0	
PRP	**Porcupine Dome** baz=211,SNR=8.0	87.09	13	P		P	01 54 58.3	-1.1
C17K	**DeLong Mountai** baz=194	87.13	6	P		P	01 54 58.5	-0.8
F21K	**Alatna River** baz=204,SNR=6.7	87.14	9	P		P	01 54 58.5	-0.8
G22K	**Bettles** baz=205	87.19	10	P		P	01 54 59.2	-0.3
G23K	**Bananza Creek** baz=207	87.25	11	P		P	01 54 59.7	-0.2
M31M	**Drury Creek, Y** comp=Z,6.8nm,1.0s	87.33	19	IAmb		IAmb	01 55 00.3	
M31M	**Drury Creek, Y** baz=221	87.33	19	P		P	01 54 59.7	-0.6
DAWY	**Dawson**	87.35	16	IAmb		IAmb	01 55 00.9	
	comp=Z,14nm,1.2s							
DAWY	**Dawson** baz=217	87.35	16	P		P	01 55 00.1	-0.3
FLWY	**Flagg Ranch** comp=Z,8.3nm,0.8s	87.39	42	IAmb		IAmb	01 55 02.8	
YHL	**Hebgen Lake** comp=Z,9.1nm,0.8s	87.46	41	IAmb		IAmb	01 55 03.5	
C18K	**Utukok River** baz=196	87.49	6	P		P	01 55 00.5	-0.6
PDAR	**Pinedale Array** comp=Z,2.9nm,0.7s,baz=223,slow=2.8,SNR=32	87.51	43	P		P	01 55 01.6	-0.3
HHC	comp=Z,2.9nm,0.7s **Hu-ho-hao-te**	87.53	314	*e*P		P	01 55 02.0	+0.1
HHC				pmax		pmax		
HHC	comp=Z,13nm,0.5s			pmax		pmax		
F22K	comp=Z,100nm,5.0s **John River** baz=205	87.61	10	P		P	01 55 00.9	-0.6
H17A	**Grant Village** comp=Z,5.9nm,0.8s	87.62	42	IAmb		IAmb	01 55 04.7	
K29M	**Barlow Dome** comp=Z,5.1nm,0.8s	87.67	17	IAmb		IAmb	01 55 03.5	
K29M	**Barlow Dome** baz=218,SNR=10	87.67	17	P		P	01 55 01.7	-0.4
COLD	**Coldfoot** comp=Z,12nm,0.8s	87.69	11	IAmb		IAmb	01 55 02.5	
COLD	**Coldfoot** baz=207,SNR=18	87.69	11	P		P	01 55 01.6	-0.2
D19K	**Kuna River** comp=Z,7.3nm,0.8s	87.69	7	IAmb		IAmb	01 55 02.3	
D19K	**Kuna River** baz=199,SNR=7.0	87.69	7	P		P	01 55 01.1	-0.8
WTLY	**Watson Lake, Y** baz=226	87.69	22	P		P	01 55 01.8	-0.3
E20K	**Nigu River** baz=201,SNR=21	87.71	8	P		P	01 55 01.3	-0.8
G24K	**Hadweenzic Riv** comp=Z,4.5nm,0.7s	87.72	12	IAmb		IAmb	01 55 01.8	
G24K	**Hadweenzic Riv** baz=209,SNR=6.9	87.72	12	P		P	01 55 01.0	-1.1
I27K	**Kandik River** comp=Z,8.6nm,1.3s	88.05	14	IAmb		IAmb	01 55 03.8	
I27K	**Kandik River** baz=215,SNR=5.2	88.05	14	P		P	01 55 02.9	-0.8
G25K	**Bearman Lake** baz=210,SNR=5.8	88.05	12	P		P	01 55 02.3	-1.3
FYU	**Fort Yukon** comp=Z,5.7nm,0.6s	88.06	13	IAmb		IAmb	01 55 03.6	
D20K	**Etivluk River** comp=Z,7.0nm,0.8s	88.08	8	IAmb		IAmb	01 55 03.6	
D20K	**Etivluk River** baz=200,SNR=6.9	88.08	8	P		P	01 55 02.8	-1.0
C19K	**Lookout Ridge** baz=198	88.10	7	P		P	01 55 03.0	-0.8
E21K	**Killik River** comp=Z,6.8nm,0.7s	88.19	9	IAmb		IAmb	01 55 04.2	
E21K	**Killik River** baz=203	88.19	9	P		P	01 55 03.3	-0.9
LIRD	**Liard River Hi** baz=229	88.23	24	P		P	01 55 03.6	-1.0
E22K	**Anaktuvuk Pass** baz=205	88.24	10	P		P	01 55 03.8	-0.8
YNE	**Yellowstone No** comp=Z,4.8nm,0.8s	88.27	41	IAmb		IAmb	01 55 06.9	
I28M	**Miner Creek** comp=Z,5.3nm,0.8s	88.33	15	IAmb		IAmb	01 55 05.0	
I28M	**Miner Creek** baz=216,SNR=8.9	88.33	15	P		P	01 55 04.1	-0.9
F24K	**Squaw Lake** baz=209,SNR=22	88.36	11	P		P	01 55 04.9	-0.2
E23K	**Chandalar** comp=Z,8.6nm,0.8s	88.53	10	IAmb		IAmb	01 55 06.3	
E23K	**Chandalar** baz=207,SNR=16	88.53	10	P		P	01 55 05.5	-0.5
J30M	**Hart River** baz=219,SNR=8.0	88.57	17	P		P	01 55 05.6	-0.7
H27K	**Steamboat Moun** comp=Z,4.7nm,0.8s	88.58	14	IAmb		IAmb	01 55 06.8	
H27K	**Steamboat Moun** baz=215,SNR=5.8	88.58	14	P		P	01 55 05.7	-0.5
MMPY	**Sheldon Lake,** baz=224,SNR=14	88.62	20	P		P	01 55 06.6	+0.2
G26K	**Porcupine Rive** baz=212,SNR=19	88.69	13	P		P	01 55 06.3	-0.2
C21K	**Knifeblade Rid** baz=202,SNR=14	88.74	8	P		P	01 55 06.3	-0.5
E24K	**Your Creek** comp=Z,4.2nm,0.6s	88.74	11	IAmb		IAmb	01 55 07.2	
E24K	**Your Creek** baz=208,SNR=9.6	88.74	11	P		P	01 55 06.4	-0.5
F25K	**Christian Rive** comp=Z,4.0nm,0.8s	88.86	12	IAmb		IAmb	01 55 08.1	
F25K	**Christian Rive** baz=211,SNR=9.3	88.86	12	P		P	01 55 07.1	-0.3
TGTN	**Hyland Airport** baz=227	88.86	22	P		P	01 55 07.1	-0.4
ELIB	**Princess Elisa** comp=Z,3.1nm,0.7s	88.88	187	*d*P		P	01 55 07.3	-0.4
A19K	**Wainwright** baz=196	89.00	6	P		P	01 55 07.6	-0.3
G27K	**Doyon Strip** comp=Z,7.3nm,1.4s	89.03	14	IAmb		IAmb	01 55 08.7	
G27K	**Doyon Strip** baz=214,SNR=6.3	89.03	14	P		P	01 55 07.6	-0.6
CMAR	**Chiang Mai Arr** comp=Z,2.4nm,0.5s,baz=107,slow=2.8,SNR=19	89.05	290	P		P	01 55 10.2	+0.9
CMAR	comp=Z,2.4nm,0.5s **Chiang Mai Arr**	89.05	290			P	01 55 10.4	+1.0
TOLK	**Toolik Lake Re** baz=207	89.06	10	P		P	01 55 07.7	-0.7
I30M	**Mount Dempster** comp=Z,9.9nm,1.0s	89.06	16	IAmb		IAmb	01 55 08.7	
I30M	**Mount Dempster** baz=219,SNR=15	89.06	16	P		P	01 55 07.5	-1.0
D23K	**Nanushuk River** baz=206,SNR=15	89.17	10	P		P	01 55 08.7	-0.1
B21K	**Ikpupuk River** baz=202	89.19	8	P		P	01 55 08.4	-0.4
B20K	**Meade River** baz=200	89.23	7	P		P	01 55 08.4	-0.6
F26K	**Sheenjek River** comp=Z,6.3nm,0.9s	89.24	12	IAmb		IAmb	01 55 10.1	
F26K	**Sheenjek River** baz=212,SNR=9.1	89.24	12	P		P	01 55 08.8	-0.4
E25K	**Arctic Village** comp=Z,4.2nm,0.9s	89.32	12	IAmb		IAmb	01 55 10.2	
E25K	**Arctic Village** baz=211,SNR=6.0	89.32	12	P		P	01 55 09.0	-0.5
H29M	**Whitestone** baz=218,SNR=17	89.33	15	P		P	01 55 08.9	-0.7
KOTAN	**Kotaneelee Air** baz=230	89.48	24	P		P	01 55 09.9	-0.5
D24K	**Happy Valley** comp=Z,7.0nm,0.8s	89.64	10	IAmb		IAmb	01 55 11.5	
D24K	**Happy Valley** baz=208	89.64	10	P		P	01 55 10.6	-0.4
C23K	**Itkillik River** baz=206,SNR=11	89.97	9	P		P	01 55 11.8	-0.6
G29M	**Pine Creek** comp=Z,7.9nm,0.9s	89.97	15	IAmb		IAmb	01 55 12.7	
G29M	**Pine Creek** baz=218,SNR=8.5	89.97	15	P		P	01 55 11.9	-0.7
B22K	**Teshekpuk Lake** baz=204	90.02	8	P		P	01 55 12.0	-0.6
H31M	**Peel River** comp=Z,5.1nm,0.8s	90.06	17	IAmb		IAmb	01 55 13.3	
H31M	**Peel River** baz=221	90.06	17	P		P	01 55 12.1	-0.9
F28M	**Old Crow** baz=216	90.09	14	P		P	01 55 12.6	-0.5
E27K	**Coleen River** baz=215,SNR=5.7	90.19	13	P		P	01 55 12.7	-0.9
D25K	**Kavik River** baz=210	90.21	11	P		P	01 55 12.6	-1.0
A22K	**Sinclair Lake** baz=202	90.43	7	P		P	01 55 13.9	-0.7
G30M	**tAoh Zrail Nji** baz=220,SNR=18	90.46	15	P		P	01 55 13.9	-0.9
VNA2	**Neumayer--Watz** comp=Z,2.5nm,0.6s,baz=176,slow=4.2	90.89	177	⇑P		P	01 55 17.2	+0.4
G31M	**Satah River** baz=221,SNR=28	90.92	16	P		P	01 55 16.1	-0.7
C27K	**Jago River** comp=Z,5.6nm,0.8s	90.97	11	IAmb		IAmb	01 55 18.3	
C27K	**Jago River** baz=213,SNR=7.1	90.97	11	P		P	01 55 16.4	-0.6
E28M	**Babbage River** baz=216,SNR=7.5	90.97	13	P		P	01 55 16.5	-0.6
C26K	**Camden Bay** baz=212	90.99	11	P		P	01 55 16.6	-0.5
F30M	**Barrier River** comp=Z,7.4nm,0.9s	91.06	15	IAmb		IAmb	01 55 18.9	
F30M	**Barrier River** baz=220,SNR=5.5	91.06	15	P		P	01 55 16.6	-1.0
E29M	**Blow River** comp=Z,3.7nm,0.9s	91.17	14	IAmb		IAmb	01 55 19.2	
E29M	**Blow River** baz=218,SNR=5.6	91.17	14	P		P	01 55 16.8	-1.2
D27M	**Malcolm River** comp=Z,11nm,1.5s	91.19	12	IAmb		IAmb	01 55 18.8	
D27M	**Malcolm River** baz=215	91.19	12	P		P	01 55 17.7	-0.5
F31M	**Tsiigehtchic** baz=222	91.44	16	P		P	01 55 18.3	-1.0
D28M	**Stokes Point** baz=217	91.73	13	P		P	01 55 19.2	-1.4
INK	**Inuvik** baz=222	92.15	15	P		P	01 55 21.4	-1.1
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=113,slow=3.9,SNR=4.4	93.82	319	P		P	01 55 30.4	-0.4
SONM	comp=Z,0.5nm,0.6s **Songino Array**	93.82	319	P		P	01 55 30.4	-0.4
YKA	**Yellowknife Ar** comp=Z,2.1nm,0.6s,baz=238,slow=4.6,SNR=14	94.57	25	P		P	01 55 32.9	-0.8
C36M	comp=Z,2.1nm,0.6s **Paulatuk** baz=231	95.35	17	P		P	01 55 36.7	-0.4
A36M	**Sachs Harbour** baz=230	96.74	15	P		P	01 55 43.0	-0.2
MKAR	**Makanchi Array** comp=Z,0.5nm,0.5s,baz=180,slow=0.4,SNR=4.1	109.39	314	PKiKP		PKiKP	02 00 38.8	-1.3
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.5s,baz=93,slow=1.9,SNR=11	112.14	318	PKiKP		PKiKP	02 00 43.6	-1.6
BVAR	**Borovoye Array** comp=Z,2.0nm,0.5s,baz=83,slow=0.4,SNR=8.1	117.11	321	PKP		PKPdf	02 00 53.8	-0.9
ARCES	**ARCESS Array B** comp=Z,2.5nm,0.8s,baz=68,slow=0.3,SNR=8.6	126.61	350	PKP		PKPdf	02 01 11.7	-0.8
FINES	**FINESS Array B** comp=Z,3.1nm,1.0s,baz=11,slow=1.4,SNR=4.4	133.49	344	PKhKP		PKPpre	02 01 14.3	
FINES				PKP		sPdif	02 01 25.8	+2.9
NOA	**NORSAR Array B** comp=Z,0.7nm,0.8s,baz=357,slow=0.2,SNR=1.8	136.67	353	PKP		PKPdf	02 01 31.6	-0.1
HFS	**Hagfors** comp=Z,0.9nm,0.4s,baz=29,slow=3.3,SNR=7.1	137.23	351	PKhKP		PKPpre	02 01 22.8	
HFS				PKP		PKPdf	02 01 32.9	+0.3
AKASG	comp=Z,1.5nm,0.7s,baz=336,slow=3.2,SNR=2.0 **Malin Array Be** comp=Z,0.3nm,0.3s,baz=47,slow=4.0,SNR=3.1	140.85	332	PKhKP		PKPpre	02 01 32.4	
AKASG				PKP		PKPdf	02 01 40.0	+0.5
EKA	comp=Z,2.0nm,0.7s,baz=337,slow=1.9,SNR=7.6 **Eskdalemuir Ar** comp=Z,2.0nm,0.7s,baz=448,slow=2.5,SNR=1.7	142.75	5	PKhKP		PKPpre	02 01 38.9	
GAL1	**Galloway**	143.07	6	*e*P		PKPab	02 01 39.6	-1.3
SORM	**Soroca**	143.08	330	⇓P		PKPab	02 01 40.6	-0.6
KMPD	**K-Podol'skiy**	143.64	332	PKP		PKPab	02 01 41.6	-1.7
ILTH	**Belurgan, Co L**	143.71	8	*e*P		PKPab	02 01 41.9	-1.5
BSEG	**Bad Segeberg** baz=16,slow=2.8	143.71	351	*e*PKPbc		PKPbc	02 01 43.3	-0.2
BNN	**Bunyan**	143.90	312			PKPbc	02 01 44.9	+0.1
HPK	**Haverah Park**	144.22	3	*e*P		PKPbc	02 01 44.2	-0.8
VASR	**Vaslui**	144.39	329	⇑P		PKPdf	02 01 46.2	+0.3
GORT1	**Trebel** baz=16,slow=2.8	144.47	350	*e*PKPbc		PKPdf	02 01 45.8	+0.1
RUE	**Ruedersdorf** baz=16,slow=2.8	144.49	347	*e*PKPbc		PKPdf	02 01 45.6	-0.2
WLF1	**Llynfaes**	144.66	6	*e*P		PKPdf	02 01 45.2	-0.9
VLDR	**Vladesti**	144.80	327	⇑P		PKPdf	02 01 47.8	+1.1
TLCR		144.85	326	⇑P		PKPdf	02 01 46.9	+0.2
BUR08	**Bucovina Ar. S**	144.89	332			PKPdf	02 01 48.2	+1.4
BURAR	**Bucovina Array**	144.90	332	⇑P		PKPdf	02 01 48.1	+1.2
BURAR	**Bucovina Array**	144.90	332			PKPdf	02 01 48.1	+1.2
OJC	**Ojcow**	144.91	340	*e*PKP		PKPdf	02 01 47.0	+0.3
SCTR	**Scanteiesti**	144.96	327	⇑P		PKPdf	02 01 47.9	+1.0
GHRR		144.99	328	⇑P		PKPdf	02 01 48.8	+1.8
RETH	**Rethem/Aller,** baz=16,slow=2.8	145.01	352	*e*PKPbc		PKPdf	02 01 47.4	+0.7
BR131	**Keskin Array S**	145.04	315			PKPdf	02 01 47.9	+0.4
BRTR	**Keskin Array B** comp=Z,4.2nm,0.7s,baz=122,slow=3.6,SNR=26	145.04	315	PKPbc		PKPdf	02 01 47.8	+0.4
BRTR	**Keskin Array B**	145.04	315			PKPdf	02 01 48.0	+0.6
TESR	**Tescani**	145.04	329	⇑P		PKPdf	02 01 47.9	+0.9
FLTG	**Flechtingen** baz=16,slow=2.8	145.12	350	*e*PKPbc		PKPdf	02 01 47.3	+0.4
KIRS	**Kirsehir-Merke**	145.12	313	⇑P		PKPdf	02 01 48.4	+0.9
IZVR	**Izvoarele**	145.16	327	⇑P		PKPdf	02 01 49.4	+2.2
FOEL	**Foel Wylfa**	145.17	5	*e*P		PKPdf	02 01 45.9	-1.2
CFR	**Carcaliu**	145.22	326	⇑P		PKPdf	02 01 48.0	+0.6
PANC	**Panciu**	145.25	328	⇑P		PKPdf	02 01 49.2	+1.8
TPGR	**Topolog**	145.28	326	⇓P		PKPdf	02 01 48.8	+1.3
ONJR	**Baraj Valea Uz**	145.29	329	⇑P		PKPdf	02 01 49.1	+1.6
ODBI	**Slobozia**	145.37	328	⇑P		PKPdf	02 01 49.6	+2.1
ASSE	**Asse, Remlinge** baz=16,slow=2.8	145.41	350	*e*PKPbc		PKPdf	02 01 48.4	+1.0
KSP	**Ksiaz**	145.41	344	*e*PKP		PKPdf	02 01 48.8	+1.3
NIE	**Niedzica**	145.42	338	*e*PKP		PKPdf	02 01 49.2	+1.5
CWF	**Charnwood Fore**	145.46	3	*e*P		PKPdf	02 01 47.2	-0.3
VRI	**Vrincioaia**	145.46	329	⇑P		PKPdf	02 01 48.6	+0.8
PLOR	**Plostina**	145.51	329	⇑P		PKPdf	02 01 48.6	+0.6
HLM1	**Long Mynd**	145.57	5	*e*P		PKPdf	02 01 48.5	+0.7
SAHR	**Sahastru**	145.58	328	⇓P		PKPdf	02 01 49.5	+1.4
BMR	**Baia Mare**	145.61	334	⇓P		PKPdf	02 01 49.7	+1.8
IBBN	**Ibbenburen** baz=16,slow=2.8	145.63	353	*e*PKPbc		PKPdf	02 01 49.3	+1.5
TURR	**Turia**	145.68	329	⇑P		PKPdf	02 01 50.4	+2.3
ARCR	**ARCALIA**	145.69	332	⇓P		PKPdf	02 01 49.6	+1.5
OSTC	**Ostas**	145.69	343	⇑*e*PKP		PKPdf	02 01 49.9	+1.9
CHVC	**Chvalec**	145.70	344	⇑*e*PKP		PKPdf	02 01 50.1	+2.0
CLZ	**Clausthal** baz=16,slow=2.8	145.73	350	*e*PKPbc		PKPdf	02 01 49.6	+1.5
COVR	**Voineasa-Covas**	145.74	329	⇑P		PKPdf	02 01 49.5	+1.2
OZUR		145.76	330	⇑P		PKPdf	02 01 50.5	+2.2
UPC	**Upice**	145.79	344	⇑*e*PKP		PKPdf	02 01 49.8	+1.6
STEB	**Steborice**	145.80	341	⇑*e*PKP		PKPdf	02 01 49.9	+1.7
BOSR	**Bodos**	145.84	330	⇑P		PKPdf	02 01 51.0	+2.6
DPC	**Dobruska-Polom**	145.85	343	⇑*e*PKP		PKPdf	02 01 50.4	+2.1
MBAR	**Mbarara**	145.85	240			PKPdf	02 01 51.6	+2.0
BRG	**Berggiesshubel** baz=16,slow=2.8	145.96	346	*e*PKPbc		PKPdf	02 01 50.3	+1.9
BRG	**Berggiesshubel**	145.96	346	⇓*e*PKPf			02 01 48.6	
BRG				Amp			02 01 49.2	
BRG	comp=Z,1.7nm,0.9s			⇑PKPb			02 01 50.3	
BRG				Amp			02 01 50.9	
BRG	comp=Z,7.7nm,0.8s **Berggiesshubel**	145.96	346	P		PKiKP	02 01 57.0	+4.1
BRG	comp=Z,3.1nm,1.0s			Amp			02 01 59.2	
KRLC	**Kraliky**	145.97	343	⇑*e*PKP		PKPdf	02 01 50.4	+1.8
MORC	**Moravsky Berou**	146.01	342	⇓P		PKPdf	02 01 50.7	+2.0
MORC	**Moravsky Berou**	146.01	342	*e*PKP		PKPdf	02 01 50.4	+1.8
CEI	**Carei**	146.03	335	⇑P		PKPdf	02 01 50.8	+2.2
DOPR	**Dopca**	146.04	330	⇓P		PKPdf	02 01 51.4	+2.6
MCH1	**Michaelchurch**	146.07	5	*e*P		PKPdf	02 01 49.5	+0.9
GTTG	**Gottingen** baz=16,slow=2.8	146.09	351	*e*PKPbc		PKPdf	02 01 50.6	+2.0
NEUB	**Neuenburg** baz=16,slow=2.8	146.10	349	*e*PKPbc		PKPdf	02 01 50.6	+1.9
MLR	**Muntele Rosu**	146.12	329	⇑P		PKPdf	02 01 50.7	+1.6
PVCC	**Panska Ves**	146.14	345	⇑*e*PKP		PKPdf	02 01 50.9	+2.1
ELMS	**Elmsett, Ipswi**	146.18	1	*

	baz=16,slow=2.8							
TANN				*e*PKPab	**PKPbc**	02 01 54.6	+2.1	
	baz=14,slow=4.3							
JAVC	**Velka Javorina**	**146.78**	**341**	*e*PKP	**PKPdf**	02 01 53.8	+3.8	
UBBA	**Unterbreizbach**	**146.78**	**350**	*e*PKPbc	**PKPdf**	02 01 51.8	+2.2	
	baz=16,slow=2.8							
PSZ	**Piszkesteto**	**146.83**	**337**	⇓P	**PKPdf**	02 01 53.1	+3.0	
ARR	**Arges**	**146.84**	**330**	⇓P	**PKPdf**	02 01 52.4	+2.2	
NKC	**Novy Kostel**	**146.89**	**347**	⇑*e*PKP	**PKPdf**	02 01 52.9	+2.8	
KRUC	**Moravsky**	**146.99**	**342**	*e*PKP	**PKPdf**	02 01 52.9	+2.7	
ZVC	**Zvikov**	**147.24**	**345**	⇑*e*PKP	**PKPdf**	02 01 53.8	+3.2	
ZVC				*e*PKPAB	**PKPbc**	02 01 57.5	+3.6	
HUMR	**Humele**	**147.28**	**328**	⇑P	**PKPdf**	02 01 53.6	+2.7	
MODS	**Modra-Piesok**	**147.33**	**341**	*e*PKP	**PKPdf**	02 01 54.7	+3.9	
UCC	**Uccle**	**147.41**	**357**	*d*PKP	**PKPdf**	02 01 53.9	+3.0	
UCC				*d*PKPab	**PKPbc**	02 01 56.9	+2.7	
SRO	**Srobarova**	**147.48**	**339**	*e*PKP	**PKPdf**	02 01 54.5	+3.5	
SRO				*e*		02 01 58.4		
MEM	**Membach**	**147.48**	**355**	*d*PKP	**PKPdf**	02 01 54.4	+3.4	
SIRR	**Siria**	**147.49**	**334**	⇑P	**PKPdf**	02 01 55.0	+3.8	
BTNL	**Ternell**	**147.49**	**355**	*d*PKPbc	**PKPdf**	02 01 54.4	+3.3	
BSTI	**Sart Tilman**	**147.54**	**355**	*d*PKPbc	**PKPdf**	02 01 54.6	+3.6	
BSTI				*d*PKPab	**PKPbc**	02 01 58.1	+3.5	
TNS	**Taunus Mts**	**147.59**	**352**	*e*PKPbc	**PKPdf**	02 01 54.6	+3.3	
	baz=16,slow=2.8							
TNS				*e*PKPab	**PKPbc**	02 01 58.3	+3.5	
	baz=14,slow=4.3							
GRF	**Grafenberg Arr**	**147.66**	**348**	*e*PKPbc	**PKPdf**	02 01 54.7	+3.3	
	baz=16,slow=2.8							
GRF				*e*PKPab	**PKiKP**	02 01 58.9	+2.5	
	baz=14,slow=4.3							
GRFO	**Grafenberg**	**147.66**	**348**		**PKPdf**	02 01 55.4	+4.0	
KHC	**Kasperske Hory**	**147.68**	**345**		**PKPdf**	02 01 55.1	+3.7	
KHC	**Kasperske Hory**	**147.68**	**345**	⇑*e*PKP	**PKPdf**	02 01 54.5	+3.1	
KHC				*e*PKPAB	**PKPbc**	02 01 58.6	+3.6	
GZR	**Gura Zlata**	**147.69**	**332**	⇑P	**PKPdf**	02 01 54.9	+3.4	
BCLA	**Clavier**	**147.72**	**356**	*d*PKP	**PKPbc**	02 01 58.2	+3.2	
BHOU	**Houvegnez**	**147.73**	**355**	*d*PKPbc	**PKPdf**	02 01 54.5	+3.1	
BHOU				*d*PKPab	**PKPbc**	02 01 58.7	+3.6	
BGES	**Gesves**	**147.77**	**356**	*d*PKPbc	**PKPdf**	02 01 58.3	+3.1	
CKRC	**Cesky Krumlov**	**147.78**	**344**	⇑*e*PKP	**PKPdf**	02 01 55.1	+3.5	
WET	**Wettzell**	**147.83**	**346**	*e*PKPbc	**PKPdf**	02 01 55.2	+3.6	
	baz=16,slow=2.8							
WET				*e*PKPab	**PKiKP**	02 02 00.0	+3.2	
	baz=14,slow=4.3							
BMRD	**Maredsous**	**147.88**	**356**	*d*PKPbc	**PKPdf**	02 01 55.4	+3.8	
BMRD				*d*PKPab	**PKPbc**	02 01 59.0	+3.6	
GEC2	**GERESS Array S**	**147.91**	**345**	*e*PKPbc	**PKPdf**	02 01 55.6	+3.7	
	baz=16,slow=2.8							
GERES	**GERESS Array B**	**147.91**	**345**	PKPbc	**PKPdf**	02 01 55.5	+3.6	
	comp=Z,5.2nm,0.7s,baz=12,slow=2.5,SNR=57							
GERES	**GERESS Array B**	**147.91**	**345**		**PKPdf**	02 01 55.6	+3.7	
RCHB	**Rochefort**	**147.99**	**356**	*d*PKPbc	**PKPdf**	02 01 55.0	+3.1	
RCHB				*d*PKPab	**PKiKP**	02 01 59.3	+2.3	
BZS	**Buzias**	**148.02**	**333**	⇑P	**PKPdf**	02 01 54.8	+2.8	
DOU	**Dourbes**	**148.09**	**356**	*d*PKP	**PKPdf**	02 01 55.1	+3.1	
DOU				*d*PKPab	**PKiKP**	02 01 59.8	+2.5	
CONA	**Conrad Observa**	**148.16**	**342**	*i* PKP	**PKPdf**	02 01 56.3	+4.0	
	comp=Z,4.5nm,0.7s,SNR=7.3							
RONA	**Rosalia, Austr**	**148.23**	**341**	*i* PKP	**PKPdf**	02 01 56.6	+4.2	
	comp=Z,3.1nm,0.7s							
HERR	**Herculane**	**148.24**	**331**	⇑P	**PKPdf**	02 01 56.5	+4.1	
PLVB	**Pleven**	**148.28**	**327**	⇑P	**PKPdf**	02 01 54.3	+1.8	
WLF	**Walferdange**	**148.40**	**354**	*d*PKPbc	**PKPdf**	02 01 56.7	+4.2	
WLF				*d*PKPab	**PKiKP**	02 02 01.7	+3.8	
WLF	**Walferdange**	**148.40**	**354**	*e*PKPbc	**PKPdf**	02 01 57.2	+4.7	
	baz=16,slow=2.8							
MDVR	**Moldovita**	**148.64**	**332**	⇑P	**PKPdf**	02 01 55.8	+2.6	
MOA	**Molln**	**148.68**	**344**	*i* PKP	**PKPdf**	02 01 57.3	+4.2	
	comp=Z,6.5nm,0.9s							
MORH	**Mrgy, Hungar**	**148.73**	**337**	*e*P	**PKPdf**	02 01 56.7	+3.6	
STU	**Stuttgart**	**148.90**	**350**	*e*PKPbc	**PKPdf**	02 01 57.9	+4.6	
	baz=16,slow=2.8							
STU				*e*PKPab	**PKiKP**	02 02 03.9	+4.9	
	baz=14,slow=4.3							
BIOA	**Bad Ischl, Aus**	**149.00**	**344**	*i* PKP	**PKPdf**	02 01 57.7	+4.1	
	comp=Z,5.0nm,1.1s							
FUR	**Furstenfeldbru**	**149.10**	**347**	*e*PKPbc	**PKPdf**	02 01 58.1	+4.4	
	baz=16,slow=2.8							
FUR				*e*PKPab	**PKiKP**	02 02 05.0	+5.5	
	baz=14,slow=4.3							
FRGS	**Fruska Gora**	**149.15**	**335**	*e*P	**PKPdf**	02 01 58.3	+4.4	
SESA	**Seetaler Alpe,**	**149.27**	**343**	*i* PKP	**PKPdf**	02 01 58.6	+4.3	
	comp=Z,29nm,0.8s,SNR=8.1							
RDO	**Rodhopi**	**149.31**	**323**		**PKPdf**	02 01 58.9	+4.7	
BFO	**Black Forest**	**149.46**	**351**	*e*PKPbc	**PKPdf**	02 01 59.2	+4.9	
	baz=16,slow=2.8							
BFO				*e*PKPab	**PKiKP**	02 02 06.0	+5.7	
	baz=14,slow=4.3							
LESA	**Schwarzleotal**	**149.49**	**345**	*i* PKP	**PKPdf**	02 01 59.1	+4.6	
	comp=Z,4.1nm,0.6s							
SOKA	**Soboth**	**149.53**	**342**	*i* PKP	**PKPdf**	02 01 58.9	+4.4	
	comp=Z,7.3nm,0.9s							
KBA	**Koelnbreinsper**	**149.64**	**344**	*i* PKP	**PKPdf**	02 01 59.3	+4.5	
	comp=Z,7.7nm,1.0s							
TEKS	**Tekeris**	**149.76**	**334**	*e*P	**PKPdf**	02 01 59.3	+4.4	
WATA	**Walderalm**	**149.82**	**347**	*i* PKP	**PKPdf**	02 01 59.8	+4.8	
	comp=Z,5.5nm,0.8s							
RETA	**Reutte**	**149.85**	**348**	*i* PKP	**PKPdf**	02 01 59.9	+4.9	
	comp=Z,3.2nm,0.7s							
WTTA	**Wattenberg**	**149.88**	**346**	*i* PKP	**PKPdf**	02 02 00.3	+5.1	
	comp=Z,11nm,0.6s,SNR=6.0							
MOTA	**Moosalm**	**149.92**	**347**	*i* PKP	**PKPdf**	02 02 00.2	+5.0	
	comp=Z,8.9nm,0.9s							
MYKA	**Terra Mystica**	**149.97**	**343**	*i* PKP	**PKPdf**	02 01 59.5	+4.3	
	comp=Z,5.8nm,0.6s							
SQTA	**Sankt Quirin**	**150.01**	**347**	*i* PKP	**PKPdf**	02 02 00.4	+5.1	
	comp=Z,8.0nm,0.6s							
ABTA	**Abfaltersbach**	**150.16**	**345**	*i* PKP	**PKPdf**	02 02 00.1	+4.6	
	comp=Z,14nm,0.7s,SNR=5.6							
DAVA	**Damuels**	**150.22**	**349**	*i* PKP	**PKPdf**	02 02 01.1	+5.4	
	comp=Z,12nm,1.1s,SNR=5.7							
FETA	**Feichten**	**150.30**	**347**	*i* PKP	**PKPdf**	02 02 01.3	+5.5	
	comp=Z,7.2nm,0.8s							
BBLS	**Lazi&#263i**	**150.37**	**334**	*e*P	**PKPdf**	02 02 01.2	+5.3	
BLY	**Banja Luka**	**150.51**	**337**	⇑P	**PKPdf**	02 02 00.1	+4.2	
BLY	**Banja Luka**	**150.51**	**337**	*e*P	**PKPdf**	02 02 01.7	+5.7	
SJES	**Sjenica**	**150.61**	**332**	*e*P	**PKPdf**	02 02 01.2	+4.9	
FUORN	**Ofenpass-Fuorn**	**150.78**	**348**		**PKPbc**	02 02 03.0	+0.1	
KLINJ	**Klinje**	**151.28**	**334**	*e*P	**PKPbc**	02 02 04.0	+0.1	
BRY	**Bratogost**	**151.52**	**333**	*e*P	**PKPdf**	02 02 03.6	+5.8	
PDG	**Podgorica**	**151.59**	**332**	⇓P	**PKPdf**	02 02 03.6	+6.0	
PDG	**Podgorica**	**151.59**	**332**	*e*P	**PKPdf**	02 02 03.4	+5.7	
TREB	**Trebinje**	**151.75**	**333**	*e*P	**PKPdf**	02 02 03.5	+5.6	
DRME	**Dracevica, Mon**	**151.81**	**332**	*e*P	**PKPdf**	02 02 03.2	+5.2	
ESDC	**Sonseca Array**	**158.05**	**12**	PKPab	**PKPab**	02 02 42.6	-1.0	
	comp=Z,2.0nm,0.8s,baz=337,slow=3.7,SNR=12							
ESDC	**Sonseca Array**	**158.05**	**12**		**PKPab**	02 02 42.8	-0.8	
KEST	**Kesra**	**161.26**	**340**	PKPab	**PKPab**	02 02 56.4	-1.4	
	comp=Z,3.1nm,1.0s,baz=65,slow=9.4,SNR=3.5							
MD01	**Midelt array s**	**164.29**	**20**	PKPab	**PKPab**	02 03 11.0	-0.3	
DBIC	**Dimbokro**	**166.89**	**150**	PKPab	**PKPab**	02 03 22.2	-0.7	
	comp=Z,2.5nm,0.8s,baz=203,slow=5.4,SNR=2.0							
TORD	**Torodi Ar. Bea**	**174.98**	**180**	PKP	**PKPdf**	02 02 18.0	-1.9	
	comp=Z,0.5nm,0.8s,baz=344,slow=0.1,SNR=3.7							

JMA ***12*** *02:09:43.3±0.1,24.0°N±0.2°×121.5°E±0.4,h44km,MV3.5/16, TAIWAN REGION*

TAP ***12*** *02:09:44.1,24.04°N×121.55°E,h45km,ML4.2,B*

ISC 12 02:09:44.6±1.2,24°03′N±0′.02×121°59′E±0′.02,h40km±4km**, n154,σ1§11/257,25C-3D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
					Op		h m s	
TWD	**Chiawan**	**0.05**	**10**	⇑*i*P		**Pn**	**02 09 51.3**	**+0.1**
TWD				*i* S		**Sn**	**02 09 56.0**	**+0.4**
ETM	**Tongmen**	**0.11**	**233**	⇑*i*P		Pn	02 09 51.2	-0.1
ETM				S		Sn	02 09 55.9	-0.1
ETL	**Fush Village**	**0.13**	**14**	P		Pn	02 09 51.5	0.0
ETL				S		Sn	02 09 56.7	+0.3
NACB	**Ninganchiao**	**0.14**	**3**	P		**Pn**	**02 09 51.5**	**-0.1**
NACB	**Ninganchiao**	**0.14**	**3**	⇑*i*P		Pn	02 09 51.4	-0.2
NACB				*e*S		Sn	02 09 56.2	-0.1
LXIB	**Xiulin Townshi**	**0.16**	**267**	⇑*i*P		**Pn**	**02 09 51.5**	**-0.3**
LXIB				S		Sn	02 09 56.6	-0.2
TEYL	**Yanliau Villag**	**0.16**	**176**	⇑*i*P		**Pn**	**02 09 52.0**	**+0.4**
TEYL				S		**Sn**	**02 09 58.8**	**+2.3**
ETLH	**Xiulin Townshi**	**0.20**	**331**	⇑*i*P		**Pn**	**02 09 52.0**	**-0.1**
ETLH				S		**Sn**	**02 09 57.5**	**+0.3**
SHUL	**Shoufeng**	**0.24**	**185**	⇑*i*P		**Pn**	**02 09 52.6**	**+0.3**
SHUL				S		**Sn**	**02 09 59.1**	**+1.4**
ESL	**Shilin**	**0.26**	**213**	⇑*i*P		**Pn**	**02 09 51.9**	**-0.6**
ESL				S		**Sn**	**02 09 57.3**	**-0.7**
WHF	**Hehuan Shan**	**0.32**	**291**	P		**Pn**	**02 09 53.5**	**-0.1**
WHF				S		**Sn**	**02 10 00.1**	**+0.4**
TEGC	**Jichi Village**	**0.32**	**188**	*e*P		**Pn**	**02 09 53.2**	**0.0**
TEGC				*e*S		**Sn**	**02 10 02.5**	**+3.4**
EAHA	**Aohua**	**0.33**	**25**	*e*P		**Pn**	**02 09 53.0**	**-0.3**
EAHA				*e*S		**Sn**	**02 09 59.4**	**+0.2**
WARBT	**Fenglin Townsh**	**0.36**	**211**	⇑*i*P		**Pn**	**02 09 52.7**	**-1.0**
WARBT				*e*S		**Sn**	**02 09 59.0**	**-0.9**
FUSS	**Fushou**	**0.38**	**305**	⇓*i*P		**Pn**	**02 09 54.2**	**+0.1**
FUSS				S		**Sn**	**02 10 01.0**	**+0.3**
OWD	**Renai**	**0.38**	**259**	P		**Pn**	**02 09 54.0**	**0.0**
OWD				S		**Sn**	**02 10 00.2**	**-0.4**
WUSB	**Renai**	**0.43**	**265**	⇓*i*P		**Pn**	**02 09 54.7**	**0.0**
WUSB				S		**Sn**	**02 10 01.5**	**-0.1**
TWT	**Tachien**	**0.44**	**301**	P		**Pn**	**02 09 55.0**	**+0.3**
TWT				S		**Sn**	**02 10 02.0**	**+0.2**
NNSB	**Datong**	**0.44**	**335**	⇑*i*P		**Pn**	**02 09 54.6**	**-0.1**
NNSB				S		**Sn**	**02 10 01.5**	**-0.2**
EWUT	**Wuta**	**0.45**	**23**	⇑*i*P		**Pn**	**02 09 54.4**	**-0.3**
EWUT				S		**Sn**	**02 10 01.4**	**-0.4**
TDCB	**Techi**	**0.45**	**300**	⇓*i*P		**Pn**	**02 09 54.9**	**0.0**
TDCB				S		**Sn**	**02 10 02.1**	**+0.1**
NNS	**Nan Shan**	**0.45**	**334**	⇑*i*P		**Pn**	**02 09 54.8**	**-0.1**
NNS				S		**Sn**	**02 10 01.6**	**-0.4**
LATG	**Datong**	**0.51**	**354**	⇑*i*P		**Pn**	**02 09 55.2**	**-0.4**
LATG				S		**Sn**	**02 10 02.9**	**-0.4**
HGSD	**Ruisui**	**0.56**	**196**	P		**Pn**	**02 09 55.6**	**-0.6**
HGSD				*e*S		**Sn**	**02 10 06.2**	**+1.9**
NDT	**Datong Townshi**	**0.57**	**353**	⇑P		**Pn**	**02 09 56.3**	**-0.1**
NDT				S		**Sn**	**02 10 04.5**	**-0.3**
EHY	**Hungye**	**0.58**	**205**	⇑*i*P		**Pn**	**02 09 54.8**	**-1.6**
EHY				*e*S		**Sn**	**02 10 04.3**	**+1.1**
EHYH	**Wanrong**	**0.58**	**203**	*e*P		**Pn**	**02 09 54.9**	**-1.6**
ESAO	**Su ao**	**0.59**	**23**	P		**Pn**	**02 09 56.3**	**-0.3**
ESAO				*e*S		**Sn**	**02 10 04.7**	**-0.4**
ENTT	**Nioudou**	**0.61**	**358**	⇑*i*P		**Pn**	**02 09 56.7**	**-0.2**
ENTT				*e*S		**Sn**	**02 10 05.3**	**-0.2**
NDS	**Dongshan**	**0.61**	**11**	⇑P		**Pn**	**02 09 56.3**	**-0.6**
NDS				S		**Sn**	**02 10 04.9**	**-0.7**
WCS	**Beigang Elemen**	**0.62**	**273**	*e*P		**Pn**	**02 09 57.0**	**0.0**
WCS				*e*S		**Sn**	**02 10 06.6**	**+0.8**
TWC	**Suao**	**0.62**	**22**	P		**Pn**	**02 09 56.9**	**-0.1**
TWC				S		**Sn**	**02 10 05.8**	**-0.1**
SSLB	**Suanglung**	**0.63**	**247**	P		**Pn**	**02 09 56.9**	**-0.2**
SSLB	**Suanglung**	**0.63**	**247**	S		**Sn**	**02 10 04.0**	**-2.1**
SSLB	**Suanglung**	**0.63**	**247**	P		**Pn**	**02 09 56.8**	**-0.4**
SSLB				*e*S		**Sn**	**02 10 05.5**	**-0.6**
WHP	**Taichung City**	**0.64**	**293**	*e*P		**Pn**	**02 09 57.4**	**+0.1**
WHP				*e*S		**Sn**	**02 10 06.5**	**+0.2**
SMT	**Sun Moon Lake**	**0.65**	**257**	*e*P		**Pn**	**02 09 57.4**	**0.0**
SMLT				S		**Sn**	**02 10 06.5**	**-0.1**
YHNB	**Yeheng**	**0.67**	**343**	P		**Pn**	**02 09 57.6**	**-0.1**
YHNB	**Yeheng**	**0.67**	**343**	⇑*i*P		**Pn**	**02 09 57.6**	**-0.1**
YHNB				S		**Sn**	**02 10 06.4**	**-0.6**
EOS4	**EOS4**	**0.67**	**82**	P		**Pn**	**02 09 57.7**	**+0.3**
EOS4				*e*S		**Sn**	**02 10 07.7**	**+1.1**
NSK	**Sanguang**	**0.68**	**342**	⇑*i*P		**Pn**	**02 09 57.7**	**-0.1**
NSK				*i* S		**Sn**	**02 10 06.6**	**-0.7**
TYC	**Yuchr**	**0.68**	**259**	P		**Pn**	**02 09 57.9**	**+0.1**
TYC				S		**Sn**	**02 10 07.1**	**-0.2**
YULB	**Yu-li**	**0.69**	**203**	P		**Pn**	**02 09 56.3**	**-1.7**
YULB	**Yu-li**	**0.69**	**203**	S		**Sn**	**02 10 05.4**	**-2.1**
YULB	**Yu-li**	**0.69**	**203**	⇑*i*P		**Pn**	**02 09 56.2**	**-1.8**
YULB				*e*S		**Sn**	**02 10 07.7**	**+0.2**
TWE	**Neicheng**	**0.69**	**6**	⇑*i*P		**Pn**	**02 09 57.7**	**-0.3**
TWE				*i* S		**Sn**	**02 10 07.3**	**-0.2**
EOS2	**EOS2**	**0.70**	**57**	*e*P		**Pn**	**02 09 59.3**	**+1.3**
EOS3	**EOS3**	**0.71**	**69**	*e*P		**Pn**	**02 09 59.0**	**+0.9**
EOS3				*e*S		**Sn**	**02 10 10.4**	**+2.6**
ECBN	**Changbin**	**0.72**	**190**	P		**Pn**	**02 09 57.9**	**-0.4**
EYUL	**Yuli**	**0.72**	**200**	*e*P		**Pn**	**02 09 56.7**	**-1.7**
FUSB	**Fushanzhiwuyua**	**0.73**	**0**	⇑*i*P		**Pn**	**02 09 58.2**	**-0.3**
FUSB				S		**Sn**	**02 10 08.1**	**-0.4**
TWF1	**Yuli**	**0.73**	**202**	P		**Pn**	**02 09 56.7**	**-1.8**
NFF	**Wufeng Townshi**	**0.74**	**325**	P		**Pn**	**02 09 59.0**	**+0.3**
NFF				S		**Sn**	**02 10 09.0**	**+0.3**
ILA	**Ilan**	**0.75**	**11**	*e*P		**Pn**	**02 09 58.6**	**-0.1**
ILA				*e*S		**Sn**	**02 10 08.8**	**-0.1**
NWLT	**Wulai**	**0.75**	**354**	⇑P		**Pn**	**02 09 58.5**	**-0.2**
NWLT				*e*S		**Sn**	**02 10 08.3**	**-0.6**
WHYT	**Xinyi Township**	**0.75**	**244**	*e*P		**Pn**	**02 09 58.9**	**+0.1**
WHYT				*e*S		**Sn**	**02 10 09.9**	**+0.9**
NSTT	**Nanjuang**	**0.80**	**318**	*e*P		**Pn**	**02 10 00.1**	**+0.6**
NSTT				*e*S		**Sn**	**02 10 10.7**	**+0.4**
LIOB	**Emei**	**0.80**	**320**	P		**Pn**	**02 10 02.4**	**+0.6**
LIOB				*i* S		**Sn**	**02 10 11.4**	**+1.1**
TWQ1	**Liyutan**	**0.81**	**293**	*i* P		**Pn**	**02 09 59.7**	**+0.1**
TWQ1				*i* S		**Sn**	**02 10 11.3**	**+0.9**
KSHI	**Guanxi Townshi**	**0.83**	**333**	P		**Pn**	**02 10 00.8**	**+0.9**
KSHI				S		**Sn**	**02 10 13.0**	**+2.0**
WNT	**Mingjian**	**0.84**	**260**	*i* P		**Pn**	**02 10 00.9**	**+0.9**
WNT				*i* S		**Sn**	**02 10 13.0**	**+1.8**
TCU	**Taichung**	**0.84**	**278**	*i* P		**Pn**	**02 10 00.5**	**+0.5**
TCU				*i* S		**Sn**	**02 10 12.6**	**+1.5**
CHKH	**Chenggong**	**0.85**	**192**	*i* P		**Pn**	**02 09 59.4**	**-0.7**
CHKH				*i* S		**Sn**	**02 10 11.4**	**-0.1**
FULB	**Fuli**	**0.87**	**198**	*e*P		**Pn**	**02 09 59.5**	**-0.9**
ALS	**Alishan**	**0.88**	**234**	*i* P		**Pn**	**02 10 01.2**	**+0.4**
ALS				*e*S		**Sn**	**02 10 13.6**	**+0.9**
NMLH	**Miaoli**	**0.88**	**305**	*e*P		**Pn**	**02 10 00.6**	**0.0**
NMLH				*e*S		**Sn**	**02 10 13.7**	**+1.4**
WDJ	**Dajia District**	**0.92**	**290**	⇑P		**Pn**	**02 10 01.2**	**+0.1**
WDJ				S		**Sn**	**02 10 13.9**	**+0.8**
NHDH	**Xindian Distri**	**0.93**	**357**	*e*P		**Pn**	**02 10 01.5**	**+0.2**
NHDH				S		**Sn**	**02 10 13.7**	**+0.3**
SBCB	**Hsinchu**	**0.94**	**324**	*e*P		**Pn**	**02 10 01.9**	**+0.6**
SBCB				*e*S		**Sn**	**02 10 14.5**	**+1.0**
CHN5	**Tsauling**	**0.94**	**243**	*e*P		**Pn**	**02 10 02.2**	**+0.8**
CHN5				S		**Sn**	**02 10 14.8**	**+1.1**
WCHH	**Zhanghua**	**0.94**	**273**	*e*P		**Pn**	**02 10 01.8**	**+0.4**
WCHH				*e*S		**Sn**	**02 10 15.3**	**+1.6**
EHD	**Haiduan**	**0.94**	**202**	*e*P		**Pn**	**02 09 59.6**	**-1.8**
TATO	**Taipei**	**0.94**	**355**	P		**Pn**	**02 10 01.5**	**+0.1**
TATO	**Taipei**	**0.94**	**355**	S		**Sn**	**02 10 14.3**	**+0.6**
TWA	**Mucha**	**0.95**	**360**	*e*P		**Pn**	**02 10 01.6**	**+0.1**
TWA				S		**Sn**	**02 10 13.7**	**-0.1**
CHKT	**Chengkung**	**0.95**	**192**	P		**Pn**	**02 10 00.5**	**-0.9**
CHKT				*e*S		**Sn**	**02 10 13.6**	**-0.2**
HSN	**Hsinchu**	**0.95**	**324**	*e*P		**Pn**	**02 10 02.1**	**+0.6**
HSN				*e*S		**Sn**	**02 10 14.3**	**+1.0**
WCH1	**Changhua City**	**0.95**	**273**	*e*P		**Pn**	**02 10 02.1**	**+0.6**
WCH1				*e*S		**Sn**	**02 10 15.4**	**+1.5**
TIPB	**Shuangxi**	**0.96**	**13**	⇑P		**Pn**	**02 10 01.8**	**0.0**
TIPB				*e*S		**Sn**	**02 10 13.8**	**-0.4**
ELDTW	**Lidau**	**0.99**	**212**	*e*P		**Pn**	**02 10 01.0**	**-1.1**
ECS	**Chishang**	**0.99**	**200**	*e*P		**Pn**	**02 10 01.1**	**-0.9**
WGK	**Gukeng**	**1.00**	**250**	*e*P		**Pn**	**02 10 03.3**	**+1.2**
WGK				*e*S		**Sn**	**02 10 17.2**	**+2.1**
NCUH	**Zhongli**	**1.00**	**339**	*e*P		**Pn**	**02 10 02.6**	**+0.4**
NCUH				S		**Sn**	**02 10 17.0**	**+1.8**
WDL	**Douliou City**	**1.01**	**252**	*e*S		**Sn**	**02 10 17.3**	**+2.0**
WDLH	**Douliu**	**1.02**	**251**	*e*P		**Pn**	**02 10 03.6**	**+1.2**
WDLH				*e*S		**Sn**	**02 10 17.5**	**+2.0**
TWB1	**Santiao Chiao**	**1.04**	**21**	P		**Pn**	**02 10 03.0**	**+0.3**
TWB1				*e*S		**Sn**	**02 10 17.0**	**+0.9**
WFSB	**Wu-fen Shan**	**1.05**	**10**	P		**Pn**	**02 10 03.1**	**+0.2**
WFSB				S		**Sn**	**02 10 16.9**	**+0.5**
WCKO	**Fanlu**	**1.08**	**237**	*e*P		**Pn**	**02 10 04.3**	**+1.1**
WCKO				*e*S		**Sn**	**02 10 19.0**	**+2.0**
TWS1	**Kuangyinshan**	**1.08**	**352**	*e*P		**Pn**	**02 10 03.4**	**+0.1**
TWS1				*e*S		**Sn**	**02 10 18.0**	**+1.0**
EDH	**Donghe**	**1.08**	**194**	P		**Pn**	**02 10 01.9**	**-1.5**
EDH				S		**Sn**	**02 10 17.2**	**+0.1**
SXI1	**Grass Mountain**	**1.09**	**14**	P		**Pn**	**02 10 03.4**	**-0.1**
SXI1				*e*S		**Sn**	**02 10 18.8**	**+1.4**
YM01	**YM01**	**1.11**	**359**	P		**Pn**	**02 10 03.3**	**-0.5**
YM01				*e*S		**Sn**	**02 10 17.2**	**-0.7**
WRL	**Guolierlin Hig**	**1.11**	**264**	P		**Pn**	**02 10 04.2**	**+0.4**
WRL				*e*S		**Sn**	**02 10 18.5**	**+0.6**
TNOU	**National Taiwa**	**1.13**	**9**	*e*P		**Pn**	**02 10 03.3**	**-0.6**
TNOU				*e*S		**Sn**	**02 10 17.8**	**-0.5**
ZUZH	**Zhuzihu**	**1.13**	**358**	P		**Pn**	**02 10 03.2**	**-0.8**
ZUZH				*e*S		**Sn**	**02 10 17.7**	**-0.6**
RLNB	**Erlin**	**1.13**	**263**	*e*P		**Pn**	**02 10 04.7**	**+0.7**
RLNB				S		**Sn**	**02 10 20.3**	**+2.0**
STYH	**Taoyuan**	**1.13**	**221**	*e*P		**Pn**	**02 10 04.6**	**+0.6**
STYH				*e*S		**Sn**	**02 10 18.9**	**+0.5**
NTST	**Danshui**	**1.14**	**354**	*e*P		**Pn**	**02 10 03.8**	**-0.2**
NTST				*e*S		**Sn**	**02 10 18.5**	**0.0**
TPUB	**Ta-pu**	**1.14**	**231**	S		**Sn**	**02 10 17.0**	**-1.6**
TPUB	**Ta-pu**	**1.14**	**231**	*i* P		**Pn**	**02 10 05.2**	**+1.1**
TPUB				S		**Sn**	**02 10 20.9**	**+2.4**
YM08	**YM08**	**1.15**	**0**	*e*P		**Pn**	**02 10 03.4**	**-0.9**
YM08				*e*S		**Sn**	**02 10 17.2**	**-1.7**
ANP	**Anpu**	**1.15**	**357**	*e*P		**Pn**	**02 10 03.8**	**-0.6**
WTP	**Ta-pu**	**1.19**	**229**	*e*P		**Pn**	**02 10 05.7**	**+0.9**
WTP				*e*S		**Sn**	**02 10 21.7**	**+2.0**
CHY	**Chiayi**	**1.19**	**244**	P		**Pn**	**02 10 05.8**	**+1.0**
CHY				S		**Sn**	**02 10 22.0**	**+2.2**
WTCT	**Ta-ch'eng**	**1.21**	**262**	*e*P		**Pn**	**02 10 05.5**	**+0.4**
WTCT				*e*S		**Sn**	**02 10 21.5**	**+1.4**
TWY	**Chenhua**	**1.24**	**1**	*e*P		**Pn**	**02 10 05.4**	**-0.1**
TWK	**Hsinying**	**1.26**	**233**	*e*P		**Pn**	**02 10 06.8**	**+1.0**
TWK				*e*S		**Sn**	**02 10 22.9**

P5NO				S		Sb	02 12 10.0	-0.3	
LLGN	**La Laguna**	**1.76**	**19**	P		Pb	02 11 49.6	-1.6	
LLGN				S		Sb	02 12 12.6	-0.4	
LCND	**La Caada**	**1.81**	**63**	P		Pb	02 11 51.2	-0.7	
JUAM	**Asuncion Mita**	**1.84**	**355**	*i* P		Pn	02 11 48.5	-1.1	
JUAM				*e*S		Sn	02 12 12.3	+0.2	
MTO3	**Montecristo**	**1.91**	**6**			Pn	02 11 51.4	+0.8	
MTO3	**Montecristo**	**1.91**	**6**	P		Pn	02 11 51.4	+0.8	
MTO3				S		Sb	02 12 16.5	-0.6	
MTO3	**Montecristo**	**1.91**	**6**	*i* P		Pn	02 11 51.4	+0.8	
CSGN	**Cosiguina Volc**	**2.00**	**76**	P		Pn	02 11 53.1	+1.3	
CSGN				S		Sb	02 12 18.4	-1.4	
FG8	**Yepocapa, Chim**	**2.02**	**331**	*e*P		Pb	02 11 58.0	+2.5	
ESQI	**Esquipulas**	**2.07**	**6**			Pn	02 11 53.9	+1.1	
ESQI	**Esquipulas**	**2.07**	**6**	P		Pn	02 11 53.9	+1.1	
ESQI				S		Sb	02 12 21.8	+0.1	
ZAFR2	**Estanzuela, Za**	**2.08**	**5**	*i* P		Pb	02 11 59.3	+2.7	
MARCA	**Marcala la Paz**	**2.22**	**42**	P		Pn	02 11 56.3	+1.4	
MARCA				S		Sb	02 12 24.5	-1.6	
MARCA	**Marcala la Paz**	**2.22**	**42**	*e*P		Pn	02 11 55.7	+0.9	
CRIN	**San Cristobal**	**2.45**	**85**	P		Pn	02 12 00.5	+2.6	
CRIN				S		Sb	02 12 31.6	-1.1	
STG5	**El Palmar, Qui**	**2.58**	**318**	*e*P		Pb	02 12 06.1	+0.9	
APG	**El Apazote**	**2.65**	**341**	Pn		Pn	02 12 01.6	+0.8	
	0.4nm,0.3s,baz=144,slow=8.3,SNR=13								
APG				Lg		Lg	02 12 42.5		
	0.3nm,0.3s,baz=79,slow=18,SNR=5.7								
APG	**El Apazote**	**2.65**	**341**	*e*P		Pn	02 12 02.1	+1.3	
PLRN	**Geotermica Pol**	**2.72**	**88**	S		Sn	02 12 36.6	+2.9	
ROCN	**Rota Cerro Neg**	**2.74**	**89**	P		Pn	02 12 02.7	+0.8	
ROCN				S		Sn	02 12 36.8	+2.5	
CNGA	**Al SSO del Vol**	**2.78**	**90**	P		Pn	02 12 03.2	+0.7	
CNGN	**Cerro Negro**	**2.79**	**90**	P		Pn	02 12 04.3	+1.7	
CNGN				S		Sn	02 12 38.4	+3.0	
MACN	**El Madrono**	**2.81**	**90**	P		Pn	02 12 03.8	+1.0	
RTAL	**Retalhuleu**	**2.91**	**314**	S		Sb	02 12 42.4	-3.3	
MOMN	**Momotombo**	**2.94**	**91**	S		Sn	02 12 41.5	+2.2	
MOM2	**El Cardon**	**3.00**	**91**	S		Sn	02 12 42.5	+2.0	
HUEH	**Huehuetenango**	**3.39**	**326**			Pb	02 12 15.6	-3.5	
BOAB	**BOACO BROADBAN**	**3.79**	**90**	Pn		Pn	02 12 16.5	+0.1	
JUD3	**Juan Diaz 3**	**4.56**	**120**	Pn		Pn	02 12 30.3	+3.3	
SIUN	**Universidad Ur**	**4.81**	**75**	Pn		Pn	02 12 28.3	-2.1	
JTS	**Las Juntas de**	**5.01**	**115**	Pn		Pn	02 12 35.1	+2.0	
	1.0nm,0.3s,baz=94,slow=20,SNR=6.7								
JTS				Sn		Sn	02 13 27.9	-2.4	
	0.9nm,0.3s,baz=334,slow=19,SNR=1.4								
JTS				Lg		Lg	02 13 58.6		
	0.3nm,0.3s,baz=130,slow=17,SNR=10								
	2.2nm,0.3s								
CMIG	**Matias Romero**	**6.89**	**312**	Pn		Pn	02 13 05.9	+6.9	
	0.5nm,0.3s,baz=119,slow=9.6,SNR=6.2								
CMIG				Sn		Sn	02 14 22.1	+5.4	
	0.2nm,0.3s,baz=7.6,slow=20,SNR=1.5								
	4.0nm,0.6s								
JCT	**Junction City**	**20.26**	**334**	P		P	02 15 51.7	-1.6	
JCT				IAmb		IAmb	02 15 54.7		
	comp=Z,4.5nm,0.7s								
BRDY	**Brady**	**20.64**	**336**	P		P	02 15 57.4	+0.1	
WHTX	**Lake Whitney,**	**20.73**	**341**	P		P	02 15 56.4	-1.8	
WHTX				IAmb		IAmb	02 15 59.5		
	comp=Z,17nm,0.8s								
TXAR	**Lajitas Array**	**21.29**	**324**	P		P	02 16 06.8	+2.4	
	comp=Z,1.5nm,0.8s,baz=140,slow=11,SNR=22								
	comp=Z,1.5nm,0.8s								
TXAR	**Lajitas Array**	**21.29**	**324**	P		P	02 16 06.1	+1.7	
TX31	**Lajitas Ar. Si**	**21.29**	**324**	P		P	02 16 06.7	+2.3	
MIAR	**Mount Ida**	**22.26**	**351**	P		P	02 16 15.8	+1.1	
MIAR				IAmb		IAmb	02 16 18.0		
	comp=Z,5.2nm,0.8s								
MNHN	**Monahans**	**22.37**	**329**	P		P	02 16 17.3	+1.3	
VHRN	**Van Horn**	**23.13**	**324**	P		P	02 16 26.4	+2.3	
TKL	**Tuckaleechee C**	**23.65**	**12**	LR		LR	02 26 03.7		
	comp=Z,65nm,19.3s,baz=292,slow=40								
TKL	**Tuckaleechee C**	**23.65**	**12**	P		P	02 16 27.4	-1.5	
TKL				IAmb		IAmb	02 16 38.9		
	comp=Z,11nm,1.4s								
FNO	**Franklin**	**23.75**	**344**	P		P	02 16 28.8	-1.2	
T42A	**Van Buren**	**24.47**	**357**	P		P	02 16 37.4	+0.8	
T42A				IAmb		IAmb	02 16 38.4		
	comp=Z,3.6nm,0.8s								
T47A	**Sharon Grove**	**24.49**	**5**	P		P	02 16 35.6	-1.2	
T47A				IAmb		IAmb	02 16 37.7		
	comp=Z,8.8nm,0.9s								
T25A	**Trinidad**	**27.93**	**334**	P		P	02 17 10.3	+2.2	
T25A				IAmb		IAmb	02 17 11.6		
	comp=Z,2.6nm,0.9s								
PV18	**Skein Mesa, Pa**	**30.91**	**329**	IAmb		IAmb	02 17 36.9		
	comp=Z,4.0nm,0.9s								
I42A	**Draeger Farm,**	**31.29**	**1**	P		P	02 17 35.9	-1.6	
I42A				IAmb		IAmb	02 17 40.1		
	comp=Z,4.8nm,0.8s								
ECSD	**EROS Data Cent**	**31.72**	**350**	P		P	02 17 40.3	-1.0	
PFO	**Pinyon Flats O**	**32.31**	**315**	LR		LR	02 33 14.5		
	comp=Z,39nm,18.3s,baz=34,slow=41								
SADO	**Sadowa**	**33.38**	**14**	LR		LR	02 31 44.8		
	comp=Z,54nm,19.8s,baz=20,slow=38								
F33A	**5 Mile Ranch,**	**33.73**	**351**	IAmb		IAmb	02 17 58.2		
	comp=Z,3.2nm,0.8s								
AGMN	**Agassiz Nation**	**36.08**	**353**	IAmb		IAmb	02 18 18.9		
	comp=Z,3.2nm,0.8s								
NVAR	**Mina Array Bea**	**36.34**	**320**	P		P	02 18 23.8	+2.0	
	comp=Z,0.7nm,0.7s,baz=131,slow=7.9,SNR=4.2								
	comp=Z,0.7nm,0.7s								
MDP	**Montagnes des**	**37.17**	**98**	LR		LR	02 35 44.1		
	comp=Z,110nm,20.1s,baz=67,slow=40								
EPLO	**Experimental L**	**37.23**	**356**	P		P	02 18 27.3	-1.7	
EPLO				IAmb		IAmb	02 18 28.2		
	comp=Z,4.6nm,0.8s								
ULM	**Lac du Bonnet**	**38.01**	**353**	P		P	02 18 32.0	-3.5	
	comp=Z,2.2nm,0.7s,baz=198,slow=9.4,SNR=4.0								
	comp=Z,2.2nm,0.7s								
YBH	**Yreka Blue Hor**	**41.02**	**321**	LR		LR	02 37 39.1		
	comp=Z,37nm,19.4s,baz=12,slow=39								
F03A	**Seaside**	**44.03**	**326**	P		P	02 19 25.5	+0.4	
SCHQ	**Schefferville**	**45.85**	**18**	P		P	02 19 34.9	-4.6	
	comp=Z,1.9nm,0.7s,baz=209,slow=10,SNR=1.8								
	comp=Z,1.9nm,0.7s								
SCHQ	**Schefferville**	**45.85**	**18**	P		P	02 19 35.6	-3.9	
YKA	**Yellowknife Ar**	**53.05**	**346**	P		P	02 20 33.4	-0.9	
	comp=Z,1.0nm,0.9s,baz=149,slow=7.4,SNR=4.7								
	comp=Z,1.0nm,0.9s								
VAO	**Valinhos**	**54.61**	**130**	P		P	02 20 44.1	-2.3	
EKA	**Eskdalemir Ar**	**77.79**	**36**	P		P	02 23 12.1	-2.4	
	comp=Z,0.6nm,0.7s,baz=288,slow=4.9,SNR=1.7								
	comp=Z,0.6nm,0.7s								
AMKA	**Amchitka**	**81.07**	**321**	P		P	02 23 32.4	0.0	
CMAR	**Chiang Mai Arr**	**148.13**	**345**	PKPbc		**PKiKP**	02 31 05.9	+0.1	
	comp=Z,0.6nm,0.3s,baz=337,slow=3.5,SNR=4.8								

UCR ***12*** *02:14:25.3±0.6,8.31N×82.81W,h21km±2km, MW4.1, Presumed earthquake*

UPA ***12*** *02:14:25.9±1.6,8.34N×82.77W,h10km±2km, MW3.4, Presumed earthquake*

CATAC ***12*** *02:14:27.1±0.4,8°N±3°×8°3W±°, h5km±1km, M3.9/13, MLv3.9/13, Error ellipse: s-maj=6.0km s-min=2.9km az=7.6, confirmed*

ISC 12 02:14:25.6±0.9, 8°31N±0°02×82°80W±0°02, h19km±2km, n71, σ1§27/110, 4C-8D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.10**	**4**	⇑*i*P		**Pg**	**02 14 29.6**	**+0.1**
LESP3				*e*S		**Sg**	**02 14 32.5**	**+0.6**
PTPA	**Petro Terminal**	**0.13**	**215**	*e*P		**Pg**	**02 14 29.8**	**+0.1**
PTPA				*e*S		**Sg**	**02 14 33.7**	**+1.2**
PTPM	**Petroterminale**	**0.13**	**219**	⇑*i*P		**Pg**	**02 14 29.9**	**+0.1**
PTPM				*e*S		**Sg**	**02 14 33.3**	**+0.8**
LIMO3	**Limones**	**0.21**	**198**	⇑*i*P		**Pg**	**02 14 30.9**	**+0.1**
LIMO3				*e*S		**Sg**	**02 14 34.9**	**+0.5**
LPPC	**Paso Canoas**	**0.23**	**349**	*e*P		**Pb**	**02 14 30.9**	**+0.1**
LPPC				*e*S		**Sg**	**02 14 35.4**	**+0.5**
CDITO	**Canoas**	**0.28**	**344**	P		**Pg**	**02 14 31.8**	**-0.1**
CDITO				S		**Sg**	**02 14 36.4**	**+0.3**
DVD	**David**	**0.37**	**69**	⇓*e*P		**Pg**	**02 14 33.4**	**+0.1**
DVD				*e*S		**Sb**	**02 14 39.9**	**+0.8**
NELY	**Ciudad Neily**	**0.37**	**337**	*e*P		**Pg**	**02 14 32.9**	**-0.6**
NELY				*e*S		**Sb**	**02 14 39.1**	**-0.1**
NELY	**Ciudad Neily**	**0.37**	**337**	*i* P		**Pg**	**02 14 32.9**	**-0.6**
NELY				*e*S		**Sg**	**02 14 38.9**	**+0.1**
CHIR3	**Chiriqui UPA,**	**0.47**	**79**	⇓*i*P		**Pg**	**02 14 34.9**	**-0.3**
CHIR3				*e*S		**Sb**	**02 14 43.4**	**+1.5**
CLLRA	**Cordillera,**	**0.47**	**22**	*i* P		**Pg**	**02 14 35.0**	**-0.3**
PTAR3	**Potrerillos Ar**	**0.49**	**38**	⇓*i*P		**Pg**	**02 14 35.4**	**-0.1**
PTAR3				*e*S		**Sb**	**02 14 43.6**	**+1.1**
BRU2	**Volcan**	**0.50**	**12**	P		**Pg**	**02 14 35.5**	**-0.3**
BRU2	**Volcan**	**0.50**	**12**	*e*P		**Pg**	**02 14 35.4**	**-0.3**
BRU2	**Volcan**	**0.50**	**12**	⇓*i*P		**Pg**	**02 14 35.5**	**-0.3**
BRU2				*e*S		**Sb**	**02 14 43.4**	**+0.6**
BGUAL	**Bijagual, Pana**	**0.50**	**66**	*i* P		**Pg**	**02 14 35.5**	**-0.2**
SCLRA	**Santa Clara, W**	**0.52**	**2**	*e*P		**Pb**	**02 14 35.7**	**-0.5**
SCLRA	**Santa Clara, W**	**0.52**	**2**	*i* P		**Pb**	**02 14 35.8**	**-0.5**
VITO	**San Vito**	**0.54**	**341**	*e*P		**Pb**	**02 14 36.2**	**-0.3**
VITO	**San Vito**	**0.54**	**341**	*i* P		**Pb**	**02 14 36.0**	**-0.5**
VITO				*e*S		**Sb**	**02 14 44.4**	**+0.6**
PIRO	**Carate, Puerto**	**0.54**	**280**	P		**Pb**	**02 14 35.4**	**-1.1**
PIRO				S		**Sb**	**02 14 43.4**	**-0.5**
PIRO	**Carate, Puerto**	**0.54**	**280**	*e*P		**Pb**	**02 14 35.2**	**-1.3**
PIRO	**Carate, Puerto**	**0.54**	**280**	⇓*i*P		**Pb**	**02 14 35.3**	**-1.1**
PIRO				*e*S		**Sn**	**02 14 45.6**	**-1.3**
BQTLY	**Boquete Panama**	**0.56**	**36**	*e*P		**Pb**	**02 14 36.3**	**-0.5**
BQTLY	**Boquete Panama**	**0.56**	**36**	*i* P		**Pb**	**02 14 36.3**	**-0.5**
BQSF3	**Alto Boquete,**	**0.56**	**40**	⇓*i*P		**Pb**	**02 14 36.3**	**-0.5**
BQSF3				*e*S		**Sg**	**02 14 44.8**	**+0.2**
LNBQ3	**Los Naranjos,**	**0.60**	**36**	⇓*i*P		**Pb**	**02 14 36.7**	**-0.8**
LNBQ3				*e*S		**Sg**	**02 14 45.7**	**0.0**
ALCO	**Alturas Coton,**	**0.64**	**357**	*e*P		**Pb**	**02 14 37.2**	**-1.1**
PBNVO	**Pueblo Nuevo,**	**0.83**	**46**	*e*P		**Pb**	**02 14 40.1**	**-1.4**
PBNVO	**Pueblo Nuevo,**	**0.83**	**46**	*i* P		**Pb**	**02 14 39.9**	**-1.6**
PBNVO				*e*S		**Sb**	**02 14 50.6**	**-1.7**
RBALA	**Bur**	**0.85**	**48**	*e*P		**Pb**	**02 14 40.9**	**-1.0**
RBALA	**Bur**	**0.85**	**48**	*i* P		**Pb**	**02 14 40.6**	**-1.3**
RBALA				*e*S		**Sb**	**02 14 50.9**	**-2.0**
BURE	**Buenos Aires**	**1.01**	**328**	*e*P		**Pb**	**02 14 43.3**	**-1.3**
NANC3	**Nancito, Chiri**	**1.05**	**93**	*e*P		**Pb**	**02 14 43.7**	**-1.6**
KKNTU	**Kakint§**	**1.11**	**61**	*e*P		**Pn**	**02 14 44.3**	**-2.0**
KKNTU	**Kakint§**	**1.11**	**61**	*i* P		**Pn**	**02 14 44.1**	**-2.1**
EDPE	**Pejibaye, P**	**1.14**	**318**	*e*P		**Pn**	**02 14 45.5**	**-1.1**
CNI2	**El Empalme, Bo**	**1.16**	**16**	⇑*e*P		**Pn**	**02 14 45.8**	**-1.0**
CNI2				*e*S		**Sb**	**02 15 01.6**	**-0.1**
PVID3	**Puerto Vidal,**	**1.20**	**102**	*e*P		**Pb**	**02 14 48.1**	**+0.4**
PVID3				*e*S		**Sg**	**02 15 04.1**	**-0.6**
SAJE	**San Jernim**	**1.25**	**326**	*e*P		**Pn**	**02 14 46.8**	**-1.5**
RGM0	**Gandoca**	**1.29**	**8**	P		**Pb**	**02 14 49.5**	**+0.2**
RGM0				S		**Sg**	**02 15 08.4**	**+0.9**
GMAL	**Guarumal, Vera**	**1.64**	**109**	*e*P		**Pn**	**02 14 53.1**	**-0.3**
GMAL				*e*S		**Sb**	**02 15 15.2**	**-0.4**
SAFE3	**Santa Fe, Vera**	**1.71**	**83**	⇓*e*P		**Pn**	**02 14 54.1**	**-0.4**
SAFE3				*e*S		**Sn**	**02 15 16.2**	**+0.3**
PIEC	**Cerro El Cedra**	**1.74**	**319**	*e*P		**Pn**	**02 14 54.6**	**-0.5**
QUEP	**Quepos**	**1.75**	**310**	P		**Pn**	**02 14 55.2**	**+0.2**
QUEP				S		**Sb**	**02 15 18.4**	**-0.4**
STIA3	**Santiago, Vera**	**1.82**	**96**	*e*P		**Pn**	**02 14 56.6**	**+0.7**
STIA3				*e*S		**Sb**	**02 15 20.6**	**-0.1**
VINA	**Juan Vinas**	**1.84**	**329**	*e*P		**Pn**	**02 14 56.6**	**+0.3**
PCAYA	**Pacayas**	**1.89**	**328**	*e*P		**Pn**	**02 14 57.4**	**+0.3**
VTCV	**VTCV, Calle Va**	**1.90**	**331**	*e*P		**Pn**	**02 14 57.4**	**+0.1**
ABRB	**Las Abras (San**	**1.92**	**332**	*e*P		**Pn**	**02 14 57.9**	**+0.4**
CALO3	**Calobre, Verag**	**1.94**	**89**	*e*P		**Pn**	**02 14 57.8**	**+0.3**
CVTQ	**Turrialba Volc**	**1.94**	**330**	*e*P		**Pn**	**02 14 58.5**	**+0.5**
BELE	**Belen**	**2.15**	**320**	*e*P		**Pn**	**02 15 01.1**	**+0.4**
TCS1	**Tacares**	**2.28**	**319**	P		**Pb**	**02 15 04.3**	**-1.8**
TRB2	**Turrubares**	**2.28**	**315**	P		**Pb**	**02 15 05.0**	**-1.3**
TRB2				S		**Sb**	**02 15 33.1**	**-1.0**
CHIT3	**Chitre**	**2.38**	**98**	*e*P		**Pn**	**02 15 04.0**	**+0.4**
CHIT3				*e*S		**Sn**	**02 15 33.5**	**+1.2**
TRT2	**Tortugero**	**2.42**	**338**	P		**Pn**	**02 15 05.9**	**+1.7**
TRT2	**Tortugero**	**2.42**	**338**	*i* P		**Pn**	**02 15 02.6**	**-1.6**
TRT2				*e*P		**Pb**	**02 15 05.2**	**-3.4**
TRT2				*e*S		**Sb**	**02 15 37.8**	**-0.4**
TRT2				*e*S		**Sn**	**02 15 38.4**	**+5.0**
PNME	**Penonome**	**2.45**	**86**	*e*P		**Pn**	**02 15 05.9**	**+1.3**
AZU	**Azuero**	**2.55**	**101**	*e*P		**Pn**	**02 15 07.1**	**+1.2**
AZU				*e*S		**Sb**	**02 15 40.1**	**-1.7**
COVE	**Coope Vega, Sa**	**2.87**	**327**	P		**Pn**	**02 15 12.0**	**+1.5**
COVE				S		**Sb**	**02 15 48.3**	**-2.8**
JTS	**Las Juntas de**	**2.90**	**313**	P		**Pn**	**02 15 13.0**	**+2.2**
JTS				S		**Sb**	**02 15 49.2**	**-2.8**
JTS	**Las Juntas de**	**2.90**	**313**	*e*P		**Pn**	**02 15 11.2**	**+0.3**
JTS				*e*S		**Sn**	**02 15 46.1**	**+0.8**
ZANG	**Zanguenga, Cho**	**2.97**	**77**	*e*P		**Pn**	**02 15 12.6**	**+0.8**
ZANG				*e*S		**Sn**	**02 15 46.0**	**-0.8**
BCIP	**Isla Barro Col**	**3.05**	**73**	P		**Pb**	**02 15 17.3**	**-2.0**
BCIP				S		**Sb**	**02 15 56.3**	**+0.2**
BCIP	**Isla Barro Col**	**3.05**	**73**	*e*P		**Pn**	**02 15 12.7**	**-0.1**
BCIP				*e*S		**Sn**	**02 15 50.4**	**+1.6**
CMARA	**Lajas Hojancha**	**3.10**	**303**	P		**Pn**	**02 15 16.0**	**+2.4**
GAMB1	**Gamboa**	**3.16**	**75**	*e*P		**Pn**	**02 15 14.7**	**+0.3**
FRIJ	**El Hiral**	**3.17**	**73**	*e*P		**Pn**	**02 15 16.6**	**+2.1**
UPAL	**Upala**	**3.38**	**320**	P		**Pn**	**02 15 20.0**	**+2.6**
UPAL				S		**Sn**	**02 16 00.1**	**+3.1**
BLUN	**Bluefields**	**3.80**	**345**	P		**Pn**	**02 15 24.8**	**+1.6**

NEIC ***12*** *02:19:09.8±2.0, 10°7S±0°1×161°0E±0°1, h10km±2km, mb4.3/6, Error ellipse: s-maj=31.8km s-min=7.5km az=48.0*

IDC ***12*** *02:19:10.9±2.9, 10°48S×161°28E, h52km±22km, mb3.7/4, mbtmp4.0/5, ML4.1/1, MS4.0/3, Error ellipse: s-maj=43.1km s-min=15.3km az=53.0*

ISC 12 02:19:12.1±1.1, 10°5S±0°1×161°2E±0°1, h62km, n20, σ1§08/19, mb3.9/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**1.64**	**309**	P		**Pn**	**02 19 37.5**	**-1.2**
	15nm,0.4s,baz=22,slow=2.4,SNR=22							
HNR				S		**Sn**	**02 19 58.4**	**-0.5**
	55nm,0.4s,baz=159,slow=20,SNR=18							
HNR	**Honiara**	**1.64**	**309**			**Pn**	**02 19 38.1**	**-0.7**
SANVU	**Saraoutou**	**7.63**	**131**	Pn		**Pn**	**02 21 00.9**	**+0.3**
KOUNC	**Koumac, New Ca**	**10.44**	**164**	Pn		**Pn**	**02 21 40.0**	**+1.0**
DZM	**Mont Dzumac**	**12.56**	**157**	P		**Pn**	**02 22 07.7**	**-0.4**
	1.1nm,0.3s,baz=318,slow=14,SNR=37							
DZM				S		**Sn**	**02 24 23.9**	**-2.6**
	6.2nm,0.9s,baz=60,slow=18,SNR=1.9							
	4.3nm,0.5s							
OUENC	**Ouen Island, N**	**13.03**	**156**	Pn		**Pn**	**02 22 15.2**	**+0.8**
PMG	**Port Moresby**	**13.91**	**273**	Pn		**Pn**	**02 22 27.5**	**+1.1**
MSVF	**Nonsavu**	**17.82**	**116**	LR		LR	02 28 57.4	
	comp=Z,272nm,21.6s,baz=273,slow=33							
WR8	**Warramunga Arr**	**27.43**	**247**	P		**P**	**02 24 52.9**	**+0.5**
WR8				IAmb		IAmb	02 25 14.1	
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**27.57**	**247**	P		**P**	**02 24 54.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=76,slow=9.0,SNR=7.7							
	comp=Z,0.9nm,0.7s							
WRA	**Warramunga Arr**	**27.57**	**247**	P		**P**	**02 24 53.8**	**+0.2**
ASAR	**Alice Springs**	**29.17**	**240**	P		**P**	**02 25 07.7**	**-0.1**
	comp=Z,1.8nm,1.2s,baz=62,slow=9.7,SNR=5.4							
	comp=Z,1.8nm,1.2s							
KNRA	**Kununurra**	**32.03**	**257**	P		**P**	**02 25 31.9**	**-1.1**
KNRA				IAmb		IAmb	02 25 37.9	
	comp=Z,40nm,1.5s							
BBOO	**Buckleboo**	**32.12**	**222**	P		**P**	**02 25 33.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**35.27**	**254**	P		**P**	**02 26 00.9**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=107,slow=5.9,SNR=5.9							
	comp=Z,3.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**35.27**	**254**	P		**P**	**02 26 00.9**	**-0.3**
FITZ				IAmb		IAmb	02 26 28.4	
	comp=Z,3.0nm,1.3s							
BATI	**Baumata**	**36.95**	**267**	LR		LR	02 41 06.8	
	comp=Z,544nm,20.6s,baz=206,slow=36							
SONM	**Songino Array**	**75.64**	**325**	P		**P**	**02 30 50.9**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=143,slow=6.1,SNR=1.9							
	comp=Z,0.3nm,0.4s							
QSPA	**South Pole Qui**	**79.52**	**180**	P		**P**	**02 31 14.1**	**+2.0**
QSPA				IAmb		IAmb	02 31 55.7	
	comp=Z,2.1nm,1.3s							
NRIK	**Noril'sk**	**94.06**	**340**	LR		LR	03 17 28.7	
	comp=Z,47nm,18.6s,baz=184,slow=37							

BGR ***12*** *02:49:19.0,36°26N×71°44E, h33km, mb4.5, Ms3.3*

IDC ***12*** *02:49:22.4±2.7,36°04N×70°98E, h85km±24km, mb4.2/30, mbtmp4.5/32, MS3.4/3, Error ellipse: s-maj=16.1km s-min=9.5km az=12.0*

MOS ***12*** *02:49:25.3±1.0,36°40N×71°11E, h110km, mb4.6/22, Error ellipse: s-maj=6.0km s-min=3.4km az=85.6*

BJI ***12*** *02:49:26.7,36°64N×71°09E, h109km, mB4.6/7, mb4.7/28*

GFZ ***12*** *02:49:27.1±0.3,36°N±3°×7°1E±°, h110km±3km, M4.7/19, mb4.8/19*

NEIC ***12*** *02:49:27.3±2.2,36°38N±0°05×71°02E±0°05, h117km±6km, mb4.6/47, Error ellipse: s-maj=8.8km s-min=4.8km az=151.0*

NNC ***12*** *02:49:36.0±3.2,37°12N×71°31E, h230km±28km, mb4.1, mpv5.3, Error ellipse: s-maj=28.9km s-min=16.9km az=20.0*

ISC 12 02:49:25.4±0.3, 36°33N±0°03×71°11E±0°03, h100km, n398, σ1§64/428, mb4.4/83, 22C-14D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANEM	**Manem**	**1.29**	**20**			**Pn**	**02 49 52.6**	**+3.1**
KBL	**Kabul**	**2.46**	**224**	PN		**Pn**	**02 50 06.0**	**+1.8**
KBL	**Kabul**	**2.46**	**224**	P		**Pn**	**02 50 06.2**	**+2.0**
	SNR=51							
KBL				S		**Sn**	**02 50 35.6**	**+1.8**
KBL	**Kabul**	**2.46**	**224**			**Pn**	**02 50 06.0**	**+1.8**
KBL	**Kabul**	**2.46**	**224**	P		**Pn**	**02 50 06.1**	**+1.8**
SHAA	**Shahritus**	**2.69**	**298**			**Pn**	**02 50 06.9**	**-0.3**
GAR	**Garm**	**2.74**	**347**			**Pn**	**02 50 08.8**	**+1.0**
GAR	**Garm**	**2.74**	**347**	P		**Pn**	**02 50 08.9**	**+1.0**
CHGR	**Chuyangaron**	**2.80**	**327**	PN		**Pn**	**02 50 08.5**	**-0.1**
CHGR	**Chuyangaron**	**2.80**	**327**			**Pn**	**02 50 08.4**	**-0.1**
DRK	**Karamyk**	**3.19**	**10**	PN		**Pn**	**02 50 16.2**	**+2.2**
DRK	**Karamyk**	**3.19**	**10**			**Pn**	**02 50 16.2**	**+2.2**
DRK	**Karamyk**	**3.19**	**10**	P		**Pn**	**02 50 16.4**	**+2.4**
NIL	**Nilore**	**3.20**	**146**	PN		**Pn**	**02 50 17.4**	**+3.6**
NIL	**Nilore**	**3.20**	**146**	P		**Pn**	**02 50 18.0**	**+4.2**
NIL	**Nilore**	**3.20**	**146**			**Pn**	**02 50 17.4**	**+3.6**
NIL	**Nilore**	**3.20**	**146**	P		**Pn**	**02 50 17.5**	**+3.6**
BTK	**Batken**	**3.73**	**357**	PN		**Pn**	**02 50 23.1**	**+2.0**
BTK	**Batken**	**3.73**	**357**			**Pn**	**02 50 23.1**	**+2.0**
BTK	**Batken**	**3.73**	**357**	P		**Pn**	**02 50 23.1**	**+2.0**
SRNI	**Srinagar**	**3.78**	**126**	*e*P		**Pn**	**02 50 24.7**	**+2.9**
SRNI				*e*S		**Sn**	**02 51 07.4**	**+1.9**
SRNI				*ex*		x	02 51 09.4	
SRNI				IAML			02 51 21.3	
	comp=E,6μm,0.5s							
OHH	**Osh**	**4.39**	**17**	P		**Pn**	**02 50 30.2**	**+0.3**
KSH2	**Kashi**	**4.51**	**50**	P		**Pn**	**02 50 35.8**	**+4.1**
KSH2				S		**Sn**	**02 51 27.2**	**+4.1**
KSH2				SMN				
	comp=E,3μm,0.6s				

comp=E,896nm,0.3s
PRZ Przheval'sk 8.34 40 PN **Pn 02 51 25.6 +2.0**
PRZ Przheval'sk 8.34 40 **Pn 02 51 25.6 +2.0**
BKNR BIKANER 8.48 167 *e*P **Pn 02 51 25.6 +0.1**
BKNR *ex* **Sn 02 52 54.8 -4.7**
BKNR *ex* **Sn 02 52 55.0 -4.6**
BTLS Baital 8.98 13 *e*PN **Pn 02 51 31.5 -0.7**
BTLS Baital 8.98 13 *e*P **Pn 02 51 31.5 -0.7**
JOSI Joshimath 9.10 127 *ex* x 02 51 37.5
JOSI *ex* x 02 52 59.8
JOSI IAML 02 53 13.3
comp=E,293nm,0.4s
UZB Uzynbulak 9.13 39 *e*P **Pn 02 51 34.5 +0.1**
UZB Uzynbulak 9.13 39 *e*P **Pn 02 51 34.6 +0.1**
NDI New Delhi 9.20 144 *e*P **Pn 02 51 35.9 +0.7**
NDI *e*S Sn 02 53 11.5 -5.4
AYAN Aya Nagar 9.33 145 *e*P **Pn 02 51 35.5 -1.5**
AYAN *e*S Sn 02 53 14.9 -5.1
KUDL Kundal 9.34 149 *e*P **Pn 02 51 35.9 -1.2**
KUDL *e*S Sn 02 53 13.7 -6.7
SHLS Shalkode 9.37 41 *e*P **Pn 02 51 40.7 +3.1**
SHLS Shalkode 9.37 41 *e*P **Pn 02 51 40.8 +3.1**
SONA Sohna 9.50 146 *e*P **Pn 02 51 39.6 +0.3**
PDGK Podgornoye 9.51 40 ⇑P **Pn 02 51 38.9 -0.5**
comp=E,114nm,0.9s
PDGK Podgornoye 9.51 40 P **Pn 02 51 39.3 -0.1**
PDGK Podgornoye 9.51 40 **Pn 02 51 39.3 -0.1**
PTH Pithoragarh 10.17 129 *e*P **Pn 02 51 48.9 +0.3**
PTH *e*S Sn 02 53 34.5 -6.4
LGTI Lohaghat 10.23 130 *e*P **Pn 02 51 48.6 -0.8**
LGTI *e*S Sn 02 53 34.9 -7.4
LGTI IAML 02 53 37.3
comp=E,178nm,0.3s
LGTI IAML 02 53 38.1
comp=N,196nm,0.5s
TDK Taldyqorghan 10.28 30 *e*P **Pn 02 51 49.7 -0.1**
TDK Taldyqorghan 10.28 30 *e*P **Pn 02 51 49.7 -0.1**
AJM Ajmer 10.32 162 *e*P **Pn 02 51 49.4 -1.1**
AJM *ex* x 02 53 32.3
AGRA Agra 10.77 145 *e*S Sn 02 53 49.6 -5.5
AGRA *e*S Sn 02 53 50.1 -5.0
UDPR Udaipur 11.92 168 *e*P **Pn 02 52 11.4 -0.7**
UDPR IAmb IAmb 02 52 13.1
comp=Z,87nm,0.6s
UDPR *e*S Sn 02 54 16.0 -7.2
JHNI Jhansi 12.60 147 *e*P Pn 02 52 19.0 -2.1
JHNI *ex* Sn 02 54 26.4 -13
JHNI *ex* Sn 02 54 27.5 -12
GUNA GUNA 12.81 154 *ex* x 02 52 14.1
GUNA *i* x Pn 02 52 21.0 -2.9
BHUJ Bhuj 13.09 186 *ex* Pn 02 52 24.9 -2.6
BHUJ *e*S Sn 02 54 43.3 -8.2
MAKZ Makanchi 13.24 34 ⇑P **Pn 02 52 27.7 -1.7**
comp=Z,28nm,0.8s
MAKZ Makanchi 13.24 34 P **Pn 02 52 28.2 -1.2**
MAKZ Makanchi 13.24 34 **Pn 02 52 28.2 -1.2**
MAKZ Makanchi 13.24 34 P **Pn 02 52 28.0 -1.4**
MK31 Makanchi Array 13.38 35 P **Pn 02 52 29.1 -2.1**
comp=Z,6.4nm,0.5s,baz=201,slow=8.3,SNR=94
MK31 Makanchi Array 13.38 35 *e*P **Pn 02 52 29.1 -2.1**
MKAR Makanchi Array 13.38 35 P **Pn 02 52 30.8 -0.4**
comp=Z,9.8nm,0.8s,baz=225,slow=12,SNR=45
MKAR Makanchi Array 13.38 35 **Pn 02 52 29.4 -1.7**
BHPL Bhopal 14.14 156 *ex* Pn 02 52 38.0 -3.2
BHPL *ex* Sn 02 55 04.2 -13
BHPL IAML 02 55 09.8
comp=N,48nm,0.3s
BHPL IAML 02 55 10.2
comp=E,102nm,1.0s
WMQ Urumqi 14.72 54 *e*P **Pn 02 52 47.8 -0.8**
WMQ S **Sn 02 55 27.5 -3.4**
WMQ pmax pmax
comp=E,27nm,0.9s
ZSN Zaisan 15.09 38 *e*P **Pn 02 52 52.8 -0.3**
ZSN Zaisan 15.09 38 *e*P **Pn 02 52 52.8 -0.3**
KURBB Kurchatov Arra 15.26 18 P **Pn 02 52 51.4 -3.8**
comp=E,7.1nm,0.7s,baz=208,slow=10,SNR=38
KURBB Kurchatov Arra 15.26 18 ⇓P **Pn 02 52 50.8 -4.5**
comp=E,55nm,0.6s
KURBB Kurchatov Arra 15.26 18 P **Pn 02 52 50.7 -4.5**
AB31 Akbulak array 15.28 331 ⇑P **Pn 02 52 53.1 -2.4**
comp=E,19nm,0.4s,baz=143,slow=12,SNR=970
AB31 ⇓S Sn 02 55 31.5 -13
comp=E,37nm,0.5s,baz=151,slow=23,SNR=21
AB31 Akbulak array 15.28 331 *e*P **Pn 02 52 52.5 -3.0**
AB31 Akbulak array 15.28 331 **Pn 02 52 52.0 -3.5**
ABKAR Akbulak array 15.28 331 **Pn 02 52 51.8 -3.7**
KURK Kurchatov 15.37 18 ⇑P **Pn 02 52 51.4 -5.1**
comp=E,13nm,0.7s
KURK Kurchatov 15.37 18 *i* P **Pn 02 52 58.2 +1.7**
KURK Kurchatov 15.37 18 P **Pn 02 52 57.4 +0.8**
KURK Kurchatov 15.37 18 **Pn 02 52 53.6 -3.0**
KURK IAmb IAmb 02 52 59.6
comp=Z,36nm,0.7s
KURK Kurchatov 15.37 18 P **Pn 02 52 53.0 -3.6**
EVN Everest 15.69 118 **Pn 02 52 59.6 -1.9**
EVN IAmb IAmb 02 53 15.6
comp=Z,38nm,0.6s
EVN Everest 15.69 118 P **Pn 02 52 58.8 -2.6**
BANOM Banah 16.36 235 P **Pn 02 53 10.5 +1.2**
SHME Shamm 16.38 235 P **Pn 02 53 10.4 +1.0**
AKL Akola 16.40 160 *ex* **Pn 02 53 10.0 +0.3**
AKL IAmb IAmb 02 53 10.7
comp=Z,38nm,0.6s
AKL *ex* Sn 02 55 59.2 -12
NGP Nagpur 16.62 153 *ex* **Pn 02 52 12.3 -0.1**
NGP IAmb IAmb 02 53 14.0
comp=Z,29nm,0.3s
BVA0 Borovoye Array 16.70 358 *i* P **Pn 02 53 10.8 -2.4**
BVAR Borovoye Array 16.70 358 P **Pn 02 53 10.7 -2.5**
comp=Z,33nm,0.6s,baz=172,slow=12,SNR=85
GAYA Gaya 16.71 130 *e*P **Pn 02 53 14.0 +0.6**
BORK Borovoye 16.73 358 P **Pn 02 53 11.7 -1.7**
BORK pmax pmax
comp=Z,33nm,0.5s
BORK Borovoye 16.73 358 **Pn 02 53 11.7 -1.7**
MDH Madha 16.79 233 P **Pn 02 53 14.1 -0.4**
MDH S **Sn 02 56 24.1 +3.1**
AKTO Aktyubinsk 16.97 330 P **Pn 02 53 15.2 -1.3**
comp=Z,102nm,0.6s,baz=144,slow=7.5,SNR=78
AKTO S Sn 02 56 11.6 -13
comp=Z,25nm,0.5s,baz=210,slow=16,SNR=7.8
AKTO Aktyubinsk 16.97 330 ⇓P **Pn 02 53 15.6 -1.0**
comp=Z,77nm,0.8s
AKTO ⇑S Sn 02 56 10.8 -14
comp=Z,35nm,0.8s
UOSS Minazif 17.10 233 **Pn 02 53 17.5 -0.8**
BLSP Bilaspur 17.14 143 IAML 02 56 19.0
comp=Z,24nm,0.3s
HATD Hatta, Dubai 17.23 232 P **Pn 02 53 20.7 +0.8**
HATD S **Sn 02 56 33.3 +1.7**
ASHO Ashiyiah 17.38 232 P **P 02 53 22.8 +1.3**
BOK Bokaro 17.85 130 *ex* **Pn 02 53 28.0 +0.6**
BOK *ex* Sn 02 56 31.5 -15
DGZ Jazzator, Alta 17.86 36 ⇑*i*P **P 02 53 26.1 -0.7**
DGZ pmax pmax
comp=Z,20nm,1.1s
ALNE Al Ain 18.02 232 P **P 02 53 29.6 +1.0**
LSA Lhasa 18.04 106 P **P 02 53 29.0 -0.3**
LSA pmax pmax
comp=Z,16nm,0.7s
LSA Lhasa 18.04 106 **P 02 53 29.0 -0.3**
LSA IAmb IAmb 02 53 41.8
comp=Z,16nm,0.7s
BSY Bisya 18.13 226 P **Pn 02 53 32.2 +1.4**
AKT Akhty 18.89 293 *e*P **P 02 53 38.5 +0.4**
AKT *e*S **S 02 57 05.3 -2.2**
AKT pmax pmax
comp=Z,25nm,1.0s
GOMU GeErMu 19.11 83 P **P 02 53 41.3 +0.5**
GOMU pmax pmax
comp=Z,4.0nm,0.4s
KAD Karad 19.14 171 *e*P **Pn 02 53 48.8 +6.0**
JRN Qarnain Island 19.35 239 P **P 02 53 41.9 -1.1**
UMZA Um Al Zommool 19.37 230 P **P 02 53 44.4 +1.1**
HYB Hyderabad 19.96 159 *ex* Pn 02 53 50.8 -1.5
HYB *i* x x 02 53 53.8
HYB *ex* x 02 53 56.7
HYB Hyderabad 19.96 159 *e*P **P 02 53 50.9 +1.1**
HYB *e*S **S 02 57 30.2 +1.4**
ZAA0 Zalesovo Array 20.04 24 P **P 02 53 50.1 -0.1**
ZALV Zalesovo Beam 20.04 24 P **P 02 53 49.8 -0.4**
comp=Z,123nm,0.6s,baz=222,slow=11,SNR=205
comp=Z,123nm,0.6s
ZALV Zalesovo Beam 20.04 24 P **P 02 53 50.0 -0.2**
ZALV Zalesovo Beam 20.04 24 P **P 02 53 50.0 -0.2**
SHL Shillong 20.75 115 P **P 02 53 59.1 +0.7**
SHL pmax pmax
comp=Z,23nm,0.8s
SHL Shillong 20.75 115 **P 02 53 59.1 +0.7**
SHL IAmb IAmb 02 54 03.2
comp=Z,23nm,0.8s
SHL Shillong 20.75 115 *ex* **P 02 54 02.4 +4.0**
SHL IAmb IAmb 02 54 03.7
comp=Z,11nm,0.7s
GNI Garni 21.03 288 P **P 02 53 58.4 -2.9**
comp=Z,15nm,0.7s,baz=106,slow=1.4,SNR=23
comp=Z,15nm,0.7s
GNI Garni 21.03 288 P **P 02 54 01.8 +0.5**
GNI pmax pmax
comp=Z,80nm,0.9s
GNI Garni 21.03 288 P **P 02 54 03.0 +1.7**
GNI Garni 21.03 288 P **P 02 54 01.8 +0.5**
GNI Garni 21.03 288 P **P 02 54 03.3 +2.0**
comp=Z,1µmcomp=Z,130nm,1.3s
GNI Garni 21.03 288 P **P 02 54 03.6 +2.3**
SVE Sverdlovsk 21.68 344 *e*P **P 02 54 08.2 +0.3**
SVE *e*S **S 02 58 07.4 +5.5**
SVE pmax pmax
comp=Z,40nm,0.9s
ARTI Arti 21.83 341 P **P 02 54 10.0 +0.5**
comp=Z,43nm,0.7s,baz=155,slow=6.2,SNR=55
ARTI S **S 02 58 02.6 -2.1**
comp=Z,2.0nm,0.4s,baz=165,slow=20,SNR=2.0
comp=Z,43nm,0.7s
ARTI Arti 21.83 341*c i*P **P 02 54 09.9 +0.5**
ARTI 02 54 38.9
ARTI S **S 02 58 02.9 -1.8**
ARTI SS **SnSn 02 58 46.6 +7.5**
ARTI pmax pmax
comp=Z,55nm,0.8s
ARTI Arti 21.83 341 P **P 02 54 09.5 0.0**
ARTI **S 02 58 02.6 -2.1**
HAKT HAKKARI 21.91 281 P **P 02 54 13.7 +2.9**
EPOS Posof 22.63 292 P **P 02 54 21.0 +2.9**
KBZ Khabaz 22.76 298 P **P 02 54 18.0 -1.2**
comp=Z,3.7nm,0.6s,baz=132,slow=6.8,SNR=12
KBZ S **S 02 58 20.6 +0.2**
comp=Z,4.3nm,1.0s,baz=123,slow=9.1,SNR=2.6
comp=Z,3.7nm,0.6s
GTA2 Gaotai 22.78 73 *e*P **P 02 54 23.1 +3.4**
GTA2 pP pP 02 54 48.5 +7.8
GTA2 pmax pmax
comp=Z,19nm,1.0s
GOF Gofitskoye 22.91 301*ce*P **P 02 54 21.5 +0.8**
SHA1 Shidzhatmaz 22.93 298*d i*P **P 02 54 21.3 +0.1**
KIV Kislovodsk 22.95 298 *e*P **P 02 54 20.8 -0.4**
KIV *e*S **S 02 58 22.6 -1.0**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV Kislovodsk 22.95 298 P **P 02 54 22.6 +1.4**
KIV S **S 02 58 24.1 +0.5**
KIV Kislovodsk 22.95 298 P **P 02 54 19.4 -1.8**
KIV Kislovodsk 22.95 298 P **P 02 54 20.4 -0.8**
comp=Z,415nmcomp=Z,41nm,0.7s
KIV Kislovodsk 22.95 298 P **P 02 54 21.5 +0.3**
BELG Belogornoye 23.08 321 P **P 02 54 22.4 +0.1**
comp=Z,87nm,0.9s,baz=116,slow=4.5,SNR=17
BELG S **S 02 58 28.5 +3.2**
comp=Z,11nm,1.0s,baz=46,slow=19,SNR=1.5
comp=Z,87nm,0.9s
BELG Belogornoye 23.08 321*d i*P **P 02 54 22.9 +0.7**
BELG pmax pmax
comp=Z,16nm,1.0s
KOPT Kop Dagi 24.29 288 IAmb IAmb 02 54 39.8
comp=Z,17nm,1.0s
KELT Kelkit 25.24 288 P **P 02 54 44.0 +1.8**
RAYN Ar Rayn 25.51 247 P **P 02 54 44.6 -0.1**
RAYN Ar Rayn 25.51 247 P **P 02 54 41.8 -2.9**
RAYN IAmb IAmb 02 54 52.4
comp=Z,7.7nm,0.6s
RAYN Ar Rayn 25.51 247 P **P 02 54 43.5 -1.2**
VRH Novokhopyorsk 25.69 315 *e*P **P 02 54 43.3 -2.7**
VRH pmax pmax
comp=Z,10.0nm,0.9s
ARPR Arapgir-MALATY 26.00 286 IAmb IAmb 02 55 30.6
comp=Z,12nm,0.7s
ARPR Arapgir-MALATY 26.00 286 P **P 02 54 50.3 +1.2**
KIRV Kirov 26.43 334 P **P 02 54 52.9 +0.4**
comp=Z,40nm,0.7s,baz=144,slow=7.3,SNR=11
comp=Z,40nm,0.7s
KIRV Kirov 26.43 334*d i*P **P 02 54 53.3 +0.8**
VSR Storozhevoye 27.19 313 *e*P **P 02 54 58.8 -0.6**
VSR pmax pmax
comp=Z,13nm,0.8s
LPSR Galich'ya Gora 27.84 316 *e*P **P 02 55 04.0 -1.2**
LPSR pmax pmax
comp=Z,9.0nm,1.0s
SONM Songino Array 28.36 55 P **P 02 55 11.6 +1.5**
comp=Z,5.0nm,0.8s,baz=265,slow=9.6,SNR=31
comp=Z,5.0nm,0.8s
SONM Songino Array 28.36 55 P **P 02 55 11.9 +1.8**
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM Songino Array 28.36 55 P **P 02 55 11.9 +1.8**
ULN Ulaanbaatar 28.80 55*c i*P **P 02 55 15.9 +1.9**
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 28.80 55 P **P 02 55 14.0 -0.1**
ULN Ulaanbaatar 28.80 55 P **P 02 55 15.5 +1.5**
ULN Ulaanbaatar 28.80 55 P **P 02 55 16.2 +2.1**
BRTR Keskin Array B 29.57 288 P **P 02 55 19.9 -1.1**
comp=Z,0.8nm,0.7s,baz=101,slow=11,SNR=6.1
comp=Z,0.8nm,0.7s
BRTR Keskin Array B 29.57 288 P **P 02 55 19.5 -1.4**
MOS Moscow 29.85 321 *e*P **P 02 55 23.9 +0.9**
OBN Obninsk 30.13 320⇓*e*P **P 02 55 25.8 +0.4**
OBN *e**PP **pP 02 55 48.7 +0.1**
OBN *e* 02 56 27.7
OBN *e*SS SS 03 02 02.6 -26
OBN pmax pmax
comp=Z,16nm,1.1s
OBN Obninsk 30.13 320 P **P 02 55 25.6 +0.2**
comp=Z,26nm,1.0s
OBN Obninsk 30.13 320 P **P 02 55 23.4 -2.0**
CMAR Chiang Mai Arr 30.29 119 P **P 02 55 25.6 -1.7**
comp=Z,1.2nm,0.3s,baz=302,slow=9.0,SNR=4.5
CMAR LR LR 03 09 27.8
comp=Z,48nm,21.0s,baz=195,slow=40
comp=Z,1.2nm,0.3s
KLMR Klimovskoe 31.68 331 *e*P **P 02 55 37.6 -1.4**
KLMR *e**SP **sP 02 56 15.9 +1.6**
KLMR pmax pmax
comp=Z,8.0nm,0.7s
HHC Hu-ho-hao-te 31.74 69 *e*P **P 02 55 41.5 +1.5**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,120nm,5.6s
AK09 Malin Array Si 33.07 309 P **P 02 55 50.8 -0.5**
AKASG Malin Array Be 33.12 309 P **P 02 55 51.3 -0.5**
comp=Z,2.0nm,0.6s,baz=83,slow=7.0,SNR=14
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 33.12 309 P **P 02 55 50.8 -1.0**
AKBB Malin Array Si 33.12 309*c i*P **P 02 55 52.5 +0.7**
AKBB pmax pmax
comp=Z,7.0nm,1.7s
AKBB Malin Array Si 33.12 309 IAmb IAmb 02 55 53.0
comp=Z,7.2nm,0.7s
AKBB Malin Array Si 33.12 309 P **P 02 55 50.6 -1.2**
KIEV Kiev 33.13 309 P **P 02 55 52.1 +0.3**
KIEV Kiev 33.13 309 **P 02 55 52.1 +0.3**
KIEV Kiev 33.13 309 P **P 02 55 50.9 -0.9**
comp=Z,37nm,0.8s
KIEV Kiev 33.13 309 P **P 02 55 51.2 -0.7**
LUBAR Lubar, Ukraine 33.94 307 P **P 02 55 58.3 -0.6**
NRIK Noril'sk 34.28 10 P **P 02 56 03.2 +1.7**
comp=Z,38nm,0.9s,baz=208,slow=5.9,SNR=28
comp=Z,38nm,0.9s
NRIK Noril'sk 34.28 10 **P 02 56 02.4 +0.9**
PLOR Plostina 34.45 300 ⇓P **P 02 56 04.3 +0.9**
PLOR Plostina 34.45 300 P **P 02 56 04.3 +0.9**
KMPD K-Podol'skiy 34.66 305 P **P 02 56 03.9 -1.2**
MNK Minsk 34.69 315 *i* P **P 02 56 05.5 +0.2**
comp=E,18nm,0.9s
MNK *i* P **P 02 56 05.5 +0.2**
comp=N,9.0nm,0.8s
MNK *i* P **P 02 56 05.5 +0.2**
comp=Z,6.0nm,0.7s,baz=103
MNK *i* pP **pP 02 56 30.1 +1.3**
MNK *i* PP **PnPn 02 57 24.9 +0.5**
MNK *i* S **S 03 01 27.3 -0.3**
MNK *i* sS **sS 03 02 10.7 +1.8**
MNK *i* SS **SnSn 03 03 52.3 +1.7**
MNK *i* LR LR 03 09 55.4
MNK *i* LRM MLR 03 12 29.9
comp=Z,40nm,20.9s
MNK *i* LRM MLR 03 12 43.2
comp=E,139nm,21.4s
MNK *i* LRM MLR 03 12 48.2
comp=N,61nm,20.0s
MNK Minsk 34.69 315 *i* P **P 02 56 05.4 +0.2**
MNK *i* *PP **pP 02 56 30.0 +1.3**
MNK *i* 02 57 24.8
MNK *i* 02 58 37.3
MNK *i* S **S 03 01 27.2 -0.3**
MNK *i* *SS **sS 03 02 10.6 +1.8**
MNK *i* SS **SnSn 03 03 52.3 +1.7**
MNK *i* 03 06 15.6
MNK pmax pmax
comp=Z,6.0nm,0.7s
MNK pmax pmax
comp=N,9.0nm,0.8s
MNK pmax pmax
comp=E,18nm,0.9s
MNK MLR MLR
comp=Z,40nm,21.0s
MNK MLR MLR
comp=E,139nm,21.0s
MNK MLR MLR
comp=N,61nm,20.0s
MLR Muntele Rosu 34.94 299 ⇑P **P 02 56 09.2 +1.5**
MLR Muntele Rosu 34.94 299 P **P 02 56 09.2 +1.5**
MLR Muntele Rosu 34.94 299 P **P 02 56 08.4 +0.6**
MLR IAmb IAmb 02 56 12.2
comp=Z,8.8nm,1.0s
MLR Muntele Rosu 34.94 299 P **P 02 56 09.1 +1.3**
comp=Z,7.6nm,1.3s
MLR Muntele Rosu 34.94 299 P **P 02 56 09.4 +1.6**
RNPP5 Staryi Chortor 35.29 309 P **P 02 56 10.3 -0.2**
NACGM Naroch 35.40 316 *e*P **P 02 56 11.1 -0.2**
comp=Z,16nm,0.9s,baz=103
BURAR Bucovina Array 35.45 303 ⇓P **P 02 56 13.3 +1.2**
BURAR Bucovina Array 35.45 303 P **P 02 56 13.3 +1.2**
VOIR 35.57 299 ⇑P **P 02 56 14.2 +1.1**
VOIR 35.57 299 P **P 02 56 14.2 +1.1**
ARR Arges 35.87 299 ⇓P **P 02 56 17.3 +1.7**
ARR Arges 35.87 299 P **P 02 56 16.9 +1.3**
JOF Joensuu 36.06 330 *e*P **P 02 56 17.4 +0.4**
VSU Vasula 36.38 322 *e*P **P 02 56 18.6 -1.0**
MARR Marisel-Cluj 36.88 302 ⇓P **P 02 56 25.1 +0.8**
ARBE Arbavere 37.05 323 *e*P **P 02 56 25.5 +0.2**
DEV Deva 37.06 300 P **P 02 56 27.5 +1.8**
PABE Paberze 37.10 316 *e*P **P 02 56 26.2 +0.4**
DRGR 37.16 302 ⇑P **P 02 56 27.3 +0.7**
DRGR 37.16 302 P **P 02 56 27.3 +0.7**
DRGR 37.16 302 P P 02 56 22.7 -3.9
VSVD Vaisvydziai 37.22 317 *e*P **P 02 56 27.7 +0.9**
KOLS Kolonicke sedl 37.45 305 *e*P **P 02 56 30.3 +1.4**
KOLS *e* 02 57 56.2
KOLS Kolonicke sedl 37.45 305 *e*P **P 02 56 30.3 +1.4**
KOLS *e*PP **PP 02 57 56.2 +0.1**
FINES FINESS Array B 37.68 326 P **P 02 56 30.9 +0.3**
comp=Z,7.5nm,0.7s,baz=117,slow=9.1,SNR=42
comp=Z,7.5nm,0.7s
FINES FINESS Array B 37.68 326 P **P 02 56 30.6 0.0**
MTSE Matsula 37.91 321 *e*P **P 02 56 32.9 +0.3**
MTSE Matsula 37.91 321 P **P 02 56 33.2 +0.6**
BZS Buzias 37.98 300 ⇓P **P 02 56 33.4 0.0**
BZS Buzias 37.98 300 P **P 02 56 33.4 0.0**
SUF Sumiainen 38.12 328 *e*P **P 02 56 34.4 +0.2**
KEF Keuruu 38.47 327 *e*P **P 02 56 36.8 -0.4**
NIE Niedzica 38.75 306 P **P 02 56 40.6 +0.8**
comp=Z,4.6nm,1.2s
RAF Rauma 39.53 325 *e*P **P 02 56 45.7 -0.3**
VAF Ylistaro 39.72 328 *e*P **P 02 56 47.7 +0.1**
AAL Aland 40.16 323 *e*P **P 02 56 50.7 -0.7**
MAUC Maruska 40.36 306 *e*P **P 02 56 52.6 -0.6**
VADS Vadso 40.51 339 *e*P **P 02 56 54.6 +0.6**
MORC Moravsky Berou 40.54 307 ⇑P **P 02 56 56.3 +1.6**
MORC Moravsky Berou 40.54 307 P **P 02 56 56.3 +1.6**
MORC Moravsky Berou 40.54 307 P **P 02 56 55.4 +0.7**
MORC Moravsky Berou 40.54 307 *e*P **P 02 56 54.7 0.0**
KEV Kevo 40.99 338 P **P 02 56 58.0 -0.1**
KEV pmax pmax
comp=Z,24nm,1.5s
KEV Kevo 40.99 338 P **P 02 56 58.0 -0.1**
KEV IAmb IAmb 02 57 17.9
comp=Z,24nm,1.5s
VRAC Vranov 41.17 306 ⇑P **P 02 57 00.4 +0.6**
VRAC Vranov 41.17 306 P **P 02 57 00.4 +0.6**
VRAC Vranov 41.17 306 *e*P **P 02 57 00.8 +0.9**
UPP Uppsala 41.26 322 *e*P **P 02 56 60.0 -0.4**
DPC Dobruska-Polom 41.31 308 *e*P **P 02 57 01.1 +0.1**
DPC Dobruska-Polom 41.31 308 *e*P **P 02 57 01.1 +0.1**
DPC Dobruska-Polom 41.31 308 P **P 02 57 01.9 +0.9**
KRUC Moravsky 41.32 306 *e*P **P 02 57 02.7 +1.7**
ARA0 ARCESS Array S 41.34 338 *e*P **P 02 57 01.5 +0.6**
ARCES ARCESS Array B 41.34 338 P **P 02 57 01.6 +0.6**
comp=Z,7.7nm,0.7s,baz=114,slow=7.7,SNR=40
ARCES LR LR 03 16 47.5
comp=Z,54nm,18.9s,baz=110,slow=40
comp=Z,7.7nm,0.7s
ARCES ARCESS Array B 41.34 338 P **P 02 57 01.4 +0.5**
CHVC Chvalec 41.47 308 *e*P **P 02 57 00.6 -1.7**
CHVC Chvalec 41.47 308 *e*P **P 02 57 00.6 -1.7**
CONA Conrad Observa 41.75 304 *e*P **P 02 57 04.1 -0.6**
comp=Z,1.9nm,1.1s
BLEU Blekinge 41.76 317 *i* P **P 02 57 02.6 -1.8**
KTK1 Kautokeino 41.81 336 *e*P **P 02 57 04.7 -0.1**
LANU Lannavaara 41.82 335 *e*P **P 02 57 04.8 -0.1**
ARSA Arzberg 42.04 303 *e*P **P 02 57 05.9 -1.1**
comp=Z,1.8nm,1.2s
BSD Bornholm Skovb 42.19 315 *i* P **P 02 57 06.8 -1.2**
BSD IAmb IAmb 02 57 12.8
comp=Z,1.4nm,0.3s
HEH HeiHe 42.28 53 *e*P **P 02 57 10.3 +1.5**
HEH pmax pmax
comp=Z,21nm,0.9s
HAMF Hammerfest 42.42 339 *e*P **P 02 57 10.4 +0.7**
SOKA Soboth 42.44 302 *e*P **P 02 57 09.4 -0.9**
comp=Z,2.5nm,0.8s
SESA Seetaler Alpe, 42.70 303 *e*P **P 02 57 11.7 -0.9**
comp=Z,3.7nm,0.8s
ZVC Zvikov 42.73 306 *e*P **P 02 57 12.2 -0.3**
OBKA Obir 42.79 302 *e*P **P 02 57 12.9 -0.3**
comp=Z,5.4nm,1.0s
BRG Berggiesshubel 42.80 308 *e*P **P 02 57 13.5 +0.5**
BRG Amp 02 57 14.6
comp=Z,2.5nm,0.6s
BRG Berggiesshubel 42.80 308 P **P 02 57 15.6 +2.5**
BRG Amp 02 57 16.0
comp=Z,4.1nm,0.9s
MOA Molln 42.83 304 *e*P **P 02 57 12.4 -1.0**
comp=Z,2.2nm,0.8s
DEL Delary 42.85 317 *i* P **P 02 57 12.2 -1.1**
DEL IAmb IAmb 02 57 16.7
comp=Z,0.5nm,0.3s
JETT Jettan, Norway 42.95 336 *e*P **P 02 57 14.1 +0.1**
LUNU Lund 43.05 315 *i* P **P 02 57 12.0 -3.0**
GERES GERESS Array B 43.10 305 P **P 02 57 15.3 -0.3**
comp=Z,0.6nm,0.7s,baz=69,slow=6.8,SNR=8.2
comp=Z,0.6nm,0.7s
HFS Hagfors 43.26 322 P **P 02 57 16.3 -0.3**
comp=Z,9.0nm,0.5s,baz=99,slow=9.8,SNR=66
comp=Z,9.0nm,0.5s
BJUU Bjuv 43.30 316 *i* P **P 02 57 15.2 -1.8**
TRO Tromso 43.46 336 *e*P **P 02 57 17.7 -0.4**
FABU Falkenberg 43.51 317 *i* P **P 02 57 19.4 +0.8**
FAUS Fauske 44.00 333 *e*P **P 02 57 21.9 -0.5**
FAUS IAmb IAmb 02 57 23.1
comp=Z,21nm,0.9s
MOR8 Moi Rana 44.01 331 *e*P **P 02 57 22.0 -0.6**
MOR8 IAmb IAmb 02 57 22.4
comp=Z,31nm,0.8s
YAK Yakutsk 44.05 35 *e*P **P 02 57 22.7 -0.2**
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.1s

ABTA	**Abfaltersbach**	44.15	303	*e*P		P	02 57 23.0	-1.0
	comp=E,3.7nm,1.2s								
STEI	**Steigen**	44.17	333	*e*P		P	02 57 23.2	-0.5
MOX	**Moxa**	44.29	308	*e*L		L	03 19 25.9	
	comp=E,33nm,19.0s								
NC405	**NORSAR Array S**	44.34	323	P		P	02 57 24.9	-0.3
NC602	**NORSAR Array S**	44.38	323	*e*P		P	02 57 25.4	-0.2
STRU	**Stroemstad**	44.43	320	*i* P		P	02 57 25.4	-0.6
NC303	**NORSAR Array S**	44.52	323	IAmb		IAmb	02 57 27.1	
	comp=Z,15nm,0.8s								
LEIR	**Leirfjorden**	44.52	330	*e*P		P	02 57 26.1	-0.5
LEIR				IAmb		IAmb	02 57 37.7	
	comp=Z,73nm,1.6s								
NB2	**NORSAR Subarra**	44.57	323	P		P	02 57 26.2	-0.9
	comp=Z,3.9nm,0.6s,baz=97,slow=7.9								
NB2	**NORSAR Subarra**	44.57	323	P		P	02 57 26.2	-0.9
NOA	**NORSAR Array B**	44.57	323	P		P	02 57 26.6	-0.6
	comp=Z,6.8nm,0.7s,baz=97,slow=7.8,SNR=28								
	comp=Z,6.8nm,0.7s								
VAGH	**Vaagaholmen**	44.60	331	*e*P		P	02 57 27.9	+0.7
VAGH				IAmb		IAmb	02 57 31.1	
	comp=Z,21nm,1.0s								
KONS	**Konsvik**	44.61	331	*e*P		P	02 57 27.3	0.0
STOK	**Stokkvaagen**	44.61	331	*e*P		P	02 57 27.4	+0.2
GRF	**Grafenberg Arr**	44.63	307	*e*P		P	02 57 29.6	+1.8
	comp=Z,12nm,1.4s,baz=93,slow=7.0								
GRF				*e*L		L	03 16 13.0		
	comp=Z,40nm,18.2s								
WTTA	**Wattenberg**	44.67	303	*e*P		P	02 57 27.5	-0.8
	comp=Z,2.8nm,1.0s								
NSS	**Namsos**	44.69	328	*e*P		P	02 57 28.0	0.0
WATA	**Walderalm**	44.70	304	*e*P		P	02 57 27.2	-1.3
	comp=Z,1.5nm,0.6s								
NBO00	**NORSAR Array S**	44.78	323	IAmb		IAmb	02 58 07.7	
	comp=Z,27nm,1.4s								
NC204	**NORSAR Array S**	44.81	323	P		P	02 57 28.4	-0.7
NC204				IAmb		IAmb	02 57 34.6	
	comp=Z,24nm,1.4s								
LOF	**Lofoten**	44.84	333	*e*P		P	02 57 29.0	-0.1
KSRS	**Korea Array**	44.85	71	P		P	02 57 28.8	-0.8
	comp=Z,1.2nm,0.4s,baz=272,slow=7.2,SNR=7.6								
	comp=Z,1.2nm,0.4s								
BSEG	**Bad Segeberg**	44.88	313	*e*P		P	02 57 30.7	+1.1
	comp=Z,3.3nm,0.7s,baz=93,slow=7.0								
MOTA	**Moosalm**	45.01	304	*e*P		P	02 57 29.6	-1.3
	comp=Z,7.4nm,1.6s								
KLR	**Kul'dur**	45.17	54	P		P	02 57 32.4	+0.4
	comp=Z,1.5nm,0.5s,baz=288,slow=5.2,SNR=7.7								
	comp=Z,1.5nm,0.5s								
KLR	**Kul'dur**	45.17	54*c*	*i* P		P	02 57 33.4	+1.4
KLR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KONO	**Kongsberg**	45.28	321	*e*P		P	02 57 32.0	-0.7
FETA	**Feichten**	45.31	303	*e*P		P	02 57 32.2	-1.2
	comp=Z,3.3nm,1.0s								
FUORN	**Ofenpass-Fuorn**	45.70	303	P		P	02 57 37.4	+0.9
HOMB	**Homborsund**	45.81	319	*i* P		P	02 57 37.9	+1.1
DAVA	**Damuels**	45.84	304	*e*P		P	02 57 36.3	-1.3
	comp=Z,3.0nm,0.5s								
TIXI	**Tiksi**	45.90	22	P		P	02 57 38.2	+0.9
	comp=Z,5.8nm,0.4s,baz=285,slow=4.9,SNR=15								
TIXI				LR		LR	03 17 40.7		
	comp=Z,62nm,18.2s,baz=250,slow=37								
	comp=Z,5.8nm,0.4s								
TIXI	**Tiksi**	45.90	22⇑	*i* P		P	02 57 38.3	+0.9
TIXI				pmax		pmax			
	comp=Z,9.0nm,0.9s								
TIXI	**Tiksi**	45.90	22	P		P	02 57 37.5	+0.1
TIXI				IAmb		IAmb	02 57 38.7		
	comp=Z,12nm,0.8s								
BER	**Bergen**	47.43	322	*e*P		P	02 57 50.2	+0.7
ASK	**Askoy**	47.50	322	*e*P		P	02 57 51.1	+1.1
SPITS	**Spitsbergen Ar**	47.68	347	P		P	02 57 52.6	+1.4
	comp=Z,4.0nm,0.6s,baz=111,slow=12,SNR=8.8								
	comp=Z,4.0nm,0.6s								
SENIN	**Lac Senin/Sane**	47.76	303	P		P	02 57 51.1	-1.5
SENIN				IAmb		IAmb	02 57 58.2		
	comp=Z,5.3nm,0.8s								
KEST	**Kesra**	49.17	289	P		P	02 58 03.1	-0.3
	comp=Z,1.9nm,0.5s,baz=106,slow=7.4,SNR=9.4								
	comp=Z,1.9nm,0.5s								
KEST	**Kesra**	49.17	289	IAmb		IAmb	02 58 30.5		
	comp=Z,9.5nm,1.4s								
EKA	**Eskdalemuir Ar**	52.47	316	P		P	02 58 27.2	-0.5
	comp=Z,1.8nm,0.7s,baz=83,slow=6.9,SNR=6.7								
	comp=Z,1.8nm,0.7s								
MBAR	**Mbarara**	52.48	235	P		P	02 58 27.9	-0.6
MBAR				pmax		pmax			
	comp=Z,6.0nm,0.8s								
MBAR	**Mbarara**	52.48	235	P		P	02 58 27.9	-0.6
MBAR				IAmb		IAmb	02 58 28.6		
	comp=Z,6.0nm,0.8s								
YSS	**Yuzhno-Sakhali**	52.85	55	*e*P		P	02 58 32.1	+1.5
YSS				pmax		pmax			
	comp=Z,10.0nm,0.7s								
SEY	**Seymchan**	54.51	34	P		P	02 58 42.9	+0.4
	comp=Z,3.5nm,0.9s,baz=262,slow=9.4,SNR=11								
	comp=Z,3.5nm,0.9s								
SEY	**Seymchan**	54.51	34⇑	*i* P		P	02 58 43.5	+1.0
SEY				pmax		pmax			
	comp=Z,2.0nm,1.1s								
ESDC	**Sonseca Array**	57.62	298	P		P	02 59 03.7	-1.3
	comp=Z,0.6nm,0.8s,baz=51,slow=7.6,SNR=6.0								
	comp=Z,0.6nm,0.8s								
BILL	**Bilibino**	58.72	26⇓	*i* P		P	02 59 14.2	+2.0
BILL				pmax		pmax			
	comp=Z,6.0nm,1.2s								
SUMG	**Summit**	61.25	341	P		P	02 59 30.8	+0.8
SUMG				pmax		pmax			
	comp=Z,9.0nm,0.7s								
SUMG	**Summit**	61.25	341	P		P	02 59 30.8	+0.8
TORD	**Torodi Ar. Bea**	65.80	269	P		P	02 59 57.2	-3.1
	comp=Z,6.0nm,0.7s,baz=44,slow=5.8,SNR=34								
	comp=Z,6.0nm,0.7s								
TORD	**Torodi Ar. Bea**	65.80	269	P		P	02 59 57.4	-2.9
TORD				IAmb		IAmb	02 59 58.1		
	comp=Z,3.5nm,0.8s								
C23K	**Itkillik River**	69.86	14	P		P	03 00 24.2	-0.7
C23K				IAmb		IAmb	03 00 27.3		
	comp=Z,5.8nm,0.8s								
C36M	**Paulatuk**	74.04	6	P		P	03 00 49.5	-0.3
INK	**Inuvik**	74.06	9	P		P	03 00 50.2	+0.3
INK				pmax		pmax			
	comp=Z,3.0nm,0.6s								
INK	**Inuvik**	74.06	9	P		P	03 00 50.2	+0.3
DBIC	**Dimbokro**	74.78	267	P		P	03 00 52.2	-2.8
	comp=Z,8.4nm,1.1s,baz=51,slow=6.5,SNR=3.0								
	comp=Z,8.4nm,1.1s								
DBIC	**Dimbokro**	74.78	267	P		P	03 00 52.7	-2.3
DBIC				pmax		pmax			
	comp=Z,10.0nm,1.0s								
DBIC	**Dimbokro**	74.78	267	P		P	03 00 52.7	-2.3
DBIC				IAmb		IAmb	03 01 27.0		
	comp=Z,9.7nm,0.9s								
ILAR	**Eielson Array**	74.92	16	P		P	03 00 54.6	-0.4
	comp=Z,1.1nm,0.9s,baz=317,slow=4.4,SNR=13								
	comp=Z,1.1nm,0.9s								
ILAR	**Eielson Array**	74.92	16	P		P	03 00 55.1	+0.1
ILAR	**Eielson Array**	74.92	16	P		P	03 00 55.1	+0.1
MAKGR	**Makgori**	75.68	222	P		P	03 00 59.6	-0.3
MAKGR				IAmb		IAmb	03 01 00.2		
	comp=Z,12nm,0.7s								
BLKN	**Baker Lake**	79.17	354	P		P	03 01 18.7	-0.1
BLKN				IAmb		IAmb	03 01 21.0		
	comp=Z,6.9nm,1.0s								
YKAW3	**Yellowknife Wh**	81.34	3	P		P	03 01 30.0	-0.5
YKA	**Yellowknife Ar**	81.41	3	P		P	03 01 30.4	-0.4
	comp=Z,3.5nm,0.7s,baz=349,slow=5.4,SNR=16								
	comp=Z,3.5nm,0.7s								
YKA	**Yellowknife Ar**	81.41	3	P		P	03 01 30.6	-0.2
YKA	**Yellowknife Ar**	81.41	3	P		P	03 01 30.6	-0.2
WRA	**Warramunga Arr**	81.82	122	P		P	03 01 32.0	-1.6
	comp=Z,1.7nm,0.8s,baz=319,slow=5.0,SNR=9.2								
	comp=Z,1.7nm,0.8s								
WRA	**Warramunga Arr**	81.82	122	P		P	03 01 31.7	-1.9
WR8	**Warramunga Arr**	81.94	122	P		P	03 01 32.3	-1.9
WR8				IAmb		IAmb	03 01 36.0		
	comp=Z,6.6nm,1.1s								
Q32M	**Nakina River**	83.09	12	P		P	03 01 40.4	+0.5
Q32M				IAmb		IAmb	03 01 45.3		
	comp=Z,6.8nm,1.2s								
ASAR	**Alice Springs**	84.08	125	P		P	03 01 43.9	-1.3
	comp=Z,2.4nm,0.7s,baz=314,slow=4.6,SNR=24								
	comp=Z,2.4nm,0.7s								
ASAR	**Alice Springs**	84.08	125	P		P	03 01 44.1	-1.1
ASAR	**Alice Springs**	84.08	125	P		P	03 01 44.1	-1.1
QSPA	**South Pole Qui**	126.12	180	PKP		PKPdf	03 08 12.9	-2.1
	comp=Z,0.6nm,0.6s,baz=0.0,slow=3.0,SNR=1.4								

IDC ***12*** *03:04:10.7±0.6,9.°70S×159.°41E,h0km,mb4.3/17, mbtmp4.2/18,ML3.8/1,MS3.7/14,Error ellipse: s-maj=19.4km s-min=7.4km az=155.0*
BJI ***12*** *03:04:14.8,9.°54S×159.°42E,h17km,mB5.1/5,mb4.8/24, Ms4.8/1,Ms7 4.5/1*
NEIC ***12*** *03:04:16.9±2.0,9.°7S±0.°1×159.°8E±0.°2,h35km±2km, mb4.8/81,Error ellipse: s-maj=26.2km s-min=18.8km az=100.0*

ISC 12 03:04:15.1±0.5,**9.°73S**±0.°09×**159.°7E**±0.°1,**h26**km,**n327,** σ0.°87/281,**mb4.8**/65,**MS3.7**/13,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
HNR	**Honiara**	0.40	41	Pg		Pb	03 04 22.6	-1.1
	203nm,0.3s,baz=151,slow=1.1,SNR=726							
HNR				Lg		Lg	03 04 30.9	
	294nm,0.3s,baz=303,slow=22,SNR=15							
HNR	**Honiara**	0.40	41			Pb	03 04 22.8	-0.9
KRVT	**Keravat (AS076**	9.32	305	LR		LR	03 10 06.3	
	comp=Z,19nm,20.0s,baz=66,slow=39							
CTA	**Charters Tower**	16.55	230	Pn		Pn	03 08 02.9	-2.7
	0.2nm,0.3s,baz=55,slow=11,SNR=2.6							
CTA				LR		LR	03 14 07.3	
	comp=Z,251nm,19.0s,baz=47,slow=36							
	1.5nm,0.5s							
CTAO	**Charters Tower**	16.55	230	P		P	03 08 10.3	+2.3
EIDS	**Eidsvold**	17.57	207	P		P	03 08 21.3	+2.2
ARMA	**Armidale**	21.91	199	P		P	03 09 08.1	+1.5
INKA	**Innaminka**	25.28	222			P	03 09 39.6	+0.1
WRA	**Warramunga Arr**	26.48	245	P		P	03 09 48.7	-1.9
	1.5nm,0.9s,baz=70,slow=9.6,SNR=11							
	1.5nm,0.9s							
STKA	**Stephens Creek**	27.69	215	P		P	03 09 60.0	-1.3
	1.4nm,0.7s,baz=23,slow=16,SNR=3.9							
	1.4nm,0.7s							
FAKI	**Fak Fak**	28.08	282	P		P	03 10 06.9	+2.0
AFI	**Afiamalu**	28.23	101	LR		LR	03 18 40.6	
	comp=Z,141nm,20.6s,baz=7.0,slow=30							
ASAR	**Alice Springs**	28.24	237	P		P	03 10 03.6	-2.7
	0.4nm,0.5s,baz=69,slow=9.7,SNR=8.5							
ASAR				LR		LR	03 21 21.1	
	comp=Z,116nm,18.4s,baz=326,slow=37							
	0.4nm,0.5s							
H11S2	**WAKE ISLAND Hy**	28.89	14	T		T	03 39 14.5	
	baz=194,slow=75,SNR=46							
H11S3	**WAKE ISLAND Hy**	28.89	14	T		T	03 39 12.4	
	baz=194,slow=75,SNR=36							
H11S1	**WAKE ISLAND Hy**	28.90	14	T		T	03 39 05.3	
	baz=194,slow=75,SNR=29							
H11N1	**WAKE ISLAND Hy**	30.11	14	T		T	03 40 57.1	
	baz=194,slow=76,SNR=21							
H11N3	**WAKE ISLAND Hy**	30.12	14	T		T	03 40 33.9	
	baz=194,slow=76,SNR=20							
H11N2	**WAKE ISLAND Hy**	30.13	14	T		T	03 40 36.0	
	baz=194,slow=76,SNR=28							
BBOO	**Buckleboo**	31.66	220	P		P	03 10 36.0	-0.4
URZ	**Urewera**	32.44	154	LR		LR	03 21 59.1	
	comp=Z,78nm,18.6s,baz=272,slow=33							
NWAO	**Narrogin (SRO)**	45.36	233	LR		LR	03 30 47.1	
	comp=Z,152nm,20.3s,baz=346,slow=35							
PPT	**Papeete**	49.80	105	LR		LR	03 31 46.9	
	comp=Z,44nm,18.1s,baz=288,slow=33							
KSRS	**Korea Array**	55.58	329	P		P	03 13 47.7	-0.7
	1.1nm,0.6s,baz=167,slow=8.8,SNR=6.5							
	1.1nm,0.6s							
NJ2	**Nanjing**	57.00	319	*e*P		P	03 14 01.1	+2.4
NJ2				pmax		pmax		
	comp=Z,18nm,0.5s							
PETK	**Petropavlovsk-**	62.62	359	P		P	03 14 35.6	-1.3
	5.5nm,0.9s,baz=152,slow=6.7,SNR=6.4							
	5.5nm,0.9s							
KLR	**Kul'dur**	63.63	340	LR		LR	03 41 02.3	
	comp=Z,83nm,19.8s,baz=238,slow=35							
XAN	**Xi'an**	64.90	315	P		P	03 14 51.3	-1.2
XAN				pmax		pmax		
	comp=Z,10.0nm,0.7s							
KMI2	**Kunming**	65.39	303	P		P	03 14 58.2	+2.1
KMI2				pP		sP	03 15 08.4	+1.7
KMI2				pmax		pmax		
	comp=Z,9.0nm,0.9s							
CM31	**Chiang Mai Arr**	66.14	295	P		P	03 15 01.6	+0.8
CM31				IAmb		IAmb	03 15 03.8	
	comp=Z,8.6nm,0.8s							
CMAR	**Chiang Mai Arr**	66.14	295	P		P	03 14 58.9	-1.9
	comp=Z,1.9nm,0.3s,baz=130,slow=5.2,SNR=13							
	comp=Z,1.9nm,0.3s							
CMAR	**Chiang Mai Arr**	66.14	295			P	03 14 59.3	-1.5
HHC	**Hu-ho-hao-te**	67.06	322	*e*P		P	03 15 08.9	+2.5
HHC				pmax		pmax		
	comp=Z,9.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,88nm,4.8s							
CD2	**Chengdu**	67.12	309	P		P	03 15 08.6	+1.7
CD2				pmax		pmax		
	comp=Z,20nm,0.4s							
VNDA	**Vanda**	67.78	179	P		P	03 15 10.6	+0.4
	comp=Z,1.7nm,0.8s,baz=341,slow=6.3,SNR=7.1							
VNDA				LR		LR	03 41 38.0	
	comp=Z,71nm,18.2s,baz=311,slow=33							
	comp=Z,1.7nm,0.8s							
VNDA	**Vanda**	67.78	179	P		P	03 15 10.9	+0.8
UNV	**Unalaska Valle**	69.51	21	P		P	03 15 22.1	+0.8
	baz=216							
LZH	**Lanzhou**	69.52	314	*e*P		P	03 15 24.7	+2.7
LZH				pP		sP	03 15 34.0	+1.5
LZH				pmax		pmax		
	comp=Z,19nm,1.4s							
LZDM	**Lanzhou Array**	69.56	314	P		P	03 15 22.1	-0.4
	comp=Z,1.2nm,0.3s,baz=103,slow=6.4,SNR=4.1							
	comp=Z,1.2nm,0.3s							
SPIA	**Saint Paul Isl**	71.11	17	P		P	03 15 31.3	+0.4
	baz=211							
CHNA	**Chernabura Isl**	72.83	23	P		P	03 15 41.5	+0.2
	baz=222							
SDPT	**Sand Point**	72.88	23	P		P	03 15 42.0	+0.4
	baz=221							
ULN	**Ulaanbaatar**	73.82	326	P		P	03 15 47.2	-0.3
S14K	**Fog Glacier**	73.92	22	P		P	03 15 48.6	+0.7
	baz=222							
GTA2	**Gaotai**	73.98	316	*e*P		P	03 15 48.7	0.0
GTA2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
SONM	**Songino Array**	74.16	326	P		P	03 15 49.1	-0.5
	comp=Z,5.9nm,0.7s,baz=140,slow=5.7,SNR=23							
	comp=Z,5.9nm,0.7s							
SONM	**Songino Array**	74.16	326			P	03 15 49.6	+0.1
M11K	**Mekoryuk**	74.95	17	P		P	03 15 54.6	+1.0
	baz=215							
CHIR	**Chirikof Islan**	75.12	24	P		P	03 15 55.1	+0.4
	baz=226							
O14K	**Tigyukauivet M**	75.57	20	P		P	03 15 57.7	+0.5
	baz=220							
M13K	**Dall Lake**	75.81	18	P		P	03 15 59.0	+0.4
	baz=218							
N14K	**Kuskokwak Cree**	75.95	19	P		P	03 15 59.8	+0.5
	baz=219							
O15K	**Ungalikthiuk R**	75.99	20	P		P	03 16 00.3	+0.6
	baz=221							
R17L	**Mt. Peulik Vol**	76.10	23	P		P	03 16 01.6	+1.2
	baz=225							
SII	**Sitkinak Islan**	76.21	24	P		P	03 16 00.8	-0.2
	baz=227							
GAMB	**Gambell**	76.47	13	P		P	03 16 02.7	+0.5
	baz=209							
M14K	**Bethel**	76.51	18	P		P	03 16 02.8	+0.3
	baz=219							
N15K	**Kwethluk River**	76.65	19	P		P	03 16 03.9	+0.5
	baz=221							
K13K	**Kusilvak Mount**	76.65	16	P		P	03 16 04.1	+0.7
	baz=216							
Q17K	**Contact Creek**	76.73	22	P		P	03 16 04.8	+0.8
	baz=225							
Q16K	**King Salmon**	76.74	22	P		P	03 16 04.4	+0.5
	baz=224							
L14K	**Kuka Creek**	76.75	18	P		P	03 16 03.9	0.0
L14K				IAmb		IAmb	03 16 07.8	
	comp=Z,8.1nm,1.0s							
L14K	**Kuka Creek**	76.75	18	P		P	03 16 04.0	+0.2
	baz=218							
M15K	**Kasigluk River**	76.86	19	P		P	03 16 04.4	-0.1
	baz=220							
O16K	**Kokwok River B**	76.90	21	P		P	03 16 05.0	+0.3
	baz=223							
ACHA	**Angle Creek He**	76.91	23	P		P	03 16 04.4	-0.6
ACHA				IAmb		IAmb	03 16 09.7	
	comp=Z,20nm,1.6s							
OHAK	**Old Harbor**	77.02	24	P		P	03 16 05.7	+0.2
	baz=228							
P17K	**Kvichak River**	77.19	21	P		P	03 16 06.7	+0.3
	baz=224							
N16K	**Nishlik Lake**	77.32	20	P		P	03 16 08.0	+0.8
	baz=222							
Q18K	**Katmai Hardscr**	77.33	22	P		P	03 16 07.6	+0.2
	baz=226							
O17K	**Koliganek Bris**	77.37	21	P		P	03 16 07.5	0.0
	baz=224							
M16K	**Timber Creek**	77.67	19			P	03 16 09.0	0.0
M16K				IAmb		IAmb	03 16 13.2	
	comp=Z,11nm,1.2s							
M16K	**Timber Creek**	77.67	19	P		P	03 16 09.5	+0.4
	baz=222							
KDAK	**Kodiak Island**	77.68	24	P		P	03 16 09.6	+0.4
	baz=228							
P18K	**Big Mountain,**	77.77	22	P		P	03 16 10.0	+0.3
	baz=225							
N17K	**Nushagak Hills**	77.89	20			P	03 16 10.6	+0.2
N17K				IAmb		IAmb	03 16 13.9	
	comp=Z,12nm,1.3s							
N17K	**Nushagak Hills**	77.89	20	P		P	03 16 10.8	+0.5
	baz=223							
L16K	**Owhat River**	78.02	19			P	03 16 10.9	-0.1
L16K				IAmb		IAmb	03 16 14.7	
	comp=Z,10nm,1.4s							
L16K	**Owhat River**	78.02	19	P		P	03 16 11.4	+0.4
	baz=221							
Q19K	**Cape Douglas,**	78.04	23	P		P	03 16 11.7	+0.5
	baz=227							
O18K	**Koktuh Hills**	78.10	21	P		P	03 16 12.2	+0.6
	baz=225							
M17K	**Holitna River**	78.44	20	P		P	03 16 14.1	+0.7
	baz=223							
N18K	**Kilae Creek**	78.45	21	P		P	03 16 14.2	+0.8
N18K				IAmb		IAmb	03 16 17.5	
	comp=Z,16nm,1.3s							
N18K	**Kilae Creek**	78.45	21	P		P	03 16 14.0	+0.5
	baz=225							
ANM	**Nome**	78.61	15	P		P	03 16 15.1	+0.8
	baz=215							
P19K	**Oil Pt**	78.69	22	P		P	03 16 15.4	+0.6
	baz=227							
L17K	**Donlin**	78.71	19	P		P	03 16 15.5	+0.7
	baz=222							
TNA	**Tin City**	78.84	13	P		P	03 16 16.4	+1.0
	baz=212							
J16K	**Anvik River**	78.88	17			P	03 16 17.2	+1.4
J16K				IAmb		IAmb	03 16 20.1	
	comp=Z,10nm,0.9s							
J16K	**Anvik River**	78.88	17	P		P	03 16 16.6	+0.9
	baz=220							
N19K	**Bonanza Creek**	79.03	21	P		P	03 16 17.5	+0.7
	baz=226							
M18K	**Stony River**	79.05	20	P		P	03 16 17.6	+0.9
	baz=225							
F14K	**Arctic Creek**	79.13	14	P		P	03 16 18.1	+1.1
	baz=214							
K17K	**Iditarod**	79.14	18	P		P	03 16 17.8	+0.6
K17K				IAmb		IAmb	03 16 21.3	
	comp=Z,10nm,1.0s							
K17K	**Iditarod**	79.14	18	P		P	03 16 18.3	+1.2
	baz=222							
O20K	**Slope Mountain**	79.20	22	P		P	03 16 18.6	+0.9
	baz=228							
L18K	**Granite Mounta**	79.28	19	P		P	03 16 19.0	+1.0
	baz=224							
HOM	**Homer**	79.29	23	P		P	03 16 18.9	+0.8
	baz=229							
G15K	**Nuiqluk**	79.30	15	P		P	03 16 18.9	+0.9
	baz=216							
I17K	**Unalakleet**	79.31	17	P		P	03 16 19.0	+0.9
	baz=220							
J17K	**VABM Dome**	79.41	18			P	03 16 19.5	+0.9
J17K				IAmb		IAmb	03 16 22.8	
	comp=Z,7.1nm,0.7s							
J17K	**VABM Dome**	79.41	18	P		P	03 16 19.0	+0.4
	baz=221							
H16K	**Elim**	79.48	16	P		P	03 16 19.5	+0.6
	baz=218							
BRSE	**Bradley Lake S**	79.69	23	P		P	03 16 20.6	+0.3
	baz=230							
F15K	**North Star Dit**	79.72	14	P		P	03 16 21.2	+0.9
	baz=216							
M19K	**Big River Lodg**	79.82	20	P		P	03 16 22.3	+1.3
	baz=226							
L19K	**White Mountain**	79.86	20	P		P	03 16 22.1	+1.0
	baz=225							
G16K	**Koyuk River**	80.04	15	P		P	03 16 22.9	+0.9
	baz=218							
CAPN	**Captain Cook N**	80.21	22	P		P	03 16 23.5	+0.5
	baz=229							
QSPA	**South Pole Qui**	80.26	180	P		P	03 16 22.8	-0.7
	comp=Z,0.9nm,0.7s,baz=4.5,slow=2.5,SNR=5.4							
	comp=Z,0.9nm,0.7s							
QSPA	**South Pole Qui**	80.26	180	P		P	03 16 22.8	-0.7
H17K	**Granite Mounta**	80.34	16	P		P	03 16 24.3	+0.6
	baz=220							
SLKM	**Skilak Lake**	80.39	23			P	03 16 23.7	-0.3
SEW	**Seward**	80.43	23	P		P	03 16 24.7	+0.5
	baz=231							
G17K	**Kiwalik Mounta**	80.57	16	P		P	03 16 24.6	-0.3
	baz=220							
SKT	**Skwentna**	80.87	21	P		P	03 16 26.6	0.0
	baz=228							
J19K	**

baz=217
E18K Tukpahlearik C 82.07 14 P P 03 16 33.9 +1.1
baz=219
M23K Glacier View 82.14 22 P P 03 16 33.9 +0.6
baz=232
EYAK Cordova Ski Ar 82.16 24 P P 03 16 33.4 +0.1
baz=234
H20K Anolleneega Mo 82.19 17 P P 03 16 33.9 +0.4
baz=225,SNR=5.0
TRF Thorofare Moun 82.27 20 IAmb IAmb 03 16 37.8
comp=Z,8.0nm,0.8s
TRF Thorofare Moun 82.27 20 P P 03 16 34.3 +0.1
baz=230,SNR=5.5
C17K DeLong Mountai 82.30 13 P P 03 16 34.5 +0.5
baz=217
SCM Sheep Creek Mo 82.31 22 P P 03 16 34.5 +0.2
baz=232
KAIM Kayak Island 82.34 25 P P 03 16 35.0 +0.6
baz=235
F19K Shaleruckik Mo 82.35 16 P 03 16 33.9 -0.4
F19K IAmb IAmb 03 16 37.7
comp=Z,7.5nm,1.1s
F19K Shaleruckik Mo 82.35 16 P P 03 16 34.5 +0.3
baz=222
WAT1 Susitna Watana 82.48 21 P P 03 16 35.1 0.0
baz=231
WAT6 Susitna Watana 82.62 22 P P 03 16 36.0 0.0
baz=232,SNR=5.8
RND Reindeer 82.74 21 IAmb IAmb 03 16 39.3
comp=Z,10nm,0.8s
I21K Tanana 82.86 19 P P 03 16 37.9 +1.0
baz=228,SNR=6.5
BMRM Bremner River 82.86 24 P P 03 16 37.4 +0.3
baz=235
C18K Utukok River 82.89 13 P P 03 16 37.8 +0.6
baz=219
MCK McKinley 82.91 21 P P 03 16 37.5 +0.2
baz=231,SNR=17
M24K Tolsona, Glenn 82.92 23 P P 03 16 37.6 +0.2
baz=234
H21K Melozitna Rive 82.93 18 P P 03 16 37.6 +0.3
baz=227
E19K Redstone River 82.96 15 P P 03 16 37.9 +0.4
baz=223,SNR=8.0
DHY Denali Highway 83.06 21 IAmb IAmb 03 16 47.4
comp=Z,8.7nm,1.2s
DHY Denali Highway 83.06 21 P P 03 16 37.9 -0.4
baz=232,SNR=6.2
F20K Avaraart Lake 83.06 16 P P 03 16 38.4 +0.5
baz=224
MLY Manley 83.15 19 IAmb IAmb 03 16 42.3
comp=Z,9.2nm,1.0s
MLY Manley 83.15 19 P P 03 16 38.7 +0.2
baz=229,SNR=8.3
N25K Chitina, Valde 83.23 23 P P 03 16 39.5 +0.5
baz=235
G21K Allakaket 83.31 17 P P 03 16 39.4 +0.2
baz=226
CRQE Cirque 83.35 25 P P 03 16 40.3 +0.5
baz=236
NEA2 Nenana 83.42 20 P P 03 16 40.5 +0.7
baz=231,SNR=19
HARP HAARP 83.47 23 P P 03 16 40.8 +0.6
baz=234
D19K Kuna River 83.50 14 IAmb IAmb 03 16 43.7
comp=Z,4.9nm,0.8s
D19K Kuna River 83.50 14 P P 03 16 41.0 +0.7
baz=222
H22K Ishtalitna Cre 83.52 18 IAmb IAmb 03 16 44.3
comp=Z,7.0nm,1.0s
H22K Ishtalitna Cre 83.52 18 P P 03 16 41.2 +0.8
baz=228,SNR=6.6
C19K Lookout Ridge 83.61 14 P P 03 16 41.7 +0.9
baz=220
WRH Wood River Hil 83.67 20 IAmb IAmb 03 16 43.7
comp=Z,10.0nm,1.0s
I23K Minto, Yukon-K 83.67 19 P P 03 16 41.7 +0.6
baz=230
PAX Paxson 83.69 22 P P 03 16 41.3 -0.1
baz=234
MCARA McCarthy VSAT 83.73 24 P P 03 16 41.5 0.0
baz=236
F21K Alatna River 83.81 17 P P 03 16 42.1 +0.2
baz=226
E20K Nigu River 83.81 15 P P 03 16 42.5 +0.6
baz=224,SNR=5.0
CCB Clear Creek Bu 83.87 20 IAmb IAmb 03 16 44.5
comp=Z,7.2nm,0.9s
WMQ Urumqi 83.99 316 eP P 03 16 45.7 +2.3
HDA Harding Lake 84.02 21 P P 03 16 43.0 0.0
baz=233,SNR=5.1
D20K Etivluk River 84.04 15 IAmb IAmb 03 16 46.1
comp=Z,5.4nm,1.0s
D20K Etivluk River 84.04 15 P P 03 16 42.8 -0.2
baz=223
H23K Yukon River 84.05 19 P P 03 16 43.0 -0.2
baz=230
K24K Donnelly Dome 84.07 21 P P 03 16 44.1 +0.8
baz=234
A19K Wainwright 84.14 13 P P 03 16 43.6 +0.2
baz=219
G22K Bettles 84.17 17 P P 03 16 44.2 +0.5
baz=228,SNR=5.4
PINM Pinnacle 84.19 26 P P 03 16 43.7 -0.3
baz=239
IL31 84.26 20 IAmb IAmb 03 16 47.3
comp=Z,5.2nm,1.0s
ILAR Eielson Array 84.26 20 P P 03 16 42.9 -1.3
comp=Z,3.1nm,0.8s,baz=245,slow=4.9,SNR=31
comp=Z,3.1nm,0.8s
ILAR Eielson Array 84.26 20 P P 03 16 43.4 -0.8
POKR Poker Plat Res 84.29 20 P P 03 16 43.9 -0.4
baz=232
M26K Nabesna, AK 84.30 23 P P 03 16 44.5 0.0
baz=236
RIDG Independent Ri 84.37 22 IAmb IAmb 03 16 48.3
comp=Z,8.9nm,1.0s
RIDG Independent Ri 84.37 22 P P 03 16 44.8 -0.1
baz=235,SNR=5.1
F22K John River 84.37 17 P P 03 16 45.5 +0.8
baz=227
G23K Bananza Creek 84.47 18 IAmb IAmb 03 16 49.1
comp=Z,8.2nm,1.0s
G23K Bananza Creek 84.47 18 P P 03 16 45.4 +0.2
baz=230,SNR=6.6
E21K Killik River 84.52 16 IAmb IAmb 03 16 49.1
comp=Z,8.3nm,1.1s
E21K Killik River 84.52 16 P P 03 16 45.7 +0.2
baz=226
O28M Mount Upton 84.57 25 P P 03 16 46.1 -0.1
baz=239
H24K Noodor Dome 84.59 19 P P 03 16 46.0 +0.1
baz=232
J25K Salcha River, 84.69 21 IAmb IAmb 03 16 49.8
comp=Z,10nm,1.2s
J25K Salcha River, 84.69 21 P P 03 16 46.5 +0.1
baz=234,SNR=5.4
M27K Edge Creek, AK 84.72 24 P P 03 16 47.3 +0.6
baz=237
COLD Coldfoot 84.76 17 P P 03 16 47.5 +0.9
baz=229
SCRK Sand Creek 84.82 22 IAmb IAmb 03 16 50.7
comp=Z,6.2nm,0.9s
SCRK Sand Creek 84.82 22 P P 03 16 47.5 +0.3
baz=235,SNR=6.2
C21K Knifeblade Rid 84.82 15 P P 03 16 48.0 +1.1
baz=225,SNR=5.5
B20K Meade River 84.86 14 P P 03 16 47.6 +0.6
baz=222
E22K Anaktuvuk Pass 84.90 16 P P 03 16 48.3 +0.9
baz=228
YUK3 Moose Creek 84.98 24 P P 03 16 48.7 +0.6
baz=239
S31K Pelican 84.98 29 P P 03 16 48.1 +0.2
baz=243
SIT Sitka 85.01 30 P P 03 16 48.6 +0.5
baz=244
YUK8 Steele Glacier 85.01 25 P P 03 16 48.3 -0.1
baz=239
O29M Mount Kennedy 85.02 26 P P 03 16 48.9 +0.6
baz=240
P29M Windy Craggy 85.07 27 P P 03 16 49.1 +0.7
baz=241
L27K Beaver Creek, 85.12 23 P P 03 16 49.4 +0.8
baz=237
BCAR Beaver Creek A 85.13 23 P 03 16 48.9 +0.2
BVCY Beaver Creek 85.15 24 P P 03 16 49.7 +0.9
baz=238
PRP Porcupine Dome 85.17 20 P P 03 16 49.9 +1.0
baz=234
B21K Ikpikpuk River 85.19 15 P P 03 16 49.9 +1.1
baz=225
G24K Hadweenzic Riv 85.25 19 IAmb IAmb 03 16 52.9
comp=Z,9.4nm,1.1s
G24K Hadweenzic Riv 85.25 19 P P 03 16 49.5 +0.4
baz=232,SNR=8.2
BRWY Burwash Landin 85.36 25 P P 03 16 50.9 +1.1
baz=240
R31K City Hall, Gus 85.42 28 P P 03 16 50.5 +0.4
baz=243
YUK6 Outpost Mounta 85.43 26 P P 03 16 50.4 -0.1
baz=241
CRAG Craig 85.44 32 P P 03 16 50.4 +0.1
baz=246
E23K Chandalar 85.47 17 IAmb IAmb 03 16 54.4
comp=Z,6.8nm,1.3s
E23K Chandalar 85.47 17 P P 03 16 50.7 +0.4
baz=230
YUK4 Talbot Arm 85.51 25 P P 03 16 51.4 +0.6
baz=240
S32K Killisnoo 85.55 30 P P 03 16 51.7 +1.0
baz=244
PLBC Pleasant Camp 85.60 27 P P 03 16 51.6 +0.6
baz=242
F24K Squaw Lake 85.63 18 P P 03 16 51.7 +0.6
baz=231
P30M Million Dollar 85.64 27 P P 03 16 52.3 +1.0
baz=242
U33K Whale Pass 85.71 31 P P 03 16 52.0 +0.5
baz=246
G25K Bearman Lake 85.73 19 P P 03 16 52.1 +0.7
baz=233
HYT Haines Junctio 85.74 26 P P 03 16 52.1 +0.3
baz=241
D23K Nanushuk River 85.76 16 IAmb IAmb 03 16 56.1
comp=Z,5.8nm,0.8s
D23K Nanushuk River 85.76 16 P P 03 16 52.7 +1.0
baz=229
E24K Your Creek 85.81 17 P P 03 16 52.9 +0.9
baz=231
TOLK Toolik Lake Re 85.86 17 P P 03 16 52.8 +0.6
baz=230
R32K Eaglecrest 85.93 29 P P 03 16 53.3 +0.6
baz=244
M29M Somme Creek 86.12 24 P P 03 16 54.9 +1.2
baz=240
V35K Ketchikan 86.17 32 P P 03 16 54.5 +0.6
baz=247
N30M Aishikik Lake 86.22 25 P P 03 16 54.5 +0.3
baz=242
WRAK Wrangell Islan 86.22 31 P P 03 16 54.9 +0.8
baz=246
O30N Mendenhall 86.33 26 P P 03 16 55.0 +0.3
baz=243
C23K Itkillik River 86.36 15 P P 03 16 55.4 +0.8
baz=229
F25K Christian River 86.36 18 P P 03 16 55.8 +1.1
baz=234
D24K Happy Valley 86.39 16 P P 03 16 55.5 +0.8
baz=230
RPN Rapa Nui 86.50 117 LR LR 03 47 21.0
comp=Z,29nm,20.4s,baz=308,slow=30
I27K Kandik River 86.56 21 IAmb IAmb 03 16 59.8
comp=Z,7.5nm,1.0s
I27K Kandik River 86.56 21 P P 03 16 56.8 +1.0
baz=237
DAWY Dawson 86.57 23 IAmb IAmb 03 17 00.1
comp=Z,5.3nm,1.1s
DAWY Dawson 86.57 23 P P 03 16 56.1 +0.3
baz=240
G26K Porcupine Rive 86.58 19 P P 03 16 56.3 +0.6
baz=235
L29M L29M 86.59 24 IAmb IAmb 03 17 00.3
comp=Z,7.1nm,1.0s
L29M L29M 86.59 24 P P 03 16 56.7 +0.9
baz=241
E25K Arctic Village 86.70 18 IAmb IAmb 03 17 00.7
comp=Z,6.0nm,1.2s
E25K Arctic Village 86.70 18 P P 03 16 56.1 -0.2
baz=242
N31M Braeburn, Yuko 86.79 26 P P 03 16 57.4 +0.5
baz=243
WHY Whitehorse 86.81 27 P P 03 16 57.7 +0.6
baz=244
M30M Minto, Yukon 86.87 25 IAmb IAmb 03 17 01.4
comp=Z,9.3nm,1.2s
M30M Minto, Yukon 86.87 25 P P 03 16 58.0 +0.7
baz=242
P32M Atlin 86.87 28 P P 03 16 57.9 +0.5
baz=245
F26K Sheenjek River 86.89 19 P P 03 16 58.3 +1.0
baz=235
H27K Steamboat Moun 86.93 20 IAmb IAmb 03 17 01.8
comp=Z,6.8nm,1.1s
H27K Steamboat Moun 86.93 20 P P 03 16 58.1 +0.6
baz=238
BBB Bella Bella 86.95 36 LR LR 03 47 19.0
comp=Z,21nm,21.1s,baz=240,slow=30
I28M Mirror Creek 87.08 21 P P 03 16 58.8 +0.5
baz=239
K29M Barlow Dome 87.18 23 IAmb IAmb 03 17 03.1
comp=Z,7.8nm,1.1s
K29M Barlow Dome 87.18 23 P P 03 16 59.6 +0.8
baz=241
D25K Kavik River 87.19 17 P P 03 16 59.2 +0.6
baz=233
G27K Doyon Strip 87.20 20 P P 03 16 59.4 +0.6
baz=237
J29N Klondike Camp 87.21 23 P P 03 16 59.8 +0.8
baz=241
U35K Hyder 87.23 32 P P 03 16 59.9 +0.8
baz=248
Q32M Nakina River 87.29 29 P P 03 17 00.2 +0.6
baz=246
S34M Telegraph Cree 87.42 30 P P 03 17 00.9 +1.0
baz=247
T35M Bob Quinn 87.51 31 P P 03 17 01.1 +0.7
baz=248
P33M Teslin, Yukon 87.54 27 P P 03 17 01.4 +0.8
baz=246
M31M Drury Creek, Y 87.70 25 P P 03 17 02.7 +1.5
baz=244
N32M Quiet Lake 87.81 27 P P 03 17 02.7 +0.8
baz=245
C26K Camden Bay 87.95 17 P P 03 17 03.1 +0.9
baz=234
E27K Coleen River 87.97 19 P P 03 17 02.8 +0.4
baz=237
J30M Hart River 87.99 23 P P 03 17 03.1 +0.4
baz=242
H29M Whitestone 88.03 21 P P 03 17 03.5 +0.8
baz=240
R33M Jennings River 88.08 29 P P 03 17 03.8 +0.6
baz=247
C27K Aaniv River 88.13 17 IAmb IAmb 03 17 07.5
comp=Z,6.2nm,1.0s
C27K Jago River 88.13 17 P P 03 17 04.0 +0.9
baz=235
DLBC Dease Lake 88.16 30 P P 03 17 04.4 +0.8
baz=248
F28M Old Crow 88.22 19 P P 03 17 04.7 +1.0
baz=239
I30M Mount Dempster 88.27 22 IAmb IAmb 03 17 07.8
comp=Z,5.0nm,0.9s
I30M Mount Dempster 88.27 22 P P 03 17 04.6 +0.5
baz=242
G29M Pine Creek 88.49 20 P P 03 17 05.1 +0.2
baz=241
MKAR Makanchi Array 88.52 318 P P 03 17 04.4 -1.1
comp=Z,2.6nm,0.7s,baz=103,slow=5.5,SNR=10
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 88.52 318 P 03 17 03.6 -1.9
D27M Malcolm River 88.73 18 P P 03 17 06.6 +0.6
baz=238
E28M Babbage River 88.83 19 P P 03 17 07.2 +0.7
baz=239
ZALV Zalesovo Beam 89.05 325 P P 03 17 05.3 -2.5
comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=2.4
comp=Z,0.5nm,0.4s
G30M tAoh Zraii Nji 89.14 21 P P 03 17 08.3 +0.3
baz=242
MMPY Sheldon Lake, 89.20 26 P P 03 17 08.5 +0.1
baz=247
E29M Blow River 89.25 19 P P 03 17 09.6 +1.2
baz=241
F30M Barrier River 89.58 20 P P 03 17 10.9 +0.9
baz=243
NVAR Mina Array Bea 89.79 51 P P 03 17 12.3 +0.4
comp=Z,0.7nm,0.7s,baz=246,slow=5.8,SNR=4.1
NVAR LR LR 03 50 07.8
comp=Z,29nm,21.1s,baz=265,slow=31
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 89.79 51 P P 03 17 11.9 -0.1
G31M Satah River 89.80 21 P P 03 17 12.2 +1.2
baz=244
F31M Tsiigehtchic 90.21 21 P P 03 17 14.4 +1.5
baz=245
PFO Pinyon Flats O 90.26 56 LR LR 03 52 35.8
comp=Z,48nm,18.2s,baz=225,slow=32
INK Inuvik 90.66 20 P P 03 17 16.4 +1.4
baz=245
NEW Newport 92.69 42 LR LR 03 54 15.3
comp=Z,32nm,19.6s,baz=328,slow=32
LPIG La Paz 93.92 66 LR LR 03 53 31.4
comp=Z,21nm,19.2s,baz=172,slow=31
C36M Paulatuk 94.24 20 P P 03 17 32.7 +1.3
baz=254
YKA Yellowknife Ar 96.58 28 P P 03 17 41.8 -0.6
comp=Z,1.2nm,0.8s,baz=268,slow=4.8,SNR=5.8
comp=Z,1.2nm,0.8s
PDAR Pinedale Array 97.08 48 P P 03 17 44.5 -0.9
comp=Z,0.6nm,0.7s,baz=274,slow=9.5,SNR=4.6
comp=Z,0.6nm,0.7s
BVAR Borovoye Array 97.27 322 P P 03 17 43.7 -2.0
comp=Z,1.0nm,0.6s,baz=99,slow=7.7,SNR=4.5
comp=Z,1.0nm,0.6s
ESDC Sonseca Array 146.81 337 PKPbc PKPdf 03 23 54.2 +0.6
comp=Z,0.8nm,0.9s,baz=56,slow=3.7,SNR=4.5
TORD Torodi Ar. Bea 158.16 281 PKPab PKPab 03 24 43.1 -1.7
comp=Z,0.8nm,0.9s,baz=57,slow=3.3,SNR=3.6

KRSC 12 03:19:46.5±2.2, 49°45N×158°82E, h40km±47km, MI3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.13	306	eS			Sn	03 20 46.8	+2.0
KDTR	Khodutka, Kamc	2.41	349	eS			Sn	03 20 55.1	+3.6
RUS	Russkaya	2.99	356	eP			Pn	03 20 33.8	+2.5
RUS				eS			Sn	03 21 09.3	+3.3
ASAK	Asacha	3.00	349	eP			Pn	03 20 36.6	+5.1
MTVR	Mutnovka	3.06	353	eS			Sn	03 21 11.6	+3.7
GRL	Gorelyy	3.14	352	eS			Sn	03 21 14.3	+4.5
KOK	Koryaka	3.85	358	eP			Pn	03 20 48.0	+4.8
GNL	Ganaly	4.29	353	eP			Pn	03 20 54.1	+4.9
MKZ	Mys Kozlova	5.42	18	eP			Pn	03 21 08.8	+4.2

*IDC **12** 03:32:26.6±1.0, 9.°45S×75.°59W, h0km, mb4.0/5, mbtmp3.8/9, ML3.7/4, MS3.2/3, Error ellipse: s-maj=18.9km s-min=14.6km az=59.0*
*NEIC **12** 03:32:32.4±1.4, 9.°46S±0.°05×75.°61W±0.°08, h35km±2km, mb4.3/4, Error ellipse: s-maj=13.6km s-min=7.5km az=288.0*

ISC 12 03:32:31.9±0.7, 9°45S±0.°07×75°67W±0.°09, h41km, n21, σ1§16/20, mb4.0/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	Nana	2.77	205	Pn			Pn	03 33 14.7	+0.7
	16nm,0.3s,baz=20,slow=16,SNR=30								
NNA				Lg			Lg	03 33 54.1	
	31nm,0.3s,baz=240,slow=15,SNR=9.9								
	43nm,0.4s								
NNA	Nana	2.77	205				Pn	03 33 14.9	+1.0
CZSB	Cruzeiro do Su	3.39	60				Pn	03 33 24.2	+1.9
ATAH	Atahualpa	3.55	310	Pn			Pn	03 33 25.9	+1.0
	7.6nm,0.3s,baz=118,slow=4.7,SNR=32								
ATAH				Lg			Lg	03 34 20.7	
	3.1nm,0.3s,baz=142,slow=19,SNR=4.2								
	9.0nm,0.8s								
SLOR	San Lorenzo -	9.11	342				Pn	03 34 41.7	+0.3
LPAZ	La Paz	10.01	134	Pn			Pn	03 34 52.9	-0.9
	0.1nm,0.3s,baz=315,slow=11,SNR=6.8								
LPAZ				Lg			Lg	03 37 43.4	
	0.1nm,0.3s,baz=224,slow=5.0,SNR=2.6								
	0.6nm,0.5s								
LPAZ	La Paz	10.01	134				Pn	03 34 53.5	-0.3
OTAV	Otavalo	10.02	344	Pn			Pn	03 34 53.5	-0.2
PB16	IPOC Station P	10.66	147	Pn			Pn	03 35 01.3	-1.4
VILB	Vilhena	15.56	104				Pn	03 36 08.5	-0.1
VILB					IAmb		IAmb	03 36 16.2	
	comp=Z,19nm,0.9s								
SIV	San Ignacio	15.64	116	Pn			Pn	03 36 08.3	-1.4
	comp=Z,0.1nm,0.3s,baz=302,slow=15,SNR=11								
SIV					Lg		Lg	03 40 38.0	
	baz=307,slow=19,SNR=3.8								
SIV					LR		LR	03 42 00.1	
	comp=Z,72nm,20.8s,baz=115,slow=37								
	comp=Z,1.1nm,0.4s								
PTLB	Pontes e Lacer	17.20	112				Pn	03 36 27.2	-2.1
JUD3	Juan Diaz 3	21.82	333	P			P	03 37 19.9	-1.1
JUD3					IAmb		IAmb	03 37 38.1	
	comp=Z,17nm,1.2s								
CPUP	Villa Florida	24.16	136	P			P	03 37 44.8	+0.3
	comp=Z,0.4nm,0.3s,baz=353,slow=8.1,SNR=2.9								
CPUP					LR		LR	03 49 39.6	
	comp=Z,42nm,18.6s,baz=128,slow=43								
	comp=Z,0.4nm,0.3s								
ANWB	Willy Bob	30.23	27	P			P	03 38 37.2	-1.8
PDAR	Pinedale Array	60.48	332	LR			LR	04 11 08.7	
	comp=Z,35nm,18.4s,baz=344,slow=38								
ULM	Lac du Bonnet	62.01	345	P			P	03 42 48.2	+0.3
	comp=Z,1.4nm,0.6s,baz=149,slow=5.9,SNR=2.4								
	comp=Z,1.4nm,0.6s								
SNAA	Sanae	75.71	162	P			P	03 44 13.3	+0.4
	comp=Z,0.8nm,0.5s,baz=249,slow=8.6,SNR=1.9								
	comp=Z,0.8nm,0.5s								
TORD	Torodi Ar. Bea	80.01	75	P			P	03 44 38.0	+0.2
	comp=Z,3.3nm,1.0s,baz=272,slow=5.7,SNR=8.9								
	comp=Z,3.3nm,1.0s								
QSPA	South Pole Qui	80.67	180	P			P	03 44 41.4	+0.9
	comp=Z,1.8nm,1.0s,baz=120,slow=5.0,SNR=2.3								
	comp=Z,1.8nm,1.0s								
QSPA	South Pole Qui	80.67	180	P			P	03 44 41.9	+1.4

*IDC **12** 03:33:10.6±1.5, 17.°44N×100.°90W, h0km, mb3.9/10, mbtmp3.8/12, ML3.0/3, MS3.3/9, Error ellipse: s-maj=35.5km s-min=24.3km az=43.0*
*NEIC **12** 03:33:16.4±2.4, 17.°55N±0.°03×101.°36W±0.°04, h35km±2km, mb4.2/64, Md4.7/151(MEX), Error ellipse: s-maj=8.4km s-min=3.0km az=233.0*
*MEX **12** 03:33:19.1±1.5, 17.°61N×101.°35W, h25km±8km, MD4.6*

ISC 12 03:33:16.0±0.7, 17°55N±0.°03×101°37W±0.°03, h32km±4km, n221, σ1§72/310, mb4.1/28, MS3.2/6, 1C-2D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.10	304				Pb	03 33 22.7	+1.0
ZIIG							Sb	03 33 25.6	0.0
ZIIG	Zihuatanejo	0.10	304	eP			Pb	03 33 22.7	+1.0
	baz=86,slow=12								
ZIIG				eS			Sb	03 33 25.6	0.0
PET2	Petatlan	0.11	97				Pb	03 33 22.5	+0.8
PET2							Sb	03 33 26.2	+0.7
PET2	Petatlan	0.11	97	eP			Pb	03 33 22.5	+0.8
PET2				eS			Sb	03 33 26.2	+0.7
ATYC	Atoyac	0.96	110				Pn	03 33 33.7	+0.4
ATYC							Sb	03 33 43.7	-2.9
ATYC	Atoyac	0.96	110	eP			Pn	03 33 33.7	+0.4
ATYC				eS			Sb	03 33 43.7	-2.9
CAIG	El Cayaco	1.17	115				Pn	03 33 36.5	+0.4
CAIG							Sn	03 33 51.4	+0.3
CAIG	El Cayaco	1.17	115	iP			Pn	03 33 36.5	+0.4
	baz=301,slow=11								
CAIG				eS			Sn	03 33 51.4	+0.3
ARIG	Puente Sto Nin	1.22	53				Pn	03 33 36.1	-0.8
ARIG	Puente Sto Nin	1.22	53	iP			Pn	03 33 36.1	-0.8
	baz=235,slow=12								
MEIG	Mezcala	1.71	77				Pn	03 33 43.8	+0.1
MEIG							Sn	03 34 05.1	+0.5
MEIG	Mezcala	1.71	77	eP			Pn	03 33 43.8	+0.1
MEIG				eS			Sn	03 34 05.1	+0.5
DAIG	Los Arroyos	1.73	107				Pn	03 33 44.6	+0.7
DAIG							Sn	03 34 07.3	+2.5
DAIG	Los Arroyos	1.73	107	eP			Pn	03 33 44.6	+0.7
DAIG				eS			Sn	03 34 07.3	+2.5
PLIG	Platanillo	1.97	64				Pn	03 33 47.6	+0.3
PLIG							Sn	03 34 13.7	+2.7

PLIG	Platanillo	1.97	64	eP	Pn	03 33 47.6	+0.3	YOIG	Yosondua	3.72	100	eP	Pn	03 34 13.7	+2.1	CCM	Cathedral Cave	22.28	21	P	P	03 38 07.3	-3.2
PLIG				eS	Sn	03 34 13.7	+2.7	YOIG				eS	Sn	03 34 55.9	+1.4	CCM				IAmb	IAmb	03 38 08.8	
URUA	Uruapan	1.98	340		Pn	03 33 48.3	+0.8	TPIG	Tehuac#an	3.92	77		Pn	03 34 15.0	+0.9		comp=Z,3.1nm,0.6s						
URUA					Sn	03 34 12.2	+0.8	TPIG					Sn	03 34 59.8	+0.7	ISCO	Idaho Springs	22.48	351		P	03 38 12.9	0.0
URUA	Uruapan	1.98	340	eP	Pn	03 33 48.3	+0.8	TPIG	Tehuac#an	3.92	77	eP	Pn	03 34 15.0	+0.9	FVM	French Village	22.51	23	IAmb	IAmb	03 38 25.4	
URUA				eS	Sn	03 34 12.2	+0.8	TPIG				eS	Sn	03 34 59.8	+0.7		comp=Z,4.8nm,0.8s						
MMIG	Aquila	2.02	292		Pn	03 33 48.2	+0.4	CJM	Chamela	3.99	300	eP	Pn	03 34 15.9	+1.0	MTPU	Mount Pierson	22.51	337		P	03 38 15.1	+1.6
MMIG					Sn	03 34 11.8	-0.1	CJM				eS	Sn	03 35 01.3	+0.7	T47A	Sharon Grove	23.09	30	IAmb	IAmb	03 38 30.8	
MMIG	Aquila	2.02	292	eP	Pn	03 33 48.2	+0.4	TOIG	Toxpalan	4.14	82		Pn	03 34 18.5	+1.3		comp=Z,6.2nm,0.8s						
MMIG				eS	Sn	03 34 11.8	-0.1	TOIG					Sn	03 35 03.9	-0.7	P40A	Paris	23.36	18	IAmb	IAmb	03 38 33.9	
MOIG	Morelia	2.12	5		Pn	03 33 49.5	-0.1	TOIG	Toxpalan	4.14	82	eP	Pn	03 34 18.5	+1.3		comp=Z,5.6nm,1.0s						
MOIG					Sn	03 34 14.1	-0.9	TOIG				eS	Sn	03 35 03.9	-0.7	TKL	Tuckaleechee C	23.87	37	P	P	03 38 23.2	-3.4
MOIG	Morelia	2.12	5	eP	Pn	03 33 49.5	-0.1	PEIG	Puerto Escondi	4.33	110		Pn	03 34 21.7	+2.0		comp=Z,5.3nm,0.6s,baz=198,slow=11,SNR=17						
MOIG				eS	Sn	03 34 14.1	-0.9	PEIG					Sn	03 35 06.2	-3.0	TKL				LR	LR	03 50 37.3	
MAVM	Malinalco, Edo	2.27	52		Pn	03 33 51.3	-0.2	PEIG	Puerto Escondi	4.33	110	eP	Pn	03 34 21.7	+2.0		comp=Z,41nm,19.2s,baz=187,slow=44						
MAVM					Sn	03 34 19.2	+0.6	PEIG				eS	Sn	03 35 06.2	-3.0		comp=Z,5.3nm,0.6s						
MAVM	Malinalco, Edo	2.27	52	eP	Pn	03 33 51.3	-0.2	CXUV	Coxquihui	4.43	53		Pn	03 34 21.1	0.0	TKL	Tuckaleechee C	23.87	37	IAmb	IAmb	03 38 25.2	
MAVM				eS	Sn	03 34 19.2	+0.6	CXUV					Sn	03 35 13.2	+1.6		comp=Z,8.5nm,1.1s						
CRIG	Cruz Grande	2.29	110		Pn	03 33 52.0	+0.4	CXUV	Coxquihui	4.43	53	eP	Pn	03 34 21.1	0.0	BG3	Lake Jocassee	23.91	40	P	P	03 38 24.1	-3.1
CRIG					Sn	03 34 16.6	-2.1	CXUV				eS	Sn	03 35 13.2	+1.6	BG3				IAmb	IAmb	03 38 26.3	
CRIG	Cruz Grande	2.29	110	eP	Pn	03 33 52.0	+0.4	OXIG	Oaxaca	4.46	95		Pn	03 34 24.0	+2.4		comp=Z,13nm,1.2s						
CRIG				eS	Sn	03 34 16.6	-2.1	OXIG					Sn	03 35 13.4	+0.8	WCI	Wyandotte Cave	24.47	30	P	P	03 38 30.2	-2.0
TOVM	TOLUCA	2.36	43		Pn	03 33 53.3	+0.4	VHO	Vista Hermosa	4.46	95	eP	Pn	03 34 24.0	+2.4	WCI				IAmb	IAmb	03 38 44.6	
TOVM					Sn	03 34 24.1	+3.2	VHO				eS	Sn	03 35 13.4	+0.8		comp=Z,8.8nm,0.9s						
TOVM	TOLUCA	2.36	43	eP	Pn	03 33 53.3	+0.4	OXBJ	Oaxaca	4.47	95		Sn	03 35 14.0	+1.2	NVAR	Mina Array Bea	25.53	328	P	P	03 38 44.6	+2.5
TOVM				eS	Sn	03 34 24.1	+3.2	OXBJ	Oaxaca	4.47	95	eS	Sn	03 35 14.0	+1.2		comp=Z,2.6nm,0.7s,baz=144,slow=10,SNR=20						
YAIG	Yautepec	2.55	59		Pn	03 33 55.3	0.0	OXLC	Oaxaca	4.49	95		Sn	03 35 14.2	+0.9		comp=Z,2.6nm,0.7s						
YAIG					Sn	03 34 25.6	+0.1	OXLC	Oaxaca	4.49	95	eS	Sn	03 35 14.2	+0.9	KVN	Kaiserville	25.91	329		P	03 38 48.8	+3.3
YAIG	Yautepec	2.55	59	eP	Pn	03 33 55.3	0.0	RPIG	Rio Verde	4.51	17		Pn	03 34 23.5	+1.3	PDAR	Pinedale Array	26.09	346	P	P	03 38 48.0	+0.9
YAIG				eS	Sn	03 34 25.6	+0.1	RPIG					Sn	03 35 16.3	+2.7		comp=Z,0.7nm,0.7s,baz=141,slow=12,SNR=7.0						
ACAM	Acambaro	2.56	14		Pn	03 33 56.6	+1.1	RPIG	Rio Verde	4.51	17	eP	Pn	03 34 23.5	+1.3	PDAR				LR	LR	03 49 03.0	
ACAM					Sn	03 34 26.2	+0.5	RPIG				eS	Sn	03 35 16.3	+2.7		comp=Z,32nm,18.2s,baz=12,slow=36						
ACAM	Acambaro	2.56	14	eP	Pn	03 33 56.6	+1.1	JAUV	Jalcomulco	4.70	67		Pn	03 34 25.6	+0.8		comp=Z,0.7nm,0.7s						
ACAM				eS	Sn	03 34 26.2	+0.5	JAUV					Sn	03 35 20.2	+1.9	BLA	Blacksburg	26.91	39		P	03 38 51.8	-2.5
INVM	La Marquesa	2.56	47		Pn	03 33 55.9	+0.1	JAUV	Jalcomulco	4.70	67	eP	Pn	03 34 25.6	+0.8	P52A	Corning	27.63	33	P	P	03 38 57.5	-3.2
INVM					Sn	03 34 30.0	+4.0	JAUV				eS	Sn	03 35 20.2	+1.9	R55A	Marlinton	27.79	38	P	P	03 38 58.9	-3.4
INVM	La Marquesa	2.56	47	eP	Pn	03 33 55.9	+0.1	CTUV	Llano Grande	4.83	36		Pn	03 34 26.4	-0.2	R55A				IAmb	IAmb	03 39 29.5	
INVM				eS	Sn	03 34 30.0	+4.0	CTUV					Sn	03 35 24.6	+3.2		comp=Z,10nm,1.2s						
AOVM	Tlapan	2.59	48		Pn	03 33 56.8	+0.6	CTUV	Llano Grande	4.83	36	eP	Pn	03 34 26.4	-0.2	O52A	Adamsville	28.14	33	P	P	03 39 01.1	-4.1
AOVM					Sn	03 34 27.7	+0.8	CTUV				eS	Sn	03 35 24.6	+3.2	O53A	New Philadelph	28.56	33	P	P	03 39 05.5	-3.5
AOVM	Tlapan	2.59	48	eP	Pn	03 33 56.8	+0.6	LVIG	Laguna Verde	5.17	65		Pn	03 34 37.4	+6.2	ULM	Lac du Bonnet	32.92	6	LR	LR	03 52 36.7	
AOVM				eS	Sn	03 34 27.7	+0.8	LVIG					Sn	03 35 33.5	+3.6		comp=Z,51nm,21.6s,baz=292,slow=35						
MZVM		2.61	51		Pn	03 33 56.7	+0.7	LVIG	Laguna Verde	5.17	65	eP	Pn	03 34 37.4	+6.2	SADO	Sadowa	32.92	30	P	P	03 39 44.6	-2.8
MZVM					Sb	03 34 32.9	-0.9	LVIG				eS	Sn	03 35 33.5	+3.6		comp=Z,2.5nm,0.7s,baz=240,slow=8.1,SNR=1.3						
MZVM		2.61	51	eP	Pn	03 33 56.7	+0.7	ZAIG	Zacatecas	5.31	348		Pn	03 34 33.6	+0.2		comp=Z,2.5nm,0.7s						
MZVM				eS	Sb	03 34 32.9	-0.9	ZAIG					Sn	03 35 32.4	-1.4	SADO	Sadowa	32.92	30	P	P	03 39 44.6	-2.8
MGIG	Malinaltepec	2.63	96		Pn	03 33 58.2	+1.7	ZAIG	Zacatecas	5.31	348	eP	Pn	03 34 30.5	-3.0	SJG	San Juan	33.51	84	LR	LR	03 52 49.9	
MGIG					Sn	03 34 25.8	-1.7	ZAIG				eS	Sn	03 35 32.4	-1.4		comp=Z,44nm,20.3s,baz=190,slow=36						
MGIG	Malinaltepec	2.63	96	eP	Pn	03 33 58.2	+1.7	NEUV	Arroyo Zacate	5.32	87		Pn	03 34 34.1	+0.9	YKA	Yellowknife Ar	45.84	351	P	P	03 41 36.4	+1.6
MGIG				eS	Sn	03 34 25.8	-1.7	NEUV					Sn	03 35 26.4	-7.0		comp=Z,0.2nm,0.5s,baz=169,slow=7.7,SNR=5.2						
TLIG	Tlapa	2.68	89		Pn	03 33 58.3	+1.2	NEUV	Arroyo Zacate	5.32	87	eP	Pn	03 34 34.1	+0.9		comp=Z,0.2nm,0.5s						
TLIG					Sn	03 34 28.6	+0.1	NEUV				eS	Sn	03 35 26.4	-7.0	DLBC	Dease Lake	45.95	339	LR	LR	04 02 44.8	
TLIG	Tlapa	2.68	89	eP	Pn	03 33 58.5	+1.4	HUIG	Huatulco	5.35	109		Pn	03 34 34.7	+1.0		comp=Z,53nm,19.9s,baz=302,slow=38						
TLIG				eS	Sn	03 34 28.6	+0.1	HUIG					Sn	03 35 28.6	-5.6	BLKN	Baker Lake	46.87	3	P	P	03 41 40.0	-2.9
TLVM	San Miguel Top	2.68	52		Pn	03 33 57.8	+0.5	HUIG	Huatulco	5.35	109	eP	Pn	03 34 34.7	+1.0	BLKN				IAmb	IAmb	03 41 55.0	
TLVM					Sn	03 34 28.9	+0.1	HUIG				eS	Sn	03 35 28.6	-5.6		comp=Z,2.5nm,0.8s						
TLVM	San Miguel Top	2.68	52	eP	Pn	03 33 57.8	+0.5	GTIG	Gomez Farias	5.87	20		Pn	03 34 40.6	-0.3	L29M	L29M	52.09	340	P	P	03 42 24.2	+1.4
TLVM				eS	Sn	03 34 28.9	+0.1	GTIG					Sn	03 35 48.2	+1.2	L29M				IAmb	IAmb	03 42 38.4	
HMTT	Tlapaneco	2.69	84		Pn	03 33 58.4	+1.1	GTIG	Gomez Farias	5.87	20	eP	Pn	03 34 40.6	-0.3		comp=Z,4.1nm,1.0s						
HMTT					Sn	03 34 30.0	+1.2	GTIG				eS	Sn	03 35 48.2	+1.2	K29M	Barlow Dome	52.40	341	P	P	03 42 25.4	+0.2
HMTT	Tlapaneco	2.69	84	eP	Pn	03 33 58.4	+1.1	PMUV	Sontecomapan	6.03	80		Pn	03 34 42.5	-0.6	K29M				IAmb	IAmb	03 42 40.5	
HMTT				eS	Sn	03 34 30.0	+1.2	PMUV					Sn	03 35 47.8	-3.3		comp=Z,1.9nm,0.9s						
XCVM	Xochimilco	2.73	51		Pn	03 33 58.9	+0.9	PMUV	Sontecomapan	6.03	80	eP	Pn	03 34 42.5	-0.6	H29M	Whitestone	54.34	343	P	P	03 42 40.2	+0.9
XCVM					Sn	03 34 31.9	+1.8	PMUV				eS	Sn	03 35 47.8	-3.3	H29M				IAmb	IAmb	03 42 53.9	
XCVM	Xochimilco	2.73	51	eP	Pn	03 33 58.9	+0.9	CMIG	Matias Romero	6.22	93	Pn	Pn	03 34 44.3	-1.3		comp=Z,2.7nm,0.8s						
XCVM				eS	Sn	03 34 31.9	+1.8		1.7nm,0.3s,baz=294,slow=9.3,SNR=10							INK	Inuvik	54.66	346	P	P	03 42 41.5	0.0
CUP5	Mexico City	2.73	49		Pn	03 33 58.9	+0.9	CMIG				Lg	Lg	03 36 22.5			comp=Z,1.4nm,0.8s,baz=143,slow=12,SNR=3.6						
CUP5					Sn	03 34 30.5	+0.4		6.2nm,0.3s,baz=345,slow=12,SNR=4.3								comp=Z,1.4nm,0.8s						
CUP5	Mexico City	2.73	49	eP	Pn	03 33 58.9	+0.9	CMIG				LR	LR	03 37 20.6		INK	Inuvik	54.66	346	IAmb	IAmb	03 42 56.0	
CUP5				eS	Sn	03 34 30.5	+0.4		comp=Z,276nm,18.0s,baz=270,slow=43								comp=Z,3.5nm,1.0s						
UNM	Universidad Na	2.73	49		Pn	03 33 58.7	+0.7	CMIG	Matias Romero	6.22	93		Pn	03 34 45.1	-0.5	F30M	Barrier River	54.67	345	P	P	03 42 41.4	-0.3
UNM	Universidad Na	2.73	49	eP	Pn	03 33 58.7	+0.7	CMIG					Sn	03 35 52.8	-2.8	H03N2	Juan Fernandez	55.04	157	T	T	04 42 14.1	
UNM				eS	Sb	03 34 36.0	-1.7	CMIG	Matias Romero	6.22	93	eP	Pn	03 34 45.1	-0.5		baz=335,slow=77,SNR=109						
MHVM	Bosque de Chap	2.76	48		Pn	03 33 58.7	+0.3	CMIG				eS	Sn	03 35 52.8	-2.8	H03N1	Juan Fernandez	55.06	157	T	T	04 42 15.4	
MHVM					Sn	03 34 33.1	+2.3	TGIG		7.92	94		Sn	03 36 39.9	+2.0		baz=335,slow=77,SNR=92						
MHVM	Bosque de Chap	2.76	48	eP	Pn	03 33 58.7	+0.3	TGIG		7.92	94	eS	Sn	03 36 39.9	+2.0	H03N3	Juan Fernandez	55.06	157	T	T	04 42 17.0	
MHVM				eS	Sn	03 34 33.1	+2.3	PDIG	Papasquiaro	8.34	334	e		03 36 50.0			baz=335,slow=77,SNR=72						
COVM	Coyoacan	2.77	49	eS	Sn	03 34 30.0	-0.8	PATR	El Naranjo	9.10	104		Pn	03 35 28.4	+3.0	ILAR	Eielson Array	56.13	338	P	P	03 42 53.6	+1.5
TACY	Mexico City	2.77	48	eP	Pn	03 33 59.3	+0.8	PATR					Sn	03 37 07.2	+0.2		comp=Z,0.7nm,1.0s,baz=162,slow=5.9,SNR=6.6						
TACY				eS	Sn	03 34 33.5	+2.5	PATR	El Naranjo	9.10	104	eP	Pn	03 35 28.4	+3.0		comp=Z,0.7nm,1.0s						
MPVM	San Francisco	2.78	53		Pn	03 33 58.2	-0.4	PATR				eS	Sn	03 37 07.2	+0.2	SFJD	Kangerlussuaq	59.15	21	LR	LR	04 08 59.5	
MPVM					Sn	03 34 31.6	+0.3	PAVE	Pavencul	9.13	104		Pn	03 35 29.9	+4.1		comp=Z,51nm,18.5s,baz=338,slow=36						
MPVM	San Francisco	2.78	53	eP	Pn	03 33 58.2	-0.4	PAVE					Sn	03 37 11.0	+3.2	EKA	Eskdalemuir Ar	80.33	35	P	P	03 45 22.7	-1.2
MPVM				eS	Sn	03 34 31.6	+0.3	PAVE	Pavencul	9.13	104	eP	Pn	03 35 29.9	+4.1		comp=Z,0.5nm,0.6s,baz=302,slow=5.7,SNR=4.1						
SCT2	Benito Juarez	2.80	49		Sn	03 34 31.7	-0.6	PAVE				eS	Sn	03 37 11.0	+3.2		comp=Z,0.5nm,0.6s						
SCT2	Benito Juarez	2.80	49	eS	Sn	03 34 31.1	-0.6	CHUJ	Union Juarez	9.22	104	eP	Pn	03 35 30.4	+3.3	NOA	NORSAR Array B	85.21	27	P	P	03 45 49.1	-0.2
APVM	Azcapotzalco	2.82	46		Pn	03 33 58.8	-0.3	CHUJ				eS	Sn	03 37 13.1	+3.0		comp=Z,0.7nm,0.9s,baz=321,slow=5.6,SNR=3.4						
APVM					Sn	03 34 32.5	+0.3	SLBS	Sierra La Lagu	10.08	309	Pn	Pn	03 35 43.4	+4.6		comp=Z,0.7nm,0.9s						
APVM	Azcapotzalco	2.82	46	eP	Pn	03 33 58.8	-0.3	APG	El Apazote	10.78	102	Pn	Pn	03 35 42.0	-6.5	ARCES	ARCESS Array B	85.46	16	P	P	03 45 50.3	+0.1
APVM				eS	Sn	03 34 32.5	+0.3		baz=327,slow=17,SNR=2.2								comp=Z,2.1nm,0.9s,baz=300,slow=3.8,SNR=2.6						
CTVM	Cuauhtemoc	2.82	48		Sn	03 34 32.5	+0.4	735A	Kenedy	11.72	16	Pn	Pn	03 35 56.0	-5.0		comp=Z,2.1nm,0.9s						
CTVM	Cuauhtemoc	2.82	48	eS	Sn	03 34 32.5	+0.4	TX31	Lajitas Ar. Si	11.92	350		Pn	03 36 08.6	+4.7	ARCES	ARCESS Array B	85.46	16	P	P	03 45 50.3	+0.1
AZVM	Cuida Lopez Ma	2.83	44		Pn	03 33 59.6	+0.3	TXAR	Lajitas Array	11.92	350	Pn	Pn	03 36 06.9	+3.0	WRA	Warramunga Arr	127.39	258	PKP	PKPdf	03 52 18.0	-0.4
AZVM					Sn	03 34 32.3	-0.3		baz=167,slow=15,SNR=14								comp=Z,0.4nm,0.7s,baz=103,slow=2.0,SNR=4.8						
AZVM	Cuida Lopez Ma	2.83	44	eP	Pn	03 33 59.6	+0.3	TXAR				Lg	Lg	03 39 33.9									
AZVM				eS	Sn	03 34 32.3	-0.3		0.1nm,0.3s,baz=172,slow=26,SNR=4.0														
VRVM	Mexico City	2.84	49	e	Sn	03 34 28.1	-4.6	TXAR				LR	LR	03 41 18.1									
CDAR	Ciudad de Arme	2.86	299	eP	Pn	03 34 00.2	+0.7		comp=Z,121nm,18.2s,baz=132,slow=40														
CDAR				eS	Sn	03 34 30.4	-2.4		0.9nm,0.8s														
COMA	Comala	2.87	308		Pn	03 33 58.7	-1.0	TXAR	Lajitas Array	11.92	350	Pn	Pn	03 36 10.2	+6.3								
COMA					Sn	03 34 31.9	-1.3	TEIG	Tepich	12.68	76	Pn	Pn	03 36 13.4	-0.8								
COMA	Comala	2.87	308	eP	Pn	03 33 58.7	-1.0	GDL2	Guadalupe Moun	14.84	350		Pn	03 36 49.0	+5.3								
COMA				eS	Sn	03 34 31.8	-1.3	Y22A	Socorro	17.07	344	P	P	03 37 17.1	+3.0								
PBVM	Pinon	2.88	49		Pn	03 33 59.9	+0.3	WMOK	Wichita Mounta	17.27	7	Pn	Pn	03 37 13.5	-1.3								
PBVM					Sn	03 34 32.1	-1.1	143A	Socs Landing,	17.57	29	P	Pn	03 37 14.9	-3.5								
PBVM	Pinon	2.88	49	eP	Pn	03 33 59.9	+0.3	ANMO	Albuquerque	17.91	346	P	Pn	03 37 24.4	+1.5								
PBVM				eS	Sn	03 34 32.1	-1.1		0.1nm,0.3s,baz=154,slow=10,SNR=4.7														
THVM	De Xico	2.88	52		Pn	03 33 60.0	+0.1	ANMO				LR	LR	03 44 54.5									
THVM					Sn	03 34 35.1	+1.5		comp=Z,211nm,18.9s,baz=172,slow=39														
THVM	De Xico	2.88	52	eP	Pn	03 33 60.0	+0.1		0.6nm,0.4s														
THVM				eS	Sn	03 34 35.1	+1.5	ANMO	Albuquerque	17.91	346	P	Pn	03 37 24.4	+1.5								
INCO	Volcan de Coli	2.89	313	eP	Pn	03 34 01.9	+1.7	W35A	Tecumseh	17.99	12		Pn	03 37 20.0	-3.6								
INCO				eS	Sn	03 34 36.4	+2.3	W35A				IAmb	IAmb	03 37 23.0									
AMVM	AMECAMECA	2.92	57		Pn	03 33 59.9	-0.7		comp=Z,8.0nm,0.5s														
AMVM					Sn	03 34 38.9	+4.2	MIAR	Mount Ida	18.31	21		Pn	03 37 23.8	-3.7								
AMVM	AMECAMECA	2.92	57	eP	Pn	03 33 59.9	-0.7	Y45A	Yeager Farm, C	19.41	31	P	P	03 37 38.9	-0.6								
AMVM				eS	Sn	03 34 38.9	+4.2	WHAR	Wooly Hollow	19.43	23		P	03 37 38.6	-1.2								
PTVM	Pico Tres Padr	2.96	46		Pn	03 34 00.4	-0.6	WHAR				IAmb	IAmb	03 37 39.3									
PTVM					Sn	03 34 37.7	+2.1		comp=Z,11nm,0.5s														
PTVM	Pico Tres Padr	2.96	46	eP	Pn	03 34 00.4	-0.6	Z47A	Carrollton	19.65	35	P	P	03 37 39.2	-3.0								
PTVM				eS	Sn	03 34 37.7	+2.1	Z47A				IAmb	IAmb	03 38 08.1									
PBXN	Popocatepetl	2.96	60	eP	Pn	03 34 01.7	+0.4		comp=Z,9.1nm,1.1s														
PBXN				eS	Sn	03 34 36.4	+0.3	HHAR	Hobbs	19.79	18		P	03 37 41.2	-2.5								
CEGR	Campo Tres	2.98	308		Pn	03 34 03.1	+1.8	HHAR				IAmb	IAmb	03 37 43.5									
CEGR					Sn	03 34 32.3	-3.8		comp=Z,8.4nm,0.6s														
CEGR	Campo Tres	2.98	308	eP	Pn	03 34 03.1	+1.8	U38A	Gravette	19.81	17	P	P	03 37 41.7	-2.2								
CEGR				eS	Sn	03 34 32.3	-3.8	U38A				IAmb	IAmb	03 37 56.9									
FTIG	Fresnillo de T	3.11	83		Pn	03 34 04.3	+1.3		comp=Z,6.8nm,0.9s														
FTIG					Sn	03 34 38.3	-0.8	250A	Grady	19.83	41	P	P	03 37 42.2	-2.0								
FTIG	Fresnillo de T	3.11	83	eP	Pn	03 34 04.3	+1.3	250A				IAmb	IAmb	03 37 51.6									
FTIG				eS	Sn	03 34 38.3	-0.8		comp=Z,19nm,1.4s														
PPSX	Xalitzintla	3.12	60	eP	Pn	03 34 04.6	+1.2	OXF	Oxford	19.99	30	P	P	03 37 43.5	-2.4								
PPSX				eS	Sn	03 34 40.1	+0.4	FCAR	Ozark Folk Cen	20.03	22	P	P	03 37 45.0	-1.2								
ZUVM	ZUMPANGO	3.14	43		Pn	03 34 03.2	-0.4	FCAR				IAmb	IAmb	03 37 45.5									
ZUVM					Sn	03 34 40.4	+0.2		comp=Z,12nm,0.6s														
ZUVM	ZUMPANGO	3.14	43	eP	Pn	03 34 03.2	-0.4	LRAL	Lakeview Retre	20.13	37		P	03 37 45.5	-1.9								
ZUVM				eS	Sn	03 34 40.4	+0.2	SDCO	Great Sand Dun	20.45	351	P	P	03 37 51.6	+0.5								
VTVM	Tizayuca	3.31	48		Pn	03 34 05.4	-0.5	SDCO				IAmb	IAmb	03 38 05.8									
VTVM					Sn	03 34 45.1	+0.8		comp=Z,15nm,1.5s														
VTVM	Tizayuca	3.31	48	eP	Pn	03 34 05.4	-0.5	LCAR	Lake Charles	20.55	24		P	03 37 49.7	-2.3								
VTVM				eS	Sn	03 34 45.1	+0.8	LCAR				IAmb	IAmb	03 38 04.8									
PHPU	Puebla	3.39	63		Pn	03 34 07.2	+0.2		comp=Z,13nm,1.5s														
PHPU					Sn	03 34 46.1	-0.2	S22A	4UR Ranch, Cre	20.68	348		P	03 37 55.1	+1.4								
PHPU	Puebla	3.39	63	eP	Pn	03 34 07.2	+0.2	Y49A	Blount Mountai	21.07	37	IAmb	IAmb	03 38 17.4									
PHPU				eS	Sn	03 34 46.1	-0.2		comp=Z,6.3nm,0.9s														
HLIG	Huajuapan de L	3.42	85		Pn	03 34 08.5	+1.2	X48A	Hartselle	21.15	35		P	03 37 55.6	-2.9								
HLIG					Sn	03 34 43.3	-3.6	X48A				IAmb	IAmb	03 37 57.6									
HLIG	Huajuapan de L	3.42	85	eP	Pn	03 34 08.5	+1.2		comp=Z,5.7nm,0.8s														
HLIG				eS	Sn	03 34 43.3	-3.6	S39A	Bolivar	21.28	18	IAmb	IAmb	03 37 59.0									
TXIG	Tlaxiaco	3.46	94		Pn	03 33 09.5	+1.6		comp=Z,7.8nm,0.6s														
TXIG					Sn	03 34 48.3	+0.4	T42A	Van Buren	21.42	23	P	P	03 37 58.5	-2.9								
TXIG	Tlaxiaco	3.46	94	eP	Pn	03 33 09.5	+1.6	PV13	Radium Mtn., P	21.55	344	P	P	03 38 00.2	-2.7								
TXIG				eS	Sn	03 34 48.3	+0.4	PV18	Skein Mesa, Pa	21.65	344	IAmb	IAmb	03 38 19.9									
DHIG	Demacu	3.52	39		Pn	03 34 07.9	-0.9		comp=Z,12nm,1.3s														
DHIG					Sn	03 34 50.2	+0.8	HMU	Henry Mountain	21.91	340	IAmb	IAmb	03 38 32.9									
DEIG	Demacu	3.52	39	eP	Pn	03 34 07.9	-0.9		comp=Z,6.6nm,1.0s														
DEIG				eS	Sn	03 34 50.2	+0.7	FPAL	Fort Paine	22.02	37	P	P	03 38 03.1	-4.7								
YOIG	Yosondua	3.72	100		Pn	03 34 13.7	+2.1	WVT	Waverly	22.06	30		P	03 38 05.0	-3.2								
YOIG					Sn	03 34 55.9	+1.4	WVT				IAmb	IAmb	03 38 07.4									
									comp=Z,4.8nm,0.5s														
								R40A	Maddies Statio	22.15	19

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.41**	**171**	*i*	**P**		**Pn**	**04 06 27.5**	**0.0**
JYNG					A		A	04 06 27.5	
	comp=N,16nm,1.5s,comp=E,15nm,10.0s								
JYNG					S		**Sn**	**04 06 41.5**	**-0.9**
YOJ	**Yonaguni jima**	**0.41**	**162**		P		**Pn**	**04 06 27.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.41**	**162**				**Pn**	**04 06 27.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.41**	**162**	⇑	*i*	P	**Pn**	**04 06 27.3**	**-0.1**
YOJ					*i*	S	**Sn**	**04 06 41.0**	**-1.4**
YOJ	**Yonaguni jima**	**0.41**	**162**		P		**Pn**	**04 06 27.4**	**-0.1**
YOJ					S		**Sn**	**04 06 41.5**	**-0.9**
EOS2	**EOS2**	**0.73**	**233**	⇑	*e*	P	**Pn**	**04 06 29.4**	**+0.2**
EOS2					e	S	**Sn**	**04 06 44.9**	**-0.5**
EOS3	**EOS3**	**0.76**	**222**	⇑	*i*	P	**Pn**	**04 06 29.7**	**+0.3**
EOS3					S		**Sn**	**04 06 45.7**	**-0.1**
TWB1	**Santiao Chiao**	**0.82**	**281**	⇑	*i*	P	**Pn**	**04 06 30.2**	**+0.2**
TWB1					S		**Sn**	**04 06 45.9**	**-1.0**
EGS		**0.86**	**269**	⇑	*i*	P	**Pn**	**04 06 30.5**	**+0.2**
EGS					e	S	**Sn**	**04 06 47.2**	**-0.1**
EOS4	**EOS4**	**0.89**	**215**	⇑	*e*	P	**Pn**	**04 06 30.1**	**-0.1**
EOS4					S		**Sn**	**04 06 46.4**	**-0.8**
IRIF	**Iriomote-Funau**	**0.94**	**124**		*i*	P	**Pn**	**04 06 31.0**	**0.0**
IRIF					A		A	04 06 31.0	
	comp=N,17nm,1.5s,comp=E,9.0nm,1.1s								
IRIF					e	S	**Sn**	**04 06 47.5**	**-1.0**
SXI1	**Grass Mountain**	**0.94**	**285**	⇑	*i*	P	**Pn**	**04 06 31.5**	**+0.4**
SXI1					e	S	**Sn**	**04 06 47.1**	**-1.7**
NTC	**Toucheng**	**0.95**	**270**		*e*	P	**Pn**	**04 06 31.9**	**+0.8**
NTC					e	S	**Sn**	**04 06 47.2**	**-1.5**
TIPB	**Shuangxi**	**0.96**	**277**	⇑	*i*	P	**Pn**	**04 06 31.7**	**+0.5**
TIPB					S		**Sn**	**04 06 47.9**	**-1.1**
TWC	**Suao**	**0.96**	**255**	⇑	*i*	P	**Pn**	**04 06 31.0**	**-0.2**
TWC					e	S	**Sn**	**04 06 46.8**	**-2.2**
ESAO	**Su ao**	**0.98**	**254**		*e*	P	**Pn**	**04 06 31.3**	**-0.1**
ESAO					e	S	**Sn**	**04 06 47.4**	**-1.8**
WFSB	**Wu-fen Shan**	**1.01**	**282**	⇑	*e*	P	**Pn**	**04 06 32.2**	**+0.5**
WFSB					e	S	**Sn**	**04 06 49.5**	**-0.3**
ILA	**Ilan**	**1.03**	**265**		*e*	P	**Pn**	**04 06 32.4**	**+0.5**
ILA					e	S	**Sn**	**04 06 49.4**	**-0.6**
TNOU	**National Taiwa**	**1.04**	**287**	⇑	*e*	P	**Pn**	**04 06 32.4**	**+0.5**
TNOU					e	S	**Sn**	**04 06 48.9**	**-1.4**
NDS	**Dongshan**	**1.08**	**258**	⇑	*e*	P	**Pn**	**04 06 32.4**	**+0.1**
NDS					e	S	**Sn**	**04 06 49.7**	**-1.1**
EWUT	**Wuta**	**1.08**	**248**	⇑	*e*	P	**Pn**	**04 06 32.1**	**-0.2**
EWUT					e	S	**Sn**	**04 06 47.7**	**-3.3**
TWE	**Neicheng**	**1.11**	**263**	⇑	*i*	P	**Pn**	**04 06 32.8**	**+0.3**
TWE					e	S	**Sn**	**04 06 50.7**	**-0.6**
ENA	**Nanau**	**1.12**	**248**	⇑	*e*	P	**Pn**	**04 06 31.1**	**-1.5**
ENA					e	S	**Sn**	**04 06 49.3**	**-2.2**
EAHA	**Aohua**	**1.16**	**243**	⇑	*i*	P	**Pn**	**04 06 33.1**	**0.0**
EAHA					S		**Sn**	**04 06 51.2**	**-1.0**
HATJ	**Hateruma jima**	**1.16**	**133**		*i*	P	**Pn**	**04 06 33.7**	**+0.6**
HATJ					A		A	04 06 33.7	
	comp=N,19nm,1.7s,comp=E,9.0nm,1.7s								
HATJ					e	S	**Sn**	**04 06 52.3**	**0.0**
EHP	**Heping Village**	**1.17**	**242**		*e*	P	**Pn**	**04 06 33.1**	**0.0**
EHP					e	S	**Sn**	**04 06 51.7**	**-0.7**
FUSB	**Fushanzhiwuyua**	**1.17**	**266**	⇑	*i*	P	**Pn**	**04 06 33.5**	**+0.2**
FUSB					e	S	**Sn**	**04 06 51.4**	**-1.2**
TWA	**Mucha**	**1.18**	**276**	⇑	*i*	P	**Pn**	**04 06 33.6**	**+0.4**
TWA					e	S	**Sn**	**04 06 52.0**	**-0.6**
NHY	**Taipei**	**1.20**	**279**		*e*	P	**Pn**	**04 06 34.2**	**+0.7**
NHY					e	S	**Sn**	**04 06 52.7**	**-0.2**
JKRS	**Kuro-shima**	**1.20**	**121**		*i*	P	**Pn**	**04 06 34.1**	**+0.7**
JKRS					A		A	04 06 34.1	
	comp=N,18nm,1.9s,comp=E,10.0nm,0.9s								
JKRS					e	S	**Sn**	**04 06 53.3**	**+0.3**
ENTT	**Nioudou**	**1.21**	**260**	⇑	*e*	P	**Pn**	**04 06 34.0**	**+0.4**
YM08	**YM08**	**1.21**	**286**		P		**Pn**	**04 06 34.2**	**+0.6**
YM08					S		**Sn**	**04 06 52.8**	**-0.4**
YM01	**YM01**	**1.22**	**284**	⇑	*i*	P	**Pn**	**04 06 34.2**	**+0.5**
YM01					e	S	**Sn**	**04 06 52.4**	**-0.9**
TWY	**Chenhua**	**1.23**	**290**		*e*	P	**Pn**	**04 06 34.2**	**+0.5**
TWY					e	S	**Sn**	**04 06 52.7**	**-0.8**
NHDH	**Xindian Distri**	**1.23**	**275**	⇑	*e*	P	**Pn**	**04 06 34.2**	**+0.5**
NHDH					S		**Sn**	**04 06 52.5**	**-1.0**
ZUZH	**Zhuzihu**	**1.24**	**284**		P		**Pn**	**04 06 34.5**	**+0.5**
ZUZH					S		**Sn**	**04 06 53.1**	**-0.7**
NWLT	**Wulai**	**1.25**	**267**		P		**Pn**	**04 06 34.1**	**+0.1**
NWLT					S		**Sn**	**04 06 52.5**	**-1.3**
JIJ	**Ishigaki jima**	**1.25**	**113**	*i*	P		**Pn**	**04 06 34.1**	**+0.1**
JIJ					A		A	04 06 34.1	
	comp=N,6.0nm,0.5s,comp=E,5.0nm,0.6s								
JIJ					e	S	**Sn**	**04 06 53.4**	**-0.5**
TAP	**Taipei**	**1.25**	**279**		*e*	P	**Pn**	**04 06 34.0**	**+0.1**
TAP					e	S	**Sn**	**04 06 52.6**	**-1.3**
NDT	**Datong Townshi**	**1.26**	**259**		*e*	P	**Pn**	**04 06 35.1**	**+1.0**
NDT					S		**Sn**	**04 06 53.8**	**-0.2**
TATO	**Taipei**	**1.26**	**276**		P		**Pn**	**04 06 34.2**	**+0.2**
TATO	**Taipei**	**1.26**	**276**		S		**Sn**	**04 06 53.0**	**-1.1**
TATO	**Taipei**	**1.26**	**276**				**Pn**	**04 06 34.3**	**+0.2**
TATO	**Taipei**	**1.26**	**276**	⇑	*i*	P	**Pn**	**04 06 34.3**	**+0.2**
TATO					e	S	**Sn**	**04 06 51.9**	**-2.2**
LATG	**Datong**	**1.27**	**256**	⇑	*e*	P	**Pn**	**04 06 34.6**	**+0.4**
LATG					e	S	**Sn**	**04 06 54.0**	**-0.3**
ANP	**Anpu**	**1.27**	**285**		*e*	P	**Pn**	**04 06 35.0**	**+0.7**
ANP					e	S	**Sn**	**04 06 53.4**	**-1.0**
BACT	**New Taipei Cit**	**1.31**	**276**		*e*	P	**Pn**	**04 06 34.5**	**0.0**
NTST	**Danshui**	**1.33**	**284**		*e*	P	**Pn**	**04 06 35.6**	**+0.9**
NTST					e	S	**Sn**	**04 06 54.8**	**-0.4**
JISG	**Ishigakijimahi**	**1.33**	**101**		*i*	P	**Pn**	**04 06 34.9**	**+0.1**
JISG					A		A	04 06 34.9	
	comp=N,9.0nm,0.5s,comp=E,6.0nm,0.6s								
JISG					S		**Sn**	**04 06 54.1**	**-1.2**
ETL	**Fush Village**	**1.33**	**239**		*e*	P	**Pn**	**04 06 34.4**	**-0.5**
ETL					e	S	**Sn**	**04 06 53.6**	**-1.8**
TWS1	**Kuangyinshan**	**1.34**	**281**	⇑	*e*	P	**Pn**	**04 06 35.6**	**+0.7**
TWS1					e	S	**Sn**	**04 06 55.3**	**-0.3**
NACB	**Ninganchiao**	**1.35**	**240**		P		**Pn**	**04 06 34.2**	**-0.7**
NACB	**Ninganchiao**	**1.35**	**240**				**Pn**	**04 06 34.3**	**-0.7**
NACB	**Ninganchiao**	**1.35**	**240**	⇑	*e*	P	**Pn**	**04 06 34.3**	**-0.7**
NACB					e	S	**Sn**	**04 06 53.7**	**-2.0**
YHNB	**Yeheng**	**1.38**	**263**		P		**Pn**	**04 06 35.7**	**+0.4**
YHNB	**Yeheng**	**1.38**	**263**				**Pn**	**04 06 35.6**	**+0.3**
YHNB	**Yeheng**	**1.38**	**263**		*e*	P	**Pn**	**04 06 35.9**	**+0.5**
YHNB					e	S	**Sn**	**04 06 55.2**	**-1.0**
NSK	**Sanguang**	**1.39**	**263**	⇑	*e*	P	**Pn**	**04 06 35.6**	**+0.1**
NSK					e	S	**Sn**	**04 06 55.5**	**-1.0**
TWD	**Chiawan**	**1.40**	**237**	⇑	*e*	P	**Pn**	**04 06 35.0**	**-0.5**
TWD					e	S	**Sn**	**04 06 54.6**	**-1.9**
NNSH	**Datong**	**1.42**	**253**		*e*	P	**Pn**	**04 06 36.0**	**+0.1**
NNSB	**Datong**	**1.42**	**253**	⇑	*e*	P	**Pn**	**04 06 36.1**	**+0.2**
NNSB					S		**Sn**	**04 06 56.0**	**-1.2**
ETLH	**Xiulin Townshi**	**1.42**	**243**	⇑	*e*	P	**Pn**	**04 06 35.7**	**-0.2**
ETLH					e	S	**Sn**	**04 06 55.8**	**-1.4**
NNS	**Nan Shan**	**1.43**	**253**	⇑	*e*	P	**Pn**	**04 06 36.0**	**+0.1**
NNS					e	S	**Sn**	**04 06 55.7**	**-1.6**
NTY	**Taoyuan**	**1.44**	**276**		*e*	P	**Pn**	**04 06 35.9**	**0.0**
HWA	**Hwalien**	**1.45**	**233**	⇑	*e*	P	**Pn**	**04 06 36.0**	**0.0**
HWA					e	S	**Sn**	**04 06 56.8**	**-0.8**
TEYL	**Yanliau Villag**	**1.52**	**230**	⇑	*e*	P	**Pn**	**04 06 36.5**	**-0.3**
TEYL					e	S	**Sn**	**04 06 57.5**	**-1.5**
NCUH	**Zhongli**	**1.54**	**274**		*e*	P	**Pn**	**04 06 37.8**	**+0.8**
NCUH					e	S	**Sn**	**04 06 59.0**	**-0.2**
ETM	**Tongmen**	**1.54**	**235**	⇑	*e*	P	**Pn**	**04 06 36.7**	**-0.3**
ETM					e	S	**Sn**	**04 06 57.2**	**-2.2**
KSHI	**Guanxi Townshi**	**1.54**	**267**	⇑	*e*	P	**Pn**	**04 06 37.9**	**+0.8**
KSHI					e	S	**Sn**	**04 06 59.4**	**0.0**
LXIB	**Xiulin Townshi**	**1.57**	**238**	⇑	*e*	P	**Pn**	**04 06 37.1**	**-0.4**
LXIB					e	S	**Sn**	**04 06 57.9**	**-2.3**
SHUL	**Shoufeng**	**1.60**	**229**	⇑	*e*	P	**Pn**	**04 06 37.5**	**-0.2**
SHUL					e	S	**Sn**	**04 06 58.9**	**-1.6**
FUSS	**Fushou**	**1.60**	**248**		*e*	P	**Pn**	**04 06 38.5**	**+0.5**
FUSS					e	S	**Sn**	**04 07 00.1**	**-0.8**
NFF	**Wufeng Townshi**	**1.61**	**262**	⇑	*e*	P	**Pn**	**04 06 38.3**	**+0.4**
NFF					S		**Sn**	**04 06 59.4**	**-1.4**
NJD	**Zhudong**	**1.63**	**266**		*e*	P	**Pn**	**04 06 38.0**	**0.0**
NJD					e	S	**Sn**	**04 07 00.8**	**-0.2**
WHF	**Hehuan Shan**	**1.63**	**245**	⇓	*e*	P	**Pn**	**04 06 38.6**	**+0.2**
WHF					e	S	**Sn**	**04 07 00.1**	**-1.7**
TWT	**Tachien**	**1.66**	**249**	⇑	*e*	P	**Pn**	**04 06 39.4**	**+0.9**
TWT					e	S	**Sn**	**04 07 01.6**	**-0.4**
NHW	**Xinwu Township**	**1.67**	**276**		P		**Pn**	**04 06 38.7**	**+0.3**
NHW					e	S	**Sn**	**04 07 01.3**	**-0.5**
TEGC	**Jichi Village**	**1.67**	**227**		*e*	P	**Pn**	**04 06 38.5**	**0.0**
TEGC					e	S	**Sn**	**04 07 00.7**	**-1.1**
TDCB	**Techi**	**1.67**	**249**	⇑	*e*	P	**Pn**	**04 06 39.5**	**+0.8**
TDCB					e	S	**Sn**	**04 07 01.1**	**-1.1**
ESL	**Shilin**	**1.68**	**232**	⇑	*e*	P	**Pn**	**04 06 38.1**	**-0.5**
ESL					S		**Sn**	**04 06 59.5**	**-2.5**
JTJ	**Tarama**	**1.68**	**97**	*i*	P		**Pn**	**04 06 39.0**	**+0.5**
JTJ					S		**Sn**	**04 07 01.1**	**-0.8**
HSN1	**Hsinchu**	**1.69**	**268**		*e*	P	**Pn**	**04 06 39.0**	**+0.3**
HSN1					e	S	**Sn**	**04 07 01.6**	**-0.6**
LIOB	**Emei**	**1.70**	**263**	⇑	*e*	P	**Pn**	**04 06 39.4**	**+0.5**
LIOB					e	S	**Sn**	**04 07 01.4**	**-1.1**
NSTT	**Nanjuang**	**1.72**	**263**	⇑	*e*	P	**Pn**	**04 06 39.3**	**+0.3**
NSTT					e	S	**Sn**	**04 07 01.6**	**-1.3**
SBCB	**Hsinchu**	**1.72**	**268**	⇑	*e*	P	**Pn**	**04 06 39.7**	**+0.7**
SBCB					e	S	**Sn**	**04 07 02.2**	**-0.7**
HSN	**Hsinchu**	**1.73**	**269**		*e*	P	**Pn**	**04 06 39.4**	**+0.2**
HSN					e	S	**Sn**	**04 07 01.7**	**-1.4**
WARBT	**Fenglin Townsh**	**1.77**	**230**	⇑	*e*	P	**Pn**	**04 06 39.1**	**-0.6**
WARBT					S		**Sn**	**04 07 01.3**	**-2.7**
EGFH	**Guangfu**	**1.77**	**228**		*e*	P	**Pn**	**04 06 39.5**	**-0.1**
OWD	**Renai**	**1.79**	**240**		*e*	S	**Pn**	**04 07 02.4**	**-2.2**
WUSB	**Renai**	**1.82**	**242**	⇑	*e*	P	**Pn**	**04 06 40.9**	**+0.6**
WUSB					e	S	**Sn**	**04 07 04.3**	**-0.8**
WHP	**Taichung City**	**1.85**	**252**		*e*	S	**Pn**	**04 07 05.5**	**-0.2**
HGSD	**Ruisui**	**1.90**	**225**		*e*	P	**Pn**	**04 06 41.0**	**-0.1**
HGSD					e	S	**Sn**	**04 07 06.8**	**+0.2**
WPL	**Puli Township**	**1.94**	**245**		*e*	P	**Pn**	**04 06 42.5**	**+0.9**
WPL					e	S	**Sn**	**04 07 07.3**	**-0.1**
EHYH	**Wanrong**	**1.95**	**226**		*e*	P	**Pn**	**04 06 41.3**	**-0.4**
EHYH					e	S	**Sn**	**04 07 05.1**	**-2.5**
EHY	**Hungye**	**1.95**	**227**	⇑	*e*	P	**Pn**	**04 06 41.2**	**-0.6**
DPDB	**Guoxing**	**1.96**	**246**		*e*	P	**Pn**	**04 06 42.8**	**+0.9**
DPDB					e	S	**Sn**	**04 07 07.4**	**-0.5**
WCS	**Beigang Elemen**	**1.96**	**246**		*e*	P	**Pn**	**04 06 43.0**	**+1.2**
WCS					e	S	**Sn**	**04 07 08.3**	**+0.5**
NSY	**Sanyi**	**1.97**	**258**		P		**Pn**	**04 06 43.1**	**+1.1**
NSY					e	S	**Sn**	**04 07 07.8**	**-0.4**
TWQ1	**Liyutan**	**1.98**	**256**		*e*	P	**Pn**	**04 06 42.6**	**+0.5**
TWQ1					e	S	**Sn**	**04 07 07.1**	**-1.2**
ECBN	**Changbin**	**2.01**	**221**	⇑	*e*	P	**Pn**	**04 06 42.4**	**-0.1**
ECBN					e	S	**Sn**	**04 07 07.5**	**-1.5**
SMLT	**Sun Moon Lake**	**2.04**	**242**	⇑	*e*	P	**Pn**	**04 06 43.8**	**+0.8**
SMLT					e	S	**Sn**	**04 07 09.8**	**-0.1**
YULB	**Yu-li**	**2.05**	**225**		P		**Pn**	**04 06 42.3**	**-0.7**
YULB	**Yu-li**	**2.05**	**225**				**Pn**	**04 06 42.0**	**-1.0**
YULB	**Yu-li**	**2.05**	**225**	⇑	P		**Pn**	**04 06 42.4**	**-0.5**
YULB					e	S	**Sn**	**04 07 07.4**	**-2.4**
SSLB	**Suanglung**	**2.05**	**239**		P		**Pn**	**04 06 43.4**	**+0.4**
SSLB	**Suanglung**	**2.05**	**239**		S		**Sn**	**04 07 09.7**	**-0.2**
SSLB	**Suanglung**	**2.05**	**239**				**Pn**	**04 06 43.2**	**+0.2**
SSLB	**Suanglung**	**2.05**	**239**	⇑	P		**Pn**	**04 06 43.4**	**+0.4**
SSLB					e	S	**Sn**	**04 07 08.5**	**-1.4**
EYUL	**Yuli**	**2.07**	**224**		*e*	P	**Pn**	**04 06 43.1**	**-0.1**
EYUL					e	S	**Sn**	**04 07 08.8**	**-1.4**
TYC	**Yuchr**	**2.07**	**243**	⇑	P		**Pn**	**04 06 44.2**	**+1.1**
TYC					e	S	**Sn**	**04 07 10.6**	**+0.4**
TWF1	**Yuli**	**2.08**	**224**	⇑	P		**Pn**	**04 06 42.9**	**-0.4**
TWF1					e	S	**Sn**	**04 07 08.5**	**-1.9**
JIRJ	**Irabujima**	**2.11**	**90**	*i*	P		**Pn**	**04 06 44.0**	**+0.4**
JIRJ					e	S	**Sn**	**04 07 10.7**	**-0.3**
TCU	**Taichung**	**2.12**	**251**		*e*	P	**Pn**	**04 06 44.6**	**+0.7**
TCU					e	S	**Sn**	**04 07 11.1**	**-0.3**
CHKH	**Chenggong**	**2.14**	**220**		*e*	P	**Pn**	**04 06 43.5**	**-0.5**
CHKH					e	S	**Sn**	**04 07 09.7**	**-2.0**
WWF	**Wufeng**	**2.14**	**248**		*e*	P	**Pn**	**04 06 44.8**	**+0.8**
WWF					e	S	**Sn**	**04 07 11.3**	**-0.5**
JIKM	**Ikemajima**	**2.16**	**88**		*e*	S	**Sn**	**04 07 11.6**	**-0.4**
WHYT	**Xinyi Township**	**2.18**	**238**	⇑	P		**Pn**	**04 06 45.7**	**+1.1**
WHYT					e	S	**Sn**	**04 07 13.2**	**+0.5**
FULB	**Fuli**	**2.19**	**222**	⇑	P		**Pn**	**04 06 44.6**	**-0.2**
FULB					e	S	**Sn**	**04 07 12.2**	**-0.8**
JMJ	**Miyako jima 2**	**2.20**	**91**		P		**Pn**	**04 06 45.8**	**+1.1**
JMJ	**Miyako jima 2**	**2.20**	**91**		S		**Sn**	**04 07 12.5**	**-0.5**
JMJ	**Miyako jima 2**	**2.20**	**91**		P		**Pn**	**04 06 45.8**	**+1.1**
JMJ					e	S	**Sn**	**04 07 11.5**	**-1.5**
WJS	**Zhushan**	**2.21**	**243**		*e*	P	**Pn**	**04 06 46.0**	**+1.1**
WJS					e	S	**Sn**	**04 07 13.8**	**+0.5**
WNT1	**Nantou City**	**2.21**	**245**		*e*	P	**Pn**	**04 06 45.9**	**+1.0**
WNT1					e	S	**Sn**	**04 07 13.2**	**-0.1**
WNT	**Mingjian**	**2.22**	**244**		*e*	P	**Pn**	**04 06 46.0**	**+1.0**
WNT					e	S	**Sn**	**04 07 13.6**	**+0.1**
WWCA	**Taichung City**	**2.22**	**255**		*e*	P	**Pn**	**04 06 45.3**	**+0.3**
WWCA					e	S	**Sn**	**04 07 13.2**	**-0.3**
CHKT	**Chengkung**	**2.23**	**219**	⇑	P		**Pn**	**04 06 44.6**	**-0.5**
CHKT					e	S	**Sn**	**04 07 11.5**	**-2.2**
JMJ2	**Miyako jima3**	**2.23**	**92**	*i*	P		**Pn**	**04 06 46.0**	**+0.8**
JMJ2					e	S	**Sn**	**04 07 14.7**	**+0.9**
WCHH	**Zhanghua**	**2.25**	**250**		*e*	P	**Pn**	**04 06 45.6**	**+0.2**
WCHH					e	S	**Sn**	**04 07 14.1**	**+0.1**
WCH1	**Changhua City**	**2.26**	**250**		*e*	P	**Pn**	**04 06 45.6**	**+0.1**
WCH1					e	S	**Sn**	**04 07 14.1**	**-0.2**
WYL	**Yuanlin Townsh**	**2.27**	**247**		*e*	P	**Pn**	**04 06 46.4**	**+0.8**
WYL					e	S	**Sn**	**04 07 14.3**	**-0.3**
EHD	**Haiduan**	**2.28**	**222**		*e*	P	**Pn**	**04 06 45.4**	**-0.4**
EHD					e	S	**Sn**	**04 07 12.7**	**-2.3**
JOGS	**Gusukube**	**2.30**	**92**		P		**Pn**	**04 06 47.1**	**+1.2**
JOGS					e	S	**Sn**	**04 07 16.2**	**+0.9**
ECS	**Chishang**	**2.32**	**221**		*e*	P	**Pn**	**04 06 46.4**	**+0.1**
ECS					e	S	**Sn**	**04 07 15.4**	**-0.3**
ALS	**Alishan**	**2.32**	**235**	⇑	P		**Pn**	**04 06 47.5**	**+1.1**
ALS					e	S	**Sn**	**04 07 15.9**	**-0.2**
EDH	**Donghe**	**2.36**	**218**	⇑	P		**Pn**	**04 06 46.5**	**-0.3**
EDH					e	S	**Sn**	**04 07 14.8**	**-1.8**
CHN5	**Tsauling**	**2.37**	**238**	⇑	P		**Pn**	**04 06 48.0**	**+1.1**
CHN5					e	S	**Sn**	**04 07 17.3**	**+0.5**
ELDTW	**Lidau**	**2.38**	**226**	⇑	P		**Pn**	**04 06 46.8**	**-0.2**
ELDTW					e	S	**Sn**	**04 07 15.0**	**-2.1**
WGK	**Gukeng**	**2.41**	**242**	⇑	*e*	P	**Pn**	**04 06 48.5**	**+1.2**
WGK					e	S	**Sn**	**04 07 18.5**	**+0.8**
WDL	**Douliou City**	**2.42**	**242**		*e*	S	**Sn**	**04 07 18.6**	**+0.8**
WDLH	**Douliu**	**2.43**	**242**	⇑	*e*	P	**Pn**	**04 06 48.6**	**+1.0**
WDLH					e	S	**Sn**	**04 07 18.2**	**+0.1**
WRL	**Guolierlin Hig**	**2.47**	**248**		*e*	P	**Pn**	**04 06 48.7**	**+0.7**
WRL					e	S	**Sn**	**04 07 18.7**	**-0.3**
RLNB	**Erlin**	**2.49**	**248**	⇑	P		**Pn**	**04 06 48.8**	**+0.5**
RLNB					e	S	**Sn**	**04 07 18.8**	**-0.5**
WCKO	**Fanlu**	**2.51**	**236**		*e*	P	**Pn**	**04 06 49.6**	**+1.1**
WCKO					e	S	**Sn**	**04 07 21.0**	**+1.1**
LONT	**Longtian**	**2.51**	**220**		*e*	P	**Pn**	**04 06 48.5**	**-0.2**
LDUT	**Ludao**	**2.53**	**211**		*e*	P	**Pn**	**04 06 48.4**	**-0.4**
LDUT					e	S	**Sn**	**04 07 17.9**	**-2.3**
STYH	**Taoyuan**	**2.55**	**229**		*e*	P	**Pn**	**04 06 50.1**	**+1.0**
STYH					e	S	**Sn**	**04 07 20.5**	**-0.3**
CHHS	**Minshiung**	**2.56**	**239**		*e*	P	**Pn**	**04 06 49.2**	**+0.9**
WTCT	**Ta-ch'eng**	**2.56**	**248**		*e*	S	**Sn**	**04 07 20.3**	**-0.7**
CHN4	**Tsaushan**	**2.57**	**235**		*e*	P	**Pn**	**04 06 50.2**	**+0.9**
CHN4					e	S	**Sn**	**04 07 20.7**	**-0.5**
STYT	**Tauyuan**	**2.57**	**229**	⇑	*e*	P	**Pn**	**04 06 50.2**	**+0.8**
STYT					e	S	**Sn**	**04 07 21.1**	**-0.2**
TPUB	**Ta-pu**	**2.57**	**233**		P		**Pn**	**04 06 50.4**	**+1.0**
TPUB	**Ta-pu**	**2.57**	**233**		S		**Sn**	**04 07 21.6**	**+0.3**
TPUB	**Ta-pu**	**2.57**	**233**				**Pn**	**04 06 50.1**	**+0.7**
TPUB	**Ta-pu**	**2.57**	**233**	⇑	P		**Pn**	**04 06 50.1**	**+0.7**
TPUB					e	S	**Sn**	**04 07 20.9**	**-0.4**
TWGBT	**Beinan**	**2.61**	**219**		P		**Pn**	**04 06 49.3**	**-0.6**
TWGBT	**Beinan**	**2.61**	**219**		S		**Sn**	**04 07 21.0**	**-1.2**
TWGBT	**Beinan**	**2.61**	**219**	⇑	P		**Pn**	**04 06 49.2**	**-0.6**
TWGBT					e	S	**Sn**	**04 07 20.1**	**-2.1**
TWG	**Pinlang**	**2.61**	**220**				**Pn**	**04 06 49.3**	**-0.7**
TWG	**Pinlang**	**2.61**	**220**	⇑	P		**Pn**	**04 06 49.2**	**-0.7**
TWG					e	S	**Sn**	**04 07 19.9**	**-2.4**
CHY	**Chiayi**	**2.62**	**239**		*e*	P	**Pn**	**04 06 50.9**	**+1.0**
CHY					e	S	**Sn**	**04 07 22.7**	**+0.4**
WTP	**Ta-pu**	**2.62**	**233**	⇑	P		**Pn**	**04 06 50.7**	**+0.7**
WTP					e	S	**Sn**	**04 07 22.9**	**+0.5**
TTN	**Taitung**	**2.62**	**217**		*e*	P	**Pn**	**04 06 50.4**	**+0.4**
TTN					e	S	**Sn**	**04 07 23.5**	**+1.0**
WMLT	**Mailiao**	**2.64**	**247**		*e*	P	**Pn**	**04 06 51.0**	**+0.8**
TWK	**Hsinying**	**2.69**	**235**	⇑	P		**Pn**	**04 06 51.8**	**+0.8**
TWK					e	S	**Sn**	**04 07 24.3**	**+0.2**
WSF	**Szhu**	**2.71**	**244**		*e*	P	**Pn**	**04 06 51.6**	**+0.5**
WSF					e	S	**Sn**	**04 07 23.6**	**-0.7**
CHN1	**Nanshi**	**2.71**	**233**	⇑	P		**Pn**	**04 06 51.9**	**+0.7**
CHN1					e	S	**Sn**	**04 07 24.6**	**0.0**
SNST	**Tainan City**	**2.72**	**234**		*e*	P	**Pn**	**04 06 52.2**	**+1.0**
SNST					e	S	**Sn**	**04 07 23.8**	**-0.7**
SGST	**Jiashian**	**2.74**	**230**		*e*	P	**Pn**	**04 06 51.6**	**0.0**
SGST					e	S	**Sn**	**04 07 23.5**	**-1.6**
WSL	**Shuilin Townsh**	**2.76**	**242**		*e*	P	**Pn**	**04 06 52.5**	**+0.8**
WSL					e	S	**Sn**	**04 07 25.8**	**+0.3**
ICHU	**Yijhu**	**2.80**	**238**		*e*	P	**Pn**	**04 06 52.9**	**+0.6**
ICHU					e	S	**Sn**	**04 07 26.1**	**-0.3**
ECL	**Taimali**	**2.86**	**218**	⇑	P		**Pn**	**04 06 52.1**	**-0.8**
ECL					e	S	**Sn**	**04 07 25.0**	**-2.8**
CHN8	**Yiju**	**2.86**	**239**		*e*	S	**Sn**	**04 07 27.8**	**0.0**
SSHA	**Shanhua**	**2.92**	**235**		*e*	P	**Pn**	**04 06 55.1**	**+1.3**
SSHA					e	S	**Sn**	**04 07 29.5**	**+0.3**
SCST	**Cishan**	**2.93**	**228**		*e*	P	**Pn**	**04 06 55.3**	**+1.4**
SSD	**Sandimen**	**2.94**	**225**	⇑	P		**Pn**	**04 06 55.2**	**+1.1**
SSD					e	S	**Sn**	**04 07 30.2**	**+0.6**
MATB	**Ma-tsu**	**2.94**	**297**	⇓	*e*	P	**Pn**	**04 06 54.1**	**0.0**
SHHT	**Tainan City**	**2.95**	**232**		*e*	P	**Pn**	**04 06 55.2**	**+1.0**
SCLT	**Jiali**	**2.97**	**236**		*e*	P	**

WRA **Warramunga Arr** 45.91 165 P P 04 14 17.9 +1.2
comp=Z,2.3nm,0.7s,baz=348,slow=8.6,SNR=14
WRA LR LR 04 36 22.7
comp=Z,141nm,21.3s,baz=157,slow=39
comp=Z,2.3nm,0.7s
WRA **Warramunga Arr** 45.91 165 P P 04 14 17.9 +1.2
WR8 **Warramunga Arr** 45.96 165 P P 04 14 14.2 -2.9
WR8 IAmb IAmb 04 14 54.9
comp=Z,13nm,1.3s
TIXI **Tiksi** 46.95 3 P P 04 14 23.6 -0.5
TIXI IAmb IAmb 04 14 24.4
comp=Z,5.8nm,0.8s
BVAR **Borovoye Array** 48.14 320 P P 04 14 33.6 -0.1
comp=Z,3.1nm,0.4s,baz=102,slow=7.8,SNR=12
comp=Z,3.1nm,0.4s
BORK **Borovoye** 48.19 320 P P 04 14 33.6 -0.4
BORK IAmb IAmb 04 14 34.4
comp=Z,3.1nm,0.5s
ASAR **Alice Springs** 49.41 167 P P 04 14 45.7 +2.0
comp=Z,0.5nm,0.6s,baz=344,slow=8.0,SNR=5.9
comp=Z,0.5nm,0.6s
AB31 **Akbulak array** 54.08 314 P 04 15 18.6 +0.5
ABKAR **Akbulak array** 54.08 314 P P 04 15 18.3 +0.2
ARTI **Arti** 55.60 323 P 04 15 27.9 -1.0
GAMB **Gambell** 57.16 29 P P 04 15 39.2 -0.5
baz=259
UNV **Unalaska Valle** 58.98 41 P P 04 15 52.1 -0.5
baz=270
TNA **Tin City** 59.05 27 P P 04 15 53.0 +0.1
baz=262
M11K **Mekoryuk** 59.32 33 P P 04 15 54.8 0.0
baz=267
F14K **Arctic Creek** 59.70 27 P P 04 15 57.2 -0.1
baz=263
ANM **Nome** 60.01 28 P P 04 15 58.9 -0.6
baz=265
K13K **Kusilvak Mount** 60.15 31 P P 04 15 59.6 -0.9
baz=267
F15K **North Star Dit** 60.41 27 P P 04 16 01.2 -1.1
baz=265
C16K **Lisburne Hills** 60.41 24 P P 04 16 01.9 -0.3
baz=263
G15K **Niukluk** 60.61 28 P P 04 16 03.8 +0.2
baz=266
M13K **Dall Lake** 60.73 33 P P 04 16 04.4 0.0
baz=269
L14K **Kuka Creek** 61.07 32 P P 04 16 05.8 -0.9
baz=269
D17K **Noatak River** 61.20 25 P P 04 16 07.3 -0.2
baz=265
C17K **DeLong Mountai** 61.23 24 P P 04 16 07.6 -0.2
baz=265
G16K **Koyuk River** 61.34 27 P P 04 16 08.5 0.0
baz=267
H16K **Elim** 61.36 28 P P 04 16 08.1 -0.5
baz=268
M14K **Bethel** 61.42 33 P P 04 16 09.7 +0.6
M14K **Bethel** 61.42 33 P P 04 16 08.6 -0.5
baz=270
N14K **Kuskokwak Cree** 61.57 34 P P 04 16 10.0 -0.1
baz=271
E17K **Hotham Inlet** 61.65 25 P P 04 16 10.2 -0.4
baz=267
O14K **Tigyukauivet M** 61.79 34 P P 04 16 11.0 -0.7
baz=272
F17K **Baldwin Pennin** 61.84 26 P P 04 16 11.3 -0.6
baz=268
C18K **Utukok River** 61.98 24 P P 04 16 12.1 -0.8
baz=266
I17K **Unalakleet** 62.02 29 P P 04 16 13.1 0.0
baz=270
M15K **Kasigluk River** 62.05 33 P P 04 16 13.1 -0.2
baz=271
J16K **Anvik River** 62.06 30 P P 04 16 13.2 -0.1
baz=270
G17K **Kiwalik Mounta** 62.06 27 P P 04 16 13.0 -0.3
baz=269
A19K **Wainwright** 62.12 22 P P 04 16 13.9 +0.3
baz=266
E18K **Tukpahlearik C** 62.14 25 P P 04 16 13.3 -0.5
baz=268
N15K **Kwethluk River** 62.36 33 P P 04 16 14.7 -0.7
baz=272
H17K **Granite Mounta** 62.36 28 P P 04 16 15.2 -0.2
baz=270
SDPT **Sand Point** 62.42 39 P P 04 16 15.2 -0.7
baz=274
F18K **Selawik** 62.49 26 P P 04 16 15.9 -0.2
baz=269
O15K **Ungalikthiuk R** 62.54 34 P P 04 16 16.1 -0.5
baz=273
C19K **Lookout Ridge** 62.58 23 P P 04 16 16.5 -0.3
baz=268
L16K **Owhat River** 62.61 32 P P 04 16 16.6 -0.4
baz=272
J17K **VABM Dome** 62.74 30 P P 04 16 18.8 +0.9
J17K **VABM Dome** 62.74 30 P P 04 16 17.7 -0.3
baz=271,SNR=5.9
S14K **Fog Glacier** 62.87 38 P P 04 16 18.3 -0.7
baz=274
M16K **Timber Creek** 62.88 32 P P 04 16 18.7 -0.2
baz=272
G18K **Tagagawik** 62.89 27 P P 04 16 18.6 -0.2
baz=270
CHNA **Chernabura Isl** 62.97 39 P P 04 16 19.5 0.0
baz=275
N16K **Nishlik Lake** 63.00 33 P P 04 16 19.8 +0.1
baz=273
H18K **Honhosa River** 63.02 28 P P 04 16 20.5 +0.8
baz=271
D19K **Kuna River** 63.10 24 P 04 16 20.8 +0.6
D19K IAmb IAmb 04 16 22.2
comp=Z,3.8nm,0.7s
D19K **Kuna River** 63.10 24 P P 04 16 21.1 +0.8
baz=270
K17K **Iditarod** 63.12 30 P P 04 16 21.3 +0.8
baz=272
L17K **Donlin** 63.15 31 P P 04 16 21.2 +0.6
baz=272
F19K **Shaleruckik Mo** 63.24 26 P P 04 16 21.9 +0.9
baz=271
O16K **Kokwok River B** 63.40 34 P P 04 16 22.1 -0.1
baz=274
E19K **Redstone River** 63.44 25 IAmb IAmb 04 16 24.2
comp=Z,3.5nm,0.6s
E19K **Redstone River** 63.44 25 P P 04 16 22.6 +0.1
baz=271
B20K **Meade River** 63.45 22 P P 04 16 23.5 +1.1
baz=270
G19K **Purcell Mounta** 63.52 27 P P 04 16 23.3 +0.2
baz=272
M17K **Holitna River** 63.60 32 P P 04 16 23.7 +0.1
baz=274
D20K **Etivluk River** 63.65 24 IAmb IAmb 04 16 25.6
comp=Z,4.0nm,0.6s
D20K **Etivluk River** 63.65 24 P P 04 16 24.0 +0.1
baz=271
GCSA **Galena City Sc** 63.66 28 P P 04 16 24.3 +0.4
baz=272
N17K **Nushagak Hills** 63.78 33 P P 04 16 24.3 -0.5
baz=274
H19K **Roundabout Mou** 63.81 27 IAmb IAmb 04 16 26.6
comp=Z,4.0nm,0.6s
H19K **Roundabout Mou** 63.81 27 P P 04 16 25.1 +0.2
baz=272,SNR=5.5
E20K **Nigu River** 63.82 24 P P 04 16 25.1 +0.1
baz=271,SNR=5.6
O17K **Koliganek Bris** 63.89 34 P P 04 16 25.5 0.0
baz=275
L18K **Granite Mounta** 63.90 31 P P 04 16 25.4 -0.1
baz=274
F20K **Avaraart Lake** 64.04 26 P P 04 16 26.0 -0.3
baz=272
A22K **Sinclair Lake** 64.18 21 P P 04 16 27.1 -0.1
baz=271
J19K **Poorman** 64.25 29 P 04 16 29.2 +1.4
J19K IAmb IAmb 04 16 30.4
comp=Z,6.0nm,1.2s
J19K **Poorman** 64.25 29 P P 04 16 27.7 -0.2
baz=274,SNR=5.4
C21K **Knifeblade Rid** 64.30 23 P P 04 16 28.5 +0.4
baz=272
B21K **Ikpikpuk River** 64.34 23 P P 04 16 28.7 +0.4
baz=272
M18K **Stony River** 64.36 32 P P 04 16 28.7 +0.1
baz=275
N18K **Kilae Creek** 64.41 33 P P 04 16 28.9 0.0
baz=275

H20K **Anotleneega Mo** 64.47 27 P P 04 16 29.5 +0.3
baz=274
R17L **Mt. Peulik Vol** 64.48 36 P P 04 16 29.8 +0.3
baz=276
E21K **Killik River** 64.63 24 P P 04 16 30.4 +0.1
baz=273
Q17K **Contact Creek** 64.66 35 P P 04 16 30.1 -0.6
baz=276
I20K **Naaghedeneel** 64.69 28 P P 04 16 30.8 +0.2
baz=275
B22K **Teshekpuk Lake** 64.72 22 P P 04 16 31.6 +0.9
baz=273
L19K **White Mountain** 64.75 31 P P 04 16 31.0 -0.2
baz=276
O18K **Koktuh Hills** 64.83 34 P P 04 16 31.6 -0.1
baz=276
P18K **Big Mountain,** 64.87 34 P P 04 16 32.1 +0.1
baz=276
J20K **Nowinta River** 64.89 29 P P 04 16 32.1 +0.2
baz=275,SNR=6.2
F21K **Alatna River** 64.90 25 P P 04 16 32.8 +0.7
baz=274
G21K **Allakaket** 64.95 26 IAmb IAmb 04 16 34.4
comp=Z,2.5nm,0.7s
G21K **Allakaket** 64.95 26 P P 04 16 33.1 +0.8
baz=275
K20K **Telida** 65.00 30 P P 04 16 33.6 +0.9
baz=276
Q18K **Katmai Hardscr** 65.07 35 P P 04 16 33.2 -0.1
baz=277
N19K **Bonanza Creek** 65.08 32 P P 04 16 33.4 0.0
baz=276
CHIR **Chirikof Islan** 65.11 38 P P 04 16 33.7 +0.2
baz=278
H21K **Melozitna Rive** 65.31 27 P P 04 16 34.7 0.0
baz=276,SNR=5.0
F22K **John River** 65.38 25 P P 04 16 36.1 +1.0
baz=275
E22K **Anaktuvuk Pass** 65.46 24 IAmb IAmb 04 16 37.8
comp=Z,1.9nm,0.7s
E22K **Anaktuvuk Pass** 65.46 24 P P 04 16 36.2 +0.6
baz=276
M20K **Styx River** 65.60 31 P P 04 16 37.4 +0.7
baz=277
G22K **Bettles** 65.70 26 P P 04 16 37.8 +0.7
baz=276
I21K **Tanana** 65.71 27 P P 04 16 37.9 +0.7
baz=277
C23K **Itkillik River** 65.72 22 P P 04 16 37.3 +0.2
baz=276
CHUM **Lake Minchumin** 65.72 29 P P 04 16 37.8 +0.5
baz=277
Q19K **Cape Douglas,** 65.74 34 P P 04 16 37.3 -0.3
baz=278
D23K **Nanushuk River** 65.78 23 P P 04 16 38.0 +0.3
baz=276
SII **Sitkinak Islan** 65.80 37 P P 04 16 38.0 0.0
baz=279
P19K **Oil Pt** 65.85 34 P P 04 16 38.9 +0.6
baz=278
H22K **Ishtalitna Cre** 65.87 27 IAmb IAmb 04 16 40.9
comp=Z,4.2nm,0.6s
H22K **Ishtalitna Cre** 65.87 27 P P 04 16 39.1 +0.8
baz=277,SNR=8.5
CAST **Castle Rocks** 65.88 29 IAmb IAmb 04 16 40.6
comp=Z,4.0nm,1.2s
CAST **Castle Rocks** 65.88 29 P P 04 16 38.6 +0.2
baz=277
PPLA **Purkeypile** 65.90 30 P P 04 16 38.7 0.0
baz=278
COLD **Coldfoot** 66.17 25 P P 04 16 40.2 +0.1
baz=277
TOLK **Tolik Lake Re** 66.22 24 P P 04 16 40.6 0.0
baz=277
MLY **Manley** 66.25 28 IAmb IAmb 04 16 43.0
comp=Z,1.7nm,0.6s
MLY **Manley** 66.25 28 P P 04 16 40.7 -0.1
baz=278
E23K **Chandalar** 66.28 24 IAmb IAmb 04 16 42.0
comp=Z,3.8nm,1.2s
E23K **Chandalar** 66.28 24 P P 04 16 40.9 0.0
baz=278
G23K **Bananza Creek** 66.31 26 P P 04 16 41.2 +0.1
baz=278
SKT **Skwentna** 66.33 31 P P 04 16 41.4 +0.1
baz=278
D24K **Happy Valley** 66.42 23 P P 04 16 41.6 -0.1
baz=278
KDAK **Kodiak Island** 66.47 36 P P 04 16 42.4 +0.2
KDAK **Kodiak Island** 66.47 36 P P 04 16 42.1 0.0
baz=279
L22K **Petersville** 66.60 30 IAmb IAmb 04 16 44.6
comp=Z,3.0nm,0.7s
L22K **Petersville** 66.60 30 P P 04 16 42.9 -0.1
baz=279
H23K **Yukon River** 66.63 27 P P 04 16 43.6 +0.4
baz=278
TRF **Thorofare Moun** 66.67 29 P P 04 16 43.6 0.0
baz=279
E24K **Your Creek** 66.70 24 P P 04 16 43.7 +0.1
baz=278
I23K **Minto, Yukon-K** 66.81 27 P P 04 16 44.3 +0.2
baz=279
CUT **Chulitna** 66.85 30 P P 04 16 44.6 +0.1
baz=279
F24K **Squaw Lake** 67.01 25 IAmb IAmb 04 16 48.0
comp=Z,3.5nm,0.6s
F24K **Squaw Lake** 67.01 25 P P 04 16 45.7 +0.1
baz=279,SNR=8.1
NEA2 **Nenana** 67.02 28 P P 04 16 45.8 +0.2
baz=280,SNR=5.6
BRSE **Bradley Lake S** 67.08 33 P P 04 16 46.4 +0.3
baz=280
MCK **McKinley** 67.22 29 P P 04 16 47.3 +0.4
baz=280
D25K **Kavik River** 67.26 23 P P 04 16 47.9 +0.8
baz=280
H24K **Noodor Dome** 67.30 26 P P 04 16 47.8 +0.4
baz=280
G24K **Hadweenzic Riv** 67.31 26 P P 04 16 47.4 0.0
baz=280
RND **Reindeer** 67.32 29 IAmb IAmb 04 16 49.0
comp=Z,3.2nm,0.6s
RC01 **Rabbit Creek A** 67.33 32 P P 04 16 47.2 -0.3
baz=280
PMR **Palmer** 67.52 31 P P 04 16 48.5 -0.3
baz=281
WAT1 **Susitna Watana** 67.56 30 P P 04 16 49.0 0.0
baz=281
POKR **Poker Plat Res** 67.61 27 P P 04 16 49.2 -0.2
baz=281
SEW **Seward** 67.65 33 P P 04 16 49.8 +0.2
baz=281
C26K **Camden Bay** 67.66 22 P P 04 16 50.3 +0.8
baz=281
E25K **Arctic Village** 67.77 24 P P 04 16 50.5 +0.2
baz=281
G25K **Bearman Lake** 67.83 25 P P 04 16 50.9 +0.3
baz=281
F25K **Christian Rive** 67.85 24 P P 04 16 51.0 +0.2
baz=281,SNR=5.1
SML **Sawmill** 67.86 31 P P 04 16 51.1 +0.2
baz=281
KNK **Knik Glacier** 67.87 31 P P 04 16 51.0 0.0
baz=281
ILAR **Eielson Array** 67.91 28 P P 04 16 51.2 0.0
comp=Z,0.5nm,0.5s,baz=298,slow=9.1,SNR=13
comp=Z,0.5nm,0.5s
HDA **Harding Lake** 67.96 28 P P 04 16 51.4 -0.1
baz=281
WAT6 **Susitna Watana** 67.97 30 P P 04 16 51.9 0.0
baz=281
DHY **Denali Highway** 68.04 29 P P 04 16 52.4 +0.2
baz=282
C27K **Jago River** 68.12 22 P P 04 16 52.8 +0.4
baz=282
SCM **Sheep Creek Mo** 68.32 31 P P 04 16 53.9 0.0
baz=282
PRP **Porcupine Dome** 68.32 27 P P 04 16 53.9 0.0
baz=282
F26K **Sheenjek River** 68.39 24 P P 04 16 54.5 +0.3
baz=283
J25K **Salcha River,** 68.58 28 P P 04 16 56.2 +0.8
baz=283
K24K **Donnelly Dome** 68.58 28 P P 04 16 55.4 0.0
baz=283
P23K **Montague Islan** 68.68 33 P P 04 16 55.3 -0.7
baz=283

G26K **Porcupine Rive** 68.69 25 P P 04 16 56.3 +0.4
baz=283
M24K **Tolsona, Glenn** 68.79 30 P P 04 16 56.8 0.0
baz=283
PAX **Paxson** 68.91 29 P P 04 16 57.5 0.0
baz=283
RIDG **Independent Ri** 69.00 28 P P 04 16 58.1 +0.1
baz=283
KLU **Klutina** 69.05 31 P P 04 16 58.5 +0.1
baz=283
D27M **Malcolm River** 69.16 22 P P 04 16 59.1 +0.2
baz=285
E27K **Coleen River** 69.21 23 P P 04 16 59.1 -0.1
baz=285
SCRK **Sand Creek** 69.32 28 P P 04 17 00.0 0.0
baz=284
Q23K **Middleton Isla** 69.33 33 P P 04 17 00.2 +0.2
baz=284
I26K **Coal Creek Min** 69.33 27 P P 04 17 00.5 +0.5
baz=284
EYAK **Cordova Ski Ar** 69.35 32 P P 04 17 00.2 +0.1
baz=284
ARCES **ARCESS Array B** 69.49 338 P P 04 16 60.0 -0.9
comp=Z,1.1nm,0.7s,baz=64,slow=4.4,SNR=3.9
comp=Z,1.1nm,0.7s
ARCES **ARCESS Array B** 69.49 338 P P 04 17 00.0 -0.9
G27K **Doyon Strip** 69.54 25 P P 04 17 01.7 +0.4
baz=285
N25K **Chitina, Valde** 69.63 31 P P 04 17 02.2 +0.2
baz=284
H27K **Steamboat Moun** 69.74 25 P P 04 17 03.1 +0.6
baz=285
BMRM **Bremner River** 69.79 31 P P 04 17 02.6 -0.4
baz=285
E28M **Babbage River** 69.83 23 P P 04 17 03.4 +0.4
baz=286
I27K **Kandik River** 69.88 26 P P 04 17 03.3 -0.1
baz=286
F28M **Old Crow** 69.99 24 P P 04 17 04.1 +0.1
baz=286
M26K **Nabesna, AK** 70.16 30 P P 04 17 05.2 0.0
baz=286
MCARA **McCarthy VSAT** 70.42 31 P P 04 17 07.0 +0.3
baz=286
E29M **Blow River** 70.47 23 P P 04 17 06.9 0.0
baz=288
L27K **Beaver Creek,** 70.49 29 P P 04 17 07.9 +0.7
baz=286
CRQE **Cirque** 70.56 31 P P 04 17 07.6 -0.1
baz=286
I28M **Miner Creek** 70.59 26 P P 04 17 08.2 +0.4
baz=287
M27K **Edge Creek, AK** 70.67 29 P P 04 17 08.6 +0.2
baz=286
G29M **Pine Creek** 70.89 24 P P 04 17 09.8 +0.4
baz=288
H29M **Whitestone** 70.97 25 P P 04 17 10.5 +0.5
baz=288
DAWY **Dawson** 71.23 27 P P 04 17 11.3 -0.3
baz=288
F30M **Barrier River** 71.48 23 P P 04 17 13.1 +0.2
baz=290
YUK3 **Moose Creek** 71.48 30 P P 04 17 12.7 -0.7
baz=288
G30M **tAoh Zraii Nji** 71.53 24 P P 04 17 13.8 +0.4
baz=290
FIA1 **FINESS Array S** 71.64 330 P P 04 17 13.6 -0.5
FINES **FINESS Array B** 71.64 330 P P 04 17 13.7 -0.4
comp=Z,1.5nm,0.5s,baz=67,slow=5.6,SNR=20
comp=Z,1.5nm,0.5s
O28M **Mount Upton** 71.92 31 P P 04 17 15.7 -0.4
baz=288
YUK8 **Steele Glacier** 71.95 30 P P 04 17 16.5 +0.3
baz=289
INK **Inuvik** 72.02 22 P P 04 17 17.1 +0.9
baz=292
L29M **L29M** 72.08 28 P P 04 17 16.9 +0.2
baz=289
I30M **Mount Dempster** 72.08 26 P P 04 17 17.1 +0.3
baz=290
K29M **Barlow Dome** 72.09 27 P P 04 17 16.5 -0.3
baz=290
PINM **Pinnacle** 72.10 32 P P 04 17 17.4 +0.5
baz=288
M29M **Somme Creek** 72.16 29 P P 04 17 17.5 +0.2
baz=289
BRWY **Burwash Landin** 72.26 30 P P 04 17 17.6 -0.2
baz=289
F31M **Tsiigehtchic** 72.27 23 P P 04 17 17.7 +0.1
baz=292
G31M **Satah River** 72.27 24 P P 04 17 18.0 +0.3
baz=292
J30M **Hart River** 72.33 26 P P 04 17 18.5 +0.3
baz=290
YUK4 **Talbot Arm** 72.44 30 P P 04 17 18.9 -0.2
baz=290
H31M **Peel River** 72.66 25 P P 04 17 19.8 -0.3
baz=292
YUK6 **Outpost Mounta** 72.71 30 P P 04 17 20.6 -0.1
baz=290
O29M **Mount Kennedy** 72.83 31 P P 04 17 21.4 +0.2
baz=290
M30M **Minto, Yukon** 72.84 28 P P 04 17 21.2 0.0
baz=291
N30M **Aishikik Lake** 73.11 30 P P 04 17 23.3 +0.5
baz=291
HYT **Haines Junctio** 73.14 30 P P 04 17 22.9 -0.2
baz=291
AKASG **Malin Array Be** 73.39 319 P P 04 17 24.1 -0.5
comp=Z,0.5nm,0.5s,baz=72,slow=6.0,SNR=2.0
comp=Z,0.5nm,0.5s
AKASG **Malin Array Be** 73.39 319 P P 04 17 24.1 -0.5
P29M **Windy Craggy** 73.46 32 P P 04 17 25.0 +0.1
baz=291
P30M **Million Dollar** 73.64 31 P P 04 17 26.0 0.0
baz=291
O30N **Mendenhall** 73.81 30 P P 04 17 26.5 -0.4
baz=292
M31M **Drury Creek, Y** 74.02 28 P P 04 17 27.6 -0.5
baz=293
PLBC **Pleasant Camp** 74.17 31 P P 04 17 28.5 -0.5
baz=292
WHY **Whitehorse** 74.40 30 P P 04 17 29.8 -0.6
baz=293
C36M **Paulatuk** 74.66 20 P P 04 17 31.6 +0.1
baz=300
S31K **Pelican** 74.80 33 P P 04 17 32.1 -0.5
baz=292
MMPY **Sheldon Lake,** 75.18 27 P P 04 17 34.4 -0.4
baz=295
P32M **Atlin** 75.36 31 P P 04 17 35.5 -0.4
baz=294
R32K **Eaglecrest** 75.52 32 P P 04 17 36.2 -0.6
baz=294
P33M **Teslin, Yukon** 75.52 30 P P 04 17 36.5 -0.3
baz=295
SIT **Sitka** 75.61 34 P P 04 17 36.4 -0.9
baz=293
S32K **Killisnoo** 75.81 33 P P 04 17 38.0 -0.4
baz=294
Q32M **Nakina River** 76.30 31 P P 04 17 40.5 -0.9
baz=295
U33K **Whale Pass** 77.11 34 P P 04 17 45.9 +0.2
baz=295
DLBC **Dease Lake** 77.58 31 P P 04 17 48.3 -0.1
baz=297
HFS **Hagfors** 77.73 331 P P 04 17 48.6 -0.6
comp=Z,1.4nm,0.5s,baz=96,slow=7.6,SNR=8.4
comp=Z,1.4nm,0.5s
NC405 **NORSAR Array S** 78.10 332 P P 04 17 50.3 -0.9
T35M **Bob Quinn** 78.15 32 P P 04 17 51.3 -0.2
baz=297
V35K **Ketchikan** 78.22 34 P P 04 17 51.7 -0.2
baz=297
NB2 **NORSAR Subarra** 78.35 332 P P 04 17 51.7 -0.9
comp=Z,0.7nm,0.5s,baz=52,slow=5.9
NOA **NORSAR Array B** 78.35 332 P P 04 17 51.8 -0.9
comp=Z,0.8nm,0.6s,baz=54,slow=5.8,SNR=5.8
comp=Z,0.8nm,0.6s
YKAW3 **Yellowknife Wh** 81.70 23 P P 04 18 10.7 +0.2
YKAW3 IAmb IAmb 04 18 12.0
comp=Z,3.7nm,0.6s
YKA **Yellowknife Ar** 81.75 23 P P 04 18 10.7 -0.1
comp=Z,2.0nm,0.6s,baz=306,slow=5.6,SNR=19
comp=Z,2.0nm,0.6s
GERES **GERESS Array B** 83.30 321 P P 04 18 19.1 -0.1
comp=Z,0.6nm,0.7s,baz=46,slow=3.9,SNR=9.3
comp=Z,0.6nm,0.7s
NVAR **Mina Array Bea** 94.89 44 P P 04 19 15.7 +1.0

comp=Z,0.9nm,0.6s,baz=304,slow=5.6,SNR=6.9
comp=Z,0.9nm,0.6s

*IDC **12** 04:16:07.8±0.7, 19.°60S×172.°45W, h0km, mb4.3/9, mbtmp4.4/12, ML3.8/3, MS3.2/2, Error ellipse: s-maj=26.2km s-min=19.5km az=143.0*
*NEIC **12** 04:16:08.4±1.6, 18.°93S±0.°09×172.°37W±0.°05, h10km±1km, mb4.8/9, Error ellipse: s-maj=16.0km s-min=7.6km az=164.0*

ISC 12 04:16:09.1±0.5, 19.°4S±0.°1×172.°31W±0.°07, h10km, n33, σ1§67/30, mb4.4/13, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.27**	**82**		**Pn**	**04 16 47.2**	**+0.5**
NIUE				Sn	**Sn**	**04 17 12.8**	**-2.0**
AFI	**Afiamalu**	**5.48**	**5**	Pn	**Pn**	**04 17 31.6**	**+0.6**
	7.2nm,0.3s,baz=154,slow=12,SNR=4.8						
AFI				Sn	Sn	04 18 18.9	-15
	15nm,0.3s,baz=62,slow=22,SNR=5.2						
	20nm,0.4s						
AFI	**Afiamalu**	**5.48**	**5**		Pn	04 17 24.0	-7.0
RAR	**Rarotonga**	**11.90**	**101**	Pn	**Pn**	**04 19 00.3**	**+1.4**
	2.4nm,0.3s,baz=310,slow=8.6,SNR=4.5						
RAR				LR	LR	04 22 34.9	
	comp=Z,187nm,19.4s,baz=263,slow=32						
	22nm,0.7s						
RAR	**Rarotonga**	**11.90**	**101**		**Pn**	**04 18 59.3**	**+0.3**
OUENC	**Ouen Island, N**	**19.71**	**258**	P	**P**	**04 20 37.2**	**-1.7**
DZM	**Mont Dzumac**	**20.05**	**259**	P	**P**	**04 20 41.6**	**-1.1**
	0.2nm,0.3s,baz=88,slow=13,SNR=3.7						
	14nm,1.1s						
TBI	**Tubuai**	**21.63**	**105**	eLR	LR	04 26 03.4	
	877nm,28.5s						
PPT2	**Papeete2**	**21.63**	**89**	eLR	LR	04 26 02.5	
	135nm,25.0s						
PPT2				eLR	LR	04 26 10.5	
	314nm,26.5s						
PPT	**Papeete**	**21.63**	**89**	LR	LR	04 27 12.6	
	comp=Z,31nm,18.6s,baz=281,slow=30						
QRZ	**Quartz Range**	**24.99**	**208**	P	**P**	**04 21 35.6**	**+2.5**
CAN	**Canberra**	**37.58**	**237**	P	**P**	**04 23 25.4**	**+1.4**
CAN				IAmb	IAmb	04 24 23.1	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**43.09**	**244**	P	**P**	**04 24 08.3**	**-1.3**
	comp=Z,3.0nm,0.9s,baz=336,slow=18,SNR=3.4						
	comp=Z,3.0nm,0.9s						
WR8	**Warramunga Arr**	**49.91**	**260**	P	**P**	**04 25 01.5**	**-1.8**
WR8				IAmb	IAmb	04 25 13.6	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**49.98**	**255**	P	**P**	**04 25 02.8**	**-1.1**
ASAR	**Alice Springs**	**49.98**	**255**	P	**P**	**04 25 02.6**	**-1.3**
	comp=Z,8.5nm,0.8s,baz=87,slow=8.4,SNR=62						
	comp=Z,8.5nm,0.8s						
WRA	**Warramunga Arr**	**50.06**	**260**	P	**P**	**04 25 02.6**	**-2.0**
	comp=Z,3.7nm,0.8s,baz=97,slow=7.7,SNR=33						
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**50.06**	**260**	P	**P**	**04 25 02.8**	**-1.8**
QSPA	**South Pole Qui**	**70.67**	**180**	P	**P**	**04 27 23.3**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=51,slow=14,SNR=14						
	comp=Z,0.8nm,0.7s						
QSPA	**South Pole Qui**	**70.67**	**180**	P	**P**	**04 27 24.3**	**-0.7**
QSPA				IAmb	IAmb	04 29 23.9	
	comp=Z,7.8nm,1.2s						
QSM	**Queen of Sheba**	**76.03**	**44**	P	**P**	**04 27 54.4**	**-2.4**
QSM				IAmb	IAmb	04 28 15.5	
	comp=Z,8.4nm,1.1s						
GWY	**Greenwater Val**	**76.29**	**43**		**P**	**04 27 54.4**	**-4.1**
GWY				IAmb	IAmb	04 28 16.9	
	comp=Z,16nm,1.6s						
PETK	**Petropavlovsk-**	**76.73**	**342**	P	**P**	**04 28 00.3**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=157,slow=5.5,SNR=1.9						
	comp=Z,2.4nm,0.8s						
PETK	**Petropavlovsk-**	**76.73**	**342**	P	**P**	**04 28 00.0**	**-0.4**
KSRS	**Korea Array**	**79.73**	**316**	P	**P**	**04 28 18.8**	**+1.4**
	comp=Z,4.1nm,0.9s,baz=130,slow=6.5,SNR=12						
	comp=Z,4.1nm,0.9s						
TXAR	**Lajitas Array**	**81.99**	**55**	P	**P**	**04 28 32.4**	**+2.6**
	comp=Z,0.8nm,0.9s,baz=219,slow=10,SNR=8.1						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**86.15**	**11**	P	**P**	**04 28 50.4**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=205,slow=5.1,SNR=11						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**94.84**	**288**	P	**P**	**04 29 33.7**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=92,slow=3.6,SNR=4.4						
	comp=Z,0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**116.86**	**318**	PKP	**PKiKP**	**04 34 54.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=82,slow=1.9,SNR=1.9						
BVAR	**Borovoye Array**	**121.64**	**321**	PKP	**PKiKP**	**04 35 03.9**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=106,slow=1.2,SNR=4.7						
BRTR	**Keskin Array B**	**149.86**	**318**	PKPbc	**PKiKP**	**04 35 59.9**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=107,slow=3.9,SNR=9.5						
BRTR	**Keskin Array B**	**149.86**	**318**		**PKiKP**	**04 36 01.3**	**+0.3**
GERES	**GERESS Array B**	**150.22**	**352**	PKPbc	**PKiKP**	**04 36 02.2**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=44,slow=3.0,SNR=3.6						

*NEIC **12** 04:19:06.8±0.8, 33.°8S±0.°2×178.°0W±0.°1, h10km±1km, mb4.1/6, Error ellipse: s-maj=26.6km s-min=17.7km az=7.0*
*WEL **12** 04:19:09.1±0.7, 34.°5S±5.°×17.°8W±1.°1, h12km, M4.4/8, mB5.0/5, ML4.3/11, MLv4.5/8, Mw(mB)4.3/5, Error ellipse: s-maj=15.2km s-min=4.4km az=110.4*
*IDC **12** 04:19:10.3±1.2, 33.°58S×178.°78W, h0km, mb4.2/3, mbtmp4.3/4, ML4.2/1, MS3.9/2, Error ellipse: s-maj=39.5km s-min=34.1km az=111.0*

ISC 12 04:19:08.0±0.8, 33.°84S±0.°07×178.°2W±0.°1, h10km, n38, σ1§50/45, mb4.2/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.57**	**3**	P	**Pn**	**04 20 16.5**	**-0.7**
GLKZ				S	**Sn**	**04 21 10.0**	**-0.4**
MXZ	**Matakaoa Point**	**4.69**	**217**	Pn	**Pn**	**04 20 19.7**	**+1.0**
MXZ	**Matakaoa Point**	**4.69**	**217**	P	**Pn**	**04 20 20.0**	**+1.2**
MXZ				S	**Sn**	**04 21 12.2**	**-1.0**
WMGZ	**Waiomatatini S**	**4.84**	**214**	P	**Pn**	**04 20 21.6**	**+0.8**
WMGZ				S	**Sn**	**04 21 17.6**	**+0.6**
PKGZ	**Pakihiroa**	**5.04**	**216**	P	**Pn**	**04 20 24.1**	**+0.5**
PKGZ				S	**Sn**	**04 21 22.0**	**+0.1**
HAZ	**Te Kaha**	**5.10**	**219**	P	**Pn**	**04 20 26.3**	**+1.9**
HAZ				S	**Sn**	**04 21 24.0**	**+0.6**
PUZ	**Puketiti**	**5.12**	**213**	P	**Pn**	**04 20 26.0**	**+1.3**
PUZ				S	**Sn**	**04 21 23.5**	**-0.3**
RUGZ	**Raukumara Rang**	**5.32**	**218**	P	**Pn**	**04 20 28.3**	**+0.7**
RUGZ				S	**Sn**	**04 21 28.7**	**-0.2**
TWGZ	**Tauwhareparae**	**5.33**	**215**	P	**Pn**	**04 20 28.7**	**+1.1**
TWGZ				S	**Sn**	**04 21 29.8**	**+0.6**
CNGZ	**Carnagh Statio**	**5.48**	**211**	P	**Pn**	**04 20 32.2**	**+2.6**
TKGZ	**Te Karaka**	**5.60**	**214**	P	**Pn**	**04 20 32.7**	**+1.3**
MWZ	**Matawai**	**5.67**	**217**	P	**Pn**	**04 20 32.9**	**+0.5**
URZ	**Urewera**	**5.83**	**220**	Pn	**Pn**	**04 20 35.6**	**+1.2**
	6.2nm,0.3s,baz=19,slow=7.6,SNR=31						
URZ				Sn	**Sn**	**04 21 37.1**	**-4.2**
	3.2nm,0.3s,baz=6.0,slow=19,SNR=8.7						
	17nm,0.3s						
URZ	**Urewera**	**5.83**	**220**	P	**Pn**	**04 20 35.8**	**+1.4**
PRGZ	**Paritu Road**	**5.98**	**211**	P	**Pn**	**04 20 36.6**	**0.0**
KNZ	**Kokohu**	**6.16**	**212**	P	**Pn**	**04 20 39.3**	**+0.4**
RTZ	**Ruatahuna**	**6.17**	**218**		**Pn**	**04 20 40.1**	**+1.0**
RTZ	**Ruatahuna**	**6.17**	**218**	P	**Pn**	**04 20 40.4**	**+1.3**
TOZ	**Tahuroa Road**	**6.44**	**231**	Pn	**Pn**	**04 20 43.3**	**+0.5**
WCZ	**Waipu Caves**	**6.49**	**249**	P	Pn	04 20 49.9	+6.3
OUZ	**Omahuta**	**6.93**	**256**	P	**Pn**	**04 20 48.3**	**-1.3**
CTZ	**Chatham Island**	**9.96**	**173**	P	**Pn**	**04 21 32.4**	**+1.4**
AS31	**Alice Springs**	**42.89**	**271**	P	**P**	**04 27 05.9**	**-1.0**
AS31				IAmb	IAmb	04 27 08.6	
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**42.89**	**271**	P	**P**	**04 27 06.9**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=111,slow=7.5,SNR=4.5						
ASAR				PcP	**PcP**	**04 28 59.0**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=89,slow=3.8,SNR=4.2						
ASAR				LR	LR	04 44 27.2	
	comp=Z,146nm,18.3s,baz=294,slow=36						
	comp=Z,4.3nm,0.9s						
ASAR	**Alice Springs**	**42.89**	**271**	P	**P**	**04 27 05.6**	**-1.3**
WR8	**Warramunga Arr**	**44.05**	**276**	P	**P**	**04 27 15.5**	**-0.7**
WR8				IAmb	IAmb	04 27 38.8	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**44.18**	**276**	P	**P**	**04 27 17.1**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=116,slow=7.8,SNR=11						
	comp=Z,4.7nm,0.9s						
WRA	**Warramunga Arr**	**44.18**	**276**	P	**P**	**04 27 17.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.28**	**273**	P	**P**	**04 28 18.9**	**-1.0**
FITZ				IAmb	IAmb	04 28 45.2	
	comp=Z,2.2nm,1.2s						
QSPA	**South Pole Qui**	**56.28**	**180**	P	P	04 28 54.6	+6.1
	comp=Z,2.5nm,1.1s,baz=51,slow=7.4,SNR=3.1						
	comp=Z,2.5nm,1.1s						
RPN	**Rapa Nui**	**58.73**	**103**	P	**P**	**04 29 03.2**	**-2.9**
BELA	**Belgrano 2**	**66.41**	**172**	P	**P**	**04 29 54.3**	**-2.4**
LPIG	**La Paz**	**86.48**	**58**	LR	LR	05 05 04.3	
	comp=Z,66nm,19.6s,baz=344,slow=32						
KURBB	**Kurchatov Arra**	**123.31**	**312**	PKP	**PKiKP**	**04 38 07.2**	**+2.3**
	comp=Z,1.1nm,0.9s,baz=113,slow=2.1,SNR=8.7						
FINES	**FINESS Array B**	**148.29**	**338**	PKPbc	**PKiKP**	**04 38 55.8**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=30,slow=4.5,SNR=17						
FINES	**FINESS Array B**	**148.29**	**338**		**PKiKP**	**04 38 55.7**	**+0.4**
HFS	**Hagfors**	**152.57**	**347**	PKPbc	**PKiKP**	**04 39 06.8**	**+2.7**
	comp=Z,2.9nm,0.9s,baz=31,slow=3.4,SNR=2.8						
AKASG	**Malin Array Be**	**153.86**	**318**	PKPbc	**PKiKP**	**04 39 10.4**	**+3.3**
	comp=Z,0.4nm,0.5s,baz=62,slow=2.2,SNR=5.5						

*IDC **12** 04:20:19.5±0.6, 52.°15N×169.°53W, h0km, mb4.5/32, mbtmp4.5/35, ML4.5/3, MS4.2/72, Error ellipse: s-maj=17.6km s-min=11.1km az=174.0*
*MOS **12** 04:20:21.6±1.1, 52.°14N×169.°52W, h22km, mb4.9/34, MS4.3/7, Error ellipse: s-maj=11.8km s-min=5.4km az=108.5*
*AEIC **12** 04:20:21.5±2.4, 51.°97N±0.°05×169.°41W±0.°09, h13km±3km, Error ellipse: s-maj=9.7km s-min=4.2km az=126.0*
*GFZ **12** 04:20:21.8±0.3, 52.°N±7.°×16.°9W±.°, h10km, M4.8/23, mb4.8/23*
*BJI **12** 04:20:23.0, 52.°59N×170.°05W, h11km, mB5.1/8, mb5.0/49, Ms4.9/32, Ms7 4.6/30*
*NEIC **12** 04:20:23.1±1.8, 52.°08N±0.°05×169.°47W±0.°09, h21km±4km, mb4.6/327, ML4.6/16, ML4.3(AEIC), Error ellipse: s-maj=10.2km s-min=4.9km az=130.0*
*GCMT **12** 04:20:24.1±0.2, 51.°95N±0.°01×169.°47W±0.°02, h17km, MW5.0/106, Moment Tensor Solution. s57,c73; s106,c158; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.82±.14; Mθθ -3.03±.10; Mφφ 0.21±.10; Mrθ 2.67±.28; Mrφ -2.10±.06; Mθφ -0.47±.29; Best double couple: Ms 4.49100×10^16 NP1 ζθ 216.00000°, δ 35.00000°, λ 44.00000°. NP2 ζθ 88.00000°, δ 66.00000°, λ 117.00000°. Principal axes: T 4.2480, Plg 59.0000°, Azm 37.0000°; N 0.4900, Plg 25.0000°, Azm 257.0000°; P -4.7340, Plg 17.0000°, Azm 159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **12** 04:20:26.6, 52.°02N×169.°39W, h33km, mb4.9, Ms4.2*

ISC 12 04:20:22.9±0.6, 51.°99N±0.°05×169.°49W±0.°03, h26km±3km, n878, σ1§33/733, mb4.7/239, MS4.4/90, 28C-44D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**1.46**	**29**		**Pn**	**04 20 46.4**	**-1.3**
OKCE	**Okmok Cone E**	**1.65**	**29**		**Pn**	**04 20 49.5**	**-0.8**
OKCE					**Pb**	**04 20 50.2**	**-2.5**
OKTU	**Okmok Mt. Tuli**	**1.65**	**32**		**Pn**	**04 20 49.2**	**-1.1**
OKNC	**Okmok New Cone**	**1.69**	**29**		**Pn**	**04 20 50.3**	**-0.5**
OKNC					**Sb**	**04 21 14.0**	**-0.1**
OKNC					**Sn**	**04 21 14.3**	**+2.7**
OKFG	**Magazine Ridge**	**1.72**	**33**		**Pn**	**04 20 50.7**	**-0.4**
MAPS	**Pakushin South**	**2.39**	**39**		**Pn**	**04 20 59.7**	**-0.7**
MAPS					**Sn**	**04 21 29.6**	**+0.8**
MAPS					**Sb**	**04 21 31.9**	**-2.3**
MGOD	**Makushin Gods**	**2.41**	**40**		**Pn**	**04 20 59.7**	**-1.0**
MGOD					**Sn**	**04 21 31.9**	**+2.6**
MNAT	**Makushin Natee**	**2.55**	**41**		**Pn**	**04 21 02.0**	**-0.5**
MNAT					**Sn**	**04 21 32.9**	**+0.2**
MNAT					**Sb**	**04 21 36.6**	**-2.2**
UNV	**Unalaska Valle**	**2.59**	**43**	P	**Pn**	**04 21 02.5**	**-0.7**
UNV	**Unalaska Valle**	**2.59**	**43**	S	**Sn**	**04 21 33.9**	**+0.1**
UNV	**Unalaska Valle**	**2.59**	**43**		**Pn**	**04 21 02.5**	**-0.7**
UNV					**Sn**	**04 21 33.8**	**+0.1**
UNV				IAML		04 21 47.7	
	comp=N,2μm,1.3s						
UNV	**Unalaska Valle**	**2.59**	**43**	P	**Pn**	**04 21 02.7**	**-0.4**
	baz=225,SNR=97						
KOSE	**Korovin Southe**	**2.83**	**279**		**Pn**	**04 21 07.9**	**+1.4**
KOSE					**Sb**	**04 21 43.5**	**-3.5**
KOSE					**Sn**	**04 21 44.0**	**+4.2**
KOFP	**Korovin Flat P**	**2.86**	**278**		**Pn**	**04 21 08.0**	**+1.2**
KOFP					**Sn**	**04 21 44.0**	**+3.6**
KOFP					**Sn**	**04 21 44.4**	**+4.1**
KONE	**Korovin Northe**	**2.88**	**280**		**Pn**	**04 21 08.3**	**+1.2**
KONE					**Pn**	**04 21 09.0**	**+1.9**
KONE					**Sb**	**04 21 44.7**	**-3.6**
KONE					**Sn**	**04 21 45.1**	**+4.3**
ATKA	**Atka Island**	**2.91**	**276**	P	**Pn**	**04 21 08.1**	**+0.6**
ATKA	**Atka Island**	**2.91**	**276**	S	**Sn**	**04 21 42.7**	**+1.1**
ATKA	**Atka Island**	**2.91**	**276**		**Pn**	**04 21 08.1**	**+0.6**
ATKA					**Sn**	**04 21 41.9**	**+0.3**
ATKA					**Sn**	**04 21 45.3**	**-3.9**
KOKL	**Mount Kliuchef**	**2.92**	**278**		**Pn**	**04 21 09.2**	**+1.5**
KOKL					**Sb**	**04 21 46.2**	**-3.4**
KONW	**Korovin Northw**	**2.93**	**280**		**Pn**	**04 21 09.0**	**+1.2**
AKRB	**Akutan Reef Bi**	**2.98**	**43**		**Pn**	**04 21 09.2**	**+0.8**
ZRO	**Akutan Zero**	**2.99**	**44**		**Sn**	**04 21 45.5**	**+2.0**
ZRO					**Sn**	**04 21 47.0**	**+3.4**
LVA	**Lava Point**	**3.01**	**42**		**Pn**	**04 21 09.4**	**+0.4**
LVA				IAML		04 22 15.1	
	comp=E,2μm,1.2s						
AHB	**Akutan Harbor**	**3.08**	**45**		**Pn**	**04 21 09.9**	**+0.1**
AKUT	**Akutan**	**3.11**	**45**	P	**Pn**	**04 21 10.4**	**+0.2**
AKUT	**Akutan**	**3.11**	**45**	S	**Sn**	**04 21 46.5**	**+0.1**
AKUT	**Akutan**	**3.11**	**45**		**Pn**	**04 21 10.5**	**+0.2**
AKUT				IAML		04 22 09.7	
	comp=E,879nm,1.3s						
GSIG	**Igitkin Island**	**3.98**	**273**		**Pn**	**04 21 22.9**	**+0.7**
GSIG					**Sn**	**04 22 08.8**	**+0.7**
GSTR	**Great Sitkin T**	**4.06**	**274**		**Pn**	**04 21 24.8**	**+1.5**
GSTD	**Great Sitkin T**	**4.11**	**274**		**Pn**	**04 21 25.1**	**+1.0**
GSCK	**Great Sitkin C**	**4.12**	**273**		**Pn**	**04 21 24.3**	**0.0**
SSLN	**Shishaldin Nor**	**4.34**	**47**		**Pn**	**04 21 26.7**	**-0.5**
SSLN					**Pn**	**04 21 27.2**	**+0.1**
ADAG	**Mount Adagdak**	**4.40**	**273**		**Pn**	**04 21 29.5**	**+1.5**
ISNN	**Isanotski Nort**	**4.45**	**48**		**Pn**	**04 21 28.8**	**+0.1**
ADK	**Adak**	**4.46**	**272**	P	**Pn**	**04 21 29.9**	**+1.2**
ADK	**Adak**	**4.46**	**272**	S	**Sn**	**04 22 21.0**	**+1.3**
ADK	**Adak**	**4.46**	**272**		**Pn**	**04 21 29.9**	**+1.2**
ADK				IAML		04 22 26.6	
	comp=E,576nm,0.7s						
ADK				IAML		04 22 48.2	
	comp=E,605nm,1.4s						
ADK	**Adak**	**4.46**	**272**	P	**Pn**	**04 21 30.1**	**+1.4**
KIRH	**Kanaga Island**	**4.71**	**272**		**Pn**	**04 21 32.1**	**-0.1**
KIRH					**Pn**	**04 21 33.2**	**+1.0**
KIWB	**Kanaga Island**	**4.75**	**271**		**Pn**	**04 21 34.0**	**+1.3**
KIWB				IAML		04 22 59.1	
	comp=E,662nm,1.2s						
TAPA	**Tanaga Point A**	**5.16**	**271**		**Pn**	**04 21 39.2**	**+0.8**
TAFL	**Tanaga Flats**	**5.22**	**271**		**Pn**	**04 21 40.2**	**+1.1**
SPIA	**Saint Paul Isl**	**5.22**	**355**	P	**Pn**	**04 21 41.1**	**+1.8**
SPIA	**Saint Paul Isl**	**5.22**	**355**	S	**Sn**	**04 22 41.1**	**+2.6**
SPIA	**Saint Paul Isl**	**5.22**	**355**		**Pn**	**04 21 41.0**	**+1.8**
SPIA				IAML		04 22 51.7	
	comp=E,386nm,0.6s						
SPIA				IAML		04 22 52.7	
	comp=N,397nm,0.6s						
SPIA	**Saint Paul Isl**	**5.22**	**355**	P	**Pn**	**04 21 39.9**	**+0.7**
	baz=174,SNR=19						
TASE	**Tanaga Southea**	**5.29**	**272**		**Pn**	**04 21 41.3**	**+0.9**
DT1	**Dutton Round H**	**5.31**	**51**		**Pn**	**04 21 40.0**	**-0.5**
DTNA	**Dutton South F**	**5.35**	**51**		**Pn**	**04 21 40.7**	**-0.3**
GAEA	**Gareloi East**	**5.74**	**272**		**Pn**	**04 21 47.9**	**+1.6**
PS1A	**Pavlof South-1**	**5.74**	**50**		**Pn**	**04 21 46.7**	**+0.3**
GANE	**Gareloi Northe**	**5.75**	**272**		**Pn**	**04 21 47.7**	**+1.1**
GALAA	**Gareloi Lava P**	**5.76**	**271**		**Pn**	**04 21 47.9**	**+1.3**
GAKI	**Gareloi-Kavalg**	**5.81**	**269**		**Pn**	**04 21 47.7**	**+0.5**
SDPT	**Sand Point**	**6.33**	**54**		**Pn**	**04 21 53.4**	**-1.0**
SDPT	**Sand Point**	**6.33**	**54**	P	**Pn**	**04 21 54.3**	**-0.1**
	baz=241						
CNBA	**Chernabura Isl**	**6.56**	**60**		**Pn**	**04 21 56.8**	**-0.9**
CHNA	**Chernabura Isl**	**6.57**	**60**	P	**Pn**	**04 21 56.5**	**-1.2**
CHNA	**Chernabura Isl**	**6.57**	**60**	P	**Pn**	**04 21 57.5**	**-0.2**
	baz=248,SNR=9.7						
CESW	**Semis' Southwe**	**6.77**	**274**		**Pn**	**04 22 02.5**	**+1.9**
AMKA	**Amchitka**	**7.00**	**269**		**Pn**	**04 22 05.2**	**+1.6**
VNKR	**Veniaminof 5**	**7.21**	**52**		**Pn**	**04 22 07.2**	**+0.6**
S14K	**Fog Glacier**	**7.25**	**50**	P	**Pn**	**04 22 06.7**	**-0.5**
	baz=238						
VNFG	**Fog Glacier, M**	**7.25**	**50**		**Pn**	**04 22 09.0**	**+1.8**
LSPA	**Little Sitkin**	**7.38**	**274**		**Pn**	**04 22 11.2**	**+2.4**
LSNW	**Little Sitkin**	**7.41**	**275**		**Pn**	**04 22 10.8**	**+1.5**
ANPB	**Aniakchak Plen**	**8.12**	**49**		**Pn**	**04 22 19.5**	**+0.4**
M11K	**Mekoryuk**	**8.62**	**11**	P	**Pn**	**04 22 23.9**	**-1.8**
	baz=193						
O14K	**Tigyukauivet M**	**8.64**	**29**		**Pn**	**04 22 27.9**	**+1.9**
O14K	**Tigyukauivet M**	**8.64**	**29**	P	**Pn**	**04 22 25.6**	**-0.4**
	baz=216,SNR=6.4						
R16K	**Pilot Point**	**8.86**	**46**	P	**Pn**	**04 22 28.1**	**-1.0**
	baz=236						
CHIR	**Chirikof Islan**	**9.04**	**59**	P	**Pn**	**04 22 30.8**	**-0.8**
CHIR	**Chirikof Islan**	**9.04**	**59**		**Pn**	**04 22 30.8**	**-0.8**
CHIR	**Chirikof Islan**	**9.04**	**59**	P	**Pn**	**04 22 31.3**	**-0.3**
	baz=250						
O15K	**Ungalikthiuk R**	**9.04**	**33**		**Pn**	**04 22 33.4**	**+1.8**
O15K	**Ungalikthiuk R**	**9.04**	**33**	P	**Pn**	**04 22 31.3**	**-0.3**
	baz=221,SNR=6.7						
N14K	**Kuskokwak Cree**	**9.07**	**26**		**Pn**	**04 22 36.4**	**+4.4**
N14K	**Kuskokwak Cree**	**9.07**	**26**	P	**Pn**	**04 22 31.9**	**-0.1**
	baz=212,SNR=9.7						
M13K	**Dall Lake**	**9.11**	**20**	P	**Pn**	**04 22 32.0**	**-0.5**
	baz=204						
PLBL	**Peulik Blue Cr**	**9.28**	**47**		**Pn**	**04 22 35.9**	**+1.1**
PLK1	**Peulik 1**	**9.43**	**47**		**Pn**	**04 22 38.2**	**+1.4**
R17L	**Mt. Peulik Vol**	**9.45**	**48**		**Pn**	**04 22 38.0**	**+0.7**
R17L	**Mt. Peulik Vol**	**9.45**	**48**	P	**Pn**	**04 22 36.9**	**-0.3**
	baz=239,SNR=12						
P16K	**Nushagak River**	**9.60**	**38**	P	**Pn**	**04 22 38.1**	**-1.1**
	baz=228						
M14K	**Bethel**	**9.72**	**22**		**Pn**	**04 22 43.4**	**+2.5**
M14K	**Bethel**	**9.72**	**22**	P	**Pn**	**04 22 40.9**	**0.0**
	baz=208,SNR=14						
N15K	**Kwethluk River**	**9.73**	**29**	P	**Pn**	**04 22 40.7**	**-0.3**
	baz=216,SNR=14						
O16K	**Kokwok River B**	**9.95**	**36**		**Pn**	**04 22 45.1**	**+1.0**
O16K	**Kokwok River B**	**9.95**	**36**	P	**Pn**	**04 22 43.8**	**-0.3**
	baz=225						
M15K	**Kasigluk River**	**9.99**	**26**	P	**Pn**	**04 22 44.6**	**0.0**
	baz=213,SNR=18						
Q17K	**Contact Creek**	**10.00**	**46**		**Pn**	**04 22 45.3**	**+0.4**
Q17K	**Contact Creek**	**10.00**	**46**	P	**Pn**	**04 22 45.1**	**+0.3**
	baz=237						
SII	**Sitkinak Islan**	**10.05**	**57**	P	**Pn**	**04 22 45.0**	**-0.4**
SII	**Sitkinak Islan**	**10.05**	**57**		**Pn**	**04 22 44.6**	**-0.9**
SII	**Sitkinak Islan**	**10.05**	**57**	P	**Pn**	**04 22 45.9**	**+0.5**
	baz=249						
SHEM	**Shemya Is, Ala**	**10.07**	**281**	Pn	**Pn**	**04 22 45.5**	**-0.2**
	comp=N,5.8nm,0.3s,baz=122,slow=4.1,SNR=6.8						
	comp=N,12nm,0.3s						
L14K	**Kuka Creek**	**10.09**	**19**	P	**Pn**	**04 22 46.7**	**+0.7**
	baz=204						
ANCK	**Angle Creek**	**10.14**	**47**		**Pn**	**04 22 46.6**	**-0.1**
K13K	**Kusilvak Mount**	**10.31**	**13**	P	**Pn**	**04 22 49.9**	**+0.9**
	baz=197						
P17K	**Kvichak River**	**10.31**	**40**	P	**Pn**	**04 22 49.5**	**+0.5**
	baz=231						
N16K	**Nishlik Lake**	**10.38**	**31**	P	**Pn**	**04 22 50.3**	**+0.4**
	baz=220,SNR=17						
O17K	**Koliganek Bris**	**10.44**	**37**	P	**Pn**	**04 22 51.2**	**+0.5**
	baz=227						
Q18K	**Katmai Hardscr**	**10.60**	**45**	P	**Pn**	**04 22 53.5**	**+0.5**
	baz=237,SNR=7.5						
M16K	**Timber Creek**	**10.75**	**28**	P	**Pn**	**04 22 55.0**	**0.0**
	baz=217,SNR=9.9						
OHAK	**Old Harbor**	**10.75**	**54**	P	**Pn**	**04 22 52.6**	**-2.4**
OHAK	**Old Harbor**	**10.75**	**54**		**Pn**	**04 22 52.9**	**-2.0**
OHAK	**Old Harbor**	**10.75**	**54**	P	**Pn**	**04 22 54.9**	**-0.1**
	baz=248						
P18K	**Big Mountain,**	**10.93**	**42**	P	**

L22K **Petersville** 14.56 36 P Pn 04 23 48.7 +1.6
baz=232
J20K **Nowinta River** 14.61 27 P Pn 04 23 48.6 +0.9
baz=220,SNR=8.5
PMR **Palmer** 14.66 41 P Pn 04 23 48.8 +0.5
baz=238
P23K **Montague Islan** 14.67 48 P Pn 04 23 47.4 -1.1
baz=246
CUT **Chulitna** 14.68 37 P Pn 04 23 48.5 -0.1
baz=233
CAST **Castle Rocks** 14.69 32 P Pn 04 23 49.3 +0.5
baz=227,SNR=11
KNK **Knik Glacier** 14.85 42 P Pn 04 23 51.5 +0.6
baz=240
CHUM **Lake Minchumin** 14.94 30 P Pn 04 23 53.2 +1.1
baz=225,SNR=11
G18K **Tagagawik** 14.99 17 P Pn 04 23 52.3 -0.4
baz=206
I20K **Naaghedeneel** 15.00 25 P Pn 04 23 52.5 -0.4
baz=218
F17K **Baldwin Pennin** 15.08 13 P Pn 04 23 55.7 +1.8
baz=200
SML **Sawmill** 15.10 41 IAmb IAmb 04 24 17.4
comp=Z,14nm,0.7s
SML **Sawmill** 15.10 41 P Pn 04 23 54.5 +0.2
baz=239
H19K **Roundabout Mou** 15.12 21 IAmb IAmb 04 24 19.6
comp=Z,34nm,1.2s
H19K **Roundabout Mou** 15.12 21 P Pn 04 23 54.6 +0.2
baz=212,SNR=8.4
KTH **Kantishna Hill** 15.17 33 IAmb IAmb 04 24 18.2
comp=Z,82nm,1.4s
TRF **Thorofare Moun** 15.32 34 IAmb IAmb 04 24 40.1
comp=Z,29nm,1.2s
TRF **Thorofare Moun** 15.32 34 P Pn 04 23 56.7 -0.6
baz=230,SNR=8.3
M23K **Glacier View** 15.34 42 P Pn 04 23 55.2 -2.2
baz=240,SNR=9.7
FID **Port Fidalgo** 15.40 46 IAmb IAmb 04 24 29.0
comp=Z,22nm,0.8s
H20K **Anotleneega Mo** 15.46 23 P Pn 04 23 58.4 -0.5
baz=216,SNR=11
F18K **Selawik** 15.46 15 P Pn 04 23 59.4 +0.5
baz=203
G19K **Purcell Mounta** 15.51 19 P Pn 04 23 57.3 -2.3
baz=210
SCM **Sheep Creek Mo** 15.52 42 IAmb IAmb 04 24 27.9
comp=Z,36nm,0.8s
SCM **Sheep Creek Mo** 15.52 42 P Pn 04 23 57.6 -2.2
baz=240,SNR=15
WAT1 **Susitna Watana** 15.57 38 P Pn 04 23 58.2 -2.3
baz=235
E17K **Hotham Inlet** 15.61 11 P Pn 04 23 59.5 -1.4
baz=198
EYAK **Cordova Ski Ar** 15.65 48 P Pn 04 23 58.4 -3.0
EYAK **Cordova Ski Ar** 15.65 48 IAmb IAmb 04 24 34.7
comp=Z,21nm,0.9s
EYAK **Cordova Ski Ar** 15.65 48 P Pn 04 23 59.8 -1.6
baz=247
WAT6 **Susitna Watana** 15.74 39 P Pn 04 24 01.4 -1.5
baz=238
DIV **Divide** 15.87 46 IAmb IAmb 04 24 35.6
comp=Z,20nm,0.6s
MCK **McKinley** 15.97 35 P Pn 04 24 04.3 -1.2
baz=232
I21K **Tanana** 15.98 27 IAmb IAmb 04 24 50.2
comp=Z,38nm,1.0s
I21K **Tanana** 15.98 27 P Pn 04 24 04.8 -0.8
baz=222,SNR=14
F19K **Shaleruckik Mo** 15.99 17 P Pn 04 24 04.6 -1.2
baz=207
KAIM **Kayak Island** 16.05 51 P Pn 04 24 05.9 -0.6
baz=251
BWN **Browne** 16.06 33 IAmb IAmb 04 24 41.6
comp=Z,34nm,0.9s
D17K **Noatak River** 16.07 9 P Pn 04 24 05.8 -1.0
baz=194
RAGM **Ragged Mountai** 16.08 49 IAmb IAmb 04 24 26.1
comp=Z,45nm,0.6s
E18K **Tukpahlearik C** 16.09 12 P Pn 04 24 05.8 -1.2
baz=200
H21K **Melozitna Rive** 16.11 25 P Pn 04 24 05.8 -1.6
baz=220,SNR=9.5
M24K **Tolsona, Glenn** 16.13 42 IAmb IAmb 04 24 50.1
comp=Z,52nm,1.1s
M24K **Tolsona, Glenn** 16.13 42 P Pn 04 24 06.6 -1.2
baz=242
DHY **Denali Highway** 16.15 38 P Pn 04 24 06.6 -1.5
baz=237
MLY **Manley** 16.24 29 IAmb IAmb 04 24 22.9
comp=Z,69nm,1.4s
MLY **Manley** 16.24 29 P Pn 04 24 07.4 -1.6
baz=225,SNR=43
BMRM **Bremner River** 16.33 47 IAmb IAmb 04 24 37.0
comp=Z,52nm,1.0s
BMRM **Bremner River** 16.33 47 P Pn 04 24 07.9 -2.2
baz=248,SNR=6.2
RDOG **Red Dog Mine** 16.43 9 P Pn 04 24 10.5 -0.9
baz=194
C16K **Lisburne Hills** 16.46 5 P Pn 04 24 09.7 -2.1
baz=189
NEA2 **Nenana** 16.47 32 P Pn 04 24 11.1 -0.8
baz=229,SNR=8.4
BERG **Berg Lake** 16.54 49 IAmb IAmb 04 24 46.2
comp=Z,29nm,0.8s
F20K **Avaraart Lake** 16.57 19 P Pn 04 24 12.0 -1.2
baz=211
N25K **Chitina, Valde** 16.58 45 P Pn 04 24 11.1 -2.4
baz=246,SNR=17
G21K **Aliakaket** 16.62 23 P Pn 04 24 11.8 -2.0
baz=216
E19K **Redstone River** 16.64 17 P Pn 04 24 12.5 -1.6
baz=207
H22K **Ishtalitna Cre** 16.68 26 P Pn 04 24 12.1 -2.5
baz=222,SNR=9.4
HARP **HAARP** 16.69 42 IAmb IAmb 04 24 37.6
comp=Z,70nm,1.2s
HARP **HAARP** 16.69 42 P Pn 04 24 14.0 -0.8
baz=242
I23K **Minto, Yukon-K** 16.74 30 P Pn 04 24 14.5 -0.8
baz=228,SNR=18
C17K **DeLong Mountai** 16.82 8 P Pn 04 24 16.1 -0.2
baz=193
PAX **Paxson** 16.84 40 P Pn 04 24 16.5 -0.1
baz=240
CRQM **Cirque** 16.92 48 IAmb IAmb 04 24 38.0
comp=Z,35nm,0.8s
CRQE **Cirque** 16.94 49 P Pn 04 24 16.1 -1.9
baz=251,SNR=7.9
COLA **College** 17.05 32 ⇑*i*P Pn 04 24 18.1 -1.0
COLA **College** 17.05 32 P Pn 04 24 17.4 -1.8
baz=231
COLA **College** 17.05 32 P Pn 04 24 18.1 -1.0
TGL **Tana Glacier** 17.07 49 IAmb IAmb 04 24 59.1
comp=Z,34nm,0.8s
HDA **Harding Lake** 17.07 35 P Pn 04 24 18.8 -0.7
baz=234
H23K **Yukon River** 17.15 28 P Pn 04 24 19.8 -0.7
baz=226
K24K **Donnelly Dome** 17.15 37 P Pn 04 24 19.3 -1.2
baz=237
C18K **Utukok River** 17.18 10 P Pn 04 24 19.8 -1.1
baz=197
MCARA **McCarthy VSAT** 17.19 47 IAmb IAmb 04 24 55.6
comp=Z,59nm,1.1s
MCARA **McCarthy VSAT** 17.19 47 P Pn 04 24 19.0 -2.0
baz=249
F21K **Alatna River** 17.20 21 P Pn 04 24 20.1 -0.9
baz=215
ILAR **Eielson Array** 17.31 34 P Pn 04 24 19.6 -2.9
comp=Z,0.6nm,0.3s,baz=240,slow=11,SNR=22
ILAR LR LR 04 31 36.3
comp=Z,1μm,18.3s,baz=222,slow=39
comp=Z,1.6nm,0.5s
ILAR **Eielson Array** 17.31 34 Pn 04 24 20.5 -2.0
POKR **Poker Plat Res** 17.34 32 P Pn 04 24 21.6 -1.2
baz=231
G22K **Bettles** 17.43 24 P Pn 04 24 23.0 -0.9
baz=219
D19K **Kuna River** 17.44 14 IAmb IAmb 04 24 54.0
comp=Z,51nm,1.5s
D19K **Kuna River** 17.44 14 P Pn 04 24 22.8 -1.3
baz=204
RIDG **Independent Ri** 17.47 38 P Pn 04 24 23.8 -0.7
baz=239
E20K **Nigu River** 17.54 17 P Pn 04 24 24.9 -0.4
baz=208
GRNC **Granite Creek** 17.56 49 IAmb IAmb 04 24 57.4
comp=Z,33nm,0.8s
M26K **Nabesna, AK** 17.60 43 P Pn 04 24 25.3 -0.9
baz=246,SNR=9.1
G23K **Bananza Creek** 17.66 26 P Pn 04 24 25.8 -0.9
baz=223,SNR=16
H24K **Noodor Dome** 17.66 30 P Pn 04 24 25.8 -1.1
baz=228,SNR=14
L26K **Log Cabin Wild** 17.72 41 P Pn 04 24 27.1 -0.5
baz=243,SNR=5.9
F22K **John River** 17.73 22 P Pn 04 24 27.6 0.0
baz=217
J25K **Salcha River,** 17.75 35 P Pn 04 24 26.2 -1.8
baz=236,SNR=16
C19K **Lookout Ridge** 17.81 12 P Pn 04 24 27.4 -1.2
baz=200
D20K **Etiviuk River** 17.88 15 P Pn 04 24 29.2 -0.2
baz=206,SNR=8.6
SCRK **Sand Creek** 17.92 38 P Pn 04 24 28.6 -1.5
baz=240,SNR=12
LOGN **Logan Glacier** 17.94 49 IAmb IAmb 04 25 07.5
comp=Z,41nm,0.9s
COLD **Coldfoot** 17.99 25 P Pn 04 24 30.7 -0.2
baz=221
M27K **Edge Creek, AK** 18.06 44 P Pn 04 24 31.2 -0.7
baz=248,SNR=12
PCA **Pinnacle** 18.10 52 IAmb IAmb 04 24 44.2
comp=Z,33nm,0.7s
PINM **Pinnacle** 18.11 52 P Pn 04 24 31.4 -1.0
baz=256
E21K **Killik River** 18.11 19 P Pn 04 24 31.6 -0.8
baz=212
PRP **Porcupine Dome** 18.22 33 P Pn 04 24 33.0 -0.8
baz=233
O28M **Mount Upton** 18.31 50 IAmb IAmb 04 25 05.8
comp=Z,26nm,0.8s
O28M **Mount Upton** 18.31 50 P P 04 24 34.8 -0.3
baz=254,SNR=21
E22K **Anaktuvuk Pass** 18.31 21 P P 04 24 34.6 -0.2
baz=217
L27K **Beaver Creek,** 18.36 42 P P 04 24 35.1 -0.3
baz=246
G24K **Hadweenzic Riv** 18.36 28 IAmb IAmb 04 25 07.4
comp=Z,36nm,1.3s
G24K **Hadweenzic Riv** 18.36 28 P P 04 24 34.7 -0.7
baz=227,SNR=14
BCAR **Beaver Creek A** 18.38 42 P 04 24 33.8 -1.7
YUK3 **Moose Creek** 18.48 47 P P 04 24 36.2 -0.6
baz=251
BVCY **Beaver Creek** 18.52 45 P Pn 04 24 37.7 +0.4
baz=249
C21K **Knifeblade Rid** 18.58 17 P P 04 24 37.7 0.0
baz=209,SNR=5.5
YUK8 **Steele Glacier** 18.65 48 P Pn 04 24 39.3 +0.2
baz=253
A19K **Wainwright** 18.69 9 P Pn 04 24 39.2 -0.1
baz=196
E23K **Chandalar** 18.77 23 P P 04 24 40.2 +0.3
baz=221,SNR=7.1
G25K **Bearman Lake** 18.82 29 P P 04 24 39.8 -0.4
baz=229,SNR=10
F24K **Squaw Lake** 18.82 26 P P 04 24 40.5 +0.2
baz=225,SNR=8.9
I26K **Coal Creek Min** 18.92 35 P P 04 24 40.2 -1.2
baz=238
FYU **Fort Yukon** 18.96 30 IAmb IAmb 04 25 20.9
comp=Z,38nm,1.2s
B20K **Meade River** 18.97 13 P P 04 24 41.9 +0.1
baz=204
O29M **Mount Kennedy** 18.97 52 P Pn 04 24 43.0 0.0
baz=258,SNR=40
BRWY **Burwash Landin** 19.01 49 P Pn 04 24 43.3 0.0
baz=254
B21K **Ikpikpuk River** 19.02 16 P P 04 24 42.8 +0.4
baz=209
E24K **Your Creek** 19.06 24 P P 04 24 43.4 +0.3
baz=223
YUK4 **Talbot Arm** 19.18 49 P Pn 04 24 45.8 +0.2
baz=255
YUK6 **Outpost Mounta** 19.22 50 P P 04 24 45.4 +0.4
baz=256
TOLK **Toolik Lake Re** 19.23 22 P Pn 04 24 46.2 +0.4
baz=220
D23K **Nanushuk River** 19.23 21 P P 04 24 45.1 +0.3
baz=217,SNR=7.8
P29M **Windy Craggy** 19.26 54 P Pn 04 24 46.6 +0.3
baz=261,SNR=26
PET **Petropavlovsk** 19.34 286 *e*P Pn 04 24 52.7 +5.4
PET *e*S S 04 28 15.4 -7.8
PET pmax pmax
comp=Z,29nm,1.3s
PET pmax pmax
comp=Z,200nm,10.7s
PET pmax pmax
comp=Z,400nm,11.6s
PET MLR MLR
comp=Z,500nm,12.0s
PET MLR MLR
comp=Z,400nm,12.0s
F25K **Christian Rive** 19.50 28 P P 04 24 47.7 -0.1
baz=228,SNR=19
M29M **Somme Creek** 19.58 46 P 04 24 49.0 +0.2
M29M IAmb IAmb 04 25 06.8
comp=Z,27nm,0.9s
M29M **Somme Creek** 19.58 46 P P 04 24 48.8 0.0
baz=252,SNR=28
HYT **Haines Junctio** 19.60 51 P Pn 04 24 49.9 -0.5
baz=258
I27K **Kandik River** 19.62 35 IAmb IAmb 04 25 18.5
comp=Z,14nm,0.7s
I27K **Kandik River** 19.62 35 P P 04 24 49.9 +0.7
baz=239,SNR=7.3
G26K **Porcupine Rive** 19.65 31 P P 04 24 49.4 +0.1
baz=233
P30M **Million Dollar** 19.73 53 P Pn 04 24 51.3 -0.6
baz=260,SNR=42
DAWY **Dawson** 19.77 41 P P 04 24 50.7 0.0
baz=246
D24K **Happy Valley** 19.80 22 P P 04 24 50.6 -0.4
baz=220
B22K **Teshekpuk Lake** 19.85 16 P P 04 24 51.1 -0.3
baz=210
S31K **Pelican** 19.85 59 IAmb IAmb 04 25 09.8
comp=Z,33nm,1.0s
S31K **Pelican** 19.85 59 P P 04 24 52.1 +0.5
baz=267
E25K **Arctic Village** 19.87 27 P Pn 04 24 52.8 -0.8
E25K **Arctic Village** 19.87 27 P P 04 24 52.6 +0.8
baz=227,SNR=12
PEA0B **Petropavlovsk-** 19.89 286 *c*P P 04 24 52.3 +0.1
PEA0B **Petropavlovsk-** 19.89 286 P P 04 24 52.6 +0.5
PETK **Petropavlovsk-** 19.89 286 P P 04 24 52.4 +0.2
comp=Z,10nm,0.3s,baz=82,slow=13,SNR=278
PETK LR LR 04 31 59.5
comp=Z,488nm,21.1s,baz=94,slow=35
comp=Z,33nm,0.4s
PETK **Petropavlovsk-** 19.89 286 P P 04 24 52.6 +0.5
BILL **Bilibino** 19.91 333 ⇓*e*P Pn 04 24 53.5 -0.4
BILL pmax pmax
comp=Z,42nm,1.6s
PLBC **Pleasant Camp** 19.92 55 P P 04 24 53.1 +0.7
baz=263,SNR=20
N30M **Aishikik Lake** 19.94 49 P P 04 24 52.5 -0.1
baz=256,SNR=50
L29M **L29M** 19.94 44 IAmb IAmb 04 25 35.7
comp=Z,35nm,1.1s
L29M **L29M** 19.94 44 P P 04 24 52.1 -0.5
baz=251,SNR=14
C23K **Itkillik River** 19.95 19 P 04 24 52.0 -0.5
C23K IAmb IAmb 04 25 33.6
comp=Z,26nm,1.0s
C23K **Itkillik River** 19.95 19 P P 04 24 52.1 -0.5
baz=216,SNR=10
H27K **Steamboat Moun** 19.98 34 IAmb IAmb 04 25 28.1
comp=Z,47nm,1.3s
H27K **Steamboat Moun** 19.98 34 P P 04 24 52.5 -0.5
baz=238,SNR=13
F26K **Sheenjek River** 20.00 29 P P 04 24 52.8 -0.5
F26K **Sheenjek River** 20.00 29 P P 04 24 52.3 -1.0
baz=231,SNR=7.9
I28M **Miner Creek** 20.16 37 P P 04 24 53.4 -1.6
I28M IAmb IAmb 04 25 19.7
comp=Z,14nm,0.7s
I28M **Miner Creek** 20.16 37 P P 04 24 53.4 -1.6
baz=242,SNR=23
A22K **Sinclair Lake** 20.19 14 P P 04 24 54.2 -0.9
baz=207
G27K **Doyon Strip** 20.25 32 P P 04 24 54.6 -1.3
baz=236,SNR=14
O30N **Mendenhall** 20.27 51 P P 04 24 57.0 +0.8
baz=259
SIT **Sitka** 20.32 62 P P 04 24 55.8 -0.8
SIT IAmb IAmb 04 25 30.2
comp=Z,26nm,1.1s
SIT **Sitka** 20.32 62 P P 04 24 57.3 +0.7
baz=270
M30M **Minto, Yukon** 20.36 46 IAmb IAmb 04 25 20.5
comp=Z,35nm,1.4s
M30M **Minto, Yukon** 20.36 46 P P 04 24 57.0 -0.2
baz=254,SNR=11
J29N **Klondike Camp** 20.39 40 P P 04 24 58.0 +0.5
baz=247
SKAG **Skagway** 20.45 55 P P 04 24 55.7 -2.4
SKAG **Skagway** 20.45 55 IAmb IAmb 04 25 15.7
comp=Z,31nm,0.7s
SKAG **Skagway** 20.45 55 P P 04 24 59.2 +1.1
baz=264
K29M **Barlow Dome** 20.45 42 P P 04 24 57.6 -0.6
K29M **Barlow Dome** 20.45 42 P P 04 24 57.5 -0.8
baz=250,SNR=16
D25K **Kavik River** 20.51 23 P P 04 24 59.4 +0.7
baz=224
N31M **Braeburn, Yuko** 20.56 49 P P 04 25 00.1 +0.8
baz=258
S32K **Killisnoo** 20.73 61 IAmb IAmb 04 25 28.4
comp=Z,43nm,1.2s
S32K **Killisnoo** 20.73 61 P Pn 04 25 03.0 -0.6
baz=270,SNR=5.3
R32K **Eaglecrest** 20.78 59 IAmb IAmb 04 25 38.4
comp=Z,48nm,1.4s
R32K **Eaglecrest** 20.78 59 P P 04 25 02.4 +0.7
baz=268
WHY **Whitehorse** 20.83 52 P P 04 25 02.5 +0.1
baz=261
JIS **Juneau Island** 20.85 59 P P 04 24 58.7 -3.7
E27K **Coleen River** 21.06 29 P P 04 25 05.4 +0.7
baz=234,SNR=6.2
H29M **Whitestone** 21.09 36 P P 04 25 03.4 -1.6
H29M IAmb IAmb 04 25 47.7
comp=Z,38nm,0.8s
H29M **Whitestone** 21.09 36 P P 04 25 03.5 -1.5
baz=243,SNR=36
J30M **Hart River** 21.20 41 IAmb IAmb 04 25 11.2
comp=Z,10nm,0.6s
J30M **Hart River** 21.20 41 P P 04 25 05.4 -0.9
baz=249,SNR=15
F28M **Old Crow** 21.27 31 P P 04 25 06.1 -0.9
baz=237,SNR=8.3
P32M **Atlin** 21.28 55 IAmb IAmb 04 25 28.8
comp=Z,15nm,0.8s
P32M **Atlin** 21.28 55 P P 04 25 06.8 -0.3
baz=265
C26K **Camden Bay** 21.29 23 P P 04 25 06.9 -0.2
baz=225
M31M **Drury Creek, Y** 21.35 48 IAmb IAmb 04 25 40.9
comp=Z,36nm,1.1s
M31M **Drury Creek, Y** 21.35 48 P P 04 25 07.4 -0.5
baz=258,SNR=18
C27K **Jago River** 21.39 25 IAmb IAmb 04 25 46.1
comp=Z,17nm,1.0s
C27K **Jago River** 21.39 25 P P 04 25 08.0 -0.2
baz=227,SNR=14
I30M **Mount Dempster** 21.42 39 P P 04 25 06.5 -2.2
baz=248,SNR=13
G29M **Pine Creek** 21.54 34 P P 04 25 07.5 -2.2
baz=242,SNR=38
U33K **Whale Pass** 21.57 65 IAmb IAmb 04 25 43.9
comp=Z,25nm,1.2s
U33K **Whale Pass** 21.57 65 P P 04 25 09.8 -0.4
baz=274
T33K **Petersburg** 21.63 63 P P 04 25 09.0 -1.7
baz=273
CRAG **Craig** 21.63 66 P P 04 25 06.8 -4.0
CRAG **Craig** 21.63 66 P P 04 25 09.3 -1.5
baz=276
N32M **Quiet Lake** 21.78 51 P P 04 25 11.7 -0.7
baz=262
P33M **Teslin, Yukon** 21.79 53 P P 04 25 12.5 -0.2
baz=264
D27M **Malcolm River** 21.89 27 IAmb IAmb 04 25 16.9
comp=Z,12nm,0.6s
D27M **Malcolm River** 21.89 27 P P 04 25 11.8 -1.8
baz=232
E28M **Babbage River** 21.93 29 P P 04 25 13.1 -0.9
E28M **Babbage River** 21.93 29 P P 04 25 12.1 -1.9
baz=236,SNR=9.0
Q32M **Nakina River** 21.98 57 IAmb IAmb 04 25 55.1
comp=Z,23nm,1.0s
Q32M **Nakina River** 21.98 57 P P 04 25 13.8 -1.0
baz=268,SNR=5.3
WRAK **Wrangell Islan** 21.98 64 P P 04 25 13.4 -1.2
baz=274
G30M **tAoh Zraii Nji** 22.20 35 IAmb IAmb 04 25 34.0
comp=Z,54nm,1.5s
G30M **tAoh Zraii Nji** 22.20 35 P P 04 25 15.3 -1.6
baz=244,SNR=8.7
E29M **Blow River** 22.32 31 P P 04 25 16.0 -2.1
baz=238,SNR=19
H31M **Peel River** 22.42 38 IAmb IAmb 04 25 49.3
comp=Z,20nm,0.8s
H31M **Peel River** 22.42 38 P P 04 25 15.9 -3.4
baz=238,SNR=19
V35K **Ketchikan** 22.50 66 P P 04 25 18.6 -1.6
baz=277
S34M **Telegraph Cree** 22.57 60 IAmb IAmb 04 25 52.4
comp=Z,19nm,1.1s
D28M **Stokes Point** 22.58 28 P P 04 25 19.9 -1.0
baz=235
F30M **Barrier River** 22.63 34 IAmb IAmb 04 25 55.1
comp=Z,17nm,0.8s
F30M **Barrier River** 22.63 34 P P 04 25 19.7 -1.8
baz=243,SNR=8.9
R33M **Jennings River** 22.67 56 IAmb IAmb 04 25 43.0
comp=Z,40nm,1.3s
R33M **Jennings River** 22.67 56 P P 04 25 20.3 -1.8
baz=268,SNR=9.6
MMPY **Sheldon Lake,** 22.86 47 IAmb IAmb 04 25 42.2
comp=Z,22nm,0.9s
MMPY **Sheldon Lake,** 22.86 47 P P 04 25 22.7 -1.4
baz=260,SNR=12
G31M **Satah River** 22.87 36 IAmb IAmb 04 25 50.1
comp=Z,17nm,0.8s
G31M **Satah River** 22.87 36 P P 04 25 23.2 -0.8
baz=246,SNR=16
SEY **Seymchan** 22.88 313 ⇑*i*P P 04 25 23.3 -0.8
SEY pmax pmax
comp=Z,13nm,1.1s
T35M **Bob Quinn** 23.10 62 IAmb IAmb 04 25 48.0
comp=Z,13nm,1.0s
T35M **Bob Quinn** 23.10 62 P P 04 25 24.9 -1.5
baz=274
DLBC **Dease Lake** 23.15 58 LR LR 04 33 49.2
comp=Z,276nm,20.9s,baz=242,slow=35
DLBC **Dease Lake** 23.15 58 P P 04 25 26.5 -0.5
baz=271,SNR=7.3
F31M **Tsiigehtchic** 23.27 35 IAmb IAmb 04 26 02.0
comp=Z,13nm,1.0s
F31M **Tsiigehtchic** 23.27 35 P P 04 25 26.8 -1.2
baz=246,SNR=5.8
MA2 **Magadan** 23.30 305 *d*iP P 04 25 29.9 +1.5
MA2 pmax pmax
comp=Z,16nm,0.8s
INK **Inuvik** 23.71 33 IAmb IAmb 04 25 32.8
comp=Z,12nm,0.6s
INK **Inuvik** 23.71 33 P P 04 25 30.5 -1.8
baz=244,SNR=18
INK **Inuvik** 23.71 33 P P 04 25 29.9 -2.3
KOTAN **Kotaneelee Air** 26.16 54 P P 04 25 54.3 -0.5
baz=272
WRGLY **Wrigley** 26.48 47 P P 04 25 56.7 -0.9
baz=266
C36M **Paulatuk** 27.29 33 IAmb IAmb 04 26 08.4
comp=Z,12nm,0.6s
C36M **Paulatuk** 27.29 33 P P 04 26 03.4 -1.3
baz=254
A36M **Sachs Harbour** 27.79 28 P P 04 26 07.7 -1.5
baz=248
TYV **Tymovskoe** 29.44 287 *e*P P 04 26 35.8 +12
TYV pmax pmax
comp=Z,5.0nm,0.9s
TYV pmax pmax
comp=Z,100nm,4.2s
YKAW3 **Yellowknife Wh** 30.54 48 P P 04 26 34.3 +0.5
YKAW3 IAmb IAmb 04 26 36.3
comp=Z,5.8nm,0.7s
YKA **Yellowknife Ar** 30.55 48 P P 04 26 33.8 0.0
comp=Z,3.4nm,0.5s,baz=275,slow=8.2,SNR=32

YKA PcP **PcP** **04 29 30.9 -1.0**
comp=Z,1.0nm,0.7s,baz=282,slow=2.2,SNR=3.9
YKA LR LR 04 41 06.1
comp=Z,839nm,19.1s,baz=274,slow=41
comp=Z,3.4nm,0.5s
YKA Yellowknife Ar 30.55 48 P **P** **04 26 32.7 -1.1**
YKA **PcP** **04 29 30.9 -1.0**
YKAW1 Yellowknife Wh 30.61 48 IAmb IAmb 04 26 46.1
comp=Z,7.5nm,0.8s
YSS Yuzhno-Sakhali 30.98 280 *eP* **P** **04 26 38.9 +1.1**
YSS *eS* **S** **04 31 34.4 -6.3**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS pmax pmax
comp=Z,100nm,4.1s
YSS MLR MLR
comp=Z,600nm,20.0s
YSS MLR MLR
comp=N,300nm,21.0s
YSS MLR MLR
comp=E,600nm,21.0s
B08A Colville Reser 31.81 76 IAmb IAmb 04 27 02.6
comp=Z,8.0nm,0.9s
EPH Ephrata 32.10 78 IAmb IAmb 04 26 52.1
comp=Z,8.1nm,1.1s
HAWA Hanford 32.59 80 IAmb IAmb 04 27 11.1
comp=Z,8.5nm,0.9s
TIXI Tiksi 33.03 329 LR LR 04 42 33.9
comp=Z,283nm,18.2s,baz=118,slow=41
TIXI Tiksi 33.03 329⇑ *iP* **P** **04 26 56.5 +1.0**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
YBH Yreka Blue Hor 33.06 89 LR LR 04 38 28.2
comp=Z,310nm,18.6s,baz=304,slow=33
GRNR Gornyy 33.13 290⇑ *iP* **P** **04 26 56.4 -0.3**
GRNR MLR MLR
comp=E,400nm,18.0s
GRNR MLR MLR
comp=N,310nm,20.0s
GRNR MLR MLR
comp=Z,300nm,17.0s
NEW Newport 33.18 75 LR LR 04 39 41.8
comp=Z,600nm,18.9s,baz=306,slow=35
NEW Newport 33.18 75 IAmb IAmb 04 27 20.2
comp=Z,9.4nm,0.9s
NEW Newport 33.18 75 P **P** **04 26 58.7 +1.5**
YAK Yakutsk 33.37 312 LR LR 04 42 20.9
comp=Z,751nm,18.1s,baz=89,slow=40
I07A Izee 33.76 83 IAmb IAmb 04 27 38.3
comp=Z,12nm,1.4s
MSO Missoula 35.75 76 IAmb IAmb 04 28 04.5
comp=Z,16nm,1.5s
KLR Kul'dur 36.52 290 LR LR 04 43 31.4
comp=Z,616nm,18.9s,baz=74,slow=38
KLR Kul'dur 36.52 290 *deP* **P** **04 27 25.2 -0.7**
KLR pmax pmax
comp=Z,13nm,1.4s
PNTR Pine Nut 36.53 91 IAmb IAmb 04 28 10.9
comp=Z,13nm,0.9s
RES Resolute Bay 36.75 25 LR LR 04 45 28.2
comp=Z,391nm,19.2s,baz=240,slow=41
H11N2 WAKE ISLAND Hy 37.11 219 T T 05 07 27.2
baz=22,slow=75
ZEA Zeya 37.11 298 *eP* **P** **04 27 29.9 -1.0**
ZEA *e* 04 27 43.7
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=E,300nm,13.0s
ZEA MLR MLR
comp=N,100nm,17.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
H11N3 WAKE ISLAND Hy 37.12 219 T T 05 08 04.5
baz=22
H11N1 WAKE ISLAND Hy 37.13 219 T T 05 07 31.2
baz=22,slow=75
HLID Hailey 37.15 81 P **P** **04 27 32.9 +1.3**
HLID Hailey 37.15 81 P **P** **04 27 32.3 +0.7**
LHV Little Huntoon 37.72 91 IAmb IAmb 04 28 22.7
comp=Z,9.8nm,1.3s
NVAR Mina Array Bea 37.73 90 P **P** **04 27 37.8 +1.2**
comp=Z,1.2nm,0.9s,baz=293,slow=8.6,SNR=5.6
NVAR LR LR 04 41 47.5
comp=Z,179nm,18.4s,baz=274,slow=34
comp=Z,1.2nm,0.9s
BOZ Bozeman (W) 37.76 76 IAmb IAmb 04 28 02.8
comp=Z,9.1nm,1.3s
ELK Elko 38.24 85 LR LR 04 42 10.5
comp=Z,416nm,18.5s,baz=296,slow=34
H11S1 WAKE ISLAND Hy 38.30 218 T T 05 08 56.5
baz=23,slow=76,SNR=141
H11S2 WAKE ISLAND Hy 38.31 218 T T 05 08 57.7
baz=23,slow=76,SNR=124
H11S3 WAKE ISLAND Hy 38.31 218 T T 05 08 57.8
baz=23,slow=76,SNR=138
BLKN Baker Lake 38.38 42 IAmb IAmb 04 27 59.7
comp=Z,10nm,1.0s
YHL Hebgen Lake 38.42 77 IAmb IAmb 04 28 02.4
comp=Z,10nm,1.1s
HEH HeiHe 38.54 293 *eP* **P** **04 27 42.0 -1.0**
HEH pmax pmax
comp=Z,20nm,0.9s
HEH L L
comp=Z,830nm,20.6s
HEH L L
comp=Z,330nm,19.4s
HEH L L
comp=Z,710nm,18.5s
USRK Ussuriysk Ar. 38.90 282 P **P** **04 27 46.2 +0.1**
comp=Z,4.1nm,0.7s,baz=54,slow=4.9,SNR=2.4
USRK LR LR 04 42 48.9
comp=Z,622nm,21.5s,baz=62,slow=35
comp=Z,4.1nm,0.7s
FFC Flin Flon 38.98 58 P **P** **04 27 46.4 -0.2**
FFC Flin Flon 38.98 58 P **P** **04 27 47.3 +0.6**
H17A Grant Village 39.03 77 IAmb IAmb 04 28 09.0
comp=Z,11nm,1.1s
HVU Hansel Valley 39.15 82 P **P** **04 27 49.4 +1.0**
RLMT Red Lodge 39.42 75 IAmb IAmb 04 28 16.6
comp=Z,12nm,1.0s
MAJO Matsushiro 39.61 268⇑ *eP* **P** **04 27 53.8 +1.7**
MAJO pmax pmax
comp=Z,35nm,2.4s
MJAR Matsushiro Arr 39.61 268 P **P** **04 27 52.1 0.0**
comp=Z,2.2nm,0.7s,baz=32,slow=7.0,SNR=8.4
MJAR LR LR 04 43 57.0
comp=Z,402nm,20.3s,baz=62,slow=36
comp=Z,2.2nm,0.7s
MJAR Matsushiro Arr 39.61 268 P **P** **04 27 52.1 0.0**
MJAR IAmb IAmb 04 28 08.3
comp=Z,9.4nm,1.2s
TPNV Topopah Spring 39.93 91 P **P** **04 27 56.5 +1.6**
DUG Dugway, Tooele 40.05 84 P **P** **04 27 57.6 +1.7**
PRN Pahroc Range 40.38 89 IAmb IAmb 04 28 23.1
comp=Z,20nm,1.3s
PSTR Posyet 40.48 281⇓ *eP* **P** **04 28 01.1 +1.9**
BW06 Boulder Array 40.55 79 P **P** **04 28 00.7 +0.6**
BW06 IAmb IAmb 04 28 23.8
comp=Z,7.0nm,0.8s
PD31 Pinedale Array 40.55 79 IAmb IAmb 04 28 23.8
comp=Z,7.2nm,0.8s
PDAR Pinedale Array 40.55 79 P **P** **04 28 00.6 +0.5**
comp=Z,5.9nm,1.0s,baz=308,slow=4.2,SNR=22
PDAR LR LR 04 44 19.2
comp=Z,233nm,18.0s,baz=314,slow=36
comp=Z,5.9nm,1.0s
GSC Goldstone, Bar 40.65 93 IAmb IAmb 04 28 19.6
comp=Z,12nm,1.1s
BNX BinXian 40.81 287⇓ P **P** **04 28 01.3 -0.6**
BNX pmax pmax
comp=Z,7.0nm,0.8s
MPU Maple Canyon 40.89 83 IAmb IAmb 04 28 05.3
comp=Z,7.8nm,0.8s
BSUT Blindstream Ca 41.11 82 IAmb IAmb 04 28 35.5
comp=Z,8.5nm,1.1s
TMUT Trail Mountain 41.58 84 IAmb IAmb 04 28 35.5
comp=Z,12nm,1.2s
RDMU Red Mountain 41.82 81 IAmb IAmb 04 28 40.1
comp=Z,17nm,1.1s
Q16A Castle Valley 41.84 84 IAmb IAmb 04 28 37.8
comp=Z,8.7nm,0.9s
ILON Igloolik, Nuna 41.95 32 P **P** **04 28 10.3 -0.6**
ILON IAmb IAmb 04 28 12.5
comp=Z,6.0nm,0.6s
P18A Preston Nutter 41.97 83 IAmb IAmb 04 28 47.5
comp=Z,16nm,1.1s

PFO Pinyon Flats O 41.98 95 LR LR 04 43 44.8
comp=Z,238nm,18.3s,baz=290,slow=33
SRU San Rafael Swe 42.12 84 IAmb IAmb 04 28 39.7
comp=Z,12nm,1.0s
BOD Bodaibo 42.18 309 *eP* **P** **04 28 12.0 -1.0**
BOD pmax pmax
comp=Z,14nm,0.6s
BORC Borrego Spring 42.24 95 IAmb IAmb 04 28 27.7
comp=Z,17nm,1.3s
IRM Iron Mountain 42.43 93 IAmb IAmb 04 28 33.3
comp=Z,13nm,1.5s
U15A North Rim 42.71 88 IAmb IAmb 04 28 41.6
comp=Z,9.2nm,1.0s
HMU Henry Mountain 42.71 85 IAmb IAmb 04 28 44.6
comp=Z,16nm,1.1s
O20A White River Ci 42.89 81 P **P** **04 28 19.5 +0.3**
O20A IAmb IAmb 04 28 48.2
comp=Z,15nm,0.9s
RSSD Black Hills 43.09 74 P **P** **04 28 20.9 +0.1**
HILR Hailar Array B 43.19 296 P **P** **04 28 20.2 -1.1**
comp=Z,2.8nm,0.4s,baz=68,slow=9.9,SNR=5.8
comp=Z,2.8nm,0.4s
HAYD Hayden 43.26 80 P **P** **04 28 20.8 -1.5**
PV23 Carpenter Ridg 43.45 83 IAmb IAmb 04 28 55.8
comp=Z,25nm,1.2s
PV10 Paradox Valley 43.48 84 IAmb IAmb 04 28 47.3
comp=Z,25nm,1.1s
PV22 Blue Mesa, Par 43.54 83 IAmb IAmb 04 28 47.3
comp=Z,11nm,1.0s
PV20 West Nyswonger 43.55 84 IAmb IAmb 04 28 51.1
comp=Z,11nm,0.8s
PV19 Morning Glory 43.56 84 IAmb IAmb 04 28 47.4
comp=Z,14nm,0.9s
PV16 Nyswonger Mesa 43.60 84 IAmb IAmb 04 28 47.7
comp=Z,6.2nm,0.8s
MDND Maddock 43.61 66 P **P** **04 28 25.2 +0.5**
PV11 David Mesa, Pa 43.63 83 IAmb IAmb 04 28 54.2
comp=Z,18nm,0.9s
PV18 Skein Mesa, Pa 43.64 84 IAmb IAmb 04 28 42.5
comp=Z,13nm,0.8s
PV12 Saucer Basin, 43.66 83 IAmb IAmb 04 29 02.5
comp=Z,18nm,0.9s
PV03 Paradox Valley 43.68 84 IAmb IAmb 04 29 03.4
comp=Z,12nm,1.2s
PV07 Paradox Valley 43.69 83 IAmb IAmb 04 28 44.5
comp=Z,6.2nm,0.7s
JCJ Chichijima 43.73 254 LR LR 04 43 55.8
comp=Z,204nm,21.6s,baz=72,slow=32
WUAZ Wupatki 43.86 88 P **P** **04 28 28.1 +1.0**
WUAZ IAmb IAmb 04 28 50.7
comp=Z,12nm,1.0s
Y14A Wickenburg 43.90 91 IAmb IAmb 04 28 45.5
comp=Z,7.6nm,1.0s
PV01 Paradox Valley 43.92 83 IAmb IAmb 04 28 49.9
comp=Z,9.6nm,0.9s
ULM Lac du Bonnet 44.39 62 P **P** **04 28 30.6 -0.4**
comp=Z,3.1nm,0.6s,baz=286,slow=9.4,SNR=6.6
ULM LR LR 04 48 51.1
comp=Z,822nm,18.3s,baz=318,slow=39
comp=Z,3.1nm,0.6s
ULM Lac du Bonnet 44.39 62 IAmb IAmb 04 29 07.7
comp=Z,8.8nm,1.0s
X16A Lo Mia Camp, P 44.54 90 IAmb IAmb 04 28 56.4
comp=Z,6.4nm,1.1s
KSRS Korea Array 45.38 277 P **P** **04 28 39.3 +0.4**
comp=Z,6.7nm,0.7s,baz=54,slow=7.7,SNR=26
KSRS LR LR 04 45 30.5
comp=Z,231nm,21.6s,baz=55,slow=33
comp=Z,6.7nm,0.7s
NEEM North Greenlan 45.38 16 *i* P **P** **04 28 37.0 -1.8**
NEEM IAmb IAmb 04 28 53.0
comp=Z,15nm,0.8s
AGMN Agassiz Nation 45.46 64 IAmb IAmb 04 28 55.5
comp=Z,17nm,1.1s
AGMN Agassiz Nation 45.46 64 P **P** **04 28 39.2 -0.3**
EPLO Experimental L 45.87 61 IAmb IAmb 04 28 57.3
comp=Z,11nm,0.9s
KULLO Kullorsuaq 46.01 20 *i* P **P** **04 28 47.2 +3.7**
KULLO IAmb IAmb 04 29 06.2
comp=Z,16nm,0.9s
SDCO Great Sand Dun 46.05 82 IAmb IAmb 04 28 51.6
comp=Z,8.1nm,1.2s
TUC Tucson 46.37 91 P **P** **04 28 47.8 +0.9**
TUC IAmb IAmb 04 29 04.9
comp=Z,8.9nm,1.1s
TUC Tucson 46.37 91 P **P** **04 28 48.5 +1.6**
JNU Nakatsue 46.39 270 LR LR 04 47 21.5
comp=Z,236nm,19.9s,baz=40,slow=35
TJN Taejon 46.41 276 P **P** **04 28 47.6 +0.5**
F33A 5 Mile Ranch, 46.61 67 IAmb IAmb 04 29 03.7
comp=Z,5.5nm,0.9s
NRIK Noril'sk 46.73 332 P **P** **04 28 48.6 -0.5**
comp=Z,4.6nm,0.5s,baz=59,slow=9.1,SNR=4.1
NRIK LR LR 04 52 23.9
comp=Z,263nm,18.8s,baz=67,slow=41
comp=Z,4.6nm,0.5s
NRIK Noril'sk 46.73 332 *deP* **P** **04 28 49.7 +0.6**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
NRIK Noril'sk 46.73 332 P **P** **04 28 48.6 -0.5**
NRIK IAmb IAmb 04 28 50.3
comp=Z,6.0nm,0.8s
ANMO Albuquerque 47.27 85 LR LR 04 47 44.6
comp=Z,264nm,18.2s,baz=315,slow=35
ANMO Albuquerque 47.27 85⇓ *eP* **P** **04 28 54.9 +0.8**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 47.27 85 P **P** **04 28 55.2 +1.1**
Y22A Socorro 47.63 87 IAmb IAmb 04 29 14.4
comp=Z,11nm,0.9s
ECSD EROS Data Cent 47.67 70 IAmb IAmb 04 29 09.6
comp=Z,5.9nm,0.9s
ECSD EROS Data Cent 47.67 70 P **P** **04 28 56.0 -0.9**
EYMN Ely 48.07 62 IAmb IAmb 04 29 14.3
comp=Z,12nm,0.9s
EYMN Ely 48.07 62 P **P** **04 28 59.2 -0.7**
121A Cookes Peak, D 48.07 89 IAmb IAmb 04 29 10.6
comp=Z,7.5nm,1.0s
SPMN Marine on St. 48.95 66 IAmb IAmb 04 29 31.0
comp=Z,5.9nm,0.9s
FRB Frobisher Bay 49.33 35 LR LR 04 51 51.4
comp=Z,978nm,20.4s,baz=302,slow=38
R32A Long Quarter, 49.74 76 IAmb IAmb 04 29 43.5
comp=Z,8.3nm,0.9s
SPA0 Spitsbergen At 50.05 358 *eP* **P** **04 29 14.0 -0.6**
SPITS Spitsbergen Ar 50.05 358 P **P** **04 29 13.2 -1.4**
comp=Z,1.7nm,0.4s,baz=32,slow=4.9,SNR=15
comp=Z,1.7nm,0.4s
MNTX Cornudas Mount 50.12 88 IAmb IAmb 04 29 39.9
comp=Z,7.0nm,0.8s
MNTX Cornudas Mount 50.12 88 P **P** **04 29 17.2 +1.4**
MSTX Muleshoe 50.19 84 IAmb IAmb 04 29 33.5
comp=Z,14nm,1.1s
GDH Godhavn 50.37 25 *i* P **P** **04 29 14.1 -3.0**
GDH IAmb IAmb 04 29 33.4
comp=Z,52nm,2.0s
G40A Rib Lake 50.39 64 IAmb IAmb 04 29 40.5
comp=Z,15nm,1.4s
TLY Talaya 50.51 306 LR LR 04 52 01.6
comp=Z,434nm,21.5s,baz=42,slow=38
TLY Talaya 50.51 306⇓ *iP* **P** **04 29 19.3 +0.8**
TLY pmax pmax
comp=Z,11nm,0.7s
BJI2 Beijing 50.84 288 P **P** **04 29 21.0 -0.1**
BJI2 pP **sP** **04 29 30.8 +0.1**
BJI2 S **S** **04 36 31.0 -4.4**
BJI2 pmax pmax
comp=Z,4.0nm,0.6s
BJI2 L L
comp=Z,180nm,16.0s
BJI2 L L
comp=Z,140nm,15.6s
BJI2 L L
comp=Z,260nm,18.9s
I40A Norwalk 51.01 66 IAmb IAmb 04 29 48.0
comp=Z,20nm,1.4s
ULN Ulaanbaatar 51.07 301 *d* P **P** **04 29 23.2 +0.3**
ULN pmax pmax
comp=Z,10.0nm,1.3s
ULN Ulaanbaatar 51.07 301 P **P** **04 29 23.4 +0.5**
SUMG Summit 51.17 17 P **P** **04 29 22.9 -0.7**
SUMG Summit 51.17 17 P **P** **04 29 24.5 +0.9**
SUMG Summit 51.17 17 *i* P **P** **04 29 24.0 +0.4**
SUMG IAmb IAmb 04 29 25.1
comp=Z,11nm,0.5s
SONM Songino Array 51.43 301 P **P** **04 29 25.3 -0.3**
comp=Z,12nm,1.3s,baz=57,slow=6.8,SNR=23

SONM PcP **PcP** **04 30 40.9 +1.1**
comp=Z,2.3nm,0.7s,baz=62,slow=2.7,SNR=4.1
SONM LR LR 04 53 18.8
comp=Z,731nm,18.7s,baz=57,slow=39
comp=Z,12nm,1.3s
SONM Songino Array 51.43 301 P **P** **04 29 26.2 +0.5**
SONM IAmb IAmb 04 29 27.0
comp=Z,11nm,1.4s
SONM **PcP** **04 30 40.9 +1.1**
ZAK Zakamensk 51.48 305 *eP* **P** **04 29 25.0 -0.9**
ZAK pmax pmax
comp=Z,10.0nm,1.6s
L40A Anamosa 51.82 68 IAmb IAmb 04 30 03.9
comp=Z,7.8nm,0.9s
MOY Mondy 51.83 308 *eP* **P** **04 29 29.0 +0.5**
MOY pmax pmax
comp=Z,10.0nm,1.3s
JFWS Jewell Farm 51.83 67 IAmb IAmb 04 29 40.3
comp=Z,8.8nm,0.8s
I42A Draeger Farm, 51.97 65 IAmb IAmb 04 29 29.3
comp=Z,9.6nm,0.9s
P38A Dawn 52.04 72 IAmb IAmb 04 29 43.9
comp=Z,9.4nm,0.8s
WMOK Wichita Mounta 52.12 80 IAmb IAmb 04 29 53.3
comp=Z,8.8nm,1.1s
WMOK Wichita Mounta 52.12 80 P **P** **04 29 31.4 +0.6**
DBG Daneborg 52.30 10 *i* P **P** **04 29 27.3 -4.3**
DBG IAmb IAmb 04 29 31.6
comp=Z,24nm,0.5s
LPIG La Paz 52.51 98 LR LR 04 48 11.1
comp=Z,70nm,18.2s,baz=316,slow=32
SFJD Kangerlussuaq 52.75 26 LR LR 04 56 08.8
comp=Z,387nm,18.6s,baz=324,slow=41
TIA Tai'an 52.76 283 P **P** **04 29 36.4 +0.9**
TIA pmax pmax
comp=Z,17nm,1.3s
TX31 Lajitas Ar. Si 52.83 89 IAmb IAmb 04 29 53.6
comp=Z,11nm,0.9s
TXAR Lajitas Array 52.83 89 P **P** **04 29 36.6 +0.5**
comp=Z,5.7nm,0.9s,baz=299,slow=5.2,SNR=35
comp=Z,5.7nm,0.9s
TXAR Lajitas Array 52.83 89 P **P** **04 29 36.4 +0.2**
GUMO Guam 52.85 241 LR LR 04 50 03.6
comp=Z,119nm,20.4s,baz=86,slow=34
HHC Hu-ho-hao-te 52.99 291 *eP* **P** **04 29 39.0 +1.7**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.7s
HHC L L
comp=Z,360nm,18.3s
HHC L L
comp=Z,270nm,16.8s
HHC L L
comp=Z,260nm,18.3s
HPIG 53.30 92 P **P** **04 29 41.6 +1.8**
HNS HongShan 53.41 286⇑ P **P** **04 29 41.5 +1.3**
HNS pmax pmax
comp=Z,52nm,0.9s
HNS L L
comp=Z,390nm,19.7s
HNS L L
comp=Z,410nm,20.2s
HNS L L
comp=Z,690nm,22.2s
U38A Gravette 53.63 75 IAmb IAmb 04 29 55.4
comp=Z,5.3nm,0.8s
R40A Maddies Statio 53.66 72 IAmb IAmb 04 29 54.4
comp=Z,5.5nm,0.8s
BTO2 Baotou 54.03 292 *eP* **P** **04 29 45.5 +0.6**
BTO2 pP **pwP** **04 29 58.2 +2.0**
BTO2 S **S** **04 37 15.3 -4.0**
BTO2 SS **SKiKP** **04 40 56.2 +1.1**
BTO2 pmax pmax
comp=Z,28nm,1.1s
BTO2 pmax pmax
comp=Z,220nm,10.4s
BTO2 L L
comp=Z,820nm,18.2s
BTO2 L L
comp=Z,720nm,12.3s
BTO2 L L
comp=Z,1μm,18.6s
KNGR Kungurtug, Tuv 54.19 308⇑ *iP* **P** **04 29 47.5 +1.6**
KNGR pmax pmax
comp=Z,23nm,1.3s
JCT Junction City 54.41 85 IAmb IAmb 04 30 03.0
comp=Z,8.8nm,0.8s
NJ2 Nanjing 54.53 278 *eP* **P** **04 29 49.4 +0.9**
NJ2 pmax pmax
comp=Z,37nm,0.5s
FCAR Ozark Folk Cen 55.35 74 IAmb IAmb 04 30 07.7
comp=Z,7.0nm,0.8s
MIAR Mount Ida 55.40 77 IAmb IAmb 04 30 13.1
comp=Z,18nm,1.4s
MIAR Mount Ida 55.40 77 P **P** **04 29 54.4 -0.4**
SCO Scoresbysund 55.61 13 *i* P **P** **04 29 53.0 -2.7**
SCO IAmb IAmb 04 29 56.7
comp=Z,10nm,0.5s
SCHQ Schefferville 55.76 43 P **P** **04 29 56.8 -0.3**
comp=Z,2.9nm,0.6s,baz=346,slow=4.9,SNR=5.5
SCHQ LR LR 04 56 20.9
comp=Z,479nm,18.1s,baz=318,slow=39
comp=Z,2.9nm,0.6s
SCHQ Schefferville 55.76 43 IAmb IAmb 04 30 11.4
comp=Z,13nm,1.0s
SOEG Soedalen 56.15 17 *i* P **P** **04 29 59.0 -0.6**
SOEG IAmb IAmb 04 30 00.5
comp=Z,24nm,0.2s
SADO Sadowa 56.71 58 LR LR 04 55 23.1
comp=Z,376nm,18.6s,baz=350,slow=37
HKT Hockley 57.22 82 P **P** **04 30 06.7 -1.0**
HKT IAmb IAmb 04 30 34.1
comp=Z,15nm,1.2s
HKT Hockley 57.22 82 P **P** **04 30 06.3 -1.3**
HAMF Hammerfest 57.31 355 *eP* **P** **04 30 06.6 -1.2**
VADS Vadso 57.44 352 *eP* **P** **04 30 08.2 -0.5**
T47A Sharon Grove 57.56 70 IAmb IAmb 04 30 23.0
comp=Z,8.4nm,0.9s
ZAA0 Zalesovo Array 57.66 318 P **P** **04 30 10.0 -0.5**
ZAA0 IAmb IAmb 04 30 32.4
comp=Z,3.2nm,0.7s
ZALV Zalesovo Beam 57.66 318 P **P** **04 30 09.7 -0.8**
comp=Z,3.1nm,0.5s,baz=77,slow=3.3,SNR=10
ZALV PcP **PcP** **04 31 03.4 +0.1**
comp=Z,2.6nm,0.6s,baz=54,slow=3.1,SNR=4.6
ZALV LR LR 04 57 34.9
comp=Z,330nm,18.5s,baz=44,slow=39
comp=Z,3.1nm,0.5s
WVT Waverly 57.73 71 P **P** **04 30 12.0 +0.7**
IVI Ivigtut 57.86 29 P **P** **04 30 12.1 +0.3**
IVI Ivigtut 57.86 29 P **P** **04 30 12.6 +0.8**
IVI Ivigtut 57.86 29 *i* P **P** **04 30 09.7 -2.0**
IVI IAmb IAmb 04 30 13.1
comp=Z,14nm,0.6s
TRQ Mont Tremblant 58.08 55 IAmb IAmb 04 30 35.8
comp=Z,10nm,1.0s
ARA0 ARCESS Array S 58.29 354 *eP* **P** **04 30 14.0 -0.8**
ARCES ARCESS Array B 58.29 354 P **P** **04 30 13.8 -1.0**
comp=Z,1.9nm,0.4s,baz=5.4,slow=5.5,SNR=21
ARCES LR LR 04 54 56.2
comp=Z,260nm,21.9s,baz=352,slow=36
comp=Z,1.9nm,0.4s
ARCES ARCESS Array B 58.29 354 **P** **04 30 14.1 -0.7**
WHN Wuhan 58.33 280⇓ P **P** **04 30 16.5 +0.9**
WHN pmax pmax
comp=Z,58nm,0.9s
TRO Tromso 58.54 357 *eP* **P** **04 30 16.0 -0.4**
JETT Jettan, Norway 58.55 356 *eP* **P** **04 30 16.6 0.0**
JETT IAmb IAmb 04 30 18.9
comp=Z,24nm,0.6s
KTK1 Kautokeino 58.95 355 *eP* **P** **04 30 20.5 +1.2**
SSLB Suanglung 59.13 270 P **P** **04 30 21.9 +0.6**
XAN Xi'an 59.14 287 P **P** **04 30 22.1 +0.9**
XAN pmax pmax
comp=Z,22nm,1.0s
XAN L L
comp=Z,550nm,21.3s
XAN L L
comp=Z,600nm,19.9s
XAN L L
comp=Z,860nm,20.6s
APA Apatity 59.53 350 *eP* P 04 30 28.2 +4.8
APA *e* 04 31 14.4
APA *e* 04 32 39.8
APA pmax pmax

APA MLR MLR
comp=Z,9.0nm,1.4s
comp=Z,573nm,20.9s
DGZ Jazzator, Alta 59.55 313⇑ *e*P **P 04 30 24.1 +0.1**
DGZ pmax pmax
comp=Z,8.0nm,0.6s
FPAL Fort Paine 60.13 71 P **P 04 30 26.9 -1.2**
FPAL IAmb IAmb 04 30 41.9
comp=Z,7.3nm,0.9s
LOF Lofoten 60.18 359 *e*P **P 04 30 26.9 -0.9**
LOF IAmb IAmb 04 30 33.0
comp=Z,280nm,2.4s
S54A Dingess, Beckl 60.31 66 P **P 04 30 29.2 -0.1**
STEI Steigen 60.35 358 *e*P **P 04 30 28.1 -0.9**
STEI IAmb IAmb 04 30 29.8
comp=Z,239nm,2.4s
TKL Tuckaleechee C 60.41 69 LR LR 04 56 46.9
comp=Z,521nm,20.0s,baz=330,slow=36
GTA2 Gaotai 60.56 297 *e*P **P 04 30 31.4 +0.3**
GTA2 pmax pmax
comp=Z,10.0nm,0.7s
GTA2 L L
comp=Z,530nm,24.8s
GTA2 L L
comp=Z,540nm,23.2s
GTA2 L L
comp=Z,340nm,23.5s
LZH Lanzhou 60.66 292 *e*P **P 04 30 32.7 +0.9**
LZH pP pwP 04 30 45.5 +2.3
LZH pmax pmax
comp=Z,16nm,1.2s
LZH L L
comp=Z,590nm,14.2s
LZH L L
comp=Z,410nm,14.2s
LZH L L
comp=Z,810nm,13.5s
LZDM Lanzhou Array 60.84 292 P **P 04 30 34.6 +1.4**
comp=Z,0.9nm,0.3s,baz=79,slow=7.5,SNR=2.0
LZDM LR LR 05 00 26.6
comp=Z,362nm,18.1s,baz=0.0,slow=40
comp=Z,0.9nm,0.3s
FAUS Fauske 60.90 358 *e*P **P 04 30 30.0 -2.7**
BORG Borgarnes 61.02 15 LR LR 05 00 38.4
comp=Z,399nm,18.1s,baz=335,slow=40
BLA Blacksburg 61.23 66 P **P 04 30 35.6 +0.1**
VAGH Vaagaholmen 61.59 359 *e*P **P 04 30 37.6 +0.2**
KONS Konsvik 61.83 359 *e*P **P 04 30 39.3 +0.3**
KONS IAmb IAmb 04 30 46.5
comp=Z,48nm,1.3s
RAUS Rausandaksla 61.87 358 *e*P **P 04 30 39.7 +0.3**
STOK Stokkvaagen 61.99 359 *e*P **P 04 30 40.6 +0.6**
MOR8 Moi Rana 62.13 358 *e*P **P 04 30 39.8 -1.3**
MOR8 IAmb IAmb 04 30 41.3
comp=Z,11nm,0.6s
LEIR Leirfjorden 62.21 359 *e*P **P 04 30 41.8 +0.2**
ZSN Zaisan 62.36 312 *e*P **P 04 30 43.5 +0.6**
ZSN pmax pmax
comp=Z,4.0nm,0.5s
ZSN Zaisan 62.36 312 *e*P **P 04 30 43.6 +0.6**
comp=Z,4.0nm,0.5s
KURK Kurchatov 62.61 318 P **P 04 30 44.9 +0.4**
KURK Kurchatov 62.61 318 P **P 04 30 44.2 -0.2**
KURK Kurchatov 62.61 318 P **P 04 30 44.5 0.0**
OUL Oulu 62.66 353 P **P 04 30 44.6 +0.1**
KURBB Kurchatov Arra 62.72 318 P **P 04 30 44.9 -0.3**
comp=Z,5.6nm,0.6s,baz=44,slow=8.0,SNR=71
KURBB LR LR 04 58 45.6
comp=Z,194nm,20.7s,baz=171,slow=37
comp=Z,5.6nm,0.6s
KURBB Kurchatov Arra 62.72 318 P **P 04 30 45.4 +0.2**
WMQ Urumqi 63.71 308 *e*P **P 04 30 53.5 +1.5**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ L L
comp=Z,790nm,20.5s
WMQ L L
comp=Z,700nm,21.9s
WMQ L L
comp=Z,260nm,16.7s
NSS Namsos 63.81 359 *e*P **P 04 30 51.8 -0.4**
NSS IAmb IAmb 04 30 52.0
comp=Z,355nm,2.6s
BVAR Borovoye Array 63.97 324 P **P 04 30 53.1 -0.4**
comp=Z,19nm,0.5s,baz=49,slow=7.3,SNR=74
comp=Z,19nm,0.5s
BORK Borovoye 63.98 325*d i*P **P 04 30 54.1 +0.6**
BORK pmax pmax
comp=Z,11nm,0.7s
BORK Borovoye 63.98 325 P **P 04 30 53.0 -0.5**
SVE Sverdlovsk 63.99 332 *e*P **P 04 30 54.5 +1.0**
MK31 Makanchi Array 64.02 313 P **P 04 30 53.5 -0.4**
MKAR Makanchi Array 64.02 313 P **P 04 30 53.0 -0.9**
comp=Z,1.1nm,0.3s,baz=51,slow=6.9,SNR=27
MKAR LR LR 05 02 09.4
comp=Z,343nm,18.9s,baz=33,slow=39
comp=Z,1.1nm,0.3s
MKAR Makanchi Array 64.02 313 P **P 04 30 53.1 -0.8**
MAKZ Makanchi 64.14 314⇑P **P 04 30 54.2 -0.6**
CD2 Chengdu 64.42 288 P **P 04 30 58.6 +1.8**
CD2 pmax pmax
comp=Z,30nm,0.6s
KRVT Keravat (AS076 64.91 223 LR LR 04 53 55.2
comp=Z,22nm,20.2s,baz=77,slow=31
ARTI Arti 65.01 333 LR LR 05 03 30.2
comp=Z,301nm,19.3s,baz=46,slow=40
ARTI Arti 65.01 333*c i*P **P 04 31 00.3 +0.1**
ARTI 04 31 32.8
ARTI S **S 04 39 38.9 -1.4**
ARTI SS **SS 04 43 46.9 -4.4**
ARTI pmax pmax
comp=Z,23nm,1.7s
ARTI Arti 65.01 333 P **P 04 30 59.9 -0.3**
KLMR Klimovskoe 65.13 345 *e*P **P 04 31 04.9 +4.0**
KLMR pmax pmax
comp=Z,17nm,1.2s
KIRV Kirov 65.33 339 LR LR 05 01 22.3
comp=Z,174nm,20.6s,baz=26,slow=38
KIRV Kirov 65.33 339⇓ *e*P **P 04 31 01.3 -0.9**
TAOE Nuku Hiva Isla 65.63 148 *e*LR LR 04 50 38.0
comp=Z,267nm,27.0s
GOMU GeErMu 65.64 298 P **P 04 31 04.9 -0.2**
GOMU pP pP 04 31 08.5 -3.6
GOMU sP sP 04 31 12.7 -2.1
GOMU S S 04 39 39.2 -10
GOMU pmax pmax
comp=Z,6.0nm,0.5s
GOMU L L
comp=Z,440nm,14.2s
GOMU L L
comp=Z,350nm,14.3s
GOMU L L
comp=Z,660nm,14.3s
AFI Afiamalu 65.65 182 LR LR 04 59 08.1
comp=Z,55nm,18.6s,baz=22,slow=35
MOL Molde 65.76 2 *e*P **P 04 31 04.5 -0.4**
AKN Aaknes 66.15 2 *e*P **P 04 31 07.9 +0.4**
FINES FINESS Array B 66.24 352 P **P 04 31 07.2 -0.8**
comp=Z,11nm,0.6s,baz=18,slow=8.3,SNR=87
FINES LR LR 04 59 36.6
comp=Z,255nm,21.9s,baz=22,slow=36
comp=Z,11nm,0.6s
FINES FINESS Array B 66.24 352 P **P 04 31 07.4 -0.6**
DOMB Dombas 66.31 1 *e*P **P 04 31 08.5 0.0**
DOMB IAmb IAmb 04 31 08.8
comp=Z,15nm,0.8s
TGY Tagaytay City 66.44 263 LR LR 04 56 03.2
comp=Z,110nm,21.2s,baz=232,slow=32
TDK Taldyqorghan 67.12 314 *e*P **P 04 31 14.6 +0.6**
TDK pmax pmax
comp=Z,4.0nm,0.5s
TDK Taldyqorghan 67.12 314 *e*P **P 04 31 14.7 +0.6**
comp=Z,4.0nm,0.5s
CMIG Matias Romero 67.26 91 LR LR 04 56 27.1
comp=Z,91nm,21.6s,baz=310,slow=32
NB2 NORSAR Subarra 67.32 360 P **P 04 31 14.4 -0.6**
comp=Z,4.3nm,0.6s,baz=360,slow=6.2
NB2 NORSAR Subarra 67.32 360 P **P 04 31 14.4 -0.6**
NOA NORSAR Array B 67.32 360 P **P 04 31 14.8 -0.2**
comp=Z,4.1nm,0.6s,baz=0.3,slow=6.3,SNR=36
comp=Z,4.1nm,0.6s
NC602 NORSAR Array S 67.63 359 *e*P **P 04 31 16.6 -0.3**
SKAR Skarslia 67.67 1 *e*P **P 04 31 17.6 +0.4**
SKAR IAmb IAmb 04 31 18.1
comp=Z,16nm,0.8s
SHLS Shalkode 68.10 313 *e*P **P 04 31 19.7 -0.6**
SHLS pmax pmax
comp=Z,7.0nm,0.6s
SHLS Shalkode 68.10 313 *e*P **P 04 31 19.8 -0.6**
comp=Z,6.6nm,0.6s
HFS Hagfors 68.20 358 P **P 04 31 20.1 -0.4**
comp=Z,9.8nm,0.5s,baz=30,slow=2.5,SNR=77
HFS LR LR 05 00 41.1
comp=Z,154nm,20.2s,baz=350,slow=36
comp=Z,9.8nm,0.5s
ARBE Arbavere 68.23 352 P **P 04 31 20.9 +0.3**
UZB Uzunbulak 68.30 313 *e*P **P 04 31 22.1 +0.5**
UZB pmax pmax
comp=Z,4.0nm,1.1s
UZB Uzunbulak 68.30 313 *e*P **P 04 31 22.2 +0.5**
comp=Z,4.4nm,1.1s
JAY Jayapura 68.62 235 LR LR 04 57 06.9
comp=Z,99nm,21.6s,baz=359,slow=32
SATY Saty 68.65 313 *e*P **P 04 31 24.5 +0.7**
SATY pmax pmax
comp=Z,4.0nm,0.9s
SATY Saty 68.65 313 *e*P **P 04 31 24.5 +0.7**
comp=Z,4.1nm,0.9s
KONO Kongsberg 68.72 0 *e*P **P 04 31 24.4 +0.7**
PZH PanZhiHua 68.86 286 P **P 04 31 26.2 +0.9**
PZH pmax pmax
comp=Z,30nm,0.8s
BTLS Baital 68.97 317 *e*P **P 04 31 26.4 +0.8**
BTLS Baital 68.97 317 *e*P **P 04 31 26.4 +0.8**
MDOK Medeo 69.18 314 *e*P **P 04 31 27.7 +0.6**
MDOK Medeo 69.18 314 *e*P **P 04 31 27.8 +0.6**
AAA Alma-Ata 69.20 314 *e*P **P 04 31 27.8 +0.7**
AAA Alma-Ata 69.20 314 *e*P **P 04 31 27.9 +0.7**
KMI2 Kunming 69.27 284 P **P 04 31 29.7 +1.7**
KMI2 pP pwP 04 31 39.6 +0.2
KMI2 sP PcP 04 31 45.0 -6.6
KMI2 pmax pmax
comp=Z,15nm,0.8s
KMI2 L L
comp=Z,280nm,13.5s
KMI2 L L
comp=Z,270nm,22.7s
KMI2 L L
comp=Z,400nm,21.8s
TNSS Tian-Shan 69.32 314 *e*P **P 04 31 28.3 0.0**
TNSS Tian-Shan 69.32 314 *e*P **P 04 31 28.4 0.0**
KDJ Kajisay 69.94 313 IAmb IAmb 04 31 33.3
comp=Z,6.1nm,0.6s
TARG Taragay, Kyrgy 69.97 313 IAmb IAmb 04 31 36.7
comp=Z,4.5nm,0.7s
TARG Taragay, Kyrgy 69.97 313 P **P 04 31 33.5 +1.2**
SGDS Sogindy 70.00 316 *e*P **P 04 31 32.9 +0.8**
comp=Z,6.5nm,1.0s
MSVF Nonsavu 70.27 193 LR LR 05 01 00.3
comp=Z,138nm,18.5s,baz=132,slow=35
AKTO Aktyubinsk 70.31 330 LR LR 05 05 37.1
comp=Z,204nm,20.0s,baz=74,slow=39
MOS Moscow 70.32 344 *e*P **P 04 31 33.8 +0.2**
AAK Ala-Archa 70.72 315 LR LR 05 05 19.7
comp=Z,421nm,18.7s,baz=32,slow=38
AAK Ala-Archa 70.72 315*c i*P **P 04 31 37.4 +0.8**
AAK pmax pmax
comp=Z,12nm,0.7s
AAK Ala-Archa 70.72 315 P **P 04 31 36.9 +0.4**
AAK Ala-Archa 70.72 315 P **P 04 31 37.1 +0.5**
AB31 Akbulak array 70.72 328 *i* P **P 04 31 35.8 -0.4**
AB31 Akbulak array 70.72 328 P **P 04 31 36.0 -0.3**
AB31 IAmb IAmb 04 31 37.5
comp=Z,7.5nm,0.9s
ABKAR Akbulak array 70.72 328 P **P 04 31 36.1 -0.2**
NRN Naryn 71.03 314 IAmb IAmb 04 31 40.1
comp=Z,5.0nm,0.7s
OBN Obninsk 71.09 345 LR LR 05 05 53.9
comp=Z,148nm,20.1s,baz=327,slow=38
OBN Obninsk 71.09 345⇓ *e*P **P 04 31 38.1 -0.3**
OBN *e* 04 32 02.7
OBN *e* 04 34 16.2
OBN pmax pmax
comp=Z,14nm,0.7s
BELG Belogornoye 71.41 337 LR LR 05 05 55.2
comp=Z,183nm,20.0s,baz=77,slow=38
BELG Belogornoye 71.41 337*d i*P **P 04 31 41.0 +0.7**
BELG pmax pmax
comp=Z,7.0nm,0.7s
PPT2 Papeete2 71.42 160 *e*S **S 04 40 53.5 -4.0**
comp=Z,94nm,23.8s
PPT2 *e*LR LR 04 53 05.7
comp=Z,244nm,36.2s
PPT2 *e*LR LR 04 53 15.3
comp=Z,473nm,31.8s
DZA Taraz 71.86 318 *e*P **P 04 31 43.7 +0.4**
DZA Taraz 71.86 318 *e*P **P 04 31 43.8 +0.4**
KK31 Karatay Array 72.03 318 *i* P **P 04 31 44.1 -0.2**
KK31 Karatay Array 72.03 318 P **P 04 31 44.6 +0.3**
KKAR Karatay Array 72.03 318 P **P 04 31 44.3 0.0**
SIJI Sorong 72.28 244 LR LR 04 59 46.2
comp=Z,81nm,20.3s,baz=69,slow=33
PABE Paberze 72.30 352 P **P 04 31 46.0 +0.4**
PABE Paberze 72.30 352 P **P 04 31 46.2 +0.7**
BRLS Borolday 72.36 319 *e*P **P 04 31 48.7 +2.4**
BRLS Borolday 72.36 319 *e*P **P 04 31 48.7 +2.4**
EKA Eskdalemuir Ar 72.45 8 P **P 04 31 46.4 -0.2**
comp=Z,1.6nm,0.5s,baz=357,slow=4.5,SNR=13
comp=Z,1.6nm,0.5s
NACGM Naroch 72.62 350 *e*P **P 04 31 47.7 +0.1**
MNK Minsk 72.90 350 *i* P **P 04 31 50.5 +1.3**
comp=E,10.0nm,0.7s
MNK *i* P **P 04 31 50.5 +1.3**
comp=N,10.0nm,1.0s
MNK *i* P **P 04 31 50.5 +1.3**
comp=Z,14nm,0.8s,baz=11
MNK *i* PcP **PcP 04 32 07.2 +1.1**
MNK *i* PP **PP 04 34 32.5 +1.7**
MNK *i* PPP PPP 04 36 16.9
MNK *i* S **S 04 41 16.4 +2.9**
MNK *i* ScS **ScS 04 41 56.9 +2.1**
MNK *i* SS **SS 04 45 57.7 +5.1**
MNK *i* SSS SSS 04 49 18.3
MNK *i* LRM MLR 05 04 40.4
comp=E,369nm,22.4s
MNK *i* LRM MLR 05 04 46.7
comp=N,211nm,20.7s
MNK Minsk 72.90 350 *i* P **P 04 31 50.4 +1.3**
MNK *i* 04 32 07.2
MNK *i* 04 34 32.5
MNK *i* PPP PPP 04 36 16.9
MNK *i* S **S 04 41 16.4 +2.9**
MNK *i* 04 41 56.9
MNK *i* SS **SS 04 45 57.7 +5.1**
MNK pmax pmax
comp=Z,14nm,0.8s
MNK pmax pmax
comp=E,10.0nm,0.7s
MNK pmax pmax
comp=N,10.0nm,1.0s
MNK MLR MLR
comp=Z,293nm,22.0s
MNK MLR MLR
comp=E,369nm,22.0s
MNK MLR MLR
comp=N,211nm,21.0s
CHM Chimkent 73.05 318 *e*P **P 04 31 51.1 +0.7**
CHM Chimkent 73.05 318 *e*P **P 04 31 51.1 +0.7**
KSH2 Kashi 73.07 313 P **P 04 31 51.9 +1.2**
KSH2 pP pwP 04 32 03.4 +1.2
KSH2 pmax pmax
comp=N,16nm,0.7s
KSH2 L L
comp=N,490nm,17.4s
KSH2 L L
comp=N,280nm,16.0s
KSH2 L L
comp=N,470nm,18.5s
RAR Rarotonga 73.38 171 LR LR 04 56 50.6
comp=N,200nm,19.6s,baz=328,slow=30
VRH Novokhopyorsk 73.85 340 *e*P **P 04 31 53.0 -1.9**
VRH pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 74.36 342 *e*P **P 04 31 56.9 -0.9**
VSR pmax pmax
comp=Z,5.0nm,0.6s
BSEG Bad Segeberg 74.45 0 *e*L L 05 05 41.6
comp=Z,70nm,18.9s
RNPP9 Sopachiv 76.16 350 P **P 04 32 07.9 -0.3**
CHGR Chuyangaron 76.29 317*d i*P **P 04 32 10.2 +0.9**
CHGR pmax pmax
comp=Z,75nm,0.6s
AK22 Malin Array Si 76.43 348 P **P 04 32 08.7 -1.0**
MI28 Mi28,Pidlybu 76.43 349 P **P 04 32 09.2 -0.6**
AK03 Malin Array Si 76.44 348 P **P 04 32 09.1 -0.7**
AK04 Malin Array Si 76.45 348 P **P 04 32 09.1 -0.8**
AK20 Malin Array Si 76.45 348 P **P 04 32 09.1 -0.8**
AK18 Malin Array Si 76.47 348 P **P 04 32 09.2 -0.7**
AKASG Malin Array Be 76.47 348 P **P 04 32 09.2 -0.8**
comp=Z,4.1nm,0.6s,baz=17,slow=5.8,SNR=18
AKASG LR LR 05 11 16.8
comp=Z,187nm,18.4s,baz=22,slow=40
comp=Z,4.1nm,0.6s
AKASG Malin Array Be 76.47 348 P **P 04 32 09.2 -0.8**
AKASG IAmb IAmb 04 32 10.7
comp=Z,4.0nm,1.1s
AKBB Malin Array Si 76.47 348⇓ *i*P **P 04 32 09.1 -0.8**
AKBB pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 76.47 348 **P 04 32 09.2 -0.7**
AKBB IAmb IAmb 04 32 10.3
comp=Z,7.5nm,0.7s
KIEV Kiev 76.47 348⇓ P **P 04 32 09.4 -0.5**
KIEV Kiev 76.47 348⇓ P **P 04 32 09.4 -0.5**
KIEV Kiev 76.47 348 **P 04 32 09.5 -0.5**
CMAR Chiang Mai Arr 76.63 283 P **P 04 32 11.8 +0.4**
comp=Z,1.7nm,0.5s,baz=28,slow=5.7,SNR=14
CMAR LR LR 05 10 17.2
comp=Z,145nm,18.3s,baz=55,slow=39
comp=Z,1.7nm,0.5s
CMAR Chiang Mai Arr 76.63 283*c e*P **P 04 32 12.8 +1.4**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 76.63 283 P **P 04 32 11.9 +0.6**
TBI Tubuai 77.04 161 *e*LR LR 04 55 50.4
comp=Z,1μm,32.8s
BRG Berggiesshubel 77.47 358 *e*P **P 04 32 16.3 +0.7**
comp=Z,20nm,1.9s,baz=2.1,slow=4.9
BRG Berggiesshubel 77.47 358 *e*P **P 04 32 16.4 +0.8**
BRG Amp 04 32 19.0
comp=Z,2.7nm,0.7s
BRG pP **PcP 04 32 26.4 +0.4**
BRG Amp 04 32 30.0
comp=Z,2.1nm,0.7s
SHAA Shahritus 77.66 317 IAmb IAmb 04 32 34.6
comp=Z,63nm,1.1s
CHVC Chvalec 77.69 356 *e*P **P 04 32 16.7 -0.2**
CHVC Chvalec 77.69 356 *e*P **P 04 32 16.7 -0.2**
MEM Membach 77.71 3 *d*P **P 04 32 17.5 +0.6**
MEM *d*PcP **sP 04 32 26.0 -0.6**
MEM *d*PP **PP 04 35 10.4 -1.1**
OSTC Ostas 77.72 356 *e*P **P 04 32 18.4 +1.4**
OSTC Ostas 77.72 356 *e*P **P 04 32 18.4 +1.4**
BSTI Sart Tilman 77.72 3 *d*P **P 04 32 18.3 +1.3**
MOX Moxa 77.74 359 *e*P **P 04 32 17.4 +0.3**
comp=Z,41nm,2.3s,baz=2.1,slow=4.9
MOX *e*L L 05 10 02.9
comp=Z,110nm,20.5s
BCLA Clavier 77.87 3 *d*P **P 04 32 18.5 +0.6**
comp=Z,4.3nm,1.0s
DPC Dobruska-Polom 77.92 356 *e*P **P 04 32 19.3 +1.1**
DPC Dobruska-Polom 77.92 356 *e*P **P 04 32 19.3 +1.1**
BMRD Maredsous 77.97 4 *d*P **P 04 32 18.9 +0.5**
BMRD *d*pP **PcP 04 32 28.4 +0.3**
TNS Taunus Mts 78.15 1 *e*L L 05 12 41.8
comp=Z,192nm,20.8s
DOU Dourbes 78.17 4 *d*PcP **PcP 04 32 27.3 -1.7**
KRLC Kraliky 78.17 356 *e*P **P 04 32 20.4 +0.8**
KRLC Kraliky 78.17 356 *e*P **P 04 32 20.4 +0.8**
STEB Steborice 78.27 355 *e*P **P 04 32 20.2 +0.1**
MORC Moravsky Berou 78.44 355⇓ P **P 04 32 21.8 +0.7**
MORC Moravsky Berou 78.44 355⇓ P **P 04 32 21.8 +0.7**
MORC Moravsky Berou 78.44 355 IAmb IAmb 04 32 48.1
comp=Z,7.2nm,1.2s
MORC Moravsky Berou 78.44 355 *e*P **P 04 32 21.5 +0.4**
ROTZ Rotzenmuhle 78.61 359 *e*P **P 04 32 22.8 +0.8**
comp=Z,4.8nm,1.7s,baz=2.1,slow=4.9
NIL Nilore 78.63 311 P **P 04 32 23.2 +0.8**
GRA1 Grafenberg Arr 78.70 360 IAmb IAmb 04 32 41.3
comp=Z,10nm,1.1s
GRF Grafenberg Arr 78.70 360 *e*P **P 04 32 23.7 +1.2**
comp=Z,41nm,1.7s,baz=2.1,slow=4.9
GRF *e*L L 05 12 36.7
comp=Z,117nm,20.1s
MAUC Maruska 78.83 355 *e*P **P 04 32 21.9 -1.3**
ZVC Zvikov 78.90 358 *e*P **P 04 32 23.4 -0.2**
ZVC AMS AMS 05 11 10.0
comp=Z,200nm,19.3s
VRAC Vranov 78.95 356⇑P **P 04 32 24.8 +1.0**
VRAC Vranov 78.95 356⇑P **P 04 32 24.8 +1.0**
VRAC Vranov 78.95 356 *e*P **P 04 32 24.5 +0.6**
KOLS Kolonicke sedl 78.96 352 *e*P **P 04 32 25.2 +1.3**
KOLS Kolonicke sedl 78.96 352 *e*P **P 04 32 25.2 +1.3**
TREC Trest 79.01 357 *e*P **P 04 32 23.6 -0.6**
TREC Trest 79.01 357 *e*P **P 04 32 23.6 -0.6**
SORM Soroca 79.10 348⇑P **P 04 32 24.0 -0.6**
SORM Soroca 79.10 348⇑P **P 04 32 24.0 -0.6**
KRUC Moravsky 79.20 356 *e*P **P 04 32 25.6 +0.4**
KHC Kasperske Hory 79.23 358*c e*P **P 04 32 26.6 +1.2**
KHC pmax pmax
comp=Z,10.0nm,1.5s
KHC Kasperske Hory 79.23 358 IAmb IAmb 04 32 45.8
comp=Z,16nm,1.5s
KHC Kasperske Hory 79.23 358 *e*P **P 04 32 26.2 +0.8**
KHC AMS AMS 05 13 00.0
comp=Z,200nm,21.3s
WET Wettzell 79.23 358 *e*P **P 04 32 25.7 +0.3**
comp=Z,94nm,3.3s,baz=2.1,slow=4.9
WET *e*L L 05 10 23.8
comp=Z,138nm,20.0s
JAVC Velka Javorina 79.35 355 *e*P **P 04 32 27.5 +1.4**
GEC2 GERESS Array S 79.51 358 IAmb IAmb 04 32 51.7
comp=Z,4.3nm,0.9s
GEC2 GERESS Array S 79.51 358 *e*P **P 04 32 27.9 +0.9**
comp=Z,1.7nm,1.7s,baz=2.1,slow=4.9
GERES GERESS Array B 79.51 358 P **P 04 32 27.6 +0.6**
comp=Z,1.2nm,0.6s,baz=4.3,slow=4.2,SNR=17
comp=Z,1.2nm,0.6s
CKRC Cesky Krumlov 79.52 357 AMS AMS 05 11 50.0
comp=Z,200nm,22.7s
KBL Kabul 79.80 314 P **P 04 32 26.5 -2.5**
MODS Modra-Piesok 79.85 355 *e*P **P 04 32 30.6 +1.8**
MODS Modra-Piesok 79.85 355 *e*P **P 04 32 30.6 +1.8**
BUR08 Bucovina Ar. S 79.95 350 IAmb IAmb 04 33 05.9
comp=Z,9.0nm,1.4s
BURAR Bucovina Array 79.98 350⇓ P **P 04 32 29.9 +0.3**
BURAR Bucovina Array 79.98 350⇓ P **P 04 32 29.9 +0.3**
BURAR Bucovina Array 79.98 350 P **P 04 32 29.6 0.0**
BFO Black Forest 80.04 1 *e*P **P 04 32 30.4 +0.5**
comp=Z,25nm,1.7s,baz=2.1,slow=4.9
BFO *e*L L 05 12 29.6
comp=Z,127nm,20.8s
ECH Echery 80.13 2 IAmb IAmb 04 32 48.9
comp=Z,12nm,1.2s
PSZ Piszkesteto 80.15 354 IAmb IAmb 04 32 33.0
comp=Z,13nm,1.4s
MAK Makhachkala 80.15 333 *e*P **P 04 32 30.4 0.0**
MAK *e* 04 35 28.5
MAK *e*PPP PPP 04 37 17.9
MAK *e*S **S 04 42 31.6 -1.7**
MAK *e*SS **SS 04 47 44.5 +1.9**
MAK *e*SSS SSS 04 51 08.6
MAK pmax pmax
comp=Z,19nm,0.3s
WINA Alland / Wiene 80.17 356 *e*P **P 04 32 31.8 +1.3**
comp=Z,5.4nm,0.9s
FUR Furstenfeldbru 80.22 359 *e*L L 05 13 31.3
comp=Z,142nm,20.3s
CONA Conrad Observa 80.36 356 *e*P **P 04 32 32.7 +1.1**
comp=Z,3.5nm,0.6s,SNR=6.3
KIV Kislovodsk 80.47 337⇑P **P 04 32 32.0 -0.3**
KIV Kislovodsk 80.47 337 *e*P **P 04 32 33.8 +1.5**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 80.47 337 P **P 04 32 31.8 -0.5**
KIV Kislovodsk 80.47 337 P **P 04 32 33.2 +0.9**
comp=Z,15nm,0.8s
MOA Molln 80.49 357 *e*P **P 04 32 33.4 +1.1**
comp=Z,1.3nm,0.6s
KBZ Khabaz 80.64 337 P **P 04 32 33.7 +0.7**
comp=Z,3.8nm,0.7s,baz=12,slow=3.3,SNR=12
KBZ LR LR 05 14 31.3
comp=Z,195nm,18.7s,baz=20,slow=40
comp=Z,3.8nm,0.7s
KBZ Khabaz 80.64 337*d i*P **P 04 32 34.6 +1.6**
KBZ pmax pmax

comp=Z,6.0nm,0.8s
BIOA Bad Ischl, Aus 80.66 358 *e*P P 04 32 34.6 +1.4
comp=Z,3.8nm,0.7s
SHA1 Shidzhatmaz 80.68 337 *de*P P 04 32 35.1 +1.5
ANN Anapa 80.83 341 *e*P P 04 32 33.9 -0.2
ANN pmax pmax
comp=Z,32nm,1.0s
RETA Reutte 80.91 360 *e*P P 04 32 35.4 +0.8
comp=Z,2.1nm,0.7s
LESA Schwarzleotal 80.95 359 *e*P P 04 32 36.0 +1.2
comp=Z,2.9nm,0.7s
DRGR 81.05 352 ⇓P P 04 32 36.1 +0.8
DRGR 81.05 352 ⇓P P 04 32 36.1 +0.8
MOTA Moosalm 81.05 360 *e*P P 04 32 36.3 +0.9
comp=Z,6.6nm,0.8s
ARSA Arzberg 81.05 357 *e*P P 04 32 36.4 +1.2
comp=Z,2.2nm,0.6s,SNR=5.6
WATA Walderalm 81.05 359 *e*P P 04 32 36.6 +1.1
comp=Z,5.3nm,0.9s
ONER Baraj Valea Uz 81.11 349 ⇓P P 04 32 37.1 +1.5
MARR Marisel-Cluj 81.12 351 ⇓P P 04 32 36.4 +0.7
WTTA Wattenberg 81.12 359 *e*P P 04 32 37.1 +1.2
comp=Z,7.3nm,0.6s
SQTA Sankt Quirin 81.17 360 *e*P P 04 32 37.1 +1.1
comp=Z,16nm,1.7s
SESA Seetaler Alpe, 81.22 357 *e*P P 04 32 37.7 +1.3
comp=Z,15nm,0.7s
KBA Koelnbreinsper 81.28 358 *i*P P 04 32 37.9 +1.2
comp=Z,9.6nm,0.6s
FETA Feichten 81.37 360 *e*PcP P 04 32 38.6 +1.4
comp=Z,12nm,1.5s
AKT Akhty 81.46 333 *e*P P 04 32 38.4 +0.8
AKT *e* 04 32 44.1
AKT *e* 04 37 30.6
AKT pmax pmax
comp=Z,26nm,0.7s
CTA Charters Tower 81.49 222 LR LR 05 09 33.3
comp=Z,82nm,18.6s,baz=220,slow=36
VSLR Vesyoloye 81.56 339⇓ *e*P P 04 32 39.5 +1.5
VSLR pmax pmax
comp=Z,12nm,0.8s
DAVOX Davos/Dischmat 81.61 0 LR LR 05 11 15.4
comp=Z,65nm,19.6s,baz=5.5,slow=38
COVR Voineasa-Covas 81.61 349 ⇓P P 04 32 39.7 +1.4
ABTA Abfaltersbach 81.63 359 *e*P P 04 32 39.5 +1.1
comp=Z,4.6nm,0.7s
SOKA Soboth 81.64 357 *e*P P 04 32 39.1 +0.6
comp=Z,7.8nm,0.8s,SNR=5.5
SAHR Sahastru 81.67 349 ⇑P P 04 32 39.6 +1.0
MYKA Terra Mystica 81.73 358 *e*P P 04 32 39.8 +0.8
comp=Z,2.0nm,0.6s
FUORN Ofenpass-Fuorn 81.77 0 P P 04 32 40.4 +1.0
FUORN IAmb IAmb 04 33 07.3
comp=Z,14nm,1.2s
OBKA Obir 81.82 357 *e*P P 04 32 40.4 +0.9
comp=Z,6.9nm,0.8s,SNR=5.4
TUE Stuetta 81.92 1 P P 04 32 41.3 +1.2
TUE IAmb IAmb 04 32 43.7
comp=Z,5.0nm,0.8s
MLR Muntele Rosu 82.00 349 LR LR 05 11 08.8
comp=Z,233nm,21.1s,baz=22,slow=37
CFR Carcaliu 82.03 348 ⇑P P 04 32 39.7 -0.7
CFR Carcaliu 82.03 348 ⇑P P 04 32 39.7 -0.7
VOIR 82.15 350 ⇓P P 04 32 42.5 +1.3
VOIR 82.15 350 ⇓P P 04 32 42.5 +1.3
VOIR 82.15 350 P P 04 32 41.4 +0.2
KAPI Kappang 82.25 252 LR LR 05 06 43.5
comp=Z,109nm,19.1s,baz=260,slow=34
ARR Arges 82.26 350 ⇑P P 04 32 43.6 +1.8
GZR Gura Zlata 82.42 351 ⇓P P 04 32 43.0 +0.4
GZR Gura Zlata 82.42 351 ⇓P P 04 32 43.0 +0.4
MDVR Moldovita 83.13 352 ⇑P P 04 32 47.8 +1.6
GNI Garni 83.52 334 LR LR 05 17 11.5
comp=Z,158nm,18.2s,baz=14,slow=41
KTUT Trabzon 83.97 338 ⇑P P 04 32 51.6 +1.1
BATI Baumata 84.20 245 LR LR 05 05 14.7
comp=Z,559nm,21.0s,baz=309,slow=32
CEST Esterri de Car 85.45 7 P P 04 33 00.6 +2.4
PDG Podgorica 85.66 354 ⇓P P 04 32 59.7 +0.8
BRTR Keskin Array B 86.47 342 P P 04 33 03.7 +0.4
comp=Z,1.6nm,0.8s,baz=12,slow=2.8,SNR=7.4
BRTR LR LR 05 15 44.9
comp=Z,128nm,20.1s,baz=14,slow=38
comp=Z,1.6nm,0.8s
BRTR Keskin Array B 86.47 342 *ce*P P 04 33 04.5 +1.2
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 86.47 342 P P 04 33 04.3 +1.0
WRA Warramunga Arr 86.71 232 P P 04 33 03.9 -0.4
comp=Z,3.1nm,0.8s,baz=34,slow=5.9,SNR=20
comp=Z,3.1nm,0.8s
WRA Warramunga Arr 86.71 232 P P 04 33 03.9 -0.4
ESDC Sonseca Array 87.85 11 P P 04 33 09.8 -0.1
comp=Z,1.4nm,0.6s,baz=346,slow=4.2,SNR=23
ESDC LR LR 05 12 08.9
comp=Z,185nm,21.6s,baz=339,slow=36
comp=Z,1.4nm,0.6s
ESDC Sonseca Array 87.85 11 P P 04 33 10.3 +0.5
SDV Santo Domingo 88.48 78 LR LR 05 15 11.7
comp=Z,154nm,18.7s,baz=305,slow=37
RPSI Rantau Prapat 88.88 273 P P 04 33 15.6 +0.7
AS17 Alice Springs 90.05 230 P P 04 33 21.2 +1.1
comp=Z,18nm,0.8s
AS15 Alice Springs 90.06 230 P P 04 33 21.5 +1.3
comp=Z,13nm,0.9s
AS31 Alice Springs 90.09 230 P P 04 33 21.6 +1.2
comp=Z,4.2nm,0.8s
AS31 Alice Springs 90.09 230 P P 04 33 21.4 +1.0
AS31 IAmb IAmb 04 33 21.9
comp=Z,3.0nm,0.7s
ASAR Alice Springs 90.09 230 P P 04 33 21.2 +0.8
comp=Z,7.9nm,0.6s,baz=30,slow=4.8,SNR=96
ASAR LR LR 05 09 42.8
comp=Z,84nm,19.9s,baz=311,slow=33
comp=Z,7.9nm,0.6s
AS09 Alice Springs 90.10 230 P P 04 33 21.8 +1.3
comp=Z,18nm,0.8s
URZ Urewera 90.63 191 LR LR 05 11 04.5
comp=Z,185nm,18.3s,baz=330,slow=34
MMAI Mount Meron Ar 92.59 339 P P 04 33 32.5 +0.4
comp=Z,0.7nm,0.4s,baz=278,slow=4.1,SNR=1.5
comp=Z,0.7nm,0.4s
STKA Stephens Creek 93.86 220 LR LR 05 10 17.1
comp=Z,151nm,20.2s,baz=16,slow=32
MDT Midelt 94.52 13 LR LR 05 20 55.9
comp=Z,86nm,18.2s,baz=32,slow=38
RPN Rapa Nui 94.71 129 LR LR 05 07 09.3
comp=Z,58nm,19.4s,baz=266,slow=30
PALK Pallekele 96.26 290 LR LR 05 21 07.0
comp=Z,196nm,20.6s,baz=110,slow=38
RPZ Rata Peaks 96.80 194 LR LR 05 12 13.4
comp=Z,36nm,19.0s,baz=288,slow=32
DBIC Dimbokro 120.11 18 PKP **PKPdf** 04 39 11.0 -0.5
comp=Z,5.4nm,1.1s,baz=0.0,slow=0.0,SNR=2.1
DBIC Dimbokro 120.11 18 PKIKP **PKPdf** 04 39 11.0 -0.5
PLCA Paso Flores 125.72 112 PKP **PKiKP** 04 39 23.1 +1.2
comp=Z,1.0nm,0.7s,baz=280,slow=3.0,SNR=3.1
QSPA South Pole Qui 141.75 180 PKhKP PKPpre 04 39 45.8
comp=Z,1.4nm,0.6s,baz=284,slow=0.6,SNR=12
MAW Mawson 150.53 218 PKPbc **PKiKP** 04 40 12.0 +0.6
comp=Z,4.1nm,0.6s,baz=108,slow=4.9,SNR=14
ELIB Princess Elisa 159.18 191 *d*PKP **PKPab** 04 40 54.0 -0.5
TROLL Troll, Antarti 159.60 173 ⇓PKPab **PKPab** 04 40 56.9 +0.6
comp=Z,110nm,0.6s

NEIC ***12*** *04:30:45.0±1.0, 21.2°S±0.1°×178.7°W±0.1, h582km±9km, mb4.1/16, Error ellipse: s-maj=19.3km s-min=15.8km az=206.0*

ISC 12 04:30:44.5±0.6, 21.2°S±0.1°×178.7°W±0.1, h579km, n42, σ0.75/39, mb3.9/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**318**	P	P	P	**04 32 13.1**	**-0.1**
	24nm,0.5s,baz=104,slow=4.2,SNR=14							
MSVF	**Nonsavu**	**4.61**	**318**	P	P	P	**04 32 13.2**	**0.0**
URZ	**Urewera**	**17.36**	**191**	P	P	P	**04 34 13.3**	**-1.7**
	3.3nm,0.3s,baz=333,slow=6.8,SNR=11							
QRZ	**Quartz Range**	**20.91**	**199**	P	P	P	**04 34 46.6**	**-0.6**
WHZ	**Wether Hill Ro**	**26.92**	**201**	P	P	P	**04 35 40.4**	**0.0**
EIDS	**Eidsvold**	**28.00**	**256**	P	P	P	**04 35 50.6**	**+0.4**
EIDS					IAmb	IAmb	04 35 51.1	
	comp=Z,3.2nm,0.7s							
STKA	**Stephens Creek**	**36.86**	**245**	P	P	P	**04 37 05.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=50,slow=7.9,SNR=1.4							
	comp=Z,0.5nm,0.3s							
WR8	**Warramunga Arr**	**43.68**	**263**	P	P	P	**04 37 58.9**	**-0.5**
WR8					IAmb	IAmb	04 38 00.3	
	comp=Z,5.6nm,1.0s							
AS31	**Alice Springs**	**43.69**	**258**	P	P	P	**04 37 59.6**	**+0.1**
ASAR	**Alice Springs**	**43.69**	**258**	P	P	P	**04 37 59.5**	**0.0**
	comp=Z,3.6nm,0.8s,baz=92,slow=8.0,SNR=27							
ASAR					PcP	**PcP**	**04 39 33.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=102,slow=4.0,SNR=4.3							
	comp=Z,3.6nm,0.8s							
ASAR	**Alice Springs**	**43.69**	**258**	P	P	P	**04 37 59.1**	**-0.4**
WRA	**Warramunga Arr**	**43.83**	**263**	P	P	P	**04 38 00.1**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=97,slow=7.5,SNR=34							
	comp=Z,1.9nm,0.5s							
WRA	**Warramunga Arr**	**43.83**	**263**	P	P	P	**04 37 60.0**	**-0.6**
MTN	**Manton Dam**	**48.49**	**271**	P	P	P	**04 38 35.5**	**-0.3**
MTN					IAmb	IAmb	04 39 15.8	
	comp=Z,13nm,1.1s							
KNRA	**Kununurra**	**49.93**	**267**	P	P	P	**04 38 45.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**52.26**	**263**	P	P	P	**04 39 02.9**	**-0.3**
VNDA	**Vanda**	**57.14**	**185**	P	P	P	**04 39 37.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=2.2,slow=7.6,SNR=7.9							
	comp=Z,0.7nm,0.6s							
VNDA	**Vanda**	**57.14**	**185**	P	P	P	**04 39 37.2**	**+0.9**
QSPA	**South Pole Qui**	**68.85**	**180**	P	P	P	**04 40 52.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=355,slow=0.3,SNR=2.0							
	comp=Z,2.0nm,0.6s							
QSPA	**South Pole Qui**	**68.85**	**180**	P	P	P	**04 40 52.4**	**+0.7**
QSPA					IAmb	IAmb	04 40 52.7	
	comp=Z,2.2nm,0.7s							
YULB	**Yu-li**	**73.33**	**304**	P	P	P	**04 41 18.0**	**-0.4**
YULB					IAmb	IAmb	04 41 39.7	
	comp=Z,9.3nm,1.3s							
TPUB	**Ta-pu**	**73.80**	**303**	P	P	P	**04 41 19.8**	**-1.3**
PETK	**Petropavlovsk-**	**76.79**	**346**	P	P	P	**04 41 37.1**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=130,slow=4.6,SNR=3.8							
	comp=Z,1.8nm,0.6s							
PETK	**Petropavlovsk-**	**76.79**	**346**	P	P	P	**04 41 37.8**	**+0.8**
NVAR	**Mina Array Bea**	**82.01**	**44**	P	P	P	**04 42 05.8**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=218,slow=8.2,SNR=6.2							
	comp=Z,0.6nm,0.6s							
N15K	**Kwethluk River**	**82.51**	**9**	P	P	P	**04 42 07.6**	**+0.8**
N15K					IAmb	IAmb	04 42 18.4	
	comp=Z,8.0nm,1.2s							
M16K	**Timber Creek**	**83.50**	**10**	P	P	P	**04 42 12.5**	**+0.8**
M16K					IAmb	IAmb	04 42 25.6	
	comp=Z,12nm,1.5s							
TRF	**Thorofare Moun**	**87.29**	**12**	P	P	P	**04 42 29.1**	**-1.0**
TRF					IAmb	IAmb	04 42 30.1	
	comp=Z,3.9nm,0.7s							
TXAR	**Lajitas Array**	**88.02**	**58**	P	P	P	**04 42 33.6**	**-0.6**
	comp=Z,0.2nm,0.8s,baz=216,slow=6.2,SNR=3.8							
	comp=Z,0.2nm,0.8s							
ILAR	**Eielson Array**	**89.16**	**13**	P	P	P	**04 42 37.8**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=218,slow=5.2,SNR=10							
	comp=Z,0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P	P	P	**04 42 43.5**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=145,slow=2.9,SNR=5.2							
	comp=Z,1.5nm,0.3s							
PDAR	**Pinedale Array**	**89.95**	**43**	P	P	P	**04 42 43.0**	**0.0**
	comp=Z,0.4nm,0.7s,baz=146,slow=2.9,SNR=5.7							
	comp=Z,0.4nm,0.7s							
SONM	**Songino Array**	**95.85**	**319**	P	P	P	**04 43 10.9**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=1.9							
	comp=Z,0.2nm,0.3s							
ARCES	**ARCESS Array B**	**129.50**	**349**	PKP	P	**PKPdf**	**04 48 46.2**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=42,slow=2.0,SNR=8.7							
AKASG	**Malin Array Be**	**143.30**	**330**	PKP	PKPab		04 49 10.8	-0.8
	comp=Z,3.5nm,0.5s,baz=44,slow=4.2,SNR=24							
AKASG	**Malin Array Be**	**143.30**	**330**			PKPab	04 49 11.1	-0.6
AKBB	**Malin Array Si**	**143.30**	**330**			PKPab	04 49 10.8	-0.8
KIEV	**Kiev**	**143.31**	**330**			PKPab	04 49 11.2	-0.5
EKA	**Eskdalemuir Ar**	**145.77**	**4**	PKPbc		**PKPbc**	**04 49 18.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=326,slow=2.5,SNR=5.5							
BRTR	**Keskin Array B**	**146.80**	**311**	PKPbc		**PKPbc**	**04 49 22.2**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=126,slow=5.4,SNR=5.0							
MMAI	**Mount Meron Ar**	**147.56**	**298**	PKPbc		**PKPbc**	**04 49 24.1**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=28,slow=6.5,SNR=1.4							
GERES	**GERESS Array B**	**150.69**	**343**	PKPbc		**PKPbc**	**04 49 31.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=0.0,slow=1.3,SNR=7.8							

SJA ***12*** *04:32:47.1±0.6, 20.2°42S×68.2°82W, h124km±5km, ML3.5, MW3.7*

IDC ***12*** *04:32:48.7±2.4, 20.2°61S×68.2°44W, h113km±23km, mb3.3/2, mbtmp3.7/6, Error ellipse: s-maj=32.0km s-min=18.6km az=85.0*

GUC ***12*** *04:32:48.8±0.8, 20.2°41S×68.2°87W, h109km±4km, ML3.4*

ISC 12 04:32:47.4±0.9, 20.45S±0.03°×68.81W±0.06, h123km±9km, n36, σ1.977/58, 1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.44**	**314**	*e*P	**Pn**		**04 33 05.9**	**0.0**
PB08					IAML		04 33 21.5	
	comp=Z,1μm,0.3s							
PB08	**IPOC Station P**	**0.44**	**314**	*i* P	**Pn**		**04 33 05.9**	**0.0**
PB08					*e*S	**Sn**	**04 33 18.8**	**-1.1**
PB08					IAML		04 33 19.5	
	comp=N,4μm,0.3s							
GO01	**Chusmiza**	**0.86**	**335**	*e*P	**Pn**		**04 33 09.2**	**+0.1**
GO01					IAML		04 33 27.7	
	comp=Z,586nm,0.2s							
GO01	**Chusmiza**	**0.86**	**335**	*i* P	**Pn**		**04 33 09.3**	**+0.3**
PB11	**IPOC Station P**	**1.05**	**311**	*e*P	**Pn**		**04 33 10.6**	**+0.2**
PB11					*e*S	**Sn**	**04 33 28.2**	**+0.4**
PB11					IAML		04 33 28.8	
	comp=Z,572nm,0.2s							
PB11	**IPOC Station P**	**1.05**	**311**	*i* P	**Pn**		**04 33 10.6**	**+0.2**
TA02	**Huaiquique**	**1.25**	**278**	*e*P	**Pn**		**04 33 12.8**	**+0.5**
TA02					*e*S	**Sn**	**04 33 32.2**	**+1.1**
TA02					IAML		04 33 32.7	
	comp=Z,1μm,0.6s							
TA01	**Diego Aracena**	**1.29**	**265**	*e*P	**Pn**		**04 33 12.9**	**+0.2**
TA01					*e*S	**Sn**	**04 33 31.8**	**0.0**
TA01					IAML		04 33 32.0	
	comp=Z,279nm,0.5s							
TA01	**Diego Aracena**	**1.29**	**265**	⇑*i*P	**Pn**		**04 33 12.9**	**+0.2**
TA01					*e*S	**Sn**	**04 33 31.2**	**-0.7**
PB02	**IPOC Station P**	**1.33**	**229**	*e*P	**Pn**		**04 33 14.1**	**+0.8**
PB02					*e*S	**Sn**	**04 33 33.8**	**+0.8**
PB02					IAML		04 33 34.7	
	comp=Z,1μm,0.6s							
PB02	**IPOC Station P**	**1.33**	**229**	*i* P	**Pn**		**04 33 14.1**	**+0.8**
PB02					*e*S	**Sn**	**04 33 33.5**	**+0.5**
PB02					IAML		04 33 35.5	
	comp=E,1μm,0.4s							
PB09	**IPOC Station P**	**1.40**	**197**	*e*P	**Pn**		**04 33 14.9**	**+0.8**
PB09					*e*S	**Sn**	**04 33 37.0**	**+2.6**
PB09					IAML		04 33 40.5	
	comp=Z,290nm,0.6s							
PB09	**IPOC Station P**	**1.40**	**197**	*i* P	**Pn**		**04 33 15.4**	**+1.3**
PB09					*e*S	**Sn**	**04 33 36.1**	**+1.7**
PB09					IAML		04 33 40.8	
	comp=N,402nm,0.6s							
PSGCX	**Pisagua**	**1.50**	**304**	*e*P	**Pn**		**04 33 15.5**	**+0.3**
PSGCX					*e*S	**Sn**	**04 33 36.6**	**+0.4**
PSGCX					IAML		04 33 37.4	
	comp=Z,765nm,0.3s							
PSGCX	**Pisagua**	**1.50**	**304**	*i* P	**Pn**		**04 33 15.3**	**+0.2**
PSGCX					*e*S	**Sn**	**04 33 35.8**	**-0.5**
PB07	**IPOC Station P**	**1.62**	**218**	*e*P	**Pn**		**04 33 17.3**	**+0.7**
PB07					*e*S	**Sn**	**04 33 40.0**	**+1.1**
PB07					IAML		04 33 40.2	
	comp=Z,404nm,0.4s							

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**1.62**	**218**	*i* P	**Pn**		**04 33 17.3**	**+0.7**
PB07					*e*S	**Sn**	**04 33 39.0**	**+0.2**
PB07					IAML		04 33 40.5	
	comp=N,682nm,0.5s							
PB03	**IPOC Station P**	**1.82**	**209**	*e*P	**Pn**		**04 33 20.1**	**+1.1**
PB03					*e*S	**Sn**	**04 33 43.8**	**+0.7**
PB03					IAML		04 33 46.0	
	comp=Z,291nm,0.4s							
PB16	**IPOC Station P**	**2.20**	**343**	*e*P	**Pn**		**04 33 20.4**	**-3.8**
PB16					*e*S	**Sn**	**04 33 54.8**	**+2.5**
PB16					IAML		04 33 55.3	
	comp=Z,187nm,0.7s							
PB16	**IPOC Station P**	**2.20**	**343**	*i* P	**Pn**		**04 33 25.8**	**+1.6**
PB12	**IPOC Station P**	**2.32**	**322**	*e*P	**Pn**		**04 33 25.2**	**0.0**
PB12					*e*S	**Sn**	**04 33 54.0**	**0.0**
PB12					IAML		04 33 59.8	
	comp=Z,493nm,0.4s							
PB12	**IPOC Station P**	**2.32**	**322**	*i* P	**Pn**		**04 33 25.2**	**0.0**
PB12					*e*S	**Sn**	**04 33 53.9**	**-0.2**
PB06	**IPOC Station P**	**2.35**	**197**	*e*P	**Pn**		**04 33 27.0**	**+1.3**
PB06					*e*S	**Sn**	**04 33 54.1**	**-0.9**
PB06					IAML		04 34 04.6	
	comp=Z,131nm,0.2s							
PB06	**IPOC Station P**	**2.35**	**197**	*i* P	**Pn**		**04 33 26.9**	**+1.2**
AP01	**Chacalluta**	**2.52**	**325**	*e*P	**Pn**		**04 33 31.1**	**+3.5**
AP01					IAML		04 34 06.5	
	comp=Z,677nm,0.3s							
AF01	**San Pedro de A**	**2.56**	**167**	*e*P	**Pn**		**04 33 29.8**	**+1.4**
AF01					*e*S	**Sn**	**04 34 00.8**	**+0.9**
AF01					IAML		04 34 14.5	
	comp=Z,125nm,2.5s							
PB05	**IPOC Station P**	**2.72**	**208**	*e*P	**Pn**		**04 33 31.1**	**+0.8**
PB05					*e*S	**Sn**	**04 33 59.3**	**-4.0**
PB05					*e*S		04 34 09.2	
PB05					IAML		04 34 14.6	
	comp=Z,84nm,0.4s							
HJA	**Humahuaca**	**4.19**	**132**	*e*P	**Pn**		**04 33 52.9**	**+3.0**
LPAZ	**La Paz**	**4.19**	**9**	P	**Pn**		**04 33 53.1**	**+2.9**
	comp=Z,12nm,0.3s,baz=210,slow=3.0,SNR=198							
LPAZ					S	**Sn**	**04 34 43.2**	**+4.5**
	comp=Z,3.1nm,0.5s,baz=4.1,slow=22,SNR=1.4							
LPAZ	**La Paz**	**4.19**	**9**	*e*P	**Pn**		**04 33 47.4**	**-2.9**
PB14	**IPOC Station P**	**4.41**	**199**	*e*P	Pn		04 33 49.0	-3.8
PB14					*e*S	**Sn**	**04 34 41.8**	**-1.7**
PB14					IAML		04 35 04.1	
	comp=Z,35nm,0.4s							
SIV	**San Ignacio**	**8.59**	**60**	P	**Pn**		**04 34 47.2**	**-1.8**
	comp=Z,1.8nm,0.4s,baz=248,slow=11,SNR=16							
SIV					S	**Sn**	**04 36 19.1**	**-5.1**
	comp=Z,1.0nm,0.8s,baz=258,slow=14,SNR=2.0							
CFA	**Coronel Fontan**	**11.12**	**177**	P	**Pn**		**04 35 21.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=4.4,slow=13,SNR=5.6							
CPUP	**Villa Florida**	**12.06**	**121**	P	**Pn**		**04 35 33.0**	**-2.3**
	comp=Z,1.8nm,0.7s,baz=311,slow=13,SNR=7.2							
BDFB	**Brasilia**	**20.34**	**80**	P	**P**		**04 37 13.7**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=240,slow=8.1,SNR=2.3							
	comp=Z,1.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**76.92**	**71**	P	**P**		**04 44 27.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=254,slow=5.2,SNR=7.0							
	comp=Z,0.4nm,0.5s							

IDC ***12*** *04:45:21.1±0.6, 38.71°S×175.01°E, h227km±8km, mb3.4/6, mbtmp4.0/7, Error ellipse: s-maj=18.6km s-min=12.1km az=125.0*

NOU ***12*** *04:45:22.5, 38.85°S×175.19°E, h246km, MLv4.4/20, North Island, New Zealand*

WEL ***12*** *04:45:26.3±0.6, 39.5°S±6.1°×17.5°E±1°, h220km±4km, M3.9/80, ML3.1/6, MLv3.9/80, Error ellipse: s-maj=7.7km s-min=7.3km az=81.4*

ISC 12 04:45:22.6±0.7, 38.77S±0.05°×175.08E±0.05, h251km±5km, n137, σ1.828/152, mb3.5/6, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HIZ	**Hauiti**	**0.31**	**325**	P	**Pn**		**04 45 55.2**	**0.0**
HIZ	**Hauiti**	**0.31**	**325**	P	Pn		**04 45 55.4**	**+0.1**
HIZ				S	**S**		**04 46 20.1**	**-0.8**
TWVZ	**Taurewa**	**0.41**	**138**	P	**Pn**		**04 45 55.9**	**+0.4**
TWVZ				S	**S**		**04 46 19.6**	**-1.9**
VRZ	**Vera Road**	**0.44**	**215**	P	**Pn**		**04 45 55.6**	**+0.2**
WATZ	**Wairara**	**0.51**	**84**	P	**Pn**		**04 45 56.3**	**+0.6**
KATZ	**Kakaramea**	**0.52**	**114**	P	**Pn**		**04 45 56.3**	**+0.4**
WTVZ	**West Tongariro**	**0.53**	**132**	P	**Pn**		**04 45 56.3**	**+0.5**
WTVZ				S	**S**		**04 46 20.2**	**-1.8**
KRVZ	**Karewarewa**	**0.55**	**127**	P	**Pn**		**04 45 56.4**	**+0.5**
KRVZ				S	**S**		**04 46 20.2**	**-1.9**
RATZ	**Rangitukua**	**0.55**	**101**	P	**Pn**		**04 45 56.1**	**+0.2**
PKVZ	**Pokaka**	**0.56**	**159**	P	**Pn**		**04 45 56.5**	**+0.7**
PKVZ				S	**S**		**04 46 20.5**	**-1.6**
COVZ	**Chateau Observ**	**0.56**	**141**	P	**Pn**		**04 45 56.3**	**+0.4**
COVZ				S	**S**		**04 46 19.5**	**-2.7**
TLZ	**Tolley Road**	**0.56**	**39**	P	**Pn**		**04 45 56.0**	**+0.1**
NTVZ	**North Tongarir**	**0.57**	**126**	P	**Pn**		**04 45 56.8**	**+0.8**
NGZ	**Ngauruhoe**	**0.57**	**136**	P	**Pn**		**04 45 56.6**	**+0.6**
TMVZ	**Te Maari**	**0.60**	**126**	P	**Pn**		**04 45 56.6**	**+0.6**
TMVZ				S	**S**		**04 46 20.2**	**-2.3**
OTVZ	**Oturere**	**0.60**	**131**	P	**Pn**		**04 45 57.0**	**+0.9**
OTVZ				S	**S**		**04 46 21.4**	**-1.1**
SNVZ	**South Ngauruho**	**0.60**	**134**	P	**Pn**		**04 45 57.0**	**+0.8**
FWVZ	**Far West T-bar**	**0.61**	**143**	P	**Pn**		**04 45 56.7**	**+0.4**
FWVZ				S	**S**		**04 46 20.4**	**-2.4**
ETVZ	**East Tongariro**	**0.61**	**127**	P	**Pn**		**04 45 56.7**	**+0.5**
ETVZ				S	**S**		**04 46 20.7**	**-1.8**
MAVZ	**Matarangi**	**0.62**	**144**	P	**Pn**		**04 45 56.8**	**+0.4**
MAVZ				S	**S**		**04 46 20.4**	**-2.7**
RITZ	**Rihia Road**	**0.64**	**109**	P	**Pn**		**04 45 56.7**	**+0.6**
KUTZ	**Kaahu Road**	**0.64**	**65**	P	**Pn**		**04 45 56.5**	**+0.4**
TRVZ	**Turoa**	**0.64**	**146**	P	**Pn**		**04 45 56.8**	**+0.5**
WHVZ	**Whangaehu Hut**	**0.65**	**143**	P	**Pn**		**04 45 56.9**	**+0.5**
MHEZ	**Mangahewa**	**0.67**	**242**	P	**Pn**		**04 45 57.4**	**+1.3**
TUVZ	**Tukino**	**0.67**	**139**	P	**Pn**		**04 45 57.2**	**+0.8**
MTVZ	**Mangateitei**	**0.69**	**154**	P	**Pn**		**04 45 57.0**	**+0.7**
WNVZ	**Wahianoa**	**0.69**	**145**	P	**Pn**		**04 45 57.1**	**+0.6**
DREZ	**Durham Road**	**0.81**	**238**	P	**Pn**		**04 45 57.6**	**+0.9**
MOVZ	**Moawhango**	**0.82**	**141**	P	**Pn**		**04 45 57.1**	**+0.1**
MOVZ				S	**S**		**04 46 20.7**	**-3.3**
LREZ	**Lake Rotokare**	**0.87**	**217**	P	**Pn**		**04 45 58.0**	**+0.9**
NEZ	**North Egmont**	**0.92**	**237**	P	**Pn**		**04 45 58.6**	**+1.2**
PREZ	**Palmer Road**	**0.92**	**231**	P	**Pn**		**04 45 58.4**	**+1.0**
KHEZ	**Kahui Hut**	**0.98**	**237**	P	**Pn**		**04 45 58.5**	**+0.8**
KHEZ	**Kahui Hut**	**0.98**	**237**	S	**S**		**04 46 25.4**	**0.0**
KHEZ	**Kahui Hut**	**

DVHZ	Dannevirke	1.75	152	P	Pn	04 46 03.4	+0.5
SNGZ	Shannon Statio	1.76	91	P	Pn	04 46 01.9	-1.2
CKHZ	Cape Kidnapper	1.79	121	P	Pn	04 46 04.3	+1.0
ETAZ	East Tamaki Re	1.81	356	P	Pn	04 46 03.6	0.0
PXZ	Pawanui	1.87	133	P	Pn	04 46 04.5	+0.6
WTAZ	Waiatarua	1.88	347	P	Pn	04 46 03.3	-0.9
EPAZ	Eden Park BICE	1.91	352	P	Pn	04 46 04.6	+0.2
PRWZ	Pori Road	1.91	159	P	Pn	04 46 05.0	+0.7
PRHZ	Porangahau	1.92	142	P	Pn	04 46 05.0	+0.6
MRZ	Mangatainoka R	1.93	169	P	Pn	04 46 04.8	+0.3
HBAZ	Herne Bay Bore	1.93	352	P	Pn	04 46 04.8	+0.2
MWZ	Matawai	1.96	78	P	Pn	04 46 04.5	-0.4
WIAZ	Waiheke Island	1.97	1	P	Pn	04 46 03.3	-1.7
MBAZ	Motutapu North	2.00	356	P	Pn	04 46 05.3	+0.1
ANWZ	Angora Road	2.00	148	P	Pn	04 46 05.7	+0.6
RVAZ	Riverhead Bore	2.03	349	P	Pn	04 46 03.5	-2.0
KNZ	Kokohu	2.04	98	P	Pn	04 46 05.7	+0.3
OGWZ	Otaki Gorge	2.05	178	P	Pn	04 46 06.2	+0.7
KIW	Kapiti Island	2.10	184	P	Pn	04 46 06.2	+0.2
RIGZ	Rimuhau	2.10	89	P	Pn	04 46 06.4	+0.4
TIWZ	Tintock	2.10	163	P	Pn	04 46 06.8	+0.8
BFZ	Birch Farm	2.11	155	P	Pn	04 46 06.1	0.0
BFZ	Birch Farm	2.11	155	S	S	04 46 38.0	-2.6
BFZ	Birch Farm	2.11	155	P	Pn	04 46 06.4	+0.3
HOWZ	Holdsworth Sta	2.15	171	P	Pn	04 46 06.5	0.0
ABAZ	Army Bay	2.17	355	P	Pn	04 46 07.2	+0.4
RUGZ	Raukumara Rang	2.19	69	P	Pn	04 46 05.8	-1.3
PRGZ	Paritu Road	2.19	95	P	Pn	04 46 07.3	+0.4
DUWZ	D'Urville Isla	2.22	203	P	Pn	04 46 07.6	+0.5
CPWZ	Castlepoint	2.31	158	P	Pn	04 46 08.8	+0.9
CAW	Cannon Point	2.34	180	P	Pn	04 46 08.5	+0.2
TWGZ	Tauwhareparae	2.35	76	P	Pn	04 46 08.6	+0.1
HAZ	Te Kaha	2.35	65	P	Pn	04 46 07.2	-1.3
MTW	Mount Morrison	2.41	172	P	Pn	04 46 09.0	+0.1
TMWZ	Te Maipa	2.42	165	P	Pn	04 46 09.2	+0.1
CNGZ	Carnagh Statio	2.46	84	P	Pn	04 46 10.5	+1.0
TCW	Tory Channel	2.52	194	P	Pn	04 46 10.3	+0.3
PKGZ	Pakihiroa	2.52	70	P	Pn	04 46 09.6	-0.6
GRZ	Great Barrier	2.53	7	P	Pn	04 46 10.1	-0.2
SNZO	South Karori	2.56	186	P	Pn	04 46 10.2	-0.2
SNZO	South Karori	2.56	186	P	S	04 46 46.8	-1.5
PUZ	Puketiti	2.59	75	P	Pn	04 46 10.5	-0.4
TKNZ	Takaka Hill	2.79	215	P	Pn	04 46 12.3	-0.6
PLWZ	Palliser	2.80	177	P	Pn	04 46 12.9	-0.1
MXZ	Matakaoa Point	2.81	66	P	Pn	04 46 12.8	-0.3
MXZ	Matakaoa Point	2.81	66	P	S	04 46 50.6	-2.5
MXZ	Matakaoa Point	2.81	66	P	Pn	04 46 12.6	-0.5
QRZ	Quartz Range	2.85	223	P	Pn	04 46 12.4	-1.0
KHZ	Kahutara	3.83	197	P	Pn	04 46 24.0	-0.3
KHZ	Kahutara	3.83	197	P	S	04 47 10.6	-2.9
RPZ	Rata Peaks	5.80	210	P	Pn	04 46 46.6	-1.6
	18nm,0.5s,baz=29,slow=1.7,SNR=31						
RPZ				S	S	04 47 50.0	-6.7
	22nm,0.3s,baz=127,slow=22,SNR=18						
RPZ	Rata Peaks	5.80	210	P	Pn	04 46 46.3	-1.9
ODZ	Otahua Downs	7.09	206	P	Pn	04 47 03.7	-0.6
JCZ	Jackson Bay	7.11	220	P	Pn	04 47 03.1	-1.5
SYZ	Scrubby Hill	8.91	207	P	Pn	04 47 26.7	-0.5
ASAR	Alice Springs	37.97	281	P	P	04 52 18.1	+1.6
	1.0nm,0.6s,baz=127,slow=8.6,SNR=21						
ASAR				PcP	PcP	04 54 25.9	-0.7
	0.5nm,0.6s,baz=114,slow=3.7,SNR=5.6						
	1.0nm,0.6s						
VNDA	Vanda	39.27	185	P	P	04 52 28.7	+2.2
	0.6nm,0.9s,baz=6.9,slow=8.4,SNR=1.5						
	0.6nm,0.9s						
WRA	Warramunga Arr	39.77	286	P	P	04 52 32.5	+1.0
	0.4nm,0.4s,baz=122,slow=8.7,SNR=9.4						
	0.4nm,0.4s						
QSPA	South Pole Qui	51.36	180	P	P	04 54 04.6	+3.3
	1.2nm,0.5s,baz=332,slow=5.5,SNR=9.9						
	1.2nm,0.5s						
KSRS	Korea Array	87.40	324	P	P	04 57 42.2	+1.1
	1.1nm,0.5s,baz=147,slow=6.3,SNR=5.7						
	1.1nm,0.5s						
CMAR	Chiang Mai Arr	91.06	293	P	P	04 57 59.0	+0.3
	1.4nm,0.3s,baz=119,slow=5.3,SNR=1.6						
	1.4nm,0.3s						
KURBB	Kurchatov Arra	122.52	311	PKP	PKPdf	05 03 46.3	-1.1
	0.1nm,0.5s,baz=101,slow=1.8,SNR=4.4						
KBZ	Khabaz	144.11	294	PKP	PKPdf	05 04 26.6	-1.2
	3.2nm,0.8s,baz=136,slow=2.2,SNR=8.7						
ARCES	ARCESS Array B	145.17	342	PKPbc	PKPab	05 04 29.2	-0.3
	0.8nm,0.3s,baz=67,slow=2.3,SNR=19						
BRTR	Keskin Array B	150.28	284	PKPbc	PKiKP	05 04 43.8	-0.8
	0.6nm,0.6s,baz=151,slow=3.3,SNR=4.2						
FINES	FINESS Array B	150.33	330	PKPbc	PKiKP	05 04 42.3	-1.4
	1.1nm,0.8s,baz=42,slow=2.7,SNR=6.3						

*SJA **12** 04:48:06.9±0.6, 17.°09S×69.°85W, h129km±5km, ML3.5, MW3.4*
*GUC **12** 04:48:22.3±0.9, 18.°25S×69.°96W, h116km±3km, ML3.3*

ISC 12 04:48:23.5±2.6,**18.°24S**±0.°08×**70.°00W**±0.°08,
h114km±14km,**n28**,σ1s**18**/43,**2D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**0.35**	**248**	*e*P		Pn	04 48 19.2	-21
AP01				*e*S		**Sn**	**04 48 54.1**	**+1.8**
AP01				IAML			04 48 55.4	
	comp=Z,2μm,0.1s							
AP01	**Chacalluta**	**0.35**	**248**	*e*P		**Pn**	**04 48 39.4**	**-0.6**
AP01				*e*S		**Sn**	**04 48 52.7**	**+0.4**
AP01				IAML			04 48 54.0	
	comp=E,3μm,0.3s							
PB16	**IPOC Station P**	**0.47**	**102**	*e*P		**Pn**	**04 48 39.9**	**-1.4**
PB16				*e*S		**Sn**	**04 48 54.1**	**-0.6**
PB16				IAML			04 48 56.3	
	comp=Z,398nm,0.5s							
PB16	**IPOC Station P**	**0.47**	**102**	⇓*i* P		**Pn**	**04 48 40.6**	**-0.7**
PB16				*e*S		**Sn**	**04 48 53.8**	**-0.8**
PB16				IAML			04 48 54.2	
	comp=E,1μm,0.2s							
PB12	**IPOC Station P**	**0.49**	**220**	*e*P		**Pn**	**04 48 39.9**	**-0.9**
PB12				*e*S		Sn	04 48 40.5	-13
PB12				IAML			04 48 54.5	
	comp=Z,455nm,0.3s							
PB12	**IPOC Station P**	**0.49**	**220**	*e*P		**Pn**	**04 48 40.5**	**-0.4**
PB12				*e*S		**Sn**	**04 48 53.9**	**0.0**
PB12				IAML			04 48 54.6	
	comp=N,1μm,0.1s							
PX02	**IPOC Station P**	**0.75**	**195**	*e*P		**Pn**	**04 48 41.5**	**-1.2**
PX02				*e*S		**Sn**	**04 48 56.8**	**-0.5**
PB18	**Visviri**	**0.81**	**37**	⇓*i* P		**Pn**	**04 48 43.7**	**-0.1**
PSGCX	**Pisagua**	**1.36**	**185**	*e*P		**Pn**	**04 48 48.3**	**-0.7**
PSGCX				*e*S		**Sn**	**04 49 08.4**	**+0.1**
PSGCX				IAML			04 49 12.3	
	comp=Z,120nm,0.1s							
PSGCX	**Pisagua**	**1.36**	**185**	*e*P		**Pn**	**04 48 48.4**	**-0.6**
PSGCX				*i* S		**Sn**	**04 49 08.1**	**-0.2**
PB11	**IPOC Station P**	**1.55**	**168**	*e*P		**Pn**	**04 48 50.4**	**-0.9**
PB11				IAML		**S**	**04 49 13.9**	**+1.5**
	comp=Z,122nm,0.4s							
PB11				*e*S		**S**	**04 49 13.9**	**+1.5**
PB11	**IPOC Station P**	**1.55**	**168**	*e*P		**Pn**	**04 48 51.0**	**-0.3**
PB11				IAML			04 49 14.7	
	comp=E,927nm,0.1s							
GO01	**Chusmiza**	**1.61**	**152**	*e*P		**Pn**	**04 48 52.8**	**+0.4**
GO01				*e*S		**Sn**	**04 49 09.5**	**-4.8**
GO01				IAML			04 49 16.8	
	comp=Z,114nm,0.2s							
GO01	**Chusmiza**	**1.61**	**152**	*e*P		**Pn**	**04 48 52.8**	**+0.4**
GO01				*e*S		**Sn**	**04 49 15.0**	**+0.7**
GO01				IAML			04 49 17.2	
	comp=N,327nm,0.2s							
TA02	**Huaiquique**	**2.02**	**184**	*e*P		**Pn**	**04 48 56.8**	**-0.2**
TA02				*e*S		**Sn**	**04 49 22.6**	**+0.1**
TA02				IAML			04 49 23.1	
	comp=Z,211nm,0.1s							
TA02	**Huaiquique**	**2.02**	**184**	*e*P		**Pn**	**04 48 56.8**	**-0.2**
PB08	**IPOC Station P**	**2.05**	**157**	*e*P		**Pn**	**04 48 57.5**	**-0.2**
PB08				*e*S		**Sn**	**04 49 25.5**	**+1.7**
PB08				IAML			04 49 26.2	
	comp=Z,81nm,0.3s							
PB08	**IPOC Station P**	**2.05**	**157**	*e*P		**Pn**	**04 48 57.9**	**+0.2**
PB08				*e*S		**Sn**	**04 49 24.1**	**+0.3**
PB08				IAML			04 49 26.2	
	comp=E,115nm,0.2s							
TA01	**Diego Aracena**	**2.32**	**184**	*e*P		**Pn**	**04 48 57.9**	**-2.8**
TA01				*e*S		**Sn**	**04 49 28.9**	**-0.4**
TA01				IAML			04 49 30.1	
	comp=Z,52nm,0.3s							
TA01	**Diego Aracena**	**2.32**	**184**	*e*P		**Pn**	**04 48 60.0**	**-0.8**
TA01				IAML			04 49 28.9	
	comp=E,102nm,0.3s							
PB02	**IPOC Station P**	**3.07**	**178**	*e*P		**Pn**	**04 49 10.3**	**-0.3**
PB02				IAML			04 50 05.3	
	comp=Z,52nm,0.4s							
PB02	**IPOC Station P**	**3.07**	**178**	*e*P		**Pn**	**04 49 10.1**	**-0.4**
PB02				IAML			04 49 49.9	
	comp=E,117nm,0.2s							
PB07	**IPOC Station P**	**3.47**	**178**	*e*P		**Pn**	**04 49 15.3**	**-0.7**
PB07				IAML			04 50 11.8	
	comp=Z,26nm,0.3s							
PB07	**IPOC Station P**	**3.47**	**178**	*e*P		**Pn**	**04 49 15.4**	**-0.7**
PB09	**IPOC Station P**	**3.61**	**169**	*e*P		**Pn**	**04 49 17.8**	**-0.1**
PB09				IAML			04 50 22.2	
	comp=Z,37nm,1.7s							
PB09	**IPOC Station P**	**3.61**	**169**	*e*P		**Pn**	**04 49 17.8**	**-0.1**
PB03	**IPOC Station P**	**3.80**	**177**	*e*P		**Pn**	**04 49 19.6**	**-0.8**
PB03				IAML			04 50 17.4	
	comp=Z,22nm,0.4s							
PB03	**IPOC Station P**	**3.80**	**177**	*e*P		**Pn**	**04 49 19.5**	**-0.8**

*CRAAG **12** 04:51:06.9, 35.°98N×0.°25E, Ml3.1, Algrie 01km NE Bel-Hadri*
*CNRM **12** 04:51:08.2, 36.°17N×0.°02W, h16km, ML3.0*
*MDD **12** 04:51:09.9±0.7, 36.°11N×0.°01E, h12km±9km, mb_Lg2.7/30, Error ellipse: s-maj=9.7km s-min=3.1km az=149.0*
*INMG **12** 04:51:10.0±1.3, 36.°07N×0.°01W, h20km±12km, ML2.1, Error ellipse: s-maj=8.8km s-min=3.5km az=137.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Argelia (ALG)*

ISC 12 04:51:07.1±1.4,**36.°07N**±0.°04×**0.°10E**±0.°04,**h17**km±11km,
n54,σ1s**72**/86,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EKMS	**Oued Kramis**	**0.51**	**61**	P		**Pg**	**04 51 16.6**	**-0.6**
OFRG	**Douar Fergoug**	**0.55**	**185**	P		**Pg**	**04 51 18.4**	**+0.4**
USTO	**Oran**	**0.62**	**238**	P		**Pn**	**04 51 22.2**	**+1.1**
ESMB	**Sidi M'hamed B**	**0.63**	**141**	P		**Pg**	**04 51 17.9**	**-1.7**
ODJA	**Bouhanifia**	**0.76**	**195**	P		**Pg**	**04 51 22.5**	**+0.5**
EANR	**`Ain N'Sour**	**0.82**	**98**	P		**Pg**	**04 51 22.0**	**-1.1**
EBNR	**Beni Rached**	**1.18**	**79**	P		**Pn**	**04 51 30.2**	**+1.3**
EDDR	**Deurdeur**	**1.72**	**92**	P		**Pn**	**04 51 35.1**	**-1.2**
CART	**Cartagena**	**1.75**	**330**	P		**Pn**	**04 51 36.7**	**+0.1**
CART				S		**Sn**	**04 51 57.2**	**-1.4**
ABKD	**Sidi Amar**	**1.85**	**75**	P		**Pn**	**04 51 41.4**	**+3.4**
EXTPC	**Torre Pacheco**	**1.87**	**334**	Pn		**Pn**	**04 51 39.3**	**+1.0**
EXTPC				Sn		**Sn**	**04 51 59.9**	**-1.7**
EXMAZ	**Mazarron**	**1.89**	**324**	Pn		**Pn**	**04 51 39.2**	**+0.6**
EXMAZ				Sn		**Sn**	**04 52 01.0**	**-1.0**
EXPDH	**Pilar de la Ho**	**1.93**	**339**	Sn		**Sn**	**04 52 02.4**	**-0.6**
ENIJ	**Nijar**	**2.06**	**297**	Pn		**Pn**	**04 51 41.3**	**+0.3**
ENIJ				Sn		**Sn**	**04 52 04.6**	**-1.7**
ENIJ				*i* lVmb_Lg			04 52 06.1	
ETRV	**Los Montesinos**	**2.06**	**341**	Sn		**Sn**	**04 52 06.1**	**-0.2**
ETRV				*i* lVmb_Lg			04 52 08.6	
TLOR	**Lorca, Murcia**	**2.13**	**318**	Pn		**Pn**	**04 51 43.2**	**+1.2**
TLOR				Sn		**Sn**	**04 52 07.2**	**-0.9**
ELOR	**Lorca, Murcia**	**2.15**	**317**	Pn		**Pn**	**04 51 42.9**	**+0.6**
ELOR				Sn		**Sn**	**04 52 07.1**	**-1.5**
EZAR	**Zarzadilla de**	**2.30**	**322**	Pn		**Pn**	**04 51 45.5**	**+1.1**
EZAR				Sn		**Sn**	**04 52 13.2**	**+0.8**
EZAR				*i* lVmb_Lg			04 52 15.2	
EBER	**Berja**	**2.54**	**290**	Pn		**Pn**	**04 51 47.7**	**-0.1**
EBER				Sn		**Sn**	**04 52 19.0**	**+0.6**
EBER				*i* lVmb_Lg			04 52 21.3	
EBEN2	**Beniarda presa**	**2.61**	**355**	Pn		**Pn**	**04 51 50.1**	**+1.5**
EBEN2				Sn		**Sn**	**04 52 20.6**	**+0.7**
EBEN2				*i* lVmb_Lg			04 52 21.6	
AFON	**Font Roja**	**2.64**	**349**	Pn		**Pn**	**04 51 49.9**	**+0.9**
AFON				Sn		**Sn**	**04 52 21.6**	**+0.8**
AFON				*i* lVmb_Lg			04 52 26.4	
ETOB	**Tobarra**	**2.88**	**334**	Pn		**Pn**	**04 51 53.6**	**+1.2**
ETOB				Sn		**Sn**	**04 52 27.0**	**+0.3**
ETOB				*i* lVmb_Lg			04 52 32.9	
EQUE	**Quentar**	**3.06**	**293**	Pn		**Pn**	**04 51 57.8**	**+3.0**
EQUE				*i* lVmb_Lg			04 52 39.3	
EQES	**Quesada**	**3.07**	**305**	Pn		**Pn**	**04 51 57.6**	**+2.6**
EQES				Sn		**Sn**	**04 52 33.8**	**+2.4**
EQES				*i* lVmb_Lg			04 52 38.6	
ELGU	**Los Guajares,**	**3.10**	**286**	Pn		**Pn**	**04 51 55.3**	**-0.1**
ELGU				Sn		**Sn**	**04 52 30.4**	**-1.7**
ELGU				*i* lVmb_Lg			04 52 36.8	
EIBI	**Ibiza**	**3.12**	**18**	Pn		**Pn**	**04 51 56.6**	**+1.2**
EIBI				Sn		**Sn**	**04 52 30.1**	**-2.2**
EIBI				*i* lVmb_Lg			04 52 32.9	
EVIV	**Cofrentes, Val**	**3.33**	**344**	Pn		**Pn**	**04 52 00.6**	**+2.1**
EVIV				Sn		**Sn**	**04 52 37.7**	**-0.1**
EVIV				*i* lVmb_Lg			04 52 41.9	
E0802	**Ubeda,Jaen**	**3.40**	**306**	Sn		**Sn**	**04 52 41.7**	**+2.5**
AKLM	**AKL**	**3.59**	**245**	P		**Pn**	**04 52 03.5**	**+1.4**
AKLM				S		**Sn**	**04 52 44.6**	**+0.4**
ECHE	**Chera**	**3.62**	**347**	Pn		**Pn**	**04 52 03.5**	**+1.1**
ECHE				Sn		**Sn**	**04 52 44.7**	**0.0**
ECHE				*i* lVmb_Lg			04 52 48.0	
EMIJ	**Mijas**	**3.96**	**279**	Pn		**Pn**	**04 52 06.4**	**-0.7**
EMIJ				Sn		**Sn**	**04 52 51.1**	**-2.1**
EMIJ				*i* lVmb_Lg			04 52 52.6	
FIGM	**Figuig**	**4.08**	**196**	P		**Pn**	**04 52 10.4**	**+1.5**
ETOS	**Mallorca**	**4.27**	**29**	*i* lVmb_Lg			04 53 01.3	
ETOS				Sn		**Sn**	**04 53 01.3**	**+0.5**
EADA	**Adamuz**	**4.28**	**301**	Pn		**Pn**	**04 52 12.6**	**+1.1**
EADA				Sn		**Sn**	**04 53 00.2**	**-0.9**
EADA				*i* lVmb_Lg			04 53 15.3	
EMOS	**Mosqueruela**	**4.31**	**354**	Pn		**Pn**	**04 52 14.7**	**+2.6**
EMOS				Sn		**Sn**	**04 53 01.2**	**-0.8**
EMOS				*i* lVmb_Lg			04 53 03.3	
ECAB	**El Cabril**	**4.84**	**296**	Pn		**Pn**	**04 52 20.2**	**+1.0**
ECAB				Sn		**Sn**	**04 53 13.9**	**-1.0**
ECAB				*i* lVmb_Lg			04 53 17.4	
ERTA	**Horta de San J**	**4.88**	**2**	Pn		**Pn**	**04 52 21.9**	**+2.2**
ERTA				Sn		**Sn**	**04 53 15.0**	**-0.9**
ERTA				*i* lVmb_Lg			04 53 20.1	
PAB	**San Pablo**	**4.94**	**316**	Pn		**Pn**	**04 52 23.2**	**+2.6**
PAB				Sn		**Sn**	**04 53 15.0**	**-2.4**
PAB				*i* lVmb_Lg			04 53 18.8	
ETOR	**Torete**	**5.03**	**341**	Pn		**Pn**	**04 52 24.6**	**+2.8**
MDT	**Midelt**	**5.06**	**231**	P		**Pn**	**04 52 23.4**	**+1.1**
MDT				S		**Sn**	**04 53 23.4**	**+3.0**
MD31	**MD31**	**5.13**	**233**	P		**Pn**	**04 52 24.3**	**+1.1**
MD31				S		**Sn**	**04 53 24.8**	**+2.8**
EPOB	**Poblet**	**5.33**	**8**	Pn		**Pn**	**04 52 26.8**	**+0.8**
EPOB				Sn		**Sn**	**04 53 24.3**	**-2.7**
EPOB				*i* lVmb_Lg			04 53 26.3	
GUD	**Guadarrama**	**5.66**	**325**	Pn		**Pn**	**04 52 33.0**	**+2.5**
PBAR	**Barrancos**	**6.08**	**292**	*e*P		**Pn**	**04 52 37.1**	**+1.0**
PBAR				*e*S		**Sn**	**04 53 43.4**	**-1.9**
PBAR				*i* IAML			04 53 46.9	
EBAD	**Badajoz**	**6.26**	**297**	Pn		**Pn**	**04 52 40.7**	**+2.0**
EBAD				Sn		**Sn**	**04 53 46.7**	**-3.1**
EBAD				*i* lVmb_Lg			04 53 50.5	
PVAQ	**Vaqueiros**	**6.41**	**284**	*e*P		**Pn**	**04 52 41.1**	**+0.3**
PVAQ				*e*S		**Sn**	**04 53 51.0**	**-2.5**
PESTR	**Estremoz**	**6.72**	**297**	*e*S		**Sn**	**04 53 58.8**	**-2.3**
PESTR				*i* IAML			04 53 60.0	
PMRV	**Marv??o**	**6.81**	**302**	*e*P		**Pn**	**04 52 47.0**	**+0.8**
PMRV				*e*S		**Sn**	**04 54 01.0**	**-2.5**
MESJ	**Messejana**	**6.89**	**287**	*e*P		**Pn**	**04 52 48.2**	**+0.9**
PARRA	**Arraiolos**	**7.03**	**295**	*e*P		**Pn**	**04 52 50.3**	**+1.1**
PLOUS	**Minas do Lousa**	**7.09**	**289**	*e*P		**Pn**	**04 52 50.4**	**+0.5**
PLOUS				*e*S		**Sn**	**04 54 06.2**	**-3.9**
MOE	**Montemor**	**7.16**	**293**	*e*P		**Pn**	**04 52 51.6**	**+0.6**
PTEO	**Sao Teotonio**	**7.23**	**284**	*e*P		**Pn**	**04 52 52.7**	**+0.7**
PSARD	**Sardoal**	**7.42**	**301**	*e*P		**Pn**	**04 52 57.0**	**+2.4**
PSARD				*e*S		**Sn**	**04 54 14.7**	**-3.8**

*BKK **12** 05:21:55.0±2.9, 23.°N±27.°×10.°3E±.°, h10km, M5.2/8, MLv5.2/8*
*IDC **12** 05:21:56.0±0.7, 22.°88N×102.°50E, h0km, mb4.1/13, mbtmp4.1/15, ML4.5/2, MS3.7/22, Error ellipse: s-maj=25.2km s-min=14.1km az=74.0*
*BJI **12** 05:21:55.3, 22.°86N×102.°52E, h11km, mB4.7/4, mb4.4/24, ML4.6/9, Ms4.4/26, Ms7 4.2/18*
*PLV **12** 05:21:56.3±1.7, 22.°94N×102.°56E, h0km±8km, ML4.6, Presumed earthquake*

*NEIC **12** 05:21:57.7±1.4, 22.°80N±0.°05×102.°56E±0.°07, h10km±1km, mb4.3/21, Error ellipse: s-maj=11.9km s-min=7.1km az=238.0*

ISC 12 05:21:57.5±0.7,**22.°87N**±0.°03×**102.°52E**±0.°03,**h11**km±4km,
n110,σ1s**58**/119,**mb4.2**/20,**MS3.8**/21,**1D**,**Yunnan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DBV	**Dienbien**	**1.55**	**162**	*e*Pn		**Pn**	**05 22 24.8**	**-0.4**
DBV				*e*Pg		**Pb**	**05 22 26.1**	**-0.2**
DBV				*e*Sg		**Sg**	**05 22 47.8**	**+0.4**
DBV				IAML			05 22 50.2	
	comp=N,9μm,0.9s							
DBV				IAML			05 22 51.8	
	comp=E,6μm,1.1s							
MLVB	**It Ong**	**1.95**	**134**	*i* Pg		Pn	05 22 16.0	-15
MLVB				IAML			05 22 33.6	
	comp=N,18μm,0.7s							
MLVB				IAML			05 22 34.7	
	comp=E,24μm,0.4s							
SLVN	**Son La**	**2.00**	**140**			**Pn**	**05 22 30.8**	**-0.5**
SLVN	**Son La**	**2.00**	**140**	*e*Pn		**Pn**	**05 22 30.9**	**-0.5**
SLVN				*e*Pg		**Pg**	**05 22 35.0**	**-0.9**
SLVN				*e*Sg		**Sg**	**05 23 02.4**	**+0.5**
KMI2	**Kunming**	**2.27**	**5**	⇓Pn		**Pn**	**05 22 35.5**	**+0.2**
KMI2				Pg		**Pb**	**05 22 38.8**	**+0.1**
KMI2				Sg		**Sg**	**05 23 09.9**	**-0.7**
KMI2				SMN				
	comp=E,1μm,0.9s							
KMI2				SME				
	comp=E,2μm,0.8s							
HGVB	**Ha Giang**	**2.28**	**90**	*e*Pn		**Pn**	**05 22 35.1**	**0.0**
HGVB				*e*Pg		**Pb**	**05 22 38.4**	**-0.3**
HGVB				*e*Sg		**Sb**	**05 23 08.0**	**+1.1**
HGVB				IAML			05 23 11.0	
	comp=E,1μm,0.5s							
HGVB				IAML			05 23 12.6	
	comp=N,3μm,0.7s							
VTVB	**Vinh Tuy**	**2.28**	**105**	*e*Pn		**Pn**	**05 22 34.7**	**-0.5**
VTVB				*e*Pg		**Pb**	**05 22 38.5**	**-0.3**
VTVB				*e*Sg		**Sg**	**05 23 08.7**	**-2.2**
VTVB				IAML			05 23 09.7	
	comp=N,4μm,0.6s							
VTVB				IAML			05 23 10.0	
	comp=E,3μm,0.5s							
MCVV	**Moc Chau**	**2.86**	**136**	*e*Pn		**Pn**	**05 22 43.4**	**+0.2**
MCVV				*e*Pg		**Pg**	**05 22 50.8**	**-1.6**
MCVV				*e*Sg		**Sg**	**05 23 28.3**	**-1.1**
CBVB	**Cao Bang**	**3.40**	**93**	*e*Pn		**Pn**	**05 22 51.3**	**+0.8**
CBVB				*e*Pg		**Pg**	**05 23 02.0**	**-0.6**
CBVB				*e*Sg		**Sg**	**05 23 45.5**	**-1.3**
PZH	**PanZhiHua**	**3.68**	**349**	Pn		**Pn**	**05 22 54.7**	**+0.2**
PZH				Pg		**Pb**	**05 23 03.9**	**+1.2**
PZH				Sg		**Sg**	**05 23 52.2**	**-3.6**
PZH				SMN				
	comp=E,410nm,0.7s							
PZH				SME				
	comp=E,530nm,0.7s							
BGV	**Bac-Giang**	**3.78**	**114**	*e*Pg		**Pb**	**05 23 06.8**	**+2.5**
TNCH	**TengChong**	**4.24**	**301**	Pn		**Pn**	**05 23 02.7**	**+0.4**
TNCH				Sg		**Sg**	**05 24 10.7**	**-3.1**
TNCH				SMN				
	comp=E,3μm,1.3s							
TNCH				SME				
	comp=E,4μm,1.4s							
TNCH				L		L		
	comp=E,6μm,4.2s							
TNCH				L		L		
	comp=E,8μm,4.0s							
TNCH				L		L		
	comp=E,2μm,5.7s							
CMAI	**Chiengmai2**	**4.36**	**229**	P		**Pn**	**05 23 04.6**	**+0.6**
LAMP	**Lampang**	**5.10**	**213**	P		**Pn**	**05 23 15.0**	**+1.0**
CHTO	**Chiang Mai**	**5.24**	**220**	P		**Pn**	**05 23 17.0**	**+1.1**
CHTO	**Chiang Mai**	**5.24**	**220**			**Pn**	**05 23 16.8**	**+0.9**
CM09	**Chiang Mai Arr**	**5.51**	**217**	P		**Pn**	**05 23 20.2**	**+0.6**
CM31	**Chiang Mai Arr**	**5.52**	**218**	P		**Pn**	**05 23 20.9**	**+1.1**
CM31	**Chiang

GTA2 L L
comp=Z,350nm,11.4s
GTA2 L L
comp=Z,280nm,9.8s
SSE Sheshan 18.53 60 P **P** 05 26 12.8 -1.2
SSE S **Sn** 05 29 40.9 -0.4
SSE pmax pmax
comp=Z,11nm,0.6s
SSE pmax pmax
comp=Z,42nm,3.0s
SSE L L
comp=Z,600nm,8.2s
SSE L L
comp=Z,310nm,8.6s
HHC Hu-ho-hao-te 19.48 21 *e*P Pn 05 26 35.7 +10
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,130nm,5.7s
HHC LR LR
comp=N,300nm,9.9s
HHC L R
comp=E,310nm,9.9s
HHC LR LR
comp=Z,380nm,11.1s
BJT Baijiatuau 20.64 31 P **P** 05 26 38.0 +1.0
BJT IAmb IAmb 05 26 41.9
comp=Z,17nm,1.3s
BJI2 Beijing 20.64 31 P **P** 05 26 37.2 +0.1
BJI2 pP **sP** 05 26 40.9 -1.3
BJI2 sP **pP** 05 26 44.5 +3.9
BJI2 S **S** 05 30 23.3 -4.4
BJI2 pmax pmax
comp=Z,6.0nm,1.4s
BJI2 pmax pmax
comp=Z,62nm,4.5s
BJI2 L L
comp=Z,190nm,15.6s
BJI2 L L
comp=Z,120nm,15.3s
MYKOM Kota Tinggi 21.00 176 P **P** 05 26 39.1 -2.0
MYKOM IAmb IAmb 05 26 47.9
comp=Z,16nm,1.1s
KKM Kota Kinabalu 21.32 140 P **P** 05 26 42.7 -2.0
KKM IAmb IAmb 05 26 55.5
comp=Z,11nm,1.0s
WMQ Urumqi 24.21 333 *e*P **P** 05 27 16.7 +2.4
WMQ L L
comp=Z,390nm,15.9s
WMQ L L
comp=Z,360nm,18.3s
SONM Songino Array 25.10 6 P **P** 05 27 23.5 +1.1
comp=Z,3.9nm,1.0s,baz=192,slow=11,SNR=18
SONM LR LR 05 38 26.9
comp=Z,134nm,19.2s,baz=191,slow=40
comp=Z,3.9nm,1.0s
SONM Songino Array 25.10 6 P **P** 05 27 23.7 +1.3
SONM IAmb IAmb 05 27 26.7
comp=Z,5.7nm,1.1s
ULN Ulaanbaatar 25.20 7 P **P** 05 27 23.5 +0.2
ULN IAmb IAmb 05 27 27.8
comp=Z,7.8nm,1.1s
KSRS Korea Array 26.23 51 LR LR 05 38 11.9
comp=Z,123nm,19.3s,baz=220,slow=37
SHLS Shalkode 27.82 322 *e*P **P** 05 27 47.0 -0.1
NIL Nilore 27.84 299 P **P** 05 27 46.8 -0.3
TARG Taragay, Kyrgy 27.94 318 P **P** 05 27 49.1 +0.7
TARG IAmb IAmb 05 28 01.8
comp=Z,3.2nm,0.9s
UZB Uzynbulak 28.07 322 *e*P **P** 05 27 51.7 +2.5
ZSN Zaisan 28.32 334 *e*P **P** 05 27 54.2 +2.9
SATY Saty 28.37 321 *e*P **P** 05 27 54.2 +2.3
TLY Talaya 28.77 1 LR LR 05 40 30.6
comp=Z,98nm,18.9s,baz=181,slow=39
MKAR Makanchi Array 28.91 331 P **P** 05 27 57.1 +0.6
comp=Z,0.9nm,0.8s,baz=120,slow=7.2,SNR=5.8
comp=Z,0.9nm,0.8s
MKAR Makanchi Array 28.91 331 P **P** 05 27 57.5 +1.0
MAKZ Makanchi 29.06 330 P **P** 05 27 58.4 +0.5
TNSS Tian-Shan 29.21 320 *e*P **P** 05 28 01.3 +1.5
MDOK Medeo 29.23 320 *e*P **P** 05 28 01.5 +2.0
BOOM Boomskoye usch 29.52 318 P **P** 05 28 02.0 -0.2
TDK Taldyqorghan 29.59 324 *e*P **P** 05 28 04.9 +2.3
HILR Hailar Array B 29.89 23 LR LR 05 41 47.2
comp=Z,60nm,20.4s,baz=155,slow=40
AAK Ala-Archa 30.50 317 LR LR 05 41 13.5
comp=Z,118nm,19.6s,baz=130,slow=38
SGDS Sogindy 30.85 318 *e*P **P** 05 28 15.9 +2.1
BTLS Baital 32.08 320 *e*P **P** 05 28 26.5 +2.0
KAPI Kappang 32.43 147 LR LR 05 41 34.3
comp=Z,143nm,18.9s,baz=202,slow=36
DZA Taraz 32.65 315 *e*P **P** 05 28 31.6 +2.0
IUG Iuzhnay 33.18 313 *e*P **P** 05 28 36.1 +1.7
KKAR Karatay Array 33.28 315 P **P** 05 28 35.2 0.0
KURBB Kurchatov Arra 33.42 332 P **P** 05 28 35.9 -0.3
comp=Z,0.4nm,0.4s,baz=128,slow=10,SNR=8.3
comp=Z,0.4nm,0.4s
KURK Kurchatov 33.45 332 P **P** 05 28 36.6 +0.2
KURK IAmb IAmb 05 28 53.1
comp=Z,3.9nm,1.1s
CHM Chimkent 33.54 313 *e*P **P** 05 28 39.2 +1.8
ZAA0 Zalesovo Array 33.79 341 P **P** 05 28 39.2 -0.1
ZAA0 IAmb IAmb 05 28 43.0
comp=Z,5.0nm,0.9s
ZALV Zalesovo Beam 33.79 341 P **P** 05 28 39.2 -0.1
comp=Z,3.4nm,0.8s,baz=148,slow=7.7,SNR=12
ZALV LR LR 05 43 58.4
comp=Z,97nm,18.9s,baz=170,slow=39
comp=Z,3.4nm,0.8s
KLR Kul'dur 34.97 34 LR LR 05 44 46.2
comp=Z,132nm,19.7s,baz=239,slow=39
BVAR Borovoye Array 38.76 329 P **P** 05 29 22.0 +0.1
comp=Z,1.2nm,0.6s,baz=139,slow=12,SNR=4.7
comp=Z,1.2nm,0.6s
BORK Borovoye 38.80 329 P **P** 05 29 23.0 +0.8
BORK IAmb IAmb 05 29 28.7
comp=Z,2.2nm,0.5s
AB31 Akbulak array 42.53 319 P **P** 05 29 53.4 +0.4
ABKAR Akbulak array 42.53 319 P **P** 05 29 53.9 +0.9
NRIK Noril'sk 47.35 353 LR LR 05 50 27.3
comp=Z,76nm,18.9s,baz=169,slow=36
NRIK Noril'sk 47.35 353 P **P** 05 30 32.2 +1.1
MA2 Magadan 49.81 30 LR LR 05 53 58.2
comp=Z,109nm,18.9s,baz=242,slow=38
TIXI Tiksi 51.07 10 LR LR 05 53 52.7
comp=Z,79nm,18.0s,baz=238,slow=38
PETK Petropavlovsk- 51.26 39 LR LR 05 53 25.1
comp=Z,84nm,18.2s,baz=240,slow=37
WB0 Warramunga Arr 52.58 141 P **P** 05 31 11.4 -0.1
WB0 IAmb IAmb 05 31 15.5
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 52.68 141 P **P** 05 31 12.1 -0.1
comp=Z,4.2nm,0.7s,baz=330,slow=8.3,SNR=37
comp=Z,4.2nm,0.7s
WRA Warramunga Arr 52.68 141 P **P** 05 31 10.1 -2.1
WR8 Warramunga Arr 52.79 141 P **P** 05 31 12.9 -0.1
KBZ Khabaz 52.82 308 LR LR 05 56 37.0
comp=Z,90nm,21.2s,baz=180,slow=39
ASAR Alice Springs 55.41 145 P **P** 05 31 32.4 +0.2
comp=Z,2.6nm,0.8s,baz=323,slow=7.0,SNR=19
ASAR PcP **PcP** 05 32 33.1 +0.6
comp=Z,0.9nm,0.8s,baz=316,slow=6.5,SNR=2.5
comp=Z,2.6nm,0.8s
ASAR Alice Springs 55.41 145 P **P** 05 31 30.9 -1.3
AKASG Malin Array Be 62.17 316 P **P** 05 32 18.2 -0.6
comp=Z,1.0nm,0.6s,baz=78,slow=6.4,SNR=4.5
AKASG LR LR 06 03 37.8
comp=Z,70nm,18.2s,baz=86,slow=40
comp=Z,1.0nm,0.6s
FINES FINESS Array B 63.72 329 P **P** 05 32 29.0 +0.1
comp=Z,2.3nm,0.9s,baz=48,slow=2.8,SNR=4.9
comp=Z,2.3nm,0.9s
ARCES ARCESS Array B 64.23 338 P **P** 05 32 32.8 +0.6
comp=Z,3.0nm,1.0s,baz=79,slow=9.3,SNR=2.6
ARCES LR LR 06 02 23.6
comp=Z,96nm,19.1s,baz=108,slow=38
comp=Z,3.0nm,1.0s
MLR Muntele Rosu 64.83 311 P **P** 05 32 38.1 +1.4
BURAR Bucovina Array 65.06 313 P **P** 05 32 38.4 +0.2
ABPO Ambohimpanom 68.18 237 P **P** 05 32 56.9 -1.7
HFS Hagfors 69.88 328 P **P** 05 33 07.9 -0.3
comp=Z,1.9nm,0.6s,baz=93,slow=3.1,SNR=8.2
comp=Z,1.9nm,0.6s
VRAC Vranov 70.42 316 LR LR 06 09 18.4
comp=Z,54nm,18.6s,baz=86,slow=40
NOA NORSAR Array B 70.89 329 P **P** 05 33 13.7 -0.8
comp=Z,1.5nm,0.8s,baz=78,slow=6.2,SNR=3.5
comp=Z,1.5nm,0.8s
GERES GERESS Array B 72.38 316 P **P** 05 33 23.8 0.0
comp=Z,0.5nm,0.5s,baz=66,slow=4.6,SNR=9.3
comp=Z,0.5nm,0.5s
GERES GERESS Array B 72.38 316 P **P** 05 33 24.2 +0.5
YKA Yellowknife Ar 89.95 16 LR LR 06 19 48.4
comp=Z,41nm,19.3s,baz=24,slow=39
BBB Bella Bella 93.19 28 LR LR 06 18 36.7
comp=Z,32nm,18.6s,baz=173,slow=36
FRB Frobisher Bay 93.38 356 LR LR 06 20 56.4
comp=Z,32nm,18.4s,baz=349,slow=38

*IDC **12** 05:38:19.9±1.4,32.°30N×141.°52E,h0km,mb3.8/7, mbtmp3.8/9,ML3.2/2, Error ellipse: s-maj=48.7km s-min=20.2km az=61.0*
*JMA **12** 05:38:21.1±0.6,32.°N±2.°×14.°2E±.°,h92km,MV3.4/31,E OFF HACHIJOJIMA ISLAND*
ISC 12 05:38:23.9±0.9,32.°30N±0.°05×141.°57E±0.°09,h31km,n23, σ1§54/27,mb3.8/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.54**	**277**	*e*P	**Pn**	**05 38 48.3**	**-0.9**
JHCJ	**Hachijojimakas**	**1.68**	**298**	*e*P	**Pn**	**05 38 51.3**	**+0.1**
JHCJ				*e*S	**Sb**	**05 39 13.9**	**-1.0**
JHJ2	**Mitsune**	**1.68**	**299**	P	**Pn**	**05 38 50.8**	**-0.4**
JHJ	**Hachijo jima 2**	**1.71**	**299**	Pn	**Pn**	**05 38 49.7**	**-1.9**
	30nm,0.3s,baz=86,slow=16,SNR=16						
JHJ				Sn	**Sn**	**05 39 12.5**	**0.0**
	34nm,0.3s,baz=113,slow=16,SNR=4.6						
BSO1	**Boso 1**	**2.40**	**348**	S	**Sn**	**05 39 27.9**	**-0.8**
BSO3	**Boso 3**	**2.65**	**341**	*e*P	**Pn**	**05 39 03.6**	**-0.6**
BSO3				*e*S	**Sn**	**05 39 36.0**	**+0.8**
BSO4	**Boso 4**	**2.87**	**339**	*e*P	**Pn**	**05 39 07.9**	**+0.5**
BSO4				*e*S	**Sn**	**05 39 42.6**	**+1.7**
JHU2	**Hanno**	**4.01**	**332**	*e*S	**Sn**	**05 40 06.0**	**-3.2**
JRY	**Ryogami san**	**4.32**	**330**	P	**Pn**	**05 39 27.6**	**+0.1**
JHO	**Hitachi**	**4.38**	**349**	P	**Pn**	**05 39 26.1**	**-2.2**
JHO				*e*S	**Sn**	**05 40 13.8**	**-4.5**
JAG	**Ashikaga**	**4.47**	**338**	*e*P	**Pn**	**05 39 28.6**	**-0.9**
MJAR	**Matsushiro Arr**	**5.06**	**328**	Pn	**Pn**	**05 39 37.2**	**-0.5**
	0.2nm,0.3s,baz=158,slow=11,SNR=6.1						
MJAR				Sn	**Sn**	**05 40 33.4**	**-1.7**
	0.1nm,0.3s,baz=133,slow=16,SNR=2.0						
	0.9nm,0.3s						
JCJ	**Chichijima**	**5.21**	**174**	Pn	**Pn**	**05 39 40.1**	**+0.3**
	5.3nm,0.3s,baz=285,slow=23,SNR=1.2						
JCJ				Sn	**Sn**	**05 40 38.2**	**-0.7**
	2.8nm,0.3s,baz=292,slow=22,SNR=0.9						
	17nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**25.90**	**113**	T	T	06 11 15.3	
	baz=303						
H11N1	**WAKE ISLAND Hy**	**25.91**	**113**	T	T	06 11 04.7	
	baz=303						
H11N3	**WAKE ISLAND Hy**	**25.92**	**113**	T	T	06 11 14.8	
	baz=303						
SONM	**Songino Array**	**30.75**	**311**	P	**P**	**05 44 38.0**	**+1.5**
	0.4nm,0.6s,baz=95,slow=9.1,SNR=3.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**46.87**	**306**	P	**P**	**05 46 50.5**	**-0.6**
	0.4nm,0.4s,baz=85,slow=9.3,SNR=5.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**49.12**	**311**	P	**P**	**05 47 10.4**	**+2.0**
	0.2nm,0.3s,baz=96,slow=9.9,SNR=1.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**52.41**	**189**	P	**P**	**05 47 33.6**	**+0.2**
	0.8nm,0.7s,baz=4.2,slow=7.5,SNR=4.8						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**73.07**	**333**	P	**P**	**05 49 50.8**	**+0.1**
	1.0nm,0.7s,baz=45,slow=3.0,SNR=4.4						
	1.0nm,0.7s						
KBZ	**Khabaz**	**74.11**	**312**	P	**P**	**05 49 58.0**	**+0.9**
	1.3nm,0.6s,baz=50,slow=7.9,SNR=5.0						
	1.3nm,0.6s						
HFS	**Hagfors**	**78.45**	**336**	P	**P**	**05 50 22.1**	**+0.6**
	1.3nm,0.8s,baz=35,slow=5.3,SNR=1.6						
	1.3nm,0.8s						

*IDC **12** 05:42:13.1±3.3,5.°79S×145.°97E,h106km±32km,mb3.5/6, mbtmp3.9/9,Error ellipse: s-maj=28.2km s-min=24.7km az=51.0*
ISC 12 05:42:12.5±1.1,5.°7S±0.°1×145.°9E±0.°2,h100km,n9, σ0§93/10,mb3.7/6,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.84**	**162**	P	**Pn**	**05 43 10.8**	**+1.2**
	47nm,0.4s,baz=9.5,slow=6.1,SNR=20						
PMG				S	**Sn**	**05 43 52.8**	**-0.9**
	91nm,0.3s,baz=324,slow=19,SNR=42						
SIJI	**Sorong**	**15.42**	**288**	P	**P**	**05 45 46.6**	**-0.4**
	7.4nm,0.5s,baz=181,slow=19,SNR=4.3						
WRA	**Warramunga Arr**	**18.07**	**218**	P	**Pn**	**05 46 16.9**	**-0.3**
	0.4nm,0.3s,baz=33,slow=11,SNR=18						
ASAR	**Alice Springs**	**21.26**	**212**	P	**P**	**05 46 51.5**	**+0.7**
	0.7nm,0.7s,baz=50,slow=8.4,SNR=6.3						
	0.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.32**	**236**	P	**P**	**05 47 10.9**	**-1.0**
	5.2nm,0.7s,baz=52,slow=11,SNR=8.7						
	5.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.20**	**299**	P	**P**	**05 51 14.7**	**+1.1**
	1.0nm,0.3s,baz=115,slow=7.2,SNR=4.3						
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**76.63**	**321**	P	**P**	**05 53 52.4**	**+0.1**
	0.3nm,0.4s,baz=115,slow=6.5,SNR=3.0						
	0.3nm,0.4s						
QSPA	**South Pole Qui**	**84.23**	**180**	P	**P**	**05 54 32.2**	**-0.6**
	1.3nm,0.9s,baz=320,slow=6.0,SNR=2.6						
	1.3nm,0.9s						
ILAR	**Eielson Array**	**85.66**	**23**	P	**P**	**05 54 39.1**	**-0.6**
	0.3nm,0.7s,baz=238,slow=5.1,SNR=4.9						
	0.3nm,0.7s						

*NORS **12** 05:54:51.9,41.°77N×43.°72E,h8km,MPVA5.1*
*TIF **12** 05:54:53.0,41.°82N×43.°78E,h12km*
*IDC **12** 05:54:53.1±0.5,41.°79N×43.°77E,h0km,mb4.1/19, mbtmp4.1/24,ML3.8/6,MS3.6/19,Error ellipse: s-maj=9.1km s-min=6.7km az=65.0*
*NSSP **12** 05:54:53.8,41.°72N×43.°78E,h10km,Ms4.2*
*MOS **12** 05:54:53.2±1.1,41.°71N×43.°64E,h11km,mb4.5/12,Error ellipse: s-maj=3.7km s-min=3.3km az=95.1*
*ISK **12** 05:54:54.7,41.°84N×43.°92E,h28km,ML4.2/15*
*MCSM **12** 05:54:55.1±0.6,42.°N±4.°×4.°4E±.°,h10km±5km,mb4.3, mB3.7,MLv4.4,Mw(mB)2.7*
*CFUSG **12** 05:54:55.6,41.°85N×43.°54E,h33km,Mb3.6/1,MD3.4/5, MSH3.1/6*
*NEIC **12** 05:54:55.0±1.3,41.°84N±0.°04×43.°79E±0.°07,h10km±1km, mb4.3/27,Error ellipse: s-maj=9.6km s-min=5.5km az=291.0*
*AFAD **12** 05:54:55.3,41.°77N×43.°74E,h9km±1km,MW4.3*
*DRS **12** 05:54:55.3,41.°75N×43.°43E,h15km*
*GFZ **12** 05:54:56.2±0.3,42.°N±4.°×4.°4E±.°,h10km,M4.2/25, mb4.2/25*
*BGR **12** 05:55:06.8,41.°51N×42.°18E,h33km,mb4.3,Ms2.9*
*NAO **12** 05:55:33.1,43.°70N×39.°05E,h33km,MB3.6*
ISC 12 05:54:53.7±1.0,41.°78N±0.°01×43.°78E±0.°01,h7km±6km, n427,σ1§49/517,mb4.2/53,MS3.6/13,38C-28D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKH	**Akhalkalaki**	**0.43**	**210**	P	**Pg**	**05 55 02.4**	**+0.3**
AKH				S	**Sg**	**05 55 08.6**	**+0.9**
AKH	**Akhalkalaki**	**0.43**	**210**	PG	**Pg**	**05 55 02.4**	**+0.3**
AKH				S	**Sg**	**05 55 08.6**	**+0.9**
BGD	**Bogdanovka**	**0.54**	**194**	P	**Pg**	**05 55 04.6**	**+0.5**
BGD				S	**Sb**	**05 55 12.8**	**-0.8**
BGD	**Bogdanovka**	**0.54**	**194**	PG	**Pg**	**05 55 04.6**	**+0.5**
BGD				S	**Sb**	**05 55 12.8**	**-0.8**
KZRT	**Kazreti**	**0.61**	**130**	P	**Pg**	**05 55 01.3**	**-4.3**
KZRT				S	**Sg**	**05 55 09.9**	**-3.7**
KZRT	**Kazreti**	**0.61**	**130**	PG	**Pg**	**05 55 01.2**	**-4.3**
TBLG	**Delisi**	**0.72**	**94**	Pg	**Pg**	**05 55 08.0**	**+0.4**
TBLG				Sg	**Sg**	**05 55 17.5**	**+0.5**
SEAG	**Tbilisi Sea**	**0.77**	**91**	P	**Pg**	**05 55 08.2**	**-0.4**
SEAG				S	**Sg**	**05 55 19.2**	**+0.7**
SEAG	**Tbilisi Sea**	**0.77**	**91**	PG	**Pg**	**05 55 08.1**	**-0.4**
SEAG				S	**Sg**	**05 55 19.2**	**+0.7**
BTNK	**Botanikuri**	**0.77**	**97**	PG	**Pg**	**05 55 08.1**	**-0.5**
BTNK				S	**Sg**	**05 55 19.3**	**+0.7**
TKB	**Tkibuli**	**0.81**	**315**	P	**Pg**	**05 55 08.8**	**-0.6**
TKB				S	**Sg**	**05 55 19.9**	**0.0**
TKB	**Tkibuli**	**0.81**	**315**	PG	**Pg**	**05 55 08.8**	**-0.6**
TKB				S	**Sg**	**05 55 19.9**	**0.0**
SRTK	**Saratovka**	**0.83**	**150**	⇑*i*P	**Pg**	**05 55 09.3**	**-0.3**
SRTK				⇑*i*S	**Sg**	**05 55 20.6**	**+0.2**
EPOS	**Posof**	**0.83**	**251**	P	**Pg**	**05 55 09.7**	**-0.1**
EPOS				S	**Sb**	**05 55 21.9**	**-0.2**
EPOS	**Posof**	**0.83**	**251**	P	**Pg**	**05 55 09.8**	**+0.1**
GARIG	**Gari**	**0.85**	**345**	P	**Pg**	**05 55 09.2**	**-0.9**
GARIG				S	**Sg**	**05 55 21.1**	**-0.1**
KMOZ	**Kamo**	**0.97**	**172**	⇓*i*P	**Pg**	**05 55 12.7**	**+0.3**
KMOZ				⇓*i*S	**Sb**	**05 55 26.2**	**+0.2**
CHRG	**Chargali**	**1.02**	**57**	P	**Pg**	**05 55 12.3**	**-0.9**
CHRG				S	**Sg**	**05 55 26.2**	**-0.3**
AHAN	**Ardahan-Merkez**	**1.06**	**235**	P	**Pg**	**05 55 13.8**	**-0.3**
AHAN				S	**Sg**	**05 55 28.1**	**+0.1**
EAK	**Akyaka**	**1.10**	**187**	P	**Pg**	**05 55 14.0**	**-0.9**
EAK				S	**Sg**	**05 55 28.1**	**-1.2**
LACR	**Lac**	**1.11**	**20**	⇓*i*PG	**Pg**	**05 55 14.1**	**-1.0**
LACR	**Lac**	**1.11**	**20**	*i* Pg	**Pg**	**05 55 14.1**	**-1.0**
LACR				*e*Sg	**Sg**	**05 55 29.1**	**-0.5**
DIGR	**Digorskoe uzhe**	**1.12**	**353**	*e*PG	**Pg**	**05 55 14.5**	**-0.9**
DIGR				*e*S	**Sg**	**05 55 30.1**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.12**	**353**	*e*Pg	**Pg**	**05 55 14.5**	**-0.9**
DIGR				*e*Sg	**Sg**	**05 55 30.1**	**+0.2**
DGRG	**David-gareji**	**1.24**	**105**	P	**Pn**	**05 55 17.4**	**-0.2**
DGRG				S	**Sb**	**05 55 33.7**	**-0.1**
DGRG	**David-gareji**	**1.24**	**105**	PG	**Pn**	**05 55 17.4**	**-0.2**
DGRG				S	**Sb**	**05 55 33.7**	**-0.1**
KARS	**Kars**	**1.27**	**205**	Pn	**Pb**	**05 55 18.2**	**+0.1**
KARS				Sn	**Sn**	**05 55 36.0**	**+0.6**
GOLE	**Ardahan-G¶le**	**1.30**	**224**	P	**Pn**	**05 55 18.2**	**-0.3**
GOLE				S	**Sb**	**05 55 34.6**	**-0.9**
KORR	**Kora**	**1.32**	**9**	*e*PG	**Pn**	**05 55 18.6**	**-0.1**
KORR				*e*S	**Sn**	**05 55 39.3**	**+2.7**
KORR	**Kora**	**1.32**	**9**	*e*Pg	**Pn**	**05 55 18.6**	**-0.1**
KORR				*e*Sg	**Sn**	**05 55 39.3**	**+2.7**
BOZK	**Kars-Merkez-Bo**	**1.33**	**207**	P	**Pn**	**05 55 18.9**	**-0.1**
BOZK				S	**Sb**	**05 55 35.8**	**-0.8**
SHTL	**Shatili**	**1.34**	**49**	P	**Pn**	**05 55 18.4**	**-0.7**
SHTL				S	**Sb**	**05 55 36.5**	**-0.4**
SHTL	**Shatili**	**1.34**	**49**	PG	**Pn**	**05 55 18.4**	**-0.7**
LSVT	**Lusahovit**	**1.37**	**129**	⇑*i*P	**Pn**	**05 55 18.3**	**-1.1**
LSVT				⇓*i*S	**Sb**	**05 55 36.2**	**-1.3**
DIGO	**Kars**	**1.40**	**193**	P	**Pn**	**05 55 20.0**	**0.0**
DIGO	**Kars**	**1.40**	**193**	P	**Pn**	**05 55 19.9**	**0.0**
VLKR	**Vladikavkaz**	**1.43**	**28**	*e*PG	**Pb**	**05 55 21.0**	**+0.3**
VLKR				*e*S	**Sg**	**05 55 42.2**	**+2.5**
AMBZ	**Amberd**	**1.44**	**165**	⇓*i*P	**Pb**	**05 55 20.9**	**-0.1**
AMBZ				⇑*i*S	**Sg**	**05 55 41.1**	**+1.1**
ARNR	**Ardon**	**1.45**	**15**	⇓*i*PG	**Pg**	**05 55 21.5**	**0.0**
ARNR				*e*S	**Sg**	**05 55 43.5**	**+3.3**
ARNR	**Ardon**	**1.45**	**15**	*i* Pg	**Pg**	**05 55 21.5**	**0.0**
ARNR				*e*Sg	**Sg**	**05 55 43.5**	**+3.3**
LSNR	**Lesken**	**1.50**	**1**	*e*PG	**Pb**	**05 55 21.9**	**0.0**
LSNR				*e*S	**Sg**	**05 55 43.5**	**+1.7**
LSNR	**Lesken**	**1.50**	**1**	*e*Pg	**Pb**	**05 55 21.9**	**0.0**
LSNR				*e*Sg	**Sg**	**05 55 43.5**	**+1.7**
KMGR	**Komgaron**	**1.51**	**32**	*e*PN	**Pb**	**05 55 22.5**	**+0.4**
KMGR				*e*S	**Sg**	**05 55 44.8**	**+2.6**
KMGR	**Komgaron**	**1.51**	**32**	*e*Pg	**Pb**	**05 55 22.6**	**+0.4**
KMGR				*e*Sg	**Sg**	**05 55 44.9**	**+2.6**
ARUZ	**Aruch**	**1.52**	**171**	⇑*i*P	**Pb**	**05 55 22.0**	**-0.3**
ARUZ				⇑*i*S	**Sb**	**05 55 42.4**	**+0.6**
DAGI	**Agillar**	**1.57**	**244**	P	**Pn**	**05 55 22.4**	**+0.3**
DAGI				S	**Sb**	**05 55 43.1**	**+0.1**
BATM	**Batumi**	**1.57**	**264**	⇑P	**Pn**	**05 55 21.5**	**-0.5**
BATM	**Batumi**	**1.57**	**264**	Pn	**Pn**	**05 55 21.5**	**-0.5**
BATM				Sn	**Sg**	**05 55 43.9**	**-0.3**
BATM	**Batumi**	**1.57**	**264**	PG	**Pn**	**05 55 21.5**	**-0.5**
STDR	**Stavd-Durt**	**1.60**	**8**	*e*PN	**Pg**	**05 55 24.2**	**-0.2**
STDR				*e*S	**Sg**	**05 55 47.1**	**+2.0**
STDR	**Stavd-Durt**	**1.60**	**8**	*e*Pg	**Pg**	**05 55 24.2**	**-0.2**
STDR				*e*Sg	**Sg**	**05 55 47.1**	**+2.0**
KAPZ	**Kaputan**	**1.62**	**154**	⇓*i*P	**Pb**	**05 55 23.7**	**-0.3**
KAPZ				⇑*i*S	**Sb**	**05 55 45.1**	**+0.4**
SENK	**Senkaya-Erzuru**	**1.63**	**222**	Pn	**Pb**	**05 55 24.0**	**-0.2**
DBOC	**Borcka**	**1.64**	**255**	P	**Pn**	**05 55 23.3**	**+0.2**
DBOC				S	**Sn**	**05 55 44.4**	**-0.1**
METS	**Metsamor**	**1.65**	**172**	*e*P	**Pb**	**05 55 24.6**	**+0.1**
METS				*e*S	**Sg**	**05 55 46.9**	**+0.3**
VNNZ	**Vanand**	**1.68**	**179**	⇑*i*P	**Pb**	**05 55 25.2**	**+0.2**
VNNZ				⇑*i*S	**Sg**	**05 55 48.3**	**+0.6**
BTKR	**Batakoyurt**	**1.69**	**19**	⇑*i*PN	**Pg**	**05 55 25.8**	**-0.3**
BTKR				*e*S	**Sg**	**05 55 52.6**	**+4.6**
BTKR	**Batakoyurt**	**1.69**	**19**	*i* Pg	**Pg**	**05 55 25.8**	**-0.3**
BTKR				*e*Sg	**Sg**	**05 55 52.6**	**+4.6**
NCK	**Nalchik**	**1.72**	**356**	*e*PN	**Pb**	**05 55 25.5**	**-0.1**
NCK				*e*S	**Sg**	**05 55 50.2**	**+1.3**
DBAD	**Bademkaya**	**1.74**	**245**	P	**Pn**	**05 55 25.2**	**+0.7**
DBAD				S	**Sn**	**05 55 47.2**	**+0.2**
DDEM	**Demirkent**	**1.77**	**240**	P	**Pb**	**05 55 26.1**	**-0.4**
GNI	**Garni**	**1.79**	**156**	Pn	**Pb**	**05 55 27.1**	**+0.1**
	93nm,0.3s,baz=325,slow=3.9,SNR=193						
GNI				Sn	**Sg**	**05 55 51.7**	**+0.5**
	204nm,0.3s,baz=342,slow=20,SNR=10						
GNI	**Garni**	**1.79**	**156**	⇑*i*P	**Pb**	**05 55 27.0**	**+0.1**
GNI				⇑*i*S	**Sg**	**05 55 51.2**	**0.0**
GNI	**Garni**	**1.79**	**156**	*e*PN	**Pg**	**05 55 27.5**	**+0.6**
GNI				*e*S	**Sg**	**05 55 51.7**	**+0.5**
GNI	**Garni**	**1.79**	**156**		**Pb**	**05 55 27.3**	**+0.3**
GNI	**Garni**	**1.79**	**156**	*e*Pg	**Pb**	**05 55 27.5**	**+0.6**
GNI				*e*Sg	**Sg**	**05 55 51.7**	**+0.5**
GNI	**Garni**	**1.79**	**156**	P	**Pb**	**05 55 27.5**	**+0.6**
GNI	**Garni**	**1.79**	**156**	P	**Pb**	**05 55 27.3**	**+0.3**
HOPA	**Hopa-Artvin**	**1.79**	**258**	Pn	**Pn**	**05 55 26.0**	**+0.9**
TASB	**TASBURUN-IGDIR**	**1.83**	**169**	Pn	**Pn**	**05 55 26.0**	**+0.3**
LGD	**Lagodekhi**	**1.84**	**88**	P	**Pb**	**05 55 27.3**	**-0.6**
LGD				S	**Sb**	**05 55 51.6**	**+0.5**
LGD	**Lagodekhi**	**1.84**	**88**	PN	**Pb**	**05 55 27.2**	**-0.6**
IGDI	**IGDIR**	**1.93**	**173**	P	**Pb**	**05 55 28.4**	**-0.9**
IGDI				S	**Sb**	**05 55 52.6**	**-0.9**
TLTR	**Tlyarata**	**1.95**	**80**	*e*PN	**Pn**	**05 55 28.3**	**+0.9**
TLTR				pmax	pmax		
	comp=Z,1μm,0.3s						
PRTR	**Priterechnaya**	**2.00**	**11**	*e*PN	**Pb**	**05 55 29.4**	**-1.1**
PRTR				*e*S	**Sg**	**05 55 58.0**	**-0.1**
PRTR	**Priterechnaya**	**2.00**	**11**	*e*Pg	**Pb**	**05 55 29.4**	**-1.1**
PRTR				*e*Sg	**Sg**	**05 55 58.0**	**-0.1**
BTLR	**Botlikh**	**2.02**	**63**	⇓*i*PN	**Pb**	**05 55 30.2**	**-0.6**
BTLR				*e*S	**Sb**	**05 55 57.0**

KIV	Kislovodsk	2.31	340			Pn	05 55 33.4	+1.0		
KIV	Kislovodsk	2.31	340	P		Pn	05 55 33.5	+1.1		
KIV	Kislovodsk	2.31	340	P		Pn	05 55 33.9	+1.5		
HNZR	Khunzah	2.32	70	⇑*i*	PN	Pb	05 55 35.9	-0.1		
HNZR					*e*S	Sb	05 56 06.2	+1.3		
CHOM	Cayeli-Rize	2.37	254	Pn		Pn	05 55 34.3	+1.3		
CHAY	Cayeli-Rize	2.40	254	Pn		Pn	05 55 34.7	+1.3		
UNCR	Uncukul	2.43	66	*e*	PN	Pb	05 55 36.2	-1.6		
UNCR					*e*S	Sb	05 56 08.4	+0.5		
UNCR					pmax	pmax				
	comp=Z,698nm,0.4s									
GNBR	Gunib	2.45	75	*e*	PN	Pb	05 55 37.3	-0.8		
GNBR					*e*S	Sb	05 56 07.8	-0.8		
GNBR	Gunib	2.45	75	*e*	PN	Pb	05 55 37.3	-0.8		
GNBR					*e*Sn	Sb	05 56 07.8	-0.8		
DLMR	Dylym	2.47	58	*e*	PN	Pn	05 55 36.5	+2.0		
DLMR					*e*S	Sb	05 56 10.1	+0.9		
DLMR					pmax	pmax				
	comp=Z,2µm,0.4s									
AKDA	Akdag	2.48	228	P		Pn	05 55 36.6	+1.8		
KMKR	Kumukh	2.50	81	*e*	PN	Pb	05 55 37.6	-1.6		
KMKR					*e*S	Sb	05 56 11.9	+1.7		
KMKR					pmax	pmax				
	comp=Z,872nm,0.5s									
DORK	Agr/Tutak/Do	2.51	198	P		Pn	05 55 35.4	+0.2		
ARKR	Arakani	2.53	70	*e*	PN	Pb	05 55 37.9	-1.6		
ARKR					*e*S	Sb	05 56 12.6	+1.8		
ARKR					pmax	pmax				
	comp=Z,756nm,0.5s									
KRNR	Karanay	2.55	65	*e*	PN	Pb	05 55 38.1	-1.7		
KRNR					*e*S	Sb	05 56 12.9	+1.5		
KRNR					pmax	pmax				
	comp=Z,339nm,0.6s									
DBC	Dubki	2.58	60	*i*	PN	Pb	05 55 38.5	-1.9		
DBC					*e*S	Sb	05 56 13.6	+1.3		
DBC	Dubki	2.58	60	*i*	Pn	Pb	05 55 38.5	-1.9		
DBC					*e*Sn	Sb	05 56 13.6	+1.3		
KRIK	Erzurum-spir	2.59	237	P		Pn	05 55 38.1	+1.8		
ERZM	Erzurum	2.62	225	P		Pn	05 55 38.2	+1.5		
IZDR	Rize	2.62	249	P		Pn	05 55 37.6	+1.1		
IZDR				S		Sb	05 56 11.9	-1.5		
BUJR	Buynaksk	2.68	66	*e*	PN	Pb	05 55 40.8	-1.3		
BUJR					*e*S	Sb	05 56 17.5	+2.3		
BUJR					pmax	pmax				
	comp=Z,475nm,0.5s									
VMUR	Van-Muradiye	2.79	183	P		Pb	05 55 44.1	0.0		
MLAZ	Malazgirt-MUS	2.80	200	Pn		Pn	05 55 40.5	+1.4		
ETEKE	Tekederesi - E	2.82	226	P		Pn	05 55 40.2	+0.7		
ETEKE				S		Sg	05 56 25.5	+1.2		
URKR	Urkarakh	2.90	81	*e*	PN	Pn	05 55 42.8	+2.3		
URKR					*e*S	Sb	05 56 20.4	-1.2		
URKR					pmax	pmax				
	comp=Z,291nm,0.4s									
SGKR	Sergokala	2.97	76	PN		Pb	05 55 44.3	-2.6		
SGKR				S		Sb	05 56 23.1	-0.3		
AKT	Akhty	2.98	95	*e*	PN	Pn	05 55 43.3	+1.8		
AKT				*e*			05 55 51.1			
AKT				*e*	PPP	PPP	05 55 54.1			
AKT					*e*S	Sb	05 56 22.0	-1.9		
AKT					pmax	pmax				
	comp=Z,226nm,0.6s									
AKT					smax	smax				
	comp=E,1µm,0.4s									
AKT					smax	smax				
	comp=N,1.0nm,0.4s									
AKT					MLR	MLR				
	comp=Z,709nm,10.0s									
GRS	Goris	3.00	139	⇓*i*	P	Pg	05 55 51.0	-0.2		
GRS				⇓*i*	S	Sg	05 56 33.0	+3.0		
MAK	Makhachkala	3.00	66	⇑*i*	PN	Pb	05 55 45.6	-1.9		
MAK					*e*S	Sb	05 56 23.1	-1.3		
MAK					pmax	pmax				
	comp=Z,753nm,0.7s									
MAK					smax	smax				
	comp=E,3µm,0.5s									
MAK					smax	smax				
	comp=E,3µm,0.5s									
MAK					MLR	MLR				
	comp=Z,2µm,9.0s									
KOPT	Kop Dagi	3.05	236			Pn	05 55 45.0	+2.4		
KOPT	Kop Dagi	3.05	236	P		Pn	05 55 44.1	+1.5		
KOPT				S		Sg	05 56 30.3	-1.3		
BAYB	BAYBURT	3.07	241	P		Pn	05 55 45.7	+2.9		
BAYB				S		Sb	05 56 27.6	+1.1		
KTUT	Trabzon	3.12	257	⇓P		Pn	05 55 44.0	+0.7		
KTUT	Trabzon	3.12	257	Pn		Pn	05 55 45.4	+2.1		
OZAP	Van, Ozalp-Mer	3.12	177	P		Pb	05 55 51.1	+1.4		
MACK	Trabzon	3.13	256	P		Pn	05 55 43.8	+0.2		
TVAN	Van	3.26	185	P		Pb	05 55 50.4	-1.8		
KSMR	Kasumkent	3.26	92	*e*	PN	Pn	05 55 48.3	+2.9		
KSMR					*e*S	Sb	05 56 30.8	-1.2		
KSMR					pmax	pmax				
	comp=Z,1µm,0.4s									
EGVZ	Egvard	3.31	140	*e*	P	Pb	05 55 51.8	-1.1		
EGVZ					*e*S	Sb	05 56 34.3	+0.8		
GOF	Gofitskoye	3.32	351	*ce*	PN	Pb	05 55 50.7	-2.2		
GOF					*e*S	Sg	05 56 38.6	-1.6		
YEDI	Yedisu-Bingol	3.40	227	Pn		Pn	05 55 49.0	+1.7		
DRN	Derbent	3.41	84	PN		Pn	05 55 49.6	+2.3		
DRN				S		Sb	05 56 33.4	-2.6		
ALVK	Alvank	3.45	144	*e*	P	Pb	05 55 55.1	-0.1		
ALVK					*e*S	Sb	05 56 40.0	+2.5		
SOC	Sochi	3.49	302	*e*	PN	Pn	05 55 47.5	-1.0		
SOC				*e*			05 55 54.8			
SOC				*e*	PPP	PPP	05 56 00.4			
SOC				*e*			05 56 28.2			
SOC							05 56 41.7			
SOC					pmax	pmax				
	comp=Z,35nm,0.6s									
SOC					MLR	MLR				
	comp=Z,362nm,10.0s									
GURO	Guroymak-BITLI	3.49	203	Pn		Pn	05 55 49.9	+1.3		
GURO	Guroymak-BITLI	3.49	203			Pn	05 55 51.4	+2.8		
AKDM	Akdamar-Van	3.50	190	Pn		Pn	05 55 49.8	+1.0		
GEVA	Gevas	3.51	189			Pn	05 55 49.0	+0.1		
GEVA	Gevas	3.51	189	P		Pb	05 55 55.9	-0.4		
MUSM	Mu-Merkez	3.51	210	P		Pn	05 55 50.5	+1.6		
BLIS	Bitlis-Merkez	3.60	201	P		Pn	05 55 53.1	+3.0		
BNGB	Bingl	3.66	221	Pn		Pn	05 55 52.6	+1.8		
ERZN	Erzincan	3.78	236	Pn		Pn	05 55 54.8	+2.2		
KELT	Kelkit	3.79	246	P		Pn	05 55 54.0	+1.2		
KELT				S		Sb	05 56 46.9	-0.4		
KELT	Kelkit	3.79	246	P		Pn	05 55 54.8	+2.0		
MAYK		4.01	222	P		Pn	05 55 56.5	+0.8		
ALUC	Giresun/Alucra	4.05	251	P		Pn	05 55 57.2	+1.0		
ARPR	Arapgir-MALATY	4.94	239			Pn	05 56 11.9	+3.3		
ANN	Anapa	5.52	305	*e*	P	Pn	05 56 17.2	+0.8		
ANN				*e*S		Sn	05 57 21.5	+1.4		
ANN					pmax	pmax				
	comp=Z,61nm,0.6s									
BNN	Bunyan	6.73	247	Pn		Pn	05 56 35.1	+2.0		
SUDU	Sudak	7.11	299	*e*	P	Pn	05 56 37.4	-0.8		
SUDU				*e*S		Sn	05 57 57.7	-1.5		
SUDU					pmax	pmax				
	comp=Z,16nm,0.4s									
SUDU					smax	smax				
	comp=N,27nm,0.5s									
SUDU					smax	smax				
	comp=E,6.0nm,0.4s									
SUDU	Sudak	7.11	299	*e*	P	Pn	05 56 37.4	-0.8		
SUDU					pmax	pmax	05 56 39.2			
	comp=Z,16nm,0.4s									
SUDU				*e*S		Sn	05 57 57.7	-1.5		
SUDU					smax	smax	05 57 58.4			
	comp=N,27nm,0.5s									
SUDU					smax	smax	05 57 58.4			
	comp=E,6.0nm,0.4s									
BZK	Bozkurt	7.30	275	Pn		Pn	05 56 42.7	+2.0		
ALU	Alushta	7.43	296	*e*	P	Pn	05 56 42.4	-0.2		
ALU				*e*S		Sn	05 58 03.1	-4.0		
ALU					pmax	pmax				
	comp=Z,54nm,0.3s									
ALU					smax	smax				
	comp=N,29nm,0.5s									
ALU					smax	smax				
	comp=E,4.0nm,0.4s									
ALU	Alushta	7.43	296	*e*	P	Pn	05 56 42.4	-0.2		
ALU					pmax	pmax	05 56 44.2			
	comp=Z,54nm,0.3s									
ALU				*e*S		Sn	05 58 03.1	-4.0		
ALU					smax	smax	05 58 10.2			
	comp=N,29nm,0.5s									
ALU					smax	smax	05 58 10.2			
	comp=E,4.0nm,0.4s									
YAL	Yalta	7.54	294	*e*	P	Pn	05 56 44.4	+0.4		
YAL				*e*S		Sn	05 58 06.4	-3.3		
YAL					pmax	pmax				
	comp=Z,29nm,0.3s									
YAL					smax	smax				
	comp=N,29nm,0.5s									
YAL					smax	smax				
	comp=E,2.0nm,0.2s									
YAL	Yalta	7.54	294	*e*	P	Pn	05 56 44.4	+0.4		
YAL					pmax	pmax	05 56 46.7			
	comp=Z,29nm,0.3s									
YAL				*e*S		Sn	05 58 06.4	-3.3		
YAL					smax	smax	05 58 15.9			
	comp=N,29nm,0.5s									
YAL					smax	smax	05 58 15.9			
	comp=E,2.0nm,0.2s									
SIM	Simferopol'	7.72	297	*e*	P	Pn	05 56 46.1	-0.4		
SIM				*e*S		Sn	05 58 13.0	-1.1		
SIM					pmax	pmax				
	comp=Z,42nm,1.1s									
SIM					smax	smax				
	comp=N,68nm,1.1s									
SIM					smax	smax				
	comp=E,46nm,1.1s									
SEV	Sevastopol'	7.89	294	*e*	P	Pn	05 56 48.4	-0.4		
SEV				*e*S		Sn	05 58 15.6	-2.7		
SEV					pmax	pmax				
	comp=Z,23nm,0.3s									
SEV					smax	smax				
	comp=N,8.0nm,0.4s									
SEV					smax	smax				
	comp=N,4.0nm,0.4s									
SEV	Sevastopol'	7.89	294	*e*	P	Pn	05 56 48.4	-0.4		
SEV					pmax	pmax	05 56 50.8			
	comp=Z,23nm,0.3s									
SEV				*e*S		Sn	05 58 15.6	-2.7		
SEV					smax	smax	05 58 18.7			
	comp=E,4.0nm,0.4s									
SEV					smax	smax	05 58 18.8			
	comp=N,8.0nm,0.4s									
BR131	Keskin Array S	7.96	258	P		Pn	05 56 53.7	+3.7		
BR131	Keskin Array S	7.96	258			Pn	05 56 53.7	+3.7		
BRTR	Keskin Array B	7.96	258	Pn		Pn	05 56 52.8	+2.8		
	comp=N,0.2nm,0.3s,baz=70,slow=10.0,SNR=16									
	comp=N,2.8nm,0.7s									
BRTR	Keskin Array B	7.96	258	P		Pn	05 56 53.8	+3.7		
BRTR	Keskin Array B	7.96	258			Pn	05 56 53.8	+3.7		
BR106	Keskin Array S	7.98	258	P		Pn	05 56 51.5	+1.3		
	comp=N,46nmcomp=N,5.9nm,0.7s									
DNZ2	Donuzlav2	8.46	299	*e*S		Sn	05 58 29.0	-3.5		
DNZ2					smax	smax	05 58 34.4			
	comp=N,1.0nm,0.3s									
DNZ2					smax	smax	05 58 34.4			
	comp=E,19nm,0.6s									
TARU	Tarkhankut	8.92	298	*e*	P	Pn	05 57 02.9	0.0		
TARU					pmax	pmax	05 57 05.1			
	comp=Z,28nm,0.3s									
TARU				*e*S		Sn	05 58 43.7	+0.2		
TARU					smax	smax	05 58 47.7			
	comp=N,5.0nm,0.4s									
TARU					smax	smax	05 58 47.7			
	comp=E,14nm,0.5s									
VSR	Storozhevoye	9.95	343	*e*	P	Pn	05 57 20.2	+3.1		
VSR					pmax	pmax				
	comp=Z,5.0nm,0.6s									
VORR	Voronezh	10.37	344	*e*	P	Pn	05 57 22.6	-0.3		
VORR					pmax	pmax				
	comp=Z,9.0nm,0.8s									
BELG	Belogornoye	10.93	13	Pn		Pn	05 57 29.9	-0.5		
	comp=Z,1.7nm,0.3s,baz=202,slow=19,SNR=5.1									
BELG				Sn		Sn	05 59 32.4	-0.5		
	comp=Z,0.9nm,0.3s,baz=241,slow=18,SNR=2.0									
	comp=Z,12nm,0.5s									
BELG	Belogornoye	10.93	13	P		Pn	05 57 30.0	-0.5		
MMAI	Mount Meron Ar	10.99	220	LR		LR	06 02 19.7			
	comp=Z,263nm,20.5s,baz=20,slow=41									
ASF	Jabal al Asfar	11.05	212	LR		LR	06 02 19.5			
	comp=Z,131nm,20.2s,baz=26,slow=40									
LPSR	Galich'ya Gora	11.31	345	*e*	P	Pn	05 57 38.9	+3.2		
LPSR					pmax	pmax				
	comp=Z,16nm,0.9s									
TLCR		11.39	292	⇓P		Pn	05 57 35.8	-1.0		
TLCR		11.39	292	P		Pn	05 57 35.7	-1.0		
TIRR	Tirgusor	11.54	289	P		Pn	05 57 36.0	-2.9		
TIRR	Tirgusor	11.54	289	Pn		Pn	05 57 36.0	-2.9		
CFR	Carcaliu	11.86	292	⇓P		Pn	05 57 42.6	-0.6		
CFR	Carcaliu	11.86	292	P		Pn	05 57 42.5	-0.6		
SORM	Soroca	12.63	305	⇑P		Pn	05 57 53.6	-0.1		
SORM	Soroca	12.63	305	P		Pn	05 57 53.6	-0.1		
ISR	Istrita	12.96	291	⇓P		Pn	05 57 57.8	-0.5		
ISR	Istrita	12.96	291	P		Pn	05 57 57.7	-0.5		
ISR	Istrita	12.96	291	P		Pn	05 57 59.3	+1.0		
	comp=Z,36nm,1.0s									
SAHR	Sahastru	12.97	293	⇓P		Pn	05 57 58.9	+0.5		
VRI	Vrincioaia	12.97	294	⇓P		Pn	05 57 58.7	+0.3		
VRI	Vrincioaia	12.97	294	P		Pn	05 57 58.7	+0.3		
PLOR	Plostina	13.02	294	⇑P		Pn	05 57 58.1	-1.0		
PLOR	Plostina	13.02	294	P		Pn	05 57 58.1	-1.0		
AKTO	Aktyubinsk	13.12	44	Pn		Pn	05 57 58.3	-2.1		
	comp=Z,2.4nm,0.3s,baz=235,slow=11,SNR=20									
AKTO				Sn		Sn	06 00 17.1	-9.3		
	comp=Z,0.6nm,0.3s,baz=220,slow=17,SNR=1.8									
AKTO				LR		LR	06 04 42.9			
	comp=Z,161nm,18.4s,baz=333,slow=45									
	comp=Z,9.7nm,0.5s									
AKTO	Aktyubinsk	13.12	44	⇑Pn		Pn	05 57 57.4	-2.9		
	comp=Z,11nm,1.1s									
AKTO				⇓Sn		Sn	06 00 25.3	-1.1		
	comp=Z,7.0nm,0.8s									
TESR	Tescani	13.17	297	⇑P		Pn	05 58 00.7	-0.4		
NEHR	Nehoiu	13.18	292	⇑P		Pn	05 58 01.3	0.0		
ONER	Baraj Valea Uz	13.30	296	⇓P		Pn	05 58 02.9	0.0		
COVR	Voineasa-Covas	13.32	294	⇓P		Pn	05 58 02.4	-0.8		
AK01	Malin Array Si	13.43	316	P		Pn	05 58 06.0	+1.4		
AKASG	Malin Array Be	13.43	317	Pn		Pn	05 58 02.6	-2.0		
	comp=Z,0.5nm,0.3s,baz=125,slow=10,SNR=1.5									
MLR	Muntele Rosu	13.43	292	Pn		Pn	05 58 02.6	-2.2		
	comp=Z,1.0nm,0.3s,baz=117,slow=4.5,SNR=9.9									
MLR				Sn		Sn	06 00 32.6	-1.8		
	comp=Z,0.6nm,0.3s,baz=119,slow=19,SNR=4.0									
MLR	Muntele Rosu	13.43	292	⇑P		Pn	05 58 04.5	-0.4		
MLR	Muntele Rosu	13.43	292	P		Pn	05 58 04.4	-0.4		
MLR	Muntele Rosu	13.43	292	P		Pn	05 58 05.8	+0.9		
	comp=Z,12nm,1.0s									
MLR	Muntele Rosu	13.43	292	P		Pn	05 58 06.9	+2.1		
KIEV	Kiev	13.44	316	⇓P		Pn	05 58 06.5	+1.7		
KIEV	Kiev	13.44	316	P		Pn	05 58 06.4	+1.7		
AK18	Malin Array Si	13.52	316	P		Pn	05 58 05.3	-0.6		
AK22	Malin Array Si	13.54	317	P		Pn	05 58 06.1	-0.1		
AB31	Akbulak array	13.56	51	⇑Pn		Pn	05 58 04.0	-2.4		
	comp=Z,12nm,0.8s,baz=240,slow=11,SNR=106									
AB31				⇑Sn		Sn	06 00 31.4	-5.9		
	comp=Z,7.0nm,0.7s,baz=247,slow=20,SNR=4.3									
AB31	Akbulak array	13.56	51			Pn	05 58 05.0	-1.4		
ABKAR	Akbulak array	13.56	51			Pn	05 58 04.6	-1.8		
DOPR	Dopca	13.90	294	⇓P		Pn	05 58 10.5	-0.7		
EIL	Elat	14.04	213	LR		LR	06 04 51.5			
	comp=Z,135nm,19.6s,baz=52,slow=43									
VOIR		14.05	291	⇑P		Pn	05 58 13.3	0.0		
VOIR		14.05	291	P		Pn	05 58 13.2	0.0		
VOIR		14.05	291	P		Pn	05 58 13.1	-0.1		
OBN	Obninsk	14.16	343	*ce*	P	Pn	05 58 12.3	-2.2		
OBN					pmax	pmax				
	comp=Z,6.0nm,1.0s									
OBN					MLR	MLR				
	comp=Z,53nm,15.0s									
ARR	Arges	14.33	291	⇑P		Pn	05 58 16.7	-0.3		
ARR	Arges	14.33	291	P		Pn	05 58 17.9	+0.8		
BURAR	Bucovina Array	14.42	300	⇑P		Pn	05 58 19.0	+0.8		
BURAR	Bucovina Array	14.42	300	P		Pn	05 58 19.0	+0.8		
BURAR	Bucovina Array	14.42	300			Pn	05 58 16.2	-2.0		
BUR08	Bucovina Ar. S	14.44	300			Pn	05 58 16.1	-2.4		
CJR	Cluj-Napoca	15.27	296	⇑P		Pn	05 58 29.0	-0.7		
CJR	Cluj-Napoca	15.27	296	P		Pn	05 58 29.0	-0.7		
RNPP5	Staryi Chortor	15.49	314	P		Pn	05 58 33.2	+0.7		
BMR	Baia Mare	15.55	299	⇓P		Pn	05 58 34.5	+1.1		
BMR	Baia Mare	15.55	299	P		Pn	05 58 34.4	+1.1		
BMR	Baia Mare	15.55	299	P		P	05 58 38.6	+0.8		
MARR	Marisel-Cluj	15.58	295	⇓P		Pn	05 58 34.1	+0.3		
DEV	Deva	15.60	292	⇑P		Pn	05 58 34.8	+0.8		
DEV	Deva	15.60	292	P		Pn	05 58 34.8	+0.8		
GZR	Gura Zlata	15.63	290	⇑P		Pn	05 58 34.5	0.0		
GZR	Gura Zlata	15.63	290	P		Pn	05 58 34.4	0.0		
KNT	Kendrikon	15.66	275	P		Pn	05 58 36.8	+2.0		
HERR	Herculane	15.84	288	⇓P		Pn	05 58 37.5	+0.3		
DRGR		15.88	295	⇑P		Pn	05 58 38.4	+0.7		
DRGR		15.88	295	P		Pn	05 58 38.4	+0.7		
TRPA	Tarpa	16.29	300	P		Pn	05 58 41.9	-0.9		
MDVR	Moldovita	16.34	288	⇓P		Pn	05 58 44.1	+0.5		
BZS	Buzias	16.46	291	P		Pn	05 58 45.6	+0.4		
SIRR	Siria	16.51	293	⇓P		Pn	05 58 45.6	-0.2		
MNK	Minsk	16.51	326	*i*	P	Pn	05 58 45.1	-0.6		
	comp=E,6.0nm,0.7s									
MNK				*i*	P	Pn	05 58 45.1	-0.6		
	comp=N,3.0nm,0.6s									
MNK				*i*	P	Pn	05 58 45.1	-0.6		
	comp=Z,4.0nm,0.7s,baz=134									
MNK				*i*	PP	PnPn	05 58 54.1	-0.5		
MNK				*i*	PPP	PPP	05 59 01.8			
MNK				*i*	S	Sn	06 01 48.1	-1.0		
MNK				*i*	SS	SnSn	06 02 02.5	+0.5		
MNK				*i*	SSS	SSS	06 02 15.1			
MNK				*i*	LQ	LQ	06 03 35.7			
MNK				*i*	LR	LR	06 04 57.4			
MNK				*i*	LRM	MLR	06 05 42.3			
	comp=E,95nm,15.7s									
MNK				*i*	LRM	MLR	06 05 52.0			
	comp=Z,100nm,15.6s									
MNK				*i*	LRM	MLR	06 05 57.5			
	comp=N,79nm,15.1s									
MNK	Minsk	16.51	326	*i*	P	Pn	05 58 45.1	-0.6		
MNK				*i*	S	Sn	06 01 48.0	-1.0		
MNK					pmax	pmax				
	comp=Z,4.0nm,0.7s									
MNK					pmax	pmax				
	comp=N,3.0nm,0.6s									
MNK					pmax	pmax				
	comp=E,6.0nm,0.7s									
MNK					MLR	MLR				
	comp=E,95nm,16.0s									
MNK					MLR	MLR				
	comp=Z,100nm,16.0s									
MNK					MLR	MLR				
	comp=N,79nm,15.0s									
AGG	Agios Georgios	16.56	268	P		P	05 58 49.4	+0.3		
IMMV	Iera Moni Meta	16.69	254	P		P	05 58 51.3	+0.9		
KIRV	Kirov	17.19	10	P		Pn	05 58 51.1	-3.1		
	comp=N,7.4nm,0.4s,baz=202,slow=19,SNR=6.6									
KIRV					LR	LR	06 06 00.8			
	comp=N,114nm,20.6s,baz=165,slow=39									
NACGM	Naroch	17.25	325	*e*	P	Pn	05 58 54.8	-0.2		
	comp=Z,6.0nm,0.9s,baz=132									
KBN	Korca	17.33	274	P		P	05 58 58.3	+0.7		
ARTI	Arti	17.41	28	P		Pn	05 58 53.7	-3.3		
	comp=Z,6.1nm,0.5s,baz=212,slow=5.4,SNR=11									
ARTI					LR	LR	06 07 46.8			
	comp=Z,115nm,18.0s,baz=190,slow=44									
ARTI	Arti	17.41	28*d*	*i*	P	Pn	05 58 53.5	-3.5		
ARTI					S	Sn	06 02 03.3	-7.5		
ARTI					pmax	pmax				
	comp=Z,17nm,1.8s									
PSZ	Piszkesteto	17.97	298	P		P	05 59 04.8	+0.1		
PSZ					pmax	pmax				
	comp=Z,9.0nm,1.1s									
PSZ	Piszkesteto	17.97	298	P		P	05 59 04.8	+0.1		
PSZ	Piszkesteto	17.97	298	P		P	05 59 04.8	+0.1		
NIE	Niedzica	18.07	303	P		Pn	05 59 05.3	+0.1		
	comp=Z,3.9nm,1.2s									
SVE	Sverdlovsk	18.56	30	*e*	P	P	05 59 07.7	-3.2		
SVE				*e*S		Sn	06 02 34.0	-4.6		
SVE					pmax	pmax				
	comp=Z,24nm,0.8s									
SHAA	Shahritus	19.19	95	P		P	05 59 18.0	-0.1		
SHAA					IAmb	IAmb	05 59 25.8			
	comp=Z,24nm,0.9s									
KLMR	Klimovskoe	19.27	354	*e*	P	P	05 59 16.8	-1.9		
KLMR					pmax	pmax				
	comp=Z,25nm,1.5s									
JAVC	Velka Javorina	19.61	300	*e*	P	Pn	05 59 29.0	+5.1		
CHGR	Chuyangaron	19.61	91	P		P	05 59 21.7	-1.0		
CHGR					pmax	pmax				
	comp=Z,21nm,0.7s									
CHGR	Chuyangaron	19.61	91	P		P	05 59 21.7	-1.0		
CHGR	Chuyangaron	19.61	91	P		Pn	05 59 25.8	+1.8		
UOSS	Minazif	19.70	145	P		P	05 59 24.1	+0.4		
UOSS					IAmb	IAmb	05 59 30.1			
	comp=Z,9.4nm,0.8s									
KK31	Karatay Array	19.75	77	P		P	05 59 24.7	+0.6		
KK31					pmax	pmax				
	comp=Z,9.0nm,0.7s									
KK31

comp=Z,20nm,0.9s
ZVC Zvikov 21.96 300 *e*P **P 05 59 48.1 +0.2**
GEC2 GERESS Array S 22.20 299 *e*P **P 05 59 51.7 +1.1**
comp=Z,14nm,1.0s,baz=99,slow=10
GERES GERESS Array B 22.20 299 P **P 05 59 51.4 +0.8**
comp=Z,6.2nm,0.8s,baz=108,slow=8.6,SNR=65
comp=Z,6.2nm,0.8s
GERES GERESS Array B 22.20 299 P **P 05 59 51.7 +1.1**
GERES GERESS Array B 22.20 299 P **P 05 59 51.7 +1.1**
KBA Koelnbreinsper 22.28 294 *e*P **P 05 59 53.1 +1.5**
comp=Z,7.9nm,0.9s
KBA Koelnbreinsper 22.28 294 P **P 05 59 52.7 +1.1**
KHC Kasperske Hory 22.31 300 *e*P **P 05 59 51.9 +0.1**
KHC Kasperske Hory 22.31 300 *e*P **P 05 59 51.9 +0.1**
KHC Kasperske Hory 22.31 300 P **P 05 59 52.4 +0.6**
comp=Z,5.6nm,1.0s
BRG Berggiesshubel 22.39 304 *e*P **P 05 59 53.4 +0.9**
comp=Z,4.7nm,1.2s,baz=99,slow=10
BRG Berggiesshubel 22.39 304 P **P 05 59 53.5 +1.0**
BRG Berggiesshubel 22.39 304 *e*P **P 05 59 53.3 +0.9**
BRG Amp 05 59 56.3
comp=Z,3.4nm,1.1s
FIA1 FINESS Array S 22.40 337 P **P 05 59 51.0 -1.5**
FIA1 IAmb IAmb 06 00 15.9
comp=Z,13nm,0.8s
FINES FINESS Array B 22.40 337 P **P 05 59 52.3 -0.3**
comp=Z,2.7nm,0.8s,baz=139,slow=11,SNR=14
FINES LR LR 06 09 41.7
comp=Z,98nm,18.3s,baz=123,slow=40
comp=Z,2.7nm,0.8s
FINES FINESS Array B 22.40 337 P **P 05 59 52.8 +0.2**
FINES FINESS Array B 22.40 337 P **P 05 59 52.8 +0.2**
HSKC Hora Svate Kat 22.65 303 P **P 05 59 56.3 +1.0**
AAK Ala-Archa 22.71 77 LR LR 06 11 36.6
comp=Z,140nm,18.3s,baz=168,slow=44
AAK Ala-Archa 22.71 77*ce*P **P 05 59 58.2 +2.0**
AAK pmax pmax
comp=Z,23nm,2.5s
AAK Ala-Archa 22.71 77 P **P 05 59 56.5 +0.2**
AAK IAmb IAmb 06 00 16.4
comp=Z,8.2nm,0.9s
LESA Schwarzleotal 22.75 295 *e*P **P 05 59 57.2 +0.7**
comp=Z,8.9nm,1.1s,SNR=7.4
WET Wettzell 22.77 299 *e*L L 06 09 21.0
comp=Z,24nm,19.7s
WET Wettzell 22.77 299 P **P 05 59 57.1 +0.5**
ABTA Abfaltersbach 22.84 293 *e*P **P 05 59 58.3 +0.9**
comp=Z,6.6nm,1.2s
WTTA Wettenberg 23.45 294 *e*P **P 06 00 04.4 +0.5**
comp=Z,13nm,1.2s
GRB3 Grafenberg Arr 23.49 300 P **P 06 00 04.7 +0.7**
WATA Walderalm 23.50 295 *i* P **P 06 00 04.4 +0.2**
comp=Z,9.3nm,1.2s
GRB5 Grafenberg Arr 23.55 299 P **P 06 00 05.2 +0.6**
GRC3 Grafenberg Arr 23.59 299 P **P 06 00 05.4 +0.4**
GRB4 Grafenberg Arr 23.66 300 P **P 06 00 06.7 +0.9**
GRC2 Grafenberg Arr 23.73 298 P **P 06 00 06.4 +0.1**
SQTA Sankt Quirin 23.75 294 *i* P **P 06 00 06.6 0.0**
comp=Z,10nm,0.8s,SNR=5.6
BOOM Boomskoye usch 23.79 77 P **P 06 00 07.9 +0.7**
BOOM pmax pmax
comp=Z,15nm,1.1s
BOOM Boomskoye usch 23.79 77 P **P 06 00 07.8 +0.7**
MOX Moxa 23.80 303 *e*L L 06 09 22.2
comp=Z,59nm,18.2s
MOTA Moosalm 23.82 295 *e*P **P 06 00 07.2 -0.1**
comp=Z,11nm,0.8s,SNR=9.1
GRA1 Grafenberg Arr 23.91 300 P **P 06 00 08.4 +0.3**
GRA1 IAmb IAmb 06 00 10.2
comp=Z,8.3nm,1.0s
GRF Grafenberg Arr 23.91 300 P **P 06 00 08.4 +0.3**
GRF pmax pmax
comp=Z,8.0nm,1.0s
GRF Grafenberg Arr 23.91 300 *e*P **P 06 00 08.8 +0.8**
comp=Z,9.6nm,1.0s,baz=99,slow=10
GRF *e*L L 06 09 49.4
comp=Z,44nm,18.9s
NRN Naryn 24.03 80 P **P 06 00 09.3 -0.3**
NRN pmax pmax
comp=Z,7.0nm,1.0s
NRN Naryn 24.03 80 P **P 06 00 09.3 -0.3**
NRN IAmb IAmb 06 00 14.8
comp=Z,6.7nm,1.0s
RETA Reutte 24.05 295 *e*P **P 06 00 09.3 -0.3**
comp=Z,5.0nm,1.0s
FETA Feichten 24.07 294 *e*P **P 06 00 09.8 0.0**
comp=Z,6.5nm,0.9s,SNR=7.3
KSH2 Kashi 24.26 86 P **P 06 00 13.8 +2.2**
KSH2 pmax pmax
comp=Z,3.0nm,0.6s
FUORN Ofenpass-Fuorn 24.39 293 P **P 06 00 12.7 -0.2**
FUORN IAmb IAmb 06 00 20.4
comp=Z,5.8nm,1.0s
ASSE Asse, Remlinge 24.65 306 *e*P **P 06 00 16.5 +1.8**
comp=Z,11nm,1.2s,baz=99,slow=10
DAVA Damuels 24.65 294 *e*P **P 06 00 14.9 -0.2**
comp=Z,3.5nm,0.6s
KDJ Kajisay 24.76 78 P **P 06 00 15.9 -0.3**
KDJ Kajisay 24.76 78 **P 06 00 15.9 -0.3**
CLZ Clausthal 24.77 305 *e*P **P 06 00 18.0 +2.0**
comp=Z,12nm,1.0s,baz=99,slow=10
GTTG Gottingen 24.97 305 *e*P **P 06 00 19.8 +2.1**
comp=Z,13nm,1.2s,baz=99,slow=10
TUE Stuetta 25.03 293 P **P 06 00 19.0 +0.5**
TUE IAmb IAmb 06 00 20.3
comp=Z,7.3nm,1.1s
TUE Stuetta 25.03 293 P **P 06 00 19.2 +0.7**
comp=Z,28nm,1.5s
STU Stuttgart 25.16 298 P **P 06 00 19.7 +0.3**
STU pmax pmax
comp=Z,20nm,0.9s
STU Stuttgart 25.16 298 P **P 06 00 19.7 +0.3**
STU Stuttgart 25.16 298 *e*P **P 06 00 20.5 +1.1**
comp=Z,49nm,0.9s,baz=99,slow=10
STU Stuttgart 25.16 298 P **P 06 00 17.0 -2.4**
KURBB Kurchatov Arra 25.43 58 P **P 06 00 22.6 +0.8**
comp=Z,5.6nm,0.6s,baz=268,slow=9.5,SNR=34
KURBB LR LR 06 11 57.7
comp=Z,97nm,20.3s,baz=176,slow=40
comp=Z,5.6nm,0.6s
KURK Kurchatov 25.50 58*ce*P **P 06 00 23.3 +0.8**
KURK pmax pmax
comp=Z,15nm,1.3s
KURK Kurchatov 25.50 58 P **P 06 00 22.9 +0.4**
KURK IAmb IAmb 06 00 38.0
comp=Z,7.8nm,0.8s
RETH Rethem/Aller, 25.56 307 *e*P **P 06 00 25.1 +2.2**
baz=99,slow=10
BFO Black Forest 25.71 297 *e*L L 06 12 08.6
comp=Z,62nm,18.0s
KASTN Kahler Asten 25.88 303 *e*P **P 06 00 28.2 +2.2**
baz=99,slow=10
HFS Hagfors 26.03 325 P **P 06 00 28.9 +1.7**
comp=Z,8.8nm,0.7s,baz=146,slow=9.0,SNR=24
HFS LR LR 06 11 17.0
comp=Z,69nm,20.0s,baz=114,slow=38
comp=Z,8.8nm,0.7s
SENIN Lac Senin/Sane 26.45 292 P **P 06 00 31.1 -0.4**
KEST Kesra 27.40 269 P **P 06 00 40.9 +1.0**
comp=Z,1.9nm,0.8s,baz=34,slow=7.3,SNR=2.3
comp=Z,1.9nm,0.8s
NB2 NORSAR Subarra 27.54 325 P **P 06 00 43.7 +2.8**
comp=Z,1.6nm,0.7s,baz=124,slow=10
NOA NORSAR Array B 27.54 325 P **P 06 00 41.8 +0.9**
comp=Z,1.7nm,0.9s,baz=137,slow=8.4,SNR=4.3
NOA LR LR 06 12 03.9
comp=Z,95nm,18.0s,baz=115,slow=37
comp=Z,1.7nm,0.9s
MK31 Makanchi Array 27.82 66*ce*P **P 06 00 45.4 +1.8**
MKAR Makanchi Array 27.82 66 P **P 06 00 44.3 +0.7**
comp=Z,1.2nm,0.5s,baz=278,slow=7.8,SNR=16
comp=Z,2.1nm,0.5s
MKAR Makanchi Array 27.82 66 P **P 06 00 44.6 +1.0**
MKAR Makanchi Array 27.82 66 P **P 06 00 44.6 +1.0**
ARCES ARCESS Array B 29.40 347 P **P 06 00 58.3 +1.0**
comp=Z,2.1nm,1.0s,baz=138,slow=8.9,SNR=2.2
comp=Z,2.1nm,1.0s
ARCES ARCESS Array B 29.40 347 P **P 06 00 57.3 0.0**
ZAA0 Zalesovo Array 29.67 52 P **P 06 00 59.6 -0.3**
ZALV Zalesovo Beam 29.67 52 P **P 06 00 59.5 -0.4**
comp=Z,0.9nm,0.6s,baz=268,slow=7.4,SNR=5.2
comp=Z,0.9nm,0.6s
ZALV Zalesovo Beam 29.67 52 P **P 06 00 59.7 -0.2**
ZALV Zalesovo Beam 29.67 52 P **P 06 00 59.7 -0.2**
DGZ Jazzator, Alta 31.11 60 *i* P **P 06 01 14.0 +1.2**
DGZ pmax pmax
comp=Z,20nm,1.0s
WMQ Urumqi 32.01 71 *e*P **P 06 01 23.6 +2.9**
EKA Eskdalemuir Ar 33.22 310 P **P 06 01 31.1 0.0**
comp=Z,1.3nm,0.6s,baz=106,slow=8.8,SNR=8.6
comp=Z,1.3nm,0.6s
NRIK Noril'sk 35.68 25 LR LR 06 21 12.9
comp=Z,124nm,18.7s,baz=213,slow=44
ESDC Sonseca Array 35.88 283 P **P 06 01 53.9 -0.4**
comp=Z,0.7nm,0.8s,baz=66,slow=7.2,SNR=3.7
comp=Z,0.7nm,0.8s
SPB2 Spitsbergen Ar 38.14 351 P **P 06 02 12.6 -0.5**
SPITS Spitsbergen Ar 38.14 351 P **P 06 02 13.5 +0.4**
comp=Z,8.1nm,1.1s,baz=120,slow=5.7,SNR=1.3
comp=Z,8.1nm,1.1s
BORG Borgarnes 42.72 325 LR LR 06 20 34.4
comp=Z,41nm,18.9s,baz=45,slow=36
KMBO Kilima Mbogo 43.12 190 P **P 06 02 54.2 -0.8**
baz=210,slow=16
SONM Songino Array 43.76 60 P **P 06 02 59.5 -0.4**
comp=Z,1.1nm,0.6s,baz=285,slow=10,SNR=5.9
SONM LR LR 06 23 18.1
comp=Z,149nm,18.1s,baz=240,slow=39
comp=Z,1.1nm,0.6s
SONM Songino Array 43.76 60 P **P 06 02 59.5 -0.4**
MBAR Mbarara 43.81 199 LR LR 06 22 02.8
comp=Z,78nm,21.0s,baz=92,slow=37
ULN Ulaanbaatar 44.17 60*ce*P **P 06 03 04.7 +1.5**
ULN pmax pmax
comp=Z,9.0nm,1.3s
ULN Ulaanbaatar 44.17 60 P **P 06 03 02.8 -0.4**
ULN IAmb IAmb 06 03 05.3
comp=Z,6.1nm,0.9s
TORD Torodi Ar. Bea 46.31 245 P **P 06 03 19.7 -0.6**
comp=Z,1.4nm,1.0s,baz=43,slow=7.3,SNR=3.8
comp=Z,1.4nm,1.0s
TORD Torodi Ar. Bea 46.31 245 P **P 06 03 19.7 -0.6**
HHC Hu-ho-hao-te 49.69 67 *e*P **P 06 03 46.6 +0.3**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,79nm,5.4s
HILR Hailar Array B 51.55 54 P **P 06 04 01.5 +1.3**
comp=Z,1.5nm,0.3s,baz=308,slow=7.1,SNR=1.6
comp=Z,1.5nm,0.3s
CMAR Chiang Mai Arr 52.09 99 P **P 06 04 06.5 +1.9**
comp=Z,1.6nm,0.3s,baz=301,slow=8.3,SNR=8.8
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 52.09 99 *i* P **P 06 04 08.6 +4.0**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
YAK Yakutsk 52.37 36 LR LR 06 30 44.1
comp=Z,75nm,18.3s,baz=244,slow=41
SEY Seymchan 61.24 30*ce*P **P 06 05 10.5 +1.5**
SEY pmax pmax
comp=Z,10.0nm,2.5s
BILL Bilibino 62.36 21 *i* P **P 06 05 17.9 +1.4**
BILL pmax pmax
comp=Z,3.0nm,1.0s
KSRS Korea Array 62.44 63 P **P 06 05 17.3 -0.1**
comp=Z,1.4nm,0.8s,baz=286,slow=5.9,SNR=4.1
comp=Z,1.4nm,0.8s
MA2 Magadan 62.60 33 LR LR 06 37 29.6
comp=Z,129nm,18.8s,baz=278,slow=41
E19K Redstone River 69.92 8 P **P 06 06 05.3 +0.3**
E19K IAmb IAmb 06 06 17.2
comp=Z,3.1nm,1.0s
KDAK Kodiak Island 79.86 9 LR LR 06 47 11.6
comp=Z,65nm,18.7s,baz=310,slow=39
PDAR Pinedale Array 92.47 341 LR LR 06 49 02.9
comp=Z,29nm,18.4s,baz=348,slow=35

IDC ***12*** *06:06:30.1±1.1,31.72N×132.07E,h0km,mb3.6/5, mbtmp3.6/8,ML2.7/2,Error ellipse: s-maj=34.5km s-min=23.4km az=98.0*
NIED ***12*** *06:06:33.4,31.71N×132.29E,h51km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-2.02; Mθθ-0.97; Mϕϕ2.99; Mrθ-1.04; Mϕθ-0.64; Mϕr1.61; Fault plane solution: M03.26000×10¹⁴ NP1:ϕs17.00000°, δ33.00000°,λ-50.00000°. NP2:ϕs151.00000°,δ65.00000°, λ-113.00000°.*
JMA ***12*** *06:06:33.4±0.2,31.7N±0.5×132.3E±1.0,h51km±3km, MV3.5/40,HYUGANADA REGION*
ISC 12 06:06:34.5±1.9,31.72N±0.04×132.24E±0.05,h30km±14km, n32,σ1ϟ23/39,mb3.5/5,Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKG	**Nichinankitago**	**0.74**	**266**	*i* P	**Pn**	**06 06 48.4**	**-0.4**
JNKG				S	**Sb**	**06 06 59.3**	**+0.7**
JTSN	**Tsuno**	**0.82**	**310**	*i* P	**Pn**	**06 06 49.3**	**-0.6**
JTSN				S	**Sb**	**06 07 00.2**	**-0.6**
JNAR	**Kushima--Naru**	**0.85**	**257**	*i* P	**Pn**	**06 06 49.8**	**-0.5**
JNAR				S	**Sn**	**06 07 02.5**	**+0.7**
JHHC	**Hyugahichiya**	**0.89**	**325**	P	**Pn**	**06 06 50.1**	**-0.8**
JHHC				S	**Sn**	**06 07 01.5**	**-1.2**
JTZ	**Takazaki**	**1.00**	**281**	*i* P	**Pn**	**06 06 51.8**	**-0.6**
JTZ				S	**Sn**	**06 07 05.8**	**+0.3**
JTO	**Tosashimizu**	**1.23**	**23**	P	**Pn**	**06 06 54.5**	**-1.2**
JTO				S	**Sn**	**06 07 08.3**	**-3.0**
JIU3	**Izumi3**	**1.47**	**305**	P	**Pn**	**06 06 59.0**	**+0.2**
JIU3				S	**Sn**	**06 07 18.1**	**+1.1**
JTN	**Tanegashima 3**	**1.51**	**226**	P	**Pn**	**06 06 58.5**	**-1.0**
JTN				S	**Sn**	**06 07 17.0**	**-1.2**
UWA2	**Uwa jima 2**	**1.53**	**12**	P	**Pn**	**06 06 59.1**	**-0.6**
UWA2				S	**Sn**	**06 07 16.3**	**-2.3**
JSU	**Suzuyama**	**1.54**	**263**	P	**Pn**	**06 06 59.0**	**-0.8**
JSU	**Suzuyama**	**1.54**	**263**	S	**Sb**	**06 07 21.2**	**-0.2**
JKU	**Kubokawa**	**1.73**	**23**	*e*S	**Sn**	**06 07 21.7**	**-2.0**
JMTN	**Minamitane**	**1.75**	**221**	P	**Pn**	**06 07 01.8**	**-1.0**
JMTN				*e*S	**Sn**	**06 07 22.6**	**-1.4**
JNA	**Nagahama**	**1.85**	**6**	P	**Pn**	**06 07 04.0**	**-0.1**
JMN	**Monobe**	**2.44**	**34**	P	**Pn**	**06 07 13.1**	**+0.9**
JTU	**Tsushima**	**3.68**	**320**	P	**Pn**	**06 07 30.6**	**+1.4**
INU	**Inuyama**	**5.39**	**46**	P	**Pn**	**06 07 54.7**	**+1.9**
JGF	**Kuroka**	**5.76**	**46**	P	**Pn**	**06 07 59.9**	**+2.0**
JOW	**Kunigami**	**5.97**	**216**	P	**Pn**	**06 08 01.2**	**+0.4**
JHJ	**Hachijo jima 2**	**6.53**	**76**	Pn	**Pn**	**06 08 09.2**	**+0.7**
JHJ2	**Mitsuno**	**6.56**	**76**	P	**Pn**	**06 08 10.5**	**+1.7**
KSRS	**Korea Array**	**6.74**	**329**	Pn	**Pn**	**06 08 11.5**	**+0.2**
	89nm,0.7s,baz=287,slow=19,SNR=4.7						
	0.2nm,0.3s,baz=146,slow=14,SNR=2.1						
	0.5nm,0.3s						
MAJO	**Matsushiro**	**6.90**	**44**	P	**Pn**	**06 08 14.6**	**+1.0**
MJAR	**Matsushiro Arr**	**6.90**	**44**	Pn	**Pn**	**06 08 14.8**	**+1.2**
	0.1nm,0.3s,baz=240,slow=14,SNR=6.2						
	0.7nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**33.29**	**103**	T	T	06 48 20.5	
	baz=295,slow=74						
H11N1	**WAKE ISLAND Hy**	**33.29**	**103**	T	T	06 48 21.6	
	baz=295,slow=74						
H11N3	**WAKE ISLAND Hy**	**33.30**	**103**	T	T	06 48 25.8	
	baz=295						
WRA	**Warramunga Arr**	**51.40**	**177**	P	**P**	**06 15 36.1**	**-0.5**
	0.3nm,0.7s,baz=10,slow=8.0,SNR=1.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**55.09**	**178**	P	**P**	**06 16 04.8**	**+1.1**
	0.6nm,1.1s,baz=11,slow=13,SNR=4.8						
	0.6nm,1s						
ILAR	**Eielson Array**	**57.95**	**30**	P	**P**	**06 16 23.9**	**+0.3**
	0.3nm,0.6s,baz=281,slow=5.2,SNR=2.5						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**69.83**	**331**	P	**P**	**06 17 40.6**	**-1.2**
	2.0nm,1.0s,baz=79,slow=4.1,SNR=1.6						
	2.0nm,1.0s						
NVAR	**Mina Array Bea**	**84.21**	**48**	P	**P**	**06 19 05.0**	**+1.6**
	0.3nm,0.6s,baz=308,slow=5.6,SNR=2.7						
	0.3nm,0.6s						

IDC ***12*** *06:27:03.9±0.5,5.13S×102.40E,h0km,mb4.3/29, mbtmp4.3/30,ML4.4/1,MS3.6/4,Error ellipse: s-maj=18.9km s-min=10.9km az=59.0*
NEIC ***12*** *06:27:08.9±1.1,5.19S±0.06×102.37E±0.07,h35km±2km, mb4.6/54,Error ellipse: s-maj=12.0km s-min=9.8km az=276.0*
GFZ ***12*** *06:27:09.3±0.3,5°S±3°×10°2E±°,h50km±2km,M4.5/20, mb4.6/20,Error ellipse: s-maj=7.8km s-min=4.4km az=43.1,confirmed*
DJA ***12*** *06:27:11.6±0.2,5°S±2°×10°2E±°,h72km,M5.2/48, mb4.9/24,mB5.9/12,MLv4.9/48,Mw4.8/4,Mw(mB)5.5/12*
ISC 12 06:27:10.0±0.6,5.21S±0.04×102.39E±0.04,h48km±5km, n201,σ1ϟ03/198,mb4.6/62,MS3.8/4,1C,Southern

Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGSI	**Enggano, Bengk**	**0.18**	**220**	P	**Pn**	**06 27 17.7**	**-0.4**
EGSI	**Enggano, Bengk**	**0.18**	**220**	P	**Pn**	**06 27 17.0**	**-1.0**
MNAI	**Manna**	**1.01**	**34**	P	**Pn**	**06 27 27.7**	**-0.2**
MNAI	**Manna**	**1.01**	**34**	S	**Sn**	**06 27 42.0**	**+0.9**
MNAI	**Manna**	**1.01**	**34**		**Pn**	**06 27 27.7**	**-0.2**
MNAI				Sn	**Sn**	**06 27 40.2**	**-0.8**
MNAI	**Manna**	**1.01**	**34**	P	**Pn**	**06 27 27.7**	**-0.2**
MNAI				S	**Sn**	**06 27 40.0**	**-1.1**
MNAI	**Manna**	**1.01**	**34**	P	**Pn**	**06 27 27.5**	**-0.4**
KSI	**Kapahiang**	**1.56**	**7**	P	**Pn**	**06 27 35.0**	**-0.4**
KSI				S	**Sn**	**06 27 54.6**	**+0.1**
LWLI	**Liwa**	**1.67**	**83**	P	**Pn**	**06 27 37.6**	**+0.7**
LWLI				S	**Sn**	**06 27 57.6**	**+0.3**
LWLI	**Liwa**	**1.67**	**83**	P	**Pn**	**06 27 36.9**	**-0.1**
KASI	**Kota Agung**	**2.12**	**99**	P	**Pn**	**06 27 43.5**	**+0.5**
KASI				S	**Sn**	**06 28 09.0**	**+0.9**
KASI	**Kota Agung**	**2.12**	**99**	P	**Pn**	**06 27 43.2**	**+0.2**
KLI	**Kotabumi**	**2.48**	**82**	P	**Pn**	**06 27 48.4**	**+0.5**
BLSI	**Bandar Lampung**	**2.84**	**93**	P	Pn	06 28 01.6	+8.6
PMBI	**Palembang**	**3.28**	**46**	Pn	**Pn**	**06 27 56.9**	**-2.0**
PMBI	**Palembang**	**3.28**	**46**	P	**Pn**	**06 27 59.2**	**+0.3**
PMBI	**Palembang**	**3.28**	**46**	P	**Pn**	**06 27 59.3**	**+0.3**
PPSI	**Pulau Pagai**	**3.40**	**316**	P	**Pn**	**06 28 01.5**	**+0.9**
PPSI	**Pulau Pagai**	**3.40**	**316**	P	**Pn**	**06 28 01.0**	**+0.4**
JMBI	**JAMBI**	**3.77**	**19**	P	**Pn**	**06 28 05.9**	**+0.3**
JMBI	**JAMBI**	**3.77**	**19**	P	**Pn**	**06 28 05.7**	**+0.1**
SDSI	**Sungai Dareh**	**4.36**	**347**	P	**Pn**	**06 28 13.9**	**+0.2**
SISI	**Saibi**	**5.08**	**319**	P	**Pn**	**06 28 22.6**	**-1.1**
	0.8nm198nm,0.8s						
SISI	**Saibi**	**5.08**	**319**	P	**Pn**	**06 28 22.5**	**-1.1**
PPI	**Padang Panjang**	**5.13**	**337**	P	**Pn**	**06 28 24.3**	**0.0**
	0.9nm108nm,0.9s						
DSRI	**Dabo**	**5.18**	**25**	P	**Pn**	**06 28 24.2**	**-0.9**
	65nm,0.5s						
DSRI	**Dabo**	**5.18**	**25**	P	**Pn**	**06 28 26.6**	**+1.5**
LEM	**Lembang**	**5.44**	**107**	Pn	**Pn**	**06 28 27.9**	**-0.8**
	12nm,0.3s,baz=300,slow=14,SNR=6.6						
LEM				LR	LR	06 31 05.9	
	comp=Z,487nm,21.2s,baz=345,slow=44						
	7.8nm,0.3s						
LEM	**Lembang**	**5.44**	**107**	P	**Pn**	**06 28 30.4**	**+1.7**
	0.5nm128nm,1.1s						
LEM	**Lembang**	**5.44**	**107**	P	**Pn**	**06 28 29.7**	**+1.0**
BKNI	**Bangkinang**	**5.66**	**346**	P	**Pn**	**06 28 33.8**	**+2.1**
	1.2nm174nm,0.9s						
BBJI	**Bungbulang**	**5.68**	**113**	P	**Pn**	**06 28 32.1**	**+0.1**
BBJI	**Bungbulang**	**5.68**	**113**		**Pn**	**06 28 31.9**	**-0.1**
BBJI				Sn	**Sn**	**06 29 30.9**	**-5.1**
BBJI	**Bungbulang**	**5.68**	**113**	P	**Pn**	**06 28 32.4**	**+0.4**
	32nm,0.7s						
BBJI	**Bungbulang**	**5.68**	**113**	P	**Pn**	**06 28 31.8**	**-0.2**
TPI	**Tanjungpandan**	**5.79**	**65**	P	**Pn**	**06 28 32.7**	**-0.7**
MYKOM	**Kota Tinggi**	**7.11**	**12**	P	**Pn**	**06 28 51.4**	**-0.1**
MYKOM	**Kota Tinggi**	**7.11**	**12**		**Pn**	**06 28 49.7**	**-1.8**
MYKOM	**Kota Tinggi**	**7.11**	**12**	P	**Pn**	**06 28 52.7**	**+1.2**
MYKOM	**Kota Tinggi**	**7.11**	**12**	P	**Pn**	**06 28 52.0**	**+0.6**
GSI	**Gunungsitoli**	**8.06**	**323**	P	**Pn**	**06 29 03.6**	**-1.0**
GSI	**Gunungsitoli**	**8.06**	**323**		**Pn**	**06 29 03.7**	**-1.0**
GSI	**Gunungsitoli**	**8.06**	**323**	P	**Pn**	**06 29 07.4**	**+2.8**
	51nm,0.8s						
GSI	**Gunungsitoli**	**8.06**	**323**	P	**Pn**	**06 29 03.7**	**-1.0**
UGM	**Wanagama**	**8.51**	**109**	P	**Pn**	**06 29 11.4**	**+0.6**
UGM	**Wanagama**	**8.51**	**109**	Pn	**Pn**	**06 29 10.3**	**-0.5**
SNJI	**Sawahan-Nganju**	**9.65**	**106**	P	**Pn**	**06 29 28.7**	**+2.2**
TPTI		**9.90**	**328**	P	**Pn**	**06 29 29.3**	**-0.4**
KULM	**Kulim**	**10.58**	**350**	P	**Pn**	**06 29 38.6**	**-0.4**
JAGI	**Jajag, Banyuwa**	**12.11**	**106**	P	**Pn**	**06 30 01.2**	**+1.1**
JAGI	**Jajag, Banyuwa**	**12.11**	**106**	S	**Sn**	**06 32 16.8**	**+3.0**
JAGI	**Jajag, Banyuwa**	**12.11**	**106**	Pn	**Pn**	**06 29 59.5**	**-0.6**
JAGI	**Jajag, Banyuwa**	**12.11**	**106**	P	**Pn**	**06 29 58.8**	**-1.3**
PMSI	**Majene**	**16.56**	**85**	P	**Pn**	**06 30 57.5**	**-1.6**
KKM	**Kota Kinabalu**	**17.76**	**51**		**Pn**	**06 31 12.7**	**-1.3**
KKM	**Kota Kinabalu**	**17.76**	**51**	P	**Pn**	**06 31 13.6**	**-0.4**
PBA	**Port Blair**	**19.31**	**330**	P	**P**	**06 31 30.1**	**-1.1**
TOLI2	**Tolitoli**	**19.41**	**72**	P	**Pn**	**06 31 33.7**	**-0.2**
TOLI2	**Tolitoli**	**19.41**	**72**		**P**	**06 31 30.8**	**-1.6**
TOLI2				IAmb	IAmb	06 31 47.7	
	comp=Z,26nm,0.8s						
TOLI2	**Tolitoli**	**19.41**	**72**	P	**P**	**06 31 32.9**	**+0.5**
MMRI	**Maumere**	**19.99**	**101**	P	**P**	**06 31 37.2**	**-1.5**
BATI	**Baumata**	**21.65**	**105**	P	**P**	**06 31 55.1**	**-1.5**
	comp=Z,19nm,0.4s,baz=278,slow=14,SNR=2.1						
	comp=Z,19nm,0.4s						
SOEI	**Soe**	**22.15**	**103**	P	**P**	**06 32 00.3**	**-1.8**
SOEI	**Soe**	**22.15**	**103**	P	**P**	**06 32 01.9**	**-0.2**
MBWA	**Marble Bar**	**23.11**	**135**	P	**P**	**06 32 11.9**	**-0.1**
MBWA				IAmb	IAmb	06 32 32.2	
	comp=Z,30nm,1.4s						
CM31	**Chiang Mai Arr**	**23.76**	**352**	P	**P**	**06 32 17.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**23.76**	**352**	P	**P**	**06 32 17.6**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=184,slow=9.6,SNR=14						
	comp=Z,2.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**23.76**	**352**	P	**P**	**06 32 17.0**	**-1.3**
CHTO	**Chiang Mai**	**24.11**	**352**	P	**P**	**06 32 20.2**	**-1.3**
CHTO	**Chiang Mai**	**24.11**	**352**	P	**P**	**06 32 19.9**	**-1.5**
MALK	**Mahakanadarawa**	**25.64**	**302**	P	**P**	**06 32 35.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**26.08**	**121**	P	**P**	**06 32 38.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**26.08**	**121**	P	**P**	**06 32 38.8**	**-0.5**
MEEK	**Meekatharra**	**26.34**	**146**	P	**P**	**06 32 39.9**	**-1.8**
KNRA	**Kununurra**	**27.90**	**114**	P	**P**	**06 32 54.6**	**-1.1**
KNRA				IAmb	IAmb	06 33 09.1	
	comp=Z,21nm,1.2s						
MTN	**Manton Dam**	**29.35**	**107**	P	**P**	**06 33 07.8**	**-0.9**
MTN				IAmb	IAmb	06 33 32.3	
	comp=Z,24nm,1.3s						
HKPS	**Hong Kong Po S**	**29.64**	**22**	P	**P**	**06 33 08.3**	**-2.8**
H08S2	**Diego Garcia H**	**29.81**	**264**	T	T	07 04 09.3	
	baz=87,slow=75,SNR=86						
H08S3	**Diego Garcia H**	**29.82**	**264**	T	T	07 04 11.3	
	baz=87,slow=75,SNR=124						
H08S1	**Diego Carcia H**	**29.82**	**264**	T	T	07 04 10.6	
	baz=87,slow=75,SNR=39						
H01W3	**Cape Leeuwin H**	**31.46**	**161**	T	T	07 06 21.7	
	baz=338,slow=76,SNR=22						
H01W2	**Cape Leeuwin H**	**31.47**	**161**	T	T	07 06 19.3	
	baz=338,slow=76,SNR=26						
H01W1	**Cape Leeuwin H**	**31.48**	**161**	T	T	07 06 22.9	
	baz=338,slow=76,SNR=26						
SSLB	**Suanglung**	**34.04**	**31**	P	**P**	**06 33 50.0**	**+0.3**
WB0	**Warramunga Arr**	**34.33**	**118**	P	**P**	**06 33 51.6**	**-0.8**
WB0				IAmb	IAmb	06 34 21.6	
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**34.35**	**118**	P	**P**	**06 33 53.0**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=286,slow=10.0,SNR=16						
WRA				PcP	**PcP**	**06 36 28.6**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=298,slow=1.9,SNR=3.5						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**34.35**	**118**	P	**P**	**06 33 51.7**	**-0.

BBOO	**Buckleboo**	41.70	135	P		**P**		06 34 54.7	+0.4
INKA	**Innaminka**	42.77	126	P		**P**		06 35 03.0	-0.1
MTSU	**Mount Surprise**	42.90	111	P		**P**		06 35 03.9	-0.4
MTSU				pP		**pP**		06 35 17.2	+0.3
PMG	**Port Moresby**	44.57	98	P		**P**		06 35 17.0	-0.7
	comp=Z,5.7nm,0.4s,baz=248,slow=16,SNR=1.6								
	comp=Z,5.7nm,0.4s								
PMG	**Port Moresby**	44.57	98	P		**P**		06 35 16.4	-1.4
PMG	**Port Moresby**	44.57	98	pP		pP		06 35 29.4	-0.9
CTA	**Charters Tower**	45.11	113	P		**P**		06 35 22.3	+0.3
	comp=Z,2.7nm,0.8s,baz=320,slow=12,SNR=2.6								
CTA				LR		LR		06 55 30.2	
	comp=Z,104nm,20.0s,baz=231,slow=38								
	comp=Z,2.7nm,0.8s								
CTAO	**Charters Tower**	45.11	113	P		**P**		06 35 20.9	-1.1
CTAO				IAmb		IAmb		06 35 38.6	
	comp=Z,5.6nm,0.9s								
STKA	**Stephens Creek**	45.25	131	P		**P**		06 35 24.5	+1.6
	comp=Z,13nm,0.6s,baz=310,slow=7.7,SNR=28								
	comp=Z,13nm,0.6s								
GUMO	**Guam**	46.12	66	LR		LR		06 57 00.1	
	comp=Z,36nm,19.5s,baz=63,slow=39								
HHC	**Hu-ho-hao-te**	46.60	10	*e*P		**P**		06 35 35.9	+2.4
HHC				pmax		pmax			
	comp=Z,8.0nm,0.5s								
HHC				pmax		pmax			
	comp=Z,48nm,5.0s								
HHC				L		L			
	comp=Z,190nm,18.3s								
HHC				L		L			
	comp=Z,120nm,17.6s								
HHC				L		L			
	comp=Z,150nm,17.6s								
BJI2	**Beijing**	46.76	15	P		**P**		06 35 35.8	+1.2
BJI2				pP		**pP**		06 35 48.2	+1.0
BJI2				sP		**sP**		06 35 53.3	+0.7
BJI2				pmax		pmax			
	comp=Z,2.0nm,0.6s								
NIL	**Nilore**	47.48	327	P		**P**		06 35 39.2	-1.2
NIL				IAmb		IAmb		06 36 03.7	
	comp=Z,11nm,1.1s								
INCN	**Inchon**	48.11	26	P		**P**		06 35 44.6	-0.6
KSRS	**Korea Array**	48.66	27	P		**P**		06 35 49.7	+0.4
	comp=Z,1.0nm,0.5s,baz=221,slow=7.0,SNR=5.9								
	comp=Z,1.0nm,0.5s								
KSH2	**Kashi**	50.63	333	P		**P**		06 36 04.5	0.0
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
MANEM	**Manem**	51.26	329	P		**P**		06 36 08.0	-1.4
MANEM				IAmb		IAmb		06 36 32.2	
	comp=Z,26nm,1.0s								
NRN	**Naryn**	52.31	335	P		**P**		06 36 16.7	-0.6
NRN				IAmb		IAmb		06 36 19.1	
	comp=Z,5.8nm,1.1s								
KDJ	**Kajisay**	52.41	336	P		**P**		06 36 17.4	-0.4
KDJ				IAmb		IAmb		06 36 34.7	
	comp=Z,12nm,1.2s								
PDGK	**Podgornoye**	52.57	339	P		**P**		06 36 18.5	-0.4
ARMA	**Armidale**	52.61	125	P		**P**		06 36 18.8	-0.7
ARMA				IAmb		IAmb		06 36 33.8	
	comp=Z,12nm,1.2s								
DRK	**Karamyk**	52.67	330	P		**P**		06 36 19.5	-0.5
SONM	**Songino Array**	52.94	3	P		**P**		06 36 22.5	+0.9
	comp=Z,6.4nm,0.9s,baz=183,slow=8.5,SNR=29								
	comp=Z,6.4nm,0.9s								
SONM	**Songino Array**	52.94	3	P		**P**		06 36 22.0	+0.4
SONM				IAmb		IAmb		06 36 37.2	
	comp=Z,11nm,0.9s								
ULN	**Ulaanbaatar**	53.01	4	P		**P**		06 36 22.2	0.0
ULN				IAmb		IAmb		06 36 37.5	
	comp=Z,8.4nm,1.0s								
SHAA	**Shahritus**	53.18	326	P		**P**		06 36 22.9	-0.6
SHAA				IAmb		IAmb		06 36 36.9	
	comp=Z,16nm,1.2s								
BOOM	**Boomskoye usch**	53.22	336	P		**P**		06 36 23.1	-0.7
MJAR	**Matsushiro Arr**	53.35	36	P		**P**		06 36 24.6	0.0
	comp=Z,1.1nm,0.7s,baz=208,slow=7.9,SNR=4.2								
	comp=Z,1.1nm,0.7s								
MJAR	**Matsushiro Arr**	53.35	36	P		**P**		06 36 23.9	-0.8
CHGR	**Chuyangaron**	53.41	328	P		**P**		06 36 24.4	-0.8
CHGR				IAmb		IAmb		06 36 49.9	
	comp=Z,6.4nm,0.7s								
ARSB	**Arslanbob**	53.55	333	P		**P**		06 36 26.0	-0.3
ARSB				IAmb		IAmb		06 36 27.7	
	comp=Z,6.0nm,1.0s								
BTK	**Batken**	53.60	330	P		**P**		06 36 25.9	-0.7
BTK				IAmb		IAmb		06 36 46.4	
	comp=Z,5.4nm,1.0s								
MKAR	**Makanchi Array**	54.76	343	P		**P**		06 36 34.8	0.0
	comp=Z,1.4nm,0.4s,baz=151,slow=9.1,SNR=31								
	comp=Z,1.4nm,0.4s								
MKAR	**Makanchi Array**	54.76	343	P		**P**		06 36 34.3	-0.5
BNX	**BinXian**	55.41	21	⇑P		**P**		06 36 39.7	+0.3
BNX				pmax		pmax			
	comp=Z,9.0nm,0.8s								
USA0B	**Ussuriysk Arra**	55.93	25	P		**P**		06 36 42.9	-0.3
USRK	**Ussuriysk Ar.**	55.93	25	P		**P**		06 36 42.5	-0.7
	comp=Z,3.9nm,0.6s,baz=218,slow=4.7,SNR=7.3								
	comp=Z,3.9nm,0.6s								
USRK	**Ussuriysk Ar.**	55.93	25	P		**P**		06 36 42.7	-0.5
KK31	**Karatay Array**	56.09	332	P		**P**		06 36 44.6	+0.2
KKAR	**Karatay Array**	56.09	332	P		**P**		06 36 44.1	-0.3
HILR	**Hailar Array B**	56.59	13	P		**P**		06 36 48.6	+0.7
	comp=Z,1.7nm,0.3s,baz=195,slow=10,SNR=0.4								
	comp=Z,1.7nm,0.3s								
TLY	**Talaya**	56.68	1	P		**P**		06 36 47.8	-0.6
	comp=Z,1.6nm,0.5s,baz=257,slow=6.7,SNR=2.2								
	comp=Z,1.6nm,0.5s								
TLY	**Talaya**	56.68	1	P		**P**		06 36 47.7	-0.7
KURBB	**Kurchatov Arra**	59.30	343	P		**P**		06 37 06.8	0.0
	comp=Z,2.1nm,0.8s,baz=158,slow=6.6,SNR=14								
	comp=Z,2.1nm,0.8s								
HEH	**HeiHe**	59.33	18	*e*P		**P**		06 37 07.6	+0.7
KURK	**Kurchatov**	59.35	343	P		**P**		06 37 06.8	-0.3
KURK				IAmb		IAmb		06 37 27.4	
	comp=Z,3.4nm,0.8s								
H04N2	**CROZET ISLANDS**	59.72	218	T		T		07 41 45.3	
	baz=64,slow=74,SNR=85								
H04N1	**CROZET ISLANDS**	59.73	218	T		T		07 41 35.5	
	baz=64,slow=74,SNR=104								
H04N3	**CROZET ISLANDS**	59.73	218	T		T		07 41 45.4	
	baz=64,slow=74,SNR=98								
H04S1	**CROZET ISLANDS**	59.96	218	T		T		07 41 47.6	
	baz=62,slow=76,SNR=51								
H04S3	**CROZET ISLANDS**	59.97	218	T		T		07 41 47.1	
	baz=62,slow=76,SNR=115								
H04S2	**CROZET ISLANDS**	59.98	218	T		T		07 41 48.5	
	baz=62,slow=76,SNR=78								
ZAA0	**Zalesovo Array**	60.76	348	P		**P**		06 37 16.0	-0.7
ZAA0				IAmb		IAmb		06 37 36.4	
	comp=Z,5.0nm,0.8s								
ZALV	**Zalesovo Beam**	60.76	348	P		**P**		06 37 16.6	-0.1
	comp=Z,2.4nm,0.4s,baz=165,slow=5.8,SNR=16								
	comp=Z,2.4nm,0.4s								
ZALV	**Zalesovo Beam**	60.76	348	P		**P**		06 37 16.4	-0.3
CASY	**Casey**	61.23	176	P		**P**		06 37 20.6	+0.9
CASY				IAmb		IAmb		06 37 40.6	
	comp=Z,7.8nm,1.3s								
BVAR	**Borovoye Array**	64.01	339	P		**P**		06 37 38.1	-0.4
	comp=Z,3.4nm,0.7s,baz=134,slow=8.5,SNR=11								
	comp=Z,3.4nm,0.7s								
BORK	**Borovoye**	64.05	339	P		**P**		06 37 38.5	-0.2
BORK				IAmb		IAmb		06 37 39.6	
	comp=Z,3.2nm,0.6s								
AB31	**Akbulak array**	65.59	331	P		**P**		06 37 48.8	0.0
ABKAR	**Akbulak array**	65.59	331	P		**P**		06 37 48.9	+0.1
MAW	**Mawson**	67.81	195	P		**P**		06 38 04.5	+1.9
	comp=Z,1.4nm,0.6s,baz=338,slow=5.4,SNR=2.3								
MAW				LR		LR		06 59 47.9	
	comp=Z,71nm,20.6s,baz=29,slow=29								
	comp=Z,1.4nm,0.6s								
MAW	**Mawson**	67.81	195	P		**P**		06 38 02.7	+0.1
ARTI	**Arti**	71.13	336	P		**P**		06 38 23.0	-0.3
KBZ	**Khabaz**	72.28	319	P		**P**		06 38 31.6	+1.1
	comp=Z,3.8nm,0.8s,baz=106,slow=5.8,SNR=9.7								
	comp=Z,3.8nm,0.8s								
PETK	**Petropavlovsk-**	74.35	31	P		**P**		06 38 42.0	-0.5
	comp=Z,1.3nm,0.7s,baz=241,slow=1.5,SNR=2.8								
	comp=Z,1.3nm,0.7s								
PETK	**Petropavlovsk-**	74.35	31	P		**P**		06 38 42.4	-0.1
CSS	**Mathiatis**	76.06	308	P		**P**		06 38 52.3	-0.5
	comp=Z,12nm,1.1s								
BR104	**Keskin Array S**	77.23	313	P		**P**		06 38 58.8	-0.6
	comp=Z,3.0nm,0.9s								
BR131	**Keskin Array S**	77.24	313	P		**P**		06 38 58.5	-1.0
BR131				IAmb		IAmb		06 39 00.6	
	comp=Z,5.7nm,1.0s								

BRTR	**Keskin Array B**	77.24	313	P		**P**		06 38 59.6	+0.1
	comp=Z,3.1nm,0.9s,baz=124,slow=6.6,SNR=10.0								
	comp=Z,3.1nm,0.9s								
BRTR	**Keskin Array B**	77.24	313	P		**P**		06 38 59.1	-0.4
BR105	**Keskin Array S**	77.25	313	P		**P**		06 38 58.9	-0.7
	comp=Z,4.1nm,1.1s								
BR106	**Keskin Array S**	77.26	313	P		**P**		06 38 59.2	-0.4
	comp=Z,3.0nm,1.0s								
VNDA	**Vanda**	78.57	169	P		**P**		06 39 06.7	+0.7
	comp=Z,1.7nm,0.9s,baz=282,slow=5.5,SNR=6.3								
	comp=Z,1.7nm,0.9s								
VNDA	**Vanda**	78.57	169	P		**P**		06 39 05.6	-0.4
AK09	**Malin Array Si**	83.41	322	P		**P**		06 39 31.9	-0.3
AK10	**Malin Array Si**	83.42	322	P		**P**		06 39 32.0	-0.3
AK08	**Malin Array Si**	83.43	322	P		**P**		06 39 32.0	-0.3
AK06	**Malin Array Si**	83.45	322	P		**P**		06 39 32.2	-0.2
AKASG	**Malin Array Be**	83.47	322	P		**P**		06 39 32.9	+0.4
	comp=Z,0.2nm,0.2s,baz=94,slow=4.2,SNR=4.2								
	comp=Z,0.2nm,0.2s								
AK01	**Malin Array Si**	83.47	322	P		**P**		06 39 32.3	-0.2
LUBAR	**Lubar, Ukraine**	84.16	321	P		**P**		06 39 35.8	-0.3
KMPD	**K-Podol'skiy**	84.64	320	P		**P**		06 39 38.2	-0.3
QSPA	**South Pole Qui**	84.77	180	P		**P**		06 39 39.9	+0.8
	comp=Z,1.3nm,0.8s,baz=252,slow=0.6,SNR=5.1								
	comp=Z,1.3nm,0.8s								
QSPA	**South Pole Qui**	84.77	180	P		**P**		06 39 39.3	+0.3
QSPA				IAmb		IAmb		06 40 15.6	
	comp=Z,6.7nm,1.5s								
BURAR	**Bucovina Array**	85.23	319	P		**P**		06 39 40.1	-1.6
BURAR				IAmb		IAmb		06 39 44.5	
	comp=Z,2.7nm,0.8s								
BUR08	**Bucovina Ar. S**	85.25	319			**P**		06 39 41.7	-0.1
BUR08				IAmb		IAmb		06 40 03.1	
	comp=Z,5.4nm,1.1s								
RNPP1	**Kostyukhnivka**	85.75	322	P		**P**		06 39 44.7	+0.7
KOLS	**Kolonicke sedl**	87.43	319	*e*P		**P**		06 39 54.8	+2.5
FIA1	**FINESS Array S**	88.05	332	P		**P**		06 39 55.7	+0.8
FINES	**FINESS Array B**	88.05	332	P		**P**		06 39 55.5	+0.6
	comp=Z,1.5nm,0.6s,baz=105,slow=4.0,SNR=15								
	comp=Z,1.5nm,0.6s								
FINES	**FINESS Array B**	88.05	332	P		**P**		06 39 55.3	+0.3
SNAA	**Sanae**	89.84	198	P		**P**		06 40 05.6	+2.2
	comp=Z,1.9nm,0.7s,baz=108,slow=3.4,SNR=6.1								
	comp=Z,1.9nm,0.7s								
ARCES	**ARCESS Array B**	90.29	340	P		**P**		06 40 06.3	+0.9
	comp=Z,2.8nm,0.9s,baz=70,slow=1.4,SNR=4.7								
	comp=Z,2.8nm,0.9s								
GERES	**GERESS Array B**	93.02	319	P		**P**		06 40 19.9	+1.3
	comp=Z,1.0nm,0.9s,baz=94,slow=4.3,SNR=6.5								
	comp=Z,1.0nm,0.9s								
HFS	**Hagfors**	93.83	330	P		**P**		06 40 22.9	+1.0
	comp=Z,2.1nm,0.8s,baz=46,slow=8.3,SNR=2.2								
	comp=Z,2.1nm,0.8s								
BDFB	**Brasilia**	144.11	234	PKP		**PKPdf**		06 46 41.3	-0.4
	comp=Z,2.4nm,0.7s,baz=142,slow=3.7,SNR=6.4								
BDFB	**Brasilia**	144.11	234	PKPdf		**PKPdf**		06 46 41.7	+0.1
TXAR	**Lajitas Array**	145.61	43	PKPbc		**PKPab**		06 46 44.9	+0.5
	comp=Z,7.3nm,0.8s,baz=290,slow=1.1,SNR=90								
LPAZ	**La Paz**	156.67	204	PKP		**PKPdf**		06 47 02.6	+0.9
	comp=Z,0.3nm,0.6s,baz=222,slow=8.6,SNR=1.7								
LPAZ				PKPab		**PKPab**		06 47 31.4	+0.6
	comp=Z,0.6nm,0.6s,baz=190,slow=5.6,SNR=2.5								

IDC ***12*** *06:45:18.1±0.3, 14°.23N×120°.76E, h213km±2km, mb3.6/23, mbtmp4.2/24, Error ellipse: s-maj=18.8km s-min=8.4km az=63.0*
MAN ***12*** *06:45:19.0, 14°.28N×120°.53E, h197km, MS3.9*
NEIC ***12*** *06:45:19.1±1.8, 14°.25N±0°.10×120°.72E±0°.04, h213km±5km, mb4.2/49, Error ellipse: s-maj=15.1km s-min=3.3km az=199.0*

ISC 12 06:45:18.8±0.6, 14°.25N±0°.06×120°.66E±0°.09, h216km±5km, n91, σ1$=17/98, mb4.1/47, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TGY	**Tagaytay City**	0.31	119	P		**Pn**	06 45 46.8	-0.5
	813nm,0.4s,baz=316,slow=1.3,SNR=22							
TGY				S		**S**	06 46 08.7	-0.8
	3µm,0.6s,baz=258,slow=19,SNR=21							
TGY	**Tagaytay City**	0.31	119	*e*P		**Pn**	06 45 47.5	+0.2
TGY				*e*S		**S**	06 46 09.5	-0.1
PCPS	**Palayan City**	0.56	44	*e*P		Pn	06 45 52.1	+4.2
PCPS				*e*S		**S**	06 46 17.4	+6.7
PGP	**Puerto Galera**	0.80	159	*e*P		**Pn**	06 45 48.4	-0.7
PGP				*e*S		**S**	06 46 10.6	-2.2
LQP	**Lukban**	0.86	99	*i* P		**Pn**	06 45 50.0	+0.3
LQP				*i* S		**S**	06 46 14.6	+1.0
SMPP	**San Manuel, Pa**	1.89	1	*i* P		**Pn**	06 45 57.0	-0.4
SMPP				*e*S		**S**	06 46 25.4	-2.2
IBAJ	**Ibajay, Aklan**	2.83	148	*i* P		**Pn**	06 46 08.3	+0.9
PLP	**Palo**	5.21	126	*e*P		**Pn**	06 46 37.4	+1.1
TPUB	**Ta-pu**	9.00	360	Pn		**Pn**	06 47 22.8	-2.1
YULB	**Yu-li**	9.11	4			**Pn**	06 47 23.7	-2.6
NACB	**Ninganchiao**	9.91	5	Pn		**Pn**	06 47 35.0	-1.6
SIJI	**Sorong**	18.33	144	P		**P**	06 49 16.4	-0.8
	3.6nm,0.3s,baz=27,slow=6.1,SNR=5.5							
FAKI	**Fak Fak**	20.57	145	P		**P**	06 49 40.8	-0.5
MYKOM	**Kota Tinggi**	20.72	235	P		**P**	06 49 44.3	+1.4
CM31	**Chiang Mai Arr**	21.25	284	P		**P**	06 49 49.9	+1.5
CMAR	**Chiang Mai Arr**	21.25	284	P		**P**	06 49 49.2	+0.9
	15nm,0.8s,baz=94,slow=7.8,SNR=93							
	15nm,0.8s							
CHTO	**Chiang Mai**	21.30	285			**P**	06 49 49.2	+0.3
CHTO				IAmb		IAmb	06 49 50.2	
	comp=Z,16nm,1.1s							
RPSI	**Rantau Prapat**	24.34	244			**P**	06 50 17.0	-0.1
GSI	**Gunungsitoli**	26.20	243	P		**P**	06 50 33.5	-0.4
LZDM	**Lanzhou Array**	26.43	328	P		**P**	06 50 36.9	+0.8
	comp=Z,3.1nm,0.4s,baz=173,slow=13,SNR=4.2							
	comp=Z,3.1nm,0.4s							
LSA	**Lhasa**	31.27	304	P		**P**	06 51 19.9	+0.8
LSA				IAmb		IAmb	06 51 20.7	
	comp=Z,6.4nm,0.8s							
FITZ	**Fitzroy Crossi**	32.52	171	P		**P**	06 51 28.4	-1.1
	comp=Z,4.8nm,1.0s,baz=358,slow=6.9,SNR=2.7							
	comp=Z,4.8nm,1.0s							
FITZ	**Fitzroy Crossi**	32.52	171	P		**P**	06 51 28.6	-0.8
EVN	**Everest**	34.26	299			**P**	06 51 46.1	+0.8
EVN				IAmb		IAmb	06 51 46.6	
	comp=Z,6.8nm,0.6s							
SONM	**Songino Array**	35.52	343	P		**P**	06 51 55.1	-0.1
	comp=Z,1.1nm,0.6s,baz=162,slow=9.4,SNR=7.2							
	comp=Z,1.1nm,0.6s							
SONM	**Songino Array**	35.52	343	P		**P**	06 51 56.0	+0.9
KLR	**Kul'dur**	36.05	12	P		**P**	06 51 59.0	-0.4
	comp=Z,1.8nm,0.7s,baz=236,slow=7.3,SNR=5.5							
	comp=Z,1.8nm,0.7s							
WB0	**Warramunga Arr**	36.41	158	P		**P**	06 52 01.7	-1.2
WB0				IAmb		IAmb	06 52 16.4	
	comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	36.54	158	P		**P**	06 52 03.0	-1.0
WRAB				IAmb		IAmb	06 52 22.1	
	comp=Z,6.0nm,1.2s							
WRA	**Warramunga Arr**	36.55	158	P		**P**	06 52 02.8	-1.3
	comp=Z,0.8nm,0.4s,baz=328,slow=10,SNR=15							
	comp=Z,0.8nm,0.4s							
WRA	**Warramunga Arr**	36.55	158	P		**P**	06 52 03.1	-0.9
WR8	**Warramunga Arr**	36.62	158	P		**P**	06 52 03.9	-0.7
WR8				IAmb		IAmb	06 52 13.6	
	comp=Z,11nm,1.3s							
AS31	**Alice Springs**	39.85	161	P		**P**	06 52 31.3	-0.2
ASAR	**Alice Springs**	39.85	161	P		**P**	06 52 30.3	-1.2
	comp=Z,1.8nm,0.5s,baz=339,slow=7.2,SNR=35							
	comp=Z,1.8nm,0.5s							
ASAR	**Alice Springs**	39.85	161	P		**P**	06 52 30.6	-0.9
CTA	**Charters Tower**	42.41	143	P		**P**	06 52 52.5	+0.1
	comp=Z,2.9nm,0.5s,baz=351,slow=6.9,SNR=5.3							
	comp=Z,2.9nm,0.5s							
CTAO	**Charters Tower**	42.41	143	P		**P**	06 52 52.7	+0.4
CTAO				IAmb		IAmb	06 52 53.7	
	comp=Z,11nm,1.1s							
WUS	**Wushi**	44.84	315	P		**P**	06 53 11.3	-0.4
WUS				IAmb		IAmb	06 53 16.7	
	comp=Z,4.8nm,0.4s							
FORT	**Forrest**	45.33	171	P		**P**	06 53 14.8	-0.6
FORT				IAmb		IAmb	06 53 25.9	
	comp=Z,11nm,1.4s							
MKAR	**Makanchi Array**	45.57	323	P		**P**	06 53 17.7	+0.5
	comp=Z,1.6nm,0.7s,baz=113,slow=9.0,SNR=16							
MKAR				PcP		**PcP**	06 54 51.7	-0.2
	comp=Z,0.7nm,0.6s,baz=129,slow=4.8,SNR=4.1							
	comp=Z,1.6nm,0.7s							
MKAR	**Makanchi Array**	45.57	323	P		**P**	06 53 17.6	+0.4
MKAR				PcP		**PcP**	06 54 52.3	+0.4

PDGK	**Podgornoye**	45.58	318			**P**		06 53 17.7	+0.2
KDJ	**Kajisay**	46.62	315	P		**P**		06 53 25.7	0.0
BOOM	**Boomskoye usch**	47.60	315	P		**P**		06 53 34.3	+1.0
ZALV	**Zalesovo Beam**	48.55	332	P		**P**		06 53 39.7	-0.3
	comp=Z,1.8nm,0.4s,baz=148,slow=8.2,SNR=5.9								
	comp=Z,1.8nm,0.4s								
ZALV	**Zalesovo Beam**	48.55	332	P		**P**		06 53 39.4	-0.6
PETK	**Petropavlovsk-**	48.56	29	P		**P**		06 53 40.3	+0.1
	comp=Z,1.3nm,0.6s,baz=175,slow=7.1,SNR=3.6								
	comp=Z,1.3nm,0.6s								
PETK	**Petropavlovsk-**	48.56	29	P		**P**		06 53 40.1	0.0
BBOO	**Buckleboo**	49.06	163	P		**P**		06 53 43.5	-0.7
ARSB	**Arslanbob**	49.26	313	P		**P**		06 53 45.6	-0.2
ARSB				IAmb		IAmb		06 53 45.8	
	comp=Z,5.0nm,0.4s								
EIDS	**Eidsvold**	49.29	143	P		**P**		06 53 45.3	-0.8
KURBB	**Kurchatov Arra**	49.71	326	P		**P**		06 53 49.5	+0.6
	comp=Z,5.5nm,0.7s,baz=124,slow=7.9,SNR=38								
	comp=Z,5.5nm,0.7s								
KURK	**Kurchatov**	49.71	326			**P**		06 53 49.3	+0.4
STKA	**Stephens Creek**	50.07	157	P		**P**		06 53 51.6	-0.2
	comp=Z,1.3nm,0.7s,baz=325,slow=12,SNR=1.6								
	comp=Z,1.3nm,0.7s								
GAR	**Garm**	50.54	309			**P**		06 53 56.1	+0.6
KBL	**Kabul**	50.58	303			**P**		06 53 58.2	+2.3
KK31	**Karatay Array**	51.56	314			**P**		06 54 03.3	+0.4
KK31				IAmb		IAmb		06 54 03.9	
	comp=Z,8.2nm,1.4s								
KKAR	**Karatay Array**	51.56	314			**P**		06 54 03.3	+0.4
BVAR	**Borovoye Array**	55.30	326	P		**P**		06 54 30.2	+0.5
	comp=Z,2.4nm,0.6s,baz=114,slow=8.8,SNR=8.4								
	comp=Z,2.4nm,0.6s								
BORK	**Borovoye**	55.34	326			**P**		06 54 29.9	-0.2
BORK				IAmb		IAmb		06 54 31.3	
	comp=Z,5.1nm,0.7s								
AB31	**Akbulak array**	60.29	319			**P**		06 55 04.5	-0.1
AB31				IAmb		IAmb		06 55 05.3	
	comp=Z,2.9nm,0.6s								
KBZ	**Khabaz**	71.49	312	P		**P**		06 56 15.6	-0.4
	comp=Z,1.5nm,0.8s,baz=85,slow=3.8,SNR=2.6								
	comp=Z,1.5nm,0.8s								
CNBA	**Chernabura Isl**	72.58	37	P		**P**		06 56 21.7	-0.5
CNBA				IAmb		IAmb		06 56 22.4	
	comp=Z,9.1nm,1.0s								
E18K	**Tukpahlearik C**	72.62	23	P		**P**		06 56 23.4	+1.2
E18K				IAmb		IAmb		06 56 23.6	
	comp=Z,4.5nm,1.1s								
M16K	**Timber Creek**	72.99	30	P		**P**		06 56 25.2	+0.7
M16K				IAmb		IAmb		06 56 26.6	
	comp=Z,4.8nm,1.2s								
J17K	**VABM Dome**	73.01	28	P		**P**		06 56 25.7	+1.1
J17K				IAmb		IAmb		06 56 26.7	
	comp=Z,3.7nm,0.8s								
C19K	**Lookout Ridge**	73.13	22	P		**P**		06 56 26.6	+1.3
C19K				IAmb		IAmb		06 56 52.3	
	comp=Z,10nm,1.4s								
K17K	**Iditarod**	73.34	28	P		**P**		06 56 28.2	+1.6
K17K				IAmb		IAmb		06 56 28.6	
	comp=Z,3.6nm,0.8s								
O16K	**Kokwok River B**	73.40	32	P		**P**		06 56 27.8	+0.9
O16K				IAmb		IAmb		06 56 28.7

mbtmp4.2/28,ML4.2/3,MS3.7/35,Error ellipse: s-maj=17.0km s-min=12.7km az=42.0
*BJI **12** 07:03:25.9,33˚.59N×102˚.95E,h8km,mB4.9/14,mb4.5/36, ML4.5/20,Ms4.5/39,Ms7 4.3/37*
*NEIC **12** 07:03:28.2±1.0,33˚.62N±0˚.08×102˚.93E±0˚.09,h10km±1km, mb4.7/125,Error ellipse: s-maj=14.1km s-min=13.3km az=184.0*
*GFZ **12** 07:03:29.2±0.1,34˚N±2˚×10˚3E±˚,h10km,M4.6/36, mb4.5/36*
ISC 12 07:03:28.2±0.3,**33˚.60N**±0˚.02×**102˚.92E**±0˚.03,**h10**km,**n551**, σ1°**86**/513,**mb4.6**/116,**MS3.7**/35,**16C-1D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**2.44**	**15**	Pn	**Pb**			**07 04 10.3**	**-2.1**
	baz=202,slow=13								
LZDM				Sn	**Sb**			**07 04 43.1**	**+0.4**
	baz=176,slow=31								
LZDM				LR	LR			07 05 19.2	
	comp=Z,962nm,20.1s,baz=160,slow=44								
	150nm,0.3s								
LZH	**Lanzhou**	**2.60**	**17**	Pn	**Pb**			**07 04 14.1**	**-0.9**
LZH				Pg	**Pg**			**07 04 17.5**	**-0.6**
LZH				Sn	**Sg**			**07 04 52.8**	**+1.0**
LZH				Sg	**Sb**			**07 04 55.2**	**+8.1**
LZH				smax	smax				
	comp=N,1μm,1.4s								
LZH				smax	smax				
	comp=E,2μm,1.5s								
LZH				LR	LR				
	comp=N,8μm,8.3s								
LZH				LR	LR				
	comp=E,10μm,8.6s								
LZH				LR	LR				
	comp=Z,7μm,8.6s								
CD2	**Chengdu**	**2.77**	**165**	Pg	**Pb**			**07 04 17.7**	**-0.2**
CD2				Sg	**Sb**			**07 04 54.0**	**+2.1**
CD2				SMN					
	comp=Z,1μm,1.3s								
CD2				SME					
	comp=Z,1μm,1.1s								
XAN	**Xi'an**	**5.02**	**83**	Pn	**Pn**			**07 04 42.5**	**-1.1**
XAN				Pg	**Pb**			**07 04 58.7**	**+2.5**
XAN				Sn	**Sn**			**07 05 39.3**	**-2.4**
XAN				Sg	**Sb**			**07 06 02.1**	**+5.5**
XAN				SMN					
	comp=Z,2μm,1.0s								
XAN				SME					
	comp=Z,1μm,1.1s								
XAN				L	L				
	comp=Z,6μm,5.0s								
XAN				L	L				
	comp=Z,4μm,5.0s								
XAN				L	L				
	comp=Z,3μm,7.0s								
GTA2	**Gaotai**	**6.41**	**338**	Pn	**Pn**			**07 05 03.6**	**+0.9**
GTA2				Sg	**Sg**			**07 06 52.5**	**-1.3**
GTA2				SMN					
	comp=Z,57nm,2.0s								
GTA2				SME					
	comp=Z,82nm,1.8s								
GTA2				L	L				
	comp=Z,2μm,11.7s								
GTA2				L	L				
	comp=Z,3μm,11.4s								
GTA2				L	L				
	comp=Z,1μm,10.5s								
ENH	**Enshi**	**6.49**	**119**				**Pn**	**07 05 02.8**	**-1.1**
ENH	**Enshi**	**6.49**	**119**	P			**Pn**	**07 05 03.9**	**0.0**
PZH	**PanZhiHua**	**7.14**	**188**	Pg			Pg	07 05 40.2	-4.8
PZH				Sg			**Sg**	**07 07 13.5**	**-4.0**
PZH				smax	smax				
	comp=N,30nm,1.1s								
PZH				smax	smax				
	comp=E,30nm,1.4s								
PZH				LR	LR				
	comp=N,800nm,7.4s								
PZH				LR	LR				
	comp=E,2μm,10.0s								
PZH				LR	LR				
	comp=Z,790nm,11.0s								
GOMU	**GeErMu**	**7.15**	**294**	Pn	**Pn**			**07 05 11.7**	**-1.4**
GOMU				Pg	**Pb**			**07 05 35.7**	**+3.1**
GOMU				Sn	**Sn**			**07 06 32.8**	**-1.8**
GOMU				SME					
	comp=Z,26nm,0.8s								
LYN	**LuoYang**	**7.98**	**80**	P	**Pn**			**07 05 25.8**	**+1.5**
LYN				SMN					
	comp=Z,730nm,0.8s								
LYN				SME					
	comp=Z,480nm,1.0s								
LYN				L	L				
	comp=Z,4μm,8.9s								
LYN				L	L				
	comp=Z,2μm,7.9s								
LYN				L	L				
	comp=Z,2μm,9.3s								
KMI2	**Kunming**	**8.42**	**181**	P	**Pn**			**07 05 33.1**	**+2.6**
KMI2				SMN					
	comp=Z,29nm,1.5s								
KMI2				SME					
	comp=Z,23nm,1.8s								
KMI2				L	L				
	comp=Z,810nm,13.4s								
KMI2				L	L				
	comp=Z,3μm,14.4s								
KMI2				L	L				
	comp=Z,2μm,10.5s								
BTO2	**Baotou**	**9.04**	**36**	*e*P			**Pn**	**07 05 38.8**	**-0.1**
BTO2				pP				07 05 41.9	
BTO2				sP				07 05 44.8	
BTO2				S			**Sn**	**07 07 21.3**	**+0.5**
BTO2				pmax	pmax				
	comp=Z,24nm,0.7s								
BTO2				pmax	pmax				
	comp=Z,290nm,11.2s								
BTO2				L	L				
	comp=Z,4μm,9.3s								
BTO2				L	L				
	comp=Z,2μm,9.1s								
BTO2				L	L				
	comp=Z,4μm,9.6s								
HHC	**Hu-ho-hao-te**	**9.99**	**41**	*e*P			**Pn**	**07 05 54.1**	**+2.2**
HHC				S			**Sn**	**07 07 43.3**	**-0.9**
HHC				sS				07 07 49.2	
HHC				pmax	pmax				
	comp=Z,19nm,0.6s								
HHC				pmax	pmax				
	comp=Z,60nm,4.0s								
HHC				L	L				
	comp=Z,810nm,7.6s								
HHC				L	L				
	comp=Z,880nm,7.6s								
HHC				L	L				
	comp=Z,810nm,7.6s								
CNSH	**ChangSha**	**10.15**	**119**	P			**Pn**	**07 05 54.1**	**+0.1**
CNSH				S			**Sn**	**07 07 45.6**	**-2.4**
CNSH				L	L				
	comp=Z,720nm,3.9s								
CNSH				L	L				
	comp=Z,610nm,4.1s								
WHN	**Wuhan**	**10.16**	**104**	P			**Pn**	**07 05 55.0**	**+0.8**
WHN				S			**Sn**	**07 07 48.0**	**-0.3**
WHN				L	L				
	comp=Z,5μm,6.7s								
HNS	**HongShan**	**10.33**	**65**	⇑P			**Pn**	**07 05 59.1**	**+2.6**
HNS				S			**Sn**	**07 07 56.8**	**+4.5**
HNS				pmax	pmax				
	comp=Z,22nm,0.8s								
HNS				pmax	pmax				
	comp=Z,360nm,3.2s								
HNS				L	L				
	comp=Z,930nm,10.0s								
HNS				L	L				
	comp=Z,2μm,10.6s								
HNS				L	L				
	comp=Z,2μm,11.1s								
GULI	**GuiLin**	**10.51**	**140**	P			**Pn**	**07 05 56.8**	**-2.2**
GULI				S			**Sn**	**07 07 56.0**	**-0.9**
MORE	**Moreh**	**11.99**	**221**	Pn			**Pn**	**07 06 19.8**	**+0.6**
BJT	**Baijiatuan**	**12.40**	**55**	P			**Pn**	**07 06 23.8**	**-0.9**
BJT	**Baijiatuan**	**12.40**	**55**	Pn			**Pn**	**07 06 23.8**	**-0.9**
BJT	**Baijiatuan**	**12.40**	**55**	P			**Pn**	**07 06 25.9**	**+1.2**
BJI2	**Beijing**	**12.40**	**55**	P			**Pn**	**07 06 24.1**	**-0.7**
BJI2				pP				07 06 27.8	
BJI2				S			**Sn**	**07 08 43.5**	**+0.5**
BJI2				pmax	pmax				
	comp=Z,5.0nm,0.8s								
BJI2				L	L				
	comp=Z,860nm,6.9s								
BJI2				L	L				
	comp=Z,690nm,7.8s								
BJI2				L	L				
	comp=Z,840nm,7.5s								
SHL	**Shillong**	**12.49**	**233**	P			**Pn**	**07 06 25.6**	**-0.7**
SHL	**Shillong**	**12.49**	**233**				**Pn**	**07 06 25.6**	**-0.7**
NJ2	**Nanjing**	**13.49**	**92**	*e*P			**Pn**	**07 06 41.2**	**+1.5**
NJ2				pmax	pmax				
	comp=Z,20nm,0.7s								
NJ2				L	L				
	comp=Z,2μm,6.8s								
NJ2				L	L				
	comp=Z,1μm,6.2s								
NJ2				L	L				
	comp=Z,4μm,11.8s								
SONM	**Songino Array**	**14.46**	**9**	Pn			**Pn**	**07 06 52.5**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=190,slow=14,SNR=27								
SONM				LR	LR			07 13 00.8	
	comp=Z,415nm,18.4s,baz=190,slow=39								
	comp=Z,4.9nm,0.6s								
SONM	**Songino Array**	**14.46**	**9**				**Pn**	**07 06 52.3**	**-0.8**
ULN	**Ulaanbaatar**	**14.59**	**11**	*i* P			**Pn**	**07 06 54.9**	**+0.1**
ULN				pmax	pmax				
	comp=Z,4.0nm,1.0s								
ULN	**Ulaanbaatar**	**14.59**	**11**				**Pn**	**07 06 53.4**	**-1.4**
ULN	**Ulaanbaatar**	**14.59**	**11**	P			**Pn**	**07 06 53.7**	**-1.1**
BRDH	**Bariadhala**	**14.73**	**225**	LR	LR			07 13 41.2	
	comp=Z,584nm,19.3s,baz=142,slow=42								
EVN	**Everest**	**14.93**	**252**	Pn			**Pn**	**07 06 59.5**	**-0.5**
EVN	**Everest**	**14.93**	**252**	P			**Pn**	**07 06 59.1**	**-0.9**
CHTO	**Chiang Mai**	**15.14**	**195**	P			**Pn**	**07 07 02.6**	**+0.3**
CHTO				pmax	pmax				
	comp=Z,18nm,0.6s								
CHTO	**Chiang Mai**	**15.14**	**195**				**Pn**	**07 07 02.6**	**+0.3**
CHTO				IAmb	IAmb			07 07 09.9	
	comp=Z,18nm,0.6s								
CHTO	**Chiang Mai**	**15.14**	**195**	P			**Pn**	**07 07 03.9**	**+1.6**
CM31	**Chiang Mai Arr**	**15.49**	**194**	Pn			**Pn**	**07 07 05.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**15.49**	**194**	Pn			**Pn**	**07 07 05.3**	**-1.5**
	baz=5.7,slow=9.4								
CMAR				LR	LR			07 13 54.4	
	comp=Z,53nm,20.5s,baz=35,slow=41								
CMAR	**Chiang Mai Arr**	**15.49**	**194**	P			**Pn**	**07 07 06.8**	**0.0**
CMAR	**Chiang Mai Arr**	**15.49**	**194**	Pn			**Pn**	**07 07 06.8**	**0.0**
WMQ	**Urumqi**	**15.64**	**315**	*e*P			**Pn**	**07 07 08.7**	**-0.1**
WMQ				PP			**sP**	**07 07 21.8**	**+3.3**
WMQ				pmax	pmax				
	comp=Z,13nm,0.7s								
WMQ				L	L				
	comp=Z,410nm,10.7s								
WMQ				L	L				
	comp=Z,630nm,10.7s								
WMQ				L	L				
	comp=Z,310nm,21.3s								
SSE	**Sheshan**	**15.64**	**94**	P			**Pn**	**07 07 06.6**	**-2.1**
SSE				S			**Sn**	**07 10 00.9**	**-1.2**
SSE				pmax	pmax				
	comp=Z,9.0nm,0.9s								
SSE				pmax	pmax				
	comp=Z,53nm,3.4s								
SSE				L	L				
	comp=Z,550nm,13.5s								
SSE				L	L				
	comp=Z,180nm,13.4s								
QIZ	**Qiongzhong**	**15.77**	**155**	P			**Pn**	**07 07 10.0**	**-0.5**
QIZ				S			**Sn**	**07 10 08.6**	**+3.2**
QIZ				pmax	pmax				
	comp=Z,28nm,2.0s								
QIZ				L	L				
	comp=Z,500nm,12.6s								
QIZ				L	L				
	comp=Z,1μm,15.6s								
QIZ				L	L				
	comp=Z,710nm,8.3s								
DL2	**Dalian**	**15.99**	**65**	P			**P**	**07 07 15.6**	**-1.1**
DL2				*e*S			**S**	**07 10 19.5**	**-5.0**
DL2				pmax	pmax				
	comp=Z,35nm,0.9s								
DL2				pmax	pmax				
	comp=Z,270nm,4.1s								
DL2				L	L				
	comp=Z,880nm,12.4s								
DL2				L	L				
	comp=Z,500nm,15.5s								
DL2				L	L				
	comp=Z,610nm,11.6s								
ZAK	**Zakamensk**	**16.78**	**1**	*e*P			**P**	**07 07 25.6**	**+0.1**
ZAK				pmax	pmax				
	comp=Z,11nm,1.6s								
KNGR	**Kungurtug, Tuv**	**17.45**	**348**	*i* P			**Pn**	**07 07 32.1**	**+0.3**
KNGR				pmax	pmax				
	comp=Z,9.0nm,1.0s								
TLY	**Talaya**	**18.08**	**1**	P			**P**	**07 07 40.7**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=259,slow=13,SNR=4.1								
TLY				LR	LR			07 15 41.5	
	comp=Z,93nm,19.4s,baz=174,slow=40								
	comp=Z,2.9nm,0.6s								
TLY	**Talaya**	**18.08**	**1**	*ce*P			**P**	**07 07 41.7**	**+1.9**
TLY				pmax	pmax				
	comp=Z,5.0nm,0.8s								
TLY	**Talaya**	**18.08**	**1**	P			**P**	**07 07 42.0**	**+2.2**
YHNB	**Yeheng**	**18.39**	**114**	P			**P**	**07 07 45.5**	**+2.0**
NACB	**Ninganchiao**	**18.83**	**115**	P			**Pn**	**07 07 48.7**	**-0.1**
TWG	**Pinlang**	**19.24**	**119**	P			**Pn**	**07 07 55.4**	**+1.8**
ZSN	**Zaisan**	**19.42**	**321**	*e*P			**Pn**	**07 07 56.2**	**+0.5**
ZSN	**Zaisan**	**19.42**	**321**	*e*P			**Pn**	**07 07 56.2**	**+0.5**
DGZ	**Jazzator, Alta**	**19.76**	**329**	*i* P			**P**	**07 07 58.6**	**+0.2**
DGZ				pmax	pmax				
	comp=Z,11nm,0.8s								
HIA	**Hailar**	**20.04**	**34**	*i* P			Pn	07 08 02.0	-1.0
HIA				pmax	pmax				
	comp=Z,12nm,0.9s								
HIA	**Hailar**	**20.04**	**34**	P			Pn	07 08 02.3	-0.7
TJN	**Taejon**	**20.21**	**75**	P			Pn	07 08 05.0	-0.1
TJN				pmax	pmax				
	comp=Z,141nm,1.1s								
TJN	**Taejon**	**20.21**	**75**	P			Pn	07 08 05.0	-0.1
HILR	**Hailar Array B**	**20.25**	**33**	P			Pn	07 08 05.6	+0.1
	comp=Z,15nm,0.7s,baz=206,slow=9.9,SNR=12								
	comp=Z,15nm,0.7s								
WUS	**Wushi**	**20.26**	**299**	P			Pn	07 08 05.5	-0.4
MK31	**Makanchi Array**	**20.47**	**316**	*ce*P			Pn	07 08 07.6	-0.5
MK31	**Makanchi Array**	**20.47**	**316**	P			**P**	**07 08 05.1**	**-0.8**
MKAR	**Makanchi Array**	**20.47**	**316**	P			**P**	**07 08 06.5**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=119,slow=11,SNR=24								
MKAR				LR	LR			07 16 40.4	
	comp=Z,267nm,20.9s,baz=120,slow=39								
	comp=Z,4.7nm,0.7s								
MKAR	**Makanchi Array**	**20.47**	**316**	*ce*P			Pn	07 08 09.6	+1.5
MKAR				pmax	pmax				
	comp=Z,5.0nm,0.7s								
MKAR	**Makanchi Array**	**20.47**	**316**	P			**P**	**07 08 04.2**	**-1.8**
KS19	**Wonju Array Si**	**20.65**	**72**	P			Pn	07 08 09.5	-0.8
MAKZ	**Makanchi**	**20.66**	**316**	P			**P**	**07 08 07.1**	**-0.9**
MAKZ				pmax	pmax				
	comp=Z,20nm,1.2s								
MAKZ	**Makanchi**	**20.66**	**316**				**P**	**07 08 07.1**	**-0.9**
MAKZ	**Makanchi**	**20.66**	**316**	P			**P**	**07 08 07.2**	**-0.8**
SHLS	**Shalkode**	**20.66**	**304**	*e*P			**P**	**07 08 06.4**	**-1.8**
SHLS	**Shalkode**	**20.66**	**304**	*e*P			**P**	**07 08 06.4**	**-1.8**
KSAR	**Wonju Array Be**	**20.66**	**72**	P			Pn	07 08 09.6	-0.8
KSAR	**Wonju Array Be**	**20.66**	**72**	P			Pn	07 08 09.6	-0.8
KSRS	**Korea Array**	**20.69**	**72**	P			**P**	**07 08 08.6**	**+0.1**
	comp=Z,10nm,0.9s,baz=252,slow=9.9,SNR=31								
KSRS				LR	LR			07 17 04.5	
	comp=Z,162nm,18.7s,baz=225,slow=39								
	comp=Z,10nm,0.9s								
PDGK	**Podgornoye**	**20.70**	**305**	P			**P**	**07 08 09.3**	**+0.6**
PDGK	**Podgornoye**	**20.70**	**305**				**P**	**07 08 09.3**	**+0.6**
UZB	**Uzynbulak**	**20.96**	**304**	*e*P			Pn	07 08 12.9	-1.2
UZB	**Uzynbulak**	**20.96**	**304**	*e*P			Pn	07 08 12.9	-1.1
PRZ	**Przheval'sk**	**21.19**	**302**	P			**P**	**07 08 14.9**	**+0.8**
PRZ				pmax	pmax				
	comp=Z,25nm,1.2s								
PRZ	**Przheval'sk**	**21.19**	**302**	P			**P**	**07 08 14.9**	**+0.8**
PRZ	**Przheval'sk**	**21.19**	**302**	P			**P**	**07 08 15.4**	**+1.4**
SATY	**Saty**	**21.36**	**303**	*e*P			**P**	**07 08 17.1**	**+1.3**
SATY				pmax	pmax				
	comp=Z,21nm,1.1s								
SATY	**Saty**	**21.36**	**303**	*e*P			**P**	**07 08 17.1**	**+1.3**

MESJ IAML 06 49 21.1
comp=E,2.7nm,0.1s
MESJ Messejana 1.98 43 *e*P **Pn 06 48 57.3 +1.6**
MESJ *e*S **Sn 06 49 20.5 +0.6**
MESJ *i* IAML 06 49 23.1
MESJ *i* IAML 06 49 29.8
MESJ *i* IAML 06 49 30.6
PLOUS Minas do Lousa 2.02 36 *e*P **Pn 06 48 57.6 +1.3**
PLOUS *e*S **Sn 06 49 20.6 -0.2**
PLOUS *i* IAML 06 49 23.1
PLOUS *i* IAML 06 49 24.4
PLOUS *i* IAML 06 49 26.1
PVAQ Vaqueiros 2.04 60 *e*P **Pn 06 48 58.3 +1.8**
PVAQ *e*S **Sn 06 49 21.5 +0.2**
PVAQ *i* IAML 06 49 22.5
PVAQ *i* IAML 06 49 22.8
PVAQ *i* IAML 06 49 25.9
PVAQ Vaqueiros 2.04 60 P **Pn 06 48 58.3 +1.8**
PVAQ S **Sn 06 49 20.8 -0.5**
EXAYA Ayamonte 2.19 68 Sn **Sn 06 49 25.3 +0.3**
EGRO El Granado 2.26 60 P **Pb 06 49 01.9 -1.7**
EGRO S **Sn 06 49 26.5 -0.4**
EGRO El Granado 2.26 60 Pn **Pn 06 49 01.7 +2.1**
EGRO Sn **Sn 06 49 26.7 -0.1**
EGRO *i* IVmb_Lg 06 49 29.3
PBEJ Beja 2.31 45 *e*P **Pn 06 49 01.9 +1.7**
PBEJ *e*S **Sn 06 49 28.0 -0.1**
PBEJ *i* IAML 06 49 29.9
PBEJ *i* IAML 06 49 30.5
PBEJ *i* IAML 06 49 40.8
MOE Montemor 2.46 30 *e*P **Pn 06 49 04.2 +1.8**
MOE *e*S **Sn 06 49 31.8 +0.1**
MOE *i* IAML 06 49 33.8
MOE *i* IAML 06 49 34.1
MOE *i* IAML 06 49 36.4
PMAFR Mafra 2.59 11 P **Pn 06 49 04.8 +0.6**
PMAFR S **Sn 06 49 33.8 -1.3**
PMAFR Mafra 2.59 11 *e*P **Pn 06 49 05.3 +1.1**
PMAFR *e*S **Sn 06 49 34.3 -0.8**
PMAFR *i* IAML 06 49 37.4
PMAFR *i* IAML 06 49 37.7
PMAFR *i* IAML 06 49 37.8
EVO Evora 2.61 35 P **Pn 06 49 05.2 +0.8**
EVO S **Sn 06 49 35.2 -0.3**
EVO Evora 2.61 35 *e*P **Pn 06 49 05.5 +1.1**
EVO *e*S **Sn 06 49 35.2 -0.3**
EVO *i* IAML 06 49 37.1
EVO *i* IAML 06 49 37.1
EVO *i* IAML 06 49 37.1
PARRA Arraiolos 2.83 32 *e*P **Pn 06 49 09.5 +2.0**
PARRA *e*S **Sn 06 49 40.4 -0.6**
PARRA *i* IAML 06 49 42.6
PARRA *i* IAML 06 49 42.7
PARRA *i* IAML 06 49 43.0
PBAR Barrancos 2.90 52 P **Pn 06 49 09.9 +1.4**
PBAR S **Sn 06 49 43.0 +0.3**
PBAR Barrancos 2.90 52 *e*P **Pn 06 49 10.9 +2.4**
PBAR *e*S **Sn 06 49 43.1 +0.3**
PBAR *i* IAML 06 49 45.3
PBAR *i* IAML 06 49 45.5
PBAR *i* IAML 06 49 46.2
EMIN Mina Concepcio 2.94 62 P **Pn 06 49 09.4 +0.4**
EMIN S **Sn 06 49 43.4 -0.2**
EMIN Mina Concepcio 2.94 62 Pn **Pn 06 49 11.2 +2.2**
EMIN Sn **Sn 06 49 42.2 -1.4**
EMIN *i* IVmb_Lg 06 49 45.1
PMTG Montargil 2.98 27 *e*P **Pn 06 49 11.2 +1.7**
PMTG *e*S **Sn 06 49 43.9 -0.7**
PMTG *i* IAML 06 49 45.0
PMTG *i* IAML 06 49 45.3
PMTG *i* IAML 06 49 46.0
PESTR Estremoz 3.08 37 P **Pn 06 49 12.6 +1.7**
PESTR S **Sn 06 49 46.3 -0.8**
PESTR Estremoz 3.08 37 *e*P **Pn 06 49 13.3 +2.4**
PESTR *e*S **Sn 06 49 46.1 -1.0**
PESTR *i* IAML 06 49 48.6
PESTR *i* IAML 06 49 49.1
PESTR *i* IAML 06 49 49.7
PSBE So Bento 3.23 16 *e*P **Pn 06 49 14.6 +1.7**
PSBE *e*S **Sn 06 49 50.5 -0.3**
PSBE *i* IAML 06 49 52.4
PSBE *i* IAML 06 49 52.5
PSBE *i* IAML 06 49 55.4
EBAD Badajoz 3.29 44 P **Pn 06 49 14.0 +0.2**
EBAD S **Sn 06 49 51.4 -1.0**
EBAD Badajoz 3.29 44 Pn **Pn 06 49 14.5 +0.7**
EBAD Sn **Sn 06 49 52.2 -0.2**
ESPR Espera 3.31 81 Pn **Pn 06 49 16.2 +2.1**
ESPR Sn **Sn 06 49 52.6 -0.2**
ESPR *i* IVmb_Lg 06 49 54.0
PSARD Sardoal 3.48 23 *e*P **Pn 06 49 17.9 +1.5**
PSARD *e*S **Sn 06 49 55.1 -1.8**
PSARD *i* IAML 06 49 56.4
PSARD *i* IAML 06 49 56.6
PSARD *i* IAML 06 49 58.6
PMRV Marv??o 3.62 33 *e*P **Pn 06 49 19.9 +1.6**
PMRV *e*S **Sn 06 49 58.9 -1.6**
PMRV *i* IAML 06 50 00.8
PMRV *i* IAML 06 50 01.3
PMRV *i* IAML 06 50 01.3
PCAS Casmilo, Conde 3.81 17 *e*P **Pn 06 49 22.8 +1.9**
PCAS *e*S **Sn 06 50 03.9 -1.1**
PCAS *i* IAML 06 50 06.4
PCAS *i* IAML 06 50 06.5
PCAS *i* IAML 06 50 07.5
ECAB El Cabril 3.97 64 P **Pn 06 49 25.0 +1.8**
ECAB S **Sn 06 50 06.5 -2.6**
ECAB El Cabril 3.97 64 Pn **Pn 06 49 25.0 +1.8**
ECAB Sn **Sn 06 50 06.2 -2.9**
ECAB *i* IVmb_Lg 06 50 11.1
ZHG ZHG 4.01 137 P **Pn 06 49 24.8 +1.0**
ZHG S **Sn 06 50 08.2 -1.9**
EMIJ Mijas 4.16 86 P **Pn 06 49 25.5 -0.3**
EMIJ S **Sn 06 50 12.1 -1.8**
EMIJ Mijas 4.16 86 Sn **Sn 06 50 14.1 +0.2**
EMIJ *i* IVmb_Lg 06 50 18.4
SRHM Skhour des Reh 4.28 156 P **Pn 06 49 31.7 +4.3**
PVIS Viseu 4.58 20 *e*P **Pn 06 49 33.0 +1.3**
PVIS *e*S **Sn 06 50 22.4 -1.9**
EADA Adamuz 4.62 66 P **Pn 06 49 33.2 +1.1**
EADA S **Sn 06 50 22.4 -2.7**
EADA Adamuz 4.62 66 Pn **Pn 06 49 34.0 +2.0**
EADA Sn **Sn 06 50 23.0 -2.1**
EADA *i* IVmb_Lg 06 50 26.4
EPLA Plasencia 4.74 39 Pn **Pn 06 49 35.1 +1.3**
EPLA Sn **Sn 06 50 26.9 -1.2**
EPLA *i* IVmb_Lg 06 50 29.7
IFR Ifrane 4.89 125 S **Sn 06 50 29.4 -2.7**
ELGU Los Guajares, 5.09 83 S **Sn 06 50 33.8 -3.1**
PVRL Vila Real 5.16 19 *e*S **Sn 06 50 35.5 -2.9**
POLO Lamas de Olo 5.23 18 *e*P **Pn 06 49 41.6 +1.1**
POLO *e*S **Sn 06 50 38.7 -1.5**
POLO *i* IAML 06 50 39.4
POLO *i* IAML 06 50 40.9
POLO *i* IAML 06 50 53.3
MVO Moncorvo 5.26 25 *e*P **Pn 06 49 42.4 +1.5**
MVO *e*S **Sn 06 50 38.2 -2.8**
MVO *i* IAML 06 50 39.4
MVO *i* IAML 06 50 43.2
MVO *i* IAML 06 50 43.4
PAB San Pablo 5.41 53 Pn **Pn 06 49 44.4 +1.4**
PAB Sn **Sn 06 50 42.1 -2.5**
PAB *i* IVmb_Lg 06 50 43.4
PSIM Granatula de C 5.46 62 Pn **Pn 06 49 45.9 +2.2**
PSIM Sn **Sn 06 50 42.7 -3.2**
MD31 MD31 5.54 128 P **Pn 06 49 45.4 +0.6**
ELOB Lobios 5.64 14 Sn **Sn 06 50 45.4 -4.9**
ELOB *i* IVmb_Lg 06 50 49.7
MDT Midelt 5.67 128 P **Pn 06 49 47.3 +0.7**
PGAV Gavieira, Arco 5.70 13 *e*P **Pn 06 49 48.1 +1.2**
PGAV *e*S **Sn 06 50 47.9 -3.8**
GUD Guadarrama 6.20 45 Pn **Pn 06 49 54.8 +0.9**
GUD Sn **Sn 06 51 01.1 -3.0**
GUD *i* IVmb_Lg 06 51 03.7

*MOS **12** 07:03:25.9±1.2,33˚.52N×102˚.97E,h8km,mb4.6/33,Error ellipse: s-maj=6.7km s-min=4.6km az=113.0*
*IDC **12** 07:03:25.1±0.6,33˚.44N×102˚.81E,h0km,mb4.1/25,*

comp=Z,21nm,1.1s
TARG Taragay, Kyrgy 21.42 300 P **P** **07 08 17.3 +0.5**
TARG pmax pmax
comp=Z,16nm,1.2s
TARG Taragay, Kyrgy 21.42 300 P **P** **07 08 17.3 +0.5**
TARG Taragay, Kyrgy 21.42 300 P **P** **07 08 17.3 +0.5**
KDJ Kajisay 21.97 300 P **P** **07 08 22.5 +0.1**
KDJ pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 21.97 300 P **P** **07 08 22.5 +0.1**
KDJ Kajisay 21.97 300 P **P** **07 08 22.9 +0.5**
TDK Taldyqorghan 22.04 308 *e*P **P** **07 08 24.6 +1.7**
TDK pmax pmax
comp=Z,14nm,0.8s
TDK Taldyqorghan 22.04 308 *e*P **P** **07 08 24.6 +1.7**
comp=Z,14nm,0.8s
ASAI AK-SAY(Kyrgyzs 22.19 297 P **P** **07 08 24.9 -0.1**
BNX BinXian 22.32 50 ⇓P **P** **07 08 28.8 +2.9**
BNX pmax pmax
comp=Z,48nm,0.8s
MDOK Medeo 22.34 303 *e*P **P** **07 08 27.8 +1.5**
MDOK Medeo 22.34 303 *e*P **P** **07 08 27.8 +1.5**
TNSS Tian-Shan 22.38 303 *e*P **P** **07 08 28.2 +1.2**
TNSS Tian-Shan 22.38 303 *e*P **P** **07 08 28.3 +1.2**
AAA Alma-Ata 22.45 303 *e*P **P** **07 08 28.9 +1.5**
AAA Alma-Ata 22.45 303 *e*P **P** **07 08 29.0 +1.5**
KSH2 Kashi 22.66 292 P **P** **07 08 32.1 +2.3**
KSH2 sP sP 07 08 39.4 +4.0
KSH2 pmax pmax
comp=Z,8.0nm,1.2s
NRN Naryn 22.68 298 P **P** **07 08 31.2 +1.1**
NRN pmax pmax
comp=Z,10.0nm,0.9s
NRN Naryn 22.68 298 P **P** **07 08 31.2 +1.1**
JOW Kunigami 22.89 100 LR LR 07 18 09.7
comp=Z,239nm,18.1s,baz=204,slow=38
JOW Kunigami 22.89 100 P **P** **07 08 32.4 +0.3**
BOOM Boomskoye usch 22.95 301 P **P** **07 08 33.1 +0.2**
BOOM pmax pmax
comp=Z,13nm,1.1s
BOOM Boomskoye usch 22.95 301 P **P** **07 08 33.1 +0.2**
BOOM Boomskoye usch 22.95 301 P **P** **07 08 33.0 +0.2**
JNU Nakatsue 23.34 83 LR LR 07 18 27.5
comp=Z,199nm,18.3s,baz=278,slow=38
MDJ Mudanjiang 23.34 54 P **P** **07 08 38.8 +2.2**
MDJ pmax pmax
comp=Z,24nm,1.6s
MDJ Mudanjiang 23.34 54 P **P** **07 08 37.4 +0.8**
AAK Ala-Archa 24.02 300 LR LR 07 20 15.6
comp=Z,180nm,21.1s,baz=139,slow=42
AAK Ala-Archa 24.02 300 P **P** **07 08 42.5 -0.9**
AAK pmax pmax
comp=Z,3.0nm,0.9s
AAK Ala-Archa 24.02 300 P **P** **07 08 42.5 -0.9**
AAK Ala-Archa 24.02 300 P **P** **07 08 43.9 +0.4**
ZAA0 Zalesovo Array 24.05 333 P **P** **07 08 42.9 -0.4**
ZALV Zalesovo Beam 24.05 333 P **P** **07 08 42.5 -0.9**
comp=Z,4.6nm,0.6s,baz=129,slow=7.9,SNR=19
ZALV LR LR 07 17 07.8
comp=Z,104nm,18.1s,baz=141,slow=34
comp=Z,4.6nm,0.6s
ZALV Zalesovo Beam 24.05 333 *i* P **P** **07 08 43.4 +0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 24.05 333 P **P** **07 08 42.9 -0.4**
SGDS Sogindy 24.12 302 *e*P **P** **07 08 45.6 +1.4**
HEH HeiHe 24.51 40 *e*P **P** **07 08 48.7 +1.1**
HEH sP **sP** **07 08 54.5 +1.1**
HEH S **S** **07 13 09.9 +1.9**
HEH pmax pmax
comp=Z,34nm,1.3s
HEH L L
comp=Z,500nm,9.7s
HEH L L
comp=Z,810nm,9.7s
HEH L L
comp=Z,1μm,9.5s
KURBB Kurchatov Arra 24.66 321 P **P** **07 08 49.0 0.0**
comp=Z,3.3nm,0.8s,baz=125,slow=10,SNR=21
KURBB LR LR 07 18 56.3
comp=Z,123nm,19.8s,baz=167,slow=38
comp=Z,3.3nm,0.8s
KURK Kurchatov 24.67 321*ce*P **P** **07 08 49.5 +0.5**
KURK pmax pmax
comp=Z,10.0nm,1.1s
KURK Kurchatov 24.67 321 P **P** **07 08 48.7 -0.4**
KURK Kurchatov 24.67 321 P **P** **07 08 49.2 +0.2**
NIL Nilore 24.67 278 P **P** **07 08 48.9 -0.4**
NIL pmax pmax
comp=Z,14nm,1.1s
NIL Nilore 24.67 278 P **P** **07 08 48.9 -0.4**
NIL Nilore 24.67 278 P **P** **07 08 49.7 +0.5**
USRK Ussuriysk Ar. 24.86 56 P **P** **07 08 52.1 +1.3**
comp=Z,3.6nm,0.8s,baz=250,slow=9.3,SNR=5.3
comp=Z,3.6nm,0.8s
USRK Ussuriysk Ar. 24.86 56 P **P** **07 08 50.0 -0.8**
BTLS Baital 24.96 306 *e*P **P** **07 08 53.1 +1.4**
BTLS Baital 24.96 306 *e*P **P** **07 08 53.1 +1.4**
BOD Bodaibo 25.37 14 *e*P **P** **07 08 55.8 +0.5**
BOD pmax pmax
comp=Z,20nm,1.1s
TGY Tagaytay City 25.38 136 LR LR 07 19 38.5
comp=Z,124nm,19.6s,baz=8.5,slow=38
MANEM Manem 25.65 288 P **P** **07 08 57.3 -1.1**
MANEM IAmb IAmb 07 09 02.2
comp=Z,22nm,1.0s
ARK Arkit 25.72 298 P **P** **07 09 01.1 +2.3**
KLR Kul'dur 26.46 45 LR LR 07 21 15.5
comp=Z,202nm,19.1s,baz=241,slow=40
KLR Kul'dur 26.46 45*ce*P **P** **07 09 05.3 0.0**
KLR pmax pmax
comp=Z,4.0nm,1.7s
ZEA Zeya 26.51 33 *e*P **P** **07 09 12.0 +6.3**
ZEA MLR MLR
comp=E,200nm,8.0s
ZEA MLR MLR
comp=N,400nm,15.0s
ZEA MLR MLR
comp=Z,400nm,10.0s
GAR Garm 26.73 291 P **P** **07 09 06.6 -1.5**
GAR Garm 26.73 291 P **P** **07 09 08.9 +0.9**
KK31 Karatay Array 26.99 300 P **P** **07 09 09.1 -1.1**
KK31 pmax pmax
comp=Z,3.0nm,1.1s
KK31 Karatay Array 26.99 300 P **P** **07 09 09.1 -1.1**
KKAR Karatay Array 26.99 300 P **P** **07 09 08.3 -1.9**
KKAR Karatay Array 26.99 300 P **P** **07 09 08.3 -1.9**
HYB Hyderabad 27.16 240 *e*P **P** **07 09 11.9 0.0**
HYB *e*S **S** **07 13 51.1 +0.5**
CHM Chimkent 27.53 298 *e*P **P** **07 09 16.5 +1.5**
CHM Chimkent 27.53 298 *e*P **P** **07 09 16.6 +1.5**
CHGR Chuyangaron 27.64 290 *i* P **P** **07 09 17.1 +1.0**
CHGR pmax pmax
comp=Z,6.0nm,1.0s
CHGR Chuyangaron 27.64 290 P **P** **07 09 14.8 -1.3**
CHGR IAmb IAmb 07 09 32.4
comp=Z,8.7nm,0.8s
CHGR Chuyangaron 27.64 290 P **P** **07 09 16.8 +0.7**
KBL Kabul 28.00 282 P **P** **07 09 17.3 -2.3**
KBL pmax pmax
comp=Z,4.0nm,0.8s
KBL Kabul 28.00 282 P **P** **07 09 17.2 -2.3**
KBL Kabul 28.00 282 P **P** **07 09 19.6 0.0**
JGF Kuroka 28.34 76 P **P** **07 09 21.7 -0.7**
JGF IAmb IAmb 07 09 32.5
comp=Z,7.3nm,0.8s
JGF Kuroka 28.34 76 P **P** **07 09 22.7 +0.3**
MJAR Matsushiro Arr 28.94 74 P **P** **07 09 26.4 -1.3**
comp=Z,1.0nm,0.8s,baz=266,slow=6.5,SNR=2.1
MJAR LR LR 07 22 34.3
comp=Z,64nm,18.3s,baz=252,slow=40
comp=Z,1.0nm,0.8s
MJAR Matsushiro Arr 28.94 74 P **P** **07 09 26.0 -1.6**
KKM Kota Kinabalu 30.07 153 P **P** **07 09 39.0 +1.2**
BVAR Borovoye Array 30.23 320 P **P** **07 09 37.9 -1.0**
comp=Z,0.7nm,0.5s,baz=113,slow=9.6,SNR=4.3
comp=Z,0.7nm,0.5s
JYT Yasato 30.56 74 P **P** **07 09 41.3 -0.7**
PSI Prapat 30.86 188 P **P** **07 09 43.8 -1.1**
PSI pmax pmax
comp=Z,5.0nm,1.0s
RPSI Rantau Prapat 30.97 188 P **P** **07 09 43.8 -1.9**
MYKOM Kota Tinggi 31.65 178 P **P** **07 09 53.6 +1.9**
GSI Gunungsitoli 32.51 190 P **P** **07 09 59.0 -0.3**

YSS Yuzhno-Sakhali 32.83 54 *e*P **P** **07 10 02.7 +0.9**
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS pmax pmax
comp=Z,100nm,3.6s
YSS MLR MLR
comp=Z,200nm,17.0s
YSS Yuzhno-Sakhali 32.83 54 P **P** **07 10 01.8 0.0**
YSS IAmb IAmb 07 10 08.9
comp=Z,15nm,1.1s
YSS Yuzhno-Sakhali 32.83 54 P **P** **07 10 02.0 +0.2**
BKNI Bangkinang 33.14 183 P **P** **07 10 04.9 +0.1**
YAK Yakutsk 33.17 23 LR LR 07 24 19.4
comp=Z,179nm,18.0s,baz=224,slow=38
YAK Yakutsk 33.17 23 *e*P **P** **07 10 05.5 +0.9**
YAK *e**PP **pP** **07 10 09.1 +0.4**
YAK *e* 07 11 14.7
YAK *e*PPP PPP 07 11 26.5
YAK *e* 07 12 46.0
YAK *e*S **S** **07 15 25.8 +1.9**
YAK *e**SS **sS** **07 15 32.7 +2.0**
YAK *e*SS **SnSn** **07 17 25.4 +2.5**
YAK *e* 07 20 31.2
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,68nm,4.1s
YAK pmax pmax
comp=N,26nm,4.2s
YAK pmax pmax
comp=E,37nm,3.5s
YAK smax smax
comp=E,38nm,3.9s
YAK smax smax
comp=N,23nm,3.2s
YAK MLR MLR
comp=Z,196nm,17.0s
YAK MLR MLR
comp=E,111nm,18.0s
YAK MLR MLR
comp=N,87nm,21.0s
YAK Yakutsk 33.17 23 P **P** **07 10 05.9 +1.4**
PALK Pallekele 33.30 223 LR LR 07 28 52.6
comp=N,141nm,18.1s,baz=64,slow=46
DAV Davao City (W) 33.72 136 LR LR 07 26 06.4
comp=N,179nm,19.4s,baz=146,slow=40
AB31 Akbulak array 35.30 309 P **P** **07 10 22.9 -0.3**
ABKAR Akbulak array 35.30 309 P **P** **07 10 22.4 -0.8**
NRIK Noril'sk 36.82 351 P **P** **07 10 34.6 -1.4**
comp=N,5.5nm,0.8s,baz=137,slow=9.6,SNR=5.9
NRIK LR LR 07 26 46.3
comp=N,125nm,19.0s,baz=168,slow=38
comp=N,5.5nm,0.8s
NRIK Noril'sk 36.82 351 *i* P **P** **07 10 37.4 +1.4**
NRIK pmax pmax
comp=Z,10.0nm,1.1s
NRIK Noril'sk 36.82 351 P **P** **07 10 35.5 -0.5**
SVE Sverdlovsk 36.91 322 *e*P **P** **07 10 38.1 +1.1**
SVE pmax pmax
comp=Z,12nm,1.2s
ARTI Arti 37.94 321*c i*P **P** **07 10 45.9 +0.2**
ARTI 07 12 59.1
ARTI S **S** **07 16 38.6 +1.3**
ARTI SS **SnSn** **07 19 18.1 -0.5**
ARTI pmax pmax
comp=Z,13nm,1.2s
ARTI Arti 37.94 321 P **P** **07 10 45.0 -0.7**
ARTI IAmb IAmb 07 10 48.7
comp=Z,9.6nm,0.9s
TIXI Tiksi 40.53 12*ce*P **P** **07 11 07.8 +0.8**
TIXI pmax pmax
comp=Z,18nm,1.7s
TIXI Tiksi 40.53 12 P **P** **07 11 06.5 -0.6**
MA2 Magadan 40.61 35 LR LR 07 29 00.1
comp=Z,58nm,19.1s,baz=272,slow=38
MA2 Magadan 40.61 35 P **P** **07 11 09.2 +1.3**
SPSI Sidrap Palu 40.61 154 P **P** **07 11 08.6 +0.2**
KPJI Karang Pucung 41.10 171 P **P** **07 11 13.6 +1.2**
SEY Seymchan 42.45 31*ce*P **P** **07 11 24.1 +1.2**
SEY pmax pmax
comp=Z,9.0nm,1.7s
GUMO Guam 42.93 107 LR LR 07 29 30.3
comp=Z,51nm,19.7s,baz=22,slow=36
PETK Petropavlovsk- 43.15 46 P **P** **07 11 27.2 -1.6**
comp=Z,4.0nm,0.9s,baz=258,slow=3.7,SNR=5.8
PETK LR LR 07 30 52.1
comp=Z,83nm,18.8s,baz=264,slow=38
comp=Z,4.0nm,0.9s
PETK Petropavlovsk- 43.15 46 P **P** **07 11 28.7 -0.1**
PETK Petropavlovsk- 43.15 46 P **P** **07 11 28.7 -0.1**
KIRV Kirov 43.18 322*ce*P **P** **07 11 29.6 +0.7**
KBZ Khabaz 47.02 301 LR LR 07 34 02.9
comp=Z,82nm,19.6s,baz=110,slow=39
KBZ Khabaz 47.02 301 *i* P **P** **07 12 00.9 +1.2**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KVAR Kislovodsk Arr 47.13 301 LR LR 07 34 27.1
comp=Z,107nm,20.7s,baz=110,slow=40
KIV Kislovodsk 47.14 301 *e*P **P** **07 12 02.3 +1.6**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,61nm,16.0s
KLMR Klimovskoe 48.46 324 *e*P **P** **07 12 08.8 -1.7**
KLMR pmax pmax
comp=Z,21nm,0.9s
MOS Moscow 49.34 317 *e*P **P** **07 12 18.3 +0.9**
BILL Bilibino 49.38 26*ce*P **P** **07 12 17.7 +0.2**
BILL pmax pmax
comp=Z,9.0nm,1.0s
OBN Obninsk 49.97 317⇓ *e*P **P** **07 12 23.6 +1.4**
OBN *e* 07 14 18.5
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,142nm,23.0s
VADS Vadso 53.25 336 *e*P **P** **07 12 46.6 +0.1**
VADS IAmb IAmb 07 12 51.3
comp=Z,128nm,1.9s
KEV Kevo 54.05 335 P **P** **07 12 52.2 -0.2**
KEV pmax pmax
comp=Z,11nm,1.1s
KEV Kevo 54.05 335 P **P** **07 12 52.2 -0.2**
KEV IAmb IAmb 07 13 11.7
comp=Z,11nm,1.1s
ARA0 ARCESS Array S 54.58 335 *e*P **P** **07 12 56.0 -0.3**
ARCES ARCESS Array B 54.58 335 P **P** **07 12 54.9 -1.4**
comp=Z,2.4nm,0.5s,baz=81,slow=7.4,SNR=20
ARCES LR LR 07 36 35.1
comp=Z,59nm,19.3s,baz=114,slow=36
comp=Z,2.4nm,0.5s
BR131 Keskin Array S 54.66 298 P **P** **07 12 57.5 -0.1**
BR131 pmax pmax
comp=Z,4.0nm,1.2s
BR131 Keskin Array S 54.66 298 P **P** **07 12 57.5 -0.1**
BRTR Keskin Array B 54.67 298 P **P** **07 12 55.0 -2.6**
comp=Z,0.4nm,0.3s,baz=77,slow=5.6,SNR=4.2
comp=Z,0.4nm,0.3s
BRTR Keskin Array B 54.67 298*ce*P **P** **07 12 59.4 +1.9**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 54.67 298 P **P** **07 12 56.8 -0.8**
KNRA Kununurra 54.85 149 P **P** **07 12 57.9 -0.9**
KNRA IAmb IAmb 07 13 19.4
comp=Z,5.6nm,0.9s
FIA1 FINESS Array S 54.95 325 P **P** **07 12 58.7 -0.4**
FIA1 IAmb IAmb 07 13 09.2
comp=Z,8.7nm,0.8s
FINES FINESS Array B 54.95 325 P **P** **07 12 58.1 -0.9**
comp=Z,3.9nm,0.7s,baz=86,slow=7.8,SNR=38
comp=Z,3.9nm,0.7s
FINES FINESS Array B 54.95 325 P **P** **07 12 58.7 -0.3**
FINES FINESS Array B 54.95 325 P **P** **07 12 58.7 -0.3**
AKASG Malin Array Be 54.97 312 P **P** **07 12 57.8 -1.5**
comp=Z,1.0nm,0.6s,baz=72,slow=6.0,SNR=4.1
AKASG LR LR 07 37 52.7
comp=Z,105nm,19.3s,baz=64,slow=38
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 54.97 312*ce*P **P** **07 13 01.7 +2.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AK10 Malin Array Si 54.97 312 P **P** **07 13 01.8 +2.4**

MNK Minsk 55.03 317 *i* P **P** **07 13 00.7 +0.9**
comp=E,17nm,0.7s
MNK *i* P **P** **07 13 00.7 +0.9**
comp=N,12nm,0.7s
MNK *i* P **P** **07 13 00.7 +0.9**
comp=Z,9.0nm,0.7s,baz=79
MNK *i* PcP **PcP** **07 14 01.6 +0.3**
MNK *i* PP **PP** **07 15 04.2 +1.5**
MNK *i* PPP PPP 07 16 17.5
MNK *i* S **S** **07 20 44.7 +2.7**
MNK *i* ScS **ScS** **07 22 50.0 +1.1**
MNK *i* SS **SS** **07 24 30.2 +5.0**
MNK *i* SSS SSS 07 26 36.7
MNK *i* LQ LQ 07 32 40.9
MNK *i* LR LR 07 36 12.4
MNK *i* LRM MLR 07 37 34.1
comp=N,95nm,19.2s
MNK *i* LRM MLR 07 37 48.1
comp=Z,121nm,21.9s
MNK *i* LRM MLR 07 38 12.8
comp=E,54nm,19.3s
MNK Minsk 55.03 317 *i* P **P** **07 13 00.7 +0.9**
MNK *i* 07 14 01.6
MNK *i* 07 15 04.1
MNK *i* PPP PPP 07 16 17.5
MNK *i* S **S** **07 20 44.6 +2.7**
MNK *i* 07 22 50.0
MNK *i* SS **SS** **07 24 30.1 +5.0**
MNK pmax pmax
comp=N,12nm,0.7s
MNK pmax pmax
comp=E,17nm,0.7s
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK MLR MLR
comp=N,95nm,19.0s
MNK MLR MLR
comp=Z,121nm,22.0s
MNK MLR MLR
comp=E,54nm,19.0s
HAMF Hammerfest 55.16 336 *e*P **P** **07 13 00.4 -0.1**
HAMF IAmb IAmb 07 13 09.8
comp=Z,1μm,3.3s
KTK1 Kautokeino 55.41 334 *e*P **P** **07 13 01.7 -0.6**
KTK1 IAmb IAmb 07 13 06.5
comp=Z,89nm,2.1s
NACGM Naroch 55.59 317 *e*P **P** **07 13 04.4 +0.7**
comp=Z,6.0nm,0.9s,baz=79
JETT Jettan, Norway 56.37 335 *e*P **P** **07 13 09.2 0.0**
JETT IAmb IAmb 07 13 17.9
comp=Z,614nm,3.1s
SPITS Spitsbergen Ar 56.68 346 LR LR 07 39 29.9
comp=Z,93nm,21.0s,baz=104,slow=38
GAMB Gambell 58.45 31 P **P** **07 13 23.0 -0.9**
baz=282
MOR8 Moi Rana 59.19 332 *e*P **P** **07 13 26.1 -2.9**
TNA Tin City 59.61 29 P **P** **07 13 30.6 -1.2**
baz=285
LEIR Leirfjorden 59.72 332 *e*P **P** **07 13 31.6 -1.1**
LEIR IAmb IAmb 07 13 37.4
comp=Z,107nm,2.1s
C16K Lisburne Hills 59.89 25 P **P** **07 13 32.8 -1.0**
baz=285
DRGR 60.15 309 P **P** **07 13 36.6 +0.6**
F14K Arctic Creek 60.27 29 P **P** **07 13 35.4 -1.0**
baz=286
C17K DeLong Mountai 60.60 25 P **P** **07 13 37.8 -1.0**
baz=287
SPIA Saint Paul Isl 60.86 39 P **P** **07 13 39.0 -1.5**
baz=287
D17K Noatak River 60.87 26 P **P** **07 13 39.6 -0.9**
baz=288
F15K North Star Dit 60.87 28 P **P** **07 13 37.9 -2.7**
baz=287
ANM Nome 60.92 30 P **P** **07 13 38.6 -2.3**
baz=287
WB0 Warramunga Arr 60.97 146 P **P** **07 13 41.6 -0.1**
WB0 IAmb IAmb 07 13 53.9
comp=Z,6.9nm,1.1s
WRA Warramunga Arr 61.10 146 P **P** **07 13 41.6 -1.0**
comp=Z,3.3nm,1.0s,baz=340,slow=7.1,SNR=10
comp=Z,3.3nm,1.0s
HFS Hagfors 61.15 325 P **P** **07 13 42.2 -0.3**
comp=Z,3.6nm,0.8s,baz=93,slow=3.1,SNR=9.4
comp=Z,3.6nm,0.8s
WR8 Warramunga Arr 61.18 146 P **P** **07 13 42.6 -0.6**
WR8 IAmb IAmb 07 13 45.1
comp=Z,7.2nm,1.1s
C18K Utukok River 61.24 25 P **P** **07 13 41.5 -1.6**
baz=289
G15K Niukluk 61.34 29 P **P** **07 13 42.0 -1.7**
baz=288
E17K Hotham Inlet 61.52 26 P **P** **07 13 43.4 -1.5**
baz=289
C19K Lookout Ridge 61.64 24 P **P** **07 13 45.7 -0.1**
C19K Lookout Ridge 61.64 24 P **P** **07 13 44.2 -1.6**
baz=290
A21K Barrow 61.80 21 P **P** **07 13 45.3 -1.4**
baz=291
E18K Tukpahlearik C 61.86 26 P **P** **07 13 46.0 -1.2**
baz=290
M11K Mekoryuk 61.86 34 P **P** **07 13 46.0 -1.3**
baz=289
G16K Koyuk River 61.88 28 P **P** **07 13 46.1 -1.3**
baz=289
F17K Baldwin Pennin 61.95 27 P **P** **07 13 46.3 -1.5**
baz=290
NB2 NORSAR Subarra 62.03 327 P **P** **07 13 47.4 -1.1**
comp=Z,0.9nm,0.6s,baz=71,slow=6.9
NB2 NORSAR Subarra 62.03 327 P **P** **07 13 47.4 -1.1**
NOA NORSAR Array B 62.03 327 P **P** **07 13 47.5 -1.0**
comp=Z,1.3nm,0.7s,baz=72,slow=6.9,SNR=6.4
NOA LR LR 07 39 50.5
comp=Z,58nm,19.6s,baz=75,slow=35
comp=Z,1.3nm,0.7s
K13K Kusilvak Mount 62.06 32 P **P** **07 13 46.7 -2.0**
baz=289
B20K Meade River 62.12 23 P **P** **07 13 47.5 -1.4**
baz=292
H16K Elim 62.18 29 P **P** **07 13 48.0 -1.4**
baz=290
D19K Kuna River 62.36 24 P **P** **07 13 50.1 -0.4**
D19K Kuna River 62.36 24 P **P** **07 13 49.4 -1.2**
baz=292,SNR=6.1
A22K Sinclair Lake 62.42 21 P **P** **07 13 49.6 -1.2**
baz=293
F18K Selawik 62.50 27 P **P** **07 13 49.3 -2.2**
baz=291
G17K Kiwalik Mounta 62.51 28 P **P** **07 13 49.8 -1.8**
baz=291
D20K Etivluk River 62.78 24 P **P** **07 13 51.5 -1.9**
baz=293,SNR=18
H17K Granite Mounta 63.01 28 P **P** **07 13 52.7 -2.2**
baz=292
E19K Redstone River 63.06 25 P **P** **07 13 54.7 -0.5**
E19K IAmb IAmb 07 13 57.6
comp=Z,4.8nm,0.8s
E19K Redstone River 63.06 25 P **P** **07 13 52.7 -2.6**
baz=293
I17K Unalakleet 63.08 30 P **P** **07 13 53.4 -2.0**
baz=292
B21K Ikpikpuk River 63.08 23 P **P** **07 13 53.2 -2.2**
baz=294
F19K Shaleruckik Mo 63.10 26 P **P** **07 13 54.5 -1.0**
F19K Shaleruckik Mo 63.10 26 P **P** **07 13 53.2 -2.3**
baz=293,SNR=6.5
E20K Nigu River 63.11 24 P **P** **07 13 53.6 -2.1**
baz=293,SNR=5.4
G18K Tagagawik 63.13 27 P **P** **07 13 53.4 -2.4**
baz=292
L14K Kuka Creek 63.15 33 P **P** **07 13 53.1 -2.8**
baz=291
B22K Teshekpuk Lake 63.16 22 P **P** **07 13 53.4 -2.4**
baz=295
VRAC Vranov 63.16 313 LR LR 07 42 50.4
comp=Z,125nm,19.8s,baz=66,slow=37
M13K Dall Lake 63.18 34 P **P** **07 13 53.9 -2.2**
baz=291
C21K Knifeblade Rid 63.22 23 P **P** **07 13 54.1 -2.2**
baz=294
J16K Anvik River 63.34 30 P **P** **07 13 54.0 -3.1**
baz=292
H18K Honhosa River 63.53 28 P **P** **07 13 55.1 -3.3**
baz=293
G19K Purcell Mounta 63.63 27 P **P** **07 13 56.6 -2.5**
baz=294
M14K Bethel 63.70 33 P **P** **07 13 56.8 -2.7**

baz=292
F20K **Avaraart Lake** 63.76 25 P P 07 13 56.6 -3.2
baz=294
E21K **Killik River** 63.78 24 P P 07 13 57.6 -2.5
baz=295
J17K **VABM Dome** 63.93 30 P P 07 13 58.5 -2.6
baz=293
UNV **Unalaska Valle** 63.98 41 P P 07 13 58.7 -2.8
baz=292
H19K **Roundabout Mou** 64.12 27 P P 07 13 59.1 -3.1
baz=294,SNR=13
AS31 **Alice Springs** 64.13 148 P P 07 14 02.6 -0.3
ASAR **Alice Springs** 64.14 148 P P 07 14 01.1 -1.8
comp=Z,1.4nm,0.7s,baz=328,slow=6.4,SNR=9.2
comp=Z,1.4nm,0.7s
ASAR **Alice Springs** 64.14 148 P P 07 14 02.9 0.0
ASAR **Alice Springs** 64.14 148 P P 07 14 02.9 0.0
N14K **Kuskokwak Cree** 64.14 34 P P 07 13 59.0 -3.5
baz=293
C23K **Itkillik River** 64.25 22 P P 07 14 03.2 +0.2
C23K **Itkillik River** 64.25 22 P P 07 13 59.8 -3.2
baz=297,SNR=19
GCSA **Galena City Sc** 64.27 28 P P 07 14 01.6 -1.6
baz=294
M15K **Kasigluk River** 64.29 33 P P 07 14 01.1 -2.3
baz=293
L16K **Owhat River** 64.43 32 P P 07 14 02.4 -2.0
baz=294
F21K **Alatna River** 64.48 25 P P 07 14 02.6 -2.0
baz=296
K17K **Iditarod** 64.53 30 P P 07 14 02.5 -2.5
baz=294
O14K **Tigyukauivet M** 64.59 34 P P 07 14 03.1 -2.3
baz=293
D23K **Nanushuk River** 64.63 23 P P 07 14 02.9 -2.7
baz=298,SNR=8.1
E22K **Anaktuvuk Pass** 64.64 24 P P 07 14 03.1 -2.6
baz=297
H20K **Anotleneega Mo** 64.73 27 P P 07 14 04.3 -1.9
baz=296,SNR=6.3
L17K **Donlin** 64.77 31 P P 07 14 04.1 -2.5
baz=294
N15K **Kwethluk River** 64.78 33 P P 07 14 03.6 -3.1
baz=294
G21K **Allakaket** 64.78 26 P P 07 14 03.4 -3.2
baz=296,SNR=7.7
F22K **John River** 64.80 24 P P 07 14 04.2 -2.5
baz=297
M16K **Timber Creek** 64.94 32 P P 07 14 05.5 -2.2
baz=294
J19K **Poorman** 65.09 28 IAmb IAmb 07 14 11.3
comp=Z,3.8nm,0.9s
J19K **Poorman** 65.09 28 P P 07 14 06.1 -2.5
baz=296
GERES **GERESS Array B** 65.10 313 P P 07 14 08.8 -0.3
comp=Z,1.0nm,0.9s,baz=79,slow=8.3,SNR=6.3
comp=Z,1.0nm,0.9s
GERES **GERESS Array B** 65.10 313 P P 07 14 08.2 -0.9
D24K **Happy Valley** 65.12 22 P P 07 14 08.6 -0.2
D24K IAmb IAmb 07 14 11.6
comp=Z,5.9nm,0.8s
D24K **Happy Valley** 65.12 22 P P 07 14 06.7 -2.1
baz=299
TOLK **Toolik Lake Re** 65.14 23 P P 07 14 06.7 -2.2
baz=299
I20K **Naaghedeneel** 65.18 27 P P 07 14 09.1 -0.1
I20K **Naaghedeneel** 65.18 27 P P 07 14 07.3 -1.9
baz=296
N16K **Nishlik Lake** 65.25 33 P P 07 14 07.2 -2.5
baz=295
O15K **Ungalikthiuk R** 65.30 34 P P 07 14 07.5 -2.6
baz=294
E23K **Chandalar** 65.40 23 IAmb IAmb 07 14 13.6
comp=Z,5.3nm,0.8s
E23K **Chandalar** 65.40 23 P P 07 14 08.1 -2.6
baz=299,SNR=5.2
L18K **Granite Mounta** 65.42 30 P P 07 14 08.3 -2.5
baz=296
H21K **Melozitna Rive** 65.42 26 P P 07 14 07.8 -3.0
baz=297,SNR=9.3
M17K **Holitna River** 65.45 31 P P 07 14 08.2 -2.8
baz=295
J20K **Nowinta River** 65.59 28 IAmb IAmb 07 14 14.7
comp=Z,6.7nm,0.9s
J20K **Nowinta River** 65.59 28 P P 07 14 09.5 -2.4
baz=297,SNR=6.8
COLD **Coldfoot** 65.61 24 P P 07 14 09.9 -2.0
baz=299,SNR=15
E24K **Your Creek** 65.77 23 P P 07 14 11.0 -2.0
baz=300
D25K **Kavik River** 65.80 21 P P 07 14 11.2 -2.0
baz=301
H22K **Ishtalitna Cre** 65.84 26 P P 07 14 11.5 -1.9
baz=298
C26K **Camden Bay** 65.92 21 P P 07 14 11.9 -2.0
baz=302
G23K **Bananza Creek** 65.92 25 IAmb IAmb 07 14 16.7
comp=Z,4.4nm,0.8s
G23K **Bananza Creek** 65.92 25 P P 07 14 11.6 -2.4
baz=299,SNR=5.6
O16K **Kokwok River B** 65.93 33 P P 07 14 11.2 -2.9
baz=296
N17K **Nushagak Hills** 65.94 32 P P 07 14 11.5 -2.6
baz=296
I21K **Tanana** 65.95 27 IAmb IAmb 07 14 17.2
comp=Z,7.2nm,1.0s
I21K **Tanana** 65.95 27 P P 07 14 11.4 -2.8
baz=298
K20K **Telida** 65.99 29 P P 07 14 11.9 -2.6
baz=297
M18K **Stony River** 66.11 31 P P 07 14 12.3 -2.9
baz=296
L19K **White Mountain** 66.21 30 IAmb IAmb 07 14 18.8
comp=Z,7.8nm,1.1s
L19K **White Mountain** 66.21 30 P P 07 14 12.6 -3.3
baz=297
P16K **Nushagak River** 66.22 34 P P 07 14 13.3 -2.7
baz=296
F24K **Squaw Lake** 66.24 23 P P 07 14 13.8 -2.3
baz=301
C27K **Jago River** 66.43 21 P P 07 14 14.8 -2.4
baz=303,SNR=14
CHUM **Lake Minchumin** 66.44 28 P P 07 14 15.0 -2.4
baz=298
N18K **Kilae Creek** 66.44 32 P P 07 14 14.6 -2.9
baz=297
MLY **Manley** 66.49 26 IAmb IAmb 07 14 20.5
comp=Z,5.7nm,0.8s
MLY **Manley** 66.49 26 P P 07 14 14.7 -3.0
baz=299
M19K **Big River Lodg** 66.53 30 IAmb IAmb 07 14 21.1
comp=Z,6.5nm,1.0s
M19K **Big River Lodg** 66.53 30 P P 07 14 16.2 -1.7
baz=297
H23K **Yukon River** 66.53 25 P P 07 14 16.2 -1.7
baz=300
SDPT **Sand Point** 66.59 38 P P 07 14 16.2 -2.2
baz=295
S14K **Fog Glacier** 66.66 37 P P 07 14 16.4 -2.6
baz=296
E25K **Arctic Village** 66.68 22 P P 07 14 16.4 -2.4
baz=302
CAST **Castle Rocks** 66.75 28 P P 07 14 17.1 -2.3
baz=299
G24K **Hadweenzic Riv** 66.80 24 P P 07 14 17.9 -1.7
baz=301,SNR=6.3
P17K **Kvichak River** 66.87 33 P P 07 14 17.5 -2.6
baz=297
I23K **Minto, Yukon-K** 66.94 26 IAmb IAmb 07 14 22.9
comp=Z,3.9nm,0.8s
I23K **Minto, Yukon-K** 66.94 26 P P 07 14 18.5 -1.9
baz=300
F25K **Christian Rive** 66.94 23 IAmb IAmb 07 14 23.9
comp=Z,5.1nm,0.8s
F25K **Christian Rive** 66.94 23 P P 07 14 17.1 -3.5
baz=302,SNR=8.5
PPLA **Purkeypile** 66.96 29 P P 07 14 18.8 -2.1
baz=299
Q16K **King Salmon** 67.00 34 P P 07 14 18.6 -2.4
baz=297
M20K **Styx River** 67.06 30 P P 07 14 19.1 -2.4
baz=298
H24K **Noodor Dome** 67.11 25 IAmb IAmb 07 14 24.6
comp=Z,4.0nm,1.0s
H24K **Noodor Dome** 67.11 25 P P 07 14 19.8 -1.9
baz=301
O18K **Koktuh Hills** 67.12 32 P P 07 14 19.7 -2.1
baz=298
KTH **Kantishna Hill** 67.14 28 IAmb IAmb 07 14 24.7
comp=Z,6.8nm,1.0s
G25K **Bearman Lake** 67.23 24 P P 07 14 20.2 -2.1
baz=302
CHNA **Chernabura Isl** 67.28 38 P P 07 14 20.8 -2.0
baz=296
NEA2 **Nenana** 67.33 26 P P 07 14 20.5 -2.5
baz=301,SNR=11
P18K **Big Mountain,** 67.33 33 P P 07 14 20.9 -2.2
baz=298
O19K **Port Alsworth** 67.36 32 P P 07 14 20.5 -2.7
baz=298
F26K **Sheenjek River** 67.36 22 P P 07 14 20.2 -3.0
baz=304
TRF **Thorofare Moun** 67.44 28 IAmb IAmb 07 14 31.4
comp=Z,3.6nm,0.8s
TRF **Thorofare Moun** 67.44 28 P P 07 14 21.0 -3.0
baz=300
D27M **Malcolm River** 67.44 20 P P 07 14 20.9 -2.8
baz=306
Q17K **Contact Creek** 67.55 34 P P 07 14 21.9 -2.8
baz=298
R17L **Mt. Peulik Vol** 67.62 35 P P 07 14 22.1 -2.9
baz=298
COLA **College** 67.63 26 P P 07 14 24.6 -0.2
COLA pmax pmax
comp=Z,22nm,0.8s
COLA **College** 67.63 26 P P 07 14 24.6 -0.2
COLA **College** 67.63 26 P P 07 14 24.6 -0.2
POKR **Poker Plat Res** 67.65 26 P P 07 14 23.8 -1.2
baz=302
SKT **Skwentna** 67.68 29 P P 07 14 23.3 -2.0
baz=300
L22K **Petersville** 67.72 29 P P 07 14 25.0 -0.5
L22K **Petersville** 67.72 29 P P 07 14 23.5 -2.0
baz=300,SNR=5.4
Q18K **Katmai Hardscr** 67.78 34 P P 07 14 24.1 -2.0
baz=298
SPCR **Spurr Chakacha** 67.78 30 P P 07 14 23.7 -2.3
baz=299
MCK **McKinley** 67.82 27 IAmb IAmb 07 14 28.5
comp=Z,3.3nm,0.8s
MCK **McKinley** 67.82 27 P P 07 14 24.4 -1.8
baz=301
E27K **Coleen River** 67.88 21 IAmb IAmb 07 14 28.8
comp=Z,4.2nm,1.0s
E27K **Coleen River** 67.88 21 P P 07 14 24.5 -2.0
baz=306
G26K **Porcupine Rive** 67.90 23 P P 07 14 24.6 -1.9
baz=304
CUT **Chulitna** 67.98 29 P P 07 14 24.4 -2.7
baz=300
RND **Reindeer** 68.02 27 IAmb IAmb 07 14 29.2
comp=Z,8.5nm,1.2s
D28M **Stokes Point** 68.03 20 P P 07 14 24.9 -2.3
baz=308
IL31 68.03 26 IAmb IAmb 07 14 29.6
comp=Z,3.9nm,0.9s
ILAR **Eielson Array** 68.03 26 P P 07 14 25.9 -1.5
comp=Z,2.9nm,1.0s,baz=290,slow=6.3,SNR=23
ILAR LR LR 07 47 12.5
comp=Z,40nm,18.5s,baz=284,slow=38
comp=Z,2.9nm,1.0s
ILAR **Eielson Array** 68.03 26 P P 07 14 26.0 -1.5
P19K **Oil Pt** 68.10 32 P P 07 14 25.3 -2.7
baz=299
PRP **Porcupine Dome** 68.11 25 P P 07 14 27.9 -0.2
PRP **Porcupine Dome** 68.11 25 P P 07 14 25.3 -2.8
baz=303,SNR=7.4
O20K **Slope Mountain** 68.16 32 P P 07 14 24.8 -3.5
baz=300
HDA **Harding Lake** 68.20 26 P P 07 14 26.1 -2.4
baz=302
E28M **Babbage River** 68.24 21 IAmb IAmb 07 14 31.7
comp=Z,4.3nm,0.8s
E28M **Babbage River** 68.24 21 P P 07 14 26.3 -2.4
baz=307,SNR=6.2
Q19K **Cape Douglas,** 68.27 33 P P 07 14 26.7 -2.4
baz=299
DAVOX **Davos/Dischmat** 68.30 312 LR LR 07 46 24.6
comp=Z,82nm,18.4s,baz=79,slow=38
M22K **Willow** 68.37 29 P P 07 14 27.1 -2.5
baz=301
WAT1 **Susitna Watana** 68.44 28 P P 07 14 28.0 -2.0
baz=302
CAPN **Captain Cook N** 68.44 30 P P 07 14 27.5 -2.5
baz=300
J25K **Salcha River,** 68.67 25 IAmb IAmb 07 14 32.4
comp=Z,3.5nm,0.9s
J25K **Salcha River,** 68.67 25 P P 07 14 28.4 -3.1
baz=304
G27K **Doyon Strip** 68.67 23 IAmb IAmb 07 14 34.5
comp=Z,6.3nm,1.1s
G27K **Doyon Strip** 68.67 23 P P 07 14 29.0 -2.5
baz=306,SNR=6.6
F28M **Old Crow** 68.74 21 IAmb IAmb 07 14 34.8
comp=Z,6.5nm,0.8s
F28M **Old Crow** 68.74 21 P P 07 14 29.1 -2.8
baz=307,SNR=9.9
DHY **Denali Highway** 68.76 27 IAmb IAmb 07 14 34.0
comp=Z,3.2nm,0.8s
DHY **Denali Highway** 68.76 27 P P 07 14 29.6 -2.6
baz=303
CHIR **Chirikof Islan** 68.83 36 P P 07 14 29.8 -2.7
baz=299
E29M **Blow River** 68.85 20 IAmb IAmb 07 14 35.6
comp=Z,8.3nm,1.1s
E29M **Blow River** 68.85 20 P P 07 14 30.3 -2.2
baz=309,SNR=7.0
PMR **Palmer** 68.86 29 IAmb IAmb 07 14 34.4
comp=Z,7.8nm,1.0s
PMR **Palmer** 68.86 29 P P 07 14 30.8 -1.8
baz=302
RC01 **Rabbit Creek A** 68.87 30 P P 07 14 30.9 -1.9
baz=301
WAT6 **Susitna Watana** 68.89 28 P P 07 14 30.6 -2.4
baz=302
K24K **Donnelly Dome** 68.97 26 P P 07 14 31.4 -1.9
baz=304
I26K **Coal Creek Min** 69.05 24 P P 07 14 32.3 -1.5
baz=305
H27K **Steamboat Moun** 69.05 23 P P 07 14 31.7 -2.1
baz=306,SNR=15
SML **Sawmill** 69.07 29 P P 07 14 32.1 -1.9
baz=302
BRSE **Bradley Lake S** 69.15 31 P P 07 14 32.5 -2.0
baz=301
SII **Sitkinak Islan** 69.18 35 P P 07 14 32.6 -2.1
baz=300
KNK **Knik Glacier** 69.23 29 P P 07 14 32.9 -2.1
baz=302
OHAK **Old Harbor** 69.28 34 P P 07 14 33.2 -2.0
baz=300
M23K **Glacier View** 69.32 29 P P 07 14 34.0 -1.6
baz=303
KDAK **Kodiak Island** 69.32 34 LR LR 07 44 05.3
comp=Z,72nm,20.0s,baz=226,slow=35
RIDG **Independent Ri** 69.34 26 P P 07 14 34.3 -1.4
baz=304
I27K **Kandik River** 69.40 24 IAmb IAmb 07 14 39.2
comp=Z,6.8nm,0.8s
I27K **Kandik River** 69.40 24 P P 07 14 35.0 -1.0
baz=306,SNR=13
SCM **Sheep Creek Mo** 69.46 28 P P 07 14 34.3 -2.2
baz=303
A36M **Sachs Harbour** 69.50 14 P P 07 14 34.2 -2.2
baz=318
SCRK **Sand Creek** 69.52 26 P P 07 14 34.6 -2.3
baz=305,SNR=17
PAX **Paxson** 69.55 27 P P 07 14 34.6 -2.4
baz=304
G29M **Pine Creek** 69.74 22 IAmb IAmb 07 14 42.0
comp=Z,6.2nm,1.0s
G29M **Pine Creek** 69.74 22 P P 07 14 36.0 -2.1
baz=309,SNR=6.2
M24K **Tolsona, Glenn** 69.76 28 P P 07 14 36.4 -2.0
baz=304
F30M **Barrier River** 69.96 20 IAmb IAmb 07 14 43.5
comp=Z,5.5nm,0.7s
F30M **Barrier River** 69.96 20 P P 07 14 37.2 -2.2
baz=311
HARP **HAARP** 69.99 27 P P 07 14 38.1 -1.6
baz=305
I28M **Miner Creek** 70.05 23 IAmb IAmb 07 14 42.8
comp=Z,6.6nm,0.8s
I28M **Miner Creek** 70.05 23 P P 07 14 38.8 -1.3
baz=308,SNR=13
H29M **Whitestone** 70.07 22 IAmb IAmb 07 14 42.5
comp=Z,4.9nm,0.9s
H29M **Whitestone** 70.07 22 P P 07 14 38.2 -1.9
baz=309
INK **Inuvik** 70.14 19 LR LR 07 51 27.5
comp=Z,70nm,18.3s,baz=282,slow=41
INK **Inuvik** 70.14 19 IAmb IAmb 07 14 42.9
comp=Z,6.5nm,0.8s
INK **Inuvik** 70.14 19 P P 07 14 38.5 -1.9
baz=312,SNR=5.2
INK **Inuvik** 70.14 19 P P 07 14 40.3 -0.1
KLU **Klutina** 70.20 28 P P 07 14 39.0 -2.1
baz=304
G30M **tAoh Zraii Nji** 70.25 21 P P 07 14 39.6 -1.6
baz=310,SNR=15
L26K **Log Cabin Wild** 70.31 26 P P 07 14 39.5 -2.1
baz=306
P23K **Montague Islan** 70.44 30 P P 07 14 40.4 -2.0
baz=304
EPYK **Eagle Plains** 70.49 22 P P 07 14 40.9 -1.8
baz=310
N25K **Chitina, Valde** 70.66 28 P P 07 14 41.8 -2.1
baz=305
F31M **Tsiigehtchic** 70.67 20 IAmb IAmb 07 14 46.8
comp=Z,5.7nm,1.0s
F31M **Tsiigehtchic** 70.67 20 P P 07 14 41.9 -1.7
baz=312
EYAK **Cordova Ski Ar** 70.81 29 P P 07 14 42.9 -1.7
baz=305
M26K **Nabesna, AK** 70.81 27 IAmb IAmb 07 14 48.4
comp=Z,3.2nm,0.8s
M26K **Nabesna, AK** 70.81 27 P P 07 14 43.1 -1.6
baz=306
L27K **Beaver Creek,** 70.85 26 IAmb IAmb 07 14 48.0
comp=Z,5.5nm,0.8s
L27K **Beaver Creek,** 70.85 26 P P 07 14 43.5 -1.4
baz=307,SNR=12
BCAR **Beaver Creek A** 70.86 26 P P 07 14 45.0 0.0
G31M **Satah River** 70.86 21 IAmb IAmb 07 14 46.9
comp=Z,5.8nm,0.8s
G31M **Satah River** 70.86 21 P P 07 14 43.4 -1.5
baz=312
BMRM **Bremner River** 71.03 28 P P 07 14 44.4 -1.6
baz=305,SNR=5.0
GLB **Gilahina Butte** 71.06 28 IAmb IAmb 07 14 48.9
comp=Z,5.8nm,0.9s
DAWY **Dawson** 71.09 24 P P 07 14 44.8 -1.6
baz=309
Q23K **Middleton Isla** 71.20 30 P P 07 14 45.4 -1.6
baz=304
M27K **Edge Creek, AK** 71.25 26 IAmb IAmb 07 14 50.8
comp=Z,6.1nm,0.9s
M27K **Edge Creek, AK** 71.25 26 P P 07 14 46.2 -1.3
baz=307,SNR=5.5
VRDI **Verde Repeater** 71.33 28 IAmb IAmb 07 14 50.6
comp=Z,7.3nm,1.0s
EKA **Eskdalemuir Ar** 71.34 325 P P 07 14 45.3 -2.6
comp=Z,0.7nm,0.7s,baz=60,slow=9.1,SNR=1.9
comp=Z,0.7nm,0.7s
I30M **Mount Dempster** 71.35 22 IAmb IAmb 07 14 50.1
comp=Z,5.0nm,0.9s
I30M **Mount Dempster** 71.35 22 P P 07 14 46.2 -1.8
baz=311,SNR=8.9
MCARA **McCarthy VSAT** 71.40 28 P P 07 14 46.5 -1.8
baz=306
BVCY **Beaver Creek** 71.59 26 P P 07 14 47.8 -1.6
baz=308
H31M **Peel River** 71.59 21 P P 07 14 47.9 -1.5
baz=312,SNR=6.1
KAIM **Kayak Island** 71.71 29 P P 07 14 48.6 -1.5
baz=306
CRQE **Cirque** 71.75 28 P P 07 14 48.7 -1.8
baz=307
C36M **Paulatuk** 71.77 16 P P 07 14 48.3 -1.9
baz=320
J30M **Hart River** 71.79 23 P P 07 14 49.0 -1.7
baz=311
K29M **Barlow Dome** 71.87 24 IAmb IAmb 07 14 53.9
comp=Z,6.2nm,0.8s
K29M **Barlow Dome** 71.87 24 P P 07 14 49.4 -1.8
baz=310,SNR=10
BARN **Barnard Glacie** 72.13 27 IAmb IAmb 07 14 55.8
comp=Z,4.7nm,0.7s
L29M **L29M** 72.14 25 IAmb IAmb 07 14 55.8
comp=Z,8.1nm,1.0s
L29M **L29M** 72.14 25 P P 07 14 51.2 -1.5
baz=310,SNR=5.9
YUK3 **Moose Creek** 72.14 27 P P 07 14 50.9 -2.1
baz=308
GRNC **Granite Creek** 72.29 28 IAmb IAmb 07 14 56.3
comp=Z,7.0nm,0.9s
M29M **Somme Creek** 72.44 25 IAmb IAmb 07 14 57.9
comp=Z,3.9nm,0.8s
M29M **Somme Creek** 72.44 25 P P 07 14 52.7 -1.9
baz=310,SNR=6.1
YUK8 **Steele Glacier** 72.71 27 P P 07 14 54.6 -1.8
baz=309
O28M **Mount Upton** 72.87 27 P P 07 14 55.4 -2.0
baz=309
BRWY **Burwash Landin** 72.92 26 P P 07 14 55.9 -1.5
baz=310
M30M **Minto, Yukon** 72.95 25 P P 07 14 55.8 -1.7
baz=311
YUK4 **Talbot Arm** 73.08 26 P P 07 14 56.5 -2.1
baz=310
PINM **Pinnacle** 73.27 28 P P 07 14 57.6 -1.9
baz=309
YUK6 **Outpost Mounta** 73.45 27 P P 07 14 58.6 -2.2
baz=310
N30M **Aishikik Lake** 73.58 26 IAmb IAmb 07 15 04.5
comp=Z,7.2nm,1.0s
N30M **Aishikik Lake** 73.58 26 P P 07 14 58.7 -2.6
baz=311,SNR=5.8
O29M **Mount Kennedy** 73.78 27 P P 07 15 00.8 -1.9
baz=310
HYT **Haines Junctio** 73.85 26 P P 07 15 01.0 -2.0
baz=311
M31M **Drury Creek, Y** 74.03 24 P P 07 15 02.3 -1.6
baz=313
N31M **Braeburn, Yuko** 74.03 25 P P 07 15 02.1 -1.8
baz=312
O30N **Mendenhall** 74.40 26 P P 07 15 04.2 -1.9
baz=312
P30M **Million Dollar** 74.51 27 P P 07 15 04.8 -2.0
baz=312
P29M **Windy Craggy** 74.54 27 P P 07 15 05.3 -1.6
baz=311
STKA **Stephens Creek** 74.64 147 P P 07 15 05.1 -2.5
comp=Z,2.5nm,0.9s,baz=326,slow=11,SNR=3.4
comp=Z,2.5nm,0.9s
MMPY **Sheldon Lake,** 74.78 23 IAmb IAmb 07 15 11.2
comp=Z,4.8nm,0.8s
MMPY **Sheldon Lake,** 74.78 23 P P 07 15 06.4 -1.9
baz=316
WHY **Whitehorse** 74.92 26 P P 07 15 07.3 -1.9
baz=313
PLBC **Pleasant Camp** 75.18 27 P P 07 15 09.1 -1.5
baz=312
N32M **Quiet Lake** 75.21 25 P P 07 15 09.0 -1.8
baz=314
MBAR **Mbarara** 75.54 259 *ce* P P 07 15 13.5 -0.1
MBAR pmax pmax
comp=Z,11nm,1.7s
SKAG **Skagway** 75.57 27 P P 07 15 11.2 -1.6
baz=313
P33M **Teslin, Yukon** 75.96 25 P P 07 15 13.6 -1.6
baz=315
P32M **Atlin** 76.08 26 P P 07 15 13.9 -1.9
baz=314
R31K **City Hall, Gus** 76.13 28 P P 07 15 14.4 -1.5
baz=313
S31K **Pelican** 76.24 28 P P 07 15 15.0 -1.7
baz=312
R32K **Eaglecrest** 76.69 27 P P 07 15 17.2 -2.1
baz=314
Q32M **Nakina River** 77.05 26 P P 07 15 19.6 -1.9
baz=315
R33M **Jennings River** 77.20 25 IAmb IAmb 07 15 25.5
comp=Z,4.0nm,0.8s
R33M **Jennings River** 77.20 25 P P 07 15 20.2 -2.0
baz=316
SIT **Sitka** 77.22 28 P P 07 15 20.3 -1.9
baz=313
S32K **Killisnoo** 77.23 28 P P 07 15 20.3 -1.9
baz=314
S34M **Telegraph Cree** 78.22 26 P P 07 15 25.5 -2.3
baz=316
DLBC **Dease Lake** 78.24 25 P P 07 15 25.7 -2.3
baz=317

U33K	**Whale Pass**	**78.75**	**28**	P		**P**	**07 15 28.2**	**-2.5**
	baz=315							
WRAK	**Wrangell Islan**	**78.84**	**28**	P		**P**	**07 15 28.9**	**-2.3**
	baz=316							
KOTAN	**Kotaneelee Air**	**78.95**	**22**	P		**P**	**07 15 29.8**	**-2.0**
	baz=322							
CRAG	**Craig**	**79.21**	**29**	P		**P**	**07 15 31.5**	**-1.7**
	baz=315							
T35M	**Bob Quinn**	**79.23**	**26**	P		**P**	**07 15 30.9**	**-2.5**
	baz=317							
YKA	**Yellowknife Ar**	**79.61**	**17**	P		**P**	**07 15 34.2**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=335,slow=5.4,SNR=10.0							
	comp=Z,2.2nm,0.7s							
YKA	**Yellowknife Ar**	**79.61**	**17**	*ce*P		**P**	**07 15 34.7**	**-0.6**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
YKA	**Yellowknife Ar**	**79.61**	**17**	P		**P**	**07 15 34.0**	**-1.2**
YKAW1	**Yellowknife Wh**	**79.64**	**17**	P		**P**	**07 15 34.4**	**-1.0**
YKAW1				IAmb		IAmb	07 15 37.6	
	comp=Z,8.7nm,1.1s							
V35K	**Ketchikan**	**79.91**	**28**	P		**P**	**07 15 35.2**	**-1.8**
	baz=316							
ESDC	**Sonseca Array**	**80.61**	**312**	P		**P**	**07 15 39.0**	**-2.2**
	comp=Z,1.1nm,1.0s,baz=97,slow=6.7,SNR=5.0							
ESDC				LR		LR	07 53 55.7	
	comp=Z,52nm,19.1s,baz=50,slow=38							
	comp=Z,1.1nm,1.0s							
ESDC	**Sonseca Array**	**80.61**	**312**	P		**P**	**07 15 40.2**	**-1.1**
NEW	**Newport**	**90.99**	**25**	LR		LR	08 00 12.6	
	comp=Z,68nm,20.3s,baz=332,slow=37							
TORD	**Torodi Ar. Bea**	**91.94**	**287**	P		**P**	**07 16 36.3**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=46,slow=3.4,SNR=6.0							
	comp=Z,2.1nm,1.0s							
TORD	**Torodi Ar. Bea**	**91.94**	**287**	P		**P**	**07 16 36.7**	**-0.8**
TORD				IAmb		IAmb	07 16 40.5	
	comp=Z,3.5nm,1.3s							

DJA ***12*** *07:06:40.6±1.2,2˚S±2˚×12˚9E±˚, h32km±18km, M3.8/12, MLv3.8/12*
IDC ***12*** *07:06:43.8±2.1,2˚.03S×129˚.17E, h75km±25km, mb3.5/3, mbtmp3.8/6, Error ellipse: s-maj=25.7km s-min=14.4km az=123.0*
ISC 12 07:06:39.0±0.9,**1˚.88S**±0˚.07×**128˚.87E**±0˚.05**, h24**km**, n13,** σ1§**18/15, mb3.7/3, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRAI	**Karang Ratu**	**1.50**	**199**	P	**Pb**	**07 07 06.7**	**+0.5**
NLAI	**Namlea**	**2.23**	**233**	P	**Pn**	**07 07 16.0**	**+1.6**
SIJI	**Sorong**	**2.59**	**67**	P	**Pn**	**07 07 20.9**	**+1.4**
	111nm,0.3s,baz=98,slow=6.2,SNR=223						
SIJI				S	**Sn**	**07 07 49.9**	**-0.4**
	587nm,0.3s,baz=175,slow=22,SNR=65						
SIJI	**Sorong**	**2.59**	**67**	P	**Pn**	**07 07 20.2**	**+0.7**
SIJI				S	**Sn**	**07 07 50.0**	**-0.4**
SANI	**Sanana**	**2.89**	**267**	P	**Pn**	**07 07 23.5**	**-0.1**
SANI				S	**Pn**	**07 07 23.4**	**-0.1**
FAKI	**Fak Fak**	**3.53**	**107**	P	**Pn**	**07 07 32.7**	**+0.4**
GAMI	**Galela, Maluku**	**3.85**	**344**	P	**Pn**	**07 07 37.3**	**+0.5**
KAPI	**Kappang**	**9.62**	**251**	P	Pn	07 09 02.5	+6.4
	50nm,0.7s,baz=89,slow=5.7,SNR=26						
FITZ	**Fitzroy Crossi**	**16.42**	**191**	P	**Pn**	**07 10 28.7**	**+0.7**
	2.2nm,0.7s,baz=42,slow=12,SNR=1.8						
WRA	**Warramunga Ar**	**18.73**	**164**	P	**P**	**07 10 53.2**	**-2.9**
	0.3nm,0.4s,baz=347,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**22.20**	**168**	P	**P**	**07 11 32.7**	**-1.1**
	2.0nm,0.7s,baz=347,slow=11,SNR=26						
	2.0nm,0.7s						
KSRS	**Korea Array**	**39.15**	**359**	P	**P**	**07 14 05.4**	**+0.6**
	0.9nm,0.7s,baz=190,slow=11,SNR=4.2						
	0.9nm,0.7s						
MJAR	**Matsushiro Arr**	**39.20**	**12**	P	**P**	**07 14 05.2**	**-0.2**
	1.6nm,0.7s,baz=189,slow=9.0,SNR=5.2						
	1.6nm,0.7s						

NEIC ***12*** *07:11:50.0±1.6, 16˚.12S±0˚.06×172˚.7W±0˚.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=18.2km s-min=10.8km az=97.0*
IDC ***12*** *07:11:50.2±0.7, 16˚.06S×173˚.09W, h0km, mb4.3/13, mbtmp4.2/14, ML5.0/1, MS3.7/15, Error ellipse: s-maj=27.8km s-min=16.8km az=140.0*
ISC 12 07:11:49.8±0.4,**16˚.18S**±0˚.05×**172˚.77W**±0˚.06**, h10**km**, n71,** σ1§**85/60, mb4.3/18, MS3.8/12, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**23**	Pn	**Pn**	**07 12 28.7**	**-1.4**
	14nm,0.3s,baz=197,slow=2.7,SNR=15						
AFI				Sn	**Sn**	**07 12 56.9**	**-3.3**
	68nm,0.3s,baz=39,slow=20,SNR=9.2						
AFI				LR	LR	07 13 28.1	
	comp=Z,517nm,21.4s,baz=262,slow=40						
AFI	**Afiamalu**	**2.46**	**23**		**Pn**	**07 12 28.6**	**-1.4**
AFI				Sn	**Sn**	**07 12 54.8**	**-5.4**
NIUE	**Niue**	**3.95**	**137**		**Pn**	**07 12 50.0**	**-0.6**
NIUE				Sn	**Sn**	**07 13 29.8**	**-7.3**
MSVF	**Nonsavu**	**8.92**	**259**	Pn	**Pn**	**07 13 55.3**	**-3.6**
	0.6nm,0.3s,baz=322,slow=23,SNR=2.1						
MSVF				LR	LR	07 16 59.8	
	comp=Z,947nm,18.3s,baz=107,slow=36						
	1.7nm,0.3s						
RAR	**Rarotonga**	**13.29**	**114**	Pn	**Pn**	**07 14 57.8**	**-0.9**
	3.3nm,0.3s,baz=295,slow=6.1,SNR=5.8						
RAR				LR	LR	07 18 57.5	
	comp=Z,242nm,20.6s,baz=278,slow=31						
RAR	**Rarotonga**	**13.29**	**114**		**Pn**	**07 14 58.5**	**-0.2**
RAO	**Raoul Island**	**13.84**	**199**	Pn	**Pn**	**07 15 06.2**	**0.0**
MARNC	**Mare, Loyalty**	**18.91**	**251**	P	**Pn**	**07 16 11.8**	**+0.4**
DZM	**Mont Dzumac**	**20.48**	**250**	P	**P**	**07 16 26.9**	**-1.2**
	7.1nm,0.9s,baz=100,slow=23,SNR=4.3						
DZM				LR	LR	07 22 57.3	
	comp=Z,365nm,20.6s,baz=48,slow=33						
	7.1nm,0.9s						
PPT	**Papeete**	**22.24**	**97**	LR	LR	07 23 31.6	
	comp=Z,82nm,19.2s,baz=296,slow=31						
PPT2	**Papeete2**	**22.24**	**97**	*e*S	S	07 20 38.5	-14
	74nm,26.8s						
PPT2				*e*LR	LR	07 21 57.8	
	253nm,25.2s						
PPT2				*e*LR	LR	07 22 03.5	
	165nm,26.2s						
TBI	**Tubuai**	**23.05**	**112**	*e*S	S	07 20 53.4	-13
	707nm,28.2s						
TBI				*e*LR	LR	07 22 24.5	
	1µm,26.2s						
HNR	**Honiara**	**27.41**	**281**	LR	LR	07 26 49.3	
	comp=Z,22nm,20.1s,baz=222,slow=33						
EIDS	**Eidsvold**	**34.92**	**249**	P	**P**	**07 18 41.5**	**-0.4**
ARMA	**Armidale**	**35.47**	**240**	P	**P**	**07 18 47.2**	**+0.4**
ARMA				IAmb	IAmb	07 18 52.0	
	comp=Z,3.5nm,0.8s						
RABL	**Rabaul**	**36.44**	**285**	P	**P**	**07 18 54.7**	**-0.5**
CTA	**Charters Tower**	**39.06**	**258**	LR	LR	07 33 25.5	
	comp=Z,190nm,18.8s,baz=242,slow=33						
H11N3	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	08 02 51.9	
	baz=151						
H11N1	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	08 03 11.1	
	baz=151						
H11N2	**WAKE ISLAND Hy**	**40.91**	**330**	T	T	08 03 02.8	
	baz=151						
STKA	**Stephens Creek**	**44.18**	**241**	P	**P**	**07 19 58.3**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=67,slow=11,SNR=4.8						
	comp=Z,3.1nm,0.7s						
BBOO	**Buckleboo**	**48.95**	**240**		**P**	**07 20 37.8**	**+1.2**
WRA	**Warramunga Arr**	**50.26**	**257**	P	**P**	**07 20 45.8**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=91,slow=7.1,SNR=5.6						
	comp=Z,2.2nm,0.7s						
AS31	**Alice Springs**	**50.45**	**253**		**P**	**07 20 47.8**	**-0.3**
AS31				IAmb	IAmb	07 20 50.5	
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**50.45**	**253**	P	**P**	**07 20 48.0**	**-0.2**
	comp=Z,6.0nm,0.6s,baz=86,slow=8.4,SNR=32						
ASAR				LR	LR	07 41 17.0	
	comp=Z,174nm,19.1s,baz=324,slow=35						
	comp=Z,6.0nm,0.6s						
ASAR	**Alice Springs**	**50.45**	**253**	P	**P**	**07 20 47.0**	**-1.2**
FORT	**Forrest**	**55.61**	**244**	P	**P**	**07 21 26.1**	**0.0**
FORT				IAmb	IAmb	07 21 48.4	
	comp=Z,3.9nm,0.8s						
FAKI	**Fak Fak**	**55.62**	**278**	P	**P**	**07 21 25.4**	**-1.0**
SIJI	**Sorong**	**57.18**	**280**	P	**P**	**07 21 38.2**	**+0.6**
	comp=Z,9.0nm,0.8s,baz=73,slow=5.9,SNR=5.1						
	comp=Z,9.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**58.64**	**258**	P	**P**	**07 21 48.5**	**+0.8**

SBA	**Scott Base**	**62.52**	**185**	P		**P**	**07 22 13.2**	**-0.1**
SBA				IAmb		IAmb	07 22 19.2	
	comp=Z,1.5nm,0.8s							
VNDA	**Vanda**	**62.66**	**186**	P		**P**	**07 22 17.7**	**+3.5**
	comp=Z,2.0nm,1.0s,baz=336,slow=6.6,SNR=5.4							
	comp=Z,2.0nm,1.0s							
VNDA	**Vanda**	**62.66**	**186**	PKIKP		**P**	**07 22 17.7**	**+3.5**
MBWA	**Marble Bar**	**63.73**	**254**	P		**P**	**07 22 20.9**	**-1.4**
MBWA				IAmb		IAmb	07 22 43.9	
	comp=Z,4.7nm,0.8s							
SHEM	**Shemya Is, Ala**	**69.56**	**352**	LR		LR	07 48 25.4	
	comp=Z,67nm,19.2s,baz=123,slow=32							
MJAR	**Matsushiro Arr**	**69.92**	**320**	LR		LR	07 48 10.9	
	comp=Z,54nm,19.8s,baz=231,slow=31							
LPIG	**La Paz**	**72.94**	**58**	LR		LR	07 47 51.9	
	comp=Z,43nm,18.4s,baz=212,slow=30							
PFO	**Pinyon Flats O**	**73.01**	**47**	LR		LR	07 49 30.2	
	comp=Z,38nm,18.1s,baz=265,slow=31							
PETK	**Petropavlovsk-**	**73.56**	**342**	P		**P**	**07 23 24.6**	**+1.7**
	comp=Z,4.1nm,0.8s,baz=135,slow=7.1,SNR=5.5							
	comp=Z,4.1nm,0.8s							
PETK	**Petropavlovsk-**	**73.56**	**342**	P		**P**	**07 23 24.0**	**+1.2**
KKM	**Kota Kinabalu**	**73.62**	**281**	P		**P**	**07 23 24.0**	**-0.2**
KKM				IAmb		IAmb	07 23 24.4	
	comp=Z,4.2nm,0.7s							
QSPA	**South Pole Qui**	**73.87**	**180**	P		**P**	**07 23 27.5**	**+2.7**
	comp=Z,3.7nm,0.9s,baz=4.8,slow=1.5,SNR=7.5							
	comp=Z,3.7nm,0.9s							
QSPA	**South Pole Qui**	**73.87**	**180**	P		**P**	**07 23 26.4**	**+1.6**
NVAR	**Mina Array Bea**	**74.51**	**42**	P		**P**	**07 23 31.8**	**+2.8**
	comp=Z,0.8nm,0.8s,baz=242,slow=10,SNR=5.4							
	comp=Z,0.8nm,0.8s							
ANMO	**Albuquerque**	**80.84**	**50**	P		**P**	**07 24 07.9**	**+3.4**
	comp=Z,0.6nm,0.6s,baz=204,slow=7.3,SNR=4.0							
ANMO				LR		LR	07 54 07.2	
	comp=Z,42nm,18.8s,baz=326,slow=31							
	comp=Z,0.6nm,0.6s							
PDAR	**Pinedale Array**	**82.44**	**42**	P		**P**	**07 24 13.8**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=222,slow=2.7,SNR=11							
	comp=Z,1.1nm,0.8s							
PDAR	**Pinedale Array**	**82.44**	**42**	P		**P**	**07 24 13.4**	**+0.6**
ILAR	**Eielson Array**	**83.09**	**11**	P		**P**	**07 24 15.3**	**0.0**
	comp=Z,1.0nm,0.9s,baz=207,slow=4.8,SNR=7.5							
	comp=Z,1.0nm,0.9s							
CMIG	**Matias Romero**	**83.58**	**70**	LR		LR	07 55 20.8	
	comp=Z,39nm,18.1s,baz=282,slow=31							
CMAR	**Chiang Mai Arr**	**93.43**	**288**	P		**P**	**07 25 05.6**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=86,slow=2.9,SNR=5.2							
CMAR				LR		LR	08 05 04.3	
	comp=Z,62nm,19.4s,baz=145,slow=34							
	comp=Z,1.5nm,0.3s							
MOX	**Moxa**	**145.44**	**355**	*e*L		L	08 38 16.7	
	comp=Z,34nm,20.3s							
MORC	**Moravsky Berou**	**145.46**	**348**	*e*PKP		**PKiKP**	**07 31 30.5**	**-1.7**
VRAC	**Vranov**	**146.09**	**349**	*e*PKP		**PKiKP**	**07 31 32.5**	**-1.0**
KRUC	**Moravsky**	**146.37**	**349**	*e*PKP		**PKiKP**	**07 31 33.1**	**-0.9**
GRF	**Grafenberg Arr**	**146.42**	**355**	*e*PKPdf		**PKiKP**	**07 31 34.8**	**+0.6**
	baz=20,slow=3.7							
GRF				*e*L		L	08 37 48.2	
	comp=Z,29nm,21.4s							
GERES	**GERESS Array B**	**147.00**	**352**	PKPbc		**PKPab**	**07 31 34.8**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=0.0,slow=1.9,SNR=8.9							
BRTR	**Keskin Array B**	**147.14**	**321**	PKPbc		**PKiKP**	**07 31 36.5**	**+0.3**
	comp=Z,0.0nm,0.9s,baz=90,slow=1.1,SNR=13							
CONA	**Conrad Observa**	**147.55**	**349**	*e*PKP		**PKiKP**	**07 31 37.3**	**+0.7**
	comp=Z,9.4nm,1.5s							
RONA	**Rosalia, Austr**	**147.69**	**349**	*e*PKP		**PKPab**	**07 31 37.9**	**+0.8**
	comp=Z,1.9nm,0.6s							
MOA	**Molln**	**147.89**	**351**	*e*PKP		**PKPab**	**07 31 37.6**	**-0.2**
	comp=Z,3.9nm,1.3s							
LESA	**Schwarzleotal**	**148.52**	**353**	*e*PKiKP		**PKPab**	**07 31 41.0**	**+0.5**
	comp=Z,3.0nm,1.0s							
SESA	**Seetaler Alpe,**	**148.56**	**350**	*i* PKP		**PKiKP**	**07 31 38.9**	**0.0**
	comp=Z,2.1nm,1.1s							
WATA	**Walderalm**	**148.73**	**354**	*e*PKP		**PKPab**	**07 31 42.3**	**+1.0**
	comp=Z,4.5nm,1.2s							
MOTA	**Moosalm**	**148.76**	**355**	*e*PKiKP		**PKPab**	**07 31 40.9**	**-0.6**
	comp=Z,4.8nm,1.1s							
KBA	**Koelnbreinsper**	**148.78**	**352**	*e*PKP		**PKPdf**	**07 31 36.0**	**+1.9**
	comp=Z,3.7nm,1.0s							
WTTA	**Wattenberg**	**148.79**	**354**	*e*PKP		**PKiKP**	**07 31 39.8**	**+0.5**
	comp=Z,4.9nm,1.1s							
DAVA	**Damuels**	**148.91**	**357**	*e*PKP		**PKiKP**	**07 31 40.6**	**+1.0**
	comp=Z,6.7nm,1.4s							
FETA	**Feichten**	**149.11**	**355**	*e*PKP		**PKiKP**	**07 31 40.4**	**+0.4**
	comp=Z,2.4nm,1.0s							
OBKA	**Obir**	**149.15**	**350**	*e*PKiKP		**PKPab**	**07 31 43.0**	**0.0**
	comp=Z,8.2nm,1.2s							
MYKA	**Terra Mystica**	**149.18**	**351**	*e*PKP		**PKiKP**	**07 31 40.2**	**+0.1**
	comp=Z,7.5nm,1.5s							
ABTA	**Abfaltersbach**	**149.21**	**353**	*e*PKP		**PKiKP**	**07 31 40.8**	**+0.7**
	comp=Z,5.4nm,1.3s							

DJA ***12*** *07:13:01.7±1.0, 1˚N±3˚×12˚7E±˚, h15km±9km, M4.1/14, MLv4.1/14*
NEIC ***12*** *07:13:02.0±0.7, 0˚.62N±0˚.08×126˚.68E±0˚.04, h65km±6km, mb4.2/14, Error ellipse: s-maj=11.1km s-min=6.2km az=186.0*
IDC ***12*** *07:13:05.5±4.7, 0˚.58N×126˚.83E, h103km±46km, mb3.8/9, mbtmp4.1/11, MS3.6/1, Error ellipse: s-maj=41.5km s-min=14.6km az=82.0*
ISC 12 07:13:00.3±0.6,**0˚.62N**±0˚.06×**126˚.67E**±0˚.05**, h47**km**, n42,** σ1§**61/42, mb4.4/14, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.72**	**77**		**Pn**	**07 13 16.6**	**+2.5**
TNTI				Sn	**Sn**	**07 13 27.3**	**+3.1**
TNTI	**Ternate**	**0.72**	**77**	P	**Pn**	**07 13 15.9**	**+1.7**
GAMI	**Galela, Maluku**	**1.65**	**43**	P	**Pn**	**07 13 29.5**	**+2.6**
MNI	**Manado**	**2.00**	**294**	P	**Pn**	**07 13 34.8**	**+3.1**
SANI	**Sanana**	**2.73**	**194**	P	**Pn**	**07 13 43.3**	**+1.6**
SGSI	**Sangihe**	**3.26**	**340**	P	**Pn**	**07 13 52.2**	**+3.3**
GTOI	**Gorontalo**	**3.66**	**270**	P	Pn	07 14 01.7	+7.3
LUWI	**Luwuk**	**4.23**	**247**	Pn	**Pn**	**07 14 03.9**	**+1.7**
LUWI				Sn	**Sn**	**07 14 52.4**	**+2.0**
KRAI	**Karang Ratu**	**4.27**	**156**	P	Pn	07 14 08.9	+6.0
SIJI	**Sorong**	**4.83**	**108**	P	**Pn**	**07 14 14.5**	**+4.0**
	4.4nm,0.5s,baz=248,slow=23,SNR=2.0						
TOLI2	**Tolitoli**	**5.91**	**275**	Pn	**Pn**	**07 14 26.8**	**+1.5**
FAKI	**Fak Fak**	**6.59**	**122**	Pn	**Pn**	**07 14 36.5**	**+1.7**
KAPI	**Kappang**	**8.89**	**231**	Pn	**Pn**	**07 15 08.2**	**+2.0**
MMRI	**Maumere**	**10.20**	**206**	Pn	**Pn**	**07 15 24.8**	**+0.7**
MTN	**Manton Dam**	**14.09**	**162**	Pn	**Pn**	**07 16 17.9**	**+0.7**
KNRA	**Kununurra**	**16.32**	**173**	Pn	**Pn**	**07 16 46.6**	**+0.3**
KNRA				IAmb	IAmb	07 16 50.2	
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.62**	**183**	P	**P**	**07 17 14.1**	**0.0**
	comp=Z,1.8nm,0.7s,baz=18,slow=13,SNR=1.4						
FITZ	**Fitzroy Crossi**	**18.62**	**183**	P	**P**	**07 17 13.8**	**-0.3**
WB0	**Warramunga Arr**	**21.63**	**160**		**P**	**07 17 46.8**	**+0.1**
WRAB	**Tennant Creek**	**21.77**	**160**	P	**P**	**07 17 48.1**	**-0.1**
WRA	**Warramunga Arr**	**21.77**	**160**	P	**P**	**07 17 48.0**	**-0.2**
	comp=Z,8.3nm,0.4s,baz=336,slow=9.9,SNR=40						
	comp=Z,8.3nm,0.4s						
WRA	**Warramunga Arr**	**21.77**	**160**	P	**P**	**07 17 47.0**	**-1.3**
WR8	**Warramunga Arr**	**21.84**	**160**		**P**	**07 17 48.6**	**-0.3**
WR8				IAmb	IAmb	07 17 50.4	
	comp=Z,7.3nm,0.7s						
MBWA	**Marble Bar**	**22.68**	**197**	P	**P**	**07 17 57.5**	**-0.4**
MBWA				IAmb	IAmb	07 18 04.3	
	comp=Z,21nm,1.1s						
TPUB	**Ta-pu**	**23.30**	**346**	P	**P**	**07 18 03.2**	**-1.0**
TPUB				IAmb	IAmb	07 18 14.8	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**25.14**	**164**		**P**	**07 18 21.0**	**-0.2**
AS31				IAmb	IAmb	07 18 24.2	
	comp=Z,3.6nm,0.6s						
ASAR	**Alice Springs**	**25.14**	**164**	P	**P**	**07 18 20.9**	**-0.4**
	comp=Z,6.3nm,0.6s,baz=346,slow=12,SNR=74						
	comp=Z,6.3nm,0.6s						
ASAR	**Alice Springs**	**25.14**	**164**	P	**P**	**07 18 20.7**	**-0.5**
STKA	**Stephens Creek**	**35.27**	**158**	P	**P**	**07 19 49.3**	**-1.4**
	comp=Z,2.9nm,0.5s,baz=338,slow=9.5,SNR=6.0						
STKA				LR	LR	07 35 27.2	
	comp=Z,94nm,18.0s,baz=359,slow=38						
	comp=Z,2.9nm,0.5s						
MJAR	**Matsushiro Arr**	**37.31**	**15**	P	**P**	**07 20 06.3**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=187,slow=9.0,SNR=5.0						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**37.31**	**15**	P	**P**	**07 20 06.4**	**-1.7**
MJAR				IAmb	IAmb	07 20 22.0	
	comp=Z,3.3nm,1.2s						
MAJO	**Matsushiro**	**37.31**	**15**	P	**P**	**07 20 07.3**	**-0.8**
MAJO				IAmb	IAmb	07 20 43.3	

	comp=Z,5.6nm,1.0s							
MGBR	**Mount Gambier**	**40.26**	**163**	P		**P**	**07 20 31.6**	**-1.1**
PETK	**Petropavlovsk-**	**58.33**	**21**	P		**P**	**07 22 50.5**	**0.0**
	comp=Z,1.8nm,0.5s,baz=189,slow=2.8,SNR=5.0							
	comp=Z,1.8nm,0.5s							
MKAR	**Makanchi Array**	**60.08**	**326**	P		**P**	**07 23 03.3**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=119,slow=8.1,SNR=21							
	comp=Z,1.3nm,0.4s							
MKAR	**Makanchi Array**	**60.08**	**326**	P		**P**	**07 23 03.1**	**+0.4**
KURBB	**Kurchatov Arra**	**64.32**	**328**	P		**P**	**07 23 31.3**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=128,slow=6.2,SNR=11							
	comp=Z,0.7nm,0.4s							
KK31	**Karatay Array**	**65.47**	**318**			**P**	**07 23 37.5**	**-1.2**
KKAR	**Karatay Array**	**65.47**	**318**			**P**	**07 23 37.6**	**-1.1**
BVAR	**Borovoye Array**	**69.89**	**328**	P		**P**	**07 24 04.9**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=114,slow=6.6,SNR=2.1							
	comp=Z,0.4nm,0.4s							
VNDA	**Vanda**	**80.36**	**173**	P		**P**	**07 25 05.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=297,slow=6.1,SNR=2.3							
	comp=Z,0.3nm,0.3s							
VNDA	**Vanda**	**80.36**	**173**	P		**P**	**07 25 05.8**	**-0.4**

IDC 12 07:18:05.0±1.3,**27˚.15N**×**140˚.80E, h489**km±50km**, mb2.9/5, mbtmp3.8/5, Error ellipse: s-maj=236.0km s-min=17.0km az=87.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.24**	**92**	P	P	07 19 07.2	+1.4
	24nm,0.3s,baz=332,slow=22,SNR=25						
JCJ				S	S	07 19 55.1	-0.2
	33nm,0.3s,baz=256,slow=24,SNR=5.5						
WRA	**Warramunga Arr**	**47.23**	**188**	P	P	07 25 53.6	+0.5
	0.3nm,0.2s,baz=6.8,slow=7.7,SNR=8.4						
	0.3nm,0.2s						
ASAR	**Alice Springs**	**50.95**	**188**	P	P	07 26 20.8	0.0
	0.2nm,0.8s,baz=2.0,slow=5.1,SNR=5.3						
	0.2nm,0.8s						
FINES	**FINESS Array B**	**77.35**	**333**	P	P	07 29 08.7	+0.3
	0.6nm,0.4s,baz=60,slow=4.6,SNR=8.8						
	0.6nm,0.4s						
HFS	**Hagfors**	**82.88**	**336**	P	P	07 29 36.2	-1.2
	2.5nm,0.8s,baz=96,slow=4.3,SNR=6.0						
	2.5nm,0.8s						
NOA	**NORSAR Array B**	**83.10**	**338**	P	P	07 29 38.2	-0.4
	0.2nm,0.4s,baz=50,slow=4.2,SNR=1.7						
	0.2nm,0.4s						

TEH ***12*** *07:19:55.6, 35˚.62N×52˚.62E, h8km±15km, ML4.0, Presumed earthquake*
THR ***12*** *07:19:56.9±0.0, 35˚.63N×52˚.62E, h10km±4km, ML4.0, Presumed earthquake*
IDC ***12*** *07:19:56.5±1.6, 35˚.57N×52˚.75E, h0km, mb3.9/10, mbtmp3.9/14, ML3.5/4, MS3.4/9, Error ellipse: s-maj=28.9km s-min=16.8km az=8.0*
NEIC ***12*** *07:19:59.0±2.1, 35˚.7N±0˚.2×52˚.83E±0˚.03, h10km±2km, mb4.0/10, Error ellipse: s-maj=25.6km s-min=4.5km az=182.0*
ISC 12 07:19:57.0±1.0,**35˚.65N**±0˚.03×**52˚.63E**±0˚.02**, h6**km±7km**, n86,** σ2§**28/88, mb4.0/14, MS3.5/4, 3C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IFIR	**Firoozkooh**	**0.10**	**93**	Pg	**Pg**	**07 19 58.0**	**-1.3**
ILAS	**Lasjerd**	**0.38**	**135**	Pg	**Pg**	**07 20 03.4**	**-1.0**
ILAS				Sg	**Sg**	**07 20 09.2**	**-0.2**
IALA	**Alasht**	**0.46**	**18**	Pg	**Pg**	**07 20 05.4**	**-0.5**
IALA				Sg	**Sg**	**07 20 13.0**	**+1.1**
IDMV	**Damavand**	**0.49**	**262**	Pg	**Pg**	**07 20 05.2**	**-1.4**
DAMV	**Damavand**	**0.54**	**268**	*e*Pg	**Pg**	**07 20 06.0**	**-1.4**
DAMV				*e*Sg	**Sg**	**07 20 14.4**	**-0.1**
DAMV				IAML		07 20 30.0	
	comp=Z,4µm,1.0s						
IPRN	**Peran**	**0.64**	**338**	Pg	**Pg**	**07 20 08.7**	**-0.7**
IPRN				Sg	**Sg**	**07 20

KBZ Khabaz 11.01 320 Pn Pn 07 22 39.7 +4.7
comp=Z,0.1nm,0.3s,baz=216,slow=13,SNR=1.3
KBZ Sn Sn 07 24 37.5 -0.9
comp=Z,0.2nm,0.3s,baz=93,slow=20,SNR=1.5
comp=Z,0.4nm,0.3s
ARPR Arapgir-MALATY 11.88 291 Pn Pn 07 22 49.7 +2.6
SHAA Shahritus 12.60 77 Pn Pn 07 22 55.5 -1.3
ASF Jabal al Asfar 13.52 260 LR LR 07 29 21.8
comp=Z,160nm,19.1s,baz=26,slow=42
MMAI Mount Meron Ar 14.48 265 LR LR 07 29 49.1
comp=Z,132nm,19.4s,baz=66,slow=41
AB31 Akbulak array 14.62 19 ⇑Pn Pn 07 23 22.5 -1.7
comp=Z,1.9nm,0.7s,baz=207,slow=12,SNR=16
AB31 ⇑Sn Sn 07 26 00.7 -5.9
comp=Z,3.3nm,0.7s,baz=207,slow=23,SNR=7.6
AB31 Akbulak array 14.62 19 Pn Pn 07 23 22.6 -1.7
ABKAR Akbulak array 14.62 19 Pn Pn 07 23 22.4 -1.9
AKTO Aktyubinsk 15.29 13 Pn Pn 07 23 30.0 -3.3
comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=4.7
AKTO Sn Sn 07 26 14.6 -8.2
comp=Z,0.4nm,0.3s,baz=32,slow=17,SNR=4.7
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 15.29 13 ⇑Pn Pn 07 23 29.2 -4.1
comp=Z,2.6nm,0.8s
AKTO ⇓Sn Sn 07 26 12.8 -10
comp=Z,3.7nm,1.1s
BRTR Keskin Array B 15.57 291 Pn P 07 23 40.3 -1.3
comp=Z,0.2nm,0.3s,baz=121,slow=14,SNR=1.8
BRTR Sn Sn 07 26 31.1 +1.0
comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=6.5
comp=Z,0.3nm,0.4s
KK31 Karatay Array 15.69 56 Pn Pn 07 23 38.6 +0.1
KK31 IAmb IAmb 07 24 13.3
comp=Z,2.1nm,0.9s
KKAR Karatay Array 15.69 56 Pn Pn 07 23 38.5 0.0
EIL Elat 16.03 253 LR LR 07 31 03.0
comp=Z,93nm,19.7s,baz=92,slow=41
NIL Nilore 17.09 91 Pn Pn 07 23 54.8 -1.7
NIL IAmb IAmb 07 24 23.7
comp=Z,7.0nm,0.8s
AAK Ala-Archa 18.31 61 LR LR 07 32 15.8
comp=Z,102nm,18.9s,baz=220,slow=40
KSH2 Kashi 18.54 72 P Pn 07 24 19.1 +4.5
KSH2 pmax pmax
comp=Z,3.0nm,0.6s
ARTI Arti 21.11 9 P P 07 24 43.1 +0.9
comp=Z,5.9nm,0.5s,baz=189,slow=7.9,SNR=9.5
comp=Z,5.9nm,0.5s
ARTI Arti 21.11 9 P P 07 24 42.8 +0.6
BORK Borovoye 21.41 30 P P 07 24 45.2 -0.2
BORK IAmb IAmb 07 24 57.7
comp=Z,4.5nm,0.5s
BVAR Borovoye Array 21.42 30 P P 07 24 46.5 +0.9
comp=Z,3.9nm,0.8s,baz=211,slow=10,SNR=12
comp=Z,3.9nm,0.8s
WUS Wushi 21.51 67 P P 07 24 46.7 -0.1
WUS IAmb IAmb 07 25 01.3
comp=Z,6.7nm,1.1s
OBN Obninsk 22.40 335 P P 07 24 57.8 +1.9
AKASG Malin Array Be 22.62 319 P P 07 25 00.5 +2.1
comp=Z,0.7nm,0.6s,baz=116,slow=8.9,SNR=6.3
comp=Z,0.7nm,0.6s
AKBB Malin Array Si 22.62 319 P 07 24 59.7 +1.4
AKBB IAmb IAmb 07 25 19.6
comp=Z,7.7nm,1.2s
KIEV Kiev 22.62 319 P P 07 24 59.4 +1.0
KIEV IAmb IAmb 07 25 19.6
comp=Z,7.5nm,1.2s
KIRV Kirov 23.05 356 P P 07 25 03.9 +1.2
comp=Z,12nm,0.7s,baz=168,slow=5.6,SNR=4.5
comp=Z,12nm,0.7s
BURAR Bucovina Array 23.59 309 P P 07 25 10.2 +1.7
MKAR Makanchi Array 24.79 54 P P 07 25 19.9 +0.3
comp=Z,0.7nm,0.6s,baz=249,slow=7.3,SNR=5.7
MKAR LR LR 07 35 36.8
comp=Z,65nm,19.1s,baz=169,slow=38
comp=Z,0.7nm,0.6s
KEK Kerkira 26.22 289 P P 07 25 35.1 +2.5
ZALV Zalesovo Beam 28.90 41 P P 07 25 57.0 +0.5
comp=Z,0.4nm,0.4s,baz=257,slow=9.7,SNR=1.4
comp=Z,0.4nm,0.4s
GERES GERESS Array B 31.34 307 P P 07 26 19.3 +1.1
comp=Z,1.2nm,0.8s,baz=97,slow=8.2,SNR=7.7
comp=Z,1.2nm,0.8s
GERES GERESS Array B 31.34 307 P P 07 26 18.2 0.0
HFS Hagfors 34.98 327 P P 07 26 50.9 +1.2
comp=Z,1.9nm,0.8s,baz=93,slow=5.8,SNR=1.9
comp=Z,1.9nm,0.8s
EKA Eskdalemuir Ar 42.45 316 P P 07 27 54.4 +1.9
comp=Z,1.0nm,0.6s,baz=104,slow=6.5,SNR=5.5
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 44.23 100 P P 07 28 06.7 -0.6
comp=Z,2.2nm,0.3s,baz=302,slow=6.5,SNR=4.1
CMAR LR LR 07 46 59.6
comp=Z,14nm,21.5s,baz=180,slow=37
comp=Z,2.2nm,0.3s
KLR Kul'dur 57.39 50 LR LR 07 57 03.7
comp=Z,90nm,18.5s,baz=233,slow=39
SUR Sutherland 73.96 208 LR LR 08 05 38.6
comp=Z,79nm,21.7s,baz=133,slow=37

*IDC **12** 07:26:32.2±1.6,57.°13N×154.°45W,h0km,mb3.3/4, mbtmp3.4/5,ML3.5/1,MS3.4/1,Error ellipse: s-maj=35.3km s-min=17.1km az=154.0*
*NEIC **12** 07:26:38.1±1.1,57.°13N±0.°03×154.°19W±0.°02,h35km±2km, ML3.2/84,ML3.0(AEIC),Error ellipse: s-maj=4.8km s-min=3.1km az=182.0*
*AEIC **12** 07:26:38.7±0.9,57.°13N±0.°04×154.°22W±0.°07,h43km±9km, Error ellipse: s-maj=5.8km s-min=4.8km az=214.0*
ISC 12 07:26:38.1±0.9,57.°13N±0.°04×154.°15W±0.°03, h42km±12km,n99,σ0.96/111,mb3.3/3,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.48**	**78**		**Pn**	**07 26 48.5**	**0.0**
OHAK					**Sn**	**07 26 56.4**	**+0.4**
OHAK				IAML		07 26 59.1	
	comp=E,2µm,0.3s						
SII	**Sitkinak Islan**	**0.57**	**182**		**Pn**	**07 26 49.2**	**-0.7**
SII					**Sn**	**07 26 58.5**	**+0.2**
KDAK	**Kodiak Island**	**1.07**	**52**	Pg	**Pn**	**07 26 56.6**	**0.0**
	comp=E,41nm,0.3s,baz=212,slow=3.3,SNR=1125						
KDAK				Lg	Lg	07 27 11.4	
	comp=E,22nm,0.3s,baz=89,slow=22,SNR=15						
KDAK				LR	LR	07 27 31.5	
	comp=E,28nm,18.8s,baz=229,slow=49						
KDAK	**Kodiak Island**	**1.07**	**52**		**Pn**	**07 26 56.7**	**+0.2**
KDAK	**Kodiak Island**	**1.07**	**52**		**Sn**	**07 27 11.0**	**+0.8**
CAHL	**Cahill**	**1.11**	**327**		**Pn**	**07 26 56.7**	**-0.6**
MGLS	**Mageik Landsli**	**1.15**	**332**		**Pn**	**07 26 57.0**	**-0.6**
MGLS					**Sn**	**07 27 11.8**	**-0.3**
KJL	**Kejulik**	**1.20**	**321**		**Pn**	**07 26 57.9**	**-0.6**
ACHA	**Angle Creek He**	**1.25**	**330**		**Pn**	**07 26 58.6**	**-0.5**
ACHA					**Sn**	**07 27 14.6**	**-0.3**
KAKN	**Katmai Knife C**	**1.27**	**338**		**Pn**	**07 26 58.9**	**-0.5**
KAKN					**Sn**	**07 27 15.6**	**+0.3**
ANCK	**Angle Creek**	**1.29**	**327**		**Pn**	**07 26 59.0**	**-0.7**
KABU	**Katmai Buttres**	**1.30**	**332**		**Pn**	**07 26 59.5**	**-0.2**
R17L	**Mt. Peulik Vol**	**1.30**	**294**		**Pn**	**07 26 59.1**	**-0.7**
R17L					**Sn**	**07 27 15.8**	**-0.1**
KAWH	**Katmai**	**1.30**	**345**		**Pn**	**07 26 59.5**	**-0.3**
KAWH					**Sn**	**07 27 16.6**	**+0.5**
KAHG	**Katmai Hook Gl**	**1.39**	**351**		**Pn**	**07 27 01.3**	**+0.4**
KAHG					**Sn**	**07 27 19.3**	**+1.2**
KARR	**Katmai Rainbow**	**1.40**	**348**		**Pn**	**07 27 01.5**	**+0.3**
Q17K	**Contact Creek**	**1.47**	**321**		**Pn**	**07 27 01.8**	**-0.4**
Q17K					**Sn**	**07 27 21.4**	**+1.1**
PLK1	**Peulik 1**	**1.49**	**298**		**Pn**	**07 27 01.9**	**-0.4**
PLBL	**Peulik Blue Cr**	**1.55**	**293**		**Pn**	**07 27 03.3**	**0.0**
Q18K	**Katmai Hardscr**	**1.59**	**344**		**Pn**	**07 27 03.7**	**-0.1**
Q18K					**Sn**	**07 27 24.1**	**+0.9**
PLK5	**Peulik 5**	**1.71**	**302**		**Pn**	**07 27 04.7**	**-0.6**
PLK5					**Sn**	**07 27 26.0**	**+0.1**
Q19K	**Cape Douglas,**	**1.82**	**8**		**Pn**	**07 27 07.8**	**+0.9**
Q19K				IAML		07 27 37.4	
	comp=N,322nm,0.7s						
ANNE	**Aniakchak Nort**	**2.15**	**266**		**Pn**	**07 27 10.5**	**-0.9**
ANPB	**Aniakchak Plen**	**2.29**	**263**		**Pn**	**07 27 12.5**	**-0.8**
P18K	**Big Mountain,**	**2.34**	**346**		**Pn**	**07 27 13.3**	**-0.7**
P17K	**Kvichak River**	**2.40**	**331**		**Pn**	**07 27 14.1**	**-0.7**
P19K	**Oil Pt**	**2.58**	**10**		**Pn**	**07 27 17.9**	**+0.6**
O18K	**Koktuh Hills**	**2.79**	**349**		**Pn**	**07 27 20.3**	**+0.1**
O18K				IAML		07 28 01.4	
	comp=E,70nm,0.8s						
O18K				IAML		07 28 02.9	
	comp=N,56nm,0.7s						
P16K	**Nushagak River**	**2.79**	**315**		**Pn**	**07 27 19.2**	**-0.9**
P16K				IAML		07 28 10.0	
	comp=N,113nm,0.7s						
CNPM	**China Poot**	**2.85**	**31**		**Pn**	**07 27 21.5**	**+0.4**
CNPM				IAML		07 28 08.8	
	comp=N,92nm,0.7s						
CNPM				IAML		07 28 09.1	
	comp=E,111nm,0.7s						
HOM	**Homer**	**2.86**	**26**	Pn	**Pn**	**07 27 22.0**	**+0.9**
ILS	**Iliamna Low So**	**2.89**	**11**		**Pn**	**07 27 22.0**	**+0.4**
ILSW	**Iliamna Southw**	**2.91**	**10**		**Pn**	**07 27 22.3**	**+0.4**
IVE	**Iliamna Volcan**	**2.96**	**11**		**Pn**	**07 27 23.1**	**+0.5**
O20K	**Slope Mountain**	**3.07**	**14**		**Pn**	**07 27 24.8**	**+0.8**
O17K	**Koliganek Bris**	**3.07**	**331**		**Pn**	**07 27 23.3**	**-0.7**
O19K	**Port Alsworth**	**3.08**	**358**	Pn	**Pn**	**07 27 24.5**	**+0.4**
VNFG	**Fog Glacier, M**	**3.10**	**256**	Pn	**Pn**	**07 27 22.8**	**-1.7**
BRLK	**Bradley Lake**	**3.15**	**32**	Pn	**Pn**	**07 27 24.7**	**-0.5**
BRLK				IAML		07 28 16.2	
	comp=E,74nm,0.2s						
BRLK				IAML		07 28 17.0	
	comp=N,61nm,0.5s						
O16K	**Kokwok River B**	**3.23**	**322**	Pn	**Pn**	**07 27 25.2**	**-0.9**
O16K				IAML		07 28 21.4	
	comp=N,49nm,0.7s						
RED	**Redoubt Volcan**	**3.38**	**12**	Pn	**Pn**	**07 27 28.6**	**+0.3**
RDSO	**Redoubt South**	**3.41**	**12**		**Pn**	**07 27 29.2**	**+0.3**
O15K	**Ungalikthiuk R**	**3.64**	**307**		**Pn**	**07 27 30.9**	**-0.9**
O15K				IAML		07 28 38.5	
	comp=E,31nm,0.9s						
N18K	**Kilae Creek**	**3.67**	**347**		**Pn**	**07 27 32.5**	**+0.2**
N18K				IAML		07 28 45.2	
	comp=E,27nm,1.1s						
N19K	**Bonanza Creek**	**3.70**	**357**	Pn	**Pn**	**07 27 33.3**	**+0.5**
N19K				IAML		07 28 35.2	
	comp=E,39nm,0.5s						
N17K	**Nushagak Hills**	**3.76**	**336**		**Pn**	**07 27 33.5**	**+0.1**
CNBA	**Chernabura Isl**	**3.83**	**235**	Pn	**Pn**	**07 27 32.7**	**-1.7**
CNBA				IAML		07 28 41.9	
	comp=N,30nm,0.8s						
CNBA				IAML		07 28 47.1	
	comp=E,28nm,0.5s						
SEW	**Seward**	**3.86**	**37**	Pn	**Pn**	**07 27 33.8**	**-1.0**
SEW				IAML		07 28 50.4	
	comp=N,22nm,0.9s						
SEW				IAML		07 28 55.5	
	comp=E,26nm,1.1s						
SLKM	**Skilak Lake**	**3.96**	**29**	Pn	**Pn**	**07 27 35.6**	**-0.6**
SLKM				IAML		07 28 22.2	
	comp=N,27nm,0.1s						
SLKM				IAML		07 28 45.2	
	comp=E,30nm,1.1s						
SPU	**Mount Spurr**	**4.21**	**14**	Pn	**Pn**	**07 27 40.1**	**+0.5**
O14K	**Tigyukauivet M**	**4.33**	**302**	Pn	**Pn**	**07 27 40.6**	**-0.6**
O14K				IAML		07 29 06.6	
	comp=N,20nm,0.9s						
O14K				IAML		07 29 08.7	
	comp=E,16nm,1.1s						
N15K	**Kwethluk River**	**4.35**	**317**		**Pn**	**07 27 41.5**	**-0.1**
N15K				IAML		07 28 58.1	
	comp=E,22nm,0.8s						
N15K				IAML		07 28 59.6	
	comp=N,27nm,0.7s						
STLK	**Strandline Lak**	**4.54**	**14**		**Pn**	**07 27 44.9**	**+0.7**
P23K	**Montague Islan**	**4.55**	**48**		**Pn**	**07 27 43.0**	**-1.3**
P23K				IAML		07 29 09.3	
	comp=N,17nm,1.1s						
P23K				IAML		07 29 17.0	
	comp=E,26nm,1.1s						
PS1A	**Pavlof South-1**	**4.57**	**251**		**Pn**	**07 27 43.7**	**-0.8**
RC01	**Rabbit Creek A**	**4.58**	**28**	Pn	**Pn**	**07 27 44.3**	**-0.4**
RC01				IAML		07 28 53.5	
	comp=N,17nm,0.4s						
RC01				IAML		07 29 02.6	
	comp=E,17nm,0.7s						
M17K	**Holitna River**	**4.61**	**340**		**Pn**	**07 27 45.1**	**0.0**
M16K	**Timber Creek**	**4.63**	**330**		**Pn**	**07 27 45.1**	**-0.2**
M16K				IAML		07 29 11.4	
	comp=N,19nm,1.0s						
M16K				IAML		07 29 16.1	
	comp=E,15nm,1.1s						
MID	**Middleton Isla**	**4.72**	**58**	Pn	**Pn**	**07 27 45.4**	**-1.2**
M20K	**Styx River**	**4.80**	**6**	Pn	**Pn**	**07 27 47.9**	**+0.1**
N14K	**Kuskokwak Cree**	**4.84**	**308**	Pn	**Pn**	**07 27 48.0**	**-0.3**
DTNA	**Dutton South F**	**4.95**	**250**		**Pn**	**07 27 48.4**	**-1.4**
SKT	**Skwentna**	**5.04**	**14**	Pn	**Pn**	**07 27 51.2**	**+0.1**
L19K	**White Mountain**	**5.08**	**356**		**Pn**	**07 27 52.7**	**+1.1**
L19K				IAML		07 29 24.5	
	comp=N,17nm,1.2s						
L19K				IAML		07 29 31.8	
	comp=E,13nm,1.2s						
HIN	**Hinchinbrook I**	**5.15**	**47**	Pn	**Pn**	**07 27 51.7**	**-0.9**
HIN				IAML		07 28 55.2	
	comp=N,20nm,1.1s						
PMR	**Palmer**	**5.16**	**28**		**Pn**	**07 27 52.1**	**-0.5**
PMR				IAML		07 29 11.0	
	comp=E,9.6nm,0.9s						
KNK	**Knik Glacier**	**5.19**	**32**	Pn	**Pn**	**07 27 52.0**	**-1.2**
KNK				IAML		07 29 22.2	
	comp=N,16nm,0.7s						
L18K	**Granite Mounta**	**5.27**	**347**		**Pn**	**07 27 54.3**	**+0.2**
L18K				IAML		07 29 29.5	
	comp=N,12nm,1.0s						
L18K				IAML		07 29 33.0	
	comp=E,8.1nm,1.2s						
L16K	**Owhat River**	**5.34**	**332**		**Pn**	**07 27 54.8**	**-0.3**
L16K				IAML		07 29 29.9	
	comp=E,9.0nm,0.9s						
L16K				IAML		07 29 39.5	
	comp=N,11nm,1.1s						
GHO	**Glory Hole Cre**	**5.36**	**28**		**Pn**	**07 27 54.9**	**-0.6**
GHO				IAML		07 29 31.7	
	comp=N,13nm,0.9s						
GHO				IAML		07 29 41.9	
	comp=E,18nm,1.2s						
FID	**Port Fidalgo**	**5.38**	**44**	Pn	**Pn**	**07 27 53.9**	**-1.8**
FID				IAML		07 29 03.9	
	comp=E,15nm,1.1s						
FID				IAML		07 29 42.2	
	comp=N,14nm,1.0s						
M14K	**Bethel**	**5.43**	**315**	Pn	**Pn**	**07 27 56.5**	**+0.1**
L17K	**Donlin**	**5.44**	**339**		**Pn**	**07 27 56.2**	**-0.4**
EYAK	**Cordova Ski Ar**	**5.55**	**48**		**Pn**	**07 27 57.1**	**-0.8**
SML	**Sawmill**	**5.55**	**30**		**Pn**	**07 27 57.5**	**-0.5**
M13K	**Dall Lake**	**5.81**	**308**	Pn	**Pn**	**07 28 01.4**	**-0.2**
KAIM	**Kayak Island**	**5.82**	**57**		**Pn**	**07 28 00.9**	**-0.8**
SCM	**Sheep Creek Mo**	**5.86**	**34**	Pn	**Pn**	**07 28 01.6**	**-0.7**
RAGM	**Ragged Mountai**	**5.91**	**53**		**Pn**	**07 28 02.4**	**-0.6**
K17K	**Iditarod**	**5.98**	**341**	Pn	**Pn**	**07 28 04.2**	**+0.3**
L14K	**Kuka Creek**	**6.08**	**318**		**Pn**	**07 28 04.8**	**-0.4**
BMRM	**Bremner River**	**6.25**	**48**	Pn	**Pn**	**07 28 06.9**	**-0.8**
M24K	**Tolsona, Glenn**	**6.42**	**36**	Pn	**Pn**	**07 28 10.1**	**+0.1**
J17K	**VABM Dome**	**6.75**	**341**		**Pn**	**07 28 14.4**	**0.0**
CRQM	**Cirque**	**6.76**	**53**		**Pn**	**07 28 14.0**	**-0.8**
GLB	**Gilahina Butte**	**6.83**	**46**		**Pn**	**07 28 14.8**	**-0.8**
DHY	**Denali Highway**	**6.86**	**27**		**Pn**	**07 28 14.9**	**-1.1**
VRDI	**Verde Repeater**	**6.86**	**49**		**Pn**	**07 28 15.1**	**-1.0**
KIAG	**Kiagna River**	**7.17**	**53**		**Pn**	**07 28 19.4**	**-1.0**
GRNC	**Granite Creek**	**7.36**	**55**		**Pn**	**07 28 22.1**	**-0.9**
O28M	**Mount Upton**	**8.08**	**57**		**Pn**	**07 28 32.5**	**-0.5**
ILAR	**Eielson Array**	**8.44**	**22**	Pn	**Pn**	**07 28 36.6**	**-0.9**
	comp=N,0.2nm,0.3s,baz=218,slow=14,SNR=8.9						
ILAR				Sn	**Sn**	**07 30 04.8**	**-6.5**
	comp=N,0.2nm,0.3s,baz=312,slow=25,SNR=4.6						
M29M	**Somme Creek**	**9.52**	**49**		**Pn**	**07 28 52.2**	**-0.3**
INK	**Inuvik**	**14.56**	**31**	Pn	**Pn**	**07 30 01.6**	**+0.6**
	comp=N,0.1nm,0.3s,baz=249,slow=11,SNR=5.9						
	comp=N,2.1nm,1.3s						
INK	**Inuvik**	**14.56**	**31**	Pn	**Pn**	**07 30 01.4**	**+0.5**
YKA	**Yellowknife Ar**	**20.34**	**58**	P	**P**	**07 31 10.7**	**+0.4**
	comp=N,1.1nm,0.7s,baz=270,slow=11,SNR=4.9						
	comp=N,1.1nm,0.7s						
PDAR	**Pinedale Array**	**31.45**	**98**	P	**P**	**07 32 56.3**	**+0.9**
	comp=N,0.3nm,0.5s,baz=325,slow=8.0,SNR=1.9						
	comp=N,0.3nm,0.5s						
TXAR	**Lajitas Array**	**44.64**	**107**	P	**P**	**07 34 48.1**	**+1.8**
	comp=N,0.2nm,0.6s,baz=326,slow=7.2,SNR=2.9						
TXAR				LR	LR	07 51 54.9	
	comp=N,49nm,19.4s,baz=278,slow=34						
	comp=N,0.2nm,0.6s						
SONM	**Songino Array**	**56.01**	**307**	P	**P**	**07 36 11.2**	**-0.9**
	comp=N,0.4nm,0.6s,baz=29,slow=9.1,SNR=4.3						
	comp=N,0.4nm,0.6s						

*IDC **12** 07:38:43.7±1.0,54.°41N×161.°43W,h0km,mb3.8/19, mbtmp3.8/22,ML3.7/3,MS3.7/1,Error ellipse: s-maj=28.1km s-min=14.3km az=3.0*
*NEIC **12** 07:38:44.9±1.6,54.°17N±0.°03×161.°49W±0.°04,h10km±1km, mb3.8/29,ML3.7/24,ML3.6(AEIC),Error ellipse: s-maj=6.0km s-min=2.9km az=140.0*
*AEIC **12** 07:38:44.2±1.8,54.°22N±0.°06×161.°56W±0.°06,h3km±4km, Error ellipse: s-maj=6.3km s-min=3.8km az=135.0*
ISC 12 07:38:44.4±1.7,54.°20N±0.°06×161.°44W±0.°03, h10km±10km,n204,σ1.9/15/213,mb3.9/25,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.98**	**346**		**Pg**	**07 39 02.8**	**-0.6**
DOL					**Sb**	**07 39 16.7**	**0.0**
DT1	**Dutton Round H**	**1.04**	**332**		**Pg**	**07 39 03.4**	**-0.9**
DT1					**Sg**	**07 39 17.9**	**+0.2**
DTNA	**Dutton South F**	**1.07**	**334**		**Pg**	**07 39 03.8**	**-1.0**
DTNA					**Sg**	**07 39 18.3**	**-0.4**
PS4A	**Pavlof South-4**	**1.18**	**348**		**Pb**	**07 39 06.2**	**-0.7**
PS4A					**Sg**	**07 39 22.3**	**0.0**
PS1A	**Pavlof South-1**	**1.24**	**352**		**Pn**	**07 39 07.3**	**-0.5**
PS1A					**Sn**	**07 39 24.9**	**+0.3**
PS1A					**Sg**	**07 39 26.2**	**+1.9**
CNBA	**Chernabura Isl**	**1.25**	**59**		**Pn**	**07 39 06.8**	**-1.1**
CHNA	**Chernabura Isl**	**1.25**	**59**	P	**Pn**	**07 39 07.0**	**-0.9**
PN7A	**Pavlof North-7**	**1.28**	**346**		**Pn**	**07 39 08.5**	**+0.1**
SDPT	**Sand Point**	**1.28**	**25**	P	**Pn**	**07 39 08.0**	**-0.4**
SDPT	**Sand Point**	**1.28**	**25**	S	**Sg**	**07 39 29.6**	**+4.0**
SDPT	**Sand Point**	**1.28**	**25**		**Pn**	**07 39 07.7**	**-0.7**
SDPT				Sn	**Sb**	**07 39 24.9**	**-0.2**
ISNN	**Isanotski Nort**	**1.51**	**296**		**Pn**	**07 39 10.7**	**-0.8**
ISNN					**Sb**	**07 39 31.6**	**0.0**
ISNN					**Sg**	**07 39 32.3**	**-0.5**
SSLN	**Shishaldin Nor**	**1.61**	**293**		**Pn**	**07 39 12.3**	**-0.7**
SSBA	**Shishaldin**	**1.67**	**291**		**Pn**	**07 39 12.9**	**-0.9**
SSBA					**Sb**	**07 39 37.0**	**+0.6**
VNKR	**Veniaminof 5**	**2.19**	**32**		**Pn**	**07 39 22.1**	**+1.2**
VNSS	**Veniaminof 8**	**2.33**	**28**		**Pn**	**07 39 24.7**	**+1.8**
VNFG	**Fog Glacier, M**	**2.35**	**26**		**Pn**	**07 39 24.3**	**+1.1**
AKSA	**Akutan Strait**	**2.50**	**270**		**Pn**	**07 39 25.0**	**-0.1**
AKSA					**Sn**	**07 39 56.1**	**+0.3**
AKUT	**Akutan**	**2.55**	**270**	P	**Pn**	**07 39 26.3**	**+0.5**
AKUT	**Akutan**	**2.55**	**270**		**Pn**	**07 39 26.3**	**+0.5**
AKUT				IAML		07 40 03.1	
	comp=E,177nm,0.5s						
AKUT				IAML		07 40 20.7	
	comp=N,205nm,0.7s						
AHB	**Akutan Harbor**	**2.58**	**270**		**Pn**	**07 39 26.2**	**0.0**
AKBBA	**Akutan Broad B**	**2.65**	**270**		**Pn**	**07 39 27.1**	**0.0**
AKBBA					**Sn**	**07 39 59.8**	**+0.5**
AKLV	**Akutan Long Va**	**2.66**	**271**		**Pn**	**07 39 27.2**	**-0.1**
AKV	**Akutan Volcano**	**2.66**	**270**		**Pn**	**07 39 27.3**	**-0.1**
AKV					**Pn**	**07 39 28.2**	**+0.8**
ZRO	**Akutan Zero**	**2.67**	**270**		**Pn**	**07 39 27.6**	**+0.1**
AKGG	**Akutan Green G**	**2.68**	**272**		**Pn**	**07 39 27.4**	**-0.1**
LVA	**Lava Point**	**2.70**	**271**		**Pn**	**07 39 28.4**	**+0.4**
LVA					**Sn**	**07 40 02.2**	**+1.6**
LVA				IAML		07 40 17.6	
	comp=N,289nm,0.6s						
LVA				IAML		07 40 26.4	
	comp=E,164nm,0.7s						
AKRB	**Akutan Reef Bi**	**2.72**	**270**		**Pn**	**07 39 28.5**	**+0.3**
AKRB					**Pn**	**07 39 29.4**	**+1.2**
UNV	**Unalaska Valle**	**3.01**	**265**	P	**Pn**	**07 39 31.7**	**-0.4**
UNV	**Unalaska Valle**	**3.01**	**265**		**Pn**	**07 39 31.9**	**-0.2**
UNV					**Sn**	**07 40 07.8**	**-0.4**
MNAT	**Makushin Natee**	**3.11**	**266**		**Pn**	**07 39 33.1**	**-0.4**
ANPB	**Aniakchak Plen**	**3.17**	**33**		**Pn**	**07 39 36.2**	**+1.9**
MGOD	**Makushin Gods**	**3.23**	**265**		**Pn**	**07 39 35.4**	**+0.2**
CHIR	**Chirikof Islan**	**3.72**	**62**	P	**Pn**	**07 39 41.8**	**-0.1**
CHIR	**Chirikof Islan**	**3.72**	**62**	P	**Sn**	**07 40 26.9**	**+1.1**
CHIR	**Chirikof Islan**	**3.72**	**62**		**Pn**	**07 39 42.0**	**+0.1**
CHIR				IAML		07 40 26.9	
	comp=N,103nm,0.7s						
CHIR				IAML		07 40 50.2	
	comp=E,132nm,1.1s						
OKFG	**Magazine Ridge**	**3.92**	**261**		**Pn**	**07 39 44.8**	**+0.2**
OKTU	**Okmok Mt. Tuli**	**4.00**	**261**		**Pn**	**07 39 46.1**	**+0.4**
OKCE	**Okmok Cone E**	**4.06**	**262**		**Pn**	**07 39 47.1**	**+0.5**
PLBL	**Peulik Blue Cr**	**4.37**	**35**		**Pn**	**07 39 52.5**	**+1.7**
R17L	**Mt. Peulik Vol**	**4.47**	**38**		**Pn**	**07 39 54.3**	**+2.0**
PLK1	**Peulik 1**	**4.52**	**35**		**Pn**	**07 39 54.6**	**+1.8**
PLK5	**Peulik 5**	**4.58**	**32**		**Pn**	**07 39 56.0**	**+2.3**
SII	**Sitkinak Islan**	**4.76**	**57**	P	**Pn**	**07 39 56.5**	**+0.3**
SII	**Sitkinak Islan**	**4.76**	**57**		**Pn**	**07 39 56.6**	**+0.3**
SII				IAML		07 41 18.6	
	comp=N,84nm,0.8s						
SII				IAML		07 41 43.3	
	comp=E,101nm,0.9s						
O14K	**Tigyukauivet M**	**5.07**	**1**		**Pn**	**07 40 01.7**	**+1.3**
O14K				IAML		07 41 36.8	
	comp=E,40nm,0.8s						
O14K				IAML		07 41 45.9	
	comp=N,47nm,0.9s						
O15K	**Ungalikthiuk R**	**5.07**	**9**		**Pn**	**07 40 01.4**	**+0.9**
O15K				IAML		07 41 47.0	
	comp=E,51nm,0.7s						
O15K				IAML		07 41 50.6	
	comp=N,41nm,0.8s						
Q17K	**Contact Creek**	**5.12**	**35**		**Pn**	**07 40 02.7**	**+1.5**
CAHL	**Cahill**	**5.17**	**39**		**Pn**	**07 40 03.3**	**+1.5**
ANCK	**Angle Creek**	**5.20**	**37**		**Pn**	**07 40 04.2**	**+1.8**
P16K	**Nushagak River**	**5.21**	**20**		**Pn**	**07 40 03.4**	**+1.2**
ACHA	**Angle Creek He**

ETKA Kagalaska Isla 9.32 262 Pn Pn 07 40 58.5 -0.2
RC01 Rabbit Creek A 9.32 37 Pn Pn 07 40 59.7 +1.1
ADK Adak 9.47 262 P Pn 07 41 00.6 -0.2
P23K Montague Islan 9.59 47 Pn Pn 07 41 02.7 +0.4
I17K Unalakleet 9.73 2 Pn Pn 07 41 05.7 +1.5
PPLA Purkeypile 9.96 25 Pn 07 41 12.7 +5.2
HIN Hinchinbrook I 10.18 46 Pn Pn 07 41 10.7 +0.2
J19K Poorman 10.27 15 Pn Pn 07 41 12.2 +0.6
FID Port Fidalgo 10.37 45 Pn Pn 07 41 12.6 -0.5
EYAK Cordova Ski Ar 10.58 47 P Pn 07 41 16.1 +0.3
EYAK Cordova Ski Ar 10.58 47 Pn Pn 07 41 16.3 +0.4
J20K Nowinta River 10.68 17 Pn Pn 07 41 18.9 +1.7
DIV Divide 10.87 44 Pn Pn 07 41 20.5 +0.5
KAIM Kayak Island 10.88 51 Pn Pn 07 41 21.1 +1.0
TRF Thorofare Moun 10.91 27 Pn Pn 07 41 21.1 +0.5
RAGM Ragged Mountai 10.97 49 Pn Pn 07 41 21.2 -0.1
I20K Naaghedeneel 11.19 15 Pn Pn 07 41 26.0 +1.7
BMRM Bremner River 11.27 46 Pn Pn 07 41 26.2 +0.8
M24K Tolsona, Glenn 11.28 39 Pn Pn 07 41 25.9 +0.4
RND Reindeer 11.28 30 Pn Pn 07 41 25.1 -0.4
H19K Roundabout Mou 11.63 10 Pn Pn 07 41 31.7 +1.4
GLB Gilahina Butte 11.84 45 Pn Pn 07 41 33.1 -0.1
VRDI Verde Repeater 11.89 46 Pn Pn 07 41 34.5 +0.6
H21K Melozitna Rive 12.27 17 Pn Pn 07 41 40.3 +1.4
K24K Donnelly Dome 12.52 34 Pn Pn 07 41 43.3 +0.8
ILAR Eielson Array 12.88 29 Pn Pn 07 41 44.4 -3.0
comp=N,0.2nm,0.3s,baz=221,slow=14,SNR=5.2
ILAR Eielson Array 12.88 29 Pn 07 41 46.8 -0.5
G21K Allakaket 12.95 14 Pn Pn 07 41 49.7 +1.4
H23K Yukon River 13.06 22 Pn Pn 07 41 49.5 -0.2
M27K Edge Creek, AK 13.09 44 Pn Pn 07 41 52.1 +1.7
O28M Mount Upton 13.15 51 Pn Pn 07 41 52.2 +0.9
F20K Avaraart Lake 13.19 10 Pn Pn 07 41 52.0 +0.5
J25K Salcha River, 13.21 31 Pn Pn 07 41 49.8 -2.1
SCRK Sand Creek 13.23 35 Pn Pn 07 41 51.3 -0.9
PRP Porcupine Dome 13.82 29 Pn Pn 07 41 59.2 -1.1
K27K Chicken 13.93 37 Pn Pn 07 42 00.9 -0.8
P29M Windy Craggy 14.00 58 Pn 07 42 04.8 +2.2
COLD Coldfoot 14.14 18 Pn Pn 07 42 05.7 +1.1
S31K Pelican 14.53 65 Pn Pn 07 42 10.0 +0.1
M29M Somme Creek 14.55 46 Pn 07 42 10.6 +0.4
N30M Aishikik Lake 14.80 51 Pn Pn 07 42 14.4 +0.8
DAWY Dawson 14.94 40 Pn Pn 07 42 15.5 +0.1
I27K Kandik River 15.06 33 Pn Pn 07 42 17.7 +0.6
I27K IAmb IAmb 07 42 28.3
comp=Z,2.3nm,0.6s
BESE Bessie Mountai 15.31 63 Pn Pn 07 42 21.4 +1.0
G26K Porcupine Rive 15.36 27 Pn Pn 07 42 21.6 +0.6
S32K Killisnoo 15.40 67 Pn Pn 07 42 22.0 +0.6
S32K IAmb IAmb 07 42 51.1
comp=Z,3.5nm,0.9s
H27K Steamboat Moun 15.50 31 Pn Pn 07 42 22.4 -0.4
D23K Nanushuk River 15.63 14 Pn Pn 07 42 24.9 +0.3
D23K IAmb IAmb 07 42 38.8
comp=Z,2.0nm,0.7s
C23K Itkillik River 16.45 13 Pn 07 42 35.2 +0.3
C23K IAmb IAmb 07 42 48.5
comp=Z,4.0nm,0.6s
D25K Kavik River 16.68 19 Pn Pn 07 42 37.9 0.0
C27K Jago River 17.46 21 P Pn 07 42 47.9 +0.2
H31M Peel River 17.67 38 Pn 07 42 50.3 -0.1
H31M IAmb IAmb 07 42 58.8
comp=Z,5.2nm,0.6s
D27M Malcolm River 17.78 24 P Pn 07 42 50.9 -0.8
DLBC Dease Lake 17.83 64 P Pn 07 42 52.7 +0.3
comp=Z,0.1nm,0.3s,baz=295,slow=22,SNR=2.0
comp=Z,0.6nm,0.6s
E29M Blow River 17.98 29 P Pn 07 42 53.1 -1.0
G31M Satah River 18.25 35 Pn 07 42 56.6 -0.7
F31M Tsiigehtchic 18.69 34 P P 07 43 01.8 -0.7
F31M IAmb IAmb 07 43 24.9
comp=Z,3.1nm,1.1s
INK Inuvik 19.23 32 P P 07 43 06.6 -1.7
comp=Z,0.4nm,0.3s,baz=239,slow=11,SNR=13
comp=Z,1.0nm,0.4s
INK Inuvik 19.23 32 P 07 43 07.9 -0.5
INK IAmb IAmb 07 43 12.7
comp=Z,3.8nm,1.1s
C36M Paulatuk 22.75 34 P P 07 43 45.6 -0.7
C36M IAmb IAmb 07 44 02.2
comp=Z,3.9nm,0.9s
PEA0B Petropavlovsk- 24.01 284 P P 07 43 58.3 -0.8
PETK Petropavlovsk- 24.01 284 P P 07 43 57.9 -1.2
comp=Z,2.7nm,0.7s,baz=82,slow=14,SNR=15
comp=Z,2.7nm,0.7s
PETK Petropavlovsk- 24.01 284 P P 07 43 58.0 -1.0
WISH Wishkah 24.67 91 P P 07 44 05.4 +0.3
YKA Yellowknife Ar 25.40 52 P P 07 44 09.3 -2.3
comp=Z,0.7nm,0.7s,baz=267,slow=8.1,SNR=5.7
comp=Z,0.7nm,0.7s
YKA Yellowknife A 25.40 52 P P 07 44 12.8 +1.2
NVAR Mina Array Bea 33.11 101 P P 07 45 20.9 +0.3
comp=Z,0.2nm,0.4s,baz=283,slow=9.9,SNR=3.5
comp=Z,0.2nm,0.4s
BLKN Baker Lake 33.41 46 P P 07 45 23.0 +0.3
DUG Dugway, Tooele 35.15 93 P P 07 45 38.5 +0.3
DUG IAmb IAmb 07 45 40.4
comp=Z,1.1nm,0.8s
PDAR Pinedale Array 35.46 87 P P 07 45 41.7 +0.7
comp=Z,0.3nm,0.6s,baz=284,slow=6.0,SNR=4.0
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 35.46 87 P P 07 45 42.1 +1.2
PSUT Pine Spring 35.62 96 P P 07 45 42.9 +0.5
PSUT IAmb IAmb 07 45 45.3
comp=Z,1.5nm,1.0s
ILON Igloolik, Nuna 37.42 35 P P 07 45 57.0 -0.1
PV19 Morning Glory 38.63 92 P P 07 46 08.3 +0.3
PV19 IAmb IAmb 07 46 09.9
comp=Z,2.0nm,0.7s
PV18 Skein Mesa, Pa 38.71 92 P P 07 46 08.9 +0.2
PV18 IAmb IAmb 07 46 26.5
comp=Z,2.5nm,0.9s
ULM Lac du Bonnet 39.06 68 P P 07 46 10.8 -0.3
comp=Z,0.5nm,0.4s,baz=320,slow=7.9,SNR=1.4
comp=Z,0.5nm,0.4s
ULM Lac du Bonnet 39.06 68 P P 07 46 11.9 +0.8
ULM IAmb IAmb 07 46 25.4
comp=Z,2.6nm,1.2s
H11N2 WAKE ISLAND Hy 42.04 228 T T 08 31 27.9
baz=27,slow=76,SNR=349
H11N3 WAKE ISLAND Hy 42.05 228 T T 08 31 28.4
baz=27,slow=76,SNR=207
H11N1 WAKE ISLAND Hy 42.06 228 T T 08 31 24.8
baz=27,slow=76,SNR=197
ECSD EROS Data Cent 42.39 77 P P 07 46 38.6 -0.1
ECSD IAmb IAmb 07 47 06.6
comp=Z,1.4nm,1.0s
H11S1 WAKE ISLAND Hy 43.21 227 T T 08 32 53.0
baz=26,slow=76,SNR=187
H11S2 WAKE ISLAND Hy 43.22 227 T T 08 32 54.0
baz=26,slow=76,SNR=123
H11S3 WAKE ISLAND Hy 43.23 227 T T 08 32 53.9
baz=26,slow=76,SNR=114
TXAR Lajitas Array 48.09 97 P P 07 47 25.4 +1.2
comp=Z,0.3nm,0.5s,baz=286,slow=5.5,SNR=19
comp=Z,0.3nm,0.5s
TXAR Lajitas Array 48.09 97 P P 07 47 25.0 +0.8
KSRS Korea Array 49.84 281 P P 07 47 37.6 +0.3
comp=Z,0.5nm,0.4s,baz=48,slow=7.7,SNR=1.9
comp=Z,0.5nm,0.4s
SADO Sadowa 51.39 65 LR LR 08 07 47.1
comp=Z,73nm,19.1s,baz=342,slow=34
SONM Songino Array 54.34 304 P P 07 48 11.1 +0.2
comp=Z,0.6nm,0.8s,baz=57,slow=6.1,SNR=3.6
comp=Z,0.6nm,0.8s
ARCES ARCESS Array B 56.47 357 P P 07 48 23.4 -2.4
comp=Z,1.4nm,0.9s,baz=19,slow=5.7,SNR=1.4
comp=Z,1.4nm,0.9s
FINES FINESS Array B 64.55 356 P P 07 49 20.9 -0.2
comp=Z,1.6nm,0.8s,baz=0.5,slow=7.7,SNR=7.5
comp=Z,1.6nm,0.8s
BVAR Borovoye Array 64.82 328 P P 07 49 23.2 +0.2
comp=Z,0.7nm,0.4s,baz=37,slow=7.6,SNR=4.2
comp=Z,0.7nm,0.4s
NOA NORSAR Array B 64.96 4 P P 07 49 23.6 -0.2
comp=Z,1.4nm,0.9s,baz=355,slow=6.8,SNR=3.4
comp=Z,1.4nm,0.9s
MKAR Makanchi Array 65.84 318 P P 07 49 30.1 +0.4
comp=Z,0.7nm,0.8s,baz=32,slow=8.5,SNR=2.7
comp=Z,0.7nm,0.8s
HFS Hagfors 65.95 3 P P 07 49 29.9 -0.2
comp=Z,1.8nm,0.4s,baz=10.0,slow=2.9,SNR=11
comp=Z,1.8nm,0.4s
EKA Eskdalemuir Ar 69.38 13 P P 07 49 52.1 +0.2
comp=Z,0.7nm,0.6s,baz=350,slow=4.3,SNR=5.3
comp=Z,0.7nm,0.6s
AKASG Malin Array Be 75.09 353 P P 07 50 25.1 -1.0
comp=Z,0.9nm,0.5s,baz=11,slow=6.0,SNR=5.3
comp=Z,0.9nm,0.5s
AKBB Malin Array Si 75.09 353 P P 07 50 26.0 -0.1
KIEV Kiev 75.10 353 P P 07 50 25.9 -0.2
GERES GERESS Array B 77.25 3 P P 07 50 37.7 -0.8
comp=Z,0.2nm,0.5s,baz=3.8,slow=4.0,SNR=3.5
comp=Z,0.2nm,0.5s
CMAR Chiang Mai Arr 80.71 289 P P 07 51 00.4 +2.6
comp=Z,1.2nm,0.3s,baz=52,slow=7.1,SNR=3.5
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 80.71 289 P P 07 50 57.9 +0.1
ESDC Sonseca Array 84.51 17 P P 07 51 17.5 +0.1
comp=Z,0.3nm,0.6s,baz=339,slow=5.8,SNR=1.5
comp=Z,0.3nm,0.6s

BER ***12*** *07:42:50.9±0.9, 65°.05N×24°.54E, h0km, ML2.1(HEL), Suspected explosion*
UPP ***12*** *07:42:52.6±1.2, 65°.27N×24°.20E, h0km, ML3.2, Presumed earthquake*
IDC ***12*** *07:42:52.5±0.8, 65°.28N×24°.33E, h0km, mbtmp3.4/6, ML2.7/5, Error ellipse: s-maj=12.6km s-min=6.6km az=101.0*
HEL ***12*** *07:42:52.3±0.1, 65°.31N×24°.34E, h0km, ML2.1, Explosion*
ISC 12 07:42:51.0±0.8, 65°.31N±0°.03×24°.26E±0°.03, h0km, n44, σ1s62/50, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OUL	Oulu	0.73	108	*eP*		Pg	07 43 04.9	+0.1
TOF	Tornio	0.77	2	*eP*		Pg	07 43 06.1	+0.4
TOF				*eS*		Sg	07 43 15.3	-0.4
OUF	Merijarvi	0.97	168	*eP*		Pg	07 43 09.5	-0.1
OBF8	Ulkokalla	1.05	200	*eP*		Pg	07 43 11.0	+0.1
RANF	Ranua	1.26	55	*eP*		Pg	07 43 14.4	-0.7
RANF				*eS*		Sg	07 43 30.0	-1.5
BURU	Burvik	1.43	241	P		Pn	07 43 18.3	+0.2
BURU	Burvik	1.43	241	*eP*		Pn	07 43 18.3	+0.2
BURU				*eS*		Sg	07 43 37.4	+0.6
RNF	Rovaniemi	1.49	28	*eP*		Pn	07 43 18.9	0.0
ERTU	Ertsjaerv	1.51	327	*eP*		Pn	07 43 19.5	+0.3
KU2	Taivalkoski	1.70	75	*eP*		Pn	07 43 22.0	+0.1
KU2				*eS*		Sn	07 43 43.1	-1.2
KU2				smax		smax	07 43 43.8	
	comp=Z,11nm,0.1s							
ODEU	Stanfors	1.77	241	P		Pn	07 43 24.1	+1.4
KLF	Kolari	1.93	357	*eP*		Pn	07 43 26.8	+1.7
MSF	Maaselka	2.07	71	*eP*		Pn	07 43 28.4	+1.5
MSF				smax		smax	07 43 55.3	
	comp=Z,21nm,0.2s							
UMAU	Umeaa	2.11	229	P		Pn	07 43 28.8	+1.3
	baz=42							
UMAU	Umeaa	2.11	229	*eP*		Pn	07 43 28.7	+1.3
SVAU	Svanoeiden	2.16	250	P		Pn	07 43 29.7	+1.5
KU1	Kurvinen	2.23	81	*eP*		Pn	07 43 30.0	+0.9
KU1				smax		smax	07 43 58.9	
	comp=Z,7.9nm,0.2s							
SGF	Sodankyl	2.33	22	smax		smax	07 44 03.8	
	comp=Z,6.8nm,0.2s							
OLKF	Oulanka, Finla	2.34	62	*eP*		Pn	07 43 31.4	+0.7
OLKF				smax		smax	07 44 02.8	
	comp=Z,6.1nm,0.2s							
VAF	Ylistaro	2.38	198	*eP*		Pn	07 43 32.8	+1.6
SUF	Sumiainen	2.73	161	*eP*		Pn	07 43 38.0	+2.0
LANU	Lannavaara	2.89	343	*eP*		Pn	07 43 40.6	+2.4
LANU				*eS*		Sn	07 44 16.2	+2.6
LANU	Lannavaara	2.89	343	*eP*		Pn	07 43 40.8	+2.6
SALU	Saltoluokta	3.11	314	*eP*		Pn	07 43 43.0	+1.7
HEF	Hetta	3.12	356	*eP*		Pn	07 43 43.1	+1.8
HEF				*eS*		Sn	07 44 22.4	+3.2
KEF	Keuruu	3.17	175	*eP*		Pn	07 43 43.9	+1.9
KTK1	Kautokeino	3.74	354	*eP*		Pn	07 43 51.9	+2.1
JOF	Joensuu	3.92	125	*eP*		Pn	07 43 54.1	+1.8
FINES	FINESS Array B	3.97	167	Pn		Pn	07 43 54.8	+1.8
	comp=Z,0.5nm,0.3s,baz=352,slow=12,SNR=35							
FINES				Lg		Lg	07 44 54.9	
	comp=Z,1.9nm,0.3s,baz=346,slow=29,SNR=5.5							
	comp=Z,2.2nm,0.2s							
MOR8	Moi Rana	4.14	286	*eP*		Pn	07 43 54.9	-0.5
FAUS	Fauske	4.17	304	*eP*		Pn	07 43 57.4	+1.7
ARA0	ARCESS Array S	4.27	6	*eP*		Pn	07 43 58.0	+0.9
ARCES	ARCESS Array B	4.27	6	Pn		Pn	07 43 57.9	+0.8
	comp=Z,1.6nm,0.3s,baz=183,slow=14,SNR=130							
ARCES				Sn		Sn	07 44 47.5	0.0
	comp=Z,0.9nm,0.3s,baz=186,slow=24,SNR=8.3							
ARCES				Lg		Lg	07 45 05.4	
	comp=Z,1.7nm,0.3s,baz=181,slow=30,SNR=8.4							
	comp=Z,3.9nm,0.2s							
I37NO	I37NO	4.37	332	I		I	08 10 00.0	
	baz=149,slow=323,SNR=4.4							
STEI	Steigen	4.45	310	*eP*		Pn	07 44 00.7	+1.1
RAF	Rauma	4.45	196	*eP*		Pn	07 44 01.6	+2.0
MEF	Metsahovi	5.12	179	*eP*		Pn	07 44 10.5	+1.8
AAL	Aland	5.51	203	*eP*		Pn	07 44 16.1	+1.9
ARBE	Arbavere	5.95	171	*eP*		Pn	07 44 18.4	-1.8
MTSE	Matsula	6.63	182	*eP*		Pn	07 44 30.7	+1.3
HFS	Hagfors	7.11	228	Pn		Pn	07 44 36.0	0.0
	comp=Z,0.5nm,0.3s,baz=49,slow=12,SNR=36							
HFS				Sn		Sn	07 45 54.2	-3.2
	comp=Z,0.4nm,0.3s,baz=51,slow=27,SNR=6.4							
HFS				Lg		Lg	07 46 29.5	
	comp=Z,1.0nm,0.3s,baz=47,slow=28,SNR=7.3							
	comp=Z,0.8nm,0.3s							
NOA	NORSAR Array B	7.29	240	Pn		Pn	07 44 36.6	-2.0
	baz=41,slow=18,SNR=12							
NOA				Sn		Sn	07 45 58.5	-3.5
	baz=34,slow=12,SNR=1.5							
NOA				Lg		Lg	07 46 35.3	
	comp=Z,0.1nm,0.3s,baz=39,slow=20,SNR=4.3							
	comp=Z,0.2nm,0.3s							
SPITS	Spitsbergen Ar	13.14	353	Pn		Pn	07 45 58.2	-0.3
	baz=161,slow=15							
	comp=Z,4.0nm,0.9s							
AKASG	Malin Array Be	14.88	168	Pn		Pn	07 46 17.2	-5.1
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=2.8							

SOME ***12*** *08:11:27.5, 39°.47N×72°.43E, h5km*
KRNET ***12*** *08:11:28.1±0.1, 39°.40N×72°.37E, h21km, mb3.2*
NNC ***12*** *08:11:36.7±3.6, 39°.88N×72°.37E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=28.6km s-min=16.8km az=179.0*
ISC 12 08:11:28.2±1.4, 39°.42N±0°.05×72°.35E±0°.03, h1km±11km, n32, σ1s24/57, 20C-25D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	Karamyk	0.43	279	⇑*iP*		Pg	08 11 36.8	+0.4
DRK				⇑*iS*		Sg	08 11 43.5	+1.5
SFK	Sufi-Kurgan	1.07	56	⇑*iP*		Pg	08 11 48.0	-0.7
SFK				⇑*iS*		Sg	08 12 02.5	-0.1
OHH	Osh	1.16	17	⇓*iP*		Pb	08 11 49.8	-1.3
OHH				⇓*iS*		Sg	08 12 05.4	+0.1
BTK	Batken	1.34	299	⇑*iP*		Pn	08 11 53.4	-0.8
BTK				⇑*iS*		Sg	08 12 11.5	+0.2
GAR	Garm	1.63	256	⇓*iP*		Pn	08 11 58.0	-0.2
GAR				⇓*iS*		Sb	08 12 20.0	-0.4
SALK	Salom-Alik	1.85	37	⇓*iP*		Pn	08 12 01.7	+0.4
SALK				⇓*iS*		Sb	08 12 26.0	-0.7
ARSB	Arslanbob	1.96	14	⇓*iP*		Pn	08 12 03.4	+0.6
ARSB				⇓*iS*		Sb	08 12 29.1	-0.9
TRKS	Terek-Say	2.30	337	⇓*iP*		Pn	08 12 07.3	-0.2
TRKS				⇓*iS*		Sn	08 12 35.9	-0.7
ARK	Arkit	2.40	353	⇓*iP*		Pn	08 12 09.6	+0.9
ARK				⇓*iS*		Sb	08 12 39.7	-2.6
CHGR	Chuyangaron	2.60	254	⇓*eP*		Pn	08 12 11.7	+0.2
CHGR				⇓*iS*		Sn	08 12 43.7	0.0
JNKS	Jany-Kuch	2.99	56	⇓*eP*		Pn	08 12 17.8	+0.7
JNKS				⇓*eS*		Sn	08 12 53.9	+0.1
MNAS	Manas	3.07	2	⇑*iP*		Pn	08 12 18.8	+0.8
MNAS				⇑*iS*		Sn	08 12 56.0	+0.5
IUG	Iuzhnay	3.25	328	Pg		Pb	08 12 27.3	+0.7
	22nm,0.3s							
IUG				Lg		Lg	08 13 10.4	
	52nm,0.5s							
IUG	Iuzhnay	3.25	328	*eP*		Pb	08 12 27.3	+0.7
	22nm,0.3s							
IUG				*eS*		Sg	08 13 10.4	-2.0
	52nm,0.5s							
UCH	Uchtor	3.25	30	⇓*iP*		Pn	08 12 21.5	+0.7
UCH				⇓*iS*		Sn	08 13 00.1	-0.3
MRKS	Merke	3.39	11	Pg		Pb	08 12 29.0	-0.2
	4.1nm,0.5s							
MRKS				Lg		Lg	08 13 13.1	
	13nm,0.4s							
MRKS	Merke	3.39	11	*eP*		Pb	08 12 29.0	-0.2
	3.2nm,0.2s							
MRKS				*eS*		Sb	08 13 13.1	+2.1
	13nm,0.4s							
EKS2	Erkin-Say	3.42	18	⇑*eP*		Pn	08 12 23.4	+0.6
EKS2				⇑*eS*		Sn	08 13 04.0	0.0
NRN	Naryn	3.44	53	⇓*iP*		Pn	08 12 23.3	0.0
NRN				⇓*iS*		Sn	08 13 03.6	-1.2
AAK	Ala-Archa	3.60	26	⇑Pn		Pb	08 12 30.3	-2.6
	1.5nm,0.5s							
AAK				⇓Lg		Lg	08 13 16.2	
	4.8nm,0.6s							
AAK	Ala-Archa	3.60	26	⇓*iP*		Pn	08 12 26.1	+0.7
AAK				⇓*iS*		Sn	08 13 08.2	-0.5
KK31	Karatay Array	3.93	340	Pn		Pn	08 12 33.5	+3.8
	0.9nm,0.2s,baz=149,slow=12,SNR=38							
KK31				⇑Lg		Lg	08 13 26.2	
	7.7nm,0.5s,baz=146,slow=22,SNR=4.3							
BRLS	Borolday	4.08	333	Pg		Pb	08 12 39.3	-1.5
	2.4nm,0.3s							
BRLS				Lg		Lg	08 13 30.8	
	5.2nm,0.3s							
BRLS	Borolday	4.08	333	*eP*		Pb	08 12 39.3	-1.5
	1.2nm,0.2s							
BRLS				*eS*		Sb	08 13 30.8	+0.2
	2.7nm,0.2s							
ULHL	Ulahol	4.09	45	⇑*iP*		Pn	08 12 32.7	+0.6
ULHL				⇑*iS*		Sn	08 13 19.8	-0.9
BOOM	Boomskoye usch	4.10	40	⇑*iP*		Pn	08 12 32.8	+0.6
BOOM				⇑*iS*		Sn	08 13 20.3	-0.7
USP	Ospenovka	4.17	22	⇑*eP*		Pn	08 12 33.9	+0.8
USP				⇑*iS*		Sn	08 13 21.9	-0.6
TKM2	Tokmak 2	4.27	34	⇑*eP*		Pn	08 12 35.3	+0.7
TKM2				⇑*iS*		Sn	08 13 24.5	-0.8
SGDS	Sogindy	4.38	22	Pg		Pb	08 12 47.0	+1.0
	1.7nm,0.4s							
SGDS				Lg		Lg	08 13 43.8	
	5.7nm,0.5s							
KST	Kastek	4.53	36	Pg		Pb	08 12 49.4	+0.7
	2.3nm,0.3s							
KST				Lg		Lg	08 13 48.2	
	5.5nm,0.7s							
KST	Kastek	4.53	36	*eP*		Pb	08 12 49.4	+0.7
	2.3nm,0.3s							
KST				*eS*		Sb	08 13 48.2	+4.3
	5.5nm,0.7s							
KDJ	Kajisay	4.56	52	⇓*iP*		Pn	08 12 39.2	+0.7
KDJ				⇓*iS*		Sn	08 13 31.3	-1.0

IDC ***12*** *08:12:16.5±1.0, 52°.25N×168°.66W, h0km, mb3.8/15, mbtmp3.7/16, ML2.6/1, MS3.2/2, Error ellipse: s-maj=27.6km s-min=18.6km az=175.0*
AEIC ***12*** *08:12:20.2±1.8, 52°.19N±0°.08×168°.46W±0°.1, h25km±5km, Error ellipse: s-maj=13.2km s-min=7.5km az=142.0*
NEIC ***12*** *08:12:21.9±0.9, 52°.36N±0°.04×168°.46W±0°.10, h29km±6km, mb3.4/24, ML3.4/14, ML3.0(AEIC), Error ellipse: s-maj=9.7km s-min=4.3km az=120.0*
ISC 12 08:12:20.2±1.9, 52°.25N±0°.09×168°.41W±0°.06, h24km±12km, n97, σ0s88/103, mb3.7/20, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OKSP	Okmok Steeple	1.00	4			Pb	08 12 38.8	-0.1
OKTU	Okmok Mt. Tuli	1.16	11			Pb	08 12 41.5	0.0
OKTU						Sn	08 12 57.7	+1.7
OKCE	Okmok Cone E	1.19	7			Pb	08 12 42.0	-0.1
OKFG	Magazine Ridge	1.20	15			Pb	08 12 42.1	-0.1
OKNC	Okmok New Cone	1.22	8			Pn	08 12 42.5	+0.7
OKNC						Pb	08 12 42.6	0.0
OKNC						Sb	08 13 00.5	+2.6
MAPS	Pakushin South	1.79	29			Pn	08 12 50.3	+0.6
MAPS						Pn	08 12 50.4	+0.6
MAPS						Sn	08 13 12.8	+1.1
MAPS						Sb	08 13 13.8	-0.6
MGOD	Makushin Gods	1.80	30			Pn	08 12 50.3	+0.5
MGOD						Pn	08 12 50.5	+0.6
MGOD						Sb	08 13 14.4	-0.4
MNAT	Makushin Natee	1.94	32			Pn	08 12 52.0	+0.3
MNAT						Pn	08 12 52.2	+0.6
MNAT						Sb	08 13 17.7	-0.9
UNV	Unalaska Valle	1.97	35			Pn	08 12 51.9	-0.1
UNV						Sn	08 13 13.8	-2.2
AKRB	Akutan Reef Bi	2.35	36			Pn	08 12 58.5	+1.2
AKRB						Pn	08 12 59.0	+1.7
ZRO	Akutan Zero	2.35	38			Pn	08 12 58.6	+1.2
ZRO						Sb	08 13 28.6	-1.9
AKBBA	Akutan Broad B	2.38	38			Pn	08 12 59.1	+1.4
AKBBA						Pn	08 12 59.3	+1.6
AKV	Akutan Volcano	2.39	37			Pn	08 12 58.9	+1.1
LVA	Lava Point	2.39	36			Pn	08 12 58.1	+0.3
LVA				IAML			08 13 48.0	
	comp=N,412nm,0.7s							
LVA				IAML			08 13 48.7	
	comp=E,190nm,0.7s							
AKUT	Akutan	2.47	39	Pn		Pn	08 12 57.4	-1.5
AKUT				IAML			08 13 53.8	
	comp=E,71nm,1.0s							
AKSA	Akutan Strait	2.50	40			Pn	08 13 00.3	+1.0
KOFP	Korovin Flat P	3.49	273			Pn	08 13 14.3	+1.3
ATKA	Atka Island	3.56	271			Pn	08 13 14.5	+0.7
ATKA				IAML			08 13 56.0	
	comp=E,34nm,0.6s							
ATKA				IAML			08 13 56.9	
	comp=N,48nm,0.4s							
KOWE	Korovin West	3.58	274			Pn	08 13 15.5	+1.2
GSTR	Great Sitkin T	4.71	271	Pn		Pn	08 13 30.3	+0.5
GSTD	Great Sitkin T	4.76	271			Pn	08 13 31.4	+0.9
GSCK	Great Sitkin C	4.78	270			Pn	08 13 31.5	+0.8
ETKA	Kagalaska Isla	4.95	269			Pn	08 13 33.4	+0.4
ADAG	Mount Adagdak	5.05	270			Pn	08 13 35.2	+0.8
ADK	Adak	5.12	269	Pn		Pn	08 13 36.0	+0.7
ADK				IAML			08 14 33.4	
	comp=N,32nm,1.1s							
ADK				IAML			08 14 39.8	
	comp=N,30nm,0.7s							
KIWB	Kanaga Island	5.41	269	Pn		Pn	08 13 40.2	+0.9
KIWB				IAML			08 14 44.0	
	comp=N,37nm,1.1s							
KIMD	Kanaga Island	5.47	268			Pn	08 13 41.0	+0.9
CNBA	Chernabura Isl	5.86	60			Pn	08 13 46.1	+0.7
AMKA	Amchitka	7.67	268	Pn		Pn	08 14 11.0	+0.8
N15K	Kwethluk River	9.18	27	Pn		Pn	08 14 31.1	+0.1
L14K	Kuka Creek	9.63	17	Pn		Pn	08 14 37.8	+0.6
OHAK	Old Harbor	10.06	54	Pn		Pn	08 14 43.5	+0.6
N17K	Nushagak Hills	10.35	32	Pn		Pn	08 14 46.9	-0.1
KDAK	Kodiak Island	10.63	52	Pn		Pn	08 14 51.1	+0.2
	comp=N,0.5nm,0.3s,baz=226

O28M	**Mount Upton**	**17.63**	**50**	P	**P**	**08 16 24.7**	**-0.4**
O28M				IAmb	IAmb	08 16 31.0	
	comp=Z,3.0nm,0.8s						
PETK	**Petropavlovsk-**	**20.46**	**286**	P	**P**	**08 16 54.6**	**-1.1**
	comp=Z,2.5nm,0.5s,baz=84,slow=14,SNR=7.4						
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**20.46**	**286**	P	**P**	**08 16 55.1**	**-0.7**
H29M	**Whitestone**	**20.49**	**35**	P	**P**	**08 16 55.8**	**-0.2**
J30M	**Hart River**	**20.56**	**41**	P	**P**	**08 16 57.2**	**+0.3**
F28M	**Old Crow**	**20.70**	**31**	P	**P**	**08 16 58.6**	**+0.2**
I30M	**Mount Dempster**	**20.79**	**39**	P	**P**	**08 16 59.8**	**+0.4**
I30M				IAmb	IAmb	08 17 18.1	
	comp=Z,1.0nm,0.8s						
G29M	**Pine Creek**	**20.95**	**34**	P	**P**	**08 17 00.9**	**0.0**
EPYK	**Eagle Plains**	**21.15**	**36**	P	**P**	**08 17 03.3**	**+0.1**
G30M	**tAoh Zraii Nji**	**21.60**	**35**	P	**P**	**08 17 07.7**	**-0.3**
G30M				IAmb	IAmb	08 17 27.2	
	comp=Z,1.7nm,0.8s						
E29M	**Blow River**	**21.75**	**31**	P	**P**	**08 17 09.4**	**-0.2**
E29M				IAmb	IAmb	08 17 13.3	
	comp=Z,0.9nm,0.6s						
H31M	**Peel River**	**21.80**	**38**	P	**P**	**08 17 08.8**	**-1.3**
H31M				IAmb	IAmb	08 17 10.2	
	comp=Z,3.0nm,0.9s						
F30M	**Barrier River**	**22.05**	**33**	P	**P**	**08 17 13.1**	**+0.4**
F30M				IAmb	IAmb	08 17 34.9	
	comp=Z,1.9nm,0.7s						
G31M	**Satah River**	**22.27**	**36**	P	**P**	**08 17 13.9**	**-1.2**
G31M				IAmb	IAmb	08 17 43.0	
	comp=Z,1.4nm,0.7s						
INK	**Inuvik**	**23.12**	**33**	P	**P**	**08 17 24.4**	**+0.4**
INK				IAmb	IAmb	08 17 28.2	
	comp=Z,1.9nm,1.1s						
SEY	**Seymchan**	**23.18**	**313**	LR	LR	08 27 51.5	
	comp=Z,98nm,19.0s,baz=330,slow=40						
BBB	**Bella Bella**	**24.47**	**74**	LR	LR	08 25 47.4	
	comp=Z,35nm,20.0s,baz=181,slow=33						
H11N2	**WAKE ISLAND Hy**	**37.73**	**220**	T	T	09 00 21.2	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**37.74**	**220**	T	T	09 00 26.4	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**37.75**	**220**	T	T	09 00 27.5	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**38.92**	**219**	T	T	09 01 50.1	
	baz=23,slow=76,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**38.93**	**219**	T	T	09 01 40.7	
	baz=23,slow=76,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**38.94**	**219**	T	T	09 01 38.2	
	baz=23,slow=76,SNR=4.4						
PDAR	**Pinedale Array**	**39.85**	**80**	P	**P**	**08 19 53.9**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=301,slow=4.0,SNR=9.6						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**39.85**	**80**	P	**P**	**08 19 53.5**	**+1.7**
KSRS	**Korea Array**	**46.00**	**277**	P	**P**	**08 20 42.0**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=60,slow=6.3,SNR=3.0						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**51.86**	**301**	P	**P**	**08 21 25.4**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=47,slow=3.7,SNR=2.5						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**52.16**	**90**	P	**P**	**08 21 29.4**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=285,slow=4.8,SNR=4.6						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**52.16**	**90**	P	**P**	**08 21 30.1**	**+1.4**
KURBB	**Kurchatov Arra**	**62.96**	**319**	P	**P**	**08 22 44.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=44,slow=8.2,SNR=3.5						
	comp=Z,0.2nm,0.4s						
BVAR	**Borovoye Array**	**64.14**	**325**	P	**P**	**08 22 51.6**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=69,slow=7.9,SNR=2.5						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**64.31**	**314**	P	**P**	**08 22 52.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=37,slow=6.2,SNR=3.7						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**64.31**	**314**	P	**P**	**08 22 53.8**	**+0.4**
FINES	**FINESS Array B**	**66.06**	**352**	P	**P**	**08 23 04.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=18,slow=7.6,SNR=12						
	comp=Z,0.9nm,0.6s						
FINES	**FINESS Array B**	**66.06**	**352**	P	**P**	**08 23 04.6**	**+0.2**
HFS	**Hagfors**	**67.95**	**359**	P	**P**	**08 23 16.0**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=345,slow=4.5,SNR=11						
	comp=Z,1.4nm,0.5s						
AKTO	**Aktyubinsk**	**70.40**	**331**	P	**P**	**08 23 31.4**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=0.7,slow=2.3,SNR=3.9						
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**76.34**	**349**	P	**P**	**08 24 06.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=17,slow=6.0,SNR=4.3						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**87.39**	**232**	P	**P**	**08 25 03.8**	**-1.4**
	comp=Z,0.6nm,1.0s,baz=26,slow=5.8,SNR=2.2						
	comp=Z,0.6nm,1.0s						
ESDC	**Sonseca Array**	**87.45**	**12**	P	**P**	**08 25 05.7**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=350,slow=4.5,SNR=4.5						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**90.77**	**231**	P	**P**	**08 25 20.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=31,slow=4.0,SNR=6.0						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**90.77**	**231**	P	**P**	**08 25 20.8**	**-0.3**

NOU ***12*** *08:32:42.2, 38°.26S × 178°.35E, h59km, MLv3.9/11, Off E. Coast of N. Island, N.Z.*
WEL ***12*** *08:32:44.6 ± 0.6, 38°.S ± 4°.× 17°.8E ± °, h63km ± 5km, M3.1/21, ML3.2/21, MLv3.1/21, Error ellipse: s-maj=4.8km s-min=4.3km az=140.3*

ISC 12 08:32:44.1 ±1.5, **38°.02S** ±0°.04 × **177°.88E** ±0°.05, **h80**km ±8km, **n100**, σ1§**14**/116, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWGZ	**Tauwhareparae**	**0.17**	**154**	P	**Pn**	**08 32 56.0**	**+0.1**
TWGZ				S	**Sn**	**08 33 04.8**	**+0.2**
RUGZ	**Raukumara Rang**	**0.17**	**290**	P	**Pn**	**08 32 55.3**	**-0.7**
RUGZ				S	**Sn**	**08 33 03.8**	**-1.0**
PKGZ	**Pakihiroa**	**0.22**	**45**	P	**Pn**	**08 32 55.3**	**-0.8**
PKGZ				S	**Sn**	**08 33 03.1**	**-1.8**
HAZ	**Te Kaha**	**0.28**	**343**	P	**Pn**	**08 32 55.6**	**-0.7**
HAZ				S	**Sn**	**08 33 03.5**	**-1.7**
PUZ	**Puketiti**	**0.30**	**99**	P	**Pn**	**08 32 56.0**	**-0.5**
PUZ				S	**Sn**	**08 33 04.4**	**-1.2**
TKGZ	**Te Karaka**	**0.41**	**184**	P	**Pn**	**08 32 57.5**	**+0.3**
TKGZ				S	**Sn**	**08 33 07.3**	**+0.4**
MWZ	**Matawai**	**0.42**	**222**	P	**Pn**	**08 32 57.4**	**+0.1**
MWZ				S	**Sn**	**08 33 06.6**	**-0.4**
TBAS	**Tolaga Bay Are**	**0.48**	**137**	P	**Pn**	**08 32 58.6**	**+0.9**
TBAS				S	**Sn**	**08 33 11.1**	**+3.3**
CNGZ	**Carnagh Statio**	**0.53**	**151**	P	**Pn**	**08 32 58.8**	**+0.7**
CNGZ				S	**Sn**	**08 33 11.6**	**+3.1**
TDHS	**Te Araroa Dist**	**0.55**	**44**	P	**Pn**	**08 32 58.1**	**-0.1**
TDHS				S	**Sn**	**08 33 09.7**	**+1.0**
MXZ	**Matakaoa Point**	**0.57**	**36**	P	**Pn**	**08 32 57.8**	**-0.7**
MXZ	**Matakaoa Point**	**0.57**	**36**	P	**Pn**	**08 32 58.1**	**-0.4**
MXZ				S	**Sn**	**08 33 08.8**	**-0.4**
RAGZ	**Rawiri**	**0.60**	**218**	P	**Pn**	**08 32 59.4**	**+0.5**
RAGZ				S	**Sn**	**08 33 10.7**	**+0.8**
GWTS	**Gisborne Waipa**	**0.60**	**177**	P	**Pn**	**08 32 59.6**	**+0.8**
GWTS				S	**Sn**	**08 33 11.9**	**+2.2**
URZ	**Urewera**	**0.65**	**249**	P	**Pn**	**08 32 59.2**	**-0.1**
URZ	**Urewera**	**0.65**	**249**	P	**Pn**	**08 32 59.3**	**-0.1**
URZ				S	**Sn**	**08 33 10.3**	**-0.3**
RIGZ	**Rimuhau**	**0.69**	**188**	P	**Pn**	**08 33 00.3**	**+0.6**
WHRZ	**Whale Island**	**0.74**	**283**	P	**Pn**	**08 33 00.7**	**+0.5**
SNGZ	**Shannon Statio**	**0.87**	**209**	P	**Pn**	**08 33 02.6**	**+0.9**
PRGZ	**Paritu Road**	**0.90**	**180**	P	**Pn**	**08 33 02.6**	**+0.6**
EDRZ	**Edgecumbe**	**0.91**	**264**	P	**Pn**	**08 33 02.0**	**-0.1**
RTZ	**Ruatahuna**	**0.92**	**230**	P	**Pn**	**08 33 02.9**	**+0.5**
MUGZ	**Murupara**	**0.99**	**242**	P	**Pn**	**08 33 03.3**	**+0.3**
KNZ	**Kokohu**	**1.01**	**189**	P	**Pn**	**08 33 03.5**	**+0.3**
OPRZ	**Ohinepanea**	**1.07**	**279**	P	**Pn**	**08 33 03.5**	**-0.4**
RAHZ	**Arahi**	**1.09**	**215**	P	**Pn**	**08 33 05.1**	**+0.8**
TARZ	**Mount Tarawera**	**1.11**	**259**	P	**Pn**	**08 33 05.3**	**+0.8**
RRRZ	**Republican Roa**	**1.12**	**253**	P	**Pn**	**08 33 04.9**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.13**	**179**	P	**Pn**	**08 33 05.6**	**+0.8**
MTHZ	**Maungataniwha**	**1.16**	**224**	P	**Pn**	**08 33 06.0**	**+0.8**
WHHZ	**Waihua**	**1.17**	**206**	P	**Pn**	**08 33 06.2**	**+0.9**
HLRZ	**Highlands Stat**	**1.23**	**259**	P	**Pn**	**08 33 06.6**	**+0.6**
KARZ	**Kaharoa**	**1.29**	**270**	P	**Pn**	**08 33 06.8**	**0.0**
HRRZ	**Handcock Road**	**1.31**	**253**	P	**Pn**	**08 33 07.6**	**+0.5**
TGRZ	**Tauranga**	**1.32**	**282**	P	**Pn**	**08 33 06.8**	**-0.3**
HSRZ	**Hossack Road**	**1.32**	**257**	P	**Pn**	**08 33 08.0**	**+0.8**
ALRZ	**Allen Road**	**1.33**	**246**	P	**Pn**	**08 33 07.5**	**+0.3**
NMHZ	**Naumai**	**1.36**	**218**	P	**Pn**	**08 33 08.9**	**+1.1**
MRHZ	**Matea Rd**	**1.41**	**234**	P	**Pn**	**08 33 08.8**	**+0.5**
ARHZ	**Aropaoanui**	**1.42**	**209**	P	**Pn**	**08 33 09.2**	**+0.8**
BKZ	**Black Stump Fm**	**1.58**	**223**	P	**Pn**	**08 33 10.9**	**+0.4**
BKZ	**Black Stump Fm**	**1.58**	**223**	S	**Sn**	**08 33 31.2**	**+0.8**
BKZ	**Black Stump Fm**	**1.58**	**223**	P	**Pn**	**08 33 11.2**	**+0.7**
KUTZ	**Kaahu Road**	**1.69**	**253**	P	**Pn**	**08 33 12.5**	**+0.6**
MCHZ	**McNeill Hill**	**1.69**	**213**	P	**Pn**	**08 33 12.6**	**+0.6**
CKHZ	**Cape Kidnapper**	**1.75**	**201**	P	**Pn**	**08 33 12.8**	**+0.1**
KWHZ	**Kaweka Forest**	**1.81**	**219**	P	**Pn**	**08 33 13.8**	**+0.3**
WATZ	**Wairara**	**1.82**	**247**	P	**Pn**	**08 33 14.7**	**+1.0**
RITZ	**Rihia Road**	**1.85**	**238**	P	**Pn**	**08 33 14.9**	**+0.9**
RATZ	**Rangitukua**	**1.86**	**242**	P	**Pn**	**08 33 15.1**	**+0.9**
TLZ	**Tolley Road**	**1.87**	**260**	P	**Pn**	**08 33 15.1**	**+0.7**
TOZ	**Tahuroa Road**	**1.91**	**278**	P	**Pn**	**08 33 14.8**	**+0.1**
KAHZ	**Kahuranaki**	**1.93**	**204**	P	**Pn**	**08 33 15.1**	**0.0**
KRHZ	**Kereru**	**2.00**	**216**	P	**Pn**	**08 33 15.7**	**-0.3**
TMVZ	**Te Maari**	**2.03**	**237**	P	**Pn**	**08 33 17.0**	**+0.5**
ETVZ	**East Tongariro**	**2.03**	**236**	P	**Pn**	**08 33 17.1**	**+0.5**
NTVZ	**North Tongarir**	**2.04**	**238**	P	**Pn**	**08 33 17.3**	**+0.7**
BHHZ	**Black Hill Sta**	**2.04**	**224**	P	**Pn**	**08 33 17.0**	**+0.4**
KRVZ	**Karewarewa**	**2.06**	**238**	P	**Pn**	**08 33 17.5**	**+0.6**
WTVZ	**West Tongariro**	**2.10**	**238**	P	**Pn**	**08 33 18.1**	**+0.6**
SNVZ	**South Ngauruho**	**2.11**	**236**	P	**Pn**	**08 33 18.1**	**+0.6**
NGZ	**Ngauruhoe**	**2.13**	**237**	P	**Pn**	**08 33 18.4**	**+0.5**
PXZ	**Pawanui**	**2.16**	**201**	P	**Pn**	**08 33 17.2**	**-0.8**
MOVZ	**Moawhango**	**2.16**	**230**	P	**Pn**	**08 33 18.3**	**0.0**
COVZ	**Chateau Observ**	**2.18**	**237**	P	**Pn**	**08 33 19.1**	**+0.6**
TWVZ	**Taurewa**	**2.18**	**241**	P	**Pn**	**08 33 19.4**	**+0.8**
WHVZ	**Whangaehu Hut**	**2.19**	**234**	P	**Pn**	**08 33 19.1**	**+0.3**
FWVZ	**Far West T-bar**	**2.20**	**235**	P	**Pn**	**08 33 19.2**	**+0.3**
MAVZ	**Matarangi**	**2.20**	**235**	P	**Pn**	**08 33 19.3**	**+0.3**
WNVZ	**Wahianoa**	**2.21**	**233**	P	**Pn**	**08 33 19.4**	**+0.4**
TRVZ	**Turoa**	**2.23**	**234**	P	**Pn**	**08 33 19.5**	**+0.2**
PNHZ	**Pukenui**	**2.30**	**214**	P	**Pn**	**08 33 19.2**	**-0.8**
WPHZ	**Waipukurau**	**2.33**	**208**	P	**Pn**	**08 33 19.6**	**-0.8**
MKAZ	**Moumakai**	**2.35**	**292**	P	**Pn**	**08 33 21.0**	**+0.3**
PKVZ	**Pokaka**	**2.35**	**237**	P	**Pn**	**08 33 21.6**	**+0.8**
HIZ	**Hauiti**	**2.43**	**258**	P	**Pn**	**08 33 23.2**	**+1.5**
HIZ	**Hauiti**	**2.43**	**258**	P	**Pn**	**08 33 23.3**	**+1.5**
TSZ	**Takapari Road**	**2.52**	**216**	P	**Pn**	**08 33 22.1**	**-1.0**
ETAZ	**East Tamaki Re**	**2.58**	**294**	P	**Pn**	**08 33 25.0**	**+1.2**
GRZ	**Great Barrier**	**2.63**	**312**	P	**Pn**	**08 33 24.5**	**+0.1**
DVHZ	**Dannevirke**	**2.63**	**210**	P	**Pn**	**08 33 23.1**	**-1.4**
VRZ	**Vera Road**	**2.69**	**245**	P	**Pn**	**08 33 26.4**	**+1.2**
MBAZ	**Motutapu North**	**2.69**	**297**	P	**Pn**	**08 33 26.0**	**+0.8**
WAZ	**Wanganui**	**2.85**	**232**	P	**Pn**	**08 33 28.1**	**+0.8**
POWZ	**Post Office Ro**	**2.88**	**214**	P	**Pn**	**08 33 26.7**	**-1.1**
PRWZ	**Pori Road**	**2.93**	**210**	P	**Pn**	**08 33 27.2**	**-1.3**
BFZ	**Birch Farm**	**2.94**	**205**	P	**Pn**	**08 33 27.3**	**-1.4**
LREZ	**Lake Rotokare**	**3.08**	**241**	P	**Pn**	**08 33 31.7**	**+1.2**
MRZ	**Mangatainoka R**	**3.18**	**213**	P	**Pn**	**08 33 30.0**	**-1.9**
PREZ	**Palmer Road**	**3.20**	**245**	P	**Pn**	**08 33 34.7**	**+2.6**
KHEZ	**Kahui Hut**	**3.28**	**246**	P	**Pn**	**08 33 35.1**	**+1.7**
KHEZ	**Kahui Hut**	**3.28**	**246**	P	**Pn**	**08 33 35.9**	**+2.6**
WCZ	**Waipu Caves**	**3.52**	**305**	P	**Pn**	**08 33 37.4**	**+1.0**
SNZO	**South Karori**	**4.10**	**216**	P	**Pn**	**08 33 42.4**	**-1.9**
OUZ	**Omahuta**	**4.44**	**308**	P	**Pn**	**08 33 53.3**	**+4.3**
TKNZ	**Takaka Hill**	**4.85**	**230**	P	**Pn**	**08 33 53.0**	**-1.6**
TKNZ				S	**Sn**	**08 34 47.2**	**-2.3**
QRZ	**Quartz Range**	**5.00**	**234**	P	**Pn**	**08 33 57.0**	**+0.4**
QRZ	**Quartz Range**	**5.00**	**234**	P	**Pn**	**08 33 55.5**	**-1.2**
QRZ				S	**Sn**	**08 34 49.7**	**-3.5**
KHZ	**Kahutara**	**5.50**	**216**	P	**Pn**	**08 34 02.0**	**-1.5**
INZ	**Inchbonnie**	**6.80**	**224**	P	**Pn**	**08 34 21.0**	**-0.1**

DJA ***12*** *09:12:13.0 ± 0.4, 8°.S ± 4°.× 12°.9E ± °, h189km ± 16km, M4.5/13, mB5.0/4, mb4.3/7, MLv4.7/13, Mw(mB)4.3/4*

ISC 12 09:12:12.9 ±1.0, **7°.6S** ±0°.1 × **128°.61E** ±0°.09, **h151**km, **n11**, σ1§**41**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.82**	**243**	P	**Pn**	**09 13 25.9**	**+1.8**
SOEI				S	**Sn**	**09 14 18.3**	**-1.3**
BATI	**Baumata**	**5.56**	**241**	P	**Pn**	**09 13 32.6**	**-1.2**
FAKI	**Fak Fak**	**5.86**	**38**	P	**Pn**	**09 13 36.2**	**-1.6**
FAKI	**Fak Fak**	**5.86**	**38**	P	**Pn**	**09 13 37.8**	**0.0**
	0.1nm31nm,0.5s						
SIJI	**Sorong**	**7.15**	**22**	P	**Pn**	**09 13 55.0**	**0.0**
PLAI	**Plampang**	**10.88**	**263**	P	**Pn**	**09 14 44.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**10.87**	**195**	P	**Pn**	**09 14 44.2**	**-0.3**
WRAB	**Tennant Creek**	**13.51**	**156**	P	**Pn**	**09 15 16.9**	**-1.7**
QIS	**Mount Isa**	**16.74**	**142**	P	**Pn**	**09 15 59.9**	**+1.1**
AS01	**Alice Springs**	**16.82**	**163**	P	**Pn**	**09 16 01.2**	**+1.5**
MTSU	**Mount Surprise**	**18.56**	**126**	P	**Pn**	**09 16 21.5**	**+1.1**

GFZ ***12*** *09:29:22.2 ± 0.2, 21°.N ± 2°.× 12°.2E ± °, h30km, M4.9/11, mb4.9/11*
NEIC ***12*** *09:29:23.1 ± 1.1, 20°.93N ± 0°.10 × 121°.8E ± 0°.1, h73km ± 8km, mb4.5/21, Error ellipse: s-maj=16.5km s-min=12.9km az=54.0*
JMA ***12*** *09:29:23.2 ± 0.7, 21°.N ± 3°.× 12°.2E ± °, h4km, MV4.5/14, TAIWAN REGION*
TAP ***12*** *09:29:24.6, 21°.11N × 121°.62E, h102km, ML4.7, D*
IDC ***12*** *09:29:25.4 ± 6.1, 21°.05N × 122°.09E, h101km ± 57km, mb3.8/16, mbtmp4.2/17, Error ellipse: s-maj=31.6km s-min=12.3km az=68.0*
MAN ***12*** *09:29:26.0, 20°.88N × 121°.76E, h84km, MS2.9*

ISC 12 09:29:24.6 ±0.6, **21°.00N** ±0°.03 × **121°.66E** ±0°.03, **h86**km ±5km, **n233**, σ1§**67**/363, **mb4.3**/29, **29D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.62**	**153**	*i* P	**Pn**	**09 29 40.1**	**0.0**
BBP				*i* S	**Sn**	**09 29 48.4**	**-3.1**
LYUB	**Lan-yu**	**1.00**	**356**	⇓*i* P	**Pn**	**09 29 44.2**	**+0.1**
LYUB				*i* S	**Sn**	**09 29 58.2**	**-0.3**
TSEB	**Hengchuen, Pin**	**1.14**	**322**	⇓*i* P	**Pn**	**09 29 46.4**	**+0.7**
TSEB				*i* S	**Sn**	**09 30 02.7**	**+1.1**
TWKBT	**Hengchun**	**1.23**	**320**	⇓*i* P	**Pn**	**09 29 47.0**	**+0.3**
TWKBT				*i* S	**Sn**	**09 30 02.9**	**-0.5**
SMST	**Manzhou Townsh**	**1.27**	**323**	*i* P	**Pn**	**09 29 47.5**	**+0.2**
SMST				*i* S	**Sn**	**09 30 04.2**	**-0.2**
HEN	**Hengchun**	**1.32**	**320**	*i* P	**Pn**	**09 29 48.4**	**+0.5**
HEN				*i* S	**Sn**	**09 30 06.0**	**+0.6**
SLIU	**Shizi**	**1.45**	**327**	⇓*eP*	**Pn**	**09 29 49.3**	**-0.3**
SLIU				*eS*	**Sn**	**09 30 07.8**	**-0.6**
TAWH	**Dawu Township**	**1.52**	**332**	⇓*i* P	**Pn**	**09 29 49.7**	**-0.7**
TAWH				*eS*	**Sn**	**09 30 09.0**	**-0.8**
TAW	**Tawu**	**1.53**	**332**	⇓*i* P	**Pn**	**09 29 49.6**	**-0.9**
TAW				*S*	**Sn**	**09 30 08.7**	**-1.4**
SCZT	**Fangliau**	**1.67**	**325**	⇓*i* P	**Pn**	**09 29 52.3**	**-0.1**
SCZT				*i* S	**Sn**	**09 30 12.2**	**-1.3**
LDUT	**Ludao**	**1.68**	**354**	⇓*eP*	**Pn**	**09 29 50.9**	**-1.5**
LDUT				*eS*	**Sn**	**09 30 11.3**	**-2.2**
ECL	**Taimali**	**1.72**	**338**	⇓*P*	**Pn**	**09 29 51.7**	**-1.3**
ECL				*eS*	**Sn**	**09 30 12.7**	**-1.9**
SSPT	**Xinbi**	**1.79**	**326**	⇓*eP*	**Pn**	**09 29 53.8**	**-0.2**
SSPT				*S*	**Sn**	**09 30 15.3**	**-0.9**
WLCH	**Liuqiu**	**1.80**	**319**	⇓*i* P	**Pn**	**09 29 55.2**	**+1.2**
WLCH				*i* S	**Sn**	**09 30 18.4**	**+2.1**
TWP	**Hsiaoliuchiu**	**1.80**	**318**	*i* P	**Pn**	**09 29 55.0**	**+0.9**
TWP				*i* S	**Sn**	**09 30 17.8**	**+1.3**
MASBT	**Mashibuluo**	**1.87**	**329**	⇓*i* P	**Pn**	**09 29 54.6**	**-0.3**
MASBT				*S*	**Sn**	**09 30 17.3**	**-0.7**
TWGBT	**Beinan**	**1.89**	**344**	⇓*i* P	**Pn**	**09 29 54.0**	**-1.2**
TWGBT				*eS*	**Sn**	**09 30 16.8**	**-1.7**
TWG	**Pinlang**	**1.89**	**343**		**Pn**	**09 29 54.1**	**-1.2**
TWG	**Pinlang**	**1.89**	**343**	*P*	**Pn**	**09 29 54.2**	**-1.2**
TWG	**Pinlang**	**1.89**	**343**	⇓*i* P	**Pn**	**09 29 54.1**	**-1.2**
TWG				*i* S	**Sn**	**09 30 16.8**	**-1.8**
TSMG	**Majia**	**1.94**	**331**	*eP*	**Pn**	**09 29 55.6**	**-0.3**
LONT	**Longtian**	**1.96**	**346**	*i* P	**Pn**	**09 29 55.1**	**-1.1**
LONT				*i* S	**Sn**	**09 30 18.6**	**-1.6**
SSD	**Sandimen**	**1.98**	**331**	*i* P	**Pn**	**09 29 56.0**	**-0.4**
SSD				*i* S	**Sn**	**09 30 18.8**	**-2.0**
EDH	**Donghe**	**1.99**	**351**	⇓*i* P	**Pn**	**09 29 55.8**	**-0.8**
EDH				*i* S	**Sn**	**09 30 19.8**	**-1.1**
SGLT	**Jiouru**	**2.03**	**328**	*eP*	**Pn**	**09 29 57.6**	**+0.5**
SGLT				*eS*	**Sn**	**09 30 20.4**	**-1.5**
WSSB	**Gushan**	**2.09**	**322**	*i* P	**Pn**	**09 29 58.3**	**+0.4**
WSSB				*i* S	**Sn**	**09 30 23.2**	**0.0**
CHKT	**Chengkung**	**2.11**	**353**	*i* P	**Pn**	**09 29 57.2**	**-1.0**
CHKT				*i* S	**Sn**	**09 30 21.8**	**-1.9**
ECS	**Chishang**	**2.12**	**349**	*i* P	**Pn**	**09 29 59.0**	**+0.6**
ECS				*S*	**Sn**	**09 30 24.1**	**0.0**
SCST	**Cishan**	**2.17**	**330**	*eP*	**Pn**	**09 29 59.1**	**+0.2**
SCST				*eS*	**Sn**	**09 30 24.0**	**-1.1**
EHD	**Haiduan**	**2.18**	**349**	*i* P	**Pn**	**09 29 57.8**	**-1.3**
EHD				*i* S	**Sn**	**09 30 23.1**	**-2.4**
CHKH	**Chenggong**	**2.19**	**354**	*i* P	**Pn**	**09 29 58.2**	**-1.1**
CHKH				*eS*	**Sn**	**09 30 23.7**	**-2.1**
SLGT	**Liugui**	**2.20**	**335**	*i* P	**Pn**	**09 29 59.2**	**-0.2**
SLGT				*i* S	**Sn**	**09 30 25.1**	**-0.7**
FULB	**Fuli**	**2.21**	**351**	*eP*	**Pn**	**09 29 59.0**	**-0.6**
FULB				*eS*	**Sn**	**09 30 26.4**	**+0.1**
ELDTW	**Lidau**	**2.26**	**345**	*eP*	**Pn**	**09 29 59.1**	**-1.1**
ELDTW				*eS*	**Sn**	**09 30 25.0**	**-2.5**
STYH	**Taoyuan**	**2.31**	**339**	*eP*	**Pn**	**09 30 00.4**	**-0.4**
ECBN	**Changbin**	**2.31**	**355**	*i* P	**Pn**	**09 30 00.1**	**-0.7**
ECBN				*i* S	**Sn**	**09 30 27.1**	**-1.5**
SHHT	**Tainan City**	**2.35**	**329**	*eP*	**Pn**	**09 30 01.9**	**+0.5**
SHHT				*eS*	**Sn**	**09 30 27.8**	**-1.7**
EYUL	**Yuli**	**2.36**	**352**	*eP*	**Pn**	**09 30 00.9**	**-0.6**
EYUL				*eS*	**Sn**	**09 30 28.9**	**-0.8**
CHN3	**Shinhua**	**2.39**	**330**	*i* P	**Pn**	**09 30 02.5**	**+0.7**
CHN3				*S*	**Sn**	**09 30 31.6**	**+1.2**
YULB	**Yu-li**	**2.41**	**352**		**Pn**	**09 30 01.0**	**-1.1**
YULB	**Yu-li**	**2.41**	**352**	*P*	**Pn**	**09 30 01.9**	**-0.2**
YULB	**Yu-li**	**2.41**	**352**	*eP*	**Pn**	**09 30 00.9**	**-1.2**
YULB				*S*	**Sn**	**09 30 29.2**	**-1.6**
CHN1	**Nanshi**	**2.42**	**334**	*eP*	**Pn**	**09 30 01.8**	**-0.4**
CHN1				*eS*	**Sn**	**09 30 28.7**	**-2.4**
WTP	**Ta-pu**	**2.44**	**337**	*i* P	**Pn**	**09 30 02.2**	**-0.4**
WTP				*eS*	**Sn**	**09 30 31.4**	**-0.2**
SNST	**Tainan City**	**2.46**	**334**	*eP*	**Pn**	**09 30 02.6**	**-0.2**
SNST				*eS*	**Sn**	**09 30 30.5**	**-1.5**
SSHA	**Shanhua**	**2.48**	**329**	*i* P	**Pn**	**09 30 03.4**	**+0.4**
SSHA				*i* S	**Sn**	**09 30 31.9**	**-0.6**
TPUB	**Ta-pu**	**2.48**	**338**		**Pn**	**09 30 02.4**	**-0.8**
TPUB	**Ta-pu**	**2.48**	**338**	*P*	**Pn**	**09 30 02.7**	**-0.4**
TPUB	**Ta-pu**	**2.48**	**338**	*i* P	**Pn**	**09 30 02.8**	**-0.6**
TPUB				*eS*	**Sn**	**09 30 31.4**	**-1.3**
HGSD	**Ruisui**	**2.49**	**355**	*i* P	**Pn**	**09 30 02.6**	**-0.6**
HGSD				*i* S	**

YHNB	**Yeheng**	**3.66**	**356**	⇓P		**Pn**	**09 30 19.8**	**+0.7**
YHNB				eS		**Sn**	**09 31 00.1**	**-1.1**
YOJ	**Yonaguni jima**	**3.66**	**20**			**Pn**	**09 30 19.4**	**+0.3**
YOJ	**Yonaguni jima**	**3.66**	**20**	P		**Pn**	**09 30 18.6**	**-0.5**
YOJ	**Yonaguni jima**	**3.66**	**20**	P		**Pn**	**09 30 19.1**	**0.0**
YOJ				eS		**Sn**	**09 30 58.9**	**-2.3**
YOJ	**Yonaguni jima**	**3.66**	**20**	eP		**Pn**	**09 30 19.4**	**+0.3**
YOJ				eS		**Sn**	**09 31 00.3**	**-0.9**
NSTT	**Nanjuang**	**3.67**	**351**	eP		**Pn**	**09 30 20.4**	**+1.3**
NSTT				eS		**Sn**	**09 31 00.1**	**-1.1**
LIOB	**Emei**	**3.68**	**351**	eP		**Pn**	**09 30 19.4**	**+0.1**
LIOB				eS		**Sn**	**09 30 59.6**	**-2.0**
TWE	**Neicheng**	**3.70**	**0**	eP		**Pn**	**09 30 20.2**	**+0.6**
TWE				eS		**Sn**	**09 31 01.0**	**-1.1**
FUSB	**Fushanzhiwuyua**	**3.74**	**359**	⇓P		**Pn**	**09 30 20.7**	**+0.5**
FUSB				eS		**Sn**	**09 31 01.2**	**-2.0**
NWLT	**Wulai**	**3.76**	**358**	eP		**Pn**	**09 30 21.2**	**+0.8**
NWLT				eS		**Sn**	**09 31 02.5**	**-1.2**
KSHI	**Guanxi Townshi**	**3.79**	**353**	eP		**Pn**	**09 30 22.5**	**+1.8**
KSHI				eS		**Sn**	**09 31 03.2**	**-1.0**
SBCB	**Hsinchu**	**3.83**	**351**	eP		**Pn**	**09 30 22.5**	**+1.2**
IRIF	**Iriomote-Funau**	**3.83**	**30**	eP		**Pn**	**09 30 21.1**	**-0.2**
IRIF				eS		**Sn**	**09 31 03.5**	**-1.7**
EGS		**3.83**	**4**	eP		**Pn**	**09 30 22.4**	**+1.0**
EGS				eS		**Sn**	**09 31 03.3**	**-2.1**
JKRS	**Kuro-shima**	**3.88**	**34**	eP		**Pn**	**09 30 21.7**	**-0.4**
JKRS				eS		**Sn**	**09 31 05.2**	**-1.4**
TIPB	**Shuangxi**	**3.96**	**2**	eP		**Pn**	**09 30 24.0**	**+1.0**
TIPB				eS		**Sn**	**09 31 07.3**	**-1.0**
TATO	**Taipei**	**3.96**	**358**			**Pn**	**09 30 23.5**	**+0.4**
TATO	**Taipei**	**3.96**	**358**	eP		**Pn**	**09 30 24.4**	**+1.3**
TATO				eS		**Sn**	**09 31 07.8**	**-0.5**
TWA	**Mucha**	**3.96**	**359**	eP		**Pn**	**09 30 23.7**	**+0.6**
TWA				eS		**Sn**	**09 31 07.8**	**-0.6**
NCUH	**Zhongli**	**3.97**	**354**	eP		**Pn**	**09 30 23.5**	**+0.2**
TWB1	**Santiao Chiao**	**4.00**	**4**	eP		**Pn**	**09 30 24.1**	**+0.5**
TWB1				eS		**Sn**	**09 31 07.2**	**-2.2**
NWF	**Wu-fen Shan**	**4.05**	**2**	eP		**Pn**	**09 30 26.3**	**+1.9**
NWF				eS		**Sn**	**09 31 10.8**	**+0.1**
WFSB	**Wu-fen Shan**	**4.05**	**2**	eP		**Pn**	**09 30 25.1**	**+0.8**
WFSB				eS		**Sn**	**09 31 09.9**	**-0.7**
JIJ	**Ishigaki jima**	**4.06**	**34**	eP		**Pn**	**09 30 23.5**	**-0.9**
JIJ				eS		**Sn**	**09 31 07.6**	**-3.1**
YM01	**YM01**	**4.13**	**359**	eP		**Pn**	**09 30 25.9**	**+0.5**
YM01				eS		**Sn**	**09 31 11.4**	**-1.2**
TNOU	**National Taiwa**	**4.13**	**1**	eP		**Pn**	**09 30 25.9**	**+0.5**
TNOU				eS		**Sn**	**09 31 10.9**	**-1.7**
ZUZH	**Zhuzihu**	**4.14**	**359**	eP		**Pn**	**09 30 26.3**	**+0.7**
YM08	**YM08**	**4.17**	**359**	eP		**Pn**	**09 30 26.7**	**+0.7**
YM08				eS		**Sn**	**09 31 10.1**	**-3.4**
JISG	**Ishigakijimahi**	**4.33**	**34**	eP		**Pn**	**09 30 27.4**	**-0.7**
JISG				eS		**Sn**	**09 31 14.7**	**-2.6**
VWUC	**VWUC**	**4.46**	**333**	eP		**Pn**	**09 30 28.5**	**-1.4**
VWUC				eS		**Sn**	**09 31 15.4**	**-5.2**
JTJ	**Tarama**	**4.58**	**37**	eS		**Sn**	**09 31 21.4**	**-2.1**
KNMB	**Chin-men Tao**	**4.58**	**319**			**Pn**	**09 30 29.5**	**-2.0**
KNMB	**Chin-men Tao**	**4.58**	**319**	*i* P		**Pn**	**09 30 30.8**	**-0.8**
KNMB				*i* S		**Sn**	**09 31 18.9**	**-4.7**
VDOS	**Pratas Island**	**4.62**	**267**	eP		**Pn**	**09 30 31.9**	**-0.1**
VDOS				eS		**Sn**	**09 31 21.6**	**-2.9**
PCYT	**Pengchaiyu**	**4.62**	**5**	*i* P		**Pn**	**09 30 32.3**	**+0.2**
PCYT				eS		**Sn**	**09 31 21.8**	**-2.7**
ZPLA	**Ao Xicun**	**4.65**	**310**	P		**Pn**	**09 30 31.6**	**-0.8**
ZPLA				eS		**Sn**	**09 31 20.7**	**-4.3**
PTMZ	**Houxiangcun**	**4.65**	**330**	P		**Pn**	**09 30 31.1**	**-1.4**
PTMZ				eS		**Sn**	**09 31 19.4**	**-5.8**
DSXP	**Dongshan**	**4.76**	**305**	eP		**Pn**	**09 30 33.3**	**-0.6**
DSXP				eS		**Sn**	**09 31 23.4**	**-4.4**
QZH2	**Quanzhou**	**4.84**	**325**	*i* Pn		**Pn**	**09 30 33.8**	**-1.2**
QZH2				Sn		**Sn**	**09 31 27.5**	**-2.2**
QZH2				smax	smax			
	comp=N,80nm,0.5s							
QZH2				smax	smax			
	comp=E,91nm,0.8s							
JMJ	**Miyako jima 2**	**5.06**	**41**	P		**Pn**	**09 30 36.3**	**-1.7**
JMJ	**Miyako jima 2**	**5.06**	**41**	eP		**Pn**	**09 30 35.3**	**-2.7**
JMJ				eS		**Sn**	**09 31 32.1**	**-3.2**
AXDP	**Jialang**	**5.16**	**319**	⇓P		**Pn**	**09 30 38.6**	**-0.8**
AXDP				eS		**Sn**	**09 31 32.2**	**-5.4**
MATB	**Ma-tsu**	**5.36**	**343**	eP		**Pn**	**09 30 40.3**	**-1.9**
MATB				eS		**Sn**	**09 31 35.9**	**-6.7**
MHZQ	**Yeshan**	**5.62**	**335**	*i* P		**Pn**	**09 30 44.3**	**-1.3**
MHZQ				*i* S		**Sn**	**09 31 44.2**	**-4.7**
LYJJ	**Jianjiangzhen**	**5.79**	**343**	eP		**Pn**	**09 30 46.5**	**-1.6**
LYJJ				eS		**Sn**	**09 31 47.1**	**-5.9**
XPSS	**Dashiqiu**	**6.05**	**347**	*i* P		**Pn**	**09 30 50.2**	**-1.4**
XPSS				eS		**Sn**	**09 31 54.7**	**-4.7**
SXFK	**Yanhouchang**	**6.51**	**326**	⇓eP		**Pn**	**09 30 56.6**	**-1.3**
SXFK				eS		**Sn**	**09 32 04.1**	**-6.6**
LQP	**Lukban**	**6.85**	**181**	eP		**Pn**	**09 31 04.8**	**+2.1**
JOW	**Kunigami**	**8.38**	**45**	Pn		**Pn**	**09 31 21.2**	**-2.2**
JOW	**Kunigami**	**8.38**	**45**	P		**Pn**	**09 31 22.1**	**-1.3**
JOW	**Kunigami**	**8.38**	**45**	eP		**Pn**	**09 31 21.2**	**-2.2**
PLP	**Palo**	**10.29**	**161**	eP		**Pn**	**09 31 52.4**	**+3.1**
NJ2	**Nanjing**	**11.29**	**348**	eP		**Pn**	**09 32 03.4**	**+0.5**
NJ2				pmax	pmax			
	comp=Z,33nm,0.7s							
KSRS	**Korea Array**	**17.27**	**17**	P		**Pn**	**09 33 19.9**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=198,slow=11,SNR=13							
KS19	**Wonju Array Si**	**17.30**	**17**	P		**Pn**	**09 33 20.3**	**-0.4**
BJI2	**Beijing**	**19.53**	**347**	P		**P**	**09 33 45.4**	**+0.2**
BJI2				pP		**pP**	**09 34 00.8**	**-0.7**
BJI2				sP		**sP**	**09 34 10.1**	**-2.0**
BJI2				pmax	pmax			
	comp=Z,3.0nm,0.7s							
TOLI2	**Tolitoli**	**19.79**	**183**	P		**Pn**	**09 33 50.8**	**+0.3**
GTOI	**Gorontalo**	**20.28**	**176**	P		**P**	**09 33 53.0**	**-0.6**
	comp=Z,15nm,0.7s							
MPSI	**Mapaga**	**20.61**	**185**	P		Pn	09 33 58.7	-1.4
HHC	**Hu-ho-hao-te**	**21.57**	**339**	eP		**P**	**09 34 10.2**	**+2.9**
HHC				pmax	pmax			
	comp=Z,8.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,100nm,5.3s							
HHC				LR	LR			
	comp=N,330nm,13.8s							
HHC				LR	LR			
	comp=E,650nm,13.8s							
HHC				LR	LR			
	comp=Z,1μm,15.3s							
JYT	**Yasato**	**22.19**	**43**	P		**P**	**09 34 16.9**	**+3.1**
JMM	**Marumori**	**23.59**	**40**	P		**P**	**09 34 30.8**	**+3.1**
MMSI	**Mamuju**	**23.70**	**187**	P		**P**	**09 34 30.7**	**+1.8**
SPSI	**Sidrap Palu**	**24.88**	**184**	P		**P**	**09 34 41.3**	**+1.8**
SONM	**Songino Array**	**29.47**	**339**	P		**P**	**09 35 20.9**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=151,slow=8.1,SNR=4.1							
	comp=Z,0.5nm,0.3s							
SONM	**Songino Array**	**29.47**	**339**	P		**P**	**09 35 20.9**	**+0.3**
GENI	**Genyem**	**29.64**	**140**	P		**P**	**09 35 23.7**	**+1.5**
WMQ	**Urumqi**	**36.22**	**317**	eP		**P**	**09 36 22.1**	**+2.8**
WMQ				PP		**PnPn**	**09 37 44.2**	**+0.6**
WMQ				pmax	pmax			
	comp=Z,40nm,0.7s							
WMQ				LR	LR			
	comp=N,390nm,18.3s							
WMQ				LR	LR			
	comp=E,750nm,17.1s							
WMQ				LR	LR			
	comp=Z,570nm,19.7s							
KNRA	**Kununurra**	**37.11**	**169**	P		**P**	**09 36 24.9**	**-2.0**
KNRA				IAmb	IAmb		09 36 39.6	
	comp=Z,4.1nm,0.9s							
MKAR	**Makanchi Array**	**40.96**	**318**	P		**P**	**09 37 00.6**	**+1.6**
	comp=Z,2.2nm,0.4s,baz=111,slow=9.2,SNR=23							
	comp=Z,2.2nm,0.4s							
PETK	**Petropavlovsk-**	**42.29**	**32**	P		**P**	**09 37 04.9**	**-4.8**
	comp=Z,4.6nm,0.7s,baz=216,slow=12,SNR=3.7							
	comp=Z,4.6nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**42.32**	**83**	T		T	10 22 41.2	
	baz=282							
H11N2	**WAKE ISLAND Hy**	**42.32**	**83**	T		T	10 22 48.3	
	baz=282							
H11N3	**WAKE ISLAND Hy**	**42.34**	**83**	T		T	10 22 50.9	
	baz=282							
H11S3	**WAKE ISLAND Hy**	**42.35**	**85**	T		T	10 22 27.0	
	baz=281,slow=75,SNR=25							
H11S1	**WAKE ISLAND Hy**	**42.36**	**85**	T		T	10 22 32.0	
	baz=281,slow=75,SNR=28							
H11S2	**WAKE ISLAND Hy**	**42.37**	**85**	T		T	10 22 21.8	
	baz=281,slow=75,SNR=23							
WB0	**Warramunga Arr**	**42.39**	**162**	P		**P**	**09 37 08.9**	**-1.9**
WB0				IAmb	IAmb		09 37 13.8	
	comp=Z,3.5nm,1.0s							
WRA	**Warramunga Arr**	**42.54**	**162**	P		**P**	**09 37 10.5**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=344,slow=9.2,SNR=49							
	comp=Z,2.3nm,0.5s							
WRA	**Warramunga Arr**	**42.54**	**162**	P		**P**	**09 37 09.5**	**-2.5**
ZAA0	**Zalesovo Array**	**43.16**	**329**	P		**P**	**09 37 16.6**	**0.0**
ZAA0				IAmb	IAmb		09 37 17.7	
	comp=Z,7.6nm,0.6s							
ZALV	**Zalesovo Beam**	**43.16**	**329**	P		**P**	**09 37 17.1**	**+0.4**
	comp=Z,6.7nm,0.5s,baz=116,slow=8.0,SNR=31							
	comp=Z,6.7nm,0.5s							
ZALV	**Zalesovo Beam**	**43.16**	**329**	P		**P**	**09 37 16.9**	**+0.2**
KSH2	**Kashi**	**43.29**	**305**	P		**P**	**09 37 20.8**	**+2.7**
KSH2				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KURK	**Kurchatov**	**44.83**	**322**	P		**P**	**09 37 30.7**	**+0.6**
KURBB	**Kurchatov Arra**	**44.85**	**322**	P		**P**	**09 37 30.8**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=115,slow=7.6,SNR=9.4							
	comp=Z,1.3nm,0.4s							
AS31	**Alice Springs**	**45.97**	**164**	P		**P**	**09 37 37.9**	**-1.5**
ASAR	**Alice Springs**	**45.97**	**164**	P		**P**	**09 37 37.9**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=344,slow=7.3,SNR=53							
	comp=Z,1.1nm,0.5s							
ASAR	**Alice Springs**	**45.97**	**164**	P		**P**	**09 37 38.9**	**-0.5**
BVAR	**Borovoye Array**	**50.43**	**322**	P		**P**	**09 38 14.2**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=106,slow=9.4,SNR=5.8							
	comp=Z,1.3nm,0.5s							
INKA	**Innaminka**	**51.85**	**158**	P		**P**	**09 38 23.5**	**-0.7**
INKA				IAmb	IAmb		09 38 25.2	
	comp=Z,2.1nm,0.8s							
STKA	**Stephens Creek**	**55.94**	**160**	P		**P**	**09 38 53.0**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=312,slow=5.3,SNR=4.9							
	comp=Z,0.8nm,0.4s							
AB31	**Akbulak array**	**56.00**	**316**	P		**P**	**09 38 55.0**	**+0.7**
AB31				IAmb	IAmb		09 39 01.5	
	comp=Z,1.1nm,0.6s							
ABKAR	**Akbulak array**	**56.00**	**316**	P		**P**	**09 38 54.9**	**+0.6**
ARTI	**Arti**	**58.01**	**324**	P		**P**	**09 39 08.7**	**+0.4**
L14K	**Kuka Creek**	**64.93**	**31**	P		**P**	**09 39 55.5**	**+0.7**
L14K				IAmb	IAmb		09 39 56.5	
	comp=Z,6.2nm,0.7s							
RAYN	**Ar Rayn**	**69.72**	**288**	P		**P**	**09 40 28.4**	**+2.5**
F26K	**Sheenjek River**	**72.35**	**24**	P		**P**	**09 40 42.0**	**+1.0**
ARCES	**ARCESS Array B**	**72.65**	**339**	P		**P**	**09 40 43.8**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=66,slow=5.0,SNR=4.0							
	comp=Z,1.9nm,0.9s							
SPB2	**Spitsbergen Ar**	**72.67**	**348**	P		**P**	**09 40 43.1**	**+0.4**
M24K	**Tolsona, Glenn**	**72.67**	**29**	P		**P**	**09 40 42.5**	**-0.5**
SPITS	**Spitsbergen Ar**	**72.67**	**348**	P		**P**	**09 40 42.5**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=67,slow=7.4,SNR=4.8							
	comp=Z,5.6nm,0.9s							
D27M	**Malcolm River**	**73.14**	**22**	P		**P**	**09 40 45.5**	**-0.1**
D27M				IAmb	IAmb		09 41 00.7	
	comp=Z,6.2nm,1.1s							
F28M	**Old Crow**	**73.95**	**23**	P		**P**	**09 40 50.4**	**0.0**
F28M				IAmb	IAmb		09 41 03.4	
	comp=Z,9.6nm,0.9s							
FINES	**FINESS Array B**	**74.41**	**330**	P		**P**	**09 40 52.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=69,slow=9.1,SNR=8.1							
	comp=Z,1.1nm,0.7s							
G29M	**Pine Creek**	**74.85**	**24**	P		**P**	**09 40 55.2**	**-0.4**
K29M	**Barlow Dome**	**76.02**	**27**	P		**P**	**09 41 01.9**	**-0.6**
K29M				IAmb	IAmb		09 41 15.6	
	comp=Z,7.0nm,0.9s							
I30M	**Mount Dempster**	**76.03**	**25**	P		**P**	**09 41 02.1**	**-0.3**
I30M				IAmb	IAmb		09 41 16.8	
	comp=Z,12nm,0.8s							
DAG	**Danmarks Havn**	**79.57**	**351**	P		**P**	**09 41 22.5**	**+0.8**
HFS	**Hagfors**	**80.55**	**331**	P		**P**	**09 41 26.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=134,slow=4.2,SNR=5.2							
	comp=Z,0.6nm,0.5s							
NOA	**NORSAR Array B**	**81.23**	**333**	P		**P**	**09 41 30.4**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=58,slow=7.3,SNR=3.8							
	comp=Z,0.5nm,0.7s							
GERES	**GERESS Array B**	**85.58**	**321**	P		**P**	**09 41 53.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=67,slow=4.5,SNR=5.2							
	comp=Z,0.7nm,0.8s							
YKA	**Yellowknife Ar**	**85.72**	**23**	P		**P**	**09 41 53.0**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=310,slow=4.6,SNR=22							
	comp=Z,1.1nm,0.5s							

IDC ***12*** *09:32:19.3±0.5, 40.91N×143.11E, h0km, mb4.6/31, mbtmp4.7/34, ML5.2/3, MS4.1/55, Error ellipse: s-maj=13.6km s-min=12.2km az=93.0*

NIED ***12*** *09:32:22.4, 40.88N×143.16E, h22km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr 1.35; Mθθ 0.30; Mθφ -1.65; Mrθ 1.05; Mrφ -0.41; Mφφ 1.46; Fault plane solution: M₀2.39000×10¹⁶ NP1: φs 169.00000°, δ25.00000°, λ51.00000°. NP2: φs 31.00000°, δ71.00000°, λ106.00000°.*

MOS ***12*** *09:32:22.9±0.8, 40.96N×143.10E, h34km, mb5.3/47, MS4.7/16 Error ellipse: s-maj=6.0km s-min=3.8km az=109.0*

BJI ***12*** *09:32:22.5, 40.88N×143.07E, h40km, mB5.0/28, mb5.0/71, Ms4.5/64, Ms7 4.5/64*

JMA ***12*** *09:32:22.4±0.1, 40.9N±0.6×143.2E±0.9, h22km, MD4.9/39, MW4.8/39, E OFF AOMORI PREF*

JMA Felt II J1 at E OFF AOMORI PREF .

GFZ ***12*** *09:32:24.6±0.1, 41.03N±0.06×143.1E±0.1, h41km±7km, mb4.9/83, Error ellipse: s-maj=12.4km s-min=6.9km az=123.0*

GCMT ***12*** *09:32:28.2±0.3, 40.92N±0.02×143.17E±0.03, h32km, MW5.0/89, Moment Tensor Solution. s49,c55; s89,c120; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 2.91±.17; Mθθ -0.34±.11; Mφφ -2.57±.11; Mrθ 0.92±.10; Mrφ -0.55±.05; Mθφ 1.76±.10; Best double couple: M₀3.43300×10¹⁶ NP1: φs 186.00000°, δ28.00000°, λ77.00000°. NP2: φs 21.00000°, δ63.00000°, λ97.00000°. Principal axes: T 3.5670, Plg72.0000°, Azm306.0000°; N -0.2680, Plg6.0000°, Azm198.0000°; P -3.3000, Plg17.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***12*** *09:32:28.1, 41.38N×143.26E, h33km, mb4.8, Ms4.6*

ISC 12 09:32:24.1±0.3, 40.94N±0.03×143.14E±0.03, h33km±1km, h33km:pP-P, n980, σ1s28/977, mb4.9/199, MS4.4/87, 35C-43D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.07**	**1**	*ce*	P	**Pn**	**09 32 42.9**		**+0.2**
ERM				pmax	pmax				
	comp=Z,831nm,0.7s								
ERM	**Erimo**	**1.07**	**1**			**Pn**	**09 32 42.7**		**0.0**
ERM	**Erimo**	**1.07**	**1**	P		**Pn**	**09 32 43.3**		**+0.5**
JEM	**Erimo**	**1.07**	**1**	P		**Pn**	**09 32 43.0**		**+0.3**
JEM				A		A	09 32 43.0		
	comp=N,22nm,1.8s,comp=E,18nm,1.1s								
JEM				*e*	S	**Sb**	**09 32 58.0**		**+0.2**
JKEN	**Kujiedanarisaw**	**1.32**	**236**	P		**Pn**	**09 32 45.0**		**-1.1**
JKEN				A		A	09 32 45.0		
	comp=N,42nm,1.0s,comp=E,30nm,1.6s								
JARK	**Aomorirokkasho**	**1.35**	**273**	⇓P		**Pn**	**09 32 46.0**		**-0.5**
JARK				A		A	09 32 46.0		
	comp=N,20nm,1.7s,comp=E,16nm,1.2s								
JTHR	**Tokachihiroo**	**1.35**	**5**	A		A	09 32 47.2		
	comp=N,19nm,2.2s,comp=E,18nm,1.8s								
JANG	**Nango**	**1.36**	**246**	*e*	P	**Pn**	**09 32 46.1**		**-0.6**
JNBK	**Urakawa-nobuka**	**1.37**	**348**	P		**Pn**	**09 32 47.5**		**+0.7**
JNBK				A		A	09 32 47.5		
	comp=N,29nm,1.4s,comp=E,38nm,1.0s								
JTH	**Tanohata**	**1.40**	**225**	P		**Pn**	**09 32 46.5**		**-0.7**
JAHD	**Aomorihigashid**	**1.40**	**284**	A		A	09 32 47.5		
	comp=N,32nm,0.5s,comp=E,41nm,1.5s								
JSHD	**Hidakashinhida**	**1.55**	**341**	A		A	09 32 50.1		
	comp=N,36nm,1.6s,comp=E,53nm,1.8s								
JTM	**Tenmabayashi**	**1.58**	**265**			**Pn**	**09 32 50.2**		**+0.5**
JTM	**Tenmabayashi**	**1.58**	**265**	P		**Pn**	**09 32 50.2**		**+0.5**
JTM	**Tenmabayashi**	**1.58**	**265**	*e*	P	**Pn**	**09 32 49.9**		**+0.2**
JTM				A		A	09 32 49.9		
	comp=N,15nm,1.2s,comp=E,16nm,2.0s								
JTM				*e*	S	**Sb**	**09 33 11.3**		**-1.0**
JOT	**Ohata**	**1.64**	**286**	⇓*e*	P	**Pn**	**09 32 50.8**		**+0.2**
JOT				A		A	09 32 50.8		
	comp=N,18nm,0.8s,comp=E,20nm,0.6s								
JOT				⇓*e*	S	**Sn**	**09 33 12.1**		**+1.6**
JCH	**Churui**	**1.68**	**6**	*e*	P	**Pn**	**09 32 51.3**		**+0.2**
JCH				A		A	09 32 51.3		
	comp=N,10.0nm,3.9s,comp=E,13nm,1.4s								
JKB	**Kayabe**	**1.84**	**301**	*e*	P	**Pn**	**09 32 54.1**		**+0.7**
JKB				A		A	09 32 54.1		
	comp=N,12nm,2.3s,comp=E,17nm,1.4s								
JIAM	**Iburiatsuma**	**1.91**	**332**	*e*	P	**Pb**	**09 32 57.6**		**-0.7**
JIAM				A		A	09 32 57.6		
	comp=N,67nm,1.4s,comp=E,52nm,1.0s								
JBT2	**Biratori 2**	**1.92**	**343**	*e*	P	**Pn**	**09 32 55.6**		**+1.2**
JOB	**Onbets**	**2.02**	**15**	A		A	09 32 57.0		
	comp=N,22nm,1.2s,comp=E,15nm,1.7s								
JOM	**Ohasama**	**2.04**	**225**	*e*	P	**Pn**	**09 32 56.7**		**+0.6**
JOM				A		A	09 32 56.7		
	comp=N,16nm,1.2s,comp=E,20nm,0.6s								
JAH	**Hinai**	**2.05**	**249**	A		A	09 32 56.5		
	comp=N,25nm,1.2s,comp=E,28nm,1.2s								
JSZI	**Iwateshizukuis**	**2.06**	**235**	A		A	09 32 56.4		
	comp=N,56nm,1.7s,comp=E,54nm,1.4s								
JSI2	**Shiura 2**	**2.07**	**274**	A		A	09 32 57.1		
	comp=N,23nm,0.8s,comp=E,39nm,1.1s								
JHHS	**Hirosakihyakuz**	**2.13**	**263**	A		A	09 32 57.9		
	comp=N,30nm,2.3s,comp=E,22nm,1.8s								
JSR	**Shiriuchi**	**2.14**	**287**	A		A	09 32 58.2		
	comp=N,15nm,2.1s,comp=E,24nm,1.8s								
OFUJ	**Ofunato**	**2.18**	**212**	A		A	09 32 57.7		
	comp=N,10.0nm,1.1s,comp=E,9.0nm,0.7s								
JEW	**Eniwo**	**2.28**	**327**	*e*	P	**Pn**	**09 33 00.7**		**+1.4**
JEW				A		A	09 33 00.7		
	comp=N,60nm,1.5s,comp=E,40nm,2.1s								
JAK	**Akkeshi**	**2.36**	**29**	P		**Pn**	**09 33 00.2**		**-0.1**
JNTW	**Noshirotokiwa**	**2.37**	**254**	A		A	09 33 01.0		
	comp=N,51nm,1.3s,comp=E,53nm,2.0s								
JYM2	**Yakumo 2**	**2.39**	**300**	A		A	09 33 02.0		
	comp=N,13nm,1.5s,comp=E,10.0nm,1.9s								
JAR	**Ashorobuto**	**2.40**	**11**	P		**Pn**	**09 33 00.8**		**-0.1**
JAR				A		A	09 33 00.8		
	comp=N,8.0nm,0.8s,comp=E,10.0nm,1.4s								
JIW	**Iwasaki**	**2.41**	**263**	A		A	09 33 01.9		
	comp=N,8.0nm,1.3s,comp=E,10.0nm,2.1s								
JOMM	**Oshimamatsumae**	**2.43**	**285**	P		**Pn**	**09 33 02.3**		**+0.8**
JRG	**Rokugo**	**2.47**	**232**	A		A	09 33 02.1		
	comp=N,20nm,1.0s,comp=E,17nm,0.9s								
JMK	**Ichinoseki**	**2.48**	**217**	*e*	P	**Pn**	**09 33 02.9**		**+0.8**
JYW	**Yuwa**	**2.65**	**239**	A		A	09 33 04.8		
	comp=N,28nm,4.2s,comp=E,36nm,1.7s								
JAB	**Ashibetsu**	**2.65**	**345**	A		A	09 33 06.2		
	comp=N,13nm,1.9s,comp=E,12nm,6.7s								
JISS	**Ishikarishitsu**	**2.66**	**332**	A		A	09 33 06.2		
	comp=N,20nm,1.4s,comp=E,24nm,2.1s								
JOFO	**Osakifurukawao**	**2.90**	**217**	A		A	09 33 08.2		
	comp=N,70nm,1.9s,comp=E,62nm,1.3s								
JYK	**Kaneyama**	**2.94**	**227**	A		A	09 33 08.9		
	comp=N,9.0nm,1.7s,comp=E,8.0nm,1.8s								
JHR	**Hokuryu**	**2.99**	**340**	A		A	09 33 10.9		
	comp=N,13nm,1.3s,comp=E,20nm,1.2s								
JTKR	**Abashiri--Toko**	**3.08**	**10**	A		A	09 33 12.2		
	comp=N,3.0nm,2.1s,comp=E,6.0nm,1.7s								
NMR	**Nemuro--Hokkai**	**3.09**	**38**	⇓*i*	P	**Pn**	**09 33 09.9**		**-0.6**
NMR				*i*	S	**Sn**	**09 33 43.4**		**-2.9**
JYYZ	**Yamagatayuza**	**3.13**	**233**	A		A	09 33 11.7		
	comp=N,13nm,1.7s,comp=E,16nm,2.6s								
ASAJ	**Asahikawa**	**3.20**	**353**	P		**Pn**	**09 33 11.3**		**-0.7**
JKA	**Kamikawa-asahi**	**3.20**	**353**			**Pn**	**09 33 11.3**		**-0.6**
JKA	**Kamikawa-asahi**	**3.20**	**353**	P		**Pn**	**09 33 12.4**		**+0.5**
JOU	**Okura**	**3.21**	**217**	A		A	09 33 12.5		
	comp=N,11nm,1.1s,comp=E

TYV pmax pmax
comp=Z,200nm,4.2s
TYV smax smax
comp=E,8.0nm,1.2s
TYV smax smax
comp=N,500nm,6.7s
TYV smax smax
comp=E,300nm,6.7s
TYV MLR MLR
comp=Z,2µm,17.0s
JMN Monobe 10.30 229 Pn 09 34 50.4 +0.8
JMN Monobe 10.30 229 P Pn 09 34 50.2 +0.7
MDJ Mudanjiang 10.61 295 Pn 09 34 54.9 +1.2
MDJ Mudanjiang 10.61 295 P Pn 09 34 56.5 +2.8
MDJ pmax pmax
comp=Z,49nm,0.9s
MDJ Mudanjiang 10.61 295 P Pn 09 34 56.1 +2.4
GRNR Gornyy 10.88 337 ⇓ *i*P **Pn 09 34 54.9 -2.5**
GRNR pmax pmax
comp=Z,3.0nm,0.6s
GRNR MLR MLR
comp=N,1µm,15.0s
GRNR MLR MLR
comp=E,860nm,15.0s
GRNR MLR MLR
comp=Z,920nm,17.0s
KLR Kul'dur 11.54 320 Pn **Pn 09 35 08.4 +2.0**
comp=Z,0.2nm,0.3s,baz=127,slow=14,SNR=36
KLR LR LR 09 39 55.8
comp=Z,1µm,19.4s,baz=148,slow=40
KLR Kul'dur 11.54 320 *ce*P **Pn 09 35 08.2 +1.8**
KLR pmax pmax
comp=Z,6.0nm,1.3s
KSRS Korea Array 12.31 258 Pn **Pn 09 35 18.4 +1.5**
comp=Z,1.6nm,0.3s,baz=65,slow=14,SNR=20
KSRS Sn **Sn 09 37 40.6 +7.7**
comp=Z,0.6nm,0.3s,baz=69,slow=24,SNR=5.0
NKL Nikolayevsk 12.32 353 *e*P **Pn 09 35 18.7 +1.7**
NKL pmax pmax
comp=E,162nm,1.0s
NKL pmax pmax
comp=N,58nm,1.1s
NKL pmax pmax
comp=Z,143nm,1.1s
KS19 Wonju Array Si 12.33 259 Pn 09 35 18.2 +0.9
KSAR Wonju Array Be 12.34 258 P Pn 09 35 17.8 +0.4
KSAR Wonju Array Be 12.34 258 Pn 09 35 17.8 +0.4
BNX BinXian 12.41 298 ⇓ P **Pn 09 35 19.6 +1.3**
BNX S **Sn 09 37 39.0 +3.6**
BNX pmax pmax
comp=Z,78nm,0.9s
BNX pmax pmax
comp=Z,240nm,5.2s
BNX L L
comp=Z,990nm,18.4s
BNX L L
comp=Z,2µm,18.4s
BNX L L
comp=Z,2µm,17.5s
JNU Nakatsue 12.52 235 LR LR 09 40 30.4
comp=Z,897nm,18.6s,baz=63,slow=39
OKH Okha 12.61 359 *de*P **Pn 09 35 18.8 -2.2**
OKH MLR MLR
comp=E,2µm,16.0s
OKH MLR MLR
comp=N,2µm,16.0s
OKH MLR MLR
comp=Z,1µm,17.0s
TJN Taejon 13.14 255 *i* P **Pn 09 35 30.6 +2.3**
TJN pmax pmax
comp=Z,1.0nm,1.0s
TJN Taejon 13.14 255 Pn 09 35 28.1 -0.2
SKR Severo-Kuril's 13.28 38 *i* P **Pn 09 35 30.8 +0.8**
CN2 Changchun 13.39 288 ⇑ P **Pn 09 35 33.3 +1.6**
CN2 *ep*P P 09 35 41.0 +0.3
CN2 *e*S **Sn 09 38 00.6 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 L L
comp=Z,400nm,12.0s
CN2 L L
comp=Z,500nm,12.0s
CN2 L L
comp=Z,600nm,13.0s
JCJ Chichijima 13.84 184 Pn **Pn 09 35 35.0 -2.9**
comp=Z,14nm,0.3s,baz=272,slow=23,SNR=5.4
JCJ Sn Sn 09 37 55.4 -15
comp=Z,5.9nm,0.3s,baz=232,slow=15,SNR=2.1
comp=Z,35nm,0.5s
JSU Suzuyama 13.90 231 Pn 09 35 38.3 -0.4
JSU Suzuyama 13.90 231 P Pn 09 35 39.1 +0.4
HEH HeiHe 14.39 316 *e*P **Pn 09 35 43.8 -1.5**
HEH pP **P 09 35 52.4 +0.6**
HEH S **Sn 09 38 28.1 +4.5**
HEH pmax pmax
comp=Z,12nm,0.7s
HEH L L
comp=Z,780nm,13.4s
HEH L L
comp=Z,1µm,14.6s
HEH L L
comp=Z,2µm,17.1s
PEA0B Petropavlovsk- 15.66 34 *i* P **Pn 09 36 03.3 +1.2**
PETK Petropavlovsk- 15.66 34 Pn **Pn 09 35 59.0 -3.2**
baz=232,slow=38
PETK LR LR 09 42 32.0
comp=Z,512nm,18.3s,baz=220,slow=39
PETK Petropavlovsk- 15.66 34 P **Pn 09 36 00.4 -1.8**
PETK Petropavlovsk- 15.66 34 Pn **Pn 09 36 00.4 -1.8**
DL2 Dalian 16.63 270 P **Pn 09 36 15.3 +0.8**
DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 pmax pmax
comp=Z,590nm,9.2s
DL2 L L
comp=Z,510nm,17.0s
DL2 L L
comp=Z,560nm,20.6s
DL2 L L
comp=Z,830nm,19.4s
ZEA Zeya 16.68 325 *e*P **Pn 09 36 13.1 -1.9**
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.3s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA MLR MLR
comp=E,500nm,16.0s
ZEA MLR MLR
comp=N,400nm,14.0s
ZEA MLR MLR
comp=Z,700nm,17.0s
HIA Hailar 18.44 305 P P 09 36 35.0 -1.6
HILR Hailar Array B 18.53 306 P P 09 36 35.8 -1.8
baz=120,slow=12
HILR LR LR 09 44 16.9
comp=Z,1µm,18.5s,baz=110,slow=39
comp=Z,18nm,0.5s
JOW Kunigami 18.68 226 P P 09 36 38.7 -0.8
JOW Kunigami 18.68 226 P P 09 36 37.7 -1.7
MA2 Magadan 19.25 12 P P 09 36 43.3 -2.2
comp=Z,6.1nm,0.7s,baz=178,slow=10,SNR=5.4
MA2 LR LR 09 44 10.4
comp=Z,452nm,20.7s,baz=196,slow=37
MA2 Magadan 19.25 12 *ce*P **P 09 36 45.5 0.0**
MA2 pmax pmax
comp=Z,11nm,1.3s
MA2 Magadan 19.25 12 P 09 36 43.6 -1.9
MA2 Magadan 19.25 12 P **P 09 36 44.8 -0.7**
comp=Z,19nm,0.8s
MA2 Magadan 19.25 12 P P 09 36 44.8 -0.7
XLT XiLinHaoTe 20.16 287 *e*P **P 09 36 53.7 -1.9**
XLT pmax pmax
comp=Z,22nm,1.0s
XLT L L
comp=Z,500nm,24.1s
XLT L L
comp=Z,760nm,20.3s
SSE Sheshan 20.25 248 P P 09 36 56.6 +0.1
SSE pmax pmax
comp=Z,9.0nm,0.9s
SSE pmax pmax
comp=Z,61nm,3.8s
SSE L L
comp=Z,220nm,17.9s
SSE L L
comp=Z,190nm,18.3s
BJI2 Beijing 20.51 276 P P 09 36 57.1 -2.2
BJI2 pP **pP 09 37 07.4 -0.2**
BJI2 sP **sP 09 37 13.4 +1.9**
BJI2 PP **PnPn 09 37 18.3 +1.2**
BJI2 S **S 09 40 38.3 -8.7**
BJI2 pmax pmax
comp=Z,13nm,1.4s
BJI2 pmax pmax
comp=Z,54nm,3.7s
BJI2 L L
comp=Z,220nm,16.8s
BJI2 L L
comp=Z,440nm,19.7s
BJI2 L L
comp=Z,630nm,18.9s
BJT Baijiatuau 20.51 276 P P 09 36 57.3 -2.0
TIA Tai'an 20.85 265 P P 09 37 01.4 -1.6
TIA pmax pmax
comp=Z,97nm,0.9s
TIA L L
comp=Z,500nm,17.9s
TIA L L
comp=Z,790nm,20.0s
TIA L L
comp=Z,1µm,19.2s
NJ2 Nanjing 21.39 253 ⇓ P **P 09 37 07.2 -1.7**
NJ2 sP **sP 09 37 21.0 -0.1**
NJ2 S **S 09 41 05.3 +0.8**
NJ2 pmax pmax
comp=Z,160nm,1.0s
NJ2 L L
comp=Z,3µm,18.0s
NJ2 L L
comp=Z,3µm,17.0s
NJ2 L L
comp=Z,4µm,20.6s
HNS HongShan 22.28 270 ⇓ P **P 09 37 15.6 -2.8**
HNS S **S 09 41 18.4 -3.1**
HNS pmax pmax
comp=Z,23nm,0.9s
HNS L L
comp=Z,240nm,20.5s
HNS L L
comp=Z,460nm,21.8s
HNS L L
comp=Z,530nm,20.8s
YAK Yakutsk 22.63 343 P **P 09 37 17.6 -4.2**
comp=Z,73nm,0.8s,baz=120,slow=1.6,SNR=20
YAK S **S 09 41 20.2 -7.0**
comp=Z,12nm,0.4s,baz=228,slow=23,SNR=4.5
YAK LR LR 09 47 04.5
comp=Z,709nm,18.1s,baz=150,slow=39
YAK Yakutsk 22.63 343 *e*P **P 09 37 16.7 -5.1**
YAK *e**PP **pP 09 37 25.9 -4.2**
YAK *e*PPP PPP 09 37 46.5
YAK *e*S **S 09 41 21.4 -5.8**
YAK *e**SS **pS 09 41 35.9 -0.6**
YAK *e*SSS SSS 09 42 07.8
YAK pmax pmax
comp=Z,84nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,20nm,1.0s
YAK pmax pmax
comp=Z,42nm,1.1s
YAK pmax pmax
comp=N,52nm,1.6s
YAK pmax pmax
comp=E,21nm,1.3s
YAK smax smax
comp=E,83nm,2.2s
YAK smax smax
comp=N,80nm,2.0s
YAK MLR MLR
comp=Z,891nm,24.0s
YAK MLR MLR
comp=N,696nm,25.0s
YAK MLR MLR
comp=E,365nm,22.0s
YAK Yakutsk 22.63 343 P **P 09 37 18.2 -3.6**
YAK Yakutsk 22.63 343 P **P 09 37 18.6 -3.2**
SEY Seymchan 22.70 11 P **P 09 37 19.5 -3.1**
comp=E,13nm,0.8s,baz=199,slow=7.6,SNR=36
SEY Seymchan 22.70 11 *i* P **P 09 37 20.7 -1.9**
SEY pmax pmax
comp=Z,11nm,0.9s
CIT Chita 23.03 309 *e*P **P 09 37 23.8 -2.4**
CIT *e* 09 37 33.0
CIT *e* 09 37 38.0
CIT *e* 09 37 54.6
CIT pmax pmax
comp=Z,79nm,1.6s
HHC Hu-ho-hao-te 23.81 280 *e*P **P 09 37 33.0 -0.9**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,140nm,5.0s
HHC L L
comp=Z,330nm,16.4s
HHC L L
comp=Z,700nm,14.2s
HHC L L
comp=Z,950nm,14.9s
TATO Taipei 24.06 235 P P 09 37 36.2 -0.1
YHNB Yeheng 24.35 235 P **P 09 37 37.1 -2.0**
YHNB IAmb IAmb 09 37 40.3
comp=Z,38nm,0.7s
YHNB Yeheng 24.35 235 P P 09 37 37.6 -1.5
LYN LuoYang 25.00 265 P P 09 37 45.6 +0.8
LYN pmax pmax
comp=Z,94nm,1.0s
LYN L L
comp=Z,830nm,17.9s
LYN L L
comp=Z,1µm,18.6s
LYN L L
comp=Z,1µm,13.7s
BTO2 Baotou 25.08 281 *e*P **P 09 37 44.5 -1.1**
BTO2 pP **pwP 09 37 55.8 -1.1**
BTO2 sP **sP 09 38 01.4 +3.0**
BTO2 PP **PnPn 09 38 23.0 +3.2**
BTO2 S **S 09 42 04.6 -3.4**
BTO2 sS **sS 09 42 20.6 -2.6**
BTO2 SS **SnSn 09 43 06.7 +8.1**
BTO2 pmax pmax
comp=Z,56nm,1.7s
BTO2 pmax pmax
comp=Z,130nm,4.1s
BTO2 L L
comp=Z,1µm,17.1s
BTO2 L L
comp=Z,2µm,17.9s
BTO2 L L
comp=Z,3µm,19.0s
SSLB Suanglung 25.26 234 P P 09 37 44.6 -2.6
YULB Yu-li 25.35 233 P P 09 37 49.1 +1.1
WHN Wuhan 25.46 255 ⇑ P **P 09 37 49.0 0.0**
WHN sP **sP 09 38 04.0 +2.3**
WHN pmax pmax
comp=Z,160nm,0.7s
WHN L L
comp=Z,3µm,14.0s
WHN L L
comp=Z,2µm,13.0s
WHN L L
comp=Z,6µm,17.9s
TPUB Ta-pu 25.82 234 P **P 09 37 50.6 -1.7**
TPUB IAmb IAmb 09 38 00.2
comp=Z,26nm,0.7s
TPUB Ta-pu 25.82 234 P P 09 37 53.4 +1.0
TWG Pinlang 25.91 232 P P 09 37 53.2 +0.1
TWG IAmb IAmb 09 38 10.7
comp=Z,65nm,1.3s
TWG Pinlang 25.91 232 P P 09 37 53.7 +0.6
ULN Ulaanbaatar 26.51 297 P P 09 37 58.8 +0.2
ULN pmax pmax
comp=Z,84nm,1.8s
ULN Ulaanbaatar 26.51 297 P P 09 37 58.8 +0.2
ULN IAmb IAmb 09 38 01.0
comp=Z,84nm,1.8s
ULN Ulaanbaatar 26.51 297 P P 09 37 58.7 +0.2
comp=Z,67nm,0.7s
ULN Ulaanbaatar 26.51 297 P P 09 37 59.4 +0.8
SONM Songino Array 26.95 297 P P 09 38 02.8 +0.3
comp=Z,11nm,0.6s,baz=87,slow=8.9,SNR=74
comp=Z,11nm,0.6s
SONM Songino Array 26.95 297 P P 09 38 02.5 -0.1
SONM IAmb IAmb 09 38 05.7
comp=Z,24nm,0.9s
GUMO Guam 27.29 176 LR LR 09 47 43.0
comp=Z,244nm,21.9s,baz=8.0,slow=34
XAN Xi'an 27.89 267 P P 09 38 07.9 -3.0
XAN S **S 09 42 46.4 -5.8**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,230nm,4.0s
XAN L L
comp=Z,450nm,13.7s
XAN L L
comp=Z,510nm,13.2s
XAN L L
comp=Z,930nm,17.5s
IRK Irkutsk 28.66 306 *e*P **P 09 38 17.8 +0.2**
IRK pmax pmax
comp=Z,44nm,1.5s
TLY Talaya 28.98 305 *ce*P **P 09 38 21.6 +1.2**
TLY pmax pmax
comp=Z,22nm,0.8s
ZAK Zakamensk 29.10 302 *e*P **P 09 38 21.2 -0.4**
ZAK pmax pmax
comp=Z,16nm,1.5s
ENH Enshi 29.20 259 P P 09 38 22.4 -0.1
H11N2 WAKE ISLAND Hy 29.28 129 T T 10 09 11.9
baz=322,slow=74,SNR=757
H11N1 WAKE ISLAND Hy 29.29 129 T T 10 09 07.8
baz=322,slow=74,SNR=617
H11N3 WAKE ISLAND Hy 29.30 129 T T 10 09 08.0
baz=322,slow=74,SNR=509
BILL Bilibino 29.90 17 P P 09 38 29.4 +1.1
BILL Bilibino 29.90 17 P 09 38 27.7 -0.6
BILL IAmb IAmb 09 38 30.4
comp=Z,42nm,1.2s
H11S1 WAKE ISLAND Hy 30.13 131 T T 10 10 15.8
baz=323,slow=76,SNR=264
H11S3 WAKE ISLAND Hy 30.13 131 T T 10 10 15.5
baz=323,slow=76,SNR=242
H11S2 WAKE ISLAND Hy 30.15 131 T T 10 10 18.7
baz=323,slow=76,SNR=275
MOY Mondy 30.62 305 *e*P **P 09 38 35.6 +0.5**
MOY pmax pmax
comp=Z,42nm,1.7s
LZH Lanzhou 30.95 274 *e*P **P 09 38 38.8 +0.7**
LZH pP sP 09 38 52.0 +1.1
LZH pmax pmax
comp=Z,16nm,1.3s
LZH L L
comp=Z,430nm,12.1s
LZH L L
comp=Z,530nm,12.1s
LZH L L
comp=Z,620nm,13.1s
LZDM Lanzhou Array 31.10 274 P P 09 38 39.8 0.0
comp=Z,1.5nm,0.3s,baz=101,slow=7.5,SNR=6.2
LZDM LR LR 09 51 26.9
comp=Z,438nm,20.9s,baz=15,slow=37
comp=Z,1.5nm,0.3s
GULI GuiLin 31.36 250 P P 09 38 40.8 -0.8
GULI pmax pmax
comp=Z,33nm,1.1s
TIXI Tiksi 31.60 351 LR LR 09 53 18.2
comp=Z,356nm,18.7s,baz=172,slow=40
TIXI Tiksi 31.60 351 *i* P **P 09 38 42.9 -0.4**
TIXI pmax pmax
comp=Z,11nm,1.5s
KNGR Kungurtug, Tuv 32.79 303 *i* P **P 09 38 53.8 -0.3**
KNGR pmax pmax
comp=Z,14nm,0.9s
GTA2 Gaotai 32.91 282 *e*P **P 09 38 55.2 -0.1**
GTA2 pmax pmax
comp=Z,15nm,1.3s
GTA2 L L
comp=Z,360nm,17.8s
GTA2 L L
comp=Z,1µm,18.4s
GTA2 L L
comp=Z,2µm,18.1s
CD2 Chengdu 33.18 265 P P 09 38 57.2 -0.5
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 L L
comp=Z,710nm,13.3s
CD2 L L
comp=Z,840nm,14.6s
CD2 L L
comp=Z,980nm,15.2s
GYA Guiyang 33.35 256 ⇓ P **P 09 38 59.4 +0.2**
GYA pmax pmax
comp=Z,93nm,0.9s
GYA L L
comp=Z,2µm,17.1s
GAMB Gambell 34.70 34 P P 09 39 10.4 +0.1
baz=251
UNV Unalaska Valle 35.68 51 P P 09 39 18.7 -0.2
baz=270
QIZ Qiongzhong 35.85 242 P P 09 39 21.6 +0.8
QIZ S **S 09 44 56.9 +0.5**
QIZ L L
comp=Z,390nm,18.0s
QIZ L L
comp=Z,460nm,17.1s
QIZ L L
comp=Z,510nm,17.9s
M11K Mekoryuk 36.38 40 P P 09 39 24.3 -0.5
baz=261
TNA Tin City 36.81 32 P P 09 39 28.2 -0.2
baz=253
PZH PanZhiHua 36.97 260 P P 09 39 30.5 +0.1
PZH pmax pmax
comp=Z,70nm,0.8s
KMI2 Kunming 36.99 257 ⇑ P **P 09 39 31.3 +0.6**
KMI2 pP sP 09 39 45.0 +1.4
KMI2 pmax pmax
comp=Z,56nm,1.1s
KMI2 L L
comp=Z,640nm,18.7s
KMI2 L L
comp=Z,650nm,20.9s
KMI2 L L
comp=Z,940nm,20.3s
DAV Davao City (W) 37.19 210 LR LR 09 53 26.0
comp=Z,118nm,19.0s,baz=34,slow=34
K13K Kusilvak Mount 37.37 38 P P 09 39 32.5 -0.7
baz=261
ANM Nome 37.58 34 P P 09 39 34.1 -0.8
baz=256
GOMU GeErMu 37.70 279 P P 09 39 36.0 -0.8
GOMU S **S 09 45 21.2 -3.8**
GOMU pmax pmax
comp=Z,33nm,0.8s
GOMU L L
comp=Z,210nm,16.4s
GOMU L L
comp=Z,260nm,16.8s
GOMU L L
comp=Z,460nm,16.3s
M13K Dall Lake 37.78 41 P P 09 39 36.3 -0.5
baz=264
F15K North Star Dit 38.15 32 P P 09 39 39.5 -0.3
baz=256
L14K Kuka Creek 38.22 39 P P 09 39 40.9 +0.6
baz=263
G15K Niukluk 38.23 33 P P 09 39 41.1 +0.6
baz=257,SNR=5.9
SLVN Son La 38.45 251 P P 09 39 43.2 +0.3
SLVN IAmb IAmb 09 39 46.2
comp=Z,17nm,0.9s
M14K Bethel 38.50 40 P P 09 39 45.3 +2.5
M14K IAmb IAmb 09 40 12.3
comp=Z,14nm,0.9s
M14K Bethel 38.50 40 P P 09 39 42.6 -0.1
baz=265
N14K Kuskokwak Cree 38.57 42 P P 09 39 43.1 -0.2
baz=266
C16K Lisburne Hills 38.61 28 P P 09 39 44.3 +0.7
C16K Lisburne Hills 38.61 28 P P 09 39 43.4 -0.2
baz=252
H16K Elim 38.92 34 P P 09 39 46.4 +0.1

baz=260
G16K Koyuk River 39.01 33 P P 09 39 47.3 +0.3
baz=259
M15K Kasigluk River 39.12 40 P P 09 39 47.9 -0.1
baz=266
SDPT Sand Point 39.16 49 P P 09 39 49.0 +0.6
baz=273
D17K Noatak River 39.26 29 P P 09 39 49.1 0.0
baz=255
DGZ Jazzator, Alta 39.32 302 *i* P P 09 39 49.9 -0.1
DGZ pmax pmax
comp=Z,39nm,0.9s
N15K Kwethluk River 39.38 41 P P 09 39 50.9 +0.7
N15K IAmb IAmb 09 40 27.5
comp=Z,19nm,1.1s
N15K Kwethluk River 39.38 41 P P 09 39 50.2 0.0
baz=267
J16K Anvik River 39.42 36 P P 09 39 50.5 0.0
baz=263
RDOG Red Dog Mine 39.42 29 P P 09 39 51.0 +0.6
RDOG IAmb IAmb 09 40 49.2
comp=Z,11nm,0.7s
RDOG Red Dog Mine 39.42 29 P P 09 39 50.4 0.0
baz=255
C17K DeLong Mountai 39.44 28 P P 09 39 50.8 +0.2
baz=254
I17K Unalakleet 39.46 35 P P 09 39 50.0 -0.8
baz=262
O15K Ungalikthiuk R 39.48 43 P P 09 39 50.6 -0.4
baz=269
E17K Hotham Inlet 39.58 30 P P 09 39 52.6 +0.8
baz=257,SNR=5.7
S14K Fog Glacier 39.64 47 P P 09 39 52.8 +0.3
baz=272
F17K Baldwin Pennin 39.67 31 P P 09 39 52.8 +0.4
baz=258
CHNA Chernabura Isl 39.70 50 P P 09 39 52.4 -0.5
baz=274
G17K Kiwalik Mounta 39.73 33 P P 09 39 53.1 +0.1
baz=260,SNR=11
L16K Owhat River 39.78 39 P P 09 39 55.4 +1.9
L16K Owhat River 39.78 39 P P 09 39 52.9 -0.6
baz=266
H17K Granite Mounta 39.95 34 P P 09 39 56.8 +1.9
H17K Granite Mounta 39.95 34 P P 09 39 54.7 -0.1
baz=262
M16K Timber Creek 39.99 40 P P 09 39 55.1 -0.1
baz=267
N16K Nishlik Lake 40.05 41 P P 09 39 55.0 -0.8
baz=268
J17K VABM Dome 40.12 36 P P 09 39 57.2 +0.9
J17K IAmb IAmb 09 40 16.9
comp=Z,14nm,0.9s
J17K VABM Dome 40.12 36 P P 09 39 56.0 -0.2
baz=264,SNR=5.5
E18K Tukpahlearik C 40.12 30 P P 09 39 57.6 +1.3
E18K Tukpahlearik C 40.12 30 P P 09 39 55.9 -0.4
baz=258
C18K Utukok River 40.19 28 P P 09 39 58.0 +1.2
C18K IAmb IAmb 09 39 59.3
comp=Z,16nm,1.1s
C18K Utukok River 40.19 28 P P 09 39 56.1 -0.8
baz=256,SNR=6.9
F18K Selawik 40.33 31 P P 09 39 57.4 -0.6
baz=260,SNR=9.9
NRIK Noril'sk 40.34 333 P P 09 39 58.0 +0.1
comp=Z,11nm,0.9s,baz=109,slow=11,SNR=15
NRIK LR LR 09 58 02.3
comp=Z,1μm,19.4s,baz=104,slow=38
comp=Z,11nm,0.9s
NRIK Noril'sk 40.34 333 *i* P P 09 39 58.1 +0.1
NRIK pmax pmax
comp=Z,32nm,1.3s
NRIK Noril'sk 40.34 333 P P 09 39 57.8 -0.2
NRIK IAmb IAmb 09 39 59.0
comp=Z,31nm,1.2s
L17K Donlin 40.37 38 P P 09 39 57.5 -0.8
baz=266
O16K Kokwok River B 40.37 42 P P 09 39 57.7 -0.7
baz=270
ZAA0 Zalesovo Array 40.39 309 P P 09 39 58.6 0.0
ZAA0 IAmb IAmb 09 40 15.8
comp=Z,37nm,1.1s
ZALV Zalesovo Beam 40.39 309 P P 09 39 58.9 +0.3
comp=Z,16nm,0.6s,baz=89,slow=7.9,SNR=54
ZALV PcP PcP 09 42 00.8 -0.4
comp=Z,7.8nm,0.7s,baz=95,slow=4.2,SNR=4.5
comp=Z,16nm,0.6s
ZALV Zalesovo Beam 40.39 309 P P 09 39 57.8 -0.8
K17K Iditarod 40.41 37 P P 09 40 00.1 +1.4
K17K Iditarod 40.41 37 P P 09 39 58.7 +0.1
baz=266
WMQ Urumqi 40.41 293 *eP* P 09 39 59.8 +0.8
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ L L
comp=Z,390nm,19.3s
WMQ L L
comp=Z,750nm,17.1s
WMQ L L
comp=Z,560nm,18.3s
P16K Nushagak River 40.42 43 P P 09 39 59.2 +0.4
baz=270
G18K Tagagawik 40.61 32 P P 09 40 00.8 +0.5
baz=262,SNR=15
H18K Honhosa River 40.63 34 P P 09 40 00.5 0.0
baz=263,SNR=6.6
A19K Wainwright 40.64 26 P P 09 40 01.1 +0.7
baz=254
M17K Holitna River 40.74 39 P P 09 40 02.1 +0.6
baz=268
N17K Nushagak Hills 40.84 41 P P 09 40 02.4 +0.1
baz=269
C19K Lookout Ridge 40.86 27 P P 09 40 03.2 +0.8
C19K IAmb IAmb 09 40 18.2
comp=Z,15nm,1.1s
C19K Lookout Ridge 40.86 27 P P 09 40 02.6 +0.2
baz=257,SNR=6.2
O17K Koliganek Bris 40.88 42 P P 09 40 03.3 +0.7
baz=270,SNR=5.9
F19K Shaleruckik Mo 41.10 31 P P 09 40 05.0 +0.6
baz=262,SNR=11
L18K Granite Mounta 41.13 38 P P 09 40 04.8 +0.2
baz=268
P17K Kvichak River 41.22 43 P P 09 40 05.8 +0.5
baz=272
D19K Kuna River 41.26 29 P P 09 40 06.9 +1.3
D19K IAmb IAmb 09 40 21.5
comp=Z,22nm,1.0s
D19K Kuna River 41.26 29 P P 09 40 06.2 +0.5
baz=259,SNR=13
G19K Purcell Mounta 41.28 32 P P 09 40 06.9 +1.1
G19K Purcell Mounta 41.28 32 P P 09 40 05.6 -0.2
baz=263,SNR=7.8
R17L Mt. Peulik Vol 41.33 45 P P 09 40 06.6 +0.3
baz=273
E19K Redstone River 41.41 30 P P 09 40 06.9 0.0
baz=261,SNR=7.8
ZSN Zaisan 41.43 299 *eP* P 09 40 07.0 -0.3
ZSN Zaisan 41.43 299 *eP* P 09 40 07.1 -0.3
H19K Roundabout Mou 41.47 33 P P 09 40 07.5 +0.2
baz=264,SNR=22
N18K Kilae Creek 41.48 41 P P 09 40 07.2 -0.3
baz=270
M18K Stony River 41.52 39 P P 09 40 07.5 -0.3
baz=269
Q17K Contact Creek 41.54 44 P P 09 40 07.8 -0.4
baz=273
J19K Poorman 41.70 36 P P 09 40 09.2 -0.1
baz=267,SNR=6.3
O18K Koktuh Hills 41.83 42 P P 09 40 10.5 0.0
baz=272
P18K Big Mountain, 41.84 42 P P 09 40 10.5 0.0
baz=272
D20K Etivluk River 41.84 28 P P 09 40 11.7 +1.3
D20K IAmb IAmb 09 40 30.2
comp=Z,18nm,1.0s
D20K Etivluk River 41.84 28 P P 09 40 10.6 +0.2
baz=260,SNR=14
CHIR Chirikof Islan 41.87 48 P P 09 40 11.3 +0.5
baz=276
B20K Meade River 41.89 26 P P 09 40 11.0 +0.3
baz=258
E20K Nigu River 41.92 29 P P 09 40 10.9 -0.2
baz=261,SNR=15
DLV Lat 41.92 236 P P 09 40 12.6 +0.8
DLV IAmb IAmb 09 40 14.1

comp=Z,23nm,0.6s
F20K Avaraart Lake 41.93 31 P P 09 40 10.7 -0.4
baz=263
L19K White Mountain 41.98 38 P P 09 40 12.4 +0.7
baz=270
Q18K Katmai Hardscr 41.98 44 P P 09 40 11.4 -0.4
baz=273
H20K Anotlleneega Mo 42.12 33 P P 09 40 12.7 0.0
baz=266,SNR=16
N19K Bonanza Creek 42.17 40 P P 09 40 13.1 -0.2
baz=271
M19K Big River Lodg 42.20 39 P P 09 40 13.4 0.0
baz=270
I20K Naaghedeneel 42.24 34 P P 09 40 13.7 +0.1
baz=267
O19K Port Alsworth 42.27 41 P P 09 40 14.7 +0.8
baz=272
A21K Barrow 42.34 25 P P 09 40 14.3 -0.1
baz=258
J20K Nowinta River 42.36 35 P P 09 40 16.4 +1.7
J20K Nowinta River 42.36 35 P P 09 40 15.2 +0.6
baz=268,SNR=13
K20K Telida 42.37 37 P P 09 40 15.1 +0.4
baz=269
C21K Knifeblade Rid 42.56 28 P P 09 40 16.9 +0.7
baz=262,SNR=10
SII Sitkinak Islan 42.60 47 P P 09 40 16.5 -0.2
baz=276
Q19K Cape Douglas, 42.68 43 P P 09 40 17.6 +0.2
baz=274
B21K Ikpikpuk River 42.69 27 P P 09 40 16.9 -0.3
baz=262
G21K Allakaket 42.76 32 P P 09 40 19.2 +1.3
G21K IAmb IAmb 09 40 29.2
comp=Z,18nm,1.0s
G21K Allakaket 42.76 32 P P 09 40 18.3 +0.4
baz=266,SNR=20
E21K Killik River 42.76 29 P P 09 40 17.9 -0.1
baz=263
M20K Styx River 42.80 39 P P 09 40 17.8 -0.6
baz=271
A22K Sinclair Lake 42.80 25 P P 09 40 17.9 -0.2
baz=260
F21K Alatna River 42.82 31 P P 09 40 18.7 +0.3
baz=265,SNR=14
P19K Oil Pt 42.84 42 P P 09 40 17.7 -0.9
baz=274
H21K Melozitna Rive 42.99 33 P P 09 40 18.8 -1.0
baz=268,SNR=14
SIJI Sorong 43.00 198 LR LR 09 55 55.9
comp=Z,166nm,18.8s,baz=9.0,slow=33
SIJI Sorong 43.00 198 P P 09 40 21.7 +1.4
comp=Z,18nm,0.8s
OHAK Old Harbor 43.01 46 P P 09 40 19.4 -0.6
baz=276
O20K Slope Mountain 43.12 41 P P 09 40 20.2 -0.8
baz=274
CHUM Lake Minchumin 43.16 36 P P 09 40 20.4 -0.7
baz=270
B22K Teshekpuk Lake 43.20 26 P P 09 40 20.3 -1.0
baz=262
PPLA Purkeypile 43.22 37 P P 09 40 20.0 -1.8
baz=271
CAST Castle Rocks 43.26 36 P P 09 40 21.3 -0.7
baz=271
MK31 Makanchi Array 43.30 299 *i* P P 09 40 22.5 0.0
MKAR Makanchi Array 43.30 299 P P 09 40 22.5 0.0
comp=Z,16nm,0.8s,baz=82,slow=9.4,SNR=88
MKAR LR LR 09 59 45.7
comp=Z,772nm,18.6s,baz=43,slow=38
comp=Z,16nm,0.8s
MKAR Makanchi Array 43.30 299 P P 09 40 22.8 +0.3
MKAR Makanchi Array 43.30 299 P P 09 40 22.8 +0.3
JAY Jayavara 43.31 184 LR LR 10 04 26.2
comp=Z,58nm,18.1s,baz=8.5,slow=44
LSA Lhasa 43.31 272 P P 09 40 25.2 +1.8
I21K Tanana 43.32 34 P P 09 40 24.4 +2.0
I21K Tanana 43.32 34 P P 09 40 22.4 0.0
baz=269,SNR=7.7
KDAK Kodiak Island 43.33 45 LR LR 10 01 22.2
comp=Z,236nm,19.1s,baz=251,slow=40
KDAK Kodiak Island 43.33 45 P P 09 40 23.0 +0.4
baz=276
F22K John River 43.35 30 P P 09 40 23.0 +0.3
baz=266
MAKZ Makanchi 43.50 299 P P 09 40 24.1 -0.1
MAKZ Makanchi 43.50 299 P P 09 40 24.0 -0.1
MAKZ IAmb IAmb 09 40 38.5
comp=Z,23nm,0.8s
MAKZ Makanchi 43.50 299 P P 09 40 24.5 +0.3
MAKZ Makanchi 43.50 299 P P 09 40 24.1 -0.1
G22K Bettles 43.57 31 P P 09 40 25.0 +0.6
baz=267,SNR=29
H22K Ishtalitna Cre 43.59 33 P P 09 40 24.6 0.0
baz=269,SNR=9.9
CHTO Chiang Mai 43.64 253 P P 09 40 25.9 +0.4
CHTO pmax pmax
comp=Z,21nm,0.8s
CHTO Chiang Mai 43.64 253 P P 09 40 25.9 +0.4
CHTO IAmb IAmb 09 40 27.3
comp=Z,21nm,0.8s
CHTO Chiang Mai 43.64 253 P P 09 40 26.1 +0.5
comp=Z,29nm,0.9s
CHTO Chiang Mai 43.64 253 P P 09 40 26.4 +0.9
CHTO Chiang Mai 43.64 253 P P 09 40 26.0 +0.5
MLY Manley 43.84 34 P P 09 40 28.1 +1.4
MLY Manley 43.84 34 P P 09 40 27.4 +0.7
baz=270,SNR=9.1
CM31 Chiang Mai Arr 43.87 253 P P 09 40 28.2 +0.8
CMAR Chiang Mai Arr 43.87 253 P P 09 40 28.4 +1.0
comp=Z,7.4nm,0.8s,baz=45,slow=6.6,SNR=38
CMAR LR LR 09 58 34.8
comp=Z,295nm,21.8s,baz=40,slow=36
comp=Z,7.4nm,0.8s
CMAR Chiang Mai Arr 43.87 253 P P 09 40 27.3 -0.1
L22K Petersville 43.88 38 P P 09 40 28.1 +1.0
L22K IAmb IAmb 09 41 05.5
comp=Z,24nm,1.5s
L22K Petersville 43.88 38 P P 09 40 27.2 +0.1
baz=273
D23K Nanushuk River 44.01 28 P P 09 40 27.7 -0.2
baz=266,SNR=6.9
TRF Thorofare Moun 44.07 36 P P 09 40 28.3 -0.4
baz=272
GTOI Gorontalo 44.08 210 P P 09 40 29.1 +0.1
comp=Z,28nm,1.3s
BRSE Bradley Lake S 44.09 42 P P 09 40 28.7 0.0
baz=276
COLD Coldfoot 44.10 31 P P 09 40 29.0 +0.4
baz=268,SNR=11
C23K Itkillik River 44.10 27 P P 09 40 28.5 -0.2
baz=265,SNR=11
CUT Chulitna 44.12 38 P P 09 40 28.8 -0.1
baz=273
G23K Bananza Creek 44.15 32 P P 09 40 29.0 -0.1
baz=269,SNR=22
M22K Willow 44.23 39 P P 09 40 29.8 0.0
baz=274
H23K Yukon River 44.34 33 P P 09 40 30.2 -0.4
baz=270
E23K Chandalar 44.35 30 P P 09 40 30.6 -0.2
baz=268,SNR=15
TOLK Toolik Lake Re 44.39 29 P P 09 40 31.3 +0.3
baz=267
I23K Minto, Yukon-K 44.42 34 P P 09 40 30.9 -0.4
baz=271
TOLI2 Tolitoli 44.52 213 P P 09 40 33.1 +0.5
TOLI2 IAmb IAmb 09 40 34.8
comp=Z,12nm,0.8s
O22K Cooper Landing 44.53 41 P P 09 40 32.4 +0.2
baz=276
NEA2 Nenana 44.56 35 P P 09 40 32.3 -0.1
baz=272,SNR=13
MCK McKinley 44.66 36 P P 09 40 33.2 0.0
baz=273
KURK Kurchatov 44.68 305 P P 09 40 34.2 +0.7
KURK Kurchatov 44.68 305 P P 09 40 33.5 +0.1
KURK Kurchatov 44.68 305 P P 09 40 33.6 +0.1
KURK Kurchatov 44.68 305 P P 09 40 33.5 +0.1
KURK pP sP 09 40 45.8 -0.7
D24K Happy Valley 44.69 28 P P 09 40 32.4 -0.9
baz=268
SEW Seward 44.70 41 P P 09 40 32.2 -1.4
baz=276
PMR Palmer 44.72 39 P P 09 40 32.0 -1.6
baz=275
KURBB Kurchatov Arra 44.76 305 P P 09 40 34.2 +0.1

comp=Z,39nm,0.6s,baz=78,slow=8.7,SNR=129
KURBB LR LR 10 00 29.9
comp=Z,341nm,18.8s,baz=184,slow=38
comp=Z,39nm,0.6s
KURBB Kurchatov Arra 44.76 305 P P 09 40 33.8 -0.3
FAKI Fak Fak 44.77 196 P P 09 40 35.8 +1.2
FAKI IAmb IAmb 09 40 36.4
comp=Z,21nm,0.8s
E24K Your Creek 44.77 30 P P 09 40 32.7 -1.4
baz=269
WAT1 Susitna Watana 44.89 37 P P 09 40 33.7 -1.4
baz=274
F24K Squaw Lake 45.00 31 P P 09 40 34.1 -1.7
baz=270
H24K Noodor Dome 45.03 33 P P 09 40 35.0 -1.2
baz=272,SNR=9.8
KNK Knik Glacier 45.05 39 P P 09 40 35.7 -0.7
baz=276
COLA College 45.08 34 P P 09 40 38.7 +2.3
COLA College 45.08 34 P P 09 40 35.1 -1.3
baz=273
COLA College 45.08 34 P P 09 40 38.3 +1.9
COLA College 45.08 34 P P 09 40 38.0 +1.6
COLA sP sP 09 40 54.5 +4.9
SML Sawmill 45.08 39 P P 09 40 35.0 -1.6
baz=276
NPW Naypyitaw 45.08 257 P P 09 40 38.3 +1.2
G24K Hadweenzic Riv 45.17 32 P P 09 40 36.0 -1.2
baz=271,SNR=11
POKR Poker Flat Res 45.24 34 P P 09 40 37.4 -0.4
baz=273
WAT6 Susitna Watana 45.28 37 P P 09 40 37.3 -1.1
baz=275
M23K Glacier View 45.36 39 P P 09 40 38.4 -0.4
baz=276
DHY Denali Highway 45.40 37 P P 09 40 38.1 -1.2
baz=275,SNR=6.1
HDA Harding Lake 45.49 35 P P 09 40 39.4 -0.4
baz=274
ILAR Eielson Array 45.49 34 P P 09 40 40.5 +0.8
comp=Z,4.9nm,0.8s,baz=264,slow=5.8,SNR=22
ILAR LR LR 10 02 57.2
comp=Z,130nm,18.1s,baz=265,slow=40
comp=Z,4.9nm,0.8s
SCM Sheep Creek Mo 45.55 39 P P 09 40 38.9 -1.4
baz=276
D25K Kavik River 45.56 28 P P 09 40 39.2 -1.2
baz=270
RABL Rabaul 45.67 167 P P 09 40 40.4 -1.3
G25K Bearman Lake 45.71 32 P P 09 40 40.9 -0.5
baz=272,SNR=6.8
LUWI Luwuk 45.71 209 P P 09 40 43.9 +1.8
P23K Montague Islan 45.73 41 P P 09 40 41.5 -0.3
baz=278
F25K Christian Rive 45.86 30 P P 09 40 41.0 -1.7
baz=272,SNR=6.1
E25K Arctic Village 45.87 30 P P 09 40 42.4 -0.4
baz=272,SNR=12
PRP Porcupine Dome 46.02 33 P P 09 40 42.3 -1.8
baz=274,SNR=6.3
K24K Donnelly Dome 46.05 36 P P 09 40 44.0 -0.3
baz=276
M24K Tolsona, Glenn 46.06 38 P P 09 40 43.8 -0.5
baz=277
C26K Camden Bay 46.08 27 P P 09 40 44.2 -0.1
baz=271,SNR=9.5
PAX Paxson 46.28 37 P P 09 40 46.7 +0.6
baz=277
SHLS Shalkode 46.31 295 *eP* P 09 40 44.1 -2.6
SHLS Shalkode 46.31 295 *eP* P 09 40 44.1 -2.6
TDK Taldyqorghan 46.41 298 *eP* P 09 40 47.3 0.0
TDK pmax pmax
comp=Z,15nm,1.1s
TDK Taldyqorghan 46.41 298 *eP* P 09 40 47.3 0.0
comp=Z,16nm,1.1s
F26K Sheenjek River 46.42 30 P P 09 40 48.0 +0.8
baz=273,SNR=22
EYAK Cordova Ski Ar 46.47 40 P P 09 40 46.4 -1.1
baz=279
RIDG Independent Ri 46.47 36 P P 09 40 48.4 +0.8
baz=277
HARP HAARP 46.49 38 P P 09 40 48.6 +0.9
baz=278
C27K Jago River 46.50 28 P P 09 40 48.3 +0.7
baz=272,SNR=13
G26K Porcupine Rive 46.61 31 P P 09 40 49.8 +1.3
baz=274
UZB Uzunbulak 46.62 295 *eP* P 09 40 48.8 -0.4
UZB Uzunbulak 46.62 295 *eP* P 09 40 48.8 -0.4
BRDH Bariadhala 46.70 263 LR LR 10 02 06.9
comp=Z,394nm,18.2s,baz=148,slow=38
SCRK Sand Creek 46.82 35 P P 09 40 50.5 0.0
baz=277,SNR=13
N25K Chitina, Valde 46.87 39 P P 09 40 50.5 -0.2
baz=279
BMRM Bremner River 46.96 39 P P 09 40 51.3 -0.2
baz=279
I26K Coal Creek Min 47.02 33 P P 09 40 51.7 -0.1
baz=276
SATY Saty 47.07 295 *eP* P 09 40 52.5 -0.1
SATY Saty 47.07 295 *eP* P 09 40 52.6 -0.1
WUS Wushi 47.19 292 P P 09 40 54.5 +1.0
KAIM Kayak Island 47.23 41 P P 09 40 53.9 +0.5
baz=280
L26K Log Cabin Wild 47.23 37 P P 09 40 54.2 +0.7
baz=278,SNR=7.4
E27K Coleen River 47.35 29 P P 09 40 56.4 +2.0
E27K IAmb IAmb 09 40 57.8
comp=Z,15nm,1.1s
E27K Coleen River 47.35 29 P P 09 40 55.1 +0.7
baz=275,SNR=14
G27K Doyon Strip 47.47 31 P P 09 40 56.3 +1.0
baz=276
EVN Everest 47.47 273 P P 09 40 56.5 0.0
EVN Everest 47.47 273 P P 09 40 57.5 +1.0
M26K Nabesna, AK 47.49 37 P P 09 40 57.2 +1.6
baz=279
D27M Malcolm River 47.49 28 P P 09 40 56.4 +0.9
baz=275,SNR=7.5
H27K Steamboat Moun 47.58 32 P P 09 40 57.7 +1.5
baz=277,SNR=10
I27K Kandik River 47.62 33 P P 09 40 58.2 +1.6
baz=278
MCARA McCarthy VSAT 47.65 39 P P 09 40 58.3 +1.6
baz=280
CRQE Cirque 47.73 40 P P 09 40 58.7 +1.2
baz=281
L27K Beaver Creek, 47.91 36 P P 09 40 59.8 +1.0
baz=280,SNR=8.5
MDOK Medeo 47.97 296 *eP* P 09 40 59.4 -0.2
MDOK Medeo 47.97 296 *eP* P 09 40 59.5 -0.2
TARG Taragay, Kyrgy 47.97 294 P P 09 41 00.5 +0.5
TARG pmax pmax
comp=Z,14nm,0.7s
TARG Taragay, Kyrgy 47.97 294 P P 09 41 00.5 +0.5
TARG IAmb IAmb 09 41 17.4
comp=Z,14nm,0.7s
TARG Taragay, Kyrgy 47.97 294 P P 09 41 00.8 +0.8
M27K Edge Creek, AK 48.01 37 P P 09 41 01.1 +1.4
baz=280,SNR=5.0
AAA Alma-Ata 48.04 296 *eP* P 09 40 59.8 -0.3
AAA pmax pmax
comp=Z,10.0nm,0.6s
AAA Alma-Ata 48.04 296 *eP* P 09 40 59.8 -0.3
comp=Z,9.7nm,0.6s
F28M Old Crow 48.06 30 P P 09 41 01.2 +1.4
baz=277,SNR=10
E28M Babbage River 48.07 29 P P 09 41 01.3 +1.4
baz=277,SNR=15
TNSS Tian-Shan 48.08 296 *eP* P 09 41 00.3 -0.5
TNSS Tian-Shan 48.08 296 *eP* P 09 41 00.3 -0.5
KUU Kurty 48.18 297 *eP* P 09 41 01.0 -0.1
KUU Kurty 48.18 297 *eP* P 09 41 01.1 -0.1
KDJ Kajisay 48.25 294 P P 09 41 02.1 +0.1
I28M Miner Creek 48.34 33 P P 09 41 03.7 +1.5
baz=279
BVCY Beaver Creek 48.47 37 P P 09 41 04.4 +1.4
baz=281
E29M Blow River 48.69 29 P P 09 41 06.2 +1.5
baz=278,SNR=32
YUK3 Moose Creek 48.78 38 P P 09 41 06.4 +0.7
baz=282
DAWY Dawson 48.81 35 P P 09 41 06.9 +1.2
baz=281
H29M Whitestone 48.85 32 P P 09 41 06.8 +0.8
baz=280
G29M Pine Creek 48.87 31 P P 09 41 08.4 +2.3

G29M IAmb IAmb 09 41 09.9
comp=Z,20nm,1.1s
G29M Pine Creek 48.87 31 P **P** **09 41 07.4 +1.3**
baz=280,SNR=10
BOOM Boomskoye usch 48.97 295 P **P** **09 41 07.5 +0.1**
BOOM pmax pmax
comp=Z,23nm,0.8s
BOOM Boomskoye usch 48.97 295 P **P** **09 41 07.5 +0.1**
BOOM Boomskoye usch 48.97 295 P **P** **09 41 08.4 +1.0**
BVAR Borovoye Array 49.01 310 P **P** **09 41 07.7 +0.4**
comp=Z,17nm,0.7s,baz=78,slow=8.4,SNR=57
comp=Z,17nm,0.7s
BORK Borovoye 49.05 310*c i*P **P** **09 41 08.0 +0.4**
BORK pmax pmax
comp=Z,14nm,0.8s
BORK Borovoye 49.05 310 P **P** **09 41 07.9 +0.4**
O28M Mount Upton 49.12 39 P **P** **09 41 09.0 +0.6**
baz=283
ASAI AK-SAY(Kyrgyzs 49.18 293 P **P** **09 41 09.7 +0.5**
BTLS Baital 49.31 299 *e*P **P** **09 41 09.7 0.0**
BTLS Baital 49.31 299 *e*P **P** **09 41 09.7 0.0**
EPYK Eagle Plains 49.48 31 P **P** **09 41 12.2 +1.5**
baz=281
SGDS Sogindy 49.50 297 *e*P **P** **09 41 11.1 -0.2**
M29M Somme Creek 49.55 37 P **P** **09 41 11.9 +0.4**
baz=283
L29M L29M 49.55 36 P **P** **09 41 12.2 +0.8**
baz=283,SNR=6.0
G30M tAoh Zrail Nji 49.56 31 P **P** **09 41 12.5 +1.1**
baz=281,SNR=14
F30M Barrier River 49.61 30 P **P** **09 41 12.9 +1.3**
baz=281,SNR=16
K29M Barlow Dome 49.66 35 P **P** **09 41 13.2 +0.9**
baz=283,SNR=7.9
YUK4 Talbot Arm 49.72 38 P **P** **09 41 13.8 +0.9**
baz=284
I30M Mount Dempster 49.85 33 P **P** **09 41 15.4 +1.7**
baz=282,SNR=13
AAK Ala-Archa 49.90 296 LR LR 10 03 25.6
comp=Z,538nm,21.2s,baz=94,slow=37
AAK Ala-Archa 49.90 296 P **P** **09 41 14.9 +0.4**
AAK Ala-Archa 49.90 296*ce*P **P** **09 41 14.0 -0.5**
AAK pmax pmax
comp=Z,12nm,1.3s
AAK Ala-Archa 49.90 296 P **P** **09 41 14.6 +0.1**
YUK6 Outpost Mounta 49.95 39 P **P** **09 41 15.2 +0.6**
baz=284
O29M Mount Kennedy 50.01 40 P **P** **09 41 15.5 +0.6**
baz=285
J30M Hart River 50.01 34 P **P** **09 41 15.0 +0.1**
baz=283
PMG Port Moresby 50.23 175 LR LR 10 02 37.6
comp=Z,127nm,18.8s,baz=282,slow=36
M30M Minto, Yukon 50.27 36 P **P** **09 41 17.1 +0.2**
baz=284
INK Inuvik 50.30 29 LR LR 10 04 47.2
comp=Z,199nm,20.1s,baz=274,slow=39
INK Inuvik 50.30 29 P **P** **09 41 17.4 +0.5**
baz=282,SNR=13
INK Inuvik 50.30 29 P **P** **09 41 18.9 +2.0**
G31M Satah River 50.32 31 P **P** **09 41 18.0 +1.0**
baz=283,SNR=8.6
HYT Haines Junctio 50.38 39 P **P** **09 41 18.3 +0.4**
baz=285
F31M Tsiigehtchic 50.41 30 P **P** **09 41 18.2 +0.5**
baz=283,SNR=9.1
N30M Aishikik Lake 50.42 38 P **P** **09 41 19.0 +1.0**
baz=285
H31M Peel River 50.55 32 P **P** **09 41 19.5 +0.6**
baz=284,SNR=16
KSH2 Kashi 50.57 291 P **P** **09 41 20.5 +0.9**
KSH2 pmax pmax
comp=Z,8.0nm,0.7s
KSH2 L L
comp=Z,660nm,12.7s
KSH2 L L
comp=Z,580nm,17.2s
KSH2 L L
comp=Z,990nm,17.2s
P29M Windy Craggy 50.59 40 P **P** **09 41 20.2 +0.9**
baz=286,SNR=7.1
P30M Million Dollar 50.83 39 P **P** **09 41 21.1 0.0**
baz=286
N31M Braeburn, Yuko 51.02 38 P **P** **09 41 23.0 +0.5**
baz=286
O30N Mendenhall 51.07 39 P **P** **09 41 22.9 +0.1**
baz=286
PLBC Pleasant Camp 51.31 40 P **P** **09 41 24.6 -0.1**
baz=287
M31M Drury Creek, Y 51.45 36 P **P** **09 41 25.6 -0.1**
baz=286,SNR=5.1
ARSB Arslanbob 51.46 295 P **P** **09 41 26.3 +0.1**
ARSB pmax pmax
comp=Z,23nm,0.6s
ARSB Arslanbob 51.46 295 P **P** **09 41 26.3 +0.1**
WHY Whitehorse 51.67 38 P **P** **09 41 27.6 +0.1**
baz=287
DZA Taraz 51.94 298 *e*P **P** **09 41 29.5 -0.2**
DZA pmax pmax
comp=Z,8.0nm,0.6s
DZA Taraz 51.94 298 *e*P **P** **09 41 29.5 -0.2**
comp=Z,8.0nm,0.6s
ARK Arkit 51.96 296 P **P** **09 41 30.5 +0.5**
KULM Kulim 51.97 239 P **P** **09 41 31.7 +1.6**
comp=Z,26nm,0.9s
KULM Kulim 51.97 239 P **P** **09 41 31.0 +0.8**
A36M Sachs Harbour 52.14 23 P **P** **09 41 31.2 +0.6**
baz=287,SNR=6.0
N32M Quiet Lake 52.36 38 P **P** **09 41 32.6 0.0**
baz=286
KK31 Karatay Array 52.40 298 *i* P **P** **09 41 33.0 -0.1**
KK31 Karatay Array 52.40 298 P **P** **09 41 32.9 -0.2**
KK31 IAmb IAmb 09 41 33.8
comp=Z,11nm,0.8s
HNR Honiara 52.47 159 LR LR 10 01 29.4
comp=Z,8.6nm,21.8s,baz=46,slow=33
P32M Atlin 52.55 40 P **P** **09 41 33.7 -0.3**
baz=289
SIT Sitka 52.58 43 P **P** **09 41 34.5 +0.4**
baz=290
R32K Eaglecrest 52.59 41 P **P** **09 41 34.6 +0.5**
baz=289
MMPY Sheldon Lake, 52.72 35 P **P** **09 41 35.7 +0.6**
baz=288
P33M Teslin, Yukon 52.78 39 P **P** **09 41 36.4 +0.7**
baz=289
S32K Killisnoo 52.82 42 P **P** **09 41 36.4 +0.5**
baz=290
BRLS Borolday 52.88 298 *e*P **P** **09 41 37.9 +1.3**
BRLS Borolday 52.88 298 *e*P **P** **09 41 37.9 +1.3**
IUG luzhnay 53.12 297 *e*P **P** **09 41 38.1 -0.4**
IUG pmax pmax
comp=Z,8.0nm,0.9s
IUG luzhnay 53.12 297 *e*P **P** **09 41 38.2 -0.4**
comp=Z,8.4nm,0.9s
SVE Sverdlovsk 53.16 317 *e*P **P** **09 41 39.4 +1.0**
SVE pmax pmax
comp=Z,62nm,1.0s
SVE MLR MLR
comp=Z,597nm,17.0s
C36M Paulatuk 53.33 26 P **P** **09 41 40.2 +0.8**
baz=290,SNR=5.3
CHM Chimkent 53.34 298 *e*P **P** **09 41 39.8 -0.1**
CHM pmax pmax
comp=Z,8.0nm,0.6s
CHM Chimkent 53.34 298 *e*P **P** **09 41 39.9 -0.1**
comp=Z,8.4nm,0.6s
Q32M Nakina River 53.46 40 P **P** **09 41 41.2 +0.3**
baz=290
BTK Batken 53.49 295 P **P** **09 41 40.9 -0.3**
R33M Jennings River 53.94 39 P **P** **09 41 44.7 +0.5**
baz=291
MANEM Manem 54.02 291 P **P** **09 41 45.7 +0.4**
MANEM IAmb IAmb 09 42 04.3
comp=Z,25nm,0.9s
CRAG Craig 54.29 44 P **P** **09 41 47.9 +1.2**
baz=292
GAR Garm 54.31 294 P **P** **09 41 47.0 -0.2**
WRAK Wrangell Islan 54.34 43 P **P** **09 41 47.7 +0.7**
baz=292
S34M Telegraph Cree 54.40 41 P **P** **09 41 48.1 +0.7**
baz=292
ARTI Arti 54.48 317*c i*P **P** **09 41 48.3 +0.3**
ARTI *PP **pwP** **09 41 59.2 -0.9**
ARTI 09 42 51.2
ARTI 09 43 50.4
ARTI S **S** **09 49 25.8 +1.4**

ARTI SS **SS** **09 53 04.2 -2.2**
ARTI pmax pmax
comp=Z,75nm,1.0s
ARTI MLR MLR
comp=Z,618nm,18.0s
ARTI Arti 54.48 317 P **P** **09 41 48.5 +0.5**
ARTI Arti 54.48 317 P **P** **09 41 48.3 +0.3**
ARTI pP **pwP** **09 41 59.7 -0.4**
NIL Nilore 54.74 286 P **P** **09 41 50.5 +0.2**
NIL pmax pmax
comp=Z,30nm,0.9s
NIL Nilore 54.74 286 P **P** **09 41 50.5 +0.2**
NIL Nilore 54.74 286 P **P** **09 41 51.3 +1.0**
DLBC Dease Lake 54.74 40 LR LR 10 04 52.3
comp=Z,57nm,21.8s,baz=314,slow=36
DLBC Dease Lake 54.74 40 P **P** **09 41 50.9 +0.9**
baz=292
PSI Prapat 54.97 238 P **P** **09 41 52.4 +0.1**
PSI pmax pmax
comp=Z,13nm,0.7s
PSI Prapat 54.97 238 P **P** **09 41 51.2 -1.1**
comp=Z,17nm,0.9s
RPSI Rantau Prapat 55.05 238 P **P** **09 41 52.4 -0.3**
RPSI IAmb IAmb 09 41 53.7
comp=Z,13nm,0.7s
T35M Bob Quinn 55.19 42 P **P** **09 41 54.2 +1.0**
baz=293
CHGR Chuyangaron 55.27 294 *i* P **P** **09 41 53.7 -0.5**
CHGR pmax pmax
comp=Z,23nm,0.9s
CHGR Chuyangaron 55.27 294 P **P** **09 41 54.0 -0.2**
AB31 Akbulak array 56.50 309 *i* P **P** **09 42 03.0 +0.3**
AB31 Akbulak array 56.50 309 P **P** **09 42 02.7 0.0**
ABKAR Akbulak array 56.50 309 P **P** **09 42 02.6 0.0**
SHAA Shahritus 56.50 293 P **P** **09 42 02.9 -0.1**
SHAA IAmb IAmb 09 42 09.6
comp=Z,37nm,0.7s
SPA0 Spitsbergen Ar 56.96 349 *e*P **P** **09 42 04.8 -0.8**
SPITS Spitsbergen Ar 56.96 349 P **P** **09 42 07.0 +1.5**
comp=Z,3.8nm,0.6s,baz=66,slow=10,SNR=6.8
SPITS LR LR 10 09 30.2
comp=Z,224nm,18.8s,baz=37,slow=39
comp=Z,3.8nm,0.6s
NOR Nord 57.24 357 *i* P **P** **09 42 06.4 -1.0**
NOR IAmb IAmb 09 42 10.3
comp=Z,3.3nm,0.9s
KBL Kabul 57.33 289 P **P** **09 42 08.4 -0.7**
KBL pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 57.33 289 P **P** **09 42 08.4 -0.7**
KBL IAmb IAmb 09 42 09.3
comp=Z,12nm,0.8s
KBL Kabul 57.33 289 P **P** **09 42 08.9 -0.2**
KIRV Kirov 57.97 322*ce*P **P** **09 42 12.8 -0.1**
BBB Bella Bella 58.36 46 LR LR 10 05 19.5
comp=Z,98nm,21.5s,baz=278,slow=34
RES Resolute Bay 58.48 15 LR LR 10 11 52.0
comp=Z,186nm,18.3s,baz=9.5,slow=40
RES Resolute Bay 58.48 15 P **P** **09 42 16.8 +0.6**
RES pmax pmax
comp=Z,12nm,0.9s
RES Resolute Bay 58.48 15 P **P** **09 42 16.8 +0.6**
RES IAmb IAmb 09 42 17.8
comp=Z,12nm,0.8s
RES Resolute Bay 58.48 15 P **P** **09 42 17.4 +1.1**
VADS Vadso 59.41 339 *e*P **P** **09 42 23.6 +0.9**
APA Apatity 59.69 335 *e*P **P** **09 42 25.7 +1.0**
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,674nm,16.7s
YKA Yellowknife Ar 59.77 32 P **P** **09 42 24.9 -0.4**
comp=Z,2.0nm,0.9s,baz=303,slow=6.4,SNR=8.4
YKA LR LR 10 12 53.4
comp=Z,92nm,18.2s,baz=10.0,slow=41
comp=Z,2.0nm,0.9s
CTA Charters Tower 60.79 177 LR LR 10 11 02.7
comp=Z,66nm,19.0s,baz=260,slow=38
ARA0 ARCESS Array S 60.82 339 *e*P **P** **09 42 33.6 +1.1**
ARCES ARCESS Array B 60.82 339 P **P** **09 42 32.1 -0.4**
comp=Z,3.0nm,0.8s,baz=47,slow=7.1,SNR=7.6
ARCES LR LR 10 13 36.9
comp=Z,291nm,19.5s,baz=64,slow=41
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 60.82 339 *e*P **P** **09 42 32.4 -0.1**
TULEG Thule 61.05 8 *i* P **P** **09 42 32.8 -1.1**
TULEG IAmb IAmb 09 42 34.7
comp=Z,13nm,0.9s
WB5 Warramunga Arr 61.06 189 P **P** **09 42 34.8 +0.2**
WRAB Tennant Creek 61.11 189*ce*P **P** **09 42 35.5 +0.5**
WRAB pmax pmax
comp=Z,21nm,1.7s
WRAB Tennant Creek 61.11 189 P **P** **09 42 35.1 +0.1**
WRAB IAmb IAmb 09 42 46.8
comp=Z,9.1nm,0.9s
WRAB Tennant Creek 61.11 189 P **P** **09 42 35.2 +0.3**
WRAB pP **pP** **09 42 45.3 +0.5**
WRA Warramunga Arr 61.12 189 P **P** **09 42 34.6 -0.4**
comp=Z,6.1nm,0.7s,baz=6.7,slow=6.9,SNR=69
comp=Z,6.1nm,0.7s
WRA Warramunga Arr 61.12 189 P **P** **09 42 34.8 -0.3**
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRA Warramunga Arr 61.12 189 P **P** **09 42 34.8 -0.3**
KLMR Klimovskoe 61.19 327 *e*P **P** **09 42 32.8 -2.3**
KLMR *e* 09 44 47.0
KLMR pmax pmax
comp=Z,49nm,1.4s
KLMR MLR MLR
comp=Z,440nm,15.0s
QIS Mount Isa 61.27 184 P **P** **09 42 36.8 +0.7**
QIS pP **sP** **09 42 47.2 -2.1**
NEEM North Greenlan 61.55 4 *i* P **P** **09 42 36.2 -1.5**
NEEM IAmb IAmb 09 42 56.0
comp=Z,11nm,0.8s
KTK1 Kautokeino 61.78 339 *e*P **P** **09 42 39.7 +0.8**
KTK1 IAmb IAmb 09 42 40.6
comp=Z,22nm,1.1s
BELG Belogornoye 61.89 316 *i* P **P** **09 42 40.3 +0.4**
BELG pmax pmax
comp=Z,14nm,0.9s
JETT Jettan, Norway 62.14 340 *e*P **P** **09 42 42.8 +1.3**
JETT IAmb IAmb 09 42 43.2
comp=Z,2µm,5.0s
HRA Herat 62.22 293 P **P** **09 42 42.2 -0.5**
HRA IAmb IAmb 09 42 44.2
comp=Z,14nm,1.1s
TRO Tromso 62.46 341 *e*P **P** **09 42 44.1 +0.7**
PALK Pallekele 64.54 257 P **P** **09 42 57.4 -0.7**
comp=Z,6.7nm,0.8s,baz=45,slow=11,SNR=2.3
PALK LR LR 10 15 02.6
comp=Z,222nm,18.1s,baz=88,slow=40
comp=Z,6.7nm,0.8s
STEI Steigen 64.62 341 *e*P **P** **09 42 58.4 +0.6**
STEI IAmb IAmb 09 43 02.6
comp=Z,41nm,1.4s
AS31 Alice Springs 64.85 189 P **P** **09 43 00.1 +0.4**
ASAR Alice Springs 64.85 189 P **P** **09 43 00.0 +0.2**
comp=Z,7.3nm,0.9s,baz=3.5,slow=6.1,SNR=53
comp=Z,7.3nm,0.9s
MOS Moscow 64.93 323 *e*P **P** **09 43 01.1 +1.2**
MOS *e* 09 43 12.4
MOS *e* 09 43 31.7
MOS pmax pmax
comp=Z,56nm,1.3s
FAUS Fauske 65.03 340 *e*P **P** **09 43 01.1 +0.8**
FAUS IAmb IAmb 09 43 02.0
comp=Z,25nm,1.2s
VRH Novokhopyorsk 65.60 317 *e*P **P** **09 43 02.7 -1.7**
VRH pmax pmax
comp=Z,40nm,0.9s
MXC Moxie City 65.61 49 P **P** **09 43 06.2 +1.6**
MXC IAmb IAmb 09 43 18.9
comp=Z,7.3nm,0.9s
OBN Obninsk 65.78 323‖ *e*P **P** **09 43 05.2 -0.3**
OBN *e* 09 45 27.6
OBN pmax pmax
comp=Z,37nm,1.0s
OBN MLR MLR
comp=Z,425nm,16.0s
OBN Obninsk 65.78 323 P **P** **09 43 04.5 -1.0**
comp=Z,46nm,1.0s
OBN Obninsk 65.78 323 P **P** **09 43 05.9 +0.4**
OBN Obninsk 65.78 323 P **P** **09 43 05.6 +0.1**
OBN pP **sP** **09 43 17.9 -1.0**

FINES FINESS Array B 65.99 332 P **P** **09 43 07.0 +0.3**
comp=Z,11nm,0.5s,baz=44,slow=7.9,SNR=96
FINES LR LR 10 14 59.3
comp=Z,644nm,18.2s,baz=42,slow=39
comp=Z,11nm,0.5s
FINES FINESS Array B 65.99 332 P **P** **09 43 06.5 -0.2**
C09A Chrisman Ranch 66.05 47 P **P** **09 43 08.6 +1.2**
C09A IAmb IAmb 09 43 21.3
comp=Z,8.6nm,0.9s
RAUS Rausandaksla 66.07 340 *e*P **P** **09 43 07.7 +0.6**
MOR8 Moi Rana 66.17 340 *e*P **P** **09 43 07.1 -0.7**
MOR8 IAmb IAmb 09 43 07.1
comp=Z,12nm,0.7s
LPSR Galich'ya Gora 66.18 320 *e*P **P** **09 43 08.1 0.0**
LPSR pmax pmax
comp=Z,53nm,0.9s
NEW Newport 66.42 46 LR LR 10 11 04.6
comp=Z,70nm,21.3s,baz=307,slow=35
NEW Newport 66.42 46 P **P** **09 43 11.2 +1.4**
LEIR Leirfjorden 66.56 340 *i* 09 45 57.0
VORR Voronezh 66.60 319 *e*P **P** **09 43 10.7 -0.1**
VORR pmax pmax
comp=Z,47nm,1.1s
MSVF Nonsavu 66.77 144 LR LR 10 06 16.6
comp=Z,208nm,21.9s,baz=158,slow=30
SUMG Summit 66.78 1 P **P** **09 43 14.0 +2.0**
SUMG Summit 66.78 1 *i* P **P** **09 43 13.0 +0.9**
SUMG IAmb IAmb 09 43 14.6
comp=Z,16nm,0.8s
VSR Storozhevoye 66.89 318 *e*P **P** **09 43 12.7 0.0**
VSR pmax pmax
comp=Z,39nm,0.9s
YBH Yreka Blue Hor 66.93 54 LR LR 10 07 04.1
comp=Z,59nm,21.6s,baz=314,slow=31
VORD Divnogorie 66.98 318 *e*P **P** **09 43 12.2 -1.0**
VORD pmax pmax
comp=Z,30nm,0.9s
MAK Makhachkala 67.13 308*c i*P **P** **09 43 13.1 -1.2**
MAK *e* 09 45 37.4
MAK *e*PPP PPP 09 47 16.3
MAK *e*S **S** **09 52 04.2 -1.9**
MAK *e*SS **SS** **09 56 28.9 +4.1**
MAK pmax pmax
comp=Z,31nm,0.3s
MAK MLR MLR
comp=Z,339nm,16.0s
QLP Quilpie 67.19 179 P **P** **09 43 15.9 +1.2**
QLP pP **sP** **09 43 26.4 -1.6**
ARBE Arbavere 67.39 330 P **P** **09 43 16.6 +1.0**
VSU Vasula 67.77 329*de*P **P** **09 43 17.7 -0.4**
VSU pmax pmax
comp=Z,17nm,0.7s
VSU Vasula 67.77 329 P **P** **09 43 18.0 0.0**
AKT Akhty 67.85 306 *e*P **P** **09 43 19.2 +0.2**
AKT *e*PP **sP** **09 43 31.9 -0.6**
AKT *e* 09 43 45.0
AKT pmax pmax
comp=Z,38nm,0.8s
AKT MLR MLR
comp=Z,522nm,22.0s
COCO West Island 68.00 230 P **P** **09 43 17.9 -2.1**
SAATT Saattut 68.05 5 *i* P **P** **09 43 19.8 +0.2**
SAATT IAmb IAmb 09 43 21.6
comp=Z,18nm,0.9s
INKA Innaminka 68.37 182 P **P** **09 43 23.4 +1.4**
GOF Gofitskoye 68.51 311*c i*P **P** **09 43 24.0 +1.0**
WVOR Wild Horse Val 68.98 52 P **P** **09 43 27.9 +1.8**
NCK Nalchik 69.13 310 *i* P **P** **09 43 26.6 -0.3**
NCK pmax pmax
comp=Z,22nm,1.0s
KVAR Kislovodsk Arr 69.37 311 LR LR 10 16 56.9
comp=Z,215nm,20.0s,baz=262,slow=39
KIV Kislovodsk 69.38 311 *i* P **P** **09 43 29.9 +1.3**
SNR=19
KIV Kislovodsk 69.38 311 *e*P **P** **09 43 29.7 +1.2**
KIV pmax pmax
comp=Z,109nm,1.1s
KIV Kislovodsk 69.38 311 P **P** **09 43 29.5 +1.0**
KIV Kislovodsk 69.38 311 P **P** **09 43 29.0 +0.5**
comp=Z,841nmcomp=Z,109nm,1.0s
KIV Kislovodsk 69.38 311 P **P** **09 43 29.9 +1.3**
KIV Kislovodsk 69.38 311 P **P** **09 43 29.8 +1.3**
KBZ Khabaz 69.39 310 P **P** **09 43 29.7 +1.3**
comp=Z,31nm,0.8s,baz=71,slow=4.0,SNR=93
KBZ LR LR 10 19 09.8
comp=Z,234nm,18.2s,baz=36,slow=40
BEKR Beckworth 69.46 55 P **P** **09 43 31.1 +1.8**
BEKR IAmb IAmb 09 43 43.1
comp=Z,8.6nm,1.1s
FFC Flin Flon 69.70 34 P **P** **09 43 31.1 +0.9**
FFC pmax pmax
comp=Z,9.0nm,0.9s
FFC Flin Flon 69.70 34 P **P** **09 43 31.1 +0.9**
FFC IAmb IAmb 09 43 32.1
comp=Z,9.4nm,0.9s
FFC Flin Flon 69.70 34 P **P** **09 43 31.3 +1.1**
MNK Minsk 70.02 326 *i* P **P** **09 43 32.7 +0.6**
comp=E,20nm,1.0s
MNK *i* P **P** **09 43 32.7 +0.6**
comp=N,22nm,1.0s
MNK *i* P **P** **09 43 32.7 +0.6**
comp=Z,55nm,0.9s,baz=47
MNK *i* pP **sP** **09 43 46.9 +1.2**
MNK *i* PP **PP** **09 46 08.0 +1.3**
MNK *i* PPP PPP 09 47 50.3
MNK *i* S **S** **09 52 40.3 +0.2**
MNK *i* sS sS 09 53 04.7 +8.4
MNK *i* SS **SS** **09 57 11.6 +2.8**
MNK *i* SSS SSS 10 00 29.8
MNK *i* LQ LQ 10 09 32.1
MNK *i* LR LR 10 14 52.2
MNK *i* LRM MLR 10 17 22.9
comp=E,376nm,17.5s
MNK *i* LRM MLR 10 17 26.1
comp=N,349nm,19.3s
MNK *i* LRM MLR 10 17 31.1
comp=Z,617nm,17.4s
MNK Minsk 70.02 326 *i* P **P** **09 43 32.7 +0.6**
MNK *i* *PP **sP** **09 43 46.8 +1.2**
MNK *i* 09 43 54.3
MNK *i* 09 46 07.9
MNK *i* PPP PPP 09 47 50.2
MNK *i* S **S** **09 52 40.3 +0.2**
MNK *i* *SS sS 09 53 04.6 +8.3
MNK *i* 09 53 30.5
MNK *i* SS **SS** **09 57 11.5 +2.8**
MNK pmax pmax
comp=Z,55nm,0.9s
MNK pmax pmax
comp=N,22nm,1.0s
MNK pmax pmax
comp=E,20nm,1.0s
MNK MLR MLR
comp=E,376nm,18.0s
MNK MLR MLR
comp=N,349nm,19.0s
MNK MLR MLR
comp=Z,617nm,17.0s
NACGM Naroch 70.20 327 *i* P **P** **09 43 33.6 +0.4**
comp=Z,78nm,0.9s,baz=46
GNI Garni 70.46 306 LR LR 10 17 41.5
comp=Z,201nm,19.9s,baz=60,slow=39
GNI Garni 70.46 306*ce*P **P** **09 43 35.9 +0.6**
GNI pmax pmax
comp=Z,36nm,1.3s
GNI Garni 70.46 306 P **P** **09 43 35.1 -0.2**
comp=Z,23nm,0.9s
HLID Hailey 70.75 49 P **P** **09 43 39.2 +2.1**
EPOS Posof 70.85 309 P **P** **09 43 39.4 +1.7**
DOMB Dombas 70.89 339 *e*P **P** **09 43 37.9 +0.5**
PABE Paberze 70.93 328 P **P** **09 43 37.8 +0.2**
HFS Hagfors 71.08 336 P **P** **09 43 38.8 +0.3**
comp=Z,7.7nm,0.5s,baz=35,slow=5.6,SNR=35
comp=Z,7.7nm,0.5s
NB2 NORSAR Subarra 71.10 337 P **P** **09 43 39.1 +0.4**
comp=Z,3.3nm,0.6s,baz=36,slow=6.5
NB2 NORSAR Subarra 71.10 337 P **P** **09 43 39.1 +0.4**
NOA NORSAR Array B 71.10 337 P **P** **09 43 38.9 +0.2**
comp=Z,5.1nm,0.7s,baz=37,slow=6.1,SNR=24
comp=Z,5.1nm,0.7s
NC602 NORSAR Array S 71.25 337 *e*P **P** **09 43 40.4 +0.8**
SHME Shamm 71.29 288 *i* P **P** **09 43 41.0 +0.6**
SNR=6.1
SOC Sochi 71.30 312 *e*P **P** **09 43 40.2 +0.1**
SOC *e* 09 46 17.1

SOC ePPP PPP 09 48 00.9
SOC eS S 09 52 55.0 -0.3
SOC eSSS SSS 10 00 36.8
SOC pmax pmax
comp=Z,14nm,0.8s
SOC MLR MLR
comp=Z,229nm,21.0s
NVAR Mina Array Bea 71.61 55 P P 09 43 44.4 +2.0
comp=Z,3.0nm,0.9s,baz=286,slow=5.9,SNR=17
NVAR LR LR 10 09 18.7
comp=Z,66nm,21.1s,baz=310,slow=31
comp=Z,3.0nm,0.9s
MSFE Esma-Masafi 71.69 288 P P 09 43 43.5 +0.7
ANN Anapa 71.80 314 eP P 09 43 43.4 +0.3
ANN pmax pmax
comp=Z,20nm,0.6s
SFJD Kangerlussuaq 71.88 6 LR LR 10 18 48.7
comp=Z,194nm,18.3s,baz=352,slow=39
UOSS Minazif 71.91 288 P P 09 43 44.5 +0.3
GCMT Greycliff 71.96 45 P P 09 43 45.1 +0.8
AK03 Malin Array Si 72.01 322 P P 09 43 44.5 +0.2
AKASG Malin Array Be 72.03 322 P P 09 43 44.5 +0.1
comp=Z,15nm,0.8s,baz=44,slow=6.0,SNR=72
comp=Z,15nm,0.8s
AKASG Malin Array Be 72.03 322 P P 09 43 44.5 +0.1
AKASG IAmb IAmb 09 43 45.8
comp=Z,12nm,1.0s
AKBB Malin Array Si 72.03 322 *ce*P P 09 43 44.2 -0.2
AKBB pmax pmax
comp=Z,28nm,0.9s
AKBB Malin Array Si 72.03 322 P P 09 43 44.2 -0.2
AKBB Malin Array Si 72.03 322 P P 09 43 44.5 +0.1
HATD Hatta, Dubai 72.03 287 P P 09 43 45.3 +0.5
AK23 Malin Array Si 72.03 322 P P 09 43 44.3 -0.1
AK01 Malin Array Si 72.04 322 P P 09 43 44.4 -0.1
AK04 Malin Array Si 72.04 322 P P 09 43 44.4 -0.1
KIEV Kiev 72.04 322 *i* P P 09 43 44.7 +0.2
SNR=18
KIEV Kiev 72.04 322 P P 09 43 44.5 0.0
comp=Z,150nm,0.9s
KIEV Kiev 72.04 322 P P 09 43 44.6 +0.2
KIEV Kiev 72.04 322 P P 09 43 44.5 0.0
AK22 Malin Array Si 72.06 322 P P 09 43 44.5 -0.1
AK09 Malin Array Si 72.06 322 P P 09 43 44.5 -0.1
AK08 Malin Array Si 72.06 322 P P 09 43 44.5 -0.1
AK21 Malin Array Si 72.06 322 P P 09 43 44.5 -0.1
ASHO Ashiyiah 72.17 287 *i* P P 09 43 45.4 -0.3
SNR=6.2
NAZ Nazwa, Dubai 72.27 288 P P 09 43 46.8 +0.5
HYA Hoyanger 72.39 340 eP P 09 43 47.0 +0.7
FAQ Al Faqa, Dubai 72.47 288 P P 09 43 47.9 +0.4
STKA Stephens Creek 72.47 181 P P 09 43 47.4 +0.3
comp=Z,1.4nm,0.7s,baz=356,slow=7.1,SNR=5.7
STKA LR LR 10 22 52.8
comp=Z,70nm,18.4s,baz=3.2,slow=42
comp=Z,1.4nm,0.7s
MI28 Mi28,Pidlybu 72.58 323 P P 09 43 47.2 -0.5
FXWY Fox Creek 72.61 47 P P 09 43 50.2 +1.8
FRB Frobisher Bay 72.66 14 LR LR 10 20 55.7
comp=Z,182nm,18.0s,baz=353,slow=40
HAKT HAKKARI 72.69 305 P P 09 43 49.5 +0.6
ASUD Al Ashush, Dub 72.73 288 *i* P P 09 43 50.0 +0.9
SNR=6.3
ALNE Al Ain 72.77 287 *i* P P 09 43 50.0 +0.7
SNR=6.0
RNPP9 Sopachiv 73.04 324 P P 09 43 50.8 +0.4
KOPT Kop Dagi 73.10 308 P P 09 43 52.2 +0.9
RNPP8 Varash 73.11 324 P P 09 43 50.7 -0.1
RNPP5 Staryi Chortor 73.17 324 P P 09 43 51.1 -0.1
LUBAR Lubar, Ukraine 73.25 322 P P 09 43 51.5 -0.2
BER Bergen 73.27 340 eP P 09 43 52.6 +1.0
HWUT Hardware Ranch 73.62 49 P P 09 43 56.4 +2.2
KELT Kelkit 73.75 309 P P 09 43 56.7 +1.6
DUG Dugway, Tooele 73.81 51 P P 09 43 57.6 +2.3
BORG Borgarnes 73.94 353 LR LR 10 14 48.9
comp=Z,63nm,21.4s,baz=351,slow=34
PD31 Pinedale Array 73.99 47 P P 09 43 57.2 +0.7
PDAR Pinedale Array 73.99 47 P P 09 43 57.8 +1.3
comp=Z,1.9nm,0.8s,baz=264,slow=2.6,SNR=17
comp=Z,1.9nm,0.8s
PDAR Pinedale Array 73.99 47 P P 09 43 57.3 +0.8
SORM Soroca 74.22 321 ⇑P P 09 43 57.5 +0.1
SORM Soroca 74.22 321 P P 09 43 57.4 +0.1
NUUK Nuuk 74.56 7 P P 09 44 00.6 +1.5
NUUK Nuuk 74.56 7 *i* P P 09 43 58.2 -0.8
NUUK IAmb IAmb 09 44 00.9
comp=Z,13nm,0.9s
KMPD K-Podol'skiy 74.81 322 P P 09 44 00.5 -0.3
BEL Belsk 74.91 327 eP P 09 44 02.3 +1.0
BEL Belsk 74.91 327 P P 09 44 02.9 +1.6
ARPR Arapgir-MALATY 74.97 309 P P 09 44 04.2 +2.0
MZR Muzera 75.06 288 *i* P P 09 44 02.7 0.0
SNR=8.1
ULM Lac du Bonnet 75.51 35 P P 09 44 04.4 -0.4
comp=Z,3.0nm,0.8s,baz=312,slow=5.8,SNR=5.3
comp=Z,3.0nm,0.8s
PFO Pinyon Flats O 75.78 58 LR LR 10 10 53.3
comp=Z,171nm,21.9s,baz=291,slow=30
RSSD Black Hills 76.04 43 P P 09 44 08.9 +0.7
BURAR Bucovina Array 76.07 322 ⇑P P 09 44 08.8 +0.5
BURAR Bucovina Array 76.07 322 P P 09 44 08.7 +0.5
TESR Tescani 76.19 320 ⇑P P 09 44 09.5 +0.7
TESR Tescani 76.19 320 P P 09 44 09.2 +0.4
comp=Z,27nm,1.1s
TESR Tescani 76.19 320 P P 09 44 09.6 +0.8
CFR Carcaliu 76.41 319 ⇓P P 09 44 10.4 +0.4
CFR Carcaliu 76.41 319 P P 09 44 10.3 +0.4
ONER Baraj Valea Uz 76.44 320 ⇑P P 09 44 11.6 +1.4
TPGR Topolog 76.49 318 ⇑P P 09 44 11.5 +1.0
ODBI Odobesti 76.53 320 ⇑P P 09 44 12.0 +1.3
STHS Stebnicka Huta 76.53 325 eP P 09 44 11.7 +1.0
STHS Stebnicka Huta 76.53 325 eP P 09 44 11.7 +1.0
OJC Ojcow 76.54 327 eP P 09 44 11.7 +1.1
OJC Ojcow 76.54 327 P P 09 44 11.2 +0.5
OJC Ojcow 76.54 327 P 09 44 11.2 +0.5
OJC Ojcow 76.54 327 P P 09 44 11.1 +0.4
comp=Z,22nm,1.1s
OJC Ojcow 76.54 327 P P 09 44 11.8 +1.1
U15A North Rim 76.57 53 P 09 44 12.4 +1.0
VRI Vrincioaia 76.61 320 ⇑P P 09 44 12.0 +0.8
VRI Vrincioaia 76.61 320 P P 09 44 12.0 +0.8
VRI Vrincioaia 76.61 320 P P 09 44 11.6 +0.4
VRI Vrincioaia 76.61 320 P P 09 44 12.3 +1.1
PLOR Plostina 76.66 320 ⇓P P 09 44 12.7 +1.1
PLOR Plostina 76.66 320 P P 09 44 12.6 +1.1
SAHR Sahastru 76.73 320 ⇑P P 09 44 13.6 +1.7
TURR Turia 76.82 320 ⇓P P 09 44 13.9 +1.5
ARCR ARCALIA 76.86 322 ⇓P P 09 44 14.2 +1.6
COVR Voineasa-Covas 76.88 320 ⇑P P 09 44 13.8 +1.0
TLBR Topalu 76.90 318 ⇓P P 09 44 14.1 +1.3
TRPA Tarpa 76.92 324 P P 09 44 14.2 +1.3
NIE Niedzica 76.93 326 eP P 09 44 14.2 +1.3
AGMN Agassiz Nation 76.97 36 P P 09 44 12.9 -0.2
ANDN Andirin 77.14 309 P P 09 44 16.1 +1.6
BSEG Bad Segeberg 77.17 334 eP P 09 44 15.2 +1.1
comp=Z,9.9nm,0.9s,baz=34,slow=5.4
BSEG eL L 10 20 35.0
comp=Z,209nm,22.0s
BSEG Bad Segeberg 77.17 334 P P 09 44 15.0 +0.9
DOPR Dopca 77.19 321 ⇑P P 09 44 16.1 +1.6
ISR Istrita 77.24 320 ⇓P P 09 44 16.3 +1.4
ISR Istrita 77.24 320 P P 09 44 16.2 +1.4
BRTR Keskin Array B 77.26 312 P P 09 44 15.7 +0.6
comp=Z,3.6nm,0.8s,baz=52,slow=3.9,SNR=16
BRTR PP PP 09 47 08.7 -0.1
comp=Z,0.4nm,0.4s,baz=40,slow=4.8,SNR=4.1
comp=Z,3.6nm,0.8s
BRTR Keskin Array B 77.26 312 *i* P P 09 44 16.1 +1.0
BRTR pmax pmax
comp=Z,4.0nm,0.8s
MLR Muntele Rosu 77.26 320 ⇑P P 09 44 15.8 +0.7
MLR Muntele Rosu 77.26 320 P P 09 44 15.7 +0.7
MLR Muntele Rosu 77.26 320 P P 09 44 15.9 +0.9
ICOR Ion Corvin 77.33 318 ⇑P P 09 44 16.9 +1.6
ABAH Abaujker 77.37 324 P P 09 44 17.1 +1.7
KSP Ksiaz 77.48 329 eP P 09 44 16.8 +0.8
OKC Ostrava-Krasne 77.51 327 AMS AMS 10 21 30.0
comp=Z,500nm,17.2s
OKC Ostrava-Krasne 77.51 327 P P 09 44 17.3 +1.2
STEB Steborice 77.59 327 eP P 09 44 17.7 +1.1
GORT1 Trebel 77.61 333 eP P 09 44 17.6 +1.0
comp=Z,44nm,1.6s,baz=34,slow=5.4
MARR Marisel-Cluj 77.74 322 ⇑P P 09 44 18.6 +1.0
VOIR 77.74 321 ⇓P P 09 44 18.9 +1.3
VOIR 77.74 321 P P 09 44 18.8 +1.3
VOIR 77.74 321 P P 09 44 19.1 +1.5
CHVC Chvalec 77.77 329 eP P 09 44 18.7 +1.1
CHVC MLR MLR
comp=Z,500nm,15.2s
CHVC Chvalec 77.77 329 eP P 09 44 18.7 +1.1
CHVC AMS AMS 10 22 00.0
comp=Z,500nm,15.2s
MORC Moravsky Berou 77.81 327 ⇑P P 09 44 19.1 +1.2
MORC Moravsky Berou 77.81 327 P P 09 44 19.0 +1.2
MORC Moravsky Berou 77.81 327 eP P 09 44 18.9 +1.0
MORC Moravsky Berou 77.81 327 P P 09 44 19.1 +1.2
DRGR 77.84 323 ⇓P P 09 44 19.0 +0.9
DRGR 77.84 323 P P 09 44 19.0 +0.9
DRGR 77.84 323 P P 09 44 19.0 +0.9
UPC Upice 77.85 329 eP P 09 44 19.5 +1.4
UPC MLR MLR
comp=Z,500nm,16.2s
UPC Upice 77.85 329 eP P 09 44 19.5 +1.4
UPC AMS AMS 10 22 00.0
comp=Z,500nm,16.2s
UPC Upice 77.85 329 P P 09 44 18.8 +0.8
DPC Dobruska-Polom 77.85 328 eP P 09 44 19.1 +1.0
DPC MLR MLR
comp=Z,400nm,16.3s
DPC Dobruska-Polom 77.85 328 eP P 09 44 19.1 +1.0
DPC AMS AMS 10 21 50.0
comp=Z,400nm,16.3s
DPC Dobruska-Polom 77.85 328 P P 09 44 19.5 +1.3
KRLC Kraliky 77.89 328 eP P 09 44 19.3 +1.0
KRLC MLR MLR
comp=Z,300nm,19.6s
KRLC Kraliky 77.89 328 eP P 09 44 19.3 +1.0
KRLC AMS AMS 10 22 00.0
comp=Z,300nm,19.6s
KRLC Kraliky 77.89 328 P P 09 44 19.9 +1.6
ARR Arges 77.99 321 ⇑P P 09 44 19.6 +0.6
ARR Arges 77.99 321 P P 09 44 20.9 +1.9
KKUL Konya-Kulu 78.05 312 P P 09 44 21.0 +1.5
FLTG Flechtingen 78.17 332 eP P 09 44 20.1 +0.4
comp=Z,16nm,0.8s,baz=34,slow=5.4
ISCO Idaho Springs 78.19 47 P P 09 44 21.7 +1.2
ISCO pP PcP 09 44 30.2 +0.3
PSZ Piszkesteto 78.25 325 ⇓P P 09 44 21.5 +1.1
PSZ Piszkesteto 78.25 325 P P 09 44 21.5 +1.1
PSZ Piszkesteto 78.25 325 P 09 44 21.4 +1.0
PSZ IAmb IAmb 09 44 22.7
comp=Z,18nm,1.1s
PSZ Piszkesteto 78.25 325 P P 09 44 21.6 +1.3
MVCO Mesa Verde 78.31 51 P P 09 44 23.0 +1.9
BRG Berggiesshubel 78.36 330 eP P 09 44 21.4 +0.6
comp=Z,5.7nm,1.0s,baz=34,slow=5.4
BRG Berggiesshubel 78.36 330 P P 09 44 21.5 +0.6
BRG Berggiesshubel 78.36 330 eP P 09 44 21.7 +0.9
BRG Amp 09 44 22.6
comp=Z,5.7nm,1.0s
PVCC Panska Ves 78.40 329 P P 09 44 22.5 +1.4
JAVC Velka Javorina 78.47 327 eP P 09 44 23.4 +1.9
JAVC Velka Javorina 78.47 327 P P 09 44 23.5 +1.9
RETH Rethem/Aller, 78.49 333 eP P 09 44 22.3 +0.9
comp=Z,12nm,1.0s,baz=34,slow=5.4
RETH Rethem/Aller, 78.49 333 P P 09 44 22.4 +0.9
ASSE Asse, Remlinge 78.54 332 eP P 09 44 22.3 +0.6
comp=Z,9.6nm,1.1s,baz=34,slow=5.4
VRAC Vranov 78.56 328 ⇓P P 09 44 23.2 +1.2
VRAC Vranov 78.56 328 P P 09 44 23.2 +1.2
VRAC Vranov 78.56 328 eP P 09 44 23.1 +1.1
VRAC Vranov 78.56 328 P P 09 44 23.4 +1.4
SIRR Siria 78.71 323 ⇓P P 09 44 23.7 +0.8
WIMM Wimmelburg 78.74 332 P P 09 44 23.4 +0.5
HSKC Hora Svate Kat 78.77 330 eP P 09 44 23.8 +0.6
HSKC AMS AMS 10 20 40.0
comp=Z,300nm,27.6s
HSKC Hora Svate Kat 78.77 330 P P 09 44 24.0 +0.8
KRUC Moravsky 78.84 328 eP P 09 44 24.4 +0.9
KRUC Moravsky 78.84 328 P P 09 44 24.6 +1.1
PRU Pruhonice 78.84 329 eP P 09 44 24.5 +1.0
PRU AMS AMS 10 22 30.0
comp=Z,300nm,15.8s
PRU Pruhonice 78.84 329 P P 09 44 24.8 +1.2
SMOL Smolenice 78.84 327 eP P 09 44 24.6 +1.1
SMOL pmax pmax
comp=Z,12nm,1.6s
GZR Gura Zlata 78.85 322 ⇓P P 09 44 24.5 +0.7
GZR Gura Zlata 78.85 322 P P 09 44 24.4 +0.7
CLZ Clausthal 78.88 332 eP P 09 44 24.8 +1.0
comp=Z,12nm,0.8s,baz=34,slow=5.4
CLZ Clausthal 78.88 332 P P 09 44 24.9 +1.2
NEUB Neuenburg 78.90 331 eP P 09 44 24.6 +0.8
comp=Z,16nm,0.8s,baz=34,slow=5.4
NEUB Neuenburg 78.90 331 P P 09 44 24.9 +1.2
SRO Srobarova 79.01 326 eP P 09 44 26.5 +2.0
MODS Modra-Piesok 79.01 327 eP P 09 44 26.2 +1.7
MODS pmax pmax
comp=Z,58nm,1.8s
MODS Modra-Piesok 79.01 327 P P 09 44 26.3 +1.8
MODS Modra-Piesok 79.01 327 eP P 09 44 26.1 +1.6
TREC Trest 79.02 328 eP P 09 44 25.7 +1.1
TREC Trest 79.02 328 eP P 09 44 25.7 +1.1
TREC Trest 79.02 329 P P 09 44 25.7 +1.1
EYMN Ely 79.14 34 P P 09 44 25.6 +0.4
BZS Buzias 79.22 322 ⇑P P 09 44 26.3 +0.6
BZS Buzias 79.22 322 P P 09 44 26.2 +0.6
BZS Buzias 79.22 322 P P 09 44 26.3 +0.6
GTTG Gottingen 79.27 332 eP P 09 44 26.9 +1.1
comp=Z,12nm,0.8s,baz=34,slow=5.4
GTTG Gottingen 79.27 332 P P 09 44 25.7 -0.1
TANN Tannenbergstha 79.29 330 eP P 09 44 26.8 +0.8
comp=Z,3.0nm,0.9s,baz=34,slow=5.4
TANN Tannenbergstha 79.29 330 P P 09 44 26.8 +0.8
PLN Plauen 79.35 331 eP P 09 44 26.9 +0.7
comp=Z,1.8nm,0.8s,baz=34,slow=5.4
IBBN Ibbenburen 79.39 334 eP P 09 44 27.0 +0.6
comp=Z,18nm,0.8s,baz=34,slow=5.4
IBBN Ibbenburen 79.39 334 P P 09 44 27.1 +0.6
MOX Moxa 79.42 331 eP P 09 44 27.4 +0.6
comp=Z,4.3nm,0.8s,baz=34,slow=5.4
MOX eL L 10 23 04.7
comp=Z,387nm,18.8s
MOX Moxa 79.42 331 P P 09 44 27.3 +0.6
NKC Novy Kostel 79.44 330 P P 09 44 27.6 +0.8
WINA Alland / Wiene 79.72 327 *i* P P 09 44 29.8 +1.4
comp=Z,6.9nm,0.8s
MDVR Moldovita 79.81 322 ⇓P P 09 44 29.1 +0.1
MPLH Magyarpolny 79.84 326 P P 09 44 29.8 +0.8
UBBA Unterbreizbach 79.86 332 eP P 09 44 29.4 +0.6
comp=Z,3.3nm,0.9s,baz=34,slow=5.4
CKRC Cesky Krumlov 79.87 328 eP P 09 44 30.0 +0.8
CKRC MLR MLR
comp=Z,300nm,17.9s
CKRC Cesky Krumlov 79.87 328 eP P 09 44 30.0 +0.8
CKRC AMS AMS 10 23 20.0
comp=Z,300nm,17.9s
EKA Eskdalemuir Ar 79.89 341 P P 09 44 29.3 +0.2
comp=Z,4.0nm,0.6s,baz=27,slow=4.9,SNR=16
EKA LR LR 10 25 42.1
comp=Z,198nm,18.3s,baz=21,slow=40
comp=Z,4.0nm,0.6s
KHC Kasperske Hory 79.90 329 eP P 09 44 30.2 +0.8
KHC e*PP sP 09 44 42.8 -0.2
KHC MLR MLR
comp=Z,300nm,16.3s
KHC Kasperske Hory 79.90 329 eP P 09 44 30.2 +0.8
KHC epP sP 09 44 42.8 -0.2
KHC AMS AMS 10 23 20.0
comp=Z,300nm,16.3s
KHC Kasperske Hory 79.90 329 P P 09 44 30.4 +1.0
CONA Conrad Observa 79.95 327 *i* P P 09 44 31.1 +1.3
comp=Z,9.5nm,1.1s,SNR=8.0
RONA Rosalia, Austr 79.95 327 *i* P P 09 44 31.1 +1.5
comp=Z,7.0nm,0.7s,SNR=6.0
ECSD EROS Data Cent 80.03 39 P 09 44 30.4 +0.3
ECSD EROS Data Cent 80.03 39 P P 09 44 29.6 -0.5
ECSD pP PcP 09 44 37.6 +0.1
GEC2 GERESS Array S 80.08 329 eP P 09 44 31.1 +0.7
comp=Z,9.9nm,0.8s,baz=34,slow=5.4
GERES GERESS Array B 80.08 329 P P 09 44 31.2 +0.8
comp=Z,2.1nm,0.7s,baz=24,slow=4.5,SNR=22
GERES PP PP 09 47 29.1 -2.9
comp=Z,0.7nm,0.8s,baz=22,slow=7.6,SNR=3.4
comp=Z,2.1nm,0.7s
KASTN Kahler Asten 80.09 333 eP P 09 44 30.9 +0.6
comp=Z,6.2nm,0.9s,baz=34,slow=5.4
MORH Mrgy, Hungar 80.11 324 ⇑P P 09 44 30.9 +0.5
MORH Mrgy, Hungar 80.11 324 P P 09 44 30.7 +0.3
WET Wettzell 80.16 329 eP P 09 44 31.9 +1.1
comp=Z,10nm,1.0s,baz=34,slow=5.4
WET eL L 10 23 55.5
comp=Z,338nm,18.0s
WET Wettzell 80.16 329 P P 09 44 31.9 +1.1
GRA3 Grafenberg Arr 80.25 331 P P 09 44 32.5 +1.3
BUG Bochum--Univer 80.28 334 eP P 09 44 31.9 +0.7
comp=Z,9.2nm,0.6s,baz=34,slow=5.4
BUG Bochum--Univer 80.28 334 P P 09 44 31.7 +0.5
GRA2 Grafenberg Arr 80.32 331 P P 09 44 33.2 +1.6
GRA1 Grafenberg Arr 80.34 331 P P 09 44 32.3 +0.6
GRF Grafenberg Arr 80.34 331 eP P 09 44 32.9 +1.2
comp=Z,17nm,0.8s,baz=34,slow=5.4
GRF eL L 10 23 23.7
comp=Z,362nm,20.2s
GRFO Grafenberg 80.34 331 P P 09 44 32.3 +0.6
GRB4 Grafenberg Arr 80.40 330 P P 09 44 33.5 +1.5
RAYN Ar Rayn 80.41 293 *i* P P 09 44 33.0 +0.5
SNR=8.5
RAYN Ar Rayn 80.41 293 P P 09 44 31.9 -0.7
RAYN Ar Rayn 80.41 293 P P 09 44 32.7 +0.2
RAYN PcP PcP 09 44 40.2 +0.6
GRB3 Grafenberg Arr 80.41 330 P P 09 44 33.6 +1.6
GRB1 Grafenberg Arr 80.43 330 P P 09 44 33.4 +1.2
GRB2 Grafenberg Arr 80.52 330 P P 09 44 33.8 +1.2
ARSA Arzberg 80.63 327 *i* P P 09 44 34.2 +1.0
comp=Z,4.3nm,0.7s
RDO Rodhopi 80.63 317 P P 09 44 34.6 +1.3
GRB5 Grafenberg Arr 80.65 330 P P 09 44 34.7 +1.4
GRB5 pP pP 09 44 43.6 +0.3
MOA Molln 80.66 328 *i* P P 09 44 34.2 +0.7
comp=Z,4.5nm,0.9s
MOA Molln 80.66 328 P P 09 44 34.8 +1.3
GRC4 Grafenberg Arr 80.73 330 P P 09 44 34.7 +0.9
MMAI Mount Meron Ar 80.79 306 P P 09 44 35.3 +0.8
comp=Z,7.5nm,0.7s,baz=23,slow=13,SNR=8.2
MMAI LR LR 10 24 23.5
comp=Z,220nm,20.0s,baz=44,slow=39
comp=Z,7.5nm,0.7s
GRC1 Grafenberg Arr 80.80 330 P P 09 44 35.0 +0.8
GRC3 Grafenberg Arr 80.86 330 P P 09 44 34.9 +0.4
TNS Taunus Mts 80.90 332 eP P 09 44 35.5 +0.7
comp=Z,6.3nm,0.8s,baz=34,slow=5.4
TNS eL L 10 24 08.5
comp=Z,328nm,19.0s
GRC2 Grafenberg Arr 80.96 330 P P 09 44 36.2 +1.1
BIOA Bad Ischl, Aus 81.04 328 *i* P P 09 44 36.4 +0.9
comp=Z,6.3nm,0.9s,SNR=5.5
ANMO Albuquerque 81.06 51 *ce*P P 09 44 35.1 -1.0
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 81.06 51 P P 09 44 36.0 -0.1
SESA Seetaler Alpe, 81.13 327 *i* P P 09 44 37.1 +0.9
comp=Z,300nm,0.6s,SNR=13
MMLI Mount Malkishu 81.17 305 P P 09 44 38.2 +1.7
SCHQ Schefferville 81.21 17 P P 09 44 37.1 +0.9
comp=Z,4.3nm,0.7s,baz=307,slow=9.2,SNR=4.5
SCHQ LR LR 10 22 21.4
comp=Z,119nm,21.9s,baz=325,slow=37
comp=Z,4.3nm,0.7s
GROS Grobnik 81.26 326 *i* P P 09 44 37.2 +0.5
LBWR Ladybower, Pea 81.26 340 P P 09 44 37.6 +1.1
SOKA Soboth 81.28 327 *i* P P 09 44 37.6 +0.7
comp=Z,18nm,0.7s,SNR=6.0
RJOB Jochberg 81.34 329 P P 09 44 38.8 +1.7
BEBN Eben Emael 81.36 334 *d*P P 09 44 37.8 +0.8
BTNL Ternell 81.39 334 *d*P P 09 44 37.9 +0.6
MEM Membach 81.41 334 *d*P P 09 44 38.2 +0.8
comp=Z,9.3nm,0.9s
MEM Membach 81.41 334 P P 09 44 38.1 +0.8
BSTI Sart Tilman 81.58 334 *d*P P 09 44 39.0 +0.8
comp=Z,2.3nm,0.9s
FUR Furstenfeldbru 81.58 330 *e*L L 10 23 09.7
comp=Z,230nm,21.2s
FUR Furstenfeldbru 81.58 330 P P 09 44 37.5 -0.8
OBKA Obir 81.62 327 *i* P P 09 44 39.3 +0.6
comp=Z,8.5nm,0.7s
BHOU Houvegnez 81.63 334 *d*P P 09 44 39.0 +0.5
LESA Schwarzleotal 81.64 329 *i* P P 09 44 39.6 +0.9
comp=Z,4.5nm,0.7s
SRS Serrai 81.64 318 P P 09 44 39.8 +1.0
KBA Koelnbreinsper 81.65 328 eP P 09 44 39.5 +0.6
comp=Z,7.0nm,0.6s,SNR=5.8
KBA Koelnbreinsper 81.65 328 P P 09 44 39.9 +1.0
GCIS Gornji Cirnik 81.68 326 *i* P P 09 44 39.2 +0.3
BCLA Clavier 81.80 334 *d*P P 09 44 40.0 +0.5
comp=Z,6.3nm,0.9s
STU Stuttgart 81.85 331 eP P 09 44 40.6 +0.9
comp=Z,30nm,0.7s,baz=34,slow=5.4
STU Stuttgart 81.85 331 P P 09 44 40.7 +0.9
MYKA Terra Mystica 81.90 328 *i* P P 09 44 40.3 +0.2
comp=Z,3.5nm,0.6s
BGES Gesves 81.91 334 *d*P P 09 44 40.3 +0.4
comp=Z,5.6nm,0.9s
RCHB Rochefort 82.06 334 *d*P P 09 44 41.2 +0.5
comp=Z,6.3nm,1.0s
RCHB Rochefort 82.06 334 P P 09 44 40.7 -0.1
VISS Visnje 82.06 326 *i* P P 09 44 41.0 +0.1
BMRD Maredsous 82.08 335 *d*P P 09 44 41.2 +0.3
comp=Z,13nm,0.9s
BMRD *d*PcP PcP 09 44 45.9 -0.3
BMRD *d*pP pwP 09 44 53.2 -0.1
BMRD *d*sP sP 09 44 57.5 +3.1
BMRD *d*PP PP 09 47 46.1 -2.2
FOEL Foel Wylfa 82.11 340 P P 09 44 42.5 +1.4
WATA Walderalm 82.14 329 *i* P P 09 44 42.2 +0.7
comp=Z,4.5nm,0.6s
WLF Walferdange 82.17 333 *d*P P 09 44 42.4 +1.0
comp=Z,4.7nm,0.9s
WTTA Wattenberg 82.18 329 *i* P P 09 44 42.5 +0.8
comp=Z,11nm,0.7s
WTTA Wattenberg 82.18 329 P P 09 44 42.3 +0.6
ABTA Abfaltersbach 82.25 328 eP P 09 44 41.8 -0.2
comp=Z,4.0nm,1.1s
DOU Dourbes 82.31 335 *d*P P 09 44 40.9 -1.2
comp=Z,3.9nm,0.9s
MOTA Moosalm 82.32 329 *i* P P 09 44 43.1 +0.7
comp=Z,18nm,0.8s,SNR=9.6
RETA Reutte 82.33 330 *i* P P 09 44 43.1 +0.8
comp=Z,7.1nm,0.9s
SQTA Sankt Quirin 82.38 329 *i* P P 09 44 43.4 +0.7
comp=Z,5.5nm,0.7s,SNR=5.2
BFO Black Forest 82.54 331 eP P 09 44 44.0 +0.6
comp=Z,7.6nm,0.9s,baz=34,slow=5.4
BFO eL L 10 21 47.8
comp=Z,157nm,21.5s
BFO Black Forest 82.54 331 P P 09 44 44.2 +0.9
FETA Feichten 82.73 329 *i* P P 09 44 45.2 +0.7
comp=Z,6.2nm,0.8s
PDG Podgorica 82.75 322 ⇑P P 09 44 44.9 +0.4
PDG Podgorica 82.75 322 P P 09 44 45.0 +0.4
PHP Peshkopia 82.76 321 P P 09 44 45.3 +0.6
DAVA Damuels 82.83 330 *i* P P 09 44 45.7 +0.6
comp=Z,10nm,0.8s,SNR=8.5
DAVA Damuels 82.83 330 P P 09 44 46.0 +0.9
LIT Litokhoron 82.96 318 P P 09 44 45.7 0.0
HRFI Mount Harif 83.05 304 P P 09 44 47.9 +1.5
ECH Echery 83.05 332 P P 09 44 46.5 +0.5
ECH Echery 83.05 332 P P 09 44 46.4 +0.4
FUORN Ofenpass-Fuorn 83.24 329 P P 09 44 48.5 +1.1
EIL Elat 83.36 304 LR LR 10 25 54.3
comp=Z,151nm,20.1s,baz=87,slow=39
EIL Elat 83.36 304 P P 09 44 48.8 +0.9
KBN Korca 83.41 320 P P 09 44 48.4 +0.3
TUE Stuetta 83.72 330 P P 09 44 50.8 +1.1
MNTX Cornudas Mount 83.98 53 P P 09 44 52.8 +1.7
SRN Sarande 84.36 320 P P 09 44 53.5 +0.7
PMOR Pomariorio Ree 84.56 115 *e*T T 11 18 04.1
comp=Z,5.5nm,0.2s
SENIN Lac Senin/Sane 84.57 331 P 09 44 54.4 +0.3
SENIN IAmb IAmb 09 44 56.5
comp=Z,5.5nm,0.8s
KEK Kerkira 84.59 320 P P 09 44 53.5 -0.5
URZ Urewera 84.72 154 LR LR 10 19 17.0
comp=Z,112nm,18.8s,baz=286,slow=33
LKD2 Lefkada island 84.88 319 P P 09 44 56.0 +0.5
PPT2 Papeete2 85.24 118 *e*LR LR 10 11 46.5
comp=Z,373nm,21.8s
PPT2 *e*LR LR 10 11 53.6
comp=Z,395nm,20.8s
ITM Ithomi 85.45 317 P P 09 44 58.2 -0.2
TAOE Nuku Hiva Isla 85.86 105 *e*LR LR 10 12 07.6
comp=Z,407nm,23.1s

LPIG	**La Paz**	**86.11**	**61**	LR	LR	10 17 25.7			
	comp=Z,42nm,20.4s,baz=296,slow=31								
SSB	**Saint Sauveur**	**86.50**	**332**	P	**P**	**09 45 04.3**	**+0.8**		
SSB				pmax	pmax				
	comp=Z,9.0nm,0.8s								
SSB	**Saint Sauveur**	**86.50**	**332**		**P**	**09 45 04.3**	**+0.8**		
SSB				IAmb	IAmb	09 45 05.1			
	comp=Z,9.0nm,0.8s								
SSB	**Saint Sauveur**	**86.50**	**332**	P	**P**	**09 45 04.3**	**+0.8**		
SSB	**Saint Sauveur**	**86.50**	**332**	P	**P**	**09 45 04.5**	**+1.0**		
SADO	**Sadowa**	**86.62**	**29**	LR	LR	10 28 09.9			
	comp=Z,120nm,18.6s,baz=356,slow=39								
TXAR	**Lajitas Array**	**86.69**	**54**	P	**P**	**09 45 05.8**	**+1.0**		
	comp=Z,1.3nm,0.8s,baz=298,slow=3.2,SNR=17								
	comp=Z,1.3nm,0.8s								
RPZ	**Rata Peaks**	**87.95**	**160**	LR	LR	10 19 47.2			
	comp=Z,28nm,20.1s,baz=268,slow=32								
TBI	**Tubuai**	**89.41**	**122**	*e*LR	LR	10 13 51.7			
	comp=Z,915nm,24.8s								
TBI				*e*T	T	11 24 03.1			
	comp=Z,1.8nm,0.2s								
TKL	**Tuckaleechee C**	**92.44**	**37**	LR	LR	10 28 23.7			
	comp=Z,88nm,21.2s,baz=336,slow=36								
KEST	**Kesra**	**92.69**	**324**	P	**P**	**09 45 32.8**	**0.0**		
	comp=Z,3.8nm,0.9s,baz=27,slow=7.9,SNR=4.0								
	comp=Z,3.8nm,0.9s								
ESDC	**Sonseca Array**	**94.35**	**335**	P	**P**	**09 45 40.2**	**-0.2**		
	comp=Z,0.9nm,0.7s,baz=11,slow=4.1,SNR=6.1								
ESDC				PP	**PP**	**09 49 22.9**	**-3.8**		
	comp=Z,1.0nm,0.9s,baz=21,slow=9.5,SNR=4.2								
ESDC				LR	LR	10 34 20.5			
	comp=Z,239nm,18.3s,baz=20,slow=39								
	comp=Z,0.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**115.44**	**318**	PKP	**PKiKP**	**09 51 02.2**	**-0.6**		
	comp=Z,0.4nm,0.4s,baz=4.9,slow=1.3,SNR=6.5								
TORD				PP	**PP**	**09 51 59.5**	**-4.1**		
	comp=Z,3.1nm,1.1s,baz=21,slow=8.2,SNR=7.5								
MAW	**Mawson**	**123.64**	**207**	PKP	**PKPdf**	**09 51 16.6**	**-0.3**		
	comp=Z,2.2nm,0.9s,baz=298,slow=2.1,SNR=3.6								
QSPA	**South Pole Qui**	**130.68**	**180**	PKP	**PKPdf**	**09 51 30.5**	**0.0**		
	comp=Z,1.7nm,0.8s,baz=286,slow=1.5,SNR=5.5								
TROLL	**Troll, Antarti**	**143.36**	**199**	⇓PKPdf	PKPbc	09 51 51.3	+0.2		
	comp=Z,228nm,0.7s								
LPAZ	**La Paz**	**143.49**	**57**	PKhKP	PKPpre	09 51 52.6			
	comp=Z,1.2nm,1.0s,baz=282,slow=2.8,SNR=3.8								
SNAA	**Sanae**	**144.88**	**198**	PKP	**PKPdf**	**09 51 56.2**	**-0.2**		
	comp=Z,24nm,0.9s,baz=143,slow=3.0,SNR=46								
H03N2	**Juan Fernandez**	**145.92**	**91**	T	T	12 35 15.5			
	baz=300,slow=76,SNR=13								
H03N3	**Juan Fernandez**	**145.93**	**91**	T	T	12 35 22.2			
	baz=300,slow=76,SNR=17								
H03N1	**Juan Fernandez**	**145.93**	**91**	T	T	12 35 07.1			
	baz=300,slow=76,SNR=14								
VNA2	**Neumayer--Watz**	**146.44**	**197**	⇓PKPdf	**PKPab**	**09 52 01.0**	**-0.5**		
	comp=Z,17nm,0.7s,baz=125,slow=1.8								
VNA1	**Neumayer--Stat**	**146.84**	**197**	⇓PKPdf	**PKPab**	**09 52 02.3**	**-0.6**		
	comp=Z,24nm,0.8s								

CATAC ***12*** *09:40:38.3±0.6, 13°N±3°×9°1W±°, h1km, M3.0/14, MLv3.0/14, Error ellipse: s-maj=8.9km s-min=6.5km az=122.9, confirmed*
GCG ***12*** *09:40:39.4±0.8, 13°.02N×90°.73W, h1km±16km, MD4.4, Presumed earthquake*
SNET ***12*** *09:40:42.3±1.1, 12°.93N×90°.58W, h28km, ML3.2, Presumed earthquake*

ISC 12 09:40:39.8±2.5, 12°.92N±0°.10×90°.63W±0°.07, h2km±13km, n34, σ0s87/45, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**1.10**	**33**	P	**Pg**	**09 41 00.2**	**-0.8**
FAME				S	**Sg**	**09 41 16.6**	**+1.3**
CEVE	**Cerro Verde**	**1.33**	**47**	P	**Pn**	**09 41 04.7**	**-1.0**
CEVE				S	**Sg**	**09 41 23.1**	**+0.3**
FG8	**Yepocapa, Chim**	**1.34**	**3**	*i* P	**Pb**	**09 41 05.5**	**-0.2**
LOAL	**Lomas de Alarc**	**1.36**	**37**	P	**Pn**	**09 41 04.8**	**-1.1**
LOAL				S	**Sg**	**09 41 24.0**	**+0.5**
JAYA	**Jayaque - finc**	**1.36**	**57**	P	**Pn**	**09 41 05.0**	**-1.0**
JAYA	**Jayaque - finc**	**1.36**	**57**	*i* P	**Pn**	**09 41 04.8**	**-1.2**
JAYA				*e*S	**Sg**	**09 41 24.3**	**+0.5**
RTR	**El Retiro**	**1.37**	**44**	*e*P	**Pn**	**09 41 04.9**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.38**	**37**	P	**Pn**	**09 41 04.8**	**-1.3**
SLOZ				S	**Sg**	**09 41 24.5**	**+0.3**
LALI	**Alcalda de L**	**1.40**	**66**	P	**Pn**	**09 41 05.2**	**-1.1**
UNIC	**Universidad Ca**	**1.49**	**45**	P	**Pn**	**09 41 06.5**	**-1.2**
UNIC				S	**Sn**	**09 41 27.3**	**-0.5**
UEES	**Universidad Ev**	**1.57**	**59**	P	**Pn**	**09 41 08.5**	**-0.3**
UEES				S	**Sn**	**09 41 30.5**	**+0.8**
UEIS	**Universidad Ev**	**1.57**	**59**	*e*P	**Pn**	**09 41 07.9**	**-0.9**
LOMA	**Loma Larga**	**1.59**	**63**	P	**Pn**	**09 41 08.1**	**-1.1**
LOMA				S	**Sn**	**09 41 30.9**	**+0.5**
STG5	**El Palmar, Qui**	**1.64**	**335**	*i* P	**Pg**	**09 41 11.8**	**+0.6**
JUAM	**Asuncion Mita**	**1.67**	**32**	*i* P	**Pn**	**09 41 09.1**	**-1.1**
SJTE	**Alcalda de S**	**1.73**	**66**	*e*P	**Pn**	**09 41 09.9**	**-1.0**
PAVA	**Las Pavas**	**1.83**	**64**	P	**Pn**	**09 41 12.9**	**+0.5**
COEG	**Centro de Oper**	**1.84**	**67**	P	**Pn**	**09 41 11.9**	**-0.6**
COEG				S	**Sn**	**09 41 36.7**	**+0.3**
COEG	**Centro de Oper**	**1.84**	**67**	*e*P	**Pn**	**09 41 11.7**	**-0.8**
MTO3	**Montecristo**	**1.92**	**40**	P	**Pn**	**09 41 12.9**	**-0.9**
MTO3	**Montecristo**	**1.92**	**40**	*i* P	**Pn**	**09 41 12.9**	**-0.9**
MTO3	**Montecristo**	**1.92**	**40**	*e*P	**Pn**	**09 41 12.9**	**-0.9**
ESQI	**Esquipulas**	**2.06**	**37**	P	**Pn**	**09 41 15.1**	**-0.4**
ESQI				S	**Sn**	**09 41 43.6**	**+1.7**
ESQI	**Esquipulas**	**2.06**	**37**	*e*P	**Pn**	**09 41 14.6**	**-0.9**
ZAFR2	**Estanzuela, Za**	**2.07**	**37**	*i* P	**Pb**	**09 41 17.9**	**-0.2**
APG	**El Apazote**	**2.08**	**4**	*i* P	**Pn**	**09 41 15.2**	**-0.8**
PQSS	**Presa 15 de Se**	**2.13**	**70**	P	**Pn**	**09 41 16.0**	**-0.5**
TECA	**Tecapa**	**2.15**	**74**	*e*P	**Pn**	**09 41 16.5**	**-0.3**
PACA	**Pacayal**	**2.31**	**76**	P	**Pn**	**09 41 18.1**	**-1.0**
PACA				S	**Sn**	**09 41 49.4**	**+1.3**
PACA	**Pacayal**	**2.31**	**76**	*e*P	**Pn**	**09 41 19.2**	**+0.2**
SARH	**Santa Rosa de**	**2.59**	**44**	P	**Pn**	**09 41 22.7**	**-0.1**
SARH	**Santa Rosa de**	**2.59**	**44**	*i* P	**Pn**	**09 41 22.5**	**-0.3**
LCND	**La Caada**	**2.70**	**81**	P	**Pn**	**09 41 23.9**	**-0.3**
LCND	**La Caada**	**2.70**	**81**	*e*P	**Pn**	**09 41 23.6**	**-0.6**

IDC ***12*** *10:37:22.2±1.4, 41°.36N×141°.01E, h0km, mb3.5/5, mbtmp3.5/5, MS3.6/1, Error ellipse: s-maj=36.2km s-min=31.8km az=69.0*
JMA ***12*** *10:37:34.8±0.1, 41°.5N±0°.3×141°.2E±0°.6, h101km, MV2.7/36, TSUGARU STRAIT REGION*

ISC 12 10:37:34.6±0.9, 41°.46N±0°.04×141°.14E±0°.06, h104km±7km, n21, σ0s53/30, mb3.4/5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOT	**Ohata**	**0.10**	**220**	*i* P	**Pn**	**10 37 49.0**	**0.0**
JAHD	**Aomorihigashid**	**0.25**	**143**	*i* P	**Pn**	**10 37 49.2**	**-0.2**
JKB	**Kayabe**	**0.43**	**350**	*i* P	**Pn**	**10 37 50.4**	**0.0**
JKB				*e*S	**Sn**	**10 38 02.0**	**-0.2**
JSR	**Shiriuchi**	**0.55**	**277**	*i* P	**Pn**	**10 37 51.3**	**+0.2**
JSR				S	**Sn**	**10 38 03.4**	**0.0**
JTM	**Tenmabayashi**	**0.68**	**184**	*i* P	**Pn**	**10 37 52.4**	**+0.3**
JTM				S	**Sn**	**10 38 05.5**	**+0.1**
JOMM	**Oshimamatsumae**	**0.85**	**275**	*i* P	**Pn**	**10 37 54.1**	**+0.4**
JOMM				S	**Sn**	**10 38 08.3**	**+0.1**
JYM2	**Yakumo 2**	**0.87**	**319**	*i* P	**Pn**	**10 37 54.3**	**+0.4**
JYM2				S	**Sn**	**10 38 08.9**	**+0.3**
JNB	**Noboribetsu**	**1.01**	**356**	*e*P	**Pn**	**10 37 55.2**	**-0.1**
JANG	**Nango**	**1.12**	**165**	P	**Pn**	**10 37 56.6**	**-0.1**
JANG				*e*S	**Sn**	**10 38 12.7**	**-0.7**
JIW	**Iwasaki**	**1.22**	**225**	*i* P	**Pn**	**10 37 58.5**	**+0.8**
JIW				S	**Sn**	**10 38 16.0**	**+0.8**
JIAM	**Iburiatsuma**	**1.30**	**26**	P	**Pn**	**10 37 59.3**	**+0.7**
JIAM				S	**Sn**	**10 38 17.5**	**+0.7**
JAH	**Hinai**	**1.33**	**197**	P	**Pn**	**10 38 00.1**	**+1.1**
JOSM	**Okushiri--Mats**	**1.39**	**297**	P	**Pn**	**10 37 59.5**	**-0.2**
JOSM				S	**Sn**	**10 38 18.3**	**-0.4**
JEW	**Eniwo**	**1.40**	**9**	P	**Pn**	**10 38 00.2**	**+0.5**
JEW				S	**Sn**	**10 38 19.2**	**+0.3**
JNBK	**Urakawa-nobuka**	**1.46**	**55**	*e*P	**Pn**	**10 38 00.5**	**0.0**
TGY	**Tagaytay City**	**32.43**	**219**	LR	LR	10 55 53.9	
	comp=Z,115nm,21.8s,baz=6.0,slow=34						
ZALV	**Zalesovo Beam**	**38.88**	**308**	P	**P**	**10 44 48.9**	**-0.6**
	0.5nm,0.6s,baz=82,slow=10,SNR=2.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**41.72**	**298**	P	**P**	**10 45 12.2**	**-0.8**
	0.3nm,0.5s,baz=81,slow=11,SNR=2.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**43.22**	**304**	P	**P**	**10 45 24.4**	**-0.6**
	0.7nm,0.6s,baz=78,slow=8.9,SNR=4.6						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**45.92**	**35**	P	**P**	**10 45 47.1**	**+0.8**
	0.5nm,0.7s,baz=278,slow=8.2,SNR=6.4						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**61.42**	**187**	P	**P**	**10 47 39.4**	**-0.4**
	0.3nm,0.8s,baz=5.5,slow=6.7,SNR=4.6						
	0.3nm,0.8s						

ISN ***12*** *11:14:00.8±2.8, 34°.72N×45°.62E, h20km±24km, ML3.4, Presumed earthquake*
TEH ***12*** *11:14:01.4, 34°.71N×45°.57E, h8km±69km, ML3.5, Presumed earthquake*

ISC 12 11:14:01.9±2.0, 34°.62N±0°.06×45°.59E±0°.06, h2km±16km, n11, σ0s95/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.66**	**83**	Pg	**Pg**	**11 14 14.6**	**0.0**
IDHR				Sg	**Sb**	**11 14 25.8**	**-0.2**
IGHG	**Ghaleghazi**	**0.86**	**110**	Pg	**Pb**	**11 14 19.5**	**-0.2**
IGHG				Sg	**Sn**	**11 14 33.3**	**-1.2**
KCHF	**Cheshme Sefid,**	**1.25**	**106**	Pg	**Pb**	**11 14 26.3**	**+0.1**
KCHF				Sg	**Sn**	**11 14 44.5**	**+0.5**
SNJK	**Sanadaj _Korde**	**1.47**	**56**	Pg	**Pn**	**11 14 28.6**	**-1.0**
BHD	**Baghdad**	**1.68**	**217**	*e*Pg	**Pn**	**11 14 30.5**	**-1.8**
	baz=35						
BHD				*e*Sg	**Sb**	**11 14 57.0**	**+1.8**
BHD				AML	AML	11 14 57.5	
	comp=E,707nm,0.6s						
SNQR	**Sonqor, Kerman**	**1.69**	**81**	Pg	**Pb**	**11 14 33.4**	**-0.5**
MAHB	**Mahabad**	**2.14**	**2**	Pn	**Pn**	**11 14 38.9**	**+0.1**
HGHA	**Hamedan- Ghaye**	**2.81**	**71**	Pn	**Pn**	**11 14 49.0**	**+0.9**
RAFI	**Al-Rafai**	**2.93**	**171**	*e*Pn	**Pn**	**11 14 50.0**	**+0.6**
RAFI				*e*Sn	**Sn**	**11 15 25.0**	**-0.1**
RAFI				AML	AML	11 15 32.5	
	comp=E,152nm,0.2s						
RAFI				AML	AML	11 15 32.6	
	comp=N,163nm,0.2s						
ISHB	**Shabestar**	**3.65**	**0**	Pn	**Pn**	**11 14 59.6**	**0.0**
GRMI	**Germi**	**4.57**	**23**	Pn	**Pn**	**11 15 12.5**	**+0.4**

RSNC ***12*** *11:30:49.0±0.8, 1°S±3°×8°1W±°, h15km±9km, M3.5, mB4.9, mb4.3, ML3.1, Mw(mB)4.2*
IGQ ***12*** *11:30:50.5±0.2, 1°S±2°×8°0W±°, h13km±1km, M3.8/36, Mjma3.8/36, MLv3.7/36, Ms(BB)3.9/24*

ISC 12 11:30:48.9±1.3, 0°.67S±0°.04×80°.55W±0°.05, h21km±1km, n73, σ1s55/79, 7C-22D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABH3	**Manabi, Bahia**	**0.15**	**60**	⇓P	**Pb**	**11 30 54.5**	**-0.4**
ABH3				S	**Sb**	**11 30 58.3**	**-0.8**
ABH2	**Ecuador-Univer**	**0.15**	**85**	⇓P	**Pb**	**11 30 55.0**	**+0.2**
ABH2				S	**Sb**	**11 30 59.7**	**+0.7**
AMNT	**Manta-Manabi**	**0.32**	**215**	⇑P	**Pn**	**11 30 57.6**	**-0.9**
PECV	**Mancha de Ca P**	**0.51**	**102**	⇑P	Pb	11 30 55.0	-4.3
JIPI	**JIPIJAPA**	**0.69**	**181**	⇑P	**Pn**	**11 31 03.3**	**-0.2**
ISPT	**Isla de la Pla**	**0.79**	**222**	⇑P	**Pn**	**11 31 05.3**	**+0.5**
PPLP	**Puerto Lpez**	**0.90**	**195**	⇑P	**Pn**	**11 31 06.0**	**-0.4**
PPLP				⇑P	**Pb**	**11 31 05.9**	**0.0**
PPLP	**Puerto Lpez**	**0.90**	**195**	P	**Pb**	**11 31 05.6**	**-0.2**
PPLP				S	**Sn**	**11 31 18.8**	**0.0**
AQUE	**Quevedo**	**1.12**	**109**	P	**Pb**	**11 31 08.6**	**-0.9**
AV18	**Acelerografo,**	**1.45**	**48**	P	**Pb**	**11 31 15.9**	**+0.7**
BV15	**Puerto Quito-O**	**1.56**	**58**	P	**Pn**	**11 31 15.3**	**-0.2**
AV21	**Acelerografo,**	**1.66**	**37**	P	**Pn**	**11 31 19.6**	**+0.8**
APR2	**Miler**	**1.75**	**65**	P	**Pn**	**11 31 17.5**	**-0.7**
AGRD	**Ecuador-Guaran**	**1.78**	**120**	P	**Pn**	**11 31 18.8**	**-0.1**
ILLI	**Illinizas Sur**	**1.82**	**91**	⇓P	**Pn**	**11 31 19.1**	**-0.5**
ILLI				S	**Sn**	**11 31 36.8**	**-5.4**
CHSH	**Refugio Sur-Vo**	**1.87**	**116**	⇓P	**Pn**	**11 31 21.1**	**+0.8**
JSCH	**Cashca Totoras**	**1.88**	**123**	⇓P	**Pn**	**11 31 20.6**	**+0.3**
PORT	**Chimborazo Vol**	**1.94**	**114**	⇓P	**Pn**	**11 31 21.7**	**+0.4**
MORR	**Playas El Morr**	**1.97**	**174**	⇑P	**Pn**	**11 31 22.5**	**+1.4**
TAMH	**Tambohuasha Ch**	**1.97**	**116**	⇓P	**Pn**	**11 31 22.2**	**+0.6**
GGPT	**Toaza - Volcan**	**1.98**	**77**	⇓P	**Pn**	**11 31 20.9**	**-0.7**
SRAM	**San Ramn-Vol**	**1.98**	**92**	P	**Pn**	**11 31 22.0**	**+0.3**
PAC1	**Pacto, Paraso**	**1.99**	**62**	P	**Pn**	**11 31 21.1**	**-0.5**
PAC1	**Pacto, Paraso**	**1.99**	**62**	P	**Pn**	**11 31 21.0**	**-0.6**
JUA2	**San Juan 2**	**2.00**	**77**	⇓P	**Pn**	**11 31 21.7**	**-0.3**
TERV	**Terraza Guagua**	**2.01**	**76**	⇓P	**Pn**	**11 31 21.7**	**-0.4**
SLOR	**San Lorenzo -**	**2.05**	**92**	⇓P	**Pn**	**11 31 23.7**	**+1.0**
SUCR	**Mariscal Sucre**	**2.06**	**89**	⇓P	**Pn**	**11 31 23.8**	**+1.1**
BNAS	**Cotopaxi Volca**	**2.07**	**90**	⇓P	**Pn**	**11 31 23.4**	**+0.4**
IGUA	**Igualata**	**2.08**	**113**	⇓P	**Pn**	**11 31 24.1**	**+0.9**
BRRN	**Barrancas-Volc**	**2.08**	**93**	⇓P	**Pn**	**11 31 23.8**	**+0.8**
RVRD	**Rio Verde**	**2.08**	**34**	P	**Pn**	**11 31 23.6**	**+0.9**
BMOR	**Cotopaxi Volca**	**2.09**	**92**	⇓P	**Pn**	**11 31 24.1**	**+0.8**
BREF	**Cotopaxi Volca**	**2.11**	**90**	⇓P	**Pn**	**11 31 25.0**	**+1.4**
PITA	**Cotopaxi Volc**	**2.12**	**87**	P	**Pn**	**11 31 24.6**	**+1.0**
TOMA	**Boca Toma-Volc**	**2.12**	**85**	P	**Pn**	**11 31 24.7**	**+1.0**
TING	**Casa Alexandra**	**2.14**	**80**	P	**Pn**	**11 31 24.7**	**+0.9**
BVC2	**Cotopaxi Volca**	**2.14**	**90**	⇓P	**Pn**	**11 31 25.2**	**+1.2**
VC1	**Cotopaxi 1**	**2.15**	**89**	⇓P	**Pn**	**11 31 25.3**	**+1.3**
BTAM	**Cotopaxi Volca**	**2.15**	**90**	⇓P	**Pn**	**11 31 25.4**	**+1.2**
VCES	**Cotopaxi**	**2.16**	**93**	⇓P	**Pn**	**11 31 25.0**	**+0.8**
PULU	**Pululahua**	**2.16**	**71**	P	**Pn**	**11 31 24.2**	**+0.1**
TAMB	**Tambo**	**2.18**	**91**	P	**Pn**	**11 31 26.0**	**+1.4**
JUI6	**Juive**	**2.21**	**110**	P	**Pn**	**11 31 26.7**	**+2.0**
PUEM	**Granja Avicola**	**2.25**	**76**	P	**Pn**	**11 31 26.9**	**+1.8**
ARRY	**Arrayan**	**2.25**	**112**	P	**Pn**	**11 31 26.9**	**+1.5**
BPAT	**Tungurahua Vol**	**2.27**	**111**	P	**Pn**	**11 31 27.5**	**+1.8**
ANTG	**Antisana-Guama**	**2.30**	**86**	P	**Pn**	**11 31 27.3**	**+1.1**
PIAT	**Ana Tenorio**	**2.31**	**98**	P	**Pn**	**11 31 27.9**	**+1.7**
PIAT	**Ana Tenorio**	**2.31**	**98**	P	**Pn**	**11 31 27.4**	**+1.2**
ISPG	**Isla Puna-Puer**	**2.31**	**171**	⇓P	**Pb**	**11 31 28.7**	**-1.3**
ANTM	**Antisana-La Mi**	**2.33**	**87**	P	**Pn**	**11 31 28.2**	**+1.6**
CUSE	**Cuicocha Este**	**2.36**	**66**	P	**Pn**	**11 31 27.3**	**+0.4**
CUSE	**Cuicocha Este**	**2.36**	**66**	P	**Pn**	**11 31 27.1**	**+0.2**
CUSE				S	**Sn**	**11 31 57.1**	**+1.6**
ANTS	**Antisana-Sarah**	**2.39**	**86**	P	**Pn**	**11 31 29.1**	**+1.7**
CUIC	**Cuicocha-Domo**	**2.39**	**66**	P	**Pn**	**11 31 27.8**	**+0.5**
ANTI	**Antisana**	**2.40**	**85**	P	**Pn**	**11 31 29.1**	**+1.5**
COTA	**Cotacachi**	**2.43**	**66**	P	**Pn**	**11 31 28.4**	**+0.5**
IMBA	**Imbabura, San**	**2.53**	**68**	P	**Pn**	**11 31 31.6**	**+2.3**
URCU	**Urcuqui**	**2.55**	**64**	P	**Pn**	**11 31 30.9**	**+1.4**
SANGA	**Volcan Sangay**	**2.57**	**122**	P	**Pn**	**11 31 31.9**	**+2.1**
CAYR	**Refugio Cayamb**	**2.63**	**75**	P	**Pn**	**11 31 33.2**	**+2.4**
YAHU	**Yahuarcocha**	**2.69**	**67**	P	**Pn**	**11 31 35.3**	**-1.3**
LNGL	**El Angel-Carch**	**2.91**	**61**	P	**Pn**	**11 31 36.4**	**+1.9**
CHL2	**Volcn Chilos**	**3.01**	**61**	P	**Pn**	**11 31 38.6**	**+2.7**
TULM	**Tulcn-Chalpat**	**3.09**	**63**	P	**Pb**	**11 31 41.3**	**-2.2**
TULM	**Tulcn-Chalpat**	**3.09**	**63**	P	**Pn**	**11 31 40.8**	**+3.8**
CASC	**Dorado de Casc**	**3.31**	**76**	P	**Pn**	**11 31 44.0**	**+4.3**
CASC	**Dorado de Casc**	**3.31**	**76**	P	**Pn**	**11 31 43.7**	**+4.0**
MCRA	**Macar, Loja**	**3.72**	**171**	P	**Pn**	**11 31 47.2**	**+1.9**
MCRA				S	**Sn**	**11 32 29.7**	**+1.1**
BBAC	**Balboa, Cauca**	**4.25**	**51**	P	**Pn**	**11 31 53.6**	**+0.9**
GR1C	**Gorgona, Isla**	**4.36**	**33**	P	**Pn**	**11 31 52.3**	**-1.7**
POPC	**Popayan, Colom**	**5.02**	**51**	P	**Pn**	**11 32 04.0**	**+0.7**
	22nm,0.8s						

NORS ***12*** *11:42:18.9, 42°.55N×43°.60E, h15km, MPVA3.7*
AFAD ***12*** *11:42:20.0, 42°.35N×43°.43E, h16km±9km, ML2.4*

ISC 12 11:42:18.7±1.3, 42°.53N±0°.04×43°.55E±0°.04, h11km±11km, n17, σ1s10/34, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIGR	**Digorskoe uzhe**	**0.37**	**4**	*i* Pg	**Pg**	**11 42 26.4**	**+0.2**
DIGR				*e*Sg	**Sb**	**11 42 32.8**	**-0.5**
LACR	**Lac**	**0.63**	**62**	*e*Pg	**Pg**	**11 42 30.5**	**-0.4**
LACR				*e*Sg	**Sb**	**11 42 39.1**	**-1.9**
KORR	**Kora**	**0.67**	**34**	*e*Pg	**Pb**	**11 42 32.3**	**-0.2**
KORR				*e*Sg	**Sn**	**11 42 42.5**	**-2.3**
LSNR	**Lesken**	**0.77**	**15**	*e*Pg	**Pn**	**11 42 34.4**	**-1.2**
LSNR				*e*Sg	**Sn**	**11 42 46.5**	**-0.7**
ARNR	**Ardon**	**0.84**	**40**	*e*Pg	**Pn**	**11 42 36.9**	**+0.4**
ARNR				*e*Sg	**Sn**	**11 42 49.1**	**+0.2**
STDR	**Stavd-Durt**	**0.92**	**24**	*e*Pg	**Pn**	**11 42 38.2**	**+0.7**
STDR				*e*Sg	**Sn**	**11 42 51.6**	**+0.8**
NCK	**Nalchik**	**0.96**	**2**	*e*Pg	**Pn**	**11 42 38.5**	**+0.3**
NCK				*e*Sg	**Sn**	**11 42 52.5**	**+0.5**
VLKR	**Vladikavkaz**	**0.98**	**58**	*e*Pg	**Pn**	**11 42 39.0**	**+0.5**
VLKR				*e*Sg	**Sn**	**11 42 53.7**	**+1.4**
KMGR	**Komgaron**	**1.10**	**61**	*e*Pg	**Pg**	**11 42 41.4**	**+1.4**
KMGR				*e*Sg	**Sn**	**11 42 57.5**	**+2.1**
EPOS	**Posof**	**1.20**	**211**	P	**Pn**	**11 42 38.5**	**-2.9**
EPOS				S	**Sb**	**11 42 55.8**	**-1.2**
EPOS				IAML		11 42 58.0	
	comp=E,52nm,0.3s						
EPOS				IAML		11 43 02.0	
	comp=N,86nm,1.2s						
AHAN	**Ardahan-Merkez**	**1.53**	**207**	P	**Pn**	**11 42 46.6**	**+0.5**
AHAN				S	**Sn**	**11 43 06.5**	**+0.4**
DBOC	**Borcka**	**1.84**	**230**	P	**Pn**	**11 42 51.0**	**+0.8**
DBOC				S	**Sb**	**11 43 15.5**	**+0.2**
DBOC				IAML		11 43 17.0	
	comp=E,51nm,0.4s						
GOLE	**Ardahan-Gl¶le**	**1.84**	**203**	P	**Pb**	**11 42 52.0**	**-0.5**
GOLE				S	**Sn**	**11 43 14.5**	**+0.8**
GOLE				IAML		11 43 18.0	
	comp=N,30nm,0.3s						
GOLE				IAML		11 43 26.0	
	comp=E,34nm,0.9s						
DAGI	**Agillar**	**1.90**	**221**	P	**Pb**	**11 42 52.9**	**-0.5**
DAGI				S	**Sb**	**11 43 17.1**	**0.0**
DAGI				IAML		11 43 22.0	
	comp=N,28nm,0.9s						
DVE	**Vedeno**	**1.95**	**76**	*e*Pg	**Pg**	**11 42 55.3**	**-0.7**
DVE				*e*Sg	**Sg**	**11 43 21.7**	**+0.4**
DBAD	**Bademkaya**	**2.05**	**223**	P	**Pb**	**11 42 55.5**	**-0.6**
DBAD				S	**Sb**	**11 43 22.1**	**+0.5**
DBAD				IAML		11 43 25.0	
	comp=N,79nm,0.7s						
DBAD				IAML		11 43 27.0	
	comp=E,68nm,0.8s						
DDEM	**Demirkent**	**2.12**	**220**	P	**Pn**	**11 42 55.5**	**+1.3**
DDEM				S	**Sb**	**11 43 24.2**	**+0.7**
DDEM				IAML		11 43 28.0	
	comp=E,65nm,0.4s						
DDEM				IAML		11 43 31.0	
	comp=N,98nm,0.4s						

SOME ***12*** *11:56:26.9, 41°.00N×75°.33E, h10km*
NNC ***12*** *11:56:27.9±2.6, 40°.99N×75°.25E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=17.8km s-min=15.4km az=178.0*
KRNET ***12*** *11:56:27.3±0.1, 40°.96N×75°.31E, h21km, mb2.6*
KNET ***12*** *11:56:31.0±0.4, 41°.21N×75°.28E, h1km±2km, ml1.6, Error ellipse: s-maj=2.9km s-min=1.9km az=3.0*

ISC 12 11:56:27.8±1.3, 41°.00N±0°.06×75°.27E±0°.03, h4km±11km, n19, σ0s78/34, 21C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**0.27**	**80**	⇑*i*P	**Pg**	**11 56 33.3**	**+0.2**
JNKS			

CMHT				S	Sg	12 14 19.7	-1.2	
CMHT				IAML		12 14 21.0		
	comp=N,5μm,0.2s							
CMHT				IAML		12 14 21.0		
	comp=E,7μm,0.1s							
GONE	**Gonen-Balikesi**	**0.64**	**343**	Pg	**Pg**	**12 14 14.1**	**-0.3**	
BUHA	**Balikesir, Bur**	**0.66**	**276**	P	**Pg**	**12 14 14.6**	**-0.3**	
BUHA				S	**Sn**	**12 14 26.8**	**-0.6**	
BUHA				IAML		12 14 27.0		
	comp=E,3μm,0.5s							
BUHA				IAML		12 14 28.0		
	comp=N,3μm,0.2s							
ATIT	**Gnen**	**0.70**	**336**	P	**Pg**	**12 14 15.8**	**+0.1**	
ATIT				S	**Sg**	**12 14 24.6**	**-0.4**	
ATIT				IAML		12 14 30.0		
	comp=N,2μm,0.2s							
DEMI	**Demirci**	**0.73**	**123**	P	**Pg**	**12 14 16.4**	**+0.3**	
DEMI				S	**Sg**	**12 14 25.7**	**+0.1**	
DEMI				IAML		12 14 30.0		
	comp=E,2μm,0.5s							
GOMA	**Golmarmara-Man**	**0.73**	**181**	Pg	**Pg**	**12 14 16.0**	**-0.1**	
YENI	**Yenice-Canakka**	**0.73**	**313**	Pg	**Pg**	**12 14 15.9**	**-0.2**	
YENI				Sg	**Sb**	**12 14 26.4**	**0.0**	
KTTT	**Salihli**	**0.76**	**170**	P	**Pg**	**12 14 16.6**	**0.0**	
KTTT				S	**Sb**	**12 14 28.5**	**+1.3**	
KTTT				IAML		12 14 30.0		
	comp=N,3μm,0.4s							
CAMT	**Merkez**	**0.84**	**215**	P	**Pg**	**12 14 18.1**	**-0.1**	
CAMT				S	**Sb**	**12 14 29.9**	**+0.3**	
CAMT				IAML		12 14 32.0		
	comp=N,1μm,0.2s							
DKL	**Dikili**	**0.88**	**246**	Pg	**Pg**	**12 14 18.5**	**-0.4**	
DKL	**Dikili**	**0.88**	**246**	P	**Pg**	**12 14 18.8**	**-0.1**	
DKL				S	**Sb**	**12 14 30.6**	**0.0**	
SMAA	**Simav-Kutahya**	**0.88**	**112**	Pg	**Pg**	**12 14 18.8**	**-0.2**	
CANM	**Can-anakkale**	**0.89**	**311**	Pg	**Pg**	**12 14 18.7**	**-0.4**	
KCTX	**Karacabey (Bur**	**0.89**	**21**	Pg	**Pg**	**12 14 18.3**	**-0.9**	
EDC	**Edincik**	**0.91**	**357**	Pg	**Pg**	**12 14 19.1**	**-0.5**	
BAND	**Balkesir-Ban**	**0.93**	**8**	⇑P	**Pg**	**12 14 19.1**	**-0.7**	
BAND				⇓S	**Sn**	**12 14 33.8**	**-0.1**	
BAND	**Balkesir-Ban**	**0.93**	**8**	P	**Pg**	**12 14 18.9**	**-0.9**	
BAND				S	**Sg**	**12 14 31.2**	**-0.8**	
BAND				IAML		12 14 34.0		
	comp=E,8μm,0.3s							
BAND				IAML		12 14 34.0		
	comp=N,5μm,0.3s							
ORLT	**Orhaneli**	**0.96**	**50**	Pg	**Pg**	**12 14 20.1**	**-0.4**	
ORLT	**Orhaneli**	**0.96**	**50**	P	**Pg**	**12 14 19.8**	**-0.7**	
ORLT				S	**Sg**	**12 14 33.1**	**0.0**	
ORLT				IAML		12 14 36.0		
	comp=N,7μm,0.3s							
ORLT				IAML		12 14 36.0		
	comp=E,3μm,0.4s							
AYVA	**Ayvalik**	**0.97**	**263**	P	**Pg**	**12 14 20.6**	**0.0**	
AYVA				S	**Sb**	**12 14 34.1**	**+0.8**	
AYVA				IAML		12 14 36.0		
	comp=N,6μm,0.5s							
AYVA				IAML		12 14 36.0		
	comp=E,6μm,0.5s							
BIGA	**Biga-Canakkale**	**1.04**	**325**	Pg	**Pg**	**12 14 21.8**	**-0.1**	
MANT	**Manisa**	**1.06**	**152**	P	**Pg**	**12 14 22.4**	**-0.1**	
MANT				S	**Sg**	**12 14 35.6**	**-0.8**	
MANT				IAML		12 14 38.0		
	comp=E,1μm,0.3s							
KRBG	**Karabiga-Canak**	**1.07**	**333**	Pg	**Pg**	**12 14 22.2**	**-0.4**	
EMET	**Ktahya-Emet**	**1.08**	**93**	P	**Pg**	**12 14 22.6**	**-0.2**	
EMET				S	**Sg**	**12 14 36.2**	**-0.6**	
EMET				IAML		12 14 39.0		
	comp=E,1μm,0.3s							
EMET				IAML		12 14 40.0		
	comp=N,1μm,0.4s							
KULA	**Kula-Manisa**	**1.08**	**148**	Pn	**Pg**	**12 14 22.7**	**-0.1**	
SHAP	**Saphane-Kutahy**	**1.08**	**112**	Pn	**Pg**	**12 14 22.9**	**0.0**	
YYLC	**Yaylacik**	**1.10**	**38**	P	**Pg**	**12 14 22.6**	**-0.6**	
YYLC				S	**Sb**	**12 14 37.5**	**+0.3**	
BAYC	**CANAKKALE_Bayr**	**1.11**	**286**	P	**Pb**	**12 14 23.3**	**+0.2**	
BAYC				S	**Sg**	**12 14 37.3**	**-0.5**	
BAYC				IAML		12 14 39.0		
	comp=N,2μm,0.2s							
BAYC				IAML		12 14 40.0		
	comp=E,2μm,0.2s							
USAK	**Uak-Merkez**	**1.11**	**130**	P	**Pg**	**12 14 23.1**	**-0.3**	
USAK				S	**Sg**	**12 14 36.9**	**-1.0**	
USAK				IAML		12 14 42.0		
	comp=E,276nm,0.7s							
USAK				IAML		12 14 46.0		
	comp=N,235nm,0.5s							
BAGT	**Foa**	**1.15**	**227**	P	**Pb**	**12 14 23.1**	**-0.5**	
BAGT				S	**Sb**	**12 14 38.9**	**+0.6**	
BAGT				IAML		12 14 40.0		
	comp=N,408nm,0.3s							
BAGT				IAML		12 14 40.0		
	comp=E,763nm,0.5s							
ODEM	**Odemis-Izmir**	**1.16**	**174**	Pn	**Pb**	**12 14 23.7**	**-0.3**	
ULDT	**Uludag**	**1.17**	**52**	P	**Pg**	**12 14 23.8**	**-0.6**	
ULDT				S	**Sb**	**12 14 39.7**	**+0.5**	
ULDT				IAML		12 14 41.0		
	comp=N,2μm,0.6s							
ULDT				IAML		12 14 42.0		
	comp=E,3μm,0.3s							
FOCM	**Foa**	**1.18**	**233**	Pn	**Pb**	**12 14 23.4**	**-0.8**	
MDNY	**Mudanya-Bursa**	**1.19**	**38**	Pn	**Pb**	**12 14 23.9**	**-0.4**	
TVSB	**Tavsanli**	**1.19**	**89**	Pn	**Pb**	**12 14 24.5**	**+0.1**	
MRMT	**Marmara Adasi**	**1.19**	**348**	Pn	**Pb**	**12 14 24.5**	**0.0**	
GEDZ	**Gediz**	**1.21**	**108**	Pn	**Pg**	**12 14 25.7**	**+0.4**	
EZNE	**Ezine-Canakkal**	**1.25**	**285**	Pn	**Pb**	**12 14 25.7**	**+0.3**	
GDZ	**Gediz**	**1.25**	**106**	P	**Pn**	**12 14 25.7**	**+0.3**	
GDZ				S	**Sb**	**12 14 41.2**	**-0.4**	
GDZ				IAML		12 14 43.0		
	comp=E,524nm,0.3s							
GDZ				IAML		12 14 50.0		
	comp=N,383nm,0.5s							
BLCB	**Balcova**	**1.26**	**214**	Pn	**Pn**	**12 14 25.2**	**0.0**	
IGD	**Bursa**	**1.28**	**49**	P	**Pn**	**12 14 25.3**	**-0.3**	
IGD				S	**Sb**	**12 14 42.4**	**+0.1**	
IGD				IAML		12 14 46.0		
	comp=N,484nm,0.1s							
IGD				IAML		12 14 47.0		
	comp=E,488nm,0.5s							
EZN	**Ezine**	**1.30**	**288**	Pn	**Pb**	**12 14 26.4**	**+0.2**	
PRK	**Paraskevi**	**1.30**	**262**	P	**Pn**	**12 14 26.0**	**+0.2**	
PRK				S	**Sb**	**12 14 42.4**	**-0.4**	
COMU	**Canakkale**	**1.30**	**301**	Pn	**Pn**	**12 14 26.1**	**+0.2**	
ARMT	**Armutlu**	**1.34**	**32**	Pn	**Pn**	**12 14 25.0**	**-1.3**	
KRBN	**Karaburun**	**1.36**	**232**	Pn	**Pn**	**12 14 26.6**	**-0.1**	
RKY	**Sarkoy-Tekirda**	**1.38**	**335**	Pn	**Pn**	**12 14 26.9**	**0.0**	
GAZK	**Gazikoy-TEKIRD**	**1.39**	**341**	Pn	**Pn**	**12 14 27.3**	**+0.3**	
GPNR	**Gulpinar-Canak**	**1.39**	**271**	Pn	**Pb**	**12 14 28.0**	**+0.2**	
DOMA	**Ktahya-Doman**	**1.41**	**75**	P	**Pn**	**12 14 27.5**	**+0.1**	
DOMA				S	**Sb**	**12 14 45.4**	**-0.6**	
DOMA				IAML		12 14 51.0		
	comp=N,708nm,0.3s							
DOMA				IAML		12 14 54.0		
	comp=E,654nm,0.3s							
GEML	**Gemlik-BURSA**	**1.42**	**43**	Pn	**Pn**	**12 14 27.2**	**-0.3**	
GELI	**Tayfur-Gelibol**	**1.48**	**311**	Pn	**Pn**	**12 14 28.2**	**0.0**	
AYDB	**Zeytinkoy-Aydi**	**1.49**	**181**	Pn	**Pn**	**12 14 28.9**	**+0.4**	
URLA	**Izmir**	**1.50**	**225**	Pn	**Pn**	**12 14 28.5**	**0.0**	
NAZL	**Nazilli-Aydin**	**1.50**	**169**	Pn	**Pn**	**12 14 28.8**	**+0.2**	
BOZC	**Bozcaada**	**1.50**	**286**	Pn	**Pn**	**12 14 28.9**	**+0.3**	
BOZC	**Bozcaada**	**1.50**	**286**	P	**Pn**	**12 14 28.5**	**-0.1**	
BOZC				S	**Sn**	**12 14 46.8**	**-1.3**	
BOZC				IAML		12 14 48.0		
	comp=N,1μm,0.4s							
BOZC				IAML		12 14 50.0		
	comp=E,1μm,0.3s							
ANDZ	**Kutahya, Merke**	**1.53**	**87**	P	**Pn**	**12 14 29.5**	**+0.5**	
ANDZ				S	**Sg**	**12 14 50.7**	**-0.4**	
ANDZ				IAML		12 14 53.0		
	comp=E,446nm,0.5s							
ANDZ				IAML		12 14 57.0		
	comp=N,527nm,0.7s							
BOTS	**Marmara Eregli**	**1.55**	**1**	Pn	**Pn**	**12 14 30.0**	**+0.7**	
GMLD	**Gumuldur**	**1.57**	**211**	Pn	**Pn**	**12 14 30.2**	**+0.7**	
YLV	**Yalova**	**1.58**	**44**	Pn	**Pn**	**12 14 29.9**	**+0.1**	
KUTH	**Kutahya**	**1.62**	**91**	P	**Pb**	**12 14 32.1**	**+0.3**	
KUTH				S	**Sb**	**12 14 52.8**	**+0.6**	
KUTH				IAML		12 15 00.0		
	comp=E,956nm,0.7s							
KUTH				IAML		12 15 01.0		
	comp=N,1μm,0.4s							
SINB	**Sinanoba-Istan**	**1.63**	**16**	Pn	**Pn**	**12 14 31.1**	**+0.8**	
ERIK	**Erikli-Kesan**	**1.64**	**319**	Pn	**Pn**	**12 14 30.5**	**0.0**	
YKBL	**Yakuplu-Istanb**	**1.65**	**20**	Pn	**Pb**	**12 14 31.8**	**-0.5**	
CAVI	**Cavuskoy**	**1.66**	**62**	Pn	**Pn**	**12 14 30.8**	**0.0**	
CAVI	**Cavuskoy**	**1.66**	**62**	P	**Pn**	**12 14 30.8**	**0.0**	
CAVI				S	**Sb**	**12 14 54.4**	**+1.2**	
CAVI				IAML		12 14 55.0		
	comp=N,956nm,0.5s							
CAVI				IAML		12 14 57.0		
	comp=E,759nm,0.4s							
BILE	**Bilecik/Merkez**	**1.66**	**64**	P	**Pn**	**12 14 30.9**	**0.0**	
BILE				S	**Sn**	**12 14 52.0**	**-0.2**	
BILE				IAML		12 14 56.0		
	comp=E,660nm,0.3s							
BILE				IAML		12 14 57.0		
	comp=N,763nm,0.5s							
YLVH	**Yalova**	**1.67**	**41**	Pn	**Pn**	**12 14 32.1**	**+1.2**	
HVHR	**Bakirkoy-Istan**	**1.68**	**24**	Pn	**Pn**	**12 14 31.3**	**+0.2**	
BRGA	**Burgazada-Ista**	**1.69**	**31**	Pn	**Pn**	**12 14 32.1**	**+1.0**	
HYBA	**Heybeliada-Ist**	**1.69**	**31**	Pn	**Pn**	**12 14 31.6**	**+0.5**	
AUBOZ	**BOZOYUK**	**1.69**	**73**	P	**Pn**	**12 14 31.9**	**+0.7**	
AUBOZ				S	**Sn**	**12 14 51.8**	**-1.1**	
AUBOZ				IAML		12 14 57.0		
	comp=E,446nm,0.5s							
BNAZ	**Uak-Banaz**	**1.70**	**116**	P	**Pg**	**12 14 34.1**	**-0.4**	
BNAZ				S	**Sg**	**12 14 55.8**	**-0.7**	
BNAZ				IAML		12 15 06.0		
	comp=N,419nm,0.6s							
BNAZ				IAML		12 15 10.0		
	comp=E,443nm,0.6s							
BUYA	**Buyukada-Istan**	**1.70**	**32**	Pn	**Pn**	**12 14 32.1**	**+0.8**	
ADVT	**Abdulvahap**	**1.71**	**54**	Pn	**Pn**	**12 14 32.6**	**+1.1**	
ADVT	**Abdulvahap**	**1.71**	**54**	P	**Pb**	**12 14 33.4**	**+0.1**	
ADVT				S	**Sb**	**12 14 55.8**	**+1.2**	
ADVT				IAML		12 15 01.0		
	comp=E,542nm,0.7s							
ADVT				IAML		12 15 02.0		
	comp=N,302nm,0.7s							
TUZL	**Tuzla-Istanbul**	**1.71**	**36**	Pn	**Pn**	**12 14 32.4**	**+0.9**	
GADA	**Gvkgeada**	**1.74**	**296**	Pn	**Pn**	**12 14 32.3**	**+0.5**	
AYDN	**Tasoluk**	**1.77**	**181**	P	**Pn**	**12 14 32.1**	**-0.3**	
AYDN				S	**Sn**	**12 14 54.5**	**-0.3**	
AYDN				IAML		12 15 02.0		
	comp=N,267nm,0.4s							
AYDN				IAML		12 15 03.0		
	comp=E,227nm,0.7s							
OSMT	**Osmaniye**	**1.79**	**49**	Pn	**Pn**	**12 14 33.6**	**+1.0**	
CHOS	**Chios island**	**1.80**	**235**	Pn	**Pn**	**12 14 32.2**	**-0.5**	
SLVT	**Silivri**	**1.81**	**7**	Pn	**Pn**	**12 14 32.9**	**+0.1**	
KAVV	**Kandilli-Istan**	**1.84**	**28**	Pn	**Pn**	**12 14 33.9**	**+0.6**	
KAVV	**Kandilli-Istan**	**1.84**	**28**	Pn	**Pn**	**12 14 34.4**	**+1.1**	
ISK	**Istanbul-Kandi**	**1.84**	**28**	Pn	**Pn**	**12 14 34.4**	**+1.1**	
CAVK	**Edirne/Enez-Ca**	**1.84**	**313**	⇓P	**Pn**	**12 14 33.7**	**+0.4**	
CAVK				⇓S	**Sn**	**12 14 57.8**	**+1.3**	
CAVK	**Edirne/Enez-Ca**	**1.84**	**313**	P	**Pn**	**12 14 33.6**	**+0.4**	
CAVK				S	**Sn**	**12 14 57.6**	**+1.2**	
CAVK				IAML		12 15 01.0		
	comp=E,438nm,0.3s							
CAVK				IAML		12 15 02.0		
	comp=N,311nm,0.4s							
CTKS	**Kestanelik-??a**	**1.85**	**14**	Pn	**Pn**	**12 14 33.6**	**+0.2**	
BGKT	**Bogazkoy**	**1.86**	**20**	Pn	**Pn**	**12 14 34.7**	**+1.2**	
BGKT	**Bogazkoy**	**1.86**	**20**	P	**Pb**	**12 14 35.2**	**-0.5**	
BGKT				S	**Sb**	**12 14 59.6**	**+0.7**	
BGKT				IAML		12 15 01.0		
	comp=N,1μm,0.8s							
BGKT				IAML		12 15 01.0		
	comp=E,833nm,0.3s							
ENEZ	**Enez**	**1.88**	**314**	Pn	**Pn**	**12 14 34.4**	**+0.6**	
HRT	**Hereke**	**1.92**	**43**	Pn	**Pn**	**12 14 35.4**	**+1.0**	
UKOP	**Uzunkopru-Edir**	**1.96**	**330**	Pn	**Pn**	**12 14 35.1**	**+0.2**	
AUKIR	**Kırka- Seyitga**	**2.02**	**94**	P	**Pb**	**12 14 39.8**	**+1.2**	
AUKIR				S	**Sb**	**12 15 04.2**	**+0.5**	
ALN	**Alexandroupoli**	**2.05**	**316**	P	**Pn**	**12 14 36.1**	**-0.1**	
ALN				S	**Sb**	**12 15 05.6**	**+1.1**	
ALN				IAML		12 15 09.0		
	comp=N,165nm,0.6s							
ALN				IAML		12 15 11.0		
	comp=E,97nm,0.8s							
ALN	**Alexandroupoli**	**2.05**	**316**	P	**Pn**	**12 14 36.2**	**0.0**	
CTYL	**Yalikoy Yolu**	**2.06**	**8**	P	**Pb**	**12 14 39.3**	**+0.2**	
CTYL				S	**Sb**	**12 15 04.0**	**-0.6**	
CTYL				IAML		12 15 07.0		
	comp=N,923nm,0.3s							
CTYL				IAML		12 15 09.0		
	comp=E,677nm,0.4s							
SMTH	**Samothraki Isl**	**2.11**	**300**	P	**Pn**	**12 14 37.0**	**-0.1**	
SILT	**Sile**	**2.16**	**37**	⇓P	**Pb**	**12 14 41.6**	**+0.7**	
LIA	**Limnos Island**	**2.17**	**283**	⇓P	**Pn**	**12 14 38.2**	**+0.4**	
LIA				S	**Sn**	**12 15 05.0**	**+0.5**	
BODT	**Bodrum**	**2.42**	**192**	P	**Pn**	**12 14 40.9**	**-0.4**	
BODT				S	**Sg**	**12 15 19.1**	**-0.6**	
BODT				IAML		12 15 30.0		
	comp=E,153nm,1.0s							
CIFT	**Cifteler, Eski**	**2.43**	**91**	P	**Pn**	**12 14 42.3**	**+0.9**	
CIFT				S	**Sg**	**12 15 18.3**	**-1.7**	
CIFT				IAML		12 15 31.0		
	comp=E,210nm,1.1s							
CIFT				IAML		12 15 34.0		
	comp=N,333nm,0.5s							
ARMN	**Kirklareli, Me**	**2.46**	**351**	P	**Pn**	**12 14 41.5**	**-0.2**	
ARMN				S	**Sn**	**12 15 09.9**	**-1.7**	
ARMN				IAML		12 15 21.0		
	comp=E,142nm,0.3s							
ARMN				IAML		12 15 24.0		
	comp=N,123nm,0.5s							
RDO	**Rodhopi**	**2.50**	**314**	P	**Pn**	**12 14 42.8**	**+0.4**	
BTAS	**Taskesti**	**2.62**	**63**	P	**Pb**	**12 14 48.5**	**-0.2**	
BTAS				S	**Sg**	**12 15 24.9**	**-1.1**	
SAHE	**Sakarya_HENDEK**	**2.65**	**57**	⇑P	**Pn**	**12 14 46.9**	**+2.5**	
MLR	**Muntele Rosu**	**6.23**	**347**	⇓P	**Pn**	**12 15 36.0**	**+2.3**	
VOIR		**6.36**	**341**	⇑P	**Pn**	**12 15 35.9**	**+0.4**	
PLOR	**Plostina**	**6.48**	**352**	⇑P	**Pn**	**12 15 38.1**	**+1.0**	
VRI	**Vrincioaia**	**6.49**	**353**	⇑P	**Pn**	**12 15 38.3**	**+1.2**	
TURR	**Turia**	**6.76**	**349**	⇑P	**Pn**	**12 15 43.0**	**+2.1**	

*IDC **12** 12:44:56.6±1.3, 12°.04N×139°.85E, h0km, mb3.4/6, mbtmp3.4/6, MS3.3/5, Error ellipse: s-maj=41.3km s-min=24.5km az=85.0*

ISC 12 12:45:01.9±1.3, 12°.0N±0°.2×139°.9E±0°.3, h35km, n10,
σ1§42/6, mb3.5/6, MS3.4/3, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**15.20**	**8**	LR	LR	12 53 09.4	
	comp=Z,42nm,20.7s,baz=166,slow=32						
SIJI	**Sorong**	**15.35**	**214**	LR	LR	12 53 06.1	
	comp=Z,58nm,18.7s,baz=99,slow=32						
WRA	**Warramunga Arr**	**32.18**	**190**	P	**P**	**12 51 25.5**	**-1.1**
	0.2nm,0.6s,baz=5.2,slow=8.8,SNR=1.9						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**35.90**	**189**	P	**P**	**12 51 60.0**	**+1.0**
	0.3nm,0.7s,baz=15,slow=7.7,SNR=4.2						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.92**	**284**	P	**P**	**12 52 33.5**	**+0.4**
	0.3nm,0.2s,baz=78,slow=11,SNR=6.0						
CMAR				LR	LR	13 07 56.4	
	comp=Z,51nm,19.8s,baz=145,slow=35						
	0.3nm,0.2s						
MA2	**Magadan**	**48.20**	**7**	LR	LR	13 17 38.2	
	comp=Z,40nm,18.9s,baz=234,slow=41						
MKAR	**Makanchi Array**	**59.30**	**318**	P	**P**	**12 55 00.9**	**+0.7**
	0.1nm,0.5s,baz=96,slow=7.1,SNR=4.4						
	0.1nm,0.5s						
TIXI	**Tiksi**	**60.01**	**356**	LR	LR	13 21 51.9	
	comp=Z,67nm,19.0s,baz=232,slow=37						
KURBB	**Kurchatov Arra**	**62.73**	**321**	P	**P**	**12 55 21.7**	**-1.7**
	0.6nm,0.8s,baz=100,slow=7.4,SNR=6.3						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**72.12**	**26**	P	**P**	**12 56 22.9**	**+0.4**
	0.4nm,0.6s,baz=252,slow=6.1,SNR=5.5						
	0.4nm,0.6s						

JMA 12 12:48:57.4±0.1, 33°.3N±0°.4×135°.9E±0°.3, h24km, MV0.9/18, S OFF KII PENINSULA, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWKM	**Wakayamakushim**	**0.20**	**332**	P	Pb	12 49 02.8	-0.2
JMMH	**Miemihama**	**0.56**	**14**	*eP*	Pb	12 49 08.2	-0.4
JMMH				*eS*	Sb	12 49 16.2	0.0
JTNC	**Tanabenakahech**	**0.58**	**338**	*eS*	Sb	12 49 17.0	+0.1
JWM	**Minabe**	**0.72**	**323**	P	Pb	12 49 10.9	-0.3
JWM				*eS*	Sb	12 49 20.2	-0.4

*NEIC **12** 12:52:01.3±1.2, 18°.66N±0°.08×65°.10W±0°.06, h10km±2km, ML3.0/29, Md3.7/10(RSPR), Error ellipse: s-maj=14.8km s-min=6.9km az=150.0*

*RSPR **12** 12:52:02.4, 18°.72N×64°.95W, h13km±19km, MD3.7/10*

ISC 12 12:51:56.5±3.3, 18°.8N±0°.1×65°.0W±0°.2, h5km±13km, n31,
σ0§80/51, 10C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.05**	**235**		**Pn**	**12 52 18.3**	**+0.4**
HUMP				Sg	**Sb**	**12 52 31.5**	**+0.3**
HUMP				IAML		12 52 32.8	
	429nm,0.2s						
HUMP				IAML		12 52 35.8	
	413nm,0.2s						
HUMP	**Col San Antoni**	**1.05**	**235**	⇑*eP*	**Pn**	**12 52 18.4**	**+0.5**
SJG	**San Juan**	**1.30**	**241**		**Pg**	**12 52 22.5**	**+0.9**
SJG				Sg	**Sn**	**12 52 37.4**	**-1.9**
SJG	**San Juan**	**1.30**	**241**	IAML		12 52 42.4	
	246nm,0.2s						
SJG				IAML		12 52 45.3	
	218nm,0.2s						
ECPR	**Experimental S**	**1.41**	**253**		**Pb**	**12 52 22.9**	**-0.4**
ECPR				Sg	**Sn**	**12 52 40.6**	**-1.2**
ECPR	**Experimental S**	**1.41**	**253**	⇑*eP*	**Pg**	**12 52 24.2**	**+0.7**
EMPR	**Esperanza - Ma**	**1.52**	**260**		**Pg**	**12 52 26.6**	**+0.8**
EMPR					**Sb**	**12 52 44.8**	**-0.1**
EMPR	**Esperanza - Ma**	**1.52**	**260**	⇑*eP*	**Pg**	**12 52 26.6**	**+0.8**
EMPR				*eS*	**Sb**	**12 52 44.8**	**-0.1**
CELP	**Cerrillos**	**1.69**	**247**		**Pg**	**12 52 28.6**	**-0.3**
CELP					**Sn**	**12 52 48.5**	**-0.3**
CELP	**Cerrillos**	**1.69**	**247**	⇑*eP*	**Pg**	**12 52 28.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.72**	**246**		**Pb**	**12 52 28.7**	**0.0**
OBIP					**Sn**	**12 52 50.0**	**+0.4**
OBIP	**Obispado Ponce**	**1.72**	**246**	⇓*eP*	**Pg**	**12 52 29.3**	**-0.2**
OBIP				*eS*	**Sn**	**12 52 50.0**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.75**	**254**		**Pb**	**12 52 28.8**	**-0.4**
UUPR					**Sn**	**12 52 50.7**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.75**	**254**	⇑*eP*	**Pg**	**12 52 29.7**	**-0.4**
AOPR	**Arecibo Observ**	**1.76**	**257**		**Pb**	**12 52 29.1**	**-0.2**
AOPR					**Sn**	**12 52 50.7**	**+0.2**
AOPR				IAML		12 53 01.7	
	306nm,0.3s						
AOPR	**Arecibo Observ**	**1.76**	**257**	⇑*eP*	**Pb**	**12 52 29.1**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.99**	**248**		**Pn**	**12 52 31.2**	**+0.4**
GBPR					**Sn**	**12 52 56.8**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.99**	**248**	⇑*eP*	**Pn**	**12 52 31.2**	**+0.4**
GBPR				*eS*	**Sn**	**12 52 56.8**	**+0.7**
AGPR	**Aguadilla, PR**	**2.07**	**263**		**Pb**	**12 52 33.5**	**-1.1**
AGPR					**Sn**	**12 52 58.5**	**+0.4**
AGPR				IAML		12 52 59.2	
	143nm,0.3s						
AGPR				IAML		12 52 59.2	
	155nm,0.4s						
AGPR	**Aguadilla, PR**	**2.07**	**263**	⇑*iP*	**Pb**	**12 52 34.0**	**-0.6**
LSP	**Las Mesas**	**2.11**	**255**		**Pb**	**12 52 34.4**	**-0.9**
LSP					**Sn**	**12 52 60.0**	**+0.8**
LSP	**Las Mesas**	**2.11**	**255**	⇑*eP*	**Pb**	**12 52 34.4**	**-0.9**
LSP				*eS*	**Sn**	**12 52 60.0**	**+0.8**
MLPR	**Magueyes Islan**	**2.14**	**249**	Pn	**Pb**	**12 52 35.2**	**-0.5**
MLPR					**Sn**	**12 52 58.9**	**-0.8**
MLPR	**Magueyes Islan**	**2.14**	**249**	⇑*eP*	**Pb**	**12 52 34.9**	**-0.8**
PRSN	**Puerto Rico Se**	**2.15**	**256**		**Pb**	**12 52 35.2**	**-0.7**
PRSN					**Sn**	**12 52 59.4**	**-0.8**
PRSN	**Puerto Rico Se**	**2.15**	**256**	⇑*eP*	**Pb**	**12 52 35.0**	**-1.0**
CRPR	**Cabo Rojo, PR**	**2.18**	**251**		**Pb**	**12 52 35.6**	**-0.9**
CRPR					**Sn**	**12 53 00.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.18**	**251**	⇓*eP*	**Pb**	**12 52 35.8**	**-0.7**
IDE	**Isla Desecheo**	**2.42**	**262**		**Pb**	**12 52 38.7**	**-1.9**
IDE					**Sn**	**12 53 07.2**	**+0.3**
IDE	**Isla Desecheo**	**2.42**	**262**	⇑*iP*	**Pb**	**12 52 38.7**	**-1.9**
IDE				*eS*	**Sn**	**12 53 07.2**	**+0.3**
DR12	**Loma Pena Alta**	**4.20**	**271**	Pn	**Pn**	**12 53 01.5**	**+0.2**
DR12					**Sn**	**12 53 52.2**	**+1.4**

ROM 12 12:55:00.8±0.5, 43°.30N±0°.02×14°.78E±0°.02, h10km±1km, ML2.6/25, Error ellipse: s-maj=2.5km s-min=1.4km az=179.0, Adriatic Sea

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

	comp=E,411µm,0.3s						
EL6				AML	AML		
	comp=N,468µm,0.3s						
MC2	**Monte Cornacci**	**1.23 252**		P	Pb	12 55 22.6	-1.7
MC2				S	Sg	12 55 40.4	0.0
FDMO	**Fiordimonte**	**1.27 259**		P	Pn	12 55 22.9	-1.7
FDMO				S	Sb	12 55 40.6	-0.6
FDMO				AML	AML		
	comp=N,156µm,0.4s						
FDMO				AML	AML		
	comp=N,156µm,1.6s						
FDMO				AML	AML		
	comp=N,157µm,0.4s						
FDMO				AML	AML		
	comp=E,151µm,0.3s						
T0110	**Collepietro**	**1.30 215**		P	Pn	12 55 24.8	-0.3
T0110				AML	AML		
	comp=E,189µm,0.6s						
T0110				AML	AML		
	comp=N,198µm,0.8s						
T0110				AML	AML		
	comp=N,198µm,1.2s						
T0110				AML	AML		
	comp=E,157µm,0.4s						
T0110				AML	AML		
	comp=N,148µm,0.9s						
LPEL	**Lama dei Pelig**	**1.33 200**		AML	AML		
	comp=E,80µm,1.3s						
LPEL				AML	AML		
	comp=N,76µm,1.3s						
SNTG	**Esanatoglia**	**1.35 269**		P	Pn	12 55 25.5	-0.2
SNTG				S	Sb	12 55 42.8	-0.7
SNTG				AML	AML		
	comp=E,154µm,0.2s						
SNTG				AML	AML		
	comp=N,182µm,0.3s						
SNTG				AML	AML		
	comp=N,181µm,0.3s						
ARVD	**Arcevia**	**1.36 279**		P	Pn	12 55 25.2	-0.6
ARVD				AML	AML		
	comp=E,56µm,0.4s						
ARVD				AML	AML		
	comp=N,73µm,0.6s						
FAGN	**Fagnano**	**1.36 221**		P	Pb	12 55 26.2	-0.1
RM33	**Pellescritta (**	**1.40 236**		AML	AML		
	comp=N,153µm,0.9s						
RM33				AML	AML		
	comp=E,175µm,0.4s						
RM33				AML	AML		
	comp=E,175µm,0.4s						
RM33				AML	AML		
	comp=N,143µm,0.8s						
LNSS	**Leonessa**	**1.46 242**		P	Pb	12 55 27.8	-0.3
LNSS				AML	AML		
	comp=N,318µm,1.3s						
LNSS				AML	AML		
	comp=N,258µm,0.5s						
LNSS				AML	AML		
	comp=E,286µm,0.5s						
LNSS				AML	AML		
	comp=E,328µm,0.5s						
LNSS				AML	AML		
	comp=N,318µm,0.7s						
MPAG	**Monte Paganucc**	**1.51 283**		P	Pb	12 55 29.2	+0.2
MPAG				AML	AML		
	comp=E,36µm,2.4s						
MPAG				AML	AML		
	comp=N,400µm,1.9s						
FRON	**Frontone**	**1.52 279**		P	Pb	12 55 28.8	-0.3
FRON				S	Sb	12 55 48.2	-0.1
FRON				AML	AML		
	comp=E,99µm,1.5s						
FRON				AML	AML		
	comp=N,105µm,1.4s						
FRON				AML	AML		
	comp=E,81µm,0.6s						
ATFO	**Monte Foce - G**	**1.61 273**		AML	AML		
	comp=N,97µm,0.4s						
ATFO				AML	AML		
	comp=E,127µm,0.7s						
ATFO				AML	AML		
	comp=N,107µm,1.0s						
ATFO				AML	AML		
	comp=N,107µm,1.0s						
ATFO				AML	AML		
	comp=E,127µm,1.3s						
ATFO				AML	AML		
	comp=E,103µm,0.4s						
BRSN	**Barisano**	**2.19 298**		AML	AML		
	comp=N,638µm,1.5s						
BRSN				AML	AML		
	comp=E,1080µm,1.5s						
BRSN				AML	AML		
	comp=E,1080µm,0.5s						
NOCI	**Noci**	**3.03 145**		AML	AML		
	comp=N,135µm,1.3s						
NOCI				AML	AML		
	comp=E,118µm,0.4s						

*TAP **12** 13:04:36.6,24˚.50N×122˚.72E, h99km±1km, ML2.6, C*
*JMA **12** 13:04:37.6±0.1,25˚.N±3˚×122˚.8E±0˚.7, h90km±1km, MV1.4/9, NW OFF ISHIGAKIJIMA IS*
ISC 12 13:04:36.6±1.5,**24˚.51N**±0˚.05×**122˚.73E**±0˚.03,**h102**km±8km, **n56**,σ0ˢ**70**/108,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.21 106**		P	**Pn**	**13 04 50.9**	**-0.1**
JYNG				*e*S	**Sn**	**13 05 01.1**	**-0.7**
YOJ	**Yonaguni jima**	**0.27 100**		*i* P	**Pn**	**13 04 51.1**	**-0.1**
YOJ				S	**Sn**	**13 05 01.5**	**-0.7**
YOJ	**Yonaguni jima**	**0.27 100**		*e*P	**Pn**	**13 04 51.1**	**-0.1**
EOS3	**EOS3**	**0.43 239**		P	**Pn**	**13 04 52.1**	**+0.2**
EOS3				*e*S	**Sn**	**13 05 04.6**	**+1.3**
EOS2	**EOS2**	**0.46 259**		P	**Pn**	**13 04 52.3**	**+0.2**
EOS2				*e*S	**Sn**	**13 05 04.8**	**+1.1**
EOS4	**EOS4**	**0.54 224**		*e*P	**Pn**	**13 04 53.0**	**+0.6**
EOS4				*e*S	**Sn**	**13 05 05.3**	**+1.1**
TWC	**Suao**	**0.80 277**		P	**Pn**	**13 04 55.5**	**+0.4**
TWC				*i* S	**Sn**	**13 05 08.6**	**-0.4**
ESAO	**Su ao**	**0.81 275**		P	**Pn**	**13 04 55.8**	**+0.7**
ESAO				S	**Sn**	**13 05 09.1**	**0.0**
EWUT	**Wuta**	**0.86 266**		P	**Pn**	**13 04 55.6**	**-0.1**
EWUT				*i* S	**Sn**	**13 05 09.8**	**-0.3**
NTC	**Toucheng**	**0.88 293**		P	**Pn**	**13 04 56.4**	**+0.5**
NTC				*e*S	**Sn**	**13 05 08.0**	**-2.4**
EAHA	**Aohua**	**0.92 259**		P	**Pn**	**13 04 55.6**	**-0.6**
EAHA				S	**Sn**	**13 05 10.8**	**-0.2**
NDS	**Dongshan**	**0.93 278**		P	**Pn**	**13 04 56.5**	**+0.2**
NDS				*e*S	**Sn**	**13 05 10.0**	**-1.2**
IRIF	**Iriomote-Funau**	**0.93 100**		*e*P	**Pn**	**13 04 56.7**	**+0.3**
TIPB	**Shuangxi**	**0.94 300**		P	**Pn**	**13 04 56.8**	**+0.3**
TIPB				S	**Sn**	**13 05 10.8**	**-0.8**
TWE	**Neicheng**	**0.99 283**		*e*P	**Pn**	**13 04 57.8**	**+0.8**
TWE				*e*S	**Sn**	**13 05 12.4**	**+0.1**
ETL	**Fush Village**	**1.06 251**		P	**Pn**	**13 04 58.7**	**+0.8**
ETL				*i* S	**Sn**	**13 05 13.7**	**-0.2**
FUSB	**Fushanzhiwuyua**	**1.06 284**		P	**Pn**	**13 04 58.3**	**+0.4**
FUSB				*i* S	**Sn**	**13 05 13.8**	**-0.2**
NACB	**Ninganchiao**	**1.08 252**		P	**Pn**	**13 04 57.9**	**-0.1**
NACB				*e*S	**Sn**	**13 05 13.6**	**-0.6**
LATG	**Datong**	**1.09 272**		P	**Pn**	**13 04 58.5**	**+0.2**
LATG				S	**Sn**	**13 05 14.6**	**0.0**
NDT	**Datong Townshi**	**1.11 275**		P	**Pn**	**13 04 58.8**	**+0.5**
NDT				S	**Sn**	**13 05 14.8**	**+0.1**
TWD	**Chiawan**	**1.11 248**		P	**Pn**	**13 04 58.7**	**+0.3**
TWD				S	**Sn**	**13 05 14.4**	**-0.4**
NWLT	**Wulai**	**1.14 284**		P	**Pn**	**13 04 59.2**	**+0.5**
NWLT				*i* S	**Sn**	**13 05 15.4**	**-0.1**
ETLH	**Xiulin Townshi**	**1.17 255**		P	**Pn**	**13 04 59.1**	**0.0**
ETLH				S	**Sn**	**13 05 15.6**	**-0.5**
JKRS	**Kuro-shima**	**1.20 103**		P	**Pn**	**13 05 00.2**	**+0.9**
JKRS				*e*S	**Sn**	**13 05 16.8**	**+0.2**
TEYL	**Yanliau Villag**	**1.21 238**		P	**Pn**	**13 04 59.5**	**0.0**
TEYL				*i* S	**Sn**	**13 05 16.3**	**-0.5**
NNSH	**Datong**	**1.23 267**		P	**Pn**	**13 05 00.6**	**+0.8**
NNSH				S	**Sn**	**13 05 17.6**	**+0.3**
NNSB	**Datong**	**1.23 267**		P	**Pn**	**13 05 00.4**	**+0.7**
NNSB				*i* S	**Sn**	**13 05 17.0**	**-0.3**
YM01	**YM01**	**1.23 301**		P	**Pn**	**13 04 59.5**	**-0.2**
YM01				S	**Sn**	**13 05 16.8**	**-0.4**
NNS	**Nan Shan**	**1.23 267**		P	**Pn**	**13 05 00.1**	**+0.3**
NNS				S	**Sn**	**13 05 17.2**	**-0.3**
YHNB	**Yeheng**	**1.24 278**		P	**Pn**	**13 05 00.4**	**+0.5**
YHNB				S	**Sn**	**13 05 17.2**	**-0.3**
ETM	**Tongmen**	**1.25 245**		P	**Pn**	**13 05 00.5**	**+0.6**
ETM				*e*S	**Sn**	**13 05 16.6**	**-1.0**
SHUL	**Shoufeng**	**1.28 236**		P	**Pn**	**13 04 60.0**	**-0.3**
SHUL				S	**Sn**	**13 05 18.3**	**+0.1**
ANP	**Anpu**	**1.29 302**		P	**Pn**	**13 05 00.5**	**+0.1**
ANP				S	**Sn**	**13 05 17.7**	**-0.8**
LXIB	**Xiulin Townshi**	**1.29 248**		P	**Pn**	**13 04 60.0**	**-0.6**
LXIB				S	**Sn**	**13 05 17.9**	**-0.9**
JIJ	**Ishigaki jima**	**1.30 96**		P	**Pn**	**13 05 00.9**	**+0.4**
JIJ				*e*S	**Sn**	**13 05 17.5**	**-1.1**
ESL	**Shilin**	**1.37 240**		P	**Pn**	**13 05 01.2**	**-0.2**
ESL				S	**Sn**	**13 05 19.7**	**-0.4**
FUSS	**Fushou**	**1.38 259**		*e*P	**Pn**	**13 05 00.3**	**-1.3**
FUSS				S	**Sn**	**13 05 20.1**	**-0.6**
WHF	**Hehuan Shan**	**1.38 255**		P	**Pn**	**13 05 01.8**	**-0.1**
WHF				S	**Sn**	**13 05 20.0**	**-1.1**
NTY	**Taoyuan**	**1.39 291**		P	**Pn**	**13 05 02.1**	**+0.6**
NTY				S	**Sn**	**13 05 19.9**	**-0.6**
JISG	**Ishigakijimahi**	**1.45 87**		*e*P	**Pn**	**13 05 02.7**	**+0.4**
JISG				*e*S	**Sn**	**13 05 21.0**	**-0.7**
WARBT	**Fenglin Townsh**	**1.46 238**		P	**Pn**	**13 05 02.3**	**-0.1**
WARBT				*e*S	**Sn**	**13 05 20.8**	**-1.2**
NFF	**Wufeng Townshi**	**1.47 275**		*i* P	**Pn**	**13 05 02.9**	**+0.3**
NFF				S	**Sn**	**13 05 22.4**	**0.0**
OWD	**Renai**	**1.52 249**		*i* P	**Pn**	**13 05 03.5**	**+0.2**
OWD				S	**Sn**	**13 05 23.5**	**-0.1**
WUSB	**Renai**	**1.56 251**		P	**Pn**	**13 05 04.5**	**+0.8**
WUSB				S	**Sn**	**13 05 24.4**	**+0.1**
HGSD	**Ruisui**	**1.56 230**		P	**Pn**	**13 05 03.8**	**+0.1**
HGSD				*e*S	**Sn**	**13 05 25.1**	**+0.9**
LIOB	**Emei**	**1.56 275**		*i* P	**Pn**	**13 05 04.1**	**+0.4**
LIOB				S	**Sn**	**13 05 24.1**	**-0.2**
NSTT	**Nanjuang**	**1.57 275**		P	**Pn**	**13 05 04.3**	**+0.5**
NSTT				S	**Sn**	**13 05 24.7**	**+0.1**
EHYH	**Wanrong**	**1.62 232**		P	**Pn**	**13 05 04.8**	**+0.4**
EHYH				S	**Sn**	**13 05 24.8**	**-0.7**
WHP	**Taichung City**	**1.64 262**		*e*P	**Pn**	**13 05 06.0**	**+1.2**
WHP				S	**Sn**	**13 05 26.1**	**0.0**
YULB	**Yu-li**	**1.71 230**		P	**Pn**	**13 05 05.5**	**-0.1**
YULB				*e*S	**Sn**	**13 05 26.3**	**-1.4**
EYUL	**Yuli**	**1.73 228**		*i* P	**Pn**	**13 05 06.3**	**+0.5**
EYUL				S	**Sn**	**13 05 28.5**	**+0.4**
SSLB	**Suanglung**	**1.77 246**		P	**Pn**	**13 05 06.2**	**-0.1**
SSLB				S	**Sn**	**13 05 29.4**	**+0.4**
WHYT	**Xinyi Township**	**1.89 245**		*e*P	**Pn**	**13 05 09.6**	**+1.7**
WHYT				*e*S	**Sn**	**13 05 33.2**	**+1.5**
EDH	**Donghe**	**2.01 221**		P	**Pn**	**13 05 09.4**	**0.0**
EDH				*e*S	**Sn**	**13 05 32.3**	**-2.0**
ELDTW	**Lidau**	**2.04 230**		*e*S	**Sn**	**13 05 33.6**	**-1.7**
JIKM	**Ikemajima**	**2.33 79**		*i* S	**Sn**	**13 05 41.9**	**+0.1**

*IDC **12** 13:20:52.1±1.0,32˚.39N×141˚.57E, h0km, mb3.7/9, mbtmp3.7/12, ML3.4/3, MS3.4/3, Error ellipse: s-maj=32.1km s-min=15.3km az=64.0*
*JMA **12** 13:20:53.7±0.5,32˚.N±1˚×14˚.2E±˚, h38km, MV3.8/34, E OFF HACHIJOJIMA ISLAND*
ISC 12 13:20:56.5±0.9,**32˚.40N**±0˚.06×**141˚.62E**±0˚.10,**h31**km,**n28**, σ1ˢ**51**/36,**mb3.7/9,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.67 294**		*e*P	**Pn**	**13 21 22.3**	**-1.4**
JHJ2	**Mitsune**	**1.67 296**		*e*P	**Pn**	**13 21 22.3**	**-1.4**
JHJ	**Hachijo jima 2**	**1.70 295**		Pn	**Pn**	**13 21 22.2**	**-1.9**
	30nm,0.3s,baz=127,slow=20,SNR=23						
JHJ				Sn	**Sn**	**13 21 44.5**	**-0.3**
	68nm,0.3s,baz=71,slow=23,SNR=7.2						
BSO1	**Boso 1**	**2.31 347**		P	**Pn**	**13 21 31.7**	**-0.3**
BSO1				*e*S	**Sn**	**13 21 58.7**	**-0.3**
BSO3	**Boso 3**	**2.57 339**		*e*P	**Pn**	**13 21 35.4**	**-0.3**
BSO3				*e*S	**Sn**	**13 22 07.0**	**+1.3**
BSO4	**Boso 4**	**2.79 338**		*e*P	**Pn**	**13 21 38.9**	**-0.1**
JHU2	**Hanno**	**3.94 331**		*e*P	**Pn**	**13 21 54.8**	**-0.1**
JHU2				*e*S	**Sn**	**13 22 38.7**	**-1.3**
JYT	**Yasato**	**3.99 343**		*e*P	**Pn**	**13 21 57.2**	**+1.7**
JYT				*e*S	**Sn**	**13 22 42.4**	**+1.0**
JYN	**Shimob**	**4.01 321**		*e*P	**Pn**	**13 21 57.8**	**+2.0**
JRY	**Ryogami san**	**4.25 329**		*e*P	**Pn**	**13 22 00.3**	**+1.2**
JHO	**Hitachi**	**4.29 349**		P	**Pn**	**13 21 58.5**	**-1.1**
JHO				*e*S	**Sn**	**13 22 45.0**	**-3.6**
JAG	**Ashikaga**	**4.39 337**		*e*P	**Pn**	**13 22 01.0**	**-0.1**
JAG				*e*S	**Sn**	**13 22 51.8**	**+0.6**
JFK	**Kawauchi**	**4.99 353**		*e*S	**Sn**	**13 23 00.6**	**-5.4**
MJAR	**Matsushiro Arr**	**5.00 327**		Pn	**Pn**	**13 22 09.2**	**-0.2**
	0.2nm,0.3s,baz=157,slow=12,SNR=9.9						
MJAR				Sn	**Sn**	**13 23 07.2**	**+1.1**
	0.2nm,0.3s,baz=357,slow=14,SNR=5.2						
	1.4nm,0.5s						
MAT	**Matsushiro**	**5.00 327**		*e*P	**Pn**	**13 22 10.4**	**+1.0**
MAT				*e*S	**Sn**	**13 23 06.9**	**+0.7**
JCJ	**Chichijima**	**5.31 175**		Pn	**Pn**	**13 22 13.7**	**-0.1**
	6.5nm,0.3s,baz=273,slow=23,SNR=6.3						
JCJ				Sn	**Sn**	**13 23 11.6**	**-2.3**
	9.1nm,0.3s,baz=307,slow=23,SNR=1.9						
	16nm,0.4s						
KSRS	**Korea Array**	**12.31 298**		LR	LR	13 28 34.0	
	comp=Z,29nm,18.4s,baz=200,slow=38						
KLR	**Kul'dur**	**18.37 339**		P	**P**	**13 25 07.8**	**-0.8**
	0.2nm,0.3s,baz=166,slow=8.3,SNR=4.0						
	0.8nm,0.5s						
TGY	**Tagaytay City**	**26.23 231**		LR	LR	13 35 55.2	
	comp=Z,75nm,20.9s,baz=182,slow=34						
SONM	**Songino Array**	**30.72 310**		P	**P**	**13 27 09.4**	**+0.7**
	0.6nm,0.6s,baz=118,slow=8.0,SNR=4.1						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**46.84 306**		P	**P**	**13 29 24.0**	**+0.4**
	0.6nm,0.6s,baz=87,slow=9.4,SNR=6.2						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**49.08 311**		P	**P**	**13 29 41.0**	**+0.3**
	0.4nm,0.4s,baz=90,slow=7.8,SNR=12						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**52.51 189**		P	**P**	**13 30 06.3**	**-0.6**
	0.5nm,0.5s,baz=5.3,slow=7.6,SNR=10.0						
WRA				LR	LR	13 50 39.4	
	comp=Z,284nm,21.3s,baz=9.5,slow=34						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**53.88 315**		P	**P**	**13 30 15.8**	**-0.8**
	0.3nm,0.4s,baz=90,slow=10,SNR=2.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**56.24 189**		P	**P**	**13 30 34.4**	**+0.5**
	0.2nm,0.4s,baz=3.2,slow=6.8,SNR=8.2						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**67.74 29**		P	**P**	**13 31 51.5**	**+0.8**
	0.3nm,0.6s,baz=289,slow=8.3,SNR=2.1						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**73.00 333**		P	**P**	**13 32 22.9**	**0.0**
	2.6nm,1.0s,baz=51,slow=6.4,SNR=4.6						
	2.6nm,1.0s						
KBZ	**Khabaz**	**74.08 312**		P	**P**	**13 32 29.9**	**+0.4**
	1.4nm,0.7s,baz=63,slow=5.9,SNR=4.2						
	1.4nm,0.7s						

IDC 12 13:26:25.0±1.5,**31˚.85N**×**139˚.73E**,**h0**km,**mb3.4**/2, **mbtmp3.3**/3,**ML1.8**/1,**Error ellipse: s-maj=116.3km s-min=17.1km az=91.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.27 2**		Pn	Pb	13 26 49.7	-0.1
	3.9nm,0.3s,baz=57,slow=24,SNR=8.4						
JHJ				Sn	Sn	13 27 09.5	+1.9
	24nm,0.3s,baz=85,slow=20,SNR=5.5						
MJAR	**Matsushiro Arr**	**4.84 345**		Pn	Pn	13 27 39.0	-0.2
	baz=160,slow=11,SNR=1.5						
MJAR				Sn	Sn	13 28 35.5	-0.6
	baz=138,slow=27,SNR=1.5						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**51.76 186**		P	P	13 35 34.5	+0.1
	0.2nm,0.4s,baz=4.5,slow=7.5,SNR=4.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**55.48 186**		P	P	13 36 01.5	-0.3
	0.8nm,1.2s,baz=8.6,slow=7.8,SNR=2.3						
	0.8nm,1.2s						

*IDC **12** 13:36:53.4±0.7,6˚.73N×72˚.93W, h156km±9km, mb3.5/4, mbtmp4.1/7, Error ellipse: s-maj=28.5km s-min=7.7km az=130.0*
*CATAC **12** 13:36:53.7±0.8,7˚.N±3˚×7˚.3W±˚, h154km±6km, M4.3/6, MLv4.3/6, Error ellipse: s-maj=11.6km s-min=5.6km az=90.4, confirmed*
*RSNC **12** 13:36:54.6±0.0,7˚.N±1˚×7˚.3W±˚, h149km±1km, M3.8, mB4.9, mb4.4, ML3.5, MLv4.2, Mw(mB)4.2*
*NEIC **12** 13:36:56.1±1.5,6˚.87N±0˚.07×73˚.1W±0˚.1, h156km±6km, mb4.2/29, Error ellipse: s-maj=16.3km s-min=9.4km az=108.0*
*FUNV **12** 13:36:56.8, 7˚.14N×73˚.18W, h5km, MW3.8, Presumed earthquake*
ISC 12 13:36:54.0±0.6,**6˚.86N**±0˚.03×**73˚.10W**±0˚.04,**h151**km±5km, **n84**,σ1ˢ**49**/130,**mb4.2**/15,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28 198**		P	**Pn**	**13 37 15.1**	**+0.2**
BARC				S	**Sn**	**13 37 29.9**	**-0.9**
PAMC	**Pamplona, Colo**	**0.62 39**		P	**Pn**	**13 37 17.9**	**+1.2**
PAMC				S	**Sn**	**13 37 34.6**	**+0.6**
BRJC	**Barrancabermej**	**0.65 280**		P	**Pn**	**13 37 16.8**	**+0.5**
BRJC				S	**Sn**	**13 37 33.7**	**+0.4**
RUSC	**La Rusia**	**0.96 179**		P	**Pn**	**13 37 19.0**	**-0.2**
RUSC				S	**Sn**	**13 37 37.6**	**-0.6**
RUSC	**La Rusia**	**0.96 179**		P	**Pn**	**13 37 18.9**	**-0.2**
RUSC				S	**Sn**	**13 37 37.4**	**-0.8**
RUSC	**La Rusia**	**0.96 179**		*e*P	**Pn**	**13 37 19.2**	**+0.1**
RUSC				*e*S	**Sn**	**13 37 36.5**	**-1.7**
PTBC	**PUERTO BERRIO,**	**1.39 257**		P	**Pn**	**13 37 21.6**	**-0.9**
PTBC				S	**Sn**	**13 37 42.6**	**-1.6**
OCAC	**Ocana**	**1.39 351**		P	**Pn**	**13 37 23.3**	**+0.6**
OCAC				S	**Sn**	**13 37 45.0**	**+0.3**
SPBC	**San Pablo de B**	**1.54 219**		P	**Pn**	**13 37 24.0**	**-0.2**
SPBC				S	**Sn**	**13 37 45.9**	**-1.4**
CHIC	**Chingaza**	**2.30 196**		P	**Pn**	**13 37 33.0**	**-0.2**
CHIC				S	**Sn**	**13 38 02.0**	**-1.3**
ROSC	**El Rosal**	**2.34 211**		P	**Pn**	**13 37 34.8**	**+1.1**
	149nm,0.3s,baz=294,slow=24,SNR=80						
ROSC				S	**Sn**	**13 38 03.9**	**-0.3**
	202nm,0.5s,baz=121,slow=14,SNR=7.6						
ROSC	**El Rosal**	**2.34 211**		P	**Pn**	**13 37 34.9**	**+1.2**
ROSC				S	**Sn**	**13 38 03.6**	**-0.6**
HELC	**Santa Helena**	**2.50 255**		P	**Pn**	**13 37 35.4**	**-0.2**
HELC				S	**Sn**	**13 38 07.7**	**+0.1**
HELC	**Santa Helena**	**2.50 255**		P	**Pn**	**13 37 35.3**	**-0.3**
HELC				S	**Sn**	**13 38 06.0**	**-1.6**
HELC	**Santa Helena**	**2.50 255**		*e*P	**Pn**	**13 37 37.2**	**+1.6**
HELC				*e*S	**Sn**	**13 38 09.1**	**+1.5**
CVER	**Cruz Verde, Cu**	**2.52 203**		P	**Pn**	**13 37 36.5**	**+0.7**
CVER				S	**Sn**	**13 38 06.1**	**-2.0**
UREC	**San Jos de Ur**	**2.57 290**		P	**Pn**	**13 37 35.5**	**-0.6**
UREC				S	**Sn**	**13 38 06.9**	**-1.7**
GUY2C	**Guyana, Caldas**	**2.78 234**		P	**Pn**	**13 37 39.4**	**+0.3**
GUY2C				S	**Sn**	**13 38 12.1**	**-1.7**
PTGC	**Puerto Gaitan,**	**2.81 160**		P	**Pn**	**13 37 38.1**	**-0.9**
PTGC				S	**Sn**	**13 38 11.4**	**-2.5**
CBOC	**Ciudad Bolivar**	**3.06 251**		P	**Pn**	**13 37 43.0**	**+0.7**
CBOC				S	**Sn**	**13 38 18.7**	**-1.0**
DBBC	**Dabeiba**	**3.09 273**		P	**Pn**	**13 37 42.9**	**+0.2**
DBBC				S	**Sn**	**13 38 19.0**	**-1.3**
SDV	**Santo Domingo**	**3.17 50**		P	**Pn**	**13 37 44.4**	**+0.7**
	140nm,0.3s,baz=236,slow=11,SNR=133						
SDV				S	**Sn**	**13 38 20.9**	**-1.3**
	100nm,0.5s,baz=252,slow=22,SNR=13						
SDV	**Santo Domingo**	**3.17 50**		*e*P	**Pn**	**13 37 44.8**	**+1.1**
SDV				*e*S	**Sn**	**13 38 21.5**	**-0.7**
PRAC	**Prado**	**3.59 210**		P	**Pn**	**13 37 48.4**	**-0.8**
PRAC				S	**Sn**	**13 38 31.0**	**-0.8**
PRAC	**Prado**	**3.59 210**		P	**Pn**	**13 37 48.3**	**-0.8**
PRAC				S	**Sn**	**13 38 31.0**	**-0.8**
APAC	**Apartado, Choc**	**3.61 287**		P	**Pn**	**13 37 49.4**	**+0.2**
APAC				S	**Sn**	**13 38 30.9**	**-1.1**
ORTC	**Ortega, Tolima**	**3.63 216**		P	**Pn**	**13 37 48.9**	**-0.6**
ORTC				S	**Sn**	**13 38 31.9**	**-0.7**
SJCC	**San Jacinto, C**	**3.66 326**		P	**Pn**	**13 37 49.3**	**-0.6**
SJCC				S	**Sn**	**13 38 30.9**	**-2.3**
SJCC	**San Jacinto, C**	**3.66 326**		P	**Pn**	**13 37 49.2**	**-0.7**
SJCC				S	**Sn**	**13 38 31.0**	**-2.3**
SJCC	**San Jacinto, C**	**3.66 326**		*e*P	**Pn**	**13 37 49.6**	**-0.3**
SJCC				*e*S	**Sn**	**13 38 28.6**	**-4.7**
PLMC	**San Jos del P**	**3.71 239**		P	**Pn**	**13 37 51.1**	**+0.4**
PLMC				S	**Sn**	**13 38 34.2**	**-0.4**
LCBC	**Los crdobas,**	**3.80 302**		P	**Pn**	**13 37 49.5**	**-2.2**
LCBC				S	**Sn**	**13 38 34.4**	**-2.1**
URMC	**La Uribe, Meta**	**3.81 200**		P	**Pn**	**13 37 52.0**	**+0.1**
URMC				S	**Sn**	**13 38 35.8**	**-1.0**
GUVC	**San Jose del G**	**4.31 174**		P	**Pn**	**13 37 56.9**	**-1.5**
GUVC				S	**Sn**	**13 38 46.6**	**-1.9**
SMRC	**Santa Marta, M**	**4.42 346**		P	**Pn**	**13 37 59.8**	**0.0**
SMRC				S	**Sn**	**13 38 48.8**	**-2.3**
PIZC	**Pizarro, Choco**	**4.64 246**		P	**Pn**	**13 38 02.9**	**+0.2**
PIZC				S	**Sn**	**13 38 57.3**	**+1.1**
PTAC	**Punta Ardita,**	**4.69 274**		P	**Pn**	**13 38 03.1**	**-0.2**
PTAC				S	**Sn**	**13 38 55.7**	**-1.6**
MACC	**Macarena, Meta**	**4.74 189**		P	**Pn**	**13 38 02.5**	**-1.6**
MACC				S	**Sn**	**13 38 54.4**	**-4.3**
BETC	**Betania**	**4.76 209**		P	**Pn**	**13 38 03.5**	**-0.9**
BETC				S	**Sn**	**13 38 56.4**	**-2.8**
URI	**Uribia**	**4.94 13**		P	**Pn**	**13 38 05.8**	**-0.8**
URI				S	**Sn**	**13 39 02.2**	**-1.1**
URIC	**Uribia, Colomb**	**4.94 13**		P	**Pn**	**13 38 05.7**	**-0.9**
	0.1nm630nm23nm,0.4s						
URIC				S	**Sn**	**13 39 01.0**	**-2.3**
	0.1nm630nm23nm,0.4s						
URIC	**Uribia, Colomb**	**4.94 13**		*e*P	**Pn**	**13 38 05.9**	**-0.7**
URIC				*e*S	**Sn**	**13 38 57.8**	**-5.5**
JAMC	**Jamundi, Valle**	**5.08 225**		P	**Pn**	**13 38 08.2**	**-0.5**
	0.2n

comp=Z,0.5nm,0.4s,baz=126,slow=9.3,SNR=17
comp=Z,0.5nm,0.4s

VHRN	**Van Horn**	**38.19**	**313**	P	**P**	**13 43 60.0**	**+0.7**
MNTX	**Cornudas Mount**	**38.96**	**314**	P	**P**	**13 44 06.3**	**+0.7**
MT01	**Popeta**	**40.53**	**178**	P	**P**	**13 44 19.3**	**+0.9**
ECSD	**EROS Data Cent**	**42.12**	**334**	P	**P**	**13 44 31.6**	**+0.3**
ECSD				IAmb	IAmb	13 44 31.8	
	comp=Z,7.5nm,1.5s						
SUSD	**Miller**	**43.72**	**333**	P	**P**	**13 44 44.0**	**-0.2**
EYMN	**Ely**	**43.84**	**342**	P	**P**	**13 44 45.3**	**+0.2**
EYMN				IAmb	IAmb	13 44 46.0	
	comp=Z,3.4nm,0.6s						
PV13	**Radium Mtn., P**	**44.89**	**319**	P	**P**	**13 44 55.3**	**+1.4**
ULM	**Lac du Bonnet**	**47.26**	**340**	P	**P**	**13 45 11.7**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=131,slow=7.4,SNR=9.8						
	comp=Z,2.3nm,0.4s						
ULM	**Lac du Bonnet**	**47.26**	**340**	P	**P**	**13 45 11.6**	**-0.2**
ULM				IAmb	IAmb	13 45 12.6	
	comp=Z,2.6nm,0.5s						
BSUT	**Blindstream Ca**	**47.48**	**321**	P	**P**	**13 45 15.3**	**+1.1**
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**13 45 18.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=122,slow=9.0,SNR=6.4						
	comp=Z,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**13 47 06.0**	**0.0**
	comp=Z,1.7nm,0.5s,baz=135,slow=6.6,SNR=27						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**13 56 24.0**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=122,slow=3.7,SNR=17						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**13 56 27.0**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=108,slow=2.7,SNR=23						

KRSC 12 13:45:08.7±1.1, 48.72N×156.20E, h67km±33km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**2.78**	**8**	*e*S	Sn	13 46 26.4	+3.2
KDTR	**Khodutka, Kamc**	**3.32**	**21**	*e*P	Pn	13 46 01.1	+2.9
KDTR				*e*S	Sn	13 46 39.9	+3.5
ASAK	**Asacha**	**3.83**	**16**	*e*P	Pn	13 46 08.2	+3.0
MTVR	**Mutnovka**	**3.98**	**18**	*e*P	Pn	13 46 10.3	+3.0
MTVR				*e*S	Sn	13 46 56.5	+3.8
RUS	**Russkaya**	**4.00**	**21**	*e*P	Pn	13 46 09.8	+2.4
RUS				*e*S	Sn	13 46 55.8	+2.8
GRL	**Gorelyy**	**4.02**	**17**	*e*P	Pn	13 46 11.4	+3.5
SPN	**Mys Shipunski**	**5.01**	**27**	*e*P	Pn	13 46 25.4	+4.2

*IDC **12** 13:50:05.4±1.6, 17.74S×167.80E, h0km, mb4.0/5, mbtmp4.0/5, MS3.4/9, Error ellipse: s-maj=40.2km s-min=37.8km az=145.0*
*NOU **12** 13:50:07.4, 17.83S×167.63E, h0km, MLv4.3/12, Vanuatu Islands*
*NEIC **12** 13:50:09.1±1.1, 17.75S±0.06×167.8E±0.1, h23km±6km, mb4.5/7, Error ellipse: s-maj=16.9km s-min=8.7km az=84.0*
ISC 12 13:50:06.6±0.7, 17.65S±0.08×167.66E±0.09, h10km, n37, σ0s83/26, mb4.3/7, MS3.5/7, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.75**	**101**	P	**Pb**	**13 50 21.4**	**-0.3**
SANVU	**Saraoutou**	**2.23**	**349**	P	**Pb**	**13 50 46.6**	**-0.5**
SANVU	**Saraoutou**	**2.23**	**349**		**Pb**	**13 50 46.2**	**-0.9**
MARNC	**Mare, Loyalty**	**3.83**	**175**	P	**Pn**	**13 51 05.7**	**+0.2**
MARNC	**Mare, Loyalty**	**3.83**	**175**	Pn	**Pn**	**13 51 04.7**	**-0.8**
KOUNC	**Koumac, New Ca**	**4.30**	**227**	P	**Pn**	**13 51 12.0**	**0.0**
KOUNC	**Koumac, New Ca**	**4.30**	**227**		**Pn**	**13 51 12.4**	**+0.3**
YATNC	**Mamie plateau,**	**4.44**	**189**	P	**Pn**	**13 51 13.1**	**-1.0**
DZM	**Mont Dzumac**	**4.54**	**194**	LR	LR	13 52 51.5	
	comp=Z,201nm,20.3s,baz=102,slow=37						
NOUC	**Port Laguerre**	**4.61**	**196**	P	**Pn**	**13 51 15.6**	**-0.7**
ONTNC	**Ouen Toro**	**4.77**	**194**	P	**Pn**	**13 51 18.8**	**+0.3**
ONTNC	**Ouen Toro**	**4.77**	**194**	Pn	**Pn**	**13 51 18.4**	**-0.1**
OUENC	**Ouen Island, N**	**4.80**	**189**	P	**Pn**	**13 51 19.7**	**+0.7**
OUENC	**Ouen Island, N**	**4.80**	**189**	Pn	**Pn**	**13 51 18.7**	**-0.3**
MSVF	**Nonsavu**	**9.91**	**92**	LR	LR	13 55 35.4	
	comp=Z,355nm,20.9s,baz=192,slow=34						
HNR	**Honiara**	**11.08**	**316**	LR	LR	13 56 23.8	
	comp=Z,5.6nm,20.6s,baz=270,slow=34						
AFI	**Afiamalu**	**20.14**	**82**	LR	LR	14 00 25.0	
	comp=Z,68nm,21.1s,baz=258,slow=31						
CTA	**Charters Tower**	**20.40**	**260**	P	Pn	13 54 46.3	+0.4
	4.4nm,0.8s,baz=68,slow=10,SNR=6.0						
CTA				LR	LR	14 01 30.0	
	comp=Z,171nm,19.4s,baz=220,slow=33						
	4.4nm,0.8s						
CTAO	**Charters Tower**	**20.40**	**260**	Pn	Pn	13 54 47.2	+1.3
STKA	**Stephens Creek**	**27.49**	**234**	P	**P**	**13 55 53.5**	**+0.4**
	1.7nm,0.5s,baz=58,slow=8.8,SNR=4.2						
	1.7nm,0.5s						
RAR	**Rarotonga**	**30.89**	**102**	LR	LR	14 06 04.0	
	comp=Z,34nm,21.2s,baz=166,slow=31						
MGBR	**Mount Gambier**	**31.04**	**224**	P	**P**	**13 56 22.9**	**-1.7**
MGBR				IAmb	IAmb	13 56 35.3	
	comp=Z,114nm,1.5s						
WR8	**Warramunga Arr**	**31.44**	**260**	P	**P**	**13 56 27.5**	**-1.0**
WR8				IAmb	IAmb	13 56 59.7	
	comp=Z,10nm,1.4s						
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**13 56 34.9**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=76,slow=8.4,SNR=5.6						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**13 56 34.6**	**+0.5**
YOJ	**Yonaguni jima**	**60.39**	**313**	P	**P**	**14 00 16.8**	**+0.5**
SHEM	**Shemya Is, Ala**	**70.31**	**4**	LR	LR	14 25 56.1	
	comp=Z,28nm,21.2s,baz=337,slow=31						
QSPA	**South Pole Qui**	**72.39**	**180**	P	**P**	**14 01 33.1**	**+0.4**
	comp=Z,3.7nm,1.2s,baz=348,slow=1.1,SNR=7.8						
	comp=Z,3.7nm,1.2s						
QSPA	**South Pole Qui**	**72.39**	**180**	P	**P**	**14 01 32.9**	**+0.1**
QSPA				IAmb	IAmb	14 02 16.6	
	comp=Z,4.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**76.48**	**295**	LR	LR	14 37 51.6	
	comp=Z,68nm,18.4s,baz=195,slow=37						
BELA	**Belgrano 2**	**83.80**	**175**	P	**P**	**14 02 36.2**	**+0.5**
BELA				IAmb	IAmb	14 02 45.7	
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**85.06**	**324**	P	**P**	**14 02 45.0**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=118,slow=5.5,SNR=4.7						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**85.06**	**324**	P	**P**	**14 02 43.1**	**+0.5**
SONM				IAmb	IAmb	14 02 57.5	
	comp=Z,1.5nm,1.1s						
YBH	**Yreka Blue Hor**	**87.22**	**45**	LR	LR	14 37 24.5	
	comp=Z,26nm,18.1s,baz=288,slow=33						
PFO	**Pinyon Flats O**	**88.40**	**54**	LR	LR	14 35 30.3	
	comp=Z,17nm,18.8s,baz=258,slow=31						
ARCES	**ARCESS Array B**	**123.16**	**345**	PKP	**PKPdf**	**14 09 02.2**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=41,slow=2.4,SNR=3.9						
BMRD	**Maredsous**	**144.65**	**341**	*d*PKP	**PKiKP**	**14 09 46.5**	**-0.6**

JMA 12 14:08:09.8±0.2, 25°N±1°×123.4E±0.3, h8km, MV1.2/7, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.60**	**220**	*e*P	Pg	14 08 21.6	+0.2
IRIF	**Iriomote-Funau**	**0.66**	**150**	*e*P	Pg	14 08 22.5	-0.1
IRIF				S	Sg	14 08 31.8	+0.6
JKRS	**Kuro-shima**	**0.89**	**139**	*e*P	Pg	14 08 26.4	-0.5
JKRS				S	Sg	14 08 38.3	-0.2
JIJ	**Ishigaki jima**	**0.89**	**128**	*e*P	Pg	14 08 27.1	+0.1
JIJ				S	Sb	14 08 39.1	-0.5
JISG	**Ishigakijimahi**	**0.92**	**110**	*e*P	Pg	14 08 27.0	-0.4
JISG				S	Sg	14 08 38.9	-0.5

TAP 12 14:08:51.1, 24.02N×121.40E, h64km, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LXIB	**Xiulin Townshi**	**0.01**	**70**	P	Pn	14 09 01.4	+0.7
LXIB				S	Sn	14 09 08.3	+0.6
ETM	**Tongmen**	**0.10**	**123**	P	Pn	14 09 01.3	+0.7
ETM				S	Sn	14 09 06.7	-0.8
WHF	**Hehuan Shan**	**0.18**	**315**	P	Pn	14 09 02.3	+0.9
WHF				*e*S	Sn	14 09 09.9	+0.9
TWD	**Chiawan**	**0.19**	**71**	P	Pn	14 09 00.7	-0.2
TWD				*e*S	Sn	14 09 07.2	-0.9
ETLH	**Xiulin Townshi**	**0.20**	**21**	*e*P	Pn	14 09 01.7	+0.5
ETLH				*e*S	Sn	14 09 08.6	+0.2
ESL	**Shilin**	**0.20**	**173**	P	Pn	14 09 01.2	+0.1
ESL				*e*S	Sn	14 09 09.4	+1.1
OWD	**Renai**	**0.22**	**253**	P	Pn	14 09 02.0	+0.7
OWD				S	Sn	14 09 09.4	+0.8
TEYL	**Yanliau Villag**	**0.23**	**130**	P	Pn	14 09 01.8	+0.6
TEYL				S	Sn	14 09 09.9	+1.5
NACB	**Ninganchiao**	**0.23**	**48**	P	Pn	14 09 01.8	+0.6
NACB				S	Sn	14 09 08.0	-0.5
ETL	**Fush Village**	**0.24**	**55**	S	Sn	14 09 08.6	-0.1
WUSB	**Renai**	**0.26**	**264**	*i* P	Sn	14 09 02.3	+0.8
WUSB				S	Sn	14 09 10.2	+1.1
FUSS	**Fushou**	**0.27**	**327**	P	Pn	14 09 02.6	+0.9
FUSS				S	Sn	14 09 10.6	+1.2
SHUL	**Shoufeng**	**0.27**	**148**	P	Pn	14 09 01.5	+0.1
SHUL				S	Sn	14 09 09.3	+0.4
WARBT	**Fenglin Townsh**	**0.30**	**183**	P	Pn	14 09 01.0	-0.7
WARBT				S	Sn	14 09 08.2	-1.1
TWT	**Tachien**	**0.31**	**318**	S	Sn	14 09 11.4	+1.6
TDCB	**Techi**	**0.32**	**316**	P	Pn	14 09 02.2	+0.1
TDCB				*e*S	Sn	14 09 11.3	+1.3
NNSB	**Datong**	**0.41**	**357**	P	Pn	14 09 03.4	+0.7
NNSB				S	Sn	14 09 12.1	+1.0
NNS	**Nan Shan**	**0.42**	**356**	S	Sn	14 09 12.7	+1.4
WCS	**Beigang Elemen**	**0.45**	**275**	P	Pn	14 09 03.5	+0.6
WCS				*e*S	Sn	14 09 12.8	+1.3
SSLB	**Suanglung**	**0.47**	**241**	*i* P	Pn	14 09 03.8	+0.6
SSLB				S	Sn	14 09 13.3	+1.4
SMLT	**Sun Moon Lake**	**0.48**	**254**	P	Pn	14 09 04.2	+0.8
SMLT				S	Sn	14 09 14.1	+1.9
WHP	**Taichung City**	**0.49**	**302**	P	Pn	14 09 04.1	+0.7
WHP				S	Sn	14 09 13.9	+1.5
LATG	**Datong**	**0.53**	**12**	*e*P	Pn	14 09 05.4	+1.5
LATG				*e*S	Sn	14 09 15.9	+2.8
EWUT	**Wuta**	**0.55**	**39**	*e*P	Pn	14 09 03.8	-0.1
EWUT				*e*S	Sn	14 09 12.5	-0.5
WHYT	**Xinyi Township**	**0.60**	**238**	P	Pn	14 09 05.4	+0.9
WHYT				S	Sn	14 09 16.2	+2.0
ENTT	**Nioudou**	**0.64**	**13**	P	Pn	14 09 05.5	+0.6
ENTT				S	Sn	14 09 15.6	+0.6
YHNB	**Yeheng**	**0.65**	**358**	*e*P	Pn	14 09 06.3	+1.1
YHNB				*e*S	Sn	14 09 16.3	+1.0
NFF	**Wufeng Townshi**	**0.67**	**337**	*e*P	Pn	14 09 06.3	+1.0
NFF				S	Sn	14 09 16.1	+0.4
WNT	**Mingjian**	**0.67**	**258**	S	Sn	14 09 18.3	+2.6
LIOB	**Emei**	**0.72**	**331**	P	Pn	14 09 06.3	+0.5
LIOB				S	Sn	14 09 17.5	+0.8
ALS	**Alishan**	**0.75**	**227**	P	Pn	14 09 07.4	+0.9
ALS				S	Sn	14 09 19.7	+2.0
FUSB	**Fushanzhiwuyua**	**0.76**	**13**	P	Pn	14 09 07.0	+0.6
FUSB				*e*S	Sn	14 09 17.6	0.0
CHN5	**Tsauling**	**0.79**	**238**	S	Sn	14 09 20.2	+2.0

IDC 12 14:23:57.1±2.8, 33.29S×178.54W, h0km, mb3.6/2, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=67.4km s-min=36.3km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.08**	**214**	Pn	Pn	14 25 28.8	+0.5
	2.0nm,0.3s,baz=258,slow=3.6,SNR=26						
URZ				Sn	Sn	14 26 37.3	-1.3
	1.2nm,0.3s,baz=166,slow=6.4,SNR=8.2						
	4.0nm,0.3s						
ASAR	**Alice Springs**	**42.58**	**270**	P	P	14 31 55.1	+0.1
	0.5nm,0.6s,baz=113,slow=7.5,SNR=14						
ASAR				PcP	PcP	14 33 46.4	-1.2
	0.5nm,1.0s,baz=106,slow=3.4,SNR=2.5						
	2.5nm,0.6s						
WRA	**Warramunga Arr**	**43.83**	**275**	P	P	14 32 05.1	0.0
	0.6nm,0.6s,baz=115,slow=8.1,SNR=9.3						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**147.67**	**338**	PKPbc	PKPbc	14 43 42.4	-0.4
	1.4nm,0.9s,baz=46,slow=3.5,SNR=3.9						

*IDC **12** 14:28:39.5±2.5, 33.36S×178.58W, h0km, mb4.2/2, mbtmp4.2/3, ML3.9/1, Error ellipse: s-maj=63.8km s-min=35.2km az=121.0*
*NEIC **12** 14:28:41.6±0.5, 33.5S±0.1×178.49W±0.06, h10km±2km, mb4.5/12, Error ellipse: s-maj=21.2km s-min=8.2km az=188.0*
ISC 12 14:28:43.7±1.8, 33.5S±0.1×178.3W±0.2, h41km, n19, σ0s73/21, mb4.4/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.26**	**4**	Pn	**Pn**	**14 29 44.6**	**-1.5**
URZ	**Urewera**	**6.03**	**217**	Pn	**Pn**	**14 30 10.0**	**-0.4**
	3.2nm,0.3s,baz=268,slow=1.6,SNR=31						
URZ				Sn	**Sn**	**14 31 17.7**	**-0.4**
	2.5nm,0.3s,baz=325,slow=11,SNR=9.9						
	7.2nm,0.3s						
RTZ	**Ruatahuna**	**6.38**	**216**		**Pn**	**14 30 13.9**	**-1.2**
TOZ	**Tahuroa Road**	**6.58**	**229**	Pn	**Pn**	**14 30 17.3**	**-0.6**
MARNC	**Mare, Loyalty**	**17.05**	**311**	P	**Pn**	**14 32 39.3**	**+0.2**
EIDS	**Eidsvold**	**27.82**	**279**	P	**P**	**14 34 29.5**	**+0.4**
EIDS				IAmb	IAmb	14 34 48.9	
	comp=Z,5.7nm,1.1s						
TAU	**Tasmania Unive**	**28.45**	**241**	P	**P**	**14 34 35.3**	**+0.7**
CTAO	**Charters Tower**	**34.20**	**284**	P	**P**	**14 35 25.6**	**+0.2**
CTAO				IAmb	IAmb	14 35 48.5	
	comp=Z,11nm,1.4s						
PMG	**Port Moresby**	**39.83**	**299**	P	**P**	**14 36 13.2**	**0.0**
PMG				IAmb	IAmb	14 36 32.1	
	comp=Z,32nm,1.2s						
AS31	**Alice Springs**	**42.81**	**270**	P	**P**	**14 36 37.3**	**-0.4**
ASAR	**Alice Springs**	**42.81**	**270**	P	**P**	**14 36 37.2**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=111,slow=7.3,SNR=48						
ASAR				PcP	**PcP**	**14 38 29.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=108,slow=3.6,SNR=5.2						
	comp=Z,2.1nm,0.7s						
WR8	**Warramunga Arr**	**43.94**	**276**	P	**P**	**14 36 46.5**	**-0.3**
WR8				IAmb	IAmb	14 37 04.0	
	comp=Z,6.3nm,1.1s						
WRAB	**Tennant Creek**	**44.07**	**276**	P	**P**	**14 36 47.2**	**-0.7**
WRAB				IAmb	IAmb	14 37 05.8	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.08**	**276**	P	**P**	**14 36 47.3**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=115,slow=7.8,SNR=32						
	comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**44.08**	**276**	P	**P**	**14 36 47.5**	**-0.4**
WB0	**Warramunga Arr**	**44.11**	**276**	P	**P**	**14 36 47.8**	**-0.4**
WB0				IAmb	IAmb	14 37 01.8	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**52.19**	**272**	P	**P**	**14 37 50.6**	**0.0**
JSU	**Suzuyama**	**80.76**	**318**	P	**P**	**14 40 54.0**	**+1.2**
FINES	**FINESS Array B**	**147.97**	**338**	PKPbc	**PKPbc**	**14 48 24.6**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=43,slow=3.4,SNR=7.6						

*IDC **12** 14:29:45.9±0.7, 6.76N×72.92W, h161km±9km, mb3.1/2, mbtmp3.7/4, Error ellipse: s-maj=35.2km s-min=7.7km az=131.0*
*CATAC **12** 14:29:45.6±0.9, 7°N±3°×7°3W±°, h159km±6km, M3.9/7, MLv3.9/7, Error ellipse: s-maj=12.7km s-min=6.0km az=86.4, confirmed*
*RSNC **12** 14:29:47.4±0.0, 7°N±1°×7°3W±°, h151km±2km, M3.4, mB4.6, mb3.3, ML3.0, Mw(mB)3.8*
*FUNV **12** 14:29:49.8, 7.15N×73.25W, h16km, MW3.6, Presumed earthquake*
ISC 12 14:29:46.0±0.9, 6.92N±0.03×73.10W±0.04, h156km±6km, n47, σ1s46/83, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.34**	**194**	P	**Pn**	**14 30 07.7**	**0.0**
BARC				P		14 30 07.8	
BARC				S	**Sn**	**14 30 23.1**	**-1.2**
PAMC	**Pamplona, Colo**	**0.58**	**44**	P	**Pn**	**14 30 10.2**	**+1.1**
PAMC				S	**Sn**	**14 30 27.3**	**+0.7**
BRJC	**Barrancabermej**	**0.64**	**275**	P	**Pn**	**14 30 09.3**	**+0.5**
BRJC				S	**Sn**	**14 30 26.5**	**+0.4**
RUSC	**La Rusia**	**1.02**	**179**	P	**Pn**	**14 30 11.8**	**-0.3**
RUSC				S	**Sn**	**14 30 31.1**	**-1.0**
RUSC	**La Rusia**	**1.02**	**179**	*e*P	**Pn**	**14 30 11.9**	**-0.3**
RUSC				*e*S	**Sn**	**14 30 30.0**	**-2.1**
OCAC	**Ocana**	**1.33**	**351**	P	**Pn**	**14 30 15.4**	**+0.9**
OCAC				S	**Sn**	**14 30 37.1**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.40**	**254**	P	**Pn**	**14 30 14.3**	**-0.7**
PTBC				S	**Sn**	**14 30 35.6**	**-1.6**
SPBC	**San Pablo de B**	**1.59**	**217**	P	**Pn**	**14 30 16.8**	**-0.3**
SPBC				S	**Sn**	**14 30 41.0**	**+0.1**
NORC	**Norcasia**	**2.21**	**233**	P	**Pn**	**14 30 23.8**	**-0.3**
NORC				S	**Sn**	**14 30 53.5**	**+0.1**
CHIC	**Chingaza**	**2.36**	**195**	P	**Pn**	**14 30 26.4**	**+0.2**
CHIC				S	**Sn**	**14 30 56.0**	**-1.2**
ROSC	**El Rosal**	**2.40**	**210**	P	**Pn**	**14 30 27.9**	**+1.2**
	75nm,0.3s,baz=255,slow=21,SNR=48						
ROSC				S	**Sn**	**14 30 57.5**	**-0.3**
	67nm,0.4s,baz=109,slow=18,SNR=9.2						
ROSC	**El Rosal**	**2.40**	**210**	P	**Pn**	**14 30 28.0**	**+1.4**
ROSC				S	**Sn**	**14 30 57.9**	**0.0**
HELC	**Santa Helena**	**2.52**	**253**	P	**Pn**	**14 30 29.7**	**+1.7**
HELC				S	**Sn**	**14 31 00.6**	**+0.2**
HELC	**Santa Helena**	**2.52**	**253**	P	**Pn**	**14 30 27.9**	**-0.1**
HELC				S	**Sn**	**14 31 01.0**	**+0.6**
HELC	**Santa Helena**	**2.52**	**253**	*e*P	**Pn**	**14 30 29.4**	**+1.3**
HELC				*e*S	**Sn**	**14 30 57.1**	**-3.3**
UREC	**San Jos de Ur**	**2.55**	**289**	P	**Pn**	**14 30 27.4**	**-0.6**
UREC				S	**Sn**	**14 31 01.1**	**+0.6**
CVER	**Cruz Verde, Cu**	**2.57**	**202**	P	**Pn**	**14 30 29.6**	**+0.8**
CVER				S	**Sn**	**14 31 01.2**	**-0.6**
GUY2C	**Guyana, Caldas**	**2.81**	**233**	P	**Pn**	**14 30 32.4**	**+0.6**
GUY2C				S	**Sn**	**14 31 07.9**	**+0.9**
VILC	**Villavicencio,**	**2.85**	**192**	P	**Pn**	**14 30 32.0**	**+0.1**
VILC				S	**Sn**	**14 31 07.0**	**-0.5**
PTGC	**Puerto Gaitan,**	**2.87**	**160**	P	**Pn**	**14 30 31.4**	**-0.7**
PTGC				S	**Sn**	**14 31 05.1**	**-2.6**
CMAN1	**Manizales, Cal**	**3.03**	**233**	P	**Pn**	**14 30 32.8**	**-1.5**
CMAN1				S	**Sn**	**14 31 08.6**	**-3.0**
CBOC	**Ciudad Bolivar**	**3.08**	**250**	P	**Pn**	**14 30 35.7**	**+0.9**
CBOC				S	**Sn**	**14 31 13.0**	**+0.5**
DBBC	**Dabeiba**	**3.09**	**272**	P	**Pn**	**14 30 35.3**	**+0.5**
DBBC				S	**Sn**	**14 31 11.4**	**-1.2**
SDV	**Santo Domingo**	**3.13**	**51**	P	**Pn**	**14 30 36.7**	**+1.2**
	18nm,0.3s,baz=223,slow=6.8,SNR=18						
SDV				S	**Sn**	**14 31 13.0**	**-0.8**
	63nm,0.4s,baz=272,slow=21,SNR=31						
SDV	**Santo Domingo**	**3.13**	**51**	*e*P	**Pn**	**14 30 36.7**	**+1.2**
SDV				*e*S	**Sn**	**14 31 13.0**	**-0.8**
APAC	**Apartado, Choc**	**3.58**	**286**	P	**Pn**	**14 30 41.5**	**+0.4**
APAC				S	**Sn**	**14 31 24.6**	**+0.8**
SJCC	**San Jacinto, C**	**3.60**	**325**	P	**Pn**	**14 30 39.4**	**-2.0**
SJCC				S	**Sn**	**14 31 21.0**	**-3.4**
SJCC	**San Jacinto, C**	**3.60**	**325**	P	**Pn**	**14 30 41.5**	**+0.1**
SJCC				S	**Sn**	**14 31 22.5**	**-1.9**
SJCC	**San Jacinto, C**	**3.60**	**325**	*e*P	**Pn**	**14 30 40.8**	**-0.5**
SJCC				*e*S	**Sn**	**14 31 17.9**	**-6.5**
PRAC	**Prado**	**3.65**	**209**	P	**Pn**	**14 30 42.0**	**0.0**
PRAC				S	**Sn**	**14 31 22.3**	**-3.2**
PRAC	**Prado**	**3.65**	**209**	P	**Pn**	**14 30 41.4**	**-0.6**
PRAC				S	**Sn**	**14 31 24.4**	**-1.0**
ORTC	**Ortega, Tolima**	**3.67**	**216**	P	**Pn**	**14 30 42.6**	**+0.3**
ORTC				S	**Sn**	**14 31 26.3**	**+0.2**
PLMC	**San Jos del P**	**3.74**	**238**	P	**Pn**	**14 30 43.6**	**+0.4**
PLMC				S	**Sn**	**14 31 27.2**	**-0.5**
LCBC	**Los crdobas,**	**3.76**	**301**	P	**Pn**	**14 30 43.5**	**+0.1**
LCBC				S	**Sn**	**14 31 27.1**	**-0.9**
URMC	**La Uribe, Meta**	**3.86**	**199**	P	**Pn**	**14 30 45.2**	**+0.4**
URMC				S	**Sn**	**14 31 30.5**	**0.0**
SMRC	**Santa Marta, M**	**4.36**	**345**	P	**Pn**	**14 30 52.7**	**+1.5**
SMRC				S	**Sn**	**14 31 40.0**	**-2.0**
GUVC	**San Jose del G**	**4.37**	**174**	P	**Pn**	**14 30 51.8**	**+0.4**
GUVC				S	**Sn**	**14 31 41.8**	**-0.5**
PIZC	**Pizarro, Choco**	**4.66**	**246**	P	**Pn**	**14 30 57.7**	**+2.6**
URI	**Uribia**	**4.87**	**13**	P	Pn	14 31 08.3	+10
URIC	**Uribia, Colomb**	**4.88**	**13**	P	**Pn**	**14 30 58.2**	**+0.3**
GARC	**Garzon, Huila**	**5.27**	**207**	P	**Pn**	**14 31 02.6**	**-0.8**
GARC				S	**Sn**	**14 32 01.6**	**-2.3**
POPC	**Popayan, Colom**	**5.62**	**219**	P	**Pn**	**14 31 10.3**	**+2.2**
VCES	**Cotopaxi**	**9.31**	**215**	P	Pn	14 32 09.7	+12
TXAR	**Lajitas Array**	**36.41**	**312**	P	**P**	**14 36 37.3**	**+1.5**
	0.2nm,0.4s,baz=124,slow=8.9,SNR=5.6						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**63.18**	**340**	P	**P**	**14 39 57.7**	**+0.6**
	0.7nm,0.5s,baz=133,slow=6.8,SNR=11						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKPbc**	**14 49 15.8**	**-1.2**
	0.4nm,0.4s,baz=118,slow=3.6,SNR=16						
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc	**PKPbc**	**14 49 19.1**	**-0.9**
	0.4nm,

SIRC					S	Sg	14 53 18.1	+0.1
SIRC					IAML		14 53 23.0	
	comp=N,358nm,0.4s							
SIRC					IAML		14 53 25.0	
	comp=E,540nm,0.4s							
YOZG	**Bozok Univ. Me**	**1.45**	**41**	P		**Pb**	**14 53 00.2**	**-0.1**
YOZG				S		**Sg**	**14 53 20.0**	**+0.2**
YOZG				IAML			14 53 25.0	
	comp=N,723nm,0.6s							
POLA	**Polati-ANKAR**	**1.48**	**313**	Pn		**Pb**	**14 53 00.6**	**-0.2**
CMRD	**Camardi-Nigde**	**1.52**	**132**	Pn		**Pn**	**14 53 00.9**	**+0.3**
KRMN	**Karaman**	**1.53**	**189**	Pn		**Pb**	**14 53 01.5**	**-0.2**
YAHY	**KAYSERI_Yahyal**	**1.54**	**112**	P		**Pb**	**14 53 01.4**	**-0.3**
YAHY				S		**Sg**	**14 53 22.6**	**+0.1**
YAHY				IAML			14 53 27.0	
	comp=E,190nm,0.9s							
YAHY				IAML			14 53 28.0	
	comp=N,199nm,0.5s							
KKBE	**Karaman, Kazim**	**1.55**	**199**	P		**Pb**	**14 53 02.0**	**0.0**
KKBE				S		**Sg**	**14 53 22.9**	**0.0**
KKBE				IAML			14 53 27.0	
	comp=N,69nm,1.5s							
KKBE				IAML			14 53 31.0	
	comp=E,84nm,0.8s							
DOGA	**KONYA_Doganhis**	**1.60**	**249**	P		**Pb**	**14 53 03.0**	**+0.1**
DOGA				S		**Sn**	**14 53 22.6**	**+0.2**
DOGA				IAML			14 53 37.0	
	comp=E,184nm,0.6s							
GUNE	**Kayseri**	**1.63**	**82**	P		**Pb**	**14 53 03.5**	**+0.2**
GUNE				S		**Sg**	**14 53 24.7**	**-0.7**
GUNE				IAML			14 53 30.0	
	comp=E,916nm,0.4s							
GUNE				IAML			14 53 31.0	
	comp=N,604nm,0.4s							
YOZ	**Yozgat**	**1.66**	**55**	Pn		**Pb**	**14 53 03.5**	**-0.5**
AUSIV	**SIVRIHISAR**	**1.74**	**296**	P		**Pb**	**14 53 05.1**	**-0.2**
AUSIV				S		**Sb**	**14 53 28.2**	**+0.9**
AUSIV				IAML			14 53 34.0	
	comp=E,100nm,0.5s							
AUSIV				IAML			14 53 35.0	
	comp=N,139nm,0.6s							
SVRH	**Sivrihisar-ESK**	**1.76**	**296**	Pn		**Pn**	**14 53 04.8**	**+1.0**
BNN	**Bunyan**	**1.79**	**84**	Pn		**Pn**	**14 53 04.9**	**+0.6**
ELDT	**Eldivan**	**1.80**	**357**	P		**Pb**	**14 53 05.7**	**-0.6**
ELDT				S		**Sg**	**14 53 30.1**	**-0.9**
ELDT				IAML			14 53 34.0	
	comp=N,422nm,0.7s							
ELDT				IAML			14 53 39.0	
	comp=E,594nm,0.5s							
SEYD	**Seydisehir-KON**	**1.87**	**227**	Pn		**Pn**	**14 53 06.5**	**+1.2**
YVAC	**Isparta, Yalva**	**1.87**	**258**	P		**Pb**	**14 53 07.1**	**-0.3**
YVAC				S		**Sg**	**14 53 32.9**	**-0.4**
YVAC				IAML			14 53 44.0	
	comp=E,111nm,0.8s							
YVAC				IAML			14 53 45.0	
	comp=N,107nm,1.1s							
COAL	**Corum-Alaca**	**1.91**	**35**	P		**Pb**	**14 53 08.4**	**+0.2**
COAL				S		**Sg**	**14 53 34.7**	**+0.1**
COAL				IAML			14 53 39.0	
	comp=N,301nm,0.5s							
COAL				IAML			14 53 40.0	
	comp=E,373nm,0.4s							
CANT	**Cankiri**	**1.91**	**1**	Pn		**Pb**	**14 53 07.3**	**-0.9**
HDMB	**Hadim**	**1.92**	**207**	Pn		**Pn**	**14 53 06.9**	**+0.8**
HACI	**Hacifakili, Ak**	**1.96**	**58**	P		**Pb**	**14 53 08.3**	**-0.8**
HACI				S		**Sg**	**14 53 35.0**	**-1.3**
HACI				IAML			14 53 41.0	
	comp=E,290nm,0.9s							
HACI				IAML			14 53 44.0	
	comp=N,235nm,0.7s							
CMDR	**Camlidere-ANKA**	**1.99**	**335**	P		**Pg**	**14 53 10.5**	**-0.8**
CMDR				S		**Sb**	**14 53 34.2**	**-0.1**
CMDR				IAML			14 53 44.0	
	comp=N,167nm,0.5s							
CMDR				IAML			14 53 50.0	
	comp=E,154nm,0.5s							
YENC	**ankr-Yen**	**2.00**	**6**	P		**Pb**	**14 53 08.8**	**-0.9**
YENC				S		**Sg**	**14 53 38.6**	**+1.2**
YENC				IAML			14 53 41.0	
	comp=E,652nm,0.3s							
YENC				IAML			14 53 42.0	
	comp=N,505nm,0.5s							
BYAT	**Afyon-Bayat**	**2.03**	**278**	P		**Pb**	**14 53 10.1**	**-0.1**
BYAT				S		**Sg**	**14 53 38.0**	**-0.4**
BYAT				IAML			14 53 44.0	
	comp=E,149nm,0.6s							
BYAT				IAML			14 53 49.0	
	comp=N,131nm,0.5s							
CKRK	**Yozgat, Cekere**	**2.04**	**47**	P		**Pb**	**14 53 10.2**	**-0.2**
CKRK				S		**Sb**	**14 53 36.5**	**+0.7**
CKRK				IAML			14 53 42.0	
	comp=E,348nm,0.5s							
CKRK				IAML			14 53 43.0	
	comp=N,310nm,0.3s							
KURO	**Afyon-Bolvadin**	**2.06**	**272**	P		**Pn**	**14 53 08.8**	**+0.9**
KURO				S		**Sb**	**14 53 36.3**	**-0.1**
KURO				IAML			14 53 48.0	
	comp=E,67nm,0.8s							
KURO				IAML			14 53 55.0	
	comp=N,38nm,0.6s							
CIFT	**Cifteler, Eski**	**2.06**	**290**	Pn		**Pn**	**14 53 08.8**	**+0.9**
SDAG	**Sultandagi-AFY**	**2.09**	**264**	Pn		**Pn**	**14 53 09.6**	**+1.3**
SAIM	**ADANA**	**2.11**	**109**	P		**Pb**	**14 53 11.8**	**+0.3**
SAIM				S		**Sg**	**14 53 40.4**	**-0.4**
SAIM				IAML			14 53 45.0	
	comp=N,188nm,0.4s							
SAIM				IAML			14 53 45.0	
	comp=E,182nm,0.4s							
YALI	**Yalozu-CANKI**	**2.12**	**348**	Pn		**Pn**	**14 53 10.3**	**+1.5**
AYAZ	**Ayas K¶y, M**	**2.22**	**26**	P		**Pg**	**14 53 14.6**	**-1.2**
AYAZ				S		**Sg**	**14 53 43.6**	**-1.0**
YUVA	**Yuva-Kibriscik**	**2.23**	**320**	Pn		**Pn**	**14 53 11.5**	**+1.2**
BAGO	**Egridir - ISPA**	**2.29**	**253**	P		**Pb**	**14 53 13.1**	**-1.5**
BAGO				S		**Sg**	**14 53 49.6**	**+2.9**
BAGO				IAML			14 54 04.0	
	comp=N,48nm,1.4s							
BAGO				IAML			14 54 12.0	
	comp=E,46nm,1.4s							
ILGA	**Ilgaz**	**2.36**	**3**	P		**Pn**	**14 53 13.4**	**+1.2**
ILGA				S		**Sb**	**14 53 44.8**	**-0.4**
ILGA				IAML			14 53 51.0	
	comp=E,164nm,0.5s							
ILGA				IAML			14 54 01.0	
	comp=N,146nm,0.6s							
RUZG	**Kolk¶y-BOLU**	**2.45**	**327**	Pn		**Pn**	**14 53 14.7**	**+1.4**
ANDN	**Andirin**	**2.46**	**116**	P		**Pb**	**14 53 16.8**	**-0.7**
ANDN				S		**Sb**	**14 53 49.1**	**+1.2**
ANDN				IAML			14 53 58.0	
	comp=N,98nm,1.0s							
ANDN				IAML			14 54 02.0	
	comp=E,99nm,0.8s							
KAGI	**orum-Kargı**	**2.54**	**16**	P		**Pb**	**14 53 18.0**	**-0.9**
KAGI				S		**Sb**	**14 53 51.4**	**+1.1**
KAGI				IAML			14 53 59.0	
	comp=E,88nm,0.4s							
KAGI				IAML			14 53 59.0	
	comp=N,97nm,0.4s							
KBUK	**KARABUK-Merkez**	**2.64**	**345**	P		**Pg**	**14 53 22.2**	**-1.5**
KBUK				S		**Sg**	**14 53 56.9**	**-1.2**
TOKA	**Tokat**	**2.78**	**53**	P		**Pb**	**14 53 21.6**	**-1.4**
TOKA				S		**Sb**	**14 53 59.6**	**+2.5**
TOKA				IAML			14 54 05.0	
	comp=E,221nm,0.6s							
TOKA				IAML			14 54 12.0	
	comp=N,102nm,0.4s							

CATAC ***12*** *15:08:47.0±0.6,9°N±3″×7°0W±°, h1km, M5.7/8, mb5.8/8, mB5.8/8, MLv6.0/7, Mw(mB)5.4/8, MwMwp4.6/1, Mwp5.0/1, Error ellipse: s-maj=11.6km s-min=6.5km az=107.7, confirmed*

MOS ***12*** *15:08:46.9±1.0,9°43N×69°90W, h10km, mb5.2/18, Error ellipse: s-maj=8.6km s-min=6.9km az=62.1*

IDC ***12*** *15:08:46.1±0.4,9°40N×69°77W, h0km, mb4.6/30, mbtmp4.6/32, ML4.3/2, MS4.4/44, Error ellipse: s-maj=11.1km s-min=8.1km az=149.0*

VAO ***12*** *15:08:47.7±0.3,9°40N×69°88W, h9km±1km, mb5.1, Presumed earthquake*

GFZ ***12*** *15:08:49.9,9°58N×69°78W, h18km, Mw5.0/60, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.48; Mθθ2.20; Mφφ-3.67; Mrθ1.72; Mrφ-0.56; Mθφ-0.53; Fault plane solution: M₀3.71578×10¹⁶ NP1:*

φs147.45828°, δ67.07451°, λ32.78473°. NP2:φs43.37403°, δ60.08508°, λ153.29416°. Principal axes: T 3.6754, Plg38.9090°, Azm7.6436°: N 0.0795, Plg50.7421°, Azm178.6235°; P -3.7549, Plg4.4277°, Azm274.0602°;

NEIC ***12*** *15:08:49.7,9.47N×69.88W, h10km*

NEIC ***12*** *15:08:49.3±1.4,9.41N±0.06×69.86W±0.06, h10km±1km, mb5.3/652, Mww5.1/14, Error ellipse: s-maj=12.5km s-min=8.6km az=137.0*

FUNV ***12*** *15:08:49.9,9.32N×69.87W, h6km, MW5.0, Presumed earthquake*

GFZ ***12*** *15:08:50.6±0.2,9°N±2°×7°0W±°, h10km, M5.2/24, mb5.3/24*

NEIC ***12*** *15:08:50.3,9.47N×69.78W, h20km, Moment Tensor Solution. Duration: 1ᵗ7 Moment tensor: Scale 10¹⁶Nm; Mrr1.94; Mθθ2.47; Mφφ-4.41; Mrθ2.18; Mθφ-1.43; Mφr-1.64; Fault plane solution: M₀4.91000×10¹⁶ NP1:φs48.74000°, δ53.24000°, λ155.77000°. NP2:φs153.82000°, δ70.81000°, λ39.33000°. Principal axes: T 4.9044, Plg41.0000°, Azm17.0000°; N 0.0199, Plg47.0000°, Azm176.0000°; P -4.9243, Plg11.0000°, Azm278.0000°;*

PTWC ***12*** *15:08:51,9.50N×69.80W, h94km, Mwp5.0/16*

GCMT ***12*** *15:08:51.3±0.2,9.41N±0.01×69.86W±0.01, h20km, MW5.1/118, Moment Tensor Solution. s58,c76; s118,c188; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.14±.14; Mθθ3.67±.10; Mφφ-5.81±.14; Mrθ2.35±.24; Mθφ-2.15±.10; Mφr-0.21±.22; Best double couple: M₀5.98500×10¹⁶ NP1:φs152.00000°, δ65.00000°, λ24.00000°. NP2:φs52.00000°, δ69.00000°, λ153.00000°. Principal axes: T 5.6850, Plg33.0000°, Azm11.0000°; N 0.6010, Plg56.0000°, Azm196.0000°; P -6.2850, Plg2.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***12*** *15:08:58.8,9.91N×68.56W, h33km, mb5.2, Ms4.4*

ISC 12 15:08:47.7±0.2, 9°43N±0.03×69°81W±0.03, h7km, n1117, σ 1ᵍ38/860, mb5.3/423, MS4.4/46, 28C-28D, Venezuelan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**0.97**	**236**	Pg		**Pg**	**Pg**	**15 09 05.7**	**-0.6**
	2µm,0.3s,baz=96,slow=7.7,SNR=3140								
SDV				Lg		Lg	Lg	15 09 17.3	
	3µm,0.3s,baz=300,slow=16,SNR=19								
SDV				LR		LR	LR	15 09 44.8	
	comp=Z,42µm,18.1s,baz=40,slow=59								
SDV	**Santo Domingo**	**0.97**	**236**	*eP*		**Pg**	**Pg**	**15 09 05.9**	**-0.5**
SDV				*eS*		**Sg**	**Sg**	**15 09 17.3**	**-1.8**
SDV	**Santo Domingo**	**0.97**	**236**	*eP*		**Pg**	**Pg**	**15 09 05.3**	**-1.1**
SDV				*eS*		**Sg**	**Sg**	**15 09 17.4**	**-1.7**
URI	**Uribia**	**3.11**	**317**	P		**Pn**	**Pn**	**15 09 37.8**	**+0.6**
URI				S		**Sn**	**Sn**	**15 10 15.0**	**+0.4**
URIC	**Uribia, Colomb**	**3.11**	**317**	P		**Pn**	**Pn**	**15 09 38.1**	**+0.9**
URIC	**Uribia, Colomb**	**3.11**	**317**	P		**Pn**	**Pn**	**15 09 38.6**	**+1.4**
URIC				S		**Sn**	**Sn**	**15 10 14.0**	**-0.7**
URIC	**Uribia, Colomb**	**3.11**	**317**	*eP*		**Pn**	**Pn**	**15 09 38.4**	**+1.2**
URIC				*eS*		**Sn**	**Sn**	**15 10 15.6**	**+0.9**
FUNV	**FUNVISIS**	**3.13**	**70**	*eP*		**Pn**	**Pn**	**15 09 39.9**	**+2.3**
FUNV				*eS*		**Sn**	**Sn**	**15 10 17.3**	**+1.9**
PAMC	**Pamplona, Colo**	**3.53**	**234**	P		**Pn**	**Pn**	**15 09 44.3**	**+0.9**
OCAC	**Ocana**	**3.66**	**251**	P		**Pn**	**Pn**	**15 09 45.9**	**+1.0**
BARC	**Barichara**	**4.37**	**230**	P		**Pn**	**Pn**	**15 09 56.7**	**+2.0**
BRJC	**Barrancabermej**	**4.59**	**238**	P		**Pn**	**Pn**	**15 09 59.6**	**+2.0**
SMRC	**Santa Marta, M**	**4.67**	**292**	P		**Pn**	**Pn**	**15 09 58.2**	**-0.5**
SMRC	**Santa Marta, M**	**4.67**	**292**	P		**Pn**	**Pn**	**15 09 57.5**	**-1.2**
SMRC				S		**Sn**	**Sn**	**15 10 50.0**	**-3.2**
RUSC	**La Rusia**	**4.78**	**223**	P		**Pn**	**Pn**	**15 10 03.1**	**+2.5**
RUSC				S		**Sn**	**Sn**	**15 10 58.9**	**+2.3**
RUSC	**La Rusia**	**4.78**	**223**	P		**Pn**	**Pn**	**15 10 01.2**	**+0.6**
RUSC	**La Rusia**	**4.78**	**223**	P		**Pn**	**Pn**	**15 10 01.6**	**+1.0**
RUSC	**La Rusia**	**4.78**	**223**	*eP*		**Pn**	**Pn**	**15 10 01.3**	**+0.7**
RUSC				*eS*		**Sn**	**Sn**	**15 10 50.8**	**-5.7**
SJCC	**San Jacinto, C**	**5.31**	**275**	P		**Pn**	**Pn**	**15 10 08.2**	**+0.7**
SJCC				S		**Sn**	**Sn**	**15 11 12.6**	**+3.5**
SJCC	**San Jacinto, C**	**5.31**	**275**	P		**Pn**	**Pn**	**15 10 09.4**	**+1.9**
SJCC	**San Jacinto, C**	**5.31**	**275**	P		**Pn**	**Pn**	**15 10 08.1**	**+0.6**
	22µm2µm,1.4s								
SJCC				S		**Sn**	**Sn**	**15 11 07.5**	**-1.6**
	22µm2µm,1.4s								
SJCC	**San Jacinto, C**	**5.31**	**275**	*eP*		**Pn**	**Pn**	**15 10 08.5**	**+0.9**
SJCC				*eS*		**Sn**	**Sn**	**15 11 05.1**	**-4.0**
PTBC	**PUERTO BERRIO,**	**5.42**	**238**	P		**Pn**	**Pn**	**15 10 08.9**	**-0.1**
	7µm691nm,0.7s								
PTBC				S		**Sn**	**Sn**	**15 11 12.3**	**+0.6**
	7µm691nm,0.7s								
SPBC	**San Pablo de B**	**5.65**	**229**	P		**Pn**	**Pn**	**15 10 13.4**	**+1.2**
	10µm767nm,0.7s								
PTGC	**Puerto Gaitan,**	**5.68**	**204**	P		**Pn**	**Pn**	**15 10 12.3**	**-0.3**
URCC	**San Jos de Ur**	**5.90**	**254**	P		**Pn**	**Pn**	**15 10 16.9**	**+1.4**
	8µm10µm806nm,0.6s								
UREC				S		**Sn**	**Sn**	**15 11 24.2**	**+0.8**
	8µm10µm806nm,0.6s								
CHIC	**Chingaza**	**6.15**	**219**	P		**Pn**	**Pn**	**15 10 20.1**	**+0.7**
	3µm9µm572nm,0.8s								
NORC	**Norcasia**	**6.31**	**233**	P		**Pn**	**Pn**	**15 10 22.3**	**+1.0**
	5µm408nm,0.7s								
NORC				S		**Sn**	**Sn**	**15 11 33.3**	**-0.5**
	5µm408nm,0.7s								
ROSC	**El Rosal**	**6.38**	**225**	Pn		**Pn**	**Pn**	**15 10 25.5**	**+2.9**
	28nm,0.3s,baz=74,slow=9.8,SNR=33								
ROSC				LR		LR	LR	15 12 27.6	
	comp=Z,1µm,21.1s,baz=17,slow=35								
ROSC	**El Rosal**	**6.38**	**225**	P		**Pn**	**Pn**	**15 10 23.5**	**+0.9**
ROSC	**El Rosal**	**6.38**	**225**			**Pn**	**Pn**	**15 10 23.5**	**+0.9**
ROSC	**El Rosal**	**6.38**	**225**	P		**Pn**	**Pn**	**15 10 25.8**	**+3.2**
ROSC	**El Rosal**	**6.38**	**225**	P		**Pn**	**Pn**	**15 10 30.9**	**+8.3**
CVER	**Cruz Verde, Cu**	**6.45**	**221**	P		**Pn**	**Pn**	**15 10 26.3**	**+2.7**
	12µm695nm,0.7s								
LCBC	**Los crdobas,**	**6.50**	**266**	P		**Pn**	**Pn**	**15 10 24.6**	**+0.8**
LCBC	**Los crdobas,**	**6.50**	**266**	P		**Pn**	**Pn**	**15 10 24.3**	**+0.5**
	12µm839nm,0.6s								
HELC	**Santa Helena**	**6.51**	**241**	P		**Pn**	**Pn**	**15 10 24.6**	**+0.2**
HELC				S		**Sn**	**Sn**	**15 11 38.8**	**-0.3**
HELC	**Santa Helena**	**6.51**	**241**	P		**Pn**	**Pn**	**15 10 25.8**	**+1.5**
HELC	**Santa Helena**	**6.51**	**241**	P		**Pn**	**Pn**	**15 10 26.2**	**+1.9**
	5µm564nm,0.8s								
HELC	**Santa Helena**	**6.51**	**241**	*eP*		**Pn**	**Pn**	**15 10 23.9**	**-0.4**
HELC				*eS*		**Sn**	**Sn**	**15 11 31.0**	**-8.1**
VILC	**Villavicencio,**	**6.54**	**216**	P		**Pn**	**Pn**	**15 10 26.8**	**+2.3**
DBBC	**Dabeiba**	**6.77**	**250**	P		**Pn**	**Pn**	**15 10 29.1**	**+1.5**
	691nm,2.3s								
APAC	**Apartado, Choc**	**6.86**	**258**	P		**Pn**	**Pn**	**15 10 30.3**	**+1.5**
	9µm9µm824nm,0.7s								
GUYZC	**Guyana, Caldas**	**6.91**	**233**	P		**Pn**	**Pn**	**15 10 31.1**	**+1.2**
	3µm8µm839nm,0.8s								
CBOC	**Ciudad Bolivar**	**7.09**	**240**	P		**Pn**	**Pn**	**15 10 33.3**	**+1.2**
	6µm739nm,1.0s								
CBOC				S		**Sn**	**Sn**	**15 11 51.1**	**-2.0**
	6µm739nm,1.0s								
GUVC	**San Jose del G**	**7.39**	**202**	P		**Pn**	**Pn**	**15 10 34.6**	**-1.5**
PRAC	**Prado**	**7.59**	**222**	P		**Pn**	**Pn**	**15 10 38.6**	**-0.3**
PRAC	**Prado**	**7.59**	**222**	P		**Pn**	**Pn**	**15 10 39.1**	**+0.2**
PRAC	**Prado**	**7.59**	**222**	P		**Pn**	**Pn**	**15 10 38.9**	**0.0**
	5µm493nm,0.7s								
PRAC				S		**Sn**	**Sn**	**15 12 06.6**	**+1.4**
	5µm493nm,0.7s								
URMC	**La Uribe, Meta**	**7.63**	**217**	P		**Pn**	**Pn**	**15 10 40.7**	**+1.2**
	11µm399nm,0.7s								
URMC				S		**Sn**	**Sn**	**15 12 06.6**	**+0.2**
	11µm399nm,0.7s								
ORTC	**Ortega, Tolima**	**7.69**	**225**	P		**Pn**	**Pn**	**15 10 40.2**	**-0.1**
	3µm5µm396nm,0.9s								
PLMC	**San Jos del P**	**7.83**	**235**	P		**Pn**	**Pn**	**15 10 42.7**	**+0.5**
	4µm399nm,0.8s								
PLMC				S		**Sn**	**Sn**	**15 12 11.3**	**0.0**
	4µm399nm,0.8s								
PTAC	**Punta Ardita,**	**8.23**	**255**	P		**Pn**	**Pn**	**15 10 46.5**	**-1.1**
	6µm544nm,0.9s								
DMDM	**Guralp CMGSTDE**	**8.23**	**80**	*eP*		**Pn**	**Pn**	**15 10 46.5**	**-1.1**
PSKH	**Kent House, Po**	**8.26**	**81**	*eP*		**Pn**	**Pn**	**15 10 53.2**	**+5.2**
GRFF	**Grenada Fort F**	**8.35**	**71**	*eP*		**Pn**	**Pn**	**15 10 58.5**	**+9.2**
TRN	**Trinidad (W)**	**8.37**	**81**	*eP*		**Pn**	**Pn**	**15 10 49.9**	**+0.4**
TRN				*eS*		**Sn**	**Sn**	**15 12 18.1**	**-6.3**
TRN	**Trinidad (W)**	**8.37**	**81**	*eP*		**Pn**	**Pn**	**15 10 49.2**	**-0.4**
TRN				x		x	x	15 13 39.3	
GRGR	**Grenville**	**8.46**	**71**	P		**Pn**	**Pn**	**15 10 53.3**	**+2.6**
GRGR				S		**Sn**	**Sn**	**15 12 22.7**	**-3.8**
GRGR	**Grenville**	**8.46**	**71**	*eP*		**Pn**	**Pn**	**15 10 51.1**	**+0.4**
GRGR				*eS*		**Sn**	**Sn**	**15 12 22.0**	**-4.5**
GRGR	**Grenville**	**8.46**	**71**	*eP*		**Pn**	**Pn**	**15 10 46.5**	**-4.2**
GRGR				x		x	x	15 12 56.7	
GRGR	**Grenville**	**8.46**	**71**	P		**Pn**	**Pn**	**15 10 55.8**	**+5.1**
PIZC	**Pizarro, Choco**	**8.70**	**240**	P		**Pn**	**Pn**	**15 10 56.3**	**+2.2**
PIZC				S		**Sn**	**Sn**	**15 12 33.2**	**+0.7**
GCMP	**Grenada, Carri**	**8.78**	**69**	*eP*		**Pn**	**Pn**	**15 10 55.2**	**+0.1**
GCMP				*eS*		**Sn**	**Sn**	**15 12 29.0**	**-5.4**
GCMP	**Grenada, Carri**	**8.78**	**69**	*eP*		**Pn**	**Pn**	**15 10 54.5**	**-0.6**
GCMP				x		x	x	15 13 06.0	
MLPR	**Magueyes Islan**	**8.91**	**17**			**Pn**	**Pn**	**15 10 56.4**	**-0.5**
CRPR	**Cabo Rojo, PR**	**8.92**	**17**			**Pn**	**Pn**	**15 10 56.5**	**-0.5**
BANI	**BANI**	**8.93**	**357**			**Pn**	**Pn**	**15 10 57.6**	**+0.4**
SDD	**Santo Domingo**	**8.98**	**359**			**Pn**	**Pn**	**15 10 58.4**	**+0.6**
OBIP	**Obispado Ponce**	**9.11**	**20**			**Pn**	**Pn**	**15 10 59.1**	**-0.5**
PRSN	**Puerto Rico Se**	**9.11**	**16**			**Pn**	**Pn**	**15 10 59.4**	**-0.3**
PCDR	**Punta Cana, DR**	**9.14**	**9**			**Pn**	**Pn**	**15 11 00.7**	**+0.6**
GARC	**Garzon, Huila**	**9.15**	**218**	P		**Pn**	**Pn**	**15 11 00.4**	**0.0**
CELP	**Cerrillos**	**9.15**	**20**			**Pn**	**Pn**	**15 11 00.5**	**+0.2**
JAMC	**Jamundi, Valle**	**9.20**	**228**	P		**Pn**	**Pn**	**15 11 01.5**	**+0.4**
UUPR	**Utuado, UPR, P**	**9.27**	**19**			**Pn**	**Pn**	**15 11 02.4**	**+0.5**
DR12	**Loma Pena Alta**	**9.31**	**3**			**Pn**	**Pn**	**15 11 02.9**	**+0.4**
SJG	**San Juan**	**9.34**	**22**	Pn		**Pn**	**Pn**	**15 11 01.8**	**-1.0**
	342nm,0.3s,baz=198,slow=14,SNR=569								
SJG						Sn	Sn	15 12 37.8	-10
	35nm,0.3s,baz=15,slow=18,SNR=2.3								
SJG						LR	LR	15 15 06.7	
	comp=Z,3µm,19.8s,baz=220,slow=41								
SJG	**San Juan**	**9.34**	**22**	Pn		**Pn**	**Pn**	**15 11 02.2**	**-0.5**
SJG						Sn	Sn	15 12 37.8	-10
SJG	**San Juan**	**9.34**	**22**	P		**Pn**	**Pn**	**15 11 01.7**	**-1.0**
SJG	**San Juan**	**9.34**	**22**	*eP*		Pn	Pn	15 10 55.8	-6.9
SJG	**San Juan**	**9.34**	**22**	P		**Pn**	**Pn**	**15 11 02.0**	**-0.8**
AOPR	**Arecibo Observ**	**9.35**	**18**			**Pn**	**Pn**	**15 11 02.6**	**-0.3**
AGPR	**Aguadilla, PR**	**9.36**	**16**			**Pn**	**Pn**	**15 11 02.6**	**-0.5**
ECPR	**Experimental S**	**9.45**	**20**			**Pn**	**Pn**	**15 11 04.0**	**-0.4**
SDDR	**Presa de Saban**	**9.60**	**352**			**Pn**	**Pn**	**15 11 07.1**	**+0.6**
SDDR	**Presa de Saban**	**9.60**	**352**	*eP*		**Pn**	**Pn**	**15 11 10.4**	**+3.9**
SDDR	**Presa de Saban**	**9.60**	**352**	*eP*		**Pn**	**Pn**	**15 11 09.2**	**+2.7**
SDDR				*eS*		Sn	Sn	15 12 45.4	-9.4
SDDR	**Presa de Saban**	**9.60**	**352**	P		**Pn**	**Pn**	**15 11 09.8**	**+3.3**
POPC	**Popayan, Colom**	**9.66**	**225**	P		**Pn**	**Pn**	**15 11 07.9**	**+0.4**
SLBI	**Saint Lucia, B**	**9.79**	**61**	*eP*		**Pn**	**Pn**	**15 11 09.1**	**+0.2**
SLBI				x		x	x	15 12 50.1	
BCIP	**Isla Barro Col**	**9.90**	**269**	P		**Pn**	**Pn**	**15 11 09.7**	**-0.8**
BCIP	**Isla Barro Col**	**9.90**	**269**			**Pn**	**Pn**	**15 11 09.7**	**-0.8**
BCIP	**Isla Barro Col**	**9.90**	**269**	P		**Pn**	**Pn**	**15 11 10.2**	**-0.3**
BCIP	**Isla Barro Col**	**9.90**	**269**	P		**Pn**	**Pn**	**15 11 10.2**	**+0.3**
BCIP	**Isla Barro Col**	**9.90**	**269**	*eP*		**Pn**	**Pn**	**15 11 10.0**	**-0.4**
BCIP	**Isla Barro Col**	**9.90**	**269**	P		**Pn**	**Pn**	**15 11 10.6**	**+0.1**
SGC2	**Sao Gabriel da**	**9.93**	**163**	*eP*		**Pn**	**Pn**	**15 11 08.9**	**-2.0**
SGC2				*eS*		**Sn**	**Sn**	**15 13 03.9**	**+1.2**
BIM	**Bigot**	**9.94**	**59**			**Pn**	**Pn**	**15 11 10.1**	**-0.9**
BIM	**Bigot**	**9.94**	**59**	P		**Pn**	**Pn**	**15 11 10.8**	**-0.2**
BIM	**Bigot**	**9.94**	**59**	*eP*		**Pn**	**Pn**	**15 11 11.1**	**+0.1**
BIM	**Bigot**	**9.94**	**59**	*eP*		Pn	Pn	15 10 59.8	-11
BIM	**Bigot**	**9.94**	**59**	P		**Pn**	**Pn**	**15 11 10.8**	**-0.2**
ZANG	**Zanguenga, Cho**	**9.94**	**268**	*eP*		**Pn**	**Pn**	**15 11 09.3**	**-1.7**
FDFM	**Morne la Roset**	**9.97**	**57**			**Pn**	**Pn**	**15 11 10.8**	**-0.7**
FDFM	**Morne la Roset**	**9.97**	**57**	P		**Pn**	**Pn**	**15 11 10.8**	**-0.7**
CXM	**Morne La Croix**	**10.00**	**57**			**Pn**	**Pn**	**15 11 10.8**	**-1.2**
MPOM	**Morne

comp=Z,161nm,0.8s
TEIG Tepich 20.80 303 P Pn 15 13 31.2 -1.0
PETF Flores 20.88 293 P **P** **15 13 25.6 -5.1**
APG El Apazote 20.92 287 P Pn 15 13 32.9 -1.0
comp=Z,6.7nm,1.0s,baz=125,slow=9.9,SNR=14
APG LR LR 15 22 34.4
comp=Z,121nm,20.6s,baz=78,slow=40
comp=Z,6.7nm,1.0s
DWPF Disney Wildern 21.57 331 P **P** **15 13 38.5 +0.6**
DWPF Disney Wildern 21.57 331 P **P** **15 13 38.9 +1.0**
NPGB Novo Progresso 21.80 138 *eP* **P** **15 13 40.7 +0.1**
NPGB *eS* **S** **15 17 43.3 +1.2**
NNA Nana 22.39 198 LR LR 15 24 50.8
comp=Z,2µm,19.0s,baz=336,slow=43
NNA Nana 22.39 198 P **P** **15 13 51.3 +4.3**
656A Willston 23.14 331 P **P** **15 13 57.8 +3.1**
656A IAmb IAmb 15 14 04.5
comp=Z,178nm,1.2s
BBSR BB Station 23.32 11 P **P** **15 13 57.2 +0.8**
BBSR IAmb IAmb 15 14 13.5
comp=Z,128nm,1.4s
BBSR BB Station 23.32 11 P **P** **15 13 58.0 +1.6**
456A Hilliard 24.05 333 IAmb IAmb 15 14 13.3
comp=Z,76nm,0.7s
VILB Vilhena 24.20 157 *eP* **P** **15 14 04.8 -0.3**
VILB *eS* **S** **15 18 24.8 +0.9**
CLDB Colider 24.52 145 *eP* **P** **15 14 07.9 -0.2**
CLDB *eS* **S** **15 18 30.3 +1.2**
CLDB Colider 24.52 145 P **P** **15 14 11.3 +3.2**
PRPB Parauapebas 25.25 127 *eP* **P** **15 14 14.7 +0.1**
RGRS Roger Stewart 25.26 339 IAmb IAmb 15 14 24.1
comp=Z,302nm,1.1s
CMIG Matias Romero 25.54 290 P **P** **15 14 18.4 +1.1**
comp=Z,5.5nm,0.6s,baz=99,slow=12,SNR=3.7
CMIG LR LR 15 26 13.0
comp=Z,2µm,18.4s,baz=90,slow=41
comp=Z,5.5nm,0.6s
LPAZ La Paz 25.61 176 P **P** **15 14 18.7 +0.2**
comp=Z,3.5nm,0.9s,baz=359,slow=10,SNR=34
LPAZ LR LR 15 25 00.6
comp=Z,3µm,20.2s,baz=338,slow=38
comp=Z,3.5nm,0.9s
LPAZ La Paz 25.61 176 P **P** **15 14 18.8 +0.2**
LPAZ pmax pmax
comp=Z,47nm,0.9s
LPAZ La Paz 25.61 176 P **P** **15 14 18.8 +0.2**
LPAZ IAmb IAmb 15 14 50.7
comp=Z,47nm,0.9s
LPAZ La Paz 25.61 176 *eP* **P** **15 14 17.4 -1.2**
LPAZ *eS* **S** **15 18 45.9 -1.6**
LPAZ La Paz 25.61 176 P **P** **15 14 22.5 +4.0**
Y58A Scranton 25.99 341 P **P** **15 14 22.0 +0.8**
Y57A Sumter 26.33 340 IAmb IAmb 15 14 34.5
comp=Z,53nm,0.6s
X58A Rowland 26.49 342 IAmb IAmb 15 14 30.4
comp=Z,84nm,1.4s
SIV San Ignacio 26.70 161 LR LR 15 25 32.6
comp=Z,4µm,19.3s,baz=333,slow=38
PB18 Visviri 26.85 179 P **P** **15 14 33.5 +3.9**
JSC Jenkinsville 26.88 339 IAmb IAmb 15 14 53.4
comp=Z,62nm,1.2s
PTLB Pontes e Lacer 26.89 157 P **P** **15 14 31.2 +1.8**
PTLB Pontes e Lacer 26.89 157 *eP* **P** **15 14 29.2 -0.2**
PTLB *eS* **S** **15 19 07.5 +1.0**
152A Waverly Hall 26.92 331 IAmb IAmb 15 14 39.5
comp=Z,66nm,0.9s
GOGA Godfrey 26.98 334 P **P** **15 14 32.1 +2.0**
PB16 IPOC Station P 27.59 179 P **P** **15 14 34.9 -1.5**
PB16 IPOC Station P 27.59 179 P **P** **15 14 39.8 +3.4**
KMSC Kings Mountain 27.68 339 IAmb IAmb 15 14 45.5
comp=Z,40nm,1.1s
BBSD Serra de San D 27.97 161 *eP* **P** **15 14 38.7 -0.4**
BBSD *eS* **S** **15 19 24.4 +0.7**
BG3 Lake Jocassee 28.13 337 IAmb IAmb 15 14 49.2
comp=Z,28nm,0.8s
T59A Double "B" Far 28.30 347 P **P** **15 14 42.4 +0.4**
T59A IAmb IAmb 15 14 49.7
comp=Z,33nm,0.9s
U56A King 28.47 342 IAmb IAmb 15 14 53.0
comp=Z,62nm,1.2s
W52A Murphy 28.62 335 IAmb IAmb 15 14 55.2
comp=Z,30nm,0.8s
SMTB Santa Maria do 28.63 129 *eP* **P** **15 14 45.1 -0.1**
SMTB *eS* **S** **15 19 35.7 +1.4**
V53A Saluda 28.68 338 IAmb IAmb 15 15 22.5
comp=Z,41nm,1.1s
SALV Santo Antonio 28.79 151 *eP* **P** **15 14 46.4 0.0**
SALV *eS* **S** **15 19 37.5 +0.9**
PSGCX Pisagua 28.84 181 IAmb IAmb 15 14 54.0
comp=Z,68nm,1.4s
PSGCX Pisagua 28.84 181 P **P** **15 14 49.7 +2.7**
GO01 Chusmiza 28.92 179 IAmb IAmb 15 15 00.9
comp=Z,38nm,0.8s
GO01 Chusmiza 28.92 179 P **P** **15 14 49.2 +1.0**
PB11 IPOC Station P 29.01 180 P **P** **15 14 48.1 -0.4**
U54A Nelsons Funny 29.09 340 IAmb IAmb 15 14 58.6
comp=Z,26nm,0.8s
BLA Blacksburg 29.28 343 IAmb IAmb 15 15 02.1
comp=Z,33nm,1.0s
W50A Signal Mountai 29.30 333 IAmb IAmb 15 14 59.5
comp=Z,31nm,0.8s
R58B Mineral 29.33 347 IAmb IAmb 15 15 36.5
comp=Z,52nm,1.4s
PB08 IPOC Station P 29.39 179 P **P** **15 14 54.6 +2.4**
CBN Corbin Frederi 29.45 348 IAmb IAmb 15 15 07.6
comp=Z,24nm,0.7s
TZTN Tazewell 29.73 337 IAmb IAmb 15 15 27.6
comp=Z,69nm,1.4s
S54A Dingess, Beckl 30.09 342 IAmb IAmb 15 15 07.5
comp=Z,35nm,1.0s
R55A Marlinton 30.19 344 IAmb IAmb 15 15 54.4
comp=Z,26nm,0.9s
CLTN Cedars of Leba 30.50 333 P **P** **15 15 01.6 +0.2**
CLTN IAmb IAmb 15 15 11.5
comp=Z,27nm,0.9s
PB02 IPOC Station P 30.56 180 IAmb IAmb 15 15 22.3
comp=Z,28nm,0.9s
PB02 IPOC Station P 30.56 180 P P 15 15 07.0 +4.8
PP1B Ponte de Pedra 30.64 151 *eP* **P** **15 15 02.8 -0.1**
Q56A Snyder Ridge, 30.66 346 IAmb IAmb 15 15 05.8
comp=Z,69nm,1.4s
ARAG Araguaiana, MT 30.68 144 *eP* **P** **15 15 03.2 -0.1**
ARAG *eS* **S** **15 20 07.4 +1.0**
P57A Homestead Farm 30.81 348 IAmb IAmb 15 15 07.1
comp=Z,57nm,1.4s
PB07 IPOC Station P 30.96 180 IAmb IAmb 15 15 15.4
comp=Z,52nm,1.4s
PB07 IPOC Station P 30.96 180 P **P** **15 15 09.5 +3.6**
MVL Millersville 31.00 350 IAmb IAmb 15 15 14.1
comp=Z,25nm,0.7s
PB09 IPOC Station P 31.04 179 IAmb IAmb 15 15 11.4
comp=Z,84nm,1.5s
Q54A Coxs Mills 31.04 343 IAmb IAmb 15 15 09.2
comp=Z,63nm,1.4s
PAGS Pennsylvania G 31.28 350 IAmb IAmb 15 16 19.0
comp=Z,61nm,1.2s
MCWV Mont Chateau 31.41 345 IAmb IAmb 15 15 12.6
comp=Z,80nm,1.5s
Q52A Bidwell 31.45 341 IAmb IAmb 15 15 19.0
comp=Z,62nm,1.1s
COIM Forte Coimbra 31.47 158 *eP* **P** **15 15 09.9 -0.2**
COIM *eS* **S** **15 20 19.3 +0.8**
R50A Paris 31.56 338 IAmb IAmb 15 15 20.9
comp=Z,48nm,1.0s
P53A Whipple 31.67 343 IAmb IAmb 15 15 21.5
comp=Z,44nm,1.2s
HKT Hockley 31.75 314 *i* P **P** **15 15 12.3 -0.2**
HKT pmax pmax
comp=Z,21nm,1.0s
N58A Sunbury 31.88 350 IAmb IAmb 15 15 16.1
comp=Z,67nm,1.4s
R49A Shelbyville 31.89 337 P **P** **15 15 13.9 +0.3**
R49A IAmb IAmb 15 15 23.1
comp=Z,42nm,1.4s
P52A Corning 32.03 342 IAmb IAmb 15 15 24.5
comp=Z,26nm,1.0s
O53A New Philadelph 32.33 344 IAmb IAmb 15 15 36.3
comp=Z,43nm,1.1s
O52A Adamsville 32.38 343 IAmb IAmb 15 15 36.4
comp=Z,47nm,1.0s
KSPA Keystone Colle 32.43 352 IAmb IAmb 15 15 27.9
comp=Z,21nm,0.7s
M57A Sunshine Farm, 32.43 350 IAmb IAmb 15 15 21.3
comp=Z,74nm,1.4s
X40A Basin Creek Fa 32.67 323 IAmb IAmb 15 15 28.9
comp=Z,26nm,1.0s

N53A Lisbon 32.74 344 IAmb IAmb 15 15 30.9
comp=Z,38nm,1.1s
SDBA SAO DESIDERIO 32.91 131 *eP* **P** **15 15 22.9 -0.1**
SDBA *eS* **S** **15 20 42.6 +1.1**
BDFB Brasilia 32.97 139 P **P** **15 15 22.6 -0.8**
comp=Z,5.4nm,1.0s,baz=322,slow=6.6,SNR=9.9
comp=Z,5.4nm,1.0s
BDFB Brasilia 32.97 139 P **P** **15 15 24.6 +1.1**
BDFB pmax pmax
comp=Z,31nm,1.1s
BDFB Brasilia 32.97 139 P **P** **15 15 24.6 +1.1**
BDFB IAmb IAmb 15 15 32.5
comp=Z,31nm,1.1s
P48A Milroy 33.00 338 IAmb IAmb 15 15 32.3
comp=Z,31nm,1.0s
MURT Porto Murtinho 33.14 159 *eP* **P** **15 15 24.3 -0.4**
MURT *eS* **S** **15 20 45.3 +0.7**
MIAR Mount Ida 33.15 323 IAmb IAmb 15 15 33.8
comp=Z,51nm,0.8s
S44A Carbondale 33.16 331 IAmb IAmb 15 15 33.8
comp=Z,84nm,0.9s
BLO Bloomington 33.18 336 IAmb IAmb 15 15 34.5
comp=Z,41nm,0.8s
FCAR Ozark Folk Cen 33.26 326 IAmb IAmb 15 15 34.3
comp=Z,43nm,0.9s
L56A Greenwood 33.28 349 P **P** **15 15 26.6 +0.7**
L56A IAmb IAmb 15 15 35.5
comp=Z,34nm,0.8s
ALLY Alegheny Colle 33.36 346 IAmb IAmb 15 15 36.2
comp=Z,32nm,0.8s
435B Jarrell 33.47 313 P **P** **15 15 28.0 +0.3**
833A Chaparral WMA, 33.56 308 IAmb IAmb 15 15 36.3
comp=Z,30nm,0.8s
O48B Farmland 33.60 339 IAmb IAmb 15 15 36.5
comp=Z,47nm,1.2s
K57A Scipio Center 33.69 351 IAmb IAmb 15 15 31.6
comp=Z,73nm,1.3s
N49A Columbus Grove 33.85 340 IAmb IAmb 15 15 42.0
comp=Z,51nm,1.1s
J61A Chester 33.87 356 IAmb IAmb 15 15 33.7
comp=Z,85nm,1.7s
MMNY Mt. Morris Dam 33.92 349 IAmb IAmb 15 15 40.3
comp=Z,36nm,1.0s
Q44A Meyer Farm, Va 34.02 333 IAmb IAmb 15 15 42.3
comp=Z,57nm,0.9s
J57A Williamstown 34.28 352 IAmb IAmb 15 15 42.4
comp=Z,34nm,0.7s
N47A Urbana 34.34 338 IAmb IAmb 15 15 53.2
comp=Z,56nm,1.0s
CCM Cathedral Cave 34.42 329 P **P** **15 15 36.7 +0.9**
CCM pmax pmax
comp=Z,67nm,0.8s
CCM Cathedral Cave 34.42 329 P **P** **15 15 36.7 +0.9**
HHAR Hobbs 34.56 324 IAmb IAmb 15 15 45.4
comp=Z,28nm,0.8s
IPMB Ipameri, GO 34.60 142 *eP* **P** **15 15 37.6 0.0**
IPMB *eS* **S** **15 21 07.7 +0.3**
NCB Newcomb 34.62 354 IAmb IAmb 15 15 40.2
comp=Z,81nm,1.4s
BRDY Brady 34.76 313 P **P** **15 15 39.4 +0.5**
BRDY IAmb IAmb 15 15 46.6
comp=Z,23nm,0.7s
P43A Skaggs, Pawnee 34.85 333 IAmb IAmb 15 15 48.2
comp=Z,54nm,0.9s
AAM Ann Arbor 34.93 342 IAmb IAmb 15 15 58.0
comp=Z,35nm,0.9s
K50A Casco 35.06 343 IAmb IAmb 15 15 50.6
comp=Z,59nm,0.9s
JANB Januaria 35.08 134 *eP* **P** **15 15 41.5 -0.4**
JANB *eS* **S** **15 21 16.1 +1.1**
RLO Rose Lookout 35.12 323 P **P** **15 15 42.0 +0.1**
R40A Maddies Statio 35.12 329 IAmb IAmb 15 15 50.2
comp=Z,47nm,0.8s
S39A Bolivar 35.23 327 IAmb IAmb 15 15 51.3
comp=Z,50nm,0.9s
LONY Lake Ozonia 35.30 354 IAmb IAmb 15 15 45.7
comp=Z,53nm,1.6s
DELO Deloro Mine 35.61 350 IAmb IAmb 15 15 47.8
comp=Z,73nm,1.6s
GGN Saint George 35.65 4 P **P** **15 15 47.2 +0.9**
GGN IAmb IAmb 15 15 58.5
comp=Z,40nm,1.0s
G62A West of Eustis 35.66 359 IAmb IAmb 15 15 50.0
comp=Z,55nm,1.2s
NBPN Ponto Novo - B 35.69 124 *eP* **P** **15 15 47.2 +0.1**
NBPN *eS* **S** **15 21 25.3 +1.0**
G65A Princeton 35.69 3 P **P** **15 15 48.0 +1.3**
PKME Peaks-Kenny Pk 35.71 1 IAmb IAmb 15 15 49.3
comp=Z,37nm,1.2s
WBO Williamsburg 35.75 353 IAmb IAmb 15 15 49.4
comp=Z,51nm,1.4s
X34A Smith Ranch, M 35.85 319 P **P** **15 15 48.6 +0.4**
P40A Paris 35.95 330 IAmb IAmb 15 15 57.1
comp=Z,45nm,0.8s
MNTQ Montreal, Queb 36.09 355 IAmb IAmb 15 15 52.3
comp=Z,48nm,1.3s
PMNB Patos De Minas 36.11 140 *eP* **P** **15 15 49.6 -1.1**
SADO Sadowa 36.12 349 LR LR 15 29 43.2
comp=Z,786nm,21.7s,baz=176,slow=35
SADO Sadowa 36.12 349 IAmb IAmb 15 15 59.8
comp=Z,99nm,1.3s
TRCB Terra Rica 36.18 152 *eP* **P** **15 15 50.9 -0.3**
T35A Sooner Cattle 36.51 323 IAmb IAmb 15 16 01.5
comp=Z,44nm,0.9s
WMOK Wichita Mounta 36.56 318 IAmb IAmb 15 16 01.9
comp=Z,47nm,0.8s
SGCY Sterling City 36.63 312 IAmb IAmb 15 16 03.1
comp=Z,41nm,0.8s
APMT Aspermont 36.66 315 IAmb IAmb 15 16 03.8
comp=Z,49nm,0.7s
SJPY San Joaquin 36.73 159 *eP* **P** **15 15 54.8 -1.1**
SJPY *eS* **S** **15 21 40.6 +0.6**
P38A Dawn 36.77 329 IAmb IAmb 15 16 02.8
comp=Z,24nm,0.7s
BB19B Bebedouro 36.82 146 *eP* **P** **15 15 56.3 -0.4**
K43A Burlington 36.91 337 IAmb IAmb 15 16 04.8
comp=Z,100nm,1.2s
RCBR Riachuelo 37.04 113 LR LR 15 31 11.4
comp=Z,427nm,18.8s,baz=305,slow=36
SN07 Snyder 07 37.08 314 IAmb IAmb 15 16 07.1
comp=Z,56nm,0.7s
229A Bryant Ranch, 37.16 312 IAmb IAmb 15 16 08.2
comp=Z,35nm,0.8s
TMB01 Midkiff 37.21 311 IAmb IAmb 15 16 08.4
comp=Z,47nm,1.0s
TXAR Lajitas Array 37.36 307 P **P** **15 16 01.8 +0.5**
comp=Z,4.0nm,0.9s,baz=119,slow=7.6,SNR=16
comp=Z,4.0nm,0.9s
TXAR Lajitas Array 37.36 307 P **P** **15 16 02.0 +0.7**
TXAR Lajitas Array 37.36 307 P **P** **15 16 02.0 +0.7**
LDASE Loma, Braz 37.40 151 *eP* **P** **15 16 01.1 -0.4**
DKNS Dickens 37.41 315 IAmb IAmb 15 16 10.3
comp=Z,62nm,0.8s
CANS Sao Roque de M 37.46 142 *eP* **P** **15 16 02.0 -0.2**
129A Stewart Farms, 37.53 313 IAmb IAmb 15 16 10.4
comp=Z,23nm,0.8s
CPUP Villa Florida 37.56 161 P **P** **15 16 02.0 -0.7**
comp=Z,7.4nm,1.3s,baz=336,slow=12,SNR=4.6
CPUP LR LR 15 32 45.6
comp=Z,858nm,21.5s,baz=341,slow=38
comp=Z,7.4nm,1.3s
MNHN Monahans 37.56 310 IAmb IAmb 15 16 11.2
comp=Z,32nm,0.6s
L40A Anamosa 37.57 334 IAmb IAmb 15 16 09.5
comp=Z,47nm,0.8s
DIAM Diamantina, MG 37.75 137 *eP* **P** **15 16 03.2 -1.5**
DIAM *eS* **S** **15 21 57.1 +1.3**
JFWS Jewell Farm 37.85 335 IAmb IAmb 15 16 14.1
comp=Z,55nm,0.8s
128A Castleberry Fa 37.98 312 IAmb IAmb 15 16 14.5
comp=Z,32nm,0.7s
AC05 El Transito 38.04 181 P **P** **15 16 07.7 +0.7**
AC05 IAmb IAmb 15 16 13.1
comp=Z,69nm,1.2s
KSU1 Kansas State U 38.05 325 IAmb IAmb 15 16 14.5
comp=Z,68nm,0.8s
TPB06 Permian Basin 38.05 310 IAmb IAmb 15 16 16.0
comp=Z,46nm,0.7s
PTGB Pitanga 38.10 153 *eP* **P** **15 16 06.8 -0.8**
LCO Las Campanas 38.22 181 P **P** **15 16 09.9 +1.2**
LCO pmax pmax
comp=Z,153nm,1.4s
LCO Las Campanas 38.22 181 P **P** **15 16 09.9 +1.2**
LDAQ Lac Daran 38.42 358 P **P** **15 16 11.1 +1.1**
LDAQ IAmb IAmb 15 16 12.3
comp=Z,72nm,1.8s

RCLB Rio Claro- Sao 38.46 146 *eP* **P** **15 16 10.2 -0.3**
AMTX Amarillo 38.60 316 IAmb IAmb 15 16 19.5
comp=Z,54nm,0.9s
N35A Tabor 38.77 328 IAmb IAmb 15 16 20.6
comp=Z,121nm,1.2s
I40A Norwalk 38.81 336 IAmb IAmb 15 16 21.6
comp=Z,73nm,1.2s
CMC01 Camacan, BA 38.83 129 *eP* **P** **15 16 13.8 +0.1**
E46A Sault Ste Mari 38.84 344 P **P** **15 16 14.2 +0.8**
E46A IAmb IAmb 15 16 22.5
comp=Z,44nm,0.9s
MSTX Muleshoe 38.87 314 IAmb IAmb 15 16 21.7
comp=Z,68nm,0.9s
TPB28 39.03 310 IAmb IAmb 15 16 23.9
comp=Z,12nm,0.9s
CO01 Juntas del Tor 39.18 180 IAmb IAmb 15 16 22.2
comp=Z,110nm,1.6s
VAO Valinhos 39.23 146 P **P** **15 16 16.7 -0.3**
VAO IAmb IAmb 15 16 23.9
comp=Z,34nm,0.8s
VAO Valinhos 39.23 146 *eP* **P** **15 16 16.7 -0.3**
GUA01 Guaratinga, BA 39.36 131 *eP* **P** **15 16 18.1 -0.1**
GO04 Tololo Observa 39.38 181 IAmb IAmb 15 16 23.9
comp=Z,79nm,1.3s
CBKS Cedar Bluff 39.68 322 IAmb IAmb 15 16 28.6
comp=Z,92nm,1.0s
SJMB Sao Joao De Ma 39.74 135 *eP* **P** **15 16 21.2 0.0**
SJMB *eS* **S** **15 22 26.5 +0.9**
G40A Rib Lake 39.80 337 IAmb IAmb 15 16 31.7
comp=Z,16nm,0.8s
L34A Svendsen Farm, 39.95 329 IAmb IAmb 15 16 30.2
comp=Z,50nm,0.9s
I37A Lemond, Waseca 40.09 333 P **P** **15 16 24.7 +0.9**
I37A IAmb IAmb 15 16 32.0
comp=Z,72nm,1.1s
PET01 Itanhaem-SP 40.09 147 *eP* **P** **15 16 23.7 -0.4**
PET01 *eS* **S** **15 22 31.5 +0.7**
RTBA Rita Blanca 40.17 317 IAmb IAmb 15 16 33.0
comp=Z,43nm,0.9s
ITAB Concordia 40.28 155 *eP* **P** **15 16 25.3 -0.3**
CO02 Combarbal 40.42 182 IAmb IAmb 15 16 31.7
comp=Z,100nm,1.4s
RIB01 Linhares ES 40.70 135 *eP* **P** **15 16 29.1 -0.1**
ZON Zonda 40.76 179 IAmb IAmb 15 16 34.3
comp=Z,133nm,1.7s
CFA Coronel Fontan 40.83 178 LR LR 15 37 26.0
comp=Z,298nm,18.3s,baz=315,slow=42
LPIG La Paz 41.26 296 LR LR 15 35 54.8
comp=Z,442nm,18.1s,baz=120,slow=39
DUB01 Friburgo-RJ 41.29 140 *eP* **P** **15 16 34.2 +0.1**
DUB01 *eS* **S** **15 22 49.8 +0.9**
ALF01 Guarapari-ES 41.35 136 *eP* **P** **15 16 34.5 0.0**
ALF01 *eS* **S** **15 22 50.1 +0.6**
E38A The Farm, Brul 41.43 337 IAmb IAmb 15 16 42.7
comp=Z,38nm,1.0s
121A Cookes Peak, D 41.91 309 P **P** **15 16 39.5 +0.2**
VA03 San Esteban 41.96 181 P **P** **15 16 40.8 +1.3**
VA03 IAmb IAmb 15 16 52.1
comp=Z,37nm,0.8s
ANMO Albuquerque 42.00 313 P **P** **15 16 40.6 +0.6**
comp=Z,2.0nm,0.5s,baz=113,slow=8.3,SNR=9.1
ANMO LR LR 15 38 46.1
comp=Z,248nm,18.3s,baz=114,slow=43
comp=Z,2.0nm,0.5s
ANMO Albuquerque 42.00 313 P **P** **15 16 40.3 +0.3**
TBO Thunder Bay 42.42 341 IAmb IAmb 15 16 51.1
comp=Z,35nm,1.1s
CPSB Cacapava Do Su 42.62 159 *eP* **P** **15 16 44.7 -0.1**
MT08 Bocatoma Ro 42.63 180 IAmb IAmb 15 16 51.9
comp=Z,77nm,1.4s
MT03 Universidad Ad 42.69 181 IAmb IAmb 15 16 51.2
comp=Z,79nm,1.1s
SDCO Great Sand Dun 42.74 317 IAmb IAmb 15 16 55.4
comp=Z,43nm,1.0s
DUN6 Lazy B Ranch 42.93 308 IAmb IAmb 15 17 09.0
comp=Z,72nm,1.1s
MT09 Talagante 42.98 181 IAmb IAmb 15 16 52.6
comp=Z,93nm,1.4s
BO04 La Punta 43.18 181 IAmb IAmb 15 16 54.8
comp=Z,60nm,1.2s
S22A 4UR Ranch, Cre 43.64 316 IAmb IAmb 15 17 03.2
comp=Z,80nm,1.2s
GO05 Hualane 44.24 182 IAmb IAmb 15 17 03.4
comp=Z,111nm,1.6s
X18A Snowflake 44.39 310 IAmb IAmb 15 17 22.0
comp=Z,31nm,1.0s
EPLO Experimental L 44.79 338 IAmb IAmb 15 17 09.7
comp=Z,46nm,0.8s
SCHQ Schefferville 45.35 2 P **P** **15 17 05.8 -0.6**
comp=Z,8.0nm,0.6s,baz=180,slow=6.0,SNR=10
SCHQ LR LR 15 35 03.3
comp=Z,729nm,21.1s,baz=234,slow=35
comp=Z,8.0nm,0.6s
SCHQ Schefferville 45.35 2 P **P** **15 17 05.8 -0.6**
PV05 Paradox Valley 45.36 315 IAmb IAmb 15 17 17.2
comp=Z,48nm,1.1s
PV21 Cone Mtn., Par 45.51 316 IAmb IAmb 15 17 17.8
comp=Z,56nm,1.2s
WUAZ Wupatki 45.86 311 IAmb IAmb 15 17 20.4
comp=Z,66nm,0.9s
ULM Lac du Bonnet 46.07 337 P **P** **15 17 10.8 -1.3**
comp=Z,10.0nm,0.7s,baz=146,slow=7.9,SNR=16
comp=Z,10.0nm,0.7s
ULM Lac du Bonnet 46.07 337 *i* P **P** **15 17 11.7 -0.5**
ULM Lac du Bonnet 46.07 337 IAmb IAmb 15 17 21.4
comp=Z,24nm,0.8s
K22A Casper 46.10 322 IAmb IAmb 15 17 21.4
comp=Z,48nm,1.2s
SRU San Rafael Swe 46.83 316 IAmb IAmb 15 17 34.0
comp=Z,23nm,0.8s
P18A Preston Nutter 46.89 317 P **P** **15 17 19.9 +0.7**
P18A IAmb IAmb 15 17 28.2
comp=Z,48nm,1.2s
RDMU Red Mountain 46.90 318 IAmb IAmb 15 17 27.6
comp=Z,21nm,1.1s
U15A North Rim 46.91 312 IAmb IAmb 15 17 28.6
comp=Z,25nm,1.0s
PKCU Pink Cliffs 47.35 313 IAmb IAmb 15 17 55.7
comp=Z,35nm,1.2s
TMUT Trail Mountain 47.39 316 IAmb IAmb 15 17 31.8
comp=Z,24nm,1.1s
MTPU Mount Pierson 47.51 314 IAmb IAmb 15 17 33.6
comp=Z,22nm,0.8s
VTX Valle De La Tr 47.87 304 IAmb IAmb 15 17 37.1
comp=Z,38nm,1.7s
TCRU Three Creeks R 47.95 314 IAmb IAmb 15 17 45.2
comp=Z,44nm,1.1s
SZCU Shurtz Canyon 47.97 313 IAmb IAmb 15 17 36.5
comp=Z,26nm,1.1s
MPU Maple Canyon 48.01 316 IAmb IAmb 15 17 37.1
comp=Z,44nm,1.2s
PD31 Pinedale Array 48.03 321 IAmb IAmb 15 17 36.0
comp=Z,49nm,1.2s
PDAR Pinedale Array 48.03 321 P **P** **15 17 27.8 -0.2**
comp=Z,2.8nm,0.6s,baz=124,slow=11,SNR=26
comp=Z,2.8nm,0.6s
PDAR Pinedale Array 48.03 321 P **P** **15 17 28.0 +0.1**
BW06 Boulder Array 48.03 321 IAmb IAmb 15 17 36.0
comp=Z,50nm,1.2s
IRM Iron Mountain 48.23 308 IAmb IAmb 15 17 38.4
comp=Z,22nm,1.2s
NLU North Lily Min 48.29 316 IAmb IAmb 15 17 39.4
comp=Z,41nm,1.1s
LAO LASA Array 48.34 327 IAmb IAmb 15 17 37.6
comp=Z,58nm,1.4s
HWUT Hardware Ranch 48.73 318 IAmb IAmb 15 18 15.2
comp=Z,20nm,1.0s
DUG Dugway, Tooele 48.90 316 IAmb IAmb 15 17 44.2
comp=Z,49nm,1.2s
PSUT Pine Spring 48.91 314 IAmb IAmb 15 17 47.7
comp=Z,26nm,0.9s
AHID Auburn Hatcher 49.00 320 IAmb IAmb 15 17 44.1
comp=Z,40nm,1.2s
PFO Pinyon Flats O 49.09 307 P **P** **15 17 37.0 +0.9**
comp=Z,1.5nm,0.8s,baz=109,slow=7.8,SNR=4.0
PFO LR LR 15 42 22.5
comp=Z,276nm,18.3s,baz=134,slow=41
comp=Z,1.5nm,0.8s
PFO Pinyon Flats O 49.09 307 P **P** **15 17 37.0 +0.9**
LOHW Long Hollow 49.12 321 IAmb IAmb 15 17 52.7
comp=Z,29nm,0.8s
RLMT Red Lodge 49.13 323 IAmb IAmb 15 17 44.5
comp=Z,24nm,0.9s
SNOW Snow King Moun 49.14 321 IAmb IAmb 15 17 45.6
comp=Z,36nm,0.9s
ECR Eagle Creek 49.32 320 IAmb IAmb 15 17 46.7
comp=Z,31nm,0.9s

BGU Big Grassy Mou 49.38 317 lAmb lAmb 15 17 46.7
comp=Z,45nm,1.3s
FXWY Fox Creek 49.40 321 lAmb lAmb 15 17 47.3
comp=Z,36nm,1.1s
FLWY Flagg Ranch 49.43 322 lAmb lAmb 15 18 00.9
comp=Z,33nm,1.2s
PLCA Paso Flores 49.91 181 P **P** **15 17 41.3 -0.8**
comp=Z,18nm,0.8s,baz=354,slow=8.1,SNR=16
PLCA LR LR 15 39 40.6
comp=Z,549nm,19.9s,baz=11,slow=37
comp=Z,18nm,0.8s
PLCA Paso Flores 49.91 181 P **P** **15 17 41.4 -0.8**
PLCA pmax pmax
comp=Z,49nm,0.9s
PLCA Paso Flores 49.91 181 P **P** **15 17 41.4 -0.8**
PLCA lAmb lAmb 15 17 47.1
comp=Z,49nm,0.9s
PLCA Paso Flores 49.91 181 *e*P **P** **15 17 41.1 -1.0**
S11A Rachel 49.93 312 lAmb lAmb 15 18 17.6
comp=Z,49nm,1.2s
TPNV Topopah Spring 50.05 311 lAmb lAmb 15 17 52.9
comp=Z,26nm,1.1s
YHB Horse Butte 50.08 322 lAmb lAmb 15 18 05.7
comp=Z,62nm,1.5s
FURC Furnace Creek, 50.34 310 lAmb lAmb 15 17 54.8
comp=Z,28nm,1.2s
ELK Elko 50.81 316 P **P** **15 17 48.7 -0.5**
comp=Z,1.5nm,0.7s,baz=114,slow=5.5,SNR=9.9
comp=Z,1.5nm,0.7s
EGMT Eagleton 51.06 326 lAmb lAmb 15 18 05.1
comp=Z,28nm,1.0s
DLMT Dillon 51.25 322 lAmb lAmb 15 18 07.9
comp=Z,43nm,1.0s
NVAR Mina Array Bea 52.10 312 P **P** **15 17 58.8 -0.1**
comp=Z,2.0nm,0.7s,baz=117,slow=7.2,SNR=11
NVAR LR LR 15 44 05.5
comp=Z,356nm,19.1s,baz=108,slow=41
comp=Z,2.0nm,0.7s
RPN Rapa Nui 52.81 225 LR LR 15 37 45.4
comp=Z,158nm,18.3s,baz=46,slow=33
PLID Pearl Lake 53.22 320 lAmb lAmb 15 18 14.9
comp=Z,30nm,1.2s
PNTR Pine Nut 53.28 312 lAmb lAmb 15 18 17.0
comp=Z,49nm,1.0s
PMOZ Porto Moniz, M 53.69 56 *e*P P 15 18 17.0 +6.4
WVOR Wild Horse Val 53.82 316 lAmb lAmb 15 18 23.3
comp=Z,28nm,1.1s
IVI Ivigtut 54.10 13 *i* P P 15 18 18.3 +5.4
F10A Beach Ranch, E 54.39 321 lAmb lAmb 15 18 30.0
comp=Z,25nm,1.2s
NRS Narsarsuaq 54.69 14 *i* P **P** **15 18 21.1 +3.9**
NRS lAmb lAmb 15 18 45.4
comp=Z,28nm,0.9s
COYC Coyhaique 54.78 182 P **P** **15 18 19.2 +1.1**
COYC lAmb lAmb 15 18 22.9
comp=Z,42nm,0.9s
I07A Izee 55.05 318 lAmb lAmb 15 18 29.2
comp=Z,21nm,1.1s
G08A Pilot Rock 55.19 319 lAmb lAmb 15 18 29.5
comp=Z,36nm,1.4s
E09A Wood Farm, Sta 55.20 321 lAmb lAmb 15 18 29.0
comp=Z,32nm,1.2s
NEW Newport 55.38 323 LR LR 15 44 24.7
comp=Z,306nm,18.3s,baz=125,slow=39
K05A Summer Lake 55.47 316 lAmb lAmb 15 19 09.4
comp=Z,31nm,1.4s
M03C McCloud 55.83 314 lAmb lAmb 15 18 39.7
comp=Z,43nm,1.2s
PINE Pine Mountain 55.90 317 lAmb lAmb 15 18 35.8
comp=Z,40nm,1.0s
J05D Fort Rock, OR 55.91 316 lAmb lAmb 15 18 35.5
comp=Z,43nm,1.1s
EDM Edmonton 55.94 330 lAmb lAmb 15 18 31.6
comp=Z,26nm,0.6s
WAH2 Wahluke Slope 56.19 321 lAmb lAmb 15 18 36.4
comp=Z,19nm,0.7s
G06A Carlson Farm, 56.25 319 lAmb lAmb 15 18 37.9
comp=Z,28nm,1.1s
YBH Yreka Blue Hor 56.40 314 LR LR 15 46 49.1
comp=Z,105nm,18.1s,baz=117,slow=40
EPH Ephrata 56.46 321 lAmb lAmb 15 18 38.4
comp=Z,17nm,1.0s
J04A Umpqua Nationa 56.49 316 lAmb lAmb 15 18 43.5
comp=Z,44nm,0.9s
MXC Moxie City 56.57 320 lAmb lAmb 15 18 40.3
comp=Z,27nm,1.2s
WIFE Three Sisters- 56.59 317 P **P** **15 18 32.2 +0.7**
WIFE lAmb lAmb 15 18 55.8
comp=Z,23nm,0.9s
BBOR Butler Butte 56.76 316 lAmb lAmb 15 18 43.3
comp=Z,22nm,1.1s
KHMM Horse Mountain 56.86 313 lAmb lAmb 15 18 42.3
comp=Z,25nm,0.9s
I04A Tendick Farm, 56.89 317 lAmb lAmb 15 18 44.2
comp=Z,23nm,1.1s
H04A Detroit Lake 57.06 318 lAmb lAmb 15 18 49.8
comp=Z,23nm,0.8s
BUCK Buck Mountain 57.42 317 lAmb lAmb 15 18 45.5
comp=Z,35nm,1.0s
I03D Drain, OR 57.49 316 lAmb lAmb 15 18 46.8
comp=Z,35nm,1.1s
J01E Myrtle Point 57.72 315 lAmb lAmb 15 18 48.3
comp=Z,44nm,1.0s
D05A Enumclaw 57.88 320 lAmb lAmb 15 19 02.9
comp=Z,37nm,1.0s
I02E Swisshome, OR 57.97 317 lAmb lAmb 15 18 50.1
comp=Z,47nm,1.1s
GNW Green Mountain 58.55 321 P **P** **15 18 44.0 -1.0**
E03A Lebam 58.64 319 lAmb lAmb 15 19 06.5
comp=Z,21nm,0.7s
SFJD Kangerlussuaq 58.94 9 LR LR 15 45 16.8
comp=Z,269nm,18.4s,baz=232,slow=37
LLLB Lilooet 59.21 324 lAmb lAmb 15 18 56.1
comp=Z,17nm,1.0s
CLRS Cowichan Lake 59.83 322 lAmb lAmb 15 19 05.8
comp=Z,16nm,0.8s
ANGG Ammassalik, Gr 60.35 15 lAmb lAmb 15 19 05.5
comp=Z,30nm,1.0s
ANGG Ammassalik, Gr 60.35 15 *i* P **P** **15 18 58.3 +1.3**
ANGG lAmb lAmb 15 19 05.5
comp=Z,27nm,0.9s
CBB Campbell River 61.03 323 lAmb lAmb 15 19 10.1
comp=Z,24nm,0.9s
MORF Marmelete 61.46 53 *e*P **P** **15 19 06.2 +0.9**
MORF lAmb lAmb 15 19 07.9
comp=Z,137nm,1.5s
MORF Marmelete 61.46 53 *e*P **P** **15 19 04.8 -0.5**
MORF Marmelete 61.46 53 *e*P **P** **15 19 06.2 +0.9**
PSBE So Bento 61.77 50 *e*P **P** **15 19 08.0 +0.7**
PLOUS Minas do Lousa 61.78 52 *e*P **P** **15 19 09.2 +1.9**
MESJ Messejana 61.90 52 *e*P **P** **15 19 09.0 +0.9**
MESJ lAmb lAmb 15 19 11.7
comp=Z,296nm,2.4s
MESJ Messejana 61.90 52 *e*P **P** **15 19 10.1 +2.0**
MESJ Messejana 61.90 52 *e*P **P** **15 19 09.0 +0.9**
MOE Montemor 61.92 51 *e*P **P** **15 19 09.9 +1.7**
MOE *i* lAmb lAmb 15 19 11.3
comp=Z,51nm,1.6s
YKAW1 Yellowknife Wh 61.96 338 lAmb lAmb 15 19 16.1
comp=Z,13nm,0.8s
PCVE Castro Verde 62.00 52 *e*P **P** **15 19 11.1 +2.2**
YKA Yellowknife Ar 62.01 338 P **P** **15 19 07.0 -1.4**
comp=Z,5.9nm,0.7s,baz=124,slow=7.5,SNR=29
comp=Z,5.9nm,0.7s
YKAW3 Yellowknife Wh 62.06 338 lAmb lAmb 15 19 16.8
comp=Z,22nm,0.8s
PCAS Casmilo, Conde 62.11 50 *e*P **P** **15 19 11.1 +1.6**
PMTG Montargil 62.12 51 *e*P **P** **15 19 10.0 +0.4**
PMTG *i* lAmb lAmb 15 19 12.6
comp=Z,43nm,1.5s
EVO Evora 62.18 51 *e*P **P** **15 19 11.1 +1.1**
PBEJ Beja 62.21 52 *e*P **P** **15 19 10.8 +0.6**
PARRA Arraiolos 62.22 51 *e*P **P** **15 19 11.8 +1.6**
PVAQ Vaqueiros 62.22 53 *e*LR LR 15 38 24.8
PVAQ *i* lAMs_20 lAMs_20 15 42 56.5
comp=Z,194nm,18.0s
PSARD Sardoal 62.27 50 *e*P **P** **15 19 10.4 -0.2**
PSARD *i* lAmb lAmb 15 19 20.6
comp=Z,38nm,1.3s
SAATT Saattut 62.38 7 *i* P **P** **15 19 10.5 -0.2**
SAATT lAmb lAmb 15 19 18.9
comp=Z,28nm,1.2s
PESTR Estremoz 62.57 51 *e*P **P** **15 19 14.8 +2.2**
PGAV Gavieira, Arco 62.67 48 *e*LR LR 15 38 04.2
PGAV *i* lAMs_20 lAMs_20 15 43 17.6
comp=Z,203nm,20.0s
PVIS Viseu 62.69 49 *e*P **P** **15 19 14.1 +0.6**

PMRV Marv??o 62.82 51 *e*LR LR 15 39 23.6
PMRV *i* lAMs_20 lAMs_20 15 56 12.2
comp=Z,109nm,20.0s
PCBR Castelo Branco 62.84 50 *e*P **P** **15 19 15.6 +1.2**
PCBR *i* lAmb lAmb 15 19 16.9
comp=Z,36nm,1.6s
PBAR Barrancos 62.88 52 *e*P **P** **15 19 16.3 +1.7**
PBAR *i* lAmb lAmb 15 19 17.7
comp=Z,29nm,1.6s
MTE Manteigas 62.89 49 *e*P **P** **15 19 16.0 +1.2**
MTE *i* lAmb lAmb 15 19 18.1
comp=Z,43nm,1.8s
MTE *e*LR LR 15 36 33.9
MTE *i* lAMs_20 lAMs_20 15 41 04.5
comp=Z,88nm,24.0s
POLO Lamas de Olo 62.90 48 *e*P **P** **15 19 16.1 +1.2**
POLO *i* lAmb lAmb 15 19 17.3
comp=Z,43nm,1.6s
PVRL Vila Real 62.94 48 *e*P **P** **15 19 15.7 +0.6**
PVRL *i* lAmb lAmb 15 19 26.3
comp=Z,50nm,1.2s
POIN Pond Inlet 63.42 357 lAmb lAmb 15 19 29.4
comp=Z,15nm,1.1s
BBB Bella Bella 63.42 324 LR LR 15 48 40.4
comp=Z,236nm,19.4s,baz=114,slow=38
MVO Moncorvo 63.42 49 *e*P **P** **15 19 19.7 +1.4**
MVO *i* lAmb lAmb 15 19 20.9
comp=Z,32nm,1.9s
MD01 Midelt array s 64.02 58 P **P** **15 19 23.7 +1.2**
MD31 MD31 64.02 58 lAmb lAmb 15 19 24.9
comp=Z,14nm,0.9s
MDT Midelt 64.14 58 LR LR 15 42 59.7
comp=Z,122nm,21.4s,baz=234,slow=32
DBIC Dimbokro 64.30 87 P **P** **15 19 23.4 -1.1**
comp=Z,8.9nm,0.9s,baz=275,slow=9.8,SNR=11
comp=Z,8.9nm,0.9s
DBIC Dimbokro 64.30 87 P **P** **15 19 24.1 -0.4**
DBIC pmax pmax
comp=Z,31nm,1.1s
DBIC Dimbokro 64.30 87 P **P** **15 19 24.1 -0.4**
DBIC lAmb lAmb 15 19 30.7
comp=Z,31nm,1.1s
KOTAN Kotaneelee Air 64.56 333 P **P** **15 19 26.0 +0.6**
baz=118
PAB San Pablo 65.17 51 P **P** **15 19 30.5 +0.7**
PAB pmax pmax
comp=Z,12nm,1.0s
PAB San Pablo 65.17 51 P **P** **15 19 30.5 +0.7**
LIRD Liard River Hi 65.17 332 P **P** **15 19 29.6 +0.2**
baz=115
RUBB Prince Rupert 65.35 326 lAmb lAmb 15 19 37.4
comp=Z,17nm,1.0s
ESDC Sonseca Array 65.48 51 P **P** **15 19 31.2 -0.6**
comp=Z,12nm,1.2s,baz=262,slow=6.6,SNR=27
comp=Z,12nm,1.2s
ESDC Sonseca Array 65.48 51 P **P** **15 19 33.2 +1.4**
ESBB Sonseca Array 65.48 51 lAmb lAmb 15 19 33.8
comp=Z,41nm,1.6s
WRGLY Wrigley 65.80 336 P **P** **15 19 33.7 +0.4**
baz=120
SUMG Summit 65.86 10 *i* P **P** **15 19 34.0 -0.1**
SUMG lAmb lAmb 15 19 42.9
comp=Z,82nm,1.3s
T35M Bob Quinn 66.25 329 lAmb lAmb 15 19 54.6
comp=Z,13nm,1.0s
T35M Bob Quinn 66.25 329 P **P** **15 19 36.8 +0.4**
baz=110
V35K Ketchikan 66.42 327 lAmb lAmb 15 19 58.8
comp=Z,54nm,1.8s
V35K Kehkan 66.42 327 P **P** **15 19 37.6 +0.1**
baz=108
DLBC Dease Lake 66.66 330 P **P** **15 19 38.8 -0.3**
baz=111,SNR=12
WTLY Watson Lake, Y 66.70 332 P **P** **15 19 38.9 -0.3**
baz=113
S34M Telegraph Cree 67.02 329 lAmb lAmb 15 19 48.5
comp=Z,14nm,1.1s
S34M Telegraph Cree 67.02 329 P **P** **15 19 40.8 -0.4**
baz=110
TULEG Thule 67.09 0 *i* P **P** **15 19 40.6 -0.7**
TULEG lAmb lAmb 15 20 03.2
comp=Z,129nm,1.6s
WRAK Wrangell Islan 67.16 328 P **P** **15 19 42.1 0.0**
baz=108
CRAG Craig 67.28 327 P **P** **15 19 41.8 -1.2**
baz=107
R33M Jennings River 67.46 331 P **P** **15 19 43.2 -0.9**
baz=111
U33K Whale Pass 67.48 327 lAmb lAmb 15 20 00.3
comp=Z,18nm,1.0s
U33K Whale Pass 67.48 327 P **P** **15 19 43.4 -0.7**
baz=108
T33K Petersburg 67.60 328 P **P** **15 19 44.5 -0.4**
baz=108
Q32M Nakina River 67.94 330 lAmb lAmb 15 19 54.8
comp=Z,17nm,0.9s
Q32M Nakina River 67.94 330 P **P** **15 19 46.4 -0.9**
baz=109
P33M Teslin, Yukon 68.61 331 P **P** **15 19 52.5 +1.1**
P33M lAmb lAmb 15 20 07.2
comp=Z,19nm,1.4s
P33M Teslin, Yukon 68.61 331 P **P** **15 19 50.9 -0.5**
baz=109
S32K Killisnoo 68.64 328 P **P** **15 19 50.5 -0.9**
baz=107
NEEM North Greenlan 68.70 4 *i* P **P** **15 19 50.2 -1.7**
NEEM lAmb lAmb 15 19 52.6
comp=Z,32nm,0.9s
MMPY Sheldon Lake, 68.76 334 P **P** **15 19 50.9 -1.3**
baz=112
R32K Eaglecrest 68.84 329 P **P** **15 19 51.7 -1.1**
baz=107
P32M Atlin 68.84 331 lAmb lAmb 15 20 00.1
comp=Z,17nm,0.9s
P32M Atlin 68.84 331 P **P** **15 19 51.6 -1.2**
baz=108
SIT Sitka 68.91 328 P **P** **15 19 52.0 -1.2**
baz=106
N32M Quiet Lake 69.05 332 P **P** **15 19 53.0 -1.0**
baz=109
EKB Eskdalemuir 69.07 34 P **P** **15 19 54.6 +0.4**
EKB lAmb lAmb 15 19 55.4
comp=Z,43nm,1.4s
EKA Eskdalemuir Ar 69.08 34 P **P** **15 19 53.6 -0.7**
comp=Z,7.8nm,0.9s,baz=256,slow=6.8,SNR=13
comp=Z,7.8nm,0.9s
C36M Paulatuk 69.11 342 P **P** **15 19 53.7 -0.5**
baz=121
SKAG Skagway 69.59 330 P **P** **15 19 56.9 -0.4**
baz=107
S31K Pelican 69.63 329 P **P** **15 19 56.9 -0.7**
baz=105
WHY Whitehorse 69.73 332 lAmb lAmb 15 20 11.2
comp=Z,20nm,0.9s
WHY Whitehorse 69.73 332 P **P** **15 19 57.9 -0.5**
baz=106
CEST Esterri de Car 69.75 48 lAmb lAmb 15 20 01.3
comp=Z,28nm,1.3s
M31M Drury Creek, Y 69.98 333 P **P** **15 19 59.3 -0.4**
baz=108,SNR=6.3
TORD Torodi Ar. Bea 70.02 79 P **P** **15 19 60.0 -0.9**
comp=Z,6.4nm,0.8s,baz=290,slow=4.9,SNR=22
TORD LR LR 15 48 11.1
comp=Z,170nm,21.8s,baz=294,slow=34
comp=Z,6.4nm,0.8s
TORD Torodi Ar. Bea 70.02 79 P **P** **15 19 60.0 -0.9**
PLBC Pleasant Camp 70.10 330 P **P** **15 19 59.9 -0.6**
baz=106
CORI Orista 70.28 49 lAmb lAmb 15 20 12.3
comp=Z,43nm,1.2s
O30N Mendenhall 70.33 331 P **P** **15 20 02.0 0.0**
baz=106,SNR=43
N31M Braeburn, Yuko 70.39 332 P **P** **15 20 02.2 0.0**
baz=107,SNR=16
P30M Million Dollar 70.56 331 P **P** **15 20 02.7 -0.7**
baz=105
A36M Sachs Harbour 70.80 344 P **P** **15 20 04.5 -0.1**
baz=121,SNR=6.6
P29M Windy Craggy 70.82 330 lAmb lAmb 15 20 18.9
comp=Z,16nm,1.0s
P29M Windy Craggy 70.82 330 P **P** **15 20 04.7 -0.2**
baz=105
N30M Aishikik Lake 70.99 332 lAmb lAmb 15 20 20.1
comp=Z,19nm,0.9s
N30M Aishikik Lake 70.99 332 P **P** **15 20 05.5 -0.4**
baz=106,SNR=12
HYT Haines Junctio 71.01 331 P **P** **15 20 05.7 -0.5**
baz=105,SNR=6.4

H31M Peel River 71.15 337 P **P** **15 20 06.5 -0.3**
baz=110,SNR=12
M30M Minto, Yukon 71.16 333 lAmb lAmb 15 20 16.0
comp=Z,25nm,0.8s
M30M Minto, Yukon 71.16 333 P **P** **15 20 06.5 -0.5**
baz=106,SNR=17
O29M Mount Kennedy 71.39 331 lAmb lAmb 15 20 22.4
comp=Z,19nm,0.9s
O29M Mount Kennedy 71.39 331 P **P** **15 20 08.1 -0.4**
baz=104
YUK6 Outpost Mounta 71.45 331 P **P** **15 20 08.5 -0.4**
baz=104
F31M Tsiigehtchic 71.49 339 lAmb lAmb 15 20 20.9
comp=Z,16nm,0.8s
F31M Tsiigehtchic 71.49 339 P **P** **15 20 07.8 -0.9**
baz=111,SNR=9.7
G31M Satah River 71.50 338 P **P** **15 20 08.1 -0.7**
baz=110,SNR=10
J30M Hart River 71.55 335 P **P** **15 20 08.5 -0.9**
baz=108
YUK4 Talbot Arm 71.68 332 P **P** **15 20 09.7 -0.7**
baz=104,SNR=9.7
INK Inuvik 71.73 339 LR LR 15 52 25.6
comp=Z,505nm,20.5s,baz=109,slow=36
INK Inuvik 71.73 339 lAmb lAmb 15 20 18.5
comp=Z,18nm,0.9s
INK Inuvik 71.73 339 P **P** **15 20 09.6 -0.6**
baz=111,SNR=9.2
I30M Mount Dempster 71.76 336 lAmb lAmb 15 20 17.6
comp=Z,25nm,1.0s
I30M Mount Dempster 71.76 336 P **P** **15 20 10.1 -0.5**
baz=108,SNR=20
K29M Barlow Dome 71.83 334 P **P** **15 20 10.3 -0.8**
baz=106
BRWY Burwash Landin 71.87 332 P **P** **15 20 10.7 -0.5**
baz=104
M29M Somme Creek 71.87 333 P **P** **15 20 10.5 -0.8**
baz=105
L29M L29M 71.90 334 P **P** **15 20 11.1 -0.3**
baz=105
JMIC Jan Mayen 72.00 18 LR LR 15 46 59.4
comp=Z,157nm,21.7s,baz=238,slow=32
PINM Pinnacle 72.16 330 P **P** **15 20 12.2 -0.8**
baz=102
YUK8 Steele Glacier 72.19 332 P **P** **15 20 12.9 -0.6**
baz=103
EPYK Eagle Plains 72.25 337 P **P** **15 20 12.8 -0.6**
baz=108,SNR=6.7
G30M tAoh Zraii Nji 72.25 338 lAmb lAmb 15 20 21.6
comp=Z,22nm,0.8s
G30M tAoh Zraii Nji 72.25 338 P **P** **15 20 13.0 -0.4**
baz=108
O28M Mount Upton 72.28 331 P **P** **15 20 12.9 -1.1**
baz=103
F30M Barrier River 72.29 338 P **P** **15 20 13.3 -0.3**
baz=109,SNR=9.2
J29N Klondike Camp 72.29 335 P **P** **15 20 13.3 -0.5**
baz=106
SSB Saint Sauveur 72.36 46 lAmb lAmb 15 20 16.6
comp=Z,38nm,1.4s
YUK3 Moose Creek 72.62 332 P **P** **15 20 15.2 -0.8**
baz=103
LOGN Logan Glacier 72.68 331 lAmb lAmb 15 20 30.6
comp=Z,17nm,0.8s
DAWY Dawson 72.69 334 P **P** **15 20 15.7 -0.4**
baz=104
UCC Uccle 72.75 40 lAmb lAmb 15 20 17.8
comp=Z,38nm,1.3s
UCC Uccle 72.75 40 *d*P **P** **15 20 17.0 +0.3**
DOU Dourbes 72.83 40 *d*P **P** **15 20 17.2 +0.1**
comp=Z,8.8nm,1.2s
H29M Whitestone 72.84 337 lAmb lAmb 15 20 26.1
comp=Z,20nm,0.8s
H29M Whitestone 72.84 337 P **P** **15 20 16.7 -0.3**
baz=106,SNR=12
G29M Pine Creek 72.90 337 P **P** **15 20 17.0 -0.3**
baz=107,SNR=15
BVCY Beaver Creek 72.95 333 P **P** **15 20 17.4 -0.3**
baz=103
BMRD Maredsous 72.96 40 *d*P **P** **15 20 17.9 0.0**
comp=Z,11nm,1.3s
GRNC Granite Creek 73.02 331 P **P** **15 20 19.2 +0.8**
GRNC lAmb lAmb 15 20 32.6
comp=Z,18nm,0.8s
BGES Gesves 73.17 40 *d*P **P** **15 20 19.8 +0.6**
RCHB Rochefort 73.24 40 *d*P **P** **15 20 19.6 +0.1**
comp=Z,14nm,1.2s
I28M Miner Creek 73.26 336 lAmb lAmb 15 20 33.9
comp=Z,32nm,1.2s
I28M Miner Creek 73.26 336 P **P** **15 20 19.1 -0.5**
baz=104,SNR=18
E29M Blow River 73.29 339 lAmb lAmb 15 20 28.2
comp=Z,26nm,0.8s
E29M Blow River 73.29 339 P **P** **15 20 19.1 -0.5**
baz=107,SNR=10
BCLA Clavier 73.31 40 *d*P **P** **15 20 19.9 -0.1**
comp=Z,6.2nm,1.3s
BCLA *d*PP **PP** **15 23 00.7 -2.4**
M27K Edge Creek, AK 73.40 332 lAmb lAmb 15 20 34.6
comp=Z,19nm,0.8s
M27K Edge Creek, AK 73.40 332 P **P** **15 20 20.3 -0.2**
baz=102,SNR=14
BSTI Sart Tilman 73.49 40 *d*P **P** **15 20 21.9 +0.8**
BCAR Beaver Creek A 73.50 333 P **P** **15 20 21.2 +0.2**
L27K Beaver Creek, 73.52 333 P **P** **15 20 20.9 -0.2**
baz=102
TGL Tana Glacier 73.54 331 lAmb lAmb 15 20 35.7
comp=Z,39nm,0.9s
CRQE Cirque 73.67 331 P **P** **15 20 21.5 -0.6**
baz=100
CRQM Cirque 73.69 331 lAmb lAmb 15 20 35.6
comp=Z,22nm,0.9s
MCARA McCarthy VSAT 73.75 331 lAmb lAmb 15 20 36.8
comp=Z,24nm,0.8s
MCARA McCarthy VSAT 73.75 331 P **P** **15 20 22.0 -0.4**
baz=100
BHOU Houvegnez 73.75 40 *d*P **P** **15 20 23.1 +0.5**
comp=Z,15nm,1.2s
MEM Membach 73.78 40 *d*P **P** **15 20 23.5 +0.8**
comp=Z,12nm,1.2s
F28M Old Crow 73.78 338 P **P** **15 20 21.9 -0.6**
baz=105,SNR=11
WLF Walferdange 73.79 41 lAmb lAmb 15 20 24.6
comp=Z,45nm,1.2s
WLF Walferdange 73.79 41 *d*P **P** **15 20 23.3 +0.4**
comp=Z,17nm,1.4s
WLF Walferdange 73.79 41 *e*P **P** **15 20 23.4 +0.6**
comp=Z,51nm,1.2s,baz=269,slow=5.7
BTNL Ternell 73.85 40 *d*P **P** **15 20 23.4 +0.2**
comp=Z,5.2nm,1.1s
D28M Stokes Point 73.85 340 P **P** **15 20 21.9 -0.8**
baz=107
BERG Berg Lake 73.91 330 P **P** **15 20 24.3 +0.9**
BERG lAmb lAmb 15 20 32.9
comp=Z,28nm,0.9s
M26K Nabesna, AK 73.92 332 P **P** **15 20 22.5 -0.9**
baz=101
VRDI Verde Repeater 73.92 331 lAmb lAmb 15 20 33.5
comp=Z,23nm,1.0s
E28M Babbage River 73.93 339 lAmb lAmb 15 20 31.4
comp=Z,15nm,0.8s
E28M Babbage River 73.93 339 P **P** **15 20 22.1 -1.2**
baz=106
I27K Kandik River 73.98 336 P **P** **15 20 22.6 -1.1**
baz=103,SNR=13
H27K Steamboat Moun 74.08 336 P **P** **15 20 23.7 -0.6**
baz=103
GLB Gilahina Butte 74.13 331 lAmb lAmb 15 20 36.2
comp=Z,22nm,1.1s
KAIM Kayak Island 74.19 330 P **P** **15 20 23.5 -1.5**
baz=99
L26K Log Cabin Wild 74.19 333 P **P** **15 20 24.0 -1.0**
baz=100
G27K Doyon Strip 74.26 337 P **P** **15 20 24.9 -0.4**
baz=103
SENIN Lac Senin/Sane 74.35 45 lAmb lAmb 15 20 28.4
comp=Z,23nm,1.0s
ECH Echery 74.35 43 lAmb lAmb 15 20 27.7
comp=Z,38nm,1.2s
RAGM Ragged Mountai 74.38 330 lAmb lAmb 15 20 35.7
comp=Z,41nm,1.0s
BMRM Bremner River 74.44 331 P **P** **15 20 26.7 +0.3**
baz=99,SNR=11
BER Bergen 74.52 30 *e*P **P** **15 20 28.4 +1.5**
N25K Chitina, Valde 74.53 331 P **P** **15 20 26.8 -0.2**
baz=99
E27K Coleen River 74.56 338 P **P** **15 20 26.3 -0.8**
baz=104

D27M	**Malcolm River**	74.59	340	P		**P**	**15 20 27.0**	**-0.2**
	baz=104							
BUG	**Bochum--Univer**	74.63	39	*e*P		**P**	**15 20 28.1**	**+0.4**
	comp=Z,41nm,1.2s,baz=269,slow=5.7							
SCRK	**Sand Creek**	74.65	334	P		**P**	**15 20 28.2**	**+0.5**
SCRK	**Sand Creek**	74.65	334	P		**P**	**15 20 27.0**	**-0.7**
	baz=100,SNR=21							
HARP	**HAARP**	74.91	332	P		**P**	**15 20 28.7**	**-0.4**
	baz=99							
EYAK	**Cordova Ski Ar**	74.93	330	P		**P**	**15 20 28.9**	**-0.3**
	baz=98							
BLS5	**Blasjo**	74.95	31	*e*P		**P**	**15 20 31.3**	**+1.8**
RIDG	**Independent Ri**	74.98	334	IAmb		IAmb	15 21 11.2	
	comp=Z,21nm,1.0s							
RIDG	**Independent Ri**	74.98	334	P		**P**	**15 20 29.1**	**-0.5**
	baz=99							
IBBN	**Ibbenburen**	75.00	38	*e*P		**P**	**15 20 30.2**	**+0.4**
	comp=Z,30nm,1.0s,baz=269,slow=5.7							
HYA	**Hoyanger**	75.05	29	*e*P		**P**	**15 20 31.3**	**+1.4**
HYA				IAmb		IAmb	15 20 39.5	
	comp=Z,136nm,1.5s							
Q23K	**Middleton Isla**	75.09	329	P		**P**	**15 20 29.7**	**-0.5**
	baz=97							
G26K	**Porcupine Rive**	75.11	337	P		**P**	**15 20 29.7**	**-0.5**
	baz=101							
BFO	**Black Forest**	75.14	43	*e*P		**P**	**15 20 30.5**	**-0.2**
	comp=Z,13nm,1.2s,baz=269,slow=5.7							
BFO				*e*L		L	16 02 24.5	
	comp=Z,184nm,20.6s							
PAX	**Paxson**	75.14	333	P		**P**	**15 20 30.0**	**-0.5**
	baz=98,SNR=5.9							
TNS	**Taunus Mts**	75.31	41	*e*P		**P**	**15 20 32.4**	**+0.7**
	comp=Z,27nm,1.1s,baz=269,slow=5.7							
TNS				*e*L		L	16 02 30.8	
	comp=Z,285nm,19.8s							
KASTN	**Kahler Asten**	75.34	40	*e*P		**P**	**15 20 31.9**	**+0.1**
	comp=Z,22nm,1.5s,baz=269,slow=5.7							
M24K	**Tolsona, Glenn**	75.34	332	IAmb		IAmb	15 20 40.7	
	comp=Z,31nm,1.1s							
M24K	**Tolsona, Glenn**	75.34	332	P		**P**	**15 20 31.1**	**-0.6**
	baz=98							
J25K	**Salcha River,**	75.35	334	P		**P**	**15 20 31.2**	**-0.5**
	baz=99							
F26K	**Sheenjek River**	75.40	338	P		**P**	**15 20 31.8**	**-0.1**
	baz=101							
K24K	**Donnelly Dome**	75.40	334	IAmb		IAmb	15 20 42.8	
	comp=Z,32nm,1.1s							
K24K	**Donnelly Dome**	75.40	334	P		**P**	**15 20 31.8**	**-0.2**
	baz=98							
PRP	**Porcupine Dome**	75.56	335	IAmb		IAmb	15 20 41.5	
	comp=Z,16nm,0.8s							
PRP	**Porcupine Dome**	75.56	335	P		**P**	**15 20 32.4**	**-0.5**
	baz=99							
AKN	**Aaknes**	75.56	28	*e*P		**P**	**15 20 34.2**	**+1.4**
AKN				IAmb		IAmb	15 20 34.7	
	comp=Z,62nm,1.2s							
FYU	**Fort Yukon**	75.61	336	IAmb		IAmb	15 20 44.4	
	comp=Z,59nm,1.6s							
C27K	**Jago River**	75.62	340	P		**P**	**15 20 32.6**	**-0.5**
	baz=102							
NOR	**Nord**	75.64	7	*i* P		**P**	**15 20 31.7**	**-1.3**
NOR				IAmb		IAmb	15 20 33.5	
	comp=Z,18nm,1.0s							
P23K	**Montague Islan**	75.68	330	P		**P**	**15 20 32.9**	**-0.7**
	baz=96							
STU	**Stuttgart**	75.73	42	IAmb		IAmb	15 20 35.4	
	comp=Z,30nm,1.0s							
STU	**Stuttgart**	75.73	42	*e*P		**P**	**15 20 34.4**	**+0.3**
	comp=Z,82nm,1.1s,baz=269,slow=5.7							
VSL	**Villasalto**	75.74	52	P		**P**	**15 20 35.8**	**+1.4**
TUE	**Stuetta**	75.77	44	IAmb		IAmb	15 20 36.7	
	comp=Z,38nm,1.2s							
KEST	**Kesra**	75.78	56	P		**P**	**15 20 34.5**	**-0.3**
	comp=Z,21nm,1.0s,baz=276,slow=2.2,SNR=19							
	comp=Z,21nm,1.0s							
KEST	**Kesra**	75.78	56	IAmb		IAmb	15 20 36.8	
	comp=Z,26nm,1.0s							
SCM	**Sheep Creek Mo**	75.85	331	IAmb		IAmb	15 20 43.5	
	comp=Z,40nm,1.0s							
SCM	**Sheep Creek Mo**	75.85	331	P		**P**	**15 20 34.8**	**+0.1**
	baz=97							
F25K	**Christian Rive**	75.94	337	IAmb		IAmb	15 20 43.8	
	comp=Z,51nm,1.9s							
F25K	**Christian Rive**	75.94	337	P		**P**	**15 20 35.4**	**+0.4**
	baz=100,SNR=10.0							
G25K	**Bearman Lake**	75.98	337	P		**P**	**15 20 35.0**	**-0.2**
	baz=99,SNR=6.7							
HDA	**Harding Lake**	76.00	334	IAmb		IAmb	15 21 17.4	
	comp=Z,32nm,1.7s							
HDA	**Harding Lake**	76.00	334	P		**P**	**15 20 34.4**	**-1.0**
	baz=98							
E25K	**Arctic Village**	76.00	338	P		**P**	**15 20 35.1**	**-0.2**
	baz=100							
RETH	**Rethem/Aller,**	76.00	38	*e*P		**P**	**15 20 36.2**	**+0.7**
	comp=Z,47nm,1.5s,baz=269,slow=5.7							
SKAR	**Skarslia**	76.02	30	IAmb		IAmb	15 20 37.5	
	comp=Z,41nm,1.3s							
SKAR				*e*P		**P**	**15 20 37.6**	**+2.0**
DHY	**Denali Highway**	76.02	333	P		**P**	**15 20 35.3**	**-0.4**
	baz=97							
ILAR	**Eielson Array**	76.02	335	P		**P**	**15 20 34.8**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=100,slow=4.3,SNR=7.8							
	comp=Z,2.8nm,0.8s							
M23K	**Glacier View**	76.03	331	P		**P**	**15 20 35.2**	**-0.4**
	baz=96							
C26K	**Camden Bay**	76.09	340	P		**P**	**15 20 35.6**	**-0.1**
	baz=101,SNR=5.8							
WAT6	**Susitna Watana**	76.12	332	P		**P**	**15 20 35.4**	**-0.9**
	baz=96							
DAVA	**Damuels**	76.15	44	*i* P		**P**	**15 20 37.3**	**+0.6**
	comp=Z,52nm,1.4s,SNR=15							
POKR	**Poker Plat Res**	76.29	335	P		**P**	**15 20 36.4**	**-0.6**
	baz=97							
SML	**Sawmill**	76.32	331	P		**P**	**15 20 37.0**	**-0.3**
	baz=96							
UBBA	**Unterbreizbach**	76.32	40	*e*P		**P**	**15 20 37.9**	**+0.6**
	comp=Z,47nm,1.7s,baz=269,slow=5.7							
GTTG	**Gottingen**	76.32	39	*e*P		**P**	**15 20 38.1**	**+0.7**
	comp=Z,45nm,1.4s,baz=269,slow=5.7							
KNK	**Knik Glacier**	76.34	331	P		**P**	**15 20 37.2**	**-0.2**
	baz=96							
FUORN	**Ofenpass-Fuorn**	76.40	44	IAmb		IAmb	15 20 40.4	
	comp=Z,49nm,1.3s							
COLA	**College**	76.44	335	*i* P		**P**	**15 20 37.9**	**+0.1**
COLA				pmax		pmax		
	comp=Z,11nm,1.5s							
COLA	**College**	76.44	335	P		**P**	**15 20 37.9**	**+0.1**
	baz=97							
D25K	**Kavik River**	76.49	339	IAmb		IAmb	15 20 46.9	
	comp=Z,24nm,0.8s							
D25K	**Kavik River**	76.49	339	P		**P**	**15 20 38.0**	**-0.1**
	baz=99,SNR=18							
DOMB	**Dombas**	76.51	28	*e*P		**P**	**15 20 40.5**	**+2.1**
DOMB				IAmb		IAmb	15 20 46.6	
	comp=Z,525nm,3.2s							
G24K	**Hadweenzic Riv**	76.52	336	P		**P**	**15 20 38.2**	**0.0**
	baz=98							
WAT1	**Susitna Watana**	76.52	332	P		**P**	**15 20 38.2**	**-0.1**
	baz=96							
H24K	**Noodor Dome**	76.57	336	P		**P**	**15 20 38.2**	**-0.4**
	baz=97							
KONO	**Kongsberg**	76.57	31	*ce*P		**P**	**15 20 40.6**	**+2.0**
KONO				pmax		pmax		
	comp=Z,14nm,1.1s							
KONO	**Kongsberg**	76.57	31	*e*P		**P**	**15 20 40.1**	**+1.5**
CLZ	**Clausthal**	76.59	39	*e*P		**P**	**15 20 39.4**	**+0.5**
	comp=Z,18nm,1.0s,baz=269,slow=5.7							
BSEG	**Bad Segeberg**	76.63	37	*e*P		**P**	**15 20 39.7**	**+0.6**
	comp=Z,12nm,1.0s,baz=269,slow=5.7							
BSEG				*e*L		L	15 50 23.9	
	comp=Z,154nm,21.1s							
PMR	**Palmer**	76.68	331	P		**P**	**15 20 38.7**	**-0.5**
	baz=95							
SEW	**Seward**	76.72	330	P		**P**	**15 20 39.0**	**-0.5**
	baz=94							
FETA	**Feichten**	76.72	44	*i* P		**P**	**15 20 40.4**	**+0.4**
	comp=Z,40nm,1.2s,SNR=29							
RETA	**Reutte**	76.75	43	*i* P		**P**	**15 20 40.4**	**+0.4**
	comp=Z,23nm,1.2s,SNR=15							
ASSE	**Asse, Remlinge**	76.78	39	*e*P		**P**	**15 20 41.0**	**+1.1**
	comp=Z,99nm,1.9s,baz=269,slow=5.7							
F24K	**Squaw Lake**	76.78	337	P		**P**	**15 20 39.4**	**-0.4**
	baz=98							
MCK	**McKinley**	76.78	333	P		**P**	**15 20 39.4**	**-0.5**
	baz=96							
O22K	**Cooper Landing**	76.88	330	P		**P**	**15 20 40.1**	**-0.2**
	baz=94							
ZCCA	**Zocca**	76.90	47	IAmb		IAmb	15 21 12.0	
	comp=Z,42nm,1.3s							
NEA2	**Nenana**	76.93	334	IAmb		IAmb	15 20 49.2	
	comp=Z,20nm,1.0s							
NEA2	**Nenana**	76.93	334	P		**P**	**15 20 40.0**	**-0.6**
	baz=96,SNR=10							
RC01	**Rabbit Creek A**	76.93	331	P		**P**	**15 20 40.2**	**-0.5**
	baz=94							
MOTA	**Moosalm**	76.98	44	*e*P		**P**	**15 20 41.6**	**+0.1**
	comp=Z,19nm,1.0s,SNR=14							
SQTA	**Sankt Quirin**	77.05	44	*e*P		**P**	**15 20 42.1**	**+0.3**
	comp=Z,36nm,1.4s,SNR=18							
E24K	**Your Creek**	77.08	338	P		**P**	**15 20 40.5**	**-1.0**
	baz=97							
GRA1	**Grafenberg Arr**	77.08	41	IAmb		IAmb	15 20 43.7	
	comp=Z,59nm,1.7s							
GRF	**Grafenberg Arr**	77.08	41	*e*P		**P**	**15 20 42.3**	**+0.5**
	comp=Z,67nm,1.8s,baz=269,slow=5.7							
GRF				*e*L		L	16 03 37.5	
	comp=Z,237nm,21.7s							
FUR	**Furstenfeldbru**	77.10	43	*e*P		**P**	**15 20 42.4**	**+0.5**
	comp=Z,57nm,1.4s,baz=269,slow=5.7							
FUR				*e*L		L	16 04 21.3	
	comp=Z,158nm,21.5s							
I23K	**Minto, Yukon-K**	77.11	335	IAmb		IAmb	15 20 51.5	
	comp=Z,76nm,2.0s							
I23K	**Minto, Yukon-K**	77.11	335	P		**P**	**15 20 41.2**	**-0.4**
	baz=96							
SLKM	**Skilak Lake**	77.13	330	IAmb		IAmb	15 20 55.8	
	comp=Z,24nm,0.8s							
FLTG	**Flechtingen**	77.13	38	*e*P		**P**	**15 20 42.2**	**+0.3**
	comp=Z,34nm,1.2s,baz=269,slow=5.7							
M22K	**Willow**	77.16	331	P		**P**	**15 20 41.5**	**-0.4**
	baz=94							
GORT1	**Trebel**	77.19	38	*e*P		**P**	**15 20 43.0**	**+0.8**
	comp=Z,31nm,1.3s,baz=269,slow=5.7							
H23K	**Yukon River**	77.25	335	P		**P**	**15 20 42.0**	**-0.4**
	baz=96							
NBO00	**NORSAR Array S**	77.25	30	IAmb		IAmb	15 20 44.8	
	comp=Z,24nm,0.9s							
NC204	**NORSAR Array S**	77.26	29	IAmb		IAmb	15 20 52.2	
	comp=Z,28nm,1.1s							
CUT	**Chulitna**	77.28	332	P		**P**	**15 20 42.1**	**-0.4**
	baz=94							
WATA	**Walderalm**	77.30	44	*e*P		**P**	**15 20 43.0**	**-0.3**
	comp=Z,10nm,0.9s,SNR=8.6							
D24K	**Happy Valley**	77.33	339	P		**P**	**15 20 42.5**	**-0.3**
	baz=97							
BRSE	**Bradley Lake S**	77.34	329	P		**P**	**15 20 42.6**	**-0.4**
	baz=93							
MOX	**Moxa**	77.34	40	*e*P		**P**	**15 20 43.3**	**+0.1**
	comp=Z,31nm,1.9s,baz=269,slow=5.7							
MOX				*e*L		L	16 03 17.3	
	comp=Z,138nm,20.3s							
WTTA	**Wattenberg**	77.34	44	*i* P		**P**	**15 20 43.7**	**+0.2**
	comp=Z,25nm,1.3s,SNR=9.5							
TRF	**Thorofare Moun**	77.36	333	IAmb		IAmb	15 21 25.1	
	comp=Z,35nm,1.1s							
TRF	**Thorofare Moun**	77.36	333	P		**P**	**15 20 43.1**	**-0.2**
	baz=94,SNR=12							
NEUB	**Neuenburg**	77.45	40	*e*P		**P**	**15 20 44.4**	**+0.7**
	comp=Z,29nm,1.0s,baz=269,slow=5.7							
NB2	**NORSAR Subarra**	77.46	30	P		**P**	**15 20 44.2**	**+0.5**
	comp=Z,49nm,1.2s,baz=266,slow=5.9							
NB2	**NORSAR Subarra**	77.46	30	P		**P**	**15 20 44.2**	**+0.5**
NOA	**NORSAR Array B**	77.46	30	P		**P**	**15 20 43.7**	**0.0**
	comp=Z,16nm,1.1s,baz=265,slow=5.7,SNR=19							
NOA				LR		LR	15 49 49.3	
	comp=Z,142nm,22.0s,baz=280,slow=32							
	comp=Z,16nm,1.1s							
E23K	**Chandalar**	77.50	338	P		**P**	**15 20 43.3**	**-0.6**
	baz=96							
L22K	**Petersville**	77.52	332	P		**P**	**15 20 43.6**	**-0.4**
	baz=94							
G23K	**Bananza Creek**	77.52	336	P		**P**	**15 20 43.8**	**-0.2**
	baz=95							
TOLK	**Toolik Lake Re**	77.54	338	P		**P**	**15 20 43.7**	**-0.4**
	baz=96							
NC303	**NORSAR Array S**	77.55	29	IAmb		IAmb	15 20 54.5	
	comp=Z,51nm,1.2s							
CAPN	**Captain Cook N**	77.60	330	P		**P**	**15 20 44.2**	**-0.2**
	baz=93							
NC602	**NORSAR Array S**	77.61	30	*e*P		**P**	**15 20 43.5**	**-0.9**
NC602				IAmb		IAmb	15 20 46.4	
	comp=Z,19nm,1.0s							
NC602	**NORSAR Array S**	77.61	30	IAmb		IAmb	15 20 54.3	
	comp=Z,40nm,1.2s							
COLD	**Coldfoot**	77.64	337	P		**P**	**15 20 44.4**	**-0.1**
	baz=95							
KTH	**Kantishna Hill**	77.65	333	IAmb		IAmb	15 20 55.7	
	comp=Z,49nm,1.3s							
MLY	**Manley**	77.68	335	IAmb		IAmb	15 20 56.1	
	comp=Z,45nm,1.7s							
MLY	**Manley**	77.68	335	P		**P**	**15 20 44.5**	**-0.4**
	baz=94,SNR=6.7							
PLN	**Plauen**	77.69	40	*e*P		**P**	**15 20 45.6**	**+0.5**
	comp=Z,11nm,1.3s,baz=269,slow=5.7							
NC405	**NORSAR Array S**	77.71	29	IAmb		IAmb	15 20 54.9	
	comp=Z,36nm,1.1s							
ROTZ	**Rotzenmuhle**	77.72	41	*e*P		**P**	**15 20 45.9**	**+0.6**
	comp=Z,7.5nm,1.5s,baz=269,slow=5.7							
HOM	**Homer**	77.80	329	P		**P**	**15 20 45.4**	**-0.1**
	baz=92							
SKT	**Skwentna**	77.84	331	P		**P**	**15 20 45.6**	**-0.2**
	baz=93							
TANN	**Tannenbergstha**	77.88	40	*e*P		**P**	**15 20 46.9**	**+0.6**
	comp=Z,31nm,1.2s,baz=269,slow=5.7							
ABTA	**Abfaltersbach**	77.95	44	*i* P		**P**	**15 20 46.8**	**0.0**
	comp=Z,26nm,1.2s,SNR=11							
D23K	**Nanushuk River**	77.98	339	IAmb		IAmb	15 20 55.9	
	comp=Z,18nm,1.0s							
D23K	**Nanushuk River**	77.98	339	P		**P**	**15 20 46.4**	**0.0**
	baz=95							
H22K	**Ishtalitna Cre**	78.00	335	P		**P**	**15 20 46.5**	**-0.1**
	baz=94							
NSS	**Namsos**	78.01	26	*e*P		**P**	**15 20 48.4**	**+1.8**
NSS				IAmb		IAmb	15 20 55.8	
	comp=Z,36nm,1.1s							
C23K	**Itkillik River**	78.03	340	P		**P**	**15 20 46.7**	**+0.1**
	baz=95							
LESA	**Schwarzleotal**	78.05	43	*e*P		**P**	**15 20 47.4**	**+0.1**
	comp=Z,30nm,1.3s,SNR=10							
STAL	**STALIGIAL**	78.10	45	IAmb		IAmb	15 20 48.9	
	comp=Z,36nm,1.3s							
CESX	**Cesi**	78.10	48	IAmb		IAmb	15 20 49.0	
	comp=Z,40nm,1.3s							
G22K	**Bettles**	78.13	337	P		**P**	**15 20 47.2**	**0.0**
	baz=94							
RJOB	**Jozberg**	78.13	43	*e*P		**P**	**15 20 47.9**	**+0.2**
	comp=Z,14nm,1.4s,baz=269,slow=5.7							
SPCR	**Spurr Chakacha**	78.13	331	P		**P**	**15 20 47.3**	**-0.2**
	baz=92							
WET	**Wettzell**	78.16	42	*e*P		**P**	**15 20 48.4**	**+0.5**
	comp=Z,17nm,1.2s,baz=269,slow=5.7							
WET				*e*L		L	16 04 13.9	
	comp=Z,252nm,21.7s							
CAST	**Castle Rocks**	78.17	333	IAmb		IAmb	15 21 29.4	
	comp=Z,17nm,1.0s							
CAST	**Castle Rocks**	78.17	333	P		**P**	**15 20 47.3**	**-0.3**
	baz=93,SNR=9.5							
PPLA	**Purkeypile**	78.19	332	IAmb		IAmb	15 21 02.6	
	comp=Z,23nm,0.8s							
PPLA	**Purkeypile**	78.19	332	P		**P**	**15 20 47.7**	**-0.2**
	baz=92,SNR=5.7							
I21K	**Tanana**	78.21	335	IAmb		IAmb	15 20 54.6	
	comp=Z,15nm,0.9s							
I21K	**Tanana**	78.21	335	P		**P**	**15 20 47.3**	**-0.4**
	baz=93,SNR=11							
KDAK	**Kodiak Island**	78.23	327	LR		LR	15 56 43.3	
	comp=Z,573nm,19.6s,baz=82,slow=37							
KDAK	**Kodiak Island**	78.23	327	P		**P**	**15 20 47.4**	**-0.6**
	baz=91							
CHUM	**Lake Minchumin**	78.29	333	P		**P**	**15 20 47.7**	**-0.5**
	baz=93,SNR=13							
O20K	**Slope Mountain**	78.30	329	P		**P**	**15 20 48.0**	**-0.4**
	baz=92							
F22K	**John River**	78.42	337	P		**P**	**15 20 48.7**	**-0.2**
	baz=94							
HSKC	**Hora Svate Kat**	78.50	40	*e*P		**P**	**15 20 50.8**	**+1.1**
KBA	**Koelnbreinsper**	78.51	44	*e*P		**P**	**15 20 50.0**	**0.0**
	comp=Z,33nm,1.2s,SNR=11							
LEIR	**Leirfjorden**	78.57	24	*e*P		**P**	**15 20 51.4**	**+1.7**
LEIR				IAmb		IAmb	15 20 59.2	
	comp=Z,28nm,0.9s							
H21K	**Melozitna Rive**	78.58	335	IAmb		IAmb	15 20 58.1	
	comp=Z,55nm,1.8s							
H21K	**Melozitna Rive**	78.58	335	P		**P**	**15 20 49.6**	**-0.2**
	baz=92,SNR=10							
M20K	**Styx River**	78.60	331	IAmb		IAmb	15 21 04.2	
	comp=Z,21nm,0.7s							
M20K	**Styx River**	78.60	331	P		**P**	**15 20 49.6**	**-0.5**
	baz=91,SNR=11							
P19K	**Oil Pt**	78.60	329	P		**P**	**15 20 49.2**	**-0.8**
	baz=91							
OHAK	**Old Harbor**	78.61	327	P		**P**	**15 20 49.1**	**-0.9**
	baz=90							
KHC	**Kasperske Hory**	78.62	42	*e*P		**P**	**15 20 50.6**	**+0.2**
KHC				*e*S		**S**	**15 30 49.9**	**+2.1**
KHC				MLR		MLR		
	comp=Z,300nm,21.5s							
KHC	**Kasperske Hory**	78.62	42	IAmb		IAmb	15 20 52.3	
	comp=Z,25nm,1.1s							
KHC	**Kasperske Hory**	78.62	42	*e*P		**P**	**15 20 50.6**	**+0.2**
KHC				*e*S		**S**	**15 30 49.9**	**+2.1**
KHC				AMS		AMS	16 04 00.0	
	comp=Z,300nm,21.5s							
HFS	**Hagfors**	78.65	30	P		**P**	**15 20 50.3**	**0.0**
	comp=Z,3.9nm,0.8s,baz=251,slow=4.4,SNR=5.3							
HFS				LR		LR	15 51 07.3	
	comp=Z,178nm,20.6s,baz=287,slow=32							
	comp=Z,3.9nm,0.8s							
VAGH	**Vaagaholmen**	78.66	24	*e*P		**P**	**15 20 53.1**	**+2.9**
VAGH				IAmb		IAmb	15 20 59.7	
	comp=Z,18nm,0.9s							
PRED	**Cave del Predi**	78.68	44	IAmb		IAmb	15 21 00.6	
	comp=Z,25nm,1.2s							
BIOA	**Bad Ischl, Aus**	78.70	43	*e*P		**P**	**15 20 50.7**	**-0.1**
	comp=Z,16nm,1.1s,SNR=10							
GEC2	**GERESS Array S**	78.71	42	P		**P**	**15 20 51.3**	**+0.4**
GEC2				IAmb		IAmb	15 20 52.5	
	comp=Z,22nm,1.0s							
GEC2	**GERESS Array S**	78.71	42	*e*P		**P**	**15 20 51.2**	**+0.2**
	comp=Z,23nm,1.0s,baz=269,slow=5.7							
GERES	**GERESS Array B**	78.71	42	P		**P**	**15 20 50.7**	**-0.3**
	comp=Z,9.5nm,0.8s,baz=256,slow=5.1,SNR=66							
	comp=Z,9.5nm,0.8s							
GERES	**GERESS Array B**	78.71	42	P		**P**	**15 20 51.4**	**+0.4**
GERES	**GERESS Array B**	78.71	42	P		**P**	**15 20 51.4**	**+0.4**
MYKA	**Terra Mystica**	78.73	44	*e*P		**P**	**15 20 51.1**	**0.0**
	comp=Z,14nm,0.7s,SNR=7.3							
Q19K	**Cape Douglas,**	78.81	328	P		**P**	**15 20 50.3**	**-0.9**
	baz=90							
BRG	**Berggiesshubel**	78.82	40	*e*P		**P**	**15 20 51.8**	**+0.4**
	comp=Z,19nm,1.1s,baz=269,slow=5.7							
BRG	**Berggiesshubel**	78.82	40	*e*P		**P**	**15 20 51.6**	**+0.3**
BRG				Amp			15 20 53.4	
	comp=Z,20nm,1.1s							
BRG				⇑PP		**PcP**	**15 20 59.1**	**-1.1**
BRG				Amp			15 21 01.5	
	comp=Z,13nm,1.1s							
BRG	**Berggiesshubel**	78.82	40	S		**S**	**15 30 54.0**	**+4.3**
G21K	**Allakaket**	78.90	336	IAmb		IAmb	15 21 00.5	
	comp=Z,28nm,1.1s							
G21K	**Allakaket**	78.90	336	P		**P**	**15 20 51.1**	**-0.4**
	baz=92							
F21K	**Alatna River**	78.92	337	P		**P**	**15 20 51.0**	**-0.7**
	baz=92							
VOJS	**Vojsko**	78.92	45	*i* P		**P**	**15 20 52.4**	**+0.2**
ZVC	**Zvikov**	79.02	41	*e*P		**P**	**15 20 52.1**	**-0.4**
B22K	**Teshekpuk Lake**	79.03	340	IAmb		IAmb	15 21 01.2	
	comp=Z,24nm,1.1s							
B22K	**Teshekpuk Lake**	79.03	340	P		**P**	**15 20 51.5**	**-0.6**
	baz=93							
K20K	**Telida**	79.06	333	P		**P**	**15 20 51.5**	**-1.0**
	baz=91							
SII	**Sitkinak Islan**	79.10	326	P		**P**	**15 20 51.5**	**-1.4**
	baz=90							
J20K	**Nowinta River**	79.11	334	IAmb		IAmb	15 21 03.1	
	comp=Z,43nm,1.2s							
J20K	**Nowinta River**	79.11	334	P		**P**	**15 20 52.0**	**-0.7**
	baz=91,SNR=11							
CKRC	**Cesky Krumlov**	79.11	42	*e*P		**P**	**15 20 52.7**	**-0.4**
CKRC				MLR		MLR		
	comp=Z,200nm,20.6s							
CKRC	**Cesky Krumlov**	79.11	42	*e*P		**P**	**15 20 52.7**	**-0.4**
CKRC				AMS		AMS	16 04 30.0	
	comp=Z,200nm,20.6s							
MOA	**Molln**	79.11	43	*e*P		**P**	**15 20 53.1**	**0.0**
	comp=Z,5.7nm,0.7s,SNR=11							
E21K	**Killik River**	79.14	338	P		**P**	**15 20 52.2**	**-0.7**
	baz=92							
O19K	**Port Alsworth**	79.15	330	P		**P**	**15 20 52.4**	**-0.6**
	baz=90							
M19K	**Big River Lodg**	79.19	331	IAmb		IAmb	15 21 26.4	
	comp=Z,45nm,1.5s							
M19K	**Big River Lodg**	79.19	331	P		**P**	**15 20 52.7**	**-0.5**
	baz=90							
N19K	**Bonanza Creek**	79.23	330	P		**P**	**15 20 52.5**	**-1.1**
	baz=90							
I20K	**Naaghedeneel**	79.26	334	P		**P**	**15 20 53.0**	**-0.5**
	baz=91							
MOZS	**Mozjanca**	79.30	45	*e*P		**P**	**15 20 54.5**	**+0.3**
SESA	**Seetaler Alpe,**	79.35	44	*e*P		**P**	**15 20 54.1**	**-0.6**
	comp=Z,8.4nm,0.8s,SNR=5.0							
OBKA	**Obir**	79.36	44	*e*P		**P**

OSTC **Ostas** 80.28 40 *e*P P 15 20 59.6 +0.2
GCSA **Galena City Sc** 80.29 334 P P 15 20 58.7 -0.3
baz=89
B20K **Meade River** 80.30 340 P P 15 20 58.9 -0.1
baz=89
WINA **Alland / Wiene** 80.32 43 *e*P P 15 21 00.0 +0.4
comp=Z,0.6nm,0.2s,SNR=10
G19K **Purcell Mounta** 80.34 336 P P 15 20 59.5 +0.1
baz=89,SNR=10
DPC **Dobruska-Polom** 80.35 40 *e*P P 15 20 59.9 +0.1
DPC **Dobruska-Polom** 80.35 40 *e*P P 15 20 59.9 +0.1
E19K **Redstone River** 80.37 337 IAmb IAmb 15 21 08.2
comp=Z,89nm,1.9s
E19K **Redstone River** 80.37 337 P P 15 20 59.3 -0.2
baz=89
Q16K **King Salmon** 80.38 328 P P 15 20 59.3 -0.3
baz=88
KRUC **Moravsky** 80.47 42 *e*P P 15 21 00.7 +0.3
RONA **Rosalia, Austr** 80.49 43 *e*P P 15 21 00.8 +0.2
comp=Z,8.6nm,1.1s,SNR=11
O17K **Koliganek Bris** 80.56 329 P P 15 21 00.2 -0.5
baz=88
N17K **Nushagak Hills** 80.57 330 P P 15 21 00.2 -0.5
baz=88
VRAC **Vranov** 80.59 41 ⇓P P 15 21 02.1 +1.0
VRAC **Vranov** 80.59 41 ⇓P P 15 21 02.1 +1.0
VRAC **Vranov** 80.59 41 *e*P P 15 21 01.2 +0.1
F19K **Shaleruckik Mo** 80.60 336 P P 15 21 00.6 -0.1
baz=88
M17K **Holitna River** 80.66 331 P P 15 21 00.9 -0.2
baz=88
D19K **Kuna River** 80.67 338 P P 15 21 01.0 -0.1
baz=88
TRO **Tromso** 80.79 21 *e*P P 15 20 59.5 -2.1
TRO IAmb IAmb 15 21 10.8
comp=Z,43nm,1.1s
H18K **Honhosa River** 80.91 335 IAmb IAmb 15 21 15.0
comp=Z,43nm,1.5s
H18K **Honhosa River** 80.91 335 P P 15 21 02.3 -0.2
baz=87
G18K **Tagagawik** 80.99 335 IAmb IAmb 15 21 10.9
comp=Z,35nm,1.3s
G18K **Tagagawik** 80.99 335 P P 15 21 02.5 -0.4
baz=87,SNR=13
K17K **Iditarod** 81.00 332 IAmb IAmb 15 21 17.3
comp=Z,22nm,0.8s
K17K **Iditarod** 81.00 332 P P 15 21 02.5 -0.4
baz=87
L17K **Donlin** 81.03 332 P P 15 21 03.0 -0.1
baz=87
P16K **Nushagak River** 81.05 328 P P 15 21 02.6 -0.7
baz=87
O16K **Kokwok River B** 81.07 329 P P 15 21 02.7 -0.7
baz=87
MODS **Modra-Piesok** 81.10 42 *e*P P 15 21 04.7 +0.9
MODS pmax pmax
comp=Z,85nm,1.3s
MODS **Modra-Piesok** 81.10 42 *e*P P 15 21 04.7 +0.9
MORC **Moravsky Berou** 81.17 41 ⇑P P 15 21 06.1 +1.9
MORC **Moravsky Berou** 81.17 41 ⇑P P 15 21 06.1 +1.9
MORC **Moravsky Berou** 81.17 41 IAmb IAmb 15 21 06.5
comp=Z,30nm,1.4s
MORC **Moravsky Berou** 81.17 41 *e*P P 15 21 04.6 +0.4
C19K **Lookout Ridge** 81.18 339 IAmb IAmb 15 21 13.1
comp=Z,52nm,1.6s
C19K **Lookout Ridge** 81.18 339 P P 15 21 04.1 +0.2
baz=87,SNR=5.1
SMOL **Smolenice** 81.19 42 *e*P P 15 21 04.9 +0.6
SMOL pmax pmax
comp=Z,16nm,1.7s
STEB **Steborice** 81.31 41 *e*P P 15 21 05.4 +0.5
BLY **Banja Luka** 81.31 46 ⇑P P 15 21 06.4 +1.4
J17K **VABM Dome** 81.31 333 P P 15 21 04.3 -0.3
baz=86
JETT **Jettan, Norway** 81.31 21 *e*P P 15 21 05.2 +0.7
JETT IAmb IAmb 15 21 13.6
comp=Z,82nm,1.2s
JAVC **Velka Javorina** 81.33 42 *e*P P 15 21 06.4 +1.3
F18K **Selawik** 81.36 336 P P 15 21 04.6 -0.1
baz=86
N16K **Nishlik Lake** 81.36 330 P P 15 21 04.9 -0.1
baz=86
M16K **Timber Creek** 81.41 330 P P 15 21 04.9 -0.3
baz=86
TIP **Timpagrande** 81.47 52 IAmb IAmb 15 21 06.2
comp=Z,41nm,1.6s
H17K **Granite Mounta** 81.58 334 IAmb IAmb 15 21 18.3
comp=Z,73nm,2.0s
H17K **Granite Mounta** 81.58 334 P P 15 21 05.8 -0.2
baz=86
L16K **Owhat River** 81.61 331 P P 15 21 06.6 +0.4
L16K IAmb IAmb 15 21 49.8
comp=Z,22nm,1.2s
L16K **Owhat River** 81.61 331 P P 15 21 05.6 -0.6
baz=86,SNR=5.5
A19K **Wainwright** 81.63 340 P P 15 21 05.7 -0.4
baz=86
E18K **Tukpahlearik C** 81.67 337 IAmb IAmb 15 21 15.9
comp=Z,20nm,1.1s
E18K **Tukpahlearik C** 81.67 337 P P 15 21 06.0 -0.5
baz=86
C18K **Utukok River** 81.79 338 IAmb IAmb 15 21 15.8
comp=Z,22nm,1.2s
C18K **Utukok River** 81.79 338 P P 15 21 06.5 -0.6
baz=85
SRO **Srobarova** 81.84 43 *e*P P 15 21 09.0 +1.3
SRO **Srobarova** 81.84 43 *e*P P 15 21 09.0 +1.3
G17K **Kiwalik Mounta** 81.84 335 P P 15 21 06.8 -0.6
baz=85
O15K **Ungalikthiuk R** 81.99 329 P P 15 21 08.2 -0.1
baz=85
I17K **Unalakleet** 82.00 333 IAmb IAmb 15 21 51.3
comp=Z,50nm,1.4s
I17K **Unalakleet** 82.00 333 P P 15 21 08.2 +0.1
baz=85
F17K **Baldwin Pennin** 82.00 336 P P 15 21 08.3 +0.1
baz=85
J16K **Anvik River** 82.01 333 P P 15 21 07.7 -0.6
baz=85
N15K **Kwethluk River** 82.04 330 P P 15 21 08.4 -0.1
baz=85
S14K **Fog Glacier** 82.09 326 P P 15 21 08.5 -0.5
baz=85
E17K **Hotham Inlet** 82.17 337 P P 15 21 08.8 -0.2
baz=84,SNR=11
MORH **Mrgy, Hungar** 82.21 44 ⇑P P 15 21 10.5 +0.8
CHNA **Chernabura Isl** 82.24 324 P P 15 21 08.8 -0.8
baz=85
M15K **Kasigluk River** 82.28 330 P P 15 21 09.2 -0.6
baz=85
KTK1 **Kautokeino** 82.36 21 *e*P P 15 21 10.4 +0.3
KTK1 IAmb IAmb 15 21 19.4
comp=Z,37nm,0.9s
C17K **DeLong Mountai** 82.54 338 P P 15 21 10.4 -0.6
baz=83
G16K **Koyuk River** 82.56 335 P P 15 21 11.1 -0.1
baz=84
L15K **Ungalak Mounta** 82.57 331 P P 15 21 10.8 -0.5
baz=84
D17K **Noatak River** 82.59 337 P P 15 21 10.9 -0.3
baz=83
H16K **Elim** 82.59 334 P P 15 21 11.0 -0.3
baz=84
SDPT **Sand Point** 82.70 325 P P 15 21 11.5 -0.5
baz=84
O14K **Tigyukauivet M** 82.72 329 P P 15 21 11.5 -0.5
baz=84
N14K **Kuskokwak Cree** 82.86 330 P P 15 21 12.6 -0.2
baz=84
M14K **Bethel** 82.90 330 IAmb IAmb 15 21 21.9
comp=Z,20nm,0.9s
M14K **Bethel** 82.90 330 P P 15 21 13.0 +0.1
baz=84
PDG **Podgorica** 83.03 48 IAmb IAmb 15 21 16.1
comp=Z,16nm,1.0s
ARA0 **ARCESS Array S** 83.10 21 *e*P P 15 21 14.1 +0.2
ARCES **ARCESS Array B** 83.10 21 P P 15 21 13.5 -0.4
comp=Z,5.6nm,0.7s,baz=272,slow=4.2,SNR=13
ARCES LR LR 15 53 18.8
comp=Z,105nm,21.3s,baz=302,slow=32
ARCES **ARCESS Array B** 83.10 21 P P 15 21 13.5 -0.4
ARCES IAmb IAmb 15 21 23.1
comp=Z,29nm,1.1s
L14K **Kuka Creek** 83.18 331 P P 15 21 14.5 +0.1
baz=83
PPT **Papeete** 83.20 251 LR LR 15 50 44.4
comp=Z,162nm,22.0s,baz=82,slow=30
PPT2 **Papeete2** 83.20 251 *e*LQ LQ 15 43 53.1
comp=Z,551nm,32.0s
PPT2 *e*LR LR 15 47 13.9
comp=Z,296nm,25.8s
PPT2 *e*LR LR 15 47 29.7
comp=Z,246nm,33.2s
G15K **Niukluk** 83.31 335 P P 15 21 15.3 +0.2
baz=82
C16K **Lisburne Hills** 83.36 338 P P 15 21 15.4 +0.2
baz=81
F15K **North Star Dit** 83.47 335 P P 15 21 15.9 0.0
baz=82
M13K **Dall Lake** 83.62 330 P P 15 21 16.6 0.0
baz=82
ANM **Nome** 83.94 334 P P 15 21 18.4 +0.1
baz=81
K13K **Kusilvak Mount** 84.03 332 P P 15 21 18.8 +0.1
baz=81
F14K **Arctic Creek** 84.19 335 P P 15 21 19.7 +0.1
baz=80
SIRR **Siria** 84.28 44 ⇑P P 15 21 21.0 +0.6
TBI **Tubuai** 84.33 245 *e*LQ LQ 15 44 18.2
comp=Z,2μm,34.5s
TBI *e*LR LR 15 47 42.6
comp=Z,1μm,25.8s
KOLS **Kolonicke sedl** 84.34 41 *e*P P 15 21 22.7 +2.0
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS **Kolonicke sedl** 84.34 41 *e*P P 15 21 22.7 +2.0
BZS **Buzias** 84.34 45 ⇑P P 15 21 21.6 +0.9
BZS **Buzias** 84.34 45 ⇑P P 15 21 21.6 +0.9
MDVR **Moldovita** 84.52 46 ⇑P P 15 21 21.8 +0.1
FINES **FINESS Array B** 84.60 29 P P 15 21 21.4 -0.3
comp=Z,8.4nm,0.9s,baz=298,slow=3.0,SNR=19
FINES LR LR 15 54 35.8
comp=Z,142nm,21.7s,baz=302,slow=32
comp=Z,8.4nm,0.9s
FINES **FINESS Array B** 84.60 29 P P 15 21 22.0 +0.3
FINES **FINESS Array B** 84.60 29 P P 15 21 22.0 +0.3
TNA **Tin City** 84.83 336 P P 15 21 22.9 +0.1
baz=79
DRGR 84.93 44 ⇓P P 15 21 23.8 0.0
DRGR 84.93 44 P P 15 21 24.2 +0.4
M11K **Mekoryuk** 85.02 330 P P 15 21 23.7 -0.1
baz=80
GZR **Gura Zlata** 85.18 45 ⇑P P 15 21 25.8 +0.8
GZR **Gura Zlata** 85.18 45 P P 15 21 26.7 +1.7
MARR **Marisel-Cluj** 85.22 44 ⇓P P 15 21 26.1 +0.8
BMR **Baia Mare** 85.33 43 ⇑P P 15 21 27.2 +1.6
BMR **Baia Mare** 85.33 43 ⇑P P 15 21 27.2 +1.6
VSU **Vasula** 85.45 32 *ce*P P 15 21 25.7 -0.3
VSU pmax pmax
comp=Z,40nm,1.7s
ARCR **ARCALIA** 86.00 43 ⇑P P 15 21 29.7 +0.7
NACGM **Naroch** 86.14 35 ⇓*i*P P 15 21 30.4 +0.9
comp=Z,56nm,1.0s,baz=281
MDB **Medias** 86.17 44 ⇑P P 15 21 31.6 +1.7
MDB **Medias** 86.17 44 ⇑P P 15 21 31.6 +1.7
RNPP8 **Varash** 86.24 39 P P 15 21 31.3 +1.2
RNPP9 **Sopachiv** 86.25 39 P P 15 21 31.3 +1.2
RNPP5 **Staryi Chortor** 86.28 39 P P 15 21 31.2 +0.9
UNV **Unalaska Valle** 86.39 324 P P 15 21 30.1 -0.6
BUR08 **Bucovina Ar. S** 86.47 42 IAmb IAmb 15 21 42.4
comp=Z,19nm,1.1s
ARR **Arges** 86.47 45 ⇑P P 15 21 32.4 +0.9
BURAR **Bucovina Array** 86.48 42 ⇑P P 15 21 32.4 +0.9
BURAR **Bucovina Array** 86.48 42 ⇑P P 15 21 32.4 +0.9
BURAR **Bucovina Array** 86.48 42 P P 15 21 32.5 +1.0
VOIR 86.75 45 P P 15 21 33.4 +0.5
comp=Z,18nm,1.1s
GAMB **Gambell** 86.82 334 P P 15 21 32.7 +0.1
baz=75
MNK **Minsk** 86.84 35 *i*P P 15 21 34.3 +1.3
comp=E,13nm,0.9s
MNK *i*P P 15 21 34.3 +1.3
comp=N,30nm,0.9s
MNK *i*P P 15 21 34.3 +1.3
comp=Z,50nm,0.9s,baz=282
MNK *i*PP PP 15 24 56.6 +1.3
MNK *i*PPP PPP 15 26 50.9
MNK *i*S SKSac 15 32 00.5 0.0
MNK *i*SS SS 15 37 55.5 +2.7
MNK *i*SSS SSS 15 41 28.1
MNK *i*LQ LQ 15 54 09.4
MNK *i*LR LR 16 01 14.9
MNK *i*LRM MLR 16 02 35.3
comp=E,102nm,18.7s
MNK *i*LRM MLR 16 02 49.3
comp=Z,178nm,19.7s
MNK *i*LRM MLR 16 03 03.8
comp=N,123nm,18.0s
MNK **Minsk** 86.84 35 *i*P P 15 21 34.2 +1.3
MNK *i* 15 24 56.5
MNK *i*PPP PPP 15 26 50.8
MNK *i*S SKSac 15 32 00.4 0.0
MNK *i*SS SS 15 37 55.5 +2.7
MNK *i*SSS SSS 15 41 28.1
MNK pmax pmax
comp=Z,50nm,0.9s
MNK pmax pmax
comp=N,30nm,0.9s
MNK pmax pmax
comp=E,13nm,0.9s
MNK MLR MLR
comp=E,102nm,19.0s
MNK MLR MLR
comp=Z,178nm,20.0s
MNK MLR MLR
comp=N,123nm,18.0s
DOPR **Dopca** 86.89 44 ⇓P P 15 21 27.5 -6.0
MLR **Muntele Rosu** 87.36 44 ⇑P P 15 21 36.6 +0.7
MLR **Muntele Rosu** 87.36 44 P P 15 21 36.6 +0.7
MI28 **Mi28,Pidlybu** 87.44 39 P P 15 21 35.7 -0.2
COVR **Voineasa-Covas** 87.47 44 ⇓P P 15 21 37.9 +1.6
ONER **Baraj Valea Uz** 87.51 44 ⇓P P 15 21 37.6 +1.2
LUBAR **Lubar, Ukraine** 87.70 40 P P 15 21 37.9 +0.7
SPIA **Saint Paul Isl** 87.75 328 P P 15 21 37.4 +0.1
baz=76
VRI **Vrincioaia** 87.83 44 ⇓P P 15 21 39.1 +1.1
VRI **Vrincioaia** 87.83 44 ⇓P P 15 21 39.1 +1.1
VRI **Vrincioaia** 87.83 44 P P 15 21 38.5 +0.5
comp=N,19nm,1.4s
ISR **Istrita** 87.85 45 P P 15 21 38.4 +0.3
comp=N,25nm,1.1s
RDO **Rodhopi** 87.87 49 IAmb IAmb 15 21 39.7
comp=Z,21nm,1.0s
LOZB **Loznitsa** 88.22 46 ⇑P P 15 21 40.3 +0.4
AK20 **Malin Array Si** 88.31 39 P P 15 21 39.9 -0.2
AK19 **Malin Array Si** 88.31 39 P P 15 21 39.9 -0.2
AK21 **Malin Array Si** 88.32 39 P P 15 21 40.0 -0.2
AK22 **Malin Array Si** 88.34 39 P P 15 21 40.1 -0.2
AK18 **Malin Array Si** 88.35 39 P P 15 21 40.1 -0.2
AK17 **Malin Array Si** 88.35 39 P P 15 21 40.1 -0.2
AK13 **Malin Array Si** 88.37 39 P P 15 21 40.2 -0.2
AK16 **Malin Array Si** 88.38 39 P P 15 21 40.3 -0.2
IDI **Anoyia** 88.43 55 P P 15 21 42.0 +0.9
AKASG **Malin Array Be** 88.45 39 P P 15 21 40.6 -0.2
comp=Z,1.9nm,0.7s,baz=268,slow=4.4,SNR=14
AKASG LR LR 15 59 19.9
comp=Z,156nm,19.2s,baz=254,slow=34
comp=Z,1.9nm,0.7s
AKASG **Malin Array Be** 88.45 39 *ce*P P 15 21 40.9 +0.1
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG **Malin Array Be** 88.45 39 P P 15 21 40.6 -0.2
AKBB **Malin Array Si** 88.45 39 *ce*P P 15 21 41.1 +0.3
AKBB pmax pmax
comp=Z,7.0nm,1.1s
SORM **Soroca** 88.45 42 ⇓P P 15 21 41.0 +0.1
SORM **Soroca** 88.45 42 ⇓P P 15 21 41.0 +0.1
BELA **Belgrano 2** 89.35 173 P P 15 21 46.4 +2.1
BELA IAmb IAmb 15 21 49.9
comp=Z,24nm,1.3s
VNA1 **Neumayer--Stat** 89.81 163 ⇑P P 15 21 51.9 +5.3
comp=Z,13nm,0.8s
VNA2 **Neumayer--Watz** 90.20 163 ⇓P P 15 21 53.1 +4.6
comp=Z,4.3nm,0.7s,baz=302,slow=5.1
TSUM **Tsumeb** 90.62 109 LR LR 15 59 35.6
comp=Z,144nm,18.7s,baz=314,slow=34
KLMR **Klimovskoe** 91.03 28 *e*P P 15 21 51.1 -1.5
KLMR pmax pmax
comp=Z,38nm,1.4s
OBN **Obninsk** 91.53 33 *de*P P 15 21 55.3 +0.3
OBN *e* 15 25 32.3
OBN *e*PPP PPP 15 27 30.0
OBN *e*S SKSac 15 32 22.0 -6.0
OBN pmax pmax
comp=Z,25nm,1.0s
SNAA **Sanae** 91.85 163 P P 15 21 56.0 -0.2
comp=Z,7.7nm,1.1s,baz=300,slow=3.4,SNR=7.4
comp=Z,7.7nm,1.1s
MOS **Moscow** 91.89 33 *e*P P 15 21 56.0 -0.7
MOS *e* 15 25 38.1
BILL **Bilibino** 93.23 342 *i*P P 15 22 02.1 -0.6
BILL pmax pmax
comp=Z,7.0nm,1.4s
RAR **Rarotonga** 93.32 249 LR LR 15 57 59.8
comp=Z,210nm,18.3s,baz=120,slow=32
TROLL **Troll, Antarti** 93.54 163 ⇑P P 15 22 08.9 +4.8
comp=Z,273nm,0.8s
LPSR **Galich'ya Gora** 93.69 35 *e*P P 15 22 05.4 +0.3
LPSR pmax pmax
comp=Z,27nm,0.9s
VORR **Voronezh** 94.18 36 *e*P P 15 22 07.6 +0.2
VORR pmax pmax
comp=Z,19nm,0.8s
BRTR **Keskin Array B** 94.21 49 P P 15 22 07.0 -1.0
comp=Z,1.9nm,0.7s,baz=259,slow=4.4,SNR=12
BRTR LR LR 16 01 28.4
comp=Z,48nm,20.6s,baz=296,slow=34
comp=Z,1.9nm,0.7s
BRTR **Keskin Array B** 94.21 49 *ce*P P 15 22 08.5 +0.5
BRTR pmax pmax
comp=Z,3.0nm,0.9s
VSR **Storozhevoye** 94.32 37 *e*P P 15 22 07.2 -0.8
VSR pmax pmax
comp=Z,13nm,1.1s
SUR **Sutherland** 95.50 122 LR LR 16 00 44.0
comp=Z,218nm,20.4s,baz=302,slow=33
VRH **Novokhopyorsk** 95.82 36 *e*P P 15 22 12.0 -2.9
VRH pmax pmax
comp=Z,9.0nm,1.0s
SHEM **Shemya Is, Ala** 97.74 327 LR LR 16 06 45.8
comp=Z,98nm,21.3s,baz=99,slow=36
EIL **Elat** 97.97 58 LR LR 16 09 20.5
comp=Z,99nm,18.3s,baz=272,slow=37
TIXI **Tiksi** 98.15 354 *i*P P 15 22 24.6 -0.4
TIXI pmax pmax
comp=Z,6.0nm,0.9s
BELG **Belogornoye** 98.63 33 LR LR 16 04 11.5
comp=Z,206nm,20.7s,baz=282,slow=34
BELG **Belogornoye** 98.63 33 *i*P P 15 22 26.9 -0.6
BELG pmax pmax
comp=Z,1.0nm,0.8s
LBTB **Lobatse** 98.79 114 LR LR 16 04 09.8
comp=Z,213nm,20.0s,baz=262,slow=34
KIV **Kislovodsk** 99.21 43 *e*P Pdif 15 22 29.0 -1.5
KIV pmax pmax
comp=Z,4.0nm,1.1s
QSPA **South Pole Qui** 99.43 180 LR LR 16 10 34.3
comp=Z,184nm,18.7s,baz=161,slow=37
KBZ **Khabaz** 99.44 43 *i*P Pdif 15 22 31.6 +0.2
KBZ pmax pmax
comp=Z,1.0nm,1.0s
SEY **Seymchan** 100.93 342 *i*P Pdif 15 22 37.0 -0.6
SEY pmax pmax
comp=Z,2.0nm,1.4s
ARTI **Arti** 101.78 27 *i*P Pdif 15 22 43.7 +2.2
ARTI pmax pmax
comp=Z,14nm,2.9s
MAK **Makhachkala** 102.82 42 *i*P Pdif 15 22 45.1 -1.3
MAK *i* 15 27 03.5
MAK *e* 15 33 19.8
MAK *e*PS PS 15 36 01.1 -6.7
MAK *e*SS SS 15 41 41.1 +0.6
MAK pmax pmax
comp=Z,18nm,0.3s
KURK **Kurchatov** 114.13 21 *i*PKIKP PKiKP 15 27 26.5 -1.4
AAK **Ala-Archa** 118.78 29 *i*PKIKP PKiKP 15 27 37.8 +0.4
WMQ **Urumqi** 123.20 19 *e*PKP PKiKP 15 27 47.3 +1.4
WMQ L L
comp=Z,150nm,23.1s
CN2 **Changchun** 125.24 347 *e*PKP PKiKP 15 27 51.0 +1.2
MJAR **Matsushiro Arr** 127.23 332 PKP PKPdf 15 27 52.4 -1.1
comp=Z,2.1nm,0.9s,baz=19,slow=2.7,SNR=4.8
HHC **Hu-ho-hao-te** 129.96 359 *e*PKP PKPdf 15 27 55.1 -3.7
GTA2 **Gaotai** 130.38 11 *e*PKP PKPdf 15 27 58.2 -1.4
GTA2 L L
comp=Z,380nm,18.4s
GTA2 L L
comp=Z,180nm,17.5s
GTA2 L L
comp=Z,260nm,18.4s
KSRS **Korea Array** 130.49 341 PKP PKPdf 15 27 59.8 +0.2
comp=Z,1.8nm,0.9s,baz=37,slow=1.0,SNR=4.6
NJ2 **Nanjing** 137.93 349 *e*P PKiKP 15 28 19.1 +3.3
NJ2 pmax pmax
comp=Z,22nm,0.5s
NJ2 **Nanjing** 137.93 349 *e*PKP PKPdf 15 28 13.3 -0.5
STKA **Stephens Creek** 143.32 228 PKP PKPdf 15 28 23.6 +0.2
comp=Z,5.5nm,1.0s,baz=108,slow=3.2,SNR=6.8
PZH **PanZhiHua** 143.35 13 PKP PKiKP 15 28 26.7 -0.5
TNCH **TengChong** 143.91 18 ⇓PKP PKPab 15 28 22.3 +0.2
TNCH pPKP pPKPdf 15 28 27.2 -0.6
TNCH sPKP sPKPdf 15 28 29.7 +0.9
TNCH L L
comp=Z,290nm,9.3s
TNCH L L
comp=Z,350nm,9.4s
TNCH L L
comp=Z,300nm,12.6s
GYA **Guiyang** 144.16 5 ⇓PKP PKPab 15 28 22.6 -0.3
KMI2 **Kunming** 144.88 12 ⇑PKP PKPab 15 28 24.0 -1.7
KMI2 pPKP pPKPdf 15 28 29.7 +0.2
SSLB **Suanglung** 145.35 342 PKPbc 15 28 26.3 -0.8
INKA **Innaminka** 145.94 234 PKPdf 15 28 27.9 -0.3
CMAR **Chiang Mai Arr** 150.15 22 PKP PKPdf 15 28 34.6 -0.8
comp=Z,5.8nm,1.0s,baz=314,slow=3.1,SNR=27
CMAR PKPbc sPKPdf 15 28 39.3 +0.1
comp=Z,5.7nm,1.0s,baz=346,slow=2.8,SNR=12
ASAR **Alice Springs** 153.28 235 PKP PKPdf 15 28 38.2 -1.8
comp=Z,1.3nm,1.0s,baz=101,slow=1.6,SNR=6.6
ASAR PKPbc sPKPdf 15 28 44.8 +1.0
comp=Z,4.0nm,1.0s,baz=116,slow=1.9,SNR=19
WRA **Warramunga Arr** 154.44 243 PKP PKPdf 15 28 40.4 -1.2
comp=Z,4.4nm,1.0s,baz=83,slow=1.2,SNR=5.1
WRA PKPbc PKiKP 15 28 51.1 +1.0
comp=Z,12nm,1.0s,baz=110,slow=1.8,SNR=21

IDC **12** *15:09:29.9±5.0, 17°.12N×105°.21W, h0km, mb4.2/5, mbtmp4.3/9, ML4.6/3, MS4.3/24, Error ellipse: s-maj=80.0km s-min=68.8km az=164.0*
GFZ **12** *15:09:35.8±0.6, 17°.N±7°×10°.5W±°, h10km, M4.3/25, mb4.4/25*
NEIC **12** *15:09:37.1±1.1, 17°.71N±0°.09×105°.40W±0°.08, h10km±1km, mb4.7/336, Md4.6/39(MEX), Error ellipse: s-maj=15.5km s-min=11.0km az=208.0*
MEX **12** *15:09:38.3±0.5, 17°.85N×105°.39W, h10km, MD4.6*
GCMT **12** *15:09:39.1±0.2, 17°.83N±0°.01×105°.50W±0°.01, h18km±1km, MW5.0/115, Moment Tensor Solution. s41,c50; s115,c163; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.01±.11; Mθθ-1.47±.09; Mϕϕ2.49±.11; Mrθ-0.13±.22; Mθϕ-3.23±.09; Mϕr1.32±.23; Best double couple: Mo3.98600×10^16 NP1:ϕ♭285.00000°, δ72.00000°, λ-179.00000°. NP2:ϕ♭195.00000°, δ89.00000°, λ-18.00000°. Principal axes: T 4.5660, Plg12.0000°, Azm242.0000°; N -1.1510, Plg72.0000°, Azm13.0000°; P -3.4050, Plg13.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 12 15:09:36.3±0.5, 17.72N±0°.05×105°.38W±0°.05, h10km, n527, σ1♀35/415, mb4.7/131, MS4.3/22, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**1.78**	**47**	*e*P		**Pn**	**15 10 04.3**	**-2.8**
CDAR				*e*S		**Sn**	**15 10 25.7**	**-4.1**
CJM	**Chamela**	**1.80**	**10**	*e*P		**Pn**	**15 10 04.1**	**-3.3**
CJM				*i*S		**Sn**	**15 10 24.8**	**-5.6**
MMIG	**Aquila**	**2.02**	**73**			**Pn**	**15 10 08.9**	**-1.5**
MMIG						**Sn**	**15 10 31.7**	**-4.0**
MMIG	**Aquila**	**2.02**	**73**	*e*P		**Pn**	**15 10 08.9**	**-1.5**
MMIG				*i*S		**Sn**	**15 10 31.7**	**-4.0**

CEGR Campo Tres 2.20 41 Pn 15 10 10.6 -2.5
CEGR Sn 15 10 36.0 -4.6
CEGR Campo Tres 2.20 41 eP Pn 15 10 10.6 -2.5
CEGR eS Sn 15 10 36.0 -4.6
INCO Volcan de Coli 2.46 43 eP Pn 15 10 15.6 -1.4
INCO eS Sn 15 10 44.1 -3.2
ZIIG Zihuatanejo 3.73 91 Pn 15 10 31.2 -2.8
ZIIG Sn 15 11 17.5 -0.6
ZIIG Zihuatanejo 3.73 91 eP Pn 15 10 31.2 -2.8
ZIIG i S Sn 15 11 17.5 -0.6
MOIG Morelia 4.43 63 Pn 15 10 44.4 +0.6
MOIG Morelia 4.43 63 eP Pn 15 10 46.2 +2.5
ARIG Puente Sto Nin 4.82 83 Pn 15 10 50.9 +1.8
ARIG Sn 15 11 41.3 -3.7
ARIG Puente Sto Nin 4.82 83 eP Pn 15 10 50.9 +1.8
ARIG eS Sn 15 11 41.3 -3.7
IGIG Irapuato, Guan 4.88 51 eP Pn 15 10 46.6 -3.4
IGIG eS Sn 15 11 47.5 +1.0
CAIG El Cayaco 4.93 97 Pn 15 10 52.6 +2.1
CAIG Sn 15 11 41.6 -6.0
CAIG El Cayaco 4.93 97 eP Pn 15 10 52.6 +2.1
CAIG i S Sn 15 11 41.6 -6.0
MEIG Mezcala 5.49 87 Pn 15 11 01.0 +2.7
MEIG Sn 15 12 01.8 +0.2
MEIG Mezcala 5.49 87 eP Pn 15 11 01.0 +2.7
MEIG i S Sn 15 12 01.8 +0.2
DAIG Los Arroyos 5.51 96 Pn 15 10 59.8 +1.2
DAIG Sn 15 11 58.9 -3.2
DAIG Los Arroyos 5.51 96 eP Pn 15 10 59.8 +1.2
DAIG i S Sn 15 11 58.9 -3.2
TOVM TOLUCA 5.63 73 eP Pn 15 11 01.3 +0.8
PLIG Platanillo 5.63 82 Pn 15 11 02.7 +2.5
PLIG Sn 15 12 05.9 +0.8
PLIG Platanillo 5.63 82 eP Pn 15 11 02.7 +2.5
PLIG i S Sn 15 12 05.9 +0.8
ZAIG Zacatecas 5.68 27 Pn 15 11 01.7 +0.7
ZAIG Zacatecas 5.68 27 eP Pn 15 11 02.7 +1.7
ZAIG eS Sn 15 12 05.7 -0.8
ZAIG Zacatecas 5.68 27 P Pn 15 11 04.4 +3.4
MAVM Malinalco, Edo 5.72 77 eP Pn 15 11 00.3 -1.3
INVM La Marquesa 5.90 74 eP Pn 15 11 03.3 -0.9
AOVM Tlapan 5.95 74 eP Pn 15 11 05.8 +0.8
MZVM 6.02 75 eP Pn 15 11 06.6 +1.1
CRIG Cruz Grande 6.05 98 Pn 15 11 04.9 -1.0
CRIG Sn 15 12 13.0 -2.3
CRIG Cruz Grande 6.05 98 eP Pn 15 11 04.9 -1.0
CRIG i S Sn 15 12 13.0 -2.3
UNM Universidad Na 6.10 74 Pn Pn 15 11 08.2 +1.3
UNM Universidad Na 6.10 74 P Pn 15 11 09.6 +2.7
YAIG Yautepec 6.11 78 Pn 15 11 09.3 +2.5
YAIG Sn 15 12 19.3 +2.4
YAIG Yautepec 6.11 78 eP Pn 15 11 09.3 +2.5
YAIG i S Sn 15 12 19.3 +2.4
MPVM San Francisco 6.22 75 eP Pn 15 11 07.2 -1.2
MGIG Malinaltepec 6.46 93 eP Pn 15 11 10.8 -0.8
MGIG eS Sn 15 12 20.7 -4.8
TLIG Tlapa 6.50 90 Sn Sn 15 12 27.3 +0.8
TLIG Tlapa 6.50 90 eP Pn 15 11 13.7 +1.5
TLIG eS Sn 15 12 22.9 -3.6
DEIG Demacu 6.53 66 eP Pn 15 11 14.6 +1.9
DEIG eS Sn 15 12 30.2 +2.8
RPIG Rio Verde 6.56 50 eP Pn 15 11 13.0 0.0
RPIG eS Sn 15 12 22.9 -5.0
HLIG Huajuapan de L 7.22 88 eP Pn 15 11 24.4 +2.2
HLIG eS Sn 15 12 41.3 -3.1
TXIG Tlaxiaco 7.28 92 eP Pn 15 11 28.1 +5.1
TXIG eS Sn 15 12 44.0 -1.9
PDIG Papasquiaro 7.29 360 eP Pn 15 11 25.6 +2.5
PDIG eS Sn 15 12 44.1 -1.9
SLBS Sierra La Lagu 7.31 325 Pn 15 11 23.5 +0.2
SLBS Sierra La Lagu 7.31 325 eP Pn 15 11 22.4 -0.9
SLBS eS Sn 15 12 46.5 0.0
SLBS Sierra La Lagu 7.31 325 P Pn 15 11 23.2 -0.1
LPIG La Paz 7.84 325 Pn Pn 15 11 32.8 +2.3
29nm,0.3s,baz=193,slow=4.2,SNR=6.4
LPIG LR LR 15 13 47.9
comp=Z,4μm,18.3s,baz=162,slow=31
50nm,0.3s
CMIG Matias Romero 10.04 92 LR LR 15 14 55.5
comp=Z,245nm,19.4s,baz=282,slow=33
SRIG Santa Rosalia 11.46 328 P Pn 15 12 22.2 +2.1
TXAR Lajitas Array 11.67 7 Pn Pn 15 12 27.3 +4.3
0.5nm,0.3s,baz=185,slow=13,SNR=85
TXAR LR LR 15 16 53.6
comp=Z,1μm,20.6s,baz=186,slow=36
16nm,1.0s
MNTX Cornudas Mount 13.92 360 P Pn 15 12 57.2 +3.5
ODSA Odessa 14.57 10 Pn 15 13 03.2 +0.6
121A Cookes Peak, D 14.91 352 Pn 15 13 07.3 -0.1
HKT Hockley 14.97 34 Pn 15 13 09.2 +1.1
HKT Hockley 14.97 34 P Pn 15 13 09.7 +1.6
DUN6 Lazy B Ranch 15.15 348 Pn Pn 15 13 11.0 +0.4
TUC Tucson 15.33 342 Pn 15 13 13.8 +0.9
TUC Tucson 15.33 342 P Pn 15 13 15.1 +2.3
POST Post 15.68 12 Pn 15 13 18.4 +0.9
POST IAmb IAmb 15 13 35.4
comp=Z,49nm,0.9s
ESQI Esquipulas 15.73 99 Pn 15 13 18.9 +0.8
MTO3 Montecristo 15.75 100 Pn 15 13 19.0 +0.4
SBM South Baldy 16.27 355 Pn Pn 15 13 25.5 +0.1
MSTX Muleshoe 16.35 8 IAmb IAmb 15 13 42.3
comp=Z,80nm,1.2s
DKNS Dickens 16.38 13 IAmb IAmb 15 13 33.2
comp=Z,71nm,1.2s
WTFS Witchita Falls 17.14 20 Pn Pn 15 13 36.4 +0.4
WTFS IAmb IAmb 15 13 53.9
comp=Z,51nm,1.1s
ANMO Albuquerque 17.19 357 P P 15 13 40.0 +1.6
comp=Z,3.5nm,1.0s,baz=170,slow=13,SNR=13
ANMO LR LR 15 19 51.3
comp=Z,916nm,21.9s,baz=180,slow=35
ANMO Albuquerque 17.19 357 P 15 13 38.5 +0.1
ANMO Albuquerque 17.19 357 P P 15 13 40.0 +1.6
AMTX Amarillo 17.41 10 IAmb IAmb 15 13 52.9
comp=Z,55nm,1.2s
Y14A Wickenburg 17.54 339 Pn 15 13 41.5 +0.5
W18A Petrified Fore 17.76 348 IAmb IAmb 15 13 49.0
comp=Z,75nm,1.4s
WMOK Wichita Mounta 17.95 18 P Pn 15 13 46.6 +0.6
X34A Smith Ranch, M 18.12 20 P 15 13 49.0 +0.6
PFO Pinyon Flats O 18.69 330 P Pn 15 13 56.7 +1.5
comp=Z,0.2nm,0.3s,baz=141,slow=11,SNR=5.1
comp=Z,2.9nm,0.8s
PFO Pinyon Flats O 18.69 330 P Pn 15 13 56.3 +1.1
RTBA Rita Blanca 18.79 7 IAmb IAmb 15 14 06.7
comp=Z,44nm,1.2s
FNO Franklin 18.86 21 IAmb IAmb 15 14 21.0
comp=Z,59nm,1.4s
W35A Tecumseh 18.95 22 IAmb IAmb 15 14 05.8
comp=Z,35nm,0.8s
Z41A Richland Creek 19.16 34 IAmb IAmb 15 14 03.7
comp=Z,89nm,1.2s
OK029 Liberty Lake 19.33 20 IAmb IAmb 15 14 21.8
comp=Z,41nm,1.0s
MVCO Mesa Verde 19.61 353 IAmb IAmb 15 14 38.9
comp=Z,48nm,1.4s
MVCO Mesa Verde 19.61 353 P Pn 15 14 07.7 +1.2
NOKA Waynoka 19.69 16 IAmb IAmb 15 14 26.7
comp=Z,55nm,1.2s
VBMS Vicksburg 19.71 40 P P 15 14 04.4 -1.6
VBMS IAmb IAmb 15 14 14.9
comp=Z,106nm,1.5s
MIAR Mount Ida 19.80 30 P 15 14 07.2 +0.2
MIAR IAmb IAmb 15 14 19.6
comp=Z,42nm,1.4s
MIAR Mount Ida 19.80 30 P Pn 15 14 08.7 +0.3
CROK Carrier 19.82 18 IAmb IAmb 15 14 20.6
comp=Z,34nm,0.9s
SDCO Great Sand Dun 19.95 360 Pn Pn 15 14 10.8 +0.3
SDCO IAmb IAmb 15 14 32.5
comp=Z,38nm,1.4s
PV05 Paradox Valley 20.55 352 P P 15 14 16.0 +0.7
PV05 IAmb IAmb 15 14 28.2
comp=Z,82nm,1.5s
T35A Sooner Cattle 20.66 20 P 15 14 16.6 +0.3
T35A IAmb IAmb 15 14 29.1
comp=Z,44nm,1.1s
GWY Greenwater Val 20.94 334 P P 15 14 19.9 +0.4
WHAR Wooly Hollow 21.02 31 P 15 14 20.1 -0.1
WHAR IAmb IAmb 15 14 33.0
comp=Z,38nm,1.2s
FCAR Ozark Folk Cen 21.58 30 P P 15 14 26.3 +0.1
FCAR IAmb IAmb 15 14 32.3
comp=Z,38nm,1.4s
SRU San Rafael Swe 21.78 349 P P 15 14 29.1 +0.6
SRU IAmb IAmb 15 14 34.0
comp=Z,42nm,1.2s
ISCO Idaho Springs 22.00 360 P 15 14 31.6 +0.5
ISCO Idaho Springs 22.00 360 P P 15 14 32.5 +1.4
TMUT Trail Mountain 22.09 348 IAmb IAmb 15 14 42.4
comp=Z,37nm,1.2s
LCAR Lake Charles 22.20 32 IAmb IAmb 15 14 39.9
comp=Z,38nm,1.3s
P18A Preston Nutter 22.24 350 IAmb IAmb 15 14 47.7
comp=Z,45nm,1.1s
TIN Tinemaha, Big 22.34 332 IAmb IAmb 15 14 39.4
comp=Z,45nm,1.2s
O20A White River Ci 22.48 354 IAmb IAmb 15 15 07.3
comp=Z,34nm,1.3s
LRAL Lakeview Retre 22.49 44 P 15 14 37.2 +1.1
LRAL IAmb IAmb 15 14 52.1
comp=Z,46nm,1.0s
PKD Bear Valley Ra 22.59 326 P 15 14 37.4 +0.3
PKD IAmb IAmb 15 14 45.3
comp=Z,34nm,1.4s
KSU1 Kansas State U 22.64 18 IAmb IAmb 15 14 47.2
comp=Z,44nm,0.9s
TPH Tonopah 22.78 335 IAmb IAmb 15 14 51.5
comp=Z,24nm,1.2s
MPU Maple Canyon 22.87 348 IAmb IAmb 15 14 44.7
comp=Z,32nm,1.3s
T42A Van Buren 22.99 30 IAmb IAmb 15 15 04.9
comp=Z,21nm,1.2s
BSUT Blindstream Ca 23.21 350 IAmb IAmb 15 15 23.2
comp=Z,30nm,1.4s
DUG Dugway, Tooele 23.30 345 IAmb IAmb 15 14 48.7
comp=Z,26nm,1.2s
DUG Dugway, Tooele 23.30 345 P P 15 14 44.8 +0.2
X48A Hartselle 23.36 41 P 15 14 46.0 +0.9
X48A IAmb IAmb 15 15 02.0
comp=Z,26nm,0.7s
Y49A Blount Mountai 23.39 43 P P 15 14 46.1 +0.8
Y49A IAmb IAmb 15 14 55.2
comp=Z,33nm,0.9s
R40A Maddies Statio 23.49 27 IAmb IAmb 15 14 54.6
comp=Z,27nm,1.2s
NVAR Mina Array Bea 23.53 334 P P 15 14 48.0 +1.1
comp=Z,3.2nm,1.0s,baz=150,slow=8.6,SNR=16
NVAR LR LR 15 23 59.1
comp=Z,451nm,18.9s,baz=162,slow=36
comp=Z,3.2nm,1.0s
NVAR Mina Array Bea 23.53 334 P P 15 14 47.7 +0.8
CCM Cathedral Cave 23.75 29 P P 15 14 49.3 +0.5
CCM Cathedral Cave 23.75 29 P P 15 14 50.7 +1.9
TCUT Toone Canyon 23.89 349 IAmb IAmb 15 14 58.9
comp=Z,38nm,1.3s
WVT Waverly 24.04 37 P 15 14 52.6 +1.1
WVT Waverly 24.04 37 P P 15 14 53.9 +2.4
BGU Big Grassy Mou 24.05 346 IAmb IAmb 15 15 00.2
comp=Z,29nm,1.5s
FVM French Village 24.07 30 IAmb IAmb 15 15 36.5
comp=Z,45nm,0.8s
WAKR Walker 24.08 332 IAmb IAmb 15 14 57.2
comp=Z,23nm,1.2s
P38A Dawn 24.13 23 IAmb IAmb 15 15 04.3
comp=Z,34nm,1.3s
HWUT Hardware Ranch 24.39 349 P P 15 14 57.0 +1.9
ELK Elko 24.47 342 P P 15 14 56.5 +0.7
comp=Z,3.4nm,1.0s,baz=176,slow=6.9,SNR=7.7
ELK LR LR 15 23 58.8
comp=Z,740nm,18.2s,baz=142,slow=35
comp=Z,3.4nm,1.0s
PNTR Pine Nut 24.63 333 IAmb IAmb 15 15 01.2
comp=Z,22nm,1.1s
PAHR Pah Rah Range 25.05 334 IAmb IAmb 15 15 17.1
comp=Z,25nm,1.2s
PDAR Pinedale Array 25.22 353 P P 15 15 03.2 +0.6
comp=Z,8.7nm,1.0s,baz=169,slow=9.1,SNR=40
PDAR LR LR 15 24 56.9
comp=Z,572nm,18.5s,baz=152,slow=36
comp=Z,8.7nm,1.0s
PDAR Pinedale Array 25.22 353 P 15 15 01.9 -0.7
L34A Svendsen Farm, 25.37 16 IAmb IAmb 15 15 11.1
comp=Z,17nm,0.8s
AHID Auburn Hatcher 25.44 350 IAmb IAmb 15 15 19.7
comp=Z,20nm,1.4s
AHID Auburn Hatcher 25.44 350 P P 15 15 06.0 +1.6
ORV Oroville 25.87 331 IAmb IAmb 15 15 13.8
comp=Z,18nm,1.4s
FXWY Fox Creek 26.28 351 P 15 15 11.7 -0.4
FXWY IAmb IAmb 15 15 20.2
comp=Z,29nm,1.1s
RSSD Black Hills 26.35 2 P P 15 15 12.6 -0.2
YPP Pitchstone Pla 26.86 351 P P 15 15 17.8 +0.3
HLID Hailey 26.87 345 P P 15 15 19.3 +1.9
ECSD EROS Data Cent 26.97 14 P P 15 15 19.0 +0.8
WVOR Wild Horse Val 27.11 338 P P 15 15 21.6 +2.2
YHL Hebgen Lake 27.49 351 IAmb IAmb 15 15 31.9
comp=Z,18nm,1.3s
KHBM Hayfork Bally 27.55 330 IAmb IAmb 15 15 35.2
comp=Z,21nm,1.4s
YBH Yreka Blue Hor 28.16 332 LR LR 15 26 14.0
comp=Z,575nm,19.4s,baz=134,slow=35
K05A Summer Lake 28.21 335 IAmb IAmb 15 15 42.2
comp=Z,17nm,1.4s
DLMT Dillon 28.21 349 IAmb IAmb 15 15 33.1
comp=Z,19nm,1.2s
BOZ Bozeman (W) 28.28 351 IAmb IAmb 15 15 38.5
comp=Z,13nm,1.2s
L04D Klamath Falls 28.37 333 IAmb IAmb 15 15 33.5
comp=Z,17nm,1.3s
K02D Willamette Mer 29.36 332 IAmb IAmb 15 15 41.5
comp=Z,24nm,1.3s
SPMN Marine on St. 29.37 18 IAmb IAmb 15 15 46.9
comp=Z,26nm,1.4s
MSO Missoula 29.88 348 IAmb IAmb 15 15 48.0
comp=Z,20nm,1.2s
H04A Detroit Lake 30.36 336 IAmb IAmb 15 15 59.6
comp=Z,16nm,1.3s
E38A The Farm, Brul 31.00 19 IAmb IAmb 15 16 36.0
comp=Z,33nm,1.0s
AGMN Agassiz Nation 31.48 12 IAmb IAmb 15 16 05.4
comp=Z,13nm,1.1s
AGMN Agassiz Nation 31.48 12 P P 15 15 59.7 +1.6
NEW Newport 31.94 345 LR LR 15 28 41.2
comp=Z,486nm,18.3s,baz=135,slow=35
NEW Newport 31.94 345 IAmb IAmb 15 16 16.0
comp=Z,11nm,1.4s
NEW Newport 31.94 345 P P 15 16 03.0 +0.8
LTY Liberty 32.03 340 IAmb IAmb 15 16 23.1
comp=Z,17nm,1.5s
EYMN Ely 32.22 18 P 15 16 05.3 +0.6
EYMN Ely 32.22 18 P P 15 16 05.8 +1.2
EPLO Experimental L 33.24 14 P 15 16 13.7 +0.2
EPLO IAmb IAmb 15 16 20.4
comp=Z,11nm,0.9s
ULM Lac du Bonnet 33.34 11 IAmb IAmb 15 16 21.7
comp=Z,8.2nm,1.1s
SDV Santo Domingo 34.88 100 LR LR 15 30 17.2
comp=Z,317nm,19.3s,baz=73,slow=36
EDM Edmonton 35.97 352 IAmb IAmb 15 16 48.6
comp=Z,24nm,1.3s
FFC Flin Flon 37.03 3 P P 15 16 46.8 +0.7
M65A Busby, Falmout 38.02 44 P P 15 16 54.7 0.0
baz=242
BBB Bella Bella 38.77 338 LR LR 15 32 24.8
comp=Z,181nm,19.7s,baz=116,slow=35
HG4B Hotspring 40.03 335 P P 15 17 11.7 +0.3
V35K Ketchikan 42.54 338 P P 15 17 32.2 +0.3
baz=142
CRAG Craig 43.20 337 P P 15 17 37.5 +0.3
baz=140
TAOE Nuku Hiva Isla 43.32 235 eLR LR 15 29 30.1
comp=Z,679nm,23.9s
T35M Bob Quinn 43.40 340 P P 15 17 39.1 +0.1
baz=144,SNR=5.4
WRAK Wrangell Islan 43.65 339 P P 15 17 41.1 +0.2
baz=141
U33K Whale Pass 43.69 338 P P 15 17 41.3 +0.1
baz=140
S34M Telegraph Cree 44.44 341 P P 15 17 47.2 0.0
baz=144
KOTAN Kotaneelee Air 44.45 347 P P 15 17 47.3 0.0
baz=154
DLBC Dease Lake 44.53 342 P P 15 17 47.7 -0.4
baz=146,SNR=7.4
YKAW1 Yellowknife Wh 45.17 354 P P 15 17 53.1 +0.1
YKAW1 IAmb IAmb 15 18 03.2
comp=Z,9.5nm,1.1s
YKA Yellowknife Ar 45.19 354 P P 15 17 52.7 -0.4
comp=Z,2.0nm,0.9s,baz=170,slow=7.6,SNR=13
comp=Z,2.0nm,0.9s
SIT Sitka 45.20 337 P P 15 17 53.1 -0.2
baz=138
S32K Killisnoo 45.24 338 P P 15 17 53.3 -0.3
baz=139
YKAW3 Yellowknife Wh 45.26 354 IAmb IAmb 15 18 00.5
comp=Z,8.9nm,1.2s
WTLY Watson Lake, Y 45.59 344 P P 15 17 56.8 +0.4
baz=148
R33M Jennings River 45.59 342 IAmb IAmb 15 18 00.7
comp=Z,12nm,1.2s
R33M Jennings River 45.59 342 P P 15 17 56.0 -0.6
baz=145,SNR=8.1
Q32M Nakina River 45.64 341 IAmb IAmb 15 17 59.8
comp=Z,12nm,1.1s
Q32M Nakina River 45.64 341 P P 15 17 56.6 -0.4
baz=143
R32K Eaglecrest 45.84 339 P P 15 17 58.5 +0.1
baz=140,SNR=6.8
S31K Pelican 46.20 338 P P 15 18 00.4 -0.8
baz=138
P32M Atlin 46.59 341 P P 15 18 02.7 -1.7
baz=142
P33M Teslin, Yukon 46.81 342 P P 15 18 05.2 -0.9
baz=143
SKAG Skagway 47.01 340 P P 15 18 06.9 -0.7
baz=140
WRGLY Wrigley 47.16 349 P P 15 18 09.0 +0.4
baz=156
PLBC Pleasant Camp 47.36 339 P P 15 18 10.3 0.0
baz=138
N32M Quiet Lake 47.64 342 P P 15 18 12.3 -0.2
baz=143
WHY Whitehrse 47.79 341 P P 15 18 13.3 -0.5
baz=141
P29M Windy Craggy 47.96 339 P P 15 18 14.3 -0.7
baz=137
P30M Million Dollar 48.06 339 P P 15 18 15.9 +0.1
baz=138
O30N Mendenhall 48.26 340 IAmb IAmb 15 18 25.5
comp=Z,6.5nm,1.0s
O30N Mendenhall 48.26 340 P P 15 18 17.2 -0.1
baz=139
MMPY Sheldon Lake, 48.34 344 P P 15 18 17.9 0.0
baz=146,SNR=13
N31M Braeburn, Yuko 48.71 341 P P 15 18 20.8 +0.1
baz=140,SNR=6.9
O29M Mount Kennedy 48.74 339 IAmb IAmb 15 18 24.6
comp=Z,15nm,1.4s
O29M Mount Kennedy 48.74 339 P P 15 18 20.8 -0.3
baz=136
HYT Haines Junctio 48.76 340 IAmb IAmb 15 18 29.7
comp=Z,13nm,1.4s
HYT Haines Junctio 48.76 340 P P 15 18 20.9 -0.4
baz=138
M31M Drury Creek, Y 48.86 342 IAmb IAmb 15 18 24.3
comp=Z,8.3nm,1.2s
M31M Drury Creek, Y 48.86 342 P P 15 18 22.0 +0.1
baz=142,SNR=6.3
N30M Aishikik Lake 49.10 340 IAmb IAmb 15 18 27.2
comp=Z,13nm,1.5s
N30M Aishikik Lake 49.10 340 P P 15 18 23.2 -0.6
baz=139,SNR=5.9
YUK6 Outpost Mounta 49.13 339 P P 15 18 23.7 -0.6
baz=137
PINM Pinnacle 49.19 338 P P 15 18 24.2 -0.3
baz=134
YUK4 Talbot Arm 49.52 340 P P 15 18 27.1 -0.1
baz=137
O28M Mount Upton 49.64 338 P P 15 18 28.4 +0.2
baz=135,SNR=5.4
BRWY Burwash Landin 49.67 340 P P 15 18 28.2 +0.1
baz=136
YUK8 Steele Glacier 49.85 339 P P 15 18 29.4 -0.4
baz=135,SNR=8.6
M30M Minto, Yukon 49.85 342 P P 15 18 29.9 +0.4
baz=140
LOGN Logan Glacier 49.96 338 IAmb IAmb 15 18 43.0
comp=Z,13nm,1.4s
GRNC Granite Creek 50.17 338 IAmb IAmb 15 18 44.5
comp=Z,18nm,1.1s
M29M Somme Creek 50.27 341 IAmb IAmb 15 18 36.1
comp=Z,11nm,1.3s
M29M Somme Creek 50.27 341 P P 15 18 32.6 -0.2
baz=138,SNR=6.8
YUK3 Moose Creek 50.44 339 P P 15 18 33.2 -0.9
baz=135
KAIM Kayak Island 50.64 336 P P 15 18 35.1 -0.4
baz=129
L29M L29M 50.66 341 P P 15 18 35.8 +0.2
baz=138,SNR=15
CRQE Cirque 50.67 337 P P 15 18 35.9 +0.1
baz=131
BVCY Beaver Creek 51.02 340 P P 15 18 38.8 +0.5
baz=135,SNR=5.9
K29M Barlow Dome 51.03 342 IAmb IAmb 15 18 41.5
comp=Z,12nm,1.2s
K29M Barlow Dome 51.03 342 P P 15 18 38.9 +0.4
baz=139,SNR=10
MCARA McCarthy VSAT 51.06 338 IAmb IAmb 15 18 42.7
comp=Z,13nm,1.0s
MCARA McCarthy VSAT 51.06 338 P P 15 18 38.2 -0.5
baz=132
Q23K Middleton Isla 51.11 334 P P 15 18 38.9 -0.1
baz=127
VRDI Verde Repeater 51.12 337 IAmb IAmb 15 18 42.3
comp=Z,15nm,1.2s
J30M Hart River 51.27 343 P P 15 18 40.2 -0.1
baz=141
M27K Edge Creek, AK 51.32 339 IAmb IAmb 15 18 43.7
comp=Z,15nm,1.3s
M27K Edge Creek, AK 51.32 339 P P 15 18 40.7 0.0
baz=134,SNR=8.7
BMRM Bremner River 51.37 337 P P 15 18 40.6 -0.4
baz=130
GLB Gilahina Butte 51.39 338 IAmb IAmb 15 18 44.9
comp=Z,17nm,1.2s
EYAK Cordova Ski Ar 51.55 336 P P 15 18 42.1 -0.1
baz=128
J29N Klondike Camp 51.70 343 P P 15 18 42.7 -0.7
baz=139
H31M Peel River 51.73 345 IAmb IAmb 15 19 12.9
comp=Z,16nm,1.5s
H31M Peel River 51.73 345 P P 15 18 43.9 +0.3
baz=144
M26K Nabesna, AK 51.73 339 IAmb IAmb 15 18 55.9
comp=Z,7.9nm,1.2s
M26K Nabesna, AK 51.73 339 P P 15 18 43.6 -0.1
baz=132
DAWY Dawson 51.75 342 P P 15 18 43.3 -0.5
baz=137
N25K Chitina, Valde 51.78 337 P P 15 18 43.9 -0.2
baz=130,SNR=5.7
BCAR Beaver Creek A 51.78 340 P P 15 18 45.1 +1.1
I30M Mount Dempster 51.78 344 P P 15 18 43.7 -0.4
baz=141
L27K Beaver Creek, 51.79 340 P P 15 18 43.5 -0.6
baz=134
P23K Montague Islan 51.88 335 P P 15 18 44.9 +0.1
baz=126
HARP HAARP 52.49 338 P P 15 18 49.2 -0.1
baz=130
K27K Chicken 52.55 341 IAmb IAmb 15 19 01.7
comp=Z,9.0nm,1.0s
G31M Satah River 52.63 346 P P 15 18 50.5 +0.3
baz=145,SNR=10
M24K Tolsona, Glenn 52.68 337 IAmb IAmb 15 18 54.5
comp=Z,16nm,1.0s
M24K Tolsona, Glenn 52.68 337 P P 15 18 50.6 -0.1
baz=129
EPYK Eagle Plains 52.77 345 IAmb IAmb 15 19 04.1
comp=Z,12nm,1.2s
EPYK Eagle Plains 52.77 345 P P 15 18 51.4 +0.1
baz=142
SEW Seward 52.78 334 P P 15 18 51.3 -0.1
baz=124
C36M Palulatuk 52.91 352 P P 15 18 52.3 +0.2
baz=158
I28M Miner Creek 52.93 343 P P 15 18 52.7 +0.2
baz=137
F31M Tsiigehtchic 52.94 347 P 15 18 53.2 +0.7
F31M Tsiigehtchic 52.94 347 P P 15 18 52.9 +0.4
baz=146,SNR=8.8
SCM Sheep Creek Mo 52.94 337 P P 15 18 52.1 -0.6
baz=127
KDAK Kodiak Island 52.96 331 P P 15 18 52.7 -0.1
baz=119

PAX	Paxson	52.97 338	P	P	15 18 53.0	+0.1	
	baz=130,SNR=6.2						
OHAK	Old Harbor	53.03 330	IAmb	IAmb	15 18 56.6		
	comp=Z,11nm,1.0s						
OHAK	Old Harbor	53.03 330	P	P	15 18 53.5	+0.2	
	baz=118						
M23K	Glacier View	53.07 336	P	P	15 18 53.6	0.0	
	baz=127						
H29M	Whitestone	53.08 344		P	15 18 54.0	+0.4	
H29M	Whitestone	53.08 344	P	P	15 18 53.8	+0.2	
	baz=140						
KNK	Knik Glacier	53.13 336	P	P	15 18 54.1	+0.1	
	baz=126						
SCRK	Sand Creek	53.13 340		P	15 18 54.9	+0.8	
SCRK			IAmb	IAmb	15 18 57.0		
	comp=Z,9.2nm,1.3s						
SCRK	Sand Creek	53.13 340	P	P	15 18 54.8	+0.7	
	baz=132,SNR=7.8						
BRSE	Bradley Lake S	53.13 333	P	P	15 18 54.1	+0.1	
	baz=122						
G30M	tAoh Zraii Nji	53.13 345	P	P	15 18 53.6	-0.4	
	baz=142						
SII	Sitkinak Islan	53.17 329	P	P	15 18 53.9	-0.5	
	baz=116						
RIDG	Independent Ri	53.26 339	P	P	15 18 55.1	+0.2	
	baz=131,SNR=17						
SML	Sawmill	53.31 336	P	P	15 18 55.6	+0.2	
SML			IAmb	IAmb	15 19 07.1		
	comp=Z,12nm,1.0s						
SML	Sawmill	53.31 336	P	P	15 18 55.6	+0.2	
	baz=126						
RC01	Rabbit Creek A	53.45 335	P	P	15 18 56.4	0.0	
	baz=124						
PMR	Palmer	53.49 336	IAmb	IAmb	15 18 58.9		
	comp=Z,7.0nm,0.9s						
PMR	Palmer	53.49 336	P	P	15 18 57.1	+0.4	
	baz=125						
GHO	Glory Hole Cre	53.52 336	IAmb	IAmb	15 19 08.2		
	comp=Z,12nm,1.2s						
G29M	Pine Creek	53.52 345	IAmb	IAmb	15 19 22.2		
	comp=Z,15nm,1.4s						
G29M	Pine Creek	53.52 345	P	P	15 18 56.9	+0.1	
	baz=140						
I27K	Kandik River	53.52 342	IAmb	IAmb	15 19 04.4		
	comp=Z,9.0nm,1.2s						
I27K	Kandik River	53.52 342	P	P	15 18 57.4	+0.5	
	baz=136						
F30M	Barrier River	53.53 346	P	P	15 18 57.8	+1.0	
F30M	Barrier River	53.53 346	P	P	15 18 57.3	+0.4	
	baz=143,SNR=7.1						
WAT6	Susitna Watana	53.55 337	P	P	15 18 57.6	+0.3	
	baz=127,SNR=7.0						
CHIR	Chirikof Islan	53.58 327	P	P	15 18 56.5	-0.8	
	baz=114						
INK	Inuvik	53.61 347	P	P	15 18 57.8	+0.4	
INK	Inuvik	53.61 347	P	P	15 18 57.5	+0.1	
	baz=146,SNR=11						
INK	Inuvik	53.61 347	P	P	15 18 58.0	+0.7	
K24K	Donnelly Dome	53.61 339	P	P	15 18 58.2	+0.7	
	baz=130						
DHY	Denali Highway	53.72 338	IAmb	IAmb	15 19 27.1		
	comp=Z,10nm,1.4s						
DHY	Denali Highway	53.72 338	P	P	15 18 59.1	+0.7	
	baz=128						
CAPN	Captain Cook N	53.85 334	P	P	15 18 59.7	+0.5	
	baz=122						
H27K	Steamboat Moun	53.95 343	IAmb	IAmb	15 19 01.8		
	comp=Z,8.0nm,1.3s						
H27K	Steamboat Moun	53.95 343	P	P	15 19 00.0	0.0	
	baz=136,SNR=6.2						
M22K	Willow	53.97 336	P	P	15 19 00.1	0.0	
	baz=124						
WAT1	Susitna Watana	54.00 337	P	P	15 19 00.4	0.0	
	baz=126						
J25K	Salcha River,	54.00 340	IAmb	IAmb	15 19 09.9		
	comp=Z,8.8nm,1.4s						
J25K	Salcha River,	54.00 340	P	P	15 19 00.6	+0.2	
	baz=131,SNR=5.4						
Q19K	Cape Douglas,	54.01 331	P	P	15 19 00.4	-0.1	
	baz=119						
O20K	Slope Mountain	54.12 333	P	P	15 19 01.4	0.0	
	baz=120						
P19K	Oil Pt	54.17 332	P	P	15 19 01.7	0.0	
	baz=120						
HDA	Harding Lake	54.40 339	IAmb	IAmb	15 19 11.9		
	comp=Z,8.7nm,1.3s						
HDA	Harding Lake	54.40 339	P	P	15 19 03.2	0.0	
	baz=129						
CUT	Chulitna	54.40 336	P	P	15 19 03.1	-0.2	
	baz=124						
G27K	Doyon Strip	54.40 343	P	P	15 19 03.9	+0.6	
G27K			IAmb	IAmb	15 19 05.6		
	comp=Z,7.4nm,1.2s						
G27K	Doyon Strip	54.40 343	P	P	15 19 03.2	-0.1	
	baz=136,SNR=11						
RND	Reindeer	54.45 338	IAmb	IAmb	15 19 06.2		
	comp=Z,16nm,1.2s						
Q18K	Katmai Hardscr	54.50 331	P	P	15 19 03.4	-0.8	
	baz=117						
STLK	Strandline Lak	54.52 335	IAmb	IAmb	15 19 17.0		
	comp=Z,6.5nm,1.1s						
F28M	Old Crow	54.53 345	P	P	15 19 04.0	-0.2	
	baz=139,SNR=18						
IL31		54.60 340	IAmb	IAmb	15 19 15.9		
	comp=Z,14nm,1.2s						
ILAR	Eielson Array	54.60 340	P	P	15 19 04.3	-0.4	
	comp=Z,7.2nm,1.1s,baz=152,slow=5.7,SNR=38						
	comp=Z,7.2nm,1.1s						
ILAR	Eielson Array	54.60 340		P	15 19 05.0	+0.2	
E29M	Blow River	54.64 346	P	P	15 19 05.3	+0.4	
	baz=141,SNR=12						
PRP	Porcupine Dome	54.65 341	IAmb	IAmb	15 19 16.9		
	comp=Z,9.6nm,1.1s						
PRP	Porcupine Dome	54.65 341	P	P	15 19 05.2	0.0	
	baz=131,SNR=10						
SKT	Skwentna	54.66 335	IAmb	IAmb	15 19 07.3		
	comp=Z,19nm,1.4s						
SKT	Skwentna	54.66 335	P	P	15 19 04.8	-0.4	
	baz=123,SNR=5.1						
L22K	Petersville	54.66 336	IAmb	IAmb	15 19 07.5		
	comp=Z,10.0nm,1.0s						
L22K	Petersville	54.66 336	P	P	15 19 04.8	-0.4	
	baz=124,SNR=6.4						
MCK	McKinley	54.67 338	IAmb	IAmb	15 19 12.4		
	comp=Z,11nm,1.1s						
MCK	McKinley	54.67 338	P	P	15 19 05.6	+0.3	
	baz=126						
R17L	Mt. Peulik Vol	54.70 329	P	P	15 19 05.4	-0.2	
	baz=115						
Q17K	Contact Creek	54.75 330	P	P	15 19 05.6	-0.4	
	baz=116						
O19K	Port Alsworth	54.91 333	P	P	15 19 06.8	-0.2	
	baz=119						
P18K	Big Mountain,	54.95 331	P	P	15 19 07.6	+0.3	
	baz=117						
COLA	College	54.99 339	P	P	15 19 08.4	+0.9	
TRF	Thorofare Moun	55.00 337	P	P	15 19 07.9	+0.1	
	baz=125,SNR=11						
POKR	Poker Plat Res	55.00 340	P	P	15 19 08.0	+0.4	
	baz=129						
G26K	Porcupine Rive	55.10 343	IAmb	IAmb	15 19 20.0		
	comp=Z,10nm,1.1s						
G26K	Porcupine Rive	55.10 343	P	P	15 19 08.3	+0.1	
	baz=134,SNR=6.4						
O18K	Koktuh Hills	55.15 332	P	P	15 19 08.2	-0.6	
	baz=118						
E28M	Babbage River	55.19 345	IAmb	IAmb	15 19 16.1		
	comp=Z,12nm,1.1s						
E28M	Babbage River	55.19 345	P	P	15 19 08.8	-0.2	
	baz=139,SNR=11						
NEA2	Nenana	55.23 339	P	P	15 19 09.1	-0.2	
	baz=127,SNR=14						
M20K	Styx River	55.25 335	P	P	15 19 09.9	+0.3	
	baz=121,SNR=8.1						
N19K	Bonanza Creek	55.28 333	P	P	15 19 09.1	-0.8	
	baz=119						
Q16K	King Salmon	55.29 330	P	P	15 19 09.6	-0.1	
	baz=115						
KTH	Kantishna Hill	55.29 337	IAmb	IAmb	15 19 11.6		
	comp=Z,14nm,1.2s						
CHNA	Chernabura Isl	55.30 325	P	P	15 19 10.0	+0.1	
	baz=110						
E27K	Coleen River	55.39 344	P	P	15 19 10.8	+0.4	
	baz=137,SNR=11						
PPLA	Purkeypile	55.41 336	P	P	15 19 10.7	0.0	
	baz=122,SNR=8.2						
P17K	Kvichak River	55.41 331	P	P	15 19 10.2	-0.4	
	baz=116						
A36M	Sachs Harbour	55.50 353	IAmb	IAmb	15 19 13.2		
	comp=Z,8.8nm,0.9s						
A36M	Sachs Harbour	55.50 353	P	P	15 19 11.5	+0.4	
	baz=157,SNR=7.1						
D28M	Stokes Point	55.56 346	P	P	15 19 11.7	+0.2	
	baz=141						
H24K	Noodor Dome	55.60 340	IAmb	IAmb	15 19 23.7		
	comp=Z,14nm,1.2s						
H24K	Noodor Dome	55.60 340	P	P	15 19 11.6	-0.4	
	baz=129,SNR=13						
G25K	Bearman Lake	55.65 342	P	P	15 19 12.5	+0.3	
	baz=131,SNR=8.7						
CAST	Castle Rocks	55.65 337	P	P	15 19 12.2	-0.1	
	baz=123,SNR=14						
I23K	Minto, Yukon-K	55.67 339	P	P	15 19 12.8	+0.5	
	baz=127,SNR=14						
F26K	Sheenjek River	55.72 343	IAmb	IAmb	15 19 15.5		
	comp=Z,6.5nm,1.1s						
F26K	Sheenjek River	55.72 343	P	P	15 19 12.8	0.0	
	baz=134,SNR=6.5						
M19K	Big River Lodg	55.78 334	IAmb	IAmb	15 19 22.2		
	comp=Z,11nm,1.2s						
M19K	Big River Lodg	55.78 334	P	P	15 19 13.2	-0.1	
	baz=120						
S14K	Fog Glacier	55.79 327	P	P	15 19 13.2	-0.4	
	baz=111						
N18K	Kilae Creek	55.83 333	IAmb	IAmb	15 19 26.2		
	comp=Z,10nm,1.0s						
N18K	Kilae Creek	55.83 333	P	P	15 19 13.4	-0.2	
	baz=117						
PPT	Papeete	55.86 233	LR	LR	15 35 60.0		
	comp=Z,405nm,19.7s,baz=54,slow=29						
PPT2	Papeete2	55.88 233	*e*S	S	15 27 02.3	-0.2	
	comp=Z,150nm,26.5s						
PPT2			*e*SS	SS	15 30 44.4	-4.2	
	comp=Z,93nm,26.0s						
PPT2			*e*LR	LR	15 35 12.7		
	comp=Z,666nm,28.0s						
PPT2			*e*LR	LR	15 35 19.8		
	comp=Z,542nm,22.8s						
SDPT	Sand Point	55.96 326	P	P	15 19 14.2	-0.4	
	baz=110						
O17K	Koliganek Bris	55.97 331	P	P	15 19 14.4	-0.2	
	baz=116						
CHUM	Lake Minchumin	55.99 337	P	P	15 19 15.5	+0.8	
	baz=123						
D27M	Malcolm River	56.02 346	IAmb	IAmb	15 19 22.4		
	comp=Z,13nm,1.1s						
D27M	Malcolm River	56.02 346	P	P	15 19 15.0	+0.1	
	baz=138,SNR=11						
G24K	Hadweenzic Riv	56.02 341	IAmb	IAmb	15 19 22.5		
	comp=Z,20nm,1.4s						
G24K	Hadweenzic Riv	56.02 341	P	P	15 19 15.0	+0.1	
	baz=132,SNR=10						
F25K	Christian Rive	56.07 343	IAmb	IAmb	15 19 27.5		
	comp=Z,8.2nm,1.2s						
F25K	Christian Rive	56.07 343	P	P	15 19 15.0	-0.3	
	baz=132,SNR=8.5						
MLY	Manley	56.07 339	IAmb	IAmb	15 19 44.2		
	comp=Z,9.1nm,1.4s						
MLY	Manley	56.07 339	P	P	15 19 15.5	+0.1	
	baz=125						
L19K	White Mountain	56.10 335	IAmb	IAmb	15 19 17.3		
	comp=Z,16nm,1.4s						
L19K	White Mountain	56.10 335	P	P	15 19 15.0	-0.7	
	baz=119,SNR=6.5						
H23K	Yukon River	56.14 340	IAmb	IAmb	15 19 27.2		
	comp=Z,9.3nm,1.3s						
H23K	Yukon River	56.14 340	P	P	15 19 15.5	-0.3	
	baz=127						
M18K	Stony River	56.18 334	P	P	15 19 15.6	-0.5	
	baz=118						
N17K	Nushagak Hills	56.33 332	IAmb	IAmb	15 19 19.1		
	comp=Z,9.1nm,1.2s						
N17K	Nushagak Hills	56.33 332	P	P	15 19 16.4	-0.8	
	baz=116						
O16K	Kokwok River B	56.35 331	P	P	15 19 16.5	-0.8	
	baz=114						
K20K	Telida	56.38 336	P	P	15 19 17.4	-0.1	
K20K			IAmb	IAmb	15 19 19.1		
	comp=Z,17nm,1.2s						
K20K	Telida	56.38 336	P	P	15 19 16.9	-0.6	
	baz=121						
E25K	Arctic Village	56.40 343	IAmb	IAmb	15 19 20.4		
	comp=Z,9.8nm,1.4s						
E25K	Arctic Village	56.40 343	P	P	15 19 17.3	-0.4	
	baz=132,SNR=7.6						
I21K	Tanana	56.59 338	IAmb	IAmb	15 19 20.9		
	comp=Z,15nm,1.3s						
I21K	Tanana	56.59 338	P	P	15 19 18.7	-0.3	
	baz=124,SNR=9.1						
CLDB	Colider	56.61 116	P	P	15 19 19.1	-0.8	
F24K	Squaw Lake	56.67 342	IAmb	IAmb	15 19 30.9		
	comp=Z,7.3nm,1.2s						
F24K	Squaw Lake	56.67 342	P	P	15 19 19.6	0.0	
	baz=130						
H22K	Ishtalitna Cre	56.79 339	IAmb	IAmb	15 19 27.2		
	comp=Z,12nm,1.4s						
H22K	Ishtalitna Cre	56.79 339	P	P	15 19 20.2	-0.2	
	baz=125,SNR=6.9						
H03N2	Juan Fernandez	56.79 154	T	T	16 20 50.3		
	baz=331,slow=77,SNR=9.5						
H03N1	Juan Fernandez	56.80 154	T	T	16 21 02.0		
	baz=331,slow=77,SNR=13						
H03N3	Juan Fernandez	56.81 154	T	T	16 20 55.4		
	baz=331,slow=77,SNR=10						
G23K	Bananza Creek	56.83 340	IAmb	IAmb	15 19 22.7		
	comp=Z,7.5nm,1.2s						
G23K	Bananza Creek	56.83 340	P	P	15 19 20.4	-0.3	
	baz=127,SNR=7.5						
M17K	Holitna River	56.83 333	IAmb	IAmb	15 19 34.6		
	comp=Z,15nm,1.2s						
M17K	Holitna River	56.83 333	P	P	15 19 19.8	-0.9	
	baz=116						
J20K	Nowinta River	56.83 337	IAmb	IAmb	15 19 22.4		
	comp=Z,16nm,1.2s						
J20K	Nowinta River	56.83 337	P	P	15 19 20.0	-0.7	
	baz=121,SNR=12						
L18K	Granite Mounta	56.88 334	IAmb	IAmb	15 19 28.5		
	comp=Z,12nm,1.4s						
L18K	Granite Mounta	56.88 334	P	P	15 19 20.3	-0.7	
	baz=118						
C27K	Jago River	56.96 345	IAmb	IAmb	15 19 29.2		
	comp=Z,16nm,1.4s						
C27K	Jago River	56.96 345	P	P	15 19 22.0	+0.4	
	baz=135,SNR=9.5						
O15K	Ungalikthiuk R	57.00 330	P	P	15 19 21.8	-0.2	
	baz=112						
N16K	Nishlik Lake	57.02 332	P	P	15 19 21.3	-0.8	
	baz=114						
H21K	Melozitna Rive	57.14 339	IAmb	IAmb	15 19 25.2		
	comp=Z,15nm,1.2s						
H21K	Melozitna Rive	57.14 339	P	P	15 19 22.6	-0.3	
	baz=123,SNR=13						
COLD	Coldfoot	57.19 341	IAmb	IAmb	15 19 31.1		
	comp=Z,15nm,1.4s						
COLD	Coldfoot	57.19 341	P	P	15 19 22.9	-0.4	
	baz=127						
E24K	Your Creek	57.20 342	IAmb	IAmb	15 19 25.9		
	comp=Z,8.0nm,1.3s						
E24K	Your Creek	57.20 342	P	P	15 19 23.9	+0.5	
	baz=129,SNR=11						
I20K	Naaghedeneel	57.28 337	P	P	15 19 23.7	-0.1	
	baz=121						
J19K	Poorman	57.30 336	IAmb	IAmb	15 19 34.5		
	comp=Z,14nm,1.2s						
J19K	Poorman	57.30 336	P	P	15 19 24.0	0.0	
	baz=120,SNR=8.5						
M16K	Timber Creek	57.33 332	P	P	15 19 24.1	-0.2	
	baz=114						
G22K	Bettles	57.42 340	P	P	15 19 25.0	+0.2	
	baz=126						
D25K	Kavik River	57.43 344	IAmb	IAmb	15 19 27.4		
	comp=Z,17nm,1.2s						
D25K	Kavik River	57.43 344	P	P	15 19 24.9	-0.1	
	baz=132,SNR=16						
C26K	Camden Bay	57.47 345	P	P	15 19 25.2	+0.1	
	baz=134,SNR=5.6						
N15K	Kwethluk River	57.50 331	P	P	15 19 25.6	+0.1	
	baz=113						
L17K	Donlin	57.52 334	P	P	15 19 25.3	-0.3	
	baz=116						
E23K	Chandalar	57.52 342		P	15 19 26.6	+0.9	
E23K			IAmb	IAmb	15 19 29.1		
	comp=Z,15nm,1.1s						
E23K	Chandalar	57.52 342	P	P	15 19 25.1	-0.6	
	baz=128,SNR=13						
O14K	Tigyukauivet M	57.71 330	P	P	15 19 27.3	+0.3	
	baz=111						
K17K	Iditarod	57.77 334	IAmb	IAmb	15 19 39.3		
	comp=Z,7.2nm,1.0s						
K17K	Iditarod	57.77 334	P	P	15 19 27.2	-0.2	
	baz=116						
H20K	Anotleneega Mo	57.78 338	P	P	15 19 27.5	0.0	
	baz=121,SNR=6.6						
L16K	Owhat River	57.84 333	IAmb	IAmb	15 19 29.4		
	comp=Z,8.0nm,1.3s						
L16K	Owhat River	57.84 333	P	P	15 19 27.5	-0.4	
	baz=114						
G21K	Allakaket	57.85 339	P	P	15 19 27.5	-0.4	
	baz=123						
TOLK	Toolik Lake Re	57.87 342	P	P	15 19 27.6	-0.4	
	baz=128,SNR=6.2						
F22K	John River	57.98 341	P	P	15 19 28.9	+0.1	
	baz=125,SNR=8.2						
M15K	Kasigluk River	57.98 332	P	P	15 19 28.9	+0.1	
	baz=112						
D24K	Happy Valley	57.98 343	IAmb	IAmb	15 19 40.0		
	comp=Z,11nm,1.4s						
D24K	Happy Valley	57.98 343	P	P	15 19 29.3	+0.6	
	baz=130						
GCSA	Galena City Sc	58.15 337	P	P	15 19 29.6	-0.3	
	baz=119						
N14K	Kuskokwak Cree	58.15 330	P	P	15 19 29.6	-0.5	
	baz=111						
F21K	Alatna River	58.23 340		P	15 19 31.2	+0.6	
F21K			IAmb	IAmb	15 19 37.9		
	comp=Z,10nm,1.4s						
F21K	Alatna River	58.23 340	P	P	15 19 30.9	+0.3	
	baz=124						
H19K	Roundabout Mou	58.37 338	P	P	15 19 31.7	+0.2	
	baz=120						
J17K	VABM Dome	58.39 335	P	P	15 19 31.3	-0.4	
	baz=116						
D23K	Nanushuk River	58.39 342	P	P	15 19 31.1	-0.5	
	baz=127,SNR=12						
M14K	Bethel	58.58 331	P	P	15 19 32.3	-0.7	
	baz=111						
L15K	Ungalak Mounta	58.71 332	P	P	15 19 33.9	-0.1	
	baz=112						
F20K	Avaraart Lake	58.88 339	IAmb	IAmb	15 19 37.1		
	comp=Z,10nm,1.2s						
F20K	Avaraart Lake	58.88 339	P	P	15 19 34.5	-0.5	
	baz=121,SNR=6.6						
H18K	Honhosa River	58.89 337	P	P	15 19 35.1	-0.2	
	baz=117						
G19K	Purcell Mounta	58.90 338	IAmb	IAmb	15 19 41.6		
	comp=Z,9.4nm,1.2s						
G19K	Purcell Mounta	58.90 338	P	P	15 19 34.9	-0.4	
	baz=119						
C23K	Itkillik River	58.90 343	P	P	15 19 35.3	+0.1	
	baz=128,SNR=12						
UNV	Unalaska Valle	58.91 323	P	P	15 19 35.3	-0.2	
	baz=103						
J16K	Anvik River	58.97 334	P	P	15 19 35.5	-0.2	
	baz=114						
E21K	Killik River	59.06 341	IAmb	IAmb	15 19 48.5		
	comp=Z,9.3nm,1.2s						
E21K	Killik River	59.06 341	P	P	15 19 36.0	-0.3	
	baz=124,SNR=7.1						
M13K	Dall Lake	59.10 331	P	P	15 19 36.1	-0.6	
	baz=110						
L14K	Kuka Creek	59.12 332	P	P	15 19 36.2	-0.6	
	baz=111						
I17K	Unalakleet	59.25 335	P	P	15 19 36.9	-0.7	
	baz=114						
TBI	Tubuai	59.33 228	*e*S	S	15 27 50.1	+2.6	
	comp=Z,924nm,26.5s						
TBI			*e*LR	LR	15 36 52.6		
	comp=Z,1μm,27.8s						
TBI			*e*LR	LR	15 37 00.6		
	comp=Z,3μm,25.5s						
G18K	Tagagawik	59.34 338	P	P	15 19 38.5	+0.2	
	baz=118						
H17K	Granite Mounta	59.39 336	P	P	15 19 38.3	-0.3	
	baz=116,SNR=7.3						
F19K	Shaleruckik Mo	59.47 339	P	P	15 19 39.1	-0.1	
	baz=119,SNR=7.9						
E19K	Redstone River	59.59 339	P	P	15 19 40.1	+0.1	
	baz=120						
E20K	Nigu River	59.66 340	P	P	15 19 40.3	-0.2	
	baz=121						
C21K	Knifeblade Rid	59.71 342	P	P	15 19 40.7	-0.1	
	baz=123						
G17K	Kiwalik Mounta	59.91 337	P	P	15 19 41.3	-0.9	
	baz=115						
B21K	Ikpikpuk River	59.91 342	P	P	15 19 42.6	+0.4	
B21K	Ikpikpuk River	59.91 342	P	P	15 19 42.2	+0.1	
	baz=124,SNR=8.6						
B22K	Teshekpuk Lake	59.98 343	P	P	15 19 41.6	-0.9	
	baz=125						
F18K	Selawik	60.03 338	P	P	15 19 42.5	-0.4	
	baz=117						
D20K	Etivluk River	60.03 341	P	P	15 19 43.3	+0.3	
D20K	Etivluk River	60.03 341	P	P	15 19 42.7	-0.4	
	baz=121						
H16K	Elim	60.17 335	P	P	15 19 43.1	-0.9	
	baz=113						
K13K	Kusilvak Mount	60.21 332	P	P	15 19 43.3	-0.9	
	baz=109						
D19K	Kuna River	60.40 340	P	P	15 19 45.6	+0.1	
D19K	Kuna River	60.40 340	P	P	15 19 44.8	-0.7	
	baz=119						
M11K	Mekoryuk	60.44 330	P	P	15 19 44.8	-1.1	
	baz=107						
G16K	Koyuk River	60.52 336	P	P	15 19 45.7	-0.6	
	baz=114						
F17K	Baldwin Pennin	60.53 338	P	P	15 19 45.6	-0.8	
	baz=115						
E18K	Tukpahlearik C	60.73 339	P	P	15 19 47.2	-0.6	
	baz=116						
A22K	Sinclair Lake	60.78 343	P	P	15 19 47.4	-0.7	
	baz=124						
B20K	Meade River	60.87 342	P	P	15 19 48.0	-0.6	
	baz=121						
E17K	Hotham Inlet	61.01 338	P	P	15 19 48.9	-0.8	
	baz=115						
G15K	Nikuluk	61.02 335	P	P	15 19 49.1	-0.7	
	baz=112						
C19K	Lookout Ridge	61.16 341		P	15 19 51.3	+0.5	
C19K	Lookout Ridge	61.16 341	P	P	15 19 50.1	-0.6	
	baz=118						
ANM	Nome	61.40 335	P	P	15 19 51.6	-0.8	
	baz=110						
C18K	Utukok River	61.47 340	P	P	15 19 51.9	-1.0	
	baz=116						
F15K	North Star Dit	61.52 336	P	P	15 19 53.6	+0.4	
F15K	North Star Dit	61.52 336	P	P	15 19 52.3	-0.9	
	baz=111						
SPIA	Saint Paul Isl	61.70 326	P	P	15 19 53.4	-1.1	
	baz=102						
D17K	Noatak River	61.71 339	P	P	15 19 53.4	-0.9	
	baz=114						
RDOG	Red Dog Mine	61.79 339	P	P	15 19 54.3	-0.7	
	baz=114						
C17K	DeLong Mountai	62.06 339	P	P	15 19 56.1	-0.6	
	baz=114						
F14K	Arctic Creek	62.09 336	P	P	15 19 56.1	-0.9	
	baz=110						
A19K	Wainwright	62.13 341	P	P	15 19 57.0	-0.2	
	baz=117						
C16K	Lisburne Hills	62.72 339	P	P	15 20 00.8	-0.4	
	baz=112						
TNA	Tin City	62.75 335	P	P	15 20 01.1	-0.3	
	baz=108						
RAR	Rarotonga	65.86 236	LR	LR	15 40 06.5		
	comp=Z,281nm,20.4s,baz=74,slow=28						
PLCA	Paso Flores	66.55 152	P	P	15 20 27.1	+0.5	
AFI	Afiamalu	72.64 249	LR	LR	15 44 53.8		
	comp=Z,314nm,18.5s,baz=82,slow=29						
PETK	Petropavlovsk-	80.09 323	P	P	15 21 45.5	-0.9	
MA2	Magadan	81.71 330	P	P	15 21 54.8	0.0	
MA2			IAmb	IAmb	15 22 06.2		
	comp=Z,15nm,1.3s						
MA2	Magadan	81.71 330	P	P	15 21 54.0	-0.9	
EKA	Eskdalemuir Ar	82.36 34	LR	LR	16 00 16.4		
	comp=Z,180nm,18.5s,baz=265,slow=37						
MSVF	Nonsavu	83.14 249	LR	LR	15 51 51.8		
	comp=Z,222nm,18.1s,baz=160,slow=31						
RAO	Raoul Island	84.09 237	LR	LR	15 51 31.8		
	comp=Z,113nm,21.0s,baz=128,slow=30						
NAO01	NORSAR Array S	86.72 26	P	P	15 22 19.8	-0.6	
ESDC	Sonseca Array	87.32 49	LR	LR	16 02 08.7		
	comp=Z,93nm,18.2s,baz=284,slow=36						
YAK	Yakutsk	89.46 337	P	P	15 22 33.8	+0.5	
YAK	Yakutsk	89.46 337	P	P	15 22 34.2	+0.9	

URZ	Urewera	91.39	230	LR	LR	15 54 06.2	
	comp=Z,173nm,21.9s,baz=60,slow=29						
DAVOX	Davos/Dischmat	93.43	39	LR	LR	16 05 38.6	
	comp=Z,263nm,18.1s,baz=256,slow=36						
GERES	GERESS Array B	94.53	35	LR	LR	16 05 16.4	
	comp=Z,168nm,21.6s,baz=358,slow=35						
DZM	Mont Dzumac	94.87	249	LR	LR	15 55 38.9	
	comp=Z,452nm,21.4s,baz=60,slow=29						
VRAC	Vranov	95.83	34	LR	LR	16 07 16.5	
	comp=Z,114nm,19.3s,baz=299,slow=36						
HNR	Honiara	97.23	262	LR	LR	15 57 17.3	
	comp=Z,6.0nm,19.9s,baz=172,slow=30						
HNR	Honiara	97.23	262	P	P	15 23 09.2	-0.9
DBIC	Dimbokro	97.93	80	LR	LR	16 01 33.8	
	comp=Z,98nm,20.7s,baz=282,slow=32						
HHC	Hu-ho-hao-te	112.38	330	*e*P	PKiKP	15 28 09.2	-3.9
WMQ	Urumqi	117.60	349	*e*PKP	PKiKP	15 28 23.4	+0.4
WMQ				LR	LR		
	comp=Z,160nm,24.9s						

NNC ***12*** *15:25:02.9±3.9, 46°.83N×89°.93E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=35.0km s-min=28.3km az=42.0*
ASRS ***12*** *15:25:13.2±0.5, 47°.N±3°×9°.0E±°, h9km, MLh3.3/10, Error ellipse: s-maj=7.8km s-min=5.2km az=71.5, confirmed*
ISC 12 15:25:06.5±2.1, 46°.80N±0°.08×89°.83E±0°.08, h10km, n18, σ1s71/41, 7C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	3.32	332	Pn	Pb		15 26 02.3	-3.1
DGZ				Pg	Pg		15 26 10.9	+0.9
DGZ				S	Sn		15 26 39.2	+1.1
DGZ				Sg	Sg		15 26 53.2	+0.2
CUR	Chagan-Uzun	3.45	344	Pn	Pn		15 26 01.6	+1.3
CUR				Pg	Pg		15 26 11.4	-1.1
CUR				Sg	Sg		15 26 56.3	-0.9
AKAR	Aktash	3.82	338	Pg	Pg		15 26 18.7	-0.9
AKAR				Sg	Sg		15 27 09.7	+0.7
CHBI	Chibit, Altay	3.84	337	Pn	Pn		15 26 06.9	+1.2
CHBI				Pg	Pg		15 26 18.3	-1.8
CHBI				Sg	Sg		15 27 09.2	-0.6
ULGR	Ulagan, Altay	4.02	343	Pn	Pn		15 26 10.7	+2.5
ULGR				Pg	Pg		15 26 22.1	-1.4
ULGR				Sg	Sg		15 27 14.6	-1.0
TUNR	Tungur	4.09	327	Pn	Pn		15 26 12.3	+3.2
TUNR				Pg	Pg		15 26 24.1	-0.7
TUNR				Sg	Sg		15 27 18.2	+0.4
TEL	Teeli	4.23	3	Pn	Pn		15 26 13.7	+2.7
TEL				Pg	Pg		15 26 28.5	+1.0
TEL				Sg	Sg		15 27 20.7	-1.7
ELDR	Elanda	5.06	332	Pn	Pn		15 26 25.2	+2.8
ELDR				Pg	Pg		15 26 43.8	+0.5
ELDR				Sg	Sg		15 27 50.7	+1.8
MK31	Makanchi Array	5.18	273	⇑Pn	Pn		15 26 23.7	-0.2
	0.2nm,0.3s,baz=93,slow=13,SNR=18							
MK31				Pg	Pb		15 26 37.3	+0.3
	0.5nm,0.3s,baz=87,slow=18,SNR=9.5							
MK31				Lg	Lg		15 27 53.4	
	1.0nm,0.3s,baz=99,slow=30,SNR=5.1							
YALR	Yailyu, Altay	5.18	345	Pg	Pg		15 26 43.7	-2.0
YALR				Sg	Sg		15 27 51.7	-1.1
ARTR	Artybash	5.28	343	Pg	Pg		15 26 45.3	-2.2
ARTR				Sg	Sg		15 27 54.3	-1.4
UKR	Ust'-Kan	5.32	323	Pn	Pn		15 26 29.5	+3.5
UKR				S	Sn		15 27 29.6	+2.3
UKR				Sg	Sg		15 27 58.3	+1.2
MAKZ	Makanchi	5.39	273	⇑Pg	Pb		15 26 40.4	-0.3
	1.1nm,0.3s							
MAKZ				⇑Lg	Lg		15 27 57.0	
	3.6nm,0.5s							
TASR	Tashtagol	6.10	349	Sg	Sg		15 28 22.4	+0.3
VEH	Verkhnyaya Baz	6.47	3	Sg	Sg		15 28 32.7	-1.3
ELT	Eltsovka	6.87	342	Sg	Sg		15 28 47.1	+0.3
KURK	Kurchatov	8.38	302	⇑Pn	Pn		15 27 06.9	-0.9
	0.5nm,0.9s							
KURK				⇑Sn	Sn		15 28 40.4	-2.0
	1.1nm,0.6s							
KURK				⇑Lg	Lg		15 29 32.1	
	4.2nm,0.8s							
KURBB	Kurchatov Arra	8.39	301	⇓Pn	Pn		15 27 06.1	-1.9
	0.7nm,0.4s							
KURBB				⇑Sn	Sn		15 28 44.9	+2.2
	3.6nm,0.6s							
KURBB				⇓Lg	Lg		15 29 33.8	
	14nm,0.8s							

WEL ***12*** *15:25:19.0±1.2, 33°.S±6°×17°.8W±1°.6, h12km, M4.8/7, ML4.5/10, MLv4.8/7, Error ellipse: s-maj=22.4km s-min=3.7km az=106.7*
IDC ***12*** *15:25:19.6±2.8, 33°.35S×177°.77W, h0km, mb4.0/2, mbtmp4.0/4, ML3.9/2, Error ellipse: s-maj=70.4km s-min=32.2km az=120.0*
NEIC ***12*** *15:25:21.0±2.4, 33°.6S±0°.2×177°.4W±0°.2, h10km±2km, mb4.1/5, Error ellipse: s-maj=36.9km s-min=16.2km az=145.0*
ISC 12 15:25:14.2±1.7, 33°.73S±0°.08×176°.6W±0°.2, h10km, n57, σ2s26/63, mb4.0/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.59	345	P	Pn		15 26 20.2	-3.4
GLKZ				S	Sn		15 27 04.0	-13
RAO	Raoul Island	4.60	346	Pn	Pn		15 26 24.0	+0.2
RIZ	Raoul Island	4.61	345	S	Sn		15 27 09.0	-8.5
MXZ	Matakaoa Point	5.64	226	P	Pn		15 26 43.3	+5.2
MXZ	Matakaoa Point	5.64	226	Pn	Pn		15 26 39.1	+1.1
MXZ	Matakaoa Point	5.64	226	P	Pn		15 26 40.3	+2.2
MXZ				S	Sn		15 27 43.0	+0.1
PUZ	Puketiti	6.01	222	P	Pn		15 26 46.7	+3.5
PUZ				S	Sn		15 27 53.0	+0.9
HAZ	Te Kaha	6.08	227	P	Pn		15 26 48.0	+3.8
HAZ				S	Sn		15 27 54.1	+0.3
MWZ	Matawai	6.61	224	P	Pn		15 26 54.6	+3.2
MWZ				S	Sn		15 28 06.0	-0.9
URZ	Urewera	6.81	227	Pn	Pn		15 26 56.2	+2.0
	2.5nm,0.3s,baz=38,slow=19,SNR=32							
URZ				Sn	Sn		15 28 09.8	-1.9
	5.3nm,0.3s,baz=160,slow=21,SNR=18							
	5.5nm,0.3s							
URZ	Urewera	6.81	227	P	Pn		15 26 56.9	+2.8
URZ	Urewera	6.81	227	P	Pn		15 26 56.6	+2.4
URZ				S	Sn		15 28 09.4	-2.3
KNZ	Kokohu	7.01	219	P	Pn		15 26 58.7	+1.8
TOZ	Tahuroa Road	7.56	236	P	Pn		15 27 07.8	+3.4
WCZ	Waipu Caves	7.76	251	P	Pn		15 27 10.7	+3.5
BKZ	Black Stump Fm	7.77	224	P	Pn		15 27 10.1	+2.7
BKZ	Black Stump Fm	7.77	224	P	Pn		15 27 10.6	+3.2
BKZ				S	Sn		15 28 32.0	-3.4
MCHZ	McNeill Hill	7.84	221	P	Pn		15 27 11.6	+3.2
MCHZ				S	Sn		15 28 37.2	0.0
KRHZ	Kereru	8.16	222	P	Pn		15 27 15.8	+3.0
KRHZ				S	Sn		15 28 42.6	-2.5
OUZ	Omahuta	8.23	257	P	Pn		15 27 15.7	+2.1
OUZ	Omahuta	8.23	257	P	Pn		15 27 15.3	+1.7
HIZ	Hauiti	8.40	233	P	Pn		15 27 19.6	+3.7
TSZ	Takapari Road	8.68	221	P	Pn		15 27 21.9	+2.0
POWZ	Post Office Ro	9.02	220	P	Pn		15 27 29.9	+5.4
MRZ	Mangatainoka R	9.31	220	Pn	Pn		15 27 30.4	+1.9
TCW	Tory Channel	10.40	221	P	Pn		15 27 45.8	+2.4
TUWZ	Tuamarina	10.73	222	Pn	Pn		15 27 48.7	+0.8
TUWZ	Tuamarina	10.73	222	P	Pn		15 27 50.3	+2.4
TKNZ	Takaka Hill	11.04	226	P	Pn		15 27 52.6	+0.4
QRZ	Quartz Range	11.18	228	P	Pn		15 27 52.9	-1.1
MRNZ	Matariki Terra	11.39	225	P	Pn		15 27 58.3	+1.3
THZ	Tophouse	11.54	223	P	Pn		15 28 01.0	+2.0
KHZ	Kahutara	11.63	219	P	Pn		15 28 04.0	+3.8
KHZ	Kahutara	11.63	219	P	Pn		15 28 04.2	+4.0
GVZ	Greta Valley S	12.29	218	P	Pn		15 28 12.4	+3.2
LTZ	Lake Taylor	12.56	221	P	Pn		15 28 13.9	+0.9
INZ	Inchbonnie	12.99	223	P	Pn		15 28 21.0	+2.2
RACZ	Rakaia	13.29	218	P	Pn		15 28 25.3	+2.5
MHCZ	Mount Hutt	13.45	220	P	Pn		15 28 27.7	+2.6
RPZ	Rata Peaks	13.85	220	Pn	Pn		15 28 31.7	+1.1
	0.7nm,0.3s,baz=38,slow=9.1,SNR=13							
RPZ				Sn	Sn		15 30 51.7	-13
	0.3nm,0.3s,baz=326,slow=24,SNR=6.9							
	1.7nm,0.4s							
RPZ	Rata Peaks	13.85	220	P	Pn		15 28 33.2	+2.7
RPZ	Rata Peaks	13.85	220	P	Pn		15 28 32.6	+2.0
ARCZ	Arundel	13.94	219	P	Pn		15 28 33.5	+1.7
TMZ	Timaru	14.33	218	P	Pn		15 28 37.1	0.0
LBZ	Lake Benmore	14.77	220	P	Pn		15 28 44.4	+1.4
ODZ	Otahua Downs	14.97	217	P	P		15 28 49.5	-1.9
ODZ	Otahua Downs	14.97	217	Pn	Pn		15 28 48.0	+2.2
ODZ	Otahua Downs	14.97	217	P	Pn		15 28 47.5	+1.7
JCZ	Jackson Bay	15.34	223	P	Pn		15 28 51.6	+0.8
ONTNC	Ouen Toro	18.76	303	P	P		15 29 33.6	+0.1
ONTNC				IAmb	IAmb		15 29 35.3	
	comp=Z,34nm,1.1s							
CTAO	Charters Tower	35.60	283	P	P		15 32 12.4	+0.3
CTAO				IAmb	IAmb		15 32 30.6	
	comp=Z,5.6nm,1.1s							
AS31	Alice Springs	44.20	270	P	P		15 33 23.4	-0.2
AS31				IAmb	IAmb		15 33 30.2	
	comp=Z,0.7nm,0.7s							
ASAR	Alice Springs	44.20	270	P	P		15 33 22.9	-0.7
	comp=Z,1.7nm,0.7s,baz=114,slow=7.9,SNR=7.0							
	comp=Z,1.7nm,0.7s							
WRA	Warramunga Arr	45.48	275	P	P		15 33 32.7	-1.1
	comp=Z,1.6nm,0.7s,baz=114,slow=7.6,SNR=10							
	comp=Z,1.5nm,0.7s							
WRA	Warramunga Arr	45.48	275	P	P		15 33 32.7	-1.1
WB0	Warramunga Arr	45.51	275	P	P		15 33 33.2	-0.9
FINES	FINESS Array B	148.67	339	PKPbc	PKPab		15 45 05.4	+1.0
	comp=Z,1.0nm,0.5s,baz=42,slow=3.0,SNR=14							

IDC ***12*** *16:06:24.3±2.3, 6°.98S×129°.81E, h96km±23km, mb3.4/4, mbtmp3.8/9, Error ellipse: s-maj=23.7km s-min=16.9km az=82.0*
ISC 12 16:06:27.3±0.8, 6°.97S±0°.08×129°.73E±0°.07, h139km, n19, σ2s09/20, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.85	123	P	Pn		16 06 58.8	-1.2
SAUI	Saumlaki	1.85	123	S	Sn		16 07 24.0	-1.1
FAKI	Fak Fak	4.74	32	P	Pn		16 07 33.9	-3.2
DRS	Darwin Rock St	5.55	168	P	Pn		16 07 47.5	-0.3
SIJI	Sorong	6.25	14	P	Pn		16 07 54.6	-2.7
	2.7nm,0.3s,baz=187,slow=16,SNR=23							
SIJI				S	Sn		16 08 58.9	-8.8
	6.3nm,0.2s,baz=288,slow=24,SNR=10							
BATI	Baumata	6.81	241	P	Pn		16 08 03.3	-1.5
	17nm,0.3s,baz=84,slow=17,SNR=2.4							
BATI				S	Sn		16 09 19.6	-1.5
	17nm,0.3s,baz=271,slow=15,SNR=3.5							
FITZ	Fitzroy Crossi	11.76	199	P	Pn		16 09 07.9	-2.8
	1.2nm,0.2s,baz=38,slow=12,SNR=26							
FITZ				S	Sn		16 11 11.3	-9.2
	4.5nm,0.3s,baz=15,slow=24,SNR=7.5							
FITZ	Fitzroy Crossi	11.76	199	P	Pn		16 09 08.7	-2.1
WRA	Warramunga Arr	13.65	161	P	Pn		16 09 31.9	-3.4
	0.6nm,0.3s,baz=349,slow=14,SNR=31							
WRA				S	Sn		16 11 54.1	-12
	4.3nm,0.5s,baz=341,slow=21,SNR=13							
QIS	Mount Isa	16.55	146	P	Pn		16 10 11.8	+0.4
ASAR	Alice Springs	17.08	167	P	P		16 10 17.6	+0.3
	1.3nm,0.4s,baz=348,slow=12,SNR=89							
ASAR				S	S		16 13 17.6	-11
	0.7nm,0.3s,baz=55,slow=22,SNR=7.5							
AS01	Alice Springs	17.09	167	P	P		16 10 18.3	+0.9
MTSU	Mount Surprise	18.03	129	P	P		16 10 29.3	+1.5
QLP	Quilpie	23.89	146	P	P		16 11 31.0	+2.7
STKA	Stephens Creek	27.14	157	P	P		16 11 58.9	+1.4
	1.0nm,0.3s,baz=328,slow=8.2,SNR=12							
	1.0nm,0.3s							
CMSA	Cobar Meteorol	28.63	151	P	P		16 12 12.3	+1.5
SONM	Songino Array	58.33	342	P	P		16 16 09.8	+2.0
	0.2nm,0.3s,baz=150,slow=6.9,SNR=2.0							
	0.2nm,0.3s							
MKAR	Makanchi Array	68.06	327	P	P		16 17 13.9	+2.1
	0.6nm,0.7s,baz=122,slow=7.2,SNR=5.0							
	0.6nm,0.7s							
KURBB	Kurchatov Arra	72.35	329	P	P		16 17 39.4	+1.6
	0.4nm,0.5s,baz=132,slow=5.0,SNR=7.6							
	0.4nm,0.5s							

IDC 12 16:13:38.9±3.4, 33°.52S×178°.21W, h0km, mb3.4/2, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=82.9km s-min=37.8km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	Urewera	6.07	217	Pn	Pn		16 15 10.4	+0.5
	0.6nm,0.3s,baz=248,slow=2.7,SNR=8.4							
URZ				Sn	Sn		16 16 19.4	-0.6
	0.5nm,0.3s,baz=132,slow=20,SNR=2.2							
	18nm,1.1s							
ASAR	Alice Springs	42.86	270	P	P		16 21 38.9	-0.2
	0.3nm,0.7s,baz=110,slow=6.6,SNR=4.7							
	0.3nm,0.7s							
WRA	Warramunga Arr	44.13	275	P	P		16 21 49.3	0.0
	0.7nm,0.9s,baz=116,slow=8.1,SNR=1.8							
	0.7nm,0.9s							
FINES	FINESS Array B	147.98	338	PKPbc	PKPbc		16 33 24.6	-0.8
	1.2nm,0.9s,baz=46,slow=4.0,SNR=3.7							

IDC ***12*** *16:16:16.7±1.7, 33°.27S×178°.53W, h0km, mb3.7/3, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=44.2km s-min=37.2km az=72.0*
ISC 12 16:16:23.1±1.6, 33°.4S±0°.2×178°.7W±0°.3, h41km, n6, σ0s75/7, mb3.6/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	Urewera	5.94	214	Pn	Pn		16 17 47.5	-0.9
	1.9nm,0.3s,baz=241,slow=2.3,SNR=14							
URZ				Sn	Sn		16 18 55.4	+0.4
	4.6nm,0.3s,baz=35,slow=22,SNR=8.5							
	4.0nm,0.3s							
ASAR	Alice Springs	42.45	271	P	P		16 24 14.8	+0.6
	0.6nm,0.6s,baz=114,slow=7.1,SNR=9.9							
	0.6nm,0.6s							
WRA	Warramunga Arr	43.71	276	P	P		16 24 24.7	+0.3
	0.7nm,0.6s,baz=116,slow=8.1,SNR=7.2							
	0.7nm,0.6s							
QSPA	South Pole Qui	56.73	180	P	P		16 26 03.1	+0.7
	1.1nm,1.0s,baz=37,slow=7.3,SNR=2.0							
	1.1nm,1.0s							
FINES	FINESS Array B	147.71	338	PKPbc	PKPbc		16 36 01.9	-0.6
	0.6nm,0.6s,baz=43,slow=3.4,SNR=7.9							
MMAI	Mount Meron Ar	151.54	279	PKPbc	PKPbc		16 36 12.6	-0.4
	0.6nm,0.3s,baz=108,slow=3.3,SNR=4.8							

IDC ***12*** *16:52:23.2±2.9, 33°.40S×179°.39E, h228km±25km, mb3.3/3, mbtmp4.1/5, Error ellipse: s-maj=31.6km s-min=21.5km az=67.0*
WEL ***12*** *16:52:24.9±0.5, 34°.S±4°×18°.0E±°, h12km, M4.7/17, mB5.2/12, ML4.6/18, MLv4.9/17, Mw(mB)4.6/12, Error ellipse: s-maj=12.8km s-min=4.3km az=109.2*
NOU ***12*** *16:52:30.8, 34°.06S×179°.27E, h266km, MLv4.4/10, South of Kermadec Islands*
ISC 12 16:52:23.6±0.9, 33°.58S±0°.06×179°.9E±0°.1, h250km, n125, σ1s98/133, mb3.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.18	197	P	Pn		16 53 30.6	+1.3
MXZ	Matakaoa Point	4.18	197	P	Pn		16 53 31.0	+1.7
MXZ				S	S		16 54 21.0	-0.7
PUZ	Puketiti	4.67	196	P	Pn		16 53 36.9	+1.6
PUZ				S	S		16 54 32.4	-0.1
GLKZ	Green Lake	4.70	24	P	Pn		16 53 38.9	+3.1
GLKZ				S	S		16 54 30.6	-2.5
RUGZ	Raukumara Rang	4.73	201	P	Pn		16 53 38.2	+2.1
RUGZ				S	S		16 54 31.4	-2.4
TWGZ	Tauwhareparae	4.84	198	P	Pn		16 53 39.1	+1.7
TWGZ				S	S		16 54 37.0	+0.8
WHRZ	Whale Island	4.87	208	P	Pn		16 53 43.1	+5.4
TGRZ	Tauranga	5.08	214	P	Pn		16 53 44.0	+3.9
CNGZ	Carnagh Statio	5.08	195	P	Pn		16 53 41.9	+1.7
CNGZ				S	S		16 54 43.8	+2.4
MWZ	Matawai	5.11	201	P	Pn		16 53 41.7	+1.1
MWZ				S	S		16 54 40.6	-1.6
WCZ	Waipu Caves	5.12	241	P	Pn		16 53 42.1	+1.4
TKGZ	Te Karaka	5.12	198	P	Pn		16 53 41.6	+0.9
URZ	Urewera	5.18	205	P	Pn		16 53 41.5	+0.1
	63nm,0.3s,baz=21,slow=12,SNR=114							
URZ				S	S		16 54 41.0	-2.6
	64nm,0.5s,baz=55,slow=23,SNR=14							
URZ	Urewera	5.18	205	P	Pn		16 53 41.9	+0.5
URZ	Urewera	5.18	205	P	Pn		16 53 42.1	+0.7
URZ				S	S		16 54 41.9	-1.7
EDRZ	Edgecumbe	5.18	208	P	Pn		16 53 45.4	+3.8
MKAZ	Moumakai	5.21	226	P	Pn		16 53 44.9	+3.0
RAGZ	Rawiri	5.29	201	P	Pn		16 53 46.6	+3.5
OMRZ	Omania	5.34	211	P	Pn		16 53 46.7	+3.3
RIGZ	Rimuhau	5.39	198	P	Pn		16 53 44.7	+0.6
OUZ	Omahuta	5.43	251	P	Pn		16 53 44.6	0.0
OUZ	Omahuta	5.43	251	P	Pn		16 53 45.0	+0.4
RRRZ	Republican Roa	5.47	209	P	Pn		16 53 48.4	+3.3
RTZ	Ruatahuna	5.54	204	P	Pn		16 53 48.4	+2.4
HSRZ	Hossack Road	5.56	211	P	Pn		16 53 50.7	+4.5
PRGZ	Paritu Road	5.57	196	P	Pn		16 53 46.9	+0.7
SNGZ	Shannon Statio	5.58	201	P	Pn		16 53 47.0	+0.6
KNZ	Kokohu	5.71	197	P	Pn		16 53 48.0	0.0
ALRZ	Allen Road	5.73	209	P	Pn		16 53 51.1	+2.8
RAHZ	Arahi	5.78	202	P	Pn		16 53 49.6	+0.7
MHGZ	Mahia Peninsul	5.79	195	P	Pn		16 53 49.5	+0.6
MTHZ	Maungataniwha	5.80	204	P	Pn		16 53 49.7	+0.5
WHHZ	Waihua	5.89	200	P	Pn		16 53 51.3	+1.2
KUTZ	Kaahu Road	5.89	213	P	Pn		16 53 52.9	+2.6
TLZ	Tolley Road	5.90	215	P	Pn		16 53 52.6	+2.2
MRHZ	Matea Rd	5.94	207	P	Pn		16 53 52.6	+1.7
WHTZ	Whakaora	5.98	211	P	Pn		16 53 55.1	+3.7
NMHZ	Naumai	6.04	203	P	Pn		16 53 53.1	+1.0
WATZ	Wairara	6.11	212	P	Pn		16 53 56.0	+3.0
ARHZ	Aropaoanui	6.13	201	P	Pn		16 53 54.2	+1.0
BKZ	Black Stump Fm	6.21	205	P	Pn		16 53 54.1	-0.1
BKZ	Black Stump Fm	6.21	205	P	Pn		16 53 54.3	+0.1
RATZ	Rangitukua	6.23	211	P	Pn		16 53 56.9	+2.4
RITZ	Rihia Road	6.29	210	P	Pn		16 53 57.8	+2.6
HIZ	Hauiti	6.38	218	P	Pn		16 53 59.8	+3.5
MCHZ	McNeill Hill	6.39	203	P	Pn		16 53 56.1	-0.4
KWHZ	Kaweka Forest	6.46	204	P	Pn		16 53 58.7	+1.3
TMVZ	Te Maari	6.47	210	P	Pn		16 53 59.7	+2.2
CKHZ	Cape Kidnapper	6.47	199	P	Pn		16 54 00.0	+2.6
KRVZ	Karewarewa	6.47	211	P	Pn		16 53 59.9	+2.2
ETVZ	East Tongariro	6.48	210	P	Pn		16 53 59.3	+1.6
WTVZ	West Tongariro	6.51	211	P	Pn		16 54 00.2	+2.0
TWVZ	Taurewa	6.54	212	P	Pn		16 54 00.8	+2.3
NGZ	Ngauruhoe	6.56	210	P	Pn		16 54 00.8	+2.1
COVZ	Chateau Observ	6.61	211	P	Pn		16 54 01.4	+2.1
BHHZ	Black Hill Sta	6.65	206	P	Pn		16 54 00.6	+0.9
FWVZ	Far West T-bar	6.65	210	P	Pn		16 54 00.6	+0.7
KAHZ	Kahuranaki	6.65	200	P	Pn		16 53 59.4	-0.4
MAVZ	Matarangi	6.65	210	P	Pn		16 54 01.4	+1.3
WHVZ	Whangaehu Hut	6.66	210	P	Pn		16 54 01.3	+1.3
KRHZ	Kereru	6.67	204	P	Pn		16 53 58.8	-1.2
TRVZ	Turoa	6.69	210	P	Pn		16 54 01.8	+1.4
WNVZ	Wahianoa	6.69	210	P	Pn		16 54 01.6	+1.2
MOVZ	Moawhango	6.69	208	P	Pn		16 54 00.6	+0.3
PKVZ	Pokaka	6.76	211	P	Pn		16 54 02.8	+1.5
PXZ	Pawanui	6.88	200	P	Pn		16 54 01.6	-0.9
VRZ	Vera Road	6.90	215	P	Pn		16 54 05.1	+2.2
PNHZ	Pukenui	6.97	204	P	Pn		16 54 04.1	+0.2
WPHZ	Waipukurau	7.03	202	P	Pn		16 54 05.5	+0.9
PRHZ	Porangahau	7.16	200	P	Pn		16 54 04.8	-1.4
TSZ	Takapari Road	7.19	205	P	Pn		16 54 04.8	-1.7
WAZ	Wanganui	7.30	211	P	Pn		16 54 08.9	+1.0
DVHZ	Dannevirke	7.33	203	P	Pn		16 54 08.3	0.0
LREZ	Lake Rotokare	7.33	215	P	Pn		16 54 10.3	+2.0
POWZ	Post Office Ro	7.55	205	P	Pn		16 54 11.1	0.0
PRWZ	Pori Road	7.63	203	P	Pn		16 54 12.3	+0.2
BFZ	Birch Farm	7.66	201	P	Pn		16 54 11.8	-0.6
BFZ	Birch Farm	7.66	201	P	Pn		16 54 10.8	-1.6
MRZ	Mangatainoka R	7.86	205	P	Pn		16 54 13.2	-1.7
TIWZ	Tintock	7.86	203	P	Pn		16 54 14.0	-1.0
CPWZ	Castlepoint	7.88	201	P	Pn		16 54 16.3	-1.1
HOWZ	Holdsworth Sta	8.09	204	P	Pn		16 54 16.0	-1.9
OGWZ	Otaki Gorge	8.14	206	P	Pn		16 54 17.6	-0.9
TMWZ	Te Maipa	8.15	202	P	Pn		16 54 18.1	-0.6
KIW	Kapiti Island	8.27	207	P	Pn		16 54 18.6	-1.6
MTW	Mount Morrison	8.33	203	P	Pn		16 54 19.2	-1.7
CAW	Cannon Point	8.43	206	P	Pn		16 54 19.3	-2.9
TRWZ	Traveller	8.48	202	P	Pn		16 54 22.7	-0.1
PAWZ	Paruwai Farm	8.55	203	P	Pn		16 54 22.8	-1.0
DUWZ	D'Urville Isla	8.63	212	P	Pn		16 54 23.1	-1.6
MSWZ	Moikau Station	8.64	204	P	Pn		16 54 23.5	-1.4
WEL	Wellington	8.69	206	P	Pn		16 54 23.6	-1.8
SNZO

σ2^{s}47/61,**31C, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABMS	**Boumerdes**	**1.02**	**224**	P	**Pg**	**17 37 34.9**	**-0.6**
ATKJ	**Tikjda**	**1.06**	**191**	P	**Pg**	**17 37 37.0**	**+0.8**
CTCHA	**Tamokra**	**1.07**	**168**	P	**Pg**	**17 37 36.6**	**+0.1**
ABA	**Alger-Bouzarea**	**1.27**	**238**	P	**Pb**	**17 37 39.2**	**-0.6**
AKET	**Djebel Ketaf**	**1.49**	**195**	P	**Pn**	**17 37 43.5**	**+0.7**
CBHR	**Beni Haroun da**	**1.78**	**120**	P	**Pn**	**17 37 46.5**	**-0.2**
ABSD	**Ouled Sidi Bra**	**2.05**	**184**	P	**Pn**	**17 37 51.9**	**+1.5**
ETOS	**Mallorca**	**2.59**	**332**	P	**Pn**	**17 37 60.0**	**+2.1**
ETOS				⇑*i*Vmb_VC		17 38 04.3	
	335nm,SNR=2.0						
ETOS				S	**Sn**	**17 38 25.0**	**-4.4**
EIBI	**Ibiza**	**2.84**	**304**	P	**Pn**	**17 38 03.6**	**+2.3**
EIBI				⇑*i*Vmb_VC		17 38 05.9	
	1μm,SNR=5.1						
EIBI				S	**Sn**	**17 38 35.3**	**-0.2**
EBEN2	**Beniarda presa**	**3.79**	**290**	P	**Pn**	**17 38 16.5**	**+2.1**
EBEN2				⇑*i*Vmb_VC		17 38 19.6	
	753nm,SNR=2.6						
EBEN2				S	**Sn**	**17 38 58.5**	**-0.6**
AFON	**Font Roja**	**4.05**	**288**	P	**Pn**	**17 38 20.4**	**+2.4**
AFON				⇑*i*Vmb_VC		17 38 23.5	
	518nm,SNR=3.1						
VSL	**Villasalto**	**4.41**	**61**	P	**Pn**	**17 38 23.6**	**+0.7**
VSL				S	Sn	17 39 09.0	-5.3
EMUR	**La Murta**	**4.47**	**276**	P	**Pn**	**17 38 24.2**	**+0.5**
EMUR				⇑*i*Vmb_VC		17 38 25.7	
	139nm,SNR=1.4						
EMUR				S	**Sn**	**17 39 11.5**	**-4.2**
EPOB	**Poblet**	**4.63**	**328**	P	**Pn**	**17 38 28.2**	**+2.3**
EPOB				⇑*i*Vmb_VC		17 38 28.9	
	176nm,SNR=2.7						
EPOB				S	**Sn**	**17 39 16.9**	**-2.9**
EVIV	**Cofrentes, Val**	**4.67**	**294**	P	**Pn**	**17 38 29.1**	**+2.7**
EVIV				S	**Sn**	**17 39 19.8**	**-0.8**
ERTA	**Horta de San J**	**4.67**	**319**	P	**Pn**	**17 38 28.9**	**+2.3**
ERTA				⇑*i*Vmb_VC		17 38 31.4	
	102nm,SNR=1.6						
ERTA				S	**Sn**	**17 39 18.1**	**-2.7**
ECHE	**Chera**	**4.68**	**298**	P	**Pn**	**17 38 29.5**	**+2.9**
ECHE				⇑*i*Vmb_VC		17 38 30.6	
	1μm,SNR=5.2						
EMOS	**Mosqueruela**	**4.75**	**309**	P	**Pn**	**17 38 30.2**	**+2.6**
EMOS				⇑*i*Vmb_VC		17 38 31.0	
	421nm,SNR=5.9						
EMOS				S	**Sn**	**17 39 20.8**	**-2.1**
ETOB	**Tobarra**	**4.81**	**286**	P	**Pn**	**17 38 31.4**	**+3.0**
ETOB				⇑*i*Vmb_VC		17 38 35.2	
	166nm,SNR=1.3						
ETOB				S	**Sn**	**17 39 23.4**	**-0.8**
EZAR	**Zarzadilla de**	**4.83**	**276**	P	**Pn**	**17 38 29.3**	**+0.6**
EZAR				⇑*i*Vmb_VC		17 38 32.1	
	278nm,SNR=0.6						
EZAR				S	**Sn**	**17 39 21.9**	**-2.7**
EMIR	**Miracle**	**4.94**	**335**	P	**Pn**	**17 38 33.3**	**+3.1**
EMIR				⇑*i*Vmb_VC		17 38 35.3	
	607nm,SNR=2.5						
EMIR				S	**Sn**	**17 39 25.9**	**-1.5**
EJON	**La Jonquera**	**5.09**	**348**	P	**Pn**	**17 38 34.0**	**+1.8**
EJON				⇑*i*Vmb_VC		17 38 35.0	
	298nm,SNR=4.5						
EJON				S	**Sn**	**17 39 26.9**	**-4.1**
E0901	**Celadas (Terue**	**5.22**	**307**	P	**Pn**	**17 38 35.7**	**+1.5**
E0901				⇑*i*Vmb_VC		17 38 38.6	
	316nm,SNR=1.6						
E0901				S	**Sn**	**17 39 32.7**	**-1.8**
ESAC	**San Caprasio**	**5.65**	**320**	P	**Pn**	**17 38 43.3**	**+3.4**
ESAC				⇑*i*Vmb_VC		17 38 45.7	
	386nm,SNR=2.2						
ESAC				S	**Sn**	**17 39 43.7**	**-1.1**
EBER	**Berja**	**5.83**	**266**	P	**Pn**	**17 38 43.8**	**+1.3**
EBER				⇑*i*Vmb_VC		17 38 45.5	
	196nm,SNR=1.2						
EBER				S	**Sn**	**17 39 47.5**	**-1.9**
EQES	**Quesada**	**5.91**	**275**	P	**Pn**	**17 38 45.5**	**+1.9**
EQES				⇑*i*Vmb_VC		17 38 48.1	
	161nm,SNR=2.5						
EQES				S	**Sn**	**17 39 50.9**	**-0.6**
ETOR	**Torete**	**6.00**	**306**	P	**Pn**	**17 38 48.9**	**+4.1**
ETOR				⇑*i*Vmb_VC		17 38 51.3	
	138nm,SNR=1.9						
ECHI	**Chisagues Biel**	**6.08**	**330**	P	**Pn**	**17 38 48.3**	**+2.3**
ECHI				⇑*i*Vmb_VC		17 38 51.2	
	116nm,SNR=1.8						
PSIM	**Granatula de C**	**6.54**	**284**	P	**Pn**	**17 38 53.7**	**+1.5**
PSIM				S	**Sn**	**17 40 03.0**	**-3.9**
ESBB	**Sonseca Array**	**6.88**	**291**	P	**Pn**	**17 38 59.9**	**+3.0**
ESBB				⇑*i*Vmb_VC		17 39 01.1	
	149nm,SNR=2.4						
ESDC	**Sonseca Array**	**6.88**	**291**	P	**Pn**	**17 38 59.5**	**+2.6**
ESDC				⇑*i*Vmb_VC		17 39 01.1	
	149nm,SNR=2.4						
EORO	**Oroz-Betelu**	**6.93**	**323**	P	**Pn**	**17 39 00.7**	**+3.1**
EORO				⇑*i*Vmb_VC		17 39 02.1	
	19nm,SNR=1.7						
EORO				S	**Sn**	**17 40 13.8**	**-2.7**
PAB	**San Pablo**	**7.14**	**289**	P	**Pn**	**17 39 03.1**	**+2.7**
PAB				⇑*i*Vmb_VC		17 39 04.6	
	87nm,SNR=1.9						
EALK	**Alkurruntz**	**7.28**	**324**	P	**Pn**	**17 39 05.4**	**+3.1**
EALK				⇑*i*Vmb_VC		17 39 07.0	
	234nm,SNR=2.2						
EALK				S	**Sn**	**17 40 22.2**	**-2.8**
GUD	**Guadarrama**	**7.34**	**298**	P	**Pn**	**17 39 06.4**	**+3.1**
GUD				⇑*i*Vmb_VC		17 39 07.6	
	51nm,SNR=1.2						
PCP	**Piancastagn**	**7.72**	**23**	P	**Pn**	**17 39 08.2**	**-0.2**
PCP				S	Sn	17 40 30.0	-6.0
ECAB	**El Cabril**	**7.78**	**277**	P	**Pn**	**17 39 10.7**	**+1.6**
ECAB				⇑*i*Vmb_VC		17 39 11.3	
	77nm,SNR=1.3						
ELAN	**Lanestosa**	**8.27**	**316**	P	**Pn**	**17 39 19.1**	**+3.2**
ELAN				⇑*i*Vmb_VC		17 39 20.4	
	192nm,SNR=0.8						
EPLA	**Plasencia**	**8.56**	**291**	P	**Pn**	**17 39 23.0**	**+3.2**
EPLA				⇑*i*Vmb_VC		17 39 25.2	
	56nm,SNR=1.0						
EARI	**Arriondas**	**9.33**	**311**	P	**Pn**	**17 39 34.2**	**+3.7**
EARI				⇑*i*Vmb_VC		17 39 35.1	
	235nm,SNR=1.1						
ECAL	**Calabor**	**9.64**	**301**	P	**Pn**	**17 39 37.7**	**+2.9**
ECAL				⇑*i*Vmb_VC		17 39 40.0	
	566nm,SNR=2.9						
ELOB	**Lobios**	**10.53**	**298**	P	**Pn**	**17 39 50.1**	**+3.1**
ELOB				⇑*i*Vmb_VC		17 39 51.5	
	114nm,SNR=0.9						

KRNET **12** *17:46:51.5±0.1, 42.°38N×78.°19E, h21km, mb3.8*
SOME **12** *17:46:52.3, 42.°40N×78.°15E, h5km*
NNC **12** *17:46:53.5±1.1, 42.°45N×78.°21E, h0km, mb4.1, mpv4.1, Error ellipse: s-maj=8.9km s-min=3.5km az=171.0*
KNET **12** *17:46:54.1±0.2, 42.°45N×78.°01E, h3km±1km, ml3.6, Error ellipse: s-maj=3.5km s-min=1.5km az=0.0*
ISC 12 17:46:52.5±1.1, **42.°37N**±0.°02×**78.°13E**±0.°02, **h1**km±9km, **n77**, σ1^{s}**31**/141, **46C-27D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.23**	**60**	⇑*i*P	**Pg**	**17 46 56.0**	**-1.0**
PRZ				⇑*i*S	**Sg**	**17 46 59.7**	**-0.3**
ANVS	**Anan'yevo**	**0.54**	**321**	⇓*e*P	**Pg**	**17 47 02.5**	**-0.3**
ANVS				⇓*i*S	**Sg**	**17 47 10.2**	**+0.4**
TARG	**Taragay, Kyrgy**	**0.68**	**201**	⇑*i*P	**Pg**	**17 47 05.1**	**-0.5**
TARG				⇑*i*S	**Sg**	**17 47 14.7**	**+0.3**
SATY	**Saty**	**0.72**	**16**	P	**Pg**	**17 47 05.5**	**-0.8**
SATY	100nm,0.3s			S	**Sg**	**17 47 14.4**	**-1.2**
	799nm,0.2s						
SATY	**Saty**	**0.72**	**16**	*e*P	**Pg**	**17 47 05.5**	**-0.8**
SATY	89nm,0.2s			*e*S	**Sg**	**17 47 14.4**	**-1.2**
	901nm,0.1s						
KDJ	**Kajisay**	**0.74**	**252**	⇓*i*P	**Pg**	**17 47 06.4**	**-0.4**
KDJ				⇓*i*S	**Sg**	**17 47 16.9**	**+0.5**
UZB	**Uzynbulak**	**1.02**	**40**	P	**Pg**	**17 47 10.4**	**-1.6**
UZB	17nm,0.2s			S	**Sg**	**17 47 23.2**	**-2.1**
	198nm,0.1s						
UZB	**Uzynbulak**	**1.02**	**40**	*e*P	**Pg**	**17 47 10.4**	**-1.6**
UZB				*e*S	**Sg**	**17 47 23.1**	**-2.1**
TNSS	**Tian-Shan**	**1.10**	**308**	P	**Pg**	**17 47 13.6**	**0.0**
	22nm,0.1s						
TNSS				S	**Sg**	**17 47 28.8**	**+1.0**
	64nm,0.2s						
TNSS	**Tian-Shan**	**1.10**	**308**	*e*P	**Pg**	**17 47 13.6**	**0.0**
	22nm,0.1s						
TNSS				*e*S	**Sg**	**17 47 28.8**	**+1.0**
	98nm,0.2s						
KURS	**Kuram**	**1.12**	**2**	P	**Pb**	**17 47 13.1**	**-1.7**
	57nm,0.3s						
KURS				S	**Sg**	**17 47 27.3**	**-1.2**
	79nm,0.2s						
KURS	**Kuram**	**1.12**	**2**	*e*P	**Pb**	**17 47 13.0**	**-1.7**
	37nm,0.2s						
KURS				*e*S	**Sg**	**17 47 27.0**	**-1.5**
	79nm,0.2s						
MDOK	**Medeo**	**1.12**	**315**	Pg	**Pg**	**17 47 14.0**	**-0.1**
	107nm,0.2s						
MDOK				Lg	Lg	17 47 29.3	
	436nm,0.4s						
MDOK	**Medeo**	**1.12**	**315**	*e*P	**Pg**	**17 47 14.0**	**-0.1**
	107nm,0.2s						
MDOK				*e*S	**Sg**	**17 47 29.3**	**+0.6**
	436nm,0.4s						
KNDC	**Almaty**	**1.21**	**315**	⇑P	**Pb**	**17 47 15.6**	**-0.6**
	20nm,0.3s						
KNDC				⇑S	**Sn**	**17 47 32.6**	**-1.0**
	463nm,0.5s						
AAA	**Alma-Ata**	**1.23**	**314**	P	**Pb**	**17 47 16.5**	**0.0**
	475nm,0.1s						
AAA				S	**Sn**	**17 47 33.5**	**-0.6**
	56nm,0.2s						
AAA	**Alma-Ata**	**1.23**	**314**	*e*P	**Pb**	**17 47 16.5**	**0.0**
	475nm,0.1s						
AAA				*e*S	**Sn**	**17 47 33.3**	**-0.8**
	55nm,0.1s						
SHLS	**Shalkode**	**1.26**	**51**	P	**Pg**	**17 47 19.8**	**+3.2**
	67nm,0.3s						
SHLS				S	**Sn**	**17 47 39.3**	**+4.3**
	545nm,0.2s						
SHLS	**Shalkode**	**1.26**	**51**	*e*P	**Pg**	**17 47 19.8**	**+3.2**
	80nm,0.2s						
SHLS				*e*S	**Sn**	**17 47 39.3**	**+4.3**
	545nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**301**	P	**Pn**	**17 47 17.3**	**-0.7**
	61nm,0.3s						
IZV				S	**Sn**	**17 47 35.9**	**-0.2**
	729nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**301**	*e*P	**Pn**	**17 47 17.3**	**-0.7**
IZV				*e*S	**Sn**	**17 47 35.9**	**-0.2**
PDGK	**Podgornoye**	**1.39**	**46**	⇑P	**Pn**	**17 47 17.1**	**-2.0**
	18nm,0.5s						
PDGK				⇑S	**Sb**	**17 47 34.5**	**-3.1**
	172nm,0.9s						
ULHL	**Ulahol**	**1.41**	**266**	P	**Pb**	**17 47 19.6**	**0.0**
	69nm,0.1s,SNR=30						
ULHL				⇓S	**Sg**	**17 47 39.5**	**+1.8**
	373nm,0.2s						
ULHL	**Ulahol**	**1.41**	**266**	⇓*i*P	**Pn**	**17 47 18.0**	**-1.4**
ULHL				⇓*i*S	**Sb**	**17 47 37.4**	**-0.8**
MTBS	**Maitube**	**1.47**	**302**	P	**Pb**	**17 47 20.4**	**-0.2**
	73nm,0.3s						
MTBS				S	**Sg**	**17 47 40.3**	**+0.7**
	477nm,0.2s						
MTBS	**Maitube**	**1.47**	**302**	*e*P	**Pb**	**17 47 20.4**	**-0.2**
	57nm,0.2s						
MTBS				*e*S	**Sg**	**17 47 40.3**	**+0.7**
	477nm,0.2s						
BOOM	**Boomskoye usch**	**1.63**	**275**	⇓*i*P	**Pn**	**17 47 22.0**	**-0.4**
BOOM				⇓*i*S	**Sb**	**17 47 43.9**	**-0.5**
KTBS	**Karatobe**	**1.71**	**322**	P	**Pn**	**17 47 23.5**	**0.0**
	16nm,0.1s						
KTBS				S	**Sb**	**17 47 45.7**	**-1.1**
	308nm,0.2s						
KTBS	**Karatobe**	**1.71**	**322**	*e*P	**Pn**	**17 47 23.5**	**0.0**
	26nm,0.1s						
KTBS				*e*S	**Sb**	**17 47 45.8**	**-1.1**
	330nm,0.2s						
KST	**Kastek**	**1.73**	**294**	P	**Pb**	**17 47 25.1**	**-0.1**
	54nm,0.2s						
KST				S	**Sg**	**17 47 48.5**	**+0.3**
	479nm,0.5s						
KST	**Kastek**	**1.73**	**294**	*e*P	**Pb**	**17 47 25.1**	**-0.1**
	54nm,0.2s						
KST				*e*S	**Sg**	**17 47 48.5**	**+0.3**
	479nm,0.5s						
BLB	**Baldybastay**	**1.75**	**8**	P	**Pn**	**17 47 24.3**	**+0.3**
	650nm,0.3s						
BLB				S	**Sb**	**17 47 47.1**	**-0.8**
	3.0nm,0.2s						
NRN	**Naryn**	**1.84**	**240**	⇑*i*P	**Pn**	**17 47 25.6**	**0.0**
NRN				⇑*i*S	**Sb**	**17 47 50.3**	**-0.6**
ARXS	**Arharly**	**1.86**	**353**	P	**Pb**	**17 47 26.5**	**-0.8**
	276nm,0.3s						
ARXS				S	**Sb**	**17 47 50.9**	**-0.1**
	121nm,0.2s						
ARXS	**Arharly**	**1.86**	**353**	*e*P	**Pb**	**17 47 26.5**	**-0.8**
	276nm,0.3s						
ARXS				*e*S	**Sb**	**17 47 50.9**	**-0.1**
	104nm,0.2s						
TKM2	**Tokmak 2**	**1.95**	**287**	⇑P	**Pb**	**17 47 28.9**	**0.0**
	89nm,0.3s,SNR=135						
TKM2				⇓S	**Sg**	**17 47 55.2**	**+0.1**
	603nm,0.3s						
TKM2	**Tokmak 2**	**1.95**	**287**	⇑*i*P	**Pn**	**17 47 26.9**	**0.0**
TKM2				⇑*i*S	**Sb**	**17 47 52.5**	**-1.3**
KTMS	**Ketmen**	**1.96**	**56**	P	**Pn**	**17 47 27.2**	**+0.3**
	29nm,0.2s						
KTMS				S	**Sn**	**17 47 51.8**	**-0.4**
	216nm,0.3s						
KTMS	**Ketmen**	**1.96**	**56**	*e*P	**Pn**	**17 47 27.2**	**+0.3**
	29nm,0.2s						
KTMS				*e*S	**Sn**	**17 47 51.8**	**-0.4**
	216nm,0.3s						
KNOS	**Konyrlen**	**2.13**	**21**	Pg	**Pb**	**17 47 30.6**	**-1.4**
	125nm,0.2s						
KNOS				Pg	**Pg**	**17 47 37.0**	**+3.6**
	30nm,0.2s						
KNOS				Lg	Lg	17 47 58.4	
	162nm,0.4s						
KNOS				Lg	Lg	17 48 06.5	
	136nm,0.6s						
KRBS	**Karabastau**	**2.24**	**307**	Pg	**Pb**	**17 47 33.8**	**0.0**
	36nm,0.2s						
KRBS				Lg	Lg	17 48 03.5	
	386nm,0.3s						
KRBS	**Karabastau**	**2.24**	**307**	*e*P	**Pb**	**17 47 33.8**	**0.0**
	38nm,0.2s						
KRBS				*e*S	**Sg**	**17 48 03.5**	**-0.8**
	386nm,0.3s						
DJR	**Jarkent**	**2.31**	**31**	Pg	**Pn**	**17 47 32.5**	**+0.8**
	205nm,0.2s						
DJR				Pg	**Pg**	**17 47 39.4**	**+2.6**
	74nm,0.3s						
DJR				Lg	Lg	17 48 02.9	
	237nm,0.3s						
DJR				Lg	Lg	17 48 10.8	
	138nm,0.4s						
KBK	**Karagaybulak**	**2.37**	**278**	⇑P	**Pb**	**17 47 35.5**	**-0.6**
	24nm,0.1s,SNR=46						
KBK				⇑S	**Sg**	**17 48 07.6**	**-1.1**
	271nm,0.3s						
KBK	**Karagaybulak**	**2.37**	**278**	⇑*i*P	**Pn**	**17 47 32.6**	**-0.1**
KBK				⇑*i*S	**Sn**	**17 48 02.4**	**-0.1**
CHMS	**Chumysh**	**2.57**	**285**	⇑P	**Pb**	**17 47 37.9**	**-1.4**
	23nm,0.3s,SNR=12						
CHMS				⇓S	**Sb**	**17 48 12.4**	**+0.9**
	92nm,0.2s						
CHMS	**Chumysh**	**2.57**	**285**	⇓*i*P	**Pn**	**17 47 35.3**	**0.0**
CHMS				⇓*i*S	**Sn**	**17 48 07.1**	**-0.1**
FRU1	**Bishkek**	**2.62**	**281**	⇓*e*P	**Pn**	**17 47 36.1**	**+0.1**
FRU1				⇓*i*S	**Sn**	**17 48 08.6**	**+0.1**
TDK	**Taldyqorghan**	**2.64**	**4**	Pg	**Pb**	**17 47 39.9**	**-0.7**
	70nm,0.2s						
TDK				Lg	Lg	17 48 13.7	
	313nm,0.4s						
TDK	**Taldyqorghan**	**2.64**	**4**	*e*P	**Pb**	**17 47 39.9**	**-0.7**
	70nm,0.2s						
TDK				*e*S	**Sb**	**17 48 13.7**	**+0.1**
	313nm,0.4s						
UCH	**Uchtor**	**2.69**	**268**	⇑P	**Pb**	**17 47 40.1**	**-1.5**
	11nm,0.2s,SNR=24						
UCH				⇑S	**Sb**	**17 48 16.4**	**+1.2**
	47nm,0.2s						
UCH	**Uchtor**	**2.69**	**268**	⇓*i*P	**Pn**	**17 47 37.1**	**-0.2**
UCH				⇓*i*S	**Sn**	**17 48 10.4**	**-0.2**
AAK	**Ala-Archa**	**2.70**	**277**	⇑P	**Pb**	**17 47 40.1**	**-1.6**
	25nm,0.2s,SNR=14						
AAK				⇓S	**Sb**	**17 48 15.8**	**+0.4**
	152nm,0.4s						
AAK	**Ala-Archa**	**2.70**	**277**	⇑Pn	**Pb**	**17 47 40.4**	**-1.3**
	67nm,0.4s						
AAK				⇑Sn	**Sb**	**17 48 17.4**	**+2.0**
	658nm,0.7s						
AAK	**Ala-Archa**	**2.70**	**277**	⇓*i*P	**Pn**	**17 47 37.1**	**-0.1**
AAK				⇓*i*S	**Sn**	**17 48 10.6**	**0.0**
SGDS	**Sogindy**	**2.79**	**294**	Pg	**Pb**	**17 47 43.9**	**+0.8**
	24nm,0.4s						
SGDS				Lg	Lg	17 48 20.7	
	369nm,0.5s						
USP	**Ospenovka**	**2.82**	**290**	⇑P	**Pb**	**17 47 41.0**	**-2.6**
	24nm,0.2s,SNR=22						
USP	**Ospenovka**	**2.82**	**290**	⇑*i*P	**Pn**	**17 47 38.6**	**-0.1**
USP				⇑*i*S	**Sn**	**17 48 12.8**	**-0.5**
KAPS	**Kapalarasan**	**3.05**	**17**	Pg	**Pb**	**17 47 47.1**	**-0.5**
	14nm,0.2s						
KAPS				Pg	**Pg**	**17 47 52.3**	**+1.4**
	16nm,0.2s						
KAPS				Lg	Lg	17 48 26.3	
	138nm,0.2s						
KAPS				Lg	Lg	17 48 32.9	
KAPS	**Kapalarasan**	**3.05**	**17**	*e*P	**Pb**	**17 47 47.1**	**-0.5**
	14nm,0.2s						
KAPS				*e*S	**Sb**	**17 48 26.3**	**+1.0**
	155nm,0.2s						
EKS2	**Erkin-Say**	**3.23**	**277**	⇑P	**Pn**	**17 47 46.9**	**+2.4**
	13nm,0.2s,SNR=15						
EKS2	**Erkin-Say**	**3.23**	**277**	⇑*i*P	**Pn**	**17 47 44.5**	**+0.1**
EKS2				⇑*i*S	**Sn**	**17 48 23.1**	**-0.5**
SALK	**Salom-Alik**	**3.55**	**247**	⇑*i*P	**Pn**	**17 47 49.1**	**+0.2**
SALK				⇑*i*S	**Sn**	**17 48 31.1**	**-0.5**
MRKS	**Merke**	**3.64**	**278**	Pg	**Pb**	**17 47 59.8**	**+2.1**
	16nm,0.5s						
MRKS				Lg	Lg	17 48 47.6	
	83nm,0.4s						
MRKS	**Merke**	**3.64**	**278**	*e*P	**Pb**	**17 47 59.8**	**+2.1**
	13nm,0.3s						
MRKS				*e*S	**Sg**	**17 48 47.6**	**-1.9**
	83nm,0.4s						
ARSB	**Arslanbob**	**3.98**	**257**	⇑*i*P	**Pn**	**17 47 55.1**	**+0.3**
ARSB				⇑*i*S	**Sn**	**17 48 41.3**	**-0.9**
MNAS	**Manas**	**4.17**	**274**	⇓*i*P	**Pn**	**17 47 57.6**	**+0.3**
MNAS				⇓*i*S	**Sn**	**17 48 45.5**	**-1.2**
SFK	**Sufi-Kurgan**	**4.21**	**238**	⇑*i*P	**Pn**	**17 47 58.2**	**+0.2**
SFK				⇑*i*S	**Sn**	**17 48 46.5**	**-1.4**
ARK	**Arkit**	**4.62**	**265**	⇑*e*P	**Pn**	**17 48 03.9**	**+0.3**
ARK				⇑*i*S	**Sn**	**17 48 56.5**	**-1.5**
MAKZ	**Makanchi**	**5.22**	**30**	⇑Pn	**Pn**	**17 48 13.0**	**+1.3**
	2.3nm,0.3s						
MAKZ				⇑Lg	Lg	17 49 33.1	
	7.5nm,0.7s						
TRKS	**Terek-Say**	**5.28**	**263**	⇑*i*P	**Pn**	**17 48 12.7**	**+0.1**
TRKS				⇑*i*S	**Sn**	**17 49 11.9**	**-2.3**
MK31	**Makanchi Array**	**5.33**	**32**	⇑Pn	**Pn**	**17 48 14.1**	**+0.9**
	1.6nm,0.2s,baz=210,slow=13,SNR=70						
MK31				⇑Lg	Lg	17 49 35.9	
	2.7nm,0.5s,baz=209,slow=29,SNR=4.9						
KK31	**Karatay Array**	**5.66**	**280**	⇑Pg	**Pb**	**17 48 36.3**	**+4.3**
	2.3nm,0.5s,baz=105,slow=15,SNR=33						
KK31				⇓Lg	Lg	17 49 55.0	
	7.1nm,0.4s,baz=91,slow=30,SNR=12						
BTK	**Batken**	**5.98**	**250**	⇓*i*P	**Pn**	**17 48 22.3**	**+0.2**
BTK				⇓*i*S	**Sn**	**17 49 28.6**	**-2.7**
ZSN	**Zaisan**	**6.98**	**41**	Pg	**Pn**	**17 48 37.3**	**+1.5**
KURBB	**Kurchatov Arra**	**8.26**	**2**	⇑Pn	**Pn**	**17 48 54.4**	**+1.0**
	1.9nm,0.8s						
KURBB				⇓Lg	Lg	17 51 13.0	
	17nm,0.8s						
KURK	**Kurchatov**	**8.36**	**2**	⇑Pn	**Pn**	**17 48 56.0**	**+1.4**
	0.5nm,0.8s						
KURK				⇓Lg	Lg	17 51 12.6	
	6.3nm,0.8s						

KRNET **12** *17:49:53.4±0.1, 42.°37N×78.°22E, h25km, mb3.4*
SOME **12** *17:49:54.0, 42.°38N×78.°17E, h15km*
NNC **12** *17:49:56.1±0.8, 42.°51N×78.°20E, h0km, mb3.3, mpv3.3, Error ellipse: s-maj=6.2km s-min=2.4km az=172.0*
ISC 12 17:49:54.3±0.9, **42.°39N**±0.°03×**78.°17E**±0.°02, **h11**km±8km, **n47**, σ1^{s}**52**/87, **17C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.20**	**62**	⇑*i*P	**Pg**	**17 49 58.4**	**-0.3**
PRZ				⇑*i*S	**Sg**	**17 50 01.9**	**+0.2**
ANVS	**Anan'yevo**	**0.54**	**317**	⇓*i*P	**Pg**	**17 50 04.9**	**0.0**
ANVS				⇓*i*S	**Sb**	**17 50 13.2**	**-0.5**
SATY	**Saty**	**0.69**	**15**	P	**Pb**	**17 50 07.8**	**-0.6**
SATY	18nm,0.1s			S	**Sg**	**17 50 15.4**	**-1.5**
	157nm,0.1s						
SATY	**Saty**	**0.69**	**15**	*e*P	**Pg**	**17 50 07.3**	**-0.4**
SATY	18nm,0.1s			*e*S	**Sg**	**17 50 16.0**	**-0.9**
	157nm,0.1s						
TARG	**Taragay, Kyrgy**	**0.71**	**202**	⇑*i*P	**Pg**	**17 50 07.1**	**-1.1**
TARG				⇑*i*S	**Sg**	**17 50 16.8**	**-0.8**
KDJ	**Kajisay**	**0.78**	**251**	⇓*i*P	**Pg**	**17 50 08.7**	**-0.7**
KDJ				⇓*i*S	**Sg**	**17 50 19.6**	**+0.1**
UZB	**Uzynbulak**	**0.98**	**40**	P	**Pn**	**17 50 13.4**	**-0.8**
UZB	4.5nm,0.2s			S	**Sb**	**17 50 24.8**	**-1.7**
	32nm,0.1s						
UZB	**Uzynbulak**	**0.98**	**40**	*e*P	**Pb**	**17 50 12.5**	**-0.9**
UZB				*e*S	**Sb**	**17 50 24.8**	**-1.7**
KURS	**Kuram**	**1.10**	**0**	P	**Pg**	**17 50 16.1**	**+0.6**
	6.2nm,0.2s						
KURS				S	**Sg**	**17 50 29.5**	**-0.3**

KTBS	**Karatobe**	**1.71**	**321**	*eP*	**Pb**	**17 50 25.1**	**-0.6**
	4.9nm,0.1s							
KTBS				*eS*	**Sb**	**17 50 47.4**	**+0.1**
	40nm,0.2s							
BLB	**Baldybastay**	**1.72**	**8**	P	**Pg**	**17 50 26.9**	**-0.4**
	26nm,0.3s							
BLB				S	**Sg**	**17 50 48.3**	**-1.4**
	42nm,0.3s							
KST	**Kastek**	**1.75**	**293**	P	**Pg**	**17 50 28.2**	**+0.3**
	6.6nm,0.3s							
KST				S	**Sg**	**17 50 50.3**	**-0.3**
	65nm,0.5s							
KST	**Kastek**	**1.75**	**293**	*eP*	**Pb**	**17 50 27.0**	**+0.5**
	5.4nm,0.2s							
KST				*eS*	**Sg**	**17 50 50.3**	**-0.3**
	65nm,0.5s							
ARXS	**Arharly**	**1.84**	**352**	P	**Pb**	**17 50 27.7**	**-0.3**
	37nm,0.5s							
ARXS				S	**Sb**	**17 50 49.5**	**-1.4**
	33nm,0.6s							
ARXS	**Arharly**	**1.84**	**352**	*eP*	**Pb**	**17 50 27.7**	**-0.3**
	27nm,0.2s							
ARXS				*eS*	**Sb**	**17 50 51.9**	**+1.0**
	32nm,0.3s							
NRN	**Naryn**	**1.88**	**240**	⇓*eP*	**Pb**	**17 50 27.4**	**-1.4**
NRN				⇓*iS*	**Sb**	**17 50 52.0**	**-0.3**
KTMS	**Ketmen**	**1.92**	**56**	P	**Pg**	**17 50 29.9**	**-1.2**
	2.8nm,0.1s							
KTMS				S	**Sb**	**17 50 53.2**	**-0.2**
	30nm,0.3s							
KTMS	**Ketmen**	**1.92**	**56**	*eP*	**Pb**	**17 50 28.8**	**-0.6**
	2.8nm,0.1s							
KTMS				*eS*	**Sb**	**17 50 53.2**	**-0.2**
	30nm,0.3s							
TKM2	**Tokmak 2**	**1.97**	**286**	⇓*iP*	**Pn**	**17 50 28.5**	**+0.8**
TKM2				⇓*iS*	**Sb**	**17 50 54.1**	**-0.7**
KNOS	**Konyrlen**	**2.10**	**20**	Pg	**Pg**	**17 50 33.6**	**-1.0**
	5.5nm,0.3s							
KNOS				Lg	Lg	17 50 59.7	
	24nm,0.4s							
KRBS	**Karabastau**	**2.25**	**306**	Pg	**Pg**	**17 50 36.9**	**-0.4**
	4.2nm,0.5s							
KRBS				Lg	Lg	17 51 05.3	
	48nm,0.4s							
KRBS	**Karabastau**	**2.25**	**306**	*eP*	**Pb**	**17 50 35.1**	**+0.2**
	3.2nm,0.2s							
KRBS				*eS*	**Sg**	**17 51 05.3**	**-1.2**
	48nm,0.4s							
DJR	**Jarkent**	**2.27**	**31**	Pg	**Pg**	**17 50 36.2**	**-1.6**
	5.6nm,0.3s							
DJR				Lg	Lg	17 51 04.2	
	42nm,0.2s							
KBK	**Karagaybulak**	**2.39**	**277**	⇑*iP*	**Pn**	**17 50 34.5**	**+0.9**
KBK				⇑*iS*	**Sn**	**17 51 04.2**	**+1.3**
CHMS	**Chumysh**	**2.59**	**285**	⇑*iP*	**Pn**	**17 50 37.0**	**+0.9**
CHMS				⇑*iS*	**Sn**	**17 51 08.7**	**+1.1**
UCH	**Uchtor**	**2.71**	**268**	⇑*iP*	**Pn**	**17 50 39.0**	**+0.8**
UCH				⇑*iS*	**Sn**	**17 51 12.1**	**+0.9**
AAK	**Ala-Archa**	**2.73**	**276**	⇓*iP*	**Pn**	**17 50 38.9**	**+0.8**
AAK				⇓*iS*	**Sn**	**17 51 12.2**	**+1.1**
SGDS	**Sogindy**	**2.81**	**293**	Pg	**Pg**	**17 50 46.8**	**-1.2**
	3.3nm,0.4s							
SGDS				Lg	Lg	17 51 22.2	
	48nm,0.5s							
KAPS	**Kapalarasan**	**3.02**	**16**	Pg	**Pg**	**17 50 50.0**	**-2.2**
	2.4nm,0.2s							
KAPS				Lg	Lg	17 51 27.7	
	24nm,0.2s							
KAPS	**Kapalarasan**	**3.02**	**16**	*eP*	**Pb**	**17 50 48.2**	**+0.1**
	1.8nm,0.1s							
KAPS				*eS*	**Sg**	**17 51 27.7**	**-3.6**
	24nm,0.2s							
EKS2	**Erkin-Say**	**3.25**	**276**	⇑*iP*	**Pn**	**17 50 46.4**	**+1.0**
EKS2				⇑*iS*	**Sn**	**17 51 24.8**	**+0.7**
SALK	**Salom-Alik**	**3.59**	**247**	⇑*iP*	**Pn**	**17 50 50.8**	**+0.8**
SALK				⇑*iS*	**Sn**	**17 51 32.5**	**+0.1**

TRN 12 17:51:22.0, 18°47N×62°84W, h23km, MD3.7, North-east of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.47**	**208**	*eP*	Pn	17 51 33.1	-0.3
SMRT				*eS*	Sn	17 51 42.0	+0.9
SABA	**Saba**	**0.93**	**204**	*eP*	Pn	17 51 40.7	+1.1
SABA				*eS*	Sn	17 51 55.1	+2.8
SEUS	**St. Eustatius**	**0.98**	**188**	*eP*	Pn	17 51 41.8	+1.4
SEUS				*eS*	Sn	17 51 56.8	+3.2
SKI	**Saint Kitts**	**1.14**	**175**	*eP*	Pb	17 51 43.1	+0.1
SKI				*eS*	Sn	17 52 00.4	+3.0
ANWB	**Willy Bob**	**1.29**	**128**	*eP*	Pn	17 51 44.9	+0.3
ANWB				*eS*	Sb	17 52 03.3	+1.7
MBWH	**Windy Hill**	**1.83**	**160**	*eP*	Pb	17 51 55.4	+0.5
MBWH				*eS*	Sn	17 52 15.6	+1.0
DHSZ	**Broadband at M**	**2.42**	**155**	*eP*	Pn	17 52 02.4	+2.2
DHSZ				*eS*	Sb	17 52 33.5	-0.7
MMLZ	**Guadeloupe Bro**	**2.66**	**155**	*eP*	Pn	17 52 06.0	+2.5
MMLZ				*eS*	Sb	17 52 38.3	-2.9
TBG	**Guadaloupe-3**	**2.85**	**156**	*eP*	Pb	17 52 09.8	-2.4
DSLB	**Salisbury**	**3.31**	**156**	*eP*	Pn	17 52 14.3	+1.9

*IDC **12** 17:53:49.2±0.7, 7°17N×33°88W, h0km, mb4.2/21, mbtmp4.2/22, ML3.9/1, MS3.7/56, Error ellipse: s-maj=23.3km s-min=15.1km az=149.0*
*NEIC **12** 17:53:51.0±2.0, 7°2N±0°1×33°94W±0°06, h10km±1km, mb4.6/10, Error ellipse: s-maj=19.6km s-min=9.7km az=195.0*

ISC 12 17:53:51.2±0.5, 7°13N±0°09×33°92W±0°09, h15km, n146, σ1$00/100, mb4.4/49, MS3.8/54, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBMO	**Morrinhos-CE**	**12.04**	**211**	*eP*	**Pn**	**17 56 41.0**	**-1.4**
SACV	**Santiago Islan**	**12.77**	**52**		Pn	17 56 46.4	-6.0
RCBR	**Riachuelo**	**13.02**	**189**	Pn	**Pn**	**17 56 55.5**	**-0.3**
	0.7nm,0.3s,baz=7.5,slow=20,SNR=9.4						
RCBR				LR	LR	18 00 43.3	
	comp=Z,136nm,20.1s,baz=67,slow=32 3.5nm,0.6s						
RCBR	**Riachuelo**	**13.02**	**189**	Pn	**Pn**	**17 56 55.8**	**-0.1**
NBPS	**Pedro II - PI**	**13.69**	**213**	*eP*	**Pn**	**17 57 05.4**	**+0.4**
NBMA	**Muriti-CE**	**15.19**	**199**	*eP*	**Pn**	**17 57 25.6**	**+0.2**
MDP	**Montagnes des**	**18.72**	**265**	LR	LR	18 04 01.1	
	comp=Z,140nm,21.5s,baz=96,slow=33						
PRPB	**Parauapebas**	**20.64**	**231**	*eP*	**P**	**17 58 30.4**	**-0.1**
SMTB	**Santa Maria do**	**20.93**	**221**	*eP*	**P**	**17 58 34.3**	**+0.7**
SDBA	**SAO DESIDERIO**	**22.27**	**209**	*eP*	**P**	**17 58 48.4**	**+0.3**
H10N3	**ASCENSION HYDR**	**24.41**	**127**	T	T	18 24 22.3	
	baz=307,slow=74,SNR=151						
H10N2	**ASCENSION HYDR**	**24.42**	**127**	T	T	18 24 22.6	
	baz=307,slow=74,SNR=156						
H10N1	**ASCENSION HYDR**	**24.43**	**127**	T	T	18 24 23.8	
	baz=307,slow=74,SNR=161						
ITTB	**Itaituba**	**24.59**	**243**	*eP*	**P**	**17 59 12.1**	**+1.1**
NPGB	**Novo Progresso**	**25.60**	**237**	*eP*	**P**	**17 59 21.6**	**+1.4**
SNDB	**Serra Nova Dou**	**25.67**	**222**	*eP*	**P**	**17 59 22.0**	**+1.2**
BDFB	**Brasilia**	**26.59**	**212**	P	**P**	**17 59 30.2**	**+1.0**
	2.3nm,0.6s,baz=15,slow=8.3,SNR=3.9						
BDFB				LR	LR	18 09 04.9	
	comp=Z,445nm,19.9s,baz=7.8,slow=34 2.3nm,0.6s						
BOAV	**Boa Vista**	**26.92**	**261**		**P**	**17 59 30.8**	**-1.4**
BOAV	**Boa Vista**	**26.92**	**261**	*eP*	**P**	**17 59 31.2**	**-0.9**
ILAM	**Ilet Lapin Mar**	**27.51**	**288**	P	**P**	**17 59 34.3**	**-3.1**
GDHS	**Morne Mazeau,**	**28.71**	**291**	P	**P**	**17 59 49.5**	**+1.3**
DBIC	**Dimbokro**	**28.85**	**89**	P	**P**	**17 59 48.5**	**-1.0**
	4.0nm,0.8s,baz=291,slow=7.3,SNR=3.8						
DBIC				LR	LR	18 09 12.0	
	comp=Z,159nm,18.4s,baz=273,slow=32 4.0nm,0.8s						
PMPST	**Porto Santo, M**	**30.55**	**30**	*eP*	**P**	**18 00 02.0**	**-2.2**
SJG	**San Juan**	**33.23**	**292**	LR	LR	18 11 10.7	
	comp=Z,68nm,21.2s,baz=94,slow=31						
TORD	**Torodi Ar. Bea**	**35.54**	**77**	P	**P**	**18 00 46.7**	**-1.4**
	13nm,0.9s,baz=270,slow=9.1,SNR=22 13nm,0.9s						
TORD	**Torodi Ar. Bea**	**35.54**	**77**	P	**P**	**18 00 46.4**	**-1.6**
SDV	**Santo Domingo**	**36.39**	**275**	LR	LR	18 13 47.2	
	comp=Z,62nm,20.4s,baz=70,slow=33						
MDT	**Midelt**	**37.33**	**43**	LR	LR	18 14 17.1	
	comp=Z,144nm,20.4s,baz=224,slow=33						
MORF	**Marmelete**	**37.81**	**34**	*eP*	**P**	**18 01 09.3**	**+2.1**
PMTG	**Montargil**	**39.33**	**32**	*eP*	**P**	**18 01 22.7**	**+2.8**
PSARD	**Sardoal**	**39.75**	**32**	*eP*	**P**	**18 01 24.7**	**+1.2**
PMRV	**Marv??o**	**40.03**	**33**	*eP*	**P**	**18 01 28.4**	**+2.6**
ROSC	**El Rosal**	**40.24**	**269**	LR	LR	18 18 34.6	
	comp=Z,135nm,20.1s,baz=80,slow=37						
CPUP	**Villa Florida**	**40.28**	**213**	LR	LR	18 17 39.3	
	comp=Z,166nm,20.2s,baz=71,slow=36						
LPAZ	**La Paz**	**41.08**	**235**	P	**P**	**18 01 36.6**	**+1.2**
	2.4nm,0.9s,baz=41,slow=6.7,SNR=9.8						
LPAZ				LR	LR	18 17 38.9	
	comp=Z,159nm,20.2s,baz=66,slow=35 2.4nm,0.9s						
LPAZ	**La Paz**	**41.08**	**235**		**P**	**18 01 36.5**	**+1.2**
LPAZ	**La Paz**	**41.08**	**235**	*eP*	**P**	**18 01 34.9**	**-0.5**
ESDC	**Sonseca Array**	**42.10**	**35**	P	**P**	**18 01 43.3**	**+0.4**
	0.9nm,0.9s,baz=238,slow=7.9,SNR=4.3						
ESDC				LR	LR	18 16 20.1	
	comp=Z,99nm,19.5s,baz=212,slow=32 0.9nm,0.9s						
ESDC	**Sonseca Array**	**42.10**	**35**	P	**P**	**18 01 45.6**	**+2.8**
ATAH	**Atahualpa**	**46.57**	**253**	LR	LR	18 21 41.3	
	comp=Z,120nm,21.5s,baz=74,slow=36						
NNA	**Nana**	**46.72**	**246**	LR	LR	18 21 33.7	
	comp=Z,259nm,20.1s,baz=28,slow=36						
KEST	**Kesra**	**48.73**	**48**	P	**P**	**18 02 36.3**	**+0.8**
	4.4nm,0.7s,baz=245,slow=7.5,SNR=6.9						
KEST				LR	LR	18 21 32.8	
	comp=Z,115nm,21.6s,baz=284,slow=34 4.4nm,0.7s						
JTS	**Las Juntas de**	**50.50**	**277**	LR	LR	18 25 03.8	
	comp=Z,37nm,19.3s,baz=115,slow=37						
VAE	**Valguarnera**	**53.16**	**48**	LR	LR	18 25 54.0	
	comp=Z,176nm,20.3s,baz=304,slow=36						
TKL	**Tuckaleechee C**	**53.66**	**309**	LR	LR	18 22 28.3	
	comp=Z,36nm,19.3s,baz=197,slow=32						
EKA	**Eskdalemuir Ar**	**53.95**	**21**	P	**P**	**18 03 13.6**	**-0.6**
	1.4nm,0.6s,baz=217,slow=6.9,SNR=6.3 1.4nm,0.6s						
SADO	**Sadowa**	**54.24**	**321**	LR	LR	18 21 22.7	
	comp=Z,51nm,20.4s,baz=144,slow=30						
SCHQ	**Schefferville**	**54.37**	**337**	LR	LR	18 22 00.6	
	comp=Z,52nm,21.7s,baz=98,slow=31						
BFO	**Black Forest**	**54.41**	**33**	*eL*	L	18 21 22.7	
	62nm,21.9s						
DAVOX	**Davos/Dischmat**	**54.42**	**36**	LR	LR	18 23 35.9	
	comp=Z,134nm,20.5s,baz=259,slow=33						
FUORN	**Ofenpass-Fuorn**	**54.56**	**36**		**P**	**18 03 19.2**	**0.0**
FUORN				IAmb	IAmb	18 03 26.4	
	comp=Z,2.7nm,0.7s						
DAVA	**Damuels**	**54.70**	**35**	*eP*	**P**	**18 03 20.1**	**+0.1**
	comp=Z,3.1nm,0.8s						
FETA	**Feichten**	**55.04**	**36**	*eP*	**P**	**18 03 21.1**	**-1.4**
	comp=Z,3.4nm,1.2s						
RETA	**Reutte**	**55.31**	**35**	*eP*	**P**	**18 03 24.1**	**-0.2**
	comp=Z,4.4nm,1.1s						
SQTA	**Sankt Quirin**	**55.43**	**36**	*eP*	**P**	**18 03 25.3**	**0.0**
	comp=Z,5.5nm,1.1s						
TNS	**Taunus Mts**	**55.56**	**32**	*eL*	L	18 22 27.2	
	comp=Z,64nm,22.0s						
WTTA	**Wattenberg**	**55.70**	**36**	*eP*	**P**	**18 03 27.2**	**-0.1**
	comp=Z,3.0nm,0.7s						
WATA	**Walderalm**	**55.70**	**36**	*eP*	**P**	**18 03 26.9**	**-0.4**
	comp=Z,5.9nm,1.1s						
ABTA	**Abfaltersbach**	**55.95**	**37**	*eP*	**P**	**18 03 29.1**	**+0.1**
	comp=Z,5.1nm,0.9s						
FUR	**Furstenfeldbru**	**55.96**	**35**	*eL*	L	18 24 38.7	
	comp=Z,102nm,20.7s						
LESA	**Schwarzleotal**	**56.39**	**36**	*eP*	**P**	**18 03 32.1**	**0.0**
	comp=Z,5.4nm,1.0s						
MYKA	**Terra Mystica**	**56.58**	**38**	*eP*	**P**	**18 03 33.5**	**+0.1**
	comp=Z,10.0nm,1.2s						
KBA	**Koelnbreinsper**	**56.62**	**37**	*eP*	**P**	**18 03 34.1**	**+0.2**
	comp=Z,3.2nm,0.7s						
RJOB	**Jochberg**	**56.62**	**36**	*eP*	**P**	**18 03 33.6**	**-0.1**
	comp=Z,7.8nm,0.9s,baz=237,slow=6.7						
GRF	**Grafenberg Arr**	**56.75**	**33**	*eP*	**P**	**18 03 35.0**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=237,slow=6.7						
GRF				*eL*	L	18 22 42.1	
	comp=Z,62nm,20.4s						
TSUM	**Tsumeb**	**57.08**	**118**	LR	LR	18 24 24.0	
	comp=Z,79nm,18.4s,baz=322,slow=32						
BIOA	**Bad Ischl, Aus**	**57.09**	**36**	*eP*	**P**	**18 03 37.5**	**+0.5**
	comp=Z,2.2nm,0.5s						
SESA	**Seetaler Alpe,**	**57.36**	**37**	*eP*	**P**	**18 03 39.4**	**+0.2**
	comp=Z,5.9nm,1.1s						
WET	**Wettzell**	**57.38**	**35**	*eP*	**P**	**18 03 39.0**	**0.0**
	comp=Z,7.7nm,1.6s,baz=237,slow=6.7						
WET				*eL*	L	18 23 07.0	
	comp=Z,54nm,21.0s						
SOKA	**Soboth**	**57.45**	**38**	*eP*	**P**	**18 03 39.8**	**+0.2**
	comp=Z,5.5nm,1.1s						
MOX	**Moxa**	**57.48**	**33**	*eP*	**P**	**18 03 38.7**	**-1.0**
	comp=Z,16nm,1.9s,baz=237,slow=6.7						
MOX				*eL*	L	18 22 39.1	
	comp=Z,59nm,20.6s						
MOA	**Molln**	**57.53**	**37**	*eP*	**P**	**18 03 40.1**	**-0.1**
	comp=Z,3.7nm,1.1s						
PLN	**Plauen**	**57.68**	**33**	*eP*	**P**	**18 03 41.7**	**+0.6**
	comp=Z,2.2nm,1.3s,baz=237,slow=6.7						
GEC2	**GERESS Array S**	**57.70**	**35**	*eP*	**P**	**18 03 40.0**	**-1.3**
	comp=Z,6.9nm,1.7s,baz=237,slow=6.7						
GEC2				*eL*	L	18 24 58.9	
	comp=Z,100nm,22.0s						
GERES	**GERESS Array B**	**57.70**	**35**	P	**P**	**18 03 41.4**	**0.0**
	comp=Z,0.8nm,0.8s,baz=232,slow=4.8,SNR=7.1						
GERES				LR	LR	18 24 59.7	
	comp=Z,104nm,21.5s,baz=264,slow=32 comp=Z,0.8nm,0.8s						
GERES	**GERESS Array B**	**57.70**	**35**	P	**P**	**18 03 40.7**	**-0.6**
TANN	**Tannenbergstha**	**57.81**	**33**	*eP*	**P**	**18 03 42.3**	**+0.3**
	comp=Z,6.6nm,1.1s,baz=237,slow=6.7						
BORG	**Borgarnes**	**58.21**	**6**	LR	LR	18 22 45.1	
	comp=Z,39nm,20.2s,baz=176,slow=30						
PLCA	**Paso Flores**	**58.33**	**212**	LR	LR	18 29 18.1	
	comp=Z,411nm,18.0s,baz=54,slow=36						
CONA	**Conrad Observa**	**58.52**	**37**	*eP*	**P**	**18 03 47.3**	**+0.1**
	comp=Z,3.7nm,1.0s						
RONA	**Rosalia, Austr**	**58.68**	**37**	*eP*	**P**	**18 03 48.5**	**+0.3**
	comp=Z,4.1nm,0.9s						
WINA	**Allan/ Wiese**	**58.73**	**37**	*eP*	**P**	**18 03 48.5**	**0.0**
	comp=Z,5.8nm,1.0s						
BRG	**Berggiesshubel**	**58.85**	**33**	*eP*	**P**	**18 03 49.5**	**+0.2**
	baz=237,slow=6.7						
MODS	**Modra-Piesok**	**59.57**	**37**	*eP*	**P**	**18 03 55.1**	**+0.8**
VRAC	**Vranov**	**59.59**	**36**	LR	LR	18 27 02.1	
	comp=Z,70nm,20.7s,baz=258,slow=34						
PSZ	**Piszkesteto**	**60.97**	**38**		**P**	**18 04 04.3**	**+0.4**
PSZ				IAmb	IAmb	18 04 05.7	
	comp=Z,6.0nm,0.9s						
FRB	**Frobisher Bay**	**61.73**	**343**	LR	LR	18 26 52.2	
	comp=Z,63nm,20.7s,baz=199,slow=32						
NIE	**Niedzica**	**61.82**	**37**	P	**P**	**18 04 11.4**	**+1.8**
	comp=Z,2.2nm,1.2s						
NIE				pP	**sP**	**18 04 13.6**	**-1.2**
	comp=Z,2.2nm,1.2s						
NB2	**NORSAR Subarra**	**63.36**	**23**	P	**P**	**18 04 20.1**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=232,slow=6.9						
NOA	**NORSAR Array B**	**63.36**	**23**	P	**P**	**18 04 20.0**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=233,slow=6.6,SNR=4.4						
NOA				LR	LR	18 27 50.1	
	comp=Z,70nm,20.9s,baz=235,slow=32 comp=Z,1.8nm,0.8s						
VOIR		**63.40**	**42**	P	**P**	**18 04 21.8**	**+1.4**
	comp=Z,2.8nm,0.6s						
HFS	**Hagfors**	**63.80**	**24**	P	**P**	**18 04 22.9**	**+0.3**
	comp=Z,6.6nm,1.0s,baz=234,slow=6.3,SNR=5.4						
HFS				LR	LR	18 30 43.2	
	comp=Z,71nm,19.2s,baz=216,slow=35 comp=Z,6.6nm,1.0s						
MLR	**Muntele Rosu**	**64.02**	**43**	LR	LR	18 31 27.2	
	comp=Z,56nm,20.1s,baz=250,slow=35						
MLR	**Muntele Rosu**	**64.02**	**43**	P	**P**	**18 04 25.9**	**+1.4**
	comp=Z,18nm,1.1s						
VRI	**Vrincioaia**	**64.65**	**42**	P	**P**	**18 04 30.3**	**+1.8**
	comp=Z,10nm,1.5s						
MBAR	**Mbarara**	**64.95**	**94**	LR	LR	18 32 22.8	
	comp=Z,38nm,18.0s,baz=206,slow=36						
KMPD	**K-Podol'skiy**	**65.29**	**39**	P	**P**	**18 04 31.9**	**-0.6**
LSZ	**Lusaka**	**65.43**	**110**	LR	LR	18 29 03.8	
	comp=Z,98nm,18.1s,baz=108,slow=32						
RNPP8	**Varash**	**65.83**	**36**	P	**P**	**18 04 37.2**	**+1.2**
LBTB	**Lobatse**	**66.11**	**121**	LR	LR	18 27 59.3	
	comp=Z,61nm,19.6s,baz=90,slow=31						
ULM	**Lac du Bonnet**	**66.79**	**322**	P	**P**	**18 04 42.2**	**0.0**
	comp=Z,1.5nm,0.6s,baz=141,slow=3.2,SNR=3.5						
ULM				LR	LR	18 29 09.4	
	comp=Z,48nm,20.6s,baz=46,slow=32 comp=Z,1.5nm,0.6s						
ULM	**Lac du Bonnet**	**66.79**	**322**	P	**P**	**18 04 41.5**	**-0.7**
ULM				IAmb	IAmb	18 04 56.7	
	comp=Z,6.8nm,1.3s						
AK19	**Malin Array Si**	**67.53**	**38**	P	**P**	**18 04 47.0**	**+0.2**
AK20	**Malin Array Si**	**67.53**	**38**	P	**P**	**18 04 47.0**	**+0.1**
AK17	**Malin Array Si**	**67.55**	**38**	P	**P**	**18 04 47.1**	**+0.2**
AK14	**Malin Array Si**	**67.56**	**38**	P	**P**	**18 04 47.2**	**+0.2**
AK18	**Malin Array Si**	**67.56**	**38**	P	**P**	**18 04 47.2**	**+0.2**
AK21	**Malin Array Si**	**67.56**	**38**	P	**P**	**18 04 47.2**	**+0.2**
AK16	**Malin Array Si**	**67.57**	**38**	P	**P**	**18 04 47.3**	**+0.2**
AK22	**Malin Array Si**	**67.58**	**38**	P	**P**	**18 04 47.3**	**+0.2**
AK06	**Malin Array Si**	**67.60**	**38**	P	**P**	**18 04 47.5**	**+0.2**
AKASG	**Malin Array Be**	**67.65**	**38**	P	**P**	**18 04 47.2**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=253,slow=6.4,SNR=7.3						
AKASG				LR	LR	18 31 19.4	
	comp=Z,26nm,21.9s,baz=246,slow=33 comp=Z,2.4nm,0.7s						
AMTX	**Amarillo**	**67.73**	**305**	P	**P**	**18 04 48.0**	**-0.5**
EIL	**Elat**	**68.16**	**61**	LR	LR	18 35 01.8	
	comp=Z,224nm,20.8s,baz=268,slow=36						
BR131	**Keskin Array S**	**68.24**	**50**		**P**	**18 04 51.7**	**-0.1**
BR131				IAmb	IAmb	18 04 55.5	
	comp=Z,4.8nm,0.8s						
BRTR	**Keskin Array B**	**68.24**	**50**	P	**P**	**18 04 52.3**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=265,slow=4.1,SNR=18						
BRTR				LR	LR	18 34 41.5	
	comp=Z,64nm,21.9s,baz=298,slow=36 comp=Z,3.3nm,0.7s						
BRTR	**Keskin Array B**	**68.24**	**50**		**P**	**18 04 51.5**	**-0.3**
MMAI	**Mount Meron Ar**	**68.82**	**57**	LR	LR	18 38 13.5	
	comp=Z,65nm,18.2s,baz=102,slow=39						
TXAR	**Lajitas Array**	**68.90**	**299**	P	**P**	**18 04 57.0**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=75,slow=5.1,SNR=4.7						
TXAR				LR	LR	18 32 33.6	
	comp=Z,16nm,21.9s,baz=36,slow=34 comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**68.90**	**299**	P	**P**	**18 04 55.4**	**-0.7**
FINES	**FINESS Array B**	**69.72**	**26**	P	**P**	**18 05 00.3**	**0.0**
	comp=Z,1.9nm,0.8s,baz=230,slow=8.9,SNR=5.1						
FINES				LR	LR	18 33 57.4	
	comp=Z,71nm,18.8s,baz=227,slow=35 comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**69.72**	**26**	P	**P**	**18 04 59.9**	**-0.4**
ASF	**Jabal al Asfar**	**70.01**	**58**	LR	LR	18 38 12.1	
	comp=Z,25nm,18.2s,baz=206,slow=38						
ANMO	**Albuquerque**	**71.64**	**304**	LR	LR	18 32 11.0	
	comp=Z,50nm,21.9s,baz=89,slow=32						
PDAR	**Pinedale Array**	**74.65**	**312**	P	**P**	**18 05 30.7**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=79,slow=11,SNR=8.0						
PDAR				LR	LR	18 33 27.8	
	comp=Z,20nm,21.5s,baz=71,slow=32 comp=Z,1.7nm,1.0s						
PDAR	**Pinedale Array**	**74.65**	**312**	P	**P**	**18 05 30.5**	**0.0**
KBZ	**Khabaz**	**75.58**	**47**	P	**P**	**18 05 36.0**	**+0.5**
	comp=Z,3.8nm,1.0s,baz=273,slow=4.7,SNR=5.7 comp=Z,3.8nm,1.0s						
HWUT	**Hardware Ranch**	**76.07**	**311**		**P**	**18 05 39.1**	**+0.4**
HWUT				IAmb	IAmb	18 05 46.8	
	comp=Z,4.2nm,0.9s						
GNI	**Garni**	**76.78**	**51**	LR	LR	18 40 18.7	
	comp=Z,37nm,21.9s,baz=272,slow=36						
YKA	**Yellowknife Ar**	**79.41**	**332**	P	**P**	**18 05 55.9**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=97,slow=5.6,SNR=12						
YKA				LR	LR	18 37 35.9	
	comp=Z,30nm,20.9s,baz=52,slow=33 comp=Z,1.3nm,0.8s						
YKA	**Yellowknife Ar**	**79.41**	**332**	P	**P**	**18 05 54.8**	**-1.8**
PFO	**Pinyon Flats O**	**79.89**	**303**	LR	LR	18 40 19.4	
	comp=Z,36nm,19.7s,baz=76,slow=35						
NEW	**Newport**	**80.20**	**318**	LR	LR	18 39 08.2	
	comp=Z,30nm,19.4s,baz=74,slow=34						
RPN	**Rapa Nui**	**80.40**	**241**	LR	LR	18 38 55.0	
	comp=Z,70nm,18.4s,baz=245,slow=34						
NVAR	**Mina Array Bea**	**81.22**	**308**	LR	LR	18 41 35.5	
	comp=Z,22nm,18.2s,baz=214,slow=35						
YBH	**Yreka Blue Hor**	**84.41**	**311**	LR	LR	18 39 50.8	
	comp=Z,32nm,21.9s,baz=66,slow=33						
ARTI	**Arti**	**85.40**	**34**	LR	LR	18 42 54.9	
	comp=Z,44nm,19.8s,baz=172,slow=34						
INK	**Inuvik**	**86.97**	**338**	LR	LR	18 43 06.3	
	comp=Z,38nm,19.8s,baz=312,slow=34						
BBB	**Bella Bella**	**86.99**	**322**	LR	LR	18 43 43.3	
	comp=Z,32nm,18.4s,baz=84,slow=34						
DLBC

	19nm,1.1s								
KURK	**Kurchatov**	**8.04**	**277**	⇑Pg		**Pb**	**18 21 16.5**	**+2.8**
	0.6nm,0.9s								
KURK				⇑Lg		Lg	18 23 06.6		
	6.6nm,1.1s								
KURBB	**Kurchatov Arra**	**8.10**	**277**	Pn		**Pn**	**18 20 50.1**	**-2.1**
	0.1nm,0.3s,baz=90,slow=15,SNR=5.2								
KURBB				Lg		Lg	18 23 05.5		
	0.1nm,0.3s,baz=86,slow=36,SNR=4.9								
	1.5nm,0.7s								
KURBB	**Kurchatov Arra**	**8.10**	**277**	⇓Pg		**Pb**	**18 21 17.5**	**+2.9**
	1.7nm,0.6s								
KURBB				⇑Lg		Lg	18 23 08.6		
	28nm,0.8s								
SONM	**Songino Array**	**10.27**	**99**	Pg		Pn	18 22 00.1	+38	
	baz=295,slow=17,SNR=2.2								
SONM				Lg		Lg	18 24 19.9		
	0.1nm,0.3s,baz=294,slow=25,SNR=12								

*IDC **12** 18:24:53.5±7.3,29˚51N×130˚44E,h0km,mb3.8/5, mbtmp3.9/7,ML3.6/2,MS4.0/2,Error ellipse: s-maj=159.3km s-min=30.2km az=172.0*
*JMA **12** 18:24:57.8±0.1,29˚5N±0˚5×130˚6E±0˚8,h60km±2km, MV3.4/39,NEAR AMAMI-OSHIMA ISLAND*
ISC 12 18:24:57.9±1.0,29˚37N±0˚04×130˚71E±0˚05,h48km±14km, n36,σ1ᵖ09/55,mb3.6/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.86**	**303**	P	**Pn**	**18 25 12.7**	**-1.1**
JNN				*e*S	**Sn**	**18 25 24.6**	**-0.8**
JYAK	**Yakushimahirau**	**0.89**	**349**	P	**Pn**	**18 25 13.0**	**-1.1**
JYAK				*e*S	**Sn**	**18 25 24.3**	**-1.6**
JMTN	**Minamitane**	**1.04**	**9**	P	**Pn**	**18 25 15.4**	**-0.7**
JMTN				S	**Sn**	**18 25 29.3**	**-0.3**
JKC	**Kuchinoerabu**	**1.18**	**338**	P	**Pn**	**18 25 17.1**	**-0.9**
JKC				S	**Sn**	**18 25 31.4**	**-1.6**
JZK	**Kikaishima**	**1.23**	**212**	P	**Pn**	**18 25 20.4**	**+1.7**
JTN	**Tanegashima 3**	**1.30**	**10**	P	**Pn**	**18 25 19.1**	**-0.7**
JTN				S	**Sn**	**18 25 35.4**	**-0.7**
JTAJ	**Takarajima**	**1.33**	**261**	P	**Pn**	**18 25 20.4**	**+0.3**
JTAJ				*e*S	**Sn**	**18 25 36.9**	**+0.2**
JAM	**Amami Oshima**	**1.36**	**226**	P	**Pn**	**18 25 21.1**	**+0.6**
JAM				*e*S	**Sn**	**18 25 39.0**	**+1.8**
JAMN	**Amaminishikomi**	**1.75**	**231**	P	**Pn**	**18 25 26.5**	**+0.7**
JAMN				*e*S	**Sn**	**18 25 48.2**	**+1.3**
JTSR	**Tashiro 2**	**1.80**	**6**	P	**Pn**	**18 25 26.8**	**+0.2**
JTSR				S	**Sn**	**18 25 47.4**	**-1.0**
JSU	**Suzuyama**	**2.14**	**354**	P	**Pn**	**18 25 30.3**	**-0.9**
JTK	**Tokunoshima**	**2.21**	**225**	P	**Pn**	**18 25 33.0**	**+0.9**
JTK				*e*S	**Sn**	**18 25 59.2**	**+1.1**
JNAR	**Kushima--Naru**	**2.21**	**13**	P	**Pn**	**18 25 32.4**	**+0.3**
JNAR				*e*S	**Sn**	**18 25 57.6**	**-0.5**
JOKE	**Okinoerabujima**	**2.75**	**224**	P	**Pn**	**18 25 40.5**	**+1.1**
JOKE				*e*S	**Sn**	**18 26 12.1**	**+0.6**
JYRO	**Yoronjima**	**3.07**	**221**	P	**Pn**	**18 25 44.5**	**+0.6**
JYRO				*e*S	**Sn**	**18 26 18.9**	**-0.4**
JOW	**Kunigami**	**3.31**	**221**	P	**Pn**	**18 25 48.0**	**+0.7**
JOW	**Kunigami**	**3.31**	**221**	P	**Pn**	**18 25 48.3**	**+1.0**
JOW				S	**Sn**	**18 26 25.0**	**-0.5**
JIH	**Iheya**	**3.35**	**227**	*e*P	**Pn**	**18 25 49.5**	**+1.7**
JIH				*e*S	**Sn**	**18 26 25.8**	**-0.6**
JKDJ	**Kitadaitoujima**	**3.44**	**171**	P	**Pn**	**18 25 49.5**	**+0.4**
JKDJ				*e*S	**Sn**	**18 26 27.6**	**-1.0**
JMZ	**Minamidaito 2**	**3.56**	**172**	P	Pn	18 26 05.0	+14
JMZ	**Minamidaito 2**	**3.56**	**172**	P	**Pn**	**18 25 51.1**	**+0.4**
JMZ				*e*S	**Sn**	**18 26 29.0**	**-2.6**
JNTH	**Nagotoyohara**	**3.70**	**221**	P	**Pn**	**18 25 53.2**	**+0.6**
JNTH				*e*S	**Sn**	**18 26 33.6**	**-1.3**
JAGN	**Aguni-jima**	**4.13**	**229**	P	**Pn**	**18 25 59.3**	**+0.9**
JAGN				*e*S	**Sn**	**18 26 45.5**	**0.0**
JKE	**Kume jima 2**	**4.61**	**230**	P	**Pn**	**18 26 05.2**	**+0.2**
JKE				*e*S	**Sn**	**18 26 56.7**	**-0.5**
JMN	**Monobe**	**5.12**	**31**	P	**Pn**	**18 26 11.9**	**-0.2**
INU	**Inuyama**	**8.00**	**40**	P	**Pn**	**18 26 53.2**	**+1.6**
JGF	**Kuroka**	**8.38**	**40**	P	**Pn**	**18 26 58.0**	**+1.3**
JHJ	**Hachijo jima 2**	**8.62**	**62**	Pn	**Pn**	**18 27 01.4**	**+1.4**
	9.2nm,0.3s,baz=120,slow=19,SNR=5.8								
JHJ				Sn	**Sn**	**18 28 39.4**	**+3.4**
	3.0nm,0.3s,baz=252,slow=20,SNR=1.3								
	94nm,0.7s								
MAJO	**Matsushiro**	**9.53**	**39**	P	**Pn**	**18 27 12.4**	**-0.1**
MJAR	**Matsushiro Arr**	**9.53**	**39**	Pn	**Pn**	**18 27 13.2**	**+0.6**
	0.1nm,0.3s,baz=213,slow=13,SNR=7.4								
	0.9nm,0.5s								
SONM	**Songino Array**	**26.30**	**321**	P	**P**	**18 30 28.3**	**-0.7**
	0.4nm,0.5s,baz=135,slow=9.1,SNR=4.4								
	0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**41.18**	**320**	P	**P**	**18 32 37.0**	**-0.4**
	0.6nm,0.6s,baz=117,slow=8.3,SNR=2.4								
	0.6nm,0.6s								
MKAR	**Makanchi Array**	**41.19**	**309**	P	**P**	**18 32 37.8**	**+0.1**
	0.7nm,0.6s,baz=94,slow=9.8,SNR=9.2								
MKAR				LR	LR	18 51 56.4			
	comp=Z,80nm,18.3s,baz=234,slow=40								
	0.7nm,0.6s								
KURBB	**Kurchatov Arra**	**44.19**	**314**	P	**P**	**18 33 01.7**	**-0.3**
	0.7nm,0.4s,baz=100,slow=8.8,SNR=8.6								
	0.7nm,0.4s								
BVAR	**Borovoye Array**	**49.46**	**316**	P	**P**	**18 33 43.2**	**+0.1**
	2.8nm,0.6s,baz=111,slow=11,SNR=9.3								
	2.8nm,0.6s								
RAO	**Raoul Island**	**76.17**	**135**	LR	LR	19 05 31.7			
	comp=Z,164nm,18.8s,baz=76,slow=32								

*IDC **12** 18:58:18.2±0.8,47˚25N×156˚54E,h0km,mb3.7/17, mbtmp3.7/18,ML2.6/1,MS3.1/4,Error ellipse: s-maj=20.9km s-min=15.6km az=152.0*
*SKHL **12** 18:58:20.2±0.5,47˚60N×156˚00E,h15km±4km,mb4.8/5 MOS **12** 18:58:21.0±2.2,47˚40N×156˚29E,h37km,mb4.3/1,Error ellipse: s-maj=14.2km s-min=6.6km az=76.8*
ISC 12 18:58:22.6±0.8,47˚39N±0˚08×156˚31E±0˚09,h29km,n52, σ2ᵖ37/51,mb3.8/17,MS3.1/3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.30**	**358**	*e*PN	**Pn**	**18 59 11.6**	**-0.6**
SKR				*e*S	**Sn**	**18 59 49.7**	**-0.8**
SKR				pmax	pmax		
	comp=Z,13nm,0.5s						
SKR				smax	smax		
	comp=E,149nm,0.4s						
SKR				smax	smax		
	comp=N,119nm,0.2s						
SKR	**Severo-Kuril's**	**3.30**	**358**	*e*P	**Pn**	**18 59 09.5**	**-2.7**
SKR				AMB	AMB	18 59 12.0	
	comp=N,20nm,0.2s						
SKR				*e*S	**Sn**	**18 59 45.4**	**-5.1**
SKR				A	A	18 59 52.0	
	comp=N,150nm,0.3s						
SKR				A	A	18 59 52.0	
	comp=N,150nm,0.3s						
PAU	**Pauzhetka**	**4.10**	**4**	*e*P	**Pn**	**18 59 21.2**	**-2.0**
PAU				AMB	AMB	18 59 24.3	
	comp=N,30nm,0.2s						
PAU				*e*S	**Sn**	**19 00 07.3**	**-2.8**
PAU				A	A	19 00 12.7	
	comp=N,210nm,0.3s						
PAU				A	A	19 00 12.7	
	comp=N,170nm,0.3s						
KDTR	**Khodutka, Kamc**	**4.57**	**14**	PN	**Pn**	**18 59 27.4**	**-2.3**
KDTR	**Khodutka, Kamc**	**4.57**	**14**	*e*P	**Pn**	**18 59 27.4**	**-2.3**
ASAK	**Asacha**	**5.11**	**11**	PN	**Pn**	**18 59 36.0**	**-1.1**
MTVR	**Mutnovka**	**5.24**	**13**	PN	**Pn**	**18 59 37.4**	**-1.6**
GRL	**Gorelyy**	**5.29**	**12**	PN	**Pn**	**18 59 38.3**	**-1.4**
PETK	**Petropavlovsk-**	**5.80**	**8**	Pn	**Pn**	**18 59 45.7**	**-0.8**
	comp=N,0.8nm,0.3s,baz=202,slow=14,SNR=19						
PETK				Sn	**Sn**	**19 00 55.2**	**+3.2**
	comp=N,0.2nm,0.3s,baz=105,slow=17,SNR=1.6						
	comp=N,1.9nm,0.4s						
PET	**Petropavlovsk**	**5.84**	**14**	*e*PN	**Pn**	**18 59 48.5**	**+1.4**
PET	**Petropavlovsk**	**5.84**	**14**	*e*P	**Pn**	**18 59 46.0**	**-1.1**
PET				*e*S	**Sn**	**19 00 49.3**	**-3.7**
PET				A	A	19 00 57.3	
	comp=N,30nm,0.3s						
PET				A	A	19 00 57.3	
	comp=N,40nm,0.3s						
KOK	**Koryaka**	**6.10**	**13**	PN	**Pn**	**18 59 50.0**	**-0.7**
KOK	**Koryaka**	**6.10**	**13**	*e*P	**Pn**	**18 59 50.0**	**-0.7**
REI	**Reidovoe**	**6.12**	**253**	*e*P	**Pn**	**18 59 48.9**	**-2.1**
REI				AMB	AMB	18 59 51.8	
	comp=N,40nm,0.4s						
REI				*e*S	**Sn**	**19 00 55.5**	**-4.5**
REI				A	A	19 00 57.3	
	comp=N,30nm,0.2s						
REI				A	A	19 00 57.3	
	comp=N,30nm,0.2s						
KUR	**Kuril'sk**	**6.23**	**253**	*e*PN	**Pn**	**18 59 48.6**	**-3.9**
KUR				pmax	pmax		
	comp=Z,40nm,0.8s						
KUR	**Kuril'sk**	**6.23**	**253**	*e*P	**Pn**	**18 59 50.9**	**-1.6**
KUR				AMB	AMB	19 00 00.7	
	comp=Z,40nm,0.3s						
KUR				*i* S	**Sn**	**19 00 58.4**	**-4.3**
KUR				A	A	19 01 02.6	
	comp=Z,60nm,0.3s						
KUR				A	A	19 01 02.6	
	comp=Z,70nm,0.3s						
SHO	**Shikotan**	**7.52**	**246**	*e*P	Pn	19 00 18.7	+8.6
SHO				AMB	AMB	19 00 22.4	
	comp=Z,20nm,0.3s						
SHO				*e*S	**Sn**	**19 01 37.0**	**+2.7**
SHO				A	A	19 01 44.1	
	comp=Z,30nm,0.3s						
SHO				A	A	19 01 44.1	
	comp=Z,20nm,0.3s						
MKZ	**Mys Kozlova**	**7.95**	**23**	PN	**Pn**	**19 00 13.2**	**-2.8**
MKZ	**Mys Kozlova**	**7.95**	**23**	*e*P	**Pn**	**19 00 13.2**	**-2.8**
YUK	**Yuzh-Kuril'sk**	**8.04**	**249**	*e*PN	**Pn**	**19 00 15.6**	**-1.7**
YUK				pmax	pmax		
	comp=Z,56nm,0.4s						
YUK				pmax	pmax		
	comp=N,29nm,0.2s						
YUK				pmax	pmax		
	comp=E,39nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**8.04**	**249**	*e*P	**Pn**	**19 00 15.8**	**-1.5**
YUK				AMB	AMB	19 00 20.4	
	comp=E,60nm,0.4s						
YUK				*e*S	**Sn**	**19 01 43.5**	**-3.7**
YUK				A	A	19 01 49.5	
	comp=E,90nm,0.6s						
YUK				A	A	19 01 49.5	
	comp=E,100nm,0.6s						
RUSJ	**Misakicho**	**8.40**	**251**	*e*PN	**Pn**	**19 00 22.7**	**+0.4**
NMR	**Nemuro--Hokkai**	**8.46**	**246**	*e*PN	**Pn**	**19 00 18.8**	**-4.3**
NMR	**Nemuro--Hokkai**	**8.46**	**246**	*e*P	**Pn**	**19 00 19.3**	**-3.8**
MA2	**Magadan**	**12.64**	**347**	LR	LR	19 06 40.5	
	comp=E,54nm,20.2s,baz=216,slow=39						
KSRS	**Korea Array**	**23.07**	**255**	P	**P**	**19 03 27.4**	**+1.9**
	comp=E,0.9nm,0.6s,baz=54,slow=9.9,SNR=5.0						
	comp=E,0.9nm,0.6s						
HILR	**Hailar Array B**	**24.19**	**289**	P	**P**	**19 03 39.4**	**+3.1**
	comp=E,1.7nm,0.4s,baz=99,slow=8.9,SNR=2.4						
	comp=E,1.7nm,0.4s						
TIXI	**Tiksi**	**27.51**	**342**	LR	LR	19 14 43.6	
	comp=E,52nm,20.8s,baz=227,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.91**	**159**	T	T	19 34 16.6	
	baz=360						
H11N1	**WAKE ISLAND Hy**	**28.92**	**159**	T	T	19 34 20.2	
	baz=360						
H11N3	**WAKE ISLAND Hy**	**28.92**	**159**	T	T	19 34 19.5	
	baz=360						
H11S1	**WAKE ISLAND Hy**	**30.04**	**160**	T	T	19 35 39.6	
	baz=347,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**30.05**	**160**	T	T	19 35 43.2	
	baz=347,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**30.05**	**160**	T	T	19 35 40.9	
	baz=347,slow=75,SNR=13						
SONM	**Songino Array**	**33.18**	**290**	P	**P**	**19 04 57.9**	**+1.4**
	comp=E,0.2nm,0.6s,baz=74,slow=9.2,SNR=1.7						
	comp=E,0.2nm,0.6s						
ILAR	**Eielson Array**	**34.68**	**39**	P	**P**	**19 05 08.8**	**-0.4**
	comp=E,0.3nm,0.6s,baz=251,slow=7.8,SNR=6.2						
	comp=E,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**44.01**	**306**	P	**P**	**19 06 28.1**	**+1.1**
	comp=E,0.4nm,0.4s,baz=82,slow=10,SNR=1.6						
	comp=E,0.4nm,0.4s						
MKAR	**Makanchi Array**	**48.58**	**298**	P	**P**	**19 07 04.2**	**+1.1**
	comp=E,0.8nm,0.7s,baz=65,slow=5.8,SNR=6.3						
	comp=E,0.8nm,0.7s						
KURK	**Kurchatov**	**48.82**	**304**	P	**P**	**19 07 06.9**	**+2.1**
KURK	**Kurchatov**	**48.82**	**304**	*e*P	**P**	**19 07 06.9**	**+2.1**
KURBB	**Kurchatov Arra**	**48.91**	**304**	P	**P**	**19 07 06.9**	**+1.3**
	comp=E,2.1nm,0.7s,baz=68,slow=8.3,SNR=18						
	comp=E,2.1nm,0.7s						
YKA	**Yellowknife Ar**	**49.09**	**38**	P	**P**	**19 07 06.3**	**-0.5**
	comp=E,0.3nm,0.6s,baz=298,slow=7.9,SNR=2.2						
	comp=E,0.3nm,0.6s						
BVAR	**Borovoye Array**	**52.13**	**310**	P	**P**	**19 07 31.4**	**+1.6**
	comp=E,1.4nm,0.5s,baz=60,slow=7.8,SNR=12						
	comp=E,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**54.64**	**259**	P	**P**	**19 07 50.5**	**+1.7**
	comp=E,0.4nm,0.5s,baz=42,slow=7.1,SNR=4.7						
	comp=E,0.4nm,0.5s						
PDAR	**Pinedale Array**	**62.59**	**56**	P	**P**	**19 08 44.4**	**+0.4**
	comp=E,0.6nm,0.8s,baz=309,slow=6.6,SNR=6.8						
	comp=E,0.6nm,0.8s						
FINES	**FINESS Array B**	**64.37**	**336**	P	**P**	**19 08 56.2**	**+1.0**
	comp=E,1.0nm,0.6s,baz=38,slow=7.7,SNR=9.7						
	comp=E,1.0nm,0.6s						
NOA	**NORSAR Array B**	**68.30**	**343**	P	**P**	**19 09 22.4**	**+2.0**
	comp=E,0.6nm,0.8s,baz=25,slow=6.2,SNR=2.1						
NOA				LR	LR	19 42 26.9	
	comp=E,9.2nm,19.2s,baz=100,slow=39						
	comp=E,0.6nm,0.8s						
HFS	**Hagfors**	**68.60**	**341**	P	**P**	**19 09 23.5**	**+1.2**
	comp=E,1.2nm,0.8s,baz=29,slow=6.5,SNR=4.1						
	comp=E,1.2nm,0.8s						
WRA	**Warramunga Arr**	**69.88**	**202**	P	**P**	**19 09 28.8**	**-1.7**
	comp=E,0.5nm,0.7s,baz=16,slow=5.9,SNR=2.7						
	comp=E,0.5nm,0.7s						
ASAR	**Alice Springs**	**73.55**	**201**	P	**P**	**19 09 52.1**	**-0.5**
	comp=E,1.0nm,0.9s,baz=19,slow=5.4,SNR=5.8						
	comp=E,1.0nm,0.9s						
TXAR	**Lajitas Array**	**75.27**	**63**	P	**P**	**19 10 03.4**	**+0.5**
	comp=E,1.4nm,0.6s,baz=302,slow=4.4,SNR=22						
	comp=E,1.4nm,0.6s						
VRAC	**Vranov**	**77.56**	**334**	LR	LR	19 48 49.2	
	comp=E,20nm,18.2s,baz=71,slow=39						

*KRNET **12** 19:05:12.2±0.1,39˚98N×69˚39E,h20km,mb3.3 ISU **12** 19:05:13,39˚67N×69˚55E,h18km*
ISC 12 19:05:12.9±1.3,39˚92N±0˚03×69˚43E±0˚03,h1km±11km, n25,σ1ᵖ19/47,24C-10D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.07**	**82**	⇑*i*P	**Pg**	**19 05 32.7**	**-0.8**
BTK				⇑*i*S	**Sb**	**19 05 47.9**	**-1.0**
GAR	**Garm**	**1.15**	**143**	⇓*e*P	**Pg**	**19 05 34.8**	**-0.1**
GAR				⇓*e*S	**Sb**	**19 05 51.1**	**+0.1**
CHGR	**Chuyangaron**	**1.28**	**190**	⇑*e*P	**Pg**	**19 05 36.9**	**-0.5**
CHGR				⇑*i*S	**Sg**	**19 05 54.7**	**+0.7**
NZBK	**Nazarbek**	**1.32**	**350**	P	**Pg**	**19 05 38.0**	**-0.3**
NZBK				S	**Sn**	**19 05 58.6**	**+1.8**
TVKS	**Tavaksay**	**1.66**	**6**	P	**Pn**	**19 05 43.1**	**-0.2**
TVKS				S	**Sb**	**19 06 06.3**	**+0.5**
CHMG	**Chimgan**	**1.69**	**15**	P	**Pn**	**19 05 43.5**	**-0.2**
CHMG				S	**Sg**	**19 06 07.1**	**0.0**
CHRV	**Charvak**	**1.76**	**13**	P	**Pn**	**19 05 44.2**	**-0.5**
CHRV				S	**Sn**	**19 06 08.3**	**+0.5**
FRG	**Fergana**	**1.86**	**75**	P	Pg	19 05 54.8	+6.3
FRG				S	**Sg**	**19 06 17.4**	**+4.8**
DRK	**Karamyk**	**1.88**	**103**	⇓*i*P	**Pb**	**19 05 47.4**	**-0.8**
DRK				⇓*i*S	**Sg**	**19 06 12.9**	**-0.4**
AGL	**Agalyk**	**2.01**	**259**	P	**Pn**	**19 05 48.6**	**+0.6**
AGL				S	**Sn**	**19 06 13.0**	**-0.9**
TRKS	**Terek-Say**	**2.07**	**38**	⇑*i*P	**Pn**	**19 05 48.4**	**-0.5**
TRKS				⇑*i*S	**Sn**	**19 06 14.7**	**-0.7**
PSK	**Pskem**	**2.13**	**19**	P	**Pn**	**19 05 49.7**	**0.0**
PSK				S	**Sn**	**19 06 16.6**	**-0.3**
TSTA	**Tashata**	**2.42**	**73**	S	**Sg**	**19 06 29.3**	**-1.4**
OHH	**Osh**	**2.64**	**76**	⇑*i*P	**Pn**	**19 05 57.3**	**+0.6**
OHH				⇑*i*S	**Sn**	**19 06 30.0**	**+0.6**
ARK	**Arkit**	**2.68**	**45**	⇑*e*P	**Pn**	**19 05 57.5**	**+0.1**
ARK				⇑*i*S	**Sn**	**19 06 30.7**	**+0.1**
ARSB	**Arslanbob**	**3.04**	**61**	⇑*i*P	**Pn**	**19 06 02.6**	**+0.3**
ARSB				⇑*i*S	**Sn**	**19 06 39.6**	**+0.1**
SFK	**Sufi-Kurgan**	**3.13**	**87**	⇑*i*P	**Pn**	**19 06 04.5**	**+0.9**
SFK				⇑*i*S	**Sn**	**19 06 42.3**	**+0.6**
KK31	**Karatay Array**	**3.28**	**14**	Pg	**Pn**	**19 06 06.8**	**+1.3**
	0.3nm,0.2s,baz=201,slow=16,SNR=17						
KK31				⇓Lg	Lg	19 06 53.7	
	7.6nm,0.4s,baz=193,slow=23,SNR=8.2						
MNAS	**Manas**	**3.46**	**41**	⇑*i*P	**Pn**	**19 06 08.2**	**+0.2**
MNAS				⇑*i*S	**Sn**	**19 06 49.0**	**-0.7**
SALK	**Salom-Alik**	**3.49**	**73**	⇑*i*P	**Pn**	**19 06 09.1**	**+0.7**
SALK				⇑*i*S	**Sn**	**19 06 50.6**	**+0.2**
EKS2	**Erkin-Say**	**4.27**	**49**	⇑*i*P	**Pn**	**19 06 19.5**	**+0.4**
EKS2				⇑*i*S	**Sn**	**19 07 08.6**	**-1.0**
UCH	**Uchtor**	**4.48**	**57**	⇑*e*P	**Pn**	**19 06 22.7**	**+0.4**
UCH				⇑*i*S	**Sn**	**19 07 14.3**	**-1.0**
AAK	**Ala-Archa**	**4.68**	**53**	⇓Pn	**Pn**	**19 06 25.8**	**+1.0**
	0.4nm,0.4s						
AAK				⇓Sn	**Sn**	**19 07 23.6**	**+3.7**
	0.6nm,0.5s						
AAK				⇓Lg	Lg	19 07 47.0	
AAK	**Ala-Archa**	**4.68**	**53**	⇓*e*P	**Pn**	**19 06 25.3**	**+0.4**
AAK				⇓*i*S	**Sn**	**19 07 18.6**	**-1.3**
BOOM	**Boomskoye usch**	**5.54**	**60**	⇑*i*P	**Pn**	**19 06 37.2**	**+0.5**
BOOM				⇑*e*S	**Sn**	**19 07 39.3**	**-1.8**

IDC 12 19:15:00.6±48.0,23˚31S×175˚98W,h0km,mb3.8/3, mbtmp3.8/3,Error ellipse: s-maj=892.8km s-min=175.9km az=87.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.36**	**248**	P	P	19 22 23.5	0.0
	0.7nm,0.4s,baz=96,slow=9.2,SNR=1.2						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**45.77**	**259**	P	P	19 23 23.9	-0.3
	0.3nm,0.3s,baz=99,slow=8.0,SNR=27						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**46.13**	**264**	P	P	19 23 27.1	0.0
	1.1nm,0.4s,baz=103,slow=7.7,SNR=46						
	1.1nm,0.4s						

*TAP **12** 19:18:53.7,25˚29N×122˚04E,h203km,ML3.0,D JMA **12** 19:18:54.4±0.3,25˚N±2˚×122˚1E±0˚7,h192km±3km, MV2.3/13,TAIWAN REGION*
ISC 12 19:18:53.1±2.6,25˚2N±0˚1×122˚13E±0˚05,h200km±15km, n50,σ0ᵖ87/81,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.23**	**214**	*e*P	Pn	**19 19 20.5**	**+1.0**
TNOU	**National Taiwa**	**0.33**	**262**	*e*P	Pn	**19 19 19.4**	**-0.2**
TNOU				*e*S	**S**	**19 19 39.1**	**-0.9**
TIPB	**Shuangxi**	**0.35**	**231**	*e*P	Pn	**19 19 21.4**	**+1.6**
TWE	**Neicheng**	**0.63**	**222**	*i* P	Pn	**19 19 22.0**	**+1.2**
FUSB	**Fushanzhiwuyua**	**0.66**	**229**	P	Pn	**19 19 21.4**	**+0.4**
FUSB				S	**S**	**19 19 42.0**	**-0.5**
NDS	**Dongshan**	**0.68**	**214**	*e*P	Pn	**19 19 22.3**	**+1.3**
NDS				*e*S	**S**	**19 19 42.6**	**+0.1**
NWLT	**Wulai**	**0.71**	**234**	P	Pn	**19 19 21.4**	**+0.2**
NWLT				S	**S**	**19 19 41.8**	**-1.0**
ENTT	**Nioudou**	**0.75**	**223**	*e*P	Pn	**19 19 22.1**	**+0.7**
ENTT				*e*S	**S**	**19 19 43.6**	**+0.4**
EOS2	**EOS2**	**0.78**	**173**	*e*P	Pn	**19 19 22.9**	**+1.6**
EWUT	**Wuta**	**0.81**	**203**	*e*P	Pn	**19 19 22.2**	**+0.4**
EWUT				*e*S	**S**	**19 19 43.2**	**-0.6**
NDT	**Datong Townshi**	**0.81**	**224**	*e*P	Pn	**19 19 22.8**	**+1.0**
NDT				*e*S	**S**	**19 19 43.3**	**-0.2**
ENA	**Nanau**	**0.84**	**205**	*e*S	**S**	**19 19 43.5**	**-0.7**
LATG	**Datong**	**0.86**	**220**	*i* P	Pn	**19 19 22.8**	**+0.7**
LATG				*i* S	**S**	**19 19 44.4**	**-0.1**
YHNB	**Yeheng**	**0.86**	**233**	⇑*i*P	Pn	**19 19 22.2**	**+0.1**
YHNB				*i* S	**S**	**19 19 42.8**	**-1.6**
NSK	**Sanguang**	**0.87**	**234**	*e*S	**S**	**19 19 42.8**	**-1.7**
EOS3	**EOS3**	**0.92**	**169**	P	Pn	**19 19 23.5**	**+1.3**
NNS	**Nan Shan**	**1.02**	**223**	*i* P	Pn	**19 19 23.6**	**+0.5**
NNS				*i* S	**S**	**19 19 46.1**	**-0.3**
NNSB	**Datong**	**1.02**	**222**	P	Pn	**19 19 23.6**	**+0.4**
NNSB				S	**S**	**19 19 46.0**	**-0.4**
JYNG	**Yonagunijimaku**	**1.05**	**135**	*e*P	Pn	**19 19 23.5**	**+0.3**
NFF	**Wufeng Townshi**	**1.08**	**239**	P	Pn	**19 19 23.5**	**0.0**
NFF				S	**S**	**19 19 45.5**	**-1.4**
YOJ	**Yonaguni jima**	**1.08**	**132**	*e*P	Pn	**19 19 23.9**	**+0.4**
NACB	**Ninganchiao**	**1.13**	**206**	P	Pn	**19 19 23.4**	**-0.5**
NACB				S	**S**	**19 19 46.7**	**-0.8**
ETL	**Fush Village**	**1.13**	**204**	*e*P	Pn	**19 19 25.7**	**+1.8**
ETL				*e*S	**S**	**19 19 46.8**	**-0.8**
ETLH	**Xiulin Townshi**	**1.15**	**211**	*e*P	Pn	**19 19 24.4**	**+0.3**
ETLH				*e*S	**S**	**19 19 47.6**	**-0.3**
LIOB	**Emei**	**1.15**	**242**	P	Pn	**19 19 24.3**	**+0.3**
LIOB			

JYAK	**Yakushimahirau**	**3.32**	**5**	*eP*	**Pn**	19 23 01.8	+1.1
JYAK				*eS*	**Sn**	19 23 37.3	-3.4
JMTN	**Minamitane**	**3.52**	**10**	*eS*	**Sn**	19 23 43.3	-2.5
TGY	**Tagaytay City**	**15.39**	**216**	LR	LR	19 32 03.1	
	comp=Z,61nm,18.4s,baz=218,slow=40						
GUMO	**Guam**	**19.11**	**131**	LR	LR	19 32 52.2	
	comp=Z,32nm,18.6s,baz=275,slow=33						
MKAR	**Makanchi Array**	**42.38**	**311**	P	**P**	19 30 03.2	-0.3
	0.4nm,0.7s,baz=100,slow=9.4,SNR=2.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**45.56**	**316**	P	**P**	19 30 29.6	+0.7
	0.7nm,0.2s,baz=98,slow=8.8,SNR=2.0						
WRA	**Warramunga Arr**	**46.76**	**175**	P	**P**	19 30 39.4	+0.8
	0.8nm,0.6s,baz=354,slow=7.9,SNR=6.5						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**50.42**	**176**	P	**P**	19 31 08.1	+1.3
	0.2nm,0.6s,baz=355,slow=7.8,SNR=12						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**50.92**	**318**	P	**P**	19 31 12.1	+1.8
	0.5nm,0.7s,baz=88,slow=8.8,SNR=3.1						
	0.5nm,0.7s						

MEX ***12*** *19:22:52.3±0.5, 14°.63N×92°.07W, h88km±15km, MD3.1*
GCG ***12*** *19:22:53.1±0.6, 14°.73N×92°.04W, h67km±6km, MD3.4, Presumed earthquake*

ISC 12 19:22:52.8±2.8, 14°.5N±0°.2×91°.9W±0°.2, h58km±17km**, n8, σ1§02/15, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.49**	**320**	*eP*	**Pn**	19 23 04.1	-0.5
THIG				*eS*	**Sn**	19 23 13.8	+0.7
STG8	**El Palmar, Qui**	**0.57**	**97**	*i* P	**Pn**	19 23 05.8	+0.1
STG8				*i* S	**Sn**	19 23 16.5	+1.5
STG5	**El Palmar, Qui**	**0.58**	**102**	*i* P	**Pn**	19 23 05.8	+0.2
STG5				*i* S	**Sn**	19 23 15.1	+0.1
CHUJ	**Union Juarez**	**0.59**	**344**	*eP*	**Pn**	19 23 05.5	-0.4
CHUJ				*eS*	**Sn**	19 23 15.5	+0.1
PATR	**El Naranjo**	**0.65**	**334**	*eP*	**Pn**	19 23 06.0	-0.7
PATR				*eS*	**Sn**	19 23 15.6	-1.1
PAVE	**Pavencul**	**0.70**	**341**	*eP*	**Pn**	19 23 06.6	-0.6
PAVE				*eS*	**Sn**	19 23 17.4	-0.3
FG16	**Alotenango, Sa**	**1.41**	**100**	*i* P	**Pn**	19 23 14.9	-1.5
TGIG		**2.51**	**333**	*eP*	**Pn**	19 23 31.5	+0.1
TGIG				*eS*	**Sn**	19 24 02.8	+2.0

IDC ***12*** *19:32:08.9±1.0, 3°.31N×127°.16E, h0km, mb3.5/7, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=65.2km s-min=15.9km az=65.0*
MAN ***12*** *19:32:18.0, 3°.60N×126°.80E, h4km, MS3.6*

ISC 12 19:32:11.3±1.5, 3°.8N±0°.7×127°.6E±1°.0, h10km**, n9, σ1§42/8, mb3.6/7, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**5.48**	**329**	*eP*	**Pb**	19 33 45.4	-1.8
CGP				*eS*	**Sb**	19 34 53.4	+0.5
SIJI	**Sorong**	**5.89**	**141**	Pn	**Pn**	19 33 37.1	-1.7
	1.0nm,0.3s,baz=319,slow=19,SNR=5.5						
SIJI				Sn	**Sn**	19 34 47.7	+1.3
	0.1nm,0.3s,baz=308,slow=19,SNR=1.4						
	3.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.79**	**185**	P	P	19 36 58.3	-5.3
	2.6nm,1.0s,baz=7.8,slow=12,SNR=1.5						
	2.6nm,1.0s						
WRA	**Warramunga Arr**	**24.46**	**164**	P	P	19 37 25.2	-5.5
	0.4nm,0.5s,baz=342,slow=9.1,SNR=8.5						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**27.94**	**168**	P	P	19 37 58.8	-3.3
	0.6nm,1.1s,baz=342,slow=8.8,SNR=9.2						
	0.6nm,1.1s						
SONM	**Songino Array**	**47.55**	**341**	P	**P**	19 40 48.1	+1.0
	0.2nm,0.4s,baz=157,slow=9.4,SNR=1.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.02**	**325**	P	**P**	19 42 05.1	+0.7
	0.3nm,0.4s,baz=121,slow=8.1,SNR=5.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.17**	**327**	P	**P**	19 42 32.5	-0.4
	0.5nm,0.7s,baz=127,slow=5.9,SNR=8.0						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**67.76**	**327**	P	**P**	19 43 10.1	+0.9
	0.3nm,0.4s,baz=119,slow=5.6,SNR=4.0						
	0.3nm,0.4s						

IDC ***12*** *19:34:46.8±0.8, 8°.54N×93°.66E, h0km, mb3.9/16, mbtmp3.9/16, MS3.7/2, Error ellipse: s-maj=41.5km s-min=17.2km az=54.0*
NEIC ***12*** *19:34:51.0±1.9, 8°.88N±0°.07×93°.9E±0°.1, h10km±1km, mb4.4/9, Error ellipse: s-maj=22.7km s-min=9.3km az=248.0*
NDI ***12*** *19:34:51.0±1.3, 8°.83N×93°.83E, h10km, mb3.8, MW4.1, Presumed earthquake*
BKK ***12*** *19:34:57.3±1.4, 9°.N±9°.×9°.4E±°, h10km, M4.1/13, mB4.5/7, mb4.4/8, Mjma3.8/13, ML4.7/7, MLv4.3/5, Mw(mB)3.6/7*

ISC 12 19:34:48.4±0.6, 8°.52N±0°.08×93°.57E±0°.06, h10km**, n45, σ1§90/46, mb4.1/18, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.22**	**345**	Pn	**Pb**	19 35 43.6	-2.1
PBA	**Port Blair**	**3.22**	**345**	*eP*	**Pn**	19 35 38.6	-0.4
PBA				*eS*	**Sn**	19 36 14.4	-3.0
PKDT	**Phuket**	**4.76**	**97**	P	**Pn**	19 36 00.7	+0.5
PKDT				S	**Sn**	19 36 50.8	-4.7
RNTT	**Ranong**	**4.92**	**80**	P	**Pn**	19 36 02.9	+0.4
KULM	**Kulim**	**7.73**	**114**	Pn	**Pn**	19 36 41.0	0.0
UTHA	**Uthaitani**	**9.05**	**39**	P	**Pn**	19 37 00.0	+0.8
	5.4nm,0.6s						
CM31	**Chiang Mai Arr**	**11.17**	**27**		Pn	19 37 22.4	-5.9
CMAR	**Chiang Mai Arr**	**11.17**	**27**	Pn	**Pn**	19 37 30.4	+2.1
	0.7nm,0.3s,baz=207,slow=16,SNR=5.5						
CMAR	**Chiang Mai Arr**	**11.17**	**27**	Pn	**Pn**	19 37 24.9	-3.4
CHTO	**Chiang Mai**	**11.48**	**26**	Pn	**Pn**	19 37 35.3	+2.7
LAMP	**Lampang**	**11.55**	**30**	P	**Pn**	19 37 36.7	+3.2
	10nm,0.6s						
PALK	**Pallekele**	**12.81**	**265**	Pn	Pn	19 37 57.2	+6.4
	0.2nm,0.3s,baz=77,slow=14,SNR=1.4						
PALK				Sn	**Sn**	19 40 07.3	-6.2
	0.9nm,0.3s,baz=82,slow=14,SNR=6.7						
VIS	**Vishakhapatnam**	**13.53**	**314**	*eP*	**Pn**	19 38 02.7	+2.2
VIS				*eS*	Sn	19 40 19.9	-11
IMP	**Imphal**	**16.22**	**1**	*eP*	**Pn**	19 38 33.8	-2.8
IMP				IAmb	IAmb	19 38 50.0	
	comp=Z,5.6nm,0.7s						
EVN	**Everest**	**20.36**	**343**		**P**	19 39 26.5	+0.6
EVN				IAmb	IAmb	19 39 37.8	
	comp=Z,13nm,0.6s						
H08S3	**Diego Garcia H**	**26.44**	**233**	T	T	20 07 33.1	
	baz=52,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**26.44**	**233**	T	T	20 07 27.3	
	baz=52,slow=76,SNR=19						
H08S1	**Diego Carcia H**	**26.46**	**233**	T	T	20 07 24.0	
	baz=52,slow=76,SNR=4.8						
GAR	**Garm**	**36.84**	**329**	P	**P**	19 41 58.2	+1.2
GAR				IAmb	IAmb	19 41 58.9	
	comp=Z,7.0nm,1.1s						
BTK	**Batken**	**37.40**	**331**	P	**P**	19 42 01.5	-0.1
ARSB	**Arslanbob**	**37.42**	**334**	P	**P**	19 42 02.5	+0.6
ARSB				IAmb	IAmb	19 42 20.3	
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**37.90**	**337**	LR	LR	19 59 57.7	
	comp=Z,68nm,19.2s,baz=164,slow=40						
MKAR	**Makanchi Array**	**39.34**	**348**	P	**P**	19 42 19.1	+1.3
	comp=Z,0.5nm,0.6s,baz=154,slow=8.0,SNR=5.3						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**40.66**	**13**	P	**P**	19 42 29.0	0.0
	comp=Z,0.3nm,0.6s,baz=198,slow=9.1,SNR=1.9						
SONM				PcP	**PcP**	19 44 30.4	-0.3
	comp=Z,0.3nm,0.4s,baz=185,slow=5.6,SNR=2.4						
	comp=Z,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**43.79**	**346**	P	**P**	19 42 53.8	-0.4
	comp=Z,0.6nm,0.8s,baz=164,slow=5.8,SNR=4.8						
KURBB				PcP	**PcP**	19 44 39.8	-0.9
	comp=Z,0.2nm,0.3s,baz=159,slow=2.2,SNR=4.2						
	comp=Z,0.6nm,0.8s						
ZAA0	**Zalesovo Array**	**45.85**	**353**		**P**	19 43 09.9	-0.6
ZAA0				IAmb	IAmb	19 43 11.9	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**45.85**	**353**	P	**P**	19 43 09.5	-1.1
	comp=Z,3.1nm,0.8s,baz=173,slow=8.7,SNR=11						
	comp=Z,3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**45.85**	**353**		**P**	19 43 09.7	-0.9
BVAR	**Borovoye Array**	**48.20**	**341**	P	**P**	19 43 28.9	-0.1
	comp=Z,0.4nm,0.4s,baz=141,slow=8.2,SNR=4.2						
BVAR				PcP	**PcP**	19 44 55.9	-0.3
	comp=Z,0.2nm,0.4s,baz=147,slow=2.9,SNR=2.4						
	comp=Z,0.4nm,0.4s						
RAYN	**Ar Rayn**	**48.31**	**294**	P	**P**	19 43 34.7	+4.3
WRA	**Warramunga Arr**	**49.09**	**126**	P	**P**	19 43 35.6	-0.8
	comp=Z,0.3nm,0.5s,baz=302,slow=7.5,SNR=5.2						
WRA				PcP	**PcP**	19 45 00.4	+0.4
	comp=Z,0.2nm,0.6s,baz=305,slow=3.5,SNR=1.4						
	comp=Z,0.3nm,0.5s						
AB31	**Akbulak array**	**49.40**	**331**	P	**P**	19 43 39.6	+1.4
ASAR	**Alice Springs**	**50.76**	**130**	P	**P**	19 43 48.0	-1.0
	comp=Z,0.6nm,1.0s,baz=301,slow=8.4,SNR=6.7						
ASAR				PcP	**PcP**	19 45 06.4	+0.3
	comp=Z,0.3nm,0.5s,baz=302,slow=3.6,SNR=4.3						
	comp=Z,0.6nm,1.0s						
BRTR	**Keskin Array B**	**61.58**	**311**	P	**P**	19 45 06.1	-0.3
	comp=Z,1.5nm,0.8s,baz=126,slow=7.3,SNR=8.5						
	comp=Z,1.5nm,0.8s						
MBAR	**Mbarara**	**63.25**	**265**	LR	LR	20 09 52.8	
	comp=Z,76nm,19.4s,baz=69,slow=33						
TIXI	**Tiksi**	**66.71**	**11**	P	**P**	19 45 38.7	-0.6
FINES	**FINESS Array B**	**71.88**	**332**	P	**P**	19 46 11.2	-0.2
	comp=Z,1.4nm,0.8s,baz=111,slow=7.7,SNR=5.2						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**74.47**	**340**	P	**P**	19 46 26.4	-0.3
	comp=Z,6.9nm,1.2s,baz=108,slow=6.7,SNR=6.7						
	comp=Z,6.9nm,1.2s						
GERES	**GERESS Array B**	**76.97**	**318**	P	**P**	19 46 42.5	+1.1
	comp=Z,0.7nm,0.8s,baz=94,slow=5.5,SNR=8.7						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**76.97**	**318**	P	**P**	19 46 40.9	-0.6
HFS	**Hagfors**	**77.62**	**330**	P	**P**	19 46 44.8	+0.1
	comp=Z,0.6nm,0.3s,baz=90,slow=6.3,SNR=15						
	comp=Z,0.6nm,0.3s						
NOA	**NORSAR Array B**	**78.89**	**331**	P	**P**	19 46 51.6	-0.2
	comp=Z,1.7nm,0.9s,baz=90,slow=5.5,SNR=3.8						
	comp=Z,1.7nm,0.9s						
SPITS	**Spitsbergen Ar**	**79.09**	**348**	P	**P**	19 46 53.1	+0.5
	comp=Z,1.2nm,0.5s,baz=79,slow=7.5,SNR=5.0						
	comp=Z,1.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**86.87**	**325**	P	**P**	19 47 34.1	+0.8
	comp=Z,1.1nm,0.6s,baz=78,slow=6.4,SNR=4.4						
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**89.90**	**283**	P	**P**	19 47 49.5	+0.9
	comp=Z,0.7nm,1.0s,baz=101,slow=4.6,SNR=2.9						
	comp=Z,0.7nm,1.0s						

FUNV ***12*** *19:47:26.1, 6°.81N×73°.31W, h150km, MW3.0, Presumed earthquake*
RSNC ***12*** *19:47:27.2±0.0, 7°.N±1°.×7°.3W±°, h145km±2km, M2.4, ML2.4*

ISC 12 19:47:25.2±1.4, 6°.85N±0°.04×73°.12W±0°.04, h153km±8km**, n22, σ1§93/43, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**193**	P	**Pn**	19 47 46.7	+0.3
BARC				P	**Pn**	19 47 46.7	+0.3
BARC				S	**Sn**	19 48 01.6	-0.9
BRJC	**Barrancabermej**	**0.63**	**281**	P	**Pn**	19 47 48.5	+0.9
BRJC				S	**Sn**	19 48 05.6	+0.9
PAMC	**Pamplona, Colo**	**0.64**	**41**	P	**Pn**	19 47 49.5	+1.2
PAMC				S	**Sn**	19 48 06.5	+0.6
RUSC	**La Rusia**	**0.95**	**178**	P	**Pn**	19 47 50.6	+0.1
RUSC				S	**Sn**	19 48 08.9	-0.9
RUSC	**La Rusia**	**0.95**	**178**	*eP*	**Pn**	19 47 50.4	-0.1
RUSC				*eS*	**Sn**	19 48 08.0	-1.8
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	P	**Pn**	19 47 53.7	+0.1
PTBC				S	**Sn**	19 48 14.5	-0.9
OCAC	**Ocana**	**1.40**	**352**	P	**Pn**	19 47 55.3	+1.2
OCAC				S	**Sn**	19 48 17.0	+0.6
SPBC	**San Pablo de B**	**1.52**	**219**	P	**Pn**	19 47 55.8	+0.5
SPBC				S	**Sn**	19 48 18.2	-0.2
NORC	**Norcasia**	**2.15**	**234**	P	**Pn**	19 48 03.1	+0.7
NORC				S	**Sn**	19 48 31.4	+0.3
CHIC	**Chingaza**	**2.29**	**195**	P	**Pn**	19 48 04.8	+0.5
CHIC				S	**Sn**	19 48 35.5	+1.0
HELC	**Santa Helena**	**2.48**	**255**	P	**Pn**	19 48 08.7	+2.1
HELC				S	**Sn**	19 48 38.3	-0.1
HELC	**Santa Helena**	**2.48**	**255**	*eP*	**Pn**	19 48 03.8	-2.7
HELC				*eS*	**Sn**	19 48 31.6	-6.9
UREC	**San Jos de Ur**	**2.55**	**291**	P	Pn	19 48 12.1	+4.9
UREC				S	**Sn**	19 48 38.4	-1.2
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	19 48 11.2	+1.1
GUY2C				S	**Sn**	19 48 45.5	+0.8
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	19 48 10.5	+0.4
VILC				S	**Sn**	19 48 44.5	-0.3
PTGC	**Puerto Gaitan,**	**2.81**	**159**	P	**Pn**	19 48 09.9	-0.4
PTGC				S	**Sn**	19 48 40.9	-4.4
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	**Pn**	19 48 15.4	+2.1
CBOC				S	**Sn**	19 48 51.5	+1.0
SDV	**Santo Domingo**	**3.19**	**50**	*eP*	**Pn**	19 48 17.1	+1.8
SDV				*eS*	**Sn**	19 48 53.9	-0.2
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	**Pn**	19 48 21.1	+0.6
ORTC				S	**Sn**	19 49 04.8	+1.4
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	19 48 21.6	+0.5
SJCC				S	**Sn**	19 49 03.2	-1.3
SJCC	**San Jacinto, C**	**3.65**	**326**	*eP*	**Pn**	19 48 25.6	-0.6
SJCC				*eS*	**Sn**	19 48 59.4	-5.1
PIZC	**Pizarro, Choco**	**4.61**	**246**	P	**Pn**	19 48 36.8	+3.2

DJA ***12*** *19:50:30.2±0.3, 9°.S±2°.×11°.0E±°, h30km±3km, M5.2/58, mb5.1/27, mB5.7/9, MLv5.2/58, Mw(mB)5.3/9*
GFZ ***12*** *19:50:30.7±0.3, 9°.S±4°.×11°.0E±°, h57km±4km, M5.1/23, mb4.8/23, Error ellipse: s-maj=9.2km s-min=3.3km az=16.3, confirmed*
NEIC ***12*** *19:50:31.3±1.9, 8°.68S±0°.08×109°.90E±0°.07, h74km±7km, mb4.3/18, Error ellipse: s-maj=11.5km s-min=9.5km az=176.0*
IDC ***12*** *19:50:33.2±1.7, 8°.43S×110°.02E, h91km±15km, mb3.9/23, mbtmp4.2/25, MS3.3/3, Error ellipse: s-maj=18.7km s-min=9.5km az=53.0*

ISC 12 19:50:30.9±0.7, 8.73S±0°.05×109°.88E±0°.04, h73km±7km**, n160, σ1§30/159, mb4.2/27, 2D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.00**	**25**	P	**Pn**	19 50 48.1	-1.5
YOGI				S	**Sn**	19 51 01.3	-2.2
UGM	**Wanagama**	**1.03**	**38**	P	**Pn**	19 50 49.0	-1.1
UGM	**Wanagama**	**1.03**	**38**		**Pn**	19 50 48.8	-1.3
UGM				Sn	**Sn**	19 51 02.9	-1.4
UGM	**Wanagama**	**1.03**	**38**	P	**Pn**	19 50 48.7	-1.3
UGM				S	**Sn**	19 51 02.7	-1.6
UGM	**Wanagama**	**1.03**	**38**	P	**Pn**	19 50 48.2	-1.9
KPJI	**Karang Pucung**	**1.67**	**326**	P	**Pn**	19 50 58.3	0.0
KPJI	**Karang Pucung**	**1.67**	**326**	P	**Pn**	19 50 58.6	+0.3
SMRI	**Semarang**	**1.76**	**19**	P	**Pn**	19 51 00.9	+1.4
SMRI	**Semarang**	**1.76**	**19**	S	**Sn**	19 51 22.4	+1.2
SMRI	**Semarang**	**1.76**	**19**		**Pn**	19 50 60.0	+0.5
SMRI				Sn	**Sn**	19 51 24.1	+2.9
SMRI	**Semarang**	**1.76**	**19**	P	**Pn**	19 51 00.1	+0.6
SMRI	**Semarang**	**1.76**	**19**	P	**Pn**	19 51 00.1	+0.6
CTJI	**Waduk Cacaban**	**1.84**	**338**	P	**Pn**	19 51 01.2	+0.6
CTJI	**Waduk Cacaban**	**1.84**	**338**	P	**Pn**	19 51 01.4	+0.8
NGJI	**Ngawi**	**2.07**	**49**	P	**Pn**	19 51 05.9	+2.3
NGJI	**Ngawi**	**2.07**	**49**	P	**Pn**	19 51 06.1	+2.5
SNJI	**Sawahan-Nganju**	**2.09**	**63**	P	**Pn**	19 51 04.3	+0.3
SNJI				S	**Sn**	19 51 30.1	+0.9
BBJI	**Bungbulang**	**2.54**	**300**	P	**Pn**	19 51 09.9	-0.1
BBJI	**Bungbulang**	**2.54**	**300**		**Pn**	19 51 09.5	-0.6
BBJI	**Bungbulang**	**2.54**	**300**	P	**Pn**	19 51 09.6	-0.4
BBJI				S	**Sn**	19 51 39.2	-0.7
BBJI	**Bungbulang**	**2.54**	**300**	P	**Pn**	19 51 09.2	-0.6
LEM	**Lembang**	**2.93**	**310**	P	**Pn**	19 51 16.3	+0.9
	185nm,0.4s,baz=107,slow=14,SNR=50						
LEM				S	**Sn**	19 51 51.8	+2.2
	1µm,0.6s,baz=127,slow=20,SNR=4.8						
LEM	**Lembang**	**2.93**	**310**	P	**Pn**	19 51 16.7	+1.3
LEM	**Lembang**	**2.93**	**310**	P	**Pn**	19 51 16.5	+1.1
SKJI	**Sukabumi**	**3.71**	**297**	P	**Pn**	19 51 27.3	+1.4
DBJI	**Dramaga**	**3.78**	**305**	P	**Pn**	19 51 28.2	+1.4
BLJI	**Banyuglugur**	**3.81**	**75**	P	**Pn**	19 51 27.4	+0.1
BWJI	**Bawean**	**3.98**	**44**	P	**Pn**	19 51 30.6	+1.1
JAGI	**Jajag, Banyuwa**	**4.24**	**87**	P	**Pn**	19 51 32.4	-0.7
JAGI	**Jajag, Banyuwa**	**4.24**	**87**	S	**Sn**	19 52 19.5	-1.9
JAGI	**Jajag, Banyuwa**	**4.24**	**87**		**Pn**	19 51 32.5	-0.6
JAGI	**Jajag, Banyuwa**	**4.24**	**87**	P	**Pn**	19 51 31.9	-1.2
JAGI	**Jajag, Banyuwa**	**4.24**	**87**	P	**Pn**	19 51 32.9	-0.2
ABJI	**Asem Bagus**	**4.41**	**78**	P	**Pn**	19 51 36.1	+0.7
XMI	**Christmas Isla**	**4.47**	**247**	P	**Pn**	19 51 34.0	-2.2
SBJI	**Serang**	**4.53**	**305**	P	**Pn**	19 51 35.6	-1.4
CGJI	**Cibinong**	**4.65**	**297**	P	**Pn**	19 51 38.6	-0.1
RTBI	**Rangdo, Negare**	**5.02**	**87**	P	**Pn**	19 51 44.6	+0.8
IGBI	**Denpasar**	**5.21**	**91**	P	**Pn**	19 51 46.9	+0.5
	2.4nm9µm452nm,0.8s						
IGBI	**Denpasar**	**5.21**	**91**	P	**Pn**	19 51 45.5	-0.8
DNP	**Denpasar**	**5.27**	**90**	P	**Pn**	19 51 46.1	-1.1
SRBI	**Singaraja**	**5.32**	**83**	P	**Pn**	19 51 46.8	-1.1
KHKI	**Kahang-Kahang**	**5.68**	**87**	P	**Pn**	19 51 52.7	-0.1
	1.0nm149nm,0.7s						
KASI	**Kota Agung**	**6.22**	**300**	P	**Pn**	19 52 00.0	-0.1
	0.5nm78nm,0.8s						
KASI	**Kota Agung**	**6.22**	**300**	P	**Pn**	19 52 01.0	+0.9
KLI	**Kotabumi**	**6.29**	**307**	P	**Pn**	19 52 00.7	-0.5
	0.7nm112nm,0.7s						
TPI	**Tanjungpandan**	**6.33**	**339**	P	**Pn**	19 52 01.7	0.0
	58nm,0.7s						
TWSI	**Taliwang, Sumb**	**6.93**	**91**	P	**Pn**	19 52 10.7	+0.9
	0.7nm154nm,0.6s						
TWSI	**Taliwang, Sumb**	**6.93**	**91**	P	**Pn**	19 52 09.7	-0.2
MDSI	**Maura Dua**	**7.06**	**306**	P	**Pn**	19 52 11.2	-0.4
PPBI	**Pangkal Pinang**	**7.51**	**330**	P	**Pn**	19 52 19.7	+1.8
PLAI	**Plampang**	**7.81**	**91**	P	**Pn**	19 52 21.9	0.0
PLAI	**Plampang**	**7.81**	**91**	P	**Pn**	19 52 23.0	+1.1
	0.6nm151nm,0.6s						
PLAI	**Plampang**	**7.81**	**91**	P	**Pn**	19 52 21.9	0.0
MNAI	**Manna**	**8.13**	**302**	P	**Pn**	19 52 25.8	-0.5
MNAI	**Manna**	**8.13**	**302**	Pn	**Pn**	19 52 26.2	-0.2
DBNI	**Kabupaten Domp**	**8.35**	**89**	P	**Pn**	19 52 28.5	-0.7
KSI	**Kapahiang**	**8.82**	**304**	P	**Pn**	19 52 36.7	+0.9
MASI	**Maura Aman, Be**	**9.41**	**306**	P	**Pn**	19 52 43.2	-0.6
WBSI	**Waikabubak, Su**	**9.44**	**96**	P	**Pn**	19 52 42.9	-1.3
LBFI	**Labuhan Bajo,**	**9.91**	**89**	P	**Pn**	19 52 49.0	-1.6
LBFI	**Labuhan Bajo,**	**9.91**	**89**	P	**Pn**	19 52 49.0	-1.6
WSI	**Waingapu**	**10.33**	**96**	P	**Pn**	19 52 55.8	-0.6
KAPI	**Kappang**	**10.48**	**70**	LR	LR	19 56 51.0	
	comp=Z,150nm,21.2s,baz=243,slow=37						
BSSI	**Bau Bau, Buton**	**10.84**	**77**	P	**Pn**	19 53 04.4	+1.1
	56nm,0.9s						
MYKOM	**Kota Tinggi**	**12.05**	**330**	P	**Pn**	19 53 20.7	+0.8
PDSI	**Padang**	**12.17**	**309**	P	**Pn**	19 53 21.3	-0.2
MMRI	**Maumere**	**12.22**	**90**	P	**Pn**	19 53 20.2	-2.0
MMRI	**Maumere**	**12.22**	**90**		**Pn**	19 53 20.7	-1.5
MMRI	**Maumere**	**12.22**	**90**	P	**Pn**	19 53 21.4	-0.8
KKSI	**Kolaka, Sulawe**	**12.54**	**70**	P	**Pn**	19 53 26.1	-0.5
BATI	**Baumata**	**13.68**	**97**	P	Pn	19 53 34.6	-7.2
	23nm,0.3s,baz=268,slow=8.5,SNR=14						
BATI				S	Sn	19 55 57.0	-15
	16nm,0.3s,baz=276,slow=19,SNR=2.0						
BATI	**Baumata**	**13.68**	**97**	P	Pn	19 53 36.9	-4.9
SOEI	**Soe**	**14.24**	**95**	P	**Pn**	19 53 48.1	-1.2
SOEI	**Soe**	**14.24**	**95**		**Pn**	19 53 47.4	-1.9
SOEI	**Soe**	**14.24**	**95**	P	**Pn**	19 53 48.8	-0.5
GIRL	**Giralia**	**14.45**	**164**	Pn	Pn	19 53 47.7	-4.1
TOLI2	**Tolitoli**	**14.62**	**49**	P	**Pn**	19 53 55.5	+1.4
TOLI2	**Tolitoli**	**14.62**	**49**	Pn	**Pn**	19 53 54.5	+0.4
MBWA	**Marble Bar**	**15.59**	**144**	P	**Pn**	19 54 03.8	-2.7
MBWA	**Marble Bar**	**15.59**	**144**	Pn	**Pn**	19 54 04.0	-2.5
MBWA				IAmb	IAmb	19 54 24.8	
	comp=Z,29nm,1.4s						
SANI	**Sanana**	**17.35**	**68**	P	**P**	19 54 29.0	+0.2
FITZ	**Fitzroy Crossi**	**17.93**	**123**	P	**Pn**	19 54 35.6	+0.2
	comp=Z,7.4

KURBB	**Kurchatov Arra**	**65.07**	**339**	P		**P**		**20 01 01.9**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=150,slow=5.7,SNR=10									
	comp=Z,0.6nm,0.4s									
KURK	**Kurchatov**	**65.11**	**339**	P		**P**		**20 01 02.4**	**-1.5**
ZALV	**Zalesovo Beam**	**65.94**	**344**	P		**P**		**20 01 07.5**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=161,slow=5.2,SNR=13									
	comp=Z,1.4nm,0.3s									
ZALV	**Zalesovo Beam**	**65.94**	**344**	P		**P**		**20 01 08.0**	**-1.1**
URZ	**Urewera**	**66.79**	**128**	P		**P**		**20 01 15.8**	**+0.8**
	comp=Z,4.1nm,0.6s,baz=294,slow=3.3,SNR=1.5									
	comp=Z,4.1nm,0.6s									
BVAR	**Borovoye Array**	**70.08**	**336**	P		**P**		**20 01 33.5**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=141,slow=9.1,SNR=13									
	comp=Z,1.8nm,0.6s									
ABKAR	**Akbulak array**	**72.36**	**328**			**P**		**20 01 48.2**	**-0.8**
PETK	**Petropavlovsk-**	**73.75**	**28**	P		**P**		**20 01 56.0**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=242,slow=3.1,SNR=6.2									
	comp=Z,2.0nm,0.6s									
PETK	**Petropavlovsk-**	**73.75**	**28**	P		**P**		**20 01 56.5**	**-0.6**
VNDA	**Vanda**	**73.76**	**170**	P		**P**		**20 01 58.5**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=316,slow=6.4,SNR=7.5									
	comp=Z,0.5nm,0.4s									
VNDA	**Vanda**	**73.76**	**170**	P		**P**		**20 01 57.5**	**+0.6**
VNDA				IAmb		IAmb		20 02 35.5		
	comp=Z,1.9nm,0.9s									
KBZ	**Khabaz**	**79.84**	**317**	P		**P**		**20 02 30.3**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=119,slow=11,SNR=4.0									
	comp=Z,2.0nm,0.8s									
TIXI	**Tiksi**	**81.20**	**6**	P		**P**		**20 02 35.7**	**-2.6**
	comp=Z,2.8nm,0.6s,baz=224,slow=1.1,SNR=8.5									
	comp=Z,2.8nm,0.6s									
TIXI	**Tiksi**	**81.20**	**6**	P		**P**		**20 02 37.2**	**-1.0**
TIXI				IAmb		IAmb		20 02 40.2		
	comp=Z,4.0nm,0.8s									
QSPA	**South Pole Qui**	**81.27**	**180**	P		**P**		**20 02 40.6**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=317,slow=0.7,SNR=12									
	comp=Z,1.1nm,0.6s									
QSPA	**South Pole Qui**	**81.27**	**180**	P		**P**		**20 02 39.6**	**+0.5**
QSPA				IAmb		IAmb		20 03 21.6		
	comp=Z,4.3nm,1.2s									
MMAI	**Mount Meron Ar**	**81.92**	**305**	P		**P**		**20 02 43.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=85,slow=7.7,SNR=3.6									
	comp=Z,1.7nm,0.6s									
BRTR	**Keskin Array B**	**85.10**	**311**	P		**P**		**20 02 58.9**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=134,slow=7.2,SNR=16									
	comp=Z,2.5nm,0.7s									
BRTR	**Keskin Array B**	**85.10**	**311**	P		**P**		**20 02 59.5**	**+0.2**
VNA2	**Neumayer--Watz**	**90.37**	**197**	⇓P		**P**		**20 03 26.9**	**+3.0**
	comp=Z,1.1nm,0.6s,baz=117,slow=4.3									
VNA2				⇓pP		**pP**		**20 03 45.0**	**+2.4**
	comp=Z,1.5nm,0.6s,baz=112,slow=4.2									
AKASG	**Malin Array Be**	**90.82**	**321**	P		**P**		**20 03 25.1**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=91,slow=4.4,SNR=4.9									
	comp=Z,0.4nm,0.5s									
FINES	**FINESS Array B**	**94.64**	**331**	P		**P**		**20 03 43.1**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=108,slow=4.5,SNR=4.5									
	comp=Z,1.5nm,0.9s									
SPITS	**Spitsbergen Ar**	**99.21**	**348**	P		**Pdif**		**20 04 02.8**	**-1.2**
	comp=Z,4.5nm,0.9s,baz=98,slow=10,SNR=2.6									
BDFB	**Brasilia**	**147.35**	**222**	PKPbc		**PKPbc**		**20 10 08.3**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=149,slow=5.9,SNR=3.6									

IDC **12** *19:57:08.2±0.8, 16°.60S×177°.19W, h0km, mb3.9/10, mbtmp3.9/12, ML5.9/1, Error ellipse: s-maj=34.7km s-min=17.2km az=149.0*

NEIC **12** *19:57:10.5±2.5, 16°.7S±0°.1×177°.2W±0°.1, h10km±1km, mb4.5/11, Error ellipse: s-maj=26.4km s-min=10.6km az=321.0*

GCMT **12** *19:57:13.4±0.3, 16°.82S±0°.02×176°.99W±0°.02, h12km, MW4.9/115, Moment Tensor Solution. s31,c40; s115,c149; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~0.74±.11; Mθθ~2.67±.10; Mϕϕ3.41±.08; Mrθ0.47±.32; Mθϕ0.28±.10; Mϕr0.36±.26; Best double couple: M○3.12000×10^16 NP1:ϕs318.00000°, δ77.00000°, λ-175.00000°. NP2:ϕs227.00000°, δ85.00000°, λ-13.00000°. Principal axes: T 3.4570, Plg5.0000°, Azm273.0000°; N -0.6730, Plg76.0000°, Azm25.0000°; P -2.7830, Plg13.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 19:57:10.9±0.5, 16°.9S±0°.2×177°.17W±0°.07, h10km, n59, σ1s76/48, mb4.3/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.64**	**259**	Pn	**Pn**	**19 58 20.9**	**-0.3**
	19nm,0.3s,baz=53,slow=20,SNR=30						
MSVF				Sn	**Sn**	**19 59 12.8**	**-2.5**
	13nm,0.3s,baz=94,slow=14,SNR=6.3						
	18nm,0.3s						
MSVF	**Nonsavu**	**4.64**	**259**		**Pn**	**19 58 21.1**	**-0.1**
MSVF				Sn	**Sn**	**19 59 13.1**	**-2.2**
AFI	**Afiamalu**	**5.98**	**61**	Pn	**Pn**	**19 58 36.5**	**-3.1**
	21nm,0.7s,baz=253,slow=19,SNR=2.5						
AFI	**Afiamalu**	**5.98**	**61**		Pn	19 58 36.1	-3.6
PAE	**Paea**	**26.35**	**96**	*e*T	T	20 30 02.8	
	6.7nm,0.2s						
PPT2	**Papeete2**	**26.36**	**96**	*e*P	**P**	**20 02 47.0**	**-0.6**
	65nm,24.2s						
PPT2				*e*S	S	20 07 11.3	-10
	102nm,23.0s						
PPT2				*e*LR	LR	20 09 12.2	
	880nm,25.5s						
PPT2				*e*LR	LR	20 09 19.1	
	2μm,26.5s						
TVO	**Taravao**	**26.66**	**96**	*e*T	T	20 30 26.1	
	2.3nm,0.1s						
TBI	**Tubuai**	**26.78**	**108**	*e*P	**P**	**20 02 52.8**	**+1.6**
	654nm,32.5s						
TBI				*e*S	**S**	**20 07 26.3**	**-1.0**
	3μm,33.8s						
TBI				*e*LR	LR	20 09 26.6	
	2μm,27.8s						
TBI				*e*LR	LR	20 09 37.9	
	8μm,28.2s						
TBI				*e*T	T	20 30 39.0	
	1.3nm,0.2s						
PMOR	**Pomariorio Ree**	**28.20**	**90**	*e*T	T	20 32 28.1	
	4.8nm,0.2s						
TAOE	**Nuku Hiva Isla**	**36.91**	**82**	*e*LR	LR	20 14 06.4	
	961nm,25.9s						
TAOE				*e*T	T	20 43 10.1	
	60nm,0.2s						
STKA	**Stephens Creek**	**40.16**	**240**	P	**P**	**20 04 47.5**	**+0.1**
	9.1nm,0.8s,baz=74,slow=11,SNR=11						
	9.1nm,0.8s						
INKA	**Innaminka**	**40.23**	**247**		P	20 04 45.2	-2.8
INKA				IAmb	IAmb	20 04 52.3	
	comp=Z,8.2nm,1.1s						
WRA	**Warramunga Arr**	**45.99**	**258**	P	P	20 05 32.5	-2.3
	comp=Z,0.8nm,0.8s,baz=93,slow=6.7,SNR=8.0						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**45.99**	**258**	P	**P**	**20 05 33.8**	**-1.0**
AS31	**Alice Springs**	**46.21**	**253**	P	**P**	**20 05 36.0**	**-0.5**
ASAR	**Alice Springs**	**46.21**	**253**	P	**P**	**20 05 35.5**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=90,slow=7.7,SNR=28						
	comp=Z,3.1nm,0.7s						
ASAR	**Alice Springs**	**46.21**	**253**	P	P	20 05 33.6	-3.0
MJAR	**Matsushiro Arr**	**67.80**	**322**	P	P	20 08 06.1	-3.1
	comp=Z,1.3nm,0.9s,baz=143,slow=4.3,SNR=1.7						
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**73.17**	**180**	P	**P**	**20 08 42.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=56,slow=2.6,SNR=7.2						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**73.17**	**180**	P	**P**	**20 08 41.4**	**-0.4**
QSPA				IAmb	IAmb	20 09 17.2	
	comp=Z,4.9nm,1.2s						
NVAR	**Mina Array Bea**	**77.87**	**43**	P	**P**	**20 09 07.6**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=232,slow=4.7,SNR=1.5						
	comp=Z,0.3nm,0.6s						
J20K	**Nowinta River**	**82.73**	**10**	P	**P**	**20 09 34.6**	**+0.1**
J20K				IAmb	IAmb	20 10 16.7	
	comp=Z,4.1nm,1.1s						
WRH	**Wood River Hil**	**84.11**	**12**	P	**P**	**20 09 43.4**	**+1.8**
CCB	**Clear Creek Bu**	**84.33**	**12**	P	**P**	**20 09 41.9**	**-0.8**
TXAR	**Lajitas Array**	**84.45**	**57**	P	P	20 09 41.5	-2.8
	comp=Z,0.9nm,1.0s,baz=235,slow=4.1,SNR=6.8						
	comp=Z,0.9nm,1.0s						
TXAR	**Lajitas Array**	**84.45**	**57**	P	**P**	**20 09 43.4**	**-0.9**
I23K	**Minto, Yukon-K**	**84.47**	**11**	P	**P**	**20 09 41.8**	**-1.6**
I23K				IAmb	IAmb	20 09 47.1	
	comp=Z,5.5nm,1.2s						
SCRK	**Sand Creek**	**84.58**	**14**	P	**P**	**20 09 43.0**	**-1.2**
SCRK				IAmb	IAmb	20 09 57.5	
	comp=Z,2.6nm,0.9s						
ILAR	**Eielson Array**	**84.63**	**13**	P	P	20 09 41.3	-3.0
	comp=Z,1.0nm,1.0s,baz=209,slow=4.8,SNR=11						
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**84.63**	**13**		**P**	**20 09 42.6**	**-1.7**
J25K	**Salcha River,**	**84.81**	**13**	P	**P**	**20 09 43.1**	**-2.2**
J25K				IAmb	IAmb	20 09 48.6	
	comp=Z,5.0nm,1.1s						
L29M	**L29M**	**85.34**	**17**	P	**P**	**20 09 48.3**	**+0.4**
L29M				IAmb	IAmb	20 09 52.7	
	comp=Z,6.7nm,1.1s						
PDAR	**Pinedale Array**	**85.80**	**43**	P	**P**	**20 09 49.1**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=255,slow=12,SNR=1.5						
	comp=Z,0.1nm,0.3s						
H03S2	**Juan Fernandez**	**87.38**	**124**	T	T	21 46 33.2	
	baz=251,slow=75,SNR=9.7						
H03S1	**Juan Fernandez**	**87.40**	**124**	T	T	21 46 31.1	
	baz=251,slow=75,SNR=8.6						
H03S3	**Juan Fernandez**	**87.40**	**124**	T	T	21 46 29.8	
	baz=251,slow=75,SNR=9.3						
CMAR	**Chiang Mai Ar**	**89.66**	**289**	P	**P**	**20 10 08.9**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=115,slow=4.0,SNR=4.6						
	comp=Z,0.1nm,0.4s						
BRTR	**Keskin Array B**	**144.87**	**317**	PKP	**PKPab**	**20 16 47.9**	**+0.1**
	comp=Z,3.7nm,0.8s,baz=88,slow=2.9,SNR=14						
MORC	**Moravsky Berou**	**145.09**	**343**	*e*PKP	**PKPab**	**20 16 49.8**	**+1.7**
VRAC	**Vranov**	**145.77**	**344**	*e*PKP	**PKPab**	**20 16 52.6**	**+2.0**
JAVC	**Velka Javorina**	**145.88**	**342**	*e*PKP	**PKPab**	**20 16 53.6**	**+2.5**
KRUC	**Moravsky**	**146.05**	**344**	*e*PKP	**PKPdf**	**20 16 51.8**	**+1.5**
MMAI	**Mount Meron Ar**	**146.55**	**305**	PKPbc	**PKPdf**	**20 16 52.4**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=83,slow=4.5,SNR=1.9						
GERES	**GERESS Array B**	**146.91**	**347**	PKPbc	**PKPdf**	**20 16 52.9**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=9.3,slow=4.5,SNR=1.4						
WINA	**Alland / Wiene**	**147.01**	**344**	*e*PKiKP	**PKPab**	**20 16 57.8**	**+2.4**
	comp=Z,5.4nm,1.3s						
CONA	**Conrad Observa**	**147.23**	**344**	*e*PKiKP	**PKPab**	**20 16 58.3**	**+1.9**
	comp=Z,13nm,1.5s						
RONA	**Rosalia, Austr**	**147.32**	**343**	*e*PKP	**PKPbc**	**20 16 57.2**	**+2.3**
	comp=Z,4.6nm,1.5s						
BIOA	**Bad Ischl, Aus**	**148.01**	**346**	*e*PKiKP	**PKiKP**	**20 17 00.9**	**+2.3**
	comp=Z,5.7nm,1.5s						
SESA	**Seetaler Alpe,**	**148.32**	**345**	*e*PKP	**PKPdf**	**20 16 55.5**	**+1.0**
	comp=Z,6.3nm,1.1s						
LESA	**Schwarzleotal**	**148.47**	**347**	*e*PKP	**PKPab**	**20 17 03.8**	**+2.6**
	comp=Z,6.4nm,1.6s						
SOKA	**Soboth**	**148.61**	**344**	*e*PKiKP	**PKiKP**	**20 17 02.9**	**+3.0**
	comp=Z,5.2nm,1.4s						
WATA	**Walderalm**	**148.78**	**348**	*e*PKP	**PKPab**	**20 17 05.6**	**+3.0**
	comp=Z,1.7nm,0.6s						
RETA	**Reutte**	**148.78**	**350**	*e*PKP	**PKPbc**	**20 17 00.2**	**+1.4**
	comp=Z,2.7nm,1.1s						
WTTA	**Wattenberg**	**148.84**	**348**	*e*PKP	**PKPbc**	**20 17 01.0**	**+1.9**
	comp=Z,2.3nm,0.7s						
MOTA	**Moosalm**	**148.86**	**349**	*e*PKP	**PKPbc**	**20 17 01.3**	**+2.2**
	comp=Z,7.7nm,1.6s						
OBKA	**Obir**	**148.89**	**344**	*e*PKiKP	**PKiKP**	**20 17 02.2**	**+1.6**
	comp=Z,10nm,1.6s						
SQTA	**Sankt Quirin**	**148.96**	**349**	*e*PKiKP	**PKiKP**	**20 17 02.6**	**+2.0**
	comp=Z,1.9nm,0.8s						
DAVA	**Damuels**	**149.12**	**351**	*e*PKP	**PKPbc**	**20 17 01.2**	**+1.4**
	comp=Z,8.6nm,1.3s						
FETA	**Feichten**	**149.24**	**349**	*e*PKiKP	**PKPbc**	**20 17 02.8**	**+2.7**
	comp=Z,5.0nm,1.3s						

IDC **12** *20:02:31.4±0.6, 16°.88S×177°.11W, h0km, mb4.3/17, mbtmp4.3/20, ML4.0/2, MS4.6/61, Error ellipse: s-maj=21.8km s-min=14.8km az=137.0*

NEIC **12** *20:02:33.9±2.1, 16°.63S±0°.05×177°.20W±0°.09, h10km±1km, mb4.6/98, Error ellipse: s-maj=15.5km s-min=4.0km az=116.0*

GFZ **12** *20:02:34.4±0.2, 17°.5S±5°×17°.7W±°, h10km, M4.9/22, mb4.9/22*

GCMT **12** *20:02:37.9±0.1, 16°.79S±0°.01×177°.06W±0°.01, h12km, MW5.3/149, Moment Tensor Solution. s92,c147; s149,c281; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr~0.11±.01; Mθθ~0.93±.01; Mϕϕ1.04±.01; Mrθ0.04±.03; Mθϕ0.20±.01; Mϕr0.25±.03; Best double couple: M○1.03100×10^17 NP1:ϕs320.00000°, δ81.00000°, λ172.00000°. NP2:ϕs51.00000°, δ82.00000°, λ9.00000°. Principal axes: T 1.1140, Plg12.0000°, Azm276.0000°; N -0.1620, Plg78.0000°, Azm91.0000°; P -0.9480, Plg1.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:02:33.5±0.3, 16°.89S±0°.07×177°.15W±0°.06, h10km, n502, σ1s30/402, mb4.6/72, MS4.7/65, 20C-17D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**2.73**	**340**		**Pn**	**20 03 12.9**	**-4.5**
MSVF	**Nonsavu**	**4.66**	**259**	Pn	**Pn**	**20 03 42.1**	**-1.9**
	19nm,0.3s,baz=111,slow=14,SNR=29						
MSVF				Sn	**Sn**	**20 04 36.0**	**-2.3**
	11nm,0.3s,baz=143,slow=20,SNR=8.0						
MSVF				LR	LR	20 05 20.4	
	comp=Z,26μm,18.8s,baz=67,slow=36						
MSVF	**Nonsavu**	**4.66**	**259**		**Pn**	**20 03 43.2**	**-0.9**
AFI	**Afiamalu**	**5.97**	**61**	Pn	**Pn**	**20 03 59.8**	**-2.2**
	9.2nm,0.3s,baz=267,slow=17,SNR=5.0						
AFI				LR	LR	20 06 00.4	
	comp=Z,4μm,21.4s,baz=242,slow=35						
	36nm,0.6s						
AFI	**Afiamalu**	**5.97**	**61**	P	**Pn**	**20 04 01.0**	**-1.1**
RAO	**Raoul Island**	**12.32**	**183**	LR	LR	20 09 31.2	
	comp=Z,7μm,19.8s,baz=26,slow=34						
DZM	**Mont Dzumac**	**16.30**	**249**	Pn	**Pn**	**20 06 22.3**	**-0.4**
	0.2nm,0.3s,baz=96,slow=8.0,SNR=5.3						
DZM				LR	LR	20 11 42.8	
	comp=Z,4μm,18.5s,baz=78,slow=34						
	3.0nm,0.8s						
ONTNC	**Quen Toro**	**16.36**	**248**	Pn	**Pn**	**20 06 22.3**	**-1.1**
ONTNC				IAmb	IAmb	20 06 34.2	
	comp=Z,44nm,1.0s						
RAR	**Rarotonga**	**16.98**	**107**	LR	LR	20 11 29.4	
	comp=Z,3μm,19.5s,baz=282,slow=32						
RAR	**Rarotonga**	**16.98**	**107**	P	**Pn**	**20 06 32.0**	**+0.7**
URZ	**Urewera**	**21.88**	**192**	P	**P**	**20 07 25.1**	**-1.5**
	comp=Z,25nm,0.9s,baz=31,slow=4.1,SNR=7.4						
URZ				LR	LR	20 14 29.2	
	comp=Z,4μm,18.6s,baz=40,slow=33						
	comp=Z,25nm,0.9s						
URZ	**Urewera**	**21.88**	**192**	P	**P**	**20 07 26.7**	**+0.2**
BKZ	**Black Stump Fm**	**22.88**	**193**	P	**P**	**20 07 37.7**	**+0.4**
HNR	**Honiara**	**23.48**	**286**	LR	LR	20 15 28.5	
	comp=Z,233nm,19.3s,baz=196,slow=33						
PAE	**Paea**	**26.33**	**96**	*e*T	T	20 35 25.5	
	comp=Z,27nm,0.3s						
PPT2	**Papeete2**	**26.34**	**96**	*e*S	**S**	**20 12 41.7**	**-1.5**
	comp=Z,517nm,26.8s						
PPT2				*e*LR	LR	20 14 42.2	
	comp=Z,4μm,24.0s						
PPT2				*e*LR	LR	20 14 49.7	
	comp=Z,3μm,26.2s						
PPT2				*e*T	T	20 35 26.8	
	comp=Z,6.5nm,0.3s						
PPT	**Papeete**	**26.34**	**96**	LR	LR	20 15 45.8	
	comp=Z,1μm,20.4s,baz=252,slow=30						
TIAR	**Tiarei**	**26.56**	**96**	*e*T	T	20 35 36.8	
	comp=Z,146nm,0.4s						
TVO	**Taravao**	**26.64**	**96**	*e*T	T	20 35 49.1	
	comp=Z,12nm,0.4s						
TBI	**Tubuai**	**26.75**	**108**	*e*S	**S**	**20 12 51.6**	**+2.0**
	comp=Z,9μm,30.2s						
TBI				*e*LR	LR	20 15 00.5	
	comp=Z,15μm,24.5s						
TBI				*e*LR	LR	20 15 02.6	
	comp=Z,6μm,28.0s						
TBI				*e*T	T	20 35 59.0	
	comp=Z,5.6nm,0.3s						
PMOR	**Pomariorio Ree**	**28.18**	**90**	*e*T	T	20 37 45.8	
	comp=Z,5.3nm,0.2s						
VAH	**Vaihoa**	**28.41**	**91**	*e*T	T	20 37 57.5	
	comp=Z,10nm,0.2s						
EIDS	**Eidsvold**	**30.75**	**249**	P	**P**	**20 08 49.6**	**+0.4**
ARMA	**Armidale**	**31.49**	**239**	P	**P**	**20 08 56.2**	**+0.4**
KRVT	**Keravat (AS076**	**32.71**	**289**	LR	LR	20 21 11.4	
	comp=Z,386nm,19.7s,baz=42,slow=34						
CTA	**Charters Tower**	**34.81**	**259**	LR	LR	20 21 58.0	
	comp=Z,2μm,19.2s,baz=76,slow=34						
PMG	**Port Moresby**	**35.50**	**278**	LR	LR	20 23 09.8	
	comp=Z,1μm,18.1s,baz=94,slow=35						
CMSA	**Cobar Meteorol**	**36.70**	**240**	P	**P**	**20 09 41.7**	**+0.8**
MTSU	**Mount Surprise**	**36.72**	**262**	P	**P**	**20 09 43.6**	**+2.3**
TAOE	**Nuku Hiva Isla**	**36.89**	**82**	*e*LR	LR	20 19 37.5	
	comp=Z,3μm,26.0s						
TAOE				*e*T	T	20 48 31.0	
	comp=Z,85nm,0.2s						
QLP	**Quilpie**	**37.02**	**248**	P	**P**	**20 09 45.5**	**+1.9**
COEN	**Coen**	**38.31**	**269**	P	**P**	**20 09 53.0**	**-1.8**
COEN	**Coen**	**38.31**	**269**	P	**P**	**20 09 56.5**	**+1.7**
TOO	**Toolangi**	**38.74**	**230**	P	**P**	**20 09 58.4**	**+0.3**
WAKE	**Wake Island**	**39.32**	**335**	P	**P**	**20 10 03.4**	**+0.4**
TAU	**Tasmania Unive**	**39.80**	**222**	P	**P**	**20 10 04.8**	**-2.0**
STKA	**Stephens Creek**	**40.17**	**240**	P	**P**	**20 10 10.1**	**0.0**
	comp=Z,9.8nm,1.2s,baz=78,slow=10,SNR=8.5						
STKA				LR	LR	20 26 10.5	
	comp=Z,501nm,18.4s,baz=72,slow=35						
	comp=Z,9.8nm,1.2s						
STKA	**Stephens Creek**	**40.17**	**240**	P	**P**	**20 10 10.6**	**+0.5**
INKA	**Innaminka**	**40.24**	**247**		**P**	**20 10 12.3**	**+1.6**
JAY	**Jayapura**	**43.80**	**284**	LR	LR	20 27 32.5	
	comp=Z,810nm,21.6s,baz=88,slow=34						
BBOO	**Buckleboo**	**44.95**	**240**	P	**P**	**20 10 48.4**	**-0.6**
BBOO				IAmb	IAmb	20 11 01.6	
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**46.00**	**258**	P	**P**	**20 10 55.9**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=96,slow=8.5,SNR=5.2						
WRA				PcP	**PcP**	**20 12 33.3**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=86,slow=3.7,SNR=3.7						
WRA				LR	LR	20 29 05.2	
	comp=Z,883nm,19.8s,baz=14,slow=35						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**46.00**	**258**	P	**P**	**20 10 56.4**	**-1.1**
AS31	**Alice Springs**	**46.23**	**253**		**P**	**20 10 59.5**	**+0.3**
ASAR	**Alice Springs**	**46.23**	**253**	P	**P**	**20 10 58.3**	**-1.0**
	comp=Z,5.7nm,0.7s,baz=91,slow=7.8,SNR=31						
ASAR				PcP	**PcP**	**20 12 34.6**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=87,slow=3.4,SNR=0.7						
ASAR				LR	LR	20 29 38.7	
	comp=Z,3μm,18.2s,baz=98,slow=35						
	comp=Z,5.7nm,0.7s						
ASAR	**Alice Springs**	**46.23**	**253**		**P**	**20 10 59.2**	**-0.1**
SIJI	**Sorong**	**53.19**	**282**	LR	LR	20 33 36.0	
	comp=Z,976nm,20.2s,baz=162,slow=35						
FITZ	**Fitzroy Crossi**	**54.38**	**260**	LR	LR	20 33 57.6	
	comp=Z,2μm,19.5s,baz=100,slow=35						
SOEI	**Soe**	**57.28**	**269**	P	**P**	**20 12 23.5**	**+1.4**
TNTI	**Ternate**	**57.41**	**282**	P	**P**	**20 12 23.7**	**+0.9**
BATI	**Baumata**	**57.75**	**268**	LR	LR	20 34 34.2	
	comp=Z,1μm,21.9s,baz=202,slow=33						
JCJ	**Chichijima**	**58.90**	**317**	LR	LR	20 32 11.5	
	comp=Z,171nm,21.0s,baz=114,slow=30						
NWAO	**Narrogin (SRO)**	**60.75**	**241**	LR	LR	20 37 39.5	
	comp=Z,482nm,18.6s,baz=78,slow=35						
DAV	**Davao City (W)**	**61.42**	**288**	LR	LR	20 37 33.3	
	comp=Z,224nm,18.0s,baz=114,slow=34						
VNDA	**Vanda**	**61.56**	**185**	LR	LR	20 35 14.2	
	comp=Z,288nm,21.6s,baz=14,slow=32						
RPN	**Rapa Nui**	**63.05**	**112**	LR	LR	20 32 59.7	
	comp=Z,685nm,20.7s,baz=254,slow=29						
JHJ	**Hachijo jima 2**	**64.54**	**321**	LR	LR	20 36 31.9	
	comp=Z,124nm,20.2s,baz=142,slow=32						
CASY	**Casey**	**67.56**	**205**	P	**P**	**20 13 31.5**	**+1.7**
MJAR	**Matsushiro Arr**	**67.83**	**322**	P	**P**	**20 13 32.0**	**+0.1**
	comp=Z,5.8nm,1.0s,baz=152,slow=5.3,SNR=9.0						
MJAR				LR	LR	20 37 34.6	
	comp=Z,247nm,21.1s,baz=138,slow=31						
	comp=Z,5.8nm,1.0s						
TGY	**Tagaytay City**	**68.44**	**293**	LR	LR	20 42 30.5	
	comp=Z,102nm,18.0s,baz=120,slow=35						
SHEM	**Shemya Is, Ala**	**69.74**	**354**	LR	LR	20 37 50.9	
	comp=Z,460nm,20.9s,baz=128,slow=30						
JNU	**Nakatsue**	**70.25**	**315**	LR	LR	20 38 44.6	
	comp=Z,176nm,22.0s,baz=146,slow=31						
UNV	**Unalaska Valle**	**71.04**	**7**	P	**P**	**20 13 50.3**	**-1.1**
	baz=191						
YULB	**Yu-li**	**72.24**	**302**	P	**P**	**20 14 00.9**	**+1.5**
NACB	**Ninganchiao**	**72.37**	**303**	P	**P**	**20 14 01.2**	**+1.1**
TPUB	**Ta-pu**	**72.74**	**302**	P	**P**	**20 14 03.8**	**+1.5**
TPUB	**Ta-pu**	**72.74**	**302**	P	**P**	**20 14 03.7**	**+1.4**
CHNA	**Chernabura Isl**	**72.99**	**11**	P	**P**	**20 14 02.1**	**-0.9**
	baz=198						
PETK	**Petropavlovsk-**	**73.02**	**344**	P	**P**	**20 14 03.1**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=160,slow=5.9,SNR=6.5						
PETK				LR	LR	20 41 29.1

NJ2 pmax pmax
comp=Z,31nm,0.9s
M14K Bethel 78.33 8 P P 20 14 33.6 +0.1
baz=195
M15K Kasigluk River 78.45 8 P P 20 14 34.3 +0.1
baz=196
N16K Nishlik Lake 78.51 9 P P 20 14 34.9 +0.2
baz=198
O18K Koktuh Hills 78.53 11 P P 20 14 34.9 +0.2
baz=202
P19K Oil Pt 78.72 12 P P 20 14 35.6 -0.2
baz=203
N17K Nushagak Hills 78.81 10 P P 20 14 36.1 -0.2
baz=200
L14K Kuka Creek 78.82 7 P P 20 14 36.4 +0.2
baz=194
M16K Timber Creek 79.01 9 IAmb IAmb 20 14 42.1
comp=Z,4.8nm,0.8s
M16K Timber Creek 79.01 9 P P 20 14 37.5 +0.2
baz=198
O19K Port Alsworth 79.01 11 P P 20 14 37.5 +0.2
baz=202
N18K Kilae Creek 79.18 10 P P 20 14 38.6 +0.4
baz=201
K13K Kusilvak Mount 79.18 6 P P 20 14 38.5 +0.3
baz=192
O20K Slope Mountain 79.24 12 P P 20 14 39.2 +0.6
baz=204
L15K Ungalak Mounta 79.29 8 P P 20 14 39.2 +0.4
baz=195
BRSE Bradley Lake S 79.33 13 P P 20 14 39.7 +0.6
baz=206
N19K Bonanza Creek 79.55 11 P P 20 14 40.8 +0.4
baz=202
L16K Owhat River 79.59 8 P P 20 14 40.7 +0.3
baz=197
M17K Holitna River 79.60 9 P 20 14 42.1 +1.6
M17K IAmb IAmb 20 14 45.0
comp=Z,5.7nm,0.9s
M17K Holitna River 79.60 9 P P 20 14 40.9 +0.4
baz=199
KLR Kul'dur 79.86 329 P P 20 14 42.6 +0.3
comp=Z,1.8nm,0.9s,baz=119,slow=4.0,SNR=4.4
KLR LR LR 20 44 28.6
comp=Z,392nm,21.6s,baz=138,slow=32
comp=Z,1.8nm,0.9s
WVOR Wild Horse Val 79.86 40 P P 20 14 43.8 +1.2
SEW Seward 79.94 14 P P 20 14 42.0 -0.3
baz=207
M18K Stony River 79.95 10 P P 20 14 42.1 -0.3
baz=201
BNX BinXian 79.97 324 ⇓P P 20 14 45.1 +2.2
BNX pmax pmax
comp=Z,9.0nm,1.0s
Q23K Middleton Isla 80.09 15 P P 20 14 43.1 -0.1
baz=210
TUC Tucson 80.13 52 P P 20 14 45.4 +1.1
L17K Donlin 80.17 9 P P 20 14 43.7 +0.2
baz=198
L18K Granite Mounta 80.49 10 P P 20 14 45.4 0.0
baz=200
MA2 Magadan 80.55 344 LR LR 20 47 13.0
comp=Z,333nm,19.6s,baz=154,slow=33
M19K Big River Lodg 80.58 11 P P 20 14 45.6 -0.3
baz=202
K17K Iditarod 80.72 9 P P 20 14 46.4 -0.2
baz=198
RC01 Rabbit Creek A 80.76 13 P P 20 14 46.5 -0.3
baz=207
L19K White Mountain 80.76 10 P P 20 14 46.3 -0.6
baz=202
M20K Styx River 80.79 11 P P 20 14 46.5 -0.6
baz=203
BBB Bella Bella 80.86 28 LR LR 20 42 10.2
comp=Z,243nm,21.3s,baz=235,slow=29
J16K Anvik River 80.96 7 P 20 14 48.6 +0.8
J16K Anvik River 80.96 7 P P 20 14 47.0 -0.8
baz=196
KAIM Kayak Island 81.02 16 P P 20 14 47.8 -0.4
baz=212
ELK Elko 81.10 43 P 20 14 49.9 +0.5
ELK IAmb IAmb 20 14 53.9
comp=Z,9.3nm,1.4s
CRAG Craig 81.11 24 P P 20 14 48.1 -0.6
baz=222
SKT Skwentna 81.19 12 P P 20 14 48.0 -1.1
baz=205
EYAK Cordova Ski Ar 81.21 15 P P 20 14 48.5 -0.7
baz=210
J17K VABM Dome 81.26 8 IAmb IAmb 20 14 54.8
comp=Z,8.7nm,1.0s
J17K VABM Dome 81.26 8 P P 20 14 48.4 -1.0
baz=198
G08A Pilot Rock 81.28 37 P 20 14 50.0 0.0
KNK Knik Glacier 81.33 14 P P 20 14 49.0 -0.9
baz=208
PMR Palmer 81.34 13 P P 20 14 49.2 -0.7
baz=207
I17K Unalakleet 81.53 7 P P 20 14 49.9 -0.9
baz=196
HAWA Hanford 81.58 36 IAmb IAmb 20 14 56.2
comp=Z,7.8nm,0.9s
U33K Whale Pass 81.59 23 P P 20 14 50.2 -1.1
baz=222
V35K Ketchikan 81.59 24 P P 20 14 50.0 -1.3
baz=224
SMAI San Martin Ant 81.67 159 P P 20 14 52.9 +1.2
ANM Nome 81.70 5 P P 20 14 50.4 -1.4
baz=191
SML Sawmill 81.71 13 P P 20 14 50.5 -1.4
baz=208
M23K Glacier View 81.83 14 P P 20 14 52.1 -0.4
baz=208
CUT Chulitna 81.83 12 P P 20 14 51.6 -0.8
baz=206
L22K Petersville 81.84 12 P P 20 14 51.2 -1.4
baz=206
BMRM Bremner River 81.86 15 P P 20 14 51.4 -1.3
baz=211
S31K Pelican 81.88 21 P P 20 14 51.8 -1.0
baz=219
PPLA Purkeypile 81.90 11 P P 20 14 51.5 -1.5
baz=204
K20K Telida 81.99 10 P P 20 14 52.6 -0.7
baz=202
CRQE Cirque 82.07 16 P P 20 14 53.0 -0.9
baz=213
S32K Killisnoo 82.07 22 P P 20 14 53.5 -0.3
baz=221
H16K Elim 82.08 6 P P 20 14 52.7 -1.0
baz=194
EPH Ephrata 82.10 35 IAmb IAmb 20 14 58.1
comp=Z,4.1nm,0.9s
G15K Niukluk 82.25 6 P P 20 14 54.0 -0.6
baz=193
J19K Poorman 82.33 9 P P 20 14 54.1 -1.0
baz=201
CAST Castle Rocks 82.40 11 P P 20 14 54.8 -0.7
baz=204
N25K Chitina, Valde 82.41 15 P P 20 14 54.9 -0.7
baz=211
DUG Dugway, Tooele 82.42 44 P P 20 14 57.2 +1.0
M24K Tolsona, Glenn 82.46 14 P P 20 14 55.2 -0.7
baz=210
GLB Gilahina Butte 82.47 15 IAmb IAmb 20 15 00.8
comp=Z,6.7nm,1.0s
TNA Tin City 82.50 4 P P 20 14 55.7 -0.1
baz=189
121A Cookes Peak, D 82.50 53 IAmb IAmb 20 15 02.5
comp=Z,5.5nm,1.0s
WAT6 Susitna Watana 82.52 13 P P 20 14 54.9 -1.4
baz=208
F14K Arctic Creek 82.52 5 P P 20 14 54.4 -1.6
baz=190
WAT1 Susitna Watana 82.57 13 P P 20 14 54.3 -2.1
baz=208
H17K Granite Mounta 82.63 7 P P 20 14 55.0 -1.6
baz=197
HEH HeiHe 82.69 328 eP P 20 15 00.2 +3.0
HEH pP PcP 20 15 02.7 +0.6
HEH S S 20 25 22.4 +7.6
HEH pmax pmax
comp=Z,8.0nm,1.3s
HEH L L
comp=Z,230nm,20.6s
HEH L L
comp=Z,340nm,19.9s
HEH L L
comp=Z,560nm,21.4s
P29M Windy Craggy 82.70 19 P P 20 14 55.7 -1.5
baz=218
R32K Eaglecrest 82.70 21 P P 20 14 56.1 -1.1
baz=221
J20K Nowinta River 82.74 10 IAmb IAmb 20 15 00.8
comp=Z,4.2nm,0.9s
J20K Nowinta River 82.74 10 P P 20 14 55.8 -1.3
baz=202
KTH Kantishna Hill 82.74 12 IAmb IAmb 20 14 58.7
comp=Z,4.5nm,1.0s
TRF Thorofare Moun 82.77 12 P P 20 14 56.0 -1.5
baz=206,SNR=10
CHUM Lake Minchumin 82.78 11 P P 20 14 56.2 -1.2
baz=204
G16K Koyuk River 82.80 6 P P 20 14 56.4 -1.0
baz=194
GCSA Galena City Sc 82.85 9 P P 20 14 56.8 -1.0
baz=200
O28M Mount Upton 82.89 17 P P 20 14 56.9 -1.4
baz=216
F15K North Star Dit 82.89 5 P P 20 14 56.8 -1.2
baz=192
HARP HAARP 82.95 14 P P 20 14 57.9 -0.4
baz=211
O29M Mount Kennedy 82.98 18 P P 20 14 58.1 -0.6
baz=217
PLBC Pleasant Camp 83.00 20 P P 20 14 58.3 -0.3
baz=219
BELA Belgrano 2 83.01 173 P P 20 15 00.0 +1.4
H18K Honhosa River 83.04 8 P P 20 14 58.1 -0.6
baz=198
DHY Denali Highway 83.04 13 P P 20 14 57.8 -1.2
baz=209
SEY Seymchan 83.07 346 LR LR 20 45 11.6
comp=Z,568nm,21.8s,baz=150,slow=31
TMUT Trail Mountain 83.07 46 IAmb IAmb 20 15 07.3
comp=Z,4.3nm,1.0s
HLID Hailey 83.08 41 P P 20 15 00.9 +1.2
G17K Kiwalik Mounta 83.09 7 P P 20 14 58.1 -0.9
baz=196
HVU Hansel Valley 83.22 43 IAmb IAmb 20 15 05.1
comp=Z,4.4nm,1.0s
I20K Naaghedeneel 83.26 10 P P 20 14 59.0 -0.8
baz=202
MCK McKinley 83.30 12 P P 20 14 59.3 -0.8
baz=207
T35M Bob Quinn 83.31 24 P P 20 14 59.7 -0.6
baz=225
P30M Million Dollar 83.33 19 P P 20 15 00.2 -0.2
baz=219
PAX Paxson 83.38 14 P P 20 14 59.6 -1.1
baz=210
YUK8 Steele Glacier 83.42 17 P P 20 15 00.6 -0.5
baz=216
SRU San Rafael Swe 83.45 46 IAmb IAmb 20 15 08.6
comp=Z,5.8nm,1.0s
M26K Nabesna, AK 83.49 15 IAmb IAmb 20 15 17.1
comp=Z,5.5nm,1.0s
YUK6 Outpost Mounta 83.55 18 P P 20 15 01.5 -0.2
baz=217
YUK3 Moose Creek 83.63 17 P P 20 15 01.8 -0.3
baz=215
S34M Telegraph Cree 83.65 23 P P 20 15 02.0 0.0
baz=224
H19K Roundabout Mou 83.65 9 IAmb IAmb 20 15 05.1
comp=Z,3.8nm,1.0s
H19K Roundabout Mou 83.65 9 P P 20 15 01.4 -0.4
baz=200,SNR=10
G18K Tagagawik 83.71 8 IAmb IAmb 20 15 04.9
comp=Z,4.8nm,1.0s
G18K Tagagawik 83.71 8 P P 20 15 01.8 -0.4
baz=198
HYT Haines Junctio 83.72 18 P P 20 15 02.0 -0.5
baz=218
M27K Edge Creek, AK 83.74 16 IAmb IAmb 20 15 06.6
comp=Z,3.6nm,1.0s
M27K Edge Creek, AK 83.74 16 P P 20 15 01.6 -0.9
baz=214
YUK4 Talbot Arm 83.79 18 P P 20 15 03.1 +0.2
baz=217
H20K Anchieneega Mo 83.85 9 P P 20 15 02.7 -0.3
baz=202,SNR=7.4
L26K Log Cabin Wild 83.93 15 P P 20 15 02.8 -0.6
baz=212
HWUT Hardware Ranch 83.93 43 P P 20 15 04.0 -0.1
F17K Baldwin Pennin 83.94 6 P P 20 15 03.2 -0.1
baz=195
P32M Atlin 83.97 21 P P 20 15 03.6 -0.1
baz=222
PV05 Paradox Valley 83.97 47 IAmb IAmb 20 15 09.1
comp=Z,5.3nm,1.0s
NEW Newport 83.99 36 LR LR 20 46 44.2
comp=Z,285nm,19.5s,baz=220,slow=32
Q32M Nakina River 84.00 22 P P 20 15 03.5 -0.5
baz=223
MNTX Cornudas Mount 84.01 54 P P 20 15 05.4 +0.9
K24K Donnelly Dome 84.03 13 P P 20 15 02.4 -1.5
baz=210
I21K Tanana 84.03 10 IAmb IAmb 20 15 06.5
comp=Z,4.0nm,1.0s
I21K Tanana 84.03 10 P P 20 15 03.8 0.0
baz=204
NEA2 Nenana 84.04 12 IAmb IAmb 20 15 07.9
comp=Z,3.5nm,1.0s
NEA2 Nenana 84.04 12 P P 20 15 02.4 -1.5
baz=207
BVCY Beaver Creek 84.05 16 P P 20 15 03.0 -1.0
baz=215
O30N Mendenhall 84.11 19 P P 20 15 03.1 -1.3
baz=219
MLY Manley 84.12 11 P P 20 15 02.7 -1.7
baz=205,SNR=6.6
WRH Wood River Hil 84.12 12 IAmb IAmb 20 15 22.4
comp=Z,3.8nm,1.0s
G19K Purcell Mounta 84.15 8 IAmb IAmb 20 15 08.0
comp=Z,4.9nm,0.9s
G19K Purcell Mounta 84.15 8 P P 20 15 02.9 -1.5
baz=199
RIDG Independent Ri 84.18 14 P P 20 15 03.3 -1.4
baz=211,SNR=6.3
F18K Selawik 84.26 7 P P 20 15 04.0 -0.9
baz=197
PMSA Palmer Station 84.26 157 LR LR 20 44 01.8
comp=Z,118nm,21.3s,baz=240,slow=30
H21K Melozitna Rive 84.33 10 IAmb IAmb 20 15 09.8
comp=Z,4.2nm,1.0s
H21K Melozitna Rive 84.33 10 P P 20 15 03.6 -1.7
baz=203,SNR=7.6
L27K Beaver Creek, 84.34 15 IAmb IAmb 20 15 10.0
comp=Z,6.8nm,1.2s
L27K Beaver Creek, 84.34 15 P P 20 15 04.5 -0.9
baz=214
N30M Aishikik Lake 84.34 18 P P 20 15 04.6 -1.0
baz=218
BCAR Beaver Creek A 84.35 15 P 20 15 05.2 -0.3
WHY Whitehorse 84.40 19 IAmb IAmb 20 15 05.5
comp=Z,4.5nm,0.9s
WHY Whitehorse 84.40 19 P P 20 15 04.6 -1.4
baz=220
DLBC Dease Lake 84.43 23 LR LR 20 45 05.7
comp=Z,865nm,20.9s,baz=216,slow=30
DLBC Dease Lake 84.43 23 P P 20 15 05.1 -1.0
baz=225
TXAR Lajitas Array 84.44 57 P P 20 15 05.7 -1.1
comp=Z,1.4nm,0.8s,baz=246,slow=3.6,SNR=16
TXAR LR LR 20 47 09.4
comp=Z,181nm,18.2s,baz=240,slow=32
comp=Z,1.4nm,0.8s
TXAR Lajitas Array 84.44 57 P P 20 15 07.5 +0.7
I23K Minto, Yukon-K 84.48 11 P P 20 15 05.5 -0.5
baz=207,SNR=7.2
E17K Hotham Inlet 84.50 6 P P 20 15 05.1 -1.0
baz=195
ANMO Albuquerque 84.53 51 LR LR 20 46 15.2
comp=Z,234nm,19.1s,baz=244,slow=31
ANMO Albuquerque 84.53 51 P P 20 15 07.8 +0.5
COLA College 84.53 12 P P 20 15 05.9 -0.4
SCRK Sand Creek 84.58 14 P P 20 15 05.9 -0.9
baz=212,SNR=7.3
ILAR Eielson Array 84.64 13 P P 20 15 05.6 -1.3
comp=Z,15nm,1.2s,baz=212,slow=4.7,SNR=23
comp=Z,15nm,1.2s
ILAR Eielson Array 84.64 13 P 20 15 06.3 -0.6
F19K Shaleruckik Mo 84.72 8 P P 20 15 06.3 -1.0
baz=199
M29M Somme Creek 84.73 17 P P 20 15 06.9 -0.7
baz=217
P33M Teslin, Yukon 84.74 21 P P 20 15 06.3 -1.3
baz=222
R33M Jennings River 84.78 22 P P 20 15 06.7 -1.1
baz=224
AHID Auburn Hatcher 84.79 43 P P 20 15 09.8 +1.4
H22K Ishtalitna Cre 84.79 10 IAmb IAmb 20 15 08.8
comp=Z,4.6nm,0.9s
H22K Ishtalitna Cre 84.79 10 P P 20 15 06.4 -1.3
baz=205,SNR=20
J25K Salcha River, 84.82 13 P P 20 15 06.7 -1.2
baz=210,SNR=18
POKR Poker Plat Res 84.83 12 P P 20 15 06.8 -1.0
baz=208
ALPN Alpine 84.86 56 IAmb IAmb 20 15 13.7
comp=Z,5.0nm,1.0s
E18K Tukpahlearik C 84.95 6 P P 20 15 07.5 -0.9
baz=196
D17K Noatak River 84.98 5 P P 20 15 07.2 -1.3
baz=194
G21K Allakaket 85.02 9 IAmb IAmb 20 15 10.1
comp=Z,2.8nm,0.8s
G21K Allakaket 85.02 9 P P 20 15 07.7 -1.1
baz=203,SNR=8.9
H23K Yukon River 85.05 11 P P 20 15 08.1 -1.0
baz=206
F20K Avaraart Lake 85.19 8 IAmb IAmb 20 15 12.1
comp=Z,2.5nm,0.8s
F20K Avaraart Lake 85.19 8 P P 20 15 08.9 -0.7
baz=201
MAW Mawson 85.22 199 LR LR 20 51 20.6
comp=Z,564nm,18.5s,baz=102,slow=34
M30M Minto, Yukon 85.31 18 IAmb IAmb 20 15 14.1
comp=Z,3.1nm,0.9s
M30M Minto, Yukon 85.31 18 P P 20 15 09.1 -1.3
baz=219
N32M Quiet Lake 85.35 20 P P 20 15 10.1 -0.5
baz=222
L29M L29M 85.35 17 P P 20 15 09.8 -0.8
baz=217,SNR=19
C16K Lisburne Hills 85.36 4 P P 20 15 09.7 -0.7
baz=191
E19K Redstone River 85.38 8 P P 20 15 10.0 -0.6
baz=199
H24K Noodor Dome 85.38 12 P P 20 15 10.1 -0.5
baz=208
PRP Porcupine Dome 85.57 13 P P 20 15 10.9 -0.9
baz=210,SNR=16
F21K Alatna River 85.67 9 P P 20 15 11.5 -0.6
baz=203
G22K Bettles 85.71 10 P P 20 15 11.8 -0.4
baz=205
C17K DeLong Mountai 85.73 5 P P 20 15 12.0 -0.3
baz=194
M31M Drury Creek, Y 85.73 19 P P 20 15 12.4 -0.1
baz=221
G23K Bananza Creek 85.77 10 P P 20 15 10.6 -2.0
baz=206,SNR=9.8
DAWY Dawson 85.79 16 P P 20 15 10.9 -1.9
baz=216
PDAR Pinedale Array 85.79 43 P P 20 15 12.3 -1.2
comp=Z,0.8nm,0.7s,baz=247,slow=4.2,SNR=8.5
PDAR LR LR 20 48 11.9
comp=Z,111nm,19.2s,baz=240,slow=32
comp=Z,0.8nm,0.7s
PDAR Pinedale Array 85.79 43 P P 20 15 12.2 -1.4
MNHN Monahans 85.93 56 IAmb IAmb 20 15 19.0
comp=Z,3.9nm,0.9s
C18K Utukok River 86.08 6 P P 20 15 12.3 -1.8
baz=195
K29M Barlow Dome 86.10 16 P P 20 15 12.2 -2.2
baz=218,SNR=8.4
F22K John River 86.14 9 P P 20 15 12.0 -2.3
baz=204
COLD Coldfoot 86.20 10 IAmb IAmb 20 15 18.0
comp=Z,3.5nm,1.0s
COLD Coldfoot 86.20 10 P P 20 15 12.8 -1.8
baz=206,SNR=6.5
G24K Hadweenzic Riv 86.22 11 P P 20 15 12.7 -2.1
baz=208
D19K Kuna River 86.26 7 P P 20 15 12.1 -2.8
baz=198
E20K Nagu River 86.27 8 P P 20 15 12.4 -2.6
baz=200
HILR Hailar Array B 86.39 324 P P 20 15 17.6 +1.5
comp=Z,2.6nm,0.6s,baz=129,slow=11,SNR=2.5
comp=Z,2.6nm,0.6s
J29N Klondike Camp 86.41 16 P P 20 15 13.0 -2.8
baz=217
I27K Kandik River 86.51 14 P P 20 15 14.5 -1.8
baz=214,SNR=7.6
G25K Bearman Lake 86.54 12 P P 20 15 14.1 -2.3
baz=210
C19K Lookout Ridge 86.68 6 P P 20 15 15.1 -1.9
baz=197
E21K Killik River 86.73 8 P P 20 15 15.6 -1.7
baz=202
E22K Anaktuvuk Pass 86.77 9 P P 20 15 16.1 -1.4
baz=204
I28M Miner Creek 86.78 15 IAmb IAmb 20 15 21.7
comp=Z,3.9nm,1.0s
I28M Miner Creek 86.78 15 P P 20 15 15.6 -2.1
baz=216
F24K Squaw Lake 86.87 11 P P 20 15 15.9 -2.1
baz=208
J30M Hart River 87.00 16 IAmb IAmb 20 15 23.2
comp=Z,4.5nm,1.0s
J30M Hart River 87.00 16 P P 20 15 17.1 -1.8
baz=219
MMPY Sheldon Lake, 87.02 19 IAmb IAmb 20 15 21.7
comp=Z,3.2nm,0.9s
MMPY Sheldon Lake, 87.02 19 P P 20 15 16.7 -2.1
baz=224
E23K Chandalar 87.05 10 P P 20 15 17.1 -1.9
baz=206
H27K Steamboat Moun 87.05 14 P P 20 15 17.1 -1.8
baz=214,SNR=7.8
G26K Porcupine Rive 87.17 13 IAmb IAmb 20 15 22.5
comp=Z,3.1nm,0.9s
G26K Porcupine Rive 87.17 13 P P 20 15 18.1 -1.2
baz=212,SNR=8.9
TGTN Hyland Airport 87.23 21 P P 20 15 18.0 -1.9
baz=226
E24K Your Creek 87.26 10 P P 20 15 18.2 -1.7
baz=207
C21K Knifeblade Rid 87.29 8 P P 20 15 18.0 -1.9
baz=202
F25K Christian Rive 87.35 12 P P 20 15 19.5 -0.9
baz=210
H03S2 Juan Fernandez 87.36 124 T T 21 51 48.7
baz=250,slow=75,SNR=13
H03S1 Juan Fernandez 87.37 124 T T 21 51 55.2
baz=250,slow=75,SNR=16
H03S3 Juan Fernandez 87.38 124 T T 21 51 51.4
baz=250,slow=75,SNR=14
HHC Hu-ho-hao-te 87.43 314 eP P 20 15 21.8 +0.4
HHC pmax pmax
comp=Z,14nm,0.5s
HHC pmax pmax
comp=Z,63nm,4.2s
I30M Mount Dempster 87.50 16 IAmb IAmb 20 15 25.4
comp=Z,3.5nm,0.9s
I30M Mount Dempster 87.50 16 P P 20 15 20.2 -1.0
baz=219
G27K Doyon Strip 87.50 13 P P 20 15 19.8 -1.3
baz=214
TOLK Toolik Lake Re 87.58 10 P P 20 15 19.8 -1.7
baz=206
A19K Wainwright 87.60 5 P P 20 15 20.3 -1.1
baz=196
D23K Nanushuk River 87.70 9 IAmb IAmb 20 15 27.8
comp=Z,3.6nm,0.9s
D23K Nanushuk River 87.70 9 P P 20 15 20.6 -1.3
baz=205
F26K Sheenjek River 87.73 12 P P 20 15 20.9 -1.2
baz=212
B21K Ikpikpuk River 87.75 8 P P 20 15 20.9 -1.2
baz=202
CMIG Matias Romero 87.77 72 LR LR 20 47 31.9
comp=Z,426nm,18.2s,baz=230,slow=31
H29M Whitestone 87.78 15 IAmb IAmb 20 15 26.2
comp=Z,2.6nm,1.0s
H29M Whitestone 87.78 15 P P 20 15 21.8 -0.6
baz=217
B20K Meade River 87.81 7 P P 20 15 21.1 -1.3
baz=199
E25K Arctic Village 87.82 11 P P 20 15 21.5 -1.1
baz=210
KOTAN Kotaneelee Air 87.84 24 P P 20 15 22.0 -0.8

baz=230
D24K **Happy Valley** 88.17 10 P P 20 15 22.5 -1.6
baz=207
EPYK **Eagle Plains** 88.31 15 P P 20 15 23.7 -1.2
baz=218
G29M **Pine Creek** 88.42 14 P P 20 15 23.7 -1.8
baz=217
KMI2 **Kunming** 88.45 297 P P 20 15 31.5 +4.7
KMI2 pmax pmax
comp=Z,6.0nm,1.1s
KMI2 L L
comp=Z,450nm,20.3s
H31M **Peel River** 88.49 16 P P 20 15 24.0 -1.8
baz=221
C23K **Itkillik River** 88.50 9 IAmb IAmb 20 15 31.3
comp=Z,4.2nm,1.0s
C23K **Itkillik River** 88.50 9 P P 20 15 23.5 -2.2
baz=205
F28M **Old Crow** 88.56 13 P P 20 15 23.9 -2.2
baz=216
B22K **Teshekpuk Lake** 88.57 8 P P 20 15 24.1 -1.9
baz=203
E27K **Coleen River** 88.67 13 P P 20 15 24.8 -1.8
baz=214
D25K **Kavik River** 88.73 10 IAmb IAmb 20 15 33.1
comp=Z,3.0nm,1.0s
D25K **Kavik River** 88.73 10 P P 20 15 24.3 -2.5
baz=209
G30M **tAoh Zraii Nji** 88.91 15 P P 20 15 25.3 -2.5
baz=219
A22K **Sinclair Lake** 89.00 7 P P 20 15 26.0 -2.0
baz=201
YAK **Yakutsk** 89.09 338 LR LR 20 50 17.8
comp=Z,124nm,21.0s,baz=124,slow=32
A21K **Barrow** 89.11 6 P P 20 15 26.2 -2.3
baz=200
G31M **Satah River** 89.36 16 IAmb IAmb 20 15 31.4
comp=Z,3.3nm,0.8s
G31M **Satah River** 89.36 16 P P 20 15 27.6 -2.2
baz=221
E28M **Babbage River** 89.45 13 P P 20 15 28.1 -2.1
baz=216
C27K **Jago River** 89.47 11 P P 20 15 27.8 -2.5
baz=212
C26K **Camden Bay** 89.50 11 P P 20 15 27.8 -2.5
baz=211
F30M **Barrier River** 89.51 15 P P 20 15 28.0 -2.5
baz=219
E29M **Blow River** 89.63 14 P P 20 15 29.1 -2.0
baz=217
D27M **Malcolm River** 89.68 12 P P 20 15 28.6 -2.8
baz=214
CMAR **Chiang Mai Arr** 89.68 289 P P 20 15 33.9 +1.5
comp=Z,1.3nm,0.9s,baz=114,slow=5.1,SNR=7.1
CMAR LR LR 20 53 14.9
comp=Z,116nm,20.2s,baz=115,slow=34
comp=Z,1.3nm,0.9s
PZH **PanZhiHua** 89.75 298 P P 20 15 37.6 +4.9
PZH pmax pmax
comp=Z,10.0nm,1.2s
F31M **Tsiigehtchic** 89.89 15 IAmb IAmb 20 15 33.4
comp=Z,3.4nm,1.0s
F31M **Tsiigehtchic** 89.89 15 P P 20 15 31.2 -1.0
baz=221
ELIB **Princess Elisa** 90.30 186 *d*P P 20 15 33.8 -0.7
comp=Z,2.2nm,1.1s
PLCA **Paso Flores** 91.15 133 LR LR 20 50 55.0
comp=Z,159nm,18.1s,baz=244,slow=32
APG **El Apazote** 91.19 75 LR LR 20 48 15.8
comp=Z,23nm,21.4s,baz=240,slow=30
LZDM **Lanzhou Array** 91.30 307 LR LR 20 53 02.0
comp=Z,120nm,21.8s,baz=120,slow=33
TROLL **Troll, Antarti** 91.32 180 ⇓P P 20 15 38.9 -0.4
comp=Z,50nm,0.6s
VNA2 **Neumayer--Watz** 92.12 177 P P 20 15 43.0 +0.2
comp=Z,1.6nm,0.7s,baz=182,slow=4.1
VNA2 **Neumayer--Watz** 92.12 177 P P 20 15 43.0 +0.2
VNA1 **Neumayer--Stat** 92.34 176 ⇓P P 20 15 44.6 +0.8
comp=Z,5.6nm,1.3s
YKA **Yellowknife Ar** 92.91 24 P P 20 15 43.9 -2.5
comp=Z,0.2nm,0.6s,baz=241,slow=4.2,SNR=5.5
YKA LR LR 20 49 39.7
comp=Z,627nm,22.0s,baz=236,slow=30
comp=Z,0.2nm,0.6s
C36M **Paulatuk** 93.78 17 P P 20 15 49.2 -1.0
baz=230
JTS **Las Juntas de** 95.01 81 LR LR 20 48 18.3
comp=Z,366nm,21.0s,baz=241,slow=29
A36M **Sachs Harbour** 95.20 14 P P 20 15 55.2 -1.5
baz=229
TIXI **Tiksi** 95.48 345 LR LR 20 55 24.1
comp=Z,548nm,20.2s,baz=130,slow=33
ATAH **Atahualpa** 96.26 99 LR LR 20 48 42.4
comp=Z,646nm,21.9s,baz=249,slow=29
TLY **Talaya** 96.57 322 LR LR 20 55 59.2
comp=Z,229nm,19.9s,baz=114,slow=33
ULM **Lac du Bonnet** 97.36 40 LR LR 20 54 09.2
comp=Z,276nm,19.8s,baz=224,slow=32
BRDH **Bariadhala** 97.43 291 LR LR 20 58 59.3
comp=Z,280nm,18.9s,baz=154,slow=35
KURBB **Kurchatov Arra** 111.93 318 PKiKP **PKiKP** 20 21 07.8 -1.0
comp=Z,0.3nm,0.5s,baz=97,slow=1.9,SNR=1.5
BVAR **Borovoye Array** 116.81 321 PKP **PKPdf** 20 21 17.3 -0.9
comp=Z,1.1nm,0.7s,baz=90,slow=2.9,SNR=6.2
ARCES **ARCESS Array B** 125.53 350 PKP **PKPdf** 20 21 33.1 -1.3
comp=Z,1.8nm,0.8s,baz=22,slow=5.7,SNR=3.1
MNK **Minsk** 137.78 338 *i* PKiKP **PKiKP** 20 22 02.6 +2.7
MNK *i* PKiKP **PKiKP** 20 22 02.6 +2.7
comp=N,10.0nm,0.8s
MNK *i* PKiKP **PKiKP** 20 22 02.6 +2.7
comp=Z,6.0nm,0.8s,baz=37
MNK *i* PP **PP** 20 24 48.8 +4.4
MNK *i* PPP PPP 20 27 49.1
MNK *i* SKS **SKSdf** 20 29 10.8 +2.2
MNK *i* SS **SS** 20 43 01.4 +7.9
MNK *i* SSS SSS 20 48 09.2
MNK *i* LQ LQ 21 15 41.4
MNK *i* LRM MLR 21 23 50.4
comp=E,164nm,19.4s
AKBB **Malin Array Si** 140.20 334 PKP **PKPdf** 20 22 01.8 -0.7
KIEV **Kiev** 140.21 334 PKP **PKPdf** 20 22 01.7 -0.8
LUBAR **Lubar, Ukraine** 141.41 334 PKP **PKPdf** 20 22 04.0 -0.7
BSEG **Bad Segeberg** 142.58 353 *e*L L 21 24 58.3
comp=E,121nm,21.1s
KMPD **K-Podol'skiy** 143.00 334 PKP **PKPdf** 20 22 06.8 -0.8
OJC **Ojcow** 144.06 341 PKP **PKPdf** 20 22 08.8 -0.6
KOLS **Kolonicke sedl** 144.34 338 *e*PKP **PKiKP** 20 22 13.4 -0.2
KSP **Ksiaz** 144.46 345 PKP **PKPdf** 20 22 09.1 -1.0
NIE **Niedzica** 144.60 340 *e*PKPdf **PKPdf** 20 22 11.2 +0.7
NIE **Niedzica** 144.60 340 PKP **PKPdf** 20 22 09.6 -0.8
PANC **Panciu** 144.71 330 ⇑P **PKPab** 20 22 07.1 -2.3
ONER **Baraj Valea Uz** 144.72 331 ⇑P **PKPdf** 20 22 12.2 +1.5
TPGR **Topolog** 144.81 328 ⇑P **PKiKP** 20 22 13.7 -1.0
BRTR **Keskin Array B** 144.90 317 PKP **PKPdf** 20 22 11.2 -0.2
comp=E,23nm,1.0s,baz=75,slow=2.4,SNR=24
STEB **Steborice** 144.90 343 *e*PKP **PKPdf** 20 22 10.8 -0.1
BR104 **Keskin Array S** 144.91 317 PKP PKPbc 20 22 10.4 -0.1
DPC **Dobruska-Polom** 144.91 345 *e*PKP **PKPdf** 20 22 11.2 +0.3
DPC AMS AMS 21 18 20.0
comp=E,200nm,26.5s
DPC **Dobruska-Polom** 144.91 345 PKP PKPbc 20 22 10.1 0.0
BR106 **Keskin Array S** 144.91 317 PKP PKPbc 20 22 10.4 -0.2
BR105 **Keskin Array S** 144.91 317 PKP PKPbc 20 22 10.4 -0.2
VRI **Vrincioaia** 144.91 331 ⇑P **PKiKP** 20 22 14.3 -0.5
VRI **Vrincioaia** 144.91 331 PKP PKPbc 20 22 09.9 -0.3
BMR **Baia Mare** 144.92 336 ⇓P **PKPdf** 20 22 10.8 -0.2
BRG **Berggiesshubel** 144.95 348 *e*PKP **PKiKP** 20 22 15.6 +0.9
BRG Amp 20 22 18.9
comp=Z,2.4nm,1.0s
PLOR **Plostina** 144.96 331 ⇑P **PKiKP** 20 22 14.9 0.0
KIRS **Kirsehir-Merke** 145.02 316 ⇑P **PKPdf** 20 22 12.0 +0.5
SAHR **Sahastru** 145.04 330 ⇑P **PKiKP** 20 22 15.3 +0.2
KRLC **Kraliky** 145.04 344 *e*PKP **PKPdf** 20 22 12.1 +0.9
KRLC AMS AMS 21 19 30.0
comp=Z,200nm,15.6s
LANS **Liptovska Anna** 145.10 341 *e*PKP **PKiKP** 20 22 14.3 -0.9
TURR **Turia** 145.10 331 ⇑P **PKiKP** 20 22 16.1 +0.8
MORC **Moravsky Berou** 145.11 343 ⇑P **PKPdf** 20 22 11.3 0.0
MORC **Moravsky Berou** 145.11 343 *e*PKP **PKiKP** 20 22 13.3 -1.9
COVR **Voineasa-Covas** 145.18 331 ⇑P PKPbc 20 22 11.0 -0.1
OZUR 145.18 332 ⇓P **PKiKP** 20 22 15.7 +0.3
BUG **Bochum--Univer** 145.35 355 *e*PKPbc **PKiKP** 20 22 13.9 -1.6
baz=15,slow=2.9
DOPR **Dopca** 145.46 332 ⇑P **PKPdf** 20 22 13.3 +1.3
KASTN **Kahler Asten** 145.48 354 *e*PKPbc **PKiKP** 20 22 13.9 -2.0
baz=15,slow=2.9

ISR **Istrita** 145.55 330 ⇑P **PKiKP** 20 22 15.9 -0.3
MLR **Muntele Rosu** 145.56 331 ⇑P **PKiKP** 20 22 17.7 +1.3
MOX **Moxa** 145.60 350 *e*PKPbc **PKiKP** 20 22 14.4 -1.7
baz=15,slow=2.9
MOX *e*L L 21 26 37.4
comp=Z,183nm,21.4s
PRU **Pruhonice** 145.66 347 *e*PKP **PKiKP** 20 22 16.9 +0.7
PRU AMS AMS 21 17 10.0
comp=Z,400nm,29.4s
PLN **Plauen** 145.66 349 *e*PKPbc **PKiKP** 20 22 14.2 -2.0
baz=15,slow=2.9
UBBA **Unterbreizbach** 145.67 352 *e*PKPbc **PKiKP** 20 22 14.6 -1.5
baz=15,slow=2.9
TANN **Tannenbergstha** 145.68 349 *e*PKPbc **PKiKP** 20 22 15.2 -1.2
baz=15,slow=2.9
MDB **Medias** 145.77 333 ⇑P **PKiKP** 20 22 14.8 -1.8
VRAC **Vranov** 145.79 344 *e*PKP **PKiKP** 20 22 15.7 -0.8
MARR **Marisel-Cluj** 145.88 335 ⇑P **PKPab** 20 22 14.2 +0.4
JAVC **Velka Javorina** 145.90 342 *e*PKP **PKiKP** 20 22 17.0 +0.1
DRGR 145.95 335 ⇑P **PKPab** 20 22 14.2 +0.2
VOIR 146.01 332 ⇓P **PKiKP** 20 22 17.9 +0.7
VOIR 146.01 332 PKP **PKPdf** 20 22 11.9 -1.2
KRUC **Moravsky** 146.07 344 *e*PKP **PKiKP** 20 22 16.2 -0.9
UCC **Uccle** 146.15 358 *d*PKP **PKPbc** 20 22 13.4 -0.5
ARR **Arges** 146.26 332 ⇑P **PKPab** 20 22 15.5 +0.3
MEM **Membach** 146.27 356 *d*PKP **PKiKP** 20 22 18.9 +1.4
BTNL **Ternell** 146.28 356 *d*PKP **PKiKP** 20 22 18.6 +1.1
BSTI **Sart Tilman** 146.32 357 *d*PKP **PKiKP** 20 22 16.4 -1.1
ROTZ **Rotzenmuhle** 146.34 349 *e*PKPbc **PKiKP** 20 22 17.1 -0.6
baz=15,slow=2.9
TNS **Taunus Mts** 146.45 353 *e*PKPbc **PKiKP** 20 22 17.6 -0.4
baz=15,slow=2.9
TNS *e*L L 21 33 27.3
comp=Z,205nm,20.1s
MODS **Modra-Piesok** 146.45 343 *e*PKP **PKiKP** 20 22 20.1 +2.2
BCLA **Clavier** 146.50 357 *d*PKP **PKiKP** 20 22 16.6 -1.3
BGES **Gesves** 146.54 357 *d*PKP **PKiKP** 20 22 20.2 +2.2
MMAI **Mount Meron Ar** 146.58 305 PKPbc **PKPbc** 20 22 15.4 -0.5
comp=Z,9.6nm,0.9s,baz=66,slow=3.6,SNR=7.1
GRF **Grafenberg Arr** 146.59 350 *e*PKPbc **PKiKP** 20 22 17.9 -0.3
baz=15,slow=2.9
GRF *e*L L 21 29 40.7
comp=Z,203nm,20.5s
BMRD **Maredsous** 146.64 358 *d*PKP **PKPab** 20 22 16.4 0.0
KHC **Kasperske Hory** 146.68 347 *e*PKP **PKiKP** 20 22 20.7 +2.3
KHC AMS AMS 21 17 30.0
comp=Z,300nm,22.9s
KHC **Kasperske Hory** 146.68 347 PKP **PKPdf** 20 22 13.0 -1.0
SIRR **Siria** 146.79 336 ⇑P **PKPbc** 20 22 15.7 -0.3
CKRC **Cesky Krumlov** 146.81 346 *e*PKP **PKiKP** 20 22 20.1 +1.4
CKRC AMS AMS 21 17 50.0
comp=Z,300nm,25.5s
WET **Wettzell** 146.81 348 *e*PKPbc **PKiKP** 20 22 18.6 -0.1
baz=15,slow=2.9
WET *e*L L 21 34 10.0
comp=Z,214nm,19.9s
DOU **Dourbes** 146.85 358 *d*PKP **PKPab** 20 22 16.6 -0.7
GEC2 **GERESS Array S** 146.92 347 *e*L L 21 25 41.0
comp=Z,167nm,21.4s
GERES **GERESS Array B** 146.92 347 PKPbc **PKPab** 20 22 17.4 -0.4
comp=Z,1.2nm,0.8s,baz=24,slow=4.9,SNR=8.2
WINA **Alland / Wiene** 147.03 344 *e*pPKP pPKPdf 20 22 17.6 +0.3
comp=Z,9.9nm,1.4s
GZR **Gura Zlata** 147.05 334 ⇑P **PKPab** 20 22 17.1 -1.2
WLF **Walferdange** 147.20 356 *d*PKP **PKiKP** 20 22 19.2 -0.2
WLF **Walferdange** 147.20 356 *e*PKPbc **PKiKP** 20 22 18.9 -0.5
baz=15,slow=2.9
CONA **Conrad Observa** 147.25 344 *e*pPKP **PKPab** 20 22 18.4 -0.7
comp=Z,20nm,1.6s
RONA **Rosalia, Austr** 147.34 343 *e*pPKP pPKPdf 20 22 17.9 +0.1
comp=Z,13nm,1.7s
BZS **Buzias** 147.34 335 ⇓P **PKPbc** 20 22 17.6 +0.1
MPLH **Magyarpolny** 147.46 341 PKP **PKPdf** 20 22 14.3 -1.0
MOA **Molln** 147.73 346 *e*pPKP **PKPab** 20 22 19.6 -1.3
comp=Z,10nm,1.5s
STU **Stuttgart** 147.78 352 *e*PKPbc **PKiKP** 20 22 21.4 +0.7
baz=15,slow=2.9
MORH **Mrazy, Hungar** 147.94 339 ⇑P **PKPab** 20 22 21.3 -0.4
ARSA **Arzberg** 147.97 344 *e*pPKP pPKPdf 20 22 19.3 +0.4
comp=Z,4.9nm,1.1s
BIOA **Bad Ischl, Aus** 148.03 346 *e*PKP **PKPab** 20 22 22.0 -0.1
comp=Z,15nm,1.4s
FUR **Furstenfeldbru** 148.05 349 *e*L L 21 35 14.1
comp=Z,147nm,19.6s
RJOB **Jochberg** 148.17 347 *e*PKPbc **PKPab** 20 22 22.2 -0.4
baz=15,slow=2.9
BFO **Black Forest** 148.33 353 *e*PKPbc **PKiKP** 20 22 21.9 +0.1
baz=15,slow=2.9
BFO *e*L L 21 28 48.4
comp=Z,268nm,19.4s
SESA **Seetaler Alpe,** 148.34 345 *e*pPKP **PKPab** 20 22 24.0 +0.4
comp=Z,18nm,1.2s
LESA **Schwarzleotal** 148.49 347 *e*pPKP **PKPab** 20 22 24.7 +0.8
comp=Z,15nm,1.6s
SOKA **Soboth** 148.62 344 *e*pPKiKP **PKPab** 20 22 25.3 +0.8
comp=Z,6.0nm,1.4s
WATA **Walderalm** 148.80 349 *e*pPKP pPKPdf 20 22 20.4 0.0
comp=Z,6.9nm,1.3s
RETA **Reutte** 148.80 350 *e*PKiKP **PKiKP** 20 22 23.5 +0.6
comp=Z,12nm,1.1s
WTTA **Wattenberg** 148.85 348 *e*PKP **PKPbc** 20 22 21.8 0.0
comp=Z,6.6nm,1.0s
MOTA **Moosalm** 148.88 349 *e*PKP **PKPbc** 20 22 22.2 +0.4
comp=Z,10.0nm,1.2s
SQTA **Sankt Quirin** 148.98 349 *e*PKP **PKPbc** 20 22 22.0 0.0
comp=Z,10nm,1.4s
MYKA **Terra Mystica** 149.02 345 *e*PKiKP **PKiKP** 20 22 23.3 -0.1
comp=Z,9.6nm,1.4s
DAVA **Damuels** 149.14 351 *e*PKiKP **PKiKP** 20 22 23.3 -0.4
comp=Z,12nm,1.5s
ABTA **Abfaltersbach** 149.17 347 *e*PKP **PKPbc** 20 22 22.1 -0.3
comp=Z,14nm,1.7s
FETA **Feichten** 149.25 349 *e*PKP **PKPbc** 20 22 22.2 -0.5
comp=Z,8.4nm,1.2s
TORD **Torodi Ar. Bea** 176.11 163 PKP **PKPdf** 20 22 44.0 -1.0
comp=Z,3.3nm,1.2s,baz=196,slow=1.0,SNR=5.6

*IDC **12** 20:07:59.5±0.8, 16.°48S×177.°10W, h0km, mb3.7/9, mbtmp3.7/11, ML4.8/2, Error ellipse: s-maj=34.4km s-min=18.0km az=148.0*
ISC 12 20:08:01.3±0.8, 16.°5S±0.°2×177.°2W±0.°1, h10km, n15, σ1°42/12, mb3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**255**	Pn		**Pn**		**20 09 12.1**	**-0.4**
	1.8nm,0.3s,baz=72,slow=20,SNR=4.0								
MSVF				Sn		**Sn**		**20 10 05.1**	**-2.1**
	2.8nm,0.3s,baz=123,slow=11,SNR=4.1								
	4.0nm,0.4s								
AFI	**Afiamalu**	**5.84**	**64**	Pn		**Pn**		**20 09 27.1**	**-0.9**
	17nm,0.3s,baz=214,slow=7.3,SNR=8.7								
	23nm,0.3s								
STKA	**Stephens Creek**	**40.32**	**240**	P		**P**		**20 15 39.7**	**+0.7**
	2.5nm,0.7s,baz=75,slow=9.0,SNR=5.6								
	2.5nm,0.7s								
WRA	**Warramunga Arr**	**46.04**	**258**	P		**P**		**20 16 27.7**	**+2.2**
	0.6nm,0.8s,baz=91,slow=7.5,SNR=2.8								
	0.6nm,0.8s								
ASAR	**Alice Springs**	**46.30**	**253**	P		**P**		**20 16 28.2**	**+0.7**
	2.1nm,0.8s,baz=91,slow=7.8,SNR=19								
	2.1nm,0.8s								
MJAR	**Matsushiro Arr**	**67.52**	**322**	P		**P**		**20 18 57.2**	**-0.6**
	0.4nm,0.5s,baz=149,slow=5.1,SNR=4.5								
	0.4nm,0.5s								
QSPA	**South Pole Qui**	**73.52**	**180**	P		**P**		**20 19 33.9**	**-0.3**
	1.5nm,0.8s,baz=63,slow=1.6,SNR=9.7								
	1.5nm,0.8s								
NVAR	**Mina Array Bea**	**77.63**	**44**	P		**P**		**20 19 59.7**	**+1.4**
	0.3nm,0.7s,baz=234,slow=6.9,SNR=1.3								
	0.3nm,0.7s								
TXAR	**Lajitas Array**	**84.28**	**57**	P		**P**		**20 20 32.4**	**-1.4**
	0.1nm,0.5s,baz=249,slow=4.4,SNR=4.6								
	0.1nm,0.5s								
ILAR	**Eielson Array**	**84.29**	**13**	P		P		20 20 30.9	-2.0
	0.3nm,0.9s,baz=207,slow=5.3,SNR=7.4								
	0.3nm,0.9s								
PDAR	**Pinedale Array**	**85.56**	**43**	P		**P**		**20 20 40.2**	**+0.1**
	0.3nm,0.8s,baz=234,slow=1.8,SNR=2.4								
	0.3nm,0.8s								
H03S2	**Juan Fernandez**	**87.59**	**124**	T		T		21 57 24.1	
	baz=251								
H03S1	**Juan Fernandez**	**87.61**	**124**	T		T		21 57 25.8	
	baz=251								
H03S3	**Juan Fernandez**	**87.61**	**124**	T		T		21 57 24.9	
	baz=251								

BRTR **Keskin Array B** 144.61 317 PKP **PKPab** 20 27 38.9 +1.7
1.9nm,0.8s,baz=57,slow=1.8,SNR=8.8

*IDC **12** 20:13:49.8±1.2, 17.°96N×121.°87E, h0km, mb3.6/7, mbtmp3.6/7, ML4.8/1, Error ellipse: s-maj=82.3km s-min=18.5km az=68.0*
*MAN **12** 20:13:56.0, 17.°22N×119.°83E, h13km, MS4.1*
ISC 12 20:13:55.0±0.8, 17.°23N±0.°05×119.°9E±0.°1, h10km, n12, σ2°62/15, mb3.5/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.89**	**39**	*i* P		**Pg**		**20 14 12.6**	**+0.5**
SIPP				*i* S		**Sg**		**20 14 23.7**	**0.0**
PCPS	**Palayan City**	**2.80**	**156**	*e*P		Pn		20 14 31.4	-8.4
PCPS				*e*S		Sn		20 14 57.1	-17
TGY	**Tagaytay City**	**3.27**	**162**	Pn		**Pn**		**20 14 50.7**	**+4.3**
	67nm,0.3s,baz=55,slow=16,SNR=5.6								
TGY				Sn		**Sb**		**20 15 33.9**	**+0.7**
	20nm,0.3s,baz=90,slow=13,SNR=4.2								
TGY	**Tagaytay City**	**3.27**	**162**	*e*P		**Pb**		**20 14 51.8**	**-1.4**
TGY				*e*S		**Sb**		**20 15 32.3**	**-0.8**
LQP	**Lukban**	**3.49**	**152**	*e*P		**Pn**		**20 14 52.9**	**+3.4**
WRA	**Warramunga Arr**	**39.58**	**158**	P		**P**		**20 21 23.4**	**-3.2**
	0.9nm,0.8s,baz=343,slow=8.1,SNR=11								
	0.9nm,0.8s								
MKAR	**Makanchi Array**	**42.76**	**322**	P		**P**		**20 21 54.4**	**+1.8**
	0.3nm,0.7s,baz=110,slow=8.1,SNR=1.9								
MKAR				PcP		**PcP**		**20 23 42.3**	**-1.7**
	0.2nm,0.5s,baz=128,slow=3.5,SNR=1.8								
	0.3nm,0.7s								
ASAR	**Alice Springs**	**42.89**	**161**	P		**P**		**20 21 51.1**	**-2.7**
	0.5nm,0.5s,baz=343,slow=8.3,SNR=10								
	0.5nm,0.5s								
KURBB	**Kurchatov Arra**	**46.85**	**325**	P		**P**		**20 22 25.6**	**+0.6**
	0.3nm,0.5s,baz=117,slow=8.4,SNR=1.3								
	0.3nm,0.5s								
BRTR	**Keskin Array B**	**76.36**	**308**	P		**P**		**20 25 48.0**	**+3.2**
	0.3nm,0.6s,baz=83,slow=12,SNR=1.6								
	0.3nm,0.6s								
FINES	**FINESS Array B**	**76.84**	**331**	P		**P**		**20 25 44.7**	**-2.1**
	1.4nm,0.8s,baz=67,slow=7.1,SNR=2.0								
	1.4nm,0.8s								
NOA	**NORSAR Array B**	**83.78**	**332**	P		**P**		**20 26 21.1**	**-3.2**
	0.4nm,0.7s,baz=63,slow=4.7,SNR=1.9								
	0.4nm,0.7s								

*FUNV **12** 20:22:34.7, 6.°85N×73.°19W, h151km, MW3.0, Presumed earthquake*
*RSNC **12** 20:22:35.7±1.0, 7.°1N±1.°7×7.°3W±.°, h143km±1km, M2.5, ML2.1*
ISC 12 20:22:33.7±1.5, 6.°88N±0.°04×73.°11W±0.°05, h152km±9km, n24, σ1°43/43, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**193**	P		**Pn**		**20 22 55.0**	**+0.2**
BARC				S		**Sn**		**20 23 10.0**	**-0.8**
PAMC	**Pamplona, Colo**	**0.61**	**42**	P		**Pn**		**20 22 57.9**	**+1.5**
PAMC				S		**Sn**		**20 23 15.0**	**+1.3**
RUSC	**La Rusia**	**0.98**	**178**	P		**Pn**		**20 22 59.3**	**+0.2**
RUSC				S		**Sn**		**20 23 17.4**	**-1.0**
RUSC	**La Rusia**	**0.98**	**178**	*e*P		**Pn**		**20 22 59.5**	**+0.5**
RUSC				*e*S		**Sn**		**20 23 16.6**	**-1.8**
OCAC	**Ocana**	**1.36**	**351**	P		**Pn**		**20 23 03.3**	**+1.1**
OCAC				S		**Sn**		**20 23 25.2**	**+1.2**
PTBC	**PUERTO BERRIO,**	**1.38**	**256**	P		**Pn**		**20 23 01.9**	**-0.2**
PTBC				S		**Sn**		**20 23 22.8**	**-1.1**
SPBC	**San Pablo de B**	**1.55**	**218**	P		**Pn**		**20 23 04.2**	**+0.2**
SPBC				S		**Sn**		**20 23 26.7**	**-0.6**
NORC	**Norcasia**	**2.18**	**233**	P		**Pn**		**20 23 13.2**	**+2.1**
NORC				S		**Sn**		**20 23 39.0**	**-0.9**
CHIC	**Chingaza**	**2.32**	**195**	P		**Pn**		**20 23 13.4**	**+0.2**
CHIC				S		**Sn**		**20 23 43.1**	**-0.4**
ROSC	**El Rosal**	**2.36**	**211**	P		**Pn**		**20 23 15.7**	**+2.1**
ROSC				S		**Sn**		**20 23 43.0**	**-1.3**
HELC	**Santa Helena**	**2.50**	**254**	P		**Pn**		**20 23 17.1**	**+1.9**
HELC				S		**Sn**		**20 23 46.9**	**-0.2**
HELC	**Santa Helena**	**2.50**	**254**	*e*P		**Pn**		**20 23 14.2**	**-1.0**
HELC				*e*S		**Sn**		**20 23 42.6**	**-4.6**
GUY2C	**Guyana, Caldas**	**2.78**	**234**	P		**Pn**		**20 23 20.6**	**+1.8**
GUY2C				S		**Sn**		**20 23 53.9**	**+0.3**
VILC	**Villavicencio,**	**2.81**	**192**	P		**Pn**		**20 23 19.6**	**+0.7**
PTGC	**Puerto Gaitan,**	**2.84**	**160**	P		**Pn**		**20 23 18.3**	**-0.8**
DBBC	**Dabeiba**	**3.08**	**273**	P		**Pn**		**20 23 21.9**	**-0.3**
SDV	**Santo Domingo**	**3.16**	**51**	*e*P		**Pn**		**20 23 24.1**	**+0.7**
SDV				*e*S		**Sn**		**20 24 00.2**	**-1.6**
APAC	**Apartado, Choc**	**3.58**	**287**	P		**Pn**		**20 23 29.5**	**+0.9**
APAC				S		**Sn**		**20 24 12.1**	**+0.9**
PRAC	**Prado**	**3.61**	**209**	P		**Pn**		**20 23 29.6**	**+0.6**
PRAC				S		**Sn**		**20 24 11.9**	**0.0**
SJCC	**San Jacinto, C**	**3.63**	**326**	P		**Pn**		**20 23 29.4**	**+0.2**
SJCC				S		**Sn**		**20 24 12.1**	**-0.2**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P		**Pn**		**20 23 29.1**	**-0.1**
SJCC				*e*S		**Sn**		**20 24 09.0**	**-3.4**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P		**Pn**		**20 23 31.2**	**+1.8**
ORTC				S		**Sn**		**20 24 12.0**	**-0.6**
PLMC	**San Jos del P**	**3.71**	**238**	P		**Pn**		**20 23 32.1**	**+1.7**
URMC	**La Uribe, Meta**	**3.83**	**199**	P		**Pn**		**20 23 33.3**	**+1.5**

*IDC **12** 20:25:36.6±2.8, 17.°63S×174.°85W, h276km±43km, mb3.2/5, mbtmp3.9/5, Error ellipse: s-maj=45.7km s-min=26.4km az=33.0*
ISC 12 20:25:35.4±1.0, 17.°7S±0.°2×175.°0W±0.°2, h256km, n6, σ0°62/7, mb3.7/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.88**	**40**	P		**Pn**		**20 26 50.3**	**+0.2**
	343nm,0.4s,baz=228,slow=15,SNR=12								
URZ	**Urewera**	**21.61**	**197**	P		**P**		**20 30 05.8**	**+0.5**
	2.2nm,0.4s,baz=29,slow=19,SNR=1.1								
	2.2nm,0.4s								
WRA	**Warramunga Arr**	**47.89**	**259**	P		**P**		**20 33 48.4**	**0.0**
	0.2nm,0.4s,baz=95,slow=7.2,SNR=10								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**47.99**	**254**	P		**P**		**20 33 49.6**	**+0.4**
	2.1nm,0.6s,baz=88,slow=8.5,SNR=48								
ASAR				PcP		**PcP**		**20 35 12.4**	**-0.7**
	0.3nm,0.6s,baz=90,slow=5.0,SNR=1.7								
	2.1nm,0.6s								
VNDA	**Vanda**	**60.93**	**186**	P		**P**		**20 35 21.3**	**+0.3**
	0.4nm,0.7s,baz=357,slow=5.4,SNR=1.9								
	0.4nm,0.7s								
QSPA	**South Pole Qui**	**72.34**	**180**	P		**P**		**20 36 32.6**	**-0.6**
	2.3nm,0.9s,baz=27,slow=0.9,SNR=7.8								
	2.3nm,0.9s								

TAP 12 20:26:03.2, 24.°39N×121.°39E, h5km, ML1.5, 4C-2D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.04**	**353**	*e*P		Pg		20 26 05.4	+0.7
NNSB				S		Sg		20 26 06.0	+0.4
NNSH	**Datong**	**0.04**	**354**	⇑P		Pg		20 26 05.3	+0.7
NNSH				S		Sg		20 26 06.0	+0.4
NNS	**Nan Shan**	**0.06**	**345**	⇑P		Pg		20 26 05.5	+0.8
NNS				*i* S		Sg		20 26 06.5	+0.6
FUSS	**Fushou**	**0.19**	**223**	⇑*i*P		Pg		20 26 08.2	+1.1
FUSS				*i* S		Sg		20 26 11.5	+1.8
LATG	**Datong**	**0.19**	**40**	⇑P		Pg		20 26 07.9	+0.8
LATG				*i* S		Sg		20 26 11.6	+1.8
ETLH	**X

ETL	**Fush Village**	**0.31**	**137**		P		Pb	20 26 10.9	-0.4
ETL					S		Sb	20 26 16.4	-0.3
EAHA	**Aohua**	**0.33**	**100**		P		Pb	20 26 11.2	-0.3
EAHA					S		Sb	20 26 16.2	-0.8
NFF	**Wufeng Townshi**	**0.35**	**315**		P		Pg	20 26 10.9	+0.9
NFF					*e*S		Sg	20 26 15.6	+1.0
TWD	**Chiawan**	**0.36**	**148**		P		Pg	20 26 11.1	+0.9
TWD					S		Sb	20 26 17.0	-1.0
LXIB	**Xiulin Townshi**	**0.36**	**176**	*i*	P		Pb	20 26 11.7	-0.6
LXIB					*e*S		Sb	20 26 16.8	-1.6
LXIB	**Xiulin Townshi**	**0.36**	**176**		S		Sb	20 26 16.9	-1.5
NDS	**Dongshan**	**0.39**	**51**		P		Pg	20 26 11.6	+0.9
NDS					S		Sb	20 26 18.4	-0.4
NWLT	**Wulai**	**0.40**	**15**		P		Pg	20 26 11.8	+0.7
NWLT					*e*S		Sg	20 26 17.5	+1.2
FUSB	**Fushanzhiwuyua**	**0.41**	**26**	*i*	P		Pb	20 26 12.6	-0.5
FUSB					S		Sb	20 26 18.9	-0.8
WHP	**Taichung City**	**0.42**	**255**		P		Pb	20 26 12.8	-0.3
WHP					S		Sb	20 26 18.7	-1.1
TWE	**Neicheng**	**0.42**	**37**		P		Pb	20 26 12.9	-0.2
TWE					S		Sb	20 26 20.1	+0.4
LIOB	**Emei**	**0.43**	**307**	*i*	P		Pb	20 26 12.8	-0.4
LIOB					*i* S		Sb	20 26 19.8	-0.1
NSTT	**Nanjuang**	**0.43**	**305**		P		Pb	20 26 13.0	-0.3
NSTT					S		Sb	20 26 20.0	0.0
NJD	**Zhudong**	**0.44**	**322**		P		Pb	20 26 13.0	-0.5
HWA	**Hwalien**	**0.45**	**154**	*i*	P		Pb	20 26 13.4	-0.3
HWA					S		Sb	20 26 21.3	+0.6
HWA	**Hwalien**	**0.45**	**154**		P		Pb	20 26 13.4	-0.3
ESAO	**Su ao**	**0.46**	**66**		P		Pb	20 26 13.5	-0.3
ESAO					S		Sb	20 26 21.4	+0.6
WUSB	**Renai**	**0.46**	**212**	⇓	P		Pg	20 26 13.1	+0.9
WUSB					*e*S		Sg	20 26 19.5	+1.2
WUSB	**Renai**	**0.46**	**212**		P		Pg	20 26 13.1	+0.9
WUSB					S		Sg	20 26 19.4	+1.1
OWD	**Renai**	**0.47**	**204**		P		Pg	20 26 12.8	+0.4
OWD					*e*S		Sg	20 26 19.4	+0.8
OWD	**Renai**	**0.47**	**204**		P		Pg	20 26 12.8	+0.5
OWD					*e*S		Sg	20 26 19.4	+0.9
TWC	**Suao**	**0.47**	**62**		P		Pb	20 26 13.6	-0.5
TWC					S		Sb	20 26 21.0	-0.4
ILA	**Ilan**	**0.50**	**41**		P		Pb	20 26 14.0	-0.4
WCS	**Beigang Elemen**	**0.55**	**233**	*i*	P		Pb	20 26 15.1	-0.2
WCS					S		Sb	20 26 23.4	0.0
DPDB	**Guoxing**	**0.55**	**230**		P		Pb	20 26 15.3	0.0
DPDB					S		Sb	20 26 24.2	+0.7
HSN	**Hsinchu**	**0.56**	**317**		P		Pb	20 26 15.8	+0.3
TWQ1	**Liyutan**	**0.56**	**266**		P		Pb	20 26 15.6	0.0
ESL	**Shilin**	**0.57**	**176**	*e*P			Pn	20 26 16.9	-1.1
ESL					S		Sb	20 26 25.3	+1.1
NSY	**Sanyi**	**0.57**	**273**		P		Pb	20 26 15.4	-0.3
NSY					S		Sb	20 26 23.6	-0.5
NCUH	**Zhongli**	**0.61**	**342**		P		Pb	20 26 16.9	+0.5
NCUH					S		Sb	20 26 26.1	+0.9
TWA	**Mucha**	**0.62**	**17**		P		Pb	20 26 17.0	+0.5
TWA					S		Sb	20 26 26.7	+1.2
SHUL	**Shoufeng**	**0.62**	**165**		P		Pb	20 26 16.9	+0.4
SHUL					S		Sb	20 26 26.6	+1.2
WARBT	**Fenglin Townsh**	**0.67**	**180**		P		Pb	20 26 17.6	+0.2
WARBT					S		Sb	20 26 26.8	-0.1
TIPB	**Shuangxi**	**0.70**	**34**		P		Pb	20 26 17.9	-0.1
TIPB					S		Sb	20 26 29.4	+1.3
SSLB	**Suanglung**	**0.72**	**214**		P		Pb	20 26 17.6	-0.6
SSLB					*e*S		Sb	20 26 27.9	-0.4
ZUZH	**Zhuzihu**	**0.79**	**10**		P		Sb	20 26 19.9	+0.5
ZUZH					S		Sn	20 26 31.9	-1.3
YULB	**Yu-li**	**0.99**	**185**	*e*P			Pn	20 26 24.2	+0.4
YULB					S		Sn	20 26 37.9	-0.3
WDL	**Douliou City**	**1.02**	**229**		P		Pn	20 26 24.1	-0.1
WDL					*e*S		Sn	20 26 40.0	+1.1

TAP 12 20:26:05.5, 23.75N×121.45E, h23km, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WARBT	**Fenglin Townsh**	**0.07**	**245**	P	Pb	20 26 09.5	-0.2
WARBT				S	Sb	20 26 12.4	0.0
ESL	**Shilin**	**0.07**	**345**	P	Pb	20 26 09.8	+0.2
ESL				S	Sb	20 26 13.1	+0.6
EGFH	**Guangfu**	**0.08**	**197**	P	Pb	20 26 09.6	-0.2
EGFH				S	Sb	20 26 12.6	+0.1
SHUL	**Shoufeng**	**0.11**	**68**	P	Pb	20 26 09.9	0.0
SHUL				S	Sb	20 26 13.4	+0.4
EHY	**Hungye**	**0.27**	**207**	P	Pb	20 26 11.8	-0.1
EHY				S	Sb	20 26 16.1	-0.1
HWA	**Hwalien**	**0.27**	**31**	S	Sb	20 26 17.3	+1.1
EHYH	**Wanrong**	**0.27**	**202**	P	Pb	20 26 11.8	-0.2
EHYH				S	Sb	20 26 16.3	0.0
LXIB	**Xiulin Townshi**	**0.28**	**352**	*i* P	Pb	20 26 12.4	+0.2
TWD	**Chiawan**	**0.36**	**21**	P	Pb	20 26 14.3	+1.0
YULB	**Yu-li**	**0.38**	**202**	P	Pb	20 26 13.0	-0.7
YULB				S	Sb	20 26 18.6	-0.6
ECBN	**Changbin**	**0.43**	**180**	P	Pb	20 26 14.4	0.0
SIPP	**Brgy, Tapao**	**5.87**	**189**	*i* P	Pb	20 27 47.5	+0.3
SIPP				*e*S	Sn	20 27 55.0	-43

*IDC **12** 20:37:11.1±7.8, 20.16S×177.61W, h471km±80km, mb3.0/6, mbtmp3.8/6, Error ellipse: s-maj=39.7km s-min=35.3km az=6.0*

ISC 12 20:37:09.3±0.8, 20.1S×177.5W±0.2, h450km, n13, σ1§70/14, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.06**	**256**	P	**P**	**20 44 43.3**	**-0.6**
	1.8nm,0.6s,baz=96,slow=8.1,SNR=25						
ASAR				PcP	**pwP**	**20 46 14.7**	**+0.8**
	0.5nm,0.5s,baz=98,slow=3.5,SNR=6.6 1.8nm,0.6s						
WRA	**Warramunga Arr**	**45.12**	**262**	P	**P**	**20 44 43.2**	**-1.2**
	0.7nm,0.3s,baz=97,slow=8.2,SNR=38 0.7nm,0.3s						
QSPA	**South Pole Qui**	**69.96**	**180**	P	**P**	**20 47 34.4**	**+0.3**
	1.3nm,0.9s,baz=45,slow=2.9,SNR=2.3 1.3nm,0.9s						
TXAR	**Lajitas Array**	**86.45**	**57**	P	**P**	**20 49 03.4**	**-0.2**
	0.2nm,0.7s,baz=243,slow=5.5,SNR=2.3 0.2nm,0.7s						
ILAR	**Eielson Array**	**87.83**	**13**	P	**P**	**20 49 10.1**	**+1.0**
	0.2nm,0.6s,baz=205,slow=6.8,SNR=1.9 0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**90.42**	**289**	P	**P**	**20 49 23.5**	**+1.3**
	0.8nm,0.8s,baz=109,slow=5.8,SNR=5.2 0.8nm,0.8s						
MKAR	**Makanchi Array**	**111.27**	**313**	PKiKP	**PKiKP**	**20 54 50.3**	**-0.7**
	0.4nm,1.0s,baz=90,slow=4.8,SNR=1.9						
BVAR	**Borovoye Array**	**119.08**	**320**	PKP	**PKPdf**	**20 55 04.8**	**-1.0**
	0.5nm,0.5s,baz=112,slow=1.6,SNR=4.1						
FINES	**FINESS Array B**	**135.53**	**344**	PKP	**PKPdf**	**20 55 35.2**	**-1.6**
	3.3nm,1.2s,baz=63,slow=3.7,SNR=3.3						
AKASG	**Malin Array Be**	**142.90**	**332**	PKP	**PKPdf**	**20 55 47.3**	**-3.2**
	1.3nm,0.4s,baz=46,slow=4.5,SNR=12						
BRTR	**Keskin Array B**	**146.92**	**313**	PKPbc	**PKPdf**	**20 55 58.9**	**+0.9**
	0.5nm,0.5s,baz=72,slow=4.7,SNR=3.9						
MMAI	**Mount Meron Ar**	**148.02**	**300**	PKPbc	**PKPdf**	**20 56 03.3**	**+3.4**
	1.2nm,0.6s,baz=66,slow=4.9,SNR=2.1						
GERES	**GERESS Array B**	**149.95**	**345**	PKPbc	**PKPbc**	**20 56 08.2**	**+0.3**
	0.3nm,0.9s,baz=48,slow=1.5,SNR=4.8						

*AEIC **12** 21:00:48.7±1.5, 51.0N±0.1×168.9W±0.1, h9km±7km, Error ellipse: s-maj=18.7km s-min=8.0km az=155.0*

NEIC 12 21:00:53.5±1.8, 51.48N±0.05×169.25W±0.04, h10km±2km, mb3.8/17, ML3.7/12, ML3.2(AEIC), Error ellipse: s-maj=9.4km s-min=3.4km az=159.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKTU	**Okmok Mt. Tuli**	**2.05**	**21**		Pb	21 01 29.6	-1.1
OKTU					Sg	21 02 01.3	+2.1
OKNC	**Okmok New Cone**	**2.10**	**19**		Pb	21 01 30.5	-1.1
OKNC					Sg	21 02 04.8	+3.9
OKFG	**Magazine Ridge**	**2.10**	**22**		Pn	21 01 30.0	+1.3
MGOD	**Makushin Gods**	**2.74**	**31**		Pn	21 01 37.8	+0.3
MGOD					Sb	21 02 16.0	-0.1
MREP	**Makushin Rep't**	**2.79**	**32**		Pn	21 01 38.4	+0.2
MNAT	**Makushin Natee**	**2.87**	**32**		Pn	21 01 39.7	+0.4
MNAT					Sb	21 02 19.1	-0.8
UNV	**Unalaska Valle**	**2.90**	**34**	Pn	Pn	21 01 39.0	-0.7
UNV					Sb	21 02 20.6	-0.2
KOSE	**Korovin Southe**	**3.10**	**288**		Pn	21 01 43.9	+1.5
KOFP	**Korovin Flat P**	**3.11**	**287**		Pn	21 01 44.2	+1.6
KOFP					Sb	21 02 26.2	-0.6
ATKA	**Atka Island**	**3.15**	**285**	Pn	Pn	21 01 42.8	-0.3
ATKA				IAML		21 02 34.5	
	comp=N,67nm,0.5s						
KOKL	**Mount Kliuchef**	**3.18**	**287**		Pn	21 01 45.2	+1.6
KOKL					Sb	21 02 28.2	-0.7
KOWE	**Korovin West**	**3.22**	**288**		Pn	21 01 46.0	+1.9
KOWE					Sb	21 02 30.0	-0.1
AKRB	**Akutan Reef Bi**	**3.28**	**35**		Pn	21 01 46.3	+1.4
LVA	**Lava Point**	**3.32**	**35**	Pn	Pn	21 01 45.2	-0.3
LVA				IAML		21 02 36.3	
	comp=E,84nm,0.6s						
LVA				IAML		21 02 37.7	
	comp=N,111nm,0.6s						
AKLV	**Akutan Long Va**	**3.35**	**35**		Pn	21 01 47.1	+1.2
AKUT	**Akutan**	**3.40**	**37**	Pn	Pn	21 01 46.4	-0.1
GSMY	**Great Sitkin M**	**4.27**	**280**		Pn	21 01 58.5	0.0
GSTR	**Great Sitkin T**	**4.27**	**281**	Pn	Pn	21 01 58.1	-0.5
GSTD	**Great Sitkin T**	**4.32**	**280**		Pn	21 01 59.4	+0.1
ETKA	**Kagalaska Isla**	**4.47**	**278**		Pn	21 02 00.7	-0.6
SSBA	**Shishaldin**	**4.52**	**41**		Pn	21 02 02.9	+0.9
ADK	**Adak**	**4.64**	**278**	Pn	Pn	21 02 02.8	-0.8
ADK				IAML		21 03 03.6	
	comp=N,106nm,0.3s						
ADK				IAML		21 03 03.8	
	comp=N,125nm,0.3s						
KIWB	**Kanaga Island**	**4.93**	**277**	Pn	Pn	21 02 06.8	-0.8
KIWB				IAML		21 03 12.9	
	comp=E,96nm,0.5s						
TASE	**Tanaga Southea**	**5.48**	**277**		Pn	21 02 15.9	+0.7
DT1	**Dutton Round H**	**5.54**	**46**		Pn	21 02 15.0	-0.9
DTNA	**Dutton South F**	**5.58**	**46**		Pn	21 02 16.8	+0.3
SPIA	**Saint Paul Isl**	**5.74**	**355**	Pn	Pn	21 02 20.1	+1.5
GANE	**Gareloi Northe**	**5.94**	**277**		Pn	21 02 23.0	+1.5
GAKI	**Gareloi-Kavalg**	**5.97**	**274**		Pn	21 02 21.2	-0.6
SDPT	**Sand Point**	**6.52**	**50**		Pn	21 02 28.2	-1.2
VNFG	**Fog Glacier, M**	**7.48**	**46**		Pn	21 02 41.6	-1.1
O14K	**Tigyukuivet M**	**9.02**	**27**	Pn	Pn	21 03 04.9	+1.3
N14K	**Kuskokwak Cree**	**9.47**	**24**	Pn	Pn	21 03 10.5	+0.7
N15K	**Kwethluk River**	**10.11**	**27**	Pn	Pn	21 03 18.9	+0.3
O16K	**Kokwok River B**	**10.29**	**33**	Pn	Pn	21 03 21.1	+0.2
GHO	**Glory Hole Cre**	**15.14**	**39**	Pn	Pn	21 04 27.7	+0.5
SML	**Sawmill**	**15.39**	**40**	Pn	Pn	21 04 27.1	-3.4
SML				IAmb	IAmb	21 04 48.5	
	comp=Z,4.0nm,0.8s						
HIN	**Hinchinbrook I**	**15.49**	**46**	Pn	Pn	21 04 28.4	-3.3
KTH	**Kantishna Hill**	**15.52**	**32**	Pn	Pn	21 04 32.6	+0.5
KTH				IAmb	IAmb	21 04 33.2	
	comp=Z,6.1nm,1.4s						
G24K	**Hadweenzic Riv**	**18.75**	**27**	P	P	21 05 11.8	-0.3
E23K	**Chandalar**	**19.18**	**23**		P	21 05 16.2	-0.8
E23K				IAmb	IAmb	21 05 32.0	
	comp=Z,6.3nm,1.3s						
E24K	**Your Creek**	**19.47**	**24**	P	P	21 05 20.1	-0.1
M29M	**Somme Creek**	**19.84**	**45**	P	P	21 05 22.2	-2.0
M29M				IAmb	IAmb	21 05 36.2	
	comp=Z,5.3nm,1.2s						
F25K	**Christian Rive**	**19.88**	**27**	P	P	21 05 22.7	-1.9
L29M	**L29M**	**20.21**	**43**	P	P	21 05 26.0	-2.2
L29M				IAmb	IAmb	21 05 38.0	
	comp=Z,3.3nm,0.8s						
H27K	**Steamboat Moun**	**20.33**	**33**		P	21 05 28.7	-0.8
H27K				IAmb	IAmb	21 05 38.9	
	comp=Z,5.9nm,0.8s						
C23K	**Itkillik River**	**20.38**	**19**		P	21 05 29.8	-0.1
C23K				IAmb	IAmb	21 05 53.1	
	comp=Z,5.0nm,1.0s						
I28M	**Miner Creek**	**20.48**	**36**	P	P	21 05 30.5	-0.7
I28M				IAmb	IAmb	21 05 43.4	
	comp=Z,3.1nm,1.0s						
G27K	**Doyon Strip**	**20.61**	**31**	P	P	21 05 32.0	-0.5
H29M	**Whitestone**	**21.42**	**35**		P	21 05 40.6	-0.6
G29M	**Pine Creek**	**21.88**	**33**		P	21 05 45.8	-0.3
EPYK	**Eagle Plains**	**22.08**	**35**	P	P	21 05 48.4	0.0
EPYK				IAmb	IAmb	21 06 07.5	
	comp=Z,5.5nm,1.0s						
MKAR	**Makanchi Array**	**64.47**	**314**	P	P	21 11 27.4	-2.5
ABKAR	**Akbulak array**	**71.23**	**328**	P	P	21 12 12.1	-0.3

*IDC **12** 21:06:43.8±0.7, 14.06N×93.17E, h0km, mb3.9/16, mbtmp3.9/18, ML3.8/2, Error ellipse: s-maj=25.6km s-min=16.4km az=51.0*

*NEIC **12** 21:06:47.7±0.8, 14.35N±0.07×92.99E±0.10, h10km±1km, mb4.6/22, Error ellipse: s-maj=16.1km s-min=10.6km az=104.0*

*NDI **12** 21:06:51.1±3.0, 14.34N×93.07E, h29km±28km, mb4.0, ML4.0, MW4.1, Presumed earthquake*

ISC 12 21:06:50.5±0.5, 14.38N±0.05×92.95E±0.05, h35km, n76, σ1§90/84, mb4.3/27, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.71**	**184**		**Pn**	**21 07 31.0**	**-0.7**
PBA	**Port Blair**	**2.71**	**184**	*e*P	**Pn**	**21 07 31.8**	**+0.1**
PBA				*e*S	**Sn**	**21 08 04.0**	**+0.7**
PBA				IAML		21 08 07.9	
	857nm,0.8s						
CM31	**Chiang Mai Arr**	**7.04**	**54**		**Pn**	**21 08 32.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**7.04**	**54**	Pn	**Pn**	**21 08 29.1**	**-2.0**
	0.2nm,0.3s,baz=239,slow=14,SNR=12						
CMAR				Sn	**Sn**	**21 09 45.4**	**-4.6**
	0.7nm,0.3s,baz=239,slow=26,SNR=4.4 0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**7.04**	**54**		**Pn**	**21 08 31.0**	**-0.1**
CHTO	**Chiang Mai**	**7.24**	**52**		**Pn**	**21 08 33.3**	**-0.7**
BWNR	**Bhubaneshwar**	**8.97**	**312**	*e*P	**Pn**	**21 09 00.8**	**+3.1**
BWNR				IAmb	IAmb	21 09 02.4	
	comp=Z,31nm,0.3s						
BWNR				*e*S	**Sn**	**21 10 34.3**	**-3.2**
VIS	**Vishakhapatnam**	**9.83**	**291**	*e*P	**Pn**	**21 09 11.4**	**+1.9**
VIS				*e*S	**Sn**	**21 10 53.0**	**-5.6**
MORE	**Moreh**	**9.89**	**7**		**Pn**	**21 09 10.0**	**-0.3**
RAGD	**RAYAGADA**	**10.30**	**299**	*e*P	**Pn**	**21 09 18.4**	**+2.5**
RAGD				IAmb	IAmb	21 09 28.4	
	comp=Z,21nm,0.6s						
IMP	**Imphal**	**10.44**	**5**	*e*P	**Pn**	**21 09 17.9**	**0.0**
IMP				IAmb	IAmb	21 09 27.6	
	comp=Z,18nm,1.3s						
KOHI	**KOHIMA**	**11.34**	**5**	*e*P	**Pn**	**21 09 29.5**	**-0.7**
KOHI				IAmb	IAmb	21 09 31.8	
	comp=Z,23nm,1.1s						
KOHI				*i* x	x	21 09 37.7	
BOK	**Bokaro**	**11.50**	**326**	*e*P	**Pn**	**21 09 35.2**	**+2.9**
BOK				*e*S	**Sn**	**21 11 32.6**	**-7.0**
DHUB	**DHUBRI**	**11.91**	**347**	*e*P	**Pn**	**21 09 39.0**	**+1.1**
MDRS	**Chennai**	**12.41**	**266**	*e*S	**Sn**	**21 11 54.3**	**-7.7**
MDRS				IAML		21 12 00.8	
	comp=N,34nm,0.2s						
MDRS				IAML		21 12 02.6	
	comp=E,19nm,0.6s						
GAYA	**Gaya**	**12.66**	**326**	*e*P	**Pn**	**21 09 50.1**	**+1.9**
GAYA				*ex*	**Sn**	**21 12 05.9**	**-2.1**
PALK	**Pallekele**	**13.95**	**241**	Pn	**Pn**	**21 10 05.2**	**-0.6**
	comp=E,1.5nm,0.3s,baz=58,slow=14,SNR=16						
PALK				Sn	Sn	21 12 29.6	-10
	comp=E,2.6nm,0.3s,baz=139,slow=20,SNR=9.6 comp=E,6.6nm,0.5s						
PALK	**Pallekele**	**13.95**	**241**	Pn	**Pn**	**21 10 05.6**	**-0.2**
HYB	**Hyderabad**	**14.18**	**284**	*e*P	**Pn**	**21 10 09.2**	**+0.2**
HYB				*e*S	**Sn**	**21 12 48.2**	**+3.1**
PZH	**PanZhiHua**	**14.60**	**33**	P	**Pn**	**21 10 16.3**	**+1.5**
EVN	**Everest**	**14.67**	**338**		**Pn**	**21 10 15.4**	**-0.8**
LSA	**Lhasa**	**15.34**	**354**		**Pn**	**21 10 24.6**	**-0.4**
BHPL	**Bhopal**	**17.13**	**303**	*e*P	**P**	**21 10 49.8**	**+1.0**
BHPL				IAmb	IAmb	21 10 54.4	
	comp=Z,6.7nm,0.5s						
PTH	**Pithoragarh**	**19.18**	**324**	*e*P	**Pn**	**21 11 12.2**	**-0.3**
NJ2	**Nanjing**	**29.48**	**49**	*e*P	**P**	**21 12 52.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ	**Urumqi**	**29.69**	**352**	*e*P	**P**	**21 12 56.3**	**+3.1**
H08S3	**Diego Garcia H** baz=42	**29.84**	**224**	T	T	21 44 10.7	
H08S2	**Diego Garcia H** baz=42, SNR=4.7	**29.84**	**224**	T	T	21 44 18.2	
H08S1	**Diego Carcia H** baz=42	**29.86**	**224**	T	T	21 44 15.5	
HHC	**Hu-ho-hao-te**	**30.97**	**28**	*e*P	**P**	**21 13 05.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,75nm,5.1s						
HHC				LR	LR		
	comp=N,95nm,13.8s						
HHC				LR	LR		
	comp=Z,170nm,15.3s						
MKAR	**Makanchi Array**	**33.53**	**347**	P	**P**	**21 13 29.0**	**+2.1**
	comp=Z,1.1nm,1.0s,baz=160,slow=9.1,SNR=5.9						
MKAR				PcP	**PcP**	**21 16 07.2**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=159,slow=4.5,SNR=2.5 comp=Z,1.1nm,1.0s						
MKAR	**Makanchi Array**	**33.53**	**347**	P	**P**	**21 13 27.2**	**+0.4**
SONM	**Songino Array**	**35.18**	**16**	P	**P**	**21 13 42.3**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=201,slow=7.7,SNR=5.0						
SONM				PcP	**PcP**	**21 16 12.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=211,slow=4.5,SNR=1.9 comp=Z,0.8nm,0.8s						
SONM	**Songino Array**	**35.18**	**16**	P	**P**	**21 13 41.3**	**0.0**
KURBB	**Kurchatov Arra**	**38.00**	**345**	P	**P**	**21 14 06.7**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=159,slow=7.6,SNR=9.5 comp=Z,1.1nm,0.8s						
KURK	**Kurchatov**	**38.06**	**345**	P	**P**	**21 14 05.3**	**-0.3**
ZALV	**Zalesovo Beam**	**39.99**	**353**	P	**P**	**21 14 24.0**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=172,slow=11,SNR=3.6 comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**39.99**	**353**	P	**P**	**21 14 22.1**	**+0.4**
AB31	**Akbulak array**	**44.04**	**329**	P	**P**	**21 14 55.6**	**+0.8**
ABKAR	**Akbulak array**	**44.04**	**329**	P	**P**	**21 14 55.4**	**+0.6**
ROCAM	**Rodrigues Isla**	**44.70**	**221**	P	**P**	**21 15 00.8**	**+0.4**
MJB9	**Matsu-Tunnel**	**45.92**	**53**	P	**P**	**21 15 08.0**	**-2.0**
MJB9				IAmb	IAmb	21 15 35.9	
	comp=Z,7.1nm,1.2s						
ATD	**Arta Tunnel**	**48.84**	**273**	P	**P**	**21 15 33.2**	**+0.1**
ARTI	**Arti**	**49.54**	**336**	P	**P**	**21 15 38.1**	**+0.3**
GURO	**Guroymak-BITLI**	**50.79**	**308**	P	**P**	**21 15 48.5**	**+0.8**
GURO				IAmb	IAmb	21 15 52.7	
	comp=Z,3.2nm,0.7s						
WB0	**Warramunga Arr**	**53.04**	**129**	P	**P**	**21 16 05.4**	**+0.8**
WB0				IAmb	IAmb	21 16 11.2	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**53.11**	**129**	P	P	21 16 00.1	-4.9
	comp=Z,0.4nm,0.7s,baz=312,slow=7.6,SNR=1.8						
WRA				PcP	**PcP**	**21 17 11.6**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=315,slow=3.7,SNR=8.8 comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**53.11**	**129**	P	**P**	**21 16 03.8**	**-1.2**
WRA					**PcP**	**21 17 12.1**	**-1.0**
ASAR	**Alice Springs**	**55.07**	**133**	P	P	21 16 14.1	-5.3
	comp=Z,0.7nm,0.7s,baz=309,slow=7.9,SNR=10						
ASAR				PcP	**PcP**	**21 17 19.0**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=305,slow=4.1,SNR=2.1 comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**55.07**	**133**	P	**P**	**21 16 18.8**	**-0.5**
ASAR					**PcP**	**21 17 19.3**	**-1.3**
BRTR	**Keskin Array B**	**57.42**	**308**	P	**P**	**21 16 37.2**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=125,slow=6.9,SNR=11 comp=Z,1.8nm,0.8s						
BRTR	**Keskin Array B**	**57.42**	**308**	P	**P**	**21 16 36.5**	**+0.5**
BR131	**Keskin Array S**	**57.42**	**308**		**P**	**21 16 37.2**	**+1.2**
BR131				IAmb	IAmb	21 16 38.8	
	comp=Z,4.0nm,1.1s						
AKASG	**Malin Array Be**	**62.40**	**320**	P	**P**	**21 17 09.8**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=88,slow=5.8,SNR=1.8 comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**66.47**	**331**	P	**P**	**21 17 36.7**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=105,slow=4.9,SNR=17 comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**66.47**	**331**	P	**P**	**21 17 36.1**	**-0.2**
LANS	**Liptovska Anna**	**68.47**	**317**	*e*P	**P**	**21 17 51.5**	**+2.3**
ARCES	**ARCESS Array B**	**68.79**	**340**	P	**P**	**21 17 51.3**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=106,slow=6.9,SNR=6.4 comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**68.79**	**340**	P	**P**	**21 17 51.5**	**+0.6**
ARCES				IAmb	IAmb	21 18 11.2	
	comp=Z,14nm,1.5s						
GERES	**GERESS Array B**	**72.26**	**317**	P	**P**	**21 18 13.5**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=87,slow=6.2,SNR=16 comp=Z,1.4nm,0.7s						
GERES	**GERESS Array B**	**72.26**	**317**	P	**P**	**21 18 12.0**	**-0.5**
HFS	**Hagfors**	**72.30**	**329**	P	**P**	**21 18 13.0**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=98,slow=4.4,SNR=11 comp=Z,2.2nm,0.6s						
NB2	**NORSAR Subarra**	**73.54**	**330**	P	**P**	**21 18 20.2**	**+0.4

CHIR3	**Chiriqui UPA,**	**0.62**	**90**	*e*P	**Pg**	**21 10 58.9**	**-0.2**
CHIR3				*e*S	**Sb**	**21 11 08.9**	**+1.1**
LNBQ3	**Los Naranjos,**	**0.64**	**52**	*e*P	**Pg**	**21 10 59.3**	**-0.3**
LNBQ3				*e*S	**Sb**	**21 11 09.6**	**+0.9**
EDP2	**Potrero Grande**	**0.65**	**340**	⇑*i*P	**Pg**	**21 10 60.0**	**+0.2**
FIMO	**Fila Mora**	**0.71**	**326**	⇑*i*P	**Pg**	**21 11 00.5**	**-0.4**
PANP	**Palmar Norte**	**0.75**	**318**	⇑*i*P	**Pg**	**21 11 00.8**	**-0.8**
PBNVO	**Pueblo Nuevo,**	**0.90**	**57**	⇓*i*P	**Pb**	**21 11 03.2**	**-1.0**
RBALA	**Bur**	**0.93**	**59**	⇓*i*P	**Pb**	**21 11 03.9**	**-0.8**
EDPE	**Pejibaye, P**	**0.97**	**321**	⇑*i*P	**Pb**	**21 11 04.4**	**-1.0**
SAJE	**San Jernim**	**1.09**	**330**	⇑*e*P	**Pb**	**21 11 06.1**	**-1.5**
CNI2	**El Empalme, Bo**	**1.13**	**25**	*e*P	**Pb**	**21 11 06.5**	**-1.5**
CNI2				*e*S	**Sb**	**21 11 23.1**	**+0.6**
KKNTU	**Kakint²**	**1.22**	**69**	⇓*i*P	**Pn**	**21 11 07.9**	**-1.4**
PIEC	**Cerro El Cedra**	**1.57**	**321**	*e*P	**Pn**	**21 11 13.7**	**-0.7**
RAZU	**San Marcos de**	**1.64**	**320**	*e*P	**Pn**	**21 11 15.4**	**+0.1**
TURIB	**Turrialba**	**1.66**	**334**	*e*P	**Pn**	**21 11 15.0**	**-0.5**
VINA	**Juan Vinas**	**1.68**	**332**	*e*P	**Pn**	**21 11 15.9**	**+0.1**
VERB	**Verbena**	**1.70**	**335**	*e*P	**Pn**	**21 11 16.4**	**+0.3**
PICV	**PH. Pirrs**	**1.73**	**315**	*e*P	**Pn**	**21 11 16.7**	**+0.3**
VTCV	**VTCV, Calle Va**	**1.75**	**334**	*e*P	**Pn**	**21 11 16.9**	**+0.1**
RESJ	**San Isidro (Tu**	**1.76**	**337**	⇓*i*P	**Pn**	**21 11 17.5**	**+0.6**
ABRB	**Las Abras (San**	**1.77**	**335**	*e*P	**Pn**	**21 11 17.5**	**+0.4**
VTR0	**Volcan Turrial**	**1.79**	**334**	⇑*i*P	**Pn**	**21 11 17.7**	**+0.1**
CVTR	**Volcan Turrial**	**1.80**	**334**	*e*P	**Pn**	**21 11 18.0**	**+0.3**
VICA	**Volcano Irazu**	**1.80**	**331**	*e*P	**Pn**	**21 11 18.4**	**+0.6**
RVLA	**Villa Bonita**	**1.81**	**340**	*e*P	**Pn**	**21 11 17.7**	**+0.2**
TRIO	**Tres Rios**	**1.81**	**326**	*e*P	**Pn**	**21 11 18.7**	**+1.0**
GMAL	**Guarumal, Vera**	**1.82**	**110**	*e*P	**Pn**	**21 11 16.4**	**-1.1**
ACOS	**Acosta**	**1.83**	**319**	*e*P	**Pn**	**21 11 18.2**	**+0.3**
HDC	**Heredia**	**1.96**	**324**	*e*P	**Pn**	**21 11 20.5**	**+0.8**
BELE	**Belen**	**1.98**	**322**	*e*P	**Pn**	**21 11 20.5**	**+0.5**
PILE	**Guapiles**	**1.98**	**336**	*e*P	**Pn**	**21 11 21.5**	**-1.2**
VBV1	**V. Barva**	**2.04**	**327**	*e*P	**Pn**	**21 11 21.0**	**0.0**
CUI	**Cuipilapa**	**3.13**	**316**	*e*P	**Pn**	**21 11 37.4**	**+1.7**
LAPC	**Finca la Perla**	**3.39**	**314**	*e*P	**Pn**	**21 11 40.7**	**+1.4**

IDC ***12*** *21:13:43.2±1.3,37°.22N×135°.05E,h372km±19km,mb2.9/2, mbtmp3.4/5,Error ellipse: s-maj=43.2km s-min=21.8km az=53.0*
JMA ***12*** *21:13:44.7±0.2,37°N±2°×13°5E±°,h362km,MV2.9/18, SEA OF JAPAN*

ISC 12 21:13:43.3±1.1,37°.2N±0°.1×135°.0E±0°.1,h372km,n9, σ0°.35/9,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.59**	**178**	P	**Pn**	**21 14 34.5**	**+0.2**
JYTA	**Yamagatataniai**	**2.13**	**139**	P	**Pn**	**21 14 37.4**	**-0.2**
MJAR	**Matsushiro Arr**	**2.64**	**104**	P	**Pn**	**21 14 41.7**	**+0.3**
	7.4nm,0.8s,baz=284,slow=9.6,SNR=24						
JAG	**Ashikaga**	**3.64**	**101**	*e*P	**Pn**	**21 14 50.5**	**+0.3**
JMK	**Ichinoseki**	**5.18**	**69**	P	**Pn**	**21 15 05.9**	**+0.1**
KSRS	**Korea Array**	**5.67**	**274**	P	**Pn**	**21 15 11.6**	**+0.4**
	1.2nm,0.6s,baz=89,slow=13,SNR=3.0						
USRK	**Ussuriysk Ar.**	**7.34**	**343**	P	**Pn**	**21 15 29.6**	**-0.4**
	2.7nm,0.6s,baz=156,slow=10.0,SNR=5.4						
BVAR	**Borovoye Array**	**46.65**	**311**	P	**P**	**21 21 35.8**	**+0.1**
	0.3nm,0.3s,baz=98,slow=9.0,SNR=1.8						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**56.86**	**181**	P	**P**	**21 22 50.3**	**-0.3**
	0.3nm,0.4s,baz=360,slow=7.3,SNR=5.1						
	0.3nm,0.4s						

NNC ***12*** *21:33:33.2±0.4,42°.93N×76°.50E,h4km±2km,mb3.1, mpv3.1,Error ellipse: s-maj=6.3km s-min=1.7km az=166.0*
KRNET ***12*** *21:33:33.1±0.1,42°.93N×76°.50E,h20km,mb2.9*
SOME ***12*** *21:33:33.6,42°.92N×76°.52E,h20km*
KNET ***12*** *21:33:34.2±0.3,42°.87N×76°.39E,h21km±2km,ml1.8,Error ellipse: s-maj=2.1km s-min=1.2km az=46.0*

ISC 12 21:33:33.4±0.8,42°.95N±0°.02×76°.46E±0°.01,h13km±6km, n52,σ1§08/97,40C-18D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZV	**Izvestkoviy**	**0.14**	**53**	P	**Pg**	**21 33 37.3**	**+0.2**
	108nm,0.1s						
IZV				S	**Sg**	**21 33 40.4**	**+0.7**
	589nm,0.2s						
IZV	**Izvestkoviy**	**0.14**	**53**	*e*P	**Pg**	**21 33 37.3**	**+0.2**
IZV				*e*S	**Sg**	**21 33 40.4**	**+0.7**
TNSS	**Tian-Shan**	**0.37**	**76**	P	**Pg**	**21 33 40.6**	**-0.3**
	6.5nm,0.1s						
TNSS				S	**Sg**	**21 33 45.6**	**-0.4**
	23nm,0.1s						
TNSS	**Tian-Shan**	**0.37**	**76**	*e*P	**Pg**	**21 33 40.6**	**-0.3**
	6.6nm,0.1s						
TNSS				*e*S	**Sg**	**21 33 45.6**	**-0.4**
	23nm,0.1s						
KST	**Kastek**	**0.38**	**284**	P	**Pb**	**21 33 41.8**	**-0.2**
	10nm,0.1s						
KST				S	**Sb**	**21 33 47.8**	**-0.1**
	100nm,0.1s						
KST	**Kastek**	**0.38**	**284**	*e*P	**Pb**	**21 33 41.8**	**-0.2**
	10nm,0.1s						
KST				*e*S	**Sb**	**21 33 47.8**	**-0.1**
	100nm,0.2s						
KNDC	**Almaty**	**0.46**	**54**	⇓P	**Pb**	**21 33 42.3**	**-1.1**
	7.8nm,0.2s						
KNDC				⇑S	**Sb**	**21 33 49.0**	**-1.1**
	86nm,0.2s						
MDOK	**Medeo**	**0.48**	**64**	Pg	**Pg**	**21 33 42.4**	**-0.5**
	22nm,0.1s						
MDOK				Lg	Lg	21 33 48.7	
	55nm,0.2s						
MDOK	**Medeo**	**0.48**	**64**	*e*P	**Pg**	**21 33 42.4**	**-0.5**
	22nm,0.1s						
MDOK				*e*S	**Sg**	**21 33 48.7**	**-0.6**
	55nm,0.2s						
BOOM	**Boomskoye usch**	**0.60**	**220**	⇑*i*P	**Pg**	**21 33 44.8**	**-0.4**
BOOM				⇑*i*S	**Sg**	**21 33 53.2**	**0.0**
TKM2	**Tokmak 2**	**0.64**	**268**	⇑P	**Pb**	**21 33 46.1**	**-0.4**
	5.5nm,0.1s,SNR=42						
TKM2				⇑S	**Sb**	**21 33 54.8**	**-0.6**
	135nm,0.1s						
TKM2	**Tokmak 2**	**0.64**	**268**	⇓*i*P	**Pb**	**21 33 46.0**	**-0.5**
TKM2				⇓*i*S	**Sb**	**21 33 55.3**	**-0.1**
ULHL	**Ulahol**	**0.72**	**193**	⇑P	**Pg**	**21 33 46.7**	**-0.9**
	8.9nm,0.2s,SNR=73						
ULHL				⇓S	**Sg**	**21 33 56.3**	**-0.8**
	31nm,0.1s						
ULHL	**Ulahol**	**0.72**	**193**	⇑*i*P	**Pg**	**21 33 46.6**	**-0.9**
ULHL				⇑*i*S	**Sg**	**21 33 56.2**	**-0.8**
ANVS	**Anan'yevo**	**0.90**	**100**	⇑*e*P	**Pg**	**21 33 49.4**	**-1.5**
ANVS				⇑*e*S	**Sg**	**21 34 01.2**	**-1.5**
KDJ	**Kajisay**	**0.98**	**147**	⇑*i*P	**Pg**	**21 33 51.1**	**-1.2**
KDJ				⇑*i*S	**Sg**	**21 34 03.9**	**-1.2**
KBK	**Karagaybulak**	**1.15**	**256**	⇑P	**Pb**	**21 33 54.6**	**-0.7**
	5.5nm,0.2s,SNR=13						
KBK				⇓S	**Sg**	**21 34 10.3**	**-0.3**
	23nm,0.2s						
KBK	**Karagaybulak**	**1.15**	**256**	⇑*i*P	**Pb**	**21 33 54.9**	**-0.4**
KBK				⇑*i*S	**Sg**	**21 34 10.7**	**0.0**
CHMS	**Chumysh**	**1.26**	**273**	⇑P	**Pb**	**21 33 56.8**	**-0.1**
	2.2nm,0.1s,SNR=8.6						
CHMS				⇓S	**Sn**	**21 34 13.8**	**+0.3**
	23nm,0.2s						
CHMS	**Chumysh**	**1.26**	**273**	⇓*i*P	**Pb**	**21 33 56.9**	**-0.1**
CHMS				⇓*i*S	**Sn**	**21 34 13.8**	**+0.3**
FRU1	**Bishkek**	**1.35**	**265**	⇑*i*P	**Pb**	**21 33 58.5**	**-0.2**
FRU1				⇑*i*S	**Sg**	**21 34 16.8**	**-0.2**
KURS	**Kuram**	**1.36**	**66**	P	**Pn**	**21 33 57.9**	**-0.2**
	3.4nm,0.1s						
KURS				S	**Sb**	**21 34 15.3**	**-0.7**
	3.4nm,0.2s						
KURS	**Kuram**	**1.36**	**66**	*e*P	**Pn**	**21 33 57.9**	**-0.2**
	4.0nm,0.1s						
KURS				*e*S	**Sb**	**21 34 15.3**	**-0.7**
	3.6nm,0.2s						
SATY	**Saty**	**1.43**	**85**	P	**Pb**	**21 33 59.4**	**-0.6**
	10.0nm,0.1s						
SATY				S	**Sn**	**21 34 17.9**	**0.0**
	62nm,0.1s						
SATY	**Saty**	**1.43**	**85**	*e*P	**Pb**	**21 33 59.4**	**-0.6**
	10.0nm,0.1s						
SATY				*e*S	**Sn**	**21 34 17.9**	**0.0**
	63nm,0.1s						
SGDS	**Sogindy**	**1.43**	**291**	P	**Pg**	**21 34 00.0**	**-0.9**
	5.5nm,0.1s						
SGDS				S	**Sg**	**21 34 18.9**	**-0.5**
	12nm,0.2s						
USP	**Ospenovka**	**1.47**	**283**	⇑P	**Pb**	**21 34 00.6**	**-0.1**
	3.5nm,0.1s,SNR=11						
USP				⇑S	**Sg**	**21 34 20.4**	**-0.4**
	9.5nm,0.1s						
USP	**Ospenovka**	**1.47**	**283**	⇑*i*P	**Pb**	**21 34 00.2**	**-0.4**
USP				⇑*i*S	**Sg**	**21 34 20.4**	**-0.4**
AAK	**Ala-Archa**	**1.48**	**258**	⇑P	**Pn**	**21 34 00.3**	**+0.4**
	2.3nm,0.2s						
AAK				⇑S	**Sb**	**21 34 20.1**	**+0.4**
	8.4nm,0.2s						
AAK	**Ala-Archa**	**1.48**	**258**	⇑P	**Pb**	**21 34 00.6**	**-0.3**
	0.2nm,0.3s						
AAK				⇑S	**Sg**	**21 34 21.1**	**0.0**
	0.7nm,0.4s						
AAK	**Ala-Archa**	**1.48**	**258**	⇓*i*P	**Pb**	**21 34 00.6**	**-0.3**
AAK				⇓*i*S	**Sb**	**21 34 20.4**	**+0.7**
PRZ	**Przheval'sk**	**1.50**	**107**	⇑*i*P	**Pn**	**21 34 00.1**	**-0.1**
PRZ				⇑*i*S	**Sn**	**21 34 19.5**	**-0.3**
NRN	**Naryn**	**1.56**	**193**	⇓*i*P	**Pn**	**21 34 01.3**	**+0.2**
NRN				⇓*i*S	**Sn**	**21 34 22.0**	**+0.8**
TARG	**Taragay, Kyrgy**	**1.58**	**140**	⇑*i*P	**Pn**	**21 34 01.3**	**-0.1**
TARG				⇑*i*S	**Sn**	**21 34 21.7**	**-0.2**
ARXS	**Arharly**	**1.60**	**38**	P	**Pb**	**21 34 02.2**	**-0.7**
	20nm,0.2s						
ARXS				S	**Sg**	**21 34 22.9**	**-2.1**
	46nm,0.2s						
ARXS	**Arharly**	**1.60**	**38**	*e*P	**Pb**	**21 34 02.2**	**-0.7**
	20nm,0.2s						
ARXS				*e*S	**Sg**	**21 34 22.9**	**-2.1**
	46nm,0.2s						
UCH	**Uchtor**	**1.61**	**244**	⇑P	**Pn**	**21 34 02.9**	**+0.9**
	1.3nm,0.1s,SNR=5.5						
UCH				⇑S	**Sb**	**21 34 24.2**	**+0.6**
	5.8nm,0.2s						
BLB	**Baldybastay**	**1.86**	**51**	P	**Pb**	**21 34 06.5**	**-0.8**
	12nm,0.2s						
BLB				S	**Sb**	**21 34 30.2**	**-0.3**
	34nm,0.3s						
UZB	**Uzynbulak**	**1.89**	**83**	P	**Pb**	**21 34 07.4**	**-0.3**
	6.1nm,0.3s						
UZB				S	**Sb**	**21 34 31.6**	**+0.3**
	24nm,0.2s						
UZB	**Uzynbulak**	**1.89**	**83**	*e*P	**Pb**	**21 34 07.4**	**-0.3**
UZB				*e*S	**Sb**	**21 34 31.6**	**+0.3**
EKS2	**Erkin-Say**	**2.00**	**263**	⇑P	**Pb**	**21 34 08.8**	**-0.8**
	1.2nm,0.1s						
EKS2				⇑S	**Sb**	**21 34 35.8**	**+1.3**
	5.8nm,0.2s						
EKS2	**Erkin-Say**	**2.00**	**263**	⇓*i*P	**Pn**	**21 34 08.2**	**+1.2**
EKS2				⇓*i*S	**Sb**	**21 34 33.7**	**-0.8**
SHLS	**Shalkode**	**2.21**	**84**	Pg	**Pg**	**21 34 18.7**	**+3.0**
	3.2nm,0.2s						
SHLS				Lg	Lg	21 34 51.0	
	13nm,0.4s						
SHLS	**Shalkode**	**2.21**	**84**	*e*P	**Pg**	**21 34 18.7**	**+3.0**
	3.5nm,0.2s						
SHLS				*e*S	**Sg**	**21 34 51.0**	**+6.6**
	11nm,0.3s						
PDGK	**Podgornoye**	**2.25**	**79**	⇑Pn	**Pn**	**21 34 11.7**	**+1.3**
	2.0nm,0.3s						
PDGK				⇑Sn	**Sb**	**21 34 40.9**	**-0.8**
	7.6nm,0.5s						
DJR	**Jarkent**	**2.78**	**59**	Pg	**Pb**	**21 34 22.1**	**-0.9**
	1.5nm,0.2s						
DJR				Lg	Lg	21 34 57.0	
	2.3nm,0.3s						
SALK	**Salom-Alik**	**2.86**	**225**	⇑*e*P	**Pn**	**21 34 20.2**	**+1.4**
SALK				⇑*e*S	**Sn**	**21 34 54.6**	**+1.5**
KTMS	**Ketmen**	**2.89**	**79**	Pg	**Pb**	**21 34 24.5**	**-0.4**
	0.3nm,0.1s						
KTMS				Lg	Lg	21 35 00.9	
	3.0nm,0.2s						
KTMS	**Ketmen**	**2.89**	**79**	*e*P	**Pb**	**21 34 24.5**	**-0.4**
	0.3nm,0.1s						
KTMS				*e*S	**Sb**	**21 35 00.9**	**+0.8**
	3.0nm,0.2s						
KK31	**Karatay Array**	**4.37**	**274**	⇓Pg	**Pg**	**21 34 56.3**	**-0.7**
	0.2nm,0.3s,baz=111,slow=17						
KK31				⇓Lg	Lg	21 35 49.5	
	2.6nm,0.7s,baz=101,slow=28,SNR=9.6						
MAKZ	**Makanchi**	**5.50**	**44**	⇓Pn	**Pn**	**21 34 54.7**	**-0.3**
	0.8nm,0.7s						
MAKZ				⇑Lg	Lg	21 36 25.8	
	1.0nm,0.8s						
MK31	**Makanchi Array**	**5.65**	**45**	⇓Pn	**Pn**	**21 34 57.1**	**0.0**
	0.1nm,0.2s,baz=225,slow=16,SNR=7.5						
MK31				⇑Lg	Lg	21 36 30.4	
	0.2nm,0.5s						

BEO ***12*** *21:55:57.5±0.7,41°.34N×19°.54E,h9km±4km,ML2.4/8*
TIR ***12*** *21:55:58.2,41°.53N×19°.66E,h45km±1km,Ml2.6/6*
SKO ***12*** *21:55:59.6,41°.47N×19°.60E,h0km*
PDG ***12*** *21:56:00.2±0.2,41°.56N×19°.56E,h16km,ML2.6/12,Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

ISC 12 21:55:57.3±1.0,41°.45N±0°.02×19°.57E±0°.03,h13km±8km, n48,σ1§35/81,8C-4D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.25**	**115**	P	**Pg**	**21 56 01.7**	**-0.9**
TIR				AML	AML	21 56 06.2	
	3.5nm,0.2s						
TIR				S	**Sg**	**21 56 07.2**	**+1.1**
ULC	**Ulcinj**	**0.56**	**335**	⇑*i*Pg	**Pb**	**21 56 09.3**	**+0.2**
ULC				*i* Sg	**Sb**	**21 56 16.8**	**-0.3**
SDA	**Shkodra**	**0.60**	**355**	P	**Pb**	**21 56 09.7**	**+0.1**
SDA				S	**Sn**	**21 56 19.3**	**-1.9**
SDA				AML	AML	21 56 26.7	
	0.4nm,0.2s						
PHP	**Peshkopia**	**0.70**	**70**	P	**Pb**	**21 56 10.8**	**-0.6**
PHP				S	**Sb**	**21 56 20.3**	**-0.6**
PHP				AML	AML	21 56 24.8	
	0.9nm,0.2s						
DRME	**Dracevica, Mon**	**0.79**	**339**	⇓*i*Pg	**Pb**	**21 56 13.2**	**+0.3**
DRME				*i* Sg	**Sb**	**21 56 24.3**	**+0.9**
BUM	**Brajici-Budva**	**0.98**	**330**	⇑*i*Pg	**Pn**	**21 56 17.2**	**+0.3**
BUM				*i* Sg	**Sn**	**21 56 31.2**	**+0.5**
VLO	**Vlora**	**0.98**	**183**	P	**Pn**	**21 56 17.6**	**+0.8**
VLO				S	**Sn**	**21 56 31.3**	**+0.7**
VLO				AML	AML	21 56 41.5	
	0.8nm,0.3s						
OHR	**Ohrid**	**0.99**	**110**	*i* Pg	**Pg**	**21 56 15.4**	**-1.0**
OHR				*i* Sg	**Sn**	**21 56 32.1**	**+1.2**
PDG	**Podgorica**	**1.00**	**347**	*e*Pg	**Pn**	**21 56 17.7**	**+0.6**
PDG				*e*Sg	**Sn**	**21 56 34.3**	**+3.2**
PDG	**Podgorica**	**1.00**	**347**	⇑*i*Pg	**Pn**	**21 56 17.1**	**0.0**
PDG				*i* Sg	**Sn**	**21 56 31.1**	**0.0**
PVY	**Plav**	**1.18**	**14**	⇑*i*Pg	**Pn**	**21 56 20.3**	**+0.7**
PVY				*i* Sg	**Sn**	**21 56 37.0**	**+1.4**
CEME	**Cevo**	**1.19**	**336**	⇓*i*Pg	**Pn**	**21 56 20.8**	**+1.0**
CEME				*i* Sg	**Sn**	**21 56 37.8**	**+1.9**
KBN	**Korca**	**1.24**	**131**	P	**Pg**	**21 56 20.7**	**-0.5**
KBN				S	**Sn**	**21 56 37.6**	**+0.5**
KBN				AML	AML	21 56 42.0	
	0.4nm,0.7s						
HCY	**Herceg Novi**	**1.27**	**322**	⇓*i*Pg	**Pg**	**21 56 22.1**	**+0.3**
HCY				*i* Sg	**Sn**	**21 56 41.1**	**+3.3**
NKME	**Niksic**	**1.39**	**341**	⇑*i*Pg	**Pg**	**21 56 23.7**	**-0.3**
NKME				*i* Sg	**Sg**	**21 56 44.6**	**+2.5**
KOME	**Kolasin**	**1.40**	**358**	⇓*i*Pg	**Pg**	**21 56 23.7**	**-0.5**
KOME				*i* Sg	**Sg**	**21 56 44.2**	**+1.9**
IVA	**Berane**	**1.44**	**10**	⇑*i*Pg	**Pg**	**21 56 24.5**	**-0.4**
IVA				*i* Sg	**Sg**	**21 56 45.3**	**+1.7**
SKO	**Skopje**	**1.50**	**69**	*i* Pg	**Pg**	**21 56 26.5**	**+0.5**
SKO				*i* Sg	**Sg**	**21 56 45.4**	**-0.1**
TREB	**Trebinje**	**1.55**	**325**	*e*Pg	**Pb**	**21 56 25.4**	**-0.5**
TREB				*e*Sg	**Sg**	**21 56 48.8**	**+1.5**
SRN	**Sarande**	**1.61**	**168**	P	**Pg**	**21 56 27.8**	**-0.3**
SRN				S	**Sg**	**21 56 48.9**	**0.0**
SRN				AML	AML	21 56 54.3	
	0.2nm,0.6s						
DBRK	**Dubrovnik**	**1.61**	**319**	*e*Pn	**Pg**	**21 56 27.7**	**-0.5**
BRY	**Bratogost**	**1.64**	**333**	⇑*i*Pg	**Pg**	**21 56 28.3**	**-0.4**
BRY				*i* Sg	**Sg**	**21 56 50.2**	**+0.2**
KEK	**Kerkira**	**1.75**	**174**	P	**Pb**	**21 56 29.2**	**0.0**
KEK				S	**Sg**	**21 56 52.9**	**-0.6**
SJES	**Sjenica**	**1.83**	**9**	*e*Pg	**Pg**	**21 56 32.4**	**-0.1**
PLE	**Pljevlja**	**1.88**	**356**	⇑*i*Pn	**Pb**	**21 56 31.0**	**-0.6**
PLE				*i* Sn	**Sg**	**21 56 55.9**	**-1.9**
STON	**Ston**	**1.98**	**316**	*e*Pn	**Pn**	**21 56 30.8**	**+0.2**
STON				Sn	**Sn**	**21 56 55.0**	**-0.2**
STON	**Ston**	**1.98**	**316**	*e*Pn	**Pn**	**21 56 31.1**	**+0.6**
IGT	**Igoumenitsa**	**2.01**	**163**	P	**Pn**	**21 56 32.5**	**+1.6**
IGT				S	**Sb**	**21 56 59.3**	**+0.7**
IGT	**Igoumenitsa**	**2.01**	**163**	*e*Pn	**Pn**	**21 56 31.7**	**+0.8**
SELS	**Selova**	**2.11**	**33**	*e*Pn	**Pb**	**21 56 34.6**	**-0.8**
BARS	**Barje**	**2.16**	**50**	*e*Pn	**Pb**	**21 56 34.7**	**-1.5**
IVAS	**Ivanjica**	**2.17**	**11**	*e*Pn	**Pb**	**21 56 34.9**	**-1.5**
LSTV	**Lastovo**	**2.38**	**304**	*e*Pn	**Pn**	**21 56 36.3**	**+0.3**
LSTV				Sn	**Sn**	**21 57 01.4**	**-3.7**
BBLS	**Lazi&#263i**	**2.41**	**357**	*e*Pn	**Pb**	**21 56 39.6**	**-1.0**
GRUS	**Gruza**	**2.58**	**19**	*e*Pn	**Pb**	**21 56 40.7**	**-2.7**
MAKA	**Makarska**	**2.63**	**315**	Sn	**Sn**	**21 57 09.8**	**-1.4**
RICI	**Ricice**	**2.72**	**319**	*e*Pn	**Pn**	**21 56 41.4**	**+0.6**
RICI				Sn	**Sn**	**21 57 13.7**	**+0.2**
TRUS	**Trudelj**	**2.84**	**12**	*e*Pn	**Pb**	**21 56 45.3**	**-2.5**
ZAPS	**Zavoj**	**2.91**	**50**	*e*Pn	**Pb**	**21 56 46.1**	**-3.0**
VTS	**Vitosha**	**2.97**	**66**	*e*Pg	**Pb**	**21 56 49.6**	**-0.6**
ZAGS	**Zajecar**	**3.07**	**39**	*e*Pn	**Pn**	**21 56 47.1**	**+1.6**
TEKS	**Tekeris**	**3.10**	**360**	*e*Pn	**Pn**	**21 56 47.0**	**+1.1**
KIJV	**Kijevo**	**3.45**	**319**	*e*Pn	**Pn**	**21 56 51.3**	**+0.5**
KIJV				Sn	**Sn**	**21 57 31.0**	**-0.6**
MORI	**Morici**	**3.73**	**312**	*e*Pn	**Pn**	**21 56 55.5**	**+1.0**
MORI				Sn	**Sn**	**21 57 36.8**	**-1.5**
UDBI	**Udbina**	**4.15**	**319**	*e*Pn	**Pn**	**21 57 01.6**	**+1.2**
UDBI				Sn	**Sn**	**21 57 48.8**	**0.0**
DUGI	**Dugi Otok**	**4.18**	**309**	*e*Pn	**Pn**	**21 57 01.4**	**+0.6**
DUGI				Sn	**Sn**	**21 57 45.9**	**-3.5**
VIRC	**Vir**	**4.36**	**312**	*e*Pn	**Pn**	**21 57 03.4**	**+0.1**
VIRC				Sn	**Sn**	**21 57 51.2**	**-2.7**
PLIT	**Plitvice**	**4.47**	**321**	*e*Pn	**Pn**	**21 57 05.8**	**+1.0**
PLIT				Sn	**Sn**	**21 57 56.2**	**-0.5**

IDC ***12*** *22:10:41.6±0.8,35°.56N×82°.50E,h0km,mb3.8/13, mbtmp3.8/19,ML3.4/6,MS3.6/7,Error ellipse: s-maj=21.1km s-min=13.9km az=50.0*
NEIC ***12*** *22:10:45.0±1.5,35°.76N±0°.06×82°.40E±0°.08,h10km±1km, mb4.1/17,Error ellipse: s-maj=14.3km s-min=3.5km az=227.0*
NDI ***12*** *22:11:05.1±1.0,34°.42N×81°.31E,h10km,ML3.0,MW3.9, Presumed earthquake*

ISC 12 22:10:43.9±0.5,35°.64N±0°.05×82°.42E±0°.05,h10km,n73, σ1§63/79,mb3.9/17,MS3.5/8,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSA	**Tissa**	**5.90**	**243**	*e*P	**Pn**	**22 12 14.9**	**+3.3**
TSSA				IAML		22 12 48.5	
	comp=E,46nm,1.0s						
TSSA				IAML		22 12 48.9	
	comp=N,37nm,0.8s						
TSSA				*i* x	x	22 14 09.5	
WUS	**Wushi**	**6.09**	**337**		**Pn**	**22 12 13.3**	**-0.8**
DHRM	**DHARAMSHALA**	**6.11**	**238**	*e*P	**Pn**	**22 12 16.6**	**+2.1**
PTH	**Pithoragarh**	**6.32**	**198**	*e*P	**Pn**	**22 12 19.0**	**+1.6**
THN	**Thein Dam**	**6.39**	**242**	*e*P	**Pn**	**22 12 19.4**	**+1.3**
THN				*ex*	**Pg**	**22 12 45.2**	**-1.0**
THN				IAML		22 12 49.9	
	comp=Z,22nm,0.2s						
KSH2	**Kashi**	**6.48**	**305**	Pn	**Pn**	**22 12 23.3**	**+3.8**
KSH2				Sn	**Sn**	**22 13 31.5**	**-2.1**
KSH2				smax	smax		
	comp=N,96nm,0.9s						
KSH2				smax	smax		
	comp=E,120nm,0.8s						
LGTI	**Lohaghat**	**6.53**	**198**	*e*P	**Pn**	**22 12 21.6**	**+1.4**
LGTI				*e*P	**Pn**	**22 12 21.9**	**+1.7**
TARG	**Taragay, Kyrgy**	**7.07**	**331**		**Pn**	**22 12 27.1**	**-0.7**
KDJ	**Kajisay**	**7.66**	**329**	Pn	**Pn**	**22 12 34.9**	**-0.8**
NRN	**Naryn**	**7.66**	**321**		**Pn**	**22 12 35.8**	**-0.1**
NIL	**Nilore**	**7.81**	**258**		**Pn**	**22 12 38.1**	**+0.4**
PDGK	**Podgornoye**	**8.00**	**344**		**Pn**	**22 12 40.0**	**-0.4**
EVN	**Everest**	**8.53**	**153**		**Pn**	**22 12 51.3**	**+3.2**
WMQ	**Urumqi**	**9.12**	**25**	Pn	**Pn**	**22 12 58.8**	**+3.2**
WMQ				Sn	**Sn**	**22 14 41.5**	**+3.2**
WMQ				smax	sm

	comp=Z,8.4nm,1.4s							
KSRS	**Korea Array**	**36.33**	**73**	LR	LR	22 34 29.7		
	comp=Z,73nm,18.5s,baz=335,slow=39							
YOJ	**Yonaguni jima**	**36.62**	**96**	P	**P**	**22 17 51.5**	**+1.0**	
BRTR	**Keskin Array B**	**38.44**	**291**	P	**P**	**22 18 06.7**	**+0.7**	
	comp=Z,1.5nm,0.9s,baz=81,slow=8.0,SNR=5.9							
	comp=Z,1.5nm,0.9s							
BRTR	**Keskin Array B**	**38.44**	**291**	P	**P**	**22 18 05.1**	**-0.9**	
TGY	**Tagaytay City**	**40.64**	**112**	LR	LR	22 35 40.4		
	comp=Z,100nm,18.3s,baz=4.0,slow=37							
AKASG	**Malin Array Be**	**40.71**	**309**	P	**P**	**22 18 24.1**	**-0.5**	
	comp=Z,0.1nm,0.3s,baz=78,slow=6.7,SNR=2.1							
AKASG				LR	LR	22 36 22.4		
	comp=Z,63nm,18.3s,baz=56,slow=38							
	comp=Z,0.1nm,0.3s							
AKASG	**Malin Array Be**	**40.71**	**309**	P	**P**	**22 18 23.0**	**-1.5**	
AKASG				IAmb	IAmb	22 18 38.8		
	comp=Z,1.5nm,0.8s							
MNK	**Minsk**	**41.68**	**314**	*i* P	**P**	**22 18 33.7**	**+1.2**	
	comp=E,5.0nm,1.0s							
MNK				*i* P	**P**	**22 18 33.7**	**+1.2**	
	comp=N,8.0nm,1.0s							
MNK				*i* P	**P**	**22 18 33.7**	**+1.2**	
	comp=Z,3.0nm,0.7s,baz=94							
MNK				*i* PP	**PP**	**22 20 10.2**	**+1.5**	
MNK				*i* PPP	PPP	22 20 38.4		
MNK				*i* S	**S**	**22 24 51.3**	**+2.3**	
MNK				*i* SS	**SS**	**22 27 58.1**	**+4.0**	
MNK				*i* SSS	SSS	22 28 26.5		
MNK				*i* LQ	LQ	22 33 20.1		
MNK				*i* LR	LR	22 35 59.9		
MNK				*i* LRM	MLR	22 37 32.1		
	comp=Z,46nm,17.3s							
MNK				*i* LRM	MLR	22 37 47.3		
	comp=E,72nm,20.2s							
MNK				*i* LRM	MLR	22 37 47.3		
	comp=N,31nm,15.8s							
MLR	**Muntele Rosu**	**43.22**	**301**	LR	LR	22 40 32.3		
	comp=N,46nm,18.2s,baz=82,slow=41							
BURAR	**Bucovina Array**	**43.47**	**304**	P	**P**	**22 18 48.1**	**+0.8**	
FINES	**FINESS Array B**	**43.47**	**324**	P	**P**	**22 18 47.2**	**+0.2**	
	comp=N,1.4nm,0.8s,baz=111,slow=7.6,SNR=6.0							
	comp=N,1.4nm,0.8s							
FINES	**FINESS Array B**	**43.47**	**324**	P	**P**	**22 18 47.3**	**+0.4**	
ARG	**Arkhangelos**	**43.48**	**287**	P	**P**	**22 18 48.2**	**+0.9**	
PMBI	**Palembang**	**43.70**	**147**	P	**P**	**22 18 51.7**	**+2.4**	
HFS	**Hagfors**	**49.45**	**322**	P	**P**	**22 19 34.0**	**+0.1**	
	comp=N,1.6nm,0.7s,baz=92,slow=9.2,SNR=2.4							
	comp=N,1.6nm,0.7s							
NB2	**NORSAR Subarra**	**50.62**	**323**	P	**P**	**22 19 42.3**	**-0.5**	
	comp=Z,0.7nm,0.7s,baz=85,slow=7.4							
NOA	**NORSAR Array B**	**50.62**	**323**	P	**P**	**22 19 42.8**	**0.0**	
	comp=Z,1.3nm,0.8s,baz=86,slow=7.3,SNR=5.5							
NOA				LR	LR	22 42 47.8		
	comp=Z,34nm,19.2s,baz=90,slow=38							
	comp=Z,1.3nm,0.8s							
GERES	**GERESS Array B**	**50.89**	**308**	P	**P**	**22 19 45.7**	**+0.6**	
	comp=Z,1.1nm,0.8s,baz=76,slow=5.6,SNR=11							
	comp=Z,1.1nm,0.8s							
GERES	**GERESS Array B**	**50.89**	**308**	P	**P**	**22 19 44.0**	**-1.2**	
ILAR	**Eielson Array**	**72.75**	**20**	P	**P**	**22 22 11.3**	**-0.7**	
	comp=Z,0.9nm,0.8s,baz=305,slow=4.3,SNR=7.6							
	comp=Z,0.9nm,0.8s							
WRA	**Warramunga Arr**	**73.98**	**130**	P	**P**	**22 22 18.3**	**-1.5**	
	comp=Z,0.9nm,0.7s,baz=326,slow=5.9,SNR=7.5							
	comp=Z,0.9nm,0.7s							
WRA	**Warramunga Arr**	**73.98**	**130**	P	**P**	**22 22 20.0**	**+0.2**	
TORD	**Torodi Ar. Bea**	**74.99**	**276**	P	**P**	**22 22 24.8**	**-1.1**	
	comp=Z,1.1nm,0.7s,baz=43,slow=5.1,SNR=7.6							
	comp=Z,1.1nm,0.7s							
ASAR	**Alice Springs**	**76.50**	**132**	P	**P**	**22 22 32.7**	**-1.6**	
	comp=Z,0.4nm,0.5s,baz=308,slow=5.8,SNR=4.2							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**76.50**	**132**	P	**P**	**22 22 33.5**	**-0.7**	
YKA	**Yellowknife Ar**	**81.24**	**8**	P	**P**	**22 22 58.8**	**-0.9**	
	comp=Z,0.7nm,0.8s,baz=341,slow=4.0,SNR=3.6							
	comp=Z,0.7nm,0.8s							
YKA	**Yellowknife Ar**	**81.24**	**8**	P	**P**	**22 22 58.1**	**-1.7**	
SCHQ	**Schefferville**	**86.09**	**343**	LR	LR	23 05 28.7		
	comp=Z,150nm,21.1s,baz=260,slow=38							

NNC ***12*** *22:10:48.8±1.2, 42.°84N×76.°51E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=10.1km s-min=4.5km az=176.0*
KRNET ***12*** *22:10:49.5±0.1, 42.°91N×76.°49E, h16km, mb2.2*
SOME ***12*** *22:10:49.2, 42.°97N×76.°50E, h20km*

ISC 12 22:10:49.0±0.9, 42.°93N±0.°04×76.°47E±0.°02, h17km±6km, n17, σ0°78/33, 6C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZV	**Izvestkoviy**	**0.15**	**45**	P	**Pg**	**22 10 53.4**	**0.0**
	17nm,0.1s						
IZV				S	**Sg**	**22 10 56.6**	**+0.3**
	92nm,0.2s						
IZV	**Izvestkoviy**	**0.15**	**45**	*e*P	**Pg**	**22 10 53.4**	**0.0**
IZV				*e*S	**Sg**	**22 10 56.6**	**+0.3**
KST	**Kastek**	**0.39**	**287**	P	**Pb**	**22 10 57.5**	**0.0**
	2.6nm,0.1s						
KST				S	**Sb**	**22 11 03.8**	**+0.6**
	13nm,0.1s						
KST	**Kastek**	**0.39**	**287**	*e*P	**Pb**	**22 10 57.5**	**0.0**
	2.6nm,0.1s						
KST				*e*S	**Sb**	**22 11 03.8**	**+0.6**
	13nm,0.2s						
MDOK	**Medeo**	**0.49**	**61**	Pg	**Pg**	**22 10 58.2**	**-0.6**
	1.8nm,0.2s						
MDOK				Lg	Lg	22 11 04.9	
	5.4nm,0.2s						
MDOK	**Medeo**	**0.49**	**61**	*e*P	**Pg**	**22 10 58.2**	**-0.6**
	2.0nm,0.1s						
MDOK				*e*S	**Sg**	**22 11 04.8**	**-0.6**
	5.4nm,0.2s						
BOOM	**Boomskoye usch**	**0.59**	**222**	↓*i* P	**Pb**	**22 11 00.9**	**0.0**
BOOM				↓*i* S	**Sb**	**22 11 09.0**	**0.0**
TKM2	**Tokmak 2**	**0.64**	**270**	↓*i* P	**Pb**	**22 11 01.9**	**+0.1**
TKM2				↓*i* S	**Sb**	**22 11 10.9**	**+0.3**
ULHL	**Ulahol**	**0.70**	**194**	↑*i* P	**Pb**	**22 11 02.7**	**-0.2**
ULHL				↑*i* S	**Sb**	**22 11 12.1**	**-0.3**
KTBS	**Karatobe**	**0.80**	**11**	*e*P	**Pg**	**22 11 03.1**	**-1.5**
	2.9nm,0.1s						
KTBS				*e*S	**Sg**	**22 11 13.2**	**-2.1**
	10nm,0.3s						
ANVS	**Anan'yevo**	**0.89**	**99**	↑*e*P	**Pb**	**22 11 06.3**	**+0.1**
ANVS				↑*e*S	**Sg**	**22 11 17.5**	**-0.8**
KDJ	**Kajisay**	**0.96**	**146**	↓*e*P	**Pb**	**22 11 07.0**	**-0.2**
KDJ				↓*e*S	**Sb**	**22 11 20.0**	**+0.3**
KBK	**Karagaybulak**	**1.15**	**257**	↓*i* P	**Pn**	**22 11 10.9**	**+0.4**
KBK				↓*i* S	**Sn**	**22 11 26.7**	**+0.8**
PRZ	**Przheval'sk**	**1.49**	**107**	↑*e*P	**Pg**	**22 11 16.8**	**-1.0**
PRZ				↑*e*S	**Sg**	**22 11 36.4**	**-0.9**
KPKS	**Kokpek**	**1.71**	**71**	*e*P	**Pb**	**22 11 19.5**	**-0.5**
	0.2nm,0.1s						
KPKS				*e*S	**Sn**	**22 11 41.2**	**+1.7**
	5.3nm,0.3s						
UZB	**Uzynbulak**	**1.89**	**83**	P	**Pb**	**22 11 23.1**	**0.0**
	3.8nm,0.4s						
UZB				S	**Sb**	**22 11 47.4**	**+1.0**
	2.1nm,0.3s						
UZB	**Uzynbulak**	**1.89**	**83**	*e*P	**Pb**	**22 11 23.1**	**0.0**
UZB				*e*S	**Sb**	**22 11 47.4**	**+1.0**

RSNC ***12*** *22:20:23.3±0.0, 7.°N±1.°×7.°3W±.°, h150km±1km, M2.9, ML2.6*
FUNV ***12*** *22:20:24.6, 7.°17N×73.°23W, h2km, MW3.2, Presumed earthquake*

ISC 12 22:20:21.3±1.3, 6.°88N±0.°03×73.°10W±0.°04, h158km±8km, n30, σ1°56/59, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.30**	**196**	P	**Pn**	**22 20 43.4**	**+0.3**
BARC				P	**Pn**	**22 20 43.4**	**+0.3**
BARC				S	**Sn**	**22 20 58.6**	**-1.1**
PAMC	**Pamplona, Colo**	**0.60**	**41**	P	**Pn**	**22 20 46.2**	**+1.6**
PAMC				S	**Sn**	**22 21 03.4**	**+0.9**
BRJC	**Barrancabermej**	**0.65**	**278**	P	**Pn**	**22 20 45.0**	**+0.7**
BRJC				S	**Sn**	**22 21 02.3**	**+0.5**
RUSC	**La Rusia**	**0.98**	**179**	P	**Pn**	**22 20 47.3**	**+0.1**
RUSC				S	**Sn**	**22 21 06.1**	**-1.0**
RUSC	**La Rusia**	**0.98**	**179**	*e*P	**Pn**	**22 20 47.6**	**+0.3**
RUSC				*e*S	**Sn**	**22 21 05.5**	**-1.5**
OCAC	**Ocana**	**1.37**	**351**	P	**Pn**	**22 20 51.5**	**+1.2**
OCAC				S	**Sn**	**22 21 13.3**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P	**Pn**	**22 20 49.7**	**-0.6**
PTBC				S	**Sn**	**22 21 11.5**	**-1.1**
SPBC	**San Pablo de B**	**1.56**	**218**	P	**Pn**	**22 20 52.1**	**0.0**
SPBC				S	**Sn**	**22 21 14.3**	**-1.5**
NORC	**Norcasia**	**2.19**	**233**	P	**Pn**	**22 20 59.9**	**+0.7**
NORC				S	**Sn**	**22 21 27.4**	**-1.0**
CHIC	**Chingaza**	**2.32**	**196**	P	**Pn**	**22 21 01.7**	**+0.6**
CHIC				S	**Sn**	**22 21 30.8**	**-1.0**
ROSC	**El Rosal**	**2.36**	**211**	P	**Pn**	**22 21 03.7**	**+2.2**
ROSC				S	**Sn**	**22 21 32.4**	**-0.2**
HELC	**Santa Helena**	**2.51**	**254**	P	**Pn**	**22 21 05.1**	**+1.9**
HELC				S	**Sn**	**22 21 37.6**	**+2.0**
HELC	**Santa Helena**	**2.51**	**254**	*e*P	**Pn**	**22 21 05.7**	**+2.5**
HELC				*e*S	**Sn**	**22 21 36.4**	**+0.8**
CVER	**Cruz Verde, Cu**	**2.54**	**202**	P	**Pn**	**22 21 05.1**	**+1.4**
CVER				S	**Sn**	**22 21 37.3**	**+0.8**
UREC	**San Jos de Ur**	**2.56**	**290**	P	**Pn**	**22 21 04.0**	**+0.4**
UREC				S	**Sn**	**22 21 35.1**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P	**Pn**	**22 21 09.0**	**+2.2**
GUY2C				S	**Sn**	**22 21 41.8**	**-0.1**
VILC	**Villavicencio,**	**2.81**	**192**	P	**Pn**	**22 21 07.1**	**+0.3**
VILC				S	**Sn**	**22 21 40.8**	**-1.2**
PTGC	**Puerto Gaitan,**	**2.83**	**160**	P	**Pn**	**22 21 06.7**	**-0.2**
PTGC				S	**Sn**	**22 21 40.1**	**-2.2**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**22 21 10.4**	**+0.5**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**22 21 11.5**	**+1.3**
SDV	**Santo Domingo**	**3.15**	**51**	*e*P	**Pn**	**22 21 13.9**	**+2.8**
SDV				*e*S	**Sn**	**22 21 49.9**	**+0.2**
APAC	**Apartado, Choc**	**3.60**	**287**	P	**Pn**	**22 21 17.9**	**+1.4**
APAC				S	**Sn**	**22 21 59.0**	**-0.5**
PRAC	**Prado**	**3.61**	**210**	P	**Pn**	**22 21 17.3**	**+0.5**
PRAC				S	**Sn**	**22 21 58.6**	**-1.4**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**22 21 17.0**	**-0.1**
SJCC				S	**Sn**	**22 21 58.6**	**-1.9**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**22 21 17.5**	**+0.4**
SJCC				*e*S	**Sn**	**22 21 55.0**	**-5.5**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**22 21 18.2**	**+1.0**
ORTC				S	**Sn**	**22 22 01.0**	**+0.3**
URMC	**La Uribe, Meta**	**3.83**	**199**	P	**Pn**	**22 21 20.7**	**+1.1**
URMC				S	**Sn**	**22 22 04.2**	**-0.8**
SMRC	**Santa Marta, M**	**4.40**	**345**	P	**Pn**	**22 21 28.5**	**+1.6**
SMRC				S	**Sn**	**22 22 15.7**	**-2.5**
URIC	**Uribia, Colomb**	**4.91**	**13**	*e*P	**Pn**	**22 21 34.2**	**+0.5**
URIC				*e*S	**Sn**	**22 22 26.3**	**-4.0**
GARC	**Garzon, Huila**	**5.24**	**207**	P	**Pn**	**22 21 38.5**	**+0.3**
GARC				S	**Sn**	**22 22 36.0**	**-2.4**

IDC ***12*** *22:25:42.4±2.5, 19.°94S×177.°68W, h387km±25km, mb3.3/8, mbtmp4.2/11, Error ellipse: s-maj=22.5km s-min=18.6km az=92.0*

ISC 12 22:25:43.4±0.9, 20.°0S±0.°1×177.°7W±0.°1, h400km, n11, σ1°46/13, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.61**	**299**	P	**Pn**	**22 27 00.5**	**-1.2**
	2.6nm,0.2s,baz=153,slow=16,SNR=2.0						
DZM	**Mont Dzumac**	**14.95**	**259**	P	**P**	**22 28 57.1**	**+1.7**
	24nm,0.7s,baz=81,slow=19,SNR=20						
URZ	**Urewera**	**18.75**	**193**	P	**P**	**22 29 34.3**	**-1.4**
	6.5nm,0.3s,baz=4.9,slow=17,SNR=11						
URZ				S	**S**	**22 32 43.9**	**-2.7**
	7.0nm,0.7s,baz=87,slow=23,SNR=6.0						
STKA	**Stephens Creek**	**38.26**	**244**	P	**P**	**22 32 26.4**	**-0.8**
	3.1nm,0.7s,baz=89,slow=8.9,SNR=6.5						
	3.1nm,0.7s						
ASAR	**Alice Springs**	**44.91**	**256**	P	**P**	**22 33 21.1**	**+0.4**
	6.4nm,0.6s,baz=98,slow=8.0,SNR=52						
ASAR				PcP	**PcP**	**22 34 55.1**	**+0.8**
	0.4nm,0.4s,baz=109,slow=3.0,SNR=2.3						
	6.4nm,0.6s						
WRA	**Warramunga Arr**	**44.95**	**261**	P	**P**	**22 33 21.0**	**0.0**
	1.8nm,0.3s,baz=95,slow=7.4,SNR=41						
	1.8nm,0.3s						
VNDA	**Vanda**	**58.43**	**185**	P	**P**	**22 34 59.8**	**+1.4**
	0.3nm,0.7s,baz=14,slow=4.7,SNR=1.9						
	0.3nm,0.7s						
QSPA	**South Pole Qui**	**70.07**	**180**	P	**P**	**22 36 14.5**	**+1.2**
	4.7nm,1.0s,baz=90,slow=4.0,SNR=11						
	4.7nm,1.0s						
PETK	**Petropavlovsk-**	**75.86**	**345**	P	**P**	**22 36 47.1**	**+0.3**
	1.4nm,0.6s,baz=160,slow=4.9,SNR=3.3						
	1.4nm,0.6s						
TXAR	**Lajitas Array**	**86.55**	**57**	P	**P**	**22 37 43.4**	**+0.4**
	0.3nm,0.8s,baz=250,slow=5.1,SNR=3.7						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**87.77**	**13**	P	**P**	**22 37 46.1**	**-1.7**
	0.2nm,0.5s,baz=204,slow=4.8,SNR=5.8						
	0.2nm,0.5s						

BGR ***12*** *22:38:29.9, 12.°09N×85.°34W, h171km±1km, mb5.0, Ms4.2*
NEIC ***12*** *22:38:43.8±1.6, 12.°02N±0.°06×86.°36W±0.°07, h159km±3km, mb5.1/741, Mwb5.4/14, Mww5.4/53, Error ellipse: s-maj=10.3km s-min=7.3km az=55.0*
CATAC ***12*** *22:38:43.9±0.2, 12.°N±2.°×8.°6W±.°, h146km±1km, M4.8/57, MLv4.8/57, Error ellipse: s-maj=4.2km s-min=1.9km az=40.3, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr1.13; Mθθ-0.28; Mϕϕ-0.85; Mrθ0.23; Mrϕ0.44; Mθϕ-0.75; Fault plane solution: M0 1.35893×10^17 NP1: ϕs157.68838°, δ62.65268°, λ95.66840°. NP2: ϕs325.49623°, δ27.88417°, λ79.18796°. Principal axes: T 1.3858, Plg71.7760°, Azm80.5929°; N -0.0545, Plg5.0332°, Azm335.0777°; P -1.3304, Plg17.4681°, Azm243.4895°; confirmed*
IDC ***12*** *22:38:43.1±0.5, 12.°18N×86.°02W, h167km±3km, mb4.6/28, mbtmp5.0/31, MS3.9/16 Error ellipse: s-maj=13.0km s-min=6.5km az=65.0*
GFZ ***12*** *22:38:43.6±0.2, 12.°N±2.°×8.°6W±.°, h166km±2km, M4.7/110, mb4.9/110, Error ellipse: s-maj=7.7km s-min=3.4km az=75.2, confirmed*
GFZ ***12*** *22:38:43.6, 12.°24N×86.°07W, h166km, Mw5.3/57, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr0.91; Mθθ-0.37; Mϕϕ-0.54; Mrθ0.49; Mrϕ0.39; Mθϕ-0.68; Fault plane solution: M0 1.21620×10^17 NP1: ϕs143.35505°, δ66.83629°, λ91.70501°. NP2: ϕs319.02753°, δ23.22293°, λ86.02193°. Principal axes: T 1.2448, Plg68.1194°, Azm56.5914°; N -0.0594, Plg1.5675°, Azm322.6842°; P -1.1854, Plg21.8185°, Azm232.0565°;*
UCR ***12*** *22:38:44.9±0.9, 11.°94N×86.°27W, h152km±6km, MW4.9, Presumed earthquake*
NEIC ***12*** *22:38:44.5, 11.°87N×86.°70W, h170km, Moment Tensor Solution. Duration: 2≤4 Moment tensor: Scale 10^17 Nm; Mrr1.31; Mθθ-0.28; Mϕϕ-1.03; Mrθ0.20; Mrϕ0.49; Mθϕ-0.58; Fault plane solution: M0 1.42000×10^17 NP1: ϕs330.65000°, δ32.50000°, λ84.83000°. NP2: ϕs156.78000°, δ57.65000°, λ93.29000°. Principal axes: T 1.4442, Plg77.0000°, Azm77.0000°; N -0.0394, Plg3.0000°, Azm335.0000°; P -1.4048, Plg13.0000°, Azm244.0000°;*
NEIC ***12*** *22:38:44, 11.°97N×86.°40W, h152km*
NEIC ***12*** *22:38:44, 11.°96N×86.°41W, h152km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr1.27; Mθθ-0.37; Mϕϕ-0.90; Mrθ0.05; Mrϕ0.58; Mθϕ-0.68; Fault plane solution: M0 1.44000×10^17 NP1: ϕs315.43000°, δ33.45000°, λ69.30000°. NP2: ϕs159.80000°, δ58.96000°, λ103.14000°. Principal axes: T 1.4698, Plg73.0000°, Azm102.0000°; N -0.0568, Plg11.0000°, Azm333.0000°; P -1.4129, Plg13.0000°, Azm240.0000°;*
GCMT ***12*** *22:38:44.8±0.1, 12.°00N±0.°01×86.°44W±0.°01, h165km, MW5.4/147, Moment Tensor Solution. s120,c186; s147,c283; Duration: 1≤2 Moment tensor: Scale 10^17 Nm; Mrr1.21±.02; Mθθ-0.50±.02; Mϕϕ-0.71±.02; Mrθ0.40±.02; Mrϕ0.31±.02; Mθϕ-0.94±.02; Best double couple: M0 1.47900×10^17 NP1: ϕs321.00000°, δ24.00000°, λ79.00000°. NP2: ϕs153.00000°, δ67.00000°, λ95.00000°. Principal axes: T 1.6260, Plg68.0000°, Azm71.0000°; N -0.2890, Plg4.0000°, Azm331.0000°; P -1.3330, Plg22.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
SNET ***12*** *22:38:46.7±2.2, 11.°91N×86.°65W, h124km, ML5.6, Presumed earthquake*

ISC 12 22:38:42.5±0.3, 11.°96N±0.°03×86.°38W±0.°03, h166km±2km, h166km:pP-P, n1360, σ1°42/1257, mb5.0/424, 30C-29D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABCN	**Banco Central**	**0.18**	**24**	↑P	**Pn**	**22 39 04.8**	**+0.1**
UNAN	**Cigeo UNAN**	**0.19**	**36**	↑P	**Pn**	**22 39 04.6**	**-0.1**
UNAN				S	**Sn**	**22 39 21.3**	**-0.5**
SAPS	**Ciudad Sandino**	**0.21**	**354**	P	**Pn**	**22 39 04.6**	**-0.1**
SAPS				S	**Sn**	**22 39 21.1**	**-0.8**
MAS3	**Al N del Volca**	**0.21**	**72**	↑P	**Pn**	**22 39 04.5**	**-0.3**
TISN	**Laguna Tiscapa**	**0.21**	**31**	↑P	**Pn**	**22 39 03.7**	**-1.1**
ALLN	**Telcor Managua**	**0.22**	**29**	P	**Pn**	**22 39 04.7**	**-0.1**
MASN	**Masaya**	**0.23**	**83**	↑P	**Pn**	**22 39 04.6**	**-0.2**
MASN				S	**Sn**	**22 39 22.3**	**+0.5**
MGAN	**Managua**	**0.23**	**36**		**Pn**	**22 39 04.7**	**0.0**
MGAN				Sn	**Sn**	**22 39 21.4**	**-0.4**
MGAN	**Managua**	**0.23**	**36**	↑P	**Pn**	**22 39 04.7**	**0.0**
MGAN	**Managua**	**0.23**	**36**	P	**Pn**	**22 39 04.6**	**-0.2**
MGAN				S	**Sn**	**22 39 21.6**	**-0.2**
MGAN	**Managua**	**0.23**	**36**	P	**Pn**	**22 39 04.8**	**0.0**
APQ2	**Apoyeque**	**0.24**	**13**	P	**Pn**	**22 39 04.8**	**+0.1**
APYN	**Apoyeque**	**0.28**	**7**	P	**Pn**	**22 39 04.8**	**-0.1**
WILN	**Americas 2**	**0.28**	**44**	↑P	**Pn**	**22 39 04.8**	**-0.1**
WILN				S	**Sn**	**22 39 22.0**	**0.0**
AMTN	**Mateare**	**0.28**	**350**	P	**Pn**	**22 39 04.8**	**0.0**
COPN	**Copaltepe**	**0.30**	**317**	P	**Pn**	**22 39 04.4**	**-0.6**
NADN	**Granada**	**0.40**	**121**	P	**Pn**	**22 39 05.7**	**+0.4**
NADN				S	**Sn**	**22 39 22.7**	**+0.1**
NADN	**Granada**	**0.40**	**121**	*e*P	**Pn**	**22 39 05.6**	**+0.3**
MOMN	**Momotombo**	**0.47**	**341**	P	**Pn**	**22 39 05.2**	**-0.4**
MOM2	**El Cardon**	**0.48**	**348**	↑P	**Pn**	**22 39 05.3**	**-0.3**
MOM2				S	**Sn**	**22 39 23.0**	**-0.4**
MACN	**El Madrono**	**0.58**	**331**	P	**Pn**	**22 39 05.7**	**-0.3**
MACN				S	**Sn**	**22 39 23.6**	**-0.7**
CNGA	**Al SSO del Vol**	**0.62**	**330**	P	**Pn**	**22 39 06.0**	**-0.3**
CNGN	**Cerro Negro**	**0.62**	**330**	↑P	**Pn**	**22 39 05.9**	**-0.4**
CNGN	**Cerro Negro**	**0.62**	**330**	P	**Pn**	**22 39 06.1**	**-0.5**
CNGN				S	**Sn**	**22 39 23.2**	**-1.5**
CNGN	**Cerro Negro**	**0.62**	**330**	P	**Pn**	**22 39 06.0**	**-0.4**
ROCN	**Rota Cerro Neg**	**0.66**	**328**	P	**Pn**	**22 39 05.0**	**-1.4**
ROCN				S	**Sn**	**22 39 23.9**	**-1.1**
PLRN	**Geotermica Pol**	**0.73**	**329**	P	**Pn**	**22 39 06.5**	**-0.4**
HERN	**Volcan Telica**	**0.78**	**326**		**Pn**	**22 39 06.8**	**-0.5**
HERN				Sn	**Sn**	**22 39 23.6**	**-2.8**
HERN	**Volcan Telica**	**0.78**	**326**	↑P	**Pn**	**22 39 07.1**	**-0.2**
HERN	**Volcan Telica**	**0.78**	**326**	*e*P	**Pn**	**22 39 06.9**	**-0.4**
JAPN	**Al SSO del Vol**	**0.81**	**122**	↑P	**Pn**	**22 39 08.3**	**+0.8**
JAPN	**Al SSO del Vol**	**0.81**	**122**	*e*P	**Pn**	**22 39 08.3**	**+0.8**
MORN	**Al O del Volca**	**0.83**	**120**	↑P	**Pn**	**22 39 08.0**	**+0.5**
MORN				S	**Sn**	**22 39 26.0**	**-0.8**
BOAB	**BOACO BROADBAN**	**0.85**	**55**		**Pn**	**22 39 07.8**	**+0.2**
BOAB	**BOACO BROADBAN**	**0.85**	**55**	↓P	**Pn**	**22 39 08.0**	**+0.3**
BOAB				S	**Sn**	**22 39 26.4**	**-0.7**
BOAB	**BOACO BROADBAN**	**0.85**	**55**	P	**Pn**	**22 39 08.2**	**+0.5**
OMEN	**Al SSO del Vol**	**0.86**	**121**	↑P	**Pn**	**22 39 08.3**	**+0.5**
AESN	**El Sauce Leon**	**0.94**	**351**	P	**Pn**	**22 39 08.6**	**+0.3**
CRIN	**San Cristobal**	**0.98**	**319**		**Pn**	**22 39 08.0**	**-0.7**
CRIN	**San Cristobal**	**0.98**	**319**	↑P	**Pn**	**22 39 08.7**	**-0.1**
CRIN				S	**Sn**	**22 39 28.7**	**-0.3**
CRIN	**San Cristobal**	**0.98**	**319**	P	**Pn**	**22 39 08.6**	**-0.1**
CRIN				S	**Sn**	**22 39 29.2**	**+0.2**
CRIN	**San Cristobal**	**0.98**	**319**	P	**Pn**	**22 39 08.7**	**-0.1**
MATN	**Matagalpa**	**1.06**	**25**	↓P	**Pn**	**22 39 09.9**	**+0.5**
MATN				S	**Sn**	**22 39 29.3**	**-0.9**
LIMN	**Finca el Limon**	**1.10**	**1**	P	**Pn**	**22 39 10.0**	**+0.3**
LIMN				S	**Sn**	**22 39 30.8**	**0.0**
CARN	**Rivas**	**1.14**	**132**		**Pn**	**22 39 10.0**	**+0.1**
CARN	**Rivas**	**1.14**	**132**	↑P	**Pn**	**22 39 10.4**	**+0.4**
CARN				S	**Sn**	**22 39 30.7**	**-0.4**
CARN	**Rivas**	**1.14**	**132**	*e*P	**Pn**	**22 39 10.4**	**+0.4**
LCRUZ	**La Cruz**	**1.15**	**140**	*e*P	**Pn**	**22 39 10.5**	**+0.5**
LCRUZ				*e*S	**Sn**	**22 39 30.6**	**-0.8**
ACON	**Acoyapa**	**1.18**	**89**	↓P	**Pn**	**22 39 10.8**	**+0.5**
ACON				S	**Sn**	**22 39 31.1**	**-0.5**
ACON	**Acoyapa**	**1.18**	**89**	*e*P	**Pn**	**22 39 10.8**	**+0.5**
BUAI	**Buenos Aires**	**1.49**	**136**	*e*P	**Pn**	**22 39 14.2**	**+0.9**
PEJA	**Penjamo Buenos**	**1.49**	**135**	*e*P	**Pn**	**22 39 12.7**	**-0.6**
LAPC	**Finca la Perla**	**1.51**	**142**	*e*P	**Pn**	**22 39 13.6**	**+0.2**
VORI	**VORI**	**1.52**	**138**	*e*P	**Pn**	**22

BLUN Bluefields 2.55 89 P Pn 22 39 26.2 +1.2
ITAL Pital 2.56 126 eP Pn 22 39 25.9 +0.8
PAQE Paquera 2.56 146 eP Pn 22 39 26.6 +1.4
TECA Tecapa 2.57 307 i P Pn 22 39 25.9 +0.5
ARZA Esparza 2.58 139 eP Pn 22 39 26.8 +1.4
VPL3 V. Platanar 2.59 128 eP Pn 22 39 26.4 +0.8
VPL1 V. Platanar 2.60 130 eP Pn 22 39 27.0 +1.1
SRA1 San Ramn 2.64 135 eP Pn 22 39 27.6 +1.4
RAMO San Ramon 2.65 134 eP Pn 22 39 27.9 +1.6
ARTO Ro Cuarto 2.67 127 eP Pn 22 39 27.7 +1.2
PALD Palmares 2.69 135 eP Pn 22 39 28.4 +1.5
MARCA Marcala la Paz 2.71 324 ⇑P Pn 22 39 28.6 +1.4
MARCA S Sn 22 40 02.2 +0.4
VPS6 V Poas 2.75 130 eP Pn 22 39 29.1 +1.3
VPS5 V. Poas 2.75 130 eP Pn 22 39 29.1 +1.3
ATEO Atenas 2.78 135 eP Pn 22 39 29.4 +1.5
TRB2 Turrubares 2.78 137 P Pn 22 39 29.3 +1.4
TRB2 S Sn 22 40 02.9 -0.2
TCS1 Tacares 2.79 133 P Pn 22 39 29.3 +1.2
TCS1 Tacares 2.79 133 eP Pn 22 39 29.7 +1.6
TECO Alcaldia de Te 2.82 304 P Pn 22 39 28.6 +0.3
TECO S Sn 22 40 02.0 -1.8
SCLA Alcaldia de Sa 2.87 307 S Sn 22 40 04.6 -0.5
VBV1 V. Barva 2.90 129 eP Pn 22 39 30.8 +1.2
BITO Garabito Jaco 2.90 143 eP Pn 22 39 31.0 +1.7
BELE Belen 2.92 132 eP Pn 22 39 31.1 +1.5
COEG Centro de Oper 2.94 304 ⇑P Pn 22 39 30.4 +0.6
COEG S Sn 22 40 06.3 -0.4
COEG Centro de Oper 2.94 304 i P Pn 22 39 30.5 +0.7
COEG eS Sn 22 40 05.5 -1.2
HEME Heredia, Merce 2.94 131 eP Pn 22 39 31.5 +1.5
TRT2 Tortugero 2.95 118 ⇓P Pn 22 39 31.0 +1.1
TRT2 S Sn 22 40 08.2 +1.6
TRT2 Tortugero 2.95 118 eP Pn 22 39 30.4 +0.6
SANTA Santa Ana 2.95 133 eP Pn 22 39 30.8 +0.8
HDC Heredia 2.96 131 Pn 22 39 31.1 +1.0
HDC Heredia 2.96 131 eP Pn 22 39 31.8 +1.7
HDC Heredia 2.96 131 eP Pn 22 39 29.1 -1.0
HDC eS Sn 22 40 03.0 -4.2
HDC Heredia 2.96 131 P Pn 22 39 31.6 +1.5
LUJA Lujan 3.04 131 eP Pn 22 39 32.7 +1.5
PAVA Las Pavas 3.04 305 ⇑P Pn 22 39 31.5 +0.4
PAVA S Sn 22 40 08.6 -0.3
SJS Escuela Geolog 3.04 131 eP Pn 22 39 32.8 +1.6
ACOS Acosta 3.06 134 eP Pn 22 39 32.9 +1.5
AMPA Desamparados 3.07 132 eP Pn 22 39 33.1 +1.6
P5NO Presa 5 de nov 3.07 311 P Pn 22 39 31.9 +0.5
PILE Guapiles 3.08 124 eP Pn 22 39 32.5 +1.0
TRIO Tres Rios 3.11 131 eP Pn 22 39 33.4 +1.4
PICV PH. Pirrs 3.16 137 eP Pn 22 39 34.2 +1.6
VICA Volcano Irazu 3.17 128 eP Pn 22 39 33.9 +0.8
LOMA Loma Larga 3.19 302 P Pn 22 39 34.0 +0.9
LOMA S Sn 22 40 11.3 -1.1
LOMA Loma Larga 3.19 302 i P Pn 22 39 33.9 +0.9
LOMA eS Sn 22 40 10.7 -1.6
ABE2 San Pablo 3.20 134 eP Pn 22 39 35.1 +1.8
VTR0 Volcan Turrial 3.22 127 eP Pn 22 39 35.0 +1.3
LALI Alcalda de L 3.24 298 ⇑P Pn 22 39 33.9 +0.4
LALI Alcalda de L 3.24 298 i P Pn 22 39 33.7 +0.2
LALI eS Sn 22 40 10.1 -3.1
REPA Paraso 3.25 130 eP Pn 22 39 35.4 +1.5
ABRB Las Abras (San 3.26 126 eP Pn 22 39 35.5 +1.5
VTCV VTCV, Calle Va 3.27 127 eP Pn 22 39 35.4 +1.4
RVLA Villa Bonita 3.30 124 eP Pn 22 39 35.8 +1.5
VERB Verbena 3.31 127 eP Pn 22 39 36.2 +1.7
PIC2 El Picacho 3.32 303 i P Pn 22 39 35.8 +1.1
PIC2 eS Sn 22 40 14.7 -0.6
LLGN La Laguna 3.32 312 i P Pn 22 39 35.4 +0.8
PIEC Cerro El Cedra 3.33 134 eP Pn 22 39 36.7 +1.8
BOQS Boqueron 3.33 302 i P Pn 22 39 36.5 +1.7
JAYA Jayaque - finc 3.43 300 ⇑P Pn 22 39 36.7 +0.6
CEDA San Andres 3.46 302 i P Pn 22 39 38.3 +2.0
BILN Bilwi Airport 3.59 54 Pn 22 39 39.0 +1.1
BILN Bilwi Airport 3.59 54 ⇓P Pn 22 39 39.1 +1.1
BILN Bilwi Airport 3.59 54 eP Pn 22 39 39.1 +1.1
SNJE San Jose 3.67 301 i P Pn 22 39 40.4 +1.3
SNJE eS Sn 22 40 22.1 -1.2
MTO3 Montecristo 3.78 310 Pn 22 39 41.4 +0.8
SAJE San Jernim 3.84 132 eP Pn 22 39 43.6 +2.3
RBDL Robledal 3.87 304 i P Pn 22 39 42.5 +0.9
ESQI Esquipulas 3.87 312 Pn 22 39 43.0 +1.4
ESQI Esquipulas 3.87 312 i P Pn 22 39 43.2 +1.6
EDPE Pejibaye, P 3.92 135 eP Pn 22 39 44.6 +2.3
FIMO Fila Mora 4.19 134 eP Pn 22 39 48.1 +2.3
EDP2 Potrero Grande 4.30 133 eP Pn 22 39 49.2 +2.7
ALCO Alturas Coton, 4.60 130 eP Pn 22 39 52.2 +1.1
PIRO Carate, Puerto 4.63 139 Pn 22 39 52.9 +1.5
PIRO Carate, Puerto 4.63 139 eP Pn 22 39 51.9 +0.5
BRU2 Volcan 4.80 131 Pn 22 39 54.9 +1.1
BRU2 Volcan 4.80 131 P Pn 22 39 55.9 +2.1
APG El Apazote 4.99 308 P Pn 22 39 58.3 +2.0
9.0nm,0.5s,baz=129,slow=10,SNR=77
APG S Sn 22 40 53.1 -0.9
7.8nm,0.6s,baz=216,slow=16,SNR=13
PTPA Petro Terminal 5.09 137 eP Pn 22 39 58.2 +0.8
PRVC Isla de Provid 5.10 73 P Pn 22 39 58.1 +0.6
43µm7µm683nm,0.8s
PRVC S Sn 22 40 55.5 -0.7
43µm7µm683nm,0.8s
RBALA Bur 5.17 126 eP Pn 22 39 60.0 +1.6
RTAL Retalhuleu 5.77 297 Pn 22 40 07.5 +1.3
PETF Flores 5.97 326 Pn 22 40 09.7 +0.7
HUEH Huehuetenango 5.99 304 Pn 22 40 10.1 +0.6
SERC Banco Serrana, 6.30 68 P Pn 22 40 14.6 +1.2
8µm564nm,1.0s
RNCC Cayo Roncador, 6.34 75 P Pn 22 40 17.1 +3.2
549nm,1.0s
RNCC S Sn 22 41 29.0 +3.3
549nm,1.0s
GMAL Guarumal, Vera 6.57 129 P Pn 22 40 15.1 -1.8
BCIP Isla Barro Col 7.01 113 Pn 22 40 24.5 +1.8
BCIP Isla Barro Col 7.01 113 P Pn 22 40 24.5 +1.8
12µm2µm208nm,1.1s
AZU Azuero 7.31 124 P Pn 22 40 27.1 +0.4
7µm43nm,0.7s
TEIG Tepich 8.42 348 Pn Pn 22 40 41.8 +0.4
TEIG Tepich 8.42 348 P Pn 22 40 44.0 +2.6
5µm2µm135nm,1.4s
TEIG S Sn 22 42 18.5 +3.1
5µm2µm135nm,1.4s
CMIG Matias Romero 9.68 303 P Pn 22 40 59.8 +1.7
38nm,0.4s,baz=138,slow=9.7,SNR=110
CMIG S Sn 22 42 42.0 -3.7
24nm,0.3s,baz=309,slow=19,SNR=9.1
APAC Apartado, Choc 10.46 112 P Pn 22 41 11.0 +2.6
5µm2µm158nm,1.1s
APAC S S 22 43 08.9 +3.3
5µm2µm158nm,1.1s
MTDJ Mount Denham 10.57 53 Pn Pn 22 41 10.4 +0.5
DBBC Dabeiba 11.17 115 P Pn 22 41 20.2 +2.5
SJCC San Jacinto, C 11.19 99 P Pn 22 41 15.6 -2.4
UREC San Jos de Ur 11.48 110 P Pn 22 41 22.2 +0.5
5µm2µm227nm,0.7s
CBOC Ciudad Bolivar 11.90 120 P P 22 41 30.5 -3.0
901nm101nm,1.0s
HELC Santa Helena 12.15 117 P Pn 22 41 33.6 +2.9
925nm105nm,0.9s
PLMC San Jos del P 12.20 124 P Pn 22 41 32.6 +1.5
854nm58nm,1.2s
CHIV Chiviricu 12.46 49 Pn Pn 22 41 34.9 +0.6
JAMC Jamundi, Valle 12.96 131 P P 22 41 43.2 -2.1
4µm1µm184nm,0.8s
TLIG Tlapa 13.03 297 Pn 22 41 43.4 +1.6
OCAC Ocana 13.38 105 P Pn 22 41 46.5 +0.3
5µm10µm1µm,0.6s
GTBY Guantanamo Bay 13.42 52 Pn 22 41 47.2 +0.7
ORTC Ortega, Tolima 13.62 125 P P 22 41 52.5 +0.1
ROSC El Rosal 13.87 120 P P 22 41 56.5 +0.9
342nm,0.9s,baz=276,slow=2.5,SNR=43
ROSC El Rosal 13.87 120 Pn Pn 22 41 53.6 +1.1
NMDO Nuevo Mundo 13.88 51 P 22 41 53.8 -1.4
SLOR San Lorenzo - 14.84 148 Pn P 22 42 05.9 -0.6
SDV Santo Domingo 15.79 100 P Pn 22 42 14.0 -2.2
124nm,1.0s,baz=280,slow=7.1,SNR=75
SDV S S 22 45 05.7 -6.7
7.7nm,0.6s,baz=162,slow=14,SNR=1.6
SDV Santo Domingo 15.79 100 P 22 42 17.1 +0.4
SDV Santo Domingo 15.79 100 eP Pn 22 42 13.9 -2.2
060A Indiantown 16.03 20 P 22 42 19.2 +0.2
SDDR Presa de Saban 16.13 62 P 22 42 21.5 +1.2
DWPF Disney Wildern 16.72 15 P Pn 22 42 27.0 -0.2
GRTK Grand Turk 17.41 55 P 22 42 33.6 -0.6

553A Crawfordville 18.23 5 P 22 42 44.1 +0.9
ZAIG Zacatecas 18.80 307 P Pn 22 42 51.2 -0.9
HBVL Hebbronville 18.95 324 P Pn 22 42 52.4 -1.1
346A Big Creek Wild 19.54 352 P P 22 42 58.4 +1.1
441A DeRidder 19.73 342 P P 22 43 00.8 +1.4
735A Kenedy 19.91 329 P P 22 43 02.6 +1.3
HKT Hockley 19.94 335 P 22 43 02.3 +0.8
CELP Cerrillos 20.06 70 P P 22 43 04.1 +1.0
SJG San Juan 20.47 70 P P 22 43 07.9 +0.5
153nm,0.8s,baz=279,slow=5.2,SNR=30
SJG San Juan 20.47 70 P P 22 43 08.3 +0.9
SJG San Juan 20.47 70 eP P 22 43 04.7 -2.7
SJG x x 22 46 53.7
ATAH Atahualpa 20.57 157 P Pn 22 43 11.6 -1.8
101nm,0.8s,baz=347,slow=6.8,SNR=40
ATAH PcP PcP 22 47 15.1 +1.8
8.3nm,0.8s,baz=315,slow=4.3,SNR=4.0
ATAH ScP ScP 22 50 35.6 +1.1
4.6nm,0.8s,baz=333,slow=2.3,SNR=4.0
101nm,0.8s
HUMP Col San Antoni 20.75 70 P P 22 43 11.3 +0.9
LRAL Lakeview Retre 20.98 359 P 22 43 14.0 +1.2
Y49A Blount Mountai 21.80 360 P 22 43 22.6 +1.2
NHSC New Hope 21.80 14 P 22 43 22.7 +1.3
Y52A Lilburn 21.91 5 IAmb IAmb 22 43 26.1
comp=Z,181nm,1.1s
Z41A Richland Creek 22.00 346 IAmb IAmb 22 43 25.9
comp=Z,169nm,1.1s
JCT Junction City 22.23 328 IAmb IAmb 22 43 28.9
comp=Z,29nm,0.8s
WHTX Lake Whitney, 22.39 335 IAmb IAmb 22 43 30.2
comp=Z,40nm,0.4s
X48A Hartselle 22.40 359 IAmb IAmb 22 43 30.2
comp=Z,47nm,0.8s
CCAR Cane Creek 22.41 348 IAmb IAmb 22 43 29.9
comp=Z,122nm,0.9s
WLAR White Oak Lake 22.49 345 IAmb IAmb 22 43 31.3
comp=Z,108nm,0.9s
BRDY Brady 22.49 331 IAmb IAmb 22 43 30.8
comp=Z,32nm,0.6s
FPAL Fort Paine 22.49 2 P P 22 43 29.4 +1.2
FPAL IAmb IAmb 22 43 31.1
comp=Z,46nm,0.7s
X51A Calhoun 22.55 3 IAmb IAmb 22 43 32.4
comp=Z,103nm,0.6s
Z38A Mt. Pleasant 22.62 341 IAmb IAmb 22 43 32.6
comp=Z,97nm,0.7s
Y57A Sumter 22.63 13 P P 22 43 30.5 +1.2
FW13 Cleburne 22.70 335 IAmb IAmb 22 43 33.1
comp=Z,55nm,0.7s
SGC2 Sao Gabriel da 22.71 121 eP P 22 43 29.7 -0.7
SABA Saba 23.06 73 eP P 22 43 24.5 -9.0
SABA x x 22 47 42.7
SAND Sanderson 23.12 323 P P 22 43 35.3 +1.3
PAULI Pauline 23.14 10 IAmb IAmb 22 43 36.9
comp=Z,104nm,0.7s
W52A Murphy 23.14 5 IAmb IAmb 22 43 36.9
comp=Z,86nm,0.6s
BG3 Lake Jocassee 23.14 7 IAmb IAmb 22 43 37.1
comp=Z,95nm,0.7s
X40A Basin Creek Fa 23.18 346 IAmb IAmb 22 43 37.2
comp=Z,30nm,0.9s
SEUS St. Eustatius 23.28 74 eP P 22 43 29.8 -5.7
SEUS x x 22 47 51.9
OZNA Ozona 23.28 326 IAmb IAmb 22 43 39.2
comp=Z,38nm,0.6s
FW06 Azle 23.29 336 IAmb IAmb 22 43 38.9
comp=Z,77nm,0.9s
SMRT St. Maarten 23.30 72 eP P 22 43 25.8 -10
SMRT x x 22 47 59.2
UALR University of 23.35 348 IAmb IAmb 22 43 38.2
comp=Z,98nm,0.8s
MIAR Mount Ida 23.42 345 IAmb IAmb 22 43 39.4
comp=Z,61nm,0.8s
PLPT Palo Pinto 23.47 334 P P 22 43 38.4 +1.3
PLPT IAmb IAmb 22 43 40.6
comp=Z,45nm,0.6s
Z35A Perchaven, San 23.48 337 IAmb IAmb 22 43 40.7
comp=Z,82nm,0.9s
TXAR Lajitas Array 23.62 320 P P 22 43 40.1 +1.5
comp=Z,38nm,0.6s,baz=140,slow=8.1,SNR=271
TXAR PcP PcP 22 47 20.6 +1.7
comp=Z,14nm,1.0s,baz=144,slow=4.5,SNR=16
TXAR ScP ScP 22 50 43.0 +1.4
comp=Z,1.7nm,0.5s,baz=148,slow=6.3,SNR=18
comp=Z,38nm,0.6s
TXAR Lajitas Array 23.62 320 P P 22 43 40.4 +1.8
TXAR PcP 22 47 19.5 +0.6
TXAR ScP 22 50 43.2 +1.6
TX31 Lajitas Ar. Si 23.62 320 IAmb IAmb 22 43 42.5
comp=Z,52nm,0.7s
V48A Smith Brothers 23.68 359 IAmb IAmb 22 43 42.3
comp=Z,104nm,1.1s
TKL Tuckaleechee C 23.71 5 IAmb IAmb 22 43 43.9
comp=Z,135nm,0.9s
CZSB Cruzeiro do Su 23.82 145 P P 22 43 42.5 +1.9
CZSB Cruzeiro do Su 23.82 145 eP P 22 43 41.9 +1.4
WHAR Wooly Hollow 23.84 348 IAmb IAmb 22 43 43.1
comp=Z,107nm,0.8s
ABTX Abilene, Hawle 23.90 331 IAmb IAmb 22 43 44.9
comp=Z,59nm,0.9s
HALT Halls 24.00 354 IAmb IAmb 22 43 47.3
comp=Z,73nm,0.6s
CLTN Cedars of Leba 24.03 0 IAmb IAmb 22 43 46.5
comp=Z,61nm,0.7s
LOOK Love County 24.04 338 IAmb IAmb 22 43 47.9
comp=Z,98nm,1.0s
SGCY Sterling City 24.06 328 IAmb IAmb 22 43 46.6
comp=Z,34nm,0.8s
WVT Waverly 24.10 357 P P 22 43 43.4 +0.7
WVT IAmb IAmb 22 44 04.8
comp=Z,18nm,0.6s
GNAR Gosnell 24.13 353 IAmb IAmb 22 43 45.0
comp=Z,168nm,1.3s
GRGR Grenville 24.18 87 eP P 22 43 41.3 -2.5
GRGR x x 22 47 57.6
W59A Clinton 24.20 16 IAmb IAmb 22 43 46.1
comp=Z,61nm,0.7s
DHSZ Broadband at M 24.25 77 eP P 22 43 42.6 -1.7
PEBM Pemiscott Bayo 24.25 353 IAmb IAmb 22 43 48.3
comp=Z,69nm,0.8s
MMLZ Guadeloupe Bro 24.31 78 eP P 22 43 42.6 -2.3
ALPN Alpine 24.32 322 IAmb IAmb 22 43 47.4
comp=Z,27nm,0.8s
WTFS Witchita Falls 24.35 335 IAmb IAmb 22 43 48.9
comp=Z,40nm,0.7s
TMB01 Midkiff 24.38 326 IAmb IAmb 22 43 49.2
comp=Z,38nm,0.9s
FCAR Ozark Folk Cen 24.39 349 IAmb IAmb 22 43 46.8
comp=Z,47nm,0.9s
LCAR Lake Charles 24.39 351 IAmb IAmb 22 43 46.9
comp=Z,75nm,0.9s
ANWB Willy Bob 24.43 74 eP P 22 43 42.6 -3.4
U49A Red Boiling Sp 24.45 1 IAmb IAmb 22 43 50.9
comp=Z,82nm,0.9s
DSLB Salisbury 24.49 79 eP P 22 43 40.0 -6.6
MNHN Monahans 24.51 324 IAmb IAmb 22 44 26.2
comp=Z,69nm,0.8s
TPB05 Hovey Rd 24.53 323 IAmb IAmb 22 43 50.2
comp=Z,31nm,0.7s
TRN Trinidad (W) 24.53 91 i P P 22 43 34.8 -12
DWS Wesley 24.61 79 eP P 22 43 47.1 -0.6
DWS x x 22 48 15.5
TZTN Tazewell 24.61 5 IAmb IAmb 22 43 53.0
comp=Z,102nm,0.8s
CXM Morne La Croix 24.69 81 P P 22 43 49.5 +1.0
CXM IAmb IAmb 22 43 52.7
comp=Z,139nm,0.9s
SVN Savane Anatole 24.69 80 eP P 22 43 44.4 -4.1
SVN x x 22 48 27.7
APMT Aspermont 24.71 332 IAmb IAmb 22 43 52.3
comp=Z,32nm,0.7s
BIM Bigot 24.77 81 P P 22 43 50.5 +1.4
BIM Bigot 24.77 81 eP P 22 43 45.5 -3.6
BIM x x 22 48 01.3
TPB01 Permian Basin 24.82 322 IAmb IAmb 22 43 52.5
comp=Z,23nm,0.9s
X34A Smith Ranch, M 24.83 337 IAmb IAmb 22 44 31.3
comp=Z,59nm,0.8s
SLBI Saint Lucia, B 24.84 82 eP P 22 43 46.6 -3.2
SLBI x x 22 48 08.6
T47A Sharon Grove 24.93 359 IAmb IAmb 22 43 53.1
comp=Z,73nm,0.8s
W35A Tecumseh 24.98 339 IAmb IAmb 22 43 51.7
comp=Z,30nm,0.6s
ODSA Odessa 24.98 326 IAmb IAmb 22 43 56.0

comp=Z,55nm,0.9s
TPB06 Permian Basin 25.00 324 IAmb IAmb 22 43 54.6
comp=Z,68nm,0.7s
129A Stewart Farms, 25.01 328 IAmb IAmb 22 43 56.6
comp=Z,39nm,0.9s
HHAR Hobbs 25.16 346 IAmb IAmb 22 43 53.8
comp=Z,44nm,0.8s
POST Post 25.16 329 IAmb IAmb 22 43 58.0
comp=Z,37nm,0.8s
FNO Franklin 25.26 338 IAmb IAmb 22 43 55.0
comp=Z,67nm,0.6s
TPB13 Reeves - Culbe 25.29 323 IAmb IAmb 22 43 58.3
comp=Z,60nm,0.6s
TUL3 Leonard 25.32 342 IAmb IAmb 22 43 55.0
comp=Z,66nm,0.7s
T42A Van Buren 25.32 351 IAmb IAmb 22 43 55.2
comp=Z,64nm,0.8s
WMOK Wichita Mounta 25.32 336 IAmb IAmb 22 43 58.4
comp=Z,58nm,0.9s
RLO Rose Lookout 25.33 343 IAmb IAmb 22 43 55.1
comp=Z,29nm,0.6s
DKNS Dickens 25.37 331 IAmb IAmb 22 44 00.1
comp=Z,26nm,0.7s
U38A Gravette 25.42 345 IAmb IAmb 22 43 56.1
comp=Z,57nm,0.9s
VHRN Van Horn 25.44 320 IAmb IAmb 22 43 58.0
comp=Z,24nm,0.9s
DEOK Depew 25.48 341 IAmb IAmb 22 43 56.1
comp=Z,50nm,0.9s
NNA Nana 25.61 158 P P 22 43 57.9 +1.2
comp=Z,44nm,0.8s,baz=336,slow=8.2,SNR=18
NNA PcP PcP 22 47 23.9 +0.5
comp=Z,9.9nm,0.6s,baz=291,slow=3.8,SNR=4.8
comp=Z,44nm,0.8s
NNA Nana 25.61 158 P P 22 43 59.3 +2.6
NNA IAmb IAmb 22 44 00.2
comp=Z,65nm,0.9s
NNA PcP 22 47 24.3 +0.9
S51A Beattyville 25.69 5 IAmb IAmb 22 43 59.9
comp=Z,53nm,0.7s
S44A Carbondale 25.75 355 IAmb IAmb 22 43 59.7
comp=Z,67nm,0.8s
OK029 Liberty Lake 25.76 339 IAmb IAmb 22 43 59.0
comp=Z,46nm,0.6s
TPB28 25.76 322 IAmb IAmb 22 44 02.2
comp=Z,11nm,0.8s
USIN University of 25.92 358 IAmb IAmb 22 44 01.4
comp=Z,58nm,0.8s
S54A Dingess, Beckl 26.13 9 IAmb IAmb 22 44 04.0
comp=Z,52nm,0.8s
T59A Double "B" Far 26.14 16 IAmb IAmb 22 44 04.2
comp=Z,118nm,1.1s
OK048 Pawnee Station 26.15 340 IAmb IAmb 22 44 38.4
comp=Z,49nm,0.9s
WCI Wyandotte Cave 26.16 0 P P 22 44 02.3 +0.9
FVM French Village 26.17 353 IAmb IAmb 22 44 03.6
comp=Z,13nm,0.7s
OK051 E0350 and S346 26.19 341 IAmb IAmb 22 44 40.9
comp=Z,47nm,0.8s
R49A Shelbyville 26.25 2 IAmb IAmb 22 44 04.4
comp=Z,69nm,0.8s
R50A Paris 26.28 4 IAmb IAmb 22 44 05.1
comp=Z,64nm,0.9s
CCM Cathedral Cave 26.35 351 P P 22 44 04.1 +1.0
CCM IAmb IAmb 22 44 04.5
comp=Z,61nm,0.8s
S39A Bolivar 26.37 348 IAmb IAmb 22 44 04.6
comp=Z,47nm,0.7s
T35A Sooner Cattle 26.47 342 IAmb IAmb 22 44 05.4
comp=Z,23nm,0.8s
MSTX Muleshoe 26.53 328 IAmb IAmb 22 44 44.3
comp=Z,38nm,0.9s
S57A Dark Hollow, R 26.54 13 IAmb IAmb 22 44 07.1
comp=Z,52nm,0.7s
BLOK Blackwell 26.55 340 IAmb IAmb 22 44 41.8
comp=Z,107nm,1.4s
CROK Carrier 26.58 339 IAmb IAmb 22 44 06.8
comp=Z,33nm,0.8s
OLIL Olney 26.71 357 IAmb IAmb 22 44 08.5
comp=Z,93nm,1.1s
AMTX Amarillo 26.72 331 IAmb IAmb 22 44 17.1
comp=Z,24nm,0.8s
ELIS Ellis County 26.73 336 IAmb IAmb 22 44 49.0
comp=Z,51nm,1.0s
R40A Maddies Statio 26.74 350 IAmb IAmb 22 44 07.7
comp=Z,28nm,0.6s
SLM Saint Louis 26.79 353 IAmb IAmb 22 44 08.6
comp=Z,46nm,1.1s
OK038 West end E0370 26.84 338 IAmb IAmb 22 44 48.3
comp=Z,29nm,0.8s
R58B Mineral 26.99 15 IAmb IAmb 22 44 12.1
comp=Z,101nm,1.2s
BOAV Boa Vista 27.33 108 IAmb IAmb 22 44 12.9
comp=Z,29nm,0.9s
BOAV Boa Vista 27.33 108 eP P 22 44 11.7 -0.5
P40A Paris 27.91 351 IAmb IAmb 22 44 18.4
comp=Z,48nm,1.5s
121A Cookes Peak, D 28.38 320 IAmb IAmb 22 44 26.3
comp=Z,22nm,0.7s
BBSR BB Station 28.46 41 P P 22 44 23.8 +1.9
RTBA Rita Blanca 28.48 332 IAmb IAmb 22 45 06.9
comp=Z,19nm,0.9s
KSU1 Kansas State U 28.52 343 IAmb IAmb 22 44 24.2
comp=Z,66nm,0.9s
R32A Long Quarter, 28.56 339 IAmb IAmb 22 44 24.5
comp=Z,22nm,0.8s
319A Douglas 28.63 316 IAmb IAmb 22 44 27.6
comp=Z,29nm,0.9s
N47A Urbana 28.82 1 IAmb IAmb 22 44 27.6
comp=Z,39nm,0.8s
Y22A Socorro 28.83 323 IAmb IAmb 22 44 28.7
comp=Z,30nm,0.8s
N41A Harden Midland 28.91 353 IAmb IAmb 22 44 26.8
comp=Z,53nm,0.7s
DUN6 Lazy B Ranch 29.23 318 IAmb IAmb 22 44 32.6
comp=Z,52nm,0.8s
ANMO Albuquerque 29.25 325 P P 22 44 31.3 +2.1
N38A Joes South For 29.35 349 IAmb IAmb 22 44 30.5
comp=Z,44nm,0.6s
WUPA West Chester U 29.45 17 IAmb IAmb 22 44 33.7
comp=Z,51nm,0.9s
MACA Manacapuru-AM 29.64 119 eP P 22 44 32.1 -0.4
T25A Trinidad 29.84 330 IAmb IAmb 22 45 40.3
comp=Z,42nm,2.0s
TUC Tucson 30.21 316 P P 22 44 39.5 +1.9
TUC Tucson 30.21 316 P P 22 44 39.5 +1.9
TUC PcP PcP 22 47 36.2 +1.7
TUC ScP ScP 22 51 03.5 +2.1
SCIA State Center 30.43 350 IAmb IAmb 22 44 41.3
comp=Z,43nm,0.7s
CPNY Central Park 30.73 19 IAmb IAmb 22 44 44.3
comp=Z,42nm,0.8s
X18A Snowflake 31.05 320 IAmb IAmb 22 44 49.5
comp=Z,26nm,1.0s
BGNE Belgrade 31.10 343 IAmb IAmb 22 44 46.5
comp=Z,70nm,0.8s
L34A Svendsen Farm, 31.14 346 IAmb IAmb 22 44 46.2
comp=Z,54nm,0.7s
W18A Petrified Fore 31.30 321 IAmb IAmb 22 44 50.8
comp=Z,37nm,0.8s
X16A Lo Mia Camp, P 31.93 319 IAmb IAmb 22 44 57.1
comp=Z,19nm,0.8s
OGNE Ogallala 31.98 337 IAmb IAmb 22 44 57.4
comp=Z,25nm,0.8s
MVCO Mesa Verde 32.03 325 IAmb IAmb 22 45 34.6
comp=Z,15nm,0.8s
MVCO Mesa Verde 32.03 325 P P 22 44 55.4 +1.8
ISCO Idaho Springs 32.53 332 P P 22 44 59.3 +1.2
M65A Busby, Falmout 32.55 22 P P 22 44 58.1 +0.3
baz=210
WUAZ Wupatki 32.58 320 IAmb IAmb 22 45 02.5
comp=Z,23nm,0.9s
L64A Middleborough 32.81 22 IAmb IAmb 22 45 05.0
comp=Z,64nm,0.8s
ECSD EROS Data Cent 32.87 346 IAmb IAmb 22 45 01.2
comp=Z,38nm,0.8s
ECSD EROS Data Cent 32.87 346 P P 22 45 00.3 -0.3
PV02 Paradox Valley 32.88 327 IAmb IAmb 22 45 03.4
comp=Z,33nm,1.5s
PV03 Paradox Valley 32.98 326 IAmb IAmb 22 45 04.4
comp=Z,13nm,0.6s
PV05 Paradox Valley 32.98 326 IAmb IAmb 22 45 04.2
comp=Z,12nm,0.6s
PV12 Saucer Basin, 33.00 327 IAmb IAmb 22 45 44.6
comp=Z,35nm,0.8s
PV18 Skein Mesa, Pa 33.00 326 IAmb IAmb 22 45 04.6
comp=Z,45nm,0.5s
PV11 David Mesa, Pa 33.02 326 IAmb IAmb 22 45 44.8

comp=Z,19nm,0.7s
WES Weston 33.03 21 IAmb IAmb 22 45 04.9
comp=Z,63nm,0.9s
BCX Boston College 33.04 21 IAmb IAmb 22 45 05.1
comp=Z,57nm,0.8s
PV16 Nyswonger Mesa 33.05 326 IAmb IAmb 22 45 04.7
comp=Z,13nm,0.7s
PV17 East Wray Mesa 33.05 326 IAmb IAmb 22 45 05.0
comp=Z,22nm,0.6s
HRV Adam Dziewonsk 33.06 20 P **P** **22 45 03.9 +1.7**
HRV IAmb IAmb 22 45 05.2
comp=Z,89nm,1.2s
PV19 Morning Glory 33.09 326 IAmb IAmb 22 45 05.2
comp=Z,26nm,0.6s
PV20 West Nyswonger 33.10 326 IAmb IAmb 22 45 05.0
comp=Z,21nm,0.7s
PV22 Blue Mesa, Par 33.15 327 IAmb IAmb 22 45 06.2
comp=Z,30nm,1.5s
PV10 Paradox Valley 33.17 326 IAmb IAmb 22 45 05.4
comp=Z,23nm,0.6s
PV23 Carpenter Ridg 33.21 327 IAmb IAmb 22 45 45.8
comp=Z,25nm,0.8s
DELO Deloro Mine 33.31 11 IAmb IAmb 22 45 07.3
comp=Z,42nm,0.8s
G40A Rib Lake 33.35 355 IAmb IAmb 22 45 05.7
comp=Z,72nm,0.8s
LPAZ La Paz 33.37 147 P **P** **22 45 06.6 +0.7**
comp=Z,17nm,0.7s,baz=331,slow=7.8,SNR=100
LPAZ ScP **ScP** **22 51 14.4 +1.5**
comp=Z,1.6nm,0.7s,baz=317,slow=4.8,SNR=3.6
LPAZ LR LR 22 59 38.3
comp=Z,148nm,20.9s,baz=308,slow=38
comp=Z,17nm,0.7s
LPAZ La Paz 33.37 147 P **P** **22 45 07.2 +1.2**
LPAZ IAmb IAmb 22 45 08.1
comp=Z,18nm,0.8s
LPAZ ScP **ScP** **22 51 14.3 +1.4**
LPAZ La Paz 33.37 147 *e*P **P** **22 45 07.0 +1.1**
LPAZ La Paz 33.37 147 P **P** **22 45 07.2 +1.2**
LPAZ La Paz 33.37 147 P **P** **22 45 07.2 +1.2**
NCB Newcomb 33.58 16 IAmb IAmb 22 45 09.7
comp=Z,54nm,0.7s
F42A Maple Grove Fa 33.72 358 IAmb IAmb 22 45 08.4
comp=Z,37nm,0.6s
PB18 Visviri 33.77 150 P **P** **22 45 12.0 +2.7**
HMU Henry Mountain 33.81 324 IAmb IAmb 22 45 13.0
comp=Z,34nm,1.1s
PB12 IPOC Station P 34.26 152 IAmb IAmb 22 45 16.4
comp=Z,51nm,0.9s
PB12 IPOC Station P 34.26 152 P **P** **22 45 14.8 +1.8**
E46A Sault Ste Mari 34.34 3 IAmb IAmb 22 45 15.2
comp=Z,19nm,0.7s
PKCU Pink Cliffs 34.40 322 IAmb IAmb 22 45 18.2
comp=Z,44nm,1.0s
PB16 IPOC Station P 34.40 151 IAmb IAmb 22 45 19.8
comp=Z,77nm,0.8s
PB16 IPOC Station P 34.40 151 P **P** **22 45 17.4 +2.7**
SRU San Rafael Swe 34.50 326 IAmb IAmb 22 45 17.7
comp=Z,40nm,1.3s
ITTB Itaituba 34.52 116 *e*P **P** **22 45 14.1 -1.1**
FRNY Flat Rock 34.55 16 IAmb IAmb 22 45 17.4
comp=Z,82nm,1.1s
P17A Butcher Ranch, 34.88 326 IAmb IAmb 22 45 59.4
comp=Z,27nm,0.9s
PFO Pinyon Flats O 34.90 313 P **P** **22 45 19.7 +1.3**
H62A Milan 35.03 19 IAmb IAmb 22 45 22.1
comp=Z,69nm,0.8s
PSGCX Pisagua 35.21 153 IAmb IAmb 22 45 24.4
comp=Z,98nm,1.5s
PSGCX Pisagua 35.21 153 P **P** **22 45 23.6 +2.5**
TCRU Three Creeks R 35.25 323 IAmb IAmb 22 45 25.2
comp=Z,15nm,0.8s
RSSD Black Hills 35.47 338 P **P** **22 45 24.7 +1.4**
RSSD IAmb IAmb 22 45 26.7
comp=Z,9.0nm,0.5s
RSSD Black Hills 35.47 338 P **P** **22 45 24.5 +1.3**
RSSD Black Hills 35.47 338 P **P** **22 45 25.1 +1.9**
RSSD PcP **PcP** **22 47 50.1 +1.1**
RSSD ScP **ScP** **22 51 19.7 +0.2**
PB11 IPOC Station P 35.56 152 P **P** **22 45 26.1 +1.8**
PB11 IAmb IAmb 22 45 32.5
comp=Z,62nm,0.8s
PB11 IPOC Station P 35.56 152 P **P** **22 45 26.3 +2.1**
GO01 Chusmiza 35.70 151 IAmb IAmb 22 45 29.6
comp=Z,60nm,0.9s
GO01 Chusmiza 35.70 151 P **P** **22 45 28.6 +2.8**
MPU Maple Canyon 35.75 326 IAmb IAmb 22 45 28.9
comp=Z,15nm,0.8s
TA02 Huaiquique 35.80 153 P **P** **22 45 28.2 +2.2**
VILB Vilhena 35.88 133 *e*P **P** **22 45 26.5 -0.4**
PSUT Pine Spring 36.03 322 IAmb IAmb 22 45 32.2
comp=Z,16nm,0.8s
PB08 IPOC Station P 36.13 152 IAmb IAmb 22 45 32.9
comp=Z,95nm,1.6s
PB08 IPOC Station P 36.13 152 P **P** **22 45 31.8 +2.6**
EYMN Ely 36.13 354 IAmb IAmb 22 45 28.9
comp=Z,32nm,0.9s
EYMN Ely 36.13 354 P **P** **22 45 27.4 -1.1**
NPGB Novo Progresso 36.17 120 *e*P **P** **22 45 27.4 -2.0**
EMMW East Machias 36.45 23 IAmb IAmb 22 45 34.1
comp=Z,48nm,0.8s
DUG Dugway, Tooele 36.53 325 P **P** **22 45 34.1 +1.9**
CCCA Chr Cany lake 36.54 315 IAmb IAmb 22 45 44.0
comp=Z,23nm,0.5s
E28A Huff 36.57 343 IAmb IAmb 22 45 33.3
comp=Z,41nm,1.0s
TPNV Topopah Spring 36.58 318 IAmb IAmb 22 45 37.5
comp=Z,18nm,0.9s
S11A Rachel 36.66 319 IAmb IAmb 22 45 38.2
comp=Z,30nm,1.0s
PDAR Pinedale Array 36.70 331 P **P** **22 45 34.4 +0.7**
comp=Z,4.2nm,0.5s,baz=132,slow=10,SNR=44
PDAR pP **pP** **22 46 10.4 +1.2**
comp=Z,3.9nm,0.8s,baz=133,slow=11,SNR=3.8
PDAR PcP **PcP** **22 47 53.3 +0.5**
comp=Z,1.8nm,0.5s,baz=135,slow=5.5,SNR=6.4
PDAR ScP **ScP** **22 51 24.1 0.0**
comp=Z,1.6nm,0.5s,baz=130,slow=6.5,SNR=12
PDAR PKiKP **PKiKP** **22 55 10.1 -0.7**
comp=Z,0.7nm,0.6s,baz=227,slow=0.5,SNR=4.3
comp=Z,4.2nm,0.5s
PDAR Pinedale Array 36.70 331 P **P** **22 45 34.4 +0.7**
PDAR **PcP** **22 47 54.1 +1.3**
PDAR **ScP** **22 51 23.9 -0.3**
FURC Furnace Creek, 36.71 317 IAmb IAmb 22 45 37.3
comp=Z,20nm,0.9s
VLDQ Val d'Or 36.81 10 IAmb IAmb 22 45 36.4
comp=Z,76nm,1.2s
PB02 IPOC Station P 36.82 154 IAmb IAmb 22 45 38.5
comp=Z,39nm,0.5s
PB02 IPOC Station P 36.82 154 P **P** **22 45 37.3 +2.4**
HWUT Hardware Ranch 36.84 328 IAmb IAmb 22 46 16.5
comp=Z,23nm,0.8s
HWUT Hardware Ranch 36.84 328 P **P** **22 45 36.1 +1.3**
GGN Saint George 37.03 23 IAmb IAmb 22 45 39.1
comp=Z,54nm,0.9s
AGMN Agassiz Nation 37.08 349 IAmb IAmb 22 45 37.9
comp=Z,105nm,1.1s
AGMN Agassiz Nation 37.08 349 P **P** **22 45 36.4 -0.2**
PB07 IPOC Station P 37.19 154 P **P** **22 45 40.5 +2.5**
SIV San Ignacio 37.40 137 P **P** **22 45 39.8 +0.1**
comp=Z,53nm,0.6s,baz=304,slow=8.0,SNR=308
SIV ScP **ScP** **22 51 27.2 +0.4**
comp=Z,2.6nm,0.9s,baz=194,slow=8.9,SNR=5.0
comp=Z,53nm,0.6s
AHID Auburn Hatcher 37.45 330 IAmb IAmb 22 46 21.5
comp=Z,19nm,0.8s
AHID Auburn Hatcher 37.45 330 P **P** **22 45 41.1 +1.0**
PB03 IPOC Station P 37.53 154 IAmb IAmb 22 45 44.3
comp=Z,120nm,1.3s
PB03 IPOC Station P 37.53 154 P **P** **22 45 43.2 +2.4**
PB09 IPOC Station P 37.53 153 IAmb IAmb 22 45 45.3
comp=Z,97nm,1.0s
PB09 IPOC Station P 37.53 153 P **P** **22 45 43.6 +2.8**
ECR Eagle Creek 37.80 330 IAmb IAmb 22 45 44.6
comp=Z,12nm,0.7s
SNOW Snow King Moun 37.80 331 IAmb IAmb 22 46 25.2
comp=Z,28nm,0.8s
VES Vestal, Richgr 37.90 314 IAmb IAmb 22 45 47.5
comp=Z,33nm,1.0s
CLDB Colider 37.92 126 *e*P **P** **22 45 41.8 -2.3**
CLDB Colider 37.92 126 P **P** **22 45 42.0 -2.0**
TIN Tinemaha, Big 37.95 317 IAmb IAmb 22 45 50.1
comp=Z,16nm,0.7s
HAL Halifax 37.98 27 IAmb IAmb 22 45 47.2
comp=Z,70nm,0.9s

PB05 IPOC Station P 38.06 155 IAmb IAmb 22 45 48.6
comp=Z,49nm,1.1s
PB05 IPOC Station P 38.06 155 P **P** **22 45 47.6 +2.4**
EPLO Experimental L 38.09 352 IAmb IAmb 22 45 45.3
comp=Z,82nm,1.1s
PB06 IPOC Station P 38.19 154 IAmb IAmb 22 45 49.6
comp=Z,100nm,1.3s
PB06 IPOC Station P 38.19 154 P **P** **22 45 49.1 +2.7**
FLWY Flagg Ranch 38.24 331 IAmb IAmb 22 46 27.2
comp=Z,15nm,0.9s
ELK Elko 38.27 324 IAmb IAmb 22 45 50.4
comp=Z,13nm,0.8s
PTLB Pontes e Lacer 38.33 135 IAmb IAmb 22 45 49.8
comp=Z,12nm,0.7s
PTLB Pontes e Lacer 38.33 135 *e*P **P** **22 45 46.8 -0.6**
LAO LASA Array 38.46 338 IAmb IAmb 22 45 50.0
comp=Z,16nm,0.8s
BBSD Serra de San D 38.56 138 *e*P **P** **22 45 49.2 -0.2**
NV11 Mina Array Sit 38.66 319 IAmb IAmb 22 45 53.8
comp=Z,21nm,0.9s
NVAR Mina Array Bea 38.76 318 P **P** **22 45 52.6 +1.5**
comp=Z,16nm,0.7s,baz=129,slow=7.3,SNR=91
NVAR PcP **PcP** **22 48 00.2 +1.0**
comp=Z,3.7nm,0.7s,baz=143,slow=2.6,SNR=9.1
NVAR ScP **ScP** **22 51 32.3 +0.3**
comp=Z,2.5nm,0.7s,baz=131,slow=4.0,SNR=9.1
comp=Z,16nm,0.7s
NVAR Mina Array Bea 38.76 318 P **P** **22 45 53.4 +2.3**
NVAR **PcP** **22 48 00.4 +1.1**
NVAR **ScP** **22 51 33.2 +1.2**
LHV Little Huntoon 38.79 318 IAmb IAmb 22 45 55.1
comp=Z,18nm,0.9s
ULM Lac du Bonnet 38.97 350 P **P** **22 45 51.4 -0.9**
comp=Z,39nm,0.8s,baz=165,slow=8.4,SNR=44
ULM PcP **PcP** **22 47 59.1 -0.2**
comp=Z,10nm,0.7s,baz=110,slow=3.4,SNR=5.3
ULM ScP **ScP** **22 51 30.8 -1.4**
comp=Z,3.7nm,0.6s,baz=192,slow=2.1,SNR=5.1
comp=Z,39nm,0.8s
ULM Lac du Bonnet 38.97 350 P **P** **22 45 51.5 -0.9**
ULM IAmb IAmb 22 45 52.5
comp=Z,62nm,1.1s
ULM **PcP** **22 47 59.1 -0.2**
ULM **ScP** **22 51 30.8 -1.4**
KVN Kaiserville 38.98 319 IAmb IAmb 22 45 55.9
comp=Z,16nm,0.9s
PMPB Monarch Peak 39.29 314 IAmb IAmb 22 45 59.2
comp=Z,20nm,0.9s
WAKR Walker 39.54 318 IAmb IAmb 22 46 01.3
comp=Z,21nm,0.9s
PB14 IPOC Station P 39.57 157 P **P** **22 46 00.3 +2.3**
HLID Hailey 39.71 328 IAmb IAmb 22 46 02.2
comp=Z,12nm,0.7s
HLID Hailey 39.71 328 P **P** **22 46 00.2 +1.3**
PNTR Pine Nut 39.97 318 IAmb IAmb 22 46 04.8
comp=Z,23nm,0.8s
MHC Mount Hamilton 40.43 315 P **P** **22 46 06.7 +1.9**
PRPB Parauapebas 40.58 114 *e*P **P** **22 46 04.5 -1.8**
ICQ Pointe Anglais 40.65 19 P **P** **22 46 06.8 +0.7**
AC01 Pan de Azucar 40.87 158 IAmb IAmb 22 46 10.8
comp=Z,41nm,0.6s
BEKR Beckworth 40.88 319 IAmb IAmb 22 46 12.4
comp=Z,22nm,0.9s
SALTA 40.95 151 P **P** **22 46 12.4 +2.8**
SALV Santo Antonio 41.09 132 *e*P **P** **22 46 08.8 -1.4**
WVOR Wild Horse Val 41.32 323 IAmb IAmb 22 46 14.4
comp=Z,33nm,1.0s
WVOR Wild Horse Val 41.32 323 P **P** **22 46 13.3 +1.4**
ORV Oroville 41.46 318 P **P** **22 46 15.2 +2.2**
SUTB Sutter Butte 41.48 317 IAmb IAmb 22 46 16.0
comp=Z,29nm,0.8s
AC02 Maricunga 42.05 157 IAmb IAmb 22 46 22.5
comp=Z,120nm,1.2s
AC02 Maricunga 42.05 157 P **P** **22 46 21.6 +3.1**
HATC Hat Creek Radi 42.11 319 IAmb IAmb 22 46 21.0
comp=Z,20nm,0.8s
SNDB Serra Nova Dou 42.18 123 *e*P **P** **22 46 18.1 -1.0**
GO03 Copiapo 42.32 158 P **P** **22 46 22.0 +1.9**
GO03 IAmb IAmb 22 46 23.8
comp=Z,36nm,0.8s
GO03 Copiapo 42.32 158 P **P** **22 46 22.4 +2.2**
COIM Forte Coimbra 42.37 138 *e*P **P** **22 46 19.7 -0.9**
M03C Mcd Lod 42.78 320 IAmb IAmb 22 46 25.7
comp=Z,16nm,0.7s
PP1B Ponte de Pedra 42.79 133 *e*P **P** **22 46 23.3 -0.7**
K05A Summer Lake 42.83 322 P **P** **22 46 25.0 +0.7**
G08A Pilot Rock 43.29 326 P **P** **22 46 28.6 +0.7**
LNOR Lincton Mounta 43.30 327 P **P** **22 46 29.0 +1.1**
L04D Klamath Falls 43.41 321 IAmb IAmb 22 46 30.5
comp=Z,31nm,0.9s
BDQN Bodoquena, MS 43.44 138 *e*P **P** **22 46 28.8 -0.4**
AC05 El Transito 43.44 159 IAmb IAmb 22 46 32.5
comp=Z,154nm,1.3s
AC05 El Transito 43.44 159 P **P** **22 46 31.7 +2.4**
LCO Las Campanas 43.46 160 P **P** **22 46 31.7 +2.1**
LCO IAmb IAmb 22 46 32.6
comp=Z,149nm,1.4s
LCO Las Campanas 43.46 160 P **P** **22 46 31.6 +2.0**
LCO PcP **PcP** **22 48 16.0 +1.2**
LCO ScP **ScP** **22 51 52.2 +1.5**
PINE Pine Mountain 43.48 323 IAmb IAmb 22 46 32.2
comp=Z,27nm,0.9s
KHMM Horse Mountain 43.60 318 IAmb IAmb 22 46 33.0
comp=Z,17nm,0.7s
MURT Porto Murtinho 43.75 140 *e*P **P** **22 46 30.8 -0.9**
SMTB Santa Maria do 43.76 116 *e*P **P** **22 46 30.6 -1.3**
JCC Jacoby Creek, 43.77 318 P **P** **22 46 33.4 +1.8**
JCC IAmb IAmb 22 46 35.0
comp=Z,49nm,1.1s
J04A Umpqua Nationa 43.85 322 IAmb IAmb 22 46 35.1
comp=Z,54nm,0.9s
ARAG Araguaiana, MT 43.89 128 *e*P **P** **22 46 31.2 -1.7**
I05D Terrebonne, OR 44.04 324 IAmb IAmb 22 46 37.6
comp=Z,17nm,0.8s
WIFE Three Sisters- 44.15 323 IAmb IAmb 22 46 38.2
comp=Z,31nm,1.2s
AQDB Aquidauana 44.16 137 *e*P **P** **22 46 34.2 -0.7**
DRLN Deer Lake 44.20 27 P **P** **22 46 35.7 +0.8**
I04A Tendick Farm, 44.35 322 IAmb IAmb 22 46 37.6
comp=Z,26nm,0.8s
FFC Flin Flon 44.40 347 P **P** **22 46 36.9 +0.5**
FFC Flin Flon 44.40 347 P **P** **22 46 36.8 +0.4**
CO01 Juntas del Tor 44.55 160 P **P** **22 46 39.8 +1.6**
CO01 IAmb IAmb 22 46 48.2
comp=Z,26nm,1.2s
CO01 Juntas del Tor 44.55 160 P **P** **22 46 40.3 +2.1**
E07A Sunnyside 44.58 327 IAmb IAmb 22 46 40.9
comp=Z,26nm,0.7s
C09A Chrisman Ranch 44.58 330 P **P** **22 46 39.3 +1.3**
H04A Detroit Lake 44.73 324 P **P** **22 46 40.4 +1.1**
H04A IAmb IAmb 22 46 41.9
comp=Z,27nm,0.6s
HOOD Mount Hood Mea 44.80 325 IAmb IAmb 22 46 43.7
comp=Z,104nm,1.0s
MXC Moxie City 44.82 327 IAmb IAmb 22 46 43.5
comp=Z,32nm,1.1s
I03D Drain, OR 44.86 322 IAmb IAmb 22 46 43.0
comp=Z,36nm,1.1s
BUCK Buck Mountain 44.92 323 IAmb IAmb 22 46 42.6
comp=Z,37nm,1.0s
J01E Myrtle Point 44.92 321 P **P** **22 46 42.1 +1.4**
J01E IAmb IAmb 22 46 44.1
comp=Z,32nm,0.8s
EPH Ephrata 44.96 328 IAmb IAmb 22 46 44.9
comp=Z,20nm,1.5s
H04D Lebanon 44.96 323 IAmb IAmb 22 46 42.9
comp=Z,17nm,0.6s
C2SB Chapadao do Su 45.02 132 *e*P **P** **22 46 41.4 -0.4**
CO03 El Pedregal 45.15 161 P **P** **22 46 44.5 +1.8**
CO03 IAmb IAmb 22 46 45.3
comp=Z,41nm,0.8s
CO03 El Pedregal 45.15 161 P **P** **22 46 43.7 +1.0**
G04A Mulino 45.20 324 IAmb IAmb 22 46 45.9
comp=Z,64nm,0.9s
CO02 Combarbal 45.39 161 P **P** **22 46 46.4 +1.8**
CO02 Combarbal 45.39 161 P **P** **22 46 45.3 +0.6**
I02E Swisshome, OR 45.39 322 IAmb IAmb 22 46 47.4
comp=Z,40nm,0.8s
LTY Liberty 45.45 327 P **P** **22 46 46.1 +1.2**
SCHQ Schefferville 45.46 16 P **P** **22 46 44.1 -0.6**
comp=Z,92nm,0.5s,baz=210,slow=6.0,SNR=245
SCHQ PcP **PcP** **22 48 20.0 -0.9**
comp=Z,8.7nm,0.5s,baz=197,slow=3.9,SNR=3.3
comp=Z,92nm,0.5s
SCHQ Schefferville 45.46 16 P **P** **22 46 44.8 +0.1**

SCHQ **PcP** **22 48 20.1 -0.8**
G03D McMinnville, O 45.66 324 IAmb IAmb 22 46 49.0
comp=Z,59nm,0.6s
F04D Rainier, OR 46.02 325 IAmb IAmb 22 46 52.1
comp=Z,50nm,0.9s
CO04 Los Peladeros 46.17 162 IAmb IAmb 22 46 53.8
comp=Z,138nm,1.3s
CO04 Los Peladeros 46.17 162 P **P** **22 46 52.9 +1.9**
F03A Seaside 46.24 324 IAmb IAmb 22 46 55.2
comp=Z,59nm,0.9s
EDM Edmonton 46.45 338 IAmb IAmb 22 46 53.4
comp=Z,21nm,0.9s
ZON Zonda 46.47 159 P **P** **22 46 54.9 +1.9**
ZON IAmb IAmb 22 46 56.5
comp=Z,104nm,1.4s
ZON Zonda 46.47 159 P **P** **22 46 55.8 +2.7**
CFA Coronel Fontan 46.68 159 P **P** **22 46 55.4 +0.8**
comp=Z,7.0nm,0.5s,baz=336,slow=9.0,SNR=22
CFA PcP **PcP** **22 48 26.4 +0.8**
comp=Z,6.4nm,0.8s,baz=313,slow=4.2,SNR=5.2
comp=Z,7.0nm,0.5s
GNW Green Mountain 46.80 327 P **P** **22 46 55.9 +0.6**
BDFB Brasilia 46.84 125 P **P** **22 46 55.1 -1.2**
comp=Z,60nm,0.8s,baz=285,slow=8.0,SNR=88
comp=Z,60nm,0.8s
BDFB Brasilia 46.84 125 IAmb IAmb 22 46 56.1
comp=Z,54nm,0.8s
VA03 San Esteban 46.97 162 P **P** **22 46 59.3 +2.3**
FCC Fort Churchill 47.07 355 P **P** **22 46 57.1 -0.1**
FCC IAmb IAmb 22 46 58.4
comp=Z,15nm,0.6s
SJPY San Joaquin 47.13 141 *e*P **P** **22 46 57.5 -0.7**
MT02 Curacav 47.26 163 P **P** **22 47 01.2 +2.2**
MT02 IAmb IAmb 22 47 02.2
comp=Z,79nm,1.4s
PEL Peldehue 47.29 162 P **P** **22 47 01.1 +1.7**
PEL IAmb IAmb 22 47 01.6
comp=Z,31nm,0.7s
PEL Peldehue 47.29 162 P **P** **22 47 00.8 +1.5**
CPUP Villa Florida 47.40 144 P **P** **22 46 59.5 -0.7**
comp=Z,13nm,0.9s,baz=329,slow=9.5,SNR=26
comp=Z,13nm,0.9s
CPUP Villa Florida 47.40 144 P **P** **22 46 59.9 -0.4**
CPUP IAmb IAmb 22 47 00.1
comp=Z,18nm,0.9s
CPUP Villa Florida 47.40 144 *e*P **P** **22 46 59.7 -0.5**
CPUP Villa Florida 47.40 144 P **P** **22 47 00.1 -0.1**
CPUP Villa Florida 47.40 144 P **P** **22 46 59.6 -0.7**
CPUP PcP **PcP** **22 48 29.1 +0.9**
MT05 Renca 47.50 162 IAmb IAmb 22 47 03.9
comp=Z,103nm,1.1s
NBPS Pedro II - PI 47.54 107 *e*P **P** **22 47 00.3 -1.4**
MT16 CCHEN 47.60 162 IAmb IAmb 22 47 04.7
comp=Z,39nm,0.6s
MT03 Universidad Ad 47.66 162 IAmb IAmb 22 47 05.9
comp=Z,70nm,0.9s
SDBA SAO DESIDERIO 47.76 119 *e*P **P** **22 47 01.2 -2.1**
MT01 Popeta 47.79 163 IAmb IAmb 22 47 04.9
comp=Z,23nm,0.7s
TRCB Terra Rica 47.81 136 *e*P **P** **22 47 01.7 -1.8**
TRCB Terra Rica 47.81 136 P **P** **22 47 01.9 -1.6**
IPMB Ipameri, GO 48.01 128 *e*P **P** **22 47 03.3 -1.8**
BO04 La Punta 48.09 162 IAmb IAmb 22 47 08.4
comp=Z,34nm,1.0s
BO03 Pichilemu 48.19 164 P **P** **22 47 08.1 +1.9**
NBMO Morrinhos-CE 48.50 105 *e*P **P** **22 47 07.8 -1.2**
GO05 Hualane 48.68 164 P **P** **22 47 11.4 +1.5**
GO05 IAmb IAmb 22 47 12.6
comp=Z,105nm,1.1s
GO05 Hualane 48.68 164 P **P** **22 47 11.0 +1.0**
BO02 Sierra Bellavi 48.80 163 P **P** **22 47 12.8 +1.9**
LDASE Londrina, Braz 49.25 136 *e*P **P** **22 47 12.4 -2.1**
PTGB Pitanga 49.50 138 *e*P **P** **22 47 14.7 -1.8**
ML02 Panimavida 49.53 164 P **P** **22 47 18.1 +1.8**
JANB Januaria 49.56 122 *e*P **P** **22 47 14.9 -2.2**
BB19B Bebedouro 49.60 131 *e*P **P** **22 47 15.7 -1.6**
PMNB Patos De Minas 49.70 127 *e*P **P** **22 47 16.7 -1.4**
BI02 San Fabin de 50.41 164 P **P** **22 47 25.0 +1.9**
BI02 IAmb IAmb 22 47 26.2
comp=Z,81nm,1.2s
BI02 San Fabin de 50.41 164 P **P** **22 47 25.0 +1.9**
CANS Sao Roque de M 50.74 129 *e*P **P** **22 47 22.8 -3.1**
PSAL Palomas, Salto 50.94 148 *e*P **P** **22 47 27.7 +0.7**
RCLB Rio Claro- Sao 51.16 132 *e*P **P** **22 47 27.3 -1.6**
NBPN Ponto Novo - B 51.17 114 *e*P **P** **22 47 26.8 -2.3**
ITAB Concordia 51.21 140 *e*P **P** **22 47 28.7 -0.5**
ITAB Concordia 51.21 140 P **P** **22 47 28.4 -0.8**
DIAM Diamantina, MG 51.77 125 *e*P **P** **22 47 31.4 -2.2**
SPB Sao Paulo 51.96 133 *e*P **P** **22 47 32.9 -1.9**
BSCB Bom Sucesso 52.39 128 *e*P **P** **22 47 36.3 -1.8**
ARCA Araçuai, MG 52.41 122 *e*P **P** **22 47 36.7 -1.5**
PET01 Itanhaem-SP 52.51 133 *e*P **P** **22 47 37.1 -1.7**
BLKN Baker Lake 52.72 355 IAmb IAmb 22 47 41.4
comp=Z,32nm,1.0s
RCBR Riachuelo 53.22 107 LR LR 23 11 04.7
comp=Z,35nm,19.5s,baz=264,slow=37
RCBR Riachuelo 53.22 107 P **P** **22 47 44.0 -0.3**
RCBR Riachuelo 53.22 107 *e*P **P** **22 47 43.8 -0.5**
RCBR Riachuelo 53.22 107 P **P** **22 47 44.1 -0.3**
RCBR Riachuelo 53.22 107 P **P** **22 47 44.0 -0.3**
RCBR pP **pP** **22 48 19.8 -2.3**
FRB Frobisher Bay 53.22 10 LR LR 23 09 59.6
comp=Z,236nm,20.6s,baz=216,slow=35
FRB Frobisher Bay 53.22 10 P **P** **22 47 42.5 -1.0**
ANCO Parque Anchore 53.32 151 *e*P **P** **22 47 45.4 +0.8**
LR05 Currie 53.61 166 P **P** **22 47 47.8 +1.3**
NBIT Itapeh - BA 53.63 119 *e*P **P** **22 47 45.3 -1.9**
CMC01 Camacan, BA 53.75 119 *e*P **P** **22 47 46.3 -1.7**
SJMB Sao Joao De Ma 53.99 124 *e*P **P** **22 47 47.5 -2.2**
NBPV Pedro Velho 53.99 107 *e*P **P** **22 47 48.7 -1.1**
GUA01 Guaratinga, BA 54.08 121 *e*P **P** **22 47 48.2 -2.2**
YKAW1 Yellowknife Wh 54.32 344 IAmb IAmb 22 47 51.9
comp=Z,15nm,0.9s
BSFB Barra de Sao F 54.33 124 *e*P **P** **22 47 50.2 -2.0**
BSFB Barra de Sao F 54.33 124 P **P** **22 47 50.4 -1.8**
YKA Yellowknife Ar 54.36 344 P **P** **22 47 51.0 -0.7**
comp=Z,13nm,0.8s,baz=139,slow=7.5,SNR=65
YKA pP **pP** **22 48 28.7 -1.0**
comp=Z,11nm,1.0s,baz=139,slow=7.7,SNR=3.6
YKA PcP **PcP** **22 48 53.4 0.0**
comp=Z,6.2nm,0.8s,baz=150,slow=4.2,SNR=14
YKA ScP **ScP** **22 52 34.0 -2.1**
comp=Z,0.7nm,0.5s,baz=147,slow=4.8,SNR=7.1
YKA LR LR 23 13 04.7
comp=Z,174nm,18.7s,baz=148,slow=38
comp=Z,13nm,0.8s
YKA Yellowknife Ar 54.36 344 P **P** **22 47 51.2 -0.5**
YKAW3 Yellowknife Wh 54.42 344 IAmb IAmb 22 47 53.1
comp=Z,16nm,0.8s
PLCA Paso Flores 54.44 165 P **P** **22 47 53.8 +1.2**
comp=Z,36nm,0.6s,baz=332,slow=7.6,SNR=87
PLCA pP **pP** **22 48 31.8 +1.1**
comp=Z,14nm,1.0s,baz=338,slow=8.6,SNR=2.1
PLCA PcP **PcP** **22 48 54.8 +0.7**
comp=Z,18nm,0.8s,baz=355,slow=3.2,SNR=6.7
comp=Z,36nm,0.6s
PLCA Paso Flores 54.44 165 P **P** **22 47 54.4 +1.8**
PLCA PcP **PcP** **22 48 55.9 +1.7**
PLCA Paso Flores 54.44 165 *e*P **P** **22 47 54.2 +1.5**
PLCA Paso Flores 54.44 165 P **P** **22 47 54.4 +1.8**
PLCA Paso Flores 54.44 165 P **P** **22 47 54.5 +1.8**
PLCA pP **pP** **22 48 31.3 +0.6**
PLCA PcP **PcP** **22 48 55.6 +1.5**
PLCA ScP **ScP** **22 52 39.4 +2.6**
TRQA Tornquist 54.75 156 P **P** **22 47 55.5 +0.6**
TRQA IAmb IAmb 22 47 56.8
comp=Z,39nm,1.1s
RIB01 Linhares ES 54.94 124 *e*P **P** **22 47 54.4 -2.2**
CAM01 Campos-RJ 55.26 127 *e*P **P** **22 47 57.2 -1.6**
ALLF01 Guarapari-ES 55.35 125 *e*P **P** **22 47 57.6 -1.8**
V35K Ketchikan 55.75 331 P **P** **22 48 01.7 -0.1**
baz=123
LIRD Liard River Hi 55.81 337 P **P** **22 48 03.2 +1.0**
baz=131
GO07 Milladeo Hill, 56.03 169 P **P** **22 48 06.1 +2.2**
GO07 Milladeo Hill, 56.03 169 P **P** **22 48 06.3 +2.5**
T35M Bob Quinn 56.04 333 P **P** **22 48 04.2 +0.3**
baz=125
IVI Ivigtut 56.47 21 IAmb IAmb 22 48 07.3
comp=Z,30nm,0.9s
IVI Ivigtut 56.47 21 P **P** **22 48 06.4 -0.4**
IVI Ivigtut 56.47 21 P **P** **22 48 05.5 -1.3**
IVI Ivigtut 56.47 21 *i* P **P** **22 48 04.5 -2.2**
IVI IAmb IAmb 22 48 07.0

CRAG **Craig** 56.55 330 P P 22 48 08.2 +0.7
baz=121
WRAK **Wrangell Islan** 56.69 331 P P 22 48 09.4 +0.9
baz=123
DLBC **Dease Lake** 56.80 334 P P 22 48 09.6 +0.3
baz=126,SNR=15
U33K **Whale Pass** 56.89 331 P P 22 48 10.4 +0.6
baz=122
S34M **Telegraph Cree** 56.97 333 P P 22 48 11.0 +0.6
baz=125
NRS **Narsarsuaq** 57.43 22 *i* P P 22 48 10.8 -2.7
NRS IAmb IAmb 22 48 13.4
comp=Z,40nm,1.3s
ILON **Igloolik, Nuna** 57.44 2 IAmb IAmb 22 48 15.1
comp=Z,17nm,0.7s
NUUK **Nuuk** 57.48 17 P P 22 48 14.2 +0.3
NUUK **Nuuk** 57.48 17 *i* P P 22 48 13.4 -0.4
NUUK IAmb IAmb 22 48 15.1
comp=Z,49nm,0.9s
R33M **Jennings River** 57.76 335 P P 22 48 16.8 +0.7
baz=126,SNR=8.8
TGTN **Hyland Airport** 58.01 338 P P 22 48 18.0 +0.3
baz=130
Q32M **Nakina River** 58.06 334 IAmb IAmb 22 48 21.2
comp=Z,13nm,1.0s
Q32M **Nakina River** 58.06 334 P P 22 48 18.3 0.0
baz=124,SNR=12
S32K **Killisnoo** 58.28 332 P P 22 48 19.7 +0.1
baz=121
SIT **Sitka** 58.42 331 P P 22 48 20.9 +0.4
baz=120
R32K **Eaglecrest** 58.67 333 P P 22 48 22.5 +0.2
baz=122
COYC **Coyhaique** 58.70 168 P P 22 48 24.7 +2.2
COYC **Coyhaique** 58.70 168 P P 22 48 24.5 +1.9
P33M **Teslin, Yukon** 58.99 335 P P 22 48 24.8 +0.3
baz=124,SNR=7.0
P32M **Atlin** 59.03 334 P P 22 48 24.8 +0.1
baz=123
S31K **Pelican** 59.30 332 P P 22 48 26.7 +0.1
baz=120
N32M **Quiet Lake** 59.63 336 IAmb IAmb 22 48 30.6
comp=Z,15nm,0.9s
N32M **Quiet Lake** 59.63 336 P P 22 48 28.8 -0.1
baz=124
MMPY **Sheldon Lake,** 59.79 338 P P 22 48 30.5 +0.5
MMPY IAmb IAmb 22 48 31.5
comp=Z,14nm,0.8s
MMPY **Sheldon Lake,** 59.79 338 P P 22 48 29.9 -0.1
baz=127,SNR=16
SFJD **Kangerlussuaq** 59.91 15 P P 22 48 29.5 -1.0
comp=Z,14nm,0.5s,baz=211,slow=10,SNR=5.7
SFJD LR LR 23 13 30.2
comp=Z,208nm,19.7s,baz=234,slow=35
comp=Z,14nm,0.5s
SFJD **Kangerlussuaq** 59.91 15 P P 22 48 29.8 -0.8
SFJD IAmb IAmb 22 48 31.2
comp=Z,56nm,1.5s
SFJD **Kangerlussuaq** 59.91 15 P P 22 48 29.8 -0.8
SFJD **Kangerlussuaq** 59.91 15 *i* P P 22 48 28.3 -2.3
SFJD IAmb IAmb 22 48 30.3
comp=Z,19nm,0.9s
WHY **Whitehorse** 60.10 335 P P 22 48 31.7 -0.4
baz=122
PLBC **Pleasant Camp** 60.11 333 P P 22 48 32.3 +0.2
baz=120
AY03 **Cochrane** 60.22 169 P P 22 48 35.3 +2.4
O30N **Mendenhall** 60.66 335 IAmb IAmb 22 48 37.2
comp=Z,14nm,0.8s
O30N **Mendenhall** 60.66 335 P P 22 48 35.8 0.0
baz=121,SNR=14
P30M **Million Dollar** 60.70 334 P P 22 48 36.2 0.0
baz=120
M31M **Drury Creek, Y** 60.74 336 P P 22 48 36.7 +0.4
baz=124
P29M **Windy Craggy** 60.80 333 IAmb IAmb 22 48 39.0
comp=Z,21nm,0.8s
P29M **Windy Craggy** 60.80 333 P P 22 48 37.0 +0.2
baz=119,SNR=7.9
N31M **Braeburn, Yuko** 60.91 335 P P 22 48 37.7 +0.2
baz=122
GDH **Godhavn** 60.97 13 *i* P P 22 48 34.6 -3.1
HYT **Haines Junctio** 61.29 334 P P 22 48 40.5 +0.3
HYT **Haines Junctio** 61.29 334 P P 22 48 40.5 +0.3
baz=120,SNR=5.3
GO08 **Villa O'Higgin** 61.39 170 P P 22 48 43.2 +2.4
GO08 IAmb IAmb 22 48 44.2
comp=Z,28nm,0.8s
GO08 **Villa O'Higgin** 61.39 170 P P 22 48 43.8 +3.0
N30M **Aishikik Lake** 61.43 335 P P 22 48 40.9 -0.2
baz=120
ILULI **Ilulissat** 61.48 14 *i* P P 22 48 37.2 -3.9
ILULI IAmb IAmb 22 48 38.9
comp=Z,18nm,0.6s
O29M **Mount Kennedy** 61.49 333 P P 22 48 41.5 -0.1
baz=118
YUK6 **Outpost Mounta** 61.71 334 P P 22 48 43.0 -0.2
baz=119
M30M **Minto, Yukon** 61.88 336 P P 22 48 44.0 -0.1
baz=121,SNR=16
PINM **Pinnacle** 62.14 333 P P 22 48 46.2 +0.3
baz=117
C36M **Paulatuk** 62.15 346 P P 22 48 46.3 +0.8
baz=137
BRWY **Burwash Landin** 62.20 334 P P 22 48 46.7 +0.5
baz=118
O28M **Mount Upton** 62.42 333 P P 22 48 47.8 -0.1
baz=117
YUK8 **Steele Glacier** 62.47 334 P P 22 48 48.0 -0.2
baz=118,SNR=11
M29M **Somme Creek** 62.49 336 IAmb IAmb 22 48 50.0
comp=Z,23nm,0.9s
M29M **Somme Creek** 62.49 336 P P 22 48 48.6 +0.5
baz=120,SNR=36
SAATT **Saattut** 62.60 12 *i* P P 22 48 47.2 -1.4
SAATT IAmb IAmb 22 48 49.0
comp=Z,21nm,0.8s
L29M **L29M** 62.69 336 IAmb IAmb 22 48 50.4
comp=Z,9.9nm,0.8s
L29M **L29M** 62.69 336 P P 22 48 49.4 0.0
baz=120,SNR=15
H31M **Peel River** 62.76 340 IAmb IAmb 22 48 51.0
comp=Z,12nm,1.1s
H31M **Peel River** 62.76 340 P P 22 48 49.7 -0.2
baz=125,SNR=12
J30M **Hart River** 62.77 338 P P 22 48 49.5 -0.5
baz=123,SNR=12
LOGN **Logan Glacier** 62.80 333 IAmb IAmb 22 48 53.0
comp=Z,12nm,1.1s
K29M **Barlow Dome** 62.83 337 IAmb IAmb 22 49 28.7
comp=Z,8.8nm,0.8s
K29M **Barlow Dome** 62.83 337 P P 22 48 49.7 -0.7
baz=121,SNR=9.8
NUUG **Nuugaatsiaq** 62.87 11 *i* P P 22 48 47.2 -3.1
NUUG IAmb IAmb 22 48 51.1
comp=Z,28nm,0.8s
RES **Resolute Bay** 62.89 357 IAmb IAmb 22 49 30.7
comp=Z,29nm,1.6s
ANGG **Ammassalik, Gr** 62.92 21 P P 22 48 49.0 -1.8
ANGG **Ammassalik, Gr** 62.92 21 *i* P P 22 48 48.7 -2.1
ANGG IAmb IAmb 22 48 50.0
comp=Z,44nm,0.7s
YUK3 **Moose Creek** 62.99 334 P P 22 48 52.0 +0.3
baz=117,SNR=8.7
GRNC **Granite Creek** 63.09 333 P P 22 48 53.1 +0.8
GRNC IAmb IAmb 22 48 53.9
comp=Z,11nm,0.8s
I30M **Mount Dempster** 63.14 339 IAmb IAmb 22 48 53.6
comp=Z,14nm,0.8s
I30M **Mount Dempster** 63.14 339 P P 22 48 52.6 +0.2
baz=123,SNR=23
G31M **Satah River** 63.39 341 IAmb IAmb 22 48 54.8
comp=Z,15nm,0.8s
G31M **Satah River** 63.39 341 P P 22 48 53.6 -0.2
baz=126,SNR=18
BVCY **Beaver Creek** 63.45 335 P P 22 48 54.5 +0.1
baz=117,SNR=5.6
F31M **Tsiigehtchic** 63.53 342 P P 22 48 54.7 -0.1
baz=126,SNR=12
DAWY **Dawson** 63.65 337 P P 22 48 55.5 -0.2
baz=119
CRQE **Cirque** 63.70 333 P P 22 48 56.2 0.0
baz=114
BERG **Berg Lake** 63.83 332 P P 22 48 58.3 +1.4
BERG IAmb IAmb 22 48 58.8
comp=Z,12nm,1.0s

M27K **Edge Creek, AK** 63.85 335 P P 22 48 57.3 +0.1
M27K **Edge Creek, AK** 63.85 335 P P 22 48 57.5 +0.3
baz=116,SNR=9.7
EPYK **Eagle Plains** 63.88 340 IAmb IAmb 22 48 58.3
comp=Z,18nm,0.9s
EPYK **Eagle Plains** 63.88 340 P P 22 48 57.2 +0.1
baz=123,SNR=18
MCARA **McCarthy VSAT** 63.93 333 P P 22 48 57.6 +0.1
baz=114
KAIM **Kayak Island** 63.97 332 P P 22 48 57.7 -0.2
baz=112
INK **Inuvik** 63.99 342 LR LR 23 19 02.8
comp=Z,201nm,20.9s,baz=103,slow=38
INK **Inuvik** 63.99 342 IAmb IAmb 22 48 59.3
comp=Z,22nm,0.9s
INK **Inuvik** 63.99 342 P P 22 48 57.7 0.0
baz=127,SNR=13
INK **Inuvik** 63.99 342 P P 22 48 57.9 +0.1
G30M **tAoh Zraii Nji** 64.06 340 P P 22 48 58.5 +0.2
baz=124
BCAR **Beaver Creek A** 64.13 335 P P 22 48 59.5 +0.6
L27K **Beaver Creek,** 64.14 335 IAmb IAmb 22 49 00.3
comp=Z,16nm,0.8s
L27K **Beaver Creek,** 64.14 335 P P 22 48 59.0 +0.1
baz=116
RAGM **Ragged Mountai** 64.27 332 IAmb IAmb 22 49 01.7
comp=Z,15nm,1.0s
F30M **Barrier River** 64.27 341 IAmb IAmb 22 49 01.0
comp=Z,29nm,0.9s
F30M **Barrier River** 64.27 341 P P 22 48 59.7 +0.1
baz=124,SNR=31
A36M **Sachs Harbour** 64.36 347 P P 22 48 59.2 -0.9
baz=137,SNR=6.8
H29M **Whitestone** 64.37 339 IAmb IAmb 22 49 02.1
comp=Z,16nm,0.8s
H29M **Whitestone** 64.37 339 P P 22 49 00.1 -0.3
baz=123,SNR=20
BMRM **Bremner River** 64.46 333 P P 22 49 00.7 -0.4
baz=113
MG05 **Puerto Natales** 64.51 170 P P 22 49 03.4 +2.1
MG05 IAmb IAmb 22 49 05.3
comp=Z,40nm,0.7s
I28M **Miner Creek** 64.53 338 P P 22 49 01.2 -0.3
baz=119,SNR=7.8
G29M **Pine Creek** 64.61 340 IAmb IAmb 22 49 03.3
comp=Z,19nm,0.9s
G29M **Pine Creek** 64.61 340 P P 22 49 02.2 +0.3
baz=122,SNR=22
Q23K **Middleton Isla** 64.70 331 P P 22 49 02.7 +0.1
baz=110
N25K **Chitina, Valde** 64.71 333 P P 22 49 02.7 0.0
baz=113,SNR=8.2
L26K **Log Cabin Wild** 64.75 335 P P 22 49 03.1 +0.2
baz=115
EYAK **Cordova Ski Ar** 64.82 332 P P 22 49 05.1 +1.8
EYAK **Cordova Ski Ar** 64.82 332 IAmb IAmb 22 49 05.2
comp=Z,13nm,0.9s
EYAK **Cordova Ski Ar** 64.82 332 P P 22 49 03.4 +0.1
baz=112
I27K **Kandik River** 65.22 338 IAmb IAmb 22 49 07.5
comp=Z,15nm,1.0s
I27K **Kandik River** 65.22 338 P P 22 49 06.3 +0.4
baz=118,SNR=25
HARP **HAARP** 65.26 334 IAmb IAmb 22 49 11.1
comp=Z,44nm,1.1s
E29M **Blow River** 65.36 341 P P 22 49 06.6 -0.1
baz=123,SNR=7.0
P23K **Montague Islan** 65.40 331 P P 22 49 06.7 -0.3
baz=110
SCRK **Sand Creek** 65.41 336 P P 22 49 07.3 +0.1
baz=115,SNR=7.8
H27K **Steamboat Moun** 65.49 339 IAmb IAmb 22 49 09.7
comp=Z,27nm,1.1s
H27K **Steamboat Moun** 65.49 339 P P 22 49 07.7 +0.1
baz=118,SNR=39
M24K **Tolsona, Glenn** 65.59 333 P P 22 49 08.4 +0.1
baz=112
F28M **Old Crow** 65.59 340 IAmb IAmb 22 49 10.7
comp=Z,13nm,0.8s
F28M **Old Crow** 65.59 340 P P 22 49 08.5 +0.3
baz=120,SNR=23
PAX **Paxson** 65.62 335 P P 22 49 08.5 -0.1
baz=113,SNR=7.0
RIDG **Independent Ri** 65.66 335 IAmb IAmb 22 49 10.2
comp=Z,17nm,0.9s
RIDG **Independent Ri** 65.66 335 P P 22 49 08.9 +0.1
baz=114,SNR=16
G27K **Doyon Strip** 65.81 339 P P 22 49 09.3 -0.3
baz=118,SNR=8.3
E28M **Babbage River** 65.99 341 P P 22 49 10.8 +0.1
baz=121,SNR=11
SCM **Sheep Creek Mo** 66.00 333 P P 22 49 10.8 -0.2
baz=110
K24K **Donnelly Dome** 66.07 335 IAmb IAmb 22 49 12.6
comp=Z,20nm,0.8s
K24K **Donnelly Dome** 66.07 335 P P 22 49 11.3 -0.1
baz=113,SNR=9.5
J25K **Salcha River,** 66.23 336 IAmb IAmb 22 49 13.7
comp=Z,12nm,0.9s
J25K **Salcha River,** 66.23 336 P P 22 49 12.2 -0.2
baz=114,SNR=23
KNK **Knik Glacier** 66.36 332 IAmb IAmb 22 49 14.8
comp=Z,21nm,1.0s
KNK **Knik Glacier** 66.36 332 P P 22 49 13.2 0.0
baz=109
SOEG **Soedalen** 66.39 20 *i* P P 22 49 09.8 -3.4
SOEG IAmb IAmb 22 49 57.4
comp=Z,14nm,1.0s
SEW **Seward** 66.41 331 P P 22 49 12.9 -0.5
baz=108
SML **Sawmill** 66.44 333 P P 22 49 13.4 -0.4
baz=110
WAT6 **Susitna Watana** 66.44 334 P P 22 49 13.6 -0.3
baz=110,SNR=15
E27K **Coleen River** 66.44 340 P P 22 49 13.7 0.0
baz=119,SNR=7.0
DHY **Denali Highway** 66.46 334 P P 22 49 13.7 -0.4
baz=111
G26K **Porcupine Rive** 66.62 339 P P 22 49 14.8 +0.1
baz=116,SNR=10
PRP **Porcupine Dome** 66.65 337 P P 22 49 14.9 -0.3
baz=114
O22K **Cooper Landing** 66.65 331 P P 22 49 14.6 -0.4
baz=108
GHO **Glory Hole Cre** 66.69 333 IAmb IAmb 22 49 16.3
comp=Z,16nm,0.8s
PMR **Palmer** 66.73 332 P P 22 49 14.7 -0.7
baz=109
D27M **Malcolm River** 66.76 342 IAmb IAmb 22 49 16.9
comp=Z,12nm,0.8s
D27M **Malcolm River** 66.76 342 P P 22 49 15.6 -0.1
baz=120,SNR=5.1
HDA **Harding Lake** 66.78 336 IAmb IAmb 22 49 16.6
comp=Z,20nm,0.9s
HDA **Harding Lake** 66.78 336 P P 22 49 15.6 -0.2
baz=112,SNR=15
SUMG **Summit** 66.81 14 P P 22 49 16.3 0.0
SUMG **Summit** 66.81 14 *i* P P 22 49 15.0 -1.3
SUMG IAmb IAmb 22 49 17.5
comp=Z,46nm,1.0s
RC01 **Rabbit Creek A** 66.85 332 P P 22 49 15.9 -0.3
baz=108
WAT1 **Susitna Watana** 66.88 334 P P 22 49 15.8 -0.7
baz=110
IL31 66.89 336 IAmb IAmb 22 49 18.0
comp=Z,34nm,1.6s
ILAR **Eielson Array** 66.89 336 P P 22 49 16.1 -0.3
comp=Z,7.3nm,0.8s,baz=114,slow=4.6,SNR=70
ILAR PP PP 22 51 46.0 +0.1
comp=Z,2.2nm,0.9s,baz=110,slow=6.8,SNR=5.3
ILAR LR LR 23 21 52.8
comp=Z,93nm,19.2s,baz=93,slow=39
comp=Z,7.3nm,0.8s
SLKM **Skilak Lake** 66.89 331 IAmb IAmb 22 49 19.0
comp=Z,21nm,1.0s
BRSE **Bradley Lake S** 66.92 330 P P 22 49 16.5 -0.3
baz=106
MG03 **Isla Dawson** 66.94 170 P P 22 49 19.2 +2.4
BRLK **Bradley Lake** 67.00 330 IAmb IAmb 22 49 19.9
comp=Z,20nm,1.0s
F26K **Sheenjek River** 67.07 339 P P 22 49 17.5 -0.1
baz=116,SNR=8.7
POKR **Poker Plat Res** 67.23 336 P P 22 49 18.3 -0.4
baz=112
COLA **College** 67.31 336 P P 22 49 18.7 -0.4
COLA **College** 67.31 336 P P 22 49 18.7 -0.4
COLA **College** 67.31 336 P P 22 49 18.7 -0.4
COLA PcP PcP 22 49 45.5 0.0

COLA pP pP 22 49 59.9 +1.2
KDAK **Kodiak Island** 67.33 328 LR LR 23 19 50.3
comp=Z,72nm,21.4s,baz=96,slow=37
KDAK **Kodiak Island** 67.33 328 P P 22 49 19.1 -0.3
baz=104
HOM **Homer** 67.34 330 P P 22 49 19.2 -0.2
baz=106
MCK **McKinley** 67.35 335 IAmb IAmb 22 49 21.0
comp=Z,22nm,1.0s
MCK **McKinley** 67.35 335 P P 22 49 19.3 -0.2
baz=110,SNR=14
G25K **Bearman Lake** 67.37 338 P P 22 49 19.7 +0.3
baz=114,SNR=12
CAPN **Captain Cook N** 67.41 331 P P 22 49 19.6 -0.2
baz=106
CUT **Chulitna** 67.49 333 P P 22 49 19.9 -0.4
baz=108
F25K **Christian Rive** 67.55 339 P P 22 49 20.7 +0.1
baz=114,SNR=14
OHAK **Old Harbor** 67.57 327 P P 22 49 20.9 0.0
baz=103
H24K **Noodor Dome** 67.67 337 P P 22 49 21.9 +0.4
baz=112,SNR=13
NEA2 **Nenana** 67.70 336 P P 22 49 21.2 -0.4
baz=110,SNR=15
BWN **Browne** 67.72 335 IAmb IAmb 22 49 23.0
comp=Z,69nm,1.0s
E25K **Arctic Village** 67.74 340 P P 22 49 22.0 +0.1
baz=115,SNR=7.5
L22K **Petersville** 67.75 333 P P 22 49 21.9 -0.2
baz=108,SNR=6.1
C27K **Jago River** 67.80 341 P P 22 49 22.3 +0.2
baz=117
TRF **Thorofare Moun** 67.83 334 IAmb IAmb 22 49 23.6
comp=Z,15nm,0.9s
TRF **Thorofare Moun** 67.83 334 P P 22 49 22.6 0.0
baz=108,SNR=12
G24K **Hadweenzic Riv** 67.85 338 P P 22 49 23.1 +0.6
baz=112,SNR=20
SII **Sitkinak Islan** 67.90 326 P P 22 49 22.9 -0.2
baz=102
O20K **Slope Mountain** 67.93 330 P P 22 49 23.5 +0.3
baz=105
SKT **Skwentna** 67.93 332 P P 22 49 22.7 -0.4
baz=107
NEEM **North Greenlan** 67.94 8 *i* P P 22 49 21.7 -1.6
NEEM IAmb IAmb 22 49 24.2
comp=Z,30nm,0.8s
I23K **Minto, Yukon-K** 68.01 336 IAmb IAmb 22 49 24.7
comp=Z,16nm,0.9s
I23K **Minto, Yukon-K** 68.01 336 P P 22 49 23.7 +0.2
baz=110,SNR=21
SPCR **Spurr Chakacha** 68.03 332 P P 22 49 23.4 -0.3
baz=106
RED **Redoubt Volcan** 68.08 331 IAmb IAmb 22 49 25.8
comp=Z,25nm,1.0s
P19K **Oil Pt** 68.12 330 P P 22 49 24.0 -0.3
baz=104
KTH **Kantishna Hill** 68.13 334 IAmb IAmb 22 49 25.0
comp=Z,13nm,0.8s
Q19K **Cape Douglas,** 68.15 329 P P 22 49 24.3 -0.2
baz=104
C26K **Camden Bay** 68.30 342 P P 22 49 25.5 +0.2
baz=116
F24K **Squaw Lake** 68.31 339 P P 22 49 26.1 +0.7
baz=112,SNR=5.4
H23K **Yukon River** 68.31 337 P P 22 49 25.4 -0.1
baz=110
PPLA **Purkeypile** 68.49 333 IAmb IAmb 22 49 27.3
comp=Z,14nm,0.9s
PPLA **Purkeypile** 68.49 333 P P 22 49 26.1 -0.6
baz=106
D25K **Kavik River** 68.51 341 IAmb IAmb 22 49 28.3
comp=Z,22nm,0.8s
D25K **Kavik River** 68.51 341 P P 22 49 26.4 -0.2
baz=114,SNR=28
MLY **Manley** 68.52 336 IAmb IAmb 22 49 28.0
comp=Z,19nm,0.8s
MLY **Manley** 68.52 336 P P 22 49 26.3 -0.4
baz=108,SNR=33
CAST **Castle Rocks** 68.59 334 P P 22 49 26.7 -0.5
baz=107
M20K **Styx River** 68.63 332 P P 22 49 27.3 -0.3
baz=105,SNR=9.7
BORG **Borgarnes** 68.72 25 P P 22 49 26.7 -1.1
comp=Z,17nm,0.9s,baz=213,slow=2.9,SNR=7.4
comp=Z,17nm,0.9s
BORG **Borgarnes** 68.72 25 P P 22 49 28.0 +0.1
BORG IAmb IAmb 22 49 28.6
comp=Z,25nm,1.1s
E24K **Your Creek** 68.73 339 P P 22 49 27.9 -0.2
baz=112
Q18K **Katmai Hardscr** 68.78 329 P P 22 49 28.4 -0.1
baz=102
G23K **Bananza Creek** 68.80 338 IAmb IAmb 22 49 30.0
comp=Z,12nm,0.9s
G23K **Bananza Creek** 68.80 338 P P 22 49 28.9 +0.4
baz=110,SNR=24
CHUM **Lake Minchumin** 68.82 334 P P 22 49 28.7 +0.2
baz=107
PPT2 **Papeete2** 68.95 246 *e*P P 22 49 29.6 -0.7
PPT2 *e*S S 22 58 14.4 -7.5
comp=Z,89nm,25.2s
PPT2 *e*SS SS 23 02 47.5 -3.6
comp=Z,249nm,26.0s
PPT2 *e*LR LR 23 10 27.2
comp=Z,146nm,34.2s
PPT2 *e*LR LR 23 10 33.0
comp=Z,304nm,29.2s
comp=Z,253nm,31.2s
N19K **Bonanza Creek** 69.00 331 IAmb IAmb 22 49 30.3
comp=Z,13nm,0.9s
N19K **Bonanza Creek** 69.00 331 P P 22 49 29.9 +0.1
baz=103,SNR=7.9
COLD **Coldfoot** 69.04 338 IAmb IAmb 22 49 31.9
comp=Z,14nm,0.9s
COLD **Coldfoot** 69.04 338 P P 22 49 30.5 +0.7
baz=110,SNR=16
H22K **Ishtalitna Cre** 69.05 337 P P 22 49 29.8 -0.2
baz=108,SNR=12
P18K **Big Mountain,** 69.05 329 P P 22 49 29.5 -0.6
baz=102
I21K **Tanana** 69.07 336 IAmb IAmb 22 49 31.8
comp=Z,13nm,0.9s
I21K **Tanana** 69.07 336 P P 22 49 29.8 -0.3
baz=107,SNR=21
E23K **Chandalar** 69.12 339 IAmb IAmb 22 49 35.0
comp=Z,12nm,0.8s
E23K **Chandalar** 69.12 339 P P 22 49 30.7 +0.2
baz=111,SNR=20
O18K **Koktuh Hills** 69.14 330 P P 22 49 30.4 -0.2
baz=102
Q17K **Contact Creek** 69.15 328 P P 22 49 30.6 -0.2
baz=101
M19K **Big River Lodg** 69.22 332 P P 22 49 31.0 0.0
baz=104
D24K **Happy Valley** 69.25 340 P P 22 49 31.5 +0.4
baz=112
R17L **Mt. Peulik Vol** 69.28 327 P P 22 49 31.7 +0.2
baz=101
TOLK **Toolik Lake Re** 69.31 340 P P 22 49 31.8 +0.2
baz=111,SNR=6.1
K20K **Telida** 69.43 334 P P 22 49 31.7 -0.7
baz=105
L19K **White Mountain** 69.50 332 P P 22 49 31.8 -1.0
baz=104,SNR=9.4
H21K **Melozitna Rive** 69.54 336 P P 22 49 32.9 -0.1
baz=107,SNR=10.0
P17K **Kvichak River** 69.62 329 IAmb IAmb 22 50 02.0
comp=Z,18nm,0.9s
P17K **Kvichak River** 69.62 329 P P 22 49 33.0 -0.5
baz=101
N18K **Kilae Creek** 69.64 331 P P 22 49 33.6 -0.1
baz=102,SNR=7.0
J20K **Nowinta River** 69.68 334 P P 22 49 33.1 -0.8
baz=105,SNR=8.8
M18K **Stony River** 69.79 331 P P 22 49 33.8 -0.7
baz=102,SNR=22
D23K **Nanushuk River** 69.80 340 P P 22 49 35.1 +0.6
baz=110,SNR=12
F22K **John River** 69.85 338 P P 22 49 35.3 +0.4
baz=108,SNR=16
E22K **Anaktuvuk Pass** 69.92 339 P P 22 49 35.3 -0.1
baz=109
I20K **Naaghedeneel** 69.98 335 IAmb IAmb 22 49 37.3
comp=Z,63nm,1.1s
I20K **Naaghedeneel** 69.98 335 P P 22 49 35.2 -0.4
baz=105,SNR=11

O17K Koliganek Bris 70.05 329 P P 22 49 36.1 -0.1
baz=101,SNR=14
G21K Allakaket 70.06 337 IAmb IAmb 22 49 37.5
comp=Z,24nm,0.8s
G21K Allakaket 70.06 337 P P 22 49 36.2 +0.1
baz=106,SNR=37
C23K Itkillik River 70.08 341 IAmb IAmb 22 49 37.6
comp=Z,13nm,0.9s
C23K Itkillik River 70.08 341 P P 22 49 36.4 +0.2
baz=110,SNR=15
N17K Nushagak Hills 70.24 330 P P 22 49 37.0 -0.3
baz=101,SNR=10.0
F21K Alatna River 70.25 338 IAmb IAmb 22 49 39.4
comp=Z,22nm,0.9s
F21K Alatna River 70.25 338 P P 22 49 37.4 +0.1
baz=107,SNR=29
J19K Poorman 70.26 334 IAmb IAmb 22 49 38.1
comp=Z,15nm,1.0s
J19K Poorman 70.26 334 P P 22 49 37.2 -0.2
baz=104,SNR=24
H20K Anotleneega Mo 70.32 336 P P 22 49 37.5 -0.2
baz=105,SNR=7.9
L18K Granite Mounta 70.34 332 P P 22 49 37.6 -0.3
baz=102,SNR=6.6
P16K Nushagak River 70.37 329 P P 22 49 38.0 -0.1
baz=100
SCO Scoresbysund 70.38 19 IAmb IAmb 22 49 38.6
comp=Z,13nm,1.0s
SCO Scoresbysund 70.38 19 *i* P P 22 49 35.4 -2.5
SCO IAmb IAmb 22 49 38.3
comp=Z,12nm,1.0s
O16K Kokwok River B 70.52 329 P P 22 49 38.8 -0.2
baz=100
M17K Holitna River 70.53 331 P P 22 49 39.0 -0.1
baz=101,SNR=11
CHNA Chernabura Isl 70.64 324 P P 22 49 39.7 -0.1
baz=97
E21K Killik River 70.78 339 P P 22 49 40.4 -0.1
baz=107
S14K Fog Glacier 70.80 326 P P 22 49 40.7 -0.2
baz=97
VNFG Fog Glacier, M 70.80 326 IAmb IAmb 22 49 42.4
comp=Z,25nm,0.8s
GCSA Galena City Sc 70.97 335 P P 22 49 41.2 -0.4
baz=103
H19K Roundabout Mou 70.97 336 IAmb IAmb 22 49 43.5
comp=Z,26nm,0.9s
H19K Roundabout Mou 70.97 336 P P 22 49 41.5 -0.1
baz=103,SNR=32
TBI Tubuai 70.97 240 *e*P P 22 49 43.8 +1.5
comp=Z,604nm,30.5s
TBI *e*LR LR 23 11 24.1
comp=Z,723nm,28.0s
N16K Nishlik Lake 71.00 330 P P 22 49 41.6 -0.4
baz=99,SNR=6.8
F20K Avaraart Lake 71.05 337 P P 22 49 41.9 -0.1
baz=104,SNR=12
L17K Donlin 71.07 332 P P 22 49 42.3 +0.1
baz=100,SNR=7.2
B22K Teshekpuk Lake 71.16 341 IAmb IAmb 22 50 03.2
comp=Z,13nm,0.9s
B22K Teshekpuk Lake 71.16 341 P P 22 49 42.4 -0.3
baz=108
K17K Iditarod 71.17 332 P P 22 49 42.1 -0.8
baz=101,SNR=8.8
M16K Timber Creek 71.19 331 P P 22 49 42.6 -0.4
baz=100
SDPT Sand Point 71.20 325 P P 22 49 42.7 -0.5
baz=96
C21K Knifeblade Rid 71.27 339 P P 22 49 43.1 -0.2
baz=106
O15K Ungalikthiuk R 71.33 329 P P 22 49 42.7 -1.3
baz=98
B21K Ikpikpuk River 71.34 340 P P 22 49 43.6 -0.2
baz=106,SNR=8.6
G19K Purcell Mounta 71.36 336 IAmb IAmb 22 49 45.1
comp=Z,14nm,0.9s
G19K Purcell Mounta 71.36 336 P P 22 49 44.0 0.0
baz=103,SNR=9.6
E20K Nigu River 71.52 338 P P 22 49 45.0 0.0
baz=104,SNR=22
L16K Owhat River 71.54 331 P P 22 49 45.4 +0.3
L16K IAmb IAmb 22 49 47.3
comp=Z,17nm,1.0s
L16K Owhat River 71.54 331 P P 22 49 45.2 +0.1
baz=99,SNR=16
N15K Kwethluk River 71.61 330 P P 22 49 44.9 -0.7
baz=98
J17K VABM Dome 71.64 333 P P 22 49 46.1 +0.4
J17K VABM Dome 71.64 333 P P 22 49 45.6 -0.1
baz=100,SNR=10
H18K Honhosa River 71.67 335 P P 22 49 46.8 +1.0
H18K IAmb IAmb 22 49 47.9
comp=Z,21nm,1.1s
H18K Honhosa River 71.67 335 P P 22 49 46.0 +0.1
baz=101,SNR=11
E19K Redstone River 71.71 337 P P 22 49 45.8 -0.3
baz=103,SNR=8.3
F19K Shaleruckik Mo 71.78 337 P P 22 49 46.2 -0.3
baz=102,SNR=13
D20K Etivluk River 71.79 339 P P 22 49 46.7 +0.2
D20K IAmb IAmb 22 49 47.8
comp=Z,21nm,0.8s
D20K Etivluk River 71.79 339 P P 22 49 46.5 -0.1
baz=104,SNR=27
A22K Sinclair Lake 71.85 341 P P 22 49 47.0 +0.2
baz=106,SNR=5.2
G18K Tagagawik 71.93 336 P P 22 49 48.2 +0.8
G18K Tagagawik 71.93 336 P P 22 49 47.6 +0.1
baz=101,SNR=16
M15K Kasigluk River 71.97 330 P P 22 49 48.1 +0.4
baz=98,SNR=8.0
O14K Tigyukauivet M 72.08 329 P P 22 49 48.2 -0.1
baz=97
VAL Valentia 72.13 39 P P 22 49 48.6 -0.2
DBG Daneborg 72.20 15 *i* P P 22 49 46.2 -2.6
DBG IAmb IAmb 22 49 49.4
comp=Z,7.6nm,0.9s
D19K Kuna River 72.27 338 P P 22 49 48.9 -0.6
baz=103,SNR=9.9
H17K Granite Mounta 72.27 335 P P 22 49 50.0 +0.5
H17K Granite Mounta 72.27 335 P P 22 49 49.6 +0.1
baz=100,SNR=8.5
B20K Meade River 72.29 340 P P 22 49 49.9 +0.5
B20K Meade River 72.29 340 P P 22 49 49.6 +0.1
baz=104,SNR=6.8
J16K Anvik River 72.31 333 IAmb IAmb 22 49 51.5
comp=Z,17nm,0.9s
J16K Anvik River 72.31 333 P P 22 49 49.8 +0.2
baz=99,SNR=13
N14K Kuskokwak Cree 72.37 329 IAmb IAmb 22 49 50.9
comp=Z,21nm,1.3s
N14K Kuskokwak Cree 72.37 329 P P 22 49 49.6 -0.4
baz=97
I17K Unalakleet 72.44 333 P P 22 49 50.3 -0.1
baz=99,SNR=8.7
A21K Barrow 72.45 341 P P 22 49 50.3 0.0
baz=105
F18K Selawik 72.47 336 P P 22 49 50.4 -0.2
baz=101
L15K Ungalak Mounta 72.49 331 P P 22 49 50.8 0.0
baz=97
M14K Bethel 72.60 330 IAmb IAmb 22 49 54.0
comp=Z,56nm,0.9s
M14K Bethel 72.60 330 P P 22 49 51.8 +0.4
baz=97,SNR=20
G17K Kiwalik Mounta 72.68 335 P P 22 49 52.4 +0.6
baz=99
IGLA Glengowla, Co 72.75 38 P P 22 49 51.6 -0.8
C19K Lookout Ridge 72.92 339 P P 22 49 54.3 +1.0
C19K IAmb IAmb 22 49 55.0
comp=Z,17nm,0.9s
C19K Lookout Ridge 72.92 339 P P 22 49 53.9 +0.6
baz=102,SNR=12
PSBE So Bento 72.95 52 *e*P P 22 49 53.4 -0.6
E18K Tukpahlearik C 72.98 337 P P 22 49 54.1 +0.6
E18K Tukpahlearik C 72.98 337 P P 22 49 53.7 +0.2
baz=100
L14K Kuka Creek 73.02 331 P P 22 49 54.2 +0.3
L14K Kuka Creek 73.02 331 P P 22 49 54.1 +0.3
baz=96,SNR=7.3
PTO Porto 73.06 51 *e*P P 22 49 53.8 -0.8
PTO *i* IAmb IAmb 22 50 00.2
comp=Z,47nm,1.4s
F17K Baldwin Pennin 73.07 336 P P 22 49 53.8 -0.3
baz=99
PTEO Sao Teotonio 73.07 54 *e*P P 22 49 54.2 -0.5

MORF Marmelete 73.14 55 *e*P P 22 49 54.9 -0.3
MORF *e*pP pP 22 50 37.8 +2.4
PCAS Casmilo, Conde 73.17 52 *e*P P 22 49 54.8 -0.4
PCAS *i* IAmb IAmb 22 49 57.6
comp=Z,57nm,1.3s
PCAS *e*pP pP 22 50 37.3 +1.8
H16K Elim 73.21 334 P P 22 49 55.2 +0.2
baz=98
M13K Dall Lake 73.25 330 P P 22 49 56.2 +1.0
M13K IAmb IAmb 22 49 57.0
comp=Z,37nm,0.9s
M13K Dall Lake 73.25 330 P P 22 49 55.2 0.0
baz=95,SNR=9.8
PGAV Gavieira, Arco 73.29 50 *e*P P 22 49 55.1 -0.9
MOE Montemor 73.33 53 *e*P P 22 49 55.6 -0.7
MOE *e*pP pP 22 50 38.7 +2.2
G16K Koyuk River 73.36 335 P P 22 49 55.4 -0.4
baz=98
DAG Danmarks Havn 73.39 13 P P 22 49 54.3 -1.5
DAG Danmarks Havn 73.39 13 *i* P P 22 49 53.0 -2.8
DAG IAmb IAmb 22 49 55.9
comp=Z,16nm,0.6s
E17K Hotham Inlet 73.39 337 P P 22 49 56.0 0.0
baz=99
PMTG Montargil 73.41 53 *e*P P 22 49 55.8 -0.9
PMTG *e*pP pP 22 50 38.9 +1.9
C18K Utukok River 73.41 338 P P 22 49 56.4 +0.2
C18K IAmb IAmb 22 49 57.5
comp=Z,19nm,1.1s
C18K Utukok River 73.41 338 P P 22 49 56.1 0.0
baz=100
PSARD Sardoal 73.44 52 *e*P P 22 49 55.9 -1.0
MESJ Messejana 73.46 54 *e*P P 22 49 56.4 -0.6
PCAB Cabril 73.48 50 P P 22 49 57.1 0.0
PARRA Arraiolos 73.56 53 *e*P P 22 49 56.7 -0.9
PARRA *e*pP pP 22 50 39.4 +1.6
EVO Evora 73.59 53 *e*P P 22 49 56.9 -0.8
PVIS Viseu 73.61 51 *e*P P 22 49 57.1 -0.7
PVIS *e*pP pP 22 50 39.3 +1.2
A19K Wainwright 73.64 340 P P 22 49 57.3 -0.1
baz=100
POLO Lamas de Olo 73.66 50 *e*P P 22 49 58.6 +0.3
POLO *e*pP pP 22 50 38.0 -0.5
PBDV Barranco-do-Ve 73.72 55 *e*P P 22 49 58.4 -0.1
PVRL Vila Real 73.72 50 *e*P P 22 49 57.4 -1.2
PVRL *i* IAmb IAmb 22 50 03.1
comp=Z,36nm,1.5s
MTE Manteigas 73.88 51 *e*P P 22 49 58.6 -0.9
MTE *e*pP pP 22 50 41.9 +2.1
MTE *e*S SKSac 22 59 47.2 -4.0
MTE Manteigas 73.88 51 P P 22 49 58.4 -1.1
IDGL Inch Island, C 73.92 36 P P 22 49 58.2 -1.0
PCBR Castelo Branco 73.96 52 *e*P P 22 49 58.9 -0.9
PCBR *e*pP pP 22 50 42.0 +1.8
D17K Noatak River 73.97 337 P P 22 49 59.1 -0.2
baz=98
K13K Kusilvak Mount 74.01 331 P P 22 49 59.8 +0.1
baz=95
G15K Niukluk 74.02 334 P P 22 50 00.1 +0.4
baz=96
PMRV Marv??o 74.04 52 *e*P P 22 49 59.3 -1.1
PMRV *e*pP pP 22 50 42.1 +1.4
PMRV *e*S PnS 23 00 19.1 +2.3
C17K DeLong Mountai 74.11 338 P P 22 50 00.1 -0.1
baz=98,SNR=5.9
MVO Moncorvo 74.25 50 *e*P P 22 50 00.9 -0.7
MVO *i* IAmb IAmb 22 50 02.9
comp=Z,34nm,1.1s
MVO *e*pP pP 22 50 44.0 +2.1
IWEX Carrickbyrne, 74.28 39 P P 22 49 59.7 -1.7
IWEX Carrickbyrne, 74.28 39 P P 22 50 00.3 -1.1
IWEX Carrickbyrne, 74.28 39 *e*P P 22 49 59.4 -2.1
F15K North Star Dit 74.35 335 P P 22 50 02.4 +0.8
F15K IAmb IAmb 22 50 03.9
comp=Z,20nm,0.9s
F15K North Star Dit 74.35 335 P P 22 50 02.1 +0.5
baz=96,SNR=5.2
PBAR Barrancos 74.38 54 *e*P P 22 49 60.0 -2.3
PBAR *e*pP pP 22 50 44.3 +1.6
PBRG Braganca 74.44 50 *e*P P 22 50 01.9 -0.8
DSB Dublin 74.54 38 P P 22 50 02.5 -0.4
ANM Nome 74.55 334 P P 22 50 03.5 +0.7
baz=95
ILTH Belurgan, Co L 74.57 37 P P 22 50 02.3 -0.7
ILTH Belurgan, Co L 74.57 37 P P 22 50 02.4 -0.7
ILTH Belurgan, Co L 74.57 37 *e*P P 22 50 01.3 -1.7
UNV Unalaska Valle 74.61 323 P P 22 50 04.3 +1.0
UNV Unalaska Valle 74.61 323 P P 22 50 04.6 +1.3
UNV IAmb IAmb 22 50 04.8
comp=Z,36nm,0.9s
UNV Unalaska Valle 74.61 323 P P 22 50 03.6 +0.3
baz=91,SNR=5.7
M11K Mekoryuk 74.66 330 P P 22 50 03.7 +0.4
baz=93
C16K Lisburne Hills 74.88 338 P P 22 50 05.7 +1.2
C16K IAmb IAmb 22 50 05.8
comp=Z,30nm,0.9s
C16K Lisburne Hills 74.88 338 P P 22 50 05.2 +0.6
baz=96,SNR=5.1
F14K Arctic Creek 75.02 335 P P 22 50 06.2 +0.8
baz=94
CCA1 Carnmenellis 75.26 41 P P 22 50 04.4 -2.7
CCA1 Carnmenellis 75.26 41 *e*P P 22 50 05.5 -1.6
CCA1 IAmb IAmb 22 50 08.2
comp=Z,12nm,0.8s
TNA Tin City 75.69 335 P P 22 50 10.4 +1.1
baz=93
NEWG New Galloway 75.80 36 *e*P P 22 50 07.8 -2.3
NEWG IAmb IAmb 22 50 10.2
comp=Z,20nm,0.7s
INVG Invergeldie, C 75.90 35 *e*P P 22 50 08.1 -2.5
INVG IAmb IAmb 22 50 11.3
comp=Z,21nm,0.8s
MCD Coleburn Disti 76.32 33 *e*P P 22 50 10.6 -2.3
MCD IAmb IAmb 22 50 13.9
comp=Z,20nm,0.7s
PAB San Pablo 76.38 52 P P 22 50 13.1 -0.8
PAB IAmb IAmb 22 50 15.3
comp=Z,19nm,1.1s
ESK Eskdalemuir 76.39 36 P P 22 50 11.9 -1.5
ESK Eskdalemuir 76.39 36 *e*P P 22 50 11.3 -2.1
ESK IAmb IAmb 22 50 13.3
comp=Z,18nm,0.8s
EKA Eskdalemuir Ar 76.41 36 P P 22 50 11.7 -1.8
comp=Z,16nm,0.6s,baz=274,slow=5.7,SNR=45
comp=Z,16nm,0.6s
FOEL Foel Wylfa 76.46 38 *e*P P 22 50 12.1 -1.8
FOEL IAmb IAmb 22 50 13.8
comp=Z,11nm,0.7s
MCH1 Michaelchurch 76.61 39 *e*P P 22 50 12.7 -2.0
MCH1 IAmb IAmb 22 50 15.2
comp=Z,8.4nm,0.8s
HLM1 Long Mynd 76.67 39 *e*P P 22 50 12.9 -2.1
HLM1 IAmb IAmb 22 50 15.2
comp=Z,14nm,0.7s
ESDC Sonseca Array 76.67 52 P P 22 50 14.5 -0.9
comp=Z,11nm,0.7s,baz=282,slow=5.2,SNR=58
ESDC pP pP 22 50 55.2 -0.8
comp=Z,5.0nm,0.9s,baz=280,slow=5.7,SNR=3.2
ESDC PKPPKP P'P'df 23 17 27.6 -1.1
comp=Z,1.6nm,1.1s,baz=132,slow=1.9,SNR=5.6
comp=Z,11nm,0.7s
ESDC Sonseca Array 76.67 52 P P 22 50 14.6 -0.8
ESDC IAmb IAmb 22 50 16.6
comp=Z,67nm,1.2s
ESBB Sonseca Array 76.67 52 IAmb IAmb 22 50 16.8
comp=Z,18nm,0.9s
DRUM Mains of Drumt 76.75 34 *e*P P 22 50 12.6 -2.8
DRUM IAmb IAmb 22 50 15.3
comp=Z,20nm,0.7s
MDT Midelt 76.77 59 LR LR 23 21 44.9
comp=Z,65nm,19.2s,baz=253,slow=34
UCM Universidad Co 77.17 51 P P 22 50 17.9 -0.3
GAMB Gambell 77.30 333 P P 22 50 19.6 +1.3
baz=89
LBWR Ladybower, Pea 77.32 38 P P 22 50 16.6 -2.1
CWF Charnwood Fore 77.61 38 P P 22 50 19.5 -0.8
CWF Charnwood Fore 77.61 38 *e*P P 22 50 18.3 -2.0
CWF IAmb IAmb 22 50 20.8
comp=Z,7.7nm,0.8s
HOPE Hope Point 78.30 153 P P 22 50 25.7 +1.9
HOPE Hope Point 78.30 153 P P 22 50 25.8 +1.9
PMSA Palmer Station 78.35 170 P P 22 50 25.5 +1.6
PMSA IAmb IAmb 22 50 28.3
comp=Z,110nm,1.4s
PMSA Palmer Station 78.35 170 *e*P P 22 50 26.0 +2.0
ESPZ Base Esperanza 78.46 167 P P 22 50 26.0 +1.4
ESPZ IAmb IAmb 22 50 26.3
comp=Z,52nm,0.6s
ELMS Elmsett, Ipswi 79.06 39 *e*P P 22 50 25.5 -2.8
ELMS IAmb IAmb 22 50 29.2
comp=Z,37nm,0.7s
KBS Kingsbay 79.94 11 P P 22 50 33.6 +1.0
KBS pP pP 22 51 14.6 +1.2
KBS Kingsbay 79.94 11 *i* P P 22 50 27.3 -5.2
CEST Esterri de Car 80.29 48 IAmb IAmb 22 50 37.0
comp=Z,19nm,1.0s
CLF Chambon-Foret 80.32 43 P P 22 50 34.0 -1.1
DBIC Dimbokro 80.39 85 P P 22 50 34.8 -1.3
comp=Z,4.8nm,0.8s,baz=287,slow=6.9,SNR=5.8
comp=Z,4.8nm,0.8s
DBIC Dimbokro 80.39 85 P P 22 50 34.8 -1.3
DBIC IAmb IAmb 22 51 59.9
comp=Z,50nm,1.9s
ADK Adak 80.89 321 P P 22 50 38.8 +0.8
ADK Adak 80.89 321 P P 22 50 39.8 +1.8
ADK IAmb IAmb 22 50 40.1
comp=Z,65nm,0.8s
ADK Adak 80.89 321 P P 22 50 37.6 -0.4
CORI Orista 80.96 49 IAmb IAmb 22 50 39.9
comp=Z,18nm,1.0s
SMAI San Martin Ant 81.07 173 P P 22 50 39.7 +1.2
SMAI IAmb IAmb 22 50 41.1
comp=Z,26nm,1.0s
HSPB Hornsund (broa 81.09 13 P P 22 50 38.5 -0.1
UCC Uccle 81.31 40 *d*P P 22 50 38.4 -1.9
comp=Z,7.7nm,1.0s
UCC *d*pP pP 22 51 21.0 -0.4
UCC Uccle 81.31 40 P P 22 50 38.5 -1.8
SJAF Saint Jean de 81.50 48 P P 22 50 40.6 -1.0
EJON La Jonquera 81.51 48 P P 22 50 40.6 -1.0
DOU Dourbes 81.56 41 *d*P P 22 50 39.6 -2.0
comp=Z,9.1nm,1.0s
BMRD Maredsous 81.64 40 *d*P P 22 50 41.6 -0.5
comp=Z,5.2nm,1.1s
BMRD *d*pP pP 22 51 22.1 -1.1
BGES Gesves 81.83 40 *d*P P 22 50 41.7 -1.4
comp=Z,11nm,1.0s
RCHB Rochefort 81.95 40 *d*P P 22 50 41.4 -2.3
comp=Z,7.2nm,1.1s
RCHB *d*pP pP 22 51 24.1 -0.8
RCHB Rochefort 81.95 40 P P 22 50 41.8 -1.9
BCLA Clavier 81.96 40 *d*P P 22 50 42.0 -1.8
comp=Z,7.7nm,1.0s
BCLA *d*pP pP 22 51 24.0 -0.9
BSTI Sart Tilman 82.10 40 *d*P P 22 50 43.3 -1.2
comp=Z,2.5nm,1.0s
BSTI *d*pP pP 22 51 25.2 -0.4
SSB Saint Sauveur 82.26 45 P P 22 50 43.6 -1.9
HGN Heimansgroeve 82.30 40 P P 22 50 43.6 -1.9
MEM Membach 82.38 40 *d*P P 22 50 45.9 0.0
comp=Z,8.5nm,1.0s
MEM *d*pP pP 22 51 26.3 -0.8
MEM Membach 82.38 40 P P 22 50 44.1 -1.8
BHOU Houvegnez 82.42 40 *d*P P 22 50 44.7 -1.4
comp=Z,7.1nm,1.1s
BTNL Ternell 82.46 40 *d*P P 22 50 46.1 -0.3
WLF Walferdange 82.62 41 *d*P P 22 50 45.2 -2.0
comp=Z,16nm,1.0s
WLF *d*pP pP 22 51 27.0 -1.3
WLF Walferdange 82.62 41 *e*P P 22 50 46.0 -1.2
comp=Z,27nm,1.0s,baz=283,slow=5.0
WLF Walferdange 82.62 41 P P 22 50 46.5 -0.7
WTSB Winterswijk 82.64 39 P P 22 50 46.3 -0.9
BUG Bochum--Univer 83.02 39 *e*P P 22 50 47.7 -1.4
comp=Z,16nm,0.9s,baz=283,slow=5.0
BUG Bochum--Univer 83.02 39 P P 22 50 48.1 -1.1
IBBN Ibbenburen 83.16 38 *e*P P 22 50 49.1 -0.8
comp=Z,15nm,0.8s,baz=283,slow=5.0
IBBN Ibbenburen 83.16 38 P P 22 50 48.9 -0.9
NA001 NORSAR Array S 83.17 29 P P 22 50 49.5 -0.3
NB2 NORSAR Subarra 83.29 29 P P 22 50 49.3 -1.1
comp=Z,14nm,0.9s,baz=282,slow=4.8
NB2 PKKP PKKPbc 23 09 09.2 -2.6
comp=Z,1.7nm,0.8s,baz=81,slow=3.8
NB2 NORSAR Subarra 83.29 29 P P 22 50 49.3 -1.1
NOA NORSAR Array B 83.29 29 P P 22 50 49.4 -1.1
comp=Z,10.0nm,0.9s,baz=284,slow=5.1,SNR=29
NOA pP pP 22 51 30.1 -1.5
comp=Z,4.8nm,0.9s,baz=284,slow=5.1,SNR=4.7
NOA PKKPbc PKKPbc 23 09 09.6 -2.2
comp=Z,1.3nm,0.8s,baz=246,slow=3.1,SNR=4.2
NOA LR LR 23 25 29.6
comp=Z,48nm,19.8s,baz=110,slow=34
comp=Z,10.0nm,0.9s
AMKA Amchitka 83.44 321 P P 22 50 52.5 +1.1
ECH Echery 83.53 42 P P 22 50 50.4 -1.6
ECH Echery 83.53 42 P P 22 50 50.3 -1.6
ECH pP pP 22 51 32.5 -0.7
BOURR Bourrignon 83.73 43 P P 22 50 51.5 -1.5
KASTN Kahler Asten 83.77 39 *e*P P 22 50 51.4 -1.7
comp=Z,5.0nm,0.8s,baz=283,slow=5.0
TNS Taunus Mts 83.98 40 *e*P P 22 50 53.0 -1.3
comp=Z,12nm,0.9s,baz=283,slow=5.0
TNS *e*L L 23 22 30.5
comp=Z,79nm,20.3s
TNS Taunus Mts 83.98 40 P P 22 50 53.3 -0.9
RETH Rethem/Aller, 84.04 37 *e*P P 22 50 53.3 -1.0
comp=Z,14nm,1.1s,baz=283,slow=5.0
RETH Rethem/Aller, 84.04 37 P P 22 50 53.5 -0.8
CALF Calern 84.20 47 P P 22 50 55.3 -0.2
ISO Isola 84.21 46 P P 22 50 53.4 -2.2
BFO Black Forest 84.28 42 *e*P P 22 50 53.8 -1.9
comp=Z,12nm,1.1s,baz=283,slow=5.0
BFO *e*L L 23 20 14.8
comp=Z,112nm,21.2s
BSEG Bad Segeberg 84.34 36 *e*P P 22 50 54.5 -1.3
comp=Z,6.2nm,1.1s,baz=283,slow=5.0
BSEG *e*L L 23 25 26.5
comp=Z,56nm,18.8s
SLE Schleitheim 84.50 42 P P 22 50 55.3 -1.6
ESCA l'Escarene 84.51 47 P P 22 50 54.5 -2.5
BNALP Bannalp 84.63 43 P P 22 50 56.9 -0.9
GTTG Gottingen 84.65 39 *e*P P 22 50 56.4 -1.1
comp=Z,18nm,1.0s,baz=283,slow=5.0
GTTG Gottingen 84.65 39 P P 22 50 56.9 -0.6
HFS Hagfors 84.69 30 P P 22 50 55.6 -1.9
comp=Z,7.3nm,0.8s,baz=289,slow=4.5,SNR=20
HFS pP pP 22 51 36.6 -2.2
comp=Z,5.6nm,1.0s,baz=268,slow=5.5,SNR=2.8
HFS LR LR 23 28 54.4
comp=Z,59nm,18.2s,baz=268,slow=36
comp=Z,7.3nm,0.8s
STU Stuttgart 84.75 41 *e*P P 22 50 56.5 -1.5
comp=Z,38nm,1.3s,baz=283,slow=5.0
STU Stuttgart 84.75 41 P P 22 50 56.6 -1.5
UBBA Unterbreizbach 84.83 39 *e*P P 22 50 56.8 -1.4
comp=Z,4.0nm,0.9s,baz=283,slow=5.0
UBBA Unterbreizbach 84.83 39 P P 22 50 56.9 -1.4
CLZ Clausthal 84.83 38 *e*P P 22 50 57.3 -1.1
comp=Z,16nm,0.9s,baz=283,slow=5.0
CLZ Clausthal 84.83 38 P P 22 50 57.4 -1.1
ASSE Asse, Remlinge 84.95 38 *e*P P 22 50 57.8 -1.1
comp=Z,12nm,1.1s,baz=283,slow=5.0
ASSE Asse, Remlinge 84.95 38 P P 22 50 57.9 -1.1
FLTG Flechtingen 85.24 38 *e*P P 22 50 58.7 -1.7
comp=Z,14nm,1.1s,baz=283,slow=5.0
MIDW Midway 85.30 298 P P 22 51 04.9 +3.7
TUE Stuetta 85.34 44 IAmb IAmb 22 51 02.6
comp=Z,28nm,1.4s
TUE Stuetta 85.34 44 P P 22 50 59.9 -1.4
BILL Bilibino 85.35 339 P P 22 51 00.9 +0.2
BILL IAmb IAmb 22 51 01.7
comp=Z,20nm,1.0s
TORD Torodi Ar. Bea 85.50 78 P P 22 50 59.5 -3.0
comp=Z,2.8nm,0.8s,baz=290,slow=4.2,SNR=11
TORD pP pP 22 51 42.1 -1.6
comp=Z,1.6nm,0.9s,baz=302,slow=7.0,SNR=2.7
TORD PKKPbc PKKPbc 23 09 07.1 +2.2
comp=Z,2.4nm,0.9s,baz=75,slow=2.7,SNR=9.4
TORD PKPPKP P'P'df 23 17 12.9 -0.6
comp=Z,3.5nm,1.0s,baz=98,slow=1.7,SNR=8.0
comp=Z,2.8nm,0.8s
DAVA Damuels 85.52 43 *e*P P 22 51 01.0 -1.2
comp=Z,18nm,1.1s,SNR=7.4
DAVA *e*pP pP 22 51 43.4 -0.1
comp=Z,12nm,1.2s
DAVA *e*PKKP PKKPbc 23 09 05.9 -0.2
comp=Z,3.4nm,0.8s
DAVA Damuels 85.52 43 P P 22 51 00.9 -1.2

WIMM	Wimmelburg	85.59	38	P		P		22 51 01.1	-1.0
GRA1	Grafenberg Arr	85.84	40	P		P		22 51 01.2	-2.3
GRF	Grafenberg Arr	85.84	40	eP		P		22 51 02.3	-1.2
	comp=Z,20nm,1.2s,baz=283,slow=5.0								
GRF				eL		L		23 27 20.1	
	comp=Z,96nm,20.9s								
MOX	Moxa	85.87	39	eP		P		22 51 02.3	-1.3
	comp=Z,14nm,1.2s,baz=283,slow=5.0								
MOX				eL		L		23 23 30.5	
	comp=Z,88nm,20.7s								
MOX	Moxa	85.87	39	P		P		22 51 02.7	-0.9
GRA3	Grafenberg Arr	85.89	40	P		P		22 51 03.2	-0.5
FUORN	Ofenpass-Fuorn	85.92	43	P		P		22 51 03.5	-0.8
FUORN	Ofenpass-Fuorn	85.92	43	P		P		22 51 03.1	-1.2
GRA2	Grafenberg Arr	85.94	40	P		P		22 51 03.1	-0.9
RETA	Reutte	86.06	42	eP		P		22 51 03.2	-1.5
	comp=Z,12nm,1.3s,SNR=7.8								
RETA				epP		pP		22 51 45.7	-0.4
	comp=Z,7.7nm,1.0s								
GRB4	Grafenberg Arr	86.11	40	P		P		22 51 04.2	-0.6
FETA	Feichten	86.14	43	eP		P		22 51 04.0	-1.2
	comp=Z,6.7nm,0.7s,SNR=6.2								
FETA				ePP		PP		22 54 29.1	+1.4
	comp=Z,5.0nm,1.8s								
FETA				ePKKP		PKKPbc		23 09 04.1	-0.6
	comp=Z,3.3nm,1.0s								
GRB1	Grafenberg Arr	86.19	40	P		P		22 51 04.5	-0.7
GRC1	Grafenberg Arr	86.20	41	P		P		22 51 03.8	-1.5
GRB2	Grafenberg Arr	86.23	41	P		P		22 51 04.2	-1.2
FUR	Furstenfeldbru	86.24	42	eL		L		23 21 25.2	
	comp=Z,110nm,21.7s								
PLN	Plauen	86.24	39	eP		P		22 51 04.2	-1.3
	comp=Z,5.4nm,0.9s,baz=283,slow=5.0								
SHEM	Shemya Is, Ala	86.27	323	LR		LR		23 32 48.6	
	comp=Z,20nm,18.0s,baz=136,slow=38								
GRB3	Grafenberg Arr	86.30	40	P		P		22 51 04.8	-0.9
ARCES	ARCESS Array B	86.31	19	P		P		22 51 03.6	-1.7
	comp=Z,2.4nm,0.5s,baz=281,slow=4.2,SNR=29								
ARCES				PP		PP		22 54 26.2	-2.0
	comp=Z,3.9nm,0.7s,baz=316,slow=6.8,SNR=4.2								
ARCES				PKKPbc		PKKPbc		23 09 03.1	-1.8
	comp=Z,1.3nm,0.6s,baz=81,slow=2.8,SNR=11								
	comp=Z,2.4nm,0.5s								
ARCES	ARCESS Array B	86.31	19	P		P		22 51 04.5	-0.8
ARCES				IAmb		IAmb		22 54 25.9	
	comp=Z,41nm,1.8s								
MOTA	Moosalm	86.32	43	eP		P		22 51 04.5	-1.6
	comp=Z,7.2nm,1.5s								
MOTA				ePP		PP		22 54 28.8	-0.4
	comp=Z,3.0nm,1.0s								
MOTA				ePKKP		PKKPbc		23 09 03.7	-0.5
	comp=Z,3.6nm,1.0s								
SQTA	Sankt Quirin	86.42	43	eP		P		22 51 04.7	-1.8
	comp=Z,11nm,1.4s								
SQTA				epP		pP		22 51 47.7	-0.3
	comp=Z,7.2nm,1.5s								
SQTA				ePP		PP		22 54 30.8	+0.9
	comp=Z,3.5nm,1.0s								
SQTA				ePKKP		PKKPbc		23 09 03.8	-0.2
	comp=Z,2.1nm,0.6s								
SQTA				eP'P'		P'P'df		23 17 10.7	+0.2
	comp=Z,1.2nm,0.6s								
TANN	Tannenbergstha	86.45	39	eP		P		22 51 05.5	-1.0
	comp=Z,18nm,1.0s,baz=283,slow=5.0								
TANN	Tannenbergstha	86.45	39	P		P		22 51 05.5	-1.0
ROTZ	Rotzenmuhle	86.45	40	eP		P		22 51 05.4	-1.1
	comp=Z,3.4nm,1.3s,baz=283,slow=5.0								
NKC	Novy Kostel	86.48	39	eP		P		22 51 05.2	-1.4
NKC	Novy Kostel	86.48	39	P		P		22 51 05.8	-0.9
WATA	Walderalm	86.63	42	eP		P		22 51 06.8	-0.8
	comp=Z,7.0nm,1.0s								
WATA				ePP		PP		22 54 34.0	+2.3
	comp=Z,5.1nm,0.9s								
WATA				eP'P'		P'P'df		23 17 10.8	+0.6
	comp=Z,6.3nm,1.0s								
WTTA	Wattenberg	86.69	42	ePKKP				23 09 02.4	
	comp=Z,10nm,1.5s								
WTTA				eP'P'		P'P'df		23 17 10.9	+0.8
	comp=Z,7.7nm,1.0s								
HSKC	Hora Svate Kat	87.00	39	P		P		22 51 07.0	-2.1
WET	Wettzell	87.03	40	eP		P		22 51 08.3	-1.0
	comp=Z,22nm,1.3s,baz=283,slow=5.0								
WET				epP		pP		22 51 50.5	-0.3
WET				eL		L		23 22 49.5	
	comp=Z,124nm,20.9s								
WET	Wettzell	87.03	40	P		P		22 51 08.3	-1.0
CGRP	Cima Grappa	87.13	44	P		P		22 51 08.9	-1.2
BRG	Berggiesshubel	87.24	39	eP		P		22 51 08.9	-1.3
	comp=Z,15nm,1.5s,baz=283,slow=5.0								
BRG	Berggiesshubel	87.24	39	P		P		22 51 09.0	-1.3
BRG	Berggiesshubel	87.24	39	eP		P		22 51 08.9	-1.3
BRG				Amp				22 51 11.7	
	comp=Z,11nm,1.3s								
BRG				pP		pP		22 51 51.3	-0.4
BRG				Amp				22 51 53.2	
	comp=Z,15nm,1.4s								
BRG				PP		PP		22 54 33.8	-2.4
BRG				Amp				22 54 39.7	
	comp=Z,8.0nm,1.3s								
RJOB	Jochberg	87.33	42	eP		P		22 51 09.3	-1.5
	comp=Z,6.3nm,1.2s,baz=283,slow=5.0								
RJOB	Jochberg	87.33	42	P		P		22 51 09.3	-1.5
LESA	Schwarzleotal	87.33	42	eP		P		22 51 10.0	-0.9
	comp=Z,4.8nm,1.1s								
LESA				eP'P'		P'P'df		23 17 09.0	+0.2
	comp=Z,3.3nm,1.0s								
ABTA	Abfaltersbach	87.40	43	eP		P		22 51 09.7	-1.5
	comp=Z,17nm,1.2s,SNR=7.5								
ABTA				ePP		PP		22 54 39.2	+1.4
	comp=Z,4.6nm,1.2s								
ABTA				ePKKP		PKKPbc		23 09 00.1	-1.4
	comp=Z,4.4nm,1.4s								
KHC	Kasperske Hory	87.47	40	eP		P		22 51 10.2	-1.2
KHC				ex		x		23 02 44.3	
KHC	Kasperske Hory	87.47	40	P		P		22 51 10.3	-1.2
GEC2	GERESS Array S	87.63	41	eP		P		22 51 10.8	-1.5
	comp=Z,22nm,1.6s,baz=283,slow=5.0								
GEC2				epP		pP		22 51 53.4	-0.4
GERES	GERESS Array B	87.63	41	P		P		22 51 10.3	-1.9
	comp=Z,0.9nm,0.5s,baz=255,slow=3.6,SNR=18								
GERES				pP		pP		22 51 53.3	-0.5
	comp=Z,1.4nm,0.9s,baz=270,slow=4.7,SNR=3.3								
GERES				PP		PP		22 54 42.5	+3.0
	comp=Z,1.4nm,0.8s,baz=285,slow=7.7,SNR=7.3								
GERES				PKKPbc		PKKPbc		23 09 00.8	-0.4
	comp=Z,1.3nm,0.8s,baz=186,slow=1.2,SNR=12								
	comp=Z,0.9nm,0.5s								
GERES	GERESS Array B	87.63	41	P		P		22 51 11.2	-1.1
KEST	Kesra	87.69	54	P		P		22 51 12.3	-0.5
	comp=Z,6.4nm,1.0s,baz=297,slow=3.2,SNR=5.9								
KEST				pP		pP		22 51 53.8	-0.6
	comp=Z,10nm,1.0s,baz=265,slow=3.9,SNR=5.1								
	comp=Z,6.4nm,1.0s								
KEST	Kesra	87.69	54	P		P		22 51 12.6	-0.2
KEST				IAmb		IAmb		22 51 59.1	
	comp=Z,13nm,1.1s								
PVCC	Panska Ves	87.72	39	P		P		22 51 11.9	-0.6
ZVC	Zvikov	87.78	40	eP		P		22 51 11.7	-1.1
FUSE	Fusea	87.81	43	P		P		22 51 11.7	-1.3
PRU	Pruhonice	87.85	39	ex		x		23 02 46.8	
PRU	Pruhonice	87.85	39	P		P		22 51 12.4	-0.7
KBA	Koelnbreinsper	87.86	42	eP		P		22 51 12.0	-1.5
	comp=Z,6.5nm,1.1s								
KBA				epP		pP		22 51 54.5	-0.5
	comp=Z,9.9nm,1.3s								
KBA	Koelnbreinsper	87.86	42	P		P		22 51 12.6	-0.9
BIOA	Bad Ischl, Aus	87.89	42	eP		P		22 51 11.6	-1.8
	comp=Z,3.2nm,0.9s								
BIOA				epP		pP		22 51 54.5	-0.6
	comp=Z,4.3nm,1.0s								
MYKA	Terra Mystica	88.18	43	ePKKP				23 08 59.9	
	comp=Z,4.0nm,1.2s								
MOA	Molln	88.26	41	eP		P		22 51 14.5	-0.6
	comp=Z,3.4nm,0.7s								
MOA	Molln	88.26	41	P		P		22 51 16.4	+1.2
GKP	Gorka Klasztor	88.50	36	eP		P		22 51 14.5	-1.5
UPC	Upice	88.61	39	P		P		22 51 15.2	-1.5
TREC	Trest	88.63	40	P		P		22 51 15.7	-1.2
SESA	Seetaler Alpe,	88.66	42	eP		P		22 51 16.2	-1.0
	comp=Z,3.0nm,0.6s								
SESA				ePP		PP		22 54 50.4	+2.5
	comp=Z,18nm,1.8s								
SESA				ePKKP		PKKPdf		23 08 52.6	-0.1
	comp=Z,5.7nm,1.1s								
OSTC	Ostas	88.72	39	eP		P		22 51 15.7	-1.5
DPC	Dobruska-Polom	88.84	39	eP		P		22 51 16.5	-1.4
DPC				ex		x		23 02 45.8	
DPC	Dobruska-Polom	88.84	39	P		P		22 51 17.4	-0.5
SOKA	Soboth	89.09	42	eP		P		22 51 18.3	-0.8
	comp=Z,10nm,1.6s								
SOKA				ePKKP		PKKPbc		23 08 57.4	-0.1
	comp=Z,5.4nm,1.0s								
ARSA	Arzberg	89.25	42	eP		P		22 51 18.5	-1.3
	comp=Z,3.4nm,1.0s								
ARSA				ePP		PP		22 54 56.5	+4.2
	comp=Z,6.6nm,1.2s								
ARSA				ePKKP		PKKPdf		23 08 53.0	+1.6
	comp=Z,5.1nm,1.7s								
CONA	Conrad Observa	89.27	41	eP		P		22 51 18.2	-1.8
	comp=Z,4.5nm,1.0s								
CONA				ePP		PP		22 54 57.1	+4.5
	comp=Z,3.1nm,1.3s								
CONA				ePKKP		PKKPdf		23 08 53.5	+2.0
	comp=Z,3.4nm,1.2s								
KRUC	Moravsky	89.27	40	eP		P		22 51 18.4	-1.4
KRUC				epP		pP		22 52 01.3	-0.2
KRUC				ePP		PP		22 54 53.1	+0.6
KRUC	Moravsky	89.27	40	P		P		22 51 18.5	-1.4
VRAC	Vranov	89.32	40	LR		LR		23 30 15.8	
	comp=Z,72nm,18.4s,baz=267,slow=35								
VRAC	Vranov	89.32	40	eP		P		22 51 18.8	-1.3
VRAC				epP		pP		22 52 01.4	-0.4
VRAC	Vranov	89.32	40	P		P		22 51 19.1	-1.0
WINA	Alland / Wiene	89.35	41	eP		P		22 51 20.0	-0.3
WINA				ePP		PP		22 54 57.8	+4.6
	comp=Z,4.1nm,1.3s								
RONA	Rosalia, Austr	89.61	41	eP		P		22 51 19.8	-1.8
	comp=Z,5.8nm,1.3s								
RONA				epP		pP		22 52 02.7	-0.6
	comp=Z,4.6nm,1.5s								
RONA				ePP		PP		22 54 59.1	+3.8
	comp=Z,3.1nm,1.1s								
RONA				ePKKP		PKKPdf		23 08 53.0	+2.2
	comp=Z,2.0nm,1.1s								
MORC	Moravsky Berou	89.77	39	eP		P		22 51 21.0	-1.2
MORC				ePP		PP		22 54 57.0	+0.6
FINES	FINESS Array B	89.95	26	P		P		22 51 21.1	-1.6
	comp=Z,2.8nm,0.8s,baz=236,slow=3.2,SNR=12								
FINES				PP		PP		22 54 53.0	-4.4
	comp=Z,4.8nm,0.9s,baz=256,slow=7.7,SNR=6.6								
FINES				PKiKP		PKiKP		22 56 16.9	-1.1
	comp=Z,1.4nm,0.8s,baz=318,slow=1.9,SNR=1.6								
FINES				PKKP		PKKPdf		23 08 50.0	-0.3
	comp=Z,2.0nm,0.7s,baz=85,slow=2.3,SNR=7.1								
FINES				PKKPbc		PKKPbc		23 08 54.5	-1.3
	comp=Z,2.0nm,0.7s,baz=46,slow=5.5,SNR=3.7								
	comp=Z,2.8nm,0.8s								
FINES	FINESS Array B	89.95	26	P		P		22 51 21.4	-1.3
MODS	Modra-Piesok	90.04	40	P		P		22 51 23.2	-0.3
MODS	Modra-Piesok	90.04	40	eP		P		22 51 23.6	+0.1
OJC	Ojcow	91.00	38	eP		P		22 51 26.5	-1.3
OJC	Ojcow	91.00	38	P		P		22 51 26.8	-1.1
BEL	Belsk	91.02	36	eP		P		22 51 27.4	-0.4
LANS	Liptovska Anna	91.16	39	eP		P		22 51 30.2	+1.5
LANS				ePP		PP		22 55 11.1	+3.7
NIE	Niedzica	91.58	39	eP		P		22 51 30.0	-0.6
MORH	Mrgy, Hungar	91.61	42	P		P		22 51 29.6	-1.1
PSZ	Piszkesteto	91.84	40	IAmb		IAmb		22 51 33.1	
	comp=Z,12nm,1.3s								
PSZ	Piszkesteto	91.84	40	P		P		22 51 29.9	-2.0
ABAH	Abaujker	92.56	40	P		P		22 51 34.4	-0.7
TRPA	Tarpa	93.42	39	P		P		22 51 37.6	-1.5
RNPP1	Kostyukhnivka	94.07	36	P		P		22 51 44.1	+2.1
AKASG	Malin Array Be	96.32	35	PP		PP		22 55 44.4	-3.0
	comp=Z,2.7nm,0.7s,baz=298,slow=7.1,SNR=13								
AKASG				PKKPbc		PKKPbc		23 08 38.0	-0.9
	comp=Z,0.4nm,0.2s,baz=87,slow=2.3,SNR=5.9								
AKASG				LR		LR		23 32 51.5	
	comp=Z,50nm,19.3s,baz=240,slow=34								
MLR	Muntele Rosu	96.61	41	LR		LR		23 33 36.0	
	comp=Z,65nm,19.3s,baz=271,slow=34								
VNA1	Schmayer--Stat	97.30	161	⇑P		Pdif		22 51 57.2	+1.1
	comp=Z,12nm,0.9s								
VNA2	Neumayer--Watz	97.64	161	⇑P		Pdif		22 51 58.2	+0.5
	comp=Z,5.2nm,0.8s,baz=291,slow=4.3								
SNAA	Sanae	99.24	161	⇑P		Pdif		22 52 06.3	+1.5
	comp=Z,119nm,0.9s								
SNAA	Sanae	99.24	161	P		Pdif		22 52 05.1	+0.2
	comp=Z,5.5nm,0.9s,baz=283,slow=2.6,SNR=6.4								
	comp=Z,5.5nm,0.9s								
SNAA	Sanae	99.24	161	IAmb		IAmb		22 52 06.8	
	comp=Z,13nm,1.1s								
TROLL	Troll, Antarti	100.95	162	⇑P		Pdif		22 52 13.8	+1.2
	comp=Z,388nm,0.8s								
QSPA	South Pole Qui	101.93	180	P		Pdif		22 52 19.0	+2.0
	comp=Z,4.2nm,0.7s,baz=146,slow=3.1,SNR=14								
QSPA	South Pole Qui	101.93	180			Pdif		22 52 19.2	+2.2
BRTR	Keskin Array B	104.27	44	PKiKP		PKiKP		22 56 44.4	+0.3
	comp=Z,0.7nm,0.9s,baz=318,slow=1.9,SNR=2.4								
BRTR				PKKPbc		PKKPbc		23 08 16.4	+0.3
	comp=Z,1.3nm,0.7s,baz=146,slow=5.2,SNR=8.0								
KBZ	Khabaz	107.90	36	PKiKP		PKiKP		22 56 50.6	+0.1
	comp=Z,1.5nm,0.9s,baz=277,slow=2.4,SNR=4.0								
KBZ				PKKPab		PKKPab		23 08 20.5	+0.6
	comp=Z,3.6nm,0.9s,baz=86,slow=4.4,SNR=6.9								
ZALV	Zalesovo Beam	113.93	6	PKiKP		PKiKP		22 57 00.7	-1.0
	comp=Z,2.0nm,0.4s,baz=263,slow=2.8,SNR=14								
ZALV				PP		PP		22 57 50.0	-6.6
	comp=Z,1.6nm,0.8s,baz=19,slow=6.3,SNR=3.6								
ZALV				PKKPbc		PKKPbc		23 07 42.5	-3.4
	comp=Z,2.5nm,0.8s,baz=150,slow=3.3,SNR=9.0								
ZALV				PKKPab		PKKPab		23 07 50.5	-2.9
	comp=Z,6.1nm,0.9s,baz=168,slow=2.7,SNR=13								
KURK	Kurchatov	116.23	11			PKPdf		22 57 05.6	-0.5
KURBB	Kurchatov Arra	116.30	11	PKP		PKPdf		22 57 05.7	-0.6
	comp=Z,1.3nm,0.6s,baz=346,slow=2.0,SNR=18								
KURBB				PKKPbc		PKKPbc		23 07 36.2	-1.5
	comp=Z,3.9nm,0.8s,baz=170,slow=2.8,SNR=41								
KURBB				PKKPab		PKKPab		23 07 41.4	-1.4
	comp=Z,2.6nm,0.9s,baz=174,slow=4.0,SNR=9.7								
CN2	Changchun	117.39	335	eP		PKiKP		22 57 09.1	+0.5
CN2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
SONM	Songino Array	119.40	350	PKP		PKPdf		22 57 12.1	-0.5
	comp=Z,3.0nm,0.3s,baz=270,slow=0.4,SNR=28								
SONM				PKKPbc		PKKPbc		23 07 25.6	-1.2
	comp=Z,3.0nm,0.8s,baz=195,slow=3.9,SNR=12								
SONM	Songino Array	119.40	350			PKPdf		22 57 11.9	-0.6
MKAR	Makanchi Array	120.64	9	PKP		PKPdf		22 57 13.3	-1.5
	comp=Z,0.9nm,0.5s,baz=323,slow=2.8,SNR=14								
MKAR				PKKPbc		PKKPbc		23 07 20.0	-2.1
	comp=Z,1.9nm,0.8s,baz=139,slow=5.8,SNR=12								
MKAR	Makanchi Array	120.64	9			PKPdf		22 57 13.2	-1.7
XLT	XiLinHaoTe	120.76	341	ePKP		PKPdf		22 57 15.0	-0.2
MAW	Mawson	120.83	167	P		PKPdf		22 57 10.7	-3.7
MAW	Mawson	120.83	167	PKP		PKPdf		22 57 14.4	0.0
	comp=Z,8.3nm,0.7s,baz=190,slow=2.7,SNR=29								
MAW	Mawson	120.83	167			PKiKP		22 57 14.9	+0.4
KSRS	Korea Array	121.24	328	PKP		PKiKP		22 57 16.4	+0.1
	comp=Z,5.1nm,0.7s,baz=9.2,slow=1.4,SNR=14								
RABL	Rabaul	121.62	272			PKiKP		22 57 18.6	+0.9
ARMA	Armidale	123.47	241	P		PKiKP		22 57 22.8	+1.8
BJI2	Beijing	124.20	339	⇓PKP		PKPdf		22 57 21.9	+0.1
BJI2				PP		PP		22 59 10.6	+3.1
BJI2				SKS		SKSdf		23 04 16.0	-2.3
BJI2				AMB		AMB			
	comp=Z,52nm,10.3s								
BJI2				LR		LR			
	comp=N,110nm,20.9s								
BJI2				LR		LR			
	comp=E,86nm,19.7s								
BJI2				LR		LR			
	comp=Z,130nm,22.3s								
WMQ	Urumqi	124.23	5	ePKP		PKiKP		22 57 23.5	+1.4
WMQ				LR		LR			
	comp=Z,100nm,23.8s								
CASY	Casey	124.54	188			PKiKP		22 57 22.7	+0.8
MOO	Moorlands	124.65	226	P		PKiKP		22 57 25.5	+2.7
CNB	Canberra Magne	124.68	235	P		PKiKP		22 57 25.2	+2.0
HHC	Hu-ho-hao-te	124.89	343	eP		PKiKP		22 57 24.0	+0.4
BTO2	Baotou	125.44	345	ePKP		PKiKP		22 57 24.7	0.0
BTO2				PP		PP		22 59 20.7	+4.8
BTO2	Baotou	125.44	345	SS		SS		23 16 02.7	+2.3
BTO2				pmax		pmax			
	comp=Z,21nm,0.6s								
BTO2				pmax		pmax			
	comp=Z,220nm,7.4s								
KSH2	Kashi	126.44	17	PKP		PKiKP		22 57 26.6	-0.2
HNS	HongShan	127.06	339	⇓PKP		PKiKP		22 57 27.9	+0.1
TOO	Toolangi	127.23	232	P		PKiKP		22 57 29.8	+1.6
TOO	Toolangi	127.23	232			PKiKP		22 57 29.4	+1.2
KBL	Kabul	128.20	26			PKiKP		22 57 30.3	-0.2
CMSA	Cobar Meteorol	128.37	239	P		PKiKP		22 57 32.2	+1.6
GTA2	Gaotai	128.50	354	Pdif		Pdif		22 54 23.8	+7.8
GTA2	Gaotai	128.50	354	ePKP		PKPdf		22 57 30.2	0.0
CTA	Charters Tower	128.94	254	P		PKiKP		22 57 33.6	+1.6
CTAO	Charters Tower	128.94	254			PKiKP		22 57 33.0	+1.0
NJ2	Nanjing	130.01	332	eP		PKiKP		22 57 33.7	-0.2
NJ2				pmax		pmax			
	comp=Z,34nm,0.6s								
ARPS	Mount Arapiles	130.26	232	P		PKiKP		22 57 35.1	+0.9
QLP	Quilpie	130.36	245	P		PKiKP		22 57 36.5	+1.8
MTSU	Mount Surprise	130.78	256	P		PKiKP		22 57 37.5	+1.7
LZH	Lanzhou	131.25	349	ePKP		PKiKP		22 57 36.9	+0.4
LZH				sPKP		sPKPdf		22 58 36.6	+0.4
LZH				LR		LR			
	comp=N,180nm,20.0s								
LZH				LR		LR			
	comp=E,150nm,20.7s								
LZH				LR		LR			
	comp=Z,140nm,19.7s								
LZDM	Lanzhou Array	131.40	349	PKP		PKPdf		22 57 36.4	+0.3
	comp=Z,1.5nm,0.3s,baz=352,slow=40,SNR=1.7								
LZDM				SKPbc		SKPbc		23 00 44.7	-1.2
	comp=Z,7.3nm,0.5s,baz=321,slow=2.1,SNR=11								
STKA	Stephens Creek	131.72	238	P		PKiKP		22 57 38.1	+0.8
STKA	Stephens Creek	131.72	238	PKP		PKiKP		22 57 37.9	+0.5
	comp=Z,32nm,0.8s,baz=112,slow=2.4,SNR=40								
STKA				SKPbc		SKPab		23 00 47.9	+0.4
	comp=Z,5.2nm,0.7s,baz=112,slow=4.3,SNR=5.6								
XAN	Xi'an	132.00	343	P		PKiKP		22 57 38.1	+0.1
XAN				pmax		pmax			
	comp=Z,13nm,0.6s								
HTT	Hallett	133.51	235	P		PKiKP		22 57 41.6	+0.7
QIS	Mount Isa	135.16	253	P		PKiKP		22 57 45.3	+0.7
ENH	Enshi	135.32	340	PKPdf		PKPdf		22 57 43.4	+0.2
BBOO	Buckleboo	135.99	235	P		PKiKP		22 57 46.0	0.0
BBOO	Buckleboo	135.99	235			PKiKP		22 57 45.5	-0.4
BAKI	Biak	136.53	281	PKP		PKiKP		22 57 49.1	+1.5
AS09	Alice Springs	140.01	247	P		PKPdf		22 57 46.8	-5.2
AS15	Alice Springs	140.05	247	P		PKPdf		22 57 46.8	-5.3
AS31	Alice Springs	140.05	247	P		PKPdf		22 57 46.8	-5.3
ASAR	Alice Springs	140.05	247	PKhKP		PKPpre		22 57 45.0	
	comp=Z,6.1nm,0.5s,baz=113,slow=4.0,SNR=46								
ASAR				PKP		PKPdf		22 57 52.6	+0.6
	comp=Z,37nm,0.8s,baz=104,slow=2.1,SNR=41								
ASAR				SKPbc		SKiKP		23 01 14.2	-1.1
	comp=Z,3.4nm,0.7s,baz=108,slow=2.5,SNR=11								
ASAR	Alice Springs	140.05	247	PKPdf		PKiKP		22 57 53.4	-1.1
WRAB	Tennant Creek	140.12	253	PKPdf		PKiKP		22 57 53.7	-1.0
WRA	Warramunga Arr	140.13	253	PKhKP		PKPpre		22 57 45.7	
	comp=Z,6.5nm,0.6s,baz=97,slow=3.1,SNR=48								
WRA				PKP		PKPdf		22 57 53.4	+1.2
	comp=Z,3.3nm,0.5s,baz=288,slow=0.1,SNR=4.5								
WRA				SKPbc		SKPbc		23 01 13.9	+0.9
	comp=Z,2.7nm,0.9s,baz=103,slow=2.6,SNR=5.8								
WRA	Warramunga Arr	140.13	253	PKPdf		PKiKP		22 57 53.9	-0.9
SIJI	Sorong	141.06	284	P		PKPdf		22 57 54.9	+0.8
KDU	Kakadu	142.06	265	P		PKiKP		22 57 57.6	-1.2
FORT	Forrest	143.07	234	P		PKPbc		22 57 55.5	+1.0
MTN	Manton Dam	143.37	265	P		PKPdf		22 57 57.5	-0.7
TNTI	Ternate	144.18	288	P		PKPdf		22 57 59.5	-0.1
SGSI	Sangihe	144.67	294	P		PKPdf		22 58 01.5	+1.0
SGSI	S

FITZ	**Fitzroy Crossi**	**39.48**	**65**	LR	LR	23 04 54.6		
	comp=Z,308nm,18.5s,baz=243,slow=35							
ASAR	**Alice Springs**	**41.74**	**79**	P	**P**	**22 49 55.4**	**-0.4**	
	7.6nm,0.8s,baz=230,slow=7.4,SNR=42							
ASAR				PcP	**PcP**	**22 51 51.3**	**-0.8**	
	2.9nm,0.7s,baz=216,slow=2.7,SNR=5.0							
ASAR				LR	LR	23 05 08.6		
	comp=Z,787nm,21.8s,baz=234,slow=33							
	7.6nm,0.8s							
ASAR	**Alice Springs**	**41.74**	**79**		**P**	**22 49 55.7**	**-0.1**	
ASAR					**PcP**	**22 51 51.3**	**-0.8**	
AS31	**Alice Springs**	**41.74**	**79**		**P**	**22 49 55.2**	**-0.6**	
STKA	**Stephens Creek**	**43.05**	**95**	P	**P**	**22 50 06.9**	**+0.6**	
	3.1nm,0.7s,baz=256,slow=11,SNR=4.5							
	3.1nm,0.7s							
WRA	**Warramunga Arr**	**44.36**	**75**	P	**P**	**22 50 16.8**	**-0.2**	
	15nm,1.0s,baz=229,slow=8.4,SNR=25							
WRA				PcP	**PcP**	**22 52 01.2**	**+0.3**	
	0.8nm,0.7s,baz=233,slow=3.7,SNR=3.3							
	15nm,1.0s							
WRA	**Warramunga Arr**	**44.36**	**75**		**P**	**22 50 17.1**	**+0.1**	
WRA					**PcP**	**22 52 01.2**	**+0.3**	
WR8	**Warramunga Arr**	**44.46**	**75**		**P**	**22 50 17.6**	**-0.2**	
WR8				IAmb	IAmb	22 50 20.6		
	comp=Z,28nm,1.1s							
WB0	**Warramunga Arr**	**44.51**	**75**		**P**	**22 50 17.8**	**-0.3**	
INKA	**Innaminka**	**44.52**	**89**		**P**	**22 50 18.4**	**+0.2**	
INKA				IAmb	IAmb	22 50 26.8		
	comp=Z,5.7nm,1.0s							
VNDA	**Vanda**	**46.01**	**163**	P	**P**	**22 50 29.9**	**+0.5**	
	comp=Z,0.8nm,0.7s,baz=276,slow=8.8,SNR=7.8							
VNDA				LR	LR	23 05 47.0		
	comp=Z,204nm,22.0s,baz=272,slow=31							
	comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**46.01**	**163**		**P**	**22 50 29.4**	**0.0**	
VNDA				IAmb	IAmb	22 50 49.9		
	comp=Z,7.4nm,1.5s							
QSPA	**South Pole Qui**	**48.37**	**180**	P	**P**	**22 50 47.9**	**-0.1**	
	comp=Z,2.5nm,0.7s,baz=308,slow=0.9,SNR=26							
QSPA				LR	LR	23 09 35.4		
	comp=Z,515nm,18.6s,baz=310,slow=34							
	comp=Z,2.5nm,0.7s							
QSPA	**South Pole Qui**	**48.37**	**180**		**P**	**22 50 48.0**	**-0.1**	
PALK	**Pallekele**	**49.34**	**350**	LR	LR	23 09 07.2		
	comp=Z,198nm,18.2s,baz=144,slow=33							
TROLL	**Troll, Antarti**	**49.65**	**204**	⇑P	**P**	**22 50 57.8**	**0.0**	
	comp=Z,164nm,0.6s							
SNAA	**Sanae**	**51.37**	**204**	P	**P**	**22 51 10.2**	**-0.5**	
	comp=Z,4.2nm,1.0s,baz=105,slow=7.7,SNR=5.8							
	comp=Z,4.2nm,1.0s							
VNA2	**Neumayer--Watz**	**53.00**	**204**	⇑P	**P**	**22 51 22.6**	**-0.1**	
	comp=Z,4.8nm,0.8s,slow=4.6							
CTA	**Charters Tower**	**53.03**	**84**	LR	LR	23 10 50.5		
	comp=Z,173nm,21.6s,baz=222,slow=33							
VNA1	**Neumayer--Stat**	**53.37**	**204**	⇑P	**P**	**22 51 25.8**	**+0.4**	
	comp=Z,5.5nm,0.8s							
SUR	**Sutherland**	**53.54**	**257**	LR	LR	23 09 31.6		
	comp=Z,100nm,19.4s,baz=140,slow=31							
LBTB	**Lobatse**	**53.95**	**267**	LR	LR	23 09 33.4		
	comp=Z,359nm,21.9s,baz=124,slow=30							
MAKGR	**Makgori**	**54.10**	**266**	P	**P**	**22 51 31.5**	**-0.1**	
MAKGR				IAmb	IAmb	22 51 33.2		
	comp=Z,16nm,1.0s							
MATP	**Matopo**	**54.46**	**274**	LR	LR	23 10 59.6		
	comp=Z,250nm,18.8s,baz=106,slow=32							
SIJI	**Sorong**	**56.03**	**55**	LR	LR	23 16 49.3		
	comp=Z,67nm,19.5s,baz=158,slow=37							
LSZ	**Lusaka**	**57.89**	**278**	LR	LR	23 12 45.0		
	comp=Z,147nm,19.7s,baz=138,slow=32							
LSZ	**Lusaka**	**57.89**	**278**		**P**	**22 51 59.3**	**+0.5**	
LSZ				IAmb	IAmb	22 52 00.6		
	comp=Z,8.5nm,1.1s							
RPZ	**Rata Peaks**	**58.18**	**122**	LR	LR	23 12 47.6		
	comp=Z,47nm,18.1s,baz=110,slow=32							
PMG	**Port Moresby**	**60.57**	**75**	LR	LR	23 17 27.9		
	comp=Z,581nm,18.1s,baz=221,slow=35							
CMAR	**Chiang Mai Arr**	**60.72**	**11**	P	**P**	**22 52 18.5**	**+0.5**	
	comp=Z,2.4nm,0.3s,baz=207,slow=7.3,SNR=5.5							
CMAR				LR	LR	23 15 47.9		
	comp=Z,152nm,19.3s,baz=200,slow=33							
	comp=Z,2.4nm,0.3s							
KMBO	**Kilima Mbogo**	**61.23**	**297**	LR	LR	23 14 31.0		
	comp=Z,79nm,18.0s,baz=154,slow=32							
TSUM	**Tsumeb**	**63.36**	**267**	LR	LR	23 15 43.0		
	comp=Z,362nm,21.1s,baz=136,slow=32							
BRDH	**Bariadhala**	**64.20**	**3**	LR	LR	23 18 29.3		
	comp=Z,668nm,18.2s,baz=165,slow=34							
URZ	**Urewera**	**64.95**	**120**	LR	LR	23 14 56.1		
	comp=Z,143nm,18.0s,baz=268,slow=30							
MBAR	**Mbarara**	**66.04**	**292**	LR	LR	23 17 35.6		
	comp=Z,100nm,18.3s,baz=150,slow=32							
KRVT	**Keravat (AS076**	**67.56**	**75**	LR	LR	23 20 56.4		
	comp=Z,34nm,19.5s,baz=134,slow=34							
HNR	**Honiara**	**69.97**	**85**	LR	LR	23 22 26.6		
	comp=Z,4.9nm,18.4s,baz=276,slow=35							
PMSA	**Palmer Station**	**71.61**	**192**	LR	LR	23 25 11.4		
	comp=Z,213nm,18.3s,baz=148,slow=36							
KBL	**Kabul**	**78.02**	**344**		**P**	**22 54 04.6**	**-0.4**	
LZDM	**Lanzhou Array**	**78.62**	**13**	LR	LR	23 28 40.6		
	comp=Z,103nm,18.4s,baz=285,slow=36							
GAR	**Garm**	**82.09**	**346**	P	**P**	**22 54 25.9**	**-0.9**	
GAR				IAmb	IAmb	22 57 23.9		
	comp=Z,12nm,0.8s							
AAK	**Ala-Archa**	**84.98**	**350**	LR	LR	23 30 47.3		
	comp=Z,229nm,18.1s,baz=198,slow=34							
KKAR	**Karatay Array**	**86.04**	**347**	P	**P**	**22 54 46.7**	**0.0**	
EIL	**Elat**	**86.56**	**315**	LR	LR	23 27 00.6		
	comp=Z,147nm,20.0s,baz=168,slow=31							
MKAR	**Makanchi Array**	**88.37**	**356**	P	**P**	**22 54 59.1**	**+1.2**	
	comp=Z,0.8nm,1.0s,baz=162,slow=6.1,SNR=3.6							
MKAR				LR	LR	23 33 32.7		
	comp=Z,131nm,18.0s,baz=182,slow=35							
	comp=Z,0.8nm,1.0s							
MKAR	**Makanchi Array**	**88.37**	**356**	P	**P**	**22 54 58.0**	**+0.1**	
MMAI	**Mount Meron Ar**	**89.00**	**318**	LR	LR	23 28 42.8		
	comp=Z,153nm,21.9s,baz=126,slow=31							
MJAR	**Matsushiro Arr**	**90.25**	**38**	LR	LR	23 34 45.8		
	comp=Z,52nm,18.1s,baz=208,slow=35							
SONM	**Songino Array**	**90.64**	**12**	LR	LR	23 33 32.6		
	comp=Z,140nm,21.9s,baz=194,slow=34							
GNI	**Garni**	**90.70**	**328**	LR	LR	23 31 17.1		
	comp=Z,150nm,19.5s,baz=138,slow=32							
KURBB	**Kurchatov Arra**	**92.44**	**354**	P	**P**	**22 55 16.9**	**+0.3**	
	comp=Z,0.3nm,0.8s,baz=175,slow=4.3,SNR=4.4							
KURBB				LR	LR	23 34 20.9		
	comp=Z,186nm,19.6s,baz=176,slow=34							
	comp=Z,0.3nm,0.8s							
KURK	**Kurchatov**	**92.52**	**354**	P	**P**	**22 55 15.7**	**-1.3**	
KURK				IAmb	IAmb	22 58 06.8		
	comp=Z,2.7nm,1.0s							
TLY	**Talaya**	**94.02**	**9**	LR	LR	23 36 50.6		
	comp=Z,147nm,21.0s,baz=179,slow=35							
KBZ	**Khabaz**	**94.46**	**329**	LR	LR	23 33 56.3		
	comp=Z,85nm,20.1s,baz=214,slow=33							
KVAR	**Kislovodsk Arr**	**94.73**	**329**	LR	LR	23 33 15.7		
	comp=Z,67nm,21.6s,baz=48,slow=32							
BRTR	**Keskin Array B**	**95.19**	**321**	LR	LR	23 34 49.3		
	comp=Z,70nm,18.4s,baz=212,slow=33							
ZALV	**Zalesovo Beam**	**95.41**	**358**	P	**P**	**22 55 31.1**	**+0.8**	
	comp=Z,0.4nm,0.3s,baz=208,slow=5.7,SNR=3.8							
	comp=Z,0.4nm,0.3s							
ZALV	**Zalesovo Beam**	**95.41**	**358**	P	**P**	**22 55 30.4**	**+0.1**	
PLCA	**Paso Flores**	**95.69**	**196**	LR	LR	23 39 34.9		
	comp=Z,232nm,18.1s,baz=176,slow=36							
DBIC	**Dimbokro**	**96.88**	**273**	LR	LR	23 33 10.7		
	comp=Z,131nm,20.9s,baz=175,slow=32							
NVAR	**Mina Array Bea**	**159.28**	**90**	PKPab	**PKPab**	**23 02 42.7**	**+0.3**	
	comp=Z,1.6nm,0.8s,baz=262,slow=4.5,SNR=6.0							
PDAR	**Pinedale Array**	**166.61**	**80**	PKPab	**PKPab**	**23 03 13.6**	**-0.9**	
	comp=Z,1.0nm,0.8s,baz=282,slow=5.1,SNR=6.7							
PDAR	**Pinedale Array**	**166.61**	**80**		**PKPab**	**23 03 13.8**	**-0.6**	

RSNC ***12*** *22:45:36.0±0.0, 7°N±2°×7°3W±°, h144km±2km, M2.4, ML2.1*
FUNV ***12*** *22:45:37.0, 7°.19N×73°.23W, h6km, MW2.8, Presumed earthquake*

ISC 12 22:45:33.3±1.6, 6°.88N±0°.04×73°.13W±0°.05, h159km±9km, n19, σ1°63/36, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**190**	P	**Pn**	**22 45 55.3**	**0.0**
BARC				S	**Sn**	**22 46 10.4**	**-1.6**
BRJC	**Barrancabermej**	**0.61**	**279**	P	**Pn**	**22 45 57.0**	**+0.7**
BRJC				S	**Sn**	**22 46 14.3**	**+0.5**
PAMC	**Pamplona, Colo**	**0.63**	**43**	P	**Pn**	**22 45 58.2**	**+1.3**
PAMC				S	**Sn**	**22 46 15.1**	**+0.1**
RUSC	**La Rusia**	**0.98**	**177**	P	**Pn**	**22 45 59.2**	**-0.2**
RUSC				S	**Sn**	**22 46 18.0**	**-1.4**
RUSC	**La Rusia**	**0.98**	**177**	*eP*	**Pn**	**22 46 00.0**	**+0.6**
RUSC				*eS*	**Sn**	**22 46 18.0**	**-1.4**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	**22 46 02.0**	**-0.2**
PTBC				S	**Sn**	**22 46 23.0**	**-1.3**
OCAC	**Ocana**	**1.36**	**352**	P	**Pn**	**22 46 03.6**	**+1.2**
OCAC				S	**Sn**	**22 46 26.4**	**+1.6**
SPBC	**San Pablo de B**	**1.54**	**217**	P	**Pn**	**22 46 03.9**	**-0.2**
SPBC				S	**Sn**	**22 46 26.4**	**-1.3**
NORC	**Norcasia**	**2.17**	**233**	P	**Pn**	**22 46 11.3**	**+0.3**
NORC				S	**Sn**	**22 46 39.3**	**-0.8**
ROSC	**El Rosal**	**2.35**	**210**	P	**Pn**	**22 46 16.1**	**+2.6**
HELC	**Santa Helena**	**2.48**	**254**	P	**Pn**	**22 46 17.6**	**+2.6**
HELC				S	**Sn**	**22 46 48.2**	**+1.1**
HELC	**Santa Helena**	**2.48**	**254**	⇑*eP*	**Pn**	**22 46 17.7**	**+2.7**
HELC				*eS*	**Sn**	**22 46 47.5**	**+0.3**
UREC	**San Jos de Ur**	**2.53**	**290**	P	**Pn**	**22 46 16.5**	**+1.2**
UREC				S	**Sn**	**22 46 47.4**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	**22 46 17.1**	**-1.5**
GUY2C				S	**Sn**	**22 46 54.3**	**+0.7**
SDV	**Santo Domingo**	**3.18**	**51**	*eP*	**Pn**	**22 46 25.2**	**+1.7**
SDV				*eS*	**Sn**	**22 47 00.9**	**-1.5**
PRAC	**Prado**	**3.60**	**209**	P	**Pn**	**22 46 29.4**	**+0.7**
PRAC				S	**Sn**	**22 47 11.3**	**-0.5**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**22 46 29.5**	**+0.5**
SJCC				S	**Sn**	**22 47 11.0**	**-1.2**
SJCC	**San Jacinto, C**	**3.62**	**326**	*eP*	**Pn**	**22 46 28.5**	**-0.4**
SJCC				*eS*	**Sn**	**22 47 06.5**	**-5.7**
ORTC	**Ortega, Tolima**	**3.63**	**216**	P	**Pn**	**22 46 28.8**	**-0.3**

UPP ***12*** *23:19:19.6±0.0, 67°.85N×20°.21E, h0km, ML2.2, Suspected explosion*
IDC ***12*** *23:19:21.1±1.3, 67°.83N×20°.79E, h0km, mbtmp2.6/3, ML1.9/3, Error ellipse: s-maj=22.8km s-min=8.3km az=120.0*

ISC 12 23:19:20.0±1.0, 67°.83N±0°.04×20°.23E±0°.03, h0km, n13, σ0°60/16, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**17**	P	**Pg**	**23 19 22.1**	**-0.4**
KUA				S	**Sg**	**23 19 23.9**	**-0.4**
RATU	**Laukkuluspa**	**0.24**	**270**	P	**Pg**	**23 19 24.3**	**-0.4**
RATU				S	**Sg**	**23 19 27.7**	**-0.1**
NIKU	**Nikkaluokta**	**0.46**	**276**	P	**Pg**	**23 19 28.2**	**-0.6**
LANU	**Lannavaara**	**0.70**	**71**	*eP*	**Pg**	**23 19 33.0**	**-0.4**
LANU	**Lannavaara**	**0.70**	**71**	P	**Pg**	**23 19 33.0**	**-0.4**
LANU				S	**Sg**	**23 19 42.3**	**-0.2**
DUNU	**Dundret**	**0.72**	**170**	P	**Pg**	**23 19 33.5**	**-0.3**
MASU	**Masugnsbyn**	**0.77**	**118**	P	**Pg**	**23 19 34.5**	**-0.3**
SALU	**Saltoluokta**	**0.80**	**237**	*eP*	**Pg**	**23 19 34.8**	**-0.6**
SALU	**Saltoluokta**	**0.80**	**237**	P	**Pg**	**23 19 34.7**	**-0.6**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**23 19 47.1**	**-0.9**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn	**Pn**	**23 20 03.3**	**+0.3**
	0.3nm,0.3s,baz=228,slow=13,SNR=17						
ARCES				Lg	Lg	23 20 36.5	
	0.8nm,0.3s,baz=231,slow=26,SNR=8.7						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**6.88**	**156**	Pn	**Pn**	**23 21 03.1**	**+1.1**
	0.1nm,0.3s,baz=336,slow=27,SNR=2.2						
FINES				Lg	Lg	23 22 51.9	
	0.2nm,0.3s,baz=350,slow=27,SNR=5.6						
	0.9nm,0.9s						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn	**Pn**	**23 21 15.9**	**+0.7**
	baz=23,slow=12,SNR=1.6						
NOA				Lg	Lg	23 23 29.0	
	baz=27,slow=20,SNR=4.8						
	0.4nm,0.8s						

SDD ***12*** *23:21:49.6±2.4, 18°.58N×70°.38W, h89km±22km, MD2.7, ML2.6, MW2.8, Presumed earthquake*
OSPL ***12*** *23:21:49.7±1.3, 18°.76N×70°.41W, h98km±10km, ML2.5, Presumed earthquake*

ISC 12 23:21:48.5±1.9, 18°.70N±0°.06×70°.37W±0°.04, h93km±14km, n16, σ1°11/25, 13C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANI	**BANI**	**0.30**	**177**	⇑*ePg*	**Pn**	**23 22 03.3**	**+0.8**
BANI				IAML		23 22 17.0	
	comp=N,244nm,0.3s						
SDD	**Santo Domingo**	**0.50**	**118**	*eS*	**Sn**	**23 22 15.7**	**+0.9**
SDD				IAML		23 22 18.6	
	comp=Z,790nm,0.1s						
SFDR	**San Fco. de Ma**	**0.60**	**12**	⇑*ePg*	**Pn**	**23 22 05.9**	**+1.5**
SFDR				⇑*eSg*	**Sn**	**23 22 16.4**	**+0.1**
SFDR				IAML		23 22 16.9	
	comp=N,237nm,0.5s						
SC01	**Santiago de lo**	**0.80**	**335**	⇑*ePg*	**Pn**	**23 22 05.8**	**-0.6**
SC01				⇑*eSg*	**Sn**	**23 22 19.9**	**+0.2**
SC01				IAML		23 22 21.1	
	comp=N,97nm,0.2s						
SC01	**Santiago de lo**	**0.80**	**335**	*i* P	**Pn**	**23 22 05.5**	**-0.9**
SC01				*eS*	**Sn**	**23 22 19.3**	**-0.4**
SDDR	**Presa de Saban**	**0.91**	**288**	⇑*ePg*	**Pn**	**23 22 06.6**	**-0.9**
SDDR				⇑*eSg*	**Sn**	**23 22 21.0**	**-0.9**
SDDR				IAML		23 22 28.7	
	comp=N,42nm,0.3s						
SDDR	**Presa de Saban**	**0.91**	**288**	*i* P	**Pn**	**23 22 06.8**	**-0.7**
SDDR				*eS*	**Sn**	**23 22 20.9**	**-0.9**
SDDR				IAML		23 22 25.3	
	comp=Z,379nm,0.2s						
HATOM	**Hato Mayor del**	**0.94**	**84**	⇑*ePg*	**Pn**	**23 22 06.8**	**-1.1**
HATOM				⇑*eSg*	**Sn**	**23 22 21.9**	**-0.5**
HATOM				IAML		23 22 23.4	
	comp=N,66nm,0.4s						
LONE3	**El Aguacate, B**	**1.03**	**265**	*i* P	**Pn**	**23 22 08.8**	**-0.2**
LONE3				IAML		23 22 33.9	
	comp=Z,17nm,3.0s						
LODU1	**El Espartillar**	**1.10**	**252**	*i* P	**Pn**	**23 22 10.4**	**+0.8**
LODU1				IAML		23 22 27.7	
	comp=Z,34nm,1.7s						
LOVI	**El Cajuil, Ovi**	**1.30**	**227**	*i* P	**Pn**	**23 22 12.1**	**+0.2**
LOVI				IAML		23 22 32.1	
	comp=Z,47nm,1.9s						
LUDR	**Luperon**	**1.31**	**335**	⇑*ePg*	**Pn**	**23 22 14.2**	**+2.1**
LUDR				IAML		23 22 28.5	
	comp=E,206nm,1.2s						
LUDR				⇑*eSg*	**Sn**	**23 22 31.6**	**+1.7**
LOPP1	**Punta Rusia, P**	**1.39**	**326**	*eS*	**Sn**	**23 22 29.6**	**-2.1**
LOPP1				IAML		23 22 33.0	
	comp=Z,61nm,3.6s						
LOBH	**Bahia de las A**	**1.46**	**236**	*i* P	**Pn**	**23 22 15.1**	**+1.1**
LOBH				IAML		23 22 41.4	
	comp=Z,40nm,1.9s						
HIDR	**Higuey Centro**	**1.57**	**94**	⇑*ePg*	**Pn**	**23 22 15.4**	**0.0**
HIDR				⇑*eSg*	**Sn**	**23 22 34.1**	**-1.6**
HIDR				IAML		23 22 39.8	
	comp=N,57nm,0.2s						
PCDR	**Punta Cana, DR**	**1.90**	**95**	*i* P	**Pn**	**23 22 20.1**	**+0.7**
PCDR				*eS*	**Sn**	**23 22 42.9**	**-0.2**
PCDR				IAML		23 22 51.7	
	comp=Z,52nm,1.6s						

IDC ***12*** *23:57:05.0±1.3, 3°.04N×127°.09E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=103.2km s-min=17.4km az=70.0*
DJA ***12*** *23:57:13.6±1.4, 3°N±6°×12°7E±°, h31km±20km, M3.8/7, MLv3.8/7*

ISC 12 23:57:11.4±1.0, 3°.2N±0°.1×127°.2E±0°.1, h44km, n10, σ1°53/12, mb3.8/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.48**	**155**	P	**Pn**	**23 57 36.0**	**+0.4**
GAMI				S	**Sn**	**23 57 55.8**	**+2.1**
SGSI	**Sangihe**	**1.70**	**287**	P	**Pn**	**23 57 39.5**	**+0.9**
SGSI				S	**Sn**	**23 57 59.2**	**+0.1**
TNTI	**Ternate**	**2.40**	**175**	P	**Pn**	**23 57 50.1**	**+1.8**
FITZ	**Fitzroy Crossi**	**21.20**	**184**	P	**P**	**00 01 52.1**	**-1.3**
	4.0nm,1.0s,baz=4.4,slow=13,SNR=1.9						
	4.0nm,1.0s						
WRA	**Warramunga Arr**	**24.04**	**163**	P	**P**	**00 02 20.8**	**-1.8**
	0.8nm,0.4s,baz=341,slow=10,SNR=5.8						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**27.48**	**166**	P	**P**	**00 02 51.9**	**-1.9**
	0.2nm,0.4s,baz=348,slow=7.7,SNR=4.4						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**37.47**	**160**	P	**P**	**00 04 19.4**	**-1.5**
	2.4nm,0.7s,baz=342,slow=6.4,SNR=3.9						
	2.4nm,0.7s						
SONM	**Songino Array**	**47.95**	**341**	P	**P**	**00 05 47.1**	**+1.4**
	0.3nm,0.8s,baz=149,slow=3.0,SNR=2.3						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**58.24**	**325**	P	**P**	**00 07 01.5**	**0.0**
	0.4nm,0.4s,baz=112,slow=7.9,SNR=9.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**62.42**	**327**	P	**P**	**00 07 30.0**	**+0.1**
	0.4nm,0.5s,baz=129,slow=6.2,SNR=5.8						
	0.4nm,0.5s						

DJA ***13*** *00:07:21.8±0.2, 3°S±2°×12°7E±°, h10km, M4.8/24, mB5.4/9, mb5.1/13, MLv4.7/24, Mw(mB)4.8/9*
NEIC ***13*** *00:07:23.9±1.7, 2°.86S±0°.06×126°.98E±0°.06, h55km±2km, mb4.7/78, Error ellipse: s-maj=9.1km s-min=8.8km az=87.0*
IDC ***13*** *00:07:25.3±2.4, 2°.95S×127°.02E, h51km±26km, mb3.6/8, mbtmp3.9/11, ML4.1/4, MS3.3/1, Error ellipse: s-maj=21.2km s-min=16.0km az=135.0*

ISC 13 00:07:21.9±0.4, 2°.92S±0°.05×126°.89E±0°.05, h41km, n124, σ1°48/125, mb4.6/47, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.38**	**147**	P	**Pn**	**00 07 30.4**	**-0.8**
NLAI				S	**Sn**	**00 07 36.6**	**-1.0**
SANI	**Sanana**	**1.25**	**314**	P	**Pn**	**00 07 41.0**	**-1.9**
SANI				S	**Sn**	**00 07 56.5**	**-2.1**
KRAI	**Karang Ratu**	**1.55**	**105**	P	**Pn**	**00 07 50.4**	**+3.3**
TNTI	**Ternate**	**3.70**	**7**	Pn	**Pn**	**00 08 17.9**	**+1.3**
TNTI					**Sn**	**00 09 00.8**	**+1.9**
LUWI	**Luwuk**	**4.52**	**294**		**Pn**	**00 08 29.2**	**+1.3**
LUWI	**Luwuk**	**4.52**	**294**	P	**Pn**	**00 08 28.8**	**+0.9**
SIJI	**Sorong**	**4.82**	**65**	P	**Pn**	**00 08 33.7**	**+1.6**
	29nm,0.3s,baz=235,slow=8.7,SNR=35						
SIJI				S	**Sn**	**00 09 28.1**	**+1.4**
	52nm,0.3s,baz=155,slow=23,SNR=16						
SIJI	**Sorong**	**4.82**	**65**	P	**Pn**	**00 08 33.3**	**+1.2**
GTOI	**Gorontalo**	**5.25**	**312**	P	**Pn**	**00 08 41.4**	**+3.5**
	1.4nm4µm289nm,0.5s						
FAKI	**Fak Fak**	**5.35**	**90**	Pn	**Pn**	**00 08 39.7**	**+0.4**
APSI	**Ampana**	**5.61**	**291**	P	**Pn**	**00 08 44.7**	**+1.9**
SOEI	**Soe**	**7.27**	**201**	Pn	**Pn**	**00 09 08.0**	**+2.2**
TOLI2	**Tolitoli**	**7.30**	**303**		**Pn**	**00 09 08.3**	**+2.2**
PCI	**Palu**	**7.33**	**286**	P	**Pn**	**00 09 09.6**	**+3.1**
	3µm122nm,1.0s						
KAPI	**Kappang**	**7.42**	**254**	P	Pn	00 09 12.6	+4.8
	3.7nm,0.3s,baz=70,slow=10,SNR=13						
KAPI				S	**Sn**	**00 10 29.7**	**-1.0**
	11nm,0.7s,baz=190,slow=19,SNR=1.7						
	28nm,0.6s						
KAPI	**Kappang**	**7.42**	**254**		**Pn**	**00 09 11.4**	**+3.6**
KAPI	**Kappang**	**7.42**	**254**	P	**Pn**	**00 09 10.3**	**+2.6**
	0.2nm29nm,0.8s						
DDMP	**Don Marcelino,**	**9.04**	**353**	*eP*	**Pn**	**00 09 29.7**	**-0.3**
DDMP				*eS*	Sn	00 11 00.3	-10
FITZ	**Fitzroy Crossi**	**15.13**	**185**	P	**P**	**00 10 56.6**	**-0.9**
	0.1nm,0.3s,baz=51,slow=19,SNR=2.0						
	3.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.13**	**185**		**Pn**	**00 10 55.1**	**+2.2**
WB0	**Warramunga Arr**	**18.28**	**157**	P	**Pn**	**00 11 34.0**	**+1.5**
WRA	**Warramunga Arr**	**18.41**	**157**	P	**Pn**	**00 11 35.3**	**+1.1**
	0.7nm,0.3s,baz=339,slow=11,SNR=13						
	3.5nm,0.6s						
WRA	**Warramunga Arr**	**18.41**	**157**	P	**P**	**00 11 34.0**	**+0.1**
WB2	**Warramunga Arr**	**18.42**	**157**	P	**P**	**00 11 33.6**	**-0.3**
WR8	**Warramunga Arr**	**18.49**	**157**	P	**Pn**	**00 11 35.3**	**+0.2**
WR0	**Warramunga Arr**	**18.51**	**157**	P	**P**	**00 11 34.7**	**-0.2**
AS31	**Alice Springs**	**21.71**	**162**	P	**P**	**00 12 10.9**	**+1.2**
ASAR	**Alice Springs**	**21.71**	**162**	P	**P**	**00 12 11.4**	**+1.7**
	1.3nm,0.3s,baz=343,slow=12,SNR=17						
	1.3nm,0.3s						
ASAR	**Alice Springs**	**21.71**	**162**	P	**P**	**00 12 11.6**	**+1.9**
GIRL	**Giralia**	**23.13**	**211**	P	**P**	**00 12 25.8**	**+1.1**
DLV	**Lat**	**23.51**	**309**	P	**P**	**00 12 29.3**	**+0.6**
DLV				IAmb	IAmb	00 12 40.0	
	comp=Z,33nm,1.4s						
MNAI	**Manna**	**23.93**	**266**	P	**P**	**00 12 32.8**	**+0.3**
CTAO	**Charters Tower**	**25.46**	**134**	P	**P**	**00 12 45.4**	**-0.9**
CTAO

KKU	**Keanakolu**	**79.51**	**69**	P	**P**	**00 19 23.7**	**-1.6**
M13K	**Dall Lake**	**82.67**	**28**	P	**P**	**00 19 40.2**	**-0.7**
M13K				IAmb	IAmb	00 20 06.8	
	comp=Z,14nm,1.2s						
L14K	**Kuka Creek**	**83.28**	**27**	P	**P**	**00 19 43.1**	**-1.0**
L14K				IAmb	IAmb	00 19 51.8	
	comp=Z,6.5nm,1.4s						
O14K	**Tigyukauivet M**	**83.31**	**29**	P	**P**	**00 19 44.4**	**+0.1**
O14K				IAmb	IAmb	00 20 19.5	
	comp=Z,6.1nm,1.1s						
N15K	**Kwethluk River**	**84.14**	**29**	P	**P**	**00 19 48.6**	**0.0**
N15K				IAmb	IAmb	00 19 49.8	
	comp=Z,6.5nm,1.2s						
F17K	**Baldwin Pennin**	**85.49**	**23**	P	**P**	**00 19 55.0**	**-0.1**
K17K	**Iditarod**	**85.66**	**26**	P	**P**	**00 19 56.9**	**+0.8**
K17K				IAmb	IAmb	00 20 03.2	
	comp=Z,6.2nm,1.4s						
C18K	**Utukok River**	**86.19**	**20**		**P**	**00 19 57.6**	**-1.1**
C18K				IAmb	IAmb	00 19 59.4	
	comp=Z,11nm,1.3s						
OHAK	**Old Harbor**	**86.93**	**32**	P	**P**	**00 20 02.0**	**-0.4**
N19K	**Bonanza Creek**	**86.99**	**29**	P	**P**	**00 20 02.3**	**-0.5**
N19K				IAmb	IAmb	00 20 16.5	
	comp=Z,3.8nm,1.0s						
G19K	**Purcell Mounta**	**87.03**	**23**	P	**P**	**00 20 02.5**	**-0.2**
G19K				IAmb	IAmb	00 20 30.2	
	comp=Z,6.0nm,1.4s						
L19K	**White Mountain**	**87.09**	**27**	P	**P**	**00 20 03.5**	**+0.3**
L19K				IAmb	IAmb	00 20 05.0	
	comp=Z,5.0nm,1.4s						
SPU	**Mount Spurr**	**88.22**	**29**	P	**P**	**00 20 08.2**	**-0.4**
SPU				IAmb	IAmb	00 20 16.0	
	comp=Z,5.2nm,1.1s						
CAST	**Castle Rocks**	**88.57**	**26**	P	**P**	**00 20 09.6**	**-0.6**
BRLK	**Bradley Lake**	**88.58**	**30**	P	**P**	**00 20 10.4**	**0.0**
KOPT	**Kop Dagi**	**89.09**	**310**	P	**P**	**00 20 11.6**	**-2.0**
KOPT				IAmb	IAmb	00 20 54.7	
	comp=Z,7.8nm,1.3s						
TRF	**Thorofare Moun**	**89.38**	**26**	P	**P**	**00 20 15.0**	**+0.8**
TRF				IAmb	IAmb	00 20 16.8	
	comp=Z,8.4nm,1.4s						
PMR	**Palmer**	**89.68**	**28**	P	**P**	**00 20 16.7**	**+1.3**
PMR				IAmb	IAmb	00 20 57.8	
	comp=Z,6.0nm,1.3s						
BWN	**Browne**	**89.83**	**26**	P	**P**	**00 20 18.6**	**+2.5**
I23K	**Minto, Yukon-K**	**90.00**	**25**	P	**P**	**00 20 18.7**	**+1.9**
I23K				IAmb	IAmb	00 20 28.8	
	comp=Z,2.1nm,1.0s						
CCB	**Clear Creek Bu**	**90.60**	**25**	P	**P**	**00 20 20.5**	**+0.8**
CCB				IAmb	IAmb	00 20 30.1	
	comp=Z,3.5nm,1.3s						
E24K	**Your Creek**	**90.67**	**22**	P	**P**	**00 20 21.1**	**+1.1**
E24K				IAmb	IAmb	00 20 44.7	
	comp=Z,3.1nm,1.4s						
HDA	**Harding Lake**	**90.95**	**26**	P	**P**	**00 20 21.8**	**+0.5**
HDA				IAmb	IAmb	00 20 24.9	
	comp=Z,4.2nm,1.3s						
ILAR	**Eielson Array**	**91.00**	**25**	P	**P**	**00 20 24.6**	**+3.0**
	comp=Z,0.2nm,0.8s,baz=279,slow=6.1,SNR=1.9						
	comp=Z,0.2nm,0.8s						
DIV	**Divide**	**91.25**	**29**	P	**P**	**00 20 22.5**	**-0.3**
DIV				IAmb	IAmb	00 20 31.9	
	comp=Z,3.5nm,0.9s						
K24K	**Donnelly Dome**	**91.42**	**26**	P	**P**	**00 20 24.5**	**+1.0**
K24K				IAmb	IAmb	00 20 49.5	
	comp=Z,3.8nm,0.8s						
TOKA	**Tokat**	**92.19**	**310**	P	**P**	**00 20 26.5**	**-1.1**
TOKA				IAmb	IAmb	00 21 07.7	
	comp=Z,5.2nm,1.1s						
TAOE	**Nuku Hiva Isla**	**92.48**	**99**	P	**P**	**00 20 28.4**	**-1.2**
C27K	**Jago River**	**92.51**	**21**	P	**P**	**00 20 28.6**	**+0.1**
E27K	**Coleen River**	**93.26**	**22**	P	**P**	**00 20 31.2**	**-0.7**
E27K				IAmb	IAmb	00 20 42.5	
	comp=Z,7.5nm,1.4s						
LOGN	**Logan Glacier**	**93.56**	**29**	P	**P**	**00 20 32.5**	**-1.2**
LOGN				IAmb	IAmb	00 21 03.2	
	comp=Z,5.8nm,1.2s						
F30M	**Barrier River**	**95.48**	**22**	P	**P**	**00 20 41.9**	**-0.2**
F30M				IAmb	IAmb	00 21 10.1	
	comp=Z,6.6nm,1.4s						
MDUB	**Mudurnu**	**96.22**	**310**	P	**P**	**00 20 44.8**	**-1.4**
INK	**Inuvik**	**96.25**	**22**	P	**P**	**00 20 43.9**	**-1.6**
BESE	**Bessie Mountai**	**96.79**	**31**	P	**P**	**00 20 47.8**	**-0.6**
GRHM	**Grahamstown, E**	**97.18**	**236**	P	**P**	**00 20 50.4**	**-0.3**
P32M	**Atlin**	**97.27**	**30**	P	**P**	**00 20 49.9**	**-0.5**
P32M				IAmb	IAmb	00 21 29.4	
	comp=Z,4.9nm,1.2s						
FIA1	**FINESS Array S**	**97.73**	**332**	P	Pdif	00 20 52.8	+0.4
FINES	**FINESS Array B**	**97.73**	**332**	P	**P**	**00 20 52.1**	**-0.2**
HBVL	**Hebbronville**	**130.27**	**57**	PKPpre	PKPpre	00 26 16.4	
HBVL				PKPdif	PKPpre	00 26 24.0	
FCAR	**Ozark Folk Cen**	**131.27**	**43**	PKPdf	**PKPdf**	**00 26 27.5**	**-2.7**
TLIG	**Tlapa**	**133.11**	**69**	PKPdf	**PKPdf**	**00 26 30.9**	**-3.4**
ACSO	**Alum Creek Sta**	**134.07**	**32**	PKPdf	**PKPdf**	**00 26 34.7**	**-0.6**
ERPA	**Erie**	**134.15**	**28**	PKPdf	**PKiKP**	**00 26 36.3**	**-0.5**
MMNY	**Mt. Morris Dam**	**134.61**	**26**	PKPdf	**PKPdf**	**00 26 35.3**	**-1.0**
O54A	**Avella**	**135.45**	**30**	PKPdf	**PKPdf**	**00 26 35.0**	**-2.9**
Z47A	**Carrollton**	**135.55**	**43**	PKPdf	**PKPdf**	**00 26 37.0**	**-1.3**
LBNH	**Lisbon**	**135.62**	**19**	PKPdf	**PKiKP**	**00 26 39.0**	**-0.7**
MACA	**Manacapuru-AM**	**170.31**	**129**	PKPdf	**PKPdf**	**00 27 27.6**	**+1.0**

CATAC ***13*** *00:09:49.1±0.5, 13˚N±2˚×9˚0W±˚, h1km, M3.5/18, MLv3.5/18, Error ellipse: s-maj=5.8km s-min=4.8km az=90.2, confirmed*
SNET ***13*** *00:09:50.0±2.7, 12.˚78N×90.˚33W, h17km, ML3.4, Presumed earthquake*
GCG ***13*** *00:09:51.1±2.1, 12.˚88N×90.˚30W, h12km±72km, MD4.4, Presumed earthquake*

ISC 13 00:09:49.4±1.9**, 12.˚78N**±0.˚07×**90.˚22W**±0.˚04**, h7**km±10km**, n35**, σ1**s00/55, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**1.07**	**10**	P	**Pn**	**00 10 10.0**	**-0.8**
FAME				S	**Sb**	**00 10 25.0**	**+0.5**
LALI	**Alcalda de L**	**1.12**	**51**	P	**Pn**	**00 10 12.2**	**+0.7**
LALI				S	**Sn**	**00 10 28.1**	**+0.9**
LALI	**Alcalda de L**	**1.12**	**51**	*i* P	**Pg**	**00 10 09.8**	**-1.1**
JAYA	**Jayaque - finc**	**1.14**	**41**	P	**Pn**	**00 10 11.9**	**-0.1**
JAYA				S	**Sb**	**00 10 27.3**	**+0.6**
JAYA	**Jayaque - finc**	**1.14**	**41**	*i* P	**Pn**	**00 10 11.7**	**-0.3**
JAYA				*i* S	**Sg**	**00 10 25.2**	**-1.0**
JAYA	**Jayaque - finc**	**1.14**	**41**	*i* P	**Pn**	**00 10 12.0**	**0.0**
JAYA				*e*S	**Sn**	**00 10 28.4**	**+0.4**
CEVE	**Cerro Verde**	**1.19**	**29**	P	**Pn**	**00 10 12.7**	**0.0**
CEVE				S	**Sn**	**00 10 29.8**	**+0.6**
LOAL	**Lomas de Alarc**	**1.28**	**19**	P	**Pg**	**00 10 14.0**	**+0.1**
LOAL	**Lomas de Alarc**	**1.28**	**19**	*i* P	**Pg**	**00 10 16.0**	**+2.1**
LOAL				*e*S	**Sn**	**00 10 32.4**	**+1.2**
PANCS	**Alcalda de**	**1.30**	**51**	P	**Pg**	**00 10 14.9**	**+0.6**
PANCS				S	**Sn**	**00 10 32.0**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.30**	**19**	P	**Pg**	**00 10 14.7**	**+0.3**
SLOZ				S	**Sg**	**00 10 32.4**	**+1.0**
BOQS	**Boqueron**	**1.31**	**44**	*i* P	**Pg**	**00 10 15.4**	**+0.8**
UEES	**Universidad Ev**	**1.33**	**46**	P	**Pg**	**00 10 14.6**	**-0.3**
UEES				S	**Sg**	**00 10 34.5**	**+2.4**
LOMA	**Loma Larga**	**1.33**	**50**	P	**Pg**	**00 10 14.4**	**-0.5**
LOMA				S	**Sg**	**00 10 33.3**	**+1.1**
LOMA	**Loma Larga**	**1.33**	**50**	*i* P	**Pb**	**00 10 14.1**	**-0.6**
UNIC	**Universidad Ca**	**1.36**	**29**	P	**Pg**	**00 10 14.9**	**-0.4**
UNIC				S	**Sn**	**00 10 33.2**	**0.0**
RBDL	**Robledal**	**1.42**	**21**	*i* P	**Pg**	**00 10 16.7**	**+0.1**
RBDL				*e*S	**Sg**	**00 10 35.2**	**+0.2**
SJTE	**Alcalda de S**	**1.44**	**55**	*i* P	**Pb**	**00 10 15.6**	**-1.0**
LFU	**La Fuente**	**1.44**	**48**	*i* P	**Pg**	**00 10 16.2**	**-0.7**
LBRS	**Las Brisas**	**1.48**	**50**	*i* P	**Pb**	**00 10 16.9**	**-0.5**
COEG	**Centro de Oper**	**1.54**	**57**	P	**Pb**	**00 10 17.2**	**-1.2**
COEG				S	**Sg**	**00 10 40.2**	**+1.2**
COEG	**Centro de Oper**	**1.54**	**57**	*i* P	**Pn**	**00 10 16.9**	**-0.5**
COEG				*e*S	**Sn**	**00 10 37.7**	**-0.1**
PAVA	**Las Pavas**	**1.55**	**53**	P	**Pb**	**00 10 17.9**	**-0.6**
TECO	**Alcaldia de Te**	**1.58**	**62**	P	**Pb**	**00 10 18.0**	**-1.1**
MTO3	**Montecristo**	**1.81**	**27**	P	**Pb**	**00 10 21.5**	**-1.5**
MTO3				S	**Sg**	**00 10 47.0**	**-0.6**
MTO3	**Montecristo**	**1.81**	**27**	*i* P	**Pb**	**00 10 21.5**	**-1.5**
P5NO	**Presa 5 de nov**	**1.85**	**50**	P	**Pb**	**00 10 21.9**	**-1.8**
P5NO				S	**Sb**	**00 10 47.8**	**+0.7**
STG5	**El Palmar, Qui**	**1.95**	**326**	*i* P	**Pg**	**00 10 27.4**	**+0.6**
STG5				*i* S	**Sg**	**00 10 53.8**	**+1.7**
ESQI	**Esquipulas**	**1.96**	**26**	P	**Pb**	**00 10 24.8**	**-0.7**
ESQI				S	**Sg**	**00 10 51.9**	**-0.5**
PACA	**Pacayal**	**1.96**	**70**	P	**Pb**	**00 10 24.1**	**-1.5**
PACA				S	**Sb**	**00 10 50.4**	**0.0**
STG8	**El Palmar, Qui**	**1.99**	**326**	*i* P	**Pg**	**00 10 27.6**	**+0.1**
APG	**El Apazote**	**2.22**	**354**	*i* P	**Pb**	**00 10 27.6**	**-2.4**
LCND	**La Caada**	**2.33**	**77**	P	**Pn**	**00 10 28.5**	**+0.4**
SARH	**Santa Rosa de**	**2.43**	**35**	P	**Pb**	**00 10 32.0**	**-1.6**
MACN	**El Madrono**	**3.47**	**95**	P	**Pn**	**00 10 44.4**	**+0.5**

IDC ***13*** *00:23:22.8±0.9, 63˚.96N×23˚.37E, h0km, mbtmp2.6/4, ML1.5/4, Error ellipse: s-maj=10.5km s-min=7.5km az=82.0*
HEL ***13*** *00:23:23.2±0.0, 63˚.95N×22˚.96E, h0km, ML1.4, Explosion*

ISC 13 00:23:21.5±0.7**, 63˚.95N**±0˚.02×**23˚.01E**±0˚.03**, h0**km**, n22, σ1**s16/36**, Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBF8	**Ulkokalla**	**0.42**	**26**	*e*P	**Pb**	**00 23 31.1**	**-0.8**
OBF8				*e*S	**Sg**	**00 23 36.6**	**+1.5**
OUF	**Merijarvi**	**0.86**	**60**	*e*P	**Pb**	**00 23 39.0**	**-0.3**
OUF				*e*S	**Sb**	**00 23 50.3**	**-1.1**
VAF	**Ylistaro**	**0.93**	**190**	*e*P	**Pb**	**00 23 40.5**	**0.0**
VAF	**Ylistaro**	**0.93**	**190**	*e*P	**Pg**	**00 23 39.6**	**+0.3**
VAF				*e*S	**Sg**	**00 23 51.0**	**-0.2**
BURU	**Burvik**	**0.95**	**312**	*e*P	**Pg**	**00 23 40.2**	**+0.4**
BURU				*e*S	**Sg**	**00 23 52.3**	**+0.2**
UMAU	**Umeaa**	**1.03**	**267**	*e*P	**Pg**	**00 23 41.2**	**-0.1**
UMAU				*e*S	**Sg**	**00 23 54.1**	**-0.6**
OUL	**Oulu**	**1.69**	**46**	*e*P	**Pb**	**00 23 53.4**	**0.0**
OUL				*e*S	**Sg**	**00 24 15.5**	**-0.2**
SUF	**Sumiainen**	**1.88**	**130**	*e*P	**Pg**	**00 23 57.2**	**-0.2**
SUF	**Sumiainen**	**1.88**	**130**	*e*PG	**Pg**	**00 23 57.3**	**-0.2**
SUF				*e*SN	**Sg**	**00 24 21.1**	**-0.8**
SUF				smax	smax	00 24 24.1	
	comp=Z,1.7nm,0.1s						
KEF	**Keuruu**	**1.98**	**154**	*e*P	**Pb**	**00 23 58.4**	**0.0**
KEF	**Keuruu**	**1.98**	**154**	*e*PB	**Pb**	**00 23 58.1**	**-0.3**
KEF				*e*SB	**Sb**	**00 24 23.4**	**-0.2**
KEF				smax	smax	00 24 26.9	
	comp=Z,1.9nm,0.1s						
KPF	**Kankaanpaa**	**2.17**	**192**	*e*PB	**Pb**	**00 24 00.7**	**-0.9**
KPF				*e*SB	**Sb**	**00 24 28.5**	**-0.5**
KPF				smax	smax	00 24 31.3	
	comp=Z,1.7nm,0.1s						
TOF	**Tornio**	**2.21**	**14**	*e*PB	**Pb**	**00 24 01.9**	**-0.4**
TOF				*e*SB	**Sb**	**00 24 30.1**	**0.0**
TOF				smax	smax	00 24 32.9	
	comp=Z,1.4nm,0.1s						
NIF	**Nilsia**	**2.21**	**103**	*e*PB	**Pb**	**00 24 02.2**	**-0.1**
NIF				*e*SB	**Sb**	**00 24 30.6**	**+0.3**
FINES	**FINESS Array B**	**2.89**	**149**	Pn	**Pb**	**00 24 11.8**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=335,slow=14,SNR=35						
FINES				Lg	Lg	00 24 49.1	
	comp=Z,0.8nm,0.3s,baz=335,slow=25,SNR=21						
	comp=Z,1.1nm,0.2s						
RAF	**Rauma**	**3.00**	**192**	*e*P	**Pn**	**00 24 12.8**	**+2.6**
JOF	**Joensuu**	**3.87**	**102**	*e*P	**Pn**	**00 24 25.3**	**+3.1**
AAL	**Aland**	**4.05**	**202**	*e*P	**Pn**	**00 24 26.1**	**+1.5**
LANU	**Lannavaara**	**4.13**	**355**	*e*P	**Pn**	**00 24 27.4**	**+1.5**
ARCES	**ARCESS Array B**	**5.69**	**9**	Pn	**Pn**	**00 24 47.6**	**+0.3**
	baz=185,slow=15,SNR=6.5						
ARCES				Sn	**Sn**	**00 25 50.1**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=194,slow=23,SNR=5.3						
ARCES				Lg	Lg	00 26 17.4	
	comp=Z,0.1nm,0.3s,baz=194,slow=30,SNR=1.8						
	comp=Z,1.0nm,0.9s						
HFS	**Hagfors**	**5.82**	**233**	Pn	**Pn**	**00 24 49.8**	**+0.8**
	baz=63,slow=13,SNR=1.6						
HFS				Sn	**Sn**	**00 25 55.3**	**-1.0**
	baz=53,slow=29,SNR=1.3						
HFS				Lg	Lg	00 26 16.8	
	comp=Z,0.1nm,0.3s,baz=47,slow=30,SNR=2.2						
	comp=Z,1.3nm,0.9s						
NOA	**NORSAR Array B**	**6.20**	**247**	Pn	**Pn**	**00 24 54.6**	**+0.4**
	baz=51,slow=11,SNR=1.3						
NOA				Sn	**Sn**	**00 26 06.4**	**+0.7**
	baz=34,slow=18,SNR=1.1						
NOA				Lg	Lg	00 26 33.1	
	baz=54,slow=23,SNR=1.6						
	comp=Z,0.2nm,0.7s						

NEIC ***13*** *00:36:13.5±2.0, 2˚.88S±0˚.06×125˚.83E±0˚.06, h10km±1km, mb4.6/48, Error ellipse: s-maj=11.2km s-min=10.3km az=239.0*
DJA ***13*** *00:36:15.2±0.2, 3˚S±2˚×12˚6E±˚, h10km, M4.5/22, mB5.0/10, mb5.0/10, MLv4.5/22, Mw(mB)4.4/10*
IDC ***13*** *00:36:17.9±1.9, 2.˚96S×125˚.85E, h44km±19km, mb4.0/15, mbtmp4.3/20, ML4.4/6, MS3.1/3, Error ellipse: s-maj=16.2km s-min=13.3km az=92.0*

ISC 13 00:36:12.9±0.4**, 2.˚92S**±0˚.04×**125˚.76E**±0˚.04**, h10**km**, n99, σ1**s35/108**, mb4.5/39, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**0.89**	**15**	P	**Pg**	**00 36 30.1**	**0.0**
SANI				S	**Sg**	**00 36 40.6**	**-1.1**
NLAI	**Namlea**	**1.37**	**103**	P	**Pg**	**00 36 39.6**	**+0.3**
NLAI				S	**Sg**	**00 36 56.9**	**-0.2**
KDI	**Kendari**	**3.31**	**252**	P	**Pn**	**00 37 05.2**	**+0.4**
LUWI	**Luwuk**	**3.52**	**302**	Pn	**Pn**	**00 37 08.5**	**+0.7**
LUWI	**Luwuk**	**3.52**	**302**	P	**Pn**	**00 37 08.6**	**+0.8**
TNTI	**Ternate**	**4.00**	**24**	Pn	**Pn**	**00 37 14.8**	**+0.4**
TNTI				Sn	**Sn**	**00 38 00.1**	**-1.2**
GTOI	**Gorontalo**	**4.48**	**322**	P	**Pn**	**00 37 24.7**	**+3.8**
SIJI	**Sorong**	**5.86**	**70**	P	**Pn**	**00 37 42.2**	**+2.2**
	42nm,0.3s,baz=230,slow=15,SNR=46						
SIJI				S	**Sn**	**00 38 46.7**	**-0.6**
	13nm,0.4s,baz=185,slow=22,SNR=6.6						
SIJI				LR	LR	00 40 48.8	
	comp=Z,28nm,21.9s,baz=126,slow=47						
SIJI	**Sorong**	**5.86**	**70**	P	**Pn**	**00 37 41.9**	**+1.9**
	0.8nm4µm160nm,0.9s						
PCI	**Palu**	**6.25**	**289**	P	**Pb**	**00 38 00.1**	**-1.9**
KAPI	**Kappang**	**6.35**	**251**	P	**Pn**	**00 37 50.2**	**+3.5**
	17nm,0.3s,baz=134,slow=5.8,SNR=55						
KAPI				S	**Sn**	**00 38 58.6**	**-0.7**
	11nm,0.6s,baz=66,slow=24,SNR=5.7						
KAPI				LR	LR	00 40 36.2	
	comp=Z,252nm,19.2s,baz=282,slow=40						
	45nm,0.3s						
KAPI	**Kappang**	**6.35**	**251**	Pn	**Pn**	**00 37 49.9**	**+3.2**
KAPI	**Kappang**	**6.35**	**251**	P	**Pn**	**00 37 50.2**	**+3.5**
TOLI2	**Tolitoli**	**6.39**	**309**		**Pn**	**00 37 49.0**	**+1.8**
TOLI2				Sn	**Sn**	**00 39 01.0**	**+0.7**
FAKI	**Fak Fak**	**6.48**	**90**	Pn	**Pn**	**00 37 49.9**	**+0.5**
SGSI	**Sangihe**	**6.56**	**358**	P	**Pn**	**00 37 51.3**	**+1.7**
SOEI	**Soe**	**6.95**	**192**	Pn	**Pn**	**00 37 56.6**	**+1.5**
SOEI	**Soe**	**6.95**	**192**	P	**Pb**	**00 38 11.8**	**-2.2**
BATI	**Baumata**	**7.54**	**196**	P	**Pn**	**00 38 05.6**	**+2.7**
	8.2nm,0.3s,baz=350,slow=8.1,SNR=2.0						
	41nm,0.5s						
DDMP	**Don Marcelino,**	**8.96**	**360**	*e*P	**Pn**	**00 38 22.7**	**+0.2**
DDMP				*e*S	**Sn**	**00 39 58.3**	**-5.4**
MTN	**Manton Dam**	**11.20**	**152**	Pn	**Pn**	**00 38 52.3**	**-1.0**
JAY	**Jayapura**	**14.93**	**89**	P	**Pn**	**00 39 45.0**	**+0.8**
	0.8nm,0.3s,baz=161,slow=18,SNR=1.8						
	2.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.09**	**180**	P	**Pn**	**00 39 46.6**	**+0.3**
	0.3nm,0.3s,baz=28,slow=7.1,SNR=8.8						
	6.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.09**	**180**	Pn	**Pn**	**00 39 44.9**	**-1.4**
WB0	**Warramunga Arr**	**18.75**	**154**	P	**P**	**00 40 32.1**	**-0.1**
WB0				IAmb	IAmb	00 40 36.4	
	comp=Z,12nm,0.5s						
WRA	**Warramunga Arr**	**18.88**	**154**	P	**Pn**	**00 40 33.8**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=336,slow=11,SNR=26						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**18.88**	**154**	P	**P**	**00 40 32.5**	**-1.1**
WB2	**Warramunga Arr**	**18.88**	**154**	P	**P**	**00 40 33.6**	**0.0**
WR8	**Warramunga Arr**	**18.96**	**154**	P	**Pn**	**00 40 34.8**	**-0.4**
WR8				IAmb	IAmb	00 40 38.7	
	comp=Z,13nm,0.6s						
WR0	**Warramunga Arr**	**18.98**	**154**	P	**Pn**	**00 40 35.1**	**-0.3**
AS31	**Alice Springs**	**22.08**	**160**	P	**P**	**00 41 08.6**	**+0.3**
ASAR	**Alice Springs**	**22.08**	**160**	P	**P**	**00 41 09.1**	**+0.7**
	comp=Z,9.0nm,0.5s,baz=346,slow=12,SNR=31						
ASAR				PcP	**PcP**	**00 45 06.8**	**+0.6**
	comp=Z,2.4nm,1.0s,baz=345,slow=1.9,SNR=8.3						
	comp=Z,9.0nm,0.5s						
ASAR	**Alice Springs**	**22.08**	**160**	P	**P**	**00 41 09.9**	**+1.6**
TPUB	**Ta-pu**	**26.54**	**349**	P	**P**	**00 41 52.9**	**+1.8**
TPUB				IAmb	IAmb	00 42 01.6	
	comp=Z,16nm,0.7s						
FORT	**Forrest**	**27.80**	**176**	P	**P**	**00 42 01.8**	**-0.5**
FORT				IAmb	IAmb	00 42 18.1	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**31.27**	**163**	P	**P**	**00 42 31.8**	**-1.3**
BBOO				IAmb	IAmb	00 42 37.7	
	comp=Z,4.7nm,0.8s						
STKA	**Stephens Creek**	**32.43**	**154**	P	**P**	**00 42 42.8**	**-0.6**
	comp=Z,3.6nm,0.4s,baz=326,slow=8.2,SNR=12						
	comp=Z,3.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**33.89**	**310**	P	**P**	**00 42 57.2**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=139,slow=8.9,SNR=4.1						
CMAR				PcP	**PcP**	**00 45 35.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=112,slow=3.1,SNR=5.4						
	comp=Z,1.3nm,0.3s						
CAN	**Canberra**	**38.78**	**149**	P	**P**	**00 43 38.4**	**+0.5**
XAN	**Xi'an**	**40.04**	**338**	P	**P**	**00 43 49.5**	**+1.1**
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
KSRS	**Korea Array**	**40.22**	**3**	P	**P**	**00 43 51.0**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=172,slow=9.8,SNR=2.5						
	comp=Z,0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**47.24**	**6**	P	**P**	**00 44 46.4**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=178,slow=4.3,SNR=3.2						
	comp=Z,1.9nm,0.7s						
EVN	**Everest**	**48.43**	**312**	P	**P**	**00 44 58.1**	**+1.6**
GTA2	**Gaotai**	**48.50**	**333**	*e*P	**P**	**00 44 58.3**	**+2.1**
GTA2				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	**Ulaanbaatar**	**53.16**	**344**	P	**P**	**00 45 31.8**	**+0.6**
MSVF	**Nonsavu**	**53.30**	**110**	LR	LR	01 07 24.6	
	comp=Z,101nm,19.6s,baz=156,slow=35						
SONM	**Songino Array**	**53.31**	**344**	P	**P**	**00 45 33.1**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=162,slow=8.7,SNR=7.5						
	comp=Z,1.6nm,0.8s						
WUS	**Wushi**	**60.98**	**321**	P	**P**	**00 46 27.6**	**+0.9**
WUS				IAmb	IAmb	00 46 30.4	
	comp=Z,3.8nm,0.7s						
NIL	**Nilore**	**61.37**	**311**	P	**P**	**00 46 28.8**	**-0.7**
NIL				IAmb	IAmb	00 46 30.8	
	comp=Z,4.2nm,0.6s						
PETK	**Petropavlovsk-**	**61.92**	**21**	P	**P**	**00 46 33.8**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=151,slow=3.4,SNR=3.9						
	comp=Z,1.9nm,0.7s						
PDGK	**Podgornoye**	**62.02**	**323**	P	**P**	**00 46 34.0**	**+0.2**
KSH2	**Kashi**	**62.27**	**318**	P	**P**	**00 46 37.1**	**+1.6**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**62.53**	**328**	P	**P**	**00 46 38.2**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=114,slow=9.0,SNR=29						
MKAR				PcP	**PcP**	**00 47 16.7**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=122,slow=4.4,SNR=4.6						
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**62.53**	**328**		**P**	**00 46 36.6**	**-0.4**
MAKZ	**Makanchi**	**62.71**	**328**	P	**P**	**00 46 38.0**	**-0.1**
MAKZ				IAmb	IAmb	00 46 40.3	
	comp=Z,3.0nm,0.7s						
MANEM	**Manem**	**64.22**	**314**	P	**P**	**00 46 48.3**	**-0.3**
MANEM				IAmb	IAmb	00 46 55.3	
	comp=Z,15nm,0.4s						
YAK	**Yakutsk**	**64.84**	**2**	P	**P**	**00 46 51.8**	**0.0**
CTZ	**Chatham Island**	**65.00**	**138**	P	**P**	**00 46 53.7**	**+0.4**
ARSB	**Arslanbob**	**65.06**	**319**	P	**P**	**00 46 54.0**	**+0.1**
ARSB				IAmb	IAmb	00 46 55.9	
	comp=Z,4.2nm,0.7s						
MA2	**Magadan**	**65.35**	**14**	P	**P**	**00 46 55.5**	**+0.4**
GAR	**Garm**	**65.82**	**315**		**P**	**00 46 58.8**	**0.0**
ZAA0	**Zalesovo Array**	**66.10**	**335**	P	**P**	**00 46 59.0**	**-1.2**
ZAA0				IAmb	IAmb	00 47 01.1	
	comp=Z,3.1nm,1.1s					

ARG	**Arkhangelos**	**0.49**	**13**	Pg	**Pg**	**00 46 42.5**	**-0.2**
ARG				Sg	**Sg**	**00 46 49.1**	**-0.2**
ARG	**Arkhangelos**	**0.49**	**13**	P	**Pg**	**00 46 42.7**	**-0.1**
ARG				S	**Sg**	**00 46 49.3**	**0.0**
ARG	**Arkhangelos**	**0.49**	**13**	P	**Pg**	**00 46 42.5**	**-0.2**
ARG				S	**Sg**	**00 46 48.8**	**-0.5**
KARP	**Karpathos**	**0.70**	**255**	Pg	**Pg**	**00 46 46.5**	**-0.3**
KARP				Sg	**Sg**	**00 46 56.7**	**+0.7**
KARP	**Karpathos**	**0.70**	**255**	P	**Pg**	**00 46 46.0**	**-0.8**
KARP				S	**Sg**	**00 46 56.4**	**+0.4**
DAT	**Datca**	**1.05**	**341**	Pg	**Pb**	**00 46 51.9**	**-1.6**
TURN	**Turunc**	**1.06**	**11**	Pg	**Pb**	**00 46 52.7**	**-0.8**
DALY	**Dalyan (Mula)**	**1.21**	**26**	Pn	**Pn**	**00 46 55.3**	**-0.7**
DALY				Sn	**Sg**	**00 47 12.9**	**+0.9**
BODA	**Bodrum-Mula**	**1.38**	**341**	Pn	**Pb**	**00 46 57.9**	**-0.5**
AKAS	**Kas**	**1.40**	**69**	Pn	**Pb**	**00 46 59.9**	**+0.5**
YER	**Yerkesik**	**1.42**	**9**	Pn	**Pb**	**00 46 59.4**	**-0.3**
YER	**Yerkesik**	**1.42**	**9**	P	**Pb**	**00 46 59.3**	**-0.3**
YER				S	**Sb**	**00 47 17.5**	**-0.4**
BODT	**Bodrum**	**1.44**	**338**	Pn	**Pn**	**00 46 59.0**	**-0.2**
BODT	**Bodrum**	**1.44**	**338**	P	**Pn**	**00 46 59.2**	**0.0**
BODT				S	**Sb**	**00 47 17.7**	**-0.6**
KLNA	**Kalymnos**	**1.47**	**326**	P	**Pn**	**00 46 57.8**	**-1.9**
YKAV	**Yalıkavak-Bodr**	**1.50**	**338**	Pn	**Pn**	**00 46 59.7**	**-0.4**
ZKR	**Zakros**	**1.58**	**247**	Pn	**Pn**	**00 47 02.3**	**+1.1**
ZKR	**Zakros**	**1.58**	**247**	P	**Pn**	**00 47 02.0**	**+0.8**
ZKR				S	**Sb**	**00 47 23.5**	**+1.1**
CAME	**Cameli-Denizli**	**1.60**	**41**	Pn	**Pb**	**00 47 03.1**	**+0.2**
ELL	**Elmali**	**1.85**	**56**	Pn	**Pb**	**00 47 07.1**	**0.0**
NPS	**Neapolis**	**2.00**	**257**	P	**Pn**	**00 47 08.3**	**+1.3**
NPS	**Neapolis**	**2.00**	**257**	P	**Pn**	**00 47 07.7**	**+0.7**
NPS				S	**Sn**	**00 47 33.3**	**+1.2**
APMY	**Acipayam-Deniz**	**2.03**	**31**	Pn	**Pn**	**00 47 08.7**	**+1.2**
GCAM	**G?zelcaml?**	**2.06**	**343**	Pn	**Pn**	**00 47 07.9**	**+0.2**
THERA	**Ancient Thera,**	**2.14**	**288**	P	**Pn**	**00 47 09.0**	**+0.1**
THERA	**Ancient Thera,**	**2.14**	**288**	P	**Pn**	**00 47 08.7**	**-0.2**
THERA				S	**Sn**	**00 47 34.7**	**-0.8**
THR6	**Thira Island,**	**2.19**	**287**	P	**Pn**	**00 47 10.1**	**+0.5**
THR3	**Thira Island,**	**2.21**	**289**	P	**Pn**	**00 47 09.0**	**-0.8**
SNT5	**Nea Kammeni, S**	**2.21**	**288**	P	**Pn**	**00 47 10.8**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.21**	**358**	Pn	**Pn**	**00 47 10.6**	**+0.6**
NAZL	**Nazilli-Aydin**	**2.24**	**6**	Pn	**Pn**	**00 47 11.1**	**+0.8**
KORT	**Korkueli**	**2.28**	**56**	Pn	**Pn**	**00 47 12.8**	**+1.8**
ANTB	**Antalya**	**2.44**	**61**	Pn	**Pb**	**00 47 15.6**	**-1.5**
ODEM	**Odemis-Izmir**	**2.54**	**1**	Pn	**Pn**	**00 47 15.1**	**+0.6**
IDI	**Anoyia**	**2.57**	**261**	Pn	**Pn**	**00 47 15.8**	**+0.9**
	6.8nm,0.3s,baz=60,slow=14,SNR=11						
IDI				Sn	**Sn**	**00 47 47.3**	**+1.0**
	7.8nm,0.3s,baz=306,slow=15,SNR=6.2						
IDI	**Anoyia**	**2.57**	**261**	Pn	**Pn**	**00 47 16.2**	**+1.3**
IDI	**Anoyia**	**2.57**	**261**	P	**Pn**	**00 47 15.8**	**+0.9**
IDI	**Anoyia**	**2.57**	**261**	P	**Pn**	**00 47 15.1**	**+0.2**
SIVA	**Sivas**	**2.70**	**256**	P	**Pn**	**00 47 17.3**	**+0.7**
BLCB	**Balcova**	**2.75**	**344**	Pn	**Pn**	**00 47 18.0**	**+0.7**
URLA	**Izmir**	**2.85**	**337**	Pn	**Pn**	**00 47 19.0**	**+0.3**
CHOS	**Chios island**	**3.07**	**330**	Pn	**Pn**	**00 47 22.4**	**+0.7**
IMMV	**Iera Moni Meta**	**3.28**	**266**	Pn	**Pn**	**00 47 26.1**	**+1.5**
GVD	**Gavdhos**	**3.32**	**256**	Pn	**Pn**	**00 47 26.8**	**+1.7**
KNDR	**Palaiochora Ch**	**3.60**	**263**	Pn	**Pn**	**00 47 30.9**	**+1.9**
PRK	**Paraskevi**	**3.76**	**339**	P	**Pn**	**00 47 31.5**	**+0.2**
KTHA	**Kythira Island**	**4.03**	**279**	P	**Pn**	**00 47 35.7**	**+0.7**
BRTR	**Keskin Array B**	**5.99**	**47**	Pn	**Pn**	**00 48 02.8**	**+0.8**
	0.1nm,0.3s,baz=235,slow=13,SNR=4.7						
BRTR				Sn	**Sn**	**00 49 13.5**	**+2.8**
	0.1nm,0.3s,baz=214,slow=25,SNR=3.6						
MMAI	**Mount Meron Ar**	**6.70**	**112**	Pn	**Pn**	**00 48 11.1**	**-0.5**
	1.7nm,0.3s,baz=291,slow=12,SNR=10						
MMAI				Sn	**Sn**	**00 49 24.6**	**-3.4**
	1.4nm,0.3s,baz=287,slow=26,SNR=4.2						
	1.3nm,0.4s						
EIL	**Elat**	**8.42**	**134**	Pn	**Pn**	**00 48 34.0**	**-1.1**
	0.3nm,0.3s,baz=22,slow=14,SNR=1.8						
EIL				Sn	**Sn**	**00 50 07.3**	**-3.0**
	0.4nm,0.3s,baz=21,slow=16,SNR=1.6						
	1.3nm,0.5s						
MLR	**Muntele Rosu**	**9.87**	**352**	Pn	**Pn**	**00 48 55.7**	**+0.6**
	0.1nm,0.3s,baz=151,slow=8.8,SNR=3.2						
	2.3nm,0.8s						
KEST	**Kesra**	**15.15**	**275**	Pn	**Pn**	**00 50 10.1**	**+2.8**
	0.1nm,0.3s,baz=46,slow=3.6,SNR=3.5						
GERES	**GERESS Array B**	**16.80**	**326**	Pn	**Pn**	**00 50 28.4**	**-0.1**
	baz=139,slow=14,SNR=1.2						
	0.4nm,0.8s						
ESDC	**Sonseca Array**	**25.51**	**288**	P	**P**	**00 52 01.1**	**-0.7**
	0.6nm,0.8s,baz=81,slow=9.8,SNR=4.6						
	0.6nm,0.8s						
HFS	**Hagfors**	**26.11**	**344**	P	**P**	**00 52 07.0**	**+0.1**
	2.1nm,0.9s,baz=162,slow=10.0,SNR=1.7						
	2.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**32.66**	**233**	P	**P**	**00 53 05.5**	**0.0**
	0.4nm,0.8s,baz=38,slow=8.7,SNR=4.2						
	0.4nm,0.8s						

MEX ***13*** *00:55:56.6±0.6, 14.°50N×92.°48W, h82km±9km, MD3.4*
GCG ***13*** *00:55:59.8±0.8, 14.°67N×92.°20W, h56km±15km, MD3.9, Presumed earthquake*

ISC 13 00:55:51.6±4.2, 14.°2N±0.°2×92.°7W±0.°2, h64km±34km, n12, σ1ş75/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.81**	**27**	*e*P		**Pn**	**00 56 08.5**	**+1.0**
THIG				*e*S		**Sn**	**00 56 18.0**	**-1.1**
THIG		**0.81**	**27**	*i* P		**Pn**	**00 56 08.7**	**+1.3**
RTAL	**Retalhuleu**	**0.98**	**70**	*e*P		**Pn**	**00 56 11.8**	**+2.1**
RTAL				*e*S		**Sn**	**00 56 23.6**	**+0.6**
PATR	**El Naranjo**	**1.01**	**23**	*e*P		**Pn**	**00 56 11.0**	**+0.8**
PATR				*e*S		**Sn**	**00 56 21.7**	**-2.2**
CHUJ	**Union Juarez**	**1.04**	**30**	*e*P		**Pn**	**00 56 11.5**	**+0.9**
CHUJ				*e*S		**Sn**	**00 56 22.5**	**-2.2**
PAVE	**Pavencul**	**1.10**	**24**	*e*P		**Pn**	**00 56 12.3**	**+0.9**
PAVE				*e*S		**Sn**	**00 56 24.1**	**-2.0**
STG5	**El Palmar, Qui**	**1.28**	**80**	*i* P		**Pn**	**00 56 13.5**	**-0.1**
STG8	**El Palmar, Qui**	**1.28**	**78**	*i* P		**Pn**	**00 56 13.6**	**-0.2**
QUEO	**Labor Ovalle**	**1.29**	**58**	*i* P		**Pn**	**00 56 14.8**	**+0.9**
HUEH	**Huehuetenango**	**1.58**	**44**	*e*P		**Pn**	**00 56 19.7**	**+2.0**
HUEH				*e*S		**Sn**	**00 56 37.6**	**+0.2**
ESSG	**Sabana Grande**	**1.77**	**83**	*i* P		**Pn**	**00 56 23.1**	**+2.9**
FG8	**Yepocapa, Chim**	**2.02**	**88**	*i* P		**Pn**	**00 56 21.4**	**-2.3**

IDC ***13*** *00:58:41.1±0.4, 5.°32N×94.°30E, h0km, mb5.1/43, mbtmp5.1/46, ML5.0/3, MS4.4/51, Error ellipse: s-maj=12.3km s-min=10.0km az=67.0*
BGR ***13*** *00:58:41.9, 4.°35N×94.°64E, h33km, mb5.2, Ms4.0*
BJI ***13*** *00:58:43.4, 5.°02N×94.°23E, h40km, mB5.2/33, mb5.4/77, Ms4.8/75, Ms7 4.6/71*
MOS ***13*** *00:58:45.0±0.9, 5.°21N×94.°30E, h41km, mb5.5/76, MS4.6/7, Error ellipse: s-maj=6.3km s-min=3.4km az=112.5*
GFZ ***13*** *00:58:46.0, 5.°19N×94.°22E, h21km, Mw5.0/44, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr2.69; Mθθ-1.47; Mϕϕ-1.22; Mrθ1.76; Mrϕ1.35; Mθϕ-1.70; Fault plane solution: M₀3.64448×10¹⁶ NP1: ϕs133.43373°, δ66.13440°, λ90.89999°. NP2: ϕs311.21022°, δ23.88157°, λ87.96669°. Principal axes: T 3.6401, Plg68.8529°, Azm45.1979°; N 0.0088, Plg0.8230°, Azm313.0696°; P -3.6489, Plg21.1295°, Azm222.7515°;*
NEIC ***13*** *00:58:46.3±1.3, 5.°17N±0.°07×94.°22E±0.°07, h35km±1km, mb5.4/225, Mww5.0/12 Error ellipse: s-maj=12.2km s-min=10.7km az=203.0*
GFZ ***13*** *00:58:46.0±0.1, 5.°N±2.°×9.°4E±.°, h30km±1km, M5.1/175, mB5.6/86, mb5.3/175, Mw(mB)5.1/86, Error ellipse: s-maj=5.0km s-min=3.1km az=28.7, confirmed*
DJA ***13*** *00:58:47.5±0.4, 5.°N±2.°×9.°4E±.°, h44km±3km, M5.4/57, mb5.5/57, mB5.8/36, MLv5.7/24, Mw5.1/16, Mw(mB)5.4/36*
GCMT ***13*** *00:58:47.3±0.2, 5.°11N±0.°01×94.°17E±0.°01, h34km, MW5.1/102, Moment Tensor Solution. s86,c112; s102,c154; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.01±.16; Mθθ-1.67±.10; Mϕϕ-3.34±.12; Mrθ1.71±.13; Mθϕ2.79±.07; Mϕr-1.86±.13; Best double couple: M₀5.79400×10¹⁶ NP1:ϕs326.00000°, δ32.00000°, λ95.00000°. NP2:ϕs141.00000°, δ58.00000°, λ87.00000°. Principal axes: T 5.5970, Plg77.0000°, Azm41.0000°; N 0.3950, Plg3.0000°, Azm142.0000°; P -5.9920, Plg13.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 00:58:45.7±0.3, 5.°17N±0.°03×94.°26E±0.°03, h33km±1km, h33km:pP-P, n1375, σ1ş21/1438, mb5.3/342, MS4.5/84, 89C-29D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSI	**Banda Aceh**	**1.08**	**72**	P		**Pb**	**00 59 05.9**	**0.0**
BSI				S		**Sb**	**00 59 20.5**	**+0.8**
MLSI	**Meulaboh, Aceh**	**2.32**	**113**	P		**Pn**	**00 59 23.0**	**+1.5**
LHMI	**Lhok Sumawe**	**2.68**	**89**	P		**Pn**	**00 59 29.5**	**+3.1**
LHMI	**Lhok Sumawe**	**2.68**	**89**			**Pn**	**00 59 28.2**	**+1.7**
LHMI	**Lhok Sumawe**	**2.68**	**89**	P		**Pn**	**00 59 29.3**	**+2.9**
LHMI	**Lhok Sumawe**	**2.68**	**89**	P		**Pn**	**00 59 29.6**	**+3.2**
SNSI	**Sinabang, Aceh**	**3.43**	**143**	P		**Pn**	**00 59 36.4**	**-0.4**
TPTI		**3.47**	**123**	P		**Pn**	**00 59 38.3**	**+0.9**
KCSI	**Kotacane, Aceh**	**3.86**	**115**	P		**Pn**	**00 59 45.5**	**+2.7**
TSI	**Tuntungan**	**4.60**	**111**	P		Pn	00 59 58.3	+5.4
GSI	**Gunungsitoli**	**5.07**	**139**	P		**Pn**	**01 00 00.0**	**+0.6**
	368nm,0.8s							
GSI	**Gunungsitoli**	**5.07**	**139**			**Pn**	**00 59 59.0**	**-0.4**
GSI	**Gunungsitoli**	**5.07**	**139**	P		**Pn**	**00 59 58.8**	**-0.6**
	365nm,0.7s							
GSI	**Gunungsitoli**	**5.07**	**139**	P		**Pn**	**00 59 59.2**	**-0.2**
PSI	**Prapat**	**5.21**	**117**	P		**Pn**	**01 00 03.9**	**+2.4**
	434nm,1.1s							
PSI	**Prapat**	**5.21**	**117**	P		**Pn**	**01 00 03.5**	**+2.0**
PSI	**Prapat**	**5.21**	**117**	P		**Pn**	**01 00 04.1**	**+2.6**
	402nm,1.1s							
RPSI	**Rantau Prapat**	**5.26**	**118**			**Pn**	**01 00 03.5**	**+1.5**
KULM	**Kulim**	**6.36**	**89**	P		**Pn**	**01 00 20.0**	**+2.8**
	227nm,0.7s							
KULM	**Kulim**	**6.36**	**89**			**Pn**	**01 00 18.9**	**+1.7**
KULM	**Kulim**	**6.36**	**89**	P		**Pn**	**01 00 19.2**	**+2.0**
	227nm,0.7s							
KULM	**Kulim**	**6.36**	**89**	P		**Pn**	**01 00 19.9**	**+2.8**
MNSI	**Mandailing Nat**	**6.86**	**129**	P		**Pn**	**01 00 25.5**	**+1.5**
	2.1nm301nm,0.5s							
PPI	**Padang Panjang**	**8.29**	**132**	P		**Pn**	**01 00 47.4**	**+3.7**
	2μm143nm,0.8s							
BKNI	**Bangkinang**	**8.30**	**125**			**Pn**	**01 00 44.4**	**+0.5**
BKNI	**Bangkinang**	**8.30**	**125**	P		**Pn**	**01 00 45.8**	**+1.9**
	7μm372nm,0.7s							
BKNI	**Bangkinang**	**8.30**	**125**	P		**Pn**	**01 00 46.0**	**+2.1**
MYKOM	**Kota Tinggi**	**10.14**	**109**			**Pn**	**01 01 09.5**	**+0.5**
MYKOM	**Kota Tinggi**	**10.14**	**109**	P		**Pn**	**01 01 10.1**	**+1.0**
MYKOM	**Kota Tinggi**	**10.14**	**109**	P		**Pn**	**01 01 09.6**	**+0.5**
KSI	**Kapahiang**	**12.09**	**136**	P		**P**	**01 01 49.4**	**+1.3**
MNAI	**Manna**	**12.85**	**137**	P		**Pn**	**01 01 48.6**	**+2.5**
	371nm,0.7s							
MNAI	**Manna**	**12.85**	**137**	Pn		**Pn**	**01 01 45.4**	**-0.7**
PALK	**Pallekele**	**13.64**	**280**	Pn		**Pn**	**01 01 56.2**	**-0.8**
	2.4nm,0.3s,baz=97,slow=15,SNR=11							
PALK				Sn		Sn	01 04 13.6	-14
	6.4nm,0.3s,baz=183,slow=22,SNR=12							
PALK				LR		LR	01 06 51.1	
	comp=Z,3μm,19.4s,baz=105,slow=36							
	6.4nm,0.4s							
PALK	**Pallekele**	**13.64**	**280**	P		**Pn**	**01 01 59.0**	**+2.0**
PALK				P		**Pn**	**01 01 59.0**	**+2.0**
PALK				P		P	01 01 59.1	-6.3
PALK				P		P	01 01 59.1	-6.3
PALK	**Pallekele**	**13.64**	**280**			**Pn**	**01 01 55.8**	**-1.2**
PALK	**Pallekele**	**13.64**	**280**	P		P	01 02 13.2	+7.8
PALK	**Pallekele**	**13.64**	**280**	P		**Pn**	**01 01 54.3**	**-2.7**
CM31	**Chiang Mai Arr**	**13.98**	**19**			**Pn**	**01 02 03.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**13.98**	**19**	Pn		**Pn**	**01 02 03.2**	**+1.6**
	3.3nm,0.3s,baz=211,slow=14,SNR=51							
CMAR				LR		LR	01 07 11.6	
	comp=Z,1μm,21.1s,baz=195,slow=37							
CMAR	**Chiang Mai Arr**	**13.98**	**19**	P		**Pn**	**01 02 03.6**	**+2.1**
CMAR	**Chiang Mai Arr**	**13.98**	**19**			**Pn**	**01 02 03.6**	**+2.1**
CHTO	**Chiang Mai**	**14.31**	**18**	P		**Pn**	**01 02 04.5**	**-1.6**
CHTO	**Chiang Mai**	**14.31**	**18**	P		Pn	01 01 59.4	-6.6
CHTO	**Chiang Mai**	**14.31**	**18**			**Pn**	**01 02 04.5**	**-1.6**
CHTO	**Chiang Mai**	**14.31**	**18**	P		**Pn**	**01 02 07.7**	**+1.6**
	2μm275nm,0.8s							
CHTO	**Chiang Mai**	**14.31**	**18**	P		**Pn**	**01 02 08.4**	**+2.3**
NPW	**Naypyitaw**	**14.64**	**7**	P		**P**	**01 02 13.9**	**-2.5**
DLV	**Lat**	**15.59**	**64**	Pn		**Pn**	**01 02 23.2**	**-0.1**
VIS	**Vishakhapatnam**	**16.43**	**320**	*e*P		**Pn**	**01 02 34.8**	**+0.9**
VIS				IAmb		IAmb	01 02 36.5	
	comp=Z,36nm,0.5s							
BWNR	**Bhubaneshwar**	**17.09**	**332**	*e*P		**Pn**	**01 02 41.9**	**-0.3**
BWNR				IAmb		IAmb	01 02 43.1	
	comp=Z,119nm,0.5s							
SALM	**Salem**	**17.18**	**293**	*e*P		**P**	**01 02 46.3**	**+1.6**
KOD	**Kodaikanal**	**17.38**	**288**	*e*P		**P**	**01 02 48.6**	**+1.3**
VJD	**Vijayawada**	**17.48**	**311**	*ex*		P	01 02 56.9	+9.0
RAGD	**RAYAGADA**	**17.51**	**324**	*e*P		**P**	**01 02 48.9**	**+0.5**
BRDH	**Bariadhala**	**17.59**	**352**	P		**Pn**	**01 02 47.0**	**-1.4**
	comp=Z,23nm,0.3s,baz=246,slow=23,SNR=1.6							
BRDH				LR		LR	01 10 49.8	
	comp=Z,2μm,20.9s,baz=171,slow=42							
	comp=Z,80nm,0.3s							
LEM	**Lembang**	**17.88**	**132**	P		**Pn**	**01 02 52.2**	**+0.1**
	comp=Z,3.9nm,0.3s,baz=225,slow=13,SNR=3.7							
LEM				LR		LR	01 10 25.2	
	comp=Z,2μm,20.7s,baz=308,slow=39							
	comp=Z,12nm,0.3s							
BBJI	**Bungbulang**	**18.33**	**133**	P		**Pn**	**01 02 57.8**	**+0.2**
	comp=Z,44nm,1.1s							
BBJI	**Bungbulang**	**18.33**	**133**	P		**P**	**01 02 54.4**	**-3.1**
SLVN	**Son La**	**18.59**	**29**	P		**Pn**	**01 03 02.3**	**+1.6**
	comp=Z,67nm,0.9s							
SLVN	**Son La**	**18.59**	**29**	P		**P**	**01 02 59.9**	**-0.4**
HYB	**Hyderabad**	**19.61**	**310**	*e*P		**Pn**	**01 03 13.6**	**+0.7**
HYB	**Hyderabad**	**19.61**	**310**	*e*P		**P**	**01 03 11.2**	**-0.3**
HYB				*e*S		**S**	**01 06 51.1**	**-0.1**
TNCH	**TengChong**	**20.17**	**11**	⇑P		**P**	**01 03 17.8**	**+0.2**
TNCH				pP		pwP	01 03 27.6	-1.2
TNCH				sP		sP	01 03 33.7	+3.8
TNCH				PP		**PnPn**	**01 03 40.8**	**+6.1**
TNCH				S		Sn	01 07 04.9	-1.0
TNCH				sS		sS	01 07 11.5	-4.2
TNCH				SS		**SnSn**	**01 07 27.6**	**+6.7**
TNCH				pmax		pmax		
	comp=Z,130nm,1.1s							
TNCH				L		L		
	comp=Z,490nm,7.5s							
TNCH				L		L		
	comp=Z,1μm,10.8s							
TNCH				L		L		
	comp=Z,1μm,18.1s							
BOK	**Bokaro**	**20.20**	**337**	*e*P		Pn	01 03 19.3	-0.5
BOK				IAmb		IAmb	01 03 20.9	
	comp=Z,112nm,0.8s							
SMRI	**Semarang**	**20.20**	**127**	P		**P**	**01 03 17.6**	**-0.2**
SMRI				IAmb		IAmb	01 03 35.0	
	comp=Z,184nm,1.0s							
SMRI	**Semarang**	**20.20**	**127**	P		Pn	01 03 33.8	+14
SHL	**Shillong**	**20.41**	**354**	P		**P**	**01 03 17.0**	**-3.2**
SHL				pmax		pmax		
	comp=Z,76nm,0.6s							
SHL	**Shillong**	**20.41**	**354**	P		**P**	**01 03 14.6**	**-5.7**
SHL	**Shillong**	**20.41**	**354**	P		**P**	**01 03 17.0**	**-3.2**
SHL				IAmb		IAmb	01 03 25.2	
	comp=Z,76nm,0.6s							
SHL	**Shillong**	**20.41**	**354**	*e*P		**P**	**01 03 18.0**	**-2.3**
SHL				IAmb		IAmb	01 03 20.3	
	comp=Z,30nm,0.7s							
BLSP	**Bilaspur**	**20.50**	**326**	*e*P		Pn	01 03 22.2	-1.1
BLSP				IAmb		IAmb	01 03 26.8	
	comp=Z,69nm,0.7s							
QIZ	**Qiongzhong**	**20.51**	**46**	P		**P**	**01 03 22.1**	**+0.9**
QIZ	**Qiongzhong**	**20.51**	**46**	P		Pn	01 03 22.8	-0.7
QIZ				S		Sn	01 07 14.4	+0.4
QIZ				pmax		pmax		
	comp=Z,81nm,1.0s							
QIZ				L		L		
	comp=Z,2μm,15.1s							
QIZ				L		L		
	comp=Z,2μm,16.5s							
QIZ				L		L		
	comp=Z,2μm,19.1s							
SHBG	**Sahibganj**	**20.94**	**343**	*e*P		**P**	**01 03 26.6**	**+0.9**
KMI2	**Kunming**	**21.47**	**21**	⇑P		**P**	**01 03 33.3**	**+1.6**
KMI2				sP		sP	01 03 48.3	+4.2
KMI2				S		**S**	**01 07 21.9**	**-6.5**
KMI2				pmax		pmax		
	comp=Z,90nm,0.9s							
KMI2				pmax		pmax		
	comp=Z,350nm,6.9s							
KMI2				L		L		
	comp=Z,970nm,19.3s							
KMI2				L		L		
	comp=Z,880nm,13.3s							
KMI2				L		L		
	comp=Z,1μm,25.3s							
NGP	**Nagpur**	**21.70**	**319**	*e*P		**P**	**01 03 35.7**	**+1.7**
NGP				IAmb		IAmb	01 03 36.4	
	comp=Z,52nm,0.8s							
KKM	**Kota Kinabalu**	**21.87**	**87**	P		**P**	**01 03 36.5**	**+0.5**
KKM	**Kota Kinabalu**	**21.87**	**87**	P		**P**	**01 03 38.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.87**	**87**	P		**P**	**01 03 37.1**	**+1.1**
PZH	**PanZhiHua**	**22.39**	**18**	P		**P**	**01 03 41.6**	**+0.1**
PZH				S		**S**	**01 07 45.5**	**-0.2**
PZH				pmax		pmax		
	comp=Z,70nm,1.0s							
PZH				pmax		pmax		
	comp=Z,190nm,5.9s							
PZH				L		L		
	comp=Z,660nm,16.9s							
PZH				L		L		
	comp=Z,810nm,16.5s							
PZH				L		L		
	comp=Z,850nm,19.6s							
BKB	**Balikpapan**	**23.50**	**105**	P		**P**	**01 03 52.8**	**0.0**
BKB				IAmb		IAmb	01 03 57.1	
	comp=Z,155nm,0.9s							
BKB	**Balikpapan**	**23.50**	**105**	P		**P**	**01 03 54.1**	**+1.3**
	comp=Z,183nm,1.2s							
BKB	**Balikpapan**	**23.50**	**105**	P		**P**	**01 03 55.7**	**+2.8**
EVN	**Everest**	**23.74**	**343**	P		**P**	**01 03 54.2**	**-1.6**
EVN				IAmb		IAmb	01 04 00.7	
	comp=Z,48nm,0.6s							
EVN	**Everest**	**23.74**	**343**	P		**P**	**01 03 55.0**	**-0.7**
JAGI	**Jajag, Banyuwa**	**24.02**	**124**	P		**P**	**01 03 59.1**	**+1.3**
	comp=Z,93nm,1.0s							
JAGI	**Jajag, Banyuwa**	**24.02**	**124**	P		**P**	**01 03 55.8**	**-2.0**
JAGI				IAmb		IAmb	01 04 24.1	
	comp=Z,86nm,1.0s							
JAGI	**Jajag, Banyuwa**	**24.02**	**124**	P		**P**	**01 03 56.9**	**-1.0**
BHPL	**Bhopal**	**24.22**	**320**	*e*P		**P**	**01 04 01.4**	**+1.8**
BHPL				IAmb		IAmb	01 04 07.1	
	comp=Z,18nm,0.9s							
GYA	**Guiyang**	**24.26**	**28**	⇓P		**P**	**01 04 00.4**	**+0.3**
LSA	**Lhasa**	**24.58**	**353**	P		**P**	**01 04 04.4**	**+1.2**
LSA	**Lhasa**	**24.58**	**353**	P		**P**	**01 04 02.7**	**-0.6**
LSA				pmax		pmax		
	comp=Z,81nm,0.7s							
LSA	**Lhasa**	**24.58**	**353**	P		**P**	**01 04 02.7**	**-0.6**
LSA				P		**P**	**01 04 02.7**	**-0.6**
LSA	**Lhasa**	**24.58**	**353**	P		**P**	**01 04 02.7**	**-0.6**
LSA				IAmb		IAmb	01 04 06.5	
	comp=Z,81nm,0.7s							
LSA	**Lhasa**	**24.58**	**353**	P		**P**	**01 04 03.3**	**0.0**
PPR	**Puerto Princes**	**24.68**	**78**	*i* P		**P**	**01 04 03.9**	**0.0**
JHNI	**Jhansi**	**25.14**	**325**	*e*P		**P**	**01 04 08.6**	**+0.7**
H08S3	**Diego Garcia H**	**25.17**	**240**	T		T	01 30 14.3	
	baz=60,slow=75,SNR=1714							
H08S2	**Diego Garcia H**	**25.17**	**240**	T		T	01 29 52.9	
	baz=60,slow=75,SNR=1601							
KHKI	**Kahang-Kahang**	**25.18**	**122**	P		**P**	**01 04 10.1**	**+1.8**
	comp=Z,100nm,0.8s							
H08S1	**Diego Garcia H**	**25.19**	**240**	T		T	01 29 54.1	
	baz=60,slow=75,SNR=1094							
GUNA	**GUNA**	**25.29**	**322**	*e*P		**P**	**01 04 10.8**	**+1.5**
HKPS	**Hong Kong Po S**	**25.67**	**47**	P		**P**	**01 04 13.2**	**+0.5**
HKPS				IAmb		IAmb	01 04 17.6	
	comp=Z,67nm,0.8s							
HKPS	**Hong Kong Po S**	**25.67**	**47**	P		**P**	**01 04 14.2**	**+1.5**
MMSI	**Mamuju**	**25.83**	**107**	P		**P**	**01 04 15.5**	**+1.2**
	comp=Z,2μmcomp=Z,164nm,0.9s							
GZH2	**Guangzhou**	**26.21**	**44**	P		**P**	**01 04 18.3**	**+0.7**
GZH2				S		**S**	**01 08 53.8**	**+6.1**
GZH2				pmax		pmax		
	comp=

WHN Wuhan 31.54 35 ⇑P P 01 05 05.5 +0.5
WHN sP **sP** **01 05 19.5 +1.6**
WHN pmax pmax
comp=Z,190nm,0.9s
WHN L L
comp=Z,3μm,15.2s
WHN L L
comp=Z,2μm,11.8s
WHN L L
comp=Z,6μm,15.0s
SSLB Suanglung 31.68 52 P **P** **01 05 06.5 +0.1**
SSLB lAmb lAmb 01 05 08.8
comp=Z,121nm,1.7s
SSLB Suanglung 31.68 52 P **P** **01 05 08.0 +1.6**
YULB Yu-li 31.74 53 P **P** **01 05 08.0 +1.1**
YULB lAmb lAmb 01 05 09.7
comp=Z,28nm,0.8s
YULB Yu-li 31.74 53 P **P** **01 05 08.1 +1.2**
DHRM DHARAMSHALA 31.75 330 *e*P **P** **01 05 07.0 -0.1**
DHRM lAmb lAmb 01 05 10.4
comp=Z,24nm,0.7s
XAN Xi'an 31.79 24 ⇑P **P** **01 05 06.3 -0.9**
XAN S **S** **01 10 15.9 +0.5**
XAN pmax pmax
comp=Z,300nm,4.3s
XAN L L
comp=Z,2μm,14.4s
XAN L L
comp=Z,1μm,16.5s
XAN L L
comp=Z,2μm,17.9s
LZDM Lanzhou Array 31.85 15 P **P** **01 05 07.4 -0.6**
comp=Z,24nm,0.5s,baz=196,slow=10,SNR=24
LZDM PcP **PcP** **01 07 58.5 0.0**
comp=Z,2.3nm,0.3s,baz=205,slow=6.6,SNR=3.7
comp=Z,24nm,0.5s
LZH Lanzhou 32.01 15 *e*P **P** **01 05 08.8 -0.4**
LZH pP pP 01 05 18.4 +0.3
LZH pmax pmax
comp=Z,74nm,1.3s
LZH pmax pmax
comp=Z,190nm,5.9s
LZH L L
comp=Z,730nm,14.2s
LZH L L
comp=Z,930nm,14.2s
LZH L L
comp=Z,950nm,14.9s
THN Thein Dam 32.18 330 *e*P **P** **01 05 10.4 -0.2**
THN lAmb lAmb 01 05 13.0
comp=Z,34nm,0.7s
NACB Ninganchiao 32.38 52 P **P** **01 05 12.4 0.0**
NACB lAmb lAmb 01 05 17.5
comp=Z,25nm,0.7s
NACB Ninganchiao 32.38 52 P **P** **01 05 13.2 +0.7**
YHNB Yeheng 32.47 51 P **P** **01 05 14.2 +0.8**
YHNB lAmb lAmb 01 05 19.2
comp=Z,46nm,0.8s
YHNB Yeheng 32.47 51 P **P** **01 05 15.0 +1.7**
TNTI Ternate 33.34 96 P **P** **01 05 19.5 -1.5**
SOEI Soe 33.37 116 P **P** **01 05 22.1 +0.8**
SOEI lAmb lAmb 01 05 55.3
comp=Z,71nm,1.0s
SOEI Soe 33.37 116 P P 01 05 31.0 +10
SOEI Soe 33.37 116 P **P** **01 05 25.2 +3.8**
YOJ Yonaguni jima 33.63 52 P **P** **01 05 25.0 +1.6**
comp=Z,52nm,0.7s
YOJ Yonaguni jima 33.63 52 P **P** **01 05 24.1 +0.7**
YOJ pmax pmax
comp=Z,36nm,0.6s
YOJ Yonaguni jima 33.63 52 P **P** **01 05 24.1 +0.7**
YOJ lAmb lAmb 01 05 26.9
comp=Z,36nm,0.6s
LYN LuoYang 33.75 28 P **P** **01 05 25.0 +0.7**
LYN sP sP 01 05 39.1 +1.9
LYN pmax pmax
comp=Z,320nm,5.7s
LYN L L
comp=Z,2μm,17.9s
LYN L L
comp=Z,800nm,17.2s
LYN L L
comp=Z,2μm,17.5s
NLAI Namlea 33.85 104 P **P** **01 05 27.2 +1.8**
comp=Z,92nm,0.8s
NIL Nilore 34.42 328 P **P** **01 05 29.2 -1.0**
NIL pmax pmax
comp=Z,71nm,0.6s
NIL Nilore 34.42 328 P **P** **01 05 30.0 -0.1**
NIL Nilore 34.42 328 P **P** **01 05 29.2 -1.0**
NIL Nilore 34.42 328 P **P** **01 05 30.0 -0.1**
GTA2 Gaotai 34.52 8 P **P** **01 05 30.9 -0.2**
GTA2 PcP **PcP** **01 08 06.4 +0.7**
GTA2 pmax pmax
comp=Z,84nm,0.9s
GTA2 L L
comp=Z,470nm,20.3s
GTA2 L L
comp=Z,310nm,19.7s
GTA2 L L
comp=Z,490nm,21.3s
NJ2 Nanjing 35.28 38 ⇑*i*P **P** **01 05 38.4 +0.8**
NJ2 pP **sP** **01 05 50.8 +0.3**
NJ2 L L
comp=Z,2μm,12.8s
NJ2 L L
comp=Z,2μm,13.3s
NJ2 L L
comp=Z,9μm,24.2s
SSE Sheshan 36.12 41 P **P** **01 05 45.5 +0.7**
SSE S **S** **01 11 24.7 +2.4**
SSE pmax pmax
comp=Z,25nm,0.7s
SSE pmax pmax
comp=Z,130nm,3.3s
SSE L L
comp=Z,370nm,14.6s
SSE L L
comp=Z,690nm,14.6s
HNS HongShan 37.12 27 ⇑P **P** **01 05 54.3 +1.1**
HNS pP **pP** **01 06 01.5 -0.8**
HNS PcP **PcP** **01 08 13.9 +0.7**
HNS pmax pmax
comp=Z,170nm,0.9s
HNS L L
comp=Z,690nm,20.1s
HNS L L
comp=Z,540nm,17.7s
HNS L L
comp=Z,910nm,17.7s
TIA Tai'an 37.36 31 P **P** **01 05 55.4 +0.1**
TIA pmax pmax
comp=Z,91nm,0.9s
TIA L L
comp=Z,1μm,16.2s
TIA L L
comp=Z,790nm,20.1s
TIA L L
comp=Z,2μm,17.7s
KBL Kabul 37.41 325 P **P** **01 05 53.6 -2.4**
KBL pmax pmax
comp=Z,10.0nm,0.7s
KBL Kabul 37.41 325 P **P** **01 05 53.6 -2.4**
KBL Kabul 37.41 325 P **P** **01 05 55.8 -0.2**
SIJI Sorong 37.45 98 LR LR 01 23 51.5
comp=Z,128nm,18.1s,baz=262,slow=40
SIJI Sorong 37.45 98 P **P** **01 05 55.6 -0.7**
comp=Z,1μmcomp=Z,118nm,1.0s
KSH2 Kashi 37.82 336 P **P** **01 05 59.0 -0.4**
KSH2 sP sP 01 06 15.6 +3.5
KSH2 PcP **PcP** **01 08 17.2 +1.7**
KSH2 pmax pmax
comp=Z,17nm,0.7s
KSH2 pmax pmax
comp=Z,130nm,5.5s
KSH2 L L
comp=Z,460nm,19.9s
KSH2 L L
comp=Z,230nm,18.9s
KSH2 L L
comp=Z,700nm,22.3s
BTO2 Baotou 38.09 19 *e*P **P** **01 06 01.1 -0.5**
BTO2 pP **pP** **01 06 10.9 +0.3**
BTO2 sP **sP** **01 06 14.8 +0.2**
BTO2 S **S** **01 11 52.2 -0.2**
BTO2 sS **sS** **01 12 10.0 +2.6**
BTO2 SS **SS** **01 14 31.4 -9.3**
BTO2 pmax pmax
comp=Z,500nm,7.6s
BTO2 L L
comp=Z,2μm,14.8s
BTO2 L L
comp=Z,2μm,15.7s
BTO2 L L
comp=Z,2μm,22.2s
WBK Wadi Bani Khal 38.24 300 P **P** **01 06 06.1 +3.2**
MANEM Manem 38.25 330 P **P** **01 06 03.0 -0.1**
MANEM lAmb lAmb 01 06 25.7
comp=Z,140nm,0.9s
WUS Wushi 38.32 342 P **P** **01 06 05.5 +2.0**
WUS lAmb lAmb 01 06 27.2
comp=Z,64nm,0.8s
WUS Wushi 38.32 342 P **P** **01 06 04.3 +0.8**
WUS Wushi 38.32 342 P **P** **01 06 04.2 +0.7**
WUS x x 01 06 13.5
WUS x x 01 06 17.6
FITZ Fitzroy Crossi 38.63 128 P **P** **01 06 05.9 -0.4**
comp=Z,10nm,0.9s
FITZ Fitzroy Crossi 38.63 128 LR LR 01 22 37.0
comp=Z,537nm,21.5s,baz=312,slow=37
FITZ Fitzroy Crossi 38.63 128 P **P** **01 06 05.6 -0.6**
FITZ Fitzroy Crossi 38.63 128 P **P** **01 06 06.1 -0.2**
HHC Hu-ho-hao-te 38.77 21 ⇑*i*P **P** **01 06 07.7 +0.5**
HHC sP sP 01 06 24.3 +4.0
HHC S **S** **01 12 07.2 +4.6**
HHC pmax pmax
comp=Z,50nm,1.1s
HHC pmax pmax
comp=Z,120nm,6.7s
HHC L L
comp=Z,870nm,18.5s
HHC L L
comp=Z,670nm,16.8s
HHC L L
comp=Z,840nm,18.5s
FAKI Fak Fak 38.79 101 P **P** **01 06 08.4 +0.7**
comp=Z,74nm,1.4s
FAKI Fak Fak 38.79 101 P **P** **01 06 07.1 -0.6**
FAKI lAmb lAmb 01 06 08.5
comp=Z,60nm,1.0s
JMDO Jabal Madar 38.90 300 P **P** **01 06 11.0 +2.5**
WMQ Urumqi 38.93 352 *e*P **P** **01 06 09.5 +1.0**
WMQ pP pP 01 06 18.0 +0.1
WMQ PcP **PcP** **01 08 20.1 +1.3**
WMQ pmax pmax
comp=Z,89nm,1.1s
WMQ pmax pmax
comp=Z,260nm,3.7s
WMQ L L
comp=Z,330nm,14.1s
WMQ L L
comp=Z,430nm,21.9s
WMQ L L
comp=Z,450nm,24.3s
JOW Kunigami 38.93 53 LR LR 01 21 59.9
comp=Z,798nm,21.7s,baz=192,slow=36
JOW Kunigami 38.93 53 P **P** **01 06 10.2 +1.5**
comp=Z,122nm,0.8s
JOW Kunigami 38.93 53 P **P** **01 06 09.8 +1.1**
JOW lAmb lAmb 01 06 10.6
comp=Z,74nm,0.7s
JOW Kunigami 38.93 53 P **P** **01 06 09.8 +1.1**
ASAI AK-SAY(Kyrgyzs 38.99 338 P **P** **01 06 10.0 +0.6**
SMDO Samad 39.19 301 P **P** **01 06 13.8 +2.7**
TARG Taragay, Kyrgy 39.26 340 P **P** **01 06 12.4 +0.7**
TARG pmax pmax
comp=Z,75nm,0.9s
TARG Taragay, Kyrgy 39.26 340 P **P** **01 06 12.4 +0.7**
TARG lAmb lAmb 01 06 36.4
comp=Z,75nm,0.9s
TARG Taragay, Kyrgy 39.26 340 P **P** **01 06 12.8 +1.2**
BIDO Bidbid 39.30 301 P **P** **01 06 15.1 +3.4**
BIDO P **P** **01 06 15.1 +3.4**
NRN Naryn 39.63 338 P **P** **01 06 14.9 +0.2**
NRN pmax pmax
comp=Z,55nm,1.4s
NRN Naryn 39.63 338 P **P** **01 06 14.9 +0.2**
DRK Karamyk 39.73 332 P **P** **01 06 16.4 +0.9**
DRK pmax pmax
comp=Z,142nm,0.7s
DRK Karamyk 39.73 332 P **P** **01 06 16.4 +0.9**
DRK Karamyk 39.73 332 P **P** **01 06 16.5 +1.0**
BSY Bisya 39.81 300 P **P** **01 06 18.8 +2.7**
BSY P **P** **01 06 18.8 +2.7**
KDJ Kajisay 39.82 340 P **P** **01 06 16.6 +0.5**
KDJ pmax pmax
comp=Z,47nm,0.8s
KDJ Kajisay 39.82 340 P **P** **01 06 16.6 +0.5**
KDJ lAmb lAmb 01 06 19.9
comp=Z,47nm,0.8s
KDJ Kajisay 39.82 340 P **P** **01 06 17.5 +1.4**
BJT Baijiatuao 39.92 27 P **P** **01 06 16.9 +0.2**
BJT pmax pmax
comp=Z,46nm,0.8s
BJT Baijiatuao 39.92 27 P **P** **01 06 16.9 +0.2**
BJT lAmb lAmb 01 06 19.1
comp=Z,46nm,0.8s
BJT Baijiatuao 39.92 27 P **P** **01 06 18.2 +1.5**
BJT Baijiatuao 39.92 27 P **P** **01 06 17.8 +1.2**
BJT x x 01 06 26.9
BJT x x 01 06 31.6
BJT PcP **PcP** **01 08 22.6 +0.7**
BJI2 Beijing 39.92 27 P **P** **01 06 18.1 +1.4**
BJI2 pP **pwP** **01 06 27.9 -0.6**
BJI2 sP **sP** **01 06 31.8 +2.1**
BJI2 PP **PnPn** **01 07 55.6 +3.3**
BJI2 PcP **PcP** **01 08 22.6 +0.7**
BJI2 S **S** **01 12 23.4 +3.8**
BJI2 pmax pmax
comp=Z,29nm,1.0s
BJI2 L L
comp=Z,230nm,20.8s
BJI2 L L
comp=Z,170nm,20.8s
BJI2 L L
comp=Z,430nm,17.9s
KNRA Kununurra 39.95 122 P **P** **01 06 16.6 -0.7**
comp=Z,37nm,1.1s
KNRA Kununurra 39.95 122 P **P** **01 06 16.7 -0.6**
KNRA lAmb lAmb 01 06 31.2
comp=Z,51nm,1.1s
HOQ Hoqain 40.02 301 P **P** **01 06 20.2 +2.4**
HOQ P **P** **01 06 20.2 +2.4**
SHLS Shalkode 40.03 343 *c i*P **P** **01 06 17.6 -0.2**
SHLS pmax pmax
comp=Z,15nm,0.5s
SHLS Shalkode 40.03 343 ⇑*i*P **P** **01 06 17.6 -0.2**
comp=Z,15nm,0.5s
GAR Garm 40.06 331 P **P** **01 06 16.2 -1.9**
GAR lAmb lAmb 01 06 36.9
comp=Z,33nm,0.8s
GAR Garm 40.06 331 P **P** **01 06 17.7 -0.4**
SHAA Shahritus 40.10 327 P **P** **01 06 17.8 -0.6**
SHAA lAmb lAmb 01 06 52.4
comp=Z,60nm,1.0s
OHH Osh 40.14 334 P **P** **01 06 18.3 -0.4**
UZB Uzynbulak 40.16 343 *c i*P **P** **01 06 19.6 +0.8**
UZB Uzynbulak 40.16 343 ⇑*i*P **P** **01 06 19.6 +0.8**
PDGK Podgornoye 40.19 343 P **P** **01 06 19.8 +0.8**
PDGK Podgornoye 40.19 343 P **P** **01 06 19.8 +0.8**
ULHL Ulahol 40.25 339 P **P** **01 06 20.6 +0.9**
SNR=16
SATY Saty 40.26 342 *c i*P **P** **01 06 20.4 +0.8**
SATY Saty 40.26 342 ⇑*i*P **P** **01 06 20.5 +0.8**
CHGR Chuyangaron 40.38 329 *c i*P **P** **01 06 19.7 -0.9**
CHGR pmax pmax
comp=Z,43nm,0.8s
CHGR Chuyangaron 40.38 329 P **P** **01 06 19.6 -1.1**
CHGR lAmb lAmb 01 06 20.7
comp=Z,54nm,0.7s
CHGR Chuyangaron 40.38 329 P **P** **01 06 19.9 -0.7**
BOOM Boomskoye usch 40.57 339 P **P** **01 06 22.2 -0.1**
BOOM pmax pmax
comp=Z,48nm,0.9s
BOOM Boomskoye usch 40.57 339 P **P** **01 06 22.2 -0.1**
BOOM lAmb lAmb 01 06 39.5
comp=Z,48nm,0.9s
BOOM Boomskoye usch 40.57 339 P **P** **01 06 22.9 +0.6**
ARQ Araqi 40.61 300 P **P** **01 06 25.7 +3.0**
BTK Batken 40.65 332 P **P** **01 06 23.3 +0.4**
BTK pmax pmax
comp=Z,41nm,0.8s
BTK Batken 40.65 332 P **P** **01 06 23.3 +0.4**
BTK lAmb lAmb 01 06 42.9
comp=Z,41nm,0.8s
BTK Batken 40.65 332 P **P** **01 06 24.2 +1.3**
TNSS Tian-Shan 40.71 340 *e*P **P** **01 06 24.2 +0.5**
TNSS Tian-Shan 40.71 340 *e*P **P** **01 06 24.2 +0.5**
ARSB Arslanbob 40.72 335 P **P** **01 06 23.8 +0.3**
ARSB pmax pmax
comp=Z,90nm,0.8s
ARSB Arslanbob 40.72 335 P **P** **01 06 23.8 +0.3**
ARSB lAmb lAmb 01 06 43.2
comp=Z,90nm,0.8s
MTN Manton Dam 40.77 116 P **P** **01 06 22.9 -1.2**
comp=Z,34nm,0.7s
MTN Manton Dam 40.77 116 P **P** **01 06 22.9 -1.2**
MTN lAmb lAmb 01 06 35.7
comp=Z,114nm,1.6s
MDOK Medeo 40.79 341 *e*P **P** **01 06 24.9 +0.9**
MDOK Medeo 40.79 341 *e*P **P** **01 06 25.0 +0.9**
UCH Uchtor 40.87 337 P **P** **01 06 25.8 +0.6**
SNR=23
AAA Alma-Ata 40.87 341 *e*P **P** **01 06 25.5 +0.9**
AAA pmax pmax
comp=Z,24nm,0.6s
AAA Alma-Ata 40.87 341 *e*P **P** **01 06 25.5 +0.9**
comp=Z,24nm,0.6s
SOHO SOHO 40.88 301 P **P** **01 06 27.5 +2.6**
SOHO P **P** **01 06 27.5 +2.6**
TKM2 Tokmak 2 41.07 339 P **P** **01 06 27.1 +0.6**
SNR=20
KBK Karagaybulak 41.08 338 P **P** **01 06 27.8 +1.3**
SNR=30
AAK Ala-Archa 41.23 338 LR LR 01 25 03.1
comp=Z,675nm,20.7s,baz=136,slow=38
AAK Ala-Archa 41.23 338 P **P** **01 06 29.2 +1.5**
SNR=10
AAK Ala-Archa 41.23 338 *i* P **P** **01 06 28.8 +1.1**
SNR=12
AAK Ala-Archa 41.23 338 *c e*P **P** **01 06 28.6 +0.9**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 41.23 338 P **P** **01 06 29.2 +1.5**
AAK Ala-Archa 41.23 338 P **P** **01 06 26.9 -0.8**
AAK lAmb lAmb 01 06 50.4
comp=Z,72nm,1.3s
AAK Ala-Archa 41.23 338 P **P** **01 06 28.8 +1.1**
FRU1 Bishkek 41.33 338 P **P** **01 06 27.2 -1.2**
FRU1 pmax pmax
comp=Z,27nm,0.7s
FRU1 Bishkek 41.33 338 P **P** **01 06 27.2 -1.2**
UOSS Minazif 41.46 302 P **P** **01 06 31.4 +1.7**
UOSS Minazif 41.46 302 P **P** **01 06 31.7 +2.0**
UOSS P **pP** **01 06 32.0 -7.0**
HATD Hatta, Dubai 41.47 302 P **P** **01 06 32.4 +2.5**
HATD Hatta, Dubai 41.47 302 P **P** **01 06 32.5 +2.7**
ASHO Ashiyiah 41.48 302 *i* P **P** **01 06 32.7 +2.8**
SNR=12
ASHO Ashiyiah 41.48 302 P **P** **01 06 32.3 +2.4**
MDH Madha 41.51 303 P **P** **01 06 31.9 +1.8**
ALNE Al Ain 41.52 301 *i* P **P** **01 06 32.9 +2.7**
SNR=13
ALNE Al Ain 41.52 301 P **P** **01 06 32.9 +2.7**
SNR=13
ALNE P **P** **01 06 32.9 +2.7**
SNR=13
EKS2 Erkin-Say 41.53 337 P **P** **01 06 31.2 +1.1**
SNR=23
WHFO Wadi Hawf 41.54 291 P **P** **01 06 32.9 +2.5**
ARK Arkit 41.54 335 P **P** **01 06 31.0 +0.7**
UMZA Um Al Zommool 41.58 299 P **P** **01 06 33.5 +2.8**
UMZA P **P** **01 06 33.5 +2.8**
MSFE Esma-Masafi 41.65 303 P **P** **01 06 34.5 +3.2**
MASF Masafi 41.65 303 P **P** **01 06 33.8 +2.4**
DL2 Dalian 41.74 33 P **P** **01 06 32.3 +0.5**
DL2 *e*S **S** **01 12 48.5 +1.7**
DL2 pmax pmax
comp=Z,120nm,0.9s
DL2 pmax pmax
comp=Z,430nm,5.8s
DL2 L L
comp=Z,930nm,18.1s
DL2 L L
comp=Z,780nm,15.9s
DL2 L L
comp=Z,1μm,17.3s
BANOM Banah 41.75 304 P **P** **01 06 35.3 +3.2**
USP Ospenovka 41.77 338 P **P** **01 06 32.7 +0.7**
SNR=22
SGDS Sogindy 41.88 339 *e*P **P** **01 06 33.5 +0.5**
FAQ Al Faqa, Dubai 41.90 302 *i* P **P** **01 06 36.7 +3.5**
SNR=6.0
FAQ Al Faqa, Dubai 41.90 302 P **P** **01 06 36.8 +3.5**
SNR=6.1
FAQ P **P** **01 06 36.8 +3.5**
SNR=6.1
NAZ Nazwa, Dubai 41.93 302 P **P** **01 06 36.1 +2.5**
NAZ Nazwa, Dubai 41.93 302 P **P** **01 06 35.9 +2.4**
NAZ P **P** **01 06 35.9 +2.4**
SHME Shamm 41.93 304 P **P** **01 06 35.7 +2.2**
SHME Shamm 41.93 304 P **P** **01 06 35.9 +2.4**
TDK Taldyqorghan 42.03 343 *e*P **P** **01 06 34.5 +0.5**
TDK pmax pmax
comp=Z,15nm,0.4s
TDK Taldyqorghan 42.03 343 *e*P **P** **01 06 34.5 +0.5**
comp=Z,15nm,0.4s
ASUD Al Ashush, Dub 42.08 301 *i* P **P** **01 06 37.7 +3.0**
SNR=14
ASUD Al Ashush, Dub 42.08 301 P **P** **01 06 37.4 +2.7**
BAKI Biak 42.27 97 P **P** **01 06 36.8 +0.3**
comp=Z,96nm,0.8s
AJN Ajban 42.35 301 P **P** **01 06 39.5 +2.6**
IUG Iuzhnay 42.67 333 *c i*P **P** **01 06 40.1 +0.7**
IUG pmax pmax
comp=Z,27nm,0.7s
IUG Iuzhnay 42.67 333 ⇑*i*P **P** **01 06 40.1 +0.7**
comp=Z,28nm,0.7s
MK31 Makanchi Array 42.74 348 P **P** **01 06 40.3 +0.5**
MK31 pmax pmax
comp=Z,54nm,0.9s
MK31 Makanchi Array 42.74 348 P **P** **01 06 40.3 +0.5**
MK31 lAmb lAmb 01 06 41.3
comp=Z,54nm,0.9s
MKAR Makanchi Array 42.74 348 P **P** **01 06 40.3 +0.5**
comp=Z,56nm,0.7s,baz=167,slow=8.3,SNR=440
comp=Z,56nm,0.7s
MAKZ Makanchi 42.82 348 P **P** **01 06 40.6 +0.2**
MAKZ pmax pmax
comp=Z,48nm,0.8s
MAKZ Makanchi 42.82 348 P **P** **01 06 40.6 +0.2**
MAKZ lAmb lAmb 01 06 41.9
comp=Z,48nm,0.8s
MAKZ Makanchi 42.82 348 P **P** **01 06 41.0 +0.5**
MAKZ Makanchi 42.82 348 P **P** **01 06 40.9 +0.5**
MAKZ x x 01 06 51.0
MAKZ PcP **sP** **01 06 53.6 +0.4**
ZSN Zaisan 42.89 351 *c i*P **P** **01 06 42.1 +1.1**
ZSN pmax pmax
comp=Z,19nm,0.8s
ZSN Zaisan 42.89 351 ⇑*i*P **P** **01 06 42.2 +1.2**
comp=Z,19nm,0.8s
XLT XiLinHaoTe 43.09 23 *e*P **P** **01 06 43.1 +0.3**
XLT sP pwP 01 06 55.0 +0.3
XLT PcP **PcP** **01 08 33.1 +0.8**
XLT pmax pmax
comp=Z,32nm,0.9s
XLT L L
comp=Z,130nm,17.5s
XLT L L
comp=Z,790nm,19.2s
XLT L L
comp=Z,2μm,18.9s
MZR Muzera 43.14 298 *i* P **P** **01 06 45.9 +2.5**
SNR=12
MZR Muzera 43.14 298 P **P** **01 06 46.2 +2.8**
MZR P **P** **01 06 46.2 +2.8**
KK31 Karatay Array 43.23 334 *i* P **P** **01 06 44.0 +0.2**
KK31 Karatay Array 43.23 334 P **P** **01 06 43.7 -0.2**
KKAR Karatay Array 43.23 334 P **P** **01 06 43.7 -0.1**
KKAR Karatay Array 43.23 334 P **P** **01 06 43.7 -0.1**
TJN Taejon 43.43 40 *i* P **P** **01 06 45.6 +0.1**
TJN pmax pmax
comp=Z,1.0nm,0.9s
BTLS Baital 43.47 339 *e*P **P** **01 06 46.3 +0.6**

BTLS Baital 43.47 339 eP P 01 06 46.4 +0.6
NWAO Narrogin (SRO) 43.71 152 LR LR 01 25 09.6
comp=Z,298nm,18.8s,baz=304,slow=36
SONM Songino Array 43.77 12 P P 01 06 47.9 -0.3
comp=Z,45nm,0.7s,baz=192,slow=8.3,SNR=286
SONM PcP PcP 01 08 35.2 +0.6
comp=Z,12nm,0.7s,baz=195,slow=3.5,SNR=6.7
SONM LR LR 01 27 53.3
comp=Z,501nm,20.2s,baz=200,slow=40
comp=Z,45nm,0.7s
SONM Songino Array 43.77 12 P P 01 06 47.8 -0.4
SONM IAmb IAmb 01 06 49.0
comp=Z,57nm,0.8s
SONM PcP 01 08 34.4 -0.2
ULN Ulaanbaatar 43.93 12 ceP P 01 06 49.1 -0.5
ULN pmax pmax
comp=Z,24nm,0.8s
ULN Ulaanbaatar 43.93 12 P P 01 06 49.5 -0.1
ULN P P 01 06 49.5 -0.1
ULN Ulaanbaatar 43.93 12 P P 01 06 49.0 -0.5
ULN IAmb IAmb 01 06 50.1
comp=Z,34nm,0.7s
ULN Ulaanbaatar 43.93 12 P P 01 06 48.8 -0.8
ULN Ulaanbaatar 43.93 12 P P 01 06 49.2 -0.4
ULN Ulaanbaatar 43.93 12 PcP PcP 01 08 35.6 +0.4
GHWR Ruwais 43.97 299 P P 01 06 52.6 +2.5
GHWR P P 01 06 52.6 +2.5
JNU Nakatsue 43.98 46 LR LR 01 25 10.3
comp=Z,672nm,21.9s,baz=213,slow=36
H01W3 Cape Leeuwin H 44.02 156 T T 01 53 53.8
baz=331,slow=76,SNR=12
H01W2 Cape Leeuwin H 44.03 156 T T 01 54 03.3
baz=331,slow=76,SNR=11
H01W1 Cape Leeuwin H 44.04 156 T T 01 54 05.1
baz=331,slow=76,SNR=12
JRN Qarnain Island 44.30 301 P P 01 06 55.2 +2.5
KSAR Wonju Array Be 44.41 39 P P 01 06 52.4 -1.0
KSAR Wonju Array Be 44.41 39 P P 01 06 52.4 -1.0
KSRS Korea Array 44.45 39 P P 01 06 53.6 0.0
comp=Z,4.6nm,0.6s,baz=219,slow=8.9,SNR=18
KSRS PcP PP 01 08 37.5 -0.2
comp=Z,2.5nm,0.6s,baz=243,slow=3.4,SNR=3.1
KSRS LR LR 01 27 14.2
comp=Z,588nm,18.6s,baz=245,slow=39
comp=Z,4.6nm,0.6s
WRKA Warakurna 44.68 134 P P 01 06 54.9 -0.8
comp=Z,8.8nm,1.3s
DGZ Jazzator, Alta 44.75 354 c iP P 01 06 56.9 +0.8
DGZ pmax pmax
comp=Z,18nm,1.0s
SLWR Sila 45.03 299 P P 01 07 00.7 +2.3
SLWR P P 01 07 00.7 +2.3
KNGR Kungurtug, Tuv 45.36 3 c iP P 01 07 01.5 +0.6
KNGR pmax pmax
comp=Z,32nm,0.8s
ZAK Zakamensk 45.69 8 eP P 01 07 02.4 -1.1
ZAK pmax pmax
comp=Z,26nm,1.8s
JMN Monobe 46.46 47 P P 01 07 09.2 -0.6
JMN IAmb IAmb 01 07 12.3
comp=Z,28nm,0.8s
JMN Monobe 46.46 47 P P 01 07 10.8 +1.1
SEM Semipalatinsk 46.60 348 eP P 01 07 11.6 +0.9
SEM pmax pmax
comp=Z,47nm,1.4s
SEM Semipalatinsk 46.60 348 eP P 01 07 11.7 +0.9
comp=Z,48nm,1.4s
WB0 Warramunga Arr 46.60 123 P P 01 07 10.6 -0.4
SAKB Bahrain 46.62 301 P P 01 07 13.2 +2.2
WRA Warramunga Arr 46.64 124 P P 01 07 11.6 +0.3
comp=Z,40nm,0.9s,baz=302,slow=9.2,SNR=140
WRA S S 01 13 54.7 -3.9
comp=Z,2.5nm,1.2s,baz=294,slow=15,SNR=2.3
comp=Z,40nm,0.9s
WRA Warramunga Arr 46.64 124 ceP P 01 07 11.6 +0.3
WRA pmax pmax
comp=Z,32nm,0.6s
WRA Warramunga Arr 46.64 124 P P 01 07 11.2 -0.1
WRAB Tennant Creek 46.64 124 P P 01 07 11.9 +0.6
comp=Z,95nm,1.1s
WRAB Tennant Creek 46.64 124 ceP P 01 07 11.8 +0.5
WRAB pmax pmax
comp=Z,45nm,0.9s
WRAB Tennant Creek 46.64 124 P P 01 07 10.6 -0.7
WRAB Tennant Creek 46.64 124 P P 01 07 11.6 +0.3
WRAB P pP 01 07 11.7 -8.7
WB2 Warramunga Arr 46.65 124 P P 01 07 11.8 +0.5
MOY Mondy 46.68 6 eP P 01 07 10.9 -0.4
MOY pmax pmax
comp=Z,21nm,1.7s
WR8 Warramunga Arr 46.78 123 P P 01 07 12.5 +0.1
WR0 Warramunga Arr 46.81 123 P P 01 07 12.1 -0.5
TLY Talaya 47.01 8 LR LR 01 29 36.7
comp=Z,549nm,20.2s,baz=186,slow=40
TLY Talaya 47.01 8 ceP P 01 07 14.3 +0.6
TLY pmax pmax
comp=Z,22nm,0.8s
TLY Talaya 47.01 8 P P 01 07 13.2 -0.5
TLY IAmb IAmb 01 07 15.2
comp=Z,23nm,0.9s
TLY Talaya 47.01 8 P P 01 07 14.4 +0.7
JAY Jayapura 47.02 98 P P 01 07 12.8 -1.6
KURBB Kurchatov Arra 47.18 346 P P 01 07 15.8 +0.8
comp=Z,35nm,0.5s,baz=172,slow=7.0,SNR=299
KURBB PcP PcP 01 08 47.0 +0.8
comp=Z,13nm,0.7s,baz=156,slow=2.6,SNR=5.5
KURBB S S 01 13 60.0 -5.6
comp=Z,2.3nm,0.9s,baz=152,slow=15,SNR=4.7
comp=Z,35nm,0.5s
KURBB Kurchatov Arra 47.18 346 P P 01 07 15.4 +0.4
KURK Kurchatov 47.25 347 P P 01 07 15.8 +0.3
KURK 01 08 47.0
KURK Kurchatov 47.25 347 P P 01 07 15.5 -0.1
KURK PcP PcP 01 08 47.0 +0.6
KURK Kurchatov 47.25 347 P P 01 07 16.3 +0.8
KURK Kurchatov 47.25 347 P P 01 07 16.5 +0.9
KURK x x 01 07 25.8
KURK x x 01 07 31.1
CN2 Changchun 47.26 31 P P 01 07 15.4 -0.4
CN2 pP pP 01 07 24.5 -0.6
CN2 PcP PcP 01 08 46.5 -0.1
CN2 S S 01 14 05.3 -1.6
CN2 sS sS 01 14 21.5 -0.8
CN2 SS SS 01 17 25.5 -9.1
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 L L
comp=Z,520nm,15.0s
CN2 L L
comp=Z,420nm,15.0s
CN2 L L
comp=Z,530nm,14.0s
IRK Irkutsk 47.65 8 eP P 01 07 17.6 -1.1
IRK pmax pmax
comp=Z,52nm,1.4s
AS15 Alice Springs 48.12 128 P P 01 07 22.8 0.0
comp=Z,57nm,0.7s
ASAR Alice Springs 48.13 128 P P 01 07 23.1 +0.3
comp=Z,14nm,0.8s,baz=306,slow=7.6,SNR=78
ASAR S S 01 14 14.2 -5.7
comp=Z,1.2nm,0.8s,baz=298,slow=15,SNR=7.2
ASAR LR LR 01 28 08.1
comp=Z,275nm,21.3s,baz=302,slow=37
comp=Z,14nm,0.8s
AS31 Alice Springs 48.13 128 P P 01 07 22.9 0.0
comp=Z,16nm,0.8s
AS31 Alice Springs 48.13 128 P P 01 07 21.8 -1.1
AS01 Alice Springs 48.16 128 P P 01 07 23.2 +0.1
comp=Z,70nm,0.8s
AS09 Alice Springs 48.17 128 P P 01 07 23.4 +0.2
comp=Z,68nm,0.8s
FORT Forrest 48.18 140 P P 01 07 22.6 -0.5
FORT IAmb IAmb 01 07 40.9
comp=Z,21nm,0.7s
AS17 Alice Springs 48.20 128 P P 01 07 23.7 +0.3
comp=Z,69nm,0.8s
HIA Hailar 48.96 22 i P P 01 07 28.8 -0.1
HIA pmax pmax
comp=Z,16nm,1.0s
HIA Hailar 48.96 22 P P 01 07 28.4 -0.4
HIA Hailar 48.96 22 P P 01 07 29.0 +0.1
HILR Hailar Array B 49.20 22 P P 01 07 31.3 +0.6
comp=Z,2.8nm,0.4s,baz=210,slow=10,SNR=5.5
HILR PcP PcP 01 08 53.8 +0.3
comp=Z,8.6nm,0.5s,baz=160,slow=4.7,SNR=8.2
HILR LR LR 01 30 32.4
comp=Z,1μm,19.1s,baz=135,slow=39
comp=Z,2.8nm,0.4s
ZAA0 Zalesovo Array 49.24 353 P P 01 07 30.6 -0.2
ZALV Zalesovo Beam 49.24 353 P P 01 07 31.4 +0.6
comp=Z,51nm,0.7s,baz=186,slow=6.7,SNR=269
ZALV S S 01 14 32.0 -2.4
comp=Z,2.8nm,0.8s,baz=174,slow=16,SNR=6.1
comp=Z,51nm,0.7s
ZALV Zalesovo Beam 49.24 353 P P 01 07 31.2 +0.4
INU Inuyama 49.51 47 P P 01 07 33.0 -0.2
INU IAmb IAmb 01 07 34.2
comp=Z,30nm,0.7s
INU Inuyama 49.51 47 P P 01 07 33.3 +0.1
BNX BinXian 49.62 30 ⇑P P 01 07 33.3 -0.6
BNX pmax pmax
comp=Z,28nm,1.1s
JGF Kuroka 49.87 47 P P 01 07 37.3 +1.3
comp=Z,49nm,0.9s
JGF Kuroka 49.87 47 P P 01 07 35.1 -1.0
JGF Kuroka 49.87 47 P P 01 07 35.4 -0.6
MDJ Mudanjiang 49.99 33 P P 01 07 36.9 +0.2
MDJ IAmb IAmb 01 07 38.8
comp=Z,85nm,1.3s
MDJ Mudanjiang 49.99 33 P P 01 07 37.9 +1.2
MDJ sP sP 01 07 53.1 +3.2
MDJ S S 01 14 47.6 +2.3
MDJ sS sS 01 15 05.5 +4.7
MDJ pmax pmax
comp=Z,62nm,1.3s
MDJ L L
comp=Z,700nm,22.7s
MDJ L L
comp=Z,360nm,13.1s
MDJ L L
comp=Z,920nm,17.2s
MDJ Mudanjiang 49.99 33 P P 01 07 38.0 +1.3
RAYN Ar Rayn 50.34 296 i P P 01 07 41.6 +1.8
SNR=22
RAYN Ar Rayn 50.34 296 P P 01 07 41.3 +1.4
RAYN Ar Rayn 50.34 296 P P 01 07 41.8 +1.9
RAYN Ar Rayn 50.34 296 P P 01 07 40.1 +0.2
RAYN IAmb IAmb 01 07 42.4
comp=Z,41nm,1.3s
RAYN Ar Rayn 50.34 296 P P 01 07 41.7 +1.8
RAYN Ar Rayn 50.34 296 P P 01 07 41.5 +1.6
RAYN x x 01 07 56.5
JCJ Chichijima 50.54 59 P P 01 07 39.2 -2.0
comp=Z,63nm,0.5s,baz=222,slow=6.3,SNR=4.7
JCJ LR LR 01 27 19.5
comp=Z,143nm,20.4s,baz=126,slow=34
comp=Z,63nm,0.5s
JCJ Chichijima 50.54 59 P P 01 07 41.3 +0.1
comp=Z,102nm,0.6s
JCJ Chichijima 50.54 59 P P 01 07 40.3 -0.9
GUMO Guam 50.54 77 LR LR 01 28 39.7
comp=Z,140nm,22.0s,baz=264,slow=36
JHJ Hachijo jima 2 50.63 51 P P 01 07 40.4 -1.5
comp=Z,168nm,1.0s,baz=34,slow=5.8,SNR=2.2
JHJ LR LR 01 28 25.7
comp=Z,319nm,21.7s,baz=280,slow=35
comp=Z,168nm,1.0s
MAJO Matsushiro 50.91 46 P P 01 07 42.7 -1.2
MAJO 01 08 59.7
MAJO pmax pmax
comp=Z,96nm,1.9s
MAJO Matsushiro 50.91 46 P P 01 07 42.7 -1.2
MAJO IAmb IAmb 01 07 45.2
comp=Z,96nm,1.9s
MAJO PcP PcP 01 08 59.7 -0.4
MAJO Matsushiro 50.91 46 P P 01 07 43.2 -0.7
MJB9 Matsu-Tunnel 50.91 46 P P 01 07 43.7 -0.2
MJB9 IAmb IAmb 01 07 46.2
comp=Z,97nm,1.9s
MJAR Matsushiro Arr 50.91 46 P P 01 07 44.2 +0.3
comp=Z,8.5nm,0.7s,baz=247,slow=7.3,SNR=16
MJAR PcP PcP 01 09 00.5 +0.4
comp=Z,11nm,0.8s,baz=242,slow=3.7,SNR=8.9
comp=Z,8.5nm,0.7s
MJAR Matsushiro Arr 50.91 46 P P 01 07 42.7 -1.2
MJAR IAmb IAmb 01 07 46.0
comp=Z,60nm,1.8s
MJAR PcP PcP 01 08 60.0 -0.1
USA0B Ussuriysk Arra 51.04 34 i P P 01 07 44.9 +0.2
USA0B Ussuriysk Arra 51.04 34 P P 01 07 44.2 -0.5
USRK Ussuriysk Ar. 51.04 34 P P 01 07 45.0 +0.3
comp=Z,12nm,0.8s,baz=235,slow=6.9,SNR=17
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 51.04 34 P P 01 07 45.0 +0.3
ATD Arta Tunnel 51.20 281 LR LR 01 26 39.2
comp=Z,11nm,19.4s,baz=170,slow=33
QIS Mount Isa 51.34 121 P P 01 07 47.7 +0.4
comp=Z,64nm,1.0s
QIS Mount Isa 51.34 121 P P 01 07 47.7 +0.4
comp=Z,64nm,1.0s
QIS Mount Isa 51.34 121 P P 01 07 47.7 +0.4
BVAR Borovoye Array 51.58 342 P P 01 07 48.6 0.0
comp=Z,33nm,0.7s,baz=145,slow=8.3,SNR=198
BVAR S S 01 15 07.4 +0.3
comp=Z,1.6nm,0.8s,baz=138,slow=17,SNR=3.6
comp=Z,33nm,0.7s
BORK Borovoye 51.62 342 c iP P 01 07 48.8 0.0
BORK pmax pmax
comp=Z,36nm,0.7s
BORK Borovoye 51.62 342 P P 01 07 48.2 -0.6
BORK IAmb IAmb 01 08 06.5
comp=Z,41nm,0.8s
AB31 Akbulak array 52.66 332 i P P 01 07 56.9 +0.2
AB31 Akbulak array 52.66 332 P P 01 07 56.0 -0.6
AB31 IAmb IAmb 01 08 15.0
comp=Z,46nm,0.8s
ABKAR Akbulak array 52.66 332 P P 01 07 56.0 -0.6
HEH HeiHe 52.85 26 eP P 01 07 57.9 -0.2
HEH pmax pmax
comp=Z,25nm,1.0s
HEH L L
comp=Z,360nm,18.0s
HEH L L
comp=Z,430nm,16.7s
HEH L L
comp=Z,690nm,17.4s
MANU Manus Island 53.53 96 P P 01 08 03.6 -0.1
KLR Kul'dur 54.15 29 P P 01 08 08.0 +0.4
comp=Z,7.1nm,0.5s,baz=255,slow=7.9,SNR=28
comp=Z,7.1nm,0.5s
KLR Kul'dur 54.15 29 P P 01 08 08.0 +0.4
MTSU Mount Surprise 54.52 116 P P 01 08 11.4 +0.5
comp=Z,13nm,0.9s
MTSU Mount Surprise 54.52 116 P P 01 08 11.3 +0.4
PMG Port Moresby 54.67 105 LR LR 01 36 32.3
comp=Z,144nm,18.7s,baz=310,slow=42
BOD Bodaibo 54.74 13 eP P 01 08 11.3 -0.4
BOD pmax pmax
comp=Z,104nm,1.0s
BBOO Buckleboo 54.76 137 P P 01 08 12.1 -0.2
comp=Z,30nm,1.0s
BBOO Buckleboo 54.76 137 P P 01 08 12.4 +0.1
comp=Z,30nm,1.0s
BBOO Buckleboo 54.76 137 P P 01 08 12.3 -0.1
BBOO IAmb IAmb 01 08 28.1
comp=Z,26nm,1.0s
BBOO Buckleboo 54.76 137 P P 01 08 12.1 -0.2
JTM Tenmabayashi 54.84 43 P P 01 08 12.7 -0.1
FOMA Nahampoana Res 54.86 235 P P 01 08 12.5 -0.7
AKT Akhty 54.98 318 eP P 01 08 13.9 0.0
AKT e 01 09 15.1
AKT e 01 10 17.5
AKT ePPP PPP 01 11 29.5
AKT pmax pmax
comp=Z,34nm,1.2s
ZEA Zeya 55.37 23 eP P 01 08 17.2 +0.8
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=N,100nm,15.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
INKA Innaminka 55.50 129 P P 01 08 17.1 -0.6
INKA IAmb IAmb 01 08 33.6
comp=Z,26nm,0.8s
HAKT HAKKARI 56.14 312 P P 01 08 22.4 -0.1
GNI Garni 56.42 316 LR LR 01 35 15.2
comp=Z,80nm,21.9s,baz=102,slow=39
GNI Garni 56.42 316 P P 01 08 25.0 +0.6
GNI Garni 56.42 316 ceP P 01 08 24.4 0.0
GNI pmax pmax
comp=Z,14nm,0.8s
GNI Garni 56.42 316 P P 01 08 24.4 0.0
GNI P P 01 08 24.4 0.0
GNI Garni 56.42 316 P P 01 08 23.7 -0.6
GNI IAmb IAmb 01 08 59.3
comp=Z,23nm,0.8s
GNI Garni 56.42 316 P P 01 08 23.8 -0.6
comp=Z,25nm,0.7s
GNI Garni 56.42 316 P P 01 08 25.0 +0.6
KIBK Kibwezi 56.65 264 P P 01 08 38.7 +12
KIBK Kibwezi 56.65 264 P P 01 08 27.0 +0.6
ERM Erimo 56.80 42 P P 01 08 27.7 +0.9
comp=Z,46nm,0.8s
ERM Erimo 56.80 42 P P 01 08 25.8 -1.0
ERM pmax pmax
comp=Z,61nm,1.5s
ERM Erimo 56.80 42 P P 01 08 25.8 -1.0
ERM IAmb IAmb 01 09 17.5
comp=Z,61nm,1.4s
GEVA Gevas 56.90 313 P P 01 08 27.6 -0.2
CTA Charters Tower 56.91 118 P P 01 08 28.6 +0.6
comp=Z,7.8nm,0.9s
CTA Charters Tower 56.91 118 LR LR 01 34 52.7
comp=Z,442nm,20.1s,baz=260,slow=38
CTAO Charters Tower 56.91 118 P P 01 08 27.2 -0.8
CTAO pmax pmax
comp=Z,13nm,0.8s
CTAO Charters Tower 56.91 118 P P 01 08 27.2 -0.8
HTT Hallett 57.09 136 P P 01 08 29.5 +0.4
comp=Z,23nm,1.3s
KMBO Kilima Mbogo 57.28 265 P P 01 08 32.2 +1.2
baz=72,slow=9.7
KMBO LR LR 01 31 25.6
comp=Z,439nm,18.6s,baz=98,slow=34
ASAJ Asahikawa 57.39 40 P P 01 08 30.7 -0.2
ASAJ pmax pmax
comp=Z,133nm,1.9s
JKA Kamikawa-asahi 57.39 40 P P 01 08 30.7 -0.2
JKA Kamikawa-asahi 57.39 40 P P 01 08 31.1 +0.1
GRNR Gornyy 57.46 30 ⇑i P P 01 08 31.5 +0.2
GRNR pmax pmax
comp=Z,7.0nm,1.1s
GRNR MLR MLR
comp=E,240nm,18.0s
GRNR MLR MLR
comp=N,310nm,17.0s
GRNR MLR MLR
comp=Z,410nm,17.0s
GURO Guroymak-BITLI 57.73 313 P P 01 08 33.2 -0.4
GURO IAmb IAmb 01 08 36.4
comp=Z,32nm,0.8s
QLP Quilpie 57.74 126 P P 01 08 34.8 +1.1
comp=Z,75nm,1.5s
QLP Quilpie 57.74 126 P P 01 08 35.4 +1.7
comp=Z,75nm,1.5s
QLP Quilpie 57.74 126 P P 01 08 34.2 +0.5
SVE Sverdlovsk 57.95 339 d iP P 01 08 35.1 +0.5
SVE pmax pmax
comp=Z,110nm,1.2s
STKA Stephens Creek 58.18 133 P P 01 08 37.2 +0.5
comp=Z,162nm,1.0s
STKA Stephens Creek 58.18 133 P P 01 08 37.0 +0.3
comp=Z,10.0nm,0.8s,baz=309,slow=7.4,SNR=15
STKA LR LR 01 34 36.0
comp=Z,269nm,21.3s,baz=325,slow=37
comp=Z,10.0nm,0.8s
STKA Stephens Creek 58.18 133 P P 01 08 37.0 +0.3
STKA Stephens Creek 58.18 133 P P 01 08 37.4 +0.7
EPOS Posof 58.37 316 P P 01 08 38.0 -0.1
ARTI Arti 58.45 338 LR LR 01 35 41.3
comp=Z,374nm,20.3s,baz=126,slow=38
ARTI Arti 58.45 338 c iP P 01 08 38.1 -0.1
ARTI 01 09 28.4
ARTI S S 01 16 37.7 -1.4
ARTI 01 18 20.4
ARTI pmax pmax
comp=Z,40nm,0.7s
ARTI MLR MLR
comp=Z,372nm,20.0s
ARTI Arti 58.45 338 P P 01 08 37.6 -0.6
ARTI Arti 58.45 338 P P 01 08 38.1 -0.1
ARTI x x 01 08 50.6
ARTI PcP PcP 01 09 29.4 +0.9
LODK Lodwar 58.74 271 P P 01 08 40.7 -0.4
LODK Lodwar 58.74 271 P P 01 08 43.6 +2.6
YSS Yuzhno-Sakhali 58.84 37 ⇑eP P 01 08 41.4 +0.3
YSS e*SP pwP 01 08 52.8 -0.9
YSS eS S 01 16 41.6 -2.9
YSS eSS SS 01 20 37.6 -0.7
YSS pmax pmax
comp=Z,200nm,2.1s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,400nm,17.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=E,400nm,15.0s
YSS Yuzhno-Sakhali 58.84 37 P P 01 08 40.7 -0.4
YSS Yuzhno-Sakhali 58.84 37 P P 01 08 41.6 +0.5
KBZ Khabaz 59.17 319 P P 01 08 43.4 0.0
comp=E,13nm,0.8s,baz=136,slow=5.7,SNR=37
comp=E,13nm,0.8s
SHA1 Shidzhatmaz 59.33 319 ceP P 01 08 44.9 0.0
KIV Kislovodsk 59.41 319 ⇑P P 01 08 45.3 +0.1
KIV Kislovodsk 59.41 319 i P P 01 08 45.1 -0.1
SNR=11
KIV Kislovodsk 59.41 319 P P 01 08 45.3 +0.1
KIV Kislovodsk 59.41 319 P P 01 08 45.0 -0.2
KIV Kislovodsk 59.41 319 P P 01 08 44.6 -0.6
comp=E,391nmcomp=E,42nm,1.0s
KIV Kislovodsk 59.41 319 P P 01 08 45.3 +0.1
GOF Gofitskoye 59.65 320 ceP P 01 08 46.2 -0.5
KELT Kelkit 60.31 314 P P 01 08 52.3 +0.7
BELG Belogornoye 60.67 329 c iP P 01 08 52.6 -0.9
BELG pmax pmax
comp=Z,15nm,0.9s
TYV Tymovskoe 60.77 33 eP P 01 08 55.1 +0.9
TYV eS S 01 17 09.5 +0.4
TYV pmax pmax
comp=Z,100nm,3.8s
TYV pmax pmax
comp=Z,23nm,1.1s
TYV smax smax
comp=N,100nm,5.8s
TYV smax smax
comp=E,300nm,5.8s
TYV MLR MLR
comp=Z,1μm,18.0s
EIL Elat 60.89 301 LR LR 01 36 16.2
comp=Z,790nm,18.0s,baz=106,slow=37
EIL Elat 60.89 301 P P 01 08 57.1 +1.6
HRFI Mount Harif 60.89 301 P P 01 08 56.5 +1.0
ARPS Mount Arapiles 60.91 137 P P 01 08 56.3 +0.9
comp=Z,8.3nm,1.6s
LABN Labinsk 60.97 319 eP P 01 08 55.2 -0.6
LABN eS S 01 17 12.8 +0.8
LABN pmax pmax
comp=Z,22nm,1.4s
CMSA Cobar Meteorol 61.08 130 P P 01 08 57.9 +1.2
comp=Z,133nm,0.9s
CMSA Cobar Meteorol 61.08 130 P P 01 08 56.7 0.0
comp=Z,134nm,0.9s
CMSA Cobar Meteorol 61.08 130 P P 01 08 57.1 +0.4
SOC Sochi 61.23 318 eP P 01 08 57.3 -0.2
SOC e 01 11 11.9
SOC ePPP PPP 01 12 37.0
SOC eS S 01 17 15.2 -0.1
SOC eSS SS 01 21 19.0 +3.1
SOC pmax pmax
comp=Z,36nm,0.9s
SOC MLR MLR
comp=Z,50nm,13.0s
MMAI Mount Meron Ar 61.23 305 P P 01 08 59.7 +1.9
comp=Z,3.4nm,0.6s,baz=65,slow=14,SNR=7.8
comp=Z,3.4nm,0.6s
ERBR Yeremizino-Bor 61.56 320 eP P 01 08 58.5 -1.2
ERBR eS S 01 17 19.0 -0.4
ERBR pmax pmax
comp=Z,31nm,0.7s
ANDN Andirin 61.66 310 P P 01 09 01.9 +1.2
TOKA Tokat 62.38 313 P P 01 09 05.2 -0.2
TOKA IAmb IAmb 01 09 06.8
comp=Z,22nm,0.8s

BNN	**Bunyan**	**62.40**	**311**	P	**P**	**01 09 04.7**	**-1.0**
BNN				IAmb	IAmb	01 09 07.0		
	comp=Z,19nm,0.8s							
YAK	**Yakutsk**	**62.51**	**18**	P	**P**	**01 09 04.8**	**-1.0**
	comp=Z,70nm,0.7s,baz=301,slow=0.9,SNR=4.1							
	comp=Z,70nm,0.7s							
YAK	**Yakutsk**	**62.51**	**18**	*e*P	**P**	**01 09 03.9**	**-1.8**
YAK				*e**PP	**pP**	**01 09 12.8**	**-2.4**
YAK				*e*		01 09 42.7		
YAK				*e*		01 11 18.4		
YAK				*e*S	**S**	**01 17 29.2**	**-1.6**
YAK				*e**SS	**sS**	**01 17 46.2**	**-0.6**
YAK				*e*		01 18 53.4		
YAK				*e*SS	**SS**	**01 21 36.9**	**+1.7**
YAK				pmax	pmax			
	comp=Z,112nm,1.4s							
YAK				pmax	pmax			
	comp=N,22nm,1.0s							
YAK				pmax	pmax			
	comp=E,42nm,2.0s							
YAK				pmax	pmax			
	comp=Z,238nm,8.4s							
YAK				pmax	pmax			
	comp=N,67nm,4.4s							
YAK				pmax	pmax			
	comp=E,72nm,4.1s							
YAK				smax	smax			
	comp=E,54nm,3.0s							
YAK				smax	smax			
	comp=N,39nm,3.5s							
YAK				MLR	MLR			
	comp=Z,767nm,23.0s							
YAK				MLR	MLR			
	comp=N,510nm,25.0s							
YAK				MLR	MLR			
	comp=E,460nm,27.0s							
YAK	**Yakutsk**	**62.51**	**18**	P	**P**	**01 09 04.9**	**-0.8**
YAK	**Yakutsk**	**62.51**	**18**	P	**P**	**01 09 05.1**	**-0.7**
YAK	**Yakutsk**	**62.51**	**18**	P	**P**	**01 09 04.7**	**-1.0**
ANN	**Anapa**	**63.20**	**318**	*e*P	P	01 09 16.4	+5.7
ANN				pmax	pmax			
	comp=Z,27nm,0.9s							
VRH	**Novokhopyorsk**	**63.21**	**326**	*e*P	**P**	**01 09 07.8**	**-2.8**
VRH				pmax	pmax			
	comp=Z,40nm,0.8s							
CSS	**Mathiatis**	**63.35**	**307**	P	**P**	**01 09 10.9**	**-1.1**
CSS				IAmb	IAmb	01 09 34.6		
	comp=Z,62nm,1.4s							
CSS	**Mathiatis**	**63.35**	**307**	P	**P**	**01 09 11.6**	**-0.3**
	comp=Z,28nm,0.8s							
CSS	**Mathiatis**	**63.35**	**307**	P	**P**	**01 09 12.4**	**+0.4**
H04N2	**CROZET ISLANDS**	**63.49**	**212**	T	T	02 18 06.4		
	baz=47,slow=75,SNR=629							
H04N1	**CROZET ISLANDS**	**63.50**	**212**	T	T	02 18 03.5		
	baz=47,slow=75,SNR=602							
KIRV	**Kirov**	**63.51**	**336**	LR	LR	01 39 04.5		
	comp=Z,342nm,20.8s,baz=123,slow=38							
KIRV	**Kirov**	**63.51**	**336**	*ce*P	**P**	**01 09 12.2**	**-0.2**
H04N3	**CROZET ISLANDS**	**63.51**	**212**	T	T	02 18 02.1		
	baz=47,slow=75,SNR=649							
MBAR	**Mbarara**	**63.70**	**267**	LR	LR	01 33 36.1		
	comp=Z,731nm,20.5s,baz=80,slow=33							
MBAR	**Mbarara**	**63.70**	**267**	P	**P**	**01 09 17.6**	**+2.8**
TOO	**Toolangi**	**63.82**	**136**	P	**P**	**01 09 17.1**	**+2.1**
	comp=Z,16nm,1.2s							
H04S1	**CROZET ISLANDS**	**63.88**	**211**	T	T	02 18 37.1		
	baz=48,slow=75,SNR=46							
H04S3	**CROZET ISLANDS**	**63.89**	**211**	T	T	02 18 21.2		
	baz=48,slow=75,SNR=113							
H04S2	**CROZET ISLANDS**	**63.90**	**211**	T	T	02 18 25.7		
	baz=48,slow=75,SNR=52							
KIRS	**Kirsehir-Merke**	**63.93**	**311**	⇑P	**P**	**01 09 16.1**	**+0.3**
NRIK	**Noril'sk**	**64.23**	**357**	P	**P**	**01 09 16.9**	**-0.2**
	comp=Z,24nm,0.7s,baz=149,slow=5.1,SNR=49							
NRIK				LR	LR	01 41 40.6		
	comp=Z,288nm,19.2s,baz=186,slow=40							
	comp=Z,24nm,0.7s							
NRIK	**Noril'sk**	**64.23**	**357**	P	**P**	**01 09 16.5**	**-0.5**
NRIK				IAmb	IAmb	01 09 17.5		
	comp=Z,28nm,0.8s							
BR104	**Keskin Array S**	**64.28**	**312**	P	**P**	**01 09 17.8**	**-0.4**
	comp=Z,246nmcomp=Z,31nm,0.8s							
BR131	**Keskin Array S**	**64.29**	**312***c*	*i*P	**P**	**01 09 17.7**	**-0.5**
BR131	**Keskin Array S**	**64.29**	**312**	P	**P**	**01 09 17.9**	**-0.3**
	SNR=58							
BR131	**Keskin Array S**	**64.29**	**312**	P	**P**	**01 09 17.6**	**-0.6**
BR131				IAmb	IAmb	01 09 18.9		
	comp=Z,30nm,0.7s							
BRTR	**Keskin Array B**	**64.29**	**312**	P	**P**	**01 09 17.8**	**-0.5**
	comp=Z,21nm,0.7s,baz=128,slow=7.4,SNR=168							
BRTR				LR	LR	01 41 46.2		
	comp=Z,87nm,18.6s,baz=166,slow=40							
	comp=Z,21nm,0.7s							
BRTR	**Keskin Array B**	**64.29**	**312**	P	**P**	**01 09 17.4**	**-0.8**
BR105	**Keskin Array S**	**64.31**	**312**	P	**P**	**01 09 17.7**	**-0.6**
	comp=Z,292nmcomp=Z,35nm,0.8s							
BR106	**Keskin Array S**	**64.31**	**312**	P	**P**	**01 09 17.8**	**-0.5**
	comp=Z,255nmcomp=Z,33nm,0.8s							
BR106				pP	**pP**	**01 09 28.7**	**+0.8**
	comp=Z,255nmcomp=Z,33nm,0.8s							
VORD	**Divnogorie**	**64.48**	**325**	*e*P	**P**	**01 09 16.5**	**-2.5**
VORD				pmax	pmax			
	comp=Z,30nm,0.8s							
BZK	**Bozkurt**	**64.65**	**314**	P	**P**	**01 09 19.8**	**-0.5**
BZK	**Bozkurt**	**64.65**	**314**	P	**P**	**01 09 20.1**	**-0.2**
	comp=Z,2µmcomp=Z,187nm,1.7s							
BZK				pP	**pP**	**01 09 29.5**	**-0.4**
	comp=Z,2µmcomp=Z,187nm,1.7s							
VSR	**Storozhevoye**	**64.66**	**325**	*e*P	**P**	**01 09 18.7**	**-1.5**
VSR				pmax	pmax			
	comp=Z,47nm,0.8s							
KKUL	**Konya-Kulu**	**64.69**	**311**	P	**P**	**01 09 21.0**	**+0.3**
VORR	**Voronezh**	**64.83**	**326**	*e*P	**P**	**01 09 19.6**	**-1.7**
VORR				pmax	pmax			
	comp=Z,75nm,0.6s							
ARMA	**Armidale**	**65.24**	**127**	P	**P**	**01 09 26.0**	**+1.5**
CAN	**Canberra**	**65.25**	**133**	P	**P**	**01 09 25.9**	**+1.5**
	comp=Z,63nm,0.9s							
CAN	**Canberra**	**65.25**	**133**	P	**P**	**01 09 23.9**	**-0.5**
CAN				pmax	pmax			
	comp=Z,62nm,1.2s							
CAN	**Canberra**	**65.25**	**133**	P	**P**	**01 09 23.9**	**-0.5**
CAN				IAmb	IAmb	01 09 43.4		
	comp=Z,62nm,1.2s							
CAN	**Canberra**	**65.25**	**133**	P	**P**	**01 09 25.2**	**+0.8**
LPSR	**Galich'ya Gora**	**65.39**	**327**	*e*P	**P**	**01 09 23.8**	**-1.1**
LPSR				pmax	pmax			
	comp=Z,95nm,0.8s							
SIM	**Simferopol'**	**65.47**	**317**α	*i*P	**P**	**01 09 25.4**	**-0.2**
SIM				pmax	pmax			
	comp=Z,31nm,0.6s							
MDUB	**Mudurnu**	**66.29**	**312**	P	**P**	**01 09 30.7**	**-0.4**
ELL	**Elmali**	**66.45**	**308**	P	**P**	**01 09 32.1**	**-0.1**
ELL				pmax	pmax			
	comp=Z,69nm,1.0s							
ELL	**Elmali**	**66.45**	**308**	P	**P**	**01 09 32.1**	**-0.1**
SAHE	**Sakarya_HENDEK**	**66.64**	**312**	⇑P	**P**	**01 09 33.1**	**-0.1**
MOS	**Moscow**	**67.44**	**329**	*e*P	**P**	**01 09 37.9**	**-0.1**
MOS				*e*		01 10 05.9		
MOS				*e*		01 12 05.0		
MOS				*e*S	**S**	**01 18 29.4**	**-2.3**
MOS				pmax	pmax			
	comp=Z,139nm,0.7s							
MOS				pmax	pmax			
	comp=Z,100nm,0.6s							
OBN	**Obninsk**	**67.72**	**328**	⇑P	**P**	**01 09 39.3**	**-0.5**
OBN	**Obninsk**	**67.72**	**328***c*	*i*P	**P**	**01 09 39.2**	**-0.5**
OBN				*e**SP	**sP**	**01 09 51.8**	**-1.1**
OBN				*e*		01 10 08.5		
OBN				*e*S	**S**	**01 18 33.9**	**-1.1**
OBN				*e*SS	**SS**	**01 22 55.3**	**-1.2**
OBN				*e*SSS	SSS	01 25 59.8		
OBN				pmax	pmax			
	comp=Z,56nm,0.9s							
OBN				MLR	MLR			
	comp=Z,183nm,21.0s							
OBN	**Obninsk**	**67.72**	**328**	P	**P**	**01 09 39.0**	**-0.7**
OBN	**Obninsk**	**67.72**	**328**	P	**P**	**01 09 39.2**	**-0.5**
	comp=Z,1µmcomp=Z,107nm,1.3s							
OBN	**Obninsk**	**67.72**	**328**	P	**P**	**01 09 39.5**	**-0.3**
OBN	**Obninsk**	**67.72**	**328**	P	**P**	**01 09 39.4**	**-0.3**
TAU	**Tasmania Unive**	**67.72**	**141**	P	**P**	**01 09 40.0**	**0.0**
TAU				pmax	pmax			
	comp=Z,35nm,1.0s							
TAU	**Tasmania Unive**	**67.72**	**141**	P	**P**	**01 09 40.0**	**0.0**
TAU				IAmb	IAmb	01 09 57.8		
	comp=Z,35nm,1.0s							
TAU	**Tasmania Unive**	**67.72**	**141**	P	**P**	**01 09 41.1**	**+1.2**
MANT	**Manisa**	**67.85**	**309**		**P**	**01 09 39.0**	**-2.2**
MANT				IAmb	IAmb	01 09 42.5		
	comp=Z,21nm,0.9s							
AYDN	**Tasoluk**	**68.22**	**308**	P	**P**	**01 09 43.6**	**+0.3**
SKR	**Severo-Kuril's**	**68.41**	**37***ce*	P	**P**	**01 09 44.8**	**+0.7**
LSZ	**Lusaka**	**68.50**	**251**	LR	LR	01 36 07.0		
	comp=Z,788nm,19.3s,baz=119,slow=33							
LSZ	**Lusaka**	**68.50**	**251**	P	**P**	**01 09 47.5**	**+2.0**
BAND	**Balkesir-Ban**	**68.57**	**311**	⇓P	**P**	**01 09 46.2**	**+0.8**
BALY	**Balya**	**68.81**	**311**	P	**P**	**01 09 47.4**	**+0.4**
KLMR	**Klimovskoe**	**68.93**	**335**	*e*P	**P**	**01 09 45.4**	**-1.8**
KLMR				pmax	pmax			
	comp=Z,37nm,0.7s							
MA2	**Magadan**	**69.10**	**27**	P	**P**	**01 09 48.1**	**-0.1**
	comp=Z,44nm,0.6s,baz=236,slow=5.6,SNR=41							
	comp=Z,44nm,0.6s							
MA2	**Magadan**	**69.10**	**27**	P	**P**	**01 09 48.7**	**+0.4**
	comp=Z,94nm,0.8s							
MA2	**Magadan**	**69.10**	**27**	P	**P**	**01 09 47.3**	**-1.0**
MA2	**Magadan**	**69.10**	**27**	P	**P**	**01 09 48.1**	**-0.1**
	comp=Z,995nmcomp=Z,92nm,0.8s							
MA2	**Magadan**	**69.10**	**27**	P	**P**	**01 09 48.2**	**-0.1**
TIRR	**Tirgusor**	**69.25**	**316**	P	**P**	**01 09 49.1**	**-0.4**
TIRR				pmax	pmax			
	comp=Z,27nm,0.8s							
TIRR	**Tirgusor**	**69.25**	**316**	P	**P**	**01 09 49.1**	**-0.4**
TIRR				IAmb	IAmb	01 09 50.1		
	comp=Z,27nm,0.8s							
MATP	**Matopo**	**69.36**	**246**	LR	LR	01 37 32.7		
	comp=Z,807nm,19.0s,baz=102,slow=34							
TIXI	**Tiksi**	**69.84**	**11**	LR	LR	01 43 35.1		
	comp=Z,606nm,19.9s,baz=222,slow=39							
TIXI	**Tiksi**	**69.84**	**11***ce*	P	**P**	**01 09 51.6**	**-1.1**
TIXI				pmax	pmax			
	comp=Z,82nm,0.7s							
TIXI	**Tiksi**	**69.84**	**11**	P	**P**	**01 09 51.6**	**-1.1**
PETK	**Petropavlovsk-**	**70.13**	**35**	P	**P**	**01 09 53.7**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=290,slow=4.4,SNR=6.4							
	comp=Z,3.1nm,0.8s							
SORM	**Soroca**	**70.20**	**319**	⇑P	**P**	**01 09 54.8**	**-0.4**
SORM	**Soroca**	**70.20**	**319**	P	**P**	**01 09 54.8**	**-0.4**
ALN	**Alexandroupoli**	**70.21**	**312**	P	**P**	**01 09 55.5**	**0.0**
ALN				pmax	pmax			
	comp=Z,21nm,0.9s							
ALN	**Alexandroupoli**	**70.21**	**312**	P	**P**	**01 09 55.5**	**0.0**
ALN	**Alexandroupoli**	**70.21**	**312**	P	**P**	**01 09 55.9**	**+0.4**
ALN				pP	**pP**	**01 10 05.1**	**-0.1**
IDI	**Anoyia**	**70.21**	**306**	P	**P**	**01 09 55.3**	**-0.4**
IDI				IAmb	IAmb	01 10 18.0		
	comp=Z,29nm,0.9s							
AK09	**Malin Array Si**	**70.28**	**322**	P	**P**	**01 09 55.0**	**-0.7**
LOZB	**Lozna**	**70.29**	**314**	⇓P	**P**	**01 09 56.5**	**+0.5**
AK10	**Malin Array Si**	**70.30**	**322**	P	**P**	**01 09 54.8**	**-1.0**
AKASG	**Malin Array Be**	**70.34**	**322**	P	**P**	**01 09 55.0**	**-1.1**
	comp=Z,10nm,0.7s,baz=92,slow=5.0,SNR=45							
AKASG				LR	LR	01 43 55.1		
	comp=Z,122nm,21.1s,baz=82,slow=39							
	comp=Z,10nm,0.7s							
AKASG	**Malin Array Be**	**70.34**	**322***ce*	P	**P**	**01 09 55.0**	**-1.1**
AKASG				pmax	pmax			
	comp=Z,13nm,0.6s							
AKASG	**Malin Array Be**	**70.34**	**322**	P	**P**	**01 09 55.0**	**-1.1**
AKBB	**Malin Array Si**	**70.34**	**322**	P	**P**	**01 09 55.2**	**-0.9**
AKBB				pmax	pmax			
	comp=Z,17nm,0.7s							
AKBB	**Malin Array Si**	**70.34**	**322**	P	**P**	**01 09 55.2**	**-0.9**
AKBB				IAmb	IAmb	01 09 55.7		
	comp=Z,17nm,0.7s							
AKBB	**Malin Array Si**	**70.34**	**322**	P	**P**	**01 09 55.1**	**-1.0**
KIEV	**Kiev**	**70.35**	**322**	⇓P	**P**	**01 09 55.5**	**-0.6**
KIEV	**Kiev**	**70.35**	**322**	*i* P	**P**	**01 09 55.2**	**-1.0**
	SNR=13							
KIEV	**Kiev**	**70.35**	**322**	P	**P**	**01 09 55.5**	**-0.6**
KIEV	**Kiev**	**70.35**	**322**	P	**P**	**01 09 55.1**	**-1.0**
	comp=Z,106nm,0.9s							
KIEV	**Kiev**	**70.35**	**322**	P	**P**	**01 09 55.3**	**-1.0**
KIEV	**Kiev**	**70.35**	**322**	P	**P**	**01 09 55.1**	**-1.0**
LEHL	**Lehliu**	**70.36**	**315**	⇑P	**P**	**01 09 57.1**	**+0.8**
RAZG	**Razgrad**	**70.39**	**314**	⇓P	**P**	**01 09 56.6**	**0.0**
PANC	**Panciu**	**70.45**	**317**	⇑P	**P**	**01 09 57.8**	**+0.9**
RDO	**Rodhopi**	**70.63**	**312**	P	**P**	**01 09 57.9**	**-0.1**
RDO	**Rodhopi**	**70.63**	**312**	P	**P**	**01 09 58.3**	**+0.2**
ISR	**Istrita**	**70.70**	**316**	⇑P	**P**	**01 09 59.8**	**+1.3**
ISR	**Istrita**	**70.70**	**316**	P	**P**	**01 09 59.8**	**+1.3**
SAHR	**Sahastru**	**70.73**	**317**	⇑P	**P**	**01 09 59.8**	**+1.1**
VRI	**Vrincioaia**	**70.73**	**317**	⇑P	**P**	**01 09 59.5**	**+0.8**
VRI	**Vrincioaia**	**70.73**	**317**	P	**P**	**01 09 59.4**	**+0.8**
VRI	**Vrincioaia**	**70.73**	**317**	P	**P**	**01 09 58.3**	**-0.3**
	comp=Z,984nmcomp=Z,110nm,0.9s							
VRI	**Vrincioaia**	**70.73**	**317**	P	**P**	**01 09 59.6**	**+0.8**
PLOR	**Plostina**	**70.78**	**317**	⇑P	**P**	**01 10 00.1**	**+1.1**
PLOR	**Plostina**	**70.78**	**317**	P	**P**	**01 10 00.0**	**+1.1**
SGRR	**Singureni**	**70.91**	**315**	⇑P	**P**	**01 10 00.8**	**+1.1**
TESR	**Tescani**	**70.93**	**317**	⇓P	**P**	**01 10 00.1**	**+0.3**
TESR	**Tescani**	**70.93**	**317**	P	**P**	**01 09 59.5**	**-0.3**
	comp=Z,1µmcomp=Z,90nm,0.9s							
TESR	**Tescani**	**70.93**	**317**	P	**P**	**01 10 00.2**	**+0.4**
TESR				pP	**pP**	**01 10 08.6**	**-0.9**
IMMV	**Iera Moni Meta**	**70.97**	**306**	P	**P**	**01 10 01.8**	**+1.5**
LUBAR	**Lubar, Ukraine**	**71.04**	**321**	P	**P**	**01 09 59.7**	**-0.7**
ONER	**Baraj Valea Uz**	**71.06**	**317**	⇑P	**P**	**01 10 01.4**	**+0.8**
COVR	**Voineasa-Covas**	**71.08**	**317**	⇑P	**P**	**01 10 01.0**	**+0.2**
MI29	**MI29, Kamyanyy**	**71.11**	**322**	P	**P**	**01 09 59.9**	**-0.9**
	comp=Z,237nm,1.1s							
MLR	**Muntele Rosu**	**71.19**	**316**	⇓P	**P**	**01 10 02.2**	**+0.6**
MLR	**Muntele Rosu**	**71.19**	**316**	P	**P**	**01 10 02.1**	**+0.6**
MLR	**Muntele Rosu**	**71.19**	**316**	P	**P**	**01 10 01.3**	**-0.3**
	comp=Z,531nmcomp=Z,65nm,1.0s							
MLR	**Muntele Rosu**	**71.19**	**316**	P	**P**	**01 10 02.3**	**+0.8**
ZIMR		**71.22**	**314**	⇑P	**P**	**01 10 02.1**	**+0.4**
ZIMR		**71.22**	**314**	P	**P**	**01 10 02.0**	**+0.4**
TURR	**Turia**	**71.26**	**317**	⇓P	**P**	**01 10 02.2**	**+0.4**
SEY	**Seymchan**	**71.32**	**24**	P	**P**	**01 10 01.3**	**-0.5**
	comp=Z,10nm,0.5s,baz=246,slow=5.0,SNR=26							
	comp=Z,10nm,0.5s							
PRAR	**RASCA**	**71.40**	**318**	⇓P	**P**	**01 10 02.5**	**-0.2**
COPA	**Copaceanca**	**71.42**	**315**	⇓P	**P**	**01 10 03.5**	**+0.7**
OZUR		**71.42**	**317**	⇓P	**P**	**01 10 02.8**	**-0.1**
BOSR	**Bodos**	**71.50**	**317**	⇑P	**P**	**01 10 03.4**	**0.0**
KMPD	**K-Podol'skiy**	**71.53**	**320**	P	**P**	**01 10 02.3**	**-1.0**
HUMR	**Humele**	**71.67**	**315**	⇓P	**P**	**01 10 04.5**	**+0.2**
HUMR	**Humele**	**71.67**	**315**	P	**P**	**01 10 04.5**	**+0.2**
PLVB	**Pleven**	**71.71**	**314**	⇓P	**P**	**01 10 04.9**	**+0.4**
VOIR		**71.79**	**316**	⇑P	**P**	**01 10 04.6**	**-0.5**
VOIR		**71.79**	**316**	P	**P**	**01 10 04.6**	**-0.5**
VOIR		**71.79**	**316**	P	**P**	**01 10 04.9**	**-0.2**
	comp=Z,15nm,0.6s							
VOIR		**71.79**	**316**	P	**P**	**01 10 04.8**	**-0.4**
PAIG	**Paliouri**	**71.83**	**310**	P	**P**	**01 10 05.4**	**+0.1**
KSANE	**Kasane**	**71.86**	**249**	P	**P**	**01 10 05.9**	**-0.2**
ARR	**Arges**	**72.07**	**316**	⇑P	**P**	**01 10 06.7**	**0.0**
ARR	**Arges**	**72.07**	**316**	P	**P**	**01 10 06.8**	**0.0**
SRS	**Serrai**	**72.08**	**311**	P	**P**	**01 10 06.2**	**-0.7**
BURAR	**Bucovina Array**	**72.13**	**318**	⇑P	**P**	**01 10 07.9**	**+0.8**
BURAR	**Bucovina Array**	**72.13**	**318**	P	**P**	**01 10 07.9**	**+0.8**
BURAR	**Bucovina Array**	**72.13**	**318**	P	**P**	**01 10 07.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**72.14**	**318**	P	**P**	**01 10 07.1**	**-0.2**
SOH	**Sokhos**	**72.21**	**311**	P	**P**	**01 10 07.3**	**-0.4**
MNK	**Minsk**	**72.21**	**326**	*i* P	**P**	**01 10 07.2**	**-0.1**
	comp=E,6.0nm,0.8s							
MNK				*i* P	**P**	**01 10 07.2**	**-0.1**
	comp=N,27nm,0.8s							
MNK				*i* P	**P**	**01 10 07.2**	**-0.1**
	comp=Z,71nm,0.7s,baz=106							
MNK				*i* PP	**PP**	**01 12 40.9**	**-7.1**
MNK				*i* PPP	PPP	01 14 32.1		
MNK				*i* S	**S**	**01 19 28.4**	**+0.6**
MNK				*i* PS		01 19 45.0		
MNK				*i* SS	**SS**	**01 24 07.4**	**+1.7**
MNK				*i* SSS	SSS	01 27 27.9		
MNK				*i* LQ	LQ	01 37 00.7		
MNK	**Minsk**	**72.21**	**326**	*i* P	**P**	**01 10 07.2**	**-0.1**
MNK				*i* PPP	PPP	01 14 32.0		
MNK				*i* S	**S**	**01 19 28.3**	**+0.6**
MNK				*i* SS	**SS**	**01 24 07.4**	**+1.7**
MNK				pmax	pmax			
	comp=E,6.0nm,0.8s							
MNK				pmax	pmax			
	comp=N,27nm,0.8s							
MNK				pmax	pmax			
	comp=Z,71nm,0.7s							
MNK				MLR	MLR			
	comp=E,655nm,15.0s							
CASY	**Casey**	**72.25**	**173**	P	**P**	**01 10 08.1**	**+0.9**
CASY				IAmb	IAmb	01 11 01.0		
	comp=Z,28nm,1.1s							
CASY	**Casey**	**72.25**	**173**	P	**P**	**01 10 09.0**	**+1.8**
HORT	**Hortiatis**	**72.37**	**311**	P	**P**	**01 10 06.5**	**-2.2**
TNR	**Turnu Rosu**	**72.37**	**316**	⇑P	**P**	**01 10 08.4**	**-0.1**
TNR	**Turnu Rosu**	**72.37**	**316**	P	**P**	**01 10 08.4**	**-0.1**
MDB	**Medias**	**72.39**	**317**	⇑P	**P**	**01 10 08.7**	**+0.1**
MDB	**Medias**	**72.39**	**317**	P	**P**	**01 10 08.7**	**+0.1**
KHWEE	**KHWEE**	**72.49**	**245**	P	**P**	**01 10 09.2**	**-0.5**
KHWEE				IAmb	IAmb	01 10 28.2		
	comp=Z,35nm,0.9s							
ARCR	**ARCALIA**	**72.59**	**318**	⇑P	**P**	**01 10 10.6**	**+0.8**
KNT	**Kendrikon**	**72.60**	**311**	P	**P**	**01 10 09.0**	**-0.9**
PUL	**Pulkovo**	**72.63**	**332***ce*	P	**P**	**01 10 10.1**	**+0.4**
PUL				pmax	pmax			
	comp=Z,144nm,0.6s							
PUL	**Pulkovo**	**72.63**	**332**	P	**P**	**01 10 10.1**	**+0.4**
LOT	**Lotru**	**72.68**	**316**	⇑P	**P**	**01 10 10.1**	**-0.4**
LOT	**Lotru**	**72.68**	**316**	P	**P**	**01 10 10.2**	**-0.3**
BAIL	**Bailesti**	**72.73**	**314**	⇑P	**P**	**01 10 10.7**	**0.0**
ITM	**Ithomi**	**72.83**	**307**	P	**P**	**01 10 10.6**	**-0.8**
ITM				IAmb	IAmb	01 10 29.9		
	comp=Z,22nm,0.8s							
ITM	**Ithomi**	**72.83**	**307**	P	**P**	**01 10 10.9**	**-0.5**
CJR	**Cluj-Napoca**	**73.03**	**317**	⇑P	**P**	**01 10 13.3**	**+0.8**
CJR	**Cluj-Napoca**	**73.03**	**317**	P	**P**	**01 10 13.3**	**+0.8**
LBTB	**Lobatse**	**73.07**	**242**	LR	LR	01 38 45.3		
	comp=Z,478nm,19.0s,baz=66,slow=33							
LBTB	**Lobatse**	**73.07**	**242**	P	**P**	**01 10 14.2**	**+1.0**
LBTB	**Lobatse**	**73.07**	**242**	P	**P**	**01 10 14.9**	**+1.7**
BMR	**Baia Mare**	**73.28**	**318**	⇑P	**P**	**01 10 14.7**	**+0.9**
BMR	**Baia Mare**	**73.28**	**318**	P	**P**	**01 10 14.7**	**+0.9**
BMR	**Baia Mare**	**73.28**	**318**	P	**P**	**01 10 14.7**	**+0.9**
MARR	**Harisel-Cluj**	**73.35**	**317**	⇑P	**P**	**01 10 15.0**	**+0.6**
DEV	**Deva**	**73.36**	**316**	⇑P	**P**	**01 10 15.4**	**+1.0**
DEV	**Deva**	**73.36**	**316**	P	**P**	**01 10 15.3**	**+1.0**
DEV	**Deva**	**73.36**	**316**	P	**P**	**01 10 15.3**	**+0.9**
GZR	**Gura Zlata**	**73.36**	**316**	⇑P	**P**	**01 10 14.5**	**0.0**
GZR	**Gura Zlata**	**73.36**	**316**	P	**P**	**01 10 14.4**	**0.0**
DRGR		**73.64**	**317**	⇑P	**P**	**01 10 16.9**	**+0.7**
DRGR		**73.64**	**317**	P	**P**	**01 10 16.8**	**+0.7**
DRGR		**73.64**	**317**	P	**P**	**01 10 16.8**	**+0.7**
VSU	**Vasula**	**73.96**	**330***ce*	P	**P**	**01 10 16.4**	**-1.2**
VSU				pmax	pmax			
	comp=Z,95nm,1.0s							
VSU	**Vasula**	**73.96**	**330**	P	**P**	**01 10 16.6**	**-1.0**
MAKGR	**Makgori**	**73.97**	**241**	P	**P**	**01 10 18.1**	**-0.4**
MAKGR				IAmb	IAmb	01 10 34.4		
	comp=Z,81nm,1.6s							
TRPA	**Tarpa**	**74.00**	**319**	P	**P**	**01 10 18.8**	**+0.7**
LKD2	**Lefkada island**	**74.00**	**309**	P	**P**	**01 10 18.4**	**+0.1**
MDVR	**Moldovita**	**74.00**	**315**	⇑P	**P**	**01 10 18.4**	**+0.1**
LVZ	**Lovozero**	**74.13**	**340**	P	**P**	**01 10 17.8**	**-0.7**
LVZ	**Lovozero**	**74.13**	**340**	P	**P**	**01 10 17.7**	**-0.7**
LVZ	**Lovozero**	**74.13**	**340**	P	**P**	**01 10 18.3**	**-0.2**
	comp=Z,23nm,1.2s							
KWP	**Kalwaria Pacla**	**74.16**	**320**	*e*P	**P**	**01 10 19.3**	**+0.3**
KWP	**Kalwaria Pacla**	**74.16**	**320**	P	**P**	**01 10 19.0**	**0.0**
	comp=Z,610nmcomp=Z,39nm,1.3s							
BZS	**Buzias**	**74.20**	**316**	⇓P	**P**	**01 10 19.8**	**+0.5**
BZS	**Buzias**	**74.20**	**316**	P	**P**	**01 10 19.8**	**+0.5**
BZS	**Buzias**	**74.20**	**316**	P	**P**	**01 10 19.5**	**+0.2**
UZHM	**Uzhgorod**	**74.25**	**319**	P	**P**	**01 10 19.5**	**0.0**
SIRR	**Siria**	**74.27**	**317**	⇑P	**P**	**01 10 20.3**	**+0.6**
LTVH	**Ltavrtes, Hu**	**74.29**	**318**	⇓P	**P**	**01 10 20.8**	**+1.1**
LTVH	**Ltavrtes, Hu**	**74.29**	**318**	P	**P**	**01 10 19.8**	**0.0**
KOLS	**Kolonicke sedl**	**74.31**	**319**	*e*P	**P**	**01 10 20.8**	**+0.9**
KOLS				pmax	pmax			
	comp=Z,23nm,0.8

JAVC pP PcP 01 10 48.1 +0.5
STEB Steborice 77.37 320 *eP* **P 01 10 38.3 +1.0**
KEV Kevo 77.41 341 P **P 01 10 36.7 -0.4**
KEV pmax pmax
comp=Z,26nm,1.1s
KEV Kevo 77.41 341 P **P 01 10 36.7 -0.4**
KEV IAmb IAmb 01 10 56.1
comp=Z,26nm,1.1s
KEV Kevo 77.41 341 P **P 01 10 37.0 -0.1**
KEV x x 01 10 52.5
SMOL Smolenice 77.43 318 *eP* **P 01 10 38.1 +0.4**
SMOL pmax pmax
comp=Z,29nm,2.3s
KOOLE Kule 77.45 245 P **P 01 10 38.0 -0.4**
KOOLE IAmb IAmb 01 10 54.0
comp=Z,29nm,1.0s
MORC Moravsky Berou 77.50 320 ⇓P **P 01 10 38.9 +0.7**
MORC Moravsky Berou 77.50 320 P **P 01 10 38.8 +0.7**
MORC Moravsky Berou 77.50 320 *eP* **P 01 10 38.7 +0.6**
MORC Moravsky Berou 77.50 320 P **P 01 10 39.0 +0.9**
MODS Modra-Piesok 77.51 318 *eP* **P 01 10 39.0 +0.9**
MODS pmax pmax
comp=Z,107nm,1.5s
MODS Modra-Piesok 77.51 318 P **P 01 10 39.1 +0.9**
MODS pP **pP 01 10 47.5 -0.5**
MODS Modra-Piesok 77.51 318 *eP* **P 01 10 39.0 +0.9**
BEHE Becsehely 77.65 316 P **P 01 10 38.8 -0.2**
CEL Celeste 77.69 308 P **P 01 10 38.7 -0.7**
CEL IAmb IAmb 01 10 57.8
comp=Z,31nm,1.1s
CEL Celeste 77.69 308 P **P 01 10 40.8 +1.4**
ARA0 ARCESS Array S 77.84 340 *eP* **P 01 10 40.0 +0.5**
ARA0 IAmb IAmb 01 10 55.4
comp=Z,193nm,2.4s
ARCES ARCESS Array B 77.84 340 P **P 01 10 39.7 +0.1**
comp=Z,7.5nm,0.7s,baz=99,slow=6.3,SNR=19
ARCES LR LR 01 47 30.4
comp=Z,406nm,21.8s,baz=112,slow=38
comp=Z,7.5nm,0.7s
ARCES ARCESS Array B 77.84 340 P **P 01 10 39.4 -0.2**
SOP Sopron 77.92 318 P **P 01 10 41.1 +0.7**
KOGS Kog 78.01 316 *i* P **P 01 10 41.5 +0.5**
KRLC Kraliky 78.02 320 *eP* **P 01 10 42.0 +1.0**
KRLC Kraliky 78.02 320 *eP* **P 01 10 42.0 +1.0**
KRLC Kraliky 78.02 320 P **P 01 10 42.1 +1.1**
VRAC Vranov 78.06 319 LR LR 01 49 10.5
comp=Z,79nm,20.6s,baz=117,slow=39
VRAC Vranov 78.06 319 ⇓P **P 01 10 41.9 +0.7**
VRAC Vranov 78.06 319 P **P 01 10 41.8 +0.7**
VRAC Vranov 78.06 319 *eP* **P 01 10 41.3 +0.1**
VRAC Vranov 78.06 319 P **P 01 10 41.7 +0.5**
VRAC pP **PcP 01 10 50.4 -0.4**
RONA Rosalia, Austr 78.10 318 *i* P **P 01 10 41.9 +0.5**
comp=Z,12nm,1.1s,SNR=5.2
GKP Gorka Klasztor 78.12 323 *eP* **P 01 10 41.4 0.0**
KRUC Moravsky 78.16 319 *eP* **P 01 10 42.1 +0.3**
KRUC Moravsky 78.16 319 P **P 01 10 42.4 +0.6**
WINA Alland / Wiene 78.28 318 *i* P **P 01 10 43.1 +0.6**
SNR=7.6
DPC Dobruska-Polom 78.34 320 *eP* **P 01 10 44.0 +1.2**
DPC *e* 01 10 56.0
DPC Dobruska-Polom 78.34 320 *eP* **P 01 10 44.0 +1.2**
DPC *ep*P **sP 01 10 56.0 -0.1**
DPC Dobruska-Polom 78.34 320 P **P 01 10 44.2 +1.4**
DPC pP **pP 01 10 53.2 +0.6**
CONA Conrad Observa 78.41 318 *i* P **P 01 10 43.7 +0.4**
comp=Z,8.9nm,1.0s
KSP Ksiaz 78.41 321 *eP* **P 01 10 43.9 +0.8**
OSTC Ostas 78.43 320 *eP* **P 01 10 44.5 +1.3**
OSTC Ostas 78.43 320 *eP* **P 01 10 44.5 +1.3**
KTK1 Kautokeino 78.45 340 *eP* **P 01 10 43.0 +0.1**
KTK1 IAmb IAmb 01 11 01.3
comp=Z,22nm,0.8s
BILL Bilibino 78.54 21 P **P 01 10 43.4 -0.1**
UPC Upice 78.56 320 *eP* **P 01 10 45.0 +1.1**
UPC Upice 78.56 320 *eP* **P 01 10 45.0 +1.1**
UPC Upice 78.56 320 P **P 01 10 45.0 +1.1**
ARSA Arzberg 78.58 317 *i* P **P 01 10 45.1 +0.9**
comp=Z,24nm,1.4s,SNR=13
ARSA Arzberg 78.58 317 P **P 01 10 45.0 +0.9**
TREC Trest 78.78 319 *eP* **P 01 10 45.7 +0.5**
TREC Trest 78.78 319 *eP* **P 01 10 45.7 +0.5**
TREC Trest 78.78 319 P **P 01 10 45.5 +0.3**
PERS Pernice 78.81 316 *i* P **P 01 10 46.0 +0.6**
SOKA Soboth 78.87 316 *i* P **P 01 10 46.5 +0.7**
comp=Z,29nm,0.9s,SNR=11
SUR Sutherland 78.91 236 LR LR 01 41 29.2
comp=Z,384nm,18.1s,baz=138,slow=32
TSUM Tsumeb 79.19 249 LR LR 01 44 17.1
comp=Z,422nm,18.1s,baz=73,slow=34
OBKA Obir 79.19 316 *i* P **P 01 10 48.1 +0.6**
comp=Z,10nm,0.8s
OBKA Obir 79.19 316 P **P 01 10 48.3 +0.7**
SESA Seetaler Alpe, 79.22 317 *i* P **P 01 10 48.6 +0.8**
SNR=15
BLEU Blekinge 79.31 326 *i* P **P 01 10 47.8 -0.1**
PRU Pruhonice 79.45 320 *eP* **P 01 10 49.6 +0.8**
PRU pmax pmax
comp=Z,5.0nm,0.6s
PRU Pruhonice 79.45 320 *eP* **P 01 10 49.6 +0.8**
comp=Z,4.6nm,0.6s
PRU Pruhonice 79.45 320 P **P 01 10 49.8 +1.0**
MOA Molln 79.47 318 *eP* **P 01 10 49.0 0.0**
comp=Z,18nm,1.9s
MOA Molln 79.47 318 P **P 01 10 49.5 +0.4**
MOA pP **pP 01 10 58.6 -0.3**
PVCC Panska Ves 79.48 320 *eP* **P 01 10 49.9 +1.0**
PVCC Panska Ves 79.48 320 *eP* **P 01 10 49.9 +1.0**
PVCC Panska Ves 79.48 320 P **P 01 10 50.1 +1.1**
CKRC Cesky Krumlov 79.51 319 *eP* **P 01 10 50.1 +0.9**
CKRC Cesky Krumlov 79.51 319 *eP* **P 01 10 50.1 +0.9**
JETT Jettan, Norway 79.56 340 *eP* **P 01 10 49.2 +0.1**
JETT IAmb IAmb 01 11 04.3
comp=Z,16nm,0.9s
ZVC Zvikov 79.63 319 *eP* **P 01 10 50.6 +0.8**
BSD Bornholm Skovb 79.69 325 *i* P **P 01 10 49.7 -0.2**
BSD IAmb IAmb 01 10 50.6
comp=Z,39nm,0.7s
CADS Cadrg 79.73 316 *i* P **P 01 10 50.5 +0.1**
SHEM Shemya Is, Ala 79.75 37 P **P 01 10 49.8 -0.6**
comp=Z,69nm,0.7s,baz=317,slow=2.4,SNR=8.1
comp=Z,69nm,0.7s
SHEM Shemya Is, Ala 79.75 37 P **P 01 10 49.1 -1.3**
SMY Shemya 79.75 37 P **P 01 10 49.7 -0.6**
SMY pmax pmax
comp=Z,77nm,0.8s
SMY Shemya 79.75 37 P **P 01 10 49.7 -0.6**
RICC Richard 79.78 320 *eP* **P 01 10 51.7 +1.1**
AQU L'Aquila 79.78 312 ⇑*i* P **P 01 10 49.0 -1.9**
DRE Drenchia 79.79 316 P **P 01 10 51.2 +0.4**
MYKA Terra Mystica 79.82 316 *i* P **P 01 10 51.6 +0.6**
comp=Z,2.0nm,0.6s,SNR=6.6
PRED Cave del Predi 79.86 316 P **P 01 10 50.7 -0.6**
PRED IAmb IAmb 01 11 07.6
comp=Z,23nm,0.9s
BIOA Bad Ischl, Aus 79.89 317 *i* P **P 01 10 51.5 +0.2**
comp=Z,16nm,1.1s,SNR=7.5
BRG Berggiesshubel 79.90 321 *eP* **P 01 10 52.0 +0.8**
comp=Z,20nm,1.0s,baz=92,slow=5.2
BRG Berggiesshubel 79.90 321 P **P 01 10 52.1 +0.8**
BRG Berggiesshubel 79.90 321 ⇑*i* P **P 01 10 52.0 +0.8**
BRG Amp 01 10 52.7
comp=Z,20nm,1.0s
ACOM Acomizza, Ital 79.91 316 P **P 01 10 52.1 +0.5**
GEC2 GERESS Array S 79.92 319 P **P 01 10 51.9 +0.4**
GEC2 IAmb IAmb 01 10 52.8
comp=Z,30nm,0.9s
GEC2 GERESS Array S 79.92 319 *eP* **P 01 10 52.3 +0.8**
comp=Z,32nm,0.9s,baz=92,slow=5.2
GEC2 *eL* L 01 50 17.4
comp=Z,102nm,20.5s
GERES GERESS Array B 79.92 319 P **P 01 10 52.2 +0.7**
comp=Z,14nm,0.7s,baz=102,slow=4.5,SNR=160
comp=Z,14nm,0.7s
GERES GERESS Array B 79.92 319 P **P 01 10 51.6 +0.1**
LNIZ Loecknitz 79.95 323 P **P 01 10 52.0 +0.6**
KHC Kasperske Hory 80.02 319 *eP* **P 01 10 52.5 +0.6**
KHC *e* 01 11 06.1
KHC pmax pmax
comp=Z,12nm,0.9s
KHC MLR MLR
comp=Z,200nm,19.7s
KHC Kasperske Hory 80.02 319 P **P 01 10 51.6 -0.3**
KHC Kasperske Hory 80.02 319 *eP* **P 01 10 52.5 +0.6**
comp=Z,12nm,0.9s
KHC *ex* x 01 11 06.1
KHC AMS AMS 01 55 00.0
comp=Z,200nm,19.7s
KHC Kasperske Hory 80.02 319 P **P 01 10 52.7 +0.8**
NRCA Norcia 80.02 312 P **P 01 10 52.3 +0.1**
FDMO Fiordimonte 80.04 313 P **P 01 10 51.6 -0.6**
KBA Koelnbreinsper 80.05 317 *i* P **P 01 10 52.2 -0.2**
comp=Z,12nm,1.1s
KBA Koelnbreinsper 80.05 317 P **P 01 10 52.4 0.0**
TRO Tromso 80.09 340 *eP* **P 01 10 51.0 -0.8**
TRO IAmb IAmb 01 11 18.7
comp=Z,961nm,3.9s
RUE Ruedersdorf 80.12 322 *eP* **P 01 10 53.1 +0.8**
comp=Z,68nm,0.8s,baz=92,slow=5.2
RUE Ruedersdorf 80.12 322 P **P 01 10 53.1 +0.8**
WIN Windhoek 80.19 246 P **P 01 10 52.0 -1.6**
WIN pmax pmax
comp=Z,18nm,1.0s
WIN Windhoek 80.19 246 P **P 01 10 52.0 -1.6**
HSKC Hora Svate Kat 80.20 320 *eP* **P 01 10 53.8 +0.8**
HSKC Hora Svate Kat 80.20 320 P **P 01 10 53.7 +0.8**
HSKC pP **pP 01 11 03.2 +0.4**
FUSE Fusea 80.25 316 P **P 01 10 53.6 +0.3**
CESX Cesi 80.40 312 P **P 01 10 54.2 +0.1**
DEL Delary 80.40 326 *i* P **P 01 10 53.9 +0.1**
DEL IAmb IAmb 01 10 54.5
comp=Z,18nm,0.7s
STAL STALIGIAL 80.44 316 P **P 01 10 53.8 -0.5**
STAL IAmb IAmb 01 10 55.7
comp=Z,137nm,1.9s
RJOB Jochberg 80.46 317 *eP* **P 01 10 54.4 0.0**
comp=Z,7.7nm,1.0s,baz=92,slow=5.2
RJOB Jochberg 80.46 317 P **P 01 10 54.5 +0.1**
WET Wettzell 80.47 319 *eP* **P 01 10 55.2 +0.8**
comp=Z,26nm,1.1s,baz=92,slow=5.2
WET *eL* L 01 49 14.3
comp=Z,83nm,19.3s
WET Wettzell 80.47 319 P **P 01 10 54.5 +0.1**
WET pP **pP 01 11 03.9 -0.4**
LESA Schwarzleotal 80.52 317 *i* P **P 01 10 54.7 -0.1**
comp=Z,11nm,0.5s,SNR=10
RGN Rugen 80.55 324 P **P 01 10 54.5 -0.1**
LUNU Lund 80.57 325 *i* P **P 01 10 55.0 +0.3**
ABTA Abfahrtsbach 80.60 316 *i* P **P 01 10 55.2 -0.1**
comp=Z,12nm,1.1s
NKC Novy Kostel 80.81 320 *eP* **P 01 10 57.1 +0.9**
NKC Novy Kostel 80.81 320 *eP* **P 01 10 57.1 +0.9**
NKC Novy Kostel 80.81 320 P **P 01 10 57.2 +0.9**
TANN Tannenbergstha 80.81 320 *eP* **P 01 10 56.8 +0.6**
comp=Z,22nm,1.4s,baz=92,slow=5.2
TANN Tannenbergstha 80.81 320 P **P 01 10 56.8 +0.6**
TANN pP **pP 01 11 06.5 +0.4**
HFS Hagfors 80.84 330 P **P 01 10 56.0 -0.1**
comp=Z,14nm,0.5s,baz=108,slow=4.8,SNR=117
comp=Z,14nm,0.5s
HFS Hagfors 80.84 330 P **P 01 10 56.0 -0.1**
BJUU Bjuv 80.84 326 *i* P **P 01 10 56.4 +0.3**
ROTZ Rotzenmuhle 80.94 319 *eP* **P 01 10 57.9 +1.1**
comp=Z,4.1nm,0.9s,baz=92,slow=5.2
PLN Plauen 81.01 320 *eP* **P 01 10 57.8 +0.6**
comp=Z,4.5nm,0.9s,baz=92,slow=5.2
FAUS Fauske 81.01 337 *eP* **P 01 10 56.5 -0.3**
FAUS IAmb IAmb 01 10 57.5
comp=Z,156nm,2.1s
FABU Falkenberg 81.08 327 *i* P **P 01 10 57.5 +0.1**
STEI Steigen 81.11 338 *eP* **P 01 10 57.1 -0.2**
STEI IAmb IAmb 01 11 15.2
comp=Z,28nm,1.1s
TEOL Teolo 81.14 315 P **P 01 10 58.0 0.0**
TEOL IAmb IAmb 01 11 10.0
comp=Z,29nm,1.1s
MOR8 Moi Rana 81.18 336 *eP* **P 01 10 57.3 -0.5**
MOR8 IAmb IAmb 01 10 57.8
comp=Z,14nm,0.7s
GRB3 Grafenberg Arr 81.19 319 P **P 01 10 59.3 +1.1**
WTTA Wattenberg 81.22 317 *i* P **P 01 10 58.4 -0.2**
comp=Z,26nm,0.9s,SNR=9.3
WTTA Wattenberg 81.22 317 P **P 01 10 58.6 -0.1**
GRB5 Grafenberg Arr 81.26 319 P **P 01 10 59.3 +0.7**
WATA Walderalm 81.27 317 *i* P **P 01 10 58.5 -0.4**
comp=Z,18nm,1.0s,SNR=7.7
GRB2 Grafenberg Arr 81.27 319 P **P 01 10 59.5 +0.8**
NEUB Neuenburg 81.29 321 *eP* **P 01 10 59.2 +0.6**
comp=Z,22nm,0.9s,baz=92,slow=5.2
NEUB Neuenburg 81.29 321 P **P 01 10 59.3 +0.6**
GRB1 Grafenberg Arr 81.29 319 P **P 01 10 59.9 +1.1**
GRC3 Grafenberg Arr 81.31 319 P **P 01 10 59.4 +0.5**
GRB4 Grafenberg Arr 81.35 319 P **P 01 11 00.1 +1.1**
GRC1 Grafenberg Arr 81.36 319 P **P 01 10 59.7 +0.6**
GRC4 Grafenberg Arr 81.36 319 P **P 01 10 59.7 +0.6**
MOX Moxa 81.36 320 *eP* **P 01 10 59.7 +0.6**
comp=Z,9.5nm,0.8s,baz=92,slow=5.2
MOX *eL* L 01 49 49.8
comp=Z,52nm,20.7s
MOX Moxa 81.36 320 P **P 01 10 59.8 +0.7**
RAUS Rausandaksla 81.38 336 *eP* **P 01 10 58.7 -0.1**
RAUS IAmb IAmb 01 10 59.0
comp=Z,21nm,0.8s
GRC2 Grafenberg Arr 81.45 319 P **P 01 10 60.0 +0.4**
WIMM Wimmelburg 81.47 321 P **P 01 10 59.9 +0.3**
GRA2 Grafenberg Arr 81.49 319 P **P 01 11 00.9 +1.1**
FUR Furstenfeldbru 81.49 318 *eP* **P 01 11 00.2 +0.3**
comp=Z,11nm,0.9s,baz=92,slow=5.2
FUR *eL* L 01 49 29.6
comp=Z,93nm,21.8s
SQTA Sankt Quirin 81.51 317 *i* P **P 01 11 00.1 0.0**
comp=Z,20nm,0.7s,SNR=11
GRA3 Grafenberg Arr 81.52 319 P **P 01 11 01.0 +1.1**
ONAU Onsala 81.54 327 *i* P **P 01 10 58.9 -0.9**
GRA1 Grafenberg Arr 81.58 319 P **P 01 11 00.9 +0.6**
GRA1 IAmb IAmb 01 11 01.8
comp=Z,21nm,0.8s
GRA1 Grafenberg Arr 81.58 319 P **P 01 11 01.2 +1.0**
GRF Grafenberg Arr 81.58 319 P **P 01 11 00.9 +0.6**
GRF pmax pmax
comp=Z,21nm,0.8s
GRF Grafenberg Arr 81.58 319 *eP* **P 01 11 01.3 +1.0**
comp=Z,24nm,0.9s,baz=92,slow=5.2
GRF *eL* L 01 49 34.6
comp=Z,68nm,21.7s
GRFO Grafenberg 81.58 319 P **P 01 11 01.3 +1.0**
GRFO Grafenberg 81.58 319 P **P 01 11 01.0 +0.8**
MOTA Moosalm 81.59 317 *i* P **P 01 11 00.3 -0.2**
comp=Z,23nm,0.9s,SNR=9.2
ZCCA Zocca 81.61 314 P **P 01 11 00.9 +0.3**
ZCCA IAmb IAmb 01 11 47.7
comp=Z,62nm,1.2s
GORT1 Trebel 81.65 323 *eP* **P 01 11 01.0 +0.6**
comp=Z,43nm,1.3s,baz=92,slow=5.2
FLTG Flechtingen 81.67 322 *eP* **P 01 11 00.4 -0.2**
comp=Z,13nm,1.1s,baz=92,slow=5.2
LEIR Leirfjorden 81.71 336 *eP* **P 01 11 00.5 -0.1**
LEIR IAmb IAmb 01 11 01.8
comp=Z,18nm,0.8s
VAGH Vaagaholmen 81.72 337 *eP* **P 01 11 00.4 -0.1**
VAGH IAmb IAmb 01 11 01.2
comp=Z,13nm,0.9s
TJOU Tjoern 81.74 328 *i* P **P 01 11 00.6 -0.2**
KONS Konsvik 81.75 336 *eP* **P 01 11 00.8 +0.1**
LOF Lofoten 81.77 338 *eP* **P 01 11 00.3 -0.5**
STOK Stokkvaagen 81.77 336 *eP* **P 01 11 01.4 +0.6**
RETA Reutte 81.82 317 *i* P **P 01 11 01.8 +0.1**
comp=Z,2.3nm,0.4s,SNR=15
FETA Feichten 81.83 317 *i* P **P 01 11 02.1 +0.2**
comp=Z,15nm,0.9s,SNR=8.5
NC405 NORSAR Array S 81.89 331 P **P 01 11 01.1 -0.6**
SALO Salr 81.95 315 P **P 01 11 02.0 -0.3**
SALO IAmb IAmb 01 11 16.7
comp=Z,46nm,1.1s
NC602 NORSAR Array S 81.95 331 *eP* **P 01 11 01.7 -0.3**
NC602 IAmb IAmb 01 11 01.9
comp=Z,16nm,0.7s
NC602 NORSAR Array S 81.95 331 P **P 01 11 01.7 -0.3**
NORES NORESS Array B 81.95 331 *eP* **P 01 11 01.7 -0.3**
ASSE Asse, Remlinge 82.01 322 *eP* **P 01 11 02.7 +0.4**
comp=Z,22nm,1.1s,baz=92,slow=5.2
ASSE Asse, Remlinge 82.01 322 P **P 01 11 02.7 +0.4**
STRU Stroemstad 82.03 329 *i* P **P 01 11 02.2 -0.2**
NSS Namsos 82.04 334 *eP* **P 01 11 02.1 -0.2**
NSS IAmb IAmb 01 11 02.8
comp=Z,19nm,0.8s
NC303 NORSAR Array S 82.07 331 P **P 01 11 02.0 -0.5**
NB201 NORSAR Array S 82.10 331 P **P 01 11 02.3 -0.4**
NB201 IAmb IAmb 01 11 34.3
comp=Z,70nm,1.9s
NB2 NORSAR Subarra 82.13 331 P **P 01 11 02.3 -0.6**
comp=Z,11nm,0.8s,baz=98,slow=5.1
NB2 NORSAR Subarra 82.13 331 P **P 01 11 02.3 -0.6**
NOA NORSAR Array B 82.13 331 P **P 01 11 02.4 -0.6**
comp=Z,7.7nm,0.7s,baz=94,slow=5.5,SNR=41
NOA pP **PP 01 14 11.8 +0.6**
comp=Z,0.9nm,0.8s,baz=92,slow=8.6,SNR=3.3
comp=Z,7.7nm,0.7s
FUORN Ofenpass-Fuorn 82.15 316 P **P 01 11 04.0 +0.4**
FUORN IAmb IAmb 01 11 18.2
comp=Z,60nm,1.4s
FUORN Ofenpass-Fuorn 82.15 316 P **P 01 11 04.3 +0.7**
FUORN pP **pP 01 11 14.1 +0.6**
CLZ Clausthal 82.19 321 *eP* **P 01 11 04.1 +0.7**
comp=Z,23nm,0.9s,baz=92,slow=5.2
CLZ Clausthal 82.19 321 P **P 01 11 04.1 +0.7**
BSEG Bad Segeberg 82.28 324 *eP* **P 01 11 04.7 +0.9**
comp=Z,24nm,0.9s,baz=92,slow=5.2
BSEG *eL* L 01 50 48.8
comp=Z,35nm,18.0s
BSEG Bad Segeberg 82.28 324 P **P 01 11 04.7 +0.9**
NAO01 NORSAR Array S 82.28 331 P **P 01 11 03.0 -0.7**
OSL Oslo 82.31 330 *eP* **P 01 11 04.3 +0.5**
OSL IAmb IAmb 01 11 04.9
comp=Z,27nm,0.7s
NBO00 NORSAR Array S 82.34 331 P **P 01 11 03.9 -0.2**
NC204 NORSAR Array S 82.37 331 P **P 01 11 03.9 -0.3**
UBBA Unterbreizbach 82.39 320 *eP* **P 01 11 04.8 +0.5**
comp=Z,3.0nm,0.7s,baz=92,slow=5.2
UBBA Unterbreizbach 82.39 320 P **P 01 11 04.9 +0.6**
DAVA Damuels 82.42 317 *i* P **P 01 11 05.3 +0.4**
comp=Z,26nm,1.2s,SNR=11
DAVA Damuels 82.42 317 P **P 01 11 05.4 +0.4**
GTTG Gottingen 82.43 321 *eP* **P 01 11 05.3 +0.6**
comp=Z,32nm,1.2s,baz=92,slow=5.2
GTTG Gottingen 82.43 321 P **P 01 11 05.4 +0.8**
SPB2 Spitsbergen Ar 82.49 348 P **P 01 11 04.8 +0.4**
SPA0 Spitsbergen Ar 82.49 348 *eP* **P 01 11 04.6 +0.1**
SPA0 IAmb IAmb 01 11 28.1
comp=Z,670nm,2.9s
SPITS Spitsbergen Ar 82.49 348 P **P 01 11 04.3 -0.2**
comp=Z,4.9nm,0.5s,baz=108,slow=9.7,SNR=14
SPITS LR LR 01 53 23.0
comp=Z,286nm,20.1s,baz=100,slow=40
comp=Z,4.9nm,0.5s
TUE Stuetta 82.78 316 P **P 01 11 07.1 +0.3**
TUE IAmb IAmb 01 11 21.8
comp=Z,34nm,1.3s
TUE Stuetta 82.78 316 P **P 01 11 07.0 +0.2**
VSL Villasalto 82.80 309 P **P 01 11 06.6 -0.2**
RETH Rethem/Aller, 82.83 322 *eP* **P 01 11 07.3 +0.7**
comp=Z,94nm,2.0s,baz=92,slow=5.2
RETH Rethem/Aller, 82.83 322 P **P 01 11 07.5 +0.8**
KONO Kongsberg 82.87 329 P **P 01 11 06.4 -0.3**
KONO pmax pmax
comp=Z,41nm,1.4s
KONO Kongsberg 82.87 329 *eP* **P 01 11 06.9 +0.1**
KONO Kongsberg 82.87 329 P **P 01 11 06.4 -0.3**
KONO IAmb IAmb 01 12 13.0
comp=Z,41nm,1.4s
KEST Kesra 82.89 305 P **P 01 11 07.7 +0.2**
comp=Z,8.8nm,0.9s,baz=16,slow=4.8,SNR=14
comp=Z,8.8nm,0.9s
KEST Kesra 82.89 305 P **P 01 11 08.9 +1.4**
SNR=7.3
KEST P **P 01 11 08.9 +1.4**
SNR=7.3
KEST Kesra 82.89 305 P **P 01 11 07.2 -0.3**
KEST IAmb IAmb 01 11 30.7
comp=Z,25nm,1.1s
STU Stuttgart 82.89 318 P **P 01 11 06.1 -1.0**
STU pmax pmax
comp=Z,9.0nm,0.7s
STU Stuttgart 82.89 318 P **P 01 11 06.1 -1.0**
STU Stuttgart 82.89 318 *eP* **P 01 11 07.5 +0.4**
comp=Z,17nm,0.7s,baz=92,slow=5.2
AMKA Amchitka 82.89 39 P **P 01 11 06.2 -0.8**
MUD Monsted U'grnd 83.00 326 *i* P **P 01 11 06.8 -0.6**
MUD IAmb IAmb 01 11 27.4
comp=Z,169nm,2.0s
DOMB Dombas 83.21 332 *eP* **P 01 11 08.6 +0.1**
DOMB IAmb IAmb 01 11 08.9
comp=Z,17nm,0.8s
SLE Schleitheim 83.36 317 P **P 01 11 10.1 +0.5**
TNS Taunus Mts 83.38 320 *eP* **P 01 11 10.4 +0.7**
comp=Z,14nm,0.8s,baz=92,slow=5.2
TNS *eL* L 01 50 02.1
comp=Z,54nm,22.0s
TNS Taunus Mts 83.38 320 P **P 01 11 10.4 +0.7**
KASTN Kahler Asten 83.40 321 *eP* **P 01 11 10.3 +0.5**
comp=Z,13nm,1.1s,baz=92,slow=5.2
BNALP Bannalp 83.41 316 P **P 01 11 10.5 +0.5**
BFO Black Forest 83.47 318 P **P 01 11 09.0 -1.1**
BFO pmax pmax
comp=Z,11nm,0.8s
BFO Black Forest 83.47 318 P **P 01 11 09.0 -1.1**
BFO Black Forest 83.47 318 *eP* **P 01 11 10.2 0.0**
comp=Z,11nm,0.8s,baz=92,slow=5.2
BFO *eL* L 01 51 18.9
comp=Z,58nm,21.9s
KBS Kingsbay 83.48 349 *eP* **P 01 11 09.1 -0.5**
KBS Kingsbay 83.48 349 P **P 01 11 09.8 +0.3**
KBS Kingsbay 83.48 349 *i* P **P 01 11 09.3 -0.2**
SKAR Skarsila 83.54 330 *eP* **P 01 11 11.1 +0.8**
IBBN Ibbenburen 83.80 322 *eP* **P 01 11 12.4 +0.7**
comp=Z,34nm,1.1s,baz=92,slow=5.2
IBBN Ibbenburen 83.80 322 P **P 01 11 12.2 +0.5**
EDA Edea 83.81 273 P **P 01 11 11.7 -0.9**
MOL Molde 83.93 332 *eP* **P 01 11 12.4 +0.3**
MOL IAmb IAmb 01 11 13.4
comp=Z,23nm,0.7s
RPZ Rata Peaks 84.07 135 LR LR 01 50 45.7
comp=Z,37nm,19.5s,baz=228,slow=37
BUG Bochum--Univer 84.12 321 *eP* **P 01 11 13.9 +0.6**
comp=Z,27nm,0.9s,baz=92,slow=5.2
BUG Bochum--Univer 84.12 321 P **P 01 11 14.0 +0.7**
AKN Aaknes 84.18 332 *eP* **P 01 11 14.2 +0.7**
AKN IAmb IAmb 01 11 14.9
comp=Z,17nm,0.8s
ESCA l'Escarene 84.21 313 P **P 01 11 14.6 +0.5**
ECH Echery 84.25 318 P **P 01 11 13.3 -0.8**
ECH pmax pmax
comp=Z,8.0nm,0.9s
ECH Echery 84.25 318 P **P 01 11 13.3 -0.8**
ECH Echery 84.25 318 P **P 01 11 14.2 +0.1**
ODD1 Odda 84.37 330 *eP* **P 01 11 15.3 +0.8**
WTSB Winterswijk 84.40 322 P **P 01 11 15.3 +0.6**
ISO Isola 84.43 314 P **P 01 11 15.6 +0.4**
BLS5 Blasjo 84.47 329 *eP* **P 01 11 15.8 +0.8**
BLS5 IAmb IAmb 01 11 16.5
comp=Z,34nm,0.7s
CALF Calern 84.54 313 P **P 01 11 16.7 +0.8**
HYA Hoyanger 84.58 331 *eP* **P 01 11 15.8 +0.3**
OXZ Oxford 84.68 134 P **P 01 11 16.3 -0.1**
OXZ IAmb IAmb 01 11 42.7
comp=Z,66nm,1.4s
BTNL Ternell 84.86 320 *dP* **P 01 11 17.5 +0.4**
comp=Z,6.4nm,1.0s
WLF Walferdange 84.87 319 P **P 01 11 17.4 +0.2**
WLF pmax pmax
comp=Z,39nm,1.5s
WLF Walferdange 84.87 319 P **P 01 11 17.4 +0.2**
WLF IAmb IAmb 01 11 19.4
comp=Z,39nm,1.5s
WLF Walferdange 84.87 319 *dP* **P 01 11 18.1 +0.9**
comp=Z,8.3nm,1.2s
WLF Walferdange 84.87 319 *eP* **P 01 11 18.1 +0.9**
comp=Z,13nm,1.0s,baz=92,slow=5.2
WLF Walferdange 84.87 319 P **P 01 11 18.2 +1.0**
GIMEL St. Georges / 84.91 316 P **P 01 11 18.3 +0.7**
MEM Membach 84.93 320 *dP* **P 01 11 17.4 -0.1**
comp=Z,7.9nm,1.1s
MEM Membach 84.93 320 P **P 01 11 17.9 +0.5**
BHOU Houvegnez 84.94 320 *dP* **P 01 11 18.2 +0.6**
comp=Z,5.0nm,1.2s
ASK Askoy 85.08 330 *eP* **P 01 11 18.4 +0.4**
ADK Adak 85.39 38 P **P 01 11 19.8 +0.1**
comp=Z,21nm,1.2s
BCLA Clavier 85.39 320 *dP* **P 01 11 19.7 -0.1**
comp=Z,6.3nm,1.4s
RCHB Rochefort 85.45 320 *dP* **P 01 11 20.1 +0.1**
BGES Gesves 85.53 320 *dP* **P 01 11 19.6 -0.9**
comp=Z,5.1nm,0.9s

RUSF Rustrel 85.57 314 P P 01 11 22.6 +1.7
BMRD Maredsous 85.74 320 dP P 01 11 21.9 +0.4
comp=Z,5.0nm,1.2s
DOU Dourbes 85.86 320 dP P 01 11 21.4 -0.8
comp=Z,4.7nm,1.1s
SSB Saint Sauveur 86.17 315 P P 01 11 24.4 +0.6
SSB Saint Sauveur 86.17 315 P P 01 11 24.0 +0.2
SSB x x 01 11 37.0
TAM Tamanrasset 86.86 292 P P 01 11 30.1 +2.2
ATKA Atka Island 86.90 38 P P 01 11 27.8 +0.6
comp=Z,39nm,0.9s
GAMB Gambell 87.19 26 P P 01 11 28.3 0.0
baz=276
BKZ Black Stump Fm 87.23 130 P P 01 11 29.0 -0.1
comp=Z,22nm,1.1s
CLF Chambon-Foret 87.54 318 P P 01 11 30.8 +0.4
URZ Urewera 87.57 129 LR LR 01 52 59.3
comp=Z,184nm,18.9s,baz=293,slow=37
NOR Nord 87.93 352 P P 01 11 31.1 -0.5
NOR pP pP 01 11 39.9 -2.1
NOR Nord 87.93 352 i P P 01 11 30.3 -1.3
TNA Tin City 88.56 24 P P 01 11 34.8 -0.1
baz=279
SPIA Saint Paul Isl 88.67 33 P P 01 11 34.9 -0.7
baz=277
ELIB Princess Elisa 89.06 197 dP P 01 11 40.1 +2.9
comp=Z,6.9nm,0.9s
C16K Lisburne Hills 89.07 21 P P 01 11 37.5 +0.3
baz=282
F14K Arctic Creek 89.23 24 P P 01 11 38.5 +0.5
baz=281
CWF Charnwood Fore 89.30 323 P P 01 11 39.2 +0.6
EDMD Edmundbyers 89.40 325 P P 01 11 39.9 +0.9
LBWR Ladybower, Pea 89.46 323 P P 01 11 39.8 +0.4
ANM Nome 89.81 25 P P 01 11 41.4 +0.6
baz=282
C17K DeLong Mountai 89.81 21 P P 01 11 41.2 +0.4
baz=284,SNR=7.0
F15K North Star Dit 89.87 24 P P 01 11 41.4 +0.3
baz=282
EKA Eskdalemuir Ar 90.00 325 P P 01 11 42.5 +0.6
comp=Z,13nm,0.7s,baz=101,slow=5.0,SNR=28
EKA LR LR 01 57 40.3
comp=Z,164nm,18.0s,baz=50,slow=39
comp=Z,13nm,0.7s
RDOG Red Dog Mine 90.01 22 P P 01 11 42.0 +0.4
baz=284
D17K Noatak River 90.03 22 P P 01 11 42.6 +0.9
baz=284,SNR=15
A19K Wainwright 90.10 19 P P 01 11 43.0 +1.0
baz=286
DAG Danmarks Havn 90.13 348 P P 01 11 41.3 -0.7
DAG Danmarks Havn 90.13 348 i P P 01 11 40.0 -2.0
M11K Mekoryuk 90.25 29 P P 01 11 43.1 +0.3
baz=281
VNDA Vanda 90.27 168 P P 01 11 43.7 +1.1
comp=Z,1.2nm,0.6s,baz=305,slow=5.6,SNR=15
VNDA LR LR 01 48 22.7
comp=Z,253nm,18.8s,baz=302,slow=33
comp=Z,1.2nm,0.6s
VNDA Vanda 90.27 168 P P 01 11 43.1 +0.5
VNDA IAmb IAmb 01 11 58.2
comp=Z,27nm,1.6s
G15K Niukluk 90.28 25 P P 01 11 43.0 +0.1
baz=283
C18K Utukok River 90.48 21 P P 01 11 44.6 +0.7
C18K Utukok River 90.48 21 P P 01 11 44.5 +0.7
baz=286,SNR=18
E17K Hotham Inlet 90.66 22 P P 01 11 45.3 +0.6
baz=285
K13K Kusilvak Mount 90.67 28 P P 01 11 45.0 +0.2
baz=282
G16K Koyuk River 90.87 24 P P 01 11 45.7 0.0
G16K IAmb IAmb 01 11 47.4
comp=Z,23nm,0.9s
G16K Koyuk River 90.87 24 P P 01 11 46.2 +0.5
baz=284
C19K Lookout Ridge 90.91 20 P P 01 11 46.7 +0.8
C19K Lookout Ridge 90.91 20 P P 01 11 47.0 +1.2
baz=287,SNR=20
E18K Tukpahlearik C 91.02 22 P P 01 11 46.7 +0.3
E18K Tukpahlearik C 91.02 22 P P 01 11 47.2 +0.9
baz=286,SNR=14
F17K Baldwin Pennin 91.04 23 P P 01 11 46.6 +0.2
F17K IAmb IAmb 01 11 49.7
comp=Z,27nm,0.9s
F17K Baldwin Pennin 91.04 23 P P 01 11 47.1 +0.7
baz=285
H16K Elim 91.11 25 P P 01 11 47.0 +0.2
baz=284
A21K Barrow 91.17 18 P P 01 11 47.5 +0.5
baz=290
UNV Unalaska Valle 91.30 36 P P 01 11 48.7 +0.8
baz=280
TORD Torodi Ar. Bea 91.33 283 P P 01 11 49.5 +0.7
comp=Z,2.8nm,0.9s,baz=75,slow=4.0,SNR=11
TORD PKKP PKKPbc 01 29 10.9 +0.6
comp=Z,0.6nm,1.0s,baz=311,slow=1.9,SNR=5.3
comp=Z,2.8nm,0.9s
TORD Torodi Ar. Bea 91.33 283 P P 01 11 48.2 -0.7
SBA Scott Base 91.38 168 P P 01 11 48.6 +0.9
SBA pmax pmax
comp=Z,23nm,1.4s
SBA Scott Base 91.38 168 P P 01 11 48.6 +0.9
SBA IAmb IAmb 01 12 04.4
comp=Z,23nm,1.4s
B20K Meade River 91.44 19 P P 01 11 49.0 +0.8
baz=289,SNR=9.0
G17K Kiwalik Mounta 91.53 24 P P 01 11 49.3 +0.5
baz=286,SNR=5.1
D19K Kuna River 91.60 21 P P 01 11 49.1 0.0
D19K Kuna River 91.60 21 P P 01 11 49.8 +0.7
baz=288,SNR=16
F18K Selawik 91.61 23 P P 01 11 49.7 +0.7
baz=287,SNR=12
M13K Dall Lake 91.62 29 P P 01 11 49.6 +0.4
M13K Dall Lake 91.62 29 P P 01 11 49.8 +0.6
baz=283
L14K Kuka Creek 91.72 28 P P 01 11 49.4 -0.3
L14K IAmb IAmb 01 12 08.3
comp=Z,33nm,1.6s
L14K Kuka Creek 91.72 28 P P 01 11 50.1 +0.5
baz=284,SNR=6.7
A22K Sinclair Lake 91.78 18 P P 01 11 50.4 +0.6
baz=291,SNR=6.2
I17K Unalakleet 91.96 25 P P 01 11 50.7 0.0
I17K IAmb IAmb 01 11 52.9
comp=Z,32nm,1.6s
I17K Unalakleet 91.96 25 P P 01 11 51.4 +0.7
baz=286
H17K Granite Mounta 91.99 24 P P 01 11 50.9 0.0
H17K IAmb IAmb 01 12 09.1
comp=Z,20nm,1.1s
H17K Granite Mounta 91.99 24 P P 01 11 51.4 +0.5
baz=287,SNR=7.5
D20K Etivluk River 92.05 20 P P 01 11 50.9 -0.2
D20K Etivluk River 92.05 20 P P 01 11 51.7 +0.6
baz=290,SNR=30
J16K Anvik River 92.16 26 P P 01 11 52.1 +0.4
J16K Anvik River 92.16 26 P P 01 11 52.4 +0.7
baz=286,SNR=12
L15K Ungalak Mounta 92.19 28 P P 01 11 52.2 +0.3
baz=285
M14K Bethel 92.21 29 P P 01 11 51.2 -0.7
M14K IAmb IAmb 01 12 10.5
comp=Z,26nm,1.4s
M14K Bethel 92.21 29 P P 01 11 52.1 +0.2
baz=285
G18K Tagagawik 92.21 23 P P 01 11 51.6 -0.3
G18K IAmb IAmb 01 11 53.2
comp=Z,13nm,1.1s
G18K Tagagawik 92.21 23 P P 01 11 52.0 0.0
baz=288,SNR=5.8
E19K Redstone River 92.25 21 P P 01 11 52.2 +0.2
E19K Redstone River 92.25 21 P P 01 11 52.6 +0.5
baz=289,SNR=36
F19K Shaleruckik Mo 92.25 22 P P 01 11 52.2 +0.2
F19K Shaleruckik Mo 92.25 22 P P 01 11 52.4 +0.4
baz=289,SNR=26
E20K Nigu River 92.36 21 P P 01 11 53.2 +0.6
baz=290,SNR=30
UCM Universidad Co 92.40 311 P P 01 11 55.0 +1.6
B21K Ikpikpuk River 92.40 19 P P 01 11 52.6 0.0
B21K Ikpikpuk River 92.40 19 P P 01 11 53.5 +0.8
baz=292,SNR=24
B22K Teshekpuk Lake 92.51 18 P P 01 11 52.7 -0.4
B22K Teshekpuk Lake 92.51 18 P P 01 11 53.6 +0.4
baz=293,SNR=5.3
C21K Knifeblade Rid 92.52 20 P P 01 11 54.1 +0.8
baz=292,SNR=20
N14K Kuskokwak Cree 92.55 29 P P 01 11 53.8 +0.3
baz=285
H18K Honhosa River 92.55 24 P P 01 11 53.4 -0.2
H18K IAmb IAmb 01 11 54.5
comp=Z,14nm,0.8s
H18K Honhosa River 92.55 24 P P 01 11 54.0 +0.5
baz=288,SNR=9.2
G19K Purcell Mounta 92.74 23 P P 01 11 54.7 +0.4
G19K Purcell Mounta 92.74 23 P P 01 11 55.1 +0.8
baz=289,SNR=25
J17K VABM Dome 92.79 26 P P 01 11 54.8 +0.2
J17K IAmb IAmb 01 11 56.6
comp=Z,32nm,1.4s
J17K VABM Dome 92.79 26 P P 01 11 55.3 +0.7
baz=287,SNR=8.8
M15K Kasigluk River 92.83 28 P P 01 11 54.8 0.0
baz=286,SNR=9.8
O14K Tigyukauivet M 92.93 30 P P 01 11 55.4 +0.1
O14K IAmb IAmb 01 11 56.9
comp=Z,35nm,1.7s
O14K Tigyukauivet M 92.93 30 P P 01 11 55.5 +0.2
baz=285
F20K Avaraart Lake 92.94 22 P P 01 11 55.5 +0.3
F20K Avaraart Lake 92.94 22 P P 01 11 55.8 +0.6
baz=290,SNR=43
ESDC Sonseca Array 93.04 310 P P 01 11 56.8 +0.4
comp=Z,2.0nm,0.8s,baz=61,slow=4.2,SNR=12
ESDC PP PP 01 15 41.1 +1.7
comp=Z,0.5nm,0.7s,baz=84,slow=9.3,SNR=4.9
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 93.04 310 P P 01 11 56.2 -0.2
ESDC PP 01 15 40.4 +1.0
E21K Killik River 93.06 20 P P 01 11 55.9 +0.1
E21K IAmb IAmb 01 11 57.3
comp=Z,24nm,0.9s
E21K Killik River 93.06 20 P P 01 11 56.1 +0.3
baz=292
L16K Owhat River 93.11 27 P P 01 11 55.9 -0.2
L16K IAmb IAmb 01 11 57.9
comp=Z,45nm,1.9s
L16K Owhat River 93.11 27 P P 01 11 56.6 +0.5
baz=287,SNR=7.6
H19K Roundabout Mou 93.19 23 P P 01 11 57.0 +0.6
H19K Roundabout Mou 93.19 23 P P 01 11 57.5 +1.1
baz=290,SNR=39
N15K Kwethluk River 93.26 29 P P 01 11 57.1 +0.3
N15K IAmb IAmb 01 11 59.5
comp=Z,13nm,0.9s
N15K Kwethluk River 93.26 29 P P 01 11 57.4 +0.5
baz=286,SNR=11
GCSA Galena City Sc 93.28 24 P P 01 11 57.8 +1.0
baz=289,SNR=12
K17K Iditarod 93.33 26 P P 01 11 57.4 +0.3
K17K Iditarod 93.33 26 P P 01 11 58.0 +0.9
baz=288,SNR=15
L17K Donlin 93.51 27 P P 01 11 58.8 +0.9
baz=288,SNR=7.2
M16K Timber Creek 93.55 28 P P 01 11 58.3 +0.1
M16K IAmb IAmb 01 12 16.2
comp=Z,18nm,1.2s
M16K Timber Creek 93.55 28 P P 01 11 58.5 +0.3
baz=287
C23K Itkillik River 93.59 18 P P 01 11 58.1 -0.1
C23K IAmb IAmb 01 11 59.8
comp=Z,16nm,0.8s
C23K Itkillik River 93.59 18 P P 01 11 58.6 +0.5
baz=295,SNR=19
O15K Ungalikthiuk R 93.66 30 P P 01 11 58.7 0.0
baz=286,SNR=5.7
F21K Alatna River 93.69 21 P P 01 11 58.9 +0.1
baz=293,SNR=13
N16K Nishlik Lake 93.80 28 P P 01 11 59.9 +0.6
baz=287,SNR=19
H20K Anotlenegea Mo 93.82 23 P P 01 11 60.0 +0.7
baz=291,SNR=36
E22K Anaktuvuk Pass 93.92 20 P P 01 11 59.3 -0.5
E22K Anaktuvuk Pass 93.92 20 P P 01 11 60.0 +0.2
baz=294
D23K Nanushuk River 93.95 19 P P 01 12 00.2 +0.4
D23K IAmb IAmb 01 12 01.8
comp=Z,24nm,1.1s
D23K Nanushuk River 93.95 19 P P 01 12 00.6 +0.8
baz=295,SNR=16
G21K Allakaket 93.96 22 P P 01 11 59.9 -0.1
G21K Allakaket 93.96 22 P P 01 12 00.1 +0.2
baz=292,SNR=26
F22K John River 94.05 21 P P 01 12 01.0 +0.6
baz=294
J19K Poorman 94.05 25 P P 01 12 01.2 +0.8
baz=290,SNR=19
M17K Holitna River 94.13 27 P P 01 12 00.6 -0.3
M17K IAmb IAmb 01 12 02.4
comp=Z,8.8nm,0.9s
M17K Holitna River 94.13 27 P P 01 12 01.7 +0.9
baz=289,SNR=6.1
L18K Granite Mounta 94.20 26 P P 01 12 00.9 -0.2
L18K IAmb IAmb 01 12 03.1
comp=Z,22nm,1.4s
L18K Granite Mounta 94.20 26 P P 01 12 01.5 +0.4
baz=289,SNR=9.0
I20K Naaghedeneel 94.23 24 P P 01 12 01.7 +0.5
I20K Naaghedeneel 94.23 24 P P 01 12 02.2 +1.0
baz=292,SNR=12
SDPT Sand Point 94.38 34 P P 01 12 03.1 +1.1
comp=Z,24nm,0.6s
O16K Kokwok River B 94.39 29 P P 01 12 02.0 0.0
O16K IAmb IAmb 01 12 03.5
comp=Z,17nm,1.4s
O16K Kokwok River B 94.39 29 P P 01 12 02.4 +0.4
baz=288,SNR=5.8
TOLK Toolik Lake Re 94.45 19 P P 01 12 02.7 +0.4
baz=296,SNR=12
D24K Happy Valley 94.46 19 P P 01 12 02.2 0.0
D24K IAmb IAmb 01 12 03.8
comp=Z,15nm,0.8s
D24K Happy Valley 94.46 19 P P 01 12 02.6 +0.4
baz=297
G22K Bettles 94.53 21 P P 01 12 02.7 +0.2
baz=294
N17K Nushagak Hills 94.53 28 P P 01 12 02.6 0.0
N17K IAmb IAmb 01 12 04.5
comp=Z,28nm,1.6s
N17K Nushagak Hills 94.53 28 P P 01 12 03.4 +0.7
baz=289
H21K Melozitna Rive 94.56 23 P P 01 12 02.9 +0.2
H21K IAmb IAmb 01 12 04.8
comp=Z,40nm,1.6s
H21K Melozitna Rive 94.56 23 P P 01 12 03.4 +0.7
baz=293,SNR=14
J20K Nowinta River 94.59 24 P P 01 12 02.7 -0.2
J20K IAmb IAmb 01 12 04.4
comp=Z,11nm,0.7s
J20K Nowinta River 94.59 24 P P 01 12 03.6 +0.7
baz=292,SNR=18
P16K Nushagak River 94.61 30 P P 01 12 02.9 -0.1
baz=288
S14K Fog Glacier 94.62 32 P P 01 12 02.6 -0.7
baz=286
E23K Chandalar 94.70 20 P P 01 12 03.7 +0.3
baz=296,SNR=7.0
M18K Stony River 94.83 27 P P 01 12 04.5 +0.5
baz=290,SNR=5.8
COLD Coldfoot 94.86 21 P P 01 12 04.3 +0.3
baz=296
K20K Telida 94.93 25 P P 01 12 04.5 +0.1
K20K IAmb IAmb 01 12 22.9
comp=Z,22nm,0.9s
K20K Telida 94.93 25 P P 01 12 05.4 +0.9
baz=292,SNR=26
H22K Ishtalitna Cre 95.00 22 P P 01 12 04.8 +0.1
H22K IAmb IAmb 01 12 06.9
comp=Z,18nm,1.4s
H22K Ishtalitna Cre 95.00 22 P P 01 12 05.4 +0.7
baz=294,SNR=9.4
CHNA Chernabura Isl 95.01 34 P P 01 12 04.4 -0.6
baz=286
L19K White Mountain 95.02 26 P P 01 12 05.6 +0.6
baz=291,SNR=11
I21K Tanana 95.06 23 P P 01 12 05.8 +0.8
baz=294
E24K Your Creek 95.07 20 P P 01 12 05.1 +0.1
baz=297,SNR=9.5
N18K Kilae Creek 95.08 28 P P 01 12 05.8 +0.5
baz=290
QSPA South Pole Qui 95.09 180 P P 01 12 05.5 +0.3
comp=Z,1.7nm,0.9s,baz=117,slow=1.0,SNR=7.1
QSPA PKKP PKKPdf 01 28 59.8 -3.1
comp=Z,1.0nm,0.7s,baz=101,slow=1.4,SNR=5.3
QSPA LR LR 01 50 13.3
comp=Z,484nm,19.0s,baz=310,slow=32
comp=Z,1.7nm,0.9s
QSPA South Pole Qui 95.09 180 P P 01 12 01.6 -3.6
QSPA IAmb IAmb 01 12 07.7
comp=Z,14nm,1.5s
G23K Bananza Creek 95.15 21 P P 01 12 05.7 +0.3
baz=296,SNR=6.3
D25K Kavik River 95.15 18 P P 01 12 05.8 +0.4
baz=299,SNR=25
NEEM North Greenlan 95.27 353 i P P 01 12 05.9 -0.2
P17K Kvichak River 95.32 29 P P 01 12 06.5 +0.3
baz=289,SNR=9.9
M19K Big River Lodg 95.33 26 P P 01 12 07.1 +0.8
baz=291
CHUM Lake Minchumin 95.45 24 P P 01 12 07.6 +0.8
baz=293,SNR=6.4
F24K Squaw Lake 95.53 20 P P 01 12 07.3 +0.1
baz=298,SNR=5.6
MLY Manley 95.60 23 P P 01 12 07.7 +0.1
baz=295
N19K Bonanza Creek 95.68 27 P P 01 12 08.5 +0.4
baz=291,SNR=9.0
O18K Koktuh Hills 95.68 28 P P 01 12 08.3 +0.4
baz=290
H23K Yukon River 95.71 22 P P 01 12 08.5 +0.5
baz=296
CAST Castle Rocks 95.73 24 P P 01 12 08.2 0.0
baz=294,SNR=15
C27K Jago River 95.81 17 P P 01 12 08.6 +0.3
baz=302
P18K Big Mountain, 95.83 29 P P 01 12 07.8 -0.9
baz=290
R17L Mt. Peulik Vol 95.87 31 P P 01 12 07.7 -1.2
baz=289
M20K Styx River 95.89 26 P P 01 12 09.1 +0.1
baz=292
PPLA Purkeypile 95.89 25 P P 01 12 09.0 0.0
baz=293
Q17K Contact Creek 95.90 30 P P 01 12 07.7 -1.4
baz=290
O19K Port Alsworth 95.98 28 P P 01 12 08.9 -0.3
baz=291
E25K Arctic Village 96.01 19 P P 01 12 09.5 +0.2
baz=300
G24K Hadweenzic Riv 96.06 21 P P 01 12 10.0 +0.4
baz=298
I23K Minto, Yukon-K 96.08 22 P P 01 12 09.9 +0.3
baz=296
Q18K Katmai Hardscr 96.20 29 P P 01 12 09.2 -1.3
baz=290
F25K Christian Rive 96.25 19 P P 01 12 11.1 +0.6
baz=300,SNR=8.0
H24K Noodor Dome 96.32 21 P P 01 12 10.7 -0.1
baz=298
NEA2 Nenana 96.44 23 P P 01 12 10.5 -0.8
baz=296
TRF Thorofare Moun 96.45 24 P P 01 12 11.2 -0.4
baz=295
G25K Bearman Lake 96.50 20 P P 01 12 11.0 -0.5
baz=300
SKT Skwentna 96.54 26 P P 01 12 11.2 -0.6
baz=294
L22K Petersville 96.64 25 P P 01 12 12.1 -0.3
baz=295
F26K Sheenjek River 96.69 19 P P 01 12 12.8 +0.4
baz=301,SNR=7.1
D27M Malcolm River 96.83 17 P P 01 12 13.7 +0.6
baz=305
MCK McKinley 96.87 24 P P 01 12 12.9 -0.5
baz=296
ILAR Eielson Array 97.19 22 P P 01 12 13.2 -1.4
comp=Z,0.7nm,0.7s,baz=288,slow=4.3,SNR=8.1
ILAR PP PP 01 16 12.1 +1.3
comp=Z,0.9nm,0.8s,baz=299,slow=7.4,SNR=4.5
comp=Z,0.7nm,0.7s
ILAR Eielson Array 97.19 22 P P 01 12 13.1 -1.6
G26K Porcupine Rive 97.20 20 P Pdif 01 12 15.4 +0.7
G26K IAmb IAmb 01 12 23.0
comp=Z,9.7nm,0.8s
G26K Porcupine Rive 97.20 20 P Pdif 01 12 15.2 +0.5
baz=302,SNR=13
E27K Coleen River 97.23 18 P P 01 12 14.4 -0.5
E27K Coleen River 97.23 18 P Pdif 01 12 15.0 +0.1
baz=304
M22K Willow 97.25 26 P P 01 12 14.4 -0.6
baz=295
PFVI Vila Bisbo 97.27 308 P P 01 12 14.4 -1.3
PRP Porcupine Dome 97.33 21 P P 01 12 15.1 -0.4
baz=300
SII Sitkinak Islan 97.36 31 P P 01 12 15.2 -0.4
baz=291
HOM Homer 97.43 28 P P 01 12 15.2 -0.7
baz=294
OHAK Old Harbor 97.57 30 P P 01 12 15.8 -0.7
baz=292
E28M Babbage River 97.62 17 P Pdif 01 12 16.9 +0.2
baz=306,SNR=8.8
RC01 Rabbit Creek A 97.70 26 P Pdif 01 12 17.3 +0.2
baz=296
KDAK Kodiak Island 97.71 30 P P 01 12 15.8 -1.3
comp=Z,3.8nm,0.7s,baz=249,slow=7.6,SNR=2.3
comp=Z,3.8nm,0.7s
KDAK Kodiak Island 97.71 30 P P 01 12 15.3 -1.9
KDAK Kodiak Island 97.71 30 P P 01 12 16.4 -0.7
baz=292
PMR Palmer 97.74 26 P P 01 12 16.6 -0.6
baz=296
DHY Denali Highway 97.80 24 P P 01 12 17.1 -0.6
baz=298
BRSE Bradley Lake S 97.81 28 P P 01 12 16.6 -1.0
baz=294
J25K Salcha River, 97.83 22 P P 01 12 16.8 -0.9
baz=300
WAT6 Susitna Watana 97.88 24 P P 01 12 17.2 -0.8
baz=298
G27K Doyon Strip 97.98 19 P P 01 12 18.1 -0.2
baz=304
SML Sawmill 97.99 25 P P 01 12 18.1 -0.4
baz=297
F28M Old Crow 98.10 18 P P 01 12 18.5 -0.3
baz=306
KNK Knik Glacier 98.11 26 P P 01 12 18.6 -0.3
baz=297
E29M Blow River 98.23 17 P P 01 12 18.8 -0.5
baz=307,SNR=5.7
I26K Coal Creek Min 98.29 21 P P 01 12 19.4 -0.2
baz=302
H27K Steamboat Moun 98.35 20 P Pdif 01 12 20.1 +0.1
baz=304
DBIC Dimbokro 98.42 277 LR LR 01 53 43.7
comp=Z,145nm,21.8s,baz=100,slow=34
PAX Paxson 98.61 24 P P 01 12 20.9 -0.3
baz=300
I27K Kandik River 98.67 20 P P 01 12 21.0 -0.4
baz=304
SCRK Sand Creek 98.68 22 P P 01 12 20.5 -1.1
baz=301
M24K Tolsona, Glenn 98.75 24 P P 01 12 20.4 -1.4
baz=299
A36M Sachs Harbour 98.86 12 P P 01 12 21.5 -0.6
baz=320
G29M Pine Creek 99.09 18 P Pdif 01 12 23.0 -0.3
baz=307
KLU Klutina 99.15 25 P Pdif 01 12 22.5 -1.2
baz=299
P23K Montague Islan 99.22 27 P Pdif 01 12 23.2 -0.7
baz=297
I28M Miner Creek 99.33 20 P Pdif 01 12 24.0 -0.5
baz=305
F30M Barrier River 99.34 17 P Pdif 01 12 23.7 -0.6
baz=309
H29M Whitestone 99.40 19 P Pdif 01 12 24.8 +0.2
H29M IAmb IAmb 01 13 55.5
comp=Z,30nm,2.0s
H29M Whitestone 99.40 19 P Pdif 01 12 23.4 -1.2
baz=307
L26K Log Cabin Wild 99.42 23 P Pdif 01 12 24.5 -0.3
INK Inuvik 99.54 16 P Pdif 01 12 24.5 -0.6
comp=Z,2.5nm,0.5s,baz=307,slow=2.0,SNR=7.7
INK LR LR 02 04 12.1
comp=Z,152nm,19.5s,baz=278,slow=40
comp=Z,2.5nm,0.5s

INK	**Inuvik**	**99.54**	**16**	P	**Pdif**	01 12 24.0	**-1.1**
INK	**Inuvik** baz=312	**99.54**	**16**	P	**Pdif**	01 12 24.3	**-0.8**
INK	**Inuvik**	**99.54**	**16**	P	**Pdif**	01 12 24.6	**-0.5**
G30M	**tAoh Zraii Nji**	**99.61**	**18**	Pdif	**Pdif**	01 12 24.1	**-1.5**
G30M	comp=Z,9.8nm,1.3s			IAmb	IAmb	01 12 26.2	
G30M	**tAoh Zraii Nji** baz=309,SNR=5.6	**99.61**	**18**	P	**Pdif**	01 12 24.8	**-0.8**
N25K	**Chitina, Valde** baz=300	**99.65**	**25**	P	**Pdif**	01 12 24.3	**-1.6**
EYAK	**Cordova Ski Ar** baz=299	**99.68**	**26**	P	**Pdif**	01 12 24.7	**-1.3**
M26K	**Nabesna, AK** baz=302	**99.89**	**23**	P	**Pdif**	01 12 25.4	**-1.6**
Q23K	**Middleton Isla** baz=298	**99.96**	**27**	P	**Pdif**	01 12 26.1	**-1.1**
BMRM	**Bremner River** baz=300	**99.97**	**25**	P	**Pdif**	01 12 26.5	**-0.8**
L27K	**Beaver Creek,** baz=303	**99.99**	**23**	P	**Pdif**	01 12 27.1	**-0.3**
F31M	**Tsiigehtchic** baz=311	**100.05**	**17**	P	**Pdif**	01 12 27.2	**-0.2**
RES	**Resolute Bay** comp=Z,7.5nm,0.9s,baz=348,slow=1.4,SNR=4.6 comp=Z,7.5nm,0.9s	**100.08**	**2**	P	**Pdif**	01 12 28.1	**+0.7**
RES	**Resolute Bay**	**100.08**	**2**		**Pdif**	01 12 27.2	**-0.3**
G31M	**Satah River**	**100.24**	**17**	Pdif	**Pdif**	01 12 27.9	**-0.3**
G31M	**Satah River** baz=311	**100.24**	**17**	P	**Pdif**	01 12 27.9	**-0.3**
DAWY	**Dawson** baz=305	**100.32**	**21**	P	**Pdif**	01 12 28.3	**-0.5**
M27K	**Edge Creek, AK** baz=303	**100.35**	**23**	P	**Pdif**	01 12 28.8	**-0.3**
MCARA	**McCarthy VSAT** baz=302	**100.41**	**24**	P	**Pdif**	01 12 28.9	**-0.2**
KAIM	**Kayak Island** baz=300	**100.57**	**26**	P	**Pdif**	01 12 28.9	**-1.0**
I30M	**Mount Dempster** baz=308	**100.66**	**19**	P	**Pdif**	01 12 29.6	**-0.8**
H31M	**Peel River** baz=310	**100.95**	**18**	P	**Pdif**	01 12 31.0	**-0.5**
J30M	**Hart River** baz=308	**101.08**	**20**	P	**Pdif**	01 12 31.9	**-0.4**
K29M	**Barlow Dome** baz=307	**101.12**	**21**	P	**Pdif**	01 12 32.1	**-0.3**
C36M	**Paulatuk** baz=321	**101.16**	**13**	P	**Pdif**	01 12 31.4	**-0.9**
L29M	**L29M** baz=306	**101.34**	**22**	P	**Pdif**	01 12 33.0	**-0.3**
BRWY	**Burwash Landin** baz=305	**102.02**	**23**	P	**Pdif**	01 12 36.1	**-0.3**
M30M	**Minto, Yukon** baz=308	**102.15**	**22**	P	**Pdif**	01 12 36.6	**-0.4**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.7s,baz=310,slow=1.9,SNR=2.9	**109.01**	**14**	PKiKP	**PKiKP**	01 17 12.1	**+0.5**
YKA	comp=Z,1.8nm,0.7s,baz=337,slow=7.5,SNR=6.8			PP	**PP**	01 17 32.5	**-6.4**
YKA				SKKP	**SKKPdf**	01 32 10.2	**+1.7**
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.8s,baz=79,slow=3.2,SNR=3.6	**109.01**	**14**		**PKiKP**	01 17 11.2	**-0.4**
TBI	**Tubuai** comp=Z,805nm,24.0s	**116.14 113**		*e*LR	LR	01 52 34.7	
SCHQ	**Schefferville** comp=Z,4.9nm,0.8s,baz=15,slow=4.3,SNR=5.4	**118.17 348**		PKP	**PKPdf**	01 17 28.9	**-0.5**
ULM	**Lac du Bonnet** comp=Z,6.3nm,0.8s,baz=1.0,slow=2.8,SNR=11	**124.11**	**8**	PKP	**PKPdf**	01 17 40.8	**-0.2**
ULM	**Lac du Bonnet**	**124.11**	**8**		**PKPdf**	01 17 39.8	**-1.2**
ELK	**Elko** comp=Z,1.5nm,0.6s,baz=337,slow=2.3,SNR=11	**126.90**	**28**	PKP	**PKPdf**	01 17 47.1	**+0.2**
ELK	**Elko**	**126.90**	**28**	PKiKP	**PKiKP**	01 17 47.6	**+0.2**
ELK	**Elko**	**126.90**	**28**		**PKiKP**	01 17 47.6	**+0.2**
NVAR	**Mina Array Bea** comp=Z,2.4nm,0.7s,baz=257,slow=1.2,SNR=11	**127.15**	**32**	PKP	**PKiKP**	01 17 48.9	**+1.0**
NVAR	**Mina Array Bea**	**127.15**	**32**		**PKPdf**	01 17 47.3	**-0.1**
HVU	**Hansel Valley**	**127.17**	**25**	PKiKP	**PKPdf**	01 17 46.6	**-0.6**
HVU	**Hansel Valley**	**127.17**	**25**	PKPdf	**PKPdf**	01 17 46.6	**-0.6**
LHV	**Little Huntoon**	**127.17**	**32**	PKPdf	**PKPdf**	01 17 46.1	**-1.0**
NV11	**Mina Array Sit**	**127.22**	**32**	PKPdf	**PKPdf**	01 17 47.0	**-0.4**
BW06	**Boulder Array**	**127.62**	**22**	PKPdf	**PKPdf**	01 17 47.2	**-1.0**
PD31	**Pinedale Array**	**127.62**	**22**	PKPdf	**PKPdf**	01 17 47.8	**-0.5**
PDAR	**Pinedale Array** comp=Z,2.7nm,0.8s,baz=22,slow=1.6,SNR=24	**127.62**	**22**	PKP	**PKiKP**	01 17 48.5	**-0.2**
PDAR	comp=Z,1.2nm,0.9s,baz=323,slow=0.7,SNR=4.8			PP	**PP**	01 19 48.8	**+0.6**
PDAR	**Pinedale Array**	**127.62**	**22**		**PKPdf**	01 17 47.7	**-0.5**
PDAR					**PP**	01 19 48.0	**-0.3**
ANMO	**Albuquerque** comp=Z,4.0nm,0.8s	**135.58**	**25***c*	*i*PKiKP	**PKiKP**	01 18 04.3	**-0.7**
ANMO				pmax	pmax		
BDFB	**Brasília** comp=Z,3.1nm,0.6s,baz=120,slow=4.7,SNR=6.5	**141.53 251**		PKP	**PKPdf**	01 18 15.1	**+0.5**
TXAR	**Lajitas Array** comp=Z,2.2nm,0.9s,baz=233,slow=0.9,SNR=21	**141.61**	**26**	PKhKP	PKPpre	01 18 08.6	
TXAR	comp=Z,0.9nm,0.7s,baz=3.5,slow=4.3,SNR=6.6			PP	**PP**	01 21 16.9	**0.0**
PRPB	**Parauapebas**	**144.24 267**		*e*P	**PKPab**	01 18 17.3	**0.0**
ARAG	**Araguaiana, MT**	**145.09 250**		*e*P	**PKPdf**	01 18 21.4	**+0.7**
C2SB	**Chapadao do Su**	**145.18 244**		*e*P	**PKPdf**	01 18 21.1	**+0.2**
SNDB	**Serra Nova Dou**	**145.30 256**		*e*P	**PKPdf**	01 18 21.8	**+0.7**
SJPY	**San Joaquin**	**145.40 229**		*e*P	**PKPbc**	01 18 19.1	**-1.9**
CPUP	**Villa Florida** comp=Z,7.4nm,0.7s,baz=94,slow=2.9,SNR=26	**145.66 229**		PKPbc	**PKPab**	01 18 22.4	**+0.3**
CPUP	**Villa Florida**	**145.66 229**		PKP2	**PKPab**	01 18 22.7	**+0.6**
CPUP	**Villa Florida**	**145.66 229**			**PKPab**	01 18 22.7	**+0.6**
BI02	**San Fabin de**	**145.96 201**		PKPdf	**PKPbc**	01 18 22.3	**-0.2**
DWPF	**Disney Wildern**	**146.66 353**		PKPbc	**PKPbc**	01 18 24.4	**-0.3**
AQDB	**Aquidauana**	**147.09 240**		*e*P	**PKPbc**	01 18 26.2	**0.0**
PP1B	**Ponte de Pedra**	**147.39 245**		*e*P	**PKPdf**	01 18 22.7	**-1.9**
MURT	**Porto Murtinho**	**148.20 236**		*e*P	**PKPdf**	01 18 25.1	**-0.8**
SALV	**Santo Antonio**	**148.64 248**		*e*P	**PKPdf**	01 18 27.8	**+1.1**
COIM	**Forte Coimbra**	**149.11 239**		*e*P	**PKPdf**	01 18 26.4	**-1.0**
CLDB	**Colider**	**149.83 257**		*e*P	**PKPdf**	01 18 29.3	**+0.6**
ITTB	**Itaituba**	**150.09 270**		*e*P	**PKPdf**	01 18 29.9	**+0.8**
PTLB	**Pontes e Lacer**	**151.94 247**		*e*P	**PKPdf**	01 18 32.1	**+0.2**
BBSD	**Serra de San D**	**152.65 242**		*e*P	**PKPdf**	01 18 32.6	**-0.3**
VILB	**Vilhena**	**153.54 251**		*e*P	**PKPdf**	01 18 35.8	**+1.3**
BOAV	**Boa Vista**	**153.71 286**		*e*P	**PKPdf**	01 18 35.8	**+1.2**
MACA	**Manacapuru-AM**	**154.93 274**		*e*P	**PKPdf**	01 18 33.8	**-2.5**
LPAZ	**La Paz** comp=Z,2.7nm,0.9s,baz=77,slow=1.3,SNR=9.9	**159.50 236**		PKP	**PKPdf**	01 18 43.5	**+0.7**
LPAZ	comp=Z,3.3nm,0.7s,baz=144,slow=2.5,SNR=7.6			PKPab	**PKPab**	01 19 21.7	**+1.0**
LPAZ	**La Paz**	**159.50 236**			**PKPdf**	01 18 42.4	**-0.4**
LPAZ					**PKPab**	01 19 21.1	**+0.4**
LPAZ	**La Paz**	**159.50 236**		*e*P	**PKPdf**	01 18 40.2	**-2.6**

GCG ***13*** *01:04:08.7±2.6, 16°.42N×93°.82W, h121km±37km, MD4.7, Presumed earthquake*

MEX ***13*** *01:04:10.0±1.2, 16°.49N×93°.80W, h141km±10km, MD4.3*

ISC 13 01:04:07.6±1.3, 16°.50N±0°.05×93°.81W±0°.04, h143km±9km, n38, σ2s44/65, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**0.27**	**201**	*e*P	**Pn**	01 04 28.2	**+0.9**
CARR				*e*S	**Sn**	01 04 42.4	**+0.2**
TGIG		**0.72**	**67**	*e*P	**Pn**	01 04 30.4	**+0.8**
TGIG				*e*S	**Sn**	01 04 45.3	**-0.9**
TGIG		**0.72**	**67**	*i*P	**Pn**	01 04 30.0	**+0.4**
TGIG				*i*S	**Sn**	01 04 43.8	**-2.4**
CMIG	**Matias Romero**	**1.18**	**300**	*e*P	**Pn**	01 04 35.1	**+1.6**
CMIG				*e*S	**Sn**	01 04 53.8	**+0.7**
PAVE	**Pavencul**	**2.04**	**129**	*e*P	**Pn**	01 04 44.0	**+1.0**
PAVE				*e*S	**Sn**	01 05 11.0	**+0.9**
PATR	**El Naranjo**	**2.05**	**132**	*e*P	**Pn**	01 04 44.0	**+0.8**
PATR				*e*S	**Sn**	01 05 09.9	**-0.5**
CHUJ	**Union Juarez**	**2.15**	**130**	*e*P	**Pn**	01 04 45.2	**+0.8**
CHUJ				*e*S	**Sn**	01 05 11.8	**-0.8**
THIG		**2.17**	**137**	*e*S	**Sn**	01 05 14.2	**+1.5**
NEUV	**Arroyo Zacate**	**2.25**	**303**	*e*P	**Pn**	01 04 47.1	**+1.8**
NEUV				*e*S	**Sn**	01 05 14.5	**+0.1**
HUIG	**Huatulco**	**2.32**	**252**	*e*P	**Pn**	01 04 45.9	**-0.4**
HUIG				*e*S	**Sn**	01 05 13.4	**-2.5**
HUIG	**Huatulco**	**2.32**	**252**	*i*P	**Pn**	01 04 45.8	**-0.4**
PMUV	**Sontecomapan**	**2.39**	**329**	*e*P	**Pn**	01 04 47.4	**+0.3**
PMUV				*e*S	**Sn**	01 05 12.5	**-5.0**
HUEH	**Huehuetenango**	**2.51**	**118**	*e*P	**Pn**	01 04 50.5	**+1.7**
HUEH				*e*S	**Sn**	01 05 13.6	**-6.8**
OXLC	**Oaxaca**	**2.83**	**282**	*e*S	**Sn**	01 05 25.7	**-1.7**
RTAL	**Retalhuleu**	**2.83**	**134**	*e*P	**Pn**	01 04 54.1	**+1.5**
RTAL				*e*S	**Sn**	01 05 28.6	**+1.3**
OXBJ	**Oaxaca**	**2.85**	**282**	*e*S	**Sn**	01 05 24.2	**-3.7**
VHO	**Vista Hermosa**	**2.86**	**282**	*e*P	**Pn**	01 04 56.1	**+3.0**
VHO				*e*S	**Sn**	01 05 29.0	**+0.9**
STG8	**El Palmar, Qui**	**3.13**	**130**	*i*P	Pn	01 04 52.3	-4.3
STG5	**El Palmar, Qui**	**3.16**	**131**	*i*P	Pn	01 04 52.8	-4.1
STG5				*i*S	Sn	01 05 25.6	-9.3
PEIG	**Puerto Escondi**	**3.24**	**262**	*e*P	**Pn**	01 04 57.9	**0.0**
PEIG				*e*S	**Sn**	01 05 33.7	**-3.0**
TOIG	**Toxpalan**	**3.49**	**298**	*e*P	**Pn**	01 05 03.4	**+2.3**
TOIG				*e*S	**Sn**	01 05 43.0	**+0.4**
APG	**El Apazote**	**3.55**	**114**	*i*P	**Pn**	01 05 01.8	**-0.2**
YOIG	**Yosondua**	**3.60**	**276**	*e*P	**Pn**	01 05 05.5	**+2.8**
YOIG				*e*S	**Sn**	01 05 40.9	**-4.4**
TXIG	**Tlaxiaco**	**3.86**	**282**	*e*P	**Pn**	01 05 09.3	**+3.2**
TXIG				*e*S	**Sn**	01 05 50.8	**-0.7**
TPIG	**Tehuac#an**	**3.89**	**300**	*e*P	**Pn**	01 05 09.6	**+3.2**
TPIG				*e*S	**Sn**	01 05 50.5	**-1.5**
JAUV	**Jalcomulco**	**4.03**	**315**	*e*P	**Pn**	01 05 08.9	**+0.8**
JAUV				*e*S	**Sn**	01 05 54.1	**-1.1**
HLIG	**Huajuapan de L**	**4.04**	**290**	*e*P	**Pn**	01 05 11.8	**+3.4**
HLIG				*e*S	**Sn**	01 05 55.0	**-0.6**
LVIG	**Laguna Verde**	**4.05**	**323**	*e*P	**Pn**	01 05 08.5	**+0.1**
LVIG				*e*S	**Sn**	01 05 52.2	**-3.4**
FTIG	**Fresnillo de T**	**4.36**	**289**	*e*S	**Sn**	01 05 58.8	**-4.2**
TLIG	**Tlapa**	**4.67**	**284**	*e*P	**Pn**	01 05 19.6	**+2.9**
TLIG				*e*S	**Sn**	01 06 09.5	**-0.9**
CRIG	**Cruz Grande**	**5.11**	**273**	*e*P	**Pn**	01 05 23.5	**+1.2**
CRIG				*e*S	**Sn**	01 06 16.5	**-4.1**
CXUV	**Coxquihui**	**5.12**	**316**	*e*P	**Pn**	01 05 24.2	**+1.7**
CXUV				*e*S	**Sn**	01 06 21.8	**+0.8**
YAIG	**Yautepec**	**5.53**	**296**	*e*P	**Pn**	01 05 32.8	**+4.6**
YAIG				*e*S	**Sn**	01 06 30.5	**-0.6**
DAIG	**Los Arroyos**	**5.62**	**276**	*e*S	**Sn**	01 06 30.9	**-2.0**
MEIG	**Mezcala**	**5.73**	**285**	*e*P	**Pn**	01 05 33.7	**+3.0**
MEIG				*e*S	**Sn**	01 06 31.9	**-3.7**
PLIG	**Platanillo**	**5.75**	**290**	*e*P	**Pn**	01 05 34.6	**+3.6**
PLIG				*e*S	**Sn**	01 06 33.4	**-2.8**
CAIG	**El Cayaco**	**6.21**	**276**	*e*P	**Pn**	01 05 39.3	**+2.3**
CAIG				*e*S	**Sn**	01 06 45.5	**-1.5**
ARIG	**Puente Sto Nin**	**6.49**	**287**	*e*P	**Pn**	01 05 44.2	**+3.4**
ARIG				*e*S	**Sn**	01 06 52.2	**-1.6**

IDC ***13*** *01:20:32.6±3.5, 27°.72N×57°.54E, h0km, mb3.4/3, mbtmp3.4/3, MS4.0/1, Error ellipse: s-maj=89.4km s-min=37.4km az=151.0*

OMAN ***13*** *01:20:36.1±1.1, 28°.12N×57°.95E, h10km, ml3.3/14, Error ellipse: s-maj=12.6km s-min=8.0km az=140.0*

TEH ***13*** *01:20:37.8, 28°.21N×57°.40E, h5km, ML3.3, Presumed earthquake*

DSN ***13*** *01:20:40.2±2.7, 27°.69N×58°.14E, h10km, ML2.8/8, Error ellipse: s-maj=54.5km s-min=16.5km az=152.0*

ISC 13 01:20:38.1±0.7, 28°.18N±0°.03×57°.46E±0°.06, h10km, n42, σ1s82/48, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.32**	**137**	Pg	**Pg**	01 20 45.6	**+1.1**
KHNJ				Sg	**Sg**	01 20 51.7	**+3.0**
IBND	**Bandar-abas**	**1.09**	**228**	Pg	**Pg**	01 20 59.5	**+0.3**
KBAM	**BAM**	**1.29**	**42**	Pg	**Pg**	01 21 02.3	**-0.6**
GENO	**Geno**	**1.38**	**236**	Pg	**Pn**	01 21 03.7	**0.0**
NGRK	**Negar Kerman**	**1.59**	**336**	Pg	**Pn**	01 21 06.5	**-0.2**
CHMN	**Cheshme madani**	**1.68**	**2**	Pg	**Pb**	01 21 09.0	**-0.3**
KRBR	**Kerman**	**1.90**	**341**	Pn	**Pb**	01 21 12.7	**-0.3**
KRM1	**Kerman Provinc**	**2.32**	**356**	Pn	**Pb**	01 21 19.2	**-1.0**
SHME	**Shamm**	**2.43**	**209**	P	**Pn**	01 21 20.3	**+2.5**
SHME				S	**Sn**	01 21 50.3	**+2.7**
SHME	**Shamm** SNR=9.0	**2.43**	**209**	P	**Pn**	01 21 18.4	**+0.6**
SHME				S	**Sb**	01 21 52.8	**+1.0**
BANOM	**Banah**	**2.48**	**205**	P	**Pn**	01 21 19.6	**+1.1**
BANOM	**Banah**	**2.48**	**205**	P	**Pn**	01 21 18.8	**+0.2**
BANOM				S	**Sn**	01 21 53.3	**+2.4**
MASF	**Masafi**	**3.03**	**203**	P	**Pn**	01 21 26.2	**0.0**
MASF				S	**Sn**	01 22 05.3	**+2.7**
MSFE	**Esma-Masafi**	**3.04**	**203**	P	**Pn**	01 21 27.3	**+1.0**
MDH	**Madha**	**3.05**	**200**	P	**Pn**	01 21 24.8	**-1.6**
MDH	**Madha**	**3.05**	**200**	P	**Pn**	01 21 25.6	**-0.9**
UOSS	**Minazif**	**3.41**	**200**	P	**Pn**	01 21 31.5	**+0.1**
UOSS	**Minazif**	**3.41**	**200**	P	**Pn**	01 21 31.0	**-0.4**
UOSS				S	**Sn**	01 22 13.7	**+1.8**
HATD	**Hatta, Dubai**	**3.55**	**200**	P	**Pn**	01 21 34.1	**+0.8**
HATD	**Hatta, Dubai**	**3.55**	**200**	P	**Pn**	01 21 30.6	**-2.6**
ASHO	**Ashiyiah**	**3.70**	**200**	P	**Pn**	01 21 35.5	**+0.1**
ASHO	**Ashiyiah**	**3.70**	**200**	P	**Pn**	01 21 35.5	**+0.1**
IBAF	**Bafgh**	**3.77**	**335**	Pn	**Pn**	01 21 38.9	**+2.4**
FAQ	**Al Faqa, Dubai**	**3.81**	**207**	P	**Pn**	01 21 38.5	**+1.6**
NHDN	**Nehbandan**	**3.91**	**34**	Pn	**Pn**	01 21 41.4	**+3.1**
ASUD	**Al Ashush, Dub**	**4.02**	**209**	P	**Pn**	01 21 40.3	**+0.5**
BSRN	**Basiran**	**4.04**	**21**	Pn	**Pn**	01 21 41.0	**+2.9**
IMEH	**Meriz**	**4.04**	**323**	Pn	**Pn**	01 21 42.4	**+2.1**
SOHO	**SOHO**	**4.12**	**192**	P	**Pn**	01 21 39.7	**-1.4**
AJN	**Ajban** SNR=6.3	**4.23**	**212**	P	**Pn**	01 21 42.7	**0.0**
HOQ	**Hoqain**	**4.58**	**182**	P	**Pn**	01 21 45.4	**-2.1**
HOQ				S	**Sn**	01 22 39.1	**-1.7**
ARQ	**Araqi**	**4.90**	**190**	P	**Pn**	01 21 50.6	**-1.3**
WSAR	**Wadi Sarin**	**5.03**	**168**	P	**Pn**	01 21 51.7	**-2.0**
SMDO	**Samad**	**5.13**	**174**	P	**Pn**	01 21 52.1	**-3.0**
AFRZ	**Afriz**	**5.39**	**14**	Pn	**Pn**	01 22 01.4	**+2.6**
BSY	**Bisya**	**5.42**	**183**	P	**Pn**	01 21 56.9	**-2.1**
WBK	**Wadi Bani Khal** SNR=8.9	**5.71**	**166**	P	**Pn**	01 22 00.7	**-2.4**
KLNJ	**Kolanjah**	**5.84**	**300**	Pn	**Pn**	01 22 07.6	**+2.6**
BRTR	**Keskin Array B** 0.1nm,0.4s,baz=129,slow=11,SNR=2.1 0.1nm,0.4s	**22.80**	**306**	P	**P**	01 25 40.6	**-0.5**
BELG	**Belogornoye** comp=Z,304nm,19.4s,baz=98,slow=45	**25.27**	**346**	LR	LR	01 39 52.0	
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=231,slow=9.8,SNR=2.8 0.5nm,0.3s	**32.61**	**30**	P	**P**	01 27 08.9	**-0.8**
TORD	**Torodi Ar. Bea** 0.2nm,0.3s,baz=61,slow=7.5,SNR=6.1 0.2nm,0.3s	**53.85**	**266**	P	**P**	01 29 58.0	**-3.7**

IDC ***13*** *01:27:59.5±0.6, 44°.30N×80°.86E, h0km, mb3.7/15, mbtmp3.9/25, ML3.9/10, MS4.0/11, Error ellipse: s-maj=11.3km s-min=7.7km az=136.0*

MOS ***13*** *01:28:00.4±1.1, 44°.42N×80°.83E, h13km, mb4.4/13, Error ellipse: s-maj=5.7km s-min=4.2km az=58.3*

NEIC ***13*** *01:28:01.8±2.2, 44°.35N±0°.04×80°.84E±0°.08, h10km±1km, mb4.5/38, Error ellipse: s-maj=10.7km s-min=5.9km az=120.0*

NNC ***13*** *01:28:02.4±0.8, 44°.41N×80°.72E, h7km±5km, mb4.9, mpv4.8, Error ellipse: s-maj=6.2km s-min=3.2km az=115.0*

SOME ***13*** *01:28:02.7, 44°.37N×80°.70E, h15km*

BJI ***13*** *01:28:03.1, 44°.40N×80°.79E, h20km, mB4.8/15, mb4.5/32, ML5.2/11, Ms4.5/32, Ms7 4.2/26*

GFZ ***13*** *01:28:06.1±0.4, 44°.N±3°.×8°.1E±°, h43km±6km, M4.5/6, mb4.2/3, Error ellipse: s-maj=9.2km s-min=6.7km az=118.3, confirmed*

ISC 13 01:28:01.5±0.7, 44°.41N±0°.02×80°.84E±0°.02, h11km±4km, n257, σ1s69/298, mb4.4/56, MS4.1/21, 18C-8D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent** 5μm,0.2s	**0.76**	**265**	P	**Pg**	01 28 16.3	**+0.1**
DJR	3μm,0.3s			S	**Sg**	01 28 26.1	**+0.1**
DJR	**Jarkent** 5μm,0.2s	**0.76**	**265**	*e*P	**Pg**	01 28 16.3	**+0.1**
DJR	2μm,0.2s			*e*S	**Sg**	01 28 26.1	**+0.1**
KAPS	**Kapalarasan** 1μm,0.2s	**1.38**	**310**	P	**Pb**	01 28 27.2	**-0.1**
KAPS	8μm,0.2s			S	**Sb**	01 28 44.7	**-0.2**
KAPS	**Kapalarasan** 1μm,0.3s	**1.38**	**310**	*e*P	**Pb**	01 28 27.2	**-0.1**
KAPS	8μm,0.3s			*e*S	**Sb**	01 28 44.7	**-0.2**
PDGK	**Podgornoye** 874nm,0.5s	**1.45**	**223**	⇑P	**Pn**	01 28 28.2	**+0.3**
PDGK	20μm,0.9s			⇓S	**Sb**	01 28 47.2	**0.0**
PDGK	**Podgornoye**	**1.45**	**223**	PG	**Pn**	01 28 28.1	**+0.3**
PDGK					Sn	01 28 46.6	-0.4
SHLS	**Shalkode** 2μm,0.2s	**1.60**	**219**	P	**Pn**	01 28 28.1	**-1.8**
SHLS	21μm,0.5s			S	**Sn**	01 28 46.8	**-3.8**
SHLS	**Shalkode**	**1.60**	**219**	*e*PG	**Pn**	01 28 28.0	**-1.9**
SHLS				*e*S	**Sn**	01 28 46.9	**-3.7**
SHLS	**Shalkode**	**1.60**	**219**	*e*P	**Pn**	01 28 28.1	**-1.8**
SHLS				*e*S	**Sn**	01 28 46.9	**-3.7**
SHLS	**Shalkode** 1μm,0.2s	**1.60**	**219**	*e*P	**Pn**	01 28 28.1	**-1.8**
SHLS	16μm,0.3s			*e*S	**Sn**	01 28 46.8	**-3.8**
UZB	**Uzynbulak** 1μm,0.5s	**1.82**	**227**	P	**Pb**	01 28 34.1	**-0.9**
UZB	6μm,0.2s			S	**Sb**	01 28 57.3	**-0.6**
UZB	**Uzynbulak**	**1.82**	**227**	*e*PN	**Pn**	01 28 33.6	**+0.7**
UZB				*e*S	**Sb**	01 28 57.2	**-0.6**
UZB	**Uzynbulak**	**1.82**	**227**	*e*P	**Pn**	01 28 33.7	**+0.7**
UZB				*e*S	**Sb**	01 28 57.2	**-0.6**
UZB	**Uzynbulak** 932nm,0.2s	**1.82**	**227**	*e*P	**Pb**	01 28 34.1	**-0.9**
UZB	5μm,0.2s			*e*S	**Sn**	01 28 56.7	**+0.6**
TDK	**Taldyqorghan** 3μm,0.4s	**1.84**	**290**	P	**Pb**	01 28 34.8	**-0.4**
TDK	7μm,0.2s			S	**Sb**	01 28 57.6	**-0.6**
TDK	**Taldyqorghan**	**1.84**	**290**	*e*PN	**Pb**	01 28 34.1	**-1.0**
TDK	**Taldyqorghan**	**1.84**	**290**	*e*P	**Pb**	01 28 34.2	**-1.0**
TDK	**Taldyqorghan** 1μm,0.2s	**1.84**	**290**	*e*P	**Pb**	01 28 34.8	**-0.4**
TDK	7μm,0.4s			*e*S	**Sb**	01 28 57.6	**-0.6**
KURS	**Kuram** 472nm,0.3s	**2.14**	**246**	Pg	**Pb**	01 28 39.1	**-1.1**
KURS	1μm,0.2s			Lg	Lg	01 29 05.3	
KURS	**Kuram** 286nm,0.4s	**2.14**	**246**	*e*P	**Pb**	01 28 39.1	**-1.1**
KURS	1μm,0.3s			*e*S	**Sb**	01 29 05.3	**-1.5**
SATY	**Saty** 1μm,0.1s	**2.22**	**234**	Pg	**Pb**	01 28 40.5	**-1.2**
SATY	10μm,0.2s			Lg	Lg	01 29 07.9	
SATY	**Saty**	**2.22**	**234**	*e*PN	**Pn**	01 28 39.3	**+0.9**
SATY	**Saty**	**2.22**	**234**	*e*P	**Pn**	01 28 39.4	**+0.9**
SATY	**Saty** 1μm,0.2s	**2.22**	**234**	*e*P	**Pb**	01 28 40.5	**-1.2**
SATY	10μm,0.3s			*e*S	**Sb**	01 29 07.9	**-1.4**
MAKZ	**Makanchi**	**2.53**	**18**	Pn	**Pn**	01 28 44.3	**+1.7**
MAKZ					Sn	01 29 14.3	**+0.8**
MAKZ	**Makanchi**	**2.53**	**18**	P	**Pn**	01 28 44.9	**+2.3**
MK31	**Makanchi Array** 5.3nm,0.3s,baz=205,slow=13,SNR=4240	**2.60**	**23**	Pn	**Pn**	01 28 45.8	**+2.3**
MK31	7.6nm,0.2s,baz=205,slow=16,SNR=29			⇑Pg	**Pg**	01 28 51.1	**-0.1**
MK31	155nm,0.5s,baz=198,slow=25,SNR=10			⇑Sn	**Sn**	01 29 16.3	**+1.2**
MK31	838nm,0.7s			⇑Lg	Lg	01 29 24.9	
MK31	**Makanchi Array**	**2.60**	**23**	PN	**Pn**	01 28 45.8	**+2.3**
MK31						01 29 18.9	
MK31	**Makanchi Array**	**2.60**	**23**	Pn	**Pb**	01 28 46.0	**-2.0**
MKAR	**Makanchi Array** 23nm,0.3s,baz=206,slow=13,SNR=535	**2.60**	**23**	Pn	**Pn**	01 28 45.7	**+2.2**
MKAR	257nm,0.3s,baz=204,slow=24,SNR=21			Sn	**Sb**	01 29 18.6	**-1.5**
MKAR	389nm,0.3s,baz=201,slow=32,SNR=8.0 36nm,0.3s			Lg	Lg	01 29 24.4	
PRZ	**Przheval'sk**	**2.62**	**224**	PN	**Pn**	01 28 43.3	**-0.6**
PRZ	**Przheval'sk**	**2.62**	**224**	Pn	**Pn**	01 28 43.3	**-0.6**
PRZ	**Przheval'sk**	**2.62**	**224**	P	**Pn**	01 28 45.9	**+2.0**
ANVS	**Anan'yevo**	**2.82**	**236**	P	**Pn**	01 28 48.9	**+2.2**
MDOK	**Medeo** 1μm,0.4s	**3.02**	**247**	Pg	**Pb**	01 28 54.0	**-1.3**
MDOK	908nm,0.3s			Lg	Lg	01 29 30.6	
MDOK	**Medeo**	**3.02**	**247**	*e*PN

41nm,0.3s,baz=199,slow=22,SNR=8.4
9.3nm,0.4s
AAK Ala-Archa 4.94 251 P **Pn** **01 29 16.9 +1.1**
SNR=12
AAK Ala-Archa 4.94 251 ⇑Pn **Pn** **01 29 17.0 +1.1**
4.2nm,0.5s
AAK ⇑Pg **Pb** **01 29 29.5 +1.3**
29nm,0.4s
AAK ⇑Lg Lg 01 30 36.9
76nm,0.4s
AAK Ala-Archa 4.94 251 Pn **Pn** **01 29 16.4 +0.5**
AAK Ala-Archa 4.94 251 P **Pn** **01 29 17.0 +1.1**
WMQ Urumqi 4.97 94 Pn **Pn** **01 29 19.1 +3.0**
WMQ Sn **Sn** **01 30 15.7 +2.1**
WMQ SMN
4μm,0.5s
WMQ SME
6μm,0.7s
UCH Uchtor 5.10 247 P **Pn** **01 29 20.4 +2.0**
SNR=15
EKS2 Erkin-Say 5.42 254 P **Pn** **01 29 23.5 +1.0**
SNR=14
MRKS Merke 5.78 256 Pg **Pb** **01 29 46.5 +4.2**
109nm,0.3s
MRKS Lg Lg 01 31 00.6
204nm,0.4s
MRKS Merke 5.78 256 *e*P **Pb** **01 29 46.5 +4.2**
84nm,0.3s
MRKS *e*S **Sg** **01 31 00.6 -6.3**
204nm,0.6s
SEM Semipalatinsk 6.02 356 Pg **Pg** **01 29 54.4 -2.3**
62nm,0.6s
SEM Lg Lg 01 31 14.0
205nm,0.4s
SEM Semipalatinsk 6.02 356 *e*P **Pg** **01 29 54.4 -2.3**
37nm,0.4s
SEM *e*S **Sg** **01 31 14.0 -0.7**
230nm,0.4s
KURBB Kurchatov Arra 6.42 347 Pn **Pn** **01 29 36.8 +0.9**
0.8nm,0.3s,baz=184,slow=12,SNR=56
KURBB Sn **Sn** **01 30 47.4 -1.6**
3.9nm,0.3s,baz=162,slow=22,SNR=5.5
KURBB Lg Lg 01 31 24.1
7.5nm,0.3s,baz=35,slow=12,SNR=6.3
2.7nm,0.2s
KURBB Kurchatov Arra 6.42 347 ⇑Pn **Pn** **01 29 36.8 +0.9**
3.8nm,0.3s
KURBB ⇓Pg Pg 01 29 59.0 -5.2
24nm,0.4s
KURBB ⇑Sn **Sn** **01 30 50.6 +1.5**
141nm,0.7s
KURBB ⇑Lg Lg 01 31 26.0
701nm,0.8s
KURK Kurchatov 6.49 347 ⇓Pn **Pn** **01 29 37.9 +0.9**
1.9nm,0.5s
KURK ⇑Pg Pg 01 30 00.4 -5.3
9.2nm,0.7s
KURK ⇑Sn **Sn** **01 30 50.6 -0.3**
57nm,0.8s
KURK ⇓Lg Lg 01 31 29.1
564nm,0.9s
KURK Kurchatov 6.49 347 *i* PN **Pn** **01 29 37.5 +0.6**
KURK Kurchatov 6.49 347 Pn **Pn** **01 29 37.3 +0.3**
KURK Kurchatov 6.49 347 P **Pn** **01 29 38.0 +1.1**
ARSB Arslanbob 6.54 245 PN **Pn** **01 29 38.7 +0.8**
ARSB Arslanbob 6.54 245 Pn **Pn** **01 29 38.7 +0.8**
KSH2 Kashi 6.57 219 Pn **Pn** **01 29 40.5 +2.3**
KSH2 Sn **Sn** **01 30 55.3 +2.1**
KSH2 SMN
430nm,1.3s
KSH2 SME
330nm,1.6s
DGZ Jazzator, Alta 6.95 38 *i* PN **Pn** **01 29 45.1 +1.7**
ARK Arkit 7.00 251 P **Pn** **01 29 45.3 +1.2**
KK31 Karatay Array 7.59 264 Pn **Pn** **01 29 52.5 +0.4**
0.6nm,0.2s,baz=75,slow=12,SNR=46
KK31 ⇓Pg Pb 01 30 19.5 +6.3
18nm,0.5s,baz=86,slow=20,SNR=4.4
KK31 Lg Lg 01 32 00.4
72nm,0.5s,baz=76,slow=26,SNR=6.9
KK31 Karatay Array 7.59 264 P **Pn** **01 29 52.5 +0.4**
KK31 Karatay Array 7.59 264 Pn **Pn** **01 29 52.1 0.0**
KKAR Karatay Array 7.59 264 P **Pn** **01 29 51.8 -0.3**
KKAR Karatay Array 7.59 264 Pn **Pn** **01 29 51.8 -0.3**
BRLS Borolday 8.09 264 *e*P **Pn** **01 30 02.3 +3.3**
BRLS Borolday 8.09 264 *e*P **Pn** **01 30 02.3 +3.3**
CHM Chimkent 8.45 260 *e*P **Pn** **01 30 04.8 +0.9**
CHM Chimkent 8.45 260 *e*P **Pn** **01 30 04.8 +0.9**
BTK Batken 8.61 243 P **Pn** **01 30 06.9 +0.8**
BTK Batken 8.61 243 Pn **Pn** **01 30 06.9 +0.8**
GAR Garm 9.54 239 Pn **Pn** **01 30 19.4 +0.4**
GAR Garm 9.54 239 P **Pn** **01 30 21.2 +2.3**
MANEM Manem 9.74 228 Pn **Pn** **01 30 22.6 +0.7**
ZAA0 Zalesovo Array 9.90 14 Pn **Pn** **01 30 23.3 -0.3**
ZALV Zalesovo Beam 9.90 14 Pn **Pn** **01 30 24.3 +0.6**
2.9nm,0.3s,baz=196,slow=13,SNR=32
ZALV Sn **Sn** **01 32 11.9 -2.8**
4.2nm,0.3s,baz=201,slow=19,SNR=3.8
ZALV Lg Lg 01 33 09.6
5.2nm,0.3s,baz=194,slow=23,SNR=3.6
ZALV LR LR 01 34 27.4
comp=Z,842nm,19.5s,baz=201,slow=39
6.4nm,0.4s
ZALV Zalesovo Beam 9.90 14 Pn **Pn** **01 30 23.9 +0.3**
CHGR Chuyangaron 10.47 241 *i* P **Pn** **01 30 31.8 +0.2**
CHGR pmax pmax
comp=Z,8.0nm,0.9s
CHGR Chuyangaron 10.47 241 Pn **Pn** **01 30 31.3 -0.3**
CHGR Chuyangaron 10.47 241 P **Pn** **01 30 32.9 +1.3**
BVA0 Borovoye Array 11.04 325 P **Pn** **01 30 39.4 +0.2**
comp=Z,0.1nm,1.4s,baz=137,slow=13,SNR=28
BVA0 Borovoye Array 11.04 325 *i* P **Pn** **01 30 39.4 +0.2**
BVAR Borovoye Array 11.04 325 Pn **Pn** **01 30 39.0 -0.2**
comp=Z,0.2nm,0.3s,baz=134,slow=13,SNR=21
BVAR Sn **Sn** **01 32 36.6 -6.0**
comp=Z,0.5nm,0.3s,baz=133,slow=23,SNR=2.5
BVAR Lg Lg 01 33 45.2
comp=Z,1.2nm,0.3s,baz=137,slow=26,SNR=8.0
comp=Z,2.2nm,0.3s
BORK Borovoye 11.08 325 P **Pn** **01 30 39.1 -0.8**
BORK Borovoye 11.08 325 Pn **Pn** **01 30 39.1 -0.8**
SHAA Shahritus 11.79 239 Pn **Pn** **01 30 48.8 -0.9**
NIL Nilore 12.25 211 P **Pn** **01 30 56.6 +0.7**
NIL Nilore 12.25 211 Pn **Pn** **01 30 56.6 +0.7**
KNGR Kungurtug, Tuv 12.85 55 *i* P **Pn** **01 31 04.9 +0.7**
KNGR pmax pmax
comp=Z,20nm,1.0s
GOMU GeErMu 13.44 123 Pn **Pn** **01 31 10.7 -1.7**
GOMU Pg 01 32 33.5
GOMU Sn **Sn** **01 33 41.6 -0.4**
GOMU Sg 01 35 08.9
GTA2 Gaotai 14.90 103 *e*P **Pn** **01 31 31.0 -1.2**
GTA2 pmax pmax
comp=Z,3.0nm,0.9s
GTA2 L L
comp=Z,540nm,10.2s
GTA2 L L
comp=Z,700nm,9.8s
GTA2 L L
comp=Z,610nm,10.5s
AB31 Akbulak array 15.09 296 P **Pn** **01 31 33.6 -1.0**
comp=Z,7.2nm,0.7s,baz=127,slow=9.8,SNR=74
AB31 Akbulak array 15.09 296 *i* P **Pn** **01 31 30.4 -4.1**
AB31 Akbulak array 15.09 296 Pn **Pn** **01 31 31.4 -3.1**
AB31 IAmb IAmb 01 31 39.9
comp=Z,9.2nm,0.7s
ABKAR Akbulak array 15.09 296 Pn **Pn** **01 31 31.2 -3.4**
MOY Mondy 15.28 54 *e*P **Pn** **01 31 38.4 +1.2**
MOY pmax pmax
comp=Z,25nm,2.0s
ZAK Zakamensk 16.30 61 *e*P **Pn** **01 31 50.0 -0.3**
ZAK pmax pmax
comp=Z,22nm,1.8s
AKTO Aktyubinsk 16.55 299 Pn **Pn** **01 31 51.1 -2.3**
comp=Z,0.4nm,0.3s,baz=107,slow=8.0,SNR=9.0
AKTO Sn Sn 01 34 44.9 -12
comp=Z,0.7nm,0.3s,baz=11,slow=5.2,SNR=1.7
AKTO Lg Lg 01 36 39.4
comp=Z,0.2nm,0.3s,baz=49,slow=15,SNR=3.6
AKTO LR LR 01 38 27.1
comp=Z,860nm,19.1s,baz=128,slow=38
comp=Z,2.7nm,0.5s
AKTO Aktyubinsk 16.55 299 ⇑P **Pn** **01 31 52.4 -1.0**
comp=Z,9.5nm,1.1s
LSA Lhasa 16.80 147 P **Pn** **01 31 56.3 -0.9**
LSA pmax pmax
comp=Z,14nm,0.8s
LSA Lhasa 16.80 147 Pn **Pn** **01 31 56.3 -0.9**
LSA Lhasa 16.80 147 P **Pn** **01 31 57.4 +0.2**
TLY Talaya 16.85 56 Pn **Pn** **01 31 57.8 +0.5**
comp=Z,0.6nm,0.3s,baz=209,slow=8.4,SNR=1.8
TLY Lg Lg 01 36 46.6
comp=Z,0.9nm,0.3s,baz=349,slow=22,SNR=3.5
TLY LR LR 01 38 37.7
comp=Z,447nm,19.0s,baz=245,slow=38
comp=Z,3.0nm,0.2s
TLY Talaya 16.85 56 Pn **Pn** **01 31 56.7 -0.6**
EVN Everest 17.10 162 Pn **Pn** **01 32 00.2 -1.0**
EVN IAmb IAmb 01 32 06.7
comp=Z,28nm,0.8s
EVN Everest 17.10 162 P **Pn** **01 32 01.1 0.0**
HRA Herat 17.48 241 **Pn** **01 32 05.8 +0.4**
SVE Sverdlovsk 17.77 322 *e*P **P** **01 32 11.9 +2.4**
SONM Songino Array 18.02 70 P **Pn** **01 32 11.9 0.0**
comp=Z,1.3nm,0.3s,baz=273,slow=10,SNR=33
SONM Lg Lg 01 37 20.1
comp=Z,0.2nm,0.3s,baz=264,slow=26,SNR=5.1
SONM LR LR 01 40 25.0
comp=Z,506nm,19.3s,baz=264,slow=41
comp=Z,8.7nm,0.6s
SONM Songino Array 18.02 70 **Pn** **01 32 11.5 -0.4**
ULN Ulaanbaatar 18.46 70 *ce*P **Pn** **01 32 17.7 +0.3**
ULN pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 18.46 70 P **P** **01 32 15.8 -1.4**
ULN Ulaanbaatar 18.46 70 P **Pn** **01 32 17.9 +0.5**
ARTI Arti 18.57 318 P **Pn** **01 32 18.9 +0.4**
comp=Z,0.3nm,0.3s,baz=124,slow=11,SNR=5.9
ARTI Lg Lg 01 37 42.1
comp=Z,0.2nm,0.3s,baz=72,slow=11,SNR=3.7
comp=Z,1.7nm,0.6s
ARTI Arti 18.57 318 P **Pn** **01 32 19.5 +1.0**
ARTI S **Sn** **01 35 46.8 +0.9**
ARTI MLR MLR
comp=Z,540nm,17.0s
ARTI Arti 18.57 318 P **P** **01 32 17.6 -0.7**
LZDM Lanzhou Array 19.35 108 P **P** **01 32 27.3 0.0**
baz=311,slow=9.6
comp=Z,3.2nm,0.4s
SHL Shillong 20.82 151 P **P** **01 32 42.8 -0.4**
SHL pmax pmax
comp=Z,76nm,1.3s
SHL Shillong 20.82 151 P **P** **01 32 42.8 -0.4**
BTO2 Baotou 21.64 90 *e*P **P** **01 32 52.8 +0.9**
BTO2 PP **PnPn** **01 33 17.2 +4.8**
BTO2 S **S** **01 36 47.8 -3.7**
BTO2 pmax pmax
comp=Z,66nm,1.1s
BTO2 pmax pmax
comp=Z,290nm,6.0s
BTO2 L L
comp=Z,870nm,13.0s
BTO2 L L
comp=Z,950nm,13.6s
BTO2 L L
comp=Z,1μm,17.1s
HHC Hu-ho-hao-te 22.81 88 *e*P **P** **01 33 06.7 +2.3**
HHC S **S** **01 37 12.0 -1.6**
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,140nm,5.9s
HHC L L
comp=Z,500nm,14.3s
HHC L L
comp=Z,390nm,13.5s
HHC L L
comp=Z,480nm,14.8s
KIRV Kirov 23.88 318 *i* P **P** **01 33 15.1 +0.3**
XAN Xi'an 23.98 106 P **P** **01 33 16.7 +0.6**
XAN S **S** **01 37 34.9 +2.1**
XAN pmax pmax
comp=Z,11nm,0.8s
XAN pmax pmax
comp=Z,220nm,5.3s
XAN L L
comp=Z,660nm,10.3s
XAN L L
comp=Z,420nm,11.7s
XAN L L
comp=Z,600nm,11.0s
MAK Makhachkala 24.06 278 *e*P **P** **01 33 14.2 -2.5**
MAK *e*S **S** **01 37 30.6 -3.2**
MAK pmax pmax
comp=Z,19nm,0.5s
MAK MLR MLR
comp=Z,264nm,14.0s
TNCH TengChong 24.09 138 ⇑P **P** **01 33 19.1 +1.8**
TNCH pP pP 01 33 21.5 +0.6
TNCH PP sP 01 33 51.8 +29
TNCH S **S** **01 37 32.5 -2.3**
TNCH SS **SnSn** **01 38 21.0 +5.4**
TNCH pmax pmax
comp=Z,18nm,1.3s
TNCH pmax pmax
comp=Z,160nm,2.8s
TNCH L L
comp=Z,410nm,9.7s
TNCH L L
comp=Z,200nm,5.1s
TNCH L L
comp=Z,400nm,10.1s
BOD Bodaibo 24.47 45 *e*P **P** **01 33 20.3 0.0**
BOD pmax pmax
comp=Z,18nm,1.2s
PZH PanZhiHua 24.56 130 P **P** **01 33 24.4 +2.9**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH L L
comp=Z,200nm,15.4s
PZH L L
comp=Z,420nm,12.0s
PZH L L
comp=Z,290nm,9.6s
TIY Taiyuan 24.64 95 P **P** **01 33 23.7 +1.6**
TIY L L
comp=Z,440nm,17.2s
TIY L L
comp=Z,370nm,17.9s
TIY L L
comp=Z,630nm,18.5s
XLT XiLinHaoTe 25.17 79 *e*P **P** **01 33 29.0 +2.1**
XLT sP sP 01 33 35.1 +3.2
XLT pmax pmax
comp=Z,7.0nm,0.9s
XLT L L
comp=Z,46nm,10.8s
XLT L L
comp=Z,290nm,10.8s
XLT L L
comp=Z,440nm,12.8s
NRIK Noril'sk 25.23 6 P **P** **01 33 27.6 +0.5**
comp=Z,2.6nm,0.6s,baz=204,slow=2.4,SNR=4.0
comp=Z,2.6nm,0.6s
NRIK Noril'sk 25.23 6 *e*P **P** **01 33 29.5 +2.4**
NRIK pmax pmax
comp=Z,5.0nm,1.1s
NRIK Noril'sk 25.23 6 P **P** **01 33 27.0 -0.1**
NRIK IAmb IAmb 01 34 01.1
comp=Z,17nm,1.2s
LYN LuoYang 26.18 101 P P 01 33 44.6 +8.6
LYN pmax pmax
comp=Z,49nm,0.8s
LYN LR LR
comp=N,920nm,15.3s
LYN LR LR
comp=E,870nm,16.3s
LYN LR LR
comp=Z,1μm,16.1s
KMI2 Kunming 26.18 130 P **P** **01 33 40.0 +3.7**
KMI2 pmax pmax
comp=Z,15nm,0.8s
KMI2 L L
comp=Z,310nm,10.7s
KMI2 L L
comp=Z,380nm,16.3s
BJT Baijiatuau 26.40 87 P **P** **01 33 37.2 -0.7**
BJT pmax pmax
comp=Z,11nm,1.2s
BJT Baijiatuau 26.40 87 P **P** **01 33 37.1 -0.7**
BJT IAmb IAmb 01 33 52.1
comp=Z,11nm,1.2s
HNS HongShan 26.40 94 ⇓P **P** **01 33 44.6 +6.7**
HNS pmax pmax
comp=Z,9.0nm,0.8s
HNS L L
comp=Z,440nm,11.4s
HNS L L
comp=Z,630nm,18.0s
HNS L L
comp=Z,660nm,19.1s
HYB Hyderabad 26.97 185 *e*P **P** **01 33 43.1 -0.1**
HYB *e*S S 01 38 31.9 +11
KBZ Khabaz 27.12 282 LR LR 01 45 15.1
comp=Z,344nm,19.0s,baz=62,slow=38
KBZ Khabaz 27.12 282 *i* P **P** **01 33 44.5 +0.2**
KBZ pmax pmax
comp=Z,4.0nm,1.5s
KIV Kislovodsk 27.21 283 *e*P **P** **01 33 45.0 -0.3**
KIV pmax pmax
comp=Z,3.0nm,1.0s
SHA1 Shidzhatmaz 27.28 282 *i* P **P** **01 33 46.0 -0.1**
KLMR Klimovskoe 29.36 319 *e*P **P** **01 34 05.2 +1.0**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
SOC Sochi 29.38 283 *e*P **P** **01 34 04.9 +0.4**
SOC *e* 01 34 57.8
SOC *e*PPP PPP 01 35 08.1
SOC *e*S **S** **01 38 59.0 +1.0**
SOC *e*SS **SnSn** **01 40 21.2 -2.9**
SOC MLR MLR
comp=Z,296nm,17.0s
MOS Moscow 29.48 308 *e*P **P** **01 34 03.7 -1.6**
MOS *e* 01 34 56.9
MOS *e*S **S** **01 38 58.5 -0.9**
WHN Wuhan 29.75 106 P P 01 34 14.3 +6.4
CMAR Chiang Mai Arr 29.99 144 P **P** **01 34 09.0 -1.1**
comp=Z,1.2nm,0.5s,baz=325,slow=8.6,SNR=8.0
CMAR LR LR 01 47 38.4
comp=Z,73nm,20.6s,baz=335,slow=39
comp=Z,1.2nm,0.5s
CMAR Chiang Mai Arr 29.99 144 *i* P **P** **01 34 10.6 +0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 29.99 144 P **P** **01 34 09.0 -1.1**
OBN Obninsk 30.05 307 LR LR 01 46 29.6
comp=Z,366nm,19.4s,baz=86,slow=37
OBN Obninsk 30.05 307 ⇑*e*P **P** **01 34 11.4 +1.1**
OBN *e**PP **pP** **01 34 14.2 +0.1**
OBN *i* *SP **sP** **01 34 17.2 +1.5**
OBN 01 35 04.0
OBN PPP PPP 01 35 16.0
OBN SSS SSS 01 41 10.0
OBN pmax pmax
comp=Z,8.0nm,1.2s
OBN MLR MLR
comp=Z,331nm,17.0s
DL2 Dalian 30.73 86 *e*P **P** **01 34 19.6 +3.1**
DL2 pmax pmax
comp=Z,40nm,1.2s
ARPR Arapgir-MALATY 31.88 275 P **P** **01 34 26.6 -0.3**
NJ2 Nanjing 32.02 100 *e*P **P** **01 34 28.1 +0.1**
NJ2 pmax pmax
comp=Z,22nm,0.5s
KLR Kul'dur 34.63 64 *ce*P **P** **01 34 51.4 +0.9**
KLR pmax pmax
comp=Z,7.0nm,2.0s
AKASG Malin Array Be 34.80 299 P **P** **01 34 52.3 +0.3**
comp=Z,0.4nm,0.5s,baz=69,slow=8.8,SNR=2.4
comp=Z,0.4nm,0.5s
AKBB Malin Array Si 34.80 299 *i* P **P** **01 34 53.8 +1.8**
AKBB pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 34.97 279 P **P** **01 34 53.8 0.0**
BR131 pmax pmax
comp=Z,3.0nm,1.1s
BR131 Keskin Array S 34.97 279 P **P** **01 34 53.8 0.0**
BRTR Keskin Array B 34.97 279 P **P** **01 34 54.3 +0.5**
comp=Z,0.2nm,0.4s,baz=67,slow=8.6,SNR=5.5
comp=Z,0.2nm,0.4s
QIZ Qiongzhong 35.01 127 P **P** **01 34 54.3 +0.2**
QIZ S **S** **01 40 27.2 +1.1**
QIZ L L
comp=Z,290nm,8.9s
QIZ L L
comp=Z,260nm,8.2s
QIZ L L
comp=Z,310nm,11.7s
RAYN Ar Rayn 35.57 246 P **P** **01 34 58.4 -0.6**
RAYN pmax pmax
comp=Z,3.0nm,0.6s
RAYN Ar Rayn 35.57 246 P **P** **01 34 58.4 -0.6**
RAYN Ar Rayn 35.57 246 P **P** **01 34 59.2 +0.2**
TIXI Tiksi 35.59 24 P **P** **01 34 58.0 -0.5**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 35.59 24 P **P** **01 34 58.0 -0.5**
TIXI IAmb IAmb 01 35 28.2
comp=Z,7.5nm,0.8s
FINES FINESS Array B 35.88 318 P **P** **01 35 01.6 +0.5**
comp=Z,1.3nm,0.9s,baz=116,slow=13,SNR=6.3
comp=Z,1.3nm,0.9s
FINES FINESS Array B 35.88 318 P **P** **01 35 01.5 +0.4**
PALK Pallekele 36.99 180 LR LR 01 50 06.2
comp=Z,163nm,18.5s,baz=55,slow=36
ARCES ARCESS Array B 37.24 331 P **P** **01 35 13.3 +0.7**
comp=Z,0.4nm,0.6s,baz=98,slow=10,SNR=1.5
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 37.24 331 P **P** **01 35 13.3 +0.7**
ARCES IAmb IAmb 01 35 51.0
comp=Z,8.0nm,1.2s
MLR Muntele Rosu 38.23 292 LR LR 01 52 43.5
comp=Z,421nm,20.1s,baz=36,slow=39
SPITS Spitsbergen Ar 41.75 344 P **P** **01 35 52.2 +2.0**
SPITS pmax pmax
comp=Z,12nm,1.1s
HFS Hagfors 42.01 316 P **P** **01 35 53.2 +0.7**
comp=Z,2.4nm,1.0s,baz=130,slow=8.7,SNR=6.0
comp=Z,2.4nm,1.0s
YSS Yuzhno-Sakhali 42.34 64 *i* P **P** **01 35 55.9 +0.6**
YSS pmax pmax
comp=Z,7.0nm,1.4s
NC405 NORSAR Array S 42.81 318 P **P** **01 35 58.2 -0.8**
NC303 NORSAR Array S 42.96 318 P **P** **01 36 02.0 +1.8**
NC303 IAmb IAmb 01 36 17.3
comp=Z,18nm,1.4s
NB2 NORSAR Subarra 43.06 318 P **P** **01 36 03.8 +2.7**
comp=Z,5.8nm,1.2s,baz=80,slow=8.6
NOA NORSAR Array B 43.06 318 P **P** **01 36 01.0 -0.1**
comp=Z,0.3nm,0.6s,baz=80,slow=8.1,SNR=2.1
comp=Z,0.3nm,0.6s
NC204 NORSAR Array S 43.24 318 P **P** **01 36 04.6 +2.0**
NC204 IAmb IAmb 01 36 11.7
comp=Z,7.2nm,1.1s
GERES GERESS Array B 44.97 301 P **P** **01 36 17.5 +0.9**
comp=Z,0.1nm,0.5s,baz=72,slow=7.2,SNR=2.0
comp=Z,0.1nm,0.5s
GERES GERESS Array B 44.97 301 P **P** **01 36 17.4 +0.8**
ATD Arta Tunnel 46.20 237 LR LR 01 58 32.9
comp=Z,5.8nm,19.4s,baz=164,slow=40
WTTA Wattenberg 46.85 299 *i* pP P 01 36 38.5 +6.9
comp=Z,6.2nm,0.9s
WATA Walderalm 46.86 299 *e*pP **P** **01 36 33.0 +1.3**
comp=Z,4.6nm,1.2s
SQTA Sankt Quirin 47.14 299 *i* pP P 01 36 40.7 +6.9
comp=Z,6.3nm,1.0s
MOTA Moosalm 47.15 300 *e*pP P 01 36 39.5 +5.6
comp=Z,8.1nm,1.2s
RETA Reutte 47.31 300 *e*pP **P** **01 36 36.6 +1.6**
comp=Z,4.4nm,1.3s
FETA Feichten 47.52 299 *e*pP P 01 36 42.0 +5.3
comp=Z,5.7nm,1.0s
DAVOX Davos/Dischmat 48.15 299 LR LR 02 00 22.5
comp=Z,139nm,19.0s,baz=71,slow=40
ZCCA Zocca 48.49 296 P **P** **01 36 44.8 +0.6**
EKA Eskdalemuir Ar 52.04 314 P **P** **01 37 12.9 +2.1**
comp=Z,0.3nm,0.5s,baz=76,slow=7.3,SNR=1.5
comp=Z,0.3nm,0.5s
B20K Meade River 58.39 20 P **P** **01 37 57.7 +1.3**
C19K Lookout Ridge 58.40 21 P **P** **01 37 57.5 +0.9**
C19K IAmb IAmb 01 38 02.0
comp=Z,6.2nm,1.3s
KMBO Kilima Mbogo 59.64 233 LR LR 02 07 27.1
comp=Z,76nm,20.2s,baz=102,slow=40
E19K Redstone River 60.18 22 P **P** **01 38 10.4 +1.5**
E19K IAmb IAmb 01 38 33.1
comp=Z,2.6nm,0.8s
G19K Purcell Mounta 61.17 23 P **P** **01 38 17.6 +2.0**

G19K					IAmb	IAmb	01 38 36.4		
	comp=Z,4.0nm,1.2s								
F21K	**Alatna River**	**61.34**	**21**	P	**P**	**P**	**01 38 16.4**	**-0.4**
F21K					IAmb	IAmb	01 38 36.2		
	comp=Z,6.2nm,1.4s								
H19K	**Roundabout Mou**	**61.80**	**23**	P	**P**	**P**	**01 38 21.0**	**+1.2**
H19K					IAmb	IAmb	01 38 59.0		
	comp=Z,7.3nm,1.5s								
K17K	**Iditarod**	**63.29**	**26**	P	**P**	**P**	**01 38 31.0**	**+1.2**
L16K	**Owhat River**	**63.64**	**28**	P	**P**	**P**	**01 38 33.0**	**+0.8**
L16K					IAmb	IAmb	01 38 57.5		
	comp=Z,2.9nm,0.9s								
CAST	**Castle Rocks**	**64.64**	**23**	P	**P**	**P**	**01 38 40.3**	**+1.6**
CAST					IAmb	IAmb	01 39 04.2		
	comp=Z,4.1nm,1.1s								
ILAR	**Eielson Array**	**64.95**	**20**	P	**P**	**P**	**01 38 41.5**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=314,slow=5.5,SNR=6.8								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**64.95**	**20**	P	**P**	**P**	**01 38 40.6**	**-0.1**
G30M	**tAoh Zrail Nji**	**65.41**	**15**	P	**P**	**P**	**01 38 45.4**	**+1.7**
G30M					IAmb	IAmb	01 39 06.2		
	comp=Z,3.6nm,1.1s								
H29M	**Whitestone**	**65.66**	**16**	P	**P**	**P**	**01 38 46.1**	**+0.8**
H29M					IAmb	IAmb	01 39 20.4		
	comp=Z,2.8nm,0.8s								
BCAR	**Beaver Creek A**	**67.63**	**19**	P	**P**	**P**	**01 38 59.4**	**+1.4**
O28M	**Mount Upton**	**69.99**	**20**	P	**P**	**P**	**01 39 13.4**	**+0.4**
O28M					IAmb	IAmb	01 39 25.8		
	comp=Z,6.4nm,1.5s								
YKA	**Yellowknife Ar**	**72.73**	**7**	P	**P**	**P**	**01 39 29.4**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=343,slow=5.7,SNR=1.7								
	comp=Z,0.5nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.20**	**272**	P	**P**	**P**	**01 39 32.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=45,slow=5.0,SNR=6.7								
	comp=Z,0.7nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.20**	**272**	P	**P**	**P**	**01 39 31.6**	**-1.1**
TORD					IAmb	IAmb	01 40 01.9		
	comp=Z,1.8nm,0.5s								
WRAB	**Tennant Creek**	**80.52**	**130**	P	**P**	**P**	**01 40 14.9**	**+1.1**
WRA	**Warramunga Arr**	**80.52**	**130**	P	**P**	**P**	**01 40 12.7**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=334,slow=5.1,SNR=4.7								
	comp=Z,1.2nm,0.7s								
WRA	**Warramunga Arr**	**80.52**	**130**	P	**P**	**P**	**01 40 12.8**	**-0.9**
WB2	**Warramunga Arr**	**80.53**	**130**	P	**P**	**P**	**01 40 12.9**	**-0.9**
ASAR	**Alice Springs**	**83.30**	**132**	P	**P**	**P**	**01 40 27.6**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=337,slow=7.2,SNR=8.3								
	comp=Z,1.2nm,0.8s								
WMOK	**Wichita Mounta**	**101.23**	**360**	P		**Pdif**	**01 41 51.7**	**-0.6**	

REN ***13*** *01:33:16.5±1.4,38°.174N±0°.010×117°.83W±0°.01, h10km±3km, Error ellipse: s-maj=1.5km s-min=1.2km az=138.0*

NEIC 13 01:33:16.5±1.9, 38°.183N±0°.008×117°.83W±0°.02, h9km±3km, ML3.2/92, ML3.5/11(REN), Error ellipse: s-maj=2.0km s-min=0.7km az=62.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLR	**Columbus**	**0.18**	**258**		Pg	01 33 20.9	+0.6
COLR					Sg	01 33 24.0	+1.0
NV11	**Mina Array Sit**	**0.35**	**314**	Pg	Pg	01 33 23.9	+0.3
NV11				Sg	Sg	01 33 28.6	+0.2
NV11				IAML		01 33 29.5	
	comp=N,2μm,0.5s						
NV11				IAML		01 33 29.6	
	comp=E,3μm,0.7s						
NV06	**Mina Array Sit**	**0.42**	**305**		Pg	01 33 25.5	+0.6
NV07	**Mina Array Sit**	**0.43**	**302**		Pg	01 33 25.6	+0.7
NV03	**Mina Array Sit**	**0.44**	**304**		Pg	01 33 25.7	+0.6
NV03					Sg	01 33 32.0	+1.1
NV08	**Mina Array Sit**	**0.44**	**300**		Pg	01 33 25.8	+0.6
NV08					Sg	01 33 32.2	+1.1
NV04	**Mina Array Sit**	**0.44**	**303**		Pg	01 33 25.7	+0.5
NV04					Sb	01 33 32.5	-1.1
NV01	**Mina Array Sit**	**0.45**	**304**		Pg	01 33 25.8	+0.5
NV01					Sb	01 33 32.4	-1.2
NVAR	**Mina Array Bea**	**0.45**	**304**	Pg	Pg	01 33 25.5	+0.2
NV02	**Mina Array Sit**	**0.45**	**304**		Pg	01 33 26.0	+0.6
TPH	**Tonopah**	**0.49**	**102**	Pg	Pg	01 33 26.2	+0.1
TPH				Sg	Sg	01 33 32.8	+0.1
TPH				IAML		01 33 33.5	
	comp=N,3μm,0.3s						
TPH				IAML		01 33 33.5	
	comp=E,2μm,0.6s						
LHV	**Little Huntoon**	**0.53**	**278**	Pg	Pg	01 33 27.2	+0.4
LHV				Sg	Sg	01 33 34.6	+0.7
LHV				IAML		01 33 36.5	
	comp=N,2μm,0.6s						
LHV				IAML		01 33 37.4	
	comp=E,2μm,0.4s						
DSP	**Deep Springs**	**0.82**	**188**	Pg	Pg	01 33 32.1	-0.2
DSP				Sg	Sg	01 33 43.1	+0.2
DSP				IAML		01 33 47.8	
	comp=E,438nm,0.4s						
Q09A	**Carvers**	**0.83**	**38**	Pg	Pg	01 33 32.4	-0.1
Q09A				Sg	Sb	01 33 44.0	-0.5
Q09A				IAML		01 33 48.5	
	comp=E,1μm,0.6s						
Q09A				IAML		01 33 50.8	
	comp=N,1μm,0.7s						
KVN	**Kaiserville**	**0.89**	**346**	Pg	Pg	01 33 33.4	-0.3
KVN				Sg	Sg	01 33 45.1	-0.2
KVN				IAML		01 33 49.6	
	comp=E,359nm,0.6s						
LCH	**Last Change Ra**	**0.96**	**171**		Pg	01 33 34.8	-0.2
LCH					Sb	01 33 48.8	+0.5
GMN	**Gold Mountain**	**0.99**	**153**	Pg	Pg	01 33 35.3	-0.3
GMN				Sg	Sg	01 33 48.7	+0.2
GMN				IAML		01 33 50.3	
	comp=N,635nm,0.4s						
GMN				IAML		01 33 52.9	
	comp=E,540nm,0.4s						
MCBM	**Casa Benchmark**	**1.00**	**238**		Pb	01 33 36.2	0.0
MDYM	**Dry Creek**	**1.07**	**241**		Pb	01 33 37.5	+0.1
MDPB	**Devils Postpil**	**1.13**	**241**	Pg	Pg	01 33 38.0	-0.2
MDPB				IAML		01 33 53.7	
	comp=N,320nm,0.4s						
MDPB				IAML		01 33 54.0	
	comp=E,243nm,0.5s						
TIN	**Tinemaha, Big**	**1.17**	**196**	Pg	Pg	01 33 38.8	-0.2
TIN				IAML		01 33 57.3	
	comp=N,668nm,0.4s						
TIN				IAML		01 33 59.5	
	comp=E,713nm,0.5s						
WAKR	**Walker**	**1.30**	**285**	Pn	Pn	01 33 40.8	-0.4
WAKR					Sn	01 33 59.1	+0.3
KCC	**Kaiser Creek**	**1.46**	**234**		Pg	01 33 44.3	-0.2
PNTR	**Pine Nut**	**1.65**	**304**	Pn	Pn	01 33 45.5	-0.4
WCT	**Wildcat Mounta**	**1.69**	**145**	Pn	Pn	01 33 46.0	-0.3
WCT				IAML		01 34 13.5	
	comp=N,400nm,0.6s						
TPNV	**Topopah Spring**	**1.76**	**134**	Pn	Pn	01 33 47.0	-0.4
TPNV				IAML		01 34 20.0	
	comp=N,378nm,0.8s						
FURC	**Furnace Creek,**	**1.88**	**155**	Pn	Pn	01 33 48.8	0.0
CPY	**CP-1**	**1.89**	**131**		Pn	01 33 48.8	-0.2
SDH	**Striped Hills**	**1.94**	**142**		Pn	01 33 50.0	+0.2
CMB	**Columbia Colle**	**2.02**	**267**	Pn	Pn	01 33 50.2	-0.6
CMB					Pb	01 33 50.7	-2.8
CMB				IAML		01 34 21.4	
	comp=N,79nm,0.4s						
AMDNV	**Amargosa**	**2.12**	**144**		Pn	01 33 52.8	+0.6
MPMC	**Manual Prospec**	**2.14**	**173**	Pn	Pn	01 33 52.2	-0.4
PEAR	**Peavine Mounta**	**2.19**	**311**		Pn	01 33 53.7	+0.4
JRC2	**Joshua Ridge**	**2.20**	**180**		Pn	01 33 53.8	+0.4
PRN	**Pahroc Range**	**2.34**	**109**	Pn	Pn	01 33 54.7	-0.5
QSM	**Queen of Sheba**	**2.34**	**161**	Pn	Pn	01 33 54.8	-0.5
QSM				IAML		01 34 34.2	
	comp=N,104nm,0.6s						
QSM				IAML		01 34 36.3	
	comp=E,68nm,0.4s						
ISA	**Isabella, Lake**	**2.57**	**192**	Pn	Pn	01 33 57.9	-0.5
ISA				IAML		01 34 44.5	
	comp=E,55nm,0.3s						
AFDM	**Forest Hills D**	**2.58**	**288**	Pn	Pn	01 33 58.6	+0.1
AFDM				IAML		01 34 39.6	
	comp=N,60nm,0.3s						
AFDM				IAML		01 34 42.3	
	comp=E,81nm,0.7s						
BEKR	**Beckworth**	**2.59**	**311**	Pn	Pn	01 33 59.4	+0.6
BEKR				IAML		01 34 41.0	
	comp=E,55nm,0.5s						
CCCA	**Chr Cany lake**	**2.68**	**172**	Pn	Pn	01 33 60.0	+0.1
CCCA						IAML	01 34 46.8		
	comp=N,86nm,0.5s								
CCCA						IAML	01 34 47.2		
	comp=E,94nm,0.7s								
LRMC	**Laurel Mtn Rad**	**2.70**	**177**	Pn	Pn	01 34 00.1	-0.2		
BBGB	**Big Mountain B**	**3.02**	**239**	Pn	Pn	01 34 05.1	+0.5		
MHC	**Mount Hamilton**	**3.13**	**256**	Pn	Pn	01 34 07.1	+0.9		
MHC					IAML	01 34 57.1			
	comp=N,28nm,2.6s								
ORV	**Oroville**	**3.17**	**297**	Pn	Pn	01 34 06.7	0.0		
ELK	**Elko**	**3.25**	**37**	Pn	Pn	01 34 07.9	0.0		
MTPC	**Mountain Pass**	**3.25**	**145**	Pn	Pn	01 34 08.3	+0.4		
MTPC					IAML	01 35 01.5			
	comp=N,63nm,0.6s								
MTPC					IAML	01 35 04.1			
	comp=E,55nm,0.6s								
SUTB	**Sutter Butte**	**3.27**	**290**	Pn	Pn	01 34 08.3	+0.4		
SUTB					IAML	01 35 04.0			
	comp=E,89nm,0.8s								
SUTB					IAML	01 35 08.5			
	comp=N,101nm,0.5s								
TPO	**Tropico Hills**	**3.31**	**186**	Pn	Pn	01 34 08.5	-0.1		
TPO					IAML	01 35 14.8			
	comp=E,29nm,0.9s								
CCUT	**Cedar City**	**3.59**	**99**	Pn	Pn	01 34 12.9	+0.3		
CCUT					IAML	01 35 11.4			
	comp=N,39nm,0.6s								
CCUT					IAML	01 35 12.3			
	comp=E,47nm,0.6s								
O03E	**Paynes Creek**	**3.73**	**306**	Pn	Pn	01 34 15.0	+0.6		
O03E					IAML	01 35 18.5			
	comp=E,38nm,0.9s								
O03E					IAML	01 35 28.7			
	comp=N,24nm,0.9s								
LCMT	**Little Creek M**	**3.83**	**106**	Pn	Pn	01 34 15.4	-0.4		
MWC	**Mount Wilson**	**3.96**	**183**	Pn	Pn	01 34 17.8	+0.3		
MWC					IAML	01 35 33.1			
	comp=N,17nm,1.5s								
KNB	**Kanab**	**4.15**	**105**	Pn	Pn	01 34 20.5	+0.3		
W13A	**Hualapai Mount**	**4.42**	**133**	Pn	Pn	01 34 26.1	+2.0		
MTPU	**Mount Pierson**	**4.46**	**90**	Pn	Pn	01 34 26.2	+1.6		
ELS	**Elsinore Mount**	**4.54**	**176**	Pn	Pn	01 34 25.7	+0.2		
ELS					IAML	01 36 18.7			
	comp=N,11nm,4.4s								
IRM	**Iron Mountain**	**4.57**	**151**	Pn	Pn	01 34 26.7	+0.8		
BGU	**Big Grassy Mou**	**4.61**	**52**	Pn	Pn	01 34 28.3	+1.7		
PMD	**Palm Desert**	**4.68**	**165**	Pn	Pn	01 34 27.7	+0.3		
PFO	**Pinyon Flats O**	**4.70**	**166**	Pn	Pn	01 34 28.1	+0.3		
U15A	**North Rim**	**4.75**	**110**	Pn	Pn	01 34 28.8	+0.2		
NLU	**North Lily Min**	**4.82**	**67**	Pn	Pn	01 34 29.8	+0.4		
BLYC	**Blythe**	**5.17**	**148**	Pn	Pn	01 34 35.3	+1.2		
BLYC					IAML	01 36 05.2			
	comp=E,24nm,1.1s								
BLYC					IAML	01 36 12.6			
	comp=N,16nm,1.8s								
SPUT	**South Promonto**	**5.19**	**51**	Pn	Pn	01 34 35.0	+0.5		
HVU	**Hansel Valley**	**5.29**	**46**	Pn	Pn	01 34 35.6	-0.3		
TMUT	**Trail Mountain**	**5.30**	**76**	Pn	Pn	01 34 34.9	-1.2		
MFID	**Camas Ranch**	**5.44**	**16**	Pn	Pn	01 34 37.8	-0.2		

IDC ***13*** *01:41:20.0±0.7,6°.79N×73°.06W,h157km±9km,mb3.4/5, mbtmp3.9/7, Error ellipse: s-maj=23.9km s-min=7.7km az=129.0*

CATAC ***13*** *01:41:19.3±0.8,7°.N±3°×7°3W±°, h155km±6km,M4.2/7, MLv4.2/7, Error ellipse: s-maj=11.6km s-min=5.6km az=90.4, confirmed*

RSNC ***13*** *01:41:20.9±0.0,7°.N±1°×7°3W±°, h146km±1km,M3.8, mB4.8,mb3.9,ML3.4,MLv4.1,Mw(mB)4.1*

NEIC ***13*** *01:41:21.1±1.7,6°.9N±0°.1×73°.1W±0°.1,h151km±10km, mb4.2/30, Error ellipse: s-maj=23.4km s-min=10.8km az=132.0*

FUNV ***13*** *01:41:22.4,7°.12N×73°.24W,h14km,MW3.7, Presumed earthquake*

ISC 13 01:41:19.9±0.6, 6°.87N±0°.03×73°.14W±0°.04, h150km±5km, n96, σ1s52/141, mb4.2/20, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**189**	P	**Pn**	**01 41 40.7**	**0.0**
BARC				S	**Sn**	**01 41 55.8**	**-0.8**
BRJC	**Barrancabermej**	**0.61**	**280**	P	**Pn**	**01 41 42.4**	**+0.5**
BRJC				S	**Sn**	**01 41 59.4**	**+0.8**
PAMC	**Pamplona, Colo**	**0.64**	**43**	P	**Pn**	**01 41 43.5**	**+0.8**
PAMC				S	**Sn**	**01 42 00.2**	**+0.2**
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	**01 41 44.7**	**-0.3**
RUSC				S	**Sn**	**01 42 03.2**	**-1.0**
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	**01 41 44.6**	**-0.5**
RUSC				S	**Sn**	**01 42 03.1**	**-1.1**
RUSC	**La Rusia**	**0.97**	**177**	⇑*i*P	**Pn**	**01 41 44.5**	**-0.5**
RUSC				*e*S	**Sn**	**01 42 01.3**	**-2.9**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**01 41 47.2**	**-0.7**
PTBC				S	**Sn**	**01 42 08.3**	**-1.1**
OCAC	**Ocana**	**1.38**	**353**	P	**Pn**	**01 41 48.8**	**+0.4**
OCAC				S	**Sn**	**01 42 11.1**	**+0.8**
SPBC	**San Pablo de B**	**1.52**	**218**	P	**Pn**	**01 41 49.6**	**-0.2**
SPBC				S	**Sn**	**01 42 12.0**	**-0.8**
NORC	**Norcasia**	**2.15**	**233**	P	**Pn**	**01 41 56.7**	**-0.2**
NORC				S	**Sn**	**01 42 25.0**	**-0.4**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**01 41 58.6**	**-0.4**
CHIC				S	**Sn**	**01 42 27.8**	**-1.3**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**01 42 00.3**	**+1.0**
	189nm,0.4s,baz=334,slow=3.8,SNR=208						
ROSC				S	**Sn**	**01 42 30.3**	**+0.6**
	427nm,0.5s,baz=108,slow=19,SNR=13						
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**01 42 00.4**	**+1.0**
ROSC				S	**Sn**	**01 42 28.7**	**-1.1**
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**01 42 01.8**	**+0.8**
HELC				S	**Sn**	**01 42 33.9**	**+1.3**
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**01 42 00.8**	**-0.2**
HELC				S	**Sn**	**01 42 33.6**	**+1.0**
HELC	**Santa Helena**	**2.47**	**254**	*e*P	**Pn**	**01 42 01.1**	**+0.1**
HELC				*e*S	**Sn**	**01 42 30.5**	**-2.1**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**01 42 02.2**	**+0.6**
CVER				S	**Sn**	**01 42 33.9**	**+0.1**
UREC	**San Jos de Ur**	**2.53**	**290**	P	**Pn**	**01 42 01.8**	**+0.4**
UREC				S	**Sn**	**01 42 31.8**	**-1.7**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**01 42 05.0**	**+0.4**
GUY2C				S	**Sn**	**01 42 39.3**	**+0.3**
VILC	**Villavicencio,**	**2.79**	**191**	P	**Pn**	**01 42 04.0**	**-0.8**
VILC				S	**Sn**	**01 42 38.9**	**-0.6**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**01 42 08.6**	**+0.8**
CBOC				S	**Sn**	**01 42 44.6**	**-0.1**
DBBC	**Dabeiba**	**3.05**	**273**	P	**Pn**	**01 42 08.5**	**+0.5**
DBBC				S	**Sn**	**01 42 44.5**	**-0.7**
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**01 42 10.3**	**+0.4**
	98nm,0.3s,baz=206,slow=6.2,SNR=46						
SDV				S	**Sn**	**01 42 49.3**	**+0.7**
	63nm,0.4s,baz=293,slow=16,SNR=13						
SDV	**Santo Domingo**	**3.19**	**51**	Pn	**Pn**	**01 42 09.9**	**0.0**
SDV	**Santo Domingo**	**3.19**	**51**	⇓*i*P	**Pn**	**01 42 10.2**	**+0.3**
SDV				*e*S	**Sn**	**01 42 46.5**	**-2.1**
APAC	**Apartado, Choc**	**3.56**	**287**	P	**Pn**	**01 42 14.9**	**+0.4**
APAC				S	**Sn**	**01 42 56.9**	**+0.1**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**01 42 14.5**	**-0.3**
PRAC				S	**Sn**	**01 42 57.1**	**-0.3**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**01 42 13.9**	**-0.9**
PRAC				S	**Sn**	**01 42 56.4**	**-1.0**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**01 42 14.8**	**-0.4**
ORTC				S	**Sn**	**01 42 57.9**	**-0.1**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**01 42 14.7**	**-0.7**
SJCC				S	**Sn**	**01 42 56.7**	**-1.7**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**01 42 14.7**	**-0.7**
SJCC				S	**Sn**	**01 42 56.3**	**-2.1**
SJCC	**San Jacinto, C**	**3.62**	**326**	*e*P	**Pn**	**01 42 13.9**	**-1.4**
SJCC				*e*S	**Sn**	**01 42 52.1**	**-6.3**
PLMC	**San Jos del P**	**3.68**	**238**	P	**Pn**	**01 42 16.4**	**+0.3**
PLMC				S	**Sn**	**01 42 57.6**	**-2.2**
LCBC	**Los crdobas,**	**3.76**	**302**	P	**Pn**	**01 42 17.8**	**+0.7**
LCBC				S	**Sn**	**01 42 59.0**	**-2.4**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**01 42 17.7**	**0.0**
URMC				S	**Sn**	**01 43 01.7**	**-0.9**
PIZC	**Pizarro, Choco**	**4.60**	**246**	P	**Pn**	**01 42 29.8**	**+1.7**
PIZC				S	**Sn**	**01 43 20.5**	**-0.7**
PTAC	**Punta Ardita,**	**4.64**	**274**	P	**Pn**	**01 42 28.3**	**-0.3**
PTAC				S	**Sn**	**01 43 21.8**	**-0.3**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**01 42 27.5**	**-2.5**
MACC				S	**Sn**	**01 43 18.7**	**-5.9**
BETC	**Betania**	**4.75**	**209**	P	**Pn**	**01 42 28.9**	**-1.2**
BETC				S	**Sn**	**01 43 24.7**	**-0.1**

URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**01 42 31.1**	**-1.4**	
URIC				S		**Sn**	**01 43 26.2**	**-3.0**	
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*P		**Pn**	**01 42 31.2**	**-1.3**	
URIC				*e*S		**Sn**	**01 43 22.0**	**-7.2**	
JAMC	**Jamundi, Valle**	**5.05**	**224**	P		**Pn**	**01 42 34.2**	**-0.1**	
	0.1nm974nm16nm,0.5s								
JAMC				S		**Sn**	**01 43 29.2**	**-3.1**	
	0.1nm974nm16nm,0.5s								
GARC	**Garzon, Huila**	**5.21**	**207**	P		**Pn**	**01 42 35.0**	**-1.3**	
GARC				S		**Sn**	**01 43 31.3**	**-4.7**	
POPC	**Popayan, Colom**	**5.56**	**220**	P		**Pn**	**01 42 40.7**	**-0.3**	
	8.2nm,0.5s								
POPC				S		**Sn**	**01 43 42.9**	**-1.4**	
	8.2nm,0.5s								
GR1C	**Gorgona, Isla**	**6.31**	**233**	P		**Pn**	**01 42 48.9**	**-1.9**	
BBAC	**Balboa, Cauca**	**6.32**	**221**	P		**Pn**	**01 42 50.7**	**-0.4**	
BBAC				S		**Sn**	**01 44 00.7**	**-1.8**	
CRUC	**La Cruz**	**6.49**	**216**	P		**Pn**	**01 42 57.0**	**+3.5**	
PTLC	**Puerto Leguiza**	**6.85**	**194**	P		**Pn**	**01 43 00.5**	**+2.4**	
	6.3nm,0.9s								
BCIP	**Isla Barro Col**	**7.01**	**289**	P		**Pn**	**01 42 58.9**	**-1.3**	
	26nm,2.4s								
BCIP				S		**Sn**	**01 44 18.1**	**-0.7**	
	26nm,2.4s								
AZU	**Azuero**	**7.14**	**278**	P		**Pn**	**01 43 01.4**	**-0.4**	
OTAV	**Otavalo**	**8.45**	**219**	Pn		**Pn**	**01 43 19.1**	**-0.7**	
SGC2	**Sao Gabriel da**	**9.29**	**138**	P		**Pn**	**01 43 31.6**	**+1.0**	
MTDJ	**Mount Denham**	**12.08**	**340**	Pn		**Pn**	**01 44 10.0**	**+2.7**	
DR12	**Loma Pena Alta**	**12.40**	**17**	P		**P**	**01 44 17.6**	**+0.3**	
GTBY	**Guantanamo Bay**	**13.12**	**352**	P		**P**	**01 44 24.4**	**-0.9**	
LPAZ	**La Paz**	**23.53**	**168**	P		**P**	**01 46 15.6**	**-1.7**	
	0.8nm,0.8s,baz=329,slow=12,SNR=2.5								
	0.8nm,0.8s								
HODGE	**Hodges**	**28.51**	**344**	P		**P**	**01 47 02.6**	**+1.4**	
Y49A	**Blount Mountai**	**29.54**	**337**	P		**P**	**01 47 11.8**	**+1.4**	
Y49A				IAmb		IAmb	01 47 32.6		
	comp=Z,11nm,1.4s								
X48A	**Hartselle**	**30.30**	**337**	P		**P**	**01 47 18.2**	**+1.1**	
X48A				IAmb		IAmb	01 47 19.7		
	comp=Z,3.4nm,0.9s								
T47A	**Sharon Grove**	**32.58**	**339**	P		**P**	**01 47 38.2**	**+1.2**	
T47A				IAmb		IAmb	01 48 13.6		
	comp=Z,8.9nm,1.4s								
WHAR	**Wooly Hollow**	**33.32**	**331**	P		**P**	**01 47 43.9**	**+0.5**	
WHAR				IAmb		IAmb	01 48 03.6		
	comp=Z,11nm,1.5s								
LCAR	**Lake Charles**	**33.42**	**333**	P		**P**	**01 47 45.3**	**+0.9**	
LCAR				IAmb		IAmb	01 47 53.3		
	comp=Z,5.2nm,1.4s								
P52A	**Corning**	**33.61**	**347**	P		**P**	**01 47 46.4**	**+0.5**	
FCAR	**Ozark Folk Cen**	**33.72**	**332**	P		**P**	**01 47 47.2**	**+0.2**	
FCAR				IAmb		IAmb	01 48 03.6		
	comp=Z,8.7nm,1.5s								
T42A	**Van Buren**	**34.20**	**334**	P		**P**	**01 47 51.6**	**+0.6**	
T42A				IAmb		IAmb	01 47 52.3		
	comp=Z,2.3nm,0.7s								
KSPA	**Keystone Colle**	**34.62**	**357**	P		**P**	**01 47 55.9**	**+1.2**	
KSPA				IAmb		IAmb	01 48 34.7		
	comp=Z,8.7nm,1.1s								
CCM	**Cathedral Cave**	**35.12**	**335**	P		**P**	**01 47 59.4**	**+0.4**	
CCM				IAmb		IAmb	01 48 00.2		
	comp=Z,5.0nm,0.7s								
SFIN	**Lafayette**	**35.63**	**342**	P		**P**	**01 48 03.9**	**+0.7**	
S39A	**Bolivar**	**35.74**	**332**	P		**P**	**01 48 04.8**	**+0.5**	
S39A				IAmb		IAmb	01 48 22.1		
	comp=Z,6.5nm,1.5s								
TXAR	**Lajitas Array**	**36.42**	**312**	P		**P**	**01 48 10.9**	**+0.6**	
	comp=Z,0.4nm,0.4s,baz=130,slow=9.8,SNR=11								
	comp=Z,0.4nm,0.4s								
TXAR	**Lajitas Array**	**36.42**	**312**	P		**P**	**01 48 10.0**	**-0.3**	
TX31	**Lajitas Ar. Si**	**36.42**	**312**	P		**P**	**01 48 10.4**	**+0.1**	
MNTX	**Cornudas Mount**	**38.93**	**314**	P		**P**	**01 48 32.1**	**+0.8**	
MNTX				IAmb		IAmb	01 48 33.0		
	comp=Z,3.8nm,1.4s								
JFWS	**Jewell Farm**	**38.95**	**340**	P		**P**	**01 48 31.0**	**-0.2**	
I42A	**Draeger Farm,**	**39.39**	**342**	P		**P**	**01 48 35.0**	**+0.2**	
I42A				IAmb		IAmb	01 49 14.4		
	comp=Z,5.0nm,1.0s								
E46A	**Sault Ste Mari**	**40.52**	**348**	P		**P**	**01 48 45.2**	**+1.1**	
E46A				IAmb		IAmb	01 49 16.2		
	comp=Z,6.6nm,0.9s								
BATG	**Bathurst New B**	**40.72**	**7**	P		**P**	**01 48 46.5

ERM A 01 43 16.4
ERM Erimo 0.95 18 Pn 01 43 04.6 -0.1
ERM Sn Sn 01 43 16.4 -0.7
ERM Erimo 0.95 18 P Pn 01 43 04.9 +0.2
JEM Erimo 0.95 18 P Pn 01 43 04.8 +0.1
JEM Erimo 0.95 18 P Pn 01 43 04.7 -0.1
JEM A A 01 43 04.7
comp=N,35nm,1.3s,comp=E,32nm,1.7s
JEM eS Sn 01 43 18.0 +0.9
JARK Aomorirokkasho 1.05 265 ⇓P Pn 01 43 05.8 -0.4
JARK A A 01 43 05.8
comp=N,26nm,2.4s,comp=E,19nm,1.5s
JARK ⇓eS Sn 01 43 20.3 +0.6
JAHD Aomorihigashid 1.08 278 ⇓P Pn 01 43 06.4 -0.1
JAHD A A 01 43 06.4
comp=N,72nm,0.5s,comp=E,69nm,0.6s
JAHD ⇓eS Sn 01 43 20.4 +0.1
JNBK Urakawa-nobuka 1.16 360 P Pn 01 43 08.5 +0.8
JNBK A A 01 43 08.5
comp=N,52nm,2.2s,comp=E,74nm,1.2s
JANG Nango 1.20 232 ⇓P Pn 01 43 07.2 -1.0
JANG A A 01 43 07.2
comp=N,12nm,3.5s,comp=E,12nm,0.9s
JANG ⇓eS Sn 01 43 22.4 -0.8
JKEN Kujiedanarisaw 1.21 222 ⇓P Pn 01 43 06.9 -1.3
JKEN A A 01 43 06.9
comp=N,17nm,1.0s,comp=E,20nm,1.1s
JKEN ⇓eS Sn 01 43 21.8 -1.6
JTHR Tokachihiroo 1.24 19 A A 01 43 09.3
comp=N,36nm,0.5s,comp=E,36nm,1.3s
JSHD Hidakashinhida 1.31 351 A A 01 43 10.5
comp=N,78nm,1.4s,comp=E,129nm,2.0s
JOT Ohata 1.31 282 ⇓P Pn 01 43 09.9 +0.2
JOT A A 01 43 09.9
comp=N,16nm,1.3s,comp=E,18nm,2.0s
JOT ⇓eS Sn 01 43 26.6 +0.5
JTM Tenmabayashi 1.32 256 P Pn 01 43 09.9 +0.1
JTM Tenmabayashi 1.32 256 Pn Pn 01 43 09.6 -0.2
JTM Tenmabayashi 1.32 256 P Pn 01 43 10.2 +0.4
JTM Tenmabayashi 1.32 256 ⇓P Pn 01 43 10.0 +0.3
JTM A A 01 43 10.0
comp=N,35nm,1.7s,comp=E,24nm,0.7s
JTM ⇓eS Sn 01 43 26.4 +0.3
JKB Kayabe 1.51 301 ⇓P Pn 01 43 12.8 +0.5
JKB A A 01 43 12.8
comp=N,23nm,2.8s,comp=E,20nm,2.0s
JKB ⇓eS Sn 01 43 31.8 +1.1
JCH Churui 1.56 17 eP Pn 01 43 13.6 +0.4
JCH A A 01 43 13.6
comp=N,21nm,1.4s,comp=E,22nm,2.1s
JCH eS Sn 01 43 33.2 +1.0
JKZ Kuzumaki 1.57 224 A A 01 43 12.6
comp=N,15nm,2.1s,comp=E,20nm,1.7s
JIAM Iburiatsuma 1.63 338 P Pn 01 43 16.4 +2.3
JIAM A A 01 43 16.4
comp=N,100nm,1.3s,comp=E,160nm,1.0s
JBT2 Biratori 2 1.69 350 iP Pn 01 43 16.0 +1.2
JBT2 A A 01 43 16.0
comp=N,20nm,1.4s,comp=E,17nm,1.9s
JSI2 Shiura 2 1.77 269 A A 01 43 16.5
comp=N,40nm,1.3s,comp=E,42nm,2.1s
JSR Shiriuchi 1.81 284 A A 01 43 17.3
comp=N,20nm,1.0s,comp=E,35nm,3.4s
JAH Hinai 1.86 241 A A 01 43 17.2
comp=N,21nm,2.4s,comp=E,17nm,4.7s
JHHS Hirosakihyakuz 1.87 256 A A 01 43 17.7
comp=N,38nm,1.1s,comp=E,37nm,2.0s
JSZI Iwateshizukuis 1.94 226 A A 01 43 18.1
comp=N,39nm,3.1s,comp=E,37nm,2.0s
JOB Onbets 1.96 24 A A 01 43 19.7
comp=N,25nm,2.4s,comp=E,26nm,1.7s
JEW Eniwo 1.98 331 P Pn 01 43 20.4 +1.6
JEW A A 01 43 20.4
comp=N,75nm,1.1s,comp=E,71nm,1.9s
JEW eS Sn 01 43 45.7 +3.3
JOM Ohasama 1.98 215 ⇓P Pn 01 43 18.9 0.0
JOM A A 01 43 18.9
comp=N,16nm,1.2s,comp=E,29nm,1.6s
JYM2 Yakumo 2 2.05 300 A A 01 43 21.0
comp=N,29nm,2.5s,comp=E,24nm,2.1s
JFR Furan 2.05 357 A A 01 43 21.3
comp=N,17nm,1.1s,comp=E,14nm,1.4s
JOMM Oshimamatsumae 2.11 282 P Pn 01 43 21.7 +1.1
JNTW Noshirotokiwa 2.14 248 A A 01 43 21.4
comp=N,51nm,3.1s,comp=E,59nm,4.6s
JIW Iwasaki 2.15 257 A A 01 43 21.7
comp=N,24nm,1.7s,comp=E,17nm,4.1s
JAR Ashorobuto 2.31 19 P Pn 01 43 23.3 0.0
JAR A A 01 43 23.3
comp=N,13nm,0.8s,comp=E,15nm,0.7s
JAR eS Sn 01 43 50.8 +0.3
JRG Rokugo 2.36 224 A A 01 43 24.1
comp=N,18nm,1.5s,comp=E,19nm,4.3s
JAK Akkeshi 2.37 37⇓iP Pn 01 43 23.6 -0.6
JAK A A 01 43 23.6
comp=N,15nm,2.3s,comp=E,17nm,1.9s
JAK ⇓eS Sn 01 43 49.6 -2.4
JISS Ishikarishitsu 2.38 336 A A 01 43 25.9
comp=N,32nm,1.8s,comp=E,28nm,2.0s
JAB Ashibetsu 2.42 351 A A 01 43 26.6
comp=N,35nm,4.0s,comp=E,26nm,1.9s
JMK Ichinoseki 2.46 209 P Pn 01 43 26.0 +0.5
JYW Yuwa 2.50 232 A A 01 43 26.2
comp=N,27nm,1.6s,comp=E,24nm,2.6s
JHR Hokuryu 2.73 344 A A 01 43 31.1
comp=N,20nm,1.9s,comp=E,30nm,1.8s
JOFO Osakifurukawao 2.88 210 A A 01 43 31.3
comp=N,35nm,2.7s,comp=E,37nm,3.6s
JKA Kamikawa-asahi 3.00 358 Pn Pn 01 43 31.9 -1.0
JKA Kamikawa-asahi 3.00 358 P Pn 01 43 34.5 +1.7
ASAJ Asahikawa 3.00 358 P Pn 01 43 31.9 -1.0
JOG3 Oga3 3.04 248 A A 01 43 27.1
comp=N,13nm,3.4s,comp=E,12nm,3.7s
NMR Nemuro--Hokkai 3.15 43⇓iP Pn 01 43 33.5 -1.5
NMR iS Sn 01 44 07.3 -4.0
RUSJ Misakicho 3.51 31 eP Pn 01 43 39.9 +0.1
RUSJ iS Sn 01 44 19.5 -0.5
YUK Yuzh-Kuril'sk 3.71 37 eP Pn 01 43 41.9 -0.7
YUK iS Sn 01 44 21.6 -3.4
YUK pmax pmax
comp=Z,1μm,0.5s
YUK pmax pmax
comp=N,541nm,0.3s
YUK pmax pmax
comp=E,592nm,0.3s
YUK smax smax
comp=N,4μm,0.4s
YUK smax smax
comp=E,8μm,0.4s
KUR Kuril'sk 5.56 41⇑iP Pn 01 44 08.1 +0.1
KUR iS Sn 01 45 10.2 -0.3
KUR pmax pmax
comp=Z,944nm,0.6s
KUR smax smax
comp=N,705nm,0.5s
KUR smax smax
comp=E,290nm,0.5s
MJB9 Matsu-Tunnel 5.78 219 Pn Pn 01 44 12.8 +1.7
MAJO Matsushiro 5.78 219 P Pn 01 44 14.2 +3.1
MAJO Matsushiro 5.78 219 P Pn 01 44 12.8 +1.7
MAJO Matsushiro 5.78 219 Pn Pn 01 44 12.8 +1.7
MAJO Matsushiro 5.78 219 P Pn 01 44 13.5 +2.4
MJAR Matsushiro Arr 5.78 219 P Pn 01 44 12.5 +1.4
comp=E,40nm,0.7s,baz=32,slow=13,SNR=37
MJAR LR LR 01 46 50.9
comp=E,2μm,20.5s,baz=42,slow=42
MJAR Matsushiro Arr 5.78 219 P Pn 01 44 12.7 +1.6
MJAR Matsushiro Arr 5.78 219 Pn Pn 01 44 12.7 +1.6
YSS Yuzhno-Sakhali 5.84 0⇑eP Pn 01 44 13.1 +1.3
YSS eS Sn 01 45 16.8 -0.6
YSS pmax pmax
comp=Z,150nm,0.7s
YSS pmax pmax
comp=Z,200nm,2.8s
YSS smax smax
comp=N,110nm,0.7s
YSS smax smax
comp=E,80nm,0.7s
YSS smax smax
comp=N,600nm,2.3s
YSS MLR MLR
comp=N,1μm,15.0s
YSS MLR MLR
comp=Z,2μm,15.0s
YSS Yuzhno-Sakhali 5.84 0 Pn Pn 01 44 12.6 +0.8

YSS Yuzhno-Sakhali 5.84 0 P Pn 01 44 13.4 +1.6
JGF Kuroka 6.95 219 P Pn 01 44 30.0 +2.8
JGF Kuroka 6.95 219 Pn Pn 01 44 29.9 +2.8
JGF Kuroka 6.95 219 P Pn 01 44 31.0 +3.9
INU Inuyama 7.32 220 P Pn 01 44 35.6 +3.5
INU Inuyama 7.32 220 Pn Pn 01 44 34.7 +2.6
INU Inuyama 7.32 220 P Pn 01 44 35.6 +3.5
UGL Uglegorsk 7.98 357 eP Pn 01 44 41.9 +0.8
UGL pmax pmax
comp=Z,50nm,1.1s
UGL MLR MLR
comp=E,2μm,20.0s
UGL MLR MLR
comp=N,2μm,13.0s
UGL MLR MLR
comp=Z,2μm,20.0s
JHJ2 Mitsune 8.32 197 P Pn 01 44 49.9 +3.9
JHJ Hachijo jima 2 8.33 197 P Pn 01 44 45.2 -0.7
comp=Z,23nm,0.3s,baz=93,slow=23,SNR=6.0
JHJ S Sn 01 46 12.4 -6.2
comp=Z,46nm,0.3s,baz=95,slow=22,SNR=1.5
comp=Z,46nm,0.3s
USA0B Ussuriysk Arra 8.51 295c iP Pn 01 44 51.1 +2.7
USA0B Ussuriysk Arra 8.51 295 Pn Pn 01 44 50.4 +2.0
USRK Ussuriysk Ar. 8.51 295 P Pn 01 44 51.5 +3.0
comp=Z,4.6nm,0.3s,baz=101,slow=14,SNR=62
USRK LR LR 01 48 06.9
comp=Z,2μm,20.2s,baz=92,slow=37
comp=Z,92nm,0.7s
USRK Ussuriysk Ar. 8.51 295 Pn 01 44 50.2 +1.8
PSTR Posyet 9.05 284 eP Pn 01 44 57.4 +1.6
TYV Tymovskoe 9.75 360 eP Pn 01 45 06.7 +1.3
TYV eS Sn 01 46 54.4 +1.0
TYV pmax pmax
comp=Z,20nm,0.8s
TYV pmax pmax
comp=Z,100nm,2.4s
TYV smax smax
comp=N,13nm,1.2s
TYV smax smax
comp=E,14nm,1.2s
TYV smax smax
comp=N,100nm,3.7s
TYV smax smax
comp=E,200nm,3.7s
TYV MLR MLR
comp=N,2μm,17.0s
TYV MLR MLR
comp=Z,2μm,16.0s
JMN Monobe 10.20 227 Pn Pn 01 45 13.7 +2.0
JMN Monobe 10.20 227 P Pn 01 45 15.0 +3.3
MDJ Mudanjiang 10.28 294 Pn Pn 01 45 15.0 +2.4
MDJ Mudanjiang 10.28 294 P Pn 01 45 15.2 +2.6
MDJ S Sn 01 46 59.3 -7.1
MDJ pmax pmax
comp=Z,87nm,1.3s
MDJ L L
comp=Z,1μm,17.9s
MDJ L L
comp=Z,2μm,16.5s
MDJ L L
comp=Z,3μm,18.5s
MDJ Mudanjiang 10.28 294 P Pn 01 45 14.9 +2.4
GRNR Gornyy 10.61 338⇑iP Pn 01 45 18.2 +1.0
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,700nm,15.0s
GRNR MLR MLR
comp=N,970nm,19.0s
GRNR MLR MLR
comp=Z,990nm,15.0s
KLR Kul'dur 11.22 320 P Pn 01 45 27.4 +1.9
comp=Z,24nm,0.9s,baz=130,slow=13,SNR=20
KSRS Korea Array 12.06 257 P Pn 01 45 39.3 +2.3
comp=Z,1.2nm,0.3s,baz=69,slow=14,SNR=28
KSRS S Sn 01 47 54.9 +4.9
comp=Z,11nm,0.9s,baz=65,slow=22,SNR=4.6
comp=Z,18nm,0.8s
BNX BinXian 12.08 298 ⇑P Pn 01 45 38.4 +1.2
BNX S Sn 01 47 50.1 -0.3
BNX pmax pmax
comp=Z,98nm,1.0s
BNX pmax pmax
comp=Z,490nm,6.8s
BNX L L
comp=Z,610nm,13.0s
BNX L L
comp=Z,1μm,20.6s
BNX L L
comp=Z,2μm,20.1s
KS19 Wonju Array Si 12.08 257 Pn Pn 01 45 37.0 -0.4
KSAR Wonju Array Be 12.09 257 P Pn 01 45 38.4 +0.9
KSAR Wonju Array Be 12.09 257 Pn Pn 01 45 38.4 +0.9
JNU Nakatsue 12.38 234 LR LR 01 50 40.2
comp=Z,1μm,19.4s,baz=49,slow=38
OKH Okha 12.44 0deP Pn 01 45 43.6 +1.5
OKH eS Sn 01 47 59.3 +0.1
OKH MLR MLR
comp=Z,800nm,16.0s
OKH MLR MLR
comp=N,1μm,16.0s
OKH MLR MLR
comp=E,2μm,16.0s
CN2 Changchun 13.06 288 P Pn 01 45 52.4 +1.8
CN2 pP P 01 46 00.7 +0.7
CN2 S Sn 01 48 16.0 +1.6
CN2 SS SnSn 01 48 32.3 +5.7
CN2 pmax pmax
comp=E,10.0nm,1.1s
CN2 L L
comp=E,610nm,17.0s
CN2 L L
comp=E,1μm,17.0s
CN2 L L
comp=E,1μm,20.0s
SKR Severo-Kuril's 13.33 40 iP Pn 01 45 55.8 +1.6
JSU Suzuyama 13.78 230 Pn Pn 01 45 59.9 -0.7
JSU Suzuyama 13.78 230 P Pn 01 46 00.4 -0.2
JCJ Chichijima 13.99 182 P Pn 01 46 00.5 -3.0
comp=E,32nm,0.5s,baz=295,slow=23,SNR=1.4
JCJ S Sn 01 48 23.2 -14
comp=E,38nm,0.8s,baz=312,slow=22,SNR=1.6
JCJ LR LR 01 51 45.9
comp=E,220nm,21.9s,baz=52,slow=38
HEH HeiHe 14.06 316 eP Pn 01 46 01.9 -2.4
HEH pmax pmax
comp=E,11nm,0.9s
HEH L L
comp=E,1μm,18.6s
HEH L L
comp=E,1μm,16.7s
HEH L L
comp=E,2μm,17.1s
PEA0B Petropavlovsk- 15.69 35 iP Pn 01 46 27.1 +1.4
PEA0B Petropavlovsk- 15.69 35 Pn Pn 01 46 20.8 -4.8
PETK Petropavlovsk- 15.69 35 P Pn 01 46 21.7 -4.0
comp=E,1.8nm,0.6s,baz=239,slow=8.4,SNR=7.6
PETK LR LR 01 52 47.1
comp=E,592nm,20.2s,baz=234,slow=38
PET Petropavlovsk 16.05 37 iP Pn 01 46 31.8 +1.5
PET pmax pmax
comp=Z,49nm,1.2s
DL2 Dalian 16.34 269 P P 01 46 36.7 +0.3
DL2 sP pP 01 46 46.3 -0.1
DL2 eS Sn 01 49 37.7 +3.6
DL2 pmax pmax
comp=Z,120nm,1.0s
DL2 pmax pmax
comp=Z,230nm,4.8s
DL2 L L
comp=Z,630nm,17.1s
DL2 L L
comp=Z,800nm,15.3s
DL2 L L
comp=Z,970nm,20.3s
ZEA Zeya 16.37 326 eP Pn 01 46 32.9 -1.4
ZEA pmax pmax
comp=N,30nm,0.6s
ZEA pmax pmax
comp=E,30nm,0.7s
ZEA pmax pmax
comp=Z,80nm,0.7s
ZEA MLR MLR
comp=Z,400nm,18.0s
ZEA MLR MLR

comp=E,300nm,19.0s
ZEA MLR MLR
comp=N,300nm,14.0s
HIA Hailar 18.10 304c iP P 01 46 53.7 -2.2
HIA pmax pmax
comp=Z,45nm,0.9s
HIA Hailar 18.10 304 P P 01 46 54.1 -1.7
HILR Hailar Array B 18.19 305 P P 01 46 55.4 -1.4
comp=Z,24nm,0.5s,baz=109,slow=13,SNR=26
HILR LR LR 01 54 22.3
comp=Z,961nm,18.7s,baz=90,slow=38
MA2 Magadan 19.15 12 P P 01 47 06.5 -0.7
comp=Z,0.7nm,0.3s,baz=195,slow=9.3,SNR=20
comp=Z,20nm,0.7s
MA2 Magadan 19.15 12ceP P 01 47 06.8 -0.4
MA2 pmax pmax
comp=Z,18nm,0.7s
MA2 Magadan 19.15 12 P 01 47 06.5 -0.7
MA2 Magadan 19.15 12 P P 01 47 06.1 -1.1
XLT XiLinHaoTe 19.83 287 eP P 01 47 13.5 -1.4
XLT pmax pmax
comp=Z,30nm,0.7s
XLT L L
comp=Z,550nm,17.4s
XLT L L
comp=Z,660nm,17.4s
BJI2 Beijing 20.20 276 P P 01 47 17.0 -1.9
BJI2 pP pP 01 47 28.0 -1.0
BJI2 sP sP 01 47 33.6 -0.8
BJI2 PP PnPn 01 47 37.3 +0.9
BJI2 S S 01 50 53.8 -9.3
BJI2 pmax pmax
comp=Z,15nm,1.4s
BJI2 pmax pmax
comp=Z,75nm,3.5s
BJI2 L L
comp=Z,210nm,16.9s
BJI2 L L
comp=Z,340nm,19.9s
BJI2 L L
comp=Z,530nm,18.4s
BJT Baijiatuau 20.20 276 P P 01 47 17.6 -1.3
BJT pmax pmax
comp=Z,27nm,0.8s
BJT Baijiatuau 20.20 276 P P 01 47 17.6 -1.3
BJT Baijiatuau 20.20 276 P P 01 47 17.5 -1.3
TIA Tai'an 20.57 265 P P 01 47 21.9 -1.0
TIA pmax pmax
comp=Z,51nm,1.1s
TIA L L
comp=Z,560nm,18.1s
TIA L L
comp=Z,590nm,21.1s
TIA L L
comp=Z,860nm,19.1s
NJ2 Nanjing 21.16 252 eP P 01 47 28.4 -0.9
NJ2 pmax pmax
comp=Z,110nm,0.6s
NJ2 L L
comp=Z,2μm,14.2s
NJ2 L L
comp=Z,2μm,11.8s
NJ2 L L
comp=Z,6μm,21.3s
HNS HongShan 21.99 269 ⇓P P 01 47 35.8 -2.3
HNS pmax pmax
comp=Z,43nm,1.1s
HNS L L
comp=Z,410nm,15.3s
HNS L L
comp=Z,290nm,18.1s
HNS L L
comp=Z,490nm,17.6s
YAK Yakutsk 22.38 344 LR LR 01 56 49.9
comp=Z,563nm,21.4s,baz=150,slow=38
YAK Yakutsk 22.38 344 eP P 01 47 38.7 -3.3
YAK e*PP pP 01 47 50.9 -1.4
YAK e 01 51 32.5
YAK eS S 01 51 40.6 -4.3
YAK e*SS Sn 01 51 57.9 -1.4
YAK e 01 58 50.7
YAK pmax pmax
comp=Z,122nm,1.3s
YAK pmax pmax
comp=N,26nm,1.5s
YAK pmax pmax
comp=E,27nm,1.4s
YAK pmax pmax
comp=Z,581nm,6.3s
YAK pmax pmax
comp=N,377nm,7.3s
YAK pmax pmax
comp=E,426nm,7.9s
YAK smax smax
comp=N,254nm,3.0s
YAK smax smax
comp=E,186nm,2.3s
YAK MLR MLR
comp=Z,995nm,31.0s
YAK MLR MLR
comp=N,764nm,36.0s
YAK MLR MLR
comp=E,246nm,14.0s
YAK Yakutsk 22.38 344 P P 01 47 39.7 -2.3
YAK Yakutsk 22.38 344 P P 01 47 39.1 -3.0
SEY Seymchan 22.59 11ceP P 01 47 41.4 -2.9
SEY pmax pmax
comp=Z,22nm,0.7s
HHC Hu-ho-hao-te 23.49 280⇓iP P 01 47 51.7 -2.0
HHC pP pP 01 48 04.8 +0.4
HHC S S 01 51 56.8 -7.5
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,94nm,5.5s
HHC L L
comp=Z,180nm,11.8s
HHC L L
comp=Z,630nm,19.1s
HHC L L
comp=Z,1μm,18.5s
TIY Taiyuan 23.61 272 P P 01 47 56.8 +1.9
TIY pP pP 01 48 03.3 -2.4
TIY pmax pmax
comp=Z,36nm,0.8s
TIY L L
comp=Z,330nm,20.6s
TIY L L
comp=Z,340nm,17.9s
TIY L L
comp=Z,380nm,17.9s
SHEM Shemya Is, Ala 24.16 51 LR LR 01 59 32.9
comp=Z,89nm,18.8s,baz=277,slow=42
YHNB Yeheng 24.21 234 P P 01 47 59.5 -1.0
YHNB IAmb IAmb 01 48 06.9
comp=Z,32nm,0.9s
YHNB Yeheng 24.21 234 P P 01 47 60.0 -0.6
NACB Ninganchiao 24.45 233 P P 01 48 01.1 -1.5
LYN LuoYang 24.72 264 P P 01 48 05.0 0.0
LYN pP pP 01 48 16.7 +0.6
LYN pmax pmax
comp=Z,36nm,1.1s
LYN pmax pmax
comp=Z,260nm,7.0s
LYN L L
comp=Z,500nm,16.8s
LYN L L
comp=Z,460nm,17.2s
LYN L L
comp=Z,770nm,17.5s
BTO2 Baotou 24.77 280 eP P 01 48 04.4 -1.1
BTO2 pP pP 01 48 15.9 -0.7
BTO2 sP sP 01 48 21.2 -0.5
BTO2 PP PnPn 01 48 41.4 +2.5
BTO2 S S 01 52 20.2 -4.6
BTO2 sS sS 01 52 39.6 -3.7
BTO2 SS SnSn 01 53 18.0 +3.9
BTO2 pmax pmax
comp=Z,85nm,1.3s
BTO2 pmax pmax
comp=Z,470nm,8.0s
BTO2 L L
comp=Z,800nm,11.1s
BTO2 L L
comp=Z,2μm,19.9s
BTO2 L L

comp=Z,2µm,19.7s
BOD **Bodaibo** **24.79 322** *e*P **P** **01 48 03.1 -2.2**
BOD pmax pmax
comp=Z,30nm,1.0s
YULB **Yu-li** **25.22 232** P **P** **01 48 07.4 -2.2**
YULB **Yu-li** **25.22 232** P **P** **01 48 10.2 +0.6**
WHN **Wuhan** **25.23 254** P **P** **01 48 09.5 -0.1**
WHN pP **pP** **01 48 21.3 +0.6**
WHN pmax pmax
comp=Z,110nm,1.1s
WHN L L
comp=Z,2µm,16.5s
WHN L L
comp=Z,3µm,16.4s
WHN L L
comp=Z,4µm,16.2s
TWG **Pinlang** **25.79 232** P **P** **01 48 14.1 -0.7**
TWG **Pinlang** **25.79 232** P **P** **01 48 15.3 +0.6**
ULN **Ulaanbaatar** **26.17 297** P **P** **01 48 17.8 -0.4**
ULN pmax pmax
comp=Z,40nm,0.8s
ULN **Ulaanbaatar** **26.17 297** P **P** **01 48 17.8 -0.4**
ULN IAmb IAmb 01 48 20.2
comp=Z,40nm,0.8s
ULN **Ulaanbaatar** **26.17 297** P **P** **01 48 18.3 +0.1**
comp=Z,3µmcomp=Z,238nm,1.2s
ULN **Ulaanbaatar** **26.17 297** P **P** **01 48 18.7 +0.5**
SONM **Songino Array** **26.62 297** P **P** **01 48 22.8 +0.6**
comp=Z,24nm,0.6s,baz=83,slow=8.8,SNR=138
SONM LR LR 01 59 34.7
comp=Z,884nm,19.7s,baz=96,slow=38
comp=Z,24nm,0.6s
SONM **Songino Array** **26.62 297** P **P** **01 48 22.3 +0.1**
GUMO **Guam** **27.48 176** LR LR 01 58 45.8
comp=Z,297nm,22.0s,baz=352,slow=35
CNSH **ChangSha** **27.57 252** P **P** **01 48 30.2 -0.6**
CNSH S **S** **01 53 11.4 +2.2**
CNSH pmax pmax
comp=Z,12nm,1.7s
CNSH L L
comp=Z,760nm,15.8s
CNSH L L
comp=Z,700nm,16.2s
CNSH L L
comp=Z,700nm,19.7s
XAN **Xi'an** **27.61 266** P **P** **01 48 30.6 -0.5**
XAN S **S** **01 53 07.9 -1.8**
XAN pmax pmax
comp=Z,27nm,1.0s
XAN pmax pmax
comp=Z,130nm,5.0s
XAN L L
comp=Z,480nm,11.7s
XAN L L
comp=Z,550nm,14.6s
XAN L L
comp=Z,620nm,17.7s
IRK **Irkutsk** **28.32 306** *e*P **P** **01 48 36.9 -0.4**
IRK pmax pmax
comp=Z,83nm,1.8s
TLY **Talaya** **28.64 305** LR LR 02 00 49.0
comp=Z,673nm,19.7s,baz=84,slow=38
TLY **Talaya** **28.64 305***ce*P **P** **01 48 40.3 +0.2**
TLY pmax pmax
comp=Z,34nm,1.3s
TLY **Talaya** **28.64 305** P **P** **01 48 40.7 +0.5**
ZAK **Zakamensk** **28.76 302** *e*P **P** **01 48 40.9 -0.4**
ZAK pmax pmax
comp=Z,25nm,1.6s
ENH **Enshi** **28.94 259** P **P** **01 48 43.2 +0.2**
H11N2 **WAKE ISLAND Hy** **29.62 129** T T 02 20 20.7
baz=323,slow=75,SNR=781
H11N1 **WAKE ISLAND Hy** **29.63 129** T T 02 20 12.4
baz=323,slow=75,SNR=884
H11N3 **WAKE ISLAND Hy** **29.64 129** T T 02 20 21.6
baz=323,slow=75,SNR=799
BILL **Bilibino** **29.82 18***ce*P **P** **01 48 50.3 -0.1**
BILL pmax pmax
comp=Z,16nm,1.0s
BILL **Bilibino** **29.82 18** P **P** **01 48 50.7 +0.3**
BILL IAmb IAmb 01 48 51.7
comp=Z,28nm,1.2s
MOY **Mondy** **30.29 305** *e*P **P** **01 48 55.4 +0.6**
MOY pmax pmax
comp=Z,28nm,1.7s
H11S1 **WAKE ISLAND Hy** **30.46 131** T T 02 21 22.6
baz=324,slow=76,SNR=559
H11S3 **WAKE ISLAND Hy** **30.47 131** T T 02 21 26.2
baz=324,slow=76,SNR=481
H11S2 **WAKE ISLAND Hy** **30.48 131** T T 02 21 24.4
baz=324,slow=76,SNR=514
LZH **Lanzhou** **30.64 273** *e*P **P** **01 48 57.8 -0.4**
LZH pP pP 01 49 06.4 -3.0
LZH pmax pmax
comp=Z,26nm,1.2s
LZH L L
comp=Z,300nm,14.2s
LZH L L
comp=Z,320nm,13.8s
LZH L L
comp=Z,570nm,13.5s
LZDM **Lanzhou Array** **30.80 273** P **P** **01 49 00.1 +0.3**
comp=Z,2.4nm,0.3s,baz=105,slow=9.5,SNR=4.0
LZDM LR LR 02 01 50.3
comp=Z,321nm,19.7s,baz=70,slow=37
comp=Z,2.4nm,0.3s
TIXI **Tiksi** **31.39 352** LR LR 02 04 20.0
comp=Z,284nm,18.8s,baz=158,slow=41
TIXI **Tiksi** **31.39 352** *i* P **P** **01 49 04.5 +0.4**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
KNGR **Kungurtug, Tuv** **32.45 303** *i* P **P** **01 49 13.8 0.0**
KNGR pmax pmax
comp=Z,22nm,0.9s
GTA2 **Gaotai** **32.59 282** *e*P **P** **01 49 15.4 +0.2**
GTA2 pmax pmax
comp=Z,13nm,0.8s
GTA2 L L
comp=Z,470nm,15.9s
GTA2 L L
comp=Z,900nm,18.1s
GTA2 L L
comp=Z,1µm,18.4s
CD2 **Chengdu** **32.91 265** P **P** **01 49 17.0 -1.0**
CD2 pmax pmax
comp=Z,40nm,0.8s
GAMB **Gambell** **34.72 34** P **P** **01 49 34.9 +1.7**
baz=252
UNV **Unalaska Valle** **35.81 52** P **P** **01 49 44.2 +1.5**
baz=270
PZH **PanZhiHua** **36.71 260** P **P** **01 49 51.2 +0.3**
PZH pmax pmax
comp=Z,40nm,0.8s
KMI2 **Kunming** **36.74 257** ⇑P **P** **01 49 51.9 +0.6**
KMI2 pP sP 01 50 06.4 -1.2
KMI2 pmax pmax
comp=Z,19nm,1.6s
KMI2 L L
comp=Z,550nm,18.4s
KMI2 L L
comp=Z,430nm,20.8s
KMI2 L L
comp=Z,720nm,20.1s
TNA **Tin City** **36.81 32** P **P** **01 49 52.8 +1.6**
baz=253
GOMU **GeErMu** **37.38 278** P **P** **01 49 55.3 -1.5**
GOMU pmax pmax
comp=Z,18nm,0.7s
K13K **Kusilvak Mount** **37.41 38** P **P** **01 49 57.4 +1.1**
K13K **Kusilvak Mount** **37.41 38** P **P** **01 49 57.8 +1.5**
baz=261
F14K **Arctic Creek** **37.43 32** P **P** **01 49 57.4 +1.0**
baz=255
ANM **Nome** **37.60 34** P **P** **01 49 58.6 +0.7**
baz=257
M13K **Dall Lake** **37.85 41** P **P** **01 50 00.9 +0.9**
baz=264
F15K **North Star Dit** **38.16 32** P **P** **01 50 03.9 +1.3**
baz=256
SLVN **Son La** **38.23 251** P **P** **01 50 04.1 +0.4**
SLVN IAmb IAmb 01 50 20.8
comp=Z,36nm,1.1s
G15K **Niukluk** **38.25 33** P **P** **01 50 04.8 +1.5**
baz=258
L14K **Kuka Creek** **38.27 39** P **P** **01 50 05.0 +1.5**
L14K IAmb IAmb 01 50 20.9
comp=Z,15nm,1.2s
L14K **Kuka Creek** **38.27 39** P **P** **01 50 04.7 +1.2**
baz=264
M14K **Bethel** **38.56 40** P **P** **01 50 07.5 +1.5**
M14K IAmb IAmb 01 50 43.9
comp=Z,12nm,0.9s
M14K **Bethel** **38.56 40** P **P** **01 50 07.8 +1.8**
baz=265
C16K **Lisburne Hills** **38.60 28** P **P** **01 50 06.6 +0.4**
baz=253
N14K **Kuskokwak Cree** **38.64 42** P **P** **01 50 08.3 +1.7**
baz=267
O14K **Tigyukauivet M** **38.81 43** P **P** **01 50 09.9 +1.8**
O14K **Tigyukauivet M** **38.81 43** P **P** **01 50 09.6 +1.5**
baz=268
L15K **Ungalak Mounta** **38.87 39** P **P** **01 50 09.8 +1.2**
baz=265
H16K **Elim** **38.94 34** P **P** **01 50 10.4 +1.3**
baz=260,SNR=8.2
DGZ **Jazzator, Alta** **38.98 302***c i*P **P** **01 50 11.3 +1.4**
DGZ pmax pmax
comp=Z,62nm,0.9s
G16K **Koyuk River** **39.03 33** P **P** **01 50 11.1 +1.2**
G16K **Koyuk River** **39.03 33** P **P** **01 50 11.4 +1.6**
baz=259
M15K **Kasigluk River** **39.18 41** P **P** **01 50 12.5 +1.3**
baz=267
D17K **Noatak River** **39.26 29** P **P** **01 50 12.4 +0.7**
baz=256,SNR=5.3
RDOG **Red Dog Mine** **39.41 29** P **P** **01 50 13.2 +0.2**
baz=255
C17K **DeLong Mountai** **39.42 28** P **P** **01 50 13.8 +0.6**
baz=255
N15K **Kwethluk River** **39.45 41** P **P** **01 50 14.9 +1.5**
N15K IAmb IAmb 01 50 23.2
comp=Z,14nm,0.8s
N15K **Kwethluk River** **39.45 41** P **P** **01 50 15.2 +1.7**
baz=268
J16K **Anvik River** **39.46 36** P **P** **01 50 14.6 +1.1**
baz=264
I17K **Unalakleet** **39.49 35** P **P** **01 50 15.4 +1.7**
baz=263
O15K **Ungalikthiuk R** **39.55 43** P **P** **01 50 16.0 +1.7**
O15K IAmb IAmb 01 50 46.4
comp=Z,12nm,0.9s
O15K **Ungalikthiuk R** **39.55 43** P **P** **01 50 16.4 +2.1**
baz=269
E17K **Hotham Inlet** **39.58 30** P **P** **01 50 16.1 +1.6**
baz=258
G17K **Kiwalik Mounta** **39.75 33** P **P** **01 50 17.5 +1.6**
baz=261,SNR=10
CHNA **Chernabura Isl** **39.81 50** P **P** **01 50 17.5 +1.1**
baz=275
L16K **Owhat River** **39.83 39** P **P** **01 50 17.7 +1.1**
baz=266
TNCH **TengChong** **39.94 260** ⇑P **P** **01 50 19.3 +1.2**
TNCH pP pP 01 50 29.8 +0.2
TNCH sP sP 01 50 35.8 +1.2
TNCH S **S** **01 56 20.9 +0.4**
TNCH sS sS 01 56 42.9 +3.5
TNCH pmax pmax
comp=Z,110nm,1.1s
TNCH pmax pmax
comp=Z,380nm,3.7s
TNCH L L
comp=Z,280nm,10.1s
TNCH L L
comp=Z,320nm,8.5s
TNCH L L
comp=Z,370nm,11.9s
H17K **Granite Mounta** **39.97 34** P **P** **01 50 19.3 +1.6**
H17K **Granite Mounta** **39.97 34** P **P** **01 50 19.1 +1.4**
baz=262,SNR=5.4
M16K **Timber Creek** **40.04 40** P **P** **01 50 19.9 +1.5**
M16K IAmb IAmb 01 50 55.6
comp=Z,33nm,1.7s
M16K **Timber Creek** **40.04 40** P **P** **01 50 19.8 +1.5**
baz=268
NRIK **Noril'sk** **40.05 333** P **P** **01 50 18.5 +0.2**
comp=Z,8.3nm,0.5s,baz=111,slow=6.7,SNR=15
NRIK LR LR 02 08 26.9
comp=Z,934nm,19.5s,baz=99,slow=38
comp=Z,8.3nm,0.5s
NRIK **Noril'sk** **40.05 333** P **P** **01 50 17.7 -0.6**
NRIK IAmb IAmb 01 50 36.3
comp=Z,18nm,0.8s
ZAA0 **Zalesovo Array** **40.05 309** P **P** **01 50 18.3 -0.2**
ZALV **Zalesovo Beam** **40.05 309** P **P** **01 50 19.1 +0.6**
comp=Z,33nm,0.5s,baz=86,slow=7.9,SNR=76
ZALV PcP **PcP** **01 52 23.0 +0.4**
comp=Z,6.0nm,0.7s,baz=111,slow=3.3,SNR=5.1
ZALV LR LR 02 07 49.9
comp=Z,710nm,19.5s,baz=84,slow=37
comp=Z,33nm,0.5s
ZALV **Zalesovo Beam** **40.05 309** P **P** **01 50 18.2 -0.3**
ZALV **PcP** **01 52 21.6 -1.0**
WMQ **Urumqi** **40.07 293** ⇑P **P** **01 50 19.8 +0.9**
WMQ pP sP 01 50 33.3 -2.1
WMQ pmax pmax
comp=Z,72nm,1.1s
WMQ pmax pmax
comp=Z,100nm,3.7s
WMQ L L
comp=Z,310nm,15.1s
WMQ L L
comp=Z,730nm,14.3s
WMQ L L
comp=Z,430nm,13.3s
N16K **Nishlik Lake** **40.12 41** P **P** **01 50 19.8 +0.8**
baz=269
E18K **Tukpahlearik C** **40.12 30** P **P** **01 50 20.3 +1.4**
baz=259
J17K **VABM Dome** **40.15 36** IAmb IAmb 01 50 40.6
comp=Z,18nm,0.9s
J17K **VABM Dome** **40.15 36** P **P** **01 50 20.3 +1.1**
baz=265
C18K **Utukok River** **40.17 28** IAmb IAmb 01 50 20.9
comp=Z,11nm,0.8s
C18K **Utukok River** **40.17 28** P **P** **01 50 19.9 +0.5**
baz=256,SNR=7.0
F18K **Selawik** **40.34 31** P **P** **01 50 21.8 +1.2**
baz=260
L17K **Donlin** **40.41 38** P **P** **01 50 22.6 +1.2**
baz=267
O16K **Kokwok River B** **40.44 42** P **P** **01 50 22.9 +1.3**
O16K **Kokwok River B** **40.44 42** P **P** **01 50 22.9 +1.3**
baz=270
K17K **Iditarod** **40.45 37** P **P** **01 50 22.7 +1.0**
K17K IAmb IAmb 01 50 39.3
comp=Z,13nm,0.8s
K17K **Iditarod** **40.45 37** P **P** **01 50 22.8 +1.1**
baz=266,SNR=7.0
P16K **Nushagak River** **40.50 43** P **P** **01 50 23.4 +1.3**
baz=271
A19K **Wainwright** **40.61 26** P **P** **01 50 23.4 +0.5**
baz=255
G18K **Tagagawik** **40.62 33** IAmb IAmb 01 50 25.6
comp=Z,16nm,0.8s
G18K **Tagagawik** **40.62 33** P **P** **01 50 24.0 +0.9**
baz=262,SNR=13
H18K **Honhosa River** **40.65 34** P **P** **01 50 24.4 +1.1**
H18K IAmb IAmb 01 50 26.1
comp=Z,16nm,0.8s
H18K **Honhosa River** **40.65 34** P **P** **01 50 24.5 +1.1**
baz=263,SNR=15
M17K **Holitna River** **40.79 40** IAmb IAmb 01 51 02.1
comp=Z,16nm,0.9s
M17K **Holitna River** **40.79 40** P **P** **01 50 25.4 +0.9**
baz=269
C19K **Lookout Ridge** **40.85 28** P **P** **01 50 25.6 +0.7**
baz=258,SNR=6.8
N17K **Nushagak Hills** **40.90 41** P **P** **01 50 26.3 +0.9**
baz=270
ZSN **Zaisan** **41.09 299** *e*P **P** **01 50 27.7 +0.5**
ZSN pmax pmax
comp=Z,18nm,0.8s
ZSN **Zaisan** **41.09 299** *e*P **P** **01 50 27.7 +0.5**
comp=Z,18nm,0.8s
F19K **Shaleruckik Mo** **41.11 31** P **P** **01 50 26.9 -0.2**
F19K **Shaleruckik Mo** **41.11 31** P **P** **01 50 27.7 +0.7**
baz=262,SNR=8.6
L18K **Granite Mounta** **41.17 38** P **P** **01 50 28.6 +1.0**
baz=268
GCSA **Galena City Sc** **41.24 34** P **P** **01 50 29.1 +1.0**
baz=265,SNR=5.4
D19K **Kuna River** **41.25 29** IAmb IAmb 01 50 32.9
comp=Z,24nm,1.1s
D19K **Kuna River** **41.25 29** P **P** **01 50 29.3 +1.0**
baz=260,SNR=13
G19K **Purcell Mounta** **41.29 32** P **P** **01 50 29.4 +0.8**
baz=264,SNR=9.8
P17K **Kvichak River** **41.30 43** P **P** **01 50 29.9 +1.3**
baz=272
E19K **Redstone River** **41.41 30** P **P** **01 50 29.8 +0.2**
E19K IAmb IAmb 01 50 35.1
comp=Z,18nm,0.7s
E19K **Redstone River** **41.41 30** P **P** **01 50 31.0 +1.5**
baz=262,SNR=23
R17L **Mt. Peulik Vol** **41.41 45** P **P** **01 50 31.4 +1.7**
baz=274
H19K **Roundabout Mou** **41.49 33** P **P** **01 50 31.5 +1.4**
baz=265,SNR=63
N18K **Kilae Creek** **41.54 41** P **P** **01 50 32.5 +1.8**
N18K **Kilae Creek** **41.54 41** P **P** **01 50 32.2 +1.5**
baz=271
M18K **Stony River** **41.57 39** P **P** **01 50 32.3 +1.4**
baz=270
Q17K **Contact Creek** **41.62 44** P **P** **01 50 32.8 +1.2**
baz=274
J19K **Poorman** **41.73 36** P **P** **01 50 33.1 +0.9**
baz=267,SNR=11
D20K **Etivluk River** **41.83 29** IAmb IAmb 01 50 34.9
comp=Z,19nm,0.8s
D20K **Etivluk River** **41.83 29** P **P** **01 50 34.1 +1.1**
baz=261,SNR=23
B20K **Meade River** **41.87 27** IAmb IAmb 01 50 34.9
comp=Z,26nm,0.8s
B20K **Meade River** **41.87 27** P **P** **01 50 33.7 +0.5**
baz=259,SNR=19
E20K **Nigu River** **41.91 29** P **P** **01 50 34.7 +1.0**
baz=262,SNR=24
F20K **Avaraart Lake** **41.94 31** P **P** **01 50 34.7 +0.9**
baz=264
L19K **White Mountain** **42.03 38** P **P** **01 50 36.7 +2.0**
L19K **White Mountain** **42.03 38** P **P** **01 50 35.6 +0.9**
baz=270
Q18K **Katmai Hardscr** **42.06 44** P **P** **01 50 36.4 +1.3**
baz=274
H20K **Anotleneega Mo** **42.14 33** P **P** **01 50 36.9 +1.4**
baz=266,SNR=20
N19K **Bonanza Creek** **42.23 40** P **P** **01 50 36.9 +0.5**
baz=272
M19K **Big River Lodg** **42.25 39** P **P** **01 50 37.4 +0.9**
baz=271
I20K **Naaghedeneel** **42.27 34** IAmb IAmb 01 50 55.9
comp=Z,25nm,1.0s
I20K **Naaghedeneel** **42.27 34** P **P** **01 50 37.6 +1.0**
baz=268
A21K **Barrow** **42.31 25** P **P** **01 50 37.0 +0.2**
baz=258
J20K **Nowinta River** **42.39 35** P **P** **01 50 39.0 +1.4**
J20K **Nowinta River** **42.39 35** P **P** **01 50 38.7 +1.1**
baz=268,SNR=12
K20K **Telida** **42.40 37** P **P** **01 50 38.8 +1.1**
baz=269
C21K **Knifeblade Rid** **42.55 28** P **P** **01 50 39.7 +0.9**
baz=262,SNR=13
B21K **Ikpikpuk River** **42.67 27** IAmb IAmb 01 50 41.9
comp=Z,20nm,0.8s
B21K **Ikpikpuk River** **42.67 27** P **P** **01 50 40.9 +1.2**
baz=262,SNR=23
SII **Sitkinak Islan** **42.69 47** P **P** **01 50 41.0 +0.9**
baz=277
Q19K **Cape Douglas,** **42.75 43** P **P** **01 50 42.2 +1.6**
baz=275
E21K **Killik River** **42.75 29** P **P** **01 50 41.4 +0.9**
baz=264
G21K **Allakaket** **42.77 32** IAmb IAmb 01 50 43.4
comp=Z,20nm,0.9s
G21K **Allakaket** **42.77 32** P **P** **01 50 41.5 +0.9**
baz=266,SNR=41
A22K **Sinclair Lake** **42.77 25** P **P** **01 50 41.3 +0.8**
baz=260
F21K **Alatna River** **42.83 31** P **P** **01 50 41.7 +0.6**
baz=266
M20K **Styx River** **42.85 39** P **P** **01 50 42.7 +1.2**
baz=272
P19K **Oil Pt** **42.91 42** P **P** **01 50 43.0 +1.1**
baz=274
MK31 **Makanchi Array** **42.96 299***ce*P **P** **01 50 42.7 +0.3**
MKAR **Makanchi Array** **42.96 299** P **P** **01 50 42.9 +0.4**
comp=Z,17nm,0.6s,baz=83,slow=9.4,SNR=118
MKAR LR LR 02 09 49.8
comp=Z,641nm,19.3s,baz=77,slow=38
comp=Z,17nm,0.6s
MKAR **Makanchi Array** **42.96 299***ce*P **P** **01 50 42.9 +0.4**
MKAR pmax pmax
comp=Z,18nm,0.6s
MKAR **Makanchi Array** **42.96 299** P **P** **01 50 42.5 +0.1**
H21K **Melozitna Rive** **43.01 33** P **P** **01 50 43.6 +1.0**
baz=268,SNR=16
LSA **Lhasa** **43.01 272** P **P** **01 50 45.7 +2.1**
OHAK **Old Harbor** **43.10 46** P **P** **01 50 44.6 +1.1**
baz=277
MAKZ **Makanchi** **43.16 299** P **P** **01 50 44.0 -0.1**
MAKZ pmax pmax
comp=Z,36nm,0.9s
MAKZ **Makanchi** **43.16 299** P **P** **01 50 44.0 -0.1**
MAKZ IAmb IAmb 01 50 59.4
comp=Z,36nm,0.9s
MAKZ **Makanchi** **43.16 299** P **P** **01 50 44.7 +0.6**
MAKZ **Makanchi** **43.16 299** P **P** **01 50 44.4 +0.3**
MAKZ pP **pP** **01 50 57.8 +2.2**
MAKZ PcP **PcP** **01 52 32.9 -0.1**
B22K **Teshekpuk Lake** **43.18 26** P **P** **01 50 44.7 +0.8**
baz=262
CHUM **Lake Minchumin** **43.19 36** P **P** **01 50 45.1 +1.1**
baz=270
PPLA **Purkeypile** **43.26 37** P **P** **01 50 45.5 +0.7**
baz=272
CAST **Castle Rocks** **43.30 37** P **P** **01 50 46.2 +1.3**
CAST **Castle Rocks** **43.30 37** P **P** **01 50 45.8 +0.8**
baz=271,SNR=16
I21K **Tanana** **43.34 34** P **P** **01 50 45.7 +0.5**
baz=269
F22K **John River** **43.35 31** P **P** **01 50 46.1 +0.8**
baz=267
SEM **Semipalatinsk** **43.40 304***c i*P **P** **01 50 46.4 +0.2**
SEM pmax pmax
comp=Z,22nm,1.1s
SEM **Semipalatinsk** **43.40 304**⇑*i*P **P** **01 50 46.4 +0.2**
comp=Z,22nm,1.1s
CHTO **Chiang Mai** **43.41 253** P **P** **01 50 46.8 +0.4**
CHTO pmax pmax
comp=Z,19nm,0.8s
CHTO **Chiang Mai** **43.41 253** P **P** **01 50 46.8 +0.4**
CHTO IAmb IAmb 01 51 02.8
comp=Z,19nm,0.8s
CHTO **Chiang Mai** **43.41 253** P **P** **01 50 47.2 +0.8**
comp=Z,29nm,0.8s
CHTO **Chiang Mai** **43.41 253** P **P** **01 50 47.4 +1.0**
KDAK **Kodiak Island** **43.42 45** P **P** **01 50 47.0 +1.0**
baz=277
E22K **Anaktuvuk Pass** **43.53 30** IAmb IAmb 01 50 49.1
comp=Z,16nm,0.8s
E22K **Anaktuvuk Pass** **43.53 30** P **P** **01 50 47.5 +0.7**
baz=266
G22K **Bettles** **43.58 31** P **P** **01 50 48.2 +1.1**
baz=268
H22K **Ishtalitna Cre** **43.60 33** P **P** **01 50 48.6 +1.2**
baz=269,SNR=18
CMAR **Chiang Mai Arr** **43.64 252** P **P** **01 50 49.3 +1.1**
comp=Z,4.6nm,0.7s,baz=43,slow=7.3,SNR=25
CMAR LR LR 02 09 47.7
comp=Z,252nm,18.6s,baz=65,slow=37
comp=Z,4.6nm,0.7s
CMAR **Chiang Mai Arr** **43.64 252** P **P** **01 50 49.0 +0.7**
KTH **Kantishna Hill** **43.81 36** IAmb IAmb 01 51 20.3
comp=Z,30nm,1.2s
MLY **Manley** **43.87 34** P **P** **01 50 51.2 +1.6**
baz=271,SNR=17
L22K **Petersville** **43.93 38** P **P** **01 50 51.1 +1.0**
baz=273
D23K **Nanushuk River** **44.00 28** P **P** **01 50 51.7 +1.2**
baz=267,SNR=8.4
C23K **Itkillik River** **44.08 27** IAmb IAmb 01 50 53.2
comp=Z,15nm,0.9s
C23K **Itkillik River** **44.08 27** P **P** **01 50 51.3 +0.2**
baz=266
GTOI **Gorontalo** **44.08 209** P **P** **01 50 51.9 +0.2**
comp=Z,14nm,1.0s
COLD **Coldfoot** **44.10 31** P **P** **01 50 52.1 +0.8**
baz=269,SNR=6.6
TRF **Thorofare Moun** **44.10 36** P **P** **01 50 52.6 +1.0**
TRF **Thorofare Moun** **44.10 36** P **P** **01 50 52.2 +0.6**

baz=273
BRSE Bradley Lake S 44.16 42 P P 01 50 52.2 +0.3
baz=276
G23K Bananza Creek 44.16 32 IAmb IAmb 01 50 54.3
comp=Z,15nm,0.8s
G23K Bananza Creek 44.16 32 P P 01 50 52.9 +1.0
baz=270,SNR=26
CUT Chulitna 44.17 38 P P 01 50 52.6 +0.7
baz=274
KURK Kurchatov 44.34 305 P P 01 50 54.4 +1.0
KURK 01 52 37.3
KURK Kurchatov 44.34 305 P P 01 50 53.2 -0.2
KURK Kurchatov 44.34 305 P P 01 50 53.8 +0.4
KURK Kurchatov 44.34 305 P P 01 50 53.4 0.0
KURK pP pwP 01 51 07.2 +0.2
SLKM Skilak Lake 44.34 41 P 01 50 54.0 +0.7
E23K Chandalar 44.35 30 P P 01 50 54.4 +1.0
baz=268,SNR=13
H23K Yukon River 44.36 33 IAmb IAmb 01 50 56.8
comp=Z,19nm,0.8s
H23K Yukon River 44.36 33 P P 01 50 54.9 +1.4
baz=271
TOLK Toolik Lake Re 44.38 29 P P 01 50 54.4 +0.8
baz=268
KURBB Kurchatov Arra 44.42 305 P P 01 50 54.4 +0.3
comp=Z,320nm,0.6s,baz=78,slow=8.8,SNR=180
KURBB PcP PcP 01 52 37.3 +0.2
comp=Z,4.2nm,0.7s,baz=67,slow=3.9,SNR=3.3
KURBB LR LR 02 10 24.4
comp=Z,335nm,18.6s,baz=167,slow=37
comp=Z,320nm,0.6s
BWN Browne 44.44 35 P P 01 50 55.8 +1.8
I23K Minto, Yukon-K 44.45 34 P P 01 50 54.9 +0.8
baz=272,SNR=11
TOLI2 Tolitoli 44.51 212 P P 01 50 55.1 0.0
RC01 Rabbit Creek A 44.52 40 P P 01 50 56.0 +1.2
baz=276
O22K Cooper Landing 44.59 41 P P 01 50 55.4 +0.1
baz=276
NEA2 Nenana 44.59 35 IAmb IAmb 01 51 15.7
comp=Z,14nm,0.7s
NEA2 Nenana 44.59 35 P P 01 50 56.1 +0.8
baz=273,SNR=15
SHL Shillong 44.62 266 P P 01 50 55.3 -0.9
SHL pmax pmax
comp=Z,35nm,0.9s
SHL Shillong 44.62 266 P P 01 50 55.3 -0.9
SHL IAmb IAmb 01 51 11.3
comp=Z,34nm,0.9s
SHL Shillong 44.62 266 *eP* P 01 50 55.4 -0.9
D24K Happy Valley 44.67 28 IAmb IAmb 01 50 58.0
comp=Z,20nm,0.8s
D24K Happy Valley 44.67 28 P P 01 50 56.3 +0.4
baz=268
MCK McKinley 44.69 36 P P 01 50 56.9 +0.8
baz=274,SNR=6.2
SEW Seward 44.77 41 P P 01 50 56.7 0.0
baz=277
E24K Your Creek 44.77 30 P P 01 50 57.7 +0.9
baz=270,SNR=16
GHO Glory Hole Cre 44.85 39 P P 01 50 58.0 +0.6
GHO IAmb IAmb 01 51 17.8
comp=Z,16nm,0.7s
WAT1 Susitna Watana 44.93 37 P P 01 50 58.5 +0.4
baz=275
F24K Squaw Lake 45.00 31 P P 01 50 59.6 +1.0
baz=271,SNR=12
WRH Wood River Hil 45.02 35 IAmb IAmb 01 51 28.1
comp=Z,14nm,1.0s
H24K Noodor Dome 45.04 33 IAmb IAmb 01 51 18.5
comp=Z,15nm,0.8s
H24K Noodor Dome 45.04 33 P P 01 51 00.5 +1.6
baz=272,SNR=23
COLA College 45.10 34 P P 01 51 00.9 +1.6
COLA pmax pmax
comp=Z,96nm,0.2s
COLA College 45.10 34 P P 01 51 00.9 +1.6
COLA College 45.10 34 P P 01 51 01.0 +1.7
KNK Knik Glacier 45.10 39 P P 01 51 00.0 +0.6
baz=276
SML Sawmill 45.12 39 IAmb IAmb 01 51 20.1
comp=Z,16nm,0.8s
SML Sawmill 45.12 39 P P 01 51 00.5 +0.9
baz=276
G24K Hadweenzic Riv 45.17 32 IAmb IAmb 01 51 03.2
comp=Z,55nm,1.6s
G24K Hadweenzic Riv 45.17 32 P P 01 51 01.2 +1.3
baz=272,SNR=18
POKR Poker Plat Res 45.26 34 P P 01 51 02.1 +1.4
baz=274
WAT6 Susitna Watana 45.32 38 P P 01 51 02.1 +0.7
baz=276
DHY Denali Highway 45.44 37 P P 01 51 02.8 +0.5
baz=276,SNR=9.1
HDA Harding Lake 45.52 35 IAmb IAmb 01 51 24.6
comp=Z,9.2nm,0.6s
HDA Harding Lake 45.52 35 P P 01 51 03.2 +0.6
baz=275
IL31 45.52 34 IAmb IAmb 01 51 22.7
comp=Z,13nm,0.9s
ILAR Eielson Array 45.52 34 P P 01 51 03.8 +1.2
comp=Z,5.9nm,0.8s,baz=263,slow=5.7,SNR=58
ILAR LR LR 02 13 14.0
comp=Z,148nm,18.0s,baz=282,slow=40
comp=Z,5.9nm,0.8s
ILAR Eielson Array 45.52 34 P P 01 51 03.2 +0.6
D25K Kavik River 45.55 28 P P 01 51 03.3 +0.4
baz=270,SNR=9.6
SCM Sheep Creek Mo 45.59 39 IAmb IAmb 01 51 43.3
comp=Z,14nm,0.9s
G25K Bearman Lake 45.72 32 P P 01 51 05.5 +1.3
baz=273,SNR=11
F25K Christian Rive 45.86 30 IAmb IAmb 01 51 09.0
comp=Z,35nm,1.8s
F25K Christian Rive 45.86 30 P P 01 51 07.0 +1.7
baz=273,SNR=7.5
E25K Arctic Village 45.87 30 IAmb IAmb 01 51 40.1
comp=Z,21nm,1.6s
E25K Arctic Village 45.87 30 P P 01 51 06.6 +1.2
baz=272
SHLS Shalkode 45.98 295 *c i* P P 01 51 04.5 -2.2
SHLS pmax pmax
comp=Z,18nm,1.1s
SHLS Shalkode 45.98 295 ⇧ *i* P P 01 51 04.6 -2.2
comp=Z,18nm,1.1s
KRVT Keravat (AS076 45.99 167 LR LR 02 05 40.5
comp=Z,12nm,21.9s,baz=239,slow=30
PRP Porcupine Dome 46.03 33 IAmb IAmb 01 51 27.4
comp=Z,16nm,0.8s
PRP Porcupine Dome 46.03 33 P P 01 51 07.8 +0.9
baz=275,SNR=9.5
C26K Camden Bay 46.06 27 P P 01 51 08.3 +1.5
baz=271
TDK Taldyqorghan 46.08 297 *eP* P 01 51 07.8 +0.5
TDK Taldyqorghan 46.08 297 *eP* P 01 51 07.8 +0.5
K24K Donnelly Dome 46.08 36 IAmb IAmb 01 51 43.8
comp=Z,16nm,0.8s
K24K Donnelly Dome 46.08 36 P P 01 51 08.1 +1.0
baz=276
M24K Tolsona, Glenn 46.10 38 P P 01 51 08.4 +1.1
baz=278
J25K Salcha River, 46.18 35 P P 01 51 09.1 +1.1
baz=276
UZB Uzynbulak 46.28 295 *eP* P 01 51 09.3 +0.2
UZB pmax pmax
comp=Z,16nm,1.1s
UZB Uzynbulak 46.28 295 *eP* P 01 51 09.4 +0.2
comp=Z,16nm,1.1s
KLU Klutina 46.30 39 IAmb IAmb 01 51 52.0
comp=Z,17nm,0.9s
KLU Klutina 46.30 39 P P 01 51 10.5 +1.5
baz=278
PAX Paxson 46.32 37 P P 01 51 10.6 +1.5
baz=277
F26K Sheenjek River 46.42 30 P P 01 51 11.3 +1.5
F26K IAmb IAmb 01 51 13.3
comp=Z,17nm,0.9s
F26K Sheenjek River 46.42 30 P P 01 51 11.6 +1.8
baz=274,SNR=16
DIV Divide 46.43 39 IAmb IAmb 01 51 29.1
comp=Z,34nm,1.4s
C27K Jago River 46.48 28 IAmb IAmb 01 51 14.4
comp=Z,19nm,1.1s
C27K Jago River 46.48 28 P P 01 51 11.3 +1.1
baz=272
RIDG Independent Ri 46.50 36 IAmb IAmb 01 51 38.8
comp=Z,16nm,1.2s
RIDG Independent Ri 46.50 36 P P 01 51 11.4 +0.9
baz=277
EYAK Cordova Ski Ar 46.53 40 P P 01 51 11.6 +1.0
baz=279
HARP HAARP 46.54 38 P P 01 51 11.6 +0.9
baz=278
G26K Porcupine Rive 46.62 31 IAmb IAmb 01 51 14.8
comp=Z,22nm,0.9s
G26K Porcupine Rive 46.62 31 P P 01 51 12.9 +1.7
baz=275,SNR=21
SATY Saty 46.73 295 *eP* P 01 51 12.8 +0.1
SATY pmax pmax
comp=Z,18nm,1.1s
SATY Saty 46.73 295 *eP* P 01 51 12.8 +0.1
comp=Z,18nm,1.1s
WUS Wushi 46.85 292 P P 01 51 14.7 +1.0
WUS Wushi 46.85 292 P P 01 51 14.3 +0.7
WUS pP sP 01 51 28.7 -1.5
SCRK Sand Creek 46.85 35 IAmb IAmb 01 51 42.5
comp=Z,16nm,0.7s
SCRK Sand Creek 46.85 35 P P 01 51 14.2 +0.9
baz=278,SNR=20
N25K Chitina, Valde 46.91 39 P P 01 51 15.0 +1.3
baz=279
BMRM Bremner River 47.02 40 P P 01 51 15.7 +1.2
baz=280
I26K Coal Creek Min 47.04 34 P P 01 51 16.0 +1.4
baz=277
EVN Everest 47.17 272 P P 01 51 17.9 +1.1
L26K Log Cabin Wild 47.27 37 P P 01 51 18.0 +1.5
L26K IAmb IAmb 01 51 42.9
comp=Z,19nm,1.1s
L26K Log Cabin Wild 47.27 37 P P 01 51 18.2 +1.7
baz=279
KAIM Kayak Island 47.29 41 P P 01 51 17.8 +1.2
baz=281
E27K Coleen River 47.34 29 P P 01 51 18.7 +1.7
E27K IAmb IAmb 01 51 20.1
comp=Z,12nm,1.1s
E27K Coleen River 47.34 29 P P 01 51 18.2 +1.2
baz=276
G27K Doyon Strip 47.47 31 P P 01 51 19.9 +1.9
baz=277,SNR=9.7
D27M Malcolm River 47.48 28 P P 01 51 19.6 +1.6
baz=275
VRDI Verde Repeater 47.52 39 IAmb IAmb 01 51 57.0
comp=Z,9.1nm,0.9s
M26K Nabesna, AK 47.53 37 IAmb IAmb 01 51 43.1
comp=Z,11nm,0.8s
M26K Nabesna, AK 47.53 37 P P 01 51 20.3 +1.8
baz=280,SNR=6.2
BERG Berg Lake 47.55 40 IAmb IAmb 01 51 37.6
comp=Z,39nm,1.3s
H27K Steamboat Moun 47.59 32 P P 01 51 20.3 +1.3
H27K IAmb IAmb 01 51 23.3
comp=Z,9.9nm,0.7s
H27K Steamboat Moun 47.59 32 P P 01 51 20.4 +1.4
baz=278,SNR=17
MDOK Medeo 47.63 295 *eP* P 01 51 19.9 +0.3
MDOK Medeo 47.63 295 *eP* P 01 51 20.0 +0.3
TARG Taragay, Kyrgy 47.63 293 P P 01 51 21.6 +1.5
I27K Kandik River 47.64 33 IAmb IAmb 01 51 38.1
comp=Z,29nm,1.6s
I27K Kandik River 47.64 33 P P 01 51 20.8 +1.4
baz=278
K27K Chicken 47.68 35 IAmb IAmb 01 51 49.4
comp=Z,13nm,0.8s
AAA Alma-Ata 47.70 296 *eP* P 01 51 20.4 +0.3
AAA pmax pmax
comp=Z,16nm,0.7s
AAA Alma-Ata 47.70 296 *eP* P 01 51 20.4 +0.3
comp=Z,16nm,0.7s
TNSS Tian-Shan 47.74 295 *eP* P 01 51 20.7 -0.1
TNSS Tian-Shan 47.74 295 *eP* P 01 51 20.8 -0.1
CRQM Cirque 47.76 40 IAmb IAmb 01 51 44.9
comp=Z,22nm,0.9s
CRQE Cirque 47.78 40 P P 01 51 22.1 +1.5
baz=281
KDJ Kajisay 47.92 294 P P 01 51 23.3 +1.3
L27K Beaver Creek, 47.95 36 IAmb IAmb 01 51 43.9
comp=Z,12nm,0.8s
L27K Beaver Creek, 47.95 36 P P 01 51 23.2 +1.5
baz=280
BCAR Beaver Creek A 47.97 36 P P 01 51 23.0 +1.2
M27K Edge Creek, AK 48.05 37 IAmb IAmb 01 52 02.0
comp=Z,14nm,1.1s
M27K Edge Creek, AK 48.05 37 P P 01 51 24.2 +1.6
baz=281,SNR=9.5
E28M Babbage River 48.06 29 IAmb IAmb 01 51 25.4
comp=Z,9.2nm,0.8s
E28M Babbage River 48.06 29 P P 01 51 23.8 +1.3
baz=277,SNR=9.4
F28M Old Crow 48.06 30 IAmb IAmb 01 51 25.8
comp=Z,14nm,0.8s
F28M Old Crow 48.06 30 P P 01 51 23.8 +1.3
baz=278,SNR=22
I28M Miner Creek 48.36 33 IAmb IAmb 01 52 02.2
comp=Z,12nm,0.9s
I28M Miner Creek 48.36 33 P P 01 51 26.7 +1.8
baz=280,SNR=14
GRNC Granite Creek 48.43 39 IAmb IAmb 01 51 58.1
comp=Z,16nm,0.9s
BVCY Beaver Creek 48.51 37 P P 01 51 27.4 +1.4
baz=282,SNR=6.6
ULHL Ulahol 48.52 295 P P 01 51 35.2 +8.6
SNR=17
BOOM Boomskoye usch 48.63 295 P P 01 51 27.5 0.0
BOOM pmax pmax
comp=Z,63nm,0.8s
BOOM Boomskoye usch 48.63 295 P P 01 51 27.5 0.0
BOOM Boomskoye usch 48.63 295 P P 01 51 28.4 +0.9
BVAR Borovoye Array 48.68 310 P P 01 51 27.9 +0.5
comp=Z,10nm,0.4s,baz=78,slow=9.2,SNR=32
comp=Z,10nm,0.4s
E29M Blow River 48.69 29 IAmb IAmb 01 51 30.7
comp=Z,23nm,1.0s
E29M Blow River 48.69 29 P P 01 51 29.0 +1.8
baz=279,SNR=22
TKM2 Tokmak 2 48.70 296 P P 01 51 29.1 +1.0
SNR=41
BORK Borovoye 48.71 310 P P 01 51 27.8 +0.1
BORK pmax pmax
comp=Z,80nm,1.4s
BORK Borovoye 48.71 310 P P 01 51 27.8 +0.1
YUK3 Moose Creek 48.82 38 P P 01 51 29.7 +1.0
baz=282
DAWY Dawson 48.83 35 P P 01 51 29.7 +1.2
baz=281
ASAI AK-SAY(Kyrgyzs 48.84 293 P P 01 51 30.1 +0.9
H29M Whitestone 48.86 32 IAmb IAmb 01 52 11.4
comp=Z,9.3nm,0.8s
H29M Whitestone 48.86 32 P P 01 51 30.3 +1.7
baz=280
G29M Pine Creek 48.88 31 IAmb IAmb 01 52 12.3
comp=Z,36nm,1.4s
G29M Pine Creek 48.88 31 P P 01 51 30.9 +2.1
baz=280,SNR=14
BTLS Baital 48.97 299 *eP* P 01 51 30.0 +0.2
BTLS Baital 48.97 299 *eP* P 01 51 30.0 +0.2
NRN Naryn 49.00 294 IAmb IAmb 01 51 51.7
comp=Z,36nm,1.4s
SGDS Sogindy 49.16 297 *eP* P 01 51 31.6 +0.2
comp=Z,13nm,0.9s
O28M Mount Upton 49.17 39 P P 01 51 33.1 +1.6
baz=284
KBK Karagaybulak 49.25 296 P P 01 51 33.4 +1.2
SNR=19
YUK8 Steele Glacier 49.25 38 P P 01 51 34.1 +2.0
baz=283
USP Ospenovka 49.32 297 P P 01 51 33.1 +0.5
SNR=6.5
EPYK Eagle Plains 49.49 32 IAmb IAmb 01 51 54.3
comp=Z,18nm,0.7s
EPYK Eagle Plains 49.49 32 P P 01 51 34.9 +1.4
baz=282,SNR=23
G30M tAoh Zrali Nji 49.56 31 P P 01 51 36.0 +1.9
baz=282,SNR=24
AAK Ala-Archa 49.56 296 P P 01 51 35.1 +0.5
SNR=5.1
AAK Ala-Archa 49.56 296 *ce* P P 01 51 34.9 +0.3
AAK pmax pmax
comp=Z,34nm,1.7s
AAK Ala-Archa 49.56 296 P P 01 51 34.6 +0.1
AAK Ala-Archa 49.56 296 P P 01 51 35.1 +0.5
AAK Ala-Archa 49.56 296 P P 01 51 34.8 +0.2
AAK pP pwP 01 51 49.5 +1.2
BRWY Burwash Landin 49.58 38 P P 01 51 34.8 +0.6
baz=284
L29M L29M 49.59 36 IAmb IAmb 01 51 56.2
comp=Z,16nm,0.9s
L29M L29M 49.59 36 P P 01 51 36.1 +1.8
baz=283,SNR=16
M29M Somme Creek 49.59 37 P P 01 51 35.7 +1.3
baz=284
F30M Barrier River 49.60 30 P P 01 51 36.2 +1.9
baz=281,SNR=34
K29M Barlow Dome 49.69 35 IAmb IAmb 01 52 05.4
comp=Z,12nm,0.8s
K29M Barlow Dome 49.69 35 P P 01 51 36.6 +1.4
baz=283,SNR=12
I30M Mount Dempster 49.87 33 P P 01 51 37.4 +0.9
I30M IAmb IAmb 01 51 39.4
comp=Z,16nm,0.8s
I30M Mount Dempster 49.87 33 P P 01 51 38.0 +1.5
baz=283,SNR=37
YUK6 Outpost Mounta 50.00 39 P P 01 51 38.4 +0.8
baz=285
J30M Hart River 50.03 34 P P 01 51 39.0 +1.3
baz=283,SNR=8.6
EKS2 Erkin-Say 50.04 296 P P 01 51 38.5 +0.4
SNR=11
GAYA Gaya 50.06 270 *eP* P 01 51 38.7 +0.4
KSH2 Kashi 50.23 291 P P 01 51 40.2 +0.5
KSH2 pP pP 01 51 52.3 +0.9
KSH2 pmax pmax
comp=Z,10.0nm,0.9s
KSH2 L L
comp=Z,440nm,13.1s
KSH2 L L
comp=Z,520nm,18.9s
KSH2 L L
comp=Z,600nm,15.6s
INK Inuvik 50.30 29 IAmb IAmb 01 51 42.0
comp=Z,15nm,0.8s
INK Inuvik 50.30 29 P P 01 51 40.6 +1.1
baz=283,SNR=20
INK Inuvik 50.30 29 P P 01 51 41.0 +1.5
M30M Minto, Yukon 50.31 36 P P 01 51 42.1 +2.3
baz=285,SNR=7.2
G31M Satah River 50.32 31 IAmb IAmb 01 51 57.1
comp=Z,15nm,0.7s
G31M Satah River 50.32 31 P P 01 51 41.3 +1.6
baz=283,SNR=19
F31M Tsiigehtchic 50.41 30 IAmb IAmb 01 51 42.9
comp=Z,16nm,0.9s
F31M Tsiigehtchic 50.41 30 P P 01 51 41.2 +0.9
baz=283,SNR=14
HYT Haines Junctio 50.43 39 P P 01 51 42.4 +1.6
baz=286,SNR=22
H31M Peel River 50.56 32 P P 01 51 43.4 +1.8
baz=284,SNR=25
HNLY HANLEY 50.64 282 *eP* P 01 51 45.3 +2.0
P29M Windy Craggy 50.65 40 P P 01 51 44.8 +2.4
P29M Windy Craggy 50.65 40 P P 01 51 44.5 +2.2
baz=286,SNR=11
P30M Million Dollar 50.88 39 P P 01 51 46.1 +1.9
baz=286
N31M Braeburn, Yuko 51.06 38 P P 01 51 46.9 +1.4
baz=286,SNR=8.4
O30N Mendenhall 51.12 39 P P 01 51 47.7 +1.8
baz=287
PTH Pithoragarh 51.31 278 *ex* x 01 51 38.6
PLBC Pleasant Camp 51.37 40 P P 01 51 49.5 +1.8
baz=288
LGTI Lohaghat 51.49 278 *eP* P 01 51 49.6 +0.4
M31M Drury Creek, Y 51.49 36 P P 01 51 50.4 +1.8
baz=287,SNR=6.1
OHH Osh 51.59 294 P P 01 51 48.9 -0.9
DZA Taraz 51.60 297 *eP* P 01 51 50.1 +0.4
DZA pmax pmax
comp=Z,15nm,0.8s
DZA Taraz 51.60 297 *eP* P 01 51 50.2 +0.4
comp=Z,15nm,0.8s
ARK Arkit 51.62 296 P P 01 51 50.9 +0.8
WHY Whitehorse 51.72 38 IAmb IAmb 01 52 14.6
comp=Z,33nm,1.3s
WHY Whitehorse 51.72 38 P P 01 51 52.0 +1.6
baz=288
KLP Kalpa 51.78 281 *eP* P 01 51 52.8 +1.1
KULM Kulim 51.81 238 P P 01 51 52.3 +0.7
KULM Kulim 51.81 238 P P 01 51 53.0 +1.4
comp=Z,38nm,1.0s
KULM Kulim 51.81 238 P P 01 51 53.1 +1.5
S31K Pelican 51.89 42 P P 01 51 52.8 +1.2
baz=289
UTK UTTARKASHI 52.04 280 *ex* pP 01 52 09.0 +3.9
KK31 Karatay Array 52.06 298 *i* P P 01 51 53.3 +0.1
KK31 Karatay Array 52.06 298 IAmb IAmb 01 52 09.3
comp=Z,19nm,0.8s
KKAR Karatay Array 52.06 298 P P 01 51 53.0 -0.2
KKAR Karatay Array 52.06 298 P P 01 51 53.0 -0.2
A36M Sachs Harbour 52.09 23 P P 01 51 54.3 +1.3
baz=287,SNR=6.5
ALBI Allahabad 52.37 272 *ex* P 01 52 00.4 +4.8
BRLS Boroldav 52.55 298 *eP* P 01 51 58.4 +1.6
BRLS Boroldav 52.55 298 *eP* P 01 51 58.4 +1.6
P32M Atlin 52.61 40 P P 01 51 58.5 +1.5
baz=289
R32K Eaglecrest 52.65 41 P P 01 51 58.3 +1.0
R32K Eaglecrest 52.65 41 P P 01 51 58.9 +1.6
baz=290
SIT Sitka 52.65 43 P P 01 51 59.3 +2.0
baz=290
TSSA Tissa 52.69 284 *eP* P 01 51 59.1 +0.9
TSSA IAmb IAmb 01 52 04.5
comp=Z,62nm,1.0s
MMPY Sheldon Lake, 52.75 35 P P 01 51 59.1 +1.1
MMPY Sheldon Lake, 52.75 35 P P 01 52 00.2 +2.1
baz=289,SNR=6.6
IUG luzhnay 52.78 297 *eP* P 01 51 58.8 +0.2
IUG pmax pmax
comp=Z,25nm,1.1s
IUG luzhnay 52.78 297 *eP* P 01 51 58.9 +0.2
comp=Z,25nm,1.1s
P33M Teslin, Yukon 52.83 39 IAmb IAmb 01 52 17.9
comp=Z,18nm,1.2s
P33M Teslin, Yukon 52.83 39 P P 01 52 00.6 +1.9
baz=290,SNR=9.5
SVE Sverdlovsk 52.83 317 *eP* P 01 51 59.8 +1.2
SVE pmax pmax
comp=Z,44nm,0.8s
SVE MLR MLR
comp=Z,759nm,18.0s
DHRM DHARAMSHALA 52.87 283 *eP* P 01 51 60.0 +0.4
DHRM *i* pP sP 01 52 14.3 -1.9
S32K Killisnoo 52.89 42 P P 01 52 00.6 +1.6
baz=290
CHM Chimkent 53.00 297 *eP* P 01 52 00.4 +0.3
CHM pmax pmax
comp=Z,12nm,0.6s
CHM Chimkent 53.00 297 *eP* P 01 52 00.4 +0.3
comp=Z,12nm,0.6s
BTK Batken 53.15 294 P P 01 52 01.4 +0.1
C36M Paulatuk 53.30 26 IAmb IAmb 01 52 04.1
comp=Z,15nm,0.9s
C36M Paulatuk 53.30 26 P P 01 52 03.1 +1.2
baz=290
MANEM Manem 53.68 291 IAmb IAmb 01 52 22.7
comp=Z,68nm,1.2s
GAR Garm 53.97 293 P P 01 52 07.5 +0.1
NDI New Delhi 54.01 279 *eP* P 01 52 07.4 -0.2
NDI IAmb IAmb 01 52 08.9
comp=Z,11nm,0.7s
NDI *i* x x 01 52 11.8
ARTI Arti 54.15 317 LR LR 02 18 01.2
comp=Z,754nm,18.1s,baz=70,slow=39
ARTI Arti 54.15 317 *c i* P P 01 52 08.6 +0.3
ARTI *PP pP 01 52 22.7 +2.5
ARTI 01 53 13.6
ARTI 01 54 07.8
ARTI S S 01 59 41.5 -0.3
ARTI SS SS 02 03 19.6 -3.7
ARTI pmax pmax
comp=Z,30nm,0.9s
ARTI MLR MLR
comp=Z,750nm,17.0s
ARTI Arti 54.15 317 P P 01 52 08.2 -0.1
ARTI Arti 54.15 317 P P 01 52 08.7 +0.3
ARTI pP pP 01 52 22.4 +2.3
NIL Nilore 54.41 286 P P 01 52 10.7 +0.1
NIL pmax pmax
comp=Z,62nm,1.0s
NIL Nilore 54.41 286 P P 01 52 10.7 +0.1

NIL Nilore 54.41 286 P **P** **01 52 11.9 +1.4**
RAGD RAYAGADA 54.61 265 *e*P **P** **01 52 13.1 +1.0**
RAGD IAmb IAmb 01 52 14.8
comp=Z,11nm,1.0s
JHNI Jhansi 54.70 275 *e*P **P** **01 52 12.1 -0.7**
PSI Prapat 54.81 238 P **P** **01 52 14.6 +0.8**
comp=Z,25nm,0.9s
CHGR Chuyangaron 54.93 293 *i* P **P** **01 52 14.5 +0.1**
CHGR pmax pmax
comp=Z,63nm,1.0s
T35M Bob Quinn 55.26 42 IAmb IAmb 01 52 39.6
comp=Z,9.3nm,0.9s
T35M Bob Quinn 55.26 42 P **P** **01 52 18.2 +1.8**
baz=294
BKNI Bangkinang 55.41 234 P **P** **01 52 19.2 +1.3**
VIS Vishakhapatnam 55.63 264 *e*P **P** **01 52 20.2 +0.7**
VIS IAmb IAmb 01 52 21.3
AB31 Akbulak array 56.16 309 *i* P **P** **01 52 23.1 +0.2**
ABKAR Akbulak array 56.16 309 P **P** **01 52 23.0 +0.1**
SHAA Shahritus 56.17 293 IAmb IAmb 01 52 29.8
comp=Z,62nm,0.8s
SPA0 Spitsbergen Ar 56.73 349 *e*P **P** **01 52 27.4 +0.9**
SPB2 Spitsbergen Ar 56.73 349 P **P** **01 52 26.7 +0.1**
SPITS Spitsbergen Ar 56.73 349 P **P** **01 52 27.2 +0.6**
comp=Z,8.9nm,0.8s,baz=83,slow=10,SNR=9.5
comp=Z,8.9nm,0.8s
SPITS Spitsbergen Ar 56.73 349 P **P** **01 52 27.6 +1.0**
SPITS pmax pmax
comp=Z,29nm,1.2s
AKTO Aktyubinsk 56.77 310 LR LR 02 18 14.7
comp=Z,491nm,21.0s,baz=42,slow=37
KBS Kingsbay 56.82 350*ce*P **P** **01 52 28.1 +0.9**
KBS pmax pmax
comp=Z,26nm,1.0s
KBS Kingsbay 56.82 350 *e*P **P** **01 52 28.4 +1.2**
KBS IAmb IAmb 01 52 29.1
comp=Z,23nm,0.8s
KBS Kingsbay 56.82 350 P **P** **01 52 28.0 +0.8**
KBS Kingsbay 56.82 350 P **P** **01 52 28.9 +1.7**
KBS Kingsbay 56.82 350 *i* P **P** **01 52 23.5 -3.7**
BHPL Bhopal 56.83 273 *e*P **P** **01 52 27.3 -0.8**
BHPL *i* x x 01 52 44.3
KBL Kabul 57.00 289 P **P** **01 52 28.5 -0.9**
KBL pmax pmax
comp=Z,41nm,1.2s
KBL Kabul 57.00 289 P **P** **01 52 28.5 -0.9**
KBL Kabul 57.00 289 P **P** **01 52 29.0 -0.4**
NOR Nord 57.05 356 P **P** **01 52 29.2 +0.4**
NOR Nord 57.05 356 *i* P **P** **01 52 25.5 -3.3**
NOR IAmb IAmb 01 52 29.4
comp=Z,8.6nm,0.8s
KIRV Kirov 57.66 322 LR LR 02 20 57.5
comp=Z,252nm,18.1s,baz=58,slow=40
KIRV Kirov 57.66 322*ce*P **P** **01 52 33.6 +0.3**
HSPB Hornsund (broa 57.68 348 P **P** **01 52 34.3 +1.1**
RES Resolute Bay 58.39 15 LR LR 02 21 12.6
comp=Z,106nm,19.9s,baz=358,slow=39
RES Resolute Bay 58.39 15 P **P** **01 52 38.4 +0.2**
RES pmax pmax
comp=Z,16nm,0.8s
RES Resolute Bay 58.39 15 P **P** **01 52 38.4 +0.2**
RES IAmb IAmb 01 52 39.6
comp=Z,16nm,0.8s
RES Resolute Bay 58.39 15 P **P** **01 52 38.8 +0.6**
AKL Akola 58.61 271 *e*P **P** **01 52 41.1 +0.5**
VADS Vadso 59.14 339 *e*P **P** **01 52 44.0 +0.5**
VADS IAmb IAmb 01 52 44.5
comp=Z,27nm,1.0s
APA Apatity 59.41 335⇓ *e*P **P** **01 52 43.5 -1.9**
APA pmax pmax
comp=Z,8.0nm,1.0s
APA MLR MLR
comp=Z,317nm,24.3s
HYB Hyderabad 59.41 267 *e*P **P** **01 52 45.7 -0.5**
YKA Yellowknife Ar 59.77 32 P **P** **01 52 47.8 -0.2**
comp=Z,1.4nm,0.8s,baz=302,slow=6.5,SNR=7.8
comp=Z,1.4nm,0.8s
YKA Yellowknife Ar 59.77 32 P **P** **01 52 48.1 +0.1**
YKA Yellowknife Ar 59.77 32 P **P** **01 52 48.1 +0.1**
KEV Kevo 60.01 339 P **P** **01 52 49.2 -0.3**
KEV pmax pmax
comp=Z,15nm,0.9s
KEV Kevo 60.01 339 P **P** **01 52 49.2 -0.3**
KEV IAmb IAmb 01 52 50.9
comp=Z,15nm,0.9s
KEV Kevo 60.01 339 P **P** **01 52 49.9 +0.4**
HAMF Hammerfest 60.32 340 *e*P **P** **01 52 51.7 +0.1**
ARA0 ARCESS Array S 60.56 339 *e*P **P** **01 52 53.9 +0.6**
ARCES ARCESS Array B 60.56 339 P **P** **01 52 53.0 -0.2**
comp=Z,2.6nm,0.5s,baz=50,slow=7.9,SNR=29
ARCES LR LR 02 23 40.6
comp=Z,305nm,19.4s,baz=48,slow=40
comp=Z,2.6nm,0.5s
KLMR Klimovskoe 60.89 327 *e*P **P** **01 52 54.3 -1.3**
KLMR *e**PP **pP** **01 53 08.6 +1.0**
KLMR pmax pmax
comp=Z,38nm,1.2s
KLMR MLR MLR
comp=Z,283nm,17.0s
TULEG Thule 60.92 8 *i* P **P** **01 52 53.0 -2.6**
TULEG IAmb IAmb 01 52 55.8
comp=Z,30nm,0.8s
WB0 Warramunga Arr 61.07 189 P **P** **01 52 56.9 -0.4**
WRA Warramunga Arr 61.25 189 P **P** **01 52 58.0 -0.5**
comp=Z,2.1nm,0.5s,baz=6.8,slow=7.0,SNR=22
comp=Z,2.1nm,0.5s
WRA Warramunga Arr 61.25 189 P **P** **01 52 58.0 -0.5**
WRA Warramunga Arr 61.25 189 P **P** **01 52 57.3 -1.1**
NEEM North Greenlan 61.40 3 *i* P P 01 52 54.4 -4.8
NEEM IAmb IAmb 01 53 05.1
comp=Z,18nm,0.8s
KTK1 Kautokeino 61.51 339 *e*P **P** **01 53 00.2 +0.4**
KTK1 IAmb IAmb 01 53 00.9
comp=Z,25nm,1.0s
BELG Belogornoye 61.56 316 LR LR 02 22 30.4
comp=Z,709nm,18.3s,baz=89,slow=39
BELG Belogornoye 61.56 316*c i*P **P** **01 53 00.6 +0.3**
BELG pmax pmax
comp=Z,5.0nm,1.1s
SGF Sodankyl 61.61 337 P **P** **01 53 00.9 +0.5**
MSF Maaselka 61.80 335 P **P** **01 53 02.5 +0.8**
DAG Danmarks Havn 61.80 355 P **P** **01 53 01.8 +0.3**
DAG Danmarks Havn 61.80 355 *i* P **P** **01 53 01.0 -0.5**
DAG IAmb IAmb 01 53 02.5
comp=Z,20nm,1.0s
HRA Herat 61.88 292 P **P** **01 53 03.0 -0.1**
HRA IAmb IAmb 01 53 21.5
comp=Z,11nm,0.9s
JETT Jettan, Norway 61.88 340 *e*P **P** **01 53 02.8 +0.5**
JETT IAmb IAmb 01 53 03.5
comp=Z,15nm,0.9s
TRO Tromso 62.20 341 *e*P **P** **01 53 04.7 +0.4**
TRO IAmb IAmb 01 53 04.9
comp=Z,16nm,0.8s
LLLB Lillooet 62.62 46 P **P** **01 53 08.0 +0.5**
LLLB IAmb IAmb 01 53 24.4
comp=Z,9.9nm,1.0s
KAD Karad 62.78 270 *e*P **P** **01 53 09.0 0.0**
KAD IAmb IAmb 01 53 14.6
comp=Z,11nm,0.5s
POIN Pond Inlet 63.02 13 P **P** **01 53 09.3 -0.4**
POIN IAmb IAmb 01 53 10.5
comp=Z,9.2nm,0.9s
OUL Oulu 63.33 335 P **P** **01 53 11.7 -0.2**
DBG Daneborg 64.30 355 *i* P P 01 53 13.3 -4.8
DBG IAmb IAmb 01 53 35.8
comp=Z,30nm,1.7s
PALK Pallekele 64.30 257 LR LR 02 22 06.8
comp=Z,209nm,20.8s,baz=82,slow=37
STEI Steigen 64.37 341 *e*P **P** **01 53 18.9 +0.2**
STEI IAmb IAmb 01 53 19.4
comp=Z,21nm,1.2s
MOS Moscow 64.61 323 *e*P **P** **01 53 20.6 +0.1**
MOS *e**PP **pwP** **01 53 34.6 -0.1**
MOS *e* 01 53 55.1
MOS *e* 01 55 42.6
MOS *e*S **S** **02 01 55.1 -1.7**
MOS *e**SS **sS** **02 02 20.0 +2.9**
MOS pmax pmax
comp=Z,31nm,0.9s
LOF Lofoten 64.63 341 *e*P **P** **01 53 21.1 +0.8**
KOD Kodaikanal 64.75 261 *e*P **P** **01 53 23.3 +0.9**
KOD IAmb IAmb 01 53 25.5
comp=Z,12nm,1.0s
FAUS Fauske 64.77 340 *e*P **P** **01 53 21.7 +0.4**
FAUS IAmb IAmb 01 53 22.3
comp=Z,46nm,1.1s
AS31 Alice Springs 64.97 189 P **P** **01 53 23.2 +0.1**
ASAR Alice Springs 64.97 189 P **P** **01 53 23.3 +0.2**
comp=Z,4.9nm,0.9s,baz=7.8,slow=5.5,SNR=20
comp=Z,4.9nm,0.9s
ASAR Alice Springs 64.97 189 P **P** **01 53 22.9 -0.2**
AS09 Alice Springs 65.00 189 P **P** **01 53 23.6 +0.3**
comp=Z,11nm,0.8s
ILON Igloolik, Nuna 65.05 16 IAmb IAmb 01 53 23.8
comp=Z,14nm,0.9s
PUL Pulkovo 65.22 329*ce*P **P** **01 53 25.0 +0.7**
PUL pmax pmax
comp=Z,28nm,0.5s
BLKN Baker Lake 65.24 24 P **P** **01 53 24.2 -0.2**
BLKN IAmb IAmb 01 53 25.8
comp=Z,14nm,0.9s
VRH Novokhopyorsk 65.28 317 *e*P **P** **01 53 23.0 -1.9**
VRH pmax pmax
comp=Z,20nm,1.0s
OBN Obninsk 65.47 323*c i*P **P** **01 53 26.1 +0.1**
OBN *PP **pP** **01 53 37.0 -1.1**
OBN *SP **sP** **01 53 43.0 +0.1**
OBN 01 55 48.0
OBN *e**SS **sS** **02 02 24.9 -2.7**
OBN *eSS **SS** **02 06 22.2 +1.8**
OBN pmax pmax
comp=Z,29nm,1.0s
OBN MLR MLR
comp=Z,265nm,17.0s
OBN Obninsk 65.47 323 P **P** **01 53 25.9 -0.1**
OBN Obninsk 65.47 323 P **P** **01 53 25.9 -0.1**
comp=Z,35nm,1.1s
OBN Obninsk 65.47 323 P **P** **01 53 26.0 -0.1**
FINES FINESS Array B 65.70 332 P **P** **01 53 27.9 +0.5**
comp=Z,55nm,0.7s,baz=50,slow=7.2,SNR=313
FINES LR LR 02 24 44.9
comp=Z,537nm,20.3s,baz=46,slow=38
comp=Z,55nm,0.7s
FINES FINESS Array B 65.70 332 P **P** **01 53 27.2 -0.3**
VAGH Vaagaholmen 65.78 340 *e*P **P** **01 53 27.9 +0.1**
VAGH IAmb IAmb 01 53 28.6
comp=Z,18nm,0.9s
RAUS Rausandaksla 65.81 340 *e*P **P** **01 53 28.2 +0.2**
RAUS IAmb IAmb 01 53 28.8
comp=Z,39nm,1.3s
LPSR Galich'ya Gora 65.86 320 *e*P **P** **01 53 27.8 -0.8**
LPSR pmax pmax
comp=Z,46nm,0.9s
LPSR MLR MLR
comp=Z,200nm,18.0s
MOR8 Moi Rana 65.91 340 *e*P **P** **01 53 27.7 -1.0**
MOR8 IAmb IAmb 01 53 28.4
comp=Z,31nm,0.7s
KONS Konsvik 66.00 340 *e*P **P** **01 53 29.3 +0.1**
I04A Tendick Farm, 66.07 52 IAmb IAmb 01 53 47.3
comp=Z,26nm,1.0s
STOK Stokkvaagen 66.15 340 *e*P **P** **01 53 30.3 0.0**
LEIR Leirfjorden 66.30 340 *e*P **P** **01 53 31.2 0.0**
LEIR IAmb IAmb 01 53 31.9
comp=Z,11nm,1.0s
JMIC Jan Mayen 66.31 350 LR LR 02 24 53.7
comp=Z,65nm,19.5s,baz=258,slow=38
NEW Newport 66.51 46 P **P** **01 53 33.7 +0.7**
SUMG Summit 66.61 0 P **P** **01 53 34.2 +0.6**
SUMG pmax pmax
comp=Z,39nm,0.8s
SUMG Summit 66.61 0 P **P** **01 53 34.2 +0.6**
SUMG Summit 66.61 0 P **P** **01 53 35.4 +1.8**
SUMG Summit 66.61 0 *i* P **P** **01 53 34.0 +0.4**
SUMG IAmb IAmb 01 53 35.9
comp=Z,39nm,0.8s
PINE Pine Mountain 66.94 51 P **P** **01 53 37.8 +1.8**
YBH Yreka Blue Hor 67.06 54 LR LR 02 21 36.5
comp=Z,72nm,20.0s,baz=356,slow=35
YBH Yreka Blue Hor 67.06 54 P **P** **01 53 38.4 +1.7**
YBH pmax pmax
comp=Z,16nm,1.0s
YBH Yreka Blue Hor 67.06 54 P **P** **01 53 38.4 +1.7**
YBH IAmb IAmb 01 53 54.2
comp=Z,16nm,1.0s
ARBE Arbavere 67.10 330 P **P** **01 53 37.2 +0.8**
VSU Vasula 67.48 329*ce*P **P** **01 53 38.3 -0.5**
VSU pmax pmax
comp=Z,71nm,1.0s
VSU Vasula 67.48 329 P **P** **01 53 38.5 -0.3**
AKT Akhty 67.51 306 *e*P **P** **01 53 39.5 0.0**
AKT *e**PP **pP** **01 53 52.2 +0.6**
AKT *e**SP **sP** **01 53 57.0 +0.6**
AKT *e* 01 54 07.7
AKT *e* 01 56 07.8
AKT pmax pmax
comp=Z,14nm,0.7s
K05A Summer Lake 67.59 52 P **P** **01 53 40.7 +0.6**
NSS Namsos 67.84 339 *e*P **P** **01 53 40.9 -0.1**
NSS IAmb IAmb 01 53 44.8
comp=Z,78nm,1.7s
GOF Gofitskoye 68.17 311*ce*P **P** **01 53 44.2 +0.7**
MTSE Matsula 68.41 331 P **P** **01 53 45.4 +0.8**
BMO Blue Mountains 68.43 49 P **P** **01 53 46.2 +1.0**
BMO pmax pmax
comp=Z,11nm,1.3s
BMO Blue Mountains 68.43 49 P **P** **01 53 46.2 +1.0**
O03E Paynes Creek 68.46 55 P **P** **01 53 47.1 +1.7**
AFI Afiamalu 69.02 132 LR LR 02 18 34.3
comp=Z,144nm,21.8s,baz=330,slow=31
PLID Pearl Lake 69.02 48 IAmb IAmb 01 54 05.7
comp=Z,31nm,1.7s
KVAR Kislovodsk Arr 69.04 310 P **P** **01 53 50.7 +1.7**
comp=Z,19nm,1.0s,baz=274,slow=22,SNR=3.4
KVAR LR LR 02 29 27.5
comp=Z,232nm,18.2s,baz=270,slow=40
comp=Z,19nm,1.0s
KIV Kislovodsk 69.04 310 *e*P **P** **01 53 49.4 +0.4**
KIV pmax pmax
comp=Z,60nm,1.0s
KIV Kislovodsk 69.04 310 P **P** **01 53 49.9 +0.9**
KIV Kislovodsk 69.04 310 P **P** **01 53 49.3 +0.3**
comp=Z,438nmcomp=Z,60nm,1.1s
KIV Kislovodsk 69.04 310 P **P** **01 53 51.0 +2.0**
KIV Kislovodsk 69.04 310 P **P** **01 53 50.8 +1.8**
KBZ Khabaz 69.06 310 P **P** **01 53 50.6 +1.6**
comp=Z,17nm,0.9s,baz=35,slow=2.7,SNR=5.2
KBZ LR LR 02 27 04.3
comp=Z,198nm,20.5s,baz=44,slow=38
comp=Z,17nm,0.9s
ORV Oroville 69.08 55 IAmb IAmb 01 54 05.6
comp=Z,13nm,1.1s
MSO Missoula 69.09 46 IAmb IAmb 01 54 06.0
comp=Z,22nm,1.6s
WVOR Wild Horse Val 69.11 52 IAmb IAmb 01 54 06.7
comp=Z,15nm,1.1s
WVOR Wild Horse Val 69.11 52 P **P** **01 53 51.8 +2.3**
SHA1 Shidzhatmaz 69.19 310*ce*P **P** **01 53 51.2 +1.1**
ERBR Yeremizino-Bor 69.21 313 *e*P **P** **01 53 50.5 +0.6**
ERBR *e**PP **pwP** **01 54 03.5 -0.7**
ERBR *eS **S** **02 02 52.7 +0.1**
ERBR pmax pmax
comp=Z,59nm,1.0s
BEKR Beckworth 69.60 55 IAmb IAmb 01 54 09.5
comp=Z,29nm,0.9s
MNK Minsk 69.71 326 *i* LRM MLR 02 27 24.0
comp=E,196nm,16.9s
MNK Minsk 69.71 326 *i* P **P** **01 53 53.8 +1.0**
MNK *i* 01 54 15.5
MNK *i* 01 56 27.4
MNK *i* PPP PPP 01 58 09.0
MNK *i* S **S** **02 02 58.4 +0.3**
MNK pmax pmax
comp=Z,53nm,0.7s
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=E,25nm,0.7s
MNK MLR MLR
comp=N,197nm,17.0s
MNK MLR MLR
comp=Z,284nm,17.0s
MNK MLR MLR
comp=E,196nm,17.0s
MNK Minsk 69.71 326 *i* P **P** **01 53 53.8 +1.0**
comp=E,25nm,0.7s
MNK Minsk 69.71 326 *i* P **P** **01 53 53.8 +1.0**
comp=N,15nm,0.8s
MNK Minsk 69.71 326 *i* P **P** **01 53 53.8 +1.0**
comp=Z,53nm,0.7s,baz=47
MNK Minsk 69.71 326 *i* PcP **PcP** **01 54 15.6 +0.2**
MNK Minsk 69.71 326 *i* PP PP 01 56 27.4 +0.7
MNK Minsk 69.71 326 *i* PPP PPP 01 58 09.0
MNK Minsk 69.71 326 *i* S **S** **02 02 58.4 +0.3**
MNK Minsk 69.71 326 *i* SS SS 02 07 17.8 -8.2
MNK Minsk 69.71 326 *i* SSS SSS 02 10 11.6
MNK Minsk 69.71 326 *i* LQ LQ 02 21 12.0
MNK Minsk 69.71 326 *i* LR LR 02 24 59.9
MNK Minsk 69.71 326 *i* LRM MLR 02 26 29.1
comp=N,197nm,17.1s
MNK Minsk 69.71 326 *i* LRM MLR 02 26 35.0
comp=Z,284nm,16.5s
FFC Flin Flon 69.73 34 P **P** **01 53 53.3 +0.4**
FFC pmax pmax
comp=Z,9.0nm,1.0s
FFC Flin Flon 69.73 34 P **P** **01 53 53.3 +0.4**
FFC Flin Flon 69.73 34 P **P** **01 53 53.8 +0.9**
LABN Labinsk 69.74 312 *e*P **P** **01 53 52.5 -0.7**
LABN *e**PP **pP** **01 54 05.7 +0.3**
LABN *eS **S** **02 02 57.7 -1.1**
LABN pmax pmax
comp=Z,49nm,0.9s
LABN MLR MLR
comp=Z,266nm,18.0s
NACGM Naroch 69.90 326⇑ *i*P **P** **01 53 54.5 +0.5**
comp=Z,125nm,0.9s,baz=46
GNI Garni 70.12 306 P **P** **01 53 57.1 +1.3**
comp=Z,4.0nm,0.6s,baz=132,slow=9.0,SNR=5.3
GNI LR LR 02 27 44.9
comp=Z,197nm,20.5s,baz=62,slow=38
comp=Z,4.0nm,0.6s
GNI Garni 70.12 306*ce*P **P** **01 53 57.6 +1.8**
GNI pmax pmax
comp=Z,21nm,1.3s
GNI Garni 70.12 306 P **P** **01 53 57.0 +1.2**
GNI IAmb IAmb 01 54 20.4
comp=Z,20nm,0.9s
GNI Garni 70.12 306 P **P** **01 53 55.6 -0.2**
comp=Z,22nm,1.4s
GNI Garni 70.12 306 P **P** **01 53 58.1 +2.2**
EPOS Posof 70.51 308 P **P** **01 54 00.1 +1.9**
DOMB Dombas 70.62 339 *e*P **P** **01 53 58.7 +0.4**
DOMB IAmb IAmb 01 54 03.5
comp=Z,35nm,1.4s
NC405 NORSAR Array S 70.62 337 IAmb IAmb 01 53 59.7
comp=Z,25nm,0.8s
NC303 NORSAR Array S 70.64 337 IAmb IAmb 01 53 59.8
comp=Z,26nm,0.9s
DLMT Dillon 70.74 46 IAmb IAmb 01 54 19.7
comp=Z,21nm,1.1s
DIGO Kars 70.79 307 P **P** **01 54 01.6 +1.6**
HFS Hagfors 70.80 336 P **P** **01 53 59.5 +0.1**
comp=Z,19nm,0.6s,baz=36,slow=6.0,SNR=63
HFS LR LR 02 28 47.1
comp=Z,294nm,19.3s,baz=38,slow=39
comp=Z,19nm,0.6s
NB2 NORSAR Subarra 70.83 337 P **P** **01 53 59.5 -0.1**
comp=Z,24nm,0.8s,baz=37,slow=6.2
NB2 NORSAR Subarra 70.83 337 P **P** **01 53 59.5 -0.1**
NOA NORSAR Array B 70.83 337 P **P** **01 53 59.5 -0.1**
comp=Z,17nm,0.8s,baz=37,slow=6.1,SNR=90
NOA LR LR 02 30 41.5
comp=Z,180nm,18.3s,baz=35,slow=40
comp=Z,17nm,0.8s
HLID Hailey 70.86 49 P **P** **01 54 00.6 +0.3**
SOEG Soedalen 70.92 358 *i* P **P** **01 53 57.2 -2.7**
SOEG IAmb IAmb 01 54 01.1
comp=Z,13nm,0.7s
NBO00 NORSAR Array S 70.96 337 P **P** **01 54 00.1 -0.3**
SOC Sochi 70.97 312 *e*P **P** **01 53 58.5 -2.2**
SOC *e* 01 56 40.7
SOC *e*PPP PPP 01 58 21.8
SOC *eS **S** **02 03 07.0 -5.8**
SOC *eSS **SS** **02 07 47.3 +1.5**
SOC MLR MLR
comp=Z,188nm,18.0s
NC602 NORSAR Array S 70.98 337 *e*P **P** **01 54 00.5 +0.1**
AKN Aaknes 71.06 340 *e*P **P** **01 54 01.8 +0.8**
NAO01 NORSAR Array S 71.08 337 P **P** **01 54 01.7 +0.6**
BOZ Bozeman (W) 71.11 46 IAmb IAmb 01 54 18.7
comp=Z,13nm,1.0s
ANN Anapa 71.47 314 *e*P **P** **01 54 04.1 +0.5**
ANN *e**PP **pwP** **01 54 17.3 -0.7**
ANN *eS **S** **02 03 17.4 -1.5**
ANN pmax pmax
comp=Z,27nm,1.1s
UOSS Minazif 71.58 287 P **P** **01 54 04.8 +0.1**
UOSS IAmb IAmb 01 54 21.0
comp=Z,18nm,0.7s
UOSS Minazif 71.58 287 P **P** **01 54 05.0 +0.3**
UOSS pP **pwP** **01 54 19.9 +2.9**
AK03 Malin Array Si 71.70 322 P **P** **01 54 05.1 +0.1**
AKASG Malin Array Be 71.72 322 P **P** **01 54 05.3 +0.2**
comp=Z,26nm,0.7s,baz=46,slow=6.1,SNR=55
AKASG LR LR 02 29 43.3
comp=Z,236nm,19.1s,baz=45,slow=39
comp=Z,26nm,0.7s
AKASG Malin Array Be 71.72 322 P **P** **01 54 05.5 +0.4**
AKASG Malin Array Be 71.72 322 P **P** **01 54 05.5 +0.4**
AKBB Malin Array Si 71.72 322*ce*P **P** **01 54 05.1 0.0**
AKBB pmax pmax
comp=Z,34nm,0.9s
AKBB Malin Array Si 71.72 322 P **P** **01 54 04.9 -0.2**
AKBB Malin Array Si 71.72 322 P **P** **01 54 05.3 +0.2**
AK23 Malin Array Si 71.72 322 P **P** **01 54 04.9 -0.2**
AK01 Malin Array Si 71.73 322 P **P** **01 54 05.1 0.0**
KIEV Kiev 71.73 322⇑ P **P** **01 54 05.4 +0.3**
KIEV Kiev 71.73 322 P **P** **01 54 05.3 +0.3**
KIEV Kiev 71.73 322 P **P** **01 54 05.1 0.0**
comp=Z,205nm,0.9s
KIEV Kiev 71.73 322 P **P** **01 54 05.5 +0.3**
KIEV Kiev 71.73 322 P **P** **01 54 05.2 0.0**
SFJD Kangerlussuaq 71.73 5 LR LR 02 28 13.2
comp=Z,180nm,19.6s,baz=344,slow=38
SFJD Kangerlussuaq 71.73 5 *i* P **P** **01 54 01.2 -3.7**
SFJD IAmb IAmb 01 54 06.0
comp=Z,11nm,0.8s
NVAR Mina Array Bea 71.75 55 P **P** **01 54 07.6 +1.8**
comp=Z,3.0nm,0.7s,baz=303,slow=6.3,SNR=1.7
comp=Z,3.0nm,0.7s
OSL Oslo 71.86 337 *e*P **P** **01 54 06.9 +1.1**
OSL IAmb IAmb 01 54 07.1
comp=Z,26nm,0.8s
SKAR Skarslia 71.95 338 *e*P **P** **01 54 07.4 +1.0**
SKAR IAmb IAmb 01 54 08.5
comp=Z,14nm,0.9s
SUW Suwalki 72.02 327 *e*P **P** **01 54 06.6 -0.2**
HYA Hoyanger 72.12 340 *e*P **P** **01 54 08.5 +1.2**
ELK Elko 72.15 51 LR LR 02 23 04.4
comp=Z,90nm,20.7s,baz=314,slow=34
MI28 MI28,Pidlybu 72.27 323 P **P** **01 54 08.0 -0.4**
STKA Stephens Creek 72.64 181 P **P** **01 54 11.3 +0.7**
comp=Z,0.8nm,0.4s,baz=169,slow=20,SNR=1.5
comp=Z,0.8nm,0.4s
RNPP9 Sopachiv 72.73 324 P **P** **01 54 11.5 +0.4**
KOPT Kop Dagi 72.76 308 IAmb IAmb 01 54 15.0
comp=Z,20nm,1.2s
GURO Guroymak-BITLI 72.76 306 P **P** **01 54 12.7 +0.9**
GURO IAmb IAmb 01 54 14.4
comp=Z,27nm,1.1s
RNPP5 Staryi Chortor 72.86 324 P **P** **01 54 11.7 -0.2**
HVU Hansel Valley 72.93 49 P **P** **01 54 13.9 +1.2**
HVU pmax pmax
comp=Z,10.0nm,1.1s
HVU Hansel Valley 72.93 49 P **P** **01 54 13.9 +1.2**
LUBAR Lubar, Ukraine 72.94 322 P **P** **01 54 12.2 -0.2**
ASK Askoy 72.96 340 *e*P **P** **01 54 13.4 +1.1**
BER Bergen 73.01 339 *e*P **P** **01 54 13.6 +1.0**
ODD1 Odda 73.06 339 *e*P **P** **01 54 14.0 +1.0**
SIM Simferopol' 73.16 315 *e*P **P** **01 54 14.9 +1.1**
SIM *e**PP **sP** **01 54 31.3 +0.5**
SIM pmax pmax
comp=Z,23nm,0.7s
SIM pmax pmax
comp=Z,27nm,0.7s
SIM MLR MLR
comp=Z,240nm,19.0s
KELT Kelkit 73.41 309 P **P** **01 54 17.4 +1.8**
BAL3X Bal3x, Balta 73.44 320 P **P** **01 54 15.2 -0.2**
HWUT Hardware Ranch 73.73 49 P **P** **01 54 18.7 +1.3**
SORM Soroca 73.90 321⇑ P **P** **01 54 18.3 +0.2**
SORM Soroca 73.90 321 P **P** **01 54 18.3 +0.2**
DUG Dugway, Tooele 73.93 51 IAmb IAmb 01 54 35.9
comp=Z,21nm,1.1s

DUG Dugway, Tooele 73.93 51 P **P** **01 54 20.5 +1.9**
PD31 Pinedale Array 74.09 47 IAmb IAmb 01 54 36.1
comp=Z,14nm,1.3s
PDAR Pinedale Array 74.09 47 P **P** **01 54 20.4 +0.8**
comp=Z,2.3nm,0.6s,baz=265,slow=2.4,SNR=28
comp=Z,2.3nm,0.6s
PDAR Pinedale Array 74.09 47 P **P** **01 54 19.9 +0.3**
KMPD K-Podol'skiy 74.50 322 P **P** **01 54 21.4 -0.1**
BEL Belsk 74.60 327 *eP* **P** **01 54 23.2 +1.2**
BEL Belsk 74.60 327 P **P** **01 54 23.5 +1.4**
ARPR Arapgir-MALATY 74.63 309 P **P** **01 54 24.9 +2.1**
GKP Gorka Klasztor 74.92 330 *eP* **P** **01 54 24.5 +0.6**
CCUT Cedar City 75.32 53 IAmb IAmb 01 54 44.3
comp=Z,29nm,1.6s
KWP Kalwaria Pacla 75.42 324 *eP* **P** **01 54 27.9 +1.0**
KWP Kalwaria Pacla 75.42 324 P **P** **01 54 26.7 -0.2**
comp=Z,771nmcomp=Z,80nm,1.0s
ULM Lac du Bonnet 75.54 34 P **P** **01 54 27.3 -0.2**
comp=Z,3.7nm,0.7s,baz=305,slow=5.4,SNR=6.4
comp=Z,3.7nm,0.7s
RDMU Red Mountain 75.54 49 IAmb IAmb 01 54 45.2
comp=Z,29nm,1.1s
GIRR Girov 75.62 321 ⇑P **P** **01 54 28.9 +0.8**
MTPU Mount Pierson 75.70 52 IAmb IAmb 01 54 46.9
comp=Z,44nm,1.9s
BUR08 Bucovina Ar. S 75.74 322 IAmb IAmb 01 54 30.8
comp=Z,23nm,0.8s
BURAR Bucovina Array 75.76 322 ⇑P **P** **01 54 30.0 +1.0**
BURAR Bucovina Array 75.76 322 P **P** **01 54 29.9 +1.0**
BURAR Bucovina Array 75.76 322 P **P** **01 54 28.9 0.0**
P18A Preston Nutter 75.79 50 IAmb IAmb 01 54 46.9
comp=Z,17nm,1.3s
TESR Tescani 75.87 320 ⇓P **P** **01 54 30.6 +1.1**
TESR Tescani 75.87 320 P **P** **01 54 30.3 +0.8**
RSSD Black Hills 76.11 43 P **P** **01 54 32.3 +1.1**
ONER Baraj Valea Uz 76.12 320 ⇑P **P** **01 54 32.5 +1.5**
KOLS Kolonicke sedl 76.13 324 *eP* **P** **01 54 32.0 +1.1**
KOLS pmax pmax
comp=Z,22nm,0.9s
KOLS Kolonicke sedl 76.13 324 P **P** **01 54 32.0 +1.1**
KOLS Kolonicke sedl 76.13 324 *eP* **P** **01 54 32.0 +1.1**
TPGR Topolog 76.17 318 ⇓P **P** **01 54 32.2 +1.0**
STHS Stebnicka Huta 76.22 325 *eP* **P** **01 54 32.6 +1.1**
STHS pmax pmax
comp=Z,16nm,0.7s
STHS Stebnicka Huta 76.22 325 *eP* **P** **01 54 32.6 +1.1**
OJC Ojcow 76.23 326 *eP* **P** **01 54 32.5 +1.0**
OJC Ojcow 76.23 326 P **P** **01 54 32.6 +1.2**
BNN Bunyan 76.25 310 IAmb IAmb 01 54 34.3
comp=Z,15nm,0.9s
VRI Vrincioaia 76.29 320 ⇓P **P** **01 54 33.4 +1.5**
VRI Vrincioaia 76.29 320 P **P** **01 54 33.4 +1.5**
VRI Vrincioaia 76.29 320 P **P** **01 54 32.8 +0.9**
PLOR Plostina 76.34 320 ⇑P **P** **01 54 33.3 +1.1**
PLOR Plostina 76.34 320 P **P** **01 54 33.3 +1.1**
UZHM Uzhgorod 76.35 324 P **P** **01 54 32.7 +0.6**
SAHR Sahastru 76.41 320 ⇓P **P** **01 54 34.7 +2.0**
TURR Turia 76.50 320 ⇓P **P** **01 54 35.2 +2.1**
BMR Baia Mare 76.51 323 P **P** **01 54 34.6 +1.5**
ARCR ARCALIA 76.55 322 ⇑P **P** **01 54 35.0 +1.7**
GAZ Gaziantep 76.56 308 IAmb IAmb 01 54 36.5
comp=Z,22nm,1.0s
COVR Voineasa-Covas 76.56 320 ⇑P **P** **01 54 34.8 +1.3**
OZUR 76.58 320 ⇑P **P** **01 54 35.4 +1.8**
TRPA Tarpa 76.61 323 P **P** **01 54 35.1 +1.5**
HMU Henry Mountain 76.62 51 IAmb IAmb 01 54 51.3
comp=Z,16nm,0.9s
NIE Niedzica 76.63 325 *eP* **P** **01 54 35.3 +1.5**
NIE Niedzica 76.63 325 P **P** **01 54 33.7 -0.1**
comp=Z,16nm,0.9s
BOSR Bodos 76.66 320 ⇑P **P** **01 54 36.1 +2.0**
U15A North Rim 76.70 53 IAmb IAmb 01 54 52.4
comp=Z,24nm,1.2s
ANDN Andirin 76.81 308 P **P** **01 54 36.9 +1.8**
EPLO Experimental L 76.88 34 IAmb IAmb 01 54 36.0
comp=Z,9.9nm,0.8s
BSEG Bad Segeberg 76.89 333 *eP* **P** **01 54 36.1 +1.0**
comp=Z,14nm,0.9s,baz=34,slow=5.5
BSEG *eL* L 02 30 49.1
comp=Z,253nm,21.4s
BSEG Bad Segeberg 76.89 333 P **P** **01 54 36.2 +1.2**
ISR Istrita 76.92 319 ⇑P **P** **01 54 36.9 +1.3**
ISR Istrita 76.92 319 P **P** **01 54 36.8 +1.3**
BR131 Keskin Array S 76.93 312 *i* P **P** **01 54 36.2 +0.4**
BR131 Keskin Array S 76.93 312 IAmb IAmb 01 54 38.0
comp=Z,49nm,1.9s
BRTR Keskin Array B 76.93 312 P **P** **01 54 36.5 +0.7**
comp=Z,3.1nm,0.6s,baz=88,slow=3.8,SNR=13
BRTR LR LR 02 33 15.3
comp=Z,118nm,19.4s,baz=78,slow=39
comp=Z,3.1nm,0.6s
BRTR Keskin Array B 76.93 312 P **P** **01 54 35.9 +0.1**
MLR Muntele Rosu 76.94 320 P **P** **01 54 36.3 +0.6**
comp=Z,4.7nm,0.8s,baz=182,slow=17,SNR=4.6
MLR LR LR 02 32 52.5
comp=Z,288nm,18.7s,baz=48,slow=39
comp=Z,4.7nm,0.8s
MLR Muntele Rosu 76.94 320 ⇓P **P** **01 54 36.8 +1.0**
MLR Muntele Rosu 76.94 320 P **P** **01 54 36.7 +1.0**
MLR Muntele Rosu 76.94 320 IAmb IAmb 01 54 38.6
comp=Z,16nm,1.3s
AGMN Agassiz Nation 77.00 36 IAmb IAmb 01 54 58.3
comp=Z,23nm,1.9s
ICOR Ion Corvin 77.01 318 ⇑P **P** **01 54 37.1 +1.1**
ABAH Abaujker 77.06 324 P **P** **01 54 37.6 +1.4**
CJR Cluj-Napoca 77.17 322 ⇓P **P** **01 54 37.9 +1.0**
CJR Cluj-Napoca 77.17 322 P **P** **01 54 37.9 +1.0**
KIRS Kirsehir-Merke 77.17 311 ⇓P **P** **01 54 38.3 +1.2**
KSP Ksiaz 77.18 328 *eP* **P** **01 54 37.8 +1.0**
LANS Liptovska Anna 77.18 326 *eP* **P** **01 54 38.8 +1.9**
LANS pmax pmax
comp=Z,13nm,1.1s
LANS Liptovska Anna 77.18 326 *eP* **P** **01 54 38.8 +1.9**
OKC Ostrava-Krasne 77.21 327 AMS AMS 02 31 10.0
comp=Z,300nm,22.4s
OKC Ostrava-Krasne 77.21 327 P **P** **01 54 38.1 +1.1**
STEB Steborice 77.29 327 *eP* **P** **01 54 38.6 +1.1**
GORT1 Trebel 77.32 332 *eP* **P** **01 54 38.6 +1.1**
comp=Z,38nm,1.2s,baz=34,slow=5.5
VOIR 77.42 320 ⇓P **P** **01 54 40.1 +1.7**
VOIR 77.42 320 P **P** **01 54 40.1 +1.7**
VOIR 77.42 320 P **P** **01 54 38.7 +0.3**
MARR Marisel-Cluj 77.42 322 ⇑P **P** **01 54 39.4 +1.0**
OSTC Ostas 77.43 328 *eP* **P** **01 54 39.5 +1.2**
OSTC MLR MLR
comp=Z,300nm,18.3s
OSTC Ostas 77.43 328 *eP* **P** **01 54 39.5 +1.2**
OSTC AMS AMS 02 32 00.0
comp=Z,300nm,18.3s
PV05 Paradox Valley 77.49 50 IAmb IAmb 01 54 56.4
comp=Z,29nm,1.1s
MORC Moravsky Berou 77.51 327 ⇑P **P** **01 54 39.9 +1.1**
MORC Moravsky Berou 77.51 327 P **P** **01 54 39.8 +1.1**
MORC Moravsky Berou 77.51 327 *eP* **P** **01 54 39.8 +1.1**
MORC Moravsky Berou 77.51 327 P **P** **01 54 40.0 +1.3**
PV03 Paradox Valley 77.52 50 IAmb IAmb 01 54 56.3
comp=Z,20nm,1.2s
DRGR 77.52 322 ⇑P **P** **01 54 39.9 +1.0**
DRGR 77.52 322 P **P** **01 54 39.8 +1.0**
DRGR 77.52 322 P **P** **01 54 40.0 +1.0**
DPC Dobruska-Polom 77.55 328 *eP* **P** **01 54 40.4 +1.4**
DPC MLR MLR
comp=Z,200nm,16.4s
DPC Dobruska-Polom 77.55 328 *eP* **P** **01 54 40.4 +1.4**
DPC AMS AMS 02 32 20.0
comp=Z,200nm,16.4s
DPC Dobruska-Polom 77.55 328 P **P** **01 54 39.0 0.0**
comp=Z,20nm,1.1s
DPC Dobruska-Polom 77.55 328 P **P** **01 54 40.6 +1.6**
UPC Upice 77.55 328 *eP* **P** **01 54 40.0 +1.1**
UPC MLR MLR
comp=Z,300nm,16.4s
UPC Upice 77.55 328 *eP* **P** **01 54 40.0 +1.1**
UPC AMS AMS 02 32 10.0
comp=Z,300nm,16.4s
UPC Upice 77.55 328 P **P** **01 54 40.3 +1.3**
KRLC Kraliky 77.58 328 *eP* **P** **01 54 40.1 +0.9**
KRLC Kraliky 77.58 328 *eP* **P** **01 54 40.1 +0.9**
KRLC Kraliky 77.58 328 P **P** **01 54 40.5 +1.4**
IVI Ivigtut 77.64 5 P **P** **01 54 39.4 +0.2**
IVI IAmb IAmb 01 55 25.6
comp=Z,28nm,1.1s
IVI Ivigtut 77.64 5 P **P** **01 54 39.7 +0.5**
IVI pP **pwP** **01 54 55.3 +1.7**

IVI Ivigtut 77.64 5 *i* P P 01 54 32.1 -7.1
IVI IAmb IAmb 01 54 39.8
comp=Z,15nm,0.6s
ARR Arges 77.67 320 ⇓P **P** **01 54 40.8 +1.0**
ARR Arges 77.67 320 P **P** **01 54 41.7 +2.0**
MAUC Maruska 77.71 327 *eP* **P** **01 54 41.2 +1.3**
KKUL Konya-Kulu 77.71 312 P **P** **01 54 41.7 +1.6**
PV01 Paradox Valley 77.76 50 IAmb IAmb 01 54 57.8
comp=Z,24nm,1.5s
MDUB Mudurnu 77.78 313 IAmb IAmb 01 54 42.4
comp=Z,29nm,1.1s
WUAZ Wupatki 77.86 53 IAmb IAmb 01 54 58.6
comp=Z,20nm,1.1s
FLTG Flechtingen 77.89 332 *eP* **P** **01 54 41.0 +0.3**
comp=Z,20nm,0.8s,baz=34,slow=5.5
PSZ Piszkesteto 77.94 325 ⇑P **P** **01 54 42.6 +1.4**
PSZ Piszkesteto 77.94 325 P **P** **01 54 42.6 +1.4**
PSZ Piszkesteto 77.94 325 P **P** **01 54 42.6 +1.4**
LOT Lotru 78.02 321 ⇑P **P** **01 54 41.7 -0.1**
LOT Lotru 78.02 321 P **P** **01 54 42.6 +0.8**
BRG Berggiesshubel 78.07 330 *eP* **P** **01 54 42.4 +0.6**
comp=Z,13nm,1.1s,baz=34,slow=5.5
BRG Berggiesshubel 78.07 330 P **P** **01 54 42.6 +0.8**
BRG Berggiesshubel 78.07 330 *i* P **P** **01 54 42.7 +1.0**
BRG Amp 01 54 43.6
comp=Z,11nm,0.9s
BRG pP **PcP** **01 54 51.9 +0.6**
BRG Amp 01 54 52.6
comp=Z,6.7nm,0.9s
PVCC Panska Ves 78.10 329 *eP* **P** **01 54 43.3 +1.3**
PVCC Panska Ves 78.10 329 *eP* **P** **01 54 43.3 +1.3**
PVCC Panska Ves 78.10 329 P **P** **01 54 43.3 +1.3**
DEV Deva 78.11 322 P **P** **01 54 43.8 +1.7**
LOZB Loznitsa 78.15 318 ⇓P **P** **01 54 43.2 +0.8**
JAVC Velka Javorina 78.17 326 *eP* **P** **01 54 44.4 +2.0**
JAVC Velka Javorina 78.17 326 P **P** **01 54 44.7 +2.3**
RETH Rethem/Aller, 78.20 333 *eP* **P** **01 54 43.1 +0.7**
comp=Z,14nm,1.0s,baz=34,slow=5.5
BSZH Besenyszg 78.25 324 P **P** **01 54 44.9 +2.2**
ASSE Asse, Remlinge 78.25 332 *eP* **P** **01 54 43.4 +0.7**
comp=Z,8.0nm,0.9s,baz=34,slow=5.5
ASSE Asse, Remlinge 78.25 332 P **P** **01 54 43.6 +0.9**
VRAC Vranov 78.26 327 P **P** **01 54 44.3 +1.4**
comp=Z,17nm,0.8s,baz=46,slow=5.4,SNR=16
VRAC LR LR 02 32 32.6
comp=Z,292nm,19.6s,baz=30,slow=38
comp=Z,17nm,0.8s
VRAC Vranov 78.26 327 ⇓P **P** **01 54 44.6 +1.6**
VRAC Vranov 78.26 327 P **P** **01 54 44.5 +1.6**
VRAC Vranov 78.26 327 *eP* **P** **01 54 44.1 +1.2**
VRAC Vranov 78.26 327 P **P** **01 54 44.0 +1.1**
RICC Richard 78.27 329 *eP* **P** **01 54 44.6 +1.7**
ISCO Idaho Springs 78.28 47 IAmb IAmb 01 55 00.8
comp=Z,18nm,1.5s
ISCO Idaho Springs 78.28 47 P **P** **01 54 44.6 +1.1**
COPA Copaceanca 78.28 319 ⇑P **P** **01 54 44.2 +1.1**
SIRR Siria 78.40 323 ⇑P **P** **01 54 43.2 -0.5**
WIMM Wimmelburg 78.45 331 P **P** **01 54 44.4 +0.6**
HSKC Hora Svate Kat 78.47 330 *eP* **P** **01 54 45.1 +1.0**
HSKC Hora Svate Kat 78.47 330 P **P** **01 54 45.1 +1.0**
GZR Gura Zlata 78.53 321 ⇑P **P** **01 54 45.1 +0.6**
GZR Gura Zlata 78.53 321 P **P** **01 54 45.1 +0.6**
KRUC Moravsky 78.53 327 *eP* **P** **01 54 45.5 +1.1**
KRUC Moravsky 78.53 327 P **P** **01 54 45.7 +1.3**
SMOL Smolenice 78.53 326 *eP* **P** **01 54 46.2 +1.8**
SMOL pmax pmax
comp=Z,11nm,0.8s
PRU Pruhonice 78.54 329 *eP* **P** **01 54 45.7 +1.3**
PRU MLR MLR
comp=Z,200nm,16.9s
PRU Pruhonice 78.54 329 *eP* **P** **01 54 45.7 +1.3**
PRU AMS AMS 02 32 20.0
comp=Z,200nm,16.9s
PRU Pruhonice 78.54 329 P **P** **01 54 45.6 +1.2**
X16A Lo Mia Camp, P 78.55 54 IAmb IAmb 01 55 02.6
comp=Z,12nm,1.0s
CLZ Clausthal 78.59 332 *eP* **P** **01 54 45.8 +1.1**
comp=Z,19nm,0.8s,baz=34,slow=5.5
CLZ Clausthal 78.59 332 P **P** **01 54 45.8 +1.1**
NEUB Neuenburg 78.61 331 *eP* **P** **01 54 45.5 +0.8**
comp=Z,24nm,0.8s,baz=34,slow=5.5
NEUB Neuenburg 78.61 331 P **P** **01 54 45.6 +0.9**
BUD Budapest 78.65 325 P **P** **01 54 45.4 +0.3**
SRO Srobarova 78.70 325 *eP* **P** **01 54 47.2 +1.9**
SRO pmax pmax
comp=Z,34nm,0.9s
SRO Srobarova 78.70 325 P **P** **01 54 47.5 +2.2**
SRO Srobarova 78.70 325 *eP* **P** **01 54 47.2 +1.9**
MODS Modra-Piesok 78.71 326 *eP* **P** **01 54 46.9 +1.5**
MODS pmax pmax
comp=Z,40nm,1.1s
MODS Modra-Piesok 78.71 326 P **P** **01 54 47.2 +1.8**
MODS Modra-Piesok 78.71 326 *eP* **P** **01 54 46.9 +1.5**
TREC Trest 78.72 328 *eP* **P** **01 54 46.1 +0.7**
TREC MLR MLR
comp=Z,200nm,19.8s
TREC Trest 78.72 328 *eP* **P** **01 54 46.1 +0.7**
TREC AMS AMS 02 33 10.0
comp=Z,200nm,19.8s
TREC Trest 78.72 328 P **P** **01 54 46.7 +1.2**
BZS Buzias 78.91 322 ⇑P **P** **01 54 47.1 +0.6**
BZS Buzias 78.91 322 P **P** **01 54 47.1 +0.6**
BZS Buzias 78.91 322 P **P** **01 54 46.3 -0.2**
GTTG Gottingen 78.98 332 *eP* **P** **01 54 47.6 +0.8**
comp=Z,20nm,0.9s,baz=34,slow=5.5
TANN Tannenbergstha 79.00 330 *eP* **P** **01 54 47.5 +0.5**
comp=Z,3.5nm,0.8s,baz=34,slow=5.5
PLN Plauen 79.05 330 *eP* **P** **01 54 47.9 +0.7**
comp=Z,2.6nm,0.9s,baz=34,slow=5.5
IBBN Ibbenburen 79.10 334 *eP* **P** **01 54 48.2 +0.8**
comp=Z,19nm,0.7s,baz=34,slow=5.5
IBBN Ibbenburen 79.10 334 P **P** **01 54 48.2 +0.8**
ZVC Zvikov 79.12 329 *eP* **P** **01 54 48.5 +0.9**
ZVC AMS AMS 02 33 10.0
comp=Z,200nm,17.8s
MOX Moxa 79.12 331 *eP* **P** **01 54 48.4 +0.8**
comp=Z,12nm,1.0s,baz=34,slow=5.5
MOX *eL* L 02 31 43.1
comp=Z,241nm,21.7s
MOX Moxa 79.12 331 P **P** **01 54 48.5 +0.8**
PLVB Pleven 79.13 319 ⇑P **P** **01 54 48.8 +1.1**
NKC Novy Kostel 79.15 330 *eP* **P** **01 54 48.4 +0.6**
NKC MLR MLR
comp=Z,200nm,18.9s
NKC Novy Kostel 79.15 330 *eP* **P** **01 54 48.4 +0.6**
NKC AMS AMS 02 32 00.0
comp=Z,200nm,18.9s
NKC Novy Kostel 79.15 330 P **P** **01 54 48.9 +1.1**
EYMN Ely 79.16 34 IAmb IAmb 01 54 48.9
comp=Z,8.8nm,0.8s
EYMN Ely 79.16 34 P **P** **01 54 47.1 -0.7**
WINA Alland / Wiene 79.42 327 *i* P **P** **01 54 50.8 +1.5**
SNR=9.1
MDVR Moldovita 79.49 322 ⇑P **P** **01 54 50.2 +0.4**
MPLH Magyarpolny 79.53 325 P **P** **01 54 50.1 +0.2**
comp=Z,64nm,1.2s
MPLH Magyarpolny 79.53 325 P **P** **01 54 51.2 +1.3**
SOP Sopron 79.55 326 P **P** **01 54 51.7 +1.8**
CKRC Cesky Krumlov 79.57 328 *eP* **P** **01 54 50.9 +0.8**
CKRC MLR MLR
comp=Z,200nm,15.2s
CKRC Cesky Krumlov 79.57 328 *eP* **P** **01 54 50.9 +0.8**
CKRC AMS AMS 02 34 10.0
comp=Z,200nm,15.2s
UBBA Unterbreizbach 79.57 332 *eP* **P** **01 54 50.4 +0.5**
comp=Z,3.9nm,0.8s,baz=34,slow=5.5
KHC Kasperske Hory 79.61 329 *eP* **P** **01 54 51.5 +1.2**
KHC MLR MLR
comp=Z,200nm,16.0s
KHC Kasperske Hory 79.61 329 IAmb IAmb 01 54 52.5
comp=Z,21nm,0.7s
KHC Kasperske Hory 79.61 329 *eP* **P** **01 54 51.5 +1.2**
KHC AMS AMS 02 35 30.0
comp=Z,200nm,16.0s
KHC Kasperske Hory 79.61 329 P **P** **01 54 50.4 +0.1**
comp=Z,330nmcomp=Z,32nm,0.9s
KHC Kasperske Hory 79.61 329 P **P** **01 54 51.6 +1.2**
ROTZ Rotzenmuhle 79.62 330 *eP* **P** **01 54 51.4 +1.1**
comp=Z,2.2nm,0.8s,baz=34,slow=5.5
EKA Eskdalemuir Ar 79.63 341 P **P** **01 54 50.7 +0.5**
comp=Z,6.7nm,0.7s,baz=28,slow=4.8,SNR=14
EKA LR LR 02 35 47.2
comp=Z,180nm,18.5s,baz=16,slow=40
comp=Z,6.7nm,0.7s

EKA Eskdalemuir Ar 79.63 341 P **P** **01 54 50.7 +0.5**
CONA Conrad Observa 79.64 327 *i* P **P** **01 54 52.1 +1.5**
comp=Z,17nm,1.0s,SNR=8.7
RONA Rosalia, Austr 79.64 326 *i* P **P** **01 54 52.3 +1.8**
comp=Z,36nm,1.1s,SNR=15
GEC2 GERESS Array S 79.79 329 *eP* **P** **01 54 51.9 +0.6**
comp=Z,7.0nm,0.7s,baz=34,slow=5.5
GEC2 *eL* L 02 33 33.5
comp=Z,130nm,20.3s
GERES GERESS Array B 79.79 329 P **P** **01 54 51.7 +0.4**
comp=Z,4.4nm,0.6s,baz=34,slow=4.7,SNR=29
GERES PP **PP** **01 57 51.7 -0.5**
comp=Z,1.1nm,0.8s,baz=38,slow=6.8,SNR=4.0
comp=Z,4.4nm,0.6s
GERES GERESS Array B 79.79 329 P **P** **01 54 51.5 +0.1**
MORH Mrgy, Hungar 79.80 324 ⇑P **P** **01 54 51.8 +0.5**
MORH Mrgy, Hungar 79.80 324 P **P** **01 54 51.5 +0.2**
MORH Mrgy, Hungar 79.80 324 P **P** **01 54 51.8 +0.5**
KASTN Kahler Asten 79.81 333 *eP* **P** **01 54 52.0 +0.7**
comp=Z,5.5nm,0.7s,baz=34,slow=5.5
WET Wettzell 79.87 329 *eP* **P** **01 54 52.8 +1.1**
comp=Z,18nm,0.9s,baz=34,slow=5.5
WET *eL* L 02 34 51.2
comp=Z,172nm,20.9s
WET Wettzell 79.87 329 P **P** **01 54 52.9 +1.2**
GRA3 Grafenberg Arr 79.96 330 P **P** **01 54 53.6 +1.4**
BUG Bochum--Üniver 80.00 334 *eP* **P** **01 54 52.9 +0.6**
comp=Z,27nm,1.1s,baz=34,slow=5.5
BUG Bochum--Üniver 80.00 334 P **P** **01 54 53.0 +0.7**
GRA2 Grafenberg Arr 80.03 330 P **P** **01 54 53.9 +1.3**
GRA1 Grafenberg Arr 80.05 330 P **P** **01 54 54.0 +1.4**
GRF Grafenberg Arr 80.05 330 *eP* **P** **01 54 54.1 +1.4**
comp=Z,33nm,0.8s,baz=34,slow=5.5
GRF *eL* L 02 33 17.4
comp=Z,263nm,20.4s
GRFO Grafenberg 80.05 330 P **P** **01 54 54.3 +1.6**
GRFO Grafenberg 80.05 330 P **P** **01 54 54.2 +1.6**
GRFO Grafenberg 80.05 330 P **P** **01 54 54.1 +1.4**
GRFO Grafenberg 80.05 330 P **P** **01 54 53.8 +1.1**
GRFO PcP **PcP** **01 55 01.3 +1.3**
RAYN Ar Rayn 80.07 292 P **P** **01 54 53.6 +0.3**
RAYN Ar Rayn 80.07 292 P **P** **01 54 53.1 -0.2**
RAYN Ar Rayn 80.07 292 P **P** **01 54 53.7 +0.4**
RAYN Ar Rayn 80.07 292 P **P** **01 54 53.5 +0.3**
RAYN pP **sP** **01 55 08.5 -1.9**
ECSD EROS Data Cent 80.08 39 P **P** **01 54 52.5 -0.4**
ASF Jabal al Asfar 80.09 304 LR LR 02 32 36.2
comp=Z,96nm,19.0s,baz=26,slow=37
GRB4 Grafenberg Arr 80.11 330 P **P** **01 54 54.1 +1.2**
GRB3 Grafenberg Arr 80.11 330 P **P** **01 54 54.3 +1.3**
GRB1 Grafenberg Arr 80.13 330 P **P** **01 54 54.8 +1.7**
GRB2 Grafenberg Arr 80.23 330 P **P** **01 54 54.8 +1.2**
RDO Rodhopi 80.31 317 P **P** **01 54 55.5 +1.3**
ARSA Arzberg 80.32 327 IAmb IAmb 01 54 55.9
comp=Z,10.0nm,0.9s
ARSA Arzberg 80.32 327 *i* P **P** **01 54 55.4 +1.2**
comp=Z,12nm,0.9s,SNR=5.3
ARSA Arzberg 80.32 327 P **P** **01 54 55.3 +1.2**
GRB5 Grafenberg Arr 80.35 330 P **P** **01 54 55.5 +1.2**
MOA Molln 80.36 328 *i* P **P** **01 54 55.7 +1.3**
comp=Z,7.9nm,0.9s
MOA Molln 80.36 328 P **P** **01 54 55.2 +0.8**
CSS Mathiatis 80.37 308 IAmb IAmb 01 54 56.2
comp=Z,20nm,0.7s
TUC Tucson 80.38 55 pP pP 01 55 10.5 +3.4
GRC4 Grafenberg Arr 80.43 330 P **P** **01 54 55.7 +1.0**
MMAI Mount Meron Ar 80.45 306 P **P** **01 54 56.6 +1.5**
comp=Z,17nm,0.9s,baz=23,slow=11,SNR=11
MMAI LR LR 02 34 27.7
comp=Z,244nm,20.1s,baz=44,slow=38
comp=Z,17nm,0.9s
GRC1 Grafenberg Arr 80.51 330 P **P** **01 54 56.1 +1.0**
GRC3 Grafenberg Arr 80.57 330 P **P** **01 54 56.4 +0.9**
TNS Taunus Mts 80.62 332 *eP* **P** **01 54 56.3 +0.5**
comp=Z,7.2nm,0.8s,baz=34,slow=5.5
TNS *eL* L 02 34 42.1
comp=Z,251nm,18.9s
GRC2 Grafenberg Arr 80.67 330 P **P** **01 54 56.8 +0.8**
BIOA Bad Ischl, Aus 80.74 328 *i* P **P** **01 54 57.6 +1.2**
comp=Z,22nm,1.0s,SNR=9.2
T25A Trinidad 80.82 48 IAmb IAmb 01 55 14.2
comp=Z,11nm,1.0s
SESA Seetaler Alpe, 80.83 327 *i* P **P** **01 54 58.3 +1.2**
SNR=15
PERS Pernice 80.98 326 *i* P **P** **01 54 58.6 +0.8**
PERS IAmb IAmb 01 54 59.8
comp=Z,42nm,0.8s
SOKA Soboth 80.98 327 *i* P **P** **01 54 58.8 +1.0**
comp=Z,47nm,1.0s,SNR=19
RJOB Jochberg 81.04 328 *eP* **P** **01 54 59.3 +1.3**
comp=Z,12nm,0.8s,baz=34,slow=5.5
RJOB Jochberg 81.04 328 P **P** **01 54 59.4 +1.3**
BTNL Ternell 81.11 334 *dP* **P** **01 54 58.9 +0.6**
comp=Z,7.5nm,1.0s
ELL Elmali 81.11 311 IAmb IAmb 01 55 00.1
comp=Z,16nm,0.8s
MEM Membach 81.13 334 *dP* **P** **01 54 55.4 -2.9**
comp=Z,8.3nm,1.0s
SCHQ Schefferville 81.13 17 P **P** **01 54 58.7 +0.3**
comp=Z,7.3nm,0.8s,baz=348,slow=4.9,SNR=5.0
SCHQ LR LR 02 34 58.0
comp=Z,128nm,18.9s,baz=320,slow=39
comp=Z,7.3nm,0.8s
ANMO Albuquerque 81.19 51 P **P** **01 55 00.5 +1.3**
ANMO pmax pmax
comp=Z,7.0nm,1.0s
ANMO Albuquerque 81.19 51 P **P** **01 55 00.5 +1.3**
ANMO Albuquerque 81.19 51 P **P** **01 55 01.0 +1.8**
GOLS Golise 81.26 326 *i* P **P** **01 54 59.9 +0.6**
FUR Furstenfeldbru 81.28 330 *eP* **P** **01 55 00.4 +1.1**
comp=Z,31nm,0.8s,baz=34,slow=5.5
FUR *eL* L 02 33 34.6
comp=Z,197nm,21.0s
FUR Furstenfeldbru 81.28 330 P **P** **01 55 00.3 +1.1**
BSTI Sart Tilman 81.30 334 *dP* **P** **01 55 00.3 +1.0**
OBKA Obir 81.32 327 *i* P **P** **01 55 00.4 +0.8**
comp=Z,23nm,0.7s,SNR=6.6
OBKA Obir 81.32 327 P **P** **01 55 00.7 +1.1**
SRS Serrai 81.32 318 P **P** **01 54 59.9 +0.3**
LESA Schwarzleotal 81.34 328 *i* P **P** **01 55 00.9 +1.2**
comp=Z,34nm,1.3s,SNR=9.5
BHOU Houvegnez 81.34 334 *dP* **P** **01 54 59.7 +0.2**
comp=Z,6.3nm,1.1s
KBA Koelnbreinsper 81.35 328 *i* P **P** **01 55 01.5 +1.6**
comp=Z,24nm,0.9s,SNR=11
KBA Koelnbreinsper 81.35 328 P **P** **01 55 01.2 +1.3**
CWF Charnwood Fore 81.48 339 P **P** **01 55 01.2 +1.0**
UCC Uccle 81.50 335 *dP* **P** **01 55 00.7 +0.4**
BCLA Clavier 81.52 334 *dP* **P** **01 55 00.8 +0.3**
comp=Z,6.8nm,1.0s
STU Stuttgart 81.56 331 IAmb IAmb 01 55 02.5
comp=Z,18nm,0.8s
STU Stuttgart 81.56 331 P **P** **01 55 01.1 +0.4**
MYKA Terra Mystica 81.59 327 *i* P **P** **01 55 01.0 0.0**
comp=Z,22nm,1.1s,SNR=6.5
BGES Gesves 81.62 334 *dP* **P** **01 55 00.3 -0.7**
comp=Z,7.0nm,1.0s
ACOM Acomizza, Ital 81.71 327 P **P** **01 55 02.1 +0.3**
RCHB Rochefort 81.77 334 *dP* **P** **01 55 01.7 -0.1**
comp=Z,8.9nm,1.1s
RCHB Rochefort 81.77 334 P **P** **01 55 02.4 +0.6**
PRED Cave del Predi 81.78 327 IAmb IAmb 01 55 02.8
comp=Z,13nm,0.8s
BMRD Maredsous 81.80 334 *dP* **P** **01 55 02.2 +0.3**
comp=Z,14nm,1.1s
WATA Walderalm 81.84 329 *i* P **P** **01 55 03.4 +0.9**
comp=Z,13nm,1.0s,SNR=8.8
FOEL Foel Wylfa 81.85 340 P **P** **01 55 03.3 +1.1**
WTTA Wattenberg 81.88 329 *i* P **P** **01 55 03.5 +0.8**
comp=Z,15nm,0.7s,SNR=6.7
ABTA Abfaltersbach 81.95 328 *i* P **P** **01 55 03.0 +0.1**
comp=Z,9.6nm,0.9s
SQTA Sankt Quirin 82.08 329 *i* P **P** **01 55 04.5 +0.8**
comp=Z,15nm,0.8s,SNR=7.8
BFO Black Forest 82.25 331 P **P** **01 55 03.7 -0.7**
BFO pmax pmax
comp=Z,30nm,1.4s

BFO	**Black Forest**	**82.25**	**331**	P	**P**	**01 55 03.7**	**-0.7**
BFO				IAmb	IAmb	01 55 06.0	
	comp=Z,30nm,1.4s						
BFO	**Black Forest**	**82.25**	**331**	*e*P	**P**	**01 55 04.9**	**+0.5**
	comp=Z,9.3nm,0.9s,baz=34,slow=5.5						
BFO				*e*L	L	02 34 18.2	
	comp=Z,144nm,21.3s						
BFO	**Black Forest**	**82.25**	**331**	P	**P**	**01 55 05.0**	**+0.6**
FETA	**Feichten**	**82.43**	**329**	*i* P	**P**	**01 55 06.1**	**+0.5**
	comp=Z,20nm,0.8s,SNR=8.7						
PHP	**Peshkopia**	**82.44**	**320**	P	**P**	**01 55 06.3**	**+0.7**
DAVA	**Damuels**	**82.54**	**330**	*i* P	**P**	**01 55 06.8**	**+0.7**
	comp=Z,23nm,0.8s,SNR=12						
DAVA	**Damuels**	**82.54**	**330**	P	**P**	**01 55 06.8**	**+0.7**
ECH	**Echery**	**82.76**	**332**	IAmb	IAmb	01 55 08.6	
	comp=Z,16nm,1.0s						
ECH	**Echery**	**82.76**	**332**	P	**P**	**01 55 07.5**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**82.94**	**329**	P	**P**	**01 55 09.1**	**+0.7**
DAVOX	**Davos/Dischmat**	**82.96**	**330**	P	**P**	**01 55 09.0**	**+0.7**
	comp=Z,7.8nm,0.8s,baz=17,slow=5.0,SNR=7.8						
DAVOX				LR	LR	02 35 00.5	
	comp=Z,226nm,21.0s,baz=64,slow=38						
	comp=Z,7.8nm,0.8s						
DAVOX	**Davos/Dischmat**	**82.96**	**330**	P	**P**	**01 55 09.0**	**+0.7**
EIL	**Elat**	**83.02**	**303**	LR	LR	02 37 03.6	
	comp=Z,120nm,19.7s,baz=55,slow=39						
KBN	**Korca**	**83.09**	**319**	P	**P**	**01 55 08.9**	**0.0**
TUE	**Stuetta**	**83.42**	**330**	IAmb	IAmb	01 55 12.5	
	comp=Z,11nm,0.8s						
TUE	**Stuetta**	**83.42**	**330**	P	**P**	**01 55 11.5**	**+0.8**
MNTX	**Cornudas Mount**	**84.11**	**53**	P	**P**	**01 55 15.3**	**+1.0**
MNTX				pP	**pwP**	**01 55 29.8**	**+0.8**
SENIN	**Lac Senin/Sane**	**84.28**	**331**	IAmb	IAmb	01 55 16.6	
	comp=Z,8.5nm,0.9s						
VLDQ	**Val d'Or**	**84.29**	**26**	IAmb	IAmb	01 55 15.1	
	comp=Z,12nm,0.9s						
GDL2	**Guadalupe Moun**	**84.36**	**52**	P	**P**	**01 55 15.3**	**-0.4**
TPB28		**84.66**	**52**	IAmb	IAmb	01 55 34.7	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**84.71**	**40**	IAmb	IAmb	01 55 33.5	
	comp=Z,8.4nm,1.0s						
CCA1	**Carmmenellis**	**84.84**	**340**	P	**P**	**01 55 18.4**	**+0.9**
PMOR	**Pomariorio Ree**	**84.90**	**115**	*e*T	T	03 28 47.2	
	comp=Z,7.8nm,0.2s						
AQU	**L'Aquila**	**85.15**	**325**	P	**P**	**01 55 20.1**	**+0.7**
AQU	**L'Aquila**	**85.15**	**325**	P	**P**	**01 55 20.1**	**+0.7**
128A	**Castleberry Fa**	**85.16**	**50**	IAmb	IAmb	01 55 36.4	
	comp=Z,9.3nm,1.0s						
PECS	**Pecos**	**85.25**	**52**	IAmb	IAmb	01 55 36.9	
	comp=Z,7.9nm,0.9s						
CESX	**Cesi**	**85.30**	**326**	IAmb	IAmb	01 55 21.1	
	comp=Z,14nm,1.1s						
POST	**Post**	**85.40**	**49**	IAmb	IAmb	01 55 37.6	
	comp=Z,15nm,0.9s						
P40A	**Paris**	**85.50**	**39**	IAmb	IAmb	01 55 22.6	
	comp=Z,8.8nm,0.9s						
PPT	**Papeete**	**85.56**	**118**	LR	LR	02 27 41.4	
	comp=Z,257nm,20.1s,baz=296,slow=32						
PPT2	**Papeete2**	**85.58**	**118**	*e*LR	LR	02 22 29.2	
	comp=Z,390nm,25.0s						
PPT2				*e*LR	LR	02 22 36.3	
	comp=Z,491nm,23.5s						
PPT2				*e*T	T	03 30 06.6	
	comp=Z,5.3nm,0.3s						
WMOK	**Wichita Mounta**	**85.70**	**47**	P	**P**	**01 55 22.5**	**+0.3**
TAOE	**Nuku Hiva Isla**	**86.18**	**105**	*e*LR	LR	02 22 47.5	
	comp=Z,604nm,25.6s						
SSB	**Saint Sauveur**	**86.21**	**332**	P	**P**	**01 55 25.4**	**+0.9**
SSB	**Saint Sauveur**	**86.21**	**332**	P	**P**	**01 55 25.4**	**+0.9**
ISO	**Isola**	**86.22**	**330**	P	**P**	**01 55 23.7**	**-1.0**
S39A	**Bolivar**	**86.31**	**41**	IAmb	IAmb	01 55 40.7	
	comp=Z,7.7nm,1.0s						
ESCA	**l'Escarene**	**86.40**	**329**	P	**P**	**01 55 25.4**	**-0.1**
TX31	**Lajitas Ar. Si**	**86.83**	**53**	IAmb	IAmb	01 55 44.8	
	comp=Z,6.7nm,0.8s						
TXAR	**Lajitas Array**	**86.83**	**53**	P	**P**	**01 55 29.2**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=282,slow=3.1,SNR=11						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**86.83**	**53**	P	**P**	**01 55 28.9**	**+0.9**
CCM	**Cathedral Cave**	**87.05**	**40**	P	**P**	**01 55 28.5**	**-0.3**
CCM				pmax	pmax		
	comp=Z,14nm,1.1s						
CCM	**Cathedral Cave**	**87.05**	**40**	P	**P**	**01 55 28.5**	**-0.3**
CCM				IAmb	IAmb	01 55 44.9	
	comp=Z,14nm,1.1s						
CCM	**Cathedral Cave**	**87.05**	**40**	P	**P**	**01 55 29.6**	**+0.9**
P46A	**Rosedale**	**87.67**	**36**	IAmb	IAmb	01 55 48.7	
	comp=Z,10nm,0.9s						
BRDY	**Brady**	**88.14**	**49**	IAmb	IAmb	01 55 50.9	
	comp=Z,7.1nm,1.1s						
MIAR	**Mount Ida**	**88.62**	**43**	IAmb	IAmb	01 55 52.9	
	comp=Z,8.2nm,0.9s						
MIAR	**Mount Ida**	**88.62**	**43**	P	**P**	**01 55 37.2**	**+0.8**
VAE	**Valguarnera**	**88.62**	**321**	LR	LR	02 38 14.8	
	comp=Z,173nm,21.6s,baz=102,slow=38						
TBI	**Tubuai**	**89.75**	**122**	*e*LR	LR	02 24 22.6	
	comp=Z,1μm,24.8s						
TBI				*e*T	T	03 35 09.2	
	comp=Z,12nm,0.3s						
KEST	**Kesra**	**92.38**	**324**	P	**P**	**01 55 53.8**	**-0.1**
	comp=Z,5.8nm,0.9s,baz=357,slow=8.4,SNR=6.4						
KEST				LR	LR	02 42 22.7	
	comp=Z,260nm,20.0s,baz=320,slow=39						
	comp=Z,5.8nm,0.9s						
KEST	**Kesra**	**92.38**	**324**	P	**P**	**01 55 52.8**	**-1.2**
KEST				IAmb	IAmb	01 55 55.5	
	comp=Z,7.3nm,1.1s						
ESDC	**Sonseca Array**	**94.07**	**335**	P	**P**	**01 56 01.9**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=40,slow=4.1,SNR=6.0						
ESDC				PP	**PP**	**01 59 48.2**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=25,slow=8.1,SNR=6.3						
ESDC				LR	LR	02 44 16.7	
	comp=Z,128nm,19.1s,baz=19,slow=39						
	comp=Z,1.6nm,0.8s						
ESDC	**Sonseca Array**	**94.07**	**335**	P	**P**	**01 56 00.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**115.11**	**317**	PKP	**PKiKP**	**02 01 24.0**	**-0.7**
	comp=Z,1.1nm,1.1s,baz=15,slow=2.0,SNR=4.7						
TORD				PP	**PP**	**02 02 24.0**	**0.0**
	comp=Z,2.2nm,1.0s,baz=13,slow=6.5,SNR=6.0						
VNDA	**Vanda**	**118.95**	**175**	PKP	**PKPdf**	**02 01 29.7**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=16,slow=5.2,SNR=2.5						
VNDA	**Vanda**	**118.95**	**175**		**PKPdf**	**02 01 29.8**	**-0.3**
MAW	**Mawson**	**123.66**	**207**	PKP	**PKPdf**	**02 01 38.5**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=234,slow=1.0,SNR=4.7						
MAW	**Mawson**	**123.66**	**207**	PKIKP	**PKiKP**	**02 01 39.8**	**+0.2**
MAW	**Mawson**	**123.66**	**207**	PKPdf	**PKiKP**	**02 01 39.8**	**+0.2**
QSPA	**South Pole Qui**	**130.85**	**180**	PKP	**PKPdf**	**02 01 52.2**	**-1.1**
	comp=Z,3.0nm,1.0s,baz=335,slow=1.1,SNR=4.3						
QSPA	**South Pole Qui**	**130.85**	**180**	PKPdf	**PKPdf**	**02 01 53.4**	**+0.2**
TROLL	**Troll, Antarti**	**143.43**	**199**	⇑PKPdf	PKPbc	02 02 14.3	+0.5
	comp=Z,209nm,0.7s						
LPAZ	**La Paz**	**143.64**	**56**	PKP	PKPbc	02 02 16.5	-0.1
	comp=Z,0.8nm,0.7s,baz=0.5,slow=5.4,SNR=6.0						
LPAZ	**La Paz**	**143.64**	**56**	PKIKP	PKPbc	02 02 16.7	+0.2
LPAZ	**La Paz**	**143.64**	**56**	PKPdf	PKPbc	02 02 16.7	+0.2
SNAA	**Sanae**	**144.95**	**198**	PKP	PKPbc	02 02 17.8	-0.6
	comp=Z,10.0nm,0.8s,baz=154,slow=3.1,SNR=26						
VNA2	**Neumayer--Watz**	**146.52**	**197**	⇑PKPdf	**PKPbc**	**02 02 23.2**	**+0.1**
	comp=Z,14nm,0.7s,baz=127,slow=1.6						
VNA1	**Neumayer--Stat**	**146.92**	**197**	PKPdf	**PKPbc**	**02 02 24.3**	**0.0**
	comp=Z,12nm,0.8s						
BDFB	**Brasilia**	**152.95**	**23**	PKPbc	**PKPbc**	**02 02 39.7**	**-1.1**
	comp=Z,3.6nm,0.8s,baz=234,slow=2.1,SNR=5.3						
PLCA	**Paso Flores**	**154.91**	**100**	PKPab	**PKPab**	**02 02 59.5**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=284,slow=2.2,SNR=3.2						

MCSM ***13*** *01:48:50.5±1.0,34˚N±5˚×2˚6E±˚, h11km±5km, mb4.4, mB4.3, MLv4.3, Mw(mB)3.5*
MOS ***13*** *01:48:50.5±1.3, 34˚.15N×25˚.50E, h10km, mb4.6/18, Error ellipse: s-maj=7.6km s-min=4.4km az=79.7*
IDC ***13*** *01:48:50.1±0.7, 34˚.20N×25˚.58E, h0km, mb4.2/18, mbtmp4.1/31, ML3.8/12, MS3.6/5, Error ellipse: s-maj=14.9km s-min=10.7km az=179.0*
ISK ***13*** *01:48:51.5, 34˚.25N×25˚.60E, h4km, ML4.0/20*
NEIC ***13*** *01:48:51.9±2.0, 34˚.14N±0˚.07×25˚.57E±0.07, h10km±1km, mb4.4/47, Error ellipse: s-maj=12.6km s-min=9.6km az=182.0*
THE ***13*** *01:48:54.0, 34˚N±17˚×2˚6E±˚, h0km±12km, M3.7/15, mb4.5/3, MLh3.7/15*
GII ***13*** *01:48:55.0±0.0, 34˚.051N±0˚.002×25˚.950E±0˚.001, h0km, Mws4.2, confirmed*
ATH ***13*** *01:48:54.3, 34˚.39N×25˚.48E, h8km±3km, ML3.9/18,*

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Latitude uncertainty: 3 km; Longitude uncertainty: 1 km
GFZ ***13*** *01:48:56.1±0.4, 34˚N±3˚×2˚6E±˚, h41km±4km, M4.2/61, mb4.3/61*
ISC 13 01:48:50.9±0.7, **34˚.13N**±0˚.04×**25˚.56E**±0˚.03, **h8**km±3km, **n441**, σ1ᵗ**85**/476, **mb4.3**/52, **MS3.6**/4, **2C-11D, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGNA	**Agios Nikolaos**	**1.06**	**7**	P	**Pg**	**01 49 10.2**	**-1.2**
AGNA				S	**Sg**	**01 49 21.1**	**-4.1**
SIVA	**Sivas**	**1.08**	**325**	P	**Pg**	**01 49 10.4**	**-1.2**
SIVA	**Sivas**	**1.08**	**325**	P	**Pg**	**01 49 10.4**	**-1.2**
SIVA				S	**Sg**	**01 49 21.2**	**-4.4**
ZKR	**Zakros**	**1.12**	**29**	Pg	**Pg**	**01 49 11.4**	**-1.1**
ZKR				Sg	**Sb**	**01 49 27.7**	**+0.3**
ZKR	**Zakros**	**1.12**	**29**	P	**Pg**	**01 49 11.3**	**-1.2**
ZKR	**Zakros**	**1.12**	**29**	P	**Pg**	**01 49 11.6**	**-0.8**
ZKR	**Zakros**	**1.12**	**29**	P	**Pg**	**01 49 11.7**	**-0.8**
ZKR				S	**Sg**	**01 49 26.3**	**-0.7**
NPS	**Neapolis**	**1.13**	**2**	P	**Pg**	**01 49 11.0**	**-1.7**
NPS				S	**Sg**	**01 49 24.2**	**-3.1**
NPS	**Neapolis**	**1.13**	**2**	P	**Pg**	**01 49 11.1**	**-1.5**
NPS				S	**Sg**	**01 49 23.8**	**-3.5**
IACM	**Heraklion**	**1.24**	**341**	P	**Pg**	**01 49 13.2**	**-1.4**
IACM				S	**Sg**	**01 49 24.7**	**-6.1**
IDI	**Anoyia**	**1.28**	**335**	Pn	**Pn**	**01 49 14.9**	**-0.3**
	16nm,0.3s,baz=164,slow=15,SNR=71						
IDI				Sn	**Sb**	**01 49 31.4**	**-0.6**
	102nm,0.3s,baz=67,slow=22,SNR=9.9						
IDI	**Anoyia**	**1.28**	**335**	Pn	**Pn**	**01 49 14.7**	**-0.5**
IDI				Sn	**Sb**	**01 49 31.8**	**-0.2**
IDI	**Anoyia**	**1.28**	**335**	P	**Pn**	**01 49 13.3**	**-1.9**
IDI	**Anoyia**	**1.28**	**335**		**Pn**	**01 49 14.2**	**-1.1**
IDI	**Anoyia**	**1.28**	**335**	P	**Pn**	**01 49 13.5**	**-1.7**
IDI				S	**Sb**	**01 49 26.8**	**-5.2**
GVD	**Gavdhos**	**1.40**	**301**	P	**Pn**	**01 49 16.3**	**-0.6**
GVD	**Gavdhos**	**1.40**	**301**	P	**Pn**	**01 49 16.8**	**-0.1**
GVD	**Gavdhos**	**1.40**	**301**	P	**Pn**	**01 49 16.2**	**-0.6**
GVD				S	**Sb**	**01 49 31.7**	**-3.8**
RTHF	**Rethymno-Limin**	**1.52**	**325**	P	**Pn**	**01 49 18.4**	**0.0**
VAM	**Vamos**	**1.69**	**319**	P	**Pn**	**01 49 21.2**	**+0.3**
CHNB	**Souda**	**1.82**	**318**	P	**Pn**	**01 49 23.1**	**+0.5**
IMMV	**Iera Moni Meta**	**1.85**	**316**	Pn	**Pb**	**01 49 24.2**	**-0.9**
IMMV	**Iera Moni Meta**	**1.85**	**316**	P	**Pn**	**01 49 23.7**	**+0.7**
IMMV	**Iera Moni Meta**	**1.85**	**316**	P	**Pg**	**01 49 27.2**	**+0.8**
IMMV	**Iera Moni Meta**	**1.85**	**316**	P	**Pn**	**01 49 23.2**	**+0.1**
CHAN	**Chania**	**1.86**	**318**	P	**Pn**	**01 49 23.2**	**0.0**
KARP	**Karpathos**	**1.93**	**43**	Pn	**Pn**	**01 49 24.8**	**+0.6**
KARP	**Karpathos**	**1.93**	**43**	Pn	**Pn**	**01 49 25.2**	**+1.1**
KARP	**Karpathos**	**1.93**	**43**	P	**Pn**	**01 49 25.3**	**+1.1**
KARP	**Karpathos**	**1.93**	**43**	P	**Pg**	**01 49 27.7**	**-0.3**
KARP	**Karpathos**	**1.93**	**43**	P	**Pb**	**01 49 25.8**	**-0.7**
KNDR	**Palaiochora Ch**	**1.94**	**305**	Pn	**Pb**	**01 49 25.5**	**-1.0**
KNDR	**Palaiochora Ch**	**1.94**	**305**	P	**Pn**	**01 49 25.0**	**+0.8**
KNDR	**Palaiochora Ch**	**1.94**	**305**	P	**Pn**	**01 49 25.1**	**+0.9**
THERA	**Ancient Thera,**	**2.23**	**358**	P	**Pn**	**01 49 29.0**	**+0.7**
THERA	**Ancient Thera,**	**2.23**	**358**	P	**Pn**	**01 49 27.6**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.27**	**357**	P	**Pb**	**01 49 31.4**	**-0.8**
THR8	**Santorini-Mono**	**2.27**	**358**	P	**Pn**	**01 49 29.1**	**+0.3**
SAP3	**Santorini-Thir**	**2.31**	**356**	P	**Pn**	**01 49 29.1**	**-0.1**
ANKY	**Antikythira Is**	**2.54**	**314**	P	**Pn**	**01 49 32.8**	**+0.4**
KTHA	**Kythira Island**	**2.94**	**317**	Pn	**Pn**	**01 49 39.6**	**+1.6**
KTHA	**Kythira Island**	**2.94**	**317**	P	**Pn**	**01 49 39.7**	**+1.6**
ARG	**Arkhangelos**	**2.96**	**45**	Pn	**Pn**	**01 49 39.0**	**+0.7**
ARG	**Arkhangelos**	**2.96**	**45**	P	**Pn**	**01 49 40.1**	**+1.9**
ARG	**Arkhangelos**	**2.96**	**45**	P	**Pn**	**01 49 39.8**	**+1.5**
ARG	**Arkhangelos**	**2.96**	**45**	Pn	**Pn**	**01 49 39.8**	**+1.5**
ARG	**Arkhangelos**	**2.96**	**45**	P	**Pn**	**01 49 39.7**	**+1.5**
DAT	**Datca**	**3.07**	**32**	Pn	**Pn**	**01 49 40.9**	**+1.0**
BODT	**Bodrum**	**3.26**	**26**	Pn	**Pn**	**01 49 43.3**	**+0.9**
VLI	**Veliai**	**3.35**	**321**	P	**Pn**	**01 49 44.5**	**+0.8**
TURN	**Turunc**	**3.43**	**39**	Pn	**Pn**	**01 49 45.9**	**+1.2**
DALY	**Dalyan (Mula)**	**3.69**	**42**	Pn	**Pn**	**01 49 49.6**	**+1.4**
YER	**Yerkesik**	**3.73**	**36**	Pn	**Pn**	**01 49 49.9**	**+0.9**
YER	**Yerkesik**	**3.73**	**36**	P	**Pn**	**01 49 49.8**	**+0.9**
GCAM	**G?zelcaml?**	**3.81**	**20**	Pn	**Pn**	**01 49 51.0**	**+1.0**
MET6	**Megalochori,Me**	**3.89**	**333**	P	**Pn**	**01 49 51.3**	**+0.3**
MET4	**Agioi Theodoro**	**3.90**	**334**	P	**Pn**	**01 49 51.2**	**+0.1**
MET5	**Makryloggos,Me**	**3.91**	**334**	P	**Pn**	**01 49 51.4**	**0.0**
MET2	**Kameni Chora,**	**3.92**	**333**	P	**Pn**	**01 49 50.9**	**-0.6**
MET3	**Ano Fanari,Met**	**3.92**	**332**	P	**Pn**	**01 49 51.0**	**-0.5**
AKAS	**Kas**	**3.92**	**57**	Pn	**Pn**	**01 49 53.1**	**+1.4**
AKAS	**Kas**	**3.92**	**57**	Pn	**Pn**	**01 49 52.0**	**+0.4**
AKAS	**Kas**	**3.92**	**57**	P	**Pn**	**01 49 53.5**	**+1.8**
VLY	**Voula,Athens**	**3.98**	**339**	P	**Pn**	**01 49 52.9**	**+0.6**
AYDN	**Tasoluk**	**4.00**	**28**	P	**Pn**	**01 49 54.1**	**+1.5**
ATHU	**Athens Univers**	**4.09**	**340**	P	**Pn**	**01 49 53.9**	**+0.1**
PTL	**Penteli**	**4.14**	**341**	P	**Pn**	**01 49 54.1**	**-0.4**
CAME	**Cameli-Denizli**	**4.15**	**46**	Pn	**Pn**	**01 49 56.0**	**+1.2**
DION	**Dionisos Attik**	**4.15**	**342**	P	**Pn**	**01 49 55.7**	**+1.0**
DION	**Dionisos Attik**	**4.15**	**342**	P	**Pn**	**01 49 54.3**	**-0.4**
ITM	**Ithomi**	**4.24**	**317**	P	**Pn**	**01 49 59.9**	**+1.0**
ITM	**Ithomi**	**4.24**	**317**	Pn	**Pn**	**01 49 56.3**	**+0.4**
ITM	**Ithomi**	**4.24**	**317**	P	**Pn**	**01 49 59.6**	**+3.7**
ITM	**Ithomi**	**4.24**	**317**	P	**Pn**	**01 49 56.0**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**4.25**	**26**	Pn	**Pn**	**01 49 57.3**	**+1.1**
CHOS	**Chios island**	**4.27**	**5**	Pn	**Pn**	**01 49 57.7**	**+1.4**
CHOS	**Chios island**	**4.27**	**5**	P	**Pn**	**01 49 56.4**	**+0.1**
URLA	**Izmir**	**4.30**	**11**	Pn	**Pn**	**01 49 58.1**	**+1.3**
ELL	**Elmali**	**4.41**	**52**	Pn	**Pn**	**01 50 00.0**	**+1.7**
ELL	**Elmali**	**4.41**	**52**	P	**Pn**	**01 49 59.3**	**+1.0**
ELL	**Elmali**	**4.41**	**52**	Pn	**Pn**	**01 49 59.3**	**+1.0**
ELL	**Elmali**	**4.41**	**52**	P	**Pn**	**01 49 59.8**	**+1.4**
BLCB	**Balcova**	**4.41**	**15**	Pn	**Pn**	**01 49 59.7**	**+1.5**
BLCB	**Balcova**	**4.41**	**15**	P	**Pn**	**01 49 59.7**	**+1.5**
NAZL	**Nazilli-Aydin**	**4.42**	**29**	Pn	**Pn**	**01 49 59.9**	**+1.5**
VIL2	**Platees**	**4.47**	**336**	P	**Pn**	**01 49 57.9**	**-1.2**
APMY	**Acipayam-Deniz**	**4.51**	**41**	Pn	**Pn**	**01 50 01.2**	**+1.5**
GUR	**Goura**	**4.60**	**326**	P	**Pn**	**01 50 00.2**	**-0.8**
ODEM	**Ancinis-Izmir**	**4.61**	**25**	Pn	**Pn**	**01 50 02.5**	**+1.8**
KYMI	**Kymi, Euboea I**	**4.64**	**346**	P	**Pn**	**01 50 00.7**	**-0.7**
KLV	**Kalavryta, Ach**	**4.78**	**326**	P	**Pn**	**01 50 03.9**	**+0.6**
KLV	**Kalavryta, Ach**	**4.78**	**326**	P	**Pn**	**01 50 03.0**	**-0.4**
DRO	**Drossia**	**4.92**	**322**	P	**Pn**	**01 50 05.5**	**+0.3**
MANT	**Manisa**	**4.98**	**28**	Pn	**Pn**	**01 50 06.8**	**+0.5**
PYRG	**Pyrgos, Dorida**	**5.14**	**327**	P	**Pn**	**01 50 06.3**	**-2.0**
AGG	**Agios Georgios**	**5.53**	**333**	P	**Pn**	**01 50 17.9**	**+4.3**
PVO	**Paravola**	**5.53**	**325**	P	**Pn**	**01 50 17.4**	**+3.8**
BALB	**Balikesir**	**5.80**	**18**	Pn	**Pn**	**01 50 17.4**	**+0.1**
BALY	**Balya**	**5.84**	**16**	P	**Pn**	**01 50 20.0**	**+2.2**
TYRN	**Tyrnavos**	**6.17**	**335**	P	**Pn**	**01 50 24.2**	**+1.8**
	24nm,1.1s						
TETR	**Tetrakomo, Epi**	**6.24**	**328**	P	**Pn**	**01 50 24.8**	**+1.5**
	31nm,0.5s						
PRMD	**Prmanda**	**6.47**	**328**	P	**Pn**	**01 50 28.5**	**+2.0**
CSS	**Mathiatis**	**6.47**	**80**	Pn	**Pn**	**01 50 26.1**	**-0.4**
CSS	**Mathiatis**	**6.47**	**80**	P	**Pn**	**01 50 26.3**	**-0.3**
	0.2nm29nm,0.5s						
CSS	**Mathiatis**	**6.47**	**80**	P	**Pn**	**01 50 26.2**	**-0.3**
CSS	**Mathiatis**	**6.47**	**80**	P	**Pn**	**01 50 26.5**	**-0.1**
CSS				S	**Sn**	**01 51 36.9**	**-3.7**
RDO	**Rodhopi**	**7.00**	**360**	Pn	**Pn**	**01 50 33.8**	**0.0**
RDO	**Rodhopi**	**7.00**	**360**	P	**Pn**	**01 50 35.4**	**+1.5**
SRS	**Serrai**	**7.15**	**348**	P	Pn	01 50 42.1	+6.3
KNT	**Kendrikon**	**7.33**	**344**	P	**Pn**	**01 50 41.2**	**+2.9**
CY604	**RAF Akrotiri,**	**7.42**	**86**	Pn	**Pn**	**01 50 39.6**	**+0.3**
OFRI	**`Ofer**	**8.03**	**98**	P	**Pn**	**01 50 47.5**	**-0.5**
OFRI				S	**Sn**	**01 52 14.9**	**-4.1**
KZIT	**Kziot**	**8.13**	**111**	P	**Pn**	**01 50 50.1**	**+0.9**
KZIT	**Kziot**	**8.13**	**111**	P	**Pn**	**01 50 48.6**	**-0.7**
KZIT				S	**Sn**	**01 52 16.6**	**-4.9**
SLTI	**Sal'it**	**8.17**	**101**	P	**Pn**	**01 50 49.1**	**-0.7**
SLTI				S	**Sn**	**01 52 17.9**	**-4.6**
MMA0B	**Mount Meron ar**	**8.29**	**95**	P	**Pn**	**01 50 51.1**	**-0.5**
MMA0B				S	**Sn**	**01 52 21.9**	**-3.7**
MMAI	**Mount Meron Ar**	**8.29**	**95**	Pn	**Pn**	**01 50 51.3**	**-0.3**
	2.6nm,0.3s,baz=299,slow=11,SNR=14						
MMAI				Sn	**Sn**	**01 52 23.1**	**-2.5**
	4.8nm,0.3s,baz=273,slow=20,SNR=5.8						
MMAI				LR	LR	01 54 58.2	
	comp=Z,111nm,18.2s,baz=97,slow=44						
	1.1nm,0.3s						
MMLI	**Mount Malkishu**	**8.43**	**99**	P	**Pn**	**01 50 52.7**	**-0.8**
MMLI				S	**Sn**	**01 52 24.6**	**-4.3**
GEM	**Giv'at Ha'Em**	**8.48**	**93**	P	**Pn**	**01 50 53.6**	**-0.4**
GEM				S	**Sn**	**01 52 26.2**	**-3.7**
BR105	**Keskin Array S**	**8.53**	**47**	P	**Pn**	**01 50 54.5**	**-0.4**
	3.9nm,0.8s						
ROII	**Roi**	**8.53**	**100**	P	**Pn**	**01 50 54.7**	**-0.2**
ROII				S	**Sn**	**01 52 27.6**	**-3.8**
BR104	**Keskin Array S**	**8.54**	**47**	P	**Pn**	**01 50 55.4**	**+0.4**
	54nm7.4nm,0.9s						
BR106	**Keskin Array S**	**8.54**	**47**	P	**Pn**	**01 50 55.4**	**+0.4**
	41nm4.9nm,0.9s						
BR131	**Keskin Array S**	**8.54**	**47**	P	**Pn**	**01 50 54.8**	**-0.3**
BR131	**Keskin Array S**	**8.54**	**47**	Pn	**Pn**	**01 50 54.8**	**-0.3**
BRTR	**Keskin Array B**	**8.54**	**47**	Pn	**Pn**	**01 50 56.5**	**+1.4**
	0.3nm,0.3s,baz=220,slow=14,SNR=12						
BRTR				Sn	**Sn**	**01 52 29.7**	**-2.1**
	0.1nm,0.3s,baz=213,slow=23,SNR=1.8						
BRTR				LR	LR	01 55 19.8	
	comp=Z,244nm,21.5s,baz=202,slow=46						
	1.5nm,0.6s						
BRTR	**Keskin Array B**	**8.54**	**47**	Pn	**Pn**	**01 50 56.7**	**+1.6**
YITV	**Yitav**	**8.57**	**102**	P	**Pn**	**01 50 54.5**	**-0.7**
YITV				S	**Sn**	**01 52 27.6**	**-4.5**
RGMN	**Argaman**	**8.58**	**100**	P	**Pn**	**01 50 55.3**	**-0.1**
RGMN				S	**Sn**	**01 52 27.9**	**-4.6**
UJAP	**Al Uja**	**8.60**	**102**	P	**Pn**	**01 50 55.2**	**-0.5**
ALMO	**Almog**	**8.64**	**103**	P	**Pn**	**01 50 55.7**	**-0.7**
ALMO				S	**Sn**	**01 52 29.9**	**-4.2**
MZS	**Mizpe Shalem**	**8.67**	**104**	P	**Pn**	**01 50 55.8**	**-0.8**
MZS				S	**Sn**	**01 52 29.6**	**-5.0**
TIP	**Timpagrande**	**8.68**	**308**	Pn	**Pn**	**01 50 55.9**	**-1.0**
TIP	**Timpagrande**	**8.68**	**308**	P	**Pn**	**01 50 56.8**	**-0.1**
	18nm,0.7s						
MSBI	**Mazada**	**8.72**	**106**	P	**Pn**	**01 50 58.2**	**+0.8**
MSBI	**Mazada**	**8.72**	**106**	P	**Pn**	**01 50 56.7**	**-0.7**
MSBI				S	**Sn**	**01 52 31.2**	**-4.7**
ZFRI	**Zfri**	**8.89**	**111**	P	**Pn**	**01 50 59.2**	**-0.5**
ZFRI				S	**Sn**	**01 52 35.9**	**-4.1**
GHAJ	**Ghor Haditha**	**8.89**	**106**	Pn	**Pn**	**01 50 59.1**	**-0.7**
GHAJ	**Ghor Haditha**	**8.89**	**106**	P	**Pn**	**01 50 60.0**	**+0.2**
GHAJ	**Ghor Haditha**	**8.89**	**106**	P	**Pn**	**01 50 59.8**	**+0.1**
GHAJ				S	**Sn**	**01 52 35.9**	**-4.2**
HRFI	**Mount Harif**	**9.02**	**114**	P	**Pn**	**01 51 02.0**	**+0.5**
HRFI	**Mount Harif**	**9.02

KIEV	Kiev	16.77	8		P		01 52 47.5	-0.8
KIEV	Kiev	16.77	8	P	P		01 52 47.3	-1.0
AKASG	Malin Array Be	16.78	8	Pn	Pn		01 52 45.7	-0.4
	comp=Z,1.0nm,0.3s,baz=202,slow=11,SNR=26							
AKASG	Malin Array Be	16.78	8	Pn	Pn		01 52 46.5	+0.3
AKASG				IAmb	IAmb		01 52 54.7	
	comp=Z,18nm,0.8s							
AKBB	Malin Array Si	16.78	8	P	Pn		01 52 46.9	+0.7
AKBB				pmax	pmax			
	comp=Z,15nm,0.8s							
AKBB	Malin Array Si	16.78	8	Pn	Pn		01 52 46.9	+0.7
AKBB				IAmb	IAmb		01 52 54.6	
	comp=Z,15nm,0.8s							
WTTA	Wattenberg	16.80	325	*i* P	P		01 52 50.1	+1.1
	comp=Z,7.0nm,0.8s,SNR=6.7							
WTTA	Wattenberg	16.80	325	P	P		01 52 51.2	+2.3
WATA	Walderalm	16.88	326	*e*P	P		01 52 50.6	+0.8
	comp=Z,4.4nm,0.7s							
TREC	Trest	16.89	337	*e*P	P		01 52 49.0	-0.7
TREC	Trest	16.89	337	*e*P	P		01 52 49.0	-0.7
TREC	Trest	16.89	337	P	P		01 52 49.9	+0.2
CKRC	Cesky Krumlov	16.89	334	*e*P	P		01 52 50.8	+1.0
CKRC	Cesky Krumlov	16.89	334	*e*P	P		01 52 50.8	+1.0
SQTA	Sankt Quirin	16.97	325	*i* P	P		01 52 52.0	+1.3
	comp=Z,4.4nm,0.5s							
FUORN	Ofenpass-Fuorn	17.03	322		P		01 52 51.7	+0.1
FUORN				IAmb	IAmb		01 53 05.5	
	comp=Z,41nm,1.2s							
FUORN	Ofenpass-Fuorn	17.03	322	P	P		01 52 54.9	+3.3
FETA	Feichten	17.07	323	*i* P	P		01 52 53.3	+1.5
	comp=Z,3.1nm,0.7s,SNR=7.3							
RNPP5	Staryi Chortor	17.09	1	P	Pn		01 52 50.2	+0.1
MOTA	Moosalm	17.11	325	*i* P	P		01 52 54.2	+1.8
	comp=Z,3.5nm,0.5s							
GEC2	GERESS Array S	17.14	333		P		01 52 52.5	-0.1
GEC2	GERESS Array S	17.14	333	*e*P	P		01 52 54.1	+1.4
	comp=Z,16nm,1.8s,baz=140,slow=11							
GERES	GERESS Array B	17.14	333	P	Pn		01 52 50.9	-0.1
	baz=145,slow=11,SNR=19							
	comp=Z,1.9nm,0.6s							
GERES	GERESS Array B	17.14	333	*e*P	P		01 52 52.8	+0.2
GERES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
GERES	GERESS Array B	17.14	333	Pn	Pn		01 52 50.5	-0.5
KRLC	Kraliky	17.19	341	P	P		01 52 53.3	+0.2
RNPP8	Varash	17.20	1	P	Pn		01 52 51.6	+0.1
RNPP9	Sopachiv	17.27	1	P	Pn		01 52 52.0	-0.4
DAVOX	Davos/Dischmat	17.34	321	P	P		01 52 54.3	-0.6
	comp=Z,0.3nm,0.3s,baz=139,slow=16,SNR=15							
	comp=Z,4.7nm,0.7s							
RETA	Reutte	17.38	325	*e*P	P		01 52 55.3	+0.1
	comp=Z,2.9nm,0.7s							
TUE	Stuetta	17.42	320	Pn	Pn		01 52 53.8	-0.6
TUE	Stuetta	17.42	320	P	P		01 52 59.1	+3.4
KHC	Kasperske Hory	17.42	333	*e*P	P		01 52 56.3	+0.7
KHC	Kasperske Hory	17.42	333		P		01 52 55.4	-0.2
KHC	Kasperske Hory	17.42	333	*e*P	P		01 52 56.3	+0.7
KHC	Kasperske Hory	17.42	333	P	P		01 52 58.5	+2.9
DPC	Dobruska-Polom	17.57	340	*e*P	Pn		01 52 56.7	+0.6
DPC	Dobruska-Polom	17.57	340	*e*P	Pn		01 52 56.7	+0.6
DPC	Dobruska-Polom	17.57	340	P	P		01 53 02.0	+4.8
FUR	Furstenfeldbru	17.63	327	*e*P	P		01 52 58.6	+0.7
	comp=Z,56nm,1.2s,baz=140,slow=11							
FUR				*e*L	L		02 01 13.6	
	comp=Z,166nm,18.7s							
FUR	Furstenfeldbru	17.63	327	P	P		01 52 57.6	-0.2
DAVA	Damuels	17.67	323	*i* Pn	P		01 52 59.8	+1.2
	comp=Z,5.2nm,0.5s,SNR=4.6							
DAVA	Damuels	17.67	323	P	P		01 53 00.9	+2.4
WET	Wettzell	17.70	332	*e*P	P		01 52 59.9	+1.1
	comp=Z,27nm,1.5s,baz=140,slow=11							
WET	Wettzell	17.70	332	P	P		01 52 59.9	+1.1
UPC	Upice	17.80	340	P	P		01 53 03.0	+3.3
PRU	Pruhonice	17.80	336	P	P		01 53 01.4	+1.6
KSP	Ksiaz	18.02	341	P	Pn		01 53 01.1	-0.6
	comp=Z,6.6nm,1.3s							
KSP				pP	sP		01 53 04.4	+0.3
	comp=Z,6.6nm,1.3s							
GRC3	Grafenberg Arr	18.04	329	P	Pn		01 53 02.0	+0.1
GRC1	Grafenberg Arr	18.14	329	P	P		01 53 05.3	+1.8
BNALP	Bannalp	18.16	320	P	P		01 53 06.5	+2.6
GRB5	Grafenberg Arr	18.16	330	P	P		01 53 10.0	+6.2
GRC4	Grafenberg Arr	18.21	329	P	P		01 53 06.2	+1.9
PVCC	Panska Ves	18.25	337	*e*P	P		01 53 05.1	+0.3
PVCC	Panska Ves	18.25	337	*e*P	P		01 53 05.1	+0.3
PVCC	Panska Ves	18.25	337	P	P		01 53 09.9	+5.1
GRB2	Grafenberg Arr	18.29	330	P	P		01 53 10.4	+5.2
GRB3	Grafenberg Arr	18.29	330	P	P		01 53 07.7	+2.5
GRB1	Grafenberg Arr	18.39	330	P	P		01 53 07.1	+0.8
ROTZ	Rotzenmuhle	18.46	332	*e*P	Pn		01 53 07.3	+0.1
	comp=Z,1.1nm,1.1s,baz=140,slow=11							
SENIN	Lac Senin/Sane	18.48	317	P	P		01 53 07.1	-0.4
GRB4	Grafenberg Arr	18.49	330	P	Pn		01 53 08.2	+0.7
SLE	Schleitheim	18.69	322	P	Pn		01 53 10.4	+0.5
GRA2	Grafenberg Arr	18.72	330	P	Pn		01 53 11.8	+1.6
NKC	Novy Kostel	18.75	333	P	Pn		01 53 16.4	+5.8
BRG	Berggiesshubel	18.75	337	*e*P	P		01 53 09.6	-0.6
BRG				Amp			01 53 11.3	
	comp=Z,2.4nm,0.9s							
GRFO	Grafenberg	18.80	330	P	Pn		01 53 17.1	+5.8
GRFO	Grafenberg	18.80	330	P	Pn		01 53 17.1	+5.8
GRFO	Grafenberg	18.80	330	P	Pn		01 53 11.6	+0.3
GRA1	Grafenberg Arr	18.80	330	P	Pn		01 53 11.6	+0.3
GRF	Grafenberg Arr	18.80	330	*e*P	Pn		01 53 11.3	0.0
	comp=Z,40nm,1.5s,baz=140,slow=11							
GRF				*e*L	L		02 00 23.6	
	comp=Z,142nm,19.4s							
GRA3	Grafenberg Arr	18.82	330	P	Pn		01 53 13.7	+2.3
TANN	Tannenbergstha	18.89	333	*e*P	P		01 53 12.0	+0.2
	comp=Z,5.1nm,0.8s,baz=140,slow=11							
TANN	Tannenbergstha	18.89	333	P	Pn		01 53 12.9	+0.6
AKT	Akhty	18.97	61	*e*P	Pn		01 53 14.0	+0.6
AKT				pmax	pmax			
	comp=Z,5.0nm,0.7s							
BOURR	Bourrignon	19.13	319	P	Pn		01 53 15.8	+0.5
BFO	Black Forest	19.15	323	P	P		01 53 14.8	+0.1
BFO				pmax	pmax			
	comp=Z,8.0nm,0.7s							
BFO	Black Forest	19.15	323	P	P		01 53 14.8	+0.1
MOX	Moxa	19.40	332	*e*P	Pn		01 53 19.0	+0.6
	comp=Z,4.0nm,0.8s,baz=140,slow=11							
MOX				*e*L	L		02 02 14.9	
	comp=Z,190nm,18.3s							
ECH	Echery	19.67	321	P	P		01 53 19.9	-0.5
ECH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ECH	Echery	19.67	321	P	P		01 53 19.9	-0.5
ECH	Echery	19.67	321	P	Pn		01 53 21.8	0.0
VSR	Storozhevoye	19.73	26	*e*P	P		01 53 20.1	-0.9
VSR				pmax	pmax			
	comp=Z,10.0nm,0.6s							
SUW	Suwalki	19.95	356	P	P		01 53 23.7	+0.4
SUW	Suwalki	19.95	356	P	P		01 53 23.7	+0.4
CORI	Orista	20.06	300	P	P		01 53 25.4	+0.8
VORR	Voronezh	20.12	25	*e*P	Pn		01 53 27.3	+0.3
VORR				pmax	pmax			
	comp=Z,71nm,1.2s							
WIMM	Wimmelburg	20.14	334	P	Pn		01 53 27.8	+0.6
UBBA	Unterbreizbach	20.17	330	*e*P	P		01 53 25.1	-0.5
	comp=Z,17nm,1.5s,baz=140,slow=11							
UBBA	Unterbreizbach	20.17	330	P	P		01 53 26.5	+0.8
RAYN	Ar Rayn	20.39	116	P	Pn		01 53 30.6	+0.2
TNS	Taunus Mts	20.40	327	*e*P	Pn		01 53 31.7	+1.4
	comp=Z,50nm,1.6s,baz=140,slow=11							
TNS	Taunus Mts	20.40	327	P	Pn		01 53 30.2	-0.1
MNK	Minsk	20.43	4	*i* P	P		01 53 29.2	+0.7
	comp=E,3.0nm,0.4s							
MNK				*i* P	P		01 53 29.2	+0.7
	comp=N,1.0nm,0.4s							
MNK				*i* P	P		01 53 29.2	+0.7
	comp=Z,5.0nm,0.5s,baz=186							
MNK				*i* PP	pwP		01 53 46.1	+12
MNK				*i* S	S		01 57 18.2	+0.8
MNK				*i* SS	SnSn		01 57 37.3	+1.7
MNK				*i* LQ	LQ		01 59 50.2	
MNK				*i* LR	LR		02 00 26.6	
MNK				*i* LRM	MLR		02 00 59.4	
	comp=N,169nm,13.8s							
MNK				*i* LRM	MLR		02 02 01.6	
	comp=Z,73nm,15.5s							
MNK				*i* LRM	MLR		02 02 33.9	
	comp=E,53nm,13.7s							
MNK	Minsk	20.43	4	*i* P	P		01 53 29.2	+0.7
MNK				*i*			01 53 46.1	

MNK				*i* S	S		01 57 18.1	+0.8
MNK				*i* SS	SnSn		01 57 37.2	+1.7
MNK				pmax	pmax			
	comp=E,3.0nm,0.4s							
MNK				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MNK				pmax	pmax			
	comp=N,1.0nm,0.4s							
MNK				MLR	MLR			
	comp=N,169nm,14.0s							
MNK				MLR	MLR			
	comp=Z,73nm,16.0s							
MNK				MLR	MLR			
	comp=E,53nm,14.0s							
GTTG	Gottingen	20.75	332	*e*P	P		01 53 32.5	+0.5
	comp=E,56nm,1.1s,baz=140,slow=11							
GTTG	Gottingen	20.75	332	P	P		01 53 32.9	+0.9
NACGM	Naroch	20.79	2	*e*P	P		01 53 33.1	+0.7
CEST	Esterri de Car	20.79	301	P	P		01 53 33.6	+0.9
CEST				IAmb	IAmb		01 53 42.2	
	comp=Z,17nm,0.9s							
CLZ	Clausthal	20.82	333	*e*P	P		01 53 32.6	-0.2
	baz=140,slow=11							
TAM	Tamanrasset	20.88	242	P	Pn		01 53 36.6	+0.3
FLTG	Flechtingen	20.90	335	*e*P	P		01 53 32.7	-0.9
	baz=140,slow=11							
WLF	Walferdange	21.11	323	*e*P	P		01 53 36.9	+1.1
	baz=140,slow=11							
WLF	Walferdange	21.11	323	P	P		01 53 38.0	+2.2
KASTN	Kahler Asten	21.12	329	*e*P	P		01 53 36.7	+0.6
	baz=140,slow=11							
PABE	Paberze	21.40	358	P	P		01 53 37.0	-2.0
PABE	Paberze	21.40	358	P	P		01 53 39.2	+0.2
BHOU	Houvegnez	21.63	324	*d*P	P		01 53 44.9	+3.4
	comp=Z,9.0nm,1.0s							
BTNL	Ternell	21.72	325	*d*P	P		01 53 44.5	+2.0
	comp=Z,13nm,0.9s							
BUG	Bochum--Univer	21.79	328	P	P		01 53 44.4	+1.3
MEM	Membach	21.79	325	*d*P	P		01 53 44.1	+0.9
	comp=Z,19nm,0.8s							
MEM	Membach	21.79	325	P	P		01 53 44.4	+1.1
RCHB	Rochefort	21.88	323	*d*P	P		01 53 44.8	+0.6
	comp=Z,5.2nm,0.8s							
RETH	Rethem/Aller,	21.91	333	*e*P	P		01 53 45.2	+0.8
	baz=140,slow=11							
RETH	Rethem/Aller,	21.91	333	P	P		01 53 43.9	-0.5
HGN	Heimansgroeve	21.93	325	P	P		01 53 46.4	+1.7
BSTI	Sart Tilman	21.99	324	*d*P	P		01 53 46.1	+0.8
	comp=Z,4.8nm,0.9s							
BCLA	Clavier	22.01	324	*d*P	P		01 53 49.7	+4.1
	comp=Z,5.2nm,1.0s							
BGES	Gesves	22.10	323	*d*P	P		01 53 48.6	+2.1
	comp=Z,4.4nm,1.2s							
DOU	Dourbes	22.16	322	*d*P	P		01 53 47.7	+0.5
	comp=Z,9.1nm,1.0s							
BMRD	Maredsous	22.20	323	*d*P	P		01 53 48.4	+0.8
	comp=Z,6.8nm,0.8s							
IBBN	Ibbenburen	22.22	330	P	P		01 53 47.7	-0.1
OBN	Obninsk	22.34	17‖	*e*P	P		01 53 50.2	+1.1
OBN				*PP	pwP		01 53 53.0	-2.0
OBN				*SP	sP		01 53 56.0	+5.0
OBN							01 54 15.0	
OBN				PPP	PPP		01 54 21.0	
OBN				S	S		01 57 55.0	+0.3
OBN				SS	SnSn		01 58 35.0	+13
OBN				pmax	pmax			
	comp=Z,14nm,0.9s							
OBN				MLR	MLR			
	comp=Z,109nm,16.0s							
WTSB	Winterswijk	22.37	328	P	P		01 53 50.6	+1.2
BSEG	Bad Segeberg	22.54	336	*e*P	P		01 53 50.3	-0.9
	baz=140,slow=11							
BSEG	Bad Segeberg	22.54	336	P	P		01 53 49.7	-1.4
UCC	Uccle	22.72	324	P	P		01 53 52.9	-0.2
UCC				pmax	pmax			
	comp=Z,10.0nm,0.9s							
UCC	Uccle	22.72	324	P	P		01 53 52.9	-0.2
UCC				IAmb	IAmb		01 54 07.1	
	comp=Z,10nm,0.9s							
UCC	Uccle	22.72	324	*d*P	P		01 53 54.2	+1.1
	comp=Z,8.9nm,0.9s							
UCC	Uccle	22.72	324	P	P		01 53 54.2	+1.1
BELG	Belogornoye	24.16	34	*i* P	P		01 54 09.2	+1.8
BELG				pmax	pmax			
	comp=Z,7.0nm,0.9s							
ESBB	Sonseca Array	24.18	292	P	P		01 54 09.0	+1.1
ESBB				IAmb	IAmb		01 54 10.8	
	comp=Z,18nm,1.2s							
ESDC	Sonseca Array	24.18	292	P	P		01 54 08.4	+0.5
	comp=Z,7.1nm,1.0s,baz=84,slow=9.0,SNR=27							
	comp=Z,7.1nm,1.0s							
ESDC	Sonseca Array	24.18	292	P	P		01 54 08.8	+0.9
PAB	San Pablo	24.47	291	P	P		01 54 11.0	+0.4
PAB				pmax	pmax			
	comp=Z,16nm,1.3s							
PAB	San Pablo	24.47	291	P	P		01 54 11.0	+0.4
PAB				IAmb	IAmb		01 54 20.9	
	comp=Z,16nm,1.2s							
EMAL	Malaga-Limoner	24.52	285	P	P		01 54 13.6	+2.7
MDT	Midelt	25.16	276	P	P		01 54 18.2	+1.4
	comp=Z,1.4nm,0.6s,baz=101,slow=16,SNR=5.9							
	comp=Z,1.4nm,0.6s							
MD01	Midelt array s	25.27	276	P	P		01 54 19.0	+1.1
MD31	MD31	25.27	276	P	P		01 54 19.2	+1.4
MD31				IAmb	IAmb		01 54 21.6	
	comp=Z,14nm,1.4s							
PUL	Pulkovo	25.84	6	*i* P	P		01 54 23.5	+0.9
PUL				pmax	pmax			
	comp=Z,49nm,0.8s							
HEL	Helsinki	26.06	359	P	P		01 54 18.4	-6.2
HEL				pmax	pmax			
	comp=Z,17nm,1.0s							
PBRG	Braganca	26.48	296	*e*P	P		01 54 31.0	+2.3
PBAR	Barrancos	26.55	288	*e*P	P		01 54 31.1	+1.8
MVO	Moncorvo	26.63	295	*e*P	P		01 54 31.6	+1.5
PMRV	Marv??o	26.82	291	*e*P	P		01 54 33.3	+1.6
PESTR	Estremoz	26.97	290	*e*P	P		01 54 34.3	+1.2
PVIS	Viseu	27.25	294	*e*P	P		01 54 38.9	+3.2
PBDV	Barranco-do-Ve	27.30	286	*e*P	P		01 54 38.0	+2.0
MOE	Moermmor	27.57	289	*e*P	P		01 54 41.1	+2.6
KLMR	Klimovskoe	28.23	14	*e*P	P		01 54 44.7	+0.6
KLMR				pmax	pmax			
	comp=Z,17nm,1.2s							
ESK	Eskdalemuir	29.08	326	P	P		01 54 50.2	-1.5
ESK				pmax	pmax			
	comp=Z,20nm,1.3s							
ESK	Eskdalemuir	29.08	326	P	P		01 54 50.2	-1.5
AB31	Akbulak array	29.49	49	P	P		01 54 55.8	+0.3
AB31				IAmb	IAmb		01 55 00.1	
	comp=Z,3.8nm,0.8s							
ABKAR	Akbulak array	29.49	49	P	P		01 54 55.0	-0.4
TORD	Torodi Ar. Bea	30.09	232	P	P		01 55 01.6	+0.5
	comp=Z,1.4nm,0.4s,baz=34,slow=8.9,SNR=34							
	comp=Z,1.4nm,0.4s							
CHGR	Chuyangaron	35.14	70	*i* P	P		01 55 46.6	+1.4
CHGR				pmax	pmax			
	comp=Z,7.0nm,1.0s							
ARCES	ARCESS Array B	35.46	360	P	P		01 55 45.5	-2.0
	comp=Z,1.2nm,0.5s,baz=183,slow=7.3,SNR=6.7							
	comp=Z,1.2nm,0.5s							
ARCES	ARCESS Array B	35.46	360	*e*P	P		01 55 49.0	+1.6
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ARCES	ARCESS Array B	35.46	360	P	P		01 55 45.1	-2.3
ARCES				IAmb	IAmb		01 55 46.3	
	comp=Z,5.1nm,1.2s							
KK31	Karatay Array	35.89	62	P	P		01 55 51.5	0.0
KK31				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KK31	Karatay Array	35.89	62	P	P		01 55 51.5	0.0
KK31				IAmb	IAmb		01 56 16.5	
	comp=Z,4.4nm,1.0s							
KKAR	Karatay Array	35.89	62	P	P		01 55 52.0	+0.5
KKAR	Karatay Array	35.89	62	P	P		01 55 52.0	+0.5
BORK	Borovoye	36.79	45	*i* P	P		01 56 00.7	+1.6
BORK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BVAR	Borovoye Array	36.83	45	P	P		01 55 59.1	-0.3
	comp=Z,3.7nm,0.8s,baz=217,slow=36,SNR=7.1							
	comp=Z,3.7nm,0.8s							
DBIC	Dimbokro	39.19	233	P	P		01 56 20.1	+0.5
	comp=Z,2.2nm,0.6s,baz=36,slow=11,SNR=4.9							
	comp=Z,2.2nm,0.6s							
DBIC	Dimbokro	39.19	233	P	P		01 56 19.4	-0.2
DBIC				IAmb	IAmb		01 56 39.2	

	comp=Z,8.0nm,1.1s							
NRN	Naryn	40.06	64	P	P		01 56 27.3	+0.2
NRN				pmax	pmax			
	comp=Z,7.0nm,1.0s							
NRN	Naryn	40.06	64	P	P		01 56 27.3	+0.2
NRN				IAmb	IAmb		01 56 30.5	
	comp=Z,6.8nm,1.0s							
KURBB	Kurchatov Arra	41.52	50	P	P		01 56 39.0	+0.4
	comp=Z,8.4nm,0.9s,baz=274,slow=8.7,SNR=20							
	comp=Z,8.4nm,0.9s							
KURK	Kurchatov	41.58	50	*i* P	P		01 56 40.7	+1.6
KURK				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KURK	Kurchatov	41.58	50	P	P		01 56 39.2	0.0
KURK				IAmb	IAmb		01 56 42.2	
	comp=Z,4.5nm,0.8s							
PDGK	Podgornoye	42.42	61	P	P		01 56 45.6	-0.7
PDGK	Podgornoye	42.42	61	P	P		01 56 45.6	-0.7
MAKZ	Makanchi	43.86	56	P	P		01 56 57.6	-0.1
MAKZ				pmax	pmax			
	comp=Z,4.0nm,0.6s							
MAKZ	Makanchi	43.86	56	P	P		01 56 57.6	-0.1
MAKZ				IAmb	IAmb		01 57 00.1	
	comp=Z,4.1nm,0.6s							
MK31	Makanchi Array	44.08	56	*c i* P	P		01 57 00.1	+0.6
MKAR	Makanchi Array	44.08	56	P	P		01 57 00.2	+0.8
	comp=Z,7.5nm,0.6s,baz=270,slow=7.2,SNR=49							
	comp=Z,7.5nm,0.6s							
MKAR	Makanchi Array	44.08	56	P	P		01 56 59.7	+0.2
SPITS	Spitsbergen Ar	44.33	357	P	P		01 57 00.3	-0.8
	comp=Z,1.8nm,0.6s,baz=327,slow=9.0,SNR=7.5							
	comp=Z,1.8nm,0.6s							
ZAA0	Zalesovo Array	45.49	45	P	P		01 57 09.9	-0.6
ZAA0				IAmb	IAmb		01 57 13.7	
	comp=Z,3.6nm,0.9s							
ZALV	Zalesovo Beam	45.49	45	P	P		01 57 10.4	-0.1
	comp=Z,3.3nm,0.5s,baz=266,slow=8.6,SNR=11							
	comp=Z,3.3nm,0.5s							
ZALV	Zalesovo Beam	45.49	45	*e*P	P		01 57 12.7	+2.2
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.5s							
WMQ	Urumqi	48.24	59	*e*P	P		01 57 31.5	-0.9
WMQ				pP	pwP		01 57 38.2	+0.6
WMQ				pmax	pmax			
	comp=Z,20nm,1.1s							
TSUM	Tsumeb	53.58	189	LR	LR		02 24 23.3	
	comp=Z,89nm,21.9s,baz=47,slow=40							
SONM	Songino Array	59.89	50	P	P		01 58 57.7	+0.2
	comp=Z,2.3nm,0.8s,baz=279,slow=8.8,SNR=12							
	comp=Z,2.3nm,0.8s							
SONM	Songino Array	59.89	50	*e*P	P		01 58 58.9	+1.5
SONM				pmax	pmax			
	comp=Z,2.0nm,0.8s							
SONM	Songino Array	59.89	50	P	P		01 58 57.6	+0.2
SONM				IAmb	IAmb		01 58 59.9	
	comp=Z,3.8nm,1.1s							
ULN	Ulaanbaatar	60.30	50	P	P		01 59 01.1	+0.9
ULN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ULN	Ulaanbaatar	60.30	50	P	P		01 59 01.1	+0.9
ULN				IAmb	IAmb		01 59 03.2	
	comp=Z,3.0nm,0.8s							
SCHQ	Schefferville	64.18	320	P	P		01 59 26.0	0.0
	comp=Z,1.6nm,0.5s,baz=68,slow=11,SNR=3.6							
	comp=Z,1.6nm,0.5s							
SCHQ	Schefferville	64.18	320	P	P		01 59 26.0	0.0
CMAR	Chiang Mai Arr	66.37	83	P	P		01 59 40.9	+0.1
	comp=Z,1.0nm,0.3s,baz=306,slow=8.5,SNR=7.6							
	comp=Z,1.0nm,0.3s							
CMAR	Chiang Mai Arr	66.37	83	*e*P	P		01 59 42.3	+1.6
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
CMAR	Chiang Mai Arr	66.37	83	P	P		01 59 41.6	+0.9
BNX	BinXian	73.78	46	⇓P	P		02 00 25.0	-0.8
BNX				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BILL	Bilibino	73.98	14	*i* P	P		02 00 29.1	+2.5
BILL				pmax	pmax			
	comp=Z,4.0nm,1.1s							
B21K	Ikpikpuk River	76.55	0	P	P		02 00 42.7	+1.4
M57A	Sunshine Farm,	76.68	311	P	P		02 00 41.4	-1.2
USRK	Ussuriysk Ar.	77.34	45	P	P		02 00 46.2	+0.1
	comp=Z,4.1nm,0.8s,baz=289,slow=4.6,SNR=7.7							
	comp=Z,4.1nm,0.8s							
USRK	Ussuriysk Ar.	77.34	45	P	P		02 00 45.5	-0.6
D20K	Etivluk River	77.45	1	P	P		02 00 46.6	+0.1
D20K				IAmb	IAmb		02 00 54.5	
	comp=Z,4.8nm,1.2s							
G31M	Satah River	78.09	352	P	P		02 00 50.3	+0.4
G29M	Pine Creek	78.50	353	P	P		02 00 51.9	-0.4
YKA	Yellowknife Ar	78.53	342	P	P		02 00 51.6	-0.8
	comp=Z,6.6nm,0.8s,baz=34,slow=5.2,SNR=5.1							
	comp=Z,0.6nm,0.8s							
KSRS	Korea Array	78.65	52	P	P		02 00 54.0	+0.4
	comp=Z,2.2nm,0.8s,baz=286,slow=4.7,SNR=4.4							
	comp=Z,2.2nm,0.8s				

	57nm,0.2s							
TDK				*e*S		**Sb**	**02 00 59.5**	**+1.8**
	130nm,0.2s							
SATY	**Saty**	**2.27**	**238**	Pg		**Pg**	**02 00 38.7**	**-1.4**
	29nm,0.1s							
SATY				Lg		Lg	02 01 05.6	
	123nm,0.1s							
SATY	**Saty**	**2.27**	**238**	*e*P		**Pg**	**02 00 38.7**	**-1.4**
	29nm,0.1s							
SATY				*e*S		**Sb**	**02 01 05.6**	**+0.5**
	123nm,0.1s							
MK31	**Makanchi Array**	**2.66**	**19**	⇑Pn		**Pb**	**02 00 44.1**	**+0.1**
	1.1nm,0.1s,baz=205,slow=15,SNR=47							
MK31				⇓Sn		**Sb**	**02 01 16.4**	**0.0**
	2.1nm,0.1s							
TNSS	**Tian-Shan**	**3.22**	**249**	Pg		**Pg**	**02 00 57.4**	**-0.9**
	4.9nm,0.2s							
TNSS				Lg		Lg	02 01 37.8	
	3.2nm,0.2s							
TNSS	**Tian-Shan**	**3.22**	**249**	*e*P		**Pg**	**02 00 57.4**	**-0.9**
	4.9nm,0.3s							
TNSS				*e*S		**Sg**	**02 01 37.8**	**-2.2**
	3.2nm,0.3s							

BJI **13** *02:08:06.4, 7.˙30S×131.˙07E,h102km,mB4.9/5,mb4.8/35*
IDC **13** *02:08:10.3±1.8, 6.˙80S×130.˙44E,h73km±15km,mb4.2/18, mbtmp4.6/22,MS3.4/5,Error ellipse: s-maj=17.0km s-min=8.8km az=68.0*
NEIC **13** *02:08:12.5±1.8, 6.˙74S±0.˙04×130.˙47E±0.˙05,h89km±5km, mb4.8/40,Error ellipse: s-maj=8.3km s-min=5.6km az=117.0*
GFZ **13** *02:08:12.9±0.2, 7.˚S×2.˚×13.˚1E±.˚,h101km,M4.8/30, mb5.0/30,Mw5.6/6*
DJA **13** *02:08:13.0±0.2, 7.˚S×2.˚×13.˚1E±.˚,h118km±5km,M4.9/27, mB5.3/17,mb5.1/27,MLv5.5/18,Mw(mB)4.7/17.*
ISC 13 02:08:12.3±0.3, **6.˙83S**±0.˙03×**130.˙56E**±0.˙04, **h100km**, **n259**, **σ1.9 66**/255, **mb4.8**/65, **3C-1D**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.36**	**147**	P	**Pn**	**02 08 38.7**	**+1.8**
SAUI	**Saumlaki**	**1.36**	**147**		**Pn**	**02 08 38.2**	**+1.3**
SAUI				Sn	**Sn**	**02 08 58.4**	**+2.9**
SAUI	**Saumlaki**	**1.36**	**147**	P	**Pn**	**02 08 38.7**	**+1.8**
SAUI	**Saumlaki**	**1.36**	**147**	P	**Pn**	**02 08 39.2**	**+2.3**
BNDI	**Bandanaira**	**2.38**	**344**	P	**Pn**	**02 08 51.4**	**+1.4**
BNDI	**Bandanaira**	**2.38**	**344**	P	**Pn**	**02 08 50.3**	**+0.3**
BNDI	**Bandanaira**	**2.38**	**344**	P	**Pn**	**02 08 51.4**	**+1.4**
KRAI	**Karang Ratu**	**4.10**	**328**	P	**Pn**	**02 09 15.6**	**+2.7**
FAKI	**Fak Fak**	**4.23**	**23**	P	**Pn**	**02 09 14.1**	**-0.7**
FAKI	**Fak Fak**	**4.23**	**23**	Pn	**Pn**	**02 09 13.3**	**-1.5**
FAKI	**Fak Fak**	**4.23**	**23**	P	**Pn**	**02 09 13.9**	**-0.8**
FAKI	**Fak Fak**	**4.23**	**23**	P	**Pn**	**02 09 14.1**	**-0.7**
NLAI	**Namlea**	**4.96**	**316**	P	**Pn**	**02 09 26.8**	**+2.2**
	1.3nm6µm364nm,0.9s						
DRS	**Darwin Rock St**	**5.58**	**177**	P	**Pn**	**02 09 32.9**	**0.0**
DRS	**Darwin Rock St**	**5.58**	**177**	S	**Sn**	**02 10 33.4**	**-2.3**
SIJI	**Sorong**	**5.96**	**7**	P	**Pn**	**02 09 36.7**	**-1.5**
	325nm,0.3s,baz=196,slow=23,SNR=246						
SIJI				S	**Sn**	**02 10 39.2**	**-6.0**
	312nm,0.2s,baz=226,slow=22,SNR=11						
SIJI				LR	LR	02 12 19.6	
	comp=Z,242nm,19.7s,baz=102,slow=42						
SIJI	**Sorong**	**5.96**	**7**	P	**Pn**	**02 09 36.5**	**-1.7**
SWI	**Sorong**	**5.97**	**7**	P	**Pn**	**02 09 36.8**	**-1.4**
MTN	**Manton Dam**	**6.00**	**175**	P	**Pn**	**02 09 38.6**	**0.0**
	comp=Z,663nm,0.4s						
MTN				S	**Sn**	**02 10 44.6**	**-1.5**
MTN	**Manton Dam**	**6.00**	**175**	Pn	**Pn**	**02 09 38.7**	**0.0**
KDU	**Kakadu**	**6.12**	**162**	P	**Pn**	**02 09 39.8**	**-0.4**
	comp=Z,390nm,0.5s						
KDU				S	**Sn**	**02 10 44.9**	**-4.0**
SANI	**Sanana**	**6.58**	**316**	P	**Pn**	**02 09 49.1**	**+2.5**
SANI	**Sanana**	**6.58**	**316**	S	**Sn**	**02 11 03.9**	**+3.6**
SANI	**Sanana**	**6.58**	**316**	P	**Pn**	**02 09 48.6**	**+2.0**
	comp=Z,93nm,0.8s						
MWPI	**Manokwari, Pap**	**6.81**	**31**	P	**Pn**	**02 09 50.7**	**+1.0**
	comp=Z,357nm,0.6s						
SOEI	**Soe**	**6.87**	**245**	P	**Pn**	**02 09 51.3**	**+0.6**
SOEI	**Soe**	**6.87**	**245**	S	**Sn**	**02 11 06.2**	**-1.3**
SOEI	**Soe**	**6.87**	**245**	Pn	**Pn**	**02 09 50.8**	**+0.1**
SOEI	**Soe**	**6.87**	**245**	P	**Pn**	**02 09 51.7**	**+1.0**
	comp=Z,3µmcomp=Z,243nm,0.7s						
SOEI	**Soe**	**6.87**	**245**	P	**Pn**	**02 09 52.4**	**+1.7**
BATI	**Baumata**	**7.60**	**243**	P	**Pn**	**02 09 58.0**	**-2.5**
	comp=Z,173nm,0.5s,baz=157,slow=3.4,SNR=11						
BATI				S	**Sn**	**02 11 17.6**	**-7.6**
	comp=Z,762nm,0.4s,baz=110,slow=11,SNR=11						
BATI	**Baumata**	**7.60**	**243**	P	**Pn**	**02 10 01.6**	**+1.1**
	comp=Z,2µmcomp=Z,193nm,0.8s						
BAKI	**Biak**	**7.87**	**45**	P	**Pn**	**02 10 05.9**	**+1.7**
TNTI	**Ternate**	**8.20**	**337**	Pn	**Pn**	**02 10 07.6**	**-1.0**
TNTI	**Ternate**	**8.20**	**337**	P	**Pn**	**02 10 09.0**	**+0.4**
	comp=Z,160nm,0.8s						
TNTI	**Ternate**	**8.20**	**337**	P	**Pn**	**02 10 09.4**	**+0.8**
KDI	**Kendari**	**8.41**	**289**	P	Pn	02 10 16.4	+5.0
	comp=Z,2µmcomp=Z,117nm,1.1s						
MMRI	**Maumere**	**8.44**	**257**	Pn	**Pn**	**02 10 11.5**	**-0.4**
KNRA	**Kununurra**	**8.97**	**191**	P	**Pn**	**02 10 17.7**	**-1.4**
	comp=Z,539nm,0.6s						
KNRA	**Kununurra**	**8.97**	**191**	Pn	**Pn**	**02 10 16.7**	**-2.4**
LUWI	**Luwuk**	**9.66**	**306**	P	Pn	02 10 48.3	+20
LUWI	**Luwuk**	**9.66**	**306**	P	Pn	02 10 32.3	+3.7
GENI	**Genyem**	**10.46**	**67**	P	**Pn**	**02 10 40.6**	**+1.2**
GTOI	**Gorontalo**	**10.57**	**314**	P	Pn	02 10 48.0	+7.1
	comp=Z,88nm,0.8s						
KAPI	**Kappang**	**10.90**	**279**	P	**Pn**	**02 10 42.3**	**-3.2**
	comp=Z,2.3nm,0.3s,baz=136,slow=9.4,SNR=4.1						
KAPI	**Kappang**	**10.90**	**279**	P	**Pn**	**02 10 48.2**	**+2.8**
JAY	**Jayapura**	**10.98**	**67**	P	**Pn**	**02 10 46.2**	**-0.3**
	comp=Z,18nm,0.9s,baz=184,slow=7.8,SNR=3.4						
JAY				S	**Sn**	**02 12 44.7**	**-2.7**
	comp=Z,17nm,0.7s,baz=261,slow=20,SNR=2.8						
FITZ	**Fitzroy Crossi**	**12.19**	**203**	P	**Pn**	**02 10 58.2**	**-4.3**
	comp=Z,55nm,0.7s						
FITZ	**Fitzroy Crossi**	**12.19**	**203**	P	**Pn**	**02 10 59.7**	**-2.9**
	comp=Z,165nm,0.5s,baz=36,slow=11,SNR=129						
FITZ				S	Sn	02 13 04.4	-12
	comp=Z,399nm,0.7s,baz=243,slow=23,SNR=9.5						
FITZ	**Fitzroy Crossi**	**12.19**	**203**	P	**Pn**	**02 10 58.5**	**-4.0**
FITZ	**Fitzroy Crossi**	**12.19**	**203**	S	**Sn**	**02 13 14.1**	**-2.5**
FITZ	**Fitzroy Crossi**	**12.19**	**203**	Pn	**Pn**	**02 10 58.6**	**-4.0**
FITZ	**Fitzroy Crossi**	**12.19**	**203**	P	**Pn**	**02 10 59.3**	**-3.3**
TOLI2	**Tolitoli**	**12.55**	**309**	Pn	**Pn**	**02 11 08.1**	**+0.6**
TOLI2	**Tolitoli**	**12.55**	**309**	P	P	02 11 10.1	-4.9
PLAI	**Plampang**	**12.82**	**260**	P	**Pn**	**02 11 09.6**	**-1.4**
PLAI	**Plampang**	**12.82**	**260**	P	**Pn**	**02 11 10.0**	**-1.0**
	comp=Z,112nm,0.7s						
PLAI	**Plampang**	**12.82**	**260**	P	**Pn**	**02 11 09.7**	**-1.3**
WB0	**Warramunga Arr**	**13.39**	**164**	Pn	**Pn**	**02 11 13.9**	**-4.5**
WRAB	**Tennant Creek**	**13.54**	**165**	P	**Pn**	**02 11 16.0**	**-4.3**
WRAB	**Tennant Creek**	**13.54**	**165**	Pn	**Pn**	**02 11 16.3**	**-4.0**
WRAB	**Tennant Creek**	**13.54**	**165**	P	**Pn**	**02 11 18.3**	**-2.0**
WRA	**Warramunga Arr**	**13.54**	**165**	P	**Pn**	**02 11 16.6**	**-3.8**
	comp=Z,118nm,0.6s,baz=347,slow=13,SNR=80						
WRA				S	Sn	02 13 38.4	-11
	comp=Z,96nm,0.8s,baz=346,slow=22,SNR=18						
WRA	**Warramunga Arr**	**13.54**	**165**	Pn	Pn	02 11 15.4	-5.0
WR8	**Warramunga Arr**	**13.60**	**164**	Pn	Pn	02 11 16.2	-4.9
TWSI	**Taliwang, Sumb**	**13.69**	**261**	P	**Pn**	**02 11 22.0**	**-0.3**
COEN	**Coen**	**14.28**	**121**	P	**Pn**	**02 11 27.8**	**-2.2**
	comp=Z,180nm,0.8s						
DAV	**Davao City (W)**	**14.68**	**340**	LR	LR	02 17 33.5	
	comp=Z,62nm,18.6s,baz=139,slow=38						
BKB	**Balikpapan**	**14.71**	**292**		**P**	**02 11 39.0**	**+0.1**
BKB	**Balikpapan**	**14.71**	**292**	P	**P**	**02 11 40.6**	**+1.6**
QIS	**Mount Isa**	**16.22**	**148**	P	**Pn**	**02 11 53.0**	**-1.4**
	comp=Z,42nm,0.7s						
QIS	**Mount Isa**	**16.22**	**148**	P	**P**	**02 11 53.9**	**-1.8**
QIS	**Mount Isa**	**16.22**	**148**	P	**P**	**02 11 54.0**	**-1.7**
JAGI	**Jajag, Banyuwa**	**16.35**	**263**	P	**P**	**02 11 57.0**	**-0.2**
JAGI	**Jajag, Banyuwa**	**16.35**	**263**		**P**	**02 11 55.6**	**-1.6**
JAGI	**Jajag, Banyuwa**	**16.35**	**263**	P	**P**	**02 11 54.9**	**-2.3**
	comp=Z,70nm,1.0s						
JAGI	**Jajag, Banyuwa**	**16.35**	**263**	P	**P**	**02 11 57.0**	**-0.2**
PMG	**Port Moresby**	**16.63**	**100**	LR	LR	02 18 51.7	
	comp=Z,126nm,21.3s,baz=282,slow=38						
AS15	**Alice Springs**	**17.02**	**169**	P	**P**	**02 12 03.3**	**-1.3**
	comp=Z,125nm,0.9s						
AS31	**Alice Springs**	**17.05**	**169**	P	**P**	**02 12 03.5**	**-1.4**
	comp=Z,48nm,0.5s						
AS31	**Alice Springs**	**17.05**	**169**	Pn	**Pn**	**02 12 03.0**	**-1.6**
ASAR	**Alice Springs**	**17.05**	**169**	P	**P**	**02 12 03.9**	**-1.0**
	comp=Z,100nm,1.0s,baz=341,slow=9.2,SNR=292						
ASAR				S	Sn	02 15 02.2	-12
	comp=Z,29nm,0.9s,baz=352,slow=25,SNR=6.5						
ASAR				LR	LR	02 18 57.8	
	comp=Z,152nm,21.8s,baz=340,slow=38						
ASAR	**Alice Springs**	**17.05**	**169**		**Pn**	**02 12 02.3**	**-2.3**
AS01	**Alice Springs**	**17.05**	**169**	P	**P**	**02 12 03.5**	**-1.4**
AS17	**Alice Springs**	**17.06**	**169**	P	**P**	**02 12 03.9**	**-1.1**
	comp=Z,150nm,1.1s						
AS09	**Alice Springs**	**17.09**	**169**	P	**P**	**02 12 04.2**	**-1.1**
	comp=Z,201nm,1.0s						
MTSU	**Mount Surprise**	**17.49**	**131**	P	**Pn**	**02 12 10.3**	**+0.2**
	comp=Z,19nm,0.5s						
MTSU	**Mount Surprise**	**17.49**	**131**	P	**Pn**	**02 12 09.8**	**-0.3**
MBWA	**Marble Bar**	**17.68**	**215**	P	**Pn**	**02 12 11.5**	**-0.8**
	comp=Z,62nm,0.7s						
MBWA	**Marble Bar**	**17.68**	**215**	P	**Pn**	**02 12 11.4**	**-1.0**
MBWA	**Marble Bar**	**17.68**	**215**	P	**Pn**	**02 12 10.7**	**-1.7**
MBWA	**Marble Bar**	**17.68**	**215**	P	**Pn**	**02 12 11.5**	**-0.8**
WRKA	**Warakurna**	**18.23**	**187**	P	**P**	**02 12 16.4**	**-1.6**
	comp=Z,44nm,0.6s						
SNJI	**Sawahan-Nganju**	**18.68**	**266**	P	**Pn**	**02 12 24.5**	**0.0**
	comp=Z,69nm,0.6s						
KKM	**Kota Kinabalu**	**19.20**	**311**	P	**P**	**02 12 27.5**	**-1.1**
KKM	**Kota Kinabalu**	**19.20**	**311**	P	**Pn**	**02 12 29.0**	**-1.6**
	comp=Z,73nm,0.7s						
KKM	**Kota Kinabalu**	**19.20**	**311**	P	**Pn**	**02 12 28.9**	**-1.6**
PCJI	**Pacitan**	**19.27**	**265**	P	**Pn**	**02 12 29.7**	**-1.6**
CTA	**Charters Tower**	**20.14**	**132**	P	Pn	02 12 41.5	+0.1
	comp=Z,94nm,0.8s						
CTA	**Charters Tower**	**20.14**	**132**	P	Pn	02 12 40.1	-1.3
	comp=Z,11nm,0.9s,baz=291,slow=11,SNR=7.1						
CTA				S	Sn	02 16 23.7	-4.7
	comp=Z,6.4nm,0.8s,baz=31,slow=14,SNR=2.3						
	comp=Z,11nm,0.9s						
GIRL	**Giralia**	**22.24**	**223**	P	**P**	**02 13 03.4**	**+2.3**
	comp=Z,44nm,1.1s						
GIRL	**Giralia**	**22.24**	**223**	P	**P**	**02 13 02.9**	**+1.8**
BBJI	**Bungbulang**	**22.74**	**267**	P	**P**	**02 13 07.2**	**+0.8**
BBJI	**Bungbulang**	**22.74**	**267**	P	**P**	**02 13 05.8**	**-0.6**
MEEK	**Meekatharra**	**22.75**	**209**	P	**P**	**02 13 07.7**	**+1.4**
	comp=Z,45nm,0.9s						
MEEK	**Meekatharra**	**22.75**	**209**	P	**P**	**02 13 06.6**	**+0.3**
INKA	**Innaminka**	**22.93**	**156**	P	**P**	**02 13 08.9**	**+0.9**
QLP	**Quilpie**	**23.57**	**148**	P	**P**	**02 13 16.0**	**+2.0**
	comp=Z,82nm,0.8s						
FORT	**Forrest**	**23.94**	**185**	P	**P**	**02 13 19.3**	**+2.0**
	comp=Z,75nm,0.8s						
FORT	**Forrest**	**23.94**	**185**	P	**P**	**02 13 18.3**	**+1.1**
KMBL	**Kambalda**	**25.73**	**197**	P	**P**	**02 13 34.4**	**+0.8**
	comp=Z,14nm,2.0s						
MORW	**Morawa**	**26.02**	**210**	P	**P**	**02 13 40.3**	**+4.1**
	comp=Z,32nm,0.8s						
MORW	**Morawa**	**26.02**	**210**	P	**P**	**02 13 35.7**	**-0.5**
MORW	**Morawa**	**26.02**	**210**	P	**P**	**02 13 37.3**	**+1.1**
MORW				IAmb	IAmb	02 14 06.9	
	comp=Z,23nm,0.7s						
BBOO	**Buckleboo**	**26.35**	**170**	P	**P**	**02 13 40.1**	**+1.0**
	comp=Z,51nm,0.9s						
BBOO	**Buckleboo**	**26.35**	**170**	P	**P**	**02 13 39.2**	**+0.1**
BBOO	**Buckleboo**	**26.35**	**170**	P	**P**	**02 13 39.3**	**+0.1**
BBOO				IAmb	IAmb	02 14 24.2	
	comp=Z,45nm,0.8s						
BBOO	**Buckleboo**	**26.35**	**170**	P	**P**	**02 13 39.9**	**+0.7**
EIDS	**Eidsvold**	**26.91**	**136**	P	**P**	**02 13 42.4**	**-1.9**
	comp=Z,12nm,1.8s						
STKA	**Stephens Creek**	**26.96**	**159**	P	**P**	**02 13 46.1**	**+1.5**
	comp=Z,116nm,1.0s						
STKA	**Stephens Creek**	**26.96**	**159**	P	**P**	**02 13 45.8**	**+1.1**
	comp=Z,3.0nm,0.5s,baz=327,slow=7.0,SNR=6.7						
STKA				S	**S**	**02 18 19.6**	**+4.9**
	comp=Z,3.3nm,0.7s,baz=168,slow=13,SNR=1.2						
	comp=Z,3.0nm,0.5s						
BLDU	**Ballidu**	**27.00**	**207**	P	**P**	**02 13 46.4**	**+1.5**
	comp=Z,46nm,1.3s						
BLDU	**Ballidu**	**27.00**	**207**	P	**P**	**02 13 46.0**	**+1.0**
KLBR	**Kellerberrin**	**27.39**	**204**	P	**P**	**02 13 49.4**	**+1.0**
	comp=Z,43nm,1.2s						
KLBR	**Kellerberrin**	**27.39**	**204**	P	**P**	**02 13 49.1**	**+0.6**
HTT	**Hallett**	**27.58**	**165**	P	**P**	**02 13 51.8**	**+1.5**
	comp=Z,13nm,1.1s						
HTT	**Hallett**	**27.58**	**165**	P	**P**	**02 13 50.4**	**+0.2**
MYKOM	**Kota Tinggi**	**28.00**	**287**	P	**P**	**02 13 55.9**	**+1.8**
MYKOM				IAmb	IAmb	02 13 57.5	
	comp=Z,32nm,0.7s						
MYKOM	**Kota Tinggi**	**28.00**	**287**	P	**P**	**02 13 56.8**	**+2.7**
CMSA	**Cobar Meteorol**	**28.36**	**152**	P	**P**	**02 13 59.5**	**+2.4**
	comp=Z,17nm,1.0s						
CMSA	**Cobar Meteorol**	**28.36**	**152**	P	**P**	**02 13 56.1**	**-1.0**
NWAO	**Narrogin (SRO)**	**28.77**	**204**	P	**P**	**02 14 00.2**	**-0.5**
ARPS	**Mount Arapiles**	**31.53**	**163**	P	**P**	**02 14 27.6**	**+2.6**
	comp=Z,12nm,0.7s,comp=Z,0.0nm						
NACB	**Ningaohiao**	**32.03**	**344**	P	P	02 14 32.7	+3.1
YHNB	**Yeheng**	**32.56**	**344**	P	**P**	**02 14 36.9**	**+2.6**
QIZ	**Qiongzhong**	**32.82**	**322**	P	P	02 14 41.8	+5.2
QIZ				S	**S**	**02 19 49.6**	**+2.9**
RPSI	**Rantau Prapat**	**32.97**	**286**	P	**P**	**02 14 37.0**	**-0.9**
SLVN	**Son La**	**38.31**	**318**	P	**P**	**02 15 23.2**	**-0.4**
SLVN				IAmb	IAmb	02 15 24.9	
	comp=Z,9.7nm,1.1s						
CM31	**Chiang Mai Arr**	**40.05**	**309**	P	**P**	**02 15 37.8**	**-0.3**
CM31				IAmb	IAmb	02 15 39.3	
	comp=Z,12nm,0.7s						
CMAR	**Chiang Mai Arr**	**40.05**	**309**	P	**P**	**02 15 37.8**	**-0.3**
	comp=Z,7.7nm,0.8s,baz=142,slow=7.7,SNR=40						
CMAR				PcP	**PcP**	**02 17 42.8**	**+1.6**
	comp=Z,1.3nm,0.4s,baz=161,slow=3.1,SNR=5.0						
	comp=Z,7.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.05**	**309**	P	**P**	**02 15 37.5**	**-0.5**
NJ2	**Nanjing**	**40.25**	**345**	*e*P	P	02 15 42.6	+3.2
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
CHTO	**Chiang Mai**	**40.26**	**310**	P	**P**	**02 15 39.5**	**-0.4**
CHTO				IAmb	IAmb	02 15 40.8	
	comp=Z,17nm,0.8s						
CHTO	**Chiang Mai**	**40.26**	**310**	P	**P**	**02 15 39.9**	**+0.1**
CHTO	**Chiang Mai**	**40.26**	**310**	P	**P**	**02 15 39.4**	**-0.4**
WHN	**Wuhan**	**40.28**	**338**	P	**P**	**02 15 40.8**	**+1.1**
PZH	**PanZhiHua**	**43.35**	**321**	P	**P**	**02 16 05.0**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MJAR	**Matsushiro Arr**	**43.73**	**9**	P	**P**	**02 16 07.3**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=189,slow=9.6,SNR=5.6						
	comp=Z,2.0nm,0.7s						
XAN	**Xi'an**	**45.52**	**335**	P	**P**	**02 16 21.6**	**-0.5**
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
HNS	**HongShan**	**46.43**	**343**	⇑P	**P**	**02 16 29.0**	**0.0**
HNS				pP	**pwP**	**02 16 58.0**	**-0.2**
HNS				pmax	pmax		
	comp=Z,20nm,0.9s						
KOHI	**KOHIMA**	**47.97**	**314**	*e*P	**P**	**02 16 40.6**	**-0.9**
KOHI				IAmb	IAmb	02 16 43.5	
	comp=Z,46nm,0.7s						
BJI2	**Beijing**	**48.47**	**345**	P	**P**	**02 16 45.2**	**+0.3**
BJI2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	**Baijiatuan**	**48.47**	**345**	P	**P**	**02 16 44.2**	**-0.6**
BJT				IAmb	IAmb	02 16 45.9	
	comp=Z,13nm,0.6s						
BJT	**Baijiatuan**	**48.47**	**345**	P	**P**	**02 16 45.6**	**+0.7**
LZDM	**Lanzhou Array**	**49.49**	**331**	P	**P**	**02 16 53.3**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=146,slow=10,SNR=1.4						
	comp=Z,1.5nm,0.3s						
SHL	**Shillong**	**49.50**	**312**	P	**P**	**02 16 52.5**	**-0.8**
SHL	**Shillong**	**49.50**	**312**	*e*P	**P**	**02 16 53.0**	**-0.2**
SHL				IAmb	IAmb	02 16 55.6	
	comp=Z,15nm,0.9s						
SHL				*i* x	x	02 17 34.8	
GUWA	**GUWAHATI**	**50.00**	**313**	*e*P	**P**	**02 16 56.8**	**0.0**
GUWA				IAmb	IAmb	02 16 58.0	
	comp=Z,14nm,0.4s						
HHC	**Hu-ho-hao-te**	**50.56**	**341**	*e*P	P	02 17 04.0	+3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DHUB	**DHUBRI**	**51.16**	**311**	*e*P	**P**	**02 17 05.5**	**0.0**
DHUB				IAmb	IAmb	02 17 06.1	
	comp=Z,23nm,1.2s						
VIS	**Vishakhapatnam**	**52.63**	**298**	*e*P	**P**	**02 17 17.3**	**+0.8**
VIS				IAmb	IAmb	02 17 19.4	
	comp=Z,13nm,0.6s						
RAGD	**RAYAGADA**	**53.14**	**300**	*e*P	**P**	**02 17 20.9**	**+0.6**
RAGD				IAmb	IAmb	02 17 22.9	
	comp=Z,13nm,0.6s						
RAGD				*i* x	x	02 17 25.8	
GTA2	**Gaotai**	**54.18**	**331**	*e*P	**P**	**02 17 28.3**	**+0.6**
GTA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
EVN	**Everest**	**54.59**	**311**	P	**P**	**02 17 31.3**	**-0.1**
EVN	**Everest**	**54.59**	**311**	P	**P**	**02 17 31.8**	**+0.3**
HILR	**Hailar Array B**	**56.94**	**352**	P	**P**	**02 17 47.9**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=156,slow=11,SNR=2.3						
	comp=Z,1.9nm,0.5s						
ULN	**Ulaanbaatar**	**58.28**	**342**	P	**P**	**02 17 57.5**	**+0.8**
ULN	**Ulaanbaatar**	**58.28**	**342**	P	**P**	**02 17 58.0**	**+1.3**
ULN	**Ulaanbaatar**	**58.28**	**342**	P	**P**	**02 17 57.9**	**+1.2**
ULN				PcP	**PcP**	**02 18 47.8**	**+1.0**
SONM	**Songino Array**	**58.46**	**341**	P	**P**	**02 17 58.8**	**+0.9**
	comp=Z,3.9nm,0.5s,baz=161,slow=6.8,SNR=35						
	comp=Z,3.9nm,0.5s						
SONM	**Songino Array**	**58.46**	**341**	P	**P**	**02 17 58.6**	**+0.6**
SONM				IAmb	IAmb	02 17 59.9	
	comp=Z,4.2nm,0.7s						
BHPL	**Bhopal**	**59.90**	**302**	*e*P	P	02 18 12.2	+4.0
BHPL				IAmb	IAmb	02 18 14.7	
	comp=Z,8.9nm,0.7s						
KUDL	**Kundal**	**62.67**	**306**	*e*P	**P**	**02 18 25.9**	**-0.9**
KUDL				IAmb	IAmb	02 18 28.8	
	comp=Z,8.3nm,0.9s						
KUDL				*i* x	P	02 18 32.9	+6.1
AJM	**Ajmer**	**63.48**	**304**	*ex*	P	02 18 38.8	+6.5
AJM				IAmb	IAmb	02 18 41.2	
	comp=Z,9.4nm,0.7s						
WMQ	**Urumqi**	**63.56**	**327**	*e*P	**P**	**02 18 33.6**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**63.99**	**18**	P	**P**	**02 18 36.0**	**+1.0**
	comp=Z,7.9nm,0.8s,baz=301,slow=8.6,SNR=4.2						
	comp=Z,7.9nm,0.8s						
PETK	**Petropavlovsk-**	**63.99**	**18**	P	**P**	**02 18 35.8**	**+0.8**
DHRM	**DHARAMSHALA**	**64.61**	**310**	*e*P	**P**	**02 18 40.2**	**+0.4**
DHRM				IAmb	IAmb	02 18 41.4	
	comp=Z,27nm,0.5s						
DHRM				*i* pP	**pP**	**02 19 00.4**	**-2.7**
NIL	**Nilore**	**67.53**	**311**	P	**P**	**02 18 57.9**	**-0.3**
NIL				IAmb	IAmb	02 18 59.3	
	comp=Z,8.4nm,0.7s						
NIL	**Nilore**	**67.53**	**311**	P	**P**	**02 18 58.6**	**+0.4**
PDGK	**Podgornoye**	**68.00**	**322**	P	**P**	**02 18 60.0**	**-1.2**
KSH2	**Kashi**	**68.37**	**317**	P	**P**	**02 19 04.4**	**+0.9**
KSH2				pP	PcP	02 19 28.1	-0.2
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	**Makanchi Array**	**68.39**	**327**	P	**P**	**02 19 04.3**	**+1.0**
	comp=Z,9.8nm,0.6s,baz=121,slow=7.8,SNR=97						
	comp=Z,9.8nm,0.6s						
MKAR	**Makanchi Array**	**68.39**	**327**	P	**P**	**02 19 03.5**	**+0.2**
MAKZ	**Makanchi**	**68.57**	**326**	P	**P**	**02 19 04.3**	**-0.1**
MAKZ				IAmb	IAmb	02 19 06.0	
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**68.57**	**326**	P	**P**	**02 19 05.0**	**+0.6**
MAKZ	**Makanchi**	**68.57**	**326**	P	**P**	**02 19 04.7**	**+0.3**
ASAI	**AK-SAY(Kyrgyzs**	**68.61**	**319**	P	**P**	**02 19 06.5**	**+1.4**
BOOM	**Boomskoye usch**	**69.77**	**320**	P	**P**	**02 19 12.5**	**+0.3**
BOOM				IAmb	IAmb	02 19 14.2	
	comp=Z,12nm,1.1s						
BOOM	**Boomskoye usch**	**69.77**	**320**	P	**P**

comp=Z,1.7nm,0.3s
DAVA Damuels 115.56 320 *i* PKiKP **PKPdf** 02 26 43.5 **+0.4**
comp=Z,1.1nm,0.3s
TXAR Lajitas Array 124.36 59 PKP **PKiKP** 02 27 01.6 **+0.9**
comp=Z,0.5nm,0.9s,baz=238,slow=2.4,SNR=5.2
TXAR Lajitas Array 124.36 59 **PKiKP** 02 27 01.3 **+0.5**
ESDC Sonseca Array 127.77 316 PKP **PKiKP** 02 27 06.9 **-0.3**
comp=Z,1.2nm,1.1s,baz=126,slow=20,SNR=4.2
TORD Torodi Ar. Bea 129.32 281 PKP **PKiKP** 02 27 10.7 **-0.2**
comp=Z,3.2nm,0.7s,baz=67,slow=1.8,SNR=17
TORD Torodi Ar. Bea 129.32 281 PKPdf **PKiKP** 02 27 10.2 **-0.7**
DBIC Dimbokro 135.74 273 PKP **PKiKP** 02 27 24.1 **+0.2**
comp=Z,5.2nm,0.9s,baz=43,slow=2.9,SNR=4.5
DBIC Dimbokro 135.74 273 PKPdf **PKiKP** 02 27 23.7 **-0.2**
CPUP Villa Florida 146.16 167 PKPbc **PKiKP** 02 27 43.7 **-1.2**
comp=Z,6.7nm,1.0s,baz=237,slow=3.5,SNR=9.5
CPUP Villa Florida 146.16 167 PKPdf **PKiKP** 02 27 42.8 **-2.2**
LPAZ La Paz 150.51 141 PKPbc **PKPab** 02 27 56.4 **-4.6**
comp=Z,7.2nm,0.7s,baz=122,slow=1.9,SNR=36
LPAZ La Paz 150.51 141 PKPbc **PKiKP** 02 27 55.2 **+0.3**

GCMT 13 02:09:58.0±0.4, **16.80S**±0.02×**177.07W**±0.02, **h16**km±2km, **MW4.8**/74, **Moment Tensor Solution. s12,c12; s74,c105; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}0.20±.10; $M_{\theta\theta}$-1.81±.10; $M_{\phi\phi}$1.61±.08; $M_{r\theta}$0.83±.33; $M_{\theta\phi}$0.69±.08; $M_{r\phi}$0.33±.27; **Best double couple:** $M_0$2.04100×10^{16} **NP1:**ϕ_s327.00000°, δ65.00000°, λ-179.00000°. **NP2:**ϕ_s236.00000°, δ89.00000°, λ-25.00000°. **Principal axes:** T 1.8920, Plg17.0000°, Azm284.0000°; N 0.2930, Plg65.0000°, Azm55.0000°; P -2.1890, Plg18.0000°, Azm189.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT2	**Papeete2** 768nm,29.8s	**26.27**	**96**	*e*LR	LR	02 21 42.9	
PPT2	529nm,30.8s			*e*LR	LR	02 21 50.5	
TBI	**Tubuai** 3μm,28.2s	**26.71**	**109**	*e*LR	LR	02 22 01.8	

WEL 13 02:13:33.6±0.4, **44°S**±2°×**17°2E**±°, **h5**km±1km, **M3.5**/12, **ML3.5**/12, **MLv3.5**/12 **Error ellipse: s-maj=2.3km s-min=2.2km az=25.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDAL	**Greendale**	**0.03**	**285**	P	Pg	02 13 35.3	+0.6
GDAL				S	Sg	02 13 36.9	+1.5
DSLC	**Dunsandel Scho**	**0.09**	**147**	P	Pg	02 13 36.1	+0.6
DSLC				S	Sg	02 13 37.7	+0.9
DFHS	**Darfield**	**0.11**	**347**	P	Pg	02 13 36.3	+0.5
DFHS				S	Sg	02 13 38.2	+0.9
RACZ	**Rakaia**	**0.13**	**178**	P	Pg	02 13 36.9	+0.6
RACZ				S	Sg	02 13 38.8	+0.7
RKAC	**Rakaia School**	**0.18**	**207**	P	Pg	02 13 37.8	+0.8
RKAC				S	Sg	02 13 40.7	+1.3
ROLC	**Rolleston Scho**	**0.18**	**89**	P	Pg	02 13 37.7	+0.6
ROLC				S	Sg	02 13 41.0	+1.5
SBRC	**Southbridge Sc**	**0.23**	**158**	P	Pg	02 13 38.8	+0.8
WCSS	**Whitecliffs**	**0.24**	**305**	P	Pg	02 13 38.5	+0.2
WCSS				S	Sg	02 13 42.2	+0.8
OXZ	**Oxford**	**0.28**	**345**	P	Pg	02 13 39.2	+0.3
OXZ				S	Sg	02 13 43.2	+0.6
MQZ	**McQueen's Vall**	**0.39**	**107**	P	Pg	02 13 41.3	+0.1
MQZ				S	Sg	02 13 46.8	+0.5
WACZ	**Wakanui South**	**0.41**	**212**	P	Pg	02 13 42.2	+0.8
WACZ				S	Sb	02 13 48.5	-1.3
MHCZ	**Mount Hutt**	**0.42**	**279**	P	Pg	02 13 42.1	+0.5
MHCZ				S	Sg	02 13 48.3	+1.2
AMCZ	**Amberley**	**0.56**	**42**	P	Pb	02 13 45.2	-0.7
AMCZ				S	Sb	02 13 53.8	-0.5
AKCZ	**Akaroa Harbour**	**0.63**	**117**	P	Pg	02 13 45.8	+0.2
AKCZ				S	Sg	02 13 54.8	+1.0
OKCZ	**Okains Bay**	**0.68**	**101**	P	Pg	02 13 47.0	+0.3
ARCZ	**Arundel**	**0.78**	**243**	P	Pg	02 13 48.6	+0.1
ARCZ				S	Sg	02 13 59.0	+0.4
RPZ	**Rata Peaks**	**0.79**	**261**	P	Pg	02 13 49.0	+0.3
LTZ	**Lake Taylor**	**0.82**	**7**	P	Pg	02 13 49.6	+0.3
LTZ				S	Sg	02 14 00.6	+0.7
GVZ	**Greta Valley S**	**0.91**	**47**	P	Pg	02 13 50.7	-0.3
GVZ				S	Sb	02 14 04.2	0.0
TMZ	**Timaru**	**1.13**	**226**	P	Pg	02 13 54.4	-0.9
WVZ	**Waitaha Valley**	**1.15**	**297**	P	Pg	02 13 55.4	-0.1
GCSZ	**Gaunt Creek Bo**	**1.34**	**281**	P	Pn	02 13 59.1	+0.1
KHZ	**Kahutara**	**1.56**	**42**	P	Pn	02 13 59.9	-2.1
LBZ	**Lake Benmore**	**1.61**	**240**	P	Pn	02 14 01.9	-0.9
FOZ	**Fox Glacier**	**1.69**	**271**	P	Pn	02 14 04.4	+0.7
ODZ	**Otahua Downs**	**1.80**	**216**	P	Pn	02 14 03.4	-1.9
DSZ	**Denniston Nort**	**1.86**	**352**	P	Pn	02 14 04.7	-1.5
THZ	**Tophouse**	**1.92**	**18**	P	Pn	02 14 05.0	-1.9
MRNZ	**Matariki Terra**	**2.24**	**12**	P	Pn	02 14 10.6	-0.8
BSWZ	**Blackbirch Sta**	**2.28**	**35**	P	Pn	02 14 10.1	-1.7
JCZ	**Jackson Bay**	**2.47**	**258**	P	Pn	02 14 14.1	-0.4
HHSZ	**Highcliff Hill**	**2.54**	**205**	P	Pn	02 14 15.3	-0.1
TUWZ	**Tuamarina**	**2.54**	**32**	P	Pn	02 14 14.4	-1.1
NNZ	**Nelson**	**2.55**	**22**	P	Pn	02 14 14.3	-1.3
WKZ	**Wanaka**	**2.56**	**240**	P	Pn	02 14 14.7	-1.0
EAZ	**Earnscleugh**	**2.60**	**230**	P	Pn	02 14 14.7	-1.7
TKNZ	**Takaka Hill**	**2.63**	**14**	P	Pn	02 14 14.1	-2.6
QRZ	**Quartz Range**	**2.78**	**6**	P	Pn	02 14 16.9	-1.9
TCW	**Tory Channel**	**2.86**	**34**	P	Pn	02 14 17.9	-1.9
TUZ	**Tuapeka**	**2.96**	**216**	P	Pn	02 14 19.4	-1.7
DUWZ	**D'Urville Isla**	**3.09**	**26**	P	Pn	02 14 22.6	-0.5
MSZ	**Milford Sound**	**3.21**	**249**	P	Pn	02 14 24.2	-0.5
MLZ	**Mavora Lakes**	**3.38**	**237**	P	Pn	02 14 26.2	-0.8
KIW	**Kapiti Island**	**3.42**	**38**	P	Pn	02 14 26.1	-1.4
OGWZ	**Otaki Gorge**	**3.58**	**40**	P	Pn	02 14 27.3	-2.4
SYZ	**Scrubby Hill**	**3.63**	**215**	P	Pn	02 14 29.0	-1.3
WHZ	**Wether Hill Ro**	**3.77**	**231**	P	Pn	02 14 30.5	-1.8
MRZ	**Mangatainoka R**	**3.89**	**42**	P	Pn	02 14 31.5	-2.6
APZ	**The Paps**	**4.37**	**221**	P	Pn	02 14 38.2	-2.4
KHEZ	**Kahui Hut**	**4.52**	**19**	P	Pn	02 14 42.9	+0.1
VRZ	**Vera Road**	**4.88**	**25**	P	Pn	02 14 47.9	+0.3
WNVZ	**Wahianoa**	**5.00**	**33**	P	Pn	02 14 48.7	-0.7
TUVZ	**Tukino**	**5.07**	**33**	P	Pn	02 14 48.6	-1.7
OTVZ	**Oturere**	**5.16**	**32**	P	Pn	02 14 50.5	-1.2

JMA 13 02:14:20.6±0.2, **24°1N**±0.7°×**122°7E**±0.5, **h9**km±2km, **MV2.1**/11, **NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.46**	**37**	P	Pg	02 14 29.5	0.0
JYNG				*e*S	Sg	02 14 36.0	+0.5
YOJ	**Yonaguni jima**	**0.50**	**41**	P	Pg	02 14 30.0	-0.3
YOJ	**Yonaguni jima**	**0.50**	**41**	P	Pg	02 14 30.8	+0.5
YOJ	**Yonaguni jima**	**0.50**	**41**	P	Pg	02 14 30.5	+0.1
YOJ				*e*S	Sg	02 14 37.5	+0.6
HATJ	**Hateruma jima**	**1.06**	**91**	*e*S	Sb	02 14 55.5	+0.4
JKRS	**Kuro-shima**	**1.25**	**83**	*e*P	Pn	02 14 44.2	-0.1
JKRS				*e*S	Sn	02 15 01.2	-0.1
JIJ	**Ishigaki jima**	**1.39**	**78**	*e*P	Pn	02 14 46.2	-0.1
JIJ				*e*S	Sb	02 15 04.2	-0.5
JISG	**Ishigakijimahi**	**1.60**	**71**	*e*P	Pn	02 14 48.2	-0.8
JISG				*e*S	Sn	02 15 07.9	-2.0

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*KOLA **13** 02:17:09.2, 77°.01N×18°.97E, h0km, ML2.6, Error ellipse: s-maj=14.9km s-min=8.0km az=120.0, Storfjorden zone*
*BER **13** 02:17:13.4±2.6, 77°.00N×18°.88E, h19km±12km, ML2.3, Confirmed Earthquake*
*FCIAR **13** 02:17:23.0, 77°.00N×21°.44E, h10km, station OMEGA has station magnitude of 3.80*

ISC 13 02:17:08.9±0.7, **76.99N**±0.03×**19.09E**±0.03, **h17**km, **n17, σ2s25/37, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.81**	**272**	*e*P	**Pg**	**02 17 25.5**	**+1.0**
HSPB				*e*Pg	**Pn**	**02 17 26.9**	**+1.5**
HSPB				*e*S	**Sb**	**02 17 35.2**	**+0.3**
HSPB				*e*Sg	**Sn**	**02 17 38.1**	**+1.1**
HSPB				IAML		02 17 39.5	
	comp=Z,50nm,0.3s						
HSPB	**Hornsund (broa**	**0.81**	**272**	P	**Pg**	**02 17 25.4**	**+0.9**
HSPB				S	**Sb**	**02 17 35.5**	**+0.5**
SPA0	**Spitsbergen Ar**	**1.33**	**335**	*e*P	**Pb**	**02 17 34.2**	**+0.9**
SPA0				*e*S	**Sg**	**02 17 52.3**	**+0.5**
SPA0				IAML		02 17 58.3	
	comp=Z,50nm,0.5s						
SPA0	**Spitsbergen Ar**	**1.33**	**335**	*e*P	**Pn**	**02 17 33.3**	**+0.7**
SPA0				*e*S	**Sg**	**02 17 54.3**	**+2.5**
SPITS	**Spitsbergen Ar**	**1.33**	**335**	P	**Pb**	**02 17 33.9**	**+0.5**
SPITS				S	**Sg**	**02 17 52.5**	**+0.7**
HOPEN	**Hopen**	**1.45**	**107**	*e*P	**Pg**	**02 17 36.9**	**+0.2**
HOPEN				*e*S	**Sg**	**02 17 55.4**	**-0.1**
HOPEN				*e*Sg	**Sb**	**02 17 58.6**	**+5.2**
HOPEN				IAML		02 18 00.4	
	comp=Z,91nm,0.1s						
HOPEN	**Hopen**	**1.45**	**107**	*e*P	**Pg**	**02 17 41.4**	**+4.7**
HOPEN				*e*S	**Sg**	**02 17 54.8**	**-0.8**
BRBB	**Barentsburg B**	**1.53**	**319**	*e*P	**Pb**	**02 17 37.1**	**+0.3**
BRBB				*e*S	**Sb**	**02 17 56.3**	**+0.4**
BRBB	**Barentsburg B**	**1.53**	**319**	P	**Pb**	**02 17 37.0**	**+0.3**
BRBB				S	**Sb**	**02 17 57.2**	**+1.4**
KBS	**Kingsbay**	**2.46**	**326**	*e*P	**Pn**	**02 17 49.0**	**+0.9**
KBS				*e*Pg	**Pg**	**02 17 55.0**	**-0.9**
KBS				*e*Sg	**Sg**	**02 18 26.4**	**-1.3**
KBS				IAML		02 18 30.3	
	comp=Z,59nm,0.3s						
KBS	**Kingsbay**	**2.46**	**326**	P	**Pn**	**02 17 49.1**	**+1.1**
KBS				S	**Sn**	**02 18 19.4**	**+1.9**
BJO1	**Bjornoya**	**2.50**	**181**	*e*P	**Pg**	**02 17 57.0**	**+0.1**
BJO1				*e*Sg	**Sg**	**02 18 29.3**	**0.0**
BJO1	**Bjornoya**	**2.50**	**181**	*e*P	**Pb**	**02 17 54.8**	**+1.5**
BJO1				*e*S	**Sb**	**02 18 27.1**	**+3.4**
OMEGA	**Omega**	**6.63**	**42**	*e*P	**Pn**	**02 18 45.7**	**+0.4**
	comp=Z,37nm,3.0s						
OMEGA				*e*S	**Sn**	**02 19 57.6**	**-2.7**
VADS	**Vadso**	**7.48**	**152**	P	**Pn**	**02 18 57.8**	**+0.8**
VADS				S	**Sn**	**02 20 18.0**	**-3.2**
ARCES	**ARCESS Array B**	**7.71**	**163**	P	**Pn**	**02 18 58.5**	**-1.7**
ARCES				S	**Sn**	**02 20 19.4**	**-7.7**
APA0	**Apatity Array**	**10.29**	**149**	P	Pn	02 19 42.7	+7.3
APA0				S	**Sn**	**02 21 28.0**	**-2.1**

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*MDD **13** 02:41:48.4±0.9, 36°.59N×9°.77W, h18km±5km, mb_Lg2.7/10, Error ellipse: s-maj=6.8km s-min=5.2km az=70.0*
*SFS **13** 02:41:49.5, 36°.58N×9°.82W, h28km, ML2.9/9, ML2.9/9, MLv2.9/9*
*IGIL **13** 02:41:50.9, 36°.66N×9°.75W, h15km, ML1.3*
*INMG **13** 02:41:50.9±1.3, 36°.65N×9°.75W, h19km±5km, ML1.6, Error ellipse: s-maj=5.6km s-min=4.2km az=46.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*CNRM **13** 02:41:53.4, 35°.97N×9°.46W, h10km*

ISC 13 02:41:46.7±1.8, **36°.49N**±0°.04×**9°.83W**±0°.07, **h33**km±3km, **n52, σ1s62/94, 5C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.03**	**51**	P	**Pb**	**02 42 06.5**	**+0.5**
PFVI				S	**Sb**	**02 42 18.3**	**-0.9**
PFVI	**Vila Bisbo**	**1.03**	**51**	*e*P	**Pb**	**02 42 06.9**	**+0.9**
PFVI				*e*S	**Sb**	**02 42 18.8**	**-0.4**
PFVI				*i* IAML		02 42 19.0	
PFVI				*i* IAML		02 42 19.1	
PFVI				*i* IAML		02 42 21.6	
MORF	**Marmelete**	**1.24**	**49**	*e*P	**Pb**	**02 42 09.9**	**+0.2**
MORF				*e*S	**Sb**	**02 42 23.8**	**-1.6**
MORF				IAML		02 42 24.5	
	comp=N,9.9nm,0.2s						
MORF	**Marmelete**	**1.24**	**49**	*e*P	**Pb**	**02 42 09.9**	**+0.2**
MORF				*e*S	**Sb**	**02 42 24.3**	**-1.1**
MORF				*i* IAML		02 42 25.0	
MORF				*i* IAML		02 42 25.3	
MORF				*i* IAML		02 42 27.0	
PTEO	**Sao Teotonio**	**1.37**	**40**	*e*P	**Pn**	**02 42 11.4**	**+1.9**
PTEO				*e*S	**Sn**	**02 42 26.5**	**0.0**
PTEO				*i* IAML		02 42 28.6	
PTEO				*i* IAML		02 42 32.0	
PTEO				*i* IAML		02 42 34.8	
PBDV	**Barranco-do-Ve**	**1.70**	**63**	*e*P	**Pn**	**02 42 16.5**	**+2.5**
PBDV				*e*S	**Sn**	**02 42 35.3**	**+0.7**
PBDV				*i* IAML		02 42 38.2	
PBDV				*i* IAML		02 42 39.0	
PBDV				*i* IAML		02 42 41.6	
PCVE	**Castro Verde**	**1.83**	**51**	P	**Pn**	**02 42 18.0**	**+2.2**
PCVE				S	**Sn**	**02 42 38.3**	**+0.5**
PCVE	**Castro Verde**	**1.83**	**51**	*e*P	**Pn**	**02 42 18.2**	**+2.4**
PCVE				*e*S	**Sn**	**02 42 38.3**	**+0.5**
PCVE				*i* IAML		02 42 39.2	
PCVE				*i* IAML		02 42 39.3	
PCVE				*i* IAML		02 42 40.6	
MESJ	**Messejana**	**1.86**	**43**	*e*P	**Pn**	**02 42 18.2**	**+2.0**
MESJ				*e*S	**Sn**	**02 42 38.4**	**-0.1**
MESJ				IAML		02 42 39.1	
	comp=N,1.7nm,0.1s						
MESJ	**Messejana**	**1.86**	**43**	*e*P	**Pn**	**02 42 18.2**	**+2.0**
MESJ				*e*S	**Sn**	**02 42 38.6**	**+0.1**
MESJ				*i* IAML		02 42 41.0	
MESJ				*i* IAML		02 42 42.1	
MESJ				*i* IAML		02 42 44.6	
PLOUS	**Minas do Lousa**	**1.90**	**36**	*e*P	**Pn**	**02 42 18.3**	**+1.6**
PLOUS				*e*S	**Sn**	**02 42 39.0**	**-0.5**
PLOUS				*i* IAML		02 42 41.3	
PLOUS				*i* IAML		02 42 41.9	
PLOUS				*i* IAML		02 42 44.3	
PVAQ	**Vaqueiros**	**1.92**	**61**	*e*P	**Pn**	**02 42 19.5**	**+2.4**
PVAQ				*e*S	**Sn**	**02 42 40.6**	**+0.5**
PVAQ				*i* IAML		02 42 42.8	
PVAQ				*i* IAML		02 42 43.5	
PVAQ				*i* IAML		02 42 43.6	
EGRO	**El Granado**	**2.15**	**60**	P	**Pn**	**02 42 22.1**	**+2.0**
EGRO				S	**Sn**	**02 42 46.1**	**+0.5**
EGRO	**El Granado**	**2.15**	**60**	P	**Pn**	**02 42 21.0**	**+0.9**
EGRO				S	**Sn**	**02 42 45.4**	**-0.2**
EGRO				*i* IVmb_Lg		02 42 48.1	
PBEJ	**Beja**	**2.19**	**45**	*e*P	**Pn**	**02 42 22.5**	**+1.8**
PBEJ				*e*S	**Sn**	**02 42 46.5**	**-0.2**
PBEJ				*i* IAML		02 42 48.0	
PBEJ				*i* IAML		02 42 49.0	
PBEJ				*i* IAML		02 42 50.5	
MOE	**Montemor**	**2.34**	**30**	*e*P	**Pn**	**02 42 25.1**	**+2.3**
MOE				*e*S	**Sn**	**02 42 50.4**	**0.0**
MOE				*i* IAML		02 42 52.0	
MOE				*i* IAML		02 42 52.1	
MOE				*i* IAML		02 42 53.4	
PMAFR	**Mafra**	**2.50**	**10**	P	**Pn**	**02 42 25.9**	**+1.0**
PMAFR				S	**Sn**	**02 42 53.6**	**-0.6**
PMAFR	**Mafra**	**2.50**	**10**	*e*P	**Pn**	**02 42 26.6**	**+1.7**
PMAFR				*e*S	**Sn**	**02 42 53.2**	**-1.0**
PMAFR				*i* IAML		02 42 56.6	
PMAFR				*i* IAML		02 42 57.5	
EVO	**Evora**	**2.50**	**35**	S	**Sn**	**02 42 53.1**	**-1.2**
EVO	**Evora**	**2.50**	**35**	*e*S	**Sn**	**02 42 53.4**	**-0.9**
EVO				*i* IAML		02 42 54.7	
EVO				*i* IAML		02 42 55.0	
EVO				*i* IAML		02 42 55.1	
PARRA	**Arraiolos**	**2.72**	**31**	*e*P	**Pn**	**02 42 29.5**	**+1.5**
PARRA				*e*S	**Sn**	**02 42 59.0**	**-0.7**
PARRA				*i* IAML		02 43 00.5	
PARRA				*i* IAML		02 43 00.6	
PARRA				*i* IAML		02 43 00.7	
PBAR	**Barrancos**	**2.79**	**52**	P	**Pn**	**02 42 30.4**	**+1.4**
PBAR				S	**Sn**	**02 43 01.0**	**-0.4**
PBAR	**Barrancos**	**2.79**	**52**	*e*P	**Pn**	**02 42 31.1**	**+2.1**
PBAR				*e*S	**Sn**	**02 43 01.3**	**-0.2**
PBAR				*i* IAML		02 43 03.5	
PBAR				*i* IAML		02 43 04.0	
PBAR				*i* IAML		02 43 04.2	
EMIN	**Mina Concepcio**	**2.83**	**62**	P	**Pn**	**02 42 31.3**	**+1.9**
EMIN				S	**Sn**	**02 43 02.4**	**0.0**
EMIN	**Mina Concepcio**	**2.83**	**62**	P	**Pn**	**02 42 30.5**	**+1.0**
EMIN				S	**Sn**	**02 43 01.7**	**-0.7**
EMIN				*i* IVmb_Lg		02 43 08.1	
PMTG	**Montargil**	**2.87**	**26**	*e*P	**Pn**	**02 42 32.0**	**+1.9**
PMTG				*e*S	**Sn**	**02 43 01.8**	**-1.6**
PMTG				*i* IAML		02 43 04.1	
PMTG				*i* IAML		02 43 04.4	
PMTG				*i* IAML		02 43 04.5	
SFS	**San Fernando**	**2.92**	**89**	P	**Pn**	**02 42 33.0**	**+2.3**
PESTR	**Estremoz**	**2.96**	**36**	P	**Pn**	**02 42 32.6**	**+1.3**
PESTR				S	**Sn**	**02 43 05.1**	**-0.6**
PESTR	**Estremoz**	**2.96**	**36**	*e*P	**Pn**	**02 42 33.1**	**+1.7**
PESTR				*e*S	**Sn**	**02 43 04.9**	**-0.8**
EBAD	**Badajoz**	**3.18**	**44**	P	**Pn**	**02 42 35.0**	**+0.7**
EBAD				S	**Sn**	**02 43 10.7**	**-0.4**
EBAD	**Badajoz**	**3.18**	**44**	P	**Pn**	**02 42 34.9**	**+0.7**
EBAD				S	**Sn**	**02 43 09.8**	**-1.2**
EBAD				*i* IVmb_Lg		02 43 12.4	
ESPR	**Espera**	**3.22**	**82**	S	**Sn**	**02 43 11.9**	**-0.1**
ESPR	**Espera**	**3.22**	**82**	S	**Sn**	**02 43 12.2**	**+0.1**
ESPR				*i* IVmb_Lg		02 43 14.7	
PSARD	**Sardoal**	**3.37**	**23**	*e*P	**Pn**	**02 42 38.8**	**+1.9**
PSARD				*e*S	**Sn**	**02 43 14.0**	**-1.8**
PSARD				*i* IAML		02 43 15.5	
PSARD				*i* IAML		02 43 16.0	
PSARD				*i* IAML		02 43 16.2	
PMRV	**Marv??o**	**3.51**	**33**	*e*P	**Pn**	**02 42 40.4**	**+1.5**
PMRV				*e*S	**Sn**	**02 43 17.3**	**-1.9**
PMRV				*i* IAML		02 43 19.3	
PMRV				*i* IAML		02 43 19.6	
PMRV				*i* IAML		02 43 20.4	
PCAS	**Casmilo, Conde**	**3.71**	**16**	*e*S	**Sn**	**02 43 23.9**	**-0.2**
PCBR	**Castelo Branco**	**3.82**	**28**	*e*S	**Sn**	**02 43 26.2**	**-0.7**
ECAB	**El Cabril**	**3.86**	**65**	P	**Pn**	**02 42 45.5**	**+1.9**
ECAB				S	**Sn**	**02 43 26.7**	**-1.1**
ECAB	**El Cabril**	**3.86**	**65**	P	**Pn**	**02 42 44.8**	**+1.1**
ECAB				S	**Sn**	**02 43 26.4**	**-1.5**
ECAB				*i* IVmb_Lg		02 43 34.5	
ZHG	**ZHG**	**4.01**	**138**	P	**Pn**	**02 42 47.6**	**+1.7**
ZHG				S	**Sn**	**02 43 31.1**	**-0.7**
PVIS	**Viseu**	**4.48**	**19**	*e*S	**Sn**	**02 43 42.5**	**-0.7**
EADA	**Adamuz**	**4.51**	**67**	P	**Pn**	**02 42 53.7**	**+1.0**
EADA				S	**Sn**	**02 43 42.1**	**-1.8**
EADA				*i* IVmb_Lg		02 43 49.3	
PVRL	**Vila Real**	**5.05**	**18**	*e*S	**Sn**	**02 43 54.2**	**-3.1**
POLO	**Lamas de Olo**	**5.12**	**17**	*e*P	**Pn**	**02 43 02.8**	**+1.6**
POLO				*e*S	**Sn**	**02 43 56.5**	**-2.6**
PAB	**San Pablo**	**5.29**	**53**	P	**Pn**	**02 43 04.4**	**+0.9**
PAB				*i* IVmb_Lg		02 43 59.9	
PAB				S	**Sn**	**02 44 00.6**	**-2.8**
PSIM	**Granatula de C**	**5.35**	**62**	P	**Pn**	**02 43 05.1**	**+0.9**
PSIM				S	**Sn**	**02 44 02.3**	**-2.4**
OUK	**Oukaimeden**	**5.52**	**162**	P	**Pn**	**02 43 08.3**	**+1.5**
OUK				S	**Sn**	**02 44 06.7**	**-2.6**
MD31	**MD31**	**5.53**	**129**	P	**Pn**	**02 43 08.3**	**+1.6**
MD31				S	**Sn**	**02 44 04.7**	**-4.5**
ELOB	**Lobios**	**5.54**	**14**	P	**Pn**	**02 43 07.6**	**+0.8**
ELOB				S	**Sn**	**02 44 04.9**	**-4.5**
ELOB				*i* IVmb_Lg		02 44 07.4	
EQES	**Quesada**	**5.56**	**74**	*i* IVmb_Lg		02 43 55.5	
EQES				S	**Sn**	**02 44 07.5**	**-2.3**
MDT	**Midelt**	**5.66**	**129**	P	**Pn**	**02 43 10.4**	**+1.9**
MDT				S	**Sn**	**02 44 10.2**	**-2.2**
OUZM	**OUZ**	**6.13**	**154**	P	**Pn**	**02 43 15.2**	**+0.2**
OUZM				S	**Sn**	**02 44 21.2**	**-2.8**

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*IDC **13** 02:59:23.0±1.5, 34°.25N×25°.39E, h0km, mb3.5/4, mbtmp3.3/7, ML2.9/3, Error ellipse: s-maj=38.8km s-min=21.5km az=150.0*

ISC 13 02:59:27.8±1.3, **34°.3N**±0°.2×**25°.3E**±0°.2, **h30**km, **n7, σ1s30/7, mb3.3/3, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=232,slow=14,SNR=1.6 0.2nm,0.4s	**8.61**	**49**	Pn	**Pn**	**03 01 31.7**	**+1.3**
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=194,slow=12,SNR=4.2 0.1nm,0.3s	**16.64**	**9**	Pn	**Pn**	**03 03 19.2**	**+0.6**
GERES	**GERESS Array B** baz=153,slow=10,SNR=3.7 0.1nm,0.4s	**16.88**	**333**	Pn	**P**	**03 03 23.1**	**-0.5**
ESDC	**Sonseca Array** 1.0nm,0.9s,baz=87,slow=9.6,SNR=5.5 1.0nm,0.9s	**23.89**	**292**	P	**P**	**03 04 38.8**	**-0.1**
TORD	**Torodi Ar. Bea** 0.1nm,0.3s,baz=38,slow=9.3,SNR=6.1 0.1nm,0.3s	**30.01**	**231**	P	**P**	**03 05 34.7**	**+0.7**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=277,slow=8.8,SNR=4.3 0.3nm,0.6s	**41.59**	**50**	P	**P**	**03 07 11.4**	**-1.4**
MKAR	**Makanchi Array** 0.8nm,0.5s,baz=260,slow=6.9,SNR=4.9 0.8nm,0.5s	**44.18**	**56**	P	**P**	**03 07 32.4**	**-1.4**

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*RSNC **13** 03:13:43.0±0.0, 7°.N±1°×7°.3W±°, h141km±1km, M2.7, ML2.4*
*FUNV **13** 03:13:44.3, 7°.12N×73°.18W, h5km, MW3.0, Presumed earthquake*

ISC 13 03:13:40.8±1.4, **6°.86N**±0°.03×**73°.13W**±0°.04, **h152**km±8km, **n26, σ1s45/52, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**191**	P	**Pn**	**03 14 02.3**	**+0.5**
BARC				S	**Sn**	**03 14 16.8**	**-0.9**
BRJC	**Barrancabermej**	**0.62**	**281**	P	**Pn**	**03 14 04.0**	**+1.1**
BRJC				S	**Sn**	**03 14 20.5**	**+0.7**
PAMC	**Pamplona, Colo**	**0.

ASAR	**Alice Springs**	**43.08**	**270**	P	P	03 24 05.7	+0.1
	1.0nm,0.7s,baz=110,slow=7.5,SNR=9.3						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**44.32**	**275**	P	P	03 24 15.5	-0.1
	1.3nm,0.5s,baz=114,slow=7.9,SNR=21						
	1.3nm,0.5s						
FINES	**FINESS Array B**	**147.86**	**338**	PKPbc	PKPbc	03 35 49.0	-0.8
	1.1nm,0.7s,baz=28,slow=3.6,SNR=6.7						

*OSPL **13** 03:35:48.7±1.8,20°.23N×70°.70W,h7km±7km,ML2.4, Presumed earthquake*
*SDD **13** 03:35:49.4±2.3,20°.29N×70°.94W,h34km±34km,MD2.9, ML2.0,MW3.3, Presumed earthquake*

ISC 13 03:35:48.3±1.5,20°.20N±0°.05×70°.90W±0°.06,h23km±16km, n11,σ0s88/20,10C,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.31**	**190**	*e*Pg	**Pn**	**03 35 58.3**	**+0.7**
LUDR				⇑*e*Sg	**Sn**	**03 36 03.7**	**+0.3**
LOPP1	**Punta Rusia, P**	**0.45**	**219**	*i* P	**Pn**	**03 35 58.7**	**-0.8**
LOPP1				*e*S	**Sn**	**03 36 08.0**	**+1.2**
LOPP1				IAML		03 36 12.3	
	comp=Z,48nm,1.3s						
SODR	**Sosua Marina B**	**0.54**	**146**	⇑*e*Pg	**Pn**	**03 36 01.4**	**+0.8**
SODR				⇑*e*Sg	**Sn**	**03 36 08.1**	**-1.0**
SODR				IAML		03 36 12.7	
	comp=N,109nm,0.5s						
SC01	**Santiago de lo**	**0.79**	**168**	⇑*e*Pg	**Pn**	**03 36 05.3**	**+1.2**
SC01				⇑*e*Sg	**Sn**	**03 36 15.2**	**-0.1**
SC01				IAML		03 36 18.9	
	comp=N,43nm,1.8s						
SC01	**Santiago de lo**	**0.79**	**168**	*i* P	**Pb**	**03 36 02.6**	**-0.8**
SC01				*e*S	**Sb**	**03 36 14.1**	**+0.4**
SDDR	**Presa de Saban**	**1.27**	**197**	⇑*e*Pg	**Pn**	**03 36 09.6**	**-1.3**
SDDR				⇑*e*Sg	**Sn**	**03 36 27.1**	**-0.1**
SDDR				IAML		03 36 29.7	
	comp=N,17nm,2.1s						
SDDR	**Presa de Saban**	**1.27**	**197**	*i* P	**Pb**	**03 36 11.8**	**+0.1**
SDDR				*e*S	**Sb**	**03 36 28.5**	**+0.9**
SDDR				IAML		03 36 33.1	
	comp=Z,288nm,0.1s						
GRTK	**Grand Turk**	**1.32**	**350**	*i* P	**Pb**	**03 36 12.3**	**-0.1**
GRTK				IAML		03 36 36.5	
	comp=Z,64nm,3.2s						
LONE3	**El Aguacate, B**	**1.68**	**199**	*i* P	**Pb**	**03 36 17.8**	**-0.9**
LONE3				*e*S	**Sb**	**03 36 40.6**	**+1.2**
LONE3				IAML		03 36 42.0	
	comp=Z,20nm,1.8s						
LODU1	**El Espartillar**	**1.92**	**197**	*i* P	**Pb**	**03 36 22.0**	**-0.7**
LODU1				IAML		03 36 52.1	
	comp=Z,31nm,1.5s						
HATOM	**Hato Mayor del**	**2.01**	**134**	⇑*e*Pg	**Pn**	**03 36 20.1**	**-0.8**
HATOM				⇑*e*Sg	**Sn**	**03 36 46.0**	**+0.6**
HATOM				IAML		03 36 46.0	
	comp=N,13nm,2.5s						

IDC 13 03:46:02.2±4.2,5°.14S×148°.01E,h0km,mb3.8/2, mbtmp3.9/3,ML4.1/1,Error ellipse: s-maj=115.6km s-min=50.8km az=110.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.32**	**191**	Sn	Sn	03 48 01.8	+1.4
	5.6nm,0.3s,baz=273,slow=19,SNR=5.9						
WRA	**Warramunga Arr**	**19.84**	**221**	P	P	03 50 35.5	+0.6
	0.7nm,0.3s,baz=46,slow=11,SNR=21						
	2.0nm,0.4s						
ASAR	**Alice Springs**	**22.89**	**215**	P	P	03 51 08.1	+0.3
	1.6nm,0.8s,baz=50,slow=8.6,SNR=18						
	1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.37**	**238**	P	P	03 51 30.3	-1.0
	1.8nm,0.5s,baz=55,slow=10,SNR=6.9						
	1.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**145.84**	**286**	PKPbc	PKPdf	04 05 44.3	+0.2
	0.3nm,1.0s,baz=65,slow=4.3,SNR=1.5						

IDC 13 03:49:23.4±3.1,6°.50S×129°.78E,h108km±43km,mb3.1/1, mbtmp3.7/5,Error ellipse: s-maj=78.7km s-min=23.0km az=89.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.79**	**15**	P	Pn	03 50 47.1	+0.1
	5.5nm,0.2s,baz=183,slow=19,SNR=1.8						
SIJI				S	Sn	03 51 47.9	-4.3
	7.3nm,0.3s,baz=167,slow=23,SNR=6.0						
FITZ	**Fitzroy Crossi**	**12.21**	**199**	P	Pn	03 52 14.2	+0.4
	7.6nm,1.2s,baz=37,slow=12,SNR=6.4						
FITZ				S	Sn	03 54 22.0	-6.2
	1.7nm,0.6s,baz=86,slow=21,SNR=0.9						
WRA	**Warramunga Arr**	**14.07**	**162**	P	Pn	03 52 36.8	-1.3
	0.4nm,0.5s,baz=334,slow=12,SNR=22						
WRA				S	Sn	03 55 02.6	-11
	1.1nm,0.4s,baz=334,slow=22,SNR=8.1						
ASAR	**Alice Springs**	**17.52**	**167**	P	Pn	03 53 21.4	+0.3
	0.6nm,0.4s,baz=346,slow=11,SNR=9.7						
MKAR	**Makanchi Array**	**67.69**	**327**	P	P	04 00 09.2	0.0
	0.2nm,0.5s,baz=114,slow=6.6,SNR=2.5						
	0.2nm,0.5s						

*IDC **13** 04:01:17.4±1.6,34°.47N×25°.95E,h0km,mb3.6/4, mbtmp3.6/4,MS3.9/1,Error ellipse: s-maj=373.6km s-min=28.1km az=141.0*
*ISK **13** 04:01:17.3,34°.08N×26°.22E,h10km,ML2.5/13*

ISC 13 04:01:21.3±1.3,34°.2N±0°.1×26°.18E±0°.06,h26km,n18, σ0s55/18,mb3.4/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.95**	**2**	Pg	**Pn**	**04 01 37.7**	**-1.2**
ZKR				Sg	**Sn**	**04 01 52.4**	**+0.8**
IDI	**Anoyia**	**1.54**	**317**	Pn	**Pn**	**04 01 47.2**	**+0.1**
GVD	**Gavdhos**	**1.85**	**292**	Pn	**Pn**	**04 01 50.7**	**-0.6**
IMMV	**Iera Moni Meta**	**2.22**	**306**	Pn	**Pn**	**04 01 56.5**	**+0.1**
ARG	**Arkhangelos**	**2.59**	**37**	Pn	**Pn**	**04 02 01.5**	**0.0**
DAT	**Datca**	**2.80**	**24**	Pn	**Pn**	**04 02 04.0**	**-0.5**
TURN	**Turunc**	**3.10**	**32**	Pn	**Pn**	**04 02 08.8**	**+0.3**
KTHA	**Kythira Island**	**3.29**	**310**	Pn	**Pn**	**04 02 11.7**	**+0.5**
DALY	**Dalyan (Mula)**	**3.33**	**37**	Pn	**Pn**	**04 02 11.9**	**+0.3**
YER	**Yerkesik**	**3.42**	**29**	Pn	**Pn**	**04 02 13.3**	**+0.3**
AKAS	**Kas**	**3.48**	**53**	Pn	**Pn**	**04 02 13.7**	**-0.2**
CAME	**Cameli-Denizli**	**3.76**	**42**	Pn	**Pn**	**04 02 17.9**	**+0.1**
ELL	**Elmali**	**3.99**	**49**	Pn	**Pn**	**04 02 21.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**30.52**	**233**	P	**P**	**04 07 32.9**	**+0.3**
	0.4nm,0.7s,baz=37,slow=8.4,SNR=2.4						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**41.10**	**50**	P	**P**	**04 09 02.7**	**-0.1**
	0.4nm,0.5s,baz=275,slow=8.8,SNR=4.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**43.63**	**56**	P	**P**	**04 09 23.1**	**-0.4**
	0.3nm,0.6s,baz=270,slow=7.8,SNR=2.9						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.09**	**45**	P	**P**	**04 09 34.1**	**-0.9**
	0.9nm,0.4s,baz=254,slow=7.1,SNR=4.4						
	0.9nm,0.4s						
MATP	**Matopo**	**54.33**	**177**	LR	LR	04 34 44.6	
	comp=Z,108nm,18.7s,baz=119,slow=37						

*NEIC **13** 04:20:14.3±2.2,17°.45S±0°.06×70°.93W±0°.08,h76km±8km, mb4.5/26,Error ellipse: s-maj=11.9km s-min=9.0km az=105.0*
*GFZ **13** 04:20:15.3±0.3,18°.3°×7°.1W±°,h92km,M4.1/7,mb4.1/7, confirmed*
*IDC **13** 04:20:19.2±2.4,17°.05S×70°.71W,h102km±17km,mb3.6/9, mbtmp3.9/12,MS2.1/1,Error ellipse: s-maj=32.3km s-min=12.6km az=18.0*

ISC 13 04:20:12.8±0.5,17°.37S±0°.05×70°.93W±0°.06,h56km,n93, σ1s45/83,mb4.3/21,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**1.14**	**151**		**Pn**	**04 20 32.7**	**+0.2**
AP01				Sn	**Sn**	**04 20 49.4**	**+2.2**
AP01	**Chacalluta**	**1.14**	**151**	P	**Pn**	**04 20 33.0**	**+0.5**
PB12	**IPOC Station P**	**1.36**	**155**	Pn	**Pn**	**04 20 35.8**	**+0.2**
PB12				Sn	**Sn**	**04 20 54.9**	**+2.3**
PB12	**IPOC Station P**	**1.36**	**155**	P	**Pn**	**04 20 36.4**	**+0.8**
PB18	**Visviri**	**1.40**	**99**	Pn	**Pn**	**04 20 38.7**	**+2.2**
PB18	**Visviri**	**1.40**	**99**	P	**Pn**	**04 20 39.3**	**+2.8**
PB16	**IPOC Station P**	**1.65**	**125**	Pn	**Pn**	**04 20 41.2**	**+1.2**
PB16	**IPOC Station P**	**1.65**	**125**	P	**Pn**	**04 20 41.6**	**+1.6**
PSGCX	**Pisagua**	**2.34**	**161**	Pn	**Pn**	**04 20 49.6**	**+0.6**
PSGCX	**Pisagua**	**2.34**	**161**	P	**Pn**	**04 20 50.4**	**+1.5**
PB11	**IPOC Station P**	**2.66**	**153**	Pn	**Pn**	**04 20 54.8**	**+1.3**
PB11	**IPOC Station P**	**2.66**	**153**	P	**Pn**	**04 20 55.3**	**+1.8**
GO01	**Chusmiza**	**2.81**	**145**	Pn	**Pn**	**04 20 57.5**	**+1.7**
LPAZ	**La Paz**	**2.89**	**68**	P	**Pn**	**04 21 01.2**	**+4.3**
	16nm,0.3s,baz=290,slow=4.9,SNR=72						
LPAZ				S	**Sn**	**04 21 31.8**	**+1.1**
	18nm,0.5s,baz=236,slow=7.3,SNR=1.9						
LPAZ				LR	LR	04 21 58.4	
	comp=Z,41nm,20.3s,baz=238,slow=38						
LPAZ	**La Paz**	**2.89**	**68**	Pn	**Pn**	**04 21 00.3**	**+3.4**
LPAZ	**La Paz**	**2.89**	**68**	P	Pn	04 21 01.6	+4.7
TA02	**Huaiquique**	**2.98**	**165**	P	**Pn**	**04 20 59.0**	**+1.4**
PB08	**IPOC Station P**	**3.22**	**149**	Pn	**Pn**	**04 21 03.3**	**+2.0**
PB02	**IPOC Station P**	**4.04**	**166**	Pn	**Pn**	**04 21 12.6**	**+0.3**
PB07	**IPOC Station P**	**4.44**	**167**	Pn	**Pn**	**04 21 18.0**	**+0.2**
PB07	**IPOC Station P**	**4.44**	**167**	P	**Pn**	**04 21 18.7**	**+0.9**
PB09	**IPOC Station P**	**4.68**	**160**	Pn	**Pn**	**04 21 22.5**	**+1.5**
PB03	**IPOC Station P**	**4.78**	**167**	Pn	**Pn**	**04 21 22.7**	**+0.2**
PB06	**IPOC Station P**	**5.46**	**167**	Pn	**Pn**	**04 21 31.6**	**-0.2**
PB05	**IPOC Station P**	**5.49**	**173**	Pn	**Pn**	**04 21 30.7**	**-1.5**
PB14	**IPOC Station P**	**7.23**	**176**	Pn	**Pn**	**04 21 53.0**	**-3.2**
NNA	**Nana**	**7.84**	**312**	P	Pn	04 22 11.2	+6.9
	7.0nm,0.5s,baz=138,slow=7.1,SNR=3.6						
NNA				S	**Sn**	**04 23 36.7**	**+5.0**
	5.5nm,0.4s,baz=107,slow=19,SNR=4.0						
NNA	**Nana**	**7.84**	**312**	P	Pn	04 22 09.7	+5.4
AC01	**Pan de Azucar**	**8.74**	**178**	Pn	**Pn**	**04 22 14.6**	**-1.9**
SIV	**San Ignacio**	**9.54**	**83**	P	**Pn**	**04 22 28.3**	**+0.6**
	3.8nm,0.4s,baz=271,slow=10,SNR=30						
SIV				S	**Sn**	**04 24 11.6**	**-1.9**
	0.8nm,0.5s,baz=322,slow=21,SNR=1.1						
AC02	**Maricunga**	**9.56**	**170**	Pn	**Pn**	**04 22 26.9**	**-1.4**
AC02	**Maricunga**	**9.56**	**170**	P	**Pn**	**04 22 29.3**	**+1.0**
VILB	**Vilhena**	**11.25**	**68**	Pn	**Pn**	**04 22 49.4**	**-1.5**
ATAH	**Atahualpa**	**12.52**	**323**	P	Pn	04 23 12.2	+3.6
	5.0nm,0.7s,baz=319,slow=11,SNR=3.6						
CLDB	**Colider**	**16.03**	**68**	P	**Pn**	**04 23 55.1**	**+0.4**
H03N1	**Juan Fernandez**	**17.54**	**203**	T	T	04 41 51.0	
	baz=26,slow=73,SNR=226						
H03N2	**Juan Fernandez**	**17.54**	**203**	T	T	04 41 51.6	
	baz=26,slow=73,SNR=214						
H03N3	**Juan Fernandez**	**17.55**	**203**	T	T	04 41 50.7	
	baz=26,slow=73,SNR=194						
BI02	**San Fabin de**	**19.22**	**181**		**P**	**04 24 31.8**	**-0.5**
CPSB	**Cacapava Do Su**	**20.55**	**132**	P	**P**	**04 24 47.9**	**+1.0**
CPSB	**Cacapava Do Su**	**20.55**	**132**	P	**P**	**04 24 47.3**	**+0.4**
BDFB	**Brasilia**	**22.03**	**89**	P	**P**	**04 25 02.1**	**-0.9**
	0.6nm,0.4s,baz=44,slow=3.4,SNR=1.5						
	0.6nm,0.4s						
BOAV	**Boa Vista**	**22.16**	**29**	P	**P**	**04 25 04.3**	**+0.1**
CAMR	**Camarioca**	**41.46**	**345**	P	**P**	**04 27 54.9**	**+0.6**
SOR	**Soroa**	**41.63**	**343**	P	**P**	**04 27 55.8**	**+0.1**
SOR				IAmb	IAmb	04 28 14.7	
	comp=Z,5.5nm,1.0s						
JSC	**Jenkinsville**	**52.30**	**349**	P	**P**	**04 29 18.3**	**-0.5**
JSC				IAmb	IAmb	04 29 45.8	
	comp=Z,3.9nm,1.0s						
HODGE	**Hodges**	**52.44**	**348**	P	**P**	**04 29 19.4**	**-0.4**
HODGE				IAmb	IAmb	04 29 44.6	
	comp=Z,5.1nm,1.2s						
V55A	**Taylorsville**	**53.83**	**350**	P	**P**	**04 29 29.7**	**-0.3**
V55A				IAmb	IAmb	04 29 31.0	
	comp=Z,6.8nm,0.9s						
SWET	**Sewanee**	**54.21**	**345**	P	**P**	**04 29 31.8**	**-1.0**
SWET				IAmb	IAmb	04 29 34.3	
	comp=Z,6.1nm,1.2s						
U49A	**Red Boiling Sp**	**55.40**	**345**	P	**P**	**04 29 40.2**	**-1.2**
U49A				IAmb	IAmb	04 29 40.8	
	comp=Z,3.0nm,0.6s						
S54A	**Dingess, Beckl**	**55.74**	**350**	P	**P**	**04 29 42.4**	**-1.5**
S54A				IAmb	IAmb	04 29 43.9	
	comp=Z,6.3nm,0.8s						
MIAR	**Mount Ida**	**55.95**	**337**	P	**P**	**04 29 45.0**	**-0.4**
TXAR	**Lajitas Array**	**56.17**	**325**	P	**P**	**04 29 46.6**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=153,slow=8.6,SNR=4.3						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**56.17**	**325**	P	**P**	**04 29 47.2**	**0.0**
Q56A	**Snyder Ridge,**	**56.65**	**352**	P	**P**	**04 29 50.5**	**+0.3**
Q56A				IAmb	IAmb	04 30 09.0	
	comp=Z,6.4nm,1.0s						
WCI	**Wyandotte Cave**	**57.16**	**346**	P	**P**	**04 29 52.1**	**-1.7**
P53A	**Whipple**	**57.40**	**350**	P	**P**	**04 29 55.2**	**-0.4**
S44A	**Carbondale**	**57.43**	**343**	P	**P**	**04 29 54.4**	**-1.3**
P52A	**Corning**	**57.67**	**350**	P	**P**	**04 29 56.1**	**-1.3**
O52A	**Adamsville**	**58.09**	**350**	P	**P**	**04 29 59.2**	**-1.2**
O52A				IAmb	IAmb	04 29 59.9	
	comp=Z,4.2nm,0.5s						
O53A	**New Philadelph**	**58.12**	**351**	P	**P**	**04 29 60.0**	**-0.6**
O53A				IAmb	IAmb	04 30 00.6	
	comp=Z,3.1nm,0.7s						
CCM	**Cathedral Cave**	**58.35**	**341**	P	**P**	**04 30 00.7**	**-1.5**
N53A	**Lisbon**	**58.61**	**351**	P	**P**	**04 30 03.3**	**-0.7**
N53A				IAmb	IAmb	04 30 07.8	
	comp=Z,8.2nm,1.2s						
R40A	**Maddies Statio**	**58.88**	**340**	P	**P**	**04 30 04.4**	**-1.6**
R40A				IAmb	IAmb	04 30 05.5	
	comp=Z,2.4nm,0.9s						
K43A	**Burlington**	**61.89**	**346**	P	**P**	**04 30 25.0**	**-1.4**
D62A	**Allapoint, All**	**64.18**	**1**	P	**P**	**04 30 40.4**	**-1.0**
ECSD	**EROS Data Cent**	**65.21**	**340**	P	**P**	**04 30 47.4**	**-0.9**
ECSD	**EROS Data Cent**	**65.21**	**340**	P	**P**	**04 30 47.7**	**-0.6**
EYMN	**Ely**	**67.58**	**345**	P	**P**	**04 31 02.3**	**-1.1**
EYMN	**Ely**	**67.58**	**345**	P	**P**	**04 31 02.2**	**-1.1**
DBIC	**Dimbokro**	**69.48**	**76**	P	**P**	**04 31 15.7**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=314,slow=12,SNR=1.9						
	comp=Z,2.6nm,0.7s						
PDAR	**Pinedale Array**	**69.60**	**331**	P	**P**	**04 31 15.7**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=150,slow=7.2,SNR=1.5						
	comp=Z,0.1nm,0.4s						
EPLO	**Experimental L**	**69.74**	**344**	P	**P**	**04 31 16.4**	**-0.4**
EPLO				IAmb	IAmb	04 31 16.8	
	comp=Z,4.5nm,1.0s						
ULM	**Lac du Bonnet**	**70.83**	**343**	P	**P**	**04 31 22.7**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=163,slow=8.8,SNR=4.3						
	comp=Z,2.0nm,0.5s						
ULM	**Lac du Bonnet**	**70.83**	**343**	P	**P**	**04 31 22.4**	**-1.0**
QSPA	**South Pole Qui**	**72.79**	**180**	P	**P**	**04 31 37.9**	**+2.6**
	comp=Z,1.6nm,1.1s,baz=114,slow=10,SNR=1.2						
	comp=Z,1.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.83**	**72**	P	**P**	**04 32 04.6**	**-0.3**
	comp=Z,4.4nm,0.7s,baz=253,slow=5.5,SNR=39						
	comp=Z,4.4nm,0.7s						
ESDC	**Sonseca Array**	**84.28**	**46**	P	**P**	**04 32 38.5**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=270,slow=7.4,SNR=5.9						
	comp=Z,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**86.69**	**341**	P	**P**	**04 32 50.4**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=144,slow=5.0,SNR=7.9						
	comp=Z,1.2nm,0.8s						
H11N3	**WAKE ISLAND Hyl**	**25.34**	**282**	T	T	06 56 10.8	
	baz=99,slow=74						
H11N2	**WAKE ISLAND Hyl**	**25.36**	**282**	T	T	06 56 11.4	
	baz=99,slow=74						
H11N1	**WAKE ISLAND Hyl**	**25.36**	**282**	T	T	06 56 09.5	
	baz=99						
H11S2	**WAKE ISLAND Hyl**	**25.36**	**281**	T	T	06 56 11.7	
	baz=99,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hyl**	**25.37**	**281**	T	T	06 56 10.6	
	baz=99,slow=75,SNR=8.6						
H11S3	**WAKE ISLAND Hyl**	**25.38**	**281**	T	T	06 56 13.0	
	baz=99,slow=75,SNR=9.9						
WRA	**Warramunga Arr**	**135.38**	**215**	PKP	**PKiKP**	**04 39 28.7**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=133,slow=2.1,SNR=2.1						
ZALV	**Zalesovo Beam**	**138.94**	**22**	PKP	**PKPdf**	**04 39 33.3**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=156,slow=1.5,SNR=4.3						
MKAR	**Makanchi Array**	**143.26**	**31**	PKhKP	PKPpre	04 39 36.0	
	comp=Z,3.3nm,0.5s,baz=308,slow=3.5,SNR=4.9						
MKAR	**Makanchi Array**	**143.26**	**31**		PKPbc	04 39 37.9	-0.1
HILR	**Hailar Array B**	**146.76**	**347**	PKPbc	**PKPdf**	**04 39 46.3**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=349,slow=1.5,SNR=1.8						
MJAR	**Matsushiro Arr**	**147.96**	**312**	PKPbc	**PKPbc**	**04 39 52.7**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=73,slow=2.7,SNR=2.0						
SONM	**Songino Array**	**149.54**	**4**	PKPbc	**PKiKP**	**04 39 56.9**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=349,slow=1.0,SNR=8.6						
SONM	**Songino Array**	**149.54**	**4**	PKPbc	**PKiKP**	**04 39 57.4**	**+0.2**

*CATAC **13** 04:44:59.1±0.9,14°.N±5°.×9°.3W±°,h25km±6km,M3.8/6, MLv3.8/6,Error ellipse: s-maj=11.2km s-min=5.5km az=23.6,confirmed*

*MEX **13** 04:44:59.8±0.8,14°.49N×92°.83W,h74km±23km,MD4.0*
*GCG **13** 04:45:01.0±1.9,14°.41N×92°.69W,h37km±136km,MD4.2, Presumed earthquake*

ISC 13 04:44:55.2±1.6,14°.22N±0°.06×92°.95W±0°.03,h31km±14km, n30,σ2s33/49,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.95**	**44**	*e*P	**Pn**	**04 45 13.4**	**+1.1**
THIG				*e*S	**Sb**	**04 45 23.5**	**-1.9**
THIG		**0.95**	**44**	*i* P	**Pn**	**04 45 13.5**	**+1.1**
PATR	**El Naranjo**	**1.13**	**38**	*e*P	**Pn**	**04 45 15.1**	**0.0**
PATR				*e*S	**Sn**	**04 45 27.6**	**-2.0**
CHUJ	**Union Juarez**	**1.19**	**43**	*e*P	**Pn**	**04 45 16.1**	**+0.1**
CHUJ				*e*S	**Sn**	**04 45 29.6**	**-1.6**
PAVE	**Pavencul**	**1.22**	**38**	*e*P	**Pn**	**04 45 17.1**	**+0.7**
PAVE				*e*S	**Sn**	**04 45 30.1**	**-1.9**
RTAL	**Retalhuleu**	**1.25**	**76**	P	**Pb**	**04 45 19.0**	**+0.7**
RTAL				S	**Sn**	**04 45 34.4**	**+2.1**
RTAL	**Retalhuleu**	**1.25**	**76**	*e*P	**Pb**	**04 45 18.8**	**+0.6**
RTAL				*e*S	**Sn**	**04 45 33.4**	**+1.0**
QUEO	**Labor Ovalle**	**1.53**	**65**	*i* P	**Pn**	**04 45 22.7**	**+2.0**
QUEO				*i* S	**Sn**	**04 45 39.7**	**+0.1**
STG5	**El Palmar, Qui**	**1.56**	**83**	*i* P	**Pn**	**04 45 20.2**	**-0.6**
STG5				*i* S	**Sn**	**04 45 34.0**	**-6.1**
STG8	**El Palmar, Qui**	**1.56**	**81**	*i* P	**Pn**	**04 45 20.3**	**-0.7**
HUEH	**Huehuetenango**	**1.77**	**52**	P	**Pb**	**04 45 26.9**	**-0.4**
HUEH	**Huehuetenango**	**1.77**	**52**	*e*P	**Pn**	**04 45 26.1**	**+2.1**
HUEH				*e*S	**Sn**	**04 45 47.0**	**+1.5**
HUEH	**Huehuetenango**	**1.77**	**52**	*i* P	**Pn**	**04 45 26.5**	**+2.6**
HUEH				*i* S	**Sn**	**04 45 46.7**	**+1.1**
ESSG	**Sabana Grande**	**2.06**	**85**	*i* P	**Pn**	**04 45 30.0**	**+2.3**
CARR	**Arriaga**	**2.22**	**335**	*e*P	**Pn**	**04 45 33.0**	**+3.1**
CARR				*e*S	**Sn**	**04 45 57.4**	**+1.2**
FG8	**Yepocapa, Chim**	**2.31**	**89**	*i* P	**Pn**	**04 45 28.8**	**-2.5**
FG16	**Alotenango, Sa**	**2.36**	**88**	*i* P	**Pn**	**04 45 30.1**	**-1.9**
FG16				*i* S	Sn	04 45 51.3	-8.8
PCG5	**San Vicente Pa**	**2.49**	**90**	*i* P	**Pn**	**04 45 32.4**	**-1.4**
APG	**El Apazote**	**2.53**	**72**	*i* P	**Pn**	**04 45 37.5**	**+3.2**
TGIG		**2.55**	**356**	*e*P	**Pn**	**04 45 37.1**	**+2.6**
TGIG				*e*S	**Sn**	**04 46 00.1**	**-4.3**
TGIG		**2.55**	**356**	*i* P	**Pn**	**04 45 37.1**	**+2.6**
CMIG	**Matias Romero**	**3.41**	**327**	*e*P	**Pn**	**04 45 49.6**	**+3.4**
CMIG				*e*S	**Sn**	**04 46 23.8**	**-1.8**
HUIG	**Huatulco**	**3.42**	**297**	*e*P	**Pn**	**04 45 43.6**	**-2.8**
HUIG				*e*S	**Sn**	**04 46 26.3**	**+0.4**
JAYA	**Jayaque - finc**	**3.44**	**99**	P	**Pn**	**04 45 50.7**	**+3.9**
JAYA				S	**Sn**	**04 46 27.1**	**+0.4**
JAYA	**Jayaque - finc**	**3.44**	**99**	*i* P	**Pn**	**04 45 50.3**	**+3.4**
PETF	**Flores**	**4.00**	**48**	*e*P	**Pn**	**04 45 57.5**	**+3.1**
PETF				*e*S	**Sn**	**04 46 37.6**	**-2.6**
PEIG	**Puerto Escondi**	**4.42**	**294**	*e*S	**Sn**	**04 46 50.5**	**-0.2**
NEUV	**Arroyo Zacate**	**4.43**	**322**	*e*P	**Pn**	**04 46 01.7**	**+1.4**
NEUV				*e*S	**Sn**	**04 46 48.8**	**-1.9**
SCIG	**Sabancuy**	**5.01**	**19**	*e*P	**Pn**	**04 46 09.8**	**+1.5**
SCIG				*e*S	**Sn**	**04 47 01.3**	**-3.9**
TOIG	**Toxpalan**	**5.52**	**315**	*e*P	**Pn**	**04 46 16.9**	**+1.5**
TOIG				*e*S	**Sn**	**04 47 16.7**	**-1.3**

IDC 13 04:59:17.1±2.2,17°.21S×178°.52W,h613km±21km, mb3.0/5,mbtmp4.0/6,Error ellipse: s-maj=89.9km s-min=22.3km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.32**	**261**	P	P	05 00 39.3	0.0
	74nm,0.7s,baz=116,slow=4.7,SNR=32						
STKA	**Stephens Creek**	**38.88**	**240**	P	P	05 05 51.1	-0.8
	2.6nm,0.5s,baz=73,slow=11,SNR=4.9						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**44.66**	**259**	P	P	05 06 37.6

BANOM	**Banah**	**5.47**	**126**	P		**Pn**	05 19 27.2	**+1.8**
BANOM				S		**Sn**	05 20 24.1	**-4.0**
AJN	**Ajban**	**5.65**	**144**	P		**Pn**	05 19 31.1	**+3.2**
AJN				S		**Sn**	05 20 32.5	**+0.2**
NAZ	**Nazwa, Dubai**	**5.69**	**137**	P		**Pn**	05 19 30.5	**+2.1**
NAZ	**Nazwa, Dubai**	**5.69**	**137**	P		**Pn**	05 19 30.9	**+2.5**
NAZ				S		**Sn**	05 20 33.2	**-0.2**
MASF	**Masafi**	**5.73**	**131**	P		**Pn**	05 19 30.8	**+1.8**
	SNR=10							
MASF				S		**Sn**	05 20 34.3	**-0.1**
MSFE	**Esma-Masafi**	**5.74**	**131**	*i* P		**Pn**	05 19 30.2	**+1.1**
	SNR=10							
ASUD	**Al Ashush, Dub**	**5.78**	**141**	P		**Pn**	05 19 32.4	**+2.8**
ASUD	**Al Ashush, Dub**	**5.78**	**141**	P		**Pn**	05 19 32.8	**+3.2**
ASUD				S		**Sn**	05 20 37.0	**+1.5**
FAQ	**Al Faqa, Dubai**	**5.83**	**139**	P		**Pn**	05 19 32.6	**+2.2**
FAQ	**Al Faqa, Dubai**	**5.83**	**139**	P		**Pn**	05 19 32.4	**+2.0**
FAQ				S		**Sn**	05 20 36.5	**-0.4**
MDH	**Madha**	**5.87**	**130**	P		**Pn**	05 19 32.4	**+1.4**
MDH	**Madha**	**5.87**	**130**	P		**Pn**	05 19 32.3	**+1.4**
MDH				S		**Sn**	05 20 35.3	**-2.5**
UOSS	**Minazif**	**6.06**	**133**	P		**Pn**	05 19 35.2	**+1.8**
UOSS	**Minazif**	**6.06**	**133**	P		**Pn**	05 19 35.3	**+1.8**
UOSS				S		**Sn**	05 20 40.5	**-1.9**
UOSS	**Minazif**	**6.06**	**133**	Pn		**Pn**	05 19 35.1	**+1.6**
HATD	**Hatta, Dubai**	**6.10**	**135**	P		**Pn**	05 19 35.2	**+1.2**
HATD	**Hatta, Dubai**	**6.10**	**135**	P		**Pn**	05 19 35.5	**+1.5**
HATD				S		**Sn**	05 20 42.5	**-1.0**
ASHO	**Ashiyiah**	**6.16**	**136**	*i* P		**Pn**	05 19 36.3	**+1.4**
	SNR=24							
ASHO				S		**Sn**	05 20 43.3	**-1.6**
ASHO	**Ashiyiah**	**6.16**	**136**	P		**Pn**	05 19 36.3	**+1.4**
	SNR=24							
ASHO				S		**Sn**	05 20 43.6	**-1.4**
KBAM	**BAM**	**6.20**	**89**	Pn		**Pn**	05 19 39.4	**+3.8**
SNQR	**Sonqor, Kerman**	**6.46**	**332**	Pn		**Pn**	05 19 40.6	**+1.3**
ALNE	**Al Ain**	**6.46**	**142**	*i* P		**Pn**	05 19 41.4	**+2.3**
	SNR=5.6							
ALNE	**Al Ain**	**6.46**	**142**	P		**Pn**	05 19 41.7	**+2.7**
	SNR=7.5							
ALNE				S		**Sn**	05 20 51.9	**-0.6**
MZR	**Muzera**	**6.47**	**162**	*i* P		**Pn**	05 19 43.5	**+4.3**
	SNR=11							
MZR	**Muzera**	**6.47**	**162**	P		**Pn**	05 19 41.4	**+2.2**
	SNR=12							
MZR				S		**Sn**	05 20 53.2	**+0.6**
IGHG	**Ghaleghazi**	**6.53**	**323**	Pn		**Pn**	05 19 41.7	**+1.4**
SOHO	**SOHO**	**6.85**	**136**	*i* P		**Pn**	05 19 45.4	**+1.1**
	SNR=19							
SOHO	**SOHO**	**6.85**	**136**	P		**Pn**	05 19 45.5	**+1.1**
SOHO				S		**Sn**	05 21 01.3	**-0.7**
ARQ	**Araqi**	**7.46**	**140**	P		**Pn**	05 19 54.0	**+1.2**
	SNR=14							
ARQ				S		**Sn**	05 21 14.7	**-2.3**
RAYN	**Ar Rayn**	**7.72**	**224**			**Pn**	05 19 55.3	**-1.2**
HOQ	**Hoqain**	**7.74**	**135**	P		**Pn**	05 19 57.7	**+1.1**
HOQ				S		**Sn**	05 21 20.6	**-3.2**
BSY	**Bisya**	**8.31**	**139**	P		**Pn**	05 20 05.8	**+1.4**
	SNR=5.2							
BSY				S		**Sn**	05 21 35.3	**-2.6**
SMDO	**Samad**	**8.58**	**134**	P		**Pn**	05 20 09.1	**+0.9**
SMDO				S		**Sn**	05 21 44.5	**-0.2**
WSAR	**Wadi Sarin**	**8.83**	**131**	P		**Pn**	05 20 12.2	**+0.7**
	SNR=7.7							
JMDO	**Jabal Madar**	**9.12**	**137**	P		**Pn**	05 20 16.2	**+0.6**
JMDO				S		**Sn**	05 21 55.6	**-2.4**
WBK	**Wadi Bani Khal**	**9.49**	**132**	P		**Pn**	05 20 21.0	**+0.3**
	SNR=7.1							
WBK				S		**Sn**	05 22 05.8	**-1.1**
JLN	**Jalan Bani Buh**	**10.10**	**132**	P		**Pn**	05 20 28.7	**-0.3**
JLN				S		**Sn**	05 22 16.1	**-5.9**
MHTO	**MHTO**	**10.14**	**142**	P		**Pn**	05 20 31.0	**+1.5**
	SNR=26							
MHTO				S		**Sn**	05 22 18.8	**-4.1**
DQM	**DQM**	**10.81**	**147**	P		**Pn**	05 20 40.4	**+1.7**
DQM				S		**Sn**	05 22 36.5	**-2.9**
GEVA	**Gevas**	**11.40**	**325**	Pn		**Pn**	05 20 46.2	**-0.7**
WHFO	**Wadi Hawf**	**11.45**	**168**	P		**Pn**	05 20 47.6	**0.0**
DMTO	**DMTO**	**11.90**	**163**	P		**Pn**	05 20 55.0	**+1.3**
	SNR=6.0							
BRTR	**Keskin Array B**	**17.96**	**310**	P		**Pn**	05 22 11.5	**-2.2**
	0.1nm,0.3s,baz=134,slow=8.8,SNR=4.2 0.3nm,0.4s							
BRTR	**Keskin Array B**	**17.96**	**310**	P		**Pn**	05 22 12.8	**-0.8**
BR131	**Keskin Array S**	**17.96**	**310**	P		**Pn**	05 22 13.0	**-0.7**
GAR	**Garm**	**18.45**	**53**	P		**Pn**	05 22 20.6	**+0.8**
GAR				IAmb		IAmb	05 22 27.9	
	comp=Z,7.8nm,0.7s							
BZK	**Bozkurt**	**18.96**	**317**	P		**P**	05 22 23.2	**-1.7**
KK31	**Karatay Array**	**20.70**	**43**	P		Pn	05 22 45.7	**-0.7**
KKAR	**Karatay Array**	**20.70**	**43**	P		Pn	05 22 45.5	-0.9
AB31	**Akbulak array**	**21.07**	**16**	P		**P**	05 22 49.1	**+1.3**
ABKAR	**Akbulak array**	**21.07**	**16**	P		**P**	05 22 49.1	**+1.3**
ARSB	**Arslanbob**	**21.33**	**50**	P		**P**	05 22 52.7	**+1.7**
ARSB				IAmb		IAmb	05 22 55.1	
	comp=Z,3.9nm,0.6s							
AKTO	**Aktyubinsk**	**21.79**	**12**	P		**P**	05 22 56.2	**+0.6**
	comp=Z,3.5nm,0.7s,baz=192,slow=11,SNR=7.8 comp=Z,3.5nm,0.7s							
BOOM	**Boomskoye usch**	**23.83**	**50**	P		**P**	05 23 18.2	**+1.2**
BOOM				IAmb		IAmb	05 23 29.1	
	comp=Z,2.5nm,0.8s							
ITM	**Ithomi**	**25.81**	**296**	P		**P**	05 23 33.7	**-1.2**
ITM				IAmb		IAmb	05 23 56.2	
	comp=Z,15nm,1.2s							
AKASG	**Malin Array Be**	**27.17**	**328**	P		**P**	05 23 46.8	**-0.3**
	comp=Z,0.3nm,0.3s,baz=134,slow=8.0,SNR=4.5 comp=Z,0.3nm,0.3s							
AKASG	**Malin Array Be**	**27.17**	**328**	P		**P**	05 23 46.8	**-0.3**
AKASG				IAmb		IAmb	05 24 27.5	
	comp=Z,3.2nm,1.1s							
BURAR	**Bucovina Array**	**27.32**	**319**	P		**P**	05 23 48.1	**-0.5**
BUR08	**Bucovina Ar. S**	**27.34**	**320**	P		**P**	05 23 48.7	**-0.1**
BUR08				IAmb		IAmb	05 24 24.8	
	comp=Z,6.1nm,1.5s							
BVAR	**Borovoye Array**	**27.61**	**25**	P		**P**	05 23 51.2	**+0.2**
	comp=Z,1.0nm,0.5s,baz=216,slow=7.3,SNR=4.7 comp=Z,1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**29.58**	**36**	P		**P**	05 24 10.5	**+2.0**
	comp=Z,0.7nm,0.8s,baz=238,slow=9.2,SNR=6.4 comp=Z,0.7nm,0.8s							
KURK	**Kurchatov**	**29.68**	**36**	P		**P**	05 24 10.2	**+0.8**
KURK				IAmb		IAmb	05 24 37.0	
	comp=Z,1.3nm,0.7s							
MKAR	**Makanchi Array**	**29.77**	**45**	P		**P**	05 24 12.2	**+1.9**
	comp=Z,0.6nm,0.5s,baz=236,slow=7.3,SNR=8.0 comp=Z,0.6nm,0.5s							
MKAR	**Makanchi Array**	**29.77**	**45**	P		**P**	05 24 11.4	**+1.1**
ZAA0	**Zalesovo Array**	**34.64**	**35**	P		**P**	05 24 53.7	**+0.8**
ZAA0				IAmb		IAmb	05 25 35.8	
	comp=Z,1.8nm,0.6s							
ZALV	**Zalesovo Beam**	**34.64**	**35**	P		**P**	05 24 54.5	**+1.6**
	comp=Z,0.9nm,0.3s,baz=244,slow=9.4,SNR=6.8 comp=Z,0.9nm,0.3s							
ZALV	**Zalesovo Beam**	**34.64**	**35**	P		**P**	05 24 53.9	**+1.0**
FINES	**FINESS Array B**	**36.33**	**340**	P		**P**	05 25 06.4	**-0.9**
	comp=Z,1.0nm,0.8s,baz=134,slow=8.2,SNR=4.4 comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	**36.33**	**340**	P		**P**	05 25 06.7	**-0.5**
HFS	**Hagfors**	**39.94**	**332**	P		**P**	05 25 37.1	**-0.7**
	comp=Z,0.9nm,0.4s,baz=134,slow=8.4,SNR=1.9 comp=Z,0.9nm,0.4s							
NC405	**NORSAR Array S**	**41.30**	**332**	P		**P**	05 25 48.3	**-0.7**
NC405				IAmb		IAmb	05 25 58.7	
	comp=Z,20nm,1.4s							
NOA	**NORSAR Array B**	**41.46**	**332**	P		**P**	05 25 50.0	**-0.3**
	comp=Z,0.2nm,0.5s,baz=121,slow=8.3,SNR=2.5 comp=Z,0.2nm,0.5s							
ARCES	**ARCESS Array B**	**43.01**	**347**	P		**P**	05 26 02.6	**-0.2**
	comp=Z,1.7nm,1.0s,baz=123,slow=4.5,SNR=3.7 comp=Z,1.7nm,1.0s							
ARCES	**ARCESS Array B**	**43.01**	**347**	P		**P**	05 26 02.8	**-0.1**
SONM	**Songino Array**	**45.87**	**50**	P		**P**	05 26 27.4	**+1.3**
	comp=Z,0.3nm,0.4s,baz=278,slow=9.9,SNR=2.4 comp=Z,0.3nm,0.4s							
EKA	**Eskdalemuir Ar**	**46.50**	**320**	P		**P**	05 26 29.8	**-1.0**
	comp=Z,0.2nm,0.3s,baz=95,slow=8.3,SNR=3.8 comp=Z,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**48.63**	**262**	P		**P**	05 26 47.1	**-0.8**
	comp=Z,1.9nm,0.6s,baz=59,slow=7.7,SNR=11 comp=Z,1.9nm,0.6s							
SPB2	**Spitsbergen Ar**	**51.48**	**351**	P		**P**	05 27 09.7	**+1.1**
DBIC	**Dimbokro**	**57.39**	**259**	P		**P**	05 27 51.0	**-1.6**
	comp=Z,1.7nm,0.6s,baz=35,slow=3.9,SNR=6.5 comp=Z,1.7nm,0.6s							
DBIC	**Dimbokro**	**57.39**	**259**	P		**P**	05 27 51.0	**-1.6**
JOW	**Kunigami**	**66.74**	**71**	P		**P**	05 28 55.0	**-0.2**
K27K	**Chicken**	**86.47**	**6**	P		**P**	05 30 46.5	**+0.4**
K27K				IAmb		IAmb	05 30 49.0	
	comp=Z,2.7nm,1.3s							
WRA	**Warramunga Arr**	**93.67**	**111**	P		**P**	05 31 19.8	**-0.9**
	comp=Z,0.3nm,0.7s,baz=306,slow=4.6,SNR=1.2 comp=Z,0.3nm,0.7s							
ASAR	**Alice Springs**	**95.15**	**114**	P		**P**	05 31 26.8	**-0.7**
	comp=Z,0.5nm,0.7s,baz=309,slow=4.9,SNR=1.3 comp=Z,0.5nm,0.7s							

ASRS ***13*** *05:24:57.0±0.8,54.°63N×86.°54E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 13 05:24:59.2±3.2,54.°64N×86.°57E,h0km,mbtmp2.8/2,
ML2.5/2,Error ellipse: s-maj=25.0km s-min=17.3km
az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**237**	I		I	05 32 40.0	
	baz=55,slow=314,SNR=3.3							
ZALV	**Zalesovo Beam**	**1.24**	**237**	Pg		Pg	05 25 21.2	-1.7
	0.6nm,0.3s,baz=55,slow=17,SNR=5.9							
ZALV				Lg		Lg	05 25 39.0	
	3.1nm,0.3s,baz=55,slow=27,SNR=18							
KURBB	**Kurchatov Arra**	**6.34**	**234**	Pn		Pn	05 26 34.5	+0.7
	0.1nm,0.3s,baz=52,slow=14,SNR=6.4							
KURBB				Sn		Sn	05 27 47.5	+0.7
	baz=48,slow=23,SNR=1.3							
KURBB				Lg		Lg	05 28 20.5	
	baz=54,slow=33,SNR=1.7 0.6nm,0.4s							
MKAR	**Makanchi Array**	**8.31**	**201**	Pn		Pn	05 27 02.2	+1.2
	0.1nm,0.3s,baz=17,slow=12,SNR=2.5							
MKAR				Lg		Lg	05 29 22.1	
	0.1nm,0.3s,baz=23,slow=34,SNR=1.8 0.1nm,0.3s							

ASRS ***13*** *05:28:35.0±1.1,54.°29N×86.°75E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 13 05:28:37.7±3.5,54.°30N×86.°68E,h0km,mbtmp2.6/2,
ML2.3/2,Error ellipse: s-maj=29.0km s-min=16.5km
az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.15**	**253**	I		I	05 36 00.0	
	baz=70,slow=318,SNR=2.6							
ZALV	**Zalesovo Beam**	**1.15**	**253**	Pg		Pg	05 28 59.3	-0.5
	0.8nm,0.3s,baz=67,slow=17,SNR=8.5							
ZALV				Lg		Lg	05 29 15.3	
	0.7nm,0.3s,baz=74,slow=32,SNR=5.3							
KURBB	**Kurchatov Arra**	**6.20**	**237**	Pn		Pn	05 30 11.6	+1.3
	baz=55,slow=14,SNR=3.1 0.3nm,0.4s							
MKAR	**Makanchi Array**	**8.02**	**202**	Pn		Pn	05 30 36.0	+0.6
	0.1nm,0.3s,baz=20,slow=17,SNR=1.9 0.1nm,0.3s							

IDC ***13*** *05:34:46.4±0.8,38.°26N×69.°87E,h0km,mb3.9/13, mbtmp3.9/21,ML3.6/7,MS3.2/3,Error ellipse: s-maj=14.4km s-min=12.1km az=162.0*
NEIC ***13*** *05:34:49.7±2.0,38.°53N±0.°04×69.°83E±0.°04,h10km±1km, mb4.3/12,Error ellipse: s-maj=8.4km s-min=3.0km az=327.0*
NNC ***13*** *05:34:53.4±4.4,38.°91N×69.°43E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=35.1km s-min=31.7km az=172.0*
ISC 13 05:34:51.3±0.5,38.°56N±0.°04×69.°79E±0.°04,h27km,n73,
σt°78/82,mb4.0/14,6C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHGR	**Chuyangaron**	**0.50**	**282**			**Pb**	**05 34 59.7**	**-1.9**
CHGR				Sg		**Sb**	**05 35 07.2**	**-1.5**
GAR	**Garm**	**0.61**	**43**			**Pb**	**05 35 00.4**	**-3.0**
GAR				Sg		**Sb**	**05 35 09.5**	**-2.2**
SHAA	**Shahritus**	**1.64**	**233**	Pn		**Pb**	**05 35 20.0**	**-0.9**
BTK	**Batken**	**1.70**	**28**			**Pn**	**05 35 19.7**	**+0.4**
MANEM	**Manem**	**1.81**	**123**			**Pn**	**05 35 21.1**	**+0.2**
DRK	**Karamyk**	**1.82**	**59**			**Pn**	**05 35 21.7**	**+0.6**
IUG	**Iuzhnay**	**3.59**	**3**	Pg		**Pn**	**05 35 48.9**	**+3.6**
	109nm,0.4s							
IUG				Lg		Lg	05 36 36.0	
	254nm,0.5s							
ARSB	**Arslanbob**	**3.70**	**41**			**Pn**	**05 35 47.2**	**+0.4**
KBL	**Kabul**	**4.05**	**189**	Pn		**Pn**	**05 35 52.0**	**+0.3**
KSH2	**Kashi**	**4.55**	**81**	Pn		**Pn**	**05 36 01.0**	**+2.5**
KSH2				Sn		**Sn**	**05 36 54.6**	**+4.0**
KSH2				smax		smax		
	comp=N,140nm,1.0s							
KSH2				smax		smax		
	comp=E,110nm,0.9s							
KK31	**Karatay Array**	**4.58**	**7**	⇓Pn		**Pn**	**05 36 01.0**	**+2.3**
	comp=E,2.2nm,0.3s,baz=194,slow=14,SNR=53							
KK31				⇓Pg		**Pb**	**05 36 12.3**	**+1.5**
	comp=E,28nm,0.7s,baz=200,slow=15,SNR=11							
KK31				⇓Sn		**Sn**	**05 36 54.7**	**+3.7**
	comp=E,8.4nm,0.5s,baz=192,slow=30,SNR=6.4							
KK31				⇑Lg		Lg	05 37 12.9	
	comp=E,74nm,0.8s,baz=188,slow=32,SNR=4.1							
KK31	**Karatay Array**	**4.58**	**7**	Pn		**Pn**	**05 36 00.7**	**+1.9**
KKAR	**Karatay Array**	**4.58**	**7**			**Pn**	**05 36 00.8**	**+2.1**
MRKS	**Merke**	**4.94**	**31**	Pg		**Pn**	**05 36 07.1**	**+3.4**
	comp=E,19nm,0.3s							
MRKS				Lg		Lg	05 37 07.4	
	comp=E,43nm,0.4s							
EKS2	**Erkin-Say**	**5.10**	**35**	P		Pn	05 36 11.0	+4.9
	SNR=14							
UCH	**Uchtor**	**5.15**	**43**	P		**Pn**	**05 36 08.7**	**+1.8**
	SNR=17							
AAK	**Ala-Archa**	**5.43**	**40**	Pn		**Pn**	**05 36 12.0**	**+1.5**
	comp=E,5.3nm,0.3s,baz=211,slow=7.0,SNR=16							
AAK				Sn		**Sn**	**05 37 13.8**	**+1.6**
	comp=E,2.0nm,0.3s,baz=243,slow=20,SNR=3.7							
AAK				Lg		Lg	05 37 38.5	
	comp=E,2.1nm,0.3s,baz=352,slow=22,SNR=6.2 comp=E,12nm,0.4s							
AAK	**Ala-Archa**	**5.43**	**40**	P		Pn	**05 36 13.2**	**+2.7**
	SNR=13							
AAK	**Ala-Archa**	**5.43**	**40**	⇑Pn		Pn	**05 36 14.4**	**+3.9**
	comp=E,10nm,0.7s							
AAK				⇑Lg		Lg	05 37 44.8	
	comp=E,52nm,1.0s							
AAK	**Ala-Archa**	**5.43**	**40**			**Pn**	**05 36 11.0**	**+0.4**
NRN	**Naryn**	**5.57**	**57**			**Pn**	**05 36 13.1**	**+0.4**
NIL	**Nilore**	**5.64**	**149**	Pn		Pn	**05 36 11.9**	**-1.4**
USP	**Ospenovka**	**5.91**	**36**	P		Pn	**05 36 21.0**	**+4.0**
	SNR=10							
BOOM	**Boomskoye usch**	**6.12**	**48**	Pn		**Pn**	**05 36 20.5**	**+0.5**
ULHL	**Ulahol**	**6.15**	**51**	P		Pn	**05 36 21.6**	**+1.0**
	SNR=6.3							
TKM2	**Tokmak 2**	**6.20**	**43**	P		Pn	**05 36 23.0**	**+1.8**
	SNR=24							
KDJ	**Kajisay**	**6.68**	**55**	Pn		**Pn**	**05 36 29.2**	**+1.4**
TARG	**Taragay, Kyrgy**	**6.91**	**60**	Pn		**Pn**	**05 36 31.0**	**-0.2**
MDOK	**Medeo**	**7.17**	**48**	Pg		**Pn**	**05 36 37.6**	**+3.1**
	comp=E,13nm,0.3s							
MDOK				Lg		Lg	05 37 59.7	
	comp=E,8.3nm,0.6s							
TSSA	**Tissa**	**7.70**	**136**	*e*P		Pn	05 36 47.1	+5.3
TSSA				*e*S		**Sn**	**05 38 09.6**	**+1.3**
WUS	**Wushi**	**7.72**	**67**	Pn		**Pn**	**05 36 43.1**	**+1.1**
DHRM	**DHARAMSHALA**	**8.24**	**138**	*e*P		**Pn**	**05 36 51.5**	**+2.4**
PDGK	**Podgornoye**	**8.76**	**54**			**Pn**	**05 36 56.8**	**+0.7**
MAKZ	**Makanchi**	**12.18**	**43**			**Pn**	**05 37 42.2**	**-0.7**
MKAR	**Makanchi Array**	**12.34**	**44**	Pn		**Pn**	**05 37 46.4**	**+1.4**
	comp=E,0.1nm,0.3s,baz=229,slow=14,SNR=14 comp=E,1.8nm,0.8s							
MKAR	**Makanchi Array**	**12.34**	**44**			**Pn**	**05 37 45.6**	**+0.5**
AB31	**Akbulak array**	**12.82**	**330**	⇑P		**Pn**	**05 37 52.3**	**+0.6**
	comp=E,2.0nm,0.4s,baz=164,slow=11,SNR=68							
AB31				⇑S		**Sn**	**05 40 10.2**	**-3.2**
	comp=E,1.7nm,0.5s,baz=267,slow=56,SNR=6.0							
AB31	**Akbulak array**	**12.82**	**330**			**Pn**	**05 37 51.3**	**-0.3**
ABKAR	**Akbulak array**	**12.82**	**330**	Pn		**Pn**	**05 37 50.4**	**-1.3**
KURBB	**Kurchatov Arra**	**13.57**	**24**	Pn		**Pn**	**05 38 00.9**	**-0.9**
	comp=E,0.5nm,0.6s,baz=212,slow=12,SNR=4.3							
KURBB				Lg		Lg	05 42 00.1	
	baz=211,slow=31,SNR=5.1							
BVAR	**Borovoye Array**	**14.48**	**1**	Pn		**Pn**	**05 38 13.6**	**-0.7**
	comp=E,0.1nm,0.3s,baz=170,slow=12,SNR=7.7							
BVAR				Sn		**Sn**	**05 40 49.1**	**-4.6**
	baz=200,slow=15 comp=E,1.9nm,0.7s							
BORK	**Borovoye**	**14.50**	**1**			**Pn**	**05 38 14.7**	**+0.2**
AKTO	**Aktyubinsk**	**14.52**	**329**	Pn		**Pn**	**05 38 15.6**	**+0.7**
	comp=E,0.5nm,0.3s,baz=141,slow=18,SNR=9.6							
AKTO				Sn		**Sn**	**05 40 51.8**	**-3.1**
	comp=E,0.1nm,0.3s,baz=174,slow=18,SNR=1.7							
AKTO				LR		LR	05 43 40.5	
	comp=E,46nm,21.5s,baz=300,slow=36 comp=E,2.1nm,0.5s							
AKTO	**Aktyubinsk**	**14.52**	**329**	⇓P		**Pn**	**05 38 14.4**	**-0.4**
	comp=E,4.2nm,0.8s							
AKTO				⇑S		**Sn**	**05 40 52.3**	**-2.6**
	comp=E,3.8nm,0.9s							
EVN	**Everest**	**17.71**	**122**			**Pn**	**05 38 55.8**	**-0.8**
EVN				IAmb		IAmb	05 38 58.8	
	comp=Z,7.7nm,0.6s							
ZAA0	**Zalesovo Array**	**18.51**	**29**	P		**P**	**05 39 04.5**	**-0.8**
ZALV	**Zalesovo Beam**	**18.51**	**29**	P		**P**	**05 39 05.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=220,slow=12,SNR=11 comp=Z,2.2nm,0.5s							
ZALV	**Zalesovo Beam**	**18.51**	**29**	P		**P**	**05 39 04.3**	**-1.0**
ARTI	**Arti**	**19.39**	**341**	P		**P**	**05 39 15.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=1.8							
ARTI				LR		LR	05 47 38.8	
	comp=Z,106nm,21.2s,baz=124,slow=39 comp=Z,1.0nm,0.3s							
GNI	**Garni**	**19.42**	**283**	P		**P**	**05 39 15.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=66,slow=12,SNR=4.1 comp=Z,3.8nm,0.4s							
BELG	**Belogornoye**	**20.70**	**319**	P		**P**	**05 39 30.2**	**+1.2**
	comp=Z,22nm,0.8s,baz=54,slow=5.3,SNR=5.4 comp=Z,22nm,0.8s							
KBZ	**Khabaz**	**20.85**	**293**	P		**P**	**05 39 31.5**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=117,slow=9.9,SNR=5.5 comp=Z,3.7nm,0.9s							
RAYN	**Ar Rayn**	**25.54**	**241**	P		**P**	**05 40 20.1**	**+2.3**
RAYN				IAmb		IAmb	05 40 22.8	
	comp=Z,6.5nm,1.1s							
BRTR	**Keskin Array B**	**27.94**	**284**	P		**P**	**05 40 39.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=56,slow=9.6,SNR=1.3 comp=Z,0.3nm,0.4s							
SONM	**Songino Array**	**28.03**	**59**	P		**P**	**05 40 39.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=251,slow=8.6,SNR=3.6 comp=Z,0.3nm,0.4s							
AKASG	**Malin Array Be**	**30.93**	**306**	P		**P**	**05 41 06.2**	**+0.6**
	comp=Z,0.3nm,0.2s,baz=84,slow=7.3,SNR=5.5 comp=Z,0.3nm,0.2s							
BURAR	**Bucovina Array**	**33.39**	**300**	P		**P**	**05 41 27.4**	**+0.1**
BUR08	**Bucovina Ar. S**	**33.40**	**300**	P		**P**	**05 41 27.6**	**+0.1**
BUR08				IAmb		IAmb	05 41 38.9	
	comp=Z,7.2nm,1.5s							
FIA1	**FINESS Array S**	**35.24**	**325**	P		**P**	**05 41 43.6**	**+0.5**
FINES	**FINESS Array B**	**35.25**	**325**	P		**P**	**05 41 43.8**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=103,slow=8.1,SNR=2.4 comp=Z,1.1nm,0.7s							
ARCES	**ARCESS Array B**	**38.88**	**337**	P		**P**	**05 42 15.6**	**+1.7**
	comp=Z,2.4nm,0.9s,baz=121,slow=8.7,SNR=4.7							
ARCES				LR		LR	05 58 50.8	
	comp=Z,57nm,18.5s,baz=115,slow=37 comp=Z,2.4nm,0.9s							
HFS	**Hagfors**	**40.86**	**321**	P		**P**	**05 42 31.6**	**+1.1**
	comp=Z,1.9nm,0.5s,baz=112,slow=10.0,SNR=2.8 comp=Z,1.9nm,0.5s							
NC303	**NORSAR Array S**	**42.11**	**322**	P		**P**	**05 42 42.2**	**+1.6**
NC303				IAmb		IAmb	05 42 47.1	
	comp=Z,12nm,1.1s							
NB2	**NORSAR Subarra**	**42.16**	**322**	P		**P**	**05 42 41.9**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=94,slow=8.6							
NOA	**NORSAR Array B**	**42.16**	**322**	P		**P**	**05 42 42.7**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=96,slow=8.3,SNR=11 comp=Z,2.4nm,0.7s							
TIXI	**Tiksi**	**44.25**	**23**	P		**P**	**05 42 57.6**	**-0

NNC 13 06:06:53.2±3.7, 38°57'N×69°73'E, h0km, mb3.6, mpv3.0, 7C, Error ellipse: s-maj=32.4km s-min=29.1km az=145.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.57**	**7**	⇑Pn	Pn	06 08 03.8	+0.3
	0.2nm,0.1s,baz=190,slow=11,SNR=7.7						
KK31				⇑Pg	Pg	06 08 17.8	-2.9
	1.8nm,0.5s,baz=162,slow=12,SNR=4.4						
KK31				⇑Sn	Sn	06 09 00.0	+2.6
	1.1nm,0.3s,baz=190,slow=30,SNR=6.4						
KK31				⇑Lg	Lg	06 09 17.1	
	10nm,0.6s,baz=189,slow=29,SNR=3.9						
AAK	**Ala-Archa**	**5.45**	**40**	⇑Pn	Pn	06 08 16.1	+0.3
	2.0nm,0.7s						
AAK				⇑Lg	Lg	06 09 42.5	
	3.0nm,0.7s						
AB31	**Akbulak array**	**12.79**	**330**	⇑P	Pn	06 09 54.5	-1.7
	0.6nm,0.4s,baz=264,slow=36,SNR=28						

RSNC 13 06:11:19.0±0.0, 7°N±1°×7°3W±°, h146km±1km, M2.9, mb3.1, ML2.5

FUNV 13 06:11:20.8, 7°13N×73°17W, h14km, MW3.5, Presumed earthquake

ISC 13 06:11:16.0±1.5, 6°87N±0°03×73°10W±0°05, h160km±9km, n28, σ1°69/55, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.29**	**197**	P	Pn	06 11 38.7	+0.7
BARC				S	Sn	06 11 53.7	-1.2
PAMC	**Pamplona, Colo**	**0.61**	**40**	P	Pn	06 11 41.5	+1.9
PAMC				S	Sn	06 11 58.6	+0.9
BRJC	**Barrancabermej**	**0.65**	**279**	P	Pn	06 11 40.4	+1.2
BRJC				S	Sn	06 11 57.4	+0.4
RUSC	**La Rusia**	**0.97**	**179**	P	Pn	06 11 42.6	+0.5
RUSC				S	Sn	06 12 01.1	-1.0
RUSC	**La Rusia**	**0.97**	**179**	*eP*	Pn	06 11 42.8	+0.7
RUSC				*eS*	Sn	06 11 59.4	-2.7
OCAC	**Ocana**	**1.38**	**351**	P	Pn	06 11 46.9	+1.6
OCAC				S	Sn	06 12 08.7	+0.9
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P	Pn	06 11 45.2	0.0
PTBC				S	Sn	06 12 05.9	-1.8
SPBC	**San Pablo de B**	**1.55**	**219**	P	Pn	06 11 47.6	+0.7
SPBC				S	Sn	06 12 09.3	-1.5
CHIC	**Chingaza**	**2.31**	**196**	P	Pn	06 11 56.8	+1.0
CHIC				S	Sn	06 12 26.0	-0.6
ROSC	**El Rosal**	**2.36**	**211**	P	Pn	06 11 58.5	+2.2
ROSC				S	Sn	06 12 26.6	-0.8
CVER	**Cruz Verde, Cu**	**2.53**	**203**	P	Pn	06 12 00.1	+1.7
CVER				S	Sn	06 12 31.2	0.0
UREC	**San Jos de Ur**	**2.57**	**290**	P	Pn	06 11 59.0	+0.6
UREC				S	Sn	06 12 29.8	-1.5
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P	Pn	06 12 03.7	+2.1
GUY2C				S	Sn	06 12 37.9	+1.1
VILC	**Villavicencio,**	**2.81**	**192**	P	Pn	06 12 02.2	+0.7
VILC				S	Sn	06 12 35.9	-0.9
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	Pn	06 12 06.8	+2.1
CBOC				S	Sn	06 12 41.8	-0.7
SDV	**Santo Domingo**	**3.16**	**50**	*eP*	Pn	06 12 07.3	+1.4
SDV				*eS*	Sn	06 12 43.0	-1.7
APAC	**Apartado, Choc**	**3.60**	**287**	P	Pn	06 12 12.1	+0.7
APAC				S	Sn	06 12 55.5	+1.1
PRAC	**Prado**	**3.61**	**210**	P	Pn	06 12 12.5	+1.0
PRAC				S	Sn	06 12 54.6	-0.1
SJCC	**San Jacinto, C**	**3.64**	**326**	P	Pn	06 12 12.7	+0.7
SJCC				S	Sn	06 12 53.9	-1.7
SJCC	**San Jacinto, C**	**3.64**	**326**	*eP*	Pn	06 12 12.9	+1.0
SJCC				*eS*	Sn	06 12 50.1	-5.5
PLMC	**San Jos del P**	**3.72**	**239**	P	Pn	06 12 14.4	+1.4
PLMC				S	Sn	06 12 56.6	-0.8
URMC	**La Uribe, Meta**	**3.82**	**200**	P	Pn	06 12 15.7	+1.4
URMC				S	Sn	06 12 59.0	-0.7
MACC	**Macarena, Meta**	**4.75**	**189**	P	Pn	06 12 25.8	-0.6
MACC				S	Sn	06 13 17.4	-4.0
URIC	**Uribia, Colomb**	**4.92**	**13**	P	Pn	06 12 29.1	+0.6
URIC				S	Sn	06 13 25.4	+0.1
URIC	**Uribia, Colomb**	**4.92**	**13**	*eP*	Pn	06 12 29.6	+1.0
URIC				*eS*	Sn	06 13 21.6	-3.7
GARC	**Garzon, Huila**	**5.23**	**207**	P	Pn	06 12 32.3	-0.6
GARC				S	Sn	06 13 29.7	-3.3
POPC	**Popayan, Colom**	**5.59**	**220**	P	Pn	06 12 38.2	+0.6
	2.0nm,1.8s						
BBAC	**Balboa, Cauca**	**6.35**	**221**	P	Pn	06 12 49.7	+2.0
BBAC				S	Sn	06 13 58.1	-1.5

NEIC 13 06:15:21.8±1.4, 6°12N±0°09×123°90E±0°10, h10km±1km, mb4.4/19, Error ellipse: s-maj=19.5km s-min=12.0km az=133.0

MAN 13 06:15:23.0, 6°25N×123°82E, h15km, MS4.0

MAN INTENSITY III - KALAMANSIG AND LEBAK SULTAN KUDARAT.

IDC 13 06:15:29.1±3.4, 6°23N×124°00E, h71km±33km, mb3.8/12, mbtmp4.1/12, MS4.0/1, Error ellipse: s-maj=29.9km s-min=13.7km az=69.0

DJA 13 06:15:31.3±2.2, 5°N±20°×12°4E±°, h212km±15km, M4.4/9, mB5.2/3, mb4.3/7, MLv4.4/9, Mw(mB)4.5/3

ISC 13 06:15:25.5±0.6, 6°18N±0°04×123°83E±0°03, h39km±3km, n64, σ1°68/74, mb4.3/22, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.11**	**94**	*i* P	Pn	06 15 50.6	+6.0
GSPH				*i* S	Sn	06 16 05.2	+6.3
CTBH	**Cotabato--PC H**	**1.12**	**21**	*eP*	Pn	06 15 42.4	-2.2
CTBH				*i* S	Sn	06 15 56.0	-2.8
KCP	**Kidapawan**	**1.50**	**56**	*i* P	Pn	06 15 48.6	-1.3
KCP				*i* S	Sn	06 16 06.2	-2.0
PAGZ	**Pagadian**	**1.72**	**345**	*i* P	Pn	06 15 51.2	-1.7
PAGZ				*eS*	Sn	06 16 11.5	-2.2
DDMP	**Don Marcelino,**	**1.87**	**92**	*i* P	Pn	06 15 55.6	+0.7
DDMP				*i* S	Sn	06 16 19.5	+2.2
DMPH	**Davao City--Mi**	**1.89**	**61**	*i* P	Pn	06 15 55.9	+0.6
DMPH				*i* S	Sn	06 16 17.5	-0.4
ZCP	**Zamboanga City**	**1.90**	**293**	*i* P	Pn	06 15 56.0	+0.6
ZCP				*i* S	Sn	06 16 18.0	-0.2
DAV	**Davao City (W)**	**1.95**	**63**	P	Pn	06 15 55.6	-0.4
	468nm,0.5s,baz=219,slow=5.2,SNR=5.0						
DAV				S	Sn	06 16 20.1	+0.8
	563nm,0.5s,baz=325,slow=21,SNR=5.6						
DAV				LR	LR	06 17 02.0	
	comp=Z,959nm,18.2s,baz=300,slow=52						
DAV	**Davao City (W)**	**1.95**	**63**	Pn	Pn	06 15 54.7	-1.3
DAV	**Davao City (W)**	**1.95**	**63**	P	Pn	06 15 54.0	-2.0
IPIL	**Ipil**	**2.04**	**322**	*i* P	Pn	06 15 57.1	-0.1
IPIL				*eS*	Sn	06 16 18.5	-2.9
BUKP	**Musuan**	**2.09**	**36**	*eP*	Pn	06 15 57.7	-0.3
BUKP				*eS*	Sn	06 16 20.5	-2.3
CGP	**Cagayan de Oro**	**2.42**	**21**	*i* P	Pn	06 16 03.0	+0.4
CGP				*i* S	Sn	06 16 36.6	+5.6
DCPH	**Dipolog City**	**2.44**	**349**	*eP*	Pn	06 16 02.3	-0.6
LSIP	**Lazi, Siquijor**	**2.94**	**356**	*i* P	Pn	06 16 13.0	+3.3
LSIP				*i* S	Sn	06 16 45.6	+1.7
SGSI	**Sangihe**	**2.99**	**146**	P	Pn	06 16 10.5	+0.1
CDOP	**Cateel, Davao**	**3.04**	**58**	*i* P	Pn	06 16 05.3	-5.7
CDOP				*i* S	Sn	06 16 43.0	-3.2
SNPH	**Sibulan**	**3.20**	**349**	*eP*	Pn	06 16 17.7	+4.3
SNPH				*eS*	Sn	06 16 53.0	+2.7
BIPH	**Bislig**	**3.21**	**51**	*eP*	Pn	06 16 12.9	-0.4
BIPH				*eS*	Sn	06 16 49.3	-1.0
LLP	**Lapu-Lapu**	**4.12**	**2**	*eP*	Pn	06 16 35.5	+10
LLP				*i* S	Sn	06 17 15.1	+2.3
MNI	**Manado**	**4.80**	**168**	P	Pn	06 16 33.1	-2.3
GTOI	**Gorontalo**	**5.56**	**189**	P	Pn	06 16 45.0	-0.8
TOLI2	**Tolitoli**	**5.88**	**211**	Pn	Pn	06 16 49.3	-0.8
TARAI	**Tarakan**	**6.85**	**246**	P	Pn	06 17 04.5	+1.0
LUWI	**Luwuk**	**7.25**	**188**	P	Pn	06 17 04.0	-4.9
CMAR	**Chiang Mai Arr**	**27.16**	**299**	P	P	**06 21 07.2**	**+1.7**
	1.0nm,0.4s,baz=117,slow=6.8,SNR=7.0						
	1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**27.16**	**299**	P	P	**06 21 06.0**	**+0.6**
ENH	**Enshi**	**27.51**	**332**	P	P	**06 21 09.2**	**+0.7**
ENH				IAmb	IAmb	06 21 11.2	
	comp=Z,16nm,1.3s						
COEN	**Coen**	**27.72**	**136**	P	P	**06 21 10.2**	**-0.3**
WB0	**Warramunga Arr**	**27.80**	**158**	P	P	**06 21 10.3**	**-0.8**
WB0				IAmb	IAmb	06 21 13.8	
	comp=Z,5.3nm,1.0s						
WRA	**Warramunga Arr**	**27.94**	**159**	P	P	**06 21 13.2**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=333,slow=11,SNR=4.6						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**27.94**	**159**	P	P	**06 21 10.2**	**-2.1**
AS31	**Alice Springs**	**31.25**	**162**	P	P	**06 21 40.3**	**-1.4**
ASAR	**Alice Springs**	**31.25**	**162**	P	P	**06 21 42.8**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=343,slow=7.1,SNR=8.4						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**31.25**	**162**	P	P	**06 21 40.1**	**-1.5**
SHL	**Shillong**	**36.11**	**306**	P	P	**06 22 25.4**	**+1.2**
EVN	**Everest**	**41.23**	**306**		P	**06 23 07.4**	**-0.2**
EVN				IAmb	IAmb	06 23 11.6	
	comp=Z,6.8nm,0.7s						
STKA	**Stephens Creek**	**41.46**	**157**	P	P	**06 23 09.2**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=341,slow=5.4,SNR=4.4						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**44.11**	**343**	P	P	**06 23 30.4**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=171,slow=9.4,SNR=6.7						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**44.11**	**343**	P	P	**06 23 30.1**	**0.0**
TLY	**Talaya**	**48.35**	**343**	P	P	**06 24 03.6**	**+0.4**
	comp=Z,4.7nm,0.5s,baz=158,slow=9.0,SNR=3.1						
	comp=Z,4.7nm,0.5s						
TLY	**Talaya**	**48.35**	**343**	P	P	**06 24 03.6**	**+0.4**
MKAR	**Makanchi Array**	**53.92**	**326**	P	P	**06 24 46.7**	**+1.5**
	comp=Z,2.7nm,0.8s,baz=131,slow=8.5,SNR=20						
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**53.92**	**326**	P	P	**06 24 46.1**	**+0.9**
MAKZ	**Makanchi**	**54.10**	**326**	P	P	**06 24 47.3**	**+0.8**
MAKZ				IAmb	IAmb	06 24 49.1	
	comp=Z,3.7nm,1.0s						
PEA0B	**Petropavlovsk-**	**54.34**	**24**	P	P	**06 24 47.6**	**-0.5**
PEA0B				IAmb	IAmb	06 25 15.4	
	comp=Z,8.9nm,1.0s						
PETK	**Petropavlovsk-**	**54.34**	**24**	LR	LR	06 48 34.3	
	comp=Z,152nm,19.9s,baz=194,slow=37						
PETK	**Petropavlovsk-**	**54.34**	**24**	P	P	**06 24 48.0**	**-0.1**
ZALV	**Zalesovo Beam**	**57.12**	**334**	P	P	**06 25 07.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=2.2						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**57.12**	**334**	P	P	**06 25 08.8**	**+0.8**
KURBB	**Kurchatov Arra**	**58.14**	**328**	P	P	**06 25 15.8**	**+0.6**
	comp=Z,3.7nm,0.2s,baz=126,slow=6.3,SNR=14						
	comp=Z,3.7nm,0.2s						
KURK	**Kurchatov**	**58.15**	**328**	P	P	**06 25 15.7**	**+0.4**
KURK				IAmb	IAmb	06 25 17.4	
	comp=Z,4.0nm,0.7s						
J20K	**Nowinta River**	**81.00**	**26**	P	P	**06 27 36.6**	**+0.7**
J20K				IAmb	IAmb	06 27 58.8	
	comp=Z,3.2nm,1.4s						
MLY	**Manley**	**82.51**	**25**	P	P	**06 27 44.0**	**0.0**
ILAR	**Eielson Array**	**84.15**	**26**	P	P	**06 27 51.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=238,slow=4.2,SNR=5.9						
	comp=Z,0.5nm,0.7s						
I26K	**Coal Creek Min**	**85.70**	**25**	P	P	**06 28 00.1**	**0.0**
I26K				IAmb	IAmb	06 28 00.7	
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**86.21**	**172**	P	P	**06 28 01.1**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=0.0,slow=2.0,SNR=7.0						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**86.21**	**172**	P	P	**06 28 01.3**	**-1.0**
VNDA				IAmb	IAmb	06 28 16.2	
	comp=Z,2.4nm,1.2s						
I27K	**Kandik River**	**86.31**	**25**	P	P	**06 28 03.0**	**-0.2**
I27K				IAmb	IAmb	06 28 09.6	
	comp=Z,5.2nm,1.3s						
BCAR	**Beaver Creek A**	**86.53**	**27**	P	P	**06 28 04.3**	**0.0**
I28M	**Miner Creek**	**87.02**	**25**	P	P	**06 28 06.9**	**+0.2**
I28M				IAmb	IAmb	06 28 07.6	
	comp=Z,1.6nm,0.8s						
FIA1	**FINESS Array S**	**88.32**	**332**	P	P	**06 28 12.6**	**-0.3**
FINES	**FINESS Array B**	**88.33**	**332**	P	P	**06 28 11.9**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=29,slow=4.4,SNR=7.4						
	comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	**88.33**	**332**	P	P	**06 28 12.6**	**-0.3**

ASRS 13 06:15:27.0±0.9, 54°23N×86°23E, h0km, M3.1(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.

IDC 13 06:15:29.9±2.5, 54°30N×86°21E, h0km, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=19.3km s-min=12.1km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**247**	I	I	06 20 40.0	
	baz=67,slow=317,SNR=3.4						
ZALV	**Zalesovo Beam**	**0.89**	**247**	Pg	Pg	06 15 45.0	-1.9
	3.6nm,0.3s,baz=69,slow=16,SNR=32						
ZALV				Lg	Lg	06 15 59.9	
	11nm,0.3s,baz=69,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**5.96**	**235**	Pn	Pn	06 17 00.3	+1.0
	0.5nm,0.3s,baz=51,slow=13,SNR=6.9						
KURBB				Lg	Lg	06 18 39.5	
	0.2nm,0.3s,baz=51,slow=33,SNR=4.3						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**7.92**	**200**	Pn	Pn	06 17 27.0	+0.8
	0.6nm,0.3s,baz=20,slow=13,SNR=21						
MKAR				Sn	Sn	06 18 57.5	+1.1
	0.1nm,0.3s,baz=19,slow=28,SNR=4.0						
MKAR				Lg	Lg	06 19 41.2	
	0.1nm,0.3s,baz=16,slow=23,SNR=3.8						
	0.9nm,0.2s						

IDC 13 06:22:23.7±0.9, 38°38N×69°87E, h0km, mb3.9/12, mbtmp4.0/19, ML3.8/5, MS3.7/3, Error ellipse: s-maj=15.0km s-min=11.6km az=158.0

MOS 13 06:22:24.7±0.9, 38°52N×69°73E, h10km, mb4.7/5, Error ellipse: s-maj=9.3km s-min=6.3km az=82.3

NNC 13 06:22:25.2±2.5, 38°40N×69°62E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=21.8km s-min=15.0km az=154.0

NEIC 13 06:22:27.4±1.8, 38°52N±0°03×69°80E±0°05, h10km±1km, mb4.5/8, Error ellipse: s-maj=7.6km s-min=4.1km az=308.0

ISC 13 06:22:26.1±0.5, 38°58N±0°04×69°65E±0°04, h12km, n92, σ2°37/97, mb4.3/17, 3C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGR	**Chuyangaron**	**0.39**	**281**	PG	Pn	**06 22 36.8**	**-0.9**
CHGR	**Chuyangaron**	**0.39**	**281**		Pn	**06 22 36.8**	**-0.9**
GAR	**Garm**	**0.67**	**51**	Pg	Pg	**06 22 37.0**	**-2.0**
SHAA	**Shahritus**	**1.58**	**230**		Pg	**06 22 57.3**	**+1.0**
BTK	**Batken**	**1.73**	**31**	PN	Pn	**06 22 57.6**	**+1.6**
BTK	**Batken**	**1.73**	**31**		Pn	**06 22 57.6**	**+1.6**
DRK	**Karamyk**	**1.90**	**61**	PN	Pn	**06 22 59.3**	**+0.7**
DRK	**Karamyk**	**1.90**	**61**		Pn	**06 22 59.3**	**+0.7**
MANEM	**Manem**	**1.91**	**122**	Pn	Pn	**06 22 58.1**	**-0.5**
IUG	**Iuzhnay**	**3.57**	**5**	Pg	Pn	**06 23 25.6**	**+4.2**
	126nm,0.7s						
IUG				Lg	Lg	06 24 12.4	
	489nm,0.5s						
ARSB	**Arslanbob**	**3.75**	**42**	PN	Pn	**06 23 24.9**	**+1.1**
ARSB	**Arslanbob**	**3.75**	**42**	Pn	Pn	**06 23 24.9**	**+1.1**
KBL	**Kabul**	**4.06**	**187**	PN	Pn	**06 23 28.6**	**+0.4**
KBL	**Kabul**	**4.06**	**187**	Pn	Pn	**06 23 28.6**	**+0.4**
DZA	**Taraz**	**4.49**	**16**	Pg	Pn	**06 23 37.7**	**+3.7**
	115nm,0.1s						
DZA				Lg	Lg	06 24 33.4	
	345nm,0.4s						
KK31	**Karatay Array**	**4.56**	**8**	Pn	Pn	**06 23 38.9**	**+4.0**
	4.3nm,0.5s,baz=196,slow=16,SNR=77						
KK31				⇓Pg	Pg	**06 23 53.0**	**-0.4**
	38nm,0.8s,baz=191,slow=16,SNR=6.9						
KK31				⇓Sn	Sb	**06 24 37.5**	**-3.5**
	90nm,0.6s,baz=192,slow=32,SNR=7.0						
KK31				⇓Lg	Lg	06 24 55.2	
	103nm,0.8s,baz=189,slow=31,SNR=4.2						
KK31	**Karatay Array**	**4.56**	**8**	PN	Pn	**06 23 37.3**	**+2.4**
KK31	**Karatay Array**	**4.56**	**8**		Pn	**06 23 37.3**	**+2.4**
KKAR	**Karatay Array**	**4.56**	**8**	PN	Pn	**06 23 37.1**	**+2.1**
KKAR	**Karatay Array**	**4.56**	**8**	Pn	Pn	**06 23 37.1**	**+2.1**
KSH2	**Kashi**	**4.65**	**81**	Pn	Pn	**06 23 40.8**	**+4.5**
KSH2				Sn	Sn	**06 24 36.8**	**+6.6**
KSH2				smax	smax		
	comp=N,140nm,0.9s						
KSH2				smax	smax		
	comp=E,110nm,0.9s						
MRKS	**Merke**	**4.97**	**32**	Pg	Pn	**06 23 42.9**	**+2.3**
	comp=E,26nm,0.4s						
MRKS				Lg	Lg	06 24 41.8	
	comp=E,72nm,0.7s						
EKS2	**Erkin-Say**	**5.14**	**36**	P	Pn	**06 23 47.8**	**+4.8**
	SNR=18						
UCH	**Uchtor**	**5.20**	**44**	P	Pn	**06 23 45.2**	**+1.1**
	SNR=16						
AAK	**Ala-Archa**	**5.48**	**41**	Pn	Pn	**06 23 49.4**	**+1.8**
	comp=E,4.7nm,0.3s,baz=213,slow=7.1,SNR=18						
AAK				Sn	Sn	**06 24 51.6**	**+1.0**
	comp=E,1.5nm,0.3s,baz=247,slow=22,SNR=3.7						
AAK				Lg	Lg	06 25 16.3	
	comp=E,2.6nm,0.3s,baz=352,slow=22,SNR=6.9						
	comp=E,19nm,0.5s						
AAK	**Ala-Archa**	**5.48**	**41**	P	Pn	**06 23 49.7**	**+2.1**
	SNR=18						
AAK	**Ala-Archa**	**5.48**	**41**	⇑Pn	Pn	**06 23 50.0**	**+2.4**
	comp=E,15nm,0.7s						
AAK				⇑Sn	Sn	**06 24 57.0**	**+6.4**
	comp=E,13nm,0.7s						
AAK				⇑Lg	Lg	06 25 23.1	
	comp=E,62nm,1.0s						
AAK	**Ala-Archa**	**5.48**	**41**		Pn	**06 23 50.2**	**+2.6**
NRN	**Naryn**	**5.64**	**58**	PN	Pn	**06 23 49.3**	**-0.8**
NRN	**Naryn**	**5.64**	**58**		Pn	**06 23 49.3**	**-0.8**
NIL	**Nilore**	**5.72**	**148**	PN	Pn	**06 23 51.3**	**+0.5**
NIL	**Nilore**	**5.72**	**148**	Pn	Pn	**06 23 51.3**	**+0.5**
KBK	**Karagaybulak**	**5.73**	**43**	P	Pn	06 23 56.1	+5.0
	SNR=10.0						
USP	**Ospenovka**	**5.95**	**37**	P	Pn	**06 23 58.7**	**+4.7**
	SNR=9.7						
ULHL	**Ulahol**	**6.22**	**52**	P	Pn	**06 23 58.3**	**+0.4**
	SNR=8.4						
TKM2	**Tokmak 2**	**6.26**	**44**	P	Pn	**06 23 59.7**	**+1.3**
	SNR=28						
KST	**Kastek**	**6.54**	**45**	Pg	Pn	**06 24 06.4**	**+4.2**
	comp=E,3.1nm,0.6s						
KST				Lg	Lg	06 25 23.0	
	comp=E,22nm,0.6s						
KDJ	**Kajisay**	**6.75**	**56**	PN	Pn	**06 24 06.2**	**+1.1**
KDJ	**Kajisay**	**6.75**	**56**	Pn	Pn	**06 24 06.2**	**+1.1**
TARG	**Taragay, Kyrgy**	**6.99**	**61**	PN	Pn	**06 24 09.7**	**+1.1**
TARG	**Taragay, Kyrgy**	**6.99**	**61**	Pn	Pn	**06 24 09.7**	**+1.1**
TNSS	**Tian-Shan**	**7.10**	**49**	Pg	Pn	**06 24 10.6**	**+0.5**
	comp=E,2.1nm,0.4s						
TNSS				Lg	Lg	06 25 29.5	
	comp=E,3.8nm,0.7s						
MDOK	**Medeo**	**7.23**	**48**	Pg	Pn	**06 24 14.5**	**+2.7**
	comp=E,16nm,0.3s						
MDOK				Lg	Lg	06 25 35.6	
	comp=E,13nm,0.5s						
DHRM	**DHARAMSHALA**	**8.32**	**137**	*eP*	Pn	**06 24 28.8**	**+2.0**
DHRM				*eS*	Sn	**06 25 56.1**	**-4.7**
DHRM				IAML		06 26 07.8	
	comp=E,24nm,0.6s						
DHRM				IAML		06 26 10.3	
	comp=N,36nm,0.6s						
PDGK	**Podgornoye**	**8.82**	**54**	P	Pn	**06 24 34.2**	**+0.7**
PDGK	**Podgornoye**	**8.82**	**54**		Pn	**06 24 34.2**	**+0.7**
MKAR	**Makanchi Array**	**12.39**	**44**	Pn	Pn	**06 25 22.4**	**+0.2**
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=11						
	comp=N,3.1nm,0.9s						
AB31	**Akbulak array**	**12.75**	**330**	⇓P	Pn	**06 25 29.2**	**+2.2**
	comp=N,2.5nm,0.5s,baz=157,slow=12,SNR=61						
AB31	**Akbulak array**	**12.75**	**330**		Pn	**06 25 26.7**	**-0.4**
ABKAR	**Akbulak array**	**12.75**	**330**		Pn	**06 25 26.8**	**-0.2**
KURBB	**Kurchatov Arra**	**13.59**	**25**	Pn	Pn	**06 25 37.7**	**-0.8**
	comp=N,2.2nm,0.2s,baz=213,slow=12,SNR=2.4						
KURBB				Lg	Lg	06 29 31.4	
	comp=N,0.1nm,0.3s,baz=212,slow=29,SNR=4.8						
KURK	**Kurchatov**	**13.69**	**25**	P	Pn	**06 25 37.7**	**-2.2**
AKTO	**Aktyubinsk**	**14.45**	**329**	Pn	Pn	**06 25 50.4**	**+0.1**
	comp=N,0.7nm,0.3s,baz=136,slow=14,SNR=9.9						
AKTO				Sn	Sn	**06 28 25.2**	**-5.0**
	comp=N,0.1nm,0.3s,baz=182,slow=21,SNR=1.5						
AKTO				LR	LR	06 31 58.8	
	comp=N,80nm,18.9s,baz=54,slow=39						
	comp=N,2.7nm,0.5s						
AKTO	**Aktyubinsk**	**14.45**	**329**	⇓P	Pn	**06 25 52.2**	**+2.0**
	comp=N,5.3nm,0.8s						
BVAR	**Borovoye Array**	**14.46**	**2**	Pn	Pn	**06 25 49.0**	**-1.3**
	comp=N,2.2nm,0.6s,baz=172,slow=12,SNR=7.7						
WMQ	**Urumqi**	**14.55**	**63**	*eP*	Pn	**06 25 54.4**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAK	**Makhachkala**	**17.32**	**292**	*eP*	Pn	**06 26 23.9**	**-3.7**
MAK				*eS*	Sn	**06 29 34.9**	**-5.3**
MAK				pmax	pmax		
	comp=Z,40nm,0.4s						
MAK				MLR	MLR		
	comp=Z,161nm,15.0s						
EVN	**Everest**	**17.81**	**121**		Pn	**06 26 32.9**	**-1.5**
EVN				IAmb	IAmb	06 26 38.3	
	comp=Z,8.8nm,0.7s						
ZAA0	**Zalesovo Array**	**18.54**	**29**		P	**06 26 40.8**	**-1.6**
ZALV	**Zalesovo Beam**	**18.54**	**29**	P	P	**06 26 41.2**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=229,slow=11,SNR=12						
	comp=Z,2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**18.54**	**29**		P	**06 26 39.9**	**-2.5**
ARTI	**Arti**	**19.33**

comp=Z,1.1nm,0.6s
WRA Warramunga Arr 83.99 121 P **P** **06 34 55.1 -1.3**
WRA Warramunga Arr 83.99 121 P **P** **06 34 55.1 -1.3**
WR8 Warramunga Arr 84.11 121 P **P** **06 34 55.4 -1.6**
WR8 IAmb IAmb 06 35 03.1
comp=Z,13nm,1.4s
ASAR Alice Springs 86.31 124 P **P** **06 35 06.4 -1.6**
comp=Z,0.6nm,0.6s,baz=310,slow=4.9,SNR=8.0
comp=Z,0.6nm,0.6s
ULM Lac du Bonnet 90.63 351 LR LR 07 18 15.0
comp=Z,95nm,22.0s,baz=306,slow=37

BJI **13** *06:22:26.0, 11˚.72N×140˚.47E, h10km, mB5.0/14, mb4.7/53, Ms4.6/49, Ms7 4.4/50*
IDC **13** *06:22:28.6±0.5, 11˚.99N×140˚.23E, h0km, mb4.3/28, mbtmp4.3/31, ML4.3/3, MS4.2/56, Error ellipse: s-maj=16.1km s-min=11.3km az=82.0*
NEIC **13** *06:22:31.7±1.6, 12˚.04N±0˚.09×140˚.21E±0˚.09, h10km±1km, mb5.1/148, Mww5.0/15, Error ellipse: s-maj=16.7km s-min=14.2km az=129.0*
NEIC **13** *06:22:31.8, 12˚.05N×140˚.23E, h10km*
GFZ **13** *06:22:32.7±0.2, 12˚N±3˚×14˚0E±˚, h10km, M4.9/33, mb5.2/33, Error ellipse: s-maj=8.3km s-min=6.0km az=86.2, confirmed*
GFZ **13** *06:22:32.7, 12˚.09N×140˚.07E, h19km, Mw5.0/24, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=0.14; Mθθ=0.51; Mϕϕ=-0.37; Mrθ=0.10; Mθϕ=3.54; Mϕr=0.16; Fault plane solution: M0=3.57147×10^16 NP1:ϕs=93.54931°, δ=87.36299°, λ=1.24882°. NP2:ϕs=3.49184°, δ=88.75250°, λ=177.36236°. Principal axes: T 3.6425, Plg2.7471°, Azm318.4970°; N -0.1467, Plg87.0824°, Azm158.1970°; P -3.4959, Plg0.9820°, Azm48.5441°;*
GCMT **13** *06:22:33.7±0.2, 12˚.02N±0˚.01×140˚.05E±0˚.01, h12km±1km, MW5.0/125, Moment Tensor Solution. s57,c70; s125,c196; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.39±.08; Mθθ=0.54±.08; Mϕϕ=-0.14±.07; Mrθ=0.43±.21; Mθϕ=3.44±.08; Mϕr=0.73±.21; Best double couple: M0=3.57100×10^16 NP1:ϕs=92.00000°, δ=78.00000°, λ=-9.00000°. NP2:ϕs=184.00000°, δ=81.00000°, λ=-168.00000°. Principal axes: T 3.6600, Plg2.0000°, Azm318.0000°; N -0.1770, Plg75.0000°, Azm218.0000°; P -3.4820, Plg15.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **13** *06:22:33.3, 12˚.05N×140˚.13E, h12km, Moment Tensor Solution. Duration: 1ŝ6 Moment tensor: Scale 10^16 Nm; Mrr=0.17; Mθθ=0.08; Mϕϕ=0.09; Mrθ=-0.78; Mθϕ=3.27; Mϕr=0.67; Fault plane solution: M0=3.43000×10^16 NP1: ϕs=181.23000°, δ=77.09000°, λ=-168.73000°. NP2: ϕs=88.68000°, δ=79.02000°, λ=-13.15000°. Principal axes: T 3.3600, Plg1.0000°, Azm135.0000°; N 0.1436, Plg73.0000°, Azm229.0000°; P -3.5036, Plg17.0000°, Azm45.0000°;*
DJA **13** *06:22:50.0±0.5, 12˚N±3˚×13˚9E±˚, h10km, M5.2/62, mB5.7/32, mb5.3/62, Mw(mB)5.2/32, MwMwp5.8/1, Mwp5.9/1*

ISC 13 06:22:32.2±0.3, 12˚.11N±0˚.04×140˚.33E±0˚.05, h10km, n516, σ1ŝ73/407, mb5.0/143, MS4.3/73, 3D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.67**	**71**	Pn	**Pn**	**06 23 44.1**	**+1.3**
	13nm,0.3s,baz=195,slow=4.2,SNR=5.8						
GUMO				Sn	**Sn**	**06 24 38.5**	**+1.4**
	19nm,0.3s,baz=183,slow=23,SNR=0.9						
GUMO				LR	LR	06 25 33.4	
	comp=Z,4μm,18.5s,baz=234,slow=39						
	52nm,0.2s						
GUMO	**Guam**	**4.67**	**71**		**Pn**	**06 23 43.1**	**+0.3**
GUMO	**Guam**	**4.67**	**71**	P	**Pn**	**06 23 44.1**	**+1.3**
BAKI	**Biak**	**13.86**	**198**	P	**P**	**06 25 55.5**	**-1.8**
	2μm77nm,1.4s						
SMPI	**Sarmi**	**14.10**	**187**	P	**Pn**	**06 25 53.7**	**+1.6**
JAY	**Jayapura**	**14.53**	**179**	Pn	Pn	06 25 54.2	-3.9
	1.4nm,0.3s,baz=24,slow=6.5,SNR=5.6						
JAY				LR	LR	06 30 50.2	
	comp=Z,794nm,18.9s,baz=12,slow=35						
	18nm,0.9s						
JAY	**Jayapura**	**14.53**	**179**	P	**P**	**06 26 08.3**	**+3.5**
	42nm,0.6s						
GENI	**Genyem**	**14.60**	**181**	P	**P**	**06 26 08.5**	**+3.0**
	2μm219nm,1.0s						
GENI	**Genyem**	**14.60**	**181**	P	**Pn**	**06 25 59.8**	**+0.8**
DAV	**Davao City (W)**	**15.38**	**252**	LR	LR	06 30 13.1	
	comp=Z,1μm,21.0s,baz=139,slow=30						
MANU	**Manus Island**	**15.70**	**153**		**Pn**	**06 26 09.4**	**-4.3**
SIJI	**Sorong**	**15.72**	**216**	Pn	**Pn**	**06 26 09.5**	**-4.5**
	1.0nm,0.3s,baz=6.7,slow=15,SNR=6.5						
SIJI				LR	LR	06 30 53.9	
	comp=Z,2μm,20.4s,baz=42,slow=32						
	6.1nm,0.5s						
SIJI	**Sorong**	**15.72**	**216**	P	**Pn**	**06 26 10.8**	**-3.2**
GAMI	**Galela, Maluku**	**16.08**	**232**	P	**Pn**	**06 26 16.9**	**-1.7**
	3μm198nm,1.2s						
SGSI	**Sangihe**	**16.87**	**241**	P	Pn	06 26 13.0	-16
FAKI	**Fak Fak**	**16.95**	**209**		**Pn**	**06 26 27.0**	**-2.7**
FAKI	**Fak Fak**	**16.95**	**209**	P	**P**	**06 26 38.7**	**+7.1**
TNTI	**Ternate**	**17.09**	**230**	P	**Pn**	**06 26 29.6**	**-1.9**
PATS	**Pohnpei**	**18.49**	**105**	P	Pn	06 26 57.4	+8.6
	comp=Z,135nm,1.6s						
JOW	**Kunigami**	**18.52**	**324**	LR	LR	06 32 25.5	
	comp=Z,1μm,19.9s,baz=172,slow=32						
JOW	**Kunigami**	**18.52**	**324**	P	**P**	**06 26 47.7**	**-1.2**
JOW	**Kunigami**	**18.52**	**324**	P	**P**	**06 26 48.6**	**-0.3**
TGY	**Tagaytay City**	**18.99**	**278**	LR	LR	06 35 07.4	
	comp=Z,292nm,18.3s,baz=46,slow=40						
RABL	**Rabaul**	**20.01**	**143**	P	**P**	**06 27 05.6**	**+0.2**
SANI	**Sanana**	**20.02**	**226**	P	**P**	**06 27 07.0**	**+1.6**
	comp=Z,2μmcomp=Z,112nm,1.4s						
SANI	**Sanana**	**20.02**	**226**	P	**P**	**06 27 02.3**	**-3.2**
KRVT	**Keravat (AS076**	**20.03**	**144**	LR	LR	06 33 29.9	
	comp=Z,153nm,20.4s,baz=250,slow=33						
NLAI	**Namlea**	**20.13**	**222**	P	Pn	06 27 15.2	+6.7
YOJ	**Yonaguni jima**	**20.50**	**309**	P	**P**	**06 27 09.3**	**-1.3**
YOJ				IAmb	IAmb	06 27 19.7	
	comp=Z,92nm,1.1s						
YOJ	**Yonaguni jima**	**20.50**	**309**	P	**P**	**06 27 09.8**	**-0.8**
GTOI	**Gorontalo**	**20.62**	**238**	P	**P**	**06 27 10.1**	**-1.8**
	comp=Z,1μmcomp=Z,135nm,1.2s						
JHJ	**Hachijo jima 2**	**20.92**	**359**	LR	LR	06 33 36.9	
	comp=Z,550nm,20.0s,baz=206,slow=32						
TWG	**Pinlang**	**21.21**	**303**	P	**P**	**06 27 16.5**	**-1.8**
TWG				IAmb	IAmb	06 27 34.4	
	comp=Z,136nm,1.2s						
TWG	**Pinlang**	**21.21**	**303**	P	**P**	**06 27 15.8**	**-2.5**
YULB	**Yu-li**	**21.29**	**304**		**P**	**06 27 17.4**	**-1.8**
YULB				IAmb	IAmb	06 27 32.3	
	comp=Z,82nm,1.2s						
YULB	**Yu-li**	**21.29**	**304**	P	**P**	**06 27 18.5**	**-0.7**
JSU	**Suzuyama**	**21.35**	**336**		**P**	**06 27 19.2**	**-0.5**
JSU	**Suzuyama**	**21.35**	**336**	P	**P**	**06 27 19.9**	**+0.2**
SSLB	**Suanglung**	**21.76**	**305**		**P**	**06 27 22.4**	**-1.8**
SSLB				IAmb	IAmb	06 27 32.3	
	comp=Z,90nm,1.0s						
SSLB	**Suanglung**	**21.76**	**305**	P	**P**	**06 27 23.5**	**-0.7**
LUWI	**Luwuk**	**21.79**	**234**	P	**P**	**06 27 21.1**	**-3.5**
LUWI	**Luwuk**	**21.79**	**234**	P	**P**	**06 27 27.1**	**+2.6**
LUWI	**Luwuk**	**21.79**	**234**	P	**P**	**06 27 23.2**	**-1.3**
TPUB	**Ta-pu**	**21.79**	**303**	P	**P**	**06 27 22.2**	**-2.4**
TPUB				IAmb	IAmb	06 27 33.4	
	comp=Z,88nm,1.0s						
TPUB	**Ta-pu**	**21.79**	**303**	P	**P**	**06 27 22.5**	**-2.1**
YHNB	**Yeheng**	**21.87**	**307**	P	**P**	**06 27 23.7**	**-1.7**
YHNB				IAmb	IAmb	06 27 38.2	
	comp=Z,46nm,0.9s						
YHNB	**Yeheng**	**21.87**	**307**	P	**P**	**06 27 24.1**	**-1.3**
TOLI2	**Tolitoli**	**22.25**	**242**		**P**	**06 27 26.0**	**-3.5**
TOLI2	**Tolitoli**	**22.25**	**242**	P	**P**	**06 27 26.1**	**-3.5**
PMG	**Port Moresby**	**22.42**	**162**	LR	LR	06 36 29.4	
	comp=Z,761nm,18.0s,baz=334,slow=38						
KDI	**Kendari**	**23.76**	**229**	P	**P**	**06 27 50.0**	**+4.9**
KNMB	**Chin-men Tao**	**24.14**	**304**	P	**P**	**06 27 47.2**	**-1.5**
QZH2	**Quanzhou**	**24.20**	**305**	P	**P**	**06 27 53.8**	**+4.7**
QZH2				S	**S**	**06 32 13.1**	**+5.6**
QZH2				pmax	pmax		
	comp=Z,43nm,0.9s						
QZH2				LR	LR		
	comp=N,560nm,13.2s						
QZH2				LR	LR		
	comp=E,560nm,10.2s						
QZH2				LR	LR		
	comp=Z,730nm,21.2s						
MJAR	**Matsushiro Arr**	**24.41**	**356**	P	**P**	**06 27 49.7**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=162,slow=10,SNR=5.0						
MJAR				LR	LR	06 36 27.6	
	comp=Z,362nm,19.0s,baz=156,slow=34						
	comp=Z,0.4nm,0.3s						
KKM	**Kota Kinabalu**	**24.55**	**258**	P	**P**	**06 27 50.2**	**-2.4**
KKM	**Kota Kinabalu**	**24.55**	**258**	P	**P**	**06 27 50.7**	**-1.9**
	comp=Z,940nmcomp=Z,117nm,1.0s						
KKM	**Kota Kinabalu**	**24.55**	**258**	P	**P**	**06 27 50.3**	**-2.3**
MMSI	**Mamuju**	**25.87**	**237**	P	**P**	**06 28 10.4**	**+6.0**
SSE	**Sheshan**	**25.88**	**320**	P	**P**	**06 28 02.3**	**-2.0**
SSE				S	**S**	**06 32 32.9**	**-1.4**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,67nm,3.6s						
SSE				L	L		
	comp=Z,240nm,20.2s						
SSE				L	L		
	comp=Z,340nm,19.9s						
KAPI	**Kappang**	**26.61**	**231**	LR	LR	06 37 46.0	
	comp=Z,238nm,19.0s,baz=45,slow=35						
SOEI	**Soe**	**26.95**	**217**	P	**P**	**06 28 12.6**	**-1.7**
SOEI	**Soe**	**26.95**	**217**	P	**P**	**06 28 20.9**	**+6.6**
	comp=Z,170nm,1.0s						
SOEI	**Soe**	**26.95**	**217**	P	**P**	**06 28 12.2**	**-2.1**
KSRS	**Korea Array**	**27.58**	**338**	P	**P**	**06 28 16.4**	**-3.1**
	comp=Z,1.7nm,0.8s,baz=171,slow=8.9,SNR=4.1						
KSRS				LR	LR	06 37 43.5	
	comp=Z,677nm,21.2s,baz=150,slow=33						
	comp=Z,1.7nm,0.8s						
BATI	**Baumata**	**27.67**	**217**	P	**P**	**06 28 15.5**	**-5.1**
	comp=Z,44nm,0.6s,baz=213,slow=13,SNR=4.3						
BATI				LR	LR	06 38 27.7	
	comp=Z,629nm,19.2s,baz=41,slow=35						
NJ2	**Nanjing**	**28.00**	**319**	*e*P	**P**	**06 28 23.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
HNR	**Honiara**	**28.95**	**137**	P	P	06 28 28.6	-3.3
	comp=Z,6.8nm,0.7s,baz=335,slow=9.3,SNR=2.1						
HNR				LR	LR	06 38 35.2	
	comp=Z,26nm,20.8s,baz=40,slow=33						
	comp=Z,6.8nm,0.7s						
KNRA	**Kununurra**	**29.88**	**203**	P	**P**	**06 28 44.3**	**+4.1**
	comp=Z,25nm,1.1s						
QIZ	**Qiongzhong**	**30.13**	**287**	P	P	06 28 39.4	-3.1
QIZ				S	**S**	**06 33 38.4**	**-3.2**
QIZ				pmax	pmax		
	comp=Z,23nm,2.0s						
QIZ				L	L		
	comp=Z,240nm,10.3s						
QIZ				L	L		
	comp=Z,380nm,11.0s						
QIZ				L	L		
	comp=Z,440nm,14.4s						
WHN	**Wuhan**	**30.24**	**311**	P	P	06 28 49.9	+6.5
WHN				S	**S**	**06 33 44.3**	**+1.2**
WHN				LR	LR		
	comp=N,2μm,16.0s						
WHN				LR	LR		
	comp=E,810nm,11.6s						
WHN				LR	LR		
	comp=Z,2μm,18.9s						
DL2	**Dalian**	**31.45**	**331**	*e*P	P	06 28 49.1	-4.8
DL2				S	S	06 33 54.4	-7.3
DL2				pmax	pmax		
	comp=Z,50nm,1.2s						
DL2				LR	LR		
	comp=N,970nm,13.4s						
DL2				LR	LR		
	comp=E,740nm,15.5s						
DL2				LR	LR		
	comp=Z,1μm,14.7s						
KHKI	**Kahang-Kahang**	**31.90**	**232**	P	P	06 29 04.9	+6.8
	comp=Z,39nm,1.4s						
WR8	**Warramunga Arr**	**32.37**	**190**	P	P	06 28 59.1	-3.1
WRA	**Warramunga Arr**	**32.39**	**191**	P	P	06 28 58.9	-3.4
	comp=Z,3.7nm,0.9s,baz=4.5,slow=9.6,SNR=13						
	comp=Z,3.7nm,0.9s						
WRA	**Warramunga Arr**	**32.39**	**191**	P	**P**	**06 28 59.6**	**-2.7**
QIS	**Mount Isa**	**32.47**	**181**	P	**P**	**06 29 05.7**	**+2.7**
	comp=Z,8.3nm,1.1s						
CTA	**Charters Tower**	**32.52**	**170**	P	**P**	**06 29 04.3**	**+0.8**
	comp=Z,7.4nm,1.8s						
CTA	**Charters Tower**	**32.52**	**170**	LR	LR	06 40 33.8	
	comp=Z,300nm,20.1s,baz=359,slow=34						
USRK	**Ussuriysk Ar.**	**32.78**	**349**	LR	LR	06 40 20.5	
	comp=Z,295nm,21.1s,baz=162,slow=33						
FITZ	**Fitzroy Crossi**	**33.33**	**206**	LR	LR	06 44 08.8	
	comp=Z,320nm,18.2s,baz=10,slow=39						
LYN	**LuoYang**	**33.77**	**316**	P	**P**	**06 29 12.9**	**-1.4**
LYN				pP	pP	06 29 16.6	+0.5
LYN				sP	sP	06 29 19.8	+3.0
LYN				pmax	pmax		
	comp=Z,17nm,0.8s						
LYN				L	L		
	comp=Z,670nm,18.2s						
LYN				L	L		
	comp=Z,540nm,18.2s						
LYN				L	L		
	comp=Z,1μm,24.0s						
HNS	**HongShan**	**34.07**	**322**	⇓P	**P**	**06 29 15.4**	**-1.5**
HNS				pmax	pmax		
	comp=Z,17nm,1.0s						
HNS				L	L		
	comp=Z,430nm,13.5s						
HNS				L	L		
	comp=Z,390nm,15.9s						
HNS				L	L		
	comp=Z,530nm,17.5s						
CN2	**Changchun**	**34.09**	**341**	P	**P**	**06 29 18.4**	**+1.4**
CN2				S	**S**	**06 34 43.4**	**+0.6**
CN2				L	L		
	comp=Z,460nm,15.0s						
CN2				L	L		
	comp=Z,570nm,15.0s						
CN2				L	L		
	comp=Z,440nm,17.0s						
SNJI	**Sawahan-Nganju**	**34.60**	**237**	P	P	06 29 27.0	+5.1
	comp=Z,62nm,1.7s						
BJI2	**Beijing**	**35.04**	**327**	P	**P**	**06 29 23.6**	**-1.6**
BJI2				pP	**pP**	**06 29 27.9**	**+0.9**
BJI2				sP	**sP**	**06 29 30.8**	**+3.0**
BJI2				S	**S**	**06 34 55.6**	**-1.9**
BJI2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BJI2				pmax	pmax		
	comp=Z,71nm,4.5s						
BJI2				L	L		
	comp=Z,170nm,18.5s						
BJI2				L	L		
	comp=Z,160nm,19.1s						
BJI2				L	L		
	comp=Z,290nm,17.6s						
BNX	**BinXian**	**35.28**	**344**	⇓P	P	06 29 24.3	-2.9
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIY	**Taiyuan**	**35.66**	**320**	P	**P**	**06 29 33.6**	**+2.8**
TIY				S	**S**	**06 35 05.6**	**-1.8**
TIY				L	L		
	comp=Z,450nm,19.9s						
TIY				L	L		
	comp=Z,360nm,19.2s						
TIY				L	L		
	comp=Z,530nm,19.2s						
XAN	**Xi'an**	**35.98**	**313**	P	**P**	**06 29 31.3**	**-2.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				L	L		
	comp=Z,380nm,15.1s						
XAN				L	L		
	comp=Z,630nm,15.5s						
XAN				L	L		
	comp=Z,760nm,15.6s						
AS15	**Alice Springs**	**36.07**	**190**	P	**P**	**06 29 37.9**	**+3.6**
	comp=Z,13nm,1.0s						
AS17	**Alice Springs**	**36.09**	**190**	P	P	06 29 41.3	+6.9
	comp=Z,7.4nm,0.9s						
AS31	**Alice Springs**	**36.10**	**190**	P	**P**	**06 29 36.3**	**+1.8**
	comp=Z,4.1nm,0.8s						
AS31	**Alice Springs**	**36.10**	**190**		**P**	**06 29 33.1**	**-1.4**
ASAR	**Alice Springs**	**36.10**	**190**	P	P	06 29 31.4	-3.2
	comp=Z,0.7nm,0.6s,baz=18,slow=13,SNR=18						
ASAR				PcP	**PcP**	**06 31 59.6**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=20,slow=2.6,SNR=6.0						
ASAR				LR	LR	06 44 35.7	
	comp=Z,478nm,18.5s,baz=16,slow=37						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**36.10**	**190**	P	**P**	**06 29 32.5**	**-2.0**
AS09	**Alice Springs**	**36.13**	**190**	P	P	06 29 42.7	+7.9
	comp=Z,7.6nm,0.8s						
LEM	**Lembang**	**37.57**	**242**	P	**P**	**06 29 44.4**	**-3.0**
	comp=Z,12nm,0.3s,baz=13,slow=17,SNR=5.7						
LEM				LR	LR	06 47 32.4	
	comp=Z,199nm,18.2s,baz=9.5,slow=40						
	comp=Z,12nm,0.3s						
KMI2	**Kunming**	**37.77**	**296**	P	**P**	**06 29 48.3**	**-0.7**
KMI2				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI2				L	L		
	comp=Z,310nm,17.0s						
KMI2				L	L		
	comp=Z,340nm,15.9s						
KMI2				L	L		
	comp=Z,430nm,21.8s						
BBJI	**Bungbulang**	**37.87**	**241**	P	**P**	**06 29 52.5**	**+2.8**
	comp=Z,59nm,1.3s						
XLT	**XiLinHaoTe**	**37.95**	**331**	*e*P	**P**	**06 29 49.0**	**-1.1**
XLT				pP	pP	06 29 52.4	+0.5
XLT				sP	sP	06 29 56.8	+4.1
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
XLT				L	L		
	comp=Z,32nm,12.2s						
XLT				L	L		
	comp=Z,290nm,19.2s						
XLT				L	L		
	comp=Z,440nm,17.8s						
HHC	**Hu-ho-hao-te**	**38.17**	**324**	*e*P	**P**	**06 29 51.1**	**-1.0**
HHC				sP	sP	06 29 59.3	+4.6
HHC				S	**S**	**06 35 48.8**	**+3.2**
HHC				pmax	pmax		
	comp=Z,120nm,8.4s						
HHC				L	L		
	comp=Z,230nm,13.5s						
HHC				L	L		
	comp=Z,300nm,15.1s						
HHC				L	L		
	comp=Z,340nm,15.8s						
CD2	**Chengdu**	**38.59**	**305**	P	**P**	**06 29 53.8**	**-1.9**
CD2				sP	pP	06 29 58.3	+0.8
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				L	L		
	comp=Z,560nm,13.3s						
CD2				L	L		
	comp=Z,450nm,11.4s						
CD2				L	L		
	comp=Z,500nm,17.8s						
WRKA	**Warakurna**	**38.74**	**198**	P	**P**	**06 30 01.6**	**+4.7**
	comp=Z,14nm,2.1s						
PZH	**PanZhiHua**	**38.96**	**297**	P	**P**	**06 29 58.0**	**-1.0**
PZH				S	**S**	**06 35 59.5**	**+1.5**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				L	L		
	comp=Z,210nm,14.7s						
PZH				L	L		
	comp=Z,290nm,11.2s						
PZH				L	L		
	comp=Z,270nm,17.4s						
BTO2	**Baotou**	**39.10**	**322**	*e*P	**P**	**06 29 58.8**	**-1.1**
BTO2				pP	**pP**	**06 30 03.3**	**+1.6**
BTO2				sP	**sP**	**06 30 05.8**	**+3.3**
BTO2				S	**S**	**06 35 56.6**	**-3.0**
BTO2				sS	**sS**	**06 36 06.8**	**+4.2**
BTO2				SS	**SnSn**	**06 38 45.8**	**-5.8**
BTO2				pmax	pmax		
	comp=Z,26nm,1.1s						
BTO2				pmax	pmax		
	comp=Z,250nm,5.1s						
BTO2				L	L		
	comp=Z,660nm,15.1s						
BTO2				L	L		
	comp=Z,760nm,18.9s						
BTO2				L	L		
	comp=Z,690nm,19.7s						
HEH	**HeiHe**	**39.49**	**347**	*e*P	**P**	**06 30 02.0**	**-0.9**
HEH				sP	**sP**	**06 30 10.0**	**+4.6**
HEH				S	**S**	**06 36 09.3**	**+4.3**
HEH				pmax	pmax		
	comp=Z,11nm,0.8s						
HEH				L	L		
	comp=Z,430nm,18.2s						
HEH				L	L		
	comp=Z,830nm,19.1s						
HEH				L	L		
	comp=Z,390nm,18.9s						
INKA	**Innaminka**	**39.61**	**179**	P	**P**	**06 30 02.7**	**-1.3**
INKA				PcP	**PcP**	**06 32 08.4**	**-2.8**
KULM	**Kulim**	**39.77**	**264**	P	P	06 30 10.4	+4.7
	comp=Z,56nm,0.8s						
CM31	**Chiang Mai Arr**	**40.35**	**284**	P	**P**	**06 30 08.6**	**-1.9**
CM31				IAmb	IAmb	06 30 19.1	
	comp=Z,27nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.35**	**284**	P	**P**	**06 30 08.9**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=88,slow=6.4,SNR=17						
CMAR				LR	LR	06 44 28.1	
	comp=Z,162nm,21.6s,baz=90,slow=33						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.35**	**284**		P	06 30 07.7	-2.8
CHTO	**Chiang Mai**	**40.37**	**285**	P	P	06 30 07.5	-3.2
CHTO	**Chiang Mai**	**40.37**	**285**	P	P	06 30 17.9	+7.2
LZH	**Lanzhou**	**40.61**	**312**	*e*P	P	06 30 09.5	-3.1
LZH				sP	sP	06 30 19.8	+4.6
LZH				S	**S**	**06 36 25.5**	**+3.0**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				L	L		
	comp=Z,330nm,14.2s						
LZH				L	L		
	comp=Z,440nm,14.2s						
LZH				L	L		
	comp=Z,700nm,15.2s						
LZDM	**Lanzhou Array**	**40.66**	**312**	LR	LR	06 46 00.7	
	comp=Z,406nm,21.6s,baz=155,slow=35						
HILR	**Hailar Array B**	**41.03**	**340**	LR	LR	06 47 05.6	
	comp=Z,387nm,18.2s,baz=355,slow=36						
PPI	**Padang Panjang**	**41.56**	**255**	P	**P**	**06 30 24.3**	**+3.8**
	comp=Z,39nm,1.0s						
PSI	**Prapat**	**42.03**	**261**	P	**P**	**06 30 28.4**	**+3.9**
	comp=Z,99nm,0.9s						
RPSI	**Rantau Prapat**	**42.05**	**261**		P	06 30 21.1	-3.5
DZM	**Mont Dzumac**	**42.54**	**143**	LR	LR	06 45 41.2	
	comp=Z,628nm,22.0s,baz=340,slow=33						
SISI	**Saibi**	**43.08**	**255**	P	**P**	**06 30 36.1**	**+3.3**
PETK	**Petropavlovsk-**	**43.20**	**15**	P	**P**	**06 30 32.9**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=176,slow=8.4,SNR=1.8						
	comp=Z,0.9nm,0.8s						
PETK	**Petropavlovsk-**	**43.20**	**15**	P	**P**	**06 30 34.6**	**+1.3**
TPTI		**43.60**	**262**	P	P	06 30 41.7	+4.6
	comp=Z,34nm,0.8s						
CMSA	**Cobar Meteorol**	**43.70**	**173**	P	**P**	**06 30 36.7**	**-0.8**
	comp=Z,22nm,1.5s						
CMSA	**Cobar Meteorol**	**43.70**	**173**	P	**P**	**06 30 36.7**	**-0.8**
GSI	**Gunungsitoli**	**43.72**	**259**	P	**P**	**06 30 41.5**	**+3.4**
GSI	**Gunungsitoli**	**43.72**	**259**	P	**P**	**06 30 36.1**	**-2.0**
GSI	**Gunungsitoli**	**43.72**	**259**		**P**	**06 30 41.1**	**+3.0**
STKA	**Stephens Creek**	**43.75**	**178**	P	**P**	**06 30 35.7**	**-2.3**
	comp=Z,5.9nm,0.8s,baz=350,slow=8.6,SNR=9.3						
STKA				LR	LR	06 49 34.1	
	comp=Z,571nm,19.2s,baz=8.2,slow=37						
	comp=Z,5.9nm,0.8s						
STKA	**Stephens Creek**	**43.75**	**178**	P	**P**	**06 30 39.3**	**+1.3**
FORT	**Forrest**	**44.24**	**195**	P	**P**	**06 30 40.5**	**-1.4**
	comp=Z,28nm,1.6s						
FORT	**Forrest**	**44.24**	**195**		**P**	**06 30 40.2**	**-1.6**
BBOO	**Buckleboo**	**44.85**	**185**	P	P	06 30 53.2	+6.5
	comp=Z,17nm,1.6s			

comp=Z,370nm,18.4s
ULN Ulaanbaatar 45.20 329 P 06 30 48.8 -0.9
ULN IAmb IAmb 06 30 57.5
comp=Z,21nm,0.9s
ULN Ulaanbaatar 45.20 329 P P 06 30 48.6 -1.0
ULN Ulaanbaatar 45.20 329 P P 06 30 48.9 -0.7
SONM Songino Array 45.52 328 P P 06 30 51.2 -1.0
comp=Z,2.0nm,0.6s,baz=143,slow=9.2,SNR=15
SONM LR LR 06 50 39.2
comp=Z,467nm,18.4s,baz=127,slow=37
comp=Z,2.0nm,0.6s
SONM Songino Array 45.52 328 P 06 30 51.1 -1.0
SONM IAmb IAmb 06 31 01.0
comp=Z,26nm,1.4s
MSVF Nonsavu 47.60 128 P P 06 31 07.0 -1.8
MA2 Magadan 48.02 7 LR LR 06 49 28.4
comp=Z,75nm,21.9s,baz=186,slow=34
MA2 Magadan 48.02 7 P P 06 31 12.0 +0.7
MA2 IAmb IAmb 06 31 21.8
comp=Z,15nm,1.0s
MA2 PcP **PcP 06 32 38.9 -0.4**
MA2 Magadan 48.02 7 P P 06 31 13.5 +2.1
KLBR Kellerberrin 48.54 206 P P 06 31 19.6 +3.9
comp=Z,53nm,1.0s
ARPS Mount Arapiles 48.63 178 P P 06 31 19.1 +2.8
comp=Z,12nm,0.9s
TLY Talaya 49.35 331 LR LR 06 53 03.4
comp=Z,232nm,19.0s,baz=124,slow=37
TLY Talaya 49.35 331 P P 06 31 21.3 -0.5
TLY Talaya 49.35 331 P P 06 31 21.9 +0.1
TOO Toolangi 49.65 175 P P 06 31 31.7 +7.5
comp=Z,9.1nm,1.5s
NWAO Narrogin (SRO) 49.92 206 LR LR 06 55 14.2
comp=Z,167nm,18.1s,baz=42,slow=40
WMQ Urumqi 55.01 315 *e*P **P 06 32 03.4 -0.7**
WMQ sP pwP 06 32 11.5 +0.1
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ L L
comp=Z,350nm,23.8s
SPIA Saint Paul Isl 58.59 29 P P 06 32 29.3 +0.2
baz=240
UNV Unalaska Valle 58.98 34 P P 06 32 31.8 -0.1
baz=246
MKAR Makanchi Array 59.53 317 P P 06 32 34.5 -1.4
comp=Z,4.8nm,0.9s,baz=96,slow=8.7,SNR=15
MKAR LR LR 06 58 27.7
comp=Z,160nm,20.2s,baz=96,slow=36
comp=Z,4.8nm,0.9s
MKAR Makanchi Array 59.53 317 P 06 32 34.3 -1.6
MAKZ Makanchi 59.74 317 P P 06 32 35.7 -1.6
MAKZ Makanchi 59.74 317 P P 06 32 36.5 -0.9
TIXI Tiksi 59.92 356 LR LR 06 56 13.3
comp=Z,137nm,21.3s,baz=192,slow=34
TIXI Tiksi 59.92 356 P P 06 32 37.8 -0.2
ZALV Zalesovo Beam 60.30 326 P P 06 32 39.1 -2.0
comp=Z,4.0nm,0.7s,baz=99,slow=6.6,SNR=5.0
ZALV LR LR 07 00 16.0
comp=Z,255nm,18.1s,baz=108,slow=38
comp=Z,4.0nm,0.7s
URZ Urewera 60.78 147 LR LR 06 57 35.2
comp=Z,166nm,18.4s,baz=314,slow=35
GAMB Gambell 61.47 22 P P 06 32 48.9 +0.1
baz=236
M11K Mekoryuk 61.97 27 P P 06 32 52.0 -0.2
baz=243
KDJ Kajisay 62.10 311 IAmb IAmb 06 33 01.9
comp=Z,13nm,0.8s
KDJ Kajisay 62.10 311 P P 06 32 52.9 -0.9
RPZ Rata Peaks 62.21 155 LR LR 06 58 25.7
comp=Z,30nm,20.1s,baz=290,slow=35
ASAI AK-SAY(Kyrgyzs 62.41 310 P P 06 32 54.8 -1.3
SDPT Sand Point 62.80 33 P P 06 32 57.2 -0.7
baz=251
KURK Kurchatov 62.90 321 P 06 32 57.0 -1.6
KURK Kurchatov 62.90 321 P P 06 32 57.1 -1.5
KSH2 Kashi 62.92 308 P P 06 32 58.3 -0.9
KSH2 sP sP 06 33 06.4 +4.6
KSH2 pmax pmax
comp=Z,150nm,4.1s
KSH2 L L
comp=Z,630nm,22.0s
KSH2 L L
comp=Z,350nm,19.2s
KSH2 L L
comp=Z,300nm,19.6s
KURBB Kurchatov Arra 62.93 321 P P 06 32 57.2 -1.6
comp=Z,15nm,0.8s,baz=102,slow=7.0,SNR=24
KURBB LR LR 07 01 50.3
comp=Z,252nm,18.6s,baz=185,slow=38
comp=Z,15nm,0.8s
BOOM Boomskoye usch 63.07 312 IAmb IAmb 06 33 08.4
comp=Z,18nm,1.5s
BOOM Boomskoye usch 63.07 312 P P 06 32 59.1 -1.1
CHNA Chernabura Isl 63.12 34 P P 06 32 59.7 -0.3
baz=252
M13K Dall Lake 63.25 28 P P 06 33 01.0 +0.3
baz=246
K13K Kusilvak Mount 63.33 26 IAmb IAmb 06 33 15.6
comp=Z,12nm,1.0s
K13K Kusilvak Mount 63.33 26 P P 06 33 01.3 0.0
baz=244
S14K Fog Glacier 63.60 33 P P 06 33 03.1 -0.2
baz=251
O14K Tigyukauivet M 63.77 29 P P 06 33 04.1 -0.1
baz=248
TNA Tin City 63.81 21 P P 06 33 03.9 -0.4
baz=239
N14K Kuskokwak Cree 63.82 28 P P 06 33 04.1 -0.4
baz=248
L14K Kuka Creek 63.93 27 P P 06 33 04.5 -0.8
L14K IAmb IAmb 06 33 15.0
comp=Z,11nm,0.9s
L14K Kuka Creek 63.93 27 P P 06 33 04.9 -0.4
baz=246
M14K Bethel 64.02 28 P P 06 33 05.4 -0.4
baz=247
AAK Ala-Archa 64.15 312 LR LR 07 04 13.4
comp=Z,118nm,18.0s,baz=103,slow=39
ANM Nome 64.25 23 P P 06 33 07.2 -0.1
baz=242
F14K Arctic Creek 64.34 22 P P 06 33 08.1 +0.2
baz=241
NIL Nilore 64.36 302 P P 06 33 06.2 -2.5
NIL Nilore 64.36 302 P P 06 33 07.2 -1.5
O15K Ungalikthiuk R 64.43 30 P P 06 33 08.8 +0.2
baz=250
M15K Kasigluk River 64.57 28 P P 06 33 08.5 -1.0
baz=248
L15K Ungalak Mounta 64.59 27 P P 06 33 09.1 -0.5
baz=247
N15K Kwethluk River 64.66 28 P P 06 33 09.5 -0.6
baz=249
F15K North Star Dit 65.06 22 P P 06 33 12.5 -0.1
baz=242
ARSB Arslanbob 65.12 310 IAmb IAmb 06 33 21.1
comp=Z,15nm,0.9s
OHH Osh 65.19 309 P P 06 33 11.1 -2.9
P16K Nushagak River 65.27 30 P P 06 33 13.6 -0.5
baz=251
N16K Nishlik Lake 65.38 28 P P 06 33 14.6 -0.2
baz=250
O16K Kokwok River B 65.41 29 P P 06 33 14.8 -0.2
O16K Kokwok River B 65.41 29 P P 06 33 14.5 -0.4
baz=251
M16K Timber Creek 65.48 28 P P 06 33 14.8 -0.6
baz=250
H16K Elim 65.49 24 P P 06 33 15.2 -0.2
baz=245
L16K Owhat River 65.49 27 IAmb IAmb 06 33 24.6
comp=Z,11nm,1.1s
L16K Owhat River 65.49 27 P P 06 33 15.0 -0.4
baz=249
CHIR Chirikof Islan 65.57 34 P P 06 33 15.6 -0.4
baz=255
J16K Anvik River 65.60 25 P P 06 33 15.7 -0.4
baz=247
R17L Mt. Peulik Vol 65.67 32 P P 06 33 15.9 -0.8
baz=254
G16K Koyuk River 65.77 23 P P 06 33 16.9 -0.3
baz=245
I17K Unalakleet 65.80 25 IAmb IAmb 06 33 29.4
comp=Z,12nm,1.1s
I17K Unalakleet 65.80 25 P P 06 33 17.0 -0.4
baz=247
Q16K King Salmon 65.83 31 P P 06 33 16.7 -1.0
baz=253

MANEM Manem 65.83 306 IAmb IAmb 06 33 26.7
comp=Z,63nm,0.8s
ARK Arkit 65.92 310 P P 06 33 17.5 -1.3
C16K Lisburne Hills 66.06 19 P P 06 33 18.9 -0.1
baz=240
P17K Kvichak River 66.09 30 P P 06 33 19.3 0.0
baz=253
NRIK Noril'sk 66.12 342 P P 06 33 17.9 -1.5
comp=Z,1.8nm,0.4s,baz=106,slow=5.0,SNR=4.4
NRIK LR LR 07 00 54.7
comp=Z,208nm,21.8s,baz=124,slow=35
comp=Z,1.8nm,0.4s
N17K Nushagak Hills 66.14 29 P P 06 33 19.7 0.0
baz=252
L17K Donlin 66.17 27 P P 06 33 19.7 -0.1
baz=250
J17K VABM Dome 66.28 25 IAmb IAmb 06 33 36.9
comp=Z,18nm,1.3s
J17K VABM Dome 66.28 25 P P 06 33 20.8 +0.3
baz=249
M17K Holitna River 66.30 28 IAmb IAmb 06 33 30.7
comp=Z,7.7nm,0.8s
M17K Holitna River 66.30 28 P P 06 33 20.6 -0.1
baz=251
K17K Iditarod 66.37 26 IAmb IAmb 06 33 31.1
comp=Z,12nm,1.0s
K17K Iditarod 66.37 26 P P 06 33 21.5 +0.4
baz=250
G17K Kiwalik Mounta 66.47 23 P P 06 33 21.8 +0.1
baz=246
H17K Granite Mounta 66.53 24 P P 06 33 22.5 +0.4
H17K IAmb IAmb 06 33 36.5
comp=Z,13nm,1.1s
H17K Granite Mounta 66.53 24 P P 06 33 22.0 -0.1
baz=247
SII Sitkinak Islan 66.53 33 P P 06 33 22.7 +0.4
baz=256
D17K Noatak River 66.54 20 P P 06 33 22.1 +0.1
baz=243
F17K Baldwin Pennin 66.63 22 P P 06 33 23.3 +0.6
baz=245
Q18K Katmai Hardscr 66.64 31 P P 06 33 23.1 0.0
baz=254
BTK Batken 66.65 308 IAmb IAmb 06 33 30.7
comp=Z,13nm,1.0s
E17K Hotham Inlet 66.70 21 P P 06 33 23.3 +0.2
baz=244
P18K Big Mountain, 66.74 30 P P 06 33 23.6 0.0
baz=254
N18K Kilae Creek 66.79 29 P P 06 33 24.1 +0.2
baz=253
C17K DeLong Mountai 66.86 20 P P 06 33 24.2 0.0
baz=242
O18K Kuguh Hills 66.88 30 P P 06 33 24.5 +0.1
baz=254
L18K Granite Mounta 66.91 27 P P 06 33 24.8 +0.3
baz=251
GAR Garm 66.98 307 P P 06 33 24.0 -1.6
M18K Stony River 67.07 28 P P 06 33 25.6 0.0
baz=252
KK31 Karatay Array 67.11 312 P P 06 33 24.4 -1.9
OHAK Old Harbor 67.17 33 P P 06 33 26.3 0.0
baz=256
H18K Honhosa River 67.22 24 IAmb IAmb 06 33 35.9
comp=Z,11nm,0.9s
H18K Honhosa River 67.22 24 P P 06 33 26.2 -0.3
baz=249
E18K Tukpahlearik C 67.27 21 IAmb IAmb 06 33 36.9
comp=Z,12nm,0.9s
E18K Tukpahlearik C 67.27 21 P P 06 33 26.9 +0.1
baz=246
F18K Selawik 67.28 22 P P 06 33 26.7 -0.1
baz=247
G18K Tagagawik 67.38 23 IAmb IAmb 06 33 37.0
comp=Z,15nm,0.9s
G18K Tagagawik 67.38 23 P P 06 33 27.2 -0.3
baz=248,SNR=8.9
O19K Port Alsworth 67.40 29 P P 06 33 27.8 +0.2
baz=254
Q19K Cape Douglas, 67.40 31 P P 06 33 27.6 -0.2
baz=256
N19K Bonanza Creek 67.49 29 P P 06 33 28.4 0.0
baz=254
C18K Utukok River 67.59 20 IAmb IAmb 06 33 48.8
comp=Z,7.9nm,0.9s
C18K Utukok River 67.59 20 P P 06 33 28.8 -0.1
baz=244
GCSA Galena City Sc 67.66 24 P P 06 33 29.3 0.0
baz=250
KDAK Kodiak Island 67.67 32 P P 06 33 29.2 -0.2
baz=257
L19K White Mountain 67.71 27 P P 06 33 29.9 +0.2
baz=253
P19K Oil Pt 67.79 30 P P 06 33 30.3 +0.1
baz=256
CHGR Chuyangaron 67.87 307 P P 06 33 29.5 -1.7
KBL Kabul 67.88 302 P P 06 33 31.1 -0.4
J19K Poorman 67.93 25 P P 06 33 31.1 +0.1
baz=252
F19K Shaleruckik Mo 68.06 22 P P 06 33 32.1 +0.4
baz=248
G19K Purcell Mounta 68.07 23 P P 06 33 31.8 0.0
baz=249,SNR=9.2
H19K Roundabout Mou 68.10 24 P P 06 33 32.2 +0.2
baz=250,SNR=9.8
O20K Slope Mountain 68.19 30 P P 06 33 32.8 0.0
baz=256
A19K Wainwright 68.31 18 P P 06 33 32.9 -0.4
baz=244
C19K Lookout Ridge 68.32 20 P P 06 33 33.3 -0.1
baz=246,SNR=7.3
BVAR Borovoye Array 68.37 322 P P 06 33 32.4 -1.5
comp=Z,12nm,0.8s,baz=101,slow=7.9,SNR=16
comp=Z,12nm,0.8s
K20K Telida 68.40 26 IAmb IAmb 06 33 50.4
comp=Z,15nm,1.2s
K20K Telida 68.40 26 P P 06 33 33.5 -0.4
baz=253
M20K Styx River 68.41 28 P P 06 33 33.8 -0.3
baz=255
BORK Borovoye 68.41 322 P P 06 33 32.2 -2.0
E19K Redstone River 68.48 22 IAmb IAmb 06 33 44.4
comp=Z,15nm,0.9s
E19K Redstone River 68.48 22 P P 06 33 34.0 -0.4
baz=249,SNR=8.0
D19K Kuna River 68.56 20 P P 06 33 34.8 -0.2
baz=248
HOM Homer 68.57 30 P P 06 33 34.9 -0.2
baz=257
J20K Nowinta River 68.61 25 P P 06 33 35.0 -0.2
baz=253,SNR=7.4
I20K Naaghedeneel 68.65 25 P P 06 33 35.4 0.0
baz=252
SHAA Shahritus 68.65 306 P P 06 33 34.4 -1.8
SHAA IAmb IAmb 06 33 43.9
comp=Z,41nm,0.8s
H20K Anotleneega Mo 68.71 24 P P 06 33 35.5 -0.3
baz=252
F20K Araraart Lake 68.89 22 P P 06 33 36.8 -0.1
baz=250
BRSE Bradley Lake S 69.04 30 P P 06 33 37.8 -0.2
baz=258
PPLA Purkeypile 69.10 27 P P 06 33 38.1 -0.4
baz=255
E20K Nigu River 69.14 21 P P 06 33 38.4 -0.1
baz=250,SNR=7.4
D20K Etivluk River 69.16 20 P P 06 33 38.7 +0.1
baz=249,SNR=16
SKT Skwentna 69.17 28 P P 06 33 38.3 -0.5
baz=256
CAST Castle Rocks 69.28 26 P P 06 33 39.0 -0.5
baz=255
CHUM Lake Minchumin 69.30 26 P P 06 33 39.4 -0.1
baz=255
B20K Meade River 69.46 19 P P 06 33 40.6 +0.2
baz=248
G21K Allakaket 69.56 23 IAmb IAmb 06 33 57.3
comp=Z,14nm,1.1s
G21K Allakaket 69.56 23 P P 06 33 41.4 +0.3
baz=253
H21K Melozitna Rive 69.58 24 IAmb IAmb 06 33 51.2
comp=Z,12nm,0.9s
H21K Melozitna Rive 69.58 24 P P 06 33 41.4 +0.2
baz=254,SNR=8.9
L22K Petersville 69.64 27 IAmb IAmb 06 33 50.0
comp=Z,10nm,0.8s
L22K Petersville 69.64 27 P P 06 33 41.7 -0.1
baz=257

SEW Seward 69.75 30 P P 06 33 42.3 0.0
baz=259
F21K Alatna River 69.78 22 P P 06 33 42.5 +0.1
baz=252
I21K Tanana 69.78 25 IAmb IAmb 06 33 53.9
comp=Z,19nm,1.0s
I21K Tanana 69.78 25 P P 06 33 42.6 +0.1
baz=255,SNR=11
RC01 Rabbit Creek A 69.81 29 P P 06 33 43.0 +0.3
baz=258
KTH Kantishna Hill 69.81 26 IAmb IAmb 06 33 56.2
comp=Z,18nm,1.1s
CUT Chulitna 69.84 28 P P 06 33 43.5 +0.6
baz=257
C21K Knifeblade Rid 69.93 20 P P 06 33 43.7 +0.3
baz=251
E21K Killik River 69.98 21 P P 06 33 44.1 +0.4
baz=252
TRF Thorofare Moun 70.07 27 P P 06 33 44.7 +0.2
baz=257
A21K Barrow 70.12 18 P P 06 33 44.6 +0.2
baz=248
B21K Ikpikpuk River 70.14 20 P P 06 33 44.9 +0.3
baz=251
PMR Palmer 70.19 29 P P 06 33 45.4 +0.3
baz=259
H22K Ishtalitna Cre 70.21 24 IAmb IAmb 06 33 59.8
comp=Z,12nm,1.1s
H22K Ishtalitna Cre 70.21 24 P P 06 33 45.2 +0.1
baz=255
MLY Manley 70.25 25 IAmb IAmb 06 33 55.0
comp=Z,15nm,1.0s
MLY Manley 70.25 25 P P 06 33 45.2 -0.3
baz=256,SNR=12
F22K John River 70.34 22 P P 06 33 46.0 +0.1
baz=254
G22K Bettles 70.43 23 P P 06 33 46.4 -0.1
baz=254
KNK Knik Glacier 70.48 29 P P 06 33 46.6 -0.2
baz=259
A22K Sinclair Lake 70.50 18 P P 06 33 46.8 0.0
baz=250
SML Sawmill 70.61 28 P P 06 33 47.6 -0.1
baz=259
E22K Anaktuvuk Pass 70.65 22 P P 06 33 47.9 +0.1
baz=254
WAT1 Susitna Watana 70.71 27 P P 06 33 48.2 -0.1
baz=259
MCK McKinley 70.72 26 IAmb IAmb 06 33 58.4
comp=Z,12nm,1.0s
MCK McKinley 70.72 26 P P 06 33 48.3 0.0
baz=258
P23K Montague Islan 70.74 30 P P 06 33 47.8 -0.7
baz=261
B22K Teshekpuk Lake 70.77 19 P P 06 33 48.7 +0.3
baz=252
NEA2 Nenana 70.84 26 P P 06 33 49.2 +0.2
baz=258
I23K Minto, Yukon-K 70.85 25 P P 06 33 49.0 0.0
baz=257,SNR=10
M23K Glacier View 70.89 29 P P 06 33 49.6 +0.2
baz=260
H23K Yukon River 70.93 24 P P 06 33 49.8 +0.3
baz=257
G23K Bananza Creek 70.95 23 P P 06 33 49.6 0.0
baz=256,SNR=7.5
COLD Coldfoot 71.01 23 IAmb IAmb 06 34 00.1
comp=Z,18nm,0.8s
COLD Coldfoot 71.01 23 P P 06 33 50.2 +0.2
baz=256,SNR=8.3
WAT6 Susitna Watana 71.03 28 P P 06 33 50.0 -0.4
baz=260,SNR=6.6
SCM Sheep Creek Mo 71.08 29 P P 06 33 50.2 -0.4
baz=260
Q23K Middleton Isla 71.18 31 P P 06 33 51.1 0.0
baz=262
WRH Wood River Hil 71.23 26 IAmb IAmb 06 34 01.8
comp=Z,11nm,1.1s
DHY Denali Highway 71.28 27 P P 06 33 51.3 -0.6
baz=260
D23K Nanushuk River 71.28 21 P P 06 33 51.7 +0.1
baz=255
COLA College 71.42 25 P P 06 33 51.2 -1.2
E23K Chandalar 71.43 22 P P 06 33 52.9 +0.3
baz=256,SNR=17
C23K Itkillik River 71.54 20 P P 06 33 53.4 +0.3
baz=254,SNR=5.5
H24K Noodor Dome 71.60 24 IAmb IAmb 06 34 12.8
comp=Z,33nm,1.6s
H24K Noodor Dome 71.60 24 P P 06 33 53.7 +0.1
baz=258
POKR Poker Plat Res 71.64 25 P P 06 33 54.2 +0.4
baz=259
EYAK Cordova Ski Ar 71.64 30 P P 06 33 54.2 +0.3
baz=262
M24K Tolsona, Glenn 71.67 28 P P 06 33 54.4 +0.2
baz=261
KLU Klutina 71.69 29 IAmb IAmb 06 34 19.6
comp=Z,12nm,1.2s
KLU Klutina 71.69 29 P P 06 33 54.8 +0.5
baz=262
HDA Harding Lake 71.71 26 P P 06 33 54.8 +0.5
baz=260
ILAR Eielson Array 71.80 26 P P 06 33 53.1 -1.7
comp=Z,1.7nm,0.7s,baz=246,slow=5.4,SNR=16
comp=Z,1.7nm,0.7s
ILAR Eielson Array 71.80 26 P P 06 33 53.1 -1.7
E24K Your Creek 71.84 22 P P 06 33 55.3 +0.2
baz=257
G24K Hadweenzic Riv 71.93 23 IAmb IAmb 06 34 06.0
comp=Z,16nm,1.0s
G24K Hadweenzic Riv 71.93 23 P P 06 33 55.7 +0.1
baz=258,SNR=5.7
F24K Squaw Lake 71.94 23 IAmb IAmb 06 34 05.9
comp=Z,13nm,0.9s
F24K Squaw Lake 71.94 23 P P 06 33 55.6 0.0
baz=258,SNR=5.6
D24K Happy Valley 71.98 21 P P 06 33 55.6 -0.1
baz=256
K24K Donnelly Dome 72.11 27 IAmb IAmb 06 34 08.1
comp=Z,15nm,1.0s
K24K Donnelly Dome 72.11 27 P P 06 33 56.5 -0.3
baz=261
PAX Paxson 72.12 28 P P 06 33 56.6 -0.3
baz=262
HARP HAARP 72.18 28 P P 06 33 56.8 -0.4
baz=262
KAIM Kayak Island 72.22 31 P P 06 33 57.0 -0.4
baz=263
BMRM Bremner River 72.25 30 IAmb IAmb 06 34 29.5
comp=Z,23nm,1.1s
BMRM Bremner River 72.25 30 P P 06 33 57.7 0.0
baz=263
N25K Chitina, Valde 72.33 29 P P 06 33 58.0 -0.2
baz=263
J25K Salcha River, 72.42 26 P P 06 33 58.5 -0.1
baz=261
G25K Bearman Lake 72.48 24 P P 06 33 58.8 0.0
baz=260
PRP Porcupine Dome 72.50 25 P P 06 33 58.8 -0.4
baz=261
RIDG Independent Ri 72.51 27 IAmb IAmb 06 34 15.0
comp=Z,28nm,1.3s
RIDG Independent Ri 72.51 27 P P 06 33 58.3 -0.8
baz=262,SNR=5.5
GLB Gilahina Butte 72.69 29 IAmb IAmb 06 34 23.7
comp=Z,15nm,1.3s
F25K Christian Rive 72.81 23 IAmb IAmb 06 34 11.1
comp=Z,12nm,0.8s
F25K Christian Rive 72.81 23 P P 06 34 00.6 -0.3
baz=260,SNR=5.0
D25K Kavik River 72.86 21 P P 06 34 00.7 -0.4
baz=259
SCRK Sand Creek 72.92 27 IAmb IAmb 06 34 31.0
comp=Z,16nm,1.3s
SCRK Sand Creek 72.92 27 P P 06 34 01.2 -0.5
baz=262
E25K Arctic Village 72.93 22 IAmb IAmb 06 34 14.7
comp=Z,22nm,1.2s
E25K Arctic Village 72.93 22 P P 06 34 01.7 +0.2
baz=260,SNR=6.1
CRQE Cirque 72.96 30 P P 06 34 01.9 -0.1
baz=264
MCARA McCarthy VSAT 73.06 29 P P 06 34 02.0 -0.4
baz=264
L26K Log Cabin Wild 73.09 28 P P 06 34 02.3 -0.2
baz=263
M26K Nabesna, AK 73.18 28 P P 06 34 02.8 -0.4

baz=264
F26K Sheenjek River 73.39 23 IAmb IAmb 06 34 14.6
comp=Z,16nm,0.9s
F26K Sheenjek River 73.39 23 P **P** **06 34 04.2 -0.1**
baz=261,SNR=5.2
G26K Porcupine Rive 73.42 23 P **P** **06 34 04.4 +0.1**
baz=262
I26K Coal Creek Min 73.45 25 P **P** **06 34 04.3 -0.3**
baz=263
M27K Edge Creek, AK 73.69 28 P **P** **06 34 05.9 -0.4**
baz=265
L27K Beaver Creek, 73.78 28 P **P** **06 34 06.0 -0.6**
baz=265
BCAR Beaver Creek A 73.80 28 P **P** **06 34 05.3 -1.5**
C27K Jago River 73.84 21 P **P** **06 34 07.0 +0.2**
baz=261
I27K Kandik River 74.12 25 IAmb IAmb 06 34 26.8
comp=Z,30nm,1.6s
I27K Kandik River 74.12 25 P **P** **06 34 08.5 -0.2**
baz=264
BVCY Beaver Creek 74.17 28 P **P** **06 34 08.9 0.0**
baz=266
H27K Steamboat Moun 74.22 24 IAmb IAmb 06 34 19.3
comp=Z,20nm,1.0s
H27K Steamboat Moun 74.22 24 P **P** **06 34 09.1 0.0**
baz=264,SNR=12
G27K Doyon Strip 74.23 24 P **P** **06 34 09.1 -0.1**
baz=264
YUK3 Moose Creek 74.31 29 P **P** **06 34 09.5 -0.5**
baz=266,SNR=5.6
PINM Pinnacle 74.32 31 P **P** **06 34 09.6 -0.3**
baz=267
O28M Mount Upton 74.38 30 IAmb IAmb 06 34 35.8
comp=Z,12nm,1.0s
O28M Mount Upton 74.38 30 P **P** **06 34 10.2 -0.3**
baz=267
E27K Coleen River 74.41 22 P **P** **06 34 09.9 -0.3**
baz=264
YUK8 Steele Glacier 74.62 30 P **P** **06 34 11.4 -0.5**
baz=267
ABKAR Akbulak array 74.67 318 P 06 34 09.7 -2.3
D27M Malcolm River 74.75 21 P **P** **06 34 12.1 -0.1**
baz=264
I28M Miner Creek 74.80 25 IAmb IAmb 06 34 22.3
comp=Z,12nm,0.9s
DAWY Dawson 74.94 27 IAmb IAmb 06 34 37.3
comp=Z,29nm,1.5s
DAWY Dawson 74.94 27 P **P** **06 34 12.9 -0.5**
baz=267,SNR=6.0
BRWY Burwash Landin 74.97 29 P **P** **06 34 13.5 -0.1**
baz=268
F28M Old Crow 75.00 23 IAmb IAmb 06 34 23.6
comp=Z,18nm,0.9s
F28M Old Crow 75.00 23 P **P** **06 34 13.3 -0.3**
baz=265,SNR=7.9
YUK4 Talbot Arm 75.16 30 P **P** **06 34 14.2 -0.7**
baz=268
O29M Mount Kennedy 75.16 31 P **P** **06 34 14.3 -0.5**
baz=268
E28M Babbage River 75.21 22 IAmb IAmb 06 34 25.0
comp=Z,19nm,0.9s
E28M Babbage River 75.21 22 P **P** **06 34 14.6 -0.2**
baz=265,SNR=5.6
PPT2 Papeete2 75.22 112 *e*LQ LQ 06 53 51.1
PPT2 *e*LR LR 06 57 16.8
comp=Z,558nm,30.5s
PPT2 *e*LR LR 06 57 17.0
comp=Z,342nm,32.2s
YUK6 Outpost Mounta 75.28 30 P **P** **06 34 15.1 -0.6**
baz=268
M29M Somme Creek 75.29 28 IAmb IAmb 06 34 41.7
comp=Z,15nm,1.1s
M29M Somme Creek 75.29 28 P **P** **06 34 15.1 -0.4**
baz=268,SNR=10.0
L29M L29M 75.46 28 P **P** **06 34 16.3 -0.1**
baz=268,SNR=6.4
H29M Whitestone 75.50 24 IAmb IAmb 06 34 52.3
comp=Z,29nm,1.4s
H29M Whitestone 75.50 24 P **P** **06 34 15.9 -0.6**
baz=267
ARTI Arti 75.56 325 P P 06 34 14.0 -3.0
comp=Z,5.4nm,1.1s,baz=139,slow=11,SNR=3.1
ARTI LR LR 07 09 17.2
comp=Z,476nm,19.7s,baz=98,slow=37
comp=Z,5.4nm,1.1s
P29M Windy Craggy 75.57 31 P **P** **06 34 16.4 -0.7**
baz=269
G29M Pine Creek 75.67 24 P **P** **06 34 16.7 -0.8**
baz=267
HYT Haines Junctio 75.70 30 IAmb IAmb 06 34 40.9
comp=Z,15nm,1.1s
HYT Haines Junctio 75.70 30 P **P** **06 34 17.0 -0.9**
baz=269
K29M Barlow Dome 75.76 27 IAmb IAmb 06 34 28.2
comp=Z,11nm,0.9s
K29M Barlow Dome 75.76 27 P **P** **06 34 17.9 -0.3**
baz=268,SNR=7.1
E29M Blow River 75.80 22 P **P** **06 34 17.1 -1.1**
baz=267
AKTO Aktyubinsk 75.89 319 P P 06 34 15.7 -3.3
comp=Z,1.1nm,0.5s,baz=66,slow=4.8,SNR=6.7
AKTO LR LR 07 09 29.8
comp=Z,172nm,19.6s,baz=86,slow=37
comp=Z,1.1nm,0.5s
N30M Aishikik Lake 75.91 29 IAmb IAmb 06 34 41.4
comp=Z,11nm,1.0s
N30M Aishikik Lake 75.91 29 P **P** **06 34 18.7 -0.3**
baz=269
P30M Million Dollar 75.97 31 P **P** **06 34 18.6 -0.8**
baz=270
M30M Minto, Yukon 76.06 28 P **P** **06 34 19.1 -0.7**
baz=269
EPYK Eagle Plains 76.17 24 IAmb IAmb 06 34 39.5
comp=Z,25nm,1.4s
EPYK Eagle Plains 76.17 24 P **P** **06 34 19.5 -0.9**
baz=268
PLBC Pleasant Camp 76.27 31 P **P** **06 34 20.4 -0.6**
baz=270
I30M Mount Dempster 76.28 26 IAmb IAmb 06 34 51.0
comp=Z,13nm,1.1s
I30M Mount Dempster 76.28 26 P **P** **06 34 20.5 -0.7**
baz=269
J30M Hart River 76.30 26 IAmb IAmb 06 34 40.6
comp=Z,20nm,1.2s
J30M Hart River 76.30 26 P **P** **06 34 20.4 -0.8**
baz=269
S31K Pelican 76.36 33 P **P** **06 34 20.3 -1.2**
baz=271
G30M tAoh Zraii Nji 76.38 24 IAmb IAmb 06 34 32.8
comp=Z,19nm,0.9s
G30M tAoh Zraii Nji 76.38 24 P **P** **06 34 21.2 -0.4**
baz=269
O30N Mendenhall 76.40 30 P **P** **06 34 21.7 -0.1**
baz=270
N31M Braeburn, Yuko 76.54 29 IAmb IAmb 06 34 46.8
comp=Z,16nm,1.0s
N31M Braeburn, Yuko 76.54 29 P **P** **06 34 22.2 -0.3**
baz=271
F30M Barrier River 76.56 23 IAmb IAmb 06 34 32.2
comp=Z,16nm,1.0s
F30M Barrier River 76.56 23 P **P** **06 34 22.6 0.0**
baz=269
SIT Sitka 76.87 34 P **P** **06 34 23.7 -0.7**
baz=272
WHY Whitehorse 76.99 30 IAmb IAmb 06 34 47.6
comp=Z,21nm,1.0s
WHY Whitehorse 76.99 30 P **P** **06 34 24.5 -0.8**
baz=272
H31M Peel River 77.13 25 P **P** **06 34 25.8 0.0**
baz=271
G31M Satah River 77.15 24 IAmb IAmb 06 34 35.0
comp=Z,19nm,1.0s
G31M Satah River 77.15 24 P **P** **06 34 25.8 0.0**
baz=271
TBI Tubuai 77.16 118 *e*SS SS 06 49 14.5 +0.1
comp=Z,553nm,31.2s
TBI *e*LQ LQ 06 54 53.8
comp=Z,877nm,32.0s
TBI *e*LR LR 06 58 16.8
comp=Z,1μm,31.5s
M31M Drury Creek, Y 77.19 29 P **P** **06 34 25.9 -0.3**
baz=272
R32K Eaglecrest 77.26 33 P **P** **06 34 25.9 -0.7**
baz=272
S32K Killisnoo 77.26 34 P **P** **06 34 25.9 -0.7**
baz=272
F31M Tsiigehtchic 77.35 23 P **P** **06 34 26.4 -0.5**
baz=271

INK Inuvik 77.42 22 P **P** **06 34 27.2 0.0**
baz=271
INK Inuvik 77.42 22 P **P** **06 34 26.9 -0.3**
P32M Atlin 77.61 31 P **P** **06 34 28.3 -0.3**
baz=273
N32M Quiet Lake 77.85 30 P **P** **06 34 29.9 0.0**
baz=273
P33M Teslin, Yukon 78.03 31 P **P** **06 34 30.9 -0.1**
baz=273
U33K Whale Pass 78.14 35 P **P** **06 34 31.6 +0.1**
baz=274
CRAG Craig 78.18 36 P **P** **06 34 31.9 +0.1**
baz=274
Q32M Nakina River 78.39 32 P **P** **06 34 32.7 -0.5**
baz=274
WRAK Wrangell Islan 78.54 34 P **P** **06 34 33.6 -0.2**
baz=275
MMPY Sheldon Lake, 78.62 28 P **P** **06 34 34.0 -0.2**
baz=274
R33M Jennings River 79.03 31 P **P** **06 34 36.2 -0.4**
baz=275
V35K Ketchikan 79.05 36 P **P** **06 34 36.2 -0.4**
baz=275
S34M Telegraph Cree 79.08 33 P **P** **06 34 36.7 0.0**
baz=275
DLBC Dease Lake 79.61 32 P **P** **06 34 39.5 -0.2**
baz=276
T35M Bob Quinn 79.64 34 P **P** **06 34 39.6 -0.2**
baz=276
A36M Sachs Harbour 79.95 18 P **P** **06 34 40.8 -0.3**
baz=278
WTLY Watson Lake, Y 80.05 31 IAmb IAmb 06 35 09.3
comp=Z,22nm,1.2s
WTLY Watson Lake, Y 80.05 31 P **P** **06 34 41.9 -0.1**
baz=277
KIRV Kirov 80.25 328 LR LR 07 13 15.8
comp=Z,311nm,18.0s,baz=81,slow=38
C36M Paulatuk 80.74 21 P **P** **06 34 44.7 -0.8**
baz=280
LIRD Liard River Hi 81.50 31 P **P** **06 34 49.3 -0.5**
baz=279
BELG Belogornoye 82.16 322 P **P** **06 34 52.9 -0.5**
comp=Z,5.3nm,0.7s,baz=286,slow=6.3,SNR=6.1
comp=Z,5.3nm,0.7s
HSPB Hornsund (broa 85.61 349 P P 06 35 08.0 -2.5
YKA Yellowknife Ar 86.19 27 P **P** **06 35 13.3 -0.3**
comp=Z,0.7nm,0.6s,baz=288,slow=5.7,SNR=4.6
comp=Z,0.7nm,0.6s
GNI Garni 86.51 310 P **P** **06 35 14.8 -1.1**
comp=Z,2.6nm,0.3s,baz=195,slow=5.4,SNR=3.5
comp=Z,2.6nm,0.3s
RES Resolute Bay 86.98 13 LR LR 07 14 18.4
comp=Z,36nm,21.5s,baz=28,slow=36
KBZ Khabaz 87.03 314 P **P** **06 35 17.6 -0.6**
comp=Z,0.6nm,0.5s,baz=121,slow=5.9,SNR=6.7
KBZ LR LR 07 17 45.3
comp=Z,130nm,20.1s,baz=70,slow=38
comp=Z,0.6nm,0.5s
ARCES ARCESS Array B 87.10 341 P **P** **06 35 16.1 -1.9**
comp=Z,0.8nm,0.7s,baz=73,slow=8.1,SNR=6.9
ARCES LR LR 07 16 38.6
comp=Z,174nm,21.8s,baz=78,slow=37
comp=Z,0.8nm,0.7s
YBH Yreka Blue Hor 87.16 48 LR LR 07 05 52.7
comp=Z,129nm,21.7s,baz=300,slow=30
WIFE Three Sisters- 87.25 46 P **P** **06 35 19.1 -0.4**
WIFE IAmb IAmb 06 35 30.2
comp=Z,12nm,1.0s
OBN Obninsk 87.89 326 LR LR 07 16 10.4
comp=Z,396nm,20.4s,baz=42,slow=37
PINE Pine Mountain 87.93 46 P **P** **06 35 22.6 -0.2**
PINE IAmb IAmb 06 35 35.5
comp=Z,14nm,1.0s
NEW Newport 89.25 41 LR LR 07 09 29.7
comp=Z,181nm,20.5s,baz=280,slow=32
BEKR Beckworth 89.36 49 IAmb IAmb 06 35 41.9
comp=Z,7.9nm,1.0s
VNDA Vanda 90.31 175 P P 06 35 29.5 -3.3
comp=Z,0.3nm,0.7s,baz=347,slow=4.8,SNR=4.9
VNDA LR LR 07 14 07.5
comp=Z,123nm,20.0s,baz=343,slow=34
comp=Z,0.3nm,0.7s
VNDA Vanda 90.31 175 P **P** **06 35 30.6 -2.3**
FINES FINESS Array B 90.59 334 P P 06 35 31.8 -2.8
comp=Z,2.1nm,0.7s,baz=76,slow=8.0,SNR=10
FINES LR LR 07 18 44.8
comp=Z,218nm,20.7s,baz=66,slow=37
comp=Z,2.1nm,0.7s
NVAR Mina Array Bea 91.28 50 P P 06 35 35.9 -2.8
comp=Z,0.5nm,0.7s,baz=305,slow=4.4,SNR=1.7
NVAR LR LR 07 09 37.9
comp=Z,76nm,21.2s,baz=288,slow=31
comp=Z,0.5nm,0.7s
MFID Camas Ranch 91.59 45 P 06 35 37.4 -2.5
AKASG Malin Array Be 93.62 324 P P 06 35 46.2 -2.7
comp=Z,0.5nm,0.5s,baz=59,slow=3.6,SNR=5.5
AKASG LR LR 07 18 45.5
comp=Z,209nm,21.5s,baz=53,slow=36
comp=Z,0.5nm,0.5s
ASF Jabal al Asfar 94.72 304 LR LR 07 23 57.7
comp=Z,85nm,18.9s,baz=26,slow=39
BRTR Keskin Array B 94.82 312 LR LR 07 22 17.9
comp=Z,51nm,20.7s,baz=92,slow=38
MMAI Mount Meron Ar 95.66 305 LR LR 07 22 56.6
comp=Z,91nm,21.4s,baz=79,slow=38
PDAR Pinedale Array 96.12 44 P **P** **06 36 00.1 -0.7**
comp=Z,0.1nm,0.4s,baz=277,slow=6.0,SNR=1.5
PDAR LR LR 07 17 14.7
comp=Z,26nm,18.3s,baz=102,slow=34
comp=Z,0.1nm,0.4s
HFS Hagfors 96.42 336 LR LR 07 23 37.7
comp=Z,251nm,19.1s,baz=44,slow=38
NOA NORSAR Array B 96.79 338 LR LR 07 23 54.2
comp=Z,102nm,18.4s,baz=60,slow=38
EIL Elat 97.07 302 LR LR 07 22 15.5
comp=Z,60nm,21.4s,baz=143,slow=37
MLR Muntele Rosu 97.81 320 LR LR 07 22 41.0
comp=Z,167nm,21.6s,baz=74,slow=37
MVCO Mesa Verde 99.01 49 P **Pdif** **06 36 22.9 +9.0**
VNA2 Neumayer--Watz 117.95 191 ||PKPdf **PKiKP** **06 41 23.0 +4.3**
comp=Z,2.0nm,0.7s,baz=69,slow=2.0
TORD Torodi Ar. Bea 131.91 300 PKP **PKPdf** **06 41 43.4 -3.6**
comp=Z,0.3nm,0.7s,baz=112,slow=0.8,SNR=1.4
PLCA Paso Flores 140.65 142 PKP **PKPdf** **06 42 00.1 -2.5**
comp=Z,1.4nm,0.8s,baz=163,slow=1.8,SNR=3.7
CO05 La Serena 145.78 126 PKPdf **PKPdf** **06 42 10.4 -1.4**
CFA Coronel Fontan 147.31 131 PKPbc **PKPdf** **06 42 13.8 -0.6**
comp=Z,1.1nm,0.8s,baz=212,slow=22,SNR=2.4
LPAZ La Paz 152.11 102 PKPbc **PKPdf** **06 42 28.6 +5.5**
comp=Z,4.1nm,0.7s,baz=312,slow=1.5,SNR=32
LPAZ La Paz 152.11 102 **PKPdf** **06 42 28.9 +5.7**
SIV San Ignacio 158.88 103 PKPab **PKPab** **06 43 06.9 -0.7**
comp=Z,1.3nm,0.9s,baz=106,slow=7.0,SNR=3.4

*SNET **13** 06:22:45.7±1.4, 13°.21N×89°.65W, h53km, ML2.8, Presumed earthquake*
*CATAC **13** 06:22:46.2±0.6, 13°N±4°×9°0W±°, h33km±3km, M2.9/13, MLv2.9/13, Error ellipse: s-maj=8.1km s-min=4.8km az=26.2, confirmed*
*GCG **13** 06:22:47.4±0.8, 13°.33N×89°.66W, h50km±9km, MD3.8, MW3.3, Presumed earthquake*

ISC 13 06:22:47.1±2.3, 13°.3N±0°.1×89°.67W±0°.07, h48km±12km, n31, σ0°69/53, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.41**	**55**	P	**Pn**	**06 22 57.1**	**-0.2**
LALI				S	**Sn**	**06 23 05.5**	**+1.1**
LALI	**Alcalda de L**	**0.41**	**55**	*i* P	**Pn**	**06 22 57.0**	**-0.3**
LALI				*i* S	**Sn**	**06 23 03.8**	**-0.6**
JAYA	**Jayaque - finc**	**0.46**	**28**	P	**Pn**	**06 22 57.7**	**-0.3**
JAYA				S	**Sn**	**06 23 06.5**	**+0.9**
JAYA	**Jayaque - finc**	**0.46**	**28**	*i* P	**Pn**	**06 22 57.6**	**-0.3**
JAYA				*i* S	**Sn**	**06 23 05.2**	**-0.4**
JAYA	**Jayaque - finc**	**0.46**	**28**	*i* P	**Pn**	**06 22 57.2**	**-0.8**
JAYA				*e*S	**Sn**	**06 23 05.6**	**0.0**
CEVE	**Cerro Verde**	**0.58**	**4**	*e*S	**Sn**	**06 23 09.4**	**+1.0**
SBLS	**San Blas**	**0.59**	**4**	*i* P	**Pn**	**06 22 59.7**	**+0.1**
SBLS				*e*S	**Sn**	**06 23 08.8**	**+0.2**
PANCS	**Alcalda de**	**0.59**	**53**	P	**Pn**	**06 22 58.9**	**-0.6**
PANCS				S	**Sn**	**06 23 08.5**	**+0.1**
CEDA	**San Andres**	**0.61**	**25**	P	Pn	06 22 53.1	-6.7
CEDA	**San Andres**	**0.61**	**25**	*i* P	**Pn**	**06 22 58.0**	**-1.7**
CEDA				*e*S	**Sn**	**06 23 09.4**	**+0.6**
BOQS	**Boqueron**	**0.61**	**38**	*i* P	**Pn**	**06 22 59.3**	**-0.6**
LOMA	**Loma Larga**	**0.62**	**51**	P	**Pn**	**06 22 59.6**	**-0.4**
LOMA	**Loma Larga**	**0.62**	**51**	*i* P	**Pn**	**06 22 59.3**	**-0.7**
LOMA				*e*S	**Sn**	**06 23 09.8**	**+0.7**
UEES	**Universidad Ev**	**0.62**	**42**	P	**Pn**	**06 22 59.6**	**-0.3**
UEES				S	**Sn**	**06 23 09.7**	**+0.6**
PIC2	**El Picacho**	**0.63**	**39**	*i* P	**Pn**	**06 22 59.9**	**-0.3**
FAME	**Alcaldia de Sa**	**0.68**	**330**	P	**Pn**	**06 23 00.4**	**-0.2**
FAME				S	**Sn**	**06 23 10.4**	**+0.1**
LFRS	**El Faro**	**0.69**	**58**	*i* P	**Pn**	**06 23 00.1**	**-0.7**
LFRS				*e*S	**Sn**	**06 23 11.1**	**+0.3**
UNIC	**Universidad Ca**	**0.74**	**9**	P	**Pn**	**06 23 01.3**	**-0.1**
UNIC				S	**Sn**	**06 23 12.9**	**+1.2**
LBRS	**Las Brisas**	**0.78**	**51**	*i* P	**Pn**	**06 23 01.8**	**-0.1**
LBRS				*e*S	**Sn**	**06 23 14.2**	**+1.6**
SLOZ	**Alcaldia de Sa**	**0.78**	**352**	P	**Pn**	**06 23 01.9**	**0.0**
SLOZ				S	**Sn**	**06 23 13.1**	**+0.4**
PAVA	**Las Pavas**	**0.85**	**57**	P	**Pn**	**06 23 02.9**	**0.0**
PAVA				S	**Sn**	**06 23 15.6**	**+1.2**
PAVA	**Las Pavas**	**0.85**	**57**	*i* P	**Pn**	**06 23 02.7**	**-0.2**
PAVA				*e*S	**Sn**	**06 23 14.9**	**+0.5**
COEG	**Centro de Oper**	**0.85**	**64**	P	**Pn**	**06 23 02.4**	**-0.5**
COEG	**Centro de Oper**	**0.85**	**64**	*i* P	**Pn**	**06 23 01.8**	**-1.1**
COEG				*e*S	**Sn**	**06 23 14.0**	**-0.3**
TECO	**Alcaldia de Te**	**0.91**	**71**	P	**Pn**	**06 23 02.7**	**-0.9**
TECO				S	**Sn**	**06 23 15.1**	**-0.6**
PQSS	**Presa 15 de Se**	**1.14**	**71**	P	**Pn**	**06 23 06.4**	**-0.3**
PQSS				S	**Sn**	**06 23 21.4**	**+0.2**
MTO3	**Montecristo**	**1.18**	**14**	P	**Pn**	**06 23 06.8**	**-0.7**
MTO3				S	**Sn**	**06 23 21.9**	**-0.7**
MTO3	**Montecristo**	**1.18**	**14**	*i* P	**Pn**	**06 23 06.8**	**-0.7**
PACA	**Pacayal**	**1.32**	**80**	P	**Pn**	**06 23 09.9**	**+0.6**
PACA				S	**Sn**	**06 23 27.2**	**+1.2**
ESQI	**Esquipulas**	**1.34**	**14**	P	**Pn**	**06 23 09.2**	**-0.4**
ESQI				S	**Sn**	**06 23 26.8**	**+0.4**
LCND	**La Caada**	**1.73**	**88**	P	**Pn**	**06 23 14.3**	**-0.5**

*IDC **13** 06:30:39.5±2.5, 21°.62N×143°.75E, h176km±21km, mb3.5/14, mbtmp4.0/15, Error ellipse: s-maj=21.4km s-min=14.7km az=75.0*
*NEIC **13** 06:30:43.0±1.0, 21°.66N±0°.09×143°.7E±0°.1, h200km±7km, mb4.0/16, Error ellipse: s-maj=22.1km s-min=5.9km az=58.0*

ISC 13 06:30:42.3±0.7, 21°.69N±0°.09×143°.7E±0°.1, h200km, n41, σ1§00/44, mb3.9/20, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.55**	**346**	P	**Pn**	**06 32 02.6**	**-1.1**
	31nm,0.3s,baz=135,slow=12,SNR=9.8						
JCJ				S	**Sn**	**06 33 05.1**	**-3.0**
	26nm,0.5s,baz=284,slow=23,SNR=1.5						
JCJ	**Chichijima**	**5.55**	**346**	Pn	**Pn**	**06 32 04.4**	**+0.6**
JYT	**Yasato**	**14.80**	**349**		**P**	**06 34 02.0**	**-0.9**
KSRS	**Korea Array**	**20.79**	**323**	P	**P**	**06 35 09.8**	**+1.8**
	2.7nm,0.7s,baz=147,slow=8.8,SNR=8.1						
	2.7nm,0.7s						
SONM	**Songino Array**	**39.63**	**320**	P	**P**	**06 37 55.0**	**+0.4**
	0.5nm,0.4s,baz=130,slow=8.0,SNR=4.5						
	0.5nm,0.4s						
SONM	**Songino Array**	**39.63**	**320**	P	**P**	**06 37 55.5**	**+0.9**
CM31	**Chiang Mai Arr**	**42.02**	**274**	P	**P**	**06 38 13.8**	**-0.5**
CM31				IAmb	IAmb	06 38 43.2	
	comp=Z,7.9nm,1.4s						
CMAR	**Chiang Mai Arr**	**42.02**	**274**	P	**P**	**06 38 13.8**	**-0.5**
WB0	**Warramunga Arr**	**42.19**	**193**	P	**P**	**06 38 16.0**	**+0.4**
WR8	**Warramunga Arr**	**42.35**	**193**	P	**P**	**06 38 16.3**	**-0.6**
WRA	**Warramunga Arr**	**42.37**	**193**	P	**P**	**06 38 15.8**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=15,slow=8.5,SNR=5.1						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**42.37**	**193**	P	**P**	**06 38 15.3**	**-1.7**
ASAR	**Alice Springs**	**46.07**	**192**	P	**P**	**06 38 45.0**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=8.5,slow=6.6,SNR=5.0						
	comp=Z,0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**54.49**	**322**	P	**P**	**06 39 49.1**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=110,slow=6.5,SNR=5.4						
	comp=Z,1.3nm,0.6s						
MK31	**Makanchi Array**	**55.03**	**313**	P	**P**	**06 39 53.2**	**0.0**
MKAR	**Makanchi Array**	**55.03**	**313**	P	**P**	**06 39 53.9**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=90,slow=9.0,SNR=16						
MKAR				PcP	**PcP**	**06 40 52.2**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=80,slow=5.2,SNR=11						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**55.03**	**313**	P	**P**	**06 39 53.8**	**+0.5**
MKAR					**PcP**	**06 40 52.1**	**-0.2**
MAKZ	**Makanchi**	**55.24**	**313**	P	**P**	**06 39 55.3**	**+0.6**
MAKZ				IAmb	IAmb	06 39 56.2	
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**57.78**	**317**	P	**P**	**06 40 12.8**	**+0.3**
KURK				IAmb	IAmb	06 40 13.8	
	comp=Z,3.7nm,0.8s						
KURBB	**Kurchatov Arra**	**57.83**	**317**	P	**P**	**06 40 12.9**	**0.0**
	comp=Z,4.1nm,0.5s,baz=94,slow=7.7,SNR=51						
	comp=Z,4.1nm,0.5s						
D20K	**Etivluk River**	**59.12**	**22**	P	**P**	**06 40 22.8**	**+1.3**
D20K				IAmb	IAmb	06 40 25.2	
	comp=Z,3.5nm,1.2s						
B20K	**Meade River**	**59.41**	**20**	P	**P**	**06 40 24.9**	**+1.5**
C23K	**Itkillik River**	**61.50**	**21**	P	**P**	**06 40 38.9**	**+1.4**
C23K				IAmb	IAmb	06 40 47.3	
	comp=Z,3.5nm,0.9s						
ILAR	**Eielson Array**	**61.84**	**27**	P	**P**	**06 40 39.1**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=253,slow=5.4,SNR=4.6						
	comp=Z,0.4nm,0.7s						
D25K	**Kavik River**	**62.83**	**22**	P	**P**	**06 40 48.1**	**+1.6**
BVAR	**Borovoye Array**	**62.96**	**320**	P	**P**	**06 40 48.0**	**+0.5**
	comp=Z,4.2nm,0.4s,baz=89,slow=7.7,SNR=14						
	comp=Z,4.2nm,0.4s						
KK31	**Karatay Array**	**63.41**	**308**	P	**P**	**06 40 51.4**	**+0.7**
KK31				IAmb	IAmb	06 40 52.1	
	comp=Z,2.4nm,0.7s						
KKAR	**Karatay Array**	**63.41**	**308**	P	**P**	**06 40 51.6**	**+0.9**
G31M	**Satah River**	**67.15**	**25**	P	**P**	**06 41 14.9**	**+0.7**
AB31	**Akbulak array**	**69.86**	**316**	P	**P**	**06 41 31.3**	**0.0**
AB31				IAmb	IAmb	06 41 32.1	
	comp=Z,1.9nm,0.8s						
ABKAR	**Akbulak array**	**69.86**	**316**	P	**P**	**06 41 31.3**	**0.0**
YKA	**Yellowknife Ar**	**76.26**	**28**	P	**P**	**06 42 08.9**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=293,slow=5.5,SNR=6.4						
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	**79.07**	**342**	P	**P**	**06 42 24.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=79,slow=7.5,SNR=5.9						
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**79.07**	**342**	P	**P**	**06 42 24.2**	**+0.2**
ARCES				IAmb	IAmb	06 42 52.1	
	comp=Z,3.9nm,1.2s						
KBZ	**Khabaz**	**82.69**	**314**	P	**P**	**06 42 44.6**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=72,slow=5.4,SNR=6.6						
	comp=Z,3.3nm,0.8s						
NVAR	**Mina Array Bea**	**82.80**	**52**	P	**P**	**06 42 45.4**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=256,slow=6.0,SNR=3.6						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**82.80**	**52**	P	**P**	**06 42 44.8**	**+0.2**
FINES	**FINESS Array B**	**83.38**	**335**	P	**P**	**06 42 45.9**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=72,slow=3.5,SNR=9.1						
	comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**	**83.38**	**335**	P	**P**	**06 42 46.1**	**-0.7**
PLCA	**Paso Flores**	**145.42**	**131**	PKPbc	**PKPab**	**06 49 56.5**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=270,slow=3.2,SNR=11						
LPAZ	**La Paz**	**149.50**	**85**	PKPbc	**PKPbc**	**06 50 08.5**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=270,slow=2.0,SNR=6.3						

*IDC **13** 06:30:47.4±3.4, 54°.29N×87°.09E, h0km, mbtmp3.6/2, ML2.8/2, Error ellipse: s-maj=31.6km s-min=19.9km az=49.0*

ASRS 13 06:30:44.0±1.0, 54°.20N×87°.11E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.37**	**260**	I	I	06 39 10.0	
	baz=76,slow=315,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.37**	**260**	Pg	Pb	06 31 11.7	+1.1
	1.1nm,0.3s,baz=75,slow=17,SNR=9.4						
ZALV				Lg	Lg	06 31 31.6	
	0.8nm,0.3s,baz=77,slow=27,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.36**	**239**	Pn	Pn	06 32 23.4	+4.6
	0.2nm,0.3s,baz=55,slow=14,SNR=1.8						
	1.4nm,0.2s						
MKAR	**Makanchi Array**	**8.03**	**204**	Pn	Pn	06 32 47.7	+5.9
	0.1nm,0.3s,baz=26,slow=15,SNR=5.5						
	4.1nm,1.1s						

WEL 13 06:52:33.8±1.2, 35°S×9°W×18°0W±1°6, h12km, M3.6/7, ML3.5/8, MLv3.6/7, Error ellipse: s-maj=21.5km s-min=9.1km az=110.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.22**	**208**	P	Pn	06 53 25.0	+0.8
PKGZ	**Pakihiroa**	**3.58**	**208**	P	Pn	06 53 29.4	+0.4
PKGZ				S	Sn	06 54 13.6	+2.4
HAZ	**Te Kaha**	**3.60**	**212**	P	Pn	06 53 29.8	+0.4
HAZ				S	Sn	06 54 15.4	+3.5
PUZ	**Puketiti**	**3.69**	**204**	P	Pn	06 53 29.8	-0.9
RUGZ	**Raukumara Rang**	**3.82**	**211**	P	Pn	06 53 32.9	+0.3
RUGZ				S	Sn	06 54 20.0	+2.5
TWGZ	**Tauwhareparae**	**3.88**	**207**	P	Pn	06 53 33.1	-0.3
TWGZ				S	Sn	06 54 19.0	+0.1
CNGZ	**Carnagh Statio**	**4.08**	**202**	P	Pn	06 53 35.5	-0.6
MWZ	**Matawai**	**4.20**	**210**	P	Pn	06 53 37.7	0.0
MWZ				S	Sn	06 54 27.1	+0.4
URZ	**Urewera**	**4.32**	**214**	P	Pn	06 53 39.3	0.0
URZ				S	Sn	06 54 28.3	-1.2
RAGZ	**Rawiri**	**4.38**	**210**	P	Pn	06 53 39.6	-0.6
RAGZ				S	Sn	06 54 30.9	-0.4
RIGZ	**Rimuhau**	**4.43**	**205**	P	Pn	06 53 40.8	-0.1
RIGZ				S	Sn	06 54 31.7	-0.7
SNGZ	**Shannon Statio**	**4.66**	**209**	P	Pn	06 53 44.4	+0.4
OUZ	**Omahuta**	**5.44**	**263**	P	Pn	06 53 54.3	-0.4

*ASRS **13** 07:05:05.0±1.5, 53°.94N×86°.62E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 07:05:06.7±3.0, 53°.97N×86°.65E, h0km, mbtmp3.0/2, ML2.6/1, Error ellipse: s-maj=23.9km s-min=13.8km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.08**	**270**	I	I	07 11 40.0	
	baz=88,slow=316,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.08**	**270**	Pg	Pg	07 05 25.9	-1.5
	0.5nm,0.3s,baz=85,slow=17,SNR=6.2						
ZALV				Lg	Lg	07 05 43.4	
	1.9nm,0.3s,baz=92,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**6.00**	**239**	Pn	Pn	07 06 36.8	+0.1
	0.1nm,0.3s,baz=56,slow=14,SNR=4.4 1.0nm,0.2s						
MKAR	**Makanchi Array**	**7.70**	**203**	Pn	Pn	07 07 01.9	+1.9
	0.2nm,0.3s,baz=28,slow=14,SNR=1.3						
MKAR				Lg	Lg	07 09 11.7	
	baz=21,slow=32						

*CATAC **13** 07:08:48.5±0.3, 12°N×2°×8°7W±°, h22km, M4.9/43, MLv4.9/43, Error ellipse: s-maj=4.0km s-min=2.0km az=18.7, confirmed*

*SNET **13** 07:08:48.3±4.2, 11°.70N×87°.11W, h22km, ML4.8, Presumed earthquake*

*NEIC **13** 07:08:49.6±1.6, 11°.64N±0°.05×87°.09W±0°.06, h40km±7km, mb4.4/164, Error ellipse: s-maj=8.7km s-min=6.7km az=61.0*

*IDC **13** 07:08:51.0±3.7, 12°.29N×86°.59W, h33km±29km, mb3.7/12, mbtmp3.9/15, ML2.5/4, Error ellipse: s-maj=31.9km s-min=12.7km az=55.0*

*GFZ **13** 07:08:53.9±0.4, 12°N±6°×8°7W±°, h67km, M4.8/14, mb4.8/14, confirmed*

*UCR **13** 07:08:54.5±1.5, 11°.78N×86°.76W, h33km±134km, MW5.0, Presumed earthquake*

ISC 13 07:08:49.6±0.6, 11°.69N±0°.04×87°.12W±0°.03, h42km±4km, n497, σ1§13/516, mb4.3/67, 20D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.71**	**47**	ǁP	**Pn**	**07 09 03.8**	**+0.6**
COPN	**Copaltepe**	**0.71**	**47**	*eP*	**Pn**	**07 09 03.9**	**+0.6**
SAPS	**Ciudad Sandino**	**0.84**	**56**	ǁP	**Pn**	**07 09 05.7**	**+0.6**
AMTN	**Mateare**	**0.86**	**51**	P	**Pn**	**07 09 06.4**	**+1.1**
MACN	**El Madrono**	**0.88**	**29**	ǁP	**Pn**	**07 09 06.3**	**+0.6**
CNGA	**Al SSO del Vol**	**0.89**	**27**	ǁP	**Pn**	**07 09 06.5**	**+0.6**
ABCN	**Banco Central**	**0.90**	**62**	P	**Pn**	**07 09 07.0**	**+1.2**
CNGN	**Cerro Negro**	**0.90**	**27**	ǁP	**Pn**	**07 09 06.4**	**+0.4**
CNGN				S	**Sn**	**07 09 20.6**	**+2.8**
CNGN	**Cerro Negro**	**0.90**	**27**	P	**Pn**	**07 09 06.4**	**+0.4**
MOMN	**Momotombo**	**0.91**	**38**	P	**Pn**	**07 09 06.6**	**+0.5**
MOMN				S	**Sn**	**07 09 20.6**	**+2.6**
APQ2	**Apoyeque**	**0.92**	**57**	P	**Pn**	**07 09 06.7**	**+0.5**
APQ2	**Apoyeque**	**0.92**	**57**	ǁP	**Pn**	**07 09 06.9**	**+0.7**
APQ2				S	**Sn**	**07 09 21.5**	**+3.2**
APQ2				S		07 09 21.9	
APYN	**Apoyeque**	**0.92**	**54**	P	**Pn**	**07 09 07.3**	**+1.1**
APYN				S	**Sn**	**07 09 20.9**	**+2.6**
UNAN	**Cigeo UNAN**	**0.93**	**63**	ǁP	**Pn**	**07 09 06.9**	**+0.6**
UNAN				S	**Sn**	**07 09 21.4**	**+3.0**
TISN	**Laguna Tiscapa**	**0.94**	**62**	ǁP	**Pn**	**07 09 06.2**	**-0.3**
ALLN	**Telcor Managua**	**0.94**	**61**	P	**Pn**	**07 09 07.3**	**+0.8**
ALLN				S	**Sn**	**07 09 21.5**	**+2.7**
PLRN	**Geotermica Pol**	**0.95**	**21**	ǁP	**Pn**	**07 09 07.0**	**+0.4**
PLRN				S	**Sn**	**07 09 21.2**	**+2.3**
HERN	**Volcan Telica**	**0.95**	**17**	Pn	**Pn**	**07 09 06.7**	**0.0**
HERN	**Volcan Telica**	**0.95**	**17**	P	**Pn**	**07 09 07.3**	**+0.7**
HERN				S	**Sn**	**07 09 21.8**	**+2.7**
HERN	**Volcan Telica**	**0.95**	**17**	*eP*	**Pn**	**07 09 07.0**	**+0.3**
MGAN	**Managua**	**0.96**	**62**		**Pn**	**07 09 07.3**	**+0.6**
MGAN				Sn	**Sn**	**07 09 19.0**	**-0.2**
MGAN	**Managua**	**0.96**	**62**	ǁP	**Pn**	**07 09 07.5**	**+0.7**
MGAN				S	**Sn**	**07 09 21.2**	**+2.0**
MGAN	**Managua**	**0.96**	**62**	P	**Pn**	**07 09 07.5**	**+0.7**
MOM2	**El Cardon**	**0.96**	**40**	ǁP	**Pn**	**07 09 07.4**	**+0.7**
MOM2				S	**Sn**	**07 09 21.7**	**+2.4**
MAS3	**Al N del Volca**	**0.98**	**70**	ǁP	**Pn**	**07 09 07.4**	**+0.5**
MAS3				S	**Sn**	**07 09 21.9**	**+2.2**
MASN	**Masaya**	**0.99**	**73**	P	**Pn**	**07 09 08.0**	**+0.9**
MASN				S	**Sn**	**07 09 23.9**	**+3.9**
CRIN	**San Cristobal**	**1.00**	**4**	Pn	**Pn**	**07 09 08.0**	**+0.7**
CRIN	**San Cristobal**	**1.00**	**4**	ǁP	**Pn**	**07 09 08.0**	**+0.7**
CRIN				S	**Sn**	**07 09 22.5**	**+2.2**
CRIN	**San Cristobal**	**1.00**	**4**	P	**Pn**	**07 09 08.1**	**+0.8**
WILN	**Americas 2**	**1.02**	**63**	ǁP	**Pn**	**07 09 08.2**	**+0.7**
WILN				S	**Sn**	**07 09 23.5**	**+2.8**
AERN	**Aeropuerto Man**	**1.03**	**64**	P	**Pn**	**07 09 08.4**	**+0.8**
AERN				S	**Sn**	**07 09 23.5**	**+2.5**
NADN	**Granada**	**1.06**	**87**	P	**Pn**	**07 09 08.8**	**+0.7**
NADN				S	**Sn**	**07 09 24.5**	**+2.7**
NADN	**Granada**	**1.06**	**87**	*eP*	**Pn**	**07 09 08.2**	**+0.1**
CSGN	**Cosiguina Volc**	**1.34**	**341**	ǁP	**Pn**	**07 09 12.5**	**+0.4**
CSGN				S	**Sn**	**07 09 31.0**	**+2.2**
LIMN	**Finca el Limon**	**1.55**	**28**	ǁP	**Pn**	**07 09 15.5**	**+0.7**
LIMN				S	**Sn**	**07 09 35.3**	**+1.6**
BOAB	**BOACO BROADBAN**	**1.61**	**62**		**Pn**	**07 09 15.9**	**+0.3**
BOAB	**BOACO BROADBAN**	**1.61**	**62**	ǁP	**Pn**	**07 09 16.0**	**+0.5**
BOAB	**BOACO BROADBAN**	**1.61**	**62**	P	**Pn**	**07 09 16.0**	**+0.5**
CARN	**Rivas**	**1.64**	**108**		**Pn**	**07 09 15.2**	**-0.9**
CARN	**Rivas**	**1.64**	**108**	P	**Pn**	**07 09 16.8**	**+0.8**
CARN				S	**Sn**	**07 09 34.5**	**-1.5**
CARN	**Rivas**	**1.64**	**108**	*eP*	**Pn**	**07 09 16.2**	**+0.1**
MATN	**Matagalpa**	**1.69**	**43**	ǁP	**Pn**	**07 09 17.7**	**+0.8**
CNCH	**Conchagua**	**1.72**	**336**	P	**Pn**	**07 09 18.1**	**+0.9**
CNCH				S	**Sn**	**07 09 37.4**	**-0.7**
CNCH	**Conchagua**	**1.72**	**336**	*i* P	**Pn**	**07 09 18.0**	**+0.7**
CNCH				*eS*	**Sn**	**07 09 36.9**	**-1.2**
INTP	**Intipuca**	**1.75**	**329**	*i* P	**Pn**	**07 09 18.4**	**+0.8**
INTP				*eS*	**Sn**	**07 09 35.6**	**-3.0**
LCND	**La Caada**	**1.77**	**335**	P	**Pn**	**07 09 18.7**	**+0.9**
LCND	**La Caada**	**1.77**	**335**	*i* P	**Pn**	**07 09 18.8**	**+0.9**
LAPC	**Finca la Perla**	**1.89**	**119**	*eP*	**Pn**	**07 09 20.9**	**+1.4**
ACON	**Acoyapa**	**1.92**	**82**	P	**Pn**	**07 09 20.0**	**+0.1**
ACON				S	**Sn**	**07 09 44.8**	**+1.9**
GP32	**Hotel Rincn d**	**1.97**	**118**	*eP*	**Pn**	**07 09 22.6**	**+2.0**
DELF	**Filadelfia**	**1.97**	**129**	*eP*	Pn	07 09 24.9	+4.3
RCON	**San Juan de Ri**	**2.01**	**28**	P	**Pn**	**07 09 22.7**	**+1.4**
RCON				S	**Sn**	**07 09 46.8**	**+1.5**
OCON	**Estacion meteo**	**2.02**	**18**	ǁP	**Pn**	**07 09 22.8**	**+1.4**
OCON				S	**Sn**	**07 09 47.8**	**+2.4**
RANC	**El Ranchito**	**2.07**	**327**	P	**Pn**	**07 09 23.6**	**+1.5**
RANC				S	**Sn**	**07 09 47.8**	**+1.0**
RANC	**El Ranchito**	**2.07**	**327**	*i* P	**Pn**	**07 09 23.6**	**+1.5**
RCVN	**Varillal2**	**2.08**	**26**	P	**Pn**	**07 09 23.5**	**+1.2**
RCVN				S	**Sn**	**07 09 48.7**	**+1.6**
MESS	**Mesas**	**2.11**	**116**	*eP*	**Pn**	**07 09 23.4**	**+0.9**
PACA	**Pacayal**	**2.12**	**326**	P	**Pn**	**07 09 24.1**	**+1.3**
PACA				S	**Sn**	**07 09 49.1**	**+1.2**
JUD3	**Juan Diaz 3**	**2.17**	**134**		**Pn**	**07 09 22.8**	**-0.6**
JUD3	**Juan Diaz 3**	**2.17**	**134**	*eP*	**Pn**	**07 09 23.0**	**-0.4**
CUI	**Cuipilapa**	**2.18**	**118**	*eP*	**Pn**	**07 09 24.4**	**+1.0**
TENO	**El Achiote**	**2.32**	**115**	*eP*	**Pn**	**07 09 25.7**	**+0.3**
TIMP	**Tierras Morena**	**2.34**	**118**	*eP*	**Pn**	**07 09 26.6**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.35**	**356**	Pn	**Pn**	**07 09 27.5**	**+1.5**
PQSS	**Presa 15 de Se**	**2.38**	**324**	P	**Pn**	**07 09 27.3**	**+1.1**
LCHIL	**Los Chiles**	**2.45**	**105**	*eP*	**Pn**	**07 09 29.6**	**+2.5**
TECO	**Alcaldia de Te**	**2.45**	**319**	P	**Pn**	**07 09 27.6**	**+0.4**
TECO				S	**Sn**	**07 09 57.3**	**+1.4**
JTS	**Las Juntas de**	**2.54**	**123**	Pn	**Pn**	**07 09 30.6**	**+2.2**
	5.7nm,0.3s,baz=116,slow=22,SNR=17 33nm,0.4s						
JTS	**Las Juntas de**	**2.54**	**123**		**Pn**	**07 09 28.1**	**-0.3**
JTS	**Las Juntas de**	**2.54**	**123**	P	**Pn**	**07 09 31.9**	**+3.5**
COEG	**Centro de Oper**	**2.57**	**318**	P	**Pn**	**07 09 29.5**	**+0.6**
COEG				S	**Sn**	**07 10 00.7**	**+1.7**
COEG	**Centro de Oper**	**2.57**	**318**	*i* P	**Pn**	**07 09 29.6**	**+0.6**
MARCA	**Marcala la Paz**	**2.61**	**340**	ǁP	**Pn**	**07 09 31.1**	**+1.6**
MTEVE	**Monteverde**	**2.63**	**121**	*eP*	**Pn**	**07 09 31.3**	**+1.5**
SJTE	**Alcalda de S**	**2.65**	**316**	*i* P	**Pn**	**07 09 30.8**	**+0.8**
VARE2	**V. Arenal**	**2.66**	**117**	*eP*	**Pn**	**07 09 31.6**	**+1.6**
PAVA	**Las Pavas**	**2.68**	**319**	P	**Pn**	**07 09 31.6**	**+1.1**
PAVA				S	**Sn**	**07 10 03.1**	**+1.4**
LAFE	**Finca La Fe, P**	**2.87**	**131**	*eP*	**Pn**	**07 09 36.8**	**+3.9**
UEES	**Universidad Ev**	**2.88**	**314**	P	**Pn**	**07 09 34.9**	**+1.7**
UEES				S	**Sn**	**07 10 09.6**	**+2.8**
BOQS	**Boqueron**	**2.93**	**314**	*i* P	**Pn**	**07 09 35.2**	**+1.3**
QUEU	**Ciudad Quesada**	**2.97**	**117**	*eP*	**Pn**	**07 09 37.1**	**+2.8**
SIUN	**Universidad Ur**	**3.04**	**48**	Pn	**Pn**	**07 09 34.9**	**-0.4**
BELE	**Belen**	**3.35**	**120**	*eP*	**Pn**	**07 09 43.1**	**+3.5**
HDC	**Heredia**	**3.40**	**119**		**Pn**	**07 09 39.4**	**-0.9**
HDC	**Heredia**	**3.40**	**119**	P	**Pn**	**07 09 44.2**	**+3.9**
ACOS	**Acosta**	**3.46**	**123**	*eP*	**Pn**	**07 09 44.1**	**+2.9**
MTO3	**Montecristo**	**3.46**	**321**		**Pn**	**07 09 42.5**	**+1.2**
ESQI	**Esquipulas**	**3.58**	**323**		**Pn**	**07 09 43.0**	**+0.3**
REPA	**Paraso**	**3.69**	**120**	*eP*	**Pn**	**07 09 48.0**	**+3.6**
PIEC	**Cerro El Cedra**	**3.73**	**123**	*eP*	**Pn**	**07 09 48.5**	**+3.5**
BILN	**Bilwi Airport**	**4.34**	**57**	Pn	**Pn**	**07 09 50.5**	**-2.6**
APG	**El Apazote**	**4.63**	**316**	Pn	**Pn**	**07 09 59.0**	**+1.7**
	baz=107,slow=14,SNR=2.7						
RGM0	**Gandoca**	**4.90**	**115**	Pn	**Pn**	**07 09 60.0**	**-0.9**
PIRO	**Carate, Puerto**	**4.96**	**131**	Pn	**Pn**	**07 09 59.3**	**-2.3**
PIRO	**Carate, Puerto**	**4.96**	**131**	*eP*	**Pn**	**07 10 03.8**	**+2.2**
BRU2	**Volcan**	**5.22**	**123**	Pn	**Pn**	**07 10 03.8**	**-1.7**
BRU2	**Volcan**	**5.22**	**123**	P	**Pn**	**07 10 09.3**	**+3.8**
RTAL	**Retalhuleu**	**5.27**	**303**	Pn	**Pn**	**07 10 05.6**	**-0.3**
BQTLY	**Boquete Panama**	**5.43**	**122**	*eP*	**Pn**	**07 10 10.8**	**+2.4**
HUEH	**Huehuetenango**	**5.58**	**311**	Pn	**Pn**	**07 10 09.9**	**-0.5**
PETF	**Flores**	**5.83**	**333**	Pn	**Pn**	**07 10 13.6**	**-0.1**
TEIG	**Tepich**	**8.56**	**353**	Pn	**Pn**	**07 10 49.9**	**-1.1**
CMIG	**Matias Romero**	**9.24**	**306**	Pn	**Pn**	**07 11 02.8**	**+2.4**
	0.4nm,0.3s,baz=153,slow=13,SNR=8.8						
CMIG				Sn	**Sn**	**07 12 46.2**	**+3.1**
	0.4nm,0.3s,baz=338,slow=22,SNR=1.3 1.5nm,0.3s						
CMIG	**Matias Romero**	**9.24**	**306**	*eP*	**Pn**	**07 11 02.6**	**+2.2**
MTDJ	**Mount Denham**	**11.31**	**54**	Pn	**Pn**	**07 11 27.1**	**-1.7**
SOR	**Soroa**	**11.71**	**19**	Pn	**Pn**	**07 11 33.7**	**-0.6**
TLIG	**Tlapa**	**12.52**	**299**	Pn	**Pn**	**07 11 45.4**	**0.0**
CAMR	**Camarioca**	**12.56**	**25**	Pn	**Pn**	**07 11 45.1**	**-0.8**
GTBY	**Guantanamo Bay**	**14.15**	**53**	Pn	**Pn**	**07 12 06.4**	**-1.2**
ROSC	**El Rosal**	**14.37**	**117**	Pn	**Pn**	**07 12 09.3**	**-1.6**
	0.2nm,0.3s,baz=319,slow=20,SNR=1.2 1.6nm,0.4s						
ROSC	**El Rosal**	**14.37**	**117**	Pn	**Pn**	**07 12 09.7**	**-1.3**
NMDO	**Nuevo Mundo**	**14.61**	**51**	Pn	**Pn**	**07 12 12.1**	**-1.6**
SLOR	**San Lorenzo -**	**15.02**	**145**	Pn	**Pn**	**07 12 17.8**	**-1.9**
MOIG	**Morelia**	**15.69**	**302**	Pn	**Pn**	**07 12 29.3**	**+1.1**
MOIG				IAmb	IAmb	07 12 43.3	
	comp=Z,12nm,0.6s						
SDV	**Santo Domingo**	**16.46**	**98**	Pn	**Pn**	**07 12 36.4**	**-1.5**
SDD	**Santo Domingo**	**17.91**	**66**		**Pn**	**07 12 54.2**	**-1.6**
ZAIG	**Zacatecas**	**18.39**	**309**		**P**	**07 13 00.2**	**-1.4**
553A	**Crawfordville**	**18.57**	**7**	P	**P**	**07 13 02.8**	**-0.3**
553A				IAmb	IAmb	07 13 09.7	
	comp=Z,28nm,1.1s						
441A	**DeRidder**	**19.78**	**344**	P	**P**	**07 13 15.4**	**-0.9**
441A				IAmb	IAmb	07 13 22.1	
	comp=Z,16nm,0.8s						
HKT	**Hockley**	**19.89**	**337**		**P**	**07 13 18.1**	**+0.5**
HKT	**Hockley**	**19.89**	**337**		**P**	**07 13 17.3**	**-0.3**
HKT				IAmb	IAmb	07 13 20.6	
	comp=Z,7.2nm,0.9s						
HKT	**Hockley**	**19.89**	**337**	P	**P**	**07 13 18.9**	**+1.4**
TIGA	**Tifton**	**19.92**	**9**	P	**P**	**07 13 17.6**	**-0.3**
TIGA				IAmb	IAmb	07 13 24.6	
	comp=Z,22nm,1.0s						
EF02	**Christine**	**20.06**	**330**	P	**P**	**07 13 19.2**	**-0.2**
EF02				IAmb	IAmb	07 13 21.1	
	comp=Z,18nm,0.7s						
833A	**Chaparral WMA,**	**20.14**	**327**	P	**P**	**07 13 20.9**	**+0.6**
833A				IAmb	IAmb	07 13 22.3	
	comp=Z,24nm,0.8s						
HNVL	**Huntsville, TX**	**20.49**	**339**	P	**P**	**07 13 24.1**	**0.0**
HNVL				IAmb	IAmb	07 13 27.2	
	comp=Z,19nm,0.9s						
ATAH	**Atahualpa**	**20.62**	**155**	P	Pn	07 13 31.4	+2.9
	comp=Z,1.6nm,0.4s,baz=326,slow=15,SNR=1.4 comp=Z,1.6nm,0.4s						
152A	**Waverly Hall**	**20.99**	**6**	P	**P**	**07 13 28.7**	**-0.8**
152A				IAmb	IAmb	07 13 34.4	
	comp=Z,9.6nm,0.7s						
HNDO	**Hondo**	**21.05**	**329**		**P**	**07 13 29.9**	**-0.4**
154A	**Montrose**	**21.14**	**9**	P	**P**	**07 13 30.5**	**-0.7**
154A				IAmb	IAmb	07 13 36.1	
	comp=Z,15nm,0.7s						
SJG	**San Juan**	**21.23**	**70**	P	**P**	**07 13 30.9**	**-1.4**
SJG				IAmb	IAmb	07 13 44.6	
	comp=Z,13nm,0.9s						
LRAL	**Lakeview Retre**	**21.24**	**0**		**P**	**07 13 31.9**	**-0.3**
143A	**Socs Landing,**	**21.28**	**350**	P	**P**	**07 13 32.3**	**-0.3**
143A				IAmb	IAmb	07 13 46.6	
	comp=Z,9.7nm,0.8s						
Z47A	**Carrollton**	**21.42**	**358**	P	**P**	**07 13 32.8**	**-1.3**
Z47A				IAmb	IAmb	07 13 38.9	
	comp=Z,7.2nm,0.7s						
HUMP	**Col San Antoni**	**21.52**	**70**	P	**P**	**07 13 33.5**	**-1.8**
HUMP				IAmb	IAmb	07 13 42.7	
	comp=Z,21nm,1.2s						
GOGA	**Godfrey**	**21.87**	**8**	P	**P**	**07 13 38.3**	**-0.7**
GOGA				IAmb	IAmb	07 13 42.8	
	comp=Z,8.6nm,0.8s						
GOGA	**Godfrey**	**21.87**	**8**	P	**P**	**07 13 41.5**	**+2.6**
GOGA				pP	**sP**	**07 13 52.6**	**-1.8**
JCT	**Junction City**	**22.09**	**330**	P	**P**	**07 13 41.4**	**0.0**
JCT				IAmb	IAmb	07 13 44.3	
	comp=Z,11nm,1.1s						
Z41A	**Richland Creek**	**22.09**	**347**	P	**P**	**07 13 41.3**	**+0.1**
Z41A				IAmb	IAmb	07 13 43.8	
	comp=Z,6.6nm,0.6s						
Y52A	**Lilburn**	**22.24**	**7**	P	**P**	**07 13 41.7**	**-1.3**
Y52A				IAmb	IAmb	07 13 46.4	
	comp=Z,14nm,0.9s						
WHTX	**Lake Whitney,**	**22.34**	**336**	P	**P**	**07 13 44.5**	**+0.6**
WHTX				IAmb	IAmb	07 13 46.7	
	comp=Z,18nm,1.0s						
BRDY	**Brady**	**22.38**	**332**	P	**P**	**07 13 44.5**	**0.0**
BRDY				IAmb	IAmb	07 13 47.4	
	comp=Z,10nm,0.8s						
TREL	**Terrell**	**22.50**	**340**	P	**P**	**07 13 46.2**	**+0.4**
CCAR	**Cane Creek**	**22.53**	**350**	P	**P**	**07 13 46.0**	**0.0**
CCAR				IAmb	IAmb	07 13 49.7	
	comp=Z,7.6nm,0.6s						
WLAR	**White Oak Lake**	**22.57**	**347**	P	**P**	**07 13 47.1**	**+0.7**
WLAR				IAmb	IAmb	07 13 49.9	
	comp=Z,7.5nm,0.7s						
FW13	**Cleburne**	**22.64**	**337**	P	**P**	**07 13 46.9**	**-0.3**
FW13				IAmb	IAmb	07 13 50.1	
	comp=Z,11nm,0.6s						
Z38A	**Mt. Pleasant**	**22.64**	**343**		**P**	**07 13 47.6**	**+0.3**
FPAL	**Fort Paine**	**22.78**	**3**	P	**P**	**07 13 49.1**	**+0.4**
HODGE	**Hodges**	**22.87**	**10**	P	**P**	**07 13 49.8**	**+0.2**
SAND	**Sanderson**	**22.91**	**325**	P	**P**	**07 13 49.9**	**-0.2**
HPIG		**23.11**	**314**	P	**P**	**07 13 51.8**	**-0.5**
OZNA	**Ozona**	**23.11**	**328**	P	**P**	**07 13 51.5**	**-0.7**
FW06	**Azle**	**23.25**	**337**	P	**P**	**07 13 52.8**	**-0.6**
FW06				IAmb	IAmb	07 13 56.5	
	comp=Z,8.9nm,0.8s						
TXAR	**Lajitas Array**	**23.36**	**321**	P	**P**	**07 13 55.8**	**+1.1**
	comp=Z,6.5nm,0.7s,baz=140,slow=9.7,SNR=88						
TXAR				PcP	**PcP**	**07 17 43.0**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=125,slow=4.1,SNR=6.1 comp=Z,6.5nm,0.7s						
TXAR	**Lajitas Array**	**23.36**	**321**		**P**	**07 13 55.5**	**+0.9**
TX31	**Lajitas Ar. Si**	**23.36**	**321**		**P**	**07 13 55.6**	**+0.9**
TX31				IAmb	IAmb	07 13 56.6	
	comp=Z,6.8nm,0.8s						
PLPT	**Palo Pinto**	**23.40**	**336**		**P**	**07 13 55.0**	**+0.1**
SWET	**Sewanee**	**23.44**	**2**	P	**P**	**07 13 55.3**	**0.0**
Z35A	**Perchaven, San**	**23.45**	**338**	P	**P**	**07 13 55.5**	**+0.1**
W50A	**Signal Mountai**	**23.46**	**4**	P	**P**	**07 13 56.2**	**+0.8**
W50A				IAmb	IAmb	07 13 57.5	
	comp=Z,13nm,0.7s						
MIAR	**Mount Ida**	**23.50**	**347**		**P**	**07 13 56.0**	**+0.2**
MIAR				IAmb	IAmb	07 13 56.9	
	comp=Z,10nm,0.7s						
MIAR	**Mount Ida**	**23.50**	**347**	P	**P**	**07 13 56.5**	**+0.7**
CPCT	**Cooper Cave**	**23.77**	**5**	P	**P**	**07 13 59.1**	**+0.7**
CPCT				IAmb	IAmb	07 14 01.1	
	comp=Z,8.8nm,0.7s						
V48A	**Smith Brothers**	**23.94**	**1**	P	**P**	**07 14 00.6**	**+0.6**
V48A				IAmb	IAmb	07 14 02.7	
	comp=Z,6.3nm,0.8s						
WHAR	**Wooly Hollow**	**23.95**	**350**	P	**P**	**07 14 00.8**	**+0.7**
LOOK	**Love County**	**24.02**	**339**		**P**	**07 14 01.5**	**+0.8**
CZSB	**Cruzeiro do Su**	**24.04**	**143**	P	**P**	**07 14 00.7**	**-0.4**
CZSB				IAmb	IAmb	07 14 03.6	
	comp=Z,4.5nm,0.6s						
TKL	**Tuckaleechee C**	**24.05**	**7**	P	**P**	**07 13 56.4**	**-4.5**
	comp=Z,2.4nm,1.0s,baz=212,slow=4.7,SNR=8.4 comp=Z,2.4nm,1.0s						
TKL	**Tuckaleechee C**	**24.05**	**7**	P	**P**	**07 14 01.3**	**+0.3**
TKL				IAmb	IAmb	07 14 03.6	
	comp=Z,15nm,1.1s						
ALPN	**Alpine**	**24.09**	**323**		**P**	**07 14 02.0**	**+0.4**
WTFS	**Witchita Falls**	**24.30**	**337**	P	**P**	**07 14 03.7**	**+0.4**
CLTN	**Cedars of Leba**	**24.30**	**2**	P	**P**	**07 14 03.8**	**+0.6**
CLTN				IAmb	IAmb	07 14 05.7	
	comp=Z,7.4nm,0.6s						
MNHN	**Monahans**	**24.32**	**326**		**P**	**07 14 04.2**	**+0.7**
MNHN				IAmb	IAmb	07 14 06.3	
	comp=Z,6.7nm,0.7s						
WVT	**Waverly**	**24.34**	**359**	P	**P**	**07 14 03.4**	**-0.2**
LNXT	**Lenox**	**24.39**	**355**	P	**P**	**07 14 04.6**	**+0.5**
FCAR	**Ozark Folk Cen**	**24.51**	**350**	P	**P**	**07 14 04.7**	**-0.4**
LCAR	**Lake Charles**	**24.54**	**352**	P	**P**	**07 14 05.0**	**-0.4**
APMT	**Aspermont**	**24.61**	**333**	P	**P**	**07 14 06.7**	**+0.6**
APMT				IAmb	IAmb	07 14 08.6	
	comp=Z,5.7nm,0.7s						
U49A	**Red Boiling Sp**	**24.74**	**3**	P	**P**	**07 14 08.4**	**+1.1**
U49A				IAmb	IAmb	07 14 10.1	
	comp=Z,7.6nm,0.8s						
ODSA	**Odessa**	**24.80**	**327**	P	**P**	**07 14 08.5**	**+0.5**
ODSA				IAmb	IAmb	07 14 10.3	
	comp=Z,10nm,0.8s						
X34A	**Smith Ranch, M**	**24.80**	**339**		**P**	**07 14 08.6**	**+0.8**
TZTN	**Tazewell**	**24.95**	**7**	P	**P**	**07 14 09.4**	**+0.3**
PECS	**Pecos**	**24.96**	**324**	P	**P**	**07 14 09.8**	**+0.4**
W35A	**Tecumseh**	**24.98**	**341**		**P**	**07 14 08.6**	**-0.8**
W35A				IAmb	IAmb	07 14 10.6	
	comp=Z,7.3nm,0.8s						
T47A	**Sharon Grove**	**25.18**	**0**		**

HLID Hailey 39.55 328 P P 07 16 17.4 +0.5
BMO Blue Mountains 41.95 328 P P 07 16 36.7 +0.2
J04A Umpqua Nationa 43.62 323 P P 07 16 48.9 -1.4
FFC Flin Flon 44.50 348 P P 07 16 56.0 -0.8
SCHQ Schefferville 45.91 16 P P 07 17 04.9 -3.2
comp=Z,3.2nm,0.9s,baz=260,slow=9.3,SNR=1.8
comp=Z,3.2nm,0.9s
SCHQ Schefferville 45.91 16 P P 07 17 07.9 -0.1
SCHQ IAmb IAmb 07 17 19.1
comp=Z,10.0nm,1.2s
CPUP Villa Florida 47.62 143 P P 07 17 25.5 +3.7
comp=Z,1.4nm,0.9s,baz=90,slow=15,SNR=1.5
comp=Z,1.4nm,0.9s
CPUP Villa Florida 47.62 143 P P 07 17 20.6 -1.2
CPUP IAmb IAmb 07 17 33.0
comp=Z,3.6nm,1.1s
YKA Yellowknife Ar 54.42 345 P P 07 18 11.2 -1.1
comp=Z,2.1nm,0.7s,baz=139,slow=7.9,SNR=15
comp=Z,2.1nm,0.7s
YKA Yellowknife Ar 54.42 345 P P 07 18 12.2 -0.1
KOTAN Kotaneelee Air 55.51 339 P P 07 18 21.4 +1.1
baz=134
V35K Ketchikan 55.63 331 P P 07 18 22.3 +1.1
baz=124
T35M Bob Quinn 55.95 333 P P 07 18 24.4 +0.8
baz=126
CRAG Craig 56.43 331 P P 07 18 28.0 +1.1
baz=122
WRAK Wrangell Islan 56.58 332 P P 07 18 28.9 +1.0
baz=124
DLBC Dease Lake 56.73 335 P P 07 18 29.9 +0.8
baz=127,SNR=7.3
U33K Whale Pass 56.77 331 P P 07 18 30.4 +1.1
baz=123
S34M Telegraph Cree 56.89 334 P P 07 18 31.1 +0.9
baz=126
WRGLY Wrigley 57.53 341 P P 07 18 35.8 +1.2
baz=136
R33M Jennings River 57.69 335 P P 07 18 36.7 +0.7
baz=127,SNR=7.1
Q32M Nakina River 57.98 334 P P 07 18 39.2 +1.1
Q32M Nakina River 57.98 334 P P 07 18 38.8 +0.7
baz=125
S32K Killisnoo 58.18 332 P P 07 18 40.0 +0.8
S32K Killisnoo 58.18 332 P P 07 18 40.2 +1.0
baz=122
SIT Sitka 58.31 331 P P 07 18 40.9 +0.8
baz=121
R32K Eaglecrest 58.58 333 P P 07 18 42.9 +0.9
baz=122
P33M Teslin, Yukon 58.93 335 P P 07 18 45.3 +0.7
baz=125
P32M Atlin 58.95 334 P P 07 18 45.1 +0.5
baz=124
S31K Pelican 59.19 332 P P 07 18 47.0 +0.7
baz=120
N32M Quiet Lake 59.58 336 P P 07 18 49.6 +0.6
baz=125
MMPY Sheldon Lake, 59.77 338 P P 07 18 51.0 +0.8
baz=128
PLBC Pleasant Camp 60.02 333 P P 07 18 52.6 +0.6
baz=121
WHY Whitehorse 60.03 335 P P 07 18 52.9 +0.7
baz=123
O30N Mendenhall 60.59 335 P P 07 18 56.6 +0.6
baz=122,SNR=6.3
P30M Million Dollar 60.62 334 P P 07 18 56.6 +0.4
baz=121
M31M Drury Creek, Y 60.70 337 P P 07 18 57.3 +0.7
baz=124
P29M Windy Craggy 60.71 333 P P 07 18 57.3 +0.5
baz=120
N31M Braeburn, Yuko 60.85 336 P P 07 18 57.9 +0.3
baz=123
HYT Haines Junctio 61.21 334 P P 07 19 00.4 +0.2
baz=121
N30M Aishikik Lake 61.37 335 P P 07 19 01.4 +0.2
baz=121
O29M Mount Kennedy 61.41 334 P P 07 19 01.6 0.0
baz=119
YUK6 Outpost Mounta 61.63 334 P P 07 19 03.0 -0.3
baz=120
M30M Minto, Yukon 61.84 336 P P 07 19 03.5 -0.9
baz=122
YUK4 Talbot Arm 61.95 335 P P 07 19 05.1 -0.3
baz=120
PINM Pinnacle 62.05 333 P P 07 19 05.7 -0.2
baz=118
BRWY Burwash Landin 62.13 335 P P 07 19 06.4 +0.1
baz=119
C36M Paulatuk 62.23 346 P P 07 19 06.5 -0.3
baz=138
O28M Mount Upton 62.34 334 P P 07 19 08.0 0.0
baz=118
YUK8 Steele Glacier 62.40 334 P P 07 19 08.5 +0.1
baz=118,SNR=5.5
M29M Somme Creek 62.43 336 IAmb IAmb 07 19 09.2
comp=Z,2.4nm,0.9s
M29M Somme Creek 62.43 336 P P 07 19 08.2 -0.2
baz=120,SNR=5.4
L29M L29M 62.64 337 P P 07 19 09.4 -0.3
baz=121
J30M Hart River 62.75 338 P P 07 19 10.3 -0.2
baz=124
H31M Peel River 62.77 340 P P 07 19 10.8 +0.3
baz=126
K29M Barlow Dome 62.79 337 P P 07 19 11.0 +0.2
baz=122
YUK3 Moose Creek 62.92 335 P P 07 19 11.9 +0.1
baz=118
I30M Mount Dempster 63.13 339 P P 07 19 12.8 -0.2
baz=124,SNR=6.3
J29N Klondike Camp 63.37 338 P P 07 19 14.5 -0.1
baz=122
BVCY Beaver Creek 63.39 335 P P 07 19 15.1 +0.4
baz=118
G31M Satah River 63.41 341 P P 07 19 14.5 -0.1
G31M IAmb IAmb 07 19 15.1
comp=Z,3.7nm,0.8s
G31M Satah River 63.41 341 P P 07 19 13.8 -0.8
baz=127,SNR=7.1
F31M Tsiigehtchic 63.55 342 P P 07 19 16.6 +1.0
F31M Tsiigehtchic 63.55 342 P P 07 19 15.8 +0.3
baz=127
CRQE Cirque 63.60 333 P P 07 19 16.1 -0.1
baz=115
DAWY Dawson 63.61 337 P P 07 19 16.1 0.0
baz=120
M27K Edge Creek, AK 63.78 335 P P 07 19 16.8 -0.6
baz=117
MCARA McCarthy VSAT 63.84 334 P P 07 19 18.2 +0.5
baz=115
KAIM Kayak Island 63.87 332 P P 07 19 17.7 -0.1
baz=113
EPYK Eagle Plains 63.88 340 P P 07 19 18.0 +0.1
baz=124,SNR=6.0
INK Inuvik 64.02 343 P P 07 19 18.5 -0.2
baz=128,SNR=7.2
INK Inuvik 64.02 343 P P 07 19 17.9 -0.8
G30M tAoh Zraii Nji 64.06 341 P P 07 19 18.7 -0.4
baz=125
L27K Beaver Creek, 64.09 336 P P 07 19 19.1 -0.1
baz=117,SNR=9.1
M26K Nabesna, AK 64.27 335 P P 07 19 20.5 0.0
baz=116
F30M Barrier River 64.29 341 P P 07 19 20.6 +0.1
baz=125,SNR=6.5
H29M Whitestone 64.36 339 P P 07 19 20.9 0.0
baz=122
BMRM Bremner River 64.37 333 P P 07 19 20.8 -0.4
baz=114
A36M Sachs Harbour 64.46 348 P P 07 19 22.1 +0.7
baz=138
I28M Miner Creek 64.51 338 P P 07 19 22.5 +0.4
baz=120
Q23K Middleton Isla 64.58 331 P P 07 19 22.2 -0.2
baz=111
G29M Pine Creek 64.62 340 P P 07 19 22.5 -0.2
baz=123,SNR=5.6
N25K Chitina, Valde 64.62 334 P P 07 19 22.5 -0.4
baz=114
L26K Log Cabin Wild 64.69 335 P P 07 19 23.3 +0.1
baz=116
EYAK Cordova Ski Ar 64.72 332 P P 07 19 23.4 +0.1
baz=112
KLU Klutina 65.16 333 P P 07 19 26.6 +0.3
baz=113
HARP HAARP 65.18 334 P P 07 19 26.8 +0.4
baz=114
I27K Kandik River 65.20 338 P P 07 19 26.3 -0.2
baz=118
P23K Montague Islan 65.28 331 P P 07 19 27.4 +0.4
baz=110
SCRK Sand Creek 65.36 336 P P 07 19 27.7 0.0
baz=116
E29M Blow River 65.39 342 P P 07 19 27.6 0.0
baz=123
H27K Steamboat Moun 65.47 339 P P 07 19 28.2 0.0
H27K IAmb IAmb 07 19 29.4
comp=Z,2.7nm,0.9s
H27K Steamboat Moun 65.47 339 P P 07 19 28.2 0.0
baz=119,SNR=8.7
M24K Tolsona, Glenn 65.51 334 P P 07 19 28.3 -0.3
baz=113
PAX Paxson 65.55 335 P P 07 19 28.4 -0.4
baz=114
F28M Old Crow 65.60 340 P P 07 19 29.1 0.0
baz=121,SNR=5.2
RIDG Independent Ri 65.61 336 P P 07 19 28.6 -0.5
baz=115,SNR=6.0
I26K Coal Creek Min 65.63 338 IAmb IAmb 07 19 29.9
comp=Z,2.6nm,0.8s
I26K Coal Creek Min 65.63 338 P P 07 19 29.0 -0.2
baz=117
G27K Dixon Strip 65.80 339 P P 07 19 30.5 +0.2
baz=119
SCM Sheep Creek Mo 65.91 333 P P 07 19 31.2 0.0
baz=111
K24K Donnelly Dome 66.01 335 P P 07 19 31.9 +0.2
baz=114
E28M Babbage River 66.01 341 P P 07 19 32.2 +0.6
baz=122
D28M Stokes Point 66.16 342 P P 07 19 33.0 +0.5
baz=123
J25K Salcha River, 66.18 336 P P 07 19 33.1 +0.2
baz=114,SNR=8.0
KNK Knik Glacier 66.27 333 P P 07 19 33.4 0.0
baz=110
SEW Seward 66.29 331 P P 07 19 33.4 -0.1
baz=109
WAT6 Susitna Watana 66.36 334 P P 07 19 33.8 -0.4
baz=111
DHY Denali Highway 66.39 334 P P 07 19 34.3 -0.1
baz=112
E27K Coleen River 66.45 341 P P 07 19 34.7 +0.2
baz=120
G26K Porcupine Rive 66.61 339 P P 07 19 35.7 +0.3
baz=117
PRP Porcupine Dome 66.61 337 P P 07 19 35.6 -0.1
baz=115,SNR=5.8
PMR Palmer 66.63 333 P P 07 19 36.0 +0.3
baz=110
RC01 Rabbit Creek A 66.74 332 P P 07 19 36.6 +0.2
baz=109
D27M Malcolm River 66.79 342 P P 07 19 36.6 0.0
baz=121
BRSE Bradley Lake S 66.79 330 P P 07 19 37.1 +0.3
baz=107
WAT1 Susitna Watana 66.80 334 P P 07 19 36.7 -0.1
baz=111
ILAR Eielson Array 66.84 336 P P 07 19 36.4 -0.6
comp=Z,0.9nm,0.8s,baz=120,slow=4.4,SNR=12
comp=Z,0.9nm,0.8s
ILAR Eielson Array 66.84 336 P P 07 19 36.8 -0.2
F26K Sheenjek River 67.07 340 P P 07 19 38.4 0.0
baz=117,SNR=5.4
RND Reindeer 67.13 335 P P 07 19 39.4 +0.4
KDAK Kodiak Island 67.17 328 P P 07 19 39.0 -0.1
baz=105
POKR Poker Plat Res 67.19 336 P P 07 19 39.5 +0.3
baz=113
HOM Homer 67.21 330 P P 07 19 39.2 -0.2
baz=106
MCK McKinley 67.28 335 P P 07 19 39.6 -0.2
baz=111
G25K Bearman Lake 67.35 338 P P 07 19 39.9 -0.2
baz=114,SNR=6.8
OHAK Old Harbor 67.40 327 P P 07 19 40.3 -0.3
baz=104
F25K Christian Rive 67.54 339 P P 07 19 41.0 -0.4
baz=115,SNR=5.2
H24K Noodor Dome 67.64 337 P P 07 19 41.4 -0.7
baz=112
NEA2 Nenana 67.64 336 P P 07 19 41.2 -0.8
baz=111,SNR=5.1
L22K Petersville 67.66 333 P P 07 19 41.4 -0.9
baz=108
SII Sitkinak Islan 67.73 327 P P 07 19 42.1 -0.7
baz=103
E25K Arctic Village 67.74 340 P P 07 19 42.2 -0.5
baz=116
TRF Thorofare Moun 67.75 334 P P 07 19 42.6 -0.4
baz=109
O20K Slope Mountain 67.80 330 P P 07 19 42.9 -0.3
baz=106
C27K Jago River 67.82 342 P P 07 19 43.0 -0.1
baz=118
G24K Hadweenzic Riv 67.82 338 P P 07 19 42.9 -0.3
baz=113,SNR=6.0
SKT Skwentna 67.83 333 P P 07 19 43.6 +0.3
baz=108
I23K Minto, Yukon-K 67.96 336 P P 07 19 44.1 +0.1
baz=111,SNR=6.1
P19K Oil Pt 67.98 330 P P 07 19 44.4 +0.1
baz=105
Q19K Cape Douglas, 68.00 329 P P 07 19 44.2 -0.3
baz=104
PPT2 Papete2 68.19 246 eLR LR 07 40 20.5
comp=Z,103nm,23.2s
PPT2 eLR LR 07 40 21.3
comp=Z,104nm,26.8s
H23K Yukon River 68.27 337 P P 07 19 46.8 +0.8
baz=111
F24K Squaw Lake 68.29 339 P P 07 19 46.3 +0.1
baz=113
C26K Camden Bay 68.33 342 P P 07 19 46.1 -0.1
baz=117
CHIR Chirikof Islan 68.36 326 P P 07 19 46.5 -0.2
baz=101
PPLA Purkeypile 68.40 333 P P 07 19 46.8 -0.3
baz=107
MLY Manley 68.47 336 P P 07 19 47.3 0.0
baz=109,SNR=8.2
CAST Castle Rocks 68.51 334 P P 07 19 47.8 +0.2
baz=108
D25K Kavik River 68.52 341 P P 07 19 47.6 0.0
baz=115
M20K Styx River 68.53 332 P P 07 19 47.9 +0.1
baz=106
Q18K Katmai Hardscr 68.63 329 P P 07 19 48.7 +0.2
baz=103
O19K Port Alsworth 68.65 330 P P 07 19 48.7 +0.3
baz=104
E24K Your Creek 68.72 339 P P 07 19 48.7 -0.1
baz=113
CHUM Lake Minchumin 68.75 334 P P 07 19 49.3 +0.3
baz=107
G23K Bananza Creek 68.77 338 P P 07 19 49.2 +0.1
baz=111,SNR=6.5
P18K Big Mountain, 68.91 329 P P 07 19 50.1 -0.1
baz=103
Q17K Contact Creek 69.00 328 P P 07 19 51.0 +0.3
baz=102
H22K Ishtalitna Cre 69.00 337 P P 07 19 50.6 0.0
baz=109
I21K Tanana 69.01 336 P P 07 19 50.5 -0.1
baz=108
COLD Coldfoot 69.02 338 P P 07 19 50.4 -0.2
baz=111
E23K Chandalar 69.11 339 P P 07 19 51.3 0.0
baz=112
R17L Mt. Peulik Vol 69.11 327 P P 07 19 51.5 +0.1
baz=101
D24K Happy Valley 69.25 340 P P 07 19 51.8 -0.3
baz=113
TOLK Toolik Lake Re 69.31 340 P P 07 19 52.0 -0.5
baz=112
K20K Telida 69.35 334 P P 07 19 52.5 -0.2
baz=106
G22K Bettles 69.39 338 P P 07 19 52.9 0.0
baz=109
L19K White Mountain 69.39 332 P P 07 19 52.9 -0.2
baz=104
P17K Kvichak River 69.47 329 P P 07 19 52.8 -0.7
baz=102
Q16K King Salmon 69.47 328 P P 07 19 53.5 -0.1
baz=102
H21K Melozitna Rive 69.49 336 P P 07 19 53.0 -0.5
baz=108
N18K Kilae Creek 69.52 331 P P 07 19 53.4 -0.5
baz=103
J20K Nowinta River 69.61 335 P P 07 19 54.3 0.0
baz=106
M18K Stony River 69.67 332 P P 07 19 54.1 -0.6
baz=103,SNR=5.3
D23K Nanushuk River 69.80 340 P P 07 19 55.4 0.0
baz=111
F22K John River 69.83 338 P P 07 19 55.7 0.0
baz=109
I20K Naaghedeneel 69.91 335 P P 07 19 56.1 -0.1
baz=106
G21K Allakaket 70.02 337 P P 07 19 56.5 -0.3
baz=107,SNR=6.8
C23K Itkillik River 70.09 341 P P 07 19 57.3 +0.1
baz=111
N17K Nushagak Hills 70.11 330 P P 07 19 56.8 -0.7
baz=102
J19K Poorman 70.18 334 P P 07 19 58.1 +0.2
baz=104
TBI Tubuai 70.21 240 eLR LR 07 41 25.5
comp=Z,384nm,23.2s
F21K Alatna River 70.22 338 P P 07 19 58.7 +0.6
F21K IAmb IAmb 07 19 59.0
comp=Z,2.0nm,0.8s
F21K Alatna River 70.22 338 P P 07 19 58.2 +0.1
baz=108,SNR=7.2
P16K Nushagak River 70.22 329 P P 07 19 58.3 +0.2
baz=100
L18K Granite Mounta 70.24 332 P P 07 19 57.4 -0.9
baz=103
H20K Anotleneega Mo 70.27 336 P P 07 19 58.4 0.0
baz=106
O16K Kokwok River B 70.38 329 P P 07 19 58.9 -0.2
baz=100
M17K Holitna River 70.41 331 P P 07 19 58.7 -0.6
baz=102
CHNA Chernabura Isl 70.43 324 P P 07 19 59.2 -0.3
baz=98
S14K Fog Glacier 70.61 326 P P 07 20 00.7 -0.1
baz=98
E21K Killik River 70.77 339 P P 07 20 01.2 -0.2
baz=108
N16K Nishlik Lake 70.87 330 P P 07 20 01.8 -0.3
baz=100
GCSA Galena City Sc 70.90 335 P P 07 20 02.0 -0.2
baz=103
H19K Roundabout Mou 70.91 336 P P 07 20 02.1 -0.1
baz=104,SNR=7.6
L17K Donlin 70.96 332 P P 07 20 02.7 +0.1
baz=101
SDPT Sand Point 71.00 325 P P 07 20 02.6 -0.4
baz=97
F20K Avaraart Lake 71.01 337 P P 07 20 02.6 -0.2
baz=105
M16K Timber Creek 71.06 331 P P 07 20 02.7 -0.6
baz=100
K17K Iditarod 71.08 333 P P 07 20 03.3 0.0
baz=101
B22K Teshekpuk Lake 71.17 341 P P 07 20 03.7 0.0
baz=109
O15K Ungalikthiuk R 71.18 329 P P 07 20 03.9 -0.2
baz=99
C21K Knifeblade Rid 71.26 340 P P 07 20 04.6 +0.3
baz=107
G19K Purcell Mounta 71.31 336 P P 07 20 05.0 +0.3
baz=104
B21K Ikpikpuk River 71.34 340 P P 07 20 05.4 +0.7
baz=107
L16K Owhat River 71.43 331 P P 07 20 05.8 +0.3
baz=100
N15K Kwethluk River 71.47 330 P P 07 20 06.1 +0.3
baz=99
E20K Nigu River 71.50 338 P P 07 20 06.2 +0.3
baz=105,SNR=7.0
J17K VABM Dome 71.56 333 P P 07 20 06.5 +0.3
baz=101
H18K Honhosa River 71.60 335 P P 07 20 06.6 +0.1
baz=102
E19K Redstone River 71.68 338 P P 07 20 07.0 0.0
baz=104
F19K Shaleruckik Mo 71.74 337 P P 07 20 07.1 -0.1
baz=103
D20K Etivluk River 71.77 339 P P 07 20 07.7 +0.2
baz=105,SNR=6.6
M15K Kasigluk River 71.84 330 P P 07 20 07.8 -0.1
baz=99
A22K Sinclair Lake 71.87 341 P P 07 20 08.5 +0.5
baz=107
G18K Tagagawik 71.88 336 P P 07 20 08.0 -0.2
baz=102
O14K Tigyukauivet M 71.92 329 P P 07 20 07.9 -0.6
baz=98
H17K Granite Mounta 72.20 335 P P 07 20 10.2 +0.2
baz=101
J16K Anvik River 72.21 333 P P 07 20 10.0 -0.2
baz=100
N14K Kuskokwak Cree 72.23 329 P P 07 20 10.2 0.0
baz=98
D19K Kuna River 72.25 339 P P 07 20 10.4 0.0
baz=104
B20K Meade River 72.30 340 P P 07 20 10.6 +0.1
baz=105
I17K Unalakleet 72.35 334 P P 07 20 11.2 +0.3
baz=100
L15K Ungalak Mounta 72.37 331 P P 07 20 10.9 -0.2
baz=98
F18K Selawik 72.42 336 P P 07 20 11.2 -0.1
baz=101
M14K Bethel 72.47 330 P P 07 20 11.3 -0.4
baz=98,SNR=6.9
A21K Barrow 72.47 342 P P 07 20 11.4 -0.1
baz=106
G17K Kiwalik Mounta 72.61 335 P P 07 20 12.0 -0.5
baz=100
L14K Kuka Creek 72.89 331 P P 07 20 13.6 -0.6
baz=97
C19K Lookout Ridge 72.91 339 P P 07 20 13.6 -0.7
baz=102
E18K Tukpahlearik C 72.94 337 P P 07 20 13.5 -0.9
baz=101
F17K Baldwin Pennin 73.02 336 P P 07 20 13.7 -1.2
baz=100
M13K Dall Lake 73.11 330 P P 07 20 14.8 -0.7
baz=96
H16K Elim 73.14 334 P P 07 20 14.5 -1.1
baz=98
G16K Koyuk River 73.30 335 P P 07 20 15.3 -1.2
baz=98
E17K Hotham Inlet 73.35 337 P P 07 20 15.5 -1.4
baz=100
C18K Utukok River 73.39 338 P P 07 20 16.5 -0.7
baz=101
A19K Wainwright 73.64 340 P P 07 20 17.8 -0.7
baz=101
K13K Kusilvak Mount 73.89 331 P P 07 20 19.3 -0.8
baz=95
RDOG Red Dog Mine 73.92 338 P P 07 20 19.6 -0.5
baz=99
D17K Noatak River 73.93 337 P P 07 20 19.2 -1.0
baz=98
G15K Niukluk 73.95 334 P P 07 20 19.4 -1.0
baz=97
C17K DeLong Mountai 74.08 338 P P 07 20 19.8 -1.4
baz=99
F15K North Star Dit 74.29 335 P P 07 20 21.7 -0.6
baz=96
UNV Unalaska Valle 74.39 323 P P 07 20 21.9 -1.2
baz=92
M11K Mekoryuk 74.52 330 P P 07 20 22.8 -0.9
baz=94
C16K Lisburne Hills 74.85 338 P P 07 20 25.1 -0.4
baz=96
F14K Arctic Creek 74.96 335 P P 07 20 26.3 +0.1
baz=95
SPIA Saint Paul Isl 76.54 326 P P 07 20 36.1 +0.7
baz=89
ESDC Sonseca Array 77.40 52 P P 07 20 39.2 -1.5
comp=Z,0.3nm,0.5s,baz=278,slow=6.0,SNR=1.9
comp=Z,0.3nm,0.5s
ESDC Sonseca Array 77.40 52 P P 07 20 39.6 -1.1
SONM Songino Array 119.53 350 PKP PKiKP 07 27 35.7 +0.4
comp=Z,0.6nm,0.6s,baz=15,slow=1.7,SNR=1.8
MKAR Makanchi Array 121.01 8 PKP PKiKP 07 27 39.8 +1.7
comp=Z,0.2nm,0.5s,baz=4.2,slow=2.4,SNR=1.8

WMQ	Urumqi	124.55	5	ePKP	PKiKP	07 27 45.5 +0.3
HHC	Hu-ho-hao-te	124.94	343	eP	PKPdf	07 27 45.8 0.0
NJ2	Nanjing	129.90	331	eP	PKPdf	07 27 55.8 +0.5
NJ2				pmax	pmax	
	comp=Z,28nm,0.6s					
ASAR	Alice Springs	139.28	247	PKP	PKiKP	07 28 14.9 -0.6
	comp=Z,0.4nm,0.7s,baz=116,slow=2.2,SNR=5.8					
CMAR	Chiang Mai Arr	149.45	349	PKP	PKPdf	07 28 32.0 +1.2
	comp=Z,0.7nm,0.3s,baz=6.4,slow=1.6,SNR=2.5					
CMAR				PKPbc	PKPbc	07 28 35.8 +0.6
	comp=Z,1.3nm,0.6s,baz=344,slow=4.2,SNR=7.0					

NEIC ***13*** *07:09:07.8±1.8, 11.˚68N±0.˚06×86.˚96W±0.˚07, h42km±5km, mb4.7/385, Error ellipse: s-maj=10.5km s-min=6.8km az=54.0*

IDC ***13*** *07:09:08.1±1.9, 12.˚04N×86.˚61W, h49km±18km, mb4.0/15, mbtmp4.3/19, ML3.3/4, Error ellipse: s-maj=25.8km s-min=11.4km az=56.0*

ISC 13 07:09:07.8±1.0, 11.˚75N±0.˚06×86.˚89W±0.˚06, h50km±9km, n318, σ0.89/205, mb4.7/179**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGAN	Managua	0.74	58	Pn	Pn	07 09 24.7	+2.6
HERN	Volcan Telica	0.85	4	Pn	Pn	07 09 24.9	+1.2
CRIN	San Cristobal	0.95	351	Pn	Pn	07 09 26.2	+1.2
BOAB	BOACO BROADBAN	.39	60	Pn	Pn	07 09 32.7	+1.9
BOAB	BOACO BROADBAN	.39	60	Sn	Sn	07 09 33.1	-3.4
CARN	Rivas	1.46	113	Pn	Pn	07 09 33.2	+1.4
CARN	Rivas	1.46	113	Sn	Sg	07 09 33.0	-2.3
JUD3	Juan Diaz 3	2.06	140	Pn	Pn	07 09 40.3	+0.2
TGUH	Tegucigalpa,Un	2.32	351	Pn	Pn	07 09 45.0	+1.4
JTS	Las Juntas de	2.40	127	P	Pn	07 09 45.8	+1.1
	21nm,0.3s,baz=304,slow=16,SNR=9.0						
	76nm,0.3s						
JTS	Las Juntas de	2.40	127		Pn	07 09 44.8	+0.1
MTO3	Montecristo	3.56	318	Pn	Pn	07 10 01.0	+0.2
ESQI	Esquipulas	3.67	320	Pn	Pn	07 10 02.7	+0.5
BILA	Bilwi Airport	4.12	56	Pn	Pn	07 10 08.7	+0.4
RGM0	Gandoca	4.73	117	Pn	Pn	07 10 16.2	-0.5
PIRO	Carate, Puerto	4.83	133	Pn	Pn	07 10 16.9	-1.1
RTAL	Retalhuleu	5.43	301		Pn	07 10 26.6	+0.4
HUEH	Huehuetenango	5.71	309	Pn	Pn	07 10 28.9	-1.5
PETF	Flores	5.88	331	Pn	Pn	07 10 32.8	+0.3
TEIG	Tepich	8.53	351		Pn	07 11 09.0	+0.3
CMIG	Matias Romero	9.38	305	P	Pn	07 11 20.0	-0.5
	1.9nm,0.3s,baz=132,slow=10,SNR=15						
CMIG				S	Sn	07 13 04.6	0.0
	8.6nm,0.8s,baz=182,slow=11,SNR=2.4						
	7.1nm,0.4s						
SOR	Soroa	11.59	18	Pn	Pn	07 11 51.3	+0.7
TLIG	Tlapa	12.68	298		Pn	07 12 06.2	+0.6
CHIV	Chivirico	12.97	50	Pn	Pn	07 12 09.2	-0.3
ROSC	El Rosal	14.21	118	P	Pn	07 12 23.9	-2.8
	0.5nm,0.3s,baz=58,slow=23,SNR=5.0						
	2.1nm,0.3s						
ROSC	El Rosal	14.21	118	Pn	Pn	07 12 26.1	-0.6
NMDO	Nuevo Mundo	14.40	51	Pn	Pn	07 12 28.1	-0.7
SLOR	San Lorenzo -	14.95	146	Pn	Pn	07 12 35.2	-1.4
MOIG	Morelia	15.85	302	Pn	Pn	07 12 47.0	-1.0
SDV	Santo Domingo	16.25	99	P	Pn	07 12 50.1	-3.0
	0.9nm,0.3s,baz=300,slow=6.2,SNR=4.6						
	2.4nm,0.4s						
SDV	Santo Domingo	16.25	99	Pn	Pn	07 12 52.5	-0.5
ZAIG	Zacatecas	18.53	308	P	Pn	07 13 21.4	+0.2
451A	Vernon	18.80	3	P	P	07 13 22.4	-0.8
HBVL	Hebbronville	18.83	326	P	P	07 13 23.1	-0.4
HBVL				IAmb	IAmb	07 13 26.8	
	comp=Z,60nm,0.9s						
346A	Big Creek Wild	19.68	353	P	Pn	07 13 33.9	-0.7
346A				IAmb	IAmb	07 13 40.4	
	comp=Z,44nm,1.0s						
352A	Blakely	19.71	5	P	Pn	07 13 34.2	-0.8
352A				IAmb	IAmb	07 13 37.2	
	comp=Z,48nm,0.9s						
441A	DeRidder	19.78	344	P	Pn	07 13 35.9	+0.1
TIGA	Tifton	19.83	8	P	P	07 13 35.4	+1.0
TIGA				IAmb	IAmb	07 13 41.3	
	comp=Z,54nm,0.9s						
HKT	Hockley	19.92	337	P	Pn	07 13 37.0	-0.4
HKT				IAmb	IAmb	07 13 37.6	
	comp=Z,28nm,0.9s						
EF04	Eagle Ford 04	20.12	331	P	P	07 13 37.5	-0.1
EF04				IAmb	IAmb	07 13 42.0	
	comp=Z,31nm,1.1s						
EF02	Christine	20.12	329	P	P	07 13 37.2	-0.4
EF02				IAmb	IAmb	07 13 37.9	
	comp=Z,42nm,0.7s						
250A	Grady	20.14	2	P	P	07 13 38.6	+0.8
250A				IAmb	IAmb	07 13 44.2	
	comp=Z,17nm,0.7s						
833A	Chaparral WMA,	20.21	326	P	P	07 13 39.0	+0.4
MLDN	Muldoon	20.28	334	P	Pn	07 13 40.8	-1.0
HNVL	Huntsville, TX	20.51	339	P	Pn	07 13 43.3	-1.1
HNVL				IAmb	IAmb	07 13 44.5	
	comp=Z,58nm,0.9s						
146A	Union	20.88	355	P	P	07 13 46.9	+1.0
146A				IAmb	IAmb	07 14 06.9	
	comp=Z,37nm,1.1s						
152A	Waverly Hall	20.91	5	P	Pn	07 13 48.7	-0.5
152A				IAmb	IAmb	07 13 51.6	
	comp=Z,34nm,0.7s						
HNDO	Hondo	21.11	329	P	P	07 13 47.7	-0.7
HNDO				IAmb	IAmb	07 13 48.5	
	comp=Z,22nm,0.9s						
NATX	Nacogdoches	21.16	341	P	P	07 13 50.2	+1.3
LRAL	Lakeview Retre	21.18	360		P	07 13 51.0	+2.0
LRAL				IAmb	IAmb	07 13 52.6	
	comp=Z,18nm,0.7s						
143A	Socs Landing,	21.26	349	P	P	07 13 51.1	+1.2
143A				IAmb	IAmb	07 13 53.5	
	comp=Z,12nm,0.6s						
Z47A	Carrollton	21.37	357	P	P	07 13 52.7	+1.6
Z47A				IAmb	IAmb	07 13 55.7	
	comp=Z,22nm,0.7s						
GOGA	Godfrey	21.78	8	P	P	07 13 55.0	-0.5
GOGA				IAmb	IAmb	07 13 59.6	
	comp=Z,32nm,0.6s						
Y49A	Blount Mountai	22.01	1	P	P	07 13 59.0	+1.1
Y49A				IAmb	IAmb	07 14 00.6	
	comp=Z,34nm,0.7s						
Z41A	Richland Creek	22.08	347	P	P	07 13 58.9	+0.2
Z41A				IAmb	IAmb	07 14 01.0	
	comp=Z,26nm,0.7s						
Y45A	Yeager Farm, C	22.14	354	P	P	07 13 59.8	+0.5
Y45A				IAmb	IAmb	07 14 23.3	
	comp=Z,59nm,1.4s						
JCT	Junction City	22.15	329	P	P	07 14 00.0	+0.5
JCT				IAmb	IAmb	07 14 01.5	
	comp=Z,24nm,0.9s						
Y52A	Lilburn	22.16	6	P	P	07 14 00.4	+0.9
Y52A				IAmb	IAmb	07 14 03.6	
	comp=Z,34nm,0.7s						
WHTX	Lake Whitney,	22.37	336		P	07 14 01.6	-0.2
BRDY	Brady	22.43	332	P	P	07 14 03.0	+0.5
BRDY				IAmb	IAmb	07 14 04.6	
	comp=Z,35nm,0.8s						
CCAR	Cane Creek	22.51	349	P	P	07 14 04.0	+0.7
CCAR				IAmb	IAmb	07 14 33.6	
	comp=Z,15nm,0.7s						
WLAR	White Oak Lake	22.56	346	IAmb	IAmb	07 14 07.1	
	comp=Z,26nm,0.7s						
X48A	Hartselle	22.59	360		P	07 14 05.1	+0.9
X48A				IAmb	IAmb	07 14 06.4	
	comp=Z,17nm,0.6s						
FPAL	Fort Paine	22.71	3		P	07 14 06.2	+0.7
OXF	Oxford	22.77	355	IAmb	IAmb	07 14 08.6	
	comp=Z,31nm,0.8s						
HODGE	Hodges	22.77	10	IAmb	IAmb	07 14 22.7	
	comp=Z,25nm,1.0s						
X51A	Calhoun	22.78	4	P	P	07 14 05.0	-1.2
X51A				IAmb	IAmb	07 14 18.1	
	comp=Z,19nm,1.1s						
Y57A	Sumter	22.94	14	IAmb	IAmb	07 14 24.4	
	comp=Z,45nm,1.3s						
JSC	Jenkinsville	23.01	12	IAmb	IAmb	07 14 11.2	
	comp=Z,15nm,0.7s						
HPIG		23.23	313	P	P	07 14 11.6	+0.6
FW06	Azle	23.27	337	P	P	07 14 11.7	+0.5
FW06				IAmb	IAmb	07 14 12.3	
	comp=Z,27nm,0.6s						
SWET	Sewanee	23.37	2	IAmb	IAmb	07 14 14.0	
	comp=Z,19nm,0.5s						
W52A	Murphy	23.39	6	IAmb	IAmb	07 14 29.2	
	comp=Z,30nm,1.0s						
BG3	Lake Jocassee	23.41	8	P	P	07 14 14.1	+1.7
BG3				IAmb	IAmb	07 14 15.0	
	comp=Z,17nm,0.7s						
PAULI	Pauline	23.42	11	IAmb	IAmb	07 14 15.3	
	comp=Z,16nm,0.8s						
PLPT	Palo Pinto	23.44	335	P	P	07 14 13.4	+0.7
UALR	University of	23.45	349	IAmb	IAmb	07 14 17.8	
	comp=Z,17nm,0.8s						
TXAR	Lajitas Array	23.45	321	P	P	07 14 13.1	0.0
	comp=Z,24nm,0.7s,baz=139,slow=9.0,SNR=16						
TXAR				PcP	PcP	07 17 58.5	+0.4
	comp=Z,1.3nm,0.6s,baz=155,slow=3.6,SNR=8.4						
	comp=Z,24nm,0.7s						
TXAR	Lajitas Array	23.45	321	P	P	07 14 13.3	+0.2
TXAR					PcP	07 17 58.9	+0.8
TX31	Lajitas Ar. Si	23.45	321	P	P	07 14 13.3	+0.2
TX31				IAmb	IAmb	07 14 13.8	
	comp=Z,21nm,0.8s						
Z35A	Perchaven, San	23.48	338	P	P	07 14 13.2	+0.1
MIAR	Mount Ida	23.49	346	P	P	07 14 13.5	+0.3
BIRD	Birdtown, Kers	23.53	13	IAmb	IAmb	07 14 16.1	
	comp=Z,23nm,0.8s						
CPCT	Cooper Cave	23.69	5	P	P	07 14 16.5	+1.4
CPCT				IAmb	IAmb	07 14 18.4	
	comp=Z,29nm,0.7s						
KMSC	Kings Mountain	23.82	11	IAmb	IAmb	07 14 18.6	
	comp=Z,15nm,0.7s						
ABTX	Abilene, Hawle	23.85	333	IAmb	IAmb	07 14 18.3	
	comp=Z,25nm,0.9s						
V48A	Smith Brothers	23.88	0	P	P	07 14 17.9	+1.1
V48A				IAmb	IAmb	07 14 19.9	
	comp=Z,17nm,0.8s						
WHAR	Wooly Hollow	23.94	349	IAmb	IAmb	07 14 18.0	
	comp=Z,21nm,1.3s						
HBAR	Harrisburg	23.94	352	IAmb	IAmb	07 14 18.2	
	comp=Z,27nm,0.6s						
TKL	Tuckaleechee C	23.97	6	P	P	07 14 16.9	-0.7
	comp=Z,23nm,0.8s,baz=182,slow=11,SNR=16						
	comp=Z,23nm,0.8s						
TKL	Tuckaleechee C	23.97	6		P	07 14 18.0	+0.4
TKL				IAmb	IAmb	07 14 21.3	
	comp=Z,25nm,0.8s						
SGCY	Sterling City	23.97	329	IAmb	IAmb	07 14 18.9	
	comp=Z,30nm,0.8s						
LOOK	Love County	24.05	339	P	P	07 14 19.0	+0.6
V53A	Saluda	24.09	8	IAmb	IAmb	07 14 22.4	
	comp=Z,20nm,0.7s						
ALPN	Alpine	24.18	323	P	P	07 14 19.6	-0.1
CLTN	Cedars of Leba	24.24	1	P	P	07 14 21.2	+1.1
WVT	Waverly	24.28	358		P	07 14 20.6	+0.2
WTFS	Witchita Falls	24.33	336	P	P	07 14 21.9	+1.0
LNXT	Lenox	24.35	355	P	P	07 14 20.8	-0.3
TPB05	Hovey Rd	24.39	324	IAmb	IAmb	07 14 24.7	
	comp=Z,12nm,0.7s						
FCAR	Ozark Folk Cen	24.49	350	P	P	07 14 22.1	-0.2
APMT	Aspermont	24.65	333	IAmb	IAmb	07 14 25.8	
	comp=Z,19nm,0.7s						
U49A	Red Boiling Sp	24.67	2	IAmb	IAmb	07 14 27.3	
	comp=Z,24nm,0.7s						
X34A	Smith Ranch, M	24.83	338		P	07 14 26.0	+0.5
TZTN	Tazewell	24.87	6	IAmb	IAmb	07 14 43.7	
	comp=Z,20nm,0.8s						
ODSA	Odessa	24.87	327	P	P	07 14 26.2	+0.2
TPB06	Permian Basin	24.88	325	IAmb	IAmb	07 14 28.1	
	comp=Z,39nm,0.7s						
129A	Stewart Farms,	24.92	329	IAmb	IAmb	07 14 28.1	
	comp=Z,22nm,0.9s						
PARMO	Parma	24.93	355	P	P	07 14 26.5	+0.1
W35A	Tecumseh	25.00	340	IAmb	IAmb	07 14 28.7	
	comp=Z,35nm,1.0s						
U54A	Nelsons Funny	25.08	10	IAmb	IAmb	07 14 32.3	
	comp=Z,23nm,0.8s						
POST	Post	25.09	330	IAmb	IAmb	07 14 30.1	
	comp=Z,22nm,0.8s						
T47A	Sharon Grove	25.13	360	IAmb	IAmb	07 14 29.6	
	comp=Z,17nm,0.6s						
TPB13	Reeves - Culbe	25.16	324	IAmb	IAmb	07 14 30.5	
	comp=Z,31nm,0.8s						
U56A	King	25.18	12	IAmb	IAmb	07 14 33.2	
	comp=Z,16nm,0.9s						
T45A	Paducah	25.21	357	P	P	07 14 28.8	-0.1
128A	Castleberry Fa	25.23	328	IAmb	IAmb	07 14 31.1	
	comp=Z,15nm,0.6s						
HHAR	Hobbs	25.24	347	P	P	07 14 29.0	-0.1
HHAR				IAmb	IAmb	07 14 29.4	
	comp=Z,13nm,0.7s						
FNO	Franklin	25.27	340	P	P	07 14 28.9	-0.5
DKNS	Dickens	25.30	332	P	P	07 14 29.6	-0.3
TUL3	Leonard	25.36	343	P	P	07 14 29.8	-0.5
RLO	Rose Lookout	25.39	345	IAmb	IAmb	07 14 30.7	
	comp=Z,17nm,0.7s						
T42A	Van Buren	25.45	352	IAmb	IAmb	07 14 31.6	
	comp=Z,11nm,0.6s						
U38A	Gravette	25.49	346	IAmb	IAmb	07 14 32.1	
	comp=Z,20nm,0.9s						
TPB28		25.62	323	IAmb	IAmb	07 14 35.8	
	comp=Z,10nm,0.8s						
QUOK	Quay	25.88	342	P	P	07 14 34.2	-0.8
S51A	Beattyville	25.95	6	IAmb	IAmb	07 14 37.6	
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	26.37	1	P	P	07 14 39.4	+0.1
WCI				IAmb	IAmb	07 14 40.6	
	comp=Z,15nm,0.6s						
CCM	Cathedral Cave	26.48	352	P	P	07 14 39.7	-0.7
CCM				IAmb	IAmb	07 14 41.0	
	comp=Z,21nm,1.2s						
T35A	Sooner Cattle	26.51	343	IAmb	IAmb	07 14 40.6	
	comp=Z,10.0nm,0.7s						
R50A	Paris	26.52	5	IAmb	IAmb	07 14 42.4	
	comp=Z,8.5nm,0.6s						
CROK	Carrier	26.60	340	IAmb	IAmb	07 14 40.9	
	comp=Z,23nm,0.8s						
R40A	Maddies Statio	26.86	351	IAmb	IAmb	07 14 43.7	
	comp=Z,9.4nm,0.8s						
NOKA	Waynoka	27.05	338	P	P	07 14 45.4	-0.2
Q44A	Meyer Farm, Va	27.10	356	IAmb	IAmb	07 14 47.0	
	comp=Z,16nm,0.8s						
BLO	Bloomington	27.31	1	IAmb	IAmb	07 14 48.4	
	comp=Z,9.2nm,0.6s						
Q52A	Bidwell	27.41	8	IAmb	IAmb	07 14 51.5	
	comp=Z,14nm,0.7s						
P48A	Milroy	27.62	2	IAmb	IAmb	07 14 51.3	
	comp=Z,11nm,0.8s						
Q54A	Coxs Mills	27.65	10	IAmb	IAmb	07 14 53.5	
	comp=Z,8.2nm,0.6s						
CBN	Corbin Frederi	27.68	16	IAmb	IAmb	07 14 53.5	
	comp=Z,18nm,0.7s						
P46A	Rosedale	27.75	359	IAmb	IAmb	07 14 52.4	
	comp=Z,11nm,0.5s						
P53A	Whipple	28.05	9	IAmb	IAmb	07 15 12.3	
	comp=Z,37nm,1.5s						
P52A	Corning	28.09	8	P	P	07 14 55.2	+0.4
P52A				IAmb	IAmb	07 14 57.3	
	comp=Z,13nm,0.6s						
121A	Cookes Peak, D	28.21	320	P	P	07 14 57.3	+1.1
P38A	Dawn	28.38	349		P	07 14 56.4	-0.9
O49A	Covington	28.41	4	IAmb	IAmb	07 14 59.5	
	comp=Z,44nm,1.5s						
RTBA	Rita Blanca	28.43	332	IAmb	IAmb	07 15 02.6	
	comp=Z,14nm,0.7s						
SFIN	Lafayette	28.51	360	IAmb	IAmb	07 14 58.9	
	comp=Z,9.9nm,0.7s						
CRNM	Carthage	28.57	324	P	P	07 15 00.3	+1.0
ACSO	Alum Creek Sta	28.57	6	P	P	07 14 59.8	+0.6
ACSO				IAmb	IAmb	07 15 01.5	
	comp=Z,18nm,0.6s						
R32A	Long Quarter,	28.58	340	P	P	07 14 58.4	-0.8
R32A				IAmb	IAmb	07 15 01.0	
	comp=Z,15nm,0.7s						
O52A	Adamsville	28.60	8	IAmb	IAmb	07 15 01.5	
	comp=Z,11nm,0.6s						
HDIL	Hopedale	28.77	356	P	P	07 15 00.8	+0.1
SBM	South Baldy	28.85	323	P	P	07 15 01.9	-0.2
N47A	Urbana	29.03	2	P	P	07 15 03.5	+0.3
N47A				IAmb	IAmb	07 15 21.3	
	comp=Z,17nm,1.2s						
ALQ	Albuquerque	29.13	326	P	P	07 15 05.0	+0.6
ANMO	Albuquerque	29.14	326	P	P	07 15 04.5	+0.1
N49A	Columbus Grove	29.15	4	IAmb	IAmb	07 15 06.1	
	comp=Z,20nm,0.7s						
PAGS	Pennsylvania G	29.75	16	P	P	07 15 09.6	0.0
PAGS				IAmb	IAmb	07 15 12.2	
	comp=Z,17nm,0.7s						
T25A	Trinidad	29.78	331		P	07 15 10.7	+0.6
MACA	Manacapuru-AM	29.98	118	P	P	07 15 12.4	+0.5
MACA				IAmb	IAmb	07 15 14.6	
	comp=Z,13nm,0.7s						
N35A	Tabor	30.00	347	P	P	07 15 11.0	-0.8
L40A	Anamosa	30.43	354	IAmb	IAmb	07 15 16.0	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	31.18	355	IAmb	IAmb	07 15 22.2	
	comp=Z,15nm,1.0s						
L34A	Svendsen Farm,	31.22	346		P	07 15 21.5	-1.0
OGNE	Ogallala	31.98	338	IAmb	IAmb	07 15 31.7	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	32.42	321		P	07 15 34.4	+1.0
H43A	Windswept, Lux	32.61	359	IAmb	IAmb	07 15 35.0	
	comp=Z,16nm,0.9s						
PV15	Paradox Valley	32.74	328	IAmb	IAmb	07 15 42.3	
	comp=Z,6.4nm,0.9s						
PV07	Paradox Valley	32.90	328	IAmb	IAmb	07 15 39.2	
	comp=Z,7.2nm,1.0s						
PV19	Morning Glory	32.98	327	P	P	07 15 38.8	+0.4
LPAZ	La Paz	33.48	146	P	P	07 15 43.6	+0.3
	comp=Z,0.4nm,0.6s,baz=315,slow=4.3,SNR=2.0						
LPAZ				PcP	PcP	07 18 23.7	+0.1
	comp=Z,0.5nm,0.5s,baz=329,slow=3.8,SNR=2.1						
	comp=Z,0.4nm,0.6s						
LPAZ	La Paz	33.48	146	P	P	07 15 42.9	-0.4
LPAZ					PcP	07 18 22.8	-0.9
SADO	Sadowa	33.57	10	P	P	07 15 42.6	-0.4
SADO				IAmb	IAmb	07 15 44.1	
	comp=Z,7.2nm,0.8s						
W13A	Hualapai Mount	33.76	318		P	07 15 47.1	+2.0
HAYD	Hayden	33.81	332	P	P	07 15 46.2	+0.7
KNB	Kanab	34.28	322	IAmb	IAmb	07 16 14.1	
	comp=Z,7.7nm,1.3s						
PB16	IPOC Station P	34.47	150		P	07 15 53.0	+1.3
PB16				IAmb	IAmb	07 16 07.7	
	comp=Z,5.5nm,0.8s						
MTPU	Mount Pierson	34.58	324	IAmb	IAmb	07 16 02.5	
	comp=Z,5.1nm,0.7s						
RSSD	Black Hills	35.47	339		P	07 16 00.5	+0.7
RSSD				IAmb	IAmb	07 16 01.6	
	comp=Z,5.8nm,0.7s						
BSUT	Blindstream Ca	35.55	328	P	P	07 16 00.8	+0.1
BSUT				IAmb	IAmb	07 16 04.3	
	comp=Z,8.1nm,0.8s						
VILB	Vilhena	36.11	132		P	07 16 06.3	+0.9
EYMN	Ely	36.28	355	IAmb	IAmb	07 16 05.5	
	comp=Z,7.7nm,0.9s						
BW06	Boulder Array	36.64	332	P	P	07 16 09.9	+0.1
PD31	Pinedale Array	36.64	332	P	P	07 16 09.8	0.0
PDAR	Pinedale Array	36.64	332	P	P	07 16 09.6	-0.2
	comp=Z,3.7nm,0.6s,baz=127,slow=10,SNR=22						
PDAR				PcP	PcP	07 18 31.1	-0.9
	comp=Z,0.9nm,0.7s,baz=139,slow=6.7,SNR=4.3						
	comp=Z,3.7nm,0.6s						
PDAR	Pinedale Array	36.64	332		P	07 16 09.7	-0.2
PDAR					PcP	07 18 31.8	-0.2
HWUT	Hardware Ranch	36.75	328	P	P	07 16 11.1	+0.4
SPUT	South Promonto	36.99	327	P	P	07 16 13.2	+0.4
SPUT				IAmb	IAmb	07 16 16.1	
	comp=Z,6.2nm,0.8s						
AGMN	Agassiz Nation	37.19	350		P	07 16 13.2	-0.9
G65A	Princeton	37.20	23	P	P	07 16 15.8	+1.6
G65A				IAmb	IAmb	07 16 31.2	
	comp=Z,21nm,1.1s						
AHID	Auburn Hatcher	37.37	330	P	P	07 16 16.1	+0.1
AHID				IAmb	IAmb	07 16 20.3	
	comp=Z,12nm,0.8s						
VES	Vestal, Richgr	37.69	315	IAmb	IAmb	07 16 21.2	
	comp=Z,9.6nm,0.9s						
ECR	Eagle Creek	37.72	330	IAmb	IAmb	07 16 19.9	
	comp=Z,15nm,1.1s						
LOHW	Long Hollow	37.78	332	IAmb	IAmb	07 16 20.5	
	comp=Z,9.4nm,1.2s						
ELK	Elko	38.15	324		P	07 16 22.8	+0.2
FLWY	Flagg Ranch	38.18	332	IAmb	IAmb	07 16 24.0	
	comp=Z,9.9nm,0.9s						
RLMT	Red Lodge	38.37	334	IAmb	IAmb	07 16 24.8	
	comp=Z,6.2nm,0.7s						
NVAR	Mina Array Bea	38.58	319	P	P	07 16 27.2	+1.0
	comp=Z,1.8nm,0.7s,baz=129,slow=7.0,SNR=12						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	38.58	319	P	P	07 16 26.8	+0.5
MDPB	Devils Postpil	38.64	317	P	P	07 16 27.7	+0.9
YMR	Madison River	38.76	332	IAmb	IAmb	07 16 29.1	
	comp=Z,10.0nm,0.9s						
KVN	Kaiserville	38.81	320		P	07 16 28.2	+0.1
ULM	Lac du Bonnet	39.09	351	P	P	07 16 28.1	-2.0
	comp=Z,23nm,0.8s,baz=160,slow=9.7,SNR=20						
	comp=Z,23nm,0.8s						
ULM	Lac du Bonnet	39.09	351		P	07 16 28.5	-1.5
QLMT	Earthquake Lak	39.09	332	P	P	07 16 31.4	+0.9
BCYI	Bear Canyon	39.64	330	IAmb	IAmb	07 16 36.7	
	comp=Z,6.7nm,0.8s						
DLMT	Dillon	40.03	332	IAmb	IAmb	07 16 39.6	
	comp=Z,7.8nm,0.8s						
MFID	Camas Ranch	40.26	327		P	07 16 40.7	+0.7
BEKR	Beckworth	40.71	319	P	P	07 16 44.3	+0.4
LYMT	Lyon Mountain	41.12	333	P	P	07 16 47.4	+0.1
WVOR	Wild Horse Val	41.18	324	P	P	07 16 48.5	+0.8
SUTB	Sutter Butte	41.29	318	P	P	07 16 48.8	+0.3
SUTB				IAmb	IAmb	07 16 51.9	
	comp=Z,6.8nm,0.7s						
MSO	Missoula	41.75	332		P	07 16 52.3	0.0
D08A	Wollman Farm,	44.33	329		P	07 17 12.9	-0.1
D08A				IAmb	IAmb	07 17 13.8	
	comp=Z,8.4nm,0.8s						
WAH2	Wahluke Slope	44.46	328	IAmb	IAmb	07 17 14.7	
	comp=Z,11nm,0.9s						
E07A	Sunnyside	44.48	328	P	P	07 17 14.5	+0.2
E07A				PcP	PcP	07 18 57.1

	comp=Z,6.6nm,0.7s						
P32M	**Atlin**	**58.99**	**334**	IAmb	IAmb	07 19 09.9	
	comp=Z,5.8nm,0.7s						
N32M	**Quiet Lake**	**59.62**	**336**	IAmb	IAmb	07 19 06.7	
	comp=Z,6.5nm,0.8s						
MMPY	**Sheldon Lake,**	**59.79**	**338**	IAmb	IAmb	07 19 08.2	
	comp=Z,5.4nm,0.8s						
O30N	**Mendenhall**	**60.63**	**335**	IAmb	IAmb	07 19 13.8	
	comp=Z,6.1nm,0.8s						
P29M	**Windy Craggy**	**60.76**	**333**	IAmb	IAmb	07 19 15.4	
	comp=Z,8.5nm,0.8s						
N31M	**Braeburn, Yuko**	**60.88**	**336**	IAmb	IAmb	07 19 15.3	
	comp=Z,4.5nm,0.8s						
N30M	**Aishikik Lake**	**61.40**	**335**	IAmb	IAmb	07 19 19.3	
	comp=Z,3.3nm,0.8s						
M29M	**Somme Creek**	**62.47**	**336**	P	**P**	**07 19 25.7**	**-0.2**
M29M				IAmb	IAmb	07 19 26.3	
	comp=Z,7.2nm,0.8s						
L29M	**L29M**	**62.67**	**336**	IAmb	IAmb	07 19 27.7	
	comp=Z,8.9nm,1.4s						
J30M	**Hart River**	**62.77**	**338**	P	**P**	**07 19 28.2**	**+0.3**
GRNC	**Granite Creek**	**63.05**	**333**	IAmb	IAmb	07 19 30.6	
	comp=Z,7.2nm,0.8s						
I30M	**Mount Dempster**	**63.15**	**339**	IAmb	IAmb	07 19 30.5	
	comp=Z,5.5nm,0.8s						
F31M	**Tsiigehtchic**	**63.57**	**342**	IAmb	IAmb	07 19 32.9	
	comp=Z,9.7nm,1.1s						
EPYK	**Eagle Plains**	**63.90**	**340**	IAmb	IAmb	07 19 35.3	
	comp=Z,7.3nm,0.8s						
INK	**Inuvik**	**64.03**	**343**	IAmb	IAmb	07 19 36.5	
	comp=Z,7.8nm,0.9s						
BCAR	**Beaver Creek A**	**64.11**	**336**		**P**	**07 19 36.7**	**0.0**
L27K	**Beaver Creek,**	**64.12**	**336**	IAmb	IAmb	07 19 37.1	
	comp=Z,6.1nm,0.8s						
H29M	**Whitestone**	**64.38**	**339**	IAmb	IAmb	07 19 38.6	
	comp=Z,6.8nm,0.8s						
G29M	**Pine Creek**	**64.64**	**340**	IAmb	IAmb	07 19 40.3	
	comp=Z,9.7nm,0.8s						
K27K	**Chicken**	**64.66**	**336**	IAmb	IAmb	07 19 40.8	
	comp=Z,3.7nm,0.8s						
KLU	**Klutina**	**65.20**	**333**	IAmb	IAmb	07 19 44.2	
	comp=Z,4.5nm,0.8s						
I27K	**Kandik River**	**65.23**	**338**	IAmb	IAmb	07 19 47.9	
	comp=Z,4.9nm,0.8s						
E29M	**Blow River**	**65.40**	**342**	IAmb	IAmb	07 19 45.3	
	comp=Z,3.9nm,0.8s						
H27K	**Steamboat Moun**	**65.49**	**339**	IAmb	IAmb	07 19 46.1	
	comp=Z,11nm,0.8s						
RIDG	**Independent Ri**	**65.64**	**336**	IAmb	IAmb	07 19 47.5	
	comp=Z,7.6nm,0.8s						
E28M	**Babbage River**	**66.03**	**341**	IAmb	IAmb	07 19 49.1	
	comp=Z,4.0nm,0.7s						
J25K	**Salcha River,**	**66.21**	**336**	IAmb	IAmb	07 19 51.0	
	comp=Z,5.5nm,0.7s						
PRP	**Porcupine Dome**	**66.64**	**337**	IAmb	IAmb	07 19 53.1	
	comp=Z,5.5nm,0.8s						
HDA	**Harding Lake**	**66.76**	**336**	IAmb	IAmb	07 19 53.5	
	comp=Z,9.9nm,0.8s						
IL31		**66.87**	**336**		**P**	**07 19 53.6**	**-0.7**
IL31				IAmb	IAmb	07 19 54.2	
	comp=Z,4.5nm,0.7s						
ILAR	**Eielson Array**	**66.87**	**336**	P	**P**	**07 19 53.5**	**-0.9**
	comp=Z,3.4nm,0.7s,baz=120,slow=4.5,SNR=29						
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**66.87**	**336**		**P**	**07 19 53.9**	**-0.6**
F26K	**Sheenjek River**	**67.09**	**340**	IAmb	IAmb	07 19 56.2	
	comp=Z,4.0nm,0.8s						
WRH	**Wood River Hil**	**67.24**	**336**	IAmb	IAmb	07 19 56.9	
	comp=Z,5.3nm,1.0s						
MCK	**McKinley**	**67.32**	**335**	IAmb	IAmb	07 19 57.8	
	comp=Z,7.2nm,0.9s						
F25K	**Christian Rive**	**67.56**	**339**	IAmb	IAmb	07 19 59.7	
	comp=Z,4.2nm,0.8s						
H24K	**Nodor Dome**	**67.67**	**337**	IAmb	IAmb	07 19 59.6	
	comp=Z,3.7nm,0.8s						
NEA2	**Nenana**	**67.68**	**336**	IAmb	IAmb	07 19 59.6	
	comp=Z,4.4nm,0.8s						
E25K	**Arctic Village**	**67.76**	**340**	P	**P**	**07 19 60.0**	**-0.1**
E25K				IAmb	IAmb	07 20 00.6	
	comp=Z,3.9nm,0.8s						
TRF	**Thorofare Moun**	**67.80**	**334**	IAmb	IAmb	07 20 03.9	
	comp=Z,7.2nm,1.0s						
C27K	**Jago River**	**67.83**	**342**	P	**P**	**07 20 00.7**	**+0.3**
C27K				IAmb	IAmb	07 20 36.4	
	comp=Z,13nm,1.4s						
G24K	**Hadweenzic Riv**	**67.85**	**338**	IAmb	IAmb	07 20 01.2	
	comp=Z,5.1nm,0.8s						
I23K	**Minto, Yukon-K**	**67.99**	**336**	IAmb	IAmb	07 20 01.7	
	comp=Z,7.0nm,0.9s						
KTH	**Kantishna Hill**	**68.10**	**334**	IAmb	IAmb	07 20 01.8	
	comp=Z,5.2nm,0.9s						
MLY	**Manley**	**68.50**	**336**	IAmb	IAmb	07 20 04.6	
	comp=Z,8.3nm,0.8s						
D25K	**Kavik River**	**68.54**	**341**	IAmb	IAmb	07 20 05.2	
	comp=Z,6.1nm,0.8s						
M20K	**Styx River**	**68.58**	**332**	P	**P**	**07 20 04.9**	**-0.4**
G23K	**Bananza Creek**	**68.80**	**338**	IAmb	IAmb	07 20 07.1	
	comp=Z,4.5nm,0.8s						
COLD	**Coldfoot**	**69.04**	**338**	IAmb	IAmb	07 20 09.1	
	comp=Z,6.4nm,0.9s						
E23K	**Chandalar**	**69.13**	**339**	IAmb	IAmb	07 20 09.4	
	comp=Z,4.7nm,0.8s						
G21K	**Allakaket**	**70.05**	**337**	IAmb	IAmb	07 20 14.6	
	comp=Z,6.5nm,0.8s						
F21K	**Alatna River**	**70.25**	**338**	IAmb	IAmb	07 20 16.2	
	comp=Z,8.9nm,0.8s						
H19K	**Roundabout Mou**	**70.94**	**336**	IAmb	IAmb	07 20 19.5	
	comp=Z,6.0nm,0.8s						
G19K	**Purcell Mounta**	**71.34**	**336**		**P**	**07 20 22.1**	**0.0**
B21K	**Ikpikpuk River**	**71.36**	**340**	IAmb	IAmb	07 20 22.3	
	comp=Z,4.0nm,0.7s						
D20K	**Etivluk River**	**71.80**	**339**	IAmb	IAmb	07 20 25.1	
	comp=Z,9.1nm,0.8s						
D19K	**Kuna River**	**72.28**	**339**	IAmb	IAmb	07 20 27.9	
	comp=Z,4.0nm,0.7s						
C19K	**Lookout Ridge**	**72.94**	**339**	IAmb	IAmb	07 20 32.4	
	comp=Z,9.6nm,1.0s						
ESDC	**Sonseca Array**	**77.19**	**52**	P	**P**	**07 20 54.8**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=293,slow=5.7,SNR=10						
	comp=Z,1.6nm,0.7s						
ESDC	**Sonseca Array**	**77.19**	**52**	P	**P**	**07 20 56.8**	**0.0**
ESDC				IAmb	IAmb	07 21 20.2	
	comp=Z,13nm,1.5s						
ADK	**Adak**	**80.73**	**321**	P	**P**	**07 21 16.6**	**+0.8**
AMKA	**Amchitka**	**83.28**	**321**	P	**P**	**07 21 29.8**	**+0.6**
NOA	**NORSAR Array B**	**83.71**	**29**	P	**P**	**07 21 31.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=260,slow=4.9,SNR=2.6						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**86.66**	**19**	P	**P**	**07 21 44.0**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=304,slow=5.1,SNR=3.8						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**86.66**	**19**	P	**P**	**07 21 46.8**	**+1.0**
PETK	**Petropavlovsk-**	**95.27**	**327**	P	**P**	**07 22 26.5**	**+0.2**
QSPA	**South Pole Qui**	**101.72**	**180**	Pdif	**Pdif**	**07 22 55.4**	**+0.4**
KURK	**Kurchatov**	**116.52**	**10**		**PKPdf**	**07 27 46.1**	**-0.2**
KURBB	**Kurchatov Arra**	**116.59**	**10**	PKP	**PKPdf**	**07 27 46.1**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=354,slow=1.8,SNR=4.8						
SONM	**Songino Array**	**119.51**	**350**	PKP	**PKiKP**	**07 27 52.3**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=9.6,slow=1.6,SNR=8.0						
MAW	**Mawson**	**120.74**	**167**	PKP	**PKiKP**	**07 27 53.9**	**0.0**
	comp=Z,1.8nm,0.7s,baz=207,slow=3.7,SNR=4.5						
MKAR	**Makanchi Array**	**120.92**	**9**	PKP	**PKPdf**	**07 27 53.7**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=54,slow=2.1,SNR=3.6						
KSRS	**Korea Array**	**121.15**	**328**	PKP	**PKPdf**	**07 27 55.4**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=349,slow=1.1,SNR=11						
GTA2	**Gaotai**	**128.65**	**353**	*eP*	**PKiKP**	**07 28 10.8**	**0.0**
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR	**Alice Springs**	**139.51**	**247**	PKP	**PKPdf**	**07 28 31.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=93,slow=1.7,SNR=5.8						
WRA	**Warramunga Arr**	**139.59**	**253**	PKP	**PKPdf**	**07 28 31.2**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=86,slow=2.0,SNR=4.7						
CMAR	**Chiang Mai Arr**	**149.43**	**349**	PKP	**PKPdf**	**07 28 48.5**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=287,slow=1.5,SNR=5.6						
CMAR				PKPbc	**PKPbc**	**07 28 52.4**	**0.0**
	comp=Z,5.7nm,0.6s,baz=315,slow=2.3,SNR=13						

MEX 13 07:10:42.4±0.5,**16.14N**×**94.74W**,**h113**km±11km, **MD4.0**(UNK), **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.95**	**352**	*eS*	Sn	07 11 16.7	-2.5
HUIG	**Huatulco**	**1.36**	**254**	*eP*	Pn	07 11 07.0	-0.8
HUIG				*eS*	Sn	07 11 25.1	-1.9
NEUV	**Arroyo Zacate**	**1.86**	**327**	*eP*	Pn	07 11 12.7	-1.1
NEUV				*eS*	Sn	07 11 36.0	-1.7
VHO	**Vista Hermosa**	**2.12**	**296**	*eP*	Pn	07 11 16.3	-1.0
VHO				*eS*	Sn	07 11 41.8	-2.0
PEIG	**Puerto Escondi**	**2.32**	**267**	*eP*	Pn	07 11 20.5	+1.0
TOIG	**Toxpalan**	**2.95**	**312**	*eP*	Pn	07 11 27.7	-0.2
TXIG	**Tlaxiaco**	**3.10**	**291**	*eP*	Pn	07 11 28.2	-1.9
TXIG				*eS*	Sn	07 12 02.7	-4.2
TPIG	**Tehuac#an**	**3.38**	**313**	*eP*	Pn	07 11 33.0	-0.6

IDC ***13*** *07:15:07.3±3.2,54.1°19N×87.2°23E,h0km,mbtmp2.9/2, ML2.4/1,Error ellipse: s-maj=27.9km s-min=19.7km az=53.0*

ASRS 13 07:15:05.0±0.6,**54.07N**×**87.15E**,**h0**km,**M2.5**(MOS),**The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**266**	I	I	07 23 50.0	
	baz=80,slow=299,SNR=0.8						
ZALV	**Zalesovo Beam**	**1.38**	**266**	Pg	Pb	07 15 32.6	+1.0
	2.4nm,0.3s,baz=82,slow=16,SNR=26						
ZALV				Lg	Lg	07 15 53.2	
	1.1nm,0.3s,baz=81,slow=28,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.31**	**240**	Pn	Pn	07 16 43.5	+4.3
	1.0nm,0.2s,baz=56,slow=14,SNR=1.0						
KURBB				Lg	Lg	07 18 31.4	
	0.1nm,0.3s,baz=60,slow=28,SNR=1.6						
MKAR	**Makanchi Array**	**7.92**	**205**	Pn	Pn	07 17 07.0	+5.6
	baz=26,slow=24,SNR=1.6						
	0.1nm,0.4s						

CRAAG ***13*** *07:22:57.1,36.86N×2.81E,Ml3.3,Algrie 13km NW Ain-Benian*
MDD ***13*** *07:22:59.4±0.7,36.90N×2.82E,h26km±9km,Mb4.0/23, M_mb3.3/24,Error ellipse: s-maj=7.9km s-min=3.0km az=152.0*

ISC 13 07:22:56.9±1.2,**36.94N**±0.04×**2.83E**±0.04,**h24**km±12km, **n37**,σ1=**64**/58,**9C**,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABA	**Alger-Bouzarea**	**0.21**	**131**	P	**Pb**	**07 23 02.2**	**-0.5**
ABMS	**Boumerdes**	**0.55**	**110**	P	**Pb**	**07 23 08.5**	**+0.5**
ABKD	**Sidi Amar**	**0.58**	**226**	P	**Pb**	**07 23 08.6**	**+0.1**
EARB	**Arib**	**0.92**	**226**	P	**Pn**	**07 23 14.7**	**+0.4**
EHRZ	**Djelida**	**0.94**	**218**	P	**Pn**	**07 23 15.2**	**+0.6**
EDDR	**Deurdeur**	**1.06**	**208**	P	**Pn**	**07 23 15.6**	**-0.7**
ATKJ	**Tikjda**	**1.15**	**115**	P	**Pn**	**07 23 17.7**	**+0.2**
AKET	**Djebel Ketaf**	**1.23**	**136**	P	**Pn**	**07 23 19.7**	**+1.0**
ABRIN	**Birine**	**1.33**	**170**	P	**Pb**	**07 23 23.6**	**+2.3**
EIBI	**Ibiza**	**2.39**	**331**	P	**Pn**	**07 23 35.7**	**+1.1**
EIBI				S	**Sn**	**07 24 01.8**	**-1.3**
EIBI	**Ibiza**	**2.39**	**331**	Pn	**Pn**	**07 23 35.8**	**+1.2**
EIBI				⇑*i*Vmb_VC		07 23 37.0	
	579nm,SNR=1.7						
EIBI				Sn	**Sn**	**07 24 01.8**	**-1.3**
ETOS	**Mallorca**	**2.82**	**360**	P	**Pn**	**07 23 41.2**	**+0.7**
ETOS				S	**Sn**	**07 24 11.9**	**-1.9**
ETOS	**Mallorca**	**2.82**	**360**	Pn	**Pn**	**07 23 41.6**	**+1.1**
ETOS				⇑*i*Vmb_VC		07 23 44.0	
	242nm,SNR=1.6						
ETOS				Sn	**Sn**	**07 24 12.2**	**-1.5**
EBEN2	**Beniarda presa**	**2.96**	**307**	Pn	**Pn**	**07 23 43.7**	**+1.4**
EBEN2				⇑*i*Vmb_VC		07 23 45.6	
	577nm,SNR=1.5						
EBEN2				Sn	**Sn**	**07 24 14.4**	**-2.7**
EXPDH	**Pilar de la Ho**	**3.02**	**289**	Pn	**Pn**	**07 23 44.4**	**+1.3**
CART	**Cartagena**	**3.13**	**283**	P	**Pn**	**07 23 43.6**	**-1.0**
CART				S	**Sn**	**07 24 19.3**	**-1.8**
MAHO	**Mahon**	**3.16**	**20**	S	**Sn**	**07 24 20.6**	**-1.4**
AFON	**Font Roja**	**3.18**	**304**	Sn	**Sn**	**07 24 22.4**	**-0.3**
ECOL	**Islas Columbre**	**3.40**	**331**	Pn	**Pn**	**07 23 49.5**	**+1.2**
ECOL				Sn	**Sn**	**07 24 27.8**	**-0.1**
EZAR	**Zarzadilla de**	**3.72**	**286**	Pn	**Pn**	**07 23 54.0**	**+1.1**
EZAR				Sn	**Sn**	**07 24 34.2**	**-1.9**
ETOB	**Tobarra**	**3.87**	**297**	P	**Pn**	**07 23 56.1**	**+1.3**
ETOB				S	**Sn**	**07 24 38.8**	**-0.7**
ETOB	**Tobarra**	**3.87**	**297**	Pn	**Pn**	**07 23 56.5**	**+1.6**
ETOB				⇑*i*Vmb_VC		07 24 00.4	
	232nm,SNR=1.8						
ETOB				Sn	**Sn**	**07 24 38.4**	**-1.1**
EVIV	**Cofrentes, Val**	**3.89**	**308**	Pn	**Pn**	**07 23 55.9**	**+0.8**
EVIV				⇑*i*Vmb_VC		07 23 59.5	
	174nm,SNR=1.2						
EVIV				Sn	**Sn**	**07 24 37.2**	**-2.9**
ECHE	**Chera**	**3.99**	**313**	P	**Pn**	**07 23 58.1**	**+1.5**
ECHE				S	**Sn**	**07 24 40.4**	**-2.2**
ECHE	**Chera**	**3.99**	**313**	Pn	**Pn**	**07 23 58.2**	**+1.5**
ECHE				⇑*i*Vmb_VC		07 24 00.4	
	144nm,SNR=1.4						
ECHE				Sn	**Sn**	**07 24 40.0**	**-2.7**
EMOS	**Mosqueruela**	**4.29**	**324**	Pn	**Pn**	**07 24 02.1**	**+1.3**
EMOS				⇑*i*Vmb_VC		07 24 02.5	
	176nm,SNR=1.6						
EMOS				Sn	**Sn**	**07 24 47.5**	**-2.6**
ERTA	**Horta de San J**	**4.46**	**335**	Pn	**Pn**	**07 24 04.7**	**+1.8**
ERTA				Sn	**Sn**	**07 24 51.3**	**-2.8**
EPOB	**Poblet**	**4.61**	**343**	Pn	**Pn**	**07 24 04.5**	**-0.6**
EPOB				Sn	**Sn**	**07 24 55.8**	**-2.1**
EQES	**Quesada**	**4.78**	**282**	Pn	**Pn**	**07 24 09.2**	**+1.7**
EQES				⇑*i*Vmb_VC		07 24 12.1	
	133nm,SNR=1.4						
EQES				Sn	**Sn**	**07 25 03.4**	**+1.2**
EMIR	**Miracle**	**5.07**	**349**	Pn	**Pn**	**07 24 14.6**	**+3.2**
EMIR				Sn	**Sn**	**07 25 09.0**	**-0.2**
EJON	**La Jonquera**	**5.50**	**0**	P	**Pn**	**07 24 18.3**	**+1.3**
EJON				S	**Sn**	**07 25 17.0**	**-2.7**
EJON	**La Jonquera**	**5.50**	**0**	Pn	**Pn**	**07 24 19.4**	**+2.2**
EJON				⇑*i*Vmb_VC		07 24 21.5	
	106nm,SNR=1.3						
EJON				Sn	**Sn**	**07 25 18.1**	**-1.7**
PSIM	**Granatula de C**	**5.54**	**292**	Sn	**Sn**	**07 25 18.8**	**-2.0**
VSL	**Villasalto**	**5.75**	**62**	Pn	**Pn**	**07 24 21.7**	**+1.0**
VSL				Sn	**Sn**	**07 25 23.7**	**-2.2**
ECHI	**Chisagues Biel**	**6.07**	**341**	Sn	**Sn**	**07 25 32.0**	**-1.9**
PAB	**San Pablo**	**6.22**	**297**	Pn	**Pn**	**07 24 28.2**	**+1.0**
ECEU	**Ceuta**	**6.70**	**264**	Pn	**Pn**	**07 24 35.0**	**+1.2**

IDC ***13*** *07:23:46.8±6.7,5.58S×149.43E,h142km±44km,mb3.7/5, mbtmp4.2/7,Error ellipse: s-maj=54.4km s-min=46.9km az=47.0*
NEIC ***13*** *07:23:50.4±1.5,5.67S±0.07×149.35E±0.09,h184km±9km, mb4.4/25,Error ellipse: s-maj=13.9km s-min=9.8km az=104.0*

ISC 13 07:23:51.2±0.6,**5.69S**±0.06×**149.31E**±0.08,**h200**km,**n40**, σ1=**88**/42,**mb4.3**/12,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.21**	**63**	Pn	**Pn**	**07 24 41.0**	**-2.5**
MANU	**Manus Island**	**4.11**	**332**		**Pn**	**07 24 53.7**	**-0.7**
PMG	**Port Moresby**	**4.26**	**210**	P	**Pn**	**07 24 53.2**	**-3.2**
	11nm,0.4s,baz=41,slow=11,SNR=6.4						
PMG				S	**Sn**	**07 25 43.4**	**-4.1**
	94nm,0.3s,baz=18,slow=16,SNR=18						
PMG	**Port Moresby**	**4.26**	**210**	Pn	**Pn**	**07 24 55.1**	**-1.2**
PMG				Sn	**Sn**	**07 25 43.7**	**-3.9**
CTA	**Charters Tower**	**14.62**	**191**	P	**Pn**	**07 27 09.0**	**+0.1**
	7.7nm,0.7s,baz=8.5,slow=10,SNR=6.7						
MTN	**Manton Dam**	**19.28**	**247**	P	**P**	**07 28 03.1**	**+2.0**
MTN				IAmb	IAmb	07 28 29.9	
	comp=Z,42nm,1.5s						
EIDS	**Eidsvold**	**19.64**	**175**	P	**P**	**07 28 05.7**	**+0.8**
EIDS				IAmb	IAmb	07 28 06.4	
	comp=Z,7.2nm,0.8s						
GUMO	**Guam**	**19.65**	**347**	P	**P**	**07 28 02.5**	**-2.5**
WB0	**Warramunga Arr**	**20.16**	**225**	P	**P**	**07 28 10.8**	**+0.3**
WB0				IAmb	IAmb	07 28 17.2	
	comp=Z,6.9nm,0.8s						
WR0	**Warramunga Arr**	**20.18**	**224**	P	**P**	**07 28 12.7**	**+2.0**
WR0				IAmb	IAmb	07 28 16.4	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**20.30**	**224**	P	**P**	**07 28 14.4**	**+2.3**
WB2				IAmb	IAmb	07 28 17.3	
	comp=Z,10nm,0.5s						
WRA	**Warramunga Arr**	**20.31**	**224**	P	**P**	**07 28 14.1**	**+2.0**
	comp=Z,6.3nm,0.4s,baz=48,slow=10,SNR=50						
	comp=Z,6.3nm,0.4s						
WRA	**Warramunga Arr**	**20.31**	**224**	P	**P**	**07 28 13.4**	**+1.3**
KNRA	**Kununurra**	**22.47**	**242**	P	**P**	**07 28 36.6**	**+2.6**
KNRA				IAmb	IAmb	07 29 20.4	
	comp=Z,34nm,1.4s						
TNTI	**Ternate**	**22.83**	**286**	P	**P**	**07 28 37.5**	**+0.3**
AS31	**Alice Springs**	**23.22**	**218**	P	**P**	**07 28 43.9**	**+3.1**
AS31				IAmb	IAmb	07 28 45.2	
	comp=Z,4.5nm,0.3s						
ASAR	**Alice Springs**	**23.23**	**218**	P	**P**	**07 28 43.9**	**+3.1**
	comp=Z,4.7nm,0.4s,baz=50,slow=9.1,SNR=145						
	comp=Z,4.7nm,0.4s						
ASAR	**Alice Springs**	**23.23**	**218**	P	**P**	**07 28 42.1**	**+1.3**
INKA	**Innaminka**	**23.39**	**199**	P	**P**	**07 28 43.1**	**+0.9**
INKA				IAmb	IAmb	07 28 45.4	
	comp=Z,5.8nm,0.5s						
ONTNC	**Ouen Toro**	**23.40**	**137**	P	**P**	**07 28 42.5**	**+0.1**
ARMA	**Armidale**	**24.70**	**175**	P	**P**	**07 28 54.6**	**+0.4**
ARMA				IAmb	IAmb	07 28 56.7	
	comp=Z,7.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.19**	**240**	P	**P**	**07 29 07.8**	**+0.2**
FITZ				IAmb	IAmb	07 29 23.2	
	comp=Z,5.7nm,1.4s						
LUWI	**Luwuk**	**26.88**	**279**	P	**P**	**07 29 13.5**	**-0.4**
STKA	**Stephens Creek**	**27.04**	**195**	P	**P**	**07 29 16.2**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=27,slow=15,SNR=1.9						
	comp=Z,0.7nm,0.3s						
BBOO	**Buckleboo**	**29.68**	**203**	P	**P**	**07 29 39.5**	**+1.1**
BBOO				IAmb	IAmb	07 29 46.8	
	comp=Z,15nm,1.4s						
FORT	**Forrest**	**31.96**	**216**	P	**P**	**07 29 58.4**	**-0.1**
FORT				IAmb	IAmb	07 30 10.7	
	comp=Z,9.7nm,1.1s						
MGBR	**Mount Gambier**	**32.87**	**193**	P	**P**	**07 30 06.5**	**+0.2**
KKM	**Kota Kinabalu**	**35.03**	**289**	P	**P**	**07 30 24.5**	**-0.8**
KKM				IAmb	IAmb	07 30 25.9	
	comp=Z,8.3nm,1.0s						
TCW	**Tory Channel**	**41.82**	**151**	P	**P**	**07 31 20.1**	**-1.3**
MAJO	**Matsushiro**	**43.28**	**347**	P	**P**	**07 31 33.0**	**-0.2**
MJB9	**Matsu-Tunnel**	**43.28**	**347**	P	**P**	**07 31 33.6**	**+0.4**
PEA0B	**Petropavlovsk-**	**59.01**	**6**	P	**P**	**07 33 28.5**	**-1.3**
PETK	**Petropavlovsk-**	**59.01**	**6**	P	**P**	**07 33 28.2**	**-1.6**
VNDA	**Vanda**	**72.10**	**177**	P	**P**	**07 34 55.7**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=351,slow=5.1,SNR=2.3						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**72.10**	**177**	P	**P**	**07 34 55.4**	**+2.2**
QSPA	**South Pole Qui**	**84.28**	**180**	P	**P**	**07 36 02.7**	**+2.3**
	comp=Z,1.7nm,0.7s,baz=315,slow=5.7,SNR=13						
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**84.28**	**180**	P	**P**	**07 36 02.6**	**+2.2**
ILAR	**Eielson Array**	**84.30**	**23**	P	**P**	**07 36 01.1**	**+0.8**
RIDG	**Independent Ri**	**84.67**	**24**	P	**P**	**07 36 02.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**147.23**	**285**	PKPbc	**PKiKP**	**07 43 13.7**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=90,slow=1.4,SNR=2.4						

IDC ***13*** *07:35:21.1±3.1,53.65N×87.11E,h0km,mbtmp2.6/2, ML2.1/2,Error ellipse: s-maj=29.9km s-min=17.8km az=65.0*

ASRS 13 07:35:18.0±1.0,**53.57N**×**87.04E**,**h0**km,**M2.4**(MOS),**The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.37**	**287**	I	I	07 42 00.0	
	baz=102,slow=316,SNR=4.5						
ZALV	**Zalesovo Beam**	**1.37**	**287**	Pg	Pb	07 35 46.2	+1.7
	0.4nm,0.3s,baz=101,slow=17,SNR=6.5						
ZALV				Lg	Lg	07 36 05.9	
	0.4nm,0.3s,baz=103,slow=29,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.02**	**244**	Pn	Pn	07 36 52.9	+4.7
	baz=61,slow=14,SNR=4.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.44**	**206**	Pn	Pn	07 37 13.4	+5.6
	baz=24,slow=13,SNR=1.9						
	0.1nm,0.3s						

IDC ***13*** *07:45:56.0±3.7,54.37N×87.45E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=33.0km s-min=21.1km az=38.0*

ASRS 13 07:45:56.0±1.1,**54.24N**×**87.13E**,**h0**km,**M2.6**(MOS),**The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**Z

comp=E,354nm,0.7s
SMY Shemya 3.17 299 P **Pn** **07 48 59.7 +1.4**
SMY Shemya 3.17 299 Pn **Pn** **07 48 59.6 +1.3**
SMY IAML 07 49 44.5
comp=N,686nm,0.8s
GSCK Great Sitkin C 3.29 76 **Pn** **07 49 00.5 +0.5**
GSSP Great Sitkin S 3.30 74 **Pn** **07 49 00.5 +0.4**
GSTD Great Sitkin T 3.31 75 **Pn** **07 49 00.3 0.0**
GSTR Great Sitkin T 3.37 74 Pn **Pn** **07 49 01.4 +0.3**
GSIG Igitkin Island 3.43 76 **Pn** **07 49 02.3 +0.4**
KOWE Korovin West 4.51 74 **Pn** **07 49 17.2 +0.4**
ATKA Atka Island 4.52 76 P **Pn** **07 49 17.5 +0.7**
ATKA Atka Island 4.52 76 S **Sn** **07 50 11.3 +3.3**
ATKA Atka Island 4.52 76 **Pn** **07 49 16.6 -0.2**
ATKA IAML 07 50 19.1
comp=E,207nm,1.0s
ATKA IAML 07 50 22.9
comp=N,257nm,0.8s
KOKL Mount Kliuchef 4.54 74 **Pn** **07 49 17.6 +0.5**
KONW Korovin Northw 4.54 73 **Pn** **07 49 17.9 +0.7**
KOFP Korovin Flat P 4.59 75 **Pn** **07 49 18.4 +0.5**
KOSE Korovin Southe 4.63 74 **Pn** **07 49 19.4 +1.0**
OKWE Okmok W'ng Wal 8.29 70 **Pn** **07 50 10.7 +2.1**
OKTU Okmok Mt. Tuli 8.39 70 **Pn** **07 50 11.7 +1.8**
SPIA Saint Paul Isl 8.75 43 P **Pn** **07 50 17.2 +2.5**
MAPS Pakushin South 9.11 68 **Pn** **07 50 21.6 +1.8**
MGOD Makushin Gods 9.15 69 **Pn** **07 50 22.0 +1.6**
UNV Unalaska Valle 9.37 69 P **Pn** **07 50 25.2 +1.9**
UNV Unalaska Valle 9.37 69 Pn **Pn** **07 50 24.4 +1.1**
LVA Lava Point 9.70 67 Pn **Pn** **07 50 27.4 -0.5**
AKUT Akutan 9.85 67 P **Pn** **07 50 31.7 +1.9**
AKUT Akutan 9.85 67 Pn **Pn** **07 50 28.8 -1.0**
PETK Petropavlovsk- 12.99 286 P **Pn** **07 51 15.6 +2.9**
comp=N,0.3nm,0.3s,baz=81,slow=18,SNR=3.7
PETK S **Sn** **07 53 29.4 -6.2**
comp=N,0.5nm,0.4s,baz=344,slow=42,SNR=1.7
comp=N,1.0nm,0.5s
SDPT Sand Point 13.09 64 P **Pn** **07 51 12.4 -1.5**
CNBA Chernabura Isl 13.52 66 Pn **Pn** **07 51 18.4 -1.5**
CHNA Chernabura Isl 13.52 66 P **Pn** **07 51 18.7 -1.2**
M13K Dall Lake 13.56 41 Pn **Pn** **07 51 19.6 -0.7**
O14K Tigyukauivet M 13.88 47 Pn **Pn** **07 51 24.8 0.0**
N14K Kuskokwak Cree 14.01 44 Pn **Pn** **07 51 27.0 +0.6**
M14K Bethel 14.32 41 **Pn** **07 51 32.1 +1.5**
L14K Kuka Creek 14.36 38 **Pn** **07 51 31.3 +0.1**
O15K Ungalikthiuk R 14.52 49 **Pn** **07 51 33.9 +0.6**
N15K Kwethluk River 14.83 45 **Pn** **07 51 36.4 -1.0**
P16K Nushagak River 15.35 51 Pn **Pn** **07 51 43.6 -0.5**
O16K Kokwok River B 15.50 49 P **P** **07 51 48.4 -1.3**
O16K IAmb IAmb 07 51 53.4
comp=Z,7.2nm,0.8s
M16K Timber Creek 15.72 43 P **P** **07 51 51.9 -0.3**
L16K Owhat River 15.85 40 P **P** **07 51 54.0 +0.5**
P17K Kvichak River 16.16 51 P **P** **07 51 56.2 -0.8**
N17K Nushagak Hills 16.28 46 P **P** **07 51 58.3 -0.2**
J16K Anvik River 16.31 35 P **P** **07 51 59.1 +0.4**
M17K Holitna River 16.55 43 P **Pn** **07 52 00.1 +0.7**
K17K Iditarod 16.84 38 P **P** **07 52 04.2 -0.4**
J17K VABM Dome 16.93 36 P **P** **07 52 05.5 0.0**
N18K Kilae Creek 16.93 47 P **P** **07 52 05.1 -0.6**
O18K Koktuh Hills 16.96 50 P **Pn** **07 52 05.0 +0.4**
O18K IAmb IAmb 07 52 09.1
comp=Z,25nm,1.4s
L18K Granite Mounta 17.24 41 P **P** **07 52 08.8 -0.3**
OHAK Old Harbor 17.33 59 P **Pn** **07 52 05.6 -3.6**
H17K Granite Mounta 17.59 31 P **Pn** **07 52 12.2 -0.1**
N19K Bonanza Creek 17.62 47 P **Pn** **07 52 13.1 +0.2**
N19K IAmb IAmb 07 52 17.3
comp=Z,11nm,1.1s
KDAK Kodiak Island 17.79 57 P **Pn** **07 52 11.3 -3.5**
comp=Z,1.1nm,0.3s,baz=256,slow=4.2,SNR=41
KDAK S Sn 07 55 19.4 -13
comp=Z,1.7nm,0.9s,baz=135,slow=20,SNR=1.0
comp=Z,2.7nm,0.3s
L19K White Mountain 18.00 43 P **P** **07 52 18.6 +1.2**
L19K IAmb IAmb 07 52 20.9
comp=Z,9.9nm,1.1s
H18K Honhosa River 18.24 32 P **P** **07 52 19.6 -0.4**
J19K Poorman 18.55 37 P **Pn** **07 52 24.1 +0.2**
J19K IAmb IAmb 07 52 29.7
comp=Z,9.7nm,1.1s
G18K Tagagawik 18.62 30 P **Pn** **07 52 24.8 -0.1**
M20K Styx River 18.62 45 P **P** **07 52 24.0 -0.3**
M20K IAmb IAmb 07 52 28.6
comp=Z,12nm,1.2s
K20K Telida 18.84 40 IAmb IAmb 07 52 31.4
comp=Z,9.3nm,1.1s
SPU Mount Spurr 18.86 47 P **P** **07 52 27.1 +0.2**
SPU IAmb IAmb 07 52 31.8
comp=Z,7.4nm,0.8s
STLK Strandline Lak 19.07 46 P **P** **07 52 29.6 +0.5**
STLK IAmb IAmb 07 52 35.2
comp=Z,12nm,0.8s
H19K Roundabout Mou 19.10 32 P **P** **07 52 29.4 0.0**
J20K Nowinta River 19.20 37 P **P** **07 52 30.9 +0.5**
J20K IAmb IAmb 07 52 36.4
comp=Z,18nm,1.2s
G19K Purcell Mounta 19.27 30 P **P** **07 52 31.5 +0.2**
G19K IAmb IAmb 07 52 37.7
comp=Z,12nm,0.8s
SKT Skwentna 19.36 45 P **P** **07 52 32.4 0.0**
SKT IAmb IAmb 07 52 37.4
comp=Z,11nm,0.7s
F19K Shaleruckik Mo 19.51 28 **P** **07 52 34.4 +0.6**
F19K IAmb IAmb 07 52 35.3
comp=Z,4.5nm,0.7s
SEW Seward 19.82 51 P **P** **07 52 36.8 -0.4**
SEW IAmb IAmb 07 52 44.4
comp=Z,10nm,1.1s
CUT Chulitna 20.06 44 P **P** **07 52 40.0 +0.1**
E19K Redstone River 20.08 27 P **P** **07 52 41.0 +0.9**
PMR Palmer 20.33 47 P **P** **07 52 40.7 -2.1**
PMR Palmer 20.33 47 P **P** **07 52 41.6 -1.1**
H21K Melozitna Rive 20.44 35 IAmb IAmb 07 52 48.4
comp=Z,4.5nm,0.7s
I21K Tanana 20.50 36 P **P** **07 52 45.2 +0.7**
D19K Kuna River 20.56 24 P **P** **07 52 45.9 +0.6**
D19K IAmb IAmb 07 52 49.5
comp=Z,11nm,0.9s
C19K Lookout Ridge 20.64 22 IAmb IAmb 07 52 50.5
comp=Z,6.0nm,0.7s
G21K Allakaket 20.66 32 **P** **07 52 46.9 +0.5**
G21K IAmb IAmb 07 52 47.9
comp=Z,12nm,1.4s
SML Sawmill 20.75 47 P **P** **07 52 46.9 -0.5**
SML IAmb IAmb 07 52 52.2
comp=Z,7.7nm,0.8s
RND Reindeer 21.01 42 P **P** **07 52 50.5 +0.3**
F21K Alatna River 21.07 30 **P** **07 52 51.3 +0.6**
F21K IAmb IAmb 07 52 54.5
comp=Z,9.4nm,0.8s
MCK McKinley 21.09 41 P **P** **07 52 50.5 -0.5**
MCK IAmb IAmb 07 52 53.6
comp=Z,6.8nm,1.0s
D20K Etivluk River 21.10 25 **P** **07 52 51.5 +0.3**
D20K IAmb IAmb 07 52 55.2
comp=Z,9.8nm,0.8s
SCM Sheep Creek Mo 21.22 47 P **P** **07 52 51.8 -0.7**
NEA2 Nenana 21.36 39 P **P** **07 52 53.9 0.0**
I23K Minto, Yukon-K 21.47 38 P **P** **07 52 55.7 +0.7**
DHY Denali Highway 21.54 44 **P** **07 52 55.3 -0.6**
WRH Wood River Hil 21.71 40 P **P** **07 52 56.2 -1.3**
WRH IAmb IAmb 07 53 04.3
comp=Z,6.8nm,1.4s
KLU Klutina 21.80 48 P **P** **07 52 58.5 -0.2**
M24K Tolsona, Glenn 21.82 47 P **P** **07 52 58.4 -0.5**
G23K Bananza Creek 21.95 34 IAmb IAmb 07 53 03.2
comp=Z,7.0nm,1.1s
COLA College 21.95 39 P **P** **07 52 60.0 -0.2**
COLA IAmb IAmb 07 53 05.9
comp=Z,8.8nm,1.1s
COLD Coldfoot 22.14 32 P **P** **07 53 02.4 +0.1**
IL31 22.30 40 **P** **07 53 03.1 -0.8**
ILAR Eielson Array 22.30 40 P **P** **07 53 00.6 -3.3**
comp=Z,1.4nm,0.8s,baz=240,slow=8.7,SNR=22
comp=Z,1.4nm,0.8s
ILAR Eielson Array 22.30 40 P **P** **07 53 03.8 -0.1**
H24K Noodor Dome 22.32 37 **P** **07 53 04.5 +0.3**
H24K IAmb IAmb 07 53 09.2
comp=Z,5.8nm,0.9s
BMRM Bremner River 22.33 50 IAmb IAmb 07 53 04.8
comp=Z,7.3nm,0.7s
PAX Paxson 22.35 45 P **P** **07 53 03.8 -0.8**
PAX IAmb IAmb 07 53 25.8
comp=Z,4.4nm,1.0s
E23K Chandalar 22.77 31 P **P** **07 53 09.4 +0.4**
GLB Gilahina Butte 22.79 49 IAmb IAmb 07 53 09.1
comp=Z,4.5nm,0.6s
RIDG Independent Ri 22.82 43 P **P** **07 53 09.3 -0.2**
RIDG IAmb IAmb 07 53 50.3
comp=Z,6.0nm,1.1s
J25K Salcha River, 22.86 41 IAmb IAmb 07 53 08.7
comp=Z,3.4nm,0.6s
VRDI Verde Repeater 22.93 50 P **P** **07 53 09.5 -1.3**
VRDI IAmb IAmb 07 53 11.2
comp=Z,6.7nm,0.7s
D23K Nanushuk River 22.94 28 P **P** **07 53 10.5 -0.2**
F24K Squaw Lake 23.07 33 IAmb IAmb 07 53 13.3
comp=Z,5.4nm,0.7s
MCARA McCarthy VSAT 23.15 49 P **P** **07 53 12.9 +0.1**
L26K Log Cabin Wild 23.30 45 P **P** **07 53 14.5 +0.2**
L26K IAmb IAmb 07 53 17.1
comp=Z,5.9nm,1.0s
C23K Itkillik River 23.47 26 P **P** **07 53 15.2 -0.6**
C23K IAmb IAmb 07 53 16.2
comp=Z,7.8nm,1.0s
FYU Fort Yukon 23.60 36 IAmb IAmb 07 53 18.5
comp=Z,6.7nm,0.8s
GRNC Granite Creek 23.69 51 IAmb IAmb 07 53 21.1
comp=Z,8.1nm,1.1s
M27K Edge Creek, AK 23.84 47 IAmb IAmb 07 53 20.4
comp=Z,4.8nm,0.8s
F25K Christian Rive 23.87 34 IAmb IAmb 07 53 21.3
comp=Z,4.0nm,0.8s
BCAR Beaver Creek A 24.01 45 P **P** **07 53 20.3 -0.7**
E25K Arctic Village 24.13 32 IAmb IAmb 07 53 24.1
comp=Z,3.2nm,0.8s
F26K Sheenjek River 24.44 34 IAmb IAmb 07 53 26.5
comp=Z,3.5nm,0.8s
O28M Mount Upton 24.45 51 P **P** **07 53 24.2 -1.1**
O28M IAmb IAmb 07 53 24.6
comp=Z,5.1nm,0.7s
DAWY Dawson 25.24 44 P **P** **07 53 31.2 -1.0**
I28M Miner Creek 25.31 40 IAmb IAmb 07 53 34.3
comp=Z,7.1nm,1.1s
M29M Somme Creek 25.43 47 IAmb IAmb 07 53 38.6
comp=Z,3.6nm,0.8s
E27K Coleen River 25.52 34 P **P** **07 53 34.4 -0.1**
E27K IAmb IAmb 07 53 37.6
comp=Z,4.8nm,0.9s
F28M Old Crow 25.93 35 IAmb IAmb 07 53 42.3
comp=Z,3.4nm,0.8s
K29M Barlow Dome 26.02 44 IAmb IAmb 07 53 47.1
comp=Z,3.8nm,0.9s
G29M Pine Creek 26.42 37 P **P** **07 53 42.6 -0.1**
G29M IAmb IAmb 07 53 45.8
comp=Z,5.9nm,1.0s
F30M Barrier River 27.44 36 IAmb IAmb 07 53 53.1
comp=Z,7.0nm,1.1s
INK Inuvik 28.43 35 P **P** **07 54 00.1 -0.5**
INK IAmb IAmb 07 54 06.2
comp=Z,2.8nm,0.8s
MMPY Sheldon Lake, 28.77 47 P **P** **07 54 03.2 -0.6**
MMPY IAmb IAmb 07 54 07.0
comp=Z,2.4nm,0.8s
TIXI Tiksi 29.93 331 LR LR 08 07 01.8
comp=Z,67nm,19.4s,baz=202,slow=38
A36M Sachs Harbour 31.92 29 P **P** **07 54 31.9 +0.5**
H11N2 WAKE ISLAND Hy 32.85 201 T T 08 29 43.6
baz=19,slow=76,SNR=19
H11N3 WAKE ISLAND Hy 32.86 201 T T 08 29 44.4
baz=19,slow=76,SNR=19
H11N1 WAKE ISLAND Hy 32.87 201 T T 08 29 48.9
baz=19,slow=76,SNR=16
H11S1 WAKE ISLAND Hy 34.08 201 T T 08 31 28.7
baz=20,slow=76,SNR=10
H11S2 WAKE ISLAND Hy 34.09 201 T T 08 31 24.0
baz=20,slow=76,SNR=7.1
H11S3 WAKE ISLAND Hy 34.09 201 T T 08 31 30.1
baz=20,slow=76,SNR=7.0
YKAW3 Yellowknife Wh 36.40 46 P **P** **07 55 09.7 -0.7**
YKA Yellowknife Ar 36.42 46 P **P** **07 55 09.7 -0.8**
comp=Z,0.9nm,0.4s,baz=283,slow=8.6,SNR=9.2
comp=Z,0.9nm,0.4s
YKA Yellowknife Ar 36.42 46 P **P** **07 55 08.7 -1.8**
YKAW1 Yellowknife Wh 36.48 46 P **P** **07 55 10.2 -0.8**
YKAW1 IAmb IAmb 07 55 39.0
comp=Z,2.5nm,0.9s
EDM Edmonton 40.22 60 P **P** **07 55 41.4 -1.2**
RES Resolute Bay 40.46 24 LR LR 08 15 26.0
comp=Z,19nm,19.0s,baz=24,slow=41
K05A Summer Lake 41.02 78 P **P** **07 55 50.0 +0.6**
I07A Izee 41.12 75 P **P** **07 55 51.0 +0.8**
I07A IAmb IAmb 07 56 32.9
comp=Z,4.0nm,1.3s
JTMT Jette 42.29 67 P **P** **07 56 00.4 +0.7**
BEKR Beckworth 42.99 81 P **P** **07 56 05.6 +0.1**
BEKR IAmb IAmb 07 56 15.8
comp=Z,2.5nm,1.1s
NVAR Mina Array Bea 45.13 81 P **P** **07 56 23.2 +0.5**
comp=Z,1.1nm,0.6s,baz=296,slow=6.3,SNR=10.0
comp=Z,1.1nm,0.6s
NVAR Mina Array Bea 45.13 81 P **P** **07 56 22.7 0.0**
MDPB Devils Postpil 45.14 82 P **P** **07 56 22.6 -0.3**
MDPB IAmb IAmb 07 56 26.7
comp=Z,3.2nm,0.9s
NV11 Mina Array Sit 45.22 81 P **P** **07 56 24.6 +1.2**
NV11 IAmb IAmb 07 56 37.9
comp=Z,6.0nm,1.5s
SONM Songino Array 45.26 295 P **P** **07 56 25.7 +2.2**
comp=Z,0.3nm,0.4s,baz=70,slow=9.8,SNR=1.9
comp=Z,0.3nm,0.4s
SONM Songino Array 45.26 295 P **P** **07 56 24.8 +1.3**
FFC Flin Flon 45.46 53 P **P** **07 56 23.3 -1.5**
TULEG Thule 45.53 18 P **P** **07 56 25.1 0.0**
ELK Elko 45.62 76 P **P** **07 56 26.6 0.0**
ELK IAmb IAmb 07 56 30.6
comp=Z,2.0nm,0.8s
YHH Holmes Hill 45.90 69 P **P** **07 56 28.9 +0.1**
HHC Hu-ho-hao-te 46.18 284 *eP* P 07 56 26.3 -4.6
HHC pmax pmax
comp=Z,11nm,0.7s
RLMT Red Lodge 46.63 68 P **P** **07 56 34.7 +0.2**
RLMT IAmb IAmb 07 56 38.2
comp=Z,2.2nm,0.8s
TPNV Topopah Spring 47.32 81 P **P** **07 56 39.6 -0.3**
LRMC Laurel Mtn Rad 47.37 84 P **P** **07 56 40.2 -0.1**
PDAR Pinedale Array 47.83 71 P **P** **07 56 42.8 -1.1**
comp=Z,1.2nm,0.6s,baz=303,slow=3.6,SNR=7.9
comp=Z,1.2nm,0.6s
SPITS Spitsbergen Ar 50.33 355 P **P** **07 57 00.9 -1.3**
comp=Z,1.0nm,0.5s,baz=48,slow=6.8,SNR=6.9
comp=Z,1.0nm,0.5s
KURK Kurchatov 57.91 312 P **P** **07 57 58.7 +1.0**
KURK IAmb IAmb 07 58 08.9
comp=Z,1.8nm,0.8s
KURK PcP **PcP** **07 58 47.7 -1.8**
KURBB Kurchatov Arra 58.02 312 P **P** **07 57 57.9 -0.5**
comp=Z,0.4nm,0.5s,baz=44,slow=6.9,SNR=2.9
comp=Z,0.4nm,0.5s
WMQ Urumqi 58.04 301 ⇑P **P** **07 58 01.0 +2.1**
WMQ ScP **ScP** **08 02 44.3 -1.9**
WMQ pmax pmax
comp=Z,17nm,0.8s
WMQ pmax pmax
comp=Z,49nm,3.6s
MKAR Makanchi Array 58.83 307 P **P** **07 58 03.7 -0.6**
comp=Z,0.1nm,0.4s,baz=64,slow=3.4,SNR=1.9
comp=Z,0.1nm,0.4s
MNHN Monahans 59.37 77 P **P** **07 58 08.2 -0.1**
BVAR Borovoye Array 59.91 318 P **P** **07 58 10.9 -0.7**
comp=Z,0.8nm,0.5s,baz=46,slow=8.5,SNR=5.0
comp=Z,0.8nm,0.5s
TXAR Lajitas Array 60.23 79 P **P** **07 58 14.2 -0.1**
comp=Z,0.8nm,0.7s,baz=279,slow=4.1,SNR=4.8
comp=Z,0.8nm,0.7s
TXAR Lajitas Array 60.23 79 P **P** **07 58 14.0 -0.2**
AB31 Akbulak array 67.02 321 P **P** **07 58 59.3 +0.7**
AB31 IAmb IAmb 07 59 42.8
comp=Z,1.4nm,0.8s
ABKAR Akbulak array 67.02 321 P **P** **07 58 58.9 +0.3**
NC204 NORSAR Array S 67.35 354 P **P** **07 59 01.3 +0.8**
NC303 NORSAR Array S 67.36 353 P **P** **07 59 00.9 +0.4**
H03N2 Juan Fernandez 122.66 104 T T 10 21 39.0
baz=308,slow=77,SNR=7.7
H03N1 Juan Fernandez 122.67 104 T T 10 21 37.1
baz=308,slow=77,SNR=9.4
H03N3 Juan Fernandez 122.67 104 T T 10 21 37.3
baz=308,slow=77,SNR=7.0
QSPA South Pole Qui 141.06 180 PKP **PKPdf** **08 07 36.8 +2.4**
comp=Z,0.7nm,0.8s,baz=118,slow=0.4,SNR=1.1
POGA Pongola 145.47 301 PKPdf **PKPdf** **08 07 44.2 +0.8**

*OTT **13** 07:48:18.3±0.2, 71°.19N×71°.30W, h18km, MN3.3/6, 128km northwest from Clyde River, Nu Baffin Island Seismic Zone, Nt.*
*DNK **13** 07:48:20.0±3.7, 71°.60N×70°.84W, h0km±28km, ML1.5, Presumed earthquake*
ISC 13 07:48:15.6±1.0, 71°.37N±0°.06×71°.19W±0°.05, h10km, n13, σ2°.23/17, Baffin Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CLRN	**Clyde River**	**1.24**	**135**	PG	**Pn**		**07 48 38.7**	**-0.3**
CLRN				SG	**Sb**		**07 48 54.3**	**-0.8**
CLRN				Trac			07 48 58.9	
	comp=Z,147nm,0.1s							
POIN	**Pond Inlet**	**2.49**	**306**	PN	**Pn**		**07 48 58.5**	**+2.4**
POIN				SN	**Sn**		**07 49 29.7**	**+3.3**
POIN				Trac			07 49 33.9	
	comp=Z,40nm,0.2s							
ILON	**Igloolik, Nuna**	**4.11**	**246**	PN	Pn		07 49 17.7	-0.7
ILON				SN	**Sn**		**07 50 03.0**	**-3.4**
ILON				LG	Lg		07 50 22.2	
ILON				Trac			07 50 23.2	
	comp=Z,26nm,0.2s							
UPNV	**Upernavik**	**4.86**	**66**	*i* P		**Pn**	**07 49 30.6**	**+2.0**
UPNV				*i* S		**Sn**	**07 50 23.5**	**-1.3**
UPNV				IAML			07 50 29.3	
	comp=Z,4.2nm,0.3s							
KULLO	**Kullorsuaq**	**5.21**	**45**	*i* P		**Pn**	**07 49 35.3**	**+1.9**
TULEG	**Thule**	**5.24**	**6**	*i* P		**Pn**	**07 49 34.6**	**+0.8**
TULEG				*e*S		**Sn**	**07 50 32.6**	**-1.4**
TULEG				IAML			07 50 35.3	
	comp=Z,2.4nm,0.3s							
RES	**Resolute Bay**	**7.65**	**307**	PN		**Pn**	**07 50 08.8**	**+1.9**
RES				PN		Pb	07 50 08.9	-19
RES				SN		**Sn**	**07 51 30.7**	**-2.8**
RES				LG		Lg	07 52 17.7	
RES				Trac			07 52 23.6	
	comp=Z,4.9nm,0.4s							
RES				Trac			07 52 23.6	
	comp=Z,6.5nm,0.5s							
RES	**Resolute Bay**	**7.65**	**307**	*i* P		**Pn**	**07 50 07.5**	**+0.7**
RES				*i* S		**Sn**	**07 51 30.2**	**-3.2**
FRB	**Frobisher Bay**	**7.73**	**171**	PN		**Pn**	**07 50 07.2**	**-0.7**
FRB				SN		Sn	07 51 26.6	-8.8
FRB				LG		Lg	07 52 14.9	
FRB				Trac			07 52 19.6	
	comp=Z,11nm,0.2s							
FRB	**Frobisher Bay**	**7.73**	**171**	*i* P		Pn	07 50 06.5	-1.4
FRB				*e*S		**Sn**	**07 51 38.0**	**+2.6**
NEEM	**North Greenlan**	**8.10**	**32**	*i* P		**Pn**	**07 50 12.8**	**-0.5**
NEEM				IAML			07 51 43.7	
	comp=Z,0.8nm,0.3s							
SUMG	**Summit**	**10.13**	**68**	*i* P		Pn	07 50 33.0	-8.3
BLKN	**Baker Lake**	**11.64**	**245**	PN		Pn	07 51 00.1	-1.4
BLKN				SN		Sn	07 53 00.1	-11
BLKN				LG		Lg	07 54 14.6	
BLKN				Trac			07 54 22.4	
	comp=Z,2.3nm,0.2s							

*IDC **13** 07:54:56.5±3.6, 53°.49N×87°.45E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=35.3km s-min=17.1km az=56.0*
ASRS 13 07:54:54.0±1.3, 53°.48N×87°.43E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.62**	**288**	I	I		08 04 50.0	
	baz=105,slow=315,SNR=1.6							
ZALV	**Zalesovo Beam**	**1.62**	**288**	Pg	Pg		07 55 26.0	+1.0
	0.9nm,0.3s,baz=105,slow=14,SNR=8.5							
ZALV				Lg	Lg		07 55 47.1	
	1.1nm,0.3s,baz=105,slow=27,SNR=7.1							
KURBB	**Kurchatov Arra**	**6.19**	**246**	Pn	Pn		07 56 31.0	+4.4
	baz=61,slow=14,SNR=4.5							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**7.47**	**208**	Pn	Pn		07 56 46.9	+2.7
	0.1nm,0.3s,baz=26,slow=12,SNR=3.5							
	0.2nm,0.4s							

*TEH **13** 07:58:59.5, 35°.61N×52°.62E, h8km±16km, ML3.8, Presumed earthquake*
*THR **13** 07:59:00.6±0.0, 35°.64N×52°.62E, h10km±5km, mb4.0, Presumed earthquake*
ISC 13 07:59:00.1±1.2, 35°.62N±0°.03×52°.61E±0°.02, h3km±13km, n45, σ1°.25/39, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IFIR	**Firoozkooh**	**0.12**	**78**	Pg	**Pg**		**07 59 02.1**	**-0.5**
ILAS	**Lasjerd**	**0.37**	**129**	Pg	**Pg**		**07 59 07.3**	**+0.1**
ILAS				Sg	**Sg**		**07 59 12.6**	**+0.5**
IDMV	**Damavand**	**0.47**	**265**	Pg	**Pg**		**07 59 08.9**	**-0.3**
IDMV				Sg	**Sg**		**07 59 17.0**	**+1.5**
IALA	**Alasht**	**0.49**	**19**	Pg	**Pg**		**07 59 09.4**	**-0.2**
IALA				Sg	**Sg**		**07 59 16.9**	**+0.8**
DAMV	**Damavand**	**0.52**	**272**	*e*Pg	**Pg**		**07 59 09.9**	**-0.2**
DAMV				IAML			07 59 29.5	
	comp=Z,2μm,1.0s							
IPRN	**Peran**	**0.66**	**340**	Pg	**Pg**		**07 59 12.7**	**-0.1**
IPRN				Sg	**Sb**		**07 59 22.7**	**-1.3**
IVRN	**Varamin**	**0.95**	**230**	Pg	**Pg**		**07 59 18.4**	**+0.1**
TEHA	**Amirabad Tehra**	**1.01**	**278**	Pg	**Pg**		**07 59 19.2**	**-0.2**
IANJ	**Anjilo**	**1.07**	**98**	Pg	**Pg**		**07 59 19.8**	**-0.8**
IHSB	**Hasanabad**	**1.10**	**261**	Pg	**Pg**		**07 59 20.9**	**-0.4**
MZPU	**Pul - Mazandar**	**1.18**	**314**	Pg	**Pg**		**07 59 22.4**	**-0.3**
CHTH	**Charan**	**1.24**	**284**	*e*Pg	**Pn**		**07 59 22.3**	**-2.2**
ISFB	**Sefidab**	**1.30**	**194**	Pg	**Pn**		**07 59 24.1**	**-1.0**
IGLO	**Ghaloghah**	**1.32**	**48**	Pg	**Pn**		**07 59 24.8**	**-0.8**
THKV	**Tehran--Karaj**	**1.44**	**282**	*e*PgA			07 59 26.6	
THKV				IAML			07 59 53.8	
	comp=Z,840nm,1.0s							
IQOM	**Qom**	**1.48**	**239**	Pg	**Pn**		**07 59 27.2**	**-0.6**
KRSH	**Karshahi**	**1.69**	**194**	Pg	**Pn**		**07 59 30.5**	**-0.1**
IGZV	**Ghazvin**	**2.09**	**292**	Pn	**Pb**		**07 59 37.6**	**-1.1**
QAMS	**Qamsar**	**2.13**	**208**	Pn	**Pb**		**07 59 37.6**	**-1.7**
ASAO	**Ashtian**	**2.37**	**244**	*e*PnA			07 59 41.1	
ASAO				IAML			08 00 18.9	
	comp=Z,460nm,1.0s							
ANAR	**Anarak**	**2.59**	**159**	Pn	**Pn**		**07 59 43.8**	**+0.9**
IZEF	**Zefreh**	**2.72**	**185**	Pn	**Pn**		**07 59 46.1**	**+1.2**
SHRO	**Shahrood**	**2.79**	**81**	*e*PnA			07 59 46.8	
SHRO				IAML			08 01 27.2	
	comp=Z,2.2nm,1.0s							
NASN	**Na'in**	**2.81**	**177**	*e*PnA			07 59 49.6	
NASN				IAML			08 00 24.5	
	comp=Z,130nm,1.0s							
KHMZ	**Khomeyn**	**2.88**	**230**	*e*PnA			07 59 50.7	
KHMZ				IAML			08 00 43.2	
	comp=Z,140nm,1.0s							
ZNJK	**Zanjan**	**3.35**	**289**	*e*Pn	**Pn**		**07 59 55.9**	**+2.4**
ZNJK				IAML			08 01 24.3	
	comp=Z,62nm,1.0s							
MRVT	**Maraveh tapeh**	**3.46**	**53**	*e*PnA			07 59 56.7	
MRVT				IAML			08 00 55.6	
	comp=Z,76nm,1.0s							
MRVT	**Maraveh tapeh**	**3.46**	**53**	Pn	**Pn**		**07 59 56.0**	**+1.2**
YZKH	**Yazd**	**3.61**	**152**	*e*Pn	**Pn**		**07 59 58.0**	**+1.0**
YZKH				IAML			08 01 06.9	
	comp=Z,110nm,1.0s							
TNSJ	**Nastanj**	**3.68**	**115**	Pn	**Pn**		**07 59 58.5**	**+0.6**
IALM	**Almabolaq**	**3.72**	**260**	Pn	**Pn**		**07 59 59.7**	**+1.2**
TAFT	**Taft - Yazd**	**4.09**	**161**	Pn	**Pn**		**08 00 04.8**	**+1.0**
SBZV	**Sabzevar**	**4.12**	**78**	*e*PnA			08 00 05.7	
SBZV				IAML			08 01 30.5	
	comp=Z,61nm,1.0s							
SBZV	**Sabzevar**	**4.12**	**78**	Pn	**Pn**		**08 00 05.0**	**+0.9**
TABS	**Tabas**	**4.20**	**117**	*e*Pn	**Pn**		**08 00 06.5**	**+1.4**
TABS				IAML			08 01 36.3	
	comp=Z,110nm,1.0s							
TKDS	**Koohdasht(Taba**	**4.22**	**117**	Pn	**Pn**		**08 00 06.2**	**+0.8**
TPRV	**Parvadeh(Tabas**	**4.25**	**126**	Pn	**Pn**		**08 00 06.6**	**+0.9**
GTMR	**Gotvand**	**4.28**	**224**	*e*PnA			08 00 09.8	
GTMR				IAML			08 01 35.2	
	comp=Z,60nm,1.0s							

SNGE Sanandaj 4.33 265 *e*Pn **Pn 08 00 08.8 +1.8**
SNGE IAML 08 01 26.3
comp=Z,57nm,1.0s
IMEH Mehriz 4.53 158 Pn **Pn 08 00 10.7 +0.9**
ISFR Sfrayin 4.58 70 Pn **Pn 08 00 12.1 +1.7**
GRMI Germi 4.93 312 *e*Pn **Pn 08 00 17.9 +2.8**
GRMI IAML 08 01 21.9
comp=Z,26nm,1.0s
ILBA Ilam Banvizeh 5.64 251 *e*Pn **Pn 08 00 27.0 +2.1**
ILBA IAML 08 02 17.7
comp=Z,14nm,1.0s
BSRN Basiran 6.53 122 *e*PnA 08 00 38.6
BSRN IAML 08 02 42.1
comp=Z,24nm,1.0s
SHRT Shahrakht 6.63 105 *e*PnA 08 00 41.1
SHRT IAML 08 02 50.1
comp=Z,24nm,1.0s

IDC 13 08:07:00.6±2.1, 20°.63N×94°.63E, h94km±23km, mb3.1/3, mbtmp3.4/4, Error ellipse: s-maj=48.4km s-min=14.9km az=39.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**3.44**	**307**	P	Pn	08 07 52.8	+0.6
	116nm,0.3s,baz=104,slow=5.6,SNR=12						
BRDH				S	Sn	08 08 29.7	-2.3
	139nm,0.3s,baz=75,slow=23,SNR=7.8						
CMAR	**Chiang Mai Arr**	**4.61**	**117**	P	Pn	08 08 08.8	+0.8
	3.4nm,0.6s,baz=290,slow=13,SNR=19						
CMAR				S	Sn	08 09 00.1	-0.3
	2.0nm,0.3s,baz=297,slow=22,SNR=5.2						
MKAR	**Makanchi Array**	**27.97**	**342**	P	P	08 12 41.3	-1.0
	0.2nm,0.6s,baz=144,slow=7.7,SNR=1.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**32.52**	**341**	P	P	08 13 21.9	-0.3
	0.3nm,0.4s,baz=166,slow=6.9,SNR=2.1						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**56.01**	**134**	P	P	08 16 30.6	+0.9
	0.6nm,1.1s,baz=318,slow=7.6,SNR=1.8						
	0.6nm,1.1s						

NOU ***13*** *08:13:19.4, 33°.78S×177°.01W, h0km, mb5.0/36, South of Kermadec Islands*
WEL ***13*** *08:13:23.2±0.7, 33°.5±6°×17°.8W±1°, 1, h12km, M5.2/15, mB5.6/12, ML5.6/15, MLv5.6/15, Mw(mB)5.0/12, Error ellipse: s-maj=15.4km s-min=3.7km az=114.4*
BJI ***13*** *08:13:25.0, 34°.34S×178°.57W, h5km, mb5.4/5*
MOS ***13*** *08:13:26.7±1.9, 33°.29S×178°.07W, h10km, mb5.2/19, Error ellipse: s-maj=11.9km s-min=9.0km az=95.1*
NEIC ***13*** *08:13:26.4±1.2, 33°.28S±0°.06×177°.9W±0°.1, h10km±1km, mb5.1/89, Mww5.3/21, Error ellipse: s-maj=17.8km s-min=10.9km az=84.0*
NEIC ***13*** *08:13:26.5, 33°.33S×177°.89W, h10km*
IDC ***13*** *08:13:26.1±0.4, 33°.32S×178°.15W, h0km, mb4.7/18, mbtmp4.8/22, ML4.6/3, MS4.5/42, Error ellipse: s-maj=17.0km s-min=13.5km az=84.0*
NEIC ***13*** *08:13:27.1, 33°.63S×177°.29W, h18km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^16 Nm; Mrr=-9.09; Mθθ 0.79; Mφφ 8.30; Mrθ -2.32; Mθφ 2.44; Mφr-2.48; Fault plane solution: M0 9.67000×10^16 NP1: φs188.00000°, δ36.34000°, λ-104.09000°. NP2: φs25.30000°, δ54.92000°, λ-79.85000°. Principal axes: T 9.5279, Plg9.0000°, Azm108.0000°; N 0.2855, Plg8.0000°, Azm199.0000°; P -9.8133, Plg77.0000°, Azm330.0000°;*
GFZ ***13*** *08:13:28.4, 33°.38S×178°.06W, h19km, Mw5.2/22, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=8.47; Mθθ 1.70; Mφφ 6.77; Mrθ 1.01; Mθφ 2.48; Mφr 2.89; Fault plane solution: M0 8.70187×10^16 NP1: φs201.22788°, δ55.32924°, λ-91.01853°. NP2: φs23.01796°, δ34.68384°, λ-88.52785°. Principal axes: T 8.3334, Plg10.3239°, Azm291.9599°; N 0.6952, Plg0.8377°, Azm201.8073°; P -9.0286, Plg79.6414°, Azm107.2194°;*
GFZ ***13*** *08:13:28.2±0.2, 33°.5±4°×17°.8W±°, h10km, M5.2/25, mb5.2/25, confirmed*
GCMT ***13*** *08:13:31.4±0.1, 33°.40S±0°.01×177°.73W±0°.01, h12km, MW5.2/128, Moment Tensor Solution. s87,c125; s128,c227; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.64±.01; Mθθ -0.04±.01; Mφφ 0.67±.01; Mrθ-0.05±.03; Mθφ 0.24±.01; Mφr 0.29±.02; Best double couple: M0 0.75500×10^17 NP1: φs30.00000°, δ36.00000°, λ-70.00000°. NP2: φs185.00000°, δ56.00000°, λ-104.00000°. Principal axes: T 0.8010, Plg10.0000°, Azm286.0000°; N -0.0910, Plg12.0000°, Azm193.0000°; P -0.7100, Plg74.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 08:13:25.8±0.9, 33°.48S±0°.02×177°.93W±0°.03, h6km±5km, n483, σ1s99/449, mb5.0/89, MS4.5/44, 13C-12D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.21**	**0**	P	**Pn**	**08 14 26.2**	**-4.2**
GLKZ				S	**Sn**	**08 15 11.9**	**-8.1**
RAO	**Raoul Island**	**4.22**	**0**	Pn	**Pn**	**08 14 27.5**	**-3.2**
	163nm,0.3s,baz=16,slow=22,SNR=9.3						
RAO				Sn	**Sn**	**08 15 13.5**	**-6.7**
	1μm,0.3s,baz=232,slow=22,SNR=11						
	387nm,0.3s						
RAO	**Raoul Island**	**4.22**	**0**	P	**Pn**	**08 14 28.9**	**-1.7**
RAO	**Raoul Island**	**4.22**	**0**	Pn	**Pn**	**08 14 27.9**	**-2.7**
RAO				Sn	**Sn**	**08 15 14.2**	**-6.0**
RAO	**Raoul Island**	**4.22**	**0**	P	**Pn**	**08 14 27.7**	**-2.9**
RIZ	**Raoul Island**	**4.22**	**0**	P	**Pn**	**08 14 27.6**	**-3.1**
RIZ				S	**Sn**	**08 15 14.5**	**-5.9**
MXZ	**Matakaoa Point**	**5.10**	**216**	P	**Pn**	**08 14 41.7**	**-1.0**
MXZ	**Matakaoa Point**	**5.10**	**216**	P	**Pn**	**08 14 41.3**	**-1.4**
MXZ				S	**Sn**	**08 15 39.6**	**-2.3**
PKGZ	**Pakihiroa**	**5.45**	**215**	P	**Pn**	**08 14 46.8**	**-0.8**
PKGZ				S	**Sn**	**08 15 49.3**	**-1.3**
HAZ	**Te Kaha**	**5.51**	**218**	P	**Pn**	**08 14 48.3**	**-0.1**
HAZ				S	**Sn**	**08 15 52.1**	**0.0**
PUZ	**Puketiti**	**5.53**	**213**	P	**Pn**	**08 14 47.6**	**-1.0**
PUZ				S	**Sn**	**08 15 51.0**	**-1.6**
RUGZ	**Raukumara Rang**	**5.72**	**217**	P	**Pn**	**08 14 50.6**	**-0.9**
TWGZ	**Tauwhareparae**	**5.74**	**214**	P	**Pn**	**08 14 50.7**	**-0.9**
TWGZ				S	**Sn**	**08 15 56.7**	**-1.2**
CNGZ	**Carnagh Statio**	**5.89**	**211**	P	**Pn**	**08 14 52.3**	**-1.3**
TKGZ	**Te Karaka**	**6.01**	**213**	P	**Pn**	**08 14 54.3**	**-1.0**
TKGZ				S	**Sn**	**08 16 03.3**	**-1.2**
WHRZ	**Whale Island**	**6.02**	**222**	P	**Pn**	**08 14 57.0**	**+1.6**
WHRZ				S	**Sn**	**08 16 06.0**	**+1.3**
MWZ	**Matawai**	**6.08**	**216**	P	**Pn**	**08 14 55.3**	**-1.0**
MWZ				S	**Sn**	**08 16 05.4**	**-0.9**
URZ	**Urewera**	**6.24**	**219**	Pn	**Pn**	**08 14 57.6**	**-0.8**
	6.1nm,0.3s,baz=242,slow=3.1,SNR=50						
URZ				Sn	**Sn**	**08 16 06.5**	**-3.5**
	82nm,0.3s,baz=167,slow=20,SNR=28						
	41nm,0.3s						
URZ	**Urewera**	**6.24**	**219**	P	**Pn**	**08 14 56.7**	**-1.7**
URZ	**Urewera**	**6.24**	**219**	P	**Pn**	**08 14 56.9**	**-1.4**
URZ				S	**Sn**	**08 16 07.8**	**-2.2**
URZ	**Urewera**	**6.24**	**219**	P	**Pn**	**08 14 59.8**	**+1.4**
OPRZ	**Ohinepanea**	**6.25**	**224**	P	**Pn**	**08 14 58.5**	**-0.1**
OPRZ				S	**Sn**	**08 16 09.7**	**-0.7**
RAGZ	**Rawiri**	**6.27**	**216**	P	**Pn**	**08 14 57.2**	**-1.7**
RIGZ	**Rimuhau**	**6.27**	**213**	P	**Pn**	**08 14 57.3**	**-1.6**
RIGZ				S	**Sn**	**08 16 08.8**	**-2.1**
MARZ	**Manawahe**	**6.28**	**223**	P	**Pn**	**08 15 00.6**	**+1.7**
MARZ				S	**Sn**	**08 16 09.9**	**-1.2**
EDRZ	**Edgecumbe**	**6.33**	**222**	P	**Pn**	**08 15 02.2**	**+2.5**
EDRZ				S	**Sn**	**08 16 12.1**	**-0.3**
TGRZ	**Tauranga**	**6.35**	**227**	P	**Pn**	**08 15 02.9**	**+3.0**
PRGZ	**Paritu Road**	**6.40**	**211**	P	**Pn**	**08 14 58.7**	**-1.8**
MKRZ	**Makatiti**	**6.50**	**223**	P	**Pn**	**08 15 06.0**	**+3.9**
SNGZ	**Shannon Statio**	**6.53**	**215**	P	**Pn**	**08 15 00.9**	**-1.5**
SNGZ				S	**Sn**	**08 16 15.7**	**-1.5**
OMRZ	**Omania**	**6.54**	**223**	P	**Pn**	**08 15 06.2**	**+3.7**
TARZ	**Mount Tarawera**	**6.55**	**222**	P	**Pn**	**08 15 04.4**	**+1.6**
KARZ	**Kaharoa**	**6.55**	**225**	P	**Pn**	**08 15 04.1**	**+1.4**
KNZ	**Kokohu**	**6.57**	**211**	P	**Pn**	**08 15 00.6**	**-2.3**
RTZ	**Ruatahuna**	**6.57**	**217**	P	**Pn**	**08 15 02.6**	**-0.4**
MUGZ	**Murupara**	**6.58**	**219**	P	**Pn**	**08 15 02.8**	**-0.2**
MHGZ	**Mahia Peninsul**	**6.58**	**210**	P	**Pn**	**08 15 01.1**	**-2.0**

RRRZ	**Republican Roa**	**6.62**	**221**	P	**Pn**	**08 15 05.5**	**+1.9**
KMRZ	**Kaimai**	**6.62**	**227**	P	**Pn**	**08 15 05.2**	**+1.5**
HLRZ	**Highlands Stat**	**6.65**	**223**	P	Pn	08 14 57.3	-6.7
HSRZ	**Hossack Road**	**6.75**	**223**	P	**Pn**	**08 15 08.9**	**+3.5**
RAHZ	**Arahi**	**6.75**	**215**	P	**Pn**	**08 15 04.7**	**-0.8**
HRRZ	**Handcock Road**	**6.78**	**222**	P	Pn	08 15 11.4	+5.5
WHHZ	**Waihua**	**6.81**	**214**	P	**Pn**	**08 15 05.1**	**-1.1**
WCZ	**Waipu Caves**	**6.82**	**247**	P	**Pn**	**08 15 08.3**	**+1.9**
TOZ	**Tahuroa Road**	**6.83**	**230**	P	**Pn**	**08 15 08.4**	**+2.0**
MTHZ	**Maungataniwha**	**6.83**	**217**	P	**Pn**	**08 15 05.9**	**-0.6**
ALRZ	**Allen Road**	**6.87**	**221**	P	**Pn**	**08 15 07.5**	**+0.4**
MRHZ	**Matea Rd**	**7.03**	**219**	P	**Pn**	**08 15 08.6**	**-0.7**
NMHZ	**Naumai**	**7.03**	**216**	P	**Pn**	**08 15 07.9**	**-1.4**
ARHZ	**Aropaoanui**	**7.07**	**214**	P	**Pn**	**08 15 07.9**	**-1.9**
KUTZ	**Kaahu Road**	**7.11**	**224**	P	**Pn**	**08 15 12.7**	**+2.3**
WHTZ	**Whakaora**	**7.16**	**222**	P	**Pn**	**08 15 15.5**	**+4.5**
TLZ	**Tolley Road**	**7.17**	**226**	P	**Pn**	**08 15 14.3**	**+3.0**
OUZ	**Omahuta**	**7.22**	**254**	P	**Pn**	**08 15 14.8**	**+2.9**
OUZ	**Omahuta**	**7.22**	**254**	P	**Pn**	**08 15 15.1**	**+3.2**
BKZ	**Black Stump Fm**	**7.24**	**217**	P	**Pn**	**08 15 09.6**	**-2.6**
BKZ	**Black Stump Fm**	**7.24**	**217**	P	**Pn**	**08 15 13.6**	**+1.5**
CKHZ	**Cape Kidnapper**	**7.36**	**212**	P	**Pn**	**08 15 11.3**	**-2.4**
MCHZ	**McNeill Hill**	**7.36**	**214**	P	**Pn**	**08 15 12.0**	**-1.7**
RITZ	**Rihia Road**	**7.43**	**221**	P	**Pn**	**08 15 15.1**	**+0.3**
KWHZ	**Kaweka Forest**	**7.47**	**216**	P	**Pn**	**08 15 13.3**	**-2.1**
KATZ	**Kakaramea**	**7.52**	**221**	P	**Pn**	**08 15 19.0**	**+2.9**
KAHZ	**Kahuranaki**	**7.56**	**212**	P	Pn	08 15 13.1	-3.4
KAHZ				S	**Sn**	**08 16 39.3**	**-3.2**
TMVZ	**Te Maari**	**7.62**	**221**	P	**Pn**	**08 15 16.6**	**-0.8**
NTVZ	**North Tongariro**	**7.62**	**221**	P	**Pn**	**08 15 17.3**	**-0.2**
ETVZ	**East Tongariro**	**7.63**	**220**	P	**Pn**	**08 15 16.7**	**-0.8**
KRVZ	**Karewarewa**	**7.63**	**223**	P	**Pn**	**08 15 16.8**	**+0.4**
KRHZ	**Kereru**	**7.67**	**215**	P	**Pn**	**08 15 16.2**	**-1.8**
OTVZ	**Oturere**	**7.67**	**221**	P	**Pn**	**08 15 17.4**	**-0.8**
WTVZ	**West Tongariro**	**7.68**	**221**	P	**Pn**	**08 15 20.9**	**+2.6**
SNVZ	**South Ngauruho**	**7.70**	**221**	P	**Pn**	**08 15 18.1**	**-0.6**
BHHZ	**Black Hill Sta**	**7.70**	**217**	P	**Pn**	**08 15 17.4**	**-1.2**
HIZ	**Hauiti**	**7.71**	**227**	P	**Pn**	**08 15 18.9**	**+0.4**
HIZ	**Hauiti**	**7.71**	**227**	P	**Pn**	**08 15 22.0**	**+3.5**
NGZ	**Ngauruhoe**	**7.71**	**221**	P	**Pn**	**08 15 18.9**	**+0.1**
TWVZ	**Taurewa**	**7.73**	**222**	P	**Pn**	**08 15 20.3**	**+1.3**
TUVZ	**Tukino**	**7.75**	**220**	P	**Pn**	**08 15 20.7**	**+1.4**
PXZ	**Pawanui**	**7.76**	**211**	P	Pn	08 15 15.7	-3.5
COVZ	**Chateau Observ**	**7.76**	**221**	P	**Pn**	**08 15 22.8**	**+3.4**
FWVZ	**Far West T-bar**	**7.80**	**221**	P	**Pn**	**08 15 20.1**	**+0.1**
WHVZ	**Whangaehu Hut**	**7.80**	**220**	P	**Pn**	**08 15 19.3**	**-0.7**
MOVZ	**Moawhango**	**7.80**	**219**	P	**Pn**	**08 15 18.5**	**-1.4**
MAVZ	**Matarangi**	**7.80**	**220**	P	**Pn**	**08 15 20.9**	**+0.8**
WNVZ	**Wahianoa**	**7.82**	**220**	P	**Pn**	**08 15 19.3**	**-1.0**
TRVZ	**Turoa**	**7.83**	**220**	P	**Pn**	**08 15 20.7**	**+0.2**
MTVZ	**Mangateitei**	**7.93**	**220**	P	**Pn**	**08 15 20.4**	**-1.3**
PKVZ	**Pokaka**	**7.93**	**221**	P	**Pn**	**08 15 26.1**	**+4.4**
PNHZ	**Pukenui**	**7.96**	**215**	P	Pn	08 15 18.6	-3.5
WPHZ	**Waipukurau**	**7.97**	**213**	P	**Pn**	**08 15 19.0**	**-3.1**
PRHZ	**Porangahau**	**8.05**	**211**	P	Pn	08 15 19.4	-3.8
VRZ	**Vera Road**	**8.15**	**224**	P	**Pn**	**08 15 27.9**	**+3.2**
TSZ	**Takapari Road**	**8.19**	**215**	P	**Pn**	**08 15 22.0**	**-3.2**
ANWZ	**Angora Road**	**8.28**	**211**	P	**Pn**	**08 15 24.0**	**-2.3**
DVHZ	**Dannevirke**	**8.28**	**213**	P	Pn	08 15 22.7	-3.8
WAZ	**Wanganui**	**8.46**	**220**	P	**Pn**	**08 15 28.5**	**-0.4**
POWZ	**Post Office Ro**	**8.54**	**214**	P	**Pn**	**08 15 29.3**	**-0.7**
BFZ	**Birch Farm**	**8.56**	**211**	P	Pn	08 15 26.1	-4.1
BFZ	**Birch Farm**	**8.56**	**211**	P	Pn	08 15 25.7	-4.5
PRWZ	**Pori Road**	**8.58**	**213**	P	**Pn**	**08 15 28.3**	**-2.2**
LREZ	**Lake Rotokare**	**8.58**	**224**	P	Pn	08 15 37.3	+6.8
NEZ	**North Egmont**	**8.64**	**226**	P	**Pn**	**08 15 35.8**	**+4.3**
KHEZ	**Kahui Hut**	**8.71**	**226**	P	Pn	08 15 36.0	+7.0
TIWZ	**Tintok**	**8.79**	**212**	P	Pn	08 15 30.0	-3.5
MRZ	**Mangatainoka R**	**8.84**	**214**	P	Pn	08 15 30.4	-3.7
HOWZ	**Holdsworth Sta**	**9.06**	**213**	P	Pn	08 15 33.7	-3.5
TMWZ	**Te Maipa**	**9.06**	**211**	P	Pn	08 15 32.9	-4.2
OGWZ	**Otaki Gorge**	**9.16**	**215**	P	**Pn**	**08 15 35.1**	**-3.3**
MTW	**Mount Morrison**	**9.27**	**212**	P	Pn	08 15 35.4	-4.6
KIW	**Kapiti Island**	**9.32**	**216**	P	Pn	08 15 37.2	-3.5
CAW	**Cannon Point**	**9.43**	**214**	P	Pn	08 15 38.2	-4.0
MSWZ	**Moikau Station**	**9.59**	**212**	P	**Pn**	**08 15 41.4**	**-3.0**
PLWZ	**Palliser**	**9.71**	**212**	P	Pn	08 15 41.7	-4.5
SNZO	**South Karori**	**9.76**	**215**	P	**Pn**	**08 15 44.3**	**-2.4**
DUWZ	**D'Urville Isla**	**9.78**	**219**	P	**Pn**	**08 15 46.6**	**-0.4**
TCW	**Tory Channel**	**9.89**	**217**	P	Pn	08 15 44.8	-3.7
TUWZ	**Tuamarina**	**10.22**	**217**	P	**Pn**	**08 15 50.2**	**-2.9**
CMWZ	**Cape Campbell**	**10.34**	**215**	P	**Pn**	**08 15 58.4**	**+3.8**
NNZ	**Nelson**	**10.36**	**219**	P	**Pn**	**08 15 52.4**	**-2.5**
BSWZ	**Blackbirch Sta**	**10.47**	**216**	P	**Pn**	**08 15 53.4**	**-3.1**
KHZ	**Quartz Range**	**10.56**	**223**	P	**Pn**	**08 15 56.1**	**-1.0**
KHZ	**Kahutara**	**11.17**	**215**	P	**Pn**	**08 16 03.9**	**-2.0**
KHZ	**Kahutara**	**11.17**	**215**	P	**Pn**	**08 16 04.0**	**-2.0**
GVZ	**Greta Valley S**	**11.83**	**214**	P	**Pn**	**08 16 12.1**	**-2.9**
LTZ	**Lake Taylor**	**12.06**	**217**	P	Pn	08 16 14.7	-3.5
OKCZ	**Okains Bay**	**12.41**	**212**	P	Pn	08 16 18.3	-4.6
INZ	**Inchbonnie**	**12.45**	**219**	P	**Pn**	**08 16 21.0**	**-2.4**
OXZ	**Oxford**	**12.58**	**216**	P	Pn	08 16 21.7	-3.6
RACZ	**Rakaia**	**12.83**	**214**	P	**Pn**	**08 16 25.7**	**-2.9**
MHCZ	**Mount Hutt**	**12.96**	**216**	P	**Pn**	**08 16 27.9**	**-2.6**
WVZ	**Waitaha Valley**	**13.06**	**220**	P	**Pn**	**08 16 30.3**	**-1.6**
WACZ	**Wakanui South**	**13.14**	**214**	P	**Pn**	**08 16 29.9**	**-3.0**
RPZ	**Rata Peaks**	**13.35**	**217**	Pn	Pn	08 16 31.9	-3.9
	1.1nm,0.3s,baz=58,slow=5.3,SNR=26						
RPZ				Sn	Sn	08 18 51.0	-14
	1.1nm,0.3s,baz=327,slow=23,SNR=18						
RPZ	**Rata Peaks**	**13.35**	**217**	P	**Pn**	**08 16 32.8**	**-3.0**
RPZ	**Rata Peaks**	**13.35**	**217**	P	**Pn**	**08 16 33.2**	**-2.6**
ARCZ	**Arundel**	**13.46**	**216**	P	**Pn**	**08 16 34.8**	**-2.5**
FOZ	**Fox Glacier**	**13.87**	**220**	P	**Pn**	**08 16 39.7**	**-3.2**
LBZ	**Lake Benmore**	**14.27**	**217**	P	Pn	08 16 44.5	-3.9
ODZ	**Otahua Downs**	**14.53**	**214**	P	Pn	08 16 47.9	-4.0
JCZ	**Jackson Bay**	**14.79**	**220**	P	Pn	08 16 51.9	-3.6
WKZ	**Wanaka**	**15.17**	**218**	P	**Pn**	**08 16 58.3**	**-2.3**
EAZ	**Earnscleugh**	**15.31**	**216**	P	**Pn**	**08 17 00.2**	**-2.2**
MSZ	**Milford Sound**	**15.64**	**220**	P	**Pn**	**08 17 04.2**	**-2.6**
MLZ	**Mavora Lakes**	**16.00**	**218**	P	**Pn**	**08 17 11.3**	**-0.2**
NIUE	**Niue**	**16.03**	**28**	P	**Pn**	**08 17 06.0**	**-5.9**
	comp=Z,245nm,1.5s						
NIUE	**Niue**	**16.03**	**28**	P	Pn	08 17 04.5	-7.5
NIUE				S	Sn	08 19 46.9	-23
MSVF	**Nonsavu**	**16.09**	**346**	Pn	**Pn**	**08 17 11.8**	**-1.0**
	comp=Z,9.0nm,0.2s,baz=96,slow=23,SNR=7.8						
MSVF				LR	LR	08 22 47.8	
	comp=Z,3μm,18.2s,baz=186,slow=35						
MSVF	**Nonsavu**	**16.09**	**346**	P	**Pn**	**08 17 12.7**	**-0.1**
SYZ	**Scrubby Hill**	**16.34**	**213**	P	**Pn**	**08 17 12.8**	**-3.0**
SYZ	**Scrubby Hill**	**16.34**	**213**	P	**Pn**	**08 17 16.8**	**+1.0**
WHZ	**Wether Hill Ro**	**16.45**	**217**	P	**Pn**	**08 17 14.3**	**-2.9**
APZ	**The Paps**	**17.10**	**215**	P	**P**	**08 17 26.8**	**-0.4**
MARNC	**Mare, Loyalty**	**17.24**	**310**		**Pn**	**08 17 26.5**	**-0.8**
MARNC				IAmb	IAmb	08 17 30.9	
	comp=Z,124nm,1.0s						
OUENC	**Ouen Island, N**	**17.37**	**305**	P	**P**	**08 17 33.3**	**+3.0**
OUENC	**Ouen Island, N**	**17.37**	**305**		**Pn**	**08 17 28.4**	**-0.4**
OUENC				IAmb	IAmb	08 17 36.9	
	comp=Z,174nm,1.7s						
YATNC	**Mamie plateau,**	**17.58**	**306**	P	**P**	**08 17 36.6**	**+4.0**
ONTNC	**Ouen Toro**	**17.71**	**305**		**Pn**	**08 17 31.8**	**-1.3**
ONTNC				IAmb	IAmb	08 17 38.8	
	comp=Z,199nm,1.4s						
DZM	**Mont Dzumac**	**17.88**	**306**	P	**Pn**	**08 17 33.9**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=113,slow=15,SNR=25						
	comp=Z,50nm,1.0s						
NOUC	**Port Laguerre**	**17.95**	**305**	P	**P**	**08 17 39.7**	**+3.0**
FUTU	**Fugatoga**	**19.09**	**359**	P	**P**	**08 17 46.1**	**-3.1**
FUTU				IAmb	IAmb	08 17 53.0	
	comp=Z,82nm,0.9s						
LHI	**Lord Howe Isla**	**19.50**	**269**	P	**Pn**	**08 17 59.6**	**+4.7**
	comp=Z,53nm,2.1s						
LHI	**Lord Howe Isla**	**19.50**	**269**	P	**P**	**08 17 53.3**	**-0.4**
LHI				IAmb	IAmb	08 18 00.3	
	comp=Z,174nm,1.6s						
RAR	**Rarotonga**	**20.20**	**57**	P	**P**	**08 18 00.2**	**-1.1**
	comp=Z,54nm,1.0s,baz=247,slow=7.7,SNR=3.9						
RAR				LR	LR	08 24 44.6	
	comp=Z,1μm,19.9s,baz=234,slow=34						
RAR	**Rarotonga**	**20.20**	**57**	P	**P**	**08 17 59.2**	**-2.1**
RAR				pmax	pmax		
	comp=Z,184nm,1.4s						
RAR	**Rarotonga**	**20.20**	**57**	P	**P**	**08 17 59.2**	**-2.1**
RAR				IAmb	IAmb	08 18 04.8	
	comp=Z,184nm,1.4s						
AFI	**Afiamalu**	**20.27**	**17**	P	Pn	08 18 03.3	-0.9
	comp=Z,52nm,0.6s,baz=66,slow=1.2,SNR=9.5						
AFI				S	S	08 21 31.2	-19
	comp=Z,33nm,0.5s,baz=52,slow=22,SNR=6.7						
	comp=Z,52nm,0.6s						
AFI	**Afiamalu**	**20.27**	**17**	P	**P**	**08 17 58.1**	**-4.1**
AFI	**Afiamalu**	**20.27**	**17**	P	**P**	**08 18 00.6**	**-1.6**
AFI				IAmb	IAmb	08 18 13.0	
	comp=Z,228nm,1.4s						
KOUNC	**Koumac, New Ca**	**20.38**	**305**	P	**P**	**08 18 02.4**	**-0.9**
KOUNC				IAmb	IAmb	08 18 10.8	
	comp=Z,202nm,1.6s						
SANVU	**Saraoutou**	**22.44**	**320**	P	**P**	**08 18 27.6**	**+2.1**
SANVU	**Saraoutou**	**22.44**	**320**	P	**P**	**08 18 23.7**	**-1.8**
SANVU				IAmb	IAmb	08 18 33.7	
	comp=Z,52nm,0.9s						
ARMA	**Armidale**	**25.97**	**268**	P	**P**	**08 19 03.1**	**+3.8**
	comp=Z,30nm,1.2s						
ARMA	**Armidale**	**25.97**	**268**	P	**P**	**08 18 58.2**	**-1.2**
TBI	**Tubuai**	**26.92**	**75**	*e*P	**P**	**08 19 06.9**	**-1.0**
	comp=Z,818nm,27.8s						
TBI				*e*S	**S**	**08 23 44.5**	**-0.8**
	comp=Z,9μm,27.0s						
TBI				*e*LR	LR	08 25 45.3	
	comp=Z,7μm,23.2s						
TBI				*e*LR	LR	08 25 47.8	
	comp=Z,2μm,26.8s						
TBI				*e*T	T	08 47 40.5	
	comp=Z,19nm,0.3s						
CNB	**Canberra Magne**	**26.99**	**257**	P	**P**	**08 19 11.4**	**+2.9**
	comp=Z,0.7nm,1.4s						
CAN	**Canberra**	**27.28**	**257**	P	**P**	**08 19 13.4**	**+2.2**
	comp=Z,30nm,1.5s						
EIDS	**Eidsvold**	**28.10**	**279**	P	**P**	**08 19 19.7**	**+1.3**
	comp=Z,33nm,0.9s						
EIDS	**Eidsvold**	**28.10**	**279**	P	**P**	**08 19 19.8**	**+1.3**
EIDS	**Eidsvold**	**28.10**	**279**	P	**P**	**08 19 18.8**	**+0.3**
EIDS				IAmb	IAmb	08 19 20.6	
	comp=Z,24nm,0.7s						
EIDS	**Eidsvold**	**28.10**	**279**	P	**P**	**08 19 19.8**	**+1.3**
TAU	**Tasmania Unive**	**28.72**	**241**	P	**P**	**08 19 23.6**	**-0.2**
TAU	**Tasmania Unive**	**28.72**	**241**	P	**P**	**08 19 24.5**	**+0.8**
TAU				pmax	pmax		
	comp=Z,65nm,1.5s						
TAU	**Tasmania Unive**	**28.72**	**241**	P	**P**	**08 19 24.5**	**+0.8**
TAU				IAmb	IAmb	08 19 41.6	
	comp=Z,65nm,1.4s						
MOO	**Moorlands**	**28.75**	**242**	P	**P**	**08 19 25.7**	**+1.6**
	comp=Z,46nm,1.0s						
MOO	**Moorlands**	**28.75**	**242**	P	**P**	**08 19 23.9**	**-0.2**
PAE	**Paea**	**29.90**	**65**	*e*T	T	08 50 45.6	
	comp=Z,31nm,0.3s						
TOO	**Toolangi**	**29.93**	**252**	P	**P**	**08 19 34.0**	**-0.7**
	comp=Z,5.0nm,1.1s						
TOO	**Toolangi**	**29.93**	**252**	P	**P**	**08 19 34.9**	**+0.2**
TOO				pmax	pmax		
	comp=Z,16nm,1.6s						
TOO	**Toolangi**	**29.93**	**252**	P	**P**	**08 19 34.9**	**+0.2**
PPT2	**Papeete2**	**29.95**	**65**	*e*P	**P**	**08 19 30.7**	**-4.3**
	comp=Z,123nm,23.8s						
PPT2				*e*S	**S**	**08 24 26.7**	**-6.5**
	comp=Z,235nm,25.5s						
PPT2				*e*LR	LR	08 27 11.3	
	comp=Z,2μm,21.0s						
PPT2				*e*LR	LR	08 27 11.6	
	comp=Z,1μm,21.2s						
PPT2				*e*T	T	08 50 45.2	
	comp=Z,6.6nm,0.4s						
PPTF

comp=Z,22nm,0.5s,baz=116,slow=7.7,SNR=301
WRA PcP **PcP** **08 23 23.5 +2.3**
comp=Z,3.1nm,0.7s,baz=122,slow=3.0,SNR=2.5
WRA ScP **ScP** **08 27 14.2 +0.4**
comp=Z,2.2nm,0.9s,baz=123,slow=4.4,SNR=4.9
WRA S **S** **08 28 04.1 -8.0**
comp=Z,0.9nm,0.8s,baz=112,slow=14,SNR=2.5
comp=Z,22nm,0.5s
WRA Warramunga Arr 44.36 275 P P 08 21 36.4 -0.8
VNDA Vanda 45.05 186 P P 08 21 45.1 +3.2
comp=Z,1.9nm,0.9s,baz=16,slow=8.3,SNR=6.4
VNDA LR LR 08 37 41.7
comp=Z,550nm,19.6s,baz=21,slow=32
comp=Z,1.9nm,0.9s
VNDA Vanda 45.05 186 P P 08 21 43.2 +1.4
MANU Manus Island 45.08 307 P P 08 21 40.6 -2.3
MANU IAmb IAmb 08 22 00.4
comp=Z,25nm,1.0s
FORT Forrest 45.39 258 P P 08 21 44.8 -0.5
comp=Z,16nm,0.9s
FORT Forrest 45.39 258 P P 08 21 44.6 -0.7
PATS Pohnpei 46.00 326 P P 08 21 49.7 -0.5
WRKA Warakurna 47.23 266 P P 08 21 57.9 -2.0
comp=Z,20nm,1.9s
JAY Jayapura 49.41 300 LR LR 08 43 14.0
comp=Z,140nm,18.6s,baz=172,slow=36
KDU Kakadu 49.57 283 P P 08 22 15.0 -3.0
comp=Z,8.8nm,0.6s
MTN Manton Dam 50.59 281 P P 08 22 24.8 -0.8
MTN PcP **PcP** **08 23 42.9 -0.5**
KNRA Kununurra 51.06 277 P P 08 22 29.3 +0.1
comp=Z,34nm,1.0s
KNRA Kununurra 51.06 277 P P 08 22 28.1 -1.0
KNRA IAmb IAmb 08 22 29.9
comp=Z,26nm,0.8s
FITZ Fitzroy Crossi 52.48 272 P P 08 22 37.3 -2.5
comp=Z,8.2nm,1.4s
FITZ Fitzroy Crossi 52.48 272 LR LR 08 46 14.4
comp=Z,610nm,18.2s,baz=124,slow=38
FITZ Fitzroy Crossi 52.48 272 P P 08 22 39.7 -0.1
FITZ Fitzroy Crossi 52.48 272 P P 08 22 39.2 -0.6
FITZ Fitzroy Crossi 52.48 272 P P 08 22 39.5 -0.3
SAUI Saumlaki 53.18 287 P P 08 22 42.9 -2.1
NWAO Narrogin (SRO) 53.42 251 P P 08 22 45.6 -1.0
NWAO Narrogin (SRO) 53.42 251 P P 08 22 45.8 -0.8
NWAO pmax pmax
comp=Z,113nm,1.7s
NWAO Narrogin (SRO) 53.42 251 P P 08 22 45.8 -0.8
KLBR Kellerberrin 53.46 253 P P 08 22 46.0 -0.9
comp=Z,50nm,0.6s
KLBR Kellerberrin 53.46 253 P P 08 22 45.9 -1.0
KLBR Kellerberrin 53.46 253 P P 08 22 45.0 -1.9
MEEK Meekatharra 54.61 259 P P 08 22 54.4 -1.0
comp=Z,16nm,1.0s
MEEK Meekatharra 54.61 259 P P 08 22 54.6 -0.8
MBWA Marble Bar 56.00 266 P P 08 23 05.0 -0.5
MBWA IAmb IAmb 08 24 06.6
comp=Z,17nm,1.0s
QSPA South Pole Qui 56.64 180 P P 08 23 12.5 +3.0
comp=Z,54nm,1.1s,baz=56,slow=1.0,SNR=80
QSPA LR LR 08 44 20.5
comp=Z,649nm,20.3s,baz=36,slow=33
comp=Z,54nm,1.1s
QSPA South Pole Qui 56.64 180 P P 08 23 11.7 +2.2
SIJI Sorong 57.56 293 LR LR 08 48 37.2
comp=Z,267nm,18.5s,baz=224,slow=37
SIJI Sorong 57.56 293 P P 08 23 15.9 -0.7
comp=Z,11nm,0.9s
KIP Kipapa 57.81 22⇑ *eP* **P 08 23 18.2 +0.2**
KIP pmax pmax
comp=Z,80nm,1.5s
BATI Baumata 58.15 279 LR LR 08 47 56.1
comp=Z,355nm,19.0s,baz=131,slow=36
RPN Rapa Nui 58.61 104 LR LR 08 43 13.5
comp=Z,638nm,19.8s,baz=257,slow=30
GUMO Guam 58.73 317 LR LR 08 47 53.3
comp=Z,94nm,19.2s,baz=136,slow=35
SANI Sanana 60.95 288 P P 08 23 40.8 +0.7
SANI Sanana 60.95 288 P P 08 23 40.7 +0.6
KAPI Kappang 64.25 282 LR LR 08 54 02.4
comp=Z,161nm,18.1s,baz=122,slow=38
KAPI Kappang 64.25 282⇓ *eP* **P 08 24 03.2 +1.1**
KAPI pmax pmax
comp=Z,15nm,1.3s
BELA Belgrano 2 66.73 172 P 08 24 18.4 +1.1
DAV Davao City (W) 67.00 296 LR LR 08 52 11.4
comp=Z,102nm,20.5s,baz=150,slow=35
PMSA Palmer Station 69.44 155 LR LR 08 50 50.3
comp=Z,356nm,18.1s,baz=236,slow=32
MAW Mawson 69.45 201 P P 08 24 37.1 +2.7
comp=Z,4.0nm,1.4s
MAW Mawson 69.45 201 P P 08 24 36.8 +2.4
comp=Z,16nm,1.2s,baz=118,slow=7.1,SNR=13
MAW LR LR 08 53 49.9
comp=Z,758nm,20.7s,baz=111,slow=35
comp=Z,16nm,1.2s
MAW Mawson 69.45 201 P P 08 24 37.1 +2.7
JCJ Chichijima 71.16 323 LR LR 08 50 36.4
comp=Z,94nm,21.9s,baz=122,slow=31
ESPZ Base Esperanza 72.73 156 P P 08 24 55.8 +1.5
ESPZ IAmb IAmb 08 24 58.1
comp=Z,31nm,1.0s
LEM Lembang 73.31 273 LR LR 08 55 40.3
comp=Z,358nm,22.0s,baz=160,slow=35
ELIB Princess Elisa 73.80 187 *dP* **P 08 25 01.9 +1.1**
comp=Z,11nm,1.3s
SYO Syowa Base 74.14 193⇑ *eP* **P 08 25 03.0 +0.5**
SYO Syowa Base 74.14 193⇑ *iP* **P 08 25 04.2 +1.7**
TROLL Troll, Antarti 74.80 180 ⇓P P 08 25 08.0 +1.4
comp=Z,702nm,0.8s
TROLL ⇓PcP **PcP** **08 25 22.2 +1.6**
comp=Z,702nm,0.8s
TGY Tagaytay City 75.02 298 LR LR 08 59 10.0
comp=Z,82nm,19.5s,baz=86,slow=37
SNAA Sanae 75.08 178 P P 08 25 09.4 +1.3
comp=Z,20nm,1.2s,baz=185,slow=4.5,SNR=12
comp=Z,20nm,1.2s
VNA2 Neumayer--Watz 75.67 177 ⇓P P 08 25 12.7 +1.2
comp=Z,46nm,0.7s,baz=174,slow=5.9
VNA2 ⇓PcP **PcP** **08 25 28.3 +4.1**
comp=Z,46nm,0.7s,baz=168,slow=5.3
VNA2 Neumayer--Watz 75.67 177 P P 08 25 12.8 +1.4
NVL N'lazarevskaya 75.81 183 *eP* **P 08 25 09.2 -3.0**
NVL *e*SS SS 08 39 57.6 +13
NVL pmax pmax
comp=Z,7.0nm,1.0s
VNA1 Neumayer--Stat 75.90 176 P P 08 25 14.6 +1.9
comp=Z,30nm,0.7s
VNA1 PcP **PcP** **08 25 29.5 +4.3**
comp=Z,30nm,0.7s
H03S2 Juan Fernandez 78.73 123 T T 09 54 22.0
baz=236,slow=74,SNR=28
H03S1 Juan Fernandez 78.74 123 T T 09 54 24.8
baz=236,slow=74,SNR=23
H03S3 Juan Fernandez 78.75 123 T T 09 54 19.1
baz=236,slow=74,SNR=22
H03N3 Juan Fernandez 78.93 123 T T 09 54 27.7
baz=240,slow=72,SNR=14
H03N2 Juan Fernandez 78.94 123 T T 09 54 27.4
baz=240,slow=72,SNR=14
H03N1 Juan Fernandez 78.95 123 T T 09 54 27.9
baz=240,slow=72,SNR=25
EFI East Falkland 80.18 147⇑ *eP* **P 08 25 36.8 0.0**
EFI pmax pmax
comp=Z,68nm,1.3s
PLCA Paso Flores 80.37 133 P P 08 25 40.2 +2.0
comp=Z,11nm,1.1s,baz=232,slow=5.5,SNR=7.3
PLCA LR LR 08 54 51.6
comp=Z,234nm,18.1s,baz=236,slow=31
comp=Z,11nm,1.1s
PLCA Paso Flores 80.37 133 P P 08 25 38.5 +0.2
PLCA IAmb IAmb 08 25 41.7
comp=Z,29nm,1.4s
PLCA Paso Flores 80.37 133 P P 08 25 40.9 +2.7
MJAR Matsushiro Arr 80.81 326 P P 08 25 39.7 -0.5
comp=Z,1.8nm,0.8s,baz=158,slow=4.9,SNR=4.2
MJAR LR LR 08 56 49.3
comp=Z,124nm,21.4s,baz=145,slow=32
comp=Z,1.8nm,0.8s
MJAR Matsushiro Arr 80.81 326 P P 08 25 39.2 -1.0
MAJO Matsushiro 80.81 326 *deP* **P 08 25 42.1 +1.8**
MAJO pmax pmax
comp=Z,4.0nm,1.0s
BI02 San Fabin de 82.31 129 P P 08 25 50.9 +2.3
ML02 Panimavida 82.74 128 P P 08 25 50.5 -0.2
ML02 Panimavida 82.74 128 P P 08 25 52.0 +1.3
GO05 Hualane 82.85 127 P 08 25 50.7 -0.7
GO05 Hualane 82.85 127 P P 08 25 52.6 +1.3
ERM Erimo 83.20 332 *ceP* **P 08 25 54.0 +1.4**
ERM pmax pmax
comp=Z,19nm,1.1s
BO02 Sierra Bellavi 83.74 128 P P 08 25 58.2 +2.2
PEL Peldehue 84.78 126 P P 08 26 03.7 +2.4
CO02 Combarbal 85.72 125 P P 08 26 08.4 +2.2
LPIG La Paz 86.11 58 LR LR 08 56 35.9
comp=Z,724nm,19.6s,baz=211,slow=30
SHEM Shemya Is, Ala 86.13 355 LR LR 08 58 38.4
comp=Z,310nm,21.0s,baz=131,slow=32
KSRS Korea Array 86.73 320 P P 08 26 09.9 -0.6
comp=Z,1.3nm,0.7s,baz=142,slow=5.6,SNR=11
KSRS LR LR 09 02 19.9
comp=Z,52nm,20.3s,baz=130,slow=34
comp=Z,1.3nm,0.7s
ZON Zonda 87.10 126 IAmb IAmb 08 26 16.0
comp=Z,32nm,1.4s
CFA Coronel Fontan 87.36 126 P P 08 26 15.6 +1.5
comp=Z,6.5nm,1.0s,baz=234,slow=3.6,SNR=12
comp=Z,6.5nm,1.0s
YSS Yuzhno-Sakhali 87.54 334 *eP* **P 08 26 16.2 +2.0**
YSS *e* 08 36 37.0
YSS *eS* **S 08 36 54.6 -1.1**
YSS *ePS* **PnS 08 37 53.7 -2.8**
YSS *eSS* **SS 08 42 40.7 -1.4**
YSS pmax pmax
comp=Z,200nm,3.6s
YSS MLR MLR
comp=E,100nm,19.0s
YSS MLR MLR
comp=Z,200nm,19.0s
ELS Elsinore Mount 87.68 47 P P 08 26 14.6 -0.7
PFO Pinyon Flats O 88.25 47 LR LR 08 57 59.6
comp=Z,570nm,20.0s,baz=244,slow=30
PFO Pinyon Flats O 88.25 47 *deP* **P 08 26 20.3 +2.2**
PFO pmax pmax
comp=Z,50nm,2.6s
PFO Pinyon Flats O 88.25 47 P P 08 26 17.4 -0.7
PFO IAmb IAmb 08 26 23.6
comp=Z,32nm,1.8s
NJ2 Nanjing 88.29 311 *eP* **P 08 26 19.3 +1.1**
NJ2 pmax pmax
comp=Z,17nm,0.6s
ISA Isabella, Lake 88.44 45 P P 08 26 17.5 -1.4
ISA pmax pmax
comp=Z,21nm,1.1s
ISA Isabella, Lake 88.44 45 P P 08 26 17.5 -1.4
PEA0B Petropavlovsk- 88.80 346 *deP* **P 08 26 20.8 +0.7**
PEA0B Petropavlovsk- 88.80 346 P P 08 26 18.6 -1.5
PETK Petropavlovsk- 88.80 346 P P 08 26 21.6 +1.5
comp=Z,5.6nm,0.6s,baz=107,slow=7.9,SNR=12
PETK LR LR 09 00 45.8
comp=Z,212nm,20.7s,baz=158,slow=32
comp=Z,5.6nm,0.6s
PETK Petropavlovsk- 88.80 346 P P 08 26 18.6 -1.5
CWC Cottonwood Cre 89.21 44 P P 08 26 22.6 -0.1
CWC IAmb IAmb 08 26 39.9
comp=Z,32nm,2.0s
O02D Mt. Diablo Mer 89.25 39 P P 08 26 22.1 -0.5
O02D IAmb IAmb 08 26 26.6
comp=Z,20nm,1.1s
113A Mohawk Valley, 89.36 49 P P 08 26 23.1 -0.1
113A IAmb IAmb 08 26 26.4
comp=Z,15nm,1.4s
QSM Queen of Sheba 89.60 45 P P 08 26 23.4 -0.8
QSM IAmb IAmb 08 26 27.8
comp=Z,13nm,1.0s
USRK Ussuriysk Ar. 89.76 327 P P 08 26 25.6 +0.8
comp=Z,1.5nm,0.7s,baz=134,slow=8.2,SNR=6.5
USRK LR LR 09 01 48.4
comp=Z,92nm,20.2s,baz=158,slow=32
comp=Z,1.5nm,0.7s
USRK Ussuriysk Ar. 89.76 327 P P 08 26 24.7 0.0
WAKR Walker 89.87 42 P P 08 26 24.7 -1.0
WAKR IAmb IAmb 08 26 28.6
comp=Z,13nm,1.1s
DSP Deep Springs 89.92 44 IAmb IAmb 08 26 28.6
comp=Z,11nm,1.4s
FURC Furnace Creek, 89.94 45 P P 08 26 25.8 -0.1
FURC IAmb IAmb 08 26 42.3
comp=Z,7.3nm,1.0s
WCT Wildcat Mounta 90.30 45 P P 08 26 25.7 -1.9
YBH Yreka Blue Hor 90.42 38 LR LR 08 59 40.3
comp=Z,318nm,19.8s,baz=222,slow=31
NVAR Mina Array Bea 90.46 43 P P 08 26 30.6 +2.2
comp=Z,5.1nm,0.8s,baz=218,slow=8.0,SNR=26
NVAR LR LR 09 00 25.7
comp=Z,315nm,20.1s,baz=205,slow=31
comp=Z,5.1nm,0.8s
NVAR Mina Array Bea 90.46 43 P P 08 26 27.6 -0.9
NV11 Mina Array Sit 90.54 43 P P 08 26 26.6 -2.2
TPNV Topopah Spring 90.63 45 P P 08 26 27.4 -1.9
TPNV pmax pmax
comp=Z,8.0nm,1.0s
TPNV Topopah Spring 90.63 45 P P 08 26 27.4 -1.9
TPNV IAmb IAmb 08 26 46.9
comp=Z,8.3nm,1.0s
TYV Tymovskoe 90.89 336 *eP* **P 08 26 31.8 +1.9**
TYV pmax pmax
comp=Z,11nm,1.4s
TYV pmax pmax
comp=Z,100nm,3.7s
TUC Tucson 90.99 51 P P 08 26 28.7 -2.3
TUC pmax pmax
comp=Z,13nm,1.3s
TUC Tucson 90.99 51 P P 08 26 28.7 -2.3
TUC IAmb IAmb 08 26 34.6
comp=Z,13nm,1.3s
TUC Tucson 90.99 51 P P 08 26 33.8 +2.9
KVN Kaiserville 91.00 42 P P 08 26 29.5 -1.5
KVN pmax pmax
comp=Z,3.0nm,1.0s
KVN Kaiserville 91.00 42 P 08 26 29.5 -1.5
K05A Summer Lake 92.07 38 P 08 26 34.5 -1.3
K05A IAmb IAmb 08 26 39.1
comp=Z,11nm,1.0s
WIFE Three Sisters- 92.55 37 P 08 26 38.2 +0.1
WIFE IAmb IAmb 08 26 41.9
comp=Z,10nm,0.9s
CN2 Changchun 92.63 323 P P 08 26 41.4 +3.3
CN2 pP pwP 08 26 46.0 -1.8
CN2 S **S** **08 37 44.6 +1.6**
WUAZ Wupatki 92.66 49 P P 08 26 37.4 -1.3
WUAZ IAmb IAmb 08 26 44.2
comp=Z,6.0nm,1.1s
CCUT Cedar City 92.75 46 P P 08 26 38.2 -1.0
PINE Pine Mountain 92.81 37 P P 08 26 37.5 -1.7
PINE IAmb IAmb 08 26 43.4
comp=Z,12nm,0.9s
WVOR Wild Horse Val 93.05 40 P P 08 26 39.1 -1.2
WVOR pmax pmax
comp=Z,22nm,1.7s
WVOR Wild Horse Val 93.05 40 P P 08 26 39.1 -1.2
WVOR IAmb IAmb 08 26 44.9
comp=Z,22nm,1.7s
WVOR Wild Horse Val 93.05 40 P P 08 26 42.1 +1.9
SALTA 93.25 122 P P 08 26 45.5 +3.2
KDAK Kodiak Island 93.39 13 P P 08 26 40.0 -1.2
KDAK pmax pmax
comp=Z,23nm,1.4s
KDAK Kodiak Island 93.39 13 P P 08 26 40.0 -1.2
PB11 IPOC Station P 93.57 116 P P 08 26 41.3 -2.1
J08A Circle Bar Ran 93.78 39 IAmb IAmb 08 26 47.4
comp=Z,6.5nm,1.0s
TX31 Lajitas Ar. Si 94.00 57 P P 08 26 44.1 -0.9
TX31 IAmb IAmb 08 26 47.5
comp=Z,8.7nm,1.4s
TXAR Lajitas Array 94.00 57 P P 08 26 46.9 +1.9
comp=Z,1.6nm,1.0s,baz=210,slow=7.2,SNR=12
TXAR LR LR 09 01 53.2
comp=Z,454nm,19.2s,baz=228,slow=31
comp=Z,1.6nm,1.0s
TXAR Lajitas Array 94.00 57 P P 08 26 42.0 -3.0
CMAR Chiang Mai Arr 94.47 289 PP PP 08 30 33.0 -2.1
comp=Z,1.2nm,0.4s,baz=143,slow=7.6,SNR=5.0
PB16 IPOC Station P 94.54 115 P 08 26 46.7 -1.7
PB16 IAmb IAmb 08 26 51.9
comp=Z,12nm,1.2s
PB16 IPOC Station P 94.54 115 P P 08 26 50.8 +2.4
G08A Pilot Rock 94.87 37 P 08 26 46.8 -1.7
G08A IAmb IAmb 08 27 06.3
comp=Z,6.7nm,1.2s
ANMO Albuquerque 95.45 51 LR LR 09 02 51.7
comp=Z,436nm,19.8s,baz=222,slow=31
ANMO Albuquerque 95.45 51⇑ *eP* **P 08 26 52.6 +1.0**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
BBB Bella Bella 95.78 28 LR LR 09 01 44.1
comp=Z,169nm,20.9s,baz=220,slow=30
HLID Hailey 96.09 41 P P 08 26 56.6 +2.4
F10A Beach Ranch, E 96.22 38 IAmb IAmb 08 26 57.5
comp=Z,4.4nm,0.9s
PLID Pearl Lake 96.26 39 IAmb IAmb 08 26 57.5
comp=Z,5.8nm,1.1s
MA2 Magadan 96.27 345 LR LR 09 09 30.4
comp=Z,118nm,18.6s,baz=176,slow=35
LPAZ La Paz 96.82 114 P P 08 27 02.0 +3.1
comp=Z,0.5nm,0.6s,baz=233,slow=5.1,SNR=4.9
LPAZ LR LR 09 02 28.3
comp=Z,204nm,21.3s,baz=238,slow=30
comp=Z,0.5nm,0.6s
LPAZ La Paz 96.82 114 P P 08 26 58.9 0.0
NEW Newport 97.83 36 LR LR 09 04 29.1
comp=Z,515nm,19.8s,baz=223,slow=31
CPUP Villa Florida 98.02 129 LR LR 09 03 29.2
comp=Z,298nm,20.5s,baz=222,slow=31
JTS Las Juntas de 98.06 83 LR LR 09 02 44.8
comp=Z,349nm,19.3s,baz=258,slow=30
SNOW Snow King Moun 98.07 43 IAmb IAmb 08 27 07.0
comp=Z,3.6nm,0.9s
PDAR Pinedale Array 98.32 44 P Pdif 08 27 05.7 +1.2
comp=Z,0.5nm,0.8s,baz=236,slow=2.7,SNR=5.5
PDAR LR LR 09 04 57.9
comp=Z,230nm,20.2s,baz=224,slow=31
comp=Z,0.5nm,0.8s
PDAR Pinedale Array 98.32 44 P P 08 27 02.9 -1.5
HHC Hu-ho-hao-te 98.41 314 *eP* Pdif 08 27 05.6 +0.8
HHC pmax pmax
comp=Z,19nm,0.7s
SEY Seymchan 98.98 347⇓ *eP* Pdif 08 27 08.5 +1.9
SEY pmax pmax
comp=Z,1.0nm,0.9s
DLBC Dease Lake 99.92 23 LR LR 09 04 53.0
comp=Z,103nm,20.7s,baz=220,slow=31
ILAR Eielson Array 100.91 13 PP PP 08 31 31.3 +7.6
comp=Z,0.4nm,1.0s,baz=206,slow=6.3,SNR=2.3
BILL Bilibino 101.91 354⇑ *eP* **Pdif 08 27 23.0 +3.5**
BILL pmax pmax
comp=Z,5.0nm,1.4s
WMQ Urumqi 115.15 307 *ePKP* **PKPdf 08 32 06.1 -1.8**
MK31 Makanchi Array 119.77 309⇑ *iPKIKP* **PKiKP 08 32 16.3 -0.4**
MKAR Makanchi Array 119.77 309 PKP PKPdf 08 32 16.1 -0.5
comp=Z,16nm,0.8s,baz=211,slow=1.4,SNR=10.0
KURK Kurchatov 123.19 312⇑ *iPKIKP* **PKiKP 08 32 24.2 +1.0**
KURBB Kurchatov Arra 123.23 312 PKP PKiKP 08 32 23.2 0.0
comp=Z,1.4nm,0.3s,baz=107,slow=2.0,SNR=11
AAK Ala-Archa 123.84 302⇑ *iPKIKP* **PKiKP 08 32 27.3 +2.3**
BVAR Borovoye Array 128.62 314 PKP PKiKP 08 32 34.5 +0.5
comp=Z,3.0nm,0.7s,baz=85,slow=1.6,SNR=8.6
BORK Borovoye 128.66 314⇓ *iPKIKP* **PKiKP 08 32 34.3 +0.3**
SPA0 Spitsbergen Ar 134.77 356 *eP* **PKiKP 08 32 45.7 0.0**
SPITS Spitsbergen Ar 134.77 356 PKP PKiKP 08 32 45.8 0.0
comp=Z,4.6nm,0.8s,baz=61,slow=8.7,SNR=5.3
ARTI Arti 135.57 319 PKP PKPdf 08 32 46.3 0.0
comp=Z,1.7nm,0.3s,baz=81,slow=0.7,SNR=4.0
ARTI Arti 135.57 319 *i* PKIKP **PKiKP 08 32 47.8 -0.1**
ARTI 08 35 22.0
ARTI SS SS 08 53 13.0 -8.6
AKTO Aktyubinsk 136.17 310 PKP PKiKP 08 32 48.2 -1.1
comp=Z,3.5nm,0.8s,baz=21,slow=4.3,SNR=5.6
ARCES ARCESS Array B 141.60 347 PKhKP PKPpre 08 32 53.5
comp=Z,0.9nm,0.5s,baz=50,slow=1.5,SNR=7.0
KTK1 Kautokeino 142.47 348 *eP* **PKiKP 08 33 01.5 -0.1**
AKT Akhty 143.25 296 *ePKIKP* **PKPdf 08 32 59.5 -1.4**
AKT *e* 08 36 15.0
AKT pmax pmax
comp=Z,12nm,1.3s
KLMR Klimovskoe 143.48 330 *ePKIKP* **PKPdf 08 33 00.2 -0.3**
KLMR pmax pmax
comp=Z,15nm,1.3s
STEI Steigen 144.68 351 *eP* **PKPdf 08 33 03.2 +0.8**
STEI IAmb IAmb 08 33 04.2
comp=Z,82nm,1.7s
FAUS Fauske 145.19 351 *eP* **PKPdf 08 33 03.1 -0.3**
FAUS IAmb IAmb 08 33 07.6
comp=Z,25nm,0.9s
GNI Garni 145.45 294 PKPbc **PKPab 08 33 05.5 +0.4**
comp=Z,5.2nm,0.4s,baz=155,slow=7.1,SNR=4.4
GNI Garni 145.45 294 *ce*PKIKP **PKPab 08 33 06.4 +1.3**
GNI Garni 145.45 294 PKPdf 08 33 02.8 -2.1
VAGH Vaagaholmen 146.06 352 *eP* **PKPab 08 33 06.0 -0.3**
RAUS Rausandaksla 146.25 351 *eP* **PKPab 08 33 07.6 +0.5**
VRH Novokhopyorsk 146.27 314 *ePKIKP* **PKPbc 08 33 05.8 -1.0**
VRH pmax pmax
comp=Z,20nm,0.9s
KONS Konsvik 146.30 352 *eP* **PKPab 08 33 06.9 -0.3**
MOR8 Moi Rana 146.45 351 *eP* **PKPab 08 33 07.5 -0.3**
STOK Stokkvaagen 146.47 352 *eP* **PKPab 08 33 07.3 -0.5**
GEVA Gevas 146.65 290 PKPbc **PKPab 08 33 08.4 -0.2**
LEIR Leirfjorden 146.67 352 *eP* **PKPab 08 33 07.8 -0.8**
KBZ Khabaz 146.79 300 PKPbc **PKPab 08 33 09.7 -0.2**
comp=Z,12nm,0.9s,baz=153,slow=3.4,SNR=6.9
MOS Moscow 146.87 323 *i* PKP2 **PKiKP 08 33 11.9 +0.9**
MOS pmax pmax
comp=Z,99nm,0.9s
KIV Kislovodsk 146.93 301 *i* PKP2 **PKPbc 08 33 09.0 -0.1**
KIV pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 147.46 317 *e*PKP2 **PKPbc 08 33 10.6 +0.4**
LPSR pmax pmax
comp=Z,26nm,0.8s
VORR Voronezh 147.62 315 *e*PKP2 **PKPab 08 33 12.7 -0.2**
VORR pmax pmax
comp=Z,30nm,0.9s
OBN Obninsk 147.69 322⇑ *e*PKP2 **PKiKP 08 33 11.4 -1.3**
OBN pmax pmax
comp=Z,17nm,1.0s
OBN pmax pmax
comp=Z,24nm,1.1s
OBN MLR MLR
comp=Z,121nm,20.0s
VSR Storozhevoye 147.80 315 *e*PKP2 **PKPbc 08 33 10.5 -0.6**
VSR pmax pmax
comp=Z,11nm,0.5s
VORD Divnogorie 147.80 314 *e*PKP2 **PKPbc 08 33 11.2 +0.1**
VORD pmax pmax
comp=Z,10.0nm,1.0s
FIA1 FINESS Array S 148.04 338 PKiKP 08 33 12.1 -1.2
FINES FINESS Array B 148.04 338 PKPbc **PKPbc 08 33 11.6 +0.1**
comp=Z,25nm,0.7s,baz=43,slow=3.2,SNR=60
NSS Namsos 148.33 350 *eP* **PKiKP 08 33 13.6 -0.2**
VSU Masuda 150.04 334⇓ *e*PKHKP **PKPbc 08 33 14.8 -1.8**
MOL Molde 150.69 355 *eP* **PKiKP 08 33 20.0 +1.4**
DOMB Dombas 151.07 353 *eP* **PKiKP 08 33 20.9 +1.3**
AKN Aaknes 151.11 355 *eP* **PKiKP 08 33 20.6 +0.9**
NC303 NORSAR Array S 151.60 351 PKiKP 08 33 21.0 +0.3
NB2 NORSAR Subarra 151.80 351 PKP **PKiKP 08 33 21.0 -0.1**
comp=Z,15nm,1.1s,baz=16,slow=4.1
NOA NORSAR Array B 151.80 351 PKPbc **PKiKP 08 33 21.0 -0.1**
comp=Z,4.7nm,0.8s,baz=14,slow=4.1,SNR=19
NOA NORSAR Array B 151.80 351 PKIKP **PKiKP 08 33 21.0 -0.1**
NBO00 NORSAR Array S 151.86 351 PKiKP 08 33 21.7 +0.5
NC602 NORSAR Array S 152.04 350 *eP* **PKiKP 08 33 21.8 +0.3**
NC602 NORSAR Array S 152.04 350 PKiKP 08 33 22.1 +0.5
MMAI Mount Meron Ar 152.19 278 PKPbc **PKiKP 08 33 23.6 +0.8**
comp=Z,4.1nm,0.5s,baz=64,slow=5.7,SNR=7.6
MNK Minsk 152.23 327 *i* PKiKP **PKiKP 08 33 23.6 +1.4**
comp=E,28nm,0.8s
MNK *i* PKiKP **PKiKP 08 33 23.6 +1.4**
comp=N,10.0nm,0.8s
MNK *i* PKiKP **PKiKP 08 33 23.6 +1.4**
comp=Z,17nm,1.0s,baz=51
MNK *i* SKP 08 36 28.6
MNK *i* PKS PP 08 36 44.5 -19
MNK *i* PP **PP** **08 37 05.7 +1.9**
MNK *i* SKS SKSdf 08 40 58.9 +36
MNK *i* SS **SS** **08 56 36.6 +4.1**
MNK *i* LR LR 09 46 35.3
MNK Minsk 152.23 327 *i* PKIKP **PKiKP 08 33 23.5 +1.4**
MNK *i* 08 37 05.6
MNK *i* SS SS 08 56 36.6 +4.0
MNK pmax pmax
comp=E,28nm,0.8s
MNK pmax pmax
comp=Z,17nm,1.0s
MNK pmax pmax
comp=N,10.0nm,0.8s
HFS Hagfors 152.26 347 PKPbc **PKiKP 08 33 22.1 +0.1**
comp=N,10nm,0.8s,baz=111,slow=3.3,SNR=11

SKAR	Skarslia	152.49	353	*e*P		PKiKP	08 33 23.8	+1.2
DBIC	Dimbokro	152.56	165	PKPbc		PKiKP	08 33 26.1	+2.0
	comp=N,5,9nm,1.0s,baz=248,slow=5.4,SNR=3.5							
CY604	RAF Akrotiri,	153.12	281			PKPab	08 33 33.9	-1.9
PABE	Paberze	153.22	332			PKiKP	08 33 25.1	+1.0
AKASG	Malin Array Be	153.72	319	PKPbc		PKiKP	08 33 25.9	+0.5
	comp=N,3.0nm,0.7s,baz=62,slow=2.3,SNR=8.7							
AKASG	Malin Array Be	153.72	319			PKiKP	08 33 28.4	+3.1
AKBB	Malin Array Si	153.72	319	PKP		PKPdf	08 33 16.7	-0.7
AK02	Malin Array Si	153.76	319	PKP		PKPdf	08 33 16.8	-0.7
AK16	Malin Array Si	153.80	319	PKP		PKPdf	08 33 17.1	-0.4
AK20	Malin Array Si	153.82	319	PKP		PKPdf	08 33 17.1	-0.4
BRTR	Keskin Array B	153.99	293	PKPbc		PKiKP	08 33 27.3	+0.9
	comp=N,2.2nm,0.6s,baz=150,slow=3.9,SNR=10							
BRTR	Keskin Array B	153.99	293			PKiKP	08 33 27.9	+1.5
LUBAR	Lubar, Ukraine	154.93	319	PKP		PKPdf	08 33 18.7	-0.4
RNPP5	Staryi Chortor	155.19	323	PKP		PKPdf	08 33 19.4	0.0
LANS	Liptovska Anna	159.69	326	*e*PKP2		PKPab	08 34 06.6	+2.7
LANS	Liptovska Anna	159.69	326	*e*PKP		PKPab	08 34 06.5	+2.7
TORD	Torodi Ar. Bea	159.75	179	PKP		PKPdf	08 33 27.7	+1.4
	comp=N,0.5nm,0.8s,baz=232,slow=1.9,SNR=3.9							
TORD				PKPab		PKPab	08 34 05.7	+0.9
	comp=N,3.8nm,0.8s,baz=180,slow=3.4,SNR=8.1							
MORC	Moravsky Berou	160.10	329	*e*PKP		PKPab	08 34 07.6	+2.0
BRG	Berggiesshubel	160.57	337	*e*PKP		PKPab	08 34 10.2	+2.7
BRG				Amp			08 34 11.4	
	comp=Z,4.4nm,0.9s							
BRG	Berggiesshubel	160.57	337	P		PKPab	08 34 16.7	+9.2
BRG				Amp			08 34 17.3	
	comp=Z,6.7nm,0.9s							
JAVC	Velka Javorina	160.72	327	*e*PKP		PKPab	08 34 11.0	+2.6
VRAC	Vranov	160.85	330	*e*PKP		PKPab	08 34 10.8	+1.9
KRUC	Moravsky	161.13	330	*e*PKP		PKPab	08 34 11.0	+1.0
MODS	Modra-Piesok	161.26	327	*e*PKP2		PKPab	08 34 13.8	+3.1
MODS	Modra-Piesok	161.26	327	*e*PKP		PKPab	08 34 13.8	+3.1
GERES	CERESS Array B	162.36	334	PKPab		PKPab	08 34 13.6	-1.9
	comp=Z,2.2nm,0.4s,baz=20,slow=5.8,SNR=7.9							
DAVOX	Davos/Dischmat	165.45	338	PKPab		PKPab	08 34 27.8	-1.5
	comp=Z,2.6nm,0.2s,baz=358,slow=12,SNR=4.5							
ESDC	Sonseca Array	172.14	36	PKP		PKPdf	08 33 35.5	-0.1
	comp=Z,0.3nm,0.4s,baz=264,slow=1.3,SNR=1.9							

NEIC ***13*** *08:22:21.6±1.8,59.°07S±0.°05×25.°9W±0.°2, h46km±6km, mb4.6/32, Error ellipse: s-maj=13.9km s-min=7.2km az=71.0*

IDC ***13*** *08:22:30.3±6.2,59.°15S×25.°99W, h125km±56km, mb3.7/10, mbtmp4.1/11, Error ellipse: s-maj=30.2km s-min=16.1km az=56.0*

ISC 13 08:22:23.5±0.5,59.°09S±0.°07×26.°08W±0.°08, h70km, n60, σ1$54/58, mb4.5/20, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
HOPE	Hope Point	7.48	306	Pn	Pn	08 24 08.4	-1.4
HOPE				Sn	Sn	08 25 31.4	-1.7
ORCD	Orcadas	9.51	252	Pn	Pn	08 24 36.2	-1.2
VNA1	Neumayer--Stat	13.76	155	P	P	08 25 37.7	-3.5
	comp=Z,8.4nm,0.3s						
VNA2	Neumayer--Watz	14.16	154	P	P	08 25 42.7	-3.0
	comp=Z,2.1nm,0.2s,baz=319,slow=13						
VNA2				S	Sn	08 28 02.1	-13
	comp=E,1.7nm,0.2s,baz=309,slow=23						
SNAA	Sanae	15.73	153	P	P	08 26 04.9	+1.7
	comp=E,4.3nm,0.4s,baz=314,slow=16,SNR=13						
SNAA				S	Sn	08 28 40.7	-13
	comp=E,0.5nm,0.3s,baz=89,slow=3.8,SNR=1.7						
TROLL	Troll, Antarti	17.27	150	P	P	08 26 25.8	+5.5
	comp=Z,103nm,0.4s						
PMSA	Palmer Station	18.52	236	P	Pn	08 26 34.8	+0.1
PMSA				IAmb	IAmb	08 26 55.2	
	comp=Z,26nm,1.1s						
BELA	Belgrano 2	19.09	186	P	P	08 26 39.3	-0.7
EFI	East Falkland	19.47	278	P	Pn	08 26 45.6	-0.6
SMAI	San Martin Ant	19.95	226	P	P	08 26 49.1	-0.3
GO08	Villa O'Higgin	28.86	271	P	P	08 28 16.1	+1.0
TRQA	Tornquist	31.15	296	P	P	08 28 35.0	-0.3
TRQA				IAmb	IAmb	08 29 02.3	
	comp=Z,22nm,1.2s						
QSPA	South Pole Qui	31.15	180	P	P	08 28 35.7	+0.4
	comp=Z,2.2nm,0.5s,baz=39,slow=0.8,SNR=13						
	comp=Z,2.2nm,0.5s						
QSPA	South Pole Qui	31.15	180	P	P	08 28 35.7	+0.4
QSPA				IAmb	IAmb	08 28 36.6	
	comp=Z,13nm,1.5s						
GO07	Milladeo Hill,	33.05	278	P	P	08 28 52.3	+0.4
PLCA	Paso Flores	33.21	284	P	P	08 28 55.0	+1.5
	comp=Z,0.7nm,0.6s,baz=157,slow=15,SNR=3.1						
	comp=Z,0.7nm,0.6s						
PLCA	Paso Flores	33.21	284	P	P	08 28 55.2	+1.7
PLCA				IAmb	IAmb	08 29 20.7	
	comp=Z,15nm,1.4s						
MAW	Mawson	37.37	141	P	P	08 29 29.8	+1.1
	comp=Z,1.1nm,0.7s,baz=37,slow=14,SNR=2.0						
	comp=Z,1.1nm,0.7s						
MAW	Mawson	37.37	141	P	P	08 29 28.6	-0.1
BI05	Punta Hualpn	37.59	285	P	P	08 29 32.2	+1.3
BO02	Sierra Bellavi	37.96	290	P	P	08 29 34.7	+0.5
BO02				IAmb	IAmb	08 29 58.4	
	comp=Z,5.5nm,1.0s						
MT01	Popeta	38.94	290	P	P	08 29 44.0	+1.7
MT01				IAmb	IAmb	08 29 58.3	
	comp=Z,13nm,1.4s						
CPUP	Villa Florida	39.30	313	P	P	08 29 45.6	+0.3
CFA	Coronel Fontan	39.36	295	P	P	08 29 48.0	+2.1
	comp=Z,0.4nm,0.4s,baz=143,slow=10,SNR=1.8						
	comp=Z,0.4nm,0.4s						
VA03	San Esteban	39.50	292	P	P	08 29 48.6	+1.5
VA03				IAmb	IAmb	08 30 02.4	
	comp=Z,28nm,1.5s						
CO04	Los Peladeros	40.29	292	P	P	08 29 54.0	+0.1
AC05	El Transito	42.64	295	P	P	08 30 14.2	+1.2
AC05				IAmb	IAmb	08 30 18.8	
	comp=Z,26nm,1.4s						
SBA	Scott Base	43.08	184	P	P	08 30 17.8	+2.0
AC04	Llanos de Chal	43.54	295	P	P	08 30 22.9	+2.8
VNDA	Vanda	43.55	182	P	P	08 30 20.3	+0.7
	comp=Z,2.4nm,0.6s,baz=188,slow=7.4,SNR=26						
	comp=Z,2.4nm,0.6s						
VNDA	Vanda	43.55	182	P	P	08 30 20.8	+1.2
H04S2	CROZET ISLANDS	45.83	111	T	T	09 21 05.1	
	baz=226,slow=74						
H04S3	CROZET ISLANDS	45.84	111	T	T	09 21 05.6	
	baz=226,slow=74						
H04S1	CROZET ISLANDS	45.85	111	T	T	09 21 07.9	
	baz=226						
AF01	San Pedro de A	46.75	302	P	P	08 30 47.0	+1.1
AF01				IAmb	IAmb	08 31 16.2	
	comp=Z,18nm,1.2s						
PB07	IPOC Station P	48.58	301	P	P	08 31 00.7	+0.8
PB07				IAmb	IAmb	08 31 17.9	
	comp=Z,11nm,1.3s						
PB02	IPOC Station P	48.94	301	P	P	08 31 02.6	0.0
PB02				IAmb	IAmb	08 31 03.6	
	comp=Z,18nm,1.5s						
LBTB	Lobatse	49.41	70	P	P	08 31 04.9	-1.3
PSGCX	Pisagua	50.55	302	P	P	08 31 16.1	+1.3
PB16	IPOC Station P	51.40	303	P	P	08 31 22.5	+0.7
PB16				IAmb	IAmb	08 31 49.0	
	comp=Z,7.3nm,1.4s						
LPAZ	La Paz	52.64	306	P	P	08 31 33.5	+2.4
	comp=Z,0.4nm,0.3s,baz=133,slow=6.3,SNR=6.6						
	comp=Z,0.4nm,0.3s						
LPAZ	La Paz	52.64	306	P	P	08 31 32.7	+1.7
LPAZ				IAmb	IAmb	08 32 00.2	
	comp=Z,4.9nm,1.5s						
BOAV	Boa Vista	67.06	322	P	P	08 33 09.4	+0.3
BOAV				IAmb	IAmb	08 33 36.6	
	comp=Z,6.2nm,1.4s						
DBIC	Dimbokro	67.72	23	P	P	08 33 14.2	+1.0
DBIC				IAmb	IAmb	08 33 40.4	
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	75.44	28	P	P	08 33 59.5	-0.1
	comp=Z,0.6nm,0.4s,baz=172,slow=5.2,SNR=8.2						
	comp=Z,0.6nm,0.4s						
TORD	Torodi Ar. Bea	75.44	28	P	P	08 33 59.6	-0.1
TORD				IAmb	IAmb	08 34 20.4	
	comp=Z,8.8nm,1.1s						
GRGR	Grenville	76.60	324	P	P	08 34 07.7	+1.4
STKA	Stephens Creek	88.79	170	P	P	08 35 09.1	-0.3
	comp=Z,1.7nm,0.9s,baz=138,slow=7.4,SNR=3.6						
	comp=Z,1.7nm,0.9s						
ASAR	Alice Springs	95.90	162	P	P	08 35 42.6	+0.2
	comp=Z,1.0nm,0.6s,baz=183,slow=4.1,SNR=16						
	comp=Z,1.0nm,0.6s						
AS31	Alice Springs	95.91	162	P	P	08 35 42.0	-0.4
WRA	Warramunga Arr	99.62	161	P	Pdif	08 35 58.6	-0.5
	comp=Z,0.4nm,0.8s,baz=194,slow=4.8,SNR=1.1						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	99.62	161		Pdif	08 35 59.7	+0.6
ZALV	Zalesovo Beam	143.10	67	PKP	PKPdf	08 41 47.5	-0.4
	comp=Z,1.0nm,0.5s,baz=246,slow=2.9,SNR=3.6						
ZALV	Zalesovo Beam	143.10	67		PKPdf	08 41 47.3	-0.6
SIT	Sitka	144.12	298	PKPdf	PKiKP	08 41 50.9	-2.3
P32M	Atlin	144.78	303		PKPdf	08 41 50.7	-0.1
C36M	Paulatuk	145.71	321	PKPdf	PKiKP	08 41 53.4	-2.7
HYT	Haines Junctio	147.03	303	PKPdf	PKPbc	08 41 55.8	-1.1
SONM	Songino Array	150.20	91	PKPbc	PKiKP	08 42 06.7	+0.5
	comp=Z,3.3nm,1.1s,baz=220,slow=2.4,SNR=6.9						
ILAR	Eielson Array	152.51	307	PKPbc	PKiKP	08 42 08.9	-1.4
	comp=Z,0.2nm,0.4s,baz=147,slow=2.1,SNR=2.9						

IDC ***13*** *08:42:07.3±0.5,9.°48N×69.°91W, h0km, mb4.1/18, mbtmp4.1/21, ML3.6/3, MS3.9/4, Error ellipse: s-maj=15.1km s-min=8.0km az=131.0*

GFZ ***13*** *08:42:09.0±0.6,9.°N±5.°×7.°0W±.°, h17km±3km, M4.5/15, mb4.5/15, Error ellipse: s-maj=16.5km s-min=9.7km az=71.6, confirmed*

NEIC ***13*** *08:42:09.1±1.4,9.°37N±0.°06×69.°86W±0.°06, h10km±1km, mb4.6/173, Error ellipse: s-maj=12.6km s-min=8.5km az=134.0*

FUNV ***13*** *08:42:10.3,9.°36N×69.°87W, h6km, MW4.3, Presumed earthquake*

VAO ***13*** *08:42:11.9±0.3,8.°50N×70.°01W, h10km, mb4.4, Presumed earthquake*

RSNC ***13*** *08:42:12.0±0.5,10.°N±2.°×7.°0W±.°, h18km, M4.5, mB5.2, mb5.1, ML4.2, Mw(mB)4.5*

ISC 13 08:42:07.1±0.3,9.°29N±0.°03×69.°76W±0.°03, h7km, n284, σ1$82/276, mb4.6/96, MS4.2/4, 2C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SDV	Santo Domingo	0.95	245	Pg		Pb	Pb	08 42 26.4	+0.4
	298nm,0.3s,baz=65,slow=13,SNR=30								
SDV				Lg		Lg	Lg	08 42 37.4	
	2μm,0.3s,baz=287,slow=18,SNR=32								
SDV				LR		LR	LR	08 43 06.9	
	comp=Z,1μm,18.8s,baz=51,slow=64								
SDV	Santo Domingo	0.95	245	↑	*i*P	Pb	Pb	08 42 26.3	+0.4
SDV					*e*S	Sb	Sb	08 42 38.7	0.0
SDV	Santo Domingo	0.95	245		*e*P	Pb	Pb	08 42 26.1	+0.1
SDV					*e*S	Sg	Sg	08 42 36.2	-1.5
FUNV	FUNVISIS	3.14	68	‖	*e*P	Pb	Pb	08 43 00.7	-2.6
FUNV					*e*S	Sn	Sn	08 43 36.8	+1.9
URIC	Uribia, Colomb	3.25	318		P	Pn	Pn	08 42 59.1	+0.6
URIC					S	Sn	Sn	08 43 33.8	-3.7
URIC	Uribia, Colomb	3.25	318	‖	*e*P	Pn	Pn	08 42 59.1	+0.6
URIC					*e*S	Sn	Sn	08 43 35.0	-2.5
PAMC	Pamplona, Colo	3.49	237		P	Pn	Pn	08 43 05.8	+3.5
OCAC	Ocana	3.67	254		P	Pn	Pn	08 43 06.7	+2.3
BARC	Barichara	4.32	232		P	Pn	Pn	08 43 17.7	+4.3
RUSC	La Rusia	4.71	225		P	Pn	Pn	08 43 22.4	+3.3
RUSC	La Rusia	4.71	225		*e*P	Pn	Pn	08 43 21.0	+2.0
RUSC					*e*S	Sn	Sn	08 44 12.0	-2.3
SJCC	San Jacinto, C	5.38	277		P	Pn	Pn	08 43 29.0	+1.2
	4μm335nm,0.6s								
SJCC	San Jacinto, C	5.38	277	‖	*e*P	Pn	Pn	08 43 28.3	+0.5
SJCC					*e*S	Sn	Sn	08 44 25.7	-4.4
PTBC	PUERTO BERRIO,	5.39	240		P	Pn	Pn	08 43 29.2	+1.2
	1μm93nm,0.7s								
SPBC	San Pablo de B	5.59	230		P	Pn	Pn	08 43 35.0	+4.2
	1μm62nm,0.6s								
UREC	San Jos de Ur	5.91	255		P	Pn	Pn	08 43 37.4	+2.3
	2μm157nm,0.7s								
CHIC	Chingaza	6.08	221		P	Pn	Pn	08 43 41.0	+3.2
	1μm127nm,0.8s								
ROSC	El Rosal	6.32	226	Pn		Pn	Pn	08 43 43.9	+2.8
	26nm,0.3s,baz=40,slow=14,SNR=33								
ROSC				Sn		Sn	Sn	08 44 53.5	-0.4
	12nm,0.3s,baz=61,slow=23,SNR=1.4								
ROSC				Lg		Lg	Lg	08 45 28.8	
	25nm,0.3s,baz=197,slow=19,SNR=1.8								
	22nm,0.3s								
ROSC	El Rosal	6.32	226			Pn	Pn	08 43 42.9	+1.7
ROSC	El Rosal	6.32	226	P		Pn	Pn	08 43 46.7	+5.6
	2μm146nm,0.6s								
CVER	Cruz Verde, Cu	6.38	222	P		Pn	Pn	08 43 48.2	+6.2
VILC	Villavicencio,	6.46	217	P		Pn	Pn	08 43 46.8	+4.1
LCBC	Los crdobas,	6.54	267	P		Pn	Pn	08 43 44.8	+1.1
GUY2C	Guyana, Caldas	6.87	234	P		Pn	Pn	08 43 52.5	+3.8
	1μm161nm,0.7s								
APAC	Apartado, Choc	6.88	259	P		Pn	Pn	08 43 50.4	+2.0
	1μm147nm,0.7s								
CBOC	Ciudad Bolivar	7.07	242	P		Pn	Pn	08 43 55.4	+4.2
	1μm125nm,1.1s								
PRAC	Prado	7.52	223	P		Pn	Pn	08 44 00.3	+3.0
	1μm96nm,0.7s								
URMC	La Uribe, Meta	7.55	218	P		Pn	Pn	08 44 02.2	+4.4
	2μm104nm,0.6s								
PLMC	San Jos del P	7.80	236	P		Pn	Pn	08 44 04.7	+3.6
	738nm65nm,0.6s								
SOLC	Bahia Solano	8.16	249	P		Pn	Pn	08 44 09.0	+2.9
MACC	Macarena, Meta	8.18	210	P		Pn	Pn	08 44 07.5	+1.2
	2μm177nm,0.5s								
PTAC	Punta Ardita,	8.24	256	P		Pn	Pn	08 44 08.5	+1.4
TRN	Trinidad (W)	8.35	80	*e*P		Pn	Pn	08 44 10.8	+2.2
GRGR	Grenville	8.46	70	*e*P		Pn	Pn	08 44 11.3	+1.2
MLPR	Magueyes Islan	9.03	17			Pn	Pn	08 44 17.7	-0.2
CRPR	Cabo Rojo, PR	9.04	16			Pn	Pn	08 44 17.8	-0.3
GARC	Garzon, Huila	9.07	219	P		Pn	Pn	08 44 21.9	+3.2
BANI	BANI	9.07	356			Pn	Pn	08 44 19.3	+0.7
SDD	Santo Domingo	9.12	359	Pn		Pn	Pn	08 44 17.5	-1.6
OBIP	Obispado Ponce	9.23	19			Pn	Pn	08 44 20.4	-0.2
PRSN	Puerto Rico Se	9.23	16			Pn	Pn	08 44 20.6	-0.1
CELP	Cerrillos	9.27	19			Pn	Pn	08 44 21.0	-0.2
PCDR	Punta Cana, DR	9.27	8			Pn	Pn	08 44 21.3	+0.1
UUPR	Utuado, UPR, P	9.39	18			Pn	Pn	08 44 22.8	-0.1
SJG	San Juan	9.45	21	Pn		Pn	Pn	08 44 24.1	+0.4
	88nm,0.3s,baz=192,slow=13,SNR=122								
SJG				Sn		Sn	Sn	08 45 57.3	-13
	3.3nm,0.3s,baz=356,slow=18,SNR=1.7								
SJG				LR		LR	LR	08 48 17.5	
	comp=Z,123nm,21.2s,baz=126,slow=40								
SJG	San Juan	9.45	21			Pn	Pn	08 44 23.8	+0.1
SJG	San Juan	9.45	21	P		Pn	Pn	08 44 24.6	+0.9
	6μm497nm,0.5s								
SJG	San Juan	9.45	21	P		Pn	Pn	08 44 24.8	+1.1
DR12	Loma Pena Alta	9.45	2			Pn	Pn	08 44 23.9	+0.1
AOPR	Arecibo Observ	9.47	18			Pn	Pn	08 44 23.9	-0.1
AGPR	Aguadilla, PR	9.48	15	Pn		Pn	Pn	08 44 24.6	+0.5
ECPR	Experimental S	9.56	20			Pn	Pn	08 44 25.7	+0.4
HUMP	Col San Antoni	9.59	23			Pn	Pn	08 44 26.6	+1.0
POPC	Popayan, Colom	9.60	226	P		Pn	Pn	08 44 29.2	+3.2
	18nm,0.7s								
SDDR	Presa de Saban	9.75	351			Pn	Pn	08 44 27.8	-0.1
SDDR	Presa de Saban	9.75	351	P		Pn	Pn	08 44 31.0	+3.1
BCIP	Isla Barro Col	9.95	270	P		Pn	Pn	08 44 30.5	0.0
	32nm,1.2s								
SC01	Santiago de lo	10.12	355			Pn	Pn	08 44 32.5	-0.5
PTLC	Puerto Leguiza	10.35	209	P		Pn	Pn	08 44 40.7	+4.6
	1μm176nm,0.8s								
BBAC	Balboa, Cauca	10.37	226	P		Pn	Pn	08 44 43.2	+6.7
	343nm21nm,0.7s								
CRUC	La Cruz	10.48	223	P		Pn	Pn	08 44 45.4	+7.1
SEUS	St. Eustatius	10.49	38	Pn		Pn	Pn	08 44 39.2	+1.3
BOAV	Boa Vista	11.46	126			Pn	Pn	08 44 53.3	+2.0
BOAV	Boa Vista	11.46	126	*e*P		Pn	Pn	08 44 53.2	+2.0
BOAV				*e*S		Sn	Sn	08 47 00.0	+0.3
MASC	Masc	11.65	339	P		Pn	Pn	08 44 55.4	+1.5
MTDJ	Mount Denham	11.65	320	Pn		Pn	Pn	08 44 52.2	-1.8
MTDJ	Mount Denham	11.65	320	P		Pn	Pn	08 44 54.9	+0.9
	29nm,1.2s								
GTBY	Guantanamo Bay	11.77	335	P		Pn	Pn	08 44 56.2	+0.7
GTBY	Guantanamo Bay	11.77	335	P		Pn	Pn	08 44 56.5	+1.0
NMDO	Nuevo Mundo	12.29	336	Pn		Pn	Pn	08 45 01.4	-1.2
JTS	Las Juntas de	15.00	275	Pn		Pn	Pn	08 45 40.0	+0.3
	0.2nm,0.3s,baz=110,slow=22,SNR=3.5								
	8.2nm,1.0s								
MACA	Manacapuru-AM	15.32	143	*e*P		Pn	Pn	08 45 42.2	-1.8
MACA				*e*S		Sn	Sn	08 48 28.2	-5.9
SIUN	Universidad Ur	15.35	288	Pn		Pn	Pn	08 45 42.8	-1.6
BOAB	BOACO BROADBAN	16.93	283	Pn		Pn	Pn	08 45 51.2	-0.7
BOAB				IAmb		IAmb	IAmb	08 46 14.0	
	comp=Z,30nm,1.0s								
CZSB	Cruzeiro do Su	17.16	190	Pn		P	Pn	08 46 08.7	-0.5
CZSB	Cruzeiro do Su	17.16	190	*e*P		Pn	Pn	08 46 02.0	-5.5
CZSB				*e*S		Sn	Sn	08 49 04.3	-14
MDP	Montagnes des	17.49	103	P		P	P	08 46 12.7	-0.2
	comp=Z,3.8nm,0.4s,baz=291,slow=14,SNR=14								
MDP				S		Sn	Sn	08 49 19.6	-7.1
	comp=Z,4.4nm,0.5s,baz=218,slow=22,SNR=2.1								
MDP				Lg		Lg	Lg	08 51 16.2	
	comp=Z,0.6nm,0.3s,baz=16,slow=20,SNR=3.8								
TGUH	Tegucigalpa,Un	17.79	287	Pn		Pn	Pn	08 46 14.6	-0.9
ATAH	Atahualpa	18.44	208	P		Pn	Pn	08 46 26.1	+2.2
	comp=Z,0.2nm,0.3s,baz=27,slow=11,SNR=1.8								
	comp=Z,3.0nm,0.6s								
ITTB	Itaituba	19.48	134	*e*P		Pn	Pn	08 46 36.1	+0.1
ITTB				*e*S		Sn	Sn	08 50 11.8	-3.2
MTO3	Montecristo	19.84	287	P		P	P	08 46 38.2	-0.7
TEIG	Tepich	20.92	303	LR		LR	LR	08 55 03.8	
	comp=Z,11nm,20.2s,baz=184,slow=38								
TEIG	Tepich	20.92	303	P		P	P	08 46 49.3	-1.1
TEIG	Tepich	20.92	303	P		P	P	08 46 51.5	+1.1
APG	El Apazote	21.01	288	P		P	P	08 46 50.5	-1.2
	comp=Z,0.7nm,0.8s,baz=117,slow=11,SNR=6.5								
VILB	Vilhena	24.05	157	P		P	P	08 47 24.4	+1.3
VILB				IAmb		IAmb	IAmb	08 47 41.0	
	comp=Z,12nm,0.7s								
VILB	Vilhena	24.05	157	*e*P		P	P	08 47 21.7	-1.4
VILB				*e*S		S	S	08 51 36.0	-4.9
456A	Hilliard	24.20	334	P		P	P	08 47 23.0	-1.4
CLDB	Colider	24.38	145	*e*P		P	P	08 47 25.7	-0.4
CLDB				*e*S		S	S	08 51 43.4	-2.7
CLDB	Colider	24.38	145	P		P	P	08 47 28.9	+2.8
PRPB	Parauapebas	25.12	127	*e*P		P	P	08 47 34.8	+1.8
PRPB				*e*S		S	S	08 51 59.2	+0.9
LPAZ	La Paz	25.46	176	P		P	P	08 47 40.6	+4.0
	comp=Z,0.9nm,0.6s,baz=351,slow=14,SNR=19								
LPAZ				Lg		Lg	Lg	08 55 37.4	
	comp=Z,0.1nm,0.3s,baz=164,slow=24,SNR=4.4								
	comp=Z,0.9nm,0.6s								
LPAZ	La Paz	25.46	176			P	P	08 47 38.8	+2.2
LPAZ	La Paz	25.46	176	*e*P		P	P	08 47 34.1	-2.5
LPAZ				*e*S		S	S	08 51 56.4	-8.2
TIGA	Tifton	25.52	332	P		P	P	08 47 35.9	-0.4
PTLB	Pontes e Lacer	26.74	157	*e*P		P	P	08 47 46.3	-1.1
PTLB				*e*S		S	S	08 52 18.9	-4.7
152A	Waverly Hall	27.07	331	P		P	P	08 47 49.0	-1.3
152A				IAmb		IAmb	IAmb	08 47 59.7	
	comp=Z,11nm,1.0s								
PB12	IPOC Station P	27.73	181	P		P	P	08 47 57.5	+1.0
PB12				IAmb		IAmb	IAmb	08 48 41.5	
	comp=Z,16nm,1.2s								
BBSD	Serra de San D	27.82	161	*e*P		P	P	08 47 55.0	-2.2
BBSD				*e*S		S	S	08 52 35.3	-5.5
KMSC	Kings Mountain	27.82	339	P		P	P	08 47 56.9	-0.2
KMSC				IAmb		IAmb	IAmb	08 48 17.6	
	comp=Z,11nm,1.1s								
SNDB	Serra Nova Dou	27.99	139	*e*P		P	P	08 47 59.1	+0.3
SNDB				*e*S		S	S	08 52 40.9	-2.6
T59A	Double "B" Far	28.45	347	P		P	P	08 48 02.0	-0.6
T59A				IAmb		IAmb	IAmb	08 48 36.8	
	comp=Z,13nm,1.2s								
LRAL	Lakeview Retre	28.49	329	P		P	P	08 48 01.9	-1.2
LRAL				IAmb		IAmb	IAmb	08 48 04.9	
	comp=Z,14nm,1.4s								
SMTB	Santa Maria do	28.51	129	*e*P		P	P	08 48 05.2	+1.7
SMTB				*e*S		S	S	08 52 51.3	-0.4
SALV	Santo Antonio	28.64

comp=Z,0.3nm,0.5s,baz=133,slow=8.4,SNR=8.4
TXAR PcP **PcP** **08 51 40.0 -0.2**
comp=Z,0.2nm,0.6s,baz=107,slow=4.6,SNR=1.9
comp=Z,0.3nm,0.5s
TXAR **Lajitas Array** **37.49 307** P **P** **08 49 21.1 -0.6**
TXAR **PcP** **08 51 40.2 0.0**
TX31 **Lajitas Ar. Si** **37.49 307** P **P** **08 49 21.3 -0.5**
N38A **Joes South For** **37.65 330** P **P** **08 49 22.9 +0.1**
N38A IAmb IAmb 08 49 23.5
comp=Z,11nm,0.6s
MNHN **Monahans** **37.69 310** IAmb IAmb 08 49 31.3
comp=Z,5.0nm,0.6s
L40A **Anamosa** **37.71 334** IAmb IAmb 08 49 31.3
comp=Z,7.0nm,0.9s
JFWS **Jewell Farm** **37.99 335** IAmb IAmb 08 49 26.8
comp=Z,10.0nm,0.7s
TPB06 **Permian Basin** **38.18 310** IAmb IAmb 08 49 36.1
comp=Z,6.2nm,0.8s
TPB01 **Permian Basin** **38.28 309** IAmb IAmb 08 49 36.3
comp=Z,2.5nm,0.7s
MSTX **Muleshoe** **39.01 314** P **P** **08 49 34.3 -0.2**
MNTX **Cornudas Mount** **39.84 309** P **P** **08 49 43.3 +1.9**
ALQ **Albuquerque** **42.13 313** P **P** **08 49 59.2 -1.2**
MT03 **Universidad Ad** **42.55 181** P **P** **08 50 06.6 +2.9**
MT03 IAmb IAmb 08 50 41.3
comp=Z,25nm,1.2s
EYMN **Ely** **42.68 338** P **P** **08 50 04.4 -0.1**
EYMN **Ely** **42.68 338** P **P** **08 50 04.5 0.0**
SDCO **Great Sand Dun** **42.87 317** P **P** **08 50 06.9 +0.3**
ISCO **Idaho Springs** **44.06 320** P **P** **08 50 17.1 +0.9**
AGMN **Agassiz Nation** **44.66 335** P **P** **08 50 20.2 -0.2**
AGMN IAmb IAmb 08 50 21.4
comp=Z,7.2nm,0.8s
AGMN **Agassiz Nation** **44.66 335** P **P** **08 50 20.6 +0.2**
ML02 **Panimavida** **44.83 182** P **P** **08 50 19.6 -2.3**
EPLO **Experimental L** **44.94 338** IAmb IAmb 08 50 23.0
comp=Z,5.5nm,0.7s
PV01 **Paradox Valley** **45.16 316** IAmb IAmb 08 50 34.6
comp=Z,5.4nm,1.0s
PV13 **Radium Mtn., P** **45.34 316** IAmb IAmb 08 50 35.9
comp=Z,11nm,1.2s
PV03 **Paradox Valley** **45.41 316** IAmb IAmb 08 50 37.1
comp=Z,8.8nm,1.2s
PV16 **Nyswonger Mesa** **45.48 316** P **P** **08 50 27.0 -0.4**
PV16 IAmb IAmb 08 50 37.6
comp=Z,11nm,1.3s
SCHQ **Schefferville** **45.48 2** P **P** **08 50 27.3 +0.4**
comp=Z,4.9nm,0.8s,baz=239,slow=8.6,SNR=3.7
comp=Z,4.9nm,0.8s
SCHQ **Schefferville** **45.48 2** P **P** **08 50 26.7 -0.2**
PV05 **Paradox Valley** **45.50 315** IAmb IAmb 08 50 31.1
comp=Z,4.2nm,0.8s
PV04 **Paradox Valley** **45.51 316** P **P** **08 50 26.8 -0.9**
PV04 IAmb IAmb 08 50 42.3
comp=Z,5.7nm,1.2s
E28A **Huff** **45.56 330** P **P** **08 50 27.6 -0.1**
ULM **Lac du Bonnet** **46.22 337** P **P** **08 50 31.4 -1.4**
comp=Z,3.9nm,0.7s,baz=140,slow=8.1,SNR=7.1
ULM LR LR 09 11 57.7
comp=Z,256nm,20.7s,baz=216,slow=39
comp=Z,3.9nm,0.7s
ULM **Lac du Bonnet** **46.22 337** P **P** **08 50 32.2 -0.5**
ULM IAmb IAmb 08 50 32.8
comp=Z,4.2nm,0.7s
HMU **Henry Mountain** **46.58 314** P **P** **08 50 35.8 -0.4**
HMU IAmb IAmb 08 50 46.8
comp=Z,6.2nm,1.1s
SRU **San Rafael Swe** **46.97 316** P **P** **08 50 38.3 -0.7**
P18A **Preston Nutter** **47.02 317** P **P** **08 50 38.6 -1.1**
P18A IAmb IAmb 08 50 49.0
comp=Z,6.8nm,1.2s
P17A **Butcher Ranch,** **47.29 316** IAmb IAmb 08 50 51.3
comp=Z,4.5nm,1.0s
KNB **Kanab** **47.67 312** IAmb IAmb 08 51 00.7
comp=Z,5.0nm,1.0s
BSUT **Blindstream Ca** **47.81 318** IAmb IAmb 08 50 55.1
comp=Z,6.0nm,1.2s
BW06 **Boulder Array** **48.17 321** P **P** **08 50 48.4 0.0**
BW06 IAmb IAmb 08 50 56.7
comp=Z,7.1nm,1.3s
PD31 **Pinedale Array** **48.17 321** P **P** **08 50 48.4 0.0**
PD31 IAmb IAmb 08 50 56.7
comp=Z,7.2nm,1.3s
PDAR **Pinedale Array** **48.17 321** P **P** **08 50 48.6 +0.2**
comp=Z,1.1nm,0.6s,baz=125,slow=10,SNR=16
PDAR PcP **PcP** **08 52 15.0 -0.8**
comp=Z,0.4nm,0.6s,baz=126,slow=4.9,SNR=1.8
comp=Z,1.1nm,0.6s
PDAR **Pinedale Array** **48.17 321** P **P** **08 50 48.0 -0.4**
PDAR **PcP** **08 52 15.1 -0.8**
CCUT **Cedar City** **48.28 313** P **P** **08 50 48.5 -0.9**
AHID **Auburn Hatcher** **49.14 320** P **P** **08 50 56.2 +0.4**
RLMT **Red Lodge** **49.27 324** IAmb IAmb 08 51 04.5
comp=Z,8.5nm,1.4s
SNOW **Snow King Moun** **49.28 321** IAmb IAmb 08 51 06.9
comp=Z,11nm,1.4s
PLCA **Paso Flores** **49.77 181** P **P** **08 51 03.7 +3.3**
comp=Z,7.6nm,0.7s,baz=334,slow=5.6,SNR=9.7
comp=Z,7.6nm,0.7s
PLCA **Paso Flores** **49.77 181** P **P** **08 51 02.3 +1.8**
GWY **Greenwater Val** **50.22 310** P **P** **08 51 04.8 +0.6**
GWY IAmb IAmb 08 51 14.0
comp=Z,13nm,1.5s
QLMT **Earthquake Lak** **50.41 322** P **P** **08 51 05.2 -0.3**
HLID **Hailey** **51.64 319** P **P** **08 51 15.2 +0.5**
FFC **Flin Flon** **52.05 337** P **P** **08 51 16.8 -0.5**
NVAR **Mina Array Bea** **52.23 312** P **P** **08 51 18.9 -0.4**
comp=Z,0.7nm,0.7s,baz=118,slow=7.4,SNR=5.5
comp=Z,0.7nm,0.7s
PINE **Pine Mountain** **56.03 317** IAmb IAmb 08 51 60.0
comp=Z,6.5nm,1.0s
EDM **Edmonton** **56.08 330** **P** **08 51 46.5 -0.4**
WAH2 **Wahluke Slope** **56.33 321** P **P** **08 51 49.1 +0.4**
WAH2 IAmb IAmb 08 51 50.0
comp=Z,7.2nm,1.2s
WIFE **Three Sisters-** **56.72 317** P **P** **08 51 52.3 +0.5**
WIFE IAmb IAmb 08 51 59.9
comp=Z,13nm,1.5s
BBOR **Butler Butte** **56.90 316** P **P** **08 51 52.8 -0.3**
H04A **Detroit Lake** **57.20 318** P **P** **08 51 55.9 +0.9**
H04A IAmb IAmb 08 52 31.6
comp=Z,7.8nm,1.2s
K02D **Willamette Mer** **57.52 315** P **P** **08 51 57.0 -0.4**
K02D PcP **PcP** **08 52 50.2 -0.7**
GO08 **Villa O'Higgin** **57.55 182** P **P** **08 51 59.9 +2.6**
GO08 IAmb IAmb 08 52 00.7
comp=Z,6.5nm,1.0s
I03D **Drain, OR** **57.63 316** P **P** **08 51 58.6 +0.6**
B04A **Port Angeles** **59.30 321** P **P** **08 52 10.3 +0.7**
PGC **Sidney** **59.49 322** P **P** **08 52 11.6 +0.7**
CBB **Campbell River** **61.17 323** P **P** **08 52 23.3 +1.0**
CBB IAmb IAmb 08 53 02.9
comp=Z,7.0nm,1.1s
YKA **Yellowknife Ar** **62.16 338** P **P** **08 52 28.3 -0.5**
comp=Z,1.8nm,0.6s,baz=124,slow=6.6,SNR=8.6
comp=Z,1.8nm,0.6s
YKA **Yellowknife Ar** **62.16 338** P **P** **08 52 29.3 +0.5**
YKAW3 **Yellowknife Wh** **62.21 338** P **P** **08 52 29.2 +0.1**
YKAW3 IAmb IAmb 08 52 34.8
comp=Z,2.8nm,0.8s
BBB **Bella Bella** **63.56 324** P **P** **08 52 39.5 +1.2**
HG4B **Hotspring** **65.39 324** P **P** **08 52 50.8 +0.5**
SUMG **Summit** **65.99 10** P **P** **08 52 55.2 +1.0**
MOBC **Moresby Island** **66.09 324** P **P** **08 52 55.3 +0.4**
RES **Resolute Bay** **66.92 353** LR LR 09 21 52.1
comp=Z,248nm,20.6s,baz=228,slow=36
R33M **Jennings River** **67.60 331** P **P** **08 53 05.9 +1.4**
Q32M **Nakina River** **68.08 330** P **P** **08 53 08.9 +1.3**
Q32M IAmb IAmb 08 53 24.2
comp=Z,6.1nm,1.2s
EKA **Eskdalemuir Ar** **69.17 34** P **P** **08 53 15.5 +1.3**
comp=Z,0.7nm,0.5s,baz=260,slow=4.1,SNR=4.3
comp=Z,0.7nm,0.5s
TORD **Torodi Ar. Bea** **70.00 79** P **P** **08 53 21.1 +0.9**
comp=Z,0.6nm,0.5s,baz=285,slow=6.3,SNR=8.8
comp=Z,0.6nm,0.5s
M31M **Drury Creek, Y** **70.13 333** P **P** **08 53 21.7 +1.6**
O30N **Mendenhall** **70.47 332** P **P** **08 53 23.7 +1.5**
O30N IAmb IAmb 08 53 31.7
comp=Z,5.5nm,0.9s
N30M **Aishikik Lake** **71.13 332** P **P** **08 53 27.8 +1.5**
N30M IAmb IAmb 08 53 35.4
comp=Z,2.8nm,0.8s
H31M **Peel River** **71.29 337** P **P** **08 53 27.5 +0.4**
M30M **Minto, Yukon** **71.31 333** IAmb IAmb 08 53 28.7
comp=Z,5.5nm,1.1s

F31M **Tsiigehtchic** **71.64 339** IAmb IAmb 08 53 37.5
comp=Z,9.9nm,1.2s
G31M **Satah River** **71.65 338** IAmb IAmb 08 53 30.3
comp=Z,5.5nm,0.9s
INK **Inuvik** **71.88 339** P **P** **08 53 30.7 +0.2**
INK IAmb IAmb 08 53 31.1
comp=Z,4.5nm,1.2s
INK **Inuvik** **71.88 339** P **P** **08 53 30.0 -0.5**
I30M **Mount Dempster** **71.91 336** IAmb IAmb 08 53 40.0
comp=Z,5.0nm,1.0s
DAG **Danmarks Havn** **72.62 11** P **P** **08 53 34.7 -0.1**
DAG **Danmarks Havn** **72.62 11** *i* P **P** **08 53 34.0 -0.8**
H29M **Whitestone** **72.99 337** IAmb IAmb 08 53 46.1
comp=Z,3.5nm,0.8s
G29M **Pine Creek** **73.05 337** P **P** **08 53 38.0 +0.4**
G29M IAmb IAmb 08 53 50.4
comp=Z,4.8nm,0.8s
E29M **Blow River** **73.43 339** IAmb IAmb 08 53 46.2
comp=Z,4.8nm,1.0s
BCAR **Beaver Creek A** **73.65 333** P **P** **08 53 42.0 +0.8**
F28M **Old Crow** **73.93 338** IAmb IAmb 08 54 00.3
comp=Z,3.4nm,0.8s
SENIN **Lac Senin/Sane** **74.41 44** P **P** **08 53 46.6 +0.3**
SENIN IAmb IAmb 08 53 49.0
comp=Z,3.7nm,0.8s
ECH **Echery** **74.42 43** P **P** **08 53 46.1 +0.1**
ECH IAmb IAmb 08 53 48.3
comp=Z,4.7nm,1.1s
BMRM **Bremner River** **74.58 331** IAmb IAmb 08 53 49.0
comp=Z,5.8nm,0.6s
E27K **Coleen River** **74.71 338** P **P** **08 53 47.4 +0.1**
SCM **Sheep Creek Mo** **76.00 331** P **P** **08 53 56.0 +1.2**
ILAR **Eielson Array** **76.16 335** P **P** **08 53 55.4 -0.3**
comp=Z,0.4nm,0.6s,baz=102,slow=4.1,SNR=6.3
comp=Z,0.4nm,0.6s
ILAR **Eielson Array** **76.16 335** P **P** **08 53 55.6 0.0**
PMR **Palmer** **76.83 331** P **P** **08 53 59.4 0.0**
PMR IAmb IAmb 08 54 04.2
comp=Z,4.1nm,1.1s
F24K **Squaw Lake** **76.93 337** P **P** **08 54 00.9 +0.9**
SLKM **Skilak Lake** **77.27 330** P **P** **08 54 03.1 +1.0**
NB2 **NORSAR Subarra** **77.56 29** P **P** **08 54 05.7 +2.0**
comp=Z,1.0nm,0.7s,baz=268,slow=5.9
NOA **NORSAR Array B** **77.56 29** P **P** **08 54 05.4 +1.8**
comp=Z,2.2nm,0.9s,baz=265,slow=5.7,SNR=8.1
comp=Z,2.2nm,0.9s
BRLK **Bradley Lake** **77.56 329** P **P** **08 54 04.8 +1.1**
G23K **Bananza Creek** **77.67 336** P **P** **08 54 05.3 +1.1**
CNPM **China Poot** **77.73 329** P **P** **08 54 05.4 +0.8**
NC405 **NORSAR Array S** **77.81 29** P **P** **08 54 06.4 +1.4**
D23K **Nanushuk River** **78.12 339** P **P** **08 54 07.7 +1.1**
D23K IAmb IAmb 08 54 39.6
comp=Z,4.5nm,1.1s
HFS **Hagfors** **78.75 30** P **P** **08 54 09.5 -0.7**
comp=Z,1.2nm,0.6s,baz=228,slow=5.6,SNR=1.8
comp=Z,1.2nm,0.6s
GERES **GERESS Array B** **78.78 42** P **P** **08 54 12.2 +1.5**
comp=Z,1.8nm,0.6s,baz=256,slow=5.4,SNR=12
comp=Z,1.8nm,0.6s
GERES **GERESS Array B** **78.78 42** P **P** **08 54 12.1 +1.4**
SPITS **Spitsbergen Ar** **80.18 12** P **P** **08 54 18.9 +1.2**
comp=Z,2.3nm,0.5s,baz=180,slow=3.3,SNR=13
comp=Z,2.3nm,0.5s
G18K **Tagagawik** **81.14 335** P **P** **08 54 24.1 +1.1**
ARCES **ARCESS Array B** **83.21 21** P **P** **08 54 34.8 +1.0**
comp=Z,1.0nm,0.5s,baz=276,slow=4.6,SNR=10
comp=Z,1.0nm,0.5s
ARCES **ARCESS Array B** **83.21 21** P **P** **08 54 35.0 +1.2**
ARCES IAmb IAmb 08 54 41.8
comp=Z,6.9nm,1.4s
FINES **FINESS Array B** **84.70 29** P **P** **08 54 42.7 +1.1**
comp=Z,1.8nm,0.8s,baz=256,slow=3.9,SNR=7.1
comp=Z,1.8nm,0.8s
FINES **FINESS Array B** **84.70 29** P **P** **08 54 43.1 +1.5**
MMAI **Mount Meron Ar** **97.47 55** LR LR 09 41 29.6
comp=Z,63nm,18.0s,baz=110,slow=36
WMQ **Urumqi** **123.31 19** *e*PKP **PKiKP** **09 01 07.3 +1.8**
HHC **Hu-ho-hao-te** **130.10 359** *e*P **PKPdf** **09 01 14.8 -3.6**
NJ2 **Nanjing** **138.08 349** *e*P **PKPdf** **09 01 33.9 +0.5**
NJ2 pmax pmax
comp=Z,11nm,0.6s
PZH **PanZhiHua** **143.48 13** PKP **PKPdf** **09 01 43.3 -0.2**
YOJ **Yonaguni jima** **144.21 340** PKPdf PKPbc 09 01 43.5 +0.8
YHNB **Yeheng** **144.54 342** PKPdf **PKPab** **09 01 43.7 0.0**
NACB **Ninganchiao** **144.94 342** PKPdf **PKPab** **09 01 44.9 -0.2**
INKA **Innaminka** **145.89 233** PKPdf **PKPdf** **09 01 46.8 -0.6**
PALK **Pallekele** **146.29 62** PKPdf **PKPdf** **09 01 47.3 -1.3**
CMAR **Chiang Mai Arr** **150.26 22** PKPbc **PKPbc** **09 02 00.2 +0.2**
comp=Z,0.8nm,0.3s,baz=327,slow=3.9,SNR=5.5
ASAR **Alice Springs** **153.24 235** PKPbc **PKPbc** **09 02 06.0 -0.8**
comp=Z,0.8nm,0.6s,baz=108,slow=2.5,SNR=9.1
WRA **Warramunga Arr** **154.42 243** PKPbc **PKPbc** **09 02 08.8 -0.5**
comp=Z,0.7nm,0.7s,baz=106,slow=2.8,SNR=12

IDC 13 08:48:33.3±0.3, 6.35S×129.88E, h76km±39km, mb3.7/1, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=68.6km s-min=23.0km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.62**	**14**	P			Pn	08 49 54.5	+0.2
	2.1nm,0.3s,baz=225,slow=18,SNR=6.5								
SIJI				S			Sn	08 50 53.0	-4.6
	16nm,0.2s,baz=135,slow=23,SNR=6.1								
	8.1nm,0.3s								
FITZ	**Fitzroy Crossi**	**12.39**	**199**	P			Pn	08 51 28.4	+1.7
	0.4nm,0.3s,baz=30,slow=13,SNR=11								
FITZ				S			Sn	08 53 36.2	-6.8
	2.3nm,0.3s,baz=171,slow=20,SNR=8.4								
	1.8nm,0.7s								
WRA	**Warramunga Arr**	**14.19**	**163**	P			Pn	08 51 48.7	-1.9
	0.2nm,0.3s,baz=340,slow=13,SNR=11								
WRA				S			Sn	08 54 14.7	-12
	1.0nm,0.5s,baz=339,slow=22,SNR=8.4								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**17.64**	**168**	P			P	08 52 34.1	0.0
	0.1nm,0.3s,baz=350,slow=10,SNR=8.0								
ASAR				S			Sn	08 55 38.6	-12
	0.6nm,0.8s,baz=184,slow=15,SNR=4.3								
	0.4nm,0.6s								
MKAR	**Makanchi Array**	**67.62**	**327**	P			P	08 59 22.1	0.0
	0.7nm,0.4s,baz=117,slow=7.8,SNR=11								
	0.7nm,0.4s								

SJA ***13*** *09:19:14.5±0.7, 29.99S×70.83W, h90km±3km, ML3.5, MW3.5*
GUC ***13*** *09:19:15.6±0.8, 30.01S×70.75W, h88km±3km, ML3.9*
ISC 13 09:19:14.9±1.3, 30.02S±0.03×70.84W±0.04, h92km±7km, n40, σ2s14/62, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.16**	**166**	*e*P			**Pn**	**09 19 28.3**	**0.0**
GO04				*e*S			**Sn**	**09 19 38.8**	**+0.5**
GO04				IAML				09 19 39.1	
	comp=Z,2μm,0.2s								
GO04	**Tololo Observa**	**0.16**	**166**	*e*P			**Pn**	**09 19 27.9**	**-0.4**
GO04				*e*S			**Sn**	**09 19 37.6**	**-0.6**
CO05	**La Serena**	**0.36**	**286**	↓*i*P			**Pn**	**09 19 29.4**	**+0.5**
CO05				*e*S			**Sn**	**09 19 39.5**	**+0.3**
CO05				IAML				09 19 40.3	
	comp=N,6μm,0.2s								
CO01	**Juntas del Tor**	**0.65**	**86**	*i* P			**Pn**	**09 19 30.8**	**-0.7**
CO01				*e*S			**Sn**	**09 19 42.0**	**-1.7**
CO01				IAML				09 19 42.4	
	comp=E,5μm,0.2s								
LCO	**Las Campanas**	**1.01**	**7**	*e*P			**Pn**	**09 19 34.6**	**-0.6**
LCO				*e*S			**Sn**	**09 19 49.5**	**-0.9**
LCO				IAML				09 19 53.0	
	comp=E,5μm,0.2s								
CO02	**Combarbal**	**1.19**	**187**	*e*P			**Pn**	**09 19 37.7**	**+0.6**
CO02				*e*S			**Sn**	**09 19 54.9**	**+1.2**
CO02				IAML				09 19 56.2	
	comp=Z,1μm,0.1s								
CO02	**Combarbal**	**1.19**	**187**	↓*i*P			**Pn**	**09 19 37.6**	**+0.5**
CO02				*e*S			**Sn**	**09 19 54.2**	**+0.5**
CO02				IAML				09 19 56.4	
	comp=N,8μm,0.1s								
AROD	**Rodeo**	**1.20**	**97**	*e*P			**Pn**	**09 19 38.1**	**+0.7**
AROD				*e*S			**Sn**	**09 19 55.9**	**+1.7**
AC05	**El Transito**	**1.28**	**23**	↑*i*P			**Pn**	**09 19 38.4**	**+0.1**
AC05				*e*S			**Sn**	**09 19 55.1**	**-0.6**
AC05				IAML				09 19 56.0	
	comp=N,2μm,0.2s								

ACDV **Cuesta del Vie** **1.50 96** *e*P **Pn** **09 19 41.7 +0.7**
ACDV *e*S **Sn** **09 20 02.2 +1.6**
ACDV IAML 09 20 02.8
comp=Z,242nm,0.6s
ACCO **Cerro Coronel** **1.64 111** *e*P **Pn** **09 19 44.1 +1.3**
ACCO *e*S **Sn** **09 20 06.0 +2.0**
AC04 **Llanos de Chal** **1.82 354** *e*P **Pn** **09 19 45.7 +0.8**
CO04 **Los Peladeros** **2.02 183** ↓*i*P **Pn** **09 19 48.4 +0.7**
CO04 IAML 09 20 18.9
comp=N,1μm,0.1s
RTLS **Leoncito** **2.21 144** *e*P **Pn** **09 19 52.7 +2.4**
RTLS *e*S **Sn** **09 20 13.5 -3.8**
RTLS *e*S 09 20 20.9
RTLS IAML 09 20 26.6
comp=Z,340nm,0.3s
ZON **Zonda** **2.40 130** *e*P **Pn** **09 19 53.9 +1.3**
ZON *e*S **Sn** **09 20 21.5 +0.1**
RTLL **Cerro Villicun** **2.42 123** *e*P **Pn** **09 19 54.5 +1.7**
RTLL *e*S **Sn** **09 20 22.9 +1.1**
RTLL IAML 09 20 28.6
comp=Z,190nm,0.4s
GO03 **Copiapo** **2.48 13** *e*P **Pn** **09 19 54.4 +0.8**
GO03 *e*S **Sn** **09 20 26.6 +3.4**
GO03 IAML 09 20 29.2
comp=Z,181nm,0.2s
GO03 **Copiapo** **2.48 13** *e*P **Pn** **09 19 53.7 +0.1**
GO03 IAML 09 20 27.9
comp=N,397nm,0.4s
AUSP **Uspallata** **2.53 151** *e*P **Pn** **09 19 57.1 +2.7**
AUSP *e*S **Sn** **09 20 18.5 -6.2**
VCA **Vinchina** **2.63 62** *e*P **Pn** **09 19 57.9 +2.1**
VCA *e*S **Sn** **09 20 27.0 -0.1**
VCA IAML 09 20 35.0
comp=Z,437nm,0.7s
VA03 **San Esteban** **2.75 175** *e*P **Pn** **09 19 58.6 +1.4**
VA03 *e*S **Sn** **09 20 29.0 -0.6**
VA03 IAML 09 20 36.1
comp=Z,253nm,0.3s
VA03 **San Esteban** **2.75 175** *e*P **Pn** **09 19 58.5 +1.4**
VA03 IAML 09 20 39.9
comp=E,568nm,0.2s
ROCH **El Roble** **2.95 183** *e*P **Pn** **09 20 00.5 +0.5**
ROCH IAML 09 20 46.7
comp=N,442nm,0.3s
AVFE **Valle Fertil** **3.00 103** *e*P **Pn** **09 20 00.8 +0.3**
AVFE *e*S **Sn** **09 20 35.0 -0.6**
AVFE IAML 09 20 42.6
comp=Z,114nm,0.3s
PEL **Peldehue** **3.12 178** *e*P **Pn** **09 20 03.9 +1.8**
PEL *e*S **Sn** **09 20 36.5 -2.0**
PEL IAML 09 20 45.8
comp=Z,113nm,0.4s
PEL **Peldehue** **3.12 178** *e*P **Pn** **09 20 03.1 +1.0**
PEL IAML 09 20 51.6
comp=N,140nm,0.2s
ARCO **CERRO ARCO** **3.25 150** *e*P **Pn** **09 20 06.8 +2.8**
ARCO *e*S **Sn** **09 20 43.0 +1.1**
ARCO IAML 09 20 54.0
comp=Z,66nm,0.5s
MT10 **Hacienda Santa** **3.25 175** *e*P **Pn** **09 20 05.3 +1.3**
MT10 IAML 09 20 57.0
comp=E,362nm,0.3s
MT14 **Cerro Cal¡n** **3.38 176** *e*P **Pn** **09 20 06.6 +1.0**
MT14 IAML 09 20 59.0
comp=N,209nm,0.4s
MT16 **CCHEN** **3.41 175** IAML 09 21 09.8
comp=N,98nm,0.8s
ACLC **CERRO LA CRUZ** **3.44 81** *e*P **Pn** **09 20 07.0 +0.5**
ACLC *e*S **Sn** **09 20 43.0 -3.4**
ACLC *e*S 09 20 47.4
ACLC IAML 09 20 52.7
comp=Z,79nm,0.3s
TINO **Tinogasta** **3.47 57** *e*P **Pn** **09 20 07.7 +0.8**
TINO *e*S **Sn** **09 20 51.9 +4.8**
TINO IAML 09 20 54.4
comp=Z,68nm,0.5s
AAGR **Agrelo** **3.50 151** *e*P **Pn** **09 20 10.6 +3.2**
AC02 **Maricunga** **3.51 26** *e*P **Pn** **09 20 08.5 +0.6**
AC02 *e*S **Sn** **09 20 44.0 -4.8**
AC02 IAML 09 20 59.7
comp=Z,52nm,0.3s
AC02 **Maricunga** **3.51 26** *e*P **Pn** **09 20 08.3 +0.4**
AC02 IAML 09 20 59.8
comp=N,118nm,0.3s
VA05 **Santo Domingo** **3.68 190** *e*P **Pn** **09 20 08.8 -0.9**
ACAN **Cantantal** **3.85 127** *e*P **Pn** **09 20 12.6 +0.5**
ACAN IAML 09 21 01.0
comp=Z,204nm,0.8s
MRA **San Martin** **5.00 120** *e*P Pn 09 20 21.4 -6.2
MRA *e*S Sn 09 21 13.5 -11
MRA *e*S 09 21 18.5
MRA IAML 09 21 21.4
comp=Z,46nm,0.6s
TCA **Tanti** **5.54 105** *e*P **Pn** **09 20 34.8 -0.2**
TCA *e*S **Sn** **09 21 29.5 -7.9**
TCA IAML 09 21 40.7
comp=Z,29nm,0.7s
FSA **Cafayete** **5.80 49** *e*P Pn 09 20 34.0 -4.6
FSA *e*S Sn 09 21 52.7 +8.8

SJA 13 09:55:50.7±0.6, 24.05S×66.76W, h226km±4km, ML3.1, MW3.5, Salta Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SALTA		**0.42**	**114**	*e*P			Pn	09 56 21.2	+0.1
SALTA				*e*P			P	09 56 21.4	+0.2
SALTA				*e*P			P	09 56 21.4	+0.2
SLA	**San Lorenzo**	**1.32**	**120**	*e*P			Pn	09 56 26.2	+0.6
HJA	**Humahuaca**	**1.50**	**56**	*e*P			Pn	09 56 27.8	+0.6
AF01	**San Pedro de A**	**1.70**	**310**	*e*P			Pn	09 56 30.3	+1.5
AF01				*e*S			S	09 56 57.7	-0.7
FSA	**Cafayete**	**2.17**	**161**	*e*P			Pn	09 56 33.6	+0.6
FSA				*e*S			S	09 57 03.9	-2.2
PB06	**IPOC Station P**	**2.91**	**297**	*e*S			S	09 57 17.6	-2.5
PB06				IAML				09 57 19.1	
	comp=Z,59nm,0.3s								
AHML	**Horco Molle**	**3.01**	**155**	*e*P			Pn	09 56 35.9	-5.9
PB09	**IPOC Station P**	**3.21**	**314**	*e*P			Pn	09 56 45.4	+1.1
PB09				IAML				09 57 52.5	
	comp=Z,34nm,3.4s								
PB14	**IPOC Station P**	**3.37**	**260**	*e*P			Pn	09 56 47.0	+0.7
PB14				*e*S			S	09 57 28.7	-1.2
PB14				IAML				09 57 29.4	
	comp=Z,24nm,0.5s								
PB05	**IPOC Station P**	**3.38**	**290**	*e*P			Pn	09 56 46.6	+0.4
PB05				*e*S			S	09 57 26.7	-3.0
PB05				IAML				09 57 31.9	
	comp=Z,30nm,0.5s								
PB03	**IPOC Station P**	**3.40**	**305**	*e*P			Pn	09 56 46.7	+0.2
PB03				IAML				09 57 30.4	
	comp=Z,80nm,0.5s								
AC02	**Maricunga**	**3.50**	**217**	*e*P			Pn	09 56 48.7	+0.7
AC02				*e*S			S	09 57 36.6	+3.6
AC02				IAML				09 58 11.4	
	comp=Z,9.8nm,2.6s								
PB07	**IPOC Station P**	**3.70**	**308**	*e*P			Pn	09 56 49.9	-0.1
PB07				IAML				09 57 36.5	
	comp=Z,53nm,0.3s								
PB02	**IPOC Station P**	**3.97**	**313**	*e*P			Pn	09 56 53.8	+0.5
PB02				IAML				09 57 48.1	
	comp=Z,45nm,0.3s								
AC01	**Pan de Azucar**	**4.06**	**238**	*e*P			Pn	09 56 53.9	-0.2
AC01				*e*S			S	09 57 42.0	-2.1
AC01				IAML				09 57 42.4	
	comp=Z,18nm,0.8s								
TINO	**Tinogasta**	**4.06**	**190**	*e*P			Pn	09 56 56.0	+1.7
TINO				*e*S			S	09 57 47.6	+3.2
TINO				IAML				09 57 55.5	
	comp=Z,8.3nm,3.0s								
PB08	**IPOC Station P**	**4.48**	**330**	*e*P			Pn	09 57 01.1	+1.4
PB08				IAML				09 57 58.6	
	comp=Z,7.4nm,1.1s								
GO01	**Chusmiza**	**4.91**	**332**	*e*P			Pn	09 57 06.6	+1.4
GO01				*e*S			S	09 58 03.8	-0.2
GO01				IAML				09 58 04.3	
	comp=Z,8.8nm,1.6s								
PB11	**IPOC Station P**	**5.05**	**327**	*e*P			Pn	09 57 07.5	+0.9
PB11				*e*S			S	09 58 03.6	-2.9
PB11				IAML				09 58 06.2	
	comp=Z,9.8nm,0.2s								
ACLC	**CERRO LA CRUZ**	**5.36**	**182**	*e*P			Pn	09 57 11.1	+0.7
ACLC				*e*P				09 57 11.2	

ACLC				eS	S	09 58 11.1	-2.5
ACLC				IAML		09 58 26.2	
	comp=Z,5.9nm,3.8s							

KRSC 13 10:22:38.3±2.6, 54°.48N×166°.08E, h20km±28km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.73**	**355**	*eP*	Pb	10 22 52.0	-0.3
BKI				*eS*	Sb	10 23 00.4	-1.4
MKZ	**Mys Kozlova**	**2.54**	**274**	*eP*	Pb	10 23 22.3	-0.7
MKZ				*eS*	Sb	10 23 51.6	-2.1
TUMR	**Tumrok**	**3.52**	**286**	*eS*	Sb	10 24 18.8	-3.4
SPN	**Mys Shipunski**	**3.85**	**251**	*eS*	Sn	10 24 24.0	+3.2
SDLR	**Sedlovina**	**4.42**	**257**	*eS*	Sn	10 24 40.0	+4.9
KRER	**Koryakskii**	**4.49**	**258**	*eS*	Sn	10 24 41.7	+4.7
AVH	**Avacha**	**4.51**	**257**	*eS*	Sn	10 24 42.8	+5.5
KOK	**Koryaka**	**4.56**	**258**	*eP*	Pn	10 23 51.6	+5.5
DALK	**Dalny**	**4.58**	**255**	*eS*	Sn	10 24 27.7	+3.8
GNL	**Ganaly**	**4.86**	**264**	*eP*	Pb	10 23 56.4	-6.2
KRMR	**Karymshinskiy**	**5.01**	**254**	*eS*	Sn	10 24 55.2	+5.8
MTVR	**Mutnovka**	**5.12**	**250**	*eS*	Sn	10 24 56.7	+4.3
ASAK	**Asacha**	**5.32**	**250**	*eP*	Pn	10 24 02.4	+5.9
ASAK				*eS*	Sn	10 25 01.9	+4.7
KDTR	**Khodutka, Kamc**	**5.51**	**244**	*eS*	Sn	10 25 03.6	+2.0

*IDC **13** 10:34:00.6±2.2, 35°.64N×82°.49E, h0km, mb3.1/2, mbtmp3.6/7, ML2.9/5, MS3.1/2, Error ellipse: s-maj=45.7km s-min=20.4km az=62.0*

ISC 13 10:34:03.2±1.6, 35°.7N±0°.1×82°.8E±0°.2, h10km, n8, σ1§92/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**9.40**	**320**	Pn	**Pn**	**10 36 19.8**	**+0.9**
	0.1nm,0.3s,baz=137,slow=16,SNR=1.2						
AAK				Pg		10 36 48.2	
	0.3nm,0.3s,baz=128,slow=5.3,SNR=4.5						
AAK				Lg	Lg	10 38 53.8	
	0.4nm,0.3s,baz=192,slow=14,SNR=1.6						
AAK				LR	LR	10 40 32.5	
	comp=Z,72nm,20.6s,baz=144,slow=42 1.0nm,0.3s						
MKAR	**Makanchi Array**	**11.05**	**358**	Pn	**Pn**	**10 36 41.5**	**+0.2**
	0.7nm,0.3s,baz=184,slow=13,SNR=20						
MKAR				Sn	**Sn**	**10 38 44.7**	**-0.1**
	0.2nm,0.3s,baz=184,slow=21,SNR=4.3						
MKAR				Lg	Lg	10 39 52.2	
	baz=176,slow=25,SNR=2.1 2.4nm,0.5s						
KURBB	**Kurchatov Arra**	**15.18**	**350**	Pn	**Pn**	**10 37 34.4**	**-3.2**
	baz=173,slow=11,SNR=5.0 0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**18.26**	**4**	Pn	**Pn**	**10 38 15.8**	**-0.8**
	0.2nm,0.3s,baz=185,slow=12,SNR=4.8 1.0nm,0.5s						
BVAR	**Borovoye Array**	**19.36**	**337**	Pn	**P**	**10 38 27.8**	**-1.0**
	0.1nm,0.3s,baz=142,slow=12,SNR=7.2 1.9nm,0.5s						
SONM	**Songino Array**	**21.27**	**48**	P	**P**	**10 38 52.0**	**+2.2**
	0.3nm,0.5s,baz=257,slow=9.9,SNR=4.4 0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**22.40**	**136**	P	**P**	**10 39 01.0**	**-0.9**
	0.4nm,0.4s,baz=313,slow=13,SNR=6.0 0.4nm,0.4s						
AKTO	**Aktyubinsk**	**23.13**	**317**	LR	LR	10 48 44.5	
	comp=Z,57nm,18.1s,baz=40,slow=38						

*UPP **13** 10:49:05.7±2.5, 65°.27N×24°.68E, h0km, ML3.2, Presumed earthquake*
*HEL **13** 10:49:05.5±0.0, 65°.24N×24°.76E, h0km, ML2.2, Explosion*
*IDC **13** 10:49:06.0±0.7, 65°.20N×24°.90E, h0km, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=14.3km s-min=6.0km az=91.0*
*BER **13** 10:49:07.3±1.0, 65°.20N×24°.69E, h0km, ML3.2(UPP), Suspected explosion*

ISC 13 10:49:04.4±0.7, 65°.25N±0°.02×24°.72E±0°.03, h0km, n43, σ1§32/65, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUL	**Oulu**	**0.52**	**108**	*eP*	**Pg**	**10 49 14.7**	**+0.3**
OUL				*eS*	**Sg**	**10 49 21.0**	**-0.1**
OBF0	**Syolatti, Pyha**	**0.79**	**196**	*eP*	**Pg**	**10 49 19.5**	**+0.1**
OBF0				*eS*	**Sg**	**10 49 29.3**	**-0.3**
KALU	**Kalix**	**0.83**	**318**	*eP*	**Pg**	**10 49 20.8**	**+0.5**
KALU				*eS*	**Sg**	**10 49 31.7**	**+0.6**
TOF	**Tornio**	**0.85**	**349**	*eP*	**Pg**	**10 49 20.9**	**+0.3**
TOF				*eS*	**Sg**	**10 49 31.9**	**+0.3**
OUF	**Merijarvi**	**0.89**	**180**	*eP*	**Pg**	**10 49 21.3**	**-0.1**
OUF				*eS*	**Sg**	**10 49 32.2**	**-0.7**
OBF8	**Ulkokalla**	**1.07**	**211**	*eP*	**Pg**	**10 49 24.7**	**-0.3**
OBF8				*eS*	**Sg**	**10 49 38.5**	**-0.4**
RANF	**Ranua**	**1.15**	**47**	*eP*	**Pg**	**10 49 26.2**	**-0.2**
RANF				*eS*	**Sg**	**10 49 40.6**	**-0.6**
RNF	**Rovaniemi**	**1.46**	**21**	*eP*	**Pn**	**10 49 32.1**	**+0.1**
RNF				*eS*	**Sg**	**10 49 50.5**	**-0.8**
KU2	**Taivalkoski**	**1.53**	**71**	*eP*	**Pn**	**10 49 32.9**	**-0.1**
KU2				*eS*	**Sg**	**10 49 52.1**	**-1.4**
ERTU	**Ertsjaerv**	**1.67**	**323**	P	**Pn**	**10 49 35.8**	**+0.9**
ERTU				S	**Sn**	**10 49 58.0**	**+1.1**
ERTU	**Ertsjaerv**	**1.67**	**323**	P	**Pn**	**10 49 35.8**	**+0.9**
ERTU				S	**Sn**	**10 49 58.0**	**+1.1**
ERTU	**Ertsjaerv**	**1.67**	**323**	*eP*	**Pn**	**10 49 35.8**	**+0.9**
ERTU				*eS*	**Sn**	**10 49 57.3**	**+0.3**
HARU	**Harads**	**1.80**	**302**	P	**Pn**	**10 49 38.1**	**+1.4**
HARU	**Harads**	**1.80**	**302**	P	**Pn**	**10 49 38.1**	**+1.4**
MSF	**Maaselka**	**1.91**	**68**	*eP*	**Pg**	**10 49 39.5**	**+1.3**
MSF				*eS*	**Sn**	**10 50 03.2**	**+0.3**
KLF	**Kolari**	**2.02**	**352**	*eP*	**Pn**	**10 49 41.4**	**+1.8**
KLF				*eS*	**Sn**	**10 50 06.8**	**+1.3**
KLF				smax	smax	10 50 09.5	
	comp=Z,9.4nm,0.1s						
KU1	**Kurvinen**	**2.05**	**79**	*eP*	**Pn**	**10 49 41.2**	**+1.1**
KU1				*eS*	**Sn**	**10 50 06.7**	**+0.4**
KU1				smax	smax	10 50 08.9	
	comp=Z,16nm,0.1s						
OLKF	**Oulanka, Finla**	**2.21**	**59**	*eP*	**Pn**	**10 49 43.3**	**+1.1**
OLKF				*eS*	**Sn**	**10 50 11.0**	**+0.8**
OLKF				smax	smax	10 50 15.2	
	comp=Z,16nm,0.1s						
UMAU	**Umeaa**	**2.22**	**234**	*eP*	**Pn**	**10 49 43.5**	**+1.1**
UMAU				*eS*	**Sn**	**10 50 11.4**	**+0.9**
UMAU				smax	smax	10 50 14.4	
	comp=Z,16nm,0.1s						
SVAU	**Svanoeiden**	**2.33**	**253**	P	**Pn**	**10 49 45.1**	**+1.2**
SVAU	**Svanoeiden**	**2.33**	**253**	P	**Pn**	**10 49 45.1**	**+1.2**
VAF	**Ylistaro**	**2.40**	**203**	*eP*	**Pn**	**10 49 46.3**	**+1.5**
SUF	**Sumiainen**	**2.62**	**165**	*eP*	**Pn**	**10 49 50.1**	**+2.2**
LANU	**Lannavaara**	**3.01**	**340**	*eP*	**Pn**	**10 49 56.0**	**+2.7**
KEF	**Keuruu**	**3.10**	**179**	*eP*	**Pn**	**10 49 56.1**	**+1.6**
HEF	**Hetta**	**3.20**	**353**	*eP*	**Pn**	**10 49 57.5**	**+1.6**
SALU	**Saltoluokta**	**3.29**	**313**	*eP*	**Pn**	**10 49 59.1**	**+1.9**
JOF	**Joensuu**	**3.72**	**126**	*eP*	**Pn**	**10 50 03.9**	**+0.9**
KTK1	**Kautokeino**	**3.82**	**352**	*eP*	**Pn**	**10 50 06.5**	**+2.1**
FINES	**FINESS Array B**	**3.87**	**170**	Pn	**Pn**	**10 50 07.0**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=356,slow=14,SNR=47						
FINES				Pg	**Pb**	**10 50 12.4**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=356,slow=19,SNR=8.4						
FINES				Sn	**Sn**	**10 50 52.6**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=354,slow=25,SNR=5.6						
FINES				Lg	Lg	10 51 04.6	
	comp=Z,2.5nm,0.3s,baz=351,slow=28,SNR=10.0 comp=Z,1.9nm,0.2s						
ARCES	**ARCESS Array B**	**4.31**	**4**	Pn	**Pn**	**10 50 12.1**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=177,slow=14,SNR=102						
ARCES				Pg	**Pb**	**10 50 21.6**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=180,slow=16,SNR=13						
ARCES				Sn	**Sn**	**10 51 01.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=182,slow=26,SNR=6.7						
ARCES				Lg	Lg	10 51 17.0	
	comp=Z,1.5nm,0.3s,baz=174,slow=28,SNR=9.3 comp=Z,2.6nm,0.3s						
FAUS	**Fauske**	**4.36**	**304**	*eP*	**Pn**	**10 50 13.3**	**+1.4**
RAF	**Rauma**	**4.45**	**199**	*eP*	**Pn**	**10 50 15.6**	**+2.5**
I37NO	**I37NO**	**4.52**	**331**	I	I	11 16 40.0	
	baz=146,slow=319,SNR=2.9						
STEI	**Steigen**	**4.64**	**310**	*eP*	**Pn**	**10 50 16.7**	**+1.1**
LEIR	**Leirfjorden**	**4.88**	**285**	*eP*	**Pn**	**10 50 19.0**	**+0.2**
KONS	**Konsvik**	**4.92**	**290**	*eP*	**Pn**	**10 50 19.9**	**+0.4**
MEF	**Metsahovi**	**5.06**	**182**	*eP*	**Pn**	**10 50 24.1**	**+2.8**
AAL	**Aland**	**5.54**	**205**	*eP*	**Pn**	**10 50 29.6**	**+1.7**
MTSE	**Matsula**	**6.58**	**184**	*eP*	**Pn**	**10 50 43.6**	**+1.4**
HFS	**Hagfors**	**7.21**	**230**	Pn	**Pn**	**10 50 50.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=46,slow=12,SNR=6.0						
HFS				Pg	**Pb**	**10 51 09.3**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=41,slow=14,SNR=5.2						
HFS				Sn	**Sn**	**10 52 09.6**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=35,slow=21,SNR=2.4						
HFS				Lg	Lg	10 52 43.6	
	comp=Z,0.5nm,0.3s,baz=35,slow=31,SNR=2.5 comp=Z,0.5nm,0.2s						
NOA	**NORSAR Array B**	**7.43**	**242**	Pn	**Pn**	**10 50 54.3**	**+0.4**
	baz=49,slow=14,SNR=1.5 comp=Z,0.1nm,0.3s						
SPITS	**Spitsbergen Ar**	**13.23**	**352**	Pn	**Pn**	**10 52 11.2**	**-1.9**
	baz=152,slow=14 comp=Z,1.2nm,0.7s						

*GUC **13** 10:55:03.7±0.9, 27°.80S×70°.89W, h61km±5km, ML3.6*
*SJA **13** 10:55:04.0±1.1, 27°.85S×70°.82W, h49km±11km, ML3.4, MW3.7*

ISC 13 10:55:02.4±1.3, 27°.74S±0°.03×71°.08W±0°.07, h20km±9km, n26, σ1§42/43, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.47**	**179**	*eP*	**Pn**	**10 55 14.9**	**+1.0**
AC04				*eS*	**Sn**	**10 55 23.3**	**+1.6**
AC04				IAML		10 55 24.1	
	comp=Z,2μm,0.4s						
AC04	**Llanos de Chal**	**0.47**	**179**	*eP*	**Pn**	**10 55 14.8**	**+0.8**
AC04				*eS*	**Sn**	**10 55 22.7**	**+1.0**
AC04				IAML		10 55 24.0	
	comp=E,12μm,0.1s						
GO03	**Copiapo**	**0.77**	**80**	*eP*	**Pb**	**10 55 17.3**	**+0.2**
GO03				*eS*	**Sb**	**10 55 26.4**	**-0.7**
GO03				IAML		10 55 27.0	
	comp=Z,3μm,0.1s						
GO03	**Copiapo**	**0.77**	**80**	*eP*	**Pb**	**10 55 17.2**	**+0.2**
GO03				*eS*	**Sb**	**10 55 26.5**	**-0.7**
AC05	**El Transito**	**1.31**	**147**	*eP*	**Pn**	**10 55 24.8**	**-0.9**
AC05				*eS*	**Sn**	**10 55 39.8**	**-2.8**
AC05				IAML		10 55 42.4	
	comp=Z,458nm,0.8s						
AC05	**El Transito**	**1.31**	**147**	*↓iP*	**Pn**	**10 55 24.8**	**-0.9**
AC05				*eS*	**Sn**	**10 55 39.4**	**-3.2**
LCO	**Las Campanas**	**1.31**	**165**	*eP*	**Pn**	**10 55 25.2**	**-0.7**
LCO				*eS*	**Sn**	**10 55 40.7**	**-2.3**
LCO				IAML		10 55 42.3	
	comp=Z,2μm,0.2s						
LCO	**Las Campanas**	**1.31**	**165**	*eP*	**Pn**	**10 55 25.0**	**-0.8**
LCO				*eS*	**Sn**	**10 55 40.5**	**-2.5**
AC01	**Pan de Azucar**	**1.64**	**15**	*eP*	**Pn**	**10 55 31.0**	**+0.9**
AC01				IAML		10 55 58.1	
	comp=Z,228nm,0.2s						
AC01	**Pan de Azucar**	**1.64**	**15**	*eP*	**Pn**	**10 55 31.0**	**+0.9**
AC01				*eS*	**Sn**	**10 55 51.5**	**+0.9**
AC01				*eS*		10 55 51.5	
AC01				IAML		10 56 00.8	
	comp=E,782nm,0.1s						
AC02	**Maricunga**	**1.96**	**63**	*eP*	**Pn**	**10 55 35.8**	**+0.9**
AC02				*i* S	**Sn**	**10 55 59.2**	**+0.1**
AC02				IAML		10 56 04.2	
	comp=Z,255nm,0.3s						
AC02	**Maricunga**	**1.96**	**63**	*eP*	**Pn**	**10 55 35.5**	**+0.6**
AC02				*eS*	**Sn**	**10 55 57.1**	**-2.0**
AC02				IAML		10 56 00.8	
	comp=E,775nm,0.4s						
CO05	**La Serena**	**2.18**	**184**	*eP*	**Pn**	**10 55 37.7**	**+0.2**
CO05				*eS*	**Sn**	**10 56 02.9**	**-1.1**
CO05				IAML		10 56 17.6	
	comp=E,627nm,0.4s						
CO01	**Juntas del Tor**	**2.40**	**159**	*eP*	**Pn**	**10 55 41.2**	**+0.4**
CO01				*eS*	**Sn**	**10 56 09.8**	**+0.1**
CO01				IAML		10 56 14.9	
	comp=Z,137nm,0.4s						
CO01	**Juntas del Tor**	**2.40**	**159**	*eP*	**Pn**	**10 55 41.1**	**+0.4**
CO01				*eS*	**Sn**	**10 56 07.5**	**-2.1**
GO04	**Tololo Observa**	**2.44**	**174**	*eP*	**Pn**	**10 55 41.4**	**+0.1**
GO04				IAML		10 56 32.2	
	comp=Z,337nm,0.2s						
GO04	**Tololo Observa**	**2.44**	**174**	*↓eP*	**Pn**	**10 55 41.0**	**-0.3**
GO04				*eS*	**Sn**	**10 56 09.7**	**-1.0**
VCA	**Vinchina**	**2.73**	**112**	IAML		10 56 30.7	
	comp=Z,118nm,0.3s						
AROD	**Rodeo**	**2.80**	**150**	*eP*	**Pn**	**10 55 48.2**	**+1.8**
ACDV	**Cuesta del Vie**	**2.98**	**145**	*eP*	**Pn**	**10 55 50.4**	**+1.8**
ACDV				IAML		10 56 50.7	
	comp=Z,50nm,0.8s						
TINO	**Tinogasta**	**3.13**	**97**	*eP*	**Pn**	**10 55 51.0**	**+0.3**
TINO				*eS*	**Sb**	**10 56 36.0**	**+0.8**
TINO				IAML		10 56 36.2	
	comp=Z,58nm,0.6s						
ACCO	**Cerro Coronel**	**3.35**	**149**	*eP*	**Pn**	**10 55 55.9**	**+2.0**
ACCO				IAML		10 56 46.4	
	comp=Z,60nm,1.0s						
CO02	**Combarbal**	**3.46**	**179**	*eP*	**Pn**	**10 55 54.8**	**-0.4**
CO02				IAML		10 56 48.9	
	comp=Z,227nm,0.7s						
RTLS	**Leoncito**	**4.34**	**159**	*eP*	**Pn**	**10 56 09.3**	**+1.8**
RTLS				*eS*	**Sn**	**10 56 58.7**	**+1.1**
RTLS				IAML		10 57 21.1	
	comp=Z,139nm,0.9s						
CFA	**Coronel Fontan**	**4.58**	**148**	*eP*	**Pn**	**10 56 11.4**	**+0.8**
CFA				*eS*	**Sn**	**10 57 05.6**	**+2.3**
CFA				IAML		10 57 14.7	
	comp=Z,24nm,1.0s						
PB05	**IPOC Station P**	**4.93**	**10**	*eP*	**Pn**	**10 56 13.5**	**-1.9**
PB05				IAML		10 57 46.1	
	comp=Z,31nm,0.6s						

KRSC 13 10:58:02.5±1.8, 49°.39N×158°.77E, h47km±52km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.15**	**308**	*eP*	Pn	10 58 36.8	+1.0
SKR				*eS*	Sn	10 59 02.2	+1.0
PAU	**Pauzhetka**	**2.43**	**330**	*eS*	Sn	10 59 12.9	+4.7
KDTR	**Khodutka, Kamc**	**2.47**	**350**	*eP*	Pn	10 58 42.9	+2.7
KDTR				*eS*	Sn	10 59 12.0	+2.9
ASAK	**Asacha**	**3.05**	**350**	*eP*	Pn	10 58 53.0	+4.7
RUS	**Russkaya**	**3.06**	**357**	*eP*	Pn	10 58 51.5	+3.3
MTVR	**Mutnovka**	**3.12**	**353**	*eP*	Pn	10 58 53.7	+4.4
MTVR				*eS*	Sn	10 59 29.0	+3.5
GRL	**Gorelyy**	**3.20**	**352**	*eP*	Pn	10 58 54.4	+4.0
GRL				*eS*	Sn	10 59 31.4	+4.0
PET	**Petropavlovsk**	**3.65**	**359**	*eP*	Pn	10 58 59.9	+3.6
PET				*eS*	Sn	10 59 42.2	+4.1
DALK	**Dalny**	**3.65**	**360**	*eP*	Pn	10 58 59.9	+3.5
SPN	**Mys Shipunski**	**3.80**	**11**	*eP*	Pn	10 59 03.2	+4.7
SDLR	**Sedlovina**	**3.90**	**1**	*eP*	Pn	10 59 03.4	+3.4
KOK	**Koryaka**	**3.91**	**359**	*eP*	Pn	10 59 04.4	+4.2
KRX	**Arik**	**3.98**	**359**	*eP*	Pn	10 59 05.0	+3.9
GNL	**Ganaly**	**4.35**	**354**	*eP*	Pn	10 59 11.1	+5.0
MKZ	**Mys Kozlova**	**5.49**	**18**	*eP*	Pn	10 59 24.9	+3.3

*DJA **13** 11:00:31.4±0.4, 2°.N±3°.×12°.7E±°, h103km±5km, M4.1/12, mb4.0/1, MLv4.1/12*
*IDC **13** 11:00:32.4±3.7, 1°.73N×127°.39E, h137km±38km, mb3.7/11, mbtmp4.1/13, MS3.2/2, Error ellipse: s-maj=47.4km s-min=12.3km az=77.0*
*NEIC **13** 11:00:32.0±1.1, 1°.68N±0°.09×127°.19E±0°.08, h122km±4km, mb4.4/19, Error ellipse: s-maj=14.3km s-min=10.7km az=217.0*

ISC 13 11:00:28.9±0.6, 1°.76N±0°.05×127°.24E±0°.09, h100km, n49, σ1§60/47, mb4.2/18, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.99**	**173**		**Pn**	**11 00 53.5**	**+4.2**
TNTI	**Ternate**	**0.99**	**173**	P	**Pn**	**11 00 53.1**	**+3.8**
MNI	**Manado**	**2.42**	**263**	P	**Pn**	**11 01 09.4**	**+2.3**
SGSI	**Sangihe**	**2.57**	**318**	P	**Pn**	**11 01 11.4**	**+2.4**
SGSI				S	**Sn**	**11 01 40.7**	**+1.0**
SANI	**Sanana**	**3.99**	**198**	P	**Pn**	**11 01 29.3**	**+1.3**
SANI				S	**Sn**	**11 02 10.7**	**-3.1**
GTOI	**Gorontalo**	**4.38**	**255**	P	**Pn**	**11 01 36.6**	**+3.4**
DDMP	**Don Marcelino,**	**4.58**	**341**	*eP*	**Pn**	**11 01 36.3**	**+0.4**
DDMP				*eS*	**Sn**	**11 02 24.8**	**-3.2**
SIJI	**Sorong**	**4.80**	**123**	P	Pn	11 01 42.1	+3.2
	8.9nm,0.3s,baz=299,slow=14,SNR=8.8						
SIJI	**Sorong**	**4.80**	**123**	P	Pn	11 01 42.2	+3.2
NLAI	**Namlea**	**4.97**	**182**	P	**Pn**	**11 01 43.5**	**+2.2**
LUWI	**Luwuk**	**5.27**	**238**	Pn	**Pn**	**11 01 46.8**	**+1.5**
DAV	**Davao City (W)**	**5.53**	**343**	LR	LR	11 03 46.0	
	comp=Z,82nm,21.2s,baz=147,slow=34						
TOLI2	**Tolitoli**	**6.49**	**264**	Pn	**Pn**	**11 02 03.8**	**+1.9**
FAKI	**Fak Fak**	**6.83**	**133**	Pn	Pn	11 02 10.2	+3.6
MTN	**Manton Dam**	**15.01**	**165**	Pn	**Pn**	**11 03 55.6**	**-0.4**
KNRA	**Kununurra**	**17.39**	**175**		**Pn**	**11 04 25.5**	**+0.1**
KNRA				IAmb	IAmb	11 04 28.4	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.80**	**185**	P	**P**	**11 04 50.9**	**-0.7**
	comp=Z,5.7nm,0.4s,baz=19,slow=10,SNR=27						
FITZ	**Fitzroy Crossi**	**19.80**	**185**	P	**P**	**11 04 51.8**	**+0.2**
WRA	**Warramunga Arr**	**22.66**	**162**	P	**P**	**11 05 21.1**	**-0.9**
	comp=Z,5.5nm,0.4s,baz=339,slow=10,SNR=212 comp=Z,5.5nm,0.4s						
WRA	**Warramunga Arr**	**22.66**	**162**		**P**	**11 05 20.0**	**-2.1**
WR8	**Warramunga Arr**	**22.73**	**162**		**P**	**11 05 22.1**	**-0.6**
MBWA	**Marble Bar**	**23.94**	**198**	P	**P**	**11 05 33.8**	**-0.1**
MBWA				IAmb	IAmb	11 05 58.5	
	comp=Z,17nm,1.3s						
AS31	**Alice Springs**	**26.09**	**166**		**P**	**11 05 52.9**	**-0.6**
AS31				IAmb	IAmb	11 05 57.5	
	comp=Z,2.9nm,0.2s						
ASAR	**Alice Springs**	**26.09**	**166**	P	**P**	**11 05 52.7**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=343,slow=8.1,SNR=56 comp=Z,1.2nm,0.3s						
ASAR	**Alice Springs**	**26.09**	**166**	P	**P**	**11 05 52.8**	**-0.7**
INKA	**Innaminka**	**32.08**	**157**	P	**P**	**11 06 46.6**	**+0.1**
INKA				IAmb	IAmb	11 06 51.4	
	comp=Z,4.2nm,1.2s						
FORT	**Forrest**	**32.37**	**179**	P	**P**	**11 06 48.2**	**-0.8**
FORT				IAmb	IAmb	11 07 15.4	
	comp=Z,9.8nm,1.1s						
MORW	**Morawa**	**32.48**	**198**	P	**P**	**11 06 49.9**	**-0.2**
BBOO	**Buckleboo**	**35.38**	**167**	P	**P**	**11 07 14.7**	**-0.5**
BBOO				IAmb	IAmb	11 07 15.7	
	comp=Z,12nm,1.3s						
NWAO	**Narrogin (SRO)**	**35.77**	**194**	P	**P**	**11 07 18.6**	**+0.1**
MJAR	**Matsushiro Arr**	**36.06**	**15**	P	**P**	**11 07 19.1**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=198,slow=9.1,SNR=2.0 comp=Z,0.8nm,0.6s						
MJAR	**Matsushiro Arr**	**36.06**	**15**	P	**P**	**11 07 22.2**	**+1.2**
MJAR				IAmb	IAmb	11 07 43.3	
	comp=Z,3.1nm,1.4s						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**11 07 21.1**	**-0.3**
	comp=Z,6.2nm,0.6s,baz=333,slow=8.3,SNR=30 comp=Z,6.2nm,0.6s						
ARMA	**Armidale**	**39.55**	**146**	P	**P**	**11 07 50.8**	**+0.3**
ARMA				IAmb	IAmb	11 07 59.1	
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	**49.31**	**342**	P	**P**	**11 09 08.1**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=126,slow=7.3,SNR=2.2 comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**49.31**	**342**	P	**P**	**11 09 07.9**	**-0.1**
MKAR	**Makanchi Array**	**59.46**	**326**	P	**P**	**11 10 21.7**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=117,slow=7.5,SNR=9.5 comp=Z,0.9nm,0.4s						
LBZ	**Lake Benmore**	**59.78**	**146**	P	**P**	**11 10 23.3**	**-0.3**
MA2	**Magadan**	**60.48**	**14**	LR	LR	11 36 36.5	
	comp=Z,49nm,19.4s,baz=248,slow=36						
ZALV	**Zalesovo Beam**	**62.56**	**333**	P	**P**	**11 10 43.7**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=157,slow=7.7,SNR=1.5 comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**62.56**	**333**	P	**P**	**11 10 42.8**	**+0.6**
KURBB	**Kurchatov Arra**	**63.66**	**328**	P	**P**	**11 10 49.4**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=129,slow=6.4,SNR=16 comp=Z,1.8nm,0.5s						
KURK	**Kurchatov**	**63.67**	**328**	P	**P**	**11 10 51.6**	**+2.1**
KURK				IAmb	IAmb	11 10 52.2	
	comp=Z,3.9nm,0.5s						
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**11 12 33.2**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=305,slow=7.5,SNR=3.7 comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**11 12 33.5**	**-0.9**
VNDA				IAmb	IAmb	11 12 35.6	
	comp=Z,6.3nm,1.5s						
MAW	**Mawson**	**82.10**	**200**	P	**P**	**11 12 37.5**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=93,slow=4.6,SNR=7.5 comp=Z,2.3nm,0.6s						
MAW	**Mawson**	**82.10**	**200**	P	**P**	**11 12 38.4**	**+0.4**
QSPA	**South Pole Qui**	**91.68**	**180**	P	**P**	**11 13 24.3**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=237,slow=9.0,SNR=1.5 comp=Z,0.7nm,0.9s						
QSPA	**South Pole Qui**	**91.68**	**180**	P	**P**	**11 13 25.9**	**+1.0**

*IDC **13** 11:00:52.3±1.2, 34°.20N×25°.49E, h0km, mb3.6/8, mbtmp3.5/14, ML3.3/6, Error ellipse: s-maj=22.2km s-min=17.2km az=25.0*

**ISC 13 11:00:54.5±0.9, 34°.20N±0°.09×25°.49E±0°.10, h17km, n15, σ0§87/16, mb3.5/7,

KARP				Sg		Sn	11 35 20.4	+0.6
KARP	**Karpathos**	**0.77**	**109**	P		Pn	11 35 08.9	+0.5
KARP				S		Sn	11 35 19.6	-0.2
KARP	**Karpathos**	**0.77**	**109**	P		Pn	11 35 08.9	+0.5
KARP				S		Sn	11 35 19.7	-0.2
THERA	**Ancient Thera,**	**0.85**	**312**	P		Pn	11 35 09.8	+0.5
THERA				S		Sn	11 35 21.6	+0.1
THERA	**Ancient Thera,**	**0.85**	**312**	P		Pn	11 35 09.7	+0.3
THERA				S		Sn	11 35 21.3	-0.2
THR8	**Santorini-Mono**	**0.88**	**314**	P		Pn	11 35 09.8	+0.2
THR6	**Thira Island,**	**0.89**	**308**	P		Pn	11 35 10.5	+0.7
THR3	**Thira Island,**	**0.93**	**311**	P		Pn	11 35 10.9	+0.7
THR5	**Thira Island,**	**0.96**	**310**	P		Pn	11 35 11.3	+0.6
IDI	**Anoyia**	**1.23**	**246**	Pn		Pn	11 35 14.8	+0.5
IDI				S		Sn	11 35 31.4	+1.2
IDI	**Anoyia**	**1.23**	**246**	P		Pn	11 35 14.4	+0.2
IDI	**Anoyia**	**1.23**	**246**	P		Pn	11 35 14.5	+0.2
IDI				S		Sn	11 35 30.4	+0.2
DAT	**Datca**	**1.41**	**49**	Pn		Pn	11 35 16.9	+0.3
SIVA	**Sivas**	**1.42**	**237**	P		Pn	11 35 18.2	+1.5
BODT	**Bodrum**	**1.51**	**34**	Pn		Pn	11 35 18.8	+0.9
BODT				S		Sn	11 35 37.8	+1.0
BODT	**Bodrum**	**1.51**	**34**	P		Pn	11 35 19.0	+1.1
YKAV	**Yalikavak-Bodr**	**1.55**	**32**	Pn		Pn	11 35 19.0	+0.6
ARG	**Arkhangelos**	**1.56**	**74**	Pn		Pn	11 35 19.3	+0.7
ARG	**Arkhangelos**	**1.56**	**74**	P		Pn	11 35 19.3	+0.7
ARG	**Arkhangelos**	**1.56**	**74**	P		Pn	11 35 19.1	+0.5
ARG				S		Sn	11 35 38.1	+0.2
TURN	**Turunc**	**1.87**	**58**	Pn		Pn	11 35 23.5	+0.8
IMMV	**Iera Moni Meta**	**1.89**	**260**	Pn		Pn	11 35 24.2	+1.2
IMMV	**Iera Moni Meta**	**1.89**	**260**	P		Pn	11 35 23.9	+0.9
IMMV	**Iera Moni Meta**	**1.89**	**260**	P		Pn	11 35 23.9	+0.9
IMMV				S		Sn	11 35 46.0	+0.2
GVD	**Gavdhos**	**2.02**	**242**	Pn		Pn	11 35 26.1	+1.3
GVD	**Gavdhos**	**2.02**	**242**	P		Pn	11 35 26.6	+1.9
GVD	**Gavdhos**	**2.02**	**242**	P		Pn	11 35 26.4	+1.7
GVD				S		Sn	11 35 50.0	+1.0
YER	**Yerkesik**	**2.10**	**50**	Pn		Pn	11 35 27.0	+1.1
YER	**Yerkesik**	**2.10**	**50**	P		Pn	11 35 27.4	+1.6
DALY	**Dalyan (Mula)**	**2.18**	**62**	Pn		Pn	11 35 28.1	+1.2
KNDR	**Palaiochora Ch**	**2.23**	**256**	Pn		Pn	11 35 28.9	+1.4
ANKY	**Antikythira Is**	**2.41**	**272**	P		Pn	11 35 30.3	+0.3
ANKY	**Antikythira Is**	**2.41**	**272**	P		Pn	11 35 30.3	+0.3
ANKY				S		Sn	11 35 58.3	-0.1
AYDB	**Zeytinkoy-Aydi**	**2.51**	**31**	Pn		Pn	11 35 32.6	+1.1
KTHA	**Kythira Island**	**2.63**	**281**	Pn		Pn	11 35 34.3	+1.2
KTHA	**Kythira Island**	**2.63**	**281**	P		Pn	11 35 33.9	+0.9
NAZL	**Nazilli-Aydin**	**2.70**	**36**	Pn		Pn	11 35 35.4	+1.4
CAME	**Cameli-Denizli**	**2.70**	**64**	Pn		Pn	11 35 35.6	+1.5
AKAS	**Kas**	**2.74**	**80**	Pn		Pn	11 35 36.1	+1.4
VLI	**Veliai**	**2.84**	**290**	P		Pn	11 35 36.7	+0.8
VLI	**Veliai**	**2.84**	**290**	P		Pn	11 35 36.7	+0.8
VLI				S		Sn	11 36 08.9	0.0
APMY	**Acipayam-Deniz**	**2.96**	**55**	Pn		Pn	11 35 39.0	+1.4
ELL	**Elmali**	**3.09**	**71**	Pn		Pn	11 35 41.2	+1.8
KORT	**Korkueli**	**3.51**	**69**	Pn		Pn	11 35 47.1	+2.0
ITM	**Ithomi**	**3.75**	**293**	Pn		Pn	11 35 50.5	+2.1
ITM	**Ithomi**	**3.75**	**293**	P		Pn	11 35 50.2	+1.8
GUR	**Goura**	**3.80**	**305**	P		Pn	11 35 50.8	+1.7
PYL	**PYLOS**	**3.81**	**288**	P		Pn	11 35 49.8	+0.7
KLV	**Kalavryta, Ach**	**3.98**	**305**	P		Pn	11 35 53.3	+1.7
BRTR	**Keskin Array B**	**7.03**	**54**	Pn		Pn	11 36 26.9	-6.5
	0.1nm,0.3s,baz=236,slow=10,SNR=1.6 0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**31.59**	**231**	P		**P**	**11 41 08.8**	**-0.8**
	0.5nm,0.4s,baz=35,slow=8.9,SNR=7.4 0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**40.02**	**52**	P		**P**	**11 42 19.5**	**-1.8**
	0.5nm,0.5s,baz=270,slow=8.7,SNR=4.7 0.5nm,0.5s							
MKAR	**Makanchi Array**	**42.67**	**57**	P		**P**	**11 42 41.9**	**-1.1**
	0.5nm,0.5s,baz=280,slow=6.7,SNR=4.1 0.5nm,0.5s							

*CATAC **13** 11:44:27.1±0.6, 7°N±2°×7°3W±°, h160km±6km, M3.8/6, MLv3.8/6, Error ellipse: s-maj=12.1km s-min=4.9km az=100.4, confirmed*
*IDC **13** 11:44:28.8±4.4, 6°71N×73°08W, h171km±30km, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=80.1km s-min=30.8km az=86.0*
*RSNC **13** 11:44:29.3±0.0, 7°N±1°×7°3W±°, h147km±1km, M3.5, mB4.8, mb3.8, ML3.1, Mw(mB)4.1*
*FUNV **13** 11:44:30.1, 7°17N×73°14W, h1km, MW3.4, Presumed earthquake*

ISC 13 11:44:27.9±0.8, 6°87N±0°03×73°13W±0°05, h152km±6km, n41, σ1°971/76, mb3.8/3, 2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**191**	P	**Pn**	**11 44 49.2**	**+0.3**
BARC				S	**Sn**	11 45 04.5	-0.4
BRJC	**Barrancabermej**	**0.62**	**280**	P	**Pn**	11 44 50.9	+0.8
BRJC				S	**Sn**	11 45 07.9	+0.9
PAMC	**Pamplona, Colo**	**0.64**	**42**	P	**Pn**	11 44 52.0	+1.2
PAMC				S	**Sn**	11 45 09.1	+0.9
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	11 44 53.3	+0.1
RUSC				S	**Sn**	11 45 12.2	-0.2
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	11 44 53.1	-0.1
RUSC				*e*S	**Sn**	11 45 10.9	-1.5
RUSC	**La Rusia**	**0.97**	**177**	⇓*i*P	**Pn**	11 44 53.1	-0.1
RUSC				*e*S	**Sn**	11 45 11.6	-0.8
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	11 44 55.6	-0.6
PTBC				S	**Sn**	11 45 17.1	-0.7
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	11 44 57.3	+0.8
OCAC				S	**Sn**	11 45 19.5	+1.0
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	11 44 58.1	+0.1
SPBC				S	**Sn**	11 45 20.1	-1.0
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	11 45 07.2	+0.1
CHIC				S	**Sn**	11 45 36.6	-0.7
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	11 45 09.4	+1.9
	51nm,0.3s,baz=78,slow=17,SNR=40						
ROSC				S	**Sn**	11 45 38.9	+0.9
	191nm,0.5s,baz=96,slow=15,SNR=12						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	11 45 08.9	+1.4
ROSC				S	**Sn**	11 45 35.4	-2.6
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	11 45 10.5	+0.7
CVER				S	**Sn**	11 45 41.6	-0.4
UREC	**San Jos de Ur**	**2.54**	**290**	P	**Pn**	11 45 09.1	-0.6
UREC				S	**Sn**	11 45 40.2	-1.6
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	11 45 12.3	-0.5
GUY2C				S	**Sn**	11 45 48.8	+1.5
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	11 45 12.6	-0.3
VILC				S	**Sn**	11 45 46.4	-1.3
PTGC	**Puerto Gaitan,**	**2.83**	**159**	P	**Pn**	11 45 13.8	+0.6
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	**Pn**	11 45 16.9	+1.0
CBOC				S	**Sn**	11 45 52.7	-0.4
SDV	**Santo Domingo**	**3.19**	**51**	⇑*i*P	**Pn**	11 45 18.9	+1.0
SDV				*e*S	**Sn**	11 45 54.1	-2.5
APAC	**Apartado, Choc**	**3.57**	**287**	P	**Pn**	11 45 23.1	+0.4
APAC				S	**Sn**	11 46 04.9	-0.3
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	11 45 23.2	+0.3
PRAC				S	**Sn**	11 46 04.7	-0.9
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	11 45 22.6	-0.3
PRAC				S	**Sn**	11 46 04.9	-0.7
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	11 45 23.9	+0.6
ORTC				S	**Sn**	11 46 06.7	+0.4
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	11 45 23.0	-0.5
SJCC				S	**Sn**	11 46 04.5	-2.2
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	11 45 23.1	-0.5
SJCC				*e*S	**Sn**	11 46 02.5	-4.2
PLMC	**San Jos del P**	**3.69**	**238**	P	**Pn**	11 45 24.9	+0.6
PLMC				S	**Sn**	11 46 07.1	-1.0
LCBC	**Los crdobas,**	**3.77**	**302**	P	**Pn**	11 45 27.4	+2.2
LCBC				S	**Sn**	11 46 10.0	+0.2
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	11 45 25.9	+0.1
URMC				S	**Sn**	11 46 09.0	-1.7
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	11 45 36.2	-1.9
MACC				S	**Sn**	11 46 27.4	-5.3
URI	**Uribia**	**4.93**	**13**	P	**Pn**	11 45 39.2	-1.3
URI				S	**Sn**	11 46 35.7	-1.4
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	11 45 39.5	-1.0
URIC				S	**Sn**	11 46 34.4	-2.8
URIC	**Uribia, Colomb**	**4.94**	**13**	⇑*i*P	**Pn**	11 45 39.7	-0.8
URIC				*e*S	**Sn**	11 46 30.6	-6.6
JAMC	**Jamundi, Valle**	**5.06**	**224**	P	**Pn**	11 45 42.0	-0.4
	5.4nm,0.5s						
JAMC				S	**Sn**	11 46 41.1	+0.6
	5.4nm,0.5s						
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	11 45 43.1	-1.3
GARC				S	**Sn**	11 46 41.1	-3.0
POPC	**Popayan, Colom**	**5.56**	**220**	P	**Pn**	11 45 48.4	-0.7
	7.4nm,1.1s						
POPC				S	**Sn**	11 46 50.6	-1.9
	7.4nm,1.1s						
BBAC	**Balboa, Cauca**	**6.32**	**221**	P	**Pn**	11 45 59.8	+0.6
BBAC				S	**Sn**	11 47 06.9	-3.8
TXAR	**Lajitas Array**	**36.43**	**312**	P	**P**	11 51 18.8	+0.5
	0.3nm,0.6s,baz=125,slow=8.9,SNR=5.0 0.3nm,0.6s						
ULM	**Lac du Bonnet**	**47.24**	**340**	P	**P**	11 52 45.2	-0.4
	1.8nm,0.6s,baz=150,slow=8.1,SNR=2.4 1.8nm,0.6s						
YKA	**Yellowknife Ar**	**63.22**	**340**	P	**P**	11 54 39.0	-0.8
	0.7nm,0.6s,baz=131,slow=6.1,SNR=2.4 0.7nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	12 03 57.2	+2.3
	0.2nm,0.6s,baz=120,slow=5.5,SNR=1.3						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPdf**	12 04 00.4	+3.4
	0.2nm,0.5s,baz=104,slow=3.3,SNR=1.1						

*KRNET **13** 11:45:24.3±0.1, 40°46N×70°85E, h10km, mb2.7*
*SOME **13** 11:45:24.5, 40°53N×71°10E, h5km*
*ISU **13** 11:45:28, 40°47N×70°77E, h18km*

ISC 13 11:45:24.5±1.1, 40°47N±0°03×70°76E±0°04, h11km±11km, n12, σ0°998/22, 8C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.41**	**174**	⇓*i*P	**Pg**	**11 45 32.1**	**-0.5**
BTK				⇓*i*S	**Sg**	11 45 38.3	+0.3
FRG	**Fergana**	**0.79**	**96**	S	**Sn**	11 45 54.2	+0.8
CHRV	**Charvak**	**1.32**	**333**	P	**Pn**	11 45 47.5	-1.5
CHRV				S	**Sb**	11 46 06.5	+0.1
TVKS	**Tavaksay**	**1.39**	**323**	P	**Pn**	11 45 48.8	-1.1
TVKS				S	**Sb**	11 46 08.3	0.0
PSK	**Pskem**	**1.49**	**349**	P	**Pg**	11 45 52.8	-0.3
PSK				S	**Sg**	11 46 13.3	+0.9
GAR	**Garm**	**1.50**	**193**	⇑*i*P	**Pb**	11 45 53.0	+0.5
GAR				⇑*i*S	**Sg**	11 46 14.0	+1.2
ARK	**Arkit**	**1.61**	**34**	⇑*e*P	**Pb**	11 45 54.3	-0.1
ARK				⇑*e*S	**Sg**	11 46 16.2	-0.2
IUG	**Iuzhnay**	**1.77**	**342**	*e*P	**Pg**	11 45 58.5	+0.1
	12nm,0.2s						
IUG				*e*S	**Sg**	11 46 23.1	+1.8
	58nm,0.3s						
CHGR	**Chuyangaron**	**2.19**	**215**	⇑*i*P	**Pb**	11 46 05.0	+0.8
CHGR				⇑*i*S	**Sg**	11 46 35.1	+0.3
KK31	**Karatay Array**	**2.64**	**356**	⇑Pn	**Pb**	11 46 12.2	+0.3
	1.0nm,0.2s,baz=168,slow=15,SNR=12						
KK31				⇑Sn	**Sb**	11 46 46.2	+1.9
	2.4nm,0.3s,baz=175,slow=29,SNR=12						
MRKS	**Merke**	**2.94**	**38**	*e*P	**Pb**	11 46 16.1	-0.8
	0.9nm,0.2s						
MRKS				*e*S	**Sb**	11 46 53.4	+0.6
	12nm,0.5s						
AGL	**Agalyk**	**3.13**	**254**	S	**Sg**	11 47 03.5	-1.4

*IDC **13** 11:53:24.9±1.1, 16°02S×174°96W, h291km±12km, mb3.3/7, mbtmp4.0/10, Error ellipse: s-maj=31.6km s-min=12.6km az=153.0*

ISC 13 11:53:24.1±0.8, 16°2S±0°3×174°9W±0°2, h278km, n11, σ1°33/12, mb3.6/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.77**	**54**	P	**Pn**	**11 54 28.1**	**+1.3**
	62nm,0.5s,baz=226,slow=2.3,SNR=24						
AFI				S	**S**	11 55 17.8	+1.0
	49nm,0.3s,baz=236,slow=13,SNR=7.1						
MSVF	**Nonsavu**	**6.91**	**256**	P	**Pn**	11 55 06.8	+2.6
	6.8nm,0.6s,baz=131,slow=17,SNR=2.3						
DZM	**Mont Dzumac**	**18.56**	**249**	P	**P**	11 57 21.8	+0.5
	7.5nm,0.9s,baz=114,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**42.40**	**240**	P	**P**	12 00 51.4	-0.6
	2.4nm,0.7s,baz=60,slow=7.5,SNR=5.1 2.4nm,0.7s						
WRA	**Warramunga Arr**	**48.25**	**258**	P	**P**	12 01 36.5	-1.3
	3.1nm,0.7s,baz=92,slow=6.3,SNR=85 3.1nm,0.7s						
ASAR	**Alice Springs**	**48.49**	**253**	P	**P**	12 01 38.9	-0.8
	24nm,0.7s,baz=87,slow=7.4,SNR=405						
FITZ	**Fitzroy Crossi**	**56.63**	**259**	P	**P**	12 02 38.8	-0.3
	2.7nm,0.7s,baz=144,slow=4.6,SNR=2.0 2.7nm,0.7s						
QSPA	**South Pole Qui**	**73.89**	**180**	P	**P**	12 04 28.9	+0.2
	0.7nm,0.6s,baz=352,slow=0.5,SNR=10.0 0.7nm,0.6s						
TXAR	**Lajitas Array**	**82.25**	**57**	P	**P**	12 05 15.2	+0.2
	0.4nm,0.9s,baz=192,slow=4.6,SNR=4.4 0.4nm,0.9s						
ILAR	**Eielson Array**	**83.47**	**12**	P	**P**	12 05 19.1	-1.3
	0.2nm,0.3s,baz=238,slow=5.7,SNR=8.3 0.2nm,0.3s						
PDAR	**Pinedale Array**	**83.80**	**42**	P	**P**	12 05 21.5	-1.4
	0.5nm,0.6s,baz=202,slow=0.8,SNR=4.7 0.5nm,0.6s						

*LDG **13** 11:54:19.2±1.2, 43°79N×2°28W, h2km, MI3.0/2, Error ellipse: s-maj=39.4km s-min=18.9km az=31.0*

ISC 13 11:54:20.6±2.2, 43°8N±0°2×2°10W±0°04, h10km, n10, σ2°33/15, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJPF	**Ste Jean**	**0.96**	**138**	*e*Pg	**Pg**	**11 54 37.8**	**-1.2**
SJPF				*e*Sg	**Sg**	11 54 52.6	+1.1
ETSF	**Etsaut**	**1.46**	**129**	*e*Pg	**Pn**	11 54 46.2	-0.8
ETSF				*e*Sg	**Sn**	11 55 06.1	-0.2
	49nm,0.5s						
EPF	**Esparros**	**1.95**	**113**	*e*Pg	**Pb**	11 54 56.4	+0.2
EPF				*e*Sg	**Sg**	11 55 25.1	+1.9
	16nm,0.3s						
PBRG	**Braganca**	**3.97**	**241**	*e*P	**Pn**	11 55 22.5	+1.0
PBRG				*e*S	**Sn**	11 56 02.9	-5.2
PBRG				IAML		11 56 08.4	
PBRG				IAML		11 56 11.1	
PBRG				IAML		11 56 13.2	
MVO	**Moncorvo**	**4.51**	**236**	*e*P	**Pn**	11 55 30.4	+1.4
MVO				*e*S	**Sn**	11 56 17.2	-4.4
MVO				IAML		11 56 21.9	
MVO				IAML		11 56 30.0	
MVO				IAML		11 56 30.1	
PCAB	**Cabril**	**4.85**	**246**	*e*S	**Sn**	11 56 31.9	+2.1
PCAB				IAML		11 56 41.6	
PCAB				IAML		11 56 48.8	
PCAB				IAML		11 56 60.0	
MTE	**Manteigas**	**5.30**	**232**	*e*S	**Sn**	11 56 40.9	-0.2
PVIS	**Viseu**	**5.31**	**236**	*e*S	**Sn**	11 56 41.8	+0.7
PCBR	**Castelo Branco**	**5.66**	**227**	*e*S	**Sn**	11 56 49.6	-0.1
PMRV	**Marv??o**	**5.92**	**224**	*e*S	**Sn**	11 56 58.2	+2.0
PMRV				IAML		11 57 06.8	
PMRV				IAML		11 57 14.9	
PMRV				IAML		11 57 21.9	

*IDC **13** 12:04:31.9±2.6, 7°50S×128°14E, h100km±25km, mb4.1/13, mbtmp4.6/17, MS2.7/1, Error ellipse: s-maj=22.1km s-min=12.6km az=72.0*
*NEIC **13** 12:04:35.8±1.5, 7°56S±0°06×128°16E±0°05, h137km±6km, mb4.6/51, Error ellipse: s-maj=9.4km s-min=7.7km az=165.0*
*GFZ **13** 12:04:36.0±0.2, 8°S±2°×12°8E±°, h149km±3km, M4.4/23, mb4.6/23, Error ellipse: s-maj=5.7km s-min=4.4km az=116.5, confirmed*
*DJA **13** 12:05:24.3±0.4, 9°S±5°×12°5E±°, h31km±12km, M3.4/6, MLv3.4/6*

ISC 13 12:04:35.5±0.3, 7°66S±0°04×128°14E±0°04, h142km, n138, σ1°963/150, mb4.5/45, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.15**	**96**	Pn	**Pn**	**12 05 23.6**	**-0.9**
SAUI				Sn	**Sn**	12 06 03.4	+1.1
BNDI	**Bandanaira**	**3.58**	**30**	P	**Pn**	12 05 30.4	+0.3
SOEI	**Soe**	**4.35**	**241**		**Pn**	12 05 42.6	+2.3
SOEI				Sn	**Sn**	12 06 32.1	+1.4
SOEI	**Soe**	**4.35**	**241**	P	**Pn**	12 05 42.3	+2.0
SOEI	**Soe**	**4.35**	**241**	P	**Pn**	12 05 42.1	+1.7
NLAI	**Namlea**	**4.51**	**347**	P	**Pn**	12 05 44.1	+1.8
BATI	**Baumata**	**5.09**	**240**	P	**Pn**	**12 05 48.9**	**-1.2**
	189nm,0.4s,baz=45,slow=8.6,SNR=55						
BATI				S	**Sn**	12 06 45.1	-3.1
	555nm,0.5s,baz=90,slow=20,SNR=18						
BATI	**Baumata**	**5.09**	**240**	P	**Pn**	12 05 48.7	-1.3
BATI	**Baumata**	**5.09**	**240**	P	**Pn**	12 05 48.7	-1.3
MMRI	**Maumere**	**5.92**	**260**	Pn	**Pn**	12 06 00.6	-0.5
MMRI				Sn	**Sn**	12 07 08.3	+0.4
MMRI	**Maumere**	**5.92**	**260**	P	**Pn**	12 06 02.7	+1.7
MMRI	**Maumere**	**5.92**	**260**	P	**Pn**	12 05 60.0	-1.1
MTN	**Manton Dam**	**5.93**	**150**		**Pn**	12 06 02.7	+1.5
MTN				Sn	**Sn**	12 07 09.6	+1.3
MTN	**Manton Dam**	**5.93**	**150**	P	**Pn**	12 06 03.2	+2.0
SANI	**Sanana**	**5.97**	**339**	P	**Pn**	12 06 00.5	-1.2
FAKI	**Fak Fak**	**6.24**	**41**	Pn	**Pn**	12 06 04.0	-1.3
FAKI				Sn	**Sn**	12 07 13.5	-2.2
FAKI	**Fak Fak**	**6.24**	**41**	P	**Pn**	12 06 04.2	-1.2
SIJI	**Sorong**	**7.43**	**25**	P	**Pn**	12 06 20.1	-1.3
	13nm,0.3s,baz=223,slow=12,SNR=13						
SIJI				S	**Sn**	12 07 42.5	-2.0
	6.4nm,0.5s,baz=192,slow=21,SNR=1.9						
SIJI				LR	LR	12 09 38.1	
	comp=Z,60nm,19.4s,baz=242,slow=42						
SIJI	**Sorong**	**7.43**	**25**	P	**Pn**	**12 06 21.8**	**+0.4**
SWI	**Sorong**	**7.44**	**25**	P	**Pn**	12 06 21.3	-0.1
KNRA	**Kununurra**	**7.99**	**176**		**Pn**	12 06 29.8	+1.0
LBFI	**Labuhan Bajo,**	**8.21**	**264**	P	**Pn**	12 06 35.3	+3.6
WBSI	**Waikabubak, Su**	**8.87**	**257**	P	**Pn**	12 06 42.8	+2.2
MWPI	**Manokwari, Pap**	**8.91**	**42**	P	**Pn**	12 06 40.8	-0.3
FITZ	**Fitzroy Crossi**	**10.65**	**193**	P	**Pn**	12 07 02.5	-1.8
	23nm,0.3s,baz=27,slow=11,SNR=122						
FITZ				S	**Sn**	12 08 55.0	-7.1
	64nm,0.4s,baz=100,slow=19,SNR=8.4						
FITZ	**Fitzroy Crossi**	**10.65**	**193**	Pn	**Pn**	12 07 03.1	-1.3
FITZ	**Fitzroy Crossi**	**10.65**	**193**	P	**Pn**	12 07 02.8	-1.5
TOLI2	**Tolitoli**	**11.39**	**320**	P	**Pn**	12 07 15.3	+1.2
RTBI	**Rangdo, Negare**	**13.09**	**266**	P	**Pn**	12 07 36.6	+0.4
WB0	**Warramunga Arr**	**13.48**	**154**	Pn	**Pn**	12 07 39.9	-1.3
WRAB	**Tennant Creek**	**13.61**	**154**	Pn	**Pn**	12 07 41.4	-1.4
WRAB	**Tennant Creek**	**13.61**	**154**	P	**Pn**	12 07 41.5	-1.3
WRA	**Warramunga Arr**	**13.61**	**154**	P	**Pn**	12 07 41.1	-1.7
	14nm,0.8s,baz=323,slow=13,SNR=55						
WRA				S	Sn	12 10 02.3	-11
	25nm,0.6s,baz=320,slow=24,SNR=11						
WRA	**Warramunga Arr**	**13.61**	**154**		**Pn**	**12 07 41.5**	**-1.3**
WR8	**Warramunga Arr**	**13.69**	**154**		**Pn**	**12 07 42.6**	**-1.2**
MBWA	**Marble Bar**	**15.69**	**210**		**Pn**	**12 08 08.7**	**-0.1**
MBWA	**Marble Bar**	**15.69**	**210**	P	**Pn**	**12 08 09.3**	**+0.5**
COEN	**Coen**	**16.04**	**114**		**Pn**	**12 08 12.2**	**-1.0**
AS31	**Alice Springs**	**16.85**	**161**		**Pn**	**12 08 23.9**	**+0.9**
AS31				IAmb	IAmb	12 08 27.7	
	comp=Z,23nm,1.1s						
ASAR	**Alice Springs**	**16.85**	**161**	P	**Pn**	**12 08 23.9**	**+0.9**
	comp=Z,56nm,0.9s,baz=337,slow=8.2,SNR=159						
ASAR				S	**S**	12 11 22.4	-8.7
	comp=Z,19nm,0.7s,baz=349,slow=26,SNR=10						
ASAR	**Alice Springs**	**16.85**	**161**		**P**	**12 08 23.5**	**+0.7**
QIS	**Mount Isa**	**16.96**	**140**	P	**Pn**	**12 08 26.0**	**+1.7**
WOJI	**Wonogiri, Jawa**	**17.06**	**268**	P	**Pn**	**12 08 25.6**	**0.0**
KKM	**Kota Kinabalu**	**18.08**	**319**	P	**P**	**12 08 35.6**	**-0.7**
KKM				IAmb	IAmb	12 08 41.6	
	comp=Z,55nm,1.1s						
PMG	**Port Moresby**	**18.89**	**97**	P	**P**	**12 08 44.1**	**-1.1**
GIRL	**Giralia**	**20.02**	**220**	P	**P**	**12 08 57.5**	**+0.2**
BBJI	**Bungbulang**	**20.31**	**269**	P	**P**	**12 09 01.2**	**+0.7**
BBJI				IAmb	IAmb	12 09 27.1	
	comp=Z,38nm,1.3s						
FORT	**Forrest**	**23.00**	**180**		**P**	**12 09 31.0**	**+3.0**
FORT				IAmb	IAmb	12 09 32.7	
	comp=Z,11nm,0.7s						
INKA	**Innaminka**	**23.27**	**151**		**P**	**12 09 33.9**	**+3.4**
INKA				IAmb	IAmb	12 09 35.5	
	comp=Z,13nm,0.7s						
MORW	**Morawa**	**24.15**	**207**	P	**P**	**12 09 42.1**	**+3.6**
MORW				IAmb	IAmb	12 09 42.8	
	comp=Z,29nm,1.0s						
MORW	**Morawa**	**24.15**	**207**	P	**P**	**12 09 40.4**	**+1.9**
QLP	**Quil

	comp=Z,26nm,1.3s								
HHC	**Hu-ho-hao-te**	**50.62**	**344**	*e*P		**P**		**12 13 23.9**	**+3.8**
HHC				pmax		pmax			
	comp=Z,19nm,0.6s								
USA0B	**Ussuriysk Arra**	**51.73**	**4**	P		**P**		**12 13 28.0**	**-0.1**
USA0B				IAmb		IAmb		12 13 46.1	
	comp=Z,7.1nm,0.8s								
USRK	**Ussuriysk Ar.**	**51.73**	**4**	P		**P**		**12 13 28.1**	**-0.1**
	comp=Z,4.0nm,0.6s,baz=190,slow=7.3,SNR=12								
	comp=Z,4.0nm,0.6s								
XLT	**XiLinHaoTe**	**52.47**	**349**	*e*P		**P**		**12 13 33.9**	**+0.2**
XLT				pmax		pmax			
	comp=Z,18nm,0.9s								
EVN	**Everest**	**53.36**	**313**			**P**		**12 13 41.1**	**-0.2**
GTA2	**Gaotai**	**53.77**	**333**	*e*P		**P**		**12 13 44.1**	**+0.7**
GTA2				pmax		pmax			
	comp=Z,14nm,0.7s								
HILR	**Hailar Array B**	**57.45**	**354**	P		**P**		**12 14 09.4**	**0.0**
	comp=Z,2.1nm,0.4s,baz=177,slow=9.1,SNR=5.2								
	comp=Z,2.1nm,0.4s								
HEH	**HeiHe**	**57.68**	**359**	*e*P		**P**		**12 14 10.3**	**-0.6**
ULN	**Ulaanbaatar**	**58.34**	**343**			**P**		**12 14 16.4**	**+0.6**
ULN				IAmb		IAmb		12 14 17.9	
	comp=Z,7.6nm,0.7s								
SONM	**Songino Array**	**58.50**	**343**	P		**P**		**12 14 17.1**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=166,slow=7.9,SNR=35								
	comp=Z,6.0nm,0.7s								
SONM	**Songino Array**	**58.50**	**343**			**P**		**12 14 16.8**	**-0.1**
SONM				IAmb		IAmb		12 14 18.4	
	comp=Z,7.0nm,1.0s								
MKAR	**Makanchi Array**	**67.78**	**328**	P		**P**		**12 15 18.1**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=122,slow=8.0,SNR=32								
	comp=Z,1.6nm,0.5s								
ZAA0	**Zalesovo Array**	**71.37**	**335**	P		**P**		**12 15 39.2**	**-0.6**
ZAA0				IAmb		IAmb		12 15 40.7	
	comp=Z,6.3nm,0.8s								
ZALV	**Zalesovo Beam**	**71.37**	**335**	P		**P**		**12 15 39.1**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=119,slow=5.2,SNR=21								
	comp=Z,3.3nm,0.5s								
ZALV	**Zalesovo Beam**	**71.37**	**335**	P		**P**		**12 15 39.3**	**-0.5**
CHGR	**Chuyangaron**	**71.48**	**315**	P		**P**		**12 15 40.7**	**-0.3**
CHGR				IAmb		IAmb		12 15 41.4	
	comp=Z,18nm,1.4s								
VNDA	**Vanda**	**72.02**	**173**	P		**P**		**12 15 44.0**	**+0.7**
KURBB	**Kurchatov Arra**	**72.12**	**329**	P		**P**		**12 15 44.3**	**0.0**
	comp=Z,3.4nm,0.5s,baz=131,slow=5.0,SNR=18								
	comp=Z,3.4nm,0.5s								
KURK	**Kurchatov**	**72.13**	**329**	P		**P**		**12 15 44.9**	**+0.5**
KURK				IAmb		IAmb		12 15 45.8	
	comp=Z,6.5nm,0.6s								
KK31	**Karatay Array**	**72.63**	**320**	P		**P**		**12 15 48.3**	**+0.7**
KKAR	**Karatay Array**	**72.63**	**320**	P		**P**		**12 15 46.8**	**-0.7**
HRA	**Herat**	**74.91**	**309**	P		**P**		**12 16 01.7**	**+0.4**
KIWB	**Kanaga Island**	**75.45**	**32**	P		**P**		**12 16 03.1**	**-0.6**
KIWB				IAmb		IAmb		12 16 18.3	
	comp=Z,15nm,1.1s								
BVAR	**Borovoye Array**	**77.64**	**328**	P		**P**		**12 16 16.0**	**0.0**
	comp=Z,1.5nm,0.5s,baz=104,slow=6.3,SNR=7.9								
	comp=Z,1.5nm,0.5s								
BORK	**Borovoye**	**77.69**	**328**	P		**P**		**12 16 16.4**	**+0.1**
BORK				IAmb		IAmb		12 16 17.2	
	comp=Z,8.9nm,1.2s								
VOI	**Vohitsoka**	**79.18**	**249**	P		**P**		**12 16 24.9**	**-0.5**
VOI				IAmb		IAmb		12 16 50.4	
	comp=Z,21nm,1.4s								
SPIA	**Saint Paul Isl**	**81.63**	**29**	P		**P**		**12 16 38.2**	**+0.8**
NRIK	**Noril'sk**	**81.76**	**347**	P		**P**		**12 16 38.6**	**+0.7**
AB31	**Akbulak array**	**81.88**	**322**	P		**P**		**12 16 39.3**	**+0.3**
ABKAR	**Akbulak array**	**81.88**	**322**	P		**P**		**12 16 39.0**	**0.0**
UNV	**Unalaska Valle**	**82.06**	**33**	P		**P**		**12 16 39.5**	**-0.2**
QSPA	**South Pole Qui**	**82.32**	**180**	P		**P**		**12 16 44.5**	**+3.3**
	comp=Z,1.0nm,0.7s,baz=290,slow=1.4,SNR=10								
	comp=Z,1.0nm,0.7s								
QSPA	**South Pole Qui**	**82.32**	**180**	P		**P**		**12 16 43.2**	**+2.0**
ARTI	**Arti**	**85.37**	**328**	P		**P**		**12 16 56.9**	**+0.3**
ARTI				IAmb		IAmb		12 16 58.0	
	comp=Z,7.1nm,0.5s								
SDPT	**Sand Point**	**85.87**	**33**	P		**P**		**12 16 58.6**	**-0.4**
RAYN	**Ar Rayn**	**86.33**	**294**	P		**P**		**12 17 01.1**	**-1.0**
M14K	**Bethel**	**87.03**	**28**	P		**P**		**12 17 05.0**	**+0.4**
M14K				IAmb		IAmb		12 17 16.4	
	comp=Z,7.1nm,1.1s								
PDAR	**Pinedale Array**	**118.67**	**45**	PKP		**PKPdf**		**12 23 07.4**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=304,slow=1.6,SNR=4.1								
TXAR	**Lajitas Array**	**126.85**	**59**	PKP		**PKiKP**		**12 23 24.6**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=281,slow=1.6,SNR=5.1								
TORD	**Torodi Ar. Bea**	**127.12**	**281**	PKP		**PKiKP**		**12 23 24.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=83,slow=2.9,SNR=4.0								
PB06	**IPOC Station P**	**145.19**	**151**	PKPdf		**PKPbc**		**12 23 55.6**	**-1.6**
CPUP	**Villa Florida**	**145.80**	**171**	PKPbc		**PKPab**		**12 23 59.5**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=199,slow=9.6,SNR=3.9								
CPUP	**Villa Florida**	**145.80**	**171**	PKPdf		**PKPdf**		**12 23 57.3**	**-0.7**
PB07	**IPOC Station P**	**145.86**	**149**	PKPdf		**PKPdf**		**12 23 57.1**	**-1.4**
LPAZ	**La Paz**	**151.27**	**146**	PKPbc		**PKiKP**		**12 24 15.6**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=212,slow=3.0,SNR=6.0								

MAN ***13*** *12:06:04.0,6˚.62N×125˚.19E,h10km,MS3.6*
MAN INTENSITY II - KIDAPAWAN CITY; MAKILALA COTABATO.
ISC 13 12:06:04.0±1.5,**6˚.63N**±0˚.04×**125˚.23E**±0˚.04,**h12**km±12km,
n13,σ1§16/23,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.40**	**340**	*i* P		**Pb**	**12 06 13.1**	**+0.1**
KCP				*i* S		**Sb**	**12 06 19.4**	**+0.2**
DMPH	**Davao City--Mi**	**0.53**	**32**	*i* P		**Pb**	**12 06 15.5**	**+0.2**
DMPH				*i* S		**Sb**	**12 06 23.9**	**+1.0**
DAV	**Davao City (W)**	**0.56**	**39**	P		**Pg**	**12 06 14.0**	**-1.0**
GSPH	**General Santos**	**0.61**	**207**	*i* P		**Pb**	**12 06 17.0**	**+0.4**
GSPH				*i* S		**Sn**	**12 06 27.1**	**-1.3**
DDMP	**Don Marcelino,**	**0.71**	**137**	*i* P		**Pb**	**12 06 18.5**	**+0.1**
DDMP				*i* S		**Sn**	**12 06 29.5**	**-1.3**
CTBH	**Cotabato--PC H**	**1.14**	**301**	*i* P		**Pb**	**12 06 24.9**	**-0.7**
CTBH				*i* S		**Sg**	**12 06 41.8**	**+1.1**
CDOP	**Cateel, Davao**	**1.66**	**46**	*i* P		**Pn**	**12 06 33.8**	**+0.8**
CDOP				*i* S		**Sn**	**12 06 54.8**	**+0.6**
CGP	**Cagayan de Oro**	**1.89**	**344**	*i* P		**Pn**	**12 06 36.8**	**+0.7**
CGP				*e*S		**Sb**	**12 07 01.2**	**-0.8**
BIPH	**Bislig**	**1.91**	**36**	*e*P		**Pn**	**12 06 36.5**	**+0.1**
BIPH				*e*S		**Sn**	**12 06 58.2**	**-2.3**
PAGZ	**Pagadian**	**2.19**	**304**	*e*P		**Pn**	**12 06 41.2**	**+0.9**
PAGZ				*i* S		**Sb**	**12 07 11.2**	**+0.4**
TSSP	**Tandag City**	**2.58**	**22**	*e*P		**Pn**	**12 06 47.0**	**+1.3**
TSSP				*i* S		Sn	12 07 08.2	-8.9
DCPH	**Dipolog City**	**2.69**	**316**	*i* P		**Pb**	**12 06 50.5**	**-1.6**
LSIP	**Lazi, Siquijor**	**2.94**	**328**	*e*P		**Pb**	**12 06 56.3**	**-0.2**
LSIP				*i* S		**Sb**	**12 07 34.9**	**+2.5**

ROM ***13*** *12:06:53.8±0.0,46˚.334N±0˚.002×12˚.634E±0˚.003, h10km,ML3.6/182,Mw3.5,Error ellipse: s-maj=0.2km s-min=0.1km az=328.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.97; Mθθ-1.70; Mφφ0.72; Mrθ-0.63; Mθφ-1.63; Mφr0.21; Fault plane solution: Mw2.19907×10¹⁴ NP1:ϕ=283.00000°,δ75.00000°, λ152.00000°. NP2:ϕ=21.00000°,δ63.00000°,λ17.00000°.*
IDC ***13*** *12:06:53.2±1.5,46˚.26N×12˚.74E,h0km,mb3.2/1, mbtmp3.5/6,ML3.3/5,MS2.5/1 Error ellipse: s-maj=17.1km s-min=11.4km az=149.0*
VIE ***13*** *12:06:53.9±0.1,46˚.32N×12˚.62E,h9km±3km,mb3.4/24, ml4.0/24,Error ellipse: s-maj=1.3km s-min=0.8km az=175.0 17 km SW of Ampezzo*
NEIC ***13*** *12:06:54.4±1.4,46˚.32N±0˚.04×12˚.62E±0˚.04,h10km±1km, mb4.3/5,ML4.0/24(VIE),Error ellipse: s-maj=6.1km s-min=4.6km az=166.0*
GFZ ***13*** *12:06:55.6±0.2,46˚N±2˚×1˚3E±˚,h10km,M4.0/54, ML3.6/53,Error ellipse: s-maj=4.3km s-min=3.0km az=165.5,confirmed*
PRU ***13*** *12:06:56.2,46˚.39N×12˚.72E,h1km,M4.3*
LDG ***13*** *12:06:56.2±0.1,46˚.21N×12˚.78E,h2km,Ml3.7/24,Error ellipse: s-maj=3.7km s-min=2.6km az=153.0*
BNS ***13*** *12:06:59.5±0.4,46˚.54N×12˚.85E,h10km,ML3.9*
ISC 13 12:06:54.5±0.6,**46˚.31N**±0˚.01×**12˚.64E**±0˚.01,**h12**km±3km,
n323,σ1§53/482,20C-25D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STAL	**STALIGIAL**	**0.07**	**134**			**Pg**	**12 06 56.9**	**-0.2**
STAL	**STALIGIAL**	**0.07**	**134**	⇓P		**Pg**	**12 06 56.9**	**-0.2**
STAL						S		**Sg**	**12 06 58.7**	**-0.4**
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
STAL						AML		AML		
CIMO	**Cimolais**	**0.14**	**270**	⇑	*e*Pg		**Pg**	**12 06 57.3**	**-0.6**
CIMO					*e*Sg		**Sg**	**12 06 59.5**	**-0.8**
CIMO	**Cimolais**	**0.14**	**270**	⇑	P		**Pg**	**12 06 57.3**	**-0.6**
CIMO					S		**Sg**	**12 06 59.5**	**-0.8**
CIMO					AML		AML		
	comp=E,12550μm,0.6s								
CIMO					AML		AML		
	comp=E,12800μm,0.4s								
CIMO					AML		AML		
	comp=N,41800μm,0.5s								
CIMO					AML		AML		
	comp=N,42400μm,0.4s								
FDS	**Forni di Sopra**	**0.15**	**341**	⇓	P		**Pg**	**12 06 57.5**	**-0.7**
FDS					S		**Sg**	**12 06 59.7**	**-1.2**
MLNI	**Malnisio**	**0.16**	**186**	⇓	*e*Pg		**Pg**	**12 06 58.5**	**+0.2**
MLNI					*e*Sg		**Sb**	**12 07 01.5**	**+0.5**
CSMI	**Casera Mimoias**	**0.20**	**3**	⇓	*e*Pg		**Pg**	**12 06 58.5**	**-0.6**
CSMI					*e*Sg		**Sg**	**12 07 01.4**	**-0.8**
CSO	**Casso**	**0.22**	**260**	⇑	*e*Pg		**Pg**	**12 06 58.8**	**-0.4**
CSO					*e*Sg		**Sg**	**12 07 02.3**	**-0.2**
CLUD	**Cludinico**	**0.23**	**49**	⇑	*e*Pg		**Pg**	**12 06 58.8**	**-0.6**
CLUD					*e*Sg		**Sg**	**12 07 02.5**	**-0.1**
CLUD	**Cludinico**	**0.23**	**49**	⇑	P		**Pg**	**12 06 58.7**	**-0.6**
CLUD					S		**Sg**	**12 07 02.5**	**-0.1**
CLUD					AML		AML		
	comp=E,8545μm,0.6s								
CLUD					AML		AML		
	comp=N,12985μm,0.4s								
CLUD					AML		AML		
	comp=E,8345μm,0.6s								
CLUD					AML		AML		
	comp=N,13500μm,0.4s								
CLUD					AML		AML		
	comp=N,12990μm,0.4s								
CLUD					AML		AML		
	comp=E,8545μm,1.4s								
CLUD					AML		AML		
	comp=E,8345μm,1.4s								
APGO	**Alpago**	**0.25**	**230**	⇑	*e*Pg		**Pg**	**12 06 59.8**	**+0.1**
APGO					*e*Sg		**Sg**	**12 07 03.9**	**+0.7**
MPRI	**Monte Prat**	**0.26**	**106**	⇓	*e*Pg		**Pg**	**12 06 59.6**	**-0.3**
MPRI					*e*Sg		**Sg**	**12 07 03.9**	**+0.5**
MPRI	**Monte Prat**	**0.26**	**106**	⇓	P		**Pg**	**12 06 59.5**	**-0.3**
MPRI					S		**Sg**	**12 07 04.2**	**+0.7**
MPRI					AML		AML		
	comp=N,34350μm,0.5s								
MPRI					AML		AML		
	comp=E,16650μm,0.4s								
MPRI					AML		AML		
	comp=N,26350μm,0.5s								
MPRI					AML		AML		
	comp=E,21800μm,0.4s								
MPRI					AML		AML		
	comp=N,34350μm,1.5s								
MPRI					AML		AML		
	comp=N,26350μm,1.5s								
DANT	**Danta di Cador**	**0.27**	**343**	⇓	P		**Pg**	**12 06 59.6**	**-0.5**
DANT					S		**Sg**	**12 07 04.1**	**+0.1**
PNAL	**Ponte nelle Va**	**0.27**	**240**	⇑	P		**Pg**	**12 06 59.8**	**-0.3**
PNAL					S		**Sg**	**12 07 04.2**	**+0.3**
FUSE	**Fusea**	**0.27**	**68**	⇑	*e*Pg		**Pg**	**12 06 59.7**	**-0.5**
FUSE					*e*Sg		**Sg**	**12 07 04.1**	**0.0**
FUSE	**Fusea**	**0.27**	**68**	⇑	P		**Pg**	**12 06 59.7**	**-0.5**
FUSE					S		**Sg**	**12 07 04.3**	**+0.2**
FUSE	**Fusea**	**0.27**	**68**		P		**Pg**	**12 06 59.8**	**-0.5**
FVI	**Forni Avoltri**	**0.30**	**19**	⇓	P		**Pg**	**12 07 00.1**	**-0.7**
FVI					S		**Sg**	**12 07 04.3**	**-0.6**
FVI					AML		AML		
	comp=E,50500μm,0.2s								
FVI					AML		AML		
	comp=N,37800μm,0.6s								
BOO	**Bordano**	**0.32**	**88**	⇑	*e*Pg		**Pg**	**12 07 00.5**	**-0.5**
BOO					*e*Sg		**Sg**	**12 07 05.6**	**+0.2**
BOO	**Bordano**	**0.32**	**88**	⇑	P		**Pg**	**12 07 00.5**	**-0.5**
BOO					S		**Sg**	**12 07 05.9**	**+0.5**
CAE	**Caneva**	**0.33**	**204**		*e*Pg		**Pg**	**12 07 01.3**	**0.0**
CAE					*e*Sg		**Sb**	**12 07 06.8**	**-0.9**
CAE	**Caneva**	**0.33**	**204**	⇑	P		**Pg**	**12 07 01.2**	**-0.1**
CAE					S		**Sb**	**12 07 07.3**	**-0.4**
BUA	**Buia**	**0.35**	**105**		*e*Pg		**Pg**	**12 07 01.6**	**+0.1**
BUA					*e*Sg		**Sg**	**12 07 07.0**	**+0.6**
FRE8	**Fregona**	**0.35**	**213**		P		**Pg**	**12 07 01.8**	**+0.2**
FRE8					S		**Sb**	**12 07 08.1**	**-0.1**
FREG	**Fregona**	**0.37**	**217**	⇑	P		**Pg**	**12 07 01.8**	**-0.2**
FREG					S		**Sb**	**12 07 08.1**	**-0.7**
FREG					AML		AML		
	comp=E,11950μm,0.4s								
FREG					AML		AML		
	comp=N,10045μm,0.4s								
FREG					AML		AML		
	comp=E,12050μm,0.4s								
FREG					AML		AML		
	comp=N,10025μm,0.4s								
FREG					AML		AML		
	comp=N,10050μm,0.4s								
FREG					AML		AML		
	comp=N,6120μm,0.3s								
AFL	**Alpe Faloria**	**0.38**	**305**	⇑	*e*Pg		**Pg**	**12 07 01.8**	**-0.4**
AFL					*e*Sg		**Sg**	**12 07 07.6**	**+0.1**
AGOR	**Agordo**	**0.41**	**266**		*e*Pg		**Pg**	**12 07 02.3**	**-0.9**
AGOR					*e*Sg		**Sg**	**12 07 08.9**	**+0.9**
AGOR	**Agordo**	**0.41**	**266**		P		**Pg**	**12 07 02.0**	**-0.7**
AGOR					S		**Sg**	**12 07 09.0**	**+0.9**
PLRO	**Paularo**	**0.43**	**56**	⇑	*e*Pg		**Pg**	**12 07 02.6**	**-0.4**
PLRO					*e*Sg		**Sg**	**12 07 09.2**	**+0.4**
PLRO	**Paularo**	**0.43**	**56**	⇑	P		**Pg**	**12 07 02.5**	**-0.6**
PLRO					S		**Sg**	**12 07 09.2**	**+0.4**
BAD	**Bernadia**	**0.43**	**100**	⇓	*e*Pg		**Pg**	**12 07 02.7**	**-0.3**
BAD					*e*Sg		**Sg**	**12 07 09.4**	**+0.8**
BAD	**Bernadia**	**0.43**	**100**	⇓	P		**Pg**	**12 07 02.7**	**-0.3**
BAD					S		**Sg**	**12 07 09.5**	**+0.8**
ABTA	**Abfaltersbach**	**0.45**	**349**				**Pg**	**12 07 02.8**	**-0.5**
ABTA							**Sg**	**12 07 08.6**	**-0.7**
ABTA	**Abfaltersbach**	**0.45**	**349**		*e*Pg		**Pg**	**12 07 02.8**	**-0.5**
	comp=N,622nm,0.4s,SNR=469								
ABTA					*e*Sg		**Sg**	**12 07 08.6**	**-0.7**
	comp=N,1μm,0.3s								
VINO	**Villanova**	**0.45**	**97**	⇓	*e*Pg		**Pg**	**12 07 03.0**	**-0.4**
VINO					*e*Sg		**Sb**	**12 07 10.3**	**-0.8**
VARN	**Col Varnada, M**	**0.49**	**229**	⇑	*e*Pg		**Pg**	**12 07 03.3**	**-0.7**
VARN					*e*Sg		**Sb**	**12 07 11.5**	**-0.5**
VARN	**Col Varnada, M**	**0.49**	**229**	⇑	P		**Pg**	**12 07 03.3**	**-0.7**
VARN					AML		AML		
	comp=E,6985μm,0.4s								
VARN					AML		AML		
	comp=E,7130μm,0.4s								
VARN					AML		AML		
	comp=N,5490μm,0.6s								
VARN					AML		AML		
	comp=N,5430μm,0.6s								
VARN					AML		AML		
	comp=E,7675μm,0.4s								
VARN					AML		AML		
	comp=E,7590μm,0.4s								
PTCC	**Patocco-Chiusa**	**0.51**	**79**		P		**Pg**	**12 07 03.9**	**-0.6**
PTCC					S		**Sg**	**12 07 11.6**	**+0.4**
PTCC					AML		AML		
	comp=N,5870μm,0.7s								
PTCC					AML		AML		
	comp=E,4765μm,0.9s								
ED06	**Collalto TV**	**0.54**	**213**		*e*Pg		**Pg**	**12 07 05.4**	**+0.3**
COLI	**Coloredo**	**0.55**	**109**		*e*Pg		**Pg**	**12 07 05.2**	**0.0**
CRND	**Cornuda**	**0.61**	**219**		P		**Pb**	**12 07 07.7**	**+0.6**
MTLO	**Montello**	**0.62**	**217**		*e*Pg		**Pg**	**12 07 06.7**	**+0.1**
LSR	**Lussari**	**0.64**	**75**	⇑	*e*Pg		**Pg**	**12 07 06.5**	**-0.5**
LSR					*e*Sg		**Sb**	**12 07 16.4**	**-0.3**
ACOM	**Acomizza, Ital**	**0.65**	**68**		*e*Pg		**Pg**	**12 07 06.9**	**-0.4**
ACOM					*e*Sg		**Sg**	**12 07 16.6**	**+0.7**
ACOM	**Acomizza, Ital**	**0.65**	**68**	⇑	P		**Pg**	**12 07 06.8**	**-0.4**
ACOM					S		**Sb**	**12 07 16.9**	**-0.1**
ACOM					AML		AML		
	comp=E,18500μm,0.3s								
ACOM					AML		AML		
	comp=N,14100μm,1.5s								
ACOM					AML		AML		
	comp=N,13550μm,1.5s								
ACOM					AML		AML		
	comp=N,13550μm,0.5s								
ACOM					AML		AML		
	comp=N,14100μm,0.5s								
ACOM					AML		AML		
	comp=E,18300μm,0.3s								
ACOM	**Acomizza, Ital**	**0.65**	**68**		P		**Pg**	**12 07 06.8**	**-0.4**
PRED	**Cave del Predi**	**0.66**	**78**		*e*Pg		**Pg**	**12 07 06.9**	**-0.4**
PRED	**Cave del Predi**	**0.66**	**78**				**Pg**	**12 07 06.6**	**-0.7**
PRED	**Cave del Predi**	**0.66**	**78**		P		**Pg**	**12 07 06.6**	**-0.7**
PRED					S		**Sg**	**12 07 16.4**	**+0.4**
DRE	**Drenchia**	**0.71**	**101**		*e*Pg		**Pg**	**12 07 07.8**	**-0.6**
DRE	**Drenchia**	**0.71**	**101**	⇓	P		**Pg**	**12 07 07.3**	**-1.0**
DRE					S		**Sb**	**12 07 18.8**	**+0.2**
ASOL	**Asolo**	**0.72**	**225**		P		**Pb**	**12 07 08.8**	**-0.1**
CGRP	**Cima Grappa**	**0.72**	**234**		P		**Pg**	**12 07 07.8**	**-0.8**
CGRP					S		**Sb**	**12 07 19.0**	**0.0**
CGRP					AML		AML		
	comp=E,4185μm,1.0s								
CGRP					AML		AML		
	comp=E,4180μm,1.0s								
CGRP					AML		AML		
	comp=N,4415μm,0.5s								
CGRP					AML		AML		
	comp=E,4205μm,1.0s								
CGRP					AML		AML		
	comp=N,4385μm,0.5s								
CGRP					AML		AML		
	comp=E,4180μm,1.0s								
CGRP	**Cima Grappa**	**0.72**	**234**		P		**Pg**	**12 07 08.6**	**+0.1**
BRES	**Bressanone**	**0.73**	**302**	⇓	P		**Pg**	**12 07 08.3**	**-0.5**
BRES					S		**Sg**	**12 07 18.2**	**-0.3**
BRES					AML		AML		
	comp=E,3245μm,0.6s								
BRES					AML		AML		
	comp=E,2760μm,0.9s								
BRES					AML		AML		
	comp=E,2760μm,1.1s								
BRES					AML		AML		
	comp=N,5275μm,0.3s								
CTI	**Castel Tesino**	**0.73**	**249**				**Pg**	**12 07 08.0**	**-0.7**
CTI	**Castel Tesino**	**0.73**	**249**		P		**Pg**	**12 07 08.9**	**+0.2**
CTI					AML		AML		
	comp=E,3855μm,0.7s								
CTI					AML		AML		
	comp=N,4575μm,0.4s								
CTI					AML		AML		
	comp=E,4420μm,1.4s								
CTI					AML		AML		
	comp=E,4420μm,0.6s								
ZIAN	**Ziano**	**0.74**	**268**	*e*Pg			**Pg**	**12 07 08.7**	**-0.2**
ZIAN	**Ziano**	**0.74**	**268**	P			**Pg**	**12 07 08.7**	**-0.2**
ZIAN					AML		AML		
	comp=E,2015μm,0.6s								
ZIAN					AML		AML		
	comp=N,1735μm,0.4s								
ZIAN					AML		AML		
	comp=E,1805μm,0.4s								
ZIAN					AML		AML		
	comp=N,2070μm,0.6s								
ZIAN					AML		AML		
	comp=E,1910μm,0.4s								
ZIAN					AML		AML		
	comp=N,1645μm,1.0s								
ZIAN					AML		AML		
	comp=N,1900μm,0.4s								
ZIAN					AML		AML		
	comp=E,1665μm,1.0s								
SABO	**M.te Sabotino**	**0.75**	**116**				**Pg**	**12 07 08.8**	**-0.2**
SABO	**M.te Sabotino**	**0.75**	**116**		P		**Pg**	**12 07 08.8**	**-0.2**
SABO					S		**Sb**	**12 07 20.3**	**+0.7**
SABO					AML		AML		
	comp=N,9040μm,0.6s								
SABO					AML		AML		
	comp=N,35450μm,0.6s								
SABO					AML		AML		
	comp=E,5520μm,0.5s								
SABO					AML		AML		
	comp=E,23600μm,0.5s								
MYKA	**Terra Mystica**	**0.77**	**65**				**Pg**	**12 07 08.5**	**-0.8**
MYKA							**Sg**	**12 07 20.1**	**+0.7**
MYKA	**Terra Mystica**	**0.77**	**65**	*e*Pg			**Pg**	**12 07 08.5**	**-0.8**
	comp=E,24nm,0.1s,SNR=96								
MYKA					*e*Sg		**Sg**	**12 07 20.1**	**+0.7**
	comp=E,139nm,0.2s								
KBA	**Koelnbreinsper**	**0.91**	**32**				**Pb**	**12 07 11.6**	**-0.7**
KBA							**Sg**	**12 07 23.4**	**-0.6**
KBA	**Koelnbreinsper**	**0.91**	**32**	*e*Pg			**Pb**	**12 07 11.9**	**-0.4**
	SNR=225								
KBA					*e*Sg		**Sg**	**12 07 23.4**	**-0.6**
	SNR=5.0								
KBA	**Koelnbreinsper**	**0.91**	**32**	*i* Pg			**Pb**	**12 07 11.6**	**-0.7**
	comp=E,37nm,0.3s,SNR=104								
KBA					Sg		**Sg**	**12 07 23.4**	**-0.6**
	comp=E,481nm,0.2s								
KBA	**Koelnbreinsper**	**0.91**	**32**	P			**Pb**	**12 07 11.8**	**-0.5**
LESA	**Schwarzleotal**	**1.11**	**1**				**Pb**	**12 07 14.8**	**-1.0**
LESA							**Sb**	**12 07 30.1**	**-0.2**
LESA	**Schwarzleotal**	**1.11**	**1**	*e*

BIOA Bad Ischl, Aus 1.54 26 Pb 12 07 23.7 +0.7
BIOA Sb 12 07 44.0 +1.5
BIOA Bad Ischl, Aus 1.54 26 *e*Pg **Pb 12 07 23.7 +0.7**
comp=E,21nm,0.3s,SNR=51
BIOA Sg **Sb 12 07 44.0 +1.5**
comp=E,312nm,0.4s
SESA Seetaler Alpe, 1.55 58 *e*Pg **Pb 12 07 23.2 -0.1**
comp=E,98nm,0.3s,SNR=161
SESA Sg **Sg 12 07 45.3 +0.8**
comp=E,274nm,0.3s
RIY Rijeka 1.63 127 *e*Pn **Pb 12 07 24.2 -0.1**
RIY Sg **Sg 12 07 46.3 -0.5**
SALO Salr 1.63 246 Pb 12 07 24.3 -0.1
FUORN Ofenpass-Fuorn 1.67 282 Pn 12 07 24.6 +0.8
FUORN Ofenpass-Fuorn 1.67 282 P **Pb 12 07 25.7 +0.4**
SOKA Soboth 1.70 77 Pb 12 07 25.7 +0.1
SOKA **Sb 12 07 47.9 +1.0**
SOKA Soboth 1.70 77 *e*Pg **Pb 12 07 25.7 +0.1**
comp=E,34nm,0.4s,SNR=52
SOKA Sn **Sb 12 07 47.9 +1.0**
comp=E,178nm,0.5s
RETA Reutte 1.74 313 Pb 12 07 26.7 +0.2
RETA **Sg 12 07 51.5 +1.0**
RETA Reutte 1.74 313 *e*Pn **Pb 12 07 26.8 +0.4**
SNR=3.5
RETA *e*Pg **Pg 12 07 28.5 +0.6**
RETA Reutte 1.74 313 *e*Pg **Pb 12 07 26.7 +0.2**
comp=E,5.6nm,0.3s,SNR=169
RETA Sg **Sg 12 07 51.5 +1.0**
comp=E,75nm,0.4s
MOA Molln 1.90 35 Pb 12 07 29.4 +0.3
MOA **Sg 12 07 55.6 0.0**
MOA Molln 1.90 35 *e*Pn **Pb 12 07 29.6 +0.5**
SNR=58
MOA *e*Pg **Pg 12 07 31.9 +1.0**
MOA *e*Sg **Sg 12 07 55.9 +0.3**
SNR=3.6
MOA Molln 1.90 35 *e*Pg **Pb 12 07 29.4 +0.3**
comp=E,50nm,0.3s,SNR=51
MOA *e*Sg **Sg 12 07 55.6 0.0**
comp=E,355nm,0.8s
MOA Molln 1.90 35 P **Pb 12 07 29.3 +0.2**
DAVOX Davos/Dischmat 1.96 285 Pn **Pb 12 07 31.0 +0.8**
comp=E,32nm,0.3s,baz=106,slow=14,SNR=121
DAVOX Lg Lg 12 07 56.4
comp=E,73nm,0.3s,baz=2.6,slow=22,SNR=21
comp=E,68nm,0.3s
IMOL Imola, Italy 2.05 198 AML AML
comp=N,4735µm,0.6s
IMOL AML AML
comp=E,4460µm,0.1s
FUR Furstenfeldbru 2.07 334 *e*Pn **Pb 12 07 31.8 -0.2**
SNR=3.0
FUR *e*Pg **Pg 12 07 34.3 0.0**
FUR *e*Sg **Sg 12 08 00.6 -0.6**
SNR=4.0
FUR Furstenfeldbru 2.07 334 P **Pb 12 07 32.3 +0.3**
OZLJ Ozalj 2.10 108 *e*Pn **Pb 12 07 31.2 -1.1**
OZLJ Sn **Sb 12 07 57.4 -0.9**
DAVA Damuels 2.13 298 Pb 12 07 33.9 +0.9
DAVA **Sg 12 08 03.6 +0.6**
DAVA Damuels 2.13 298 *e*Pn **Pb 12 07 34.0 +0.9**
SNR=4.7
DAVA *e*Pg **Pg 12 07 36.0 +0.7**
DAVA Damuels 2.13 298 *e*Pg **Pb 12 07 33.9 +0.9**
comp=E,7.3nm,0.3s
DAVA Sg **Sg 12 08 03.6 +0.6**
comp=E,399nm,0.6s
DAVA Damuels 2.13 298 P **Pb 12 07 33.9 +0.9**
RABC Rab 2.17 135 *e*Pn **Pb 12 07 31.9 -1.8**
RABC Sn **Sb 12 07 59.5 -1.0**
ARSA Arzberg 2.20 64 Pn 12 07 32.3 +1.5
ARSA Arzberg 2.20 64 *e*Pn **Pn 12 07 32.5 +1.7**
SNR=9.3
ARSA Arzberg 2.20 64 *e*Pn **Pn 12 07 32.3 +1.5**
comp=E,10.0nm,0.4s,SNR=29
ARSA Sn **Sn 12 07 58.9 +1.1**
comp=E,39nm,0.5s
ARSA Sg **Sg 12 08 05.2 +0.1**
comp=E,60nm,0.7s
ARSA Arzberg 2.20 64 P **Pn 12 07 32.6 +1.8**
PRMA PARMA 2.25 227 Pn **Pn 12 07 31.9 +0.5**
TUE Stuetta 2.28 275 Pn **Pn 12 07 32.1 0.0**
TUE Stuetta 2.28 275 P **Pb 12 07 35.1 -0.6**
TUE Stuetta 2.28 275 P **Pb 12 07 35.0 -0.7**
ZCCA Zocca 2.28 211 Pn **Pn 12 07 32.2 +0.2**
NVLJ Novalja 2.35 137 *i* Pn **Pn 12 07 33.9 +1.1**
NVLJ Sn **Sb 12 08 04.5 -1.1**
PTJ Puntijarka 2.35 99 *e*Pn **Pn 12 07 34.3 +1.3**
PTJ Sn **Sb 12 08 05.0 -0.9**
PLONS Plons/SG 2.36 289 *e*Pn **Pb 12 07 36.8 -0.1**
SNR=6.2
KOGS Kog 2.51 86 AML AML
comp=E,4170µm,0.6s
KOGS AML AML
comp=N,4210µm,1.5s
KOGS AML AML
comp=N,4210µm,0.5s
MILN Milano 2.52 252 AML AML
comp=E,1014µm,0.5s
MILN AML AML
comp=E,1014µm,1.5s
MILN AML AML
comp=N,941µm,0.9s
MILN AML AML
comp=E,994µm,1.3s
MILN AML AML
comp=E,994µm,0.7s
MILN AML AML
comp=N,941µm,1.1s
MILN AML AML
comp=N,1032µm,0.6s
GEC2 GERESS Array S 2.64 16 Pn 12 07 38.3 +1.5
GEC2 GERESS Array S 2.64 16 *e*Pn **Pn 12 07 38.5 +1.5**
SNR=10
GEC2 *e*Sg **Sb 12 08 17.3 +3.3**
SNR=2.8
GERES GERESS Array B 2.64 16 Pn 12 07 38.4 +1.5
comp=N,1.1nm,0.3s,baz=192,slow=13,SNR=71
GERES Sn **Sg 12 08 10.7 +1.9**
comp=N,4.3nm,0.3s,baz=198,slow=22,SNR=11
GERES Lg Lg 12 08 17.3
comp=N,12nm,0.3s,baz=193,slow=32,SNR=18
comp=N,17nm,0.3s
GERES GERESS Array B 2.64 16 Pn 12 07 37.5 +0.6
VIRC Vir 2.64 139 *e*Pn **Pn 12 07 37.7 +0.9**
KALN Kalnik 2.66 92 *i* Pn **Pn 12 07 37.7 +0.6**
GRC3 Grafenberg Arr 2.68 345 P **Pn 12 07 38.5 +1.1**
GRC2 Grafenberg Arr 2.70 342 P **Pn 12 07 40.0 +2.3**
CONA Conrad Observa 2.73 53 *e*Pn **Pn 12 07 39.9 +1.7**
comp=N,7.2nm,0.3s,SNR=20
CONA Sn **Sn 12 08 13.4 +2.2**
comp=N,19nm,0.3s
CKRC Cesky Krumlov 2.75 24 *e*PN **Pn 12 07 40.3 +1.9**
CKRC *e*SG **Sb 12 08 19.8 +2.5**
comp=N,252nm,0.4s
GRC1 Grafenberg Arr 2.79 345 P **Pn 12 07 40.8 +1.8**
UDBI Udbina 2.83 128 *e*Pn **Pn 12 07 41.0 +1.5**
WET Wettzell 2.84 3 *e*Pn **Pn 12 07 41.2 +1.6**
SNR=8.9
WET *e*Sg **Sg 12 08 24.0 -1.7**
SNR=0.9
WET Wettzell 2.84 3 P **Pn 12 07 41.0 +1.4**
RONA Rosalia, Austr 2.87 60 Pn 12 07 41.6 +1.6
RONA **Pg 12 07 48.9 -0.5**
RONA **Sn 12 08 15.6 +1.2**
RONA Rosalia, Austr 2.87 60 *e*Pn **Pn 12 07 41.6 +1.6**
comp=N,8.7nm,0.3s,SNR=12
RONA *e*Pg **Pg 12 07 48.9 -0.5**
comp=N,64nm,0.6s
RONA Sn **Sn 12 08 15.6 +1.2**
comp=N,26nm,0.4s
BEHE Becsehely 2.87 85 Pn **Pn 12 07 40.8 +0.8**
BEHE Becsehely 2.87 85 P **Pn 12 07 40.9 +0.8**
GRB5 Grafenberg Arr 2.88 347 P **Pn 12 07 41.4 +1.3**
GRC4 Grafenberg Arr 2.88 345 P **Pn 12 07 42.4 +2.2**
DUGI Dugi Otok 2.88 143 *i* Pn **Pn 12 07 41.4 +1.2**
KHC Kasperske Hory 2.89 12 Pn 12 07 41.8 +1.4
KHC Kasperske Hory 2.89 12 *e*PN **Pn 12 07 42.0 +1.6**
KHC *e*PG **Pb 12 07 48.3 +2.3**
KHC *e*SN **Sn 12 08 17.6 +2.5**
KHC *e*SG **Sg 12 08 25.9 -1.5**
comp=N,184nm,0.4s
KHC Kasperske Hory 2.89 12 P **Pn 12 07 42.5 +2.1**
WINA Alland / Wiene 2.95 51 *e*Pn **Pn 12 07 42.8 +1.6**
SNR=11
WINA Sn **Sb 12 08 21.0 -2.1**
MOSL Moslavina 2.96 102 *e*Pn **Pn 12 07 41.8 +0.6**
SOP Sopron 3.02 61 P **Pn 12 07 42.6 +0.6**
GRB2 Grafenberg Arr 3.03 348 P **Pn 12 07 44.8 +2.6**
MURB Monte Urbino 3.05 182 Pn 12 07 44.0 +1.5
GRB3 Grafenberg Arr 3.09 350 P **Pn 12 07 44.5 +1.5**
GRB1 Grafenberg Arr 3.15 348 P **Pn 12 07 46.4 +2.5**
SLE Schleitheim 3.18 299 *e*Pn **Pn 12 07 46.8 +2.4**
SNR=13
SLE *e*Pg **Pg 12 07 54.6 -0.9**
SLE Schleitheim 3.18 299 P **Pn 12 07 46.9 +2.5**
GRB4 Grafenberg Arr 3.24 348 P **Pn 12 07 47.5 +2.3**
GUMA Gualdo di Mace 3.29 171 Pn 12 07 46.3 +0.5
FDMO Fiordimonte 3.29 174 Pn 12 07 46.7 +0.9
ZVC Zvikov 3.30 18 *e*PN **Pn 12 07 47.9 +2.0**
ZVC *e*PG **Pb 12 07 55.9 +3.0**
ZVC *e*SN **Sn 12 08 26.3 +1.2**
SULZ Cheisacher 3.33 293 *e*Pn **Pn 12 07 49.1 +2.7**
SNR=1.8
STU Stuttgart 3.39 318 Pn **Pn 12 07 46.4 -0.8**
STU Stuttgart 3.39 318 *e*Pn **Pn 12 07 50.0 +2.9**
SNR=2.6
STU Stuttgart 3.39 318 P **Pn 12 07 50.9 +3.7**
ZIRJ Zirje 3.41 140 *i* Pn **Pn 12 07 49.3 +1.9**
ROTZ Rotzenmuhle 3.47 355 *e*Pn **Pn 12 07 48.9 +0.7**
SNR=17
ROTZ *e*Pg **Pg 12 07 59.6 -1.4**
MPLH Magyarpolny 3.48 74 P **Pn 12 07 48.9 +0.5**
NRCA Norcia 3.49 174 Pn 12 07 49.8 +1.1
GRFO Grafenberg 3.51 345 Pn **Pn 12 07 48.5 -0.3**
GRFO Grafenberg 3.51 345 P **Pn 12 07 51.0 +2.1**
GRA1 Grafenberg Arr 3.51 345 Pn **Pn 12 07 49.3 +0.4**
GRA1 Grafenberg Arr 3.51 345 P **Pn 12 07 50.8 +1.9**
GRF Grafenberg Arr 3.51 345 *e*Pn **Pn 12 07 51.1 +2.2**
SNR=2.3
GRF *e*Pg **Pg 12 08 01.0 -0.8**
BALST Balsthal 3.54 289 *e*Pn **Pn 12 07 52.0 +2.7**
SNR=7.3
TREC Trest 3.55 32 *e*PN **Pn 12 07 50.9 +1.5**
TREC Trest 3.55 32 P **Pn 12 07 50.8 +1.4**
BFO Black Forest 3.56 306 Pn 12 07 51.3 +1.8
BFO Black Forest 3.56 306 *e*Pn **Pn 12 07 51.9 +2.4**
SNR=16
BLY Banja Luka 3.56 114 Pn **Pn 12 07 50.1 +0.6**
GRA3 Grafenberg Arr 3.56 346 P **Pn 12 07 51.6 +2.0**
SENIN Lac Senin/Sane 3.70 273 Pn **Pn 12 07 51.5 -0.1**
CESX Cesi 3.70 181 Pn 12 07 52.3 +0.8
CASP Castiglione de 3.74 200 Pn **Pn 12 07 52.0 0.0**
KRUC Moravsky 3.75 41 *e*PN **Pn 12 07 52.3 +0.3**
KRUC *e*SG **Sb 12 08 50.5 +4.7**
KRUC Moravsky 3.75 41 P **Pn 12 07 53.0 +0.9**
MODS Modra-Piesok 3.77 55 P **Pn 12 07 53.9 +1.5**
MODS Modra-Piesok 3.77 55 *e*PN **Pn 12 07 53.5 +1.1**
MODS *e*PG **Pg 12 08 04.2 -2.5**
MODS *e*SN **Sn 12 08 38.4 +1.7**
MODS *e*SG **Sg 12 08 55.1 -0.4**
BOURR Bourrignon 3.86 288 P **Pn 12 07 56.3 +2.6**
PRU Pruhonice 3.90 18 *e*PN **Pn 12 07 55.4 +1.3**
PRU *e*SG **Sg 12 08 55.7 -3.8**
comp=N,106nm,0.5s
PRU Pruhonice 3.90 18 P **Pn 12 07 55.5 +1.3**
NKC Novy Kostel 3.93 358 *e*PN **Pn 12 07 56.2 +1.6**
NKC *e*SG **Sg 12 08 56.7 -3.8**
comp=N,136nm,0.5s
NKC Novy Kostel 3.93 358 P **Pn 12 07 56.7 +2.2**
AQU L'Aquila 3.99 172 Pn 12 07 56.2 +0.7
AQU L'Aquila 3.99 172 P **Pn 12 07 56.6 +1.1**
VRAC Vranov 4.01 40 Pn **Pn 12 07 56.1 +0.4**
comp=N,1.3nm,0.3s,baz=227,slow=15,SNR=3.9
VRAC Lg Lg 12 09 00.9
comp=N,8.5nm,0.3s,baz=315,slow=22,SNR=22
comp=N,3.0nm,0.4s
VRAC Vranov 4.01 40 *e*PN **Pn 12 07 55.8 +0.1**
VRAC *e*PG **Pb 12 08 04.3 -0.8**
VRAC *e*SG **Sg 12 09 00.1 -3.2**
VRAC Vranov 4.01 40 P **Pn 12 07 56.6 +0.9**
TANN Tannenbergstha 4.11 358 *e*Pn **Pn 12 07 58.7 +1.6**
SNR=18
TANN Tannenbergstha 4.11 358 P **Pn 12 07 58.7 +1.6**
MORH Mrgy, Hungar 4.17 89 P **Pn 12 07 58.1 +0.3**
ECH Echery 4.19 299 Pn 12 07 58.4 +0.3
ECH Echery 4.19 299 P **Pn 12 08 00.5 +2.4**
LPG La Plagne 4.19 261 *e*Pn **Pn 12 07 59.0 +0.6**
LPL La Plagne 4.20 261 *e*Pn **Pn 12 07 59.1 +0.7**
CDF Champ du Feu 4.21 302 *e*Pn **Pn 12 08 00.2 +1.8**
HINF Hinteralfeld 4.23 293 *e*Pn **Pn 12 08 00.7 +2.0**
HINF *e*Sn **Sn 12 08 50.2 +2.2**
comp=N,111nm,0.4s
JAVC Velka Javorina 4.26 51 *e*PN **Pn 12 08 00.1 +1.0**
JAVC Velka Javorina 4.26 51 P **Pn 12 08 00.6 +1.5**
RICI Ricice 4.26 130 *e*Pn **Pn 12 08 00.7 +1.6**
SAOF Saorge 4.28 239 P **Pn 12 08 00.4 +1.0**
RRL Rocca Remolon 4.33 253 AML AML
comp=E,86µm,0.6s
RRL AML AML
comp=N,85µm,0.7s
HSKC Hora Svate Kat 4.33 7 *e*PN **Pn 12 08 00.9 +0.8**
HSKC *e*SG **Sg 12 09 10.3 -3.2**
comp=N,104nm,0.6s
HSKC Hora Svate Kat 4.33 7 P **Pn 12 08 01.7 +1.5**
MOX Moxa 4.39 351 *e*Pn **Pn 12 08 01.9 +1.1**
SNR=8.6
MOX Moxa 4.39 351 P **Pn 12 08 02.0 +1.1**
GIMEL St. Georges / 4.41 275 P **Pn 12 08 04.1 +2.8**
PVCC Panska Ves 4.41 16 P **Pn 12 08 02.4 +1.2**
MBDF Montbardon 4.42 251 *e*Pn **Pn 12 08 01.4 0.0**
SBF Sospel 4.42 238 *e*Pn **Pn 12 08 02.5 +1.1**
SBF *e*Sn **Sn 12 08 51.0 -1.8**
comp=N,86nm,0.5s
ESCA l'Escarene 4.48 238 P **Pn 12 08 03.2 +1.1**
ISO Isola 4.48 244 P **Pn 12 08 01.9 -0.3**
CABF La Chapelle 4.54 276 *e*Pn **Pn 12 08 05.3 +2.3**
CABF *e*Sn **Sn 12 08 58.9 +3.3**
PGF Pioggiola 4.57 216 *e*Pn **Pn 12 08 04.1 +0.6**
PGF *e*Sn **Sn 12 08 55.3 -1.3**
comp=N,25nm,0.6s
HAU Haudompre 4.61 294 *e*Pn **Pn 12 08 05.6 +1.6**
HAU *e*Sn **Sn 12 08 56.5 -0.9**
comp=N,198nm,0.5s
BRG Berggiesshubel 4.65 10 *e*Pn **Pn 12 08 05.5 +1.1**
SNR=4.0
BRG Berggiesshubel 4.65 10 P **Pn 12 08 06.7 +2.3**
BRG Berggiesshubel 4.65 10 Pn **Pn 12 08 05.8 +1.4**
BRG Pg **Pg 12 08 22.4 -1.1**
BRG Sn **Sn 12 08 58.6 +0.3**
BRG Sg **Sg 12 09 20.1 -3.5**
BRG Amp 12 09 25.4
comp=Z,69nm,0.6s
LSTV Lastovo 4.67 138 *e*Pn **Pn 12 08 05.9 +1.2**
KRLC Kraliky 4.68 35 *e*PN **Pn 12 08 05.6 +0.7**
KRLC *e*SG **Sg 12 09 22.2 -2.4**
comp=Z,123nm,0.8s
KRLC Kraliky 4.68 35 P **Pn 12 08 06.1 +1.2**
DPC Dobruska-Polom 4.73 30 *e*PN **Pn 12 08 06.2 +0.6**
DPC *e*SG **Sg 12 09 22.6 -3.7**
comp=Z,68nm,0.5s
DPC Dobruska-Polom 4.73 30 P **Pn 12 08 07.2 +1.6**
UPC Upice 4.76 27 *e*PN **Pn 12 08 07.0 +1.0**
UPC Upice 4.76 27 P **Pn 12 08 07.1 +1.0**
MORC Moravsky Berou 4.78 42 Pn **Pn 12 08 06.4 +0.1**
MORC Moravsky Berou 4.78 42 *e*PN **Pn 12 08 05.1 -1.2**
MORC *e*SG **Sb 12 09 22.0 +6.4**
MORC Moravsky Berou 4.78 42 P **Pn 12 08 07.2 +0.9**
TNS Taunus Mts 4.81 326 *e*Pn **Pn 12 08 09.4 +2.7**
SNR=19
TNS Taunus Mts 4.81 326 P **Pn 12 08 09.7 +3.0**
UBBA Unterbreizbach 4.84 340 *e*Pn **Pn 12 08 09.8 +2.9**
SNR=3.4
UBBA Unterbreizbach 4.84 340 P **Pn 12 08 09.6 +2.7**
NEUB Neuenburg 4.94 354 P **Pn 12 08 09.0 +0.7**
ORIF Oris-en-Rattie 4.94 256 *e*Pn **Pn 12 08 10.3 +1.8**
ORIF *e*Sn **Sn 12 09 10.2 +4.6**
comp=Z,37nm,0.5s
NAST IGS Nastaetten 5.03 322 *e*Pn **Pn 12 08 12.3 +2.7**
NAST *e*Sn **Sn 12 09 07.7 +0.1**
comp=Z,92nm,0.3s
SGRT San Giovanni R 5.08 153 Pn **Pn 12 08 09.8 -0.6**
PAGF Fort de Pagny 5.20 298 *e*Pn **Pn 12 08 15.4 +3.4**
PAGF Fort de Pagny 5.20 298 *e*Pn **Pn 12 08 15.7 +3.7**
PAGF *e*Sn **Sn 12 09 10.1 -1.7**
comp=Z,42nm,0.5s
PAGF *e*Sn Sb 12 09 11.7 -16
comp=Z,40nm,0.5s
PSZ Piszkesteto 5.21 69 Pn 12 08 12.8 +0.5
PSZ Piszkesteto 5.21 69 P **Pn 12 08 14.7 +2.5**
KOE Koeppel 5.25 323 *e*Pn **Pn 12 08 15.3 +2.5**
KOE *e*Sn **Sn 12 09 13.2 -0.1**
comp=Z,110nm,0.7s
BGG Burgeitz 5.26 320 *e*Pn **Pn 12 08 15.5 +2.7**
BGG *e*Sn **Sn 12 09 14.2 +0.8**
comp=Z,50nm,0.7s
LMR La Mourre 5.28 238 *e*Pn **Pn 12 08 13.4 +0.3**
LMR *e*Sn **Sn 12 09 12.0 -1.7**
comp=Z,59nm,0.8s
WLF Walferdange 5.49 310 Pn **Pn 12 08 16.0 0.0**
WLF Walferdange 5.49 310 *d*P **Pn 12 08 19.3 +3.3**
WLF *d*S **Sn 12 09 21.1 +2.0**
SFTF Sexfontaines 5.51 293 *e*Pn **Pn 12 08 17.6 +1.4**
SMRF Simiane la Rot 5.51 247 *e*Pn **Pn 12 08 16.6 +0.2**
SMRF *e*Sn **Sn 12 09 20.6 +1.0**
comp=Z,18nm,0.6s
GTTG Gottingen 5.53 342 P **Pn 12 08 19.5 +3.0**
HILG Hillesheim 5.63 317 *e*Pn **Pn 12 08 21.1 +3.2**
KASTN Kahler Asten 5.63 332 *e*Pn **Pn 12 08 20.9 +2.9**
SNR=7.1
SSB Saint Sauveur 5.75 263 Pn 12 08 20.3 +0.6
SSB Saint Sauveur 5.75 263 P **Pn 12 08 21.1 +1.5**
KECS Kecovo 5.76 65 *e*PN **Pn 12 08 20.7 +1.0**
KECS *e*SN **Sn 12 09 23.3 -2.3**
STB Steinbach 5.76 320 *e*Pn **Pn 12 08 22.9 +3.2**
STB *e*Sn **Sn 12 09 25.9 +0.2**
comp=Z,37nm,0.6s
VIVF Saint-Julien-l 5.78 258 *e*Pn **Pn 12 08 21.8 +1.9**
VIVF *e*Sn **Sn 12 09 29.3 +3.2**
comp=Z,24nm,0.7s
HOBG Hohbusch 5.85 325 *e*Pn **Pn 12 08 23.7 +2.8**
HOBG *e*Sn **Sn 12 09 27.5 -0.3**
comp=Z,124nm,0.6s
BNS Bensberg 5.90 324 *e*Pn **Pn 12 08 24.7 +3.2**
BNS *e*Sn **Sn 12 09 29.0 0.0**
comp=Z,129nm,0.5s
KLL Kalltalsperre 6.04 318 *e*Pn **Pn 12 08 26.3 +2.7**
KLL *e*Sn **Sn 12 09 32.1 -0.5**
comp=Z,15nm,0.8s
SMF Signal de Mont 6.08 276 *e*Pn **Pn 12 08 26.0 +1.8**
SMF *e*Sn **Sn 12 09 32.0 -1.6**
comp=Z,14nm,0.5s
DREG Dreilaegerbach 6.09 318 *e*Pn **Pn 12 08 27.5 +3.3**
DREG *e*Sn **Sn 12 09 33.7 0.0**
comp=Z,21nm,1.0s
LOR Lormes 6.10 282 *e*Pn **Pn 12 08 26.2 +1.8**
baz=96
LOR *e*Sn **Sn 12 09 32.9 -1.2**
comp=Z,19nm,0.4s
PDG Podgorica 6.13 127 Pn **Pn 12 08 24.7 0.0**
MEM Membach 6.16 317 *d*P **Pn 12 08 28.9 +3.8**
comp=Z,17nm,0.3s
MEM *d*S **Sn 12 09 38.4 +3.1**
MEM Membach 6.16 317 P **Pn 12 08 29.2 +4.1**
RCHB Rochefort 6.27 311 *d*P **Pn 12 08 30.4 +3.8**
comp=Z,20nm,0.5s
RCHB *d*S **Sn 12 09 37.7 -0.4**
RCHB Rochefort 6.27 311 P **Pn 12 08 30.6 +4.0**
HGN Heimansgroeve 6.30 317 P **Pn 12 08 30.9 +3.9**
SSF Saint Saulge 6.33 280 *e*Pn **Pn 12 08 29.1 +1.6**
BCLA Clavier 6.38 313 *d*P **Pn 12 08 31.9 +3.6**
comp=Z,13nm,0.5s
BCLA *d*S **Sn 12 09 41.2 +0.3**
AVF Avril sur Loir 6.42 278 *e*Pn **Pn 12 08 30.7 +1.9**
GIVF Givet 6.45 309 *e*Pn **Pn 12 08 32.6 +3.4**
GIVF *e*Sn **Sn 12 09 40.3 -2.4**
comp=Z,36nm,0.6s
DOU Dourbes 6.57 308 *d*P **Pn 12 08 34.2 +3.4**
comp=Z,11nm,0.6s
DOU *d*S **Sn 12 09 45.8 +0.2**
LASF Ste Croix 6.59 253 *e*Pn **Pn 12 08 31.7 +0.5**
LASF *e*Sn **Sn 12 09 45.6 -0.6**
comp=Z,12nm,0.5s
BMRD Maredsous 6.59 310 *d*P **Pn 12 08 35.1 +4.0**
comp=Z,12nm,0.7s
BMRD *d*S **Sn 12 09 45.3 -0.9**
BAIF Baives 6.77 307 *e*Pn **Pn 12 08 38.1 +4.6**
BAIF *e*Sn **Sn 12 09 50.8 +0.4**
comp=Z,33nm,0.7s
BGF Bois d'Agland 6.77 276 *e*Pn **Pn 12 08 35.6 +2.0**
BGF *e*Sn **Sn 12 09 49.1 -1.4**
comp=Z,26nm,0.4s
RETH Rethem/Aller, 6.78 343 P **Pn 12 08 36.2 +2.7**
HYF Humbligny 6.93 282 *e*Pn **Pn 12 08 38.1 +2.3**
UCC Uccle 7.09 312 Pn **Pn 12 08 37.6 -0.3**
VSL Villasalto 7.22 200 Pn **Pn 12 08 40.4 +0.7**
TCF Toulx Ste Croi 7.22 274 *e*Pn **Pn 12 08 41.7 +1.9**
TCF *e*Sn **Sn 12 10 01.3 -0.4**
comp=Z,13nm,0.4s
CAF Calviac 7.54 263 *e*Pn **Pn 12 08 45.4 +1.2**
CAF *e*Sn **Sn 12 10 07.8 -1.8**
comp=Z,9.7nm,0.8s
RJF Les Rejaudoux 7.83 267 *e*Pn **Pn 12 08 50.5 +2.3**
RJF *e*Sn **Sn 12 10 14.4 -2.4**
comp=Z,3.4nm,0.5s
MTLF Montolieu 7.98 252 *e*Pn **Pn 12 08 51.7 +1.5**
MTLF *e*Sn **Sn 12 10 18.0 -2.3**
comp=Z,5.2nm,0.6s
RGN Rugen 8.26 3 Pn **Pn 12 08 53.4 -0.6**
BUR08 Bucovina Ar. S 8.70 77 Pn **Pn 12 09 00.4 +0.3**
BURAR Bucovina Array 8.71 77 Pn **Pn 12 08 59.9 -0.3**
CORI Orista 8.76 244 Pn **Pn 12 09 00.7 -0.1**
MFF Saint Martin d 8.83 277 *e*Pn **Pn 12 09 04.7 +2.9**
LDF La Druitiere 8.94 289 *e*Pn **Pn 12 09 06.8 +3.5**
LDF *e*Sn **Sn 12 10 42.1 -1.8**
comp=Z,20nm,0.8s
CEST Esterri de Car 8.94 250 Pn **Pn 12 09 02.9 -0.6**
FLN La Foliniere 9.21 290 *e*Pn **Pn 12 09 09.3 +2.3**
FLN *e*Sn **Sn 12 10 49.3 -1.1**
comp=Z,12nm,0.6s
GRR Gorron 9.39 288 *e*Pn **Pn 12 09 09.9 +0.4**
GRR *e*Sn **Sn 12 10 53.2 -1.8**
comp=Z,7.6nm,0.5s
SUW Suwalki 10.25 37 Pn **Pn 12 09 21.0 -0.2**
SGMF Saint Gilles 10.51 286 *e*Pn **Pn 12 09 27.0 +2.2**
EKA Eskdalemuir Ar 13.43 318 Pn **Pn 12 10 08.0 +3.3**
baz=124,slow=14
comp=Z,0.4nm,0.2s
NOA NORSAR Array B 14.78 357 LR LR 12 15 50.8
comp=Z,19nm,19.3s,baz=85,slow=36
FINES FINESS Array B 17.05 22 P **P 12 10 53.7 -0.5**
comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=3.8
comp=Z,1.2nm,0.6s
FINES FINESS Array B 17.05 22 Pn **Pn 12 10 51.5 -0.9**
FIA1 FINESS Array S 17.05 22 Pn **Pn 12 10 52.1 -0.3**
FIA1 IAmb IAmb 12 11 08.9
comp=Z,10nm,0.9s
MD31 MD31 18.92 231 P **P 12 11 15.1 +0.1**
TORD Torodi Ar. Bea 34.32 199 P **P 12 13 40.5 -0.3**
comp=Z,0.1nm,0.3s,baz=20,slow=9.2,SNR=1.8
comp=Z,0.1nm,0.3s
KKAR Karatay Array 40.47 73 P **P 12 14 31.8 -1.0**
DBIC Dimbokro 42.28 206 P **P 12 14 46.5 -1.3**
DBIC IAmb IAmb 12 15 11.3
comp=Z,15nm,1.4s
RES Resolute Bay 50.26 341 P **P 12 15 49.5 -0.3**
M31M Drury Creek, Y 68.65 344 P **P 12 17 56.5 -0.6**
M31M IAmb IAmb 12 18 02.2
comp=Z,3.7nm,1.4s

*IDC **13** 12:16:54.5±1.3, 19°.55S×177°.64W, h544km±18km, mb3.1/3, mbtmp4.1/6, Error ellipse: s-maj=20.3km s-min=18.3km az=95.0*

ISC 13 12:16:54.9±0.8, 19°.5S±0°.1×177°.7W±0°.1, h550km, n7, σ1§21/11, mb3.7/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.44**	**293**	P	**P**		**12 18 20.2**	**-0.1**
	4.4nm,0.4s,baz=106,slow=24,SNR=7.0							
AFI	**Afiamalu**	**7.91**	**46**	P	**P**		**12 18 51.9**	**0.0**
	34nm,0.9s,baz=224,slow=9.7,SNR=2.0							
AFI				S	**S**		**12 20 27.8**	**0.0**
	45nm,0.7s,baz=255,slow=19,SNR=6.9							
URZ	**Urewera**	**19.24**	**193**	P	**P**		**12 20 44.4**	**+0.6**
	4.9nm,0.3s,baz=19,slow=8.8,SNR=11							
URZ				S	**S**		**12 23 50.9**	**+1.1**
	5.3nm,0.6s,baz=1.9,slow=23,SNR=1.7							
WRA	**Warramunga Arr**	**45.07**	**261**	P	**P**		**12 24 21.6**	**-0.8**
	0.6nm,0.5s,baz=96,slow=7.8,SNR=32							
WRA				PcP	**PcP**		**12 25 53.2**	**+1.7**

0.5nm,0.9s,baz=94,slow=3.3,SNR=1.5
0.6nm,0.5s
ASAR Alice Springs 45.08 256 P **P** **12 24 21.9 -0.6**
1.9nm,0.6s,baz=91,slow=8.3,SNR=44
ASAR PcP **PcP** **12 25 53.2 +1.7**
0.4nm,0.5s,baz=105,slow=4.0,SNR=7.9
1.9nm,0.6s
QSPA South Pole Qui 70.56 180 P **P** **12 27 12.8 -1.8**
2.0nm,0.8s,baz=36,slow=6.0,SNR=13
2.0nm,0.8s
AKASG Malin Array Be 142.30 332 PKP **PKPdf** **12 35 25.3 +0.4**
1.0nm,0.4s,baz=40,slow=2.4,SNR=8.5

IDC 13 12:23:05.7±2.3, 18°75S×177°94W, h583km±27km, mb2.5/4, mbtmp3.4/5, Error ellipse: s-maj=52.9km s-min=30.9km az=164.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.94**	**284**	P	P	12 24 29.6	0.0
	9.4nm,0.6s,baz=121,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**44.93**	**260**	P	P	12 30 29.2	-0.7
	0.2nm,0.5s,baz=99,slow=7.8,SNR=1.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**45.00**	**255**	P	P	12 30 30.7	+0.2
	0.3nm,0.9s,baz=91,slow=7.8,SNR=6.8						
	0.3nm,0.9s						
QSPA	**South Pole Qui**	**71.31**	**180**	P	P	12 33 27.2	+0.1
	1.3nm,1.0s,baz=25,slow=11,SNR=3.1						
	1.3nm,1.0s						
TXAR	**Lajitas Array**	**86.07**	**57**	P	P	12 34 45.7	-0.2
	0.2nm,0.7s,baz=228,slow=5.1,SNR=3.6						
	0.2nm,0.7s						

HEL 13 13:06:40.5±0.5, 61°11N×29°83E, h0km, ML1.3, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**1.25**	**244**	smax	smax	13 07 18.4	
	comp=Z,2.2nm,0.2s						
VJF				SN	Sn	13 07 24.0	+1.2
FIA0	**FINESS Array S**	**1.84**	**282**	PG	Pn	13 07 13.2	-0.2
	baz=99						
FIA0				smax	smax	13 07 35.4	
	comp=Z,1.3nm,0.2s						
FIA0				SG	Sb	13 07 38.5	-0.2
JOF	**Joensuu**	**1.94**	**20**	*e*P	Pn	13 07 15.4	+0.7
JOF	**Joensuu**	**1.94**	**20**	PG	Pn	13 07 15.3	+0.5
KAF	**Kangasniemi**	**1.96**	**302**	smax	smax	13 07 38.8	
	comp=Z,1.6nm,0.2s						
KAF				SN	Sn	13 07 38.9	-1.4
PVF	**Pernaja**	**2.03**	**256**	PG	Pn	13 07 16.3	+0.5
	baz=72						
PVF				smax	smax	13 07 40.6	
	comp=Z,1.4nm,0.2s						
PVF				SG	Sg	13 07 44.8	-0.7
SUF	**Sumiainen**	**2.38**	**314**	*e*P	Pn	13 07 22.2	+1.5
SUF	**Sumiainen**	**2.38**	**314**	PG	Pb	13 07 23.6	-0.5
SUF				smax	smax	13 07 50.7	
	comp=Z,0.6nm,0.2s						
SUF				SG	Sb	13 07 53.6	-0.4
KEF	**Keuruu**	**2.60**	**296**	*e*P	Pb	13 07 26.0	-1.9
KEF	**Keuruu**	**2.60**	**296**	PG	Pb	13 07 27.3	-0.5
KEF				smax	smax	13 07 57.2	
	comp=Z,0.6nm,0.2s						
KEF				SG	Sb	13 08 00.2	-0.1
MEF	**Metsahovi**	**2.82**	**254**	*e*P	Pb	13 07 29.8	-1.9
VAF	**Ylistaro**	**3.89**	**303**	*e*P	Pn	13 07 45.2	+3.8
VAF	**Ylistaro**	**3.89**	**303**	PB	Pn	13 07 44.1	+2.7
	baz=118						

*NEIC **13** 13:12:29.8±0.9, 22°2S±0°1×179°0W±0°2, h581km±6km, mb4.2/15, Error ellipse: s-maj=27.5km s-min=20.1km az=97.0*
*IDC **13** 13:12:33.5±2.0, 22°36S×179°58W, h583km±25km, mb2.9/6, mbtmp3.9/8, Error ellipse: s-maj=27.8km s-min=21.6km az=66.0*
ISC 13 13:12:31.9±1.1, 22°36S±0°10×179°4W±0°2, h579km, n26, σ1s62/26, mb3.9/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.17**	**332**	P	**P**	**13 14 06.7**	**+1.6**
	11nm,0.4s,baz=183,slow=5.0,SNR=15						
MSVF	**Nonsavu**	**5.17**	**332**	P	**P**	**13 14 06.5**	**+1.5**
FUTU	**Fugatoga**	**8.10**	**9**	P	P	13 14 27.7	-3.9
URZ	**Urewera**	**16.13**	**190**	P	**P**	**13 15 50.9**	**-0.3**
	1.6nm,0.3s,baz=14,slow=4.2,SNR=1.3						
URZ				S	**S**	**13 18 29.2**	**-4.4**
	7.2nm,1.0s,baz=82,slow=20,SNR=1.9						
MRZ	**Mangatainoka R**	**18.73**	**192**	P	**P**	**13 16 15.4**	**+0.6**
INZ	**Inchbonnie**	**21.69**	**198**	P	**P**	**13 16 42.3**	**+0.8**
STKA	**Stephens Creek**	**35.80**	**246**	P	**P**	**13 18 44.1**	**+0.6**
	1.2nm,0.6s,baz=95,slow=12,SNR=2.0						
	1.2nm,0.6s						
INKA	**Innaminka**	**36.36**	**253**	P	**P**	**13 18 48.5**	**+0.3**
INKA				IAmb	IAmb	13 18 49.3	
	comp=Z,5.4nm,1.4s						
BBOO	**Buckleboo**	**40.54**	**245**	P	**P**	**13 19 22.7**	**+0.7**
BBOO				IAmb	IAmb	13 19 43.0	
	comp=Z,18nm,1.5s						
AS31	**Alice Springs**	**42.82**	**259**	P	**P**	**13 19 40.4**	**+0.3**
ASAR	**Alice Springs**	**42.82**	**259**	P	**P**	**13 19 40.5**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=104,slow=7.8,SNR=19						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**42.82**	**259**	P	**P**	**13 19 40.2**	**+0.2**
WR8	**Warramunga Arr**	**42.90**	**264**	P	**P**	**13 19 41.0**	**+0.3**
WR8				IAmb	IAmb	13 20 13.9	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**43.04**	**265**	P	**P**	**13 19 41.9**	**+0.2**
WB0				IAmb	IAmb	13 20 05.4	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**43.05**	**264**	P	**P**	**13 19 41.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=101,slow=7.9,SNR=27						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**43.05**	**264**	P	**P**	**13 19 41.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**51.48**	**264**	P	**P**	**13 20 46.1**	**+1.2**
FITZ				IAmb	IAmb	13 21 13.1	
	comp=Z,4.7nm,1.5s						
VNDA	**Vanda**	**55.95**	**185**	P	**P**	**13 21 15.3**	**-0.2**
	comp=Z,1.4nm,1.2s,baz=22,slow=6.7,SNR=1.8						
	comp=Z,1.4nm,1.2s						
VNDA	**Vanda**	**55.95**	**185**	P	**P**	**13 21 15.3**	**-0.2**
MORW	**Morawa**	**57.90**	**249**	P	**P**	**13 21 29.8**	**+0.2**
MORW				IAmb	IAmb	13 21 33.4	
	comp=Z,33nm,1.4s						
QSPA	**South Pole Qui**	**67.72**	**180**	P	**P**	**13 22 34.4**	**+2.3**
	comp=Z,0.7nm,0.5s,baz=37,slow=6.0,SNR=8.9						
	comp=Z,0.7nm,0.5s						
QSPA	**South Pole Qui**	**67.72**	**180**	P	**P**	**13 22 34.4**	**+2.3**
QSPA				IAmb	IAmb	13 23 02.6	
	comp=Z,6.6nm,1.5s						
MAJO	**Matsushiro**	**70.93**	**325**	P	**P**	**13 22 48.4**	**-3.2**
MAJO				IAmb	IAmb	13 23 04.9	
	comp=Z,9.8nm,1.4s						
MJB9	**Matsu-Tunnel**	**70.93**	**325**	P	**P**	**13 22 48.7**	**-2.9**
MJB9				IAmb	IAmb	13 23 05.9	
	comp=Z,12nm,1.4s						
PETK	**Petropavlovsk-**	**77.73**	**346**	P	**P**	**13 23 30.1**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=174,slow=7.1,SNR=4.5						
	comp=Z,1.1nm,0.8s						
HIA	**Hailar**	**89.43**	**325**	P	**P**	**13 24 25.8**	**-1.8**

*NNC **13** 13:15:16.7±0.5, 50°04N×78°97E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=15.5km s-min=2.6km az=63.0, Suspected Mining explosion.*
*SOME **13** 13:15:18.3, 50°00N×78°78E*
*IDC **13** 13:15:18.8±1.1, 50°09N×78°72E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=12.8km s-min=6.4km az=65.0*
ISC 13 13:15:17.1±1.9, 50°04N±0°05×78°4E±0°2, h0km, n15, σ0s76/27, 16C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.55**	**7**	⇓P	**Pb**	**13 15 28.8**	**-0.8**
KUR07				⇑S	**Sb**	**13 15 38.0**	**+0.1**
KUR06	**Kurchatov Arra**	**0.56**	**7**	⇑P	**Pb**	**13 15 29.0**	**-0.9**
KUR06				⇑S	**Sb**	**13 15 38.5**	**0.0**
KUR14	**Kurchatov Arra**	**0.58**	**11**	⇑P	**Pg**	**13 15 28.9**	**+0.6**
KUR14				⇑S	**Sb**	**13 15 37.8**	**-1.2**
KUR15	**Kurchatov Arra**	**0.58**	**9**	⇑P	**Pg**	**13 15 29.0**	**+0.7**
KUR15				⇑S	**Sb**	**13 15 38.0**	**-1.1**
KURBB	**Kurchatov Arra**	**0.58**	**7**	Pg	**Pg**	**13 15 29.2**	**+0.8**
	1.3nm,0.3s,baz=166,slow=18,SNR=97						
KURBB				Lg	Lg	13 15 38.1	
	4.9nm,0.3s,baz=167,slow=32,SNR=55						
KURBB	**Kurchatov Arra**	**0.58**	**7**	⇑P	**Pg**	**13 15 29.1**	**+0.8**
	11nm,0.3s						
KURBB				⇑S	**Sb**	**13 15 38.4**	**-0.7**
	29nm,0.4s						
KUR16	**Kurchatov Arra**	**0.59**	**5**	⇑P	**Pb**	**13 15 29.3**	**-1.0**
KUR16				⇑S	**Sb**	**13 15 38.7**	**-0.4**
KUR17	**Kurchatov Arra**	**0.59**	**3**	⇑P	**Pb**	**13 15 29.5**	**-0.8**
KUR17				⇓S	**Sb**	**13 15 39.1**	**-0.1**
KUR05	**Kurchatov Arra**	**0.60**	**7**	⇑P	**Pg**	**13 15 29.5**	**+0.8**
KUR05				⇑S	**Sb**	**13 15 39.0**	**-0.6**
KUR04	**Kurchatov Arra**	**0.62**	**7**	⇑P	**Pb**	**13 15 30.1**	**-0.8**
KUR04				⇑S	**Sb**	**13 15 39.9**	**-0.3**
KURK	**Kurchatov**	**0.69**	**11**	⇓P	**Pg**	**13 15 30.4**	**+0.2**
	3.2nm,0.5s						
KURK				⇓S	**Sg**	**13 15 40.3**	**+1.2**
	7.4nm,0.5s						
MK31	**Makanchi Array**	**4.15**	**140**	⇓Pg	**Pb**	**13 16 30.7**	**-0.3**
	1.1nm,0.6s,baz=327,slow=14,SNR=8.4						
MK31				Lg	Lg	13 17 22.8	
	4.6nm,0.5s,baz=324,slow=26,SNR=22						
MKAR	**Makanchi Array**	**4.15**	**140**	Pn	**Pn**	**13 16 21.8**	**+0.1**
	0.2nm,0.3s,baz=1.8,slow=13,SNR=4.1						
MKAR				Pg	**Pb**	**13 16 29.7**	**-1.3**
	0.5nm,0.3s,baz=324,slow=13,SNR=9.8						
MKAR				Sn	**Sn**	**13 17 11.5**	**+0.6**
	0.5nm,0.3s,baz=327,slow=16,SNR=4.8						
MKAR				Lg	Lg	13 17 22.8	
	3.3nm,0.3s,baz=316,slow=29,SNR=14						
	0.4nm,0.5s						
I46RU	**ZALESOVO INFRA**	**5.56**	**43**	I	I	13 52 40.0	
	baz=228,slow=325,SNR=2.9						
ZALV	**Zalesovo Beam**	**5.56**	**43**	Pn	**Pn**	**13 16 41.2**	**+0.2**
	0.4nm,0.3s,baz=224,slow=14,SNR=6.6						
ZALV				Sn	**Sn**	**13 17 45.5**	**-0.1**
	0.3nm,0.3s,baz=211,slow=42,SNR=1.9						
ZALV				Lg	Lg	13 18 08.7	
	0.3nm,0.3s,baz=235,slow=30,SNR=4.2						
	1.1nm,0.4s						

*NEIC **13** 13:34:28.1±1.4, 5°58N±0°09×127°1E±0°2, h78km±9km, mb4.3/20, Error ellipse: s-maj=26.6km s-min=9.4km az=68.0*
*MAN **13** 13:34:29.0, 5°46N×127°26E, h66km, MS3.4*
*IDC **13** 13:34:30.4±2.5, 5°65N×127°48E, h114km±25km, mb3.7/10, mbtmp4.1/11, Error ellipse: s-maj=103.0km s-min=12.1km az=67.0*
ISC 13 13:34:29.0±0.5, 5°49N±0°04×127°19E±0°07, h100km, n51, σ2s07/61, mb4.3/20, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.59**	**293**	*i* P	**Pn**	**13 34 57.6**	**+1.3**
DDMP				*i* S	**Sn**	**13 35 16.0**	**-1.1**
DAV	**Davao City (W)**	**2.24**	**315**	S	**Sn**	**13 35 35.3**	**+3.3**
	244nm,0.4s,baz=171,slow=7.6,SNR=2.0						
DAV	**Davao City (W)**	**2.24**	**315**	Pn	**Pn**	**13 35 00.5**	**-4.2**
GSPH	**General Santos**	**2.31**	**285**	*i* P	**Pn**	**13 35 05.5**	**-0.2**
GSPH				*i* S	**Sn**	**13 35 31.2**	**-2.5**
CDOP	**Cateel, Davao**	**2.40**	**342**	*i* P	**Pn**	**13 35 08.2**	**+1.4**
CDOP				*e*S	**Sn**	**13 35 34.3**	**-1.4**
KCP	**Kidapawan**	**2.58**	**306**	*i* P	**Pn**	**13 35 11.7**	**+2.5**
KCP				*i* S	**Sn**	**13 35 42.3**	**+2.3**
BIPH	**Bislig**	**2.80**	**343**	*e*P	**Pn**	**13 35 13.2**	**+1.2**
BIPH				*e*S	**Sn**	**13 35 36.3**	**-9.0**
BUKP	**Musuan**	**3.18**	**318**	*i* P	**Pn**	**13 35 19.6**	**+2.4**
BUKP				*i* S	**Sn**	**13 35 56.4**	**+2.1**
CTBH	**Cotabato--PC H**	**3.39**	**301**	*i* P	**Pn**	**13 35 22.8**	**+2.8**
TSSP	**Tandag City**	**3.67**	**345**	*e*P	**Pn**	**13 35 25.7**	**+2.0**
TSSP				*e*S	Sn	13 35 52.3	-14
CGP	**Cagayan de Oro**	**3.85**	**320**	*e*P	Pn	13 35 30.9	+4.8
CGP				*e*S	**Sn**	**13 36 11.8**	**+1.3**
TNTI	**Ternate**	**4.69**	**178**		**Pn**	**13 35 36.9**	**-0.6**
SIJI	**Sorong**	**7.51**	**147**	P	**Pn**	**13 36 18.6**	**+2.6**
	6.5nm,0.3s,baz=333,slow=16,SNR=15						
SIJI				S	**Sn**	**13 37 39.1**	**-0.5**
	4.0nm,0.5s,baz=38,slow=23,SNR=6.4						
TOLI2	**Tolitoli**	**7.73**	**236**		**Pn**	**13 36 18.2**	**-0.6**
TOLI2				Sn	**Sn**	**13 37 39.9**	**-5.0**
LUWI	**Luwuk**	**7.84**	**214**	Pn	**Pn**	**13 36 19.9**	**-0.4**
FAKI	**Fak Fak**	**9.76**	**149**	Pn	**Pn**	**13 36 48.9**	**+2.4**
MTN	**Manton Dam**	**18.63**	**168**	P	**Pn**	**13 38 39.2**	**-1.2**
MTN				IAmb	IAmb	13 39 06.8	
	comp=Z,23nm,1.4s						
TPUB	**Ta-pu**	**18.80**	**341**	P	**P**	**13 38 39.4**	**-1.3**
TPUB				IAmb	IAmb	13 39 17.2	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**21.09**	**176**	P	**P**	**13 39 06.7**	**+1.3**
KNRA				IAmb	IAmb	13 39 39.4	
	comp=Z,25nm,1.4s						
JOW	**Kunigami**	**21.25**	**3**	P	**P**	**13 39 06.0**	**-1.2**
JOW				IAmb	IAmb	13 39 21.4	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**23.49**	**184**	P	**P**	**13 39 31.0**	**+1.1**
WB0	**Warramunga Arr**	**26.08**	**164**	P	**P**	**13 39 54.9**	**+1.5**
WB0				IAmb	IAmb	13 40 07.7	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**26.23**	**165**	P	**P**	**13 39 55.8**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=352,slow=9.7,SNR=24						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**26.23**	**165**	P	**P**	**13 39 55.8**	**+1.0**
WR8	**Warramunga Arr**	**26.29**	**164**	P	**P**	**13 39 56.7**	**+1.4**
WR8				IAmb	IAmb	13 40 39.3	
	comp=Z,16nm,1.5s						
AS31	**Alice Springs**	**29.71**	**168**	P	**P**	**13 40 27.2**	**+1.5**
ASAR	**Alice Springs**	**29.71**	**168**	P	**P**	**13 40 25.9**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=341,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**13 43 27.5**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=347,slow=2.3,SNR=5.8						
ASAR				ScP	**ScP**	**13 46 59.3**	**-1.5**
	comp=Z,0.4nm,0.9s,baz=352,slow=4.1,SNR=2.5						
	comp=Z,0.3nm,0.7s						
HNS	**HongShan**	**33.74**	**342**	⇓P	**P**	**13 41 02.0**	**+1.0**
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC	**Hu-ho-hao-te**	**37.89**	**341**	*e*P	**P**	**13 41 40.1**	**+3.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BBOO	**Buckleboo**	**39.01**	**168**	P	**P**	**13 41 46.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**39.36**	**193**	P	**P**	**13 41 49.6**	**+1.0**
STKA	**Stephens Creek**	**39.62**	**161**	P	**P**	**13 41 52.8**	**+1.9**
	comp=Z,1.1nm,0.5s,baz=324,slow=8.9,SNR=4.0						
	comp=Z,1.1nm,0.5s						
ULN	**Ulaanbaatar**	**45.61**	**341**		**P**	**13 42 39.2**	**-0.1**
ULN				IAmb	IAmb	13 42 41.1	
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**45.80**	**341**	P	**P**	**13 42 41.2**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=162,slow=8.5,SNR=4.9						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**45.80**	**341**	P	**P**	**13 42 41.8**	**+1.0**
MKAR	**Makanchi Array**	**56.39**	**324**	P	**P**	**13 44 00.3**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=113,slow=7.5,SNR=41						
	comp=Z,2.3nm,0.4s						
MKAR	**Makanchi Array**	**56.39**	**324**		**P**	**13 43 59.9**	**-0.1**
MAKZ	**Makanchi**	**56.58**	**324**		**P**	**13 44 00.5**	**-0.9**
MAKZ				IAmb	IAmb	13 44 02.4	
	comp=Z,3.9nm,0.9s						
ZALV	**Zalesovo Beam**	**59.24**	**332**	P	**P**	**13 44 19.2**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=120,slow=6.5,SNR=7.3						
	comp=Z,1.1nm,0.4s						
KURK	**Kurchatov**	**60.52**	**327**		**P**	**13 44 28.9**	**+0.4**
KURBB	**Kurchatov Arra**	**60.52**	**327**	P	**P**	**13 44 28.5**	**0.0**
	comp=Z,4.5nm,0.6s,baz=126,slow=6.5,SNR=63						
	comp=Z,4.5nm,0.6s						
KKAR	**Karatay Array**	**62.27**	**316**	P	**P**	**13 44 40.5**	**-0.1**
BVAR	**Borovoye Array**	**66.11**	**326**	P	**P**	**13 45 05.5**	**+0.1**
	comp=Z,4.6nm,0.5s,baz=130,slow=9.0,SNR=25						
	comp=Z,4.6nm,0.5s						
BORK	**Borovoye**	**66.16**	**326**		**P**	**13 45 05.8**	**+0.1**
AB31	**Akbulak array**	**71.09**	**320**	P	**P**	**13 45 36.4**	**-0.1**
AB31				IAmb	IAmb	13 45 37.2	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**71.09**	**320**	P	**P**	**13 45 35.9**	**-0.6**
ARTI	**Arti**	**73.79**	**327**	P	**P**	**13 45 50.7**	**-1.6**
ARCES	**ARCESS Array B**	**88.97**	**340**	P	**P**	**13 47 10.6**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=73,slow=5.1,SNR=1.4						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**88.97**	**340**	P	**P**	**13 47 11.1**	**-1.0**
FINES	**FINESS Array B**	**90.51**	**332**	P	**P**	**13 47 18.0**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=48,slow=2.3,SNR=1.7						
	comp=Z,1.2nm,0.9s						
BURAR	**Bucovina Array**	**94.00**	**318**	P	**P**	**13 47 34.0**	**-2.1**
BURAR				IAmb	IAmb	13 47 36.6	
	comp=Z,1.2nm,1.0s						

DJA 13 13:51:32.4±0.4, 9°S±5°×117°5E±°, h57km±8km, M4.0/12, mb4.3/2, MLv3.9/12, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**0.63**	**339**	P	Pn	13 51 47.0	+1.4
IGBI				S	Sn	13 51 57.8	+2.6
KHKI	**Kahang-Kahang**	**1.06**	**13**	P	Pn	13 51 51.5	+0.3
KHKI				S	Sn	13 52 05.1	0.0
JAGI	**Jajag, Banyuwa**	**1.52**	**308**	P	Pn	13 51 56.9	-0.5
JAGI				S	Sn	13 52 15.8	-0.4
TWSI	**Taliwang, Sumb**	**1.64**	**66**	P	Pn	13 51 58.3	-0.6
TWSI				S	Sn	13 52 19.0	+0.1
PLAI	**Plampang**	**2.45**	**77**	P	Pn	13 52 10.0	+0.1
PLAI				S	Sn	13 52 38.6	-0.1
SNJI	**Sawahan-Nganju**	**3.92**	**294**	P	Pn	13 52 30.7	+0.4
SNJI				S	Sn	13 53 15.7	+0.5
UGM	**Wanagama**	**5.02**	**287**	P	Pn	13 52 46.1	+0.9
	146nm,1.9s						

*JSN **13** 14:02:05.9±0.5, 18°09N×77°73W, h19km±1km, MD4.1, Confirmed Earthquake*
*SSNC **13** 14:02:06.7±1.6, 18°23N×77°74W, h16km±6km, MD3.6, ML3.7, MW3.7, Presumed earthquake*
*NEIC **13** 14:02:06.7±0.3, 18°43N±0°05×77°64W±0°09, h10km±2km, mb_Lg2.9/9, Error ellipse: s-maj=16.0km s-min=5.6km az=243.0*
ISC 13 14:02:04.4±1.2, 18°09N±0°06×77°72W±0°04, h21km±1km, n34, σ2s07/61, 12C-3D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCJ	**Malvern**	**0.17**	**168**	⇓*i*P	**Pb**	**14 02 10.4**	**+0.1**
MCJ				⇑*i*S	**Sb**	**14 02 13.9**	**-0.5**
CVJ	**Coleyville**	**0.22**	**53**	⇓*i*P	**Pb**	**14 02 11.2**	**+0.8**
CVJ				⇓*i*S	**Sb**	**14 02 15.3**	**+0.6**
MTDJ	**Mount Denham**	**0.22**	**53**	Pg	**Pb**	**14 02 11.2**	**+0.7**
MTDJ				Sg	**Sb**	**14 02 15.0**	**+0.4**
MTDJ	**Mount Denham**	**0.22**	**53**	*e*P	**Pb**	**14 02 11.1**	**+0.7**
MTDJ				*e*S	**Sb**	**14 02 14.9**	**+0.3**
MTDJ				IAML		14 02 15.5	
	26μm,0.3s						
MTDJ				IAML		14 02 15.7	
	comp=Z,45μm,0.4s						
PCJ	**Portland Cotta**	**0.64**	**123**	⇑*i*P	**Pb**	**14 02 17.6**	**+0.7**
PCJ				⇑*i*S	**Sb**	**14 02 26.3**	**+0.8**
BNJ	**Bonny Gate**	**0.77**	**73**	⇑*i*P	**Pb**	**14 02 20.0**	**+0.9**
BNJ				*i* S	**Sn**	**14 02 30.5**	**-0.6**
STH	**Stony Hill**	**0.87**	**91**	⇑*i*P	**Pb**	**14 02 21.3**	**+0.6**
STH				⇑*i*P	**Pb**	**14 02 21.3**	**+0.6**
STH				⇑*i*S	**Sn**	**14 02 33.4**	**-0.1**
HOJ	**Hope**	**0.93**	**95**	⇑*i*P	**Pb**	**14 02 22.6**	**+0.8**
HOJ				⇑*i*P	**Pb**	**14 02 22.6**	**+0.8**
GWJ	**Greenwich**	**0.95**	**91**	⇑*i*P	**Pb**	**14 02 22.8**	**+0.7**
GWJ				⇑*i*P	**Pb**	**14 02 22.8**	**+0.7**
GWJ				⇑*i*S	**Sn**	**14 02 35.8**	**+0.3**
LMGC	**Las Mercedes**	**2.08**	**19**	*e*P	**Pn**	**14 02 37.4**	**-0.6**
LMGC				*e*S	**Sn**	**14 03 00.5**	**-2.8**
LMGC				IAML		14 03 02.4	
	comp=N,374nm,0.1s						
LMGC				IAML		14 03 05.1	
	comp=E,266nm,0.1s						
CHIV	**Chivirico**	**2.25**	**33**	Pn	**Pn**	**14 02 39.5**	**-0.9**
CHIV	**Chivirico**	**2.25**	**33**	*e*P	**Pn**	**14 02 39.5**	**-0.9**
CHIV				*e*S	**Sn**	**14 03 03.9**	**-3.6**
CHIV				IAML		14 03 06.9	
	comp=E,150nm,0.2s						
CHIV				IAML		14 03 07.2	
	comp=N,200nm,0.2s						
MARVS	**Santiago de Cu**	**2.56**	**42**	*e*P	**Pn**	**14 02 44.2**	**-0.5**
MARVS				*e*S	**Sn**	**14 03 12.0**	**-3.4**
MARVS				IAML		14 03 13.5	
	comp=E,115nm,0.3s						
MARVS				IAML		14 03 15.2	
	comp=N,121nm,0.3s						
RCC	**Rio Carpintero**	**2.69**	**45**	*e*P	**Pn**	**14 02 45.8**	**-0.7**
RCC				*e*S	**Sn**	**14 03 14.8**	**-3.8**
RCC				IAML		14 03 18.1	
	comp=Z,120nm,1.0s						
RCC				IAML		14 03 18.2	
	comp=E,67nm,0.2s						
RCC				IAML		14 03 18.5	
	comp=N,70nm,0.3s						
LCCY	**Blossom Villag**	**2.73**	**305**	*e*P	**Pn**	**14 02 46.6**	**-0.4**
LCCY				*e*S	**Sn**	**14 03 15.8**	**-3.6**
LCCY				IAML		14 03 19.7	
	comp=E,539nm,0.7s						
LCCY				IAML		14 03 21.4	
	comp=N,536nm,0.5s						
GTBY	**Guantanamo Bay**	**3.07**	**53**	Pn	**Pn**	**14 02 51.5**	**-0.2**
GTBY				IAmb_Lg		14 03 36.9	
	comp=Z,38nm,0.8s						
GTBY	**Guantanamo Bay**	**3.07**	**53**	*e*P	**Pn**	**14 02 51.4**	**-0.4**
GTBY				*e*S	**Sn**	**14 03 25.8**	**-2.1**
GTBY				IAML		14 03

CAMR				IAML		14 04 53.2		
	comp=E,35nm,0.5s							
SDDR	**Presa de Saban**	**6.17**	**81**	Pn	**Pn**	**14 03 36.2**	**+1.8**	
SOR	**Soroa**	**6.81**	**314**	Pn	**Pn**	**14 03 44.1**	**+1.0**	
SOR	**Soroa**	**6.81**	**314**	*eP*	**Pn**	**14 03 44.2**	**+1.0**	
SOR				*eS*	**Sn**	**14 04 59.9**	**-0.2**	
SOR				IAML		14 05 06.6		
	comp=E,33nm,0.6s							
SOR				IAML		14 05 08.3		
	comp=N,26nm,0.6s							
GRTK	**Grand Turk**	**7.08**	**60**	*eP*	**Pn**	**14 03 48.0**	**+1.2**	
GRTK				*eS*	**Sn**	**14 04 59.8**	**-6.8**	
GRTK				IAML		14 05 07.5		
	comp=N,64nm,0.3s							
GRTK				IAML		14 05 08.1		
	comp=N,43nm,0.5s							
DR12	**Loma Pena Alta**	**7.95**	**84**	Pn	**Pn**	**14 04 02.5**	**+3.7**	

IDC ***13*** *14:03:41.4±3.9, 40˚.09N×142˚.09E, h0km, mb3.7/6, mbtmp3.6/7, ML2.0/1, Error ellipse: s-maj=80.1km s-min=31.8km az=114.0*

JMA ***13*** *14:03:48.5±0.1, 39˚.8N±0˚.2×141˚.9E±0˚.5, h58km, MV3.3/39, NORTHERN IWATE PREF*

JMA Felt I J1 at NORTHERN IWATE PREF .

ISC 13 14:03:48.5±1.0**, 39˚.76N**±0˚.04×**141˚.85E**±0˚.08**, h58**km±6km**, n26**, σ0**s56**/30**, mb3.7**/6**, 13D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.18**	**2**	P	**Pn**	**14 03 57.7**	**+0.1**
JTH				*eS*	**Sn**	**14 04 04.2**	**+0.1**
MIYJ	**Miyakonagasawa**	**0.19**	**188**	*i* P	**Pn**	**14 03 57.8**	**+0.1**
MIYJ				S	**Sn**	**14 04 04.1**	**-0.1**
JKEN	**Kujiedanarisaw**	**0.46**	**346**	↓*i* P	**Pn**	**14 03 59.8**	**0.0**
JKEN				↓S	**Sn**	**14 04 08.0**	**0.0**
JKZ	**Kuzumaki**	**0.46**	**299**	↓P	**Pn**	**14 04 00.1**	**+0.2**
JKZ				↓*eS*	**Sn**	**14 04 08.1**	**-0.1**
JOM	**Ohasama**	**0.52**	**236**	↓P	**Pn**	**14 04 00.3**	**-0.2**
JOM				↓*eS*	**Sn**	**14 04 08.9**	**-0.3**
JANG	**Nango**	**0.66**	**337**	↓*i* P	**Pn**	**14 04 02.0**	**-0.2**
JANG				↓*eS*	**Sn**	**14 04 11.6**	**-0.6**
OFUJ	**Ofunato**	**0.70**	**192**	*i* P	**Pn**	**14 04 02.5**	**-0.1**
OFUJ				*eS*	**Sn**	**14 04 12.5**	**-0.3**
JMK	**Ichinoseki**	**0.95**	**211**	↓*i* P	**Pn**	**14 04 05.6**	**-0.2**
JRG	**Rokugo**	**1.01**	**249**	↓*i* P	**Pn**	**14 04 06.3**	**-0.2**
JAH	**Hinai**	**1.03**	**295**	↓*i* P	**Pn**	**14 04 06.8**	**+0.1**
JAH				↓*eS*	**Sn**	**14 04 20.0**	**-0.3**
JTM	**Tenmabayashi**	**1.19**	**330**	P	**Pn**	**14 04 08.9**	**0.0**
JTM				*eS*	**Sn**	**14 04 23.6**	**-0.5**
JIO	**Ouri**	**1.36**	**197**	*i* P	**Pn**	**14 04 11.1**	**-0.2**
JIO				S	**Sn**	**14 04 27.7**	**-0.6**
JYK	**Kaneyama**	**1.43**	**234**	↓P	**Pn**	**14 04 12.2**	**0.0**
MJAR	**Matsushiro Arr**	**4.31**	**223**	Pn	**Pn**	**14 04 52.6**	**+1.1**
	0.1nm,0.3s,baz=33,slow=13,SNR=5.4						
MJAR				Sn	Sn	14 05 50.0	+10
	baz=301,slow=16						
	0.7nm,0.4s						
SONM	**Songino Array**	**26.65**	**299**	P	**P**	**14 09 23.7**	**+2.0**
	0.2nm,0.5s,baz=93,slow=9.7,SNR=1.9						
	0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.35**	**126**	T	T	14 40 26.9		
	baz=318,slow=75,SNR=53						
H11N1	**WAKE ISLAND Hy**	**29.36**	**126**	T	T	14 40 26.2		
	baz=318,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	14 40 30.3		
	baz=318,slow=75,SNR=39							
H11S1	**WAKE ISLAND Hy**	**30.15**	**127**	T	T	14 41 22.6		
	baz=319,slow=76,SNR=7.8							
H11S3	**WAKE ISLAND Hy**	**30.15**	**127**	T	T	14 41 24.5		
	baz=319,slow=76,SNR=9.5							
H11S2	**WAKE ISLAND Hy**	**30.16**	**127**	T	T	14 41 24.0		
	baz=319,slow=76,SNR=8.9							
ZALV	**Zalesovo Beam**	**40.38**	**310**	P	**P**	**14 11 20.2**	**-0.2**	
	1.1nm,0.5s,baz=85,slow=7.8,SNR=4.9							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**43.02**	**300**	P	**P**	**14 11 41.6**	**-0.5**	
	0.5nm,0.6s,baz=76,slow=8.5,SNR=5.8							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**44.64**	**306**	P	**P**	**14 11 54.1**	**-0.9**	
	0.8nm,0.5s,baz=81,slow=8.4,SNR=6.8							
	0.8nm,0.5s							
FINES	**FINESS Array B**	**66.57**	**332**	P	**P**	**14 14 31.6**	**-0.4**	
	0.9nm,0.7s,baz=51,slow=6.5,SNR=2.1							
	0.9nm,0.7s							
HFS	**Hagfors**	**71.75**	**336**	P	**P**	**14 15 03.9**	**-0.2**	
	0.3nm,0.3s,baz=40,slow=6.3,SNR=1.2							
	0.3nm,0.3s							

CATAC ***13*** *14:12:42.9±0.2, 13˚.N±2˚×8˚.9W±˚, h33km±2km, M4.7/43, mb4.8/2, mB4.8/2, MLv4.7/43, Mw(mB)4.0/2, Error ellipse: s-maj=3.8km s-min=2.0km az=36.8, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.16; Mθθ=0.24; Mϕϕ=-0.07; Mrθ=2.81; Mϕϕ=0.09; Mrϕ=-0.61; Fault plane solution: M₀2.88123×10¹⁵ NP1:ϕ=43.92496°, δ=3.32090°, λ=-148.23489°. NP2:ϕ=282.20293°, δ=88.25246°, λ=-87.17565°. Principal axes: T 2.8938, Plg43.1850°, Azm9.4640°; N -0.0254, Plg2.8230°, Azm102.1167°; P -2.8685, Plg46.6758°, Azm195.1137°; confirmed*

SNET ***13*** *14:12:43.1±1.4, 13˚.19N×89˚.48W, h52km, ML4.5, Presumed earthquake*

IDC ***13*** *14:12:44.1±1.6, 13˚.30N×89˚.38W, h84km±11km, mb3.5/7, mbtmp3.9/10, MS3.5/16, Error ellipse: s-maj=38.0km s-min=9.6km az=43.0*

GCG ***13*** *14:12:44.4±1.3, 13˚.34N×89˚.52W, h53km±9km, MD4.7, ML4.7, Presumed earthquake*

NEIC ***13*** *14:12:44.1±1.6, 13˚.29N±0˚.07×89˚.39W±0˚.08, h76km±10km, mb4.3/52, Error ellipse: s-maj=12.4km s-min=7.9km az=49.0*

UCR ***13*** *14:12:51.2±1.7, 12˚.67N×88˚.87W, h0km±80km, MB4.3(NEIC), Presumed earthquake*

ISC 13 14:12:42.3±0.7**, 13˚.21N**±0˚.04×**89˚.49W**±0˚.04**, h62**km±5km**, n186, σ1s30/214, mb4.3/25, 1C-7D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.32**	**31**	P	**Pn**	**14 12 52.7**	**0.0**
LALI	**Alcalda de L**	**0.32**	**31**	*i* P	**Pn**	**14 12 52.7**	**0.0**
JAYA	**Jayaque - finc**	**0.44**	**5**	P	**Pn**	**14 12 54.1**	**+0.1**
JAYA	**Jayaque - finc**	**0.44**	**5**	*i* P	**Pn**	**14 12 54.0**	**+0.1**
JAYA				*i* S	**Sn**	**14 13 02.1**	**-0.4**
JAYA				IAML		14 13 03.1	
	comp=E,50µm,0.3s						
JAYA	**Jayaque - finc**	**0.44**	**5**	↓*i* P	**Pn**	**14 12 54.1**	**+0.1**
JAYA				*eS*	**Sn**	**14 13 01.4**	**-1.0**
PANCS	**Alcalda de**	**0.50**	**37**	P	**Pn**	**14 12 54.5**	**+0.1**
PANCS				S	**Sn**	**14 13 03.5**	**+0.3**
LOMA	**Loma Larga**	**0.53**	**36**	P	**Pn**	**14 12 55.2**	**+0.3**
LOMA	**Loma Larga**	**0.53**	**36**	*i* P	**Pn**	**14 12 55.2**	**+0.3**
LOMA				*eS*	**Sn**	**14 13 04.9**	**+0.9**
SEMO	**Seminario San**	**0.55**	**28**	P	**Pn**	**14 12 55.4**	**+0.3**
SEMO				S	**Sn**	**14 13 05.2**	**+0.8**
UEES	**Universidad Ev**	**0.56**	**26**	P	**Pn**	**14 12 55.7**	**+0.6**
UEES				S	**Sn**	**14 13 05.4**	**+0.9**
UEES	**Universidad Ev**	**0.56**	**26**	↓*i* P	**Pn**	**14 12 55.5**	**+0.4**
BOQS	**Boqueron**	**0.56**	**21**	↓*i* P	**Pn**	**14 12 55.8**	**+0.5**
LFRS	**El Faro**	**0.58**	**46**	↓*i* P	**Pn**	**14 12 55.9**	**+0.5**
IGN	**Direccin Gen**	**0.59**	**32**	P	**Pn**	**14 12 55.9**	**+0.5**
IGN				S	**Sn**	**14 13 05.8**	**+0.9**
CEDA	**San Andres**	**0.59**	**9**	P	**Pn**	**14 12 56.1**	**+0.6**
CEDA				S	**Sn**	**14 13 06.0**	**+0.9**
CEDA	**San Andres**	**0.59**	**9**	*i* P	**Pn**	**14 12 56.1**	**+0.6**
CEDA				*eS*	**Sn**	**14 13 06.4**	**+1.4**
CEVE	**Cerro Verde**	**0.62**	**348**	P	**Pn**	**14 12 56.6**	**+0.6**
CEVE	**Cerro Verde**	**0.62**	**348**	*i* P	**Pn**	**14 12 56.6**	**+0.6**
CEVE				*eS*	**Sn**	**14 13 07.7**	**+1.6**
LFU	**La Fuente**	**0.65**	**34**	↓*i* P	**Pn**	**14 12 56.9**	**+0.8**
SNJE	**San Jose**	**0.66**	**350**	↓*i* P	**Pn**	**14 12 57.0**	**+0.6**
LBRS	**Las Brisas**	**0.68**	**40**	↓*i* P	**Pn**	**14 12 57.4**	**+0.9**
RTR	**El Retiro**	**0.70**	**347**	*eP*	**Pn**	**14 12 57.6**	**+0.8**
COEG	**Centro de Oper**	**0.72**	**56**	P	**Pn**	**14 12 57.3**	**+0.4**
COEG				S	**Sn**	**14 13 08.6**	**+0.9**
PAVA	**Las Pavas**	**0.73**	**47**	P	**Pn**	**14 12 58.0**	**+0.9**
PAVA	**Las Pavas**	**0.73**	**47**	*eP*	**Pn**	**14 12 58.0**	**+0.9**
PAVA				*eS*	**Sn**	**14 13 09.9**	**+1.9**
TECO	**Alcaldia de Te**	**0.76**	**65**	P	**Pn**	**14 12 57.4**	**0.0**
TECO	**Alcaldia de Te**	**0.76**	**65**	*eP*	**Pn**	**14 12 57.4**	**0.0**
TECO				*eS*	**Sn**	**14 13 08.8**	**+0.3**
UNIC	**Universidad Ca**	**0.77**	**356**	P	**Pn**	**14 12 58.4**	**+0.8**
UNIC				S	**Sn**	**14 13 10.2**	**+1.5**
FAME	**Alcaldia de Sa**	**0.81**	**321**	P	**Pn**	**14 12 58.2**	**+0.2**
LOAL	**Lomas de Alarc**	**0.83**	**340**	P	**Pn**	**14 12 59.4**	**+1.1**
LOAL				S	**Sn**	**14 13 12.0**	**+1.9**
SLOZ	**Alcaldia de Sa**	**0.86**	**340**	P	**Pn**	**14 12 59.6**	**+0.9**
SLOZ				S	**Sn**	**14 13 12.4**	**+1.8**
SLOZ	**Alcaldia de Sa**	**0.86**	**340**	*eP*	**Pn**	**14 12 59.6**	**+0.9**
SLOZ				*eS*	**Sn**	**14 13 13.1**	**+2.4**
SCLA	**Alcaldia de Sa**	**0.89**	**57**	S	**Sn**	**14 13 12.7**	**+1.4**
PQSS	**Presa 15 de Se**	**0.99**	**66**	P	**Pn**	**14 13 01.0**	**+0.8**
PQSS				S	**Sn**	**14 13 14.7**	**+1.1**
TECA	**Tecapa**	**1.00**	**74**	↓*i* P	**Pn**	**14 13 00.8**	**+0.2**
P5NO	**Presa 5 de nov**	**1.04**	**43**	P	**Pn**	**14 13 01.6**	**+0.6**
P5NO				S	**Sn**	**14 13 16.0**	**+1.1**
LLGN	**La Laguna**	**1.08**	**29**	P	**Pn**	**14 13 02.3**	**+0.8**
LLGN				S	**Sn**	**14 13 17.0**	**+1.1**
PACA	**Pacayal**	**1.16**	**77**	P	**Pn**	**14 13 03.2**	**+0.6**
PACA	**Pacayal**	**1.16**	**77**	*eP*	**Pn**	**14 13 03.7**	**+1.0**
PACA				*eS*	**Sn**	**14 13 20.1**	**+2.2**
MTO3	**Montecristo**	**1.18**	**6**		**Pn**	**14 13 03.6**	**+0.6**
MTO3				Sn	**Sn**	**14 13 19.1**	**+0.6**
MTO3	**Montecristo**	**1.18**	**6**	P	**Pn**	**14 13 04.0**	**+0.9**
MTO3	**Montecristo**	**1.18**	**6**	*i* P	**Pn**	**14 13 03.9**	**+0.9**
MTO3	**Montecristo**	**1.18**	**6**	*eP*	**Pn**	**14 13 03.9**	**+0.9**
MTO3				*eS*	**Sn**	**14 13 19.1**	**+0.6**
RANC	**El Ranchito**	**1.19**	**79**	P	**Pn**	**14 13 03.8**	**+0.8**
RANC				S	**Sn**	**14 13 19.6**	**+1.1**
ESQI	**Esquipulas**	**1.35**	**6**		**Pn**	**14 13 06.3**	**+1.2**
ESQI				Sn	**Sn**	**14 13 23.1**	**+1.0**
ESQI	**Esquipulas**	**1.35**	**6**	P	**Pn**	**14 13 06.3**	**+1.2**
ESQI				S	**Sn**	**14 13 24.0**	**+1.8**
ESQI	**Esquipulas**	**1.35**	**6**	*eP*	**Pn**	**14 13 24.0**	**+1.2**
ESQI				*eS*	**Sn**	**14 13 24.5**	**+2.4**
ZAFR2	**Estanzuela, Za**	**1.36**	**6**	*i* P	Pn	14 13 11.8	+6.6
INTP	**Intipuca**	**1.40**	**91**	*eP*	**Pn**	**14 13 06.5**	**+0.9**
INTP				*eS*	**Sn**	**14 13 24.6**	**+1.4**
FG16	**Alotenango, Sa**	**1.45**	**317**	*i* P	Pn	14 13 12.5	+6.0
FG8	**Yepocapa, Chim**	**1.47**	**315**	*i* P	Pn	14 13 13.1	+6.3
LCND	**La Caada**	**1.56**	**86**	P	**Pn**	**14 13 08.7**	**+0.9**
CNCH	**Conchagua**	**1.61**	**88**	P	**Pn**	**14 13 09.3**	**+0.7**
CNCH	**Conchagua**	**1.61**	**88**	*eP*	**Pn**	**14 13 09.6**	**+0.9**
CNCH				*eS*	**Sn**	**14 13 31.2**	**+2.7**
MARCA	**Marcala la Paz**	**1.70**	**56**	P	**Pn**	**14 13 10.8**	**+0.9**
MARCA				S	**Sn**	**14 13 32.0**	**+1.4**
MARCA	**Marcala la Paz**	**1.70**	**56**	*i* P	**Pn**	**14 13 10.7**	**+0.9**
SARH	**Santa Rosa de**	**1.71**	**24**	P	**Pn**	**14 13 11.6**	**+1.8**
SARH				S	**Sn**	**14 13 32.7**	**+2.0**
SARH	**Santa Rosa de**	**1.71**	**24**	*i* P	**Pn**	**14 13 11.5**	**+1.7**
CSGN	**Cosiguina Volc**	**1.90**	**97**	P	**Pn**	**14 13 13.1**	**+0.7**
CSGN				S	**Sn**	**14 13 36.6**	**+1.2**
APG	**El Apazote**	**2.02**	**332**	P	**Pn**	**14 13 15.3**	**+1.1**
	comp=E,7.4nm,0.3s,baz=154,slow=10.0,SNR=88						
APG				S	**Sn**	**14 13 41.6**	**+3.2**
	comp=E,45nm,0.7s,baz=222,slow=18,SNR=11						
APG	**El Apazote**	**2.02**	**332**	*i* P	**Pn**	**14 13 15.6**	**+1.3**
STG8	**El Palmar, Qui**	**2.19**	**304**	*i* P	Pn	14 13 23.3	+6.7
STG8				*i* S	Sn	14 13 52.0	+9.3
STG8				IAML		14 14 00.8	
	comp=E,6µm,0.1s						
CRIN	**San Cristobal**	**2.43**	**102**	Pn	**Pn**	**14 13 20.1**	**+0.3**
CRIN	**San Cristobal**	**2.43**	**102**	P	**Pn**	**14 13 20.9**	**+1.1**
CRIN				S	**Sn**	**14 13 50.0**	**+1.6**
RTAL	**Retalhuleu**	**2.51**	**302**		**Pn**	**14 13 21.5**	**+0.8**
RTAL	**Retalhuleu**	**2.51**	**302**	P	**Pn**	**14 13 22.1**	**+1.4**
HERN	**Volcan Telica**	**2.66**	**103**	Pn	**Pn**	**14 13 23.0**	**+0.1**
HERN	**Volcan Telica**	**2.66**	**103**	*eP*	**Pn**	**14 13 22.9**	**+0.1**
HERN				*eS*	**Sn**	**14 13 54.1**	**0.0**
PLRN	**Geotermica Pol**	**2.73**	**103**	P	**Pn**	**14 13 23.9**	**+0.2**
CNGA	**Al SSO del Vol**	**2.81**	**104**	P	**Pn**	**14 13 25.2**	**+0.3**
CNGN	**Cerro Negro**	**2.81**	**104**	P	**Pn**	**14 13 25.2**	**+0.3**
CNGN				S	**Sn**	**14 13 57.5**	**-0.2**
MACN	**El Madrono**	**2.84**	**105**	P	**Pn**	**14 13 25.7**	**+0.4**
MACN				S	**Sn**	**14 13 57.9**	**-0.6**
OCON	**Estacion meteo**	**2.96**	**82**	P	**Pn**	**14 13 27.5**	**+0.6**
OCON				S	**Sn**	**14 14 01.9**	**+0.6**
MOMN	**Momotombo**	**2.99**	**105**	P	**Pn**	**14 13 28.0**	**+0.8**
MOMN				S	**Sn**	**14 14 02.9**	**+1.0**
COPN	**Copaltepe**	**3.01**	**110**	P	**Pn**	**14 13 28.6**	**+1.1**
COPN	**Copaltepe**	**3.01**	**110**	*eP*	**Pn**	**14 13 28.6**	**+1.1**
COPN				*eS*	**Sn**	**14 13 59.8**	**-2.6**
MOM2	**El Cardon**	**3.03**	**104**	P	**Pn**	**14 13 28.3**	**+0.5**
MOM2				S	**Sn**	**14 14 03.3**	**+0.3**
LIMN	**Finca el Limon**	**3.05**	**92**	P	**Pn**	**14 13 28.8**	**+0.6**
LIMN				S	**Sn**	**14 14 04.6**	**+1.1**
SAPS	**Ciudad Sandino**	**3.18**	**109**	P	**Pn**	**14 13 31.2**	**+1.2**
SAPS				S	**Sn**	**14 14 06.3**	**-0.4**
RCVN	**Varillal2**	**3.23**	**83**	P	**Pn**	**14 13 31.1**	**+0.5**
APQ2	**Apoyeque**	**3.25**	**108**	P	**Pn**	**14 13 32.1**	**+1.3**
APQ2				S	**Sn**	**14 14 08.5**	**+0.2**
RCON	**San Juan de Ri**	**3.25**	**85**	P	**Pn**	**14 13 32.3**	**+1.3**
RCON				S	**Sn**	**14 14 10.5**	**+1.8**
TISN	**Laguna Tiscapa**	**3.32**	**108**	P	**Pn**	**14 13 31.7**	**-0.1**
UNAN	**Cigeo UNAN**	**3.33**	**109**	P	**Pn**	**14 13 32.4**	**+0.5**
MGAN	**Managua**	**3.34**	**108**	Pn	**Pn**	**14 13 31.7**	**-0.3**
WILN	**Americas 2**	**3.39**	**108**	S	**Sn**	**14 14 11.9**	**+0.2**
MAS2	**Al N del Volca**	**3.44**	**110**	P	**Pn**	**14 13 34.7**	**+1.2**
MASN	**Masaya**	**3.48**	**110**	S	**Sn**	**14 14 14.2**	**+0.2**
MATN	**Matagalpa**	**3.48**	**94**	P	**Pn**	**14 13 34.1**	**0.0**
MATN				S	**Sn**	**14 14 14.5**	**+0.3**
NADN	**Granada**	**3.68**	**113**	P	**Pn**	**14 13 36.6**	**-0.1**
NADN				S	**Sn**	**14 14 18.3**	**-0.6**
PETF	**Flores**	**3.70**	**354**		**Pn**	**14 13 36.7**	**-0.3**
BOAB	**BOACO BROADBAN**	**3.81**	**101**		**Pn**	**14 13 38.1**	**-0.3**
BOAB	**BOACO BROADBAN**	**3.81**	**101**	S	**Sn**	**14 14 23.9**	**+1.9**
MORN	**Al O del Volca**	**4.10**	**113**	S	**Sn**	**14 14 30.7**	**+1.4**
LCRUZ	**La Cruz**	**4.33**	**119**	*eP*	**Pn**	**14 13 47.1**	**+1.4**
LCRUZ				*eS*	**Sn**	**14 14 32.7**	**-2.1**
LAPC	**Finca la Perla**	**4.65**	**121**	*eP*	**Pn**	**14 13 51.8**	**+1.7**
ALIBA	**Liberia Airpor**	**4.66**	**124**	*eP*	**Pn**	**14 13 52.7**	**+2.6**
VRLE	**La Escondida,**	**4.70**	**120**	*eP*	**Pn**	**14 13 52.9**	**+2.1**
CLARA	**Aguas Claras**	**4.86**	**119**	*eP*	**Pn**	**14 13 55.2**	**+2.2**
MESS	**Mesas**	**4.87**	**120**	*eP*	**Pn**	**14 13 54.6**	**+1.6**
JUD3	**Juan Diaz 3**	**4.91**	**128**		**Pn**	**14 13 55.0**	**+1.3**
JUD3	**Juan Diaz 3**	**4.91**	**128**	*eP*	**Pn**	**14 13 55.3**	**+1.6**
CUI	**Cuipilapa**	**4.94**	**121**	*eP*	**Pn**	**14 13 56.0**	**+2.0**
CMARA	**Lajas Hojancha**	**5.09**	**128**	*eP*	**Pn**	**14 13 57.4**	**+1.3**
TIMP	**Tierras Morena**	**5.10**	**120**	*eP*	**Pn**	**14 13 58.0**	**+1.8**
JUNT	**Juntas**	**5.31**	**123**	*eP*	Pn	14 14 08.5	+10
JTS	**Las Juntas de**	**5.31**	**123**	P	**Pn**	**14 14 00.8**	**+1.7**
	comp=E,7.0nm,0.3s,baz=301,slow=18,SNR=9.3						
JTS				S	**Sn**	**14 15 00.4**	**+1.5**
	comp=E,11nm,0.3s,baz=288,slow=19,SNR=1.1						
JTS				LR	LR	14 15 39.7	
	comp=E,35nm,18.8s,baz=316,slow=33						
JTS	**Las Juntas de**	**5.31**	**123**		**Pn**	**14 14 00.4**	**+1.4**
JTS					**Sn**	**14 15 00.4**	**+1.5**
JTS	**Las Juntas de**	**5.31**	**123**	P	**Pn**	**14 14 00.2**	**+1.2**
JTS	**Las Juntas de**	**5.31**	**123**	*eP*	**Pn**	**14 14 01.5**	**+2.4**
MTEVE	**Monteverde**	**5.40**	**122**	*eP*	**Pn**	**14 14 03.6**	**+3.2**
ARE1	**Arenal 1**	**5.41**	**120**	*eP*	**Pn**	**14 14 03.1**	**+2.6**
ARE1				*eS*	Sn	14 15 15.0	+14
VARE2	**V. Arenal**	**5.41**	**120**	*eP*	**Pn**	**14 14 02.9**	**+2.4**
LAFE	**Finca La Fe, P**	**5.62**	**127**	*eP*	**Pn**	**14 14 04.5**	**+1.2**
LAFE				*eS*	**Sn**	**14 15 01.7**	**-4.9**
PICV	**PH. Pirrs**	**6.30**	**124**	*eP*	**Pn**	**14 14 16.3**	**+3.7**
VICA	**Volcano Irazu**	**6.39**	**120**	*eP*	**Pn**	**14 14 16.5**	**+2.2**
CMIG	**Matias Romero**	**6.48**	**302**	P	**Pn**	**14 14 16.0**	**+0.9**
	comp=E,9.9nm,0.5s,baz=115,slow=11,SNR=21						
CMIG				S	**Sn**	**14 15 29.1**	**+1.5**
	comp=E,22nm,0.4s,baz=263,slow=21,SNR=11						
PIRO	**Carate, Puerto**	**7.71**	**128**		**Pn**	**14 14 33.0**	**+1.1**
PIRO	**Carate, Puerto**	**7.71**	**128**	*eP*	**Pn**	**14 14 35.5**	**+3.6**
ALCO	**Alturas Coton,**	**7.79**	**122**	*eP*	**Pn**	**14 14 36.2**	**+3.0**
TLIG	**Tlapa**	**9.76**	**297**		**Pn**	**14 15 01.2**	**+1.1**
SOR	**Soroa**	**11.34**	**32**		**Pn**	**14 15 22.9**	**+1.3**
HNDO	**Hondo**	**18.60**	**332**	P	**P**	**14 16 56.3**	**+1.6**
TIGA	**Tifton**	**18.93**	**16**	P	**P**	**14 16 57.0**	**-1.2**
TIGA				IAmb	IAmb	14 17 04.5	
	comp=Z,26nm,0.9s						
SDV	**Santo Domingo**	**19.00**	**101**	P	**P**	**14 16 58.7**	**-0.6**
	comp=Z,3.2nm,0.4s,baz=304,slow=7.3,SNR=3.3						
SDV	**Santo Domingo**	**19.00**	**101**	P	**P**	**14 16 57.9**	**-1.4**
JCT	**Junction City**	**19.65**	**333**	P	**P**	**14 17 05.5**	**-0.6**
BRDY	**Brady**	**20.00**	**336**	P	**P**	**14 17 09.6**	**-0.4**
BRDY				IAmb	IAmb	14 17 13.0	
	comp=Z,11nm,0.7s						
WHTX	**Lake Whitney,**	**20.07**	**340**		**P**	**14 17 11.3**	**+0.7**
SAND	**Sanderson**	**20.36**	**327**		**P**	**14 17 14.4**	**+0.6**
FW13	**Cleburne**	**20.39**	**340**	P	**P**	**14 17 14.2**	**+0.1**
OZNA	**Ozona**	**20.63**	**331**	P	**P**	**14 17 17.2**	**+0.4**
OZNA				IAmb	IAmb	14 17 34.3	
	comp=Z,13nm,1.0s						
Y49A	**Blount Mountai**	**20.74**	**7**	P	**P**	**14 17 18.2**	**+0.3**
Y49A				IAmb	IAmb	14 17 21.3	
	comp=Z,9.0nm,0.7s						
TXAR	**Lajitas Array**	**20.75**	**323**	P	**P**	**14 17 19.6**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=144,slow=9.9,SNR=12						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**20.75**	**323**	P	**P**	**14 17 18.4**	**+0.4**
X48A	**Hartselle**	**21.26**	**6**	P	**P**	**14 17 21.7**	**-1.7**
MIAR	**Mount Ida**	**21.56**	**351**		**P**	**14 17 26.6**	**0.0**
MIAR				IAmb	IAmb	14 17 48.1	
	comp=Z,14nm,1.1s						
UALR	**University of**	**21.62**	**354**	P	**P**	**14 17 27.2**	**0.0**
UALR				IAmb	IAmb	14 17 46.2	
	comp=Z,23nm,1.1s						
MNHN	**Monahans**	**21.79**	**328**	P	**P**	**14 17 29.4**	**+0.2**
LOOK	**Love County**	**21.84**	**343**	P	**P**	**14 17 29.8**	**+0.2**
LOOK				IAmb	IAmb	14 17 50.7	
	comp=Z,15nm,1.0s						
WHAR	**Wooly Hollow**	**22.12**	**354**		**P**	**14 17 30.5**	**-2.2**
SWET	**Sewanee**	**22.14**	**8**	P	**P**	**14 17 32.6**	**-0.3**
SWET				IAmb	IAmb	14 17 35.1	
	comp=Z,6.3nm,0.7s						
APMT	**Aspermont**	**22.25**	**336**	P	**P**	**14 17 32.6**	**-1.5**
APMT				IAmb	IAmb	14 17 50.1	
	comp=Z,9.5nm,1.0s						
X34A	**Smith Ranch, M**	**22.60**	**342**	P	**P**	**14 17 39.1**	**+1.3**
X34A				IAmb	IAmb	14 17 58.3	
	comp=Z,11nm,0.7s						
FCAR	**Ozark Folk Cen**	**22.70**	**354**	P	**P**	**14 17 38.2**	**-0.7**
FCAR				IAmb	IAmb	14 17 55.9	
	comp=Z,15nm,1.1s						
LCAR	**Lake Charles**	**22.81**	**357**	P	**P**	**14 17 39.6**	**-0.3**
DKNS	**Dickens**	**22.87**	**335**	P	**P**	**14 17 41.2**	**+0.5**
DKNS				IAmb	IAmb	14 17 56.5	
	comp=Z,10nm,1.1s						
TKL	**Tuckaleechee C**	**22.93**	**12**	LR	LR	14 26 55.1	
	comp=Z,93nm,21.8s,baz=184,slow=37						
SJG	**San Juan**	**22.98**	**75**	LR	LR	14 27 20.5	
	comp=Z,98nm,19.5s,baz=220,slow=38						
WMOK	**Wichita Mounta**	**23.02**	**340**	P	**P**	**14 17 40.2**	**-2.0**
WMOK				IAmb	IAmb	14 17 57.5	
	comp=Z,15nm,1.1s						
T47A	**Sharon Grove**	**23.77**	**5**		**P**	**14 17 49.0**	**-0.1**
T47A				IAmb	IAmb	14 18 05.6	
	comp=Z,18nm,1.2s						
S44A	**Carbondale**	**24.38**	**0**	P	**P**	**14 17 54.5**	**-0.2**
BLOK	**Blackwell**	**24.45**	**345**	P	**P**	**14 17 55.0**	**-0.3**
S39A	**Bolivar**	**24.61**	**353**

CEDA					S		Sn	14 17 40.7 +0.9
SJTE	**Alcalda de S**	**0.62**	**50**	*e*	P		Pn	14 17 30.6 -0.6
SJTE					S		Sn	14 17 41.0 +0.6
CEVE	**Cerro Verde**	**0.63**	**348**		P		Pn	14 17 31.0 -0.4
CEVE	**Cerro Verde**	**0.63**	**348**	*e*	P		Pn	14 17 31.1 -0.4
CEVE					*e*S		Sn	14 17 42.9 +2.1
SBLS	**San Blas**	**0.64**	**349**	ǁ *i*	P		Pn	14 17 31.1 -0.5
SBLS					*e*S		Sn	14 17 42.1 +1.0
LFU	**La Fuente**	**0.65**	**34**	*e*	P		Pn	14 17 31.5 -0.1
LFU					*e*S		Sn	14 17 42.4 +1.3
SNJE	**San Jose**	**0.66**	**350**	*i*	P		Pn	14 17 31.4 -0.5
SNJE					*e*S		Sn	14 17 42.5 +1.0
LBRS	**Las Brisas**	**0.68**	**40**	*e*	P		Pn	14 17 31.8 -0.2
RTR	**El Retiro**	**0.70**	**348**	*e*	P		Pn	14 17 32.0 -0.3
COEG	**Centro de Oper**	**0.72**	**56**		P		Pn	14 17 31.8 -0.7
COEG					S		Sn	14 17 42.8 +0.1
PAVA	**Las Pavas**	**0.74**	**47**		P		Pn	14 17 32.6 -0.1
PAVA	**Las Pavas**	**0.74**	**47**	*e*	P		Pn	14 17 32.6 -0.1
PAVA					*e*S		Sn	14 17 44.3 +1.2
TECO	**Alcaldia de Te**	**0.77**	**65**		P		Pn	14 17 31.9 -1.2
TECO					S		Sn	14 17 43.5 -0.2
UNIC	**Universidad Ca**	**0.77**	**356**		P		Pn	14 17 32.9 -0.3
UNIC					S		Sn	14 17 45.0 +1.2
FAME	**Alcaldia de Sa**	**0.81**	**321**		P		Pn	14 17 32.6 -1.0
FAME					S		Sn	14 17 43.9 -0.8
LOAL	**Lomas de Alarc**	**0.83**	**340**		P		Pn	14 17 33.7 -0.2
LOAL					S		Sn	14 17 47.0 +1.7
SLOZ	**Alcaldia de Sa**	**0.86**	**341**		P		Pn	14 17 33.9 -0.4
RBDL	**Robledal**	**0.92**	**348**	*e*	P		Pn	14 17 34.7 -0.5
RBDL					*e*S		Sn	14 17 49.1 +1.7
TECA	**Tecapa**	**1.00**	**74**	*e*	P		Pn	14 17 35.5 -0.9
P5NO	**Presa 5 de nov**	**1.05**	**43**		P		Pn	14 17 36.1 -0.7
P5NO					S		Sn	14 17 50.1 -0.3
LLGN	**La Laguna**	**1.09**	**29**		P		Pn	14 17 37.2 -0.3
LLGN					S		Sn	14 17 51.9 +0.5
PACA	**Pacayal**	**1.17**	**77**		P		Pn	14 17 38.7 +0.1
PACA	**Pacayal**	**1.17**	**77**	*e*	P		Pn	14 17 38.6 +0.1
PACA					*e*S		Sn	14 17 54.6 +1.2
MTO3	**Montecristo**	**1.19**	**6**		P		Pn	14 17 38.3 -0.6
MTO3					S		Sn	14 17 53.9 -0.2
MTO3	**Montecristo**	**1.19**	**6**	*i*	P		Pn	14 17 38.3 -0.6
RANC	**El Ranchito**	**1.19**	**79**		P		Pn	14 17 38.8 -0.1
RANC					S		Sn	14 17 54.8 +0.7
VSM	**San Miguel**	**1.21**	**79**	*e*	P		Pn	14 17 39.1 -0.1
ESQI	**Esquipulas**	**1.35**	**6**		P		Pn	14 17 41.1 +0.1
ESQI					S		Sn	14 17 58.4 +0.5
INTP	**Intipuca**	**1.40**	**90**	*e*	P		Pn	14 17 41.4 -0.2
INTP					*e*S		Sn	14 17 59.3 +0.3
CNCH	**Conchagua**	**1.62**	**87**		P		Pn	14 17 43.9 -0.7
CNCH					S		Sn	14 18 06.0 +1.6
CNCH	**Conchagua**	**1.62**	**87**	*e*	P		Pn	14 17 44.1 -0.6
MARCA	**Marcala la Paz**	**1.70**	**56**	*i*	P		Pn	14 17 43.6 -2.3
SARH	**Santa Rosa de**	**1.71**	**24**		P		Pn	14 17 46.1 +0.2
SARH					S		Sn	14 18 07.4 +0.8
SARH	**Santa Rosa de**	**1.71**	**24**	*i*	P		Pn	14 17 45.1 -0.8
SARH				*i*	S		Sn	14 18 05.0 -1.7
CSGN	**Cosiguina Volc**	**1.90**	**97**		P		Pn	14 17 48.3 -0.2
LIMN	**Finca el Limon**	**3.05**	**92**		P		Pn	14 18 03.6 -0.6

AFAD ***13*** *15:13:52.6, 35°.83N×30°.35E, h5km±3km, ML3.5*
ISK ***13*** *15:13:53.7, 35°.95N×30°.22E, h8km, ML3.4/20*
IDC ***13*** *15:13:53.5±1.1, 36°.00N×30°.31E, h0km, mb3.6/5, mbtmp3.4/10, ML3.1/4, MS2.1/1, Error ellipse: s-maj=21.4km s-min=17.7km az=149.0*

ISC 13 15:13:54.1±0.7, 35°.95N±0°.04×30°.28E±0°.02, h10km, n64, σ1s 27/73, mb3.5/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.37**	**8**	P	**Pg**	**15 14 00.8**	**-0.7**
AKUM				S	**Sg**	**15 14 04.9**	**-1.6**
AKUM				IAML		15 14 12.0	
	comp=N,4μm,0.4s						
AKUM				IAML		15 14 12.0	
	comp=E,4μm,0.7s						
DEMR	**Demre-Antalya**	**0.41**	**313**	Pg	**Pg**	**15 14 01.3**	**-1.0**
DEMR				Sg	**Sg**	**15 14 06.8**	**-0.9**
AKAS	**Kas**	**0.61**	**297**	Pg	**Pg**	**15 14 04.9**	**-1.1**
AKAS	**Kas**	**0.61**	**297**	P	**Pg**	**15 14 05.5**	**-0.5**
AKAS				S	**Sg**	**15 14 12.9**	**-1.2**
AKAS				IAML		15 14 20.0	
	comp=E,1μm,1.0s						
KEMT	**Kemer-ANTALYA**	**0.69**	**19**	Pg	**Pb**	**15 14 06.9**	**-1.3**
ELL	**Elmali**	**0.85**	**340**	Pg	**Pb**	**15 14 10.1**	**-0.9**
ELL				Sg	**Sb**	**15 14 22.1**	**-0.4**
IZZE	**Mula-Seydike**	**0.98**	**300**	P	**Pn**	**15 14 14.5**	**+0.6**
IZZE				S	**Sn**	**15 14 29.8**	**+1.9**
ANTB	**Antalya**	**0.99**	**18**	Pg	**Pn**	**15 14 13.6**	**-0.5**
KORT	**Korkueli**	**1.05**	**3**	Pg	**Pn**	**15 14 14.4**	**-0.6**
KORT	**Korkueli**	**1.05**	**3**	P	**Pn**	**15 14 15.1**	**+0.1**
KORT				S	**Sn**	**15 14 31.4**	**+1.6**
KORT				IAML		15 14 36.0	
	comp=E,882nm,0.6s						
KNIK	**Mula-Seydike**	**1.06**	**328**	P	**Pn**	**15 14 16.2**	**+1.1**
KNIK				S	**Sn**	**15 14 32.2**	**+2.2**
CAME	**Cameli-Denizli**	**1.26**	**322**	Pn	**Pg**	**15 14 17.9**	**-0.5**
SABU	**Mula-Dalaman**	**1.37**	**310**	P	**Pg**	**15 14 20.3**	**-0.1**
BUCA	**Burdur, Bucak-**	**1.39**	**9**	P	**Pg**	**15 14 21.7**	**+0.8**
CAEL	**Denizli, Camel**	**1.40**	**327**	P	**Pg**	**15 14 22.2**	**+1.2**
GOLH	**Golhisar**	**1.41**	**336**	P	**Pg**	**15 14 22.4**	**+1.3**
KEPZ	**Antalya-Kepez**	**1.43**	**48**	P	**Pg**	**15 14 20.3**	**-1.3**
BCK	**Bucak**	**1.53**	**9**	Pn	**Pg**	**15 14 22.2**	**-1.2**
DALY	**Dalyan (Mula)**	**1.57**	**304**	Pn	**Pb**	**15 14 22.0**	**-1.2**
DALY	**Dalyan (Mula)**	**1.57**	**304**	P	**Pg**	**15 14 23.0**	**-1.2**
GAZI	**Gazipasa**	**1.68**	**80**	Pn	**Pg**	**15 14 24.6**	**-1.6**
GAZI	**Gazipasa**	**1.68**	**80**	P	**Pb**	**15 14 23.8**	**-1.2**
APMY	**Acipayam-Deniz**	**1.71**	**333**	Pn	**Pb**	**15 14 24.1**	**-1.6**
BRDR	**BURDUR-Merkez**	**1.75**	**354**	P	**Pg**	**15 14 27.6**	**-0.1**
ARG	**Arkhangelos**	**1.76**	**279**	Pn	**Pn**	**15 14 24.5**	**-0.2**
TURN	**Turunc**	**1.83**	**297**	Pn	**Pb**	**15 14 25.9**	**-1.8**
TURN	**Turunc**	**1.83**	**297**	P	**Pg**	**15 14 28.9**	**-0.4**
INCE	**Denizli-Bozkur**	**1.84**	**342**	P	**Pg**	**15 14 27.9**	**-1.6**
TAVA	**DENIZLI_Tavas**	**1.87**	**324**	P	**Pg**	**15 14 28.2**	**-0.7**
SEDI	**Konya, Seydise**	**1.91**	**38**	P	**Pg**	**15 14 29.5**	**-1.2**
SEYD	**Seydisehir-KON**	**1.92**	**40**	Pn	**Pb**	**15 14 27.9**	**-1.4**
DNIZ	**Denizli-Tavas-**	**1.94**	**330**	P	**Pg**	**15 14 31.1**	**-0.3**
BASM	**Basmaki-Afyon**	**1.97**	**355**	Pn	**Pb**	**15 14 28.2**	**-2.0**
YER	**Yerkesik**	**1.99**	**307**	Pn	**Pn**	**15 14 28.3**	**+0.4**
MULA	**Mugla, Merkez-**	**2.04**	**310**	P	**Pg**	**15 14 32.2**	**-1.1**
HDMB	**Hadim**	**2.05**	**60**	Pn	**Pb**	**15 14 29.8**	**-1.7**
BAGO	**Egridir - ISPA**	**2.08**	**11**	P	**Pg**	**15 14 32.6**	**-1.3**
ERMK	**Ermenek**	**2.24**	**71**	P	**Pb**	**15 14 34.2**	**-0.6**
KZIL	**AFYON_Kizioren**	**2.30**	**357**	P	**Pb**	**15 14 34.7**	**-1.1**
DAT	**Datca**	**2.31**	**290**	Pn	**Pn**	**15 14 32.6**	**+0.2**
DAT	**Datca**	**2.31**	**290**	P	**Pb**	**15 14 33.8**	**-2.2**
YAZI	**Mula-Dat$a-**	**2.39**	**289**	P	**Pn**	**15 14 32.8**	**-0.6**
ESEN	**Aydn-Nazilli**	**2.41**	**321**	P	**Pg**	**15 14 38.4**	**-1.8**
DOGA	**KONYA_Doganhis**	**2.42**	**27**	P	**Pb**	**15 14 37.5**	**-0.3**
SULTU	**Buldan**	**2.42**	**331**	P	**Pg**	**15 14 39.2**	**-1.3**
YVAC	**Isparta, Yalva**	**2.44**	**18**	P	**Pb**	**15 14 37.4**	**-0.8**
KMER	**Konya-Meram**	**2.47**	**42**	P	**Pb**	**15 14 38.4**	**-0.3**
PASA	**Karahalli, USA**	**2.47**	**345**	P	**Pb**	**15 14 38.0**	**-0.7**
KKBE	**Karaman, Kazim**	**2.49**	**59**	P	**Pb**	**15 14 37.9**	**-1.0**
NAZL	**Nazilli-Aydin**	**2.56**	**322**	Pn	**Pn**	**15 14 36.4**	**+0.7**
AYDN	**Tasoluk**	**2.57**	**312**	P	**Pg**	**15 14 41.5**	**-1.9**
KONT	**Konya--Tatoy**	**2.60**	**39**	P	**Pb**	**15 14 39.3**	**-1.5**
BODT	**Bodrum**	**2.63**	**296**	Pn	**Pn**	**15 14 37.2**	**+0.5**
IDI	**Anoyia**	**4.44**	**263**	Pn	**Pn**	**15 15 03.7**	**+2.1**
	10nm,0.8s,baz=339,slow=7.4,SNR=12						
IDI					**Sn**	**15 15 54.5**	**+1.2**
	baz=216,slow=6.1						
BRTR	**Keskin Array B**	**4.61**	**34**	Pn	**Pn**	**15 15 05.4**	**+1.4**
	0.3nm,0.3s,baz=215,slow=16,SNR=4.9						
BRTR					**Sn**	**15 15 58.2**	**+0.5**
	0.4nm,0.3s,baz=203,slow=25,SNR=4.3						
	0.8nm,0.6s						
MMAI	**Mount Meron Ar**	**5.15**	**123**	Pn	**Pn**	**15 15 12.4**	**+1.1**
	2.5nm,0.3s,baz=306,slow=13,SNR=5.4						
MMAI					**Sn**	**15 16 12.6**	**+1.8**
	2.5nm,0.3s,baz=309,slow=30,SNR=2.0						
	0.9nm,0.3s						
ASF	**Jabal al Asfar**	**6.66**	**123**	Pn	**Pn**	**15 15 34.1**	**+2.0**
	0.2nm,0.3s,baz=306,slow=14,SNR=1.4						
	0.9nm,0.4s						
EIL	**Elat**	**7.40**	**147**	Pn	**Pn**	**15 15 44.7**	**+2.6**
	0.4nm,0.3s,baz=331,slow=14,SNR=1.4						
	2.1nm,0.6s						
FINES	**FINESS Array B**	**25.65**	**355**	P	**P**	**15 19 26.0**	**+2.3**
	1.2nm,0.8s,baz=168,slow=7.1,SNR=1.8						
	1.2nm,0.8s						

ATD	**Arta Tunnel**	**26.84**	**152**		LR		LR	15 31 45.0
	comp=Z,4.0nm,18.1s,baz=186,slow=40							
TORD	**Torodi Ar. Bea**	**34.29**	**236**		P		**P**	**15 20 40.9 +0.2**
	1.0nm,1.0s,baz=39,slow=9.6,SNR=3.5							
	1.0nm,1.0s							
KURBB	**Kurchatov Arra**	**37.37**	**52**		P		**P**	**15 21 06.2 -0.6**
	0.7nm,0.8s,baz=270,slow=9.0,SNR=7.4							
	0.7nm,0.8s							
MKAR	**Makanchi Array**	**39.84**	**58**		P		**P**	**15 21 26.2 -1.4**
	0.3nm,0.7s,baz=275,slow=8.1,SNR=2.7							
	0.3nm,0.7s							
ZALV	**Zalesovo Beam**	**41.44**	**47**		P		**P**	**15 21 42.1 +1.4**
	0.4nm,0.4s,baz=263,slow=7.1,SNR=2.6							
	0.4nm,0.4s							

SDD ***13*** *15:40:21.0±1.0, 19°.19N×65°.93W, h33km±674km, MD3.3, ML2.7, MW3.0, Presumed earthquake*
NEIC ***13*** *15:40:21.0±0.5, 19°.10N±0°.06×65°.96W±0°.06, h35km±2km, ML3.1/31, Md3.4/11(RSPR), Error ellipse: s-maj=11.8km s-min=7.8km az=30.0*
RSPR ***13*** *15:40:22.7, 19°.06N×65°.97W, h39km±6km, MD3.4/11*

ISC 13 15:40:19.2±2.5, 19°.2N±0°.1×65°.95W±0°.08, h30km±12km, n37, σ0s 61/61, 21C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.87**	**219**		**Pb**	**15 40 36.1**	**+0.4**
EMPR					**Sb**	**15 40 46.9**	**-0.1**
EMPR	**Esperanza - Ma**	**0.87**	**219**	⇑ *e*P	**Pb**	**15 40 36.1**	**+0.4**
EMPR				*e*S	**Sb**	**15 40 46.9**	**-0.1**
ECPR	**Experimental S**	**0.92**	**205**		**Pb**	**15 40 36.3**	**-0.2**
ECPR					**Sn**	**15 40 48.5**	**+0.3**
ECPR	**Experimental S**	**0.92**	**205**	⇑ *e*P	**Pb**	**15 40 36.5**	**-0.1**
HUMP	**Col San Antoni**	**1.01**	**175**		**Pn**	**15 40 37.4**	**+0.2**
HUMP					**Sn**	**15 40 49.8**	**-0.7**
HUMP				IAML		15 40 50.7	
	739nm,0.3s						
HUMP				IAML		15 40 55.5	
	635nm,0.2s						
HUMP	**Col San Antoni**	**1.01**	**175**	⇑ *e*P	**Pb**	**15 40 37.6**	**-0.4**
SJG	**San Juan**	**1.05**	**190**		**Pb**	**15 40 38.5**	**-0.2**
SJG				IAML		15 40 54.1	
	656nm,0.2s						
SJG				IAML		15 40 54.4	
	500nm,0.2s						
SJG	**San Juan**	**1.05**	**190**		**Sn**	**15 40 51.3**	**-0.2**
SJG	**San Juan**	**1.05**	**190**	⇑ *e*Pg	**Pb**	**15 40 38.6**	**-0.2**
SJG				⇑ *e*Sg	**Sb**	**15 40 52.5**	**+0.3**
AOPR	**Arecibo Observ**	**1.10**	**224**		**Pn**	**15 40 39.1**	**+0.5**
AOPR					**Sn**	**15 40 52.5**	**-0.4**
AOPR				IAML		15 40 53.6	
	668nm,0.2s						
AOPR	**Arecibo Observ**	**1.10**	**224**	⇑ *e*Pg	**Pn**	**15 40 39.1**	**+0.5**
AOPR				⇑ *e*Sg	**Sb**	**15 40 53.5**	**-0.2**
AOPR				IAML		15 40 54.5	
	comp=E,1μm,0.2s						
AOPR				IAML		15 40 55.6	
	comp=N,545nm,0.2s						
AOPR	**Arecibo Observ**	**1.10**	**224**	⇑ *e*P	**Pn**	**15 40 39.1**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.15**	**219**		**Pn**	**15 40 39.8**	**+0.5**
UUPR					**Sn**	**15 40 53.7**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.15**	**219**	ǁ *e*P	**Pb**	**15 40 40.0**	**-0.5**
CELP	**Cerrillos**	**1.23**	**209**		**Pn**	**15 40 40.9**	**+0.6**
CELP					**Sn**	**15 40 55.5**	**-0.3**
CELP				IAML		15 40 57.6	
	comp=N,142nm,0.2s						
CELP	**Cerrillos**	**1.23**	**209**	⇑ *e*Pg	**Pn**	**15 40 40.9**	**+0.6**
CELP				⇑ *e*Sg	**Sn**	**15 40 55.6**	**-0.2**
CELP				IAML		15 40 57.0	
	comp=E,40nm,0.3s						
CELP				IAML		15 41 02.7	
	comp=N,46nm,0.2s						
CELP	**Cerrillos**	**1.23**	**209**	ǁ *e*P	**Pb**	**15 40 41.1**	**-0.6**
OBIP	**Obispado Ponce**	**1.27**	**210**		**Pb**	**15 40 41.6**	**-0.8**
OBIP					**Sn**	**15 40 56.6**	**-0.2**
OBIP	**Obispado Ponce**	**1.27**	**210**	⇑ *e*P	**Pb**	**15 40 42.1**	**-0.3**
OBIP				*e*S	**Sn**	**15 40 56.6**	**-0.2**
AGPR	**Aguadilla, PR**	**1.29**	**238**		**Pn**	**15 40 41.4**	**+0.2**
AGPR					**Sn**	**15 40 56.9**	**-0.6**
AGPR				IAML		15 41 01.5	
	comp=N,136nm,0.2s						
AGPR	**Aguadilla, PR**	**1.29**	**238**	ǁ *e*P	**Pn**	**15 40 41.8**	**+0.6**
LSP	**Las Mesas**	**1.45**	**228**		**Pn**	**15 40 44.3**	**+0.9**
LSP					**Sn**	**15 41 01.6**	**+0.2**
LSP	**Las Mesas**	**1.45**	**228**	⇑ *e*P	**Pn**	**15 40 44.3**	**+0.9**
LSP				*e*S	**Sn**	**15 41 01.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.46**	**217**		**Pn**	**15 40 44.4**	**+0.8**
GBPR					**Sn**	**15 41 01.2**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.46**	**217**	⇑ *e*P	**Pn**	**15 40 44.4**	**+0.8**
GBPR				*e*S	**Sn**	**15 41 01.2**	**-0.5**
PRSN	**Puerto Rico Se**	**1.47**	**231**		**Pn**	**15 40 44.6**	**+1.0**
PRSN					**Sn**	**15 41 01.5**	**-0.2**
PRSN				IAML		15 41 09.6	
	comp=N,617nm,0.2s						
PRSN	**Puerto Rico Se**	**1.47**	**231**	⇑ *e*Pg	**Pb**	**15 40 45.1**	**-0.6**
PRSN				⇑ *e*Sg	**Sn**	**15 41 01.8**	**+0.1**
PRSN				IAML		15 41 03.5	
	comp=E,422nm,0.2s						
PRSN				IAML		15 41 09.5	
	comp=N,362nm,0.2s						
PRSN	**Puerto Rico Se**	**1.47**	**231**	ǁ *e*P	**Pb**	**15 40 44.8**	**-1.0**
MLPR	**Magueyes Islan**	**1.57**	**222**	Pn	**Pn**	**15 40 45.7**	**+0.7**
MLPR					**Sn**	**15 41 04.1**	**-0.2**
MLPR	**Magueyes Islan**	**1.57**	**222**	⇑ *e*Pg	**Pn**	**15 40 46.0**	**+1.0**
MLPR				IAML		15 41 08.6	
	comp=N,22nm,0.1s						
MLPR				IAML		15 41 13.9	
	comp=E,25nm,0.2s						
MLPR	**Magueyes Islan**	**1.57**	**222**	ǁ *e*P	**Pn**	**15 40 45.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.58**	**224**		**Pn**	**15 40 45.9**	**+0.8**
CRPR					**Sn**	**15 41 04.0**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.58**	**224**	ǁ *e*P	**Pn**	**15 40 46.2**	**+1.0**
IDE	**Isla Desecheo**	**1.63**	**242**		**Pn**	**15 40 46.3**	**+0.4**
IDE					**Sn**	**15 41 05.5**	**-0.3**
IDE	**Isla Desecheo**	**1.63**	**242**	ǁ *e*P	**Pn**	**15 40 46.3**	**+0.4**
IDE				*e*S	**Sn**	**15 41 05.5**	**-0.3**
DR12	**Loma Pena Alta**	**3.27**	**264**	Pn	**Pn**	**15 41 09.5**	**+1.1**
HATOM	**Hato Mayor del**	**3.27**	**264**	⇑ *e*Pg	**Pn**	**15 41 09.4**	**+1.0**
HATOM				⇑ *e*Sg	**Sn**	**15 41 44.8**	**-1.5**
HATOM				IAML		15 41 54.0	
	comp=E,9.4nm,0.1s						
HATOM				IAML		15 42 03.3	
	comp=N,24nm,4.0s						

TRN ***13*** *15:41:00.0, 11°.58N×61°.27W, h65km, MD2.7, South-east of Grenada.*

FUNV 13 15:41:51.2, 12°.36N×62°.46W, h25km, MW2.8, Presumed earthquake, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRFF	**Grenada Fort F**	**0.77**	**114**	*e*P	Pb	15 42 06.2	+0.2
GRFF				*e*S	Sn	15 42 17.7	+0.3
GRGR	**Grenville**	**0.82**	**106**	*e*P	Pb	15 42 06.3	-0.5
GRGR				*e*S	Sn	15 42 18.1	-0.4
GRGR	**Grenville**	**0.82**	**106**	*e*P	Pb	15 42 06.7	-0.1
GRGR				*e*S	Sn	15 42 18.8	+0.3
GCMP	**Grenada, Carri**	**1.01**	**83**	*e*P	Pn	15 42 10.0	+0.1
GCMP				*e*S	Sb	15 42 23.2	+0.2
GCMP	**Grenada, Carri**	**1.01**	**83**	*e*P	Pn	15 42 10.0	+0.1
GCMP				*e*S	Sn	15 42 23.4	0.0
DMDM	**Guralp CMG5TDE**	**1.88**	**152**	*e*P	Pn	15 42 10.8	-11
DMDM				*e*S	Sn	15 42 23.6	-21
TRN	**Trinidad (W)**	**1.99**	**149**	*e*P	Pn	15 42 22.8	-0.6
TRN	**Trinidad (W)**	**1.99**	**149**	*e*P	Pn	15 42 10.5	-13
TRN				*e*S	Sn	15 42 23.5	-24

IDC ***13*** *15:52:09.8±0.9, 60°.34S×43°.98W, h0km, mb3.9/4, mbtmp3.9/5, ML3.5/1, MS3.5/3, Error ellipse: s-maj=41.0km s-min=23.0km az=79.0*
NEIC ***13*** *15:52:11.6±0.9, 60°.45S±0°.1×44°.1W±0°.2, h10km±1km, mb4.7/22, Error ellipse: s-maj=20.1km s-min=17.3km az=259.0*

ISC 13 15:52:11.2±0.6, 60°.45S±0°.09×44°.1W±0°.1, h10km, n43, σ0s 95/35, mb4.7/15, 2C, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESPZ	**Base Esperanza**	**6.75**	**238**		**Pn**	**15 53 48.3**	**-1.8**

PMSA	**Palmer Station**	**10.12**	**236**		LR		LR	15 58 51.0
	comp=Z,120nm,20.6s,baz=109,slow=39							
SMAI	**San Martin Ant**	**12.52**	**222**				**Pn**	**15 55 09.9 +0.8**
VNA1	**Neumayer--Stat**	**17.69**	**140**		P		**Pn**	**15 56 15.5 -1.7**
	comp=Z,7.6nm,0.8s							
BELA	**Belgrano 2**	**17.79**	**173**		Pn		**Pn**	**15 56 16.5 -1.9**
VNA2	**Neumayer--Watz**	**18.05**	**141**		⇑P		**Pn**	**15 56 20.4 -1.3**
	comp=Z,5.5nm,0.7s,baz=292,slow=13							
SNAA	**Sanae**	**19.66**	**142**		P		**P**	**15 56 40.7 +0.9**
	comp=Z,0.1nm,0.3s,baz=280,slow=8.7,SNR=10							
	comp=Z,4.0nm,0.8s							
TROLL	**Troll, Antarti**	**21.38**	**142**		⇑P		**P**	**15 56 58.2 -0.4**
	comp=Z,138nm,0.6s							
TRQA	**Tornquist**	**25.09**	**325**		P		**P**	**15 57 36.1 +0.4**
TRQA					IAmb		IAmb	15 57 38.6
	comp=Z,22nm,1.4s							
QSPA	**South Pole Qui**	**29.79**	**180**		P		**P**	**15 58 18.0 +0.2**
	comp=Z,0.9nm,0.6s,baz=171,slow=8.7,SNR=6.5							
	comp=Z,0.9nm,0.6s							
QSPA	**South Pole Qui**	**29.79**	**180**		P		**P**	**15 58 17.7 -0.2**
BI05	**Punta Hualpn**	**30.07**	**309**		P		**P**	**15 58 20.5 +0.2**
MT09	**Talagante**	**31.90**	**315**		P		**P**	**15 58 36.6 0.0**
MT09					IAmb		IAmb	15 59 05.2
	comp=Z,23nm,1.4s							
VA03	**San Esteban**	**32.66**	**316**		P		**P**	**15 58 43.4 +0.1**
VA03					IAmb		IAmb	15 58 59.3
	comp=Z,18nm,1.2s							
CPUP	**Villa Florida**	**35.29**	**339**		LR		LR	16 13 56.6
	comp=Z,27nm,20.3s,baz=76,slow=37							
LCO	**Las Campanas**	**36.16**	**318**		P		**P**	**15 59 13.4 -0.4**
LCO					IAmb		IAmb	15 59 21.1
	comp=Z,27nm,1.4s							
AC04	**Llanos de Chal**	**37.02**	**318**		P		**P**	**15 59 20.5 -0.4**
AC02	**Maricunga**	**37.68**	**322**		P		**P**	**15 59 27.1 0.0**
AC01	**Pan de Azucar**	**38.78**	**320**		P		**P**	**15 59 35.5 -0.2**
AC01					IAmb		IAmb	15 59 57.6
	comp=Z,32nm,1.4s							
PB14	**IPOC Station P**	**40.14**	**321**		P		**P**	**15 59 47.0 -0.5**
PB14					IAmb		IAmb	16 00 25.1
	comp=Z,12nm,1.2s							
VNDA	**Vanda**	**41.34**	**188**		P		**P**	**15 59 58.8 +2.4**
	comp=Z,0.7nm,1.0s,baz=161,slow=15,SNR=2.2							
	comp=Z,0.7nm,1.0s							
VNDA	**Vanda**	**41.34**	**188**		P		**P**	**15 59 58.8 +2.4**
MAW	**Mawson**	**41.70**	**147**		LR		LR	16 16 48.9
	comp=Z,305nm,18.8s,baz=3.5,slow=35							
PB05	**IPOC Station P**	**41.74**	**322**		P		**P**	**15 59 59.6 -0.8**
PB05					IAmb		IAmb	16 00 30.7
	comp=Z,21nm,1.4s							
GO01	**Chusmiza**	**44.46**	**325**		P		**P**	**16 00 22.8 0.0**
GO01					IAmb		IAmb	16 00 24.1
	comp=Z,6.2nm,0.6s							
PB11	**IPOC Station P**	**44.50**	**325**		P		**P**	**16 00 22.8 +0.1**
PB11					IAmb		IAmb	16 00 24.7
	comp=Z,16nm,1.1s							
PSGCX	**Pisagua**	**44.79**	**324**		P		**P**	**16 00 25.1 +0.1**
PSGCX					IAmb		IAmb	16 00 52.2
	comp=Z,15nm,1.3s							
LPAZ	**La Paz**	**47.39**	**328**		P		**P**	**16 00 45.7 -0.4**
	comp=Z,1.6nm,0.7s,baz=145,slow=6.3,SNR=6.9							
	comp=Z,1.6nm,0.7s							
LPAZ	**La Paz**	**47.39**	**328**		P		**P**	**16 00 45.8 -0.4**
H10S2	**ASCENSION HYDR**	**55.90**	**36**		T		T	17 03 04.4
	baz=20,slow=74,SNR=10							

comp=N,34μm,1.2s
CSMI Casera Mimoias 0.17 8 ||| *e*Pg Pb 16 14 47.0 -0.6
CSMI *e*Sg Sg 16 14 50.0 +1.3
MLNI Malnisio 0.20 181 ||| *e*Pg Pg 16 14 47.0 +0.6
MLNI *e*Sg Sg 16 14 50.3 +1.1
CLUD Cludinico 0.21 59 *e*Pg Pb 16 14 47.6 -0.6
CLUD *e*Sg Sg 16 14 51.0 +1.2
CLUD Cludinico 0.21 59 P Pb 16 14 47.8 -0.5
CLUD S Sg 16 14 51.3 +1.5
CSO Casso 0.22 251 *e*Pg Pg 16 14 47.4 +0.6
CSO *e*Sg Sg 16 14 50.8 +0.9
APGO Alpago 0.26 222 *e*Pg Pb 16 14 48.5 -0.6
APGO *e*Sg Sg 16 14 52.3 +1.1
FUSE Fusea 0.28 75 *e*Pg Pb 16 14 48.9 -0.4
FVI Forni Avoltri 0.28 24 ||| P Pb 16 14 48.9 -0.5
FVI S Sg 16 14 52.8 +1.2
FVI AML AML
comp=N,42μm,0.1s
FVI AML AML
comp=E,70μm,0.1s
MPRI Monte Prat 0.28 112 *e*Pg Pg 16 14 48.5 +0.6
MPRI Monte Prat 0.28 112 ||| P Pb 16 14 48.7 -0.7
MPRI S Sb 16 14 53.1 -1.0

LJU 13 16:14:53.2, 46°.39N × 15°.07E, h0 km, Confirmed
Rockburst, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAVS	**Zavodnje**	**0.05**	**325**	*e*Pg	Pg	16 14 53.2	-1.1
ZAVS				IAML		16 14 54.9	
	comp=Z,54nm,0.1s						

IDC 13 16:15:10.6 ± 2.2, 22°.45N × 142°.03E, h254 km ± 59 km, mb2.9/3, mbtmp3.6/4, Error ellipse: s-maj=371.1km s-min=23.1km az=88.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.63**	**2**	P	Pn	16 16 23.9	+2.0
	32nm,0.7s,baz=186,slow=19,SNR=1.7						
JCJ				S	S	16 17 18.2	-0.7
	29nm,0.8s,baz=137,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**42.80**	**191**	P	P	16 22 42.7	-1.0
	0.3nm,0.4s,baz=8.6,slow=7.7,SNR=7.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**46.52**	**190**	P	P	16 23 14.1	+1.1
	0.2nm,0.8s,baz=18,slow=6.6,SNR=1.2						
	0.2nm,0.8s						
FINES	**FINESS Array B**	**82.04**	**334**	P	P	16 27 02.4	+0.2
	1.4nm,1.0s,baz=45,slow=3.5,SNR=4.8						
	1.4nm,1.0s						

*NEIC **13** 16:22:47.8 ± 1.1, 22°.23S ± 0°.09 × 179°.3W ± 0°.1, h585 km ± 8 km, mb4.3/31, Error ellipse: s-maj=18.6km s-min=11.0km az=115.0*
*IDC **13** 16:22:49.2 ± 1.5, 22°.11S × 179°.60W, h595 km ± 16 km, mb3.3/7, mbtmp4.2/9, Error ellipse: s-maj=22.2km s-min=17.8km az=94.0*
ISC 13 16:22:48.1 ± 0.5, 22°.22S ± 0°.07 × 179°.39W ± 0°.09, h592 km, n82, σ1§20/83, mb4.2/23, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.07**	**331**	P	**P**	**16 24 20.3**	**-0.9**
	11nm,0.4s,baz=230,slow=16,SNR=24						
MSVF				S	**S**	**16 25 36.3**	**-0.8**
	11nm,0.9s,baz=191,slow=21,SNR=1.4						
RAO	**Raoul Island**	**7.13**	**170**	P	**P**	**16 24 38.1**	**-0.7**
GLKZ	**Green Lake**	**7.14**	**170**	P	**P**	**16 24 38.1**	**-0.8**
FUTU	**Fugatoga**	**7.96**	**9**	P	**P**	**16 24 46.7**	**-0.2**
NIUE	**Niue**	**9.39**	**72**	P	P	16 24 55.7	-5.1
AFI	**Afiamalu**	**10.98**	**42**	P	**P**	**16 25 14.0**	**-2.8**
MARNC	**Mare, Loyalty**	**11.71**	**271**	P	**P**	**16 25 22.9**	**-1.0**
OUENC	**Ouen Island, N**	**12.75**	**267**	P	**P**	**16 25 34.0**	**-0.4**
DZM	**Mont Dzumac**	**13.13**	**268**	P	**P**	**16 25 38.5**	**0.0**
	3.0nm,0.6s,baz=118,slow=9.7,SNR=6.7						
OUZ	**Omahuta**	**14.33**	**204**	P	**P**	**16 25 53.0**	**+2.8**
HAZ	**Te Kaha**	**15.68**	**188**	P	**P**	**16 26 02.9**	**+0.3**
TOZ	**Tahuroa Road**	**16.08**	**195**	P	**P**	**16 26 08.2**	**+1.9**
URZ	**Urewera**	**16.27**	**190**	P	**P**	**16 26 06.4**	**-1.7**
	5.7nm,0.4s,baz=275,slow=3.2,SNR=11						
URZ				S	**S**	**16 28 45.2**	**-5.8**
	11nm,0.9s,baz=65,slow=20,SNR=6.8						
URZ	**Urewera**	**16.27**	**190**	P	**P**	**16 26 06.5**	**-1.5**
MWZ	**Matawai**	**16.28**	**189**	P	**P**	**16 26 07.1**	**-1.2**
VRZ	**Vera Road**	**17.58**	**195**	P	**P**	**16 26 22.7**	**+2.7**
TSZ	**Takapari Road**	**18.22**	**191**	P	**P**	**16 26 25.7**	**-0.2**
BFZ	**Birch Farm**	**18.77**	**190**	P	**P**	**16 26 30.0**	**-0.9**
BFZ	**Birch Farm**	**18.77**	**190**	P	**P**	**16 26 30.2**	**-0.7**
MRZ	**Mangatainoka R**	**18.87**	**192**	P	**P**	**16 26 30.9**	**-0.9**
MRZ	**Mangatainoka R**	**18.87**	**192**	P	**P**	**16 26 30.9**	**-0.9**
OGWZ	**Otaki Gorge**	**19.11**	**193**	P	**P**	**16 26 33.2**	**-0.7**
TCW	**Tory Channel**	**19.68**	**194**	P	**P**	**16 26 40.0**	**+1.0**
QRZ	**Quartz Range**	**19.77**	**198**	P	**P**	**16 26 40.5**	**+0.6**
TKNZ	**Takaka Hill**	**19.84**	**197**	P	**P**	**16 26 40.5**	**0.0**
NNZ	**Nelson**	**19.90**	**196**	P	**P**	**16 26 40.9**	**-0.2**
TUWZ	**Tuamarina**	**19.96**	**195**	P	**P**	**16 26 42.9**	**+1.3**
MRNZ	**Matariki Terra**	**20.24**	**197**	P	**P**	**16 26 43.5**	**-0.6**
THZ	**Tophouse**	**20.54**	**197**	P	**P**	**16 26 46.6**	**-0.3**
THZ	**Tophouse**	**20.54**	**197**	P	**P**	**16 26 46.6**	**-0.3**
DSZ	**Denniston Nort**	**20.83**	**199**	P	**P**	**16 26 49.9**	**+0.4**
KHZ	**Kahutara**	**20.99**	**195**	P	**P**	**16 26 49.7**	**-1.2**
GVZ	**Greta Valley S**	**21.63**	**195**	P	**P**	**16 26 55.3**	**-1.3**
LTZ	**Lake Taylor**	**21.66**	**197**	P	**P**	**16 26 55.4**	**-1.5**
INZ	**Inchbonnie**	**21.83**	**198**	P	**P**	**16 26 57.5**	**-0.9**
FOZ	**Fox Glacier**	**23.07**	**200**	P	**P**	**16 27 09.3**	**0.0**
FOZ	**Fox Glacier**	**23.07**	**200**	P	**P**	**16 27 09.3**	**0.0**
TMZ	**Timaru**	**23.48**	**197**	P	**P**	**16 27 12.7**	**-0.4**
LBZ	**Lake Benmore**	**23.72**	**199**	P	**P**	**16 27 14.0**	**-1.2**
JCZ	**Jackson Bay**	**23.89**	**201**	P	**P**	**16 27 16.7**	**-0.1**
WKZ	**Wanaka**	**24.48**	**200**	P	**P**	**16 27 21.5**	**-0.4**
EAZ	**Earnscleugh**	**24.75**	**199**	P	**P**	**16 27 24.2**	**-0.1**
WHZ	**Wether Hill Ro**	**25.77**	**201**	P	**P**	**16 27 33.6**	**+0.4**
ARMA	**Armidale**	**27.18**	**246**	P	**P**	**16 27 47.1**	**+1.1**
ARMA				IAmb	IAmb	16 27 55.3	
	comp=Z,17nm,1.2s						
EIDS	**Eidsvold**	**27.18**	**257**	P	**P**	**16 27 46.0**	**+0.1**
EIDS				IAmb	IAmb	16 27 51.4	
	comp=Z,18nm,1.5s						
CTAO	**Charters Tower**	**32.07**	**267**	P	**P**	**16 28 28.0**	**-0.2**
CTAO				IAmb	IAmb	16 28 43.9	
	comp=Z,19nm,1.4s						
TOO	**Toolangi**	**33.85**	**235**	P	**P**	**16 28 43.4**	**+0.6**
TOO				IAmb	IAmb	16 28 44.2	
	comp=Z,3.5nm,0.8s						
STKA	**Stephens Creek**	**35.89**	**246**	P	**P**	**16 29 00.0**	**+0.2**
	comp=Z,4.5nm,0.5s,baz=95,slow=9.9,SNR=17						
	comp=Z,4.5nm,0.5s						
INKA	**Innaminka**	**36.44**	**253**	P	**P**	**16 29 05.3**	**+0.9**
BBOO	**Buckleboo**	**40.64**	**245**	P	**P**	**16 29 37.7**	**-0.5**
BBOO				IAmb	IAmb	16 30 00.6	
	comp=Z,9.7nm,1.1s						
AS31	**Alice Springs**	**42.89**	**259**	P	**P**	**16 29 55.6**	**-0.4**
ASAR	**Alice Springs**	**42.89**	**259**	P	**P**	**16 29 55.3**	**-0.7**
	comp=Z,4.4nm,0.7s,baz=95,slow=8.6,SNR=77						
ASAR				PcP	**PcP**	**16 31 33.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=99,slow=3.9,SNR=5.1						
	comp=Z,4.4nm,0.7s						
WR8	**Warramunga Arr**	**42.96**	**264**	P	**P**	**16 29 55.0**	**-1.6**
WR8				IAmb	IAmb	16 30 08.1	
	comp=Z,11nm,1.3s						
WB0	**Warramunga Arr**	**43.09**	**264**	P	**P**	**16 29 56.4**	**-1.2**
WB0				IAmb	IAmb	16 30 03.0	
	comp=Z,9.2nm,1.2s						
WRAB	**Tennant Creek**	**43.10**	**264**	P	**P**	**16 29 55.6**	**-2.1**
WRAB				IAmb	IAmb	16 30 12.5	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**43.11**	**264**	P	**P**	**16 29 56.6**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=95,slow=7.9,SNR=83						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**43.11**	**264**	P	**P**	**16 29 56.6**	**-1.1**
FORT	**Forrest**	**47.44**	**248**	P	**P**	**16 30 30.1**	**-0.4**
FORT				IAmb	IAmb	16 30 30.7	
	comp=Z,6.6nm,0.8s						
KNRA	**Kununurra**	**49.28**	**268**	P	**P**	**16 30 44.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**51.54**	**264**	P	**P**	**16 31 00.8**	**+0.1**
VNDA	**Vanda**	**56.09**	**185**	P	**P**	**16 31 33.5**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=5.3,slow=6.4,SNR=7.0						
	comp=Z,1.1nm,0.7s						
VNDA	**Vanda**	**56.09**	**185**	P	**P**	**16 31 32.5**	**+0.7**

MBWA Marble Bar 56.23 259 P **P** **16 31 33.3 -0.3**
MBWA IAmb IAmb 16 31 41.8
comp=Z,15nm,1.3s
MORW Morawa 57.99 249 P **P** **16 31 45.2 -0.3**
MORW IAmb IAmb 16 32 04.0
comp=Z,53nm,1.5s
QSPA South Pole Qui 67.86 180 P **P** **16 32 49.7 +1.5**
comp=Z,4.7nm,0.8s,baz=41,slow=1.2,SNR=28
comp=Z,4.7nm,0.8s
QSPA South Pole Qui 67.86 180 **P** **16 32 50.2 +2.0**
QSPA IAmb IAmb 16 32 51.7
comp=Z,6.1nm,1.0s
ADK Adak 73.82 2 P **P** **16 33 23.6 +0.7**
PEA0B Petropavlovsk- 77.61 346 P **P** **16 33 44.4 +0.5**
PEA0B IAmb IAmb 16 33 51.8
comp=Z,22nm,1.4s
PETK Petropavlovsk- 77.61 346 P **P** **16 33 44.5 +0.6**
comp=Z,1.0nm,0.6s,baz=149,slow=3.5,SNR=5.9
comp=Z,1.0nm,0.6s
BELA Belgrano 2 78.03 173 P **P** **16 33 46.2 +0.3**
MAW Mawson 79.51 200 P **P** **16 33 54.6 +0.8**
comp=Z,1.6nm,0.7s,baz=184,slow=14,SNR=3.8
comp=Z,1.6nm,0.7s
MAW Mawson 79.51 200 P **P** **16 33 54.6 +0.8**
ELIB Princess Elisa 84.79 187 *d*P **P** **16 34 21.3 +0.6**
comp=Z,3.1nm,0.9s
TROLL Troll, Antarti 86.01 181 P **P** **16 34 27.2 +0.6**
M27K Edge Creek, AK 89.41 16 P **P** **16 34 42.6 +0.2**
M27K IAmb IAmb 16 35 14.4
comp=Z,5.8nm,1.4s
K24K Donnelly Dome 89.68 14 P **P** **16 34 44.2 +0.8**
CCB Clear Creek Bu 89.97 13 P **P** **16 34 45.2 +0.5**
CCB IAmb IAmb 16 35 02.7
comp=Z,1.2nm,1.1s
IL31 90.27 13 P **P** **16 34 45.9 -0.1**
IL31 IAmb IAmb 16 35 11.4
comp=Z,3.5nm,1.4s
PH02 Texas Public H 92.99 53 P **P** **16 34 59.6 +0.2**
BVAR Borovoye Array 119.55 319 PKP **PKPdf** **16 40 31.4 +0.3**
comp=Z,0.5nm,0.4s,baz=113,slow=3.0,SNR=3.4
HFS Hagfors 141.01 350 PKhKP PKPpre 16 41 06.4
comp=Z,2.0nm,0.8s,baz=88,slow=4.6,SNR=6.6
EKA Eskdalemuir Ar 146.81 4 PKPbc **PKPbc** **16 41 23.6 -0.8**
comp=Z,0.3nm,0.4s,baz=11,slow=1.9,SNR=1.5

*IDC **13** 16:44:41.9 ± 1.1, 17°.42S × 167°.69E, h0 km, mb4.0/12, mbtmp4.0/14, ML3.3/2, MS3.5/11, Error ellipse: s-maj=28.5km s-min=19.3km az=101.0*
*NOU **13** 16:44:43.0, 17°.28S × 167°.86E, h8 km, MLv4.5/23, Vanuatu Islands*
*NEIC **13** 16:44:43.3 ± 1.0, 17°.27S ± 0°.06 × 167°.8E ± 0°.1, h10 km ± 1 km, mb4.5/11, Error ellipse: s-maj=17.6km s-min=9.8km az=81.0*
ISC 13 16:44:45.4 ± 0.5, 17°.35S ± 0°.06 × 167°.82E ± 0°.07, h27 km, n52, σ1§07/46, mb4.1/15, MS3.6/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.51**	**137**	P	**Pb**	**16 44 55.2**	**-0.7**
DVP	**Devils Point**	**0.51**	**137**	S	**Sb**	**16 45 01.9**	**-1.1**
RTV	**Rentapao**	**0.72**	**127**	P	**Pb**	**16 44 57.9**	**-1.6**
RTV	**Rentapao**	**0.72**	**127**	S	**Sb**	**16 45 08.5**	**-0.6**
SANVU	**Saraoutou**	**1.98**	**343**		**Pn**	**16 45 14.5**	**-2.7**
MARNC	**Mare, Loyalty**	**4.11**	**177**	P	**Pn**	**16 45 47.3**	**+0.8**
MARNC	**Mare, Loyalty**	**4.11**	**177**	Pn	**Pn**	**16 45 46.9**	**+0.4**
KOUNC	**Koumac, New Ca**	**4.61**	**226**	P	**Pn**	**16 45 54.7**	**+1.3**
KOUNC	**Koumac, New Ca**	**4.61**	**226**		**Pn**	**16 45 53.6**	**+0.2**
YATNC	**Mamie plateau,**	**4.76**	**190**	P	**Pn**	**16 45 55.9**	**+0.4**
DZM	**Mont Dzumac**	**4.87**	**195**	Pn	**Pn**	**16 45 57.0**	**0.0**
	2.4nm,0.3s,baz=97,slow=10,SNR=38						
DZM				Sn	**Sn**	**16 46 50.9**	**-1.7**
	6.6nm,0.3s,baz=332,slow=24,SNR=7.6						
DZM				LR	LR	16 47 17.4	
	comp=Z,110nm,18.5s,baz=58,slow=33						
	9.9nm,0.5s						
NOUC	**Port Laguerre**	**4.94**	**197**	P	**Pn**	**16 45 59.1**	**+1.3**
ONTNC	**Ouen Toro**	**5.09**	**194**	P	**Pn**	**16 46 02.0**	**+2.0**
ONTNC	**Ouen Toro**	**5.09**	**194**	Pn	**Pn**	**16 46 00.1**	**+0.1**
OUENC	**Ouen Island, N**	**5.12**	**190**	P	**Pn**	**16 46 02.3**	**+1.9**
OUENC	**Ouen Island, N**	**5.12**	**190**	Pn	**Pn**	**16 46 00.4**	**0.0**
NGOA	**Tingoa Renbel**	**9.47**	**306**	P	**Pn**	**16 46 59.5**	**-0.6**
MSVF	**Nonsavu**	**9.77**	**94**	LR	LR	16 50 05.8	
	comp=Z,485nm,18.5s,baz=145,slow=33						
HNR	**Honiara**	**10.98**	**315**	Pn	**Pn**	**16 47 20.3**	**-0.5**
	0.1nm,0.3s,baz=138,slow=17,SNR=2.7						
HNR				LR	LR	16 50 25.2	
	comp=Z,4.2nm,18.9s,baz=214,slow=31						
	2.3nm,0.9s						
HNR	**Honiara**	**10.98**	**315**		**Pn**	**16 47 19.7**	**-1.1**
AFI	**Afiamalu**	**19.94**	**83**	LR	LR	16 55 02.9	
	comp=Z,107nm,21.2s,baz=188,slow=31						
KRVT	**Keravat (AS076**	**20.19**	**308**	LR	LR	16 56 03.8	
	comp=Z,15nm,2.6s,baz=7.1,slow=34						
CTA	**Charters Tower**	**20.60**	**259**	P	**P**	**16 49 21.7**	**-0.9**
	3.2nm,0.8s,baz=90,slow=14,SNR=1.8						
CTA				LR	LR	16 56 31.6	
	comp=Z,116nm,18.8s,baz=224,slow=35						
	3.2nm,0.8s						
LTZ	**Lake Taylor**	**25.63**	**172**	P	**P**	**16 50 13.4**	**+0.7**
LTZ				IAmb	IAmb	16 50 41.3	
	comp=Z,19nm,1.3s						
STKA	**Stephens Creek**	**27.79**	**234**	P	**P**	**16 50 32.0**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=50,slow=7.6,SNR=3.7						
STKA				LR	LR	17 01 11.6	
	comp=Z,320nm,18.3s,baz=225,slow=36						
	comp=Z,1.2nm,0.5s						
WB0	**Warramunga Arr**	**31.75**	**260**	P	**P**	**16 51 06.8**	**-0.7**
WRA	**Warramunga Arr**	**31.80**	**260**	P	**P**	**16 51 06.6**	**-1.4**
	comp=Z,1.2nm,0.8s,baz=92,slow=9.3,SNR=10.0						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**31.80**	**260**	P	**P**	**16 51 06.9**	**-1.1**
AS31	**Alice Springs**	**32.33**	**253**	P	**P**	**16 51 11.8**	**-0.7**
AS31				IAmb	IAmb	16 51 24.3	
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**32.33**	**253**	P	**P**	**16 51 11.5**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=78,slow=8.6,SNR=26						
ASAR				LR	LR	17 04 07.0	
	comp=Z,119nm,18.6s,baz=43,slow=36						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**32.33**	**253**	P	**P**	**16 51 11.4**	**-1.2**
GUMO	**Guam**	**38.19**	**322**	LR	LR	17 09 35.6	
	comp=Z,33nm,18.2s,baz=182,slow=39						
SIJI	**Sorong**	**39.50**	**291**	P	**P**	**16 52 13.8**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=168,slow=19,SNR=2.3						
	comp=Z,3.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.12**	**262**	P	**P**	**16 52 18.2**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=44,slow=7.0,SNR=1.7						
	comp=Z,2.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.12**	**262**	P	**P**	**16 52 19.1**	**-0.1**
PPTF	**Pamatai, Papee**	**40.59**	**97**	P	**P**	**16 52 23.1**	**-0.1**
DAV	**Davao City (W)**	**48.28**	**297**	LR	LR	17 12 11.4	
	comp=Z,84nm,19.3s,baz=230,slow=34						
MJAR	**Matsushiro Arr**	**60.46**	**333**	P	**P**	**16 54 53.9**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=155,slow=8.0,SNR=4.0						
	comp=Z,0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**60.46**	**333**	P	**P**	**16 54 53.2**	**+0.3**
MJAR				IAmb	IAmb	16 55 04.5	
	comp=Z,2.5nm,0.9s						
SBA	**Scott Base**	**60.53**	**180**	P	**P**	**16 54 53.9**	**+1.1**
SBA				IAmb	IAmb	16 54 59.7	
	comp=Z,3.9nm,1.2s						
SHEM	**Shemya Is, Ala**	**70.00**	**4**	LR	LR	17 22 10.4	
	comp=Z,34nm,19.9s,baz=146,slow=32						
PETK	**Petropavlovsk-**	**70.71**	**354**	P	**P**	**16 56 01.1**	**+2.4**
	comp=Z,2.5nm,1.1s,baz=161,slow=9.2,SNR=2.8						
	comp=Z,2.5nm,1.1s						
QSPA	**South Pole Qui**	**72.69**	**180**	P	**P**	**16 56 10.9**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=356,slow=1.2,SNR=7.8						
	comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	**72.69**	**180**	P	**P**	**16 56 11.4**	**+0.7**
QSPA				IAmb	IAmb	16 56 17.9	
	comp=Z,4.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**76.50**	**294**	P	**P**	**16 56 34.5**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=113,slow=6.7,SNR=1.8						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.50**	**294**	P	**P**	**16 56 33.8**	**+0.3**
ULN	**Ulaanbaatar**	**84.55**	**324**	P	**P**	**16 57 15.8**	**-0.5**
ULN				IAmb	IAmb	16 57 30.0	
	comp=Z,3.6nm,0.8s						
SONM	**Songino Array**	**84.91**	**324**	P	**P**	**16 57 17.4**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=134,slow=4.2,SNR=7.4						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**84.91**	**324**	P	**P**	**16 57 17.4**	**-0.6**
SONM				IAmb	IAmb	16 57 31.0	
	comp=Z,6.0nm,1.4s						

ILAR Eielson Array 88.85 18 P **P** **16 57 37.1 +0.4**
comp=Z,0.2nm,0.7s,baz=213,slow=4.5,SNR=2.1
comp=Z,0.2nm,0.7s
ELK Elko 91.65 48 LR LR 17 31 13.2
comp=Z,50nm,20.3s,baz=236,slow=30
GERES GERESS Array B 142.20 332 PKP **PKPdf** **17 04 15.9 +0.5**
comp=Z,0.2nm,0.5s,baz=64,slow=2.3,SNR=2.0

*IDC **13** 16:46:11.9 ± 3.9, 2°.81N × 127°.48E, h101 km ± 40 km, mb3.4/8, mbtmp3.8/9, Error ellipse: s-maj=62.5km s-min=15.6km az=71.0*
*NEIC **13** 16:46:12.7 ± 1.3, 3°.1N ± 0°.1 × 127°.9E ± 0°.1, h106 km ± 9 km, mb4.1/13, Error ellipse: s-maj=20.0km s-min=11.4km az=54.0*
*DJA **13** 16:46:12.2 ± 0.5, 3°.N ± 4° × 12°.8E ± °, h116 km ± 6 km, M4.2/13, mB4.9/3, mb4.3/7, MLv4.1/13, Mw(mB)4.1/3*
*MAN **13** 16:46:15.0, 3°.31N × 127°.65E, h58 km, MS4.0*
ISC 13 16:46:11.0 ± 0.6, 3°.20N ± 0°.05 × 127°.98E ± 0°.06, h100 km, n46, σ1§72/49, mb4.0/13, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.49**	**194**		**Pn**	**16 46 51.0**	**+1.0**
TNTI	**Ternate**	**2.49**	**194**	P	**Pn**	**16 46 51.9**	**+1.9**
TNTI				S	**Sn**	**16 47 21.7**	**+1.8**
SGSI	**Sangihe**	**2.49**	**281**	P	**Pn**	**16 46 50.7**	**+0.7**
SGSI				S	**Sn**	**16 47 19.5**	**-0.5**
MNI	**Manado**	**3.59**	**241**	P	**Pn**	**16 47 04.5**	**-0.2**
DDMP	**Don Marcelino,**	**3.66**	**322**	*e*P	**Pn**	**16 47 07.7**	**+2.0**
DDMP				*e*S	**Sn**	**16 47 47.4**	**-0.6**
KCP	**Kidapawan**	**4.75**	**323**	*e*P	**Pn**	**16 47 18.2**	**-2.3**
KCP				*i* S	**Sn**	**16 48 18.0**	**+3.5**
BIPH	**Bislig**	**5.20**	**342**	*e*P	**Pn**	**16 47 29.1**	**+2.5**
BIPH				*e*S	**Sn**	**16 48 20.1**	**-5.3**
SIJI	**Sorong**	**5.21**	**141**	P	**Pn**	**16 47 28.4**	**+1.7**
	26nm,0.3s,baz=304,slow=23,SNR=75						
SIJI				S	**Sn**	**16 48 24.8**	**-0.8**
	9.2nm,0.4s,baz=253,slow=19,SNR=8.6						
SIJI	**Sorong**	**5.21**	**141**	P	**Pn**	**16 47 28.6**	**+1.9**
CTBH	**Cotabato--PC H**	**5.45**	**317**	*i* P	**Pn**	**16 47 31.7**	**+1.7**
GTOI	**Gorontalo**	**5.58**	**243**	P	**Pn**	**16 47 32.2**	**+0.6**
	0.2nm610nm56nm,0.5s						
GTOI				S	**Sn**	**16 48 34.9**	**+0.4**
	0.2nm610nm56nm,0.5s						
LUWI	**Luwuk**	**6.70**	**231**	Pn	**Pn**	**16 47 47.3**	**+0.5**
FAKI	**Fak Fak**	**7.43**	**145**	Pn	**Pn**	**16 47 58.7**	**+1.9**
FAKI	**Fak Fak**	**7.43**	**145**	P	**Pn**	**16 47 58.7**	**+1.9**
TOLI2	**Tolitoli**	**7.48**	**254**		**Pn**	**16 47 56.7**	**-0.9**
KDI	**Kendari**	**8.90**	**217**	P	**Pn**	**16 48 15.5**	**-1.3**
KKM	**Kota Kinabalu**	**12.06**	**284**	Pn	**Pn**	**16 49 00.3**	**+0.7**
MTN	**Manton Dam**	**16.25**	**169**	Pn	**Pn**	**16 49 52.7**	**-0.8**
KNRA	**Kununurra**	**18.77**	**178**	P	**P**	**16 50 21.3**	**-1.1**
KNRA				IAmb	IAmb	16 50 39.5	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.29**	**186**	P	**P**	**16 50 45.9**	**-3.8**
	comp=Z,1.2nm,0.5s,baz=8.4,slow=5.7,SNR=11						
	comp=Z,1.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.29**	**186**	P	**P**	**16 50 46.8**	**-2.9**
WB0	**Warramunga Arr**	**23.68**	**165**	P	**P**	**16 51 12.8**	**-1.0**
WB0				IAmb	IAmb	16 51 18.6	
	comp=Z,17nm,1.2s						
WRAB	**Tennant Creek**	**23.83**	**165**	P	**P**	**16 51 14.6**	**-0.5**
WRAB				IAmb	IAmb	16 51 33.7	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**23.83**	**165**	P	**P**	**16 51 13.3**	**-1.8**
	comp=Z,2.5nm,0.7s,baz=344,slow=10.0,SNR=22						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**23.83**	**165**	P	**P**	**16 51 13.1**	**-2.0**
WRA				IAmb	IAmb	16 51 51.5	
	comp=Z,0.1nm,0.9s						
WR8	**Warramunga Arr**	**23.89**	**165**	P	**P**	**16 51 14.4**	**-1.2**
WR8				IAmb	IAmb	16 51 32.6	
	comp=Z,18nm,1.5s						
AS31	**Alice Springs**	**27.32**	**168**	P	**P**	**16 51 46.3**	**-0.4**
ASAR	**Alice Springs**	**27.32**	**168**	P	**P**	**16 51 45.1**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=352,slow=9.0,SNR=5.8						
ASAR				PcP	**PcP**	**16 55 04.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=349,slow=2.3,SNR=8.3						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**27.32**	**168**	P	**P**	**16 51 46.7**	**0.0**
ASAR					**PcP**	**16 55 04.0**	**+0.2**
BBOO	**Buckleboo**	**36.62**	**169**	P	**P**	**16 53 07.1**	**-0.7**
STKA	**Stephens Creek**	**37.21**	**161**	P	**P**	**16 53 12.2**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=356,slow=8.5,SNR=6.4						
	comp=Z,1.0nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.81**	**65**	T	T	17 37 14.6	
	baz=253						
H11S1	**WAKE ISLAND Hy**	**40.83**	**65**	T	T	17 37 17.6	
	baz=253						
H11S2

AC01 Pan de Azucar 1.31 187 P Pn 16 52 08.5 +2.4
PB05 IPOC Station P 1.99 6 eP Pn 16 52 16.2 +0.7
PB05 IAML 16 52 55.7
comp=Z,2µm,0.4s
PB05 IPOC Station P 1.99 6 Pn 16 52 16.8 +1.2
PB05 IPOC Station P 1.99 6 eP Pn 16 52 16.9 +1.4
PB05 IAML 16 52 57.9
comp=E,5µm,0.7s
PB05 IPOC Station P 1.99 6 P Pn 16 52 17.0 +1.5
PB06 IPOC Station P 2.27 20 eP Pn 16 52 19.9 +0.6
PB06 IAML 16 52 55.6
comp=Z,3µm,0.3s
PB06 IPOC Station P 2.27 20 Pn 16 52 20.5 +1.1
PB06 IPOC Station P 2.27 20 i P Pn 16 52 20.5 +1.1
PB06 i S Sn 16 52 47.5 +1.3
PB06 IAML 16 52 54.9
comp=N,6µm,0.6s
PB06 IPOC Station P 2.27 20 P Pn 16 52 20.7 +1.3
AC02 Maricunga 2.30 150 eP Pn 16 52 21.6 +1.5
AC02 IAML 16 52 55.3
comp=Z,2µm,0.3s
AC02 Maricunga 2.30 150 Pn 16 52 22.3 +2.2
AC02 Maricunga 2.30 150 eP Pn 16 52 22.4 +2.2
AC02 i S Sn 16 52 50.1 +2.6
AC02 IAML 16 52 53.2
comp=E,5µm,0.2s
AC02 Maricunga 2.30 150 P Pn 16 52 22.4 +2.3
GO03 Copiapo 2.74 176 eP Pn 16 52 26.8 +1.1
GO03 IAML 16 53 12.5
comp=Z,1µm,0.3s
GO03 Copiapo 2.74 176 Pn 16 52 27.4 +1.6
GO03 Copiapo 2.74 176 eP Pn 16 52 27.3 +1.6
GO03 IAML 16 53 12.9
comp=N,2µm,0.4s
GO03 Copiapo 2.74 176 P Pn 16 52 28.0 +2.2
AF01 San Pedro de A 2.79 48 eP Pn 16 52 28.1 +1.5
AF01 IAML 16 53 26.2
comp=Z,6µm,0.6s
AF01 San Pedro de A 2.79 48 Pn 16 52 28.4 +1.8
AF01 San Pedro de A 2.79 48 eP Pn 16 52 28.6 +2.0
AF01 i S Sn 16 52 59.4 +0.2
PB03 IPOC Station P 2.85 13 eP Pn 16 52 27.4 0.0
PB03 IAML 16 53 16.4
comp=Z,4µm,0.8s
PB03 IPOC Station P 2.85 13 Pn 16 52 28.0 +0.6
PB03 IPOC Station P 2.85 13 i P Pn 16 52 27.9 +0.6
PB03 i S Sn 16 53 06.9 +6.4
PB03 IAML 16 53 20.4
comp=N,3µm,0.7s
PB03 IPOC Station P 2.85 13 P Pn 16 52 28.1 +0.6
PB07 IPOC Station P 3.14 9 eP Pn 16 52 31.4 +0.1
PB07 IAML 16 53 24.9
comp=Z,3µm,0.3s
PB07 IPOC Station P 3.14 9 Pn 16 52 31.9 +0.6
PB07 IPOC Station P 3.14 9 eP Pn 16 52 32.0 +0.6
PB07 i S Sn 16 53 18.2 +10
PB07 IPOC Station P 3.14 9 P Pn 16 52 32.2 +0.8
PB09 IPOC Station P 3.22 20 eP Pn 16 52 33.7 +1.3
PB09 IAML 16 53 30.0
comp=Z,3µm,0.5s
PB09 IPOC Station P 3.22 20 Pn 16 52 34.1 +1.6
PB09 IPOC Station P 3.22 20 eP Pn 16 52 34.2 +1.7
PB09 i S Sn 16 53 11.9 +2.2
PB09 IPOC Station P 3.22 20 P Pn 16 52 33.1 +0.7
AC04 Llanos de Chal 3.40 190 eP Pn 16 52 34.1 -0.5
AC04 IAML 16 53 37.1
comp=Z,766nm,1.3s
AC04 Llanos de Chal 3.40 190 Pn 16 52 34.8 +0.2
AC04 Llanos de Chal 3.40 190 eP Pn 16 52 34.8 +0.2
AC04 i S Sn 16 53 17.4 +3.7
AC04 IAML 16 53 43.9
comp=N,729nm,0.6s
AC04 Llanos de Chal 3.40 190 P Pn 16 52 34.6 -0.1
PB02 IPOC Station P 3.54 8 eP Pn 16 52 36.6 -0.2
PB02 IAML 16 53 40.4
comp=Z,3µm,0.3s
PB02 IPOC Station P 3.54 8 Pn 16 52 37.3 +0.5
PB02 IPOC Station P 3.54 8 eP Pn 16 52 37.0 +0.2
PB02 IPOC Station P 3.54 8 P Pn 16 52 37.7 +0.9
SALTA 3.77 81 eP Pn 16 52 42.2 +1.9
SALTA 3.77 81 P Pn 16 52 41.8 +1.4
AC05 El Transito 3.98 178 eP Pn 16 52 44.0 +1.2
AC05 eS Sn 16 53 26.5 -1.7
AC05 IAML 16 53 55.5
comp=Z,779nm,0.6s
AC05 El Transito 3.98 178 Pn 16 52 44.8 +2.0
AC05 El Transito 3.98 178 P Pn 16 52 44.0 +1.2
TINO Tinogasta 4.10 142 eP Pn 16 52 46.5 +2.0
LCO Las Campanas 4.16 183 eP Pn 16 52 45.4 +0.1
LCO IAML 16 53 60.0
comp=Z,1µm,1.1s
LCO Las Campanas 4.16 183 Pn 16 52 46.0 +0.7
LCO Las Campanas 4.16 183 P Pn 16 52 46.1 +0.7
FSA Cafayete 4.21 108 eP Pn 16 52 48.4 +2.4
VCA Vinchina 4.36 153 eP Pn 16 52 50.6 +2.6
VCA IAML 16 54 07.9
comp=Z,443nm,1.3s
VCA Vinchina 4.36 153 eP Pn 16 52 51.8 +3.8
SLA San Lorenzo 4.48 89 eP Pn 16 52 55.3 +5.7
SLA San Lorenzo 4.48 89 eP Pn 16 52 51.2 +1.6
TA02 Huaiquique 4.56 4 P Pn 16 52 49.9 -0.7
PB08 IPOC Station P 4.83 14 eP Pn 16 52 54.8 +0.1
PB08 IAML 16 54 14.9
comp=Z,606nm,0.7s
PB08 IPOC Station P 4.83 14 Pn 16 52 55.5 +0.8
PB08 IPOC Station P 4.83 14 P Pn 16 52 54.5 -0.2
HJA Humahuaca 4.87 71 eP Pn 16 52 59.4 +4.1
HJA IAML 16 54 19.9
comp=Z,207nm,2.9s
PB11 IPOC Station P 5.11 8 eP Pn 16 52 57.1 -1.2
PB11 IAML 16 54 28.3
comp=Z,662nm,0.6s
PB11 IPOC Station P 5.11 8 P Pn 16 52 58.0 -0.3
CO01 Juntas del Tor 5.12 177 eP Pn 16 52 57.3 -1.3
CO01 eS Sn 16 54 07.8 +11
CO01 IAML 16 54 30.9
comp=Z,298nm,1.0s
CO01 Juntas del Tor 5.12 177 Pn Pn 16 53 00.2 +1.6
CO01 Juntas del Tor 5.12 177 P Pn 16 53 00.2 +1.6
PSGCX Pisagua 5.23 3 eP Pn 16 52 58.5 -1.4
PSGCX IAML 16 54 34.1
comp=Z,437nm,1.4s
PSGCX Pisagua 5.23 3 P Pn 16 52 58.6 -1.4
YJA Yavi 5.24 61 eP Pn 16 53 04.5 +4.2
GO01 Chusmiza 5.28 13 eP Pn 16 53 01.4 +0.4
GO01 IAML 16 54 33.2
comp=Z,603nm,0.8s
GO01 Chusmiza 5.28 13 Pn 16 53 01.0 +0.1
GO01 Chusmiza 5.28 13 P Pn 16 53 00.5 -0.5
GO04 Tololo Observa 5.32 183 eP Pn 16 53 01.3 +0.1
GO04 IAML 16 54 36.0
comp=Z,522nm,1.2s
GO04 Tololo Observa 5.32 183 Pn 16 53 02.0 +0.7
GO04 Tololo Observa 5.32 183 P Pn 16 53 01.6 +0.4
CO03 El Pedregal 5.98 182 P Pn 16 53 10.4 +0.2
PB12 IPOC Station P 6.20 1 Pn 16 53 13.0 -0.3
PB12 IPOC Station P 6.20 1 P Pn 16 53 12.8 -0.5
CO02 Combarbal 6.36 184 P Pn 16 53 16.2 +0.8
PB16 IPOC Station P 6.53 8 Pn 16 53 18.4 +0.1
PB16 IPOC Station P 6.53 8 P Pn 16 53 19.3 +1.0
ZON Zonda 6.85 167 P Pn 16 53 23.4 +1.3
CFA Coronel Fontan 7.01 164 P Pn 16 53 25.0 +0.8
comp=Z,2.3nm,0.3s,baz=342,slow=12,SNR=30
CFA S Sn 16 54 43.3 +0.7
comp=Z,22nm,0.7s,baz=350,slow=12,SNR=4.0
comp=Z,4.9nm,0.3s
VA03 San Esteban 7.89 181 P Pn 16 53 37.1 +0.7
LPAZ La Paz 8.78 15 P Pn 16 53 49.6 +0.5
comp=Z,0.4nm,0.3s,baz=202,slow=7.4,SNR=8.8
LPAZ LR LR 16 57 43.4
comp=Z,278nm,20.4s,baz=222,slow=41
comp=Z,1.0nm,0.3s
LPAZ La Paz 8.78 15 eP Pn 16 53 46.8 -2.3
LPAZ La Paz 8.78 15 P Pn 16 53 48.9 -0.3
MT01 Popeta 9.02 184 Pn Pn 16 53 50.0 -1.7
H03N1 Juan Fernandez 11.32 219 P Pn 16 54 22.9 -0.1
baz=109,slow=15,SNR=45
H03N1 S Sn 16 56 25.7 -2.3
H03N1 T T 17 06 04.9
baz=43,slow=72,SNR=1221
H03N2 Juan Fernandez 11.33 219 P Pn 16 54 22.9 -0.3
baz=109,slow=15,SNR=31
H03N2 S Sn 16 56 25.6 -2.6
H03N2 T T 17 06 16.1
baz=43,slow=72,SNR=1379
H03N3 Juan Fernandez 11.34 219 P Pn 16 54 22.7 -0.6
baz=109,slow=15,SNR=49
H03N3 S Sn 16 56 25.3 -3.2
H03N3 T T 17 06 16.4
baz=43,slow=72,SNR=1108
H03S3 Juan Fernandez 11.61 218 P Pn 16 54 26.4 -0.5
baz=33,slow=20,SNR=94
H03S3 S Sn 16 56 30.9 -4.0
H03S3 T T 17 06 32.4
baz=45,slow=79
H03S1 Juan Fernandez 11.62 218 P Pn 16 54 27.0 0.0
baz=33,slow=20,SNR=45
H03S1 S Sn 16 56 30.6 -4.6
H03S1 T T 17 06 28.6
baz=45,slow=79
H03S2 Juan Fernandez 11.62 218 P Pn 16 54 26.7 -0.4
baz=33,slow=20,SNR=73
H03S2 S Sn 16 56 31.3 -4.1
H03S2 T T 17 06 31.2
baz=45,slow=79
BBSD Serra de San D 11.92 52 eP Pn 16 54 26.2 -5.3
CPUP Villa Florida 11.92 100 P Pn 16 54 27.4 -4.0
comp=Z,0.3nm,0.3s,baz=278,slow=15,SNR=5.3
CPUP LR LR 17 00 01.7
comp=Z,67nm,19.2s,baz=259,slow=43
comp=Z,1.2nm,0.2s
CPUP Villa Florida 11.92 100 P Pn 16 54 31.5 +0.1
MURT Porto Murtinho 12.20 78 eP Pn 16 54 32.7 -2.6
SIV San Ignacio 12.43 47 P Pn 16 54 34.2 -4.2
comp=Z,0.1nm,0.3s,baz=224,slow=10,SNR=31
SIV S Sn 16 56 44.7 -11
comp=Z,4.9nm,0.7s,baz=216,slow=17,SNR=2.0
comp=Z,16nm,0.7s
COIM Forte Coimbra 12.68 70 eP Pn 16 54 38.7 -3.2
BDQN Bodoquena, MS 13.37 74 eP Pn 16 54 47.8 -3.5
PTLB Pontes e Lacer 14.13 51 Pn 16 54 58.2 -3.4
PTLB Pontes e Lacer 14.13 51 eP Pn 16 54 58.0 -3.6
VILB Vilhena 15.27 41 eP Pn 16 55 12.5 -4.3
PLCA Paso Flores 15.85 180 P P 16 55 27.4 +0.3
comp=Z,0.2nm,0.3s,baz=360,slow=12,SNR=4.0
PLCA LR LR 17 01 24.3
comp=Z,187nm,20.9s,baz=359,slow=36
comp=Z,3.1nm,0.7s
TRCB Terra Rica 16.41 87 eP Pn 16 55 27.6 -3.8
TRCB Terra Rica 16.41 87 P Pn 16 55 29.8 -1.6
SALV Santo Antonio 16.42 60 eP Pn 16 55 27.3 -4.1
ITAB Concordia 16.62 102 P Pn 16 55 31.4 -2.5
PTGB Pitanga 16.68 93 eP Pn 16 55 33.4 -1.3
C2SB Chapadao do Su 17.41 73 P Pn 16 55 41.9 -1.9
LDASE Londrina, Braz 17.69 89 eP Pn 16 55 43.8 -3.4
ATAH Atahualpa 19.19 335 P Pn 16 56 06.8 +1.1
comp=Z,0.3nm,0.3s,baz=178,slow=17,SNR=1.6
comp=Z,1.8nm,0.5s
CLDB Colider 19.65 48 eP P 16 56 07.3 -1.8
CLDB Colider 19.65 48 P P 16 56 08.1 -1.0
ARAG Araguaiana, MT 19.67 66 eP P 16 56 07.5 -1.9
SPB Sao Paulo 21.01 91 P P 16 56 24.2 +0.4
SPB IAmb IAmb 16 56 25.8
comp=Z,18nm,0.8s
SPB Sao Paulo 21.01 91 eP P 16 56 22.2 -1.6
SPB Sao Paulo 21.01 91 P P 16 56 23.3 -0.5
RCLB Rio Claro- Sao 21.11 88 eP P 16 56 24.5 -0.5
VAO Valinhos 21.52 90 P P 16 56 28.3 -1.1
VAO IAmb IAmb 16 56 46.4
comp=Z,22nm,0.8s
VAO Valinhos 21.52 90 eP P 16 56 28.7 -0.7
IPMB Ipameri, GO 21.77 76 eP P 16 56 30.0 -2.0
TEFE Tefe 21.93 16 eP P 16 56 34.2 +0.5
SNDB Serra Nova Dou 22.18 58 eP P 16 56 33.2 -3.1
CANS Sao Roque de M 22.64 83 eP P 16 56 38.3 -3.2
NPGB Novo Progresso 22.83 42 eP P 16 56 40.7 -2.7
BDFB Brasilia 22.91 71 P P 16 56 41.0 -3.2
comp=Z,20nm,1.0s,baz=243,slow=11,SNR=15
BDFB LR LR 17 04 54.3
comp=Z,151nm,21.4s,baz=259,slow=35
comp=Z,20nm,1.0s
BDFB Brasilia 22.91 71 P P 16 56 41.2 -3.0
BDFB IAmb IAmb 16 56 44.0
comp=Z,17nm,0.8s
PMNB Patos De Minas 23.14 79 eP P 16 56 43.3 -3.3
PMNB Patos De Minas 23.14 79 P P 16 56 44.0 -2.5
MACA Manacapuru-AM 23.52 25 P P 16 56 48.9 -1.2
MACA IAmb IAmb 16 57 16.6
comp=Z,45nm,1.2s
MACA Manacapuru-AM 23.52 25 eP P 16 56 49.0 -1.0
BSCB Bom Sucesso 23.93 86 P P 16 56 50.8 -3.1
SGC2 Sao Gabriel da 24.77 8 eP P 16 57 01.1 -0.5
ITTB Itaituba 24.78 37 eP P 16 57 00.7 -1.0
DIAM Diamantina, MG 25.70 81 eP P 16 57 08.4 -1.7
JANB Januaria 26.37 73 eP P 16 57 14.1 -2.1
SMTB Santa Maria do 26.95 58 eP P 16 57 20.1 -1.3
SDBA SAO DESIDERIO 27.11 67 eP P 16 57 20.6 -2.2
PRPB Parauapebas 27.11 50 eP P 16 57 21.1 -1.7
BSFB Barra de Sao F 28.07 84 P P 16 57 29.2 -2.1
BOAV Boa Vista 28.73 21 P 16 57 36.9 -0.4
BOAV Boa Vista 28.73 21 eP P 16 57 37.4 +0.2
SDV Santo Domingo 33.53 360 LR LR 17 13 24.8
comp=Z,84nm,20.5s,baz=113,slow=39
NBPS Pedro II - PI 34.49 59 eP P 16 58 26.7 -1.3
RPN Rapa Nui 34.95 258 P P 16 58 29.3 -2.4
RCBR Riachuelo 38.11 66 P P 16 58 58.9 0.0
RCBR Riachuelo 38.11 66 P P 16 58 58.5 -0.4
PMSA Palmer Station 40.14 176 LR LR 17 15 42.1
comp=Z,121nm,18.7s,baz=74,slow=36
MASC Masc 44.90 355 P P 16 59 55.5 +1.3
BELA Belgrano 2 55.66 171 P P 17 01 15.9 +1.0
BELA IAmb IAmb 17 01 17.1
comp=Z,3.6nm,0.9s
VNA1 Neumayer--Stat 57.63 160 ⇑P **P 17 01 29.7 +0.7**
comp=Z,4.5nm,0.8s
VNA2 Neumayer--Watz 57.99 160 ⇑P **P 17 01 31.7 +0.1**
comp=Z,5.0nm,0.7s,baz=283,slow=7.8
VNA2 Neumayer--Watz 57.99 160 P P 17 01 31.5 -0.1
SNAA Sanae 59.60 160 P P 17 01 42.7 -0.1
comp=Z,3.7nm,0.8s,baz=276,slow=6.4,SNR=8.7
comp=Z,3.7nm,0.8s
PAULI Pauline 60.31 349 P P 17 01 47.3 -0.7
KMSC Kings Mountain 60.55 350 P P 17 01 49.8 +0.2
TROLL Troll, Antarti 61.32 160 ⇑P **P 17 01 54.9 +0.3**
comp=Z,209nm,0.8s
TXAR Lajitas Array 62.62 327 P P 17 02 06.4 +2.6
comp=Z,0.5nm,0.8s,baz=164,slow=6.1,SNR=4.7
comp=Z,0.5nm,0.8s
WVT Waverly 62.84 344 P P 17 02 05.5 +0.5
WVT IAmb IAmb 17 02 20.4
comp=Z,6.3nm,0.8s
T47A Sharon Grove 63.48 345 P P 17 02 09.7 +0.5
T47A IAmb IAmb 17 02 25.1
comp=Z,15nm,1.0s
QSPA South Pole Qui 65.36 180 P P 17 02 22.8 +1.4
comp=Z,7.4nm,0.9s,baz=169,slow=1.3,SNR=25
comp=Z,7.4nm,0.9s
QSPA South Pole Qui 65.36 180 P P 17 02 22.9 +1.5
QSPA IAmb IAmb 17 02 24.0
comp=Z,6.7nm,0.8s
QSPA South Pole Qui 65.36 180 P P 17 02 21.6 +0.2
S39A Bolivar 65.82 340 IAmb IAmb 17 02 41.1
comp=Z,13nm,0.7s
SBM South Baldy 68.13 328 P P 17 02 38.9 -0.9
DBIC Dimbokro 71.03 73 P P 17 02 56.9 -0.7
comp=Z,6.7nm,0.8s,baz=238,slow=6.3,SNR=5.9
DBIC LR LR 17 33 17.7
comp=Z,90nm,19.9s,baz=163,slow=35
comp=Z,6.7nm,0.8s
DBIC Dimbokro 71.03 73 P P 17 02 56.9 -0.7
DBIC IAmb IAmb 17 02 57.9
comp=Z,12nm,1.0s
ECSD EROS Data Cent 72.35 340 P P 17 03 04.0 -0.9
ECSD pP pP **17 03 20.8 +1.5**
PPT Papeete 73.23 258 LR LR 17 25 51.7
comp=Z,28nm,21.0s,baz=162,slow=28
VNDA Vanda 73.33 190 P P 17 03 12.2 +1.9
comp=Z,0.7nm,0.8s,baz=117,slow=3.3,SNR=2.6
comp=Z,0.7nm,0.8s
VNDA Vanda 73.33 190 P P 17 03 12.2 +1.9
PDAR Pinedale Array 76.33 331 P P 17 03 29.8 +1.5
comp=Z,0.3nm,0.2s,baz=171,slow=3.1,SNR=5.3
comp=Z,0.3nm,0.2s
SUR Sutherland 78.11 120 LR LR 17 31 46.0
comp=Z,220nm,20.3s,baz=156,slow=31
TORD Torodi Ar. Bea 79.79 70 P P 17 03 46.9 -0.9
comp=Z,7.2nm,0.7s,baz=256,slow=5.0,SNR=34
comp=Z,7.2nm,0.7s
TORD Torodi Ar. Bea 79.79 70 P P 17 03 46.9 -0.9
TORD IAmb IAmb 17 03 48.1
comp=Z,4.5nm,0.8s
MAW Mawson 81.54 164 P P 17 03 57.1 +0.8
comp=Z,6.5nm,0.7s,baz=210,slow=6.4,SNR=15
comp=Z,6.5nm,0.7s
MAW Mawson 81.54 164 P P 17 03 56.8 +0.6
ASAR Alice Springs 126.31 208 PKP PKPdf 17 10 43.0 +0.7
comp=Z,0.8nm,0.9s,baz=140,slow=1.8,SNR=7.9
H11S2 WAKE ISLAND Hyl 26.84 275 T T 19 30 29.5
baz=108,slow=75,SNR=461
H11S1 WAKE ISLAND Hyl 26.85 275 T T 19 30 27.0
baz=108,slow=75,SNR=348
H11S3 WAKE ISLAND Hyl 26.86 275 T T 19 30 25.6
baz=108,slow=75,SNR=421
H11N3 WAKE ISLAND Hyl 27.02 277 T T 19 30 37.8
baz=107,slow=75,SNR=48
H11N1 WAKE ISLAND Hyl 27.03 277 T T 19 30 40.0
baz=107,slow=75,SNR=45
H11N2 WAKE ISLAND Hyl 27.03 277 T T 19 30 41.5
baz=107,slow=75,SNR=41
WRA Warramunga Arr 129.38 211 PKP PKPdf 17 10 49.2 +1.0
comp=Z,0.5nm,0.4s,baz=146,slow=1.7,SNR=6.7
BVAR Borovoye Array 139.32 36 PKP PKPdf 17 11 07.3 +1.5
comp=Z,1.1nm,0.9s,baz=321,slow=2.0,SNR=2.4
KURK Kurchatov 144.87 35 PKPbc 17 11 15.6 +0.8
KURBB Kurchatov Arra 144.88 35 PKP PKPbc 17 11 15.8 +1.0
comp=Z,6.6nm,0.8s,baz=302,slow=3.6,SNR=59
ZALV Zalesovo Beam 145.56 26 PKPbc PKPab 17 11 18.0 +0.7
comp=Z,22nm,0.8s,baz=316,slow=4.1,SNR=90
ZALV Zalesovo Beam 145.56 26 PKPab 17 11 17.9 +0.6
EKS2 Erkin-Say 145.66 50 P PKPab 17 11 18.9 +0.7
SNR=10
AAK Ala-Archa 146.17 50 P PKPab 17 11 21.1 +1.0
SNR=6.1
UCH Uchtor 146.32 50 P PKPab 17 11 21.5 +0.4
SNR=6.3
KBK Karagaybulak 146.47 49 P PKPab 17 11 22.3 +0.9
SNR=7.1
TKM2 Tokmak 2 146.82 49 P PKPab 17 11 23.0 +0.2
SNR=6.3
ULHL Ulahol 147.51 49 P PKPbc 17 11 23.2 -0.2
SNR=9.2
KSH2 Kashi 148.04 55 PKPbc PKPbc 17 11 26.0 +1.2
MKAR Makanchi Array 149.14 38 PKPbc PKPbc 17 11 27.9 +0.6
comp=Z,6.2nm,0.8s,baz=322,slow=2.6,SNR=54
HEH HeiHe 151.11 336 PKPbc PKPbc 17 11 32.4 +0.6
MJAR Matsushiro Arr 152.85 302 PKPbc PKPbc 17 11 36.2 0.0
comp=Z,1.7nm,1.1s,baz=93,slow=2.6,SNR=4.7
SONM Songino Array 156.92 5 PKP PKPdf 17 11 36.1 +1.7
comp=Z,0.5nm,0.9s,baz=0.0,slow=1.1,SNR=5.2
SONM PKPab **PKPab 17 12 04.0 -0.4**
comp=Z,1.3nm,0.9s,baz=341,slow=3.1,SNR=6.8
HHC Hu-ho-hao-te 163.95 355 eP PKPdf 17 11 44.3 +2.0
NJ2 Nanjing 169.13 313 eP PKPdf 17 11 46.5 +0.1
NJ2 pmax pmax
comp=Z,25nm,0.8s

*NEIC **13** 17:27:00.2±2.1, 45°.02N±0°.03×106°.86W±0°.04, h0km±1km, ML2.8/36, Error ellipse: s-maj=5.4km s-min=3.8km az=320.0*
*IDC **13** 17:27:02.0±1.4, 44°.98N×106°.88W, h0km, mbtmp3.3/2, ML1.9/1, Error ellipse: s-maj=56.2km s-min=9.6km az=136.0*
ISC 13 17:27:02.0±1.0, **45°.17N**±0°.05×**106°.71W**±0°.05, **h0**km, **n36,** σ1=**83**/39, **Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**1.56**	**12**		**Pg**	**17 27 32.7**	**+0.8**
LAO				IAML		17 27 58.7	
	103nm,0.9s						
LAO				IAML		17 27 58.9	
	132nm,0.6s						
RLMT	**Red Lodge**	**1.81**	**270**		**Pn**	**17 27 31.9**	**-2.7**
RLMT				IAML		17 28 05.8	
	97nm,0.7s						
RLMT				IAML		17 28 07.3	
	81nm,0.8s						
GCMT	**Greycliff**	**2.17**	**288**		**Pn**	**17 27 36.6**	**-2.9**
RSSD	**Black Hills**	**2.18**	**118**		**Pn**	**17 27 39.3**	**-0.4**
RSSD				IAML		17 28 20.3	
	64nm,0.7s						
RSSD	**Black Hills**	**2.18**	**118**		**Sn**	**17 28 07.8**	**+0.3**
YNE	**Yellowstone No**	**2.34**	**267**	Pn	**Pn**	**17 27 40.6**	**-1.3**
YNE				IAML		17 28 15.6	
	comp=N,75nm,0.4s						
YMP	**Mirror Lake Pl**	**2.48**	**261**		**Pn**	**17 27 42.5**	**-1.5**
K22A	**Casper**	**2.52**	**177**		**Pn**	**17 27 41.9**	**-2.5**
K22A				IAML		17 28 21.5	
	comp=N,62nm,0.3s						
YHH	**Holmes Hill**	**2.96**	**264**		**Pn**	**17 27 49.6**	**-0.9**
FLWY	**Flagg Ranch**	**3.04**	**251**		**Pn**	**17 27 46.9**	**-4.7**
FLWY				IAML		17 29 15.7	
	comp=N,27nm,1.1s						
YPP	**Pitchstone Pla**	**3.05**	**254**		**Pn**	**17 27 48.8**	**-3.0**
BW06	**Boulder Array**	**3.16**	**222**		**Pn**	**17 27 54.0**	**+0.8**
BW06					**Sn**	**17 28 32.5**	**+0.8**
BW06				IAML		17 28 38.0	
	comp=N,16nm,0.7s						
PD31	**Pinedale Array**	**3.16**	**222**		**Pn**	**17 27 52.4**	**-0.8**
PD31					**Sn**	**17 28 32.2**	**+0.5**
PDAR	**Pinedale Array**	**3.16**	**222**	Pn	**Pn**	**17 27 53.4**	**+0.1**
	comp=N,2.9nm,0.3s,baz=54,slow=17,SNR=40						
PDAR				Lg	Lg	17 28 33.2	
	comp=N,4.4nm,0.3s,baz=44,slow=33,SNR=13						
PDAR	**Pinedale Array**	**3.16**	**222**		**Pn**	**17 27 54.5**	**+1.3**
PDAR					**Sn**	**17 28 31.0**	**-0.7**
YHL	**Hebgen Lake**	**3.19**	**266**		**Pn**	**17 27 50.8**	**-2.9**
YHL				IAML		17 28 52.0	
	comp=E,35nm,1.0s						
YHL				IAML		17 28 52.1	
	comp=N,21nm,1.2s						
LOHW	**Long Hollow**	**3.19**	**242**		**Pn**	**17 27 54.6**	**+0.9**
QLMT	**Earthquake Lak**	**3.36**	**266**		**Pn**	**17 27 56.9**	**+0.9**
QLMT					**Sn**	**17 28 38.2**	**+1.5**
FXWY	**Fox Creek**	**3.45**	**245**		**Pn**	**17 27 57.3**	**+0.1**
BOZ	**Bozeman (W)**	**3.49**	**279**		**Pn**	**17 27 57.7**	**0.0**
BOZ				IAML		17 28 51.2	
	comp=N,12nm,0.7s						
EGMT	**Eagleton**	**3.54**	**325**		**Pn**	**17 27 54.3**	**-4.1**
DLMT	**Dillon**	**4.16**	**275**	Pn	**Pn**	**17 28 06.9**	**0.0**
DLMT				IAML		17 29 14.5	
	comp=N,14nm,1.5s						
DLMT				IAML		17 29 26.5	
	comp=N,16nm,1.2s						
MCMT	**McKenzie Canyo**	**4.37**	**268**	Pn	**Pn**	**17 28 12.2**	**+2.4**
HWUT	**Hardware Ranch**	**5.01**	**227**	Pn	**Pn**	**17 28 19.6**	**+0.9**
HWUT				IAML		17 30 01.3	
	comp=N,7.8nm,1.4s						
HWUT				IAML		17 30 03.7	
	comp=N,7.0nm,1.4s						
PV21	**Cone Mtn., Par**	**6.81**	**195**	Pn	**Pn**	**17 28 42.6**	**-0.8**
PV07	**Paradox Valley**	**6.88**	**193**		**Pn**	**17 28 44.2**	**-0.1**
PV04	**Paradox Valley**	**6.96**	**194**	Pn	**Pn**	**17 28 45.6**	**+0.2**
PV20	**West Nyswonger**	**7.02**	**195**	Pn	**Pn**	**17 28 45.1**	**-1.1**
PV16	**Nyswonger Mesa**	**7.04**	**194**	Pn	**Pn**	**17 28 46.3**	**-0.3**
PV11	**David Mesa, Pa**	**7.05**	**194**	Pn	**Pn**	**17 28 45.0**	**-1.6**
PV03	**Paradox Valley**	**7.09**	**194**	Pn	**Pn**	**17 28 45.4**	**-1.8**
PV02	**Paradox Valley**	**7.12**	**193**	Pn	**Pn**	**17 28 47.0**	**-0.6**
PV01	**Paradox Valley**	**7.16**	**192**	Pn	**Pn**	**17 28 47.0**	**-1.2**
ELK	**Elko**	**7.66**	**238**		**Pn**	**17 28 51.4**	**-3.6**
I56US	**NEWPORT INFRAS**	**7.80**	**297**	I	I	18 12 20.0	
	baz=111,slow=318,SNR=2.4						
ULM	**Lac du Bonnet**	**8.90**	**51**	Pn	**Pn**	**17 29 12.3**	**+0.5**
	comp=N,0.2nm,0.3s,baz=241,slow=12,SNR=1.3						
ULM				Lg	Lg	17 31 43.7	
	comp=N,0.2nm,0.3s,baz=281,slow=10,SNR=2.2						
	comp=N,0.6nm,0.3s						

*MAN **13** 17:30:13.0, 2°.75N×127°.43E, h82km, MS3.5*
*DJA **13** 17:30:15.5±0.4, 3°.N±4°×12°.8E±°, h117km±5km, M4.1/12, mB4.9/3, mb4.3/12, MLv4.0/12, Mw(mB)4.2/3*
*IDC **13** 17:30:19.1±7.6, 2°.57N×127°.69E, h124km±51km, mb3.2/4, mbtmp3.8/6, Error ellipse: s-maj=64.8km s-min=52.7km az=173.0*
ISC 13 17:30:14.2±0.9, **3°.11N**±0°.05×**127°.88E**±0°.06, **h100**km, **n23,** σ2=**08**/26, **mb3.5/4, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.38**	**192**	P	**Pn**	**17 30 54.1**	**+2.4**

TNTI				S	Sn	17 31 23.6	+3.1
SGSI	**Sangihe**	**2.41**	**284**	P	Pn	17 30 53.3	+1.2
MNI	**Manado**	**3.46**	**241**	P	Pn	17 31 07.3	+1.2
MNI				S	Sn	17 31 46.4	+0.2
DDMP	**Don Marcelino,**	**3.67**	**324**	*e*P	Pn	17 31 09.2	+0.2
DDMP				*e*S	Sn	17 31 51.1	-0.3
KCP	**Kidapawan**	**4.76**	**324**	*e*P	Pn	17 31 28.4	+4.6
KCP				*i* S	Sn	17 32 24.6	+6.7
SIJI	**Sorong**	**5.21**	**139**	P	Pn	17 31 31.1	+1.3
	12nm,0.3s,baz=330,slow=20,SNR=39						
SIJI				S	Sn	17 32 28.4	-0.2
	7.1nm,0.4s,baz=330,slow=16,SNR=11						
SIJI	**Sorong**	**5.21**	**139**	P	Pn	17 31 31.3	+1.6
BIPH	**Bislig**	**5.26**	**343**	*e*P	Pn	17 31 31.7	+1.2
BIPH				*e*S	Sn	17 32 27.6	-2.2
GTOI	**Gorontalo**	**5.45**	**243**	P	Pn	17 31 35.0	+2.0
	0.2nm512nm55nm,0.6s						
CTBH	**Cotabato--PC H**	**5.45**	**319**	*i* P	Pn	17 31 34.0	+0.9
SANI	**Sanana**	**5.46**	**200**	P	Pn	17 31 32.4	-0.8
	0.4nm5µm44nm,0.6s						
LUWI	**Luwuk**	**6.56**	**231**	P	Pn	17 31 48.5	+0.4
	0.2nm45nm,1.0s						
LUWI				S	Sn	17 33 02.1	+0.5
	0.2nm45nm,1.0s						
FAKI	**Fak Fak**	**7.42**	**144**	P	Pn	17 32 01.5	+1.7
	44nm,1.7s						
KDI	**Kendari**	**8.77**	**217**	P	Pn	17 32 17.8	-0.4
	29nm,0.7s						
PCI	**Palu**	**8.97**	**244**	P	Pn	17 32 22.2	+1.2
	18nm,0.8s						
JAY	**Jayapura**	**13.99**	**113**	P	**P**	17 33 33.1	+0.3
	6.9nm,1.0s,baz=225,slow=1.4,SNR=2.6						
FITZ	**Fitzroy Crossi**	**21.19**	**186**	P	**P**	17 34 49.0	-2.7
	1.9nm,0.7s,baz=3.4,slow=8.4,SNR=7.1						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**23.77**	**165**	P	**P**	17 35 16.0	-1.7
	1.1nm,0.7s,baz=343,slow=10,SNR=9.9						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**27.25**	**168**	P	**P**	17 35 48.1	-1.1
	0.2nm,0.5s,baz=353,slow=7.4,SNR=5.5						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**37.16**	**160**	P	**P**	17 37 13.7	-1.8
	1.3nm,0.6s,baz=331,slow=8.2,SNR=2.3						
	1.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**40.94**	**65**	T	T	18 21 19.8	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**40.95**	**65**	T	T	18 21 23.8	
	baz=253						
H11S1	**WAKE ISLAND Hy**	**40.96**	**65**	T	T	18 21 16.9	
	baz=253						

IDC ***13*** *17:33:59.5±1.0,25°.12N×99°.82E,h0km,mb3.7/7, mbtmp3.7/8,ML4.4/1,MS3.5/7,Error ellipse: s-maj=43.9km s-min=15.9km az=75.0*

NEIC ***13*** *17:34:01.0±1.4,25°.18N±0°.07×99°.57E±0°.09,h10km±1km, mb4.0/6,Error ellipse: s-maj=14.5km s-min=10.7km az=53.0*

BKK ***13*** *17:34:03.7±1.0,25°N±7°×9°9E±1°.0,h10km,M4.5/16, mB5.0/8,mb4.4/12,Mjma4.4/16,ML5.0/12,MLv4.7/7, Mw(mB)4.3/8*

ISC 13 17:34:00.5±0.7,25°.09N±0°.07×99°.59E±0°.09,h10km,n33, σ1§62/29,mb3.8/10,MS3.6/6,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORE	**Moreh**	**4.89**	**261**	Pn	**Pn**	**17 35 13.3**	**-0.8**
CMAI	**Chiengmai2**	**5.15**	**186**	P	**Pn**	**17 35 19.5**	**+1.6**
	1.5nm0.7nm0.9nm2µm84nm,0.8s						
SLVN	**Son La**	**5.45**	**132**		**Pn**	**17 35 23.2**	**+1.4**
CHTO	**Chiang Mai**	**6.27**	**186**		**Pn**	**17 35 34.4**	**+1.3**
LAMP	**Lampang**	**6.53**	**180**	P	**Pn**	**17 35 38.8**	**+2.1**
	0.3nm0.3nm0.9nm49nm,0.9s						
CM31	**Chiang Mai Arr**	**6.62**	**185**		**Pn**	**17 35 39.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**6.62**	**185**	Pn	**Pn**	**17 35 39.9**	**+2.0**
	2.2nm,0.3s,baz=360,slow=13,SNR=50						
CMAR				Pg	**Pg**	**17 36 05.0**	**-2.3**
	5.4nm,0.3s,baz=356,slow=18,SNR=93						
CMAR				Lg	Lg	17 37 32.0	
	1.2nm,0.3s,baz=18,slow=29,SNR=4.0						
CMAR				LR	LR	17 38 15.7	
	comp=Z,75nm,21.9s,baz=200,slow=38						
	4.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**6.62**	**185**		**Pn**	**17 35 39.8**	**+1.9**
MHMT	**Maesarieng**	**7.05**	**193**	P	**Pn**	**17 35 45.8**	**+2.1**
	0.5nm0.3nm0.2nm410nm18nm,0.6s						
LOEI	**Loei**	**7.70**	**168**	P	**Pn**	**17 35 56.2**	**+3.5**
LSA	**Lhasa**	**8.80**	**303**	Pn	**Pn**	**17 36 08.1**	**-0.1**
UTHA	**Uthaitani**	**9.48**	**181**	P	**Pn**	**17 36 19.5**	**+2.4**
	2.5nm,0.5s						
ENH	**Enshi**	**10.18**	**57**	Pn	**Pn**	**17 36 25.5**	**-1.2**
KHLT	**Khaolaem Dam**	**10.28**	**185**	P	**Pn**	**17 36 29.7**	**+1.6**
SONM	**Songino Array**	**23.34**	**12**	P	**P**	**17 39 09.6**	**+0.7**
	0.5nm,0.6s,baz=198,slow=10,SNR=4.6						
SONM				LR	LR	17 47 54.8	
	comp=Z,74nm,18.1s,baz=206,slow=36						
	0.5nm,0.6s						
SONM	**Songino Array**	**23.34**	**12**	P	**P**	**17 39 08.7**	**-0.3**
SONM				IAmb	IAmb	17 39 15.3	
	comp=Z,2.0nm,1.2s						
WUS	**Wushi**	**23.35**	**318**	P	**P**	**17 39 09.8**	**+0.7**
WUS				IAmb	IAmb	17 39 46.2	
	comp=Z,4.7nm,0.4s						
NIL	**Nilore**	**24.44**	**297**	P	**P**	**17 39 18.8**	**-0.7**
KDJ	**Kajisay**	**25.13**	**318**	P	**P**	**17 39 23.7**	**-2.2**
KDJ				IAmb	IAmb	17 39 29.3	
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**25.69**	**332**	P	**P**	**17 39 30.9**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=136,slow=11,SNR=22						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**25.69**	**332**	P	**P**	**17 39 31.2**	**+0.6**
TLY	**Talaya**	**26.74**	**6**	LR	LR	17 50 07.0	
	comp=Z,61nm,18.9s,baz=196,slow=36						
KURBB	**Kurchatov Arra**	**30.23**	**333**	P	**P**	**17 40 11.3**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=132,slow=11,SNR=4.3						
	comp=Z,0.3nm,0.2s						
KURK	**Kurchatov**	**30.26**	**333**	P	**P**	**17 40 11.3**	**-0.1**
KURK				IAmb	IAmb	17 40 38.2	
	comp=Z,4.8nm,1.5s						
ZALV	**Zalesovo Beam**	**30.87**	**343**	P	**P**	**17 40 17.3**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=163,slow=11,SNR=3.9						
	comp=Z,0.6nm,0.6s						
BVAR	**Borovoye Array**	**35.50**	**330**	P	**P**	**17 41 00.2**	**+3.0**
	comp=Z,0.5nm,0.5s,baz=122,slow=9.7,SNR=2.8						
	comp=Z,0.5nm,0.5s						
KAPI	**Kappang**	**35.77**	**144**	LR	LR	17 55 58.9	
	comp=Z,184nm,18.0s,baz=270,slow=37						
ARTI	**Arti**	**43.13**	**328**	LR	LR	18 00 32.4	
	comp=Z,66nm,18.4s,baz=140,slow=37						
MA2	**Magadan**	**49.29**	**32**	LR	LR	18 06 46.6	
	comp=Z,54nm,18.4s,baz=256,slow=40						
OBN	**Obninsk**	**54.45**	**321**	LR	LR	18 08 14.3	
	comp=Z,94nm,19.8s,baz=224,slow=38						
WRA	**Warramunga Arr**	**56.09**	**140**	P	**P**	**17 43 39.7**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=327,slow=7.6,SNR=5.1						
	comp=Z,1.3nm,0.9s						
WRA	**Warramunga Arr**	**56.09**	**140**	P	**P**	**17 43 39.7**	**-0.4**
ASAR	**Alice Springs**	**58.77**	**143**	P	**P**	**17 43 58.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=322,slow=7.4,SNR=1.9						
	comp=Z,0.4nm,0.7s						

DJA ***13*** *18:07:33.8±0.6,3°N±5°×12°6E±°,h40km±7.57km,M3.8/9, mB4.8/1,mb4.0/2,MLv3.7/9,Mw(mB)4.0/1*

MAN ***13*** *18:07:36.0,3°.43N×126°.00E,h1km,MS3.7*

IDC ***13*** *18:07:39.6±5.2,3°.35N×127°.17E,h133km±59km,mb3.2/4, mbtmp3.6/5,MS2.8/1,Error ellipse: s-maj=92.3km s-min=23.3km az=73.0*

ISC 13 18:07:34.6±0.9,3°.16N±0°.05×126°.40E±0°.07,h63km,n14, σ1§92/17,mb3.5/4,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.01**	**301**	P	**Pn**	**18 07 52.8**	**-0.1**
SGSI				S	**Sn**	**18 08 06.1**	**-0.5**
MNI	**Manado**	**2.31**	**222**	P	**Pn**	**18 08 10.8**	**+0.4**
MNI				S	**Sn**	**18 08 39.2**	**+1.5**
TNTI	**Ternate**	**2.56**	**158**	P	**Pn**	**18 08 13.0**	**-0.8**
TNTI				S	**Sn**	**18 08 44.1**	**+0.3**
KCP	**Kidapawan**	**4.04**	**341**	*e*P	Pn	18 08 40.5	+6.5
KCP				*i* S	**Sn**	**18 09 16.3**	**-3.8**
GTOI	**Gorontalo**	**4.22**	**234**	P	**Pn**	**18 08 37.2**	**+0.8**
CTBH	**Cotabato--PC H**	**4.57**	**332**	*i* P	**Pn**	**18 08 40.7**	**-0.5**
BIPH	**Bislig**	**4.99**	**360**	*e*P	**Pn**	**18 08 50.2**	**+3.3**
BIPH				*e*S	**Sn**	**18 09 46.9**	**+3.5**
SIJI	**Sorong**	**6.30**	**129**	P	**Pn**	**18 09 04.5**	**-0.5**
	1.9nm,0.3s,baz=288,slow=14,SNR=1.3						
KDI	**Kendari**	**8.02**	**208**	P	**Pn**	**18 09 28.7**	**+0.2**
GUMO	**Guam**	**20.98**	**59**	LR	LR	18 20 09.3	
	comp=Z,24nm,18.9s,baz=276,slow=37						
FITZ	**Fitzroy Crossi**	**21.14**	**182**	P	**P**	**18 12 16.4**	**+1.9**
	1.9nm,0.8s,baz=358,slow=11,SNR=1.2						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**24.25**	**162**	P	**P**	**18 12 43.9**	**-1.9**
	2.4nm,0.9s,baz=346,slow=9.0,SNR=10						
	2.4nm,0.9s						
ASAR	**Alice Springs**	**27.65**	**165**	P	**P**	**18 13 15.3**	**-1.3**
	0.3nm,0.7s,baz=346,slow=8.8,SNR=4.8						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**57.83**	**326**	P	**P**	**18 17 19.2**	**-0.6**
	0.2nm,0.4s,baz=118,slow=8.6,SNR=7.3						
	0.2nm,0.4s						

SJA ***13*** *18:09:52.8±0.6,21°.13S×68°.81W,h118km±4km,ML4.2, MW4.1*

IDC ***13*** *18:09:53.6±2.1,21°.17S×68°.70W,h104km±19km,mb3.7/6, mbtmp4.0/12,MS3.4/1,Error ellipse: s-maj=22.9km s-min=17.4km az=84.0*

NEIC ***13*** *18:09:54.7±0.9,21°.12S±0°.03×68°.88W±0°.07,h117km±3km, mb4.2/10,ML4.2(GUC),Error ellipse: s-maj=9.0km s-min=4.7km az=102.0*

GFZ ***13*** *18:09:54.1±0.2,21°S±2°×6°9W±°,h133km,M4.3/10, mb4.2/10*

GUC ***13*** *18:09:55.2±0.8,21°.11S×68°.88W,h116km±3km,ML4.2*

VAO ***13*** *18:09:59.6±0.8,20°.88S×68°.30W,h126km,mb4.4, Presumed earthquake*

ISC 13 18:09:53.6±0.5,21°.16S±0°.03×68°.88W±0°.05,h119km±5km, n169,σ1§64/186,mb4.1/5,4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.72**	**208**	*e*P	**Pn**	**18 10 13.8**	**+0.6**
PB09				IAML		18 10 30.9	
	comp=Z,4µm,0.6s						
PB09	**IPOC Station P**	**0.72**	**208**		**Pn**	**18 10 14.5**	**+1.3**
PB09				Sn	**Sn**	**18 10 30.0**	**+2.1**
PB09	**IPOC Station P**	**0.72**	**208**	↓*i* P	**Pn**	**18 10 14.5**	**+1.3**
PB09				*e*S	**Sn**	**18 10 30.1**	**+2.1**
PB09				IAML		18 10 32.4	
	comp=N,4µm,0.3s						
PB09	**IPOC Station P**	**0.72**	**208**	P	**Pn**	**18 10 14.7**	**+1.5**
PB02	**IPOC Station P**	**0.96**	**260**	*e*P	**Pn**	**18 10 15.6**	**+0.4**
PB02				*e*S	**Sn**	**18 10 32.8**	**+1.2**
PB02				IAML		18 10 36.7	
	comp=Z,11µm,0.4s						
PB02	**IPOC Station P**	**0.96**	**260**		**Pn**	**18 10 16.0**	**+0.8**
PB02				Sn	**Sn**	**18 10 32.4**	**+0.8**
PB02	**IPOC Station P**	**0.96**	**260**	↓*i* P	**Pn**	**18 10 16.4**	**+1.2**
PB02				*e*S	**Sn**	**18 10 32.5**	**+0.9**
PB02				IAML		18 10 33.9	
	comp=E,19µm,0.2s						
PB02	**IPOC Station P**	**0.96**	**260**	P	**Pn**	**18 10 16.5**	**+1.2**
PB08	**IPOC Station P**	**1.05**	**346**	*e*P	**Pn**	**18 10 16.3**	**-0.2**
PB08				*e*S	**Sn**	**18 10 33.8**	**+0.1**
PB08				IAML		18 10 36.0	
	comp=Z,2µm,0.3s						
PB08	**IPOC Station P**	**1.05**	**346**		**Pn**	**18 10 16.9**	**+0.4**
PB08					**Sn**	**18 10 33.4**	**-0.3**
PB08	**IPOC Station P**	**1.05**	**346**	↓*i* P	**Pn**	**18 10 17.1**	**+0.6**
PB08				*e*S	**Sn**	**18 10 33.6**	**-0.1**
PB08				IAML		18 10 34.5	
	comp=E,4µm,0.2s						
PB08	**IPOC Station P**	**1.05**	**346**	P	**Pn**	**18 10 17.1**	**+0.6**
PB07	**IPOC Station P**	**1.09**	**239**	*e*P	**Pn**	**18 10 17.6**	**+0.9**
PB07				*e*S	**Sn**	**18 10 35.4**	**+1.3**
PB07				IAML		18 10 37.4	
	comp=Z,3µm,0.4s						
PB07	**IPOC Station P**	**1.09**	**239**		**Pn**	**18 10 17.7**	**+1.1**
PB07	**IPOC Station P**	**1.09**	**239**	P	**Pn**	**18 10 17.7**	**+1.1**
PB03	**IPOC Station P**	**1.20**	**223**	*e*P	**Pn**	**18 10 18.4**	**+0.7**
PB03				*e*S	**Sn**	**18 10 37.6**	**+1.5**
PB03				IAML		18 10 39.8	
	comp=Z,4µm,0.2s						
PB03	**IPOC Station P**	**1.20**	**223**		**Pn**	**18 10 19.0**	**+1.2**
PB03				Sn	**Sn**	**18 10 37.2**	**+1.2**
PB03	**IPOC Station P**	**1.20**	**223**	*e*P	**Pn**	**18 10 19.2**	**+1.4**
PB03				*e*S	**Sn**	**18 10 37.3**	**+1.2**
PB03				IAML		18 10 38.0	
	comp=E,5µm,0.3s						
PB03	**IPOC Station P**	**1.20**	**223**	P	**Pn**	**18 10 19.3**	**+1.4**
TA02	**Huaiquique**	**1.47**	**307**	*e*P	**Pn**	**18 10 21.0**	**+0.4**
TA02				*e*S	**Sn**	**18 10 42.8**	**+1.7**
TA02				IAML		18 10 43.4	
	comp=Z,2µm,0.1s						
TA02	**Huaiquique**	**1.47**	**307**	*e*P	**Pn**	**18 10 21.1**	**+0.4**
TA02	**Huaiquique**	**1.47**	**307**	P	**Pn**	**18 10 21.0**	**+0.4**
GO01	**Chusmiza**	**1.52**	**349**	*e*P	**Pn**	**18 10 20.9**	**-0.7**
GO01				*e*S	Sn	18 10 25.4	-17
GO01	**Chusmiza**	**1.52**	**349**		**Pn**	**18 10 22.0**	**+0.3**
GO01	**Chusmiza**	**1.52**	**349**	*i* P	**Pn**	**18 10 22.0**	**+0.3**
GO01				*e*S	**Sn**	**18 10 43.5**	**+0.6**
GO01				IAML		18 10 45.4	
	comp=E,11µm,0.1s						
GO01	**Chusmiza**	**1.52**	**349**	P	**Pn**	**18 10 22.1**	**+0.4**
PB11	**IPOC Station P**	**1.57**	**332**	*e*P	**Pn**	**18 10 21.4**	**-0.6**
PB11				*e*S	**Sn**	**18 10 44.1**	**+0.5**
PB11				IAML		18 10 47.8	
	comp=Z,1µm,0.6s						
PB11	**IPOC Station P**	**1.57**	**332**		**Pn**	**18 10 22.0**	**+0.1**
PB11	**IPOC Station P**	**1.57**	**332**	*i* P	**Pn**	**18 10 22.1**	**+0.1**
PB11				*e*S	**Sn**	**18 10 43.5**	**-0.1**
PB11				IAML		18 10 44.6	
	comp=N,4µm,0.4s						
PB11	**IPOC Station P**	**1.57**	**332**	P	**Pn**	**18 10 22.2**	**+0.2**
PB06	**IPOC Station P**	**1.67**	**203**	*e*P	**Pn**	**18 10 24.2**	**+1.2**
PB06				IAML		18 10 49.7	
	comp=Z,2µm,0.5s						
PB06	**IPOC Station P**	**1.67**	**203**		**Pn**	**18 10 24.8**	**+1.6**
PB06	**IPOC Station P**	**1.67**	**203**	*e*P	**Pn**	**18 10 24.9**	**+1.8**
PB06				*e*S	**Sn**	**18 10 47.7**	**+2.2**
PB06				IAML		18 10 51.6	
	comp=E,3µm,0.4s						
PB06	**IPOC Station P**	**1.67**	**203**	P	**Pn**	**18 10 24.7**	**+1.6**
AF01	**San Pedro de A**	**1.90**	**160**	*e*P	**Pn**	**18 10 28.4**	**+2.3**
AF01				*e*S	**Sn**	**18 10 50.5**	**-0.2**
AF01				IAML		18 11 14.5	
	comp=Z,1µm,1.3s						
AF01	**San Pedro de A**	**1.90**	**160**		**Pn**	**18 10 28.6**	**+2.6**
AF01	**San Pedro de A**	**1.90**	**160**	*e*P	**Pn**	**18 10 28.8**	**+2.8**
PSGCX	**Pisagua**	**1.95**	**323**	*e*P	Pn	18 10 23.2	-3.3
PSGCX				*e*S	**Sn**	**18 10 51.9**	**+0.4**
PSGCX				IAML		18 10 52.9	
	comp=Z,749nm,1.0s						
PSGCX	**Pisagua**	**1.95**	**323**		**Pn**	**18 10 26.0**	**-0.5**
PSGCX	**Pisagua**	**1.95**	**323**	*e*P	**Pn**	**18 10 26.1**	**-0.3**
PSGCX	**Pisagua**	**1.95**	**323**	P	**Pn**	**18 10 26.2**	**-0.2**
PB05	**IPOC Station P**	**2.08**	**216**	*e*P	**Pn**	**18 10 29.4**	**+1.2**
PB05				*e*S	**Sn**	**18 10 48.0**	**-6.6**
PB05				IAML		18 10 56.2	
	comp=Z,921nm,0.6s						
PB05	**IPOC Station P**	**2.08**	**216**		**Pn**	**18 10 29.2**	**+1.1**
PB05	**IPOC Station P**	**2.08**	**216**	*e*P	**Pn**	**18 10 29.5**	**+1.4**
PB05				*e*S	**Sn**	**18 10 53.8**	**-0.8**
PB05	**IPOC Station P**	**2.08**	**216**	P	**Pn**	**18 10 29.0**	**+0.8**
PX02	**IPOC Station P**	**2.51**	**330**	*e*P	**Pn**	**18 10 32.2**	**-1.4**
PB16	**IPOC Station P**	**2.87**	**348**	*e*P	Pn	18 10 21.0	-18
PB16				*e*S	Sn	18 11 02.4	-11
PB16				IAML		18 11 23.5	
	comp=Z,260nm,0.5s						
PB16	**IPOC Station P**	**2.87**	**348**	Pn	**Pn**	**18 10 39.3**	**+0.5**
PB16	**IPOC Station P**	**2.87**	**348**	↓*e*P	**Pn**	**18 10 39.5**	**+0.7**
PB16				IAML		18 11 18.1	
	comp=N,311nm,0.3s						
PB16	**IPOC Station P**	**2.87**	**348**	P	**Pn**	**18 10 39.3**	**+0.5**
PB12	**IPOC Station P**	**2.88**	**331**	*e*P	**Pn**	**18 10 37.0**	**-1.3**
PB12				*e*S	**Sn**	**18 11 12.6**	**-0.2**
PB12				IAML		18 11 19.3	
	comp=Z,404nm,0.3s						
PB12	**IPOC Station P**	**2.88**	**331**	Pn	**Pn**	**18 10 37.3**	**-1.1**
PB12	**IPOC Station P**	**2.88**	**331**	*e*P	**Pn**	**18 10 37.4**	**-1.1**
PB12				*e*S	**Sn**	**18 11 11.8**	**-1.1**
PB12	**IPOC Station P**	**2.88**	**331**	P	**Pn**	**18 10 37.6**	**-0.8**
AP01	**Chacalluta**	**3.10**	**333**	*e*P	**Pn**	**18 10 41.6**	**+0.4**
AP01				*e*S	**Sn**	**18 11 17.4**	**-0.5**
AP01				IAML		18 11 39.6	
	comp=Z,665nm,0.5s						
AP01	**Chacalluta**	**3.10**	**333**		**Pn**	**18 10 40.2**	**-1.0**
AP01	**Chacalluta**	**3.10**	**333**	*e*P	**Pn**	**18 10 40.3**	**-0.9**
AP01	**Chacalluta**	**3.10**	**333**	P	**Pn**	**18 10 40.2**	**-1.0**
YJA	**Yavi**	**3.29**	**108**	*e*P	**Pn**	**18 10 46.6**	**+2.5**
PB18	**Visviri**	**3.60**	**351**		**Pn**	**18 10 48.7**	**+0.4**
PB18	**Visviri**	**3.60**	**351**	*e*P	Pn	18 10 53.4	+5.0
PB18	**Visviri**	**3.60**	**351**	P	**Pn**	**18 10 49.4**	**+1.0**
PB14	**IPOC Station P**	**3.72**	**202**	*e*P	**Pn**	**18 10 49.7**	**0.0**
PB14				*e*S	**Sn**	**18 11 34.2**	**+1.1**
PB14				IAML		18 11 47.0	
	comp=Z,308nm,0.3s						
PB14	**IPOC Station P**	**3.72**	**202**		**Pn**	**18 10 49.5**	**-0.3**
PB14	**IPOC Station P**	**3.72**	**202**	*e*P	**Pn**	**18 10 50.1**	**+0.3**
PB14	**IPOC Station P**	**3.72**	**202**	P	**Pn**	**18 10 49.8**	**0.0**
SALTA		**3.84**	**143**	*e*P	**Pn**	**18 10 54.5**	**+3.0**
SALTA				*e*P		18 10 54.9	
SALTA		**3.84**	**143**	P	**Pn**	**18 10 54.0**	**+2.5**
SLA	**San Lorenzo**	**4.71**	**139**	*e*P	**Pn**	**18 11 05.9**	**+3.0**
SLA	**San Lorenzo**	**4.71**	**139**	*e*P	**Pn**	**18 11 05.8**	**+2.9**
LPAZ	**La Paz**	**4.90**	**8**	P	**Pn**	**18 11 07.3**	**+1.5**
	comp=Z,12nm,0.3s,baz=195,slow=7.1,SNR=47						
LPAZ				S	**Sn**	**18 11 58.7**	**-3.1**
	comp=Z,13nm,0.7s,baz=161,slow=12,SNR=1.7						
LPAZ	**La Paz**	**4.90**	**8**	*e*P	**Pn**	**18 11 07.7**	**+1.8**
LPAZ	**La Paz**	**4.90**	**8**	*e*P	**Pn**	**18 11 07.7**	**+1.8**
LPAZ	**La Paz**	**4.90**	**8**	P	**Pn**	**18 11 06.7**	**+0.9**
AC01	**Pan de Azucar**	**5.21**	**197**	*e*P	**Pn**	**18 11 08.3**	**-1.0**
AC01				*e*S	**Sn**	**18 12 06.3**	**-2.0**
AC01				IAML		18 12 12.1	
	comp=Z,141nm,0.4s						
AC01	**Pan de Azucar**	**5.21**	**197**		**Pn**	**18 11 08.4**	**-1.0**
AC01	**Pan de Azucar**	**5.21**	**197**	P	**Pn**	**18 11 08.4**	**-1.0**
AC02	**Maricunga**	**5.65**	**182**		**Pn**	**18 11 16.9**	**+1.1**
AC02	**Maricunga**	**5.65**	**182**	P	**Pn**	**18 11 16.5**	**+0.7**
GO03	**Copiapo**	**6.52**	**191**	Pn	**Pn**	**18 11 25.8**	**-1.3**
GO03	**Copiapo**	**6.52**	**191**	P	**Pn**	**18 11 26.5**	**-0.6**
AC04	**Llanos de Chal**	**7.29**	**195**		**Pn**	**18 11 34.4**	**-3.0**
AC05	**El Transito**	**7.75**	**189**		**Pn**	**18 11 42.4**	**-1.4**
AC05	**El Transito**	**7.75**	**189**	P	**Pn**	**18 11 42.5**	**-1.3**
LCO	**Las Campanas**	**7.99**	**192**	Pn	**Pn**	**18 11 44.5**	**-2.6**
LCO	**Las Campanas**	**7.99**	**192**	P	**Pn**	**18 11 45.4**	**-1.7**
BBSD	**Serra de San D**	**8.76**	**65**	*e*P	Pn	18 11 53.9	-3.5
CO01	**Juntas del Tor**	**8.85**	**187**	Pn	**Pn**	**18 11 57.5**	**-1.2**
CO01	**Juntas del Tor**	**8.85**	**187**	P	**Pn**	**18 11 58.3**	**-0.5**
SIV	**San Ignacio**	**9.01**	**57**	P	**Pn**	**18 11 57.8**	**-3.0**
	comp=Z,45nm,0.6s,baz=240,slow=10.0,SNR=131						
SIV				S	Sn	18 13 30.7	-10
	comp=Z,6.6nm,0.9s,baz=311,slow=20,SNR=4.7						
GO04	**Tololo Observa**	**9.14**	**191**	Pn	**Pn**	**18 12 00.4**	**-2.3**
GO04	**Tololo Observa**	**9.14**	**191**	P	**Pn**	**18 12 00.9**	**-1.7**
CO02	**Combarbal**	**10.18**	**190**	Pn	**Pn**	**18 12 13.1**	**-3.5**
CFA	**Coronel Fontan**	**10.42**	**177**	P	**Pn**	**18 12 17.7**	**-2.1**
	comp=Z,1.7nm,0.5s,baz=302,slow=11,SNR=11						
CFA				S	**Sn**	**18 14 06.8**	**-7.7**
	comp=Z,4.2nm,0.5s,baz=72,slow=19,SNR=9.2						
COIM	**Forte Coimbra**	**10.47**	**85**	*e*P	Pn	18 12 15.8	-4.6
MURT	**Porto Murtinho**	**10.51**	**95**	*e*P	**Pn**	**18 12 18.9**	**-2.1**
PTLB	**Pontes e Lacer**	**10.86**	**60**		**Pn**	**18 12 23.4**	**-2.3**
PTLB	**Pontes e Lacer**	**10.86**	**60**	*e*P	**Pn**	**18 12 22.8**	**-2.9**
CO04	**Los Peladeros**	**11.00**	**189**	Pn	**Pn**	**18 12 24.6**	**-3.2**
BDQN	**Bodoquena, MS**	**11.37**	**89**	*e*P	**Pn**	**18 12 29.4**	**-3.2**
VILB	**Vilhena**	**11.64**	**47**		**Pn**	**18 12 33.3**	**-2.8**
VILB	**Vilhena**	**11.64**	**47**	*e*P	**Pn**	**18 12 33.6**	**-2.6**
CPUP	**Villa Florida**	**11.76**	**118**	P	**Pn**	**18 12 36.5**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=321,slow=15,SNR=3.5						
MT02	**Curacav**	**12.22**	**189**	Pn	**Pn**	**18 12 41.2**	**-2.4**
SALV	**Santo Antonio**	**13.55**	**69**	*e*P	**Pn**	**18 13 00.1**	**-1.1**
H03N1	**Juan Fernandez**	**15.12**	**214**	P	**P**	**18 13 23.0**	**0.0**

comp=Z,0.3nm,0.6s,baz=319,slow=2.7,SNR=1.7
ZALV Zalesovo Beam 141.64 25 PKP **PKiKP 18 29 12.1 -1.4**
comp=Z,0.8nm,0.6s,baz=316,slow=4.1,SNR=4.3
MKAR Makanchi Array 145.34 36 PKPbc **PKiKP 18 29 19.6 -1.9**
comp=Z,2.4nm,0.7s,baz=330,slow=3.1,SNR=26
MKAR Makanchi Array 145.34 36 PKiKP 18 29 19.3 -2.1
WMQ Urumqi 150.18 35 ePKPbc **PKPdf 18 29 25.6 +0.1**
WMQ PKPab **PKPab 18 29 42.1 +5.0**
HHC Hu-ho-hao-te 160.37 359 *eP* **PKPdf 18 29 41.5 +2.1**

*OSPL **13** 18:47:06.4±1.3, 18°.17N×69°.03W, h115km±13km, ML2.9, Presumed earthquake*
*SDD **13** 18:47:07.1±2.3, 18°.54N×69°.11W, h104km±14km, MD3.2, ML2.6, MW3.0, Presumed earthquake*
ISC 13 18:47:07.2±1.7, 18°.3N±0°.1×69°.12W±0°.04, h83km±17km, n14, σ1°40/18, 5C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centro**	**0.50**	**51**	⇓*e*Pg	**Pn**	**18 47 20.6**	**-0.6**
HIDR				⇑*e*Sg	**Sn**	**18 47 32.5**	**+1.0**
HIDR				IAML		18 47 33.2	
	comp=E,281nm,0.3s						
HIDR				IAML		18 47 33.6	
	comp=N,236nm,0.2s						
HATOM	**Hato Mayor del**	**0.56**	**334**	⇑*e*Pg	**Pn**	**18 47 20.5**	**-1.4**
HATOM				⇓*e*Sg	**Sn**	**18 47 33.6**	**+0.9**
HATOM				IAML		18 47 36.0	
	comp=E,120nm,0.1s						
HATOM				IAML		18 47 36.6	
	comp=N,101nm,0.2s						
PCDR	**Punta Cana, DR**	**0.74**	**72**	⇑*e*Pg	**Pn**	**18 47 22.6**	**-0.9**
PCDR				IAML		18 47 42.3	
	comp=N,84nm,1.6s						
PCDR	**Punta Cana, DR**	**0.74**	**72**	*i* P	**Pn**	**18 47 23.6**	**0.0**
PCDR				*e*S	**Sn**	**18 47 37.9**	**+2.2**
PCDR				IAML		18 47 44.0	
	comp=Z,38nm,1.1s						
SMDR	**Samana, DR**	**1.01**	**357**	⇓*e*Pg	**Pn**	**18 47 24.1**	**-2.5**
SMDR				IAML		18 47 42.2	
	comp=E,143nm,0.2s						
SMDR				IAML		18 47 42.5	
	comp=N,211nm,0.8s						
BANI	**BANI**	**1.18**	**276**	IAML		18 47 49.6	
	comp=N,111nm,1.1s						
BANI				IAML		18 47 55.7	
	comp=E,86nm,0.6s						
MLPR	**Magueyes Islan**	**2.00**	**99**	IAML		18 48 05.4	
	comp=E,15nm,0.1s						
MLPR				IAML		18 48 05.6	
	comp=N,14nm,0.1s						
SDDR	**Presa de Saban**	**2.17**	**289**	*i* P	**Pn**	**18 47 41.7**	**+0.2**
SDDR				*e*S	**Sn**	**18 48 08.5**	**+0.9**
SDDR				IAML		18 48 13.9	
	comp=Z,193nm,0.2s						
LOVI	**El Cajuil, Ovi**	**2.19**	**258**	*i* P	**Pn**	**18 47 40.9**	**-0.8**
LOVI				*e*S	**Sn**	**18 48 07.2**	**-0.9**
LOVI				IAML		18 48 08.1	
	comp=Z,50nm,1.2s						
AOPR	**Arecibo Observ**	**2.25**	**88**	⇓*e*Pg	**Pn**	**18 47 41.9**	**-0.7**
AOPR				IAML		18 48 14.6	
	comp=E,279nm,0.2s						
AOPR				IAML		18 48 18.2	
	comp=N,109nm,0.2s						
REDR	**Restauracion**	**2.33**	**293**	⇑*e*Pg	**Pn**	**18 47 45.8**	**+2.3**
REDR				IAML		18 48 19.2	
	comp=N,29nm,0.7s						
REDR				IAML		18 48 20.4	
	comp=E,22nm,0.1s						
OBIP	**Obispado Ponce**	**2.41**	**95**	*i* P	**Pn**	**18 47 42.8**	**-1.8**
OBIP				IAML		18 48 21.6	
	comp=Z,115nm,0.2s						
CELP	**Cerrillos**	**2.43**	**94**	⇑*e*Pg	**Pn**	**18 47 45.4**	**+0.5**
CELP				IAML		18 48 20.4	
	comp=E,13nm,0.2s						
CELP				IAML		18 48 23.1	
	comp=N,9.5nm,0.3s						
LOBH	**Bahia de las A**	**2.43**	**261**	*i* P	**Pn**	**18 47 44.5**	**-0.4**
LOBH				*e*S	**Sn**	**18 48 13.3**	**-0.5**
LOBH				IAML		18 48 16.1	
	comp=Z,44nm,1.9s						

*KRNET **13** 19:07:10.6±0.1, 39°.54N×75°.72E, mb2.8*
*SOME **13** 19:07:11.0, 39°.70N×75°.62E, h15km*
*NNC **13** 19:07:12.3±2.9, 39°.77N×75°.52E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=19.2km s-min=17.4km az=15.0*
ISC 13 19:07:13.3±2.2, 39°.5N±0°.1×75°.71E±0°.07, h28km, n17, σ1°34/27, 12C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.77**	**287**	⇑*i*P	**Pn**	**19 07 42.1**	**-0.3**
SFK				⇑*i*S	**Sn**	**19 08 05.3**	**+1.2**
NRN	**Naryn**	**1.93**	**6**	⇑*i*P	**Pn**	**19 07 43.9**	**-0.7**
NRN				⇑*e*S	**Sn**	**19 08 08.0**	**-0.1**
ULHL	**Ulahol**	**2.76**	**8**	⇑*e*P	**Pn**	**19 07 55.6**	**-0.3**
ULHL				⇑*i*S	**Sn**	**19 08 28.1**	**-0.2**
KDJ	**Kajisay**	**2.84**	**23**	⇑*e*P	**Pn**	**19 07 56.5**	**-0.5**
KDJ				⇑*e*S	**Sn**	**19 08 30.5**	**+0.2**
BOOM	**Boomskoye usch**	**2.98**	**3**	⇑*e*P	**Pn**	**19 07 58.9**	**+0.1**
BOOM				⇑*i*S	**Sn**	**19 08 33.7**	**0.0**
AAK	**Ala-Archa**	**3.25**	**344**	⇑Pg	**Pn**	**19 08 04.9**	**+2.3**
	1.3nm,0.5s						
AAK				⇑Lg	Lg	19 08 45.2	
	10nm,1.1s						
KST	**Kastek**	**3.53**	**3**	Pg	**Pb**	**19 08 13.4**	**-1.8**
	2.5nm,0.3s						
KST				Lg	Lg	19 08 58.0	
	12nm,0.6s						
KST	**Kastek**	**3.53**	**3**	*e*P	**Pb**	**19 08 13.4**	**-1.8**
	2.5nm,0.3s						
KST				*e*S	**Sb**	**19 08 58.0**	**+0.4**
	12nm,0.6s						
ANVS	**Anan'yevo**	**3.58**	**24**	⇓*e*P	**Pn**	**19 08 06.6**	**-0.6**
ANVS				⇓*e*S	**Sn**	**19 08 48.2**	**-0.5**
TNSS	**Tian-Shan**	**3.64**	**14**	Pg	**Pb**	**19 08 15.7**	**-1.4**
	1.2nm,0.4s						
TNSS				Lg	Lg	19 09 02.2	
	2.5nm,0.6s						
TNSS	**Tian-Shan**	**3.64**	**14**	*e*P	**Pb**	**19 08 15.7**	**-1.4**
	1.2nm,0.4s						
TNSS				*e*S	**Sb**	**19 09 02.2**	**+1.2**
	2.5nm,0.6s						
MDOK	**Medeo**	**3.78**	**15**	Pg	**Pb**	**19 08 17.7**	**-1.8**
	0.9nm,0.1s						
MDOK				Lg	Lg	19 09 05.3	
	18nm,0.8s						
SGDS	**Sogindy**	**4.02**	**349**	Pg	**Pb**	**19 08 22.1**	**-1.3**
	1.9nm,0.2s						
SGDS				Lg	Lg	19 09 12.8	
	6.1nm,0.8s						
KRBS	**Karabastau**	**4.18**	**360**	Pg	**Pb**	**19 08 24.6**	**-1.6**
	1.4nm,0.6s						
KRBS				Lg	Lg	19 09 17.4	
	7.3nm,0.7s						
KRBS	**Karabastau**	**4.18**	**360**	*e*P	**Pb**	**19 08 24.6**	**-1.6**
	1.4nm,0.6s						
KRBS				*e*S	**Sb**	**19 09 17.4**	**+1.3**
	7.3nm,0.7s						
UZB	**Uzynbulak**	**4.40**	**33**	Pg	**Pb**	**19 08 29.8**	**-0.2**
UZB				Lg	Lg	19 09 26.1	
UZB	**Uzynbulak**	**4.40**	**33**	*e*P	**Pb**	**19 08 29.8**	**-0.2**
	0.9nm,0.1s						
UZB				*e*S	**Sb**	**19 09 26.1**	**+3.4**
	4.5nm,0.6s						

*DNK **13** 19:34:12.8±1.5, 51°.40N×16°.11E, h27km±99km, ML2.0, Presumed earthquake*
*VIE **13** 19:34:14.4±0.4, 51°.52N×16°.09E, h0km, mb2.5/13, ml2.8/14, Error ellipse: s-maj=3.8km s-min=2.9km az=29.0 80 km NW of Wroclaw Suspected Mining induced.*
*IPEC **13** 19:34:14.2±0.2, 51°.53N×16°.18E, h1km, ML2.4/8, Error ellipse: s-maj=1.3km s-min=0.9km az=32.0*
*PRU **13** 19:34:17.1±1.4, 43N×16°.10E, h0km*
ISC 13 19:34:12.9±0.8, 51°.61N±0°.03×16°.15E±0°.02, h0km, n53, σ1°19/97, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.77**	**173**	*i* Pg	**Pg**	**19 34 27.8**	**+0.1**
KSP				*e*Sg	**Sg**	**19 34 37.0**	**-0.7**
CHVC	**Chvalec**	**1.02**	**183**	*e*PG	**Pg**	**19 34 32.5**	**0.0**
CHVC				*e*SG	**Sg**	**19 34 44.7**	**-1.1**
	comp=Z,59nm,0.6s						
OSTC	**Ostas**	**1.05**	**178**	*e*PG	**Pg**	**19 34 33.0**	**-0.1**
OSTC				*e*SG	**Sg**	**19 34 46.1**	**-0.6**
UPC	**Upice**	**1.11**	**185**	*e*PG	**Pg**	**19 34 33.8**	**-0.3**
UPC				*e*SG	**Sg**	**19 34 47.5**	**-0.9**
	comp=Z,108nm,0.4s						
DPC	**Dobruska-Polom**	**1.26**	**175**	*e*PG	**Pg**	**19 34 36.4**	**-0.7**
DPC				*e*SG	**Sg**	**19 34 51.6**	**-1.9**
	comp=Z,37nm,0.6s						
PIVO	**Bartosovice**	**1.45**	**170**	*e*Pg	**Pg**	**19 34 39.9**	**-0.7**
	baz=350						
PIVO				*e*Sg	**Sg**	**19 34 56.8**	**-2.5**
	42nm,0.3s,baz=350						
PVCC	**Panska Ves**	**1.47**	**223**	*e*PG	**Pg**	**19 34 41.0**	**-0.1**
PVCC				*e*SG	**Sb**	**19 34 59.8**	**-0.6**
	comp=Z,124nm,0.4s						
BRG	**Berggiesshubel**	**1.57**	**243**	Pg	**Pb**	**19 34 43.3**	**+0.5**
BRG				Sg	**Sn**	**19 35 03.5**	**+0.4**
BRG				Amp		19 35 04.9	
	comp=Z,66nm,0.4s						
KRLC	**Kraliky**	**1.59**	**165**	*e*PG	**Pn**	**19 34 42.4**	**+0.1**
KRLC				*e*SG	**Sg**	**19 35 02.4**	**-1.4**
	comp=Z,34nm,0.6s						
RICC	**Richard**	**1.68**	**231**	*e*PN	**Pn**	**19 34 44.1**	**+0.6**
ANAC	**Anensky vrch**	**1.72**	**153**	*e*Pn	**Pn**	**19 34 44.0**	**-0.2**
	baz=333						
ANAC				*e*Sg	**Sn**	**19 35 05.7**	**-1.2**
	comp=Z,34nm,0.3s,baz=333						
RYBC	**Ceska Rybna**	**1.80**	**182**	*e*Pn	**Pn**	**19 34 45.0**	**-0.3**
	baz=2.3						
RYBC				*e*Sg	**Sn**	**19 35 08.2**	**-0.6**
	comp=Z,31nm,0.2s,baz=2.3						
PRU	**Pruhonice**	**1.92**	**213**	*e*PG	**Pn**	**19 34 47.5**	**+0.7**
PRU				*e*SG	**Sg**	**19 35 12.9**	**-1.6**
	comp=Z,64nm,0.3s						
STEB	**Steborice**	**1.97**	**148**	*e*PG	**Pb**	**19 34 50.1**	**+0.5**
STEB				*e*SG	**Sb**	**19 35 15.1**	**+0.5**
	comp=Z,46nm,0.5s						
HSKC	**Hora Svate Kat**	**1.99**	**241**	*e*PG	**Pb**	**19 34 50.5**	**+0.6**
HSKC				*e*SG	**Sb**	**19 35 15.1**	**-0.1**
	comp=Z,30nm,0.3s						
MORC	**Moravsky Berou**	**2.04**	**154**	*e*Pn	**Pn**	**19 34 48.1**	**-0.4**
	baz=334						
MORC				*e*Sg	**Sb**	**19 35 15.5**	**-1.2**
	comp=Z,25nm,0.4s,baz=334						
OKC	**Ostrava-Krasne**	**2.18**	**144**	*e*SG	**Sb**	**19 35 21.4**	**+0.6**
VRAC	**Vranov**	**2.32**	**173**	*e*Pn	**Pn**	**19 34 52.2**	**-0.1**
	baz=353						
VRAC				*e*Sg	**Sb**	**19 35 24.0**	**-0.8**
	comp=Z,16nm,0.3s,baz=353						
VRAC	**Vranov**	**2.32**	**173**	*e*PN	**Pn**	**19 34 52.3**	**-0.1**
VRAC				*e*SG	**Sb**	**19 35 24.1**	**-0.8**
TREC	**Trest**	**2.35**	**191**	*e*PN	**Pn**	**19 34 53.1**	**+0.2**
TREC				*e*SG	**Sb**	**19 35 25.8**	**0.0**
ZVC	**Zvikov**	**2.51**	**211**	*e*PN	**Pn**	**19 34 54.5**	**-0.4**
KRUC	**Moravsky**	**2.55**	**176**	*e*Pn	**Pn**	**19 34 55.6**	**0.0**
	baz=357						
KRUC				*e*Sg	**Sb**	**19 35 31.7**	**+0.2**
	comp=Z,11nm,0.3s,baz=357						
KRUC	**Moravsky**	**2.55**	**176**	*e*PN	**Pn**	**19 34 55.7**	**+0.1**
KRUC				*e*SG	**Sb**	**19 35 31.8**	**+0.2**
STAC	**Stalkov**	**2.64**	**192**	*e*Pn	**Pn**	**19 34 56.8**	**0.0**
	baz=12						
STAC				*e*Sg	**Sb**	**19 35 34.3**	**+0.3**
	comp=Z,22nm,0.2s,baz=12						
OJC	**Ojcow**	**2.69**	**120**	*e*Pg	**Pg**	**19 35 05.6**	**+1.1**
OJC				*e*Sg	**Sg**	**19 35 40.2**	**+0.8**
NKC	**Novy Kostel**	**2.72**	**241**	*e*PG	**Pg**	**19 35 04.8**	**-0.2**
NKC				*e*SG	**Sg**	**19 35 39.1**	**-1.1**
	comp=Z,61nm,0.3s						
JAVC	**Velka Javorina**	**2.92**	**160**	*e*Pn	**Pn**	**19 35 00.7**	**0.0**
	baz=341						
KHC	**Kasperske Hory**	**2.98**	**215**	*e*PN	**Pn**	**19 35 01.0**	**-0.4**
KHC				*e*PB	**Pb**	**19 35 07.2**	**+0.4**
KHC				*e*SN	**Sn**	**19 35 36.3**	**-1.6**
KHC				*e*SG	**Sg**	**19 35 45.9**	**-2.6**
	comp=Z,12nm,0.4s						
CKRC	**Cesky Krumlov**	**3.03**	**204**	*e*PN	**Pn**	**19 35 02.3**	**+0.1**
CKRC				*e*PG	**Pb**	**19 35 09.0**	**+1.2**
CKRC				*e*SG	**Sg**	**19 35 47.4**	**-2.9**
	comp=Z,20nm,0.5s						
LANS	**Liptovska Anna**	**3.25**	**138**	*e*PN	**Pn**	**19 35 02.0**	**-3.2**
LANS				*e*PG	**Pb**	**19 35 13.6**	**+2.1**
LANS				*e*SG	**Sg**	**19 35 55.2**	**-2.1**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*PN	**Pn**	**19 35 03.9**	**-2.2**
MODS				*e*PG	**Pg**	**19 35 15.4**	**-1.1**
MODS				*e*SG	**Sg**	**19 35 59.1**	**-0.4**
NIE	**Niedzica**	**3.44**	**128**	*e*Pg	**Pg**	**19 35 18.6**	**-0.2**
NIE				*e*Sg	**Sg**	**19 36 02.5**	**-0.9**
WINA	**Alland / Wiene**	**3.50**	**181**	*i* Pn	**Pn**	**19 35 09.1**	**+0.5**
BSD	**Bornholm Skovb**	**3.59**	**349**	*i* P	**Pn**	**19 35 10.2**	**+0.5**
BSD				*i* S	**Sn**	**19 35 51.1**	**-1.8**
BSD				IAML		19 36 27.9	
	comp=Z,1.4nm,0.4s						
CONA	**Conrad Observa**	**3.69**	**183**	*i* Pn	**Pn**	**19 35 11.6**	**+0.4**
	comp=Z,0.4nm,0.1s						
CONA				*e*Sn	**Sn**	**19 35 57.2**	**+1.8**
	comp=Z,2.6nm,0.2s						
RONA	**Rosalia, Austr**	**3.91**	**179**	*e*Sn	**Sn**	**19 36 03.3**	**+2.4**
	comp=Z,1.8nm,0.3s						
STHS	**Stebnicka Huta**	**3.92**	**122**	*e*PG	**Pg**	**19 35 29.4**	**+1.4**
MOA	**Molln**	**3.96**	**199**	*i* Pn	**Pn**	**19 35 15.1**	**+0.3**
	comp=Z,1.8nm,0.3s						
MOA				Sg	**Sg**	**19 36 18.7**	**-1.3**
	comp=Z,9.9nm,0.3s						
KECS	**Kecovo**	**4.19**	**137**	*e*PG	**Pg**	**19 35 33.1**	**-0.2**
BIOA	**Bad Ischl, Aus**	**4.25**	**204**	*e*Pn	**Pn**	**19 35 19.0**	**+0.1**
	comp=Z,1.3nm,0.3s						
BIOA				*e*Sn	**Sn**	**19 36 10.1**	**+0.9**
	comp=Z,3.2nm,0.4s						
LUNU	**Lund**	**4.34**	**339**	*i* P	**Pn**	**19 35 20.2**	**+0.1**
LUNU				*i* S	**Sn**	**19 36 10.3**	**-1.1**
ARSA	**Arzberg**	**4.38**	**186**	*e*Pn	**Pn**	**19 35 21.4**	**+0.7**
	comp=Z,0.2nm,0.2s						
ARSA				Sg	**Sg**	**19 36 37.5**	**+3.9**
	comp=Z,6.2nm,0.6s						
SESA	**Seetaler Alpe,**	**4.62**	**194**	*i* Pn	**Pn**	**19 35 24.6**	**+0.5**
	comp=Z,0.9nm,0.2s						
SESA				Sg	**Sg**	**19 36 43.3**	**+2.1**
	comp=Z,9.6nm,0.5s						
BLEU	**Blekinge**	**4.71**	**358**	*i* P	**Pn**	**19 35 26.6**	**+1.4**
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**19 35 26.4**	**+0.6**
KOLS				*e*PG	**Pg**	**19 35 44.5**	**+0.5**
KOLS				*e*SN	**Sn**	**19 36 20.2**	**-1.4**
BJUU	**Bjuv**	**4.84**	**339**	*i* P	**Pn**	**19 35 27.1**	**+0.2**
KBA	**Koelnbreinsper**	**4.89**	**203**	*e*Pn	**Pn**	**19 35 28.4**	**+0.6**
	comp=Z,1.3nm,0.4s						
KBA				Sg	**Sg**	**19 36 52.5**	**+2.5**
	comp=Z,2.7nm,0.3s						
DEL	**Delary**	**5.05**	**345**	*i* P	**Pn**	**19 35 29.0**	**-0.9**
DEL				IAML		19 36 30.4	
	comp=Z,0.7nm,0.3s						
WTTA	**Wattenberg**	**5.25**	**216**	*e*Pn	**Pn**	**19 35 33.2**	**+0.4**
	comp=Z,0.1nm,0.1s						
MOTA	**Moosalm**	**5.39**	**220**	*e*Pn	**Pn**	**19 35 35.1**	**+0.5**
	comp=Z,0.3nm,0.2s						
MOTA				*e*Sn	**Sn**	**19 36 36.1**	**-1.3**
	comp=Z,2.1nm,0.6s						
RETA	**Reutte**	**5.41**	**222**	Sg	**Sg**	**19 37 09.1**	**+2.4**
	comp=Z,3.0nm,0.4s						
SQTA	**Sankt Quirin**	**5.45**	**218**	*i* Pn	**Pn**	**19 35 35.8**	**+0.3**
	comp=Z,0.4nm,0.1s						
FABU	**Falkenberg**	**5.76**	**341**	*i* P	**Pn**	**19 35 39.1**	**-0.5**

*GCMT **13** 19:38:35.6±0.5, 21°.73N±0°.04×142°.82E±0°.07, h294km±2km, MW5.0/43, Moment Tensor Solution. s43,c54; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.50±.25; $M_{\theta\theta}$-3.30±.38; $M_{\phi\phi}$-0.19±.49; $M_{r\theta}$-1.10±.39; $M_{\theta\phi}$-1.27±.37; $M_{r\phi}$0.69±.48; Best double couple: M_o3.85900×10^{16} NP1:ϕ_s55.00000°, δ41.00000°, λ66.00000°. NP2:ϕ_s266.00000°, δ53.00000°, λ109.00000°. Principal axes: T 3.8750, Plg73.0000°, Azm230.0000°; N -0.0250, Plg15.0000°, Azm74.0000°; P -3.8440, Plg6.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*NEIC **13** 19:38:35.6±2.1, 21°.70N±0°.07×143°.1E±0°.1, h295km±4km, mb4.8/354 Error ellipse: s-maj=14.9km s-min=9.6km az=82.0*
*GFZ **13** 19:38:35.6±0.5, 22°.N±3°×14°.3E±°, h282km±6km, M4.6/24, mb5.0/24*
*IDC **13** 19:38:36.1±0.8, 21°.65N×143°.06E, h308km±6km, mb4.3/30, mbtmp5.0/33, Error ellipse: s-maj=10.3km s-min=5.6km az=75.0*
*BJI **13** 19:38:36.8, 21°.84N×142°.86E, h307km, mB4.7/14, mb4.5/50*
*JMA **13** 19:38:39.0±0.4, 22°N±2°×14°3E±°, h312km, MV5.7/31, MW4.9/31, MARIANA ISLANDS REGION*
ISC 13 19:38:36.0±0.5, 21°.69N±0°.03×143°.07E±0°.05, h305km±4km, n717, σ1°37/654, mb4.8/252, 7C, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**4.99**	**351**	*e*P	**Pn**	**19 39 53.8**	**+0.2**
JHH2				*e*S	**S**	**19 40 51.3**	**-4.6**
CBIJ	**Chichi jima**	**5.44**	**352**	*e*P	**Pn**	**19 39 58.5**	**-0.4**
CBIJ				*e*S	**S**	**19 41 03.4**	**-2.1**
JCJ	**Chichijima**	**5.44**	**352**	P	**Pn**	**19 39 57.8**	**-1.1**
	606nm,0.3s,baz=180,slow=8.1,SNR=103						
JCJ				S	**S**	**19 41 02.7**	**-2.8**
	1μm,0.4s,baz=232,slow=19,SNR=16						
JCJ	**Chichijima**	**5.44**	**352**	P	**Pn**	**19 39 58.6**	**-0.2**
JCJ	**Chichijima**	**5.44**	**352**	S	**S**	**19 41 05.2**	**-0.3**
JCJ	**Chichijima**	**5.44**	**352**		**Pn**	**19 39 57.5**	**-1.3**
JCJ				Sn	**S**	**19 41 01.8**	**-3.7**
JCJ	**Chichijima**	**5.44**	**352**	P	**Pn**	**19 39 58.8**	**0.0**
DPSS	**Saipan**	**6.91**	**158**		**Pn**	**19 40 16.1**	**-0.4**
GUMO	**Guam**	**8.24**	**168**	P	**Pn**	**19 40 31.9**	**-0.7**
	2μm,1.0s,baz=269,slow=2.7,SNR=43						
GUMO				S	**S**	**19 42 14.6**	**+7.3**
	50nm,0.8s,baz=342,slow=20,SNR=0.8						
GUMO	**Guam**	**8.24**	**168**	P	**Pn**	**19 40 32.1**	**-0.5**
GUMO	**Guam**	**8.24**	**168**		**Pn**	**19 40 32.5**	**-0.1**
GUMO					**S**	**19 42 14.6**	**+7.3**
GUMO	**Guam**	**8.24**	**168**	P	**Pn**	**19 40 32.9**	**+0.3**
JMZ	**Minamidaito 2**	**11.60**	**293**	P	**P**	**19 41 14.8**	**-0.4**
JMZ	**Minamidaito 2**	**11.60**	**293**		**Pn**	**19 41 13.0**	**-0.6**
JMZ	**Minamidaito 2**	**11.60**	**293**	P	Pn	19 41 06.7	-6.9
JMZ	**Minamidaito 2**	**11.60**	**293**	*e*P	**Pn**	**19 41 13.0**	**-0.6**
JHCJ	**Hachijojimakas**	**11.70**	**346**	*e*P	**Pn**	**19 41 14.3**	**-0.5**
JHJ2	**Mitsune**	**11.74**	**346**	P	**Pn**	**19 41 15.0**	**-0.2**
JHJ2	**Mitsune**	**11.74**	**346**		**Pn**	**19 41 13.8**	**-1.3**
JHJ2	**Mitsune**	**11.74**	**346**	P	**Pn**	**19 41 14.8**	**-0.3**
JHJ2	**Mitsune**	**11.74**	**346**	*e*P	**Pn**	**19 41 14.5**	**-0.7**
JHJ	**Hachijo jima 2**	**11.75**	**346**	P	**Pn**	**19 41 14.6**	**-0.8**
	290nm,0.3s,baz=177,slow=19,SNR=44						
JHJ				S	**S**	**19 43 24.3**	**-2.0**
	160nm,0.4s,baz=107,slow=19,SNR=3.9						
JMKN	**Mikurajimanish**	**12.54**	**347**	*e*P	**Pn**	**19 41 24.2**	**-0.6**
BSO1	**Boso 1**	**13.05**	**352**	*e*P	**P**	**19 41 31.0**	**+0.4**
TTO1	**TONANKAI O.B.S**	**13.12**	**336**	*e*P	**P**	**19 41 33.3**	**+1.6**
BSO3	**Boso 3**	**13.26**	**351**	*e*P	**P**	**19 41 33.4**	**+0.3**
BSO4	**Boso 4**	**13.47**	**350**	*e*P	**Pn**	**19 41 36.1**	**+0.2**
JSG	**Sagara**	**13.63**	**343**	P	**Pn**	**19 41 39.3**	**+1.4**
JSG	**Sagara**	**13.63**	**343**	P	**P**	**19 41 37.5**	**-0.1**
JSG	**Sagara**	**13.63**	**343**	P	**Pn**	**19 41 39.5**	**+1.5**
JIE	**Ise**	**13.84**	**337**	*e*P	**Pn**	**19 41 41.0**	**+0.5**
JOW	**Kunigami**	**14.43**	**294**	P	**Pn**	**19 41 49.2**	**+1.5**
JOW	**Kunigami**	**14.43**	**294**		**P**	**19 41 45.1**	**-1.4**
JOW	**Kunigami**	**14.43**	**294**	P	**Pn**	**19 41 49.5**	**+2.0**
JMN	**Monobe**	**14.48**	**328**	P	**Pn**	**19 41 49.2**	**+1.1**
JMN	**Monobe**	**14.48**	**328**	S	**S**	**19 44 29.1**	**+3.3**
JMN	**Monobe**	**14.48**	**328**		**Pn**	**19 41 50.0**	**+1.8**
JMN	**Monobe**	**14.48**	**328**	P	**P**	**19 41 47.3**	**+0.2**
INU	**Inuyama**	**14.61**	**340**	P	**Pn**	**19 41 49.6**	**+0.1**
INU	**Inuyama**	**14.61**	**340**	P	**P**	**19 41 47.5**	**-0.9**
INU	**Inuyama**	**14.61**	**340**	P	**P**	**19 41 49.1**	**+0.7**
JGF	**Kuroka**	**14.73**	**341**	P	**Pn**	**19 41 51.4**	**+0.3**
JGF	**Kuroka**	**14.73**	**341**	S	**S**	**19 44 33.2**	**+2.4**
JGF	**Kuroka**	**14.73**	**341**		**S**	**19 41 49.3**	**-0.6**
JGF	**Kuroka**	**14.73**	**341**	P	**Pn**	**19 41 51.0**	**0.0**
JSU	**Suzuyama**	**14.91**	**314**	P	**Pn**	**19 41 54.0**	**+0.8**
JSU	**Suzuyama**	**14.91**	**314**		**P**	**19 41 52.5**	**+0.7**
JSU	**Suzuyama**	**14.91**	**314**	P	**Pn**	**19 41 54.3**	**+1.1**
MJAR	**Matsushiro Arr**	**15.39**	**345**	P	**P**	**19 41 56.6**	**-0.4**
	36nm,0.6s,baz=165,slow=9.5,SNR=112						
MJAR				S	**S**	**19 44 42.2**	**-1.6**
	17nm,0.9s,baz=150,slow=12,SNR=6.1						
MJAR				ScP	**ScP**	**19 49 45.2**	**-0.3**
	3.5nm,0.9s,baz=167,slow=3.1,SNR=6.8						
MJAR	**Matsushiro Arr**	**15.39**	**345**		**P**	**19 41 56.0**	**-1.0**
MJAR					**S**	**19 44 42.2**	**-1.6**
MJAR					**ScP**	**19 49 46.0**	**+0.5**
MAJO	**Matsushiro**	**15.39**	**345**	P	**P**	**19 41 57.6**	**+0.6**
MAJO	**Matsushiro**	**15.39**	**345**	S	**S**	**19 44 46.5**	**+2.6**
MAJO	**Matsushiro**	**15.39**	**345**		**P**	**19 41 56.8**	**-0.2**
MAJO	**Matsushiro**	**15.39**	**345**	P	**Pn**	**19 41 58.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**15.40**	**345**	P	**P**	**19 41 57.4**	**+0.3**
YOJ	**Yonaguni jima**	**18.66**	**282**	P	**P**	**19 42 33.1**	**+0.7**
JTM	**Tenmabayashi**	**19.11**	**355**	P	**P**	**19 42 38.9**	**+1.8**

KKM	**Kota Kinabalu**	**30.27**	**243**	P	**P**	**19 44 20.1**	**+0.3**
KKM				IAmb	IAmb	19 44 21.6	
	comp=Z,42nm,0.9s						
KKM	**Kota Kinabalu**	**30.27**	**243**	P	**P**	**19 44 20.5**	**+0.8**
	comp=Z,57nm,0.9s						
KKM	**Kota Kinabalu**	**30.27**	**243**	P	**P**	**19 44 20.8**	**+1.0**
HEH	**HeiHe**	**31.06**	**340**	*e*P	**P**	**19 44 27.0**	**+0.9**
HEH				PcP	**PcP**	**19 47 13.6**	**+0.2**
HEH				S	**S**	**19 49 08.6**	**+0.5**
HEH				ScP	**ScP**	**19 50 26.8**	**0.0**
HEH				ScS	**ScS**	**19 54 23.8**	**-0.6**
HEH				pmax	pmax		
	comp=Z,49nm,1.0s						
PCI	**Palu**	**31.92**	**228**	P	**P**	**19 44 33.5**	**-0.5**
	comp=Z,50nm,1.0s						
XAN	**Xi'an**	**32.45**	**300**	P	**P**	**19 44 38.3**	**-0.1**
XAN				PcP	**PcP**	**19 47 17.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC	**Hu-ho-hao-te**	**32.76**	**313**	*e*P	**P**	**19 44 42.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
PETK	**Petropavlovsk-**	**33.31**	**16**	P	**P**	**19 44 46.3**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=208,slow=7.5,SNR=3.9						
PETK				PP	**PP**	**19 46 09.0**	**+0.8**
	comp=Z,3.0nm,1.0s,baz=219,slow=10,SNR=4.2						
PETK				PcP	**PcP**	**19 47 18.0**	**-1.7**
	comp=Z,6.4nm,0.8s,baz=226,slow=6.2,SNR=8.2						
PETK				ScP	**ScP**	**19 50 33.7**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=217,slow=6.5,SNR=4.6						
HILR	**Hailar Array B**	**33.38**	**332**	P	**P**	**19 44 46.8**	**+0.5**
	comp=Z,12nm,0.6s,baz=134,slow=9.1,SNR=7.9						
HILR				ScP	**ScP**	**19 50 34.9**	**0.0**
	comp=Z,1.0nm,0.4s,baz=143,slow=3.6,SNR=1.6						
	comp=Z,12nm,0.6s						
MMSI	**Mamuju**	**33.84**	**227**	P	**P**	**19 44 49.4**	**-1.2**
	comp=Z,17nm,0.5s						
BKB	**Balikpapan**	**34.26**	**232**	P	**P**	**19 44 54.6**	**+0.5**
BKB	**Balikpapan**	**34.26**	**232**	P	**P**	**19 44 54.3**	**+0.2**
BKB	**Balikpapan**	**34.26**	**232**	P	**P**	**19 44 53.3**	**-0.8**
	comp=Z,332nm,1.1s						
BKB	**Balikpapan**	**34.26**	**232**	P	**P**	**19 44 55.0**	**+0.9**
DLV	**Lat**	**34.42**	**259**	P	**P**	**19 44 57.0**	**+1.3**
DLV	**Lat**	**34.42**	**259**	P	**P**	**19 44 56.3**	**+0.6**
DLV	**Lat**	**34.42**	**259**	P	**P**	**19 44 57.5**	**+1.7**
COEN	**Coen**	**35.42**	**180**	P	**P**	**19 45 03.2**	**-0.8**
	comp=Z,317nm,0.8s						
KDU	**Kakadu**	**35.71**	**198**	P	**P**	**19 45 05.1**	**-1.3**
	comp=Z,16nm,2.5s						
CD2	**Chengdu**	**36.26**	**293**	P	**P**	**19 45 11.4**	**+0.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
MTN	**Manton Dam**	**36.26**	**200**	P	**P**	**19 45 09.7**	**-1.4**
	comp=Z,35nm,0.9s						
MTN	**Manton Dam**	**36.26**	**200**	P	**P**	**19 45 09.6**	**-1.4**
MTN				IAmb	IAmb	19 45 11.3	
	comp=Z,70nm,1.5s						
SOEI	**Soe**	**36.29**	**212**	P	**P**	**19 45 08.2**	**-3.2**
SLVN	**Son La**	**36.37**	**277**	P	**P**	**19 45 13.1**	**+1.0**
SLVN	**Son La**	**36.37**	**277**	P	**P**	**19 45 13.2**	**+1.2**
SLVN				IAmb	IAmb	19 45 14.4	
	comp=Z,16nm,0.7s						
LZH	**Lanzhou**	**36.96**	**302**	*e*P	**P**	**19 45 17.8**	**+0.9**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZDM	**Lanzhou Array**	**37.05**	**301**	P	**P**	**19 45 19.0**	**+1.1**
	comp=Z,10.0nm,0.4s,baz=124,slow=13,SNR=20						
	comp=Z,10.0nm,0.4s						
KMI2	**Kunming**	**37.06**	**283**	⇑P	**P**	**19 45 19.6**	**+1.6**
KMI2				pmax	pmax		
	comp=Z,14nm,0.9s						
ULN	**Ulaanbaatar**	**38.90**	**321**	P	**P**	**19 45 31.8**	**-1.1**
ULN	**Ulaanbaatar**	**38.90**	**321**	P	**P**	**19 45 31.7**	**-1.2**
	comp=Z,21nm,0.8s						
ULN	**Ulaanbaatar**	**38.90**	**321**	P	**P**	**19 45 33.5**	**+0.6**
SONM	**Songino Array**	**39.27**	**321**	P	**P**	**19 45 36.7**	**+0.8**
	comp=Z,2.3nm,0.4s,baz=126,slow=6.5,SNR=28						
SONM				PcP	**PcP**	**19 47 37.3**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=130,slow=2.3,SNR=4.5						
SONM				ScP	**ScP**	**19 50 56.9**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=119,slow=2.9,SNR=4.9						
SONM				S	**S**	**19 51 12.3**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=110,slow=12,SNR=1.7						
	comp=Z,2.3nm,0.4s						
SONM	**Songino Array**	**39.27**	**321**	P	**P**	**19 45 36.8**	**+0.8**
SONM					**PcP**	**19 47 37.3**	**-0.6**
SONM					**ScP**	**19 50 56.9**	**-0.1**
SONM					**S**	**19 51 12.3**	**-1.1**
KNRA	**Kununurra**	**39.70**	**202**	P	**P**	**19 45 38.7**	**-0.8**
	comp=Z,38nm,0.8s						
KNRA	**Kununurra**	**39.70**	**202**	P	**P**	**19 45 38.4**	**-1.1**
KNRA				IAmb	IAmb	19 45 39.6	
	comp=Z,28nm,0.6s						
KHKI	**Kahang-Kahang**	**40.23**	**225**	P	**P**	**19 45 45.1**	**+1.2**
	comp=Z,119nm,1.0s						
GTA2	**Gaotai**	**40.85**	**306**	*e*P	**P**	**19 45 49.9**	**+1.0**
GTA2				PcP	**PcP**	**19 47 44.0**	**+0.8**
GTA2				S	**S**	**19 51 37.1**	**+0.3**
GTA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA2				L	L		
	comp=Z,190nm,16.8s						
GTA2				L	L		
	comp=Z,190nm,15.6s						
GTA2				L	L		
	comp=Z,140nm,17.1s						
TNCH	**TengChong**	**40.90**	**284**	⇑P	**P**	**19 45 50.1**	**+0.6**
TNCH				PcP	**PcP**	**19 47 44.8**	**+1.1**
TNCH				S	**S**	**19 51 31.5**	**-6.5**
TNCH				pmax	pmax		
	comp=Z,29nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,170nm,5.0s						
JAGI	**Jajag, Banyuwa**	**41.27**	**226**	P	**P**	**19 45 51.9**	**-0.6**
JAGI				IAmb	IAmb	19 45 52.2	
	comp=Z,53nm,0.9s						
YAK	**Yakutsk**	**41.36**	**350**	P	**P**	**19 45 52.3**	**-0.2**
YAK	**Yakutsk**	**41.36**	**350**	P	**P**	**19 45 53.0**	**+0.5**
YAK	**Yakutsk**	**41.36**	**350**	P	**P**	**19 45 52.5**	**+0.1**
YAK				PcP	**PcP**	**19 47 44.1**	**-0.1**
YAK				ScP	**ScP**	**19 51 04.5**	**-0.1**
CHTO	**Chiang Mai**	**41.39**	**274**	P	**P**	**19 45 53.9**	**+0.5**
CHTO	**Chiang Mai**	**41.39**	**274**	P	**P**	**19 45 53.5**	**0.0**
CHTO	**Chiang Mai**	**41.39**	**274**	P	**P**	**19 45 54.0**	**+0.5**
CHTO	**Chiang Mai**	**41.39**	**274**	P	**P**	**19 45 54.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**41.47**	**274**	P	**P**	**19 45 55.0**	**+1.0**
	comp=Z,9.5nm,0.6s,baz=89,slow=7.7,SNR=67						
CMAR				PcP	**PcP**	**19 47 44.9**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=93,slow=3.4,SNR=6.9						
	comp=Z,9.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.47**	**274**	P	**P**	**19 45 54.7**	**+0.7**
CMAR					**PcP**	**19 47 46.6**	**+1.1**
CTA	**Charters Tower**	**41.64**	**175**	P	**P**	**19 45 55.5**	**+0.2**
	comp=Z,10nm,1.7s						
CTAO	**Charters Tower**	**41.64**	**175**	P	**P**	**19 45 55.5**	**+0.2**
WB0	**Warramunga Arr**	**42.07**	**192**	IAmb	IAmb	19 45 59.0	
	comp=Z,24nm,0.5s						
QIS	**Mount Isa**	**42.12**	**185**	P	**P**	**19 45 58.7**	**-0.5**
	comp=Z,14nm,2.4s						
QIS	**Mount Isa**	**42.12**	**185**	P	**P**	**19 45 59.0**	**-0.2**
WR8	**Warramunga Arr**	**42.23**	**192**	P	**P**	**19 45 59.2**	**-0.8**
WRAB	**Tennant Creek**	**42.24**	**192**	P	**P**	**19 45 59.2**	**-0.9**
WRAB	**Tennant Creek**	**42.24**	**192**	P	**P**	**19 45 57.8**	**-2.3**
WRAB				IAmb	IAmb	19 45 60.0	
	comp=Z,37nm,0.6s						
WRAB	**Tennant Creek**	**42.24**	**192**	P	**P**	**19 45 57.8**	**-2.3**
WRAB	**Tennant Creek**	**42.24**	**192**	P	**P**	**19 45 59.2**	**-0.9**
WRA	**Warramunga Arr**	**42.25**	**192**	P	**P**	**19 45 59.5**	**-0.7**
	comp=Z,26nm,0.6s,baz=13,slow=8.0,SNR=312						
WRA				PcP	**PP**	**19 47 46.3**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=19,slow=3.9,SNR=5.8						
WRA				ScP	**ScP**	**19 51 09.2**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=14,slow=4.1,SNR=5.2						
WRA				S	**S**	**19 51 54.6**	**-2.8**
	comp=Z,6.5nm,1.1s,baz=13,slow=14,SNR=8.1						
	comp=Z,26nm,0.6s						
WRA	**Warramunga Arr**	**42.25**	**192**	P	**P**	**19 45 58.0**	**-2.2**
WRA					**PP**	**19 47 46.3**	**+0.9**
WRA					**ScP**	**19 51 09.2**	**+0.3**
WB1	**Warramunga Ar.**	**42.26**	**192**	P	**P**	**19 45 60.0**	**-0.3**
WC4	**Warramunga Arr**	**42.27**	**192**	P	**P**	**19 46 00.0**	**-0.3**
TPI	**Tanjungpandan**	**42.30**	**239**	P	**P**	**19 46 00.5**	**-0.3**
	comp=Z,1µmcomp=Z,81nm,0.8s						
SNJI	**Sawahan-Nganju**	**42.44**	**230**	P	**P**	**19 46 02.3**	**+0.3**
	comp=Z,147nm,1.2s						

MYKOM	**Kota Tinggi**	**42.98**	**248**	P	**P**	**19 46 07.8**	**+1.7**
MYKOM	**Kota Tinggi**	**42.98**	**248**	P	**P**	**19 46 07.6**	**+1.5**
MYKOM				IAmb	IAmb	19 46 08.4	
	comp=Z,33nm,0.7s						
MYKOM	**Kota Tinggi**	**42.98**	**248**	P	**P**	**19 46 07.1**	**+1.0**
	comp=Z,50nm,0.7s						
KIWB	**Kanaga Island**	**42.99**	**36**	P	**P**	**19 46 07.5**	**+1.8**
FITZ	**Fitzroy Crossi**	**43.07**	**205**	P	**P**	**19 46 06.2**	**-0.5**
PPBI	**Pangkal Pinang**	**43.18**	**241**	P	**P**	**19 46 07.6**	**-0.2**
ADK	**Adak**	**43.26**	**36**	P	**P**	**19 46 09.4**	**+1.6**
UGM	**Wanagama**	**43.41**	**231**	P	**P**	**19 46 09.1**	**-0.5**
NPW	**Nanpyitaw**	**43.80**	**276**	P	**P**	**19 46 14.0**	**+1.4**
KULM	**Kulim**	**44.16**	**255**	P	**P**	**19 46 16.8**	**+1.2**
KULM	**Kulim**	**44.16**	**255**	P	**P**	**19 46 16.8**	**+1.2**
KULM	**Kulim**	**44.16**	**255**	P	**P**	**19 46 17.1**	**+1.6**
	comp=Z,1µmcomp=Z,124nm,0.8s						
KULM	**Kulim**	**44.16**	**255**	P	**P**		
ATKA	**Atka Island**	**44.77**	**36**	P	**P**	**19 46 17.3**	**+1.8**
JMBI	**JAMBI**	**44.95**	**244**	P	**P**	**19 46 20.5**	**+0.8**
BBJI	**Bungbulang**	**45.23**	**234**	P	**P**	**19 46 24.9**	**+3.2**
BBJI				IAmb	IAmb	**19 46 22.2**	**-1.7**
	comp=Z,32nm,1.0s					19 46 23.5	
AS15	**Alice Springs**	**45.92**	**192**	P	**P**	**19 46 28.5**	**-0.6**
	comp=Z,14nm,0.5s						
AS17	**Alice Springs**	**45.94**	**192**	P	**P**	**19 46 28.6**	**-0.6**
	comp=Z,13nm,0.7s						
AS01	**Alice Springs**	**45.95**	**192**	P	**P**	**19 46 28.5**	**-0.8**
AS31	**Alice Springs**	**45.95**	**192**	P	**P**	**19 46 28.6**	**-0.7**
	comp=Z,7.5nm,0.6s						
ASAR	**Alice Springs**	**45.96**	**192**	P	**P**	**19 46 28.3**	**-1.1**
	comp=Z,6.3nm,0.6s,baz=13,slow=7.6,SNR=109						
ASAR				PcP	**PcP**	**19 47 59.8**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=12,slow=3.5,SNR=4.7						
ASAR				ScP	**ScP**	**19 51 25.4**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=12,slow=6.1,SNR=3.2						
ASAR				S	**S**	**19 52 48.1**	**-2.5**
	comp=Z,3.7nm,0.7s,baz=14,slow=13,SNR=16						
	comp=Z,6.3nm,0.6s						
AS09	**Alice Springs**	**45.98**	**192**	P	**P**	**19 46 28.9**	**-0.7**
	comp=Z,11nm,0.8s						
AUALC	**St Philip's Co**	**45.98**	**192**	P	**P**	**19 46 29.2**	**-0.4**
BKNI	**Bangkinang**	**46.14**	**248**	P	**P**	**19 46 32.3**	**+1.3**
BKNI	**Bangkinang**	**46.14**	**248**	P	**P**	**19 46 30.8**	**-0.1**
BKNI	**Bangkinang**	**46.14**	**248**	P	**P**	**19 46 31.0**	**0.0**
	comp=Z,186nm,0.8s						
BKNI	**Bangkinang**	**46.14**	**248**	P	**P**	**19 46 32.5**	**+1.6**
PSI	**Prapat**	**46.81**	**253**	P	**P**	**19 46 37.4**	**+1.1**
PSI	**Prapat**	**46.81**	**253**	P	**P**	**19 46 37.3**	**+1.0**
	comp=Z,55nm,0.9s						
SHL	**Shillong**	**46.82**	**285**	P	**P**	**19 46 36.1**	**-0.3**
SHL				IAmb	IAmb	19 46 37.4	
	comp=Z,30nm,0.9s						
RPSI	**Rantau Prapat**	**46.85**	**252**	IAmb	IAmb	19 46 38.3	
	comp=Z,64nm,1.1s						
KSI	**Kapahiang**	**46.93**	**242**	P	**P**	**19 46 36.7**	**-0.5**
	comp=Z,3µmcomp=Z,162nm,0.7s						
PPI	**Padang Panjang**	**47.09**	**248**	P	**P**	**19 46 39.0**	**+0.7**
	comp=Z,68nm,0.9s						
LSA	**Lhasa**	**47.14**	**291**	P	**P**	**19 46 40.1**	**+1.0**
LSA	**Lhasa**	**47.14**	**291**	P	**P**	**19 46 40.8**	**+1.7**
QLP	**Quilpie**	**48.00**	**179**	P	**P**	**19 46 44.3**	**-0.7**
	comp=Z,22nm,1.2s						
QLP	**Quilpie**	**48.00**	**179**	P	**P**	**19 46 44.2**	**-0.7**
TPTI		**48.16**	**254**	P	**P**	**19 46 45.6**	**-0.8**
	comp=Z,56nm,0.8s						
MBWA	**Marble Bar**	**48.30**	**210**	P	**P**	**19 46 47.4**	**+0.1**
	comp=Z,24nm,1.3s						
MBWA	**Marble Bar**	**48.30**	**210**	P	**P**	**19 46 47.1**	**-0.3**
WRKA	**Warakurna**	**48.61**	**198**	P	**P**	**19 46 48.1**	**-1.6**
GSI	**Gunungsitoli**	**48.69**	**252**	P	**P**	**19 46 50.8**	**+0.3**
GSI	**Gunungsitoli**	**48.69**	**252**	P	**P**	**19 46 50.6**	**+0.1**
	comp=Z,159nm,0.7s						
GSI	**Gunungsitoli**	**48.69**	**252**	P	**P**	**19 46 50.9**	**+0.3**
DZM	**Mont Dzumac**	**49.11**	**151**	P	**P**	**19 46 53.4**	**-0.2**
	comp=Z,8.7nm,0.9s,baz=333,slow=11,SNR=2.9						
	comp=Z,8.7nm,0.9s						
AKUT	**Akutan**	**50.19**	**37**	P	**P**	**19 47 01.8**	**+0.7**
AKUT	**Akutan**	**50.19**	**37**	P	**P**	**19 47 01.6**	**+0.5**
AKUT				IAmb	IAmb	19 47 03.1	
	comp=Z,51nm,0.8s						
WMQ	**Urumqi**	**50.50**	**309**	*e*P	**P**	**19 47 05.6**	**+1.8**
WMQ				PcP	**PcP**	**19 48 17.5**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,17nm,1.7s						
WMQ				L	L		
	comp=Z,72nm,15.1s						
M11K	**Mekoryuk**	**52.32**	**29**	P	**P**	**19 47 18.3**	**+1.6**
	baz=245						
CMSA	**Cobar Meteorol**	**52.98**	**177**	P	**P**	**19 47 22.1**	**+0.2**
STKA	**Stephens Creek**	**53.28**	**182**	P	**P**	**19 47 23.6**	**-0.4**
	comp=Z,59nm,1.0s						
STKA	**Stephens Creek**	**53.28**	**182**	P	**P**	**19 47 23.1**	**-1.0**
	comp=Z,4.5nm,0.4s,baz=4.7,slow=10.0,SNR=20						
STKA				S	**S**	**19 54 29.3**	**-2.1**
	comp=Z,1.3nm,0.7s,baz=8.9,slow=19,SNR=1.9						
	comp=Z,4.5nm,0.4s						
STKA	**Stephens Creek**	**53.28**	**182**	P	**P**	**19 47 23.5**	**-0.6**
SDPT	**Sand Point**	**53.48**	**36**	P	**P**	**19 47 25.8**	**+0.6**
	baz=255						
M13K	**Dall Lake**	**53.63**	**30**	P	**P**	**19 47 27.8**	**+1.5**
	baz=248						
K13K	**Kusilvak Mount**	**53.64**	**28**	P	**P**	**19 47 28.4**	**+2.1**
	baz=246,SNR=7.9						
FORT	**Forrest**	**54.12**	**196**	P	**P**	**19 47 29.9**	**-0.2**
	comp=Z,27nm,0.7s						
ZAA0	**Zalesovo Array**	**54.15**	**322**	P	**P**	**19 47 29.9**	**-0.2**
ZAA0				IAmb	IAmb	19 48 30.6	
	comp=Z,14nm,0.5s						
ZALV	**Zalesovo Beam**	**54.15**	**322**	P	**P**	**19 47 30.3**	**+0.2**
	comp=Z,8.8nm,0.7s,baz=106,slow=7.6,SNR=45						
ZALV				PcP	**PcP**	**19 48 29.7**	**-0.7**
	comp=Z,14nm,0.4s,baz=118,slow=3.9,SNR=27						
ZALV				S	**S**	**19 54 42.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=107,slow=9.7,SNR=4.9						
	comp=Z,8.8nm,0.7s						
O14K	**Tigyukauivet M**	**54.22**	**32**	P	**P**	**19 47 32.0**	**+1.5**
	baz=251						
S14K	**Fog Glacier**	**54.23**	**35**	P	**P**	**19 47 31.5**	**+0.8**
	baz=255						
N14K	**Kuskokwak Cree**	**54.24**	**31**	IAmb	IAmb	19 47 33.2	
	comp=Z,33nm,1.1s						
N14K	**Kuskokwak Cree**	**54.24**	**31**	P	**P**	**19 47 32.3**	**+1.8**
	baz=250						
L14K	**Kuka Creek**	**54.28**	**29**	P	**P**	**19 47 32.8**	**+1.9**
	baz=248,SNR=7.3						
M14K	**Bethel**	**54.39**	**30**	IAmb	IAmb	19 47 34.6	
	comp=Z,32nm,1.1s						
M14K	**Bethel**	**54.39**	**30**	P	**P**	**19 47 33.6**	**+1.9**
	baz=250						
ANM	**Nome**	**54.47**	**25**	P	**P**	**19 47 34.2**	**+1.9**
	baz=244						
F14K	**Arctic Creek**	**54.53**	**23**	P	**P**	**19 47 34.6**	**+2.0**
	baz=242						
MKAR	**Makanchi Array**	**54.62**	**313**	P	**P**	**19 47 34.3**	**+0.6**
	comp=Z,6.6nm,0.7s,baz=90,slow=9.2,SNR=65						
MKAR				PcP	**PcP**	**19 48 32.6**	**+0.1**
	comp=Z,6.9nm,0.6s,baz=92,slow=3.7,SNR=13						
MKAR				ScP	**ScP**	**19 52 00.4**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=92,slow=5.1,SNR=4.6						
MKAR				S	**S**	**19 54 50.4**	**+1.2**
	comp=Z,1.4nm,1.0s,baz=95,slow=18,SNR=6.3						
MKAR				PKP2bc	**P'P'bc**	**20 17 54.3**	**-6.6**
	comp=Z,0.5nm,0.8s,baz=270,slow=0.4,SNR=4.1						
	comp=Z,6.6nm,0.7s						
MAKZ	**Makanchi**	**54.84**	**313**	P	**P**	**19 47 35.6**	**+0.4**
MAKZ	**Makanchi**	**54.84**	**313**	P	**P**	**19 47 36.0**	**+0.8**
MAKZ				PcP	**PcP**	**19 48 32.9**	**-0.4**
CHGN	**Chignik**	**54.85**	**36**	P	**P**	**19 47 35.1**	**+0.1**
CHGN				IAmb	IAmb	19 47 35.7	
	comp=Z,22nm,0.5s						
CHGN	**Chignik**	**54.85**	**36**	P	**P**	**19 47 35.4**	**+0.4**
	baz=256,SNR=7.6						
O15K	**Ungalikthiuk R**	**54.90**	**32**	IAmb	IAmb	19 47 37.7	
	comp=Z,36nm,1.3s						
O15K	**Ungalikthiuk R**	**54.90**	**32**	P	**P**	**19 47 36.9**	**+1.5**
	baz=253,SNR=12						
L15K	**Ungalak Mounta**	**54.93**	**29**	P	**P**	**19 47 36.7**	**+1.2**
	baz=249						
M15K	**Kasigluk River**	**54.96**	**30**	P	**P**	**19 47 37.2**	**+1.4**
	baz=251,SNR=6.1						
N15K	**Kwethluk River**	**55.07**	**31**	IAmb	IAmb	19 47 39.2	
	comp=Z,26nm,0.9s						
N15K	**Kwethluk River**	**55.07**	**31**	P	**P**	**19 47 38.3**	**+1.7**
	baz=252,SNR=13						
G15K	**Niukluk**	**55.17**	**24**	P	**P**	**19 47 38.8**	**+1.5**
	baz=245						

F15K	**North Star Dit**	**55.26**	**23**	P	**P**	**19 47 39.1**	**+1.3**
	baz=244						
H16K	**Elim**	**55.73**	**25**	P	**P**	**19 47 42.4**	**+1.2**
	baz=247						
N16K	**Nishlik Lake**	**55.79**	**31**	P	**P**	**19 47 43.7**	**+2.0**
	baz=253,SNR=19						
L16K	**Owhat River**	**55.85**	**29**	P	**P**	**19 47 43.5**	**+1.5**
	baz=251,SNR=6.5						
O16K	**Kokwok River B**	**55.87**	**32**	P	**P**	**19 47 43.8**	**+1.6**
	baz=254,SNR=14						
M16K	**Timber Creek**	**55.87**	**30**	P	**P**	**19 47 43.7**	**+1.5**
	baz=252,SNR=8.0						
J16K	**Anvik River**	**55.89**	**27**	P	**P**	**19 47 44.3**	**+1.9**
	baz=249						
I17K	**Unalakleet**	**56.07**	**26**	P	**P**	**19 47 45.4**	**+1.9**
	baz=249						
C16K	**Lisburne Hills**	**56.21**	**21**	P	**P**	**19 47 45.2**	**+0.7**
	baz=241						
R17L	**Mt. Peulik Vol**	**56.25**	**34**	P	**P**	**19 47 45.7**	**+0.7**
	baz=257						
N17K	**Nushagak Hills**	**56.56**	**31**	P	**P**	**19 47 49.0**	**+1.9**
	baz=254,SNR=10						
M17K	**Holitna River**	**56.68**	**30**	P	**P**	**19 47 49.8**	**+1.9**
	baz=254,SNR=8.1						
G17K	**Kiwalik Mounta**	**56.69**	**25**	P	**P**	**19 47 49.1**	**+1.2**
	baz=248						
K17K	**Iditarod**	**56.69**	**28**	IAmb	IAmb	19 47 51.1	
	comp=Z,36nm,0.9s						
K17K	**Iditarod**	**56.69**	**28**	P	**P**	**19 47 49.5**	**+1.6**
	baz=252,SNR=19						
D17K	**Noatak River**	**56.70**	**22**	P	**P**	**19 47 49.6**	**+1.6**
	baz=244						
H17K	**Granite Mounta**	**56.77**	**25**	P	**P**	**19 47 50.0**	**+1.5**
	baz=249,SNR=5.9						
F17K	**Baldwin Pennin**	**56.83**	**23**	P	**P**	**19 47 50.5**	**+1.7**
	baz=247						
E17K	**Hotham Inlet**	**56.88**	**23**	P	**P**	**19 47 50.7**	**+1.5**
	baz=246						
C17K	**DeLong Mountai**	**57.02**	**21**	P	**P**	**19 47 51.5**	**+1.3**
	baz=243						
Q18K	**Katmai Hardscr**	**57.18**	**33**	P	**P**	**19 47 51.5**	**-0.1**
	baz=258,SNR=9.2						
SII	**Sitkinak Islan**	**57.20**	**36**	P	**P**	**19 47 52.4**	**+0.7**
	baz=260						
P18K	**Big Mountain,**	**57.23**	**32**	P	**P**	**19 47 52.3**	**+0.4**
	baz=257						
KURK	**Kurchatov**	**57.41**	**317**	P	**P**	**19 47 53.4**	**+0.2**
KURK					**PcP**	**19 48 42.8**	**-0.4**
KURK	**Kurchatov**	**57.41**	**317**	P	**P**	**19 47 53.3**	**+0.2**
KURK				PcP	**PcP**	**19 48 42.7**	**-0.5**
E18K	**Tukpahlearik C**	**57.45**	**22**	P	**P**	**19 47 55.2**	**+2.1**
	baz=247						
M18K	**Stony River**	**57.45**	**30**	P	**P**	**19 47 55.1**	**+1.8**
	baz=255,SNR=15						
KURBB	**Kurchatov Arra**	**57.46**	**317**	P	**P**	**19 47 54.0**	**+0.5**
	comp=Z,21nm,0.5s,baz=94,slow=7.5,SNR=326						
KURBB				PcP	**PcP**	**19 48 42.8**	**-0.6**
	comp=Z,5.2nm,0.7s,baz=94,slow=4.5,SNR=6.7						
KURBB				S	**S**	**19 55 25.7**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=92,slow=11,SNR=4.8						
	comp=Z,21nm,0.5s						
H18K	**Honhosa River**	**57.46**	**25**	P	**P**	**19 47 54.4**	**+1.2**
	baz=250						
F18K	**Selawik**	**57.48**	**23**	P	**P**	**19 47 54.4**	**+1.1**
	baz=248						
G18K	**Tagagawik**	**57.60**	**24**	P	**P**	**19 47 55.7**	**+1.5**
	baz=250,SNR=7.4						
C18K	**Utukok River**	**57.75**	**21**	P	**P**	**19 47 56.1**	**+0.9**
	baz=245						
OHAK	**Old Harbor**	**57.80**	**35**	P	**P**	**19 47 56.5**	**+0.8**
	baz=260						
NRIK	**Noril'sk**	**57.97**	**340**	P	**P**	**19 47 56.8**	**+0.1**
	comp=Z,9.9nm,0.6s,baz=117,slow=9.8,SNR=13						
NRIK				PcP	**PcP**	**19 48 45.2**	**+0.1**
	comp=Z,6.3nm,0.6s,baz=128,slow=5.1,SNR=4.4						
	comp=Z,9.9nm,0.6s						
NRIK	**Noril'sk**	**57.97**	**340**		**PcP**	**19 48 45.2**	**+0.1**
ARPS	**Mount Arapiles**	**58.15**	**181**	P	**P**	**19 47 58.4**	**0.0**
	comp=Z,15nm,1.1s						
F19K	**Shaleruckik Mo**	**58.26**	**24**	P	**P**	**19 47 59.7**	**+1.0**
	baz=250,SNR=5.6						
KDAK	**Kodiak Island**	**58.27**	**35**	P	**P**	**19 47 59.5**

baz=260
G23K **Bananza Creek** 61.17 25 P P 19 48 20.6 +2.0
baz=258,SNR=19
P23K **Montague Islan** 61.24 32 P P 19 48 20.2 +1.2
baz=264
ARSB **Arslanbob** 61.29 306 IAmb IAmb 19 48 21.8
comp=Z,14nm,0.7s
WAT6 **Susiitna Watana** 61.41 30 P P 19 48 21.1 +0.8
baz=262
D23K **Nanushuk River** 61.45 22 P P 19 48 22.5 +2.2
baz=256,SNR=14
SCM **Sheep Creek Mo** 61.50 30 P P 19 48 21.8 +1.0
baz=263
E23K **Chandalar** 61.62 23 IAmb IAmb 19 48 24.8
comp=Z,51nm,1.4s
E23K **Chandalar** 61.62 23 P P 19 48 23.9 +2.3
baz=257,SNR=30
C23K **Itkillik River** 61.70 21 P P 19 48 23.8 +1.9
baz=255,SNR=39
NIL **Nilore** 61.94 297 P P 19 48 24.9 +0.7
NIL IAmb IAmb 19 48 26.5
comp=Z,17nm,0.8s
E24K **Your Creek** 62.04 23 P P 19 48 26.3 +2.0
baz=258,SNR=16
M24K **Tolsona, Glenn** 62.07 30 P P 19 48 26.0 +1.4
baz=264
ILAR **Eielson Array** 62.10 27 P P 19 48 24.3 -0.4
comp=Z,9.0nm,0.8s,baz=261,slow=6.4,SNR=78
ILAR S S 19 56 23.9 -0.7
comp=Z,0.2nm,0.7s,baz=263,slow=13,SNR=4.4
comp=Z,9.0nm,0.8s
ILAR **Eielson Array** 62.10 27 P P 19 48 24.2 -0.5
EYAK **Cordova Ski Ar** 62.12 32 P P 19 48 26.1 +1.3
baz=265
D24K **Happy Valley** 62.15 22 IAmb IAmb 19 48 27.8
comp=Z,24nm,1.1s
D24K **Happy Valley** 62.15 22 P P 19 48 26.9 +2.0
baz=257,SNR=14
F24K **Squaw Lake** 62.16 24 P P 19 48 27.1 +2.1
baz=259,SNR=10
G24K **Hadweenzic Riv** 62.16 25 IAmb IAmb 19 48 28.0
comp=Z,18nm,1.1s
G24K **Hadweenzic Riv** 62.16 25 P P 19 48 27.0 +1.9
baz=260,SNR=14
BVAR **Borovoye Array** 62.61 319 P P 19 48 29.0 +0.8
comp=Z,41nm,0.3s,baz=91,slow=7.3,SNR=246
BVAR PcP PcP 19 49 04.1 -0.1
comp=Z,11nm,0.6s,baz=104,slow=4.2,SNR=6.2
BVAR S S 19 56 29.7 -1.6
comp=Z,3.4nm,1.0s,baz=88,slow=8.8,SNR=8.5
comp=Z,41nm,0.3s
BORK **Borovoye** 62.65 320 P P 19 48 29.4 +0.9
MANEM **Manem** 62.68 302 IAmb IAmb 19 48 31.4
comp=Z,23nm,0.6s
G25K **Bearman Lake** 62.72 25 P P 19 48 30.5 +1.9
baz=261
N25K **Chitina, Valde** 62.77 31 P P 19 48 30.4 +1.2
baz=265
RIDG **Independent Ri** 62.85 28 P P 19 48 30.5 +0.8
baz=264
KK31 **Karatay Array** 62.98 308 IAmb IAmb 19 48 32.8
comp=Z,22nm,0.9s
F25K **Christian Rive** 63.02 24 IAmb IAmb 19 48 34.0
comp=Z,19nm,1.2s
F25K **Christian Rive** 63.02 24 P P 19 48 32.9 +2.2
baz=261,SNR=21
D25K **Kavik River** 63.04 22 IAmb IAmb 19 48 33.4
comp=Z,20nm,0.8s
D25K **Kavik River** 63.04 22 P P 19 48 32.6 +1.8
baz=260,SNR=36
E25K **Arctic Village** 63.13 23 IAmb IAmb 19 48 34.6
comp=Z,22nm,1.2s
E25K **Arctic Village** 63.13 23 P P 19 48 33.6 +2.2
baz=261,SNR=16
CRQE **Cirque** 63.44 32 P P 19 48 34.7 +1.0
baz=267
MCARA **McCarthy VSAT** 63.50 31 P P 19 48 35.1 +1.1
baz=267
GAR **Garm** 63.56 304 IAmb IAmb 19 48 36.2
comp=Z,20nm,0.9s
F26K **Sheenjek River** 63.60 24 IAmb IAmb 19 48 37.7
comp=Z,34nm,1.3s
F26K **Sheenjek River** 63.60 24 P P 19 48 36.7 +2.2
baz=263,SNR=19
C26K **Camden Bay** 63.64 22 P P 19 48 37.0 +2.3
baz=261
G26K **Porcupine Rive** 63.65 25 IAmb IAmb 19 48 40.1
comp=Z,14nm,0.8s
G26K **Porcupine Rive** 63.65 25 P P 19 48 36.7 +1.9
baz=263,SNR=15
C27K **Jago River** 64.01 22 P P 19 48 38.9 +1.8
baz=262,SNR=9.1
BCAR **Beaver Creek A** 64.17 29 P P 19 48 36.2 -2.1
I27K **Kandik River** 64.40 26 P P 19 48 40.7 +1.0
baz=266
G27K **Doyon Strip** 64.47 25 P P 19 48 41.9 +1.7
baz=265
H27K **Steamboat Moun** 64.48 26 IAmb IAmb 19 48 43.0
comp=Z,28nm,0.9s
H27K **Steamboat Moun** 64.48 26 P P 19 48 42.1 +1.9
baz=266,SNR=40
BVCY **Beaver Creek** 64.57 30 P P 19 48 42.2 +1.3
baz=268
E27K **Coleen River** 64.61 24 P P 19 48 42.9 +1.9
baz=265,SNR=6.3
YUK3 **Moose Creek** 64.74 31 P P 19 48 43.7 +1.5
baz=269,SNR=9.8
O28M **Mount Upton** 64.86 32 IAmb IAmb 19 48 45.6
comp=Z,18nm,1.0s
O28M **Mount Upton** 64.86 32 P P 19 48 44.5 +1.5
baz=270,SNR=8.9
D27M **Malcolm River** 64.93 22 IAmb IAmb 19 48 46.0
comp=Z,14nm,1.0s
D27M **Malcolm River** 64.93 22 P P 19 48 44.9 +1.8
baz=265,SNR=5.3
YUK8 **Steele Glacier** 65.07 31 P P 19 48 46.0 +1.6
baz=270,SNR=7.5
I28M **Miner Creek** 65.09 27 IAmb IAmb 19 48 46.3
comp=Z,14nm,0.8s
I28M **Miner Creek** 65.09 27 P P 19 48 45.5 +1.3
baz=268,SNR=23
F28M **Old Crow** 65.22 24 IAmb IAmb 19 48 47.6
comp=Z,23nm,1.1s
F28M **Old Crow** 65.22 24 P P 19 48 46.8 +1.8
baz=267,SNR=15
KBL **Kabul** 65.25 299 P P 19 48 46.2 +0.2
KBL IAmb IAmb 19 48 47.0
comp=Z,15nm,0.7s
DAWY **Dawson** 65.28 28 P P 19 48 46.9 +1.6
baz=269,SNR=8.9
E28M **Babbage River** 65.40 23 IAmb IAmb 19 48 49.1
comp=Z,35nm,1.3s
E28M **Babbage River** 65.40 23 P P 19 48 48.0 +2.0
baz=267,SNR=13
SHAA **Shahritus** 65.48 302 IAmb IAmb 19 48 49.0
comp=Z,22nm,0.6s
YUK4 **Talbot Arm** 65.61 31 P P 19 48 50.0 +2.2
baz=271,SNR=13
O29M **Mount Kennedy** 65.66 32 IAmb IAmb 19 48 51.1
comp=Z,25nm,1.1s
O29M **Mount Kennedy** 65.66 32 P P 19 48 50.1 +2.1
baz=271,SNR=5.6
M29M **Somme Creek** 65.69 30 IAmb IAmb 19 48 50.9
comp=Z,20nm,1.1s
M29M **Somme Creek** 65.69 30 P P 19 48 50.1 +2.0
baz=270,SNR=19
D28M **Stokes Point** 65.73 22 P P 19 48 50.2 +2.1
baz=267
H29M **Whitestone** 65.75 26 IAmb IAmb 19 48 50.4
comp=Z,14nm,0.7s
H29M **Whitestone** 65.75 26 P P 19 48 50.0 +1.6
baz=269,SNR=18
YUK6 **Outpost Mounta** 65.75 32 P P 19 48 50.5 +1.8
baz=271,SNR=5.3
J29N **Klondike Camp** 65.80 28 P P 19 48 50.4 +1.7
baz=270
L29M **L29M** 65.84 29 IAmb IAmb 19 48 51.9
comp=Z,25nm,1.1s
L29M **L29M** 65.84 29 P P 19 48 51.0 +2.1
baz=270,SNR=21
G29M **Pine Creek** 65.91 25 IAmb IAmb 19 48 52.2
comp=Z,30nm,1.1s
G29M **Pine Creek** 65.91 25 P P 19 48 51.1 +1.8
baz=269,SNR=17
E29M **Blow River** 66.00 23 P P 19 48 51.2 +1.4
baz=268,SNR=8.5
K29M **Barlow Dome** 66.10 28 IAmb IAmb 19 48 53.3
comp=Z,19nm,1.1s
K29M **Barlow Dome** 66.10 28 P P 19 48 52.4 +1.7
baz=271,SNR=17
P29M **Windy Craggy** 66.11 33 IAmb IAmb 19 48 53.6
comp=Z,23nm,1.0s
P29M **Windy Craggy** 66.11 33 P P 19 48 52.7 +2.0
baz=272,SNR=8.1
HYT **Haines Junctio** 66.18 32 IAmb IAmb 19 48 54.2
comp=Z,17nm,1.0s
HYT **Haines Junctio** 66.18 32 P P 19 48 53.4 +2.2
baz=272,SNR=13
N30M **Aishikik Lake** 66.36 31 IAmb IAmb 19 48 55.1
comp=Z,20nm,1.1s
N30M **Aishikik Lake** 66.36 31 P P 19 48 53.9 +1.6
baz=272,SNR=9.0
EPYK **Eagle Plains** 66.42 26 IAmb IAmb 19 48 54.9
comp=Z,32nm,1.1s
EPYK **Eagle Plains** 66.42 26 P P 19 48 54.0 +1.4
baz=270,SNR=20
M30M **Minto, Yukon** 66.46 30 P P 19 48 54.7 +1.8
baz=272
P30M **Million Dollar** 66.48 33 P P 19 48 55.1 +2.0
baz=273
I30M **Mount Dempster** 66.58 27 IAmb IAmb 19 48 57.1
comp=Z,18nm,1.2s
I30M **Mount Dempster** 66.58 27 P P 19 48 55.0 +1.3
baz=271,SNR=19
J30M **Hart River** 66.61 28 P P 19 48 55.4 +1.5
baz=271,SNR=11
G30M **tAoh Zraii Nji** 66.62 25 IAmb IAmb 19 48 56.0
comp=Z,22nm,0.9s
G30M **tAoh Zraii Nji** 66.62 25 P P 19 48 54.8 +1.0
baz=270,SNR=23
F30M **Barrier River** 66.78 24 P P 19 48 56.5 +1.7
baz=270,SNR=20
PLBC **Pleasant Camp** 66.81 33 P P 19 48 56.5 +1.4
baz=274,SNR=8.0
O30N **Mendenhall** 66.87 32 P P 19 48 57.0 +1.5
baz=273
N31M **Braeburn, Yuko** 66.98 31 IAmb IAmb 19 48 59.1
comp=Z,30nm,1.2s
N31M **Braeburn, Yuko** 66.98 31 P P 19 48 57.8 +1.6
baz=273,SNR=9.0
SKAG **Skagway** 67.34 33 P P 19 48 59.9 +1.5
baz=274
G31M **Satah River** 67.39 25 P P 19 48 59.7 +1.2
baz=272,SNR=44
H31M **Peel River** 67.41 26 IAmb IAmb 19 49 01.0
comp=Z,26nm,0.9s
H31M **Peel River** 67.41 26 P P 19 49 00.2 +1.5
baz=273,SNR=22
WHY **Whitehorse** 67.47 32 P P 19 49 00.6 +1.2
baz=274,SNR=6.4
SIT **Sitka** 67.55 36 P P 19 49 00.5 +0.9
baz=275
F31M **Tsigehtchic** 67.57 24 P P 19 49 00.2 +0.6
baz=272,SNR=7.2
M31M **Drury Creek, Y** 67.60 30 P P 19 49 01.4 +1.4
baz=274,SNR=7.6
INK **Inuvik** 67.62 24 IAmb IAmb 19 49 01.6
comp=Z,16nm,1.1s
INK **Inuvik** 67.62 24 P P 19 49 00.7 +0.7
baz=272,SNR=6.4
RTZ **Ruatahuna** 67.90 152 P P 19 49 01.6 -0.6
S32K **Kitimisnoo** 67.91 35 P P 19 49 03.2 +1.3
baz=276
P32M **Atlin** 68.15 33 IAmb IAmb 19 49 06.0
comp=Z,15nm,1.1s
P32M **Atlin** 68.15 33 P P 19 49 04.9 +1.4
baz=276,SNR=5.2
N32M **Quiet Lake** 68.31 31 P P 19 49 05.9 +1.5
baz=276
P33M **Teslin, Yukon** 68.53 32 P P 19 49 07.3 +1.4
baz=276,SNR=8.0
CRAG **Craig** 68.95 37 P P 19 49 09.8 +1.4
baz=278
Q32M **Nakina River** 68.96 34 P P 19 49 10.1 +1.4
baz=277
MMPY **Sheldon Lake,** 69.01 30 IAmb IAmb 19 49 11.7
comp=Z,22nm,1.5s
MMPY **Sheldon Lake,** 69.01 30 P P 19 49 10.4 +1.7
baz=277,SNR=7.8
WRAK **Wrangell Islan** 69.25 36 P P 19 49 11.9 +1.7
baz=278
ARTI **Arti** 69.31 324 P P 19 49 10.6 0.0
ARTI **Arti** 69.31 324 P P 19 49 10.6 0.0
ABKAR **Akbulak array** 69.48 316 P P 19 49 11.9 +0.1
R33M **Jennings River** 69.56 33 P P 19 49 14.1 +1.9
baz=278,SNR=6.2
PLWZ **Palliser** 69.65 155 P P 19 49 11.5 -1.3
DIB **Dawson Inlet,** 69.66 40 IAmb IAmb 19 49 14.3
comp=Z,11nm,0.9s
S34M **Telegraph Cree** 69.69 35 IAmb IAmb 19 49 15.8
comp=Z,41nm,1.6s
S34M **Telegraph Cree** 69.69 35 P P 19 49 14.7 +1.9
baz=278
A36M **Sachs Harbour** 70.08 19 IAmb IAmb 19 49 17.2
comp=Z,24nm,0.9s
A36M **Sachs Harbour** 70.08 19 P P 19 49 16.0 +1.1
baz=279,SNR=8.0
DLBC **Dease Lake** 70.19 34 P P 19 49 17.9 +1.9
baz=279,SNR=13
T35M **Bob Quinn** 70.31 35 P P 19 49 18.5 +1.8
baz=280
TGTN **Hyland Airport** 70.56 31 P P 19 49 19.9 +1.8
baz=280,SNR=6.4
HG4B **Hotspring** 70.58 40 P P 19 49 19.0 +0.6
HG4B IAmb IAmb 19 49 20.1
comp=Z,15nm,1.1s
RUBB **Prince Rupert** 70.77 38 IAmb IAmb 19 49 21.8
comp=Z,17nm,1.3s
HRA **Herat** 70.78 300 IAmb IAmb 19 49 22.2
comp=Z,25nm,1.4s
C36M **Paulatuk** 70.91 22 IAmb IAmb 19 49 21.2
comp=Z,37nm,1.4s
C36M **Paulatuk** 70.91 22 P P 19 49 20.5 +0.6
baz=281,SNR=13
WRGLY **Wrigley** 72.42 28 P P 19 49 30.5 +1.5
baz=283
HOLB **Holberg** 72.80 42 P P 19 49 33.1 +1.5
KOTAN **Kotaneelee Air** 72.86 32 P P 19 49 33.1 +1.4
baz=284
CBB **Campbell River** 74.67 42 IAmb IAmb 19 49 45.1
comp=Z,23nm,1.4s
NOR **Nord** 76.40 357 *i* P P 19 49 50.8 -0.8
NOR IAmb IAmb 19 49 53.7
comp=Z,9.4nm,1.5s
YKAW3 **Yellowknife Wh** 76.49 28 IAmb IAmb 19 49 53.7
comp=Z,15nm,0.9s
YKA **Yellowknife Ar** 76.51 28 P P 19 49 52.9 +0.4
comp=Z,17nm,0.7s,baz=290,slow=5.6,SNR=30
comp=Z,17nm,0.7s
YKA **Yellowknife Ar** 76.51 28 P P 19 49 52.3 -0.1
YKAW1 **Yellowknife Wh** 76.57 28 IAmb IAmb 19 49 54.2
comp=Z,27nm,0.9s
LLLB **Lillooet** 76.64 41 IAmb IAmb 19 49 56.0
comp=Z,19nm,1.0s
LVZ **Lovozero** 76.77 338 P P 19 49 54.2 +0.3
LVZ IAmb IAmb 19 49 55.2
comp=Z,19nm,1.1s
E03A **Lebam** 76.81 45 IAmb IAmb 19 49 57.1
comp=Z,22nm,0.8s
GNW **Green Mountain** 76.98 44 IAmb IAmb 19 49 58.2
comp=Z,22nm,1.1s
RES **Resolute Bay** 77.11 13 IAmb IAmb 19 49 57.2
comp=Z,9.7nm,0.8s
VADS **Vadso** 77.45 341 *e*P P 19 49 58.2 +0.7
VADS IAmb IAmb 19 49 59.0
comp=Z,31nm,0.9s
H04D **Lebanon** 77.99 47 IAmb IAmb 19 50 03.9
comp=Z,34nm,1.3s
L02F **Cane Junction** 78.17 49 IAmb IAmb 19 50 04.7
comp=Z,21nm,1.1s
H04A **Detroit Lake** 78.31 47 IAmb IAmb 19 50 05.0
comp=Z,21nm,0.9s
KEV **Kevo** 78.33 341 P P 19 50 02.6 +0.2
KEV **Kevo** 78.33 341 P P 19 50 02.8 +0.4
I04A **Tendick Farm,** 78.45 47 IAmb IAmb 19 50 05.6
comp=Z,22nm,1.0s
HOOD **Mount Hood Mea** 78.46 46 IAmb IAmb 19 50 06.1
comp=Z,30nm,1.1s
LTY **Liberty** 78.47 44 IAmb IAmb 19 50 05.6
comp=Z,11nm,0.8s
BBOR **Butler Butte** 78.55 48 IAmb IAmb 19 50 06.6
comp=Z,16nm,1.0s
HAMF **Hammerfest** 78.80 343 *e*P P 19 50 05.2 +0.3
KHBM **Hayfork Bally** 78.89 51 IAmb IAmb 19 50 08.2
comp=Z,15nm,0.9s
ARA0 **ARCESS Array S** 78.89 341 *e*P P 19 50 06.2 +0.7
ARA0 IAmb IAmb 19 50 06.9
comp=Z,30nm,0.7s
ARCES **ARCESS Array B** 78.89 341 P P 19 50 06.1 +0.6
comp=Z,22nm,0.6s,baz=56,slow=5.6,SNR=147
ARCES PKiKP PKiKP 19 55 36.4 -0.5
comp=Z,1.1nm,0.8s,baz=50,slow=2.3,SNR=3.9
comp=Z,22nm,0.6s
ARCES **ARCESS Array B** 78.89 341 P P 19 50 05.8 +0.3
YBH **Yreka Blue Hor** 78.91 50 IAmb IAmb 19 50 08.7
comp=Z,23nm,1.1s
M02C **Callahan** 78.92 50 IAmb IAmb 19 50 08.9
comp=Z,14nm,0.8s
MXC **Moxie City** 78.94 44 IAmb IAmb 19 50 08.6
comp=Z,17nm,0.9s
EPH **Ephrata** 79.12 43 IAmb IAmb 19 50 09.0
comp=Z,15nm,0.8s
E07A **Sunnyside** 79.23 44 IAmb IAmb 19 50 10.1
comp=Z,22nm,1.1s
HAWA **Hanford** 79.50 44 IAmb IAmb 19 50 11.4
comp=Z,14nm,1.0s
D08A **Wollman Farm,** 79.66 43 IAmb IAmb 19 50 12.1
comp=Z,23nm,0.9s
E08A **Dider Farm, El** 79.77 44 IAmb IAmb 19 50 12.8
comp=Z,15nm,1.0s
GDXM **Geysers** 79.81 52 IAmb IAmb 19 50 13.7
comp=Z,19nm,1.0s
KTK1 **Kautokeino** 79.86 341 *e*P P 19 50 11.1 +0.4
KTK1 IAmb IAmb 19 50 11.6
comp=Z,20nm,0.9s
TULEG **Thule** 80.08 7 *i* P P 19 50 11.8 +0.1
G08A **Pilot Rock** 80.26 45 IAmb IAmb 19 50 15.5
comp=Z,11nm,1.1s
JETT **Jettan, Norway** 80.35 343 *e*P P 19 50 13.9 +0.7
JETT IAmb IAmb 19 50 14.4
comp=Z,28nm,0.7s
NEW **Newport** 80.36 42 IAmb IAmb 19 50 15.7
comp=Z,22nm,0.9s
ORV **Oroville** 80.50 51 IAmb IAmb 19 50 16.4
comp=Z,11nm,0.9s
TRO **Tromso** 80.71 343 *e*P P 19 50 15.3 +0.2
TRO IAmb IAmb 19 50 15.5
comp=Z,16nm,0.7s
NEEM **North Greenlan** 80.72 3 *i* P P 19 50 15.3 -0.1
NEEM IAmb IAmb 19 50 16.3
comp=Z,9.7nm,0.7s
AFDM **Forest Hills D** 81.10 52 IAmb IAmb 19 50 19.8
comp=Z,20nm,1.3s
DAG **Danmarks Havn** 81.13 356 *i* P P 19 50 16.0 -1.2
DAG IAmb IAmb 19 50 18.0
comp=Z,11nm,1.1s
BEKR **Beckworth** 81.22 51 IAmb IAmb 19 50 20.4
comp=Z,19nm,0.9s
J08A **Circle Bar Ran** 81.28 47 IAmb IAmb 19 50 20.9
comp=Z,22nm,0.9s
WVOR **Wild Horse Val** 81.51 48 IAmb IAmb 19 50 22.0
comp=Z,15nm,1.1s
BMO **Blue Mountains** 81.51 45 IAmb IAmb 19 50 21.9
comp=Z,19nm,0.9s
PAHR **Pah Rah Range** 81.98 51 IAmb IAmb 19 50 24.4
comp=Z,14nm,1.0s
PNTR **Pine Nut** 82.05 51 IAmb IAmb 19 50 25.2
comp=Z,18nm,0.8s
KBZ **Khabaz** 82.30 314 P P 19 50 24.9 +1.1
comp=Z,36nm,0.9s,baz=73,slow=3.2,SNR=56
comp=Z,36nm,0.9s
KIV **Kislovodsk** 82.35 314 P P 19 50 24.4 +0.1
KIV **Kislovodsk** 82.35 314 P P 19 50 24.7 +0.4
comp=Z,303nmcomp=Z,32nm,1.0s
KIV **Kislovodsk** 82.35 314 P P 19 50 24.7 +0.4
KIV x x 19 51 24.6
GNI **Garni** 82.37 310 P P 19 50 24.9 +0.3
WAKR **Walker** 82.38 52 IAmb IAmb 19 50 26.5
comp=Z,11nm,0.8s
STEI **Steigen** 82.84 342 *e*P P 19 50 26.4 +0.2
STEI IAmb IAmb 19 50 27.0
comp=Z,22nm,0.7s
MDPB **Devils Postpil** 82.96 52 IAmb IAmb 19 50 29.8
comp=Z,11nm,1.0s
FINES **FINESS Array B** 83.14 334 P P 19 50 27.3 -0.5
comp=Z,19nm,0.5s,baz=58,slow=5.1,SNR=369
comp=Z,19nm,0.5s
FINES **FINESS Array B** 83.14 334 P P 19 50 26.7 -1.1
KVN **Kaiserville** 83.15 51 IAmb IAmb 19 50 30.5
comp=Z,18nm,1.3s
LHV **Little Huntoon** 83.16 52 IAmb IAmb 19 50 30.9
comp=Z,18nm,1.0s
LOF **Lofoten** 83.17 343 *e*P P 19 50 28.4 +0.6
FAUS **Fauske** 83.20 342 *e*P P 19 50 28.1 +0.1
FAUS IAmb IAmb 19 50 28.7
comp=Z,50nm,1.4s
NVAR **Mina Array Bea** 83.23 51 P P 19 50 29.9 +0.8
comp=Z,14nm,0.7s,baz=289,slow=5.3,SNR=83
comp=Z,14nm,0.7s
NVAR **Mina Array Bea** 83.23 51 P P 19 50 29.7 +0.6
NV11 **Mina Array Sit** 83.34 51 IAmb IAmb 19 50 31.6
comp=Z,14nm,1.0s
DBG **Daneborg** 83.62 355 *i* P P 19 50 28.1 -1.9
DBG IAmb IAmb 19 50 30.9
comp=Z,6.4nm,0.8s
ILON **Igloolik, Nuna** 83.68 15 IAmb IAmb 19 50 30.9
comp=Z,9.5nm,0.6s
DSP **Deep Springs** 83.88 52 IAmb IAmb 19 50 35.2
comp=Z,18nm,1.2s
HLID **Hailey** 83.93 46 IAmb IAmb 19 50 34.6
comp=Z,14nm,1.0s
TPH **Tonopah** 84.16 51 IAmb IAmb 19 50 35.6
comp=Z,19nm,1.0s
RAUS **Rausandaksla** 84.20 342 *e*P P 19 50 32.6 -0.5
RAUS IAmb IAmb 19 50 33.5
comp=Z,40nm,1.2s
VAGH **Vaagaholmen** 84.22 342 *e*P P 19 50 32.9 -0.2
MOR8 **Moi Rana** 84.27 341 *e*P P 19 50 32.1 -1.3
MOR8 IAmb IAmb 19 50 32.9
comp=Z,20nm,0.8s
DLMT **Dillon** 84.36 43 IAmb IAmb 19 50 36.5
comp=Z,11nm,0.8s
KONS **Konsvik** 84.43 342 *e*P P 19 50 35.1 +1.0
KONS IAmb IAmb 19 50 35.3
comp=Z,6.5nm,0.7s
GMN **Gold Mountain** 84.43 52 IAmb IAmb 19 50 37.0
comp=Z,12nm,0.9s
STOK **Stokkvaagen** 84.57 342 *e*P P 19 50 34.6 -0.3
STOK IAmb IAmb 19 50 34.8
comp=Z,20nm,1.0s
LEIR **Leirfjorden** 84.70 342 *e*P P 19 50 35.5 0.0
LEIR IAmb IAmb 19 50 36.0
comp=Z,36nm,1.2s
MPMC **Manual Prospec** 84.74 53 IAmb IAmb 19 50 38.6
comp=Z,17nm,1.0s
CLC **China Lake** 84.75 54 IAmb IAmb 19 50 38.3
comp=Z,15nm,0.8s
BOZ **Bozeman (W)** 84.88 43 IAmb IAmb 19 50 38.9
comp=Z,14nm,0.7s
WCT **Wildcat Mounta** 85.09 52 IAmb IAmb 19 50 40.1
comp=Z,18nm,1.0s
HVU **Hansel Valley** 85.77 47 IAmb IAmb 19 50 43.8
comp=Z,21nm,1.2s
FFC **Flin Flon** 85.89 32 P P 19 50 42.2 +0.6
FFC IAmb IAmb 19 50 43.4
comp=Z,23nm,1.0s
FFC **Flin Flon** 85.89 32 P P 19 50 42.3 +0.6
SUMG **Summit** 85.97 0 IAmb IAmb 19 50 44.0
comp=Z,31nm,1.3s
SUMG **Summit** 85.97 0 *i* P P 19 50 43.0 +0.8
SUMG IAmb IAmb 19 50 43.7
comp=Z,26nm,1.2s
PRN **Pahroc Range** 86.00 51 IAmb IAmb 19 50 44.9
comp=Z,22nm,1.0s
MNK **Minsk** 86.12 328 *i* P P 19 50 42.4 -0.4
comp=E,6.0nm,0.7s,baz=58
MNK *i* P P 19 50 42.4 -0.4
comp=N,5.0nm,0.7s
MNK *i* P P 19 50 42.4 -0.4
comp=Z,19nm,0.8s
MNK *i* pP pP 19 51 48.9 -4.9
MNK *i* sP sP 19 52 18.5 -7.0
MNK *i* PP PP 19 54 07.2 -0.2
MNK *i* PPP PPP 19 56 03.0
MNK *i* SKS S 20 00 22.0 -29
MNK *i* S SKSac 20 00 40.3 +1.3
MNK *i* PS PS 20 00 59.6 -92
MNK *i* sS sS 20 02 44.4 -13
MNK *i* SS SS 20 06 36.4 +0.4
MNK *i* SSS SSS 20 10 15.1
FXWY **Fox Creek** 86.12 44 IAmb IAmb 19 50 45.7
comp=Z,11nm,1.1s
FLWY **Flagg Ranch** 86.14 44 IAmb IAmb 19 50 46.2

	comp=Z,22nm,0.9s							
NSS	**Namsos**	**86.16**	**341**	*e*P		**P**	**19 50 42.1**	**-0.6**
NSS				IAmb		IAmb	19 50 42.8	
	comp=Z,22nm,1.0s							
YNE	**Yellowstone No**	**86.17**	**43**	IAmb		IAmb	19 53 12.8	
	comp=Z,11nm,0.8s							
YMP	**Mirror Lake Pl**	**86.19**	**43**	IAmb		IAmb	19 50 46.8	
	comp=Z,17nm,0.9s							
SPUT	**South Promonto**	**86.19**	**47**	IAmb		IAmb	19 50 45.7	
	comp=Z,22nm,1.1s							
DPP	**Dos Picos Cty**	**86.36**	**56**	IAmb		IAmb	19 50 45.8	
	comp=Z,17nm,1.1s							
PSUT	**Pine Spring**	**86.39**	**50**	IAmb		IAmb	19 50 46.5	
	comp=Z,20nm,1.1s							
DUG	**Dugway, Tooele**	**86.42**	**48**	IAmb		IAmb	19 50 46.6	
	comp=Z,18nm,0.9s							
NACGM	**Naroch**	**86.44**	**329**	*e*P		**P**	**19 50 44.2**	**-0.1**
	comp=N,14nm,0.9s							
PFO	**Pinyon Flats O**	**86.48**	**55**	P		**P**	**19 50 45.1**	**0.0**
PFO	**Pinyon Flats O**	**86.48**	**55**	P		**P**	**19 50 45.3**	**+0.2**
HWUT	**Hardware Ranch**	**86.66**	**46**	P		**P**	**19 50 46.2**	**+0.3**
HWUT				IAmb		IAmb	19 50 47.8	
	comp=Z,21nm,1.1s							
BELC	**Belle Mtn. Jos**	**86.68**	**55**	IAmb		IAmb	19 50 47.5	
	comp=Z,15nm,0.9s							
BAR	**Barrett**	**86.69**	**56**	IAmb		IAmb	19 50 47.0	
	comp=Z,6.8nm,0.7s							
NLU	**North Lily Min**	**87.04**	**48**	IAmb		IAmb	19 50 49.5	
	comp=Z,9.1nm,0.9s							
IRM	**Iron Mountain**	**87.26**	**54**	IAmb		IAmb	19 50 50.7	
	comp=Z,17nm,1.1s							
YUH	**Yuha Desert**	**87.28**	**56**	IAmb		IAmb	19 50 50.5	
	comp=Z,12nm,1.0s							
AK03	**Malin Array Si**	**87.44**	**324**	P		**P**	**19 50 47.6**	**-1.5**
AKASG	**Malin Array Be**	**87.45**	**324**	P		**P**	**19 50 48.0**	**-1.2**
	comp=Z,2.5nm,0.4s,baz=53,slow=4.9,SNR=25							
	comp=Z,2.5nm,0.4s							
AKASG	**Malin Array Be**	**87.45**	**324**	P		**P**	**19 50 47.1**	**-2.1**
AKASG				IAmb		IAmb	19 50 49.6	
	comp=Z,11nm,1.2s							
AKBB	**Malin Array Si**	**87.45**	**324**	IAmb		IAmb	19 50 49.2	
	comp=Z,9.4nm,0.8s							
AK01	**Malin Array Si**	**87.46**	**324**	P		**P**	**19 50 47.6**	**-1.7**
AK09	**Malin Array Si**	**87.46**	**324**	P		**P**	**19 50 47.7**	**-1.6**
AK08	**Malin Array Si**	**87.47**	**324**	P		**P**	**19 50 48.3**	**-1.0**
AK04	**Malin Array Si**	**87.47**	**324**	P		**P**	**19 50 47.9**	**-1.4**
SCO	**Scoresbysund**	**87.47**	**355**	IAmb		IAmb	19 50 50.7	
	comp=Z,17nm,1.2s							
PDAR	**Pinedale Array**	**87.47**	**45**	P		**P**	**19 50 48.2**	**-1.7**
	comp=Z,1.9nm,0.6s,baz=286,slow=3.1,SNR=14							
	comp=Z,1.9nm,0.6s							
PDAR	**Pinedale Array**	**87.47**	**45**	P		**P**	**19 50 49.0**	**-0.8**
AK02	**Malin Array Si**	**87.48**	**324**	P		**P**	**19 50 48.0**	**-1.4**
AK10	**Malin Array Si**	**87.49**	**324**	P		**P**	**19 50 48.1**	**-1.3**
AK11	**Malin Array Si**	**87.49**	**324**	P		**P**	**19 50 47.9**	**-1.5**
AK22	**Malin Array Si**	**87.50**	**324**	P		**P**	**19 50 48.2**	**-1.2**
AK21	**Malin Array Si**	**87.51**	**325**	P		**P**	**19 50 48.2**	**-1.3**
AK12	**Malin Array Si**	**87.52**	**324**	P		**P**	**19 50 48.1**	**-1.4**
AK18	**Malin Array Si**	**87.52**	**324**	P		**P**	**19 50 48.2**	**-1.4**
ESJX	**Sierra Juarez**	**87.52**	**57**	IAmb		IAmb	19 50 52.2	
	comp=Z,11nm,1.1s							
AK06	**Malin Array Si**	**87.52**	**324**	P		**P**	**19 50 48.2**	**-1.4**
AK16	**Malin Array Si**	**87.53**	**324**	P		**P**	**19 50 48.5**	**-1.1**
AK07	**Malin Array Si**	**87.54**	**324**	P		**P**	**19 50 48.7**	**-0.9**
AK20	**Malin Array Si**	**87.54**	**324**	P		**P**	**19 50 48.3**	**-1.3**
AK19	**Malin Array Si**	**87.55**	**324**	P		**P**	**19 50 48.5**	**-1.2**
AK13	**Malin Array Si**	**87.58**	**324**	P		**P**	**19 50 48.8**	**-1.0**
BLYC	**Blythe**	**87.90**	**55**	IAmb		IAmb	19 50 53.8	
	comp=Z,18nm,1.1s							
RAYN	**Ar Rayn**	**88.08**	**294**	P		**P**	**19 50 51.8**	**-1.0**
RAYN				IAmb		IAmb	19 50 53.5	
	comp=Z,8.9nm,0.9s							
RAYN	**Ar Rayn**	**88.08**	**294**	P		**P**	**19 50 52.6**	**-0.2**
Q16A	**Castle Valley**	**88.12**	**49**	IAmb		IAmb	19 50 55.0	
	comp=Z,9.8nm,0.8s							
MI28	**MI28,Pidlybu**	**88.16**	**325**	P		**P**	**19 50 50.6**	**-2.0**
P17A	**Butcher Ranch,**	**88.17**	**48**	IAmb		IAmb	19 50 55.0	
	comp=Z,10.0nm,0.8s							
U15A	**North Rim**	**88.42**	**51**	IAmb		IAmb	19 50 56.7	
	comp=Z,15nm,1.2s							
P18A	**Preston Nutter**	**88.44**	**48**	IAmb		IAmb	19 50 56.8	
	comp=Z,7.2nm,0.7s							
SRU	**San Rafael Swe**	**88.49**	**48**	IAmb		IAmb	19 50 56.0	
	comp=Z,13nm,0.7s							
LUBAR	**Lubar, Ukraine**	**88.66**	**324**	P		**P**	**19 50 54.1**	**-0.8**
NC405	**NORSAR Array S**	**88.69**	**339**	IAmb		IAmb	19 50 55.6	
	comp=Z,25nm,1.4s							
HFS	**Hagfors**	**88.69**	**337**	P		**P**	**19 50 53.8**	**-1.1**
	comp=Z,7.8nm,0.4s,baz=80,slow=3.2,SNR=98							
	comp=Z,7.8nm,0.4s							
RNPP9	**Sopachiv**	**88.83**	**326**	P		**P**	**19 50 54.5**	**-1.2**
DOMB	**Dombas**	**88.88**	**340**	*e*P		**P**	**19 50 56.3**	**+0.5**
113A	**Mohawk Valley,**	**88.89**	**55**	IAmb		IAmb	19 50 57.8	
	comp=Z,7.0nm,0.7s							
RNPP8	**Varash**	**88.89**	**326**	P		**P**	**19 50 55.2**	**-0.8**
NC204	**NORSAR Array S**	**88.89**	**339**	IAmb		IAmb	19 50 56.8	
	comp=Z,18nm,1.1s							
NB2	**NORSAR Subarra**	**88.91**	**339**	P		**P**	**19 50 54.8**	**-1.1**
	comp=Z,10.0nm,1.2s,baz=46,slow=4.6							
NB2	**NORSAR Subarra**	**88.91**	**339**	P		**P**	**19 50 54.8**	**-1.1**
NOA	**NORSAR Array B**	**88.91**	**339**	P		**P**	**19 50 54.6**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=49,slow=4.7,SNR=12							
	comp=Z,3.0nm,0.8s							
RNPP5	**Staryi Chortor**	**88.94**	**326**	P		**P**	**19 50 55.4**	**-0.8**
MOL	**Molde**	**88.95**	**341**	*e*P		**P**	**19 50 56.6**	**+0.6**
Y14A	**Wickenburg**	**88.97**	**54**	IAmb		IAmb	19 50 59.5	
	comp=Z,14nm,0.7s							
NC602	**NORSAR Array S**	**89.02**	**338**	*e*P		**P**	**19 50 54.5**	**-1.9**
BNN	**Bunyan**	**89.17**	**312**	IAmb		IAmb	19 50 58.6	
	comp=Z,14nm,1.0s							
AKN	**Aaknes**	**89.41**	**341**	*e*P		**P**	**19 50 59.0**	**+0.8**
O20A	**White River Ci**	**89.58**	**47**	IAmb		IAmb	19 51 00.7	
	comp=Z,11nm,0.7s							
PV22	**Blue Mesa, Par**	**89.95**	**48**	IAmb		IAmb	19 51 03.9	
	comp=Z,18nm,1.5s							
PV16	**Nyswonger Mesa**	**89.97**	**48**	IAmb		IAmb	19 51 03.2	
	comp=Z,16nm,1.0s							
PV03	**Paradox Valley**	**90.04**	**48**	IAmb		IAmb	19 51 03.5	
	comp=Z,13nm,1.0s							
KMPD	**K-Podol'skiy**	**90.12**	**324**	P		**P**	**19 50 59.9**	**-1.8**
BR131	**Keskin Array S**	**90.27**	**313**	IAmb		IAmb	19 51 03.0	
	comp=Z,6.2nm,0.8s							
BRTR	**Keskin Array B**	**90.27**	**313**	P		**P**	**19 51 01.8**	**-1.0**
	comp=Z,3.7nm,0.7s,baz=74,slow=3.6,SNR=16							
	comp=Z,3.7nm,0.7s							
BRTR	**Keskin Array B**	**90.27**	**313**	P		**P**	**19 51 01.9**	**-0.9**
BR104	**Keskin Array S**	**90.28**	**313**	P		**P**	**19 51 01.8**	**-1.1**
PV01	**Paradox Valley**	**90.29**	**48**	IAmb		IAmb	19 51 04.5	
	comp=Z,8.9nm,0.9s							
RSSD	**Black Hills**	**90.33**	**42**	P		**P**	**19 51 03.2**	**+0.1**
RSSD				IAmb		IAmb	19 51 04.2	
	comp=Z,10nm,0.6s							
BURAR	**Bucovina Array**	**91.34**	**323**	P		**P**	**19 51 06.9**	**-0.7**
TUC	**Tucson**	**91.35**	**54**	P		**P**	**19 51 08.9**	**+0.9**
TUC				IAmb		IAmb	19 51 10.3	
	comp=Z,13nm,1.4s							
ISCO	**Idaho Springs**	**91.50**	**46**	IAmb		IAmb	19 51 10.9	
	comp=Z,8.0nm,0.9s							
ULM	**Lac du Bonnet**	**91.51**	**33**	P		**P**	**19 51 07.4**	**-0.7**
	comp=Z,3.2nm,0.7s,baz=298,slow=4.0,SNR=3.8							
	comp=Z,3.2nm,0.7s							
ANMO	**Albuquerque**	**93.31**	**50**	P		**P**	**19 51 17.2**	**+0.1**
121A	**Cookes Peak, D**	**93.50**	**53**	IAmb		IAmb	19 51 20.5	
	comp=Z,12nm,1.3s							
BRG	**Berggiesshubel**	**95.02**	**330**	*e*P		**P**	**19 51 23.8**	**-0.5**
BRG				Amp			19 51 25.6	
	comp=Z,6.4nm,1.3s							
GERES	**GERESS Array B**	**96.54**	**329**	P		**P**	**19 51 30.1**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=32,slow=5.2,SNR=13							
GERES				PKiKP		**PKiKP**	**19 56 06.5**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=52,slow=1.7,SNR=2.8							
	comp=Z,1.1nm,0.6s							
GERES	**GERESS Array B**	**96.54**	**329**	P		**P**	**19 51 30.0**	**-1.3**
EKA	**Eskdalemuir Ar**	**98.06**	**341**	P		**P**	**19 51 36.6**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=41,slow=3.8,SNR=2.6							
EKA				PKiKP		**PKiKP**	**19 56 09.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=35,slow=2.6,SNR=1.8							
	comp=Z,0.7nm,0.6s							
TXAR	**Lajitas Array**	**98.15**	**54**	P		**P**	**19 51 37.2**	**-1.7**
	comp=Z,0.9nm,0.9s,baz=322,slow=3.6,SNR=7.1							
TXAR				PKKP		**PKKPbc**	**20 08 10.9**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=113,slow=3.8,SNR=8.5							
	comp=Z,0.9nm,0.9s							
TXAR	**Lajitas Array**	**98.15**	**54**	P		**P**	**19 51 36.1**	**-2.9**
QSPA	**South Pole Qui**	**111.48**	**180**	PKiKP		**PKiKP**	**19 56 33.0**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=18,slow=3.2,SNR=43							
ESDC	**Sonseca Array**	**111.63**	**333**	PKiKP		**PKiKP**	**19 56 34.6**	**-0.1**
	comp=Z,1.5nm,1.1s,baz=16,slow=3.9,SNR=4.2							
MD01	**Midelt array s**	**117.65**	**330**			**PKiKP**	**19 56 46.9**	**+0.3**
BELA	**Belgrano 2**	**123.75**	**181**			**PKPdf**	**19 56 55.8**	**-0.9**
TROLL	**Troll, Antarti**	**124.92**	**194**	⇑PKiKP		**PKPdf**	**19 56 59.3**	**+0.1**
	comp=Z,357nm,0.5s							
SNAA	**Sanae**	**126.31**	**193**	PKP		**PKPdf**	**19 57 01.1**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=148,slow=2.2,SNR=13							
VNA2	**Neumayer--Watz**	**127.81**	**192**	⇑PKiKP		**PKPdf**	**19 57 04.5**	**-0.1**
	comp=Z,18nm,0.6s,baz=131,slow=1.8							
VNA1	**Neumayer--Stat**	**128.20**	**192**	⇑PKiKP		**PKPdf**	**19 57 05.2**	**-0.1**
	comp=Z,12nm,1.0s							
TORD	**Torodi Ar. Bea**	**128.66**	**309**	PKP		**PKPdf**	**19 57 07.0**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=30,slow=1.3,SNR=30							
TORD				PP		**PP**	**19 59 14.8**	**-2.4**
	comp=Z,0.9nm,0.9s,baz=42,slow=4.3,SNR=3.6							
SDV	**Santo Domingo**	**135.09**	**51**			**PKPdf**	**19 57 20.8**	**+0.5**
SDV	**Santo Domingo**	**135.09**	**51**	*e*P		**PKPdf**	**19 57 18.7**	**-1.6**
SGC2	**Sao Gabriel da**	**143.71**	**58**	*e*P		PKPab	19 57 32.5	-0.9
PLCA	**Paso Flores**	**145.83**	**131**	PKPbc		**PKPab**	**19 57 40.7**	**-0.2**
	comp=Z,41nm,0.6s,baz=247,slow=4.4,SNR=99							
PLCA	**Paso Flores**	**145.83**	**131**			**PKPbc**	**19 57 40.3**	**+0.5**
PLCA	**Paso Flores**	**145.83**	**131**	*e*P		**PKPbc**	**19 57 39.6**	**-0.2**
GO05	**Hualane**	**146.64**	**121**			**PKPdf**	**19 57 39.6**	**-0.5**
BOAV	**Boa Vista**	**146.76**	**47**			**PKPbc**	**19 57 43.3**	**+0.1**
BOAV	**Boa Vista**	**146.76**	**47**	*e*P		**PKPbc**	**19 57 42.1**	**-1.0**
BO02	**Sierra Bellavi**	**147.61**	**121**			**PKPbc**	**19 57 45.0**	**0.0**
PEL	**Peldehue**	**148.07**	**118**	*i* P		**PKiKP**	**19 57 48.0**	**+0.3**
PEL	**Peldehue**	**148.07**	**118**			**PKPbc**	**19 57 45.0**	**-1.2**
VA03	**San Esteban**	**148.26**	**118**	*i* P		**PKPbc**	**19 57 46.8**	**+0.1**
LCO	**Las Campanas**	**148.70**	**110**			**PKPbc**	**19 57 48.6**	**+0.4**
GO03	**Copiapo**	**149.23**	**108**	*i* P		**PKiKP**	**19 57 50.4**	**+0.1**
AUSP	**Uspallata**	**149.34**	**117**	*i* P		**PKiKP**	**19 57 50.8**	**+0.1**
RTLS	**Leoncito**	**149.50**	**116**	*i* P		**PKiKP**	**19 57 51.0**	**-0.1**
ARCO	**CERRO ARCO**	**149.58**	**118**	*i* P		**PKiKP**	**19 57 50.6**	**-0.4**
ACCO	**Cerro Coronel**	**149.91**	**114**	*i* P		**PKiKP**	**19 57 51.8**	**-0.1**
LPAZ	**La Paz**	**150.05**	**85**	PKP		**PKPdf**	**19 57 47.2**	**+0.3**
LPAZ	comp=Z,4.8nm,0.7s,baz=343,slow=2.4,SNR=19			PKPbc		**PKiKP**	**19 57 53.2**	**+0.3**
	comp=Z,30nm,0.6s,baz=345,slow=4.2,SNR=74							
LPAZ	**La Paz**	**150.05**	**85**	*e*P		**PKPdf**	**19 57 45.0**	**-1.9**
ZON	**Zonda**	**150.06**	**116**	*i* P		**PKPbc**	**19 57 51.4**	**+0.3**
AC02	**Maricunga**	**150.25**	**106**	*i* P		**PKiKP**	**19 57 53.3**	**+0.3**
MACA	**Manacapuru-AM**	**150.47**	**55**	*e*P		**PKPdf**	**19 57 47.6**	**+0.7**
VCA	**Vinchina**	**150.91**	**110**	*i* P		**PKiKP**	**19 57 54.1**	**+0.2**
AVFE	**Valle Fertil**	**151.26**	**114**	*i* P		**PKPbc**	**19 57 54.2**	**+0.2**
ACLC	**CERRO LA CRUZ**	**151.90**	**112**	*i* P		**PKiKP**	**19 57 55.8**	**-0.1**
ITTB	**Itaituba**	**154.92**	**49**	*e*P		**PKPdf**	**19 57 53.4**	**0.0**
VILB	**Vilhena**	**156.18**	**72**	*e*P		**PKPdf**	**19 57 53.0**	**-2.1**
BBSD	**Serra de San D**	**157.24**	**83**	*e*P		**PKPdf**	**19 57 56.5**	**+0.2**
PTLB	**Pontes e Lacer**	**158.07**	**77**			**PKPdf**	**19 57 57.9**	**+0.6**
PTLB	**Pontes e Lacer**	**158.07**	**77**	*e*P		**PKPdf**	**19 57 58.2**	**+0.9**
CLDB	**Colider**	**158.97**	**62**	*e*P		**PKPdf**	**19 57 58.8**	**+0.3**
COIM	**Forte Coimbra**	**160.42**	**89**	*e*P		**PKPdf**	**19 57 59.4**	**-0.5**
MURT	**Porto Murtinho**	**160.78**	**94**	*e*P		**PKPdf**	**19 58 00.1**	**-0.2**
SALV	**Santo Antonio**	**161.34**	**75**	*e*P		**PKPdf**	**19 58 01.8**	**+0.8**
BDQN	**Bodoquena, MS**	**161.46**	**90**	*e*P		**PKPdf**	**19 58 01.6**	**+0.6**
CPSB	**Cacapava Do Su**	**162.83**	**124**	*e*P		**PKPdf**	**19 58 03.0**	**+0.9**
SNDB	**Serra Nova Dou**	**163.21**	**57**	*e*P		**PKPdf**	**19 58 04.0**	**+1.1**
AMBA	**Amambai (Brazi**	**163.24**	**98**	*e*P		**PKPdf**	**19 58 04.0**	**+1.2**
SMTB	**Santa Maria do**	**163.63**	**40**	*e*P		**PKPdf**	**19 58 04.0**	**+0.6**
ARAG	**Araguaiana, MT**	**164.71**	**70**	*e*P		**PKPdf**	**19 58 05.3**	**+1.0**
TRCB	**Terra Rica**	**165.42**	**97**	*e*P		**PKPdf**	**19 58 04.9**	**+0.2**
PTGB	**Pitanga**	**165.76**	**105**	*e*P		**PKPdf**	**19 58 04.7**	**-0.3**
BDFB	**Brasília**	**167.90**	**62**	PKP		**PKPdf**	**19 58 06.6**	**-0.2**
	comp=Z,4.4nm,0.5s,baz=87,slow=2.9,SNR=6.0							
BDFB	**Brasília**	**167.90**	**62**			**PKPdf**	**19 58 08.1**	**+1.2**
SDBA	**SAO DESIDERIO**	**168.04**	**41**	*e*P		**PKPdf**	**19 58 05.7**	**-1.2**
IPMB	**Ipameri, GO**	**168.76**	**73**	*e*P		**PKPdf**	**19 58 06.2**	**-1.1**
NBPN	**Ponto Novo - B**	**168.77**	**17**	*e*P		**PKPdf**	**19 58 08.0**	**+0.7**
JANB	**Januaria**	**170.38**	**48**	*e*P		**PKPdf**	**19 58 08.5**	**+0.2**
DIAM	**Diamantina, MG**	**172.82**	**63**	*e*P		**PKPdf**	**19 58 09.5**	**0.0**
SJMB	**Sao Joao De Ma**	**175.02**	**54**	*e*P		**PKPdf**	**19 58 10.5**	**+0.4**
CAM01	**Campos-RJ**	**175.61**	**93**	*e*P		**PKPdf**	**19 58 09.6**	**-0.6**
RIB01	**Linhares ES**	**175.99**	**55**	*e*P		**PKPdf**	**19 58 09.9**	**-0.4**

IDC 13 20:09:35.9±2.7, 6.73S×128.95E, h175km±37km, mb2.9/1, mbtmp3.3/5, Error ellipse: s-maj=50.1km s-min=18.8km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.26**	**22**	P	Pn	20 11 06.3	0.0
	2.5nm,0.8s,baz=198,slow=20,SNR=1.5						
SIJI				S	Sn	20 12 11.7	-5.8
	3.7nm,0.2s,baz=226,slow=23,SNR=6.6						
FITZ	**Fitzroy Crossi**	**11.76**	**196**	P	Pn	20 12 19.2	+0.9
	2.8nm,0.9s,baz=11,slow=12,SNR=2.5						
FITZ				S	Sn	20 14 27.2	-1.7
	6.4nm,1.1s,baz=0.0,slow=13,SNR=1.5						
WRA	**Warramunga Arr**	**14.14**	**159**	P	Pn	20 12 48.7	+0.1
	0.4nm,0.9s,baz=339,slow=14,SNR=8.0						
WRA				S	Sn	20 15 23.8	-2.3
	0.3nm,0.8s,baz=336,slow=22,SNR=1.4						
ASAR	**Alice Springs**	**17.50**	**165**	P	Pn	20 13 29.1	-0.4
	0.2nm,0.5s,baz=339,slow=9.9,SNR=18						
MKAR	**Makanchi Array**	**67.43**	**327**	P		20 20 12.4	-0.3
	0.2nm,0.4s,baz=133,slow=7.6,SNR=2.5						
	0.2nm,0.4s						

IDC 13 20:13:52.2±1.2, 13.°80N×119.°67E, h0km, mb3.4/4, mbtmp3.5/4, MS3.7/1, Error ellipse: s-maj=24.4km s-min=14.6km az=167.0
MAN 13 20:13:54.0, 13.°78N×119.°73E, h6km, MS3.6
ISC 13 20:13:56.6±1.1, 13.°93N±0.°10×119.°72E±0.°07, h30km, n13, σ1s12/15, mb3.7/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.19**	**82**	Pg	**Pn**	**20 14 17.1**	**-0.3**
	304nm,0.3s,baz=254,slow=7.4,SNR=24						
TGY				Lg	Lg	20 14 32.9	
	360nm,0.3s,baz=252,slow=20,SNR=7.7						
TGY				LR	LR	20 14 33.9	
	comp=Z,122nm,18.2s,baz=294,slow=33						
TGY	**Tagaytay City**	**1.19**	**82**	*e*P	**Pn**	**20 14 17.4**	**0.0**
TGY				*e*S	**Sb**	**20 14 35.1**	**+1.3**
PGP	**Puerto Galera**	**1.27**	**109**	*e*P	**Pn**	**20 14 17.0**	**-1.4**
PGP				*e*S	**Sn**	**20 14 33.5**	**-0.9**
PCPS	**Palayan City**	**1.48**	**61**	*e*P	Pb	20 14 30.5	+6.9
PCPS				*e*S	Sb	20 14 57.0	+15
LQP	**Lukban**	**1.77**	**84**	*e*P	**Pn**	**20 14 26.1**	**+0.6**
LQP				*e*S	**Sn**	**20 14 46.9**	**-0.3**
GQP	**Guinayangan**	**2.65**	**90**	*e*P	**Pn**	**20 14 39.0**	**+1.7**
GQP				*e*S	**Sn**	**20 15 07.8**	**-0.6**
IBAJ	**Ibajay, Aklan**	**3.18**	**131**	*e*P	**Pn**	**20 14 46.1**	**+1.4**
GSPH	**General Santos**	**9.34**	**146**	*i* P	**Pn**	**20 16 10.7**	**+1.3**
GSPH				*i* S		20 16 14.6	
CMAR	**Chiang Mai Arr**	**20.45**	**285**	P	**P**	**20 18 32.4**	**+0.5**
	0.2nm,0.5s,baz=84,slow=11,SNR=6.1						
	0.2nm,0.5s						
PMG	**Port Moresby**	**35.76**	**129**	LR	LR	20 37 06.7	
	comp=Z,104nm,18.4s,baz=231,slow=39						
WRA	**Warramunga Arr**	**36.60**	**157**	P	**P**	**20 20 58.9**	**-1.5**
	1.3nm,0.7s,baz=335,slow=8.7,SNR=16						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**39.86**	**159**	P	**P**	**20 21 27.1**	**-0.7**
	0.9nm,0.6s,baz=339,slow=9.3,SNR=20						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**49.47**	**327**	P	**P**	**20 22 44.0**	**-0.1**
	0.3nm,0.8s,baz=125,slow=9.0,SNR=3.5						
	0.3nm,0.8s						

IDC 13 20:26:10.5±0.9, 30.°68N×141.°83E, h0km, mb3.7/8, mbtmp3.7/11, ML3.2/3, Error ellipse: s-maj=36.6km s-min=16.2km az=73.0
NIED 13 20:26:16.0, 30.°94N×141.°89E, h90km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15 Nm; Mrr 0.51; Mθθ -0.02; Mφφ -0.50; Mrθ -0.21; Mθφ 0.06; Mφr 1.26; Fault plane solution: M0 1.37000×10^15 NP1: φs 175.00000°, δ 11.00000°, λ 95.00000°. NP2: φs 351.00000°, δ 79.00000°, λ 89.00000°.
JMA 13 20:26:16.0±0.4, 31.°N±2.°×14.°2E±.°, h90km, MV3.6/22, NEAR TORISHIMA IS
ISC 13 20:26:21.6±1.1, 31.°02N±0.°09×141.°6E±0.°1, h100km, n26, σ2s03/25, mb3.7/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.59**	**324**	*e*P	**Pn**	**20 26 59.5**	**-2.5**
JHJ2				*e*S	**Sn**	**20 27 31.7**	**-1.2**
JHJ	**Hachijo jima 2**	**2.62**	**324**	Pn	**Pn**	**20 26 58.6**	**-3.6**
	8.0nm,0.3s,baz=72,slow=20,SNR=2.2						
JHJ				Sn	**Sn**	**20 27 31.5**	**-2.0**
	19nm,0.3s,baz=143,slow=20,SNR=7.4						
	76nm,0.9s						
JMKN	**Mikurajimanish**	**3.34**	**329**	*e*S	**Sn**	**20 27 51.7**	**+0.9**
JMYK	**Miyake Tsubota**	**3.51**	**330**	*e*S	**Sn**	**20 27 54.4**	**-0.3**
BSO1	**Boso 1**	**3.66**	**352**	*e*P	**Pn**	**20 27 13.4**	**-2.3**
BSO1				*e*S	**Sn**	**20 27 57.4**	**-0.3**
BSO3	**Boso 3**	**3.89**	**346**	*e*P	**Pn**	**20 27 16.6**	**-2.4**
CBIJ	**Chichi jima**	**3.94**	**173**	*e*S	Sn	20 27 48.5	-17
JCJ	**Chichijima**	**3.94**	**173**	Pn	Pn	20 27 08.0	-12
	4.7nm,0.3s,baz=311,slow=20,SNR=1.6						
JCJ				Sn	Sn	20 27 47.7	-18
	19nm,0.3s,baz=270,slow=20,SNR=6.3						
	22nm,0.5s						
BSO4	**Boso 4**	**4.11**	**345**	*e*P	**Pn**	**20 27 20.1**	**-2.0**
JOD2	**Odawara 2**	**4.74**	**334**	*e*P	**Pn**	**20 27 29.2**	**-1.6**
JHU2	**Hanno**	**5.19**	**338**	*e*P	**Pn**	**20 27 35.3**	**-1.6**
JHU2				*e*S	**Sn**	**20 28 35.7**	**+0.2**
JRY	**Ryogami san**	**5.48**	**336**	*e*P	**Pn**	**20 27 40.2**	**-0.7**
JRY				*e*S	**Sn**	**20 28 45.0**	**+2.4**
JHO	**Hitachi**	**5.64**	**351**	*e*P	**Pn**	**20 27 40.3**	**-2.7**
JHO				*e*S	**Sn**	**20 28 44.7**	**-1.8**
JAG	**Ashikaga**	**5.69**	**342**	*e*S	**Sn**	**20 28 47.5**	**-0.1**
MJAR	**Matsushiro Arr**	**6.20**	**334**	Pn	**Pn**	**20 27 50.1**	**-0.5**
	0.3nm,0.3s,baz=151,slow=13,SNR=9.0						
MJAR				Sn	**Sn**	**20 29 01.8**	**+1.8**
	0.1nm,0.3s,baz=154,slow=22,SNR=1.7						
	4.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**25.88**	**113**	T	T	20 58 37.1	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**25.88**	**113**	T	T	20 58 38.7	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**25.89**	**113**	T	T	20 58 35.8	
	baz=304						
SONM	**Songino Array**	**31.64**	**312**	P	P	20 32 39.3	+4.0
	0.4nm,0.8s,baz=119,slow=12,SNR=3.6					

	37nm,0.9s							
UZB	**Uzynbulak**	**4.57**	**242**	Pg	**Pb**	**20**	**35**	**00.0 +2.7**
	6.2nm,0.6s							
UZB				Lg	Lg	20	36	01.2
	17nm,0.8s							
UZB	**Uzynbulak**	**4.57**	**242**	*e*P	**Pg**	**20**	**35**	**00.5 -4.0**
	7.3nm,0.5s							
UZB				*e*S	**Sg**	**20**	**36**	**01.2 -2.5**
	17nm,0.8s							
KURS	**Kuram**	**4.96**	**249**	Pg	**Pg**	**20**	**35**	**09.9 -2.0**
	4.0nm,0.5s							
KURS				Lg	Lg	20	36	17.6
	21nm,1.5s							
KURS	**Kuram**	**4.96**	**249**	*e*P	**Pg**	**20**	**35**	**09.9 -2.0**
	4.0nm,0.8s							
KURS				*e*S	**Sg**	**20**	**36**	**17.6 +1.5**
	21nm,1.0s							
SATY	**Saty**	**5.00**	**244**	Pg	**Pb**	**20**	**35**	**07.3 +2.6**
	2.6nm,0.2s							
SATY				Lg	Lg	20	36	13.7
	34nm,0.5s							
SATY	**Saty**	**5.00**	**244**	*e*P	**Pg**	**20**	**35**	**09.4 -3.4**
	3.2nm,0.3s							
SATY				*e*S	**Sg**	**20**	**36**	**16.6 -1.0**
	34nm,0.5s							
MDOK	**Medeo**	**5.84**	**250**	Pg	**Pg**	**20**	**35**	**25.9 -2.9**
	9.3nm,0.6s							
MDOK				Lg	Lg	20	36	44.9
	16nm,1.1s							
KTBS	**Karatobe**	**5.87**	**256**	Pg	**Pb**	**20**	**35**	**23.8 +4.3**
	1.3nm,0.6s							
KTBS				Lg	Lg	20	36	42.0
	21nm,0.9s							
KTBS	**Karatobe**	**5.87**	**256**	*e*P	**Pg**	**20**	**35**	**25.7 -3.7**
	1.7nm,0.5s							
KTBS				*e*S	**Sg**	**20**	**36**	**44.4 -1.1**
	23nm,0.8s							
KURBB	**Kurchatov Arra**	**6.59**	**324**	⇑Pn	**Pn**	**20**	**35**	**14.8 +1.0**
	0.9nm,0.5s							
KURBB				⇓Sn	**Sn**	**20**	**36**	**30.2 +1.3**
	8.8nm,0.6s							
KURBB				⇓Lg	Lg	20	37	06.6
	86nm,0.7s							
KST	**Kastek**	**6.61**	**252**	Pg	**Pg**	**20**	**35**	**40.2 -3.3**
	3.7nm,0.5s							
KST				Lg	Lg	20	37	10.6
	12nm,0.8s							
KST	**Kastek**	**6.61**	**252**	*e*P	**Pg**	**20**	**35**	**40.2 -3.3**
	3.7nm,0.5s							
KST				*e*S	**Sg**	**20**	**37**	**09.9 +0.8**
	12nm,0.8s							
KURK	**Kurchatov**	**6.62**	**325**	⇑Pn	**Pn**	**20**	**35**	**14.9 +0.6**
	0.4nm,0.6s							
KURK				⇓Sn	**Sn**	**20**	**36**	**30.4 +0.6**
	2.8nm,0.8s							
KURK				⇑Lg	Lg	20	37	04.4
	9.1nm,0.7s							

*IDC **13** 20:38:09.5±1.1, 13°.45N×92°.69E, h0km, mb3.6/8, mbtmp3.5/9, ML2.8/1, Error ellipse: s-maj=43.3km s-min=18.5km az=59.0*

ISC 13 20:38:14.4±1.1, 13°.6N±0°.1×92°.9E±0°.1, h29km, n16, σ1§26/11, mb3.6/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.56**	**50**	Pn	**Pn**	**20 40 03.9**	**+1.2**
	baz=231,slow=14,SNR=6.0						
CMAR				Sn	**Sn**	**20 41 25.7**	**-1.7**
	0.1nm,0.3s,baz=235,slow=25,SNR=4.6						
	0.6nm,0.6s						
PALK	**Pallekele**	**13.54**	**244**	Sn	Sn	20 43 36.0	-18
	0.4nm,0.3s,baz=82,slow=14,SNR=4.2						
H08S3	**Diego Garcia H**	**29.25**	**225**	T	T	21 14 38.7	
	baz=44,slow=74,SNR=6.8						
H08S2	**Diego Garcia H**	**29.26**	**225**	T	T	21 14 36.2	
	baz=44,slow=74,SNR=4.5						
H08S1	**Diego Carcia H**	**29.27**	**225**	T	T	21 14 35.8	
	baz=44						
MKAR	**Makanchi Array**	**34.26**	**347**	P	**P**	**20 44 59.4**	**+1.5**
	0.5nm,0.8s,baz=159,slow=8.9,SNR=3.8						
	0.5nm,0.8s						
SONM	**Songino Array**	**35.93**	**16**	P	**P**	**20 45 12.8**	**+0.4**
	0.3nm,0.6s,baz=222,slow=1.9,SNR=2.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**38.73**	**345**	P	**P**	**20 45 36.9**	**+1.1**
	0.5nm,0.7s,baz=160,slow=7.9,SNR=4.3						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**40.75**	**353**	P	**P**	**20 45 53.2**	**+0.5**
	0.8nm,0.6s,baz=172,slow=8.4,SNR=4.6						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**52.67**	**128**	P	**P**	**20 47 26.5**	**0.0**
	0.6nm,0.6s,baz=307,slow=7.8,SNR=9.9						
WRA				PcP	**PcP**	**20 48 36.8**	**+0.6**
	0.4nm,0.6s,baz=312,slow=3.9,SNR=5.4						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**54.59**	**132**	P	**P**	**20 47 40.2**	**-0.4**
	0.4nm,0.6s,baz=311,slow=7.0,SNR=9.0						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**67.11**	**331**	P	**P**	**20 49 03.1**	**-2.0**
	0.7nm,0.9s,baz=96,slow=7.2,SNR=1.4						
	0.7nm,0.9s						
H04N2	**CROZET ISLANDS**	**70.05**	**209**	T	T	22 05 16.3	
	baz=42,slow=75,SNR=2.8						
H04N1	**CROZET ISLANDS**	**70.06**	**209**	T	T	22 05 18.5	
	baz=42,slow=75,SNR=3.7						
H04N3	**CROZET ISLANDS**	**70.06**	**209**	T	T	22 05 14.9	
	baz=42,slow=75,SNR=3.4						
GERES	**GERESS Array B**	**72.79**	**317**	P	**P**	**20 49 39.9**	**-0.4**
	0.2nm,0.5s,baz=90,slow=2.0,SNR=4.1						
	0.2nm,0.5s						

*TEH **13** 20:45:41.2, 34°.30N×46°.47E, h9km±16km, ML3.1, Presumed earthquake*

*ISN **13** 20:45:45.4±1.8, 34°.30N×46°.47E, h12km±30km, ML3.1, Presumed earthquake*

ISC 13 20:45:42.6±0.9, 34°.31N±0°.04×46°.55E±0°.04, h7km±6km, n15, σ1§07/18, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**0.02**	**44**	Pg	**Pg**	**20 45 43.5**	**-0.7**
IGHG				Sg	**Sg**	**20 45 46.6**	**+1.2**
IDHR	**Dehrash**	**0.41**	**341**	Pg	**Pg**	**20 45 48.8**	**-1.9**
KCHF	**Cheshme Sefid,**	**0.41**	**95**	Pg	**Pg**	**20 45 50.2**	**-0.4**
ILBA	**Ilam Banvizeh**	**0.74**	**203**	Pg	**Pg**	**20 45 55.4**	**-1.5**
SNQR	**Sonqor, Kerman**	**1.04**	**58**	Pg	**Pg**	**20 46 02.2**	**-0.5**
IBZA	**Bozab**	**1.10**	**81**	Pg	**Pn**	**20 46 04.1**	**-0.6**
SNJK	**Sanadaj _Korde**	**1.20**	**21**	Pg	**Pg**	**20 46 04.6**	**-1.0**
IALM	**Almabolaq**	**1.44**	**67**	Pg	**Pb**	**20 46 10.0**	**0.0**
BDRS	**Dareh Seyedi**	**1.97**	**100**	Pn	**Pb**	**20 46 18.0**	**-0.9**
BHD	**Baghdad**	**2.08**	**241**	*i* P	**Pb**	**20 46 21.1**	**+0.3**
	baz=59						
BHD				*i* S	**Sn**	**20 46 46.0**	**+1.8**
BHD				IAML		20 46 50.4	
	comp=N,126nm,0.7s						
BHD				IAML		20 46 51.1	
	comp=E,289nm,0.3s						
MAHB	**Mahabad**	**2.54**	**345**	Pn	**Pn**	**20 46 25.2**	**+0.7**
RAFI	**Al-Rafai**	**2.61**	**188**	*i* P	**Pb**	**20 46 29.0**	**-0.7**
RAFI				*i* S	**Sb**	**20 47 02.0**	**0.0**
IAZR	**Azarshahr**	**3.39**	**352**	Pn	**Pn**	**20 46 36.7**	**+0.5**
JHBN	**Jahan bin**	**4.03**	**120**	Pn	**Pn**	**20 46 45.9**	**+0.8**
KLNJ	**Kolanjah**	**5.38**	**126**	Pn	**Pn**	**20 47 04.1**	**+0.4**

TAP 13 21:03:40.9, 23°.28N×120°.60E, h8km, ML1.7, 1C-1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPUB	**Ta-pu**	**0.03**	**54**	*i* P	Pg	21 03 42.8	+0.4
TPUB				*i* S	Sg	21 03 44.1	+0.6
WTP	**Ta-pu**	**0.04**	**163**	*i* P	Pg	21 03 43.0	+0.4
WTP				*i* S	Sg	21 03 44.5	+0.8
CHN4	**Tsaushan**	**0.07**	**353**	*i* P	Pg	21 03 43.3	+0.5
CHN4				*i* S	Sg	21 03 45.2	+0.9
SNST	**Tainan City**	**0.11**	**237**	⇑P	Pg	21 03 44.1	+0.6
SNST				*i* S	Sg	21 03 46.6	+1.3
CHN1	**Nanshi**	**0.12**	**215**	*i* P	Pg	21 03 44.2	+0.6
CHN1				*i* S	Sg	21 03 46.8	+1.3
WCKO	**Fanlu**	**0.16**	**1**	*i* P	Pg	21 03 45.0	+0.8
WCKO				*i* S	Sg	21 03 48.5	+2.0
STYT	**Tauyuan**	**0.18**	**130**	⇓P	Pg	21 03 45.8	+1.1
STYT				S	Sg	21 03 49.6	+2.2
STYH	**Taoyuan**	**0.20**	**125**	*i* P	Pg	21 03 45.9	+1.0
STYH				*i* S	Sg	21 03 49.3	+1.8
SGST	**Jiashian**	**0.20**	**185**	*e*P	Pg	21 03 45.2	+0.2
SGST				*e*S	Sg	21 03 49.6	+1.9
CHY	**Chiayi**	**0.27**	**323**	*e*P	Pb	21 03 47.2	-0.8
CHY				S	Sb	21 03 51.7	-1.2
CHN2	**Minshiung**	**0.28**	**335**	P	Pb	21 03 47.3	-0.9
CHN2				S	Sb	21 03 52.2	-0.8
SLGT	**Liugui**	**0.29**	**172**	P	Pb	21 03 47.9	-0.6
SLGT				*e*S	Sb	21 03 53.9	+0.5
ALS	**Alishan**	**0.29**	**39**	*i* P	Pb	21 03 47.9	-0.8
ALS				*i* S	Sb	21 03 53.1	-0.7
ICHU	**Yijhu**	**0.31**	**285**	P	Pb	21 03 48.0	-0.7
ICHU				*e*S	Sb	21 03 53.6	-0.2
CHN5	**Tsauling**	**0.32**	**13**	P	Pb	21 03 48.2	-0.8
CHN5				S	Sb	21 03 54.5	0.0
ELDTW	**Lidau**	**0.39**	**104**	P	Pb	21 03 49.6	-0.6
ELDTW				*i* S	Sb	21 03 55.9	-0.6
SCST	**Cishan**	**0.41**	**194**	P	Pb	21 03 50.0	-0.4
SCST				*e*S	Sb	21 03 58.4	+1.6
WDLH	**Douliu**	**0.41**	**352**	P	Pb	21 03 49.9	-0.6
WDLH				*e*S	Sb	21 03 57.3	+0.4
WSL	**Shuilin Townsh**	**0.42**	**305**	P	Pb	21 03 50.4	-0.3
WSL				S	Sb	21 03 56.6	-0.5
WHYT	**Xinyi Township**	**0.47**	**29**	*e*P	Pb	21 03 51.1	-0.5
WHYT				*e*S	Sb	21 03 58.6	-0.1
WSF	**Szhu**	**0.50**	**316**	P	Pb	21 03 51.3	-0.6
WSF				S	Sb	21 03 59.1	-0.2
SSD	**Sandimen**	**0.53**	**177**	P	Pb	21 03 52.4	-0.2
SSD				S	Sb	21 04 00.9	+0.5
SSLB	**Suanglung**	**0.60**	**33**	P	Pb	21 03 53.1	-0.6
FULB	**Fuli**	**0.64**	**97**	P	Pb	21 03 54.3	-0.2
FULB				S	Sb	21 04 05.1	+1.5
TWF1	**Yuli**	**0.64**	**84**	P	Pb	21 03 54.4	0.0
TWF1				*e*S	Sb	21 04 03.3	-0.2
YULB	**Yu-li**	**0.65**	**80**	P	Pb	21 03 54.1	-0.4
YULB				*e*S	Sb	21 04 02.9	-0.9
SMLT	**Sun Moon Lake**	**0.66**	**24**	P	Pb	21 03 55.0	+0.2
SMLT				S	Sb	21 04 04.9	+0.8
EYUL	**Yuli**	**0.66**	**84**	P	Pb	21 03 54.8	+0.1
EYUL				S	Sb	21 04 03.8	-0.3
TYC	**Yuchr**	**0.66**	**21**	P	Pb	21 03 54.8	0.0
TYC				S	Sb	21 04 05.6	+1.5
MASBT	**Mashibuluo**	**0.67**	**178**	P	Pb	21 03 55.1	+0.3
MASBT				S	Sb	21 04 05.2	+0.9
VWDT	**VWDT**	**0.68**	**46**	P	Pb	21 03 55.0	-0.1
VWDT				S	Sb	21 04 05.0	+0.3
EHYH	**Wanrong**	**0.71**	**73**	P	Pb	21 03 55.9	+0.2
EHYH				S	Sb	21 04 05.9	+0.3
EDH	**Donghe**	**0.72**	**115**	P	Pg	21 03 54.7	-0.1
EDH				*e*S	Sn	21 04 07.4	-1.1
DPDB	**Guoxing**	**0.81**	**22**	P	Pb	21 03 57.0	-0.2
DPDB				S	Sn	21 04 09.8	-1.1
WCS	**Beigang Elemen**	**0.82**	**20**	P	Pb	21 03 57.4	-0.1
WCS				S	Sb	21 04 09.6	+0.8
WARBT	**Fenglin Townsh**	**0.84**	**59**	P	Pb	21 03 58.0	+0.2
WARBT				S	Sb	21 04 09.7	+0.4
WUSB	**Renai**	**0.85**	**34**	*i* P	Pb	21 03 58.2	+0.2
WUSB				*i* S	Sb	21 04 10.1	+0.4
OWD	**Renai**	**0.85**	**38**	P	Pb	21 03 58.2	+0.2
OWD				S	Sb	21 04 10.8	+1.1
PHUB	**P'eng-hu**	**0.97**	**284**	P	Pg	21 03 59.8	+0.2
PHUB				S	Sb	21 04 13.2	+0.1
LDUT	**Ludao**	**1.00**	**127**	P	Pn	21 04 01.0	-0.3
LDUT				S	Sn	21 04 15.4	-0.3
WHP	**Taichung City**	**1.04**	**18**	P	Pn	21 04 01.6	-0.3
WHP				S	Sn	21 04 16.6	-0.1
NACB	**Ninganchiao**	**1.27**	**46**	P	Pn	21 04 20.4	-1.3
NACB				*e*S	Sb	21 04 24.0	-1.3
NNSB	**Datong**	**1.35**	**32**	P	Pg	21 04 06.8	0.0
NNSB				S	Sn	21 04 24.7	+0.3

*CNRM **13** 21:34:35.9, 34°.19N×5°.81W, h3km, ML2.6*
*IGIL **13** 21:34:37.1, 34°.37N×5°.61W, h10km, ML2.1*
*SFS **13** 21:34:37.1, 34°.31N×5°.81W, h10km, ML3.2/14, ML3.5/14, MLv3.2/14*
*INMG **13** 21:34:37.1±1.3, 34°.34N×5°.65W, h19km±9km, ML2.3, Error ellipse: s-maj=5.0km s-min=5.0km az=112.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*
*MDD **13** 21:34:39.1±1.1, 34°.35N×5°.86W, h22km±9km, mb_Lg2.6/10, Error ellipse: s-maj=7.7km s-min=4.6km az=106.0*

ISC 13 21:34:35.0±1.1, 34°.35N±0°.02×5°.81W±0°.02, h9km±9km, n65, σ1§42/123, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.47**	**121**	P	**Pg**	**21 34 44.3**	**+0.1**
SICH				S	**Sg**	**21 34 50.5**	**0.0**
CHEFC	**Chefchaouen**	**0.84**	**27**	P	**Pn**	**21 34 54.7**	**+1.6**
CHEFC				S	**Sn**	**21 35 08.8**	**+3.0**
RTC	**Rabat Centre**	**0.94**	**248**	Pn	**Pn**	**21 34 54.9**	**+0.5**
RTC				Sn	**Sn**	**21 35 07.8**	**-0.2**
RTC	**Rabat Centre**	**0.94**	**248**	P	**Pb**	**21 34 55.6**	**+0.1**
RTC				S	**Sg**	**21 35 05.6**	**+0.2**
IFR	**Ifrane**	**1.01**	**146**	Pn	**Pg**	**21 34 53.8**	**-0.5**
IFR				Sn	**Sg**	**21 35 06.3**	**-1.1**
LCRM	**LCR**	**1.03**	**130**	P	**Pg**	**21 34 54.5**	**-0.3**
LCRM				S	**Sg**	**21 35 08.1**	**-0.1**
ZHG	**ZHG**	**1.14**	**218**	P	**Pb**	**21 34 57.0**	**+0.1**
ZHG				S	**Sn**	**21 35 14.4**	**+1.4**
CZD	**Col de Zad**	**1.46**	**154**	P	**Pn**	**21 35 01.7**	**-0.1**
CZD				S	**Sb**	**21 35 19.9**	**-1.4**
AKLM	**AKL**	**1.61**	**84**	P	**Pb**	**21 35 04.8**	**-0.2**
AKLM				S	**Sg**	**21 35 26.6**	**-0.2**
AVE	**Averroes**	**1.70**	**232**	Pn	**Pg**	**21 35 07.5**	**-0.1**
AVE				Sn	**Sb**	**21 35 28.8**	**+0.9**
AVE	**Averroes**	**1.70**	**232**	P	**Pn**	**21 35 05.5**	**+0.6**
AVE				S	**Sn**	**21 35 27.7**	**+1.0**
MD31	**MD31**	**1.72**	**149**	P	**Pn**	**21 35 04.6**	**-0.6**
MD31				S	**Sn**	**21 35 26.8**	**-0.5**
PALE	**Palemas**	**1.76**	**60**	P	**Pg**	**21 35 08.3**	**-0.4**
PALE				S	**Sg**	**21 35 33.4**	**+1.8**
MDT	**Midelt**	**1.83**	**147**	P	**Pn**	**21 35 06.2**	**-0.5**
MDT				S	**Sn**	**21 35 29.6**	**-0.5**
EMIJ	**Mijas**	**2.36**	**21**	Pn	**Pn**	**21 35 16.1**	**+2.2**
EMIJ				Sn	**Sn**	**21 35 44.3**	**+1.1**
EMIJ	**Mijas**	**2.36**	**21**	Pn	**Pb**	**21 35 17.5**	**-0.2**
EMIJ				Sn	**Sn**	**21 35 44.3**	**+1.1**
EMIJ				*i* lVmb_Lg		21 35 46.1	
ESPR	**Espera**	**2.51**	**359**	Pn	**Pb**	**21 35 20.0**	**-0.2**
ESPR				Sn	**Sn**	**21 35 44.8**	**-1.9**
ESPR	**Espera**	**2.51**	**359**	Pn	**Pn**	**21 35 16.1**	**+0.1**
ESPR				Sn	**Sn**	**21 35 45.1**	**-1.6**
ESPR				*i* lVmb_Lg		21 35 53.0	
SRHM	**Skhour des Reh**	**2.57**	**224**	P	**Pb**	**21 35 20.3**	**-0.9**
SRHM				S	**Sb**	**21 35 55.0**	**+2.2**
TISM	**Timmit**	**2.68**	**192**	P	**Pn**	**21 35 18.5**	**+0.2**
TISM				S	**Sn**	**21 35 50.3**	**-0.5**
TAF	**Taforalt**	**2.84**	**80**	P	**Pn**	**21 35 22.6**	**+2.1**
TAF				S	**Sb**	**21 35 59.2**	**-1.4**
ELGU	**Los Guajares,**	**3.07**	**35**	Pn	**Pn**	**21 35 25.1**	**+1.3**
ELGU				Sn	**Sn**	**21 35 59.7**	**-1.1**
ELGU	**Los Guajares,**	**3.07**	**35**	Pn	**Pn**	**21 35 25.6**	**+1.8**
ELGU				Sn	**Sn**	**21 35 59.5**	**-1.2**
ELGU				*i* lVmb_Lg		21 36 06.0	
EGOR	**Sierra Gorda,**	**3.08**	**26**	Pn	**Pb**	**21 35 28.3**	**-1.6**
EGOR				Sn	**Sn**	**21 36 03.9**	**+2.9**
PBDV	**Barranco-do-Ve**	**3.36**	**330**	Pn	**Pn**	**21 35 28.1**	**+0.4**
PBDV				Sn	**Sn**	**21 36 06.8**	**-1.0**
PBDV	**Barranco-do-Ve**	**3.36**	**330**	*e*P	**Pn**	**21 35 28.6**	**+0.9**
PBDV				*e*S	**Sn**	**21 36 07.2**	**-0.6**
PBDV				*i* IAML		21 36 08.8	
PBDV				*i* IAML		21 36 14.7	
PVAQ	**Vaqueiros**	**3.42**	**334**	*e*P	**Pn**	**21 35 29.6**	**+1.1**
PVAQ				*e*S	**Sn**	**21 36 08.8**	**-0.2**
PVAQ				*i* IAML		21 36 10.2	
PVAQ				*i* IAML		21 36 10.4	
PVAQ				*i* IAML		21 36 11.1	
EGRO	**El Granado**	**3.45**	**337**	Pn	**Pn**	**21 35 29.6**	**+0.7**
EGRO				Sn	**Sn**	**21 36 09.3**	**-0.7**
EGRO	**El Granado**	**3.45**	**337**	Pn	**Pn**	**21 35 30.2**	**+1.3**
EGRO				Sn	**Sn**	**21 36 09.3**	**-0.7**
EGRO				*i* lVmb_Lg		21 36 15.2	
EBER	**Berja**	**3.48**	**42**	Pn	**Pn**	**21 35 30.9**	**+1.5**
EBER				Sn	**Sn**	**21 36 12.5**	**+1.7**
EMIN	**Mina Concepcio**	**3.48**	**349**	Pn	**Pn**	**21 35 27.6**	**-1.6**
EMIN	**Mina Concepcio**	**3.48**	**349**	Pn	**Pn**	**21 35 31.1**	**+1.8**
EMIN				Sn	**Sn**	**21 36 07.8**	**-2.8**
EMIN				*i* lVmb_Lg		21 36 22.4	
OUZM	**OUZ**	**3.53**	**193**	P	**Pn**	**21 35 32.1**	**+2.0**
OUZM				S	**Sn**	**21 36 15.6**	**+3.6**
TZRR	**Tazzarine**	**3.56**	**177**	P	**Pn**	**21 35 30.8**	**+0.3**
TZRR				S	**Sn**	**21 36 12.0**	**-0.8**
OUK	**Oukaimeden**	**3.58**	**210**	P	**Pn**	**21 35 31.0**	**-0.1**
OUK				S	**Sn**	**21 36 13.2**	**-0.5**
TIO	**Tiouine**	**3.63**	**200**	P	**Pn**	**21 35 31.7**	**+0.2**
TIO				S	**Sn**	**21 36 14.0**	**-0.5**
ECAB	**El Cabril**	**3.73**	**5**	Pn	**Pn**	**21 35 34.2**	**+1.5**
ECAB				Sn	**Sn**	**21 36 14.9**	**-1.9**
ECAB	**El Cabril**	**3.73**	**5**	Pn	**Pn**	**21 35 35.7**	**+2.9**
ECAB				Sn	**Sn**	**21 36 14.5**	**-2.3**
ECAB				*i* lVmb_Lg		21 36 20.7	
PCVE	**Castro Verde**	**3.74**	**332**	Pn	**Pn**	**21 35 34.0**	**+1.1**
PCVE				Sn	**Sn**	**21 36 16.9**	**-0.1**
PCVE	**Castro Verde**	**3.74**	**332**	*e*P	**Pn**	**21 35 34.2**	**+1.4**
PCVE				*e*S	**Sn**	**21 36 16.3**	**-0.7**
PCVE				*i* IAML		21 36 16.8	
PCVE				*i* IAML		21 36 17.9	
PCVE				*i* IAML		21 36 21.1	
MORF	**Marmelete**	**3.75**	**323**	*e*S	**Sn**	**21 36 16.4**	**-0.8**
MORF				IAML		21 36 17.7	
	comp=E,4.3nm,0.2s						
MORF	**Marmelete**	**3.75**	**323**	*e*P	**Pn**	**21 35 33.9**	**+0.9**
MORF				*e*S	**Sn**	**21 36 16.8**	**-0.4**
EADA	**Adamuz**	**3.93**	**14**	Pn	**Pn**	**21 35 36.8**	**+1.2**
EADA				Sn	**Sn**	**21 36 20.4**	**-1.4**
EADA	**Adamuz**	**3.93**	**14**	Pn	**Pn**	**21 35 36.3**	**+0.8**
EADA				Sn	**Sn**	**21 36 21.4**	**-0.5**
EADA				*i* lVmb_Lg		21 36 24.3	
PBAR	**Barrancos**	**3.94**	**346**	Pn	**Pn**	**21 35 36.6**	**+0.9**
PBAR				Sn	**Sn**	**21 36 20.7**	**-1.4**
PBAR	**Barrancos**	**3.94**	**346**	*e*P	**Pn**	**21 35 36.7**	**+1.1**
PBAR				*e*S	**Sn**	**21 36 20.6**	**-1.4**
PBAR				*i* IAML		21 36 21.8	
PBAR				*i* IAML		21 36 21.9	
PBAR				*i* IAML		21 36 22.1	
PTEO	**Sao Teotonio**	**3.97**	**324**	*e*P	**Pn**	**21 35 37.9**	**+1.9**
PTEO				*e*S	**Sn**	**21 36 22.7**	**0.0**
MESJ	**Messejana**	**3.99**	**331**	*e*P	**Pn**	**21 35 37.4**	**+1.1**
MESJ				*e*S	**Sn**	**21 36 21.4**	**-1.8**
MESJ				IAML		21 36 26.6	
	comp=N,4.9nm,0.5s						
MESJ	**Messejana**	**3.99**	**331**	*e*P	**Pn**	**21 35 37.4**	**+1.1**
MESJ				*e*S	**Sn**	**21 36 23.1**	**-0.1**
MESJ				*i* IAML		21 36 26.4	
MESJ				*i* IAML		21 36 26.6	
MESJ				*i* IAML		21 36 26.6	
MESJ				*i* IAML		21 36 26.6	
EQES	**Quesada**	**4.09**	**32**	Pn	**Pn**	**21 35 40.2**	**+2.4**
EQES				*i* lVmb_Lg		21 36 33.2	
EBAD	**Badajoz**	**4.50**	**348**	Pn	**Pn**	**21 35 45.0**	**+1.7**
EBAD				Sn	**Sn**	**21 36 34.5**	**-1.2**
EBAD	**Badajoz**	**4.50**	**348**	Pn	**Pn**	**21 35 44.6**	**+1.3**
EBAD				Sn	**Sn**	**21 36 32.4**	**-3.4**
EBAD				*i* lVmb_Lg		21 36 36.4	
EVO	**Evora**	**4.53**	**338**	*e*P	**Pn**	**21 35 45.0**	**+1.2**
EVO				*e*S	**Sn**	**21 36 35.9**	**-0.7**
EVO				*i* IAML		21 36 36.6	
EVO				*i* IAML		21 36 37.3	
EVO				*i* IAML		21 36 38.8	
MOE	**Montemor**	**4.64**	**335**	*e*P	**Pn**	**21 35 46.6**	**+1.4**
MOE				*e*S	**Sn**	**21 36 38.1**	**-1.1**
MOE				*i* IAML		21 36 40.6	
MOE				*i* IAML		21 36 45.6	
MOE				*i* IAML		21 36 47.2	
PESTR	**Estremoz**	**4.73**	**343**	Pn	**Pn**	**21 35 46.8**	**+0.3**
PESTR				Sn	**Sn**	**21 36 39.8**	**-1.6**
PESTR	**Estremoz**	**4.73**	**343**	*e*S	**Sn**	**21 36 40.5**	**-1.0**
PESTR				*i* IAML		21 36 41.0	
PESTR				*i* IAML		21 36 41.1	
PESTR				*i* IAML		21 36 42.8	
PSIM	**Granatula de C**	**4.75**	**20**	Pn	**Pn**	**21 35 49.7**	**+2.8**
PSIM				Sn	**Sn**	**21 36 39.2**	**-2.9**
PARRA	**Arraiolos**	**4.80**	**339**	*e*P	**Pn**	**21 35 48.7**	**+1.2**
PARRA				*e*S	**Sn**	**21 36 42.2**	**-1.1**
PARRA				*i* IAML		21 36 49.0	
PARRA				*i* IAML		21 36 54.9	
PARRA				*i* IAML		21 37 07.3	
PMTG	**Montargil**	**5.09**	**338**	*e*P	**Pn**	**21 35 52.9**	**+1.5**
PMTG				*e*S	**Sn**	**21 36 49.4**	**-0.9**
PMTG				*i* IAML		21 36 50.7	
PMTG				*i* IAML		21 36 51.2	
PMTG				*i* IAML		21 36 53.1	
PMRV	**Marv??o**	**5.22**	**346**	*e*P	**Pn**	**21 35 55.0**	**+1.7**
PMRV				*e*S	**Sn**	**21 36 52.7**	**-1.0**
PMRV				*i* IAML		21 36 53.0	
PMRV				*i* IAML		21 36 53.8	
PMRV				*i* IAML		21 36 54.1	
PMAFR	**Mafra**	**5.38**	**330**	Pn	**Pn**	**21 35 55.0**	**-0.4**
PSARD	**Sardoal**	**5.57**	**341**	*e

	110nm,0.2s							
VIEF	**Viey**	**0.16**	**261**	⇑P		**Pg**	**21 55 46.9**	**+0.3**
VIEF				S		**Sg**	**21 55 49.3**	**+0.6**
VIEF	**Viey**	**0.16**	**261**	Pg		**Pg**	**21 55 46.3**	**-0.2**
LABF	**Labassere**	**0.18**	**319**	Pg		**Pg**	**21 55 47.0**	**-0.1**
LABF				Sg		**Sg**	**21 55 49.7**	**+0.3**
ECHI	**Chisagues Biel**	**0.24**	**187**	Pg		**Pg**	**21 55 48.0**	**-0.2**
ECHI				Sg		**Sg**	**21 55 51.2**	**-0.2**
ECHI				*i* iVmb_Lg			21 55 51.6	
ECHI	**Chisagues Biel**	**0.24**	**187**	P		**Pg**	**21 55 48.0**	**-0.2**
ECHI				S		**Sg**	**21 55 51.5**	**+0.1**
ECHI	**Chisagues Biel**	**0.24**	**187**	Pg		**Pg**	**21 55 48.0**	**-0.2**
ECHI				Sg		**Sg**	**21 55 51.3**	**-0.1**
PYLO	**Lourdes**	**0.28**	**312**	P		**Pg**	**21 55 49.3**	**+0.3**
PYLO				S		**Sg**	**21 55 53.6**	**+1.0**
	36nm,0.3s							
PYLO	**Lourdes**	**0.28**	**312**	Pg		**Pg**	**21 55 48.7**	**-0.2**
PYLO				Sg		**Sg**	**21 55 52.7**	**+0.1**
MELF	**Melles**	**0.39**	**95**	Pg		**Pg**	**21 55 50.4**	**-0.5**
MELF				Sg		**Sg**	**21 55 56.2**	**+0.3**
VIER	**Vielha - Casau**	**0.45**	**116**	P		**Pg**	**21 55 52.0**	**-0.1**
VIER				S		**Sg**	**21 55 58.8**	**+0.8**
	28nm,0.2s							
CARA	**Val d'Aran**	**0.47**	**115**	⇑P		**Pg**	**21 55 52.4**	**-0.2**
CARA				S		**Sg**	**21 55 59.5**	**+0.8**
	18nm,0.3s							
REYF	**Montagne du Re**	**0.49**	**289**	Pg		**Pg**	**21 55 52.4**	**-0.4**
CANF	**Canfranc**	**0.57**	**256**	Pg		**Pg**	**21 55 53.8**	**-0.6**
ETSF	**Etsaut**	**0.58**	**269**	*e*Pg		**Pg**	**21 55 54.0**	**-0.7**
ETSF				*e*Sg		**Sg**	**21 56 02.0**	**-0.3**
	7.9nm,0.2s							
MLS	**Moulis**	**0.63**	**85**	P		**Pg**	**21 55 55.5**	**-0.1**
MLS				S		**Sg**	**21 56 04.2**	**+0.4**
MLS	**Moulis**	**0.63**	**85**	Pg		**Pg**	**21 55 54.8**	**-0.7**
CTRE	**Tremp**	**0.70**	**146**	P		**Pg**	**21 55 56.8**	**-0.2**
CTRE				S		**Sg**	**21 56 06.7**	**+0.5**
ATE	**Arette**	**0.71**	**285**	P		**Pg**	**21 55 57.2**	**+0.1**
ATE				S		**Sg**	**21 56 07.2**	**+0.9**
	6.0nm,0.1s							
SALF	**Salau**	**0.72**	**102**	P		**Pg**	**21 55 57.2**	**0.0**
SALF				S		**Sg**	**21 56 06.8**	**+0.3**
	12nm,0.2s							
SALF	**Salau**	**0.72**	**102**	Pg		**Pg**	**21 55 56.6**	**-0.6**
SALF				Sg		**Sg**	**21 56 06.3**	**-0.2**
CEST	**Esterri de Car**	**0.81**	**112**	P		**Pg**	**21 55 58.3**	**-0.7**
CEST				S		**Sg**	**21 56 10.4**	**+0.9**
	6.5nm,0.3s							
CSOR	**Sort**	**0.85**	**128**	P		**Pg**	**21 55 59.2**	**-0.5**
CSOR				S		**Sg**	**21 56 11.1**	**+0.4**
	4.9nm,0.3s							
CRAS	**Crastes**	**0.89**	**24**	Pg		**Pb**	**21 56 01.3**	**-0.2**
CRAS				Sg		**Sb**	**21 56 14.5**	**+0.7**
IRAF	**Chalets d'Irat**	**0.94**	**278**	Pg		**Pg**	**21 56 01.0**	**-0.6**
GENF	**Genat**	**0.98**	**94**	P		**Pg**	**21 56 01.9**	**-0.5**
GENF				S		**Sg**	**21 56 15.4**	**+0.3**
PAND	**Andorre**	**1.04**	**111**	P		**Pg**	**21 56 03.3**	**-0.1**
PAND				S		**Sb**	**21 56 18.1**	**-0.3**
	6.3nm,0.2s							
CORG	**Organya**	**1.05**	**130**	P		**Pg**	**21 56 03.0**	**-0.6**
CORG				S		**Sb**	**21 56 17.9**	**-0.5**
	3.0nm,0.2s							
ARBS	**La Rabassa**	**1.07**	**115**	P		**Pg**	**21 56 03.1**	**-0.9**
ARBS				S		**Sg**	**21 56 18.0**	**+0.1**
	7.1nm,0.3s							
SJPF	**Ste Jean**	**1.09**	**281**	*e*Pg		**Pg**	**21 56 04.0**	**-0.4**
CAVN	**Les Avellanes**	**1.09**	**159**	P		**Pg**	**21 56 04.2**	**-0.2**
CAVN				S		**Sb**	**21 56 19.3**	**-0.5**
	19nm,0.5s							
OSSF	**Osses**	**1.15**	**288**	P		**Pg**	**21 56 04.9**	**-0.7**
OSSF				S		**Sb**	**21 56 20.9**	**-0.5**
	2.7nm,0.3s							
EALK	**Alkurruntz**	**1.31**	**284**	Pg		**Pg**	**21 56 08.3**	**-0.4**
EALK				Sg		**Sg**	**21 56 24.3**	**-1.4**
EALK				*i* iVmb_Lg			21 56 33.5	
EALK	**Alkurruntz**	**1.31**	**284**	Pn		**Pg**	**21 56 07.6**	**-1.1**
CLLI	**Llivia**	**1.35**	**108**	P		**Pg**	**21 56 08.5**	**-0.8**
CLLI				S		**Sg**	**21 56 27.1**	**+0.3**
	4.8nm,0.5s							
FNEB	**Nbias**	**1.38**	**90**	S		**Sn**	**21 56 28.3**	**-0.1**
	2.8nm,0.2s							
EMIR	**Miracle**	**1.38**	**136**	P		**Pn**	**21 56 09.0**	**-0.7**
EMIR				S		**Sn**	**21 56 28.4**	**-0.1**
	7.2nm,0.3s							
CARF	**Carcanieres**	**1.39**	**97**	P		**Pn**	**21 56 09.5**	**-0.4**
CARF				S		**Sn**	**21 56 28.8**	**-0.1**
	6.1nm,0.3s							
CARF	**Carcanieres**	**1.39**	**97**	Pn		**Pn**	**21 56 09.2**	**-0.7**
CARF				Sg		**Sb**	**21 56 28.5**	**+0.2**
VALC	**Valcebollere**	**1.43**	**111**	P		**Pn**	**21 56 10.0**	**-0.5**
VALC				S		**Sg**	**21 56 29.6**	**+0.1**
	15nm,0.2s							
MTLF	**Montolieu**	**1.51**	**73**	*e*Pg		**Pn**	**21 56 11.6**	**+0.1**
MTLF				*e*Sg		**Sn**	**21 56 31.4**	**-0.4**
	3.4nm,0.2s							
CBRU	**Bruguera**	**1.56**	**113**	S		**Sg**	**21 56 34.1**	**+0.4**
	12nm,0.5s							
CORI	**Orista**	**1.64**	**124**	S		**Sb**	**21 56 35.4**	**+0.1**
	11nm,0.3s							
EPOB	**Poblet**	**1.68**	**158**	Pn		**Pn**	**21 56 14.4**	**+0.6**
EPOB				Sn		**Sn**	**21 56 35.9**	**0.0**
EPOB				*i* iVmb_Lg			21 56 40.4	
EPOB	**Poblet**	**1.68**	**158**	P		**Pn**	**21 56 13.9**	**+0.1**
EPOB				S		**Sb**	**21 56 36.5**	**-0.1**
	3.8nm,0.4s							
FILF	**Fillols**	**1.75**	**101**	P		**Pn**	**21 56 13.6**	**-1.1**
FILF				S		**Sn**	**21 56 36.2**	**-1.4**
	2.1nm,0.3s							
FILF	**Fillols**	**1.75**	**101**	Pg		**Pn**	**21 56 14.6**	**-0.2**
ERTA	**Horta de San J**	**1.95**	**178**	S		**Sn**	**21 56 43.4**	**+0.8**
	2.4nm,0.2s							
SJAF	**Saint Jean de**	**2.00**	**101**	P		**Pn**	**21 56 18.8**	**+0.6**
SJAF				S				
	3.0nm,0.3s							
VAN2	**Vandellos 2**	**2.00**	**167**	S		**Sn**	**21 56 44.6**	**+0.9**
LFF	**La Frestale**	**2.06**	**10**	*e*Pg		**Pn**	**21 56 20.1**	**+1.0**
LFF				*e*Sg		**Sg**	**21 56 49.7**	**0.0**
	4.9nm,0.3s							
CMAS	**Mas de Barbera**	**2.18**	**178**	P		**Pn**	**21 56 20.9**	**+0.2**
CMAS				S		**Sn**	**21 56 48.7**	**+0.5**
	2.5nm,0.2s							
CCAS	**Cassa de la Se**	**2.23**	**116**	P		**Pn**	**21 56 21.7**	**+0.5**
CCAS				S		**Sn**	**21 56 49.4**	**+0.1**
	2.4nm,0.4s							
CPAL	**Palau Saverder**	**2.24**	**104**	S		**Sn**	**21 56 50.6**	**+0.9**
CAF	**Calviac**	**2.41**	**33**	*e*Pg		**Pb**	**21 56 27.4**	**-0.1**
CAF				*e*Sg		**Sb**	**21 56 58.7**	**+1.0**
	1.9nm,0.2s							
RJF	**Les Rejaudoux**	**2.57**	**21**	*e*Pg		**Pb**	**21 56 30.3**	**+0.1**
RJF				*e*Sg		**Sb**	**21 57 03.7**	**+1.5**
	3.1nm,0.2s							
EMOS	**Mosqueruela**	**2.60**	**192**	S		**Sn**	**21 56 59.1**	**+0.4**
LASF	**Ste Croix**	**2.88**	**65**	*e*Sg		**Sg**	**21 57 13.9**	**-2.1**
	0.6nm,0.2s							
TCF	**Toulx Ste Croi**	**3.66**	**22**	*e*Sg		**Sg**	**21 57 39.6**	**-1.4**
	0.4nm,0.2s							
MFF	**Saint Martin d**	**3.70**	**356**	*e*Sg		**Sg**	**21 57 39.6**	**-2.8**
	1.5nm,0.5s							
VIVF	**Saint-Julien-l**	**3.75**	**57**	*e*Sg		**Sb**	**21 57 39.8**	**+3.5**
	1.0nm,0.4s							

*IDC **13** 22:06:45.5±1.2, 10°.56N×95°.31E, h0km, mb3.9/10, mbtmp3.9/10, MS3.5/1, Error ellipse: s-maj=67.9km s-min=16.5km az=58.0*

ISC 13 22:06:50.8±1.3, 10°.6N±0°.2×95°.4E±0°.4, h35km, n11, σ0s58/10, mb3.9/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**36.74**	**334**	LR	LR	22 29 50.4	
	comp=Z,74nm,20.3s,baz=147,slow=38						
MKAR	**Makanchi Array**	**37.72**	**345**	P	**P**	**22 14 02.2**	**-0.9**
	1.5nm,0.8s,baz=158,slow=9.9,SNR=7.6						
	1.5nm,0.8s						
SONM	**Songino Array**	**38.23**	**12**	P	**P**	**22 14 07.4**	**-0.1**
	0.4nm,0.6s,baz=187,slow=7.3,SNR=2.6						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**42.22**	**344**	P	**P**	**22 14 40.9**	**+0.5**
	2.1nm,1.0s,baz=162,slow=7.7,SNR=12						
	2.1nm,1.0s						
ZALV	**Zalesovo Beam**	**44.03**	**351**	P	**P**	**22 14 55.8**	**+0.9**
	0.7nm,0.6s,baz=178,slow=8.6,SNR=5.3						
	0.7nm,0.6s						
BVAR	**Borovoye Array**	**46.83**	**340**	P	**P**	**22 15 17.5**	**+0.4**
	2.6nm,0.9s,baz=148,slow=9.5,SNR=9.7						
	2.6nm,0.9s						
WRA	**Warramunga Arr**	**48.92**	**128**	P	**P**	**22 15 33.4**	**-0.4**
	1.4nm,0.8s,baz=306,slow=8.9,SNR=6.7						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**50.80**	**133**	P	**P**	**22 15 48.2**	**+0.1**
	0.9nm,0.7s,baz=308,slow=6.8,SNR=12						
	0.9nm,0.7s						
ARTI	**Arti**	**53.92**	**336**	P	**P**	**22 16 11.0**	**+0.3**
	2.3nm,0.8s,baz=158,slow=6.5,SNR=4.2						
	2.3nm,0.8s						
STKA	**Stephens Creek**	**61.15**	**135**	P	**P**	**22 17 02.2**	**+0.2**
	1.4nm,0.6s,baz=299,slow=10,SNR=2.9						
	1.4nm,0.6s						
GERES	**GERESS Array B**	**76.61**	**318**	P	**P**	**22 18 37.9**	**-0.1**
	0.5nm,0.7s,baz=87,slow=6.8,SNR=6.6						
	0.5nm,0.7s						

*NNC **13** 22:14:10.7±0.3, 44°.33N×78°.84E, h1km±2km, mb4.0, mpv4.1, Error ellipse: s-maj=2.6km s-min=2.1km az=15.0*
*SOME **13** 22:14:11.4, 44°.32N×78°.82E, h15km*

ISC 13 22:14:11.6±0.9, 44°.32N±0°.02×78°.84E±0°.02, h8km±7km, n50, σ1s28/82, 4C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNOS	**Konyrlen**	**0.25**	**81**	P	**Pb**	**22 14 17.1**	**+0.4**
KNOS	2μm,0.1s			S	**Sb**	**22 14 21.2**	**+1.1**
	670nm,0.2s						
BLB	**Baldybastay**	**0.34**	**229**	P	**Pb**	**22 14 19.0**	**-1.1**
BLB	219nm,0.1s			S	**Sb**	**22 14 24.1**	**-1.6**
	515nm,0.1s						
DJR	**Jarkent**	**0.69**	**89**	P	**Pg**	**22 14 24.2**	**-0.6**
DJR	112nm,0.1s			S	**Sg**	**22 14 33.2**	**-0.6**
	176nm,0.2s						
DJR	**Jarkent**	**0.69**	**89**	*e*P	**Pg**	**22 14 24.2**	**-0.6**
DJR	112nm,0.1s			*e*S	**Sg**	**22 14 33.2**	**-0.6**
	176nm,0.2s						
ARXS	**Arharly**	**0.73**	**262**	P	**Pg**	**22 14 25.4**	**-0.3**
ARXS	179nm,0.1s			S	**Sg**	**22 14 35.4**	**+0.1**
	464nm,0.2s						
ARXS	**Arharly**	**0.73**	**262**	*e*P	**Pg**	**22 14 25.4**	**-0.3**
ARXS	179nm,0.1s			*e*S	**Sg**	**22 14 35.3**	**+0.1**
	464nm,0.2s						
TDK	**Taldyqorghan**	**0.75**	**336**	P	**Pg**	**22 14 25.2**	**-0.8**
TDK	154nm,0.1s			S	**Sg**	**22 14 35.2**	**-0.5**
	0.8nm,0.1s						
TDK	**Taldyqorghan**	**0.75**	**336**	*e*P	**Pg**	**22 14 25.2**	**-0.8**
TDK	154nm,0.1s			*e*S	**Sg**	**22 14 35.2**	**-0.5**
	0.8nm,0.1s						
KURS	**Kuram**	**0.96**	**210**	P	**Pb**	**22 14 29.8**	**-0.8**
KURS	22nm,0.3s			S	**Sb**	**22 14 43.1**	**-0.4**
	105nm,0.1s						
KURS	**Kuram**	**0.96**	**210**	*e*P	**Pb**	**22 14 29.8**	**-0.8**
KURS	22nm,0.3s			*e*S	**Sb**	**22 14 43.5**	**0.0**
	105nm,0.2s						
KAPS	**Kapalarasan**	**1.03**	**21**	P	**Pg**	**22 14 30.4**	**-1.1**
KAPS	24nm,0.1s			S	**Sg**	**22 14 43.6**	**-1.3**
	632nm,0.2s						
KAPS	**Kapalarasan**	**1.03**	**21**	*e*P	**Pg**	**22 14 30.4**	**-1.1**
KAPS	24nm,0.1s			*e*S	**Sg**	**22 14 43.6**	**-1.3**
	632nm,0.1s						
PDGK	**Podgornoye**	**1.10**	**154**	⇑P	**Pg**	**22 14 31.4**	**-1.3**
PDGK	35nm,0.3s			⇓S	**Sg**	**22 14 46.3**	**-0.6**
	20nm,0.2s						
UZB	**Uzynbulak**	**1.18**	**173**	P	**Pg**	**22 14 33.4**	**-0.9**
UZB	114nm,0.2s			S	**Sb**	**22 14 49.2**	**-0.6**
	84nm,0.2s						
UZB	**Uzynbulak**	**1.18**	**173**	*e*P	**Pg**	**22 14 33.4**	**-0.9**
UZB	114nm,0.2s			*e*S	**Sb**	**22 14 49.2**	**-0.6**
	84nm,0.2s						
SHLS	**Shalkode**	**1.25**	**158**	P	**Pg**	**22 14 37.1**	**+1.5**
SHLS	101nm,0.2s			S	**Sn**	**22 14 55.6**	**+3.0**
	188nm,0.4s						
SHLS	**Shalkode**	**1.25**	**158**	*e*P	**Pg**	**22 14 37.1**	**+1.5**
SHLS	101nm,0.2s			*e*S	**Sn**	**22 14 55.6**	**+3.0**
	188nm,0.2s						
SATY	**Saty**	**1.30**	**194**	P	**Pn**	**22 14 35.4**	**-0.8**
SATY	51nm,0.1s			S	**Sb**	**22 14 52.6**	**-0.7**
	632nm,0.1s						
SATY	**Saty**	**1.30**	**194**	*e*P	**Pn**	**22 14 35.4**	**-0.8**
SATY	51nm,0.1s			*e*S	**Sb**	**22 14 52.6**	**-0.7**
	632nm,0.1s						
KTMS	**Ketmen**	**1.40**	**128**	P	**Pn**	**22 14 36.5**	**-1.1**
KTMS	24nm,0.2s			S	**Sb**	**22 14 55.2**	**-1.1**
	248nm,0.2s						
KTMS	**Ketmen**	**1.40**	**128**	*e*P	**Pn**	**22 14 36.5**	**-1.1**
KTMS	24nm,0.2s			*e*S	**Sb**	**22 14 55.1**	**-1.2**
	248nm,0.2s						
KTBS	**Karatobe**	**1.67**	**249**	P	**Pn**	**22 14 41.1**	**-0.1**
KTBS	14nm,0.1s			S	**Sb**	**22 15 02.7**	**-1.1**
	163nm,0.2s						
KTBS	**Karatobe**	**1.67**	**249**	*e*P	**Pn**	**22 14 41.1**	**-0.1**
KTBS	14nm,0.1s			*e*S	**Sb**	**22 15 02.7**	**-1.1**
	163nm,0.2s						
MDOK	**Medeo**	**1.74**	**229**	Pg	**Pb**	**22 14 42.6**	**-1.2**
MDOK	39nm,0.2s			Lg	Lg	22 15 05.4	
	202nm,0.6s						
KNDC	**Almaty**	**1.75**	**231**	⇓Pn	**Pb**	**22 14 43.0**	**-1.0**
KNDC	48nm,0.2s			⇑Sn	**Sg**	**22 15 07.4**	**-0.4**
	197nm,0.3s						
AAA	**Alma-Ata**	**1.78**	**232**	P	**Pb**	**22 14 44.0**	**-0.5**
AAA	113nm,0.2s			S	**Sg**	**22 15 07.8**	**-1.1**
	16nm,0.1s						
AAA	**Alma-Ata**	**1.78**	**232**	*e*P	**Pb**	**22 14 44.0**	**-0.5**
AAA	113nm,0.2s			*e*S	**Sg**	**22 15 07.8**	**-1.1**
	16nm,0.1s						
TNSS	**Tian-Shan**	**1.88**	**228**	P	**Pb**	**22 14 45.6**	**-0.8**
TNSS	7.4nm,0.2s			S	**Sg**	**22 15 10.5**	**-1.5**
	29nm,0.2s						
TNSS	**Tian-Shan**	**1.88**	**228**	*e*P	**Pb**	**22 14 45.6**	**-0.8**
TNSS	7.4nm,0.1s			*e*S	**Sg**	**22 15 10.5**	**-1.5**
	29nm,0.2s						
MTBS	**Maitube**	**2.11**	**237**	Pg	**Pb**	**22 14 49.8**	**-0.4**
MTBS	26nm,0.1s			Lg	Lg	22 15 17.5	
	529nm,0.1s						
MTBS	**Maitube**	**2.11**	**237**	*e*P	**Pb**	**22 14 49.8**	**-0.4**
MTBS	26nm,0.1s			*e*S	**Sg**	**22 15 17.5**	**-1.9**
	529nm,0.2s						
KRBS	**Karabastau**	**2.36**	**256**	Pg	**Pb**	**22 14 53.6**	**-0.9**
KRBS	4.9nm,0.2s			Lg	Lg	22 15 23.8	
	13nm,0.3s						
KRBS	**Karabastau**	**2.36**	**256**	*e*P	**Pb**	**22 14 53.6**	**-0.9**
KRBS	4.9nm,0.2s			*e*S	**Sb**	**22 15 23.8**	**-0.1**
	50nm,0.2s						
KST	**Kastek**	**2.44**	**239**	Pg	**Pb**	**22 14 55.3**	**-0.6**
KST	7.7nm,0.2s			Lg	Lg	22 15 26.9	
	66nm,0.5s						
KST	**Kastek**	**2.44**	**239**	*e*P	**Pb**	**22 14 55.3**	**-0.6**
KST	6.3nm,0.2s			*e*S	**Sb**	**22 15 26.9**	**+0.6**
	60nm,0.2s						
TKM2	**Tokmak 2**	**2.74**	**240**	P	**Pb**	**22 14 59.0**	**-1.9**
	SNR=6.7						
ULHL	**Ulahol**	**2.81**	**223**	P	**Pn**	**22 14 58.9**	**+1.9**
	SNR=20						
SGDS	**Sogindy**	**3.16**	**256**	Pg	**Pb**	**22 15 08.6**	**+0.5**
	11nm,0.4s						
SGDS				Lg	Lg	22 15 49.7	
	27nm,0.5s						
CHMS	**Chumysh**	**3.25**	**247**	P	**Pb**	**22 15 10.5**	**+1.0**
	SNR=11						
KBK	**Karagaybulak**	**3.28**	**241**	P	**Pn**	**22 15 05.0**	**+1.5**
	SNR=9.0						
USP	**Ospenovka**	**3.31**	**253**	P	**Pb**	**22 15 11.6**	**+1.0**
	SNR=7.6						
BTLS	**Baital**	**3.49**	**284**	Pg	**Pb**	**22 15 13.1**	**-0.6**
	8.4nm,0.2s						
BTLS				Lg	Lg	22 15 57.6	
	12nm,0.2s						
BTLS	**Baital**	**3.49**	**284**	*e*P	**Pb**	**22 15 13.1**	**-0.6**
	8.7nm,0.2s						
BTLS				*e*S	**Sb**	**22 15 57.6**	**+1.4**
	12nm,0.3s						
AAK	**Ala-Archa**	**3.58**	**243**	P	**Pb**	**22 15 16.7**	**+1.4**
	SNR=5.8						
AAK	**Ala-Archa**	**3.58**	**243**	⇓Pg	**Pb**	**22 15 15.8**	**+0.6**
	21nm,0.3s						
AAK				⇑Lg	Lg	22 16 05.2	
	54nm,0.7s						
UCH	**Uchtor**	**3.79**	**238**	P	**Pb**	**22 15 20.8**	**+1.8**
	SNR=8.2						
MRKS	**Merke**	**4.37**	**251**	Pg	**Pb**	**22 15 30.7**	**+2.0**
	2.6nm,0.3s						
MRKS				Lg	Lg	22 16 28.2	
	9.3nm,0.4s						
MRKS	**Merke**	**4.37**	**251**	*e*P	**Pb**	**22 15 30.7**	**+2.0**
	2.2nm,0.2s						
MRKS				*e*S	**Sg**	**22 16 28.2**	**-3.8**
	9.3nm,0.2s						
KK31	**Karatay Array**	**6.16**	**261**	Pg	**Pb**	**22 16 02.9**	**+3.9**
	0.5nm,0.3s,baz=73,slow=14,SNR=6.6						
KK31				Lg	Lg	22 17 24.9	
	5.7nm,0.8s,baz=74,slow=24,SNR=8.7						
KURBB	**Kurchatov Arra**	**6.31**	**358**	⇑Lg	Lg	22 17 30.4	
	12nm,0.7s						

*IDC **13** 22:14:46.5±0.5, 17°.31S×167°.97E, h0km, mb4.4/22, mbtmp4.4/25, ML4.7/3, MS4.3/53, Error ellipse: s-maj=18.0km s-min=13.9km az=82.0*
*MOS **13** 22:14:48.4±1.1, 17°.27S×167°.77E, h18km, mb5.1/25, MS4.5/9, Error ellipse: s-maj=10.9km s-min=8.1km az=34.4*
*NEIC **13** 22:14:48.8±1.7, 17°.27S±0°.05×167°.88E±0°.07, h10km±1km, mb5.2/50, Mww5.1/14, Error ellipse: s-maj=10.7km s-min=9.3km az=277.0*
*GFZ **13** 22:14:48.8±0.2, 17°.5±3°.7×16°.8E±°, h10km, M5.2/37, mb5.2/37*
*NOU **13** 22:14:48.7, 17°.30S×167°.82E, h8km, mb5.0/49, Vanuatu Islands*
*BJI **13** 22:14:50.7, 17°.00S×167°.16E, h10km, mB5.2/12, mb4.8/42, Ms4.9/15, Ms7.4.6/17*
*GCMT **13** 22:14:52.8±0.2, 17°.29S±0°.02×167°.65E±0°.01, h21km, MW5.1/113, Moment Tensor Solution. s83,c115; s113,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.96±.16; $M_{\theta\theta}$0.22±.11; $M_{\phi\phi}$-5.18±.11; $M_{r\theta}$1.26±.22; $M_{\theta\phi}$0.27±.08; $M_{\phi r}$-3.44±.19; Best double couple: M_o6.26400×10^{16} NP1:ϕ_s7.00000°, δ28.00000°, λ108.00000°. NP2:ϕ_s167.00000°, δ63.00000°, λ80.00000°. Principal axes: T 6.2280, Plg70.0000°, Azm57.0000°; N 0.0680, Plg9.0000°, Azm171.0000°; P -6.2990, Plg18.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 22:14:50.5±0.4, 17°.30S±0°.04×167°.87E±0°.05, h24km±2km, h25km:pP-P, n408, σ1s64/368, mb5.0/96, MS4.5/69, 12C-21D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.52**	**144**	P	**Pb**	**22 15 01.0**	**-0.1**
DVP	**Devils Point**	**0.52**	**144**	S	**Sb**	**22 15 08.9**	**+0.7**
RTV	**Rentapao**	**0.72**	**132**	P	**Pb**	**22 15 03.7**	**-0.8**
RTV	**Rentapao**	**0.72**	**132**	S	**Sb**	**22 15 14.5**	**+0.5**
SANVU	**Saraoutou**	**1.95**	**341**	P	**Pn**	**22 15 21.7**	**-0.5**
SANVU	**Saraoutou**	**1.95**	**341**	S	**Sn**	**22 15 46.9**	**+1.0**
SANVU	**Saraoutou**	**1.95**	**341**		**Pn**	**22 15 20.0**	**-2.2**
SANVU	**Saraoutou**	**1.95**	**341**	P	**Pn**	**22 15 20.6**	**-1.6**
MARNC	**Mare, Loyalty**	**4.16**	**178**	P	**Pn**	**22 15 51.3**	**-1.2**
MARNC	**Mare, Loyalty**	**4.16**	**178**	Pn	**Pn**	**22 15 50.5**	**-2.0**
KOUNC	**Koumac, New Ca**	**4.68**	**226**	P	**Pn**	**22 15 59.5**	**-0.2**
KOUNC	**Koumac, New Ca**	**4.68**	**226**	S	**Sn**	**22 16 53.6**	**+0.3**
KOUNC	**Koumac, New Ca**	**4.68**	**226**	Pn	**Pn**	**22 15 59.2**	**-0.5**
YATNC	**Mamie plateau,**	**4.82**	**191**	P	**Pn**	**22 16 01.2**	**-0.4**
DZM	**Mont Dzumac**	**4.93**	**196**	Pn	**Pn**	**22 16 02.3**	**-0.9**
	23nm,0.3s,baz=86,slow=8.1,SNR=122						
DZM				Sn	**Sn**	**22 16 56.3**	**-3.3**
	70nm,0.3s,baz=332,slow=23,SNR=16						
DZM				LR	LR	22 17 48.9	
	comp=Z,5μm,19.9s,baz=36,slow=37						
	116nm,0.6s						
NOUC	**Port Laguerre**	**5.00**	**197**	P	**Pn**	**22 16 03.3**	**-0.7**
NOUC	**Port Laguerre**	**5.00**	**197**	S	**Sn**	**22 17 01.7**	**+0.7**
ONTNC	**Ouen Toro**	**5.15**	**195**	P	**Pn**	**22 16 06.1**	**-0.1**
ONTNC	**Ouen Toro**	**5.15**	**195**	Pn	**Pn**	**22 16 06.3**	**+0.1**
OUENC	**Ouen Island, N**	**5.18**	**191**	P	**Pn**	**22 16 06.5**	**-0.1**
OUENC	**Ouen Island, N**	**5.18**	**191**	Pn	**Pn**	**22 16 06.3**	**-0.3**
HURO	**Huro Makira**	**8.93**	**319**	P	**Pn**	**22 16 58.5**	**+0.4**
NGOA	**Tingoa Renbel**	**9.47**	**306**	P	**Pn**	**22 17 04.6**	**-1.0**
MSVF	**Nonsavu**	**9.73**	**94**	Pn	**Pn**	**22 17 06.7**	**-2.4**
	0.5nm,0.3s,baz=238,slow=21,SNR=1.8						
MSVF				LR	LR	22 20 13.3	
	comp=Z,7μm,18.8s,baz=223,slow=34						
	5.2nm,0.7s						
MSVF	**Nonsavu**	**9.73**	**94**	⇑eP	**Pn**	**22 17 10.1**	**+1.0**
HNR	**Honiara**	**10.98**	**314**	Pn	**Pn**	**22 17 27.2**	**+1.0**
	1.2nm,0.3s,baz=309,slow=9.1,SNR=7.1						
HNR				Sn	**Sn**	**22 19 23.8**	**-4.5**
	0.8nm,0.3s,baz=242,slow=20,SNR=1.7						
HNR				LR	LR	22 21 18.4	
	comp=Z,96nm,18.7s,baz=221,slow=36						
	8.2nm,0.6s						
HNR	**

URZ Urewera 22.40 161 P **P** **22 19 45.7 -1.5**
comp=Z,3.7nm,0.6s,baz=255,slow=2.5,SNR=8.2
URZ LR LR 22 27 18.3
comp=Z,2µm,18.6s,baz=342,slow=34
comp=Z,3.7nm,0.6s
URZ Urewera 22.40 161 P **P** **22 19 47.9 +0.7**
URZ Urewera 22.40 161 P **P** **22 19 51.1 +3.8**
MTSU Mount Surprise 22.45 264 P **P** **22 19 49.1 +1.0**
comp=Z,57nm,1.0s
RTZ Ruatahuna 22.68 161 P **P** **22 19 51.5 +1.1**
RTZ IAmb IAmb 22 20 10.6
comp=Z,59nm,1.0s
BKZ Black Stump Fm 23.05 163 P **P** **22 19 54.7 +0.6**
BKZ Black Stump Fm 23.05 163 P **P** **22 19 55.4 +1.2**
QLP Quilpie 23.75 243 P **P** **22 20 01.4 +0.2**
comp=Z,181nm,1.3s
QLP Quilpie 23.75 243 P **P** **22 20 01.1 -0.1**
QRZ Quartz Range 23.79 171 P **P** **22 20 04.1 +2.8**
MRZ Mangatainoka R 24.21 166 P **P** **22 20 06.0 +0.7**
MRZ IAmb IAmb 22 20 19.8
comp=Z,34nm,0.9s
CNB Canberra Magne 24.36 219 P **P** **22 20 08.1 +1.3**
comp=Z,3.5nm,1.0s
BFZ Birch Farm 24.40 164 P **P** **22 20 07.6 +0.6**
CAN Canberra 24.58 219 P **P** **22 20 09.7 +0.8**
CMSA Cobar Meteorol 24.60 231 P **P** **22 20 10.3 +1.3**
comp=Z,183nm,1.0s
CMSA Cobar Meteorol 24.60 231 P **P** **22 20 09.4 +0.4**
CMSA Cobar Meteorol 24.60 231 P **P** **22 20 10.1 +1.1**
TUWZ Tuamarina 24.61 169 P **P** **22 20 10.1 +1.2**
THZ Tophouse 24.76 171 P **P** **22 20 11.3 +0.9**
THZ IAmb IAmb 22 20 32.7
comp=Z,25nm,0.8s
MSWZ Moikau Station 24.86 167 P **P** **22 20 11.6 +0.4**
KHZ Kahutara 25.50 170 P **P** **22 20 15.7 -1.2**
RPZ Rata Peaks 26.47 175 LR LR 22 29 09.1
comp=Z,146nm,21.6s,baz=67,slow=33
RPZ Rata Peaks 26.47 175 P **P** **22 20 25.2 -0.5**
QIS Mount Isa 26.91 259 P **P** **22 20 31.6 +1.5**
comp=Z,19nm,1.9s
QIS Mount Isa 26.91 259 P **P** **22 20 30.3 +0.2**
INKA Innaminka 27.06 243 P **P** **22 20 30.9 -0.4**
STKA Stephens Creek 27.85 234 P **P** **22 20 38.7 +0.4**
comp=Z,210nm,1.0s
STKA Stephens Creek 27.85 234 P **P** **22 20 39.2 +0.9**
comp=Z,9.7nm,0.6s,baz=58,slow=8.1,SNR=18
STKA LR LR 22 31 25.0
comp=Z,1µm,18.6s,baz=70,slow=36
comp=Z,9.7nm,0.6s
STKA Stephens Creek 27.85 234 P **P** **22 20 38.9 +0.5**
TOO Toolangi 28.19 220 P **P** **22 20 44.1 +2.7**
comp=Z,8.1nm,1.4s
ARPS Mount Arapiles 30.06 225 P **P** **22 20 58.5 +0.6**
comp=Z,15nm,1.3s
JAY Jayapura 30.45 296 LR LR 22 33 27.0
comp=Z,650nm,18.5s,baz=8.5,slow=37
HTT Hallett 30.55 233 P **P** **22 21 02.9 +0.5**
comp=Z,6.2nm,1.8s
MOO Moorlands 30.64 211 P **P** **22 21 05.3 +2.3**
RAR Rarotonga 30.77 102 LR LR 22 31 06.4
comp=Z,198nm,20.5s,baz=261,slow=32
GENI Genyem 30.88 295 P **P** **22 21 04.8 -0.5**
WR0 Warramunga Arr 31.66 260 P **P** **22 21 10.9 -1.4**
WR8 Warramunga Arr 31.70 260 P **P** **22 21 11.5 -1.1**
WR8 IAmb IAmb 22 21 22.2
comp=Z,71nm,1.9s
WB0 Warramunga Arr 31.80 260 P **P** **22 21 12.3 -1.3**
WB0 IAmb IAmb 22 21 13.5
comp=Z,25nm,0.8s
WRAB Tennant Creek 31.84 260 P **P** **22 21 13.7 -0.1**
WRAB Tennant Creek 31.84 260⇑ *e*P **P** **22 21 12.4 -1.5**
WRAB pmax pmax
comp=Z,10.0nm,0.9s
WRAB Tennant Creek 31.84 260 P **P** **22 21 12.3 -1.5**
WRA Warramunga Arr 31.85 260 P **P** **22 21 12.6 -1.4**
comp=Z,11nm,0.8s,baz=91,slow=9.1,SNR=62
comp=Z,11nm,0.8s
WRA Warramunga Arr 31.85 260 P **P** **22 21 11.5 -2.4**
AS17 Alice Springs 32.30 253 P **P** **22 21 15.9 -2.0**
comp=Z,19nm,0.8s
AS01 Alice Springs 32.34 253 P **P** **22 21 18.1 -0.1**
AS09 Alice Springs 32.35 253 P **P** **22 21 17.2 -1.1**
comp=Z,31nm,0.8s
AS15 Alice Springs 32.37 253 P **P** **22 21 17.6 -0.9**
comp=Z,22nm,0.8s
AS31 Alice Springs 32.38 253 P **P** **22 21 17.8 -0.9**
comp=Z,9.1nm,0.6s
AS31 Alice Springs 32.38 253 P **P** **22 21 17.3 -1.3**
ASAR Alice Springs 32.38 253 P **P** **22 21 17.5 -1.1**
comp=Z,15nm,0.7s,baz=79,slow=9.1,SNR=73
ASAR LR LR 22 34 10.3
comp=Z,2µm,18.1s,baz=86,slow=36
comp=Z,15nm,0.7s
ASAR Alice Springs 32.38 253 P **P** **22 21 17.3 -1.3**
BBOO Buckleboo 32.53 236 P **P** **22 21 19.4 -0.4**
comp=Z,36nm,0.9s
BBOO Buckleboo 32.53 236 P **P** **22 21 19.9 +0.1**
BBOO Buckleboo 32.53 236 P **P** **22 21 19.3 -0.4**
BBOO IAmb IAmb 22 21 31.1
comp=Z,24nm,0.8s
BBOO Buckleboo 32.53 236 P **P** **22 21 18.6 -1.1**
SRPI Serui, Papua 34.66 293 P **P** **22 21 38.3 -0.2**
KNRA Kununurra 37.49 267 P **P** **22 22 01.9 -0.8**
comp=Z,35nm,0.7s
KNRA Kununurra 37.49 267 P **P** **22 22 01.4 -1.2**
KNRA IAmb IAmb 22 22 10.4
comp=Z,25nm,0.8s
WRKA Warakurna 37.59 251 P **P** **22 22 01.5 -2.0**
comp=Z,6.6nm,2.4s
FAKI Fak Fak 37.76 288 P **P** **22 22 04.7 -0.3**
GUMO Guam 38.18 322 LR LR 22 36 31.5
comp=Z,418nm,20.7s,baz=140,slow=34
FORT Forrest 38.54 242 P **P** **22 22 10.2 -1.2**
SIJI Sorong 39.53 290 LR LR 22 39 34.7
comp=Z,645nm,18.5s,baz=158,slow=38
SIJI Sorong 39.53 290 P **P** **22 22 19.4 -0.5**
comp=Z,19nm,1.2s
SIJI Sorong 39.53 290 P **P** **22 22 18.4 -1.4**
SWI Sorong 39.54 291 P **P** **22 22 18.0 -1.9**
FITZ Fitzroy Crossi 40.17 262 P **P** **22 22 25.7 +0.5**
comp=Z,14nm,0.9s
FITZ Fitzroy Crossi 40.17 262 LR LR 22 38 24.2
comp=Z,1µm,20.2s,baz=104,slow=35
FITZ Fitzroy Crossi 40.17 262 P **P** **22 22 25.1 -0.1**
FITZ Fitzroy Crossi 40.17 262 P **P** **22 22 25.4 +0.2**
TBI Tubuai 40.36 106 *e*S **S** **22 28 33.1 -0.3**
comp=Z,2µm,29.5s
TBI *e*LQ LQ 22 31 51.9
comp=Z,5µm,28.2s
TBI *e*LR LR 22 33 38.8
comp=Z,3µm,26.0s
PPT2 Papeete2 40.54 97 *e*P **P** **22 22 26.1 -2.2**
comp=Z,52nm,22.5s
PPT2 *e*S **S** **22 28 36.3 -0.1**
comp=Z,296nm,25.5s
PPT2 *e*LQ LQ 22 31 46.6
comp=Z,3µm,46.0s
PPT2 *e*LR LR 22 33 30.6
comp=Z,696nm,26.8s
PPT2 *e*LR LR 22 33 44.7
comp=Z,830nm,22.8s
PPT Papeete 40.54 97 LR LR 22 35 48.4
comp=Z,476nm,18.0s,baz=263,slow=31
NLAI Namlea 42.35 285 P **P** **22 22 43.5 +0.3**
BATI Baumata 43.43 273 LR LR 22 42 28.1
comp=Z,568nm,18.2s,baz=196,slow=38
MBWA Marble Bar 45.48 257 P **P** **22 23 08.2 0.0**
comp=Z,64nm,1.1s
MBWA Marble Bar 45.48 257 P **P** **22 23 08.6 +0.4**
MBWA Marble Bar 45.48 257 P **P** **22 23 07.9 -0.3**
MBWA Marble Bar 45.48 257 P **P** **22 23 07.9 -0.3**
MEEK Meekatharra 46.37 250 P **P** **22 23 15.0 -0.3**
comp=Z,63nm,1.2s
MEEK Meekatharra 46.37 250 P **P** **22 23 15.1 -0.2**
MEEK Meekatharra 46.37 250 P **P** **22 23 14.9 -0.3**
KLBR Kellerberrin 47.40 243 P **P** **22 23 22.5 -0.7**
comp=Z,62nm,0.8s
NWAO Narrogin (SRO) 47.97 241 LR LR 22 43 56.6
comp=Z,513nm,19.5s,baz=85,slow=36
NWAO Narrogin (SRO) 47.97 241 P **P** **22 23 27.3 -0.3**
NWAO Narrogin (SRO) 47.97 241 P **P** **22 23 27.5 -0.1**
NWAO Narrogin (SRO) 47.97 241 P **P** **22 23 26.7 -0.9**
NWAO pmax pmax
comp=Z,154nm,1.7s
NWAO Narrogin (SRO) 47.97 241 P **P** **22 23 26.7 -0.9**
DAV Davao City (W) 48.30 297 LR LR 22 45 07.6
comp=Z,176nm,18.0s,baz=114,slow=38
KAPI Kappang 48.62 279 P **P** **22 23 33.3 +0.5**
KAPI Kappang 48.62 279⇑ *e*P **P** **22 23 30.8 -2.0**
KAPI pmax pmax
comp=Z,18nm,1.0s
MORW Morawa 48.72 246 P **P** **22 23 33.2 -0.2**
MORW Morawa 48.72 246 P **P** **22 23 32.8 -0.6**
MORW IAmb IAmb 22 24 28.8
comp=Z,61nm,1.4s
PCI Palu 49.95 284 P **P** **22 23 44.2 +1.2**
comp=Z,1µmcomp=Z,55nm,1.6s
JCJ Chichijima 50.69 330 LR LR 22 43 48.1
comp=Z,123nm,21.7s,baz=110,slow=34
TAOE Nuku Hiva Isla 51.20 88 *e*LR LR 22 38 36.3
comp=Z,738nm,21.8s
TGY Tagaytay City 55.85 301 LR LR 22 46 42.4
comp=Z,133nm,20.1s,baz=218,slow=34
KKM Kota Kinabalu 56.05 290 P **P** **22 24 27.8 -0.3**
comp=Z,450nmcomp=Z,31nm,1.4s
KKM Kota Kinabalu 56.05 290 P **P** **22 24 27.2 -0.9**
JOW Kunigami 58.33 118 LR LR 22 50 26.0
comp=Z,192nm,18.0s,baz=172,slow=37
JOW Kunigami 58.33 318 P **P** **22 24 43.4 -0.4**
JOW IAmb IAmb 22 24 56.3
comp=Z,30nm,0.9s
JOW Kunigami 58.33 318 P **P** **22 24 43.5 -0.4**
LEM Lembang 59.63 272 LR LR 22 52 59.1
comp=Z,403nm,18.1s,baz=150,slow=38
INU Inuyama 59.99 331 P **P** **22 24 55.4 +0.2**
JMN Monobe 60.21 328 P **P** **22 24 58.4 +1.6**
VNDA Vanda 60.32 182 P **P** **22 24 56.9 0.0**
comp=Z,0.8nm,1.0s,baz=330,slow=4.1,SNR=4.3
VNDA LR LR 22 47 26.8
comp=Z,100nm,19.4s,baz=8.0,slow=32
comp=Z,0.8nm,1.0s
VNDA Vanda 60.32 182 P **P** **22 24 56.9 0.0**
MJAR Matsushiro Arr 60.44 333 P **P** **22 24 58.0 -0.3**
comp=Z,4.3nm,1.0s,baz=170,slow=8.7,SNR=8.6
MJAR LR LR 22 48 43.1
comp=Z,96nm,21.9s,baz=136,slow=34
comp=Z,4.3nm,1.0s
MJAR Matsushiro Arr 60.44 333 P **P** **22 24 58.0 -0.3**
MJAR Matsushiro Arr 60.44 333 P **P** **22 24 57.9 -0.3**
MJAR IAmb IAmb 22 25 09.9
comp=Z,36nm,1.0s
MAJO Matsushiro 60.44 333 *de*P **P** **22 24 58.8 +0.5**
MAJO pmax pmax
comp=Z,16nm,1.1s
MAJO Matsushiro 60.44 333 P **P** **22 24 58.3 0.0**
MAJO Matsushiro 60.44 333 P **P** **22 24 58.6 +0.3**
MJB9 Matsu-Tunnel 60.45 333 P **P** **22 24 58.9 +0.5**
SBA Scott Base 60.58 180 P **P** **22 24 59.9 +1.2**
SBA pmax pmax
comp=Z,10.0nm,1.0s
SBA Scott Base 60.58 180 P **P** **22 24 59.9 +1.2**
NACB Ninganchiao 61.13 311 P **P** **22 25 02.0 -1.2**
TPUB Ta-pu 61.31 310 P **P** **22 25 05.0 +0.6**
TPUB Ta-pu 61.31 310 P **P** **22 25 03.1 -1.3**
SSLB Suanglung 61.36 310 P **P** **22 25 03.0 -1.8**
YHNB Yeheng 61.60 311 P **P** **22 25 06.1 -0.4**
YHNB Yeheng 61.60 311 P **P** **22 25 05.9 -0.5**
JKA Kamikawa-asahi 65.34 340 P **P** **22 25 30.6 -0.1**
KSRS Korea Array 66.18 326 P **P** **22 25 36.8 +0.5**
comp=Z,0.9nm,0.7s,baz=148,slow=9.5,SNR=2.0
comp=Z,0.9nm,0.7s
YSS Yuzhno-Sakhali 67.84 342 *e*P **P** **22 25 47.2 +0.6**
YSS *e* 22 26 10.9
YSS *e*S **S** **22 34 42.4 -0.9**
YSS *e*SS **SS** **22 39 10.4 +4.7**
YSS pmax pmax
comp=Z,100nm,6.2s
YSS pmax pmax
comp=Z,5.0nm,0.8s
YSS MLR MLR
comp=Z,200nm,18.0s
YSS MLR MLR
comp=N,100nm,17.0s
YSS MLR MLR
comp=E,100nm,15.0s
YSS Yuzhno-Sakhali 67.84 342 P **P** **22 25 48.0 +1.5**
YSS IAmb IAmb 22 26 16.5
comp=Z,20nm,0.8s
NJ2 Nanjing 67.92 316 *e*P **P** **22 25 48.5 +1.1**
NJ2 pmax pmax
comp=Z,15nm,0.6s
USA0B Ussuriysk Arra 69.43 333 *d*P **P** **22 25 56.9 +0.3**
USA0B Ussuriysk Arra 69.43 333 P **P** **22 25 55.6 -1.0**
USA0B IAmb IAmb 22 26 09.3
comp=Z,33nm,1.2s
USRK Ussuriysk Ar. 69.43 333 P **P** **22 25 57.1 +0.6**
comp=Z,3.2nm,1.0s,baz=122,slow=5.2,SNR=9.5
USRK LR LR 22 55 15.8
comp=Z,94nm,19.6s,baz=162,slow=35
comp=Z,3.2nm,1.0s
USRK Ussuriysk Ar. 69.43 333 P **P** **22 25 55.7 -0.8**
SHEM Shemya Is, Ala 69.95 4 LR LR 22 51 36.0
comp=Z,322nm,20.5s,baz=140,slow=32
KULM Kulim 70.04 282 P **P** **22 26 00.6 -0.4**
KULM IAmb IAmb 22 26 13.5
comp=Z,29nm,1.2s
WHN Wuhan 70.09 312 P **P** **22 26 01.1 +0.2**
WHN sP **pP** **22 26 07.5 +0.2**
WHN pmax pmax
comp=Z,62nm,0.9s
PET Petropavlovsk 70.49 354 *de*P **P** **22 26 02.1 -0.7**
PET pmax pmax
comp=Z,10.0nm,1.2s
PEA0B Petropavlovsk- 70.67 354 P **P** **22 26 04.4 +0.4**
PEA0B pmax pmax
comp=Z,33nm,1.3s
PEA0B Petropavlovsk- 70.67 354 P **P** **22 26 04.4 +0.4**
PEA0B IAmb IAmb 22 26 16.8
comp=Z,33nm,1.3s
PETK Petropavlovsk- 70.67 354 P **P** **22 26 04.1 +0.1**
comp=Z,0.9nm,0.5s,baz=177,slow=5.6,SNR=1.8
PETK LR LR 22 54 43.3
comp=Z,128nm,18.8s,baz=166,slow=34
comp=Z,0.9nm,0.5s
PETK Petropavlovsk- 70.67 354 P **P** **22 26 03.8 -0.2**
DL2 Dalian 70.69 323 P P 22 26 12.5 +8.1
DL2 pmax pmax
comp=Z,38nm,0.8s
RPSI Rantau Prapat 70.79 279 P **P** **22 26 04.5 -1.1**
RPSI IAmb IAmb 22 26 17.4
comp=Z,44nm,1.3s
MDJ Mudanjiang 70.81 332 P **P** **22 26 08.6 +3.6**
MDJ pmax pmax
comp=Z,13nm,1.2s
MDJ Mudanjiang 70.81 332 P **P** **22 26 05.0 -0.1**
PSI Prapat 70.82 279 P **P** **22 26 04.5 -1.5**
PSI pmax pmax
comp=Z,44nm,1.3s
PSI Prapat 70.82 279 P **P** **22 26 05.2 -0.8**
comp=Z,28nm,1.3s
GSI Gunungsitoli 71.61 277 P **P** **22 26 10.0 -0.6**
GSI Gunungsitoli 71.61 277 P **P** **22 26 10.9 +0.3**
comp=Z,50nm,0.9s
GSI Gunungsitoli 71.61 277 P **P** **22 26 09.2 -1.4**
BNX BinXian 72.66 332 ⇓P **P** **22 26 15.8 -0.3**
BNX pmax pmax
comp=Z,20nm,0.9s
QSPA South Pole Qui 72.74 180 P **P** **22 26 16.7 +0.1**
comp=Z,14nm,1.0s,baz=337,slow=0.6,SNR=28
QSPA LR LR 22 57 44.6
comp=Z,140nm,18.3s,baz=32,slow=35
comp=Z,14nm,1.0s
QSPA South Pole Qui 72.74 180 P **P** **22 26 16.2 -0.4**
QSPA IAmb IAmb 22 26 35.8
comp=Z,25nm,0.8s
QSPA South Pole Qui 72.74 180 P **P** **22 26 17.2 +0.6**
ENH Enshi 73.44 310 P **P** **22 26 19.8 -1.4**
ENH IAmb IAmb 22 26 33.1
comp=Z,27nm,0.9s
ENH Enshi 73.44 310 P **P** **22 26 19.9 -1.2**
SLVN Son La 73.50 299 P **P** **22 26 21.3 -0.4**
LYN LuoYang 73.69 315 P **P** **22 26 22.3 -0.2**
LYN sP pP 22 26 28.8 -0.1
LYN pmax pmax
comp=Z,23nm,1.2s
LYN pmax pmax
comp=Z,190nm,7.4s
LYN L L
comp=Z,210nm,16.1s
LYN L L
comp=Z,240nm,17.5s
LYN L L
comp=Z,350nm,19.2s
HNS HongShan 73.89 318 ⇓P **P** **22 26 25.6 +2.0**
HNS pmax pmax
comp=Z,45nm,1.0s
HNS L L
comp=Z,170nm,15.1s
HNS L L
comp=Z,180nm,15.1s
HNS L L
comp=Z,200nm,17.8s
BJI2 Beijing 74.61 321 P **P** **22 26 28.3 +0.6**
BJI2 sP **pP** **22 26 35.3 +1.1**
BJI2 S **S** **22 36 02.6 +0.5**
BJI2 pmax pmax
comp=Z,3.0nm,1.8s
BJT Baijiatuau 74.61 321 P **P** **22 26 27.3 -0.5**
BJT pmax pmax
comp=Z,16nm,1.0s
BJT Baijiatuau 74.61 321 P **P** **22 26 27.3 -0.5**
BJT IAmb IAmb 22 26 40.2
comp=Z,16nm,1.0s
BJT Baijiatuau 74.61 321 P **P** **22 26 27.6 -0.2**
BSI Banda Aceh 75.12 281 P **P** **22 26 31.3 0.0**
comp=Z,77nm,1.1s
XAN Xi'an 75.85 313 P **P** **22 26 33.0 -2.1**
XAN pmax pmax
comp=Z,9.0nm,1.2s
XAN L L
comp=Z,370nm,18.0s
XAN L L
comp=Z,280nm,16.7s
XAN L L
comp=Z,600nm,18.4s
RPN Rapa Nui 76.07 114 LR LR 22 54 12.5
comp=Z,123nm,18.3s,baz=212,slow=31
HEH HeiHe 76.11 335 *e*P **P** **22 26 38.6 +2.5**
HEH L L
comp=Z,150nm,19.4s
HEH L L
comp=Z,190nm,20.8s
HEH L L
comp=Z,180nm,20.2s
KMI2 Kunming 76.15 302 P **P** **22 26 38.4 +1.2**
KMI2 sP sP 22 26 44.6 -1.4
KMI2 pmax pmax
comp=Z,11nm,1.0s
CM31 Chiang Mai Arr 76.52 294 P **P** **22 26 39.2 0.0**
CM31 IAmb IAmb 22 26 52.3
comp=Z,27nm,1.0s
CMAR Chiang Mai Arr 76.52 294 P **P** **22 26 40.4 +1.2**
comp=Z,2.0nm,0.6s,baz=133,slow=4.8,SNR=13
CMAR LR LR 23 01 04.6
comp=Z,43nm,18.6s,baz=125,slow=36
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 76.52 294 P **P** **22 26 39.3 +0.1**
CHTO Chiang Mai 76.66 295 P **P** **22 26 39.4 -0.6**
CHTO pmax pmax
comp=Z,22nm,1.0s
CHTO Chiang Mai 76.66 295 P **P** **22 26 39.4 -0.6**
CHTO IAmb IAmb 22 26 53.2
comp=Z,22nm,0.9s
CHTO Chiang Mai 76.66 295 P **P** **22 26 40.5 +0.5**
CHTO Chiang Mai 76.66 295 P **P** **22 26 40.9 +0.9**
XLT XiLinHaoTe 77.12 324 *e*P **P** **22 26 43.0 +0.9**
XLT PcP **pwP** **22 26 54.1 +0.2**
XLT pmax pmax
comp=Z,8.0nm,1.0s
PZH PanZhiHua 77.57 303 P P 22 26 52.9 +7.8
PZH pmax pmax
comp=Z,10.0nm,0.9s
MA2 Magadan 77.86 351 LR LR 22 56 00.5
comp=Z,230nm,21.9s,baz=170,slow=32
HHC Hu-ho-hao-te 77.91 320 *e*P **P** **22 26 48.5 +1.9**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,5.9s
CD2 Chengdu 78.03 308 P **P** **22 26 49.9 +2.5**
CD2 pmax pmax
comp=Z,20nm,0.6s
BTO2 Baotou 78.90 319 *e*P **P** **22 26 53.9 +1.8**
BTO2 pP **pP** **22 26 58.8 +0.2**
BTO2 sP **PcP** **22 27 00.9 +0.2**
BTO2 pmax pmax
comp=Z,22nm,1.4s
BTO2 pmax pmax
comp=Z,260nm,8.6s
NPW Naypyitaw 79.48 295 P **P** **22 26 56.5 +1.0**
TNCH TengChong 79.55 300 P **P** **22 26 58.3 +2.2**
TNCH pP pP 22 27 01.6 -1.0
TNCH pmax pmax
comp=Z,15nm,0.6s
TNCH pmax pmax
comp=Z,120nm,2.8s
MAW Mawson 79.73 202 P **P** **22 26 58.0 +1.9**
comp=Z,1.8nm,1.4s
MAW Mawson 79.73 202 P **P** **22 26 56.8 +0.7**
comp=Z,2.3nm,0.8s,baz=135,slow=4.4,SNR=4.5
MAW LR LR 22 57 33.8
comp=Z,302nm,20.7s,baz=77,slow=32
comp=Z,2.3nm,0.8s
MAW Mawson 79.73 202 P **P** **22 26 57.4 +1.3**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 79.73 202 P **P** **22 26 57.4 +1.3**
LZH Lanzhou 80.47 312 *e*P **P** **22 27 02.6 +1.8**
LZH sP pwP 22 27 13.3 +0.7
LZH pmax pmax
comp=Z,13nm,1.3s
LZH L L
comp=Z,180nm,17.3s
LZH L L
comp=Z,240nm,17.3s
LZH L L
comp=Z,260nm,17.6s
LZDM Lanzhou Array 80.51 312 P **P** **22 27 02.4 +1.2**
comp=Z,1.0nm,0.3s,baz=139,slow=5.5,SNR=8.3
LZDM LR LR 23 04 14.5
comp=Z,88nm,18.2s,baz=150,slow=37
comp=Z,1.0nm,0.3s
SEY Seymchan 80.89 353⇓ *e*P **P** **22 27 01.5 -0.7**
SEY pmax pmax
comp=Z,3.0nm,1.1s
KDAK Kodiak Island 81.66 20 LR LR 22 58 40.5
comp=Z,178nm,19.3s,baz=209,slow=32
IMP Imphal 83.28 298 *e*P **P** **22 27 14.9 -0.8**
BELA Belgrano 2 84.13 175 P **P** **22 27 17.8 -1.3**
ULN Ulaanbaatar 84.54 324 P **P** **22 27 21.5 -0.3**
ULN Ulaanbaatar 84.54 324 P **P** **22 27 21.5 -0.3**
ULN Ulaanbaatar 84.54 324 P **P** **22 27 21.7 -0.1**
ULN Ulaanbaatar 84.54 324 P **P** **22 27 21.8 0.0**
YAK Yakutsk 84.65 343 *e*P **P** **22 27 21.8 +0.1**
YAK *e**PP **PcP** **22 27 25.7 +0.5**
YAK *e* 22 30 35.8
YAK *e*PPP PPP 22 32 28.5
YAK *e*S **SKSac** **22 37 44.9 +1.0**
YAK *e*SS **SS** **22 43 20.1 +0.7**
YAK *e*SSS SSS 22 46 49.5
YAK pmax pmax
comp=Z,13nm,2.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,1.0nm,1.1s
YAK pmax pmax
comp=Z,224nm,7.2s
YAK pmax pmax
comp=N,92nm,6.9s
YAK pmax pmax
comp=E,74nm,4.6s
YAK smax smax
comp=E,40nm,5.0s
YAK smax smax
comp=N,32nm,4.1s
YAK MLR MLR
comp=Z,145nm,25.0s
YAK MLR MLR
comp=N,94nm,25.0s
YAK MLR MLR
comp=E,79nm,26.0s
YAK Yakutsk 84.65 343 P **P** **22 27 22.0 +0.3**
YAK IAmb IAmb 22 27 33.7
comp=Z,26nm,1.1s
SONM Songino Array 84.90 324 P **P** **22 27 23.0 -0.5**
comp=Z,12nm,1.2s,baz=150,slow=6.1,SNR=22
SONM LR LR 23 07 30.2

comp=Z,99nm,18.0s,baz=126,slow=37
comp=Z,12nm,1.2s
SONM Songino Array 84.90 324 P **P** **22 27 23.1 -0.5**
SONM pmax pmax
comp=Z,64nm,1.4s
SONM Songino Array 84.90 324 P **P** **22 27 23.1 -0.4**
TEZP TEZPUR 84.91 300 *eP* **P** **22 27 24.5 +0.6**
TEZP TEZPUR 84.91 300 *eP* **P** **22 27 24.0 0.0**
TEZP *i* x x 22 27 34.9
GTA2 Gaotai 84.93 314 *eP* **P** **22 27 24.0 +0.1**
GTA2 pmax pmax
comp=Z,8.0nm,1.6s
GTA2 L L
comp=Z,130nm,15.2s
GTA2 L L
comp=Z,130nm,16.5s
GTA2 L L
comp=Z,180nm,14.3s
BILL Bilibino 85.11 359⇓ *eP* **P** **22 27 23.4 -0.5**
BILL pmax pmax
comp=Z,13nm,1.8s
SHL Shillong 85.29 298 P **P** **22 27 25.7 -0.4**
SHL pmax pmax
comp=Z,47nm,0.9s
SHL Shillong 85.29 298 P **P** **22 27 25.7 -0.4**
SHL Shillong 85.29 298 *eP* P 22 27 33.5 +7.4
SHL Shillong 85.29 298 *eP* P 22 27 33.6 +7.6
SHL *i* x x 22 27 37.3
YBH Yreka Blue Hor 86.83 45 LR LR 22 59 19.4
comp=Z,244nm,19.5s,baz=256,slow=31
LSA Lhasa 87.41 302⇑ *iP* P 22 27 24.8 -12
LSA pmax pmax
comp=Z,10.0nm,0.9s
LSA Lhasa 87.41 302 P **P** **22 27 36.0 -0.8**
ELIB Princess Elisa 87.80 190 *dP* **P** **22 27 37.7 +0.2**
comp=Z,5.2nm,1.2s
ZAK Zakamensk 87.97 325 *eP* **P** **22 27 37.0 -1.5**
ZAK pmax pmax
comp=Z,32nm,1.4s
PFO Pinyon Flats O 88.03 54 LR LR 22 59 20.3
comp=Z,475nm,20.0s,baz=244,slow=30
TLY Talaya 88.43 326 P **P** **22 27 39.7 -0.9**
comp=Z,3.0nm,0.6s,baz=129,slow=8.6,SNR=3.6
TLY LR LR 23 08 45.4
comp=Z,74nm,18.2s,baz=130,slow=37
comp=Z,3.0nm,0.6s
TLY Talaya 88.43 326⇑ *eP* **P** **22 27 40.8 +0.2**
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY Talaya 88.43 326 P **P** **22 27 39.8 -0.8**
TLY IAmb IAmb 22 27 53.3
comp=Z,18nm,1.1s
TLY Talaya 88.43 326 P **P** **22 27 40.6 +0.1**
NVAR Mina Array Bea 88.51 49 P **P** **22 27 41.2 -0.4**
comp=Z,0.7nm,0.8s,baz=241,slow=8.3,SNR=3.5
NVAR LR LR 23 01 28.8
comp=Z,290nm,19.0s,baz=240,slow=32
comp=Z,0.7nm,0.8s
BBB Bella Bella 88.58 34 LR LR 22 59 37.9
comp=Z,198nm,20.7s,baz=258,slow=30
ILAR Eielson Array 88.79 18 P **P** **22 27 40.0 -1.9**
comp=Z,0.4nm,0.6s,baz=247,slow=4.4,SNR=6.3
ILAR LR LR 23 04 56.9
comp=Z,258nm,18.6s,baz=246,slow=34
comp=Z,0.4nm,0.6s
PALK Pallekele 89.44 278 LR LR 23 10 16.5
comp=Z,184nm,18.0s,baz=110,slow=37
LPIG La Paz 89.77 65 LR LR 23 01 32.9
comp=Z,447nm,18.4s,baz=218,slow=31
MOY Mondy 89.86 325 *eP* **P** **22 27 47.5 +0.1**
MOY pmax pmax
comp=Z,17nm,2.5s
WVOR Wild Horse Val 89.88 45 P **P** **22 27 47.9 +0.2**
I07A Izee 89.97 43 P **P** **22 27 47.9 -0.2**
TROLL Troll, Antarti 90.36 185⇑ P **P** **22 27 49.5 0.0**
comp=Z,680nm,1.1s
NVL N'lazarevskaya 90.59 188 *eP* P 22 27 43.8 -6.7
NVL pmax pmax
comp=Z,13nm,0.9s
DLBC Dease Lake 90.94 28 LR LR 23 03 46.7
comp=Z,218nm,19.0s,baz=218,slow=32
SNAA Sanae 91.02 183 P **P** **22 27 52.2 -0.3**
comp=Z,3.4nm,0.9s,baz=222,slow=4.1,SNR=5.9
comp=Z,3.4nm,0.9s
KNGR Kungurtug, Tuv 91.32 323⇓ *eP* **P** **22 27 53.9 -0.3**
KNGR pmax pmax
comp=Z,12nm,1.5s
VNA2 Neumayer--Watz 91.94 182⇑ P **P** **22 27 56.4 -0.3**
comp=Z,5.6nm,0.6s,baz=173,slow=4.1
VNA2 Neumayer--Watz 91.94 182 P **P** **22 27 56.9 +0.2**
VNA1 Neumayer--Stat 92.23 181⇑ P **P** **22 27 58.3 +0.2**
comp=Z,9.1nm,1.2s
TIXI Tiksi 92.59 348 LR LR 23 05 17.0
comp=Z,131nm,21.1s,baz=139,slow=33
NEW Newport 93.14 40 LR LR 23 02 57.3
comp=Z,114nm,20.9s,baz=112,slow=31
HYB Hyderabad 94.42 287 *eP* **P** **22 28 08.7 -0.4**
HYB *ePKIKP* **PKiKP** **22 32 51.5 -1.1**
HYB *eSKSac* **SKSac** **22 38 43.6 +0.1**
WMQ Urumqi 94.93 314 *eP* **P** **22 28 12.8 +1.8**
WMQ L L
comp=Z,200nm,15.7s
WMQ L L
comp=Z,140nm,18.3s
WMQ L L
comp=Z,130nm,20.7s
INK Inuvik 95.13 19 LR LR 23 08 17.4
comp=Z,123nm,18.5s,baz=230,slow=34
PDAR Pinedale Array 96.26 47 LR LR 23 04 44.3
comp=Z,93nm,20.4s,baz=246,slow=31
DGZ Jazzator, Alta 96.99 320⇓ *eP* **P** **22 28 20.0 -0.3**
DGZ pmax pmax
comp=Z,9.0nm,1.6s
TXAR Lajitas Array 96.99 62 LR LR 23 07 07.0
comp=Z,181nm,18.1s,baz=259,slow=32
MKAR Makanchi Array 99.45 316 P **Pdif** **22 28 31.2 0.0**
comp=Z,0.4nm,0.6s,baz=86,slow=6.4,SNR=4.0
MKAR LR LR 23 17 45.8
comp=Z,42nm,18.0s,baz=113,slow=38
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 99.45 316 *i* P **Pdif** **22 28 31.7 +0.4**
MKAR Makanchi Array 99.45 316 P **Pdif** **22 28 30.7 -0.5**
YKA Yellowknife Ar 99.56 27 LR LR 23 09 25.2
comp=Z,113nm,18.4s,baz=281,slow=33
ZALV Zalesovo Beam 99.79 323 P **Pdif** **22 28 31.7 -0.9**
comp=Z,1.1nm,0.6s,baz=104,slow=6.3,SNR=7.3
ZALV LR LR 23 12 11.0
comp=Z,56nm,21.9s,baz=112,slow=34
comp=Z,1.1nm,0.6s
ZALV Zalesovo Beam 99.79 323 **Pdif** **22 28 31.0 -1.5**
KSH2 Kashi 102.45 307 P **Pdif** **22 28 45.8 +0.8**
KSH2 pmax pmax
comp=Z,2.0nm,1.3s
KURK Kurchatov 102.72 319⇑ *eP* **Pdif** **22 28 44.7 -1.0**
KURK pmax pmax
comp=Z,2.0nm,1.1s
ARTI Arti 115.02 325 *i* PKIKP **PKPdf** **22 33 30.6 +1.4**
ARTI 22 34 27.8
ARTI 22 40 42.7
KIRV Kirov 119.35 328⇑ *i* PKiKP **PKiKP** **22 33 40.1 +2.6**
ARA0 ARCESS Array S 122.87 345 *eP* PKiKP 22 33 55.9 +12
ARCES ARCESS Array B 122.87 345 PKP **PKPdf** **22 33 43.0 -1.0**
comp=Z,1.8nm,0.6s,baz=50,slow=2.9,SNR=5.9
ARCES ARCESS Array B 122.87 345 PKiKP **PKPdf** **22 33 43.0 -1.0**
KLMR Klimovskoe 123.22 333 *ePKIKP* **PKPdf** **22 33 44.7 -0.2**
KLMR pmax pmax
comp=Z,27nm,1.3s
AKT Akhty 123.74 309 *ePKIKP* **PKPdf** **22 33 46.3 -0.4**
JETT Jettan, Norway 124.04 347 *eP* PKiKP 22 33 57.6 +11
TRO Tromso 124.29 347 *eP* PKiKP 22 33 57.5 +11
VRH Novokhopyorsk 125.75 321 *ePKIKP* **PKPdf** **22 33 46.0 -4.0**
VRH pmax pmax
comp=Z,3.0nm,0.8s
STEI Steigen 126.46 348 *eP* PKiKP 22 34 02.5 +11
LPSR Galich'ya Gora 126.90 324 *ePKIKP* **PKiKP** **22 33 55.7 +3.0**
LPSR pmax pmax
comp=Z,19nm,0.6s
KIV Kislovodsk 127.01 312 *ePKIKP* **PKPdf** **22 33 52.7 -0.1**
KIV pmax pmax
comp=Z,7.0nm,1.1s
VORR Voronezh 127.08 322 *ePKIKP* **PKiKP** **22 33 53.2 +0.2**
VORR pmax pmax
comp=Z,28nm,0.4s
OBN Obninsk 127.17 327⇑ *ePKIKP* **PKPdf** **22 33 52.4 -0.2**
OBN *i* 22 33 54.0
OBN *e* 22 34 03.0
OBN 22 41 01.0
OBN SS SS 22 53 04.0 +5.4
OBN pmax pmax
comp=Z,3.0nm,0.5s
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN MLR MLR
comp=Z,92nm,20.0s
VSR Storozhevoye 127.26 322 *ePKIKP* **PKPdf** **22 33 52.5 -0.4**
VSR pmax pmax
comp=Z,6.0nm,0.9s
VORD Divnogorie 127.28 322 *ePKIKP* **PKPdf** **22 33 51.1 -1.8**
VORD pmax pmax
comp=Z,3.0nm,1.0s
VAGH Vaagaholmen 127.89 348 *eP* PKiKP 22 34 05.4 +11
KONS Konsvik 128.12 347 *eP* PKiKP 22 34 06.3 +12
STOK Stokkvaagen 128.28 347 *eP* PKiKP 22 34 06.9 +12
FINES FINESS Array B 128.31 338 PKP **PKPdf** **22 33 54.9 +0.3**
comp=Z,2.9nm,0.9s,baz=124,slow=9.5,SNR=4.6
FINES FINESS Array B 128.31 338 PKPdf **PKPdf** **22 33 54.5 -0.1**
LEIR Leirfjorden 128.45 347 *eP* PKiKP 22 34 06.9 +12
NSS Namsos 130.06 347 *eP* PKiKP 22 34 10.1 +11
MNK Minsk 131.82 330 *i* PKP PKPdf 22 33 53.1 -8.4
comp=E,5.0nm,0.8s
MNK *i* PKP PKPdf 22 33 53.1 -8.4
comp=N,10.0nm,0.8s
MNK *i* PKP PKPdf 22 33 53.1 -8.4
comp=Z,10.0nm,0.8s,baz=56
MNK *i* PKiKP PKiKP 22 33 54.4 -8.1
MNK *i* PP PP 22 36 13.7 -8.1
MNK *i* SKP 22 37 17.7
MNK *i* PKS PKSdf 22 37 21.9 -16
MNK *i* PPP PPP 22 39 03.9
MNK *i* SKS 22 39 54.1
MNK *i* SS SS 22 53 19.2 -37
MNK *i* SSS SSS 22 58 10.2
MNK Minsk 131.82 330 *i* PKIKP PKPdf 22 33 53.1 -8.4
MNK *i* 22 33 54.4
MNK pmax pmax
comp=N,10.0nm,0.8s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK pmax pmax
comp=E,5.0nm,0.8s
MNK MLR MLR
comp=E,95nm,17.0s
MNK MLR MLR
comp=Z,103nm,18.0s
DOMB Dombas 132.88 347 *eP* PKiKP 22 34 15.8 +11
AKASG Malin Array Be 133.17 325 PKP **PKiKP** **22 34 05.5 +0.2**
comp=Z,0.4nm,0.4s,baz=66,slow=1.8,SNR=2.0
AKASG Malin Array Be 133.17 325 PKPdf **PKPdf** **22 34 04.4 +0.3**
AKBB Malin Array Si 133.17 325⇓ *i*PKIKP **PKiKP** **22 34 04.9 -0.4**
AKN Aaknes 133.20 348 *eP* PKiKP 22 34 17.1 +12
NB2 NORSAR Subarra 133.24 345 PKPdf PKiKP 22 34 15.2 +10
comp=Z,5.6nm,1.2s,baz=31,slow=1.9
NOA NORSAR Array B 133.24 345 PKP **PKPdf** **22 34 04.2 +0.1**
comp=Z,0.2nm,0.7s,baz=55,slow=2.3,SNR=2.1
HFS Hagfors 133.34 343 PKP **PKPdf** **22 34 03.9 -0.2**
comp=Z,2.3nm,0.7s,baz=47,slow=2.6,SNR=4.4
NC602 NORSAR Array S 133.42 344 *eP* PKiKP 22 34 15.9 +10
MBAR Mbarara 134.19 252⇑ *i*PKIKP **PKiKP** **22 34 08.8 0.0**
LUBAR Lubar, Ukraine 134.37 325 P **PKPdf** **22 34 06.1 -0.3**
BRTR Keskin Array B 134.59 309 PKP **PKPdf** **22 34 07.0 -0.4**
comp=Z,0.9nm,0.9s,baz=68,slow=3.9,SNR=2.3
BSEG Bad Segeberg 139.50 340 *eL* L 23 35 23.8
comp=Z,64nm,22.0s
STEB Steborice 139.53 330 *ePKP* **PKiKP** **22 34 18.1 -0.2**
STEB *ex* x 22 34 28.0
MORC Moravsky Berou 139.74 330 *ePKP* **PKPdf** **22 34 17.4 +0.9**
OSTC Ostas 139.81 332 *ex* x 22 34 30.6
OSTC AMS AMS 23 36 40.0
comp=Z,200nm,18.9s
CHVC Chvalec 139.86 332 *ePKIKP* **PKiKP** **22 34 20.5 +1.5**
CHVC MLR MLR
comp=Z,200nm,22.4s
CHVC Chvalec 139.86 332 *ePKP* **PKiKP** **22 34 20.5 +1.5**
CHVC AMS AMS 23 37 00.0
comp=Z,200nm,22.4s
MAUC Maruska 139.89 330 *ePKP* **PKiKP** **22 34 19.0 -0.1**
KRLC Kraliky 139.89 331 AMS AMS 23 35 40.0
comp=Z,100nm,21.7s
DPC Dobruska-Polom 139.91 332 *ePKIKP* **PKiKP** **22 34 21.1 +1.9**
DPC MLR MLR
comp=Z,200nm,18.3s
DPC Dobruska-Polom 139.91 332 *ePKP* **PKiKP** **22 34 21.1 +1.9**
DPC AMS AMS 23 36 30.0
comp=Z,200nm,18.3s
UPC Upice 139.94 332 AMS AMS 23 36 40.0
comp=Z,200nm,18.3s
JAVC Velka Javorina 140.30 329 *ePKP* **PKPdf** **22 34 18.7 +1.2**
BRG Berggiesshubel 140.57 334⇓ *ePKPf* **PKPdf** **22 34 22.4 +4.5**
BRG Amp 22 34 23.2
comp=Z,3.4nm,0.8s
BRG Berggiesshubel 140.57 334 P PKiKP 22 34 30.8 +10
BRG Amp 22 34 33.3
comp=Z,7.1nm,0.9s
KRUC Moravsky 140.78 330 *ePKP* **PKPdf** **22 34 18.7 +0.4**
PRU Pruhonice 140.97 333 *ePKIKP* **PKiKP** **22 34 25.6 +4.3**
PRU *e* 22 34 33.2
PRU MLR MLR
comp=Z,200nm,20.7s
PRU Pruhonice 140.97 333 *ePKP* **PKiKP** **22 34 25.6 +4.3**
PRU *ex* x 22 34 33.2
PRU AMS AMS 23 32 00.0
comp=Z,200nm,20.7s
HSKC Hora Svate Kat 140.98 334 *ePKP* **PKiKP** **22 34 27.0 +5.7**
HSKC *ex* x 22 34 33.2
EKA Eskdalemuir Ar 141.42 352 PKP **PKPdf** **22 34 19.6 +0.4**
comp=Z,2.8nm,0.8s,baz=26,slow=2.5,SNR=5.9
WINA Alland / Wiene 141.59 329 *ePKIKP* **PKiKP** **22 34 22.9 +0.3**
comp=Z,1.7nm,0.6s
NKC Novy Kostel 141.67 334 AMS AMS 23 36 50.0
comp=Z,100nm,21.8s
MOX Moxa 141.69 336 *eL* L 23 36 12.7
comp=Z,77nm,21.4s
RONA Rosalia, Austr 141.76 329 *ePKP* **PKPdf** **22 34 20.8 +0.6**
comp=Z,3.6nm,0.9s
CKRC Cesky Krumlov 141.92 331 *ePKIKP* **PKiKP** **22 34 22.7 -0.6**
CKRC MLR MLR
comp=Z,100nm,21.1s
CKRC Cesky Krumlov 141.92 331 *ePKP* **PKiKP** **22 34 22.7 -0.6**
CKRC AMS AMS 23 40 10.0
comp=Z,100nm,21.1s
KHC Kasperske Hory 142.02 332 *ePKIKP* **PKiKP** **22 34 23.7 +0.2**
KHC MLR MLR
comp=Z,200nm,28.6s
KHC Kasperske Hory 142.02 332 *ePKP* **PKiKP** **22 34 23.7 +0.2**
KHC AMS AMS 23 35 40.0
comp=Z,200nm,28.6s
GERES GERESS Array B 142.18 332 PKP **PKPdf** **22 34 20.6 -0.4**
comp=Z,0.9nm,0.9s,baz=40,slow=1.7,SNR=6.5
GERES GERESS Array B 142.18 332 PKPdf **PKPdf** **22 34 17.2 -3.8**
WET Wettzell 142.32 333 *eL* L 23 36 57.2
comp=Z,117nm,21.4s
ARSA Arzberg 142.45 329 *epPKP* **PKiKP** **22 34 24.5 +0.1**
comp=Z,4.0nm,1.2s
GRF Grafenberg Arr 142.59 335 *ePKP* **PKiKP** **22 34 29.5 +4.9**
baz=39,slow=3.1
GRF *eL* L 23 36 16.7
comp=Z,78nm,19.8s
MOA Molln 142.64 330 *esPKiKP* **PKiKP** **22 34 30.0 +5.2**
comp=Z,6.4nm,0.8s
SESA Seetaler Alpe, 143.02 329 *esPKiKP* **PKiKP** **22 34 30.9 +5.0**
comp=Z,37nm,0.9s
BIOA Bad Ischl, Aus 143.05 331 *i SKiKP* **PKiKP** **22 34 30.8 +5.1**
comp=Z,6.3nm,1.0s
SOKA Soboth 143.09 328 *esPKiKP* **PKiKP** **22 34 31.2 +5.4**
comp=Z,6.3nm,1.0s
TNS Taunus Mts 143.23 338 *eL* L 23 33 24.5
comp=Z,88nm,22.0s
OBKA Obir 143.45 329 *esPKiKP* **PKiKP** **22 34 31.9 +5.3**
comp=Z,5.7nm,1.0s
LESA Schwarzleotal 143.69 331 *esPKiKP* **PKiKP** **22 34 32.9 +5.9**
comp=Z,21nm,0.8s,SNR=6.3
MEM Membach 143.73 340 *d*PKPdf **PKiKP** **22 34 25.4 -1.5**
MEM *dPKP* **sPKPdf** **22 34 33.8 +0.9**
FUR Furstenfeldbru 143.75 333 *eL* L 23 40 39.3
comp=Z,82nm,21.1s
LJU Ljubljana 143.78 328 *i* PKPbc **PKiKP** **22 34 33.2 +6.0**
MYKA Terra Mystica 143.81 330 *esPKiKP* **PKiKP** **22 34 32.8 +5.5**
comp=Z,13nm,0.8s
CEY Cerknica 144.04 328 *i* PKPbc **PKiKP** **22 34 34.0 +6.2**
UCC Uccle 144.07 342 *dPKP* **PKiKP** **22 34 34.0 +6.4**
WATA Walderalm 144.25 332 *i* sPKiKP **PKiKP** **22 34 34.2 +5.9**
comp=Z,10nm,0.9s
ABTA Abfaltersbach 144.26 331 *es*PKiKP **PKiKP** **22 34 34.3 +6.0**
comp=Z,12nm,0.8s,SNR=6.5
WTTA Wattenberg 144.28 332 *i* PKP **PKPdf** **22 34 24.5 -0.3**
comp=Z,3.7nm,0.7s
WTTA *i* sPKiKP **sPKPdf** **22 34 35.1 +0.9**
comp=Z,32nm,0.9s
BMRD Maredsous 144.39 341 *d*PKPdf **PKPdf** **22 34 26.3 +1.6**
BMRD *d*PKP **sPKPdf** **22 34 35.3 +1.3**
MOTA Moosalm 144.46 333 *ePKP* **PKPdf** **22 34 24.6 -0.4**
comp=Z,5.3nm,0.8s
MOTA *es*PKiKP **sPKPdf** **22 34 35.6 +1.1**
comp=Z,31nm,0.9s
RETA Reutte 144.50 333 *ePKP* PKPbc 22 34 24.3 +0.7
comp=Z,1.8nm,0.6s
RETA *es*PKiKP sPKPdf 22 34 35.9 +1.4
comp=Z,22nm,0.9s
WLF Walferdange 144.50 339 *d*PKPdf **PKPdf** **22 34 24.6 -0.3**
WLF *d*PKP **sPKPdf** **22 34 35.2 +1.0**
SQTA Sankt Quirin 144.50 332 *i* PKP **PKPdf** **22 34 24.6 -0.5**
comp=Z,2.6nm,0.7s
SQTA *es*PKiKP **sPKPdf** **22 34 35.9 +1.3**
comp=Z,37nm,0.8s
STAL STALIGIAL 144.52 330 PKPdf **PKPab** **22 34 23.0 -0.4**
DOU Dourbes 144.62 341 *d*PKPdf **PKPdf** **22 34 26.2 +1.1**
DOU *d*PKP **sPKPdf** **22 34 35.9 +1.4**
BFO Black Forest 144.83 336 *eL* L 23 43 56.2
comp=Z,82nm,19.9s
FETA Feichten 144.87 332 *ePKP* **PKPab** **22 34 24.6 -0.2**
comp=Z,4.4nm,0.9s,SNR=10
FETA *i* sPKiKP **sPKiKP** **22 34 36.8 -2.2**
comp=Z,39nm,0.8s
DAVA Damuels 145.03 334 *i* PKP **PKPbc** **22 34 24.9 -0.5**
comp=Z,7.4nm,0.7s,SNR=8.8
DAVA *es*PKiKP **sPKiKP** **22 34 37.2 -2.1**
comp=Z,60nm,0.8s
CTI Castel Tesino 145.18 331 PKP2 **PKPbc** **22 34 24.1 -1.8**
CTI Castel Tesino 145.18 331 **PKPbc** **22 34 24.1 -1.8**
ECH Echery 145.37 337 PKP2 **PKPbc** **22 34 24.6 -1.7**
ECH Echery 145.37 337 **PKPbc** **22 34 24.6 -1.7**
FUORN Ofenpass-Fuorn 145.38 332 **PKPbc** **22 34 24.8 -1.9**
TUE Stuetta 145.90 333 PKPdf **PKPdf** **22 34 26.6 -1.1**
TUE Stuetta 145.90 333 P **PKPdf** **22 34 27.9 +0.2**
TIP Timpagrande 146.73 317 P **PKPdf** **22 34 29.7 +0.6**
CEL Celeste 147.79 316 PKPbc **PKPbc** **22 34 33.6 -0.2**
KEST Kesra 153.53 318 PKPab **PKPab** **22 35 00.0 +0.1**
comp=Z,4.6nm,0.8s,baz=337,slow=0.2,SNR=5.7
ESDC Sonseca Array 156.60 344 PKPab **PKPab** **22 35 11.9 -1.0**
comp=Z,0.9nm,0.7s,baz=358,slow=3.9,SNR=4.9
TORD Torodi Ar. Bea 166.03 255 PKP **PKPdf** **22 34 53.5 -1.0**
comp=Z,1.5nm,0.9s,baz=102,slow=1.4,SNR=5.6
TORD PKPab **PKPab** **22 35 54.7 -0.1**
comp=Z,0.5nm,0.9s,baz=116,slow=4.0,SNR=2.1

JMA ***13*** *22:15:37.6±0.1,23.1N±0.3×121.9E±0.3,h42km, MV2.7/11, TAIWAN REGION*
TAP ***13*** *22:15:38.4,22.98N×121.89E,h31km, ML3.0, C*
ISC 13 22:15:33.0±1.0, 22.96N±0.02×122.09E±0.02, h14km±8km, n73, σ0 92/130, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.64**	**244**	*i* P	**Pn**	**22 15 48.1**	**+0.5**
LDUT				*i* S	**Sb**	**22 15 55.2**	**+0.6**
CHKH	**Chenggong**	**0.68**	**290**	*i* P	**Pn**	**22 15 47.9**	**-0.3**
CHKH				S	**Sg**	**22 15 54.6**	**-0.6**
CHKT	**Chengkung**	**0.68**	**282**	*i* P	**Pn**	**22 15 47.8**	**-0.4**
CHKT				*i* S	**Sg**	**22 15 54.6**	**-0.7**
ECBN	**Changbin**	**0.69**	**302**	P	**Pn**	**22 15 48.4**	**0.0**
ECBN				S	**Sg**	**22 15 55.5**	**+0.1**
EDH	**Donghe**	**0.72**	**272**	*eP*	**Pn**	**22 15 48.9**	**+0.1**
EDH				*eS*	**Sg**	**22 15 56.3**	**-0.3**
FULB	**Fuli**	**0.77**	**288**	P	**Pn**	**22 15 49.1**	**-0.4**
FULB				S	**Sg**	**22 15 57.8**	**-0.3**
EYUL	**Yuli**	**0.81**	**299**	*i* P	**Pn**	**22 15 50.1**	**+0.1**
EYUL				*i* S	**Sg**	**22 15 59.4**	**+0.1**
HGSD	**Ruisui**	**0.81**	**311**	P	**Pn**	**22 15 50.0**	**0.0**
HGSD				*eS*	**Sg**	**22 15 58.6**	**-0.8**
ECS	**Chishang**	**0.81**	**280**	*i* P	**Pn**	**22 15 50.5**	**+0.4**
ECS				S	**Sg**	**22 15 59.1**	**+0.1**
TWF1	**Yuli**	**0.83**	**299**	P	**Pn**	**22 15 50.4**	**+0.1**
TWF1				*eS*	**Sg**	**22 15 59.2**	**-0.7**
EHD	**Haiduan**	**0.83**	**284**	P	**Pn**	**22 15 50.5**	**+0.2**
EHD				S	**Sg**	**22 15 59.4**	**-0.7**
YULB	**Yu-li**	**0.85**	**301**	P	**Pn**	**22 15 50.6**	**+0.1**
YULB				*eS*	**Sg**	**22 16 00.3**	**-0.2**
EHYH	**Wanrong**	**0.87**	**308**	*eP*	**Pn**	**22 15 51.2**	**+0.4**
EHYH				*eS*	**Sg**	**22 16 01.6**	**+0.3**
LONT	**Longtian**	**0.89**	**267**	*eP*	**Pn**	**22 15 51.3**	**+0.3**
TTN	**Taitung**	**0.89**	**257**	*eP*	**Pn**	**22 15 52.0**	**+0.8**
TTN				*eS*	**Sg**	**22 16 02.1**	**+0.2**
EHY	**Hungye**	**0.89**	**308**	*eP*	**Pn**	**22 15 51.7**	**+0.5**
EGFH	**Guangfu**	**0.94**	**320**	*eP*	**Pn**	**22 15 52.4**	**+0.7**
EGFH				*eS*	**Sg**	**22 16 02.9**	**-0.4**
TWGBT	**Beinan**	**0.94**	**262**	*eP*	**Pn**	**22 15 52.1**	**+0.3**
TWGBT				*eS*	**Sg**	**22 16 02.9**	**-0.6**
TWG	**Pinlang**	**0.95**	**262**	P	**Pn**	**22 15 52.2**	**+0.3**
TWG				*eS*	**Sg**	**22 16 02.6**	**-1.1**
SHUL	**Shoufeng**	**0.96**	**330**	*eP*	**Pn**	**22 15 53.4**	**+1.3**
SHUL				*eS*	**Sb**	**22 16 04.8**	**+0.8**
WARBT	**Fenglin Townsh**	**1.00**	**320**	P	**Pn**	**22 15 53.4**	**+0.8**
WARBT				S	**Sg**	**22 16 04.4**	**-0.9**
ELDTW	**Lidau**	**1.01**	**283**	P	**Pn**	**22 15 53.0**	**+0.1**
ELDTW				S	**Sg**	**22 16 03.2**	**-2.6**
LAY	**Lan-yu**	**1.04**	**209**	*eS*	**Sb**	**22 16 07.2**	**+0.9**
ESL	**Shilin**	**1.05**	**325**	*eP*	**Pn**	**22 15 54.0**	**+0.8**
ESL				*eS*	**Sg**	**22 16 05.5**	**-1.3**
LYUB	**Lan-yu**	**1.06**	**206**	*eP*	**Pn**	**22 15 55.3**	**+1.9**
LYUB				*eS*	**Sb**	**22 16 07.0**	**+0.2**
ECL	**Taimali**	**1.11**	**251**	P	**Pg**	**22 15 54.6**	**+0.4**
ECL				S	**Sb**	**22 16 06.9**	**-1.3**
ETM	**Tongmen**	**1.15**	**332**	*eP*	**Pg**	**22 15 57.7**	**+2.6**
ETM				*eS*	**Sb**	**22 16 08.5**	**-0.9**
EOS4	**EOS4**	**1.18**	**10**	*eP*	**Pg**	**22 15 58.3**	**+2.6**
EOS4				*eS*	**Sn**	**22 16 12.7**	**+2.2**
VWDT	**VWDT**	**1.18**	**313**	*eP*	**Pg**	**22 15 56.5**	**+0.8**
VWDT				*eS*	**Sb**	**22 16 09.2**	**-1.1**
TWD	**Chiawan**	**1.21**	**338**	*eS*	**Sb**	**22 16 10.8**	**-0.3**
STYH	**Taoyuan**	**1.23**	**280**	P	**Pg**	**22 15 56.7**	**+0.1**
STYH				S	**Sb**	**22 16 10.1**	**-1.6**
LXIB	**Xiulin Townshi**	**1.23**	**330**	*eP*	**Pg**	**22 15 57.5**	**+0.8**
LXIB				*eS*	**Sb**	**22 16 10.8**	**-1.1**
STYT	**Tauyuan**	**1.24**	**280**	P	**Pg**	**22 15 56.9**	**-0.1**
STYT				*eS*	**Sb**	**22 16 10.4**	**-1.8**
TAWH	**Dawu Township**	**1.27**	**241**	*eP*	**Pg**	**22 15 57.9**	**+0.6**
TAWH				*eS*	**Sb**	**22 16 12.6**	**-0.3**
EAST	**Anshuo**	**1.28**	**244**	*eP*	**Pg**	**22 15 57.7**	**+0.1**
EAST				*eS*	**Sb**	**22 16 12.6**	**-0.6**
NACB	**Ninganchiao**	**1.29**	**340**	*eP*	**Pg**	**22 15 58.1**	**+0.2**
NACB				*eS*	**Sb**	**22 16 13.9**	**+0.2**
OWD	**Renai**	**1.30**	**320**	*i* P	**Pg**	**22 15 58.3**	**+0.2**
OWD				*eS*	**Sb**	**22 16 11.9**	**-2.1**
ALS	**Alishan**	**1.30**	**295**	P	**Pg**	**22 15 58.5**	**+0.4**
ALS				*eS*	**Sb**	**22 16 13.5**	**-0.7**
SLGT	**Liugui**	**1.33**	**272**	*eP*	**Pg**	**22 15 58.7**	**+0.2**
SSLB	**Suanglung**	**1.33**	**309**	*eP*	**Pg**	**22 15 58.6**	**0.0**
SSLB				*eS*	**Sb**	**22 16 13.0**	**-1.7**
EOS3	**EOS3**	**1.34**	**9**	*eP*	**Pg**	**22 16 01.2**	**+2.4**
EOS3				*eS*	**Sg**	**22 16 17.9**	**+1.7**
WHYT	**Xinyi Township**	**1.35**	**303**	*eP*	**Pg**	**22 15 59.3**	**+0.3**
WHYT				*eS*	**Sb**	**22 16 14.8**	**-0.6**
TSMG	**Majia**	**1.35**	**260**	*eP*	**Pg**	**22 15 59.0**	**0.0**
SSD	**Sandimen**	**1.36**	**261**	P	**Pb**	**22 15 58.6**	**+0.4**
WUSB	**Renai**	**1.36**	**319**	P	**Pg**	**22 15 59.5**	**+0.2**
WUSB				*eS*	**Sb**	**22 16 14.1**	**-1.7**
MASBT	**Mashibuluo**	**1.39**	**256**	*eP*	**Pg**	**22 15 59.4**	**-0.3**
TPUB	**Ta-pu**	**1.39**	**285**	*eP*	**Pg**	**22 16 00.2**	**+0.6**
TPUB				*eS*	**Sn**	**22 16 16.6**	**+0.5**
WTP	**Ta-pu**	**1.39**	**282**	*eP*	**Pg**	**22 16 00.1**	**+0.4**
SGST	**Jiashian**	**1.39**	**275**	P	**Pb**	**22 15 59.3**	**+0.5**
SGST				*eS*	**Sn**	**22 16 16.3**	**+0.1**
SLIU	**Shizi**	**1.40**	**239**	*eP*	**Pg**	**22 15 59.8**	**-0.1**
SLIU				*eS*	**Sn**	**22 16 16.0**	**-0.4**
SMLT	**Sun Moon Lake**	**1.43**	**310**	*eP*	**Pg**	**22 16 00.9**	**+0.4**
SMLT				*eS*	**Sn**	**22 16 17.0**	**-0.3**
CHN4	**Tsaushan**	**1.43**	**286**	*eP*	**Pg**	**22 16 00.8**	**+0.2**
CHN5	**Tsauling**	**1.45**	**297**	*eP*	**Pg**	**22 16 01.5**	**+0.7**
CHN5				*i* S	**Sn**	**22 16 17.8**	**+0.1**
WCKO	**Fanlu**	**1.45**	**290**	P	**Pg**	**22 16 01.7**	**+0.9**
WCKO				*eS*	**Sb**	**22 16 18.6**	**+0.6**

CHN1	**Nanshi**	**1.46**	**279**		P		**Pg**	**22 16 01.5**	**+0.6**
CHN1					*e*S		**Sn**	**22 16 18.8**	**+0.9**
EOS2	**EOS2**	**1.46**	**5**		*e*P		**Pg**	**22 16 03.1**	**+2.1**
SCST	**Cishan**	**1.47**	**268**		*e*P		**Pg**	**22 16 02.0**	**+0.8**
TYC	**Yuchr**	**1.47**	**310**		*e*P		**Pg**	**22 16 01.2**	**-0.1**
TYC					*e*S		**Sn**	**22 16 18.8**	**+0.5**
SMST	**Manzhou Townsh**	**1.48**	**231**		*e*P		**Pg**	**22 16 01.9**	**+0.4**
SMST					*e*S		**Sn**	**22 16 18.8**	**+0.3**
SNST	**Tainan City**	**1.49**	**281**		*e*P		**Pg**	**22 16 01.6**	**0.0**
SNST					*e*S		**Sn**	**22 16 18.9**	**+0.3**
DPDB	**Guoxing**	**1.51**	**315**		*e*P		**Pg**	**22 16 02.1**	**0.0**
DPDB					*e*S		**Sn**	**22 16 19.7**	**+0.3**
WCS	**Beigang Elemen**	**1.54**	**316**		*e*P		**Pg**	**22 16 03.0**	**+0.4**
TWKBT	**Hengchun**	**1.55**	**230**		*e*P		**Pg**	**22 16 03.1**	**+0.3**
TWKBT					*e*S		**Sn**	**22 16 21.1**	**+0.9**
TWK1	**Hengchun**	**1.56**	**230**		*e*P		**Pg**	**22 16 03.3**	**+0.4**
TWK1					*e*S		**Sn**	**22 16 21.2**	**+0.9**
WNT	**Mingjian**	**1.58**	**306**		*e*P		**Pg**	**22 16 03.7**	**+0.3**
WNT					*e*S		**Sn**	**22 16 21.5**	**+0.5**
JYNG	**Yonagunijimaku**	**1.68**	**28**		*e*S		**Sg**	**22 16 26.0**	**-1.2**
TWQ1	**Liyutan**	**1.84**	**319**		*e*P		**Pg**	**22 16 08.0**	**-0.2**
TWQ1					*e*S		**Sb**	**22 16 30.1**	**+0.8**
HATJ	**Hateruma jima**	**1.92**	**55**		P		**Pg**	**22 16 10.4**	**+0.6**
HATJ					*e*S		**Sg**	**22 16 34.0**	**-0.7**
TIPB	**Shuangxi**	**2.02**	**353**		P		**Pg**	**22 16 10.9**	**-0.8**
TIPB					S		**Sb**	**22 16 34.1**	**-0.5**
JKRS	**Kuro-shima**	**2.18**	**54**		P		**Pg**	**22 16 14.2**	**-0.5**
JKRS					*e*S		**Sg**	**22 16 40.9**	**-2.1**
JIJ	**Ishigaki jima**	**2.35**	**53**		*e*P		**Pg**	**22 16 16.1**	**-1.9**
JISG	**Ishigakijimahi**	**2.60**	**51**		P		**Pb**	**22 16 19.6**	**+0.1**
JISG					*e*S		**Sb**	**22 16 51.1**	**-0.3**
JMJ2	**Miyako jima3**	**3.46**	**58**		*e*P		**Pb**	**22 16 31.9**	**-2.1**

*SOME **13** 22:23:20.3, 39°.87N×69°.83E, h5km*
*KRNET **13** 22:23:21.4±0.1, 39°.80N×69°.70E, h18km, mb3.0*
*ISU **13** 22:23:21, 39°.71N×69°.85E, h14km*

ISC 13 22:23:21.2±1.3, **39°.80N**±0°.03×**69.72E**±0°.03, **h0**km±11km, **n34**, σ1°**37**/64, **28C-17D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.89**	**72**	⇓*i*P	**Pg**	**22 23 38.5**	**+0.3**
BTK				⇓*i*S	**Sb**	**22 23 50.8**	**-1.1**
GAR	**Garm**	**0.92**	**149**	⇑*i*P	**Pg**	**22 23 39.0**	**+0.1**
GAR				⇑*i*S	**Sg**	**22 23 52.0**	**+1.2**
MINT	**Mingtut**	**1.17**	**55**	P	**Pg**	**22 24 00.8**	**-3.0**
MINT				S	**Sg**	**22 23 56.8**	**-2.2**
CHGR	**Chuyangaron**	**1.22**	**201**	⇑*i*P	**Pn**	**22 23 44.0**	**-1.5**
CHGR				⇑*i*S	**Sb**	**22 24 00.7**	**-0.7**
NZBK	**Nazarbek**	**1.50**	**342**	P	**Pn**	**22 23 50.6**	**+1.3**
NZBK				S	**Sg**	**22 24 12.3**	**+3.0**
DRK	**Karamyk**	**1.64**	**100**	⇑*i*P	**Pn**	**22 23 51.6**	**0.0**
DRK				⇑*i*S	**Sg**	**22 24 14.2**	**+0.3**
FRG	**Fergana**	**1.69**	**69**	S	**Sg**	**22 24 16.5**	**+1.0**
CHMG	**Chimgan**	**1.77**	**7**	P	**Pn**	**22 23 51.9**	**-1.3**
CHMG				S	**Sn**	**22 24 14.6**	**-1.8**
TVKS	**Tavaksay**	**1.78**	**358**	P	**Pn**	**22 23 51.2**	**-2.0**
TVKS				S	**Sn**	**22 24 14.4**	**-2.2**
CHRV	**Charvak**	**1.85**	**5**	P	**Pn**	**22 23 52.7**	**-1.6**
CHRV				S	**Sn**	**22 24 16.7**	**-1.7**
TRKS	**Terek-Say**	**2.04**	**32**	⇑*i*P	**Pn**	**22 23 57.5**	**+0.5**
TRKS				⇑*i*S	**Sn**	**22 24 23.7**	**+0.4**
PSK	**Pskem**	**2.19**	**13**	P	**Sn**	**22 24 00.1**	**+1.0**
PSK				S	**Sn**	**22 24 27.0**	**+0.3**
AGL	**Agalyk**	**2.21**	**264**	P	**Sn**	**22 24 00.1**	**+1.0**
AGL				S	**Sn**	**22 24 27.3**	**+0.2**
TSTA	**Tashata**	**2.25**	**69**	S	**Sn**	**22 24 27.5**	**-0.8**
IUG	**luzhnay** 12nm,0.2s	**2.36**	**6**	*e*P	**Pn**	**22 24 01.7**	**+0.4**
IUG				*e*S	**Sn**	**22 24 31.8**	**+0.7**
	132nm,0.5s						
OHH	**Osh**	**2.46**	**72**	⇑*i*P	**Pn**	**22 24 03.8**	**+1.1**
OHH				⇑*i*S	**Sb**	**22 24 34.8**	**-2.5**
ARK	**Arkit**	**2.63**	**40**	⇑*i*P	**Pn**	**22 24 06.3**	**+1.3**
ARK				⇑*i*S	**Sn**	**22 24 38.8**	**+1.2**
ARSB	**Arslanbob**	**2.92**	**57**	⇓*i*P	**Pn**	**22 24 10.2**	**+1.2**
ARSB				⇓*i*S	**Sn**	**22 24 45.8**	**+1.0**
SFK	**Sufi-Kurgan**	**2.92**	**85**	⇓*i*P	**Pn**	**22 24 10.5**	**+1.4**
SFK				⇓*i*S	**Sn**	**22 24 46.2**	**+1.2**
KK31	**Karatay Array** 1.5nm,0.2s,baz=193,slow=17,SNR=18	**3.36**	**10**	⇑Pg	**Pb**	**22 24 22.3**	**+0.7**
KK31				Lg	Lg	22 25 06.7	
	8.2nm,0.3s,baz=201,slow=30,SNR=14						
MRKS	**Merke** 1.3nm,0.1s	**3.96**	**41**	*e*P	**Pb**	**22 24 31.8**	**-0.2**
MRKS				*e*S	**Sb**	**22 25 23.1**	**+2.7**
	12nm,0.6s						
EKS2	**Erkin-Say**	**4.19**	**46**	⇓*i*P	**Pn**	**22 24 28.1**	**+1.6**
EKS2				⇓*i*S	**Sn**	**22 25 16.5**	**+0.3**
UCH	**Uchtor**	**4.37**	**55**	⇑*i*P	**Pn**	**22 24 30.6**	**+1.4**
UCH				⇑*i*S	**Sn**	**22 25 21.1**	**+0.1**
AAK	**Ala-Archa** 0.7nm,0.5s	**4.59**	**50**	⇓Pg	**Pb**	**22 24 42.2**	**-0.4**
AAK				⇑Lg	Lg	22 25 50.7	
	7.9nm,0.9s						
AAK	**Ala-Archa**	**4.59**	**50**	⇑*i*P	**Pn**	**22 24 33.4**	**+1.4**
AAK				⇑*i*S	**Sn**	**22 25 25.9**	**-0.1**
FRU1	**Bishkek**	**4.77**	**49**	⇑*i*P	**Pn**	**22 24 35.9**	**+1.5**
FRU1				⇑*i*S	**Sn**	**22 25 30.2**	**-0.2**
KBK	**Karagaybulak**	**4.87**	**52**	⇓*i*P	**Pn**	**22 24 37.3**	**+1.4**
KBK				⇓*i*S	**Sn**	**22 25 32.8**	**-0.2**
USP	**Ospenovka**	**4.99**	**44**	⇓*i*P	**Pn**	**22 24 39.0**	**+1.6**
USP				⇓*i*S	**Sn**	**22 25 35.1**	**-0.7**
NRN	**Naryn**	**5.05**	**69**	⇑*i*P	**Pn**	**22 24 39.6**	**+1.1**
NRN				⇑*i*S	**Sn**	**22 25 36.6**	**-1.1**
BOOM	**Boomskoye usch**	**5.42**	**58**	⇑*i*P	**Pn**	**22 24 44.8**	**+1.5**
BOOM				⇑*i*S	**Sn**	**22 25 45.7**	**-0.7**
TKM2	**Tokmak 2**	**5.42**	**53**	⇑*i*P	**Pn**	**22 24 44.8**	**+1.4**
TKM2				⇑*i*S	**Sn**	**22 25 45.5**	**-1.0**
ULHL	**Ulahol**	**5.51**	**62**	⇑*i*P	**Pn**	**22 24 46.0**	**+1.3**
ULHL				⇑*i*S	**Sn**	**22 25 47.9**	**-0.9**
KDJ	**Kajisay**	**6.11**	**65**	⇓*i*P	**Pn**	**22 24 54.7**	**+1.8**
KDJ				⇓*i*S	**Sn**	**22 26 02.5**	**-1.1**
TARG	**Taragay, Kyrgy**	**6.44**	**70**	⇓*e*P	**Pn**	**22 24 59.2**	**+1.6**
TARG				⇓*i*S	**Sn**	**22 26 10.3**	**-1.6**

*SDD **13** 22:23:23.1±1.8, 17°.81N×65°.33W, h0km±22km, MD3.3, ML2.8, MW3.1, Presumed earthquake*
*NEIC **13** 22:23:24.7±1.7, 17°.77N±0°.06×65°.49W±0°.02, h10km±1km, ML3.0/35, Md3.4/16(RSPR), Error ellipse: s-maj=9.8km s-min=2.9km az=9.0*
*RSPR **13** 22:23:28.4, 17°.89N×65°.59W, h5km±31km, MD3.4/16*

ISC 13 22:23:25.1±1.4, **17°.79N**±0°.07×**65°.51W**±0°.04, **h9**km±11km, **n49**, σ0°**90**/64, **18C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**0.48**	**317**		**Pb**	**22 23 35.1**	**-0.6**
HUMP					**Sg**	**22 23 41.4**	**+0.6**
HUMP				IAML		22 23 42.1	
	983nm,0.2s						
HUMP				IAML		22 23 42.3	
	893nm,0.2s						
HUMP	**Col San Antoni**	**0.48**	**317**	⇑*e*P	**Pb**	**22 23 35.2**	**-0.4**
PDPR	**Patillas Dam,**	**0.54**	**295**	Pg	**Pb**	**22 23 36.0**	**-0.7**
PDPR				Sg	**Sg**	**22 23 43.5**	**+0.8**
PDPR				IAML		22 23 45.0	
	682nm,0.1s						
PDPR				IAML		22 23 45.6	
	810nm,0.1s						
PDPR	**Patillas Dam,**	**0.54**	**295**	⇑*e*P	**Pb**	**22 23 36.2**	**-0.5**
IGPR	**InterUniversit**	**0.60**	**287**		**Pb**	**22 23 37.4**	**-0.3**
IGPR					**Sb**	**22 23 46.0**	**-0.2**
IGPR	**InterUniversit**	**0.60**	**287**	⇓*e*P	**Pb**	**22 23 37.4**	**-0.3**
SJG	**San Juan**	**0.69**	**298**	Pg	**Pg**	**22 23 38.4**	**-0.1**
SJG				IAML		22 23 48.9	
	462nm,0.2s						
SJG				IAML		22 23 51.6	
	475nm,0.2s						
SJG	**San Juan**	**0.69**	**298**	*e*P	**Pg**	**22 23 38.6**	**+0.2**
SJG	**San Juan**	**0.69**	**298**	⇑*e*Pg	**Pg**	**22 23 38.6**	**+0.2**
SJG	**San Juan**	**0.69**	**298**	⇑*e*P	**Pb**	**22 23 38.8**	**-0.5**
ECPR	**Experimental S**	**0.97**	**303**	Pg	**Pg**	**22 23 43.2**	**-0.5**
ECPR				Sg	**Sg**	**22 23 56.2**	**-0.2**
ECPR				IAML		22 24 00.1	
	678nm,0.2s						
ECPR	**Experimental S**	**0.97**	**303**	⇓*e*P	**Pg**	**22 23 43.4**	**-0.4**
CELP	**Cerrillos**	**1.06**	**286**		**Pg**	**22 23 45.2**	**-0.2**
CELP				Sg	**Sg**	**22 23 59.5**	**+0.3**

CELP	**Cerrillos**	**1.06**	**286**	⇓*e*Pg		**Pg**	**22 23 45.3**	**-0.2**
CELP				⇓*e*Sg		**Sb**	**22 24 00.2**	**+0.7**
CELP				IAML			22 24 01.5	
	comp=E,48nm,0.4s							
CELP				IAML			22 24 02.2	
	comp=N,61nm,0.2s							
CELP	**Cerrillos**	**1.06**	**286**	⇓*e*P		**Pg**	**22 23 45.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.08**	**284**			**Pg**	**22 23 45.5**	**-0.3**
OBIP					Sg	**Sg**	**22 23 59.6**	**-0.2**
OBIP	**Obispado Ponce**	**1.08**	**284**	⇑*e*P		**Pb**	**22 23 45.9**	**0.0**
OBIP				*e*S		**Sb**	**22 24 00.5**	**+0.4**
EMPR	**Esperanza - Ma**	**1.19**	**305**			**Pb**	**22 23 47.8**	**0.0**
EMPR						**Sg**	**22 24 02.3**	**-1.1**
EMPR	**Esperanza - Ma**	**1.19**	**305**	⇓*e*P		**Pb**	**22 23 47.8**	**0.0**
EMPR				*e*S		**Sg**	**22 24 02.3**	**-1.1**
UUPR	**Utuado, UPR, P**	**1.24**	**292**	Pn		**Pg**	**22 23 47.8**	**-1.2**
UUPR	**Utuado, UPR, P**	**1.24**	**292**	⇑*e*P		**Pg**	**22 23 48.1**	**-0.9**
AOPR	**Arecibo Observ**	**1.31**	**295**	Pn		**Pn**	**22 23 48.7**	**-0.9**
AOPR				IAML			22 24 13.6	
	comp=N,438nm,0.3s							
AOPR	**Arecibo Observ**	**1.31**	**295**	⇑*e*Pg		**Pn**	**22 23 49.1**	**-0.5**
AOPR				IAML			22 24 12.4	
	comp=N,364nm,0.5s							
AOPR				IAML			22 24 13.4	
	comp=E,779nm,0.3s							
AOPR	**Arecibo Observ**	**1.31**	**295**	⇑*e*P		**Pn**	**22 23 49.2**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.32**	**278**			**Pg**	**22 23 50.9**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.32**	**278**	⇑*e*P		**Pg**	**22 23 50.9**	**+0.5**
MLPR	**Magueyes Islan**	**1.48**	**277**	Pn		**Pn**	**22 23 50.8**	**-1.0**
MLPR	**Magueyes Islan**	**1.48**	**277**	*e*Pg		**Pn**	**22 23 51.3**	**-0.5**
MLPR				⇑*e*P		**Pn**	**22 23 51.3**	**-0.5**
MLPR				⇑*e*Sg		**Sg**	**22 24 15.2**	**+2.6**
MLPR				IAML			22 24 20.9	
	comp=E,26nm,0.6s							
MLPR				IAML			22 24 21.7	
	comp=N,25nm,0.4s							
MLPR	**Magueyes Islan**	**1.48**	**277**	⇑*e*P		**Pn**	**22 23 51.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.54**	**278**	Pn		**Pn**	**22 23 51.6**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.54**	**278**	⇑*e*P		**Pn**	**22 23 52.0**	**-0.7**
LSP	**Las Mesas**	**1.55**	**285**			**Pb**	**22 23 54.0**	**0.0**
LSP	**Las Mesas**	**1.55**	**285**	⇑*e*P		**Pb**	**22 23 54.0**	**0.0**
PRSN	**Puerto Rico Se**	**1.62**	**286**	⇑*e*Pg		**Pb**	**22 23 55.3**	**+0.3**
PRSN				IAML			22 24 21.1	
	comp=E,284nm,0.2s							
PRSN				IAML			22 24 22.4	
	comp=N,396nm,0.3s							
PRSN	**Puerto Rico Se**	**1.62**	**286**	⇑*e*P		**Pb**	**22 23 55.1**	**0.0**
AGPR	**Aguadilla, PR**	**1.67**	**294**	Pn		**Pn**	**22 23 54.9**	**+0.4**
AGPR				IAML			22 24 18.6	
	comp=N,201nm,0.7s							
AGPR				IAML			22 24 25.7	
	comp=N,192nm,0.8s							
AGPR	**Aguadilla, PR**	**1.67**	**294**	⇑*e*P		**Pn**	**22 23 55.3**	**+0.9**
IDE	**Isla Desecheo**	**1.96**	**288**			**Pn**	**22 23 58.6**	**+0.1**
IDE	**Isla Desecheo**	**1.96**	**288**	⇑*e*P		**Pn**	**22 23 58.6**	**+0.1**
SKI	**Saint Kitts**	**2.68**	**99**	*e*P		**Pn**	**22 24 08.9**	**+0.5**
SKI				*e*S		**Sn**	**22 24 43.2**	**+2.3**
MBWH	**Windy Hill**	**3.33**	**108**	*e*P		**Pn**	**22 24 15.9**	**-1.5**
MBWH				*e*S		**Sn**	**22 24 56.5**	**-0.7**
ANWB	**Willy Bob**	**3.55**	**91**	*e*P		**Pn**	**22 24 21.9**	**+1.6**
ANWB				*e*S		**Sn**	**22 25 02.7**	**+0.3**
DR12	**Loma Pena Alta**	**3.81**	**286**	Pn		**Pn**	**22 24 25.0**	**+1.0**
HATOM	**Hato Mayor del** comp=N,19nm,1.7s	**3.81**	**286**	IAML			22 25 37.2	
DHSZ	**Broadband at M**	**3.88**	**112**	*e*P		**Pn**	**22 24 26.5**	**+1.6**
DHSZ				*e*S		**Sn**	**22 25 09.4**	**-1.2**
TBG	**Guadaloupe-3**	**4.17**	**117**	*e*P		**Pn**	**22 24 25.8**	**-3.0**
DSLB	**Salisbury**	**4.56**	**120**	*e*P		**Pn**	**22 24 34.8**	**+0.6**
DSLB				*e*S		Sn	22 25 14.8	-13
FDFM	**Morne la Roset**	**5.16**	**125**	Pn		**Pn**	**22 24 41.8**	**-0.7**
BIM	**Bigot**	**5.36**	**127**	Pn		**Pn**	**22 24 44.3**	**-1.1**

*SJA **13** 22:33:02.6±0.7, 18°.04S×69°.77W, h145km±3km, ML3.5, MW3.5*
*GUC **13** 22:33:04.3±0.8, 18°.11S×69°.68W, h132km±4km, ML3.3*
*IDC **13** 22:33:07.6±5.6, 17°.90S×69°.23W, h160km±35km, mb3.7/2, mbtmp4.2/3, MS4.3/4, Error ellipse: s-maj=72.6km s-min=35.2km az=22.0*
*VAO **13** 22:33:08.3±1.4, 18°.04S×69°.09W, h141km, mb4.1, Presumed earthquake*

ISC 13 22:33:03.0±0.9, **18°.04S**±0°.05×**69°.64W**±0°.09, **h141**km±7km, **n47**, σ1°**17**/63, **1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.32**	**158**	*e*P	**Pn**	**22 33 23.9**	**+0.7**
PB16				*e*S	**Sn**	**22 33 39.9**	**+1.3**
PB16				IAML		22 33 40.8	
	comp=Z,773nm,0.5s						
PB16	**IPOC Station P**	**0.32**	**158**	*i* P	**Pn**	**22 33 23.9**	**+0.7**
PB16				*e*S	**Sn**	**22 33 38.7**	**+0.1**
PB16				IAML		22 33 39.2	
	comp=N,2μm,0.3s						
PB18	**Visviri**	**0.47**	**19**	*e*P	**Pn**	**22 33 25.4**	**+1.6**
PB18				*e*S	**Sn**	**22 33 41.6**	**+2.1**
PB18				IAML		22 33 47.3	
	comp=E,343nm,0.7s						
AP01	**Chacalluta**	**0.75**	**243**	*e*P	**Pn**	**22 33 24.4**	**-0.4**
AP01				*e*S	**Sn**	**22 33 41.5**	**+0.1**
AP01				IAML		22 33 44.6	
	comp=Z,3μm,0.1s						
AP01	**Chacalluta**	**0.75**	**243**	*e*P	**Pn**	**22 33 25.1**	**+0.3**
AP01				*e*S	**Sn**	**22 33 41.3**	**-0.1**
PB12	**IPOC Station P**	**0.87**	**229**	*e*P	**Pn**	**22 33 25.7**	**-0.2**
PB12				*e*S	**Sn**	**22 33 42.8**	**-0.6**
PB12				IAML		22 33 43.8	
	comp=Z,1μm,0.4s						
PB12	**IPOC Station P**	**0.87**	**229**	⇑*i*P	**Pn**	**22 33 25.9**	**0.0**
PB12				*e*S	**Sn**	**22 33 42.6**	**-0.7**
PX02	**IPOC Station P**	**1.07**	**210**	*e*P	**Pn**	**22 33 27.0**	**-0.6**
PSGCX	**Pisagua**	**1.62**	**196**	*e*P	**Pn**	**22 33 33.4**	**+0.1**
PSGCX				*e*S	**Sn**	**22 33 56.2**	**-0.3**
PSGCX				IAML		22 33 56.5	
	comp=Z,247nm,0.2s						
PSGCX	**Pisagua**	**1.62**	**196**	*i* P	**Pn**	**22 33 33.4**	**+0.1**
PSGCX				*e*S	**Sn**	**22 33 55.1**	**-1.4**
GO01	**Chusmiza**	**1.68**	**166**	*e*P	**Pn**	**22 33 35.4**	**+1.1**
GO01				IAML		22 34 05.7	
	comp=Z,168nm,0.2s						
GO01	**Chusmiza**	**1.68**	**166**	*i* P	**Pn**	**22 33 35.8**	**+1.4**
GO01				*e*S	**Sn**	**22 33 59.5**	**+1.2**
GO01				IAML		22 34 04.0	
	comp=E,366nm,0.2s						
PB11	**IPOC Station P**	**1.72**	**181**	*e*P	**Pn**	**22 33 34.8**	**+0.4**
PB11				*e*S	**Sn**	**22 33 59.0**	**+0.5**
PB11				IAML		22 34 02.9	
	comp=Z,325nm,0.3s						
PB11	**IPOC Station P**	**1.72**	**181**	*e*P	**Pn**	**22 33 35.2**	**+0.8**
PB11				*e*S	**Sn**	**22 33 58.5**	**0.0**
PB11				IAML		22 33 59.6	
	comp=E,667nm,0.2s						
PB08	**IPOC Station P**	**2.15**	**168**	*e*P	**Pn**	**22 33 40.9**	**+1.2**
PB08				*e*S	**Sn**	**22 34 09.3**	**+1.5**
PB08				IAML		22 34 13.4	
	comp=Z,101nm,0.4s						
PB08	**IPOC Station P**	**2.15**	**168**	*e*P	**Pn**	**22 33 41.5**	**+1.8**
PB08				*e*S	**Sn**	**22 34 08.9**	**+1.1**
PB08				IAML		22 34 10.9	
	comp=E,223nm,0.4s						
LPAZ	**La Paz**	**2.26**	**40**	P	**Pn**	**22 33 43.4**	**+2.1**
LPAZ	comp=E,24nm,0.3s,baz=225,slow=17,SNR=148			S	**Sn**	**22 34 10.5**	**-0.1**
	comp=E,17nm,0.6s,baz=270,slow=19,SNR=4.0						
LPAZ	**La Paz**	**2.26**	**40**	*e*P	**Pn**	**22 33 43.5**	**+2.2**
LPAZ	**La Paz**	**2.26**	**40**	*e*P	**Pn**	**22 33 43.3**	**+2.1**
TA02	**Huaiquique**	**2.27**	**192**	*e*P	Pn	22 33 35.7	-5.1
TA02				IAML		22 34 09.1	
	comp=Z,268nm,0.7s						
PB02	**IPOC Station P**	**3.28**	**184**	*e*P	**Pn**	**22 33 54.8**	**+1.1**
PB02				*e*S	**Sn**	**22 34 33.1**	**+0.2**
PB02				IAML		22 34 37.1	
	comp=Z,137nm,0.3s						
PB02	**IPOC Station P**	**3.28**	**184**	*e*P	**Pn**	**22 33 54.8**	**+1.1**
PB07	**IPOC Station P**	**3.68**	**184**	*e*P	**Pn**	**22 33 59.5**	**+0.6**
PB07				*e*S	**Sn**	**22 34 43.3**	**+0.9**
PB07				IAML		22 34 53.4	
	comp=Z,53nm,0.3s						
PB09	**IPOC Station P**	**3.76**	**174**	*e*P	**Pn**	**22 34 02.0**	**+2.0**
PB09				*e*S	Sn	22 34 29.9	-14
PB09				IAML		22 35 05.4	
	comp=Z,41nm,0.6s						

PB03	**IPOC Station P**	**4.00**	**182**	*e*P		**Pn**	**22 34 03.8**	**+0.7**
PB03				*e*S		**Sn**	**22 34 48.7**	**-1.0**
PB03				IAML			22 35 09.0	
	comp=Z,41nm,0.3s							
PB06	**IPOC Station P**	**4.65**	**179**	*e*P		**Pn**	**22 34 12.2**	**+0.5**
PB06				*e*S		**Sn**	**22 35 05.0**	**-0.2**
PB06				IAML			22 35 06.4	
	comp=Z,29nm,1.0s							
PB05	**IPOC Station P**	**4.82**	**186**	*e*P		**Pn**	**22 34 13.7**	**-0.3**
PB05				*e*S		**Sn**	**22 35 07.5**	**-1.8**
PB05				IAML			22 35 09.8	
	comp=Z,24nm,0.4s							
SIV	**San Ignacio** comp=Z,3.6nm,0.3s,baz=253,slow=14,SNR=15	**8.44**	**77**	P		**Pn**	**22 35 00.8**	**-1.6**
SIV				S		**Sn**	**22 36 32.4**	**-3.8**
	comp=Z,2.2nm,0.7s,baz=143,slow=20,SNR=2.5							
PTLB	**Pontes e Lacer**	**10.38**	**77**	*e*P		**Pn**	**22 35 26.6**	**-1.6**
VILB	**Vilhena**	**10.40**	**62**	*e*P		**Pn**	**22 35 27.3**	**-1.3**
MURT	**Porto Murtinho**	**11.88**	**110**	*e*P		**Pn**	**22 35 46.9**	**-1.1**
PP1B	**Ponte de Pedra**	**14.06**	**91**	*e*P		**Pn**	**22 36 14.9**	**-1.2**
CLDB	**Colider**	**15.17**	**64**	*e*P		**Pn**	**22 36 30.1**	**+0.1**
ITAB	**Concordia**	**18.55**	**123**	*e*P		**P**	**22 37 09.7**	**+0.7**
SNDB	**Serra Nova Dou**	**18.71**	**74**	*e*P		**P**	**22 37 11.3**	**+0.5**
CPSB	**Cacapava Do Su**	**19.20**	**133**	*e*P		**P**	**22 37 16.9**	**+0.8**
ITTB	**Itaituba**	**19.23**	**47**	*e*P		**P**	**22 37 16.2**	**-0.1**
FRTB	**Fartura**	**19.50**	**109**	*e*P		**P**	**22 37 19.0**	**-0.3**
BDFB	**Brasilia** comp=Z,2.3nm,0.4s,baz=247,slow=6.6,SNR=5.5	**20.83**	**87**	P		**P**	**22 37 32.9**	**-0.9**
	comp=Z,2.3nm,0.4s							
CANS	**Sao Roque de M**	**22.07**	**100**	*e*P		**P**	**22 37 46.6**	**-0.3**
SMTB	**Santa Maria do**	**23.28**	**70**	*e*P		**P**	**22 37 59.0**	**+0.7**
JANB	**Januaria**	**24.45**	**87**	*e*P		**P**	**22 38 09.8**	**+0.8**
PMSA	**Palmer Station** comp=Z,177nm,18.2s,baz=228,slow=38	**46.86**	**177**	LR		LR	23 02 52.1	
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,0.4s,baz=253,slow=5.7,SNR=24	**76.87**	**71**	P		**P**	**22 44 40.4**	**+0.3**
	comp=Z,1.4nm,0.4s							
SFJD	**Kangerlussuaq** comp=Z,103nm,19.1s,baz=313,slow=36	**85.95**	**7**	LR		LR	23 24 59.4	
LSZ	**Lusaka** comp=Z,187nm,18.0s,baz=153,slow=35	**92.55**	**107**	LR		LR	23 27 36.0	
MBAR	**Mbarara** comp=Z,167nm,19.0s,baz=127,slow=34	**99.68**	**94**	LR		LR	23 29 31.8	

*IDC **13** 22:55:37.9±2.2, 25°.94S×178°.72E, h562km±21km, mb3.2/3, mbtmp4.3/5, Error ellipse: s-maj=42.9km s-min=21.3km az=43.0*
*NEIC **13** 22:55:39.6±1.7, 26°.1S±0°.1×178°.6E±0°.1, h566km±12km, mb4.2/10, Error ellipse: s-maj=20.4km s-min=16.1km az=150.0*

ISC 13 22:55:36.0±1.0, **25°.8S**±0°.1×**178°.8E**±0°.2, **h550**km, **n23**, σ1°**55**/23, **mb4.2/8, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.53**	**141**	P	**P**	**22 57 04.3**	**+2.5**
	367nm,0.3s,baz=66,slow=18,SNR=5.8						
RAO	**Raoul Island**	**4.53**	**141**	P	**P**	**22 57 04.8**	**+3.0**
DZM	**Mont Dzumac** 5.6nm,0.7s,baz=112,slow=19,SNR=2.1	**11.90**	**285**	P	**P**	**22 58 14.7**	**+1.1**
TOZ	**Tahuroa Road**	**12.27**	**192**	P	**P**	**22 58 18.2**	**+1.2**
NIUE	**Niue**	**12.35**	**60**	P	**P**	22 58 24.8	+6.5
URZ	**Urewera** 10nm,0.6s,baz=342,slow=6.4,SNR=10	**12.55**	**186**	P	**P**	**22 58 20.0**	**0.0**
URZ				S	**S**	**23 00 32.7**	**-2.3**

CDITO				S		**Sn**	**22 58 57.2**	**+0.3**
TRT2	**Tortugero**	**1.36**	**13**	P		**Pn**	**22 58 39.2**	**-0.3**
TRT2				S		**Sb**	**22 58 56.8**	**-0.6**
TRT2	**Tortugero**	**1.36**	**13**	*e*P		**Pn**	**22 58 39.1**	**-0.3**
JTS	**Las Juntas de**	**1.38**	**320**	P		**Pn**	**22 58 38.4**	**-1.3**
JTS				S		**Sn**	**22 58 57.9**	**+0.1**
JTS	**Las Juntas de**	**1.38**	**320**	*e*P		**Pn**	**22 58 38.5**	**-1.3**
BRU2	**Volcan**	**1.42**	**108**	P		**Pn**	**22 58 40.1**	**-0.4**
BRU2				S		**Sn**	**22 58 59.1**	**+0.1**
BRU2	**Volcan**	**1.42**	**108**	*e*P		**Pn**	**22 58 40.0**	**-0.4**
RGM0	**Gandoca**	**1.47**	**76**	P		**Pn**	**22 58 40.9**	**-0.1**
RGM0				S		**Sg**	**22 59 03.5**	**+1.1**
COVE	**Coope Vega, Sa**	**1.52**	**347**	P		**Pn**	**22 58 41.5**	**-0.3**
COVE				S		**Sb**	**22 59 02.2**	**+0.1**
CMARA	**Lajas Hojancha**	**1.56**	**300**	P		**Pn**	**22 58 42.8**	**+0.5**
PBNVO	**Pueblo Nuevo,**	**1.87**	**100**	*i* P		**Pn**	**22 58 46.4**	**-0.1**
PBNVO				*e*S		**Sn**	**22 59 09.9**	**-0.1**
UPAL	**Upala**	**1.91**	**330**	S		**Sb**	**22 59 12.9**	**-0.3**
RBALA	**Bur**	**1.91**	**100**	*i* P		**Pn**	**22 58 46.2**	**-0.9**
RBALA				*e*S		**Sn**	**22 59 10.6**	**-0.4**
RBALA				IAML			22 59 11.4	
	comp=Z,238nm,0.5s							
BLUN	**Bluefields**	**2.77**	**6**	P		**Pn**	**22 58 58.5**	**-0.4**
ACON	**Acoyapa**	**2.94**	**338**	P		**Pn**	**22 59 00.6**	**-0.6**
ACON				S		**Sn**	**22 59 37.0**	**+0.7**

IDC ***13*** *23:00:19.9±0.9, 42°.48N×144°.29E, h0km, mb3.8/19, mbtmp3.8/22, ML3.1/2, MS3.2/2, Error ellipse: s-maj=24.1km s-min=17.2km az=162.0*
MOS ***13*** *23:00:22.8±0.9, 42°.29N×144°.26E, h36km, mb5.0/1, Error ellipse: s-maj=13.1km s-min=7.8km az=69.3*
JMA ***13*** *23:00:23.2±0.1, 42°.3N±0°.4×144°.4E±0°.7, h29km±2km, MD4.0/38, MV4.0/38, SE OFF TOKACHI*
SKHL ***13*** *23:00:23.4±0.7, 42°.20N×144°.40E, h43km±1km, mb5.1/5*
NIED ***13*** *23:00:23.2, 42°.30N×144°.41E, h29km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.46; Mθθ2.68; Mφφ-6.14; Mrθ4.98; Mrφ-2.49; Mθφ-6.22; Fault plane solution: M◎9.84000×10¹⁴ NP1:φs47.00000°, δ34.00000°, λ159.00000°. NP2:φs155.00000°, δ78.00000°, λ58.00000°.*
NEIC ***13*** *23:00:25.4±1.5, 42°.38N±0°.07×144°.2E±0°.1, h35km±2km, mb4.2/68 Error ellipse: s-maj=17.1km s-min=11.8km az=103.0*

ISC 13 23:00:25.2±0.8, 42°.39N±0°.10×144°.34E±0°.05, h37km±2km, n139, σ1§19/126, mb4.1/53, 1C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
JOB	**Onbets**	**0.63**	**324**	⇓P			**Pn**	**23 00 37.5**			**-0.3**
JOB				A			A	23 00 37.5			
	comp=N,11nm,1.1s,comp=E,19nm,1.8s										
JAK	**Akkeshi**	**0.66**	**24**	P			**Pn**	**23 00 36.9**			**-1.2**
JAK				A			A	23 00 36.9			
	comp=N,9.0nm,1.1s,comp=E,6.0nm,1.0s										
AKK	**Akkeshi**	**0.73**	**31**	*i* P			**Pn**	**23 00 37.8**			**-1.2**
AKK				*e*S			**Sn**	**23 00 49.0**			**+0.2**
JCH	**Churui**	**0.76**	**288**	⇓*e*P			Pn	23 00 38.3			-1.0
JCH				A			A	23 00 38.3			
	comp=N,11nm,0.8s,comp=E,6.0nm,0.6s										
JTHR	**Tokachihiroo**	**0.78**	**263**	⇓P			Pn	23 00 38.4			-1.2
JTHR				⇓S			**Sn**	**23 00 51.1**			**+1.1**
JKHN	**Kushirohamanak**	**0.92**	**41**	P			**Pn**	**23 00 40.9**			**-0.7**
JKHN				*e*S			**Sn**	**23 00 54.1**			**+0.5**
JEM	**Erimo**	**0.95**	**247**	⇓P			Pn	23 00 40.2			-1.8
ERM	**Erimo**	**0.95**	**247**	PN			Pn	23 00 40.5			-1.5
ERM	**Erimo**	**0.95**	**247**				Pn	23 00 40.5			-1.5
JAR	**Ashorobuto**	**1.00**	**335**	*e*P			**Pn**	**23 00 42.3**			**-0.3**
JAR				A			A	23 00 42.3			
	comp=N,4.0nm,0.9s,comp=E,4.0nm,0.5s										
JNBK	**Urakawa-nobuka**	**1.18**	**265**	⇓P			Pn	23 00 43.6			-1.5
JNBK				A			A	23 00 43.6			
	comp=N,6.0nm,1.6s,comp=E,4.0nm,2.0s										
JNK	**Nakash**	**1.23**	**13**	P			**Pn**	**23 00 44.8**			**-1.0**
NMR	**Nemuro--Hokkai**	**1.42**	**46**	⇑*i* PN			**Pn**	**23 00 46.9**			**-1.4**
NMR				*i* S			**Sn**	**23 01 08.3**			**+2.6**
NMR	**Nemuro--Hokkai**	**1.42**	**46**	*i* P			**Pn**	**23 00 47.0**			**-1.4**
NMR				*i* S			**Sn**	**23 01 04.2**			**-1.5**
NEM2	**Nemuro 2**	**1.42**	**46**	P			**Pn**	**23 00 49.9**			**-1.5**
JMP	**Maruseppu**	**1.77**	**336**	A			A	23 00 54.3			
	comp=N,5.0nm,0.7s,comp=E,5.0nm,1.0s										
RUSJ	**Misakicho**	**1.84**	**21**	*e*PN			**Pn**	**23 00 54.1**			**-0.1**
RUSJ				*i* S			**Sn**	**23 01 21.9**			**+5.7**
YUK	**Yuzh-Kuril'sk**	**1.99**	**34**	*e*PN			**Pn**	**23 00 55.5**			**-0.7**
YUK				*i* S			**Sn**	**23 01 21.9**			**+2.1**
YUK				pmax			pmax				
	comp=N,182nm,0.3s										
YUK				pmax			pmax				
	comp=Z,941nm,0.3s										
YUK				pmax			pmax				
	comp=E,79nm,0.1s										
YUK				smax			smax				
	comp=N,2μm,0.6s										
YUK				smax			smax				
	comp=E,730nm,0.6s										
YUK	**Yuzh-Kuril'sk**	**1.99**	**34**	*e*P			**Pn**	**23 00 55.8**			**-0.4**
YUK				AMB			AMB	23 00 57.7			
	comp=E,1μm,0.5s										
YUK				*i* S			**Sn**	**23 01 19.6**			**-0.2**
YUK				A			A	23 01 27.1			
	comp=E,2μm,0.5s										
YUK				A			A	23 01 27.1			
	comp=E,1μm,0.5s										
JKA	**Kamikawa-asahi**	**2.14**	**324**	Pn			**Pn**	**23 00 58.1**			**-0.3**
JKA	**Kamikawa-asahi**	**2.14**	**324**	*e*P			**Pn**	**23 00 58.1**			**-0.3**
ASAJ	**Asahikawa**	**2.14**	**324**	PN			**Pn**	**23 00 58.1**			**-0.3**
SHO	**Shikotan**	**2.35**	**50**	*e*P			Pn	23 01 12.8			+12
SHO				AMB			AMB	23 01 15.0			
	comp=E,120nm,0.3s										
SHO				*e*S			Sn	23 01 38.2			+9.4
SHO				A			A	23 01 45.8			
	comp=E,660nm,0.4s										
SHO				A			A	23 01 45.8			
	comp=E,590nm,0.4s										
JTM	**Tenmabayashi**	**2.93**	**238**				Pn	23 01 08.0			-1.2
KUR	**Kuril'sk**	**3.82**	**41**	*e*PN			**Pn**	**23 01 23.0**			**+1.6**
KUR				*i* S			**Sn**	**23 02 09.4**			**+4.4**
KUR				pmax			pmax				
	comp=Z,140nm,0.6s										
KUR				smax			smax				
	comp=E,135nm,0.5s										
KUR				smax			smax				
	comp=N,131nm,0.6s										
KUR	**Kuril'sk**	**3.82**	**41**	*e*P			**Pn**	**23 01 22.1**			**+0.7**
KUR				AMB			AMB	23 01 25.1			
	comp=N,240nm,0.5s										
KUR				*i* S			**Sn**	**23 02 05.6**			**+0.6**
KUR				A			A	23 02 10.0			
	comp=N,170nm,0.2s										
KUR				A			A	23 02 10.0			
	comp=N,150nm,0.2s										
REI	**Reidovoe**	**3.92**	**42**	*e*P			**Pn**	**23 01 24.1**			**+1.3**
REI				AMB			AMB	23 01 29.9			
	comp=N,190nm,0.4s										
REI				*e*S			**Sn**	**23 02 07.4**			**0.0**
REI				A			A	23 02 14.7			
	comp=N,20nm,0.4s										
REI				A			A	23 02 14.7			
	comp=N,20nm,0.4s										
YSS	**Yuzhno-Sakhali**	**4.70**	**347**	*e*PN			Pn	23 01 39.9			+6.4
YSS				pmax			pmax				
	comp=Z,10.0nm,0.7s										
YSS				MLR			MLR				
	comp=Z,200nm,13.0s										
YSS				MLR			MLR				
	comp=N,100nm,15.0s										
YSS				MLR			MLR				
	comp=E,100nm,14.0s										
YSS	**Yuzhno-Sakhali**	**4.70**	**347**	*e*P			**Pn**	**23 01 34.5**			**+1.0**
MJB9	**Matsu-Tunnel**	**7.52**	**221**	Pn			Pn	23 02 10.8			-1.5
MAJO	**Matsushiro**	**7.52**	**221**	PN			Pn	23 02 10.1			-2.2
MAJO	**Matsushiro**	**7.52**	**221**	Pn			Pn	23 02 10.1			-2.2
MJAR	**Matsushiro Arr**	**7.52**	**221**	Pn			Pn	23 02 10.7			-1.6
	comp=E,0.2nm,0.3s,baz=26,slow=13,SNR=11										
MJAR				LR			LR	23 05 46.1			
	comp=E,212nm,18.1s,baz=160,slow=43										
	comp=E,3.3nm,0.6s										
KSRS	**Korea Array**	**13.52**	**254**	Pn			Pn	23 03 32.5			-1.9
	comp=E,0.2nm,0.3s,baz=63,slow=15,SNR=2.5										
KSRS				LR			LR	23 08 38.1			
	comp=E,75nm,18.6s,baz=65,slow=37										
	comp=E,1.6nm,0.8s										

PETK	**Petropavlovsk-**	**13.96**	**35**	Pn		**Pn**	**23 03 36.8**	**-3.5**
	comp=E,1.8nm,0.7s,baz=216,slow=8.9,SNR=2.7							
SEY	**Seymchan**	**21.11**	**10**	P		**P**	**23 05 04.3**	**-2.0**
	comp=E,1.4nm,0.2s,baz=181,slow=13,SNR=3.7							
	comp=E,1.4nm,0.2s							
SONM	**Songino Array**	**27.13**	**295**	P		**P**	**23 06 03.9**	**-0.8**
	comp=E,0.9nm,0.7s,baz=82,slow=7.8,SNR=4.6							
	comp=E,0.9nm,0.7s							
SONM	**Songino Array**	**27.13**	**295**	P		**P**	**23 06 03.7**	**-1.0**
GSTR	**Great Sitkin T**	**28.26**	**56**	P		**P**	**23 06 17.2**	**+2.5**
H11N2	**WAKE ISLAND Hy**	**29.55**	**133**	T		T	23 37 11.1	
	baz=325,slow=76,SNR=292							
H11N1	**WAKE ISLAND Hy**	**29.57**	**133**	T		T	23 37 09.2	
	baz=325,slow=76,SNR=230							
H11N3	**WAKE ISLAND Hy**	**29.57**	**133**	T		T	23 37 11.6	
	baz=325,slow=76,SNR=192							
H11S1	**WAKE ISLAND Hy**	**30.45**	**135**	T		T	23 38 50.7	
	baz=327,slow=75,SNR=276							
H11S3	**WAKE ISLAND Hy**	**30.46**	**135**	T		T	23 38 34.5	
	baz=327,slow=75,SNR=171							
H11S2	**WAKE ISLAND Hy**	**30.47**	**135**	T		T	23 38 23.1	
	baz=327,slow=75,SNR=164							
K13K	**Kusilvak Mount**	**35.68**	**39**	P		**P**	**23 07 20.2**	**+0.7**
K13K				IAmb		IAmb	23 07 50.1	
	comp=E,5.0nm,1.3s							
F15K	**North Star Dit**	**36.45**	**33**	P		**P**	**23 07 26.2**	**+0.1**
M14K	**Bethel**	**36.82**	**41**	P		**P**	**23 07 29.5**	**+0.2**
C16K	**Lisburne Hills**	**36.91**	**28**	P		**P**	**23 07 29.9**	**-0.1**
N15K	**Kwethluk River**	**37.71**	**42**	P		**P**	**23 07 37.1**	**+0.3**
O15K	**Ungalikthiuk R**	**37.81**	**44**	P		**P**	**23 07 38.8**	**+1.1**
O15K				IAmb		IAmb	23 07 45.6	
	comp=Z,7.8nm,1.4s							
F17K	**Baldwin Pennin**	**37.97**	**32**	P		**P**	**23 07 39.4**	**+0.5**
L16K	**Owhat River**	**38.10**	**40**	P		**P**	**23 07 40.6**	**+0.6**
L16K				IAmb		IAmb	23 07 43.4	
	comp=Z,2.4nm,0.7s							
M16K	**Timber Creek**	**38.30**	**41**	P		**P**	**23 07 42.4**	**+0.6**
M16K				IAmb		IAmb	23 07 47.6	
	comp=Z,5.1nm,1.1s							
J17K	**VABM Dome**	**38.42**	**37**	P		**P**	**23 07 43.8**	**+1.0**
J17K				IAmb		IAmb	23 08 03.3	
	comp=Z,3.8nm,1.0s							
E18K	**Tukpahlearik C**	**38.42**	**31**	P		**P**	**23 07 42.8**	**0.0**
C18K	**Utukok River**	**38.49**	**29**	P		**P**	**23 07 43.0**	**-0.3**
C18K				IAmb		IAmb	23 07 44.5	
	comp=Z,3.9nm,0.8s							
O16K	**Kokwok River B**	**38.70**	**43**	P		**P**	**23 07 45.5**	**+0.4**
O16K				IAmb		IAmb	23 07 47.8	
	comp=Z,4.8nm,1.3s							
K17K	**Iditarod**	**38.72**	**38**	P		**P**	**23 07 46.9**	**+1.6**
K17K				IAmb		IAmb	23 07 57.5	
	comp=Z,11nm,1.5s							
G18K	**Tagagawik**	**38.91**	**33**	P		**P**	**23 07 48.0**	**+1.1**
H18K	**Honhosa River**	**38.93**	**34**	P		**P**	**23 07 47.9**	**+0.8**
H18K				IAmb		IAmb	23 07 56.6	
	comp=Z,3.7nm,0.9s							
M17K	**Holitna River**	**39.05**	**40**	P		**P**	**23 07 49.5**	**+1.4**
M17K				IAmb		IAmb	23 07 53.9	
	comp=Z,7.7nm,1.2s							
N17K	**Nushagak Hills**	**39.16**	**42**	P		**P**	**23 07 49.6**	**+0.6**
N17K				IAmb		IAmb	23 07 53.8	
	comp=Z,5.2nm,1.4s							
C19K	**Lookout Ridge**	**39.17**	**28**	P		**P**	**23 07 49.2**	**+0.2**
C19K				IAmb		IAmb	23 07 50.0	
	comp=Z,10nm,1.5s							
F19K	**Shaleruckik Mo**	**39.40**	**32**	P		**P**	**23 07 51.1**	**+0.2**
L18K	**Granite Mounta**	**39.44**	**39**	P		**P**	**23 07 52.8**	**+1.5**
D19K	**Kuna River**	**39.56**	**29**	P		**P**	**23 07 52.8**	**+0.5**
D19K				IAmb		IAmb	23 07 53.9	
	comp=Z,3.2nm,0.9s							
G19K	**Purcell Mounta**	**39.58**	**33**	P		**P**	**23 07 53.4**	**+1.0**
E19K	**Redstone River**	**39.71**	**31**			**P**	**23 07 54.0**	**+0.5**
H19K	**Roundabout Mou**	**39.77**	**34**	P		**P**	**23 07 54.6**	**+0.6**
N18K	**Kilae Creek**	**39.80**	**42**	P		**P**	**23 07 55.5**	**+1.1**
J19K	**Poorman**	**40.00**	**36**	P		**P**	**23 07 57.0**	**+1.0**
J19K				IAmb		IAmb	23 08 30.4	
	comp=Z,6.8nm,1.4s							
D20K	**Etivluk River**	**40.14**	**29**	P		**P**	**23 07 56.8**	**-0.3**
D20K				IAmb		IAmb	23 07 58.8	
	comp=Z,4.7nm,1.1s							
ZALV	**Zalesovo Beam**	**40.19**	**308**	P		**P**	**23 07 56.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=92,slow=8.5,SNR=6.7							
ZALV				PcP		**PcP**	**23 10 01.3**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=78,slow=2.8,SNR=4.0							
	comp=Z,1.4nm,0.6s							
B20K	**Meade River**	**40.20**	**27**	P		**P**	**23 07 57.4**	**-0.1**
L19K	**White Mountain**	**40.30**	**39**	P		**P**	**23 08 00.1**	**+1.6**
N19K	**Bonanza Creek**	**40.49**	**41**	P		**P**	**23 08 02.5**	**+2.3**
N19K				IAmb		IAmb	23 08 29.5	
	comp=Z,6.4nm,1.4s							
J20K	**Nowinta River**	**40.66**	**36**	P		**P**	**23 08 02.1**	**+0.7**
J20K				IAmb		IAmb	23 08 04.8	
	comp=Z,3.0nm,0.7s							
B21K	**Ikpikpuk River**	**41.00**	**28**	P		**P**	**23 08 03.7**	**-0.3**
B21K				IAmb		IAmb	23 08 05.8	
	comp=Z,3.4nm,0.7s							
Q19K	**Cape Douglas,**	**41.01**	**44**	P		**P**	**23 08 04.6**	**+0.2**
G21K	**Allakaket**	**41.06**	**33**	P		**P**	**23 08 05.9**	**+1.2**
G21K				IAmb		IAmb	23 08 15.1	
	comp=Z,6.8nm,1.4s							
OHAK	**Old Harbor**	**41.37**	**47**	P		**P**	**23 08 06.7**	**-0.6**
CAST	**Castle Rocks**	**41.57**	**37**	P		**P**	**23 08 10.1**	**+1.2**
CAST				IAmb		IAmb	23 08 50.8	
	comp=Z,5.2nm,1.4s							
I21K	**Tanana**	**41.62**	**35**	P		**P**	**23 08 09.8**	**+0.6**
I21K				IAmb		IAmb	23 08 25.8	
	comp=Z,6.7nm,1.3s							
E22K	**Anaktuvuk Pass**	**41.83**	**30**	P		**P**	**23 08 11.5**	**+0.5**
H22K	**Ishtalitna Cre**	**41.89**	**34**	P		**P**	**23 08 12.8**	**+1.3**
MLY	**Manley**	**42.14**	**35**	P		**P**	**23 08 14.8**	**+1.2**
CNPM	**China Poot**	**42.19**	**43**	P		**P**	**23 08 14.2**	**+0.2**
C23K	**Itkillik River**	**42.41**	**28**	P		**P**	**23 08 15.5**	**-0.1**
C23K				IAmb		IAmb	23 08 40.9	
	comp=Z,6.6nm,1.5s							
G23K	**Bananza Creek**	**42.45**	**32**	P		**P**	**23 08 17.3**	**+1.2**
E23K	**Chandalar**	**42.65**	**30**			**P**	**23 08 17.5**	**-0.2**
E23K				IAmb		IAmb	23 08 19.8	
	comp=Z,6.4nm,1.5s							
I23K	**Minto, Yukon-K**	**42.73**	**35**	P		**P**	**23 08 19.1**	**+0.9**
NEA2	**Nenana**	**42.87**	**36**	P		**P**	**23 08 20.4**	**+1.0**
NEA2				IAmb		IAmb	23 08 22.6	
	comp=Z,3.9nm,0.8s							
E24K	**Your Creek**	**43.08**	**30**	P		**P**	**23 08 22.0**	**+0.9**
E24K				IAmb		IAmb	23 09 03.6	
	comp=Z,4.8nm,1.4s							
GHO	**Glory Hole Cre**	**43.11**	**40**	P		**P**	**23 08 21.6**	**+0.1**
WRH	**Wood River Hil**	**43.30**	**36**	P		**P**	**23 08 23.1**	**+0.2**
WRH				IAmb		IAmb	23 09 05.3	
	comp=Z,4.0nm,0.8s							
F24K	**Squaw Lake**	**43.30**	**31**	P		**P**	**23 08 23.2**	**+0.2**
H24K	**Noodor Dome**	**43.33**	**34**	P		**P**	**23 08 23.7**	**+0.5**
MKAR	**Makanchi Array**	**43.39**	**298**	P		**P**	**23 08 23.6**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=81,slow=10.0,SNR=4.1							
	comp=Z,3.9nm,0.6s							
MKAR	**Makanchi Array**	**43.39**	**298**	P		**P**	**23 08 24.2**	**+0.2**
MKAR	**Makanchi Array**	**43.39**	**298**	P		**P**	**23 08 24.2**	**+0.2**
MKAR	**Makanchi Array**	**43.39**	**298**	*e*P		**P**	**23 08 24.2**	**+0.2**
G24K	**Hadweenzic Riv**	**43.47**	**32**	P		**P**	**23 08 24.8**	**+0.6**
G24K				IAmb		IAmb	23 08 45.5	
	comp=Z,5.3nm,1.3s							
DHY	**Denali Highway**	**43.71**	**38**	P		**P**	**23 08 25.9**	**-0.5**
DHY				IAmb		IAmb	23 08 39.5	
	comp=Z,8.7nm,1.5s							
IL31		**43.79**	**35**	P		**P**	**23 08 27.6**	**+0.8**
IL31				IAmb		IAmb	23 08 38.0	
	comp=Z,5.3nm,1.3s							
ILAR	**Eielson Array**	**43.79**	**35**	P		**P**	**23 08 26.4**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=268,slow=6.0,SNR=14							
	comp=Z,1.5nm,0.9s							
ILAR	**Eielson Array**	**43.79**	**35**	P		**P**	**23 08 26.9**	**0.0**
ILAR	**Eielson Array**	**43.79**	**35**	P		**P**	**23 08 26.9**	**0.0**
SCM	**Sheep Creek Mo**	**43.86**	**40**	P		**P**	**23 08 27.5**	**-0.1**
SCM				pmax		pmax		
	comp=Z,15nm,1.2s							
SCM	**Sheep Creek Mo**	**43.86**	**40**	P		**P**	**23 08 27.5**	**-0.1**
D25K	**Kavik River**	**43.87**	**29**	P		**P**	**23 08 27.3**	**-0.2**
KURK	**Kurchatov**	**44.59**	**304**	P		**P**	**23 08 34.4**	**+1.0**
KURK	**Kurchatov**	**44.59**	**304**	P		**P**	**23 08 34.4**	**+1.0**
KURK	**Kurchatov**	**44.59**	**304**	*e*P		**P**	**23 08 34.4**	**+1.0**
KURBB	**Kurchatov Arra**	**44.67**	**304**	P		**P**	**23 08 34.4**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=73,slow=8.9,SNR=4.2							
	comp=Z,0.8nm,0.3s							
H27K	**Steamboat Moun**	**45.88**	**33**			**P**	**23 08 45.5**	**+1.9**
H27K				IAmb		IAmb	23 08 47.4	
	comp=Z,2.1nm,0.8s							

I28M	**Miner Creek**	**46.64**	**34**	IAmb		IAmb	23 08 58.5	
	comp=Z,2.6nm,0.9s							
I30M	**Mount Dempster**	**48.15**	**34**	IAmb		IAmb	23 09 04.9	
	comp=Z,2.2nm,0.7s							
HYT	**Haines Junctio**	**48.70**	**40**			**P**	**23 09 07.6**	**+2.0**
BVAR	**Borovoye Array**	**48.77**	**309**	P		**P**	**23 09 06.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=75,slow=9.1,SNR=4.6							
	comp=Z,0.6nm,0.3s							
P33M	**Teslin, Yukon**	**51.09**	**40**	IAmb		IAmb	23 10 02.6	
	comp=Z,3.6nm,1.1s							
WRA	**Warramunga Arr**	**62.70**	**191**	P		**P**	**23 10 46.9**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=354,slow=6.7,SNR=1.3							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**62.70**	**191**	P		**P**	**23 10 46.9**	**+0.6**
FINES	**FINESS Array B**	**65.13**	**332**	P		**P**	**23 11 01.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=40,slow=7.3,SNR=14							
	comp=Z,0.6nm,0.5s							
KBZ	**Khabaz**	**69.14**	**311**	P		**P**	**23 11 27.8**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=45,slow=1.4,SNR=1.6							
	comp=Z,1.2nm,0.7s							
NVAR	**Mina Array Bea**	**70.05**	**56**	P		**P**	**23 11 33.6**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=310,slow=8.1,SNR=4.8							
	comp=Z,1.3nm,0.8s							
NB2	**NORSAR Subarra**	**70.10**	**338**	P		**P**	**23 11 33.3**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=34,slow=6.5							
NOA	**NORSAR Array B**	**70.10**	**338**	P		**P**	**23 11 32.6**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=24,slow=3.3,SNR=1.2							
NOA				PP		**PP**	**23 14 05.6**	**-2.4**
	comp=Z,1.2nm,0.7s,baz=22,slow=3.8,SNR=8.7							
	comp=Z,0.2nm,0.6s							
HFS	**Hagfors**	**70.12**	**336**	P		**P**	**23 11 32.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=64,slow=6.9,SNR=4.5							
HFS				PP		**PP**	**23 14 06.3**	**-1.7**
	comp=Z,2.4nm,0.6s,baz=10,slow=3.2,SNR=10							
	comp=Z,1.3nm,0.8s							
AKASG	**Malin Array Be**	**71.43**	**323**	P		**P**	**23 11 40.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=38,slow=6.7,SNR=2.3							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**71.43**	**323**	P		**P**	**23 11 40.8**	**-0.6**
AKASG				IAmb		IAmb	23 11 57.5	
	comp=Z,2.6nm,1.2s							
PDAR	**Pinedale Array**	**72.36**	**48**	P		**P**	**23 11 48.1**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=73,slow=1.0,SNR=6.1							
	comp=Z,0.5nm,0.5s							
BRTR	**Keskin Array B**	**76.96**	**312**	P		**P**	**23 12 13.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=23,slow=7.8,SNR=1.4							
	comp=Z,0.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**78.80**	**342**	P		**P**	**23 12 23.6**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=38,slow=3.6,SNR=1.6							
	comp=Z,0.6nm,0.6s							
GERES	**GERESS Array B**	**79.31**	**329**	P		**P**	**23 12 27.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=8.9,slow=7.4,SNR=1.6							
	comp=Z,0.1nm,0.3s							
TXAR	**Lajitas Array**	**85.12**	**54**	P		**P**	**23 12 58.5**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=286,slow=3.3,SNR=6.9							
	comp=Z,0.6nm,0.8s							
H03N2	**Juan Fernandez**	**145.03**	**90**	T		T	02 01 53.6	
	baz=300,slow=76,SNR=6.7							
H03N3	**Juan Fernandez**	**145.04**	**90**	T		T	02 01 53.2	
	baz=300,slow=76,SNR=5.2							
H03N1	**Juan Fernandez**	**145.05**	**90**	T		T	02 01 52.6	
	baz=300,slow=76,SNR=7.8							

IDC ***13*** *23:10:38.6±0.7, 17°.07S×167°.48E, h0km, mb4.4/12, mbtmp4.4/14, ML4.0/2, MS3.6/14, Error ellipse: s-maj=23.9km s-min=15.9km az=81.0*
*NEIC

comp=Z,5.8nm,1.1s
CASY Casey 61.38 203 P **P** **23 20 56.6 0.0**
CASY IAmb IAmb 23 21 14.9
comp=Z,11nm,1.1s
NJ2 Nanjing 67.54 316 *e*P **P** **23 21 38.3 +0.9**
NJ2 pmax pmax
comp=Z,15nm,0.6s
PETK Petropavlovsk- 70.47 354 P **P** **23 21 54.2 -1.0**
comp=Z,1.1nm,0.8s,baz=197,slow=14,SNR=5.7
PETK LR LR 23 49 49.2
comp=Z,35nm,18.7s,baz=196,slow=33
comp=Z,1.1nm,0.8s
MDJ Mudanjiang 70.50 332 P P 23 22 04.9 +9.4
MDJ pmax pmax
comp=Z,11nm,0.9s
CN2 Changchun 71.81 329 P **P** **23 22 05.5 +2.0**
QSPA South Pole Qui 72.89 180 P **P** **23 22 10.0 +0.1**
comp=Z,13nm,1.0s,baz=356,slow=1.7,SNR=43
comp=Z,13nm,1.0s
QSPA South Pole Qui 72.89 180 P **P** **23 22 10.0 +0.1**
QSPA IAmb IAmb 23 22 11.5
comp=Z,10nm,0.8s
LYN LuoYang 73.31 315 P **P** **23 22 13.6 +0.9**
LYN pmax pmax
comp=Z,14nm,0.9s
LYN pmax pmax
comp=Z,190nm,8.5s
XAN Xi'an 75.46 313 P P 23 22 33.3 +8.0
XAN pmax pmax
comp=Z,7.0nm,0.9s
PZH PanZhiHua 77.16 303 P **P** **23 22 38.1 +2.9**
HHC Hu-ho-hao-te 77.55 320 *e*P **P** **23 22 38.4 +1.4**
HHC pmax pmax
comp=Z,9.0nm,0.7s
MAW Mawson 79.73 202 P **P** **23 22 47.6 -0.9**
SEY Seymchan 80.69 353 P **P** **23 22 53.6 +0.1**
comp=Z,1.8nm,0.2s,baz=161,slow=9.0,SNR=6.8
comp=Z,1.8nm,0.2s
ULN Ulaanbaatar 84.19 324 P P 23 23 07.2 -5.2
BELA Belgrano 2 84.31 175 P **P** **23 23 12.1 -0.3**
GTA2 Gaotai 84.55 314 *e*P **P** **23 23 15.3 +0.9**
GTA2 pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 84.55 324 P P 23 23 08.3 -5.9
ELIB Princess Elisa 87.89 191 *d*P **P** **23 23 30.1 -0.2**
comp=Z,2.5nm,1.0s
ILAR Eielson Array 88.76 18 LR LR 00 00 50.6
comp=Z,50nm,18.7s,baz=92,slow=34
TROLL Troll, Antarti 90.48 185 P **P** **23 23 42.5 0.0**
comp=Z,410nm,0.9s
SNAA Sanae 91.16 183 ⇑P **P** **23 23 45.7 +0.1**
comp=Z,59nm,0.6s
SNAA Sanae 91.16 183 P **P** **23 23 45.3 -0.3**
comp=Z,4.3nm,0.9s,baz=183,slow=7.2,SNR=7.2
comp=Z,4.3nm,0.9s
SNAA Sanae 91.16 183 P P **23 23 44.9 -0.7**
SNAA IAmb IAmb 23 23 47.7
comp=Z,7.1nm,1.1s
VNA2 Neumayer--Watz 92.08 182 ⇑P **P** **23 23 49.9 +0.1**
comp=Z,4.5nm,0.8s,baz=169,slow=4.2
VNA2 ⇑pP **sP** **23 23 59.1 +0.6**
comp=Z,2.9nm,0.7s,baz=170,slow=4.5
VNA1 Neumayer--Stat 92.38 181 ⇑P **P** **23 23 51.3 +0.2**
comp=Z,5.3nm,1.1s
ESPZ Base Esperanza 92.61 162 P **P** **23 23 51.4 -0.9**
WMQ Urumqi 94.55 314 *e*P P 23 23 55.5 -6.1
WMQ pmax pmax
comp=Z,22nm,0.7s
ARCES ARCESS Array B 122.63 345 PKP **PKPdf** **23 29 35.0 -0.9**
comp=Z,1.2nm,0.6s,baz=71,slow=2.3,SNR=5.9
SCO Scoresbysund 126.37 4 *i*P PKPdf 23 29 35.0 -8.0
FINES FINESS Array B 128.02 338 PKP **PKPdf** **23 29 46.0 -0.4**
comp=Z,1.1nm,0.8s,baz=350,slow=4.2,SNR=3.8
NB2 NORSAR Subarra133.00 344 PKPdf PKiKP 23 30 06.0 +8.9
comp=Z,0.4nm,0.7s,baz=28,slow=1.9
NOA NORSAR Array B133.00 344 PKP **PKPdf** **23 29 54.0 -2.0**
comp=Z,0.5nm,0.8s,baz=353,slow=3.1,SNR=2.8
WINA Alland / Wiene 141.27 329 *ep*PKiKP **PKiKP** **23 30 18.4 +4.1**
comp=Z,3.0nm,1.1s
GERES GERESS Array B 141.86 332 PKP **PKPdf** **23 30 14.0 +1.2**
comp=Z,0.5nm,0.7s,baz=104,slow=1.2,SNR=4.7
GERES GERESS Array B 141.86 332 **PKPdf** **23 30 14.0 +1.2**
MOA Molln 142.32 330 *ep*PKiKP **PKiKP** **23 30 19.5 +3.0**
comp=Z,3.7nm,1.2s
SESA Seetaler Alpe, 142.69 329 *ep*PKiKP **PKiKP** **23 30 20.3 +2.7**
comp=Z,6.1nm,1.1s
LESA Schwarzleotal 143.37 331 *e*PKP PKPbc 23 30 13.0 +0.4
comp=Z,4.7nm,1.0s
LESA *ep*PKiKP pPKPdf 23 30 22.1 -0.2
comp=Z,8.2nm,1.0s
WATA Walderalm 143.94 332 *ep*PKiKP **PKiKP** **23 30 24.4 +4.4**
comp=Z,6.5nm,1.0s
ABTA Abfaltersbach 143.94 330 *e*PKP PKPbc 23 30 14.2 -0.1
comp=Z,3.3nm,0.7s,SNR=4.3
ABTA *ep*PKiKP pPKPdf 23 30 22.8 -0.4
comp=Z,3.5nm,0.8s
MOTA Moosalm 144.15 332 *e*PKP PKPbc 23 30 15.7 +0.7
comp=Z,5.8nm,1.0s
MOTA *ep*PKiKP sPKPdf 23 30 24.7 -1.3
comp=Z,7.6nm,1.0s
RETA Reutte 144.19 333 *ep*PKiKP **PKiKP** **23 30 24.9 +4.4**
comp=Z,3.7nm,1.1s
SQTA Sankt Quirin 144.19 332 *e*PKP PKPbc 23 30 15.6 +0.5
comp=Z,4.1nm,0.9s
SQTA *ep*PKiKP pPKPdf 23 30 24.6 +0.8
comp=Z,4.5nm,0.9s
FETA Feichten 144.56 332 *e*PKP **PKPdf** **23 30 16.9 -0.8**
comp=Z,5.2nm,0.8s
FETA *ep*PKiKP **sPKPdf** **23 30 25.9 -0.9**
comp=Z,7.6nm,0.9s
DAVA Damuels 144.72 333 *e*PKP **PKPdf** **23 30 17.4 -0.6**
comp=Z,8.3nm,0.9s,SNR=4.5
DAVA *ep*PKiKP **sPKPdf** **23 30 25.9 -1.1**
comp=Z,14nm,0.9s

IDC ***13*** *23:15:36.6±1.0, 57.°20N×123.°46E, h0km, mb3.8/5, mbtmp3.8/11, ML3.7/6, Error ellipse: s-maj=24.4km s-min=14.5km az=134.0*
YARS ***13*** *23:15:40.1, 57.°36N×123.°60E, h30km, ML2.7/8*
ISC 13 23:15:38.4±1.2, 57°33N±0.°03×123°61E±0.°03, h12km±9km, n24, σ1§86/40, mb3.8/5, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLNS	**Chul'man**	**0.86**	**124**	*i*	Pg		**Pn**	**23 15 57.5**	**+1.2**
CLNS	69nm,0.3s			*e*	Sg		**Sn**	**23 16 09.4**	**+0.6**
	2μm,0.3s								
YKLR	**Yuktali**	**1.30**	**236**	*i*	Pg		**Pg**	**23 16 04.4**	**+1.0**
YKLR	70nm,0.5s			*e*	Sg		**Sg**	**23 16 21.4**	**+1.2**
	295nm,0.2s								
ALDR	**Aldan**	**1.60**	**36**	*i*	Pg		**Pb**	**23 16 09.2**	**+1.2**
ALDR	110nm,0.1s			*e*	Sg		**Sb**	**23 16 30.1**	**+1.9**
	1μm,0.2s								
KHN	**Khani**	**2.12**	**261**	*e*	Pg		**Pb**	**23 16 16.4**	**-0.4**
KHN	56nm,0.3s			*e*	Sg		**Sb**	**23 16 43.1**	**0.0**
	312nm,0.1s								
TNDR	**Tynda**	**2.27**	**164**	*e*	Pn		**Pb**	**23 16 18.8**	**-0.6**
TNDR	19nm,0.4s			*e*	Pg		**Pg**	**23 16 22.6**	**+0.6**
TNDR	70nm,0.3s			*e*	Sg		**Sg**	**23 16 52.1**	**+0.8**
OLMR	**Olekminsk**	**3.47**	**333**	*e*	Pn		**Pn**	**23 16 33.0**	**+0.8**
OLMR	12nm,0.6s			*e*	Pn		Pb	23 16 33.0	-6.7
OLMR	59nm,0.6s			*e*	Pg		**Pg**	**23 16 42.1**	**-2.7**
OLMR				*e*	Sn		**Sn**	**23 17 12.6**	**-0.5**
TUP	**Tupik**	**3.56**	**217**	*e*	Pg		**Pg**	**23 16 45.9**	**-0.8**
TUP	44nm,0.3s			*e*	Sg		**Sg**	**23 17 33.5**	**+0.7**
	451nm,0.3s								
BMKR	**Bomnak**	**3.94**	**130**	*e*	Sg		**Sg**	**23 17 43.8**	**-1.0**
CGD	**Chagda**	**3.99**	**66**	*e*	Pn		**Pn**	**23 16 41.5**	**+2.1**
CGD	370nm,0.3s			*e*	Sg		**Sg**	**23 17 43.7**	**-2.7**
	27nm,0.2s								
ZEA	**Zeya**	**4.15**	**149**	*e*	Pn		**Pn**	**23 16 43.7**	**+2.2**
ZEA	101nm,0.3s			*e*	Sg		**Sg**	**23 17 50.6**	**-0.9**
	30nm,0.2s								
BLSR	**Buluus**	**4.90**	**32**	*e*	Pn		**Pn**	**23 16 52.5**	**+0.7**
BLSR	160nm,0.5s			*e*	Sn		**Sn**	**23 17 46.9**	**-1.6**
	0.2nm,0.3s								
TBGR	**Tabaga**	**5.45**	**32**	*i*	Pn		**Pn**	**23 17 00.7**	**+1.3**
TBGR	4.4nm,0.7s			*i*	Pg		**Pb**	**23 17 17.6**	**+4.2**
	3.9nm,0.7s								
TBGR	82nm,0.7s			*e*	Sn		**Sn**	**23 17 59.8**	**-2.1**
YAK	**Yakutsk**	**5.63**	**31**	Pn			**Pn**	**23 17 03.1**	**+1.3**
	7.5nm,0.3s,baz=215,slow=7.1,SNR=6.6								
YAK	11nm,0.3s,baz=113,slow=4.4,SNR=14			Sn			**Sn**	**23 18 03.3**	**-3.0**
YAK	25nm,0.3s,baz=353,slow=23,SNR=9.5			Lg			Lg	23 18 33.0	
	31nm,0.4s								
EKMR	**Ekimchan**	**6.84**	**125**	*e*	Pn		**Pn**	**23 17 21.2**	**+2.7**
EKMR	90nm,0.8s			*e*	Sg		**Sg**	**23 19 12.6**	**-5.0**
HILR	**Hailar Array B**	**8.12**	**198**	Pn			**Pn**	**23 17 32.7**	**-3.3**
	baz=10,slow=13								
HILR	baz=14,slow=31			Lg			Lg	23 19 51.3	
	1.1nm,0.3s								
SONM	**Songino Array**	**14.10**	**235**	Pn			**Pn**	**23 18 57.5**	**-0.4**
	baz=42,slow=13,SNR=1.3								
SONM	0.3nm,0.3s,baz=36,slow=25,SNR=5.3			Lg			Lg	23 22 58.2	
	0.1nm,0.3s								
USRK	**Ussuriysk Ar.**	**14.16**	**155**	Pn			**Pn**	**23 18 57.3**	**-1.3**
	0.1nm,0.3s,baz=341,slow=15,SNR=1.2								
	0.7nm,0.6s								
SEY	**Seymchan**	**15.30**	**57**	Pn			**Pn**	**23 19 14.8**	**+0.8**
	0.9nm,0.3s,baz=268,slow=12,SNR=9.1								
	4.3nm,0.5s								
PETK	**Petropavlovsk-**	**19.77**	**88**	P			**P**	**23 20 08.5**	**+0.4**
	0.2nm,0.3s,baz=328,slow=10,SNR=4.1								
	1.8nm,0.7s								
KURBB	**Kurchatov Arra**	**26.92**	**275**	P			**P**	**23 21 20.3**	**+1.1**
	0.6nm,0.2s,baz=57,slow=9.4,SNR=1.4								
	0.6nm,0.2s								
ILAR	**Eielson Array**	**40.44**	**41**	P			**P**	**23 23 16.6**	**+0.5**
	0.6nm,0.5s,baz=306,slow=6.4,SNR=12								
	0.6nm,0.5s								
FINES	**FINESS Array B**	**45.36**	**318**	P			**P**	**23 23 55.0**	**-1.0**
	1.0nm,0.9s,baz=38,slow=7.1,SNR=4.7								
	1.0nm,0.9s								
HFS	**Hagfors**	**50.59**	**322**	P			**P**	**23 24 36.9**	**+0.5**
	1.5nm,0.9s,baz=325,slow=7.2,SNR=2.4								
	1.5nm,0.9s								
YKA	**Yellowknife Ar**	**52.31**	**30**	P			**P**	**23 24 48.8**	**-0.5**
	0.8nm,0.7s,baz=311,slow=5.6,SNR=2.1								
	0.8nm,0.7s								

MDD ***13*** *23:32:27.9±0.9, 35.°89N×0.°17E, h24km±15km, Mb4.0/19, M_mb3.3/19, Error ellipse: s-maj=16.6km s-min=4.3km az=147.0*
CRAAG ***13*** *23:32:29.3, 35.°90N×0.°30E, Ml3.3, Algrie 08km SE Bel-Hadri*
CNRM ***13*** *23:32:31.4, 36.°15N×0.°18W, h31km, ML2.8*
ISC 13 23:32:27.1±1.5, 36°04N±0.°03×0°08E±0.°04, h15km±12km, n33, σ1§46/53, 15C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFRG	**Douar Fergoug**	**0.52**	**183**	P		P	**Pb**	**23 32 39.0**	**+1.0**
EKMS	**Oued Kramis**	**0.53**	**59**	P		P	**Pg**	**23 32 36.8**	**-0.9**
ESMB	**Sidi M'hamed B**	**0.62**	**139**	P		P	**Pg**	**23 32 38.4**	**-0.9**
ODJA	**Bouhanifia**	**0.73**	**195**	P		P	**Pn**	**23 32 43.1**	**+0.1**
EBNR	**Beni Rached**	**1.20**	**78**	P		P	**Pg**	**23 32 50.8**	**+0.5**
EBNH	**Beni Haoua**	**1.29**	**68**	P		P	**Pb**	**23 32 51.7**	**+0.6**
EDDR	**Deurdeur**	**1.73**	**91**	P		P	**Pn**	**23 32 55.7**	**-1.0**
CART	**Cartagena**	**1.77**	**331**	P		P	**Pn**	**23 32 56.7**	**-0.5**
CART				S		S	**Sn**	**23 33 17.2**	**-2.3**
ENIJ	**Nijar**	**2.06**	**297**	Pn		Pn	**Pn**	**23 33 01.4**	**+0.1**
ENIJ	408nm,SNR=4.4			⇑*i*VmB_VC				23 33 09.4	
EMUR	**La Murta**	**2.09**	**330**	Pn			**Pn**	**23 33 02.0**	**+0.4**
EMUR	296nm,SNR=4.3			⇑*i*Vmb_VC				23 33 04.6	
EMUR				Sn			**Sn**	**23 33 26.7**	**-0.7**
EASA	**Ain Sidi Ali**	**2.23**	**147**	P		P	**Pg**	**23 33 09.1**	**-0.9**
EZAR	**Zarzadilla de**	**2.32**	**323**	Pn		Pn	**Pn**	**23 33 05.5**	**+0.6**
EZAR	292nm,SNR=2.8			⇑*i*VmB_VC				23 33 12.9	
EZAR				Sn			**Sn**	**23 33 33.5**	**+0.4**
TAF	**Taforalt**	**2.38**	**240**	P		P	**Pn**	**23 33 06.2**	**+0.6**
TAF				S		S	**Sn**	**23 33 33.9**	**-0.6**
ABRIN	**Birine**	**2.51**	**99**	P		P	**Pn**	**23 33 07.0**	**-0.4**
EBER	**Berja**	**2.54**	**291**	Pn		Pn	**Pn**	**23 33 07.6**	**-0.4**
EBER	470nm,SNR=4.7			⇑*i*VmB_VC				23 33 09.6	
EBER				Sn			**Sn**	**23 33 39.0**	**+0.2**
ETOB	**Tobarra**	**2.91**	**334**	Pn		Pn	**Pn**	**23 33 14.7**	**+1.8**
ETOB	319nm,SNR=3.3			⇑*i*VmB_VC				23 33 17.9	
ETOB				Sn			**Sn**	**23 33 48.9**	**+1.3**
EQES	**Quesada**	**3.08**	**306**	Pn		Pn	**Pn**	**23 33 17.7**	**+2.4**
EQES	392nm,SNR=7.7			⇑*i*VmB_VC				23 33 20.6	
EQES				Sn			**Sn**	**23 33 52.8**	**+1.0**
ELGU	**Los Guajares,**	**3.10**	**287**	Pn		Pn	**Pn**	**23 33 15.2**	**-0.3**
ELGU	277nm,SNR=6.0			⇑*i*VmB_VC				23 33 22.8	
ELGU				Sn			**Sn**	**23 33 51.3**	**-1.1**
EIBI	**Ibiza**	**3.15**	**18**	Pn		Pn	**Pn**	**23 33 16.6**	**+0.5**
EIBI	232nm,SNR=1.9			⇑*i*VmB_VC				23 33 23.0	
EIBI				Sn			**Sn**	**23 33 51.5**	**-1.9**
EVIV	**Cofrentes, Val**	**3.36**	**344**	Pn		Pn	**Pn**	**23 33 21.9**	**+2.8**
EVIV	130nm,SNR=1.9			⇑*i*VmB_VC				23 33 26.6	
EVIV				Sn			**Sn**	**23 33 58.0**	**-0.7**
AKLM	**AKL**	**3.57**	**246**	P		P	**Pn**	**23 33 23.3**	**+1.3**
ECHE	**Chera**	**3.64**	**347**	Pn		Pn	**Pn**	**23 33 24.1**	**+1.1**
ECHE	189nm,SNR=1.4			⇑*i*VmB_VC				23 33 29.4	
ECHE				Sn			**Sn**	**23 34 05.9**	**+0.3**
EMIJ	**Mijas**	**3.95**	**279**	Pn		Pn	**Pn**	**23 33 26.5**	**-0.7**
EMIJ	112nm,SNR=2.3			⇑*i*VmB_VC				23 33 33.0	
EMIJ				Sn			**Sn**	**23 34 11.1**	**-2.3**
FIGM	**Figuig**	**4.05**	**196**	P		P	**Pn**	**23 33 33.0**	**+4.3**
EADA	**Adamuz**	**4.29**	**301**	Pn		Pn	**Pn**	**23 33 32.0**	**+0.1**
EADA				Sn			**Sn**	**23 34 21.1**	**-0.4**
EMOS	**Mosqueruela**	**4.34**	**354**	Pn		Pn	**Pn**	**23 33 33.8**	**+1.1**
EMOS	97nm,SNR=1.3			⇑*i*VmB_VC				23 33 42.7	
EMOS				Sn			**Sn**	**23 34 21.3**	**-1.8**
ECAB	**El Cabril**	**4.84**	**296**	Pn		Pn	**Pn**	**23 33 40.3**	**+0.8**
ECAB	72nm,SNR=2.1			⇑*i*VmB_VC				23 33 42.0	
ECAB				Sn			**Sn**	**23 34 35.0**	**-0.3**
PAB	**San Pablo**	**4.95**	**316**	Pn		Pn	**Pn**	**23 33 42.8**	**+1.8**
PAB	55nm,SNR=1.7			⇑*i*VmB_VC				23 33 44.7	
PAB				Sn			**Sn**	**23 34 36.1**	**-2.0**
MDT	**Midelt**	**5.04**	**232**	P		P	**Pn**	**23 33 43.6**	**+1.4**
MDT				S		S	**Sn**	**23 34 40.7**	**+0.6**
MD31	**MD31**	**5.10**	**233**	P		P	**Pn**	**23 33 44.4**	**+1.3**
MD31				S		S	**Sn**	**23 34 41.6**	**-0.1**
PVAQ	**Vaqueiros**	**6.41**	**285**	P		P	**Pn**	**23 34 00.3**	**-0.7**
PVAQ				S		S	**Sn**	**23 35 10.3**	**-3.6**
PESTR	**Estremoz**	**6.72**	**297**	P		P	**Pn**	**23 34 05.0**	**-0.3**
PESTR				S		S	**Sn**	**23 35 19.2**	**-2.4**
EALK	**Alkurruntz**	**7.27**	**351**	Pn		Pn	**Pn**	**23 34 15.1**	**+2.2**
EALK	110nm,SNR=1.1			⇑*i*VmB_VC				23 34 20.4	

IDC ***13*** *23:34:23.4±1.4, 20.°32N×146.°11E, h0km, mb3.7/9, mbtmp3.8/10, ML4.0/1, MS3.5/3, Error ellipse: s-maj=48.5km s-min=20.7km az=82.0*
ISC 13 23:34:29.9±1.2, 20°4N±0.°1×146°0E±0.°3, h44km, n18, σ0§67/11, mb3.6/9, MS3.9/3, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**7.56**	**333**	Pn		Pn	**Pn**	**23 36 17.2**	**-0.4**
	2.2nm,0.3s,baz=126,slow=19,SNR=1.5								
JCJ	4.9nm,0.3s,baz=277,slow=20,SNR=1.2			Sn			**Sn**	**23 37 41.2**	**-0.8**
	42nm,0.8s								
H11S3	**WAKE ISLAND Hy 19.61**	**92**		T		T		23 59 50.8	
	baz=275,slow=75,SNR=5.9								
H11S1	**WAKE ISLAND Hy 19.62**	**92**		T		T		23 59 50.9	
	baz=275,slow=75,SNR=4.6								
H11S2	**WAKE ISLAND Hy 19.63**	**92**		T		T		23 59 51.9	
	baz=275,slow=75,SNR=4.8								
H11N1	**WAKE ISLAND Hy 19.66**	**88**		T		T		23 59 00.8	
	baz=275,slow=75,SNR=3.1								
H11N2	**WAKE ISLAND Hy 19.66**	**88**		T		T		23 59 08.7	
	baz=275,slow=75,SNR=4.2								
H11N3	**WAKE ISLAND Hy 19.67**	**88**		T		T		23 59 07.8	
	baz=275,slow=75,SNR=4.0								
KSRS	**Korea Array**	**23.18**	**321**	P			**P**	**23 39 33.1**	**+0.4**
	1.2nm,0.5s,baz=138,slow=10,SNR=4.6								
KSRS				LR			LR	23 48 16.2	
	comp=Z,21nm,19.0s,baz=145,slow=36								
	1.2nm,0.5s								
WRA	**Warramunga Arr**	**41.64**	**197**	P			**P**	**23 42 14.1**	**0.0**
	1.2nm,0.6s,baz=18,slow=8.2,SNR=7.7								
	1.2nm,0.6s								
SONM	**Songino Array**	**42.04**	**320**	P			**P**	**23 42 17.6**	**+0.4**
	0.1nm,0.3s,baz=116,slow=6.7,SNR=1.4								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**45.31**	**196**	P			**P**	**23 42 42.6**	**-1.0**
	0.2nm,0.5s,baz=21,slow=8.0,SNR=2.2								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**57.53**	**313**	P			**P**	**23 44 15.7**	**+0.8**
	0.3nm,0.6s,baz=90,slow=12,SNR=2.5								
	0.3nm,0.6s								
KURBB	**Kurchatov Arra**	**60.28**	**317**	P			**P**	**23 44 34.1**	**+0.3**
	0.8nm,0.6s,baz=94,slow=7.7,SNR=11								
	0.8nm,0.6s								
ILAR	**Eielson Array**	**62.05**	**27**	P			**P**	**23 44 45.8**	**+0.2**
	0.3nm,0.7s,baz=230,slow=6.9,SNR=2.1								
	0.3nm,0.7s								
BVAR	**Borovoye Array**	**65.38**	**320**	P			**P**	**23 45 08.4**	**+0.6**
	1.3nm,0.4s,baz=90,slow=7.1,SNR=8.5								
	1.3nm,0.4s								
FINES	**FINESS Array B**	**85.50**	**335**	P			**P**	**23 47 02.3**	**-0.7**
	1.2nm,0.8s,baz=47,slow=5.3,SNR=5.5								
	1.2nm,0.8s								
VRAC	**Vranov**	**97.37**	**329**	LR			LR	00 35 55.0	
	comp=Z,70nm,19.0s,baz=270,slow=38								
GERES	**GERESS Array B**	**99.06**	**330**	LR			LR	00 33 47.0	
	comp=Z,44nm,20.8s,baz=266,slow=36								

IDC ***13*** *23:41:33.1±0.8, 1.°61N×90.°92W, h0km, mb4.0/14, mbtmp4.0/18, ML3.2/5, MS3.8/36, Error ellipse: s-maj=27.9km s-min=14.2km az=55.0*
NEIC ***13*** *23:41:37.1±1.3, 1.°78N±0.°09×90.°8W±0.°1, h10km±1km, mb4.5/130, Error ellipse: s-maj=19.8km s-min=13.9km az=240.0*
GCMT ***13*** *23:41:39.1±0.3, 1.°75N±0.°02×90.°88W±0.°02, h20km±1km, MW4.9/90, Moment Tensor Solution. s17,c18; s90,c120; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.79±.14; Mθθ0.94±.09; Mϕϕ-0.15±.10; Mrθ-1.08±.19; Mrϕ-2.14±.08; Mθϕ0.33±.17; Best double couple: M₀2.44600×10¹⁶ NP1:ϕs354.00000°, δ62.00000°, λ-5.00000°. NP2: ϕs86.00000°, δ86.00000°, λ-152.00000°. Principal axes: T 2.9060, Plg16.0000°, Azm216.0000°; N -0.9210, Plg62.0000°, Azm94.0000°; P -1.9850, Plg23.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 23:41:35.6±0.5, 1.°70N±0.°08×90.°90W±0.°09, h10km, n182, σ1§12/155, mb4.5/67, MS3.8/31, 1D, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**10.38**	**34**			Pn	**Pn**	**23 44 05.1**	**+0.4**
	0.4nm,0.3s,baz=243,slow=2.3,SNR=6.5								
JTS				LR			LR	23 47 06.7	
	comp=Z,1μm,19.7s,baz=218,slow=32								
	3.2nm,0.7s								
JTS	**Las Juntas de**	**10.38**	**34**				**Pn**	**23 44 03.7**	**-1.1**
BRU2	**Volcan**	**10.79**	**49**				**Pn**	**23 44 11.4**	**+1.0**
BOAB	**BOACO BROADBAN**	**11.87**	**26**				**Pn**	**23 44 27.3**	**+2.1**
SLOR	**San Lorenzo -**	**12.63**	**101**				**Pn**	**23 44 38.1**	**+2.1**
MTO3	**Montecristo**	**12.71**	**7**				**Pn**	**23 44 39.3**	**+2.5**
APG	**El Apazote**	**13.23**	**2**	Pn		Pn	**Pn**	**23 44 43.8**	**-0.1**
	baz=198,slow=13,SNR=3.8								
APG				LR			LR	23 48 44.6	
	comp=Z,43nm,21.0s,baz=264,slow=32								
SIUN	**Universidad Ur**	**13.39**	**27**				**Pn**	**23 44 49.9**	**+4.0**
PETF	**Flores**	**15.16**	**4**	P			**P**	**23 45 13.7**	**-1.4**
ATAH	**Atahualpa**	**15.25**	**125**	Pn			**Pn**	**23 45 11.2**	**-0.5**
	0.2nm,0.3s,baz=308,slow=12,SNR=15								
ATAH				LR			LR	23 50 03.6	
	comp=Z,897nm,18.4s,baz=303,slow=34								
	3.6nm,0.7s								
CMIG	**Matias Romero**	**15.79**	**346**	Pn			**Pn**	**23 45 17.4**	**-0.9**
	0.1nm,0.3s,baz=175,slow=12,SNR=1.2								
	0.5nm,0.3s								
ROSC	**El Rosal**	**16.84**	**79**	Pn			**Pn**	**23 45 33.5**	**+1.4**
	0.6nm,0.3s,baz=122,slow=15,SNR=4.8								
ROSC				LR			LR	23 50 59.0	
	comp=Z,430nm,22.0s,baz=235,slow=34								
	4.9nm,0.4s								
ROSC	**El Rosal**	**16.84**	**79**	P			**Pn**	**23 45 33.5**	**+1.4**
TLIG	**Tlapa**	**17.47**	**335**	P			**P**	**23 45 41.5**	**+0.5**
NNA	**Nana**	**19.49**	**135**	LR			LR	23 52 01.2	
	comp=Z,348nm,22.0s,baz=302,slow=32								
CZSB	**Cruzeiro do Su**	**20.42**	**118**				**P**	**23 46 13.5**	**+0.2**
CZSB						IAmb	IAmb	23 46 19.0	
	comp=Z,25nm,1.0s								
SDV	**Santo Domingo**	**21.39**	**70**	P			**P**	**23 46 23.1**	**-0.8**
	comp=Z,14nm,0.7s,baz=255,slow=8.4,SNR=8.6								
SDV				LR			LR	23 54 42.9	
	comp=Z,196nm,21.1s,baz=250,slow=37								
	comp=Z,14nm,0.7s								
SDV	**Santo Domingo**	**21.39**	**70**				**P**	**23 46 23.3**	**-0.6**
SDV						IAmb	IAmb	23 46 34.3	
	comp=Z,24nm,0.9s								
LPAZ	**La Paz**	**28.72**	**129**	P			**P**	**23 47 34.1**	**0.0**
	comp=Z,2.4nm,0.9s,baz=284,slow=5.3,SNR=7.3								
LPAZ				LR			LR	23 58 29.4	
	comp=Z,275nm,21.9s,baz=315,slow=35								
	comp=Z,2.4nm,0.9s								
LPAZ	**La Paz**	**28.72**	**129**				**P**	**23 47 34.3**	**+0.2**
PB16	**IPOC Station P**	**28.97**	**134**				**P**	**23 47 36.9**	**+0.6**
LPIG	**La Paz**	**29.13**	**321**	LR			LR	23 56 11.4	
	comp=Z,139nm,20.8s,baz=188,slow=30								
SJG	**San Juan**	**29.26**	**55**	LR			LR	23 57 14.8	
	comp=Z,236nm,21.7s,baz=254,slow=32								
TXAR	**Lajitas Array**	**30.05**	**337**	P			**P**	**23 47 45.5**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=153,slow=8.4,SNR=6.0								
	comp=Z,0.

RTBA Rita Blanca 36.26 344 P 23 48 39.6 +0.2
RTBA IAmb IAmb 23 48 48.5
comp=Z,9.5nm,1.0s
R40A Maddies Statio 36.44 358 P P 23 48 40.4 -0.2
R40A IAmb IAmb 23 48 44.5
comp=Z,11nm,1.2s
WCI Wyandotte Cave 36.60 6 P P 23 48 41.9 -0.1
BLA Blacksburg 36.64 14 P P 23 48 41.9 -0.6
BLA IAmb IAmb 23 48 42.9
comp=Z,14nm,1.1s
OLIL Olney 36.95 4 P P 23 48 45.3 +0.4
T25A Trinidad 37.40 342 P 23 48 50.3 +1.2
T25A IAmb IAmb 23 48 57.9
comp=Z,6.7nm,0.9s
BLO Bloomington 37.51 6 P P 23 48 49.6 -0.1
BLO IAmb IAmb 23 48 55.9
comp=Z,12nm,0.8s
KSU1 Kansas State U 37.59 353 P P 23 48 51.2 +0.8
KSU1 IAmb IAmb 23 48 56.8
comp=Z,11nm,0.9s
W18A Petrified Fore 37.59 334 P P 23 48 51.2 +0.4
113A Mohawk Valley, 37.64 328 P 23 48 52.1 +1.1
P40A Paris 37.67 359 P P 23 48 51.4 +0.3
X16A Lo Mia Camp, P 37.78 332 P P 23 48 53.0 +0.6
Q51A Peebles 37.79 10 P 23 48 51.7 -0.4
Q51A IAmb IAmb 23 48 58.4
comp=Z,12nm,0.9s
Y14A Wickenburg 38.16 330 P P 23 48 55.2 -0.3
SDCO Great Sand Dun 38.30 341 P P 23 48 57.7 +0.9
SDCO IAmb IAmb 23 49 06.6
comp=Z,8.1nm,1.2s
MDP Montagnes des 38.33 84 LR LR 00 03 22.1
comp=Z,91nm,18.1s,baz=275,slow=34
CBN Corbin Frederi 38.39 17 P P 23 48 58.3 +1.1
P52A Corning 38.59 11 P P 23 48 58.2 -0.7
P52A IAmb IAmb 23 49 06.3
comp=Z,12nm,1.1s
P53A Whipple 38.60 12 P P 23 48 58.6 -0.3
P53A IAmb IAmb 23 48 59.3
comp=Z,11nm,1.0s
YUH Yuha Desert 38.75 325 P P 23 49 01.0 +0.7
YUH IAmb IAmb 23 49 27.1
comp=Z,13nm,1.5s
S22A 4UR Ranch, Cre 38.75 340 P 23 49 00.5 -0.2
BLYC Blythe 38.80 328 P P 23 49 01.7 +0.9
BLYC IAmb IAmb 23 49 23.4
comp=Z,8.7nm,1.2s
N41A Harden Midland 38.83 0 P 23 49 01.3 +0.4
N41A IAmb IAmb 23 49 09.1
comp=Z,8.7nm,0.8s
PFO Pinyon Flats O 39.76 326 LR LR 00 02 44.6
comp=Z,75nm,21.1s,baz=150,slow=32
U15A North Rim 39.82 333 P P 23 49 10.7 +1.0
PV13 Radium Mtn., P 39.84 338 P P 23 49 10.4 +0.8
PV02 Paradox Valley 39.85 338 P P 23 49 11.0 +1.3
PV02 IAmb IAmb 23 49 12.3
comp=Z,14nm,1.2s
PV03 Paradox Valley 39.93 338 P P 23 49 10.5 +0.1
PV18 Skein Mesa, Pa 39.95 338 P P 23 49 10.9 +0.3
PV18 IAmb IAmb 23 49 19.0
comp=Z,6.2nm,0.8s
PV12 Saucer Basin, 39.97 338 P P 23 49 11.2 +0.5
PV12 IAmb IAmb 23 49 13.1
comp=Z,16nm,1.1s
PV17 East Wray Mesa 40.00 338 P P 23 49 11.2 +0.2
PV17 IAmb IAmb 23 49 18.9
comp=Z,11nm,1.3s
PV07 Paradox Valley 40.02 338 P P 23 49 12.7 +1.6
PV20 West Nyswonger 40.05 338 P P 23 49 11.9 +0.5
PV20 IAmb IAmb 23 49 13.4
comp=Z,13nm,1.2s
PV04 Paradox Valley 40.08 338 P P 23 49 12.2 +0.7
PV04 IAmb IAmb 23 49 14.4
comp=Z,10nm,1.1s
PV23 Carpenter Ridg 40.17 338 P P 23 49 13.3 +0.8
PV23 IAmb IAmb 23 49 21.8
comp=Z,11nm,0.9s
L40A Anamosa 40.19 360 P 23 49 12.7 +0.5
L40A IAmb IAmb 23 49 17.7
comp=Z,13nm,1.1s
ISCO Idaho Springs 40.22 342 P 23 49 14.0 +1.1
ISCO IAmb IAmb 23 49 22.5
comp=Z,11nm,1.2s
BO02 Sierra Bellavi 40.91 154 P P 23 49 19.5 +1.1
BO02 IAmb IAmb 23 49 29.4
comp=Z,16nm,1.3s
AQDB Aquidauana 40.92 124 P 23 49 20.0 +1.4
AQDB IAmb IAmb 23 49 25.1
comp=Z,19nm,1.3s
Q16A Castle Valley 41.42 336 P 23 49 23.1 +0.5
K30B Basset 41.54 350 P P 23 49 24.0 +0.7
P18A Preston Nutter 41.66 337 P P 23 49 26.0 +1.2
ECSD EROS Data Cent 42.16 354 P P 23 49 27.7 -0.7
ECSD IAmb IAmb 23 49 34.6
comp=Z,6.0nm,0.8s
I37A Lemond, Waseca 42.19 357 P P 23 49 29.8 +1.2
I37A IAmb IAmb 23 50 12.7
comp=Z,14nm,1.2s
PSUT Pine Spring 42.26 333 P P 23 49 30.3 +0.7
BSUT Blindstream Ca 42.65 338 P P 23 49 33.5 +0.7
BSUT IAmb IAmb 23 49 41.2
comp=Z,8.6nm,1.0s
CPUP Villa Florida 42.74 133 P P 23 49 31.8 -1.6
comp=Z,0.9nm,0.6s,baz=336,slow=8.7,SNR=3.0
CPUP LR LR 00 08 10.7
comp=Z,103nm,21.0s,baz=258,slow=37
comp=Z,0.9nm,0.6s
CPUP Villa Florida 42.74 133 IAmb IAmb 23 49 43.0
comp=Z,13nm,1.5s
TCUT Toone Canyon 43.40 337 P P 23 49 39.8 +1.0
TCUT IAmb IAmb 23 49 47.2
comp=Z,11nm,0.9s
HWUT Hardware Ranch 43.88 338 P P 23 49 42.2 -0.3
BGU Big Grassy Mou 43.88 336 P 23 49 43.3 +0.7
SPUT South Promonto 43.97 337 P P 23 49 43.6 +0.4
SADO Sadowa 44.13 12 LR LR 00 08 21.3
comp=Z,77nm,18.7s,baz=144,slow=36
PDAR Pinedale Array 44.17 340 P P 23 49 45.1 +0.1
comp=Z,0.2nm,0.3s,baz=166,slow=8.7,SNR=6.0
PDAR LR LR 00 08 01.3
comp=Z,90nm,18.1s,baz=152,slow=36
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 44.34 329 P P 23 49 47.4 +1.0
comp=Z,3.9nm,0.9s,baz=159,slow=9.9,SNR=15
NVAR LR LR 00 06 32.9
comp=Z,80nm,19.7s,baz=219,slow=34
comp=Z,3.9nm,0.9s
NVAR Mina Array Bea 44.34 329 P P 23 49 47.2 +0.8
HVU Hansel Valley 44.49 337 P P 23 49 47.8 +0.3
ELK Elko 44.68 334 LR LR 00 06 46.6
comp=Z,138nm,19.2s,baz=150,slow=34
ELK Elko 44.68 334 P 23 49 50.0 +1.0
KVN Kaiserville 44.71 330 P 23 49 50.0 +0.7
BUKO Buck Lake 44.72 12 P P 23 49 48.2 -0.9
FXWY Fox Creek 45.44 339 P P 23 49 55.3 +0.2
FXWY IAmb IAmb 23 50 22.1
comp=Z,11nm,1.4s
E28A Huff 45.51 351 P P 23 49 56.6 +1.3
BDFB Brasilia 45.75 114 P P 23 49 57.4 -0.4
comp=Z,1.4nm,0.5s,baz=214,slow=7.3,SNR=3.2
BDFB LR LR 00 09 03.3
comp=Z,194nm,19.0s,baz=339,slow=36
comp=Z,1.4nm,0.5s
BDFB Brasilia 45.75 114 P P 23 49 57.4 -0.4
PLCA Paso Flores 46.13 158 P P 23 49 58.2 -2.1
comp=Z,2.2nm,1.0s,baz=333,slow=9.8,SNR=3.1
PLCA LR LR 00 05 30.3
comp=Z,87nm,18.9s,baz=340,slow=31
comp=Z,2.2nm,1.0s
YHL Hebgen Lake 46.56 340 P P 23 50 04.5 +0.5
AGMN Agassiz Nation 46.62 355 P P 23 50 03.3 -0.7
MCCM Marconi Confer 46.64 325 P P 23 50 05.1 +0.8
HLID Hailey 46.65 336 P 23 50 04.5 -0.1
HLID IAmb IAmb 23 50 12.3
comp=Z,3.6nm,0.9s
ORV Oroville 46.86 327 P P 23 50 07.3 +1.2
ORV IAmb IAmb 23 50 08.1
comp=Z,3.4nm,0.9s
BCYI Bear Canyon 46.89 338 P P 23 50 07.0 +0.5
BCYI IAmb IAmb 23 50 08.5
comp=Z,6.8nm,1.4s
GCMT Greycliff 46.90 342 P P 23 50 06.4 0.0
MCMT McKenzie Canyo 47.12 339 P P 23 50 08.5 +0.1
PLID Pearl Lake 48.55 336 P 23 50 19.1 -0.3
ULM Lac du Bonnet 48.56 356 P P 23 50 17.2 -1.8
comp=Z,4.7nm,0.9s,baz=153,slow=8.0,SNR=4.6
ULM LR LR 00 12 17.3
comp=Z,88nm,19.0s,baz=112,slow=38
comp=Z,4.7nm,0.9s
ULM Lac du Bonnet 48.56 356 P P 23 50 17.6 -1.5
YBH Yreka Blue Hor 49.06 329 LR LR 00 11 26.8
comp=Z,57nm,18.2s,baz=174,slow=36
PINE Pine Mountain 49.69 332 P P 23 50 28.0 -0.1
PINE IAmb IAmb 23 50 30.3
comp=Z,7.3nm,1.0s
F10A Beach Ranch, E 49.77 336 P P 23 50 28.7 +0.2
F10A IAmb IAmb 23 50 38.5
comp=Z,3.2nm,0.8s
NEW Newport 51.61 338 LR LR 00 12 31.4
comp=Z,135nm,18.9s,baz=154,slow=36
SCHQ Schefferville 56.49 16 LR LR 00 14 21.7
comp=Z,118nm,21.7s,baz=200,slow=35
BBB Bella Bella 59.12 334 LR LR 00 14 58.5
comp=Z,38nm,21.9s,baz=16,slow=34
PPT2 Papeete2 60.87 249 *e*LR LR 00 09 55.8
PPT2 *e*LR LR 00 09 59.5
comp=Z,174nm,26.0s
TBI Tubuai 62.13 243 *e*LR LR 00 10 33.5
comp=Z,1μm,29.0s
YKA Yellowknife Ar 63.19 348 P P 23 52 03.9 +0.2
comp=Z,1.6nm,0.7s,baz=152,slow=7.2,SNR=3.1
YKA LR LR 00 21 13.6
comp=Z,68nm,18.2s,baz=90,slow=38
comp=Z,1.6nm,0.7s
FRB Frobisher Bay 64.05 11 LR LR 00 18 18.9
comp=Z,127nm,20.6s,baz=187,slow=34
DLBC Dease Lake 64.35 338 LR LR 00 20 48.9
comp=Z,74nm,18.0s,baz=44,slow=37
O30N Mendenhall 68.20 338 P P 23 52 34.1 -2.1
M29M Somme Creek 70.14 339 P P 23 52 48.8 +0.5
M29M IAmb IAmb 23 52 56.2
comp=Z,4.7nm,0.9s
G31M Satah River 71.73 343 P P 23 52 58.2 +0.5
G31M IAmb IAmb 23 53 05.1
comp=Z,5.7nm,0.9s
INK Inuvik 72.50 345 LR LR 00 26 51.4
comp=Z,55nm,18.8s,baz=52,slow=38
G29M Pine Creek 72.83 342 P 23 53 04.8 +0.5
RES Resolute Bay 72.94 359 LR LR 00 26 49.7
comp=Z,43nm,19.7s,baz=286,slow=37
I27K Kandik River 73.16 340 P P 23 53 07.1 +0.8
I27K IAmb IAmb 23 53 26.0
comp=Z,5.8nm,1.1s
RIDG Independent Ri 73.26 338 P P 23 53 08.0 +1.0
RIDG IAmb IAmb 23 53 13.5
comp=Z,6.2nm,1.0s
SEW Seward 73.34 334 P P 23 53 06.5 -0.8
KDAK Kodiak Island 73.81 331 LR LR 00 25 29.1
comp=Z,44nm,18.0s,baz=86,slow=36
ILAR Eielson Array 74.56 338 P P 23 53 13.8 -0.7
comp=Z,1.1nm,0.8s,baz=148,slow=4.5,SNR=11
comp=Z,1.1nm,0.8s
ILAR Eielson Array 74.56 338 P P 23 53 14.1 -0.4
H24K Noodor Dome 75.46 339 P P 23 53 19.3 -0.4
H24K IAmb IAmb 23 53 26.3
comp=Z,3.8nm,0.9s
F25K Christian Rive 75.62 341 P P 23 53 21.3 +0.7
F25K IAmb IAmb 23 53 28.0
comp=Z,3.5nm,0.9s
PPLA Purkeypile 75.75 336 P P 23 53 20.9 -0.7
O18K Koktuh Hills 75.87 332 P P 23 53 22.4 +0.3
O18K IAmb IAmb 23 53 22.6
comp=Z,7.6nm,1.1s
E25K Arctic Village 75.88 342 P P 23 53 22.9 +0.8
E25K IAmb IAmb 23 53 23.7
comp=Z,4.3nm,1.1s
CAST Castle Rocks 75.94 336 P P 23 53 22.1 -0.4
CAST IAmb IAmb 23 53 28.3
comp=Z,3.5nm,1.0s
MLY Manley 76.12 338 P P 23 53 23.6 0.0
G23K Bananza Creek 76.65 339 P P 23 53 27.7 +1.2
G23K IAmb IAmb 23 53 33.4
comp=Z,3.6nm,1.1s
D25K Kavik River 76.78 343 P P 23 53 26.9 -0.2
D25K IAmb IAmb 23 53 34.9
comp=Z,4.3nm,0.7s
E23K Chandalar 77.15 341 P 23 53 30.9 +1.6
E23K IAmb IAmb 23 53 37.1
comp=Z,3.1nm,0.9s
F21K Alatna River 78.09 339 P 23 53 34.4 -0.2
F21K IAmb IAmb 23 53 42.1
comp=Z,3.5nm,0.9s
C23K Itkillik River 78.32 342 P P 23 53 36.1 +0.4
G19K Purcell Mounta 78.99 338 P P 23 53 39.8 +0.3
M14K Bethel 79.34 332 P P 23 53 42.1 +0.7
BORG Borgarnes 79.85 24 LR LR 00 26 40.7
comp=Z,42nm,19.6s,baz=222,slow=34
E18K Tukpahlearik C 80.73 338 P P 23 53 50.2 +1.3
E18K IAmb IAmb 23 53 55.7
comp=Z,3.5nm,1.0s
C18K Utukok River 81.33 340 P P 23 53 52.9 +0.8
BELA Belgrano 2 84.92 170 P P 23 54 12.0 +1.5
BELA IAmb IAmb 23 54 18.1
comp=Z,4.4nm,1.1s
DBIC Dimbokro 85.87 83 LR LR 00 28 59.2
comp=Z,34nm,18.3s,baz=148,slow=33
MDT Midelt 85.97 57 LR LR 00 31 23.1
comp=Z,61nm,18.4s,baz=200,slow=35
ESDC Sonseca Array 86.56 51 P P 23 54 18.2 -1.3
comp=Z,0.6nm,0.7s,baz=258,slow=5.8,SNR=4.4
ESDC LR LR 00 30 54.7
comp=Z,30nm,19.3s,baz=235,slow=34
comp=Z,0.6nm,0.7s
ESDC Sonseca Array 86.56 51 P P 23 54 18.4 -1.1
ESDC IAmb IAmb 23 54 44.5
comp=Z,2.2nm,1.0s
TORD Torodi Ar. Bea 92.14 77 P P 23 54 43.7 -2.5
comp=Z,0.5nm,0.9s,baz=237,slow=4.7,SNR=2.6
comp=Z,0.5nm,0.9s
TORD Torodi Ar. Bea 92.14 77 P P 23 54 43.7 -2.5
URZ Urewera 92.61 232 LR LR 00 27 51.9
comp=Z,136nm,18.3s,baz=230,slow=30
TROLL Troll, Antarti 92.67 162 ⇓P **P 23 54 51.8 +4.2**
comp=Z,54nm,0.8s
HFS Hagfors 95.77 29 LR LR 00 37 49.1
comp=Z,48nm,18.2s,baz=285,slow=35
H11S2 WAKE ISLAND Hyl 101.21 289 T T 01 48 16.2
baz=85,slow=75,SNR=99
H11S1 WAKE ISLAND Hyl 101.21 289 T T 01 48 17.5
baz=85,slow=75,SNR=73
H11S3 WAKE ISLAND Hyl 101.22 289 T T 01 48 18.0
baz=85,slow=75,SNR=60
ZALV Zalesovo Beam 124.43 3 PKP PKPdf 00 00 34.1 -1.0
comp=Z,6nm,0.6s,baz=0.0,slow=2.9,SNR=2.4
KURK Kurchatov 127.02 8 PKPdf 00 00 37.8 -2.4
KURBB Kurchatov Arra 127.10 8 PKP PKPdf 00 00 37.8 -2.5
comp=Z,0.2nm,0.3s,baz=351,slow=1.9,SNR=5.4
ASAR Alice Springs 131.46 240 PKP PKPdf 00 00 47.4 -2.0
comp=Z,0.2nm,0.5s,baz=93,slow=1.9,SNR=1.2
WRA Warramunga Arr 132.24 244 PKP PKPdf 00 00 50.3 -0.7
comp=Z,0.2nm,0.5s,baz=109,slow=2.3,SNR=1.3
HHC Hu-ho-hao-te 132.97 337 *e*P **PKPdf 00 00 48.9 -3.0**
PZH PanZhiHua 149.42 337 PKPbc PKPdf 00 01 22.0 +0.4

IDC 13 23:45:10.1±4.7, 4°94S×150°84E, h210^{km}, 36^{km}, mb3.3/2, mbtmp4.0/4, Error ellipse: s-maj=66.6km s-min=23.2km az=159.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.75**	**219**	P	Pn	23 46 34.6	+0.3
	19nm,0.4s,baz=188,slow=15,SNR=5.7						
PMG				S	S	23 47 42.3	+1.5
	26nm,0.6s,baz=145,slow=23,SNR=7.0						
HNR	**Honiara**	**10.07**	**117**	P	Pn	23 47 30.3	0.0
	6.0nm,0.5s,baz=270,slow=9.1,SNR=4.4						
WRA	**Warramunga Arr**	**21.92**	**226**	P	P	23 49 46.5	-0.4
	1.7nm,0.5s,baz=51,slow=9.9,SNR=15						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**24.76**	**220**	P	P	23 50 12.9	+0.1
	0.7nm,0.4s,baz=52,slow=8.9,SNR=22						
	0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**148.49**	**287**	PKPbc	PKPbc	00 04 32.6	-0.5
	0.3nm,0.7s,baz=68,slow=3.1,SNR=2.4						

*IDC **13** 23:48:07.5±1.3, 33°37S×177°70W, h0^{km}, mb3.9/3, mbtmp4.0/5, ML4.2/2, Error ellipse: s-maj=38.7km s-min=28.7km az=109.0*

ISC 13 23:48:12.8±1.2, 33°3S±0°1×178°1W±0°2, h35^{km}, n10, σ1^{s}92/12, mb4.0/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.01**	**2**	Pn	Pn	23 49 13.5	+1.6
	51nm,0.3s,baz=83,slow=23,SNR=1.7						
RAO				Sn	Sn	23 49 54.1	-3.5
	176nm,0.3s,baz=80,slow=21,SNR=5.7						
	82nm,0.3s						
URZ	**Urewera**	**6.33**	**217**	Pn	Pn	23 49 42.3	-1.2
	1.3nm,0.3s,baz=255,slow=3.6,SNR=9.5						
URZ				Sn	Sn	23 50 52.9	-1.6
	4.9nm,0.3s,baz=158,slow=22,SNR=11						
	2.8nm,0.3s						
ASAR	**Alice Springs**	**42.97**	**270**	P	P	23 56 11.5	+2.7
	2.1nm,0.8s,baz=109,slow=7.1,SNR=13						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**44.22**	**275**	P	P	23 56 21.0	+2.2
	1.3nm,0.7s,baz=118,slow=8.3,SNR=8.4						
	1.3nm,0.7s						
QSPA	**South Pole Qui**	**56.84**	**180**	P	P	23 57 54.2	+0.5
	1.6nm,1.0s,baz=354,slow=1.5,SNR=2.3						
	1.6nm,1.0s						
NJ2	**Nanjing**	**88.07**	**311**	*e*P	P	00 00 58.5	-1.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	**Kurchatov Arra**	**123.00**	**312**	PKP	**PKPdf**	00 07 04.6	-0.4
	comp=Z,0.3nm,0.6s,baz=106,slow=2.7,SNR=4.6						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKPbc**	00 07 53.2	+0.1
	comp=Z,2.0nm,0.6s,baz=27,slow=3.4,SNR=9.2						
NB2	**NORSAR Subarra**	**151.57**	**350**	PKP	**PKPbc**	00 08 02.3	-0.2
	comp=Z,0.5nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.57**	**350**	PKPbc	**PKPbc**	00 08 02.4	-0.2
	comp=Z,0.8nm,0.7s,baz=14,slow=4.1,SNR=4.9						

*DJA **14** 00:04:34.1±0.2, 7°S±2°×10°6E±°, h97^{km}±2^{km}, M5.4/55, mb5.3/24, mB5.9/14, MLv5.0/55, Mw(mB)5.5/14*
*NEIC **14** 00:04:34.9±1.9, 6°56S±0°08×106°36E±0°09, h106^{km}±3^{km}, mb4.6/50, Error ellipse: s-maj=15.4km s-min=8.1km az=45.0*
*GFZ **14** 00:04:35.3±0.2, 7°S±5°×10°6E±°, h114^{km}±1^{km}, M5.2/25, mb4.9/25, Error ellipse: s-maj=11.5km s-min=4.0km az=34.5, confirmed*
*BJI **14** 00:04:35.0, 6°60S×106°40E, h120^{km}, mB4.9/5, mb4.8/17*
*IDC **14** 00:04:36.6±0.8, 6°50S×106°32E, h125^{km}±6^{km}, mb4.1/25, mbtmp4.5/26, MS3.8/5, Error ellipse: s-maj=15.2km s-min=7.4km az=52.0*

ISC 14 00:04:35.3±0.6, 6°69S±0°05×106°18E±0°04, h114^{km}±4^{km}, n225, σ1^{s}50/226, mb4.6/57, 7C-4D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**0.49**	**130**	P	Pn	00 04 50.8	-1.6
CGJI	**Cibinong**	**0.49**	**279**	P	Pn	00 04 51.9	-0.5
SBJI	**Serang**	**0.57**	**355**	P	Pn	00 04 53.2	+0.2
DBJI	**Dramaga**	**0.58**	**76**	P	Pn	00 04 52.7	-0.4
TNG	**Tangerang**	**0.70**	**42**	P	Pn	00 04 54.0	+0.1
LEM	**Lembang**	**1.44**	**95**	P	Pn	00 05 02.3	+0.6
	2μm,0.4s,baz=295,slow=6.7,SNR=424						
LEM				LR	LR	00 05 10.3	
	comp=Z,260nm,20.2s,baz=208,slow=25						
LEM				S	Sn	00 05 22.6	+0.8
	4μm,0.6s,baz=306,slow=19,SNR=22						
LEM	**Lembang**	**1.44**	**95**	P	Pn	00 05 02.3	+0.6
LEM				S	Sn	00 05 23.0	+1.3
BBJI	**Bungbulang**	**1.65**	**118**	P	Pn	00 05 02.2	-1.9
BBJI	**Bungbulang**	**1.65**	**118**		Pn	00 05 02.2	-1.9
BBJI	**Bungbulang**	**1.65**	**118**	P	Pn	00 05 02.4	-1.8
BBJI				S	Sn	00 05 23.1	-3.0
BBJI	**Bungbulang**	**1.65**	**118**	P	Pn	00 05 02.4	-1.8
KASI	**Kota Agung**	**2.04**	**305**	P	Pn	00 05 10.3	+1.4
KASI				S	Sn	00 05 35.1	+0.5
KASI	**Kota Agung**	**2.04**	**305**	P	Pn	00 05 10.4	+1.5
KLI	**Kotabumi**	**2.24**	**324**	P	Pn	00 05 13.5	+2.0
KLI				S	Sn	00 05 40.7	+1.4
KPJI	**Karang Pucung**	**2.81**	**103**	P	Pn	00 05 18.8	0.0
MDSI	**Maura Dua**	**2.96**	**318**	P	Pn	00 05 23.1	+2.2
CTJI	**Waduk Cacaban**	**3.00**	**96**	P	Pn	00 05 21.5	+0.2
XMI	**Christmas Isla**	**3.76**	**187**	P	Pn	00 05 25.8	-5.8
LHSI	**Lahat**	**3.89**	**317**	P	Pn	00 05 35.7	+2.5
MNAI	**Manna**	**3.96**	**306**		Pn	00 05 35.1	+1.0
MNAI	**Manna**	**3.96**	**306**	P	Pn	00 05 35.5	+1.4
MNAI				S	Sn	00 06 19.0	-0.8
MNAI	**Manna**	**3.96**	**306**	P	Pn	00 05 35.5	+1.4
PMBI	**Palembang**	**4.00**	**339**		Pn	00 05 35.1	+0.5
PMBI	**Palembang**	**4.00**	**339**	P	Pn	00 05 37.7	+3.0
PMBI	**Palembang**	**4.00**	**339**	P	Pn	00 05 37.9	+3.2
TPI	**Tanjungpandan**	**4.18**	**21**	P	Pn	00 05 38.5	+1.4
YOGI	**Yogyakarta**	**4.23**	**106**	P	Pn	00 05 37.0	-0.8
SMRI	**Semarang**	**4.25**	**95**	P	Pn	00 05 36.9	-1.1
SMRI	**Semarang**	**4.25**	**95**		Pn	00 05 35.3	-2.8
SMRI	**Semarang**	**4.25**	**95**	P	Pn	00 05 38.4	+0.4
SMRI	**Semarang**	**4.25**	**95**	P	Pn	00 05 38.7	+0.6
UGM	**Wanagama**	**4.48**	**106**	P	Pn	00 05 40.6	-0.5
UGM	**Wanagama**	**4.48**	**106**		Pn	00 05 40.3	-0.8
UGM	**Wanagama**	**4.48**	**106**	P	Pn	00 05 40.1	-1.0
PPBI	**Pangkal Pinang**	**4.50**	**359**	P	Pn	00 05 44.0	+2.5
KSI	**Kapahiang**	**4.68**	**310**	P	Pn	00 05 45.5	+1.6
WOJI	**Wonogiri, Jawa**	**4.84**	**104**	P	Pn	00 05 45.5	-0.5
SNJI	**Sawahan-Nganju**	**5.64**	**101**	P	Pn	00 05 57.8	+0.8
	0.8nm128nm,0.7s						
DSRI	**Dabo**	**6.38**	**345**	P	Pn	00 06 09.1	+2.3
	0.3nm68nm,0.4s						
PPSI	**Pulau Pagai**	**7.28**	**302**	P	Pn	00 06 18.4	-0.7
SDSI	**Sungai Dareh**	**7.43**	**320**	P	Pn	00 06 21.1	0.0
BLJI	**Banyuglugur**	**7.43**	**99**	P	Pn	00 06 24.4	+3.3
ABJI	**Asem Bagus**	**8.07**	**98**	P	Pn	00 06 32.9	+3.2
JAGI	**Jajag, Banyuwa**	**8.10**	**103**	P	Pn	00 06 30.6	+0.5
JAGI	**Jajag, Banyuwa**	**8.10**	**103**		Pn	00 06 28.4	-1.7
JAGI	**Jajag, Banyuwa**	**8.10**	**103**	P	Pn	00 06 29.9	-0.2
	9μm478nm,0.8s						
JAGI	**Jajag, Banyuwa**	**8.10**	**103**	P	Pn	00 06 30.5	+0.3
PPI	**Padang Panjang**	**8.46**	**317**	P	Pn	00 06 34.5	-0.6
	91nm,0.5s						
BKNI	**Bangkinang**	**8.65**	**323**	P	Pn	00 06 37.8	+0.1
MYKOM	**Kota Tinggi**	**8.74**	**344**	Pn	Pn	00 06 37.6	-1.2
MYKOM	**Kota Tinggi**	**8.74**	**344**	P	Pn	00 06 40.7	+1.9
MYKOM	**Kota Tinggi**	**8.74**	**344**	P	Pn	00 06 40.5	+1.6
IGBI	**Denpasar**	**9.13**	**104**	P	Pn	00 06 42.6	-1.5
KHKI	**Kahang-Kahang**	**9.49**	**101**	P	Pn	00 06 48.4	-0.6
PLAI	**Plampang**	**11.69**	**101**	P	Pn	00 07 19.4	+0.8
PLAI	**Plampang**	**11.69**	**101**	P	Pn	00 07 15.3	-3.3
GSI	**Gunungsitoli**	**11.70**	**312**		Pn	00 07 14.7	-4.1
RPSI	**Rantau Prapat**	**11.81**	**322**		Pn	00 07 16.8	-3.4
DBNI	**Kabupaten Domp**	**12.16**	**99**	P	Pn	00 07 21.3	-3.5
KULM	**Kulim**	**13.12**	**335**	Pn	Pn	00 07 37.6	+0.2
KAPI	**Kappang**	**13.61**	**84**	P	Pn	00 07 40.8	-2.9
	4.0nm,0.4s,baz=223,slow=22,SNR=1.8						
BATI	**Baumata**	**17.64**	**103**	P	P	00 08 29.6	-3.8
	46nm,0.4s,baz=286,slow=15,SNR=6.5						
BATI				S	Sn	00 11 46.7	-4.4
	19nm,0.4s,baz=262,slow=22,SNR=3.6						
GIRL	**Giralia**	**17.66**	**155**	P	Pn	00 08 34.2	+0.1
GIRL				IAmb	IAmb	00 08 35.5	
	comp=Z,52nm,1.1s						
SOEI	**Soe**	**18.16**	**101**	P	Pn	00 08 41.4	+1.1
SOEI	**Soe**	**18.16**	**101**		P	00 08 37.4	-1.8
SOEI				IAmb	IAmb	00 09 01.2	
	comp=Z,46nm,0.7s						
MBWA	**Marble Bar**	**19.46**	**139**	P	Pn	00 08 57.0	+1.4
MBWA	**Marble Bar**	**19.46**	**139**		P	00 08 51.9	-1.3
MBWA				IAmb	IAmb	00 09 00.2	
	comp=Z,34nm,1.4s						
FITZ	**Fitzroy Crossi**	**22.10**	**123**	P	P	00 09 20.4	-1.1
	comp=Z,7.3nm,0.9s,baz=307,slow=10,SNR=7.0						
FITZ				S	S	00 13 19.6	+1.7
	comp=Z,1.5nm,0.5s,baz=324,slow=19,SNR=1.8						
	comp=Z,7.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.10**	**123**	P	P	00 09 21.0	-0.5
MEEK	**Meekatharra**	**23.10**	**151**	P	P	00 09 34.0	+2.6
DAV	**Davao City (W)**	**23.70**	**55**	LR	LR	00 19 15.0	
	comp=Z,78nm,18.4s,baz=184,slow=37						
KNRA	**Kununurra**	**23.86**	**114**	P	P	00 09 38.2	-0.2
KNRA				IAmb	IAmb	00 10 01.4	
	comp=Z,15nm,0.8s						
MORW	**Morawa**	**24.12**	**158**	P	P	00 09 41.7	+1.1
MORW	**Morawa**	**24.12**	**158**	P	P	00 09 40.0	-0.7
MORW				IAmb	IAmb	00 10 07.0	
	comp=Z,51nm,1.5s						
MTN	**Manton Dam**	**25.33**	**106**	P	P	00 09 52.4	+0.6
MTN				IAmb	IAmb	00 09 53.3	

comp=Z,4.4nm,1.4s
CMAR Chiang Mai Arr 25.99 344 P **P** **00 09 56.2 -1.4**
comp=Z,4.7nm,0.6s,baz=181,slow=8.5,SNR=32
comp=Z,4.7nm,0.6s
CHTO Chiang Mai 26.33 344 P **P** **00 09 58.0 -2.7**
NWAO Narrogin (SRO) 28.05 160 P **P** **00 10 15.8 -0.2**
comp=Z,11nm,0.8s,baz=337,slow=8.9,SNR=5.8
comp=Z,11nm,0.8s
NWAO Narrogin (SRO) 28.05 160 P **P** **00 10 17.4 +1.4**
NWAO Narrogin (SRO) 28.05 160 P **P** **00 10 15.8 -0.2**
H01W3 Cape Leeuwin H 29.00 166 T T 00 41 05.1
baz=344,slow=76,SNR=4.7
H01W1 Cape Leeuwin H 29.01 166 T T 00 41 04.6
baz=344,slow=76,SNR=13
H01W2 Cape Leeuwin H 29.01 166 T T 00 41 08.7
baz=344,slow=76,SNR=5.3
WB0 Warramunga Arr 30.32 118 P **P** **00 10 36.0 -0.2**
WB0 IAmb IAmb 00 11 01.9
comp=Z,8.6nm,1.1s
WRA Warramunga Arr 30.34 118 P **P** **00 10 36.0 -0.4**
comp=Z,1.4nm,0.7s,baz=291,slow=10,SNR=9.3
WRA PcP **PcP** **00 13 34.0 -0.1**
comp=Z,0.8nm,0.5s,baz=300,slow=2.6,SNR=2.9
comp=Z,1.4nm,0.7s
WRAB Tennant Creek 30.34 118 P **P** **00 10 38.7 +2.3**
WR8 Warramunga Arr 30.48 118 P **P** **00 10 37.8 +0.2**
WR8 IAmb IAmb 00 11 19.3
comp=Z,12nm,1.3s
ASAR Alice Springs 31.53 125 P **P** **00 10 46.7 -0.2**
comp=Z,1.3nm,0.6s,baz=296,slow=8.3,SNR=13
ASAR PcP **PcP** **00 13 37.4 +0.2**
comp=Z,0.3nm,0.3s,baz=298,slow=2.6,SNR=2.3
ASAR S **S** **00 15 46.0 -1.3**
comp=Z,3.1nm,0.9s,baz=300,slow=16,SNR=13
comp=Z,1.3nm,0.6s
ASAR Alice Springs 31.53 125 P **P** **00 10 44.3 -2.6**
ASAR PcP **PcP** **00 13 37.4 +0.2**
FORT Forrest 31.54 142 P **P** **00 10 45.0 -1.8**
FORT IAmb IAmb 00 11 20.4
comp=Z,12nm,1.2s
AS01 Alice Springs 31.57 125 P **P** **00 10 50.4 +3.2**
PZH PanZhiHua 33.28 353 P **P** **00 11 05.6 +3.4**
H08S2 Diego Garcia H 33.43 266 T T 00 46 48.5
baz=91,slow=75,SNR=26
H08S3 Diego Garcia H 33.44 266 T T 00 46 47.4
baz=91,slow=75,SNR=25
H08S1 Diego Carcia H 33.45 266 T T 00 46 55.2
baz=91,slow=75,SNR=21
SHL Shillong 34.95 337 P **P** **00 11 14.7 -2.0**
QIS Mount Isa 35.19 116 P **P** **00 11 20.2 +1.5**
BBOO Buckleboo 38.03 137 P **P** **00 11 44.5 +1.9**
BBOO Buckleboo 38.03 137 P **P** **00 11 42.5 -0.1**
BBOO IAmb IAmb 00 12 11.1
comp=Z,18nm,1.3s
LSA Lhasa 38.96 339 P **P** **00 11 50.6 -0.3**
EVN Everest 39.20 332 P **P** **00 11 52.2 -0.9**
EVN Everest 39.20 332 P **P** **00 11 52.3 -0.9**
HTT Hallett 40.35 136 P **P** **00 12 03.6 +1.6**
NJ2 Nanjing 40.38 17 *eP* **P** **00 12 04.0 +1.9**
NJ2 pmax pmax
comp=Z,20nm,0.5s
PMG Port Moresby 40.65 97 P **P** **00 12 05.7 +1.1**
BHPL Bhopal 40.93 318 *eP* **P** **00 12 05.5 -1.4**
STKA Stephens Creek 41.45 132 P **P** **00 12 11.2 +0.2**
comp=Z,11nm,0.6s,baz=306,slow=8.2,SNR=26
comp=Z,11nm,0.6s
STKA Stephens Creek 41.45 132 P **P** **00 12 12.2 +1.2**
JHNI Jhansi 41.71 321 *eP* **P** **00 12 11.9 -1.3**
CMSA Cobar Meteorol 44.39 129 P **P** **00 12 36.9 +2.2**
CMSA Cobar Meteorol 44.39 129 P **P** **00 12 35.2 +0.5**
RK1H Rockhampton Ha 45.68 116 P **P** **00 12 46.6 +1.6**
BTO2 Baotou 47.33 4 *eP* **P** **00 12 59.8 +2.1**
BTO2 pmax pmax
comp=Z,14nm,0.8s
BTO2 pmax pmax
comp=Z,200nm,11.7s
HHC Hu-ho-hao-te 47.57 6 *eP* **P** **00 13 03.1 +3.6**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,91nm,4.7s
DHRM DHARAMSHALA 48.06 325 *eP* **P** **00 13 01.6 -2.1**
NIL Nilore 50.83 324 P **P** **00 13 23.4 -1.1**
WUS Wushi 53.69 335 P **P** **00 13 44.1 -1.5**
WUS Wushi 53.69 335 P **P** **00 13 44.8 -0.9**
KSH2 Kashi 53.70 331 P **P** **00 13 43.3 -2.4**
KSH2 pmax pmax
comp=Z,3.0nm,0.6s
KBL Kabul 53.96 322 P **P** **00 13 47.4 -0.3**
KBL IAmb IAmb 00 13 49.1
comp=Z,6.2nm,0.8s
KBL Kabul 53.96 322 P **P** **00 13 46.9 -0.9**
SONM Songino Array 54.29 0 P **P** **00 13 49.3 -0.6**
comp=Z,2.2nm,0.4s,baz=182,slow=9.3,SNR=12
SONM PcP **PcP** **00 14 52.0 -0.6**
comp=Z,1.3nm,0.4s,baz=180,slow=5.3,SNR=5.5
SONM ScP **ScP** **00 18 39.0 -1.4**
comp=Z,0.4nm,0.3s,baz=186,slow=4.6,SNR=4.4
comp=Z,2.2nm,0.4s
SONM Songino Array 54.29 0 P **P** **00 13 49.5 -0.3**
SONM **PcP** **00 14 52.0 -0.6**
SONM **ScP** **00 18 39.0 -1.4**
MANEM Manem 54.52 326 P **P** **00 13 51.6 -0.3**
MANEM IAmb IAmb 00 13 52.5
comp=Z,51nm,1.4s
KDJ Kajisay 55.33 334 P **P** **00 13 56.7 -0.8**
KDJ IAmb IAmb 00 13 57.8
comp=Z,11nm,1.3s
PDGK Podgornoye 55.36 337 P **P** **00 13 56.5 -1.1**
DRK Karamyk 55.87 328 P **P** **00 14 01.1 -0.4**
DRK Karamyk 55.87 328 P **P** **00 14 01.6 +0.1**
GAR Garm 56.31 327 **P** **P** **00 14 03.0 -1.5**
GAR IAmb IAmb 00 14 03.6
comp=Z,10nm,1.0s
SHAA Shahritus 56.55 324 **P** **P** **00 14 03.8 -2.4**
SHAA IAmb IAmb 00 14 04.7
comp=Z,14nm,0.5s
ARSB Arslanbob 56.64 330 P **P** **00 14 05.5 -1.3**
ARSB IAmb IAmb 00 14 06.5
comp=Z,14nm,1.4s
BTK Batken 56.80 328 **P** **P** **00 14 07.0 -0.9**
BTK IAmb IAmb 00 14 11.9
comp=Z,8.0nm,1.2s
BTK Batken 56.80 328 P **P** **00 14 07.0 -0.9**
HILR Hailar Array B 57.25 10 P **P** **00 14 09.0 -1.8**
comp=Z,1.0nm,0.3s,baz=183,slow=13,SNR=1.9
comp=Z,1.0nm,0.3s
MK31 Makanchi Array 57.33 341 P **P** **00 14 10.1 -1.3**
MKAR Makanchi Array 57.33 341 P **P** **00 14 09.5 -1.9**
comp=Z,2.8nm,0.4s,baz=153,slow=8.2,SNR=32
comp=Z,2.8nm,0.4s
MKAR Makanchi Array 57.33 341 P **P** **00 14 09.9 -1.4**
KKAR Karatay Array 59.19 330 P **P** **00 14 22.9 -1.5**
CASY Casey 59.57 178 P **P** **00 14 27.2 +0.6**
H04N2 CROZET ISLANDS 60.97 220 T T 01 20 58.8
baz=67,slow=75,SNR=70
H04N1 CROZET ISLANDS 60.98 220 T T 01 20 58.3
baz=67,slow=75,SNR=80
H04N3 CROZET ISLANDS 60.98 220 T T 01 20 57.0
baz=67,slow=75,SNR=75
H04S1 CROZET ISLANDS 61.16 220 T T 01 21 08.1
baz=68,slow=75,SNR=12
H04S3 CROZET ISLANDS 61.17 220 T T 01 21 02.6
baz=68,slow=75,SNR=6.8
H04S2 CROZET ISLANDS 61.17 219 T T 01 20 54.4
baz=68,slow=75,SNR=6.0
KURBB Kurchatov Arra 61.89 340 P **P** **00 14 41.3 -1.3**
comp=Z,2.4nm,0.3s,baz=152,slow=5.8,SNR=5.8
KURBB PcP **sP** **00 15 22.3 -0.6**
comp=Z,1.7nm,0.3s,baz=152,slow=3.5,SNR=4.5
KURBB ScP **ScP** **00 19 11.5 -2.3**
comp=Z,0.3nm,0.7s,baz=145,slow=3.4,SNR=3.4
comp=Z,2.4nm,0.3s
KURK Kurchatov 61.94 341 P **P** **00 14 41.3 -1.6**
KURK **PcP** **00 15 22.3 -0.2**
KURK **ScP** **00 19 11.5 -2.5**
KURK Kurchatov 61.94 341 P **P** **00 14 42.3 -0.5**
ZAA0 Zalesovo Array 63.04 346 P **P** **00 14 48.7 -1.4**
ZALV Zalesovo Beam 63.04 346 P **P** **00 14 48.2 -1.9**
comp=Z,1.0nm,0.3s,baz=157,slow=6.4,SNR=8.4
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 63.04 346 P **P** **00 14 48.4 -1.7**
RAYN Ar Rayn 66.39 299 P **P** **00 15 13.3 +0.7**
RAYN IAmb IAmb 00 15 13.9
comp=Z,6.5nm,1.1s
BVAR Borovoye Array 66.77 337 P **P** **00 15 13.8 -0.6**
comp=Z,3.8nm,0.4s,baz=138,slow=8.8,SNR=11
comp=Z,3.8nm,0.4s
BORK Borovoye 66.81 337 P **P** **00 15 14.4 -0.2**
BORK IAmb IAmb 00 15 22.7
comp=Z,5.2nm,0.8s
MAW Mawson 67.42 197 P **P** **00 15 19.6 +1.3**
comp=Z,6.2nm,0.8s,baz=52,slow=4.8,SNR=16
comp=Z,6.2nm,0.8s
MAW Mawson 67.42 197 P **P** **00 15 20.1 +1.9**
AB31 Akbulak array 68.73 329 P **P** **00 15 26.0 -0.7**
AB31 IAmb IAmb 00 15 27.4
comp=Z,13nm,0.8s
ABKAR Akbulak array 68.73 329 P **P** **00 15 25.9 -0.9**
AKTO Aktyubinsk 70.45 330 LR LR 00 50 15.6
comp=Z,47nm,18.6s,baz=61,slow=39
GNI Garni 73.16 315 LR LR 00 50 14.6
comp=Z,33nm,20.1s,baz=314,slow=37
ARTI Arti 74.05 335 P **P** **00 15 59.0 +0.5**
KBZ Khabaz 75.88 318 P **P** **00 16 09.4 +0.2**
comp=Z,6.2nm,0.9s,baz=124,slow=7.3,SNR=10
comp=Z,6.2nm,0.9s
VNDA Vanda 76.42 169 P **P** **00 16 13.0 +1.2**
comp=Z,2.9nm,0.5s,baz=307,slow=5.3,SNR=23
comp=Z,2.9nm,0.5s
VNDA Vanda 76.42 169 P **P** **00 16 13.2 +1.4**
NRIK Noril'sk 76.95 353 P **P** **00 16 13.4 -1.4**
comp=Z,1.4nm,0.3s,baz=162,slow=3.2,SNR=4.3
comp=Z,1.4nm,0.3s
EIL Elat 77.22 302 P **P** **00 16 18.4 +1.1**
SBA Scott Base 77.50 169 P **P** **00 16 20.0 +2.1**
SBA IAmb IAmb 00 16 21.0
comp=Z,7.2nm,0.8s
MMAI Mount Meron Ar 77.76 306 P **P** **00 16 21.5 +1.2**
comp=Z,2.2nm,0.6s,baz=98,slow=7.4,SNR=4.7
comp=Z,2.2nm,0.6s
BOSA Boshof 78.88 242 P **P** **00 16 27.5 +0.9**
comp=Z,7.7nm,1.1s,baz=138,slow=11,SNR=2.6
comp=Z,7.7nm,1.1s
BOSA Boshof 78.88 242 P **P** **00 16 27.5 +0.9**
BOSA IAmb IAmb 00 16 30.7
comp=Z,24nm,1.4s
BR104 Keskin Array S 81.01 312 P **P** **00 16 37.0 -0.8**
comp=Z,5.3nm,0.8s
BR131 Keskin Array S 81.02 312 P **P** **00 16 37.9 0.0**
BRTR Keskin Array B 81.02 312 P **P** **00 16 37.5 -0.3**
comp=Z,3.6nm,0.7s,baz=125,slow=6.9,SNR=20
comp=Z,3.6nm,0.7s
BR105 Keskin Array S 81.03 312 P **P** **00 16 37.1 -0.9**
comp=Z,5.0nm,0.8s
BR106 Keskin Array S 81.03 312 P **P** **00 16 37.8 -0.2**
comp=Z,5.5nm,0.9s
KKUL Konya-Kulu 81.40 311 P **P** **00 16 40.7 +0.8**
QSPA South Pole Qui 83.30 180 P **P** **00 16 50.1 +0.9**
comp=Z,6.2nm,0.7s,baz=278,slow=4.0,SNR=52
comp=Z,6.2nm,0.7s
QSPA South Pole Qui 83.30 180 P **P** **00 16 50.1 +0.9**
QSPA IAmb IAmb 00 16 51.3
comp=Z,7.9nm,1.0s
QSPA South Pole Qui 83.30 180 P **P** **00 16 50.2 +0.9**
OBN Obninsk 84.03 327 P **P** **00 16 52.8 -0.1**
OBN Obninsk 84.03 327 P **P** **00 16 52.3 -0.6**
comp=Z,30nm,0.8s
OBN Obninsk 84.03 327 P **P** **00 16 52.2 -0.7**
SORM Soroca 86.89 319 ⇓P **P** **00 17 07.7 +0.4**
AK09 Malin Array Si 86.89 322 P **P** **00 17 07.1 -0.2**
AK10 Malin Array Si 86.91 322 P **P** **00 17 07.2 -0.1**
AKASG Malin Array Be 86.95 322 P **P** **00 17 07.4 -0.1**
comp=Z,0.8nm,0.5s,baz=87,slow=4.4,SNR=5.1
comp=Z,0.8nm,0.5s
AKASG Malin Array Be 86.95 322 P **P** **00 17 07.4 -0.1**
AKBB Malin Array Si 86.95 322 P **P** **00 17 07.1 -0.4**
KIEV Kiev 86.96 322 P **P** **00 17 07.1 -0.5**
comp=Z,13nm,0.9s
AK19 Malin Array Si 87.09 322 P **P** **00 17 07.8 -0.4**
VRI Vrincioaia 87.47 317 ⇓P **P** **00 17 11.4 +1.2**
VRI Vrincioaia 87.47 317 P **P** **00 17 10.9 +0.7**
comp=Z,8.9nm,1.1s
VRI Vrincioaia 87.47 317 P **P** **00 17 11.6 +1.5**
PLOR Plostina 87.52 317 ⇓P **P** **00 17 11.4 +1.0**
TESR Tescani 87.65 317 ⇑P **P** **00 17 12.0 +0.9**
TESR Tescani 87.65 317 P **P** **00 17 11.2 +0.1**
comp=Z,9.1nm,1.9s
LUBAR Lubar, Ukraine 87.68 321 P **P** **00 17 10.5 -0.6**
TROLL Troll, Antarti 87.87 198 ⇑P **P** **00 17 14.2 +2.4**
comp=Z,208nm,0.7s
MLR Muntele Rosu 87.92 316 ⇓P **P** **00 17 13.7 +1.2**
MLR Muntele Rosu 87.92 316 P **P** **00 17 13.8 +1.2**
MLR IAmb IAmb 00 17 23.3
comp=Z,1.1nm,1.2s
MLR Muntele Rosu 87.92 316 P **P** **00 17 12.2 -0.3**
ARR Arges 88.81 316 ⇑P **P** **00 17 17.0 +0.4**
BURAR Bucovina Array 88.84 318 ⇑P **P** **00 17 18.2 +1.5**
BURAR Bucovina Array 88.84 318 P **P** **00 17 18.3 +1.6**
BUR08 Bucovina Ar. S 88.85 318 P **P** **00 17 18.2 +1.3**
NACGM Naroch 89.37 325 *eP* **P** **00 17 20.0 +1.1**
comp=Z,9.0nm,0.8s,baz=102
LOT Lotru 89.42 316 P **P** **00 17 19.4 -0.2**
SNAA Sanae 89.57 197 ⇑P **P** **00 17 22.0 +2.2**
comp=Z,92nm,0.6s
SNAA Sanae 89.57 197 P **P** **00 17 21.8 +2.0**
comp=Z,4.8nm,0.8s,baz=112,slow=5.9,SNR=11
SNAA LR LR 00 51 15.5
comp=Z,254nm,20.6s,baz=156,slow=31
comp=Z,4.8nm,0.8s
SNAA Sanae 89.57 197 P **P** **00 17 21.3 +1.5**
SNAA IAmb IAmb 00 17 23.1
comp=Z,7.1nm,1.0s
VSU Vasula 90.16 329 P **P** **00 17 21.9 -0.6**
FINES FINESS Array B 91.12 332 P **P** **00 17 27.1 +0.2**
comp=Z,4.3nm,0.8s,baz=103,slow=6.1,SNR=13
comp=Z,4.3nm,0.8s
FINES FINESS Array B 91.12 332 P **P** **00 17 26.1 -0.8**
VNA2 Neumayer--Watz 91.22 198 ⇑P **P** **00 17 29.5 +2.3**
comp=Z,4.9nm,0.6s,baz=107,slow=4.4
VNA2 Neumayer--Watz 91.22 198 P **P** **00 17 29.8 +2.5**
VNA1 Neumayer--Stat 91.59 198 ⇑P **P** **00 17 31.3 +2.3**
comp=Z,5.2nm,0.7s
BELA Belgrano 2 92.84 188 P **P** **00 17 35.1 +0.4**
BELA IAmb IAmb 00 17 36.1
comp=Z,6.8nm,1.5s
ARCES ARCESS Array B 92.97 340 P **P** **00 17 34.8 -0.5**
comp=Z,0.8nm,0.5s,baz=103,slow=5.5,SNR=10
comp=Z,0.8nm,0.5s
SPITS Spitsbergen Ar 96.47 348 LR LR 01 05 35.9
comp=Z,56nm,21.4s,baz=214,slow=38
HFS Hagfors 97.00 330 P **P** **00 17 53.7 -0.1**
comp=Z,2.4nm,0.9s,baz=90,slow=5.4,SNR=2.7
comp=Z,2.4nm,0.9s
SCHQ Schefferville 131.67 355 SKPbc **SKPbc** **00 26 46.8 -3.3**
comp=Z,2.2nm,0.6s,baz=47,slow=7.7,SNR=5.0
PDAR Pinedale Array 132.22 36 SKPbc **SKPbc** **00 26 51.4 -1.4**
comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=4.9
CPUP Villa Florida 143.48 205 PKP PKPbc 00 23 55.9 +1.1
comp=Z,1.2nm,0.6s,baz=191,slow=5.2,SNR=1.9
TXAR Lajitas Array 143.97 48 PKP **PKPdf** **00 23 57.4 -0.8**
comp=Z,0.2nm,0.3s,baz=308,slow=3.0,SNR=3.8
TXAR SKPbc **SKPbc** **00 27 26.1 -0.7**
comp=Z,0.2nm,0.5s,baz=323,slow=1.9,SNR=4.4
LPAZ La Paz 156.48 194 PKPab **PKPab** **00 24 48.9 +1.4**
comp=Z,1.1nm,0.8s,baz=152,slow=2.6,SNR=6.1

IDC ***14*** *00:13:56.4±5.0, 30.21°N×130.93°E, h0km, mb3.7/8, mbtmp3.7/9, ML2.7/1, MS3.3/5, Error ellipse: s-maj=115.9km s-min=45.2km az=166.0*
NIED ***14*** *00:14:07.1, 31.36°N×131.57°E, h33km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-0.01; Mθθ0.80; Mϕϕ-0.79; Mrθ3.03; Mθϕ0.21; Mϕr8.44; Fault plane solution: M₀9.00000×10¹⁴ NP1: ϕs120.00000°, δ4.00000°, λ.9.00000°. NP2:ϕs20.00000°, δ89.00000°, λ.94.00000°.*
JMA ***14*** *00:14:07.1±0.1, 31.4°N±0.3×131.6°E±0.6, h33km, MV3.6/39, SE OFF OSUMI PEN*
JMA Felt I J1 at SE OFF OSUMI PEN .
ISC 14 00:14:06.4±1.4, 31.37°N±0.06×131.6°E±0.1, h40km±9km, n31, σ1°9°09/25, mb3.6/8, MS3.1/3, 4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.30**	**302**	⇓*i*	P	**Pn**	**00 14 14.6**	**0.0**
JNAR				⇓	S	**Sn**	**00 14 20.2**	**-0.2**
JNKG	**Nichinankitago**	**0.33**	**331**	⇓*i*	P	**Pn**	**00 14 15.2**	**+0.1**
JNKG				⇓	S	**Sn**	**00 14 21.3**	**+0.2**
JTSR	**Tashiro 2**	**0.59**	**250**	*i*	P	**Pn**	**00 14 18.8**	**+0.4**
JTSR					S	**Sn**	**00 14 27.5**	**+0.6**
JTZ	**Takazaki**	**0.67**	**322**	*i*	P	**Pn**	**00 14 20.0**	**+0.6**
JTZ					S	**Sn**	**00 14 29.6**	**+0.8**
JTN	**Tanegashima 3**	**0.87**	**215**		P	**Pn**	**00 14 23.7**	**+1.5**
JTSN	**Tsuno**	**0.88**	**356**	*i*	P	**Pn**	**00 14 23.3**	**+1.1**
JTSN					S	**Sn**	**00 14 36.0**	**+2.2**
JSU	**Suzuyama**	**0.96**	**278**	*i*	P	**Pn**	**00 14 24.4**	**+0.9**
JSU					S	**Sn**	**00 14 37.6**	**+1.7**
JMTN	**Minamitane**	**1.13**	**211**	*eP*		**Pn**	**00 14 27.1**	**+1.4**
JZO	**Okuchi**	**1.13**	**313**		P	**Pn**	**00 14 26.9**	**+1.2**
JIU3	**Izumi3**	**1.34**	**332**		P	**Pn**	**00 14 30.6**	**+2.0**
JNU	**Nakatsue**	**1.84**	**342**		LR	LR	00 15 36.0	
	comp=Z,277nm,19.3s,baz=179,slow=34							
KSRS	**Korea Array**	**6.78**	**335**		LR	LR	00 18 40.7	
	comp=Z,120nm,19.1s,baz=165,slow=37							
MJAR	**Matsushiro Arr**	**7.55**	**45**		Pn	Pn	00 16 06.3	+12
	0.1nm,0.3s,baz=235,slow=15,SNR=2.0							
	0.7nm,0.4s							
SONM	**Songino Array**	**25.26**	**318**		P	**P**	**00 19 28.8**	**-0.1**
	1.2nm,0.6s,baz=131,slow=9.5,SNR=7.9							
	1.2nm,0.6s							
PETK	**Petropavlovsk-**	**28.80**	**33**		LR	LR	00 33 24.5	
	comp=Z,46nm,18.9s,baz=96,slow=39							
CMAR	**Chiang Mai Arr**	**32.13**	**254**		LR	LR	00 32 13.2	
	comp=Z,26nm,20.0s,baz=180,slow=35							
H11N2	**WAKE ISLAND Hy**	**33.77**	**102**		T	T	00 56 40.2	
	baz=298,slow=75,SNR=28							
H11N1	**WAKE ISLAND Hy**	**33.78**	**102**		T	T	00 56 39.1	
	baz=298,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**33.79**	**102**		T	T	00 56 40.0	
	baz=298,slow=75,SNR=21							
H11S3	**WAKE ISLAND Hy**	**34.18**	**104**		T	T	00 57 16.6	
	baz=304,slow=74							
H11S1	**WAKE ISLAND Hy**	**34.18**	**104**		T	T	00 57 20.4	
	baz=304,slow=74							
H11S2	**WAKE ISLAND Hy**	**34.20**	**104**		T	T	00 57 30.9	
	baz=304							
KURBB	**Kurchatov Arra**	**43.37**	**312**		P	**P**	**00 22 03.9**	**-0.7**
	0.4nm,0.5s,baz=98,slow=9.1,SNR=4.8							
	0.4nm,0.5s							
BVAR	**Borovoye Array**	**48.55**	**315**		P	**P**	**00 22 45.2**	**-0.2**
	1.5nm,0.5s,baz=92,slow=8.0,SNR=8.9							
	1.5nm,0.5s							
CTA	**Charters Tower**	**53.07**	**163**		LR	LR	00 41 21.3	
	comp=Z,154nm,21.8s,baz=220,slow=32							
FINES	**FINESS Array B**	**69.85**	**330**		P	**P**	**00 25 11.2**	**-1.3**
	0.8nm,0.8s,baz=66,slow=6.5,SNR=4.3							
	0.8nm,0.8s							
AKASG	**Malin Array Be**	**73.53**	**320**		P	**P**	**00 25 34.3**	**-0.5**
	0.2nm,0.3s,baz=60,slow=5.5,SNR=1.5							
	0.2nm,0.3s							
HFS	**Hagfors**	**75.62**	**333**		P	**P**	**00 25 46.7**	**-0.2**
	0.6nm,0.6s,baz=53,slow=5.7,SNR=1.2							
	0.6nm,0.6s							
NB2	**NORSAR Subarra**	**75.99**	**334**		P	**P**	**00 25 49.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=50,slow=6.2							
NOA	**NORSAR Array B**	**75.99**	**334**		P	**P**	**00 25 49.6**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=50,slow=5.5,SNR=1.4							
	comp=Z,0.3nm,0.6s							
BRTR	**Keskin Array B**	**76.19**	**308**		P	**P**	**00 25 49.6**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=62,slow=6.1,SNR=1.6							
	comp=Z,0.5nm,0.8s							

GCMT 14 00:21:03.0±0.3, 49.73°S±0.03°×122.40°E±0.07, h19km±1km, MW4.9/74, Moment Tensor Solution. s14,c18; s74,c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.60±.21; Mθθ2.22±.14; Mϕϕ0.37±.13; Mrθ0.91±.27; Mθϕ-0.33±.07; Mϕr0.71±.33; **Best double couple:** M₀2.67200×10¹⁶ **NP1:**ϕs112.00000°, δ38.00000°, λ-67.00000°. **NP2:**ϕs264.00000°, δ56.00000°, λ-107.00000°. **Principal axes:** T 2.4040, Plg9.0000°, Azm6.0000°; N 0.5340, Plg14.0000°, Azm274.0000°; P -2.9390, Plg73.0000°, Azm129.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Western Indian-Antarctic Ridge**

SOME ***14*** *00:56:11.2, 39.87°N×77.58°E, h20km*
NNC ***14*** *00:56:14.0±1.1, 40.08°N×77.62°E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=7.9km s-min=5.4km az=165.0*
KRNET ***14*** *00:56:19.5±0.1, 40.27°N×77.51°E, h15km, mb3.2*
ISC 14 00:56:14.9±2.0, 40.13°N±0.07°×77.57°E±0.04, h3km±17km, n36, σ1°31°55, 13C-17D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.61**	**6**	⇓*i*	P	**Pg**	**00 56 47.2**	**+1.4**
TARG				⇓*i*	S	**Sg**	**00 57 07.9**	**+1.2**
NRN	**Naryn**	**1.77**	**318**	⇓*eP*		**Pg**	**00 56 50.4**	**+1.5**
NRN				⇓*eS*		**Sg**	**00 57 12.4**	**+0.6**
KDJ	**Kajisay**	**2.02**	**352**	⇓*eP*		**Pg**	**00 56 54.2**	**+0.5**
KDJ				⇑*iS*		**Sg**	**00 57 20.2**	**+0.3**
ULHL	**Ulahol**	**2.34**	**335**	⇑*iP*		**Pg**	**00 57 00.0**	**+0.2**
ULHL				⇑*iS*		**Sg**	**00 57 29.9**	**-0.3**
PRZ	**Przheval'sk**	**2.44**	**15**	⇓*eP*		**Pg**	**00 57 01.1**	**-0.5**
PRZ				⇓*eS*		**Sg**	**00 57 31.5**	**-1.7**
ANVS	**Anan'yevo**	**2.65**	**1**	⇓*eP*		**Pb**	**00 57 03.9**	**+0.7**
ANVS				⇓*eS*		**Sb**	**00 57 36.5**	**+0.3**
BOOM	**Boomskoye usch**	**2.66**	**333**	⇓*iP*		**Pb**	**00 57 03.9**	**+0.6**
BOOM				⇓*iS*		**Sb**	**00 57 36.1**	**-0.3**
TNSS	**Tian-Shan**	**2.94**	**351**		Pg	**Pb**	**00 57 08.4**	**+0.2**
	6.8nm,0.4s							
TNSS					Lg	Lg	00 57 50.3	
	8.7nm,0.7s							
TNSS	**Tian-Shan**	**2.94**	**351**	*eP*		**Pb**	**00 57 08.4**	**+0.2**
	6.8nm,0.4s							
TNSS				*eS*		**Sg**	**00 57 50.3**	**+0.8**
	8.7nm,0.7s							
SALK	**Salom-Alik**	**2.96**	**286**	⇓*eP*		**Pb**	**00 57 08.8**	**+0.4**
SALK				⇓*eS*		**Sb**	**00 57 45.3**	**+0.3**
SATY	**Saty**	**3.00**	**12**	Pg		**Pb**	**00 57 09.4**	**+0.5**
	13nm,0.4s							
SATY				Lg		Lg	00 57 51.9	
	26nm,0.5s							
SATY	**Saty**	**3.00**	**12**	*eP*		**Pb**	**00 57 09.4**	**+0.5**
	13nm,0.4s							
SATY				*eS*		**Sg**	**00 57 51.9**	**+0.8**
	26nm,0.5s							
MDOK	**Medeo**	**3.06**	**353**	Pg		**Pb**	**00 57 09.9**	**-0.1**
	16nm,0.5s							
MDOK				Lg		Lg	00 57 52.8	
	45nm,0.6s							
KNDC	**Almaty**	**3.12**	**352**	⇓Pg		**Pg**	**00 57 13.1**	**-1.6**
	22nm,0.5s							
KNDC				⇑Lg		Lg	00 57 54.5	
	68nm,0.5s							
SFK	**Sufi-Kurgan**	**3.13**	**269**	⇑*eP*		**Pb**	**00 57 12.0**	**+0.8**
SFK				⇑*eS*		**Sb**	**00 57 50.3**	**+0.5**
KST	**Kastek**	**3.15**	**338**	Pg		**Pb**	**00 57 11.7**	**+0.1**
	5.0nm,0.5s							
KST				Lg		Lg	00 57 55.8	
	39nm,0.7s							
KST	**Kastek**	**3.15**	**338**	*eP*		**Pb**	**00 57 11.7**	**+0.1**
	5.0nm,0.5s							
KST				*eS*		**Sg**	**00 57 55.8**	**-0.5**
	39nm,0.7s							
UZB	**Uzynbulak**	**3.21**	**19**	Pg		**Pb**	**00 57 12.4**	**-0.2**
	5.4nm,0.3s							
UZB				Lg		Lg	00 57 57.0	
	11nm,0.6s							
UZB	**Uzynbulak**	**3.21**	**19**	*eP*		**Pb**	**00 57 12.4**	**-0.2**
	5.4nm,0.3s							
UZB				*eS*		**Sg**	**00 57 57.0**	**-0.9**
	11nm,0.6s							
KBK	**Karagaybulak**	**3.21**	**323**	⇓*eP*		**Pb**	**00 57 13.0**	**+0.4**
KBK				⇓*eS*		**Sb**	**00 57 52.4**	**+0.3**
SHLS	**Shalkode**	**3.34**	**24**	Pg		**Pg**	**00 57 17.3**	**-1.6**
	13nm,0.6s							
SHLS				Lg		Lg	00 58 05.5	
	20nm,0.6s							
SHLS	**Shalkode**	**3.34**	**24**	*eP*		**Pg**	**00 57 17.3**	**-1.6**
	13nm,0.6s							
SHLS				*eS*		**Sg**	**00 58 05.5**	**+3.2**
	20nm,0.6s							
KURS	**Kuram**	**3.39**	**7**	Pg		**Pb**	**00 57 16.1**	**+0.5**
	6.8nm,0.7s							
KURS				Lg		Lg	00 58 03.3	
	10.0nm,0.5

AAK	**Ala-Archa**	**3.41**	**318**	⇑Pg		**Pb**	**00 57 17.4**	**+1.3**
	3.4nm,0.6s								
AAK				⇑Lg		Lg	00 58 02.6		
	12nm,0.9s								
FRU1	**Bishkek**	**3.48**	**321**	⇑*e*P		**Pb**	**00 57 15.6**	**-1.5**
FRU1				⇑*e*S		**Sb**	**00 57 56.6**	**-3.1**
PDGK	**Podgornoye**	**3.51**	**24**	⇑Pg		**Pg**	**00 57 19.2**	**-2.9**
	4.1nm,0.5s								
PDGK				⇑Lg		Lg	00 58 05.5		
	23nm,0.7s								
KRBS	**Karabastau**	**3.84**	**339**	Pg		**Pb**	**00 57 24.8**	**+1.6**
	4.7nm,0.7s								
KRBS				Lg		Lg	00 58 18.3		
	18nm,0.7s								
KRBS	**Karabastau**	**3.84**	**339**	*e*P		**Pb**	**00 57 24.8**	**+1.6**
	4.7nm,0.7s								
KRBS				*e*S		**Sg**	**00 58 18.3**	**+0.1**
	18nm,0.7s								
SGDS	**Sogindy**	**3.98**	**327**	Pg		**Pb**	**00 57 26.9**	**+1.1**
	3.5nm,0.7s								
SGDS				Lg		Lg	00 58 21.9		
	9.3nm,0.6s								
BLB	**Baldybastay**	**4.02**	**9**	Pg		**Pb**	**00 57 27.9**	**+1.4**
	6.8nm,0.7s								
BLB				Lg		Lg	00 58 23.3		
	13nm,0.6s								
ARXS	**Arharly**	**4.09**	**3**	*e*P		**Pb**	**00 57 29.4**	**+1.9**
	3.5nm,0.2s								
KNOS	**Konyrlen**	**4.39**	**15**	Pg		**Pb**	**00 57 34.9**	**+2.1**
	3.8nm,0.7s								
KNOS				Lg		Lg	00 58 35.5		
	4.0nm,0.7s								
DJR	**Jarkent**	**4.51**	**21**	Pg		**Pb**	**00 57 37.0**	**+2.2**
	2.1nm,0.3s								
DJR				Lg		Lg	00 58 39.2		
	3.6nm,0.3s								
DJR	**Jarkent**	**4.51**	**21**	*e*P		**Pb**	**00 57 37.0**	**+2.2**
	2.1nm,0.3s								
DJR				*e*S		**Sg**	**00 58 39.2**	**-0.6**
	3.6nm,0.3s								
KK31	**Karatay Array**	**6.07**	**302**	⇓Pg		**Pg**	**00 58 08.9**	**-2.3**
	0.4nm,0.3s								
KK31				⇓Lg		Lg	00 59 29.9		
	2.5nm,0.8s,baz=114,slow=29,SNR=4.7								

REY **14** *00:56:17.3,64.˚62N×17.˚52W,h1km*
IDC **14** *00:56:19.6±0.6,64.˚59N×17.˚47W,h0km,mb3.9/20, mbtmp3.9/25,ML2.7/4,MS3.4/23,Error ellipse: s-maj=17.3km s-min=11.8km az=22.0*
GFZ **14** *00:56:19.1±0.3,65˚N±5˚×1˚8W±˚,h10km,M4.0/30, mb4.1/30*
BGS **14** *00:56:19.8±2.3,64.˚53N×17.˚72W,h10km,ML4.5, Presumed earthquake*
DNK **14** *00:56:19.8±10.0,64.˚60N×17.˚63W,h2km,ML2.8, Presumed earthquake*
NEIC **14** *00:56:21.0±2.0,64.˚53N±0.˚09×17.˚7W±0.˚2,h10km±1km, mb4.4/74,Error ellipse: s-maj=15.5km s-min=10.4km az=200.0*
MOS **14** *00:56:21.0±2.4,64.˚50N×17.˚70W,h10km,mb4.5/29,Error ellipse: s-maj=10.9km s-min=7.5km az=107.3*

ISC 14 00:56:20.3±0.3,**64.˚63N**±0.˚02×**17.˚53W**±0.˚02,**h10**km,**n354**, *σ*2**s01**/345,**mb4.3**/104,**MS3.4**/23,**4C-20D,Iceland**

Code	Station Name	Δ°	AZ°	Phase	ISC	Time h m s	Res ISC
IKIS	**Kista**	**0.05**	**342**	P	**Pg**	**00 56 19.0**	**-3.6**
IKIS				S	**Sg**	**00 56 20.2**	**-3.9**
IVON	**Vonarskard**	**0.11**	**295**	P	**Pg**	**00 56 20.2**	**-2.9**
IDYN	**Dyngjuhals**	**0.18**	**23**	P	**Pg**	**00 56 21.3**	**-2.9**
IGRF	**Grimsfjall**	**0.25**	**153**	P	**Pg**	**00 56 23.0**	**-2.5**
ISKR	**Skrokkalda**	**0.38**	**260**	P	**Pg**	**00 56 25.0**	**-2.8**
IVOT	**Vottur**	**0.39**	**157**	P	**Pg**	**00 56 24.6**	**-3.4**
IJOK	**Jokulheimar**	**0.44**	**224**	P	**Pg**	**00 56 25.8**	**-3.0**
THOR	**Thorvaldshraun**	**0.48**	**49**	P	**Pg**	**00 56 27.0**	**-2.6**
THOR				S	**Sg**	**00 56 34.2**	**-1.7**
IKRE	**Kreppuhraun**	**0.52**	**72**	P	**Pg**	**00 56 27.4**	**-3.0**
IKRE				S	**Sg**	**00 56 34.8**	**-2.4**
IASK	**Askja**	**0.57**	**41**	P	**Pg**	**00 56 28.0**	**-3.4**
IASK				S	**Sg**	**00 56 36.2**	**-2.7**
IIEY	**Innrieyrar**	**0.59**	**206**	P	**Pg**	**00 56 28.0**	**-3.8**
IIEY				S	**Sg**	**00 56 37.1**	**-2.6**
IMKO	**Mokollar**	**0.62**	**55**	P	**Pg**	**00 56 29.3**	**-3.0**
IMKO				S	**Sg**	**00 56 38.5**	**-1.9**
IKSK	**Karasker**	**0.65**	**135**	P	**Pg**	**00 56 29.1**	**-3.9**
IKSK				S	**Sg**	**00 56 38.5**	**-3.0**
IKAL	**Kalfafell**	**0.69**	**186**	P	**Pg**	**00 56 29.8**	**-3.8**
IKAL				S	**Sg**	**00 56 40.4**	**-2.1**
ISVA	**Svartarkot**	**0.72**	**9**	P	**Pg**	**00 56 30.5**	**-3.8**
IFAL	**Falljokull**	**0.74**	**155**	S	**Sg**	**00 56 41.7**	**-2.5**
IVSH	**V-Sauoahnukur**	**0.79**	**76**	P	**Pg**	**00 56 31.9**	**-3.7**
IVSH				S	**Sg**	**00 56 43.3**	**-2.7**
SLET	**Slettubjorg**	**0.80**	**150**	P	**Pg**	**00 56 31.5**	**-4.2**
SLET				S	**Sg**	**00 56 42.9**	**-3.1**
IKVI	**Kvisker**	**0.80**	**143**	P	**Pg**	**00 56 31.1**	**-4.7**
IKVI				S	**Sg**	**00 56 43.3**	**-3.0**
IFAG	**Fagurholsmyri**	**0.85**	**153**	P	**Pg**	**00 56 32.0**	**-4.6**
IFAG				S	**Sg**	**00 56 45.2**	**-2.4**
IADA	**Aoalbol**	**0.92**	**64**	P	**Pg**	**00 56 33.9**	**-4.2**
IADA				S	**Sg**	**00 56 46.8**	**-3.3**
ISTE	**Stelbrattur**	**0.93**	**285**	S	**Sg**	**00 56 47.0**	**-3.3**
IMEL	**Melhnausar**	**1.02**	**21**	P	**Pg**	**00 56 35.2**	**-4.7**
IMEL				S	**Sg**	**00 56 50.0**	**-3.0**
ISLY	**Slysaalda**	**1.06**	**222**	P	**Pg**	**00 56 36.8**	**-4.0**
ISLY				S	**Sg**	**00 56 50.6**	**-4.0**
IFED	**Fedgar**	**1.12**	**238**	P	**Pb**	**00 56 37.9**	**-3.9**
IFED				S	**Sg**	**00 56 53.0**	**-3.4**
IKVO	**Krokottuvotn**	**1.12**	**14**	P	**Pb**	**00 56 37.1**	**-4.7**
IRJU	**Rjupnafell**	**1.13**	**207**	P	**Pb**	**00 56 37.7**	**-4.2**
IGRS	**Grimsstaoir**	**1.18**	**30**	P	**Pb**	**00 56 38.1**	**-4.6**
IGRS				S	**Sb**	**00 56 54.5**	**-3.5**
IGYG	**Gygjarholskot**	**1.22**	**255**	P	**Pn**	**00 56 38.9**	**-4.4**
ISKI	**Skildingahlsh**	**1.27**	**9**	P	**Pn**	**00 56 39.5**	**-4.6**
IGHA	**Grjothals**	**1.27**	**16**	P	**Pn**	**00 56 39.5**	**-4.7**
IGRA	**Granastaoir**	**1.30**	**359**	P	**Pn**	**00 56 39.9**	**-4.5**
IDIM	**Dimmadalss**	**1.36**	**10**	P	**Pn**	**00 56 40.9**	**-4.5**
IESK	**Eystri-Skogar**	**1.39**	**218**	P	**Pn**	**00 56 42.1**	**-3.7**
ISAU	**Saurbar**	**1.41**	**244**	P	**Pn**	**00 56 41.9**	**-4.1**
IHED	**Heoinshofoi**	**1.46**	**3**	P	**Pn**	**00 56 42.5**	**-4.2**
IBRE	**Brettingsstaoi**	**1.51**	**354**	P	**Pn**	**00 56 43.4**	**-4.0**
IGIL	**Gilhagi**	**1.54**	**18**	P	**Pn**	**00 56 43.9**	**-3.9**
IASB	**sbjarnarstai**	**1.64**	**276**	P	**Pn**	**00 56 46.0**	**-3.1**
BORG	**Borgarnes**	**1.64**	**276**	Pn	**Pn**	**00 56 46.0**	**-3.2**
	18nm,0.3s,baz=92,slow=8.8,SNR=103						
BORG				Sn	**Sg**	**00 57 11.6**	**-1.4**
	22nm,0.3s,baz=119,slow=23,SNR=4.3						
BORG	**Borgarnes**	**1.64**	**276**	P	**Pn**	**00 56 46.4**	**-2.8**
ILEI	**Leirhofn**	**1.84**	**13**	P	**Pn**	**00 56 48.3**	**-3.6**
IGRI	**Grimsey**	**1.93**	**354**	P	**Pn**	**00 56 49.7**	**-3.5**
IGRI				S	**Sn**	**00 57 14.9**	**-2.6**
SCO	**Scoresbysund**	**6.12**	**346**	P	**Pn**	**00 57 49.6**	**-1.0**
SCO	**Scoresbysund**	**6.12**	**346**		**Pn**	**00 57 49.6**	**-1.0**
SCO	**Scoresbysund**	**6.12**	**346**	P	**Pn**	**00 57 51.5**	**+0.8**
SCO	**Scoresbysund**	**6.12**	**346**	*i* P	**Pn**	**00 57 49.0**	**-1.7**
SCO	**Scoresbysund**	**6.12**	**346**	*i* P	**Pn**	**00 57 50.9**	**+0.2**
SCO				*e*S	**Sn**	**00 58 59.3**	**-1.3**
SCO				IAML		01 01 53.3	
	comp=Z,28nm,3.6s						
SOEG	**Soedalen**	**6.61**	**309**	*e*P	**Pn**	**00 57 58.1**	**+0.7**
SOEG				IAML		01 01 42.7	
	comp=Z,35nm,2.7s						
JMIC	**Jan Mayen**	**7.23**	**24**	LR	LR	01 00 23.1	
	comp=Z,503nm,18.4s,baz=196,slow=34						
LINV	**Loch Inver, As**	**8.78**	**132**	*e*P	**Pn**	**00 58 26.2**	**-0.9**
LINV				IAML		00 58 29.1	
	comp=Z,7.8nm,0.4s						
KPL	**Plockton**	**9.30**	**136**	*e*P	**Pn**	**00 58 32.8**	**-1.4**
KPL				IAML		00 58 35.6	
	comp=Z,25nm,0.4s						
DBG	**Daneborg**	**9.77**	**356**	*e*P	Pn	00 58 46.6	+6.0
DBG				IAML		01 05 37.0	
	comp=Z,13nm,4.8s						
MCD	**Coleburn Disti**	**9.86**	**129**	*e*P	**Pn**	**00 58 42.1**	**+0.1**
MCD				IAML		00 58 45.8	
	comp=Z,9.6nm,0.5s						
INVG	**Invergeldie, C**	**10.54**	**135**	*e*P	**Pn**	**00 58 50.7**	**-0.7**
INVG				IAML		00 58 53.4	
	comp=Z,8.3nm,0.6s						
EAB	**Aberfoyle**	**10.66**	**136**	*e*P	**Pn**	**00 58 52.3**	**-0.5**
PGBU	**Glenifferbraes**	**10.94**	**138**	*e*P	**Pn**	**00 58 55.7**	**-1.0**
PGBU				IAML		00 58 58.5	
	comp=Z,38nm,0.6s						
SUMG	**Summit**	**10.97**	**326**	*e*P	**Pn**	**00 58 58.9**	**+1.5**
SUMG				IAML		01 02 32.6	
	comp=Z,34nm,3.6s						
NEWG	**New Galloway**	**11.61**	**139**	*e*P	**Pn**	**00 59 05.8**	**-0.2**
NEWG				IAML		00 59 08.1	
	comp=Z,7.4nm,0.6s						
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**00 59 06.1**	**-1.6**
	comp=Z,4.3nm,0.6s,baz=321,slow=13,SNR=16						
EKA				Sn	**Sn**	**01 01 17.5**	**-1.0**
	baz=334,slow=33						
EKA				LR	LR	01 03 14.4	
	comp=Z,197nm,21.1s,baz=341,slow=36						
ESK	**Eskdalemuir**	**11.74**	**136**	P	**Pn**	**00 59 07.3**	**-0.3**
ESK	**Eskdalemuir**	**11.74**	**136**	Pn	**Pn**	**00 59 07.3**	**-0.3**
ESK	**Eskdalemuir**	**11.74**	**136**	*e*P	**Pn**	**00 59 06.9**	**-0.8**
DAG	**Danmarks Havn**	**12.21**	**359**	P	Pn	00 59 18.2	+4.2
DAG	**Danmarks Havn**	**12.21**	**359**	*i* P	Pn	00 59 17.9	+3.9
NRS	**Narsarsuaq**	**13.12**	**268**	Pn	Pn	00 59 16.7	-10
NC204	**NORSAR Array S**	**13.24**	**92**	Pn	**Pn**	**00 59 26.1**	**-2.0**
NOA	**NORSAR Array B**	**13.54**	**92**	Pn	**Pn**	**00 59 30.0**	**-2.2**
	baz=300,slow=13,SNR=5.2						
NOA				LR	LR	01 04 43.9	
	comp=Z,60nm,21.3s,baz=305,slow=37						
	comp=Z,0.7nm,0.6s						
NOA	**NORSAR Array B**	**13.54**	**92**	*e*P	**Pn**	**00 59 35.5**	**+3.2**
SFJD	**Kangerlussuaq**	**13.67**	**295**	LR	LR	01 04 31.2	
	comp=Z,222nm,18.5s,baz=84,slow=36						
NC405	**NORSAR Array S**	**13.72**	**91**	Pn	**Pn**	**00 59 36.8**	**+2.1**
ILULI	**Ilulissat**	**13.81**	**304**	P	Pn	00 59 25.4	-10
LBWR	**Ladybower, Pea**	**13.83**	**137**	P	**Pn**	**00 59 36.3**	**+0.1**
CWF	**Charnwood Fore**	**14.54**	**137**	P	**P**	**00 59 48.4**	**-4.1**
HFS	**Hagfors**	**15.06**	**93**	Pn	**Pn**	**00 59 51.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=306,slow=16,SNR=1.5						
	comp=Z,0.7nm,0.7s						
KBS	**Kingsbay**	**16.68**	**19**	*i* P	**P**	**01 00 14.1**	**-2.0**
KBS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBS	**Kingsbay**	**16.68**	**19**	Pn	**Pn**	**01 00 11.6**	**-2.2**
ARCES	**ARCESS Array B**	**17.15**	**54**	P	**P**	**01 00 19.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=274,slow=13,SNR=6.5						
	comp=Z,0.7nm,0.7s						
BSEG	**Bad Segeberg**	**17.63**	**114**	P	**Pn**	**01 00 24.8**	**-0.9**
WTSB	**Winterswijk**	**17.85**	**124**	P	**P**	**01 00 28.2**	**-0.9**
IBBN	**Ibbenburen**	**17.92**	**122**	P	**P**	**01 00 32.0**	**+2.1**
UCC	**Uccle**	**17.98**	**130**	*d*P	**P**	**01 00 30.2**	**-0.5**
RETH	**Rethem/Aller,**	**18.18**	**118**	P	**P**	**01 00 31.8**	**-0.9**
HGN	**Heimansgroeve**	**18.54**	**127**	P	**Pn**	**01 00 37.0**	**+0.1**
BMRD	**Maredsous**	**18.54**	**130**	*d*P	**Pn**	**01 00 38.4**	**+1.4**
BSTI	**Sart Tilman**	**18.57**	**128**	*d*P	**Pn**	**01 00 39.7**	**+2.4**
BGES	**Gesves**	**18.58**	**129**	*d*P	**Pn**	**01 00 38.9**	**+1.5**
BCLA	**Clavier**	**18.62**	**129**	*d*P	**P**	**01 00 32.1**	**-5.5**
DOU	**Dourbes**	**18.66**	**131**	*d*P	**Pn**	**01 00 39.7**	**+1.2**
	comp=Z,3.5nm,1.1s						
MEM	**Membach**	**18.70**	**127**	*d*P	**Pn**	**01 00 40.3**	**+1.4**
MEM	**Membach**	**18.70**	**127**	P	**Pn**	**01 00 40.9**	**+2.0**
BTNL	**Ternell**	**18.76**	**127**	*d*P	**Pn**	**01 00 41.2**	**+1.6**
RCHB	**Rochefort**	**18.82**	**130**	*d*P	**Pn**	**01 00 42.7**	**+2.4**
BHOU	**Houvegnez**	**18.91**	**128**	*d*P	**Pn**	**01 00 43.3**	**+1.8**
ASSE	**Asse, Remlinge**	**19.15**	**117**	P	**Pn**	**01 00 44.5**	**+0.2**
CLZ	**Clausthal**	**19.27**	**118**	P	**Pn**	**01 00 46.2**	**+0.4**
GTTG	**Gottingen**	**19.35**	**120**	P	**Pn**	**01 00 47.0**	**+0.3**
WLF	**Walferdange**	**19.55**	**129**	*d*P	**Pn**	**01 00 48.9**	**-0.2**
FIA1	**FINESS Array S**	**19.72**	**79**	P	**Pn**	**01 00 51.0**	**-0.1**
FINES	**FINESS Array B**	**19.72**	**79**	P	**P**	**01 00 48.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=308,slow=9.4,SNR=6.9						
FINES				LR	LR	01 08 00.9	
	comp=Z,80nm,20.5s,baz=278,slow=36						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**19.72**	**79**	*e*P	**Pn**	**01 00 53.8**	**+2.7**
FINES	**FINESS Array B**	**19.72**	**79**	P	**Pn**	**01 00 50.4**	**-0.7**
CLF	**Chambon-Foret**	**19.77**	**138**		**Pn**	**01 00 50.8**	**-1.0**
CLF				IAmb	IAmb	01 00 57.8	
	comp=Z,40nm,1.5s						
CLF	**Chambon-Foret**	**19.77**	**138**	P	**Pn**	**01 00 50.5**	**-1.3**
UBBA	**Unterbreizbach**	**19.95**	**121**	P	**Pn**	**01 00 53.7**	**0.0**
WIMM	**Wimmelburg**	**19.95**	**117**	P	**Pn**	**01 00 53.5**	**-0.4**
NEUB	**Neuenburg**	**20.30**	**117**	P	Pn	01 00 57.5	-0.5
APA	**Apatity**	**20.36**	**59**	*e*P	Pn	01 01 00.0	+1.5
APA				*e*S	**S**	**01 04 44.6**	**+0.4**
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOX	**Moxa**	**20.69**	**119**	P	Pn	01 01 01.6	-1.0
ECH	**Echery**	**21.14**	**129**	P	**P**	**01 01 06.3**	**+1.2**
ECH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ECH	**Echery**	**21.14**	**129**		**P**	**01 01 06.2**	**+1.2**
ECH	**Echery**	**21.14**	**129**	P	**P**	**01 01 06.0**	**+0.9**
TANN	**Tannenbergstha**	**21.20**	**118**	P	**P**	**01 01 06.1**	**+0.3**
GRA1	**Grafenberg Arr**	**21.32**	**121**	P	**P**	**01 01 08.3**	**+1.2**
GRA1				IAmb	IAmb	01 01 22.7	
	comp=Z,27nm,1.2s						
GRF	**Grafenberg Arr**	**21.32**	**121**	P	**P**	**01 01 08.3**	**+1.2**
GRF				pmax	pmax		
	comp=Z,27nm,1.2s						
GRFO	**Grafenberg**	**21.32**	**121**	P	**P**	**01 01 09.2**	**+2.1**
NKC	**Novy Kostel**	**21.34**	**118**	*e*P	**P**	**01 01 07.6**	**+0.3**
NKC	**Novy Kostel**	**21.34**	**118**	*e*P	**P**	**01 01 07.6**	**+0.3**
NKC	**Novy Kostel**	**21.34**	**118**	P	**P**	**01 01 08.1**	**+0.8**
BRG	**Berggiesshubel**	**21.41**	**115**	P	**P**	**01 01 08.6**	**+0.7**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**01 01 08.0**	**+0.1**
BRG				Amp		01 01 09.9	
	comp=Z,13nm,1.2s						
BRG	**Berggiesshubel**	**21.41**	**115**	P	**P**	**01 01 12.1**	**+4.1**
BRG				Amp		01 01 13.4	
	comp=Z,13nm,1.2s						
BRG	**Berggiesshubel**	**21.41**	**115**	P	P	01 01 17.9	+10
BRG				Amp		01 01 18.8	
	comp=Z,14nm,1.2s						
BRG	**Berggiesshubel**	**21.41**	**115**	S	Sn	01 05 14.0	+1.1
HSKC	**Hora Svate Kat**	**21.42**	**116**	P	**P**	**01 01 08.8**	**+0.7**
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**01 01 08.8**	**+0.5**
BFO				pmax	pmax		
	comp=Z,16nm,1.1s						
BFO	**Black Forest**	**21.43**	**127**		**P**	**01 01 08.8**	**+0.5**
BFO				IAmb	IAmb	01 01 13.8	
	comp=Z,16nm,1.1s						
VSU	**Vasula**	**21.58**	**86**	⇓*e*P	**P**	**01 01 11.3**	**+1.6**
VSU				pmax	pmax		
	comp=Z,16nm,0.9s						
VSU	**Vasula**	**21.58**	**86**	P	**P**	**01 01 07.7**	**-2.0**
FRB	**Frobisher Bay**	**21.75**	**291**	LR	LR	01 09 44.9	
	comp=Z,61nm,19.2s,baz=96,slow=37						
BOURR	**Bourrignon**	**21.88**	**130**	P	**P**	**01 01 12.3**	**-0.8**
PVCC	**Panska Ves**	**21.92**	**115**	P	**P**	**01 01 15.1**	**+1.6**
SLE	**Schleitheim**	**21.98**	**128**	P	**P**	**01 01 15.2**	**+1.1**
PABE	**Paberze**	**22.22**	**95**		**P**	**01 01 15.9**	**-0.7**
PABE	**Paberze**	**22.22**	**95**	P	**P**	**01 01 17.0**	**+0.5**
PRU	**Pruhonice**	**22.34**	**116**	*e*P	P	01 01 24.0	+6.0
PRU				*e*S	Sn	01 05 28.9	-6.5
PRU				MLR	MLR		
	comp=Z,100nm,11.2s						
PRU	**Pruhonice**	**22.34**	**116**	*e*P	P	01 01 24.0	+6.0
PRU				*e*S	Sn	01 05 28.9	-6.5
PRU				AMS	AMS	01 12 50.0	
	comp=Z,100nm,11.2s						
KSP	**Ksiaz**	**22.36**	**112**	P	**P**	**01 01 18.6**	**+0.4**
	comp=Z,21nm,1.4s						
PUL	**Pulkovo**	**22.38**	**80**	*de*P	**P**	**01 01 19.3**	**+1.0**
PUL				pmax	pmax		
	comp=Z,37nm,0.8s						
CHVC	**Chvalec**	**22.46**	**113**	*e*P	**P**	**01 01 20.7**	**+1.4**
CHVC	**Chvalec**	**22.46**	**113**	*e*P	**P**	**01 01 20.7**	**+1.4**
UPC	**Upice**	**22.51**	**113**	AMS	AMS	01 13 00.0	
	comp=Z,100nm,13.6s						
UPC	**Upice**	**22.51**	**113**	P	**P**	**01 01 20.3**	**+0.5**
OSTC	**Ostas**	**22.55**	**113**	*e*S	Sn	01 05 38.3	-2.1
ZVC	**Zvikov**	**22.65**	**117**	*e*P	**P**	**01 01 23.7**	**+2.4**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**01 01 22.3**	**+0.8**
KHC				*e*S	**S**	**01 05 30.4**	**+1.0**
KHC				MLR	MLR		
	comp=Z,100nm,15.8s						
KHC	**Kasperske Hory**	**22.67**	**118**		**P**	**01 01 21.0**	**-0.5**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**01 01 22.3**	**+0.8**
KHC				*e*S	**S**	**01 05 30.4**	**+1.0**
KHC				AMS	AMS	01 12 10.0	
	comp=Z,100nm,15.8s						
KHC	**Kasperske Hory**	**22.67**	**118**	P	**P**	**01 01 21.7**	**+0.2**
	comp=Z,8.0nm,1.4s						
BNALP	**Bannalp**	**22.73**	**129**	P	**P**	**01 01 26.0**	**+3.7**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**01 01 21.2**	**-1.2**
DPC				MLR	MLR		
	comp=Z,100nm,13.5s						
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**01 01 21.2**	**-1.2**
DPC				AMS	AMS	01 13 10.0	
	comp=Z,100nm,13.5s						
DPC	**Dobruska-Polom**	**22.76**	**113**	P	**P**	**01 01 22.8**	**+0.4**
	comp=Z,11nm,1.2s						
DPC	**Dobruska-Polom**	**22.76**	**113**	P	**P**	**01 01 23.4**	**+0.9**
SENIN	**Lac Senin/Sane**	**22.81**	**131**		**P**	**01 01 23.4**	**+0.2**
SENIN				IAmb	IAmb	01 01 46.8	
	comp=Z,17nm,1.4s						
DAVA	**Damuels**	**22.87**	**126**	*e*P	**P**	**01 01 25.0**	**+1.3**
	comp=Z,9.3nm,1.4s						
SSB	**Saint Sauveur**	**22.93**	**137**	P	**P**	**01 01 24.0**	**-0.3**
SSB				pmax	pmax		
	comp=Z,25nm,1.5s						
SSB	**Saint Sauveur**	**22.93**	**137**	P	**P**	**01 01 24.0**	**-0.3**
SSB				IAmb	IAmb	01 01 38.5	
	comp=Z,25nm,1.5s						
SSB	**Saint Sauveur**	**22.93**	**137**	P	**P**	**01 01 22.5**	**-1.8**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**01 01 25.2**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=318,slow=9.5,SNR=16						
	comp=Z,1.7nm,0.9s						
GERES	**GERESS Array B**	**22.95**	**119**	*e*P	**P**	**01 01 26.7**	**+2.2**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**01 01 24.8**	**+0.3**
RETA	**Reutte**	**23.00**	**125**	*e*P	**P**	**01 01 26.6**	**+1.5**
	comp=Z,3.0nm,0.9s						
KRLC	**Kraliky**	**23.16**	**113**	*e*P	**P**	**01 01 28.4**	**+1.8**
KRLC	**Kraliky**	**23.16**	**113**	*e*P	**P**	**01 01 28.4**	**+1.8**
MOTA	**Moosalm**	**23.25**	**124**	*e*P	**P**	**01 01 28.7**	**+1.0**
	comp=Z,6.2nm,1.1s						
DAVOX	**Davos/Dischmat**	**23.30**	**127**	P	**P**	**01 01 29.8**	**+1.6**
	comp=Z,3.7nm,0.8s,baz=330,slow=14,SNR=6.2						
DAVOX				LR	LR	01 11 09.1	
	comp=Z,56nm,18.6s,baz=300,slow=38						
	comp=Z,3.7nm,0.8s						
TUE	**Stuetta**	**23.39**	**128**		**P**	**01 01 30.8**	**+1.6**
TUE	**Stuetta**	**23.39**	**128**	P	**P**	**01 01 29.3**	**+0.1**
	comp=Z,1μmcomp=Z,38nm,1.9s						
TUE	**Stuetta**	**23.39**	**128**	P	**P**	**01 01 31.9**	**+2.7**
SQTA	**Sankt Quirin**	**23.39**	**124**	*e*P	**P**	**01 01 30.1**	**+1.0**
	comp=Z,7.1nm,0.9s						
FETA	**Feichten**	**23.39**	**125**	*e*P	**P**	**01 01 30.1**	**+0.9**
	comp=Z,8.5nm,1.2s						
WATA	**Walderalm**	**23.42**	**124**	*e*P	**P**	**01 01 30.5**	**+1.1**
	comp=Z,3.4nm,0.8s						
WTTA	**Wattenberg**	**23.51**	**124**	*e*P	**P**	**01 01 31.1**	**+0.8**
	comp=Z,10nm,1.3s						
STEB	**Steborice**	**23.66**	**112**	*e*P	**P**	**01 01 32.2**	**+0.6**
VRAC	**Vranov**	**23.69**	**114**	P	**P**	**01 01 32.5**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=323,slow=10,SNR=5.9						
VRAC				LR	LR	01 11 20.7	
	comp=Z,62nm,19.2s,baz=331,slow=38						
	comp=Z,2.2nm,0.8s						
VRAC	**Vranov**	**23.69**	**114**	*e*P	**P**	**01 01 31.9**	**0.0**
MORC	**Moravsky Berou**	**23.69**	**112**	P	**P**	**01 01 31.3**	**-0.7**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MORC	**Moravsky Berou**	**23.69**	**112**	P	**P**	**01 01 31.2**	**-0.7**
MORC	**Moravsky Berou**	**23.69**	**112**	*e*P	**P**	**01 01 31.5**	**-0.4**
MORC	**Moravsky Berou**	**23.69**	**112**	P	**P**	**01 01 32.9**	**+1.0**
LESA	**Schwarzeetal**	**23.75**	**122**	*e*P	**P**	**01 01 33.8**	**+1.3**
	comp=Z,3.5nm,1.0s						
KRUC	**Moravsky**	**23.81**	**115**	*e*P	**P**	**01 01 32.2**	**-0.8**
KRUC	**Moravsky**	**23.81**	**115**	P	**P**	**01 01 33.7**	**+0.7**
NACGM	**Naroch**	**23.83**	**93**	*e*P	**P**	**01 01 34.0**	**+0.9**
	comp=Z,15nm,1.0s,baz=311						
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BURAR	Bucovina Array	28.53	106	P	P	01 02 17.3	+1.5
MLR	Muntele Rosu	30.53	108	LR	LR	01 16 02.9	
	comp=Z,70nm,18.2s,baz=237,slow=39						
VRI	Vrincioaia	30.55	106	P	P	01 02 33.2	-0.4
	comp=Z,12nm,3.0s						
GHRR		30.67	105	P	P	01 02 34.3	-0.4
VORR	Voronezh	31.43	87 *eP*		P	01 02 49.4	+8.1
VORR				pmax	pmax		
	comp=Z,19nm,0.4s						
VSR	Storozhevoye	31.75	87 *eP*		P	01 02 45.6	+1.5
VSR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MD01	Midelt array s	32.75	160	P	P	01 02 54.5	+1.3
MD31	MD31	32.75	160	P	P	01 02 54.0	+0.9
MDT	Midelt	32.82	160	LR	LR	01 15 37.3	
	comp=Z,69nm,21.6s,baz=28,slow=35						
KEST	Kesra	33.14	138	LR	LR	01 17 01.0	
	comp=Z,126nm,18.5s,baz=262,slow=38						
ARTI	Arti	36.07	66 *d iP*		P	01 03 24.1	+2.5
ARTI						01 04 40.8	
ARTI						01 05 44.6	
ARTI				S	S	01 09 05.5	+5.2
ARTI				SS	SnSn	01 11 28.9	+4.3
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.9s						
ARTI	Arti	36.07	66	P	P	01 03 23.9	+2.4
ARTI				IAmb	IAmb	01 03 29.1	
	comp=Z,5.3nm,1.2s						
NRIK	Noril'sk	36.50	35	LR	LR	01 20 17.9	
	comp=Z,52nm,18.8s,baz=336,slow=39						
NRIK	Noril'sk	36.50	35 *eP*		P	01 03 26.7	+1.6
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GOF	Gofitskoye	38.12	91 *ceP*		P	01 03 43.6	+4.5
BR131	Keskin Array S	38.48	105	P	P	01 03 43.6	+1.2
BR131				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BR131	Keskin Array S	38.48	105	P	P	01 03 43.6	+1.2
BR131				IAmb	IAmb	01 03 47.7	
	comp=Z,5.6nm,1.0s						
BRTR	Keskin Array B	38.48	105	P	P	01 03 43.7	+1.4
	comp=Z,2.4nm,0.7s,baz=339,slow=6.9,SNR=9.3						
	comp=Z,2.4nm,0.7s						
BRTR	Keskin Array B	38.48	105 *eP*		P	01 03 44.9	+2.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	38.48	105	P	P	01 03 44.3	+1.9
KIV	Kislovodsk	38.85	92 *eP*		P	01 03 47.6	+2.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,16.0s						
KBZ	Khabaz	39.12	92	P	P	01 03 49.0	+1.5
	comp=Z,2.1nm,0.8s,baz=304,slow=3.3,SNR=4.0						
	comp=Z,2.1nm,0.8s						
NCK	Nalchik	39.61	92 *eP*		P	01 03 54.4	+2.7
NCK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULM	Lac du Bonnet	41.60	289	LR	LR	01 20 52.8	
	comp=Z,56nm,18.6s,baz=261,slow=35						
D25K	Kavik River	41.62	335	P	P	01 04 10.2	+2.2
D25K				IAmb	IAmb	01 04 13.9	
	comp=Z,10nm,1.0s						
C23K	Itkillik River	41.90	338		P	01 04 11.0	+0.9
C23K				IAmb	IAmb	01 04 18.7	
	comp=Z,11nm,1.4s						
AB31	Akbulak array	42.01	73		P	01 04 13.5	+2.1
ABKAR	Akbulak array	42.01	73	P	P	01 04 13.1	+1.8
D24K	Happy Valley	42.20	336	P	P	01 04 14.5	+1.9
D24K				IAmb	IAmb	01 04 16.4	
	comp=Z,5.2nm,0.8s						
H29M	Whitestone	42.67	329	P	P	01 04 17.7	+1.3
D23K	Nanushuk River	42.68	337	P	P	01 04 17.3	+0.8
GNI	Garni	42.84	94	P	P	01 04 18.7	+0.3
	comp=Z,7.5nm,2.1s						
F25K	Christian Rive	42.99	334		P	01 04 20.0	+0.9
F25K				IAmb	IAmb	01 04 25.3	
	comp=Z,5.8nm,1.1s						
E24K	Your Creek	43.09	335	P	P	01 04 21.1	+1.2
BORK	Borovoye	43.18	62	P	P	01 04 21.6	+0.8
BORK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BORK	Borovoye	43.18	62	P	P	01 04 21.6	+0.8
BVAR	Borovoye Array	43.23	62	P	P	01 04 22.2	+1.0
	comp=Z,2.3nm,0.8s,baz=331,slow=8.5,SNR=11						
	comp=Z,2.3nm,0.8s						
E23K	Chandalar	43.30	336		P	01 04 22.4	+0.7
H27K	Steamboat Moun	43.34	331	P	P	01 04 23.2	+1.2
J30M	Hart River	43.58	327		P	01 04 25.2	+1.2
E22K	Anaktuvuk Pass	43.61	337	P	P	01 04 25.6	+1.4
E21K	Killik River	43.69	338	P	P	01 04 26.4	+1.7
E21K				IAmb	IAmb	01 04 41.1	
	comp=Z,6.3nm,1.4s						
G24K	Hadweenzic Riv	44.12	334		P	01 04 29.5	+1.3
G24K				IAmb	IAmb	01 04 36.5	
	comp=Z,9.8nm,1.3s						
I26K	Coal Creek Min	44.48	331	P	P	01 04 31.3	+0.3
I26K				IAmb	IAmb	01 04 52.2	
	comp=Z,8.2nm,1.5s						
C18K	Utukok River	44.55	342	P	P	01 04 33.7	+2.0
C18K				IAmb	IAmb	01 04 48.5	
	comp=Z,4.2nm,1.1s						
F21K	Alatna River	44.72	337		P	01 04 34.1	+1.2
F21K				IAmb	IAmb	01 04 38.4	
	comp=Z,5.5nm,1.2s						
F20K	Avaraart Lake	45.24	338		P	01 04 38.1	+1.0
F20K				IAmb	IAmb	01 04 42.6	
	comp=Z,4.7nm,1.1s						
G21K	Allakaket	45.36	337		P	01 04 39.2	+1.1
G21K				IAmb	IAmb	01 04 45.1	
	comp=Z,3.8nm,1.0s						
H22K	Ishtalitna Cre	45.56	335	P	P	01 04 41.3	+1.7
H22K				IAmb	IAmb	01 04 48.0	
	comp=Z,5.3nm,1.2s						
ILAR	Eielson Array	45.72	332	P	P	01 04 42.2	+1.3
	comp=Z,1.9nm,1.0s,baz=24,slow=6.7,SNR=13						
	comp=Z,1.9nm,1.0s						
ILAR	Eielson Array	45.72	332	P	P	01 04 43.4	+2.5
ILAR	Eielson Array	45.72	332	P	P	01 04 43.4	+2.5
SCRK	Sand Creek	45.82	330	P	P	01 04 41.7	-0.2
I23K	Minto, Yukon-K	45.86	334	IAmb	IAmb	01 04 50.1	
	comp=Z,4.1nm,1.2s						
M29M	Somme Creek	45.90	326	P	P	01 04 44.7	+2.1
M29M				IAmb	IAmb	01 04 50.9	
	comp=Z,3.3nm,1.0s						
H21K	Melozitna River	46.02	336	P	P	01 04 45.4	+2.1
MLY	Manley	46.22	335	P	P	01 04 47.1	+2.1
G19K	Purcell Mounta	46.29	339	P	P	01 04 46.0	+0.6
G19K				IAmb	IAmb	01 04 56.9	
	comp=Z,3.2nm,1.1s						
G18K	Tagagawik	46.76	339		P	01 04 50.9	+1.8
G18K				IAmb	IAmb	01 05 01.2	
	comp=Z,5.8nm,1.2s						
J20K	Nowinta River	47.62	336	IAmb	IAmb	01 05 02.0	
	comp=Z,4.8nm,1.0s						
ZALV	Zalesovo Beam	47.67	51	P	P	01 04 56.2	-0.1
	comp=Z,0.4nm,0.4s,baz=316,slow=6.2,SNR=4.7						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	47.67	51 *eP*		P	01 04 58.6	+2.3
KURK	Kurchatov	48.14	58 *eP*		P	01 05 01.2	+1.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	48.14	58	P	P	01 04 59.9	-0.1
KURK				IAmb	IAmb	01 05 03.3	
	comp=Z,2.8nm,0.8s						
KURBB	Kurchatov Arra	48.19	58	P	P	01 04 59.7	-0.7
	comp=Z,2.2nm,0.8s,baz=322,slow=7.5,SNR=7.8						
	comp=Z,2.2nm,0.8s						
T47A	Sharon Grove	48.62	270	P	P	01 05 05.7	+1.8
M17K	Holitna River	50.77	336	P	P	01 05 22.2	+2.3
M17K				IAmb	IAmb	01 05 25.8	
	comp=Z,5.5nm,1.1s						
KK31	Karatay Array	51.30	70	P	P	01 05 26.5	+2.3
KK31				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KK31	Karatay Array	51.30	70	P	P	01 05 26.5	+2.3
KK31				IAmb	IAmb	01 05 30.4	
	comp=Z,6.5nm,1.2s						
KKAR	Karatay Array	51.30	70	P	P	01 05 26.4	+2.2
KKAR	Karatay Array	51.30	70	P	P	01 05 26.4	+2.2
NEW	Newport	51.44	303	LR	LR	01 27 31.7	
	comp=Z,57nm,18.2s,baz=110,slow=36						
BOZ	Bozeman (W)	51.62	297	P	P	01 05 27.2	+0.5
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BOZ	Bozeman (W)	51.62	297		P	01 05 27.2	+0.5
BOZ				IAmb	IAmb	01 05 32.1	
	comp=Z,4.5nm,1.2s						
DGZ	Jazzator, Alta	52.11	53 *eP*		P	01 05 32.6	+2.3
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
M14K	Bethel	52.12	339	P	P	01 05 32.4	+2.4
MKAR	Makanchi Array	52.76	58	P	P	01 05 35.3	+0.3
	comp=Z,1.3nm,1.0s,baz=338,slow=9.5,SNR=4.4						
	comp=Z,1.3nm,1.0s						
MKAR	Makanchi Array	52.76	58 *eP*		P	01 05 37.6	+2.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	Torodi Ar. Bea	53.11	156	P	P	01 05 37.4	-0.5
	comp=Z,2.2nm,1.0s,baz=341,slow=6.9,SNR=8.6						
	comp=Z,2.2nm,1.0s						
TORD	Torodi Ar. Bea	53.11	156	P	P	01 05 37.4	-0.5
TORD				IAmb	IAmb	01 06 12.0	
	comp=Z,4.2nm,0.9s						
PD31	Pinedale Array	53.18	293	P	P	01 05 38.1	-0.3
PD31				IAmb	IAmb	01 05 40.3	
	comp=Z,3.2nm,0.9s						
PDAR	Pinedale Array	53.18	293	P	P	01 05 38.7	+0.3
	comp=Z,1.5nm,0.8s,baz=60,slow=5.9,SNR=13						
	comp=Z,1.5nm,0.8s						
PDAR	Pinedale Array	53.18	293	P	P	01 05 38.0	-0.4
KDAK	Kodiak Island	53.23	332	LR	LR	01 29 56.1	
	comp=Z,59nm,20.3s,baz=358,slow=38						
AAK	Ala-Archa	53.29	67 *eP*		P	01 05 41.1	+2.0
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BTK	Batken	53.98	72	P	P	01 05 45.4	+1.2
BTK	Batken	53.98	72		P	01 05 45.4	+1.2
KNGR	Kungurtug, Tuv	54.60	45 ⇑ *iP*		P	01 05 49.2	+0.6
KNGR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GAR	Garm	54.67	73		P	01 05 50.5	+1.3
MOY	Mondy	54.70	42 *eP*		P	01 05 53.0	+3.8
MOY				pmax	pmax		
	comp=Z,12nm,1.5s						
HWUT	Hardware Ranch	54.96	294	P	P	01 05 51.0	-0.4
HWUT				IAmb	IAmb	01 05 56.5	
	comp=Z,5.5nm,1.2s						
TARG	Taragay, Kyrgy	55.36	65	P	P	01 05 56.4	+1.9
TARG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TARG	Taragay, Kyrgy	55.36	65		P	01 05 56.4	+1.9
TARG				IAmb	IAmb	01 06 01.5	
	comp=Z,4.3nm,1.1s						
TLY	Talaya	55.44	40	LR	LR	01 34 11.6	
	comp=Z,70nm,18.2s,baz=192,slow=41						
KSH2	Kashi	56.68	68	P	P	01 06 06.3	+2.6
KSH2				pP	sP	01 06 08.4	-0.5
KSH2				sP	pP	01 06 13.1	+5.6
KSH2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PV10	Paradox Valley	56.70	290	P	P	01 06 03.6	-0.4
PV02	Paradox Valley	56.73	290	P	P	01 06 04.3	+0.2
PV03	Paradox Valley	56.73	290	P	P	01 06 04.3	+0.2
PV19	Morning Glory	56.74	290	P	P	01 06 04.2	0.0
PV19				IAmb	IAmb	01 06 37.1	
	comp=Z,4.3nm,1.0s						
PV18	Skein Mesa, Pa	56.76	290	P	P	01 06 04.1	-0.3
PV13	Radium Mtn., P	56.80	290	P	P	01 06 04.8	+0.1
PV05	Paradox Valley	56.98	290	P	P	01 06 05.6	-0.3
MTPU	Mount Pierson	58.25	292	P	P	01 06 14.5	-0.5
MTPU				IAmb	IAmb	01 06 50.0	
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	58.55	165	P	P	01 06 17.4	+0.5
	comp=Z,4.7nm,0.9s,baz=0.3,slow=11,SNR=3.2						
	comp=Z,4.7nm,0.9s						
YBH	Yreka Blue Hor	59.07	303	LR	LR	01 29 36.4	
	comp=Z,49nm,20.0s,baz=350,slow=34						
CCUT	Cedar City	59.15	293	P	P	01 06 21.0	-0.1
CCUT				IAmb	IAmb	01 06 26.5	
	comp=Z,2.0nm,0.6s						
JCT	Junction City	59.64	278	P	P	01 06 24.7	+0.3
JCT				pmax	pmax		
	comp=Z,7.0nm,0.4s						
JCT	Junction City	59.64	278	P	P	01 06 24.6	+0.3
SONM	Songino Array	59.68	40	P	P	01 06 26.9	+2.4
	comp=Z,2.4nm,0.4s,baz=343,slow=1.5,SNR=4.2						
	comp=Z,2.4nm,0.4s						
SONM	Songino Array	59.68	40 *eP*		P	01 06 27.6	+3.1
GDL2	Guadalupe Moun	60.09	282	P	P	01 06 28.3	+0.8
WUAZ	Wupatki	60.11	290	P	P	01 06 27.9	+0.2
NVAR	Mina Array Bea	60.31	297	P	P	01 06 30.3	+1.2
	comp=Z,0.2nm,0.5s,baz=35,slow=6.6,SNR=2.0						
NVAR				LR	LR	01 32 07.1	
	comp=Z,56nm,18.5s,baz=184,slow=36						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	62.28	280	P	P	01 06 43.0	+0.6
	comp=Z,0.6nm,0.9s,baz=57,slow=4.6,SNR=5.3						
	comp=Z,0.6nm,0.9s						
SHEM	Shemya Is, Ala	62.63	352	LR	LR	01 33 03.8	
	comp=Z,29nm,21.4s,baz=218,slow=35						
HHC	Hu-ho-hao-te	67.55	40 *eP*		P	01 07 16.8	+0.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,90nm,4.4s						
KSRS	Korea Array	74.69	28	LR	LR	01 44 00.8	
	comp=Z,22nm,18.0s,baz=345,slow=38						
PZH	PanZhiHua	77.77	53	P	P	01 08 18.8	+1.3
KMI2	Kunming	79.37	53	P	P	01 08 27.3	+0.8
KMI2				sP	PcP	01 08 33.3	-1.3
KMI2				pmax	pmax		
	comp=Z,13nm,1.2s						
CMAR	Chiang Mai Arr	84.16	59	P	P	01 08 53.2	+1.6
	comp=Z,0.7nm,0.3s,baz=342,slow=5.0,SNR=4.7						
	comp=Z,0.7nm,0.3s						

NEIC **14** *01:08:24.2±1.6, 5.7S±0.1×154.7E±0.1, h140km±7km, mb4.5/14, Error ellipse: s-maj=16.8km s-min=14.1km az=50.0*
IDC **14** *01:08:29.9±3.7, 6.00S×154.53E, h179km±30km, mb3.6/8, mbtmp4.2/10, Error ellipse: s-maj=26.2km s-min=19.0km az=44.0*
ISC 14 01:08:24.7±0.7, **5.71S**±0.08×**154.66E**±0.08, **h150**km, **n35**, σ1ᵍ**19**/**38**, **mb4.1**/12, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.91	301			Pn	01 09 09.9	-1.1
RABL					Sn	Sn	01 09 45.8	-0.9
PMG	Port Moresby	8.29	243	P		Pn	01 10 24.1	+2.0
	16nm,0.3s,baz=56,slow=7.3,SNR=7.5							
PMG				S		Sn	01 11 54.2	-0.2
	25nm,0.5s,baz=94,slow=17,SNR=5.7							
PMG	Port Moresby	8.29	243			Pn	01 10 22.4	+0.4
PMG						Sn	01 11 53.0	-1.4
KOUNC	Koumac, New Ca	17.46	149	P		P	01 12 16.7	-1.5
EIDS	Eidsvold	19.85	190	P		P	01 12 44.4	+0.3
EIDS				IAmb		IAmb	01 13 15.2	
	comp=Z,19nm,1.3s							
DZM	Mont Dzumac	19.86	146	P		P	01 12 44.5	+0.2
	comp=Z,20nm,0.6s,baz=326,slow=15,SNR=64							
ONTNC	Ouen Toro	20.06	146	P		P	01 12 45.4	-1.0
ONTNC				IAmb		IAmb	01 13 12.4	
	comp=Z,26nm,0.9s							
MARNC	Mare, Loyalty	20.34	142	P		P	01 12 49.3	0.0
OUENC	Ouen Island, N	20.36	146	P		P	01 12 49.9	+0.3
OUENC				IAmb		IAmb	01 12 50.9	
	comp=Z,26nm,0.5s							
WB0	Warramunga Arr	24.16	233	P		P	01 13 27.4	+0.2
WB0				IAmb		IAmb	01 14 10.4	
	comp=Z,19nm,1.4s							
WR8	Warramunga Arr	24.18	232	P		P	01 13 27.5	+0.1
WR8				IAmb		IAmb	01 13 35.5	
	comp=Z,21nm,1.4s							
MTN	Manton Dam	24.26	251	P		P	01 13 27.5	-0.6
MTN				IAmb		IAmb	01 13 37.4	
	comp=Z,29nm,1.3s							
WRA	Warramunga Arr	24.30	233	P		P	01 13 28.9	+0.4
	comp=Z,1.9nm,0.3s,baz=56,slow=10,SNR=26							
WRA				PcP		PcP	01 17 04.4	-0.2
	comp=Z,0.3nm,0.6s,baz=60,slow=2.6,SNR=1.7							
	comp=Z,1.9nm,0.3s							
WRA	Warramunga Arr	24.30	233	P		P	01 13 28.1	-0.4
WRA						PcP	01 17 02.5	-2.0
ARMA	Armidale	24.74	186	P		P	01 13 30.3	-2.2
ARMA				IAmb		IAmb	01 13 35.4	
	comp=Z,22nm,1.2s							
ASAR	Alice Springs	26.79	226	P		P	01 13 50.9	-0.2
	comp=Z,0.6nm,0.5s,baz=57,slow=9.3,SNR=6.6							
ASAR				PcP		PcP	01 17 10.3	+0.1
	comp=Z,0.7nm,0.6s,baz=64,slow=2.1,SNR=6.2							
	comp=Z,0.6nm,0.5s							
ASAR	Alice Springs	26.79	226	P		P	01 13 49.7	-1.3
ASAR						PcP	01 17 10.2	-0.1
H11S3	WAKE ISLAND Hy	26.82	26	T		T	01 42 06.1	
	baz=207,slow=73,SNR=11							
H11S2	WAKE ISLAND Hy	26.82	26	T		T	01 42 00.4	
	baz=207,slow=73,SNR=5.1							
H11S1	WAKE ISLAND Hy	26.84	26	T		T	01 42 00.9	
	baz=207,slow=73,SNR=4.6							
RTZ	Ruatahuna	38.50	151	P		P	01 15 31.8	-0.7
CMAR	Chiang Mai Arr	59.94	295	P		P	01 18 18.0	+2.4
	comp=Z,1.1nm,0.4s,baz=99,slow=4.6,SNR=5.0							
	comp=Z,1.1nm,0.4s							
CMAR	Chiang Mai Arr	59.94	295	P		P	01 18 15.6	0.0
VNDA	Vanda	71.87	178	P		P	01 19 31.9	+1.1
	comp=Z,1.3nm,0.8s,baz=328,slow=5.5,SNR=5.9							
	comp=Z,1.3nm,0.8s							
VNDA	Vanda	71.87	178	P		P	01 19 30.1	-0.7
MKAR	Makanchi Array	82.23	319	P		P	01 20 31.6	+2.3
	comp=Z,0.4nm,0.7s,baz=95,slow=7.2,SNR=3.0							
	comp=Z,0.4nm,0.7s							
MKAR	Makanchi Array	82.23	319	P		P	01 20 30.4	+1.2
ILAR	Eielson Array	82.31	22	P		P	01 20 34.5	+5.2
	comp=Z,0.2nm,0.5s,baz=246,slow=5.0,SNR=2.4							
	comp=Z,0.2nm,0.5s							
ILAR	Eielson Array	82.31	22	P		P	01 20 30.0	+0.8
QSPA	South Pole Qui	84.26	180	P		P	01 20 40.0	+0.6
	comp=Z,3.2nm,0.5s,baz=11,slow=5.0,SNR=40							
	comp=Z,3.2nm,0.5s							
QSPA	South Pole Qui	84.26	180	P		P	01 20 39.9	+0.5
QSPA				IAmb		IAmb	01 20 40.7	
	comp=Z,3.9nm,0.6s							
MAW	Mawson	85.45	203	P		P	01 20 45.9	+0.8
	comp=Z,1.4nm,0.4s,baz=83,slow=3.9,SNR=17							
	comp=Z,1.4nm,0.4s							
MAW	Mawson	85.45	203	P		P	01 20 45.6	+0.5
TORD	Torodi Ar. Bea	152.35	287	PKPbc		PKPbc	01 28 03.0	-1.0
	comp=Z,0.2nm,0.3s,baz=88,slow=1.9,SNR=5.6							
TORD	Torodi Ar. Bea	152.35	287			PKPbc	01 28 01.1	-2.9

IDC **14** *01:11:48.2±2.8, 27.10S×178.47W, h277km±12km, mb3.5/5, mbtmp4.2/6, Error ellipse: s-maj=56.4km s-min=20.6km az=42.0*
ISC 14 01:11:51.8±1.5, **27.5S**±0.2×**178.5W**±0.2, **h300**km, **n29**, σ1ᵍ**76**/**32**, **mb3.9**/**7**, **3C**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.77	164	P		Pn	01 12 36.4	-0.3
RIZ				S		S	01 13 07.6	-4.9
RAO	Raoul Island	1.77	164	P		Pn	01 12 36.5	-0.3
	389nm,0.3s,baz=73,slow=20,SNR=9.2							
RAO				S		S	01 13 11.4	-1.2
	629nm,0.3s,baz=109,slow=19,SNR=6.6							
GLKZ	Green Lake	1.79	164	P		Pn	01 12 36.7	-0.2
GLKZ				S		S	01 13 09.7	-3.0
OUZ	Omahuta	10.21	220	P		P	01 14 17.2	+1.5
MXZ	Matakaoa Point	10.35	194	P		Pn	01 14 13.8	-0.2
MXZ				S		S	01 16 02.5	-7.8
WCZ	Waipu Caves	10.35	214	P		P	01 14 18.8	+1.5
WMGZ	Waiomatatini S	10.57	193	P		Pn	01 14 14.2	-2.6
WMGZ				S		S	01 16 05.3	-10
PUZ	Puketiti	10.85	194	P		Pn	01 14 20.2	0.0
PUZ				S		S	01 16 14.6	-7.1
RUGZ	Raukumara Rang	10.88	196	P		Pn	01 14 18.6	-2.1
CNGZ	Carnagh Statio	11.26	193	P		Pn	01 14 25.6	+0.5
MWZ	Matawai	11.27	196	P		Pn	01 14 24.2	-1.1
TKGZ	Te Karaka	11.29	195	P		Pn	01 14 23.9	-1.6
TKGZ				S		S	01 16 22.5	-9.2
URZ	Urewera	11.31	198	P		Pn	01 14 24.0	-1.7
	19nm,0.3s,baz=262,slow=4.3,SNR=25							
URZ				S		S	01 16 26.7	-5.2
	15nm,0.3s,baz=246,slow=23,SNR=18							
URZ	Urewera	11.31	198	P		Pn	01 14 23.9	-1.8
MUGZ	Murupara	11.60	199	P		Pn	01 14 28.3	-1.1
RTZ	Ruatahuna	11.68	198	P		Pn	01 14 29.4	-0.9
SNGZ	Shannon Statio	11.74	196	P		Pn	01 14 30.8	-0.3
RAHZ	Arahi	11.93	197	P		Pn	01 14 32.0	-1.3
RAHZ				S		S	01 16 40.3	-5.9
MTHZ	Maungataniwha	11.93	198	P		Pn	01 14 32.7	-0.7
NMHZ	Naumai	12.17	198	P		Pn	01 14 34.6	-1.8
NMHZ				S		S	01 16 45.8	-5.9
ASAR	Alice Springs	42.90	264	P		P	01 19 20.8	-1.0
	0.7nm,0.5s,baz=105,slow=8.2,SNR=14							
	0.7nm,0.5s							
WRA	Warramunga Arr	43.63	269	P		P	01 19 25.9	-1.6
	1.9nm,0.6s,baz=106,slow=7.9,SNR=10							
	1.9nm,0.6s							
VNDA	Vanda	50.89	185	P		P	01 20 24.4	+2.2
	1.2nm,0.5s,baz=14,slow=8.2,SNR=8.2							
	1.2nm,0.5s							
QSPA	South Pole Qui	62.56	180	P		P	01 21 45.6	+1.5
	3.0nm,0.8s,baz=36,slow=6.7,SNR=8.8							
	3.0nm,0.8s							
MAW	Mawson	74.83	200	P		P	01 22 59.8	+0.6
	1.7nm,0.7s,baz=124,slow=3.6,SNR=2.8							
	1.7nm,0.7s							
TROLL	Troll, Antarti	80.72	180 ⇑	P		P	01 23 32.3	+0.7
	comp=Z,193nm,0.6s							
VNA2	Neumayer--Watz	81.61	177 ⇑	P		P	01 23 37.4	+1.3
	comp=Z,4.1nm,0.8s,baz=184,slow=5.2							
VNA1	Neumayer--Stat	81.84	177 ⇑	P		P	01 23 38.7	+1.4
	comp=Z,5.4nm,0.9s							
BVAR	Borovoye Array	124.05	317	PKP		PKiKP	01 30 12.0	-2.5
	comp=Z,0.6nm,0.6s,baz=101,slow=2.9,SNR=4.3							

SJA **14** *01:11:52.1±0.6, 20.91S×68.72W, h129km±3km, ML3.8, MW3.8*
NEIC **14

comp=Z,1μm,0.8s
GO01 Chusmiza 1.30 343 Pn 01 12 19.6 +0.6
GO01 Chusmiza 1.30 343 ⇓iP Pn 01 12 19.8 +0.8
GO01 eS Sn 01 12 39.2 +0.6
GO01 IAML 01 12 42.4
comp=N,4μm,0.4s
PB11 IPOC Station P 1.41 325 eP Pn 01 12 20.4 +0.6
PB11 eS Sn 01 12 41.6 +1.4
PB11 IAML 01 12 42.0
comp=Z,1μm,0.3s
PB11 IPOC Station P 1.41 325 Pn 01 12 20.5 +0.6
PB11 IPOC Station P 1.41 325 ⇓iP Pn 01 12 20.7 +0.8
PB11 eS Sn 01 12 41.0 +0.8
PB11 IAML 01 12 42.9
comp=E,4μm,0.3s
TA02 Huaiquique 1.42 297 eP Pn 01 12 21.0 +1.3
TA02 eS Sn 01 12 42.3 +2.3
TA02 IAML 01 12 43.5
comp=Z,836nm,0.1s
TA02 Huaiquique 1.42 297 eP Pn 01 12 21.0 +1.3
PB03 IPOC Station P 1.44 219 eP Pn 01 12 20.9 +0.7
PB03 eS Sn 01 12 42.1 +1.3
PB03 IAML 01 12 46.5
comp=Z,399nm,0.5s
PB03 IPOC Station P 1.44 219 Pn 01 12 20.6 +0.5
PB03 IPOC Station P 1.44 219 ⇓iP Pn 01 12 20.8 +0.7
PB03 eS Sn 01 12 41.1 +0.3
PSGCX Pisagua 1.82 316 eP Pn 01 12 25.3 +0.8
PSGCX eS Sn 01 12 49.8 +1.2
PSGCX IAML 01 12 52.3
comp=Z,555nm,1.0s
PSGCX Pisagua 1.82 316 Pn 01 12 25.2 +0.6
PSGCX Pisagua 1.82 316 iP Pn 01 12 25.3 +0.8
PB06 IPOC Station P 1.92 202 eP Pn 01 12 26.6 +0.8
PB06 eS Sn 01 12 53.0 +2.1
PB06 IAML 01 12 55.9
comp=Z,399nm,0.3s
PB06 IPOC Station P 1.92 202 Pn 01 12 26.0 +0.2
PB06 IPOC Station P 1.92 202 ⇓iP Pn 01 12 26.5 +0.7
PB06 IAML 01 12 56.6
comp=E,610nm,0.3s
AF01 San Pedro de A 2.10 165 eP Pn 01 12 29.9 +1.7
AF01 eS Sn 01 12 40.9 -14
AF01 IAML 01 12 46.9
comp=Z,380nm,0.8s
AF01 San Pedro de A 2.10 165 Pn 01 12 28.6 +0.4
AF01 San Pedro de A 2.10 165 iP Pn 01 12 29.5 +1.4
PB05 IPOC Station P 2.33 214 eP Pn 01 12 31.7 +0.8
PB05 eS Sn 01 13 02.2 +2.3
PB05 IAML 01 13 08.6
comp=Z,279nm,0.5s
PB05 IPOC Station P 2.33 214 Pn 01 12 31.4 +0.5
PB05 IPOC Station P 2.33 214 eP Pn 01 12 31.3 +0.5
PB05 IAML 01 13 08.6
comp=E,398nm,0.3s
PX02 IPOC Station P 2.36 325 eP Pn 01 12 31.3 +0.1
PB16 IPOC Station P 2.66 345 eP Pn 01 12 37.4 +1.8
PB16 eS Sn 01 13 07.5 -0.7
PB16 IAML 01 13 14.8
comp=Z,202nm,0.4s
PB16 IPOC Station P 2.66 345 Pn 01 12 36.4 +0.7
PB16 IPOC Station P 2.66 345 ⇓iP Pn 01 12 37.4 +1.8
PB16 IAML 01 13 18.5
comp=N,221nm,0.3s
PB12 IPOC Station P 2.72 327 eP Pn 01 12 36.2 +0.4
PB12 eS Sn 01 13 09.4 +0.7
PB12 IAML 01 13 16.1
comp=Z,423nm,0.3s
PB12 IPOC Station P 2.72 327 Pn 01 12 36.1 +0.2
PB12 IPOC Station P 2.72 327 eP Pn 01 12 36.1 +0.2
PB12 IAML 01 13 14.1
comp=N,754nm,0.5s
AP01 Chacalluta 2.93 330 eP Pn 01 12 40.6 +2.0
AP01 IAML 01 13 26.0
comp=Z,545nm,0.2s
AP01 Chacalluta 2.93 330 Pn 01 12 39.7 +1.2
PB18 Visviri 3.38 349 Pn 01 12 46.8 +1.8
PB18 Visviri 3.38 349 eP Pn 01 12 48.1 +3.1
PB18 IAML 01 13 48.1
comp=E,124nm,0.5s
HJA Humahuaca 3.87 127 eP Pn 01 12 52.7 +1.4
HJA eS Sn 01 13 40.4 +4.0
PB14 IPOC Station P 3.98 202 eP Pn 01 12 53.2 +0.6
PB14 eS Sn 01 13 39.2 +0.4
PB14 IAML 01 13 51.6
comp=Z,103nm,0.7s
PB14 IPOC Station P 3.98 202 Pn 01 12 52.4 -0.2
SALTA 3.99 146 eP Pn 01 12 54.5 +1.5
LPAZ La Paz 4.65 8 P Pn 01 13 04.4 +2.4
comp=Z,30nm,0.3s,baz=196,slow=3.6,SNR=442
LPAZ La Paz 4.65 8 eP Pn 01 13 04.7 +2.7
LPAZ La Paz 4.65 8 Pn 01 13 03.2 +1.3
SLA San Lorenzo 4.84 142 eP Pn 01 13 05.1 +1.0
AC01 Pan de Azucar 5.46 197 Pn 01 13 10.7 -1.5
AC02 Maricunga 5.89 183 Pn 01 13 17.7 -0.8
GO03 Copiapo 6.77 191 Pn Pn 01 13 27.9 -2.0
AC04 Llanos de Chal 7.54 196 Pn Pn 01 13 36.8 -3.5
AC05 El Transito 8.00 189 Pn 01 13 43.7 -2.9
LCO Las Campanas 8.24 192 Pn Pn 01 13 46.4 -3.6
CO01 Juntas del Tor 9.09 187 Pn Pn 01 13 59.1 -2.4
GO04 Tololo Observa 9.39 191 Pn Pn 01 14 01.9 -3.5
CO02 Combarbal 10.43 191 Pn Pn 01 14 14.7 -4.6
PTLB Pontes e Lacer 10.66 61 Pn 01 14 19.8 -2.7
CO04 Los Peladeros 11.25 190 Pn Pn 01 14 28.5 -2.0
VILB Vilhena 11.41 47 Pn 01 14 30.7 -1.7
MT02 Curacav 12.46 189 Pn Pn 01 14 45.9 -0.3
MT01 Popeta 13.08 189 Pn Pn 01 14 52.6 -1.5
BI02 San Fabin de 15.84 187 Pn 01 15 29.5 +0.4
BI02 IAmb IAmb 01 15 31.4
comp=Z,11nm,0.9s
GO06 Currarehue 18.74 186 P P 01 16 01.8 -0.6
GO06 IAmb IAmb 01 16 07.0
comp=Z,5.9nm,0.8s
MACA Manacapuru-AM 19.34 25 P P 01 16 07.5 -1.4
PLCA Paso Flores 19.81 184 P Pn 01 16 15.8 -0.9
comp=Z,2.9nm,0.8s,baz=8,slow=13,SNR=6.3
PLCA Paso Flores 19.81 184 P P 01 16 14.9 +1.0
BOAV Boa Vista 24.55 20 P P 01 17 01.2 -0.3
BOAV IAmb IAmb 01 17 46.0
comp=Z,7.0nm,1.5s
TORD Torodi Ar. Bea 77.05 70 P P 01 23 32.8 -0.3
comp=Z,0.5nm,0.7s,baz=247,slow=5.3,SNR=5.0
comp=Z,0.5nm,0.7s
H11S2 WAKE ISLAND Hy 27.92 278 T T 03 50 54.6
baz=101,slow=74,SNR=8.6
H11S1 WAKE ISLAND Hy 27.93 278 T T 03 50 54.3
baz=101,slow=74,SNR=6.4
H11S3 WAKE ISLAND Hy 27.94 278 T T 03 50 57.6
baz=101,slow=74,SNR=4.8
H11N3 WAKE ISLAND Hy 27.98 279 T T 03 50 53.7
baz=107
H11N2 WAKE ISLAND Hy 28.00 279 T T 03 50 53.0
baz=107
H11N1 WAKE ISLAND Hy 28.00 279 T T 03 50 58.0
baz=107
MKAR Makanchi Array 145.10 36 PKP PKPdf 01 31 17.4 +1.5
comp=Z,0.3nm,0.5s,baz=316,slow=2.9,SNR=2.9
MKAR Makanchi Array 145.10 36 PKPdf 01 31 16.8 +0.9
HHC Hu-ho-hao-te 160.13 359 eP PKPdf 01 31 39.8 +1.7

NEIC ***14*** *01:25:12.8±1.5, 18.°68N±0.°07×145.°7E±0.°1, h196km±5km, mb4.6/39, Error ellipse: s-maj=15.8km s-min=9.5km az=76.0*
IDC ***14*** *01:25:16.6±3.6, 18.°68N×145.°75E, h242km±33km, mb3.9/26, mbtmp4.5/28, Error ellipse: s-maj=19.2km s-min=8.4km az=85.0*

ISC 14 01:25:12.3±0.8, 18.°68N±0.°05×145.°70E±0.°10, h196km±7km, n105, σ0.91/112, mb4.5/46, 3C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.42**	**179**	Pn	**Pn**	**01 26 06.2**	**-0.6**
DPSS				Sn	**Sn**	**01 26 48.9**	**-0.6**
GUMO	**Guam**	**5.12**	**189**	S	**Sn**	**01 27 28.0**	**-0.1**
	113nm,0.3s,baz=15,slow=20,SNR=3.7						
GUMO	**Guam**	**5.12**	**189**	Pn	**Pn**	**01 26 28.2**	**0.0**
JCJ	**Chichijima**	**8.98**	**339**	P	**Pn**	**01 27 18.4**	**+0.1**
	34nm,0.6s,baz=304,slow=24,SNR=1.3						
JCJ				S	**Sn**	**01 28 56.7**	**-2.3**
	61nm,0.7s,baz=308,slow=23,SNR=2.4						
JCJ	**Chichijima**	**8.98**	**339**		**Pn**	**01 27 17.8**	**-0.5**
JHJ2	**Mitsune**	**15.31**	**341**	P	**P**	**01 28 40.2**	**+1.4**
JHJ	**Hachijo jima 2**	**15.33**	**341**	P	**P**	**01 28 40.4**	**+1.4**
	44nm,0.3s,baz=260,slow=22,SNR=8.6						
JHJ				S	**Sn**	**01 31 29.9**	**-0.4**
	132nm,0.9s,baz=303,slow=20,SNR=2.6						
PATS	**Pohnpei**	**17.01**	**132**	Pn	**Pn**	**01 29 00.7**	**+1.8**
JOW	**Kunigami**	**17.99**	**300**		**P**	**01 29 08.0**	**-0.3**
JOW				IAmb	IAmb	01 29 12.4	
	comp=Z,36nm,0.9s						
JMN	**Monobe**	**18.34**	**327**	P	**P**	**01 29 12.4**	**+0.3**
JGF	**Kuroka**	**18.41**	**338**		**P**	**01 29 13.0**	**+0.3**
JGF				IAmb	IAmb	01 29 23.6	
	comp=Z,16nm,0.7s						
MJAR	**Matsushiro Arr**	**18.98**	**341**	P	**P**	**01 29 19.6**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=166,slow=10,SNR=7.8						
MJAR	**Matsushiro Arr**	**18.98**	**341**		**P**	**01 29 20.3**	**+1.4**
MAJO	**Matsushiro**	**18.98**	**341**	P	**P**	**01 29 18.5**	**-0.4**
MAJO				IAmb	IAmb	01 29 26.0	
	comp=Z,21nm,1.2s						
MJB9	**Matsu-Tunnel**	**18.99**	**341**	P	**P**	**01 29 18.9**	**-0.1**
MJB9				IAmb	IAmb	01 29 27.0	
	comp=Z,22nm,1.3s						
H11S3	**WAKE ISLAND Hy**	**19.89**	**87**	T	T	01 50 53.8	
	baz=274						
H11S1	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	01 50 55.9	
	baz=274						
H11S2	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	01 50 49.1	
	baz=274						
H11N1	**WAKE ISLAND Hy**	**20.04**	**84**	T	T	01 51 05.1	
	baz=268,slow=74						
H11N2	**WAKE ISLAND Hy**	**20.04**	**84**	T	T	01 51 13.5	
	baz=268,slow=74						
H11N3	**WAKE ISLAND Hy**	**20.06**	**84**	T	T	01 51 15.8	
	baz=268						
YHNB	**Yeheng**	**23.36**	**289**	P	**P**	**01 30 05.4**	**+2.0**
YHNB				IAmb	IAmb	01 30 06.0	
	comp=Z,18nm,0.8s						
RABL	**Rabaul**	**23.60**	**164**	P	**P**	**01 30 05.9**	**+0.4**
SSLB	**Suanglung**	**23.61**	**287**		**P**	**01 30 06.7**	**+1.2**
KSRS	**Korea Array**	**24.34**	**324**	P	**P**	**01 30 12.1**	**+0.1**
	comp=Z,3.4nm,0.6s,baz=147,slow=8.7,SNR=13						
	comp=Z,3.4nm,0.6s						
NJ2	**Nanjing**	**27.59**	**304**	*eP*	**P**	**01 30 42.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
DL2	**Dalian**	**29.02**	**319**	*eP*	**P**	**01 30 56.0**	**+2.1**
DL2				pmax	pmax		
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**30.04**	**237**	P	**P**	**01 31 03.8**	**+0.7**
TOLI2				IAmb	IAmb	01 31 04.6	
	comp=Z,10.0nm,1.0s						
MTN	**Manton Dam**	**34.46**	**206**	P	**P**	**01 31 41.2**	**-0.3**
MTN				IAmb	IAmb	01 31 51.6	
	comp=Z,32nm,1.3s						
HEH	**HeiHe**	**34.73**	**339**	*eP*	**P**	**01 31 43.6**	**+0.1**
HHC	**Hu-ho-hao-te**	**36.62**	**314**	*eP*	**P**	**01 32 01.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,4.0s						
KNRA	**Kununurra**	**37.99**	**207**	P	**P**	**01 32 11.8**	**+0.3**
KNRA				IAmb	IAmb	01 32 35.7	
	comp=Z,25nm,1.2s						
WB0	**Warramunga Arr**	**39.78**	**197**		**P**	**01 32 26.5**	**+0.2**
WB0				IAmb	IAmb	01 32 27.9	
	comp=Z,9.2nm,0.4s						
WB0				PcP	**PcP**	**01 34 28.1**	**-0.5**
WR8	**Warramunga Arr**	**39.93**	**197**		**P**	**01 32 27.3**	**-0.2**
WR8				IAmb	IAmb	01 32 29.0	
	comp=Z,8.3nm,0.8s						
WR8				PcP	**PcP**	**01 34 28.4**	**-0.6**
WRAB	**Tennant Creek**	**39.95**	**197**	P	**P**	**01 32 28.4**	**+0.7**
WRAB				IAmb	IAmb	01 32 29.2	
	comp=Z,22nm,1.0s						
WRA	**Warramunga Arr**	**39.97**	**197**	P	**P**	**01 32 27.6**	**-0.2**
	comp=Z,5.7nm,0.3s,baz=15,slow=8.7,SNR=28						
WRA				PcP	**PcP**	**01 34 28.4**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=22,slow=3.5,SNR=11						
	comp=Z,5.7nm,0.3s						
WRA	**Warramunga Arr**	**39.97**	**197**		**P**	**01 32 26.5**	**-1.3**
WRA				PcP	**PcP**	**01 34 28.4**	**-0.8**
LZDM	**Lanzhou Array**	**40.75**	**304**	P	**P**	**01 32 35.5**	**+1.0**
	comp=Z,12nm,0.4s,baz=101,slow=8.7,SNR=20						
	comp=Z,12nm,0.4s						
PZH	**PanZhiHua**	**41.17**	**289**	P	**P**	**01 32 40.3**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.52**	**209**	P	**P**	**01 32 41.0**	**+0.4**
	comp=Z,5.1nm,0.3s,baz=12,slow=4.6,SNR=46						
	comp=Z,5.1nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.52**	**209**	P	**P**	**01 32 40.9**	**+0.4**
ULN	**Ulaanbaatar**	**42.79**	**322**	P	**P**	**01 32 50.4**	**-0.3**
SONM	**Songino Array**	**43.16**	**321**	P	**P**	**01 32 53.8**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=117,slow=8.9,SNR=20						
SONM				PcP	**PcP**	**01 34 38.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=136,slow=3.3,SNR=2.4						
	comp=Z,2.6nm,0.5s						
SONM	**Songino Array**	**43.16**	**321**	P	**P**	**01 32 53.7**	**0.0**
SONM					**PcP**	**01 34 39.5**	**0.0**
AS31	**Alice Springs**	**43.63**	**196**	P	**P**	**01 32 57.1**	**-0.3**
ASAR	**Alice Springs**	**43.63**	**196**	P	**P**	**01 32 57.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=15,slow=6.5,SNR=14						
ASAR				PcP	**PcP**	**01 34 40.5**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=24,slow=4.5,SNR=5.8						
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	**43.63**	**196**	P	**P**	**01 32 57.5**	**0.0**
ASAR					**PcP**	**01 34 41.3**	**0.0**
EIDS	**Eidsvold**	**44.09**	**173**	P	**P**	**01 33 00.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**44.23**	**278**	P	**P**	**01 33 03.9**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=57,slow=6.4,SNR=6.5						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**44.23**	**278**	P	**P**	**01 33 01.7**	**-0.7**
YAK	**Yakutsk**	**44.74**	**349**		**P**	**01 33 06.4**	**+0.6**
OUENC	**Ouen Island, N**	**45.77**	**152**	P	**P**	**01 33 14.1**	**-0.2**
OUENC				IAmb	IAmb	01 33 52.1	
	comp=Z,25nm,1.1s						
STKA	**Stephens Creek**	**50.42**	**185**	P	**P**	**01 33 48.8**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=18,slow=11,SNR=3.1						
	comp=Z,0.9nm,0.3s						
ZAA0	**Zalesovo Array**	**58.03**	**323**		**P**	**01 34 43.6**	**-0.9**
ZALV	**Zalesovo Beam**	**58.03**	**323**	P	**P**	**01 34 43.9**	**-0.6**
	comp=Z,3.6nm,0.4s,baz=108,slow=7.8,SNR=20						
ZALV				PcP	**pwP**	**01 35 33.0**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=110,slow=4.3,SNR=4.2						
	comp=Z,3.6nm,0.4s						
ZALV	**Zalesovo Beam**	**58.03**	**323**	P	**P**	**01 34 44.1**	**-0.4**
ZALV					**PcP**	**01 35 33.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**58.08**	**208**	P	**P**	**01 34 44.6**	**-0.5**
	comp=Z,15nm,0.9s,baz=45,slow=5.4,SNR=6.1						
	comp=Z,15nm,0.9s						
MKAR	**Makanchi Array**	**58.48**	**314**	P	**P**	**01 34 47.7**	**-0.1**
	comp=Z,4.6nm,0.5s,baz=91,slow=7.5,SNR=47						
	comp=Z,4.6nm,0.5s						
MKAR	**Makanchi Array**	**58.48**	**314**	P	**P**	**01 34 48.3**	**+0.5**
MAKZ	**Makanchi**	**58.70**	**314**		**P**	**01 34 49.9**	**+0.6**
MAKZ				IAmb	IAmb	01 34 50.6	
	comp=Z,8.3nm,0.5s						
H19K	**Roundabout Mou**	**60.03**	**24**	P	**P**	**01 34 58.3**	**+0.3**
D20K	**Etivluk River**	**61.23**	**21**		**P**	**01 35 07.5**	**+1.4**
D20K				IAmb	IAmb	01 35 09.2	
	comp=Z,4.6nm,0.5s						
KURK	**Kurchatov**	**61.29**	**318**		**P**	**01 35 06.8**	**0.0**
KURK				IAmb	IAmb	01 35 08.5	
	comp=Z,7.4nm,0.9s						
KURBB	**Kurchatov Arra**	**61.34**	**318**	P	**P**	**01 35 06.8**	**-0.3**
	comp=Z,7.6nm,0.6s,baz=93,slow=7.6,SNR=99						
	comp=Z,7.6nm,0.6s						
NRIK	**Noril'sk**	**61.63**	**340**	P	**P**	**01 35 08.7**	**-0.1**
	comp=Z,10nm,0.4s,baz=110,slow=9.4,SNR=20						
	comp=Z,10nm,0.4s						
NRIK	**Noril'sk**	**61.63**	**340**		**P**	**01 35 09.0**	**+0.3**
BOOM	**Boomskoye usch**	**62.82**	**309**		**P**	**01 35 18.0**	**+0.6**
BOOM				IAmb	IAmb	01 35 19.1	
	comp=Z,5.3nm,0.6s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	**01 35 22.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=254,slow=5.2,SNR=7.6						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	**01 35 22.9**	**+0.6**
BVAR	**Borovoye Array**	**66.49**	**320**	P	**P**	**01 35 40.5**	**-0.3**
	comp=Z,20nm,0.6s,baz=94,slow=7.6,SNR=129						
	comp=Z,20nm,0.6s						
BORK	**Borovoye**	**66.54**	**320**		**P**	**01 35 41.1**	**+0.2**
KK31	**Karatay Array**	**66.78**	**310**		**P**	**01 35 42.6**	**-0.1**
KK31				IAmb	IAmb	01 35 44.1	
	comp=Z,5.7nm,0.7s						
KKAR	**Karatay Array**	**66.78**	**310**		**P**	**01 35 42.9**	**+0.1**
G31M	**Satah River**	**69.07**	**25**		**P**	**01 35 57.2**	**+0.7**
G31M				IAmb	IAmb	01 36 03.8	
	comp=Z,3.6nm,0.5s						
ARTI	**Arti**	**73.19**	**325**	P	**P**	**01 36 20.7**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=79,slow=5.9,SNR=7.3						
	comp=Z,2.5nm,0.3s						
ARTI	**Arti**	**73.19**	**325**		**P**	**01 36 21.3**	**-0.2**
ARTI				IAmb	IAmb	01 36 22.3	
	comp=Z,7.9nm,0.8s						
AB31	**Akbulak array**	**73.36**	**317**	P	**P**	**01 36 21.6**	**-1.0**
AB31				IAmb	IAmb	01 36 23.1	
	comp=Z,5.7nm,0.5s						
ABKAR	**Akbulak array**	**73.36**	**317**	P	**P**	**01 36 21.6**	**-1.0**
MCQ	**Macquarie Isla**	**73.76**	**172**	P	**P**	**01 36 26.4**	**+1.9**
AKTO	**Aktyubinsk**	**74.39**	**318**	P	**P**	**01 36 27.9**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=91,slow=6.7,SNR=13						
	comp=Z,2.9nm,0.6s						
YKA	**Yellowknife Ar**	**78.01**	**28**	P	**P**	**01 36 48.2**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=283,slow=5.3,SNR=2.6						
	comp=Z,1.1nm,0.6s						
YKA	**Yellowknife Ar**	**78.01**	**28**	P	**P**	**01 36 50.1**	**+1.5**
SPITS	**Spitsbergen Ar**	**79.19**	**351**	P	**P**	**01 36 54.6**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=49,slow=5.6,SNR=6.2						
	comp=Z,1.7nm,0.6s						
ARCES	**ARCESS Array B**	**82.52**	**342**	P	**P**	**01 37 12.3**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=58,slow=5.5,SNR=14						
	comp=Z,1.4nm,0.5s						
ARCES	**ARCESS Array B**	**82.52**	**342**	P	**P**	**01 37 11.9**	**-0.7**
ARCES				IAmb	IAmb	01 37 16.7	
	comp=Z,13nm,1.4s						
NVAR	**Mina Array Bea**	**83.15**	**52**	P	**P**	**01 37 17.4**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=280,slow=5.1,SNR=5.8						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**83.15**	**52**	P	**P**	**01 37 16.7**	**0.0**
KBZ	**Khabaz**	**86.16**	**315**	P	**P**	**01 37 30.9**	**-0.4**
	comp=Z,3.0nm,1.0s,baz=58,slow=4.4,SNR=4.0						
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**86.91**	**335**	P	**P**	**01 37 32.8**	**-1.8**
	comp=Z,2.8nm,0.3s,baz=64,slow=4.5,SNR=68						
	comp=Z,2.8nm,0.3s						
FINES	**FINESS Array B**	**86.91**	**335**	P	**P**	**01 37 32.7**	**-2.0**
NACGM	**Naroch**	**90.28**	**330**	*eP*	**P**	**01 37 50.1**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=56						
HFS	**Hagfors**	**92.41**	**338**	P	**P**	**01 37 58.5**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=50,slow=4.8,SNR=17						
	comp=Z,0.8nm,0.3s						
NB2	**NORSAR Subarra**	**92.59**	**340**	P	**P**	**01 37 59.8**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=49,slow=4.3						
NOA	**NORSAR Array B**	**92.59**	**340**	P	**P**	**01 37 59.9**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=28,slow=3.4,SNR=5.8						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**94.13**	**314**	P	**P**	**01 38 07.8**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=63,slow=4.4,SNR=2.2						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**94.13**	**314**	P	**P**	**01 38 08.0**	**-1.0**
TROLL	**Troll, Antarti**	**122.57**	**193**	⇑PKPdf	**PKPdf**	**01 43 43.0**	**-0.8**
	comp=Z,37nm,0.4s						
SNAA	**Sanae**	**123.90**	**191**	⇑PKPdf	**PKPdf**	**01 43 45.3**	**-1.0**
	comp=Z,14nm,0.3s						
SNAA	**Sanae**	**123.90**	**191**	PKP	**PKPdf**	**01 43 44.8**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=141,slow=2.0,SNR=2.1						
SNAA	**Sanae**	**123.90**	**191**		**PKPdf**	**01 43 45.6**	**-0.7**
VNA2	**Neumayer--Watz**	**125.35**	**191**	⇑PKPdf	**PKPdf**	**01 43 48.4**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=153,slow=1.6						
VNA1	**Neumayer--Stat**	**125.73**	**190**	PKPdf	**PKPdf**	**01 43 49.7**	**0.0**
	comp=Z,1.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**132.47**	**309**	PKP	**PKPdf**	**01 44 02.7**	**-1.5**
	comp=Z,1.0nm,1.2s,baz=63,slow=1.9,SNR=5.6						
LPAZ	**La Paz**	**147.67**	**91**	PKPbc	**PKPdf**	**01 44 32.6**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=267,slow=4.7,SNR=5.8						
LPAZ	**La Paz**	**147.67**	**91**		**PKPdf**	**01 44 32.9**	**+0.7**

IDC ***14*** *01:42:03.8±0.6, 62.°16S×164.°76E, h0km, mb4.7/9, mbtmp4.7/11, ML5.4/1, MS4.5/40, Error ellipse: s-maj=28.8km s-min=15.3km az=73.0*
NEIC ***14*** *01:42:04.9±1.5, 62.°14S±0.°09×165.°3E±0.°4, h10km±1km, mb5.1/38, Ms_20 4.9/151, Mww5.2/19, Error ellipse: s-maj=27.9km s-min=14.9km az=87.0*
NEIC ***14*** *01:42:04.9, 62.°14S×165.°33E, h10km*
GFZ ***14*** *01:42:05.9±0.2, 62.°S±3.°×16.°5E±.°, h10km, M5.4/21, mb5.0/21, confirmed*
NEIC ***14*** *01:42:05.2, 62.°14S×165.°33E, h12km, Moment Tensor Solution. Duration: 25 Moment tensor: Scale 10^16 Nm; Mrr=0.03; Mθθ 7.54; Mφφ=7.51; Mrθ=2.54; Mθφ=2.84; Mφr 2.22; Fault plane solution: Mo 8.73000×10^16 NP1: φs 234.35000°, δ 68.21000°, λ 175.78000°. NP2: φs 325.92000°, δ 86.08000°, λ 21.84000°. Principal axes: T 9.0133, Plg 18.0000°, Azm 192.0000°; N -0.6032, Plg 68.0000°, Azm 336.0000°; P -8.4101, Plg 12.0000°, Azm 98.0000°;*
GCMT ***14*** *01:42:05.9±0.1, 62.°16S±0.°01×165.°04E±0.°02, h13km, MW5.3/140, Moment Tensor Solution. s94, c139; s140, c237; Duration: 1f1 Moment tensor: Scale 10^17 Nm; Mrr=0.24±.02; Mθθ 1.08±.02; Mφφ=0.84±.02; Mrθ=0.32±.04; Mθφ=0.25±.01; Mφr=0.08±.04; Best double couple: Mo 1.03900×10^17 NP1: φs 323.00000°, δ 73.00000°, λ 1.00000°. NP2: φs 233.00000°, δ 89.00000°, λ 163.00000°. Principal axes: T 1.1790, Plg 12.0000°, Azm 187.0000°; N -0.2790, Plg 73.0000°, Azm 250.0000°; P -0.8980, Plg 11.0000°, Azm 279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 01:42:05.1±0.3, 62.°20S±0.°06×165.°06E±0.°09, h10km, n303, σ1.86/176, mb5.0/28, MS4.9/114, 13C-13D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.43**	**183**	Pn	**Pn**	**01 45 41.7**	**-0.8**
	13nm,0.3s,baz=353,slow=13,SNR=530						
VNDA				LR	LR	01 50 36.7	
	comp=Z,6μm,21.1s,baz=8.0,slow=33						
	64nm,0.5s						
VNDA	**Vanda**	**15.43**	**183**	Pn	**Pn**	**01 45 41.0**	**-1.4**
VNDA				IAmb	IAmb	01 45 47.8	
	comp=Z,256nm,1.5s						
SBA	**Scott Base**	**15.74**	**179**	Pn	**Pn**	**01 45 46.4**	**-0.1**
DCZ	**Deep Cove**	**16.81**	**5**		**Pn**	**01 45 58.5**	**-1.9**
DCZ				IAmb	IAmb	01 46 00.8	
	comp=Z,287nm,2.0s						
MLZ	**Mavora Lakes**	**16.96**	**7**	Pn	**Pn**

comp=Z,3µm,18.1s,baz=188,slow=36
URZ Urewera 25.09 23 P P 01 47 29.9 +0.4
TOZ Tahuroa Road 25.33 20 P 01 47 30.5 -1.2
OUZ Omahuta 27.53 15 IAMs_20 IAMs_20 01 58 03.1
comp=Z,3µm,18.0s
QSPA South Pole Qui 27.89 180 P P 01 47 55.5 +0.6
comp=Z,49nm,1.0s,baz=21,slow=3.1,SNR=73
QSPA LR LR 01 57 21.3
comp=Z,2µm,21.2s,baz=29,slow=33
comp=Z,49nm,1.0s
QSPA South Pole Qui 27.89 180 P P 01 47 54.1 -0.8
QSPA IAmb IAmb 01 47 56.8
comp=Z,60nm,1.1s
QSPA South Pole Qui 27.89 180 IAMs_20 IAMs_20 01 57 55.5
comp=Z,3µm,18.0s
QSPA South Pole Qui 27.89 180 P P 01 47 55.7 +0.8
STKA Stephens Creek 33.89 323 P P 01 48 48.2 +0.4
comp=Z,3.1nm,0.9s,baz=180,slow=14,SNR=3.7
STKA LR LR 02 00 21.4
comp=Z,944nm,19.6s,baz=155,slow=32
comp=Z,3.1nm,0.9s
EIDS Eidsvold 38.00 339 P P 01 49 25.8 +2.8
comp=Z,15nm,2.2s
INKA Innaminka 38.03 324 P P 01 49 24.4 +1.2
MAW Mawson 38.93 217 P P 01 49 31.4 +1.0
comp=Z,2.3nm,1.5s
MAW Mawson 38.93 217 P P 01 49 31.0 +0.6
comp=Z,15nm,1.1s,baz=126,slow=8.6,SNR=13
MAW LR LR 02 05 38.4
comp=Z,2µm,18.9s,baz=123,slow=36
comp=Z,15nm,1.1s
MAW Mawson 38.93 217 P 01 49 31.2 +0.8
BELA Belgrano 2 39.65 174 P P 01 49 36.4 0.0
DZM Mont Dzumac 40.11 2 LR LR 02 05 08.0
comp=Z,459nm,18.7s,baz=188,slow=34
H01W1 Cape Leeuwin H 41.75 287 T T 02 34 43.5
baz=147,slow=76,SNR=334
H01W2 Cape Leeuwin H 41.76 287 T T 02 34 42.0
baz=147,slow=76,SNR=2386
H01W3 Cape Leeuwin H 41.77 287 T T 02 34 44.7
baz=147,slow=76,SNR=1991
SYO Syowa Base 43.46 205 ⇓*e*P **P 01 50 08.2 +0.6**
SYO Syowa Base 43.46 205 ⇑*e*P P 01 50 15.8 +8.2
ELIB Princess Elisa 43.57 196 *d*P **P 01 50 08.1 -0.6**
ELIB *d*PP **PP 01 51 44.0 -5.6**
AS19 Alice Springs 43.85 317 P P 01 50 13.1 +1.8
comp=Z,12nm,1.0s
AS09 Alice Springs 43.87 317 P P 01 50 13.4 +2.0
AS17 Alice Springs 43.88 317 P P 01 50 11.1 -0.5
AS03 Alice Springs 43.90 317 P P 01 50 11.2 -0.5
comp=Z,15nm,0.9s
AS31 Alice Springs 43.91 317 P P 01 50 11.9 +0.1
ASAR Alice Springs 43.91 317 P P 01 50 10.5 -1.3
comp=Z,8.0nm,0.9s,baz=160,slow=8.0,SNR=24
ASAR PcP **PP 01 51 55.7 +1.8**
comp=Z,1.7nm,1.0s,baz=148,slow=4.4,SNR=4.2
ASAR LR LR 02 05 56.7
comp=Z,354nm,21.8s,baz=156,slow=33
comp=Z,8.0nm,0.9s
ASAR Alice Springs 43.91 317 P P 01 50 10.9 -0.9
ASAR **PP 01 51 54.5 +0.6**
AS15 Alice Springs 43.94 317 P P 01 50 11.3 -0.7
comp=Z,9.6nm,0.9s
CTA Charters Tower 44.05 334 LR LR 02 06 07.9
comp=Z,771nm,18.5s,baz=160,slow=33
WRKA Warakurna 44.56 309 P P 01 50 17.1 +0.1
comp=Z,6.1nm,1.0s
MSVF Nonsavu 45.34 18 LR LR 02 07 15.2
comp=Z,1µm,18.9s,baz=186,slow=33
TROLL Troll, Antarti 45.53 188 ⇑P **P 01 50 24.3 0.0**
comp=Z,2µm,0.9s
SNAA Sanae 46.15 185 ⇑P **P 01 50 29.0 0.0**
comp=Z,574nm,0.8s
SNAA Sanae 46.15 185 P P 01 50 28.4 -0.6
comp=Z,38nm,1.0s,baz=172,slow=7.9,SNR=65
SNAA LR LR 02 08 56.2
comp=Z,2µm,20.4s,baz=184,slow=35
comp=Z,38nm,1.0s
SNAA Sanae 46.15 185 P P 01 50 29.1 0.0
SNAA IAMs_20 IAMs_20 02 08 44.9
comp=Z,2µm,19.0s
VNA2 Neumayer--Watz 47.05 183 ⇑P **P 01 50 36.0 -0.1**
comp=Z,22nm,0.7s,baz=168,slow=6.8
VNA2 Neumayer--Watz 47.05 183 P P 01 50 36.1 0.0
WR9 Warramunga Arr 47.19 319 P P 01 50 38.4 +0.6
WRA Warramunga Arr 47.26 319 P P 01 50 36.8 -1.5
comp=Z,2.8nm,1.0s,baz=159,slow=6.8,SNR=6.4
WRA PcP **PcP 01 52 07.7 -1.7**
comp=Z,1.7nm,0.8s,baz=158,slow=3.2,SNR=6.1
comp=Z,2.8nm,1.0s
WRA Warramunga Arr 47.26 319 P P 01 50 38.4 +0.1
WRA **PcP 01 52 08.0 -1.3**
VNA1 Neumayer--Stat 47.35 183 ⇑P **P 01 50 38.6 +0.2**
comp=Z,65nm,1.0s
RAR Rarotonga 47.52 47 LR LR 02 07 00.3
comp=Z,451nm,19.6s,baz=204,slow=31
PMSA Palmer Station 48.20 154 LR LR 02 07 38.5
comp=Z,409nm,20.7s,baz=222,slow=32
TBI Tubuai 49.44 60 *e*S **S 01 57 57.3 -4.7**
comp=Z,454nm,28.0s
TBI *e*SS **SS 02 01 38.6 +5.1**
comp=Z,8µm,27.2s
TBI *e*LR LR 02 04 51.9
comp=Z,1µm,30.0s
TBI *e*LR LR 02 04 56.1
comp=Z,2µm,24.8s
TBI *e*T T 02 43 35.7
comp=Z,176nm,0.3s
FITZ Fitzroy Crossi 51.89 310 LR LR 02 09 55.7
comp=Z,476nm,20.8s,baz=167,slow=32
HNR Honiara 52.80 354 LR LR 02 09 16.7
comp=Z,30nm,21.5s,baz=270,slow=31
PMG Port Moresby 54.29 338 LR LR 02 11 02.1
comp=Z,660nm,20.0s,baz=166,slow=32
PAE Paea 54.52 56 *e*T T 02 50 03.7
comp=Z,102nm,0.3s
TVO Taravao 54.53 57 *e*T T 02 49 58.4
comp=Z,43nm,0.3s
PPT2 Papeete2 54.58 56 *e*LR LR 02 07 12.9
comp=Z,384nm,22.2s
PPT2 *e*T T 02 50 03.5
comp=Z,31nm,0.3s
PPT Papeete 54.60 56 LR LR 02 08 35.3
comp=Z,271nm,19.1s,baz=194,slow=29
KDU Kakadu 54.67 320 P P 01 51 31.7 -2.3
TIAR Tiarei 54.70 57 *e*T T 02 50 00.0
comp=Z,298nm,0.3s
VAH Vaihoa 57.48 57 *e*T T 02 53 41.9
comp=Z,401nm,0.3s
PMOR Pomariorio Ree 57.59 57 *e*T T 02 53 58.5
comp=Z,8.4nm,0.4s
GO08 Villa O'Higgin 60.52 140 P P 01 52 16.2 +1.3
JAY Jayapura 62.27 332 LR LR 02 16 08.3
comp=Z,437nm,21.9s,baz=176,slow=33
RPN Rapa Nui 64.37 100 LR LR 02 12 54.9
comp=Z,398nm,20.1s,baz=224,slow=29
KAPI Kappang 66.10 309 LR LR 02 18 38.7
comp=Z,302nm,20.3s,baz=149,slow=33
SIJI Sorong 66.24 323 LR LR 02 22 15.6
comp=Z,378nm,18.7s,baz=108,slow=36
TAOE Nuku Hiva Isla 66.28 62 *e*LR LR 02 12 41.5
comp=Z,258nm,23.0s
LR05 Currie 68.09 136 P P 01 53 05.1 +0.5
PLCA Paso Flores 68.11 137 P P 01 53 05.4 +0.6
comp=Z,6.4nm,1.0s,baz=206,slow=8.5,SNR=5.7
comp=Z,6.4nm,1.0s
PLCA Paso Flores 68.11 137 P P 01 53 04.8 0.0
PLCA IAmb IAmb 01 53 14.8
comp=Z,19nm,1.4s
GO06 Curarrehue 68.85 136 P P 01 53 08.1 -1.4
GO06 IAmb IAmb 01 53 16.9
comp=Z,27nm,1.3s
GO06 Curarrehue 68.85 136 P P 01 53 11.3 +1.8
LEM Lembang 69.22 296 LR LR 02 19 55.1
comp=Z,327nm,18.4s,baz=191,slow=33
H03S2 Juan Fernandez 71.43 128 T T 03 12 05.9
baz=204,slow=74,SNR=1953
H03S1 Juan Fernandez 71.44 128 T T 03 12 07.3
baz=204,slow=74,SNR=1205
H03S3 Juan Fernandez 71.45 128 T T 03 12 06.7
baz=204,slow=74,SNR=1660
BI02 San Fabin de 71.57 135 P P 01 53 25.9 -0.2
BI02 IAmb IAmb 01 53 34.0
comp=Z,18nm,1.1s
BI02 San Fabin de 71.57 135 P P 01 53 27.0 +0.8
H03N3 Juan Fernandez 71.78 128 T T 03 12 43.2
baz=210,slow=74
H03N2 Juan Fernandez 71.79 128 T T 03 12 32.9
baz=210
H03N1 Juan Fernandez 71.79 128 T T 03 12 34.5
baz=210,slow=74
BO02 Sierra Bellavi 73.44 135 P 01 53 36.2 -1.2
BO02 IAmb IAmb 01 53 45.2
comp=Z,33nm,1.1s
BO02 Sierra Bellavi 73.44 135 P P 01 53 38.1 +0.8
MT05 Renca 74.73 134 IAMs_20 IAMs_20 02 16 07.1
comp=Z,570nm,22.0s
VA01 Torpederas 74.76 133 IAMs_20 IAMs_20 02 23 22.0
comp=Z,686nm,22.0s
MT08 Bocatoma Ro 74.92 135 P P 01 53 46.9 +0.6
MT08 IAmb IAmb 01 53 49.2
comp=Z,24nm,1.4s
VA03 San Esteban 75.37 134 P P 01 53 50.0 +1.4
DAV Davao City (W) 75.45 319 LR LR 02 27 58.2
comp=Z,125nm,18.2s,baz=170,slow=37
CO04 Los Peladeros 75.88 133 P P 01 53 51.7 -0.1
SDSI Sungai Dareh 77.14 293 P P 01 53 56.6 -2.1
GUMO Guam 77.19 340 LR LR 02 25 29.0
comp=Z,56nm,19.5s,baz=151,slow=34
LCO Las Campanas 78.75 132 P 01 54 07.1 -0.8
LCO IAmb IAmb 01 54 15.2
comp=Z,28nm,1.1s
AC05 El Transito 79.06 133 P 01 54 09.5 +0.1
AC05 El Transito 79.06 133 P P 01 54 11.1 +1.7
AC02 Maricunga 81.29 133 P P 01 54 21.3 -0.6
AC02 IAmb IAmb 01 54 33.9
comp=Z,23nm,1.2s
AC02 Maricunga 81.29 133 P P 01 54 23.9 +2.0
SUR Sutherland 81.44 210 LR LR 02 28 32.5
comp=Z,487nm,19.4s,baz=150,slow=34
CPSB Cacapava Do Su 82.66 147 P P 01 54 29.6 +1.1
TGY Tagaytay City 83.53 317 LR LR 02 30 44.6
comp=Z,146nm,21.6s,baz=87,slow=35
BOSA Boshof 83.92 215 LR LR 02 30 05.2
comp=Z,213nm,19.5s,baz=167,slow=34
H08S2 Diego Garcia H 84.50 264 T T 03 28 25.0
baz=151,slow=76,SNR=108
H08S1 Diego Garcia H 84.50 264 T T 03 28 26.2
baz=151,slow=76,SNR=78
H08S3 Diego Garcia H 84.52 264 T T 03 28 25.9
baz=151,slow=76,SNR=185
SALTA 84.64 134 P P 01 54 41.5 +2.1
CPUP Villa Florida 85.47 143 P P 01 54 44.0 +1.1
comp=Z,4.7nm,1.0s,baz=197,slow=7.9,SNR=4.4
CPUP LR LR 02 29 02.3
comp=Z,250nm,19.4s,baz=238,slow=33
comp=Z,4.7nm,1.0s
CPUP Villa Florida 85.47 143 P 01 54 42.0 -0.9
CPUP IAmb IAmb 01 54 50.5
comp=Z,20nm,1.3s
CPUP Villa Florida 85.47 143 P P 01 54 43.6 +0.7
PB07 IPOC Station P 85.72 130 P P 01 54 47.0 +2.7
LBTB Lobatse 87.24 216 LR LR 02 31 33.1
comp=Z,349nm,19.1s,baz=164,slow=34
PB11 IPOC Station P 87.61 130 P P 01 54 52.4 -1.2
PB11 IPOC Station P 87.61 130 P P 01 54 55.9 +2.3
GO01 Chusmiza 87.86 130 P P 01 54 54.3 -0.9
GO01 IAmb IAmb 01 55 03.4
comp=Z,15nm,1.1s
GO01 Chusmiza 87.86 130 P P 01 54 57.4 +2.2
PB16 IPOC Station P 88.97 129 P 01 54 59.3 -1.2
PB16 IAmb IAmb 01 55 09.1
comp=Z,10nm,1.0s
PB16 IPOC Station P 88.97 129 P P 01 55 03.6 +3.0
MATP Matopo 90.74 220 LR LR 02 33 34.0
comp=Z,155nm,19.1s,baz=134,slow=34
JCJ Chichijima 90.86 340 LR LR 02 29 31.3
comp=Z,66nm,21.2s,baz=112,slow=31
LPAZ La Paz 91.35 130 P P 01 55 13.6 +1.8
comp=Z,2.8nm,0.8s,baz=186,slow=5.5,SNR=14
LPAZ LR LR 02 27 45.0
comp=Z,155nm,19.4s,baz=204,slow=30
comp=Z,2.8nm,0.8s
LPAZ La Paz 91.35 130 P 01 55 10.9 -0.9
LPAZ IAmb IAmb 01 55 19.8
comp=Z,9.8nm,1.0s
LPAZ La Paz 91.35 130 P P 01 55 13.8 +2.1
NNA Nana 91.94 120 LR LR 02 27 14.1
comp=Z,306nm,20.1s,baz=201,slow=29
JOW Kunigami 93.50 328 LR LR 02 36 04.4
comp=Z,129nm,19.9s,baz=266,slow=35
PALK Pallekele 93.75 278 LR LR 02 30 53.6
comp=Z,112nm,18.8s,baz=129,slow=31
TSUM Tsumeb 94.87 211 LR LR 02 35 26.7
comp=Z,720nm,21.7s,baz=167,slow=34
CMAR Chiang Mai Arr 95.61 299 LR LR 02 39 18.6
comp=Z,119nm,18.1s,baz=175,slow=36
ATAH Atuhualpa 95.68 117 LR LR 02 28 36.6
comp=Z,212nm,20.9s,baz=218,slow=29
LSZ Lusaka 95.68 222 LR LR 02 36 30.4
comp=Z,180nm,19.2s,baz=162,slow=34
BDFB Brasilia 98.16 148 LR LR 02 39 14.1
comp=Z,130nm,18.0s,baz=162,slow=35
JNU Nakatsue 98.91 331 LR LR 02 37 31.8
comp=Z,132nm,19.6s,baz=174,slow=34
NJ2 Nanjing 101.01 321 *e*P **Pdif 01 55 56.3 +2.1**
NJ2 pmax pmax
comp=Z,20nm,0.5s
PZH PanZhiHua 101.73 305 P **Pdif 01 56 03.1 +5.3**
H06S1 SOCORRO T 103.61 76 T T 03 52 02.0
SNR=42
HYB Hyderabad 103.62 281 *e*Pdif **Pdif 01 56 06.1 -0.2**
HYB *e*PKiKP **PKiKP 02 00 24.4 -0.3**
H06N1 SOCORRO T-PHAS 103.71 76 T T 03 51 50.5
SNR=8.5
CN2 Changchun 110.35 331 *e*P **PKiKP 02 00 35.3 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 111.34 319 *e*P **PKiKP 02 00 36.3 -2.1**
PET Petropavlovsk 114.99 356 IAMs_20 IAMs_20 02 40 16.6
comp=Z,321nm,22.0s
MSTX Muleshoe 120.40 74 IAMs_20 IAMs_20 02 59 19.6
comp=Z,251nm,21.0s
ELK Elko 120.70 60 IAMs_20 IAMs_20 02 44 37.6
comp=Z,255nm,20.0s
WMQ Urumqi 122.36 303 *e*PKP **PKPdf 02 00 57.8 -1.6**
O14K Tigyukauivet M 123.87 20 IAMs_20 IAMs_20 02 46 17.4
comp=Z,226nm,20.0s
O15K Kangaliklthiut R 124.03 21 IAMs_20 IAMs_20 02 45 27.7
comp=Z,312nm,21.0s
O16K Kokwok River B 124.72 22 IAMs_20 IAMs_20 02 45 47.9
comp=Z,282nm,19.0s
SMRT St. Maarten 124.73 120 IAMs_20 IAMs_20 02 50 39.2
comp=Z,243nm,22.0s
PDAR Pinedale Array 124.73 63 PKP **PKPdf 02 01 03.6 -0.6**
comp=Z,1.0nm,1.1s,baz=203,slow=2.3,SNR=5.4
PDAR Pinedale Array 124.73 63 PKPdf 02 01 03.3 -0.9
H02S1 DAWSON INLET TI 125.11 41 T T 04 18 49.5
SNR=5.4
H02S2 DAWSON INLET TI 125.11 41 T T 04 18 51.5
SNR=5.4
M14K Bethel 125.19 19 IAMs_20 IAMs_20 02 48 43.2
comp=Z,274nm,21.0s
DLMT Dillon 125.62 59 IAMs_20 IAMs_20 02 59 54.7
comp=Z,192nm,18.0s
L14K Kuka Creek 125.64 18 IAMs_20 IAMs_20 02 49 06.3
comp=Z,312nm,20.0s
N17K Nushagak Hills 125.76 22 IAMs_20 IAMs_20 02 45 36.3
comp=Z,296nm,21.0s
M16K Timber Creek 125.92 21 IAMs_20 IAMs_20 02 47 19.5
comp=Z,297nm,20.0s
OGNE Ogallala 126.48 70 IAMs_20 IAMs_20 02 52 07.9
comp=Z,198nm,19.0s
L16K Owhat River 126.49 20 IAMs_20 IAMs_20 02 47 56.6
comp=Z,270nm,19.0s
M17K Holitna River 126.53 21 IAMs_20 IAMs_20 02 46 21.8
comp=Z,274nm,20.0s
MKAR Makanchi Array 126.96 301 PKP **PKPdf 02 01 06.7 -1.4**
comp=Z,0.7nm,0.9s,baz=129,slow=1.8,SNR=1.9
MKAR Makanchi Array 126.96 301 PKPdf 02 01 06.9 -1.2
K17K Iditarod 127.63 20 IAMs_20 IAMs_20 02 49 04.7
comp=Z,246nm,20.0s
J16K Anvik River 127.80 19 IAMs_20 IAMs_20 02 51 22.3
comp=Z,294nm,20.0s
S31K Pelican 128.13 35 IAMs_20 IAMs_20 02 47 15.8
comp=Z,243nm,20.0s
J17K VABM Dome 128.14 20 IAMs_20 IAMs_20 02 48 41.3
comp=Z,299nm,20.0s
M22K Willow 128.22 25 IAMs_20 IAMs_20 02 48 53.2
comp=Z,268nm,20.0s
ANM Nome 128.35 16 IAMs_20 IAMs_20 02 49 16.1
comp=Z,325nm,21.0s
I17K Unalakleet 128.35 19 IAMs_20 IAMs_20 02 52 28.0
comp=Z,294nm,20.0s
PPLA Purkeypile 128.86 24 IAMs_20 IAMs_20 02 51 25.3
comp=Z,225nm,20.0s
BESE Bessie Mountai 129.04 36 IAMs_20 IAMs_20 02 47 26.7
comp=Z,241nm,20.0s
P29M Windy Craggy 129.18 33 IAMs_20 IAMs_20 02 47 27.4
comp=Z,242nm,21.0s
CAST Castle Rocks 129.36 23 IAMs_20 IAMs_20 02 51 41.5
comp=Z,213nm,20.0s
LOGN Logan Glacier 129.40 31 IAMs_20 IAMs_20 02 48 16.3
comp=Z,238nm,20.0s
BARN Barnard Glacie 129.45 30 IAMs_20 IAMs_20 02 52 04.6
comp=Z,195nm,19.0s
H17K Granite Mounta 129.46 18 IAMs_20 IAMs_20 02 48 39.3
comp=Z,338nm,22.0s
F15K North Star Dit 129.54 16 IAMs_20 IAMs_20 02 51 47.5
comp=Z,241nm,20.0s
O29M Mount Kennedy 129.54 33 IAMs_20 IAMs_20 02 55 08.1
comp=Z,216nm,18.0s
TORD Torodi Ar. Bea 129.59 201 PKP **PKPdf 02 01 13.8 -0.2**
comp=Z,2.2nm,1.0s,baz=160,slow=1.2,SNR=7.7
TORD Torodi Ar. Bea 129.59 201 PKPdf 02 01 13.5 -0.6
KTH Kantishna Hill 129.70 24 IAMs_20 IAMs_20 02 51 52.4
comp=Z,235nm,19.0s
H18K Honhosa River 129.90 19 IAMs_20 IAMs_20 02 51 06.8
comp=Z,298nm,21.0s
I20K Naaghedeneel 130.20 21 IAMs_20 IAMs_20 02 49 49.7
comp=Z,256nm,20.0s
P32M Atlin 130.21 36 IAMs_20 IAMs_20 02 47 48.4
comp=Z,245nm,21.0s
H19K Roundabout Mou 130.55 20 IAMs_20 IAMs_20 02 50 15.0
comp=Z,285nm,21.0s
Q44A Meyer Farm, Va 130.75 82 IAMs_20 IAMs_20 03 04 07.6
comp=Z,282nm,22.0s
R33M Jennings River 130.81 37 IAMs_20 IAMs_20 02 47 39.7
comp=Z,315nm,21.0s
P33M Teslin, Yukon 130.98 36 IAMs_20 IAMs_20 02 48 35.1
comp=Z,200nm,20.0s
G19K Purcell Mounta 131.02 19 IAMs_20 IAMs_20 02 50 32.4
comp=Z,293nm,21.0s
MLY Manley 131.08 23 IAMs_20 IAMs_20 02 54 55.8
comp=Z,202nm,19.0s
WRH Wood River Hil 131.08 25 IAMs_20 IAMs_20 02 48 04.8
comp=Z,236nm,21.0s
M29M Somme Creek 131.41 31 IAMs_20 IAMs_20 03 03 19.6
comp=Z,188nm,18.0s
COLA College 131.48 25 IAMs_20 IAMs_20 02 49 35.5
comp=Z,187nm,20.0s
KURBB Kurchatov Arra 131.52 302 PKP **PKiKP 02 01 17.9 +0.4**
comp=Z,0.4nm,0.7s,baz=121,slow=1.8,SNR=4.4
KURK Kurchatov 131.55 302 PKiKP 02 01 17.5 -0.1
ILAR Eielson Array 131.58 25 PKP **PKiKP 02 01 17.3 +0.1**
comp=Z,1.9nm,1.0s,baz=200,slow=1.9,SNR=8.7
ILAR Eielson Array 131.58 25 PKPdf 02 01 16.5 +0.3
N32M Quiet Lake 131.69 35 IAMs_20 IAMs_20 03 02 13.0
comp=Z,201nm,19.0s
C16K Lisburne Hills 131.91 14 IAMs_20 IAMs_20 02 46 48.1
comp=Z,221nm,20.0s
M30M Minto, Yukon 131.94 32 IAMs_20 IAMs_20 02 59 12.4
comp=Z,233nm,18.0s
G21K Allakaket 131.94 21 IAMs_20 IAMs_20 02 50 25.7
comp=Z,256nm,20.0s
H23K Yukon River 132.01 23 IAMs_20 IAMs_20 02 48 33.6
comp=Z,261nm,20.0s
M31M Drury Creek, Y 132.23 33 IAMs_20 IAMs_20 02 52 54.1
comp=Z,248nm,20.0s
F21K Alatna River 132.59 20 IAMs_20 IAMs_20 02 49 52.8
comp=Z,279nm,21.0s
G23K Bananza Creek 132.72 22 IAMs_20 IAMs_20 02 50 58.3
comp=Z,246nm,20.0s
G24K Hadweenzic Riv 133.18 24 IAMs_20 IAMs_20 02 52 02.4
comp=Z,250nm,22.0s
FYU Fort Yukon 133.49 25 IAMs_20 IAMs_20 02 54 31.6
comp=Z,266nm,18.0s
E22K Anaktuvuk Pass 133.69 21 IAMs_20 IAMs_20 02 52 21.0
comp=Z,224nm,20.0s
J30M Hart River 133.73 31 IAMs_20 IAMs_20 02 50 43.9
comp=Z,200nm,20.0s
G26K Porcupine Rive 134.12 25 IAMs_20 IAMs_20 02 54 48.1
comp=Z,237nm,19.0s
F25K Christian Rive 134.31 24 IAMs_20 IAMs_20 02 52 35.3
comp=Z,275nm,22.0s
F26K Sheenjek River 134.69 25 IAMs_20 IAMs_20 02 55 26.2
comp=Z,202nm,18.0s
E27K Coleen River 135.61 25 IAMs_20 IAMs_20 02 55 44.7
comp=Z,188nm,18.0s
D25K Kavik River 135.68 22 IAMs_20 IAMs_20 02 51 25.5
comp=Z,266nm,21.0s
BVAR Borovoye Array 136.63 299 PKP **PKPdf 02 01 26.6 +0.6**
comp=Z,0.6nm,0.5s,baz=135,slow=2.0,SNR=1.6
C36M Paulatuk 140.47 32 IAMs_20 IAMs_20 02 55 40.9
comp=Z,164nm,20.0s
ARPR Arapgir-MALATY 140.62 259 IAMs_20 IAMs_20 03 12 07.6
comp=Z,186nm,19.0s
BRTR Keskin Array B 143.27 255 PKP **PKPdf 02 01 39.2 +0.5**
comp=Z,1.1nm,0.8s,baz=156,slow=6.5,SNR=5.0
TIRR Tirgusor 149.39 255 IAMs_20 IAMs_20 03 18 09.6
comp=Z,168nm,21.0s
KEST Kesra 149.46 221 PKPbc **PKiKP 02 01 55.6 +0.8**
comp=Z,9.0nm,1.1s,baz=152,slow=2.7,SNR=6.4
KEST Kesra 149.46 221 PKPab **PKPab 02 01 59.5 +0.8**
TIP Timpagrande 149.98 235 ⇓P **PKPab 02 02 01.4 +0.8**
CFR Carcaliu 150.07 256 ⇓P **PKPab 02 01 59.1 -1.6**
CUC Castrococco 151.04 234 IAMs_20 IAMs_20 03 20 18.6
comp=Z,214nm,18.0s
NEHR Nehoiu 151.09 254 ⇓P **PKPab 02 02 03.5 -1.6**
SAHR Sahastru 151.15 255 ⇓P **PKPab 02 02 03.5 -1.8**
VRI Vrincioaia 151.24 255 ⇑P **PKPbc 02 01 56.0 -1.6**
VRI Vrincioaia 151.24 255 P PKPdf 02 01 51.4 -0.2
PLOR Plostina 151.26 255 ⇓P **PKPab 02 02 09.5 +3.8**
MLR Muntele Rosu 151.30 253 ⇓P **PKPab 02 02 03.0 -3.1**
COVR Voineasa-Covas 151.46 254 ⇑P **PKPab 02 02 04.1 -2.4**
TURR Turia 151.70 254 ⇑P **PKPab 02 02 04.7 -2.8**
ARR Arges 151.79 252 ⇑P **PKiKP 02 02 00.6 +1.3**
DOPR Dopca 151.92 254 ⇓P **PKiKP 02 02 02.4 +2.9**
SORM Soroca 152.18 260 ⇓P **PKPbc 02 01 57.0 -2.6**
LOT Lotru 152.24 251 ⇑P **PKPbc 02 01 58.9 -1.1**
BIZ Bicaz 152.33 256 ⇑P **PKPab 02 02 06.9 -3.3**
HERR Herculane 152.39 249 ⇓P **PKPab 02 02 06.7 -3.7**
MDVR Moldovita 152.62 248 ⇓P **PKPbc 02 01 59.2 -1.5**
BURAR Bucovina Array 153.24 256 ⇑P **PKPab 02 02 08.4 -5.7**
KMPD K-Podol'skiy 153.36 258 P PKPab 02 02 20.3 +5.9
AK07 Malin Array Si 153.49 264 P PKPdf 02 01 54.2 -0.5
AKASG Malin Array Be 153.58 265 PKPbc **PKPbc 02 02 02.6 0.0**
comp=Z,0.2nm,0.3s,baz=130,slow=2.4,SNR=5.3
AKASG Malin Array Be 153.58 265 PKPdf **PKPdf 02 01 55.9 +1.0**
DRGR 153.74 252 ⇑P **PKiKP 02 02 08.5 +5.2**
PVAQ Vaqueiros 154.78 194 *e*LQ LQ 02 56 14.1
PVAQ *e*LR LR 03 03 05.5
PVAQ *i* IAMs_20 IAMs_20 03 07 57.8
comp=Z,265nm,20.0s
KOLS Kolonicke sedl 155.54 254 *e*PKP **PKPdf 02 02 01.0 +3.3**
ESDC Sonseca Array 156.48 202 PKP **PKPdf 02 01 59.1 -0.2**
comp=Z,0.3nm,0.7s,baz=157,slow=1.1,SNR=2.1
ESDC PKPab **PKPab 02 02 27.6 -0.4**
comp=Z,2.7nm,1.0s,baz=184,slow=3.3,SNR=9.9
ESDC Sonseca Array 156.48 202 PKPdf 02 01 58.2 -1.1
ESDC **PKPab 02 02 28.5 +0.5**
PMRV Marv??o 156.74 195 *e*LQ LQ 02 56 50.5
PMRV *e*LR LR 03 07 23.4
PMRV *i* IAMs_20 IAMs_20 03 12 41.6
comp=Z,210nm,20.0s
SOKA Soboth 156.96 241 *e*PKP **PKPab 02 02 30.9 +1.0**
comp=Z,5.4nm,1.1s
ARSA Arzberg 157.21 243 *e*PKP **PKPab 02 02 31.8 +0.8**
comp=Z,3.0nm,0.8s
RONA Rosalia, Austr 157.24 245 *e*PKP **PKPab 02 02 31.9 +0.8**
comp=Z,16nm,1.3s
SESA Seetaler Alpe, 157.50 242 *e*pPKP **PKPab 02 02 35.1 +2.7**
comp=Z,17nm,1.0s
JAVC Velka Javorina 157.53 249 *e*PKP **PKPab 02 02 33.1 +0.7**
CONA Conrad Observa 157.60 245 *e*PKP **PKPab 02 02 35.0 +2.3**
comp=Z,7.1nm,1.1s
MTE Manteigas 157.72 195 *e*LQ LQ 02 58 02.0
MTE *e*LR LR 03 04 50.4
MTE *i* IAMs_20 IAMs_20 03 12 40.4
comp=Z,186nm,18.0s
KBA Koelnbreinsper 157.97 240 *e*pPKP **PKPab 02 02 37.3 +2.9**
comp=Z,4.3nm,1.4s
ABTA Abfaltersbach 158.03 238 *e*pPKP **PKPab 02 02 38.1 +3.5**
comp=Z,7.6nm,1.1s
MOA Molln 158.21 242 *e*PKP **PKPab 02 02 37.8 +2.6**
comp=Z,11nm,1.2s
KRUC Moravsky 158.24 247 *e*PKP **PKPab 02 02 34.1 -1.2**
KRUC *e* 02 02 41.6
MORC Moravsky Berou 158.27 250 *e*PKP **PKPab 02 02 34.3 -1.2**

MORC				*e*			02 02 42.1	
VRAC	**Vranov**	**158.34**	**248**	*e*PKP	**PKPab**	**02 02 36.2**	**+0.4**	
VRAC				*e*		02 02 42.5		
BIOA	**Bad Ischl, Aus**	**158.34**	**241**	*e*PKP	**PKPab**	**02 02 38.6**	**+2.8**	
	comp=Z,5.1nm,1.2s							
MVO	**Moncorvo**	**158.41**	**196**	*e*LR	LR	03 08 28.5		
MVO				*i* IAMs_20	IAMs_20	03 09 46.1		
	comp=Z,245nm,22.0s							
LESA	**Schwarzleotal**	**158.52**	**239**	*e*PKP	**PKPab**	**02 02 39.2**	**+2.5**	
	comp=Z,5.3nm,0.9s							
WTTA	**Wattenberg**	**158.80**	**237**	*e*PKP	**PKPab**	**02 02 36.9**	**-1.1**	
	comp=Z,11nm,1.2s							
WATA	**Walderalm**	**158.88**	**237**	*e*PKP	**PKPab**	**02 02 38.7**	**+0.4**	
	comp=Z,14nm,1.5s							
SQTA	**Sankt Quirin**	**158.94**	**237**	*e*PKP	**PKPab**	**02 02 40.8**	**+2.3**	
	comp=Z,4.0nm,1.0s							
FETA	**Feichten**	**158.96**	**236**	*e*PKP	**PKPab**	**02 02 38.4**	**-0.3**	
	comp=Z,4.4nm,1.0s							
TUE	**Stuetta**	**159.03**	**233**	IAMs_20	IAMs_20	03 30 29.7		
	comp=Z,199nm,20.0s							
PABE	**Paberze**	**159.06**	**269**	IAMs_20	IAMs_20	03 19 11.8		
	comp=Z,181nm,20.0s							
MOTA	**Moosalm**	**159.08**	**237**	*e*PKP	**PKPab**	**02 02 39.3**	**+0.1**	
	comp=Z,7.8nm,1.2s							
GERES	**GERESS Array B**	**159.22**	**243**	PKPab	**PKPab**	**02 02 39.2**	**-0.6**	
	comp=Z,1.3nm,1.0s,baz=149,slow=5.4,SNR=5.1							
GERES	**GERESS Array B**	**159.22**	**243**		**PKPab**	**02 02 39.9**	**+0.1**	
RETA	**Reutte**	**159.33**	**236**	*e*PKP	**PKPab**	**02 02 41.2**	**+1.0**	
	comp=Z,9.2nm,1.1s							
PGAV	**Gavieira, Arco**	**159.35**	**194**	*e*LR	LR	03 04 47.7		
PGAV				*i* IAMs_20	IAMs_20	03 10 08.2		
	comp=Z,302nm,22.0s							
KHC	**Kasperske Hory**	**159.49**	**244**	IAMs_20	IAMs_20	03 17 28.4		
	comp=Z,175nm,20.0s							
SSB	**Saint Sauveur**	**159.65**	**223**	IAMs_20	IAMs_20	03 27 42.7		
	comp=Z,196nm,20.0s							
WET	**Wettzell**	**159.79**	**243**	*e*PKPab	**PKPab**	**02 02 43.4**	**+1.2**	
	baz=141,slow=5.2							
BRG	**Berggiesshubel**	**160.65**	**247**	*e*PKPab	**PKPab**	**02 02 52.4**	**+6.7**	
BRG				Amp		02 02 54.4		
	comp=Z,2.8nm,1.1s							
GRF	**Grafenberg Arr**	**160.90**	**241**	*e*PKPab	**PKPab**	**02 02 47.1**	**+0.1**	
	baz=141,slow=5.2							
GRF				*e*L	L	03 19 10.3		
	comp=Z,144nm,21.8s							
MOX	**Moxa**	**161.47**	**244**	*e*PKPab	**PKPab**	**02 02 49.4**	**0.0**	
	baz=141,slow=5.2							
MOX				*e*L	L	03 21 04.9		
	comp=Z,178nm,20.6s							
FLTG	**Flechtingen**	**162.87**	**247**	*e*PKPab	**PKPab**	**02 02 57.7**	**+2.3**	
	baz=141,slow=5.2							
WLF	**Walferdange**	**162.87**	**233**	*e*PKPab	**PKPab**	**02 02 56.4**	**+0.9**	
	baz=141,slow=5.2							

*NOU **14** 01:55:45.8, 36°.65S × 177°.79E, h240km, MLv3.3/5, Off E. Coast of N. Island, N.Z.*
*IDC **14** 01:55:49.1 ± 6.2, 36°.27S × 177°.01E, h152km ± 67km, mb3.5/2, mbtmp3.9/2, Error ellipse: s-maj=93.1km s-min=45.5km az=8.0*
*NEIC **14** 01:55:50.2 ± 1.8, 36°.6S ± 0°.1 × 177°.1E ± 0°.2, h168km ± 10km, mb4.3/8, Error ellipse: s-maj=19.4km s-min=13.8km az=114.0*
*WEL **14** 01:55:51.5 ± 0.9, 37°.5 S × 17°.7E ±°, h191km ± 8km, M3.1/24, ML3.0/7, MLv3.1/24, Error ellipse: s-maj=8.4km s-min=6.3km az=56.8*

ISC 14 01:55:50.8 ± 0.9, 36°.73S ± 0°.06 × 177°.47E ± 0°.07, h199km ± 7km, n66, σ1°09/79, mb3.9/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.05**	**166**	P	**Pn**	**01 56 20.8**	**0.0**
HAZ				S	**Sn**	**01 56 43.3**	**-1.0**
MXZ	**Matakaoa Point**	**1.07**	**141**	P	**Pn**	**01 56 19.9**	**-1.0**
MXZ	**Matakaoa Point**	**1.07**	**141**	Pn	**Pn**	**01 56 18.8**	**-2.1**
MXZ				Sn	**Sn**	**01 56 41.5**	**-2.8**
MXZ	**Matakaoa Point**	**1.07**	**141**	P	**Pn**	**01 56 20.0**	**-0.8**
MXZ				S	**Sn**	**01 56 44.2**	**-0.2**
PKGZ	**Pakihiroa**	**1.23**	**157**	P	**Pn**	**01 56 22.4**	**+0.2**
PKGZ				S	**Sn**	**01 56 46.8**	**0.0**
RUGZ	**Raukumara Rang**	**1.25**	**172**	P	**Pn**	**01 56 21.4**	**-1.0**
WMGZ	**Waiomatatini S**	**1.32**	**146**	P	**Pn**	**01 56 22.5**	**-0.4**
WMGZ				S	**Sn**	**01 56 48.1**	**+0.2**
PUZ	**Puketiti**	**1.48**	**155**	P	**Pn**	**01 56 24.1**	**-0.1**
TWGZ	**Tauwhareparae**	**1.50**	**164**	P	**Pn**	**01 56 25.1**	**+0.6**
TWGZ				S	**Sn**	**01 56 52.2**	**+1.4**
URZ	**Urewera**	**1.55**	**190**	P	**Pn**	**01 56 25.0**	**+0.1**
	25nm,0.3s,baz=264,slow=4.7,SNR=81						
URZ				S	**Sn**	**01 56 51.3**	**-0.2**
	41nm,0.4s,baz=177,slow=22,SNR=33						
URZ	**Urewera**	**1.55**	**190**	P	**Pn**	**01 56 24.7**	**-0.1**
URZ	**Urewera**	**1.55**	**190**	P	**Pn**	**01 56 24.9**	**+0.1**
MWZ	**Matawai**	**1.60**	**178**	P	**Pn**	**01 56 25.4**	**0.0**
MWZ				S	**Sn**	**01 56 52.2**	**-0.2**
GRZ	**Great Barrier**	**1.69**	**286**	P	**Pn**	**01 56 25.7**	**-0.4**
TKGZ	**Te Karaka**	**1.73**	**170**	P	**Pn**	**01 56 26.8**	**+0.3**
RAGZ	**Rawiri**	**1.76**	**181**	P	**Pn**	**01 56 27.9**	**+0.9**
MUGZ	**Murupara**	**1.83**	**197**	P	**Pn**	**01 56 28.1**	**+0.6**
CNGZ	**Carnagh Statio**	**1.85**	**162**	P	**Pn**	**01 56 28.1**	**+0.4**
WIAZ	**Waiheke Island**	**1.88**	**267**	P	**Pn**	**01 56 28.4**	**+0.5**
MKAZ	**Moumakai**	**1.89**	**258**	P	**Pn**	**01 56 29.0**	**+0.9**
RTZ	**Ruatahuna**	**1.92**	**192**	P	**Pn**	**01 56 28.4**	**-0.1**
RTZ				Sn	**Sn**	**01 56 58.3**	**+0.3**
RIGZ	**Rimuhau**	**1.99**	**173**	P	**Pn**	**01 56 29.5**	**+0.4**
ETAZ	**East Tamaki Re**	**2.05**	**263**	P	**Pn**	**01 56 30.4**	**+0.7**
SNGZ	**Shannon Statio**	**2.05**	**183**	P	**Pn**	**01 56 30.0**	**+0.2**
MBAZ	**Motutapu North**	**2.07**	**268**	P	**Pn**	**01 56 30.8**	**+0.9**
MTHZ	**Maungataniwha**	**2.18**	**193**	P	**Pn**	**01 56 31.4**	**+0.3**
RAHZ	**Arahi**	**2.21**	**188**	P	**Pn**	**01 56 31.9**	**+0.5**
PRGZ	**Paritu Road**	**2.21**	**172**	P	**Pn**	**01 56 32.1**	**+0.6**
MRHZ	**Matea Rd**	**2.26**	**201**	P	**Pn**	**01 56 32.3**	**+0.3**
KNZ	**Kokohu**	**2.29**	**176**	P	**Pn**	**01 56 32.4**	**+0.1**
WTAZ	**Waiatarua**	**2.33**	**264**	P	**Pn**	**01 56 32.0**	**-0.8**
WHHZ	**Waihua**	**2.35**	**184**	P	**Pn**	**01 56 33.2**	**+0.3**
NMHZ	**Naumai**	**2.42**	**192**	P	**Pn**	**01 56 34.6**	**+0.8**
MHGZ	**Mahia Peninsul**	**2.44**	**172**	P	**Pn**	**01 56 34.0**	**+0.1**
BKZ	**Black Stump Fm**	**2.55**	**197**	P	**Pn**	**01 56 34.9**	**-0.3**
ARHZ	**Aropaoanui**	**2.56**	**188**	P	**Pn**	**01 56 35.5**	**+0.3**
ARHZ				S	**Sn**	**01 57 10.3**	**+0.2**
WOZ	**Waipu Caves**	**2.64**	**286**	P	**Pn**	**01 56 35.9**	**-0.3**
KWHZ	**Kaweka Forest**	**2.81**	**197**	P	**Pn**	**01 56 38.1**	**-0.1**
KWHZ				S	**Sn**	**01 57 15.6**	**+0.1**
OTVZ	**Oturere**	**2.82**	**210**	P	**Pn**	**01 56 39.3**	**+0.9**
SNVZ	**South Ngauruho**	**2.85**	**210**	P	**Pn**	**01 56 41.0**	**+2.3**
SNVZ				S	**Sn**	**01 57 15.5**	**-0.8**
KRHZ	**Kereru**	**3.04**	**196**	P	**Pn**	**01 56 40.2**	**-0.6**
KRHZ				S	**Sn**	**01 57 19.6**	**-0.5**
KAHZ	**Kahuranaki**	**3.10**	**188**	P	**Pn**	**01 56 41.3**	**-0.2**
PXZ	**Pawanui**	**3.33**	**188**	P	**Pn**	**01 56 43.8**	**-0.5**
PNHZ	**Pukenui**	**3.33**	**197**	P	**Pn**	**01 56 43.6**	**-0.8**
OUZ	**Omahuta**	**3.48**	**294**	P	**Pn**	**01 56 45.6**	**-0.6**
OUZ	**Omahuta**	**3.48**	**294**	P	**Pn**	**01 56 45.8**	**-0.4**
BFZ	**Birch Farm**	**4.06**	**193**	P	**Pn**	**01 56 51.5**	**-1.7**
BFZ	**Birch Farm**	**4.06**	**193**	Pn	**Pn**	**01 56 51.9**	**-1.4**
MRZ	**Mangatainoka R**	**4.20**	**200**	Pn	**Pn**	**01 56 52.6**	**-2.3**
MSWZ	**Moikau Station**	**4.99**	**200**	Pn	**Pn**	**01 57 04.0**	**-0.9**
SNZO	**South Karori**	**5.06**	**204**	Pn	**Pn**	**01 57 03.4**	**-2.4**
TCW	**Tory Channel**	**5.12**	**208**	Pn	**Pn**	**01 57 04.6**	**-2.0**
PLWZ	**Palliser**	**5.13**	**199**	Pn	**Pn**	**01 57 05.7**	**-1.1**
TUWZ	**Tuamarina**	**5.44**	**209**	Pn	**Pn**	**01 57 08.8**	**-1.9**
KOUNC	**Koumac, New Ca**	**19.81**	**321**	P	**P**	**02 00 06.5**	**+0.3**
MCQ	**Macquarie Isla**	**21.87**	**210**	P	**P**	**02 00 25.0**	**-2.5**
AS31	**Alice Springs**	**39.52**	**277**	P	**P**	**02 03 01.9**	**-0.4**
ASAR	**Alice Springs**	**39.52**	**277**	P	**P**	**02 03 01.8**	**-0.6**
	1.0nm,0.5s,baz=119,slow=8.2,SNR=15 1.0nm,0.5s						
WR8	**Warramunga Arr**	**40.97**	**282**	P	**P**	**02 03 13.8**	**-0.5**
WR8				IAmb	IAmb	02 03 26.0	
	comp=Z,25nm,1.4s						
WRA	**Warramunga Arr**	**41.11**	**282**	P	**P**	**02 03 14.1**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=121,slow=7.8,SNR=7.7 comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**41.11**	**282**	P	**P**	**02 03 14.6**	**-0.8**
FORT	**Forrest**	**41.14**	**263**	P	**P**	**02 03 14.9**	**-0.6**
FORT				IAmb	IAmb	02 03 38.5	
	comp=Z,13nm,1.1s						
WB0	**Warramunga Arr**	**41.16**	**282**	P	**P**	**02 03 14.5**	**-1.3**
WB0				IAmb	IAmb	02 03 28.8	
	comp=Z,7.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**49.00**	**278**	P	**P**	**02 04 16.9**	**-0.5**
FITZ				IAmb	IAmb	02 04 28.0	
	comp=Z,5.2nm,1.5s						

QSPA	**South Pole Qui**	**53.39**	**180**	P	**P**	**02 04 53.7**	**+4.1**	
FINES	**FINESS Array B**	**149.44**	**333**	PKPbc	**PKiKP**	**02 15 17.3**	**+1.0**	
	comp=Z,0.7nm,0.8s,baz=47,slow=2.8,SNR=4.7							

IDC 14 02:20:39.5 ± 2.7, 17°.51S × 178°.58W, h607km ± 23km, mb2.7/4, mbtmp3.6/5, Error ellipse: s-maj=117.8km s-min=24.1km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.23**	**265**	P	P	02 22 00.6	0.0
	6.0nm,0.5s,baz=309,slow=22,SNR=5.5						
WRA	**Warramunga Arr**	**44.55**	**259**	P	P	02 27 59.2	-0.1
	0.5nm,0.5s,baz=94,slow=7.1,SNR=10 0.5nm,0.5s						
ASAR	**Alice Springs**	**44.75**	**254**	P	P	02 28 00.7	-0.1
	1.0nm,0.5s,baz=89,slow=8.9,SNR=15 1.0nm,0.5s						
ILAR	**Eielson Array**	**85.53**	**13**	P	P	02 32 14.2	0.0
	0.1nm,0.4s,baz=208,slow=4.7,SNR=5.0 0.1nm,0.4s						
TXAR	**Lajitas Array**	**85.92**	**58**	P	P	02 32 16.9	-0.1
	0.2nm,0.7s,baz=244,slow=4.7,SNR=4.2 0.2nm,0.7s						

*ISK **14** 02:31:00.9, 34°.32N × 25°.91E, h5km, ML2.9/13*
*IDC **14** 02:31:03.6 ± 1.3, 34°.37N × 25°.50E, h0km, mb3.8/9, mbtmp3.8/11, ML2.9/2, Error ellipse: s-maj=23.0km s-min=18.7km az=8.0*
*NEIC **14** 02:31:03.9 ± 1.4, 34°.39N ± 0°.03 × 25°.73E ± 0°.06, h10km ± 1km, mb4.3/13, Error ellipse: s-maj=8.5km s-min=5.7km az=272.0*
*THE **14** 02:31:05.7, 35°N ± 3° × 2°6E ±°, h16km ± 5km, M3.0/9, MLh3.0/9*
*ATH **14** 02:31:07.2, 34°.59N × 25°.70E, h16km ± 3km, ML3.0/7, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 14 02:31:03.0 ± 1.6, 34°.40N ± 0°.05 × 25°.78E ± 0°.03, h4km ± 9km, n74, σ1°28/90, mb3.9/14, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.80**	**27**	Pg	**Pg**	**02 31 17.8**	**-0.5**
ZKR				Sg	**Sg**	**02 31 30.6**	**+1.9**
ZKR	**Zakros**	**0.80**	**27**	P	**Pg**	**02 31 17.8**	**-0.5**
ZKR				S	**Sg**	**02 31 27.9**	**-0.8**
ZKR	**Zakros**	**0.80**	**27**	P	**Pg**	**02 31 18.4**	**0.0**
ZKR				S	**Sg**	**02 31 30.3**	**+1.6**
SIT2	**Siteia**	**0.85**	**18**	P	**Pb**	**02 31 20.9**	**+0.6**
SIT2				S	**Sg**	**02 31 30.2**	**0.0**
NPS	**Neapolis**	**0.87**	**351**	P	**Pg**	**02 31 19.6**	**-0.2**
NPS				S	**Sg**	**02 31 30.3**	**-0.8**
NPS	**Neapolis**	**0.87**	**351**	P	**Pg**	**02 31 19.4**	**-0.3**
NPS				S	**Sg**	**02 31 29.7**	**-1.4**
SIVA	**Sivas**	**1.01**	**308**	P	**Pb**	**02 31 22.9**	**-0.2**
SIVA				S	**Sb**	**02 31 36.1**	**-0.6**
IDI	**Anoyia**	**1.15**	**321**	Pn	**Pb**	**02 31 25.2**	**-0.4**
	3.0nm,0.3s,baz=156,slow=12,SNR=31						
IDI				Sn	**Sn**	**02 31 42.8**	**+0.5**
	17nm,0.3s,baz=234,slow=16,SNR=7.5						
IDI	**Anoyia**	**1.15**	**321**	Pn	**Pn**	**02 31 26.2**	**+0.2**
IDI				Sn	**Sn**	**02 31 45.9**	**+3.6**
IDI	**Anoyia**	**1.15**	**321**	P	**Pb**	**02 31 25.4**	**-0.1**
IDI				S	**Sg**	**02 31 39.8**	**-0.2**
IDI	**Anoyia**	**1.15**	**321**		**Pg**	**02 31 25.6**	**+0.6**
IDI					**Sb**	**02 31 40.3**	**-0.6**
IDI	**Anoyia**	**1.15**	**321**	P	**Pg**	**02 31 25.7**	**+0.6**
IDI				S	**Sg**	**02 31 38.5**	**-1.5**
GVD	**Gavdhos**	**1.46**	**288**	Pn	**Pg**	**02 31 31.2**	**+0.1**
GVD				Sn	**Sg**	**02 31 53.8**	**+3.7**
GVD	**Gavdhos**	**1.46**	**288**	P	**Pb**	**02 31 30.5**	**-0.3**
GVD				S	**Sg**	**02 31 49.9**	**-0.2**
GVD	**Gavdhos**	**1.46**	**288**	P	**Pg**	**02 31 31.3**	**+0.1**
KARP	**Karpathos**	**1.61**	**44**	Pn	**Pn**	**02 31 30.9**	**-1.4**
KARP	**Karpathos**	**1.61**	**44**	P	**Pn**	**02 31 30.6**	**-1.7**
KARP				S	**Sn**	**02 31 50.2**	**-3.4**
KARP	**Karpathos**	**1.61**	**44**		**Pn**	**02 31 33.4**	**+1.1**
KARP	**Karpathos**	**1.61**	**44**	P	**Pb**	**02 31 34.0**	**+0.6**
VAM	**Vamos**	**1.64**	**308**	P	**Pn**	**02 31 33.0**	**+0.2**
VAM				S	**Sb**	**02 31 54.0**	**-1.1**
VAM	**Vamos**	**1.64**	**308**	P	**Pb**	**02 31 33.9**	**0.0**
IMMV	**Iera Moni Meta**	**1.82**	**306**	Pn	**Pb**	**02 31 36.4**	**-0.5**
IMMV	**Iera Moni Meta**	**1.82**	**306**	P	**Pn**	**02 31 35.1**	**-0.1**
IMMV	**Iera Moni Meta**	**1.82**	**306**	P	**Pb**	**02 31 36.4**	**-0.5**
KNDR	**Palaiochora Ch**	**1.96**	**296**	Pn	**Pb**	**02 31 38.1**	**-1.2**
KNDR	**Palaiochora Ch**	**1.96**	**296**	P	**Pb**	**02 31 38.6**	**-0.7**
THR6	**Thira Island,**	**1.98**	**351**	P	**Pn**	**02 31 37.5**	**+0.2**
THERA	**Ancient Thera,**	**1.98**	**353**	P	**Pn**	**02 31 36.2**	**-1.1**
THERA	**Ancient Thera,**	**1.98**	**353**	P	**Pn**	**02 31 37.6**	**+0.3**
SNT5	**Nea Kammeni, S**	**2.02**	**351**	P	**Pn**	**02 31 38.4**	**+0.4**
THR5	**Thira Island,**	**2.04**	**350**	P	**Pn**	**02 31 38.4**	**+0.1**
ARG	**Arkhangelos**	**2.64**	**46**	Pn	**Pn**	**02 31 46.3**	**-0.1**
ARG	**Arkhangelos**	**2.64**	**46**	P	**Pn**	**02 31 45.1**	**-1.3**
ARG	**Arkhangelos**	**2.64**	**46**	Pn	**Pn**	**02 31 47.1**	**+0.7**
ARG	**Arkhangelos**	**2.64**	**46**	P	**Pn**	**02 31 47.2**	**+0.8**
DAT	**Datca**	**2.75**	**32**	Pn	**Pn**	**02 31 48.2**	**+0.2**
TURN	**Turunc**	**3.10**	**40**	Pn	**Pn**	**02 31 52.8**	**0.0**
VLI	**Veliai**	**3.27**	**316**	P	**Pn**	**02 31 55.9**	**+0.7**
DALY	**Dalyan (Mula)**	**3.36**	**43**	Pn	**Pn**	**02 31 56.6**	**+0.3**
AKAS	**Kas**	**3.62**	**59**	Pn	**Pn**	**02 31 59.0**	**-0.2**
AKAS	**Kas**	**3.62**	**59**	Pn	**Pn**	**02 31 59.8**	**-0.3**
CAME	**Cameli-Denizli**	**3.83**	**47**	Pn	**Pn**	**02 32 03.1**	**+0.2**
ELL	**Elmali**	**4.10**	**54**	Pn	**Pn**	**02 32 07.2**	**+0.6**
ELL	**Elmali**	**4.10**	**54**		**Pn**	**02 32 07.0**	**+0.4**
ITM	**Ithomi**	**4.18**	**313**	Pn	**Pn**	**02 32 06.8**	**-0.9**
ALN	**Alexandroupoli**	**6.49**	**2**	Pn	**Pn**	**02 32 39.8**	**+0.4**
KBZ	**Khabaz**	**16.21**	**50**	Pn	**P**	**02 34 58.4**	**+3.6**
	0.1nm,0.3s,baz=312,slow=4.7,SNR=7.0 7.1nm,1.0s						
AKBB	**Malin Array Si**	**16.48**	**8**	Pn	**Pn**	**02 34 54.0**	**-1.1**
GERES	**GERESS Array B**	**16.99**	**332**	Pn	**P**	**02 35 03.2**	**-0.4**
	baz=144,slow=14,SNR=1.6 0.1nm,0.5s						
GERES	**GERESS Array B**	**16.99**	**332**		**Pn**	**02 35 01.4**	**-0.2**
ESDC	**Sonseca Array**	**24.26**	**291**	P	**P**	**02 36 21.7**	**+0.3**
	0.4nm,0.8s,baz=102,slow=12,SNR=2.6 0.4nm,0.8s						
ESDC	**Sonseca Array**	**24.26**	**291**	P	**P**	**02 36 19.3**	**-2.0**
MTE	**Manteigas**	**27.04**	**293**	P	**P**	**02 36 44.0**	**-2.5**
MTE				IAmb	IAmb	02 37 15.2	
	comp=Z,13nm,1.0s						
FINES	**FINESS Array B**	**27.06**	**0**	P	**P**	**02 36 45.8**	**-0.5**
	comp=Z,2.4nm,1.1s,baz=187,slow=10,SNR=3.4 comp=Z,2.4nm,1.1s						
FINES	**FINESS Array B**	**27.06**	**0**	P	**P**	**02 36 46.1**	**-0.2**
EKB	**Eskdalemuir**	**28.97**	**325**	P	**P**	**02 37 01.9**	**-1.6**
EKB				IAmb	IAmb	02 37 40.9	
	comp=Z,19nm,1.3s						
AB31	**Akbulak array**	**29.17**	**49**	P	**P**	**02 37 06.2**	**+0.9**
ABKAR	**Akbulak array**	**29.17**	**49**	P	**P**	**02 37 05.6**	**+0.2**
DSB	**Dublin**	**29.52**	**320**	P	**P**	**02 37 07.1**	**-1.3**
HRA	**Herat**	**29.99**	**80**	P	**P**	**02 37 13.0**	**0.0**
HRA				IAmb	IAmb	02 37 27.1	
	comp=Z,2.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.41**	**232**	P	**P**	**02 37 15.6**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=22,slow=9.6,SNR=5.6 comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.41**	**232**	P	**P**	**02 37 16.3**	**-0.3**
TORD				IAmb	IAmb	02 37 25.7	
	comp=Z,7.1nm,0.6s						
ARCES	**ARCESS Array B**	**35.19**	**360**	P	**P**	**02 37 59.7**	**+1.8**
	comp=Z,1.4nm,1.0s,baz=171,slow=9.5,SNR=3.7 comp=Z,1.4nm,1.0s						
ARCES	**ARCESS Array B**	**35.19**	**360**	P	**P**	**02 37 58.0**	**+0.2**
ARCES				IAmb	IAmb	02 38 25.5	
	comp=Z,6.5nm,1.2s						
BVAR	**Borovoye Array**	**36.51**	**45**	P	**P**	**02 38 12.4**	**+3.0**
	comp=Z,1.0nm,0.7s,baz=277,slow=2.5,SNR=5.4 comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**41.20**	**50**	P	**P**	**02 38 51.0**	**+2.3**
	comp=Z,1.1nm,0.6s,baz=277,slow=8.8,SNR=8.0 comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**41.27**	**50**	P	**P**	**02 38 49.0**	**-0.2**
KURK				IAmb	IAmb	02 38 55.0	
	comp=Z,1.4nm,0.8s						
MK31	**Makanchi Array**	**43.77**	**56**	P	**P**	**02 39 09.3**	**-0.5**
MK31				IAmb	IAmb	02 39 27.7	
	comp=Z,2.2nm,1.2s						
MKAR	**Makanchi Array**	**43.77**	**56**	P	**P**	**02 39 13.0**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=274,slow=6.0,SNR=5.6 comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**43.77**	**56**	P	**P**	**02 39 09.7**	**0.0**

SPITS	**Spitsbergen Ar**	**44.07**	**357**	P	**P**	**02 39 13.2**	**+1.5**	
	comp=Z,5.7nm,0.9s,baz=151,slow=9.2,SNR=2.5 comp=Z,5.7nm,0.9s							
ZALV	**Zalesovo Beam**	**45.16**	**46**	P	**P**	**02 39 23.3**	**+2.6**	
	comp=Z,0.9nm,0.5s,baz=248,slow=8.5,SNR=4.6 comp=Z,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**45.16**	**46**	P	**P**	**02 39 19.7**	**-1.0**	
MSEY	**Mahe Island**	**47.90**	**138**	P	**P**	**02 39 41.4**	**-1.3**	

*MDD **14** 02:55:42.1 ± 0.9, 37°.68N × 4°.40E, h0km ± 11km, Mb4.0/17, M_mb3.3/17, Error ellipse: s-maj=13.0km s-min=5.0km az=149.0*
*CRAAG **14** 02:55:44.1, 37°.15N × 4°.35E, Ml3.0, Algrie 29km NW Azzeffoun*

ISC 14 02:55:41.8 ± 3.1, 37°.7N ± 0°.1 × 4°.4E ± 0°.1, h10km, n23, σ0s90/32, 10C, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKJ	**Tikjda**	**1.27**	**189**	P	Pn	02 55 59.4	-6.3
CTCHA	**Tamokra**	**1.29**	**169**	P	Pn	02 55 59.7	-6.1
AKET	**Djebel Ketaf**	**1.69**	**193**	P	Pn	02 56 06.6	-4.9
MAHO	**Mahon**	**2.19**	**358**	P	**Pn**	**02 56 18.4**	**+0.2**
MAHO				S	**Sn**	**02 56 44.6**	**-0.9**
ETOS	**Mallorca**	**2.39**	**330**	P	**Pn**	**02 56 22.2**	**+1.1**
ETOS				S	**Sn**	**02 56 51.2**	**+0.7**
ETOS	**Mallorca**	**2.39**	**330**	Pn	**Pn**	**02 56 21.8**	**+0.7**
ETOS				Sn	**Sn**	**02 56 50.4**	**-0.1**
EIBI	**Ibiza**	**2.72**	**300**	P	**Pn**	**02 56 26.1**	**+0.6**
EIBI				S	**Sn**	**02 56 57.7**	**-0.7**
EIBI	**Ibiza**	**2.72**	**300**	Pn	**Pn**	**02 56 26.2**	**+0.8**
EIBI				⇑*i*IVmb_VC		02 56 35.5	
	191nm,SNR=1.1						
EIBI				Sn	**Sn**	**02 56 58.5**	**+0.1**
ECOL	**Islas Columbre**	**3.62**	**309**	Pn	**Pn**	**02 56 38.5**	**+0.7**
ECOL				Sn	**Sn**	**02 57 20.9**	**+0.4**
EBEN2	**Beniarda presa**	**3.72**	**287**	Pn	**Pn**	**02 56 39.1**	**-0.1**
EBEN2				⇑*i*IVmb_VC		02 56 41.2	
	242nm,SNR=1.3						
AFON	**Font Roja**	**3.98**	**286**	Pn	**Pn**	**02 56 43.4**	**+0.5**
AFON				⇑*i*IVmb_VC		02 56 47.9	
	159nm,SNR=1.5						
EPOB	**Poblet**	**4.44**	**326**	Pn	**Pn**	**02 56 49.8**	**+0.5**
EPOB				⇑*i*IVmb_VC		02 56 57.3	
	157nm,SNR=1.2						
EPOB				Sn	**Sn**	**02 57 39.7**	**-1.4**
ERTA	**Horta de San J**	**4.51**	**317**	Pn	**Pn**	**02 56 51.3**	**+1.2**
ERTA				⇑*i*IVmb_VC		02 56 57.7	
	93nm,SNR=0.6						
ERTA				Sn	**Sn**	**02 57 41.4**	**-1.2**
EVIV	**Cofrentes, Val**	**4.58**	**292**	Pn	**Pn**	**02 56 52.1**	**+1.0**
ECHE	**Chera**	**4.58**	**296**	P	**Pn**	**02 56 51.9**	**+0.7**
ECHE	**Chera**	**4.58**	**296**	Pn	**Pn**	**02 56 52.0**	**+0.8**
ECHE				⇑*i*IVmb_VC		02 56 53.0	
	192nm,SNR=2.1						
EMOS	**Mosqueruela**	**4.61**	**307**	Pn	**Pn**	**02 56 52.6**	**+1.0**
EMOS				⇑*i*IVmb_VC		02 56 53.6	
	115nm,SNR=1.6						
EMOS				Sn	**Sn**	**02 57 43.7**	**-1.6**
ETOB	**Tobarra**	**4.75**	**283**	P	**Pn**	**02 56 53.8**	**+0

comp=N,2µm,0.2s
DAT IAML 03 02 32.0
comp=E,2µm,0.6s
BODA Bodrum-Mula 0.32 13 Pg **Pg 03 02 30.3 -0.1**
BODA Sg **Sg 03 02 34.9 +0.1**
BODT Bodrum 0.34 357 Pg **Pg 03 02 31.2 +0.4**
BODT Sg **Sg 03 02 36.3 +0.9**
BODT Bodrum 0.34 357 P **Pg 03 02 31.4 +0.7**
BODT S **Sg 03 02 36.4 +1.0**
KLNA Kalymnos 0.38 309 P **Pg 03 02 31.4 0.0**
KLNA S **Sg 03 02 36.4 +0.0**
YKAV Yalikavak-Bodr 0.41 354 Pg **Pg 03 02 31.4 -0.5**
YKAV Sg **Sg 03 02 37.4 0.0**
TURN Turunc 0.73 85 Pg **Pg 03 02 38.1 +0.1**
TURN Sg **Sb 03 02 48.9 +0.5**
TURN Turunc 0.73 85 P **Pg 03 02 37.3 -0.6**
TURN S **Sb 03 02 47.7 -0.8**
TURN IAML 03 02 50.0
comp=N,184nm,0.6s
DDIM Aydin, Didim 0.74 354 P **Pg 03 02 38.1 -0.1**
RODB Rodos 0.76 111 P **Pn 03 02 40.4 +0.1**
RODB S **Sn 03 02 50.5 -1.2**
RDI1 Rhodes Town Ha 0.76 110 P **Pn 03 02 40.7 +0.3**
RDI1 S **Sn 03 02 51.6 -0.1**
ARG Arkhangelos 0.81 128 Pg **Pg 03 02 39.4 -0.1**
ARG Sg **Sb 03 02 51.7 +1.0**
ARG Arkhangelos 0.81 128 P **Pg 03 02 39.3 -0.1**
ARG S **Sb 03 02 50.9 +0.2**
YER Yerkesik 0.86 61 Pg **Pb 03 02 40.8 0.0**
YER Sg **Sb 03 02 52.9 +0.5**
YER Yerkesik 0.86 61 P **Pg 03 02 40.2 -0.3**
YER S **Sb 03 02 52.3 -0.1**
MULA Mugla, Merkez- 0.95 56 P **Pn 03 02 43.2 +0.1**
GCAM G?zelcaml? 0.98 355 Pg **Pb 03 02 42.6 -0.2**
GCAM Sg **Sn 03 02 56.6 -0.6**
GCAM G?zelcaml? 0.98 355 P **Pb 03 02 42.7 0.0**
AYDN Tasoluk 1.03 25 P **Pb 03 02 43.5 -0.2**
DALY Dalyan (Mula) 1.06 84 Pn **Pn 03 02 44.4 -0.1**
DALY Dalyan (Mula) 1.06 84 P **Pn 03 02 44.6 +0.1**
KARP Karpathos 1.18 187 Pn **Pn 03 02 45.5 -0.6**
KARP Karpathos 1.18 187 P **Pn 03 02 45.3 -0.8**
KARP S **Sn 03 03 03.0 +0.9**
KRL1 Karlovasi Samo 1.19 335 P **Pn 03 02 45.0 -1.2**
AYDB Zeytinkoy-Aydi 1.30 20 Pn **Pb 03 02 48.5 +0.2**
SABU Mula-Dalaman 1.31 85 P **Pg 03 02 49.0 -0.1**
ESEN Aydn-Nazilli 1.35 37 P **Pn 03 02 48.1 -0.3**
DGB zmir 1.38 345 P **Pn 03 02 47.7 -1.1**
GMLD Gumuldur 1.40 346 Pn **Pn 03 02 49.7 +0.6**
NAZL Nazilli-Aydin 1.46 31 Pn **Pn 03 02 50.2 +0.2**
TAVA DENIZLI_Tavas 1.47 59 P **Pg 03 02 51.6 -0.3**
DUVT Torbali 1.50 3 P **Pn 03 02 49.9 -0.6**
IZZE Mula-Seydike 1.55 100 P **Pb 03 02 52.9 +0.5**
CAME Cameli-Denizli 1.59 81 Pn **Pb 03 02 52.7 -0.6**
DNIZ Denizli-Tavas- 1.63 56 P **Pb 03 02 53.6 -0.3**
CAEL Denizli, Camel 1.64 75 P **Pg 03 02 57.7 +2.4**
ODEM Odemis-Izmir 1.66 20 Pn **Pn 03 02 53.5 +0.7**
BLCB Balcova 1.68 352 P **Pn 03 02 52.0 -1.0**
BLCB S **Sn 03 03 14.7 +0.3**
URLA Izmir 1.74 340 Pn **Pn 03 02 54.8 +0.9**
APMY Acipayam-Deniz 1.74 64 Pn **Pb 03 02 54.8 -1.0**
SULTU Buldan 1.75 40 P **Pg 03 02 57.4 -0.1**
KNIK Mula-Seydike 1.80 85 P **Pb 03 02 57.1 +0.4**
ZKR Zakros 1.84 210 Pn **Pn 03 02 58.5 +1.1**
GOLH Golhisar 1.85 73 P **Pb 03 02 58.5 +0.7**
AKAS Kas 1.89 104 Pn **Pb 03 02 57.5 -0.9**
CHOS Chios island 1.95 329 Pn **Pn 03 02 56.8 0.0**
CHOS Chios island 1.95 329 P **Pn 03 02 56.1 -0.7**
NPS Neapolis 2.02 224 P **Pn 03 02 57.5 -0.1**
ELL Elmali 2.07 88 Pn **Pb 03 03 00.2 -1.1**
KULA Kula-Manisa 2.08 30 Pn **Pb 03 03 00.1 -1.4**
GORD Gordes-Manisa 2.29 17 Pn **Pn 03 03 02.5 +1.1**
IDI Anoyia 2.44 235 P **Pn 03 03 03.7 +0.1**

IDC 14 03:10:39.3±8.5,37°94N×87°73E, h0km, mbtmp3.5/3, ML3.4/2,2C-4D, Error ellipse: s-maj=110.4km s-min=42.3km az=37.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**9.72**	**337**	⇓Pn	Pn	03 12 58.3	-2.1
	0.3nm,0.4s,baz=154,slow=14,SNR=6.8						
MK31				⇑Sn	Sn	03 14 39.8	-10
	2.0nm,1.0s						
MK31				⇓Lg	Lg	03 15 30.6	
	1.3nm,0.6s,baz=198,slow=32						
MKAR	**Makanchi Array**	**9.72**	**337**	Pn	Pn	03 12 59.1	-1.3
	0.5nm,0.3s,baz=153,slow=14,SNR=5.6						
MKAR				Sn	Sn	03 14 45.2	-5.0
	baz=148,slow=22						
MKAR				Lg	Lg	03 15 49.0	
	0.3nm,0.3s,baz=156,slow=28,SNR=2.1						
	1.0nm,0.4s						
MAKZ	**Makanchi**	**9.83**	**336**	⇓Pn	Pn	03 12 57.8	-4.2
	1.2nm,0.4s						
MAKZ				⇑Sn	Sn	03 14 43.5	-9.5
	0.9nm,0.5s						
MAKZ				⇓Lg	Lg	03 15 39.9	
	6.0nm,1.1s						
ZALV	**Zalesovo Beam**	**16.14**	**354**	Pn	Pn	03 14 26.0	-1.4
	0.4nm,0.3s,baz=172,slow=15,SNR=1.9						
SONM	**Songino Array**	**16.84**	**48**	Pn	Pn	03 14 37.2	+0.6
	0.1nm,0.3s,baz=235,slow=13,SNR=4.5						
	0.7nm,0.8s						

*IDC **14** 03:25:09.2±8.3,30°97N×131°89E, h0km, mb3.9/6, mbtmp3.9/6, MS3.0/3, Error ellipse: s-maj=277.8km s-min=96.9km az=18.0*
*JMA **14** 03:25:19.7±0.1,31°4N±0°3×131°6E±0°5, h34km, MV3.4/39, SE OFF OSUMI PEN*
ISC 14 03:25:18.2±1.4,31°36N±0°06×131°63E±0°09,h37km±1km, n17,σ1ᵍ00/20,mb3.8/6,4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.35**	**299**	⇓P	Pn	**03 25 27.1**	**+0.5**
JNAR				⇓eS	Sn	**03 25 32.7**	**-0.8**
JNKG	**Nichinankitago**	**0.37**	**325**	⇓iP	Pn	**03 25 27.7**	**+0.7**
JNKG				⇓eS	Sn	**03 25 33.5**	**-0.2**
JTSR	**Tashiro 2**	**0.63**	**253**	P	Pn	**03 25 31.2**	**+0.4**
JTSR				eS	Sn	**03 25 39.8**	**+0.1**
JTZ	**Takazaki**	**0.71**	**320**	P	Pn	**03 25 32.5**	**+0.7**
JTZ				eS	Sn	**03 25 41.9**	**+0.4**
JTN	**Tanegashima 3**	**0.89**	**219**	eP	Pn	**03 25 35.8**	**+1.6**
JTSN	**Tsuno**	**0.89**	**353**	P	Pn	**03 25 35.5**	**+1.3**
JTSN				eS	Sn	**03 25 47.7**	**+1.7**
JSU	**Suzuyama**	**1.01**	**279**	P	Pn	**03 25 36.8**	**+0.8**
JMTN	**Minamitane**	**1.14**	**213**	eP	Pn	**03 25 39.4**	**+1.8**
JZO	**Okuchi**	**1.17**	**312**	P	Pn	**03 25 39.3**	**+1.2**
JNU	**Nakatsue**	**1.87**	**340**	LR	LR	03 26 57.0	
	comp=Z,208nm,20.3s,baz=210,slow=47						
KSRS	**Korea Array**	**6.81**	**334**	LR	LR	03 30 02.8	
	comp=Z,63nm,18.8s,baz=170,slow=40						
SONM	**Songino Array**	**25.31**	**318**	P	**P**	**03 30 41.3**	**0.0**
	1.1nm,0.6s,baz=132,slow=9.4,SNR=8.3						
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**43.42**	**312**	P	**P**	**03 33 16.8**	**-0.3**
	0.7nm,0.3s,baz=96,slow=8.7,SNR=1.4						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	**48.60**	**315**	P	**P**	**03 33 58.0**	**+0.1**
	2.9nm,0.5s,baz=97,slow=7.9,SNR=7.6						
	2.3nm,0.5s						
FINES	**FINESS Array B**	**69.89**	**330**	P	**P**	**03 36 24.2**	**-0.7**
	0.7nm,0.5s,baz=73,slow=7.0,SNR=5.9						
FINES				LR	LR	04 09 32.5	
	comp=Z,33nm,19.1s,baz=149,slow=38						
	0.7nm,0.5s						
AKASG	**Malin Array Be**	**73.57**	**320**	P	**P**	**03 36 46.4**	**-0.8**
	0.3nm,0.3s,baz=60,slow=6.9,SNR=2.1						
	0.3nm,0.3s						
NOA	**NORSAR Array B**	**76.02**	**334**	P	**P**	**03 37 00.9**	**-0.4**
	0.3nm,0.6s,baz=48,slow=5.7,SNR=2.2						
	0.3nm,0.6s						

*AUST **14** 03:32:22.0±0.2,28°S±2°×13°6E±°, h10km, ML2.9/10, Error ellipse: s-maj=4.9km s-min=3.9km az=72.7*
*IDC **14** 03:32:22.3±2.6,28°06S×135°94E, h0km, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=43.0km s-min=16.2km az=54.0*
ISC 14 03:32:21.2±0.7,28°29S±0°04×135°62E±0°05,h10km,n19,σ1ᵍ55/30,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OOD	**Oodnadatta**	**0.49**	**7**	P	**Pg**	**03 32 30.8**	**-0.1**
OOD				S	**Sg**	**03 32 36.7**	**-0.6**
MULG	**Mulgathing**	**2.41**	**214**	P	**Pb**	**03 33 03.2**	**-1.5**
MULG				S	**Sb**	**03 33 34.3**	**-0.2**
LCRK	**Leigh Creek**	**3.13**	**134**	P	**Pn**	**03 33 11.7**	**+1.1**
YAPP	**Yappala Statio**	**4.26**	**147**	P	**Pn**	**03 33 27.7**	**+1.5**
YAPP				S	**Sn**	**03 34 18.4**	**+2.3**
BBOO	**Buckleboo**	**4.53**	**175**	P	**Pn**	**03 33 31.3**	**+1.5**
BBOO				S	**Sn**	**03 34 22.9**	**+0.4**
INKA	**Innaminka**	**4.57**	**84**	P	**Pn**	**03 33 31.4**	**+1.1**
INKA				S	**Sn**	**03 34 24.3**	**+0.8**
AS18	**Alice Springs**	**4.81**	**342**	P	**Pn**	**03 33 35.7**	**+2.0**
ASAR	**Alice Springs**	**4.85**	**341**	Pn	**Pn**	**03 33 35.6**	**+1.2**
	0.5nm,0.3s,baz=161,slow=12,SNR=11						
ASAR				Sn	**Sn**	**03 34 30.4**	**-0.2**
	1.3nm,0.3s,baz=160,slow=22,SNR=12						
ASAR				Lg	Lg	03 34 52.0	
	1.0nm,0.3s,baz=158,slow=25,SNR=5.0						
	0.6nm,0.2s						
AS31	**Alice Springs**	**4.85**	**341**	P	**Pn**	**03 33 36.3**	**+2.0**
NAPP	**Napperby**	**5.34**	**157**	P	**Pn**	**03 33 42.3**	**+1.3**
	comp=Z,7.1nm,1.1s,comp=Z,0.0nm						
STKA	**Stephens Creek**	**6.29**	**126**	P	**Pn**	**03 33 55.1**	**+1.0**
STKA				S	**Sn**	**03 35 03.6**	**-2.5**
STKA	**Stephens Creek**	**6.29**	**126**	Pn	**Pn**	**03 33 55.5**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=309,slow=14,SNR=4.7						
STKA				Sn	**Sn**	**03 35 02.7**	**-3.4**
	comp=Z,1.6nm,0.3s,baz=202,slow=21,SNR=7.8						
STKA				Lg	Lg	03 35 39.1	
	comp=Z,0.8nm,0.3s,baz=48,slow=24,SNR=3.5						
	comp=Z,1.1nm,0.3s						
FORT	**Forrest**	**7.04**	**248**	P	**Pn**	**03 34 05.1**	**+0.8**
	comp=Z,8.7nm,1.0s,comp=Z,0.0nm						
FORT				S	**Sn**	**03 35 23.0**	**-1.4**
WRKA	**Warakurna**	**7.30**	**295**	P	**Pn**	**03 34 08.4**	**+0.4**
	comp=Z,6.2nm,2.9s,comp=Z,0.0nm						
WRKA				S	**Sn**	**03 35 30.8**	**-0.3**
KELC	**Kelly Hill Cav**	**7.75**	**172**	P	**Pn**	**03 34 15.6**	**+1.5**
	comp=Z,24nm,2.1s,comp=Z,0.1nm						
WRA	**Warramunga Arr**	**8.39**	**352**	Pn	**Pn**	**03 34 23.4**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=167,slow=13,SNR=30						
WRA				Sn	**Sn**	**03 35 55.4**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=171,slow=24,SNR=5.2						
WRA				Lg	Lg	03 36 45.4	
	comp=Z,0.3nm,0.3s,baz=167,slow=26,SNR=4.7						
	comp=Z,0.7nm,0.3s						
QIS	**Mount Isa**	**8.51**	**26**	P	**Pn**	**03 34 24.1**	**-0.4**
CMSA	**Cobar Meteorol**	**9.32**	**113**	P	**Pn**	**03 34 35.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**13.67**	**316**	Pn	**Pn**	**03 35 37.5**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=139,slow=14,SNR=1.4						
	comp=Z,2.8nm,0.8s						

*NIED **14** 03:36:34.5,39°06N×140°87E, h9km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.36; Mθθ-0.40; Mφφ-4.97; Mrθ1.62; Mrφ-0.81; Mθφ1.79; Fault plane solution: M₀5.75000×10¹⁴ NP1: φs179.00000°, δ35.00000°, λ71.00000°. NP2:φs22.00000°, δ57.00000°, λ103.00000°.*
*JMA **14** 03:36:34.5±0.0,39°1N±0°1×140°9E±0°2, h9km, MV3.7/20, SOUTHERN IWATE PREF*
JMA Felt II J1 at SOUTHERN IWATE PREF .
*IDC **14** 03:36:39.2±3.1,39°06N×140°77E, h48km±28km, mb3.6/11, mbtmp3.8/15, ML2.9/3, MS3.1/2, Error ellipse: s-maj=27.5km s-min=16.8km az=76.0*
*NEIC **14** 03:36:39.3±1.7,39°15N±0°03×140°8E±0°1, h44km±9km, mb4.3/12, Error ellipse: s-maj=13.3km s-min=4.6km az=90.0*
ISC 14 03:36:33.8±0.9,39°09N±0°03×140°97E±0°04,h12km±6km, n57,σ1ᵍ47/59,mb4.1/16,12D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.23**	**125**	⇓P	**Pb**	**03 36 40.1**	**+0.1**
JRG	**Rokugo**	**0.41**	**320**	⇓P	**Pg**	**03 36 42.1**	**+0.2**
JRG				⇓eS	**Sg**	**03 36 47.8**	**+0.4**
JOM	**Ohasama**	**0.46**	**32**	⇓iP	**Pn**	**03 36 44.5**	**-1.7**
JOM				⇓eS	**Sn**	**03 36 51.6**	**+2.6**
JKMT	**Kesennumamotoy**	**0.48**	**125**	⇓iP	**Pn**	**03 36 44.4**	**-2.0**
JKMT				⇓eS	**Sn**	**03 36 51.7**	**+2.1**
JYK	**Kaneyama**	**0.51**	**251**	⇓P	**Pg**	**03 36 42.9**	**-0.9**
JYK				⇓eS	**Sg**	**03 36 48.5**	**-2.0**
OFUJ	**Ofunato**	**0.54**	**90**	⇓iP	**Pn**	**03 36 46.2**	**-1.1**
JIO	**Ouri**	**0.70**	**155**	⇓iP	**Pb**	**03 36 47.7**	**-0.2**
JIO				⇓eS	**Sb**	**03 36 57.1**	**-0.2**
JOU	**Okura**	**0.76**	**199**	P	**Pb**	**03 36 48.0**	**-1.0**
JOU				eS	**Sb**	**03 36 57.4**	**-1.8**
JTM	**Tenmabayashi**	**1.70**	**2**		**Pb**	**03 37 05.1**	**+0.1**
JTM				Sn	**Sg**	**03 37 27.3**	**-1.2**
JYT	**Yasato**	**2.92**	**192**	Pn	**Pb**	**03 37 23.4**	**-2.3**
MJB9	**Matsu-Tunnel**	**3.35**	**222**		**Pn**	**03 37 28.3**	**+2.2**
MAJO	**Matsushiro**	**3.35**	**222**		**Pn**	**03 37 27.4**	**+1.4**
MJAR	**Matsushiro Arr**	**3.35**	**222**	P	**Pn**	**03 37 26.6**	**+0.6**
	0.1nm,0.3s,baz=26,slow=13,SNR=11						
MJAR				S	**Sb**	**03 38 13.3**	**-0.7**
	6.8nm,0.7s,baz=9.5,slow=27,SNR=4.2						
	3.7nm,0.8s						
MJAR	**Matsushiro Arr**	**3.35**	**222**		**Pn**	**03 37 28.9**	**+2.8**
ERM	**Erimo**	**3.37**	**29**		**Pb**	**03 37 29.1**	**-4.3**
USRK	**Ussuriysk Ar.**	**8.45**	**310**	P	**Pn**	**03 38 36.4**	**+0.6**
	0.3nm,0.3s,baz=119,slow=15,SNR=3.3						
	1.2nm,0.5s						
USRK	**Ussuriysk Ar.**	**8.45**	**310**		**Pn**	**03 38 36.0**	**+0.1**
KSRS	**Korea Array**	**10.39**	**265**	P	**Pn**	**03 39 04.9**	**+2.3**
	0.4nm,0.3s,baz=80,slow=14,SNR=6.4						
KSRS				S	**Sn**	**03 41 01.1**	**+2.2**
	2.4nm,0.7s,baz=71,slow=24,SNR=4.3						
KSRS				LR	LR	03 42 24.9	
	comp=Z,46nm,20.5s,baz=345,slow=34						
	1.1nm,0.6s						
HILR	**Hailar Array B**	**18.38**	**312**	P	**P**	**03 40 48.4**	**0.0**
	5.0nm,0.7s,baz=96,slow=13,SNR=1.6						
H11N2	**WAKE ISLAND Hy**	**29.53**	**123**	T	T	04 13 25.7	
	baz=318,slow=75,SNR=154						
H11N1	**WAKE ISLAND Hy**	**29.54**	**123**	T	T	04 13 13.5	
	baz=318,slow=75,SNR=174						
H11N3	**WAKE ISLAND Hy**	**29.55**	**123**	T	T	04 13 13.6	
	baz=318,slow=75,SNR=92						
H11S1	**WAKE ISLAND Hy**	**30.30**	**125**	T	T	04 13 55.2	
	baz=318,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**30.30**	**125**	T	T	04 13 55.3	
	baz=318,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**30.31**	**125**	T	T	04 14 02.1	
	baz=318,slow=76,SNR=32						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**03 44 10.3**	**-0.3**
	0.5nm,0.5s,baz=104,slow=9.5,SNR=4.0						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**03 44 09.8**	**-0.8**
MKAR	**Makanchi Array**	**42.76**	**300**	P	**P**	**03 44 30.8**	**-0.2**
	0.9nm,0.7s,baz=83,slow=11,SNR=5.4						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**42.76**	**300**	P	**P**	**03 44 29.7**	**-1.3**
E19K	**Redstone River**	**43.84**	**29**	P	**P**	**03 44 41.9**	**+2.5**
KURK	**Kurchatov**	**44.41**	**306**	P	**P**	**03 44 42.9**	**-1.2**
KURBB	**Kurchatov Arra**	**44.49**	**306**	P	**P**	**03 44 44.7**	**0.0**
	0.9nm,0.3s,baz=80,slow=8.2,SNR=9.1						
	0.9nm,0.3s						
E23K	**Chandalar**	**46.78**	**29**	P	**P**	**03 45 04.1**	**+1.3**
E23K				IAmb	IAmb	03 45 17.0	
	comp=Z,5.8nm,1.3s						
E24K	**Your Creek**	**47.21**	**29**	P	**P**	**03 45 08.5**	**+2.4**
E24K				IAmb	IAmb	03 45 12.0	
	comp=Z,2.9nm,1.0s						
GHO	**Glory Hole Cre**	**47.28**	**37**	P	**P**	**03 45 06.2**	**-0.6**
GHO				IAmb	IAmb	03 45 11.2	
	comp=Z,8.6nm,0.9s						
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**03 45 13.8**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=270,slow=6.1,SNR=9.4						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**03 45 12.8**	**+0.9**
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**03 45 19.6**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=62,slow=8.8,SNR=3.8						
	comp=Z,0.6nm,0.4s						
I30M	**Mount Dempster**	**52.31**	**32**	P	**P**	**03 45 47.5**	**+2.5**
I30M				IAmb	IAmb	03 45 48.7	
	comp=Z,3.5nm,0.8s						
AB31	**Akbulak array**	**56.37**	**309**	P	**P**	**03 46 14.5**	**-0.1**
AB31				IAmb	IAmb	03 46 15.7	
	comp=Z,1.4nm,0.6s						
ABKAR	**Akbulak array**	**56.37**	**309**	P	**P**	**03 46 14.9**	**+0.3**
WB0	**Warramunga Arr**	**58.87**	**187**	P	**P**	**03 46 32.4**	**0.0**
WR8	**Warramunga Arr**	**59.04**	**187**	P	**P**	**03 46 34.2**	**+0.6**
WB2	**Warramunga Arr**	**59.05**	**187**	P	**P**	**03 46 33.9**	**+0.2**
WRA	**Warramunga Arr**	**59.05**	**187**	P	**P**	**03 46 33.6**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=4.4,slow=7.2,SNR=11						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**59.05**	**187**	P	**P**	**03 46 34.1**	**+0.4**
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**03 46 59.4**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=358,slow=6.0,SNR=5.4						
	comp=Z,0.9nm,0.7s						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**03 47 00.1**	**+1.2**
FINES	**FINESS Array B**	**66.84**	**332**	P	**P**	**03 47 24.9**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=79,slow=9.9,SNR=4.2						
	comp=Z,1.1nm,0.7s						
FINES	**FINESS Array B**	**66.84**	**332**	P	**P**	**03 47 24.7**	**-0.4**
HFS	**Hagfors**	**72.08**	**335**	P	**P**	**03 47 57.7**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=41,slow=8.0,SNR=1.9						
	comp=Z,0.7nm,0.4s						
NB2	**NORSAR Subarra**	**72.16**	**337**	P	**P**	**03 47 58.6**	**+0.5**
	comp=Z,4.6nm,1.2s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**72.16**	**337**	P	**P**	**03 47 58.5**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=40,slow=5.9,SNR=3.8						
	comp=Z,0.8nm,0.8s						
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**03 47 59.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=45,slow=7.0,SNR=2.3						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**03 47 58.9**	**-1.1**
AKASG				IAmb	IAmb	03 48 00.4	
	comp=Z,4.2nm,1.4s						
BORG	**Borgarnes**	**75.57**	**352**	LR	LR	04 23 24.9	
	comp=Z,23nm,19.4s,baz=139,slow=37						
LPAZ	**La Paz**	**145.90**	**56**	PKPbc	**PKiKP**	**03 56 15.4**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=359,slow=7.3,SNR=4.7						

*ATH **14** 04:07:04.5±1.1,34°17N×26°47E, h16km, ML3.0/6, Latitude uncertainty: 4 km; Longitude uncertainty: 9 km*
*ISK **14** 04:07:04.7,34°21N×26°21E, h9km, ML2.9/17*
*IDC **14** 04:07:04.7±1.4,34°49N×26°16E, h0km, mb3.7/6, mbtmp3.6/7, ML3.9/1, Error ellipse: s-maj=50.4km s-min=22.0km az=158.0*
*NEIC **14** 04:07:04.8±1.4,34°07N±0°05×26°15E±0°05, h10km±2km, mb4.2/9, Error ellipse: s-maj=9.8km s-min=5.7km az=140.0*
*THE **14** 04:07:05.4,34°N±4°×2°6E±°, h21km, M2.8/5, MLh2.8/5*
*AFAD **14** 04:07:10.8,34°76N×26°52E, h7km±4km, ML2.8*
ISC 14 04:07:04.8±1.7,34°21N±0°06×26°40E±0°03,h12km±10km, n78,σ2ᵍ06/94,mb3.9/9,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.92**	**351**	Pg	**Pg**	**04 07 22.5**	**0.0**
ZKR				Sg	**Sb**	**04 07 35.6**	**+0.8**
ZKR	**Zakros**	**0.92**	**351**	P	**Pb**	**04 07 22.9**	**+0.2**
ZKR				S	**Sb**	**04 07 35.9**	**+1.1**
ZKR	**Zakros**	**0.92**	**351**	P	**Pg**	**04 07 22.6**	**0.0**
ZKR				S	**Sb**	**04 07 36.2**	**+1.4**
SIT2	**Siteia**	**1.02**	**347**	P	**Pb**	**04 07 25.0**	**+0.6**
SIT2				S	**Sn**	**04 07 39.4**	**+0.1**
AGNA	**Agios Nikolaos**	**1.13**	**330**	P	**Pb**	**04 07 26.0**	**-0.3**
AGNA				S	**Sg**	**04 07 42.3**	**+1.1**
NPS	**Neapolis**	**1.23**	**329**	P	**Pn**	**04 07 27.4**	**-0.5**
NPS				S	**Sb**	**04 07 44.0**	**0.0**
NPS	**Neapolis**	**1.23**	**329**	P	**Pn**	**04 07 27.7**	**-0.2**
NPS				S	**Sb**	**04 07 45.2**	**+1.2**
KARP	**Karpathos**	**1.48**	**25**	Pn	**Pg**	**04 07 33.2**	**0.0**
KARP	**Karpathos**	**1.48**	**25**	P	**Pn**	**04 07 29.6**	**-1.7**
KARP				S	**Sn**	**04 07 49.4**	**-1.2**
KARP	**Karpathos**	**1.48**	**25**	Pn	**Pg**	**04 07 35.0**	**+1.8**
SIVA	**Sivas**	**1.54**	**302**	P	**Pn**	**04 07 31.9**	**-0.1**
SIVA				S	**Sn**	**04 07 51.8**	**-0.2**
SIVA	**Sivas**	**1.54**	**302**	P	**Pn**	**04 07 32.0**	**-0.1**
IDI	**Anoyia**	**1.64**	**311**	Pn	**Pn**	**04 07 32.9**	**-0.7**
IDI	**Anoyia**	**1.64**	**311**	P	**Pn**	**04 07 33.3**	**-0.3**
IDI				S	**Sn**	**04 07 53.3**	**-1.4**
IDI	**Anoyia**	**1.64**	**311**	Pn	**Pn**	**04 07 33.6**	**0.0**
IDI				Sn	**Sn**	**04 07 53.8**	**-0.9**
IDI	**Anoyia**	**1.64**	**311**	P	**Pn**	**04 07 33.2**	**-0.3**
GVD	**Gavdhos**	**2.01**	**289**	Pn	**Pn**	**04 07 37.6**	**-0.9**
GVD	**Gavdhos**	**2.01**	**289**	P	**Pn**	**04 07 38.0**	**-0.6**
GVD				S	**Sn**	**04 08 03.6**	**0.0**
GVD	**Gavdhos**	**2.01**	**289**	P	**Pn**	**04 07 38.0**	**-0.6**
VAM	**Vamos**	**2.17**	**304**	P	**Pn**	**04 07 41.6**	**+0.9**
THR6	**Thira Island,**	**2.29**	**339**	P	**Pn**	**04 07 41.4**	**-1.1**
THR8	**Santorini-Mono**	**2.32**	**341**	P	**Pn**	**04 07 41.7**	**-1.1**
IMMV	**Iera Moni Meta**	**2.35**	**303**	Pn	**Pn**	**04 07 42.9**	**-0.3**
IMMV	**Iera Moni Meta**	**2.35**	**303**	P	**Pn**	**04 07 44.1**	**+0.8**
ARG	**Arkhangelos**	**2.45**	**35**	Pn	**Pb**	**04 07 47.4**	**-1.4**
ARG	**Arkhangelos**	**2.45**	**35**	P	**Pn**	**04 07 43.3**	**-1.4**
ARG	**Arkhangelos**	**2.45**	**35**	Pn	**Pb**	**04 07 48.7**	**-0.2**
KNDR	**Palaiochora Ch**	**2.50**	**295**	Pn	**Pn**	**04 07 44.6**	**-0.7**
DAT	**Datca**	**2.69**	**21**	Pn	**

BVAR	**Borovoye Array**	**36.28**	**45**	P	**P**	04 14 09.5	**+1.6**
	comp=Z,0.6nm,0.4s,baz=254,slow=8.3,SNR=1.3						
	comp=Z,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**40.94**	**50**	P	**P**	04 14 48.5	**+1.5**
	comp=Z,1.4nm,0.5s,baz=277,slow=8.8,SNR=20						
	comp=Z,1.4nm,0.5s						
KURK	**Kurchatov**	**41.00**	**50**	P	**P**	04 14 48.9	**+1.4**
KURK				IAmb	IAmb	04 14 50.0	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**43.45**	**56**	P	**P**	04 15 09.7	**+2.1**
	comp=Z,0.9nm,0.6s,baz=275,slow=6.2,SNR=7.2						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**43.45**	**56**	P	**P**	04 15 10.4	**+2.7**
ZALV	**Zalesovo Beam**	**44.93**	**45**	P	**P**	04 15 20.0	**+0.6**
	comp=Z,0.8nm,0.4s,baz=261,slow=9.6,SNR=2.7						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**44.93**	**45**	P	**P**	04 15 20.2	**+0.8**

*IDC **14** 04:11:41.5±6.9,6˚.90S×126˚.68E,h408^{km}±73^{km},mb3.3/1, mbtmp3.9/4,Error ellipse: s-maj=100.1km s-min=92.3km az=123.0*
*NEIC **14** 04:11:41.3±0.7,6˚.86S±0˚.07×126˚.7E±0˚.2,h415^{km}±13^{km}, mb4.3/4,Error ellipse: s-maj=25.5km s-min=5.4km az=70.0*
ISC 14 04:11:40.5±1.4,**6˚.8S**±0˚.2×**126˚.8E**±0˚.1,**h407**^{km},**n17**, σ**0˚.78**/**18**,**mb4.0**/**3**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.55**	**222**	P	**P**	**04 12 58.6**	**+0.4**
	201nm,0.3s,baz=53,slow=5.1,SNR=16						
BATI				S	**S**	**04 14 00.6**	**-1.1**
	27nm,0.3s,baz=90,slow=20,SNR=2.0						
FAKI	**Fak Fak**	**6.70**	**55**		**P**	**04 13 22.2**	**+0.7**
MTN	**Manton Dam**	**7.36**	**145**		**P**	**04 13 28.9**	**0.0**
KNRA	**Kununurra**	**9.01**	**168**		**P**	**04 13 47.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**11.26**	**186**	P	**P**	**04 14 13.2**	**+1.3**
	3.1nm,0.7s,baz=356,slow=13,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.26**	**186**	P	**P**	**04 14 12.5**	**+0.7**
WB0	**Warramunga Arr**	**14.84**	**151**	P	**P**	**04 14 51.2**	**+0.1**
WRA	**Warramunga Arr**	**14.96**	**151**	P	**P**	**04 14 52.4**	**-0.1**
	0.9nm,0.4s,baz=327,slow=11,SNR=24						
WRA	**Warramunga Arr**	**14.96**	**151**	P	**P**	**04 14 51.4**	**-1.1**
WR8	**Warramunga Arr**	**15.05**	**151**	P	**P**	**04 14 53.4**	**-0.1**
AS31	**Alice Springs**	**18.09**	**158**	P	**P**	**04 15 25.4**	**-0.4**
ASAR	**Alice Springs**	**18.09**	**158**	P	**P**	**04 15 26.4**	**+0.6**
	1.3nm,0.4s,baz=339,slow=10,SNR=19						
ASAR	**Alice Springs**	**18.09**	**158**	P	**P**	**04 15 26.1**	**+0.3**
BBOO	**Buckleboo**	**27.26**	**163**	P	**P**	**04 16 49.3**	**-0.4**
BBOO				IAmb	IAmb	04 16 52.0	
	comp=Z,32nm,1.5s						
STKA	**Stephens Creek**	**28.51**	**153**	P	**P**	**04 17 01.1**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=324,slow=14,SNR=3.5						
	comp=Z,0.9nm,0.3s						
QSPA	**South Pole Qui**	**83.15**	**180**	P	**P**	**04 23 22.0**	**-0.1**
QSPA				IAmb	IAmb	04 23 27.4	
	comp=Z,4.6nm,1.4s						
OK038	**West end E0370**	**129.10**	**48**		**PKPdf**	**04 29 59.9**	**-1.6**

*IDC **14** 04:12:54.2±0.8,17˚.41N×101˚.33W,h0^{km},mb4.0/7, mbtmp3.9/10,ML3.5/4,MS3.4/26,Error ellipse: s-maj=30.1km s-min=14.0km az=53.0*
*NEIC **14** 04:13:00.8±1.9,17˚.63N±0˚.05×101˚.08W±0˚.04,h35^{km}±1^{km}, mb4.3/134,Md4.8/128(MEX),Error ellipse: s-maj=9.0km s-min=5.7km az=35.0*
*MEX **14** 04:13:01.4±1.1,17˚.59N×101˚.13W,h46^{km}±7^{km},MD4.8*
ISC 14 04:12:59.9±0.8,**17˚.53N**±0˚.03×**101˚.14W**±0˚.02,**h35**^{km}±3km, **n288**,σ**1˚.32**/326,**mb4.3**/40,**MS3.4**/21,**1D**,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PET2	**Petatlan**	**0.12**	**272**		**Pb**	**04 13 06.8**	**+0.7**
PET2					**Sb**	**04 13 11.8**	**+1.5**
PET2	**Petatlan**	**0.12**	**272**	*i* P	**Pb**	**04 13 06.8**	**+0.7**
PET2				*i* S	**Sb**	**04 13 11.8**	**+1.5**
ZIIG	**Zihuatanejo**	**0.32**	**284**		**Pn**	**04 13 08.4**	**+0.3**
ZIIG					**Sb**	**04 13 14.8**	**+1.1**
ZIIG	**Zihuatanejo**	**0.32**	**284**	‖ *i* P	**Pn**	**04 13 08.4**	**+0.3**
	baz=91,slow=8.6						
ZIIG				*i* S	**Sb**	**04 13 14.8**	**+1.1**
ATYC	**Atoyac**	**0.74**	**115**		**Pn**	**04 13 13.9**	**-0.1**
ATYC					**Sn**	**04 13 24.1**	**+0.1**
ATYC	**Atoyac**	**0.74**	**115**	*eP*	**Pn**	**04 13 13.9**	**-0.1**
ATYC				*eS*	**Sn**	**04 13 24.1**	**+0.1**
UON	**La Union**	**0.78**	**304**	*i* P	Pn	04 13 07.1	-7.4
UON				*i* S	**Sn**	**04 13 18.2**	**-6.7**
CAIG	**El Cayaco**	**0.96**	**120**		**Pn**	**04 13 16.8**	**-0.1**
CAIG					**Sn**	**04 13 29.5**	**+0.1**
CAIG	**El Cayaco**	**0.96**	**120**	*eP*	**Pn**	**04 13 16.8**	**-0.1**
CAIG				*eS*	**Sn**	**04 13 29.5**	**+0.1**
MEIG	**Mezcala**	**1.50**	**75**		**Pn**	**04 13 24.2**	**-0.2**
MEIG					**Sn**	**04 13 42.7**	**-0.1**
MEIG	**Mezcala**	**1.50**	**75**	*eP*	**Pn**	**04 13 24.2**	**-0.2**
MEIG				*eS*	**Sn**	**04 13 42.7**	**-0.1**
DAIG	**Los Arroyos**	**1.51**	**109**		**Pn**	**04 13 24.5**	**0.0**
DAIG					**Sn**	**04 13 43.1**	**+0.1**
DAIG	**Los Arroyos**	**1.51**	**109**	*eP*	**Pn**	**04 13 24.5**	**0.0**
DAIG				*eS*	**Sn**	**04 13 43.1**	**+0.1**
PLIG	**Platanillo**	**1.78**	**61**		**Pn**	**04 13 28.2**	**-0.1**
PLIG					**Sn**	**04 13 48.8**	**-0.9**
PLIG	**Platanillo**	**1.78**	**61**	*eP*	**Pn**	**04 13 28.2**	**-0.1**
PLIG				*eS*	**Sn**	**04 13 48.8**	**-0.9**
CRIG	**Cruz Grande**	**2.07**	**112**		**Pn**	**04 13 32.3**	**0.0**
CRIG					**Sn**	**04 13 54.4**	**-2.6**
CRIG	**Cruz Grande**	**2.07**	**112**	*eP*	**Pn**	**04 13 32.3**	**0.0**
CRIG				*eS*	**Sn**	**04 13 54.4**	**-2.6**
URUA	**Uruapan**	**2.08**	**335**		**Pn**	**04 13 33.0**	**+0.5**
URUA					**Sn**	**04 13 55.9**	**-1.5**
URUA	**Uruapan**	**2.08**	**335**	*eP*	**Pn**	**04 13 33.0**	**+0.5**
URUA				*eS*	**Sn**	**04 13 55.9**	**-1.5**
MAVM	**Malinalco, Edo**	**2.11**	**47**		**Pn**	**04 13 32.2**	**-0.7**
MAVM	**Malinalco, Edo**	**2.11**	**47**	*eP*	**Pn**	**04 13 32.2**	**-0.7**
MOIG	**Morelia**	**2.14**	**359**		**Pn**	**04 13 33.0**	**-0.4**
MOIG				Sn	**Sn**	**04 13 55.8**	**-3.0**
MOIG	**Morelia**	**2.14**	**359**	*eP*	**Pn**	**04 13 33.2**	**-0.2**
MOIG				*eS*	**Sn**	**04 13 57.7**	**-1.1**
TOVM	**TOLUCA**	**2.23**	**38**		**Pn**	**04 13 34.4**	**-0.3**
TOVM	**TOLUCA**	**2.23**	**38**	*eP*	**Pn**	**04 13 34.4**	**-0.3**
MMIG	**Aquila**	**2.23**	**290**		**Pn**	**04 13 34.4**	**-0.1**
MMIG					**Sn**	**04 14 00.3**	**-0.6**
MMIG	**Aquila**	**2.23**	**290**	*eP*	**Pn**	**04 13 34.4**	**-0.1**
MMIG				*i* S	**Sn**	**04 14 00.3**	**-0.6**
YAIG	**Yautepec**	**2.37**	**56**		**Pn**	**04 13 35.9**	**-0.6**
YAIG					**Sn**	**04 14 04.2**	**-0.3**
YAIG	**Yautepec**	**2.37**	**56**	*eP*	**Pn**	**04 13 35.9**	**-0.6**
YAIG				*eS*	**Sn**	**04 14 04.2**	**-0.3**
MGIG	**Malinaltepec**	**2.41**	**97**		**Pn**	**04 13 38.6**	**+1.6**
MGIG					**Sn**	**04 14 05.5**	**+0.1**
MGIG	**Malinaltepec**	**2.41**	**97**	*eP*	**Pn**	**04 13 38.6**	**+1.6**
MGIG				*eS*	**Sn**	**04 14 05.5**	**+0.1**
INVM	**La Marquesa**	**2.42**	**43**		**Pn**	**04 13 37.2**	**-0.1**
INVM	**La Marquesa**	**2.42**	**43**	*eP*	**Pn**	**04 13 37.2**	**-0.1**
AOVM	**Tlapan**	**2.44**	**45**		**Pn**	**04 13 37.3**	**-0.4**
AOVM	**Tlapan**	**2.44**	**45**	*eP*	**Pn**	**04 13 37.3**	**-0.4**
MZVM		**2.45**	**47**		**Pn**	**04 13 37.6**	**+0.2**
MZVM		**2.45**	**47**	*eP*	**Pn**	**04 13 37.6**	**+0.2**
TLIG	**Tlapa**	**2.45**	**89**		**Pn**	**04 13 38.6**	**+1.0**
TLIG				Sn	**Sn**	**04 14 06.0**	**-0.5**
TLIG	**Tlapa**	**2.45**	**89**	*eP*	**Pn**	**04 13 38.6**	**+1.0**
TLIG				*eS*	**Sn**	**04 14 05.3**	**-1.1**
TLVM	**San Miguel Top**	**2.52**	**48**		**Pn**	**04 13 38.7**	**0.0**
TLVM	**San Miguel Top**	**2.52**	**48**	*eP*	**Pn**	**04 13 38.7**	**0.0**
ACAM	**Acambaro**	**2.53**	**9**		**Pn**	**04 13 41.0**	**+2.3**
ACAM					**Sn**	**04 14 10.1**	**+1.6**
ACAM	**Acambaro**	**2.53**	**9**	*eP*	**Pn**	**04 13 41.0**	**+2.3**
ACAM				*eS*	**Sn**	**04 14 10.1**	**+1.6**
ATVM	**ATLACOMULCO**	**2.54**	**29**		**Pn**	**04 13 38.4**	**-0.6**
ATVM	**ATLACOMULCO**	**2.54**	**29**	*eP*	**Pn**	**04 13 38.4**	**-0.6**
CNCY	**Coyoacan**	**2.57**	**46**	*eP*	**Pn**	**04 13 40.7**	**+1.3**
XCVM	**Xochimilco**	**2.57**	**48**		**Pn**	**04 13 38.5**	**-0.9**
XCVM	**Xochimilco**	**2.57**	**48**	*eP*	**Pn**	**04 13 38.5**	**-0.9**
CUP5	**Mexico City**	**2.58**	**46**		**Pn**	**04 13 39.7**	**+0.2**
CUP5					**Sn**	**04 14 09.8**	**0.0**
CUP5	**Mexico City**	**2.58**	**46**	*eP*	**Pn**	**04 13 39.7**	**+0.2**
CUP5				*eS*	**Sn**	**04 14 09.8**	**0.0**
UNM	**Universidad Na**	**2.58**	**46**		**Pn**	**04 13 39.6**	**+0.1**
UNM	**Universidad Na**	**2.58**	**46**	*eP*	**Pn**	**04 13 39.4**	**-0.1**
UNM				*eS*	**Sn**	**04 14 08.9**	**-0.9**
MHVM	**Bosque de Chap**	**2.61**	**44**		**Pn**	**04 13 39.8**	**-0.2**
MHVM	**Bosque de Chap**	**2.61**	**44**	*eP*	**Pn**	**04 13 39.8**	**-0.2**
MPVM	**San Francisco**	**2.62**	**50**		**Pn**	**04 13 40.1**	**+0.2**
MPVM	**San Francisco**	**2.62**	**50**	*eP*	**Pn**	**04 13 40.1**	**+0.2**
TACY	**Mexico City**	**2.62**	**44**	*eP*	**Pn**	**04 13 41.5**	**+1.5**
TACY				*eS*	**Sn**	**04 14 12.2**	**+1.4**
APVM	**Azcapotzalco**	**2.67**	**43**		**Pn**	**04 13 39.8**	**-0.9**
APVM	**Azcapotzalco**	**2.67**	**43**	*eP*	**Pn**	**04 13 39.8**	**-0.9**
VRVM	**Mexico City**	**2.69**	**45**		**Pn**	**04 13 39.2**	**-1.7**
VRVM	**Mexico City**	**2.69**	**45**	*eP*	**Pn**	**04 13 39.2**	**-1.7**
AZVM	**Cuida Lopez Ma**	**2.70**	**40**		**Pn**	**04 13 41.4**	**+0.2**
AZVM	**Cuida Lopez Ma**	**2.70**	**40**	*eP*	**Pn**	**04 13 41.4**	**+0.2**
THVM	**De Xico**	**2.71**	**49**		**Pn**	**04 13 41.1**	**-0.2**
THVM	**De Xico**	**2.71**	**49**	*eP*	**Pn**	**04 13 41.1**	**-0.2**
PBVM	**Pinon**	**2.72**	**45**		**Pn**	**04 13 40.9**	**-0.3**
PBVM	**Pinon**	**2.72**	**45**	*eP*	**Pn**	**04 13 40.9**	**-0.3**
AMVM	**AMECAMECA**	**2.74**	**54**		**Pn**	**04 13 41.3**	**-0.5**
AMVM	**AMECAMECA**	**2.74**	**54**	*eP*	**Pn**	**04 13 41.3**	**-0.5**
PBXN	**Popocatepetl**	**2.78**	**58**	*eP*	**Pn**	**04 13 42.7**	**+0.3**
PPCU	**Popocatepetl**	**2.80**	**58**	*eP*	**Pn**	**04 13 42.6**	**-0.2**
PTVM	**Pico Tres Padr**	**2.81**	**43**		**Pn**	**04 13 41.9**	**-0.7**
PTVM	**Pico Tres Padr**	**2.81**	**43**	*eP*	**Pn**	**04 13 41.9**	**-0.7**
PBPN	**Popocatepetl**	**2.82**	**57**	*eP*	**Pn**	**04 13 42.6**	**-0.4**
PBCV	**Popocatepetl**	**2.85**	**59**	*eP*	**Pn**	**04 13 42.7**	**-0.5**
FTIG	**Fresnillo de T**	**2.89**	**82**		**Pn**	**04 13 44.3**	**+0.7**
FTIG					**Sn**	**04 14 15.3**	**-1.9**
FTIG	**Fresnillo de T**	**2.89**	**82**	*eP*	**Pn**	**04 13 44.3**	**+0.7**
FTIG				*eS*	**Sn**	**04 14 15.3**	**-1.9**
PPAX	**Atlixo**	**2.93**	**61**	*eP*	**Pn**	**04 13 44.1**	**-0.2**
PPSX	**Xalitzintla**	**2.94**	**58**	*eP*	**Pn**	**04 13 45.3**	**+0.9**
COMA	**Comala**	**3.06**	**306**		**Pn**	**04 13 47.2**	**+1.2**
COMA					**Sn**	**04 14 19.8**	**-1.7**
COMA	**Comala**	**3.06**	**306**	*eP*	**Pn**	**04 13 47.2**	**+1.2**
COMA				*eS*	**Sn**	**04 14 19.8**	**-1.7**
INCO	**Volcan de Coli**	**3.07**	**311**	*eP*	**Pn**	**04 13 47.5**	**+1.2**
INCO				*eS*	**Sn**	**04 14 23.6**	**+1.5**
CDAR	**Ciudad de Arme**	**3.07**	**298**	*eP*	**Pn**	**04 13 46.4**	**+0.4**
CDAR				*eS*	**Sn**	**04 14 19.2**	**-2.3**
VTVM	**Tizayuca**	**3.16**	**45**		**Pn**	**04 13 47.0**	**-0.5**
VTVM	**Tizayuca**	**3.16**	**45**	*eP*	**Pn**	**04 13 47.0**	**-0.5**
CEGR	**Campo Tres**	**3.18**	**306**		**Pn**	**04 13 48.8**	**+1.2**
CEGR					**Sn**	**04 14 23.9**	**-0.5**
CEGR	**Campo Tres**	**3.18**	**306**	*eP*	**Pn**	**04 13 48.8**	**+1.2**
CEGR				*eS*	**Sn**	**04 14 23.9**	**-0.5**
HLIG	**Huajuapan de L**	**3.19**	**84**		**Pn**	**04 13 48.9**	**+1.0**
HLIG					**Sn**	**04 14 24.2**	**-0.7**
HLIG	**Huajuapan de L**	**3.19**	**84**	*eP*	**Pn**	**04 13 48.9**	**+1.0**
HLIG				*eS*	**Sn**	**04 14 24.2**	**-0.7**
PHPU	**Puebla**	**3.20**	**61**		**Pn**	**04 13 46.0**	**-2.0**
PHPU					**Sn**	**04 14 24.7**	**-0.3**
PHPU	**Puebla**	**3.20**	**61**	*eP*	**Pn**	**04 13 46.0**	**-2.0**
PHPU				*eS*	**Sn**	**04 14 24.7**	**-0.3**
IGIG	**Irapuato, Guan**	**3.21**	**357**		**Pn**	**04 13 48.4**	**+0.3**
IGIG					**Sn**	**04 14 25.9**	**+0.7**
IGIG	**Irapuato, Guan**	**3.21**	**357**	*eP*	**Pn**	**04 13 48.4**	**+0.3**
IGIG				*eS*	**Sn**	**04 14 25.9**	**+0.7**
TXIG	**Tlaxiaco**	**3.23**	**94**		**Pn**	**04 13 49.6**	**+1.2**
TXIG					**Sn**	**04 14 23.9**	**-1.9**
TXIG	**Tlaxiaco**	**3.23**	**94**	*eP*	**Pn**	**04 13 49.6**	**+1.2**
TXIG				*eS*	**Sn**	**04 14 23.9**	**-1.9**
DHIG	**Demacu**	**3.40**	**36**		**Pn**	**04 13 49.7**	**-1.0**
DHIG					**Sn**	**04 14 29.4**	**-0.6**
DEIG	**Demacu**	**3.40**	**35**	*eP*	**Pn**	**04 13 49.7**	**-1.0**
DEIG				*eS*	**Sn**	**04 14 29.4**	**-0.6**
YOIG	**Yosondua**	**3.50**	**101**		**Pn**	**04 13 53.9**	**+1.8**
YOIG					**Sn**	**04 14 32.5**	**0.0**
YOIG	**Yosondua**	**3.50**	**101**	*eP*	**Pn**	**04 13 53.9**	**+1.8**
YOIG				*eS*	**Sn**	**04 14 32.5**	**0.0**
TPIG	**Tehuac#an**	**3.70**	**76**		**Pn**	**04 13 54.8**	**0.0**
TPIG					**Sn**	**04 14 37.6**	**+0.3**
TPIG	**Tehuac#an**	**3.70**	**76**	*eP*	**Pn**	**04 13 54.8**	**0.0**
TPIG				*eS*	**Sn**	**04 14 37.6**	**+0.3**
TOIG	**Toxpalan**	**3.92**	**81**		**Pn**	**04 13 58.0**	**+0.2**
TOIG					**Sn**	**04 14 44.0**	**+1.4**
TOIG	**Toxpalan**	**3.92**	**81**	*eP*	**Pn**	**04 13 58.0**	**+0.2**
TOIG				*eS*	**Sn**	**04 14 44.0**	**+1.4**
PEIG	**Puerto Escondi**	**4.12**	**111**		**Pn**	**04 14 00.8**	**+0.4**
PEIG					**Sn**	**04 14 44.6**	**-2.7**
PEIG	**Puerto Escondi**	**4.12**	**111**	*eP*	**Pn**	**04 14 00.8**	**+0.4**
PEIG				*eS*	**Sn**	**04 14 44.6**	**-2.7**
CJM	**Chamela**	**4.19**	**298**	*eP*	**Pn**	**04 14 02.1**	**+0.7**
CJM				*eS*	**Sn**	**04 14 51.5**	**+2.3**
OXIG	**Oaxaca**	**4.23**	**96**		**Pn**	**04 14 03.8**	**+1.7**
OXIG					**Sn**	**04 14 50.5**	**0.0**
VHO	**Vista Hermosa**	**4.23**	**96**	*eP*	**Pn**	**04 14 03.8**	**+1.7**
VHO				*eS*	**Sn**	**04 14 50.5**	**0.0**
CXUV	**Coxquihui**	**4.26**	**51**		**Pn**	**04 14 01.5**	**-1.0**
CXUV					**Sn**	**04 14 52.2**	**+1.1**
CXUV	**Coxquihui**	**4.26**	**51**	*eP*	**Pn**	**04 14 01.5**	**-1.0**
CXUV				*eS*	**Sn**	**04 14 52.2**	**+1.1**
RPIG	**Rio Verde**	**4.47**	**14**		**Pn**	**04 14 06.1**	**+0.8**
RPIG					**Sn**	**04 14 57.4**	**+1.2**
RPIG	**Rio Verde**	**4.47**	**14**	*eP*	**Pn**	**04 14 06.1**	**+0.8**
RPIG				*eS*	**Sn**	**04 14 57.4**	**+1.2**
JAUV	**Jalcomulco**	**4.50**	**65**		**Pn**	**04 14 06.8**	**+1.1**
JAUV					**Sn**	**04 14 58.0**	**+1.1**
JAUV	**Jalcomulco**	**4.50**	**65**	*eP*	**Pn**	**04 14 06.8**	**+1.1**
JAUV				*eS*	**Sn**	**04 14 58.0**	**+1.1**
CTUV	**Llano Grande**	**4.72**	**33**		**Pn**	**04 14 08.2**	**-0.4**
CTUV					**Sn**	**04 15 02.5**	**+0.4**
CTUV	**Llano Grande**	**4.72**	**33**	*eP*	**Pn**	**04 14 08.2**	**-0.4**
CTUV				*eS*	**Sn**	**04 15 02.5**	**+0.4**
LVIG	**Laguna Verde**	**4.98**	**63**		**Pn**	**04 14 13.2**	**+1.0**
LVIG					**Sn**	**04 15 08.0**	**-0.6**
LVIG	**Laguna Verde**	**4.98**	**63**	*eP*	**Pn**	**04 14 13.2**	**+1.0**
LVIG				*eS*	**Sn**	**04 15 08.0**	**-0.6**
NEUV	**Arroyo Zacate**	**5.09**	**87**		**Pn**	**04 14 14.2**	**+0.4**
NEUV					**Sn**	**04 15 08.2**	**-3.1**
NEUV	**Arroyo Zacate**	**5.09**	**87**	*eP*	**Pn**	**04 14 14.2**	**+0.4**
NEUV				*eS*	**Sn**	**04 15 08.2**	**-3.1**
HUIG	**Huatulco**	**5.13**	**109**		**Pn**	**04 14 15.9**	**+1.6**
HUIG					**Sn**	**04 15 06.9**	**-5.4**
HUIG	**Huatulco**	**5.13**	**109**	*eP*	**Pn**	**04 14 15.9**	**+1.6**
HUIG				*eS*	**Sn**	**04 15 06.9**	**-5.4**
ZAIG	**Zacatecas**	**5.38**	**346**		**Pn**	**04 14 18.6**	**+0.6**
ZAIG					**Sn**	**04 15 20.9**	**+2.0**
ZAIG	**Zacatecas**	**5.38**	**346**	*eP*	**Pn**	**04 14 19.8**	**+1.7**
ZAIG				*eS*	**Sn**	**04 15 20.9**	**+2.0**
GTIG	**Gomez Farias**	**5.81**	**18**		**Pn**	**04 14 21.9**	**-1.7**
GTIG					**Sn**	**04 15 20.9**	**+1.7**
GTIG	**Gomez Farias**	**5.81**	**18**	*eP*	**Pn**	**04 14 21.9**	**-1.7**
GTIG				*eS*	**Sn**	**04 15 30.9**	**+1.7**
CMIG	**Matias Romero**	**5.99**	**93**	Pn	**Pn**	**04 14 27.4**	**+1.3**
	2.8nm,0.3s,baz=262,slow=13,SNR=12						
CMIG				Sn	**Sn**	**04 15 30.9**	**-2.7**
	4.8nm,0.3s,baz=296,slow=18,SNR=3.7						
CMIG				LR	LR	04 16 59.0	
	comp=Z,283nm,18.9s,baz=283,slow=40						
	5.9nm,0.3s						
CMIG	**Matias Romero**	**5.99**	**93**		**Pn**	**04 14 27.4**	**+1.3**
CMIG					**Sn**	**04 15 31.8**	**-1.7**
CMIG	**Matias Romero**	**5.99**	**93**	*eP*	**Pn**	**04 14 27.4**	**+1.3**
CMIG				*eS*	**Sn**	**04 15 31.8**	**-1.7**
LNIG	**Linares**	**7.50**	**12**		**Pn**	**04 14 45.9**	**-0.9**
LNIG					**Sn**	**04 16 11.2**	**+0.6**
LNIG	**Linares**	**7.50**	**12**	*eP*	**Pn**	**04 14 45.9**	**-0.9**
LNIG				*eS*	**Sn**	**04 16 11.2**	**+0.6**
APG	**El Apazote**	**10.55**	**102**	Pn	**Pn**	**04 15 29.5**	**+0.5**
	0.1nm,0.3s,baz=95,slow=15,SNR=5.5						
APG				Sn	**Sn**	**04 17 29.6**	**+3.4**
	0.1nm,0.3s,baz=236,slow=22,SNR=2.5						
APG				Lg	Lg	04 18 35.6	
	baz=204,slow=14,SNR=3.6						
APG				LR	LR	04 19 34.1	
	comp=Z,10nm,22.0s,baz=274,slow=37						
LPIG	**La Paz**	**10.78**	**309**	LR	LR	04 19 13.8	
	comp=Z,61nm,18.6s,baz=5.0,slow=35						
833A	**Chaparral WMA,**	**10.86**	**8**		**Pn**	**04 15 31.3**	**-1.7**
TXAR	**Lajitas Array**	**11.97**	**349**	Pn	**Pn**	**04 15 49.3**	**+1.0**
	baz=164,slow=15,SNR=5.1						
TXAR				Lg	Lg	04 19 16.6	
	baz=165,slow=30,SNR=2.6						
TXAR				LR	LR	04 20 56.5	
	comp=Z,315nm,19.7s,baz=168,slow=40						
	0.5nm,1.0s						
TXAR	**Lajitas Array**	**11.97**	**349**		**Pn**	**04 15 46.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**11.98**	**349**		**Pn**	**04 15 46.4**	**-1.9**
ALPN	**Alpine**	**12.99**	**350**		**Pn**	**04 16 02.8**	**+0.7**
OZNA	**Ozona**	**13.33**	**0**		**Pn**	**04 16 07.0**	**+0.2**
VHRN	**Van Horn**	**13.65**	**346**		**Pn**	**04 16 11.7**	**+0.4**
MNHN	**Monahans**	**13.83**	**354**		**Pn**	**04 16 14.4**	**+0.8**
BRDY	**Brady**	**13.83**	**8**		**Pn**	**04 16 12.4**	**-1.2**
PECS	**Pecos**	**14.00**	**350**	Pn	**Pn**	**04 16 15.9**	**0.0**
TMB01	**Midkiff**	**14.10**	**357**	Pn	**Pn**	**04 16 17.4**	**+0.1**
TPB13	**Reeves - Culbe**	**14.18**	**351**	Pn	**Pn**	**04 16 16.4**	**-1.9**
229A	**Bryant Ranch,**	**14.39**	**358**	Pn	**Pn**	**04 16 19.1**	**-2.1**
TPB28		**14.40**	**348**	Pn	**Pn**	**04 16 21.8**	**+0.3**
TPB11	**China Draw**	**14.58**	**350**	Pn	**Pn**	**04 16 21.5**	**-2.3**
MNTX	**Cornudas Mount**	**14.62**	**346**	Pn	**Pn**	**04 16 22.0**	**-2.3**
GDL2	**Guadalupe Moun**	**14.89**	**349**		**Pn**	**04 16 26.4**	**-1.7**
441A	**DeRidder**	**15.02**	**27**	Pn	**Pn**	**04 16 28.2**	**-1.3**
ABTX	**Abilene, Hawle**	**15.09**	**5**	Pn	**Pn**	**04 16 29.0**	**-1.6**
PLPT	**Palo Pinto**	**15.43**	**9**		**Pn**	**04 16 33.4**	**-1.6**
POST	**Post**	**15.47**	**359**		**Pn**	**04 16 35.1**	**-0.5**
POST				IAmb	IAmb	04 16 41.1	
	comp=Z,32nm,1.2s						
APMT	**Aspermont**	**15.76**	**3**	IAmb	IAmb	04 16 43.1	
	comp=Z,31nm,0.8s						
121A	**Cookes Peak, D**	**16.10**	**339**		**Pn**	**04 16 44.8**	**+1.0**
MSTX	**Muleshoe**	**16.44**	**355**		**Pn**	**04 16 47.0**	**-1.0**
Z38A	**Mt. Pleasant**	**16.61**	**18**	IAmb	IAmb	04 16 52.2	
	comp=Z,23nm,0.9s						
JTS	**Las Juntas de**	**17.27**	**112**	LR	LR	04 22 17.6	
	comp=Z,40nm,20.4s,baz=278,slow=32						
AMTX	**Amarillo**	**17.29**	**358**	IAmb	IAmb	04 17 01.0	
	comp=Z,21nm,1.1s						
143A	**Socs Landing,**	**17.47**	**28**	IAmb	IAmb	04 17 01.1	
	comp=Z,14nm,0.8s						
WLAR	**White Oak Lake**	**17.63**	**23**	IAmb	IAmb	04 17 13.3	
	comp=Z,25nm,1.1s						
W35A	**Tecumseh**	**17.96**	**11**	IAmb	IAmb	04 17 06.2	
	comp=Z,19nm,0.8s						
ANMO	**Albuquerque**	**17.98**	**346**	P	**P**	**04 17 08.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=29						
ANMO				LR	LR	04 24 41.5	
	comp=Z,271nm,18.8s,baz=160,slow=39						
	comp=Z,6.0nm,0.8s						
ANMO	**Albuquerque**	**17.98**	**346**		**Pn**	**04 17 07.2**	**-0.2**
DEOK	**Depew**	**18.70**	**12**	IAmb	IAmb	04 17 14.1	
	comp=Z,21nm,1.1s						
OK052	**Battle Ridge R**	**18.79**	**11**	IAmb	IAmb	04 17 18.1	
	com

comp=Z,30nm,18.9s,baz=181,slow=38
SCHQ Schefferville 45.56 27 LR LR 04 44 21.3
comp=Z,30nm,18.5s,baz=218,slow=41
YKA Yellowknife Ar 45.90 351 P **P** **04 21 18.6 -0.2**
comp=Z,1.3nm,0.8s,baz=161,slow=8.1,SNR=2.4
YKA LR LR 04 42 02.3
comp=Z,108nm,18.9s,baz=80,slow=38
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 45.90 351 P **P** **04 21 18.9 +0.1**
DLBC Dease Lake 46.05 339 LR LR 04 42 31.8
comp=Z,68nm,19.6s,baz=104,slow=39
LPAZ La Paz 46.77 134 P **P** **04 21 26.7 -0.2**
comp=Z,0.9nm,0.8s,baz=320,slow=7.9,SNR=4.6
comp=Z,0.9nm,0.8s
LPAZ La Paz 46.77 134 P **P** **04 21 26.8 -0.2**
SPT South Point 51.63 281 P **P** **04 22 03.5 0.0**
L29M L29M 52.18 340 **P** **04 22 07.3 +0.3**
K29M Barlow Dome 52.49 341 P **P** **04 22 09.9 +0.5**
K29M IAmb IAmb 04 22 11.4
comp=Z,4.0nm,1.0s
G31M Satah River 53.84 345 P **P** **04 22 18.9 -0.1**
INK Inuvik 54.73 346 **P** **04 22 25.0 -0.5**
INK IAmb IAmb 04 22 26.2
comp=Z,5.4nm,1.1s
RIDG Independent Ri 54.91 338 P **P** **04 22 27.5 +0.5**
H03N2 Juan Fernandez 54.94 157 T T 05 21 34.3
baz=335,slow=77,SNR=160
H03N1 Juan Fernandez 54.95 157 T T 05 21 25.9
baz=335,slow=77,SNR=239
H03N3 Juan Fernandez 54.96 157 T T 05 21 38.2
baz=335,slow=77,SNR=154
G27K Doyon Strip 55.79 342 P **P** **04 22 33.1 -0.1**
G27K IAmb IAmb 04 22 34.4
comp=Z,2.8nm,0.8s
ILAR Eielson Array 56.23 338 P **P** **04 22 35.7 -0.7**
comp=Z,2.2nm,1.0s,baz=146,slow=5.0,SNR=14
comp=Z,2.2nm,1.0s
ILAR Eielson Array 56.23 338 **P** **04 22 37.3 +0.9**
RES Resolute Bay 57.27 2 LR LR 04 48 40.9
comp=Z,45nm,18.5s,baz=314,slow=37
G24K Hadweenzic Riv 57.54 340 **P** **04 22 46.7 +1.0**
C27K Jago River 58.23 344 P **P** **04 22 51.1 +0.6**
C27K IAmb IAmb 04 23 01.9
comp=Z,6.2nm,1.2s
J20K Nowinta River 58.63 336 P **P** **04 22 53.4 +0.1**
D25K Kavik River 58.77 343 P **P** **04 22 54.8 +0.5**
D25K IAmb IAmb 04 22 55.5
comp=Z,3.1nm,0.9s
L18K Granite Mounta 58.84 333 P **P** **04 22 54.8 0.0**
L18K IAmb IAmb 04 23 07.4
comp=Z,3.5nm,1.2s
PPTF Pamatai, Papee 59.07 236 P **P** **04 22 59.2 +2.0**
SFJD Kangerlussuaq 59.09 21 LR LR 04 48 34.2
comp=Z,51nm,19.2s,baz=218,slow=36
M16K Timber Creek 59.41 331 P **P** **04 22 59.3 +0.5**
M16K IAmb IAmb 04 23 13.5
comp=Z,2.0nm,0.9s
F21K Alatna River 59.82 339 **P** **04 23 01.9 +0.4**
D23K Nanushuk River 59.82 341 P **P** **04 23 02.0 +0.5**
C23K Itkillik River 60.28 342 P **P** **04 23 05.3 +0.7**
C23K IAmb IAmb 04 23 05.9
comp=Z,4.0nm,0.8s
J16K Anvik River 60.91 334 P **P** **04 23 09.2 +0.2**
J16K IAmb IAmb 04 23 20.9
comp=Z,1.4nm,0.8s
CPUP Villa Florida 60.93 135 P **P** **04 23 08.9 -0.7**
comp=Z,2.0nm,0.7s,baz=310,slow=6.4,SNR=6.3
comp=Z,2.0nm,0.7s
CPUP Villa Florida 60.93 135 P **P** **04 23 09.4 -0.2**
CPUP IAmb IAmb 04 23 09.8
comp=Z,2.5nm,0.8s
E19K Redstone River 61.22 339 P **P** **04 23 11.6 +0.5**
E19K IAmb IAmb 04 23 17.4
comp=Z,2.0nm,0.8s
L14K Kuka Creek 61.22 331 P **P** **04 23 11.4 +0.3**
L14K IAmb IAmb 04 23 16.9
comp=Z,2.0nm,0.8s
D20K Etivluk River 61.56 340 P **P** **04 23 13.8 +0.4**
D20K IAmb IAmb 04 23 14.7
comp=Z,1.9nm,0.9s
E18K Tukpahlearik C 62.40 338 P **P** **04 23 19.2 +0.2**
E18K IAmb IAmb 04 23 32.0
comp=Z,2.9nm,0.8s
C19K Lookout Ridge 62.71 340 P **P** **04 23 21.4 +0.3**
C18K Utukok River 63.06 339 P **P** **04 23 24.0 +0.5**
F15K North Star Dit 63.34 336 P **P** **04 23 26.1 +0.8**
F15K IAmb IAmb 04 23 26.5
comp=Z,2.8nm,0.9s
PLCA Paso Flores 64.56 155 P **P** **04 23 33.5 -0.2**
comp=Z,4.0nm,1.0s,baz=346,slow=5.8,SNR=3.4
comp=Z,4.0nm,1.0s
PLCA Paso Flores 64.56 155 P **P** **04 23 35.5 +1.8**
ITAB Concordia 65.10 132 P **P** **04 23 38.1 +0.7**
SUMG Summit 65.33 17 P **P** **04 23 40.2 +1.5**
SUMG IAmb IAmb 04 23 42.6
comp=Z,1.4nm,0.6s
BORG Borgarnes 69.95 27 LR LR 04 56 04.0
comp=Z,19nm,18.1s,baz=266,slow=37
NBO00 NORSAR Array S 84.94 27 P **P** **04 25 32.6 +1.2**
NB2 NORSAR Subarra 85.13 27 P pP 04 25 44.6 +1.1
comp=Z,2.2nm,0.9s,baz=297,slow=5.3
NOA NORSAR Array B 85.13 27 LR LR 05 03 59.5
comp=Z,22nm,20.6s,baz=305,slow=36
ARCES ARCESS Array B 85.41 16 LR LR 05 04 26.7
comp=Z,45nm,18.1s,baz=103,slow=36
ARCES ARCESS Array B 85.41 16 P **P** **04 25 34.0 +0.5**
FINES FINESS Array B 90.84 23 LR LR 05 09 41.1
comp=Z,37nm,18.4s,baz=314,slow=37
VRAC Vranov 93.68 35 LR LR 05 10 51.9
comp=Z,20nm,18.7s,baz=250,slow=37
PABE Paberze 93.78 28 P **P** **04 26 14.4 +1.2**
WRA Warramunga Arr 127.61 258 PKP **PKPdf** **04 32 01.9 -0.4**
comp=Z,0.9nm,0.7s,baz=82,slow=2.3,SNR=8.8
WRA Warramunga Arr 127.61 258 PKPdf **PKPdf** **04 32 02.3 0.0**
ASAR Alice Springs 128.37 253 PKP **PKPdf** **04 32 03.2 -0.5**
comp=Z,1.0nm,0.9s,baz=106,slow=1.8,SNR=3.6
UGM Wanagama 147.72 283 PKPdf **PKPdf** **04 32 38.2 -1.0**
PMBI Palembang 150.73 297 PKPdf **PKPdf** **04 32 44.1 +0.2**

*NOU **14** 04:16:35.1,32.˚46S×176.˚85W,h97km,mb4.5/13,South of Kermadec Islands*
*WEL **14** 04:16:55.8±0.7,33.˚5±5.˚1˚×17.˚9W±1.˚2,h12km,M5.0/19, mB5.5/13,ML4.9/19,MLv5.0/19,Mw(mB)5.0/13,Error ellipse: s-maj=17.3km s-min=3.9km az=110.1*
*NEIC **14** 04:16:59.8±1.7,33.˚17S±0.˚08×179.˚2W±0.˚2,h35km±1km, mb4.3/10,Error ellipse: s-maj=26.1km s-min=10.3km az=110.0*
*IDC **14** 04:17:01.0±2.9,33.˚08S×179.˚26W,h52km±24km,mb4.1/10, mbtmp4.5/11,ML4.6/2,MS3.6/12,Error ellipse: s-maj=21.6km s-min=16.4km az=84.0*
ISC 14 04:17:00.0±0.5,33.˚32S±0.˚05×178.˚78W±0.˚09,h48km, n145,σ1°78/135,mb4.4/15,MS3.7/12,3D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.11**	**11**	P	**Pn**	**04 17 59.6**	**-0.7**
GLKZ				S	**Sn**	**04 18 45.5**	**-1.6**
RAO	**Raoul Island**	**4.12**	**11**	P	**Pn**	**04 17 59.5**	**-0.9**
RAO	68nm,0.3s,baz=52,slow=22,SNR=2.1			S	**Sn**	**04 18 46.8**	**-0.5**
RAO	**Raoul Island**	**4.12**	**11**		**Pn**	**04 17 59.4**	**-1.1**
RAO	263nm,0.3s,baz=70,slow=20,SNR=1.8				**Sn**	**04 18 45.2**	**-2.2**
MXZ	**Matakaoa Point**	**4.86**	**209**	P	**Pn**	**04 18 08.2**	**-2.4**
MXZ	**Matakaoa Point**	**4.86**	**209**		**Pn**	**04 18 08.1**	**-2.4**
MXZ	**Matakaoa Point**	**4.86**	**209**	P	**Pn**	**04 18 08.8**	**-1.7**
MXZ				S	**Sn**	**04 19 04.7**	**-0.8**
WMGZ	**Waiomatatini S**	**5.04**	**206**	P	**Pn**	**04 18 11.7**	**-1.3**
WMGZ				S	**Sn**	**04 19 10.9**	**+0.9**
PKGZ	**Pakihiroa**	**5.21**	**209**	P	**Pn**	**04 18 13.6**	**-1.8**
PKGZ				S	**Sn**	**04 19 12.7**	**-1.6**
HAZ	**Te Kaha**	**5.24**	**211**	P	**Pn**	**04 18 14.5**	**-1.3**
HAZ				S	**Sn**	**04 19 16.1**	**+1.2**
PUZ	**Puketiti**	**5.32**	**206**	P	**Pn**	**04 18 14.6**	**-2.3**
PUZ				S	**Sn**	**04 19 16.2**	**-0.7**
WIZ	**White Island**	**5.34**	**217**	P	**Pn**	**04 18 16.4**	**-0.7**
RUGZ	**Raukumara Rang**	**5.46**	**211**	P	**Pn**	**04 18 17.0**	**-2.0**
RUGZ				S	**Sn**	**04 19 19.3**	**-1.3**
TWGZ	**Tauwhareparae**	**5.52**	**208**	P	**Pn**	**04 18 18.3**	**-1.4**
TWGZ				S	**Sn**	**04 19 19.9**	**-2.0**
GRZ	**Great Barrier**	**5.57**	**237**	P	**Pn**	**04 18 20.9**	**+0.6**
MYRZ	**Mayor Island**	**5.68**	**224**	P	**Pn**	**04 18 23.6**	**+1.8**
WHRZ	**Whale Island**	**5.70**	**216**	P	**Pn**	**04 18 22.3**	**+0.2**
WHRZ				S	**Sn**	**04 19 27.8**	**+1.6**
CNGZ	**Carnagh Statio**	**5.71**	**205**	P	**Pn**	**04 18 20.3**	**-1.9**
CNGZ				S	**Sn**	**04 19 26.2**	**-0.1**
TKGZ	**Te Karaka**	**5.80**	**207**	P	**Pn**	**04 18 23.4**	**-0.1**
TKGZ				S	**Sn**	**04 19 25.7**	**-2.9**
MWZ	**Matawai**	**5.84**	**210**	P	**Pn**	**04 18 21.0**	**-3.0**
MWZ				S	**Sn**	**04 19 28.0**	**-1.7**
MARZ	**Manawahe**	**5.95**	**217**	P	**Pn**	**04 18 25.5**	**0.0**
URZ	**Urewera**	**5.96**	**213**	P	**Pn**	**04 18 24.6**	**-1.0**
URZ	8.5nm,0.3s,baz=267,slow=3.7,SNR=81			S	**Sn**	**04 19 30.7**	**-1.9**
	55nm,0.4s,baz=85,slow=23,SNR=7.2 83nm,0.3s						
URZ	**Urewera**	**5.96**	**213**	P	**Pn**	**04 18 22.2**	**-3.4**
URZ	**Urewera**	**5.96**	**213**	P	**Pn**	**04 18 22.8**	**-2.8**
URZ				S	**Sn**	**04 19 30.6**	**-1.9**
EDRZ	**Edgecumbe**	**6.01**	**216**	P	**Pn**	**04 18 26.5**	**0.0**
EDRZ				S	**Sn**	**04 19 34.5**	**+0.5**
RAGZ	**Rawiri**	**6.02**	**210**	P	**Pn**	**04 18 26.1**	**-0.5**
RAGZ				S	**Sn**	**04 19 33.8**	**-0.4**
RIGZ	**Rimuhau**	**6.06**	**207**	P	**Pn**	**04 18 24.9**	**-2.3**
RIGZ				S	**Sn**	**04 19 33.5**	**-1.7**
OMRZ	**Omania**	**6.20**	**218**	P	**Pn**	**04 18 30.8**	**+1.8**
KARZ	**Kaharoa**	**6.20**	**219**	P	**Pn**	**04 18 29.6**	**+0.6**
PRGZ	**Paritu Road**	**6.21**	**205**	P	**Pn**	**04 18 26.3**	**-2.9**
MBAZ	**Motutapu North**	**6.23**	**235**	P	**Pn**	**04 18 30.6**	**+1.2**
TARZ	**Mount Tarawera**	**6.23**	**217**	P	**Pn**	**04 18 30.6**	**+1.1**
KMRZ	**Kaimai**	**6.24**	**222**	P	**Pn**	**04 18 30.0**	**+0.5**
WCZ	**Waipu Caves**	**6.24**	**243**	P	**Pn**	**04 18 30.0**	**+0.4**
MUGZ	**Murupara**	**6.29**	**214**	P	**Pn**	**04 18 29.0**	**-1.2**
SNGZ	**Shannon Statio**	**6.29**	**209**	P	**Pn**	**04 18 27.8**	**-2.5**
RRRZ	**Republican Roa**	**6.30**	**216**	P	**Pn**	**04 18 30.2**	**-0.2**
RTZ	**Ruatahuna**	**6.31**	**212**		**Pn**	**04 18 28.7**	**-1.8**
KNZ	**Kokohu**	**6.37**	**206**	P	**Pn**	**04 18 28.3**	**-3.0**
MHGZ	**Mahia Peninsul**	**6.41**	**204**	P	**Pn**	**04 18 29.6**	**-2.3**
TOZ	**Tahuroa Road**	**6.41**	**225**		**Pn**	**04 18 31.8**	**-0.1**
TOZ	**Tahuroa Road**	**6.41**	**225**	P	**Pn**	**04 18 33.4**	**+1.6**
RAHZ	**Arahi**	**6.51**	**210**	P	**Pn**	**04 18 32.6**	**-0.7**
OUZ	**Omahuta**	**6.59**	**251**	P	**Pn**	**04 18 33.8**	**-0.6**
OUZ	**Omahuta**	**6.59**	**251**	P	**Pn**	**04 18 34.2**	**-0.1**
MRHZ	**Matea Rd**	**6.74**	**214**	P	**Pn**	**04 18 33.5**	**-2.9**
TLZ	**Valley Road**	**6.81**	**221**	P	**Pn**	**04 18 37.9**	**+0.6**
BKZ	**Black Stump Fm**	**6.97**	**212**	P	**Pn**	**04 18 37.7**	**-1.9**
HIZ	**Hauiti**	**7.32**	**223**	P	**Pn**	**04 18 43.8**	**-0.5**
HIZ	**Hauiti**	**7.32**	**223**	P	**Pn**	**04 18 45.5**	**+1.2**
NGZ	**Ngauruhoe**	**7.40**	**216**	P	**Pn**	**04 18 43.9**	**-1.7**
KHEZ	**Kahui Hut**	**8.33**	**222**	P	**Pn**	**04 18 57.0**	**-1.2**
BFZ	**Birch Farm**	**8.36**	**207**	P	**Pn**	**04 18 53.9**	**-4.6**
BFZ	**Birch Farm**	**8.36**	**207**		Pn	04 18 53.1	-5.4
MRZ	**Mangatainoka R**	**8.61**	**210**		Pn	04 18 56.5	-5.4
SNZO	**South Karori**	**9.52**	**211**	P	**Pn**	**04 19 10.6**	**-3.7**
TUWZ	**Tuamarina**	**9.95**	**213**		Pn	04 19 13.7	-6.7
QRZ	**Quartz Range**	**10.21**	**220**	P	**Pn**	**04 19 21.1**	**-2.8**
KHZ	**Kahutara**	**10.92**	**212**	P	**Pn**	**04 19 28.9**	**-4.7**
RPZ	**Rata Peaks**	**13.07**	**214**	P	Pn	04 19 57.5	-5.5
	1.1nm,0.4s,baz=339,slow=2.8,SNR=7.7						
RPZ	0.7nm,0.3s,baz=80,slow=15,SNR=4.1			S	Sn	04 22 12.5	-14
RPZ	**Rata Peaks**	**13.07**	**214**	P	Pn	04 19 56.7	-6.3
RPZ	**Rata Peaks**	**13.07**	**214**		Pn	04 19 57.2	-5.7
ODZ	**Otahua Downs**	**14.28**	**212**	P	Pn	04 20 14.2	-5.2
JCZ	**Jackson Bay**	**14.46**	**218**	P	Pn	04 20 16.7	-5.2
RAR	**Rarotonga**	**20.71**	**59**	LR	LR	04 30 10.1
	comp=Z,101nm,19.0s,baz=274,slow=38						
TBI	**Tubuai**	**27.57**	**76**	*e*LR	LR	04 29 44.9
	764nm,27.0s						
TBI				*e*T	T	04 51 45.1
	8.5nm,0.2s						
PAE	**Paea**	**30.48**	**66**	*e*T	T	04 55 09.2
	34nm,0.2s						
PPT2	**Papeete2**	**30.53**	**66**	*e*LR	LR	04 30 54.7
	194nm,26.5s						
PPT2				*e*LR	LR	04 30 55.0
	114nm,26.8s						
PPT2				*e*T	T	04 55 14.0
	3.1nm,0.2s						
PPT	**Papeete**	**30.54**	**66**	LR	LR	04 35 38.5
	comp=Z,27nm,18.3s,baz=290,slow=36						
STKA	**Stephens Creek**	**33.28**	**261**	LR	LR	04 34 39.5
	comp=Z,195nm,21.2s,baz=80,slow=32						
PMOR	**Pomariorio Ree**	**33.38**	**64**	*e*T	T	04 58 49.0
	1.3nm,0.2s						
VAH	**Vaihoa**	**33.44**	**65**	*e*T	T	04 58 56.7
	16nm,0.2s						
CTA	**Charters Tower**	**33.74**	**284**	LR	LR	04 34 11.6
	comp=Z,175nm,21.0s,baz=219,slow=31						
AS31	**Alice Springs**	**42.38**	**270**	P	**P**	**04 24 47.7**	**-2.2**
AS31					IAmb	IAmb	04 24 50.3
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**42.38**	**270**	P	**P**	**04 24 48.4**	**-1.5**
	comp=Z,6.1nm,0.8s,baz=112,slow=7.5,SNR=34						
ASAR				PcP	**PcP**	**04 26 40.2**	**-2.4**
	comp=Z,0.5nm,0.6s,baz=132,slow=4.2,SNR=1.8						
	comp=Z,6.1nm,0.8s						
ASAR	**Alice Springs**	**42.38**	**270**	P	**P**	**04 24 47.3**	**-2.6**
WR8	**Warramunga Arr**	**43.49**	**276**	P	**P**	**04 24 57.0**	**-1.9**
WR8					IAmb	IAmb	04 24 58.4
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**43.63**	**276**	P	**P**	**04 24 57.4**	**-2.6**
	comp=Z,6.0nm,0.7s,baz=118,slow=7.6,SNR=26						
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**43.63**	**276**		**P**	**04 24 57.2**	**-2.8**
WB0	**Warramunga Arr**	**43.67**	**276**		**P**	**04 24 57.8**	**-2.5**
SBA	**Scott Base**	**45.09**	**184**	P	**P**	**04 25 12.9**	**+2.0**
SBA					IAmb	IAmb	04 25 43.8
	comp=Z,4.3nm,1.2s						
VNDA	**Vanda**	**45.13**	**186**	P	**P**	**04 25 13.8**	**+2.6**
	comp=Z,1.1nm,0.9s,baz=19,slow=4.6,SNR=5.9						
	comp=Z,1.1nm,0.9s						
VNDA	**Vanda**	**45.13**	**186**	P	**P**	**04 25 13.7**	**+2.4**
FITZ	**Fitzroy Crossi**	**51.76**	**273**	P	**P**	**04 26 00.4**	**-2.6**
	1.1nm,0.4s,baz=143,slow=7.4,SNR=6.9						
	comp=Z,1.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.76**	**273**	P	**P**	**04 26 00.4**	**-2.6**
FITZ					IAmb	IAmb	04 26 24.1
	comp=Z,5.6nm,1.5s						
QSPA	**South Pole Qui**	**56.80**	**180**	P	**P**	**04 26 41.7**	**+2.6**
	comp=Z,9.9nm,0.8s,baz=34,slow=2.0,SNR=41						
	comp=Z,9.9nm,0.8s						
QSPA	**South Pole Qui**	**56.80**	**180**	P	**P**	**04 26 42.0**	**+2.8**
SIJI	**Sorong**	**56.85**	**294**	LR	LR	04 49 16.9
	comp=Z,72nm,21.3s,baz=216,slow=34						
RPN	**Rapa Nui**	**59.34**	**104**	LR	LR	04 47 11.5
	comp=Z,34nm,19.3s,baz=252,slow=30						
MAW	**Mawson**	**69.35**	**201**	P	**P**	**04 28 02.8**	**+0.6**
	comp=Z,3.8nm,1.1s,baz=110,slow=9.1,SNR=4.6						
	comp=Z,3.8nm,1.1s						
MAW	**Mawson**	**69.35**	**201**	P	**P**	**04 28 02.0**	**-0.2**
MAW					IAmb	IAmb	04 28 04.3
	comp=Z,2.8nm,1.4s						
TROLL	**Troll, Antarti**	**74.96**	**180**	⇓P	**P**	**04 28 37.5**	**+1.7**
	comp=Z,386nm,0.8s						
SNAA	**Sanae**	**75.26**	**179**	⇓P	**P**	**04 28 39.1**	**+1.6**
	comp=Z,52nm,0.7s						
SNAA	**Sanae**	**75.26**	**179**	P	**P**	**04 28 38.8**	**+1.3**
	comp=Z,5.2nm,1.1s,baz=199,slow=5.9,SNR=6.8						
	comp=Z,5.2nm,1.1s						
SNAA	**Sanae**	**75.26**	**179**	P	**P**	**04 28 39.3**	**+1.8**
SNAA					IAmb	IAmb	04 28 40.1
	comp=Z,5.9nm,1.1s						
VNA2	**Neumayer--Watz**	**75.87**	**177**	⇓P	**P**	**04 28 42.6**	**+1.7**
	comp=Z,12nm,0.7s,baz=176,slow=5.4						
VNA1	**Neumayer--Stat**	**76.10**	**177**	P	**P**	**04 28 44.2**	**+2.0**
	comp=Z,12nm,0.8s						
H03S2	**Juan Fernandez**	**79.41**	**123**	T	T	05 57 34.1
	baz=235,slow=74,SNR=193						
H03S1	**Juan Fernandez**	**79.42**	**123**	T	T	05 57 41.9
	baz=235,slow=74,SNR=168						
H03S3	**Juan Fernandez**	**79.43**	**123**	T	T	05 57 40.9
	baz=235,slow=74,SNR=175						
H03N3	**Juan Fernandez**	**79.62**	**123**	T	T	05 57 41.6
	baz=240,slow=72,SNR=121						
H03N2	**Juan Fernandez**	**79.62**	**123**	T	T	05 57 30.9
	baz=240,slow=72,SNR=99						
H03N1	**Juan Fernandez**	**79.64**	**123**	T	T	05 57 40.7
	baz=240,slow=72,SNR=221						
PLCA	**Paso Flores**	**81.00**	**133**	P	**P**	**04 29 13.7**	**+3.8**
	comp=Z,4.6nm,0.9s,baz=217,slow=4.9,SNR=6.1						
	comp=Z,4.6nm,0.9s						
KSRS	**Korea Array**	**86.15**	**320**	LR	LR	05 05 37.0
	comp=Z,30nm,19.3s,baz=210,slow=34						
PETK	**Petropavlovsk-**	**88.47**	**346**	P	**P**	**04 29 45.9**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=140,slow=5.0,SNR=6.3						
	comp=Z,3.2nm,0.9s						
PETK	**Petropavlovsk-**	**88.47**	**346**	P	**P**	**04 29 46.8**	**+0.1**
NVAR	**Mina Array Bea**	**90.82**	**43**	P	**P**	**04 30 00.2**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=197,slow=8.2,SNR=4.6						
	comp=Z,1.4nm,0.9s						
NVAR	**Mina Array Bea**	**90.82**	**43**	P	**P**	**04 29 59.6**	**+1.2**
NNA	**Nana**	**93.25**	**106**	LR	LR	05 02 24.8
	comp=Z,54nm,21.2s,baz=202,slow=29						
CMIG	**Matias Romero**	**94.27**	**72**	LR	LR	05 10 58.8
	comp=Z,9.2nm,18.1s,baz=190,slow=34						
ANMO	**Albuquerque**	**95.90**	**52**	LR	LR	05 07 10.3
	comp=Z,32nm,18.9s,baz=266,slow=31						
NEW	**Newport**	**98.11**	**36**	LR	LR	05 08 02.5
	comp=Z,29nm,19.8s,baz=213,slow=31						
PDAR	**Pinedale Array**	**98.69**	**44**	LR	LR	05 09 03.5
	comp=Z,19nm,19.8s,baz=249,slow=32						
KURBB	**Kurchatov Arra**	**122.59**	**312**	PKP	**PKPdf**	**04 35 48.5**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=105,slow=2.2,SNR=14						
BVAR	**Borovoye Array**	**128.00**	**314**	PKP	**PKPdf**	**04 35 59.1**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=97,slow=2.3,SNR=6.3						
SPITS	**Spitsbergen Ar**	**134.56**	**356**	PKP	**PKPdf**	**04 36 10.2**	**-1.7**
	comp=Z,2.2nm,0.6s,baz=16,slow=2.1,SNR=1.4						
ARCES	**ARCESS Array B**	**141.28**	**347**	PKhKP	PKPpre	04 36 19.7
	comp=Z,1.7nm,0.7s,baz=48,slow=1.8,SNR=3.7						
ARCES				PKP	**PKPdf**	**04 36 25.2**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=90,slow=1.2,SNR=3.8						
ARCES	**ARCESS Array B**	**141.28**	**347**		**PKPdf**	**04 36 25.5**	**+1.1**
FAUS	**Fauske**	**144.92**	**351**	*e*P	**PKPab**	**04 36 29.9**	**-0.2**
VAGH	**Vaagaholmen**	**145.80**	**352**	*e*P	**PKPdf**	**04 36 32.3**	**-0.1**
RAUS	**Rausandaksla**	**145.98**	**351**	*e*P	**PKPdf**	**04 36 33.1**	**+0.4**
KONS	**Konsvik**	**146.04**	**351**	*e*P	**PKPdf**	**04 36 33.2**	**+0.5**
MOR8	**Moi Rana**	**146.17**	**350**	*e*P	**PKPdf**	**04 36 32.1**	**-0.9**
STOK	**Stokkvaagen**	**146.21**	**351**	*e*P	**PKPbc**	**04 36 34.0**	**-0.1**
LEIR	**Leirfjorden**	**146.41**	**351**	*e*P	**PKPdf**	**04 36 34.0**	**+0.6**
FIA1	**FINESS Array S**	**147.62**	**338**	PKPdf	**PKPbc**	**04 36 37.1**	**-1.2**
FINES	**FINESS Array B**	**147.62**	**338**	PKPbc	**PKPbc**	**04 36 37.3**	**-1.0**
	comp=Z,13nm,0.7s,baz=66,slow=4.6,SNR=47						
FINES	**FINESS Array B**	**147.62**	**338**		**PKPbc**	**04 36 37.0**	**-1.3**
NSS	**Namsos**	**148.07**	**351**	*e*P	**PKPbc**	**04 36 38.8**	**-0.6**
AKN	**Aaknes**	**150.89**	**354**	*e*P	**PKiKP**	**04 36 47.2**	**0.0**
MMAI	**Mont Meron Ar**	**151.46**	**279**	PKPbc	**PKPbc**	**04 36 47.1**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=95,slow=3.1,SNR=5.3						
NB2	**NORSAR Subarra**	**151.51**	**350**	PKP	**PKPbc**	**04 36 47.6**	**-0.4**
	comp=Z,6.8nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.51**	**350**	PKPbc	**PKPbc**	**04 36 47.4**	**-0.7**
	comp=Z,3.9nm,0.8s,baz=20,slow=4.7,SNR=36						
FOO	**Floro**	**151.60**	**356**	*e*P	**PKPbc**	**04 36 48.2**	**+0.1**
HFS	**Hagfors**	**151.94**	**347**	PKPbc	**PKPbc**	**04 36 47.9**	**-1.0**
	comp=Z,11nm,0.8s,baz=36,slow=2.4,SNR=20						
HYA	**Hoyanger**	**151.95**	**355**	*e*P	**PKPbc**	**04 36 48.6**	**-0.3**
SKAR	**Skarslia**	**152.24**	**353**	*e*P	**PKiKP**	**04 36 49.9**	**-0.1**
ASK	**Askoy**	**152.70**	**356**	*e*P	**PKiKP**	**04 36 51.1**	**+0.3**
KONO	**Kongsberg**	**153.08**	**351**	PKPbc	**PKPbc**	**04 36 51.5**	**0.0**
AKASG	**Malin Array Be**	**153.13**	**319**	PKPbc	**PKPbc**	**04 36 50.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=80,slow=1.5,SNR=4.7						
AKASG	**Malin Array Be**	**153.13**	**319**		**PKPdf**	**04 36 46.8**	**+2.3**
BRTR	**Keskin Array B**	**153.27**	**293**	PKPbc	**PKPbc**	**04 36 50.8**	**-2.0**
	comp=Z,2.3nm,0.9s,baz=83,slow=2.3,SNR=7.6						
BRTR	**Keskin Array B**	**153.27**	**293**		**PKPbc**	**04 36 49.6**	**-3.2**
TORD	**Torodi Ar. Bea**	**159.92**	**181**	PKP	**PKPdf**	**04 36 55.3**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=166,slow=1.2,SNR=3.9						
TORD				PKPab	**PKPab**	**04 37 34.9**	**+1.3**
	comp=Z,6.5nm,0.9s,baz=168,slow=4.0,SNR=16						
ESDC	**Sonseca Array**	**172.41**	**32**	PKP	**PKPdf**	**04 37 04.5**	**+1.0**
	comp=Z,0.9nm,1.0s,baz=318,slow=1.7,SNR=4.6						

*IDC **14** 04:28:07.7±0.9,49.˚82S×122.˚40E,h0km,mb4.1/7, mbtmp4.1/7,MS3.8/8,Error ellipse: s-maj=45.4km s-min=17.0km az=101.0*
*NEIC **14** 04:28:09.6±2.0,49.˚8S±0.˚1×122.˚6E±0.˚2,h10km±1km, mb4.7/16,Error ellipse: s-maj=23.0km s-min=15.8km az=296.0*
ISC 14 04:28:08.8±0.6,49.˚79S±0.˚09×122.˚5E±0.˚1,h10km,n47, σ0°87/37,mb4.4/12,MS3.8/8,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.10**	**334**	T	T	04 48 25.1
	baz=159,slow=74,SNR=30						
H01W2	**Cape Leeuwin H**	**16.11**	**334**	T	T	04 48 25.3
	baz=159,slow=74,SNR=7.8						
H01W3	**Cape Leeuwin H**	**16.12**	**334**	T	T	04 48 26.4
	baz=159,slow=74,SNR=32						
CASY	**Casey**	**17.65**	**196**	Pn	**Pn**	**04 32 14.4**	**-0.1**
MGBR	**Mount Gambier**	**17.70**	**54**	Pn	**Pn**	**04 32 14.1**	**-1.2**
MGBR				IAmb	IAmb	04 32 58.3
	com

GCMT	**Greycliff**	**145.29**	**76**	PKPbc	**PKPbc**	**04 47 44.1**	**-1.8**
K22A	**Casper**	**145.84**	**83**	PKPdf	**PKPbc**	**04 47 47.9**	**+0.1**
WTFS	**Witchita Falls**	**145.98**	**102**	PKPdf	**PKPdf**	**04 47 47.3**	**-0.2**
LAO	**LASA Array**	**147.84**	**76**	PKPdf	**PKPdf**	**04 47 49.5**	**-0.8**
OGNE	**Ogallala**	**147.88**	**89**	PKPdf	**PKPdf**	**04 47 50.3**	**-0.3**
BLOK	**Blackwell**	**148.65**	**99**	PKPdf	**PKPdf**	**04 47 51.0**	**-0.9**
TUL3	**Leonard**	**149.03**	**102**	PKPdf	**PKPdf**	**04 47 51.6**	**-0.9**
KSU1	**Kansas State U**	**150.40**	**96**	PKPbc	**PKiKP**	**04 48 00.8**	**+0.2**

*IDC **14** 04:40:20.4±0.8, 14°.88S×173°.27W, h0km, mb4.0/8, mbtmp4.0/8, MS3.5/11, Error ellipse: s-maj=34.3km s-min=17.6km az=141.0*
*NEIC **14** 04:40:23.0±1.2, 14°.98S±0°.08×172°.9W±0°.1, h10km±1km, mb4.5/14, Error ellipse: s-maj=25.4km s-min=12.3km az=106.0*

ISC 14 04:40:24.6±0.6, 14°.97S±0°.09×173°.1W±0°.1, h29km, n48, σ1s47/32, mb4.4/15, MS3.6/10, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.64**	**50**	Pn	**Pn**	**04 40 50.0**	**-1.6**
	77nm,0.3s,baz=231,slow=14,SNR=36						
AFI				Sn	Sn	04 41 06.0	-5.8
	335nm,0.3s,baz=63,slow=21,SNR=11						
AFI				LR	LR	04 41 23.6	
	comp=Z,264nm,18.4s,baz=122,slow=36						
AFI	**Afiamalu**	**1.64**	**50**		**Pn**	**04 40 50.1**	**-1.5**
NIUE	**Niue**	**5.08**	**144**	Pn	**Pn**	**04 41 36.6**	**-2.2**
MSVF	**Nonsavu**	**8.95**	**251**	LR	LR	04 45 30.5	
	comp=Z,317nm,21.3s,baz=160,slow=35						
PPT	**Papeete**	**22.70**	**100**	LR	LR	04 53 34.1	
	comp=Z,48nm,18.4s,baz=307,slow=35						
URZ	**Urewera**	**24.77**	**199**	LR	LR	04 54 01.7	
	comp=Z,107nm,18.1s,baz=310,slow=33						
RTZ	**Ruatahuna**	**25.14**	**199**	P	**P**	**04 45 49.3**	**+2.0**
H11S2	**WAKE ISLAND Hy**	**38.76**	**328**	T	T	05 28 55.3	
	baz=152						
H11S3	**WAKE ISLAND Hy**	**38.77**	**328**	T	T	05 29 12.8	
	baz=152,slow=74						
H11S1	**WAKE ISLAND Hy**	**38.77**	**328**	T	T	05 29 23.4	
	baz=152,slow=74						
H11N3	**WAKE ISLAND Hy**	**39.69**	**330**	T	T	05 30 32.4	
	baz=149,slow=76,SNR=2.3						
H11N1	**WAKE ISLAND Hy**	**39.70**	**330**	T	T	05 30 27.5	
	baz=149,slow=76,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**39.71**	**330**	T	T	05 30 33.3	
	baz=149,slow=76,SNR=3.0						
STKA	**Stephens Creek**	**44.52**	**240**	P	**P**	**04 48 32.7**	**-1.2**
	1.0nm,0.4s,baz=77,slow=9.6,SNR=4.2						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**50.25**	**256**	P	**P**	**04 49 17.3**	**-1.3**
	0.5nm,0.4s,baz=91,slow=7.4,SNR=26						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**50.25**	**256**	P	**P**	**04 49 17.9**	**-0.8**
ASAR	**Alice Springs**	**50.54**	**252**	P	**P**	**04 49 19.7**	**-1.1**
	1.3nm,0.4s,baz=87,slow=7.6,SNR=15						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**50.54**	**252**	P	**P**	**04 49 20.2**	**-0.7**
VNDA	**Vanda**	**63.84**	**186**	P	**P**	**04 50 55.5**	**+1.6**
SHEM	**Shemya Is, Ala**	**68.32**	**352**	LR	LR	05 16 48.6	
	comp=Z,50nm,19.0s,baz=115,slow=32						
PETK	**Petropavlovsk-**	**72.32**	**342**	P	**P**	**04 51 46.2**	**-1.2**
	0.9nm,0.8s,baz=125,slow=7.4,SNR=4.4						
	0.9nm,0.8s						
PFO	**Pinyon Flats O**	**72.40**	**47**	LR	LR	05 17 46.5	
	comp=Z,48nm,18.8s,baz=198,slow=31						
YBH	**Yreka Blue Hor**	**73.07**	**37**	LR	LR	05 17 33.2	
	comp=Z,36nm,19.9s,baz=252,slow=30						
NVAR	**Mina Array Bea**	**73.80**	**42**	LR	LR	05 17 51.3	
	comp=Z,40nm,19.9s,baz=284,slow=30						
KDAK	**Kodiak Island**	**74.44**	**11**	LR	LR	05 16 35.8	
	comp=Z,36nm,21.6s,baz=189,slow=29						
QSPA	**South Pole Qui**	**75.07**	**180**	P	**P**	**04 52 04.4**	**+0.8**
	4.1nm,0.8s,baz=65,slow=2.8,SNR=19						
	4.1nm,0.8s						
QSPA	**South Pole Qui**	**75.07**	**180**	P	**P**	**04 52 04.7**	**+1.1**
QSPA				IAmb	IAmb	04 52 06.7	
	comp=Z,4.6nm,0.8s						
TXAR	**Lajitas Array**	**80.11**	**56**	P	**P**	**04 52 34.2**	**+1.9**
	comp=Z,0.7nm,1.1s,baz=240,slow=7.1,SNR=4.9						
	comp=Z,0.7nm,1.1s						
TXAR	**Lajitas Array**	**80.11**	**56**	P	**P**	**04 52 32.5**	**+0.1**
ANMO	**Albuquerque**	**80.29**	**50**	LR	LR	05 22 45.7	
	comp=Z,22nm,18.2s,baz=262,slow=32						
G18K	**Tagagawik**	**81.35**	**6**		**P**	**04 52 39.8**	**+1.8**
WRH	**Wood River Hil**	**81.47**	**11**	P	**P**	**04 52 39.9**	**+1.2**
WRH				IAmb	IAmb	04 52 43.4	
	comp=Z,7.5nm,1.0s						
CCB	**Clear Creek Bu**	**81.68**	**11**	P	**P**	**04 52 40.2**	**+0.4**
CCB				IAmb	IAmb	04 52 44.2	
	comp=Z,5.2nm,0.9s						
PDAR	**Pinedale Array**	**81.74**	**42**	P	**P**	**04 52 42.3**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=240,slow=5.4,SNR=4.6						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**81.74**	**42**	P	**P**	**04 52 39.9**	**-1.0**
G19K	**Purcell Mounta**	**81.75**	**7**	P	**P**	**04 52 41.5**	**+1.4**
G19K				IAmb	IAmb	04 52 45.6	
	comp=Z,2.9nm,0.8s						
ILAR	**Eielson Array**	**81.96**	**11**	P	**P**	**04 52 42.2**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=225,slow=6.7,SNR=8.2						
ILAR				LR	LR	05 27 35.6	
	comp=Z,19nm,18.3s,baz=284,slow=35						
	comp=Z,0.8nm,0.7s						
F19K	**Shaleruckik Mo**	**82.35**	**6**		**P**	**04 52 45.1**	**+1.9**
F19K				IAmb	IAmb	04 52 48.0	
	comp=Z,2.8nm,0.7s						
E19K	**Redstone River**	**83.01**	**6**		**P**	**04 52 49.8**	**+3.1**
E21K	**Killik River**	**84.31**	**7**	P	**P**	**04 52 55.1**	**+1.7**
E21K				IAmb	IAmb	04 52 58.5	
	comp=Z,3.7nm,0.9s						
G26K	**Porcupine Rive**	**84.49**	**11**	P	**P**	**04 52 55.9**	**+1.6**
E23K	**Chandalar**	**84.53**	**9**	P	**P**	**04 52 54.5**	**-0.1**
E23K				IAmb	IAmb	04 53 05.0	
	comp=Z,3.8nm,1.2s						
I30M	**Mount Dempster**	**84.62**	**15**	P	**P**	**04 52 55.7**	**+0.6**
I30M				IAmb	IAmb	04 53 09.6	
	comp=Z,3.5nm,1.1s						
ULM	**Lac du Bonnet**	**93.40**	**39**	LR	LR	05 30 58.6	
	comp=Z,36nm,18.8s,baz=183,slow=32						
GERES	**GERESS Array B**	**145.76**	**352**	PKPbc	**PKPdf**	**05 00 00.3**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=18,slow=3.1,SNR=7.8						
GERES	**GERESS Array B**	**145.76**	**352**	PKPdf	**PKPdf**	**04 59 58.9**	**-1.7**
BRTR	**Keskin Array B**	**146.02**	**322**	PKPbc	**PKPdf**	**05 00 00.9**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=64,slow=2.9,SNR=6.2						
BRTR	**Keskin Array B**	**146.02**	**322**	PKPdf	**PKPdf**	**05 00 00.3**	**-1.1**

*NNC **14** 04:52:23.4±0.7, 43°.21N×80°.48E, h2km±2km, mb3.3, mpv3.4, Error ellipse: s-maj=5.0km s-min=3.0km az=152.0*
*SOME **14** 04:52:23.3, 43°.12N×80°.53E, h25km*
*KRNET **14** 04:52:25.6±0.1, 43°.25N×80°.35E, mb2.8*

ISC 14 04:52:23.4±1.2, 43°.21N±0°.04×80°.36E±0°.05, h10km, n47, σ2s36/74, 17C-10D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**0.65**	**281**	⇓P	**Pb**	**04 52 37.8**	**+0.9**
	11nm,0.3s						
PDGK				⇑S	**Sb**	**04 52 48.2**	**+2.2**
	150nm,0.3s						
SHLS	**Shalkode**	**0.66**	**266**	P	Pg	04 52 32.8	-3.4
	210nm,0.3s						
SHLS				S	**Sg**	**04 52 39.8**	**-5.1**
	757nm,0.4s						
SHLS	**Shalkode**	**0.66**	**266**	*eP*	Pg	04 52 32.8	-3.4
	210nm,0.3s						
SHLS				*eS*	**Sg**	**04 52 39.8**	**-5.1**
	757nm,0.4s						
UZB	**Uzynbulak**	**0.98**	**267**	P	**Pg**	**04 52 43.3**	**+1.1**
	15nm,0.1s						
UZB				S	**Sb**	**04 52 58.1**	**+2.5**
	204nm,0.2s						
UZB	**Uzynbulak**	**0.98**	**267**	*eP*	**Pg**	**04 52 43.3**	**+1.1**
	15nm,0.1s						
UZB				*eS*	**Sb**	**04 52 58.1**	**+2.5**
	204nm,0.2s						
DJR	**Jarkent**	**1.20**	**340**	P	**Pb**	**04 52 46.9**	**+0.8**
	34nm,0.2s						
DJR				S	**Sn**	**04 53 04.2**	**+1.6**
	30nm,0.4s						
DJR	**Jarkent**	**1.20**	**340**	*eP*	**Pb**	**04 52 46.9**	**+0.8**
	34nm,0.2s						
DJR				*eS*	**Sn**	**04 53 04.2**	**+1.6**
	30nm,0.4s						
KPKS	**Kokpek**	**1.25**	**282**	P	**Pb**	**04 52 48.5**	**+1.4**
	0.5nm,0.2s						
KPKS				S	**Sg**	**04 53 06.5**	**+2.9**
	108nm,0.4s						
KPKS	**Kokpek**	**1.25**	**282**	*eP*	**Pb**	**04 52 48.5**	**+1.4**
	0.5nm,0.2s						
KPKS				*eS*	**Sg**	**04 53 06.5**	**+2.9**
	108nm,0.4s						
KNOS	**Konyrlen**	**1.43**	**324**	P	**Pb**	**04 52 51.5**	**+1.2**
	45nm,0.3s						
KNOS				S	**Sg**	**04 53 12.0**	**+2.5**
	135nm,0.3s						
SATY	**Saty**	**1.44**	**265**	P	**Pb**	**04 52 51.6**	**+1.3**
	6.4nm,0.1s						
SATY				S	**Sg**	**04 53 12.3**	**+2.6**
	135nm,0.1s						
SATY	**Saty**	**1.44**	**265**	*eP*	**Pb**	**04 52 51.6**	**+1.3**
	6.4nm,0.1s						
SATY				*eS*	**Sg**	**04 53 12.3**	**+2.6**
	135nm,0.1s						
PRZ	**Przheval'sk**	**1.61**	**244**	⇓*e*P	**Pg**	**04 52 55.6**	**+1.3**
PRZ				⇓*i*S	**Sg**	**04 53 17.0**	**+1.7**
KURS	**Kuram**	**1.62**	**281**	P	**Pb**	**04 52 54.9**	**+1.5**
	9.1nm,0.7s						
KURS				S	**Sg**	**04 53 17.5**	**+1.9**
	59nm,0.5s						
KURS	**Kuram**	**1.62**	**281**	*eP*	**Pb**	**04 52 54.9**	**+1.5**
	9.1nm,0.7s						
KURS				*eS*	**Sg**	**04 53 17.5**	**+1.9**
	59nm,0.5s						
BLB	**Baldybastay**	**1.63**	**304**	P	**Pb**	**04 52 54.9**	**+1.3**
	103nm,0.2s						
BLB				S	**Sg**	**04 53 17.4**	**+1.6**
	90nm,0.2s						
ANVS	**Anan'yevo**	**2.02**	**259**	⇑*e*P	**Pb**	**04 53 01.5**	**+1.2**
ANVS				⇑*e*S	**Sb**	**04 53 28.6**	**+3.0**
ARXS	**Arharly**	**2.09**	**299**	Pg	**Pb**	**04 53 02.7**	**+1.2**
	10.0nm,0.3s						
ARXS				Lg	Lg	04 53 31.2	
	105nm,0.4s						
ARXS	**Arharly**	**2.09**	**299**	*eP*	**Pb**	**04 53 02.7**	**+1.2**
	10.0nm,0.3s						
ARXS				*eS*	**Sb**	**04 53 31.2**	**+3.6**
	105nm,0.4s						
KAPS	**Kapalarasan**	**2.20**	**341**	Pg	**Pb**	**04 53 04.4**	**+1.2**
	25nm,0.1s						
KAPS				Lg	Lg	04 53 34.0	
	109nm,0.2s						
KAPS	**Kapalarasan**	**2.20**	**341**	*eP*	**Pb**	**04 53 04.4**	**+1.2**
	25nm,0.1s						
KAPS				*eS*	**Sg**	**04 53 34.0**	**+0.1**
	109nm,0.2s						
TDK	**Taldyqorghan**	**2.28**	**323**	Pg	**Pb**	**04 53 06.0**	**+1.3**
	98nm,0.2s						
TDK				Lg	Lg	04 53 36.7	
	155nm,0.4s						
TDK	**Taldyqorghan**	**2.28**	**323**	*eP*	**Pb**	**04 53 06.0**	**+1.3**
	98nm,0.2s						
TDK				*eS*	**Sg**	**04 53 36.7**	**+0.1**
	155nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.40**	**233**	⇑*i*P	**Pb**	**04 53 07.7**	**+0.8**
TARG				⇑*i*S	**Sb**	**04 53 37.8**	**+1.1**
MDOK	**Medeo**	**2.42**	**270**	Pg	**Pb**	**04 53 08.4**	**+1.3**
	8.8nm,0.3s						
MDOK				Lg	Lg	04 53 40.9	
	46nm,0.4s						
TNSS	**Tian-Shan**	**2.51**	**267**	Pg	**Pb**	**04 53 09.9**	**+1.2**
	1.7nm,0.2s						
TNSS				Lg	Lg	04 53 43.5	
	6.5nm,0.4s						
TNSS	**Tian-Shan**	**2.51**	**267**	*eP*	**Pb**	**04 53 09.9**	**+1.2**
	1.7nm,0.2s						
TNSS				*eS*	**Sb**	**04 53 43.5**	**+3.7**
	6.5nm,0.4s						
KDJ	**Kajisay**	**2.58**	**246**	⇓*e*P	**Pb**	**04 53 09.6**	**-0.3**
KDJ				⇓*i*S	**Sb**	**04 53 41.9**	**+0.2**
KTBS	**Karatobe**	**2.73**	**282**	Pg	**Pb**	**04 53 14.2**	**+2.0**
	1.9nm,0.4s						
KTBS				Lg	Lg	04 53 50.5	
	36nm,0.5s						
KTBS	**Karatobe**	**2.73**	**282**	*eP*	**Pb**	**04 53 14.2**	**+2.0**
	1.9nm,0.3s						
KTBS				*eS*	**Sb**	**04 53 50.4**	**+4.7**
	44nm,0.4s						
ULHL	**Ulahol**	**3.19**	**254**	⇑*e*P	**Pb**	**04 53 18.1**	**-2.0**
ULHL				⇑*i*S	**Sn**	**04 53 56.5**	**+4.7**
KST	**Kastek**	**3.23**	**269**	Pg	**Pb**	**04 53 22.8**	**+2.0**
	6.2nm,0.4s						
KST				Lg	Lg	04 54 05.5	
	20nm,0.4s						
KST	**Kastek**	**3.23**	**269**	*eP*	**Pb**	**04 53 22.8**	**+2.0**
	6.2nm,0.4s						
KST				*eS*	**Sb**	**04 54 05.5**	**+5.3**
	20nm,0.4s						
BOOM	**Boomskoye usch**	**3.33**	**259**	⇑*i*P	**Pb**	**04 53 20.2**	**-2.4**
BOOM				⇑*i*S	**Sn**	**04 53 59.5**	**+4.1**
KRBS	**Karabastau**	**3.45**	**280**	Pg	**Pb**	**04 53 26.9**	**+2.4**
	3.4nm,0.5s						
KRBS				Lg	Lg	04 54 12.5	
	20nm,0.3s						
KRBS	**Karabastau**	**3.45**	**280**	*eP*	**Pb**	**04 53 26.9**	**+2.4**
	3.4nm,0.5s						
KRBS				*eS*	**Sg**	**04 54 12.5**	**-1.6**
	20nm,0.3s						
NRN	**Naryn**	**3.69**	**243**	⇑*e*P	**Pn**	**04 53 25.4**	**+4.7**
NRN				⇑*e*S	**Sn**	**04 54 09.6**	**+5.2**
MAKZ	**Makanchi**	**3.78**	**17**	⇓Pn	**Pn**	**04 53 22.0**	**+0.4**
	1.4nm,0.3s						
MAKZ				⇓Pg	**Pb**	**04 53 31.8**	**+1.7**
	1.6nm,0.3s						
MAKZ				⇓Lg	Lg	04 54 20.3	
	4.1nm,0.3s						
MK31	**Makanchi Array**	**3.84**	**20**	⇑Pn	**Pn**	**04 53 24.5**	**+2.0**
	0.3nm,0.3s,baz=203,slow=14,SNR=11						
MK31				Pg	**Pb**	**04 53 32.7**	**+1.5**
	0.6nm,0.3s,baz=192,slow=13,SNR=9.4						
MK31				⇓Sn	**Sn**	**04 54 07.4**	**-0.2**
	0.8nm,0.3s,baz=205,slow=25,SNR=3.8						
MK31				⇑Lg	Lg	04 54 23.3	
	1.8nm,0.3s,baz=197,slow=28,SNR=7.3						
AAK	**Ala-Archa**	**4.35**	**264**	⇑Pg	**Pg**	**04 53 44.5**	**-2.1**
	1.7nm,0.7s						
AAK				⇑Lg	Lg	04 54 44.4	
	4.2nm,0.7s						
BTLS	**Baital**	**4.90**	**294**	Pg	Pb	04 53 54.4	+5.2
	2.9nm,0.1s						
BTLS				Lg	Lg	04 54 59.8	
	16nm,0.3s						
BTLS	**Baital**	**4.90**	**294**	*eP*	Pb	04 53 54.4	+5.2
	2.9nm,0.1s						
BTLS				*eS*	**Sg**	**04 54 59.8**	**-0.9**
	16nm,0.3s						
MRKS	**Merke**	**5.26**	**267**	Pg	**Pg**	**04 54 03.0**	**-1.0**
	1.6nm,0.2s						
MRKS				Lg	Lg	04 55 14.5	
	3.4nm,0.4s						
MRKS	**Merke**	**5.26**	**267**	*eP*	**Pg**	**04 54 03.0**	**-1.0**
	1.6nm,0.2s						
MRKS				*eS*	**Sg**	**04 55 14.4**	**+2.4**
	3.4nm,0.4s						
KK31	**Karatay Array**	**7.21**	**273**	⇑Lg	Lg	04 56 14.4	
	1.0nm,0.4s,baz=86,slow=28,SNR=5.7						
KURBB	**Kurchatov Arra**	**7.52**	**351**	⇓Lg	Lg	04 56 23.9	
	2.0nm,0.5s						
KURK	**Kurchatov**	**7.60**	**352**	⇑Lg	Lg	04 56 22.4	
	1.6nm,1.1s						

TRN 14 05:14:48.7, 14°.35N×60°.24W, h32km, MD3.5, East of Martinique., Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLAC	**Saint Lucia, A**	**0.78**	**235**	*eP*	Pb	05 15 04.2	+0.3
SLAC				*eS*	Sn	05 15 15.5	+1.3
SLBI	**Saint Lucia, B**	**0.79**	**245**	*eP*	Pb	05 15 04.2	+0.3
SLBI				*eS*	Sb	05 15 15.7	+1.4
SLCP	**Castries, St.**	**0.81**	**245**	*eS*	Sb	05 15 15.9	+1.1
BIM	**Bigot**	**0.82**	**281**	*eP*	Pb	05 15 05.2	+0.7
BIM				*eS*	Sb	05 15 18.0	+2.6
SVN	**Savane Anatole**	**1.02**	**298**	*eP*	Pb	05 15 08.3	+0.4
SVN				*eS*	Sb	05 15 23.0	+1.9
DSLB	**Salisbury**	**1.57**	**313**	*eP*	Pb	05 15 16.1	-1.0
DSLB				*eS*	Sb	05 15 36.1	-0.6
DWS	**Wesley**	**1.59**	**319**	*eP*	Pb	05 15 16.4	-1.0
DWS				*eS*	Sb	05 15 36.2	-1.0
MAGL	**Barre de l'ile**	**1.88**	**328**	*eP*	Pn	05 15 19.4	+0.8
MAGL				*eS*	Sn	05 15 41.2	-0.1
TBG	**Guadaloupe-3**	**2.02**	**318**	*eP*	Pn	05 15 21.7	+1.2
TBG				*eS*	Sn	05 15 45.3	+0.6
MMLZ	**Guadeloupe Bro**	**2.18**	**321**	*eP*	Pn	05 15 23.8	+1.1
MMLZ				*eS*	Sb	05 15 51.3	-2.6
GCMP	**Grenada, Carri**	**2.19**	**212**	*eP*	Pn	05 15 24.7	+1.8
GCMP				*eS*	Sn	05 15 50.7	+1.9
DHSZ	**Broadband at M**	**2.41**	**323**	*eP*	Pn	05 15 26.2	+0.3
DHSZ				*eS*	Sn	05 15 56.2	+1.8
GRGR	**Grenville**	**2.60**	**212**	*eP*	Pn	05 15 31.1	+2.5
GRGR				*eS*	Sn	05 16 01.0	+1.8
TRN	**Trinidad (W)**	**3.85**	**197**	x	x	05 15 26.5	

NOU 14 05:16:25.2, 15°.11S×166°.63E, h14km, MLv4.7/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.65**	**121**	P	Pb	05 16 38.6	+0.3
SANVU	**Saraoutou**	**0.65**	**121**	S	Sb	05 16 48.1	+0.9
DVP	**Devils Point**	**3.00**	**150**	P	Pn	05 17 12.1	-0.2
YATNC	**Mamie plateau,**	**6.92**	**178**	P	Pn	05 18 05.6	-0.6
NOUC	**Port Laguerre**	**6.96**	**183**	P	Pn	05 18 06.5	-0.3
OUENC	**Ouen Island, N**	**7.27**	**178**	P	Pn	05 18 12.1	+1.0
NGOA	**Tingoa Renbel**	**7.30**	**298**	P	Pn	05 18 11.6	+0.1

*IDC **14** 05:22:02.4±1.5, 35°.70N×31°.38E, h0km, mb3.7/2, mbtmp3.6/8, ML3.2/4, Error ellipse: s-maj=25.5km s-min=18.3km az=59.0*
*NIC **14** 05:22:03.2, 35°.76N×31°.32E, h9km±2km, Ml3.0/10*
*AFAD **14** 05:22:03.0, 35°.45N×31°.40E, h23km±2km, ML3.1*
*GII **14** 05:22:04.8±0.0, 35°.49N×31°.20E, h0km, Mws3.4, confirmed*
*ISK **14** 05:22:06.3, 35°.71N×31°.48E, h7km, ML3.1/34*

ISC 14 05:22:04.6±1.0, 35°.71N±0°.02×31°.37E±0°.02, h15km±8km, n96, σ1s80/126, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.93**	**55**	Pg	**Pn**	**05 22 23.4**	**+0.3**
GAZI				Sg	**Sn**	**05 22 35.4**	**-0.8**
GAZI	**Gazipasa**	**0.93**	**55**	P	**Pn**	**05 22 23.7**	**+0.6**
ALAN	**Alanya-ANTALYA**	**1.00**	**32**	Pg	**Pn**	**05 22 25.4**	**+1.3**
AKUM	**Antalya-Kumluc**	**1.04**	**307**	P	**Pn**	**05 22 26.5**	**+1.9**
AKUM				S	**Sn**	**05 22 43.1**	**+4.3**
AKUM				IAML		05 22 47.0	
	comp=N,536nm,0.7s						
AKUM				IAML		05 22 50.0	
	comp=E,386nm,0.3s						
AKMS	**Akamas**	**1.04**	**131**	P	**Pg**	**05 22 24.3**	**-0.5**
AKMS				S	**Sn**	**05 22 40.9**	**+1.9**
AKMS				AML	AML	05 22 44.6	
	1.6nm,0.4s						
AKMS				AML	AML	05 22 46.8	
	1.2nm,0.5s						
KEMT	**Kemer-ANTALYA**	**1.11**	**324**	Pn	**Pn**	**05 22 28.6**	**+3.0**
ALFC	**Alefka**	**1.14**	**118**	P	**Pb**	**05 22 25.2**	**-0.9**
ALFC				S	**Sn**	**05 22 42.9**	**+1.5**
ALFC				AML	AML	05 22 49.2	
	1.5nm,0.4s						
ALFC				AML	AML	05 22 53.2	
	0.9nm,0.3s						
KEPZ	**Antalya-Kepez**	**1.21**	**9**	P	**Pn**	**05 22 28.1**	**+1.1**
KEPZ				S	**Sn**	**05 22 43.2**	**+0.1**
KEPZ				IAML		05 22 50.0	
	comp=N,248nm,0.7s						
ANTB	**Antalya**	**1.33**	**334**	Pn	Pg	05 22 32.3	+2.2
NATA	**Nata**	**1.35**	**133**	P	**Pb**	**05 22 29.8**	**+0.3**
NATA				S	**Sg**	**05 22 49.5**	**+1.5**
NATA				AML	AML	05 23 01.2	
	2.7nm,0.7s						
NATA				AML	AML	05 23 05.8	
	2.4nm,0.6s						
TROD	**Troodos**	**1.44**	**121**	P	**Pn**	**05 22 30.5**	**+0.3**
TROD				S	**Sg**	**05 22 51.2**	**+0.2**
TROD				AML	AML	05 23 04.3	
	0.8nm,0.5s						
TROD				AML	AML	05 23 09.3	
	0.4nm,0.6s						
TEKE	**Tekeli-Mersin**	**1.48**	**72**	Pn	**Pg**	**05 22 31.9**	**-1.1**
TEKE				Sn	**Sg**	**05 22 52.0**	**-0.3**
AKAS	**Kas**	**1.53**	**291**	Pn	**Pg**	**05 22 35.7**	**+1.7**
AKAS	**Kas**	**1.53**	**291**	P	Pg	05 22 38.1	+4.2
AKAS				S	**Sg**	**05 22 57.6**	**+3.7**
XYLS	**Xyliatos**	**1.53**	**116**	P	**Pn**	**05 22 31.4**	**0.0**
XYLS				S	**Sn**	**05 22 52.5**	**+1.3**
XYLS				AML	AML	05 23 02.2	
	0.7nm,0.5s						
XYLS				AML	AML	05 23 04.0	
	0.5nm,0.6s						
KORT	**Korkueli**	**1.54**	**328**	Pn	**Pg**	**05 22 35.4**	**+1.3**
KORT	**Korkueli**	**1.54**	**328**	P	Pg	05 22 36.2	+2.1
KORT				S	**Sg**	**05 22 59.1**	**+5.1**
KORT				IAML		05 23 08.0	
	comp=E,258nm,1.0s						
KORT				IAML		05 23 10.0	
	comp=N,161nm,0.6s						
HDMB	**Hadim**	**1.54**	**35**	Pn	**Pg**	**05 22 33.8**	**-0.5**
HDMB				Sn	**Sg**	**05 22 54.5**	**+0.1**
ELL	**Elmali**	**1.58**	**312**	Pn	**Pg**	**05 22 36.4**	**+1.5**
APOL	**The Sanctuary**	**1.60**	**130**	P	Pn	05 22 33.1	+0.9
APOL				S	**Sb**	**05 22 55.8**	**+2.1**
APOL				AML	AML	05 23 07.2	
	0.5nm,0.5s						
APOL				AML	AML	05 23 07.3	
	0.3nm,0.6s						
BERE	**Bereket-Mersin**	**1.63**	**66**	Pn	**Pg**	**05 22 34.8**	**-1.1**
YORU	**Yoruktepe-Mers**	**1.71**	**74**	Pn	**Pb**	**05 22 35.8**	**+0.1**
SEYD	**Seydisehir-KON**	**1.

EREN	**Erenkoy**	**2.29**	**94**	Pn	**Pb**	**05 22 44.2**	**-1.3**
BAGO	**Egridir - ISPA**	**2.33**	**349**	P	**Pg**	**05 22 46.5**	**-2.7**
KONT	**Konya--Tatoy**	**2.37**	**19**	Pn	**Pb**	**05 22 46.2**	**-0.8**
KONT	**Konya--Tatoy**	**2.37**	**19**	P	**Pg**	**05 22 46.8**	**-3.3**
DOGA	**KONYA_Doganhis**	**2.41**	**6**	P	**Pg**	**05 22 48.1**	**-2.7**
APMY	**Acipayam-Deniz**	**2.43**	**317**	Pn	**Pg**	**05 22 47.9**	**-3.2**
DALY	**Dalyan (Mula)**	**2.46**	**298**	P	**Pb**	**05 22 45.6**	**-2.9**
INCE	**Denizli-Bozkur**	**2.47**	**325**	P	**Pg**	**05 22 48.5**	**-3.4**
YVAC	**Isparta, Yalva**	**2.56**	**358**	P	**Pn**	**05 22 46.2**	**+0.5**
LADK	**Ladik-KONYA**	**2.61**	**17**	Pn	**Pb**	**05 22 49.7**	**-1.5**
TAVA	**DENIZLI_Tavas**	**2.65**	**312**	P	**Pb**	**05 22 50.5**	**-1.3**
DNIZ	**Denizli-Tavas-**	**2.68**	**316**	P	**Pb**	**05 22 51.8**	**-0.6**
OSC2	**CSNet OBS 4**	**2.73**	**164**	P	**Pn**	**05 22 48.2**	**+0.4**
OSC2				S	**Sn**	**05 23 22.3**	**+1.8**
KZIL	**AFYON_Kizioren**	**2.73**	**339**	P	**Pb**	**05 22 52.5**	**-0.7**
TURN	**Turunc**	**2.75**	**294**	P	**Pb**	**05 22 50.0**	**-3.3**
SDAG	**Sultandagi-AFY**	**2.75**	**353**	Pn	**Pb**	**05 22 52.1**	**-1.5**
YESY	**Yesilyurt**	**2.81**	**42**	Pn	**Pb**	**05 22 52.3**	**-2.3**
PASA	**Karahalli, USA**	**3.04**	**331**	P	**Pb**	**05 22 54.9**	**-3.5**
KIZT	**Kizilcal**	**3.19**	**7**	Pn	**Pb**	**05 22 58.2**	**-2.9**
BNAZ	**Uak-Banaz**	**3.20**	**339**	P	**Pb**	**05 22 58.2**	**-3.0**
ESEN	**Aydn-Nazilli**	**3.20**	**312**	P	**Pn**	**05 22 55.5**	**+1.1**
YAZI	**Mula-Datşa-**	**3.32**	**288**	P	**Pn**	**05 22 57.1**	**+1.1**
CMRD	**Camardi-Nigde**	**3.50**	**55**	Pn	**Pb**	**05 23 02.1**	**-4.2**
TAHT	**Tahtakopru-Hat**	**3.96**	**79**	Pn	**Pn**	**05 23 08.0**	**+3.3**
KOZT	**Kozan**	**4.00**	**62**	Pn	**Pn**	**05 23 08.9**	**+3.6**
MMA0B	**Mount Meron ar**	**4.28**	**128**	P	**Pn**	**05 23 09.7**	**+0.5**
MMA0B				S	**Sn**	**05 23 59.9**	**+1.0**
MMAI	**Mount Meron Ar**	**4.28**	**128**	Pn	**Pn**	**05 23 09.4**	**+0.2**
	4.7nm,0.3s,baz=310,slow=14,SNR=13						
MMAI				Sn	**Sn**	**05 23 58.1**	**-0.8**
	6.7nm,0.3s,baz=313,slow=29,SNR=5.2						
GEM	**Giv'at Ha'Em**	**4.33**	**124**	P	**Pn**	**05 23 10.6**	**+0.8**
GEM				S	**Sn**	**05 24 01.1**	**+1.0**
BRTR	**Keskin Array B**	**4.40**	**23**	Pn	**Pn**	**05 23 13.7**	**+2.7**
	0.8nm,0.3s,baz=198,slow=16,SNR=6.9						
BRTR				Sn	**Sn**	**05 24 03.3**	**+1.4**
	baz=206,slow=22						
	2.1nm,0.5s						
KNHM	**Kefar Nahum**	**4.48**	**128**	P	**Pn**	**05 23 12.6**	**+0.7**
KNHM				S	**Sn**	**05 24 04.4**	**+0.7**
MMLI	**Mount Malkishu**	**4.68**	**133**	P	**Pn**	**05 23 15.0**	**+0.3**
MMLI				S	**Sn**	**05 24 08.7**	**-0.1**
ROII	**Roi**	**4.86**	**134**	P	**Pn**	**05 23 17.9**	**+0.9**
RGMN	**Argaman**	**4.93**	**134**	P	**Pn**	**05 23 18.5**	**+0.4**
RGMN				S	**Sn**	**05 24 15.2**	**+0.3**
IDI	**Anoyia**	**5.31**	**267**	Pn	**Pn**	**05 23 23.0**	**-0.4**
	5.9nm,0.5s,baz=84,slow=14,SNR=8.4						
IDI				Sn	**Sn**	**05 24 19.9**	**-4.3**
	3.7nm,0.3s,baz=298,slow=17,SNR=9.1						
KZIT	**Kziot**	**5.41**	**151**	P	**Pn**	**05 23 24.3**	**-0.5**
KZIT				S	**Sn**	**05 24 25.3**	**-1.5**
MSBI	**Mazada**	**5.50**	**142**	P	**Pn**	**05 23 26.0**	**+0.1**
MSBI				S	**Sn**	**05 24 28.2**	**-0.7**
ASF	**Jabal al Asfar**	**5.79**	**126**	Pn	**Pn**	**05 23 30.7**	**+0.8**
	0.7nm,0.3s,baz=306,slow=11,SNR=6.9						
	1.3nm,0.3s						
HRFI	**Mount Harif**	**6.44**	**150**	P	**Pn**	**05 23 38.4**	**-0.4**
HRFI				S	**Sn**	**05 24 50.7**	**-1.4**
EIL	**Elat**	**6.73**	**152**	Pn	**Pn**	**05 23 41.2**	**-1.7**
	2.5nm,0.3s,baz=341,slow=16,SNR=19						
EIL				Sn	**Sn**	**05 24 54.7**	**-4.6**
	0.5nm,0.3s,baz=37,slow=17,SNR=2.2						
	15nm,0.5s						
EIL	**Elat**	**6.73**	**152**	P	**Pn**	**05 23 42.1**	**-0.8**
EIL				S	**Sn**	**05 24 57.7**	**-1.6**
GERES	**GERESS Array B**	**18.47**	**321**	P	**P**	**05 26 21.3**	**+1.5**
	baz=118,slow=11,SNR=4.0						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**25.98**	**354**	P	**P**	**05 27 34.6**	**-1.8**
	1.9nm,0.9s,baz=157,slow=10,SNR=4.0						
	1.9nm,0.9s						
MKAR	**Makanchi Array**	**39.22**	**58**	P	**P**	**05 29 32.5**	**+0.3**
	0.6nm,0.7s,baz=274,slow=7.8,SNR=5.4						
	0.6nm,0.7s						

CATAC ***14*** *05:46:33.0±0.4, 14°N±4″×9°1W±°, h123km±3km, M2.7/9, MLv2.7/9, Error ellipse: s-maj=9.1km s-min=2.9km az=22.7, confirmed*

GCG ***14*** *05:46:33.0±0.9, 14°.14N×90°.57W, h121km±11km, MD3.9, ML3.8, MW2.9, Presumed earthquake*

ISC 14 05:46:33.3±1.9, 14°.15N±0°.08×90°.49W±0°.05, h132km±12km, n35, σ0s85/57, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG16	**Alotenango, Sa**	**0.13**	**352**	*i* P	**Pn**	**05 46 51.5**	**-0.1**
FG8	**Yepocapa, Chim**	**0.13**	**330**	*i* P	**Pn**	**05 46 51.8**	**+0.4**
PCG5	**San Vicente Pa**	**0.13**	**58**	*i* P	**Pn**	**05 46 50.3**	**-1.2**
FAME	**Alcaldia de Sa**	**0.55**	**123**	P	**Pn**	**05 46 52.1**	**-0.8**
FAME				S	**Sn**	**05 47 06.6**	**-1.1**
SLOZ	**Alcaldia de Sa**	**0.70**	**100**	P	**Pn**	**05 46 53.3**	**-0.6**
SLOZ				S	**Sn**	**05 47 10.7**	**+1.1**
LOAL	**Lomas de Alarc**	**0.71**	**102**	P	**Pn**	**05 46 53.4**	**-0.6**
LOAL				S	**Sn**	**05 47 10.8**	**+1.2**
JUAM	**Asuncion Mita**	**0.79**	**76**	*i* P	**Pn**	**05 46 54.1**	**-0.5**
APG	**El Apazote**	**0.85**	**2**	*i* P	**Pn**	**05 46 54.9**	**-0.5**
STG5	**El Palmar, Qui**	**0.87**	**287**	*i* P	**Pn**	**05 46 56.3**	**+1.0**
STG8	**El Palmar, Qui**	**0.89**	**290**	*i* P	**Pn**	**05 46 57.1**	**+1.4**
STG8				*i* S	**Sn**	**05 47 16.5**	**+3.9**
STG8				IAML		05 47 23.6	
	comp=N,1μm,0.2s						
CEVE	**Cerro Verde**	**0.90**	**110**	S	**Sn**	**05 47 12.5**	**-0.3**
UNIC	**Universidad Ca**	**0.93**	**100**	P	**Pn**	**05 46 55.3**	**-0.6**
UNIC				S	**Sn**	**05 47 12.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.12**	**116**	P	**Pn**	**05 46 57.3**	**-0.5**
JAYA				S	**Sn**	**05 47 16.1**	**-0.2**
JAYA	**Jayaque - finc**	**1.12**	**116**	*i* P	**Pn**	**05 46 57.4**	**-0.3**
JAYA				*i* S	**Sn**	**05 47 15.8**	**-0.6**
MTO3	**Montecristo**	**1.13**	**77**	P	**Pn**	**05 46 57.6**	**-0.2**
MTO3				S	**Sn**	**05 47 16.6**	**+0.1**
MTO3	**Montecristo**	**1.13**	**77**	*i* P	**Pn**	**05 46 57.5**	**-0.4**
ZAFR2	**Estanzuela, Za**	**1.19**	**69**	*i* P	**Pn**	**05 46 58.4**	**+0.1**
ESQI	**Esquipulas**	**1.19**	**70**	P	**Pn**	**05 46 58.5**	**+0.1**
ESQI				S	**Sn**	**05 47 17.5**	**+0.2**
RTAL	**Retalhuleu**	**1.23**	**288**	P	**Pn**	**05 46 57.3**	**-1.3**
RTAL				S	**Sn**	**05 47 16.3**	**-1.6**
UEES	**Universidad Ev**	**1.29**	**109**	P	**Pn**	**05 46 59.4**	**0.0**
UEES				S	**Sn**	**05 47 19.3**	**+0.1**
LALI	**Alcalda de L**	**1.31**	**120**	P	**Pn**	**05 47 00.0**	**+0.5**
LALI				S	**Sn**	**05 47 19.8**	**+0.4**
LOMA	**Loma Larga**	**1.38**	**111**	S	**Sn**	**05 47 20.8**	**-0.1**
PANCS	**Alcalda de**	**1.38**	**112**	P	**Pn**	**05 46 59.4**	**-0.9**
PANCS				S	**Sn**	**05 47 20.4**	**-0.5**
LLGN	**La Laguna**	**1.50**	**89**	P	**Pn**	**05 47 01.3**	**-0.4**
LLGN				S	**Sn**	**05 47 24.1**	**+0.8**
HUEH	**Huehuetenango**	**1.52**	**320**	P	**Pn**	**05 47 01.2**	**-0.9**
HUEH				S	**Sn**	**05 47 22.7**	**-1.2**
PAVA	**Las Pavas**	**1.57**	**106**	P	**Pn**	**05 47 02.1**	**-0.3**
PAVA				S	**Sn**	**05 47 24.6**	**-0.1**
COEG	**Centro de Oper**	**1.65**	**108**	P	**Pn**	**05 47 02.7**	**-0.6**
COEG				S	**Sn**	**05 47 26.4**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.77**	**104**	S	**Sn**	**05 47 29.1**	**+0.5**
TECO	**Alcaldia de Te**	**1.77**	**110**	P	**Pn**	**05 47 04.8**	**+0.2**
TECO				S	**Sn**	**05 47 29.2**	**+0.6**
SARH	**Santa Rosa de**	**1.79**	**69**	P	**Pn**	**05 47 04.7**	**-0.2**
SARH				S	**Sn**	**05 47 29.6**	**+0.7**
SARH	**Santa Rosa de**	**1.79**	**69**	*i* P	**Pn**	**05 47 05.6**	**+0.7**
PQSS	**Presa 15 de Se**	**1.95**	**105**	P	**Pn**	**05 47 06.5**	**-0.2**
PQSS				S	**Sn**	**05 47 32.7**	**+0.4**
PACA	**Pacayal**	**2.21**	**107**	P	**Pn**	**05 47 10.0**	**-0.1**
PACA				S	**Sn**	**05 47 39.1**	**+0.8**
RANC	**El Ranchito**	**2.25**	**108**	P	**Pn**	**05 47 10.6**	**-0.1**
RANC				S	**Sn**	**05 47 39.7**	**+0.4**
CNCH	**Conchagua**	**2.72**	**108**	S	**Sn**	**05 47 50.1**	**+0.2**

CATAC ***14*** *05:49:35.1±0.5, 9°N±2″×8°5W±°, h7km±2km, M3.2/13, MLv3.2/13, Error ellipse: s-maj=5.7km s-min=2.7km az=41.0, confirmed*

UCR ***14*** *05:49:36.0±0.9, 9°.25N×84°.72W, h15km±9km, MW4.0, Presumed earthquake*

ISC 14 05:49:35.3±1.4, 9°.23N±0°.04×84°.70W±0°.03, h10km±10km, n92, σ0s63/106, 4C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BITO	**Garabito Jaco**	**0.40**	**12**	*eP*	**Pg**	**05 49 43.4**	**+0.3**
QUEP	**Quepos**	**0.57**	**69**	P	**Pg**	**05 49 46.3**	**0.0**
QUEP				S	**Sg**	**05 49 54.7**	**+0.9**
QUEP	**Quepos**	**0.57**	**69**	*eP*	**Pg**	**05 49 46.3**	**0.0**
CAO2	**Cobano, Puntar**	**0.61**	**319**	*eP*	**Pg**	**05 49 47.0**	**-0.1**
PAQE	**Paquera**	**0.63**	**339**	*eP*	**Pg**	**05 49 47.3**	**-0.2**
PICV	**PH. Pirrs**	**0.64**	**52**	*eP*	**Pg**	**05 49 48.2**	**+0.6**
PURI	**Puriscal**	**0.72**	**32**	*eP*	**Pg**	**05 49 49.2**	**-0.1**
TRB2	**Turrubares**	**0.72**	**20**	P	**Pg**	**05 49 49.0**	**-0.3**
TRB2				S	**Sb**	**05 49 59.6**	**-0.5**
ARZA	**Esparza**	**0.76**	**2**	*eP*	**Pg**	**05 49 49.3**	**-0.6**
ACOS	**Acosta**	**0.77**	**43**	*eP*	**Pg**	**05 49 50.7**	**+0.4**
ABE2	**San Pablo**	**0.80**	**53**	*eP*	**Pb**	**05 49 51.3**	**-0.1**
PITB	**Pirrs, San**	**0.80**	**57**	*eP*	**Pg**	**05 49 51.0**	**+0.3**
RAZU	**San Marcos de**	**0.80**	**57**	*eP*	**Pg**	**05 49 50.9**	**+0.2**
ATEO	**Atenas**	**0.81**	**23**	*eP*	**Pg**	**05 49 50.4**	**-0.5**
PIEC	**Cerro El Cedra**	**0.83**	**62**	*iP*	**Pg**	**05 49 51.7**	**+0.3**
PALD	**Palmares**	**0.86**	**18**	*eP*	**Pg**	**05 49 51.6**	**-0.4**
SANTA	**Santa Ana**	**0.87**	**36**	*eP*	**Pg**	**05 49 51.3**	**-0.7**
SRA1	**San Ramn**	**0.88**	**14**	*eP*	**Pg**	**05 49 51.9**	**-0.3**
RAMO	**San Ramon**	**0.88**	**15**	*eP*	**Pg**	**05 49 52.7**	**+0.4**
BELE	**Belen**	**0.90**	**34**	*eP*	**Pg**	**05 49 51.8**	**-0.8**
TCS1	**Tacares**	**0.90**	**26**	P	**Pg**	**05 49 52.6**	**0.0**
AMPA	**Desamparados**	**0.92**	**44**	*eP*	**Pg**	**05 49 51.7**	**-1.3**
NARAN	**Naranjo de Ala**	**0.92**	**20**	*eP*	**Pb**	**05 49 53.7**	**+0.2**
GREC	**Grecia**	**0.93**	**25**	⇑*iP*	**Pb**	**05 49 53.7**	**+0.1**
LUJA	**Lujan**	**0.93**	**42**	*eP*	**Pg**	**05 49 52.8**	**-0.4**
MEXI	**Barrio Mexico**	**0.93**	**41**	*eP*	**Pg**	**05 49 53.3**	**0.0**
NYURE	**Nandayure**	**0.94**	**325**	*eP*	**Pg**	**05 49 53.0**	**-0.4**
HEME	**Heredia, Merce**	**0.94**	**36**	⇑*iP*	**Pg**	**05 49 53.4**	**-0.1**
SJS	**Escuela Geolog**	**0.95**	**42**	*eP*	**Pg**	**05 49 53.6**	**-0.1**
SJS3	**Mercedes San J**	**0.95**	**42**	*eP*	**Pg**	**05 49 53.3**	**-0.3**
POAS	**San Pedro de P**	**0.96**	**28**	*eP*	**Pg**	**05 49 54.0**	**+0.3**
DOMI	**Santo Domingo**	**0.96**	**39**	*eP*	**Pg**	**05 49 53.9**	**+0.1**
HDC	**Heredia**	**0.96**	**37**	⇑*iP*	**Pg**	**05 49 54.0**	**+0.2**
TRIO	**Tres Rios**	**0.97**	**46**	*eP*	**Pg**	**05 49 53.4**	**-0.5**
ZARE	**Zarcero**	**1.00**	**18**	*eP*	**Pg**	**05 49 54.5**	**0.0**
REPA	**Paraso**	**1.01**	**54**	*eP*	**Pg**	**05 49 54.5**	**-0.3**
VPS8	**V Poas**	**1.05**	**26**	*eP*	**Pg**	**05 49 55.8**	**+0.3**
CMARA	**Lajas Hojancha**	**1.06**	**318**	P	**Pg**	**05 49 55.1**	**-0.6**
CMARA				S	**Sb**	**05 50 10.3**	**+0.5**
VBV1	**V. Barva**	**1.06**	**34**	*eP*	**Pg**	**05 49 55.4**	**-0.3**
VPL1	**V. Platanar**	**1.07**	**18**	*eP*	**Pg**	**05 49 55.3**	**-0.7**
JUNT	**Juntas**	**1.08**	**346**	*eP*	**Pb**	**05 49 54.7**	**-1.3**
JTS	**Las Juntas de**	**1.08**	**347**	P	**Pb**	**05 49 54.8**	**-1.4**
JTS				S	**Sb**	**05 50 10.5**	**0.0**
JTS	**Las Juntas de**	**1.08**	**347**	*eP*	**Pb**	**05 49 54.7**	**-1.5**
EDPE	**Pejibaye, P**	**1.12**	**93**	*eP*	**Pb**	**05 49 55.7**	**-1.1**
VICA	**Volcano Irazu**	**1.13**	**48**	*eP*	**Pg**	**05 49 56.6**	**-0.5**
VINA	**Juan Vinas**	**1.15**	**55**	*eP*	**Pb**	**05 49 57.0**	**-0.5**
VPL3	**V. Platanar**	**1.18**	**19**	*eP*	**Pb**	**05 49 56.8**	**-1.0**
CASO	**Castillo**	**1.20**	**358**	*eP*	**Pb**	**05 49 57.9**	**-0.3**
CVTO	**Turrialba Volc**	**1.20**	**50**	*eP*	**Pb**	**05 49 58.0**	**-0.4**
ARTO	**Ro Cuarto**	**1.21**	**23**	*eP*	**Pn**	**05 49 58.1**	**-0.2**
TURIB	**Turrialba**	**1.21**	**56**	*eP*	**Pn**	**05 49 57.5**	**-0.8**
VTR0	**Volcan Turrial**	**1.22**	**50**	*eP*	**Pb**	**05 49 58.6**	**-0.1**
CVTR	**Volcan Turrial**	**1.22**	**50**	*eP*	**Pb**	**05 49 58.0**	**-0.7**
VTCV	**VTCV, Calle Va**	**1.22**	**52**	*eP*	**Pn**	**05 49 58.0**	**-0.6**
VERB	**Verbena**	**1.22**	**54**	*eP*	**Pn**	**05 49 57.8**	**-0.8**
ARE1	**Arenal 1**	**1.23**	**359**	⇑*iP*	**Pn**	**05 49 58.2**	**-0.3**
VARE2	**V. Arenal**	**1.23**	**359**	*eP*	**Pn**	**05 49 57.8**	**-0.8**
VACR	**Volcan Arenal**	**1.24**	**1**	*eP*	**Pn**	**05 49 58.0**	**-0.7**
ABRB	**Las Abras (San**	**1.24**	**51**	⇑*iP*	**Pn**	**05 49 58.8**	**-0.1**
JUD3	**Juan Diaz 3**	**1.25**	**319**	*eP*	**Pn**	**05 49 58.1**	**-0.7**
CEDE	**Laguna Cedeo**	**1.25**	**360**	*eP*	**Pn**	**05 49 59.0**	**0.0**
CNAS	**Canas**	**1.25**	**342**	*eP*	**Pn**	**05 49 58.7**	**-0.2**
TILA	**Tilaran**	**1.26**	**348**	*eP*	**Pn**	**05 49 58.6**	**-0.5**
TABAC	**Tabacon**	**1.26**	**357**	*eP*	**Pn**	**05 49 59.0**	**-0.2**
RESJ	**San Isidro (Tu**	**1.31**	**53**	*eP*	**Pn**	**05 49 59.8**	**0.0**
PILE	**Cuapiles**	**1.37**	**42**	*eP*	**Pn**	**05 49 58.8**	**-0.2**
FIMO	**Fila Mora**	**1.35**	**100**	*eP*	**Pb**	**05 50 00.8**	**0.0**
TIMP	**Tierras Morena**	**1.38**	**347**	*eP*	**Pn**	**05 49 59.7**	**-1.1**
QUEB	**Quebradon, Cot**	**1.40**	**352**	*eP*	**Pn**	**05 50 00.6**	**-0.4**
DELF	**Filadelfia**	**1.47**	**325**	*eP*	**Pb**	**05 50 03.3**	**+0.5**
TENO	**El Achiote**	**1.49**	**350**	*eP*	**Pn**	**05 50 01.1**	**-1.2**
CUI	**Cuipilapa**	**1.49**	**342**	*eP*	**Pn**	**05 50 01.5**	**-0.7**
COVE	**Coope Vega, Sa**	**1.51**	**11**	P	**Pn**	**05 50 00.8**	**-1.6**
COVE				S	**Sb**	**05 50 22.7**	**0.0**
PIRO	**Carate, Puerto**	**1.58**	**121**	P	**Pn**	**05 50 02.8**	**-0.6**
PIRO				S	**Sn**	**05 50 24.1**	**+0.2**
MESS	**Mesas**	**1.58**	**342**	*eP*	**Pn**	**05 50 03.3**	**-0.2**
ALIBA	**Liberia Airpor**	**1.59**	**329**	*eP*	**Pb**	**05 50 05.2**	**+0.4**
CLARA	**Aguas Claras**	**1.61**	**343**	*eP*	**Pn**	**05 50 04.0**	**0.0**
TRT2	**Tortugero**	**1.63**	**36**	P	**Pn**	**05 50 04.6**	**+0.5**
TRT2				S	**Sn**	**05 50 25.2**	**0.0**
TRT2	**Tortugero**	**1.63**	**36**	*eP*	**Pn**	**05 50 04.2**	**+0.2**
UPAL	**Upala**	**1.69**	**350**	P	**Pn**	**05 50 05.2**	**+0.3**
UPAL				S	**Sn**	**05 50 26.0**	**+0.3**
UPAL	**Upala**	**1.69**	**350**	*eP*	**Pn**	**05 50 05.8**	**-0.7**
LAPC	**Finca la Perla**	**1.69**	**335**	*eP*	**Pn**	**05 50 04.1**	**-0.9**
LCHIL	**Los Chiles**	**1.80**	**360**	*eP*	**Pn**	**05 50 07.2**	**+0.8**
CDITO	**Canoas**	**1.92**	**110**	P	**Pn**	**05 50 08.0**	**-0.1**
CDITO				S	**Sn**	**05 50 32.3**	**0.0**
BRU2	**Volcan**	**2.03**	**102**	P	**Pn**	**05 50 10.2**	**+0.4**
BRU2				S	**Sn**	**05 50 35.2**	**-0.2**
CARN	**Rivas**	**2.11**	**338**	P	**Pn**	**05 50 11.3**	**+0.6**
CARN				S	**Sb**	**05 50 38.7**	**-1.2**
PBNVO	**Pueblo Nuevo,**	**2.50**	**98**	*eP*	**Pn**	**05 50 16.0**	**-0.1**
RBALA	**Bur**	**2.54**	**98**	*eP*	**Pn**	**05 50 17.4**	**+0.7**
ACON	**Acoyapa**	**2.76**	**350**	P	**Pn**	**05 50 20.2**	**+0.5**
ACON				S	**Sn**	**05 50 54.5**	**+1.4**
NADN	**Granada**	**2.83**	**333**	P	**Pn**	**05 50 21.2**	**+0.7**
NADN				S	**Sn**	**05 50 56.2**	**+1.4**
MAS3	**Al N del Volca**	**3.13**	**333**	P	**Pn**	**05 50 25.5**	**+0.6**
UNAN	**Cigeo UNAN**	**3.25**	**332**	P	**Pn**	**05 50 27.1**	**+0.6**
UNAN				S	**Sn**	**05 51 06.7**	**+1.4**

IDC ***14*** *05:51:37.3±0.9, 49°.80S×122°.52E, h0km, mb4.1/7, mbtmp4.1/7, MS3.9/15, Error ellipse: s-maj=48.4km s-min=18.9km az=106.0*

NEIC ***14*** *05:51:39.0±1.4, 49°.88S±0°.10×122°.4E±0°.2, h10km±1km, mb4.5/20, Error ellipse: s-maj=19.7km s-min=15.3km az=305.0*

ISC 14 05:51:39.2±0.5, 49°.76S±0°.07×122°.4E±0°.1, h10km, n53, σ1s72/42, mb4.5/14, MS4.0/14, 3C-2D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.06**	**335**	T	T	06 11 59.0	
	baz=160,slow=74,SNR=43						
H01W2	**Cape Leeuwin H**	**16.06**	**335**	T	T	06 12 02.8	
	baz=160,slow=74,SNR=47						
H01W3	**Cape Leeuwin H**	**16.07**	**335**	T	T	06 12 05.3	
	baz=160,slow=74,SNR=48						
NWAO	**Narrogin (SRO)**	**17.26**	**345**	LR	LR	06 00 48.4	
	comp=Z,439nm,19.1s,baz=191,slow=32						
CASY	**Casey**	**17.67**	**196**		**Pn**	**05 55 43.7**	**-1.3**
CASY				IAmb	IAmb	05 55 58.6	
	comp=Z,32nm,1.2s						
TAU	**Tasmania Unive**	**18.44**	**78**	P	**P**	**05 55 53.0**	**-1.7**
FORT	**Forrest**	**19.43**	**15**	P	**P**	**05 56 05.6**	**+0.1**
FORT				IAmb	IAmb	05 56 30.2	
	comp=Z,23nm,1.3s						
STKA	**Stephens Creek**	**22.89**	**46**	P	**P**	**05 56 42.9**	**0.0**
	comp=Z,2.4nm,0.8s,baz=222,slow=9.8,SNR=3.6						
STKA				LR	LR	06 04 29.7	
	comp=Z,147nm,18.6s,baz=207,slow=34						
	comp=Z,2.4nm,0.8s						
INKA	**Innaminka**	**26.08**	**39**		**P**	**05 57 13.0**	**+0.2**
ASAR	**Alice Springs**	**27.55**	**23**	P	**P**	**05 57 25.9**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=189,slow=8.3,SNR=8.1						
ASAR				LR	LR	06 07 25.9	
	comp=Z,421nm,20.0s,baz=189,slow=34						
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**27.55**	**23**	P	**P**	**05 57 26.6**	**+0.5**
GIRL	**Giralia**	**27.83**	**344**	P	**P**	**05 57 27.7**	**-0.8**
WRA	**Warramunga Arr**	**31.23**	**22**	P	**P**	**05 57 57.2**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=197,slow=11,SNR=4.0						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**31.23**	**22**	P	**P**	**05 58 00.4**	**+1.6**
WR8	**Warramunga Arr**	**31.26**	**22**	P	**P**	**05 57 59.6**	**+0.6**
WR8				IAmb	IAmb	05 58 07.6	
	comp=Z,11nm,1.3s						
VNDA	**Vanda**	**31.57**	**165**	LR	LR	06 09 42.8	
	comp=Z,297nm,19.9s,baz=321,slow=34						
VNDA	**Vanda**	**31.57**	**165**	P	**P**	**05 58 00.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**31.69**	**6**	P	**P**	**05 58 03.1**	**+0.3**
	comp=Z,6.2nm,1.1s,baz=175,slow=14,SNR=3.7						
FITZ				LR	LR	06 09 41.7	
	comp=Z,341nm,19.9s,baz=178,slow=34						
	comp=Z,6.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**31.69**	**6**	P	**P**	**05 58 02.2**	**-0.6**
FITZ				IAmb	IAmb	05 58 11.2	
	comp=Z,7.2nm,1.5s						
MAW	**Mawson**	**34.01**	**216**	LR	LR	06 09 56.1	
	comp=Z,79nm,18.4s,baz=71,slow=32						
MAW	**Mawson**	**34.01**	**216**	P	**P**	**05 58 21.5**	**-1.1**
CTA	**Charters Tower**	**35.16**	**41**	LR	LR	06 12 50.2	
	comp=Z,154nm,18.7s,baz=228,slow=36						
BATI	**Baumata**	**39.44**	**2**	LR		06 15 57.0	
	comp=Z,848nm,18.2s,baz=218,slow=37						
QSPA	**South Pole Qui**	**40.36**	**180**	P	**P**	**05 59 16.0**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=341,slow=4.8,SNR=4.9						
QSPA				LR	LR	06 15 11.8	
	comp=Z,272nm,19.6s,baz=346,slow=35						
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	**40.36**	**180**	P	**P**	**05 59 15.6**	**-1.1**
QSPA				IAmb	IAmb	05 59 42.5	
	comp=Z,12nm,1.2s						
BBJI	**Bungbulang**	**43.95**	**339**	P	**P**	**05 59 46.4**	**+0.1**
JAY	**Jayapura**	**49.58**	**24**	LR	LR	06 21 01.3	
	comp=Z,151nm,21.4s,baz=218,slow=36						
TOLI2	**Tolitoli**	**50.70**	**358**	P	**P**	**06 00 38.7**	**-0.1**
TOLI2				IAmb	IAmb	06 00 40.3	
	comp=Z,22nm,1.4s						
KRVT	**Keravat (AS076**	**51.74**	**39**	LR	LR	06 22 19.1	
	comp=Z,13nm,19.2s,baz=295,slow=36						
BELA	**Belgrano 2**	**51.85**	**186**	P	**P**	**06 00 45.5**	**-1.3**
BELA				IAmb	IAmb	06 00 59.0	
	comp=Z,9.0nm,1.0s						
SNAA	**Sanae**	**52.87**	**199**	⇑P	**P**	**06 00 55.1**	**+0.5**
	comp=Z,103nm,1.0s						
SNAA				⇓pP	**sP**	**06 01 00.5**	**+3.2**
	comp=Z,71nm,0.7s						
SNAA				sP	**pwP**	**06 01 07.0**	**+5.5**
	comp=Z,130nm,1.2s						
SNAA	**Sanae**	**52.87**	**199**	P	**P**	**06 00 54.0**	**-0.5**
	comp=Z,5.5nm,1.0s,baz=131,slow=8.7,SNR=7.7						
	comp=Z,5.5nm,1.0s						
SNAA	**Sanae**	**52.87**	**199**	P	**P**	**06 00 54.4**	**-0.2**
SNAA				IAmb	IAmb	06 01 07.6	
	comp=Z,20nm,1.5s						
VNA2	**Neumayer--

PB16				IAmb	IAmb	06 02 49.7	
	comp=Z,7.0nm,1.5s						
H10N1	**ASCENSION HYDR**	**49.12**	**18**	T	T	06 56 36.8	
	baz=189						
H10N3	**ASCENSION HYDR**	**49.12**	**18**	T	T	06 56 56.2	
	baz=189						
H10N2	**ASCENSION HYDR**	**49.14**	**18**	T	T	06 56 54.4	
	baz=189						
VILB	**Vilhena**	**49.68**	**317**	P	**P**	**06 02 49.9**	**+0.6**
VILB				IAmb	IAmb	06 02 53.9	
	comp=Z,5.8nm,1.2s						
LPAZ	**La Paz**	**50.05**	**306**	P	**P**	**06 02 53.5**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=146,slow=3.6,SNR=9.9						
	comp=Z,0.6nm,0.4s						
LPAZ	**La Paz**	**50.05**	**306**	P	**P**	**06 02 53.5**	**+0.7**
LPAZ				PcP	**PcP**	**06 04 10.8**	**-0.4**
BOAV	**Boa Vista**	**64.00**	**323**	P	**P**	**06 04 30.1**	**-0.2**
DBIC	**Dimbokro**	**65.22**	**25**	P	**P**	**06 04 38.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.13**	**30**	P	**P**	**06 05 28.0**	**+0.9**
	comp=Z,3.7nm,0.5s,baz=202,slow=6.7,SNR=29						
	comp=Z,3.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.13**	**30**	P	**P**	**06 05 26.0**	**-1.0**
TORD				IAmb	IAmb	06 05 28.6	
	comp=Z,3.1nm,0.6s						
SDV	**Santo Domingo**	**73.70**	**316**	P	**P**	**06 05 29.8**	**-0.9**
SABA	**Saba**	**79.16**	**326**	P	**P**	**06 06 02.0**	**+0.8**
FINES	**FINESS Array B**	**124.45**	**28**	PKP	**PKPdf**	**06 12 52.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=215,slow=2.0,SNR=4.3						
FINES	**FINESS Array B**	**124.45**	**28**	PKPdf	**PKPdf**	**06 12 52.9**	**-0.5**
N30M	**Aishikik Lake**	**144.54**	**309**	PKPdf	PKPbc	06 13 30.9	+1.0
M30M	**Minto, Yukon**	**144.85**	**310**	PKPbc	PKPbc	06 13 31.6	+0.8
YKU2	**Yakutat**	**144.91**	**305**	PKPbc	PKPbc	06 13 30.9	0.0
G31M	**Satah River**	**145.37**	**318**	PKPdf	**PKPdf**	**06 13 32.1**	**+0.1**
INK	**Inuvik**	**145.52**	**321**	PKPdf	**PKPdf**	**06 13 32.8**	**+0.6**
M29M	**Somme Creek**	**145.52**	**310**	PKPdf	**PKPdf**	**06 13 33.0**	**+0.4**
O28M	**Mount Upton**	**145.65**	**306**	PKPdf	**PKPdf**	**06 13 33.0**	**-0.1**
G30M	**tAoh Zraii Nji**	**146.12**	**318**	PKPdf	**PKPdf**	**06 13 34.5**	**+1.1**
EPYK	**Eagle Plains**	**146.12**	**317**	PKPdf	**PKPdf**	**06 13 34.8**	**+1.4**
JMZ	**Minamidaito 2**	**146.25**	**144**	PKPdf	**PKPdf**	**06 13 33.0**	**-1.9**
DAWY	**Dawson**	**146.48**	**312**	PKPdf	**PKPdf**	**06 13 35.4**	**+1.3**
E29M	**Blow River**	**147.10**	**320**	PKPdf	**PKPdf**	**06 13 36.8**	**+1.8**
ILAR	**Eielson Array**	**149.80**	**312**	PKPbc	**PKPbc**	**06 13 43.5**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=127,slow=2.7,SNR=20						
ILAR	**Eielson Array**	**149.80**	**312**		**PKPbc**	**06 13 44.4**	**0.0**
SONM	**Songino Array**	**151.05**	**87**	PKPbc	**PKPbc**	**06 13 46.9**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=225,slow=2.2,SNR=8.4						

REN ***14*** *05:59:28.6±1.2, 38.°047N±0.°005×118.°75W±0.°01, h10km±6km, Error ellipse: s-maj=1.6km s-min=0.9km az=92.0*

NCEDC ***14*** *05:59:28.8±1.2, 38.°045N±0.°010×118.°739W±0.°006, h8km±6km, Error ellipse: s-maj=1.4km s-min=0.7km az=192.0*

NEIC 14 05:59:28.8±1.1, 38.°04N±0.°01×118.°74W±0.°01, h10km±2km, mb4.0/12, ML3.5/152, ML3.8/15(REN), Mwr3.6/3(NCEDC), Error ellipse: s-maj=3.0km s-min=1.9km az=256.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.28**	**42**		Pg	05 59 34.6	+0.2
MLHM	**Little Hot Cre**	**0.37**	**189**		Pg	05 59 36.6	+0.5
MEMM	**East Mammoth H**	**0.41**	**203**		Pg	05 59 37.2	+0.3
MCSM	**Casa Diablo Ho**	**0.41**	**199**		Pg	05 59 37.1	+0.2
MDCM	**Deadman Creek**	**0.41**	**216**		Pg	05 59 36.9	0.0
MRCM	**Red Rock Canyo**	**0.41**	**153**		Pg	05 59 37.0	+0.1
MCBM	**Casa Benchmark**	**0.41**	**197**		Pg	05 59 37.3	+0.2
MCBM					Sg	05 59 42.8	+0.3
MLAC	**Mammoth, Mammo**	**0.42**	**190**		Pg	05 59 37.3	+0.2
MMLB	**Mammoth Lakes**	**0.42**	**206**		Pg	05 59 37.5	+0.3
MGPM	**Gravel Pit**	**0.43**	**197**		Pg	05 59 37.7	+0.4
MDYM	**Dry Creek**	**0.44**	**209**		Pg	05 59 37.8	+0.3
MDYM					Sb	05 59 44.4	-1.1
MLCM	**Laurel Creek C**	**0.45**	**198**		Pg	05 59 37.9	+0.2
MCVM	**Convict Lake**	**0.46**	**189**		Pg	05 59 37.9	+0.2
MLIM	**Lincoln Peak**	**0.46**	**209**		Pg	05 59 38.0	+0.2
MLIM	**Lincoln Peak**	**0.46**	**209**		Pg	05 59 38.3	+0.4
MINS	**Minaret Summit**	**0.46**	**213**		Pg	05 59 38.0	+0.1
MMPM	**Mammoth Pass**	**0.49**	**208**		Pg	05 59 38.5	+0.1
MMPM	**Mammoth Pass**	**0.49**	**208**		Pg	05 59 38.4	+0.1
MMPM					Sg	05 59 45.2	+0.4
MDPB	**Devils Postpil**	**0.49**	**213**		Pg	05 59 38.4	0.0
MDPB					Sg	05 59 45.1	+0.3
MDPB				IAML		05 59 45.5	
	comp=E,5μm,0.6s						
MDPB				IAML		05 59 45.8	
	comp=N,4μm,0.4s						
NV08	**Mina Array Sit**	**0.49**	**42**		Pg	05 59 38.5	0.0
NV08					Sg	05 59 45.6	+0.6
NV09	**Mina Array Sit**	**0.51**	**39**		Pg	05 59 38.8	0.0
NV09					Sg	05 59 46.1	+0.6
NV07	**Mina Array Sit**	**0.51**	**44**		Pg	05 59 38.8	0.0
NV07					Sg	05 59 45.9	+0.3
NV04	**Mina Array Sit**	**0.51**	**42**		Pg	05 59 39.0	+0.1
NV04					Sg	05 59 46.7	+1.0
NV01	**Mina Array Sit**	**0.52**	**42**		Pg	05 59 39.0	0.0
NV01					Sg	05 59 46.4	+0.5
NVBR	**Mina Array Bea**	**0.52**	**42**		Pg	05 59 39.0	0.0
NV03	**Mina Array Sit**	**0.52**	**42**		Pg	05 59 39.1	0.0
NV03					Sg	05 59 46.5	+0.5
NV02	**Mina Array Sit**	**0.53**	**41**		Pg	05 59 39.1	0.0
NV02					Sg	05 59 46.6	+0.5
NV06	**Mina Array Sit**	**0.53**	**44**		Pg	05 59 39.2	+0.1
NV06					Sg	05 59 46.7	+0.5
NV05	**Mina Array Sit**	**0.54**	**41**		Pg	05 59 39.3	0.0
NV05					Sg	05 59 47.1	+0.6
MCDM	**Chidago Canyon**	**0.55**	**154**		Pg	05 59 39.7	+0.3
COLR	**Columbus**	**0.55**	**79**		Pg	05 59 39.7	+0.1
COLR					Sg	05 59 47.8	+0.8
NV11	**Mina Array Sit**	**0.60**	**50**		Pg	05 59 40.6	0.0
NV11					Sg	05 59 48.9	+0.3
NV11				IAML		05 59 49.3	
	comp=N,2μm,0.5s						
NV11				IAML		05 59 50.6	
	comp=E,2μm,0.5s						
WAKR	**Walker**	**0.72**	**310**		Pg	05 59 42.8	+0.1
WAKR					Sg	05 59 52.6	+0.5
WAKR				IAML		05 59 53.3	
	comp=N,2μm,0.6s						
WAKR				IAML		05 59 54.5	
	comp=E,2μm,0.3s						
KCC	**Kaiser Creek**	**0.85**	**213**		Pg	05 59 44.9	-0.3
KCC					Sg	05 59 56.3	0.0
DSP	**Deep Springs**	**0.91**	**137**		Pg	05 59 46.1	-0.2
DSP					Sb	05 59 58.5	-0.3
EBP	**Ebbets Pass**	**1.00**	**303**		Pg	05 59 47.8	-0.2
MMIM	**Miami Mountain**	**1.01**	**232**		Pg	05 59 47.8	-0.4
TIN	**Tinemaha, Big**	**1.07**	**157**		Pg	05 59 49.2	-0.1
TIN				IAML		06 00 08.4	
	comp=E,2μm,0.9s						
TIN				IAML		06 00 09.3	
	comp=N,2μm,0.6s						
KVN	**Kaiserville**	**1.13**	**26**		Pg	05 59 49.8	-0.7
KVN					Sg	06 00 05.2	0.0
MBUM	**Mount Bullion**	**1.16**	**246**		Pb	05 59 50.4	-0.6
BUCR	**Buckhorn Ranch**	**1.17**	**252**		Pb	05 59 50.5	-0.8
LCH	**Last Change Ra**	**1.19**	**132**		Pg	05 59 52.0	+0.4
TPH	**Tonopah**	**1.20**	**88**		Pb	05 59 51.3	-0.4
TPH				IAML		06 00 12.3	
	comp=N,1μm,0.6s						
TPH				IAML		06 00 14.3	
	comp=E,1μm,0.7s						
PNTR	**Pine Nut**	**1.24**	**328**		Pn	05 59 52.2	-0.3
PNTR					Sb	06 00 08.6	-0.1
CMB	**Columbia Colle**	**1.30**	**270**		Pn	05 59 52.5	-0.5
CMB				IAML		06 00 16.9	
	comp=N,529nm,0.6s						
FRI	**Friant**	**1.30**	**217**		Pn	05 59 52.9	0.0
MHDM	**Hidden Dam**	**1.30**	**225**		Pn	05 59 53.1	+0.1
GMN	**Gold Mountain**	**1.39**	**122**	Pn	Pb	05 59 55.0	0.0
GMN				IAML		06 00 17.5	
	comp=N,1μm,0.6s						
GMN				IAML		06 00 21.4	
	comp=E,831nm,0.6s						
LEGD	**La Grand CA**	**1.39**	**234**		Pb	05 59 54.6	-0.2
Q09A	**Carvers**	**1.46**	**57**	Pn	Pb	05 59 56.1	-0.1
KARE	**Kearney REC, C**	**1.56**	**203**		Pb	05 59 57.7	-0.1
MPK	**Martis Peak**	**1.61**	**322**	Pn	Pn	05 59 57.8	+0.2
MPK				IAML		06 00 23.4	
	comp=E,1μm,1.1s						
WELL	**Weller Preserv**	**1.61**	**285**		Pb	05 59 58.4	-0.3
WELL				IAML		06 00 21.1	
	comp=N,860nm,0.3s						
WELL				IAML		06 00 23.6	
	comp=E,851nm,0.3s						
CGO	**Cerro Gordo**	**1.67**	**153**		Pb	05 59 59.3	-0.5
PAHR	**Pah Rah Range**	**1.74**	**343**	Pn	Pn	05 59 59.2	0.0
PAHR				IAML		06 00 26.5	
	comp=E,363nm,0.4s						
PAHR				IAML		06 00 27.0	
	comp=N,488nm,0.8s						
VOG	**Valley Oaks Go**	**1.79**	**197**		Pb	06 00 01.9	+0.2
DONR	**Donner Summit**	**1.80**	**317**		Pb	06 00 02.4	+0.4
PEAR	**Peavine Mounta**	**1.83**	**329**		Pb	06 00 02.2	-0.4
SPG2	**Springville 2**	**1.84**	**181**		Pb	06 00 02.5	-0.1
YUBA	**Cisco Grove, Y**	**1.91**	**313**		Pb	06 00 04.0	+0.1
AFDM	**Forest Hills D**	**1.97**	**298**	Pn	Pb	06 00 03.5	-1.2
AFDM				IAML		06 00 33.4	
	comp=E,499nm,0.7s						
MFS	**McCloud Flat S**	**2.05**	**159**		Pn	06 00 04.8	+1.4
WCT	**Wildcat Mounta**	**2.10**	**126**		Pn	06 00 04.9	+0.8
WCT				IAML		06 00 38.0	
	comp=E,626nm,0.5s						
MTOS	**Mt Oso, Westle**	**2.12**	**256**		Pb	06 00 05.9	-1.3
BMSM	**Mercy Hot Spri**	**2.14**	**230**		Pb	06 00 06.9	-0.8
FURC	**Furnace Creek,**	**2.17**	**136**		Pn	06 00 05.5	+0.6
SLD	**San Luis Dam**	**2.19**	**245**		Pb	06 00 07.8	-0.7
VES	**Vestal, Richgr**	**2.21**	**187**		Pn	06 00 07.1	+1.5
VES				IAML		06 00 42.5	
	comp=N,325nm,0.6s						
VES				IAML		06 00 45.7	
	comp=E,424nm,0.8s						
BEKR	**Beckworth**	**2.22**	**326**		Pn	06 00 06.9	+1.1
BEKR				IAML		06 00 41.1	
	comp=N,176nm,0.7s						
BEKR				IAML		06 00 41.2	
	comp=E,294nm,0.6s						
CSTL	**Corral Hollow**	**2.22**	**260**		Pb	06 00 07.7	-1.2
MPMC	**Manual Prospec**	**2.22**	**153**		Pn	06 00 06.6	+0.8
HPCM	**Pacheco Lake**	**2.24**	**245**		Pb	06 00 08.1	-1.3
CMMM	**Mount Mocho**	**2.26**	**256**		Pn	06 00 08.0	+1.7
TPNV	**Topopah Spring**	**2.26**	**118**		Pn	06 00 07.2	+0.8
TPNV				IAML		06 00 47.9	
	comp=E,382nm,0.6s						
WNMM	**Nine Mile Cany**	**2.29**	**163**		Pb	06 00 10.7	+0.5
CBSNC	**Byron Hot Spri**	**2.30**	**265**		Pb	06 00 10.6	+0.2
WASM	**Alta Sierra Ca**	**2.30**	**176**		Pb	06 00 10.9	+0.3
ARN	**Arnold Ranch**	**2.32**	**254**		Pn	06 00 08.9	+1.8
BBGB	**Big Mountain B**	**2.34**	**232**		Pn	06 00 08.6	+1.2
LTR	**Lone Tree Road**	**2.34**	**241**		Pb	06 00 10.5	-0.7
GHS	**Gilroy Hot Spr**	**2.35**	**247**		Pb	06 00 10.3	-0.9
HFEM	**San Felipe**	**2.36**	**244**		Pb	06 00 11.1	-0.3
SDH	**Striped Hills**	**2.37**	**125**		Pn	06 00 09.0	+1.2
AVNL	**Avenal, CA USA**	**2.37**	**212**		Pb	06 00 10.0	-1.6
CMLM	**Mount Lewis**	**2.37**	**257**		Pb	06 00 10.3	-1.3
WORM	**Onyx Ranch**	**2.38**	**170**		Pb	06 00 11.2	-0.5
ISA	**Isabella, Lake**	**2.38**	**175**	Pn	Pb	06 00 10.2	-1.6
ISA				IAML		06 00 44.6	
	comp=N,193nm,0.3s						
ISA				IAML		06 00 46.0	
	comp=E,196nm,0.3s						
CLC	**China Lake**	**2.40**	**157**		Pn	06 00 09.6	+1.3
MHC	**Mount Hamilton**	**2.40**	**254**		Pn	06 00 10.2	+1.9
MHC				IAML		06 00 49.9	
	comp=E,326nm,0.7s						
S11A	**Rachel**	**2.40**	**99**		Pn	06 00 08.8	+0.5
CPY	**CP-1**	**2.41**	**117**		Pn	06 00 09.3	+0.9
WENL	**Wente Vineyard**	**2.42**	**261**		Pb	06 00 11.6	-0.9
CADM	**Anderson Res.**	**2.45**	**250**		Pb	06 00 12.0	-0.9
CCOB	**Coe Ranch Numb**	**2.45**	**252**		Pb	06 00 12.3	-0.7
PMPB	**Monarch Peak**	**2.46**	**223**	Pn	Pn	06 00 09.6	+0.7
GWY	**Greenwater Val**	**2.48**	**138**		Pn	06 00 10.1	+0.7
GWY				IAML		06 00 59.2	
	comp=E,185nm,0.9s						
GWY				IAML		06 01 02.9	
	comp=N,147nm,1.2s						
SAO	**San Andreas Ge**	**2.50**	**240**	Pn	Pn	06 00 10.8	+1.2
CSR	**Chase Ranch**	**2.50**	**245**		Pb	06 00 12.1	-1.8
OHCM	**Honcut**	**2.50**	**302**		Pn	06 00 10.6	+1.0
TRC	**Taylor Ranch**	**2.51**	**214**		Pn	06 00 11.7	+2.0
RUSS	**Russell Ranch**	**2.51**	**283**		Pb	06 00 14.0	+0.1
HSFM	**Saint Francis**	**2.51**	**242**		Pb	06 00 13.1	-1.0
AMDNV	**Amargosa**	**2.52**	**128**		Pn	06 00 11.3	+1.4
FRP	**Fremont Peak**	**2.54**	**240**		Pb	06 00 12.9	-1.5
FRP	**Fremont Peak**	**2.54**	**240**		Pn	06 00 11.8	+1.7
PKD	**Bear Valley Ra**	**2.54**	**215**	Pn	Pb	06 00 12.5	-2.0
PKD				IAML		06 00 56.0	
	comp=N,145nm,1.1s						
PKD				IAML		06 01 06.4	
	comp=E,153nm,1.1s						
QSM	**Queen of Sheba**	**2.56**	**144**	Pn	Pn	06 00 11.3	+1.0
QSM				IAML		06 00 54.4	
	comp=N,120nm,1.1s						
QSM				IAML		06 00 55.2	
	comp=E,167nm,1.3s						
NADM	**Allendale**	**2.58**	**280**		Pb	06 00 15.1	0.0
OSTM	**Stimpson Lane**	**2.60**	**302**		Pb	06 00 15.7	+0.3
ORV	**Oroville**	**2.63**	**306**	Pn	Pn	06 00 12.7	+1.4
ORV				IAML		06 00 51.9	
	comp=N,197nm,0.3s						
ORV				IAML		06 00 53.3	
	comp=E,171nm,0.5s						
SUTB	**Sutter Butte**	**2.66**	**297**	Pn	Pn	06 00 12.2	+0.5
LRMC	**Laurel Mtn Rad**	**2.69**	**161**	Pn	Pn	06 00 12.1	-0.3
CCCA	**Chr Cany lake**	**2.74**	**156**	Pn	Pn	06 00 12.4	-0.5
CCCA				IAML		06 01 09.8	
	comp=N,148nm,1.5s						
CCCA				IAML		06 01 14.6	
	comp=E,127nm,1.1s						
FORD	**Fort Ord Natur**	**2.77**	**242**	Pn	Pn	06 00 13.8	+0.6
HULI	**Fort Hunter Li**	**2.84**	**225**		Pn	06 00 14.7	+0.5
HULI				IAML		06 00 59.8	
	comp=E,242nm,0.9s						
JRSC	**Jasper Ridge**	**2.84**	**258**	Pn	Pn	06 00 15.1	+0.8
JRSC				IAML		06 01 12.4	
	comp=E,115nm,0.9s						
JRSC				IAML		06 01 14.9	
	comp=N,140nm,1.6s						
CVS	**Carmenet Viney**	**2.94**	**277**	Pn	Pn	06 00 16.9	+1.3
CVS				IAML		06 01 08.1	
	comp=E,142nm,1.1s						
CVS				IAML		06 01 15.3	
	comp=N,106nm,1.0s						
PRN	**Pahroc Range**	**3.00**	**101**		Pn	06 00 17.1	+0.6
PRN				IAML		06 01 12.6	
	comp=N,198nm,0.6s						
PRN				IAML		06 01 16.8	
	comp=E,253nm,0.7s						
GSC	**Goldstone, Bar**	**3.15**	**150**	Pn	Pn	06 00 19.1	+0.6
GSC				IAML		06 01 18.5	
	comp=E,110nm,0.8s						
TPO	**Tropico Hills**	**3.18**	**172**	Pn	Pn	06 00 19.1	+0.1
MCCM	**Marconi Confer**	**3.27**	**273**	Pn	Pn	06 00 20.9	+0.8
MCCM				IAML		06 01 08.3	
	comp=N,92nm,2.5s						
MCCM				IAML		06 01 11.4	
	comp=E,119nm,2.1s						
GDXM	**Geysers**	**3.27**	**285**		Pn	06 00 22.8	+2.6
O03E	**Paynes Creek**	**3.27**	**314**	Pn	Pn	06 00 19.2	-1.1
O03E				IAML		06 01 12.0	
	comp=N,164nm,0.6s						
FARB	**Farallon Islan**	**3.39**	**266**	Pn	Pn	06 00 20.9	-0.8
OSI	**Osito Audit: C**	**3.42**	**180**	Pn	Pn	06 00 22.0	-0.2
OSI				IAML		06 01 20.0	
	comp=E,79nm,0.6s						
OSI				IAML		06 01 26.8	
	comp=N,92nm,1.0s						
HATC	**Hat Creek Radi**	**3.48**	**324**	Pn	Pn	06 00 21.8	-1.3
HATC				IAML		06 01 49.4	
	comp=E,142nm,1.9s						
HATC				IAML		06 02 06.8	
	comp=N,127nm,3.3s						
MTPC	**Mountain Pass**	**3.61**	**134**	Pn	Pn	06 00 27.0	+2.0
O02D	**Mt. Diablo Mer**	**3.80**	**305**	Pn	Pn	06 00 28.4	+0.9
ELK	**Elko**	**3.83**	**44**		Pn	06 00 28.6	+0.6
ELK				IAML		06 01 32.8	
	comp=N,64nm,0.3s						
ELK				IAML		06 01 33.3	
	comp=N,67nm,0.3s						
MWC	**Mount Wilson**	**3.85**	**172**	Pn	Pn	06 00 29.0	+0.7
MWC				IAML		06 01 35.9	
	comp=N,48nm,0.6s						
MWC				IAML		06 01 41.1	
	comp=E,45nm,1.6s						
PSUT	**Pine Spring**	**3.88**	**81**	Pn	Pn	06 00 28.5	-0.2
PASC	**Pasadena Art C**	**3.89**	**173**	Pn	Pn	06 00 28.5	-0.1
BFSC	**Mount Baldy Ra**	**3.89**	**167**	Pn	Pn	06 00 28.9	+0.1
M03C	**McCloud**	**4.15**	**322**	Pn	Pn	06 00 31.7	-0.6
CCUT	**Cedar City**	**4.29**	**95**	Pn	Pn	06 00 33.9	-0.5
KHBM	**Hayfork Bally**	**4.34**	**308**	Pn	Pn	06 00 34.2	-0.8
DANC	**Danby, Needles**	**4.35**	**140**	Pn	Pn	06 00 36.5	+1.6
WVOR	**Wild Horse Val**	**4.39**	**1**	Pn	Pn	06 00 36.0	+0.4
LCMT	**Little Creek M**	**4.49**	**102**		Pn	06 00 37.5	+0.5
SZCU	**Shurtz Canyon**	**4.50**	**94**	Pn	Pn	06 00 37.6	+0.4
ELS	**Elsinore Mount**	**4.51**	**166**	Pn	Pn	06 00 39.4	+2.2
BELC	**Belle Mtn. Jos**	**4.60**	**150**		Pn	06 00 39.4	+0.8
M02C	**Callahan**	**4.61**	**318**	Pn	Pn	06 00 39.5	+0.9
DNR	**Dunn Ranch,Anz**	**4.78**	**158**	Pn	Pn	06 00 41.8	+0.7
PMD	**Palm Desert**	**4.79**	**156**	Pn	Pn	06 00 41.4	+0.4
YBH	**Yreka Blue Hor**	**4.79**	**322**	Pn	Pn	06 00 42.2	+1.1
YBH				IAML		06 01 49.3	
	comp=N,56nm,0.3s						
PFO	**Pinyon Flats O**	**4.79**	**157**	Pn	Pn	06 00 41.7	+0.5
KNB	**Kanab**	**4.82**	**100**		Pn	06 00 43.5	+1.9
KNB				IAML		06 02 08.9	
	comp=E,22nm,1.0s						
KNB				IAML		06 02 13.8	
	comp=N,33nm,1.4s						
IRM	**Iron Mountain**	**4.85**	**142**	Pn	Pn	06 00 43.1	+1.2
W13A	**Hualapai Mount**	**4.89**	**125**	Pn	Pn	06 00 41.4	-1.1
K05A	**Summer Lake**	**4.96**	**341**	Pn	Pn	06 00 43.7	+0.2
L04D	**Klamath Falls**	**4.99**	**328**	Pn	Pn	06 00 44.5	+0.7
DUG	**Dugway, Tooele**	**5.09**	**63**	Pn	Pn	06 00 45.4	+0.2
DUG				IAML		06 02 11.5	
	comp=N,56nm,1.6s						
BORC	**Borrego Spring**	**5.12**	**158**	Pn	Pn	06 00 44.4	-1.2
K04D	**Chiloquin, OR**	**5.12**	**334**	Pn	Pn	06 00 45.0	-0.7
BC3	**Big Chuckawall**	**5.13**	**148**	Pn	Pn	06 00 45.7	-0.1
PKCU	**Pink Cliffs**	**5.13**	**95**	Pn	Pn	06 00 45.9	-0.1
MTPU	**Mount Pierson**	**5.18**	**88**	Pn	Pn	06 00 46.9	+0.2
DPP	**Dos Picos Cty**	**5.24**	**163**	Pn	Pn	06 00 49.5	+2.2
BGU	**Big Grassy Mou**	**5.28**	**55**	Pn	Pn	06 00 48.2	+0.4
J08A	**Circle Bar Ran**	**5.32**	**2**	Pn	Pn	06 00 49.0	+0.6
U15A	**North Rim**	**5.39**	**105**	Pn	Pn	06 00 49.9	+0.4
NLU	**North Lily Min**	**5.53**	**68**	Pn	Pn	06 00 51.6	+0.1
YUH	**Yuha Desert**	**5.85**	**156**	Pn	Pn	06 00 54.8	-0.8
PINE	**Pine Mountain**	**5.98**	**345**	Pn	Pn	06 00 55.2	-2.4
WUAZ	**Wupatki**	**6.43**	**111**	Pn	Pn	06 01 04.2	+0.5
ESJX	**Sierra Juarez**	**6.44**	**158**	Pn	Pn	06 01 05.3	+1.4
WIFE	**Three Sisters-**	**6.45**	**340**	Pn	Pn	06 01 03.5	-0.4
HWUT	**Hardware Ranch**	**6.57**	**55**	Pn	Pn	06 01 06.1	+0.5
I03D	**Drain, OR**	**6.64**	**330**	Pn	Pn	06 01 06.6	+0.2
BSUT	**Blindstream Ca**	**6.67**	**66**	Pn	Pn	06 01 06.1	-1.1
X16A	**Lo Mia Camp, P**	**6.92**	**119**	Pn	Pn	06 01 10.8	+0.4
HOOD	**Mount Hood Mea**	**7.59**	**344**	Pn	Pn	06 01 19.4	-0.2
PV10	**Paradox Valley**	**7.65**	**85**	Pn	Pn	06 01 19.9	-0.6
PV23	**Carpenter Ridg**	**7.67**	**84**	Pn	Pn	06 01 20.2	-0.6
G04A	**Mulino**	**7.69**	**340**	Pn	Pn	06 01 20.7	-0.1
PV18	**Skein Mesa, Pa**	**7.75**	**85**	Pn	Pn	06 01 20.6	-1.3
PV22	**Blue Mesa, Par**	**7.85**	**83**	Pn	Pn	06 01 21.2	-2.0
X18A	**Snowflake**	**7.92**	**114**	Pn	Pn	06 01 22.7	-1.5
BW06	**Boulder Array**	**8.45**	**53**	Pn	Pn	06 01 30.0	-1.4
PD31	**Pinedale Array**	**8.45**	**53**	Pn	Pn	06 01 29.8	-1.6
PDAR	**Pinedale Array**	**8.45**	**53**	Pn	Pn	06 01 30.1	-1.3
TXAR	**Lajitas Array**	**15.25**	**120**	Pn	Pn	06 03 35.7	+1.5
WMOK	**Wichita Mounta**	**16.41**	**96**	Pn	Pn	06 03 17.9	-1.2
OK029	**Liberty Lake**	**17.17**	**91**	Pn	Pn	06 03 28.3	-0.4
OK029				IAmb	IAmb	06 04 07.8	
	comp=Z,5.1nm,0.6s						
ADOK	**Arcadia Dam**	**17.27**	**91**	Pn	Pn	06 03 28.6	-1.4
OK052	**Battle Ridge R**	**17.64**	**90**		Pn	06 03 34.6	0.0
RUBB	**Prince Rupert**	**18.09**	**338**	Pn	Pn	06 03 39.0	-1.0
RUBB				IAmb	IAmb	06 03 40.1	
	comp=Z,8.8nm,1.2s						
U38A	**Gravette**	**19.45**	**87**	P	P	06 03 54.8	-0.7
U38A				IAmb	IAmb	06 03 59.8	
	comp=Z,4.7nm,0.6s						
EYMN	**Ely**	**22.15**	**55**	P	P	06 04 24.4	-0.2
J47A	**Sun

comp=Z,206nm,18.0s,baz=215,slow=42
comp=Z,2.4nm,0.8s
JAY Jayapura 26.32 127 LR LR 06 31 40.1
comp=Z,91nm,19.6s,baz=314,slow=37
USA0B Ussuriysk Arra 31.94 17 P **P 06 21 58.2 -0.4**
USA0B IAmb IAmb 06 22 17.2
comp=Z,8.2nm,0.9s
USRK Ussuriysk Ar. 31.94 17 P **P 06 21 58.0 -0.6**
comp=Z,2.2nm,0.7s,baz=207,slow=8.9,SNR=4.0
comp=Z,2.2nm,0.7s
USRK Ussuriysk Ar. 31.94 17 P **P 06 21 56.7 -1.9**
BNX BinXian 32.38 10 ⇓P **P 06 22 03.5 +1.0**
BNX pmax pmax
comp=Z,8.0nm,1.0s
SONM Songino Array 35.66 344 P **P 06 22 31.0 0.0**
comp=Z,1.0nm,0.7s,baz=171,slow=10,SNR=6.2
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 36.51 157 P **P 06 22 37.2 -1.3**
comp=Z,5.4nm,0.7s,baz=336,slow=9.6,SNR=43
comp=Z,5.4nm,0.7s
WRA Warramunga Arr 36.51 157 P **P 06 22 37.4 -1.0**
WR8 Warramunga Arr 36.58 156 P **P 06 22 38.0 -1.1**
WR8 IAmb IAmb 06 22 49.2
comp=Z,15nm,1.3s
PALK Pallekele 39.02 264 LR LR 06 39 02.5
comp=Z,109nm,18.1s,baz=88,slow=36
AS31 Alice Springs 39.77 160 P **P 06 23 05.5 -0.5**
ASAR Alice Springs 39.77 160 P **P 06 23 05.3 -0.6**
comp=Z,3.5nm,0.7s,baz=340,slow=7.4,SNR=40
comp=Z,3.5nm,0.7s
ASAR Alice Springs 39.77 160 P **P 06 23 05.7 -0.3**
CTA Charters Tower 42.59 142 LR LR 06 41 18.6
comp=Z,81nm,19.8s,baz=222,slow=36
FORT Forrest 45.10 170 P **P 06 23 49.3 +0.1**
FORT IAmb IAmb 06 24 26.4
comp=Z,11nm,1.0s
MKAR Makanchi Array 45.40 324 P **P 06 23 52.5 +1.0**
comp=Z,2.3nm,0.8s,baz=132,slow=9.1,SNR=20
MKAR PcP **PcP 06 25 30.5 0.0**
comp=Z,0.5nm,0.6s,baz=131,slow=3.7,SNR=2.7
MKAR LR LR 06 44 07.0
comp=Z,144nm,18.5s,baz=86,slow=38
comp=Z,2.3nm,0.8s
MKAR Makanchi Array 45.40 324 P **P 06 23 52.1 +0.6**
MKAR PcP **PcP 06 25 31.5 +1.0**
NIL Nilore 46.53 303 P **P 06 24 01.4 +0.8**
NIL IAmb IAmb 06 24 02.0
comp=Z,9.7nm,0.7s
AAK Ala-Archa 48.37 315 P **P 06 24 15.9 +1.1**
comp=Z,1.1nm,0.3s,baz=156,slow=3.1,SNR=4.0
comp=Z,1.1nm,0.3s
AAK Ala-Archa 48.37 315 P **P 06 24 16.9 +2.0**
AAK IAmb IAmb 06 24 17.7
comp=Z,2.6nm,0.8s
ZALV Zalesovo Beam 48.52 333 P **P 06 24 15.1 -0.6**
comp=Z,1.8nm,0.6s,baz=129,slow=5.8,SNR=7.5
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 48.52 333 P **P 06 24 15.6 -0.1**
MANEM Manem 48.75 308 P **P 06 24 20.2 +2.1**
MANEM IAmb IAmb 06 24 31.0
comp=Z,16nm,0.9s
BBOO Buckleboo 48.95 162 P **P 06 24 18.4 -0.8**
PETK Petropavlovsk- 49.26 29 P **P 06 24 19.6 -1.7**
KURBB Kurchatov Arra 49.59 326 P **P 06 24 24.5 +0.6**
comp=Z,4.2nm,0.8s,baz=124,slow=7.8,SNR=40
comp=Z,4.2nm,0.8s
KURK Kurchatov 49.59 327 **P 06 24 24.9 +1.1**
KBL Kabul 50.13 304 P **P 06 24 29.4 +0.9**
KBL IAmb IAmb 06 24 54.0
comp=Z,4.3nm,0.8s
GAR Garm 50.18 309 P **P 06 24 29.9 +1.1**
CHGR Chuyangaron 50.96 309 P **P 06 24 35.6 +0.9**
MA2 Magadan 51.00 20 LR LR 06 47 43.1
comp=Z,42nm,18.2s,baz=246,slow=38
KK31 Karatay Array 51.27 315 P **P 06 24 37.5 +0.8**
KK31 IAmb IAmb 06 24 48.0
comp=Z,7.2nm,1.2s
KKAR Karatay Array 51.27 315 **P 06 24 37.3 +0.5**
BVAR Borovoye Array 55.16 326 P **P 06 25 05.3 0.0**
comp=Z,1.2nm,0.6s,baz=128,slow=9.6,SNR=5.5
comp=Z,1.2nm,0.6s
BORK Borovoye 55.21 326 P **P 06 25 06.3 +0.7**
BORK IAmb IAmb 06 25 19.8
comp=Z,3.5nm,0.8s
MARNC Mare, Loyalty 58.90 126 P **P 06 25 31.0 -1.2**
NRIK Noril'sk 59.05 347 P **P 06 25 33.5 +1.0**
NRIK IAmb IAmb 06 25 43.4
comp=Z,2.8nm,0.8s
AB31 Akbulak array 60.06 319 **P 06 25 40.5 +0.7**
AB31 IAmb IAmb 06 25 41.5
comp=Z,4.6nm,0.9s
ABKAR Akbulak array 60.06 319 **P 06 25 40.9 +1.1**
AMKA Amchitka 60.31 38 P **P 06 25 40.1 -1.3**
AMKA IAmb IAmb 06 25 41.5
comp=Z,8.1nm,1.1s
AKTO Aktyubinsk 61.55 320 P **P 06 25 50.0 0.0**
comp=Z,2.8nm,0.8s,baz=99,slow=2.2,SNR=7.4
AKTO LR LR 06 53 43.6
comp=Z,107nm,21.3s,baz=63,slow=37
comp=Z,2.8nm,0.8s
MSEY Mahe Island 66.48 259 P **P 06 26 23.0 0.0**
F15K North Star Dit 71.47 25 P **P 06 26 52.4 -0.7**
F15K IAmb IAmb 06 27 09.0
comp=Z,5.2nm,1.1s
F17K Baldwin Pennin 72.92 24 P **P 06 27 01.0 -0.7**
F17K IAmb IAmb 06 27 17.2
comp=Z,5.0nm,1.1s
AFI Afiamalu 73.09 109 LR LR 06 51 56.5
comp=Z,200nm,21.7s,baz=148,slow=30
E18K Tukpahlearik C 73.25 23 P **P 06 27 03.7 +0.1**
CAST Castle Rocks 76.83 28 P **P 06 27 24.0 -0.4**
KDAK Kodiak Island 77.08 33 LR LR 07 00 51.8
comp=Z,22nm,21.6s,baz=258,slow=35
ARCES ARCESS Array B 78.62 339 P **P 06 27 34.3 0.0**
comp=Z,0.6nm,0.4s,baz=79,slow=6.4,SNR=13
ARCES LR LR 07 06 02.5
comp=Z,56nm,18.3s,baz=96,slow=38
comp=Z,0.6nm,0.4s
ARCES ARCESS Array B 78.62 339 P **P 06 27 33.6 -0.7**
ARCES IAmb IAmb 06 27 43.6
comp=Z,7.4nm,1.4s
ILAR Eielson Array 78.94 26 P **P 06 27 33.9 -2.1**
comp=Z,0.3nm,0.7s,baz=284,slow=3.6,SNR=4.3
ILAR LR LR 07 03 02.3
comp=Z,32nm,21.5s,baz=268,slow=36
comp=Z,0.3nm,0.7s
ILAR Eielson Array 78.94 26 P **P 06 27 34.4 -1.6**
SPITS Spitsbergen Ar 79.24 348 P **P 06 27 37.1 -0.4**
comp=Z,3.7nm,0.8s,baz=108,slow=5.4,SNR=4.4
comp=Z,3.7nm,0.8s
FINES FINESS Array B 79.73 331 P **P 06 27 40.4 0.0**
comp=Z,1.3nm,0.9s,baz=87,slow=5.9,SNR=8.6
comp=Z,1.3nm,0.9s
FINES FINESS Array B 79.73 331 P **P 06 27 40.7 +0.3**
RIDG Independent Ri 79.99 27 P **P 06 27 40.7 -1.2**
RIDG IAmb IAmb 06 27 53.2
comp=Z,10nm,1.3s
HFS Hagfors 85.92 331 LR LR 07 09 19.2
comp=Z,69nm,19.1s,baz=84,slow=38
NC405 NORSAR Array S 86.47 332 P **P 06 28 15.4 +0.1**
NB2 NORSAR Subarra 86.72 332 P **P 06 28 15.4 -1.2**
comp=Z,1.5nm,0.8s,baz=66,slow=4.8
NOA NORSAR Array B 86.72 332 P **P 06 28 16.3 -0.3**
comp=Z,0.5nm,0.6s,baz=67,slow=4.9,SNR=7.2
NOA LR LR 07 07 36.2
comp=Z,32nm,21.1s,baz=90,slow=36
comp=Z,0.5nm,0.6s
VRAC Vranov 88.03 320 LR LR 07 12 15.1
comp=Z,25nm,18.8s,baz=100,slow=39
MBAR Mbarara 89.30 269 LR LR 07 06 26.9
comp=Z,68nm,19.5s,baz=170,slow=34
DAVOX Davos/Dischmat 93.15 320 LR LR 07 15 36.7
comp=Z,37nm,18.8s,baz=80,slow=39
PPT Papeete 94.62 107 LR LR 07 03 09.1
comp=Z,26nm,20.5s,baz=315,slow=30
LBTB Lobatse 99.55 247 LR LR 07 11 48.6
comp=Z,64nm,20.5s,baz=164,slow=34
PLCA Paso Flores 151.75 163 PKPbc **PKPbc 06 35 26.2 -1.5**
comp=Z,0.9nm,0.6s,baz=54,slow=1.8,SNR=3.2

*IDC **14** 06:24:53.8±3.4, 54.˚19N×87.˚16E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=31.1km s-min=19.9km az=54.0*
ASRS 14 06:24:52.0±1.0, 54.˚14N×87.˚16E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**263**	I	I	06 33 20.0	
	baz=79,slow=309,SNR=5.5						
ZALV	**Zalesovo Beam**	**1.39**	**263**	Pg	Pg	06 25 18.6	0.0
	0.9nm,0.3s,baz=84,slow=16,SNR=7.4						
ZALV				Lg	Lg	06 25 38.5	
	0.7nm,0.3s,baz=81,slow=26,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.34**	**240**	Pn	Pn	06 26 29.8	+3.2
	0.1nm,0.3s,baz=54,slow=14,SNR=3.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.98**	**205**	Pn	Pn	06 26 52.9	+3.8
	0.1nm,0.3s,baz=23,slow=13,SNR=1.3						
	0.1nm,0.2s						

IDC 14 06:40:33.6±3.3, 49.˚28S×123.˚55E, h0km, mb3.6/4, mbtmp3.6/4, MS3.5/11, Error ellipse: s-maj=125.0km s-min=29.0km az=97.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**15.96**	**331**	T	T	07 00 47.0	
	baz=159,slow=74,SNR=14						
H01W2	**Cape Leeuwin H**	**15.96**	**331**	T	T	07 00 48.5	
	baz=159,slow=74,SNR=13						
H01W3	**Cape Leeuwin H**	**15.97**	**331**	T	T	07 00 49.9	
	baz=159,slow=74,SNR=11						
STKA	**Stephens Creek**	**22.05**	**45**	P	P	06 45 29.8	+0.1
	1.9nm,0.9s,baz=240,slow=5.5,SNR=3.0						
STKA				LR	LR	06 54 02.3	
	comp=Z,121nm,18.2s,baz=211,slow=37						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**26.84**	**21**	P	P	06 46 15.4	-0.3
	1.1nm,0.9s,baz=193,slow=8.7,SNR=5.5						
ASAR				LR	LR	06 56 15.6	
	comp=Z,206nm,19.6s,baz=250,slow=35						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**30.52**	**20**	P	P	06 46 48.8	+0.3
	0.7nm,0.9s,baz=189,slow=9.4,SNR=1.5						
	0.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**31.15**	**4**	LR	LR	06 59 16.4	
	comp=Z,154nm,18.2s,baz=354,slow=36						
VNDA	**Vanda**	**31.85**	**165**	P	P	06 46 59.6	0.0
	0.6nm,0.9s,baz=300,slow=8.7,SNR=2.7						
VNDA				LR	LR	06 57 21.7	
	comp=Z,103nm,20.7s,baz=310,slow=32						
	0.6nm,0.9s						
CTA	**Charters Tower**	**34.33**	**40**	LR	LR	07 00 48.8	
	comp=Z,86nm,19.3s,baz=218,slow=35						
MAW	**Mawson**	**34.82**	**216**	LR	LR	06 59 16.9	
	comp=Z,70nm,20.5s,baz=56,slow=32						
QSPA	**South Pole Qui**	**40.84**	**180**	LR	LR	07 03 30.0	
	comp=Z,92nm,21.6s,baz=343,slow=34						
KRVT	**Keravat (AS076**	**50.92**	**38**	LR	LR	07 09 55.4	
	comp=Z,7.1nm,20.1s,baz=302,slow=35						
SNAA	**Sanae**	**53.56**	**198**	LR	LR	07 11 13.7	
	comp=Z,83nm,19.9s,baz=117,slow=34						
DAV	**Davao City (W)**	**56.14**	**2**	LR	LR	07 16 07.4	
	comp=Z,70nm,19.1s,baz=192,slow=38						
GUMO	**Guam**	**65.37**	**23**	LR	LR	07 20 01.0	
	comp=Z,22nm,19.5s,baz=103,slow=36						

*BUL **14** 06:53:09.8±1.6, 26.˚59S×23.˚84E, h10km, MD3.2, Presumed earthquake*
PRE 14 06:53:07.6±1.2, 26.˚90S×26.˚65E, h2km, ML2.2, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.84**	**56**	*e*P	Pg	06 53 24.3	+0.6
WDLM				*e*S	Sg	06 53 35.2	+0.6
WDLM				IAML		06 53 39.8	
	comp=Z,116nm,0.2s						
HRAO	**HartRAO**	**1.37**	**43**	*e*P	Pb	06 53 34.1	0.0
HRAO				*e*S	Sn	06 53 52.8	+0.1
HRAO				IAML		06 53 53.9	
	comp=Z,69nm,0.7s						
LBTB	**Lobatse**	**2.10**	**333**	*i* P	Pg	06 53 48.0	+0.1
LBTB				*i* S	Sb	06 54 12.9	-0.2
LBTB	**Lobatse**	**2.10**	**333**	*e*P	Pn	06 53 45.1	+1.2
LBTB				*e*S	Sn	06 54 11.0	+0.3
LBTB				IAML		06 54 17.2	
	comp=Z,37nm,0.2s						
BOSA	**Boshof**	**2.11**	**215**	*i* P	Pg	06 53 47.6	-0.4
BOSA				*i* S	Sg	06 54 17.5	+2.1
BOSA	**Boshof**	**2.11**	**215**	*e*P	Pn	06 53 45.3	+1.2
BOSA				*e*S	Sn	06 54 12.0	+1.2
BOSA				IAML		06 54 18.9	
	comp=Z,20nm,0.4s						
LEPH	**Lephalale, Lim**	**3.20**	**19**	*e*P	Pn	06 54 00.1	+1.0
LEPH				*e*S	Sn	06 54 37.1	-0.7
LEPH				IAML		06 54 50.2	
	comp=Z,10nm,0.5s						
PILG	**Pilgrimsrest,**	**4.15**	**63**	*e*P	Pn	06 54 13.8	+1.6
PILG				*e*S	Sn	06 55 00.5	-0.9
PILG				IAML		06 55 01.1	
	comp=Z,13nm,0.4s						
PMBG	**Pietermaritzbu**	**4.29**	**128**	*e*P	Pn	06 54 15.2	+1.3
PMBG				*e*S	Sn	06 55 03.4	-1.3
PMBG				IAML		06 55 22.3	
	comp=Z,7.5nm,0.3s						
KSTD	**Kokstad**	**4.38**	**148**	*e*P	Pn	06 54 16.4	+1.0
KSTD				*e*S	Sn	06 55 05.8	-1.2
KSTD				IAML		06 55 26.4	
	comp=Z,4.5nm,0.4s						
BFON	**Badsfontein, M**	**5.52**	**207**	*e*P	Pn	06 54 31.5	+0.5
BFON				*e*S	Sn	06 55 32.6	-2.6
BFON				IAML		06 56 04.6	
	comp=Z,6.8nm,0.5s						
BRAK	**Brakfontein**	**5.87**	**213**	*e*P	Pn	06 54 37.4	+1.8
BRAK				*e*S	Sn	06 55 41.0	-2.5
BRAK				IAML		06 55 59.0	
	comp=Z,2.9nm,0.4s						
MATP	**Matopo**	**6.66**	**15**	*i* P	Pb	06 54 57.4	-6.9
SUR	**Sutherland**	**7.46**	**222**	*e*P	Pn	06 54 59.5	+1.9
SUR				*e*S	Sn	06 56 19.0	-3.9
SUR				IAML		06 57 07.3	
	comp=Z,2.2nm,1.1s						

*ASRS **14** 07:00:11.0±1.9, 54.˚62N×83.˚67E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 14 07:00:12.8±2.2, 54.˚58N×83.˚72E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=17.5km s-min=10.6km az=166.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**134**	I	I	07 06 30.0	
	baz=314,slow=315,SNR=1.2						
ZALV	**Zalesovo Beam**	**0.90**	**134**	Pg	Pg	07 00 29.7	-0.3
	1.9nm,0.3s,baz=318,slow=19,SNR=18						
ZALV				Lg	Lg	07 00 43.3	
	5.0nm,0.3s,baz=317,slow=29,SNR=31						
KURBB	**Kurchatov Arra**	**5.07**	**221**	Pn	Pn	07 01 30.1	+0.1
	0.1nm,0.3s,baz=42,slow=14,SNR=4.8						
KURBB				Lg	Lg	07 02 50.8	
	0.1nm,0.3s,baz=40,slow=30,SNR=5.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.85**	**187**	Pn	Pn	07 02 08.8	+0.7
	0.1nm,0.3s,baz=11,slow=14,SNR=2.9						
MKAR				Lg	Lg	07 04 19.0	
	0.1nm,0.3s,baz=9.6,slow=30,SNR=1.7						
	0.2nm,0.5s						

*IDC **14** 07:05:17.5±3.3, 54.˚20N×87.˚36E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=27.8km s-min=19.5km az=50.0*
ASRS 14 07:05:15.0±2.0, 54.˚21N×87.˚29E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**261**	I	I	07 14 20.0	
	0.1nm,0.8s,baz=78,slow=312,SNR=8.6						
ZALV	**Zalesovo Beam**	**1.48**	**261**	Pg	Pb	07 05 44.2	+0.9
	1.5nm,0.3s,baz=78,slow=15,SNR=14						
ZALV				Lg	Lg	07 06 06.7	
	2.0nm,0.3s,baz=78,slow=21,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	Pn	07 06 55.0	+3.9
	baz=58,slow=14,SNR=4.4						
KURBB				Lg	Lg	07 08 42.5	
	baz=59,slow=35,SNR=3.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	07 07 17.6	+4.1
	0.2nm,0.3s,baz=22,slow=12,SNR=2.5						
MKAR				Lg	Lg	07 09 31.5	
	baz=16,slow=32						
	0.2nm,0.4s						

*IDC **14** 07:21:32.7±2.6, 5.˚41N×125.˚75E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=222.1km s-min=30.1km az=65.0*
*MAN **14** 07:21:44.0, 5.˚93N×126.˚50E, h15km, MS3.1*
ISC 14 07:21:41.8±1.3, 5.˚67N±0.˚09×126.˚8E±0.˚1, h84km, n7, σ2≥85/11, mb3.2/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	**2.13**	**351**	*i* P	**Pn**	**07 22 15.1**	**-0.4**
CDOP				*e*S	**Sn**	**07 22 39.7**	**-1.6**
KCP	**Kidapawan**	**2.14**	**309**	*e*P	**Pn**	**07 22 14.0**	**-1.7**
KCP				*i* S	**Sn**	**07 22 37.9**	**-3.7**
BIPH	**Bislig**	**2.53**	**351**	*e*P	**Pn**	**07 22 21.3**	**+0.4**
BIPH				*e*S	**Sn**	**07 22 49.8**	**-1.1**
CGP	**Cagayan de Oro**	**3.45**	**323**	*e*P	**Pn**	**07 22 37.0**	**+3.7**
CGP				*e*S	**Sn**	**07 23 18.4**	**+5.2**
WRA	**Warramunga Arr**	**26.52**	**164**	P	**P**	**07 27 12.7**	**+1.0**
	0.4nm,0.8s,baz=341,slow=10,SNR=4.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**29.98**	**167**	P	**P**	**07 27 43.0**	**+0.6**
	0.4nm,0.9s,baz=343,slow=7.2,SNR=2.3						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**56.01**	**325**	P	**P**	**07 31 10.3**	**-1.4**
	0.2nm,0.4s,baz=132,slow=7.0,SNR=2.0						
	0.2nm,0.4s						

*BGR **14** 07:34:15.7, 36.˚03N×71.˚97E, h33km, mb4.9, Ms3.3*
*MOS **14** 07:34:24.5±1.0, 36.˚40N×71.˚42E, h110km, mb5.2/41, Error ellipse: s-maj=5.1km s-min=3.3km az=96.8*
*IDC **14** 07:34:24.4±1.7, 36.˚20N×71.˚33E, h106km±14km, mb4.5/36, mbtmp4.9/39, MS3.4/20, Error ellipse: s-maj=12.8km s-min=8.6km az=14.0*
*BJI **14** 07:34:25.7, 36.˚58N×71.˚30E, h112km, mB4.8/9, mb4.8/39*
*GFZ **14** 07:34:26.5±0.3, 36.˚N±3.˚×7.˚1E±.˚, h101km±3km, M4.8/19, mb5.0/19*
*NEIC **14** 07:34:26.9, 36.˚43N×71.˚23E, h116km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr 1.73; Mθθ -1.93; Mφφ 0.19; Mrθ 0.45; Mθφ -1.25; Mrφ 2.06; Fault plane solution: M0 3.06000×10¹⁶ NP1: φs 274.17000°, δ37.96000°, λ 144.95000°. NP2: φs 33.12000°, δ69.31000°, λ 57.43000°. Principal axes: T 3.1870, Plg54.0000°, Azm263.0000°; N -0.2639, Plg30.0000°, Azm46.0000°; P -2.9231, Plg18.0000°, Azm147.0000°;*
*NEIC **14** 07:34:26.8±1.8, 36.˚44N±0.˚04×71.˚26E±0.˚06, h115km±5km, mb4.8/231, Mwr 4.9/11 Error ellipse: s-maj=8.3km s-min=4.2km az=130.0*
*NNC **14** 07:34:26.1±2.5, 36.˚68N×70.˚99E, h99km±34km, mb4.7, mpv5.2, Error ellipse: s-maj=22.0km s-min=12.8km az=39.0*
*GCMT **14** 07:34:27.8±0.4, 36.˚31N±0.˚03×70.˚83E±0.˚03, h111km±4km, MW4.8/87, Moment Tensor Solution. s20,c20; s87,c112; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.27±.09; Mθθ -2.11±.11; Mφφ 0.83±.11; Mrθ 0.20±.08; Mrφ -1.02±.13; Mθφ 1.02±.06; Best double couple: M0 2.32700×10¹⁶ NP1: φs 288.00000°, δ52.00000°, λ 147.00000°. NP2: φs 39.00000°, δ65.00000°, λ 43.00000°. Principal axes: T 2.1570, Plg47.0000°, Azm259.0000°; N 0.3360, Plg41.0000°, Azm64.0000°; P -2.4970, Plg8.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 07:34:25.2±0.3, 36.˚41N±0.˚03×71.˚36E±0.˚03, h108km±2km, h108km: pP-P, n1007, σ1≥65/1010, mb4.8/287, 22C-48D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**1.16**	**13**		**Pn**	**07 34 49.8**	**+1.5**
MANEM				Sn	**Sn**	**07 35 07.7**	**+2.1**
KBL	**Kabul**	**2.66**	**226**	P	**Pn**	**07 35 05.5**	**-1.4**
	SNR=102						
KBL	**Kabul**	**2.66**	**226**		**Pn**	**07 35 07.1**	**+0.3**
KBL				Sn	**Sn**	**07 35 38.7**	**-0.1**
KBL	**Kabul**	**2.66**	**226**	P	**Pn**	**07 35 07.3**	**+0.5**
GAR	**Garm**	**2.72**	**343**		**Pn**	**07 35 07.7**	**+0.2**
GAR	**Garm**	**2.72**	**343**	P	**Pn**	**07 35 07.8**	**+0.2**
SHAA	**Shahritus**	**2.84**	**295**		**Pn**	**07 35 07.8**	**-1.3**
SHAA				Sn	**Sn**	**07 35 40.4**	**-2.4**
CHGR	**Chuyangaron**	**2.85**	**323**	*d* iPN	**Pn**	**07 35 08.3**	**-0.9**
CHGR	**Chuyangaron**	**2.85**	**323**		**Pn**	**07 35 08.3**	**-0.9**
CHGR	**Chuyangaron**	**2.85**	**323**	P	**Pn**	**07 35 08.3**	**-0.9**
DRK	**Karamyk**	**3.09**	**6**	PN	**Pn**	**07 35 14.4**	**+1.8**
DRK	**Karamyk**	**3.09**	**6**		**Pn**	**07 35 14.4**	**+1.8**
DRK	**Karamyk**	**3.09**	**6**	P	**Pn**	**07 35 14.5**	**+1.8**
NIL	**Nilore**	**3.16**	**150**	PN	**Pn**	**07 35 15.7**	**+2.4**
NIL	**Nilore**	**3.16**	**150**	P	**Pn**	**07 35 15.5**	**+2.2**
NIL	**Nilore**	**3.16**	**150**		**Pn**	**07 35 15.7**	**+2.4**
NIL	**Nilore**	**3.16**	**150**	P	**Pn**	**07 35 15.8**	**+2.5**
BTK	**Batken**	**3.67**	**353**	PN	**Pn**	**07 35 21.7**	**+1.6**
BTK	**Batken**	**3.67**	**353**		**Pn**	**07 35 21.7**	**+1.6**
BTK	**Batken**	**3.67**	**353**	P	**Pn**	**07 35 21.8**	**+1.6**
SRNI	**Srinagar**	**3.67**	**129**	*e*P	**Pn**	**07 35 21.7**	**+1.4**
SRNI				*e*S	**Sn**	**07 36 04.5**	**+1.7**
SRNI				IAML		07 36 11.1	
	comp=E,4μm,0.2s						
OHH	**Osh**	**4.26**	**15**	P	**Pn**	**07 35 28.3**	**+0.2**
KSH2	**Kashi**	**4.31**	**49**	P	**Pn**	**07 35 32.3**	**+3.5**
KSH2				S	**Sn**	**07 36 20.9**	**+2.8**
KSH2				SMN			
	comp=E,5μm,0.9s						
KSH2				SME			
	comp=E,3μm,0.8s						
JMU	**Jammu**	**4.61**	**141**	*e*P	**Pn**	**07 35 35.2**	**+2.4**
JMU				IAmb	IAmb	07 35 36.8	
	comp=Z,2μm,0.4s						
JMU				*e*S	**Sn**	**07 36 27.0**	**+1.7**
JMU				IAML		07 36 30.3	
	comp=E,3μm,0.5s						
JMU				IAML		07 36 42.7	
	comp=E,5μm,0.4s						
ARSB	**Arslanbob**	**5.07**	**14**	PN	**Pn**	**07 35 39.4**	**+0.3**
ARSB	**Arslanbob**	**5.07**	**14**		**Pn**	**07 35 39.4**	**+0.3**
ALCI	**Alchi Leh**	**5.24**	**113**	*e*P	**Pn**	**07 35 41.6**	**0.0**
ALCI				*ex*	x	07 36 41.6	
TSSA	**Tissa**	**5.32**	**131**	*e*P	**Pn**	**07 35 43.7**	**+1.2**
TSSA				*e*S	**Sn**	**07 36 40.0**	**-2.6**
TSSA				IAML		07 36 42.5	
	comp=N,1μm,0.2s						
TSSA				IAML		07 36 50.5	
	comp=E,2μm,0.5s						
THN	**Thein Dam**	**5.37**	**136**	*e*P	**Pn**	**07 35 44.4**	**+1.3**
THN				*e*S	**Sn**	**07 36 43.5**	**-0.2**
THN				IAML		07 36 46.3	
	comp=N,1μm,0.2s						
THN				IAML		07 36 47.1	
	comp=E,1μm,0.1s						
DHRM	**DHARAMSHALA**	**5.82**	**134**	*i* P	**Pn**	**07 35 49.7**	**+0.4**
DHRM				*e*S	**Sn**	**07 36 54.2**	**-0.6**
DHRM				IAML		07 36 57.2	
	comp=N,2μm,0.1s						
DHRM				IAML		07 36 57.6	
	comp=E,2μm,0.3s						
IUG	**luzhnay**	**5.82**	**350**	*d* iPN	**Pn**	**07 35 49.0**	**-0.2**
IUG	**luzhnay**	**5.82**	**350**	⇓*i*P	**Pn**	**07 35 49.1**	**-0.2**
TLWR	**Talawar**	**5.85**	**138**	*e*P	**Pn**	**07 35 47.3**	**-2.2**
TLWR				*e*S	**Sn**	**07 36 52.4**	**-2.9**
ASAI	**AK-SAY(Kyrgyzs**	**6.05**	**40**	P	**Pn**	**07 35 54.3**	**+1.8**
CHM	**Chimkent**	**6.06**	**348**	*e*PN	**Pn**	**07 35 52.4**	**+0.1**
CHM	**Chimkent**	**6.06**	**348**	*e*P	**Pn**	**07 35 52.5**	**+0.1**
UCH	**Uchtor**	**6.30**	**22**	P	**Pn**	**07 35 57.0**	**+1.0**
	SNR=88						
DZA	**Taraz**	**6.48**	**360**	*e*PN	**Pn**	**07 35 57.9**	**-0.1**
DZA	**Taraz**	**6.48**	**360**	*e*P	**Pn**	**07 35 57.9**	**-0.1**
BHK	**Bhakra**	**6.51**	**139

SNR=165
AAK Ala-Archa 6.68 20 P **Pn 07 36 02.0 +1.2**
comp=E,286nm,0.5s,baz=195,slow=6.5,SNR=424
AAK S **Sn 07 37 14.0 -1.4**
comp=E,268nm,0.6s,baz=331,slow=22,SNR=10
AAK Ala-Archa 6.68 20 P **Pn 07 36 02.0 +1.2**
SNR=313
AAK Ala-Archa 6.68 20 ⇑P **Pn 07 35 59.0 -1.8**
comp=E,99nm,0.5s
AAK ⇑S **Sn 07 37 13.9 -1.6**
comp=E,187nm,0.6s
AAK Ala-Archa 6.68 20 PN **Pn 07 36 01.6 +0.7**
AAK Ala-Archa 6.68 20 P **Pn 07 36 01.5 +0.7**
AAK Ala-Archa 6.68 20 P **Pn 07 36 02.1 +1.2**
KK31 Karatay Array 6.72 355 ⇑P **Pn 07 35 57.7 -3.6**
comp=E,214nm,0.3s,baz=179,slow=14,SNR=3962
KK31 ⇑S **Sn 07 37 11.3 -5.0**
comp=E,565nm,0.7s,baz=177,slow=15,SNR=7.3
KK31 Karatay Array 6.72 355 PN **Pn 07 36 01.0 -0.3**
KK31 Karatay Array 6.72 355 **Pn 07 36 00.8 -0.4**
KKAR Karatay Array 6.72 355 PN **Pn 07 36 00.8 -0.5**
KKAR Karatay Array 6.72 355 **Pn 07 36 00.8 -0.5**
SRGN SRI GANGA NAGA 6.80 161 *e*P **Pn 07 36 02.6 +0.1**
KBK Karagaybulak 6.83 23 P **Pn 07 36 04.2 +1.3**
SNR=54
FRU1 Bishkek 6.87 21 PN **Pn 07 36 05.0 +1.6**
FRU1 Bishkek 6.87 21 **Pn 07 36 05.0 +1.6**
ULHL Ulahol 6.95 31 P **Pn 07 36 05.4 +0.9**
SNR=81
BOOM Boomskoye usch 7.03 29 PN **Pn 07 36 06.6 +1.0**
BOOM Boomskoye usch 7.03 29 Pn **Pn 07 36 06.6 +1.0**
CHMS Chumysh 7.08 21 P **Pn 07 36 07.1 +0.9**
SNR=49
HNLY HANLEY 7.24 118 *e*P **Pn 07 36 08.5 -0.4**
HNLY *ex* x 07 37 20.3
USP Ospenovka 7.26 18 P **Pn 07 36 09.9 +1.2**
SNR=10
TKM2 Tokmak 2 7.28 25 P **Pn 07 36 10.0 +0.9**
SNR=176
KDJ Kajisay 7.28 37 PN **Pn 07 36 10.1 +1.1**
KDJ Kajisay 7.28 37 **Pn 07 36 10.1 +1.1**
KDJ Kajisay 7.28 37 P **Pn 07 36 10.5 +1.4**
TARG Taragay, Kyrgy 7.30 41 PN **Pn 07 36 10.6 +1.0**
TARG Taragay, Kyrgy 7.30 41 **Pn 07 36 10.6 +1.0**
TARG Taragay, Kyrgy 7.30 41 P **Pn 07 36 10.9 +1.3**
SGDS Sogindy 7.47 19 ⇓*i*P **Pn 07 36 11.3 -0.2**
SGDS *e*S **Sn 07 37 33.0 -1.6**
KLP Kalpa 7.51 128 *e*P **Pn 07 36 12.4 +0.1**
KLP *e*S **Sn 07 37 31.2 -4.8**
KLP IAML 07 37 36.9
comp=E,714nm,0.8s
KLP IAML 07 37 37.8
comp=N,934nm,0.6s
KST Kastek 7.51 27 Pg **Pn 07 36 13.3 +1.2**
comp=N,123nm,0.6s
KST Lg Lg 07 37 33.4
comp=N,178nm,1.1s
HRA Herat 7.71 258 **Pn 07 36 14.6 -0.4**
MTBS Maitube 7.76 29 P **Pn 07 36 16.8 +1.3**
comp=N,240nm,1.0s
WUS Wushi 7.78 50 **Pn 07 36 17.8 +2.1**
TNSS Tian-Shan 7.89 31 P **Pn 07 36 18.2 +0.6**
comp=N,18nm,0.7s
TNSS Tian-Shan 7.89 31 *e*PN **Pn 07 36 17.6 0.0**
TNSS Tian-Shan 7.89 31 *e*P **Pn 07 36 17.6 0.0**
KRBS Karabastau 8.00 23 P **Pn 07 36 18.5 -0.1**
comp=N,98nm,0.9s
AAA Alma-Ata 8.02 30 *e*PN **Pn 07 36 19.4 +0.4**
AAA Alma-Ata 8.02 30 *e*P **Pn 07 36 19.4 +0.4**
MDOK Medeo 8.04 31 *e*PN **Pn 07 36 19.7 +0.4**
MDOK Medeo 8.04 31 *e*P **Pn 07 36 19.8 +0.4**
PRZ Przheval'sk 8.15 40 PN **Pn 07 36 22.6 +1.7**
PRZ Przheval'sk 8.15 40 **Pn 07 36 22.6 +1.7**
PRZ Przheval'sk 8.15 40 P **Pn 07 36 22.8 +1.9**
UTK UTTARKASHI 8.18 132 *e*P **Pn 07 36 21.7 +0.4**
UTK *e*S **Sn 07 37 44.5 -7.6**
KUU Kurty 8.39 25 *e*PN **Pn 07 36 24.2 +0.3**
KUU Kurty 8.39 25 *e*P **Pn 07 36 24.2 +0.3**
BKNR BIKANER 8.52 168 *e*P **Pn 07 36 24.9 -0.9**
BKNR *e*S **Sn 07 37 54.0 -6.2**
SATY Saty 8.57 37 *d i*PN **Pn 07 36 26.7 +0.2**
SATY Saty 8.57 37 ⇓*i*P **Pn 07 36 26.8 +0.2**
BTLS Baital 8.86 12 P **Pn 07 36 29.5 -0.8**
comp=N,15nm,0.4s
BTLS Baital 8.86 12 *e*PN **Pn 07 36 30.0 -0.2**
BTLS Baital 8.86 12 *e*P **Pn 07 36 30.1 -0.2**
UZB Uzynbulak 8.95 39 P **Pn 07 36 32.4 +0.8**
comp=N,51nm,0.6s
UZB Uzynbulak 8.95 39 *e*PN **Pn 07 36 31.8 +0.2**
UZB Uzynbulak 8.95 39 *e*P **Pn 07 36 31.9 +0.3**
JOSI Joshimath 8.99 128 *e*P **Pn 07 36 31.5 -0.9**
JOSI IAmb IAmb 07 36 38.6
comp=Z,162nm,0.5s
JOSI *ex* x 07 37 59.7
JOSI *e*S **Sn 07 38 04.4 -7.6**
JOSI IAML 07 38 07.4
comp=N,452nm,0.6s
JOSI IAML 07 38 09.3
comp=E,624nm,0.8s
NDI New Delhi 9.15 146 *e*P **Pn 07 36 32.4 -1.9**
NPLP NPLP New Delhi 9.16 146 *e*P **Pn 07 36 32.7 -1.9**
NPLP *e*S **Sn 07 38 08.7 -7.1**
SHLS Shalkode 9.18 40 *e*P **Pn 07 36 38.0 +3.3**
SHLS Shalkode 9.18 40 *e*P **Pn 07 36 38.1 +3.3**
ARXS Arharly 9.22 30 P **Pn 07 36 34.8 -0.5**
comp=E,70nm,0.7s
AYAN Aya Nagar 9.28 147 *e*P **Pn 07 36 33.8 -2.3**
KUDL Kundal 9.31 151 *e*P **Pn 07 36 34.7 -1.8**
KUDL *e*S **Sn 07 38 13.9 -5.4**
KUDL IAML 07 38 14.8
comp=E,158nm,0.4s
PDGK Podgornoye 9.31 40 ⇓P **Pn 07 36 35.9 -0.7**
comp=E,73nm,0.8s
PDGK Podgornoye 9.31 40 P **Pn 07 36 36.7 +0.1**
PDGK Podgornoye 9.31 40 **Pn 07 36 36.7 +0.1**
BLB Baldybastay 9.41 33 P **Pn 07 36 37.4 -0.5**
comp=E,28nm,1.2s
SONA Sohna 9.46 148 *e*P **Pn 07 36 36.5 -2.0**
JASL Jaisalmer 9.46 182 *e*P **Pn 07 36 36.6 -1.9**
JASL *e*S **Sn 07 38 16.6 -6.5**
UGON Onchagaon 9.79 144 *e*P **Pn 07 36 42.3 -0.7**
UGON *e*S **Sn 07 38 24.6 -6.4**
UGON *e*S 07 38 27.4
PTH Pithoragarh 10.06 130 *e*P **Pn 07 36 45.1 -1.8**
TDK Taldyqorghan 10.11 30 *e*P **Pn 07 36 46.7 -0.5**
TDK Taldyqorghan 10.11 30 *e*P **Pn 07 36 46.7 -0.5**
LGTI Lohaghat 10.13 131 *e*P **Pn 07 36 46.2 -1.5**
LGTI *e*S **Sn 07 38 33.5 -6.0**
LGTI IAML 07 38 36.2
comp=E,96nm,0.3s
AJM Ajmer 10.34 163 *e*P **Pn 07 36 49.0 -1.5**
AJM *ex* Sn 07 38 54.0 +10
AGRA Agra 10.72 147 *e*P **Pn 07 36 55.7 +0.1**
UDPR Udaipur 11.96 170 *e*P **Pn 07 37 10.8 -1.4**
GUNA GUNA 12.79 155 *e*P **Pn 07 37 19.8 -3.5**
GUNA IAmb IAmb 07 37 22.2
comp=Z,105nm,0.5s
GUNA *i* x x 07 37 34.7
GUNA *e*S Sn 07 39 33.8 -10
MAKZ Makanchi 13.07 34 ⇑P **Pn 07 37 25.0 -1.6**
comp=Z,52nm,0.8s
MAKZ Makanchi 13.07 34 P **Pn 07 37 25.7 -0.9**
MAKZ Makanchi 13.07 34 **Pn 07 37 25.7 -0.9**
MAKZ Makanchi 13.07 34 P **Pn 07 37 25.8 -0.8**
BHUJ Bhuj 13.19 187 *e*P **Pn 07 37 26.2 -2.1**
MK31 Makanchi Array 13.20 35 ⇓P **Pn 07 37 27.2 -1.1**
comp=Z,25nm,0.8s,baz=211,slow=10,SNR=125
MK31 Makanchi Array 13.20 35 P **Pn 07 37 27.5 -0.8**
MK31 Makanchi Array 13.20 35 Pn **Pn 07 37 27.5 -0.8**
MKAR Makanchi Array 13.20 35 P **Pn 07 37 28.0 -0.3**
comp=Z,23nm,0.9s,baz=221,slow=11,SNR=86
MKAR ScP **ScP 07 46 14.1 +0.5**
comp=Z,3.9nm,0.9s,baz=274,slow=7.2,SNR=4.7
MKAR Makanchi Array 13.20 35 **Pn 07 37 27.4 -1.0**
BHPL Bhopal 14.13 157 *e*P **Pn 07 37 37.6 -3.0**
BHPL *ex* x 07 40 05.8
ALBI Allahabad 14.23 138 *ex* **Pn 07 37 37.5 -4.3**
ALBI IAmb IAmb 07 37 38.5
comp=Z,132nm,0.7s
WMQ Urumqi 14.51 54 *e*P **Pn 07 37 46.4 +1.0**
WMQ S **Sn 07 40 21.8 -3.6**
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ L L
comp=Z,97nm,24.3s
KURBB Kurchatov Arra 15.12 18 P **Pn 07 37 49.6 -3.2**
comp=Z,8.8nm,0.9s,baz=211,slow=12,SNR=31
KURBB S **Sn 07 40 44.2 +4.4**
comp=Z,7.5nm,1.0s,baz=209,slow=20,SNR=4.2
KURBB Kurchatov Arra 15.12 18 ⇓P **P 07 37 54.9 -0.7**
comp=Z,38nm,0.7s
KURK Kurchatov 15.23 18 ⇓P **Pn 07 37 55.1 +0.9**
comp=Z,10nm,0.8s
KURK Kurchatov 15.23 18 P **Pn 07 37 51.0 -3.3**
KURK Kurchatov 15.23 18 **Pn 07 37 51.0 -3.3**
KURK Kurchatov 15.23 18 P **Pn 07 37 50.8 -3.5**
AB31 Akbulak array 15.31 331 ⇑P **Pn 07 37 52.4 -3.0**
comp=Z,41nm,0.4s,baz=142,slow=12,SNR=921
AB31 ⇑S **Sn 07 40 34.9 -9.4**
comp=Z,31nm,0.6s,baz=150,slow=24,SNR=10
AB31 Akbulak array 15.31 331 *i* P **Pn 07 37 52.3 -3.0**
AB31 Akbulak array 15.31 331 **Pn 07 37 52.3 -3.0**
ABKAR Akbulak array 15.31 331 **Pn 07 37 51.8 -3.5**
EVN Everest 15.55 118 Pn **Pn 07 37 56.3 -2.8**
EVN Everest 15.55 118 P **Pn 07 37 56.6 -2.5**
AKL Akola 16.41 161 *e*P **Pn 07 38 08.2 -1.0**
AKL IAmb IAmb 07 38 10.1
comp=Z,51nm,0.6s
AKL *ex* **Sn 07 41 00.9 -10**
BANOM Banah 16.57 235 P **P 07 38 13.1 +1.2**
NGP Nagpur 16.60 154 *e*P **Pn 07 38 09.2 -2.3**
BVA0 Borovoye Array 16.63 358 P **Pn 07 38 09.4 -2.3**
comp=Z,0.7nm,0.6s,baz=160,slow=12,SNR=56
BVA0 S **Sn 07 41 06.3 -10**
comp=Z,1.6nm,0.7s,baz=161,slow=19,SNR=5.1
BVAR Borovoye Array 16.63 358 P **Pn 07 38 09.8 -1.9**
comp=Z,31nm,0.5s,baz=172,slow=12,SNR=43
BVAR S **Sn 07 41 06.0 -10**
comp=Z,22nm,0.8s,baz=166,slow=24,SNR=6.0
BORK Borovoye 16.65 358 P **Pn 07 38 09.8 -2.1**
BORK Borovoye 16.65 358 **Pn 07 38 09.8 -2.1**
MDH Madha 17.00 234 P **Pn 07 38 16.2 -0.2**
AKTO Aktyubinsk 17.01 330 P **Pn 07 38 15.6 -0.7**
comp=Z,256nm,0.8s,baz=139,slow=12,SNR=75
AKTO S Sn 07 41 14.4 -11
comp=Z,13nm,0.4s,baz=136,slow=21,SNR=2.9
AKTO Aktyubinsk 17.01 330 ⇓P **Pn 07 38 14.3 -2.0**
comp=Z,134nm,0.7s
AKTO ⇓S **Sn 07 41 17.0 -8.3**
comp=Z,58nm,0.8s
MASF Masafi 17.04 234 P **P 07 38 17.7 +0.6**
BLSP Bilaspur 17.08 144 *e*P **Pn 07 38 15.3 -2.1**
BLSP IAmb IAmb 07 38 20.4
comp=Z,94nm,0.8s
WSAR Wadi Sarin 17.13 223 P **P 07 38 18.1 +0.2**
UOSS Minazif 17.31 233 P **Pn 07 38 24.2 +4.0**
UOSS Minazif 17.31 233 P **P 07 38 17.7 -2.2**
HATD Hatta, Dubai 17.44 233 P **Pn 07 38 24.8 +3.0**
WBK Wadi Bani Khal 17.45 221 P **Pn 07 38 24.8 +2.9**
ASHO Ashiyiah 17.59 233 P **Pn 07 38 24.4 +0.8**
JLN Jalan Bani Buh 17.60 219 P **P 07 38 23.1 -0.1**
SMDO Samad 17.60 225 P **Pn 07 38 24.2 +0.4**
HOQ Hoqain 17.62 227 P **Pn 07 38 25.4 +1.4**
NAZ Nazwa, Dubai 17.63 234 P **Pn 07 38 24.0 -0.1**
DGZ Jazzator, Alta 17.68 36 *d i*P **P 07 38 23.7 -0.3**
DGZ pmax pmax
comp=Z,28nm,0.9s
SOHO SOHO 17.68 230 P **Pn 07 38 26.2 +1.6**
BOK Bokaro 17.75 131 *e*P **P 07 38 24.2 -0.5**
BOK *ex* x 07 41 29.3
SHBG Sahibganj 17.84 124 *e*P **P 07 38 24.5 -1.3**
SHBG IAmb IAmb 07 38 25.8
comp=Z,64nm,0.4s
POO Poona 17.94 172 *e*P **Pn 07 38 28.4 +0.5**
POO IAmb IAmb 07 38 31.8
comp=Z,15nm,0.8s
ASUD Al Ashush, Dub 18.10 234 P **Pn 07 38 30.9 +1.2**
JMDO Jabal Madar 18.11 223 P **Pn 07 38 30.9 +1.0**
ALNE Al Ain 18.23 232 P **Pn 07 38 31.3 +0.1**
ARQ Araqi 18.28 229 P **Pn 07 38 33.0 +1.1**
BSY Bisya 18.33 226 P **Pn 07 38 32.0 -0.4**
KAD Karad 19.19 172 *ex* **Pn 07 38 47.8 +5.2**
KAD IAmb IAmb 07 38 50.0
comp=Z,54nm,1.2s
MHTO MHTO 19.31 221 P **Pn 07 38 43.4 -0.6**
MAK Makhachkala 19.46 297 *e*P **P 07 38 44.0 +0.7**
MAK *e*S **S 07 42 18.4 +1.1**
MAK pmax pmax
comp=Z,298nm,1.2s
JRN Qarnain Island 19.56 239 P **P 07 38 43.9 -0.6**
UMZA Um Al Zommool 19.58 230 P **P 07 38 44.8 +0.1**
ZAA0 Zalesovo Array 19.88 24 P **P 07 38 47.3 -0.4**
ZALV Zalesovo Beam 19.88 24 P **P 07 38 48.0 +0.2**
comp=Z,32nm,0.5s,baz=211,slow=11,SNR=84
ZALV S **S 07 42 20.9 -4.6**
comp=Z,5.8nm,0.6s,baz=213,slow=15,SNR=3.5
comp=Z,32nm,0.5s
ZALV Zalesovo Beam 19.88 24 *i* P **P 07 38 48.0 +0.2**
ZALV pmax pmax
comp=Z,32nm,0.5s
ZALV Zalesovo Beam 19.88 24 P **P 07 38 47.7 -0.1**
HYB Hyderabad 19.96 160 *e*P **Pn 07 38 50.3 -1.3**
HYB Hyderabad 19.96 160 *e*P **Pn 07 38 50.4 -1.2**
HYB *e*S **S 07 42 30.6 +3.0**
RAGD RAYAGADA 20.13 145 *e*P Pn 07 38 52.6 -1.0
RAGD IAmb IAmb 07 38 56.3
GHWR Ruwais 20.18 237 P **P 07 38 50.5 -0.8**
MZR Muzera 20.44 234 P **P 07 38 53.4 -0.7**
SNR=9.7
BWNR Bhubaneshwar 20.48 138 *e*P **P 07 38 55.9 +1.4**
BWNR IAmb IAmb 07 38 59.8
comp=Z,67nm,0.8s
SAKB Bahrain 20.59 246 P **P 07 38 54.4 -1.2**
SHL Shillong 20.61 116 P **P 07 38 56.9 +0.9**
SHL Shillong 20.61 116 P **P 07 38 57.4 +1.4**
SNR=26
SHL Shillong 20.61 116 P **P 07 38 56.9 +0.9**
SHL Shillong 20.61 116 *e*P **P 07 38 57.2 +1.2**
SHL IAmb IAmb 07 39 01.8
comp=Z,53nm,0.8s
SLWR Sila 20.93 239 P **P 07 38 58.9 -0.3**
KBD Kabd 21.13 257 P **P 07 39 00.9 -0.5**
GNI Garni 21.20 288 P **P 07 39 01.3 -1.0**
comp=Z,18nm,0.6s,baz=146,slow=15,SNR=26
comp=Z,18nm,0.6s
GNI Garni 21.20 288 *c i*P **P 07 39 04.6 +2.3**
GNI pmax pmax
comp=Z,99nm,1.0s
GNI Garni 21.20 288 P **P 07 39 01.9 -0.4**
GNI Garni 21.20 288 P **P 07 39 04.9 +2.6**
comp=Z,2μmcomp=Z,155nm,1.2s
GNI Garni 21.20 288 P **P 07 39 05.3 +3.0**
VIS Vishakhapatnam 21.41 147 *e*P **P 07 39 07.3 +2.8**
VIS IAmb IAmb 07 39 12.4
comp=Z,34nm,0.8s
SVE Sverdlovsk 21.66 344 *e*P **P 07 39 07.2 +0.4**
SVE *e*S **S 07 43 04.7 +4.6**
SVE pmax pmax
comp=Z,94nm,0.8s
ARTI Arti 21.83 340 P **P 07 39 09.8 +1.2**
comp=Z,178nm,0.9s,baz=154,slow=6.6,SNR=57
comp=Z,178nm,0.9s
ARTI Arti 21.83 340 *d i*P **P 07 39 08.7 +0.2**
ARTI 07 39 40.9
ARTI S **S 07 43 04.6 +1.5**
ARTI SS **SnSn 07 43 48.4 +10**
ARTI pmax pmax
comp=Z,213nm,0.9s
ARTI Arti 21.83 340 P **P 07 39 08.8 +0.2**
HAKT HAKKARI 22.09 281 P **P 07 39 14.6 +2.7**
DIGO Kars 22.25 289 P **P 07 39 16.9 +3.4**
GEVA Gevas 22.55 283 P **P 07 39 15.5 -0.9**
GTA2 Gaotai 22.57 74 *e*P **P 07 39 19.6 +3.0**
GTA2 pP pP 07 39 43.8 +5.3
GTA2 pmax pmax
comp=Z,24nm,1.1s
EPOS Posof 22.79 292 P **P 07 39 20.9 +2.1**
KBZ Khabaz 22.90 297 P **P 07 39 19.8 +0.1**
comp=Z,18nm,0.9s,baz=121,slow=5.4,SNR=22
comp=Z,18nm,0.9s
KBZ Khabaz 22.90 297 *d i*P **P 07 39 20.6 +0.9**
KBZ pmax pmax
comp=Z,32nm,1.1s
GOF Gofitskoye 23.04 301 *c e*P **P 07 39 21.8 +0.8**
SHA1 Shidzhatmaz 23.08 297 *d i*P **P 07 39 22.7 +1.0**
KVAR Kislovodsk Arr 23.08 298 P **P 07 39 21.8 +0.3**
comp=Z,5.5nm,0.7s,baz=103,slow=11,SNR=1.7
comp=Z,5.5nm,0.7s
KIV Kislovodsk 23.09 298 *e*P **P 07 39 22.7 +1.1**
KIV *e*S **S 07 43 25.7 +1.4**
KIV pmax pmax
comp=Z,34nm,1.0s
KIV MLR MLR
comp=Z,55nm,14.0s
KIV Kislovodsk 23.09 298 P **P 07 39 23.1 +1.5**
KIV Kislovodsk 23.09 298 P **P 07 39 21.8 +0.2**
KIV Kislovodsk 23.09 298 P **P 07 39 22.7 +1.1**
comp=Z,684nmcomp=Z,63nm,0.7s
KIV Kislovodsk 23.09 298 P **P 07 39 23.2 +1.5**
BELG Belogornoye 23.14 321 P **P 07 39 22.6 +0.7**
comp=Z,114nm,0.8s,baz=330,slow=0.7,SNR=53
comp=Z,114nm,0.8s
MORE Moreh 23.16 115 P **P 07 39 24.6 +2.2**
GURO Guroymak-BITLI 23.33 284 P **P 07 39 26.3 +2.3**
KNGR Kungurtug, Tuv 23.53 45 *c i*P **P 07 39 27.7 +2.1**
KNGR pmax pmax
comp=Z,27nm,0.9s
DMTO DMTO 23.61 222 P **P 07 39 26.6 +0.2**
WHFO Wadi Hawf 24.10 225 P **P 07 39 30.9 0.0**
SNR=9.4
LABN Labinsk 24.59 299 *e*P **P 07 39 36.5 +1.4**
LABN pmax pmax
comp=Z,123nm,1.2s
ERBR Yeremizino-Bor 24.94 301 *e*P **P 07 39 39.8 +1.5**
ERBR pmax pmax
comp=Z,55nm,0.7s
RAYN Ar Rayn 25.73 247 P **P 07 39 44.5 -1.2**
RAYN pmax pmax
comp=Z,12nm,0.5s
RAYN Ar Rayn 25.73 247 P **P 07 39 45.6 -0.1**
RAYN Ar Rayn 25.73 247 P **P 07 39 44.5 -1.2**
RAYN IAmb IAmb 07 39 50.1
comp=Z,12nm,0.5s
RAYN Ar Rayn 25.73 247 P **P 07 39 45.2 -0.5**
VRH Novokhopyorsk 25.78 314 *e*P **P 07 39 44.2 -1.6**
VRH pmax pmax
comp=Z,30nm,1.0s
TNCH TengChong 25.87 108 ⇑P **P 07 39 48.0 +0.9**
TNCH pP pP 07 40 10.8 -1.3
TNCH sP sP 07 40 27.3 +2.1
TNCH pmax pmax
comp=Z,32nm,0.5s
TNCH pmax pmax
comp=Z,230nm,4.1s
LZDM Lanzhou Array 26.04 81 P **P 07 39 48.2 -0.5**
comp=Z,1.3nm,0.3s,baz=268,slow=10,SNR=3.8
comp=Z,1.3nm,0.3s
LZH Lanzhou 26.14 81 *e*P P 07 39 57.3 +7.9
LZH sP pP 07 40 05.3 -8.9
LZH pmax pmax
comp=Z,25nm,1.2s
ARPR Arapgir-MALATY 26.17 286 P **P 07 39 48.5 -1.3**
ARPR IAmb IAmb 07 40 34.2
comp=Z,29nm,1.1s
KIRV Kirov 26.45 334 P **P 07 39 52.7 +1.0**
comp=Z,82nm,0.7s,baz=128,slow=4.3,SNR=30
KIRV LR LR 07 50 41.6
comp=Z,66nm,21.6s,baz=139,slow=37
comp=Z,82nm,0.7s
KIRV Kirov 26.45 334 *d i*P **P 07 39 53.0 +1.3**
KOD Kodaikanal 26.64 166 *e*P **P 07 39 55.7 +1.5**
KOD IAmb IAmb 07 39 57.7
comp=Z,8.6nm,0.7s
ANN Anapa 26.93 299 *e*P **P 07 39 57.8 +1.5**
ANN pmax pmax
comp=Z,52nm,0.8s
VORD Divnogorie 27.12 313 *e*P **P 07 39 56.2 -1.6**
VORD pmax pmax
comp=Z,20nm,1.0s
GAZ Gaziantep 27.28 282 P **P 07 39 59.6 +0.1**
VSR Storozhevoye 27.28 313 *e*P **P 07 39 58.6 -0.7**
VSR pmax pmax
comp=Z,50nm,0.9s
VORR Voronezh 27.42 314 *e*P **P 07 39 55.7 -4.8**
VORR pmax pmax
comp=Z,131nm,0.6s
CD2 Chengdu 27.44 92 P **P 07 40 05.1 +4.1**
CD2 pP pP 07 40 30.6 +5.0
CD2 pmax pmax
comp=Z,30nm,0.8s
TLY Talaya 27.49 46 LR LR 07 51 56.6
comp=Z,53nm,18.9s,baz=222,slow=38
TLY Talaya 27.49 46 P **P 07 40 00.2 -1.0**
LPSR Galich'ya Gora 27.92 316 *e*P **P 07 40 05.0 0.0**
LPSR pmax pmax
comp=Z,84nm,0.9s
BNN Bunyan 28.13 286 P **P 07 40 06.2 -1.0**
SONM Songino Array 28.15 55 P **P 07 40 07.6 +0.3**
comp=Z,4.1nm,0.8s,baz=258,slow=7.4,SNR=12
comp=Z,4.1nm,0.8s
SONM Songino Array 28.15 55 P **P 07 40 06.9 -0.3**
SNOP Sinop 28.42 293 P **P 07 40 07.9 -1.7**
SNOP IAmb IAmb 07 40 24.9
comp=Z,14nm,0.8s
ULN Ulaanbaatar 28.59 55 *c e*P **P 07 40 12.7 +1.5**
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 28.59 55 P **P 07 40 11.3 +0.1**
ULN Ulaanbaatar 28.59 55 P **P 07 40 12.0 +0.8**
comp=Z,31nm,0.9s
ULN Ulaanbaatar 28.59 55 P **P 07 40 13.3 +2.1**
ASF Jabal al Asfar 28.69 272 LR LR 07 53 15.1
comp=Z,69nm,21.6s,baz=26,slow=39
HMDM Hanimaadhoo 29.54 176 P **P 07 40 20.4 +0.7**
KIRS Kirsehir-Merke 29.59 287 ⇓P **P 07 40 22.7 +2.6**
MMAI Mount Meron Ar 29.65 274 LR LR 07 55 10.3
comp=Z,55nm,20.6s,baz=100,slow=42
BR104 Keskin Array S 29.74 288 P **P 07 40 22.4 +1.0**
comp=Z,3.4nm,0.8s
BR131 Keskin Array S 29.74 288 ⇓*e*P **P 07 40 22.0 +0.5**
BR131 Keskin Array S 29.74 288 P **P 07 40 21.7 +0.2**
BRTR Keskin Array B 29.74 288 P **P 07 40 22.1 +0.7**
comp=Z,2.2nm,0.6s,baz=103,slow=8.6,SNR=9.1
comp=Z,2.2nm,0.6s
BRTR Keskin Array B 29.74 288 *i* P **P 07 40 22.7 +1.2**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 29.74 288 P **P 07 40 21.7 +0.2**
BR106 Keskin Array S 29.75 288 P **P 07 40 23.3 +1.7**
comp=Z,4.7nm,0.8s
BR105 Keskin Array S 29.76 288 P **P 07 40 22.8 +1.2**
comp=Z,4.9nm,0.9s
MOS Moscow 29.92 321 *e*P **P 07 40 24.3 +1.7**
MOS *e**PP **pP 07 40 48.5 +1.4**
MOS *e* 07 41 25.5
MOS *e*S **S 07 45 13.1 +1.2**
MOS *e*SS **SnSn 07 46 55.4 +0.5**
MOS pmax pmax
comp=Z,48nm,0.6s
CHTO Chiang Mai 29.92 118 P **P 07 40 24.2 +1.1**
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 29.92 118 P **P 07 40 24.2 +1.1**
CHTO Chiang Mai 29.92 118 P **P 07 40 24.2 +1.1**
comp=Z,8.4nm,0.9s
CHTO Chiang Mai 29.92 118 P **P 07 40 26.8 +3.8**
CY604 RAF Akrotiri, 30.00 277 P **P 07 40 23.1 -0.3**
CY604 IAmb IAmb 07 41 30.1
comp=Z,50nm,1.7s
CY601 RAF Akrotiri, 30.01 277 P **P 07 40 22.9 -0.4**
CMAR Chiang Mai Arr 30.15 119 P **P 07 40 24.1 -1.0**
comp=Z,0.9nm,0.4s,baz=300,slow=8.2,SNR=17
CMAR ScP **ScP 07 46 53.4 -2.9**
comp=Z,0.5nm,0.3s,baz=304,slow=4.5,SNR=4.6
comp=Z,0.9nm,0.4s
CMAR Chiang Mai Arr 30.15 119 P **P 07 40 27.4 +2.2**
OBN Obninsk 30.20 319 P **P 07 40 26.1 +1.1**
comp=Z,31nm,0.4s,baz=151,slow=3.8,SNR=16
comp=Z,31nm,0.4s
OBN Obninsk 30.20 319 *c i*P **P 07 40 26.0 +0.9**
OBN *e**PP **pP 07 40 50.9 +1.4**
OBN *e**SP **sP 07 41 01.3 -1.0**
OBN *e* 07 41 28.2
OBN *e* 07 43 24.3
OBN pmax pmax
comp=Z,65nm,0.9s
OBN Obninsk 30.20 319 P **P 07 40 26.0 +0.9**
OBN Obninsk 30.20 319 P **P 07 40 26.0 +0.9**
comp=Z,726nmcomp=Z,70nm,1.5s
OBN Obninsk 30.20 319 P **P 07 40 26.3 +1.2**
PALK Pallekele 30.23 161 LR LR 07 52 58.6
comp=Z,199nm,19.5s,baz=88,slow=37

PALK **Pallekele** 30.23 161 P **P** 07 40 25.2 -0.6
PALK pmax pmax
comp=Z,60nm,1.6s
PALK **Pallekele** 30.23 161 P **P** 07 40 25.2 -0.6
BTO2 **Baotou** 30.25 70 *e*P **P** 07 40 28.8 +2.8
BTO2 pP **pP** 07 40 52.9 +1.6
BTO2 sP **sP** 07 41 06.3 +1.9
BTO2 pmax pmax
comp=Z,27nm,1.1s
BTO2 pmax pmax
comp=Z,200nm,9.0s
XAN Xi'an 30.65 83 P P 07 40 35.0 +5.6
XAN pP pP 07 40 54.6 +0.3
XAN pmax pmax
comp=Z,10.0nm,0.7s
CSS Mathiatis 30.80 279 P **P** 07 40 31.1 +0.4
CSS IAmb IAmb 07 40 46.4
comp=Z,14nm,1.1s
EIL Elat 31.12 268 P **P** 07 40 32.7 -0.9
comp=Z,8.2nm,0.6s,baz=89,slow=3.6,SNR=4.0
EIL LR LR 07 56 20.0
comp=Z,112nm,18.2s,baz=110,slow=42
comp=Z,8.2nm,0.6s
HHC Hu-ho-hao-te 31.52 69 *e*P **P** 07 40 40.4 +3.3
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,31nm,4.3s
KLMR Klimovskoe 31.70 331 *e*P **P** 07 40 37.3 -1.0
KLMR *e**SP **sP** 07 41 15.5 0.0
KLMR pmax pmax
comp=Z,54nm,0.9s
SLVN Son La 32.03 109 P **P** 07 40 43.5 +1.8
ELL Elmali 33.10 283 P **P** 07 40 51.0 0.0
ELL pmax pmax
comp=Z,16nm,0.7s
ELL Elmali 33.10 283 P **P** 07 40 51.0 0.0
ELL IAmb IAmb 07 40 53.6
comp=Z,16nm,0.7s
AK09 Malin Array Si 33.18 309 P **P** 07 40 51.8 +0.5
AK10 Malin Array Si 33.20 309 P **P** 07 40 51.8 +0.3
AK10 pP **pP** 07 41 16.8 +0.4
AK08 Malin Array Si 33.20 309 P **P** 07 40 51.8 +0.3
AK07 Malin Array Si 33.22 309 P **P** 07 40 52.5 +0.8
AK05 Malin Array Si 33.23 309 P **P** 07 40 52.2 +0.4
AKASG Malin Array Be 33.23 309 P **P** 07 40 52.0 +0.3
comp=Z,9.1nm,0.6s,baz=89,slow=7.2,SNR=46
AKASG LR LR 07 57 27.7
comp=Z,66nm,18.2s,baz=70,slow=42
comp=Z,9.1nm,0.6s
AKBB Malin Array Si 33.23 309 P **P** 07 40 52.2 +0.5
AKBB pmax pmax
comp=Z,78nm,1.4s
AKBB Malin Array Si 33.23 309 P **P** 07 40 52.2 +0.5
KIEV Kiev 33.24 309 P **P** 07 40 52.4 +0.6
KIEV Kiev 33.24 309 **P** 07 40 52.4 +0.6
KIEV Kiev 33.24 309 P **P** 07 40 52.0 +0.2
comp=Z,153nm,1.5s
KIEV Kiev 33.24 309 P **P** 07 40 52.3 +0.6
KIEV Kiev 33.24 309 P **P** 07 40 51.9 0.0
KIEV PcP **PcP** 07 43 31.4 -0.3
TPGR Topolog 33.34 298 ⇓P **P** 07 40 55.0 +2.2
SORM Soroca 33.50 304 ⇓P **P** 07 40 55.4 +1.3
SORM Soroca 33.50 304 P **P** 07 40 55.4 +1.3
SORM Soroca 33.50 304 P **P** 07 40 55.1 +1.0
comp=Z,35nm,0.9s
CFR Carcaliu 33.54 299 ⇑P **P** 07 40 56.4 +1.9
CFR Carcaliu 33.54 299 P **P** 07 40 56.3 +1.9
LUBAR Lubar, Ukraine 34.06 307 P **P** 07 40 58.9 0.0
LUBAR pP **pP** 07 41 23.6 -0.3
NRIK Noril'sk 34.17 10 P **P** 07 41 01.4 +1.8
comp=Z,38nm,0.8s,baz=200,slow=5.7,SNR=31
NRIK LR LR 07 56 10.2
comp=Z,36nm,19.8s,baz=202,slow=38
comp=Z,38nm,0.8s
NRIK Noril'sk 34.17 10 P **P** 07 41 01.1 +1.5
MI28 Mi28,Pidlybu 34.24 309 P **P** 07 41 00.0 -0.5
VRI Vrincioaia 34.53 300 ⇓P **P** 07 41 04.9 +1.8
VRI Vrincioaia 34.53 300 P **P** 07 41 04.3 +1.8
VRI Vrincioaia 34.53 300 P **P** 07 41 06.3 +3.2
PLOR Plostina 34.58 300 ⇑P **P** 07 41 05.9 +2.3
PLOR Plostina 34.58 300 P **P** 07 41 05.9 +2.3
TESR Tescani 34.58 301 ⇓P **P** 07 41 05.2 +1.7
TESR Tescani 34.58 301 P **P** 07 41 05.4 +1.9
comp=Z,30nm,0.9s
ARG Arkhangelos 34.62 283 P **P** 07 41 03.5 -0.5
ARG pmax pmax
comp=Z,66nm,1.3s
ARG Arkhangelos 34.62 283 P **P** 07 41 03.5 -0.5
ISR Istrita 34.67 299 ⇓P **P** 07 41 06.5 +2.1
ISR Istrita 34.67 299 P **P** 07 41 06.4 +2.1
ONER Baraj Valea Uz 34.76 301 ⇓P **P** 07 41 06.7 +1.6
MNK Minsk 34.77 315 *i* P **P** 07 41 06.1 +1.1
comp=E,9.0nm,0.7s
MNK *i* P **P** 07 41 06.1 +1.1
comp=N,55nm,1.0s
MNK *i* P **P** 07 41 06.1 +1.1
comp=Z,60nm,1.0s,baz=103
MNK *i* pP **pP** 07 41 30.7 +0.5
MNK *i* sP **sP** 07 41 43.6 +0.6
MNK *i* PP **PP** 07 42 26.2 +0.5
MNK *i* S **S** 07 46 29.6 +2.3
MNK *i* sS **ScP** 07 47 13.0 +1.5
MNK *i* SS **SnSn** 07 48 53.1 +0.8
MNK *i* LR LR 07 55 30.3
MNK Minsk 34.77 315 *i* P **P** 07 41 06.1 +1.1
MNK *i* *PP **pP** 07 41 30.7 +0.5
MNK *i* *SP **sP** 07 41 43.6 +0.6
MNK *i* 07 42 26.2
MNK *i* S **S** 07 46 29.6 +2.3
MNK *i* *SS **ScP** 07 47 13.0 +1.5
MNK *i* SS **SnSn** 07 48 53.1 +0.8
MNK pmax pmax
comp=Z,60nm,1.0s
MNK pmax pmax
comp=N,55nm,1.0s
MNK pmax pmax
comp=E,9.0nm,0.7s
KMPD K-Podol'skiy 34.79 305 P **P** 07 41 05.2 0.0
COVR Voineasa-Covas 34.89 300 ⇑P **P** 07 41 08.4 +2.2
BIZ Bicaz 34.96 302 ⇑P **P** 07 41 09.2 +2.3
MLR Muntele Rosu 35.08 299 P **P** 07 41 08.8 +0.8
comp=E,37nm,0.8s,baz=113,slow=2.8,SNR=32
MLR LR LR 08 00 19.4
comp=E,48nm,18.5s,baz=82,slow=44
comp=E,37nm,0.8s
MLR Muntele Rosu 35.08 299 ⇑P **P** 07 41 10.7 +2.7
MLR Muntele Rosu 35.08 299 P **P** 07 41 10.6 +2.7
MLR Muntele Rosu 35.08 299 P **P** 07 41 08.7 +0.8
RNP5 Staryi Chortor 35.39 309 P **P** 07 41 11.1 +0.7
RNP8 Varash 35.43 309 P **P** 07 41 11.4 +0.7
DOPR Dopca 35.46 300 ⇓P **P** 07 41 13.5 +2.4
NACGM Naroch 35.48 316 *e*P **P** 07 41 12.4 +1.3
comp=Z,104nm,0.9s,baz=103
BURAR Bucovina Array 35.58 303 ⇓P **P** 07 41 13.6 +1.4
BURAR Bucovina Array 35.58 303 P **P** 07 41 13.5 +1.4
BURAR Bucovina Array 35.58 303 P **P** 07 41 13.1 +0.9
BURAR IAmb IAmb 07 41 15.4
comp=Z,15nm,0.8s
BUR08 Bucovina Ar. S 35.59 303 P **P** 07 41 12.9 +0.6
BUR08 IAmb IAmb 07 41 15.3
comp=Z,11nm,0.9s
VOIR 35.71 299 ⇓P **P** 07 41 15.8 +2.4
VOIR 35.71 299 P **P** 07 41 15.7 +2.4
VOIR 35.71 299 P **P** 07 41 14.8 +1.5
comp=Z,12nm,0.9s
ARR Arges 36.01 299 ⇓P **P** 07 41 17.8 +1.9
JOF Joensuu 36.09 330 *e*P **P** 07 41 17.6 +1.3
VSU Vasula 36.44 322 *c i*P **P** 07 41 18.9 -0.3
VSU pmax pmax
comp=Z,62nm,0.8s
VSU Vasula 36.44 322 *e*P **P** 07 41 18.7 -0.5
LOT Lotru 36.61 299 ⇓P **P** 07 41 23.2 +2.2
MARR Marisel-Cluj 37.02 301 ⇓P **P** 07 41 26.5 +2.1
ARBE Arbavere 37.10 323 *e*P **P** 07 41 25.5 +0.7
PABE Paberze 37.19 316 **P** 07 41 26.6 +1.0
PABE Paberze 37.19 316 *e*P **P** 07 41 26.1 +0.5
DRGR 37.29 302 ⇓P **P** 07 41 29.1 +2.4
DRGR 37.29 302 P **P** 07 41 29.1 +2.4
KWP Kalwaria Pacla 37.30 306 P **P** 07 41 28.9 +2.2
comp=Z,793nmcomp=Z,66nm,1.6s
GZR Gura Zlata 37.31 299 ⇓P **P** 07 41 28.3 +1.4
GZR Gura Zlata 37.31 299 P **P** 07 41 28.3 +1.4

SUW Suwalki 37.39 314 P **P** 07 41 27.9 +0.5
SUW Suwalki 37.39 314 P **P** 07 41 27.9 +0.5
KOLS Kolonicke sedl 37.57 305 *e*P **P** 07 41 31.1 +2.2
KOLS pmax pmax
comp=Z,23nm,0.9s
KOLS Kolonicke sedl 37.57 305 *e*P **P** 07 41 31.1 +2.2
LVZ Lovozero 37.65 338 P **P** 07 41 30.5 +1.1
LVZ pmax pmax
comp=Z,34nm,0.8s
LVZ Lovozero 37.65 338 P **P** 07 41 30.5 +1.1
LVZ Lovozero 37.65 338 P **P** 07 41 30.5 +1.1
comp=Z,55nm,1.3s
LVZ Lovozero 37.65 338 P **P** 07 41 30.1 +0.7
LVZ x x 07 41 57.9
FIA1 FINESS Array S 37.72 326 P **P** 07 41 31.0 +1.0
FINES FINESS Array B 37.72 326 P **P** 07 41 31.0 +0.9
comp=Z,24nm,0.8s,baz=107,slow=10,SNR=63
FINES LR LR 07 58 25.5
comp=Z,62nm,20.1s,baz=86,slow=38
comp=Z,24nm,0.8s
FINES FINESS Array B 37.72 326 *i* P **P** 07 41 31.2 +1.2
FINES pmax pmax
comp=Z,24nm,0.8s
FINES FINESS Array B 37.72 326 P **P** 07 41 30.8 +0.8
APA Apatity 37.83 337 ⇓*e*P **P** 07 41 29.0 -1.9
APA *e**PP **pP** 07 41 55.8 -0.4
APA *e* 07 42 58.7
APA *e* 07 43 46.7
APA *e*S **S** 07 47 08.7 -5.0
APA *e*SS **SS** 07 49 56.1 -7.6
APA pmax pmax
comp=Z,12nm,1.1s
APA MLR MLR
comp=Z,185nm,22.2s
MTSE Matsula 37.98 321 *e*P **P** 07 41 32.9 +0.7
SIRR Siria 38.04 301 ⇑P **P** 07 41 35.2 +2.2
MEF Metsahovi 38.11 324 *e*P **P** 07 41 34.0 +0.7
MDVR Moldovita 38.11 298 ⇓P **P** 07 41 35.9 +2.3
BZS Buzias 38.11 300 ⇓P **P** 07 41 35.8 +2.3
BZS Buzias 38.11 300 P **P** 07 41 35.8 +2.3
SUF Sumiainen 38.16 328 *e*P **P** 07 41 34.8 +1.2
STHS Stebnicka Huta 38.25 306 *e*P **P** 07 41 35.0 +0.3
STHS pmax pmax
comp=Z,2.0nm,0.5s
STHS Stebnicka Huta 38.25 306 *e*P **P** 07 41 35.0 +0.3
KEF Keuruu 38.51 327 *e*P **P** 07 41 37.5 +0.9
SLIT Slitere, Latvi 38.51 319 *e*P **P** 07 41 36.7 0.0
NIE Niedzica 38.87 306 *e*P **P** 07 41 41.2 +1.3
NIE Niedzica 38.87 306 P **P** 07 41 42.0 +2.2
comp=Z,232nmcomp=Z,21nm,1.0s
PSZ Piszkesteto 39.17 304 IAmb IAmb 07 41 45.2
comp=Z,14nm,1.1s
OJC Ojcow 39.19 307 *e*P **P** 07 41 43.0 +0.4
OJC Ojcow 39.19 307 P **P** 07 41 43.4 +0.9
OJC Ojcow 39.19 307 P **P** 07 41 43.4 +0.9
OJC Ojcow 39.19 307 P **P** 07 41 43.8 +1.3
comp=Z,36nm,1.2s
NJ2 Nanjing 39.20 82 *e*P **P** 07 41 43.3 +0.5
NJ2 pmax pmax
comp=Z,26nm,0.5s
LANS Liptovska Anna 39.41 306 *e*P **P** 07 41 46.8 +2.4
LANS pmax pmax
comp=Z,2.0nm,0.6s
LANS Liptovska Anna 39.41 306 *e*P **P** 07 41 46.8 +2.4
RAF Rauma 39.58 324 *e*P **P** 07 41 45.8 +0.3
VAF Ylistaro 39.76 328 *e*P **P** 07 41 48.0 +0.9
MORH Mrgy, Hungar 40.13 301 ⇓P **P** 07 41 52.4 +2.0
MORH Mrgy, Hungar 40.13 301 P **P** 07 41 52.3 +2.0
comp=Z,10nm,1.6s
AAL Aland 40.22 323 *e*P **P** 07 41 50.7 -0.1
SRO Srobarova 40.23 303 *e*P **P** 07 41 53.6 +2.5
SRO pmax pmax
comp=Z,9.0nm,0.4s
SRO Srobarova 40.23 303 *e*P **P** 07 41 53.6 +2.5
VADS Vadso 40.50 339 *e*P **P** 07 41 54.4 +1.3
VADS IAmb IAmb 07 41 55.1
comp=Z,41nm,0.8s
JAVC Velka Javorina 40.61 305 *e*P **P** 07 41 57.3 +3.0
MORC Moravsky Berou 40.65 307 ⇑P **P** 07 41 56.5 +1.9
MORC Moravsky Berou 40.65 307 P **P** 07 41 56.5 +1.9
MORC Moravsky Berou 40.65 307 IAmb IAmb 07 41 57.9
comp=Z,22nm,1.0s
MORC Moravsky Berou 40.65 307 *e*P **P** 07 41 56.4 +1.8
MORC *e* 07 43 27.7
SMOL Smolenice 40.78 305 *e*P **P** 07 41 59.2 +3.5
SMOL pmax pmax
comp=Z,3.0nm,0.7s
MODS Modra-Piesok 40.89 304 *e*P **P** 07 41 59.3 +2.7
MODS pmax pmax
comp=Z,31nm,1.2s
MODS Modra-Piesok 40.89 304 *e*P **P** 07 41 59.3 +2.7
MODS *e*PP **PP** 07 43 33.5 +0.7
KEV Kevo 41.00 338 P **P** 07 41 58.2 +1.1
KEV pmax pmax
comp=Z,25nm,0.9s
KEV Kevo 41.00 338 P **P** 07 41 58.2 +1.1
KEV IAmb IAmb 07 41 59.2
comp=Z,25nm,0.9s
KEV Kevo 41.00 338 P **P** 07 41 57.7 +0.7
KRLC Kraliky 41.13 307 *e*P **P** 07 41 58.9 +0.3
KRLC Kraliky 41.13 307 *e*P **P** 07 41 58.9 +0.3
VRAC Vranov 41.29 306 ⇓P **P** 07 42 01.8 +1.9
VRAC Vranov 41.29 306 P **P** 07 42 01.7 +1.9
VRAC Vranov 41.29 306 *e*P **P** 07 42 02.3 +2.5
BLY Banja Luka 41.32 299 P **P** 07 42 00.5 +0.4
UPP Uppsala 41.33 322 *e*P **P** 07 42 00.3 +0.4
ARA0 ARCESS Array S 41.34 338 *e*P **P** 07 42 01.2 +1.2
ARA0 IAmb IAmb 07 42 02.0
comp=Z,53nm,0.9s
ARCES ARCESS Array B 41.34 338 P **P** 07 42 01.1 +1.2
comp=Z,32nm,0.8s,baz=116,slow=8.2,SNR=96
ARCES LR LR 08 00 19.4
comp=Z,106nm,20.6s,baz=106,slow=38
comp=Z,32nm,0.8s
ARCES ARCESS Array B 41.34 338 P **P** 07 42 01.0 +1.0
CN2 Changchun 41.39 62 *e*P **P** 07 42 01.9 +1.2
CN2 *e*pP pP 07 42 27.0 -0.1
CN2 *e*S **S** 07 48 07.5 +0.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
BEHE Becsehely 41.40 302 P **P** 07 41 59.7 -1.1
BEHE IAmb IAmb 07 42 51.2
comp=Z,7.6nm,0.6s
DPC Dobruska-Polom 41.42 307 *e*P **P** 07 42 01.9 +1.0
DPC Dobruska-Polom 41.42 307 *e*P **P** 07 42 01.9 +1.0
DPC Dobruska-Polom 41.42 307 P **P** 07 42 02.8 +1.9
comp=Z,263nmcomp=Z,23nm,1.1s
KSP Ksiaz 41.42 308 P **P** 07 42 02.6 +1.7
comp=Z,14nm,1.4s
KRUC Moravsky 41.43 306 *e*P **P** 07 42 03.3 +2.3
CHVC Chvalec 41.58 308 *e*P **P** 07 42 03.9 +1.7
CHVC Chvalec 41.58 308 *e*P **P** 07 42 03.9 +1.7
RONA Rosalia, Austr 41.60 303 *e*P **P** 07 42 03.2 +0.7
comp=Z,8.8nm,0.9s
RONA *e*P **PP** 07 43 43.3 +2.8
comp=Z,7.3nm,0.9s
UPC Upice 41.61 308 *e*P **P** 07 42 04.6 +2.2
UPC Upice 41.61 308 *e*P **P** 07 42 04.6 +2.2
WINA Alland / Wiene 41.72 304 *e*P **P** 07 42 05.5 +2.2
comp=Z,21nm,1.6s
KTK1 Kautokeino 41.82 336 *e*P **P** 07 42 04.6 +0.8
KTK1 IAmb IAmb 07 42 05.4
comp=Z,40nm,0.8s
LANU Lannavaara 41.83 335 *e*P **P** 07 42 04.9 +0.9
BLEU Blekinge 41.84 316 *i* P **P** 07 42 03.9 -0.3
CONA Conrad Observa 41.87 304 *i* P **P** 07 42 05.6 +0.9
comp=Z,16nm,0.9s,SNR=14
ARSA Arzberg 42.17 303 P **P** 07 42 05.8 -1.3
ARSA Arzberg 42.17 303 *e*P **P** 07 42 08.6 +1.6
comp=Z,8.2nm,1.1s
ARSA *e*PP **PP** 07 43 48.3 +1.8
comp=Z,6.0nm,1.0s
BSD Bornholm Skovb 42.28 315 *e*P **P** 07 42 07.1 -0.6
BSD Bornholm Skovb 42.28 315 *i* P **P** 07 42 06.5 -1.2
BSD IAmb IAmb 07 42 08.7
comp=Z,23nm,1.1s
HAMF Hammerfest 42.42 339 *e*P **P** 07 42 10.1 +1.4
HAMF IAmb IAmb 07 42 10.9
comp=Z,70nm,0.8s
GSI Gunungsitoli 42.53 139 P **P** 07 42 11.2 +0.9
SOKA Soboth 42.57 302 *i* P **P** 07 42 11.5 +1.1
comp=Z,14nm,0.8s,SNR=8.8

CKRC Cesky Krumlov 42.82 305 *e*P **P** 07 42 13.7 +1.4
CKRC Cesky Krumlov 42.82 305 *e*P **P** 07 42 13.7 +1.4
SESA Seetaler Alpe, 42.83 303 *i* P **P** 07 42 14.8 +2.2
SNR=7.3
SESA *e*PP **PP** 07 43 57.6 +3.7
comp=Z,29nm,1.2s
ZVC Zvikov 42.85 306 *e*P **P** 07 42 13.8 +1.3
BRG Berggiesshubel 42.91 308 *e*P **P** 07 42 14.6 +1.6
comp=Z,21nm,1.0s,baz=84,slow=7.9
BRG Berggiesshubel 42.91 308 *e*P **P** 07 42 15.2 +2.3
BRG Amp 07 42 15.7
comp=Z,21nm,1.0s
BRG pP **pP** 07 42 41.5 +2.6
BRG Amp 07 42 42.8
comp=Z,5.6nm,0.9s
DEL Delary 42.93 317 *i* P **P** 07 42 13.3 +0.3
DEL IAmb IAmb 07 42 14.3
comp=Z,42nm,1.4s
MOA Molln 42.95 304 *i* P **P** 07 42 14.1 +0.7
comp=Z,14nm,1.1s,SNR=6.4
JETT Jettan, Norway 42.96 336 *e*P **P** 07 42 14.3 +1.1
JETT IAmb IAmb 07 42 15.0
comp=Z,37nm,0.9s
LUNU Lund 43.14 315 *i* P **P** 07 42 15.1 +0.4
GEC2 GERESS Array S 43.22 305 P **P** 07 42 16.2 +0.6
GEC2 GERESS Array S 43.22 305 *e*P **P** 07 42 17.0 +1.3
comp=Z,7.9nm,1.2s,baz=84,slow=7.9
GERES GERESS Array B 43.22 305 P **P** 07 42 16.9 +1.3
comp=Z,1.2nm,0.7s,baz=95,slow=5.9,SNR=9.2
GERES PP **PP** 07 43 53.5 -4.4
comp=Z,3.8nm,1.0s,baz=90,slow=8.0,SNR=5.2
comp=Z,1.2nm,0.7s
GERES GERESS Array B 43.22 305 P **P** 07 42 16.3 +0.6
KHC Kasperske Hory 43.27 306 ⇓*i* P **P** 07 42 17.4 +1.4
KHC pmax pmax
comp=Z,13nm,1.6s
KHC Kasperske Hory 43.27 306 P **P** 07 42 16.6 +0.6
KHC IAmb IAmb 07 42 18.3
comp=Z,21nm,1.6s
KHC Kasperske Hory 43.27 306 P **P** 07 42 17.4 +1.4
comp=Z,7.6nm,1.9s
HFS Hagfors 43.32 322 P **P** 07 42 16.7 +0.6
comp=Z,26nm,0.7s,baz=98,slow=9.1,SNR=59
comp=Z,26nm,0.7s
BJUU Bjuv 43.39 316 *i* P **P** 07 42 17.4 +0.7
TRO Tromso 43.47 336 *e*P **P** 07 42 17.9 +0.8
TRO IAmb IAmb 07 42 20.2
comp=Z,29nm,1.0s
MSEY Mahe Island 43.49 203 P **P** 07 42 18.6 +0.6
MSEY pmax pmax
comp=Z,56nm,1.1s
MSEY Mahe Island 43.49 203 P **P** 07 42 18.6 +0.6
MYKA Terra Mystica 43.52 302 *e*P **P** 07 42 19.1 +1.1
comp=Z,5.3nm,0.7s
FABU Falkenberg 43.59 317 *i* P **P** 07 42 18.6 +0.3
PRED Cave del Predi 43.60 302 P **P** 07 42 19.2 +0.5
WET Wettzell 43.73 306 *e*P **P** 07 42 20.9 +1.3
comp=Z,29nm,2.1s,baz=84,slow=7.9
LLD Lille Linde 43.83 315 *i* P **P** 07 42 21.5 +1.3
LLD IAmb IAmb 07 42 25.0
comp=Z,93nm,1.0s
TANN Tannenbergstha 43.88 308 *e*P **P** 07 42 22.3 +1.5
comp=Z,28nm,1.5s,baz=84,slow=7.9
RJOB Jochberg 43.95 304 *e*P **P** 07 42 24.4 +3.0
comp=Z,5.2nm,0.8s,baz=84,slow=7.9
FAUS Fauske 44.02 332 *e*P **P** 07 42 22.5 +0.9
FAUS IAmb IAmb 07 42 23.3
comp=Z,73nm,1.0s
ONAU Onsala 44.04 318 *i* P **P** 07 42 21.4 -0.5
MOR8 Moi Rana 44.04 331 *e*P **P** 07 42 21.9 +0.1
MOR8 IAmb IAmb 07 42 22.7
comp=Z,92nm,0.9s
LESA Schwarzleotal 44.07 303 *e*P **P** 07 42 22.8 +0.4
comp=Z,3.7nm,0.4s
PLN Plauen 44.07 308 *e*P **P** 07 42 23.7 +1.5
comp=Z,5.6nm,1.2s,baz=84,slow=7.9
ROTZ Rotzenmuhle 44.10 307 *e*P **P** 07 42 24.4 +1.9
comp=Z,7.3nm,1.5s,baz=84,slow=7.9
STEI Steigen 44.19 333 *e*P **P** 07 42 23.7 +0.8
STEI IAmb IAmb 07 42 24.6
comp=Z,35nm,1.0s
STAL STALIGIAL 44.21 302 P **P** 07 42 23.5 0.0
STAL IAmb IAmb 07 42 25.6
comp=Z,9.9nm,0.8s
NEUB Neuenburg 44.25 309 *e*P **P** 07 42 25.0 +1.3
comp=Z,24nm,0.9s,baz=84,slow=7.9
RAUS Rausandaksla 44.26 331 *e*P **P** 07 42 24.5 +1.0
RAUS IAmb IAmb 07 42 25.8
comp=Z,49nm,1.1s
ABTA Abfaltersbach 44.27 303 *e*P **P** 07 42 25.1 +1.1
comp=Z,3.4nm,0.7s
NC405 NORSAR Array S 44.39 323 P **P** 07 42 25.1 +0.4
MOX Moxa 44.40 308 *e*P **P** 07 42 26.6 +1.7
comp=Z,16nm,1.1s,baz=84,slow=7.9
MOX *e*L L 08 04 59.1
comp=Z,30nm,21.0s
GORT1 Trebel 44.42 312 *e*P **P** 07 42 26.5 +1.6
comp=Z,40nm,1.2s,baz=84,slow=7.9
NC602 NORSAR Array S 44.44 323 *e*P **P** 07 42 25.2 +0.2
NC602 IAmb IAmb 07 42 26.0
comp=Z,39nm,1.1s
NC602 NORSAR Array S 44.44 323 P **P** 07 42 25.0 -0.1
STRU Stroemstad 44.50 320 *i* P **P** 07 42 25.2 -0.3
FLTG Flechtingen 44.51 311 *e*P **P** 07 42 26.6 +1.0
comp=Z,32nm,0.9s,baz=84,slow=7.9
LEIR Leirfjorden 44.55 330 *e*P **P** 07 42 26.5 +0.7
LEIR IAmb IAmb 07 42 27.4
comp=Z,41nm,1.0s
NC303 NORSAR Array S 44.57 323 P **P** 07 42 26.8 +0.7
KS19 Wonju Array Si 44.58 71 P **P** 07 42 25.9 -0.6
NB201 NORSAR Array S 44.59 323 P **P** 07 42 26.5 +0.2
KSAR Wonju Array Be 44.61 71 P **P** 07 42 28.5 +1.8
KSAR Wonju Array Be 44.61 71 P **P** 07 42 28.5 +1.8
VAGH Vaagaholmen 44.63 331 *e*P **P** 07 42 26.9 +0.5
VAGH IAmb IAmb 07 42 28.9
comp=Z,52nm,1.2s
NB2 NORSAR Subarra 44.63 323 P **P** 07 42 26.4 -0.2
comp=Z,52nm,1.0s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.63 323 P **P** 07 42 26.4 -0.2
NOA NORSAR Array B 44.63 323 P **P** 07 42 26.8 +0.2
comp=Z,25nm,0.8s,baz=96,slow=7.8,SNR=97
comp=Z,25nm,0.8s
KONS Konsvik 44.63 331 *e*P **P** 07 42 27.0 +0.6
KONS IAmb IAmb 07 42 28.0
comp=Z,27nm,1.0s
KSRS Korea Array 44.63 71 P **P** 07 42 27.8 +0.9
comp=Z,7.9nm,1.1s,baz=285,slow=8.0,SNR=7.1
KSRS LR LR 08 02 34.7
comp=Z,22nm,18.5s,baz=250,slow=38
comp=Z,7.9nm,1.1s
STOK Stokkvaagen 44.64 331 *e*P **P** 07 42 27.0 +0.5
NSS Namsos 44.73 328 *e*P **P** 07 42 27.8 +0.5
NSS IAmb IAmb 07 42 28.2
comp=Z,19nm,1.0s
GRF Grafenberg Arr 44.75 307 *e*P **P** 07 42 30.1 +2.4
comp=Z,67nm,1.7s,baz=84,slow=7.9
GRF *e*L L 07 58 49.0
comp=Z,40nm,21.1s
NAO01 NORSAR Array S 44.77 323 P **P** 07 42 27.7 0.0
OSL Oslo 44.79 321 *e*P **P** 07 42 28.2 +0.4
WTTA Wattenberg 44.79 303 *e*P **P** 07 42 28.2 0.0
comp=Z,12nm,1.1s
WTTA *e*PP **PP** 07 44 16.2 +1.5
comp=Z,17nm,1.0s
WATA Walderalm 44.82 304 *e*P **P** 07 42 29.4 +0.9
comp=Z,6.1nm,0.7s
WATA *e*PP **PP** 07 44 16.5 +1.5
comp=Z,8.8nm,0.5s
NBO00 NORSAR Array S 44.84 323 P **P** 07 42 28.0 -0.3
LOF Lofoten 44.86 333 *e*P **P** 07 42 29.2 +1.0
LOF IAmb IAmb 07 42 29.2
comp=Z,32nm,1.1s
MURB Monte Urbino 44.89 298 P **P** 07 42 29.6 +0.7
BSEG Bad Segeberg 44.97 313 *e*P **P** 07 42 30.9 +1.6
comp=Z,7.8nm,0.8s,baz=84,slow=7.9
CTI Castel Tesino 44.98 302 IAmb IAmb 07 42 33.1
comp=Z,9.2nm,0.8s
CLZ Clausthal 45.08 310 *e*P **P** 07 42 31.9 +1.6
comp=Z,32nm,1.4s,baz=84,slow=7.9
SQTA Sankt Quirin 45.09 303 *e*P **P** 07 42 31.8 +1.3
comp=Z,3.6nm,0.5s
SQTA *e*PP **PP** 07 44 19.1 +1.4
comp=Z,1.8nm,0.5s
MOTA Moosalm 45.14 304 *e*P **P** 07 42 31.7 +0.7
comp=Z,6.2nm,0.7s
MOTA *e*PP **PP** 07 44 17.8 -0.5

comp=Z,4.1nm,0.6s
KONO Kongsberg 45.34 321 *e*P **P 07 42 32.4 +0.2**
KONO pmax pmax
comp=Z,32nm,1.2s
KONO Kongsberg 45.34 321 *e*P **P 07 42 32.5 +0.2**
KONO IAmb IAmb 07 42 33.3
comp=Z,33nm,1.1s
KONO Kongsberg 45.34 321 P **P 07 42 32.3 +0.2**
KONO IAmb IAmb 07 42 33.6
comp=Z,35nm,1.2s
KONO Kongsberg 45.34 321 P **P 07 42 32.3 +0.2**
KONO sP **sP 07 43 11.5 +1.0**
GTTG Gottingen 45.35 310 *e*P **P 07 42 34.1 +1.7**
comp=Z,30nm,1.0s,baz=84,slow=7.9
UBBA Unterbreizbach 45.41 309 *e*P **P 07 42 34.1 +1.4**
comp=Z,20nm,1.5s,baz=84,slow=7.9
FETA Feichten 45.44 303 *e*P **P 07 42 33.2 -0.2**
comp=Z,2.7nm,0.5s
FETA *e*PP **PP 07 44 21.5 0.0**
comp=Z,10nm,1.1s
BJO1 Bjornoya 45.44 343 *e*P **P 07 42 34.2 +1.4**
BJO1 IAmb IAmb 07 42 34.7
comp=Z,62nm,0.9s
RETH Rethem/Aller, 45.62 311 *e*P **P 07 42 35.9 +1.5**
comp=Z,12nm,1.1s,baz=84,slow=7.9
DOMB Dombas 45.74 324 *e*P **P 07 42 35.6 +0.3**
DOMB IAmb IAmb 07 42 36.7
comp=Z,44nm,1.1s
TIXI Tiksi 45.75 22 ⇓ *i*P **P 07 42 35.9 +0.7**
TIXI pmax pmax
comp=Z,18nm,0.9s
TIXI Tiksi 45.75 22 P **P 07 42 35.9 +0.7**
TIXI IAmb IAmb 07 43 17.5
comp=Z,19nm,0.9s
FUORN Ofenpass-Fuorn 45.82 303 P **P 07 42 35.7 -0.8**
SALO Salr 45.83 301 P **P 07 42 34.8 -1.5**
SALO IAmb IAmb 07 42 40.4
comp=Z,27nm,1.1s
HOMB Homborsund 45.88 319 *e*P **P 07 42 37.3 +0.9**
HOMB Homborsund 45.88 319 *i*P **P 07 42 36.5 +0.1**
DAVA Damuels 45.97 304 *i*P **P 07 42 37.4 -0.2**
comp=Z,14nm,0.6s,SNR=9.4
SKAR Skarslia 46.03 322 *e*P **P 07 42 38.6 +1.0**
SKAR IAmb IAmb 07 42 39.5
comp=Z,38nm,1.3s
DAVOX Davos/Dischmat 46.05 303 LR LR 08 05 17.4
comp=Z,52nm,20.5s,baz=82,slow=40
TUE Stuetta 46.47 303 P **P 07 42 40.9 -0.6**
MOL Molde 46.48 325 *e*P **P 07 42 42.0 +0.9**
IBBN Ibbenburen 46.64 311 *e*P **P 07 42 43.9 +1.4**
comp=Z,28nm,1.1s,baz=84,slow=7.9
AKN Aaknes 46.72 324 *e*P **P 07 42 43.8 +0.8**
ODD1 Odda 46.85 321 *e*P **P 07 42 46.0 +2.0**
BLS5 Blasjo 46.94 321 *e*P **P 07 42 45.1 +0.4**
BLS5 IAmb IAmb 07 42 46.8
comp=Z,41nm,1.1s
HYA Hoyanger 47.07 323 *e*P **P 07 42 49.9 +4.2**
HSPB Hornsund (broa 47.30 345 *e*P **P 07 42 49.0 +1.8**
BER Bergen 47.49 322 *e*P **P 07 42 50.1 +1.2**
BER IAmb IAmb 07 42 50.4
comp=Z,75nm,1.3s
ASK Askoy 47.56 322 *e*P **P 07 42 50.4 +0.9**
ASK IAmb IAmb 07 42 50.9
comp=Z,66nm,1.3s
KMY Karmoy 47.56 320 *e*P **P 07 42 51.2 +1.7**
FOO Floro 47.63 324 *e*P **P 07 42 50.8 +0.8**
SPA0 Spitsbergen Ar 47.65 347 *e*P **P 07 42 51.8 +1.8**
SPITS Spitsbergen Ar 47.65 347 P **P 07 42 51.7 +1.7**
comp=Z,18nm,0.8s,baz=116,slow=9.7,SNR=12
SPITS LR LR 08 05 21.0
comp=Z,15nm,18.1s,baz=106,slow=39
comp=Z,18nm,0.8s
SPITS Spitsbergen Ar 47.65 347 P **P 07 42 51.7 +1.7**
SPITS pmax pmax
comp=Z,79nm,1.4s
BTNL Ternell 47.88 309 *d*P **P 07 42 54.2 +2.0**
comp=Z,5.9nm,0.8s
SENIN Lac Senin/Sane 47.88 303 P **P 07 42 51.8 -0.7**
SENIN IAmb IAmb 07 42 54.5
comp=Z,8.5nm,0.7s
MEM Membach 47.95 309 *d*P **P 07 42 54.7 +2.1**
comp=Z,8.1nm,1.0s
WLF Walferdange 48.01 307 *d*P **P 07 42 55.7 +2.5**
comp=Z,19nm,1.0s
WLF Walferdange 48.01 307 *e*P **P 07 42 55.0 +1.9**
comp=Z,30nm,1.0s,baz=84,slow=7.9
BCLA Clavier 48.42 309 *d*P **P 07 42 58.3 +2.0**
RCHB Rochefort 48.52 308 *d*P **P 07 42 56.2 -0.8**
KBS Kingsbay 48.77 347 *c i*P **P 07 43 00.2 +1.7**
KBS pmax pmax
comp=Z,70nm,1.4s
KBS Kingsbay 48.77 347 *e*P **P 07 43 00.3 +1.8**
KBS IAmb IAmb 07 43 01.0
comp=Z,45nm,1.0s
KBS Kingsbay 48.77 347 P **P 07 43 00.1 +1.5**
KBS Kingsbay 48.77 347 P **P 07 42 60.0 +1.5**
KBS PcP **PcP 07 44 23.1 +1.4**
KBS Kingsbay 48.77 347 *i*P **P 07 42 58.5 0.0**
BMRD Maredsous 48.78 309 *d*P **P 07 43 01.2 +2.1**
comp=Z,10nm,1.0s
DOU Dourbes 48.93 308 *d*P **P 07 43 00.9 +0.7**
comp=Z,7.6nm,1.1s
KEST Kesra 49.34 289 P **P 07 43 04.1 +0.5**
comp=Z,3.6nm,0.6s,baz=112,slow=17,SNR=4.3
comp=Z,3.6nm,0.6s
KEST Kesra 49.34 289 P **P 07 43 03.4 -0.2**
KEST IAmb IAmb 07 44 08.8
comp=Z,23nm,1.5s
KIBK Kibwezi 49.49 226 P **P 07 43 05.2 +0.2**
DRUM Mains of Drumt 51.89 318 *e*P **P 07 43 23.5 +1.2**
DRUM IAmb IAmb 07 43 26.0
comp=Z,9.5nm,0.8s
EDMD Edmundbyers 51.98 315 *e*P **P 07 43 23.7 +0.6**
EDMD IAmb IAmb 07 43 26.8
comp=Z,10nm,0.6s
LBWR Ladybower, Pea 52.13 313 *e*P **P 07 43 25.4 +1.2**
LBWR IAmb IAmb 07 43 28.1
comp=Z,17nm,0.8s
MCD Coleburn Disti 52.18 319 *e*P **P 07 43 25.4 +0.9**
MCD IAmb IAmb 07 43 27.4
comp=Z,25nm,0.7s
EKA Eskdalemuir Ar 52.56 316 P **P 07 43 27.4 +0.1**
comp=Z,11nm,0.9s,baz=89,slow=7.9,SNR=16
EKA LR LR 08 08 33.7
comp=Z,60nm,19.7s,baz=174,slow=39
comp=Z,11nm,0.9s
ESK Eskdalemuir 52.59 316 *e*P **P 07 43 27.9 +0.4**
ESK IAmb IAmb 07 43 29.6
comp=Z,8.0nm,1.0s
YSS Yuzhno-Sakhali 52.64 55 *e*P **P 07 43 27.4 -0.6**
YSS *e* 07 43 58.3
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS pmax pmax
comp=Z,100nm,4.2s
YSS MLR MLR
comp=Z,100nm,13.0s
MAJO Matsushiro 52.71 69 P **P 07 43 29.2 +0.4**
MAJO pmax pmax
comp=Z,58nm,1.9s
MAJO Matsushiro 52.71 69 P **P 07 43 29.2 +0.4**
MJAR Matsushiro Arr 52.72 69 P **P 07 43 29.3 +0.5**
comp=Z,6.1nm,0.9s,baz=294,slow=8.2,SNR=10
comp=Z,6.1nm,0.9s
MJAR Matsushiro Arr 52.72 69 P **P 07 43 28.9 +0.1**
INVG Invergeldie, C 52.82 318 *e*P **P 07 43 30.3 +1.0**
INVG IAmb IAmb 07 43 32.7
comp=Z,6.4nm,0.8s
EAB Aberfoyle 53.03 317 *e*P **P 07 43 31.2 +0.4**
EAB IAmb IAmb 07 43 33.4
comp=Z,7.9nm,0.8s
NEWG New Galloway 53.20 316 *e*P **P 07 43 32.9 +0.9**
NEWG IAmb IAmb 07 43 35.0
comp=Z,16nm,0.8s
MCH1 Michaelchurch 53.21 312 *e*P **P 07 43 32.5 +0.3**
MCH1 IAmb IAmb 07 43 36.0
comp=Z,23nm,0.8s
NOR Nord 53.95 350 *i*P **P 07 43 37.2 +0.1**
NOR IAmb IAmb 07 43 39.2
comp=Z,20nm,1.2s
SEY Seymchan 54.33 34 *e*P **P 07 43 41.2 +1.0**
SEY pmax pmax
comp=Z,5.0nm,1.1s
DSB Dublin 54.88 314 P **P 07 43 44.8 +0.5**
DAG Danmarks Havn 54.90 344 *i*P **P 07 43 44.0 -0.1**
DAG IAmb IAmb 07 43 45.9
comp=Z,64nm,1.2s
IDGL Inch Island, C 55.04 316 P **P 07 43 47.1 +1.7**
IWEX Carrickbyrne, 55.35 313 P **P 07 43 48.9 +1.2**
DBG Daneborg 55.77 341 *i*P **P 07 43 50.7 +0.4**
DBG IAmb IAmb 07 43 54.8
comp=Z,9.1nm,0.8s
VAL Valentia 57.52 313 P **P 07 44 04.3 +1.3**
ESBB Sonseca Array 57.76 298 P **P 07 44 04.1 -0.9**
ESBB IAmb IAmb 07 45 00.2
comp=Z,11nm,1.2s
ESDC Sonseca Array 57.76 298 P **P 07 44 04.5 -0.6**
comp=Z,2.9nm,0.9s,baz=63,slow=7.3,SNR=13
comp=Z,2.9nm,0.9s
ESDC Sonseca Array 57.76 298 P **P 07 44 03.8 -1.3**
ESDC IAmb IAmb 07 45 00.7
comp=Z,11nm,1.1s
TAM Tamanrasset 57.84 276 P **P 07 44 05.2 -0.7**
TAM pmax pmax
comp=Z,116nm,0.2s
TAM Tamanrasset 57.84 276 P **P 07 44 05.2 -0.7**
TAM Tamanrasset 57.84 276 P **P 07 44 04.9 -1.0**
BILL Bilibino 58.56 26 ⇓ *i*P **P 07 44 11.2 +1.1**
BILL pmax pmax
comp=Z,19nm,1.6s
BORG Borgarnes 58.83 330 LR LR 08 09 44.8
comp=Z,31nm,19.8s,baz=79,slow=36
ABPO Ambohimpanom 59.66 207 P **P 07 44 18.5 +0.1**
ABPO pmax pmax
comp=Z,23nm,1.4s
ABPO Ambohimpanom 59.66 207 P **P 07 44 18.5 +0.1**
ABPO Ambohimpanom 59.66 207 P **P 07 44 19.8 +1.4**
ABPO PcP **PcP 07 45 04.7 +0.3**
PEA0B Petropavlovsk- 59.83 44 P **P 07 44 20.1 +1.0**
PEA0B pmax pmax
comp=Z,28nm,1.4s
PEA0B Petropavlovsk- 59.83 44 P **P 07 44 20.1 +1.0**
PETK Petropavlovsk- 59.83 44 P **P 07 44 19.4 +0.3**
PETK Petropavlovsk- 59.83 44 P **P 07 44 19.4 +0.3**
NEEM North Greenlan 61.19 348 *i*P **P 07 44 29.2 +1.0**
NEEM IAmb IAmb 07 44 30.0
comp=Z,58nm,1.3s
SOEG Soedalen 61.20 335 *i*P **P 07 44 29.6 +1.5**
SOEG IAmb IAmb 07 44 30.8
comp=Z,18nm,0.9s
SUMG Summit 61.24 341 *i*P **P 07 44 30.0 +1.2**
SUMG IAmb IAmb 07 44 33.2
comp=Z,60nm,1.0s
ANGG Ammassalik, Gr 64.62 334 P **P 07 44 51.6 +0.8**
ANGG Ammassalik, Gr 64.62 334 *i*P **P 07 44 51.1 +0.4**
ANGG IAmb IAmb 07 44 52.6
comp=Z,31nm,0.9s
LSZ Lusaka 65.60 226 P **P 07 44 57.5 -0.4**
LSZ pmax pmax
comp=Z,13nm,1.1s
LSZ Lusaka 65.60 226 P **P 07 44 57.5 -0.4**
LSZ IAmb IAmb 07 45 32.0
comp=Z,13nm,1.1s
LSZ Lusaka 65.60 226 P **P 07 44 57.7 -0.2**
TORD Torodi Ar. Bea 66.01 269 P **P 07 44 58.3 -2.2**
comp=Z,9.5nm,0.6s,baz=50,slow=5.8,SNR=55
comp=Z,9.5nm,0.6s
TORD Torodi Ar. Bea 66.01 269 P **P 07 44 59.6 -0.9**
TORD IAmb IAmb 07 45 01.7
comp=Z,5.3nm,0.7s
ILULI Ilulissat 66.58 341 P **P 07 45 04.5 +1.2**
ILULI pmax pmax
comp=Z,56nm,0.9s
ILULI Ilulissat 66.58 341 P **P 07 45 04.5 +1.2**
ILULI Ilulissat 66.58 341 *i*P **P 07 45 03.6 +0.3**
ILULI IAmb IAmb 07 45 05.7
comp=Z,62nm,1.0s
A19K Wainwright 67.17 17 P **P 07 45 07.6 +0.6**
baz=316
A21K Barrow 67.33 15 P **P 07 45 08.1 +0.1**
baz=320
C16K Lisburne Hills 67.44 20 P **P 07 45 09.2 +0.4**
baz=313
C17K DeLong Mountai 67.88 19 P **P 07 45 11.8 +0.2**
baz=315,SNR=5.7
A22K Sinclair Lake 67.92 15 P **P 07 45 12.2 +0.5**
baz=321
SFJD Kangerlussuaq 67.95 339 LR LR 08 14 17.1
comp=Z,39nm,21.4s,baz=32,slow=35
SFJD Kangerlussuaq 67.95 339 P **P 07 45 12.7 +0.7**
SFJD pmax pmax
comp=Z,25nm,1.2s
SFJD Kangerlussuaq 67.95 339 P **P 07 45 12.7 +0.7**
SFJD IAmb IAmb 07 45 15.5
comp=Z,25nm,1.2s
SFJD Kangerlussuaq 67.95 339 *i*P **P 07 45 11.1 -0.9**
SFJD IAmb IAmb 07 45 15.5
comp=Z,19nm,1.1s
B20K Meade River 68.22 16 P **P 07 45 14.2 +0.6**
baz=320
C18K Utukok River 68.27 18 P **P 07 45 14.2 +0.2**
baz=317,SNR=6.8
C19K Lookout Ridge 68.33 17 IAmb IAmb 07 45 17.1
comp=Z,14nm,0.7s
C19K Lookout Ridge 68.33 17 P **P 07 45 15.2 +0.8**
baz=318,SNR=12
D17K Noatak River 68.46 20 P **P 07 45 15.7 +0.6**
baz=315,SNR=16
GAMB Gambell 68.47 25 P **P 07 45 16.2 +1.0**
baz=310
TNA Tin City 68.53 23 P **P 07 45 16.2 +0.6**
baz=312
B22K Teshekpuk Lake 68.76 15 P **P 07 45 17.6 +0.7**
baz=323
B21K Ikpikpuk River 69.08 16 IAmb IAmb 07 45 21.6
comp=Z,14nm,0.8s
B21K Ikpikpuk River 69.08 16 P **P 07 45 19.6 +0.7**
baz=322
F14K Arctic Creek 69.08 22 P **P 07 45 19.9 +0.8**
baz=313
POIN Pond Inlet 69.13 351 IAmb IAmb 07 45 21.6
comp=Z,8.7nm,0.7s
D19K Kuna River 69.14 17 P **P 07 45 19.8 +0.3**
baz=319,SNR=19
E17K Hotham Inlet 69.24 20 P **P 07 45 20.3 +0.3**
baz=316
E18K Tukpahlearik C 69.32 19 IAmb IAmb 07 45 22.8
comp=Z,11nm,0.8s
E18K Tukpahlearik C 69.32 19 P **P 07 45 20.9 +0.4**
baz=317,SNR=12
D20K Etivluk River 69.33 17 IAmb IAmb 07 45 22.9
comp=Z,14nm,0.9s
D20K Etivluk River 69.33 17 P **P 07 45 20.8 +0.2**
baz=320,SNR=11
C21K Knifeblade Rid 69.41 16 P **P 07 45 21.2 +0.2**
baz=322,SNR=8.4
F15K North Star Dit 69.42 21 IAmb IAmb 07 45 23.9
comp=Z,11nm,0.8s
F15K North Star Dit 69.42 21 P **P 07 45 21.9 +0.7**
baz=315,SNR=8.7
C23K Itkillik River 69.74 14 IAmb IAmb 07 45 26.0
comp=Z,18nm,0.8s
C23K Itkillik River 69.74 14 P **P 07 45 23.7 +0.7**
baz=325,SNR=13
E20K Nigu River 69.79 17 P **P 07 45 23.9 +0.4**
baz=321,SNR=15
F17K Baldwin Pennin 69.87 20 IAmb IAmb 07 45 26.4
comp=Z,14nm,0.8s
F17K Baldwin Pennin 69.87 20 P **P 07 45 24.4 +0.6**
baz=317,SNR=13
ANM Nome 70.01 23 P **P 07 45 25.2 +0.4**
baz=314
G15K Niukluk 70.11 22 P **P 07 45 25.9 +0.5**
baz=315
E19K Redstone River 70.15 18 IAmb IAmb 07 45 27.7
comp=Z,43nm,1.9s
E19K Redstone River 70.15 18 P **P 07 45 25.8 +0.2**
baz=320,SNR=12
E21K Killik River 70.15 16 IAmb IAmb 07 45 27.6
comp=Z,13nm,0.8s
E21K Killik River 70.15 16 P **P 07 45 25.8 +0.2**
baz=323
F18K Selawik 70.18 19 P **P 07 45 25.9 +0.1**
baz=318,SNR=11
G16K Koyuk River 70.32 21 P **P 07 45 27.0 +0.4**
baz=316
D23K Nanushuk River 70.44 15 IAmb IAmb 07 45 30.0
comp=Z,9.3nm,0.9s
D23K Nanushuk River 70.44 15 P **P 07 45 28.0 +0.7**
baz=325,SNR=9.2
F19K Shaleruckik Mo 70.50 19 P **P 07 45 28.1 +0.4**
baz=320,SNR=5.5
D24K Happy Valley 70.66 14 IAmb IAmb 07 45 30.6
comp=Z,30nm,1.8s
D24K Happy Valley 70.66 14 P **P 07 45 29.1 +0.5**
baz=327
G17K Kiwalik Mounta 70.73 20 P **P 07 45 29.5 +0.3**
baz=318,SNR=5.4
C26K Camden Bay 70.74 13 P **P 07 45 29.7 +0.6**
baz=330
F20K Avaraart Lake 70.84 18 P **P 07 45 29.7 -0.1**
baz=321
H16K Elim 70.91 22 P **P 07 45 30.8 +0.6**
baz=317
TOLK Toolik Lake Re 70.94 15 P **P 07 45 31.2 +0.7**
baz=326,SNR=20
G18K Tagagawik 70.98 19 P **P 07 45 31.4 +0.7**
baz=319,SNR=6.2
D25K Kavik River 70.99 13 IAmb IAmb 07 45 33.6
comp=Z,12nm,0.8s
D25K Kavik River 70.99 13 P **P 07 45 31.4 +0.7**
baz=329
C27K Jago River 71.20 12 IAmb IAmb 07 45 35.0
comp=Z,11nm,0.8s
C27K Jago River 71.20 12 P **P 07 45 32.2 +0.2**
baz=331,SNR=12
G19K Purcell Mounta 71.20 19 IAmb IAmb 07 45 34.1
comp=Z,10nm,0.8s
G19K Purcell Mounta 71.20 19 P **P 07 45 32.2 +0.2**
baz=320,SNR=14
F21K Alatna River 71.24 17 IAmb IAmb 07 45 35.5
comp=Z,11nm,0.8s
F21K Alatna River 71.24 17 P **P 07 45 32.5 +0.2**
baz=323,SNR=20
A36M Sachs Harbour 71.27 5 P **P 07 45 32.8 +0.5**
baz=346
F22K John River 71.31 16 P **P 07 45 33.1 +0.4**
baz=324
H17K Granite Mounta 71.36 21 P **P 07 45 32.9 -0.1**
baz=318
E23K Chandalar 71.41 15 IAmb IAmb 07 46 24.8
comp=Z,12nm,1.2s
E23K Chandalar 71.41 15 P **P 07 45 33.6 +0.3**
baz=326,SNR=8.6
H18K Honhosa River 71.62 20 P **P 07 45 34.9 +0.3**
H18K IAmb IAmb 07 45 37.8
comp=Z,18nm,1.6s
H18K Honhosa River 71.62 20 P **P 07 45 35.0 +0.3**
baz=320
E24K Your Creek 71.64 15 P **P 07 45 34.9 +0.3**
baz=327
G21K Allakaket 71.80 17 P **P 07 45 35.9 +0.3**
G21K IAmb IAmb 07 45 37.2
comp=Z,7.1nm,0.8s
G21K Allakaket 71.80 17 P **P 07 45 35.5 -0.1**
baz=323,SNR=11
H19K Roundabout Mou 71.85 19 IAmb IAmb 07 45 38.2
comp=Z,9.1nm,0.9s
H19K Roundabout Mou 71.85 19 P **P 07 45 35.8 -0.1**
baz=321
I17K Unalakleet 71.92 22 P **P 07 45 36.9 +0.7**
baz=318
G22K Bettles 71.94 16 P **P 07 45 36.6 +0.2**
baz=325
COLD Coldfoot 71.98 16 IAmb IAmb 07 45 39.1
comp=Z,10nm,0.9s
COLD Coldfoot 71.98 16 P **P 07 45 37.0 +0.3**
baz=326
D27M Malcolm River 72.00 12 P **P 07 45 37.0 +0.2**
baz=333
K13K Kusilvak Mount 72.10 24 P **P 07 45 37.9 +0.5**
baz=316
E25K Arctic Village 72.17 14 IAmb IAmb 07 45 39.7
comp=Z,32nm,1.9s
E25K Arctic Village 72.17 14 P **P 07 45 38.0 +0.2**
baz=330,SNR=7.8
F24K Squaw Lake 72.23 15 P **P 07 45 38.4 +0.2**
baz=328
D28M Stokes Point 72.27 11 P **P 07 45 38.6 +0.4**
baz=335
H20K Anotleneega Mo 72.28 18 P **P 07 45 38.6 +0.1**
baz=322,SNR=21
GCSA Galena City Sc 72.34 20 P **P 07 45 39.1 +0.3**
baz=321
J16K Anvik River 72.39 22 P **P 07 45 39.5 +0.3**
baz=318
G23K Bananza Creek 72.45 16 P **P 07 45 39.9 +0.3**
baz=326,SNR=8.3
KHWEE KHWEE 72.45 224 P **P 07 45 40.2 +0.1**
F25K Christian River 72.61 14 P **P 07 45 40.9 +0.4**
baz=330,SNR=15
M11K Mekoryuk 72.66 26 P **P 07 45 41.4 +0.6**
baz=315
H21K Melozitna Rive 72.67 18 IAmb IAmb 07 45 43.0
comp=Z,11nm,1.1s
H21K Melozitna Rive 72.67 18 P **P 07 45 41.1 +0.3**
baz=324,SNR=8.8
ILON Igloolik, Nuna 72.70 350 P **P 07 45 40.5 -0.3**
J17K VABM Dome 72.76 21 IAmb IAmb 07 45 48.9
comp=Z,22nm,1.7s
J17K VABM Dome 72.76 21 P **P 07 45 42.1 +0.8**
baz=320
E28M Babbage River 72.80 11 P **P 07 45 42.6 +1.1**
E28M Babbage River 72.80 11 P **P 07 45 42.0 +0.5**
baz=334
F26K Sheenjek River 72.81 13 P **P 07 45 42.2 +0.6**
F26K Sheenjek River 72.81 13 P **P 07 45 42.2 +0.6**
baz=331,SNR=5.5
H22K Ishtalitna Cre 72.82 17 IAmb IAmb 07 45 43.5
comp=Z,25nm,1.8s
H22K Ishtalitna Cre 72.82 17 P **P 07 45 42.0 +0.3**
baz=325,SNR=7.8
E27K Coleen River 72.83 12 IAmb IAmb 07 45 44.0
comp=Z,42nm,1.9s
E27K Coleen River 72.83 12 P **P 07 45 42.5 +0.8**
baz=333,SNR=5.3
I20K Naaghedeneel 72.94 19 IAmb IAmb 07 45 45.0
comp=Z,17nm,0.9s
I20K Naaghedeneel 72.94 19 P **P 07 45 42.8 +0.5**
baz=323,SNR=7.1
G24K Hadweenzic Riv 73.01 15 IAmb IAmb 07 45 45.1
comp=Z,7.5nm,0.8s
G24K Hadweenzic Riv 73.01 15 P **P 07 45 43.6 +0.8**
baz=328,SNR=10
L14K Kuka Creek 73.18 24 P **P 07 45 44.6 +0.8**
baz=317,SNR=7.1
G25K Bearman Lake 73.24 15 P **P 07 45 45.0 +0.9**
baz=329,SNR=7.8
E29M Blow River 73.25 11 IAmb IAmb 07 46 31.4
comp=Z,57nm,2.0s
E29M Blow River 73.25 11 P **P 07 45 45.1 +1.0**
baz=336
I21K Tanana 73.26 18 P **P 07 45 44.7 +0.5**
baz=325
J19K Poorman 73.27 20 IAmb IAmb 07 45 47.0
comp=Z,13nm,1.0s
J19K Poorman 73.27 20 P **P 07 45 45.1 +0.7**
baz=322,SNR=12
H23K Yukon River 73.30 16 IAmb IAmb 07 45 46.9
comp=Z,48nm,1.8s
H23K Yukon River 73.30 16 P **P 07 45 45.3 +0.8**
baz=327,SNR=12
L15K Ungalak Mounta 73.32 23 P **P 07 45 45.3 +0.7**
baz=318
SPIA Saint Paul Isl 73.34 30 P **P 07 45 46.0 +1.2**
baz=312
K17K Iditarod 73.51 21 IAmb IAmb 07 45 48.5
comp=Z,18nm,0.9s
K17K Iditarod 73.51 21 P **P 07 45 46.5 +0.8**
baz=320,SNR=12
J20K Nowinta River 73.52 19 IAmb IAmb 07 45 48.4
comp=Z,13nm,0.8s
J20K Nowinta River 73.52 19 P **P 07 45 46.5 +0.7**
baz=323,SNR=15
G26K Porcupine Rive 73.53 14 P **P 07 45 46.4 +0.6**
baz=331
FYU Fort Yukon 73.59 14 IAmb IAmb 07 45 48.8
comp=Z,13nm,0.9s
M13K Dall Lake 73.63 25 P **P 07 45 47.0 +0.5**
baz=317
F28M Old Crow 73.64 12 P **P 07 45 47.2 +0.7**
baz=334
H24K Noodor Dome 73.66 16 P **P 07 45 46.9 +0.2**
baz=328,SNR=9.6
MLY Manley 73.68 17 IAmb IAmb 07 45 48.5
comp=Z,37nm,1.9s
MLY Manley 73.68 17 P **P 07 45 46.7 -0.1**
baz=326
M14K Bethel 73.85 24 IAmb IAmb 07 45 50.9
comp=Z,17nm,0.9s

M14K **Bethel** 73.85 24 P P 07 45 48.7 +0.9
baz=318,SNR=8.4
I23K **Minto, Yukon-K** 73.91 17 IAmb IAmb 07 45 50.6
comp=Z,11nm,0.9s
I23K **Minto, Yukon-K** 73.91 17 P P 07 45 48.6 +0.6
baz=327,SNR=10.0
L16K **Owhat River** 73.93 23 IAmb IAmb 07 45 51.2
comp=Z,9.9nm,0.8s
L16K **Owhat River** 73.93 23 P P 07 45 48.8 +0.7
baz=320,SNR=11
C36M **Paulatuk** 73.94 6 P P 07 45 48.3 +0.2
baz=347,SNR=32
INK **Inuvik** 73.95 9 IAmb IAmb 07 45 50.8
comp=Z,14nm,0.8s
INK **Inuvik** 73.95 9 P P 07 45 48.9 +0.8
baz=339,SNR=16
L17K **Donlin** 73.96 22 P P 07 45 48.9 +0.5
baz=320,SNR=6.9
G27K **Doyon Strip** 74.06 13 P P 07 45 49.1 +0.2
baz=333,SNR=16
K20K **Telida** 74.20 19 IAmb IAmb 07 45 52.4
comp=Z,12nm,0.8s
K20K **Telida** 74.20 19 P P 07 45 50.4 +0.6
baz=324
CHUM **Lake Minchumin** 74.24 19 P P 07 45 50.4 +0.5
baz=325
F30M **Barrier River** 74.28 10 IAmb IAmb 07 45 54.1
comp=Z,11nm,0.8s
F30M **Barrier River** 74.28 10 P P 07 45 50.6 +0.4
baz=338,SNR=8.9
M15K **Kasigluk River** 74.31 24 P P 07 45 51.3 +0.9
baz=319,SNR=9.2
POKR **Poker Plat Res** 74.37 16 P P 07 45 51.3 +0.6
baz=328
L18K **Granite Mounta** 74.37 21 P P 07 45 51.6 +0.8
baz=322
PRP **Porcupine Dome** 74.44 15 P P 07 45 51.7 +0.4
baz=330
NEA2 **Nenana** 74.44 17 IAmb IAmb 07 45 53.2
comp=Z,16nm,0.8s
NEA2 **Nenana** 74.44 17 P P 07 45 51.1 -0.1
baz=327,SNR=17
COLA **College** 74.48 16 P P 07 45 51.6 +0.2
COLA pmax pmax
comp=Z,19nm,0.7s
COLA **College** 74.48 16 P P 07 45 51.6 +0.2
COLA IAmb IAmb 07 45 53.5
comp=Z,19nm,0.7s
COLA **College** 74.48 16 P P 07 45 51.4 0.0
baz=328
COLA **College** 74.48 16 P P 07 45 51.5 +0.2
N14K **Kuskokwak Cree** 74.56 25 P P 07 45 52.7 +0.8
baz=318
G29M **Pine Creek** 74.58 12 IAmb IAmb 07 45 55.9
comp=Z,19nm,1.4s
G29M **Pine Creek** 74.58 12 P P 07 45 52.6 +0.6
baz=336
H27K **Steamboat Moun** 74.59 13 IAmb IAmb 07 45 55.0
comp=Z,9.7nm,0.8s
H27K **Steamboat Moun** 74.59 13 P P 07 45 52.5 +0.4
baz=333,SNR=13
M16K **Timber Creek** 74.61 23 P P 07 45 52.9 +0.6
baz=320
CAST **Castle Rocks** 74.68 19 P P 07 45 52.9 +0.3
baz=325
F31M **Tsiigehtchic** 74.73 10 IAmb IAmb 07 45 54.7
comp=Z,13nm,0.7s
F31M **Tsiigehtchic** 74.73 10 P P 07 45 53.1 +0.3
baz=339,SNR=13
ILAR **Eielson Array** 74.79 16 P P 07 45 52.6 -0.6
comp=Z,3.7nm,0.8s,baz=337,slow=3.7,SNR=34
ILAR PP PP 07 48 42.5 +1.5
comp=Z,1.2nm,0.8s,baz=320,slow=7.6,SNR=4.7
ILAR LR LR 08 25 59.1
comp=Z,28nm,19.2s,baz=309,slow=41
comp=Z,3.7nm,0.8s
M17K **Holitna River** 74.79 22 P 07 45 54.9 +1.7
M17K IAmb IAmb 07 45 56.5
comp=Z,12nm,0.8s
M17K **Holitna River** 74.79 22 P P 07 45 54.2 +0.9
baz=321,SNR=8.7
G30M **tAoh Zraii Nji** 74.80 11 P P 07 45 53.4 +0.1
baz=337,SNR=9.1
LBTB **Lobatse** 74.81 222 P P 07 45 54.5 +0.6
LBTB pmax pmax
comp=Z,24nm,1.0s
LBTB **Lobatse** 74.81 222 P 07 45 54.5 +0.6
LBTB IAmb IAmb 07 45 55.7
comp=Z,24nm,1.0s
LBTB **Lobatse** 74.81 222 P P 07 45 54.0 +0.1
N15K **Kwethluk River** 74.90 24 P P 07 45 54.9 +1.0
baz=319,SNR=5.4
L19K **White Mountain** 74.93 21 P P 07 45 54.7 +0.6
baz=323,SNR=6.7
DBIC **Dimbokro** 74.98 267 P P 07 45 53.3 -1.8
comp=Z,4.3nm,0.7s,baz=40,slow=3.7,SNR=4.7
comp=Z,4.3nm,0.7s
PPLA **Purkeypile** 75.08 19 IAmb IAmb 07 45 56.4
comp=Z,10nm,0.7s
PPLA **Purkeypile** 75.08 19 P P 07 45 55.0 0.0
baz=325
HDA **Harding Lake** 75.09 16 P P 07 45 54.9 0.0
baz=329
N16K **Nishlik Lake** 75.10 23 P P 07 45 55.4 +0.4
baz=320,SNR=7.9
TRF **Thorofare Moun** 75.11 18 IAmb IAmb 07 46 52.5
comp=Z,42nm,1.9s
TRF **Thorofare Moun** 75.11 18 P P 07 45 55.2 0.0
baz=326
I27K **Kandik River** 75.14 14 P P 07 45 55.8 +0.6
baz=333,SNR=8.2
G31M **Satah River** 75.14 10 IAmb IAmb 07 45 56.9
comp=Z,12nm,0.8s
G31M **Satah River** 75.14 10 P P 07 45 55.4 +0.3
baz=339,SNR=13
H29M **Whitestone** 75.16 12 IAmb IAmb 07 45 57.5
comp=Z,12nm,0.7s
H29M **Whitestone** 75.16 12 P P 07 45 55.9 +0.6
baz=336,SNR=12
M18K **Stony River** 75.20 21 P P 07 45 56.0 +0.5
baz=322
MCK **McKinley** 75.20 17 P P 07 45 55.6 0.0
baz=328
O14K **Tigyukauivet M** 75.20 25 P P 07 45 56.4 +0.8
baz=319
FRB **Frobisher Bay** 75.24 343 LR LR 08 23 49.2
comp=Z,23nm,18.7s,baz=118,slow=39
J25K **Salcha River,** 75.26 15 P P 07 45 55.7 -0.2
baz=330,SNR=9.7
M19K **Big River Lodg** 75.28 21 P P 07 45 56.6 +0.5
baz=324
EPYK **Eagle Plains** 75.29 11 P P 07 45 56.1 0.0
baz=337
RND **Reindeer** 75.50 17 P P 07 45 57.2 -0.1
RND pmax pmax
comp=Z,42nm,1.8s
RND **Reindeer** 75.50 17 P P 07 45 57.2 -0.1
RND IAmb IAmb 07 46 47.4
comp=Z,42nm,1.8s
N17K **Nushagak Hills** 75.55 23 P 07 45 59.3 +1.7
N17K IAmb IAmb 07 46 00.4
comp=Z,53nm,2.0s
N17K **Nushagak Hills** 75.55 23 P P 07 45 58.2 +0.6
baz=322
I28M **Miner Creek** 75.59 13 P P 07 45 58.7 +0.8
I28M IAmb IAmb 07 45 59.5
comp=Z,10nm,0.8s
I28M **Miner Creek** 75.59 13 P P 07 45 58.0 +0.1
baz=334,SNR=18
M20K **Styx River** 75.65 20 P P 07 45 58.8 +0.5
baz=324
O15K **Ungalikthiuk R** 75.75 24 P P 07 45 59.2 +0.5
baz=320
N18K **Kilae Creek** 75.83 22 P P 07 45 59.7 +0.5
baz=322
K24K **Donnelly Dome** 75.87 16 IAmb IAmb 07 46 00.9
comp=Z,20nm,0.8s
K24K **Donnelly Dome** 75.87 16 P P 07 45 59.3 -0.2
baz=330,SNR=8.6
CUT **Chulitna** 75.99 19 P P 07 45 60.0 0.0
baz=327
O16K **Kokwok River B** 75.99 23 IAmb IAmb 07 46 03.5
comp=Z,19nm,1.1s
O16K **Kokwok River B** 75.99 23 P P 07 46 00.8 +0.7
baz=321,SNR=7.9
SKT **Skwentna** 76.01 19 IAmb IAmb 07 46 01.6
comp=Z,16nm,0.9s
SKT **Skwentna** 76.01 19 P P 07 46 00.1 -0.1
baz=326,SNR=8.3
WAT1 **Susitna Watana** 76.06 18 P P 07 46 00.5 0.0
baz=328
SCRK **Sand Creek** 76.11 15 P P 07 46 00.8 0.0
baz=331,SNR=8.7
DHY **Denali Highway** 76.13 17 IAmb IAmb 07 46 02.7
comp=Z,11nm,0.7s
DHY **Denali Highway** 76.13 17 P P 07 46 00.8 -0.3
baz=329,SNR=9.9
RIDG **Independent Ri** 76.13 16 IAmb IAmb 07 46 02.6
comp=Z,19nm,1.5s
RIDG **Independent Ri** 76.13 16 P P 07 46 00.5 -0.4
baz=331
N19K **Bonanza Creek** 76.14 21 P P 07 46 01.0 0.0
baz=324
H31M **Peel River** 76.18 11 IAmb IAmb 07 46 02.8
comp=Z,13nm,0.7s
H31M **Peel River** 76.18 11 P P 07 46 01.2 +0.1
baz=339,SNR=14
I30M **Mount Dempster** 76.41 12 IAmb IAmb 07 46 05.9
comp=Z,8.0nm,0.8s
I30M **Mount Dempster** 76.41 12 P P 07 46 02.8 +0.2
baz=337,SNR=13
P16K **Nushagak River** 76.46 24 P P 07 46 03.1 +0.4
baz=321
SPCR **Spurr Chakacha** 76.47 20 P P 07 46 02.7 -0.1
baz=325
WAT6 **Susitna Watana** 76.47 17 P P 07 46 02.7 -0.3
baz=329
M22K **Willow** 76.57 19 P P 07 46 03.6 +0.3
baz=327
O19K **Port Alsworth** 76.68 22 P P 07 46 04.3 +0.3
baz=324
O18K **Koktuh Hills** 76.69 22 IAmb IAmb 07 46 07.0
comp=Z,14nm,0.8s
O18K **Koktuh Hills** 76.69 22 P P 07 46 04.3 +0.3
baz=323,SNR=8.7
P17K **Kvichak River** 76.83 23 P P 07 46 05.2 +0.4
baz=322
GHO **Glory Hole Cre** 76.86 18 IAmb IAmb 07 46 06.5
comp=Z,17nm,0.9s
DAWY **Dawson** 76.94 13 IAmb IAmb 07 46 07.1
comp=Z,53nm,1.9s
DAWY **Dawson** 76.94 13 P P 07 46 05.7 +0.2
baz=335,SNR=10
PMR **Palmer** 76.96 19 P P 07 46 05.4 -0.1
baz=328
SML **Sawmill** 76.98 18 IAmb IAmb 07 46 07.6
comp=Z,17nm,0.8s
SML **Sawmill** 76.98 18 P P 07 46 06.1 +0.3
baz=328,SNR=5.1
J30M **Hart River** 77.02 12 IAmb IAmb 07 46 07.9
comp=Z,40nm,1.9s
J30M **Hart River** 77.02 12 P P 07 46 06.3 +0.3
baz=338,SNR=6.5
P18K **Big Mountain,** 77.05 22 P P 07 46 06.7 +0.6
baz=323
L26K **Log Cabin Wild** 77.08 15 IAmb IAmb 07 46 08.2
comp=Z,31nm,1.9s
L26K **Log Cabin Wild** 77.08 15 P P 07 46 06.9 +0.6
baz=332
CAPN **Captain Cook N** 77.12 20 P P 07 46 07.0 +0.6
baz=326
Q16K **King Salmon** 77.17 23 P P 07 46 07.5 +0.8
baz=322,SNR=5.9
UNV **Unalaska Valle** 77.19 31 P P 07 46 07.3 +0.4
baz=316
SCM **Sheep Creek Mo** 77.21 18 IAmb IAmb 07 46 07.9
comp=Z,14nm,0.8s
SCM **Sheep Creek Mo** 77.21 18 P P 07 46 07.6 +0.6
baz=329
RC01 **Rabbit Creek A** 77.23 19 P P 07 46 07.7 +0.6
baz=327
HARP **HAARP** 77.23 17 P P 07 46 07.8 +0.7
baz=331,SNR=5.5
M24K **Tolsona, Glenn** 77.25 17 P P 07 46 07.4 +0.1
baz=330
O20K **Slope Mountain** 77.27 21 P P 07 46 07.6 +0.2
baz=325
KNK **Knik Glacier** 77.29 18 P P 07 46 07.4 0.0
baz=328
L27K **Beaver Creek,** 77.37 15 P P 07 46 08.4 +0.5
baz=333
BCAR **Beaver Creek A** 77.38 15 P P 07 46 08.7 +0.7
P19K **Oil Pt** 77.44 21 P P 07 46 08.7 +0.4
baz=325
K29M **Barlow Dome** 77.49 13 P P 07 46 09.2 +0.6
K29M **Barlow Dome** 77.49 13 P P 07 46 08.6 0.0
baz=337,SNR=7.3
M26K **Nabesna, AK** 77.72 16 P P 07 46 10.0 +0.2
baz=322
Q18K **Katmai Hardscr** 77.72 23 P P 07 46 10.4 +0.5
baz=324
KLU **Klutina** 77.84 17 P P 07 46 10.9 +0.3
baz=330
BOSA **Boshof** 77.86 220 P P 07 46 10.0 -1.1
comp=Z,14nm,0.8s,baz=30,slow=6.5,SNR=13
comp=Z,14nm,0.8s
BOSA **Boshof** 77.86 220 P P 07 46 10.8 -0.3
BOSA pmax pmax
comp=Z,41nm,1.2s
BOSA **Boshof** 77.86 220 P P 07 46 10.8 -0.3
BOSA **Boshof** 77.86 220 P P 07 46 10.6 -0.5
BOSA pP pP 07 46 40.3 +0.2
HOM **Homer** 77.90 21 P P 07 46 11.4 +0.6
baz=326
Q19K **Cape Douglas,** 77.91 22 P P 07 46 11.1 +0.2
baz=324
M27K **Edge Creek, AK** 77.99 15 IAmb IAmb 07 46 14.3
comp=Z,18nm,1.2s
M27K **Edge Creek, AK** 77.99 15 P P 07 46 12.0 +0.6
baz=333
L29M **L29M** 78.05 13 IAmb IAmb 07 46 14.4
comp=Z,17nm,1.2s
L29M **L29M** 78.05 13 P P 07 46 12.2 +0.5
baz=336
N25K **Chitina, Valde** 78.06 17 P P 07 46 12.1 +0.3
baz=331
S14K **Fog Glacier** 78.06 26 P P 07 46 12.3 +0.4
baz=320
BRSE **Bradley Lake S** 78.09 20 P P 07 46 12.3 +0.4
baz=327
R17L **Mt. Peulik Vol** 78.10 24 P P 07 46 11.9 -0.1
baz=323
SEW **Seward** 78.14 20 P P 07 46 12.2 +0.1
baz=328
BVCY **Beaver Creek** 78.15 15 P P 07 46 12.3 +0.1
baz=334
SDPT **Sand Point** 78.44 27 P P 07 46 13.9 +0.1
baz=320
CHGN **Chignik** 78.45 26 P P 07 46 14.5 +0.6
baz=321
M29M **Somme Creek** 78.60 14 IAmb IAmb 07 46 17.6
comp=Z,9.0nm,0.8s
M29M **Somme Creek** 78.60 14 P P 07 46 14.9 +0.1
baz=336,SNR=7.6
MCARA **McCarthy VSAT** 78.61 16 P P 07 46 15.2 +0.5
baz=332
BMRM **Bremner River** 78.62 17 P P 07 46 15.3 +0.5
baz=331
EYAK **Cordova Ski Ar** 78.71 18 P P 07 46 15.7 +0.5
baz=330
P23K **Montague Islan** 78.77 19 P P 07 46 16.1 +0.5
baz=329
M30M **Minto, Yukon** 78.79 13 P P 07 46 16.0 +0.3
baz=337
YUK3 **Moose Creek** 78.81 15 P P 07 46 16.0 -0.1
baz=334
CRQE **Cirque** 79.16 16 P P 07 46 18.2 +0.3
baz=332
CHNA **Chernabura Isl** 79.17 27 P P 07 46 18.7 +0.9
baz=320
KDAK **Kodiak Island** 79.17 22 P P 07 46 18.6 +0.8
baz=325
YUK8 **Steele Glacier** 79.40 15 P P 07 46 19.4 +0.1
baz=335
OHAK **Old Harbor** 79.42 23 P P 07 46 19.5 +0.3
baz=325
BRWY **Burwash Landin** 79.47 14 P P 07 46 19.8 +0.3
baz=336
Q23K **Middleton Isla** 79.53 19 P P 07 46 20.2 +0.5
baz=330
M31M **Drury Creek, Y** 79.55 12 P P 07 46 20.1 +0.2
baz=339
YUK4 **Talbot Arm** 79.57 14 P P 07 46 20.2 0.0
baz=336,SNR=5.4
KAIM **Kayak Island** 79.58 17 P P 07 46 20.6 +0.6
baz=332
MMPY **Sheldon Lake,** 79.65 10 IAmb IAmb 07 46 31.8
comp=Z,19nm,1.6s
MMPY **Sheldon Lake,** 79.65 10 P P 07 46 21.0 +0.6
baz=342
N30M **Aishikik Lake** 79.77 13 P P 07 46 22.0 +1.0
baz=337
O28M **Mount Upton** 79.78 15 P P 07 46 21.8 +0.3
baz=335
N31M **Braeburn, Yuko** 79.98 13 IAmb IAmb 07 46 26.4
comp=Z,12nm,1.0s
N31M **Braeburn, Yuko** 79.98 13 P P 07 46 23.0 +0.8
baz=338
YUK6 **Outpost Mounta** 80.00 14 P P 07 46 23.0 +0.5
baz=336
WRGLY **Wrigley** 80.00 7 IAmb IAmb 07 46 26.5
comp=Z,18nm,0.9s
WRGLY **Wrigley** 80.00 7 P P 07 46 23.0 +0.8
baz=348
HYT **Haines Junctio** 80.27 14 IAmb IAmb 07 46 26.8
comp=Z,14nm,0.9s
HYT **Haines Junctio** 80.27 14 P P 07 46 24.6 +0.8
baz=337,SNR=6.5
PINM **Pinnacle** 80.38 15 P P 07 46 24.9 +0.5
baz=335
O29M **Mount Kennedy** 80.54 15 P P 07 46 26.2 +0.8
baz=336
O30N **Mendenhall** 80.59 13 P P 07 46 26.1 +0.6
baz=338
N32M **Quiet Lake** 80.76 12 P P 07 46 26.9 +0.5
baz=340
WHY **Whitehorse** 80.91 13 P P 07 46 27.4 +0.1
baz=339
P30M **Million Dollar** 81.03 14 P P 07 46 28.4 +0.6
baz=337
YKAW3 **Yellowknife Wh** 81.25 3 P P 07 46 29.4 +0.5
YKAW3 IAmb IAmb 07 46 30.6
comp=Z,10nm,0.7s
YKA **Yellowknife Ar** 81.32 3 P P 07 46 29.8 +0.5
comp=Z,12nm,0.7s,baz=350,slow=5.3,SNR=22
YKA LR LR 08 26 31.5
comp=Z,25nm,19.0s,baz=44,slow=38
comp=Z,12nm,0.7s
YKA **Yellowknife Ar** 81.32 3 P P 07 46 29.6 +0.4
P29M **Windy Craggy** 81.33 14 P P 07 46 29.9 +0.5
baz=337
P33M **Teslin, Yukon** 81.69 12 P P 07 46 31.7 +0.3
P33M IAmb IAmb 07 46 35.1
comp=Z,15nm,1.0s
P33M **Teslin, Yukon** 81.69 12 P P 07 46 31.5 +0.1
baz=341,SNR=7.2
WRA **Warramunga Arr** 81.69 122 P P 07 46 31.0 -0.8
comp=Z,1.7nm,0.6s,baz=324,slow=5.0,SNR=16
comp=Z,1.7nm,0.6s
WRA **Warramunga Arr** 81.69 122 P P 07 46 31.0 -0.8
WRA pmax pmax
comp=Z,1.0nm,1.8s
WRA **Warramunga Arr** 81.69 122 P P 07 46 31.0 -0.8
WRAB **Tennant Creek** 81.69 122 P P 07 46 32.8 +1.0
WRAB pmax pmax
comp=Z,43nm,2.0s
WRAB **Tennant Creek** 81.69 122 P P 07 46 32.8 +1.0
WRAB IAmb IAmb 07 47 15.3
comp=Z,43nm,1.9s
WB2 **Warramunga Arr** 81.70 122 P P 07 46 32.8 +0.9
WB2 IAmb IAmb 07 47 41.2
comp=Z,29nm,1.6s
PLBC **Pleasant Camp** 81.76 14 P P 07 46 32.0 +0.4
baz=338
WR0 **Warramunga Arr** 81.84 122 P P 07 46 31.7 -0.9
WR0 IAmb IAmb 07 48 20.5
comp=Z,11nm,1.1s
SKAG **Skagway** 81.95 13 P P 07 46 33.2 +0.6
baz=339
P32M **Atlin** 82.12 13 P P 07 46 34.3 +0.7
baz=340
SCHQ **Schefferville** 82.30 337 P P 07 46 34.7 +0.2
comp=Z,5.5nm,0.7s,baz=31,slow=6.6,SNR=8.5
comp=Z,5.5nm,0.7s
SCHQ **Schefferville** 82.30 337 IAmb IAmb 07 46 38.0
comp=Z,26nm,1.3s
WTLY **Watson Lake, Y** 82.40 10 P P 07 46 35.7 +0.7
WTLY **Watson Lake, Y** 82.40 10 P P 07 46 35.4 +0.4
baz=344
R33M **Jennings River** 82.77 11 P P 07 46 37.4 +0.3
R33M IAmb IAmb 07 46 41.1
comp=Z,9.3nm,1.0s
R33M **Jennings River** 82.77 11 P P 07 46 37.7 +0.6
baz=342,SNR=5.4
R31K **City Hall, Gus** 82.85 14 P P 07 46 37.9 +0.6
baz=338
Q32M **Nakina River** 82.97 12 P P 07 46 38.4 +0.2
baz=341
KOTAN **Kotaneelee Air** 82.97 8 P P 07 46 38.5 +0.5
baz=348
S31K **Pelican** 83.17 14 P P 07 46 39.5 +0.6
baz=338
R32K **Eaglecrest** 83.21 13 P P 07 46 40.0 +0.8
baz=339
LIRD **Liard River Hi** 83.44 9 P P 07 46 40.8 +0.4
baz=346
DLBC **Dease Lake** 83.83 11 P P 07 46 43.0 +0.6
baz=343
S32K **Killisnoo** 83.96 14 P P 07 46 43.7 +0.8
baz=339
AS31 **Alice Springs** 83.96 125 P P 07 46 43.3 -0.2
ASAR **Alice Springs** 83.96 125 P P 07 46 42.9 -0.6
comp=Z,3.2nm,0.7s,baz=310,slow=4.9,SNR=16
ASAR PP PP 07 49 57.5 -1.4
comp=Z,0.7nm,0.9s,baz=318,slow=9.0,SNR=4.1
comp=Z,3.2nm,0.7s
ASAR **Alice Springs** 83.96 125 P P 07 46 43.6 +0.1
ASAR **Alice Springs** 83.96 125 P P 07 46 43.6 +0.1
AS17 **Alice Springs** 84.02 125 P P 07 46 44.9 +1.1
comp=Z,5.3nm,0.8s
S34M **Telegraph Cree** 84.15 12 P P 07 46 44.2 +0.2
S34M IAmb IAmb 07 46 47.1
comp=Z,13nm,0.9s
S34M **Telegraph Cree** 84.15 12 P P 07 46 44.5 +0.5
baz=342
SIT **Sitka** 84.20 14 P P 07 46 44.8 +0.6
baz=339
T35M **Bob Quinn** 85.19 12 P P 07 46 49.6 +0.3
baz=343
WRAK **Wrangell Islan** 85.36 13 P P 07 46 50.6 +0.6
baz=341
FORT **Forrest** 85.39 134 P P 07 46 51.4 +0.9
U33K **Whale Pass** 85.51 13 P P 07 46 51.4 +0.7
baz=341
CRAG **Craig** 86.12 14 P P 07 46 54.6 +0.8
baz=341
ICQ **Pointe Anglais** 86.92 334 P P 07 46 58.4 +0.6
FFC **Flin Flon** 89.05 356 P P 07 47 08.5 +0.6
FFC pmax pmax
comp=Z,17nm,1.3s
FFC **Flin Flon** 89.05 356 P P 07 47 08.4 +0.6
FFC IAmb IAmb 07 47 12.1
comp=Z,17nm,1.3s
FFC **Flin Flon** 89.05 356 P P 07 47 08.4 +0.5
FFC sP sP 07 47 49.2 +0.2
BBB **Bella Bella** 90.15 12 P P 07 47 14.0 +1.0
EDM **Edmonton** 90.65 3 P P 07 47 16.4 +1.0
EDM pmax pmax
comp=Z,37nm,1.4s
EDM **Edmonton** 90.65 3 P P 07 47 16.4 +1.0
TRQ **Mont Tremblant** 92.21 337 P P 07 47 23.7 +0.9
TRQ IAmb IAmb 07 50 48.2
comp=Z,11nm,1.4s
LLLB **Lillooet** 92.57 8 P P 07 47 23.4 -1.0
LLLB IAmb IAmb 07 47 29.9
comp=Z,5.5nm,0.8s
ULM **Lac du Bonnet** 92.98 352 P P 07 47 26.2 0.0
comp=Z,4.6nm,0.9s,baz=29,slow=5.5,SNR=4.7
comp=Z,4.6nm,0.9s
ULM **Lac du Bonnet** 92.98 352 P P 07 47 25.6 -0.6
EPLO **Experimental L** 93.28 350 P P 07 47 27.8 +0.2
NEW **Newport** 95.36 6 IAmb IAmb 07 47 39.1
comp=Z,2.8nm,0.8s
PDAR **Pinedale Array** 101.20 1 P Pdif 07 48 04.3 +0.6
comp=Z,0.2nm,0.6s,baz=56,slow=2.5,SNR=2.4
TXAR **Lajitas Array** 114.44 355 PKP PKiKP 07 52 52.3 -0.6
comp=Z,0.3nm,0.8s,baz=312,slow=3.1,SNR=2.6
VNDA **Vanda** 125.33 165 PKP PKPdf 07 53 10.4 -1.6
comp=Z,0.7nm,0.8s,baz=256,slow=2.3,SNR=4.5
QSPA **South Pole Qui** 126.20 180 PKP PKPdf 07 53 12.8 -1.3
comp=Z,3.4nm,1.0s,baz=245,slow=1.4,SNR=8.6
ROSC **El Rosal** 127.91 315 PKP PKPdf 07 53 19.4 0.0
comp=Z,5.1nm,0.7s,baz=48,slow=22,SNR=4.1

CPUP Villa Florida 135.50 268 PKP PKPdf 07 53 29.9 -2.8
comp=Z,1.7nm,0.8s,baz=32,slow=3.0,SNR=5.1
CPUP Villa Florida 135.50 268 PKIKP PKPdf 07 53 30.0 -2.8
LPAZ La Paz 138.92 288 PKP PKPdf 07 53 38.7 -1.4
comp=Z,0.7nm,0.8s,baz=123,slow=1.7,SNR=3.6
LPAZ SKPbc **SKPbc 07 57 03.6 -1.7**
comp=Z,0.8nm,0.9s,baz=349,slow=4.0,SNR=4.1
PLCA Paso Flores 150.07 250 PKPbc PKPbc 07 54 02.1 -1.0
comp=Z,7.8nm,0.8s,baz=146,slow=4.6,SNR=12

IDC ***14*** *07:46:15.4±1.1,34°.12N×83°.22E,h0km,mb3.6/8, mbtmp3.7/9,ML2.9/1,MS3.3/2, Error ellipse: s-maj=46.4km s-min=18.7km az=53.0*

ISC 14 07:46:20.9±1.2,34°.2N±0°.2×83°.4E±0°.2,h35km,n12, σ1§00/10,mb3.8/7,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**10.91**	**323**	LR		LR	LR	07 53 34.7	
comp=Z,78nm,20.1s,baz=172,slow=49									
MKAR	**Makanchi Array**	**12.60**	**357**	Pn		**Pn**	**Pn**	**07 49 16.4**	**-1.1**
0.1nm,0.3s,baz=184,slow=12,SNR=1.8									
1.0nm,0.8s									
CMAR	**Chiang Mai Arr**	**20.96**	**135**	P		**P**	**P**	**07 51 00.0**	**-1.0**
0.7nm,0.4s,baz=322,slow=10,SNR=1.3									
0.7nm,0.4s									
SONM	**Songino Array**	**21.97**	**45**	P		**P**	**P**	**07 51 12.7**	**+1.0**
0.5nm,0.4s,baz=245,slow=5.9,SNR=2.3									
0.5nm,0.4s									
FINES	**FINESS Array B**	**45.09**	**325**	P		**P**	**P**	**07 54 31.7**	**-1.5**
1.9nm,0.9s,baz=115,slow=8.6,SNR=4.8									
1.9nm,0.9s									
ARCES	**ARCESS Array B**	**47.24**	**336**	P		**P**	**P**	**07 54 49.8**	**-0.2**
0.9nm,0.8s,baz=121,slow=7.5,SNR=1.7									
0.9nm,0.8s									
HFS	**Hagfors**	**51.05**	**323**	P		**P**	**P**	**07 55 19.6**	**+0.3**
0.6nm,0.5s,baz=101,slow=7.5,SNR=1.9									
0.6nm,0.5s									
NB2	**NORSAR Subarra**	**52.22**	**324**	P		**P**	**P**	**07 55 29.2**	**+1.1**
comp=Z,0.8nm,0.6s,baz=86,slow=7.4									
NOA	**NORSAR Array B**	**52.22**	**324**	P		**P**	**P**	**07 55 28.6**	**+0.5**
comp=Z,0.7nm,0.7s,baz=86,slow=7.4,SNR=5.2									
comp=Z,0.7nm,0.7s									
JAY	**Jayapura**	**65.02**	**112**	LR		LR		08 28 48.4	
comp=Z,49nm,18.4s,baz=20,slow=39									
WRA	**Warramunga Arr**	**72.48**	**130**	P		**P**	**P**	**07 57 44.5**	**+0.4**
comp=Z,0.8nm,0.7s,baz=326,slow=5.9,SNR=6.8									
comp=Z,0.8nm,0.7s									
ASAR	**Alice Springs**	**74.96**	**133**	P		**P**	**P**	**07 57 58.5**	**-0.2**
comp=Z,0.4nm,0.8s,baz=321,slow=5.7,SNR=4.5									
comp=Z,0.4nm,0.8s									

CATAC ***14*** *08:25:20.4±0.2, 13°.N±2°.×8°.9W±°., h39km±4km, M5.0/68, MLv5.0/68, Error ellipse: s-maj=3.9km s-min=1.1km az=32.1, confirmed*

GFZ ***14*** *08:25:21.0±0.3, 13°.N±4°.×8°.9W±°., h82km, M4.7/30, mb4.6/30, confirmed*

SNET ***14*** *08:25:20.9±1.4, 13°.01N×88°.71W, h53km, ML4.8, Presumed earthquake*

IDC ***14*** *08:25:20.3±0.7, 13°.17N×88°.44W, h71km±6km, mb4.0/15, mbtmp4.3/18, MS3.5/44, Error ellipse: s-maj=23.4km s-min=10.0km az=55.0*

GCG ***14*** *08:25:21.5±0.9, 13°.02N×88°.82W, h30km±7km, MD5.1, ML5.0, Presumed earthquake*

NEIC ***14*** *08:25:22.4±2.8, 13°.02N±0°.07×88°.64W±0°.07, h80km±4km, mb4.6/337, Error ellipse: s-maj=11.5km s-min=7.3km az=221.0*

ISC 14 08:25:19.8±0.4,12°.97N±0°.04×88°.71W±0°.03,h70km±3km, h70km:pP-P,n802,σ1§47/730,mb4.6/153,12C-24D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.57**	**353**	P			**Pn**	**08 25 32.8**	**-0.6**
TECO				S			**Sn**	**08 25 42.5**	**-0.9**
LCY	**Lacayo**	**0.61**	**42**	⇓*i*P			**Pn**	**08 25 33.7**	**-0.2**
RANC	**El Ranchito**	**0.62**	**42**	⇑P			**Pn**	**08 25 33.8**	**-0.3**
RANC				S			**Sn**	**08 25 44.3**	**-0.2**
PACA	**Pacayal**	**0.63**	**37**	⇓P			**Pn**	**08 25 34.0**	**-0.2**
PACA				S			**Sn**	**08 25 45.0**	**+0.4**
COEG	**Centro de Oper**	**0.67**	**346**	⇓P			**Pn**	**08 25 34.0**	**-0.5**
COEG				S			**Sn**	**08 25 44.5**	**-0.9**
PQSS	**Presa 15 de Se**	**0.67**	**13**	⇑P			**Pn**	**08 25 34.3**	**-0.1**
PQSS	**Presa 15 de Se**	**0.67**	**13**	*e*P			**Pn**	**08 25 34.3**	**-0.1**
PQSS				*e*S			**Sn**	**08 25 45.3**	**+0.1**
INTP	**Intipuca**	**0.68**	**70**	*e*P			**Pn**	**08 25 34.3**	**-0.2**
INTP				*e*S			**Sn**	**08 25 45.1**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.73**	**359**	P			**Pn**	**08 25 35.4**	**+0.2**
SCLA				S			**Sn**	**08 25 46.8**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.73**	**359**	*e*P			**Pn**	**08 25 35.3**	**+0.2**
PAVA	**Las Pavas**	**0.77**	**344**	⇓P			**Pn**	**08 25 35.5**	**-0.2**
PAVA	**Las Pavas**	**0.77**	**344**	*e*P			**Pn**	**08 25 35.6**	**-0.2**
PAVA				*e*S			**Sn**	**08 25 47.5**	**0.0**
PANCS	**Alcalda de**	**0.79**	**325**	P			**Pn**	**08 25 35.5**	**-0.3**
PANCS				S			**Sn**	**08 25 46.2**	**-1.4**
LALI	**Alcalda de L**	**0.79**	**311**	⇑P			**Pn**	**08 25 35.0**	**-0.8**
LALI	**Alcalda de L**	**0.79**	**311**	*i* P			**Pn**	**08 25 34.9**	**-0.8**
LALI				*i* S			**Sn**	**08 25 43.6**	**-3.9**
LALI	**Alcalda de L**	**0.79**	**311**	*e*P			**Pn**	**08 25 35.0**	**-0.8**
LALI				*e*S			**Sn**	**08 25 46.1**	**-1.4**
LOMA	**Loma Larga**	**0.81**	**327**	⇑P			**Pn**	**08 25 35.8**	**-0.4**
LOMA	**Loma Larga**	**0.81**	**327**	*e*P			**Pn**	**08 25 35.7**	**-0.4**
LOMA				*e*S			**Sn**	**08 25 47.3**	**-0.9**
LBRS	**Las Brisas**	**0.83**	**337**	*i* P			**Pn**	**08 25 36.6**	**+0.2**
IGN	**Direccin Gen**	**0.87**	**329**	P			**Pn**	**08 25 36.7**	**-0.1**
IGN				S			**Sn**	**08 25 49.7**	**-0.2**
LFU	**La Fuente**	**0.87**	**333**	*e*P			**Pn**	**08 25 37.0**	**+0.1**
LCND	**La Caada**	**0.87**	**67**	⇓P			**Pn**	**08 25 36.9**	**+0.1**
LCND	**La Caada**	**0.87**	**67**	*i* P			**Pn**	**08 25 37.3**	**+0.5**
LCND				*e*S			**Sn**	**08 25 49.8**	**+0.5**
SEMO	**Seminario San**	**0.89**	**326**	P			**Pn**	**08 25 36.8**	**-0.2**
SEMO				S			**Sn**	**08 25 49.2**	**-0.5**
UEES	**Universidad Ev**	**0.90**	**326**	⇓P			**Pn**	**08 25 37.0**	**-0.2**
UEES				S			**Sn**	**08 25 49.6**	**-0.6**
PIC2	**El Picacho**	**0.94**	**326**	*e*P			**Pn**	**08 25 37.7**	**-0.1**
PIC2				*e*S			**Sn**	**08 25 51.1**	**0.0**
BOQS	**Boqueron**	**0.94**	**324**	*e*P			**Pn**	**08 25 37.9**	**0.0**
JAYA	**Jayaque - finc**	**0.99**	**314**	⇑P			**Pn**	**08 25 37.7**	**-0.7**
JAYA	**Jayaque - finc**	**0.99**	**314**	*i* P			**Pn**	**08 25 37.7**	**-0.7**
JAYA				*i* S			**Sn**	**08 25 50.8**	**-1.4**
JAYA				IAML				08 26 00.8	
comp=E,43µm,0.3s									
JAYA	**Jayaque - finc**	**0.99**	**314**	*e*P			**Pn**	**08 25 37.7**	**-0.7**
JAYA				*e*S			**Sn**	**08 25 51.0**	**-1.1**
P5NO	**Presa 5 de nov**	**1.01**	**357**	P			**Pn**	**08 25 38.6**	**0.0**
P5NO	**Presa 5 de nov**	**1.01**	**357**	*e*P			**Pn**	**08 25 38.5**	**0.0**
P5NO				*e*S			**Sn**	**08 25 52.7**	**+0.3**
CEDA	**San Andres**	**1.06**	**321**	⇓P			**Pn**	**08 25 39.1**	**-0.1**
CEDA				S			**Sn**	**08 25 53.8**	**+0.2**
CEDA	**San Andres**	**1.06**	**321**	*e*P			**Pn**	**08 25 39.2**	**0.0**
CEDA				*e*S			**Sn**	**08 25 54.4**	**+0.8**
CSGN	**Cosiguina Volc**	**1.12**	**89**	⇑P			**Pn**	**08 25 40.1**	**+0.1**
CSGN				S			**Sn**	**08 25 55.9**	**+0.8**
LLGN	**La Laguna**	**1.21**	**349**	⇓P			**Pn**	**08 25 41.2**	**0.0**
LLGN				S			**Sn**	**08 25 57.2**	**+0.2**
CEVE	**Cerro Verde**	**1.23**	**314**	P			**Pn**	**08 25 41.8**	**+0.3**
CEVE				S			**Sn**	**08 25 57.5**	**-0.3**
CEVE	**Cerro Verde**	**1.23**	**314**	*e*P			**Pn**	**08 25 42.2**	**+0.7**
CEVE				*e*S			**Sn**	**08 25 59.3**	**+1.5**
SBLS	**San Blas**	**1.24**	**315**	*e*P			**Pn**	**08 25 41.7**	**+0.1**
SBLS				*e*S			**Sn**	**08 25 58.5**	**+0.6**
UNIC	**Universidad Ca**	**1.30**	**321**	P			**Pn**	**08 25 42.0**	**-0.2**
UNIC				S			**Sn**	**08 25 59.3**	**+0.3**
LOAL	**Lomas de Alarc**	**1.46**	**315**	P			**Pn**	**08 25 45.3**	**+0.9**
LOAL				S			**Sn**	**08 26 03.2**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.48**	**315**	⇓P			**Pn**	**08 25 44.9**	**+0.3**
SLOZ				S			**Sn**	**08 26 04.0**	**+0.8**
FAME	**Alcaldia de Sa**	**1.54**	**305**	⇑P			**Pn**	**08 25 45.3**	**0.0**
MTO3	**Montecristo**	**1.56**	**336**				**Pn**	**08 25 46.0**	**+0.2**
MTO3	**Montecristo**	**1.56**	**336**	⇓P			**Pn**	**08 25 46.0**	**+0.2**
MTO3				S			**Sn**	**08 26 05.7**	**+0.4**
MTO3	**Montecristo**	**1.56**	**336**	*i* P			**Pn**	**08 25 46.0**	**+0.2**
CRIN	**San Cristobal**	**1.64**	**99**				**Pn**	**08 25 48.2**	**+1.4**
CRIN	**San Cristobal**	**1.64**	**99**	P			**Pn**	**08 25 48.1**	**+1.3**
CRIN				S			**Sn**	**08 26 08.4**	**+1.2**
CRIN	**San Cristobal**	**1.64**	**99**	P			**Pn**	**08 25 48.0**	**+1.3**
CRIN				S			**Sn**	**08 26 06.2**	**-1.0**
CRIN	**San Cristobal**	**1.64**	**99**	P			**Pn**	**08 25 47.9**	**+1.1**
JUAM	**Asuncion Mita**	**1.67**	**325**	*i* P			**Pn**	**08 25 47.4**	**+0.3**
ESQI	**Esquipulas**	**1.70**	**339**				**Pn**	**08 25 48.3**	**+0.8**
ESQI	**Esquipulas**	**1.70**	**339**	⇓P			**Pn**	**08 25 48.3**	**+0.8**
ESQI	**Esquipulas**	**1.70**	**339**	⇓*i*P			**Pn**	**08 25 48.3**	**+0.8**
ESQI				*e*S			**Sn**	**08 26 09.3**	**+0.8**
ZAFR2	**Estanzuela, Za**	**1.72**	**339**	*i* P			Pn	08 25 54.6	+6.9
TGUH	**Tegucigalpa,Un**	**1.77**	**52**	Pn			**Pn**	**08 25 49.2**	**+0.7**
SARH	**Santa Rosa de**	**1.80**	**359**	⇓P			**Pn**	**08 25 49.9**	**+1.0**
SARH	**Santa Rosa de**	**1.80**	**359**	*i* P			**Pn**	**08 25 49.9**	**+1.0**
QUEN	**Al S del Volca**	**1.85**	**101**	⇑P			**Pn**	**08 25 47.2**	**-2.4**
QUEN				S			**Sn**	**08 26 10.7**	**-1.4**
TEL3	**Telica 3**	**1.86**	**102**	⇓P			**Pn**	**08 25 50.5**	**+0.9**
HERN	**Volcan Telica**	**1.87**	**101**				**Pn**	**08 25 50.1**	**+0.3**
HERN	**Volcan Telica**	**1.87**	**101**	⇓P			**Pn**	**08 25 50.0**	**+0.3**
HERN				S			**Sn**	**08 26 12.3**	**-0.3**
PLRN	**Geotermica Pol**	**1.94**	**101**	P			**Pn**	**08 25 51.1**	**+0.5**
PLRN				S			**Sn**	**08 26 13.7**	**-0.4**
ROCN	**Rota Cerro Neg**	**1.97**	**103**	⇓P			**Pn**	**08 25 48.0**	**-3.2**
ROCN				S			**Sn**	**08 26 11.6**	**-3.4**
ILCN	**San Idelfonso**	**2.00**	**101**	⇓P			**Pn**	**08 25 50.8**	**-0.8**
ILCN				S			**Sn**	**08 26 15.1**	**-0.6**
CNGA	**Al SSO del Vol**	**2.02**	**103**	⇓P			**Pn**	**08 25 52.2**	**+0.4**
CNGA				S			**Sn**	**08 26 16.7**	**+0.6**
CNGN	**Cerro Negro**	**2.02**	**103**	⇓P			**Pn**	**08 25 52.1**	**+0.3**
CNGN				S			**Sn**	**08 26 17.2**	**+1.1**
CNGN	**Cerro Negro**	**2.02**	**103**	P			**Pn**	**08 25 51.5**	**-0.3**
CNGN	**Cerro Negro**	**2.02**	**103**	P			**Pn**	**08 25 52.2**	**+0.4**
PCG5	**San Vicente Pa**	**2.04**	**308**	*i* P			**Pn**	**08 25 56.5**	**+4.4**
MACN	**El Madrono**	**2.05**	**104**	⇑P			**Pn**	**08 25 52.4**	**+0.2**
MACN				S			**Sn**	**08 26 17.5**	**+0.6**
FG16	**Alotenango, Sa**	**2.18**	**307**	*i* P			Pn	08 26 00.0	+6.0
MOMN	**Momotombo**	**2.19**	**104**	P			**Pn**	**08 25 54.5**	**+0.4**
MOMN				S			**Sn**	**08 26 20.1**	**-0.2**
FG08	**Yepocapa, Chim**	**2.21**	**306**	*i* P			Pn	08 26 00.7	+6.2
COPN	**Copaltepe**	**2.21**	**110**	P			**Pn**	**08 25 54.5**	**+0.2**
MOM2	**El Cardon**	**2.24**	**103**	P			**Pn**	**08 25 55.3**	**+0.6**
MOM2				S			**Sn**	**08 26 21.4**	**+0.1**
OCON	**Estacion meteo**	**2.27**	**73**	⇓P			**Pn**	**08 25 55.2**	**-0.1**
OCON				S			**Sn**	**08 26 22.8**	**+0.5**
LIMN	**Finca el Limon**	**2.29**	**87**	⇑P			**Pn**	**08 25 55.9**	**+0.4**
LIMN				S			**Sn**	**08 26 23.7**	**+1.0**
AMTN	**Mateare**	**2.34**	**108**	P			**Pn**	**08 25 57.1**	**+1.0**
AMTN				S			**Sn**	**08 26 23.6**	**-0.3**
SAPS	**Ciudad Sandino**	**2.39**	**109**	P			**Pn**	**08 25 57.6**	**+0.9**
SAPS				S			**Sn**	**08 26 24.9**	**-0.2**
APYN	**Apoyeque**	**2.42**	**107**	P			**Pn**	**08 25 58.6**	**+1.4**
APYN				S			**Sn**	**08 26 26.2**	**+0.4**
APQ2	**Apoyeque**	**2.45**	**108**	P			**Pn**	**08 25 58.4**	**+0.8**
APQ2				S			**Sn**	**08 26 26.9**	**+0.4**
APQ2	**Apoyeque**	**2.45**	**108**	P			**Pn**	**08 25 58.2**	**+0.6**
APQ2				S			**Sn**	**08 26 27.0**	**+0.5**
ABCN	**Banco Central**	**2.49**	**109**	P			**Pn**	**08 25 59.1**	**+0.9**
ABCN				S			**Sn**	**08 26 27.6**	**0.0**
ALLN	**Telcor Managua**	**2.51**	**108**	P			**Pn**	**08 25 59.2**	**+0.7**
ALLN				S			**Sn**	**08 26 27.9**	**-0.1**
TISN	**Laguna Tiscapa**	**2.52**	**109**	P			**Pn**	**08 25 56.1**	**-2.4**
RCVN	**Varillal2**	**2.53**	**76**	P			**Pn**	**08 25 59.3**	**+0.6**
RCVN				S			**Sn**	**08 26 29.5**	**+0.9**
UNAN	**Cigeo UNAN**	**2.53**	**109**	P			**Pn**	**08 25 59.6**	**+0.9**
UNAN				S			**Sn**	**08 26 27.8**	**-0.7**
MGAN	**Managua**	**2.54**	**108**				**Pn**	**08 25 59.3**	**+0.5**
MGAN	**Managua**	**2.54**	**108**	P			**Pn**	**08 25 59.6**	**+0.7**
MGAN				S			**Sn**	**08 26 28.7**	**-0.1**
MGAN	**Managua**	**2.54**	**108**	P			**Pn**	**08 25 59.5**	**+0.7**
MGAN				S			**Sn**	**08 26 27.5**	**-1.2**
MGAN	**Managua**	**2.54**	**108**	*i* P			**Pn**	**08 26 00.4**	**+1.6**
RCON	**San Juan de Ri**	**2.54**	**78**	⇑P			**Pn**	**08 25 59.5**	**+0.5**
RCON				S			**Sn**	**08 26 29.9**	**+0.9**
WILN	**Americas 2**	**2.59**	**108**	P			**Pn**	**08 26 00.8**	**+1.3**
WILN				S			**Sn**	**08 26 30.3**	**+0.3**
RCPN	**Sur Rio San Ju**	**2.61**	**77**	P			**Pn**	**08 26 00.4**	**+0.5**
AERN	**Aeropuerto Man**	**2.62**	**108**	P			**Pn**	**08 26 00.7**	**+0.9**
AERN				S			**Sn**	**08 26 30.7**	**+0.2**
APG	**El Apazote**	**2.64**	**320**	P			**Pn**	**08 26 01.5**	**+1.1**
comp=E,4.0nm,0.5s,baz=142,slow=9.7,SNR=43									
APG	**El Apazote**	**2.64**	**320**	*i* P			**Pn**	**08 26 01.5**	**+1.1**
MAS3	**Al N del Volca**	**2.65**	**110**	P			**Pn**	**08 26 00.8**	**+0.5**
MAS3				S			**Sn**	**08 26 30.6**	**-0.8**
MASN	**Masaya**	**2.69**	**111**	P			**Pn**	**08 26 02.0**	**+1.1**
MASN				S			**Sn**	**08 26 31.7**	**-0.6**
MATN	**Matagalpa**	**2.72**	**90**	⇓P			**Pn**	**08 26 01.7**	**+0.4**
MATN				S			**Sn**	**08 26 33.9**	**+0.7**
NADN	**Granada**	**2.88**	**115**	P			**Pn**	**08 26 05.1**	**+1.6**
NADN				S			**Sn**	**08 26 30.7**	**-1.4**
NADN	**Granada**	**2.88**	**115**	*e*P			**Pn**	**08 26 05.2**	**+1.7**
STG5	**El Palmar, Qui**	**2.93**	**299**	*i* P			Pn	08 26 09.6	+5.4
STG8	**El Palmar, Qui**	**2.96**	**300**	*i* P			Pn	08 26 10.5	+5.8
BOAB	**BOACO BROADBAN**	**3.02**	**99**				**Pn**	**08 26 05.3**	**0.0**
BOAB	**BOACO BROADBAN**	**3.02**	**99**	⇓P			**Pn**	**08 26 05.3**	**0.0**
BOAB				S			**Sn**	**08 26 41.0**	**+0.7**
BOAB	**BOACO BROADBAN**	**3.02**	**99**	P			**Pn**	**08 26 05.5**	**+0.2**
RTAL	**Retalhuleu**	**3.29**	**298**				**Pn**	**08 26 09.7**	**+0.7**
RTAL	**Retalhuleu**	**3.29**	**298**	P			**Pn**	**08 26 09.4**	**+0.5**
RTAL				S			**Sn**	**08 26 47.7**	**+0.8**
JAPN	**Al SSO del Vol**	**3.29**	**115**	P			**Pn**	**08 26 11.3**	**+2.2**
JAPN				S			**Sn**	**08 26 47.5**	**+0.4**
JAPN	**Al SSO del Vol**	**3.29**	**115**	*e*P			**Pn**	**08 26 11.0**	**+1.9**
MORN	**Al O del Volca**	**3.31**	**115**	P			**Pn**	**08 26 11.3**	**+2.0**
MORN				S			**Sn**	**08 26 48.2**	**+0.7**
LCRUZ	**La Cruz**	**3.55**	**122**	*e*P			**Pn**	**08 26 13.4**	**+0.8**
HUEH	**Huehuetenango**	**3.58**	**311**				**Pn**	**08 26 15.2**	**+2.1**
HUEH	**Huehuetenango**	**3.58**	**311**	P			**Pn**	**08 26 14.1**	**+2.0**
HUEH				S			**Sn**	**08 26 55.4**	**+1.1**
HUEH	**Huehuetenango**	**3.58**	**311**	*i* P			**Pn**	**08 26 14.8**	**+1.6**
CARN	**Rivas**	**3.59**	**119**				**Pn**	**08 26 14.8**	**+1.7**
CARN	**Rivas**	**3.59**	**119**	P			**Pn**	**08 26 13.7**	**+0.7**
CARN				S			**Sn**	**08 26 52.6**	**-1.7**
CARN	**Rivas**	**3.59**	**119**	*e*P			**Pn**	**08 26 14.7**	**+1.7**
ACON	**Acoyapa**	**3.60**	**106**	P			**Pn**	**08 26 13.2**	**0.0**
ACON				S			**Sn**	**08 26 55.1**	**+0.7**
LAPC	**Finca la Perla**	**3.88**	**124**	*e*P			**Pn**	**08 26 20.1**	**+3.0**
ALIBA	**Liberia Airpor**	**3.90**	**127**	*e*P			**Pn**	**08 26 20.5**	**+3.2**
SIUN	**Universidad Ur**	**3.91**	**79**				**Pn**	**08 26 18.4**	**+1.0**
SIUN	**Universidad Ur**	**3.91**	**79**	P			**Pn**	**08 26 18.5**	**+1.0**
SIUN				S			**Sn**	**08 27 03.7**	**+1.7**
BUAI	**Buenos Aires**	**3.91**	**122**	*e*P			**Pn**	**08 26 21.0**	**+3.5**
PEJA	**Penjamo Buenos**	**3.91**	**121**	*e*P			**Pn**	**08 26 19.9**	**+2.4**
VRLE	**La Escondida,**	**3.93**	**123**	*e*P			**Pn**	**08 26 20.1**	**+2.3**
ERLA	**Liberia**	**3.96**	**126**	*e*P			**Pn**	**08 26 20.4**	**+2.5**
GPS2	**Hotel Rincn d**	**3.96**	**123**	*e*P			**Pn**	**08 26 22.7**	**+4.5**
DELF	**Filadelfia**	**3.98**	**129**	*e*P			**Pn**	**08 26 21.3**	**+2.9**
SACU	**Santa Cruz**	**4.08**	**131**	*e*P			**Pn**	**08 26 21.8**	**+2.0**
PETF	**Flores**	**4.08**	**344**				**Pn**	**08 26 21.9**	**+2.1**
PETF	**Flores**	**4.08**	**344**	⇓P			**Pn**	**08 26 22.2**	**+2.3**
PETF	**Flores**	**4.08**	**344**	*i* P			**Pn**	**08 26 22.1**	**+2.3**
CLARA	**Aguas Claras**	**4.09**	**122**	*e*P			**Pn**	**08 26 21.1**	**+1.2**
CLARA				*e*S			**Sn**	**08 27 05.6**	**-1.0**
MESS	**Mesas**	**4.09**	**122**	*e*P			**Pn**	**08 26 21.9**	**+1.9**
HORNC	**Hornillas**	**4.12**	**123**	*e*P			**Pn**	**08 26 22.3**	**+1.8**
CUI	**Cuipilapa**	**4.16**	**123**	*e*P			**Pn**	**08 26 23.0**	**+2.0**
UPAL	**Upala**	**4.17**	**119**	*e*P			**Pn**	**08 26 22.6**	**+1.7**
JUD3	**Juan Diaz 3**	**4.17**	**131**				**Pn**	**08 26 23.1**	**+1.9**
JUD3	**Juan Diaz 3**	**4.17**	**131**	*e*P			**Pn**	**08 26 23.5**	**+2.4**
PLVR	**Palo Verde**	**4.20**	**128**	*e*P			**Pn**	**08 26 25.5**	**+4.0**
TENO	**El Achiote**	**4.29**	**121**	*e*P			**Pn**	**08 26 25.0**	**+2.2**
TIMP	**Tierras Morena**	**4.32**	**123**	*e*P			**Pn**	**08 26 25.4**	**+2.2**
CNAS	**Canas**	**4.35**	**125**	*e*P			Pn	08 26 30.5	+7.0
CMAA	**Lajas Hojancha**	**4.36**	**132**	*e*P			**Pn**	**08 26 25.7**	**+2.0**
LCHIL	**Los Chiles**	**4.36**	**116**	*e*P			**Pn**	**08 26 28.0**	**+4.4**
QUEB	**Quebradon, Cot**	**4.40**	**122**	*e*P			**Pn**	**08 26 28.5**	**+4.2**
COTE	**Lago Cote**	**4.41**	**122**	*e*P			**Pn**	**08 26 26.7**	**+2.3**
TILA	**Tilaran**	**4.43**	**124**	*e*P			**Pn**	**08 26 26.2**	**+1.6**
NYURE	**Nandayure**	**4.50**	**131**	*e*P			**Pn**	**08 26 27.3**	**+1.8**
JTS	**Las Juntas de**	**4.54**	**125**	P			**Pn**	**08 26 27.2**	**+1.1**
comp=E,17nm,0.3s,baz=109,slow=22,SNR=68									
JTS				S			**Sn**	**08 27 13.9**	**-3.8**
comp=E,97nm,0.4s,baz=199,slow=12,SNR=3.9									
JTS	**Las Juntas de**	**4.54**	**125**				**Pn**	**08 26 28.7**	**+2.5**
JTS	**Las Juntas de**	**4.54**	**125**	S			**Sn**	**08 27 18.4**	**+0.6**
JTS	**Las Juntas de**	**4.54**	**125**	P			**Pn**	**08 26 27.7**	**+1.5**
JTS	**Las Juntas de**	**4.54**	**125**	*e*P			**Pn**	**08 26 28.9**	**+2.8**
JUNT	**Juntas**	**4.54**	**126**	*e*P			**Pn**	**08 26 28.8**	**+2.7**
TABAC	**Tabacon**	**4.58**	**122**	*e*P			**Pn**	**08 26 31.4**	**+4.7**
MTEVE	**Monteverde**	**4.63**	**124**	*e*P			**Pn**	**08 26 31.2**	**+3.7**
CEDE	**Laguna Cedeo**	**4.64**	**122**	*e*P			**Pn**	**08 26 31.1**	**+3.6**
ARE1	**Arenal 1**	**4.64**	**122**	*e*P			**Pn**	**08 26 29.6**	**+2.2**
VARE2	**V. Arenal**	**4.64**	**122**	*e*P			**Pn**	**08 26 30.1**	**+2.6**
CASO	**Castillo**	**4.64**	**122**	*e*P			**Pn**	**08 26 29.8**	**+2.3**
VACR	**Volcan Arenal**	**4.67**	**122**	*e*P			**Pn**	**08 26 30.7**	**+2.9**
COVE	**Coope Vega, Sa**	**4.78**	**117**	S			**Sn**	**08 27 22.7**	**-0.6**
CAO2	**Cobano, Puntar**	**4.81**	**132**	*e*P			**Pn**	**08 26 32.0**	**+2.2**
PAQE	**Paquera**	**4.85**	**130**	*e*P			**Pn**	**08 26 32.9**	**+2.6**
LAFE	**Finca La Fe, P**	**4.87**	**130**	*e*P			**Pn**	**08 26 32.6**	**+1.9**
BLUN	**Bluefields**	**4.92**	**101**	P			**Pn**	**08 26 33.9**	**+2.7**
ARZA	**Esparza**	**4.95**	**126**	*e*P			**Pn**	**08 26 34.5**	**+2.8**
QUEU	**Ciudad Quesada**	**4.95**	**122**	*e*P			**Pn**	**08 26 33.2**	**+1.5**
VPL3	**V. Platanar**	**5.04**	**121**	*e*P			**Pn**	**08 26 34.6**	**+1.6**
SRA1	**San Ramn**	**5.04**	**124**	*e*P			**Pn**	**08 26 35.9**	**+2.8**
RAMO	**San Ramon**	**5.05**	**124**	*e*P			**Pn**	**08 26 36.2**	**+3.0**
ZARE	**Zarcero**	**5.06**	**123**	*e*P			**Pn**	**08 26 35.6**	**+2.3**
PALD	**Palmares**	**5.09**	**124**	*e*P			**Pn**	**08 26 36.8**	**+3.0**
OROT	**Orotina**	**5.11**	**126**	*e*P			**Pn**	**08 26 37.5**	**+3.7**
NARAN	**Naranjo de Ala**	**5.12**	**123**	*e*P			**Pn**	**08 26 37.5**	**+3.4**
ARTO	**Ro Cuarto**	**5.12**	**120**	*e*P			**Pn**	**08 26 38.6**	**+4.5**
SARCI	**Sarchi**	**5.15**	**123**	*e*P			**Pn**	**08 26 38.1**	**+3.6**
TRB2

comp=Z,0,4nm,0.5s,baz=118,slow=3.6,SNR=6.1
TXAR LR LR 08 39 01.7
comp=Z,52nm,21.1s,baz=139,slow=38
comp=Z,4.6nm,0.6s
TXAR Lajitas Array 21.40 322 P 08 30 03.5 +1.5
OXF Oxford 21.46 358 IAmb IAmb 08 30 23.6
comp=Z,61nm,1.5s
PLPT Palo Pinto 21.62 338 IAmb IAmb 08 30 32.2
comp=Z,36nm,0.9s
FPAL Fort Paine 21.66 7 P P 08 30 06.0 +1.3
X40A Basin Creek Fa 21.75 351 P P 08 30 08.1 +2.6
MIAR Mount Ida 21.93 349 P P 08 30 08.7 +1.2
MIAR IAmb IAmb 08 30 34.1
comp=Z,17nm,0.9s
MIAR Mount Ida 21.93 349 P P 08 30 09.2 +1.7
UALR University of 21.96 352 P P 08 30 09.4 +1.7
HODGE Hodges 21.97 14 P P 08 30 09.4 +1.5
HODGE IAmb IAmb 08 30 11.7
comp=Z,12nm,0.6s
ABTX Abilene, Hawle 21.98 335 P P 08 30 09.8 +1.7
ABTX IAmb IAmb 08 30 12.0
comp=Z,15nm,0.7s
SGCY Sterling City 22.04 331 P P 08 30 11.0 +2.3
SGCY IAmb IAmb 08 30 12.2
comp=Z,19nm,0.6s
JSC Jenkinsville 22.27 16 IAmb IAmb 08 30 14.2
comp=Z,20nm,0.8s
TMB01 Midkiff 22.31 329 IAmb IAmb 08 30 14.9
comp=Z,18nm,0.6s
SJG San Juan 22.32 74 LR LR 08 39 15.9
comp=Z,60nm,21.2s,baz=263,slow=38
MNHN Monahans 22.40 327 IAmb IAmb 08 30 16.5
comp=Z,23nm,0.6s
ATAH Atahualpa 22.45 152 LR LR 08 38 02.4
comp=Z,64nm,20.4s,baz=335,slow=34
W52A Murphy 22.45 10 P P 08 30 14.5 +1.4
W52A IAmb IAmb 08 30 35.8
comp=Z,28nm,0.8s
BG3 Lake Jocassee 22.55 12 P P 08 30 15.0 +0.9
BG3 IAmb IAmb 08 30 42.4
comp=Z,30nm,1.3s
HBAR Harrisburg 22.56 356 P P 08 30 15.4 +1.2
CPCT Cooper Cave 22.70 9 IAmb IAmb 08 30 39.5
comp=Z,18nm,0.7s
APMT Aspermont 22.79 335 IAmb IAmb 08 30 44.7
comp=Z,13nm,0.8s
TPB06 Permian Basin 22.88 327 IAmb IAmb 08 30 19.7
comp=Z,19nm,0.7s
ODSA Odessa 22.91 329 IAmb IAmb 08 30 19.4
comp=Z,27nm,1.4s
SN07 Snyder 07 22.91 333 P P 08 30 18.9 +0.8
129A Stewart Farms, 22.98 331 IAmb IAmb 08 30 20.9
comp=Z,9.5nm,0.7s
TKL Tuckaleechee C 23.03 10 LR LR 08 39 28.1
comp=Z,72nm,20.8s,baz=185,slow=37
TKL Tuckaleechee C 23.03 10 IAmb IAmb 08 30 43.2
comp=Z,18nm,0.9s
FCAR Ozark Folk Cen 23.03 353 IAmb IAmb 08 30 44.3
comp=Z,22nm,0.8s
KMSC Kings Mountain 23.07 16 IAmb IAmb 08 30 46.7
comp=Z,20nm,1.2s
WVT Waverly 23.08 2 P P 08 30 19.8 +0.3
LCAR Lake Charles 23.11 355 IAmb IAmb 08 30 41.8
comp=Z,21nm,1.2s
POST Post 23.17 332 IAmb IAmb 08 30 23.0
comp=Z,16nm,0.7s
V53A Saluda 23.22 12 IAmb IAmb 08 30 46.4
comp=Z,20nm,0.9s
LPIG La Paz 23.24 302 LR LR 08 39 53.5
comp=Z,31nm,18.4s,baz=342,slow=37
128A Castleberry Fa 23.27 329 IAmb IAmb 08 30 23.9
comp=Z,9.9nm,0.6s
W35A Tecumseh 23.29 343 IAmb IAmb 08 30 54.6
comp=Z,15nm,0.8s
WMOK Wichita Mounta 23.52 339 P P 08 30 24.7 +0.9
U49A Red Boiling Sp 23.59 6 IAmb IAmb 08 30 46.2
comp=Z,21nm,1.2s
TPB28 23.60 325 IAmb IAmb 08 30 28.9
comp=Z,4.4nm,0.7s
HHAR Hobbs 23.69 349 IAmb IAmb 08 30 28.2
comp=Z,14nm,0.6s
TUL3 Leonard 23.72 346 IAmb IAmb 08 30 52.3
comp=Z,20nm,1.0s
RLO Rose Lookout 23.79 347 IAmb IAmb 08 30 29.1
comp=Z,10nm,0.5s
DEOK Depew 23.84 344 IAmb IAmb 08 30 27.6
comp=Z,10nm,0.5s
U38A Gravette 23.92 349 P 08 30 27.6 +0.2
TZTN Tazewell 23.93 10 P P 08 30 27.4 -0.1
T47A Sharon Grove 23.96 3 IAmb IAmb 08 30 28.6
comp=Z,18nm,0.6s
OK052 Battle Ridge R 24.06 344 IAmb IAmb 08 30 29.8
comp=Z,16nm,0.6s
OK029 Liberty Lake 24.06 342 IAmb IAmb 08 30 29.9
comp=Z,16nm,0.7s
MNTX Cornudas Mount 24.13 323 P P 08 30 30.4 +1.1
QUOK Quay 24.20 344 IAmb IAmb 08 30 31.4
comp=Z,19nm,0.6s
V58A Windy Hill, Pi 24.32 19 IAmb IAmb 08 30 33.0
comp=Z,19nm,0.6s
OK048 Pawnee Station 24.49 344 IAmb IAmb 08 30 36.7
comp=Z,10nm,0.7s
MSTX Muleshoe 24.51 331 IAmb IAmb 08 30 34.1
comp=Z,22nm,0.8s
AMTX Amarillo 24.78 334 IAmb IAmb 08 30 38.4
comp=Z,13nm,0.7s
OK038 West end E0370 25.09 341 IAmb IAmb 08 30 39.5
comp=Z,15nm,0.6s
CCM Cathedral Cave 25.09 355 P P 08 30 37.9 +0.1
CCM IAmb IAmb 08 31 00.4
comp=Z,20nm,0.9s
CCM Cathedral Cave 25.09 355 P P 08 30 37.7 -0.1
WCI Wyandotte Cave 25.25 4 P P 08 30 38.4 -0.9
WCI IAmb IAmb 08 30 40.1
comp=Z,13nm,0.7s
WCI Wyandotte Cave 25.25 4 P P 08 30 38.7 -0.6
T59A Double "B" Far 25.91 21 IAmb IAmb 08 31 11.5
comp=Z,14nm,0.8s
CZSB Cruzeiro do Su 26.00 141 P P 08 30 48.9 +2.6
CZSB IAmb IAmb 08 31 16.1
comp=Z,21nm,0.9s
CZSB Cruzeiro do Su 26.00 141 eP P 08 30 46.5 +0.2
Q51A Peebles 26.39 9 IAmb IAmb 08 30 50.5
comp=Z,11nm,0.6s
RTBA Rita Blanca 26.55 334 IAmb IAmb 08 31 12.0
comp=Z,14nm,0.9s
P40A Paris 26.62 354 IAmb IAmb 08 30 52.4
comp=Z,13nm,0.7s
SBM South Baldy 26.82 324 P P 08 30 55.0 +0.9
Q54A Coxs Mills 26.84 14 IAmb IAmb 08 30 54.8
comp=Z,13nm,0.5s
P38A Dawn 26.89 352 IAmb IAmb 08 31 23.8
comp=Z,18nm,1.2s
KSU1 Kansas State U 26.95 346 IAmb IAmb 08 31 35.5
comp=Z,12nm,0.9s
CBN Corbin Frederi 27.09 20 IAmb IAmb 08 30 57.6
comp=Z,14nm,0.7s
ANMO Albuquerque 27.15 327 LR LR 08 43 49.9
comp=Z,47nm,18.9s,baz=86,slow=41
ANMO Albuquerque 27.15 327 P P 08 30 58.4 +1.7
ANMO Albuquerque 27.15 327 P P 08 30 56.5 -0.3
P52A Corning 27.19 11 IAmb IAmb 08 31 15.8
comp=Z,21nm,1.4s
P53A Whipple 27.20 12 IAmb IAmb 08 30 58.3
comp=Z,11nm,0.9s
Q56A Snyder Ridge, 27.31 16 IAmb IAmb 08 31 23.9
comp=Z,11nm,0.9s
O52A Adamsville 27.71 11 IAmb IAmb 08 31 02.6
comp=Z,9.2nm,0.8s
T25A Trinidad 27.87 332 P P 08 31 05.7 +2.4
O53A New Philadelph 27.97 12 IAmb IAmb 08 31 07.0
comp=Z,7.5nm,0.6s
P57A Homestead Farm 28.05 18 IAmb IAmb 08 31 06.3
comp=Z,10.0nm,0.6s
SDMD Soldier's Deli 28.35 20 IAmb IAmb 08 31 08.8
comp=Z,5.5nm,0.5s
N53A Lisbon 28.58 13 P P 08 31 09.2 -0.1
N53A IAmb IAmb 08 31 28.3
comp=Z,23nm,1.5s
SDCO Great Sand Dun 28.87 332 P P 08 31 14.1 +1.9
L40A Anamosa 29.07 356 IAmb IAmb 08 31 17.1
comp=Z,8.9nm,0.8s
PAOC Oil Creek Stat 29.52 14 P P 08 31 17.5 -0.1
PAOC IAmb IAmb 08 31 49.7
comp=Z,14nm,1.2s
X16A Lo Mia Camp, P 29.68 320 P P 08 31 21.4 +2.1
BOAV Boa Vista 29.81 108 P P 08 31 18.3 -2.1

BOAV Boa Vista 29.81 108 *eP* **P 08 31 18.0 -2.4**
BOAV *epP* **pP 08 31 35.2 -2.0**
JFWS Jewell Farm 29.87 358 IAmb IAmb 08 31 24.5
comp=Z,7.5nm,0.8s
MVCO Mesa Verde 29.94 327 P **P 08 31 22.8 +1.2**
ISCO Idaho Springs 30.60 334 P **P 08 31 29.0 +1.4**
PV02 Paradox Valley 30.81 328 IAmb IAmb 08 31 32.9
comp=Z,12nm,1.5s
PV05 Paradox Valley 30.90 328 IAmb IAmb 08 31 33.3
comp=Z,13nm,1.5s
PV11 David Mesa, Pa 30.95 328 IAmb IAmb 08 31 33.3
comp=Z,8.6nm,0.6s
PV17 East Wray Mesa 30.98 328 IAmb IAmb 08 31 33.4
comp=Z,5.3nm,0.6s
PV19 Morning Glory 31.02 328 IAmb IAmb 08 31 35.6
comp=Z,7.9nm,0.6s
PV20 West Nyswonger 31.03 328 IAmb IAmb 08 31 33.8
comp=Z,6.5nm,0.5s
PV04 Paradox Valley 31.04 328 IAmb IAmb 08 31 34.8
comp=Z,16nm,1.4s
I37A Lemond, Waseca 31.20 353 IAmb IAmb 08 31 34.1
comp=Z,12nm,0.8s
ECSD EROS Data Cent 31.40 349 P P 08 31 33.5 -0.7
HMU Henry Mountain 31.68 326 IAmb IAmb 08 31 39.8
comp=Z,8.7nm,0.7s
O20A White River Ci 32.06 331 IAmb IAmb 08 31 43.1
comp=Z,8.8nm,1.0s
MACA Manacapuru-AM 32.12 118 P P 08 31 39.5 -1.3
MACA Manacapuru-AM 32.12 118 *eP* **P 08 31 39.1 -1.6**
PFO Pinyon Flats O 32.56 314 LR LR 08 45 50.9
comp=Z,46nm,19.9s,baz=187,slow=38
SADO Sadowa 32.73 13 LR LR 08 44 41.8
comp=Z,67nm,21.9s,baz=217,slow=36
P17A Butcher Ranch, 32.79 328 IAmb IAmb 08 31 50.5
comp=Z,5.6nm,0.6s
K22A Casper 33.36 336 IAmb IAmb 08 31 53.1
comp=Z,6.8nm,0.9s
F33A 5 Mile Ranch, 33.39 350 IAmb IAmb 08 31 51.8
comp=Z,7.0nm,0.6s
RSSD Black Hills 33.72 340 P P 08 31 56.3 +1.7
RSSD IAmb IAmb 08 31 57.2
comp=Z,5.9nm,0.7s
RSSD Black Hills 33.72 340 P P 08 31 56.4 +1.7
PDAR Pinedale Array 34.74 333 P P 08 32 04.2 +0.7
comp=Z,1.8nm,0.6s,baz=128,slow=10,SNR=30
PDAR PcP **PcP 08 34 35.6 -0.3**
comp=Z,0.6nm,0.5s,baz=152,slow=5.4,SNR=4.9
comp=Z,1.8nm,0.6s
PDAR Pinedale Array 34.74 333 P P 08 32 04.4 +0.8
HWUT Hardware Ranch 34.80 329 IAmb IAmb 08 32 06.7
comp=Z,4.4nm,0.7s
HWUT Hardware Ranch 34.80 329 P P 08 32 05.5 +1.5
AHID Auburn Hatcher 35.45 331 IAmb IAmb 08 32 12.1
comp=Z,6.9nm,0.6s
AHID Auburn Hatcher 35.45 331 P P 08 32 10.9 +1.2
LPAZ La Paz 35.48 144 P P 08 32 12.1 +1.5
comp=Z,1.8nm,0.6s,baz=322,slow=5.1,SNR=19
LPAZ pP **pP 08 32 27.4 -0.1**
comp=Z,1.8nm,0.6s,baz=303,slow=10,SNR=3.5
LPAZ LR LR 08 46 59.2
comp=Z,66nm,20.4s,baz=310,slow=37
comp=Z,1.8nm,0.6s
LPAZ La Paz 35.48 144 *eP* **P 08 32 10.5 -0.1**
AGMN Agassiz Nation 35.72 352 P P 08 32 11.1 -0.5
ECR Eagle Creek 35.80 331 IAmb IAmb 08 32 15.9
comp=Z,6.2nm,0.7s
LOHW Long Hollow 35.88 332 IAmb IAmb 08 32 16.4
comp=Z,6.3nm,0.7s
PB16 IPOC Station P 36.42 148 P P 08 32 21.2 +2.6
MDP Montagnes des 36.43 99 LR LR 08 50 12.4
comp=Z,47nm,18.1s,baz=244,slow=41
YPP Pitchstone Pla 36.49 333 P P 08 32 19.4 +0.8
NVAR Mina Array Bea 36.51 319 P P 08 32 20.4 +1.6
comp=Z,1.9nm,0.6s,baz=133,slow=7.4,SNR=6.4
NVAR LR LR 08 49 31.9
comp=Z,78nm,19.8s,baz=108,slow=40
comp=Z,1.9nm,0.6s
YMP Mirror Lake Pl 36.58 334 IAmb IAmb 08 32 30.2
comp=Z,7.1nm,0.7s
YMR Madison River 36.87 333 IAmb IAmb 08 32 24.4
comp=Z,8.8nm,0.8s
ITTB Itaituba 37.01 116 *eP* **P 08 32 19.3 -3.7**
YHB Horse Butte 37.04 333 IAmb IAmb 08 32 26.1
comp=Z,8.2nm,1.0s
YHL Hebgen Lake 37.11 333 IAmb IAmb 08 32 27.5
comp=Z,8.1nm,0.7s
ULM Lac du Bonnet 37.64 352 P P 08 32 26.4 -1.4
comp=Z,9.3nm,0.6s,baz=158,slow=9.6,SNR=15
ULM LR LR 08 49 04.7
comp=Z,80nm,21.3s,baz=174,slow=38
comp=Z,9.3nm,0.6s
HLID Hailey 37.66 329 P P 08 32 29.4 +1.0
BOZ Bozeman (W) 37.89 334 IAmb IAmb 08 32 34.3
comp=Z,7.9nm,0.8s
DLMT Dillon 38.14 332 IAmb IAmb 08 32 34.3
comp=Z,5.5nm,0.8s
VILB Vilhena 38.24 131 P 08 32 33.4 0.0
VILB Vilhena 38.24 131 *eP* **P 08 32 32.6 -0.8**
VILB *epP* **pP 08 32 51.3 +0.8**
WVOR Wild Horse Val 39.16 324 IAmb IAmb 08 32 43.3
comp=Z,3.8nm,0.7s
WVOR Wild Horse Val 39.16 324 P P 08 32 41.6 +0.6
MSO Missoula 39.86 333 IAmb IAmb 08 32 48.3
comp=Z,5.6nm,1.1s
CLDB Colider 40.35 124 *eP* **P 08 32 48.5 -2.5**
CLDB *epP* **pP 08 33 07.6 -0.7**
CLDB Colider 40.35 124 P P 08 32 50.5 -0.6
CLDB pP **pP 08 33 06.8 -1.5**
PTLB Pontes e Lacer 40.66 133 P P 08 32 53.7 +0.2
PTLB IAmb IAmb 08 32 54.5
comp=Z,14nm,1.5s
PTLB Pontes e Lacer 40.66 133 *eP* **P 08 32 52.8 -0.7**
PTLB *epP* **pP 08 33 11.1 +0.3**
I07A Izee 40.70 326 P P 08 32 54.7 +1.0
BBSD Serra de San D 40.84 136 *eP* **P 08 32 55.4 +0.4**
BBSD *epP* **pP 08 33 13.0 +0.7**
YBH Yreka Blue Hor 41.17 321 LR LR 08 52 21.2
comp=Z,59nm,21.6s,baz=142,slow=39
NEW Newport 42.37 332 LR LR 08 55 13.0
comp=Z,34nm,18.9s,baz=128,slow=42
NEW Newport 42.37 332 P P 08 33 07.0 -0.2
NEW Newport 42.37 332 P P 08 33 06.8 -0.3
C09A Chrisman Ranch 42.58 331 IAmb IAmb 08 33 10.4
comp=Z,4.5nm,0.8s
HOOD Mount Hood Mea 42.68 326 P P 08 33 09.9 +0.1
FFC Flin Flon 42.95 349 P P 08 33 11.6 0.0
FFC IAmb IAmb 08 33 12.4
comp=Z,7.5nm,0.6s
FFC Flin Flon 42.95 349 P P 08 33 12.1 +0.4
SALV Santo Antonio 43.47 130 *eP* **P 08 33 15.8 -0.5**
SALV *epP* **pP 08 33 33.0 -0.7**
AC02 Maricunga 43.90 154 P P 08 33 22.8 +2.5
RPN Rapa Nui 44.60 207 LR LR 08 47 10.9
comp=Z,92nm,21.5s,baz=50,slow=29
SNDB Serra Nova Dou 44.63 122 *eP* **P 08 33 23.5 -2.3**
SNDB *epP* **pP 08 33 42.9 -0.3**
COIM Forte Coimbra 44.65 137 *eP* **P 08 33 25.6 -0.2**
COIM *epP* **pP 08 33 43.6 +0.4**
SCHQ Schefferville 45.15 18 P P 08 33 27.9 -1.5
comp=Z,7.6nm,0.7s,baz=217,slow=9.7,SNR=11
SCHQ pP **pP 08 33 45.2 -1.7**
comp=Z,2.5nm,0.7s,baz=225,slow=9.4,SNR=2.1
SCHQ PcP **PcP 08 35 06.8 -1.8**
comp=Z,15nm,1.3s,baz=210,slow=7.3,SNR=4.0
SCHQ LR LR 08 53 19.8
comp=Z,57nm,18.7s,baz=200,slow=37
comp=Z,7.6nm,0.7s
SCHQ Schefferville 45.15 18 P P 08 33 27.9 -1.5
SCHQ IAmb IAmb 08 33 28.7
comp=Z,8.2nm,0.8s
A05A Maple Falls 45.26 329 IAmb IAmb 08 33 31.3
comp=Z,5.8nm,0.7s
MURT Porto Murtinho 46.00 138 *eP* **P 08 33 36.0 -0.5**
MURT *epP* **pP 08 33 54.6 +0.6**
SMTB Santa Maria do 46.25 116 *eP* **P 08 33 35.5 -3.1**
SMTB *epP* **pP 08 33 55.5 -0.6**
ARAG Araguaiana, MT 46.30 127 *eP* **P 08 33 37.1 -1.8**
ARAG *epP* **pP 08 33 55.5 -0.9**
AQDB Aquidauana 46.46 135 *eP* **P 08 33 39.9 -0.1**
AQDB *epP* **pP 08 33 58.0 +0.4**
AQDB Aquidauana 46.46 135 P P 08 33 40.3 +0.2
AQDB *pP* **pP 08 33 57.2 -0.4**
H03N2 Juan Fernandez 47.08 169 T T 09 23 58.2
baz=347,slow=76,SNR=42
H03N1 Juan Fernandez 47.09 169 T T 09 23 58.4
baz=347,slow=76,SNR=37

H03N3 Juan Fernandez 47.10 169 T T 09 23 57.4
baz=347,slow=76,SNR=64
AMBA Amambai (Brazi 48.61 137 *eP* **P 08 33 56.9 +0.2**
AMBA *epP* **pP 08 34 15.6 +1.1**
VA03 San Esteban 48.67 160 P P 08 33 59.2 +2.0
BDFB Brasilia 49.28 124 P P 08 34 01.8 -0.4
comp=Z,3.7nm,0.6s,baz=285,slow=9.1,SNR=7.7
BDFB LR LR 08 55 53.1
comp=Z,36nm,19.0s,baz=172,slow=37
comp=Z,3.7nm,0.6s
BDFB Brasilia 49.28 124 IAmb IAmb 08 34 02.4
comp=Z,4.6nm,0.7s
SJPY San Joaquin 49.35 140 *eP* **P 08 34 01.4 -0.9**
SJPY *epP* **pP 08 34 20.6 +0.5**
MT08 Bocatoma Ro 49.48 159 P P 08 34 05.3 +1.8
CPUP Villa Florida 49.57 142 P P 08 34 04.1 +0.1
comp=Z,1.7nm,0.5s,baz=337,slow=11,SNR=12
CPUP LR LR 08 56 20.1
comp=Z,23nm,19.2s,baz=80,slow=38
comp=Z,1.7nm,0.5s
CPUP Villa Florida 49.57 142 IAmb IAmb 08 34 41.8
comp=Z,5.0nm,1.2s
CPUP Villa Florida 49.57 142 *eP* **P 08 34 04.0 0.0**
CPUP *epP* **pP 08 34 22.8 +1.1**
BBB Bella Bella 50.25 329 LR LR 08 57 32.1
comp=Z,44nm,19.1s,baz=211,slow=38
FRB Frobisher Bay 52.65 11 P P 08 34 24.6 -1.9
YKA Yellowknife Ar 52.80 345 P P 08 34 27.3 -0.3
comp=Z,12nm,0.8s,baz=154,slow=7.1,SNR=36
YKA pP **pP 08 34 45.1 -0.5**
comp=Z,3.8nm,0.9s,baz=145,slow=8.0,SNR=2.8
YKA LR LR 08 58 55.9
comp=Z,49nm,21.1s,baz=102,slow=38
comp=Z,12nm,0.8s
KOTAN Kotaneelee Air 53.77 339 P P 08 34 35.2 +0.4
baz=136
LIRD Liard River Hi 54.00 337 P P 08 34 36.8 +0.3
baz=133
T35M Bob Quinn 54.12 333 P P 08 34 38.6 +1.1
baz=127
CRAG Craig 54.56 331 P P 08 34 41.1 +0.4
baz=123
WRAK Wrangell Islan 54.73 332 P P 08 34 42.8 +0.9
baz=124
BSCB Bom Sucesso 54.80 127 P P 08 34 42.5 -0.5
U33K Whale Pass 54.92 331 P P 08 34 44.1 +0.9
baz=124
DLBC Dease Lake 54.92 335 LR LR 09 01 56.4
comp=Z,40nm,19.2s,baz=56,slow=40
DLBC Dease Lake 54.92 335 P P 08 34 44.2 +0.9
baz=128
S34M Telegraph Cree 55.06 334 P P 08 34 44.7 +0.4
baz=127
WTLY Watson Lake, Y 55.49 337 P P 08 34 48.0 +0.6
baz=130
WRGLY Wrigley 55.84 342 P P 08 34 49.8 +0.1
baz=138
R33M Jennings River 55.89 335 P P 08 34 50.9 +0.5
baz=128
PLCA Paso Flores 56.02 163 P P 08 34 52.1 +0.7
comp=Z,2.5nm,0.9s,baz=335,slow=6.9,SNR=5.3
PLCA LR LR 08 53 49.4
comp=Z,34nm,19.6s,baz=43,slow=30
comp=Z,2.5nm,0.9s
Q32M Nakina River 56.17 335 P P 08 34 52.6 +0.2
baz=126
S32K Killisnoo 56.33 332 P P 08 34 53.6 +0.3
baz=123
SIT Sitka 56.45 332 P P 08 34 54.7 +0.5
baz=122
ILON Igloolik, Nuna 56.53 3 P 08 34 53.1 -1.5
R32K Eaglecrest 56.74 333 P P 08 34 56.7 +0.4
baz=123
BSFB Barra de Sao F 56.78 123 *eP* **P 08 34 54.6 -2.5**
BSFB *epP* **pP 08 35 15.1 -0.1**
BSFB Barra de Sao F 56.78 123 P P 08 34 56.6 -0.5
P33M Teslin, Yukon 57.13 336 P P 08 34 59.4 +0.3
baz=126
P32M Atlin 57.14 335 P P 08 34 59.5 +0.3
baz=125
DUB01 Friburgo-RJ 57.25 127 *eP* **P 08 34 59.6 -0.9**
DUB01 *epP* **pP 08 35 18.7 +0.1**
S31K Pelican 57.35 332 P P 08 35 00.7 +0.2
baz=121
R31K City Hall, Gus 57.36 333 P P 08 35 00.9 +0.3
baz=122
NRS Narsarsuaq 57.38 23 P P 08 35 01.0 +0.3
RIB01 Linhares ES 57.39 123 *eP* **P 08 34 59.9 -1.6**
RIB01 *epP* **pP 08 35 19.3 -0.3**
CAM01 Campos-RJ 57.68 126 *eP* **P 08 35 02.3 -1.1**
CAM01 *epP* **pP 08 35 21.4 -0.1**
SKAG Skagway 57.75 334 P P 08 35 03.7 +0.4
baz=123
N32M Quiet Lake 57.80 336 P P 08 35 03.9 +0.2
baz=126
MMPY Sheldon Lake, 58.01 338 P P 08 35 05.6 +0.3
baz=129
PLBC Pleasant Camp 58.19 334 P P 08 35 06.9 +0.5
baz=122
WHY Whitehorse 58.23 335 P P 08 35 06.7 -0.1
baz=124
O30N Mendenhall 58.78 335 IAmb IAmb 08 35 13.1
comp=Z,5.5nm,0.8s
O30N Mendenhall 58.78 335 P P 08 35 10.9 +0.3
baz=123
P30M Million Dollar 58.80 334 P P 08 35 11.1 +0.4
baz=122
P29M Windy Craggy 58.88 333 P P 08 35 11.7 +0.4
baz=121
M31M Drury Creek, Y 58.92 337 P P 08 35 11.8 +0.4
baz=125
N31M Braeburn, Yuko 59.05 336 P P 08 35 12.8 +0.3
baz=124
HYT Haines Junctio 59.40 335 P P 08 35 14.9 0.0
baz=122
N30M Aishikik Lake 59.57 335 P P 08 35 16.0 -0.1
baz=122
SFJD Kangerlussuaq 59.57 16 LR LR 09 00 05.6
comp=Z,50nm,20.1s,baz=190,slow=35
O29M Mount Kennedy 59.59 334 P P 08 35 16.0 -0.3
baz=120
YUK6 Outpost Mounta 59.82 335 P P 08 35 17.4 -0.6
baz=121
M30M Minto, Yukon 60.06 337 P P 08 35 19.3 0.0
baz=123
YUK4 Talbot Arm 60.15 335 P P 08 35 19.6 -0.6
baz=121
PINM Pinnacle 60.22 333 P P 08 35 20.0 -0.5
baz=118
BRWY Burwash Landin 60.32 335 P P 08 35 20.6 -0.5
baz=120
O28M Mount Upton 60.51 334 P P 08 35 22.7 0.0
baz=119
YUK8 Steele Glacier 60.58 334 P P 08 35 23.2 0.0
baz=119
C36M Paulatuk 60.63 346 P P 08 35 23.5 +0.5
baz=140
M29M Somme Creek 60.64 336 P P 08 35 23.2 -0.2
baz=121
L29M L29M 60.86 337 P P 08 35 24.6 -0.2
baz=122
J30M Hart River 61.00 339 IAmb IAmb 08 35 33.2
comp=Z,3.8nm,1.0s
J30M Hart River 61.00 339 P P 08 35 25.7 -0.1
baz=124
K29M Barlow Dome 61.03 338 P P 08 35 25.2 -0.8
baz=123
H31M Peel River 61.05 340 IAmb IAmb 08 35 27.5
comp=Z,2.5nm,0.8s
H31M Peel River 61.05 340 P P 08 35 25.6 -0.4
baz=127
YUK3 Moose Creek 61.11 335 P P 08 35 25.9 -0.9
baz=119
I30M Mount Dempster 61.39 339 P P 08 35 27.9 -0.6
baz=125
BVCY Beaver Creek 61.59 335 P P 08 35 29.1 -0.6
baz=119
G31M Satah River 61.71 341 P P 08 35 30.0 -0.4
baz=128,SNR=20
CRQE Cirque 61.77 333 P P 08 35 30.8 -0.3
baz=116
RES Resolute Bay 61.80 358 LR LR 09 02 38.8
comp=Z,43nm,19.9s,baz=183,slow=36
RES Resolute Bay 61.80 358 P P 08 35 29.7 -1.2
DAWY Dawson 61.84 337 IAmb IAmb 08 35 31.2
comp=Z,2.6nm,0.8s
DAWY Dawson 61.84 337 P P 08 35 31.3 -0.2

baz=121
F31M **Tsiigehtchic** 61.87 342 P P 08 35 31.4 0.0
baz=128
M27K **Edge Creek, AK** 61.98 335 P P 08 35 32.4 -0.1
baz=118
KAIM **Kayak Island** 62.02 332 P P 08 35 32.5 -0.1
baz=114
MCARA **McCarthy VSAT** 62.02 334 P P 08 35 32.6 +0.1
baz=116
EPYK **Eagle Plains** 62.16 340 IAmb IAmb 08 35 34.1
comp=Z,5.2nm,0.8s
EPYK **Eagle Plains** 62.16 340 P P 08 35 33.3 -0.2
baz=125,SNR=6.1
L27K **Beaver Creek,** 62.29 336 IAmb IAmb 08 35 35.4
comp=Z,4.7nm,0.8s
L27K **Beaver Creek,** 62.29 336 P P 08 35 34.1 -0.3
baz=118
INK **Inuvik** 62.35 343 LR LR 09 05 56.8
comp=Z,62nm,19.5s,baz=71,slow=39
INK **Inuvik** 62.35 343 P P 08 35 34.4 -0.2
baz=129,SNR=12
INK **Inuvik** 62.35 343 P P 08 35 34.4 -0.2
G30M **tAoh Zraii Nji** 62.36 341 IAmb IAmb 08 35 35.6
comp=Z,4.1nm,0.8s
G30M **tAoh Zraii Nji** 62.36 341 P P 08 35 34.3 -0.5
baz=126,SNR=7.3
M26K **Nabesna, AK** 62.46 335 P P 08 35 35.6 0.0
baz=117
BMRM **Bremner River** 62.53 333 P P 08 35 36.5 +0.4
baz=114
F30M **Barrier River** 62.59 342 P P 08 35 36.1 -0.2
baz=126,SNR=25
H29M **Whitestone** 62.63 340 IAmb IAmb 08 35 37.3
comp=Z,5.8nm,0.7s
H29M **Whitestone** 62.63 340 P P 08 35 36.8 +0.2
baz=123,SNR=7.0
Q23K **Middleton Isla** 62.72 331 P P 08 35 37.0 -0.3
baz=112
I28M **Miner Creek** 62.76 339 P 08 35 37.3 -0.3
I28M IAmb IAmb 08 35 40.5
comp=Z,3.5nm,0.8s
I28M **Miner Creek** 62.76 339 P P 08 35 37.5 -0.1
baz=121
N25K **Chitina, Valde** 62.80 334 P P 08 35 37.8 -0.1
baz=115
K27K **Chicken** 62.85 337 IAmb IAmb 08 35 39.0
comp=Z,4.3nm,0.7s
EYAK **Cordova Ski Ar** 62.87 332 P P 08 35 38.8 +0.5
baz=113
L26K **Log Cabin Wild** 62.89 335 P P 08 35 38.7 +0.3
baz=117
A36M **Sachs Harbour** 62.90 348 P P 08 35 38.6 +0.3
baz=139
G29M **Pine Creek** 62.90 340 P P 08 35 38.4 0.0
baz=124,SNR=11
KLU **Klutina** 63.33 333 P P 08 35 41.3 -0.1
baz=113
HARP **HAARP** 63.37 334 P P 08 35 41.9 +0.4
baz=115
P23K **Montague Islan** 63.43 331 P P 08 35 41.9 -0.1
baz=111
I27K **Kandik River** 63.45 338 IAmb IAmb 08 35 43.8
comp=Z,4.9nm,0.7s
I27K **Kandik River** 63.45 338 P P 08 35 41.8 -0.3
baz=120,SNR=8.2
SCRK **Sand Creek** 63.57 336 P P 08 35 43.0 -0.1
baz=116
M24K **Tolsona, Glenn** 63.68 334 P P 08 35 43.3 -0.4
baz=114
E29M **Blow River** 63.70 342 IAmb IAmb 08 35 45.5
comp=Z,7.2nm,0.8s
E29M **Blow River** 63.70 342 P P 08 35 43.6 0.0
baz=124
H27K **Steamboat Moun** 63.73 339 P 08 35 44.4 +0.5
H27K **Steamboat Moun** 63.73 339 P P 08 35 44.0 +0.1
baz=120,SNR=18
RIDG **Independent Ri** 63.81 336 IAmb IAmb 08 35 45.4
comp=Z,5.8nm,0.8s
RIDG **Independent Ri** 63.81 336 P P 08 35 44.6 +0.1
baz=116
F28M **Old Crow** 63.89 341 P P 08 35 45.0 +0.1
baz=122,SNR=31
G27K **Doyon Strip** 64.06 339 IAmb IAmb 08 35 46.5
comp=Z,4.6nm,0.7s
G27K **Doyon Strip** 64.06 339 P P 08 35 45.8 -0.3
baz=120,SNR=9.8
SCM **Sheep Creek Mo** 64.08 333 P P 08 35 45.9 -0.4
baz=112
K24K **Donnelly Dome** 64.21 336 P P 08 35 46.8 -0.3
baz=115
E28M **Babbage River** 64.32 342 P P 08 35 47.6 -0.1
baz=123,SNR=9.4
J25K **Salcha River,** 64.39 336 IAmb IAmb 08 35 49.8
comp=Z,6.3nm,0.7s
J25K **Salcha River,** 64.39 336 P P 08 35 49.2 +0.9
baz=115,SNR=11
KNK **Knik Glacier** 64.42 333 P P 08 35 48.4 -0.1
baz=111
SEW **Seward** 64.43 331 P P 08 35 48.6 +0.2
baz=109
SML **Sawmill** 64.51 333 P P 08 35 48.8 -0.3
baz=111
WAT6 **Susitna Watana** 64.54 334 P P 08 35 48.9 -0.5
baz=112
DHY **Denali Highway** 64.58 334 P P 08 35 50.1 +0.4
baz=113
O22K **Cooper Landing** 64.68 331 P P 08 35 50.1 -0.1
baz=109
E27K **Coleen River** 64.74 341 IAmb IAmb 08 35 51.4
comp=Z,7.5nm,0.8s
E27K **Coleen River** 64.74 341 P P 08 35 50.9 +0.4
baz=121,SNR=7.5
PMR **Palmer** 64.79 333 P P 08 35 51.0 +0.2
baz=110
PMOR **Pomariorio Ree** 64.83 246 *e*T T 09 45 58.0
comp=Z,3.4nm,0.2s
PRP **Porcupine Dome** 64.85 337 IAmb IAmb 08 35 52.5
comp=Z,6.8nm,0.7s
PRP **Porcupine Dome** 64.85 337 P P 08 35 51.2 -0.1
baz=116,SNR=10.0
G26K **Porcupine Rive** 64.87 339 IAmb IAmb 08 35 51.8
comp=Z,4.8nm,0.8s
G26K **Porcupine Rive** 64.87 339 P P 08 35 51.4 +0.1
baz=118
RC01 **Rabbit Creek A** 64.89 332 P P 08 35 51.5 0.0
baz=110
BRSE **Bradley Lake S** 64.92 330 P P 08 35 52.0 +0.2
baz=108
HDA **Harding Lake** 64.93 336 IAmb IAmb 08 35 51.9
comp=Z,5.9nm,0.7s
HDA **Harding Lake** 64.93 336 P P 08 35 51.6 -0.2
baz=114
WAT1 **Susitna Watana** 64.98 334 P P 08 35 51.9 -0.3
baz=112
IL31 65.05 336 IAmb IAmb 08 35 53.4
comp=Z,14nm,1.4s
ILAR **Eielson Array** 65.05 336 P P 08 35 52.0 -0.5
comp=Z,3.3nm,0.8s,baz=172,slow=5.0,SNR=44
ILAR LR LR 09 07 19.0
comp=Z,36nm,18.5s,baz=323,slow=39
comp=Z,3.3nm,0.8s
ILAR **Eielson Array** 65.05 336 P 08 35 52.3 -0.3
D27M **Malcolm River** 65.10 342 IAmb IAmb 08 35 53.6
comp=Z,6.5nm,0.7s
D27M **Malcolm River** 65.10 342 P P 08 35 52.7 -0.1
baz=122
FYU **Fort Yukon** 65.20 338 IAmb IAmb 08 35 54.1
comp=Z,5.0nm,0.7s
KDAK **Kodiak Island** 65.28 328 LR LR 09 07 30.6
comp=Z,28nm,18.2s,baz=105,slow=39
KDAK **Kodiak Island** 65.28 328 P P 08 35 53.9 -0.1
baz=106
M22K **Willow** 65.29 333 P P 08 35 54.1 0.0
baz=110
HOM **Homer** 65.33 330 P P 08 35 54.3 -0.1
baz=107
F26K **Sheenjek River** 65.34 340 IAmb IAmb 08 35 55.5
comp=Z,7.2nm,0.7s
F26K **Sheenjek River** 65.34 340 P P 08 35 54.5 +0.1
baz=118,SNR=16
CCB **Clear Creek Bu** 65.37 336 IAmb IAmb 08 35 54.8
comp=Z,3.8nm,0.6s
POKR **Poker Plat Res** 65.41 337 P P 08 35 54.9 0.0
baz=114
WRH **Wood River Hil** 65.41 336 IAmb IAmb 08 35 54.5
comp=Z,5.2nm,0.7s
CAPN **Captain Cook N** 65.44 331 P P 08 35 55.2 +0.1
baz=108
COLA **College** 65.47 336 P P 08 35 54.3 -0.9
COLA IAmb IAmb 08 35 55.1
comp=Z,9.2nm,0.9s
COLA **College** 65.47 336 P P 08 35 55.3 +0.1
baz=113
COLA **College** 65.47 336 P P 08 35 54.6 -0.5
MCK **McKinley** 65.47 335 P P 08 35 55.3 0.0
baz=112
CUT **Chulitna** 65.57 333 P P 08 35 56.0 +0.1
baz=110
G25K **Bearman Lake** 65.60 338 P P 08 35 55.7 -0.2
baz=116,SNR=9.3
F25K **Christian Rive** 65.81 339 P P 08 35 57.4 0.0
baz=116,SNR=21
SII **Sitkinak Islan** 65.81 326 P P 08 35 57.6 0.0
baz=104
NEA2 **Nenana** 65.85 336 P P 08 35 57.8 +0.1
baz=112
H24K **Noodor Dome** 65.87 337 IAmb IAmb 08 35 58.3
comp=Z,5.3nm,0.8s
H24K **Noodor Dome** 65.87 337 P P 08 35 57.8 0.0
baz=113,SNR=7.0
O20K **Slope Mountain** 65.93 330 P P 08 35 58.3 0.0
baz=106
TRF **Thorofare Moun** 65.94 334 IAmb IAmb 08 36 01.7
comp=Z,7.5nm,0.7s
TRF **Thorofare Moun** 65.94 334 P P 08 35 58.3 -0.2
baz=110
SKT **Skwentna** 66.00 333 P P 08 35 58.7 +0.1
baz=108
E25K **Arctic Village** 66.02 340 P P 08 35 59.1 +0.4
baz=117,SNR=16
SPCR **Spurr Chakacha** 66.06 332 P P 08 35 59.5 +0.3
baz=107
G24K **Hadweenzic Riv** 66.07 338 IAmb IAmb 08 36 00.0
comp=Z,6.2nm,0.7s
G24K **Hadweenzic Riv** 66.07 338 P P 08 35 59.0 -0.1
baz=114,SNR=7.6
P19K **Oil Pt** 66.11 330 P P 08 35 59.2 -0.2
baz=106
Q19K **Cape Douglas,** 66.12 329 P P 08 35 59.4 -0.1
baz=105
C27K **Jago River** 66.13 342 IAmb IAmb 08 36 00.3
comp=Z,6.5nm,0.8s
C27K **Jago River** 66.13 342 P P 08 35 59.4 0.0
baz=119,SNR=7.1
I23K **Minto, Yukon-K** 66.17 336 IAmb IAmb 08 36 00.3
comp=Z,8.2nm,0.7s
I23K **Minto, Yukon-K** 66.17 336 P P 08 35 59.2 -0.5
baz=112,SNR=12
KTH **Kantishna Hill** 66.24 334 IAmb IAmb 08 36 01.0
comp=Z,5.8nm,0.9s
H23K **Yukon River** 66.49 337 P P 08 36 01.6 -0.2
baz=112
F24K **Squaw Lake** 66.55 339 IAmb IAmb 08 36 04.5
comp=Z,3.6nm,0.8s
F24K **Squaw Lake** 66.55 339 P P 08 36 02.2 0.0
baz=114,SNR=8.2
PPLA **Purkeypile** 66.57 333 P P 08 36 02.1 -0.4
baz=108
C26K **Camden Bay** 66.64 342 P P 08 36 02.5 -0.1
baz=118
MLY **Manley** 66.67 336 P P 08 36 02.8 -0.2
baz=110
M20K **Styx River** 66.69 332 IAmb IAmb 08 36 03.6
comp=Z,4.8nm,0.6s
M20K **Styx River** 66.69 332 P P 08 36 03.0 -0.2
baz=107
CAST **Castle Rocks** 66.69 334 P P 08 36 01.9 -1.2
baz=108
Q18K **Katmai Hardscr** 66.74 329 P P 08 36 03.0 -0.6
baz=104
O19K **Port Ailsworth** 66.78 330 P P 08 36 03.3 -0.4
baz=105
D25K **Kavik River** 66.82 341 P P 08 36 03.8 0.0
baz=116,SNR=35
CHUM **Lake Minchumin** 66.94 334 P P 08 36 04.5 -0.1
baz=108
E24K **Your Creek** 66.99 339 P P 08 36 05.0 +0.1
baz=114
G23K **Bananza Creek** 67.00 338 IAmb IAmb 08 36 06.0
comp=Z,4.5nm,0.8s
G23K **Bananza Creek** 67.00 338 P P 08 36 05.0 0.0
baz=112,SNR=13
N19K **Bonanza Creek** 67.02 331 P P 08 36 04.9 -0.4
baz=105
P18K **Big Mountain,** 67.03 329 P P 08 36 05.0 -0.4
baz=104
O18K **Koktuh Hills** 67.13 330 IAmb IAmb 08 36 06.5
comp=Z,6.1nm,0.8s
O18K **Koktuh Hills** 67.13 330 P P 08 36 05.7 -0.2
baz=104
R17L **Mt. Peulik Vol** 67.21 327 P P 08 36 06.3 -0.1
baz=102
I21K **Tanana** 67.22 336 P P 08 36 05.4 -1.0
baz=109
H22K **Ishtalitna Cre** 67.22 337 P P 08 36 06.1 -0.4
baz=110
COLD **Coldfoot** 67.26 338 IAmb IAmb 08 36 08.1
comp=Z,5.8nm,0.8s
COLD **Coldfoot** 67.26 338 P P 08 36 06.8 +0.1
baz=112,SNR=12
M19K **Big River Lodg** 67.27 332 P P 08 36 06.2 -0.5
baz=106
PPT **Papeete** 67.30 245 LR LR 08 58 03.0
comp=Z,60nm,18.2s,baz=303,slow=29
PPT2 **Papeete2** 67.31 245 *e*LR LR 08 56 21.5
comp=Z,148nm,27.5s
PPT2 *e*LR LR 08 56 28.4
comp=Z,98nm,25.2s
E23K **Chandalar** 67.37 339 P P 08 36 07.6 +0.1
baz=113,SNR=18
K20K **Telida** 67.53 334 IAmb IAmb 08 36 08.5
comp=Z,3.9nm,0.6s
K20K **Telida** 67.53 334 P P 08 36 07.4 -1.0
baz=106
D24K **Happy Valley** 67.54 340 P P 08 36 07.9 -0.4
baz=114
L19K **White Mountain** 67.55 332 P P 08 36 08.0 -0.6
baz=105
Q16K **King Salmon** 67.58 328 P P 08 36 08.6 -0.2
baz=102
TOLK **Toolik Lake Re** 67.58 340 P P 08 36 08.8 +0.1
baz=113,SNR=12
P17K **Kvichak River** 67.58 329 P P 08 36 08.4 -0.4
baz=102
G22K **Bettles** 67.63 338 P P 08 36 09.2 +0.3
baz=110
N18K **Kilae Creek** 67.66 331 P P 08 36 08.6 -0.7
baz=104
H21K **Melozitna Rive** 67.70 336 P P 08 36 08.8 -0.6
baz=108
J20K **Nowinta River** 67.79 335 P P 08 36 09.4 -0.6
baz=107
M18K **Stony River** 67.82 331 P P 08 36 09.5 -0.7
baz=104
CHGN **Chignik** 68.06 326 P P 08 36 12.2 +0.4
baz=90
F22K **John River** 68.08 338 P P 08 36 12.1 +0.3
baz=110
D23K **Nanushuk River** 68.08 340 IAmb IAmb 08 36 13.1
comp=Z,4.5nm,0.9s
D23K **Nanushuk River** 68.08 340 P P 08 36 12.2 +0.5
baz=112,SNR=5.5
I20K **Naaghedeneel** 68.11 335 P P 08 36 11.6 -0.3
baz=107
N17K **Nushagak Hills** 68.24 330 P P 08 36 12.4 -0.6
baz=102
G21K **Allakaket** 68.24 337 IAmb IAmb 08 36 13.8
comp=Z,5.8nm,0.7s
G21K **Allakaket** 68.24 337 P P 08 36 12.2 -0.6
baz=108,SNR=12
P16K **Nushagak River** 68.33 329 P P 08 36 13.2 -0.3
baz=101
J19K **Poorman** 68.37 334 P P 08 36 13.2 -0.4
baz=105,SNR=5.2
C23K **Itkillik River** 68.39 341 P P 08 36 13.8 +0.2
baz=112,SNR=12
L18K **Granite Mounta** 68.39 332 P P 08 36 13.3 -0.5
baz=104
F21K **Alatna River** 68.46 338 P P 08 36 14.6 +0.4
baz=108,SNR=22
H20K **Anotleneega Mo** 68.47 336 P P 08 36 14.1 -0.2
baz=106
CHNA **Chernabura Isl** 68.49 324 P P 08 36 14.3 -0.3
baz=98
O16K **Kokwok River B** 68.50 329 P P 08 36 14.4 -0.1
baz=101
M17K **Holitna River** 68.55 331 P P 08 36 14.9 0.0
baz=102
S14K **Fog Glacier** 68.69 326 P P 08 36 15.5 -0.4
baz=99
N16K **Nishlik Lake** 69.00 330 P P 08 36 17.2 -0.5
baz=101
E21K **Killik River** 69.03 339 IAmb IAmb 08 36 18.1
comp=Z,4.4nm,0.7s
E21K **Killik River** 69.03 339 P P 08 36 17.3 -0.4
baz=108
SDPT **Sand Point** 69.07 324 P P 08 36 17.2 -0.9
baz=98
GCSA **Galena City Sc** 69.09 335 P P 08 36 16.9 -1.1
baz=104
L17K **Donlin** 69.11 332 P P 08 36 17.8 -0.4
baz=102
H19K **Roundabout Mou** 69.11 336 IAmb IAmb 08 36 18.8
comp=Z,5.0nm,0.8s
H19K **Roundabout Mou** 69.11 336 P P 08 36 17.8 -0.4
baz=105
M16K **Timber Creek** 69.20 331 P P 08 36 18.5 -0.3
baz=101
K17K **Iditarod** 69.23 332 P P 08 36 18.3 -0.8
baz=102
F20K **Avaraart Lake** 69.24 337 P P 08 36 18.6 -0.3
baz=106
O15K **Ungalikthiuk R** 69.29 329 P P 08 36 19.1 -0.4
baz=100
B22K **Teshekpuk Lake** 69.47 341 P P 08 36 20.4 +0.1
baz=110
TBI **Tubuai** 69.52 239 *e*T T 09 51 37.6
comp=Z,2.7nm,0.2s
G19K **Purcell Mounta** 69.53 336 P P 08 36 20.3 -0.5
baz=105,SNR=5.9
C21K **Knifeblade Rid** 69.53 340 P P 08 36 20.4 -0.4
baz=108
L16K **Owhat River** 69.57 331 P P 08 36 20.8 -0.3
baz=101
N15K **Kwethluk River** 69.59 330 P P 08 36 20.7 -0.6
baz=100
B21K **Ikpikpuk River** 69.62 340 P P 08 36 20.7 -0.5
baz=108,SNR=5.3
J17K **VABM Dome** 69.72 333 P P 08 36 21.1 -0.9
baz=102
E20K **Nigu River** 69.75 338 P P 08 36 21.7 -0.6
baz=106,SNR=15
H18K **Honhosa River** 69.80 335 P P 08 36 22.3 -0.2
baz=103
E19K **Redstone River** 69.92 338 P P 08 36 22.5 -0.6
baz=105
F19K **Shaleruckik Mo** 69.96 337 P P 08 36 23.3 -0.1
baz=104,SNR=5.8
M15K **Kasigluk River** 69.97 330 P P 08 36 23.7 +0.1
baz=99
D20K **Etivluk River** 70.03 339 IAmb IAmb 08 36 24.6
comp=Z,8.1nm,0.8s
D20K **Etivluk River** 70.03 339 P P 08 36 24.1 +0.2
baz=106,SNR=8.5
O14K **Tigyukauivet M** 70.03 329 P P 08 36 24.1 +0.1
baz=98
G18K **Tagagawik** 70.09 336 P P 08 36 24.5 +0.2
baz=103
A22K **Sinclair Lake** 70.17 341 P P 08 36 24.7 0.0
baz=108
N14K **Kuskokwak Cree** 70.34 329 P P 08 36 25.6 -0.2
baz=98
J16K **Anvik River** 70.38 333 IAmb IAmb 08 36 27.5
comp=Z,5.9nm,0.8s
J16K **Anvik River** 70.38 333 P P 08 36 25.7 -0.3
baz=100
H17K **Granite Mounta** 70.39 335 P P 08 36 25.6 -0.6
baz=102
D19K **Kuna River** 70.51 339 IAmb IAmb 08 36 27.2
comp=Z,3.5nm,0.7s
D19K **Kuna River** 70.51 339 P P 08 36 26.7 -0.1
baz=104
L15K **Ungalak Mounta** 70.51 331 P P 08 36 26.5 -0.3
baz=99
I17K **Unalakleet** 70.53 333 P P 08 36 26.8 -0.1
baz=100
B20K **Meade River** 70.58 340 P P 08 36 26.9 -0.2
baz=106
M14K **Bethel** 70.60 330 P P 08 36 27.4 0.0
baz=98,SNR=5.4
F18K **Selawik** 70.64 336 P P 08 36 27.5 0.0
baz=102
A21K **Barrow** 70.78 342 P P 08 36 28.3 0.0
baz=107
G17K **Kiwalik Mounta** 70.81 335 P P 08 36 28.3 -0.3
baz=101
L14K **Kuka Creek** 71.03 331 P P 08 36 30.1 +0.1
baz=98
C19K **Lookout Ridge** 71.17 339 P P 08 36 30.6 -0.3
baz=103
E18K **Tukpahlearik C** 71.17 337 P P 08 36 30.3 -0.5
baz=102
M13K **Dall Lake** 71.23 330 P P 08 36 30.5 -0.7
baz=97
G16K **Koyuk River** 71.49 335 P P 08 36 32.1 -0.7
baz=99
E17K **Hotham Inlet** 71.58 337 P P 08 36 33.0 -0.2
baz=100,SNR=9.3
C18K **Utukok River** 71.64 338 P P 08 36 33.0 -0.7
baz=102
A19K **Wainwright** 71.92 340 P P 08 36 34.6 -0.6
baz=102
K13K **Kusilvak Mount** 72.03 331 P P 08 36 35.3 -0.7
baz=96
G15K **Niukluk** 72.14 334 P P 08 36 35.7 -0.9
baz=98
RDOG **Red Dog Mine** 72.16 338 P P 08 36 36.3 -0.5
baz=100
D17K **Noatak River** 72.16 337 P P 08 36 36.3 -0.4
baz=100
C17K **DeLong Mountai** 72.33 338 P P 08 36 37.5 -0.2
baz=100
UNV **Unalaska Valle** 72.44 323 P P 08 36 37.4 -1.2
baz=92
F15K **North Star Dit** 72.48 335 IAmb IAmb 08 36 39.9
comp=Z,7.3nm,0.7s
F15K **North Star Dit** 72.48 335 P P 08 36 38.2 -0.5
baz=97
M11K **Mekoryuk** 72.64 329 P P 08 36 39.4 -0.3
baz=94
ANM **Nome** 72.65 334 P P 08 36 39.5 -0.2
baz=96
DAG **Danmarks Havn** 72.93 13 P P 08 36 38.6 -2.5
DAG **Danmarks Havn** 72.93 13 *i*P P 08 36 39.0 -2.1
C16K **Lisburne Hills** 73.09 338 P P 08 36 42.0 -0.2
baz=98
F14K **Arctic Creek** 73.15 335 P P 08 36 42.6 0.0
baz=96
TNA **Tin City** 73.82 335 P P 08 36 46.4 -0.1
baz=94
SPIA **Saint Paul Isl** 74.62 326 P P 08 36 51.7 +0.3
baz=90
GAMB **Gambell** 75.37 333 P P 08 36 55.8 +0.3
baz=90
EKA **Eskdalemuir Ar** 76.93 36 P P 08 37 02.9 -1.7
comp=Z,1.1nm,0.6s,baz=267,slow=6.3,SNR=4.8
comp=Z,1.1nm,0.6s
ESDC **Sonseca Array** 77.84 52 P P 08 37 09.2 -0.9
comp=Z,0.9nm,0.8s,baz=286,slow=5.5,SNR=4.6
ESDC pP pP 08 37 27.5 -1.6
comp=Z,0.9nm,0.8s,baz=292,slow=6.2,SNR=2.5
ESDC LR LR 09 06 04.5
comp=Z,29nm,19.1s,baz=176,slow=32
comp=Z,0.9nm,0.8s
ESDC **Sonseca Array** 77.84 52 P P 08 37 09.2 -0.9
ESDC IAmb IAmb 08 37 11.1
comp=Z,8.9nm,1.4s
ADK **Adak** 78.68 321 P P 08 37 15.0 +0.7
SPITS **Spitsbergen Ar** 80.45 12 P P 08 37 22.7 -0.9
comp=Z,3.8nm,1.0s,baz=214,slow=0.9,SNR=4.6
SPITS LR LR 09 13 27.2
comp=Z,46nm,18.1s,baz=277,slow=36
comp=Z,3.8nm,1.0s
NOA **NORSAR Array B** 83.51 29 LR LR 09 12 01.8
comp=Z,14nm,20.7s,baz=270,slow=34
HFS **Hagfors** 84.94 29 LR LR 09 14 44.0
comp=Z,22nm,19.3s,baz=190,slow=35
DAVOX **Davos/Dischmat** 86.45 43 LR LR 09 10 38.2
comp=Z,34nm,21.7s,baz=277,slow=32
GERES **GERESS Array B** 88.34 40 LR LR 09 12 52.6
comp=Z,22nm,20.3s,baz=110,slow=32
VRAC **Vranov** 89.99 39 LR LR 09 13 12.9
comp=Z,30nm,21.5s,baz=238,slow=32
FINES **FINESS Array B** 90.05 26 LR LR 09 21 17.0

comp=Z,21nm,18.2s,baz=309,slow=37
SEY Seymchan 90.99 336 P **P** **08 38 15.1 -1.0**
comp=Z,1.6nm,0.8s,baz=87,slow=9.3,SNR=5.4
comp=Z,1.6nm,0.8s
VAE Valguarnera 92.35 51 LR LR 09 14 41.8
comp=Z,68nm,19.8s,baz=288,slow=32
MA2 Magadan 93.44 334 LR LR 09 25 12.2
comp=Z,37nm,18.2s,baz=308,slow=38
AKASG Malin Array Be 96.80 34 LR LR 09 19 28.5
comp=Z,29nm,19.3s,baz=250,slow=34
MSVF Nonsavu 96.89 253 LR LR 09 13 22.4
comp=Z,69nm,19.1s,baz=148,slow=30
NRIK Noril'sk 97.86 1 LR LR 09 23 48.9
comp=Z,49nm,22.0s,baz=350,slow=36
YAK Yakutsk 99.42 343 LR LR 09 32 11.9
comp=Z,41nm,18.3s,baz=358,slow=40
BOSA Boshof 117.03 116 PKP **PKPdf** **08 43 57.1 -0.4**
comp=Z,2.6nm,0.6s,baz=220,slow=3.1,SNR=4.4
KSRS Korea Array 119.18 327 PKP **PKPdf** **08 44 00.8 -0.4**
comp=Z,2.2nm,0.6s,baz=8.1,slow=1.5,SNR=7.1
HHC Hu-ho-hao-te 123.26 342 *e*P **PKPdf** **08 44 07.3 -1.9**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,28nm,4.5s
WMQ Urumqi 123.39 3 *e*PKP **PKPdf** **08 44 08.8 -0.5**
WMQ LR LR
comp=Z,62nm,20.3s
WRA Warramunga Arr 138.22 255 PKP **PKiKP** **08 44 39.3 -0.6**
comp=Z,1.7nm,0.6s,baz=91,slow=3.0,SNR=4.5
WRA pPKP **pPKPdf** **08 44 58.1 +0.1**
comp=Z,2.2nm,0.7s,baz=89,slow=2.8,SNR=6.8
ASAR Alice Springs 138.31 249 PKhKP PKPpre 08 44 29.4
comp=Z,0.6nm,0.8s,baz=107,slow=3.4,SNR=5.2
ASAR PKP **PKiKP** **08 44 39.3 -0.8**
comp=Z,1.3nm,0.6s,baz=92,slow=1.5,SNR=17
CMAR Chiang Mai Arr 147.88 346 PKPbc **PKPdf** **08 44 55.7 +0.8**
comp=Z,2.5nm,0.6s,baz=344,slow=3.6,SNR=10

NAO ***14*** *08:33:07.2,35˚.66N×31˚.22E,h10km,MB3.9*
NIC ***14*** *08:33:10.4,35˚.74N×31˚.26E,h71km±9km,Ml3.9/15*
ISK ***14*** *08:33:10.3,35˚.64N×31˚.38E,h8km,ML4.0/63*
GRAL ***14*** *08:33:11.1±0.4,35˚.78N×30˚.99E,h80km±999km,MD4.2*
NEIC ***14*** *08:33:13.0±1.8,35˚.52N±0˚.06×31˚.28E±0˚.06,h45km±4km, mb4.3/40,Error ellipse: s-maj=10.1km s-min=6.6km az=208.0*
IDC ***14*** *08:33:12.4±1.7,35˚.66N×31˚.22E,h40km±15km,mb4.0/20, mbtmp4.1/29,ML4.2/8,MS3.1/14,Error ellipse: s-maj=17.3km s-min=11.9km az=25.0*
MCSM ***14*** *08:33:13.0±0.5,35˚N±3˚×3˚1E±˚,h50km±7km,mb4.3, mB5.0,MLv4.1,Mw(mB)4.2*
AFAD ***14*** *08:33:13.2,35˚.85N×31˚.40E,h21km±1km,MW4.0*
GFZ ***14*** *08:33:14.5±0.2,36˚N±3˚×3˚1E±˚,h63km,M4.4/35, mb4.5/35,confirmed*
GII ***14*** *08:33:15.9±0.0,35˚.387N±0˚.001×31˚.277E±0˚.001, h0km,Mws4.2/6,confirmed*
THE ***14*** *08:33:29.6,36˚N±17˚×3˚0E±3˚5,h66km±26km,M3.7/8, MLh3.7/8*
ISC 14 08:33:12.9±0.8,35°59N±0°.03×31°29E±0°.02,h49km±8km, n343,σ1$48/386,mb4.2/36,MS3.1/6,9C-5D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AKMS	**Akamas**	**1.03**	**124**	P	**Pn**		**08 33 29.4**	**-1.5**
AKMS				S	**Sn**		**08 33 46.7**	**+2.4**
AKMS				AML	AML		08 33 50.6	
	11nm,0.3s							
AKMS				AML	AML		08 33 50.9	
	7.9nm,0.5s							
GAZI	**Gazipasa**	**1.05**	**52**	Pg	**Pn**		**08 33 29.3**	**-2.0**
GAZI				Sg	**Sn**		**08 33 43.1**	**-1.7**
GAZI	**Gazipasa**	**1.05**	**52**	S	**Sn**		**08 33 41.9**	**-2.9**
GAZI	**Gazipasa**	**1.05**	**52**	P	**Pn**		**08 33 29.3**	**-2.0**
GAZI				P	**Pn**		**08 33 29.3**	**-2.0**
GAZI				S	**Sn**		**08 33 40.6**	**-4.2**
AKUM	**Antalya-Kumluc**	**1.06**	**314**	P	**Pn**		**08 33 32.1**	**+0.7**
AKUM				S	**Sn**		**08 33 51.9**	**+6.8**
ALAN	**Alanya-ANTALYA**	**1.13**	**32**	Pg	**Pn**		**08 33 30.8**	**-1.6**
ALFC	**Alefka**	**1.15**	**112**	P	**Pn**		**08 33 30.7**	**-2.0**
ALFC				S	**Sn**		**08 33 48.0**	**+0.6**
ALFC				AML	AML		08 33 55.2	
	13nm,0.5s							
ALFC				AML	AML		08 33 59.9	
	4.3nm,0.4s							
KEMT	**Kemer-ANTALYA**	**1.17**	**330**	Pn	**Pn**		**08 33 32.9**	**0.0**
KEMT				Sn	**Sn**		**08 33 49.9**	**+2.1**
MNVG	**Manavgat-Antal**	**1.20**	**5**	Pn	**Pn**		**08 33 32.7**	**-0.6**
MNVG				Sn	**Sn**		**08 33 49.3**	**+0.8**
DEMR	**Demre-Antalya**	**1.30**	**300**	Pn	**Pn**		**08 33 36.1**	**+1.5**
NATA	**Nata**	**1.32**	**127**	P	**Pn**		**08 33 35.6**	**+0.6**
NATA				S	**Sn**		**08 33 54.2**	**+2.7**
NATA				AML	AML		08 34 07.2	
	33nm,0.7s							
NATA				AML	AML		08 34 11.8	
	27nm,0.7s							
KEPZ	**Antalya-Kepez**	**1.33**	**11**	P	**Pn**		**08 33 34.0**	**-1.1**
ANTB	**Antalya**	**1.40**	**339**	Pn	**Pn**		**08 33 36.5**	**+0.4**
TROD	**Troodos**	**1.44**	**116**	P	**Pn**		**08 33 35.1**	**-1.6**
TROD				S	**Sn**		**08 33 56.5**	**+1.9**
TROD				AML	AML		08 34 10.3	
	6.2nm,0.6s							
TROD				AML	AML		08 34 15.3	
	4.0nm,0.6s							
BOZY	**Bozyazi-Mersin**	**1.46**	**69**	Pn	**Pn**		**08 33 36.4**	**-0.4**
AKAS	**Kas**	**1.51**	**295**	Pn	**Pn**		**08 33 39.1**	**+1.4**
AKAS	**Kas**	**1.51**	**295**		**Pn**		**08 33 38.9**	**+1.2**
AKAS	**Kas**	**1.51**	**295**	P	**Pn**		**08 33 41.3**	**+3.6**
AKAS	**Kas**	**1.51**	**295**	P	**Pn**		**08 33 42.3**	**+4.6**
XYLS	**Xyliatos**	**1.55**	**111**	P	**Pn**		**08 33 37.2**	**-0.9**
XYLS				S	**Sn**		**08 33 59.1**	**+2.0**
XYLS				AML	AML		08 34 05.3	
	3.6nm,0.7s							
XYLS				AML	AML		08 34 08.2	
	6.3nm,0.5s							
TEKE	**Tekeli-Mersin**	**1.58**	**69**	Pn	**Pn**		**08 33 37.8**	**-0.6**
APOL	**The Sanctuary**	**1.58**	**125**	P	**Pn**		**08 33 39.1**	**+0.6**
APOL				S	**Sn**		**08 33 59.9**	**+2.2**
APOL				AML	AML		08 34 13.4	
	4.3nm,0.8s							
APOL				AML	AML		08 34 14.8	
	4.2nm,1.2s							
KORT	**Korkueli**	**1.60**	**332**	Pn	**Pn**		**08 33 39.6**	**+0.7**
ELL	**Elmali**	**1.61**	**316**	Pn	**Pn**		**08 33 39.8**	**+0.8**
ELL	**Elmali**	**1.61**	**316**		**Pn**		**08 33 40.9**	**+1.9**
ELL	**Elmali**	**1.61**	**316**	S	**Sn**		**08 33 56.1**	**-2.6**
ELL				AML	AML		08 34 24.3	
	9.9nm,0.6s							
ELL				AML	AML		08 34 24.4	
	10nm,1.1s							
HDMB	**Hadim**	**1.67**	**35**	Pn	**Pn**		**08 33 39.6**	**-0.4**
BERE	**Bereket-Mersin**	**1.74**	**64**	Pn	**Pn**		**08 33 40.5**	**-0.3**
ATHAL	**Athalassa**	**1.78**	**104**	P	**Pn**		**08 33 40.9**	**-0.2**
ATHAL				S	**Sn**		**08 34 03.1**	**+0.5**
ATHAL				AML	AML		08 34 13.8	
	6.0nm,0.5s							
ATHAL				AML	AML		08 34 31.6	
	5.7nm,0.7s							
CSS	**Mathiatis**	**1.78**	**110**	Pn	**Pn**		**08 33 41.6**	**+0.4**
CSS	**Mathiatis**	**1.78**	**110**		**Pn**		**08 33 40.2**	**-1.0**
CSS	**Mathiatis**	**1.78**	**110**	P	**Pn**		**08 33 40.3**	**-0.9**
CSS				S	**Sn**		**08 34 05.2**	**+2.5**
CSS				AML	AML		08 34 20.8	
	2.5nm,0.6s							
CSS				AML	AML		08 34 21.5	
	2.6nm,0.8s							
CSS	**Mathiatis**	**1.78**	**110**	Pn	**Pn**		**08 33 40.5**	**-0.7**
CSS	**Mathiatis**	**1.78**	**110**	P	**Pn**		**08 33 40.7**	**-0.5**
CSS	**Mathiatis**	**1.78**	**110**	P	**Pn**		**08 33 40.6**	**-0.7**
CSS	**Mathiatis**	**1.78**	**110**	P	**Pn**		**08 33 40.5**	**-0.7**
CSS				S	**Sn**		**08 34 02.8**	**0.0**
ASGA	**Asgata**	**1.79**	**116**	P	**Pn**		**08 33 41.8**	**+0.4**
ASGA				S	**Sn**		**08 34 05.4**	**+2.4**
ASGA				AML	AML		08 34 14.0	
	5.3nm,0.6s							
ASGA				AML	AML		08 34 21.7	
	4.5nm,0.6s							
YORU	**Yoruktepe-Mers**	**1.80**	**71**	Pn	**Pn**		**08 33 41.5**	**-0.1**
BUCA	**Burdur, Bucak-**	**1.83**	**341**	P	**Pn**		**08 33 42.2**	**+0.2**
LFK	**Lefkose**	**1.85**	**99**	Pn	**Pn**		**08 33 42.7**	**+0.4**
OREN	**Orenkoy-Mersin**	**1.86**	**70**	Pn	**Pn**		**08 33 42.4**	**+0.1**
SEYD	**Seydisehir-KON**	**1.86**	**13**	Pn	**Pn**		**08 33 42.0**	**-0.5**
SEDI	**Konya, Seydise**	**1.89**	**11**	P	**Pn**		**08 33 43.0**	**+0.1**
AKK1	**Akkuyu-Mersin**	**1.91**	**73**	Pn	**Pn**		**08 33 42.6**	**-0.3**
GULN	**MERSIN_Gulnar**	**1.92**	**71**	S	**Sn**		**08 34 10.0**	**+3.9**
BECE	**Buyukeceli-Mer**	**1.92**	**72**	Pn	**Pn**		**08 33 43.1**	**-0.1**
BECE	**Buyukeceli-Mer**	**1.92**	**72**	Pn	**Pn**		**08 33 43.1**	**-0.1**
TEPK	**Tepekoy-MERSIN**	**1.93**	**70**	Pn	**Pn**		**08 33 43.1**	**-0.2**
BCK	**Bucak**	**1.95**	**343**	Pn	**Pn**		**08 33 44.4**	**+0.8**
MVOU	**Mavrovouni**	**2.00**	**106**	P	**Pn**		**08 33 42.3**	**-1.9**
MVOU				S	**Sn**		**08 34 09.2**	**+1.2**
MVOU				AML	AML		08 34 21.5	
	2.1nm,0.9s							
MVOU				AML	AML		08 34 29.7	
	2.6nm,0.7s							
YESI	**Yesilovacik-Me**	**2.00**	**72**	Pn	**Pn**		**08 33 44.1**	**-0.1**
IKL	**Isikli**	**2.04**	**71**	Pn	**Pn**		**08 33 44.8**	**0.0**
KARG	**Kargicak-Mersi**	**2.05**	**72**	Pn	**Pn**		**08 33 44.9**	**0.0**
OSC1	**CSNet OBS 1**	**2.09**	**180**	P	**Pn**		**08 33 44.7**	**-0.7**
OSC1				S	**Sn**		**08 34 14.2**	**+4.0**
OSC1				AML	AML		08 34 22.7	
	0.3nm,0.6s							
OSC1				AML	AML		08 34 26.9	
	0.3nm,0.6s							
CAME	**Cameli-Denizli**	**2.10**	**311**	Pn	**Pn**		**08 33 47.0**	**+1.3**
KEBE	**Keben-Mersin**	**2.14**	**66**	Pn	**Pn**		**08 33 45.8**	**-0.4**
KRMN	**Karaman**	**2.24**	**45**	Pn	**Pn**		**08 33 47.2**	**-0.4**
SILI	**Silifke-Mersin**	**2.27**	**69**	Pn	**Pn**		**08 33 47.7**	**-0.2**
SLFK	**Silifke-Mersin**	**2.29**	**69**	Pn	**Pn**		**08 33 48.3**	**+0.1**
KMER	**Konya-Meram**	**2.34**	**21**	P	**Pn**		**08 33 50.3**	**+1.4**
EREN	**Erenkoy**	**2.34**	**91**	Pn	**Pn**		**08 33 49.3**	**+0.4**
EREN	**Erenkoy**	**2.34**	**91**	P	**Pn**		**08 33 50.1**	**+1.1**
EREN				S	**Sn**		**08 34 20.1**	**+3.6**
BAGO	**Egridir - ISPA**	**2.43**	**351**	P	**Pn**		**08 33 51.6**	**+1.4**
DALY	**Dalyan (Mula)**	**2.46**	**301**	Pn	**Pn**		**08 33 51.7**	**+1.2**
APMY	**Acipayam-Deniz**	**2.47**	**320**	Pn	**Pn**		**08 33 52.3**	**+1.6**
KONT	**Konya--Tatoy**	**2.50**	**20**	Pn	**Pn**		**08 33 51.5**	**+0.4**
KONT	**Konya--Tatoy**	**2.50**	**20**	P	**Pn**		**08 33 52.1**	**+1.0**
BASM	**Basmaki-Afyon**	**2.53**	**337**	Pn	**Pn**		**08 33 52.7**	**+1.2**
OSC2	**CSNet OBS 4**	**2.64**	**162**	P	**Pn**		**08 33 54.3**	**+1.3**
OSC2				S	**Sn**		**08 34 26.2**	**+2.5**
OSC2				AML	AML		08 34 36.7	
	0.8nm,0.8s							
OSC2				AML	AML		08 34 40.6	
	0.9nm,0.6s							
ARG	**Arkhangelos**	**2.65**	**285**	P	**Pn**		**08 33 53.2**	**+0.1**
ARG				S	Sn		08 34 11.9	-12
ARG	**Arkhangelos**	**2.65**	**285**		**Pn**		**08 33 53.4**	**+0.4**
ARG	**Arkhangelos**	**2.65**	**285**	S	**Sn**		**08 34 21.7**	**-2.3**
ARG				AML	AML		08 34 21.8	
	0.9nm,0.4s							
ARG				AML	AML		08 34 25.3	
	1.1nm,0.5s							
TURN	**Turune**	**2.73**	**296**	Pn	**Pn**		**08 33 55.6**	**+1.3**
LADK	**Ladik-KONYA**	**2.74**	**18**	Pn	**Pn**		**08 33 54.8**	**+0.3**
SDAG	**Sultandagi-AFY**	**2.86**	**354**	Pn	**Pn**		**08 33 56.8**	**+0.7**
YER	**Yerkesik**	**2.88**	**303**	Pn	**Pn**		**08 33 58.3**	**+2.0**
YER	**Yerkesik**	**2.88**	**303**	P	**Pn**		**08 33 57.8**	**+1.5**
YER				S	Sn		08 34 19.7	-10
KERG	**Konya-Eregli**	**2.92**	**51**	P	**Pn**		**08 33 59.0**	**+2.0**
KERG				S	**Sn**		**08 34 36.0**	**+5.2**
CY604	**RAF Akrotiri,**	**2.92**	**114**		**Pn**		**08 33 57.5**	**+0.8**
YESY	**Yesilyurt**	**2.94**	**41**	Pn	**Pn**		**08 33 57.9**	**+0.7**
KHL	**Karahalli**	**3.07**	**333**	Pn	**Pn**		**08 34 00.1**	**+1.1**
DAT	**Datca**	**3.21**	**292**	P	**Pn**		**08 34 01.8**	**+0.8**
KIZT	**Kizilcal**	**3.31**	**8**	Pn	**Pn**		**08 34 02.9**	**+0.5**
KARP	**Karpathos**	**3.37**	**270**	P	**Pn**		**08 34 03.4**	**+0.3**
KARP	**Karpathos**	**3.37**	**270**		**Pn**		**08 34 03.4**	**+0.3**
KARP	**Karpathos**	**3.37**	**270**	S	**Sn**		**08 34 39.9**	**-1.9**
KARP				AML	AML		08 34 44.8	
	2.6nm,0.2s							
KARP				AML	AML		08 34 46.0	
	2.0nm,0.3s							
KARP	**Karpathos**	**3.37**	**270**	Pn	**Pn**		**08 34 03.3**	**+0.3**
KARP				Sn	**Sn**		**08 34 41.9**	**+0.1**
KARP	**Karpathos**	**3.37**	**270**	P	**Pn**		**08 34 03.6**	**+0.6**
KARP	**Karpathos**	**3.37**	**270**	P	**Pn**		**08 34 03.7**	**+0.6**
NAZL	**Nazilli-Aydin**	**3.38**	**315**	Pn	**Pn**		**08 34 04.8**	**+1.7**
AYDN	**Tasoluk**	**3.44**	**308**	P	**Pn**		**08 34 04.9**	**+0.9**
BODA	**Bodrum-Mula**	**3.44**	**296**	Pn	**Pn**		**08 34 06.1**	**+2.2**
BODT	**Bodrum**	**3.54**	**296**	P	**Pn**		**08 34 06.0**	**+0.8**
KULA	**Kula-Manisa**	**3.60**	**325**	Pn	**Pn**		**08 34 08.1**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**3.60**	**312**	Pn	**Pn**		**08 34 08.5**	**+2.2**
GULA	**Gulagac**	**3.62**	**40**	Pn	**Pn**		**08 34 07.3**	**+0.8**
MANT	**Manisa**	**3.63**	**324**		**Pn**		**08 34 07.0**	**+0.3**
KULU	**Kulu**	**3.70**	**21**	Pn	**Pn**		**08 34 08.5**	**+0.8**
ODEM	**Odemis-Izmir**	**3.72**	**317**	Pn	**Pn**		**08 34 09.9**	**+2.1**
GEDZ	**Gediz**	**3.76**	**337**	Pn	**Pn**		**08 34 10.3**	**+1.9**
KKUL	**Konya-Kulu**	**3.80**	**19**	P	**Pn**		**08 34 11.5**	**+2.5**
SHAP	**Saphane-Kutahy**	**3.80**	**335**	Pn	**Pn**		**08 34 10.6**	**+1.6**
SERE	**Sereflikochisa**	**3.81**	**28**	Pn	**Pn**		**08 34 09.9**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.85**	**3**	Pn	**Pn**		**08 34 10.9**	**+1.2**
BHL	**Bhannes**	**3.96**	**114**	*e*P	**Pn**		**08 34 11.9**	**+0.7**
DQRL	**Deir Qamar**	**4.00**	**117**	*e*P	**Pn**		**08 34 12.2**	**+0.5**
HWQ	**Hawqa**	**4.04**	**108**	*e*P	**Pn**		**08 34 12.8**	**+0.5**
HWQ				*e*S	**Sn**		**08 34 58.7**	**+0.3**
TAHT	**Tahtakopru-Hat**	**4.04**	**77**	Pn	**Pn**		**08 34 13.3**	**+1.1**
AFSR	**Afar-Bala (An**	**4.10**	**20**	Pn	**Pn**		**08 34 14.3**	**+1.2**
KIRS	**Kirsehir-Merke**	**4.11**	**30**	⇓P	**Pn**		**08 34 14.8**	**+1.6**
KOZT	**Kozan**	**4.11**	**61**	Pn	**Pn**		**08 34 14.2**	**+1.1**
TVSB	**Tavsanli**	**4.12**	**340**	Pn	**Pn**		**08 34 15.1**	**+1.8**
GORD	**Gordes-Manisa**	**4.14**	**324**	Pn	**Pn**		**08 34 15.8**	**+2.2**
BEIL	**Beino**	**4.15**	**103**	*e*P	**Pn**		**08 34 14.2**	**+0.5**
BEIL				*e*S	**Sn**		**08 35 00.5**	**-0.4**
QRWL	**Qaraoun**	**4.16**	**118**	*e*P	**Pn**		**08 34 14.6**	**+0.7**
ZAHL	**Zahle**	**4.16**	**113**	*e*P	**Pn**		**08 34 14.7**	**+0.7**
POLA	**Polatl-ANKAR**	**4.16**	**9**	Pn	**Pn**		**08 34 15.5**	**+1.6**
KAMT	**Kaman**	**4.23**	**26**	Pn	**Pn**		**08 34 16.0**	**+1.1**
OFRI	**`Ofer**	**4.26**	**133**	P	**Pn**		**08 34 16.0**	**+0.7**
OFRI				S	**Sn**		**08 35 02.8**	**-1.0**
MMA0B	**Mount Meron ar**	**4.26**	**126**	P	**Pn**		**08 34 16.0**	**+0.7**
MMA0B				S	**Sn**		**08 35 03.3**	**-0.6**
MMAI	**Mount Meron Ar**	**4.26**	**126**	Pn	**Pn**		**08 34 15.6**	**+0.3**
	56nm,0.3s,baz=321,slow=13,SNR=56							
MMAI				Sn	**Sn**		**08 35 03.4**	**-0.5**
	32nm,0.3s,baz=311,slow=31,SNR=9.9							
	18nm,0.3s							
RCY	**Rachaya**	**4.29**	**118**	*e*P	**Pn**		**08 34 16.3**	**+0.5**
RCY				*e*S	**Sn**		**08 35 04.6**	**-0.1**
SHBL	**Chebaa**	**4.30**	**120**	*e*P	**Pn**		**08 34 16.6**	**+0.6**
GEM	**Giv'at Ha'Em**	**4.32**	**122**	P	**Pn**		**08 34 18.1**	**+2.0**
GEM	**Giv'at Ha'Em**	**4.32**	**122**	P	**Pn**		**08 34 16.8**	**+0.7**
GEM				S	**Sn**		**08 35 04.4**	**-0.8**
BLCB	**Balcova**	**4.40**	**311**	P	**Pn**		**08 34 17.3**	**+0.2**
KNHM	**Kefar Nahum**	**4.46**	**126**	P	**Pn**		**08 34 18.5**	**+0.6**
KNHM				S	**Sn**		**08 35 07.6**	**-1.0**
BR104	**Keskin Array S**	**4.51**	**24**	Pn	**Pn**		**08 34 20.2**	**+1.4**
BR105	**Keskin Array S**	**4.51**	**23**	Pn	**Pn**		**08 34 20.4**	**+1.6**
ANDN	**Andirin**	**4.52**	**63**	P	**Pn**		**08 34 23.1**	**+4.1**
BRTR	**Keskin Array B**	**4.53**	**24**	Pn	**Pn**		**08 34 19.2**	**+0.3**
	5.5nm,0.3s,baz=195,slow=15,SNR=64							
BRTR				LR	LR		08 36 31.1	
	comp=Z,347nm,18.9s,baz=218,slow=44							
	16nm,0.5s							
BR106	**Keskin Array S**	**4.53**	**23**	Pn	**Pn**		**08 34 20.1**	**+1.1**
BR131	**Keskin Array S**	**4.53**	**24**	Pn	**Pn**		**08 34 20.3**	**+1.3**
BR131	**Keskin Array S**	**4.53**	**24**		**Pn**		**08 34 20.3**	**+1.3**
KSHT	**Keshet**	**4.56**	**124**	P	**Pn**		**08 34 20.5**	**+1.1**
KSHT				S	**Sn**		**08 35 10.7**	**-0.3**
NPS	**Neapolis**	**4.65**	**268**	P	**Pn**		**08 34 21.2**	**+0.6**
MMLI	**Mount Malkishu**	**4.65**	**131**	P	**Pn**		**08 34 22.0**	**+1.3**
MMLI	**Mount Malkishu**	**4.65**	**131**	P	**Pn**		**08 34 21.0**	**+0.4**
MMLI				S	**Sn**		**08 35 11.7**	**-1.7**
SALP	**Salfit**	**4.78**	**136**	P	**Pn**		**08 34 23.7**	**+1.3**
THERA	**Ancient Thera,**	**4.78**	**281**	P	**Pn**		**08 34 22.1**	**-0.3**
THR8	**Santorini-Mono**	**4.78**	**281**	P	**Pn**		**08 34 22.1**	**-0.3**
QRNJ	**Al-Qirein**	**4.82**	**131**	P	**Pn**		**08 34 24.3**	**+1.5**
ROII	**Roi**	**4.83**	**133**	P	**Pn**		**08 34 23.6**	**+0.7**
ROII				S	**Sn**		**08 35 16.2**	**-1.3**
THR6	**Thira Island,**	**4.84**	**281**	P	**Pn**		**08 34 23.7**	**+0.6**
THR3	**Thira Island,**	**4.85**	**281**	P	**Pn**		**08 34 23.4**	**+0.1**
SNT5	**Nea Kammeni, S**	**4.85**	**281**	P	**Pn**		**08 34 24.1**	**+0.8**
BALB	**Balikesir**	**4.87**	**327**		**Pn**		**08 34 24.7**	**+1.2**
MDUB	**Mudurnu**	**4.87**	**359**		**Pn**		**08 34 25.6**	**+1.9**
THR9	**Santorini-Faro**	**4.88**	**281**	P	**Pn**		**08 34 23.6**	**0.0**
BNN	**Bunyan**	**4.88**	**47**	Pn	**Pn**		**08 34 25.1**	**+1.3**
BNN	**Bunyan**	**4.88**	**47**		**Pn**		**08 34 25.7**	**+1.9**
THR5	**Thira Island,**	**4.89**	**281**	P	**Pn**		**08 34 24.4**	**+0.6**
KMRS	**Kahramanmaras**	**4.90**	**65**	Pn	**Pn**		**08 34 25.5**	**+1.5**
RGMN	**Argaman**	**4.90**	**133**	P	**Pn**		**08 34 24.5**	**+0.5**
RGMN				S	**Sn**		**08 35 17.5**	**-1.8**
YITV	**Yitav**	**5.00**	**135**	P	**Pn**		**08 34 25.8**	**+0.4**
YITV				S	**Sn**		**08 35 19.9**	**-2.1**
JER	**Jerusalem**	**5.01**	**138**	P	**Pn**		**08 34 26.0**	**+0.4**
JER				S	**Sn**		**08 35 20.4**	**-1.9**
UJAP	**Al Uja**	**5.02**	**135**	Pn	**Pn**		**08 34 27.7**	**+2.0**
UJAP	**Al Uja**	**5.02**	**135**	P	**Pn**		**08 34 28.0**	**+2.3**
	0.6nm2μm67nm,0.7s							
UJAP	**Al Uja**	**5.02**	**135**	P	**Pn**		**08 34 26.6**	**+0.9**
GAZ	**Gaziantep**	**5.03**	**70**	Pn	**Pn**		**08 34 26.9**	**+1.1**
GAZ	**Gaziantep**	**5.03**	**70**		**Pn**		**08 34 26.4**	**+0.6**
BALY	**Balya**	**5.06**	**326**	P	**Pn**		**08 34 28.5**	**+2.3**
ALMO	**Almog**	**5.14**	**136**	P	**Pn**		**08 34 27.5**	**+0.1**
ALMO				S	**Sn**		**08 35 23.2**	**-2.2**
YOZ	**Yozgat**	**5.15**	**37**	Pn	**Pn**		**08 34 28.9**	**+1.3**
IDI	**Anoyia**	**5.24**	**269**	Pn	**Pn**		**08 34 28.0**	**-0.7**
	18nm,0.3s,baz=341,slow=7.2,SNR=33							
IDI				Sn	**Sn**		**08 35 23.1**	**-4.7**
	7.2nm,0.3s,baz=352,slow=8.5,SNR=3.0							
IDI	**Anoyia**	**5.24**	**269**		**Pn**		**08 34 29.1**	**+0.4**
MZS	**Mizpe Shalem**	**5.28**	**138**	P	**Pn**		**08 34 29.3**	**+0.1**
MZS				S	**Sn**		**08 35 26.7**	**-2.0**
KZIT	**Kziot**	**5.35**	**150**	P	**Pn**		**08 34 31.1**	**+0.9**
	0.5nm4μm104nm,0.8s							
KZIT	**Kziot**	**5.35**	**150**	P	**Pn**		**08 34 30.9**	**+0.7**
KZIT	**Kziot**	**5.35**	**150**	P	**Pn**		**08 34 29.9**	**-0.2**
KZIT				S	**Sn**		**08 35 28.0**	**-2.5**
MSBI	**Mazada**	**5.45**	**140**	P	**Pn**		**08 34 32.8**	**+1.2**
	0.1nm8.8nm,0.4s							
MSBI	**Mazada**	**5.45**	**140**	P	**Pn**		**08 34 32.6**	**+1.1**
MSBI	**Mazada**	**5.45**	**140**	P	**Pn**		**08 34 31.4**	**-0.1**
MSBI				S	**Sn**		**08 35 31.0**	**-2.0**
GHAJ	**Ghor Haditha**	**5.57**	**139**		**Pn**		**08 34 32.5**	**-0.7**
GHAJ	**Ghor Haditha**	**5.57**	**139**	P	**Pn**		**08 34 36.2**	**+3.0**
	0.4nm2μm45nm,0.4s							
GHAJ	**Ghor Haditha**	**5.57**	**139**	P	**Pn**		**08 34 35.6**	**+2.4**
GHAJ	**Ghor Haditha**	**5.57**	**139**	P	**Pn**		**08 34 33.1**	**-0.1**
GHAJ				S	**Sn**		**08 35 34.0**	**-1.9**
LISJ	**El Lisan**	**5.58**	**140**	P	**Pn**		**08 34 36.5**	**+3.3**
RMNI	**Mount Ramon**	**5.77**	**149**	P	**Pn**		**08 34 36.5**	**+0.4**
RMNI				S	**Sn**		**08 35 40.5**	**-0.4**
ASF	**Jabal al Asfar**	**5.77**	**125**	Pn	**Pn**		**08 34 36.8**	**+0.7**
	4.4nm,0.3s,baz=304,slow=6.7,SNR=23							
ASF				Sn	**Sn**		**08 35 42.0**	**+0.9**
	3.2nm,0.3s,baz=292,slow=20,SNR=3.7							
	7.0nm,0.3s							
ASF	**Jabal al Asfar**	**5.77**	**125**	P	**Pn**		**08 34 38.0**	**+1.9**
	1.0nm127nm,0.5s							
HRFI	**Mount Harif**	**6.37**	**149**	P	**Pn**		**08 34 45.1**	**+0.8**
	0.3nm860nm53nm,0.6s							
HRFI	**Mount Harif**	**6.37**	**149**	P	**Pn**		**08 34 44.5**	**+0.3**
HRFI	**Mount Harif**	**6.37**	**149**	P	**Pn**		**08 34 44.0**	**-0.2**
HRFI				S	**Sn**		**08 35 53.9**	**-1.8**
ARPR	**Arapgir-MALATY**	**6.61**	**56**	P	**

BRG Berggiesshubel 19.75 326 P **P** **08 37 38.9 +0.4**
BRG Berggiesshubel 19.75 326 *e*P **P** **08 37 39.0 +0.5**
BRG Amp 08 37 39.8
comp=Z,3.7nm,0.7s
GRC1 Grafenberg Arr 19.75 319 P **Pn** **08 37 40.1 -0.3**
DAVA Damuels 19.78 313 *e*P **P** **08 37 39.7 +0.6**
comp=Z,14nm,0.6s
DAVA Damuels 19.78 313 P **P** **08 37 39.9 +0.8**
HSKC Hora Svate Kat 19.80 325 P **P** **08 37 39.8 +0.7**
GRC4 Grafenberg Arr 19.80 319 P **Pn** **08 37 40.6 -0.4**
GRB3 Grafenberg Arr 19.81 320 P **Pn** **08 37 40.2 -0.9**
GRB2 Grafenberg Arr 19.84 320 P **P** **08 37 39.7 +0.2**
GRB1 Grafenberg Arr 19.92 320 P **P** **08 37 40.5 +0.2**
GRB4 Grafenberg Arr 20.01 320 P **P** **08 37 42.0 +0.6**
SAOF Saorge 20.03 302 P **P** **08 37 41.1 -0.5**
NKC Novy Kostel 20.03 323 P **P** **08 37 42.2 +0.6**
TANN Tannenbergstha 20.14 323 P Pn 08 37 44.0 -1.0
GRA3 Grafenberg Arr 20.31 320 P **P** **08 37 45.5 +0.9**
GRFO Grafenberg 20.32 320 P **P** **08 37 45.4 +0.7**
BELG Belogornoye 20.42 30 P **P** **08 37 45.8 +0.1**
comp=Z,14nm,0.5s,baz=232,slow=6.8,SNR=7.4
comp=Z,14nm,0.5s
BNALP Bannalp 20.48 310 P **P** **08 37 47.1 +0.5**
BNALP Bannalp 20.48 310 P **P** **08 37 47.0 +0.3**
MOX Moxa 20.70 323 P Pn 08 37 50.3 -1.3
SLE Schleitheim 20.84 313 P **P** **08 37 50.0 -0.4**
SLE Schleitheim 20.84 313 P **P** **08 37 50.5 +0.1**
SENIN Lac Senin/Sane 20.99 308 P **P** **08 37 52.7 +0.5**
BFO Black Forest 21.20 314 P **P** **08 37 55.3 +1.1**
BFO IAmb IAmb 08 37 57.8
comp=Z,9.6nm,0.8s
ECH Echery 21.84 313 P **P** **08 38 00.7 -0.4**
ECH Echery 21.84 313 P **P** **08 38 01.4 +0.3**
CLZ Clausthal 22.07 324 P **P** **08 38 03.6 +0.1**
GTTG Gottingen 22.08 323 P **P** **08 38 03.7 +0.1**
MTSE Matsula 23.66 350 P **P** **08 38 19.0 -0.5**
BGES Gesves 24.04 316 *d*P **P** **08 38 24.3 +1.1**
DOU Dourbes 24.19 315 *d*P **P** **08 38 24.7 +0.2**
comp=Z,6.9nm,0.7s
AKTO Aktyubinsk 24.36 44 LR LR 08 51 05.2
comp=Z,55nm,18.4s,baz=244,slow=44
AB31 Akbulak array 24.99 48 **P** **08 38 32.3 +0.4**
ABKAR Akbulak array 24.99 48 **P** **08 38 31.7 -0.1**
FIA1 FINESS Array S 26.08 354 **P** **08 38 40.8 -0.8**
FINES FINESS Array B 26.08 354 P **P** **08 38 40.5 -1.1**
comp=Z,3.9nm,0.5s,baz=171,slow=9.5,SNR=10
comp=Z,3.9nm,0.5s
FINES FINESS Array B 26.08 354 **P** **08 38 41.0 -0.6**
HFS Hagfors 27.07 341 P **P** **08 38 50.5 0.0**
comp=Z,1.6nm,0.4s,baz=157,slow=8.0,SNR=8.4
HFS LR LR 08 51 24.6
comp=Z,43nm,19.6s,baz=142,slow=40
comp=Z,1.6nm,0.4s
ARTI Arti 27.74 33 LR LR 08 52 12.0
comp=Z,41nm,18.4s,baz=74,slow=41
ARTI Arti 27.74 33 **P** **08 38 56.9 +0.3**
ESDC Sonseca Array 28.11 289 P **P** **08 39 00.5 +0.4**
comp=Z,1.3nm,0.8s,baz=77,slow=9.2,SNR=8.4
comp=Z,1.3nm,0.8s
ESDC Sonseca Array 28.11 289 P **P** **08 39 00.5 +0.4**
NB2 NORSAR Subarra 28.51 340 P **P** **08 39 02.1 -1.3**
comp=Z,0.8nm,0.5s,baz=144,slow=9.3
NOA NORSAR Array B 28.51 340 P **P** **08 39 01.9 -1.6**
comp=Z,1.0nm,0.6s,baz=142,slow=9.5,SNR=9.1
NOA LR LR 08 52 35.6
comp=Z,49nm,18.6s,baz=85,slow=41
comp=Z,1.0nm,0.6s
EKA Eskdalemuir Ar 30.74 321 P **P** **08 39 21.1 -2.0**
comp=Z,0.3nm,0.3s,baz=121,slow=10,SNR=3.2
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 32.45 45 P **P** **08 39 38.9 +0.7**
comp=Z,0.5nm,0.5s,baz=247,slow=7.6,SNR=4.7
comp=Z,0.5nm,0.5s
ARCES ARCESS Array B 34.15 356 P **P** **08 39 52.2 -0.6**
comp=Z,1.6nm,0.6s,baz=163,slow=7.8,SNR=14
ARCES PcP **PcP** **08 42 28.6 -0.2**
comp=Z,1.3nm,0.9s,baz=188,slow=3.4,SNR=3.5
ARCES LR LR 08 54 44.2
comp=Z,41nm,20.0s,baz=104,slow=38
comp=Z,1.6nm,0.6s
ARCES ARCESS Array B 34.15 356 P **P** **08 39 52.2 -0.6**
ARCES IAmb IAmb 08 40 06.0
comp=Z,3.1nm,0.9s
ASAI AK-SAY(Kyrgyzs 35.60 68 P **P** **08 40 05.7 -0.5**
TARG Taragay, Kyrgy 36.48 66 P **P** **08 40 15.1 +1.4**
KURBB Kurchatov Arra 36.95 51 P **P** **08 40 17.6 +0.6**
comp=Z,1.1nm,0.5s,baz=270,slow=8.9,SNR=5.9
comp=Z,1.1nm,0.5s
KURK Kurchatov 37.02 51 P **P** **08 40 17.6 0.0**
KURK IAmb IAmb 08 40 34.8
comp=Z,3.0nm,0.8s
MAKZ Makanchi 39.12 57 **P** **08 40 36.7 +1.3**
MAKZ Makanchi 39.12 57 P **P** **08 40 36.9 +1.5**
MKAR Makanchi Array 39.34 57 P **P** **08 40 38.5 +1.3**
comp=Z,7.0nm,0.6s,baz=278,slow=6.4,SNR=43
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 39.34 57 **P** **08 40 38.1 +0.8**
ZALV Zalesovo Beam 41.08 46 P **P** **08 40 51.1 -0.4**
comp=Z,0.7nm,0.4s,baz=257,slow=10,SNR=4.9
ZALV LR LR 09 01 04.4
comp=Z,34nm,18.8s,baz=39,slow=41
comp=Z,0.7nm,0.4s
SPITS Spitsbergen Ar 43.17 356 P **P** **08 41 08.0 -0.3**
comp=Z,3.1nm,0.6s,baz=148,slow=11,SNR=8.7
SPITS PcP **PcP** **08 42 57.7 +0.8**
comp=Z,3.1nm,0.7s,baz=165,slow=3.5,SNR=4.5
comp=Z,3.1nm,0.6s
NRIK Noril'sk 45.38 24 P **P** **08 41 27.4 +1.3**
comp=Z,5.9nm,0.5s,baz=235,slow=3.6,SNR=9.0
comp=Z,5.9nm,0.5s
NRIK Noril'sk 45.38 24 **P** **08 41 27.3 +1.3**
DAG Danmarks Havn 46.79 346 P **P** **08 41 36.7 -0.3**
SONM Songino Array 55.29 52 P **P** **08 42 42.0 +0.6**
comp=Z,1.0nm,0.4s,baz=285,slow=8.5,SNR=7.1
comp=Z,1.0nm,0.4s
SONM Songino Array 55.29 52 P **P** **08 42 42.0 +0.6**
GRTLG Ghanzi 57.44 191 P **P** **08 42 54.7 -2.1**
HHC Hu-ho-hao-te 61.18 59 *e*P **P** **08 43 24.4 +1.8**
CMAR Chiang Mai Arr 61.54 87 P **P** **08 43 25.9 +0.7**
comp=Z,1.0nm,0.4s,baz=297,slow=8.2,SNR=8.2
comp=Z,1.0nm,0.4s
SCHQ Schefferville 66.05 321 P **P** **08 43 53.5 -0.9**
comp=Z,3.2nm,0.6s,baz=82,slow=4.3,SNR=7.5
comp=Z,3.2nm,0.6s
SCHQ Schefferville 66.05 321 **P** **08 43 53.8 -0.6**
GBN Guysborough 67.47 310 P **P** **08 44 04.1 +0.6**
NJ2 Nanjing 70.40 64 *e*P **P** **08 44 19.3 -2.6**
NJ2 pmax pmax
comp=Z,43nm,0.5s
USRK Ussuriysk Ar. 72.92 48 P **P** **08 44 37.1 +0.3**
comp=Z,4.2nm,0.6s,baz=271,slow=6.7,SNR=6.9
comp=Z,4.2nm,0.6s
C36M Paulatuk 73.81 351 **P** **08 44 42.2 +0.6**
KSRS Korea Array 73.98 55 P **P** **08 44 43.5 +0.3**
comp=Z,1.8nm,0.7s,baz=304,slow=4.1,SNR=4.7
comp=Z,1.8nm,0.7s
C23K Itkillik River 74.87 1 P **P** **08 44 49.8 +2.0**
C23K IAmb IAmb 08 44 51.3
comp=Z,2.7nm,0.8s
C18K Utukok River 75.66 5 P **P** **08 44 53.1 +0.6**
D19K Kuna River 75.99 4 P **P** **08 44 55.3 +1.0**
D19K IAmb IAmb 08 45 14.2
comp=Z,6.2nm,1.5s
E29M Blow River 76.02 356 P **P** **08 44 55.5 +1.1**
E29M IAmb IAmb 08 44 58.9
comp=Z,4.5nm,1.1s
F30M Barrier River 76.65 355 P **P** **08 44 58.9 +0.8**
F30M IAmb IAmb 08 45 17.4
comp=Z,5.5nm,1.3s
E18K Tukpahlearik C 76.91 5 P **P** **08 45 00.3 +0.8**
E18K IAmb IAmb 08 45 28.7
comp=Z,5.8nm,1.4s
F24K Squaw Lake 77.20 360 P **P** **08 45 02.0 +0.8**
F24K IAmb IAmb 08 45 03.8
comp=Z,2.0nm,0.8s
G31M Satah River 77.21 354 P **P** **08 45 01.0 -0.1**
G31M IAmb IAmb 08 45 02.0
comp=Z,3.2nm,0.7s
G30M tAoh Zraii Nji 77.30 355 P **P** **08 45 02.0 +0.2**
G30M IAmb IAmb 08 45 02.7
comp=Z,2.0nm,0.8s
G29M Pine Creek 77.49 356 P **P** **08 45 03.5 +0.7**
G29M IAmb IAmb 08 45 04.2
comp=Z,4.0nm,0.8s
F19K Shaleruckik Mo 77.66 4 P **P** **08 45 04.7 +1.1**
F19K IAmb IAmb 08 45 11.9
comp=Z,4.1nm,1.4s
G27K Doyon Strip 77.78 357 P **P** **08 45 05.6 +1.2**
G27K IAmb IAmb 08 45 06.3
comp=Z,2.1nm,0.7s
G21K Allakaket 78.15 2 P **P** **08 45 07.5 +1.0**
G21K IAmb IAmb 08 45 28.8
comp=Z,4.8nm,1.4s
H31M Peel River 78.31 354 P **P** **08 45 08.1 +0.7**
ILAR Eielson Array 79.96 359 P **P** **08 45 15.8 -0.5**
comp=Z,0.4nm,0.7s,baz=345,slow=6.5,SNR=5.8
comp=Z,0.4nm,0.7s
SCRK Sand Creek 80.69 358 P **P** **08 45 22.5 +2.0**
SCRK IAmb IAmb 08 45 22.7
comp=Z,2.2nm,0.7s
MJAR Matsushiro Arr 81.23 51 P **P** **08 45 25.0 +1.3**
comp=Z,2.3nm,0.8s,baz=303,slow=2.8,SNR=4.2
comp=Z,2.3nm,0.8s
MJAR Matsushiro Arr 81.23 51 P **P** **08 45 25.0 +1.3**
MJAR IAmb IAmb 08 45 40.0
comp=Z,3.0nm,1.1s
QSPA South Pole Qui 125.44 180 PKP **PKiKP** **08 52 07.9 0.0**
comp=Z,0.8nm,1.0s,baz=237,slow=17,SNR=1.2

*IDC **14** 08:33:59.6±2.0, 17.87S×178.13W, h604km±23km, mb3.0/5, mbtmp4.0/6, Error ellipse: s-maj=49.5km s-min=26.3km az=165.0*
ISC 14 08:33:58.8±1.3, **18.0S**±0.3×**178.0W**±0.2, **h590**km, **n6**, σ0^{2}**94/6**, **mb3.7/5**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.76**	**274**	P	**P**	**08 35 23.0**	**+1.0**
	53nm,0.7s,baz=122,slow=5.0,SNR=30						
STKA	**Stephens Creek**	**38.91**	**241**	P	**P**	**08 40 35.2**	**+0.1**
	1.2nm,0.5s,baz=93,slow=8.6,SNR=4.3						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**44.98**	**260**	P	**P**	**08 41 21.9**	**-1.1**
	0.8nm,0.3s,baz=93,slow=7.4,SNR=40						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**45.12**	**254**	P	**P**	**08 41 23.5**	**-0.5**
	4.1nm,0.5s,baz=87,slow=8.8,SNR=65						
	4.1nm,0.5s						
QSPA	**South Pole Qui**	**72.04**	**180**	P	**P**	**08 44 24.0**	**+0.2**
	0.9nm,1.0s,baz=117,slow=6.8,SNR=2.0						
	0.9nm,1.0s						
TXAR	**Lajitas Array**	**85.74**	**57**	P	**P**	**08 45 36.6**	**-0.2**
	0.3nm,0.7s,baz=224,slow=5.2,SNR=4.2						
	0.3nm,0.7s						

*MOS **14** 08:45:59.4±0.8, 42.55N×131.43E, h574km, mb4.1/20, Error ellipse: s-maj=12.2km s-min=6.9km az=123.2*
*BJI **14** 08:45:59.2, 42.57N×131.41E, h573km, mB4.4/3, mb4.8/16*
*GFZ **14** 08:45:59.6±0.3, 42°N±5.5°×13°1E±°, h562km, M4.3/30, mb4.2/30, confirmed*
*JMA **14** 08:46:00.4±0.4, 42°N±2.2°×13°2E±°, h610km, MV4.0/44, NEAR VLADIVOSTOK*
*NEIC **14** 08:46:00.5±1.8, 42.53N±0.08×131.3E±0.2, h563km±4km, mb4.1/79, Error ellipse: s-maj=16.8km s-min=12.0km az=90.0*
*IDC **14** 08:46:00.2±0.5, 42.53N×131.28E, h563km±5km, mb3.6/23, mbtmp4.5/28, Error ellipse: s-maj=11.3km s-min=8.6km az=64.0*
ISC 14 08:45:59.7±0.4, **42.48N**±0.06×**131.44E**±0.05, **h563**km, **n494**, σ1^{2}**49/486**, **mb4.1**/96, **2C-10D, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSTR	**Posyet**	**0.50**	**291**	*d* iP	**P**	**08 47 07.8**	**+1.5**
PSTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VLA	**Vladivostok**	**0.72**	**27**	*c* iP	**P**	**08 47 08.4**	**+1.9**
USRK	**Ussuriysk Ar.**	**1.77**	**13**	P	**P**	**08 47 10.7**	**+1.2**
	comp=Z,49nm,0.3s,baz=191,slow=1.9,SNR=353						
USRK				S	**S**	**08 48 06.6**	**0.0**
	comp=Z,9.5nm,0.7s,baz=211,slow=14,SNR=6.0						
USA0B	**Ussuriysk Arra**	**1.77**	**13**	P	**P**	**08 47 10.7**	**+1.2**
USA0B	**Ussuriysk Arra**	**1.77**	**13**	P	**P**	**08 47 10.7**	**+1.2**
MDJ	**Mudanjiang**	**2.52**	**329**		**P**	**08 47 14.1**	**+1.2**
MDJ	**Mudanjiang**	**2.52**	**329**	P	**P**	**08 47 14.3**	**+1.4**
MDJ				S	**S**	**08 48 14.8**	**+1.9**
BNX	**BinXian**	**4.37**	**320**	iP	**P**	**08 47 25.5**	**+0.5**
BNX				S	**S**	**08 48 32.9**	**-2.1**
BNX				pmax	pmax		
	comp=Z,440nm,0.7s						
BNX				pmax	pmax		
	comp=Z,110nm,4.3s						
KS19	**Wonju Array Si**	**5.67**	**210**	P	**P**	**08 47 38.2**	**+2.0**
KSRS	**Korea Array**	**5.70**	**209**	P	**P**	**08 47 38.3**	**+2.0**
	comp=Z,21nm,0.7s,baz=19,slow=9.0,SNR=63						
KSRS	**Korea Array**	**5.70**	**209**	*e*P	**P**	**08 47 38.3**	**+2.0**
KSRS				pmax	pmax		
	comp=Z,22nm,0.6s						
KSAR	**Wonju Array Be**	**5.72**	**210**	P	**P**	**08 47 37.4**	**+0.8**
KSAR	**Wonju Array Be**	**5.72**	**210**		**P**	**08 47 37.4**	**+0.8**
JOSM	**Okushiri--Mats**	**5.97**	**91**	*e*P	**P**	**08 47 38.9**	**+0.3**
JHST	**Hiyamasetana**	**6.24**	**88**	*e*P	**P**	**08 47 41.6**	**+0.5**
JOG3		**6.30**	**111**	*e*P	P	**08 47 47.5**	**+5.8**
JSH	**Shimam**	**6.36**	**86**	*e*P	**P**	**08 47 42.6**	**+0.5**
JSK	**Shakotan**	**6.69**	**79**	*e*P	**P**	**08 47 45.3**	**+0.1**
JIW	**Iwasaki**	**6.70**	**103**	*e*P	**P**	**08 47 45.9**	**+0.5**
JKB	**Kayabe**	**7.15**	**91**	*e*P	**P**	**08 47 49.1**	**-0.4**
JOT	**Ohata**	**7.25**	**95**	*e*P	**P**	**08 47 50.0**	**-0.5**
JKSM	**Kasumi**	**7.32**	**159**	*e*P	**P**	**08 47 53.5**	**+2.1**
JKY	**Yasaka**	**7.41**	**156**	*e*P	**P**	**08 47 54.1**	**+2.0**
JTM	**Tenmabayashi**	**7.41**	**100**	P	**P**	**08 47 52.9**	**+0.9**
JHS	**Saijyo**	**7.58**	**170**	P	**P**	**08 47 51.4**	**-2.5**
JRG	**Rokugo**	**7.61**	**111**	P	**P**	**08 47 53.6**	**-0.4**
JRG				*e*S	**S**	**08 49 24.1**	**-3.6**
JWT	**Wachi**	**7.82**	**155**	*e*P	**P**	**08 47 58.1**	**+2.0**
MJAR	**Matsushiro Arr**	**7.91**	**136**	P	**P**	**08 47 57.8**	**+0.8**
	comp=Z,5.5nm,0.6s,baz=318,slow=9.4,SNR=8.5						
MJA0	**Matsu Arr-Jizo**	**7.92**	**136**	*e*P	**P**	**08 47 58.4**	**+1.2**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JWK2	**Keihoku**	**8.07**	**66**	*e*P	**P**	**08 48 00.7**	**+2.4**
JTU	**Tsushima**	**8.10**	**192**	*e*P	**P**	**08 48 00.7**	**+1.8**
JMK	**Ichinoseki**	**8.22**	**112**	*e*P	**P**	**08 47 58.8**	**-1.1**
ASAJ	**Asahikawa**	**8.30**	**75**	P	**P**	**08 48 01.1**	**+0.4**
JKA	**Kamikawa-asahi**	**8.30**	**75**		**P**	**08 48 01.1**	**+0.4**
JKA	**Kamikawa-asahi**	**8.30**	**75**	P	**P**	**08 48 01.6**	**+0.9**
JMM	**Marumori**	**8.51**	**120**	*e*P	**P**	**08 48 02.3**	**-0.5**
JMM				*e*S	**S**	**08 49 39.3**	**-4.6**
JRY	**Ryogami san**	**8.66**	**136**	*e*S	**S**	**08 49 43.6**	**-3.2**
ERM	**Erimo**	**8.71**	**89**	P	**P**	**08 48 04.5**	**-0.2**
ERM	**Erimo**	**8.71**	**89**	P	**P**	**08 48 04.5**	**-0.2**
ERM	**Erimo**	**8.71**	**89**	P	**P**	**08 48 04.1**	**-0.6**
JCH	**Churui**	**8.81**	**85**	*e*P	**P**	**08 48 04.6**	**-1.1**
JCH				*e*S	S	08 49 42.3	-6.8
JFK	**Kawauchi**	**8.86**	**122**	*e*P	**P**	**08 48 05.2**	**-1.2**
JFK				*e*S	S	08 49 43.0	-7.4
JMN	**Monobe**	**8.94**	**167**	P	**P**	**08 48 08.4**	**+1.1**
JIE	**Ise**	**9.07**	**151**	*e*P	**P**	**08 48 08.3**	**-0.2**
YSS	**Yuzhno-Sakhali**	**9.21**	**57**	*e*P	**P**	**08 48 11.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JTKR	**Abashiri--Toko**	**9.23**	**76**	*e*P	**P**	**08 48 10.3**	**+0.4**
JNU	**Nakatsue**	**9.35**	**183**	P	**P**	**08 48 12.5**	**+1.1**
	comp=Z,46nm,1.1s,baz=318,slow=16,SNR=7.7						
NEM2	**Nemuro 2**	**10.53**	**80**	*e*P	**P**	**08 48 22.7**	**-0.3**
NEM2				*e*S	**S**	**08 50 17.1**	**-3.9**
HILR	**Hailar Array B**	**10.77**	**315**	P	**P**	**08 48 25.4**	**-0.1**
	comp=Z,8.6nm,0.4s,baz=115,slow=11,SNR=16						
BSO1	**Boso 1**	**10.80**	**133**	*e*P	**P**	**08 48 24.9**	**-0.6**
BSO1				*e*S	**S**	**08 50 21.9**	**-3.4**
JSJ	**Shimokoshiki**	**10.87**	**188**	*e*P	**P**	**08 48 27.9**	**+1.2**
TYV	**Tymovskoe**	**11.38**	**39**	*e*P	**P**	**08 48 32.6**	**+1.0**
TYV				*e*S	**S**	**08 50 33.4**	**-3.2**
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
TYV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TYV				smax	smax		
	comp=N,3.0nm,0.9s						
TYV				smax	smax		
	comp=N,400nm,5.5s						
ZEA	**Zeya**	**11.61**	**348**	*e*P	**P**	**08 48 33.8**	**-0.1**
ZEA				*e*		08 50 46.2	
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
JOW	**Kunigami**	**15.82**	**190**	P	**P**	**08 49 16.3**	**-0.8**
ULN	**Ulaanbaatar**	**17.98**	**296**	*d* iP	**P**	**08 49 37.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULN	**Ulaanbaatar**	**17.98**	**296**		**P**	**08 49 37.5**	**+0.7**
ULN	**Ulaanbaatar**	**17.98**	**296**	P	**P**	**08 49 37.8**	**+1.0**
SONM	**Songino Array**	**18.42**	**295**	P	**P**	**08 49 41.7**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=88,slow=9.8,SNR=23						
SONM	**Songino Array**	**18.42**	**295**	*e*P	**P**	**08 49 42.0**	**+1.3**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	**Songino Array**	**18.42**	**295**	P	**P**	**08 49 41.5**	**+0.8**
SONM				IAmb	IAmb	08 49 42.6	
	comp=Z,2.8nm,0.8s						
ZAK	**Zakamensk**	**20.86**	**302**	*e*P	**P**	**08 50 01.6**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SEY	**Seymchan**	**23.88**	**24**	ScP	**ScP**	**08 56 37.1**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=261,slow=5.3,SNR=4.3						
GTA2	**Gaotai**	**24.03**	**274**	*e*P	**P**	**08 50 32.3**	**+1.1**
GTA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KNGR	**Kungurtug, Tuv**	**24.53**	**301**	*e*P	**P**	**08 50 36.4**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	**Tiksi**	**29.28**	**358**	P	**P**	**08 51 15.6**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**29.28**	**358**	P	**P**	**08 51 15.6**	**-0.9**
TIXI				IAmb	IAmb	08 51 18.0	
	comp=Z,4.7nm,0.8s						
DGZ	**Jazzator, Alta**	**31.00**	**299**	*d* iP	**P**	**08 51 32.9**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZAA0	**Zalesovo Array**	**32.54**	**307**	P	**P**	**08 51 44.6**	**0.0**
ZAA0				IAmb	IAmb	08 51 45.3	
	comp=Z,6.5nm,1.2s						
ZALV	**Zalesovo Beam**	**32.54**	**307**	P	**P**	**08 51 44.3**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=107,slow=9.9,SNR=10						
ZALV				PcP	**PcP**	**08 54 13.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=59,slow=5.7,SNR=5.2						
ZALV				ScP	**ScP**	**08 57 03.5**	**-1.2**
	comp=Z,3.6nm,0.6s,baz=99,slow=3.6,SNR=16						
	comp=Z,2.1nm,0.3s						
ZALV	**Zalesovo Beam**	**32.54**	**307**	*e*P	**P**	**08 51 44.6**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**32.54**	**307**		**P**	**08 51 44.7**	**-0.1**
MK31	**Makanchi Array**	**34.78**	**294**	*d* iP	**P**	**08 52 03.7**	**0.0**
MKAR	**Makanchi Array**	**34.78**	**294**	P	**P**	**08 52 03.8**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=86,slow=10.0,SNR=22						
	comp=Z,3.1nm,0.6s						
MAKZ	**Makanchi**	**34.99**	**294**	P	**P**	**08 52 05.7**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAKZ	**Makanchi**	**34.99**	**294**		**P**	**08 52 05.7**	**+0.3**
MAKZ				IAmb	IAmb	08 52 06.4	
	comp=Z,4.8nm,0.7s						
MAKZ	**Makanchi**	**34.99**	**294**	P	**P**	**08 52 05.7**	**+0.3**
NRIK	**Noril'sk**	**35.09**	**335**	P	**P**	**08 52 04.9**	**-1.0**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NRIK	**Noril'sk**	**35.09**	**335**	P	**P**	**08 52 04.9**	**-1.0**
NRIK				IAmb	IAmb	08 52 40.6	
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**36.52**	**302**	P	**P**	**08 52 18.4**	**+0.4**
KURK						08 54 25.9	
KURK	**Kurchatov**	**36.52**	**302**		**P**	**08 52 17.9**	**-0.1**
KURK	**Kurchatov**	**36.52**	**302**	P	**P**	**08 52 17.9**	**-0.1**
KURBB	**Kurchatov Arra**	**36.59**	**302**	P	**P**	**08 52 18.4**	**-0.2**
	comp=Z,13nm,0.7s,baz=82,slow=8.5,SNR=61						
KURBB				PcP	**PcP**	**08 54 25.9**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=96,slow=2.8,SNR=2.7						
	comp=Z,13nm,0.7s						
PDGK	**Podgornoye**	**37.55**	**289**	P	**P**	**08 52 26.3**	**-0.4**
PDGK	**Podgornoye**	**37.55**	**289**		**P**	**08 52 26.3**	**-0.4**
GAMB	**Gambell** baz=264	**38.51**	**37**	P	**P**	**08 52 36.2**	**+2.2**
SPIA	**Saint Paul Isl** baz=274	**39.11**	**47**	P	**P**	**08 52 40.3**	**+1.5**
TARG	**Taragay, Kyrgy**	**39.24**	**288**	P	**P**	**08 52 41.2**	**+0.5**
TARG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TARG	**Taragay, Kyrgy**	**39.24**	**288**		**P**	**08 52 41.2**	**+0.5**
TARG				IAmb	IAmb	08 52 42.3	
	comp=Z,5.8nm,0.7s						
TARG	**Taragay, Kyrgy**	**39.24**	**288**	P	**P**	**08 52 41.9**	**+1.2**
KDJ	**Kajisay**	**39.55**	**289**	P	**P**	**08 52 43.0**	**+0.1**
BOOM	**Boomskoye usch**	**40.29**	**290**	P	**P**	**08 52 49.3**	**+0.5**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BOOM	**Boomskoye usch**	**40.29**	**290**		**P**	**08 52 49.3**	**+0.5**
BOOM				IAmb	IAmb	08 52 50.2	
	comp=Z,5.4nm,0.6s						
BOOM	**Boomskoye usch**	**40.29**	**290**	P	**P**	**08 52 49.8**	**+1.0**
TNA	**Tin City** baz=266	**40.29**	**34**	P	**P**	**08 52 50.2**	**+2.0**
ASAI	**AK-SAY(Kyrgyzs**	**40.43**	**287**	P	**P**	**08 52 50.4**	**+0.3**
F14K	**Arctic Creek** baz=267	**40.95**	**34**	P	**P**	**08 52 55.5**	**+2.0**
M11K	**Mekoryuk** baz=273	**41.02**	**42**	P	**P**	**08 52 55.9**	**+1.8**
BVAR	**Borovoye Array**	**41.19**	**307**	P	**P**	**08 52 55.4**	**-0.2**
	comp=Z,5.1nm,0.5s,baz=77,slow=7.8,SNR=21						
BVAR				PcP	**PcP**	**08 54 40.7**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=67,slow=3.9,SNR=5.9						
BVAR				ScP	**ScP**	**08 57 35.4**	**-2.0**
	comp=Z,1.7nm,0.6s,baz=46,slow=4.3,SNR=4.0						
	comp=Z,5.1nm,0.5s						
BORK	**Borovoye**	**41.23**	**307**	*d* iP	**P**	**08 52 55.7**	**-0.2**
BORK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BORK	**Borovoye**	**41.23**	**307**		**P**	**08 52 54.8**	**-1.1**
BORK				IAmb	IAmb	08 52 56.4	
	comp=Z,4.8nm,0.6s						
AAK	**Ala-Archa**	**41.25**	**290**	*d* iP	**P**	**08 52 56.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	**Ala-Archa**	**41.25**	**290**	P	**P**	**08 52 56.5**	**+0.1**
AAK				IAmb	IAmb	08 52 57.3	
	comp=Z,4.2nm,0.7s						
AAK	**Ala-Archa**	**41.25**	**290**	P	**P**	**08 52 56.6**	**+0.2**
ANM	**Nome** baz=269	**41.33**	**36**	P	**P**	**08 52 58.2**	**+1.7**
C16K	**Lisburne Hills** baz=265	**41.53**	**30**	P	**P**	**08 53 00.1**	**+2.1**
UNV	**Unalaska Valle** baz=280	**41.63**	**52**	P	**P**	**08 53 00.3**	**+1.4**
F15K	**North Star Dit** baz=269	**41.66**	**34**	P	**P**	**08 53 01.0**	**+2.0**
K13K	**Kusilvak Mount**	**41.69**	**40**	P	**P**	**08 53 01.3**	**+2.0**
K13K				IAmb	IAmb	08 53 01.9	
	comp=Z,

A19K	Wainwright	43.19	27	P	P	08 53 12.2	+1.3
	baz=267						
L15K	Ungalak Mounta	43.21	40	P	P	08 53 12.6	+1.4
	baz=276						
E18K	Tukpahlearik C	43.29	31		P	08 53 12.9	+1.1
E18K				IAmb	IAmb	08 53 14.7	
	comp=Z,4.6nm,0.8s						
E18K	Tukpahlearik C	43.29	31	P	P	08 53 13.7	+1.9
	baz=270,SNR=6.2						
N14K	Kuskokwak Cree	43.32	42	P	P	08 53 14.3	+2.3
	baz=278						
G17K	Kiwalik Mounta	43.32	34	P	P	08 53 14.0	+1.9
	baz=272						
I17K	Unalakleet	43.39	37	P	P	08 53 14.8	+2.2
	baz=274						
J16K	Anvik River	43.48	38	P	P	08 53 15.5	+2.2
	baz=275						
O14K	Tigyukauivet M	43.62	43	P	P	08 53 16.4	+2.0
	baz=279						
H17K	Granite Mounta	43.66	35	P	P	08 53 16.4	+1.7
	baz=274						
C19K	Lookout Ridge	43.68	29	P	P	08 53 16.7	+1.9
	baz=270						
F18K	Selawik	43.69	33	P	P	08 53 16.7	+1.9
	baz=272,SNR=5.7						
M15K	Kasigluk River	43.71	41	P	P	08 53 17.1	+2.0
	baz=278						
KK31	Karatay Array	43.83	292	P	P	08 53 15.9	-0.5
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	43.83	292		P	08 53 15.9	-0.5
KK31				IAmb	IAmb	08 53 17.2	
	comp=Z,6.4nm,0.9s						
KKAR	Karatay Array	43.83	292	P	P	08 53 15.8	-0.6
KKAR	Karatay Array	43.83	292		P	08 53 15.8	-0.6
N15K	Kwethluk River	44.07	42	P	P	08 53 19.7	+1.8
	baz=278						
G18K	Tagagawik	44.12	34	P	P	08 53 20.0	+1.8
G18K	Tagagawik	44.12	34	P	P	08 53 20.1	+1.8
	baz=274						
J17K	VABM Dome	44.15	37	P	P	08 53 20.2	+1.7
	baz=276						
L16K	Owhat River	44.16	40	P	P	08 53 20.4	+1.9
	baz=277						
D19K	Kuna River	44.22	30	P	P	08 53 20.4	+1.4
	baz=272,SNR=5.2						
H18K	Honhosa River	44.30	35	P	P	08 53 21.2	+1.6
	baz=275						
O15K	Ungalikthiuk R	44.36	43	P	P	08 53 22.3	+2.1
	baz=280						
F19K	Shaleruckik Mo	44.42	32	P	P	08 53 22.5	+2.0
	baz=274,SNR=5.2						
M16K	Timber Creek	44.50	41	P	P	08 53 23.4	+2.2
	baz=279						
B20K	Meade River	44.53	28	P	P	08 53 23.1	+1.9
	baz=271						
K17K	Iditarod	44.58	38	P	P	08 53 23.9	+2.1
	baz=277						
E19K	Redstone River	44.59	31		P	08 53 23.7	+1.8
E19K				IAmb	IAmb	08 53 24.5	
	comp=Z,4.2nm,0.7s						
E19K	Redstone River	44.59	31	P	P	08 53 23.9	+2.0
	baz=274,SNR=8.3						
L17K	Donlin	44.66	39	P	P	08 53 24.6	+2.2
	baz=278,SNR=5.5						
N16K	Nishlik Lake	44.68	41	P	P	08 53 24.4	+1.8
	baz=279						
A21K	Barrow	44.70	26	P	P	08 53 23.7	+1.1
	baz=270						
G19K	Purcell Mounta	44.74	33	P	P	08 53 25.0	+1.9
	baz=275						
D20K	Etivluk River	44.76	30	P	P	08 53 24.6	+1.5
	baz=273,SNR=7.7						
SDPT	Sand Point	44.77	49	P	P	08 53 24.8	+1.5
	baz=283						
E20K	Nigu River	44.94	30	P	P	08 53 26.1	+1.6
	baz=274,SNR=6.6						
GCSA	Galena City Sc	44.97	35	P	P	08 53 26.6	+1.9
	baz=276						
H19K	Roundabout Mou	45.06	34	IAmb	IAmb	08 53 28.3	
	comp=Z,6.0nm,0.8s						
H19K	Roundabout Mou	45.06	34	P	P	08 53 27.5	+2.1
	baz=276						
S14K	Fog Glacier	45.07	47	P	P	08 53 27.6	+1.9
	baz=283						
O16K	Kokwok River B	45.16	43	P	P	08 53 28.3	+2.0
	baz=281						
M17K	Holitna River	45.17	40	P	P	08 53 28.6	+2.3
	baz=279						
F20K	Avaraart Lake	45.21	32	P	P	08 53 28.0	+1.5
	baz=275						
A22K	Sinclair Lake	45.24	26	P	P	08 53 28.2	+1.5
	baz=272						
P16K	Nushagak River	45.32	43	P	P	08 53 29.3	+1.8
	baz=281						
CHNA	Chernabura Isl	45.38	49	P	P	08 53 29.7	+1.6
	baz=284						
L18K	Granite Mounta	45.39	39	P	P	08 53 30.3	+2.3
	baz=279						
C21K	Knifeblade Rid	45.40	29	P	P	08 53 29.9	+2.0
	baz=274,SNR=5.1						
B21K	Ikpikpuk River	45.42	28	P	P	08 53 30.1	+2.0
	baz=274,SNR=6.4						
N17K	Nushagak Hills	45.44	41	P	P	08 53 30.8	+2.4
	baz=280						
GAR	Garm	45.56	287	P	P	08 53 29.5	-0.4
J19K	Poorman	45.61	36	P	P	08 53 31.4	+1.8
	baz=278						
H20K	Anotleneega Mo	45.72	34	P	P	08 53 32.4	+1.9
	baz=278						
E21K	Killik River	45.75	30	IAmb	IAmb	08 53 33.0	
	comp=Z,5.4nm,0.8s						
E21K	Killik River	45.75	30	P	P	08 53 32.2	+1.5
	baz=275						
B22K	Teshekpuk Lake	45.79	27	P	P	08 53 32.4	+1.6
	baz=274						
NIL	Nilore	45.86	279	P	P	08 53 30.4	-1.7
M18K	Stony River	45.92	40	P	P	08 53 34.2	+2.2
	baz=281						
I20K	Naaghedeneel	45.98	35	P	P	08 53 34.3	+1.9
	baz=278						
N18K	Kilae Creek	46.04	41	P	P	08 53 35.0	+2.0
	baz=281						
F21K	Alatna River	46.06	32	P	P	08 53 34.8	+1.7
	baz=277,SNR=9.2						
P17K	Kvichak River	46.07	43	P	P	08 53 35.2	+2.0
	baz=282						
Q16K	King Salmon	46.07	44	P	P	08 53 35.5	+2.3
	baz=283						
G21K	Allakaket	46.14	32	IAmb	IAmb	08 53 36.4	
	comp=Z,6.8nm,0.9s						
G21K	Allakaket	46.14	32	P	P	08 53 35.5	+1.8
	baz=278,SNR=9.1						
J20K	Nowinta River	46.22	36	P	P	08 53 36.4	+2.1
	baz=279						
L19K	White Mountain	46.25	39	P	P	08 53 36.8	+2.2
	baz=281						
K20K	Telida	46.39	37	P	P	08 53 37.6	+2.0
	baz=280						
R17L	Mt. Peulik Vol	46.46	45	P	P	08 53 38.2	+2.0
	baz=284						
M19K	Big River Lodg	46.51	39	P	P	08 53 38.7	+2.2
	baz=281						
F22K	John River	46.52	31	P	P	08 53 38.4	+1.9
	baz=278						
CHGR	Chuyangaron	46.53	287	P	P	08 53 37.1	-0.1
O18K	Koktuh Hills	46.54	42	P	P	08 53 39.1	+2.3
	baz=283						
H21K	Melozitna Rive	46.55	34	P	P	08 53 39.2	+2.5
	baz=279						
Q17K	Contact Creek	46.56	44	P	P	08 53 38.3	+1.3
	baz=284						
P18K	Big Mountain,	46.63	42	P	P	08 53 39.3	+1.8
	baz=283						
N19K	Bonanza Creek	46.69	40	P	P	08 53 40.2	+2.2
	baz=282						
C23K	Itkillik River	46.79	28	IAmb	IAmb	08 53 41.1	
	comp=Z,4.0nm,0.6s						
C23K	Itkillik River	46.79	28	P	P	08 53 40.6	+2.1
	baz=277						
G22K	Bettles	46.87	32	P	P	08 53 40.9	+1.8
	baz=279						
D23K	Nanushuk River	46.88	29	P	P	08 53 41.2	+2.0
	baz=278,SNR=5.7						
Q18K	Katmai Hardscr	46.92	43	P	P	08 53 41.7	+1.9
	baz=284						
I21K	Tanana	46.97	34	P	P	08 53 41.7	+1.8
	baz=280						
CHUM	Lake Minchumin	47.06	36	P	P	08 53 42.9	+2.3
	baz=281						
H22K	Ishtalitna Cre	47.09	33	P	P	08 53 42.9	+2.1
	baz=280						
M20K	Styx River	47.10	39	P	P	08 53 43.1	+2.1
	baz=282						
ARTI	Arti	47.23	314	*d iP*	P	08 53 41.7	-0.3
ARTI						08 55 01.3	
ARTI						08 55 37.8	
ARTI				S	S	08 59 53.2	-0.5
ARTI				SS	SS	09 03 25.4	-4.7
ARTI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARTI	Arti	47.23	314		P	08 53 41.9	-0.1
CAST	Castle Rocks	47.26	37	P	P	08 53 44.1	+2.0
	baz=282						
CHIR	Chirikof Islan	47.32	47	P	P	08 53 44.9	+2.2
	baz=286						
PPLA	Purkeypile	47.32	37	P	P	08 53 44.7	+2.0
	baz=282						
COLD	Coldfoot	47.32	31	P	P	08 53 44.3	+1.8
	baz=280						
TOLK	Toolik Lake Re	47.33	29	P	P	08 53 44.1	+1.5
	baz=279						
E23K	Chandalar	47.41	30	IAmb	IAmb	08 53 45.5	
	comp=Z,3.5nm,0.6s						
E23K	Chandalar	47.41	30	P	P	08 53 45.0	+1.8
	baz=280,SNR=6.3						
G23K	Bananza Creek	47.48	32	P	P	08 53 45.6	+1.8
	baz=280						
MLY	Manley	47.51	34	P	P	08 53 46.0	+2.0
	baz=281						
D24K	Happy Valley	47.51	29	P	P	08 53 45.7	+1.8
	baz=279						
Q19K	Cape Douglas,	47.54	43	P	P	08 53 46.3	+2.0
	baz=285						
P19K	Oil Pt	47.56	42	P	P	08 53 46.6	+2.2
	baz=284						
SPCR	Spurr Chakacha	47.69	40	P	P	08 53 47.9	+2.4
	baz=284						
SHAA	Shahritus	47.74	286	IAmb	IAmb	08 53 47.4	
	comp=Z,38nm,0.4s						
O20K	Slope Mountain	47.76	41	P	P	08 53 47.9	+2.0
	baz=284						
SKT	Skwentna	47.82	38	P	P	08 53 48.2	+1.9
	baz=284						
E24K	Your Creek	47.82	30	IAmb	IAmb	08 53 49.0	
	comp=Z,4.8nm,1.0s						
E24K	Your Creek	47.82	30	P	P	08 53 48.1	+1.7
	baz=281						
H23K	Yukon River	47.84	33	P	P	08 53 48.8	+2.3
	baz=282						
SII	Sitkinak Islan	47.89	46	P	P	08 53 48.7	+1.8
	baz=286						
TRF	Thorofare Moun	48.04	36	P	P	08 53 50.0	+1.9
	baz=283						
I23K	Minto, Yukon-K	48.06	34	P	P	08 53 50.1	+2.1
	baz=282						
F24K	Squaw Lake	48.15	31	P	P	08 53 50.2	+1.4
	baz=282,SNR=5.1						
OHAK	Old Harbor	48.17	45	P	P	08 53 50.5	+1.5
	baz=286						
CAPN	Captain Cook N	48.29	40	P	P	08 53 51.7	+1.9
	baz=285						
CUT	Chulitna	48.29	38	P	P	08 53 51.9	+2.1
	baz=284						
NEA2	Nenana	48.30	35	IAmb	IAmb	08 53 52.5	
	comp=Z,3.5nm,0.7s						
NEA2	Nenana	48.30	35	P	P	08 53 51.7	+1.8
	baz=283						
D25K	Kavik River	48.34	28	IAmb	IAmb	08 53 52.5	
	comp=Z,3.0nm,0.6s						
D25K	Kavik River	48.34	28	P	P	08 53 51.5	+1.3
	baz=281,SNR=6.2						
HOM	Homer	48.34	41	P	P	08 53 52.3	+2.1
	baz=286						
KDAK	Kodiak Island	48.38	44	P	P	08 53 52.5	+2.0
	baz=286						
G24K	Hadweenzic Riv	48.48	32	P	P	08 53 53.2	+2.0
	baz=283						
H24K	Noodor Dome	48.51	33	P	P	08 53 53.6	+2.1
	baz=283						
M22K	Willow	48.52	38	P	P	08 53 53.6	+2.1
	baz=285						
ABKAR	Akbulak array	48.54	304		P	08 53 51.7	-0.1
MCK	McKinley	48.56	36	P	P	08 53 53.8	+1.9
	baz=284						
C26K	Camden Bay	48.73	27	P	P	08 53 54.6	+1.7
	baz=282						
COLA	College	48.75	34	P	P	08 53 55.5	+2.4
	baz=284						
COLA	College	48.75	34	P	P	08 53 54.9	+1.8
BRSE	Bradley Lake S	48.76	41	P	P	08 53 55.3	+1.9
	baz=286						
POKR	Pour Plat Res	48.86	34	P	P	08 53 55.8	+1.8
	baz=284						
RC01	Rabbit Creek A	48.87	39	P	P	08 53 55.2	+1.1
	baz=286						
E25K	Arctic Village	48.88	30	P	P	08 53 56.3	+2.2
	baz=283						
WAT1	Susitna Watana	48.95	37	P	P	08 53 57.0	+2.3
	baz=285						
F25K	Christian Rive	48.98	30	P	P	08 53 57.1	+2.2
	baz=284						
G25K	Bearman Lake	49.00	31	P	P	08 53 57.0	+2.1
	baz=284						
PMR	Palmer	49.02	39	P	P	08 53 57.3	+2.1
	baz=286						
O22K	Cooper Landing	49.05	40	P	P	08 53 57.5	+2.1
	baz=286						
IL31		49.17	34		P	08 53 57.1	+0.9
IL31				IAmb	IAmb	08 53 59.0	
	comp=Z,3.8nm,0.5s						
ILAR	Eielson Array	49.17	34	P	P	08 53 57.1	+0.8
	comp=Z,2.3nm,0.5s,baz=291,slow=8.0,SNR=40						
	comp=Z,2.3nm,0.5s						
ILAR	Eielson Array	49.17	34	*eP*	P	08 53 57.1	+0.8
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
C27K	Jago River	49.20	27	P	P	08 53 58.3	+1.9
	baz=283,SNR=9.5						
HDA	Harding Lake	49.24	35	IAmb	IAmb	08 53 58.5	
	comp=Z,5.1nm,0.7s						
HDA	Harding Lake	49.24	35	P	P	08 53 57.7	+0.9
	baz=285						
SML	Sawmill	49.33	38	P	P	08 53 59.1	+1.6
	baz=286						
KNK	Knik Glacier	49.38	39	P	P	08 54 00.2	+2.3
	baz=286						
WAT6	Susitna Watana	49.38	37	P	P	08 53 59.5	+1.5
	baz=286						
DHY	Denali Highway	49.41	36	P	P	08 54 00.2	+2.0
	baz=286						
F26K	Sheenjek River	49.51	30	P	P	08 54 00.5	+1.7
	baz=285,SNR=5.9						
PRP	Porcupine Dome	49.53	33	IAmb	IAmb	08 54 02.0	
	comp=Z,5.0nm,0.9s						
PRP	Porcupine Dome	49.53	33	P	P	08 54 01.0	+1.9
	baz=285,SNR=5.4						
SCM	Sheep Creek Mo	49.78	38	P	P	08 54 02.8	+1.9
	baz=287						
G26K	Porcupine Rive	49.84	31	P	P	08 54 03.2	+2.1
	baz=286						
J25K	Salcha River,	49.84	34	P	P	08 54 02.9	+1.6
	baz=286						
K24K	Donnelly Dome	49.90	35	P	P	08 54 02.7	+1.1
	baz=286						
M24K	Tolsona, Glenn	50.22	37	P	P	08 54 06.6	+2.5
	baz=288						
D27M	Malcolm River	50.23	28	IAmb	IAmb	08 54 06.8	
	comp=Z,5.2nm,0.7s						
D27M	Malcolm River	50.23	28	P	P	08 54 05.9	+1.8
	baz=286						
P23K	Montague Islan	50.30	40	P	P	08 54 06.2	+1.6
	baz=288						
E27K	Coleen River	50.30	29	P	P	08 54 06.5	+1.9
	baz=286						
RIDG	Independent Ri	50.31	35	P	P	08 54 05.9	+1.1
	baz=287						
KLU	Klutina	50.52	38	P	P	08 54 08.1	+1.8
	baz=288						
HARP	HAARP	50.58	37	P	P	08 54 08.5	+1.8
	baz=288						
SCRK	Sand Creek	50.60	35	IAmb	IAmb	08 54 08.7	
	comp=Z,5.2nm,0.8s						
SCRK	Sand Creek	50.60	35	P	P	08 54 08.0	+1.1
	baz=288,SNR=6.2						
G27K	Doyon Strip	50.68	31	P	P	08 54 09.3	+1.9
	baz=287						
H27K	Steamboat Moun	50.91	31	IAmb	IAmb	08 54 12.3	
	comp=Z,3.8nm,0.7s						
H27K	Steamboat Moun	50.91	31	P	P	08 54 11.2	+2.2
	baz=288,SNR=5.6						
E28M	Babbage River	50.91	28	P	P	08 54 11.3	+2.3
	baz=288						
Q23K	Middleton Isla	50.98	41	P	P	08 54 11.5	+2.0
	baz=290						
I27K	Kandik River	51.07	32	IAmb	IAmb	08 54 13.3	
	comp=Z,6.5nm,0.8s						
I27K	Kandik River	51.07	32	P	P	08 54 11.8	+1.6
	baz=288,SNR=5.7						
N25K	Chitina, Valde	51.09	38	P	P	08 54 12.2	+1.8
	baz=289						
F28M	Old Crow	51.10	29	P	P	08 54 12.3	+2.0
	baz=288						
L26K	Log Cabin Wild	51.17	36	P	P	08 54 12.6	+1.6
	baz=289						
KIRV	Kirov	51.18	318	*d iP*	P	08 54 10.8	-0.2
BMRM	Bremner River	51.29	38	P	P	08 54 13.5	+1.6
	baz=290						
M26K	Nabesna, AK	51.53	36	P	P	08 54 15.6	+2.0
	baz=290						
E29M	Blow River	51.55	28	P	P	08 54 15.2	+1.6
	baz=289						
KAIM	Kayak Island	51.74	40	P	P	08 54 16.7	+1.7
	baz=291						
I28M	Miner Creek	51.78	32	P	P	08 54 17.2	+1.8
	baz=290						
L27K	Beaver Creek,	51.82	35	P	P	08 54 17.5	+1.9
	baz=290						
MCARA	McCarthy VSAT	51.87	38	P	P	08 54 17.9	+1.9
	baz=290						
G29M	Pine Creek	52.01	30	P	P	08 54 18.5	+1.6
	baz=290						
M27K	Edge Creek, AK	52.04	36	P	P	08 54 18.9	+1.6
	baz=291						
CRQE	Cirque	52.06	38	P	P	08 54 19.4	+1.8
	baz=291						
H29M	Whitestone	52.12	31	P	P	08 54 19.7	+2.0
	baz=291						
DAWY	Dawson	52.48	34	P	P	08 54 21.8	+1.5
	baz=291						
F30M	Barrier River	52.57	29	IAmb	IAmb	08 54 23.7	
	comp=Z,6.9nm,0.8s						
F30M	Barrier River	52.57	29	P	P	08 54 22.6	+1.7
	baz=292,SNR=6.3						
G30M	tAoh Zraii Nji	52.65	30	IAmb	IAmb	08 54 23.6	
	comp=Z,9.1nm,1.1s						
G30M	tAoh Zraii Nji	52.65	30	P	P	08 54 22.5	+1.0
	baz=292,SNR=7.3						
EPYK	Eagle Plains	52.69	30	P	P	08 54 23.4	+1.6
	baz=292,SNR=10						
J29N	Klondike Camp	52.82	33	P	P	08 54 24.4	+1.6
	baz=292						
YUK3	Moose Creek	52.87	37	P	P	08 54 25.1	+1.7
	baz=292						
INK	Inuvik	53.10	28	IAmb	IAmb	08 54 26.6	
	comp=Z,4.0nm,0.6s						
INK	Inuvik	53.10	28	P	P	08 54 25.9	+1.3
	baz=293,SNR=5.2						
INK	Inuvik	53.10	28	P	P	08 54 25.8	+1.3
I30M	Mount Dempster	53.25	32	IAmb	IAmb	08 54 28.4	
	comp=Z,7.0nm,0.7s						
I30M	Mount Dempster	53.25	32	P	P	08 54 27.5	+1.6
	baz=293,SNR=13						
K29M	Barlow Dome	53.33	34	P	P	08 54 28.2	+1.7
	baz=293,SNR=5.5						
F31M	Tsiigehtchic	53.36	29	P	P	08 54 28.0	+1.5
	baz=293						
L29M	L29M	53.37	35	P	P	08 54 28.0	+1.3
	baz=293						
YUK8	Steele Glacier	53.37	37	P	P	08 54 28.3	+1.4
	baz=293						
O28M	Mount Upton	53.38	38	P	P	08 54 28.3	+1.3
	baz=293						
G31M	Satah River	53.38	29	P	P	08 54 27.6	+1.0
	baz=293						
M29M	Somme Creek	53.48	35	P	P	08 54 29.2	+1.6
	baz=293						
J30M	Hart River	53.52	32	P	P	08 54 29.0	+1.2
	baz=293						
SPA0	Spitsbergen Ar	53.58	347	*eP*	P	08 54 28.6	+0.7
SPITS	Spitsbergen Ar	53.58	347	P	P	08 54 28.1	+0.2
	comp=Z,5.5nm,0.7s,baz=88,slow=6.8,SNR=9.1						
	comp=Z,5.5nm,0.7s						
PINM	Pinnacle	53.62	38	P	P	08 54 30.0	+1.5
	baz=293						
BRWY	Burwash Landin	53.66	37	P	P	08 54 30.1	+1.3
	baz=294						
H31M	Peel River	53.80	31	P	P	08 54 31.0	+1.3
	baz=294						
YUK4	Talbot Arm	53.84	37	P	P	08 54 31.9	+1.7
	baz=294						
KBS	Kingsbay	53.86	348	*eP*	P	08 54 30.7	+0.8
A36M	Sachs Harbour	54.10	22	P	P	08 54 32.1	+0.6
	baz=297						
YUK6	Outpost Mounta	54.13	37	P	P	08 54 33.6	+1.3
	baz=294						
M30M	Minto, Yukon	54.14	35	P	P	08 54 33.6	+1.5
	baz=294						
HSPB	Hornsund (broa	54.40	345	P	P	08 54 34.3	+0.7
N30M	Aishikik Lake	54.48	36	P	P	08 54 36.1	+1.6
	baz=295						
BELG	Belogornoye	54.51	312	*d iP*	P	08 54 34.3	-0.5
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HYT	Haines Junctio	54.56	37	P	P	08 54 36.7	+1.5
	baz=295						
VADS	Vadso	54.60	336	*eP*	P	08 54 35.1	0.0
P29M	Windy Craggy	54.96	38	P	P	08 54 39.5	+1.6
	baz=296						
NOR	Nord	55.03	355	P	P	08 54 38.2	+0.1
N31M	Braeburn, Yuko	55.03	36	P	P	08 54 40.2	+1.8
	baz=296						
BJO1	Bjornoya	55.10	342	*eP*	P	08 54 39.1	+0.5
P30M	Million Dollar	55.11	38	P	P	08 54 40.9	+2.0
	baz=296						
O30N	Mendenhall	55.21	37	P	P	08 54 41.4	+1.8
	baz=296						
M31M	Drury Creek, Y	55.31	35	P	P	08 54 42.1	+1.8
	baz=296						
KEV	Kevo	55.49	336	P	P	08 54 40.9	-0.4
PLBC	Pleasant Camp	55.67	38	P	P	08 54 45.1	+2.3
	baz=297						
WHY	Whitehorse	55.79	36	P	P	08 54 45.2	+1.5
	baz=297						
HAMF	Hammerfest	56.01	337	*eP*	P	08 54 44.9	0.0
HAMF				IAmb	IAmb	08 54 45.7	
	comp=Z,4.3nm,0.7s						
ARA0	ARCESS Array S	56.05	336	*eP*	P	08 54 45.2	-0.1
ARA0				IAmb	IAmb	08 54 45.8	
	comp=Z,7.4nm,0.9s						
ARCES	ARCESS Array B	56.05	336	P	P	08 54 45.2	0.0
	comp=Z,2.9nm,0.4s,baz=61,slow=9.1,SNR=40						
	comp=Z,2.9nm,0.4s						
ARCES	ARCESS Array B	56.05	336	P	P	08 54 45.3	0.0
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	56.05	336	P	P	08 54 45.2	0.0
S31K	Pelican	56.41	40	P	P	08 54 49.7	+1.9
	baz=298						
MMPY	Sheldon Lake,	56.42	33	P	P	08 54 49.7	+1.7
	baz=298						
P32M	Atlin	56.81	37	P	P	08 54 52.3	+1.6
	baz=298						
P33M	Teslin, Yukon	56.91	36	P	P	08 54 52.8	+1.4
	baz=299						
KTK1	Kautokeino	57.02	336	*eP*	P	08 54 52.2	+0.4
KTK1				IAmb	IAmb	08 54 52.5	
	comp=Z,4.3nm,0.6s						
SIT	Sitka	57.27	40	P	P	08 54 55.1	+1.4
	baz=299						
S32K	Killisnoo	57.43	40	P	P	08 54 56.4	+1.6
	baz=299						
JETT	Jettan, Norway	57.54	337	*eP*	P	08 54 55.3	-0.2
JETT				IAmb	IAmb	08 54 56.1	
	comp=Z,4.9nm,0.6s						
Q32M	Nakina River	57.76	38	P	P	08 54 58.7	+1.3
	baz=300						
TRO	Tromso	57.92	338	*eP*	P	08 54 58.0	0.0
R33M	Jennings River	58.13	37	P	P	08 55 01.0	+1.3
	baz=300						
OUL	Oulu	58.30	331	P	P	08 55 00.4	-0.1
U33K	Whale Pass	58.80	41	P	P	08 55 06.1	+2.0
	baz=301						
S34M	Telegraph Cree	58.81	38	P	P	08 55 06.3	+2.2

baz=301
WRAK Wrangell Islan 59.01 40 P **P** **08 55 07.4 +1.9**
baz=301
OBN Obninsk 59.03 318 *e*P **P** **08 55 05.4 -0.2**
OBN *e**PP **pP** **08 56 55.8 +0.5**
OBN *e* 08 57 24.6
OBN pmax pmax
comp=Z,4.0nm,0.6s
DLBC Dease Lake 59.04 37 P **P** **08 55 07.5 +1.7**
baz=302
CRAG Craig 59.13 41 P **P** **08 55 07.5 +1.3**
baz=301
RES Resolute Bay 59.14 13 P **P** **08 55 06.6 +0.5**
WRGLY Wrigley 59.16 31 P **P** **08 55 07.5 +1.1**
baz=304
DAG Danmarks Havn 59.53 352 P **P** **08 55 08.7 +0.1**
DAG Danmarks Havn 59.53 352 *i* P **P** **08 55 08.0 -0.7**
DAG IAmb IAmb 08 55 09.3
comp=Z,4.6nm,0.6s
T35M Bob Quinn 59.70 39 P **P** **08 55 11.4 +1.2**
baz=302
STEI Steigen 60.03 337 *e*P **P** **08 55 12.0 -0.1**
STEI IAmb IAmb 08 55 12.4
comp=Z,7.9nm,0.6s
FINES FINESS Array B 60.27 328 P **P** **08 55 13.3 -0.4**
comp=Z,7.9nm,0.4s,baz=80,slow=5.8,SNR=117
comp=Z,7.9nm,0.4s
FINES FINESS Array B 60.27 328 **P** **08 55 13.5 -0.3**
NEEM North Greenlan 60.34 1 *i* P **P** **08 55 12.8 -1.6**
NEEM IAmb IAmb 08 55 15.1
comp=Z,7.8nm,0.4s
FAUS Fauske 60.37 336 *e*P **P** **08 55 14.1 -0.3**
LOF Lofoten 60.39 338 *e*P **P** **08 55 12.9 -1.5**
KOTAN Kotaneelee Air 60.68 34 P **P** **08 55 17.7 +1.2**
baz=305
RAUS Rausandaksla 61.37 336 *e*P **P** **08 55 20.5 -0.4**
VAGH Vaagaholmen 61.40 336 *e*P **P** **08 55 20.8 -0.3**
MOR8 Moi Rana 61.42 336 *e*P **P** **08 55 19.8 -1.5**
MOR8 IAmb IAmb 08 55 20.3
comp=Z,12nm,0.7s
KIV Kislovodsk 61.51 305 *e*P **P** **08 55 22.7 +0.3**
KIV pmax pmax
comp=Z,11nm,0.9s
KIV MLR MLR
comp=Z,31nm,17.0s
SHA1 Shidzhatmaz 61.65 305 *e*P **P** **08 55 23.0 -0.4**
VSU Vasula 61.73 325 *e*P **P** **08 55 22.2 -1.1**
VSU pmax pmax
comp=Z,10.0nm,0.7s
VSU Vasula 61.73 325 P **P** **08 55 22.1 -1.3**
LEIR Leirfjorden 61.86 336 *e*P **P** **08 55 23.5 -0.6**
WRA Warramunga Arr 62.16 177 P **P** **08 55 27.0 +0.3**
comp=Z,5nm,0.5s,baz=354,slow=7.0,SNR=71
comp=Z,2.5nm,0.5s
WRA Warramunga Arr 62.16 177 P **P** **08 55 27.0 +0.3**
WRA Warramunga Arr 62.16 177 P **P** **08 55 27.0 +0.3**
YKA Yellowknife Ar 62.84 28 P **P** **08 55 31.0 +0.4**
comp=Z,2.2nm,0.4s,baz=328,slow=5.0,SNR=14
comp=Z,2.2nm,0.4s
YKA Yellowknife Ar 62.84 28 *i* P **P** **08 55 31.7 +1.2**
YKA pmax pmax
comp=Z,1.0nm,0.3s
NACGM Naroch 63.82 321 *e*P **P** **08 55 37.0 +0.1**
comp=Z,14nm,0.7s,baz=53
SUMG Summit 65.03 357 IAmb IAmb 08 55 46.4
comp=Z,4.8nm,0.7s
SUMG Summit 65.03 357 *i* P **P** **08 55 44.0 -0.8**
SUMG IAmb IAmb 08 55 46.1
comp=Z,4.7nm,0.8s
AK03 Malin Array Si 65.17 317 P **P** **08 55 44.5 -1.0**
AKASG Malin Array Be 65.18 317 P **P** **08 55 44.8 -0.8**
comp=Z,3.0nm,0.4s,baz=52,slow=6.3,SNR=24
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 65.18 317 P **P** **08 55 44.8 -0.8**
AKASG pmax pmax
comp=Z,5.0nm,1.5s
AKASG Malin Array Be 65.18 317 P **P** **08 55 44.8 -0.8**
AKBB Malin Array Si 65.18 317 P **P** **08 55 44.8 -0.8**
AKBB pmax pmax
comp=Z,6.0nm,0.6s
AKBB Malin Array Si 65.18 317 **P** **08 55 44.8 -0.8**
AKBB Malin Array Si 65.18 317 P **P** **08 55 44.7 -0.8**
AK01 Malin Array Si 65.19 317 P **P** **08 55 44.7 -0.9**
KIEV Kiev 65.19 317 P **P** **08 55 45.0 -0.7**
KIEV Kiev 65.19 317 **P** **08 55 45.0 -0.7**
KIEV Kiev 65.19 317 P **P** **08 55 44.7 -0.9**
comp=Z,35nm,0.8s
AK04 Malin Array Si 65.20 317 P **P** **08 55 44.6 -1.1**
AK09 Malin Array Si 65.20 317 P **P** **08 55 44.8 -0.9**
HFS Hagfors 65.79 331 P **P** **08 55 48.5 -0.6**
comp=Z,9.1nm,0.4s,baz=69,slow=5.1,SNR=68
comp=Z,9.1nm,0.4s
ASAR Alice Springs 65.85 178 P **P** **08 55 50.9 +0.8**
comp=Z,2.3nm,0.7s,baz=356,slow=6.7,SNR=19
comp=Z,2.3nm,0.4s
NB201 NORSAR Array S 65.98 333 IAmb IAmb 08 55 50.8
comp=Z,7.3nm,0.7s
NB2 NORSAR Subarra 66.01 333 P **P** **08 55 49.8 -0.9**
comp=Z,2.7nm,0.6s,baz=42,slow=6.5
NB2 NORSAR Subarra 66.01 333 P **P** **08 55 49.8 -0.9**
NOA NORSAR Array B 66.01 333 P **P** **08 55 49.8 -0.9**
comp=Z,2.9nm,0.6s,baz=23,slow=7.1,SNR=29
comp=Z,2.9nm,0.6s
MOL Molde 66.09 335 *e*P **P** **08 55 51.3 +0.3**
NC602 NORSAR Array S 66.12 332 *e*P **P** **08 55 50.6 -0.6**
RNPP9 Sopachiv 66.40 319 P **P** **08 55 52.8 -0.3**
LUBAR Lubar, Ukraine 66.41 317 P **P** **08 55 52.2 -1.0**
AKN Aaknes 66.56 335 *e*P **P** **08 55 54.3 +0.4**
KMPD K-Podol'skiy 67.92 316 P **P** **08 56 01.0 -1.5**
SUE Sulen 68.11 335 *e*P **P** **08 56 03.8 +0.5**
ASK Askoy 68.41 335 *e*P **P** **08 56 05.6 +0.4**
BLS5 Blasjo 68.81 333 *e*P **P** **08 56 08.2 +0.5**
BLS5 IAmb IAmb 08 56 09.3
comp=Z,14nm,1.1s
ANDN Andirin 69.12 302 P **P** **08 56 10.3 +0.2**
KMY Karmoy 69.37 334 *e*P **P** **08 56 11.4 +0.4**
BRTR Keskin Array B 69.46 305 P **P** **08 56 11.3 -0.8**
comp=Z,0.9nm,0.4s,baz=90,slow=2.3,SNR=5.4
comp=Z,0.9nm,0.4s
BR105 Keskin Array S 69.48 305 P **P** **08 56 11.7 -0.6**
comp=Z,3.2nm,1.2s
OJC Ojcow 70.10 321 P **P** **08 56 15.7 +0.1**
comp=Z,17nm,0.8s
OJC Ojcow 70.10 321 P **P** **08 56 15.1 -0.5**
NIE Niedzica 70.41 320 P **P** **08 56 17.9 +0.4**
comp=Z,5.9nm,0.7s
MORC Moravsky Berou 71.46 321 *e*P **P** **08 56 23.9 +0.3**
MORC Moravsky Berou 71.46 321 P **P** **08 56 23.7 +0.1**
KRLC Kraliky 71.60 322 P **P** **08 56 24.8 +0.4**
DPC Dobruska-Polom 71.61 322 P **P** **08 56 25.0 +0.5**
comp=Z,4.1nm,1.0s
DPC Dobruska-Polom 71.61 322 P **P** **08 56 24.9 +0.5**
JAVC Velka Javorina 72.04 321 *e*P **P** **08 56 28.6 +1.6**
VRAC Vranov 72.23 321 *e*P **P** **08 56 28.3 +0.3**
VRAC Vranov 72.23 321 P **P** **08 56 28.5 +0.4**
PVCC Panska Ves 72.27 323 P **P** **08 56 28.9 +0.7**
KRUC Moravsky 72.49 321 *e*P **P** **08 56 29.9 +0.3**
HSKC Hora Svate Kat 72.71 324 P **P** **08 56 31.3 +0.5**
TREC Trest 72.74 322 P **P** **08 56 31.4 +0.3**
RETH Rethem/Aller, 72.83 327 P **P** **08 56 31.7 +0.4**
FRB Frobisher Bay 72.94 9 P **P** **08 56 32.3 +0.5**
WINA Alland / Wiene 73.33 321 *e*P **P** **08 56 35.2 +0.9**
comp=Z,4.1nm,0.5s
RONA Rosalia, Austr 73.51 320 *i* P **P** **08 56 36.4 +0.9**
comp=Z,6.0nm,0.7s
CONA Conrad Observa 73.55 321 *e*P **P** **08 56 36.6 +0.8**
comp=Z,3.4nm,0.6s
KHC Kasperske Hory 73.72 323 *d i* P **P** **08 56 37.0 +0.4**
KHC pmax pmax
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 73.72 323 P **P** **08 56 36.7 0.0**
comp=Z,4.2nm,0.8s
KHC Kasperske Hory 73.72 323 P **P** **08 56 37.0 +0.4**
GERES GERESS Array B 73.88 323 P **P** **08 56 37.2 -0.4**
comp=Z,0.7nm,0.4s,baz=42,slow=6.2,SNR=7.8
comp=Z,0.7nm,0.4s
GERES GERESS Array B 73.88 323 *e*P **P** **08 56 37.5 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.4s
STKA Stephens Creek 74.58 171 P **P** **08 56 43.1 +1.7**
comp=Z,4.1nm,0.4s,baz=354,slow=5.4,SNR=8.2
comp=Z,4.1nm,0.4s
STKA Stephens Creek 74.58 171 *e*P **P** **08 56 43.6 +2.2**
STKA pmax pmax
comp=Z,4.0nm,0.4s

SESA Seetaler Alpe, 74.75 321 *e*P **P** **08 56 43.0 +0.3**
comp=Z,9.5nm,0.5s
SOKA Soboth 74.85 320 *e*P **P** **08 56 43.6 +0.6**
comp=Z,5.6nm,0.5s
EKA Eskdalemuir Ar 75.20 335 P **P** **08 56 45.0 +0.2**
comp=Z,1.7nm,0.3s,baz=32,slow=5.3,SNR=18
comp=Z,1.7nm,0.3s
EKA Eskdalemuir Ar 75.20 335 P **P** **08 56 45.0 +0.2**
KBA Koelnbreinsper 75.34 321 *e*P **P** **08 56 46.1 +0.1**
comp=Z,2.0nm,0.4s
KBA Koelnbreinsper 75.34 321 P **P** **08 56 45.5 -0.4**
LESA Schwarzleotal 75.39 322 *e*P **P** **08 56 47.0 +0.9**
comp=Z,4.5nm,0.5s
DLMT Dillon 75.59 41 P **P** **08 56 47.8 +0.5**
RETA Reutte 76.20 323 *e*P **P** **08 56 51.0 +0.5**
comp=Z,3.0nm,0.4s
BFO Black Forest 76.62 325 P **P** **08 56 52.2 -0.6**
BFO pmax pmax
comp=Z,10.0nm,1.0s
BFO Black Forest 76.62 325 **P** **08 56 52.1 -0.6**
BFO IAmb IAmb 08 56 53.5
comp=Z,9.7nm,1.0s
DAVA Damuels 76.75 323 *e*P **P** **08 56 54.0 +0.3**
comp=Z,8.2nm,0.6s
FUORN Ofenpass-Fuorn 77.08 323 **P** **08 56 56.0 +0.3**
FUORN IAmb IAmb 08 56 56.8
comp=Z,7.0nm,0.7s
FUORN Ofenpass-Fuorn 77.08 323 P **P** **08 56 56.1 +0.5**
NVAR Mina Array Bea 77.57 49 P **P** **08 57 00.5 +2.1**
comp=Z,1.4nm,0.6s,baz=296,slow=5.1,SNR=11
comp=Z,1.4nm,0.6s
TUE Stuetta 77.61 323 P **P** **08 56 58.5 +0.2**
TUE IAmb IAmb 08 56 59.7
comp=Z,4.4nm,0.7s
TUE Stuetta 77.61 323 P **P** **08 56 58.3 -0.1**
comp=Z,26nm,0.6s
IDI Anoyia 77.61 307 P **P** **08 56 56.5 -2.0**
comp=Z,3.3nm,0.4s,baz=14,slow=4.2,SNR=1.3
comp=Z,3.3nm,0.4s
IDI Anoyia 77.61 307 P **P** **08 56 56.5 -2.0**
PDAR Pinedale Array 78.99 41 P **P** **08 57 07.2 +1.3**
comp=Z,0.7nm,0.6s,baz=31,slow=1.9,SNR=10.0
comp=Z,0.7nm,0.6s
SCHQ Schefferville 81.82 11 P **P** **08 57 20.2 +0.2**
comp=Z,3.4nm,0.7s,baz=334,slow=4.6,SNR=8.4
comp=Z,3.4nm,0.7s
SCHQ Schefferville 81.82 11 P **P** **08 57 20.2 +0.2**
SCHQ IAmb IAmb 08 57 59.8
comp=Z,7.6nm,1.2s
ESDC Sonseca Array 88.78 327 P **P** **08 57 52.9 -1.1**
comp=Z,0.4nm,0.6s,baz=35,slow=5.4,SNR=4.7
comp=Z,0.4nm,0.6s
ESDC Sonseca Array 88.78 327 P **P** **08 57 52.9 -1.1**
SNAA Sanae 143.29 202 PKP PKPab 09 04 26.9 -0.4
comp=Z,0.9nm,0.6s,baz=176,slow=4.3,SNR=3.8
LPAZ La Paz 148.98 39 PKPbc **PKPbc** **09 04 45.7 0.0**
comp=Z,1.0nm,0.5s,baz=52,slow=5.8,SNR=9.2

*SJA **14** 08:48:42.6±0.8,31.°30S×71.°43W,h62km±3km, ML3.4, MW3.6*
*GUC **14** 08:48:43.7±0.9,31.°31S×71.°33W,h71km±5km, ML3.5*
ISC 14 08:48:44.0±1.2,**31.°30S**±0.°02×**71.°43W**±0.°05,**h59**km±9km,
n51,σ1°**78**/84,**4C-1D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.38**	**75**	*e*P		**Pn**	**08 48 54.7**	**-0.2**
CO02				*e*S		**Sn**	**08 49 03.2**	**+0.5**
CO02				IAML			08 49 03.6	
	comp=Z,6µm,0.5s							
CO02	**Combarbal**	**0.38**	**75**	*e*P		**Pn**	**08 48 54.9**	**+0.1**
CO02				*e*S		**Sn**	**08 49 02.7**	**0.0**
CO04	**Los Peladeros**	**0.83**	**153**↑	*e*P		**Pn**	**08 48 59.8**	**-0.4**
CO04				*e*S		**Sn**	**08 49 11.9**	**-0.2**
CO04				IAML			08 49 14.6	
	comp=N,2µm,0.1s							
GO04	**Tololo Observa**	**1.25**	**26**	*e*P		**Pn**	**08 49 05.2**	**-0.4**
GO04				*e*S		**Sn**	**08 49 21.0**	**-0.6**
GO04				IAML			08 49 22.1	
	comp=Z,1µm,0.1s							
GO04	**Tololo Observa**	**1.25**	**26**↑	*e*P		**Pn**	**08 49 05.4**	**-0.2**
GO04				*e*S		**Sn**	**08 49 21.6**	**0.0**
GO04				IAML			08 49 23.0	
	comp=N,3µm,0.3s							
CO05	**La Serena**	**1.39**	**7**↓	*e*P		**Pn**	**08 49 07.4**	**+0.2**
CO05				*e*S		**Sn**	**08 49 25.3**	**+0.7**
CO05				IAML			08 49 26.2	
	comp=E,960nm,0.4s							
VA03	**San Esteban**	**1.64**	**153**	*e*P		**Pn**	**08 49 10.6**	**-0.1**
VA03				*e*S		**Sn**	**08 49 31.4**	**+0.7**
VA03				IAML			08 49 34.2	
	comp=Z,307nm,0.2s							
ROCH	**El Roble**	**1.70**	**168**	*e*P		**Pn**	**08 49 11.6**	**0.0**
ROCH				*e*S		**Sn**	**08 49 32.8**	**+0.2**
ROCH				IAML			08 49 39.3	
	comp=N,404nm,0.4s							
VA01	**Torpederas**	**1.73**	**186**	*e*P		Pn	08 48 54.7	-17
CO01	**Juntas del Tor**	**1.75**	**41**	*e*P		**Pn**	**08 49 12.4**	**0.0**
CO01				*e*S		**Sn**	**08 49 33.5**	**-0.3**
CO01				IAML			08 49 33.6	
	comp=Z,1µm,0.3s							
CO01	**Juntas del Tor**	**1.75**	**41**	IAML			08 49 33.8	
	comp=E,1µm,0.1s							
RTLS	**Leoncito**	**1.88**	**106**	*e*P		**Pn**	**08 49 14.8**	**+0.6**
RTLS				*e*S		**Sn**	**08 49 38.6**	**+1.6**
PEL	**Peldehue**	**1.94**	**161**	*e*P		**Pn**	**08 49 15.5**	**+0.8**
PEL				*e*S		**Sn**	**08 49 31.2**	**-6.9**
MT02	**Curacav**	**1.97**	**173**	*e*P		**Pn**	**08 49 15.1**	**0.0**
MT02				IAML			08 49 52.2	
	comp=Z,119nm,0.7s							
MT02	**Curacav**	**1.97**	**173**	*i* P		**Pn**	**08 49 14.9**	**-0.2**
MT02				*e*S		**Sn**	**08 49 37.9**	**-0.7**
AROD	**Rodeo**	**2.03**	**57**	*e*P		**Pn**	**08 49 17.2**	**+1.1**
AROD				*e*S		**Sn**	**08 49 42.6**	**+2.1**
ACCO	**Cerro Coronel**	**2.15**	**71**	*e*P		**Pn**	**08 49 18.7**	**+0.8**
ACCO				*e*S		**Sn**	**08 49 45.9**	**+2.3**
ACCO				IAML			08 49 46.5	
	comp=Z,225nm,0.2s							
MT05	**Renca**	**2.16**	**165**	*e*P		**Pn**	**08 49 18.5**	**+0.7**
MT05				*e*S		**Sn**	**08 49 49.3**	**+5.8**
MT05				IAML			08 50 03.5	
	comp=Z,108nm,0.6s							
MT05	**Renca**	**2.16**	**165**	IAML			08 49 52.6	
	comp=E,408nm,0.3s							
ACDV	**Cuesta del Vie**	**2.28**	**61**	*e*P		**Pn**	**08 49 20.6**	**+1.1**
ACDV				*e*S		**Sn**	**08 49 38.5**	**-8.1**
ACDV				IAML			08 49 51.3	
	comp=Z,85nm,0.4s							
MT03	**Universidad Ad**	**2.32**	**161**	*e*P		**Pn**	**08 49 20.5**	**+0.6**
MT03				*e*S		Sn	08 49 38.3	-9.0
MT03				IAML			08 49 38.4	
	comp=Z,202nm,0.3s							
MT03	**Universidad Ad**	**2.32**	**161**↑	*e*P		**Pn**	**08 49 20.4**	**+0.5**
MT03				*e*S		**Sn**	**08 49 46.9**	**-0.4**
MT03				IAML			08 50 03.4	
	comp=E,442nm,0.2s							
ZON	**Zonda**	**2.36**	**97**	*e*P		**Pn**	**08 49 21.1**	**+0.7**
ZON				*e*S		**Sn**	**08 49 49.5**	**+1.1**
ZON				IAML			08 49 52.8	
	comp=Z,210nm,0.3s							
MT04	**Ro Olivares**	**2.36**	**153**	*e*P		**Pn**	**08 49 21.7**	**+1.0**
MT04				*e*S		**Sn**	**08 49 51.3**	**+2.7**
MT04				IAML			08 49 56.2	
	comp=Z,143nm,0.5s							
MT04	**Ro Olivares**	**2.36**	**153**	*e*P		**Pn**	**08 49 21.6**	**+0.9**
MT04				*e*S		**Sn**	**08 49 48.2**	**-0.4**
LCO	**Las Campanas**	**2.37**	**16**	*e*P		**Pn**	**08 49 21.1**	**+0.3**
LCO				*e*S		**Sn**	**08 49 50.5**	**+1.7**
LCO				IAML			08 49 56.6	
	comp=Z,290nm,0.1s							
LCO	**Las Campanas**	**2.37**	**16**	*e*P		**Pn**	**08 49 20.2**	**-0.6**
LCO				*e*S		**Sn**	**08 49 48.9**	**0.0**
LCO				IAML			08 49 59.9	
	comp=Z,1µm,0.3s							
MT08	**Bocatoma Ro**	**2.45**	**151**	*e*P		**Pn**	**08 49 18.7**	**-3.1**
MT08				*e*S		**Sn**	**08 49 49.1**	**-1.6**
MT08				IAML			08 49 59.9	
	comp=Z,66nm,0.4s							
SJA	**San Juan**	**2.46**	**96**	*e*P		**Pn**	**08 49 23.4**	**+1.6**
SJA				*e*S		**Sn**	**08 49 53.1**	**+2.4**
SJA				IAML			08 49 53.8	
	comp=Z,193nm,0.6s							
RTLL	**Cerro Villicun**	**2.52**	**91**	*e*P		**Pn**	**08 49 23.2**	**+0.5**
RTLL				*e*S		**Sn**	**08 49 52.9**	**+0.5**
RTLL				IAML			08 49 55.3	
	comp=Z,120nm,0.2s							
MT01	**Popeta**	**2.56**	**177**	*e*P		**Pn**	**08 49 23.1**	**0.0**
MT01				*e*S		**Sn**	**08 49 54.2**	**+1.1**
MT01				IAML			08 49 59.1	
	comp=Z,78nm,0.8s							
MT01	**Popeta**	**2.56**	**177**	*e*P		**Pn**	**08 49 23.0**	**-0.2**
MT01				*e*S		**Sn**	**08 49 53.2**	**+0.1**
MT01				IAML			08 50 00.6	
	comp=N,76nm,0.2s							
ARCO	**CERRO ARCO**	**2.61**	**127**	*e*P		**Pn**	**08 49 25.9**	**+1.9**
ARCO				*e*S		**Sn**	**08 49 53.5**	**-1.2**
ARCO				IAML			08 49 59.0	
	comp=Z,130nm,0.4s							
AC05	**El Transito**	**2.65**	**22**	*e*P		**Pn**	**08 49 25.0**	**+0.4**
AC05				*e*S		**Sn**	**08 49 56.4**	**+0.8**
AC05				IAML			08 50 03.0	
	comp=Z,99nm,0.2s							
AC05	**El Transito**	**2.65**	**22**	*e*P		**Pn**	**08 49 24.9**	**+0.4**
AC05				*e*S		**Sn**	**08 49 54.4**	**-1.2**
AC05				IAML			08 50 00.6	
	comp=N,183nm,0.2s							
CFA	**Coronel Fontan**	**2.74**	**97**	*e*P		**Pn**	**08 49 26.0**	**+0.3**
CFA				IAML			08 49 58.1	
	comp=Z,182nm,0.4s							
CFA				*e*S		**Sn**	**08 49 58.3**	**+0.7**
AAGR	**Agrelo**	**2.83**	**130**	*e*P		**Pn**	**08 49 28.8**	**+1.8**
AAGR				IAML			08 50 06.6	
	comp=Z,82nm,0.5s							
BO01	**Tunca**	**3.09**	**175**	*e*P		**Pn**	**08 49 32.0**	**+1.6**
AC04	**Llanos de Chal**	**3.10**	**6**	*e*P		**Pn**	**08 49 30.2**	**-0.3**
AC04				*e*S		**Sn**	**08 50 08.8**	**+2.3**
AC04				IAML			08 50 22.2	
	comp=Z,78nm,0.8s							
AC04	**Llanos de Chal**	**3.10**	**6**↑	*e*P		**Pn**	**08 49 30.3**	**-0.3**
AC04				*e*S		**Sn**	**08 50 06.3**	**-0.1**
AC04				IAML			08 50 19.0	
	comp=E,115nm,0.2s							
AVIZ	**Vizcacheras**	**3.28**	**132**	*e*P		Pn	08 49 18.4	-15
AVFE	**Valle Fertil**	**3.47**	**80**	*e*P		Pn	08 49 25.2	-10
AVFE				*e*S		Sn	08 50 03.5	-12
BO02	**Sierra Bellavi**	**3.52**	**171**	*e*P		**Pn**	**08 49 36.7**	**+0.3**
BO02				IAML			08 50 21.3	
	comp=Z,53nm,0.1s							
GO05	**Hualane**	**3.72**	**186**	*e*P		**Pn**	**08 49 38.8**	**-0.3**
GO05				IAML			08 51 02.2	
	comp=Z,18nm,0.8s							
ACAN	**Cantantal**	**3.73**	**106**	*e*P		**Pn**	**08 49 38.1**	**-1.2**
VCA	**Vinchina**	**3.79**	**48**	*e*P		**Pn**	**08 49 41.8**	**+1.7**
VCA				*e*S		**Sn**	**08 50 22.8**	**-0.7**
VCA				IAML			08 50 30.5	
	comp=Z,127nm,0.6s							
ACLC	**CERRO LA CRUZ**	**4.29**	**65**	*e*P		**Pn**	**08 49 46.8**	**-0.2**
ACLC				*e*S		**Sn**	**08 50 34.9**	**-1.1**
ACLC				IAML			08 50 41.4	
	comp=Z,71nm,0.5s							
TINO	**Tinogasta**	**4.66**	**47**	*e*P		**Pn**	**08 49 52.5**	**+0.5**
TINO				*e*S		**Sn**	**08 50 44.6**	**-0.2**
TINO				IAML			08 50 54.9	
	comp=Z,49nm,0.7s							
AC02	**Maricunga**	**4.88**	**25**	*e*P		**Pn**	**08 49 55.8**	**+0.4**
AC02				*e*S		**Sn**	**08 50 51.2**	**+0.3**
AC02				IAML			08 51 34.8	
	comp=Z,16nm,1.6s							
MRA	**San Martin**	**4.98**	**104**	*e*P		**Pn**	**08 49 55.9**	**-0.5**
MRA				*e*S		**Sn**	**08 50 47.8**	**-5.0**
MRA				IAML			08 51 19.1	
	comp=Z,35nm,0.7s							
AC01	**Pan de Azucar**	**5.19**	**8**	*e*P		**Pn**	**08 49 57.9**	**-1.3**
AC01				IAML			08 51 30.0	
	comp=Z,17nm,1.6s							

*IDC **14** 08:56:14.4±0.9,54.°47N×164.°29E,h0km,mb3.6/7, mbtmp3.6/9,ML3.4/2,MS2.3/3,Error ellipse: s-maj=33.4km s-min=19.0km az=161.0*
*KRSC **14** 08:56:15.2±1.6,54.°35N×164.°35E,h48km±33km, Ml4.0*
*MOS **14** 08:56:16.6±2.0,53.°67N×164.°73E,h35km,mb3.9/7,Error ellipse: s-maj=14.0km s-min=12.4km az=82.0*
ISC 14 08:56:14.3±1.8,**54.°45N**±0.°04×**164.°29E**±0.°03,**h7**km±12km,
n71,σ2°**13**/98,**mb3.7**/14,**2C**,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BKI	**Bering**	**1.24**	**52**	*e*P		**Pb**	**08 56 37.8**	**-0.1**
BKI				*e*S		**Sb**	**08 56 51.8**	**-2.2**
MKZ	**Mys Kozlova**	**1.49**	**275**	*e*P		**Pg**	**08 56 43.4**	**+0.5**
MKZ				*e*S		**Sb**	**08 57 01.5**	**0.0**
KBTR	**Krutoberegovo**	**1.95**	**335**	*e*P		**Pn**	**08 56 48.1**	**+0.3**
KBTR				*e*S		**Sb**	**08 57 11.7**	**-0.9**
TUMD	**Tumrok D**	**2.37**	**290**	*e*P		**Pb**	**08 56 56.2**	**-1.1**
TUMD				*e*S		**Sb**	**08 57 24.2**	**-2.6**
TUMR	**Tumrok**	**2.53**	**291**	*e*P		**Pb**	**08 56 58.9**	**-1.2**
TUMR				*e*S		**Sb**	**08 57 28.8**	**-2.7**
ZLN	**Zelenaya**	**2.54**	**310**	*e*P		**Pb**	**08 56 59.4**	**-0.8**
ZLN				*e*S		**Sb**	**08 57 29.3**	**-2.4**
BZGR	**Bezymyannyi-Gr**	**2.54**	**307**	*e*P		**Pb**	**08 56 58.5**	**-1.7**
BZGR				*e*S		**Sb**	**08 57 29.6**	**-2.1**
BZP	**Bezymyannyi-Pe**	**2.60**	**306**	*e*P		**Pb**	**08 56 59.1**	**-2.2**
BZP				*e*S		**Sn**	**08 57 29.4**	**+0.6**
CIRR	**Tsirk**	**2.62**	**311**	*e*P		**Pb**	**08 57 00.1**	**-1.5**
LGNR	**Loginova**	**2.63**	**310**	*e*P		**Pb**	**08 57 01.0**	**-0.9**
LGNR				*e*S		**Sb**	**08 57 32.4**	**-2.1**
BZMR	**Bezymyannaya**	**2.64**	**306**	*e*P		**Pb**	**08 57 00.1**	**-1.8**
BZMR				*e*S		**Sb**	**08 57 32.7**	**-1.8**
BZWR	**Bezymyannyi-We**	**2.65**	**307**	*e*P		**Pb**	**08 57 00.3**	**-1.8**
BZWR				*e*S		**Sb**	**08 57 32.0**	**-2.9**
KMNR	**Kamenistaya**	**2.67**	**301**	*e*P		**Pb**	**08 57 00.4**	**-2.1**
KMNR				*e*S		**Sb**	**08 57 33.5**	**-2.0**
SMKR	**Semkarok**	**2.67**	**324**	*e*P		**Pn**	**08 56 59.8**	**+2.0**
SMKR				*e*S		**Sb**	**08 57 32.9**	**-2.6**
KIRR	**Kirishev**	**2.72**	**305**	*e*P		**Pb**	**08 57 01.3**	**-2.0**
KIRR				*e*S		**Sb**	**08 57 35.1**	**-1.7**
KPT	**Kopyto**	**2.78**	**305**	*e*P		**Pb**	**08 57 02.2**	**-2.2**
KPT				*e*S		**Sb**	**08 57 37.5**	**-1.1**
KLY	**Klyuchi**	**2.79**	**314**	*e*P		**Pn**	**08 57 00.3**	**+0.9**
KLY				*e*S		**Sn**	**08 57 33.9**	**+0.7**
KII	**Karymskiy**	**2.87**	**264**	*e*P		**Pn**	**08 57 02.7**	**+2.3**
KII				*e*S		**Sn**	**08 57 35.6**	**+0.4**
SPN	**Mys Shipunski**	**2.87**	**244**	*e*P		**Pn**	**08 57 02.2**	**+1.8**
SPN				*e*S		**Sn**	**08 57 35.2**	**0.0**
KOZ	**Kozyrevsk**	**3.00**	**304**	*e*P		**Pb**	**08 57 05.2**	**-2.8**
KOZ				*e*S		**Sb**	**08 57 41.5**	**-3.3**
NLC	**Nalytchevo**	**3.20**	**248**	*e*P		**Pn**	**08 57 06.4**	**+1.5**
NLC				*e*S		**Sn**	**08 57 41.7**	**-1.5**
SRDR	**Sredinnyy**	**3.21**	**308**	*e*P		**Pn**	**08 57 08.4**	**-3.2**
SRDR				*e*S		**Sn**	**08 57 46.2**	**+2.6**
SDLR	**Sedlovina**	**3.41**	**252**	*e*P		**Pn**	**08 57 10.2**	**+2.2**
SDLR				*e*S		**Sn**	**08 57 49.1**	**+0.6**
SMAR	**Somma**	**3.46**	**252**	*e*P		**Pn**	**08 57 11.1**	**+2.4**
SMAR				*e*S		**Sn**	**08 57 49.1**	**-0.8**
UGLR	**Uglovaya**	**3.47**	**251**	*e*P		**Pn**	**08 57 11.2**	**+2.5**
UGLR				*e*S		**Sb**	**08 57 49.5**	**-0.6**
KRER	**Koryakskii**	**3.47**	**253**	*e*P		**Pn**	**08 57 11.2**	**+2.3**
KRER

MTVR	**Mutnovka**	**4.14**	**244**	*e*P		**Pn**	**08 57 20.5**	**+2.5**
MTVR				*e*S		**Sn**	**08 58 05.2**	**-1.6**
GRL	**Gorelyy**	**4.17**	**245**	*e*P		**Pn**	**08 57 21.2**	**+2.8**
GRL				*e*S		**Sn**	**08 58 07.2**	**-0.1**
ASAK	**Asacha**	**4.34**	**244**	*e*P		**Pn**	**08 57 23.8**	**+3.1**
ASAK				*e*S		**Sn**	**08 58 11.9**	**+0.3**
APC	**Apacha**	**4.50**	**253**	*e*P		**Pn**	**08 57 27.1**	**+4.3**
KDTR	**Khodutka, Kamc**	**4.58**	**237**	*e*P		**Pn**	**08 57 25.5**	**+1.6**
KDTR				*e*S		**Sn**	**08 58 13.7**	**-3.5**
SHEM	**Shemya Is, Ala**	**6.09**	**102**	Pn		**Pn**	**08 57 45.4**	**+0.7**
	2.6nm,0.3s,baz=199,slow=4.3,SNR=6.6							
SHEM				Sn		**Sn**	**08 58 48.9**	**-5.7**
	1.6nm,0.3s,baz=168,slow=23,SNR=2.1							
SHEM				LR		LR	09 00 19.3	
	comp=Z,40nm,19.1s,baz=134,slow=40							
	9.8nm,0.4s							
SKR	**Severo-Kuril's**	**6.25**	**236**	*e*PN		**Pn**	**08 57 44.3**	**-2.5**
MA2	**Magadan**	**8.98**	**310**	LR		LR	09 01 46.0	
	comp=Z,33nm,19.2s,baz=78,slow=37							
MA2	**Magadan**	**8.98**	**310**	*e*PN		Pn	08 58 37.8	+14
BILL	**Bilibino**	**13.67**	**3**	*e*P		P	08 59 41.9	+4.7
BILL				pmax	pmax			
	comp=Z,3.0nm,1.0s							
YSS	**Yuzhno-Sakhali**	**15.52**	**250**	*e*P		**Pn**	**08 59 54.1**	**+0.7**
YSS				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TIXI	**Tiksi**	**22.97**	**332**	*e*P		P	09 01 27.2	+8.3
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.9s							
MAJO	**Matsushiro**	**25.35**	**236**	*i* P		**P**	**09 01 38.0**	**-3.7**
MAJO				pmax	pmax			
	comp=Z,2.0nm,1.0s							
MJAR	**Matsushiro Arr**	**25.35**	**236**	P		**P**	**09 01 43.4**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=20,slow=12,SNR=1.4							
	comp=Z,0.8nm,0.6s							
ILAR	**Eielson Array**	**26.08**	**47**	P		**P**	**09 01 49.0**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=259,slow=8.8,SNR=12							
	comp=Z,1.3nm,0.9s							
ILAR	**Eielson Array**	**26.08**	**47**	*e*P		**P**	**09 01 49.2**	**+1.1**
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**34.71**	**176**	T		T	09 40 23.9	
	baz=360,slow=76,SNR=9.6							
H11N3	**WAKE ISLAND Hy**	**34.73**	**176**	T		T	09 40 23.9	
	baz=360,slow=76,SNR=6.5							
H11N1	**WAKE ISLAND Hy**	**34.73**	**176**	T		T	09 40 25.1	
	baz=360,slow=76,SNR=8.1							
ULN	**Ulaanbaatar**	**35.61**	**284**	*e*P		**P**	**09 03 15.1**	**+2.6**
ULN				pmax	pmax			
	comp=Z,1.0nm,1.2s							
NRIK	**Noril'sk**	**36.25**	**324**	*i* P		P	09 03 25.4	+7.9
NRIK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
DGZ	**Jazzator, Alta**	**45.28**	**297**	*i* P		P	09 04 37.5	+5.1
DGZ				pmax	pmax			
	comp=Z,1.0nm,0.8s							
KURK	**Kurchatov**	**49.11**	**303**	P		**P**	**09 05 03.7**	**+1.7**
KURBB	**Kurchatov Arra**	**49.21**	**303**	P		**P**	**09 05 03.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=55,slow=7.7,SNR=1.7							
	comp=Z,0.4nm,0.5s							
MK31	**Makanchi Array**	**49.78**	**297**	*e*P		P	09 05 12.0	+4.7
MKAR	**Makanchi Array**	**49.78**	**297**	P		**P**	**09 05 08.0**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=60,slow=7.2,SNR=3.9							
	comp=Z,0.1nm,0.5s							
MKAR	**Makanchi Array**	**49.78**	**297**	P		**P**	**09 05 08.0**	**+0.7**
ARTI	**Arti**	**54.15**	**319**	*i* P		P	09 05 45.4	+5.8
ARTI				pmax	pmax			
	comp=Z,3.0nm,1.8s							
OBN	**Obninsk**	**62.67**	**329**	*e*P		P	09 06 44.3	+5.3
OBN				*e**PP		pwP	09 06 58.4	+12
OBN				*e*			09 09 04.4	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.6s							
TXAR	**Lajitas Array**	**67.83**	**70**	P		**P**	**09 07 15.1**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=301,slow=4.0,SNR=5.8							
	comp=Z,0.5nm,0.8s							
WRA	**Warramunga Arr**	**78.41**	**209**	P		**P**	**09 08 15.9**	**+0.5**
	comp=Z,0.9nm,1.1s,baz=23,slow=5.3,SNR=2.4							
	comp=Z,0.9nm,1.1s							
ASAR	**Alice Springs**	**82.07**	**208**	P		**P**	**09 08 37.1**	**+2.0**
	comp=Z,0.4nm,0.9s,baz=14,slow=5.2,SNR=2.7							
	comp=Z,0.4nm,0.9s							
LPAZ	**La Paz**	**124.64**	**68**	*e*PKIKP		**PKPdf**	**09 15 09.7**	**-5.5**
LPAZ				pmax	pmax			
	comp=Z,1.0nm,1.0s							
QSPA	**South Pole Qui**	**144.20**	**180**	PKP		**PKPdf**	**09 15 47.8**	**-1.6**
	comp=Z,0.9nm,1.1s,baz=8.2,slow=3.8,SNR=3.5							

IDC ***14*** *09:00:55.7±1.2,33°.89N×25°.99E,h0km,mb3.6/9, mbtmp3.6/13,ML3.5/4,MS3.8/1,Error ellipse: s-maj=23.2km s-min=17.4km az=19.0*

ISC 14 09:00:59.4±0.9,33°.90N±0°.10×25°.99E±0°.07,h26km,n17, σ1s18/18,mb3.6/8,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.66**	**327**	Pn	**Pn**	**09 01 27.9**	**+1.0**
	5.3nm,0.3s,baz=120,slow=20,SNR=19						
IDI				Sn	**Sb**	**09 01 50.2**	**+0.5**
	13nm,0.3s,baz=23,slow=8.5,SNR=7.8						
MMAI	**Mount Meron Ar**	**7.92**	**94**	Sn	**Sn**	**09 04 19.7**	**-2.0**
	2.0nm,0.3s,baz=275,slow=24,SNR=2.3						
BRTR	**Keskin Array B**	**8.45**	**44**	Pn	**Pn**	**09 03 01.9**	**+1.7**
	0.1nm,0.3s,baz=262,slow=9.5,SNR=2.1						
	0.5nm,0.7s						
EIL	**Elat**	**8.71**	**117**	Pn	**Pn**	**09 03 02.9**	**-1.0**
	1.5nm,0.3s,baz=19,slow=9.8,SNR=6.4						
EIL				Sn	**Sn**	**09 04 43.4**	**+2.1**
	0.7nm,0.3s,baz=27,slow=14,SNR=1.4						
	4.1nm,0.6s						
KBZ	**Khabaz**	**16.40**	**48**	Pn	**P**	**09 04 50.4**	**0.0**
	0.1nm,0.3s,baz=33,slow=19,SNR=2.5						
	2.2nm,1.0s						
AKASG	**Malin Array Be**	**16.96**	**7**	Pn	**Pn**	**09 04 54.5**	**-0.2**
	0.4nm,0.3s,baz=198,slow=11,SNR=4.3						
	0.9nm,0.6s						
ESDC	**Sonseca Array**	**24.60**	**292**	P	**P**	**09 06 17.9**	**+0.3**
	0.2nm,0.4s,baz=81,slow=8.7,SNR=1.9						
	0.2nm,0.4s						
HFS	**Hagfors**	**27.46**	**347**	P	**P**	**09 06 42.5**	**-0.6**
	1.1nm,0.8s,baz=157,slow=11,SNR=1.8						
	1.1nm,0.8s						
HFS	**Hagfors**	**27.46**	**347**	P	**P**	**09 06 42.5**	**-0.6**
FINES	**FINESS Array B**	**27.56**	**0**	P	**P**	**09 06 42.8**	**-1.1**
	0.8nm,0.6s,baz=169,slow=13,SNR=3.8						
	0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.24**	**233**	P	**P**	**09 07 08.2**	**0.0**
	0.1nm,0.4s,baz=46,slow=9.4,SNR=1.4						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**35.69**	**360**	P	**P**	**09 07 53.8**	**-1.4**
	1.1nm,0.7s,baz=172,slow=9.8,SNR=5.6						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**41.39**	**50**	P	**P**	**09 08 44.2**	**+0.9**
	0.6nm,0.6s,baz=276,slow=8.7,SNR=7.9						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**43.91**	**56**	P	**P**	**09 09 05.2**	**+1.3**
	0.9nm,0.7s,baz=286,slow=5.8,SNR=7.2						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**45.39**	**45**	P	**P**	**09 09 14.7**	**-0.9**
	0.6nm,0.6s,baz=264,slow=7.1,SNR=2.3						
	0.6nm,0.6s						
OPO	**Ambohidratompo**	**55.96**	**156**	LR	LR	09 36 07.8	
	comp=Z,69nm,18.1s,baz=96,slow=38						
SONM	**Songino Array**	**59.76**	**50**	P	**P**	**09 11 02.3**	**+0.1**
	0.4nm,0.5s,baz=258,slow=7.4,SNR=2.1						
	0.4nm,0.5s						

ASRS ***14*** *09:05:15.0±0.7,54°.32N×87°.12E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 14 09:05:20.8±3.5,54°.26N×86°.97E,h0km,mbtmp2.6/2, ML2.4/2,Error ellipse: s-maj=31.4km s-min=19.5km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**257**	I	I	09 13 40.0	
	baz=76,slow=315,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.30**	**257**	Pg	Pb	09 05 46.0	-0.2
	0.6nm,0.3s,baz=78,slow=17,SNR=5.5						
ZALV				Lg	Lg	09 06 02.7	
	0.5nm,0.3s,baz=72,slow=28,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.32**	**238**	Pn	Pn	09 06 55.1	+0.1
	0.1nm,0.3s,baz=53,slow=13,SNR=2.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.05**	**204**	Pn	Pn	09 07 20.1	+1.2
	0.1nm,0.3s,baz=22,slow=12,SNR=1.5						
	0.1nm,0.3s						

AFAD ***14*** *09:11:09.8,35°.65N×31°.41E,h7km±3km,ML2.5*
ISK ***14*** *09:11:10.9,35°.72N×31°.51E,h3km,ML2.6/21*
NIC ***14*** *09:11:10.6,35°.61N×31°.36E,h18km±1km,Ml2.5/9*

ISC 14 09:11:09.9±1.2,35°.63N±0°.03×31°.41E±0°.02,h6km±10km, n55,σ1s24/77,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.95**	**50**	Pg	**Pg**	**09 11 27.6**	**-0.6**
GAZI				Sg	**Sg**	**09 11 39.4**	**-1.2**
GAZI	**Gazipasa**	**0.95**	**50**	P	**Pg**	**09 11 26.9**	**-1.3**
GAZI				S	**Sg**	**09 11 39.8**	**-0.9**
GAZI				IAML		09 11 45.0	
	comp=N,127nm,0.5s						
GAZI				IAML		09 11 46.0	
	comp=E,122nm,0.3s						
GAZI	**Gazipasa**	**0.95**	**50**	P	**Pg**	**09 11 27.1**	**-1.1**
GAZI				S	**Sg**	**09 11 39.5**	**-1.2**
AKMS	**Akamas**	**0.97**	**128**	P	**Pg**	**09 11 29.2**	**+0.6**
AKMS				S	**Sb**	**09 11 44.0**	**+1.7**
AKMS				AML	AML	09 11 49.3	
	0.5nm,0.3s						
AKMS				AML	AML	09 11 50.5	
	0.4nm,0.8s						
ALAN	**Alanya-ANTALYA**	**1.06**	**28**	Pg	**Pg**	**09 11 29.7**	**-0.5**
ALFC	**Alefka**	**1.08**	**115**	P	**Pg**	**09 11 29.6**	**-1.1**
ALFC				S	**Sn**	**09 11 47.4**	**+0.4**
ALFC				AML	AML	09 11 52.7	
	0.4nm,0.5s						
ALFC				AML	AML	09 11 54.6	
	0.4nm,0.4s						
AKUM	**Alanya-Kumluc**	**1.11**	**309**	P	**Pg**	**09 11 28.9**	**-2.3**
AKUM				S	**Sb**	**09 11 46.7**	**+0.5**
AKUM				IAML		09 11 50.0	
	comp=N,101nm,0.6s						
AKUM				IAML		09 11 55.0	
	comp=E,94nm,0.3s						
KEMT	**Kemer-ANTALYA**	**1.19**	**325**	Pn	**Pn**	**09 11 34.1**	**+1.0**
NATA	**Nata**	**1.27**	**131**	P	**Pn**	**09 11 33.6**	**-0.6**
NATA				S	**Sn**	**09 11 53.0**	**+1.3**
NATA				AML	AML	09 12 03.8	
	0.8nm,0.7s						
NATA				AML	AML	09 12 06.4	
	0.7nm,0.6s						
KEPZ	**Antalya-Kepez**	**1.28**	**7**	P	**Pn**	**09 11 31.5**	**-2.9**
KEPZ				S	**Sb**	**09 11 48.3**	**-3.0**
KEPZ				IAML		09 11 54.0	
	comp=N,105nm,0.5s						
KEPZ				IAML		09 11 54.0	
	comp=E,82nm,0.6s						
BOZY	**Bozyazi-Mersin**	**1.36**	**69**	Pn	**Pn**	**09 11 35.9**	**+0.4**
TROD	**Troodos**	**1.37**	**119**	P	**Pn**	**09 11 34.5**	**-1.3**
TROD				S	**Sb**	**09 11 54.8**	**+0.8**
TROD				AML	AML	09 12 08.1	
	0.3nm,0.5s						
TROD				AML	AML	09 12 13.6	
	0.2nm,0.7s						
ANTB	**Antalya**	**1.41**	**335**	Pn	**Pg**	**09 11 37.6**	**+0.7**
ANTB				Sn	**Sg**	**09 11 57.2**	**+2.0**
XYLS	**Xyliatos**	**1.48**	**114**	P	**Pn**	**09 11 36.8**	**-0.3**
XYLS				S	**Sn**	**09 11 56.2**	**-0.6**
XYLS				AML	AML	09 12 05.1	
	0.2nm,0.5s						
XYLS				AML	AML	09 12 12.6	
	0.2nm,0.6s						
TEKE	**Tekeli-Mersin**	**1.48**	**69**	Pn	**Pn**	**09 11 37.8**	**+0.7**
TEKE				Sn	**Sb**	**09 11 57.2**	**+0.3**
AKAS	**Kas**	**1.58**	**293**	Pn	**Pg**	**09 11 41.3**	**+1.1**
HDMB	**Hadim**	**1.59**	**33**	Pn	**Pn**	**09 11 39.0**	**+0.1**
KORT	**Korkueli**	**1.61**	**328**	Pn	**Pb**	**09 11 40.8**	**+0.6**
KORT	**Korkueli**	**1.61**	**328**	P	**Pn**	**09 11 38.5**	**-0.6**
KORT				S	**Sg**	**09 12 06.4**	**+4.6**
KORT				IAML		09 12 12.0	
	comp=E,71nm,0.9s						
KORT				IAML		09 12 13.0	
	comp=N,66nm,0.8s						
BERE	**Bereket-Mersin**	**1.64**	**63**	Pn	**Pn**	**09 11 39.7**	**+0.3**
ELL	**Elmali**	**1.65**	**313**	Pn	**Pg**	**09 11 41.6**	**+0.1**
YORU	**Yoruktepe-Mers**	**1.71**	**71**	Pn	**Pn**	**09 11 40.8**	**+0.6**
CSS	**Mathiatis**	**1.71**	**112**	Pn	**Pb**	**09 11 41.8**	**+0.1**
CSS	**Mathiatis**	**1.71**	**112**	P	**Pn**	**09 11 39.6**	**-0.6**
CSS				S	**Sn**	**09 12 02.6**	**+0.2**
CSS				AML	AML	09 12 14.2	
	0.1nm,0.4s						
CSS				AML	AML	09 12 18.4	
	0.1nm,0.5s						
ASGA	**Asgata**	**1.73**	**119**	S	**Sb**	**09 12 04.6**	**+0.6**
ASGA				AML	AML	09 12 14.9	
	0.2nm,0.6s						
ASGA				AML	AML	09 12 19.2	
	0.2nm,0.8s						
AKK1	**Akkuyu-Mersin**	**1.81**	**73**	Pn	**Pn**	**09 11 42.4**	**+0.8**
GULN	**MERSIN_Gulnar**	**1.82**	**72**	P	**Pn**	**09 11 41.0**	**-0.8**
GULN				S	**Sn**	**09 12 05.3**	**+0.1**
GULN				IAML		09 12 10.0	
	comp=E,55nm,0.6s						
GULN				IAML		09 12 11.0	
	comp=N,59nm,0.5s						
BECE	**Buyukeceli-Mer**	**1.83**	**73**	Pn	**Pn**	**09 11 42.6**	**+0.7**
BECE	**Buyukeceli-Mer**	**1.83**	**73**	Pn	**Pn**	**09 11 42.7**	**+0.8**
BUCA	**Burdur, Bucak-**	**1.83**	**338**	P	**Pn**	**09 11 42.3**	**+0.3**
BUCA				IAML		09 12 15.0	
	comp=E,40nm,0.6s						
SEDI	**Konya, Seydise**	**1.84**	**9**	P	**Pn**	**09 11 41.5**	**-0.7**
SEDI				S	**Sn**	**09 12 06.5**	**+0.6**
SEDI				IAML		09 12 13.0	
	comp=N,50nm,0.7s						
SEDI				IAML		09 12 13.0	
	comp=E,59nm,0.5s						
YESI	**Yesilovacik-Me**	**1.90**	**72**	Pn	**Pn**	**09 11 43.8**	**+0.9**
MVOU	**Mavrovouni**	**1.92**	**108**	P	**Pn**	**09 11 43.1**	**0.0**
MVOU				S	**Sn**	**09 12 07.4**	**-0.2**
MVOU				AML	AML	09 12 20.8	
	0.1nm,0.4s						
MVOU				AML	AML	09 12 26.3	
	0.1nm,0.4s						
TISA	**Tisan-Mersin**	**1.92**	**73**	Pn	**Pn**	**09 11 44.1**	**+1.0**
BCK	**Bucak**	**1.94**	**340**	Pn	**Pb**	**09 11 45.0**	**-0.8**
IKL	**Isikli**	**1.95**	**71**	Pn	**Pn**	**09 11 44.4**	**+0.9**
KARG	**Kargicak-Mersi**	**1.96**	**72**	Pn	**Pn**	**09 11 44.5**	**+0.9**
KKBE	**Karaman, Kazim**	**2.01**	**37**	P	**Pn**	**09 11 44.1**	**-0.4**
KKBE				S	**Sb**	**09 12 13.4**	**+1.0**
KKBE				IAML		09 12 18.0	
	comp=N,35nm,0.7s						
KKBE				IAML		09 12 24.0	
	comp=E,44nm,0.6s						
KEBE	**Keben-Mersin**	**2.04**	**66**	Pn	**Pn**	**09 11 45.6**	**+0.7**
OSC1	**CSNet OBS 1**	**2.12**	**183**	P	**Pn**	**09 11 45.3**	**-0.6**
OSC1				AML	AML	09 12 09.3	
OSC1				S	**Sn**	**09 12 11.6**	**-1.1**
OSC1				AML	AML	09 12 21.0	
KRMN	**Karaman**	**2.15**	**44**	Pn	**Pn**	**09 11 47.1**	**+0.7**
SILI	**Silifke-Mersin**	**2.17**	**69**	Pn	**Pn**	**09 11 47.7**	**+1.1**
GOLH	**Golhisar**	**2.19**	**318**	P	**Pn**	**09 11 46.4**	**-0.6**
GOLH				IAML		09 12 34.0	
	comp=E,43nm,0.8s						
GOLH				IAML		09 12 37.0	
	comp=N,40nm,0.8s						
EREN	**Erenkoy**	**2.25**	**92**	Pn	**Pn**	**09 11 49.4**	**+1.7**
KMER	**Konya-Meram**	**2.27**	**20**	P	**Pn**	**09 11 49.4**	**+1.3**
KMER				S	**Sb**	**09 12 21.1**	**+1.2**
KMER				IAML		09 12 24.0	
	comp=E,43nm,0.6s						
KMER				IAML		09 12 26.0	
	comp=N,39nm,0.4s						
BAGO	**Egridir - ISPA**	**2.41**	**348**	P	**Pn**	**09 11 48.5**	**-1.5**
BAGO				IAML		09 12 30.0	
	comp=E,20nm,0.5s						
KONT	**Konya--Tatoy**	**2.44**	**18**	Pn	**Pn**	**09 11 51.2**	**+0.9**
KONT	**Konya--Tatoy**	**2.44**	**18**	P	**Pn**	**09 11 51.5**	**+1.2**
KONT				IAML		09 12 36.0	
	comp=E,28nm,0.5s						
DOGA	**KONYA_Doganhis**	**2.48**	**5**	P	**Pn**	**09 11 50.4**	**-0.6**
DOGA				IAML		09 12 30.0	
	comp=E,27nm,0.5s						
DOGA				IAML		09 12 31.0	
	comp=N,34nm,0.6s						
DALY	**Dalyan (Mula)**	**2.52**	**299**	P	**Pn**	**09 11 48.1**	**-3.3**
YVAC	**Isparta, Yalva**	**2.64**	**357**	P	**Pn**	**09 11 52.4**	**-0.8**
OSC2	**CSNet OBS 4**	**2.64**	**164**	P	**Pn**	**09 11 52.2**	**-0.8**
OSC2				S	**Sn**	**09 12 25.0**	**-0.4**
LADK	**Ladik-KONYA**	**2.68**	**16**	Pn	**Pn**	**09 11 54.9**	**+1.2**
KERG	**Konya-Eregli**	**2.82**	**50**	P	**Pn**	**09 11 56.4**	**+0.7**
KERG				S	**Sb**	**09 12 33.7**	**-2.0**
KERG				IAML		09 12 42.0	
	comp=N,32nm,0.4s						
KERG				IAML		09 12 45.0	
	comp=E,24nm,0.5s						
YESY	**Yesilyurt**	**2.85**	**40**	Pn	**Pn**	**09 11 56.8**	**+0.7**

IDC 14 09:11:57.0±6.4,17°.67S×174°.29W,h276km±34km, mb3.2/3,mbtmp3.9/4,Error ellipse: s-maj=197.7km s-min=29.6km az=139.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.45**	**33**	P	Pn	09 13 08.3	+0.9
	24nm,0.5s,baz=275,slow=18,SNR=6.1						
AFI				S	S	09 14 03.6	-0.1
	44nm,0.3s,baz=244,slow=18,SNR=11						
WRA	**Warramunga Arr**	**48.53**	**259**	P	P	09 20 12.9	-0.1
	1.0nm,0.6s,baz=98,slow=7.0,SNR=30						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**48.63**	**254**	P	P	09 20 13.6	-0.2
	2.0nm,0.6s,baz=88,slow=8.5,SNR=31						
	2.0nm,0.6s						
ILAR	**Eielson Array**	**84.83**	**11**	P	P	09 24 00.3	0.0
	0.3nm,0.8s,baz=210,slow=8.8,SNR=1.6						
	0.3nm,0.8s						

TIF ***14*** *09:22:56.2,38°.81N×44°.66E,h1km±1km*
AZER ***14*** *09:22:56.2,38°.77N×44°.52E,h5km,ml4.0*
AFAD ***14*** *09:22:56.6,38°.78N×44°.69E,h7km±3km,ML3.6*
ISK ***14*** *09:22:57.7,38°.67N×44°.73E,h4km,ML3.6/8*
TEH ***14*** *09:22:58.4,38°.80N×44°.57E,h6km±38km,ML3.3, Presumed earthquake*

ISC 14 09:22:58.3±1.2,38°.79N±0°.02×44°.59E±0°.02,h0km±10km, n80,σ1s86/124,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**255**	P	**Pg**	**09 23 08.0**	**+0.4**
OZAP				S	**Sb**	**09 23 16.3**	**-1.3**
OZAP				IAML		09 23 19.0	
	comp=N,4μm,0.9s						
OZAP	**Van, Ozalp-Mer**	**0.48**	**255**	Pg	**Pg**	**09 23 08.0**	**+0.4**
NAX	**Nakhchivan**	**0.80**	**61**	P	**Pb**	**09 23 14.9**	**-0.3**
NAX				S	**Sb**	**09 23 26.9**	**+0.3**
VMUR	**Van-Muradiye**	**0.82**	**284**	P	**Pg**	**09 23 13.4**	**-0.6**
VMUR				S	**Sb**	**09 23 27.3**	**+0.1**
IMRD	**Marand**	**0.87**	**95**	Pg	**Pg**	**09 23 15.6**	**+0.5**
ISHB	**Shabestar**	**0.95**	**122**	Pg	**Pb**	**09 23 17.5**	**-0.3**
HYR	**Heyderabad**	**0.95**	**12**	P	**Pb**	**09 23 17.5**	**-0.2**
HYR				S	**Sn**	**09 23 32.3**	**-1.0**
SBZ	**Shahbuz**	**0.96**	**51**	P	**Pb**	**09 23 17.8**	**-0.2**
SBZ				S	**Sn**	**09 23 32.2**	**-1.4**
TVAN	**Van**	**0.96**	**255**	P	**Pg**	**09 23 16.4**	**-0.4**
TVAN	**Van**	**0.96**	**255**	Pg	**Pg**	**09 23 16.4**	**-0.4**
DYDN	**Diyadin**	**1.03**	**317**	P	**Pg**	**09 23 17.7**	**-0.4**
DYDN				S	**Sn**	**09 23 33.1**	**-2.4**
DYDN				IAML		09 23 36.0	
	comp=N,1μm,0.5s						
DYDN				IAML		09 23 40.0	
	comp=E,1μm,0.8s						
DYDN	**Diyadin**	**1.03**	**317**	Pg	**Pg**	**09 23 17.7**	**-0.4**
ORD	**Ordubad**	**1.10**	**82**	P	**Pg**	**09 23 19.9**	**+0.4**
ORD				S	**Sn**	**09 23 36.1**	**-0.9**
IGDI	**IGDIR**	**1.15**	**340**	P	**Pg**	**09 23 18.7**	**-1.7**
IGDI	**IGDIR**	**1.15**	**340**	Pg	**Pg**	**09 23 18.7**	**-1.7**
IGDI	**IGDIR**	**1.15**	**340**	P	**Pn**	**09 23 20.8**	**-0.9**
IGDI				S	**Sn**	**09 23 37.7**	**-0.4**
YOVA	**Hakkari_Yksek**	**1.22**	**191**	P	**Pg**	**09 23 20.8**	**-1.0**
YOVA				S	**Sn**	**09 23 42.7**	**+2.5**
YOVA	**Hakkari_Yksek**	**1.22**	**191**	Pg	**Pg**	**09 23 20.7**	**-1.0**
GEVA	**Gevas**	**1.29**	**249**	P	**Pg**	**09 23 21.5**	**-1.6**
GEVA				S	**Sn**	**09 23 41.4**	**-0.5**
AKDM	**Akdamar-Van**	**1.34**	**251**	Pn	**Pg**	**09 23 24.6**	**+0.5**
AKDM				Sn	**Sn**	**09 23 44.2**	**+1.1**
GNI	**Garni**	**1.36**	**5**	Pn	**Pg**	**09 23 25.7**	**+1.2**
GNI				Sn	**Sn**	**09 23 46.3**	**+2.7**
GNI	**Garni**	**1.36**	**5**	Pg	**Pn**	**09 23 23.8**	**-1.0**
HAKT	**HAKKARI**	**1.41**	**210**	P	**Pn**	**09 23 23.3**	**-2.1**
HAKT				S	**Sn**	**09 23 46.7**	**+1.8**
HAKT	**HAKKARI**	**1.41**	**210**	P	**Pn**	**09 23 25.0**	**-0.5**
HAKT				S	**Sn**	**09 23 46.3**	**+1.4**
ADCV	**BITLIS_Adilcev**	**1.46**	**271**	P	**Pg**	**09 23 26.0**	**-0.3**
ADCV				S	**Sg**	**09 23 48.0**	**+2.7**
ADCV	**BITLIS_Adilcev**	**1.46**	**271**	Pg	**Pg**	**09 23 26.0**	**-0.3**
AGRB	**Hanur-Agry**	**1.47**	**303**	Pn	**Pg**	**09 23 27.5**	**+1.0**
AGRB				Sn	**Sg**	**09 23 49.8**	**+4.2**
KOTA	**Agri, Merkez-K**	**1.48**	**314**	P	**Pg**	**09 23 26.3**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.53**	**294**	P	**Pn**	**09 23 26.3**	**-0.7**
IAZR	**Azarshahr**	**1.56**	**135**	Pg	**Pn**	**09 23 27.6**	**+0.1**
CUKT	**Cukurca**	**1.72**	**207**	P	**Pb**	**09

LRK	**Lerik**	**2.94**	**92**	P		**Pn**	**09 23 48.2**	**+1.8**
LRK				S		**Sb**	**09 24 25.8**	**-2.3**
GLBA	**Clilabad**	**3.00**	**80**	P		**Pb**	**09 23 50.0**	**-2.5**
GLBA				S		**Sb**	**09 24 27.1**	**-2.5**
BNGB	**Bingl**	**3.06**	**275**	Pn		**Pn**	**09 23 49.9**	**+1.9**
SEKA	**Sheki**	**3.14**	**39**	P		**Pb**	**09 23 52.8**	**-2.2**
SEKA				S		**Sb**	**09 24 33.6**	**-0.3**
KDMR	**Kurdemir**	**3.20**	**59**	S		**Sb**	**09 24 32.4**	**-3.0**
YEDI	**Yedisu-Bingol**	**3.21**	**283**	Pn		**Pn**	**09 23 52.4**	**+2.2**
ZKTA	**Zakatala**	**3.24**	**28**	P		**Pb**	**09 23 53.2**	**-3.6**
ZKTA				S		**Sb**	**09 24 34.1**	**-2.7**
LKRN	**Lenkeran, Azer**	**3.27**	**90**	P		**Pn**	**09 23 52.4**	**+1.5**
LKRN				S		**Sb**	**09 24 34.0**	**-3.6**
ASTR	**Astara**	**3.29**	**93**	P		**Pn**	**09 23 53.1**	**+2.0**
ASTR				S		**Sb**	**09 24 34.5**	**-3.7**
QBL	**Gabala**	**3.30**	**48**	P		**Pn**	**09 23 53.5**	**+2.3**
QBL				S		**Sb**	**09 24 37.1**	**-1.3**
GAS1	**Astara - Iran**	**3.35**	**96**	Pn		**Pn**	**09 23 53.8**	**+1.9**
IML	**Ismayilli**	**3.41**	**53**	P		**Pn**	**09 23 54.0**	**+1.2**
IML				S		**Sb**	**09 24 38.7**	**-3.0**
XNQ	**Khinaliq**	**3.62**	**48**	P		**Pn**	**09 23 57.9**	**+2.1**
XNQ				S		**Sb**	**09 24 43.4**	**-4.4**
PQL	**Pirkuli**	**3.67**	**56**	P		**Pn**	**09 23 59.2**	**+2.7**
PQL				S		**Sb**	**09 24 45.0**	**-4.3**
SHTL	**Shatili**	**3.89**	**6**	P		**Pb**	**09 24 09.7**	**+1.8**
SHTL				S		**Sg**	**09 25 06.0**	**+2.8**
QSAR	**Qusar**	**3.92**	**45**	P		**Pn**	**09 24 01.8**	**+2.1**
QSAR				S		**Sn**	**09 24 49.9**	**+3.5**
ATGJ	**Altiaghaj**	**3.94**	**57**	P		**Pn**	**09 24 01.6**	**+1.5**
ATGJ				S		**Sn**	**09 24 48.8**	**+1.8**
QUBA	**Quba, Azerbaij**	**3.94**	**48**	P		**Pn**	**09 24 01.5**	**+1.5**
QUBA				S		**Sb**	**09 24 51.3**	**-5.6**
SIZA	**Siyzn**	**4.02**	**54**	P		**Pn**	**09 24 03.4**	**+2.1**
SIZA				S		**Sn**	**09 24 52.7**	**+3.7**
IDHR	**Dehrash**	**4.33**	**160**	Pn		**Pn**	**09 24 07.6**	**+2.0**

IDC 14 09:26:18.8±3.4, 33°.67S×178°.79W, h0km, mb3.4/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=78.8km s-min=47.9km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.66**	**215**	Pn	Pn	09 27 43.4	-0.7
	1.7nm,0.3s,baz=272,slow=4.3,SNR=15						
URZ				Sn	Sn	09 28 43.5	-6.3
	0.9nm,0.3s,baz=339,slow=23,SNR=7.2 3.2nm,0.3s						
ASAR	**Alice Springs**	**42.37**	**271**	P	P	09 34 15.2	+0.2
	0.7nm,1.0s,baz=107,slow=7.5,SNR=5.4 0.7nm,1.0s						
WRA	**Warramunga Arr**	**43.66**	**276**	P	P	09 34 25.2	-0.2
	0.3nm,0.7s,baz=115,slow=8.5,SNR=4.7 0.3nm,0.7s						
FINES	**FINESS Array B**	**147.94**	**338**	PKPbc	PKPbc	09 46 04.4	-0.8
	0.9nm,0.8s,baz=46,slow=4.7,SNR=1.2						

*IDC **14** 09:27:02.8±1.1, 23°.42N×94°.83E, h0km, mb3.5/5, mbtmp3.5/7, ML4.0/2, Error ellipse: s-maj=36.2km s-min=18.9km az=60.0*
*NEIC **14** 09:27:12.0±1.1, 23°.37N±0°.04×94°.33E±0°.08, h85km±1km, mb4.2/11, Error ellipse: s-maj=11.3km s-min=6.1km az=103.0*
*NDI **14** 09:27:15.0±2.3, 23°.50N×94°.15E, h95km, ML3.5, MW3.5, Presumed earthquake*
ISC 14 09:27:12.1±1.0, 23°.40N±0°.06×94°.25E±0°.06, h91km±9km, n36, σ1§62/45, mb3.8/11, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**0.83**	**4**		**Pn**	**09 27 29.6**	**-0.5**
MORE					**Sn**	**09 27 43.3**	**-0.2**
IMP	**Imphal**	**1.45**	**349**	*e*P	**Pn**	**09 27 39.3**	**+1.9**
IMP				*e*S	**Sn**	**09 27 57.5**	**+1.1**
SILR	**SILCHAR**	**1.91**	**317**	*e*P	**Pn**	**09 27 43.6**	**+0.5**
SILR				*e*S	**Sn**	**09 28 07.2**	**+0.5**
SILR				IAML		09 28 17.7	
	comp=N,357nm,0.3s						
SILR				IAML		09 28 20.1	
	comp=E,444nm,0.4s						
KOHI	**KOHIMA**	**2.31**	**357**	*ex*	Pn	09 27 43.4	-5.3
KOHI				*e*S	**Sn**	**09 28 16.4**	**-0.2**
KOHI				IAML		09 28 26.4	
	comp=N,299nm,0.4s						
BRDH	**Bariadhala**	**2.50**	**254**	Pn	**Pn**	**09 27 51.6**	**+0.6**
	comp=N,66nm,0.3s,baz=268,slow=18,SNR=2.5						
BRDH				Sn	**Sn**	**09 28 22.3**	**+1.5**
	comp=N,116nm,0.3s,baz=247,slow=22,SNR=14 comp=N,130nm,0.3s						
BELO	**BELONIA**	**2.58**	**267**	*e*P	**Pn**	**09 27 52.8**	**+0.8**
BELO				*e*S	**Sn**	**09 28 24.1**	**+1.6**
MOKO	**MOKOCHONG**	**2.92**	**5**	*e*P	**Pn**	**09 27 59.5**	**+2.7**
MOKO				*e*S	**Sn**	**09 28 29.4**	**-1.6**
MOKO				IAML		09 28 45.3	
	comp=E,249nm,0.2s						
MOKO				IAML		09 28 46.7	
	comp=N,232nm,0.3s						
SHL	**Shillong**	**3.05**	**316**	Pn	**Pn**	**09 27 59.6**	**+1.1**
SHL	**Shillong**	**3.05**	**316**	*e*P	**Pn**	**09 27 60.0**	**+1.5**
SHL				*e*S	**Sn**	**09 28 30.6**	**-3.5**
SHL				IAML		09 28 33.6	
	comp=N,266nm,0.1s						
SHL				IAML		09 28 34.3	
	comp=E,324nm,0.3s						
TEZP	**TEZPUR**	**3.46**	**338**	*e*P	**Pn**	**09 28 04.8**	**+0.9**
TEZP				*e*S	**Sn**	**09 28 42.1**	**-1.8**
TEZP				IAML		09 28 45.4	
	comp=N,184nm,0.1s						
GUWA	**GUWAHATI**	**3.62**	**321**	*e*P	**Pn**	**09 28 06.4**	**+0.4**
GUWA				*e*S	**Sn**	**09 28 43.7**	**-4.1**
DHUB	**DHUBRI**	**4.66**	**305**	*e*P	**Pn**	**09 28 20.0**	**-0.2**
DHUB				*e*S	**Sn**	**09 29 09.0**	**-4.0**
DHUB				IAML		09 29 11.0	
	comp=N,91nm,0.2s						
CHTO	**Chiang Mai**	**6.33**	**135**	Pn	**Pn**	**09 28 40.7**	**-2.2**
CMAR	**Chiang Mai Arr**	**6.59**	**137**	Pn	Pn	09 28 36.7	-10
	comp=N,0.4nm,0.3s,baz=322,slow=13,SNR=1.6						
CMAR				Lg	Lg	09 30 09.2	
	comp=N,0.7nm,0.3s,baz=323,slow=26,SNR=4.6 comp=N,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**6.59**	**137**	Pn	**Pn**	**09 28 44.3**	**-2.2**
EVN	**Everest**	**8.09**	**306**		**Pn**	**09 29 08.1**	**+0.6**
MK31	**Makanchi Array**	**25.25**	**341**	P	**P**	**09 32 30.0**	**+0.3**
MKAR	**Makanchi Array**	**25.25**	**341**	P	**P**	**09 32 31.4**	**+1.7**
	comp=N,0.8nm,0.6s,baz=142,slow=10.0,SNR=7.0 comp=N,0.8nm,0.6s						
MKAR	**Makanchi Array**	**25.25**	**341**	P	**P**	**09 32 30.5**	**+0.8**
SONM	**Songino Array**	**26.24**	**19**	P	**P**	**09 32 39.1**	**+0.4**
	comp=N,0.2nm,0.5s,baz=203,slow=9.3,SNR=1.5 comp=N,0.2nm,0.5s						
SONM	**Songino Array**	**26.24**	**19**	P	**P**	**09 32 38.3**	**-0.4**
KURBB	**Kurchatov Arra**	**29.80**	**340**	P	**P**	**09 33 12.9**	**+2.6**
	comp=N,0.1nm,0.3s,baz=149,slow=8.2,SNR=2.3 comp=N,0.1nm,0.3s						
KURK	**Kurchatov**	**29.85**	**340**	P	**P**	**09 33 11.9**	**+1.2**
KURK				IAmb	IAmb	09 33 15.6	
	comp=Z,0.8nm,0.6s						
AB31	**Akbulak array**	**37.29**	**322**	P	**P**	**09 34 15.3**	**+0.1**
AB31				IAmb	IAmb	09 34 42.3	
	comp=Z,1.1nm,0.8s						
ABKAR	**Akbulak array**	**37.29**	**322**	P	**P**	**09 34 15.3**	**+0.1**
PETK	**Petropavlovsk-**	**55.76**	**41**	P	**P**	**09 36 39.7**	**+0.2**
WB0	**Warramunga Arr**	**58.09**	**134**	P	**P**	**09 36 55.4**	**-0.9**
WB0				IAmb	IAmb	09 37 08.3	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**58.18**	**135**	P	**P**	**09 36 56.1**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=324,slow=7.3,SNR=18 comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**58.18**	**135**	P	**P**	**09 36 54.4**	**-2.6**
WRA				IAmb	IAmb	09 37 04.0	
	comp=Z,0.7nm,1.5s						
WB2	**Warramunga Arr**	**58.19**	**135**	P	**P**	**09 36 56.4**	**-0.6**
WB2				IAmb	IAmb	09 37 28.6	
	comp=Z,11nm,1.4s						
WR8	**Warramunga Arr**	**58.29**	**134**	P	**P**	**09 36 56.9**	**-0.9**
WR0	**Warramunga Arr**	**58.32**	**134**	P	**P**	**09 36 57.0**	**-1.0**
AS31	**Alice Springs**	**60.60**	**138**	P	**P**	**09 37 12.8**	**-0.9**
AS31				IAmb	IAmb	09 37 29.4	
	comp=Z,1.6nm,1.2s						
ASAR	**Alice Springs**	**60.60**	**138**	P	**P**	**09 37 13.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=319,slow=6.8,SNR=13 comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**60.60**	**138**	P	**P**	**09 37 13.2**	**-0.4**
H31M	**Peel River**	**83.72**	**18**	P	**P**	**09 39 30.6**	**-0.1**
H31M				IAmb	IAmb	09 39 46.5	
	comp=Z,8.8nm,1.4s						

*IDC **14** 09:35:09.0±2.9, 53°.70N×87°.91E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=26.6km s-min=18.2km az=42.0*
ASRS 14 09:35:07.0±1.9, 53°.64N×87°.98E, h0km, M2.9(MOS)**, The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.90**	**281**	I	I	09 44 50.0	
	baz=91,slow=318,SNR=1.5						
ZALV	**Zalesovo Beam**	**1.90**	**281**	Pn	Pb	09 35 42.8	+0.2
	3.1nm,0.3s,baz=93,slow=14,SNR=38						
ZALV				Lg	Lg	09 36 08.5	
	6.3nm,0.3s,baz=96,slow=28,SNR=16						
KURBB	**Kurchatov Arra**	**6.55**	**246**	Pn	Pn	09 36 46.9	+2.4
	0.1nm,0.3s,baz=61,slow=14,SNR=7.6						
KURBB				Sn	Sn	09 37 59.6	-0.4
	baz=62,slow=27						
KURBB				Lg	Lg	09 38 35.0	
	0.1nm,0.3s,baz=70,slow=32,SNR=1.6 0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.76**	**210**	Pn	Pn	09 37 04.6	+3.4
	0.3nm,0.3s,baz=26,slow=13,SNR=6.6 0.4nm,0.2s						

*IDC **14** 09:37:03.2±1.9, 18°.5S±0°.3×178°.3W±0°.2, h550km, n9, σ0§67/9, mb3.8/7, Fiji Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.58**	**281**	P	**P**	**09 38 22.6**	**+0.5**
	15nm,0.5s,baz=358,slow=22,SNR=14						
DZM	**Mont Dzumac**	**14.80**	**253**	P	**P**	**09 40 09.6**	**-1.1**
	2.3nm,0.5s,baz=116,slow=23,SNR=5.7						
CTA	**Charters Tower**	**33.50**	**261**	P	**P**	**09 42 57.8**	**+0.2**
	1.7nm,0.3s,baz=95,slow=13,SNR=1.9 1.7nm,0.3s						
STKA	**Stephens Creek**	**38.50**	**242**	P	**P**	**09 43 39.5**	**+0.8**
	1.7nm,0.5s,baz=98,slow=8.4,SNR=7.2 1.7nm,0.5s						
WRA	**Warramunga Arr**	**44.68**	**260**	P	**P**	**09 44 27.3**	**-0.4**
	1.6nm,0.5s,baz=98,slow=6.6,SNR=74 1.6nm,0.5s						
ASAR	**Alice Springs**	**44.78**	**255**	P	**P**	**09 44 28.9**	**+0.4**
	9.0nm,0.5s,baz=89,slow=8.7,SNR=202 9.0nm,0.5s						
QSPA	**South Pole Qui**	**71.61**	**180**	P	**P**	**09 47 28.8**	**-0.2**
	0.8nm,0.5s,baz=114,slow=4.8,SNR=7.8 0.8nm,0.5s						
NVAR	**Mina Array Bea**	**79.72**	**44**	P	**P**	**09 48 14.1**	**-0.4**
	0.4nm,0.6s,baz=225,slow=9.2,SNR=3.7 0.4nm,0.6s						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**09 48 47.1**	**+0.3**
	0.6nm,0.7s,baz=215,slow=6.8,SNR=8.8 0.6nm,0.7s						

*IDC **14** 09:41:51.9±0.8, 49°.67S×121°.65E, h0km, mb4.1/8, mbtmp4.1/8, MS3.8/21, Error ellipse: s-maj=41.2km s-min=17.1km az=101.0*
*NEIC **14** 09:41:53.5±1.9, 49°.6S±0°.1×121°.7E±0°.3, h10km±1km, mb4.7/13, Error ellipse: s-maj=30.2km s-min=19.2km az=282.0*
ISC 14 09:41:53.8±0.6, 49°.65S±0°.09×121°.8E±0°.2, h10km, n50, σ1§14/31, mb4.6/13, MS3.8/20, 2C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.78**	**336**	T	T	10 02 13.6	
	baz=159,slow=74,SNR=65						
H01W2	**Cape Leeuwin H**	**15.78**	**336**	T	T	10 02 12.0	
	baz=159,slow=74,SNR=57						
H01W3	**Cape Leeuwin H**	**15.80**	**336**	T	T	10 02 11.7	
	baz=159,slow=74,SNR=56						
NWAO	**Narrogin (SRO)**	**17.05**	**347**	LR	LR	09 49 49.1	
	comp=Z,83nm,20.7s,baz=122,slow=28						
CASY	**Casey**	**17.67**	**195**	P	**P**	**09 45 59.4**	**-1.2**
STKA	**Stephens Creek**	**23.11**	**47**	P	**P**	**09 46 59.9**	**+0.2**
	3.6nm,0.9s,baz=188,slow=9.7,SNR=5.6						
STKA				LR	LR	09 54 18.4	
	comp=Z,224nm,20.2s,baz=213,slow=32 3.6nm,0.9s						
ASAR	**Alice Springs**	**27.61**	**24**	P	**P**	**09 47 41.0**	**-0.2**
	1.8nm,1.0s,baz=197,slow=9.4,SNR=8.6						
ASAR				LR	LR	09 57 32.9	
	comp=Z,581nm,20.6s,baz=157,slow=34 1.8nm,1.0s						
AS31	**Alice Springs**	**27.61**	**24**	P	**P**	**09 47 41.6**	**+0.3**
WRA	**Warramunga Arr**	**31.28**	**23**	P	**P**	**09 48 14.3**	**+0.5**
	0.9nm,1.0s,baz=189,slow=7.8,SNR=3.6 1.0nm,1.0s						
WRA	**Warramunga Arr**	**31.28**	**23**	P	**P**	**09 48 14.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**31.62**	**7**	LR	LR	09 59 49.3	
	comp=Z,307nm,20.4s,baz=177,slow=34						
VNDA	**Vanda**	**31.79**	**165**	P	**P**	**09 48 17.4**	**-0.3**
	1.0nm,1.0s,baz=302,slow=9.8,SNR=5.0						
VNDA				LR	LR	10 00 10.1	
	comp=Z,264nm,19.1s,baz=318,slow=34 1.0nm,1.0s						
VNDA	**Vanda**	**31.79**	**165**	P	**P**	**09 48 17.9**	**+0.1**
VNDA				IAmb	IAmb	09 48 38.5	
	comp=Z,6.3nm,1.2s						
LBZ	**Lake Benmore**	**32.93**	**100**	P	**P**	**09 48 28.1**	**0.0**
RPZ	**Rata Peaks**	**33.79**	**99**	LR	LR	09 58 53.9	
	comp=Z,31nm,18.2s,baz=246,slow=30						
MAW	**Mawson**	**33.86**	**216**	LR	LR	10 01 07.7	
	comp=Z,58nm,18.1s,baz=58,slow=34						
INZ	**Inchbonnie**	**34.51**	**98**	P	**P**	**09 48 41.6**	**-0.3**
INZ				IAmb	IAmb	09 48 49.7	
	comp=Z,18nm,1.2s						
CTA	**Charters Tower**	**35.34**	**42**	LR	LR	10 03 04.7	
	comp=Z,203nm,18.0s,baz=214,slow=36						
QRZ	**Quartz Range**	**36.17**	**96**	P	**P**	**09 48 55.0**	**-1.2**
QSPA	**South Pole Qui**	**40.48**	**180**	P	**P**	**09 49 31.9**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=309,slow=1.1,SNR=9.9						
QSPA				LR	LR	10 05 48.2	
	comp=Z,273nm,18.2s,baz=16,slow=36 comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**40.48**	**180**	P	**P**	**09 49 33.7**	**+1.3**
QSPA				IAmb	IAmb	09 50 01.0	
	comp=Z,13nm,1.2s						
DZM	**Mont Dzumac**	**44.52**	**68**	LR	LR	10 06 09.3	
	comp=Z,57nm,19.8s,baz=218,slow=33						
PMG	**Port Moresby**	**45.33**	**36**	LR	LR	10 08 38.8	
	comp=Z,94nm,18.8s,baz=163,slow=35						
SIJI	**Sorong**	**49.26**	**13**	LR	LR	10 11 16.5	
	comp=Z,54nm,21.0s,baz=200,slow=36						
JAY	**Jayapura**	**49.64**	**25**	LR	LR	10 11 18.7	
	comp=Z,205nm,20.8s,baz=209,slow=36						
TOLI2	**Tolitoli**	**50.57**	**359**	P	**P**	**09 50 51.3**	**-1.1**
TOLI2				IAmb	IAmb	09 50 57.7	
	comp=Z,8.6nm,0.9s						
KRVT	**Keravat (AS076**	**51.91**	**40**	LR	LR	10 12 55.5	
	comp=Z,30nm,19.4s,baz=142,slow=36						
BELA	**Belgrano 2**	**51.92**	**186**	P	**P**	**09 51 01.4**	**-0.6**
BELA				IAmb	IAmb	09 51 04.2	
	comp=Z,8.6nm,0.9s						
SNAA	**Sanae**	**52.85**	**199**	⇑P	**P**	**09 51 11.4**	**+2.4**
	comp=Z,118nm,1.1s						
SNAA	**Sanae**	**52.85**	**199**	P	**P**	**09 51 07.7**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=148,slow=6.2,SNR=7.1 comp=Z,3.5nm,0.8s						
SNAA	**Sanae**	**52.85**	**199**	P	**P**	**09 51 09.6**	**+0.6**
SNAA				IAmb	IAmb	09 51 13.0	
	comp=Z,18nm,1.4s						
VNA1	**Neumayer--Stat**	**54.77**	**198**	⇑P	**P**	**09 51 25.5**	**+2.6**
	comp=Z,7.8nm,1.1s						
DAV	**Davao City (W)**	**56.57**	**4**	LR	LR	10 15 23.9	
	comp=Z,81nm,20.6s,baz=156,slow=36						
GUMO	**Guam**	**66.16**	**25**	LR	LR	10 21 59.3	
	comp=Z,45nm,18.8s,baz=114,slow=36						
RAR	**Rarotonga**	**66.72**	**96**	LR	LR	10 19 08.3	
	comp=Z,76nm,18.4s,baz=274,slow=34						
PALK	**Pallekele**	**67.03**	**315**	LR	LR	10 17 58.9	
	comp=Z,111nm,18.8s,baz=88,slow=32						
CM31	**Chiang Mai Arr**	**70.77**	**337**	P	**P**	**09 53 08.9**	**-1.2**
CM31				IAmb	IAmb	09 53 11.8	
	comp=Z,4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**70.77**	**337**	P	**P**	**09 53 09.7**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=189,slow=5.5,SNR=8.4						
CMAR				LR	LR	10 24 21.2	
	comp=Z,47nm,18.4s,baz=195,slow=36 comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**70.77**	**337**	P	**P**	**09 53 08.4**	**-1.8**
SUR	**Sutherland**	**72.54**	**241**	LR	LR	10 19 31.1	
	comp=Z,151nm,18.2s,baz=106,slow=31						
TPUB	**Ta-pu**	**72.62**	**359**	P	**P**	**09 53 23.7**	**+2.5**
MJAR	**Matsushiro Arr**	**87.03**	**13**	LR	LR	10 30 41.7	
	comp=Z,16nm,21.5s,baz=193,slow=34						
PLCA	**Paso Flores**	**89.34**	**171**	P	**P**	**09 54 50.2**	**-0.2**
	comp=Z,7.6nm,1.2s,baz=51,slow=6.5,SNR=3.6 comp=Z,7.6nm,1.2s						
PLCA	**Paso Flores**	**89.34**	**171**	P	**P**	**09 54 50.2**	**-0.2**
PDAR	**Pinedale Array**	**144.38**	**81**	PKP	**PKPdf**	**10 01 29.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=219,slow=1.9,SNR=5.5						
YNE	**Yellowstone No**	**145.14**	**77**		**PKPdf**	**10 01 32.4**	**+1.3**
RTBA	**Rita Blanca**	**145.38**	**95**	PKPdf	**PKPab**	**10 01 31.4**	**-0.3**
EKA	**Eskdalemuir Ar**	**146.78**	**301**	PKPbc	**PKPbc**	**10 01 33.8**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=73,slow=2.9,SNR=4.5						
YKA	**Yellowknife Ar**	**147.13**	**45**	PKPbc	**PKPbc**	**10 01 35.8**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=276,slow=12,SNR=3.9						
YKA	**Yellowknife Ar**	**147.13**	**45**		**PKPbc**	**10 01 36.0**	**+0.3**

IDC 14 09:59:31.7±2.5, 2°.06N×126°.48E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=216.2km s-min=28.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.19**	**161**	P	P	10 04 40.0	-0.3
	0.4nm,0.6s,baz=340,slow=11,SNR=15 0.4nm,0.6s						
ASAR	**Alice Springs**	**26.58**	**165**	P	P	10 05 12.1	+0.3
	0.1nm,0.5s,baz=344,slow=11,SNR=5.1 0.1nm,0.5s						
MKAR	**Makanchi Array**	**58.78**	**326**	P	P	10 09 31.8	0.0
	0.2nm,0.4s,baz=119,slow=8.6,SNR=2.3 0.2nm,0.4s						

*IDC **14** 10:08:05.8±1.8, 7°.05S×129°.58E, h151km±17km, mb3.6/7, mbtmp4.1/12, Error ellipse: s-maj=28.8km s-min=15.6km az=79.0*
*NEIC **14** 10:08:06.4±0.7, 7°.00S±0°.10×129°.56E±0°.09, h161km±11km, mb4.2/7, Error ellipse: s-maj=15.3km s-min=11.6km az=143.0*
ISC 14 10:08:05.1±0.6, 7°.00S±0°.06×129°.53E±0°.08, h150km, n33, σ1§42/36, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.01**	**119**	Pn	**Pn**	**10 08 42.1**	**+1.9**
FAKI	**Fak Fak**	**4.87**	**34**	Pn	**Pn**	**10 09 17.8**	**+1.0**
SOEI	**Soe**	**5.89**	**242**	Pn	**Pn**	**10 09 31.9**	**+1.5**
MTN	**Manton Dam**	**6.02**	**165**		**Pn**	**10 09 33.0**	**+1.0**
SIJI	**Sorong**	**6.33**	**16**	P	**Pn**	**10 09 37.6**	**+1.4**
	11nm,0.2s,baz=240,slow=24,SNR=29						
SIJI				S	**Sn**	**10 10 44.1**	**-3.5**
	14nm,0.3s,baz=267,slow=23,SNR=21						
BATI	**Baumata**	**6.62**	**241**	P	**Pn**	**10 09 40.2**	**0.0**
	28nm,0.4s,baz=187,slow=3.1,SNR=7.5						
BATI				S	**Sn**	**10 10 51.3**	**-3.3**
	40nm,0.4s,baz=158,slow=17,SNR=6.6						
KNRA	**Kununurra**	**8.66**	**185**	Pn	**Pn**	**10 10 07.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**11.67**	**199**	P	**Pn**	**10 10 47.6**	**+0.5**
	1.7nm,0.3s,baz=13,slow=11,SNR=14						
FITZ				S	Sn	10 12 46.3	-10
	13nm,0.5s,baz=101,slow=18,SNR=9.6						
FITZ	**Fitzroy Crossi**	**11.67**	**199**		**Pn**	**10 10 46.6**	**-0.4**
WB0	**Warramunga Arr**	**13.54**	**160**		**Pn**	**10 11 09.2**	**-2.1**
WRA	**Warramunga Arr**	**13.69**	**161**	P	**Pn**	**10 11 11.4**	**-1.7**
	1.4nm,0.5s,baz=332,slow=14,SNR=35						
WRA				S	Sn	10 13 34.5	-10
	5.4nm,0.6s,baz=338,slow=22,SNR=11						
WRA	**Warramunga Arr**	**13.69**	**161**	Pn	**Pn**	**10 11 10.4**	**-2.7**
WR8	**Warramunga Arr**	**13.75**	**160**	Pn	**Pn**	**10 11 12.2**	**-1.8**
AS31	**Alice Springs**	**17.10**	**166**	P	**P**	**10 11 54.6**	**+0.1**
AS31				IAmb	IAmb	10 11 57.2	
	comp=Z,3.6nm,0.4s						
ASAR	**Alice Springs**	**17.10**	**166**	P	**Pn**	**10 11 56.4**	**+1.1**
	comp=Z,5.4nm,0.6s,baz=345,slow=10,SNR=102						
ASAR				S	S	10 14 55.2	-10
	comp=Z,0.8nm,0.3s,baz=250,slow=11,SNR=7.6						
ASAR				ScP	**ScP**	**10 19 51.4**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=348,slow=1.6,SNR=4.9						
ASAR	**Alice Springs**	**17.10**	**166**	P	**P**	**10 11 54.9**	**+0.4**
STKA	**Stephens Creek**	**27.19**	**157**	P	**P**	**10 13 35.4**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=343,slow=11,SNR=2.9 comp=Z,1.1nm,0.5s						
TATO	**Taipei**	**32.73**	**346**	P	**P**	**10 14 22.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**39.38**	**310**	P	**P**	**10 15 21.5**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=122,slow=8.4,SNR=1.4 comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**10 18 49.8**	**+1.9**
	comp=Z,2.1nm,0.5s,baz=119,slow=7.8,SNR=28 comp=Z,2.1nm,0.5s						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**10 18 49.0**	**+1.1**
MAKZ	**Makanchi**	**68.15**	**327**	P	**P**	**10 18 50.3**	**+1.3**
MAKZ				IAmb	IAmb	10 18 51.4	
	comp=Z,1.9nm,0.6s						
ZAA0	**Zalesovo Array**	**71.38**	**334**	P	**P**	**10 19 08.2**	**-0.4**
ZAA0				IAmb	IAmb	10 19 09.6

OBF0	**Syolatti, Pyha**	**2.67**	**270**	PG	**Pg**	**10**	**20**	**41.4 -0.4**
OBF0				smax	smax	10	21	13.1
	comp=Z,4.7nm,0.2s							
RNF	**Rovaniemi**	**2.69**	**319**	PB	**Pb**	**10**	**20**	**39.4 -0.1**
	baz=136							
RNF				SG	**Sg**	**10**	**21**	**15.3 -1.6**
SUF	**Sumiainen**	**2.71**	**226**	*eP*	**Pb**	**10**	**20**	**39.6 -0.4**
SUF	**Sumiainen**	**2.71**	**226**	PB	**Pb**	**10**	**20**	**40.2 +0.2**
SUF				smax	smax	10	21	14.1
	comp=Z,2.0nm,0.2s							
OBF8	**Ulkokalla**	**3.03**	**267**	PG	**Pg**	**10**	**20**	**47.4 -1.4**
OBF8				smax	smax	10	21	23.4
	comp=Z,2.4nm,0.2s							
APA0	**Apatity Array**	**3.15**	**18**	P	**Pn**	**10**	**20**	**43.4 +1.9**
APA0				S	**Sn**	**10**	**21**	**19.9 +0.2**
KALU	**Kalix**	**3.21**	**295**	PG	**Pb**	**10**	**20**	**49.2 +0.7**
KEF	**Keuruu**	**3.52**	**228**	*eP*	**Pb**	**10**	**20**	**51.0 -2.8**
KEF	**Keuruu**	**3.52**	**228**	SB	**Sb**	**10**	**21**	**37.0 -0.1**
KLF	**Kolari**	**3.70**	**317**	PB	**Pb**	**10**	**20**	**53.6 -3.3**
FINES	**FINESS Array B**	**3.77**	**214**	Pn	**Pn**	**10**	**20**	**52.2 +2.1**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=1.2							
FINES				Pg	**Pb**	**10**	**20**	**57.8 -0.3**
	comp=Z,0.2nm,0.3s,baz=26,slow=15,SNR=4.7							
FINES				Lg	Lg	10	21	50.5
	comp=Z,0.5nm,0.3s,baz=26,slow=28,SNR=2.7							
	comp=Z,0.3nm,0.4s							
VAF	**Ylistaro**	**3.79**	**248**	*eP*	**Pb**	**10**	**20**	**54.8 -3.5**
VAF	**Ylistaro**	**3.79**	**248**	PG	**Pb**	**10**	**20**	**59.4 +1.0**
ERTU	**Ertsjaerv**	**3.91**	**303**	PN	**Pn**	**10**	**20**	**55.3 +3.3**
RAJF	**Raja-Jooseppi**	**3.94**	**349**	PN	**Pn**	**10**	**20**	**53.2 +1.0**
RAJF				SN	**Sn**	**10**	**21**	**40.0 +1.0**
UMAU	**Umeaa**	**4.32**	**264**	SG	**Sg**	**10**	**22**	**09.4 +0.2**
VJF	**Virojoki**	**4.33**	**199**	SG	**Sg**	**10**	**22**	**08.4 -1.3**
HEF	**Hetta**	**4.64**	**327**	SN	**Sn**	**10**	**21**	**54.0 -2.4**
LAAU	**Lannavaara**	**4.81**	**319**	*eP*	**Pn**	**10**	**21**	**06.5 +2.2**
TERR	**Teriberka**	**4.93**	**20**	P	**Pn**	**10**	**21**	**05.8 -0.1**
ARCES	**ARCESS Array B**	**5.27**	**341**	Pn	**Pn**	**10**	**21**	**10.5 0.0**
	comp=Z,0.1nm,0.3s,baz=159,slow=15,SNR=16							
ARCES				Sn	**Sn**	**10**	**22**	**09.5 -2.4**
	comp=Z,0.2nm,0.3s,baz=159,slow=25,SNR=1.8							
ARCES				Lg	Lg	10	22	32.2
	comp=Z,0.3nm,0.3s,baz=154,slow=30,SNR=7.5							
	comp=Z,0.4nm,0.2s							
ARCES	**ARCESS Array B**	**5.27**	**341**	P	**Pn**	**10**	**21**	**11.7 +1.1**
ARCES				S	**Sn**	**10**	**22**	**11.6 -0.3**
RAF	**Rauma**	**5.38**	**231**	*eP*	**Pn**	**10**	**21**	**15.3 +3.3**
VADS	**Vadso**	**5.51**	**356**	S	**Sn**	**10**	**22**	**17.7 -0.2**
I37NO	**I37NO**	**6.43**	**319**	I	I	10	56	50.0
	baz=127,slow=316,SNR=4.1							
FAUS	**Fauske**	**6.74**	**301**	S	**Sn**	**10**	**22**	**51.0 +2.9**
HFS	**Hagfors**	**8.97**	**247**	Pn	**Pn**	**10**	**21**	**59.8 -1.5**
	comp=Z,0.1nm,0.3s,baz=69,slow=13,SNR=2.1							
HFS				Lg	Lg	10	24	30.0
	comp=Z,0.2nm,0.3s,baz=53,slow=29,SNR=2.2							
	comp=Z,0.7nm,0.7s							

*SOME **14** 10:24:36.6, 43.65N × 69.78E*
NNC 14 10:24:36.9±2.2, 43.68N × 69.76E, h0km, mb3.7, mpv3.0, 3C-1D, Error ellipse: s-maj=17.3km s-min=6.7km az=128.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.65**	**175**	P	Pn	10 24 52.4	-1.0
	1.7nm,0.2s						
BRLS				S	Sn	10 25 05.6	+1.2
	20nm,0.4s						
KK31	**Karatay Array**	**0.79**	**136**	||P	Pg	10 24 52.0	0.0
	0.5nm,0.2s,baz=324,slow=18,SNR=70						
KK31				↑↑S	Sg	10 25 02.4	+0.1
	46nm,0.7s,baz=314,slow=33,SNR=13						
IUG	**Iuzhnay**	**1.54**	**173**	P	Pb	10 25 06.3	-0.1
	26nm,0.4s						
IUG				S	Sn	10 25 28.8	+2.3
	80nm,0.6s						
BTLS	**Baital**	**3.36**	**65**	Pg	Pb	10 25 39.0	+1.7
	13nm,0.5s						
BTLS				Lg	Lg	10 26 24.3	
	7.3nm,0.6s						
SGDS	**Sogindy**	**3.54**	**92**	Pg	Pb	10 25 42.0	+1.6
	2.0nm,0.5s						
SGDS				Lg	Lg	10 26 29.0	
	6.1nm,0.7s						
AAK	**Ala-Archa**	**3.61**	**105**	↑↑Pg	Pb	10 25 42.7	+1.0
	1.1nm,0.5s						
AAK				↑↑Lg	Lg	10 26 29.7	
KRBS	**Karabastau**	**4.29**	**88**	Pg	Pb	10 25 55.0	+1.8
	2.3nm,0.6s						
KRBS				Lg	Lg	10 26 51.4	
	2.7nm,0.6s						
KST	**Kastek**	**4.56**	**96**	Pg	Pg	10 26 01.2	-3.1
	2.9nm,0.2s						
KST				Lg	Lg	10 27 02.1	
	8.1nm,0.7s						
KTBS	**Karatobe**	**5.02**	**87**	Pg	Pb	10 26 08.6	+3.0
	0.2nm,0.1s						
KTBS				Lg	Lg	10 27 14.3	
	5.2nm,0.6s						

*IDC **14** 11:25:08.8±4.0, 14.06N × 124.68E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=314.7km s-min=30.7km az=64.0*
*MAN **14** 11:26:19.0, 7.01N × 127.74E, h32km, MS2.7*
ISC 14 11:26:18.9±2.8, 7.1N±0.4 × 127.8E±0.4, h35km, n4, σ1s09/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	**1.52**	**297**	*eP*	**Pn**	**11 26 44.1**	**+0.6**
CDOP				*eS*	**Sn**	**11 27 02.1**	**+0.1**
BIPH	**Bislig**	**1.79**	**308**	*i* P	**Pn**	**11 26 48.1**	**+0.8**
BIPH				*i* S	**Sn**	**11 27 07.4**	**-1.5**
WRA	**Warramunga Arr**	**27.62**	**167**	P	**P**	**11 32 03.3**	**+0.1**
	0.4nm,0.9s,baz=344,slow=9.1,SNR=1.3						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**31.14**	**169**	P	**P**	**11 32 34.0**	**-0.5**
	0.3nm,0.8s,baz=343,slow=7.3,SNR=4.1						
	0.3nm,0.8s						

*AFAD **14** 11:30:56.4, 35.33N × 41.10E, h4km ±5km, MW4.1*
*ISK **14** 11:31:10.1, 35.92N × 40.53E, h6km, ML4.1/14*
ISC 14 11:30:56.5±1.9, 35.29N±0.07 × 40.99E±0.08, h10km, n35, σ2s03/48, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANL	**SANLIURFA_Merk**	**2.48**	**320**	P	**Pb**	**11 31 41.5**	**+0.3**
SANL				S	**Sn**	**11 32 08.2**	**+0.9**
SURC	**SANLIURFA_SURC**	**2.50**	**310**	P	**Pb**	**11 31 41.2**	**-0.2**
SURC				S	**Sn**	**11 32 08.2**	**+0.5**
DYBB	**Diyarbakir**	**2.75**	**346**	Pn	**Pb**	**11 31 46.2**	**+0.5**
URFA	**Urfa**	**2.77**	**321**	Pn	**Pb**	**11 31 46.0**	**-0.1**
URFA				Sn	**Sn**	**11 32 12.3**	**-2.2**
HANM	**anlurfa/Hi**	**2.85**	**324**	P	**Pb**	**11 31 45.9**	**-1.6**
HANM				S	**Sn**	**11 32 19.3**	**+2.9**
SVAN	**Silvan-Diyarba**	**2.86**	**3**	Pn	**Pg**	**11 31 49.4**	**-1.9**
ATAB	**Bozova**	**3.08**	**316**	P	**Pb**	**11 31 49.7**	**-1.6**
ATAB				S	**Sb**	**11 32 27.3**	**-1.6**
NARI	**Adyaman-Kaht**	**3.15**	**326**	P	**Pb**	**11 31 52.7**	**+0.1**
NARI				S	**Sb**	**11 32 27.9**	**-3.1**
NZIP	**Nizip/Gaziante**	**3.20**	**304**	P	**Pb**	**11 31 52.3**	**-1.2**
NZIP				S	**Sb**	**11 32 31.6**	**-1.1**
CNGT	**ngs**	**3.22**	**336**	P	**Pb**	**11 31 51.9**	**-1.9**
CNGT				S	**Sb**	**11 32 31.0**	**-2.1**
AZEY	**Adyaman-Merk**	**3.35**	**320**	P	**Pn**	**11 31 52.1**	**+3.2**
AZEY				S	**Sb**	**11 32 39.6**	**+2.9**
SVRC	**Sivrice-ELAZID**	**3.37**	**337**	Pn	**Pb**	**11 31 54.4**	**-1.9**
MDYL	**Doganyol-Malat**	**3.40**	**333**	Pn	**Pb**	**11 31 54.9**	**-2.0**
ESIJ	**Sivrice-Elazig**	**3.43**	**337**	Pn	**Pb**	**11 31 55.3**	**-2.1**
GZT	**Gaziantep**	**3.45**	**308**	P	**Pn**	**11 31 54.5**	**+4.1**
GZT				S	**Sb**	**11 32 38.4**	**-1.4**
ESGZ	**Sivrice-Elazig**	**3.50**	**334**	Pn	**Pb**	**11 31 56.6**	**-1.9**
KUZU	**Kuzuini**	**3.50**	**296**	P	**Pg**	**11 32 02.8**	**-0.8**
KUZU				S	**Sb**	**11 32 41.0**	**-0.2**
GAZ	**Gaziantep**	**3.59**	**303**	Pn	**Pb**	**11 31 58.9**	**-1.1**
AKCA	**Adyaman/G¶l**	**3.65**	**314**	P	**Pb**	**11 31 57.8**	**-3.4**
AKCA				S	**Sb**	**11 32 44.2**	**-1.2**
RHAN	**Hatay/Reyhanl**	**3.70**	**286**	P	**Pb**	**11 32 01.8**	**-0.1**
RHAN				S	**Sb**	**11 32 48.7**	**+1.9**
BNGB	**Bingl**	**3.70**	**356**	Pn	**Pb**	**11 32 00.7**	**-1.3**
KHMN	**Narli-Kahraman**	**3.74**	**305**	Pn	**Pb**	**11 32 00.8**	**-1.8**
AKCD	**Akcadag**	**3.88**	**322**	P	**Pn**	**11 31 59.8**	**+3.5**
HASA	**Hatay-Hassa-Ha**	**3.93**	**293**	P	**Pn**	**11 31 60.0**	**+3.1**
HASA				S	**Sb**	**11 32 51.9**	**-1.6**
KMRS	**Kahramanmaras**	**3.97**	**305**	Pn	**Pb**	**11 32 04.2**	**-2.4**
KAMA	**Osmaniye**	**3.98**	**300**	P	**Pn**	**11 32 00.2**	**+2.6**
KAMA				S	**Sb**	**11 32 54.5**	**-0.3**
BEIL	**Beino**	**4.02**	**261**	*eP*	**Pb**	**11 32 05.5**	**-1.9**
YAYL	**Yayladag**	**4.05**	**282**	P	**Pb**	**11 32 04.6**	**-3.3**
YAYL				S	**Sg**	**11 33 06.0**	**-0.4**
HWQ	**Hawqa**	**4.27**	**258**	*eP*	**Pb**	**11 32 09.8**	**-2.0**
ARPR	**Arapgir-MALATY**	**4.35**	**332**	Pn	Pb	11 32 08.3	-4.7
ANDN	**Andirin**	**4.39**	**303**	P	**Pb**	**11 32 12.4**	**-1.3**
ILIC	**Ilic-Erzincan**	**4.58**	**336**	Pn	Pb	11 32 11.8	-5.2
RCY	**Rachaya**	**4.62**	**249**	*eP*	**Pb**	**11 32 16.5**	**-1.3**
SHBL	**Chebaa**	**4.75**	**247**	*eP*	**Pb**	**11 32 18.0**	**-2.0**
SARI	**SarD1z-Kayseri**	**4.81**	**312**	Pn	Pn	11 32 15.5	+6.4

*NNC **14** 11:33:39.7±1.6, 44.72N × 81.83E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=20.1km s-min=5.6km az=123.0, Suspected Mining explosion.*
*SOME **14** 11:33:40.1, 44.67N × 82.00E, h35km*
ISC 14 11:33:35.8±1.7, 44.68N±0.07 × 82.1E±0.1, h0km, n12, σ1s09/21, 5C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNOS	**Konyrlen**	**2.09**	**262**	P	**Pb**	**11 34 15.3**	**+0.6**
	16nm,0.2s						
KNOS				S	**Sb**	**11 34 40.5**	**-0.7**
	26nm,0.2s						
MK31	**Makanchi Array**	**2.12**	**4**	Pn	**Pb**	**11 34 15.8**	**+0.6**
	2.5nm,0.3s,baz=192,slow=12,SNR=120						
MK31				↑Sn	**Sg**	**11 34 43.9**	**-0.1**
	1.3nm,0.2s,baz=188,slow=27,SNR=23						
MAKZ	**Makanchi**	**2.13**	**358**	↑Pn	**Pb**	**11 34 16.0**	**+0.6**
	3.1nm,0.3s						
MAKZ				↑Sn	**Sg**	**11 34 43.7**	**-0.6**
	4.0nm,0.3s						
PDGK	**Podgornoye**	**2.29**	**235**	↑Pn	**Pb**	**11 34 18.4**	**+0.3**
	5.1nm,0.4s						
PDGK				↑Sn	**Sb**	**11 34 47.8**	**+0.7**
	4.4nm,0.3s						
SHLS	**Shalkode**	**2.42**	**232**	Pg	**Pn**	**11 34 17.0**	**+0.3**
	23nm,0.1s						
SHLS				Lg	Lg	11 34 43.7	
	29nm,0.2s						
SHLS	**Shalkode**	**2.42**	**232**	*eP*	**Pn**	**11 34 17.0**	**+0.3**
	23nm,0.1s						
SHLS				*eS*	**Sn**	**11 34 43.7**	**-3.4**
	29nm,0.2s						
UZB	**Uzynbulak**	**2.68**	**236**	Pg	**Pb**	**11 34 25.7**	**+1.0**
	9.8nm,0.2s						
UZB				Lg	Lg	11 34 58.9	
	6.4nm,0.1s						
UZB	**Uzynbulak**	**2.68**	**236**	*eP*	**Pb**	**11 34 25.7**	**+1.0**
	9.8nm,0.2s						
UZB				*eS*	**Sb**	**11 34 58.9**	**+0.7**
	6.4nm,0.1s						
KPKS	**Kokpek**	**2.72**	**245**	*eP*	**Pb**	**11 34 26.3**	**+0.9**
	6.7nm,0.1s						
KPKS				*eS*	**Sb**	**11 34 59.4**	**+0.1**
	21nm,0.2s						
ARXS	**Arharly**	**3.07**	**263**	Pg	**Pb**	**11 34 32.4**	**+1.1**
	4.7nm,0.3s						
ARXS				Lg	Lg	11 35 10.2	
	12nm,0.4s						
ARXS	**Arharly**	**3.07**	**263**	*eP*	**Pb**	**11 34 32.4**	**+1.1**
	4.7nm,0.3s						
ARXS				*eS*	**Sb**	**11 35 10.2**	**+0.8**
	12nm,0.4s						
SATY	**Saty**	**3.10**	**240**	*eP*	**Pb**	**11 34 32.8**	**+0.8**
	4.9nm,0.1s						
SATY				*eS*	**Sb**	**11 35 10.5**	**+0.2**
	28nm,0.3s						

*IDC **14** 11:51:31.9±1.0, 49.78S × 122.35E, h0km, mb3.8/7, mbtmp3.8/7, MS3.7/13, Error ellipse: s-maj=49.1km s-min=18.3km az=102.0*
ISC 14 11:51:33.3±1.0, 49.85±0.1 × 122.4E±0.3, h10km, n20, σ0s61/8, mb3.8/7, MS3.7/12, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.05**	**335**	T	T	12 11 52.7	
	baz=159,slow=74,SNR=22						
H01W2	**Cape Leeuwin H**	**16.05**	**335**	T	T	12 11 53.5	
	baz=159,slow=74,SNR=22						
H01W3	**Cape Leeuwin H**	**16.07**	**335**	T	T	12 11 53.5	
	baz=159,slow=74,SNR=25						
NWAO	**Narrogin (SRO)**	**17.27**	**345**	LR	LR	12 00 32.6	
	comp=Z,384nm,21.4s,baz=113,slow=31						
STKA	**Stephens Creek**	**22.95**	**46**	P	**P**	**11 56 38.3**	**+0.7**
	2.8nm,0.7s,baz=226,slow=11,SNR=4.1						
STKA				LR	LR	12 04 55.4	
	comp=Z,107nm,18.5s,baz=209,slow=35						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**27.59**	**23**	P	**P**	**11 57 20.9**	**+0.2**
	1.7nm,0.8s,baz=187,slow=8.8,SNR=12						
ASAR				LR	LR	12 07 39.5	
	comp=Z,232nm,18.1s,baz=212,slow=35						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**31.27**	**22**	P	**P**	**11 57 52.5**	**-0.8**
	0.6nm,1.0s,baz=194,slow=8.3,SNR=2.4						
	0.6nm,1.0s						
VNDA	**Vanda**	**31.57**	**165**	P	**P**	**11 57 55.4**	**0.0**
	0.6nm,0.9s,baz=305,slow=8.3,SNR=3.6						
VNDA				LR	LR	12 09 57.5	
	comp=Z,141nm,18.5s,baz=318,slow=35						
	0.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**31.72**	**6**	LR	LR	12 09 25.5	
	comp=Z,180nm,20.3s,baz=108,slow=34						
MAW	**Mawson**	**33.96**	**216**	LR	LR	12 09 50.9	
	comp=Z,62nm,20.3s,baz=67,slow=32						
CTA	**Charters Tower**	**35.21**	**41**	LR	LR	12 10 55.5	
	comp=Z,116nm,20.5s,baz=229,slow=33						
QSPA	**South Pole Qui**	**40.34**	**180**	P	**P**	**11 59 10.8**	**+0.1**
	1.4nm,1.0s,baz=345,slow=7.2,SNR=5.2						
QSPA				LR	LR	12 15 06.7	
	comp=Z,164nm,19.5s,baz=356,slow=35						
	1.4nm,1.0s						
SIJI	**Sorong**	**49.32**	**12**	LR	LR	12 23 57.6	
	comp=Z,71nm,18.2s,baz=98,slow=39						
JAY	**Jayapura**	**49.62**	**24**	LR	LR	12 20 33.9	
	comp=Z,123nm,21.4s,baz=184,slow=35						
SNAA	**Sanae**	**52.84**	**199**	P	**P**	**12 00 48.4**	**0.0**
	3.0nm,0.9s,baz=152,slow=6.6,SNR=5.7						
	3.0nm,0.9s						
PMSA	**Palmer Station**	**65.67**	**177**	LR	LR	12 29 22.9	
	comp=Z,65nm,21.4s,baz=202,slow=35						
CMAR	**Chiang Mai Arr**	**71.03**	**336**	P	**P**	**12 02 51.8**	**+0.5**
	0.6nm,0.5s,baz=197,slow=5.2,SNR=5.2						
	0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**87.09**	**13**	LR	LR	12 39 46.9	
	comp=Z,28nm,21.1s,baz=188,slow=33						
PLCA	**Paso Flores**	**89.15**	**170**	LR	LR	12 42 48.4	
	comp=Z,25nm,18.6s,baz=158,slow=34						
YKA	**Yellowknife Ar**	**146.98**	**46**	PKPbc	**PKPbc**	**12 11 14.1**	**-0.7**
	0.7nm,0.6s,baz=258,slow=3.1,SNR=1.4						

*KRSC **14** 11:55:25.8±0.4, 55.75N × 162.05E, h54km ±12km, Mc4.0, Ml4.2*
*MOS **14** 11:55:26.7±0.7, 55.81N × 162.07E, h53km, mb4.2/2, Error ellipse: s-maj=9.1km s-min=4.3km az=72.1*
*IDC **14** 11:55:28.9±2.5, 56.01N × 161.47E, h62km ±27km, mb3.4/14, mbtmp3.7/16, ML3.4/2, MS2.8/3, Error ellipse: s-maj=21.2km s-min=13.9km az=164.0*
ISC 14 11:55:26.8±1.1, 55.78N±0.02 × 162.03E±0.02, h29km ±8km, n121, σ1s38/180, mb3.8/15, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.61**	**38**	PN	**Pb**	**11 55 39.5**	**+0.5**
KBG				S	**Sn**	**11 55 49.1**	**+0.7**
KBG	**Krutoberegovo**	**0.61**	**38**	*eP*	**Pb**	**11 55 39.6**	**+0.5**
KBG				*eS*	**Sn**	**11 55 49.1**	**+0.7**
KBTR	**Krutoberegovo**	**0.62**	**45**	PN	**Pn**	**11 55 40.2**	**+0.6**
KBTR				S	**Sn**	**11 55 49.6**	**+1.0**
KBTR	**Krutoberegovo**	**0.62**	**45**	*eP*	**Pn**	**11 55 40.2**	**+0.6**
KBTR				*eS*	**Sn**	**11 55 49.7**	**+1.0**
ZLN	**Zelenaya**	**0.73**	**290**	PN	**Pn**	**11 55 41.6**	**+0.3**
ZLN				S	**Sn**	**11 55 52.1**	**+0.6**
ZLN	**Zelenaya**	**0.73**	**290**	*eP*	**Pn**	**11 55 41.6**	**+0.3**
ZLN				*eS*	**Sn**	**11 55 52.2**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**0.77**	**283**	PN	**Pn**	**11 55 42.1**	**+0.3**
BZGR				S	**Sn**	**11 55 52.8**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**0.77**	**283**	*eP*	**Pn**	**11 55 42.1**	**+0.3**
BZGR				*eS*	**Sn**	**11 55 52.9**	**+0.4**
CIRR	**Tsirk**	**0.80**	**296**	PN	**Pb**	**11 55 42.3**	**+0.1**
CIRR				S	**Sn**	**11 55 53.4**	**+0.2**
CIRR	**Tsirk**	**0.80**	**296**	*eP*	**Pb**	**11 55 42.3**	**+0.1**
CIRR				*eS*	**Sn**	**11 55 53.5**	**+0.2**
LGNR	**Loginova**	**0.81**	**293**	PN	**Pn**	**11 55 42.8**	**+0.3**
LGNR				S	**Sn**	**11 55 53.9**	**+0.1**
LGNR	**Loginova**	**0.81**	**293**	*eP*	**Pn**	**11 55 42.9**	**+0.3**
LGNR				*eS*	**Sn**	**11 55 54.0**	**+0.1**
BZP	**Bezymyannyi-Pe**	**0.85**	**280**	PN	**Pb**	**11 55 42.9**	**-0.2**
BZP				S	**Sb**	**11 55 54.2**	**0.0**
BZP	**Bezymyannyi-Pe**	**0.85**	**280**	*eP*	**Pb**	**11 55 42.9**	**-0.2**
BZP				*eS*	**Sb**	**11 55 54.3**	**0.0**
SMKR	**Semkarok**	**0.87**	**339**	PN	**Pb**	**11 55 43.2**	**-0.1**
SMKR				S	**Sn**	**11 55 55.4**	**+0.6**
SMKR	**Semkarok**	**0.87**	**339**	*eP*	**Pb**	**11 55 43.2**	**-0.1**
SMKR				*eS*	**Sn**	**11 55 55.4**	**+0.6**
BZMR	**Bezymyannaya**	**0.88**	**281**	PN	**Pn**	**11 55 43.7**	**+0.3**
BZMR				S	**Sn**	**11 55 56.0**	**+0.3**
BZMR	**Bezymyannaya**	**0.88**	**281**	*eP*	**Pn**	**11 55 43.7**	**+0.3**
BZMR				*eS*	**Sn**	**11 55 55.6**	**+0.3**
BZWR	**Bezymyannyi-We**	**0.88**	**283**	PN	**Pn**	**11 55 43.9**	**+0.5**
BZWR				S	**Sn**	**11 55 56.1**	**+0.8**
BZWR	**Bezymyannyi-We**	**0.88**	**283**	*eP*	**Pn**	**11 55 44.0**	**+0.5**
BZWR				*eS*	**Sn**	**11 55 56.1**	**+0.8**
BDR	**Baidarnaya**	**0.92**	**330**	PN	**Pn**	**11 55 44.1**	**+0.3**
BDR				S	**Sn**	**11 55 56.7**	**+0.7**
BDR	**Baidarnaya**	**0.92**	**330**	*eP*	**Pn**	**11 55 44.1**	**+0.3**
BDR				*eS*	**Sn**	**11 55 56.8**	**+0.7**
KLY	**Klyuchi**	**0.94**	**305**	PN	**Pn**	**11 55 42.5**	**-1.5**
KLY				S	**Sb**	**11 55 53.9**	**-2.7**
KLY	**Klyuchi**	**0.94**	**305**	*eP*	**Pn**	**11 55 42.6**	**-1.5**
KLY				*eS*	**Sb**	**11 55 53.9**	**-2.7**
KIRR	**Kirishev**	**0.97**	**281**	PN	**Pb**	**11 55 45.0**	**0.0**
KIRR				S	**Sn**	**11 55 58.3**	**+1.0**
KIRR	**Kirishev**	**0.97**	**281**	*eP*	**Pb**	**11 55 45.1**	**0.0**
KIRR				*eS*	**Sn**	**11 55 58.4**	**+1.0**
KMNR	**Kamenistaya**	**1.01**	**270**	PN	**Pb**	**11 55 45.6**	**-0.1**
KMNR				S	**Sn**	**11 55 58.6**	**+0.2**
KMNR	**Kamenistaya**	**1.01**	**270**	*eP*	**Pb**	**11 55 45.7**	**-0.1**
KMNR				*eS*	**Sn**	**11 55 58.7**	**+0.2**
KPT	**Kopyto**	**1.04**	**281**	PN	**Pn**	**11 55 45.9**	**+0.5**
KPT				S	**Sn**	**11 55 59.8**	**+0.8**
KPT	**Kopyto**	**1.04**	**281**	*eP*	**Pn**	**11 55 46.0**	**+0.5**
KPT				*eS*	**Sn**	**11 55 59.9**	**+0.8**
TUMD	**Tumrok D**	**1.09**	**239**	PN	**Pn**	**11 55 46.6**	**+0.5**
TUMD				S	**Sb**	**11 56 00.8**	**-0.1**
TUMD	**Tumrok D**	**1.09**	**239**	*eP*	**Pn**	**11 55 46.7**	**+0.5**
TUMD				*eS*	**Sb**	**11 56 00.8**	**-0.1**
TUMR	**Tumrok**	**1.18**	**246**	PN	**Pb**	**11 55 48.6**	**0.0**
TUMR				S	**Sb**	**11 56 03.1**	**-0.4**
TUMR	**Tumrok**	**1.18**	**246**	*eP*	**Pb**	**11 55 48.6**	**0.0**
TUMR				*eS*	**Sb**	**11 56 03.2**	**-0.4**
MKZ	**Mys Kozlova**	**1.23**	**188**	PN	**Pn**	**11 55 48.6**	**+0.6**
MKZ				S	**Sn**	**11 56 04.4**	**+0.7**
MKZ	**Mys Kozlova**	**1.23**	**188**	*eP*	**Pn**	**11 55 48.7**	**+0.6**
MKZ				*eS*	**Sn**	**11 56 04.4**	**+0.7**
KOZ	**Kozyrevsk**	**1.25**	**284**	PN	**Pb**	**11 55 49.2**	**-0.4**
KOZ				S	**Sb**	**11 56 05.4**	**+0.1**
KOZ	**Kozyrevsk**	**1.25**	**284**	*eP*	**Pb**	**11 55 49.3**	**-0.4**
KOZ				*eS*	**Sb**	**11 56 05.5**	**+0.1**
SRDR	**Sredinnyy**	**1.41**	**294**	PN	**Pn**	**11 55 51.2**	**+0.7**
SRDR				S	**Sn**	**11 56 08.7**	**+0.6**
SRDR	**Sredinnyy**	**1.41**	**294**	*eP*	**Pn**	**11 55 51.2**	**+0.7**
SRDR				*eS*	**Sn**	**11 56 08.7**	**+0.6**
KII	**Karymskiy**	**2.29**	**222**	PN	**Pn**	**11 56 04.0**	**+1.3**
KII	**Karymskiy**	**2.29**	**222**	*eP*	**Pn**	**11 56 04.0**	**+1.3**
BKI	**Bering**	**2.32**	**103**	PN	**Pn**	**11 56 04.0**	**+1.1**
BKI				S	**Sn**	**11 56 30.7**	**+0.3**
BKI	**Bering**	**2.32**	**103**	*eP*	**Pn**	**11 56 04.0**	**+1.1**
BKI				*eS*	**Sn**	**11 56 30.7**	**+0.3**
TIGL	**Tigil**	**2.72**	**319**	PN	**Pn**	**11 56 11.6**	**+3.2**
TIGL	**Tigil**	**2.72**	**319**	*eP*	**Pn**	**11 56 11.7**	**+3.2**
SPN	**Mys Shipunski**	**2.93**	**204**	PN	**Pn**	**11 56 12.2**	**+0.9**

ASAK				S		**Sn**	11 57 18.6	+2.1
ASAK	**Asacha**	**4.18**	**217**	*e*P		**Pn**	11 56 30.8	+2.2
ASAK				*e*S		**Sn**	11 57 18.6	+2.1
KDTR	**Khodutka, Kamc**	**4.61**	**212**	PN		**Pn**	11 56 35.4	+0.9
KDTR				S		**Sn**	11 57 28.5	+1.5
KDTR	**Khodutka, Kamc**	**4.61**	**212**	*e*P		**Pn**	11 56 35.5	+0.9
KDTR				*e*S		**Sn**	11 57 28.6	+1.5
SKR	**Severo-Kuril's**	**6.21**	**217**	*e*PN		**Pn**	11 56 55.0	-1.4
SKR				*e*S		**Sn**	11 58 11.3	+4.9
SKR				pmax	pmax			
	comp=Z,3.0nm,0.4s							
SKR				pmax	pmax			
	comp=Z,200nm,6.3s							
SKR				smax	smax			
	comp=E,25nm,0.5s							
SKR				smax	smax			
	comp=N,34nm,0.5s							
SKR				MLR	MLR			
	comp=Z,200nm,14.0s							
MA2	**Magadan**	**7.14**	**307**	LR	LR		11 59 59.2	
	comp=Z,53nm,20.6s,baz=105,slow=40							
SHEM	**Shemya Is, Ala**	**7.70**	**108**	P		Pn	11 57 22.6	+5.8
	comp=Z,1.2nm,0.3s,baz=278,slow=17,SNR=1.2							
SHEM				S		**Sn**	**11 58 40.9**	**-2.1**
	comp=Z,19nm,0.9s,baz=110,slow=11,SNR=2.0							
	comp=Z,6.4nm,0.5s							
SEY	**Seymchan**	**8.70**	**330**	*i* PN		**Pn**	**11 57 33.5**	**+3.1**
BILL	**Bilibino**	**12.46**	**7**	*i* PN		Pn	11 58 28.1	+6.2
YSS	**Yuzhno-Sakhali**	**14.88**	**242**	*i* P		**P**	**11 58 58.3**	**-2.1**
ERM	**Erimo**	**18.45**	**230**	*i* P		**P**	**11 59 38.8**	**-1.0**
ERM				pmax	pmax			
	comp=Z,13nm,1.1s							
TIXI	**Tiksi**	**21.18**	**331**	LR	LR		12 09 51.8	
	comp=Z,40nm,18.1s,baz=8.0,slow=42							
ILAR	**Eielson Array**	**26.16**	**49**	P		**P**	**12 00 57.2**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=263,slow=8.5,SNR=15							
	comp=Z,0.8nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**36.17**	**172**	T		T	12 39 57.3	
	baz=355,slow=76,SNR=7.4							
H11N3	**WAKE ISLAND Hy**	**36.19**	**172**	T		T	12 39 51.9	
	baz=355,slow=76,SNR=8.1							
H11N1	**WAKE ISLAND Hy**	**36.19**	**172**	T		T	12 39 57.6	
	baz=355,slow=76,SNR=12							
YKA	**Yellowknife Ar**	**40.44**	**45**	P		**P**	**12 03 00.9**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=297,slow=7.7,SNR=2.0							
	comp=Z,1.2nm,0.7s							
SPITS	**Spitsbergen Ar**	**44.67**	**350**	P		P	12 03 32.9	-3.4
	comp=Z,1.8nm,0.4s,baz=69,slow=9.9,SNR=7.4							
	comp=Z,1.8nm,0.4s							
KURK	**Kurchatov**	**47.30**	**301**	P		P	12 03 51.9	-5.4
KURBB	**Kurchatov Arra**	**47.41**	**301**	P		P	12 03 51.9	-6.2
	comp=Z,0.1nm,0.2s,baz=54,slow=7.9,SNR=4.4							
	comp=Z,0.1nm,0.2s							
MKAR	**Makanchi Array**	**48.04**	**295**	P		P	12 03 58.5	-4.5
	comp=Z,0.2nm,0.6s,baz=58,slow=8.0,SNR=2.1							
	comp=Z,0.2nm,0.6s							
BVAR	**Borovoye Array**	**49.62**	**308**	P		P	12 04 11.9	-3.2
	comp=Z,0.7nm,0.4s,baz=34,slow=11,SNR=1.4							
	comp=Z,0.7nm,0.4s							
NVAR	**Mina Array Bea**	**53.82**	**73**	P		**P**	**12 04 47.3**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=301,slow=7.6,SNR=8.3							
	comp=Z,0.9nm,0.7s							
PDAR	**Pinedale Array**	**55.27**	**64**	P		**P**	**12 04 57.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=333,slow=3.3,SNR=5.9							
	comp=Z,0.4nm,0.5s							
ULM	**Lac du Bonnet**	**56.18**	**49**	P		**P**	**12 05 02.5**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=168,slow=13,SNR=1.5							
	comp=Z,0.9nm,0.4s							
FINES	**FINESS Array B**	**58.10**	**337**	P		P	12 05 12.8	-4.0
	comp=Z,0.4nm,0.5s,baz=48,slow=5.7,SNR=6.0							
	comp=Z,0.4nm,0.5s							
FINES	**FINESS Array B**	**58.10**	**337**	*e*P		**P**	**12 05 18.8**	**+1.9**
OBN	**Obninsk**	**60.86**	**328**	*e*P		**P**	**12 05 39.9**	**+4.0**
OBN				*e*			12 06 23.2	
OBN				*e*			12 07 54.3	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
NOA	**NORSAR Array B**	**61.27**	**344**	P		P	12 05 34.6	-4.1
	comp=Z,0.2nm,0.4s,baz=29,slow=7.1,SNR=1.9							
	comp=Z,0.2nm,0.4s							
HFS	**Hagfors**	**61.73**	**343**	P		P	12 05 37.5	-4.3
	comp=Z,0.8nm,0.6s,baz=16,slow=6.2,SNR=1.9							
	comp=Z,0.8nm,0.6s							
TXAR	**Lajitas Array**	**68.59**	**69**	P		**P**	**12 06 26.3**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=288,slow=5.6,SNR=8.6							
	comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**78.99**	**206**	P		**P**	**12 07 26.7**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=5.9,slow=6.1,SNR=1.3							
	comp=Z,0.2nm,0.7s							
QSPA	**South Pole Qui**	**145.53**	**180**	PKPbc		**PKPdf**	**12 14 57.6**	**-2.9**
	comp=Z,0.6nm,0.7s,baz=74,slow=5.7,SNR=1.6							

NEIC ***14*** *12:14:09.3±1.0,36°.05N±0°.07×140°.26E±0°.09,h62km±9km, mb4.1/10,Error ellipse: s-maj=10.2km s-min=9.6km az=106.0*

IDC ***14*** *12:14:10.7±2.2,35°.91N×140°.00E,h74km±17km,mb3.5/8, mbtmp3.8/9,MS3.6/1,Error ellipse: s-maj=30.3km s-min=7.5km az=63.0*

JMA ***14*** *12:14:10.3±0.1,36°.0N±0°.3×140°.1E±0°.4,h59km,MV3.3/40, SOUTHERN IBARAKI PREF*

JMA Felt I J1 at SOUTHERN IBARAKI PREF .

ISC 14 12:14:09.6±0.8,36°.03N±0°.04×140°.14E±0°.04,h67km±6km, n52,σ0s79/56,mb4.0/14,6D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.21**	**13**	⇓*i*P	**Pn**	**12 14 19.8**	**-0.1**
JYT				⇓*e*S	**Sn**	**12 14 26.6**	**-0.7**
JIHU	**Itakohorinouch**	**0.32**	**101**	*e*P	**Pn**	**12 14 21.4**	**+0.9**
JIHU				*e*S	**Sn**	**12 14 29.9**	**+1.4**
JAG	**Ashikaga**	**0.68**	**306**	⇓*i*P	**Pn**	**12 14 24.0**	**-0.1**
JAG				⇓S	**Sn**	**12 14 33.9**	**-0.8**
JRY	**Ryogami san**	**1.00**	**270**	⇓*i*P	**Pn**	**12 14 28.1**	**+0.2**
JRY				⇓*e*S	**Sn**	**12 14 41.1**	**-0.6**
JKT	**Katashina**	**1.03**	**316**	*i* P	**Pn**	**12 14 28.4**	**0.0**
JKT				*e*S	**Sn**	**12 14 41.8**	**-0.6**
JOD2	**Odawara 2**	**1.15**	**229**	P	**Pn**	**12 14 30.1**	**+0.3**
JOD2				*e*S	**Sn**	**12 14 43.9**	**-1.0**
BSO3	**Boso 3**	**1.26**	**166**	P	**Pn**	**12 14 31.4**	**+0.4**
JYN	**Shimob**	**1.40**	**248**	*i* P	**Pn**	**12 14 34.1**	**+0.9**
JFY	**Yanaizu**	**1.42**	**346**	*i* P	**Pn**	**12 14 33.9**	**+0.4**
JFY				*e*S	**Sn**	**12 14 51.5**	**+0.1**
JIM2	**Oshima 3**	**1.43**	**204**	P	**Pn**	**12 14 33.4**	**-0.2**
JIM2				*e*S	**Sn**	**12 14 50.4**	**-1.2**
JFK	**Kawauchi**	**1.46**	**24**	P	**Pn**	**12 14 34.2**	**+0.2**
JFK				*e*S	**Sn**	**12 14 52.0**	**-0.4**
JUON	**Uonuma**	**1.47**	**324**	P	**Pn**	**12 14 34.3**	**+0.3**
MJAR	**Matsushiro Arr**	**1.64**	**289**	P	**Pn**	**12 14 36.9**	**+0.5**
	21nm,0.3s,baz=88,slow=11,SNR=102						
MJAR				S	**Sn**	**12 14 55.9**	**-0.7**
	52nm,0.6s,baz=86,slow=20,SNR=11						
MJAR				LR	LR	12 15 32.0	
	comp=Z,94nm,19.0s,baz=357,slow=51						
MJAR	**Matsushiro Arr**	**1.64**	**289**		**Pn**	**12 14 36.7**	**+0.3**
MAJO	**Matsushiro**	**1.64**	**289**	Pn	**Pn**	**12 14 36.9**	**+0.5**
MJB9	**Matsu-Tunnel**	**1.65**	**289**	Pn	**Pn**	**12 14 37.9**	**+1.4**
JSG	**Sagara**	**2.09**	**230**	Pn	**Pn**	**12 14 43.8**	**+1.4**
JGF	**Kuroka**	**2.30**	**260**	Pn	**Pn**	**12 14 46.5**	**+1.3**
INU	**Inuyama**	**2.63**	**256**	Pn	**Pn**	**12 14 50.5**	**+0.8**
JHJ	**Hachijo jima 2**	**2.92**	**186**	P	**Pn**	**12 14 53.8**	**+0.2**
	65nm,0.3s,baz=82,slow=18,SNR=9.3						
JHJ				S	**Sn**	**12 15 25.8**	**-1.7**
	109nm,0.3s,baz=73,slow=22,SNR=7.5						
JHJ2	**Mitsune**	**2.92**	**185**	Pn	**Pn**	**12 14 53.9**	**+0.2**
JTM	**Tenmabayashi**	**4.81**	**8**	Pn	**Pn**	**12 15 18.9**	**-0.6**
ERM	**Erimo**	**6.42**	**21**	Pn	**Pn**	**12 15 39.8**	**-1.7**
JKA	**Kamikawa-asahi**	**8.30**	**12**	Pn	**Pn**	**12 16 05.3**	**-1.8**
SONM	**Songino Array**	**27.52**	**306**	P	**P**	**12 19 48.5**	**-1.4**
	1.0nm,0.7s,baz=114,slow=9.1,SNR=6.4						
	1.0nm,0.7s						
SONM	**Songino Array**	**27.52**	**306**	P	**P**	**12 19 49.4**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**28.56**	**117**	T	T	12 50 06.9	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**28.56**	**118**	T	T	12 50 05.7	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**28.57**	**117**	T	T	12 50 06.3	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**29.22**	**120**	T	T	12 50 56.3	
	baz=315						
H11S3	**WAKE ISLAND Hy**	**29.22**	**120**	T	T	12 50 58.6	
	baz=315						
H11S2	**WAKE ISLAND Hy**	**29.23**	**120**	T	T	12 50 58.0	
	baz=315						

ZAA0	**Zalesovo Array**	**41.84**	**313**	P		**P**	**12 21 52.5**	**-0.2**
ZAA0				IAmb	IAmb		12 21 53.9	
	comp=Z,4.5nm,1.2s							
ZALV	**Zalesovo Beam**	**41.84**	**313**	P		**P**	**12 21 52.8**	**0.0**
	comp=Z,1.6nm,0.7s,baz=88,slow=4.6,SNR=7.2							
	comp=Z,1.6nm,0.7s							
MKAR	**Makanchi Array**	**43.79**	**303**	P		**P**	**12 22 08.6**	**0.0**
	comp=Z,1.7nm,0.7s,baz=80,slow=9.0,SNR=6.7							
	comp=Z,1.7nm,0.7s							
KURK	**Kurchatov**	**45.75**	**309**	P		**P**	**12 22 24.2**	**+0.1**
KURK				IAmb	IAmb		12 22 25.6	
	comp=Z,3.6nm,0.8s							
KURBB	**Kurchatov Arra**	**45.82**	**309**	P		**P**	**12 22 24.6**	**0.0**
	comp=Z,2.6nm,0.7s,baz=86,slow=8.1,SNR=34							
	comp=Z,2.6nm,0.7s							
BVAR	**Borovoye Array**	**50.49**	**313**	P		**P**	**12 23 01.4**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=116,slow=10,SNR=4.0							
	comp=Z,0.7nm,0.5s							
IL31		**50.89**	**32**	P		**P**	**12 23 03.9**	**+0.5**
IL31				IAmb	IAmb		12 23 09.9	
	comp=Z,2.1nm,1.1s							
ILAR	**Eielson Array**	**50.89**	**32**	P		**P**	**12 23 04.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=287,slow=6.4,SNR=6.0							
	comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**50.89**	**32**	P		**P**	**12 23 04.3**	**+0.8**
WB0	**Warramunga Arr**	**55.76**	**187**	P		**P**	**12 23 39.5**	**-0.1**
WR8	**Warramunga Arr**	**55.93**	**186**	P		**P**	**12 23 40.7**	**-0.1**
WR8				IAmb	IAmb		12 24 14.2	
	comp=Z,5.9nm,1.1s							
WRA	**Warramunga Arr**	**55.93**	**187**	P		**P**	**12 23 40.2**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=1.6,slow=7.5,SNR=16							
	comp=Z,0.6nm,0.5s							
WRA	**Warramunga Arr**	**55.93**	**187**	P		**P**	**12 23 40.1**	**-0.7**
AB31	**Akbulak array**	**57.80**	**310**	P		**P**	**12 23 54.6**	**+0.8**
AB31				IAmb	IAmb		12 23 58.5	
	comp=Z,0.8nm,0.8s							
ABKAR	**Akbulak array**	**57.80**	**310**			**P**	**12 23 54.4**	**+0.5**
AS31	**Alice Springs**	**59.66**	**187**	P		**P**	**12 24 06.9**	**-0.1**
AS31				IAmb	IAmb		12 24 46.3	
	comp=Z,1.4nm,1.2s							
ASAR	**Alice Springs**	**59.66**	**187**	P		**P**	**12 24 07.6**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=16,slow=13,SNR=4.5							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**59.66**	**187**	P		**P**	**12 24 06.7**	**-0.3**
MBWA	**Marble Bar**	**60.07**	**202**	P		**P**	**12 24 10.0**	**+0.2**
KIRV	**Kirov**	**60.43**	**323**	LR	LR		12 52 54.9	
	comp=Z,42nm,18.2s,baz=194,slow=38							

PAS ***14*** *12:15:18.9±0.8,36°.454N±0°.009×117°.99W±0°.01, h4km±2km,Error ellipse: s-maj=1.5km s-min=1.3km az=54.0*

NEIC 14 12:15:18.3±0.8,36°.451N±0°.010×117°.97W±0°.01, h5km±1km,ML3.4/173,Mwr3.6/6(PAS),Error ellipse: s-maj=2.9km s-min=2.1km az=266.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CWC	**Cottonwood Cre**	**0.09**	**263**		Pg	12 15 20.7	+0.4
CWC				Sg	Sg	12 15 22.3	+0.6
MFS	**McCloud Flat S**	**0.35**	**164**		Pg	12 15 25.5	+0.5
MFS					Sg	12 15 30.9	+1.3
DAC	**Darwin (Calif)**	**0.35**	**119**		Pg	12 15 25.6	+0.5
DAC					Sg	12 15 31.2	+1.4
WLHM	**Little Horse**	**0.41**	**223**		Pg	12 15 26.5	+0.3
WLHM					Sg	12 15 32.3	+0.7
WRVM	**Rose V. Centra**	**0.45**	**171**		Pg	12 15 27.5	+0.6
WRVM					Sg	12 15 33.9	+1.2
WCSM	**Coso Springs S**	**0.46**	**158**		Pg	12 15 27.8	+0.7
WCSM					Sg	12 15 34.4	+1.4
JRC2	**Joshua Ridge**	**0.49**	**164**		Pg	12 15 28.1	+0.5
JRC2					Sg	12 15 35.2	+1.2
WVPM	**Volcano Peak E**	**0.52**	**166**		Pg	12 15 28.7	+0.5
WVPM					Sg	12 15 36.2	+1.2
MPMC	**Manual Prospec**	**0.55**	**135**		Pg	12 15 29.3	+0.4
MPMC				Sg	Sg	12 15 37.0	+0.8
MPMC				IAML		12 15 37.7	
	comp=E,2μm,0.4s						
RCWM	**Renegade Canyo**	**0.56**	**152**		Pg	12 15 29.8	+0.6
RCWM					Sg	12 15 37.7	+1.2
WCHM	**Chimney Peak**	**0.57**	**188**		Pg	12 15 29.5	+0.1
WCHM					Sg	12 15 37.5	+0.7
WNMM	**Nine Mile Cany**	**0.61**	**175**		Pg	12 15 30.3	+0.3
WNMM					Sg	12 15 38.8	+0.9
TIN	**Tinemaha, Big**	**0.64**	**341**		Pg	12 15 30.9	+0.4
TIN					Sb	12 15 40.2	-1.1
TOW	**Tower One**	**0.66**	**165**		Pb	12 15 31.8	-0.5
TOW					Sb	12 15 41.8	-0.1
CLC	**China Lake**	**0.70**	**154**		Pg	12 15 32.0	+0.2
SRTC	**Snort**	**0.78**	**166**		Pb	12 15 34.0	-0.3
SRTC					Sb	12 15 45.5	+0.3
WORM	**Onyx Ranch**	**0.79**	**196**		Pg	12 15 33.3	-0.1
WORM					Sg	12 15 43.7	+0.2
LCH	**Last Change Ra**	**0.82**	**19**		Pg	12 15 33.9	-0.2
LCH					Sg	12 15 45.1	+0.3
WASM	**Alta Sierra Ca**	**0.85**	**214**		Pg	12 15 34.7	0.0
WASM					Sg	12 15 46.1	+0.4
ISA	**Isabella, Lake**	**0.89**	**207**		Pg	12 15 35.2	-0.1
ISA				IAML		12 15 48.3	
	comp=E,738nm,0.3s						
FURC	**Furnace Creek,**	**0.90**	**89**		Pg	12 15 35.7	+0.3
DSP	**Deep Springs**	**0.92**	**0**		Pg	12 15 35.6	-0.3
DSP					Sg	12 15 47.7	-0.1
DSP				IAML		12 15 48.8	
	comp=N,2μm,0.4s						
WBSM	**Bird Springs**	**0.92**	**188**		Pg	12 15 36.0	0.0
LRMC	**Laurel Mtn Rad**	**1.00**	**166**		Pg	12 15 37.7	+0.3
LRMC					Sb	12 15 51.1	-0.5
LRMC				IAML		12 15 51.8	
	comp=E,1μm,0.5s						
LRMC				IAML		12 15 52.4	
	comp=N,1μm,0.2s						
QSM	**Queen of Sheba**	**1.02**	**118**		Pg	12 15 37.9	+0.1
QSM				IAML		12 15 55.1	
	comp=E,1μm,0.6s						
QSM				IAML		12 15 55.4	
	comp=N,1μm,0.7s						
GMN	**Gold Mountain**	**1.02**	**34**		Pg	12 15 37.9	0.0
CCCA	**Chr Cany lake**	**1.05**	**152**		Pb	12 15 38.9	0.0
GWY	**Greenwater Val**	**1.09**	**104**		Pg	12 15 39.2	+0.1
GWY					Sb	12 15 53.9	-0.3
GWY				IAML		12 16 01.9	
	comp=E,1μm,0.6s						
VES	**Vestal, Richgr**	**1.09**	**236**		Pg	12 15 39.0	-0.1
VES					Sb	12 15 53.8	-0.3
VES				IAML		12 15 58.2	
	comp=N,1μm,0.7s						
VES				IAML		12 16 00.6	
	comp=E,788nm,0.7s						
WCT	**Wildcat Mounta**	**1.14**	**72**		Pg	12 15 40.0	-0.1
WCT				IAML		12 15 58.5	
	comp=N,709nm,0.7s						
WCT				IAML		12 15 58.6	
	comp=E,712nm,0.5s						
VOG	**Valley Oaks Go**	**1.14**	**264**		Pg	12 15 40.0	-0.2
VOG					Sg	12 15 54.9	-0.2
DTP	**Desert Tortois**	**1.19**	**175**		Pg	12 15 40.8	-0.2
DTP					Sg	12 15 56.5	+0.1
CCAC	**Calif City Air**	**1.30**	**182**		Pn	12 15 42.7	-0.4
CCAC					Sg	12 15 59.9	0.0
TEJ	**El Tejon**	**1.35**	**206**		Pn	12 15 43.4	-0.5
MLAC	**Mammoth, Mammo**	**1.36**	**330**		Pn	12 15 44.0	-0.2
AMDNV	**Amargosa**	**1.36**	**89**		Pn	12 15 43.7	-0.3
KCC	**Kaiser Creek**	**1.39**	**309**		Pn	12 15 43.9	-0.5
KCC					Sb	12 16 01.7	-1.1
TPNV	**Topopah Spring**	**1.47**	**70**		Pn	12 15 45.8	+0.2
TPNV				IAML		12 16 12.4	
	comp=E,487nm,1.1s						
TPNV				IAML		12 16 13.6	
	comp=E,654nm,0.8s						
MDPB	**Devils Postpil**	**1.47**	**323**		Pn	12 15 45.7	0.0
MDPB					Sb	12 16 05.3	-0.2
MDPB				IAML		12 16 09.1	
	comp=E,432nm,0.7s						
MDPB				IAML		12 16 09.3	
	comp=N,600nm,0.5s						
GSC	**Goldstone, Bar**	**1.49**	**140**		Pn	12 15 45.6	-0.2
GSC				IAML		12 16 09.2	
	comp=E,817nm,0.8s						
GSC				IAML		12 16 10.2	
	comp=N,759nm,0.6s						
ARVC	**Arvin**	**1.49**	**208**		Pb	12 15 46.5	0.0

TPO	**Tropico Hills**	**1.58**	**188**			Pn	12 15 47.4	+0.3
TPO				IAML			12 16 10.7	
	comp=E,575nm,1.1s							
TPO				IAML			12 16 12.6	
	comp=N,588nm,0.7s							
LHV	**Little Huntoon**	**1.85**	**347**	IAML			12 16 24.1	
	comp=E,499nm,0.8s							
LHV				IAML			12 16 26.9	
	comp=N,401nm,0.9s							
OSI	**Osito Audit: C**	**1.93**	**199**			Pn	12 15 52.3	+0.5
OSI				IAML			12 16 23.0	
	comp=E,393nm,0.9s							
OSI				IAML			12 16 23.2	
	comp=N,257nm,0.8s							
NV11	**Mina Array Sit**	**1.98**	**356**	Pn	Pn		12 15 53.4	+0.7
NVAR	**Mina Array Bea**	**1.99**	**353**		Pn		12 15 53.1	+0.3
PKD	**Bear Valley Ra**	**2.14**	**257**	IAML			12 16 33.3	
	comp=N,286nm,1.1s							
PKD				IAML			12 16 41.9	
	comp=E,256nm,1.5s							
S11A	**Rachel**	**2.14**	**56**			Pn	12 15 55.7	+0.9
MTPC	**Mountain Pass**	**2.19**	**115**			Pn	12 15 55.4	0.0
MTPC				IAML			12 16 35.4	
	comp=E,152nm,0.5s							
MTPC				IAML			12 16 35.8	
	comp=N,141nm,0.7s							
BFSC	**Mount Baldy Ra**	**2.22**	**173**			Pn	12 15 56.5	+0.6
BFSC				IAML			12 16 29.6	
	comp=E,255nm,0.8s							
MWC	**Mount Wilson**	**2.22**	**182**			Pn	12 15 56.7	+0.8
MWC				IAML			12 16 31.2	
	comp=N,248nm,0.5s							
MWC				IAML			12 16 33.0	
	comp=E,200nm,1.2s							
PASC	**Pasadena Art C**	**2.28**	**184**	IAML			12 16 36.2	
	comp=E,154nm,1.0s							
PMPB	**Monarch Peak**	**2.29**	**265**			Pn	12 15 58.4	+1.6
WAKR	**Walker**	**2.36**	**331**			Pn	12 15 59.1	+1.3
Q09A	**Carvers**	**2.46**	**15**	Pn	Pn		12 16 00.3	+1.1
CMB	**Columbia Colle**	**2.49**	**310**			Pb	12 16 02.0	-1.6
CMB				IAML			12 16 39.2	
	comp=E,194nm,0.8s							
CMB				IAML			12 16 42.5	
	comp=N,201nm,0.7s							
PRN	**Pahroc Range**	**2.53**	**67**	Pn	Pn		12 16 00.8	+0.6
KVN	**Kaiserville**	**2.60**	**358**		Pn		12 16 01.7	+0.6
HULI	**Fort Hunter Li**	**2.67**	**262**	IAML			12 16 53.1	
	comp=N,162nm,0.8s							
HULI				IAML			12 16 57.7	
	comp=E,197nm,1.1s							
DANC	**Danby, Needles**	**2.78**	**130**	IAML			12 16 55.4	
	comp=N,231nm,0.9s							
DANC				IAML			12 16 58.2	
	comp=E,209nm,0.9s							
SAO	**San Andreas Ge**	**2.81**	**277**			Pn	12 16 04.8	+0.9
ELS	**Elsinore Mount**	**2.83**	**171**			Pn	12 16 04.8	+0.6
ELS				IAML			12 16 49.8	
	comp=E,91nm,0.7s							
BELC	**Belle Mtn. Jos**	**2.93**	**146**			Pn	12 16 05.8	+0.2
BELC				IAML			12 16 56.8	
	comp=N,88nm,0.9s							
BELC				IAML			12 16 56.9	
	comp=E,90nm,0.6s							
PNTR	**Pine Nut**	**2.93**	**334**	Pn	Pn		12 16 06.1	+0.4
PNTR				IAML			12 17 09.3	
	comp=E,107nm,0.9s							
PNTR				IAML			12 17 20.1	
	comp=N,121nm,0.8s							
MHC	**Mount Hamilton**	**3.07**	**288**			Pn	12 16 09.2	+1.6
MHC				IAML			12 17 01.9	
	comp=E,170nm,0.7s							
IRM	**Iron Mountain**	**3.25**	**134**	IAML			12 17 07.7	
	comp=N,54nm,0.6s							
IRM				IAML			12 17 12.2	
	comp=E,68nm,1.5s							
MPK	**Martis Peak**	**3.27**	**331**	IAML			12 17 18.4	
	comp=N,150nm,0.8s							
MPK				IAML			12 17 28.5	
	comp=E,137nm,0.8s							
BORC	**Borrego Spring**	**3.42**	**158**	IAML			12 17 11.5	
	comp=E,70nm,0.9s							
AFDM	**Forest Hills D**	**3.44**	**317**	IAML			12 17 09.3	
	comp=E,100nm,0.5s							
AFDM				IAML			12 17 11.7	
	comp=N,111nm,0.6s							
BC3	**Big Chuckawall**	**3.47**	**143**	IAML			12 17 10.3	
	comp=N,48nm,0.7s							
BC3				IAML			12 17 11.5	
	comp=E,49nm,0.6s							
DPP	**Dos Picos Cty**	**3.55**	**166**	IAML			12 17 14.5	
	comp=E,60nm,1.1s							
W13A	**Hualapai Mount**	**3.59**	**111**	IAML			12 17 25.2	
	comp=N,41nm,1.4s							
PSUT	**Pine Spring**	**3.88**	**56**	IAML			12 17 22.5	
	comp=N,68nm,1.4s							
PSUT				IAML			12 17 24.0	
	comp=E,66nm,1.2s							
BEKR	**Beckworth**	**3.89**	**332**	IAML			12 17 34.9	
	comp=N,45nm,0.7s							
BEKR				IAML			12 17 40.2	
	comp=E,62nm,1.0s							
BLYC	**Blythe**	**3.91**	**133**	IAML			12 17

GTOI	**Gorontalo**	**6.81**	**249**	*eP*		**Pn**	**12 22 34.8**	**+1.7**
	1µm102nm,0.8s								
CGP	**Cagayan de Oro**	**7.05**	**319**	*eP*		**Pn**	**12 22 37.7**	**+1.5**
TOLI2	**Tolitoli**	**8.81**	**257**	Pn		**Pn**	**12 22 59.7**	**-0.7**
KDI	**Kendari**	**9.74**	**224**	P		**Pn**	**12 23 13.6**	**+0.3**
GUMO	**Guam**	**18.52**	**55**	LR		LR	12 31 01.8	
	comp=Z,124nm,20.3s,baz=220,slow=33								
KNRA	**Kununurra**	**18.68**	**182**	P		**P**	**12 25 10.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**21.40**	**190**	P		**P**	**12 25 41.1**	**+0.1**
	3.5nm,0.9s,baz=28,slow=13,SNR=7.1								
	3.5nm,0.9s								
FITZ	**Fitzroy Crossi**	**21.40**	**190**	P		**P**	**12 25 40.6**	**-0.4**
TPUB	**Ta-pu**	**21.77**	**338**	P		**P**	**12 25 43.0**	**-2.1**
TPUB				IAmb		IAmb	12 26 02.8		
	comp=Z,59nm,1.5s								
WB0	**Warramunga Arr**	**23.27**	**168**	P		**P**	**12 26 01.3**	**+0.4**
WRA	**Warramunga Arr**	**23.43**	**168**	P		**P**	**12 26 02.8**	**+0.2**
	comp=Z,4.7nm,0.6s,baz=348,slow=10,SNR=55								
WRA				PcP		**PcP**	**12 29 47.3**	**-1.8**	
	comp=Z,0.5nm,0.9s,baz=344,slow=2.4,SNR=2.2								
	comp=Z,4.7nm,0.6s								
WRA	**Warramunga Arr**	**23.43**	**168**	P		**P**	**12 26 00.2**	**-2.4**
WR8	**Warramunga Arr**	**23.48**	**168**	P		**P**	**12 26 03.0**	**0.0**
WR8				IAmb		IAmb	12 26 03.9		
	comp=Z,23nm,1.4s								
KRVT	**Keravat (AS076**	**23.81**	**108**	LR		LR	12 33 23.9		
	comp=Z,49nm,18.9s,baz=149,slow=32								
RABL	**Rabaul**	**23.91**	**108**	P		**P**	**12 26 07.8**	**+0.5**
RABL				IAmb		IAmb	12 26 19.6		
	comp=Z,16nm,0.6s								
AS31	**Alice Springs**	**26.99**	**171**	P		**P**	**12 26 35.1**	**0.0**
ASAR	**Alice Springs**	**26.99**	**171**	P		**P**	**12 26 35.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=0.4,slow=7.6,SNR=16								
ASAR				PcP		**PcP**	**12 29 56.0**	**-1.0**	
	comp=Z,0.3nm,0.6s,baz=359,slow=2.0,SNR=4.0								
	comp=Z,1.0nm,0.6s								
NJ2	**Nanjing**	**30.43**	**342**	*eP*		**P**	**12 27 06.5**	**+0.8**
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.5s								
INKA	**Innaminka**	**32.58**	**161**	P		**P**	**12 27 24.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**33.46**	**299**	P		**P**	**12 27 34.0**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.7,SNR=6.7								
	comp=Z,0.4nm,0.3s								
KSRS	**Korea Array**	**34.20**	**358**	P		**P**	**12 27 39.0**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=200,slow=9.3,SNR=4.2								
	comp=Z,1.6nm,0.8s								
MAJO	**Matsushiro**	**34.24**	**13**			**P**	**12 27 38.4**	**-0.7**
MAJO				IAmb		IAmb	12 27 40.0		
	comp=Z,8.0nm,0.8s								
MJAR	**Matsushiro Arr**	**34.24**	**13**	P		**P**	**12 27 38.0**	**-1.2**
	comp=Z,4.2nm,0.7s,baz=189,slow=9.7,SNR=12								
	comp=Z,4.2nm,0.7s								
MJAR	**Matsushiro Arr**	**34.24**	**13**	P		**P**	**12 27 38.5**	**-0.6**
MJB9	**Matsu-Tunnel**	**34.25**	**13**	P		**P**	**12 27 39.5**	**+0.3**
MJB9				IAmb		IAmb	12 27 41.4		
	comp=Z,7.8nm,0.8s								
TIA	**Tai'an**	**34.82**	**343**	P		**P**	**12 27 44.0**	**-0.1**
TIA				pmax		pmax			
	comp=Z,7.0nm,0.7s								
LYN	**LuoYang**	**35.00**	**335**	*eP*		**P**	**12 27 47.1**	**+1.4**
LYN				sP		pwP	12 27 55.4	+2.7	
LYN				pmax		pmax			
	comp=Z,18nm,0.7s								
PZH	**PanZhiHua**	**35.24**	**314**	P		P	12 27 42.9	-5.1	
XAN	**Xi'an**	**36.19**	**331**	P		P	12 28 01.8	+5.8	
XAN				pmax		pmax			
	comp=Z,8.0nm,0.8s								
BBOO	**Buckleboo**	**36.29**	**170**	P		**P**	**12 27 56.3**	**-0.5**
BBOO				IAmb		IAmb	12 28 04.0		
	comp=Z,19nm,1.3s								
HNS	**HongShan**	**36.68**	**340**	⇓P		**P**	**12 28 00.5**	**+0.5**
HNS				pmax		pmax			
	comp=Z,19nm,0.9s								
STKA	**Stephens Creek**	**36.69**	**162**	P		**P**	**12 28 00.5**	**+0.2**
	comp=Z,7.0nm,0.7s,baz=338,slow=7.9,SNR=13								
	comp=Z,7.0nm,0.7s								
BJI2	**Beijing**	**38.63**	**344**	P		**P**	**12 28 17.1**	**+0.6**
BJI2				sP		**pwP**	**12 28 24.9**	**+1.3**	
BJI2				pmax		pmax			
	comp=Z,6.0nm,0.8s								
H11S3	**WAKE ISLAND Hy**	**39.59**	**65**	T		T	13 10 34.7		
	baz=252,slow=75,SNR=17								
H11S2	**WAKE ISLAND Hy**	**39.60**	**65**	T		T	13 10 33.5		
	baz=252,slow=75,SNR=9.9								
H11S1	**WAKE ISLAND Hy**	**39.61**	**65**	T		T	13 10 34.1		
	baz=252,slow=75,SNR=5.7								
H11N1	**WAKE ISLAND Hy**	**40.16**	**63**	T		T	13 11 16.1		
	baz=253								
H11N2	**WAKE ISLAND Hy**	**40.17**	**63**	T		T	13 11 16.0		
	baz=253								
H11N3	**WAKE ISLAND Hy**	**40.18**	**63**	T		T	13 11 16.6		
	baz=253								
LZH	**Lanzhou**	**40.40**	**327**	*eP*		P	12 28 41.5	+10	
LZH				sP		pwP	12 28 49.4	+11	
LZH				pmax		pmax			
	comp=Z,23nm,1.2s								
HHC	**Hu-ho-hao-te**	**40.85**	**339**	*eP*		**P**	**12 28 37.0**	**+1.9**
HHC				pmax		pmax			
	comp=Z,9.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,55nm,4.4s								
JKA	**Kamikawa-asahi**	**42.47**	**14**	P		**P**	**12 28 49.4**	**+1.1**
JKA				IAmb		IAmb	12 29 05.5		
	comp=Z,8.6nm,1.1s								
GTA2	**Gaotai**	**45.08**	**327**	*eP*		**P**	**12 29 10.3**	**+0.8**
GTA2				sP		pwP	12 29 18.3	+1.7	
GTA2				pmax		pmax			
	comp=Z,4.0nm,0.6s								
YSS	**Yuzhno-Sakhali**	**45.19**	**13**	P		**P**	**12 29 10.7**	**+0.7**
YSS				IAmb		IAmb	12 29 11.6		
	comp=Z,5.4nm,0.7s								
HEH	**HeiHe**	**46.99**	**358**	*eP*		**P**	**12 29 24.1**	**-0.1**
HEH				pmax		pmax			
	comp=Z,5.0nm,0.9s								
EVN	**Everest**	**47.47**	**306**			**P**	**12 29 27.9**	**-1.2**
ULN	**Ulaanbaatar**	**48.55**	**340**			**P**	**12 29 36.5**	**-0.1**
ULN				IAmb		IAmb	12 29 38.2		
	comp=Z,7.9nm,1.1s								
SONM	**Songino Array**	**48.75**	**340**	P		**P**	**12 29 38.4**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=159,slow=8.7,SNR=8.8								
	comp=Z,1.1nm,0.5s								
SONM	**Songino Array**	**48.75**	**340**	P		**P**	**12 29 38.5**	**+0.4**
WMQ	**Urumqi**	**54.75**	**324**	*eP*		P	12 30 28.3	+5.4	
WMQ				sP		pwP	12 30 32.0	+2.0	
WMQ				pmax		pmax			
	comp=Z,18nm,0.7s								
PETK	**Petropavlovsk-**	**55.04**	**20**	P		**P**	**12 30 24.3**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=217,slow=7.2,SNR=4.3								
	comp=Z,2.3nm,0.7s								
PETK	**Petropavlovsk-**	**55.04**	**20**	P		**P**	**12 30 25.1**	**+0.4**
MKAR	**Makanchi Array**	**59.57**	**324**	P		**P**	**12 30 57.0**	**+0.1**
	comp=Z,5.2nm,0.5s,baz=113,slow=8.3,SNR=50								
	comp=Z,5.2nm,0.5s								
MAKZ	**Makanchi**	**59.76**	**324**			**P**	**12 30 58.4**	**+0.2**
KDJ	**Kajisay**	**60.56**	**318**			**P**	**12 31 04.2**	**+0.2**
KDJ				IAmb		IAmb	12 31 13.8		
	comp=Z,5.5nm,0.8s								
ZAA0	**Zalesovo Array**	**62.34**	**332**	P		**P**	**12 31 14.7**	**-0.8**
ZALV	**Zalesovo Beam**	**62.34**	**332**	P		**P**	**12 31 14.6**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=91,slow=5.9,SNR=7.2								
	comp=Z,1.5nm,0.6s								
ZALV	**Zalesovo Beam**	**62.34**	**332**	P		**P**	**12 31 14.9**	**-0.6**
ZALV				PcP		**PcP**	**12 31 54.9**	**-0.2**
KURK	**Kurchatov**	**63.68**	**327**			**P**	**12 31 24.4**	**-0.1**
KURK				IAmb		IAmb	12 31 25.6		
	comp=Z,4.8nm,0.8s								
KURBB	**Kurchatov Arra**	**63.68**	**327**	P		**P**	**12 31 24.2**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=122,slow=6.0,SNR=42								
	comp=Z,2.7nm,0.5s								
KK31	**Karatay Array**	**65.48**	**316**	P		**P**	**12 31 36.1**	**-0.4**
KK31				IAmb		IAmb	12 31 45.0		
	comp=Z,2.4nm,0.8s								
KKAR	**Karatay Array**	**65.48**	**316**	P		**P**	**12 31 36.4**	**-0.1**
TIXI	**Tiksi**	**68.44**	**360**	P		**P**	**12 31 55.2**	**+0.5**
TIXI				IAmb		IAmb	12 31 56.1		
	comp=Z,4.5nm,0.8s								
BVAR	**Borovoye Array**	**69.27**	**326**	P		**P**	**12 32 00.0**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=126,slow=7.5,SNR=13								
	comp=Z,2.8nm,0.7s								
BORK	**Borovoye**	**69.32**	**326**			**P**	**12 31 59.9**	**-0.7**
BORK				IAmb		IAmb	12 32 01.7		
	comp=Z,3.5nm,0.6s								
NRIK	**Noril'sk**	**71.66**	**346**	P		**P**	**12 32 14.2**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=95,slow=3.8,SNR=4.1								
NRIK				LR		LR	13 06 07.4		
	comp=Z,19nm,19.7s,baz=190,slow=38								
	comp=Z,3.5nm,0.7s								
AB31	**Akbulak array**	**74.29**	**320**	P		**P**	**12 32 29.2**	**-1.3**
ABKAR	**Akbulak array**	**74.29**	**320**	P		**P**	**12 32 29.6**	**-1.0**
D19K	**Kuna River**	**80.74**	**21**	IAmb		IAmb	12 33 10.0		
	comp=Z,11nm,1.2s								
E19K	**Redstone River**	**80.80**	**22**	IAmb		IAmb	12 33 09.9		
	comp=Z,7.8nm,1.1s								
KDAK	**Kodiak Island**	**81.00**	**32**	LR		LR	13 02 58.2		
	comp=Z,30nm,20.3s,baz=244,slow=31								
F20K	**Avaraart Lake**	**81.28**	**23**	IAmb		IAmb	12 33 11.9		
	comp=Z,4.7nm,1.3s								
G21K	**Allakaket**	**82.03**	**23**	IAmb		IAmb	12 33 17.1		
	comp=Z,4.7nm,1.1s								
I21K	**Tanana**	**82.42**	**25**	IAmb		IAmb	12 33 17.9		
	comp=Z,6.4nm,1.2s								
VNDA	**Vanda**	**82.50**	**173**	P		**P**	**12 33 14.9**	**-0.4**
	comp=Z,1.1nm,1.0s,baz=313,slow=6.5,SNR=4.0								
	comp=Z,1.1nm,1.0s								
VNDA	**Vanda**	**82.50**	**173**	P		**P**	**12 33 14.9**	**-0.4**
VNDA				IAmb		IAmb	12 33 17.1		
	comp=Z,4.8nm,1.4s								
H22K	**Ishtalitna Cre**	**82.78**	**24**	IAmb		IAmb	12 33 20.6		
	comp=Z,7.0nm,1.4s								
D23K	**Nanushuk River**	**83.49**	**21**			**P**	**12 33 23.0**	**+2.3**
C23K	**Itkillik River**	**83.64**	**20**			**P**	**12 33 22.4**	**+1.0**
E23K	**Chandalar**	**83.76**	**22**	P		**P**	**12 33 23.2**	**+1.0**
F24K	**Squaw Lake**	**84.35**	**23**	IAmb		IAmb	12 33 28.1		
	comp=Z,5.1nm,1.1s								
ILAR	**Eielson Array**	**84.52**	**25**	P		**P**	**12 33 25.5**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=244,slow=7.4,SNR=4.2								
	comp=Z,0.4nm,0.8s								
C27K	**Jago River**	**86.02**	**21**	IAmb		IAmb	12 33 35.8		
	comp=Z,2.5nm,0.8s								
BCAR	**Beaver Creek A**	**86.72**	**27**	P		**P**	**12 33 37.9**	**+0.8**
I27K	**Kandik River**	**86.77**	**25**	P		**P**	**12 33 37.8**	**+0.5**
I27K				IAmb		IAmb	12 33 56.9		
	comp=Z,6.0nm,1.4s								
I28M	**Miner Creek**	**87.48**	**25**	P		**P**	**12 33 41.5**	**+0.8**
I28M				IAmb		IAmb	12 34 13.8		
	comp=Z,4.1nm,1.3s								
ARCES	**ARCESS Array B**	**91.92**	**340**	P		**P**	**12 34 00.5**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=90,slow=6.1,SNR=3.8								
	comp=Z,1.1nm,0.7s								
ARCES	**ARCESS Array B**	**91.92**	**340**	P		**P**	**12 34 00.8**	**-0.6**
ARCES				IAmb		IAmb	12 34 10.9		
	comp=Z,5.4nm,1.2s								
QSPA	**South Pole Qui**	**93.03**	**180**	P		**P**	**12 34 06.1**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=255,slow=0.8,SNR=7.0								
	comp=Z,0.9nm,0.8s								
QSPA	**South Pole Qui**	**93.03**	**180**	P		**P**	**12 34 06.8**	**+0.1**
TXAR	**Lajitas Array**	**119.87**	**54**	PKP		**PKPdf**	**12 39 44.7**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=238,slow=3.8,SNR=4.5								
CFA	**Coronel Fontan**	**147.17**	**152**	PKPbc		**PKPbc**	**12 40 37.2**	**0.0**
	comp=Z,4.2nm,0.6s,baz=236,slow=6.5,SNR=6.7								

*FUNV **14** 12:47:38.5,9.°07N×73.°61W,h8km,MW3.6,Presumed earthquake*
*RSNC **14** 12:47:39.2±0.0,9.°N±1.°×7.°4W±.°,h98km±2km,M3.5,mB4.8, mb4.1,ML3.2,Mw(mB)4.1*
ISC 14 12:47:38.6±1.2,**8.98N**±0.°03×**73.66W**±0.°03,**h86**km±9km, **n37**,σ1**s56**/74,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LL8C	**La Loma 8 Chim**	**0.39**	**339**	P		P	**Pn**	**12 47 52.6**	**+0.5**
LL8C				S		S	**Sn**	**12 48 03.1**	**+0.9**
OCAC	**Ocana**	**0.81**	**155**	P		P	**Pn**	**12 47 55.4**	**-0.7**
OCAC				S		S	**Sn**	**12 48 08.2**	**-0.9**
VMM05	**San Martn**	**1.07**	**175**	P		P	**Pn**	**12 47 58.8**	**-0.1**
VMM05				S		S	**Sn**	**12 48 15.0**	**+1.0**
SJCC	**San Jacinto, C**	**1.76**	**301**	P		P	**Pn**	**12 48 08.4**	**+0.8**
SJCC				S		S	**Sn**	**12 48 30.2**	**+0.6**
SJCC	**San Jacinto, C**	**1.76**	**301**	*eP*		P	**Pn**	**12 48 08.7**	**+1.1**
SJCC				*eS*		S	**Sn**	**12 48 30.8**	**+1.2**
VMM09	**Lebrija**	**1.87**	**169**	P		P	**Pn**	**12 48 08.8**	**-0.4**
VMM09				S		S	**Sn**	**12 48 31.2**	**-1.2**
PAMC	**Pamplona, Colo**	**1.88**	**150**	P		P	**Pn**	**12 48 10.4**	**+0.8**
PAMC				S		S	**Sn**	**12 48 34.3**	**+1.2**
BRJC	**Barrancabermej**	**1.99**	**182**	P		P	**Pn**	**12 48 09.7**	**-0.9**
BRJC				S		S	**Sn**	**12 48 33.8**	**-1.2**
UREC	**San Jos de Ur**	**2.22**	**237**	P		P	**Pn**	**12 48 13.2**	**-0.4**
UREC				S		S	**Sn**	**12 48 39.8**	**-0.6**
SMRC	**Santa Marta, M**	**2.24**	**346**	P		P	**Pn**	**12 48 14.5**	**+0.6**
SMRC				S		S	**Sn**	**12 48 41.6**	**+0.6**
BARC	**Barichara**	**2.42**	**169**	P		P	**Pn**	**12 48 15.7**	**-0.8**
BARC				S		S	**Sn**	**12 48 44.2**	**-1.2**
PTBC	**PUERTO BERRIO,**	**2.55**	**198**	P		P	**Pn**	**12 48 16.9**	**-1.1**
PTBC				S		S	**Sn**	**12 48 48.4**	**+0.2**
LCBC	**Los crdobas,**	**2.68**	**268**	P		P	**Pn**	**12 48 19.2**	**-0.5**
LCBC				S		S	**Sn**	**12 48 52.4**	**+1.0**
SDV	**Santo Domingo**	**2.99**	**91**	*eP*		P	**Pn**	**12 48 25.1**	**+1.0**
SDV				*eS*		S	**Sn**	**12 48 59.1**	**-0.1**
APAC	**Apartado, Choc**	**3.08**	**250**	P		P	**Pn**	**12 48 24.7**	**-0.5**
APAC				S		S	**Sn**	**12 49 00.9**	**-0.2**
RUSC	**La Rusia**	**3.12**	**169**	P		P	**Pn**	**12 48 24.6**	**-1.5**
RUSC				S		S	**Sn**	**12 49 02.0**	**-0.6**
RUSC	**La Rusia**	**3.12**	**169**	*eP*		P	**Pn**	**12 48 27.8**	**+1.6**
RUSC				*eS*		S	**Sn**	**12 49 04.1**	**+1.5**
URIC	**Uribia, Colomb**	**3.17**	**31**	P		P	**Pn**	**12 48 25.7**	**-0.6**
URIC				S		S	**Sn**	**12 49 02.3**	**-0.8**
URIC	**Uribia, Colomb**	**3.17**	**31**	*eP*		P	**Pn**	**12 48 26.0**	**-0.3**
URIC				*eS*		S	**Sn**	**12 49 01.8**	**-1.3**
DBBC	**Dabeiba**	**3.19**	**233**	P		P	**Pn**	**12 48 27.5**	**+0.8**
DBBC				S		S	**Sn**	**12 49 01.2**	**-2.6**
SPBC	**San Pablo de B**	**3.33**	**187**	P		P	**Pn**	**12 48 27.2**	**-1.4**
SPBC				S		S	**Sn**	**12 49 05.9**	**-1.3**
HELC	**Santa Helena**	**3.33**	**214**	P		P	**Pn**	**12 48 29.8**	**+0.9**
HELC				S		S	**Sn**	**12 49 11.4**	**+3.7**
HELC	**Santa Helena**	**3.33**	**214**	*eP*		P	**Pn**	**12 48 31.5**	**+2.6**
HELC				*eS*		S	**Sn**	**12 49 10.7**	**+3.0**
NORC	**Norcasia**	**3.60**	**200**	P		P	**Pn**	**12 48 31.7**	**-0.5**
NORC				S		S	**Sn**	**12 49 16.3**	**+2.6**
CBOC	**Ciudad Bolivar**	**3.87**	**217**	P		P	**Pn**	**12 48 36.7**	**+0.6**
CBOC				S		S	**Sn**	**12 49 22.6**	**+2.0**
GUY2C	**Guyana, Caldas**	**4.09**	**205**	P		P	**Pn**	**12 48 38.9**	**-0.5**
GUY2C				S		S	**Sn**	**12 49 27.3**	**+0.9**
ROSC	**El Rosal**	**4.16**	**189**	P		P	**Pn**	**12 48 40.5**	**+0.3**
ROSC				S		S	**Sn**	**12 49 29.5**	**+1.6**
CHIC	**Chingaza**	**4.32**	**181**	P		P	**Pn**	**12 48 42.4**	**0.0**
CHIC				S		S	**Sn**	**12 49 31.9**	**+0.1**
CVER	**Cruz Verde, Cu**	**4.45**	**185**	P		P	**Pn**	**12 48 45.5**	**+1.4**
CVER				S		S	**Sn**	**12 49 36.3**	**+1.4**
PTAC	**Punta Ardita,**	**4.49**	**246**	P		P	**Pn**	**12 48 43.7**	**-0.6**
PTAC				S		S	**Sn**	**12 49 33.6**	**-1.8**
PLMC	**San Jos del P**	**4.81**	**213**	P		P	**Pn**	**12 48 48.5**	**-0.2**
PLMC				S		S	**Sn**	**12 49 45.5**	**+2.2**
VILC	**Villavicencio,**	**4.83**	**180**	P		P	**Pn**	**12 48 50.1**	**+1.0**
VILC				S		S	**Sn**	**12 49 45.1**	**+1.2**
PTGC	**Puerto Gaitan,**	**4.98**	**162**	P		P	**Pn**	**12 48 49.4**	**-1.6**
PTGC				S		S	**Sn**	**12 49 43.4**	**-4.0**
ORTC	**Ortega, Tolima**	**5.28**	**197**	P		P	**Pn**	**12 48 55.9**	**+0.9**
	1µm27nm,1.1s								
ORTC				S		S	**Sn**	**12 49 57.7**	**+3.1**
	1µm27nm,1.1s								
PRAC	**Prado**	**5.37**	**193**	P		P	**Pn**	**12 48 55.1**	**-1.2**
	16nm,0.6s								
PRAC				S		S	**Sn**	**12 49 57.7**	**+0.8**
	16nm,0.6s								
URMC	**La Uribe, Meta**	**5.74**	**187**	P		P	**Pn**	**12 49 00.9**	**-0.5**
URMC				S		S	**Sn**	**12 50 04.8**	**-1.1**
BCIP	**Isla Barro Col**	**6.11**	**272**	P		P	**Pn**	**12 49 03.4**	**-2.9**
BCIP				S		S	**Sn**	**12 50 09.5**	**-5.3**

*IDC **14** 12:59:26.4±1.4,9.°18N×126.°11E,h59km±12km,mb4.2/24, mbtmp4.5/28,MS3.4/10,Error ellipse: s-maj=20.2km s-min=8.3km az=83.0*
*MAN **14** 12:59:26.0,9.°25N×126.°29E,h27km,MS4.6*
MAN INTENSITY III - CORTES LANUZA AND CITY OF TANDAG SURIGAO DEL SUR; . INTENSITY II - CARMEN SURIGAO DEL SUR.
*NEIC **14** 12:59:27.8±1.3,9.°21N±0.°08×126.°1E±0.°1,h65km±7km, mb4.6/97,Error ellipse: s-maj=17.5km s-min=10.8km az=83.0*
*DJA **14** 12:59:35.8±0.3,9.°N±3.°×12.°6E±.°,h75km±5km,M4.8/7, mb4.5/6,mB5.3/4,MLv5.0/7,Mw(mB)4.7/4*
ISC 14 12:59:26.0±0.7,**9.19N**±0.°04×**126.36E**±0.°05,**h56**km±6km, **n365**,σ1**s26**/340,**mb4.6**/76,**MS3.9**/4,**1C,Mindanao**

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

TSSP	**Tandag City**	**0.21**	**227**	*eP*			**Pn**	**12 59 33.5**	**-1.6**
TSSP				*eS*			**Sn**	**12 59 39.0**	**-2.5**
BIPH	**Bislig**	**1.00**	**180**	*i* P			**Pn**	**12 59 43.6**	**-0.3**
BIPH				*i* S			**Sn**	**12 59 57.0**	**0.0**
SCPH	**Surigao**	**1.04**	**305**	*i* p			**Pn**	**12 59 43.6**	**-0.8**
SCPH				*i* s			Sn	12 59 45.9	-12
CDOP	**Cateel, Davao**	**1.40**	**177**	*i* P			**Pn**	**12 59 49.5**	**+0.2**
CDOP				*eS*			**Sn**	**13 00 08.8**	**+2.2**
CGP	**Cagayan de Oro**	**1.80**	**246**	*i* P			**Pn**	**12 59 54.6**	**0.0**
CGP				*i* S			**Sn**	**13 00 17.2**	**+0.9**
DAV	**Davao City (W)**	**2.24**	**200**	P			**Pn**	**13 00 01.5**	**+0.8**
	313nm,0.5s,baz=278,slow=4.4,SNR=2.2								
DAV				S			**Sn**	**13 00 25.9**	**-1.4**
	398nm,0.5s,baz=140,slow=21,SNR=3.6								
DAV				LR			LR	13 00 50.7	
	comp=Z,825nm,20.1s,baz=342,slow=39								
DAV	**Davao City (W)**	**2.24**	**200**	Pn			**Pn**	**13 00 01.7**	**+1.0**
DAV	**Davao City (W)**	**2.24**	**200**	P			Pn	13 00 06.9	+6.2
DAV				S			**Sn**	**13 00 27.5**	**+0.2**
DAV	**Davao City (W)**	**2.24**	**200**	P			Pn	13 00 09.0	+8.3
DMPH	**Davao City--Mi**	**2.25**	**202**	*eP*			Pn	13 00 05.8	+4.9
DMPH				*i* S			Sn	13 00 37.5	+10
PLP	**Palo**	**2.39**	**326**	*eP*			**Pn**	**13 00 03.1**	**+0.3**
PLP				*eS*			**Sn**	**13 00 34.4**	**+3.6**
KCP	**Kidapawan**	**2.50**	**210**	*i* P			**Pn**	**13 00 06.0**	**+1.6**
KCP				*eS*			**Sn**	**13 00 35.4**	**+1.6**
TBP	**Tagbilaran**	**2.51**	**282**	*i* P			**Pn**	**13 00 04.9**	**+0.5**
TBP				*i* S			**Sn**	**13 00 36.1**	**+2.3**
LLP	**Lapu-Lapu**	**2.61**	**296**	*eP*			**Pn**	**13 00 06.5**	**+0.7**
LLP				*i* S			**Sn**	**13 00 38.3**	**+2.0**
LSIP	**Lazi, Siquijor**	**2.69**	**269**	*i* P			**Pn**	**13 00 07.2**	**+0.3**
LSIP				*eS*			**Sn**	**13 00 36.9**	**-1.4**
CTBH	**Cotabato--PC H**	**2.86**	**227**	*eP*			**Pn**	**13 00 10.2**	**+1.0**
SNPH	**Sibulan**	**3.08**	**273**	*eP*			**Pn**	**13 00 13.2**	**+0.9**
SNPH				*eS*			**Sn**	**13 00 53.7**	**+5.7**
GSPH	**General Santos**	**3.38**	**204**	*i* P			**Pn**	**13 00 20.3**	**+3.8**
GSPH				*i* S			**Sn**	**13 00 58.5**	**+3.0**
IBAJ	**Ibajay, Aklan**	**4.88**	**303**	*i* P			**Pn**	**13 00 38.7**	**+1.9**
SGSI	**Sangihe**	**5.53**	**189**	P			**Pn**	**13 00 49.1**	**+3.3**
GQP	**Guinayangan**	**6.05**	**321**	*eP*			**Pn**	**13 00 55.0**	**+2.0**
LQP	**Lukban**	**6.80**	**317**	*eP*			**Pn**	**13 01 05.9**	**+2.5**
TGY	**Tagaytay City**	**7.21**	**313**	P			**Pn**	**13 01 08.2**	**-0.8**
	68nm,0.4s,baz=40,slow=0.9,SNR=4.9								
TGY				LR			LR	13 04 09.4	
	comp=Z,234nm,20.5s,baz=72,slow=40								
PCPS	**Palayan City**	**7.51**	**317**	*eP*			Pn	13 01 21.6	+8.7
PPR	**Puerto Princes**	**7.54**	**275**	*i* P			**Pn**	**13 01 15.0**	**+1.5**
MNI	**Manado**	**7.84**	**191**	P			**Pn**	**13 01 21.6**	**+4.1**
TNTI	**Ternate**	**8.42**	**173**	Pn			**Pn**	**13 01 27.4**	**+1.9**
TNTI	**Ternate**	**8.42**	**173**	P			Pn	13 01 32.0	+6.5
GTOI	**Gorontalo**	**9.12**	**202**	P			**Pn**	**13 01 36.5**	**+1.4**
TOLI2	**Tolitoli**	**9.75**	**215**	Pn			**Pn**	**13 01 43.8**	**0.0**
LUWI	**Luwuk**	**10.77**	**200**	P			**

comp=Z,5.7nm,0.5s,baz=219,slow=2.6,SNR=62
comp=Z,5.7nm,0.5s
PETK Petropavlovsk- 50.58 24 P P 13 08 20.9 +1.8
PET Petropavlovsk 50.91 25 P P 13 08 22.9 +1.5
PET IAmb IAmb 13 08 41.0
comp=Z,9.0nm,1.1s
YAK Yakutsk 52.80 2 P P 13 08 35.7 +0.3
MKAR Makanchi Array 52.94 323 P P 13 08 36.1 -0.6
comp=Z,5.3nm,0.6s,baz=123,slow=8.0,SNR=51
MKAR PcP PcP **13 09 44.6 -0.5**
comp=Z,1.4nm,0.6s,baz=120,slow=4.0,SNR=4.7
comp=Z,5.3nm,0.6s
MKAR Makanchi Array 52.94 323 P 13 08 36.2 -0.6
MKAR PcP PcP **13 09 44.1 -0.9**
PDGK Podgornoye 53.05 318 P P 13 08 36.2 -1.6
MAKZ Makanchi 53.13 323 P 13 08 37.2 -1.0
MAKZ IAmb IAmb 13 08 38.0
comp=Z,4.3nm,0.6s
KDJ Kajisay 54.12 316 P P 13 08 44.7 -1.0
KDJ IAmb IAmb 13 08 46.0
comp=Z,4.5nm,1.0s
KSH2 Kashi 54.19 312 P P 13 08 45.9 -0.3
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
NIL Nilore 54.41 305 P 13 08 46.1 -1.7
NRN Naryn 54.67 315 P P 13 08 49.0 -0.9
ZAA0 Zalesovo Array 55.61 332 P P 13 08 54.3 -1.8
ZALV Zalesovo Beam 55.61 332 P P 13 08 54.3 -1.7
comp=Z,1.4nm,0.4s,baz=127,slow=6.8,SNR=9.0
comp=Z,1.4nm,0.4s
ZALV Zalesovo Beam 55.61 332 P P 13 08 54.9 -1.1
KURK Kurchatov 57.00 326 P 13 09 05.0 -1.0
KURBB Kurchatov Arra 57.01 326 P P 13 09 05.0 -1.0
comp=Z,5.6nm,0.6s,baz=125,slow=6.7,SNR=46
comp=Z,5.6nm,0.6s
GAR Garm 58.05 310 P P 13 09 12.3 -1.5
KK31 Karatay Array 59.07 315 P P 13 09 19.5 -1.2
KK31 IAmb IAmb 13 09 20.4
comp=Z,3.9nm,1.0s
KKAR Karatay Array 59.07 315 P 13 09 19.7 -1.0
TIXI Tiksi 62.43 1 P P 13 09 43.1 +0.2
comp=Z,7.3nm,0.5s,baz=226,slow=5.1,SNR=8.6
comp=Z,7.3nm,0.5s
TIXI Tiksi 62.43 1 P 13 09 42.6 -0.3
BVAR Borovoye Array 62.60 326 P P 13 09 43.5 -0.9
comp=Z,4.0nm,0.8s,baz=117,slow=9.0,SNR=16
comp=Z,4.0nm,0.8s
BORK Borovoye 62.65 326 P 13 09 43.4 -1.4
ATKA Atka Island 64.28 36 P P 13 09 56.6 +1.1
NRIK Noril'sk 65.08 346 P P 13 09 59.9 -0.5
comp=Z,6.2nm,0.9s,baz=138,slow=4.6,SNR=6.1
comp=Z,6.2nm,0.9s
NRIK Noril'sk 65.08 346 P 13 09 59.6 -0.8
NRIK IAmb IAmb 13 10 00.8
comp=Z,6.8nm,1.0s
AB31 Akbulak array 67.75 320 P 13 10 17.1 -0.8
ABKAR Akbulak array 67.75 320 P P 13 10 16.0 -1.9
SPIA Saint Paul Isl 68.05 32 P P 13 10 21.7 +2.1
baz=252
UNV Unalaska Valle 69.20 36 P P 13 10 28.1 +1.3
UNV Unalaska Valle 69.20 36 P P 13 10 28.5 +1.7
baz=257
GAMB Gambell 69.61 25 P P 13 10 30.5 +1.4
baz=249
M11K Mekoryuk 70.99 29 P P 13 10 39.3 +1.7
baz=255
TNA Tin City 71.75 24 P P 13 10 43.2 +1.1
baz=252
K13K Kusilvak Mount 72.11 28 P P 13 10 45.5 +1.2
baz=256
F14K Arctic Creek 72.36 24 P P 13 10 46.6 +0.9
baz=253
M13K Dall Lake 72.37 29 P P 13 10 47.6 +1.7
baz=258
ANM Nome 72.49 25 P P 13 10 47.4 +0.9
baz=254
L14K Kuka Creek 72.89 28 IAmb IAmb 13 10 52.1
comp=Z,6.7nm,0.7s
L14K Kuka Creek 72.89 28 P P 13 10 50.4 +1.4
baz=258,SNR=6.9
SDPT Sand Point 72.93 35 P P 13 10 50.8 +1.4
baz=262
N14K Kuskokwak Cree 73.08 30 P P 13 10 51.7 +1.6
baz=259
F15K North Star Dit 73.09 24 P P 13 10 50.9 +0.7
baz=255
M14K Bethel 73.11 29 P 13 10 51.4 +1.1
M14K Bethel 73.11 29 P P 13 10 51.5 +1.2
baz=259,SNR=5.8
G15K Niukluk 73.15 25 P P 13 10 51.5 +1.0
baz=256
O14K Tigyukauivet M 73.16 31 IAmb IAmb 13 10 53.3
comp=Z,6.2nm,0.8s
O14K Tigyukauivet M 73.16 31 P P 13 10 51.9 +1.3
baz=260,SNR=5.7
CHNA Chernabura Isl 73.36 35 P P 13 10 52.8 +0.9
baz=262
L15K Ungalak Mounta 73.52 28 P P 13 10 54.2 +1.5
baz=259
C16K Lisburne Hills 73.55 21 P P 13 10 54.1 +1.4
baz=253
S14K Fog Glacier 73.58 34 P P 13 10 54.3 +1.0
baz=262
M15K Kasigluk River 73.71 29 P P 13 10 55.0 +1.2
baz=260,SNR=5.7
H16K Elim 73.81 25 P P 13 10 55.1 +0.7
baz=257
O15K Ungalikthiuk R 73.88 31 P P 13 10 56.2 +1.3
baz=261
N15K Kwethluk River 73.91 30 IAmb IAmb 13 10 57.9
comp=Z,7.2nm,0.7s
N15K Kwethluk River 73.91 30 P P 13 10 56.0 +0.9
baz=260,SNR=6.7
G16K Koyuk River 73.94 24 P P 13 10 55.6 +0.5
baz=257
D17K Noatak River 74.22 22 P P 13 10 56.5 -0.1
baz=256
CHGN Chignik 74.22 34 P P 13 10 57.8 +0.9
baz=263
J16K Anvik River 74.24 27 P P 13 10 57.9 +1.0
baz=259
I17K Unalakleet 74.31 26 P P 13 10 58.1 +0.8
baz=259
RDOG Red Dog Mine 74.37 22 P P 13 10 57.5 -0.1
baz=256
C17K DeLong Mountai 74.38 21 P P 13 10 58.2 +0.6
baz=255
L16K Owhat River 74.47 28 IAmb IAmb 13 11 00.6
comp=Z,3.5nm,0.8s
L16K Owhat River 74.47 28 P P 13 10 59.1 +0.9
baz=261
E17K Hotham Inlet 74.54 23 P P 13 10 59.4 +0.8
baz=257
M16K Timber Creek 74.60 29 IAmb IAmb 13 11 14.1
comp=Z,6.9nm,1.0s
M16K Timber Creek 74.60 29 P P 13 11 00.1 +1.0
baz=261
N16K Nishlik Lake 74.61 30 P P 13 11 00.4 +1.2
baz=262,SNR=5.9
F17K Baldwin Pennin 74.62 23 P P 13 10 59.8 +0.9
baz=258
G17K Kiwalik Mounta 74.66 24 P P 13 11 00.4 +1.1
baz=258
P16K Nushagak River 74.79 31 P P 13 11 01.9 +1.8
baz=263
O16K Kokwok River B 74.82 31 IAmb IAmb 13 11 03.1
comp=Z,5.4nm,0.8s
O16K Kokwok River B 74.82 31 P P 13 11 01.5 +1.2
baz=262
H17K Granite Mounta 74.85 25 P P 13 11 01.1 +0.6
baz=259
J17K VABM Dome 74.93 27 P P 13 11 02.1 +1.1
baz=260
E18K Tukpahlearik C 75.08 22 IAmb IAmb 13 11 04.5
comp=Z,5.3nm,0.8s
E18K Tukpahlearik C 75.08 22 P P 13 11 02.8 +1.2
baz=258
L17K Donlin 75.08 28 P P 13 11 02.6 +0.7
baz=262
C18K Utukok River 75.13 21 P P 13 11 03.6 +1.6
C18K IAmb IAmb 13 11 20.8
comp=Z,7.1nm,1.2s
C18K Utukok River 75.13 21 P P 13 11 02.9 +0.9
baz=257
K17K Iditarod 75.17 27 P P 13 11 03.4 +1.1
baz=261
F18K Selawik 75.28 23 P P 13 11 03.5 +0.7
baz=259
M17K Holitna River 75.39 29 IAmb IAmb 13 11 07.0
comp=Z,4.1nm,0.8s
M17K Holitna River 75.39 29 P P 13 11 05.1 +1.5
baz=262
N17K Nushagak Hills 75.39 30 P 13 11 05.4 +1.8
N17K IAmb IAmb 13 11 07.0
comp=Z,7.2nm,1.0s
N17K Nushagak Hills 75.39 30 P P 13 11 04.9 +1.2
baz=263
Q16K King Salmon 75.44 32 P P 13 11 06.0 +2.1
baz=264
R17L Mt. Peulik Vol 75.48 33 P P 13 11 05.9 +1.6
baz=264
H18K Honhosa River 75.54 25 P P 13 11 05.6 +1.2
baz=261
G18K Tagagawik 75.54 24 P P 13 11 05.7 +1.3
baz=260
P17K Kvichak River 75.61 31 P P 13 11 05.3 +0.4
baz=264
CHIR Chirikof Islan 75.72 35 P P 13 11 07.0 +1.4
baz=266
C19K Lookout Ridge 75.80 21 IAmb IAmb 13 11 10.1
comp=Z,9.8nm,0.9s
C19K Lookout Ridge 75.80 21 P P 13 11 06.2 +0.4
baz=259
Q17K Contact Creek 75.80 32 P P 13 11 06.9 +0.8
baz=265
L18K Granite Mounta 75.84 28 P P 13 11 06.9 +0.7
baz=263
N18K Kilae Creek 76.05 30 P P 13 11 08.3 +1.0
baz=264
F19K Shaleruckik Mo 76.05 23 P P 13 11 08.3 +1.0
baz=261
GCSA Galena City Sc 76.10 25 P P 13 11 08.3 +0.8
baz=262
M18K Stony River 76.17 29 P P 13 11 09.0 +1.0
baz=264
D19K Kuna River 76.21 22 IAmb IAmb 13 11 10.2
comp=Z,4.7nm,0.8s
D19K Kuna River 76.21 22 P P 13 11 09.4 +1.3
baz=260
G19K Purcell Mounta 76.22 24 P P 13 11 09.0 +0.8
baz=262
P18K Big Mountain, 76.25 31 P P 13 11 09.6 +1.0
baz=265
Q18K Katmai Hardscr 76.29 32 P P 13 11 09.9 +0.9
baz=265
O18K Koktuh Hills 76.30 31 P P 13 11 10.2 +1.3
baz=265
E19K Redstone River 76.36 23 IAmb IAmb 13 11 11.8
comp=Z,8.1nm,1.2s
E19K Redstone River 76.36 23 P P 13 11 09.8 +0.8
baz=261
H19K Roundabout Mou 76.39 25 IAmb IAmb 13 11 12.0
comp=Z,5.0nm,0.7s
H19K Roundabout Mou 76.39 25 P P 13 11 10.2 +1.1
baz=262,SNR=7.9
J19K Poorman 76.54 26 P P 13 11 11.1 +1.0
baz=264
SII Sitkinak Islan 76.58 34 P P 13 11 11.6 +1.1
baz=267
L19K White Mountain 76.69 28 P P 13 11 12.7 +1.7
baz=265
N19K Bonanza Creek 76.75 30 P P 13 11 12.4 +1.0
baz=265
O19K Port Alsworth 76.77 30 P P 13 11 13.0 +1.6
baz=266
D20K Etivluk River 76.79 21 IAmb IAmb 13 11 14.0
comp=Z,6.7nm,0.9s
D20K Etivluk River 76.79 21 P P 13 11 12.8 +1.4
baz=262
B20K Meade River 76.80 20 P P 13 11 12.8 +1.4
baz=261
E20K Nigu River 76.87 22 P P 13 11 12.8 +0.9
baz=262
F20K Avaraart Lake 76.88 23 IAmb IAmb 13 11 14.6
comp=Z,3.9nm,0.8s
F20K Avaraart Lake 76.88 23 P P 13 11 12.8 +0.9
baz=263,SNR=7.8
Q19K Cape Douglas, 77.02 32 P P 13 11 14.1 +1.1
baz=266
H20K Anotleneega Mo 77.03 25 P P 13 11 14.1 +1.2
baz=264,SNR=6.2
I20K Naaghedeneel 77.12 26 P P 13 11 14.4 +1.1
baz=264
K20K Telida 77.17 27 P P 13 11 15.0 +1.4
baz=265
A21K Barrow 77.20 19 P P 13 11 14.2 +0.6
baz=261
J20K Nowinta River 77.21 26 P P 13 11 15.3 +1.5
baz=265
P19K Oil Pt 77.28 31 P P 13 11 15.2 +0.8
baz=267
M20K Styx River 77.48 29 P P 13 11 16.1 +0.6
baz=266
C21K Knifeblade Rid 77.50 21 P P 13 11 15.8 +0.4
baz=263
KDAK Kodiak Island 77.52 33 P P 13 11 16.5 +0.9
baz=268
O20K Slope Mountain 77.61 30 P P 13 11 17.3 +1.0
baz=267
B21K Ikpikpuk River 77.62 21 P P 13 11 16.5 +0.4
baz=263
A22K Sinclair Lake 77.68 19 P P 13 11 17.1 +0.8
baz=263
G21K Allakaket 77.70 24 IAmb IAmb 13 11 19.3
comp=Z,5.0nm,0.9s
G21K Allakaket 77.70 24 P P 13 11 17.7 +1.2
baz=265
E21K Killik River 77.71 22 IAmb IAmb 13 11 19.0
comp=Z,3.8nm,0.8s
E21K Killik River 77.71 22 P P 13 11 17.9 +1.3
baz=264
F21K Alatna River 77.77 23 P P 13 11 17.8 +0.8
baz=265
H21K Melozitna Rive 77.91 25 P P 13 11 18.5 +0.7
baz=266
PPLA Purkeypile 77.98 28 P P 13 11 19.4 +1.0
baz=267
CHUM Lake Minchumin 77.99 27 P P 13 11 18.8 +0.6
baz=267
RAYN Ar Rayn 78.05 292 P 13 11 18.0 -1.5
RAYN IAmb IAmb 13 11 20.9
comp=Z,3.8nm,0.8s
CAST Castle Rocks 78.06 27 IAmb IAmb 13 11 21.8
comp=Z,3.9nm,0.8s
CAST Castle Rocks 78.06 27 P P 13 11 20.3 +1.7
baz=267
HOM Homer 78.09 31 P P 13 11 20.6 +1.8
baz=268
B22K Teshekpuk Lake 78.11 20 P P 13 11 20.0 +1.3
baz=264
I21K Tanana 78.22 25 IAmb IAmb 13 11 22.3
comp=Z,5.6nm,0.8s
I21K Tanana 78.22 25 P P 13 11 21.0 +1.6
baz=267
SKT Skwentna 78.24 29 P P 13 11 20.9 +1.2
baz=268
F22K John River 78.30 23 P P 13 11 21.1 +1.2
baz=266
CAPN Captain Cook N 78.37 30 P P 13 11 21.8 +1.4
baz=268
E22K Anaktuvuk Pass 78.48 22 P P 13 11 22.3 +1.4
baz=266
H22K Ishtalitna Cre 78.51 25 P P 13 11 22.3 +1.2
baz=267
G22K Bettles 78.52 23 P P 13 11 22.4 +1.4
baz=267
BRSE Bradley Lake S 78.55 31 P P 13 11 22.0 +0.6
baz=269
MLY Manley 78.73 25 IAmb IAmb 13 11 24.8
comp=Z,4.0nm,0.7s
MLY Manley 78.73 25 P P 13 11 22.8 +0.5
baz=268,SNR=6.7
CUT Chulitna 78.85 28 P P 13 11 23.8 +0.9
baz=269
TRF Thorofare Moun 78.87 27 P P 13 11 23.7 +0.4
baz=268
M22K Willow 78.90 29 P P 13 11 24.1 +0.9
baz=269
D23K Nanushuk River 78.95 21 P P 13 11 23.8 +0.4
baz=267
C23K Itkillik River 79.03 21 P P 13 11 24.4 +0.6
baz=267,SNR=11
COLD Coldfoot 79.05 23 P P 13 11 24.5 +0.6
baz=268
O22K Cooper Landing 79.07 30 P P 13 11 25.3 +1.1
baz=270
G23K Bananza Creek 79.09 24 P P 13 11 24.9 +0.6
baz=268
H23K Yukon River 79.26 25 P P 13 11 25.9 +0.7
baz=269
E23K Chandalar 79.30 22 IAmb IAmb 13 11 28.5
comp=Z,4.2nm,0.9s
E23K Chandalar 79.30 22 P P 13 11 26.0 +0.5
baz=268
I23K Minto, Yukon-K 79.32 25 IAmb IAmb 13 11 28.8
comp=Z,4.6nm,0.7s
I23K Minto, Yukon-K 79.32 25 P P 13 11 26.4 +0.9
baz=269,SNR=6.9
TOLK Toolik Lake Re 79.34 22 P P 13 11 26.5 +0.9
baz=268
PMR Palmer 79.37 29 P P 13 11 26.8 +1.0
baz=270
NEA2 Nenana 79.43 26 IAmb IAmb 13 11 28.4
comp=Z,4.5nm,0.7s
NEA2 Nenana 79.43 26 P P 13 11 26.8 +0.6
baz=269,SNR=5.8
MCK McKinley 79.48 27 IAmb IAmb 13 11 28.1
comp=Z,7.5nm,0.7s
MCK McKinley 79.48 27 P P 13 11 27.5 +1.0
baz=270
D24K Happy Valley 79.63 21 IAmb IAmb 13 11 29.8
comp=Z,6.0nm,0.6s
D24K Happy Valley 79.63 21 P P 13 11 27.5 +0.4
baz=269
WAT1 Susitna Watana 79.65 28 P P 13 11 28.4 +1.0
baz=270
KNK Knik Glacier 79.69 29 P P 13 11 28.5 +0.8
baz=270
E24K Your Creek 79.73 22 P P 13 11 28.3 +0.5
baz=268,SNR=5.1
SML Sawmill 79.75 29 P P 13 11 28.9 +0.9
baz=270
H24K Noodor Dome 79.95 25 P P 13 11 30.1 +1.1
baz=270
F24K Squaw Lake 79.95 23 IAmb IAmb 13 11 32.2
comp=Z,3.8nm,0.7s
F24K Squaw Lake 79.95 23 P P 13 11 29.3 +0.4
baz=270,SNR=8.5
WAT6 Susitna Watana 80.02 28 P P 13 11 30.7 +1.2
baz=271
G24K Hadweenzic Riv 80.11 24 P P 13 11 30.4 +0.6
baz=270
DHY Denali Highway 80.18 27 P P 13 11 30.7 +0.2
baz=271
SCM Sheep Creek Mo 80.23 29 P P 13 11 31.1 +0.5
baz=271
HDA Harding Lake 80.35 26 P P 13 11 31.3 +0.1
baz=271
ILAR Eielson Array 80.37 26 P P 13 11 31.1 -0.2
comp=Z,1.4nm,0.7s,baz=238,slow=5.0,SNR=25
comp=Z,1.4nm,0.7s
D25K Kavik River 80.50 21 P P 13 11 32.0 +0.2
baz=271
G25K Bearman Lake 80.65 24 P P 13 11 33.5 +0.9
baz=272
M24K Tolsona, Glenn 80.76 28 P P 13 11 34.3 +0.8
baz=272
Q23K Middleton Isla 80.78 31 P P 13 11 33.6 +0.1
baz=273
F25K Christian Rive 80.81 23 P P 13 11 34.2 +0.6
baz=272
E25K Arctic Village 80.82 22 P P 13 11 33.7 +0.1
baz=272
K24K Donnelly Dome 80.88 27 P P 13 11 34.4 +0.3
baz=272
C26K Camden Bay 81.00 20 P P 13 11 34.9 +0.4
baz=272
J25K Salcha River, 81.03 26 P P 13 11 35.5 +0.7
baz=273
EYAK Cordova Ski Ar 81.03 30 P P 13 11 35.7 +0.9
baz=273
RIDG Independent Ri 81.30 27 P P 13 11 36.1 -0.2
baz=273
F26K Sheenjek River 81.38 23 P P 13 11 36.3 -0.3
baz=273
C27K Jago River 81.43 21 P P 13 11 36.9 +0.2
baz=273
N25K Chitina, Valde 81.54 29 P P 13 11 38.3 +0.7
baz=274
G26K Porcupine Rive 81.56 23 P P 13 11 37.8 +0.3
baz=274
BMRM Bremner River 81.57 30 P P 13 11 38.8 +1.1
baz=274
SCRK Sand Creek 81.67 26 P P 13 11 38.5 +0.3
baz=274
L26K Log Cabin Wild 82.02 27 P P 13 11 41.6 +1.6
baz=275
M26K Nabesna, AK 82.23 28 P P 13 11 42.8 +1.6
baz=275
E27K Coleen River 82.30 22 P P 13 11 42.5 +1.1
baz=276
MCARA McCarthy VSAT 82.31 29 P P 13 11 42.6 +1.1
baz=275
G27K Doyon Strip 82.41 24 P P 13 11 43.2 +1.2
baz=276
D27M Malcolm River 82.43 21 P P 13 11 43.1 +1.0
baz=276
K27K Chicken 82.50 26 IAmb IAmb 13 11 45.8
comp=Z,6.1nm,0.8s
H27K Steamboat Moun 82.52 24 P P 13 11 44.0 +1.4
baz=276
I27K Kandik River 82.54 25 IAmb IAmb 13 11 45.8
comp=Z,5.8nm,0.8s
I27K Kandik River 82.54 25 P P 13 11 44.1 +1.3
baz=276
L27K Beaver Creek, 82.71 27 P P 13 11 44.6 +0.9
baz=276
M27K Edge Creek, AK 82.75 28 P P 13 11 45.2 +1.2
baz=276
F28M Old Crow 83.01 23 IAmb IAmb 13 11 47.7
comp=Z,3.8nm,0.6s
F28M Old Crow 83.01 23 P P 13 11 46.1 +1.0
baz=277
E28M Babbage River 83.02 22 P P 13 11 46.4 +1.4
baz=278
BVCY Beaver Creek 83.22 28 P P 13 11 47.5 +1.2
baz=277
I28M Miner Creek 83.26 25 IAmb IAmb 13 11 49.6
comp=Z,6.7nm,0.8s
I28M Miner Creek 83.26 25 P P 13 11 47.2 +0.7
baz=278
E29M Blow River 83.64 22 P P 13 11 48.9 +0.6
baz=279
DAWY Dawson 83.67 26 P P 13 11 49.4 +0.8
baz=278
O28M Mount Upton 83.74 30 P P 13 11 49.7 +0.4
baz=278
H29M Whitestone 83.79 24 IAmb IAmb 13 11 51.7
comp=Z,5.2nm,0.7s
H29M Whitestone 83.79 24 P P 13 11 49.9 +0.8
baz=279
PINM Pinnacle 83.80 30 P P 13 11 50.4 +1.0
baz=278
VADS Vadso 83.80 340 eP P 13 11 48.8 -0.2
VADS IAmb IAmb 13 11 50.4
comp=Z,48nm,1.8s
G29M Pine Creek 83.82 23 P P 13 11 50.0 +0.7
baz=279
M29M Somme Creek 84.32 28 P P 13 11 53.2 +1.2
baz=279
L29M L29M 84.37 27 P P 13 11 52.9 +0.8
baz=279
YUK4 Talbot Arm 84.40 29 P P 13 11 53.2 +0.6
baz=279
EPYK Eagle Plains 84.42 24 P P 13 11 52.9 +0.6
baz=280
G30M tAoh Zraii Nji 84.51 23 P P 13 11 53.2 +0.4
baz=281
K29M Barlow Dome 84.52 26 P P 13 11 53.2 +0.2
baz=280
F30M Barrier River 84.56 22 IAmb IAmb 13 11 55.3
comp=Z,3.7nm,0.8s
F30M Barrier River 84.56 22 P P 13 11 53.1 +0.1
baz=281
O29M Mount Kennedy 84.60 30 P P 13 11 52.8 -0.7
baz=279
I30M Mount Dempster 84.77 25 IAmb IAmb 13 11 58.6
comp=Z,4.2nm,0.8s
I30M Mount Dempster 84.77 25 P P 13 11 54.0 -0.2
baz=281
J30M Hart River 84.90 25 P P 13 11 55.1 +0.2
baz=281
HYT Haines Junctio 85.04 29 P P 13 11 55.7 0.0
baz=280

M30M	**Minto, Yukon**	**85.06**	**27**	P		**P**		**13 11 56.1**	**+0.4**
	baz=281								
SPA0	**Spitsbergen Ar**	**85.09**	**349**	*e*P		**P**		**13 11 55.5**	**0.0**
SPITS	**Spitsbergen Ar**	**85.09**	**349**	P		**P**		**13 11 54.9**	**-0.6**
	comp=Z,3.2nm,0.5s,baz=92,slow=8.3,SNR=9.9								
	comp=Z,3.2nm,0.5s								
P29M	**Windy Craggy**	**85.12**	**30**	P		**P**		**13 11 56.6**	**+0.6**
	baz=280								
ARA0	**ARCESS Array S**	**85.23**	**340**	*e*P		**P**		**13 11 56.0**	**-0.3**
ARA0				IAmb		IAmb		13 11 56.6	
	comp=Z,8.0nm,0.8s								
ARCES	**ARCESS Array B**	**85.23**	**340**	P		**P**		**13 11 55.9**	**-0.5**
	comp=Z,8.1nm,0.7s,baz=79,slow=6.2,SNR=37								
	comp=Z,8.1nm,0.7s								
ARCES	**ARCESS Array B**	**85.23**	**340**			**P**		**13 11 55.3**	**-1.0**
INK	**Inuvik**	**85.25**	**22**	P		**P**		**13 11 56.5**	**+0.1**
	baz=283								
G31M	**Satah River**	**85.27**	**23**	P		**P**		**13 11 57.3**	**+0.8**
	baz=282								
F31M	**Tsiigehtchic**	**85.36**	**22**	IAmb		IAmb		13 11 58.2	
	comp=Z,6.5nm,1.1s								
F31M	**Tsiigehtchic**	**85.36**	**22**	P		**P**		**13 11 57.6**	**+0.6**
	baz=283								
H31M	**Peel River**	**85.48**	**24**	IAmb		IAmb		13 11 59.9	
	comp=Z,10nm,1.3s								
H31M	**Peel River**	**85.48**	**24**	P		**P**		**13 11 58.4**	**+0.7**
	baz=282								
PLBC	**Pleasant Camp**	**85.84**	**31**	P		**P**		**13 12 00.6**	**+1.1**
	baz=281								
KTK1	**Kautokeino**	**86.14**	**339**	*e*P		**P**		**13 12 00.3**	**-0.5**
KTK1				IAmb		IAmb		13 12 00.7	
	comp=Z,6.9nm,0.8s								
BRTR	**Keskin Array B**	**86.28**	**309**	P		**P**		**13 12 00.9**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=76,slow=5.2,SNR=4.6								
	comp=Z,1.3nm,0.8s								
BRTR	**Keskin Array B**	**86.28**	**309**	P		**P**		**13 12 00.2**	**-2.1**
FINES	**FINESS Array B**	**86.88**	**332**	P		**P**		**13 12 03.5**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=84,slow=4.1,SNR=17								
	comp=Z,1.3nm,0.4s								
A36M	**Sachs Harbour**	**86.92**	**17**	P		**P**		**13 12 05.2**	**+0.6**
	baz=290								
C36M	**Paulatuk**	**88.23**	**20**	P		**P**		**13 12 11.1**	**+0.3**
	baz=292								
R33M	**Jennings River**	**88.54**	**30**	P		**P**		**13 12 12.9**	**+0.2**
	baz=286								
MAW	**Mawson**	**88.72**	**200**	P		**P**		**13 12 12.6**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=42,slow=6.7,SNR=3.6								
	comp=Z,1.9nm,0.7s								
MAW	**Mawson**	**88.72**	**200**	P		**P**		**13 12 13.5**	**+0.4**
VNDA	**Vanda**	**88.85**	**173**	P		**P**		**13 12 14.5**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=322,slow=6.4,SNR=28								
VNDA				LR		LR		13 49 23.3	
	comp=Z,86nm,21.3s,baz=310,slow=34								
	comp=Z,2.5nm,0.7s								
VNDA	**Vanda**	**88.85**	**173**			**P**		**13 12 14.4**	**+0.8**
VNDA				IAmb		IAmb		13 12 15.5	
	comp=Z,2.8nm,0.7s								
DLBC	**Dease Lake**	**89.28**	**31**	P		**P**		**13 12 16.3**	**+0.1**
	baz=287								
STEI	**Steigen**	**89.29**	**339**	*e*P		**P**		**13 12 14.6**	**-1.3**
FAUS	**Fauske**	**89.48**	**339**	*e*P		**P**		**13 12 15.7**	**-1.1**
HFS	**Hagfors**	**93.04**	**332**	P		**P**		**13 12 31.8**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=116,slow=3.4,SNR=4.7								
	comp=Z,1.1nm,0.6s								
NOA	**NORSAR Array B**	**93.76**	**334**	P		**P**		**13 12 35.0**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=65,slow=4.6,SNR=3.3								
	comp=Z,0.8nm,0.8s								
QSPA	**South Pole Qui**	**99.06**	**180**	P		**Pdif**		**13 12 59.8**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=34,slow=3.8,SNR=1.6								
QSPA				LR		LR		13 54 53.6	
	comp=Z,53nm,21.9s,baz=354,slow=34								
	comp=Z,0.5nm,0.6s								
QSPA	**South Pole Qui**	**99.06**	**180**	P		**Pdif**		**13 13 01.6**	**+0.9**
QSPA				IAmb		IAmb		13 13 32.3	
	comp=Z,3.0nm,1.4s								
TORD	**Torodi Ar. Bea**	**120.74**	**291**	PKP		**PKPdf**		**13 18 12.3**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=60,slow=2.3,SNR=10								
PLCA	**Paso Flores**	**145.18**	**157**	PKPbc		**PKPdf**		**13 18 58.8**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=245,slow=2.6,SNR=6.8								

IDC 14 12:59:50.3±4.3, 54°.91N×111°.31E, *h*0km, mbtmp3.4/3, ML3.3/3, Error ellipse: s-maj=44.3km s-min=28.9km az=16.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HILR	**Hailar Array B**	**7.45**	**133**	Pn	Pn	13 01 40.2	-0.1
	baz=318,slow=15						
HILR				Lg	Lg	13 03 46.9	
	baz=319,slow=29						
	1.0nm,0.2s						
SONM	**Songino Array**	**7.72**	**205**	Pn	Pn	13 01 44.7	+0.6
	0.4nm,0.3s,baz=21,slow=14,SNR=6.8						
SONM				Lg	Lg	13 03 55.2	
	0.6nm,0.3s,baz=21,slow=26,SNR=11						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**15.42**	**277**	Pn	Pn	13 03 28.5	-0.4
	0.2nm,0.3s,baz=81,slow=13,SNR=3.6						
	0.3nm,0.4s						

*IDC **14** 13:18:13.1±0.7, 37°.76N×87°.63E, *h*0km, mb4.1/16, mbtmp4.2/23, ML4.1/7, MS3.5/9, Error ellipse: s-maj=21.7km s-min=11.9km az=46.0*

*MOS **14** 13:18:13.1±1.2, 37°.93N×87°.54E, *h*10km, mb4.7/11, Error ellipse: s-maj=7.7km s-min=4.3km az=120.7*

*NEIC **14** 13:18:13.5±2.4, 37°.74N±0°.08×87°.6E±0°.1, *h*10km±1km, mb4.5/21, Error ellipse: s-maj=16.9km s-min=11.9km az=52.0*

*BJI **14** 13:18:13.8, 37°.70N×87°.61E, *h*18km, mB4.6/9, mb4.4/23, ML4.7/10, Ms4.1/25, Ms7 3.8/21*

*NNC **14** 13:18:17.6±1.9, 38°.11N×87°.18E, *h*0km, mb4.7, mpv5.1, Error ellipse: s-maj=25.8km s-min=14.7km az=77.0*

ISC 14 13:18:13.7±0.4, 37°.78N±0°.05×87°.54E±0°.05, h10km, n189, σ1§80/192, mb4.5/35, MS3.7/7, 19C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**6.04**	**1**	Pn	**Pn**	**13 19 41.8**	**-1.4**
WMQ				Sn	**Sn**	**13 20 49.8**	**-2.6**
WMQ				SMN			
	940nm,1.1s						
WMQ				SME			
	570nm,1.3s						
WUS	**Wushi**	**7.29**	**301**		**Pn**	**13 20 00.5**	**+0.1**
WUS					**Pb**	**13 20 20.5**	**+0.1**
SHLS	**Shalkode**	**8.17**	**314**	*e*P	**Pn**	**13 20 10.5**	**-1.9**
SHLS	**Shalkode**	**8.17**	**314**	*e*P	**Pn**	**13 20 10.5**	**-1.9**
PDGK	**Podgornoye**	**8.26**	**315**	⇓Pn	**Pn**	**13 20 14.6**	**+0.9**
	39nm,0.4s						
PDGK				⇓Sn	**Sn**	**13 21 40.9**	**-6.3**
	93nm,0.6s						
PDGK				⇑Lg	Lg	13 22 28.1	
	126nm,0.8s						
PDGK	**Podgornoye**	**8.26**	**315**	P	**Pn**	**13 20 13.9**	**+0.2**
PDGK	**Podgornoye**	**8.26**	**315**		**Pn**	**13 20 13.9**	**+0.2**
UZB	**Uzynbulak**	**8.42**	**312**	*e*P	**Pn**	**13 20 17.2**	**+1.3**
UZB				*e*S	**Sn**	**13 21 52.3**	**+1.3**
UZB	**Uzynbulak**	**8.42**	**312**	*e*P	**Pn**	**13 20 17.2**	**+1.3**
UZB				*e*S	**Sn**	**13 21 52.4**	**+1.3**
PRZ	**Przheval'sk**	**8.43**	**307**	P	**Pn**	**13 20 16.9**	**+0.8**
PRZ	**Przheval'sk**	**8.43**	**307**		**Pn**	**13 20 16.9**	**+0.8**
TARG	**Taragay, Kyrgy**	**8.47**	**301**	P	**Pn**	**13 20 17.5**	**+0.6**
TARG	**Taragay, Kyrgy**	**8.47**	**301**		**Pn**	**13 20 17.5**	**+0.6**
LSA	**Lhasa**	**8.60**	**158**	*e*P	Pg	13 20 48.4	-10
LSA				S	Sg	13 22 23.6	-26
LSA				LR	LR		
	comp=N,430nm,11.9s						
LSA				LR	LR		
	comp=E,930nm,13.3s						
SATY	**Saty**	**8.73**	**310**	*e*P	**Pn**	**13 20 21.9**	**+1.7**
SATY	**Saty**	**8.73**	**310**	*e*P	**Pn**	**13 20 21.9**	**+1.7**
KDJ	**Kajisay**	**9.06**	**302**	P	**Pn**	**13 20 26.0**	**+1.2**
KDJ	**Kajisay**	**9.06**	**302**		**Pn**	**13 20 26.0**	**+1.2**
KSH2	**Kashi**	**9.49**	**282**	P	**Pn**	**13 20 31.5**	**+0.9**
KSH2				S	**Sn**	**13 22 17.8**	**+0.4**
KSH2				SMN			
	comp=E,330nm,0.8s						
KSH2				SME			
	comp=E,200nm,1.0s						
NRN	**Naryn**	**9.62**	**296**	*e*P	**Pn**	**13 20 33.0**	**+0.4**
NRN	**Naryn**	**9.62**	**296**		**Pn**	**13 20 33.0**	**+0.4**
MDOK	**Medeo**	**9.63**	**307**	*e*P	**Pn**	**13 20 33.9**	**+1.4**
MDOK	**Medeo**	**9.63**	**307**	*e*P	**Pn**	**13 20 33.9**	**+1.4**
TNSS	**Tian-Shan**	**9.63**	**306**	*e*P	**Pn**	**13 20 34.0**	**+1.2**
TNSS	**Tian-Shan**	**9.63**	**306**	*e*P	**Pn**	**13 20 34.0**	**+1.2**
GTA2	**Gaotai**	**9.71**	**76**	*e*P	**Pn**	**13 20 34.9**	**+1.2**
GTA2				pmax	pmax		
	comp=E,6.0nm,1.2s						
GTA2				L	L		
	comp=E,570nm,7.9s						
GTA2				L	L		
	comp=E,650nm,9.8s						
GTA2				L	L		
	comp=E,610nm,9.8s						
AAA	**Alma-Ata**	**9.74**	**307**	*e*P	**Pn**	**13 20 35.8**	**+1.9**
AAA	**Alma-Ata**	**9.74**	**307**	*e*P	**Pn**	**13 20 35.8**	**+1.9**
ULHL	**Ulahol**	**9.75**	**301**	P	**Pn**	**13 20 35.7**	**+1.5**
	SNR=49						
MK31	**Makanchi Array**	**9.81**	**338**	⇑Pn	**Pn**	**13 20 34.2**	**-0.6**
	comp=E,9.5nm,0.7s,baz=152,slow=14,SNR=106						
MK31				⇑Sn	**Sn**	**13 22 23.1**	**-2.0**
	comp=E,9.2nm,0.5s						
MK31				⇑Lg	Lg	13 23 16.2	
	comp=E,30nm,0.8s,baz=147,slow=30,SNR=3.7						
MK31	**Makanchi Array**	**9.81**	**338**	P	**Pn**	**13 20 34.7**	**-0.2**
MK31	**Makanchi Array**	**9.81**	**338**	Pn	**Pn**	**13 20 34.7**	**-0.2**
MKAR	**Makanchi Array**	**9.81**	**338**	Pn	**Pn**	**13 20 34.4**	**-0.5**
	comp=E,2.2nm,0.3s,baz=153,slow=14,SNR=63						
MKAR				Sn	**Sn**	**13 22 21.4**	**-3.6**
	comp=E,4.7nm,0.3s,baz=160,slow=23,SNR=4.5						
MKAR				Lg	Lg	13 23 27.4	
	comp=E,4.5nm,0.3s,baz=156,slow=30,SNR=3.9						
MKAR				LR	LR	13 25 03.1	
	comp=E,205nm,19.3s,baz=150,slow=42						
	comp=E,5.7nm,0.4s						
MKAR	**Makanchi Array**	**9.81**	**338**		**Pn**	**13 20 33.7**	**-1.1**
EVN	**Everest**	**9.81**	**184**	Pn	**Pn**	**13 20 34.4**	**-1.1**
ZSN	**Zaisan**	**9.87**	**349**	*e*P	**Pn**	**13 20 35.0**	**-0.6**
ZSN	**Zaisan**	**9.87**	**349**	*e*P	**Pn**	**13 20 35.0**	**-0.6**
MAKZ	**Makanchi**	**9.92**	**337**	⇓Pn	**Pn**	**13 20 36.2**	**-0.1**
	comp=E,9.3nm,0.5s						
MAKZ				⇑Sn	**Sn**	**13 22 23.6**	**-4.1**
	comp=E,33nm,1.1s						
MAKZ				⇑Lg	Lg	13 23 19.8	
	comp=E,124nm,1.1s						
MAKZ	**Makanchi**	**9.92**	**337**		**Pn**	**13 20 34.9**	**-1.4**
TDK	**Taldyqorghan**	**9.95**	**319**	*e*P	**Pn**	**13 20 37.6**	**+0.8**
TDK	**Taldyqorghan**	**9.95**	**319**	*e*P	**Pn**	**13 20 37.6**	**+0.8**
BOOM	**Boomskoye usch**	**10.05**	**302**	P	**Pn**	**13 20 38.5**	**+0.2**
BOOM	**Boomskoye usch**	**10.05**	**302**		**Pn**	**13 20 38.5**	**+0.2**
TKM2	**Tokmak 2**	**10.46**	**303**	P	**Pn**	**13 20 45.0**	**+1.1**
	SNR=151						
KBK	**Karagaybulak**	**10.79**	**301**	P	**Pn**	**13 20 50.3**	**+1.9**
	SNR=6.5						
UCH	**Uchtor**	**10.93**	**298**	P	**Pn**	**13 20 51.5**	**+0.9**
	SNR=9.9						
CHMS	**Chumysh**	**11.06**	**302**	P	**Pn**	**13 20 52.6**	**+0.7**
	SNR=11						
FRU1	**Bishkek**	**11.06**	**301**	*e*P	**Pn**	**13 20 51.2**	**-0.9**
FRU1	**Bishkek**	**11.06**	**301**	Pn	**Pn**	**13 20 51.2**	**-0.9**
AAK	**Ala-Archa**	**11.09**	**300**	Pn	**Pn**	**13 20 53.5**	**+1.0**
	comp=E,4.8nm,0.3s,baz=123,slow=9.2,SNR=34						
AAK				Lg	Lg	13 24 07.7	
	comp=E,1.2nm,0.3s,baz=49,slow=20,SNR=1.8						
AAK				LR	LR	13 26 01.1	
	comp=E,187nm,18.4s,baz=137,slow=42						
	comp=E,10nm,0.3s						
AAK	**Ala-Archa**	**11.09**	**300**	P	**Pn**	**13 20 54.1**	**+1.6**
	SNR=20						
AAK	**Ala-Archa**	**11.09**	**300**	⇑Pn	**Pn**	**13 20 52.9**	**+0.4**
	comp=E,58nm,1.4s						
AAK				⇑Pg		13 21 30.4	
	comp=E,23nm,0.9s						
AAK				⇑Lg	Lg	13 23 54.3	
	comp=E,132nm,1.5s						
AAK	**Ala-Archa**	**11.09**	**300**	P	**Pn**	**13 20 52.2**	**-0.3**
AAK	**Ala-Archa**	**11.09**	**300**		**Pn**	**13 20 52.1**	**-0.3**
USP	**Ospenovka**	**11.33**	**303**	P	**Pn**	**13 20 56.3**	**+0.6**
	SNR=14						
EKS2	**Erkin-Say**	**11.59**	**299**	P	**Pn**	**13 21 00.6**	**+1.3**
	SNR=18						
DGZ	**Jazzator, Alta**	**11.92**	**360**	*e*P	**Pn**	**13 21 03.5**	**-0.3**
NIL	**Nilore**	**12.32**	**255**	P	**Pn**	**13 21 09.4**	**+0.2**
NIL	**Nilore**	**12.32**	**255**		**Pn**	**13 21 09.4**	**+0.2**
DRK	**Karamyk**	**12.43**	**283**	P	**Pn**	**13 21 09.7**	**-1.3**
DRK	**Karamyk**	**12.43**	**283**		**Pn**	**13 21 09.7**	**-1.3**
MANEM	**Manem**	**12.57**	**274**		**Pn**	**13 21 12.5**	**-0.4**
LZDM	**Lanzhou Array**	**13.07**	**93**	Pn	**Pn**	**13 21 20.4**	**+0.7**
	baz=284,slow=13						
LZDM				Lg	Lg	13 25 04.2	
	baz=283,slow=26						
LZDM				LR	LR	13 26 16.1	
	comp=E,116nm,20.9s,baz=235,slow=37						
	comp=E,1.9nm,0.3s						
LZH	**Lanzhou**	**13.16**	**92**	*e*P	**Pn**	**13 21 21.9**	**+1.1**
LZH				sP	P	13 21 28.3	-2.7
LZH				pmax	pmax		
	comp=E,17nm,1.2s						
LZH				L	L		
	comp=E,440nm,10.7s						
LZH				L	L		
	comp=E,390nm,11.7s						
BTK	**Batken**	**13.22**	**285**	P	**Pn**	**13 21 19.0**	**-2.6**
BTK	**Batken**	**13.22**	**285**		**Pn**	**13 21 19.0**	**-2.6**
GAR	**Garm**	**13.57**	**280**		**Pn**	**13 21 22.3**	**-4.1**
KK31	**Karatay Array**	**14.01**	**298**	⇑Pn	**Pn**	**13 21 34.1**	**+1.8**
	comp=E,2.1nm,0.5s,baz=122,slow=6.2,SNR=28						
KK31				⇑Lg	Lg	13 25 31.7	
	comp=E,8.7nm,0.7s						
KK31	**Karatay Array**	**14.01**	**298**	P	**Pn**	**13 21 29.4**	**-2.9**
KK31	**Karatay Array**	**14.01**	**298**		**Pn**	**13 21 29.4**	**-2.9**
KKAR	**Karatay Array**	**14.01**	**298**	*e*P	**Pn**	**13 21 28.8**	**-3.5**
KKAR	**Karatay Array**	**14.01**	**298**		**Pn**	**13 21 28.8**	**-3.5**
IUG	**luzhnay**	**14.12**	**293**	*e*P	**Pn**	**13 21 36.7**	**+2.9**
IUG	**luzhnay**	**14.12**	**293**	*e*P	**Pn**	**13 21 36.8**	**+2.9**
KURBB	**Kurchatov Arra**	**14.36**	**336**	Pn	**Pn**	**13 21 34.0**	**-3.0**
	comp=E,0.1nm,0.3s,baz=145,slow=13,SNR=36						
KURBB				Lg	Lg	13 25 53.2	
	baz=146,slow=28,SNR=6.1						
	comp=E,4.8nm,0.8s						
KURBB	**Kurchatov Arra**	**14.36**	**336**	⇓Pn	**Pn**	**13 21 33.9**	**-3.1**
	comp=E,5.9nm,0.5s						
KURBB				⇓Sn	**Sn**	**13 24 16.5**	**+0.3**
	comp=E,23nm,0.8s						
KURBB				⇑Lg	Lg	13 25 43.2	
	comp=E,90nm,1.0s						
KURK	**Kurchatov**	**14.41**	**337**	⇑Pn	**Pn**	**13 21 34.7**	**-3.1**
	comp=E,2.5nm,0.8s						
KURK				⇓Sn	**Sn**	**13 24 15.0**	**-2.5**
	comp=E,9.7nm,1.4s						
KURK				⇑Lg	Lg	13 25 43.9	
	comp=E,28nm,1.4s						
KURK	**Kurchatov**	**14.41**	**337**	*c* *i*P	**Pn**	**13 21 34.6**	**-3.1**
KURK	**Kurchatov**	**14.41**	**337**		Pn	13 21 33.0	-4.7
CHM	**Chimkent**	**14.46**	**294**	*e*P	**Pn**	**13 21 41.4**	**+2.9**
CHM	**Chimkent**	**14.46**	**294**	*e*P	**Pn**	**13 21 41.4**	**+2.9**
CHGR	**Chuyangaron**	**14.48**	**279**	*i* P	**Pn**	**13 21 35.5**	**-3.3**
CHGR	**Chuyangaron**	**14.48**	**279**		Pn	13 21 32.6	-6.2
KNGR	**Kungurtug, Tuv**	**14.67**	**26**	*e*P	**Pn**	**13 21 40.8**	**-0.5**
KBL	**Kabul**	**15.29**	**263**	P	**Pn**	**13 21 44.7**	**-5.1**
KBL				pmax	pmax		
	comp=Z,20nm,0.7s						
KBL	**Kabul**	**15.29**	**263**		**Pn**	**13 21 44.7**	**-5.1**
KBL				IAmb	IAmb	13 21 55.3	
	comp=Z,20nm,0.7s						
SHAA	**Shahritus**	**15.38**	**275**		**Pn**	**13 21 46.1**	**-4.8**
SHAA				IAmb	IAmb	13 21 55.1	
	comp=Z,26nm,0.7s						
ZAA0	**Zalesovo Array**	**16.28**	**354**		Pn	13 21 54.6	-7.7
ZALV	**Zalesovo Beam**	**16.28**	**354**	Pn	**Pn**	**13 22 00.1**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=173,slow=13,SNR=8.0						
ZALV				Sn	Sn	13 24 51.2	-12
	comp=Z,0.9nm,0.3s,baz=175,slow=24,SNR=5.4						
ZALV				LR	LR	13 29 21.9	
	comp=Z,152nm,18.6s,baz=187,slow=41						
ZALV	**Zalesovo Beam**	**16.28**	**354**	*e*P	**Pn**	**13 22 00.3**	**-2.0**
ZALV	**Zalesovo Beam**	**16.28**	**354**		Pn	13 21 55.0	-7.3
ZALV					Sn	13 24 51.2	-12
MOY	**Mondy**	**16.82**	**30**	*e*P	**Pn**	**13 22 09.4**	**+0.1**
MOY				pmax	pmax		
	comp=Z,29nm,2.0s						
ZAK	**Zakamensk**	**16.89**	**37**	*e*P	**Pn**	**13 22 09.4**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**17.06**	**48**	P	**Pn**	**13 22 11.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=242,slow=15,SNR=27						
	comp=Z,4.6nm,0.7s						
SONM	**Songino Array**	**17.06**	**48**		**Pn**	**13 22 12.2**	**-0.2**
SONM				IAmb	IAmb	13 22 18.1	
	comp=Z,29nm,1.1s						
ULN	**Ulaanbaatar**	**17.46**	**49**	P	**Pn**	**13 22 17.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,41nm,1.5s						
ULN	**Ulaanbaatar**	**17.46**	**49**		**Pn**	**13 22 17.5**	**0.0**
ULN				IAmb	IAmb	13 22 22.6	
	comp=Z,41nm,1.4s						
XAN	**Xi'an**	**17.71**	**96**	P	**P**	**13 22 23.9**	**+2.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				L	L		
	comp=Z,940nm,16.0s						
XAN				L	L		
	comp=Z,530nm,15.1s						
XAN				L	L		
	comp=Z,580nm,12.9s						
TLY	**Talaya**	**17.95**	**34**	P	**P**	**13 22 24.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=230,slow=13,SNR=3.3						
	comp=Z,3.5nm,0.6s						
TLY	**Talaya**	**17.95**	**34**	*i* P	**Pn**	**13 22 22.3**	**-1.0**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TLY	**Talaya**	**17.95**	**34**	P	**P**	**13 22 24.7**	**+0.8**
IRK	**Irkutsk**	**18.62**	**34**	*e*P	**Pn**	**13 22 32.0**	**+0.5**
IRK				pmax	pmax		
	comp=Z,41nm,1.4s						
HHC	**Hu-ho-hao-te**	**18.83**	**73**	*e*P	**P**	**13 22 30.3**	**-3.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,33nm,4.9s						
HHC				L	L		
	comp=Z,250nm,8.7s						
HHC				L	L		
	comp=Z,410nm,11.6s						
HHC				L	L		
	comp=Z,240nm,8.7s						
BVAR	**Borovoye Array**	**19.35**	**327**	P	**P**	**13 22 40.2**	**+1.0**
	comp=Z,2.0nm,0.3s,baz=122,slow=11,SNR=53						
	comp=Z,13nm,0.8s						
BORK	**Borovoye**	**19.40**	**327**	P	**P**	**13 22 39.5**	**-0.2**
BORK				pmax	pmax		
	comp=Z,27nm,1.0s						
BORK	**Borovoye**	**19.40**	**327**		**P**	**13 22 39.5**	**-0.2**
BORK				IAmb	IAmb	13 22 43.4	
	comp=Z,27nm,1.0s						
ENH	**Enshi**	**19.64**	**106**	P	**P**	**13 22 40.3**	**-2.4**
LYN	**LuoYang**	**20.37**	**92**	P	Pn	13 22 52.0	-0.5
LYN				pmax	pmax		
	comp=Z,35nm,1.1s						
LYN				L	L		
	comp=Z,940nm,16.1s						
LYN				L	L		
	comp=Z,410nm,15.2s						
LYN				L	L		
	comp=Z,390nm,12.4s						
HNS	**HongShan**	**21.51**	**83**	⇓P	**P**	**13 23 04.8**	**+2.1**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HNS				L	L		
	comp=Z,440nm,12.5s						
HNS				L	L		
	comp=Z,220nm,12.9s						
HNS				L	L		
	comp=Z,280nm,12.2s						
CMAR	**Chiang Mai Arr**	**21.68**	**149**	P	**P**	**13 23 05.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=328,slow=9.1,SNR=11						
	comp=Z,1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.68**	**149**	*e*P	**P**	**13 23 07.2**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.68**	**149**	P	**P**	**13 23 03.2**	**-1.5**
HYB	**Hyderabad**	**21.77**	**204**	*e*P	**P**	**13 23 05.1**	**-0.6**
HYB				*e*S	**S**	**13 27 06.4**	**0.0**
XLT	**XiLinHaoTe**	**22.38**	**65**	*e*P	**P**	**13 23 14.1**	**+1.9**
XLT				pmax	pmax		
	comp=Z,19nm,1.0s						
XLT				pmax	pmax		
	comp=Z,130nm,4.6s						
AB31	**Akbulak array**	**22.93**	**309**	P	**P**	**13 23 18.7**	**+0.8**
	comp=Z,24nm,0.9s,baz=102,slow=11,SNR=97						
AB31	**Akbulak array**	**22.93**	**309**	P	**P**	**13 23 18.0**	**+0.2**
AB31				IAmb	IAmb	13 23 24.5	
	comp=Z,19nm,0.8s						
ABKAR	**Akbulak array**	**22.93**	**309**	P	**P**	**13 23 17.6**	**-0.2**
AKTO	**Aktyubinsk**	**24.51**	**311**	P	**P**	**13 23 34.5**	**+1.4**
	comp=Z,4.8nm,0.8s,baz=103,slow=7.9,SNR=14						
	comp=Z,4.8nm,0.8s						
AKTO	**Aktyubinsk**	**24.51**	**311**	⇓P	**P**	**13 23 34.0**	**+0.9**
	comp=Z,5.4nm,0.7s						
SVE	**Sverdlovsk**	**26.10**	**326**	*e*P	**P**	**13 23 49.3**	**+1.9**
SVE				pmax	pmax		
	comp=Z,36nm,1.3s						
NJ2	**Nanjing**	**26.23**	**93**	*e*P	**P**	**13 23 46.9**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
ARTI	**Arti**	**26.90**	**323**	P	**P**	**13 23 56.0**	**+1.3**
	comp=Z,6.3nm,0.6s,baz=114,slow=1.7,SNR=8.9						
	comp=Z,6.3nm,0.6s						
ARTI	**Arti**	**26.90**	**323**	*d* *i*P	**P**	**13 23 55.6**	**+1.0**
ARTI

VADS	**Vadso**	**44.26 335**	*e*P	**P**	**13 26 25.3 +2.4**	
MA2	**Magadan**	**45.03 40**	LR	LR	13 46 21.8	
	comp=Z,79nm,18.3s,baz=289,slow=38					
ARA0	**ARCESS Array S**	**45.43 334**	*e*P	**P**	**13 26 34.7 +2.4**	
ARCES	**ARCESS Array B**	**45.43 334**	P	**P**	**13 26 33.7 +1.4**	
	comp=Z,4.2nm,0.8s,baz=92,slow=7.1,SNR=16					
	comp=Z,4.2nm,0.8s					
ARCES	**ARCESS Array B**	**45.43 334**	*e*P	**P**	**13 26 34.3 +2.0**	
ARCES			pmax	pmax		
	comp=Z,4.0nm,0.8s					
BURAR	**Bucovina Array**	**45.72 303**	P	**P**	**13 26 33.3 -1.7**	
BUR08	**Bucovina Ar. S**	**45.72 303**	P	**P**	**13 26 33.5 -1.5**	
BUR08			lAmb	lAmb	13 26 59.0	
	comp=Z,4.5nm,1.2s					
KTK1	**Kautokeino**	**46.14 333**	*e*P	**P**	**13 26 40.1 +2.1**	
KTK1			lAmb	lAmb	13 26 42.2	
	comp=Z,5.8nm,0.9s					
FAUS	**Fauske**	**49.01 331**	*e*P	**P**	**13 27 02.3 +2.1**	
FAUS			lAmb	lAmb	13 27 02.9	
	comp=Z,9.6nm,0.7s					
MOR8	**Moi Rana**	**49.38 329**	*e*P	**P**	**13 27 04.2 +1.1**	
MOR8			lAmb	lAmb	13 27 04.3	
	comp=Z,7.7nm,0.9s					
RAUS	**Rausandaksla**	**49.53 330**	*e*P	**P**	**13 27 05.9 +1.7**	
LOF	**Lofoten**	**49.65 332**	*e*P	**P**	**13 27 06.0 +0.9**	
VAGH	**Vaagaholmen**	**49.82 330**	*e*P	**P**	**13 27 07.6 +1.2**	
LEIR	**Leirfjorden**	**49.92 329**	*e*P	**P**	**13 27 09.1 +1.9**	
LEIR			lAmb	lAmb	13 27 09.7	
	comp=Z,7.7nm,0.8s					
HFS	**Hagfors**	**50.32 321**	P	**P**	**13 27 11.9 +1.5**	
	comp=Z,4.2nm,0.4s,baz=79,slow=9.7,SNR=42					
	comp=Z,4.2nm,0.4s					
NSS	**Namsos**	**50.55 327**	*e*P	**P**	**13 27 14.1 +2.1**	
VRAC	**Vranov**	**50.91 307**	*e*P	**P**	**13 27 17.5 +2.6**	
KRUC	**Moravsky**	**51.10 307**	*e*P	**P**	**13 27 18.4 +2.0**	
NC602	**NORSAR Array S**	**51.28 322**	*e*P	**P**	**13 27 19.6 +2.0**	
NB2	**NORSAR Subarra**	**51.39 323**	P	**P**	**13 27 19.9 +1.6**	
	comp=Z,2.3nm,0.4s,baz=80,slow=7.4					
NB2	**NORSAR Subarra**	**51.39 323**	P	**P**	**13 27 19.9 +1.6**	
NOA	**NORSAR Array B**	**51.39 323**	P	**P**	**13 27 19.9 +1.6**	
	comp=Z,2.3nm,0.4s,baz=80,slow=7.4,SNR=26					
	comp=Z,2.3nm,0.4s					
NOA	**NORSAR Array B**	**51.39 323**	*e*P	**P**	**13 27 20.0 +1.6**	
NOA			pmax	pmax		
	comp=Z,2.0nm,0.4s					
KAPI	**Kappang**	**52.05 138**	LR	LR	13 51 05.6	
	comp=Z,191nm,18.6s,baz=169,slow=38					
DOMB	**Dombas**	**52.22 324**	*e*P	**P**	**13 27 26.3 +1.7**	
MOL	**Molde**	**52.81 325**	*e*P	**P**	**13 27 30.9 +2.1**	
SKAR	**Skarslia**	**52.85 323**	*e*P	**P**	**13 27 31.7 +2.4**	
GERES	**GERESS Array B**	**52.87 307**	P	**P**	**13 27 31.3 +1.7**	
	comp=Z,0.9nm,0.6s,baz=63,slow=6.3,SNR=8.6					
	comp=Z,0.9nm,0.6s					
GERES	**GERESS Array B**	**52.87 307**	P	**P**	**13 27 28.4 -1.3**	
NRCA	**Norcia**	**55.27 300**	P	**P**	**13 27 46.4 -0.8**	
SOEI	**Soe**	**58.44 136**	P	**P**	**13 28 06.9 -3.2**	
EKA	**Eskdalemuir Ar**	**60.32 319**	P	**P**	**13 28 24.1 +1.6**	
	comp=Z,1.1nm,0.6s,baz=67,slow=7.3,SNR=3.7					
	comp=Z,1.1nm,0.6s					
ESDC	**Sonseca Array**	**68.17 304**	P	**P**	**13 29 15.4 +1.1**	
	comp=Z,1.1nm,0.6s,baz=52,slow=5.7,SNR=10.0					
	comp=Z,1.1nm,0.6s					
ESDC	**Sonseca Array**	**68.17 304**	P	**P**	**13 29 13.7 -0.6**	
WRAB	**Tennant Creek**	**72.33 134**⇑	*i*P	**P**	**13 29 42.6 +2.8**	
WRAB			pmax	pmax		
	comp=Z,3.0nm,0.9s					
WRA	**Warramunga Arr**	**72.33 134**	P	**P**	**13 29 40.5 +0.7**	
	comp=Z,0.7nm,0.8s,baz=331,slow=5.8,SNR=6.3					
	comp=Z,0.7nm,0.8s					
WRA	**Warramunga Arr**	**72.33 134**	P	**P**	**13 29 40.5 +0.7**	
ASAR	**Alice Springs**	**75.06 137**	P	**P**	**13 29 56.2 +0.5**	
	comp=Z,0.4nm,0.7s,baz=334,slow=5.4,SNR=6.3					
	comp=Z,0.4nm,0.7s					
YKA	**Yellowknife Ar**	**78.49 10**	P	**P**	**13 30 15.1 +0.4**	
	comp=Z,1.7nm,0.6s,baz=344,slow=5.5,SNR=4.1					
	comp=Z,1.7nm,0.6s					
TORD	**Torodi Ar. Bea**	**78.82 278**	P	**P**	**13 30 18.8 +1.6**	
	comp=Z,1.4nm,0.7s,baz=33,slow=4.7,SNR=6.4					
	comp=Z,1.4nm,0.7s					
TORD	**Torodi Ar. Bea**	**78.82 278**	P	**P**	**13 30 18.8 +1.6**	
TORD			lAmb	lAmb	13 30 32.0	
	comp=Z,3.3nm,0.7s					

MOS ***14*** *13:21:04.2±1.0, 44.˚00N×147.˚17E, h67km, mb5.4/55, MS3.8/16, Error ellipse: s-maj=6.1km s-min=4.5km az=107.9*

MOS Felt (IV-V) at Malokuril'skoe.

BGR ***14*** *13:21:05.8, 44.˚21N×146.˚65E, h33km, mb5.2, Ms3.9*

IDC ***14*** *13:21:07.9±1.7, 44.˚08N×147.˚08E, h85km±14km, mb4.6/34, mbtmp4.9/43, MS3.7/60, Error ellipse: s-maj=9.7km s-min=8.3km az=128.0*

SKHL ***14*** *13:21:07.9±0.7, 43.˚90N×147.˚20E, h103km±4km, mb5.8/8, msh7.0/6*

SKHL Felt (IV) at Yushno-Kuril`sk, Lagunnoe, Goryachy Plyash, Golovnino, Malokuril`skoe, (III) at Krabozavodskoe, Gornyi, (II) Kuril`sk, Reidovo.

BJI ***14*** *13:21:07.6, 44.˚09N×146.˚83E, h77km, mB5.0/29, mb5.0/68, Ms4.2/38, Ms7 4.0/38*

GFZ ***14*** *13:21:08.1±0.5, 44.˚N±4.˚×14.˚7E±.˚, h82km±4km, M5.1/23, mb5.2/23*

NEIC ***14*** *13:21:08.1±1.7, 44.˚05N±0.˚07×147.˚1E±0.˚1, h88km±4km, mb5.2/720, Mww4.9/12, Error ellipse: s-maj=11.6km s-min=9.2km az=117.0*

NIED ***14*** *13:21:09.1, 43.˚79N×147.˚15E, h88km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-3.23; Mθθ2.74; Mφφ 0.48; Mrθ 0.28; Mθφ 1.44; Mφr-0.00; Fault plane solution: M₀3.35000×10¹⁶ NP1:φs62.00000°, δ43.00000°, λ-93.00000°. NP2:φs246.00000°, δ47.00000°, λ-87.00000°.*

JMA ***14*** *13:21:09.1±0.2, 43.˚8N±0.˚8×14.˚7E±.˚, h88km±3km, MD4.9/38, MW4.9/38, E OFF HOKKAIDO*

JMA Felt II J1 at E OFF HOKKAIDO .

GCMT ***14*** *13:21:10.1±0.2, 44.˚04N±0.˚02×147.˚31E±0.˚02, h92km±2km, MW5.0/112, Moment Tensor Solution. s59,c69; s112,c171; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.63±.09; Mθθ 1.85±.10; Mφφ 0.78±.10; Mrθ 0.77±.07; Mθφ2.03±.08; Mφr 1.03±.06; Best double couple: M₀3.29300×10¹⁶ NP1:φs63.00000°, δ35.00000°, λ-75.00000°. NP2:φs224.00000°, δ57.00000°, λ-100.00000°. Principal axes: T 3.6590, Plg11.0000°, Azm321.0000°; N -0.7310, Plg9.0000°, Azm230.0000°; P -2.9280, Plg76.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 13:21:07.4±0.3, 43.˚97N±0.˚03×147.˚15E±0.˚03, h86km±2km, h86km; pP-P, n1238, σ1≥51/1025, mb5.2/516, 61C-53D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.25**	**247**	*i* P	Pn	13 21 34.6	+14
SHO				AMB	AMB	13 21 35.6	
	55μm,0.3s						
SHO				*i* S	Sn	13 21 43.9	+14
SHO				A	A	13 21 44.5	
	207μm,0.2s						
SHO				A	A	13 21 44.5	
	208μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.93**	**274**	*d i* PN	**Pn**	**13 21 27.7**	**+1.7**
YUK	**Yuzh-Kuril'sk**	**0.93**	**274**	*i* P	**Pn**	**13 21 27.6**	**+1.6**
YUK				AMB	AMB	13 21 28.2	
	41μm,0.3s						
YUK				*i* S	**Sn**	**13 21 42.2**	**+2.2**
YUK				A	A	13 21 43.2	
	135μm,0.3s						
YUK				A	A	13 21 43.2	
	115μm,0.3s						
NEM2	**Nemuro 2**	**1.19**	**240**	P	**Pn**	**13 21 30.0**	**+1.0**
NEM2				A	A	13 21 30.0	
	comp=N,20nm,2.2s,comp=E,51nm,1.1s						
NEM2				S	**Sn**	**13 21 45.4**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.20**	**240**	⇓*i* PN	**Pn**	**13 21 30.0**	**+0.9**
NMR				*i* S	**Sn**	**13 21 45.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**1.20**	**240**	*i* P	**Pn**	**13 21 30.1**	**+0.9**
NMR				*i* S	**Sn**	**13 21 45.7**	**+0.3**
KUR	**Kuril'sk**	**1.36**	**22**	*d i* PN	**Pn**	**13 21 33.2**	**+2.1**
KUR	**Kuril'sk**	**1.36**	**22**	*i* P	**Pn**	**13 21 33.3**	**+2.1**
KUR				AMB	AMB	13 21 34.0	
	comp=E,10μm,0.5s						
KUR				AMB	AMB	13 21 34.2	
	comp=E,12μm,0.2s						
KUR				*i* S	**Sn**	**13 21 51.5**	**+2.3**
KUR				A	A	13 21 52.4	
	comp=E,59μm,2.0s						
KUR				A	A	13 21 52.4	
	comp=E,49μm,2.0s						
KUR				A	A	13 21 52.4	
	comp=E,39μm,0.3s						
KUR				A	A	13 21 52.4	
	comp=E,24μm,0.3s						
RUSJ	**Misakicho**	**1.38**	**276**⇑	*i* PN	**Pn**	**13 21 33.9**	**+2.5**
REI	**Reidovoe**	**1.44**	**25**	*i* P	**Pn**	**13 21 34.4**	**+2.3**
REI				AMB	AMB	13 21 35.4	
	comp=E,4μm,0.5s						
REI				*i* S	**Sn**	**13 21 53.1**	**+2.3**
REI				A	A	13 21 53.9	
	comp=E,10μm,0.3s						
REI				A	A	13 21 53.9	
	comp=E,7μm,0.3s						
JRA	**Rausu**	**1.47**	**269**	P	**Pn**	**13 21 34.9**	**+2.4**
JRA				A	A	13 21 34.9	
	comp=N,117nm,1.2s,comp=E,149nm,1.4s						
JRA				S	**Sn**	**13 21 54.2**	**+2.8**
JNSB	**Nemuroshibetsu**	**1.56**	**264**	*i* P	**Pn**	**13 21 36.2**	**+2.4**
JNSB				A	A	13 21 36.2	
	comp=N,108nm,2.2s,comp=E,116nm,2.5s						
JNSB				S	**Sn**	**13 21 56.8**	**+3.0**
JKHN	**Kushirohamanak**	**1.70**	**239**	*i* P	**Pn**	**13 21 36.8**	**+1.3**
JKHN				A	A	13 21 36.8	
	comp=N,48nm,0.8s,comp=E,65nm,1.0s						
JKHN				S	**Sn**	**13 21 57.2**	**+0.5**
JNK	**Nakash**	**1.80**	**259**	P	**Pn**	**13 21 38.4**	**+1.6**
JNK				A	A	13 21 38.4	
	comp=N,20nm,1.1s,comp=E,17nm,3.1s						
JAK	**Akkeshi**	**2.04**	**242**	P	**Pn**	**13 21 40.9**	**+1.0**
JAK				A	A	13 21 40.9	
	comp=N,31nm,1.6s,comp=E,32nm,0.8s						
JAK				S	**Sn**	**13 22 04.2**	**-0.4**
JTKR	**Abashiri--Toko**	**2.34**	**271**	P	**Pn**	**13 21 46.3**	**+2.4**
JTKR				A	A	13 21 46.3	
	comp=N,9.0nm,3.4s,comp=E,6.0nm,2.2s						
JTKR				S	**Sn**	**13 22 14.1**	**+2.1**
JAR	**Ashorobuto**	**2.55**	**256**	P	**Pn**	**13 21 49.0**	**+2.3**
JAR				A	A	13 21 49.0	
	comp=N,14nm,2.8s,comp=E,13nm,1.2s						
JAR				*e*S	**Sn**	**13 22 18.8**	**+2.0**
JOB	**Onbets**	**2.64**	**247**	P	**Pn**	**13 21 49.7**	**+1.8**
JOB				A	A	13 21 49.7	
	comp=N,23nm,1.1s,comp=E,16nm,1.2s						
JOB				S	**Sn**	**13 22 19.6**	**+0.5**
JMP	**Maruseppu**	**2.74**	**272**	*i* P	**Pn**	**13 21 51.7**	**+2.4**
JMP				*e*S	**Sn**	**13 22 24.4**	**+2.9**
JCH	**Churui**	**3.08**	**245**	P	**Pn**	**13 21 54.9**	**+1.0**
JCH				A	A	13 21 54.9	
	comp=N,9.0nm,1.5s,comp=E,7.0nm,0.4s						
JCH				S	**Sn**	**13 22 29.4**	**-0.3**
JKK2	**Kamakawa 2**	**3.18**	**270**	*i* P	**Pn**	**13 21 58.0**	**+2.7**
JKK2				S	**Sn**	**13 22 36.1**	**+3.8**
JKA	**Kamikawa-asahi**	**3.29**	**274**		**Pn**	**13 21 59.1**	**+2.5**
JKA	**Kamikawa-asahi**	**3.29**	**274**	P	**Pn**	**13 21 59.7**	**+3.1**
ASAJ	**Asahikawa**	**3.29**	**274**	PN	**Pn**	**13 21 59.2**	**+2.5**
ASAJ	**Asahikawa**	**3.29**	**274**	*i* P	**Pn**	**13 21 59.5**	**+2.9**
JFR	**Furan**	**3.41**	**258**	*i* P	**Pn**	**13 22 00.8**	**+2.5**
JFR				S	**Sn**	**13 22 39.0**	**+1.3**
JSE	**Soyaes**	**3.42**	**288**	*i* P	**Pn**	**13 22 00.9**	**+2.5**
JEM	**Erimo**	**3.52**	**238**	*e*P	**Pn**	**13 22 01.3**	**+1.5**
ERM	**Erimo**	**3.52**	**238**	*d i* PN	**Pn**	**13 22 02.3**	**+2.5**
ERM				pmax	pmax		
	comp=Z,1μm,1.0s						
ERM	**Erimo**	**3.52**	**238**		**Pn**	**13 22 01.2**	**+1.3**
ERM				Sn	**Sn**	**13 22 37.8**	**-2.6**
ERM	**Erimo**	**3.52**	**238**	P	**Pn**	**13 22 02.0**	**+2.2**
JNBK	**Urakawa-nobuka**	**3.64**	**244**	P	**Pn**	**13 22 02.1**	**+0.8**
JNBK				A	A	13 22 02.1	
	comp=N,7.0nm,1.4s,comp=E,9.0nm,0.5s						
YSS	**Yuzhno-Sakhali**	**4.30**	**316**	*a i* PN	**Pn**	**13 22 12.9**	**+2.6**
YSS				*e*S	**Sn**	**13 23 01.1**	**+1.9**
YSS				pmax	pmax		
	comp=Z,2μm,6.8s						
YSS				pmax	pmax		
	comp=N,700nm,6.2s						
YSS				pmax	pmax		
	comp=E,2μm,6.7s						
YSS				pmax	pmax		
	comp=Z,660nm,0.9s						
YSS				smax	smax		
	comp=N,620nm,1.1s						
YSS				smax	smax		
	comp=E,610nm,0.9s						
YSS				smax	smax		
	comp=N,1μm,4.1s						
YSS				smax	smax		
	comp=E,2μm,3.8s						
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS				MLR	MLR		
	comp=N,1μm,13.0s						
YSS				MLR	MLR		
	comp=E,800nm,13.0s						
YSS	**Yuzhno-Sakhali**	**4.30**	**316**		**Pn**	**13 22 10.2**	**-0.1**
YSS	**Yuzhno-Sakhali**	**4.30**	**316**	P	**Pn**	**13 22 12.9**	**+2.6**
YSS	**Yuzhno-Sakhali**	**4.30**	**316**	*e*P	**Pn**	**13 22 12.7**	**+2.4**
YSS				AMB	AMB	13 22 23.4	
	comp=E,800nm,0.5s						
YSS				*e*S	**Sn**	**13 23 00.9**	**+1.7**
YSS				A	A	13 23 07.3	
	comp=E,1μm,4.1s						
YSS				A	A	13 23 07.3	
	comp=E,2μm,4.1s						
JAHD	**Aomorihigashid**	**5.07**	**240**	A	A	13 22 22.8	
	comp=N,19nm,0.8s,comp=E,16nm,0.6s						
JTM	**Tenmabayashi**	**5.51**	**237**		**Pn**	**13 22 26.3**	**-0.6**
JTM				Sn	**Sn**	**13 23 23.5**	**-5.4**
JTM	**Tenmabayashi**	**5.51**	**237**	P	**Pn**	**13 22 27.4**	**+0.5**
UGL	**Uglegorsk**	**6.20**	**327**⇑	*i* PN	**Pn**	**13 22 39.4**	**+3.2**
UGL				*e*S	**Sn**	**13 23 50.9**	**+5.4**
UGL				pmax	pmax		
	comp=Z,3μm,2.6s						
UGL				pmax	pmax		
	comp=Z,1μm,1.0s						
UGL				smax	smax		
	comp=E,700nm,2.6s						
UGL				smax	smax		
	comp=N,1μm,1.9s						
UGL	**Uglegorsk**	**6.20**	**327**	*e*P	**Pn**	**13 22 39.3**	**+3.1**
UGL				AMB	AMB	13 22 41.1	
	comp=N,3μm,2.6s						
UGL				AMB	AMB	13 22 41.1	
	comp=N,930nm,0.9s						
UGL				*e*S	**Sn**	**13 23 48.5**	**+3.0**
UGL				A	A	13 23 54.0	
	comp=N,1μm,2.3s						
UGL				A	A	13 23 54.0	
	comp=N,700nm,2.3s						
TYV	**Tymovskoe**	**7.54**	**338**	*e*PN	**Pn**	**13 22 57.0**	**+2.5**
TYV				*e*S	**Sn**	**13 24 22.0**	**+3.7**
TYV				pmax	pmax		
	comp=Z,1μm,3.5s						
TYV				pmax	pmax		
	comp=Z,151nm,0.8s						
TYV				smax	smax		
	comp=N,84nm,1.0s						
TYV				smax	smax		
	comp=E,108nm,1.0s						
TYV				smax	smax		
	comp=N,400nm,3.9s						
TYV				smax	smax		
	comp=E,500nm,3.9s						
TYV	**Tymovskoe**	**7.54**	**338**	*e*P	**Pn**	**13 22 56.7**	**+2.2**
TYV				AMB	AMB	13 22 58.0	
	comp=E,250nm,2.0s						
TYV				AMB	AMB	13 23 10.5	
	comp=E,240nm,0.8s						
TYV				*e*S	**Sn**	**13 24 20.2**	**+1.9**
TYV				A	A	13 24 25.8	
	comp=E,400nm,2.0s						
TYV				A	A	13 24 25.8	
	comp=E,500nm,2.0s						
SKR	**Severo-Kuril's**	**9.06**	**39**	*e*PN	**Pn**	**13 23 15.4**	**+0.2**
SKR				pmax	pmax		
	comp=Z,58nm,0.6s						
SKR				pmax	pmax		
	comp=Z,200nm,3.2s						
SKR				MLR	MLR		
	comp=Z,400nm,12.0s						
SKR	**Severo-Kuril's**	**9.06**	**39**	*e*P	**Pn**	**13 23 15.4**	**+0.2**
SKR				AMB	AMB	13 23 29.4	
	comp=Z,110nm,2.0s						
SKR				*e*S	**Sn**	**13 24 54.0**	**-1.3**
SKR				A	A	13 25 02.4	
	comp=Z,100nm,2.0s						
SKR				A	A	13 25 02.4	
	comp=Z,100nm,2.0s						
GRNR	**Gornyy**	**9.96**	**317**⇓	*i* PN	**Pn**	**13 23 29.8**	**+2.4**
GRNR				pmax	pmax		
	comp=E,60nm,0.9s						
GRNR	**Gornyy**	**9.96**	**317**	*e*P	**Pn**	**13 23 29.8**	**+2.4**
OKH	**Okha**	**9.98**	**345**	*e*P	Pn	13 23 21.2	-6.5
OKH				AMB	AMB	13 23 31.6	
	comp=Z,1μm,2.7s						
MJB9	**Matsu-Tunnel**	**10.08**	**226**		**Pn**	**13 23 29.0**	**-0.2**
MAJO	**Matsushiro**	**10.08**	**226**	*c i* PN	**Pn**	**13 23 29.0**	**-0.2**
MAJO	**Matsushiro**	**10.08**	**226**		**Pn**	**13 23 28.1**	**-1.1**
MAJO	**Matsushiro**	**10.08**	**226**	P	**Pn**	**13 23 28.7**	**-0.5**
MJAR	**Matsushiro Arr**	**10.08**	**226**	P	**Pn**	**13 23 28.9**	**-0.3**
	comp=Z,22nm,0.5s,baz=27,slow=13,SNR=74						
MJAR				S	**Sn**	**13 25 21.5**	**+1.0**
	comp=Z,7.2nm,0.8s,baz=73,slow=22,SNR=4.1						
MJAR				LR	LR	13 27 54.5	
	comp=Z,130nm,21.1s,baz=40,slow=40						
NKL	**Nikolayevsk**	**10.13**	**337**	*e*PN	**Pn**	**13 23 29.2**	**-0.6**
NKL				pmax	pmax		
	comp=N,118nm,1.2s						
NKL				pmax	pmax		
	comp=E,331nm,1.2s						
NKL				pmax	pmax		
	comp=Z,612nm,1.2s						
NKL				MLR	MLR		
	comp=N,2μm,19.0s						
NKL				MLR	MLR		
	comp=E,1μm,15.0s						
NKL				MLR	MLR		
	comp=Z,2μm,15.0s						
NKL	**Nikolayevsk**	**10.13**	**337**	*e*P	**Pn**	**13 23 31.4**	**+1.6**
NKL				AMB	AMB	13 23 32.5	
	comp=Z,1μm,7.5s						
USRK	**Ussuriysk Ar.**	**10.91**	**276**	P	**Pn**	**13 23 40.4**	**-0.1**
	comp=Z,60nm,0.9s,baz=89,slow=13,SNR=70						
USRK	**Ussuriysk Ar.**	**10.91**	**276**		**Pn**	**13 23 39.8**	**-0.7**
USA0B	**Ussuriysk Arra**	**10.91**	**276**	*c i* PN	**Pn**	**13 23 40.8**	**+0.3**
USA0B	**Ussuriysk Arra**	**10.91**	**276**		**Pn**	**13 23 40.7**	**+0.2**
VLA	**Vladivostok**	**11.12**	**271**	*d i* PN	**Pn**	**13 23 43.4**	**+0.2**
VLA	**Vladivostok**	**11.12**	**271**	*e*P	**Pn**	**13 23 43.4**	**+0.2**
JGF	**Kuroka**	**11.24**	**225**		**Pn**	**13 23 43.5**	**-1.6**
PEA0B	**Petropavlovsk-**	**11.50**	**34**	*c i* PN	**Pn**	**13 23 47.3**	**-1.0**
PEA0B	**Petropavlovsk-**	**11.50**	**34**		**Pn**	**13 23 46.8**	**-1.5**
PETK	**Petropavlovsk-**	**11.50**	**34**	P	**Pn**	**13 23 47.2**	**-1.1**
	comp=Z,13nm,0.6s,baz=200,slow=9.6,SNR=20						
PETK				LR	LR	13 28 45.8	
	comp=Z,86nm,18.1s,baz=224,slow=40						
PETK	**Petropavlovsk-**	**11.50**	**34**		**Pn**	**13 23 46.9**	**-1.5**
JSG	**Sagara**	**11.58**	**220**	Pn	**Pn**	**13 23 49.0**	**-0.6**
INU	**Inuyama**	**11.62**	**226**		**Pn**	**13 23 49.4**	**-0.6**
INU	**Inuyama**	**11.62**	**226**	P	**Pn**	**13 23 50.2**	**+0.1**
PET	**Petropavlovsk**	**11.83**	**36**	*e*PN	**Pn**	**13 23 49.6**	**-3.2**
PET				pmax	pmax		
	comp=Z,24nm,1.1s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PET	**Petropavlovsk**	**11.83**	**36**		**Pn**	**13 23 50.5**	**-2.3**
PET	**Petropavlovsk**	**11.83**	**36**	P	**Pn**	**13 23 51.5**	**-1.3**
	comp=Z,426nmcomp=Z,17nm,1.6s						
PET	**Petropavlovsk**	**11.83**	**36**	P	**Pn**	**13 23 51.8**	**-1.0**
PET	**Petropavlovsk**	**11.83**	**36**	*e*P	**Pn**	**13 23 50.5**	**-2.3**
PSTR	**Posyet**	**11.99**	**269**	*c i* PN	**Pn**	**13 23 54.9**	**-0.1**
PSTR	**Posyet**	**11.99**	**269**	*e*P	**Pn**	**13 23 54.9**	**-0.1**
JHJ2	**Mitsune**	**12.26**	**210**	Pn	**Pn**	**13 23 57.0**	**-1.7**
JHJ	**Hachijo jima 2**	**12.27**	**210**	P	**Pn**	**13 23 57.5**	**-1.3**
	comp=Z,104nm,0.9s,baz=73,slow=20,SNR=5.0						
JHJ				S	Sn	13 26 03.7	-10
	comp=Z,124nm,0.4s,baz=303,slow=23,SNR=8.9						
MDJ	**Mudanjiang**	**12.60**	**279**		**Pn**	**13 24 00.0**	**-3.3**
MDJ	**Mudanjiang**	**12.60**	**279**	P	**Pn**	**13 24 03.1**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,53nm,1.1s						
MDJ				L	L		
	comp=Z,690nm,22.7s						
MDJ				L	L		
	comp=Z,330nm,23.7s						
MDJ				L	L		
	comp=Z,820nm,24.3s						
BNX	**BinXian**	**14.12**	**284**	⇓P	**Pn**	**13 24 22.8**	**-0.4**
BNX				S	**Sn**	**13 26 59.0**	**+0.6**
BNX				pmax	pmax		
	comp=Z,81nm,0.9s						
BNX				pmax	pmax		
	comp=Z,240nm,3.5s						
BNX				L	L		
	comp=Z,420nm,8.1s						
BNX				L	L		
	comp=Z,570nm,12.5s						
BNX				L	L		
	comp=Z,590nm,13.6s						
HEH	**HeiHe**	**14.82**	**302**	*e*P	**Pn**	**13 24 30.8**	**-1.4**
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CN2	**Changchun**	**15.65**	**277**	*e*P	**Pn**	**13 24 41.1**	**-1.7**
CN2				*e*pP	P	13 24 53.0	+7.9
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				L	L		
	comp=Z,300nm,11.0s						
CN2				L	L		
	comp=Z,200nm,11.0s						
CN2				L	L		
	comp=Z,200nm,12.0s						
MA2	**Magadan**	**15.79**	**7**	P	**Pn**	**13 24 44.0**	**-0.4**
	comp=Z,14nm,0.7s,baz=162,slow=13,SNR=7.6						
MA2				LR	LR	13 30 06.7	
	comp=Z,248nm,20.0s,baz=190,slow=34						
MA2	**Magadan**	**15.79**	**7**	P	**Pn**	**13 24 44.2**	**-0.2**
MA2	**Magadan**	**15.79**	**7**		**Pn**	**13 24 44.2**	**-0.2**
MA2	**Magadan**	**15.79**	**7**	P	**Pn**	**13 24 44.2**	**-0.2**
	comp=Z,39nm,0.8s						
KSRS	**Korea Array**	**15.95**	**253**	P	**Pn**	**13 24 46.4**	**-0.2**
	comp=Z,13nm,0.8s,baz=62,slow=12,SNR=26						
KSRS				LR	LR	13 30 28.8	
	comp=Z,209nm,20.0s,baz=65,slow=35						
KS19	**Wonju Array Si**	**15.97**	**253**	P	**Pn**	**13 24 45.8**	**-1.0**
ZEA	**Zeya**	**16.29**	**314**	*e*P	**Pn**	**13 24 50.6**	**-0.1**
ZEA				*e*		13 27 53.5	
ZEA				pmax	pm

DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 pmax pmax
comp=Z,190nm,5.3s
DL2 L L
comp=Z,330nm,12.3s
DL2 L L
comp=Z,330nm,20.8s
DL2 L L
comp=Z,260nm,11.8s
SHEM Shemya Is, Ala 19.84 54 P **P** **13 25 31.1 +0.1**
comp=Z,205nm,0.9s,baz=306,slow=3.4,SNR=25
SHEM LR LR 13 35 26.3
comp=Z,26nm,18.4s,baz=280,slow=43
SHEM Shemya Is, Ala 19.84 54 P **P** **13 25 30.0 -1.0**
SMY Shemya 19.84 54 P **P** **13 25 30.8 -0.3**
SMY Shemya 19.84 54 P **P** **13 25 30.8 -0.3**
YAK Yakutsk 20.80 337 P **P** **13 25 38.2 -3.1**
comp=Z,124nm,0.8s,baz=316,slow=1.9,SNR=31
YAK S **S** **13 29 20.4 -7.9**
comp=Z,11nm,0.5s,baz=101,slow=23,SNR=6.0
YAK LR LR 13 33 41.1
comp=Z,188nm,19.2s,baz=136,slow=36
YAK Yakutsk 20.80 337 *e*P **P** **13 25 37.5 -3.8**
YAK *e*S **S** **13 29 19.6 -8.6**
YAK *e* 13 29 49.3
YAK *e* 13 36 53.2
YAK pmax pmax
comp=Z,133nm,0.9s
YAK pmax pmax
comp=E,41nm,1.2s
YAK pmax pmax
comp=N,44nm,1.0s
YAK smax smax
comp=E,193nm,2.6s
YAK smax smax
comp=N,149nm,1.6s
YAK Yakutsk 20.80 337 P **P** **13 25 37.0 -4.3**
YAK Yakutsk 20.80 337 P **P** **13 25 38.0 -3.3**
XLT XiLinHaoTe 22.32 281 *e*P **P** **13 25 56.6 -1.2**
XLT S **S** **13 29 51.6 -5.9**
XLT pmax pmax
comp=N,140nm,0.8s
XLT L L
comp=N,500nm,11.1s
XLT L L
comp=N,490nm,12.7s
AMKA Amchitka 22.74 60 P **P** **13 26 02.4 +0.3**
JOW Kunigami 22.91 228 P **P** **13 26 04.4 +0.4**
JOW Kunigami 22.91 228 P **P** **13 26 05.5 +1.5**
BJI2 Beijing 23.29 271 P **P** **13 26 07.0 -0.5**
BJI2 sP **sP** **13 26 33.0 -3.2**
BJI2 PP **PnPn** **13 26 41.6 +3.8**
BJI2 S **S** **13 30 09.0 -4.1**
BJI2 pmax pmax
comp=N,27nm,0.9s
BJI2 L L
comp=N,76nm,15.1s
BJI2 L L
comp=N,85nm,17.2s
BJI2 L L
comp=N,97nm,17.6s
BJT Baijiatuau 23.29 271 P **P** **13 26 06.6 -0.9**
BJT Baijiatuau 23.29 271 P **P** **13 26 06.6 -0.9**
TIA Tai'an 24.15 262 P **P** **13 26 16.3 +1.0**
TIA pmax pmax
comp=N,34nm,0.7s
TIA pmax pmax
comp=N,210nm,3.5s
TIA L L
comp=N,600nm,17.9s
TIA L L
comp=N,160nm,17.2s
TIA L L
comp=N,350nm,12.4s
BOD Bodaibo 24.77 316 *e*P **P** **13 26 17.3 -3.4**
BOD pmax pmax
comp=Z,68nm,1.3s
KIWB Kanaga Island 24.99 59 P **P** **13 26 22.7 0.0**
NJ2 Nanjing 25.14 251 *e*P **P** **13 26 25.9 +1.6**
NJ2 pP **pP** **13 26 41.9 -2.0**
NJ2 pmax pmax
comp=Z,24nm,0.7s
ADK Adak 25.28 59 P **P** **13 26 25.0 -0.4**
ADK pmax pmax
comp=Z,62nm,1.1s
ADK Adak 25.28 59 P **P** **13 26 25.0 -0.4**
ADK Adak 25.28 59 P **P** **13 26 25.8 +0.4**
HNS HongShan 25.35 266 ⇑P **P** **13 26 29.0 +2.8**
HNS pmax pmax
comp=Z,27nm,1.0s
GSTR Great Sitkin T 25.68 58 P **P** **13 26 29.3 +0.3**
GSTR IAmb IAmb 13 26 43.5
comp=Z,80nm,1.0s
BILL Bilibino 26.15 16 *e*P **P** **13 26 35.3 +2.2**
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,173nm,20.0s
BILL Bilibino 26.15 16 *e*P **P** **13 26 35.3 +2.2**
HHC Hu-ho-hao-te 26.34 276 *e*P **P** **13 26 38.1 +2.9**
HHC S **S** **13 31 02.4 +0.5**
HHC pmax pmax
comp=Z,92nm,1.0s
HHC pmax pmax
comp=Z,100nm,4.7s
HHC L L
comp=Z,140nm,12.6s
HHC L L
comp=Z,140nm,10.9s
HHC L L
comp=Z,160nm,12.6s
ATKA Atka Island 26.83 58 P **P** **13 26 39.0 -0.4**
TIY Taiyuan 26.86 269 P **P** **13 26 43.9 +4.0**
BTO2 Baotou 27.58 276 *e*P **P** **13 26 48.8 +2.4**
BTO2 pP **pP** **13 27 05.8 -0.2**
BTO2 sP **sP** **13 27 15.3 -0.8**
BTO2 pmax pmax
comp=Z,190nm,1.1s
BTO2 pmax pmax
comp=Z,720nm,6.5s
ULN Ulaanbaatar 27.95 292 *d*↓P **P** **13 26 50.1 +0.5**
ULN pmax pmax
comp=Z,44nm,1.0s
ULN MLR MLR
comp=Z,278nm,17.0s
ULN Ulaanbaatar 27.95 292 P **P** **13 26 47.3 -2.3**
ULN IAmb IAmb 13 26 52.1
comp=Z,48nm,1.0s
ULN Ulaanbaatar 27.95 292 P **P** **13 26 50.8 +1.2**
ULN pP **pP** **13 27 03.3 -6.0**
ULN Ulaanbaatar 27.95 292 P **P** **13 26 50.0 +0.4**
ULN Ulaanbaatar 27.95 292 *e*P **P** **13 26 50.1 +0.5**
LYN LuoYang 28.28 262 *e*P **P** **13 26 56.3 +3.8**
LYN pP pP 13 27 13.4 +1.2
LYN pmax pmax
comp=Z,18nm,0.8s
SONM Songino Array 28.39 292 P **P** **13 26 53.6 +0.1**
comp=Z,18nm,0.9s,baz=86,slow=8.1,SNR=43
SONM LR LR 13 38 36.0
comp=Z,285nm,20.4s,baz=78,slow=37
comp=Z,18nm,0.9s
SONM Songino Array 28.39 292 P **P** **13 26 53.3 -0.2**
NACB Ninganchiao 28.76 235 P **P** **13 26 56.2 -0.6**
WHN Wuhan 29.14 254 P P 13 27 07.4 +7.3
WHN S **S** **13 31 46.1 +0.2**
WHN pmax pmax
comp=Z,46nm,0.6s
TIXI Tiksi 29.15 348 P **P** **13 26 56.0 -3.7**
comp=Z,14nm,0.8s,baz=155,slow=5.0,SNR=12
TIXI LR LR 13 40 12.0
comp=Z,95nm,20.4s,baz=178,slow=39
TIXI Tiksi 29.15 348 ⇑↓P **P** **13 26 56.6 -3.2**
TIXI pmax pmax
comp=Z,13nm,0.8s
TIXI MLR MLR
comp=Z,138nm,16.0s
TIXI Tiksi 29.15 348 P **P** **13 26 56.3 -3.5**
H11N2 WAKE ISLAND Hy 29.27 139 T T 13 57 58.0
baz=330,slow=75,SNR=3313
H11N1 WAKE ISLAND Hy 29.28 139 T T 13 57 58.6
baz=330,slow=75,SNR=2856
H11N3 WAKE ISLAND Hy 29.28 139 T T 13 57 58.9
baz=330,slow=75,SNR=2853
IRK Irkutsk 29.43 302 *e*P **P** **13 27 00.3 -2.3**
IRK pmax pmax
comp=Z,31nm,2.2s
SPIA Saint Paul Isl 29.58 48 P **P** **13 27 04.0 +0.3**
SPIA Saint Paul Isl 29.58 48 P **P** **13 27 04.7 +1.0**
baz=262
TLY Talaya 29.84 301 LR LR 13 39 26.0
comp=Z,222nm,20.8s,baz=78,slow=37
TLY Talaya 29.84 301 ⇑*i*P **P** **13 27 06.3 +0.1**
TLY pmax pmax
comp=Z,14nm,1.3s
TLY MLR MLR
comp=Z,285nm,14.0s
TLY Talaya 29.84 301 *e*P **P** **13 27 06.3 +0.1**
TPUB Ta-pu 29.99 235 P **P** **13 27 08.0 +0.2**
H11S1 WAKE ISLAND Hy 30.23 141 T T 13 59 12.1
baz=332,slow=76,SNR=594
H11S3 WAKE ISLAND Hy 30.24 141 T T 13 59 09.3
baz=332,slow=76,SNR=490
H11S2 WAKE ISLAND Hy 30.25 141 T T 13 59 14.1
baz=332,slow=76,SNR=5326
GUMO Guam 30.34 184 LR LR 13 37 51.7
comp=Z,48nm,21.5s,baz=348,slow=33
GAMB Gambell 30.53 35 P **P** **13 27 13.0 +1.0**
baz=249
XAN Xi'an 31.08 265 P **P** **13 27 18.6 +1.3**
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN pmax pmax
comp=Z,120nm,5.2s
UNV Unalaska Valle 31.50 55 P **P** **13 27 21.0 +0.3**
baz=271
AKUT Akutan 31.93 55 P **P** **13 27 24.6 +0.2**
M11K Mekoryuk 32.15 43 P **P** **13 27 26.9 +0.6**
M11K IAmb IAmb 13 27 29.2
comp=Z,53nm,1.1s
M11K Mekoryuk 32.15 43 P **P** **13 27 27.5 +1.2**
baz=261
TNA Tin City 32.67 33 P **P** **13 27 31.1 +0.3**
TNA IAmb IAmb 13 27 33.0
comp=Z,24nm,0.8s
TNA Tin City 32.67 33 P **P** **13 27 31.5 +0.7**
baz=251,SNR=5.0
K13K Kusilvak Mount 33.15 40 IAmb IAmb 13 27 37.8
comp=Z,36nm,1.0s
K13K Kusilvak Mount 33.15 40 P **P** **13 27 36.7 +1.7**
baz=260,SNR=20
F14K Arctic Creek 33.27 34 P **P** **13 27 37.5 +1.4**
baz=253,SNR=5.3
ANM Nome 33.41 35 P **P** **13 27 39.5 +2.2**
baz=255
M13K Dall Lake 33.55 43 P **P** **13 27 40.9 +2.3**
baz=264,SNR=15
LZH Lanzhou 33.77 272 *e*P **P** **13 27 42.8 +1.9**
LZH pP pP 13 28 02.5 +1.6
LZH S **S** **13 32 58.1 -0.3**
LZH pmax pmax
comp=Z,25nm,1.2s
LZH L L
comp=Z,240nm,12.8s
LZH L L
comp=Z,190nm,13.1s
LZH L L
comp=Z,180nm,13.1s
LZDM Lanzhou Array 33.93 272 P **P** **13 27 43.5 +0.9**
comp=Z,3.2nm,0.4s,baz=88,slow=6.7,SNR=4.2
LZDM LR LR 13 41 24.1
comp=Z,108nm,18.3s,baz=250,slow=36
comp=Z,3.2nm,0.4s
L14K Kuka Creek 33.99 41 IAmb IAmb 13 27 45.4
comp=Z,37nm,0.8s
L14K Kuka Creek 33.99 41 P **P** **13 27 44.2 +1.9**
baz=263,SNR=24
F15K North Star Dit 34.01 33 P **P** **13 27 44.1 +1.6**
baz=254
G15K Niukluk 34.07 35 P **P** **13 27 44.5 +1.5**
baz=256,SNR=8.8
M14K Bethel 34.27 43 P **P** **13 27 44.5 -0.3**
M14K Bethel 34.27 43 P **P** **13 27 46.8 +2.0**
baz=264,SNR=22
N14K Kuskokwak Cree 34.34 44 P **P** **13 27 47.2 +1.9**
baz=266,SNR=28
O14K Tigyukauivet M 34.51 45 P **P** **13 27 48.5 +1.7**
baz=267,SNR=23
C16K Lisburne Hills 34.54 29 P **P** **13 27 46.1 -0.9**
C16K Lisburne Hills 34.54 29 P **P** **13 27 47.9 +0.9**
baz=250
L15K Ungalak Mounta 34.60 41 P **P** **13 27 48.7 +1.1**
baz=264
H16K Elim 34.74 36 P **P** **13 27 50.0 +1.2**
baz=258
G16K Koyuk River 34.85 34 P **P** **13 27 50.9 +1.1**
baz=257,SNR=8.1
M15K Kasigluk River 34.89 43 P **P** **13 27 51.8 +1.7**
baz=266,SNR=60
SDPT Sand Point 34.95 52 P **P** **13 27 51.4 +0.8**
baz=274
N15K Kwethluk River 35.15 44 P **P** **13 27 54.3 +1.9**
baz=267,SNR=56
D17K Noatak River 35.17 30 P **P** **13 27 53.1 +0.7**
baz=253,SNR=11
J16K Anvik River 35.22 38 P **P** **13 27 54.6 +1.7**
baz=262,SNR=9.3
O15K Ungalikthiuk R 35.24 45 P **P** **13 27 54.7 +1.6**
baz=269,SNR=49
I17K Unalakleet 35.27 37 IAmb IAmb 13 27 56.2
comp=Z,28nm,1.2s
I17K Unalakleet 35.27 37 P **P** **13 27 54.3 +1.0**
baz=261
GTA2 Gaotai 35.27 279 *e*P **P** **13 27 55.5 +1.7**
GTA2 PcP **PcP** **13 30 24.3 +1.7**
GTA2 S **S** **13 33 23.8 +2.5**
GTA2 pmax pmax
comp=Z,27nm,0.9s
GTA2 L L
comp=Z,180nm,16.5s
GTA2 L L
comp=Z,160nm,16.8s
GTA2 L L
comp=Z,170nm,15.2s
RDOG Red Dog Mine 35.34 30 P **P** **13 27 55.0 +1.1**
baz=253
C17K DeLong Mountai 35.37 29 P **P** **13 27 54.5 +0.3**
baz=252
S14K Fog Glacier 35.42 50 P **P** **13 27 54.6 -0.2**
baz=273
VNFG Fog Glacier, M 35.42 50 IAmb IAmb 13 27 55.0
comp=Z,18nm,0.7s
E17K Hotham Inlet 35.47 32 P **P** **13 27 55.8 +0.8**
baz=256,SNR=9.5
CHNA Chernabura Isl 35.49 53 P **P** **13 27 55.6 +0.3**
baz=275
F17K Baldwin Pennin 35.53 33 IAmb IAmb 13 27 59.3
comp=Z,20nm,0.7s
F17K Baldwin Pennin 35.53 33 P **P** **13 27 56.8 +1.2**
baz=257,SNR=18
L16K Owhat River 35.56 41 P **P** **13 27 57.3 +1.5**
baz=265,SNR=44
G17K Kiwalik Mounta 35.57 34 P **P** **13 27 57.4 +1.4**
baz=259
M16K Timber Creek 35.76 42 P **P** **13 27 59.4 +1.8**
baz=267,SNR=22
H17K Granite Mounta 35.77 36 P **P** **13 27 59.2 +1.6**
baz=260,SNR=9.1
N16K Nishlik Lake 35.82 43 P **P** **13 28 00.1 +2.0**
baz=268,SNR=47
J17K VABM Dome 35.91 38 P **P** **13 28 00.9 +2.0**
baz=263,SNR=37
E18K Tukpahlearik C 36.01 31 P **P** **13 28 00.3 +0.6**
baz=256
CHGN Chignik 36.05 50 P **P** **13 27 59.7 -0.4**
baz=274
C18K Utukok River 36.12 29 P **P** **13 28 00.8 +0.2**
baz=254,SNR=7.2
O16K Kokwok River B 36.14 45 IAmb IAmb 13 28 03.5
comp=Z,39nm,1.1s
O16K Kokwok River B 36.14 45 P **P** **13 28 02.4 +1.6**
baz=270,SNR=24
L17K Donlin 36.15 40 P **P** **13 28 03.1 +2.2**
baz=266,SNR=39
P16K Nushagak River 36.19 46 P **P** **13 28 03.3 +2.1**
baz=270,SNR=17
F18K Selawik 36.19 33 P **P** **13 28 02.4 +1.2**
baz=258,SNR=11
K17K Iditarod 36.20 39 P **P** **13 28 02.9 +1.6**
baz=265
CD2 Chengdu 36.43 264 P **P** **13 28 04.8 +1.1**
CD2 S **S** **13 33 37.6 -1.5**
CD2 pmax pmax
comp=Z,30nm,0.8s
G18K Tagagawik 36.46 34 IAmb IAmb 13 28 06.0
comp=Z,29nm,0.8s
G18K Tagagawik 36.46 34 P **P** **13 28 04.6 +1.1**
baz=260,SNR=50
H18K Honhosa River 36.46 35 P **P** **13 28 04.8 +1.2**
baz=262
M17K Holitna River 36.51 42 P **P** **13 28 05.9 +1.9**
baz=268,SNR=53
N17K Nushagak Hills 36.61 43 IAmb IAmb 13 28 07.9
comp=Z,49nm,1.1s
N17K Nushagak Hills 36.61 43 P **P** **13 28 06.5 +1.7**
baz=269,SNR=22
C19K Lookout Ridge 36.80 29 P **P** **13 28 06.8 +0.4**
baz=255,SNR=5.8
Q16K King Salmon 36.89 46 P **P** **13 28 08.6 +1.4**
baz=272,SNR=18
L18K Granite Mounta 36.91 40 P **P** **13 28 09.4 +2.1**
baz=267,SNR=43
F19K Shaleruckik Mo 36.97 33 P **P** **13 28 08.2 +0.4**
baz=260,SNR=33
GYA Guiyang 36.98 255 ⇓P P 13 28 17.5 +9.0
GYA pmax pmax
comp=Z,20nm,0.9s
P17K Kvichak River 36.99 45 P **P** **13 28 09.8 +1.8**
baz=272,SNR=16
GCSA Galena City Sc 37.03 36 P **P** **13 28 08.7 +0.4**
baz=264
R17L Mt. Peulik Vol 37.09 48 P **P** **13 28 09.4 +0.4**
baz=274,SNR=8.1
G19K Purcell Mounta 37.13 34 IAmb IAmb 13 28 11.2
comp=Z,16nm,0.8s
G19K Purcell Mounta 37.13 34 P **P** **13 28 09.8 +0.6**
baz=262,SNR=29
D19K Kuna River 37.17 30 P **P** **13 28 09.9 +0.3**
baz=258
N18K Kilae Creek 37.25 43 P **P** **13 28 12.6 +2.3**
baz=270,SNR=34
E19K Redstone River 37.29 32 IAmb IAmb 13 28 12.7
comp=Z,23nm,0.8s
E19K Redstone River 37.29 32 P **P** **13 28 11.8 +1.2**
baz=260
M18K Stony River 37.29 42 P **P** **13 28 12.6 +2.0**
baz=269,SNR=28
H19K Roundabout Mou 37.30 35 P **P** **13 28 12.2 +1.5**
baz=263,SNR=54
Q17K Contact Creek 37.31 47 P **P** **13 28 11.5 +0.6**
baz=273
J19K Poorman 37.51 38 P **P** **13 28 13.6 +1.2**
baz=266,SNR=54
O18K Koktuh Hills 37.60 44 P **P** **13 28 15.0 +1.7**
baz=272,SNR=20
P18K Big Mountain, 37.60 45 P **P** **13 28 14.7 +1.4**
baz=272,SNR=36
ACHA Angle Creek He 37.61 47 IAmb IAmb 13 28 15.8
comp=Z,19nm,0.8s
CHIR Chirikof Islan 37.65 51 P **P** **13 28 13.6 -0.1**
CHIR Chirikof Islan 37.65 51 P **P** **13 28 15.1 +1.4**
baz=277
Q18K Katmai Hardscr 37.75 46 P **P** **13 28 15.5 +0.8**
baz=273,SNR=19
D20K Etivluk River 37.76 30 IAmb IAmb 13 28 37.5
comp=Z,20nm,0.8s
D20K Etivluk River 37.76 30 P **P** **13 28 14.9 +0.4**
baz=259
L19K White Mountain 37.77 41 IAmb IAmb 13 28 17.4
comp=Z,37nm,1.2s
L19K White Mountain 37.77 41 P **P** **13 28 16.2 +1.6**
baz=269,SNR=19
F20K Avaraart Lake 37.80 33 P **P** **13 28 15.6 +0.8**
baz=262
E20K Nigu River 37.82 31 P **P** **13 28 15.9 +0.8**
baz=260
B20K Meade River 37.85 28 IAmb IAmb 13 28 19.7
comp=Z,18nm,0.8s
B20K Meade River 37.85 28 P **P** **13 28 15.3 +0.1**
baz=257
N19K Bonanza Creek 37.94 43 IAmb IAmb 13 28 19.2
comp=Z,33nm,1.0s
N19K Bonanza Creek 37.94 43 P **P** **13 28 18.2 +2.0**
baz=271,SNR=13
H20K Anotlenenega Mo 37.95 35 P **P** **13 28 17.4 +1.3**
baz=265,SNR=28
O19K Port Alsworth 38.03 44 IAmb IAmb 13 28 21.9
comp=Z,36nm,1.2s
O19K Port Alsworth 38.03 44 P **P** **13 28 18.4 +1.6**
baz=272
I20K Naaghedeneel 38.06 36 P **P** **13 28 18.8 +1.8**
baz=266,SNR=10
K20K Telida 38.16 39 IAmb IAmb 13 28 20.7
comp=Z,37nm,1.0s
K20K Telida 38.16 39 P **P** **13 28 19.2 +1.3**
baz=268
J20K Nowinta River 38.16 37 P **P** **13 28 19.4 +1.5**
baz=267,SNR=62
PATS Pohnpei 38.26 162 P **P** **13 28 20.3 +1.1**
comp=Z,53nm,1.5s
A21K Barrow 38.35 26 P **P** **13 28 19.8 +0.5**
baz=256
SII Sitkinak Islan 38.37 50 P **P** **13 28 20.1 +0.3**
baz=277
Q19K Cape Douglas, 38.44 46 P **P** **13 28 20.9 +0.6**
baz=274,SNR=9.2
C21K Knifeblade Rid 38.49 29 P **P** **13 28 21.2 +0.6**
baz=260,SNR=7.8
M20K Styx River 38.58 41 IAmb IAmb 13 28 24.7
comp=Z,34nm,0.9s
M20K Styx River 38.58 41 P **P** **13 28 23.5 +2.0**
baz=271,SNR=20
P19K Oil Pt 38.60 45 P **P** **13 28 22.5 +0.8**
baz=274
G21K Allakaket 38.61 34 IAmb IAmb 13 28 24.4
comp=Z,31nm,0.8s
G21K Allakaket 38.61 34 P **P** **13 28 22.7 +1.1**
baz=265
ILSW Iliamna Southw 38.63 44 IAmb IAmb 13 28 24.6
comp=Z,62nm,1.9s
B21K Ikpikpuk River 38.63 28 IAmb IAmb 13 28 50.8
comp=Z,19nm,0.8s
B21K Ikpikpuk River 38.63 28 P **P** **13 28 22.4 +0.6**
baz=260,SNR=7.7
E21K Killik River 38.67 30 P **P** **13 28 22.9 +0.7**
baz=262
F21K Alatna River 38.69 32 P **P** **13 28 23.0 +0.6**
baz=264,SNR=23
A22K Sinclair Lake 38.79 26 P **P** **13 28 23.6 +0.5**
baz=256
H21K Melozitna Rive 38.83 35 IAmb IAmb 13 28 25.8
comp=Z,32nm,1.2s
H21K Melozitna Rive 38.83 35 P **P** **13 28 24.8 +1.4**
baz=266,SNR=28
O20K Slope Mountain 38.89 44 P **P** **13 28 25.4 +1.3**
baz=274,SNR=6.4
CHUM Lake Minchumin 38.96 38 P **P** **13 28 26.6 +2.0**
baz=269,SNR=31
PPLA Purkeypile 39.01 39 P **P** **13 28 27.3 +2.1**
baz=270,SNR=28
SPCR Spurr Chakacha 39.03 42 P **P** **13 28 27.2 +1.8**
baz=272,SNR=6.8
CAST Castle Rocks 39.05 39 P **P** **13 28 27.1 +1.7**
baz=270
NRIK Noril'sk 39.06 331 P **P** **13 28 24.1 -1.2**
comp=Z,6.1nm,0.9s,baz=132,slow=6.2,SNR=4.7
comp=Z,6.1nm,0.9s
NRIK Noril'sk 39.06 331 P **P** **13 28 23.8 -1.5**
KDAK Kodiak Island 39.10 48 *d*↓P **P** **13 28 26.0 +0.2**
KDAK pmax pmax
comp=Z,139nm,0.9s
KDAK MLR MLR
comp=Z,81nm,14.0s
KDAK Kodiak Island 39.10 48 P **P** **13 28 25.7 -0.1**
KDAK Kodiak Island 39.10 48 P **P** **13 28 26.2 +0.4**
baz=276
KDAK Kodiak Island 39.10 48 P **P** **13 28 26.4 +0.6**
KDAK Kodiak Island 39.10 48 P **P** **13 28 25.9 +0.1**
SPU Mount Spurr 39.11 42 IAmb IAmb 13 28 28.9
comp=Z,40nm,1.1s
I21K Tanana 39.14 36 IAmb IAmb 13 28 28.9
comp=Z,27nm,1.0s
I21K Tanana 39.14 36 P **P** **13 28 27.6 +1.6**
baz=268
B22K Teshekpuk Lake 39.17 27 P **P** **13 28 27.3 +1.1**
baz=260
STLK Strandline Lak 39.20 42 IAmb IAmb 13 28 29.6
comp=Z,32nm,0.9s
F22K John River 39.22 32 P **P** **13 28 28.1 +1.3**
baz=265

SKT **Skwentna** **39.33** **41** P **P** **13 28 29.1 +1.3**
baz=272,SNR=7.4
HOM **Homer** **39.41** **44** P **P** **13 28 29.4 +1.0**
baz=275
E22K **Anaktuvuk Pass** **39.42** **31** P **P** **13 28 29.3 +0.8**
baz=264
H22K **Ishtalitna Cre** **39.43** **35** IAmb IAmb 13 28 31.2
comp=Z,25nm,1.0s
H22K **Ishtalitna Cre** **39.43** **35** P **P** **13 28 29.9 +1.4**
baz=267,SNR=29
G22K **Bettles** **39.44** **33** P **P** **13 28 29.5 +1.0**
baz=266
CAPN **Captain Cook N** **39.57** **43** P **P** **13 28 31.1 +1.4**
baz=274
CNPM **China Poot** **39.63** **45** IAmb IAmb 13 28 32.5
comp=Z,25nm,0.8s
MLY **Manley** **39.66** **36** P **P** **13 28 32.0 +1.5**
baz=269,SNR=30
BRSE **Bradley Lake S** **39.86** **44** P **P** **13 28 32.8 +0.7**
baz=276
TRF **Thorofare Moun** **39.86** **38** P **P** **13 28 32.9 +0.6**
TRF IAmb IAmb 13 28 35.6
comp=Z,23nm,0.8s
TRF **Thorofare Moun** **39.86** **38** P **P** **13 28 33.3 +1.0**
baz=271,SNR=17
CUT **Chulitna** **39.91** **40** P **P** **13 28 33.3 +0.9**
baz=273
D23K **Nanushuk River** **39.92** **30** P **P** **13 28 33.2 +0.7**
D23K **Nanushuk River** **39.92** **30** P **P** **13 28 33.8 +1.3**
baz=264,SNR=7.7
COLD **Coldfoot** **39.97** **33** P **P** **13 28 33.7 +0.8**
baz=267
M22K **Willow** **40.01** **41** P **P** **13 28 34.0 +0.7**
baz=274
G23K **Bananza Creek** **40.01** **33** P **P** **13 28 34.1 +0.8**
G23K **Bananza Creek** **40.01** **33** P **P** **13 28 34.1 +0.8**
baz=268,SNR=29
C23K **Itkillik River** **40.04** **28** P **P** **13 28 34.7 +1.2**
baz=263,SNR=14
SLKM **Skilak Lake** **40.05** **43** IAmb IAmb 13 28 35.1
comp=Z,33nm,1.1s
H23K **Yukon River** **40.18** **35** IAmb IAmb 13 28 37.6
comp=Z,39nm,1.0s
H23K **Yukon River** **40.18** **35** P **P** **13 28 36.3 +1.6**
baz=269
GOMU **GeErMu** **40.21** **277** P **P** **13 28 36.3 +0.5**
GOMU pmax pmax
comp=Z,49nm,0.8s
RC01 **Rabbit Creek A** **40.24** **42** IAmb IAmb 13 28 37.0
comp=Z,41nm,0.9s
RC01 **Rabbit Creek A** **40.24** **42** P **P** **13 28 36.1 +0.9**
baz=275,SNR=12
E23K **Chandalar** **40.24** **31** P **P** **13 28 36.5 +1.3**
baz=266,SNR=29
I23K **Minto, Yukon-K** **40.25** **36** P **P** **13 28 36.6 +1.4**
baz=270,SNR=26
O22K **Cooper Landing** **40.30** **43** P **P** **13 28 36.4 +0.7**
baz=275
TOLK **Toolik Lake Re** **40.30** **30** P **P** **13 28 36.4 +0.7**
baz=266,SNR=9.7
DGZ **Jazzator, Alta** **40.31** **300***c i*P **P** **13 28 36.7 +0.5**
DGZ pmax pmax
comp=Z,21nm,0.9s
DGZ MLR MLR
comp=Z,270nm,15.0s
NEA2 **Nenana** **40.38** **37** P **P** **13 28 37.7 +1.4**
baz=271,SNR=11
PZH **PanZhiHua** **40.42** **260** P **P** **13 28 38.3 +1.0**
PZH S **S** **13 34 37.4 -2.0**
PZH pmax pmax
comp=Z,10.0nm,0.9s
MCK **McKinley** **40.46** **38** P **P** **13 28 38.2 +1.1**
baz=272,SNR=26
SEW **Seward** **40.47** **44** P **P** **13 28 37.8 +0.7**
baz=276
PMR **Palmer** **40.49** **41** IAmb IAmb 13 28 39.5
comp=Z,24nm,0.9s
PMR **Palmer** **40.49** **41** P **P** **13 28 37.9 +0.6**
baz=275,SNR=11
KMI2 **Kunming** **40.55** **257** P **P** **13 28 39.6 +1.2**
KMI2 pP pP 13 29 00.1 +1.2
KMI2 sP sP 13 29 07.1 -1.6
KMI2 pmax pmax
comp=Z,15nm,1.1s
GHO **Glory Hole Cre** **40.58** **41** IAmb IAmb 13 28 40.1
comp=Z,46nm,0.9s
D24K **Happy Valley** **40.61** **30** IAmb IAmb 13 28 41.1
comp=Z,20nm,0.7s
D24K **Happy Valley** **40.61** **30** P **P** **13 28 38.9 +0.8**
baz=266
E24K **Your Creek** **40.66** **31** IAmb IAmb 13 28 42.8
comp=Z,23nm,0.8s
E24K **Your Creek** **40.66** **31** P **P** **13 28 39.5 +0.7**
baz=268,SNR=58
WAT1 **Susitna Watana** **40.68** **39** P **P** **13 28 39.4 +0.5**
baz=274
KNK **Knik Glacier** **40.83** **42** P **P** **13 28 40.9 +0.8**
baz=275,SNR=11
SML **Sawmill** **40.85** **41** P **P** **13 28 41.4 +1.0**
baz=275,SNR=28
H24K **Noodor Dome** **40.86** **35** IAmb IAmb 13 28 43.3
comp=Z,36nm,1.0s
H24K **Noodor Dome** **40.86** **35** P **P** **13 28 42.3 +1.9**
baz=271,SNR=50
ZAA0 **Zalesovo Array** **40.87** **307** P **P** **13 28 39.0 -1.5**
ZALV **Zalesovo Beam** **40.87** **307** P **P** **13 28 39.1 -1.4**
comp=Z,8.2nm,0.8s,baz=75,slow=6.3,SNR=11
ZALV PcP **PcP** **13 30 39.8 +0.3**
comp=Z,12nm,0.8s,baz=73,slow=3.5,SNR=12
ZALV LR LR 13 46 06.9
comp=Z,117nm,19.6s,baz=82,slow=37
comp=Z,8.2nm,0.8s
ZALV **Zalesovo Beam** **40.87** **307** P **P** **13 28 38.9 -1.6**
ZALV PcP **PcP** **13 30 39.7 +0.2**
F24K **Squaw Lake** **40.87** **32** P **P** **13 28 41.3 +0.9**
baz=269,SNR=16
COLA **College** **40.89** **36***d i*P **P** **13 28 41.4 +0.9**
COLA *i* *PP **pP** **13 29 03.0 +2.1**
COLA pmax pmax
comp=Z,79nm,0.9s
COLA MLR MLR
comp=Z,37nm,16.0s
COLA **College** **40.89** **36** P **P** **13 28 41.8 +1.3**
COLA **College** **40.89** **36** P **P** **13 28 41.8 +1.3**
baz=272
COLA **College** **40.89** **36** P **P** **13 28 42.2 +1.7**
COLA **College** **40.89** **36** P **P** **13 28 41.9 +1.4**
COLA PcP **PcP** **13 30 39.9 +0.6**
G24K **Hadweenzic Riv** **41.02** **33** IAmb IAmb 13 28 47.5
comp=Z,27nm,0.9s
G24K **Hadweenzic Riv** **41.02** **33** P **P** **13 28 43.4 +1.7**
baz=270,SNR=28
POKR **Poker Plat Res** **41.06** **36** P **P** **13 28 43.7 +1.7**
baz=272
WAT6 **Susitna Watana** **41.07** **40** P **P** **13 28 43.0 +0.8**
baz=275,SNR=14
DHY **Denali Highway** **41.20** **39** P **P** **13 28 44.0 +0.7**
baz=274,SNR=28
HDA **Harding Lake** **41.30** **37** IAmb IAmb 13 28 46.0
comp=Z,53nm,1.0s
HDA **Harding Lake** **41.30** **37** P **P** **13 28 44.4 +0.5**
baz=273,SNR=29
IL31 **41.31** **36** IAmb IAmb 13 28 45.9
comp=Z,45nm,1.1s
ILAR **Eielson Array** **41.31** **36** P **P** **13 28 44.5 +0.6**
comp=Z,32nm,1.1s,baz=257,slow=6.1,SNR=149
ILAR LR LR 13 47 15.6
comp=Z,37nm,18.0s,baz=268,slow=38
comp=Z,32nm,1.1s
ILAR **Eielson Array** **41.31** **36** P **P** **13 28 44.8 +0.8**
ILAR **Eielson Array** **41.31** **36** P **P** **13 28 44.8 +0.8**
DAV **Davao City (W)** **41.32** **214** LR LR 13 43 01.6
comp=Z,115nm,20.3s,baz=352,slow=32
DAV **Davao City (W)** **41.32** **214** P **P** **13 28 45.3 +0.7**
DAV pP **pP** **13 28 58.1 -6.9**
SCM **Sheep Creek Mo** **41.33** **41** IAmb IAmb 13 28 46.5
comp=Z,52nm,1.0s
SCM **Sheep Creek Mo** **41.33** **41** P **P** **13 28 45.2 +0.9**
baz=276,SNR=7.6
D25K **Kavik River** **41.49** **29** P **P** **13 28 46.0 +0.6**
baz=268,SNR=28
P23K **Montague Islan** **41.50** **44** P **P** **13 28 46.6 +1.0**
baz=278
G25K **Bearman Lake** **41.57** **33** P **P** **13 28 47.6 +1.6**
baz=271,SNR=12
F25K **Christian River** **41.73** **32** P **P** **13 28 49.2 +1.7**
baz=271,SNR=16

E25K **Arctic Village** **41.76** **31** P **P** **13 28 49.0 +1.3**
baz=270,SNR=18
M24K **Tolsona, Glenn** **41.84** **40** P **P** **13 28 50.0 +1.6**
baz=276,SNR=9.6
PRP **Porcupine Dome** **41.85** **35** P **P** **13 28 50.0 +1.5**
baz=273,SNR=31
K24K **Donnelly Dome** **41.85** **38** P **P** **13 28 49.0 +0.5**
baz=275,SNR=26
FID **Port Fidalgo** **41.86** **42** IAmb IAmb 13 28 53.9
comp=Z,38nm,1.0s
J25K **Salcha River,** **41.97** **37** P **P** **13 28 49.3 -0.2**
baz=274,SNR=20
C26K **Camden Bay** **42.02** **29** P **P** **13 28 51.3 +1.7**
baz=269,SNR=9.9
WMQ **Urumqi** **42.02** **291** *eP* **P** **13 28 51.5 +1.4**
WMQ pP pP 13 29 07.5 -3.1
WMQ S **S** **13 35 05.9 +3.3**
WMQ pmax pmax
comp=Z,60nm,1.1s
WMQ pmax pmax
comp=Z,160nm,3.8s
WMQ L L
comp=Z,250nm,15.7s
WMQ L L
comp=Z,290nm,17.1s
WMQ L L
comp=Z,180nm,20.3s
KLU **Klutina** **42.03** **41** IAmb IAmb 13 28 52.5
comp=Z,56nm,1.0s
KLU **Klutina** **42.03** **41** P **P** **13 28 51.5 +1.5**
baz=277,SNR=19
Q23K **Middleton Isla** **42.11** **44** P **P** **13 28 51.8 +1.3**
baz=279
SLVN **Son La** **42.22** **252** P **P** **13 28 51.9 -0.1**
EYAK **Cordova Ski Ar** **42.24** **43** IAmb IAmb 13 28 54.2
comp=Z,55nm,1.2s
EYAK **Cordova Ski Ar** **42.24** **43** P **P** **13 28 53.1 +1.5**
baz=278
RIDG **Independent Ri** **42.27** **38** IAmb IAmb 13 28 54.1
comp=Z,38nm,0.9s
RIDG **Independent Ri** **42.27** **38** P **P** **13 28 52.4 +0.5**
baz=276,SNR=18
HARP **HAARP** **42.28** **40** P **P** **13 28 53.8 +1.9**
baz=277,SNR=9.3
F26K **Sheenjek River** **42.30** **32** P **P** **13 28 54.0 +1.9**
baz=272,SNR=20
C27K **Jago River** **42.43** **29** IAmb IAmb 13 28 56.3
comp=Z,20nm,0.8s
C27K **Jago River** **42.43** **29** P **P** **13 28 55.0 +1.9**
baz=270,SNR=25
G26K **Porcupine Rive** **42.48** **33** IAmb IAmb 13 28 56.5
comp=Z,27nm,0.8s
G26K **Porcupine Rive** **42.48** **33** P **P** **13 28 55.4 +2.0**
baz=273,SNR=41
ZSN **Zaisan** **42.61** **297** *eP* **P** **13 28 55.7 +0.9**
ZSN **Zaisan** **42.61** **297** *eP* **P** **13 28 55.7 +0.9**
SCRK **Sand Creek** **42.63** **37** IAmb IAmb 13 28 56.4
comp=Z,34nm,0.8s
SCRK **Sand Creek** **42.63** **37** P **P** **13 28 55.3 +0.5**
baz=276,SNR=54
N25K **Chitina, Valde** **42.64** **41** P **P** **13 28 55.5 +0.5**
baz=278
BMRM **Bremner River** **42.73** **42** IAmb IAmb 13 29 00.1
comp=Z,41nm,0.9s
BMRM **Bremner River** **42.73** **42** P **P** **13 28 57.1 +1.4**
baz=275,SNR=11
KAIM **Kayak Island** **43.00** **43** P **P** **13 28 59.1 +1.3**
baz=280
L26K **Log Cabin Wild** **43.03** **39** IAmb IAmb 13 29 00.9
comp=Z,49nm,0.9s
L26K **Log Cabin Wild** **43.03** **39** P **P** **13 28 59.9 +1.9**
baz=278,SNR=16
E27K **Coleen River** **43.24** **31** P **P** **13 29 00.3 +0.6**
E27K **Coleen River** **43.24** **31** P **P** **13 29 01.2 +1.6**
baz=274,SNR=7.1
VRDI **Verde Repeater** **43.25** **41** IAmb IAmb 13 29 02.6
comp=Z,45nm,1.2s
M26K **Nabesna, AK** **43.27** **40** P **P** **13 29 02.3 +2.2**
baz=279,SNR=30
G27K **Doyon Strip** **43.33** **33** P **P** **13 29 02.2 +1.8**
baz=275,SNR=18
D27M **Malcolm River** **43.41** **30** P **P** **13 29 02.5 +1.5**
baz=273,SNR=9.4
MCARA **McCarthy VSAT** **43.42** **41** P **P** **13 29 01.9 +0.7**
MCARA IAmb IAmb 13 29 06.5
comp=Z,38nm,0.9s
MCARA **McCarthy VSAT** **43.42** **41** P **P** **13 29 02.8 +1.6**
baz=280
H27K **Steamboat Moun** **43.43** **34** P **P** **13 29 03.2 +2.0**
baz=276,SNR=47
I27K **Kandik River** **43.46** **35** P **P** **13 29 02.6 +1.1**
baz=276,SNR=7.3
CRQM **Cirque** **43.48** **42** P **P** **13 29 02.3 +0.5**
CRQE **Cirque** **43.50** **42** P **P** **13 29 03.5 +1.5**
baz=280,SNR=13
TGL **Tana Glacier** **43.63** **42** P **P** **13 29 03.6 +0.7**
TGL IAmb IAmb 13 29 05.8
comp=Z,57nm,1.1s
L27K **Beaver Creek,** **43.71** **39** P **P** **13 29 05.3 +1.8**
baz=279
BCAR **Beaver Creek A** **43.73** **39** P **P** **13 29 05.3 +1.7**
M27K **Edge Creek, AK** **43.80** **40** IAmb IAmb 13 29 07.4
comp=Z,44nm,0.9s
M27K **Edge Creek, AK** **43.80** **40** P **P** **13 29 06.2 +1.9**
baz=280,SNR=19
F28M **Old Crow** **43.94** **32** P **P** **13 29 07.1 +1.8**
baz=276,SNR=18
E28M **Babbage River** **43.97** **30** P **P** **13 29 07.1 +1.6**
baz=275,SNR=9.3
BARN **Barnard Glacie** **44.13** **41** IAmb IAmb 13 29 10.0
comp=Z,55nm,1.2s
I28M **Miner Creek** **44.17** **35** P **P** **13 29 08.9 +1.7**
baz=278,SNR=72
D28M **Stokes Point** **44.20** **29** P **P** **13 29 08.5 +1.3**
baz=275
BVCY **Beaver Creek** **44.25** **39** P **P** **13 29 09.5 +1.7**
baz=280,SNR=16
SGSI **Sangihe** **44.44** **212** P **P** **13 29 10.3 +0.6**
comp=Z,43nm,0.6s
MK31 **Makanchi Array** **44.48** **297***c i*P **P** **13 29 10.1 +0.2**
MKAR **Makanchi Array** **44.48** **297** P **P** **13 29 10.2 +0.3**
comp=Z,50nm,0.8s,baz=77,slow=8.5,SNR=85
MKAR PcP **PcP** **13 30 51.8 0.0**
comp=Z,4.9nm,0.8s,baz=90,slow=2.9,SNR=3.2
MKAR S **S** **13 35 37.0 -1.5**
comp=Z,1.4nm,0.9s,baz=75,slow=4.3,SNR=4.3
MKAR LR LR 13 48 49.2
comp=Z,171nm,18.0s,baz=64,slow=37
comp=Z,50nm,0.8s
YUK3 **Moose Creek** **44.56** **40** P **P** **13 29 11.7 +1.2**
baz=281,SNR=8.3
E29M **Blow River** **44.60** **31** P **P** **13 29 12.4 +1.9**
baz=277,SNR=19
DAWY **Dawson** **44.62** **37** P **P** **13 29 11.6 +0.8**
baz=280,SNR=12
MAKZ **Makanchi** **44.68** **298** ⇑P **P** **13 29 12.1 +0.7**
MAKZ **Makanchi** **44.68** **298** P **P** **13 29 11.1 -0.3**
MAKZ **Makanchi** **44.68** **298** P **P** **13 29 11.5 +0.1**
MAKZ **Makanchi** **44.68** **298** P **P** **13 29 11.7 +0.2**
H29M **Whitestone** **44.70** **34** IAmb IAmb 13 29 14.3
comp=Z,41nm,1.0s
H29M **Whitestone** **44.70** **34** P **P** **13 29 13.0 +1.7**
baz=279,SNR=25
G29M **Pine Creek** **44.74** **33** P **P** **13 29 12.4 +0.8**
G29M **Pine Creek** **44.74** **33** P **P** **13 29 13.8 +2.2**
baz=278,SNR=45
O28M **Mount Upton** **44.89** **42** P **P** **13 29 14.4 +1.2**
baz=283
YUK8 **Steele Glacier** **44.99** **41** P **P** **13 29 15.2 +1.2**
baz=282
PINM **Pinnacle** **45.01** **43** P **P** **13 29 15.2 +1.3**
baz=283
J29N **Klondike Camp** **45.06** **36** P **P** **13 29 15.4 +1.2**
baz=280
BRWY **Burwash Landin** **45.31** **41** P **P** **13 29 17.8 +1.6**
baz=283
EPYK **Eagle Plains** **45.34** **33** P **P** **13 29 18.1 +1.8**
baz=280,SNR=52
M29M **Somme Creek** **45.34** **39** P **P** **13 29 18.6 +2.0**
baz=282,SNR=6.3
L29M **L29M** **45.35** **38** IAmb IAmb 13 29 20.1
comp=Z,61nm,1.2s
L29M **L29M** **45.35** **38** P **P** **13 29 18.8 +2.2**
baz=282,SNR=22
KURK **Kurchatov** **45.41** **304** P **P** **13 29 17.1 0.0**
KURK 13 30 55.3
KURK **Kurchatov** **45.41** **304** P **P** **13 29 16.1 -0.9**

KURK IAmb IAmb 13 29 18.1
comp=Z,37nm,0.8s
KURK PcP **PcP** **13 30 53.1 -1.7**
KURK **Kurchatov** **45.41** **304** P **P** **13 29 16.9 -0.2**
KURK **Kurchatov** **45.41** **304** *eP* **P** **13 29 17.1 0.0**
KURK **Kurchatov** **45.41** **304** P **P** **13 29 16.6 -0.5**
G30M **tAoh Zrail Nji** **45.43** **32** IAmb IAmb 13 29 19.5
comp=Z,31nm,0.7s
G30M **tAoh Zrail Nji** **45.43** **32** P **P** **13 29 18.5 +1.4**
baz=280,SNR=41
K29M **Barlow Dome** **45.47** **37** IAmb IAmb 13 29 20.5
comp=Z,34nm,1.1s
K29M **Barlow Dome** **45.47** **37** P **P** **13 29 19.3 +1.7**
baz=282,SNR=27
F30M **Barrier River** **45.49** **32** P **P** **13 29 19.7 +2.1**
baz=280,SNR=50
KURBB **Kurchatov Arra** **45.49** **304** P **P** **13 29 17.1 -0.6**
comp=Z,44nm,0.8s,baz=74,slow=8.5,SNR=28
KURBB PcP **PcP** **13 30 55.3 +0.2**
comp=Z,6.7nm,0.8s,baz=80,slow=3.4,SNR=5.8
KURBB S **S** **13 35 50.1 -2.7**
comp=Z,1.1nm,1.0s,baz=74,slow=18,SNR=4.2
KURBB LR LR 13 49 28.0
comp=Z,74nm,21.2s,baz=167,slow=38
comp=Z,44nm,0.8s
YUK4 **Talbot Arm** **45.50** **41** P **P** **13 29 19.5 +1.6**
baz=283
I30M **Mount Dempster** **45.69** **35** P **P** **13 29 21.0 +1.7**
baz=281,SNR=86
YUK6 **Outpost Mounta** **45.73** **41** P **P** **13 29 21.5 +1.8**
baz=284
O29M **Mount Kennedy** **45.78** **42** P **P** **13 29 22.0 +2.0**
baz=284
MANU **Manus Island** **45.81** **180** P **P** **13 29 20.8 +0.2**
MANU IAmb IAmb 13 29 22.5
comp=Z,50nm,1.7s
J30M **Hart River** **45.83** **36** IAmb IAmb 13 29 23.1
comp=Z,38nm,1.3s
J30M **Hart River** **45.83** **36** P **P** **13 29 22.0 +1.6**
baz=282,SNR=20
BAKI **Biak** **46.03** **195** P **P** **13 29 22.6 +0.2**
comp=Z,25nm,1.2s
DLV **Lat** **46.05** **238** P **P** **13 29 24.2 +1.4**
DLV **Lat** **46.05** **238** P **P** **13 29 25.1 +2.3**
M30M **Minto, Yukon** **46.07** **39** IAmb IAmb 13 29 25.5
comp=Z,25nm,1.0s
M30M **Minto, Yukon** **46.07** **39** P **P** **13 29 24.3 +2.1**
baz=284,SNR=16
HYT **Haines Junctio** **46.16** **41** P **P** **13 29 25.6 +2.5**
baz=285,SNR=34
G31M **Satah River** **46.20** **32** IAmb IAmb 13 29 25.3
comp=Z,42nm,0.9s
G31M **Satah River** **46.20** **32** P **P** **13 29 24.4 +1.3**
baz=281,SNR=28
N30M **Aishikik Lake** **46.20** **40** P **P** **13 29 24.8 +1.6**
baz=284
INK **Inuvik** **46.21** **30** IAmb IAmb 13 29 25.9
comp=Z,24nm,1.0s
INK **Inuvik** **46.21** **30** P **P** **13 29 24.6 +1.4**
baz=281,SNR=24
INK **Inuvik** **46.21** **30** P **P** **13 29 25.1 +2.0**
F31M **Tsiigehtchic** **46.30** **32** IAmb IAmb 13 29 26.0
comp=Z,37nm,0.9s
F31M **Tsiigehtchic** **46.30** **32** P **P** **13 29 25.1 +1.3**
baz=281,SNR=40
P29M **Windy Craggy** **46.36** **43** P **P** **13 29 27.0 +2.6**
baz=286,SNR=17
H31M **Peel River** **46.40** **34** IAmb IAmb 13 29 27.4
comp=Z,46nm,0.9s
H31M **Peel River** **46.40** **34** P **P** **13 29 26.3 +1.6**
baz=282,SNR=34
TNTI **Ternate** **46.48** **208** P **P** **13 29 25.6 -0.2**
TNTI **Ternate** **46.48** **208** P **P** **13 29 25.8 -0.1**
comp=Z,14nm,0.5s
P30M **Million Dollar** **46.60** **42** P **P** **13 29 29.0 +2.5**
baz=286
JAY **Jayapura** **46.63** **189** LR LR 13 46 41.0
comp=Z,60nm,20.6s,baz=1.5,slow=33
JAY **Jayapura** **46.63** **189** P **P** **13 29 27.8 +0.7**
comp=Z,23nm,1.0s
SRPI **Serui, Papua** **46.67** **195** P **P** **13 29 27.7 +0.4**
MNI **Manado** **46.76** **211** P **P** **13 29 27.3 -0.8**
N31M **Braeburn, Yuko** **46.80** **40** IAmb IAmb 13 29 31.4
comp=Z,43nm,0.9s
N31M **Braeburn, Yuko** **46.80** **40** P **P** **13 29 30.3 +2.4**
baz=285,SNR=11
O30N **Mendenhall** **46.85** **41** P **P** **13 29 30.3 +2.0**
baz=286,SNR=5.6
SIJI **Sorong** **46.85** **202** LR LR 13 50 02.8
comp=Z,46nm,19.1s,baz=112,slow=37
SIJI **Sorong** **46.85** **202** P **P** **13 29 30.0 +1.3**
comp=Z,14nm,0.7s
PLBC **Pleasant Camp** **47.08** **43** P **P** **13 29 32.3 +2.2**
baz=287
M31M **Drury Creek, Y** **47.25** **39** IAmb IAmb 13 29 34.4
comp=Z,33nm,1.0s
M31M **Drury Creek, Y** **47.25** **39** P **P** **13 29 33.3 +1.9**
baz=286,SNR=16
CHTO **Chiang Mai** **47.35** **254** P **P** **13 29 33.2 +0.5**
CHTO pmax pmax
comp=Z,23nm,1.1s
CHTO **Chiang Mai** **47.35** **254** P **P** **13 29 33.2 +0.5**
CHTO **Chiang Mai** **47.35** **254** P **P** **13 29 33.6 +0.9**
comp=Z,19nm,1.2s
CHTO **Chiang Mai** **47.35** **254** P **P** **13 29 34.1 +1.4**
WHY **Whitehorse** **47.45** **41** IAmb IAmb 13 29 36.2
comp=Z,31nm,0.8s
WHY **Whitehorse** **47.45** **41** P **P** **13 29 35.3 +2.2**
baz=287,SNR=6.2
SKAG **Skagway** **47.58** **42** P **P** **13 29 36.1 +2.2**
baz=287
S31K **Pelican** **47.59** **45** P **P** **13 29 35.8 +1.8**
baz=288
CMAR **Chiang Mai Arr** **47.59** **253** P **P** **13 29 36.0 +1.5**
comp=Z,5.4nm,0.9s,baz=41,slow=7.3,SNR=32
CMAR PcP **PcP** **13 31 04.3 +1.2**
comp=Z,2.0nm,0.8s,baz=33,slow=3.4,SNR=5.2
CMAR LR LR 13 49 43.3
comp=Z,48nm,19.1s,baz=55,slow=36
comp=Z,5.4nm,0.9s
CMAR **Chiang Mai Arr** **47.59** **253** P **P** **13 29 34.6 +0.1**
CMAR PcP **PcP** **13 31 03.5 +0.4**
TDK **Taldyqorghan** **47.68** **297** *eP* **P** **13 29 36.0 +1.0**
TDK pmax pmax
comp=Z,52nm,1.0s
TDK **Taldyqorghan** **47.68** **297** *eP* **P** **13 29 36.0 +1.0**
comp=Z,52nm,1.0s
SHLS **Shalkode** **47.77** **294** *eP* **P** **13 29 34.4 -1.4**
SHLS pmax pmax
comp=Z,17nm,0.6s
SHLS **Shalkode** **47.77** **294** *eP* **P** **13 29 34.4 -1.4**
comp=Z,17nm,0.6s
SHL **Shillong** **48.05** **266** P **P** **13 29 38.0 -0.2**
SHL pmax pmax
comp=Z,8.0nm,0.8s
SHL **Shillong** **48.05** **266** P **P** **13 29 38.0 -0.2**
UZB **Uzynbulak** **48.06** **294***c i*P **P** **13 29 38.9 +0.8**
UZB pmax pmax
comp=Z,26nm,1.1s
UZB **Uzynbulak** **48.06** **294** ⇑*i*P **P** **13 29 38.9 +0.8**
comp=Z,26nm,1.1s
RABL **Rabaul** **48.15** **173** P **P** **13 29 38.8 0.0**
RABL IAmb IAmb 13 30 03.6
comp=Z,36nm,0.8s
GTOI **Gorontalo** **48.20** **213** P **P** **13 29 38.8 -0.4**
comp=Z,23nm,1.5s
P32M **Atlin** **48.33** **42** P **P** **13 29 41.4 +1.7**
baz=288
SIT **Sitka** **48.34** **46** P **P** **13 29 41.3 +1.5**
baz=290
R32K **Eaglecrest** **48.35** **44** P **P** **13 29 41.1 +1.2**
baz=289
SATY **Saty** **48.51** **294***c i*P **P** **13 29 42.3 +0.8**
SATY pmax pmax
comp=Z,15nm,0.8s
SATY **Saty** **48.51** **294** ⇑*i*P **P** **13 29 42.3 +0.8**
comp=Z,15nm,0.8s
MMPY **Sheldon Lake,** **48.52** **38** P **P** **13 29 43.1 +1.8**
baz=288,SNR=12
P33M **Teslin, Yukon** **48.56** **41** IAmb IAmb 13 29 44.8
comp=Z,43nm,1.1s
P33M **Teslin, Yukon** **48.56** **41** P **P** **13 29 43.6 +2.0**
baz=289,SNR=17
S32K **Killisnoo** **48.59** **45** P **P** **13 29 43.5 +1.8**
baz=290
NPW **Nayoyitaw** **48.66** **257** P **P** **13 29 44.5 +1.8**
TOLI2 **Tolitoli** **48.69** **216** P **P** **13 29 43.1 +0.1**

PRZ Przheval'sk 48.77 294 P **P** 13 29 44.7 +1.1
PRZ pmax pmax
comp=Z,41nm,0.8s
PRZ Przheval'sk 48.77 294 P **P** 13 29 44.7 +1.1
WUS Wushi 48.80 292 P **P** 13 29 44.6 +0.8
WUS Wushi 48.80 292 P **P** 13 29 45.1 +1.3
WUS sP **sP** 13 30 15.0 +0.4
Q32M Nakina River 49.23 42 P **P** 13 29 48.5 +1.6
baz=290
C36M Paulatuk 49.28 28 P **P** 13 29 47.8 +1.0
baz=288,SNR=7.2
MDOK Medeo 49.35 295 *e*P **P** 13 29 49.0 +1.0
MDOK Medeo 49.35 295 *e*P **P** 13 29 49.0 +1.0
BVAR Borovoye Array 49.37 309 P **P** 13 29 48.2 +0.5
comp=Z,14nm,0.9s,baz=66,slow=7.2,SNR=13
BVAR PcP **PcP** 13 31 09.6 +0.6
comp=Z,2.7nm,0.4s,baz=63,slow=4.3,SNR=5.0
BVAR S **S** 13 36 45.0 -2.8
comp=Z,1.7nm,0.8s,baz=57,slow=11,SNR=4.5
comp=Z,14nm,0.9s
BORK Borovoye 49.40 309⇑ *i*P **P** 13 29 47.3 -0.7
BORK pmax pmax
comp=Z,33nm,1.0s
BORK MLR MLR
comp=Z,170nm,18.0s
BORK Borovoye 49.40 309 P **P** 13 29 47.1 -0.9
BORK IAmb IAmb 13 29 50.5
comp=Z,41nm,1.2s
AAA Alma-Ata 49.42 295 *e*P **P** 13 29 49.4 +1.0
AAA Alma-Ata 49.42 295 *e*P **P** 13 29 49.5 +1.0
AAA Alma-Ata 49.42 295 *e*P **P** 13 29 49.4 +1.0
TNSS Tian-Shan 49.48 295 *e*P **P** 13 29 49.9 +0.7
TNSS Tian-Shan 49.48 295 *e*P **P** 13 29 49.9 +0.7
TARG Taragay, Kyrgy 49.50 293 IAmb IAmb 13 29 52.0
comp=Z,28nm,1.0s
TARG Taragay, Kyrgy 49.50 293 P **P** 13 29 50.9 +1.5
SANI Sanana 49.58 208 P **P** 13 29 49.9 +0.1
T33K Petersburg 49.65 45 P **P** 13 29 51.6 +1.8
baz=291
R33M Jennings River 49.71 42 IAmb IAmb 13 29 54.0
comp=Z,24nm,1.0s
R33M Jennings River 49.71 42 P **P** 13 29 52.6 +2.2
baz=291,SNR=11
KDJ Kajisay 49.73 294 P **P** 13 29 51.1 +0.1
KDJ pmax pmax
comp=Z,49nm,0.8s
KDJ Kajisay 49.73 294 P **P** 13 29 51.0 +0.1
U33K Whale Pass 49.81 46 P **P** 13 29 53.4 +2.4
baz=292
CRAG Craig 50.05 47 P **P** 13 29 54.9 +2.0
baz=292
WRAK Wrangell Islan 50.10 46 P **P** 13 29 55.4 +2.1
baz=292
S34M Telegraph Cree 50.16 43 IAmb IAmb 13 29 57.2
comp=Z,23nm,0.9s
S34M Telegraph Cree 50.16 43 P **P** 13 29 56.2 +2.5
baz=292,SNR=5.2
EVN Everest 50.30 273 P **P** 13 29 56.4 +0.5
EVN IAmb IAmb 13 30 30.0
comp=Z,26nm,1.1s
EVN Everest 50.30 273 P **P** 13 29 57.5 +1.6
ULHL Ulahol 50.30 294 P **P** 13 29 56.6 +1.4
SNR=7.2
TKM2 Tokmak 2 50.41 295 P **P** 13 29 57.5 +1.4
SNR=28
WTLY Watson Lake, Y 50.48 40 IAmb IAmb 13 29 59.0
comp=Z,16nm,0.9s
WTLY Watson Lake, Y 50.48 40 P **P** 13 29 58.1 +1.9
baz=292,SNR=11
DLBC Dease Lake 50.52 43 LR LR 13 52 35.5
comp=Z,27nm,18.8s,baz=272,slow=37
DLBC Dease Lake 50.52 43 P **P** 13 29 58.8 +2.4
baz=292,SNR=10
ASAI AK-SAY(Kyrgyzs 50.74 293 P **P** 13 30 00.3 +1.6
SGDS Sogindy 50.80 296⇑ *i*P **P** 13 29 59.8 +1.0
comp=Z,19nm,1.3s
NRN Naryn 50.84 293 IAmb IAmb 13 30 13.9
comp=Z,25nm,1.4s
PCI Palu 50.91 216 P **P** 13 29 59.4 -0.4
comp=Z,26nm,0.8s
KBK Karagaybulak 50.96 295 P **P** 13 30 01.6 +1.4
SNR=17
T35M Bob Quinn 50.96 44 P **P** 13 30 02.7 +2.9
baz=293,SNR=12
USP Ospenovka 50.97 296 P **P** 13 30 01.3 +1.2
SNR=26
AAK Ala-Archa 51.26 295 P **P** 13 30 03.5 +1.1
comp=Z,12nm,0.6s,baz=115,slow=5.8,SNR=12
AAK LR LR 13 54 04.1
comp=Z,124nm,19.0s,baz=101,slow=39
comp=Z,12nm,0.6s
AAK Ala-Archa 51.26 295 P **P** 13 30 03.9 +1.4
SNR=5.8
AAK Ala-Archa 51.26 295 P **P** 13 30 03.1 +0.7
AAK IAmb IAmb 13 30 04.4
comp=Z,45nm,1.4s
AAK Ala-Archa 51.26 295 P **P** 13 30 03.6 +1.1
WRGLY Wrigley 51.66 35 IAmb IAmb 13 30 07.8
comp=Z,22nm,1.1s
WRGLY Wrigley 51.66 35 P **P** 13 30 06.9 +2.1
baz=293
EKS2 Erkin-Say 51.72 296 P **P** 13 30 06.9 +1.1
SNR=6.6
LIRD Liard River Hi 52.01 40 P **P** 13 30 09.8 +2.2
baz=294,SNR=5.4
RUBB Prince Rupert 52.03 47 IAmb IAmb 13 30 10.6
comp=Z,25nm,0.9s
KSH2 Kashi 52.24 291 P **P** 13 30 11.6 +1.9
KSH2 pmax pmax
comp=Z,20nm,1.1s
KOTAN Kotaneelee Air 52.66 39 P **P** 13 30 14.5 +2.2
baz=295
SVE Sverdlovsk 52.98 317 *e*P **P** 13 30 14.4 -0.3
SVE pmax pmax
comp=Z,26nm,0.7s
PMG Port Moresby 53.12 180 LR LR 13 50 44.1
comp=Z,67nm,20.4s,baz=278,slow=33
POHA Pohakuloa 53.15 98 P **P** 13 30 19.0 +2.3
DZA Taraz 53.19 297 *e*P **P** 13 30 17.6 +1.1
DZA pmax pmax
comp=Z,15nm,0.7s
DZA Taraz 53.19 297 *e*P **P** 13 30 17.7 +1.1
comp=Z,15nm,0.7s
WOH Wood Valley 53.50 98 P **P** 13 30 20.2 +1.1
KKAR Karatay Array 53.61 298 P **P** 13 30 19.4 -0.2
KKAR Karatay Array 53.61 298 P **P** 13 30 19.4 -0.2
BBB Bella Bella 54.13 49 LR LR 13 49 51.9
comp=Z,14nm,21.2s,baz=242,slow=32
BBB Bella Bella 54.13 49 IAmb IAmb 13 30 25.5
comp=Z,35nm,1.2s
BBB Bella Bella 54.13 49 P **P** 13 30 24.6 +1.4
ARTI Arti 54.29 317 P **P** 13 30 23.8 -0.5
comp=Z,21nm,0.8s,baz=68,slow=5.6,SNR=22
ARTI PcP **PcP** 13 31 27.0 -0.4
comp=Z,6.8nm,0.7s,baz=75,slow=5.4,SNR=3.8
ARTI LR LR 13 56 35.6
comp=Z,84nm,18.6s,baz=48,slow=39
comp=Z,21nm,0.8s
ARTI Arti 54.29 317*c* *i*P **P** 13 30 23.3 -1.0
ARTI *PP **pP** 13 30 45.6 0.0
ARTI 13 31 26.8
ARTI S **S** 13 37 53.9 -1.3
ARTI SS **SS** 13 41 36.6 -1.0
ARTI pmax pmax
comp=Z,18nm,0.7s
ARTI Arti 54.29 317 P **P** 13 30 23.1 -1.2
ARTI IAmb IAmb 13 30 25.6
comp=Z,37nm,1.1s
ARTI PcP **PcP** 13 31 26.4 -0.9
ARTI Arti 54.29 317 P **P** 13 30 23.4 -1.0
ARTI PcP **PcP** 13 31 26.9 -0.4
NOR Nord 54.38 357 *i* P P 13 30 19.5 -5.1
NOR IAmb IAmb 13 30 22.6
comp=Z,4.4nm,0.8s
IUG Iuzhnay 54.39 297*c* *i*P **P** 13 30 26.5 +1.1
IUG pmax pmax
comp=Z,21nm,0.9s
IUG Iuzhnay 54.39 297⇑ *i*P **P** 13 30 26.5 +1.1
comp=Z,21nm,0.9s
SPITS Spitsbergen Ar 54.57 349 P **P** 13 30 25.0 -1.0
comp=Z,14nm,1.0s,baz=27,slow=9.7,SNR=3.5
SPITS LR LR 13 54 25.0
comp=Z,47nm,18.6s,baz=74,slow=37
comp=Z,14nm,1.0s
KBS Kingsbay 54.57 350⇑ *i*P **P** 13 30 24.8 -1.2
KBS pmax pmax
comp=Z,50nm,1.8s
KBS Kingsbay 54.57 350 P **P** 13 30 24.5 -1.5
CHM Chimkent 54.58 297 *e*P **P** 13 30 27.8 +1.2
CHM pmax pmax
comp=Z,11nm,0.6s
CHM Chimkent 54.58 297 *e*P **P** 13 30 27.8 +1.2
comp=Z,11nm,0.6s
DRK Karamyk 54.59 293 P **P** 13 30 26.8 -0.3
DRK Karamyk 54.59 293 P **P** 13 30 26.8 -0.3
RES Resolute Bay 54.76 17 LR LR 13 57 20.0
comp=Z,41nm,18.1s,baz=11,slow=40
RES Resolute Bay 54.76 17 P **P** 13 30 24.7 -2.7
HOLB Holberg 54.84 51 IAmb IAmb 13 30 30.4
comp=Z,27nm,0.8s
BTK Batken 54.94 294 IAmb IAmb 13 30 34.1
comp=Z,28nm,0.8s
YKAW3 Yellowknife Wh 55.58 34 IAmb IAmb 13 30 35.4
comp=Z,25nm,0.8s
YKA Yellowknife Ar 55.62 34 P **P** 13 30 34.4 +0.6
comp=Z,18nm,0.7s,baz=301,slow=7.0,SNR=17
YKA LR LR 13 55 23.9
comp=Z,56nm,19.6s,baz=344,slow=37
comp=Z,18nm,0.7s
YKA Yellowknife Ar 55.62 34 *i* P **P** 13 30 34.5 +0.8
YKA pmax pmax
comp=Z,18nm,0.8s
MANEM Manem 55.68 291 IAmb IAmb 13 30 37.7
comp=Z,31nm,0.9s
GAR Garm 55.82 293 P **P** 13 30 36.6 +0.8
NIL Nilore 56.73 287 P **P** 13 30 42.9 +0.8
NIL pmax pmax
comp=Z,27nm,1.0s
NIL Nilore 56.73 287 P **P** 13 30 42.9 +0.8
NIL IAmb IAmb 13 30 44.8
comp=Z,27nm,0.9s
NIL Nilore 56.73 287 P **P** 13 30 43.7 +1.6
CHGR Chuyangaron 56.77 294⇓ *i*P **P** 13 30 42.8 +0.3
CHGR pmax pmax
comp=Z,96nm,0.9s
ABKAR Akbulak array 56.93 309 P **P** 13 30 43.6 +0.3
AKTO Aktyubinsk 57.39 311 P **P** 13 30 46.7 +0.1
comp=Z,15nm,1.0s,baz=66,slow=6.1,SNR=25
AKTO LR LR 13 55 27.1
comp=Z,60nm,18.9s,baz=217,slow=36
comp=Z,15nm,1.0s
KIRV Kirov 57.42 322 LR LR 13 57 03.0
comp=Z,69nm,18.6s,baz=46,slow=38
KIRV Kirov 57.42 322*c* *i*P **P** 13 30 45.5 -1.1
KDU Kakadu 57.95 197 P **P** 13 30 51.2 +0.5
comp=Z,9.0nm,1.2s
CLRS Cowichan Lake 58.00 51 P **P** 13 30 50.8 0.0
CLRS IAmb IAmb 13 30 52.9
comp=Z,15nm,1.0s
SHAA Shahritus 58.05 293 IAmb IAmb 13 30 54.6
comp=Z,74nm,1.1s
LLLB Lillooet 58.30 48 IAmb IAmb 13 30 55.1
comp=Z,17nm,1.0s
NEEM North Greenlan 58.33 5 *i* P **P** 13 30 51.5 -1.6
NEEM IAmb IAmb 13 30 52.7
comp=Z,13nm,0.9s
MTN Manton Dam 58.40 198 P **P** 13 30 54.4 +0.6
comp=Z,34nm,1.1s
MTN Manton Dam 58.40 198 P **P** 13 30 53.5 -0.4
ARA0 ARCESS Array S 59.04 340 *e*P **P** 13 30 57.7 0.0
ARCES ARCESS Array B 59.04 340 P **P** 13 30 56.9 -0.8
comp=Z,0.8nm,0.4s,baz=46,slow=7.4,SNR=8.2
ARCES LR LR 13 59 38.7
comp=Z,54nm,18.5s,baz=31,slow=39
comp=Z,0.8nm,0.4s
A05A Maple Falls 59.05 50 IAmb IAmb 13 30 59.9
comp=Z,26nm,1.1s
PSI Prapat 59.07 240 P **P** 13 30 59.1 +0.3
PSI pmax pmax
comp=Z,8.0nm,0.9s
KBL Kabul 59.12 290 P **P** 13 30 58.8 -0.2
KBL pmax pmax
comp=Z,14nm,0.9s
KBL Kabul 59.12 290 P **P** 13 30 58.8 -0.2
KBL IAmb IAmb 13 31 02.8
comp=Z,14nm,0.8s
RPSI Rantau Prapat 59.15 240 P **P** 13 30 59.1 -0.1
DAG Danmarks Havn 59.20 356 *i* P **P** 13 30 56.0 -2.7
DAG IAmb IAmb 13 30 57.6
comp=Z,19nm,1.3s
GNW Green Mountain 59.41 52 IAmb IAmb 13 31 03.3
comp=Z,19nm,1.4s
KTK1 Kautokeino 59.98 340 *e*P **P** 13 31 03.5 -0.7
KTK1 IAmb IAmb 13 31 04.2
comp=Z,7.8nm,1.0s
D05A Enumclaw 60.09 52 IAmb IAmb 13 31 08.3
comp=Z,28nm,1.1s
KLMR Klimovskoe 60.25 327 *e*P **P** 13 31 04.0 -2.1
KLMR S **S** 13 39 10.9 -2.2
KLMR pmax pmax
comp=Z,47nm,1.0s
JETT Jettan, Norway 60.27 341 *e*P **P** 13 31 05.8 -0.3
JETT IAmb IAmb 13 31 06.2
comp=Z,18nm,0.8s
LON Longmire 60.44 52 P **P** 13 31 07.7 0.0
LON pmax pmax
comp=Z,10.0nm,1.1s
LON Longmire 60.44 52 P **P** 13 31 07.7 0.0
TRO Tromso 60.55 342 *e*P **P** 13 31 06.7 -1.3
TRO IAmb IAmb 13 31 07.9
comp=Z,20nm,0.8s
LTY Liberty 60.80 51 IAmb IAmb 13 31 12.3
comp=Z,34nm,1.5s
I03D Drain, OR 61.26 56 IAmb IAmb 13 31 15.8
comp=Z,21nm,0.9s
EPH Ephrata 61.35 51 IAmb IAmb 13 31 15.7
comp=Z,21nm,1.0s
ILON Igloolik, Nuna 61.38 18 P **P** 13 31 13.0 -0.6
ILON IAmb IAmb 13 31 16.4
comp=Z,31nm,1.6s
H04A Detroit Lake 61.39 54 IAmb IAmb 13 31 16.7
comp=Z,34nm,1.1s
MXC Moxie City 61.40 52 IAmb IAmb 13 31 16.8
comp=Z,29nm,1.0s
K02D Willamette Mer 61.64 57 IAmb IAmb 13 31 18.7
comp=Z,26nm,1.2s
BELG Belogornoye 61.74 317 LR LR 14 00 02.7
comp=Z,172nm,21.3s,baz=298,slow=38
BELG Belogornoye 61.74 317*c* *i*P **P** 13 31 16.3 0.0
BELG pmax pmax
comp=Z,16nm,0.8s
BELG MLR MLR
comp=Z,32nm,21.0s
I04A Tendick Farm, 61.76 55 IAmb IAmb 13 31 19.2
comp=Z,24nm,1.0s
C09A Chrisman Ranch 61.83 50 IAmb IAmb 13 31 19.1
comp=Z,24nm,0.9s
MTSU Mount Surprise 61.85 183 P **P** 13 31 18.8 +1.4
comp=Z,7.5nm,1.1s
D08A Wollman Farm, 61.90 51 IAmb IAmb 13 31 19.5
comp=Z,18nm,0.9s
HAWA Hanford 61.94 52 IAmb IAmb 13 31 20.3
comp=Z,25nm,1.1s
WIFE Three Sisters- 61.96 55 P **P** 13 31 19.7 +1.4
WIFE IAmb IAmb 13 31 21.0
comp=Z,31nm,1.2s
G06A Carlson Farm, 61.97 53 IAmb IAmb 13 31 20.9
comp=Z,29nm,1.2s
L02F Cave Junction 62.02 57 IAmb IAmb 13 31 21.3
comp=Z,23nm,1.1s
I05D Terrebonne, OR 62.08 54 P **P** 13 31 20.0 +1.1
I05D IAmb IAmb 13 31 20.9
comp=Z,14nm,0.9s
BBOR Butler Butte 62.12 56 IAmb IAmb 13 31 22.1
comp=Z,41nm,1.5s
E08A Dider Farm, El 62.15 51 IAmb IAmb 13 31 21.4
comp=Z,26nm,0.9s
PINE Pine Mountain 62.63 55 IAmb IAmb 13 31 25.7
comp=Z,35nm,1.0s
STEI Steigen 62.72 342 *e*P **P** 13 31 21.8 -0.8
STEI IAmb IAmb 13 31 21.9
comp=Z,12nm,1.0s
L04D Klamath Falls 62.74 57 P **P** 13 31 23.2 -0.1
YBH Yreka Blue Hor 62.77 57 IAmb IAmb 13 31 26.4
comp=Z,28nm,1.3s
M02C Callahan 62.88 58 IAmb IAmb 13 31 27.4
comp=Z,27nm,1.2s
LOF Lofoten 62.94 342 *e*P **P** 13 31 24.5 +0.4
LNOR Lincton Mounta 62.95 51 IAmb IAmb 13 31 27.2
comp=Z,58nm,1.8s
FAUS Fauske 63.15 341 *e*P **P** 13 31 24.5 -1.0
FAUS IAmb IAmb 13 31 25.1
comp=Z,16nm,0.9s
K05A Summer Lake 63.28 56 IAmb IAmb 13 31 30.1
comp=Z,40nm,1.0s
M03C McCloud 63.40 57 IAmb IAmb 13 31 30.4
comp=Z,29nm,1.0s
O02D Mt. Diablo Mer 63.64 59 P **P** 13 31 30.4 +1.1
O02D IAmb IAmb 13 31 32.2
comp=Z,22nm,1.1s
SUMG Summit 63.69 2 P **P** 13 31 28.8 -0.7
SUMG pmax pmax
comp=Z,17nm,0.9s
SUMG Summit 63.69 2 P **P** 13 31 28.8 -0.7
SUMG Summit 63.69 2 *i* P **P** 13 31 29.0 -0.5
SUMG IAmb IAmb 13 31 30.2
comp=Z,14nm,0.7s
HRA Herat 63.77 293 IAmb IAmb 13 31 33.1
comp=Z,39nm,1.8s
HATC Hat Creek Radi 64.07 58 IAmb IAmb 13 31 34.7
comp=Z,36nm,0.8s
RAUS Rausandaksla 64.21 341 *e*P **P** 13 31 31.8 -0.7
RAUS IAmb IAmb 13 31 32.5
comp=Z,8.4nm,0.9s
MOS Moscow 64.27 324 *e*P **P** 13 31 33.8 +0.8
MOS *e* 13 31 55.2
MOS *e* 13 32 12.6
MOS Moscow 64.27 324 *e*P **P** 13 31 33.8 +0.8
MOR8 Moi Rana 64.33 341 *e*P **P** 13 31 31.0 -2.3
MOR8 IAmb IAmb 13 31 32.1
comp=Z,17nm,0.8s
J08A Circle Bar Ran 64.33 54 IAmb IAmb 13 31 36.5
comp=Z,25nm,1.1s
STOK Stokkvaagen 64.53 341 *e*P **P** 13 31 35.3 +0.8
QIS Mount Isa 64.58 188 P **P** 13 31 35.4 0.0
comp=Z,11nm,2.5s
WR8 Warramunga Arr 64.66 193 IAmb IAmb 13 31 37.1
comp=Z,47nm,1.2s
WRAB Tennant Creek 64.66 193*d* *i*P **P** 13 31 35.9 0.0
WRAB pmax pmax
comp=Z,48nm,1.1s
WRAB Tennant Creek 64.66 193 P **P** 13 31 35.1 -0.9
WRAB IAmb IAmb 13 31 37.1
comp=Z,41nm,1.1s
WRAB Tennant Creek 64.66 193 P **P** 13 31 35.9 0.0
WRA Warramunga Arr 64.67 193 P **P** 13 31 36.0 0.0
comp=Z,27nm,1.0s,baz=11,slow=6.7,SNR=71
WRA LR LR 13 56 26.0
comp=Z,458nm,20.8s,baz=126,slow=33
comp=Z,27nm,1.0s
WRA Warramunga Arr 64.67 193 P **P** 13 31 34.9 -1.1
FIA1 FINESS Array S 64.68 333 IAmb IAmb 13 31 35.5
comp=Z,26nm,0.7s
FINES FINESS Array B 64.68 333 P **P** 13 31 34.8 -0.8
comp=Z,9.6nm,0.6s,baz=41,slow=7.3,SNR=74
FINES LR LR 14 02 49.8
comp=Z,72nm,18.2s,baz=57,slow=39
comp=Z,9.6nm,0.6s
FINES FINESS Array B 64.68 333 P **P** 13 31 34.2 -1.4
LEIR Leirfjorden 64.69 341 *e*P **P** 13 31 35.2 -0.4
PLID Pearl Lake 64.70 51 IAmb IAmb 13 31 38.3
comp=Z,44nm,1.1s
SAATT Saattut 64.73 7 *i*P **P** 13 31 34.3 -1.5
SAATT IAmb IAmb 13 31 37.7
comp=Z,28nm,1.1s
MSO Missoula 64.77 49 IAmb IAmb 13 31 38.8
comp=Z,39nm,0.9s
FITZ Fitzroy Crossi 64.83 203 P **P** 13 31 38.2 +1.2
comp=Z,6.0nm,1.9s
FITZ Fitzroy Crossi 64.83 203 P **P** 13 31 37.2 +0.2
OBN Obninsk 65.14 324*d* *i*P **P** 13 31 39.0 +0.3
OBN *e*PP **pP** 13 32 01.6 +1.0
OBN *e*SP **PcP** 13 32 11.6 +1.0
OBN *e* 13 34 02.8
OBN *i*S **S** 13 40 14.2 -0.2
OBN *e*SS **sS** 13 40 51.6 +1.2
OBN pmax pmax
comp=Z,67nm,1.4s
OBN MLR MLR
comp=Z,67nm,17.0s
OBN Obninsk 65.14 324 P **P** 13 31 39.2 +0.5
comp=Z,28nm,0.5s
OBN Obninsk 65.14 324 *e*P **P** 13 31 39.0 +0.3
BEKR Beckworth 65.32 58 IAmb IAmb 13 31 42.4
comp=Z,32nm,0.9s
VRH Novokhopyorsk 65.36 318 *e*P **P** 13 31 38.7 -1.5
VRH pmax pmax
comp=Z,70nm,0.9s
AFDM Forest Hills D 65.50 59 P **P** 13 31 40.6 -0.8
FFC Flin Flon 65.52 37 P **P** 13 31 41.3 +0.1
FFC pmax pmax
comp=Z,27nm,0.9s
FFC Flin Flon 65.52 37 P **P** 13 31 41.3 +0.1
FFC IAmb IAmb 13 31 43.1
comp=Z,27nm,0.9s
LPSR Galich'ya Gora 65.76 321 *e*P **P** 13 31 42.2 -0.5
LPSR pmax pmax
comp=Z,82nm,0.8s
MFID Camas Ranch 65.83 52 IAmb IAmb 13 31 45.7
comp=Z,81nm,1.9s
FCC Fort Churchill 65.83 30 IAmb IAmb 13 31 47.3
comp=Z,23nm,0.8s
PAHR Pah Rah Range 66.01 57 IAmb IAmb 13 31 47.0
comp=Z,35nm,1.1s
VORR Voronezh 66.25 320 *e*P **P** 13 31 45.2 -0.7
PNTR Pine Nut 66.26 58 IAmb IAmb 13 31 49.0
comp=Z,30nm,0.8s
NSS Namsos 66.28 341 *e*P **P** 13 31 46.3 +0.5
DLMT Dillon 66.42 49 IAmb IAmb 13 31 50.2
comp=Z,41nm,1.0s
CMB Columbia Colle 66.42 59 IAmb IAmb 13 31 49.5
comp=Z,19nm,0.9s
VSR Storozhevoye 66.57 319 *e*P **P** 13 31 48.0 +0.1
VSR pmax pmax
comp=Z,90nm,0.9s
VSU Vasula 66.64 330*c* *e*P **P** 13 31 46.5 -1.8
VSU *i* *PP **pP** 13 32 09.4 -0.9
VSU pmax pmax
comp=Z,16nm,0.8s
VORD Divnogorie 66.67 319 *e*P **P** 13 31 47.4 -1.2
VORD pmax pmax
comp=Z,80nm,1.0s
WAKR Walker 66.72 58 IAmb IAmb 13 31 52.0
comp=Z,22nm,1.0s
BBGB Big Mountain B 66.91 61 IAmb IAmb 13 31 54.9
comp=Z,34nm,1.1s
KVN Kaiserville 67.20 57 IAmb IAmb 13 31 54.8
comp=Z,27nm,0.9s
NVAR Mina Array Bea 67.46 58 P **P** 13 31 55.5 +1.4
comp=Z,21nm,0.8s,baz=287,slow=6.7,SNR=154
comp=Z,21nm,0.8s
NVAR Mina Array Bea 67.46 58 P **P** 13 31 55.0 +0.9
MDPB Devils Postpil 67.48 59 P **P** 13 31 54.5 +0.2
YHL Hebgen Lake 67.52 49 IAmb IAmb 13 31 56.9
comp=Z,27nm,0.8s
NV11 Mina Array Sit 67.55 58 IAmb IAmb 13 31 57.0
comp=Z,22nm,0.9s
YHB Horse Butte 67.57 49 IAmb IAmb 13 31 57.1
comp=Z,34nm,0.8s
MSVF Nonsavu 67.60 148 LR LR 13 58 10.0
comp=Z,46nm,20.1s,baz=114,slow=33
MAK Makhachkala 67.61 308 *e*P **P** 13 31 53.6 -1.0
MAK *e*PP **pP** 13 32 16.0 -0.7
MAK *e*SP **sP** 13 32 26.1 -0.1
MAK *e*S **S** 13 40 43.2 -1.4
MAK *e*SS **sS** 13 41 22.5 +1.4
MAK pmax pmax
comp=Z,115nm,0.9s
MAK MLR MLR
comp=Z,110nm,20.0s
Q09A Carvers 67.89 57 IAmb IAmb 13 31 59.1
comp=Z,39nm,0.9s
YNE Yellowstone No 68.05 48 IAmb IAmb 13 31 60.0
comp=Z,21nm,0.8s
PALK Pallekele 68.09 259 LR LR 14 06 02.8
comp=Z,100nm,18.2s,baz=100,slow=40
LKWY Lake 68.12 49 IAmb IAmb 13 32 02.0
comp=Z,27nm,1.1s
YMP Mirror Lake Pl 68.14 49 IAmb IAmb 13 32 01.2
comp=Z,24nm,1.1s
DSP Deep Springs 68.33 59 IAmb IAmb 13 32 02.1
comp=Z,34nm,1.0s
TPH Tonopah 68.34 58 IAmb IAmb 13 32 01.9
comp=Z,35nm,0.9s
AS15 Alice Springs 68.36 193 P **P** 13 32 00.8 +1.4
comp=Z,13nm,1.2s
RLMT Red Lodge 68.37 48 IAmb IAmb 13 32 02.4
comp=Z,65nm,1.6s
AS17 Alice Springs 68.38 193 P **P** 13 32 00.9 +1.3

comp=Z,13nm,1.1s
FXWY Fox Creek 68.39 50 lAmb lAmb 13 32 02.8
comp=Z,30nm,1.1s
AS31 Alice Springs 68.39 193 P **P** **13 32 00.7 +1.0**
comp=Z,3.6nm,1.0s
AS31 Alice Springs 68.39 193 P **P** **13 31 60.0 +0.3**
ASAR Alice Springs 68.39 193 P **P** **13 32 00.5 +0.8**
comp=Z,7.7nm,0.8s,baz=10,slow=6.5,SNR=50
comp=Z,7.7nm,0.8s
ASAR Alice Springs 68.39 193 P **P** **13 31 59.8 +0.2**
AS09 Alice Springs 68.42 193 P **P** **13 32 01.1 +1.3**
comp=Z,16nm,0.9s
HVU Hansel Valley 68.61 52 lAmb lAmb 13 32 03.6
comp=Z,22nm,0.9s
LOHW Long Hollow 68.63 50 lAmb lAmb 13 32 04.2
comp=Z,78nm,1.7s
SNOW Snow King Moun 68.65 50 lAmb lAmb 13 32 04.5
comp=Z,35nm,1.1s
GOF Gofitskoye 68.70 312 *ce*P **P** **13 32 02.4 +1.0**
AHID Auburn Hatcher 68.91 51 lAmb lAmb 13 32 05.3
comp=Z,27nm,1.1s
FRB Frobisher Bay 68.97 16 LR LR 14 03 07.0
comp=Z,48nm,20.5s,baz=22,slow=37
MOL Molde 68.99 341 *e*P **P** **13 32 05.0 +2.0**
DOMB Dombas 69.09 340 *e*P **P** **13 32 02.8 -0.8**
DOMB lAmb lAmb 13 32 04.7
comp=Z,8.8nm,0.8s
MNK Minsk 69.14 327 *i* P **P** **13 32 05.7 +1.7**
comp=E,61nm,1.0s
MNK *i* P **P** **13 32 05.7 +1.7**
comp=N,64nm,1.1s
MNK *i* P **P** **13 32 05.7 +1.7**
comp=Z,80nm,0.9s,baz=42
MNK *i* pP **PcP** **13 32 28.7 +1.3**
MNK *i* sP **sP** **13 32 38.5 +2.9**
MNK *i* PP **PP** **13 34 39.5 +2.4**
MNK *i* PPP PPP 13 36 21.0
MNK *i* S **S** **13 41 05.1 +2.6**
MNK *i* sS **SKiKP** **13 41 46.0 +0.5**
MNK *i* SS **SS** **13 45 34.3 +5.2**
MNK *i* SSS SSS 13 48 52.0
MNK *i* LR LR 14 03 13.1
MNK Minsk 69.14 327 *i* P **P** **13 32 05.7 +1.7**
MNK *i* *PP **PcP** **13 32 28.7 +1.3**
MNK *i* 13 34 39.4
MNK *i* PPP PPP 13 36 20.9
MNK *i* S **S** **13 41 05.0 +2.6**
MNK *i* *SS **SKiKP** **13 41 46.0 +0.5**
MNK *i* SS **SS** **13 45 34.3 +5.2**
MNK pmax pmax
comp=Z,80nm,0.9s
MNK pmax pmax
comp=N,64nm,1.1s
MNK pmax pmax
comp=E,61nm,1.0s
NC303 NORSAR Array S 69.20 339 P **P** **13 32 03.8 -0.5**
NC405 NORSAR Array S 69.21 339 P **P** **13 32 03.3 -1.0**
NC405 lAmb lAmb 13 32 05.8
comp=Z,19nm,0.7s
NC204 NORSAR Array S 69.32 339 lAmb lAmb 13 32 06.1
comp=Z,72nm,1.6s
NB201 NORSAR Array S 69.37 339 lAmb lAmb 13 32 06.7
comp=Z,24nm,0.7s
NB2 NORSAR Subarra 69.40 339 P **P** **13 32 05.0 -0.6**
comp=Z,21nm,0.8s,baz=31,slow=6.5
NB2 NORSAR Subarra 69.40 339 P **P** **13 32 05.0 -0.6**
NOA NORSAR Array B 69.40 339 P **P** **13 32 05.0 -0.6**
comp=Z,8.4nm,0.6s,baz=32,slow=6.3,SNR=64
NOA LR LR 14 06 51.6
comp=Z,37nm,18.9s,baz=45,slow=40
comp=Z,8.4nm,0.6s
HWUT Hardware Ranch 69.41 52 lAmb lAmb 13 32 08.6
comp=Z,34nm,1.1s
HFS Hagfors 69.49 337 P **P** **13 32 05.7 -0.4**
comp=Z,14nm,0.4s,baz=35,slow=5.4,SNR=101
HFS LR LR 14 04 39.0
comp=Z,58nm,21.8s,baz=43,slow=38
comp=Z,14nm,0.4s
MBWA Marble Bar 69.52 207 P **P** **13 32 07.7 +1.1**
comp=Z,25nm,2.5s
MBWA Marble Bar 69.52 207 P **P** **13 32 06.9 +0.3**
MBWA lAmb lAmb 13 32 08.3
comp=Z,32nm,1.1s
S11A Rachel 69.52 57 lAmb lAmb 13 32 09.3
comp=Z,36nm,0.8s
CLC China Lake 69.55 60 lAmb lAmb 13 32 09.0
comp=Z,26nm,1.0s
NC602 NORSAR Array S 69.57 338 *e*P **P** **13 32 06.1 -0.5**
NC602 NORSAR Array S 69.57 338 lAmb lAmb 13 32 10.9
comp=Z,55nm,1.9s
DUG Dugway, Tooele 69.61 54 lAmb lAmb 13 32 09.8
comp=Z,29nm,0.9s
KVAR Kislovodsk Arr 69.61 312 LR LR 14 07 09.7
comp=Z,111nm,18.7s,baz=284,slow=40
KIV Kislovodsk 69.62 312 ⇓P **P** **13 32 09.2 +1.9**
KIV Kislovodsk 69.62 312 *e*P **P** **13 32 08.9 +1.6**
KIV *e*S **S** **13 41 09.9 +1.2**
KIV pmax pmax
comp=Z,72nm,1.1s
KIV pmax pmax
comp=Z,4.0nm,2.0s
KIV MLR MLR
comp=Z,94nm,17.0s
KIV Kislovodsk 69.62 312 P **P** **13 32 08.4 +1.2**
KIV Kislovodsk 69.62 312 P **P** **13 32 09.1 +1.9**
comp=Z,682nmcomp=Z,68nm,0.7s
KIV Kislovodsk 69.62 312 *e*P **P** **13 32 08.9 +1.6**
KIV Kislovodsk 69.62 312 P **P** **13 32 09.2 +1.9**
NAO01 NORSAR Array S 69.65 339 lAmb lAmb 13 32 07.8
comp=Z,49nm,1.7s
KBZ Khabaz 69.66 311 P **P** **13 32 08.7 +1.4**
comp=Z,50nm,0.8s,baz=52,slow=4.4,SNR=82
KBZ LR LR 14 07 27.1
comp=Z,120nm,18.4s,baz=44,slow=40
comp=Z,50nm,0.8s
KBZ Khabaz 69.66 311 *ce*P **P** **13 32 08.9 +1.6**
KBZ pmax pmax
comp=Z,57nm,0.9s
KBZ MLR MLR
comp=Z,118nm,25.0s
KBZ Khabaz 69.66 311 *e*P **P** **13 32 08.9 +1.6**
TPNV Topopah Spring 69.66 58 lAmb lAmb 13 32 10.0
comp=Z,35nm,0.9s
TPO Tropico Hills 69.76 61 lAmb lAmb 13 32 10.6
comp=Z,37nm,1.1s
BW06 Boulder Array 69.77 50 lAmb lAmb 13 32 10.3
comp=Z,26nm,1.0s
PD31 Pinedale Array 69.77 50 lAmb lAmb 13 32 10.3
comp=Z,26nm,1.0s
PDAR Pinedale Array 69.77 50 P **P** **13 32 09.2 +0.8**
comp=Z,14nm,0.7s,baz=277,slow=2.4,SNR=127
comp=Z,14nm,0.7s
PDAR Pinedale Array 69.77 50 P **P** **13 32 08.4 0.0**
SHA1 Shidzhatmaz 69.78 312 *c i*P **P** **13 32 09.9 +1.4**
TCUT Toone Canyon 69.82 52 lAmb lAmb 13 32 11.1
comp=Z,26nm,0.8s
CCCA Chr Cany lake 69.88 60 lAmb lAmb 13 34 41.6
comp=Z,36nm,0.7s
GWY Greenwater Val 69.89 59 lAmb lAmb 13 32 11.2
comp=Z,28nm,0.9s
QSM Queen of Sheba 69.91 59 lAmb lAmb 13 32 11.3
comp=Z,39nm,1.0s
QLP Quilpie 70.26 183 P **P** **13 32 12.2 +1.1**
comp=Z,32nm,1.6s
MWC Mount Wilson 70.28 61 P **P** **13 32 11.8 +0.1**
MWC pmax pmax
comp=Z,47nm,1.4s
MWC Mount Wilson 70.28 61 P **P** **13 32 11.8 +0.1**
MWC lAmb lAmb 13 32 13.6
comp=Z,47nm,1.4s
MPU Maple Canyon 70.41 53 lAmb lAmb 13 32 14.6
comp=Z,25nm,1.0s
SKAR Skarsla 70.45 340 *e*P **P** **13 32 12.2 +0.2**
SKAR lAmb lAmb 13 32 13.7
comp=Z,82nm,2.2s
HYA Hoyanger 70.53 341 *e*P **P** **13 32 13.6 +1.1**
SUE Sulen 70.96 342 *e*P **P** **13 32 15.2 +0.2**
GNI Garni 71.01 308 LR LR 14 07 36.2
comp=Z,61nm,18.3s,baz=7.5,slow=39
GNI Garni 71.01 308 ⇑ *e*P **P** **13 32 18.2 +2.3**
GNI pmax pmax
comp=Z,12nm,0.7s
GNI Garni 71.01 308 P **P** **13 32 16.9 +0.9**
GNI lAmb lAmb 13 32 44.3
comp=Z,24nm,0.8s
MTPC Mountain Pass 71.03 59 lAmb lAmb 13 32 18.4
comp=Z,46nm,1.6s
NUUK Nuuk 71.17 9 *i* P **P** **13 32 14.5 -1.7**
NUUK lAmb lAmb 13 32 18.4
comp=Z,34nm,1.3s
P17A Butcher Ranch, 71.29 53 lAmb lAmb 13 32 19.9
comp=Z,40nm,1.0s
ULM Lac du Bonnet 71.32 37 P **P** **13 32 17.4 0.0**
comp=Z,10nm,0.8s,baz=324,slow=7.1,SNR=10.0
comp=Z,10nm,0.8s
ASK Askoy 71.37 341 *e*P **P** **13 32 18.8 +1.3**
ASK lAmb lAmb 13 32 19.3
comp=Z,17nm,1.0s
AK03 Malin Array Si 71.39 324 P **P** **13 32 18.0 +0.2**
AK23 Malin Array Si 71.40 324 P **P** **13 32 18.3 +0.4**
AKASG Malin Array Be 71.40 324 P **P** **13 32 18.1 +0.3**
comp=Z,43nm,0.8s,baz=40,slow=6.4,SNR=158
AKASG LR LR 14 06 55.4
comp=Z,74nm,18.7s,baz=54,slow=38
comp=Z,43nm,0.8s
AKASG Malin Array Be 71.40 324 P **P** **13 32 18.2 +0.3**
AKASG pmax pmax
comp=Z,53nm,1.3s
AKASG Malin Array Be 71.40 324 P **P** **13 32 18.2 +0.3**
AKASG lAmb lAmb 13 32 20.2
comp=Z,53nm,1.2s
AKBB Malin Array Si 71.40 324 *c i*P **P** **13 32 18.0 +0.1**
AKBB pmax pmax
comp=Z,81nm,0.9s
AKBB Malin Array Si 71.40 324 P **P** **13 32 17.9 +0.1**
AK04 Malin Array Si 71.41 324 P **P** **13 32 17.9 0.0**
KIEV Kiev 71.42 324 ⇑P **P** **13 32 18.4 +0.5**
KIEV Kiev 71.42 324 ⇑P **P** **13 32 18.4 +0.5**
KIEV Kiev 71.42 324 P **P** **13 32 17.9 0.0**
comp=Z,3µmcomp=Z,371nm,1.1s
BER Bergen 71.42 341 *e*P **P** **13 32 19.1 +1.2**
BER lAmb lAmb 13 32 19.5
comp=Z,22nm,1.1s
AK22 Malin Array Si 71.42 324 P **P** **13 32 18.3 +0.3**
LCMT Little Creek M 71.44 56 lAmb lAmb 13 32 21.1
comp=Z,25nm,0.9s
AK11 Malin Array Si 71.44 324 P **P** **13 32 18.4 +0.3**
SOC Sochi 71.45 313 *e*P **P** **13 32 19.8 +1.5**
SOC *e* 13 34 59.9
SOC *e*PPP PPP 13 36 40.0
SOC *e*S **S** **13 41 32.1 +2.3**
SOC pmax pmax
comp=Z,58nm,1.0s
SOC MLR MLR
comp=Z,208nm,25.0s
P18A Preston Nutter 71.47 53 lAmb lAmb 13 32 21.3
comp=Z,29nm,1.2s
AK19 Malin Array Si 71.48 324 P **P** **13 32 18.5 +0.2**
AK14 Malin Array Si 71.51 324 P **P** **13 32 18.6 +0.1**
INKA Innaminka 71.60 186 P **P** **13 32 19.9 +0.8**
DNR Dunn Ranch,Anz 71.61 61 P **P** **13 32 19.8 +0.2**
DNR lAmb lAmb 13 32 21.6
comp=Z,27nm,1.0s
SRU San Rafael Swe 71.65 53 lAmb lAmb 13 32 21.9
comp=Z,39nm,0.9s
PFO Pinyon Flats O 71.69 61 P **P** **13 32 20.1 0.0**
PFO pmax pmax
comp=Z,13nm,1.1s
PFO Pinyon Flats O 71.69 61 P **P** **13 32 20.1 0.0**
KNB Kanab 71.69 56 lAmb lAmb 13 32 22.9
comp=Z,26nm,1.0s
E28A Huff 71.76 42 lAmb lAmb 13 32 21.8
comp=Z,43nm,1.1s
RSSD Black Hills 71.80 46 P **P** **13 32 21.0 +0.3**
RSSD pmax pmax
comp=Z,35nm,0.9s
RSSD Black Hills 71.80 46 P **P** **13 32 21.0 +0.3**
RSSD lAmb lAmb 13 32 22.3
comp=Z,35nm,0.9s
RSSD Black Hills 71.80 46 P **P** **13 32 21.1 +0.3**
RSSD pP **pP** **13 32 42.9 -0.1**
MI28 Mi28,Pidlybu 71.89 325 P **P** **13 32 20.2 -0.6**
IRM Iron Mountain 72.16 60 lAmb lAmb 13 32 24.9
comp=Z,33nm,1.3s
RNPP9 Sopachiv 72.26 326 P **P** **13 32 23.6 +0.6**
O20A White River Ci 72.27 51 lAmb lAmb 13 32 25.9
comp=Z,22nm,0.8s
RNPP8 Varash 72.33 326 P **P** **13 32 24.1 +0.7**
RNPP5 Staryi Chortor 72.40 326 P **P** **13 32 24.3 +0.5**
U15A North Rim 72.40 56 lAmb lAmb 13 32 27.1
comp=Z,28nm,0.9s
LUBAR Lubar, Ukraine 72.61 324 P **P** **13 32 25.3 +0.2**
EPLO Experimental L 72.68 36 lAmb lAmb 13 32 26.5
comp=Z,35nm,0.9s
AGMN Agassiz Nation 72.77 39 lAmb lAmb 13 32 27.1
comp=Z,24nm,1.0s
BLYC Blythe 72.81 60 lAmb lAmb 13 32 28.9
comp=Z,37nm,1.2s
PV21 Cone Mtn., Par 72.92 53 lAmb lAmb 13 32 29.6
comp=Z,32nm,0.8s
PV22 Blue Mesa, Par 73.04 53 lAmb lAmb 13 32 30.2
comp=Z,38nm,1.1s
ESJX Sierra Juarez 73.07 62 lAmb lAmb 13 32 30.5
comp=Z,28nm,1.1s
PV04 Paradox Valley 73.07 53 lAmb lAmb 13 32 30.5
comp=Z,35nm,1.0s
GLA Glamis 73.09 60 lAmb lAmb 13 32 30.5
comp=Z,24nm,1.0s
PV16 Nyswonger Mesa 73.12 53 lAmb lAmb 13 32 30.8
comp=Z,42nm,1.1s
PV11 David Mesa, Pa 73.15 53 lAmb lAmb 13 32 31.7
comp=Z,40nm,0.9s
PV12 Saucer Basin, 73.18 53 lAmb lAmb 13 32 32.0
comp=Z,42nm,0.9s
PV07 Paradox Valley 73.19 53 lAmb lAmb 13 32 31.1
comp=Z,29nm,1.2s
PV03 Paradox Valley 73.20 53 lAmb lAmb 13 32 31.2
comp=Z,27nm,0.9s
PV13 Radium Mtn., P 73.28 53 lAmb lAmb 13 32 31.8
comp=Z,37nm,0.9s
PV02 Paradox Valley 73.29 53 lAmb lAmb 13 32 31.9
comp=Z,43nm,1.1s
BSD Bornholm Skovb 73.30 334 *i* P **P** **13 32 27.7 -1.4**
BSD lAmb lAmb 13 32 29.9
comp=Z,35nm,1.1s
PV15 Paradox Valley 73.35 53 lAmb lAmb 13 32 32.0
comp=Z,27nm,1.1s
KOPT Kop Dagi 73.49 310 lAmb lAmb 13 32 36.2
comp=Z,24nm,0.8s
WUAZ Wupati 73.56 56 lAmb lAmb 13 32 33.8
comp=Z,24nm,0.9s
GURO Guroymak-BITLI 73.64 308 lAmb lAmb 13 32 35.3
comp=Z,38nm,0.8s
SORM Soroca 73.70 322 ⇑P **P** **13 32 32.6 +1.1**
SORM Soroca 73.70 322 ⇑P **P** **13 32 32.6 +1.1**
SORM Soroca 73.70 322 P **P** **13 32 31.9 +0.4**
comp=Z,73nm,1.0s
BEL Belsk 73.92 329 *e*P **P** **13 32 34.1 +1.3**
ISCO Idaho Springs 73.96 50 lAmb lAmb 13 32 36.1
comp=Z,22nm,0.9s
MVCO Mesa Verde 74.11 54 lAmb lAmb 13 32 36.6
comp=Z,21nm,0.8s
KMPD K-Podol'skiy 74.20 324 P **P** **13 32 34.2 -0.2**
X16A Lo Mia Camp, P 74.26 57 lAmb lAmb 13 32 38.0
comp=Z,30nm,0.9s
F33A 5 Mile Ranch, 74.39 40 lAmb lAmb 13 32 37.1
comp=Z,32nm,1.1s
S22A 4UR Ranch, Cre 74.70 52 lAmb lAmb 13 32 40.6
comp=Z,25nm,1.1s
KWP Kalwaria Pacla 74.92 326 *e*P **P** **13 32 39.9 +1.2**
KWP Kalwaria Pacla 74.92 326 P **P** **13 32 40.1 +1.4**
comp=Z,1µmcomp=Z,118nm,1.1s
EYMN Ely 74.95 36 lAmb lAmb 13 32 40.0
comp=Z,24nm,0.8s
ARPR Arapgir-MALATY 75.33 310 lAmb lAmb 13 32 45.2
comp=Z,37nm,0.9s
GIRR Girov 75.41 322 ⇑P **P** **13 32 43.0 +1.5**
BURAR Bucovina Array 75.46 324 ⇓P **P** **13 32 43.0 +1.1**
BURAR Bucovina Array 75.46 324 ⇓P **P** **13 32 43.0 +1.1**
BURAR Bucovina Array 75.46 324 P **P** **13 32 42.3 +0.4**
OJC Ojcow 75.59 328 *e*P **P** **13 32 43.4 +1.0**
OJC *e*S **S** **13 42 15.4 -0.8**
OJC Ojcow 75.59 328 P **P** **13 32 43.5 +1.0**
comp=Z,481nmcomp=Z,53nm,1.1s
BIZ Bicaz 75.60 323 ⇓P **P** **13 32 44.2 +1.6**
KOLS Kolonicke sedl 75.65 326 *e*P **P** **13 32 44.4 +1.5**
KOLS pmax pmax
comp=Z,28nm,0.9s
KOLS Kolonicke sedl 75.65 326 *e*P **P** **13 32 44.4 +1.5**
STKA Stephens Creek 75.65 185 P **P** **13 32 44.0 +1.2**
comp=Z,5.2nm,0.8s,baz=334,slow=8.3,SNR=7.0
comp=Z,5.2nm,0.8s
STKA Stephens Creek 75.65 185 P **P** **13 32 44.0 +1.2**
STHS Stebnicka Huta 75.68 327 *e*P **P** **13 32 44.1 +1.1**
STHS pmax pmax
comp=Z,26nm,0.9s
STHS Stebnicka Huta 75.68 327 *e*P **P** **13 32 44.1 +1.1**
TESR Tescani 75.69 322 ⇑P **P** **13 32 44.0 +0.9**
TESR Tescani 75.69 322 P **P** **13 32 44.2 +1.1**
comp=Z,578nmcomp=Z,60nm,1.1s
GHRR 75.69 321 P **P** **13 32 44.7 +1.6**
TLCR 75.71 320 ⇑P **P** **13 32 45.2 +2.0**
TLCR 75.71 320 ⇑P **P** **13 32 45.2 +2.0**
BSEG Bad Segeberg 75.73 335 *e*P **P** **13 32 44.3 +1.2**
comp=Z,15nm,0.9s,baz=31,slow=5.5
BSEG *e*L L 14 08 41.4
comp=Z,48nm,21.7s
ECSD EROS Data Cent 75.80 42 lAmb lAmb 13 32 45.2
comp=Z,50nm,1.1s
RUE Ruedersdorf 75.87 333 *e*P **P** **13 32 45.0 +1.0**
comp=Z,34nm,1.0s,baz=31,slow=5.5
E38A The Farm, Brul 75.96 37 lAmb lAmb 13 32 45.5
comp=Z,42nm,0.9s
CFR Carcaliu 76.03 320 ⇑P **P** **13 32 45.9 +0.9**
CFR Carcaliu 76.03 320 ⇑P **P** **13 32 45.9 +0.9**
NIE Niedzica 76.05 327 P **P** **13 32 46.6 +1.5**
comp=Z,232nmcomp=Z,20nm,1.1s
TUC Tucson 76.10 59 P **P** **13 32 46.1 +0.3**
TUC pmax pmax
comp=Z,13nm,1.0s
TUC Tucson 76.10 59 P **P** **13 32 46.1 +0.3**
TUC Tucson 76.10 59 P **P** **13 32 46.5 +0.8**
TPGR Topolog 76.14 320 ⇓P **P** **13 32 47.3 +1.5**
VRI Vrincioaia 76.15 322 P **P** **13 32 47.4 +1.7**
comp=Z,24nm,1.4s
GORT1 Trebel 76.23 334 *e*P **P** **13 32 47.5 +1.5**
comp=Z,63nm,1.3s,baz=31,slow=5.5
SAHR Sahastru 76.27 322 ⇑P **P** **13 32 49.3 +2.8**
KSP Ksiaz 76.38 330 *e*P **P** **13 32 47.9 +0.9**
KSP *e*S **S** **13 42 24.1 -0.8**
KSP Ksiaz 76.38 330 P **P** **13 32 48.0 +1.1**
comp=Z,37nm,1.0s
COVR Voineasa-Covas 76.40 322 ⇑P **P** **13 32 48.6 +1.4**
SPMN Marine on St. 76.47 39 lAmb lAmb 13 32 48.6
comp=Z,26nm,1.0s
T25A Trinidad 76.50 51 lAmb lAmb 13 32 50.1
comp=Z,33nm,1.0s
OKC Ostrava-Krasne 76.53 329 *e*P **P** **13 32 49.3 +1.5**
OKC Ostrava-Krasne 76.53 329 *e*P **P** **13 32 49.3 +1.5**
STEB Steborice 76.59 329 *e*P **P** **13 32 48.7 +0.6**
DOPR Dopca 76.66 322 ⇑P **P** **13 32 50.7 +2.1**
CHVC Chvalec 76.67 330 *e*P **P** **13 32 49.8 +1.2**
CHVC Chvalec 76.67 330 *e*P **P** **13 32 49.8 +1.2**
UPC Upice 76.75 330 *e*P **P** **13 32 50.6 +1.5**
UPC Upice 76.75 330 *e*P **P** **13 32 50.6 +1.5**
DPC Dobruska-Polom 76.77 330 *e*P **P** **13 32 50.5 +1.3**
DPC Dobruska-Polom 76.77 330 *e*P **P** **13 32 50.5 +1.3**
DPC Dobruska-Polom 76.77 330 P **P** **13 32 50.7 +1.5**
comp=Z,295nmcomp=Z,26nm,1.2s
MLR Muntele Rosu 76.79 322 LR LR 14 08 29.3
comp=Z,55nm,19.3s,baz=67,slow=37
MLR Muntele Rosu 76.79 322 P **P** **13 32 51.0 +1.5**
comp=Z,23nm,1.0s
MORC Moravsky Berou 76.80 329 ⇑P **P** **13 32 50.7 +1.3**
MORC Moravsky Berou 76.80 329 ⇑P **P** **13 32 50.7 +1.3**
MORC Moravsky Berou 76.80 329 P **P** **13 32 49.8 +0.4**
MORC lAmb lAmb 13 32 51.9
comp=Z,30nm,0.9s
MORC Moravsky Berou 76.80 329 *e*P **P** **13 32 50.3 +0.9**
ISR Istrita 76.80 321 ⇑P **P** **13 32 51.7 +2.2**
ISR Istrita 76.80 321 ⇑P **P** **13 32 51.7 +2.2**
ISR Istrita 76.80 321 P **P** **13 32 51.1 +1.6**
comp=Z,49nm,0.7s
FLTG Flechtingen 76.82 334 *e*P **P** **13 32 49.9 +0.6**
comp=Z,44nm,1.0s,baz=31,slow=5.5
KRLC Kraliky 76.83 330 *e*P **P** **13 32 50.8 +1.2**
KRLC Kraliky 76.83 330 *e*P **P** **13 32 50.8 +1.2**
ANMO Albuquerque 76.87 54 ⇓ *i*P **P** **13 32 51.4 +1.1**
ANMO pmax pmax
comp=Z,20nm,1.4s
ANMO Albuquerque 76.87 54 P **P** **13 32 50.4 +0.2**
ICOR Ion Corvin 77.00 320 ⇑P **P** **13 32 51.8 +1.3**
RETH Rethem/Aller, 77.05 335 *e*P **P** **13 32 51.7 +1.1**
comp=Z,38nm,1.1s,baz=31,slow=5.5
DRGR 77.17 324 ⇓P **P** **13 32 52.8 +1.2**
DRGR 77.17 324 ⇓P **P** **13 32 52.8 +1.2**
BRG Berggiesshubel 77.17 332 *e*P **P** **13 32 52.1 +0.8**
comp=Z,13nm,1.0s,baz=31,slow=5.5
BRG Berggiesshubel 77.17 332 *i* P **P** **13 32 52.0 +0.6**
BRG Amp 13 32 53.0
comp=Z,13nm,1.0s
BRG pP **pP** **13 33 14.1 +0.2**
BRG Amp 13 33 14.8
comp=Z,3.7nm,0.8s
BRG Berggiesshubel 77.17 332 S **S** **13 42 33.0 -0.5**
ASSE Asse, Remlinge 77.17 334 *e*P **P** **13 32 52.2 +1.0**
comp=Z,22nm,1.1s,baz=31,slow=5.5
VOIR 77.22 322 ⇓P **P** **13 32 53.2 +1.3**
VOIR 77.22 322 ⇓P **P** **13 32 53.2 +1.3**
VOIR 77.22 322 P **P** **13 32 53.2 +1.3**
comp=Z,296nmcomp=Z,24nm,0.9s
PVCC Panska Ves 77.25 331 *e*P **P** **13 32 53.6 +1.8**
PVCC Panska Ves 77.25 331 *e*P **P** **13 32 53.6 +1.8**
BR131 Keskin Array S 77.39 314 *c i*P **P** **13 32 53.8 +0.8**
BRTR Keskin Array B 77.39 314 P **P** **13 32 53.6 +0.5**
comp=Z,6.4nm,0.7s,baz=76,slow=3.7,SNR=25
BRTR LR LR 14 13 53.7
comp=Z,30nm,19.0s,baz=71,slow=41
comp=Z,6.4nm,0.7s
BRTR Keskin Array B 77.39 314 *i* P **P** **13 32 54.7 +1.7**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BRTR Keskin Array B 77.39 314 P **P** **13 32 53.1 +0.1**
RICC Richard 77.39 331 *e*P **P** **13 32 54.4 +1.8**
BR106 Keskin Array S 77.40 314 P **P** **13 32 54.0 +1.0**
comp=Z,67nmcomp=Z,9.5nm,0.9s
BR104 Keskin Array S 77.41 314 P **P** **13 32 54.5 +1.4**
comp=Z,73nmcomp=Z,10nm,0.9s
BR105 Keskin Array S 77.41 314 P **P** **13 32 54.2 +1.1**
comp=Z,92nmcomp=Z,12nm,0.9s
SCHQ Schefferville 77.41 19 P **P** **13 32 53.1 +0.4**
comp=Z,4.1nm,0.3s,baz=5.2,slow=5.2,SNR=20
SCHQ LR LR 14 08 20.4
comp=Z,69nm,21.9s,baz=340,slow=37
comp=Z,4.1nm,0.3s
PSZ Piszkesteto 77.42 327 ⇑P **P** **13 32 54.4 +1.5**
PSZ Piszkesteto 77.42 327 ⇑P **P** **13 32 54.4 +1.5**
ARR Arges 77.46 322 ⇑P **P** **13 32 55.1 +1.9**
JAVC Velka Javorina 77.51 329 *e*P **P** **13 32 55.4 +2.0**
CLZ Clausthal 77.52 334 *e*P **P** **13 32 54.6 +1.3**
comp=Z,45nm,1.1s,baz=31,slow=5.5
VRAC Vranov 77.54 329 LR LR 14 12 03.4
comp=Z,92nm,18.5s,baz=34,slow=40
VRAC Vranov 77.54 329 ⇑P **P** **13 32 55.1 +1.6**
VRAC Vranov 77.54 329 ⇑P **P** **13 32 55.1 +1.6**
VRAC Vranov 77.54 329 *e*P **P** **13 32 54.8 +1.3**
HSKC Hora Svate Kat 77.57 332 *e*P **P** **13 32 54.3 +0.6**
NEUB Neuenburg 77.61 333 *e*P **P** **13 32 54.5 +0.7**
comp=Z,55nm,1.1s,baz=31,slow=5.5
319A Douglas 77.67 58 lAmb lAmb 13 32 57.0
comp=Z,37nm,0.9s
KIRS Kirsehir-Merke 77.68 313 ⇓P **P** **13 32 56.8 +2.2**
PRU Pruhonice 77.71 331 *e*P **P** **13 32 54.7 +0.3**
PRU Pruhonice 77.71 331 *e*P **P** **13 32 54.7 +0.3**
121A Cookes Peak, D 77.77 57 lAmb lAmb 13 32 58.0
comp=Z,27nm,1.0s
LOT Lotru 77.78 323 ⇓P **P** **13 32 56.5 +1.4**
DEV Deva 77.81 324 ⇓P **P** **13 32 56.6 +1.6**
DEV Deva 77.81 324 ⇓P **P** **13 32 56.6 +1.6**
KRUC Moravsky 77.81 329 *e*P **P** **13 32 56.2 +1.2**
CBKS Cedar Bluff 77.85 47 lAmb lAmb 13 32 56.2
comp=Z,32nm,0.8s
GTTG Gottingen 77.90 334 *e*P **P** **13 32 56.5 +1.1**
comp=Z,32nm,1.0s,baz=31,slow=5.5
IBBN Ibbenburen 77.91 336 *e*P **P** **13 32 56.3 +0.8**
comp=Z,40nm,0.9s,baz=31,slow=5.5
EKA Eskdalemuir Ar 77.91 343 P **P** **13 32 55.9 +0.5**
comp=Z,8.4nm,0.8s,baz=14,slow=4.9,SNR=19
comp=Z,8.4nm,0.8s
ESK Eskdalemuir 77.94 343 P **P** **13 32 55.5 -0.1**
ESK pmax pmax
comp=Z,18nm,1.0s
ESK Eskdalemuir 77.94 343 P **P** **13 32 55.5 -0.1**
RTBA Rita Blanca 77.94 51 lAmb lAmb 13 32 57.6
comp=Z,29nm,1.0s
HUMR Humele 77.96 322 ⇑P **P** **13 32 57.1 +1.2**
MODS Modra-Piesok 78.06 328 *e*P **P** **13 32 58.0 +1.6**

MODS pmax pmax
comp=Z,47nm,1.4s
MODS Modra-Piesok 78.06 328 *e*P **P 13 32 58.0 +1.6**
TANN Tannenbergstha 78.06 332 *e*P **P 13 32 57.2 +0.7**
comp=Z,49nm,2.1s,baz=31,slow=5.5
PLN Plauen 78.10 333 *e*P **P 13 32 57.4 +0.8**
comp=Z,13nm,1.6s,baz=31,slow=5.5
MOX Moxa 78.15 333 *e*P **P 13 32 57.6 +0.8**
comp=Z,29nm,1.3s,baz=31,slow=5.5
MOX *e*L L 14 06 26.7
comp=Z,53nm,21.2s
COPA Copaceanca 78.17 321 ⇓P **P 13 32 58.8 +1.8**
GZR Gura Zlata 78.25 324 ⇑⇑P **P 13 32 58.4 +0.8**
GZR Gura Zlata 78.25 324 ⇑P **P 13 32 58.4 +0.8**
ZVC Zvikov 78.29 331 *e*P **P 13 32 57.8 +0.2**
UBBA Unterbreizbach 78.52 334 *e*P **P 13 32 60.0 +1.2**
comp=Z,7.7nm,0.9s,baz=31,slow=5.5
KASTN Kahler Asten 78.68 335 *e*P **P 13 33 00.6 +0.9**
comp=Z,22nm,1.0s,baz=31,slow=5.5
ROTZ Rotzenmuhle 78.70 332 *e*P **P 13 33 01.2 +1.3**
comp=Z,5.5nm,1.3s,baz=31,slow=5.5
WINA Alland / Wiene 78.73 329 *e*P **P 13 33 01.1 +1.0**
comp=Z,13nm,1.0s,SNR=6.1
WINA *es*P **pP 13 33 24.9 +2.2**
comp=Z,13nm,1.0s
KHC Kasperske Hory 78.77 331 *d i*P **P 13 33 01.1 +0.8**
KHC pmax pmax
comp=Z,28nm,1.0s
KHC Kasperske Hory 78.77 331 IAmb IAmb 13 33 02.9
comp=Z,24nm,1.0s
KHC Kasperske Hory 78.77 331 *e*P **P 13 33 00.8 +0.5**
KHC Kasperske Hory 78.77 331 P **P 13 33 01.1 +0.8**
comp=Z,24nm,0.9s
CKRC Cesky Krumlov 78.77 330 *e*P **P 13 33 02.0 +1.7**
CKRC Cesky Krumlov 78.77 330 *e*P **P 13 33 02.0 +1.7**
BUG Bochum--Univer 78.81 336 *e*P **P 13 33 01.4 +1.0**
comp=Z,35nm,1.1s,baz=31,slow=5.5
CONA Conrad Observa 78.95 329 *i*P **P 13 33 02.6 +1.2**
comp=Z,12nm,0.9s,SNR=10
CONA *es*P **pP 13 33 26.2 +2.1**
comp=Z,13nm,1.1s
GEC2 GERESS Array S 78.97 331 *e*P **P 13 33 02.1 +0.6**
comp=Z,11nm,1.1s,baz=31,slow=5.5
GEC2 *e*L L 14 06 53.5
comp=Z,44nm,20.4s
GERES GERESS Array B 78.97 331 P **P 13 33 01.8 +0.3**
comp=Z,2.4nm,0.6s,baz=23,slow=4.4,SNR=24
GERES LR LR 14 12 45.4
comp=Z,50nm,19.2s,baz=32,slow=39
comp=Z,2.4nm,0.6s
GERES GERESS Array B 78.97 331 P **P 13 33 00.1 -1.4**
RONA Rosalia, Austr 78.98 329 *e*P **P 13 33 02.4 +0.9**
comp=Z,15nm,1.1s,SNR=7.7
RONA *es*P **pP 13 33 26.5 +2.4**
comp=Z,16nm,1.1s
WET Wettzell 79.00 331 *e*P **P 13 33 02.7 +1.1**
comp=Z,22nm,1.1s,baz=31,slow=5.5
WET *e*L L 14 11 17.9
comp=Z,75nm,20.3s
GRF Grafenberg Arr 79.09 333 *e*P **P 13 33 03.4 +1.4**
comp=Z,32nm,0.9s,baz=31,slow=5.5
GRF *e*L L 14 11 44.2
comp=Z,81nm,18.6s
PH02 Texas Public H 79.14 51 IAmb IAmb 13 33 04.6
comp=Z,43nm,1.0s
E46A Sault Ste Mari 79.19 33 IAmb IAmb 13 33 03.3
comp=Z,45nm,1.4s
I42A Draeger Farm, 79.25 38 IAmb IAmb 13 33 04.1
comp=Z,24nm,0.9s
KSU1 Kansas State U 79.27 45 IAmb IAmb 13 33 03.8
comp=Z,27nm,0.7s
MORH Mrgy, Hungar 79.30 326 P **P 13 33 04.1 +0.9**
comp=Z,6.6nm,1.4s
TNS Taunus Mts 79.53 334 *e*P **P 13 33 05.5 +1.0**
comp=Z,17nm,0.9s,baz=31,slow=5.5
TNS *e*L L 14 10 24.6
comp=Z,80nm,21.5s
MOA Molln 79.61 330 *i*P **P 13 33 05.8 +0.9**
comp=Z,2.4nm,0.6s
MOA *i*sP **pP 13 33 29.5 +2.0**
comp=Z,10nm,1.0s
L40A Anamosa 79.64 40 IAmb IAmb 13 33 06.0
comp=Z,27nm,0.9s
ARSA Arzberg 79.65 329 *i*P **P 13 33 06.2 +1.1**
comp=Z,8.0nm,1.2s
ARSA *es*P **pP 13 33 30.1 +2.3**
comp=Z,5.0nm,0.7s
AMTX Amarillo 79.66 51 IAmb IAmb 13 33 07.6
comp=Z,36nm,1.1s
BTNL Ternell 79.91 336 *d*P **P 13 33 07.9 +1.4**
MEM Membach 79.92 336 *d*P **P 13 33 06.0 -0.5**
comp=Z,14nm,1.2s
MEM *d*pP **pP 13 33 30.4 +1.2**
BSTI Sart Tilman 80.07 336 *d*P **P 13 33 08.0 +0.7**
BSTI *d*pP **pP 13 33 31.9 +2.0**
BSTI *d*sP **sP 13 33 40.4 +1.1**
SESA Seetaler Alpe, 80.12 329 *i*P **P 13 33 08.4 +0.5**
comp=Z,12nm,0.7s,SNR=8.3
SESA *es*P **pP 13 33 32.4 +1.8**
comp=Z,13nm,1.0s
VLDQ Val d'Or 80.27 29 IAmb IAmb 13 33 08.5
comp=Z,38nm,1.0s
BCLA Clavier 80.30 336 *d*P **P 13 33 08.9 +0.4**
comp=Z,12nm,1.1s
BCLA *d*pP **pP 13 33 32.7 +1.5**
SOKA Soboth 80.31 329 *e*P **P 13 33 09.3 +0.5**
comp=Z,11nm,0.9s,SNR=8.3
SOKA *es*P **pP 13 33 33.1 +1.7**
comp=Z,7.2nm,0.9s
TPB28 80.35 55 IAmb IAmb 13 33 11.9
comp=Z,30nm,0.8s
RDO Rodhopi 80.35 319 P **P 13 33 09.3 +0.4**
RDO IAmb IAmb 13 33 11.8
comp=Z,21nm,0.9s
BGES Gesves 80.39 336 *d*P **P 13 33 09.6 +0.6**
comp=Z,11nm,1.2s
BGES *d*pP **pP 13 33 33.0 +1.3**
FUR Furstenfeldbru 80.39 332 *e*L L 14 06 46.8
comp=Z,70nm,21.7s
L42A Oliver, Polo 80.40 39 IAmb IAmb 13 33 09.8
comp=Z,24nm,0.9s
P38A Dawn 80.42 43 IAmb IAmb 13 33 10.8
comp=Z,42nm,1.0s
K43A Burlington 80.45 38 IAmb IAmb 13 33 10.3
comp=Z,34nm,1.1s
LESA Schwarzleotal 80.54 331 *i*P **P 13 33 10.6 +0.6**
comp=Z,13nm,0.9s,SNR=8.8
LESA *es*P **pP 13 33 34.4 +1.7**
comp=Z,28nm,1.8s
RCHB Rochefort 80.55 336 *d*P **P 13 33 10.4 +0.5**
RCHB *d*pP **pP 13 33 32.8 +0.2**
RCHB *d*sP **sP 13 33 42.7 +0.8**
BMRD Maredsous 80.56 337 *d*P **P 13 33 10.3 +0.4**
comp=Z,15nm,1.0s
BMRD *d*pP **pP 13 33 33.4 +0.8**
KBA Koelnbreinsper 80.59 330 *e*P **P 13 33 11.2 +0.8**
comp=Z,10nm,0.9s,SNR=6.3
OBKA Obir 80.63 329 *e*P **P 13 33 10.3 -0.2**
comp=Z,1.3nm,0.5s
VHRN Van Horn 80.69 56 IAmb IAmb 13 33 13.3
comp=Z,25nm,0.9s
DOU Dourbes 80.79 337 *d*P **P 13 33 07.4 -3.7**
comp=Z,4.7nm,0.9s
DOU *d*pP **pP 13 33 33.6 -0.2**
128A Castleberry Fa 80.84 53 IAmb IAmb 13 33 13.8
comp=Z,18nm,0.8s
MYKA Terra Mystica 80.87 330 *i*P **P 13 33 11.6 -0.1**
comp=Z,1.9nm,0.4s
CY604 RAF Akrotiri, 80.88 309 P **P 13 33 11.3 -0.2**
PECS Pecos 80.94 55 IAmb IAmb 13 33 14.4
comp=Z,30nm,1.0s
WATA Walderalm 81.00 331 *e*P **P 13 33 12.9 +0.3**
comp=Z,4.3nm,0.4s
WATA *es*P **pP 13 33 37.0 +1.8**
comp=Z,30nm,1.3s
RAR Rarotonga 81.03 131 LR LR 14 06 36.8
comp=Z,112nm,19.1s,baz=262,slow=34
WTTA Wattenberg 81.04 331 *e*P **P 13 33 13.3 +0.5**
comp=Z,7.0nm,0.5s
WTTA *es*P **pP 13 33 37.4 +1.9**
comp=Z,17nm,1.0s
POST Post 81.08 52 IAmb IAmb 13 33 14.9
comp=Z,20nm,0.8s
ASF Jabal al Asfar 81.11 306 LR LR 14 12 46.8
comp=Z,50nm,18.9s,baz=27,slow=38
TPB06 Permian Basin 81.12 54 IAmb IAmb 13 33 15.4
comp=Z,18nm,0.6s

RETA Reutte 81.15 332 *e*P **P 13 33 13.9 +0.7**
comp=Z,12nm,1.1s
RETA *es*P **pP 13 33 37.9 +1.9**
comp=Z,15nm,0.9s
MOTA Moosalm 81.16 331 *e*P **P 13 33 13.1 -0.2**
comp=Z,4.9nm,0.6s
MOTA *es*P **pP 13 33 37.7 +1.6**
comp=Z,31nm,1.1s
ABTA Abfaltersbach 81.17 330 *e*P **P 13 33 12.9 -0.5**
comp=Z,2.4nm,0.5s
BFO Black Forest 81.22 334 P **P 13 33 13.0 -0.6**
BFO pmax pmax
comp=Z,10.0nm,0.7s
BFO Black Forest 81.22 334 P **P 13 33 13.0 -0.6**
BFO Black Forest 81.22 334 *e*P **P 13 33 14.1 +0.6**
comp=Z,11nm,0.9s,baz=31,slow=5.5
BFO *e*L L 14 09 53.8
comp=Z,49nm,21.8s
BFO Black Forest 81.22 334 P **P 13 33 13.8 +0.2**
BFO pP **pP 13 33 37.4 +1.1**
SQTA Sankt Quirin 81.23 331 *e*P **P 13 33 13.7 0.0**
comp=Z,5.3nm,0.6s
SQTA *i*sP **pP 13 33 38.0 +1.6**
comp=Z,18nm,0.9s
NWAO Narrogin (SRO) 81.25 205 P **P 13 33 14.3 +0.7**
comp=Z,12nm,0.8s,baz=196,slow=2.5,SNR=3.7
comp=Z,12nm,0.8s
TPB01 Permian Basin 81.30 55 IAmb IAmb 13 33 15.9
comp=Z,13nm,0.9s
OK029 Liberty Lake 81.31 48 IAmb IAmb 13 33 15.9
comp=Z,33nm,0.7s
MMAI Mount Meron Ar 81.35 308 P **P 13 33 15.6 +1.1**
comp=Z,6.5nm,0.7s,baz=21,slow=12,SNR=7.8
MMAI LR LR 14 13 52.6
comp=Z,64nm,18.5s,baz=32,slow=39
comp=Z,6.5nm,0.7s
OK052 Battle Ridge 81.51 47 IAmb IAmb 13 33 16.9
comp=Z,25nm,0.9s
FETA Feichten 81.56 332 *e*P **P 13 33 15.2 -0.3**
comp=Z,4.6nm,0.8s
FETA *es*P **pP 13 33 39.8 +1.5**
comp=Z,13nm,1.1s
VAY Valandovo 81.58 321 *i*P **P 13 33 16.1 +0.6**
TPB05 Hovey Rd 81.58 55 IAmb IAmb 13 33 18.0
comp=Z,41nm,1.0s
DAVA Damuels 81.62 332 *e*P **P 13 33 16.3 +0.4**
comp=Z,7.0nm,0.9s
DAVA *i*sP **pP 13 33 40.1 +1.6**
comp=Z,19nm,1.1s
APMT Aspermont 81.68 51 IAmb IAmb 13 33 17.8
comp=Z,52nm,1.7s
229A Bryant Ranch, 81.71 53 IAmb IAmb 13 33 18.5
comp=Z,28nm,1.2s
TMB01 Midkiff 81.77 54 IAmb IAmb 13 33 18.9
comp=Z,20nm,1.1s
I49A Point Hope 81.78 34 IAmb IAmb 13 33 17.9
comp=Z,36nm,0.9s
DEOK Depew 81.78 47 IAmb IAmb 13 33 18.3
comp=Z,38nm,1.1s
ALPN Alpine 81.79 56 IAmb IAmb 13 33 18.9
comp=Z,23nm,1.0s
RAYN Ar Rayn 81.91 295 P **P 13 33 16.5 -1.1**
RAYN pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 81.91 295 P **P 13 33 16.4 -1.1**
X34A Smith Ranch, M 82.00 49 IAmb IAmb 13 33 20.0
comp=Z,38nm,1.0s
S39A Bolivar 82.01 44 IAmb IAmb 13 33 18.5
comp=Z,26nm,0.9s
DAVOX Davos/Dischmat 82.06 332 LR LR 14 14 08.1
comp=Z,62nm,18.8s,baz=78,slow=39
R40A Maddies Statio 82.07 43 IAmb IAmb 13 33 19.3
comp=Z,29nm,0.9s
W35A Tecumseh 82.10 48 IAmb IAmb 13 33 20.1
comp=Z,44nm,1.2s
TUL3 Leonard 82.10 47 IAmb IAmb 13 33 19.8
comp=Z,20nm,0.7s
PDG Podgorica 82.14 324 ⇑P **P 13 33 18.8 +0.4**
PDG Podgorica 82.14 324 P **P 13 33 18.3 -0.1**
PDG IAmb IAmb 13 33 22.1
comp=Z,34nm,1.1s
SGCY Sterling City 82.14 53 IAmb IAmb 13 33 20.4
comp=Z,28nm,0.9s
RLO Rose Lookout 82.31 46 IAmb IAmb 13 33 20.7
comp=Z,25nm,0.6s
SADO Sadowa 82.52 31 LR LR 14 11 19.9
comp=Z,30nm,19.3s,baz=284,slow=36
TX31 Lajitas Ar. Si 82.53 56 IAmb IAmb 13 33 22.9
comp=Z,33nm,0.9s
TXAR Lajitas Array 82.53 56 P **P 13 33 21.7 +0.9**
comp=Z,20nm,0.8s,baz=297,slow=4.0,SNR=199
comp=Z,20nm,0.8s
TXAR Lajitas Array 82.53 56 P **P 13 33 20.7 -0.1**
OHR Ohrid 82.54 322 *i*P **P 13 33 21.4 +0.8**
SLBS Sierra La Lagu 82.61 64 P **P 13 33 21.2 -0.1**
CCM Cathedral Cave 82.76 43 P **P 13 33 21.3 -0.5**
CCM pmax pmax
comp=Z,34nm,0.9s
CCM Cathedral Cave 82.76 43 P **P 13 33 21.3 -0.5**
CCM IAmb IAmb 13 33 23.1
comp=Z,34nm,0.9s
CCM Cathedral Cave 82.76 43 P **P 13 33 21.7 0.0**
CCM pP **pP 13 33 45.2 +0.7**
SFIN Lafayette 82.87 39 IAmb IAmb 13 33 23.6
comp=Z,40nm,1.1s
OZNA Ozona 82.87 54 IAmb IAmb 13 33 24.1
comp=Z,23nm,1.1s
TRQ Mont Tremblant 82.89 28 IAmb IAmb 13 33 23.3
comp=Z,30nm,1.0s
SAND Sanderson 83.00 55 IAmb IAmb 13 33 25.0
comp=Z,28nm,1.0s
HPIG 83.03 59 IAmb IAmb 13 33 26.3
comp=Z,21nm,1.0s
FVM French Village 83.22 42 IAmb IAmb 13 33 25.6
comp=Z,27nm,1.6s
PMOR Pomariorio Ree 83.26 118 *e*T T 15 05 04.8
comp=Z,53nm,0.3s
DELO Deloro Mine 83.30 30 IAmb IAmb 13 33 25.2
comp=Z,22nm,1.0s
T42A Van Buren 83.64 43 IAmb IAmb 13 33 27.5
comp=Z,73nm,1.8s
N49A Columbus Grove 83.71 37 IAmb IAmb 13 33 27.9
comp=Z,39nm,1.0s
WBO Williamsburg 83.72 29 IAmb IAmb 13 33 27.1
comp=Z,19nm,0.9s
OLIL Olney 83.73 40 IAmb IAmb 13 33 28.3
comp=Z,50nm,1.2s
BRDY Brady 83.82 52 IAmb IAmb 13 33 30.1
comp=Z,20nm,0.9s
O48B Farmland 83.83 38 IAmb IAmb 13 33 28.2
comp=Z,42nm,1.1s
MNTQ Montreal, Queb 83.84 28 IAmb IAmb 13 33 28.1
comp=Z,28nm,0.9s
TAOE Nuku Hiva Isla 83.89 108 *e*LR LR 13 59 59.1
comp=Z,236nm,27.7s
JCT Junction City 83.96 53 IAmb IAmb 13 33 29.7
comp=Z,34nm,0.9s
FCAR Ozark Folk Cen 84.02 45 IAmb IAmb 13 33 29.2
comp=Z,33nm,1.2s
EIL Elat 84.07 306 LR LR 14 14 03.3
comp=Z,72nm,18.0s,baz=46,slow=38
PPT2 Papeete2 84.15 121 *e*T T 15 06 17.2
comp=Z,6.1nm,0.3s
WHTX Lake Whitney, 84.16 51 IAmb IAmb 13 33 30.9
comp=Z,44nm,1.1s
O49A Covington 84.25 37 IAmb IAmb 13 33 30.6
comp=Z,21nm,1.0s
TIAR Tiarei 84.27 121 *e*T T 15 06 19.0
comp=Z,174nm,0.3s
NRCA Norcia 84.29 328 IAmb IAmb 13 33 54.9
comp=Z,35nm,1.2s
MIAR Mount Ida 84.31 46 IAmb IAmb 13 33 31.4
comp=Z,38nm,1.0s
P48A Milroy 84.36 38 IAmb IAmb 13 33 31.1
comp=Z,38nm,1.3s
LCAR Lake Charles 84.36 44 IAmb IAmb 13 33 32.0
comp=Z,30nm,1.5s
MMNY Mt. Morris Dam 84.72 32 IAmb IAmb 13 33 32.6
comp=Z,32nm,1.0s
X40A Basin Creek Fa 84.74 46 IAmb IAmb 13 33 33.6
comp=Z,26nm,1.1s
ALLY Alegheny Colle 84.78 34 P **P 13 33 32.0 +0.1**
ACSO Alum Creek Sta 84.79 36 IAmb IAmb 13 33 33.5
comp=Z,31nm,0.9s
WCI Wyandotte Cave 84.97 39 P **P 13 33 32.8 -0.2**
WCI pmax pmax
comp=Z,37nm,1.2s
WCI Wyandotte Cave 84.97 39 P **P 13 33 32.8 -0.2**

WCI IAmb IAmb 13 33 34.6
comp=Z,37nm,1.1s
WCI Wyandotte Cave 84.97 39 P **P 13 33 33.8 +0.8**
WCI pP **pP 13 33 56.4 +0.5**
PAOC Oil Creek Stat 85.07 33 IAmb IAmb 13 33 34.8
comp=Z,24nm,0.9s
G62A West of Eustis 85.09 26 IAmb IAmb 13 33 35.2
comp=Z,23nm,1.0s
J59A Piesco 85.33 29 IAmb IAmb 13 33 35.5
comp=Z,18nm,0.9s
L56A Greenwood 85.37 32 IAmb IAmb 13 33 36.0
comp=Z,22nm,0.9s
P51A Williamsport 85.38 37 IAmb IAmb 13 33 36.1
comp=Z,31nm,0.8s
PAMR Moraine State 85.39 34 IAmb IAmb 13 33 36.6
comp=Z,34nm,0.9s
R49A Shelbyville 85.43 39 IAmb IAmb 13 33 37.1
comp=Z,58nm,1.9s
WVT Waverly 85.94 42 P **P 13 33 37.5 -0.4**
WVT pmax pmax
comp=Z,13nm,0.8s
WVT Waverly 85.94 42 P **P 13 33 37.5 -0.4**
WVT Waverly 85.94 42 P **P 13 33 38.6 +0.7**
WVT pP **pP 13 34 01.6 +0.8**
P53A Whipple 86.09 36 IAmb IAmb 13 33 40.0
comp=Z,23nm,1.0s
Q52A Bidwell 86.15 36 IAmb IAmb 13 33 40.0
comp=Z,24nm,1.1s
M57A Sunshine Farm, 86.22 32 IAmb IAmb 13 33 40.6
comp=Z,28nm,0.8s
URZ Urewera 86.22 157 LR LR 14 10 22.0
comp=Z,49nm,19.1s,baz=312,slow=34
L59A Walton 86.25 30 IAmb IAmb 13 33 40.6
comp=Z,25nm,0.9s
U49A Red Boiling Sp 86.60 40 IAmb IAmb 13 33 42.7
comp=Z,26nm,0.9s
S51A Beattyville 86.67 38 IAmb IAmb 13 33 42.8
comp=Z,18nm,1.1s
V48A Smith Brothers 86.74 41 IAmb IAmb 13 33 43.2
comp=Z,42nm,1.4s
N58A Sunbury 86.80 32 IAmb IAmb 13 33 43.5
comp=Z,31nm,0.9s
Q56A Snyder Ridge, 87.37 34 IAmb IAmb 13 33 46.4
comp=Z,27nm,1.0s
P57A Homestead Farm 87.47 33 IAmb IAmb 13 33 46.8
comp=Z,19nm,1.0s
TZTN Tazewell 87.60 39 IAmb IAmb 13 33 47.6
comp=Z,21nm,0.9s
MVL Millersville 87.67 32 IAmb IAmb 13 33 47.6
comp=Z,21nm,0.9s
X48A Hartselle 87.68 42 IAmb IAmb 13 33 47.2
comp=Z,15nm,0.9s
W50A Signal Mountai 87.89 41 IAmb IAmb 13 33 48.7
comp=Z,19nm,0.9s
CPCT Cooper Cave 88.06 40 IAmb IAmb 13 33 49.5
comp=Z,24nm,1.0s
TKL Tuckaleechee C 88.23 39 IAmb IAmb 13 33 50.4
comp=Z,24nm,0.8s
VAE Valguarnera 88.32 324 LR LR 14 18 08.1
comp=Z,69nm,19.0s,baz=110,slow=39
U54A Nelsons Funny 88.39 37 IAmb IAmb 13 33 51.2
comp=Z,19nm,0.8s
BLA Blacksburg 88.41 36 P **P 13 33 49.4 -0.4**
BLA pmax pmax
comp=Z,29nm,1.1s
BLA Blacksburg 88.41 36 P **P 13 33 49.4 -0.4**
BLA IAmb IAmb 13 33 51.4
comp=Z,29nm,1.1s
Y49A Blount Mountai 88.46 42 IAmb IAmb 13 33 51.2
comp=Z,18nm,0.8s
CEST Esterri de Car 88.56 336 P **P 13 33 50.3 -0.2**
CEST IAmb IAmb 13 34 17.1
comp=Z,25nm,1.3s
S57A Dark Hollow, R 88.56 35 IAmb IAmb 13 33 52.2
comp=Z,16nm,1.1s
TBI Tubuai 88.59 125 *e*LR LR 14 02 14.8
comp=Z,780nm,33.2s
TBI *e*T T 15 11 53.4
comp=Z,6.7nm,0.3s
V53A Saluda 88.66 39 IAmb IAmb 13 33 52.6
comp=Z,16nm,1.1s
R58B Mineral 88.83 34 IAmb IAmb 13 33 52.7
comp=Z,14nm,1.1s
BG3 Lake Jocassee 89.17 39 IAmb IAmb 13 33 55.2
comp=Z,21nm,0.9s
Y52A Lilburn 89.58 40 IAmb IAmb 13 34 03.9
comp=Z,17nm,0.9s
OXZ Oxford 89.72 162 P **P 13 33 56.2 +0.9**
KMSC Kings Mountain 89.76 38 IAmb IAmb 13 33 57.5
comp=Z,28nm,1.3s
T59A Double "B" Far 89.81 34 IAmb IAmb 13 33 58.0
comp=Z,20nm,1.3s
HODGE Hodges 90.10 39 P **P 13 33 57.7 0.0**
HODGE IAmb IAmb 13 33 59.5
comp=Z,18nm,1.0s
152A Waverly Hall 90.25 42 IAmb IAmb 13 34 30.0
comp=Z,20nm,0.9s
LBZ Lake Benmore 90.33 164 P **P 13 33 59.9 +1.7**
BIRD Birdtown, Kers 90.56 38 IAmb IAmb 13 34 01.3
comp=Z,16nm,1.0s
KEST Kesra 91.89 327 LR LR 14 20 41.5
comp=Z,78nm,19.1s,baz=26,slow=39
ESDC Sonseca Array 92.75 338 P **P 13 34 09.8 -0.2**
comp=Z,2.4nm,0.9s,baz=16,slow=3.5,SNR=9.7
ESDC LR LR 14 21 51.6
comp=Z,24nm,18.1s,baz=3.5,slow=39
comp=Z,2.4nm,0.9s
ESDC Sonseca Array 92.75 338 P **P 13 34 08.4 -1.6**
CMIG Matias Romero 96.99 58 LR LR 14 15 19.9
comp=Z,9.5nm,21.0s,baz=348,slow=34
MDT Midelt 99.35 336 LR LR 14 23 20.5
comp=Z,22nm,21.4s,baz=46,slow=38
TORD Torodi Ar. Bea 115.02 322 PKP **PKiKP 13 39 38.0 -0.7**
comp=Z,0.9nm,0.5s,baz=27,slow=1.6,SNR=5.2
VNDA Vanda 121.56 176 PKP **PKiKP 13 39 50.0 +0.5**
comp=Z,2.1nm,0.8s,baz=316,slow=4.8,SNR=9.1
VNDA Vanda 121.56 176 PKIKP **PKiKP 13 39 50.0 +0.5**
SBA Scott Base 122.15 175 PKIKP **PKiKP 13 39 51.6 +1.0**
SBA Scott Base 122.15 175 **PKiKP 13 39 51.5 +1.0**
QSPA South Pole Qui 133.70 180 PKP **PKiKP 13 40 14.2 +0.1**
comp=Z,5.7nm,0.9s,baz=335,slow=1.2,SNR=14
QSPA South Pole Qui 133.70 180 **PKiKP 13 40 13.5 -0.6**
LPAZ La Paz 139.37 58 PKP **PKPdf 13 40 25.7 +0.2**
comp=Z,1.2nm,0.7s,baz=11,slow=4.1,SNR=4.4
LPAZ La Paz 139.37 58 PKIKP **PKPdf 13 40 25.5 0.0**
LPAZ La Paz 139.37 58 **PKPdf 13 40 25.5 0.0**
PB12 IPOC Station P 139.72 63 **PKPdf 13 40 23.7 -1.7**
ELIB Princess Elisa 141.50 205 *d*PKPdf PKPpre 13 40 22.6
H03N2 Juan Fernandez 142.96 90 T T 16 19 41.3
baz=304,slow=77,SNR=154
H03N3 Juan Fernandez 142.97 90 T T 16 19 42.2
baz=304,slow=77,SNR=154
H03N1 Juan Fernandez 142.98 89 T T 16 19 42.6
baz=304,slow=77,SNR=143
PTLB Pontes e Lacer 143.84 46 PKPbc 13 40 30.6 0.0
NVL N'lazarevskaya 145.38 204 ⇓*i*PKP2 **PKPdf 13 40 32.1 -1.7**
NVL pmax pmax
comp=Z,33nm,0.9s
BELA Belgrano 2 145.97 179 **PKPdf 13 40 33.4 -1.3**
LCO Las Campanas 146.43 76 PKP2 **PKPbc 13 40 38.4 -0.3**
LCO Las Campanas 146.43 76 **PKPbc 13 40 38.4 -0.3**
TROLL Troll, Antarti 147.20 199 ⇓PKPdf **PKPab 13 40 40.5 -0.9**
comp=Z,2μm,0.7s
CO04 Los Peladeros 147.96 81 **PKPbc 13 40 42.4 -0.4**
SNAA Sanae 148.66 198 ⇓PKPdf **PKPbc 13 40 43.5 +0.3**
comp=Z,369nm,0.9s
SNAA Sanae 148.66 198 PKPbc **PKPbc 13 40 43.3 +0.1**
comp=Z,20nm,0.9s,baz=162,slow=1.4,SNR=31
SNAA Sanae 148.66 198 **PKPdf 13 40 38.7 -0.6**
BDFB Brasilia 148.96 29 PKPbc **PKPbc 13 40 45.6 0.0**
comp=Z,17nm,0.8s,baz=241,slow=0.9,SNR=19
BDFB Brasilia 148.96 29 **PKPbc 13 40 45.2 -0.4**
BO02 Sierra Bellavi 149.51 86 **PKPdf 13 40 39.5 -2.4**
AQDB Aquidauana 149.82 46 **PKPdf 13 40 40.0 -2.7**
SMAI San Martin Ant 149.89 155 **PKPdf 13 40 40.1 -1.1**
VNA2 Neumayer--Watz 150.20 197 ⇓PKPdf **PKiKP 13 40 47.7 0.0**
comp=Z,41nm,0.8s,baz=134,slow=1.6
VNA1 Neumayer--Stat 150.59 196 ⇓PKPdf **PKiKP 13 40 48.8 +0.3**
comp=Z,38nm,1.0s
PLCA Paso Flores 152.11 97 PKPbc **PKiKP 13 40 52.9 +0.2**
comp=Z,12nm,0.9s,baz=279,slow=3.3,SNR=14
COYC Coyhaique 152.29 107 **PKPdf 13 40 43.8 -1.9**
CPUP Villa Florida 153.50 56 **PKPbc 13 40 55.8 0.0**
comp=Z,2.0nm,0.7s,baz=146,slow=3.6,SNR=4.1

ROM 14 13:30:29.9±0.1, 42.710N±0.004×13.264E±0.006, h11km, ML0.8/12, Error ellipse: s-maj=0.5km s-min=0.3km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.10**	**146**	P	Pg	13 30 33.3	+0.7
SMA1				S	Sg	13 30 35.0	+0.4
SMA1				AML	AML		
	comp=E,84μm,0.3s						
SMA1				AML	AML		
	comp=N,85μm,0.3s						
SMA1				AML	AML		
	comp=E,73μm,0.1s						
SMA1				AML	AML		
	comp=N,84μm,0.1s						
MTRA	**Matera**	**0.11**	**64**	P	Pg	13 30 33.3	+0.5
MTRA				S	Sg	13 30 35.3	+0.4
MTRA				AML	AML		
	comp=E,186μm,0.3s						
MTRA				AML	AML		
	comp=N,146μm,1.0s						
MTRA				AML	AML		
	comp=E,163μm,0.2s						
MTRA				AML	AML		
	comp=N,129μm,0.3s						
MTRA				AML	AML		
	comp=E,163μm,0.1s						
MTRA				AML	AML		
	comp=N,126μm,0.3s						
NRCA	**Norcia**	**0.17**	**318**	P	Pg	13 30 34.2	+0.6
NRCA				S	Sg	13 30 37.1	+0.9
NRCA				AML	AML		
	comp=E,53μm,0.4s						
NRCA				AML	AML		
	comp=N,51μm,0.7s						
NRCA				AML	AML		
	comp=E,50μm,0.1s						
NRCA				AML	AML		
	comp=N,47μm,0.1s						
MMO1	**Montemonaco**	**0.20**	**14**	P	Pg	13 30 34.7	+0.6
MMO1				S	Sg	13 30 38.1	+1.1
RM33	**Pellescritta (**	**0.20**	**190**	P	Pg	13 30 34.8	+0.6
RM33				S	Sg	13 30 38.2	+1.0
RM33				AML	AML		
	comp=E,26μm,0.1s						
RM33				AML	AML		
	comp=N,22μm,0.4s						
TERO	**Teramo**	**0.27**	**109**	P	Pg	13 30 35.7	+0.4
TERO				AML	AML		
	comp=E,21μm,0.1s						
TERO				AML	AML		
	comp=N,23μm,0.1s						
CSP1	**Cessapalombo**	**0.38**	**354**	P	Pg	13 30 37.8	+0.3

*IDC **14** 13:33:29.7±0.9, 3.08N×129.15E, h0km, mb3.8/8, mbtmp3.8/9, ML3.1/1, Error ellipse: s-maj=52.1km s-min=15.9km az=74.0*
*NEIC **14** 13:33:31.6±0.9, 3.13N±0.09×129.32E±0.09, h10km±1km, mb4.1/11, Error ellipse: s-maj=15.8km s-min=14.6km az=195.0*

ISC 14 13:33:31.1±0.6, 3.07N±0.07×129.3E±0.1, h10km, n28, σ0s88/29, mb4.0/13, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.01**	**221**		**Pn**	**13 34 19.2**	**+0.4**
SIJI	**Sorong**	**4.37**	**154**	Pn	**Pn**	**13 34 38.1**	**+0.5**
	0.9nm,0.3s,baz=339,slow=18,SNR=12						
SIJI				Sn	**Sn**	**13 35 26.4**	**-2.3**
	1.6nm,0.3s,baz=21,slow=23,SNR=9.7 3.4nm,0.4s						
FAKI	**Fak Fak**	**6.63**	**154**	Pn	**Pn**	**13 35 10.3**	**+1.6**
CGP	**Cagayan de Oro**	**7.05**	**319**	*e*P	**Pn**	**13 35 15.8**	**+1.3**
LUWI	**Luwuk**	**7.72**	**238**	Pn	**Pn**	**13 35 25.2**	**+1.6**
TOLI2	**Tolitoli**	**8.75**	**257**		**Pn**	**13 35 37.8**	**0.0**
KNRA	**Kununurra**	**18.64**	**182**	P	**P**	**13 37 49.7**	**+0.6**
KNRA				IAmb	IAmb	13 38 06.5	
	comp=Z,15nm,1.2s						
FITZ	**Fitzroy Crossi**	**21.35**	**190**	P	**P**	**13 38 18.7**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=17,slow=11,SNR=3.1 comp=Z,2.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.35**	**190**	P	**P**	**13 38 19.0**	**+0.4**
FITZ				IAmb	IAmb	13 38 23.1	
	comp=Z,5.2nm,1.5s						
WB0	**Warramunga Arr**	**23.24**	**168**	P	**P**	**13 38 39.2**	**+0.5**
WB0				IAmb	IAmb	13 39 01.3	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**23.40**	**168**	P	**P**	**13 38 40.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=348,slow=10,SNR=8.8 comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**23.40**	**168**	P	**P**	**13 38 39.4**	**-0.9**
WR8	**Warramunga Arr**	**23.44**	**168**	P	**P**	**13 38 41.2**	**+0.5**
WR8				IAmb	IAmb	13 39 19.4	
	comp=Z,5.7nm,1.1s						
ASAR	**Alice Springs**	**26.95**	**171**	P	**P**	**13 39 13.3**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=349,slow=8.5,SNR=5.4 comp=Z,0.3nm,0.6s						
LSA	**Lhasa**	**44.82**	**310**	P	**P**	**13 41 45.4**	**-0.7**
ULN	**Ulaanbaatar**	**48.58**	**340**	P	**P**	**13 42 14.0**	**-0.9**
ULN				IAmb	IAmb	13 42 15.9	
	comp=Z,2.9nm,1.0s						
SONM	**Songino Array**	**48.78**	**340**	P	**P**	**13 42 16.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=144,slow=9.2,SNR=4.5 comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**48.78**	**340**	P	**P**	**13 42 16.4**	**0.0**
PETK	**Petropavlovsk-**	**55.10**	**20**	P	**P**	**13 43 04.0**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=223,slow=5.9,SNR=2.8 comp=Z,0.9nm,0.6s						
PETK	**Petropavlovsk-**	**55.10**	**20**	P	**P**	**13 43 03.5**	**+0.2**
MKAR	**Makanchi Array**	**59.58**	**324**	P	**P**	**13 43 34.8**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=118,slow=8.2,SNR=24 comp=Z,2.2nm,0.5s						
MKAR	**Makanchi Array**	**59.58**	**324**	P	**P**	**13 43 34.4**	**-0.7**
MAKZ	**Makanchi**	**59.77**	**324**	P	**P**	**13 43 35.9**	**-0.5**
KURK	**Kurchatov**	**63.69**	**327**	P	**P**	**13 44 02.1**	**-0.6**
KURK				IAmb	IAmb	13 44 03.4	
	comp=Z,1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.70**	**327**	P	**P**	**13 44 02.1**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=122,slow=6.0,SNR=16 comp=Z,0.9nm,0.5s						
BVAR	**Borovoye Array**	**69.29**	**326**	P	**P**	**13 44 38.1**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=117,slow=8.8,SNR=4.8 comp=Z,0.6nm,0.4s						
ABKAR	**Akbulak array**	**74.30**	**320**	P	**P**	**13 45 07.5**	**-1.2**
H19K	**Roundabout Mou**	**80.71**	**24**	P	**P**	**13 45 45.1**	**+0.9**
H19K				IAmb	IAmb	13 45 48.8	
	comp=Z,2.0nm,1.1s						

*IDC **14** 13:37:17.3±6.9, 40.21N×141.85E, h88km±43km, mb3.4/6, mbtmp3.7/8, MS3.6/2, Error ellipse: s-maj=88.9km s-min=20.3km az=71.0*
*JMA **14** 13:37:21.3±0.1, 40.0N±0.2×141.2E±0.4, h96km, MV3.2/39, NORTHERN IWATE PREF*

ISC 14 13:37:21.0±0.9, 40.04N±0.04×141.21E±0.08, h98km±6km, n28, σ0s65/29, mb3.9/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKZ	**Kuzumaki**	**0.11**	**121**	*i* P	**Pn**	**13 37 35.1**	**+0.3**
JKZ				S	**Sn**	**13 37 45.2**	**+0.1**
JSZI	**Iwateshizukuis**	**0.36**	**214**	P	**Pn**	**13 37 35.5**	**-0.2**
JSZI				S	**Sn**	**13 37 46.0**	**-0.6**
JANG	**Nango**	**0.41**	**35**	*i* P	**Pn**	**13 37 36.2**	**+0.2**
JANG				S	**Sn**	**13 37 47.2**	**+0.1**
JAH	**Hinai**	**0.47**	**289**	*i* P	**Pn**	**13 37 36.2**	**-0.1**
JAH				S	**Sn**	**13 37 47.3**	**-0.5**
JOM	**Ohasama**	**0.57**	**174**	*i* P	**Pn**	**13 37 37.1**	**0.0**
JOM				S	**Sn**	**13 37 49.4**	**+0.2**
JTM	**Tenmabayashi**	**0.75**	**352**	P	**Pn**	**13 37 38.9**	**+0.1**
JRG	**Rokugo**	**0.78**	**215**	*i* P	**Pn**	**13 37 39.2**	**+0.2**
JRG				S	**Sn**	**13 37 52.9**	**+0.4**
JIW	**Iwasaki**	**1.07**	**301**	P	**Pn**	**13 37 42.1**	**0.0**
JIW				*e*S	**Sn**	**13 37 58.0**	**0.0**
JMK	**Ichinoseki**	**1.09**	**180**	*i* P	**Pn**	**13 37 42.4**	**+0.1**
JMK				*e*S	**Sn**	**13 37 58.1**	**-0.1**
JYK	**Kaneyama**	**1.30**	**211**	*i* P	**Pn**	**13 37 44.8**	**0.0**
JOT	**Ohata**	**1.35**	**355**	*e*P	**Pn**	**13 37 45.6**	**+0.4**
JOMM	**Oshimamatsumae**	**1.74**	**329**	P	**Pn**	**13 37 50.4**	**+0.3**
JOMM				S	**Sn**	**13 38 12.4**	**0.0**
MJAR	**Matsushiro Arr**	**4.22**	**215**	P	**Pn**	**13 38 24.9**	**+1.8**
	3.6nm,0.6s,baz=69,slow=14,SNR=14						
USRK	**Ussuriysk Ar.**	**8.02**	**304**	P	**Pn**	**13 39 15.5**	**+0.9**
	5.5nm,0.6s,baz=116,slow=15,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**29.91**	**125**	T	T	14 14 12.8	
	baz=318,slow=75,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**29.92**	**125**	T	T	14 14 11.2	
	baz=318,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**29.93**	**125**	T	T	14 14 12.5	
	baz=318,slow=75,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**30.71**	**127**	T	T	14 15 22.6	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**30.71**	**127**	T	T	14 15 11.2	
	baz=320,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**30.72**	**127**	T	T	14 15 14.9	
	baz=320						
ZALV	**Zalesovo Beam**	**39.82**	**310**	P	**P**	**13 44 43.8**	**-0.6**
	1.2nm,0.5s,baz=79,slow=9.8,SNR=5.3 1.2nm,0.5s						
SIJI	**Sorong**	**41.72**	**195**	LR	LR	14 01 18.1	
	comp=Z,67nm,18.4s,baz=73,slow=34						
CMAR	**Chiang Mai Arr**	**42.19**	**252**	P	**P**	**13 45 05.9**	**+1.7**
	0.3nm,0.4s,baz=69,slow=8.9,SNR=1.6 0.3nm,0.4s						
JAY	**Jayapura**	**42.35**	**181**	LR	LR	14 00 31.4	
	comp=Z,70nm,19.0s,baz=174,slow=33						
MKAR	**Makanchi Array**	**42.45**	**299**	P	**P**	**13 45 05.3**	**-0.7**
	0.2nm,0.4s,baz=78,slow=8.1,SNR=2.5 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**44.08**	**306**	P	**P**	**13 45 18.3**	**-0.7**
	1.6nm,0.7s,baz=80,slow=8.2,SNR=13 1.6nm,0.7s						
BVAR	**Borovoye Array**	**48.47**	**310**	P	**P**	**13 45 53.0**	**-0.4**
	1.0nm,0.5s,baz=74,slow=8.3,SNR=4.8 1.0nm,0.5s						
WRA	**Warramunga Arr**	**60.01**	**187**	P	**P**	**13 47 16.3**	**-1.1**
	0.4nm,0.4s,baz=2.2,slow=7.2,SNR=12 0.4nm,0.4s						

*SJA **14** 14:09:37.8±1.0, 21.98S×67.31W, h210km, ML3.2, MW3.5*
*SCB **14** 14:09:39.7±1.2, 22.03S×67.28W, h167km±16km, MB5.8, ML3.5/2, Error ellipse: s-maj=5.5km s-min=4.5km az=0.0*

ISC 14 14:09:37.8±1.9, 21.98S±0.05×67.26W±0.05, h202km±16km, n28, σ1s65/44, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.63**	**97**	P	**Pn**	**14 10 13.4**	**0.0**
MOCB	**Mochara**	**1.68**	**65**	P	**Pn**	**14 10 13.4**	**-0.4**
PB09	**IPOC Station P**	**1.85**	**275**	*e*P	**Pn**	**14 10 16.1**	**+1.0**
PB09				*e*S	**Sn**	**14 10 44.9**	**+0.9**
HJA	**Humahuaca**	**2.10**	**126**	*e*P	**Pn**	**14 10 18.2**	**+0.3**
PB06	**IPOC Station P**	**2.26**	**251**	*e*P	**Pn**	**14 10 20.0**	**+0.7**
PB06				*e*S	**Sn**	**14 10 52.6**	**+1.0**
PB06	**IPOC Station P**	**2.26**	**251**	P	**Pn**	**14 10 20.0**	**+0.7**
PB03	**IPOC Station P**	**2.31**	**268**	*e*P	**Pn**	**14 10 20.5**	**+0.6**
PB03				*e*S	**Sn**	**14 10 51.5**	**-1.1**
PB03				IAML		14 10 53.7	
	comp=Z,64nm,0.1s						
SALTA		**2.39**	**159**	*e*P	**Pn**	**14 10 22.8**	**+1.7**
SALTA				*e*P	**Pn**	**14 10 22.8**	**+1.7**
SALTA				*e*P		14 10 23.0	
PB07	**IPOC Station P**	**2.45**	**275**	*e*P	**Pn**	**14 10 22.1**	**+0.6**
PB07				*e*S	**Sn**	**14 10 55.0**	**-0.4**
PB07				IAML		14 10 56.0	
	comp=Z,88nm,0.1s						
PB02	**IPOC Station P**	**2.54**	**285**	*e*P	**Pn**	**14 10 22.7**	**+0.4**
PB02				*e*S	**Sn**	**14 10 55.9**	**-1.1**
PB02				IAML		14 10 57.4	
	comp=Z,148nm,0.2s						
PB02	**IPOC Station P**	**2.54**	**285**	P	**Pn**	**14 10 22.6**	**+0.3**
PB02				S	**Sn**	**14 10 55.3**	**-1.7**
PB02				IAML		14 10 57.8	
	comp=Z,136nm,0.2s						
PB08	**IPOC Station P**	**2.54**	**316**	*e*P	**Pn**	**14 10 23.6**	**+0.9**
PB08				*e*S	**Sn**	**14 10 58.7**	**+1.0**
PB08	**IPOC Station P**	**2.54**	**316**	P	**Pn**	**14 10 24.4**	**+1.7**
PB05	**IPOC Station P**	**2.85**	**252**	*e*P	**Pn**	**14 10 26.1**	**+0.2**
PB05				*e*S	**Sn**	**14 11 02.4**	**-1.1**
GO01	**Chusmiza**	**2.92**	**322**	*e*P	**Pn**	**14 10 28.1**	**+0.9**
GO01				*e*S	**Sn**	**14 11 07.8**	**+2.1**
GO01				IAML		14 11 10.3	
	comp=Z,34nm,0.1s						
GO01	**Chusmiza**	**2.92**	**322**	P	**Pn**	**14 10 28.5**	**+1.3**
PB11	**IPOC Station P**	**3.14**	**314**	*e*P	**Pn**	**14 10 29.7**	**+0.2**
PB11				*e*S	**Sn**	**14 11 08.9**	**-0.9**
PB11				IAML		14 11 10.2	
	comp=Z,48nm,0.2s						
PB11	**IPOC Station P**	**3.14**	**314**	P	**Pn**	**14 10 29.8**	**+0.4**
PB11				S	**Sn**	**14 11 08.4**	**-1.4**
PB11				IAML		14 11 11.5	
	comp=Z,122nm,0.2s						
TA02	**Huaiquique**	**3.17**	**302**	*e*P	**Pn**	**14 10 33.1**	**+3.6**
TA02				IAML		14 11 52.6	
	comp=Z,91nm,0.1s						
PSGCX	**Pisagua**	**3.58**	**311**	*e*P	**Pn**	**14 10 34.3**	**-0.3**
PSGCX				*e*S	**Sn**	**14 11 17.5**	**-1.5**
PSGCX				IAML		14 11 23.4	
	comp=Z,20nm,0.6s						
PB14	**IPOC Station P**	**3.91**	**227**	*e*P	**Pn**	**14 10 39.8**	**+1.0**
PB14				*e*S	**Sn**	**14 11 24.3**	**-2.4**
PB14	**IPOC Station P**	**3.91**	**227**	P	**Pn**	**14 10 39.0**	**+0.2**
PB16	**IPOC Station P**	**4.20**	**329**	*e*P	**Pn**	**14 10 43.7**	**+1.0**
PB16				*e*S	**Sn**	**14 11 28.1**	**-5.5**
PB16				*e*S	S	14 11 34.6	+1.6
PB16				IAML		14 11 36.3	
	comp=Z,10nm,0.5s						
PB16	**IPOC Station P**	**4.20**	**329**	P	**Pn**	**14 10 44.5**	**+1.8**
PB12	**IPOC Station P**	**4.42**	**319**	*e*P	**Pn**	**14 10 44.8**	**-0.1**
PB12				*e*S	**Sn**	**14 11 34.8**	**-3.0**
PB12				IAML		14 11 37.0	
	comp=Z,17nm,0.3s						
BBOJ	**La Paz, Jacaqu**	**5.06**	**350**	P	**Pn**	**14 10 55.6**	**+2.1**
SOEJ	**Jacaque**	**5.06**	**350**	P	**Pn**	**14 10 55.6**	**+2.1**
BBOB	**La Paz, Bander**	**5.87**	**352**	P	**Pn**	**14 11 05.8**	**+1.9**

*SNET **14** 14:10:39.8±3.3, 14.14N×91.79W, h23km, ML4.3, Presumed earthquake*
*GCG **14** 14:10:40.6±1.5, 14.17N×91.78W, h42km±24km, MD4.6, ML4.6, MW3.3, Presumed earthquake*
*CATAC **14** 14:10:40.6±0.5, 14°N±3°×9°2W±°, h32km±4km, M4.3/17, MLv4.3/17, Error ellipse: s-maj=8.0km s-min=3.5km az=38.2, confirmed*

ISC 14 14:10:38.1±2.0, 14.10N±0.06×91.67W±0.06, h2km±12km, n48, σ1s95/72, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.42**	**356**	P	**Pn**	**14 10 50.9**	**-0.3**
RTAL				S	**Sb**	**14 10 59.7**	**+4.5**
RTAL	**Retalhuleu**	**0.42**	**356**	*i*P	**Pn**	**14 10 50.9**	**-0.3**
RTAL				*e*S	**Sb**	**14 10 58.7**	**+3.5**
STG5	**El Palmar, Qui**	**0.43**	**45**	*i* P	**Pn**	**14 10 52.3**	**+0.9**
STG8	**El Palmar, Qui**	**0.47**	**41**	*i* P	**Pn**	**14 10 53.2**	**+1.3**
STG8				*i* S		14 11 03.0	
STG8				IAML		14 11 04.2	
	comp=N,64μm,0.2s						
QUEO	**Labor Ovalle**	**0.78**	**11**	*i* P	**Pn**	**14 10 55.7**	**-0.7**
QUEO				*i* S	**Sn**	**14 11 07.2**	**-1.7**
QUEO				IAML		14 11 09.8	
	comp=E,16μm,0.1s						
THIG		**0.99**	**324**	*i* P	**Pb**	**14 10 55.1**	**-2.9**
FG8	**Yepocapa, Chim**	**1.08**	**81**	*i* P	**Pb**	**14 10 56.7**	**-2.9**
FG8				*i* S	**Sb**	**14 11 08.5**	**-5.8**
FG16	**Alotenango, Sa**	**1.14**	**81**	*i* P	**Pn**	**14 10 57.8**	**-3.3**
FG16				*i* S	**Sb**	**14 11 11.0**	**-4.8**
GCG4	**OSOP**	**1.20**	**66**	*i* P	**Pg**	**14 11 03.0**	**+1.8**
HUEH	**Huehuetenango**	**1.22**	**7**	P	**Pg**	**14 11 02.1**	**+0.5**
HUEH				S	**Sn**	**14 11 18.5**	**-1.1**
HUEH	**Huehuetenango**	**1.22**	**7**	*i* P	**Pg**	**14 11 02.0**	**+0.5**
HUEH				IAML		14 11 28.5	
	comp=N,3μm,0.7s						
HUEH	**Huehuetenango**	**1.22**	**7**	*e*P	**Pg**	**14 11 02.1**	**+0.5**
HUEH				*e*S	**Sg**	**14 11 17.2**	**-0.3**
PCG5	**San Vicente Pa**	**1.26**	**84**	*i* P	**Pn**	**14 11 00.4**	**-2.4**
PCG5				*i* S	**Sb**	**14 11 15.6**	**-3.7**
PCG5				IAML		14 11 17.6	
	comp=N,22μm,0.2s						
APG	**El Apazote**	**1.47**	**52**	*i* P	**Pg**	**14 11 06.8**	**+0.5**
APG				*i* S	**Sg**	**14 11 27.3**	**+1.8**
FAME	**Alcaldia de Sa**	**1.62**	**99**	P	**Pb**	**14 11 08.6**	**-0.1**
LOAL	**Lomas de Alarc**	**1.83**	**93**	P	**Pb**	**14 11 12.6**	**+0.2**
LOAL	**Lomas de Alarc**	**1.83**	**93**	*e*P	**Pb**	**14 11 12.6**	**+0.2**
LOAL				*e*S	**Sb**	**14 11 35.8**	**0.0**
RBDL	**Robledal**	**1.92**	**89**	*e*P	**Pb**	**14 11 13.3**	**-0.6**
RTR	**El Retiro**	**1.97**	**96**	*e*P	**Pb**	**14 11 15.0**	**+0.2**
CEVE	**Cerro Verde**	**2.00**	**97**	P	**Pb**	**14 11 14.9**	**-0.5**
CEVE				S	**Sb**	**14 11 41.1**	**+0.3**
CEVE	**Cerro Verde**	**2.00**	**97**	*e*P	**Pb**	**14 11 15.1**	**-0.3**
CEVE				*e*S	**Sb**	**14 11 40.4**	**-0.4**
SBLS	**San Blas**	**2.00**	**97**	*e*P	**Pb**	**14 11 14.5**	**-0.8**
SBLS				*e*S	**Sb**	**14 11 40.4**	**-0.4**
SNJE	**San Jose**	**2.01**	**96**	*e*P	**Pb**	**14 11 14.9**	**-0.6**
SNJE				*e*S	**Sb**	**14 11 40.8**	**-0.4**
UNIC	**Universidad Ca**	**2.06**	**93**	P	**Pb**	**14 11 15.4**	**-0.8**
UNIC				S	**Sb**	**14 11 42.4**	**+0.1**
JAYA	**Jayaque - finc**	**2.20**	**101**	P	**Pn**	**14 11 16.6**	**+0.8**
JAYA	**Jayaque - finc**	**2.20**	**101**	*i* P	**Pb**	**14 11 16.9**	**-1.8**
JAYA				*i* S	**Sn**	**14 11 43.9**	**+0.2**
JAYA				IAML		14 11 46.9	
	comp=N,8μm,0.2s						
JAYA	**Jayaque - finc**	**2.20**	**101**	*e*P	**Pb**	**14 11 16.8**	**-1.9**
JAYA				*e*S	**Sn**	**14 11 44.6**	**+1.0**
CEDA	**San Andres**	**2.23**	**97**	P	**Pn**	**14 11 17.0**	**+1.0**
CEDA				S	**Sb**	**14 11 46.6**	**-0.5**
MTO3	**Montecristo**	**2.26**	**82**	P	**Pb**	**14 11 19.3**	**-0.4**
MTO3	**Montecristo**	**2.26**	**82**	*i* P	**Pn**	**14 11 17.3**	**+0.7**
MTO3	**Montecristo**	**2.26**	**82**	*e*P	**Pn**	**14 11 17.4**	**+0.8**
ESQI	**Esquipulas**	**2.30**	**78**	P	**Pb**	**14 11 19.0**	**-1.4**
BOQS	**Boqueron**	**2.35**	**99**	*e*P	**Pb**	**14 11 19.7**	**-1.6**
BOQS				*e*S	**Sn**	**14 11 49.0**	**+1.7**
LALI	**Alcalda de L**	**2.36**	**105**	S	**Sn**	**14 11 48.1**	**+0.7**
UEES	**Universidad Ev**	**2.39**	**99**	S	**Sn**	**14 11 49.8**	**+1.6**
PANCS	**Alcalda de**	**2.46**	**101**	P	**Pb**	**14 11 20.7**	**-2.4**
PANCS				S	**Sn**	**14 11 50.6**	**+0.6**
PANCS	**Alcalda de**	**2.46**	**101**	*e*P	**Pb**	**14 11 21.1**	**-2.0**
LOMA	**Loma Larga**	**2.46**	**100**	P	**Pn**	**14 11 20.7**	**+1.3**
LOMA	**Loma Larga**	**2.46**	**100**	*e*P	**Pn**	**14 11 20.3**	**+0.9**
LOMA				*e*S	**Sn**	**14 11 51.6**	**+1.4**
PAVA	**Las Pavas**	**2.68**	**98**	P	**Pb**	**14 11 24.7**	**-2.1**
PAVA				S	**Sn**	**14 11 57.2**	**+1.8**
COEG	**Centro de Oper**	**2.75**	**100**	P	**Pn**	**14 11 24.8**	**+1.6**
COEG	**Centro de Oper**	**2.75**	**100**	*e*P	**Pb**	**14 11 25.5**	**-2.5**
COEG				*e*S	**Sb**	**14 11 60.0**	**-2.2**
P5NO	**Presa 5 de nov**	**2.83**	**92**	S	**Sn**	**14 12 00.8**	**+1.9**
TECO	**Alcaldia de Te**	**2.86**	**101**	S	**Sn**	**14 12 01.8**	**+2.0**
SARH	**Santa Rosa de**	**2.90**	**76**	S	**Sn**	**14 12 03.0**	**+2.3**
TECA	**Tecapa**	**3.13**	**101**	*e*P	**Pn**	**14 11 30.6**	**+1.9**
PACA	**Pacayal**	**3.31**	**100**	P	**Pn**	**14 11 33.3**	**+2.3**
PACA				S	**Sn**	**14 12 14.1**	**+3.1**
PACA	**Pacayal**	**3.31**	**100**	*e*P	**Pb**	**14 11 33.9**	**-3.6**
PACA				*e*P	Pn	14 11 35.4	+4.4

*NEIC **14** 14:11:56.4±2.2, 49.9S±0.1×122.4E±0.3, h10km±2km, mb4.3/10, Error ellipse: s-maj=32.1km s-min=17.7km az=276.0*
*IDC **14** 14:11:56.2±1.1, 49.96S×122.63E, h0km, mb3.9/5, mbtmp3.9/6, ML2.1/1, MS3.7/4, Error ellipse: s-maj=63.8km s-min=20.0km az=89.0*

ISC 14 14:11:56.5±0.6, 49.93S±0.08×122.6E±0.2, h10km, n22, σ1s20/18, mb3.9/6, MS3.6/4, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.23**	**335**	T	T	14 32 18.1	
	baz=159,slow=74,SNR=21						
H01W2	**Cape Leeuwin H**	**16.23**	**335**	T	T	14 32 19.1	
	baz=159,slow=74,SNR=19						
H01W3	**Cape Leeuwin H**	**16.25**	**335**	T	T	14 32 19.5	
	baz=159,slow=74,SNR=20						
NWAO	**Narrogin (SRO)**	**17.44**	**345**	P	**P**	**14 16 01.9**	**+0.9**
	0.4nm,0.3s,baz=164,slow=13,SNR=3.4 4.6nm,0.7s						
NWAO	**Narrogin (SRO)**	**17.44**	**345**		**Pn**	**14 16 00.0**	**+0.3**
NWAO				IAmb	IAmb	14 16 13.0	
	comp=Z,74nm,1.4s						
BBOO	**Buckleboo**	**19.83**	**35**	P	**Pn**	**14 16 28.2**	**-0.6**
BBOO				IAmb	IAmb	14 17 06.7	
	comp=Z,17nm,1.4s						
ASAR	**Alice Springs**	**27.68**	**23**	P	**P**	**14 17 45.9**	**+1.2**
	comp=Z,0.8nm,0.9s,baz=202,slow=9.0,SNR=4.9 comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**27.68**	**23**	P	**P**	**14 17 44.6**	**-0.1**
VNDA	**Vanda**	**31.39**	**165**	P	**P**	**14 18 17.9**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=295,slow=8.8,SNR=6.3						
VNDA				LR	LR	14 29 60.0	
	comp=Z,142nm,19.4s,baz=322,slow=35 comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**31.39**	**165**	P	**P**	**14 18 17.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**31.85**	**6**	LR	LR	14 30 20.4	
	comp=Z,169nm,18.6s,baz=334,slow=35						
FITZ	**Fitzroy Crossi**	**31.85**	**6**	P	**P**	**14 18 21.1**	**-0.4**
FITZ				IAmb	IAmb	14 19 02.0	
	comp=Z,2.4nm,1.4s						
RPZ	**Rata Peaks**	**33.28**	**98**	P	**P**	**14 18 33.5**	**-0.5**
MAW	**Mawson**	**33.91**	**216**	P	**P**	**14 18 36.2**	**-3.0**
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**14 19 33.9**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=346,slow=1.5,SNR=6.8						
QSPA				LR	LR	14 35 39.6	
	comp=Z,84nm,19.2s,baz=24,slow=35 comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**14 19 33.9**	**+1.1**
QSPA				IAmb	IAmb	14 20 10.9	
	comp=Z,8.0nm,1.5s						
SAUI	**Saumlaki**	**42.44**	**13**	P	**P**	**14 19 50.2**	**-1.3**
SNAA	**Sanae**	**52.74**	**199**	P	**P**	**14

INU	**Inuyama**	**5.23**	**345**	P		**P**		**14 15 05.9**	**+0.1**
JMN	**Monobe**	**5.30**	**312**	P		**P**		**14 15 05.3**	**-1.3**
JMN	**Monobe**	**5.30**	**312**	P		**P**		**14 15 04.3**	**-2.3**
JGF	**Kuroka**	**5.41**	**349**	P		**P**		**14 15 06.1**	**-1.5**
JGF	**Kuroka**	**5.41**	**349**	P		**P**		**14 15 07.3**	**-0.4**
JHU2	**Hanno**	**5.57**	**5**	P		**P**		**14 15 06.0**	**-3.1**
JHU2				*e*S		**S**		**14 16 14.4**	**-7.8**
JRY	**Ryogami san**	**5.72**	**2**	P		**P**		**14 15 09.1**	**-1.7**
JRY				S		**S**		**14 16 21.6**	**-3.6**
JYT	**Yasato**	**6.07**	**12**	P		**P**		**14 15 11.8**	**-2.5**
JYT				S		S		14 16 19.5	-12
MJAR	**Matsushiro Arr**	**6.25**	**357**	P		**P**		**14 15 14.8**	**-1.4**
	12nm,0.7s,baz=174,slow=11,SNR=46								
MJAR				S		**S**		**14 16 31.0**	**-4.2**
	3.7nm,0.6s,baz=146,slow=11,SNR=4.6								
MAJO	**Matsushiro**	**6.25**	**357**			**P**		**14 15 15.1**	**-1.2**
MAJO	**Matsushiro**	**6.25**	**357**	P		**P**		**14 15 14.8**	**-1.4**
MJB9	**Matsu-Tunnel**	**6.26**	**357**	P		**P**		**14 15 16.0**	**-0.3**
JHO	**Hitachi**	**6.51**	**14**	P		**P**		**14 15 16.6**	**-2.4**
JHO				S		**S**		**14 16 34.0**	**-6.1**
JTM	**Tenmabayashi**	**10.66**	**10**	P		**P**		**14 16 04.3**	**+0.3**
JTM	**Tenmabayashi**	**10.66**	**10**	P		**P**		**14 16 03.2**	**-0.8**
KSRS	**Korea Array**	**11.42**	**312**	P		**P**		**14 16 12.9**	**+0.7**
	2.2nm,0.6s,baz=127,slow=10,SNR=14								
KSAR	**Wonju Array Be**	**11.43**	**311**	P		**P**		**14 16 12.3**	**-0.1**
KS19	**Wonju Array Si**	**11.48**	**312**	P		**P**		**14 16 12.9**	**-0.1**
ERM	**Erimo**	**12.26**	**16**	P		**P**		**14 16 22.0**	**+0.6**
ERM	**Erimo**	**12.26**	**16**	P		**P**		**14 16 21.2**	**-0.1**
JKA	**Kamikawa-asahi**	**14.16**	**12**			**P**		**14 16 42.6**	**+0.6**
JKA	**Kamikawa-asahi**	**14.16**	**12**	P		**P**		**14 16 42.8**	**+0.8**
USA0B	**Ussuriysk Arra**	**14.86**	**341**	P		**P**		**14 16 49.6**	**+0.2**
USRK	**Ussuriysk Ar.**	**14.86**	**341**	P		**P**		**14 16 49.6**	**+0.2**
	3.8nm,0.5s,baz=144,slow=9.2,SNR=15								
USRK	**Ussuriysk Ar.**	**14.86**	**341**	P		**P**		**14 16 49.3**	**-0.1**
MDJ	**Mudanjiang**	**15.99**	**336**	P		**P**		**14 17 01.0**	**-0.5**
MDJ				IAmb		IAmb		14 17 03.8	
	comp=Z,10nm,1.0s								
MDJ	**Mudanjiang**	**15.99**	**336**	P		**P**		**14 17 01.2**	**-0.3**
YHNB	**Yeheng**	**16.30**	**254**	P		**P**		**14 17 03.6**	**-1.5**
NACB	**Ninganchiao**	**16.33**	**252**	P		**P**		**14 17 02.6**	**-2.8**
YULB	**Yu-li**	**16.92**	**250**	P		**P**		**14 17 10.2**	**-1.4**
YULB	**Yu-li**	**16.92**	**250**	P		**P**		**14 17 10.7**	**-0.9**
YSS	**Yuzhno-Sakhali**	**16.95**	**10**			**P**		**14 17 11.3**	**-0.3**
YSS				IAmb		IAmb		14 17 13.8	
	comp=Z,25nm,1.5s								
YSS	**Yuzhno-Sakhali**	**16.95**	**10**	P		**P**		**14 17 12.0**	**+0.4**
SSLB	**Suanglung**	**17.02**	**252**	P		**P**		**14 17 11.3**	**-1.4**
SSLB	**Suanglung**	**17.02**	**252**	P		**P**		**14 17 11.7**	**-1.1**
TWG	**Pinlang**	**17.37**	**249**	P		**P**		**14 17 14.9**	**-1.5**
TWG	**Pinlang**	**17.37**	**249**	P		**P**		**14 17 15.4**	**-1.0**
TPUB	**Ta-pu**	**17.51**	**251**	P		**P**		**14 17 16.6**	**-1.3**
TPUB	**Ta-pu**	**17.51**	**251**	P		**P**		**14 17 16.4**	**-1.5**
BNX	**BinXian**	**17.76**	**333**	⇓P		**P**		**14 17 21.4**	**+1.2**
BNX				pmax		pmax			
	comp=Z,18nm,0.7s								
HEH	**HeiHe**	**21.66**	**340**	*e*P		**P**		**14 17 57.1**	**+0.5**
HEH				pmax		pmax			
	comp=Z,7.0nm,0.6s								
HHC	**Hu-ho-hao-te**	**24.33**	**303**	*e*P		**P**		**14 18 21.3**	**+0.4**
HHC				pmax		pmax			
	comp=Z,20nm,0.6s								
HHC				pmax		pmax			
	comp=Z,54nm,4.2s								
ENH	**Enshi**	**25.15**	**277**	P		**P**		**14 18 26.8**	**-1.5**
XAN	**Xi'an**	**25.39**	**286**	P		**P**		**14 18 28.3**	**-2.1**
XAN				pmax		pmax			
	comp=Z,21nm,0.7s								
PEA0B	**Petropavlovsk-**	**26.72**	**26**	P		**P**		**14 18 42.3**	**+0.6**
PEA0B				IAmb		IAmb		14 18 52.9	
	comp=Z,24nm,1.5s								
PETK	**Petropavlovsk-**	**26.72**	**26**	P		**P**		**14 18 42.8**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=218,slow=5.0,SNR=5.5								
	comp=Z,2.6nm,0.8s								
PETK	**Petropavlovsk-**	**26.72**	**26**	P		**P**		**14 18 42.5**	**+0.7**
PET	**Petropavlovsk**	**27.02**	**27**	P		**P**		**14 18 45.1**	**+0.7**
PET				IAmb		IAmb		14 19 01.5	
	comp=Z,12nm,1.2s								
PET	**Petropavlovsk**	**27.02**	**27**	P		**P**		**14 18 42.5**	**-1.9**
WAKE	**Wake Island**	**27.62**	**107**	P		**P**		**14 18 48.3**	**-1.8**
ULN	**Ulaanbaatar**	**29.87**	**315**	P		**P**		**14 19 09.7**	**0.0**
ULN	**Ulaanbaatar**	**29.87**	**315**	P		**P**		**14 19 09.0**	**-0.7**
SONM	**Songino Array**	**30.27**	**315**	P		**P**		**14 19 13.4**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=123,slow=9.0,SNR=5.8								
	comp=Z,0.7nm,0.4s								
SONM	**Songino Array**	**30.27**	**315**	P		**P**		**14 19 13.1**	**0.0**
MA2	**Magadan**	**30.42**	**12**	P		**P**		**14 19 14.7**	**+0.5**
SLVN	**Son La**	**32.41**	**262**	P		**P**		**14 19 32.1**	**+0.2**
PZH	**PanZhiHua**	**32.58**	**273**	P		**P**		**14 19 33.3**	**-0.1**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
GTA2	**Gaotai**	**32.98**	**297**	*e*P		**P**		**14 19 36.8**	**+0.2**
GTA2				pmax		pmax			
	comp=Z,13nm,1.0s								
FAKI	**Fak Fak**	**33.58**	**192**	P		**P**		**14 19 41.7**	**0.0**
TOLI2	**Tolitoli**	**33.61**	**214**	P		**P**		**14 19 41.3**	**-0.7**
TOLI2	**Tolitoli**	**33.61**	**214**	P		**P**		**14 19 41.1**	**-0.9**
SHEM	**Shemya Is, Ala**	**34.23**	**39**	P		**P**		**14 19 47.8**	**+1.0**
SMY	**Shemya**	**34.23**	**39**	P		**P**		**14 19 48.0**	**+1.2**
CHTO	**Chiang Mai**	**37.69**	**262**			**P**		**14 20 16.2**	**0.0**
CHTO				IAmb		IAmb		14 20 17.2	
	comp=Z,8.4nm,1.0s								
CMAR	**Chiang Mai Arr**	**37.85**	**261**	P		**P**		**14 20 17.8**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=42,slow=9.7,SNR=13								
	comp=Z,1.4nm,0.6s								
KIWB	**Kanaga Island**	**38.91**	**44**	P		**P**		**14 20 27.0**	**+1.3**
KIWB				IAmb		IAmb		14 20 39.4	
	comp=Z,20nm,1.3s								
ADK	**Adak**	**39.20**	**44**	P		**P**		**14 20 28.8**	**+0.8**
GSTR	**Great Sitkin T**	**39.62**	**43**	P		**P**		**14 20 31.6**	**0.0**
ATKA	**Atka Island**	**40.76**	**44**	P		**P**		**14 20 41.3**	**+0.7**
TIXI	**Tiksi**	**41.76**	**355**	P		**P**		**14 20 48.1**	**-0.2**
TIXI				IAmb		IAmb		14 20 49.0	
	comp=Z,3.5nm,0.5s								
MTN	**Manton Dam**	**43.48**	**191**	P		**P**		**14 21 02.1**	**-0.5**
MTN				IAmb		IAmb		14 21 20.1	
	comp=Z,23nm,1.5s								
SPIA	**Saint Paul Isl**	**44.23**	**37**	P		**P**		**14 21 09.6**	**+1.6**
EVN	**Everest**	**45.01**	**281**	P		**P**		**14 21 14.7**	**-0.6**
EVN				IAmb		IAmb		14 21 16.6	
	comp=Z,6.3nm,0.6s								
ZALV	**Zalesovo Beam**	**45.05**	**318**	P		**P**		**14 21 14.9**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=90,slow=9.0,SNR=2.7								
ZALV				PcP		**PcP**		**14 22 46.5**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=126,slow=3.0,SNR=2.4								
ZALV				ScP		**ScP**		**14 25 56.7**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=59,slow=5.6,SNR=2.5								
	comp=Z,0.7nm,0.4s								
UNV	**Unalaska Valle**	**45.64**	**43**	P		**P**		**14 21 20.8**	**+1.9**
MKAR	**Makanchi Array**	**46.06**	**307**	P		**P**		**14 21 22.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=93,slow=8.5,SNR=11								
MKAR				PcP		**PcP**		**14 22 50.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=90,slow=4.9,SNR=3.7								
MKAR				ScP		**ScP**		**14 26 01.6**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=83,slow=6.2,SNR=3.5								
	comp=Z,1.3nm,0.7s								
MKAR	**Makanchi Array**	**46.06**	**307**	P		**P**		**14 21 22.1**	**-0.3**
MKAR						**PcP**		**14 22 50.6**	**+0.5**
MKAR						**ScP**		**14 26 01.6**	**+1.0**
MAKZ	**Makanchi**	**46.27**	**307**	P		**P**		**14 21 24.0**	**0.0**
KNRA	**Kununurra**	**46.67**	**193**	P		**P**		**14 21 27.6**	**+0.3**
KNRA				IAmb		IAmb		14 21 29.1	
	comp=Z,9.2nm,0.8s								
PDGK	**Podgornoye**	**48.18**	**303**			**P**		**14 21 38.0**	**-0.7**
GSI	**Gunungsitoli**	**48.44**	**241**			**P**		**14 21 39.6**	**-1.3**
KURK	**Kurchatov**	**48.54**	**313**			**P**		**14 21 40.0**	**-1.1**
KURK				IAmb		IAmb		14 21 43.0	
	comp=Z,2.5nm,0.5s								
KURBB	**Kurchatov Arra**	**48.59**	**313**	P		**P**		**14 21 41.4**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=92,slow=7.6,SNR=23								
	comp=Z,1.9nm,0.5s								
L14K	**Kuka Creek**	**48.98**	**33**	P		**P**		**14 21 45.4**	**+1.3**
N14K	**Kuskokwak Cree**	**49.20**	**35**	P		**P**		**14 21 47.2**	**+1.4**
N14K				IAmb		IAmb		14 22 19.7	
	comp=Z,11nm,1.3s								
M14K	**Bethel**	**49.21**	**34**	P		**P**		**14 21 47.6**	**+1.7**
M14K				IAmb		IAmb		14 21 48.7	
	comp=Z,5.5nm,0.8s								
O14K	**Tigyukauivet M**	**49.31**	**36**	P		**P**		**14 21 48.4**	**+1.8**
O14K				IAmb		IAmb		14 22 01.3	
	comp=Z,9.7nm,1.5s								
FITZ	**Fitzroy Crossi**	**49.70**	**196**	P		**P**		**14 21 50.8**	**+0.7**
CNBA	**Chernabura Isl**	**49.76**	**42**	P		**P**		**14 21 50.9**	**+0.8**
C16K	**Lisburne Hills**	**49.78**	**24**	P		**P**		**14 21 51.2**	**+1.2**
C16K				IAmb		IAmb		14 21 52.2	
	comp=Z,8.3nm,1.1s								
WB0	**Warramunga Arr**	**49.93**	**185**	P		**P**		**14 21 51.8**	**+0.1**
WB0				IAmb		IAmb		14 21 54.0	
	comp=Z,5.5nm,0.6s								
KDJ	**Kajisay**	**50.00**	**301**	P		**P**		**14 21 52.5**	**+0.2**
N15K	**Kwethluk River**	**50.03**	**35**	P		**P**		**14 21 53.7**	**+1.7**
N15K				IAmb		IAmb		14 21 54.6	
	comp=Z,4.0nm,0.8s								
WRA	**Warramunga Arr**	**50.11**	**185**	P		**P**		**14 21 53.3**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=1.8,slow=7.7,SNR=59								
WRA				PcP		**PcP**		**14 23 06.1**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=3.6,slow=3.8,SNR=2.3								
	comp=Z,4.4nm,0.5s								
WRA	**Warramunga Arr**	**50.11**	**185**	P		**P**		**14 21 53.3**	**+0.2**
WRA						**PcP**		**14 23 06.1**	**+1.1**
WR8	**Warramunga Arr**	**50.11**	**185**	P		**P**		**14 21 53.2**	**+0.2**
WR8				IAmb		IAmb		14 21 53.8	
	comp=Z,7.6nm,0.6s								
CHGN	**Chignik**	**50.52**	**40**	P		**P**		**14 21 55.6**	**0.0**
CHGN				IAmb		IAmb		14 22 18.1	
	comp=Z,22nm,1.4s								
C18K	**Utukok River**	**51.36**	**24**	P		**P**		**14 22 02.9**	**+1.2**
C18K				IAmb		IAmb		14 22 42.2	
	comp=Z,7.8nm,1.4s								
G18K	**Tagagawik**	**51.66**	**28**			**P**		**14 22 04.6**	**+0.7**
KSH2	**Kashi**	**51.68**	**298**	P		**P**		**14 22 05.6**	**+1.0**
KSH2				pmax		pmax			
	comp=Z,3.0nm,0.9s								
J19K	**Poorman**	**52.62**	**30**			**P**		**14 22 12.3**	**+1.5**
I20K	**Naaghedeneel**	**53.21**	**29**	IAmb		IAmb		14 22 18.1	
	comp=Z,1.1nm,0.7s								
J20K	**Nowinta River**	**53.29**	**30**	IAmb		IAmb		14 22 18.6	
	comp=Z,6.0nm,0.6s								
BVAR	**Borovoye Array**	**53.59**	**316**	P		**P**		**14 22 18.1**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=95,slow=7.5,SNR=11								
BVAR				PcP		**PcP**		**14 23 18.7**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=72,slow=4.7,SNR=1.9								
	comp=Z,1.8nm,0.3s								
BORK	**Borovoye**	**53.64**	**316**	P		**P**		**14 22 18.9**	**+0.6**
AS31	**Alice Springs**	**53.83**	**185**	P		**P**		**14 22 20.6**	**+0.5**
ASAR	**Alice Springs**	**53.83**	**185**	P		**P**		**14 22 20.4**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=358,slow=5.6,SNR=85								
	comp=Z,1.7nm,0.5s								
ASAR	**Alice Springs**	**53.83**	**185**	P		**P**		**14 22 19.9**	**-0.2**
MBWA	**Marble Bar**	**54.28**	**202**	P		**P**		**14 22 23.7**	**+0.4**
MBWA				IAmb		IAmb		14 22 24.1	
	comp=Z,23nm,1.4s								
KK31	**Karatay Array**	**54.71**	**304**	IAmb		IAmb		14 22 27.9	
	comp=Z,5.3nm,1.0s								
KKAR	**Karatay Array**	**54.71**	**304**	P		**P**		**14 22 26.3**	**+0.1**
FUNA	**Funafuti**	**54.82**	**128**	P		**P**		**14 22 27.5**	**+0.3**
NEA2	**Nenana**	**55.52**	**30**	IAmb		IAmb		14 22 34.0	
	comp=Z,9.5nm,1.4s								
ILAR	**Eielson Array**	**56.46**	**30**	P		**P**		**14 22 38.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=259,slow=5.5,SNR=9.8								
	comp=Z,0.6nm,0.5s								
CHGR	**Chuyangaron**	**56.66**	**299**			**P**		**14 22 39.2**	**-0.8**
RIDG	**Independent Ri**	**57.38**	**31**	P		**P**		**14 22 45.1**	**+0.7**
RIDG				IAmb		IAmb		14 22 46.3	
	comp=Z,2.9nm,0.6s								
INKA	**Innaminka**	**57.73**	**178**	P		**P**		**14 22 47.7**	**+0.6**
SCRK	**Sand Creek**	**57.74**	**31**	IAmb		IAmb		14 22 48.7	
	comp=Z,5.0nm,0.6s								
I27K	**Kandik River**	**58.64**	**29**	P		**P**		**14 22 54.7**	**+1.7**
I28M	**Miner Creek**	**59.35**	**29**			**P**		**14 22 59.4**	**+1.5**
I28M				IAmb		IAmb		14 23 00.0	
	comp=Z,2.5nm,0.5s								
ARTI	**Arti**	**60.10**	**321**	P		**P**		**14 23 02.8**	**-0.1**
ARTI				IAmb		IAmb		14 23 03.4	
	comp=Z,7.8nm,0.5s								
M29M	**Somme Creek**	**60.40**	**32**	P		**P**		**14 23 06.5**	**+1.6**
M29M				IAmb		IAmb		14 23 09.0	
	comp=Z,4.7nm,1.1s								
L29M	**L29M**	**60.45**	**31**	P		**P**		**14 23 06.1**	**+1.0**
L29M				IAmb		IAmb		14 23 08.7	
	comp=Z,4.3nm,1.1s								
EPYK	**Eagle Plains**	**60.55**	**27**	P		**P**		**14 23 07.1**	**+1.3**
EPYK				IAmb		IAmb		14 23 51.5	
	comp=Z,7.5nm,0.6s								
AB31	**Akbulak array**	**60.65**	**313**			**P**		**14 23 06.2**	**-0.4**
AB31				IAmb		IAmb		14 23 07.2	
	comp=Z,4.0nm,0.5s								
ABKAR	**Akbulak array**	**60.65**	**313**			**P**		**14 23 06.8**	**+0.1**
G30M	**tAoh Zraii Nji**	**60.65**	**27**			**P**		**14 23 07.2**	**+0.8**
G30M				IAmb		IAmb		14 23 09.8	
	comp=Z,6.5nm,1.1s								
I30M	**Mount Dempster**	**60.86**	**29**			**P**		**14 23 09.3**	**+1.3**
I30M				IAmb		IAmb		14 23 10.0	
	comp=Z,3.0nm,0.8s								
FORT	**Forrest**	**61.55**	**190**	P		**P**		**14 23 13.8**	**+1.1**
STKA	**Stephens Creek**	**61.88**	**177**	P		**P**		**14 23 15.9**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=323,slow=8.7,SNR=5.8								
	comp=Z,2.0nm,0.6s								
M31M	**Drury Creek, Y**	**62.31**	**32**	P		**P**		**14 23 19.1**	**+1.7**
M31M				IAmb		IAmb		14 23 19.6	
	comp=Z,3.4nm,0.5s								
BBOO	**Buckleboo**	**62.80**	**182**	P		**P**		**14 23 22.0**	**+1.1**
MORW	**Morawa**	**62.83**	**202**	P		**P**		**14 23 21.9**	**+0.7**
NWAO	**Narrogin (SRO)**	**66.05**	**200**	P		**P**		**14 23 42.2**	**+0.6**
	comp=Z,7.5nm,0.7s,baz=52,slow=6.8,SNR=4.9								
	comp=Z,7.5nm,0.7s								
NWAO	**Narrogin (SRO)**	**66.05**	**200**	P		**P**		**14 23 42.4**	**+0.8**
NWAO				IAmb		IAmb		14 24 02.6	
	comp=Z,48nm,1.4s								
ARCES	**ARCESS Array B**	**69.50**	**340**	P		**P**		**14 24 03.2**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=64,slow=8.2,SNR=5.3								
	comp=Z,0.8nm,0.6s								
ARCES	**ARCESS Array B**	**69.50**	**340**	P		**P**		**14 24 03.2**	**+0.8**
ARCES				IAmb		IAmb		14 24 17.8	
	comp=Z,5.5nm,1.4s								
YKA	**Yellowknife Ar**	**70.82**	**28**	P		**P**		**14 24 11.1**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=288,slow=9.9,SNR=1.3								
	comp=Z,1.6nm,0.7s								
TULEG	**Thule**	**72.06**	**7**	P		**P**		**14 24 20.0**	**+2.5**
KBZ	**Khabaz**	**73.57**	**311**	P		**P**		**14 24 27.3**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=37,slow=5.1,SNR=5.5								
	comp=Z,3.9nm,0.8s								
FIA1	**FINESS Array S**	**73.70**	**332**	P		**P**		**14 24 27.4**	**+0.2**
FINES	**FINESS Array B**	**73.71**	**332**	P		**P**		**14 24 27.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=83,slow=4.1,SNR=8.5								
	comp=Z,1.0nm,0.6s								
FINES	**FINESS Array B**	**73.71**	**332**	P		**P**		**14 24 27.1**	**-0.1**
WIFE	**Three Sisters-**	**75.86**	**47**	P		**P**		**14 24 41.3**	**+1.3**
WIFE				IAmb		IAmb		14 25 13.0	
	comp=Z,10nm,1.3s								
J04A	**Umpqua Nationa**	**76.06**	**48**	P		**P**		**14 24 42.2**	**+1.1**
AKASG	**Malin Array Be**	**78.21**	**322**	P		**P**		**14 24 52.4**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=51,slow=5.7,SNR=3.5								
	comp=Z,0.4nm,0.3s								
J08A	**Circle Bar Ran**	**78.31**	**47**	P		**P**		**14 24 54.7**	**+1.4**
J08A				IAmb		IAmb		14 24 55.8	
	comp=Z,2.9nm,0.6s								
HFS	**Hagfors**	**79.26**	**335**	P		**P**		**14 24 58.0**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=72,slow=4.7,SNR=2.4								
	comp=Z,0.8nm,0.5s								
NC405	**NORSAR Array S**	**79.26**	**337**	P		**P**		**14 24 58.3**	**+0.4**
NC405				IAmb		IAmb		14 25 24.8	
	comp=Z,10nm,1.3s								
NOA	**NORSAR Array B**	**79.49**	**337**	P		**P**		**14 24 59.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=53,slow=6.6,SNR=2.3								
	comp=Z,0.3nm,0.6s								
NVAR	**Mina Array Bea**	**80.96**	**51**	P		**P**		**14 25 07.5**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=291,slow=4.8,SNR=4.0								
	comp=Z,0.4nm,0.5s								
BOZ	**Bozeman (W)**	**81.24**	**42**	P		**P**		**14 25 09.8**	**+1.0**
BOZ				IAmb		IAmb		14 25 11.3	
	comp=Z,1.6nm,0.7s								
BRTR	**Keskin Array B**	**81.56**	**311**	P		**P**		**14 25 11.3**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=99,slow=3.9,SNR=6.3								
	comp=Z,1.7nm,0.9s								
PDAR	**Pinedale Array**	**84.10**	**43**	P		**P**		**14 25 24.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=317,slow=8.0,SNR=4.4								
	comp=Z,0.3nm,0.3s								
QSPA	**South Pole Qui**	**120.04**	**180**	PKP		**PKiKP**		**14 31 38.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=285,slow=1.0,SNR=8.2								

*IDC **14** 14:36:23.1±0.9, 49°.94S×122°.60E, h0km, mb3.9/7, mbtmp4.0/8, ML2.4/1, MS3.8/6, Error ellipse: s-maj=43.7km s-min=16.5km az=98.0*
*NEIC **14** 14:36:24.5±1.1, 49°.9S±0°.1×122°.6E±0°.3, h10km±1km, mb4.2/13, Error ellipse: s-maj=29.7km s-min=18.8km az=277.0*
ISC 14 14:36:24.5±0.6**, 49°.93S**±0°.08×**122°.6E**±0°.2**, h10**km**, n34, σ0s43/28, mb4.1/11, MS3.7/6, 3D, Western**

Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.26**	**334**	T	T		14 56 48.5	
	baz=158,slow=74,SNR=73							
H01W2	**Cape Leeuwin H**	**16.26**	**334**	T	T		14 56 48.8	
	baz=158,slow=74,SNR=74							
H01W3	**Cape Leeuwin H**	**16.27**	**334**	T	T		14 56 46.9	
	baz=158,slow=74,SNR=65							
NWAO	**Narrogin (SRO)**	**17.45**	**345**	P		**P**	**14 40 28.7**	**-0.4**
	0.7nm,0.3s,baz=160,slow=10,SNR=5.2							
	13nm,0.9s							
NWAO	**Narrogin (SRO)**	**17.45**	**345**	P		**P**	**14 40 28.9**	**-0.2**
NWAO				IAmb		IAmb	14 40 55.9	
	comp=Z,47nm,1.2s							
CASY	**Casey**	**17.53**	**196**	P		**P**	**14 40 29.8**	**0.0**
CASY				IAmb		IAmb	14 40 31.6	
	comp=Z,14nm,1.2s							
BBOO	**Buckleboo**	**19.81**	**35**	P		**P**	**14 40 55.1**	**+0.2**
BBOO				IAmb		IAmb	14 41 33.4	
	comp=Z,18nm,1.3s							
TOO	**Toolangi**	**20.54**	**62**	P		**P**	**14 41 02.8**	**-0.1**
STKA	**Stephens Creek**	**22.93**	**45**	P		**P**	**14 41 28.8**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=204,slow=12,SNR=4.2							
STKA				LR		LR	14 49 04.9	
	comp=Z,131nm,18.5s,baz=204,slow=33							
	comp=Z,3.1nm,0.8s							
INKA	**Innaminka**	**26.14**	**39**	P		**P**	**14 41 58.8**	**+0.2**
INKA				IAmb		IAmb	14 42 01.4	
	comp=Z,5.4nm,1.1s							
ASAR	**Alice Springs**	**27.67**	**23**	P		**P**	**14 42 12.6**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=203,slow=8.3,SNR=11							
	comp=Z,1.1nm,0.8s							
ASAR	**Alice Springs**	**27.67**	**23**	P		**P**	**14 42 11.3**	**-1.2**
AS31	**Alice Springs**	**27.67**	**23**	P		**P**	**14 42 11.9**	**-0.6**
WRA	**Warramunga Arr**	**31.35**	**22**	P		**P**	**14 42 45.1**	**0.0**
	comp=Z,0.6nm,0.9s,baz=197,slow=8.3,SNR=2.3							
	comp=Z,0.6nm,0.9s							
WRA	**Warramunga Arr**	**31.35**	**22**	P		**P**	**14 42 45.1**	**0.0**
VNDA	**Vanda**	**31.38**	**165**	P		**P**	**14 42 45.1**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=296,slow=7.6,SNR=11							
VNDA				LR		LR	14 54 26.9	
	comp=Z,236nm,19.8s,baz=316,slow=34							
	comp=Z,1.6nm,0.8s							
VNDA	**Vanda**	**31.38**	**165**	P		**P**	**14 42 44.9**	**+0.1**
VNDA				IAmb		IAmb	14 42 46.2	
	comp=Z,3.5nm,1.1s							
FITZ	**Fitzroy Crossi**	**31.85**	**5**	LR		LR	14 54 24.3	
	comp=Z,142nm,19.5s,baz=208,slow=34							
SBA	**Scott Base**	**32.43**	**164**	P		**P**	**14 42 54.8**	**+0.7**
SBA				IAmb		IAmb	14 43 14.0	
	comp=Z

NFF	**Wufeng Townshi**	**1.20**	**258**	P	**Pn**	**14 51 07.4**	**-0.3**
FUSS	**Fushou**	**1.24**	**239**	*e*P	**Pg**	**14 51 09.2**	**-0.2**
FUSS				*e*S	**Sg**	**14 51 25.7**	**+0.1**
LXIB	**Xiulin Townshi**	**1.25**	**227**	*e*P	**Pb**	**14 51 09.1**	**+0.3**
LXIB				*e*S	**Sg**	**14 51 26.3**	**+0.3**
HSN1	**Hsinchu**	**1.27**	**265**	P	**Pn**	**14 51 08.2**	**-0.3**
WHF	**Hehuan Shan**	**1.28**	**235**	*e*P	**Pg**	**14 51 09.8**	**-0.4**
WHF				*e*S	**Sg**	**14 51 26.6**	**-0.3**
LIOB	**Emei**	**1.29**	**259**	*e*P	**Pn**	**14 51 08.9**	**+0.1**
TWT	**Tachien**	**1.29**	**241**	*e*P	**Pg**	**14 51 10.2**	**-0.1**
IRIF	**Iriomote-Funau**	**1.32**	**114**	*e*P	**Pg**	**14 51 10.6**	**-0.4**
IRIF				*e*S	**Sg**	**14 51 29.3**	**+1.1**
OWD	**Renai**	**1.46**	**231**	*i* P	**Pb**	**14 51 12.4**	**+0.1**
OWD				*e*S	**Sg**	**14 51 32.1**	**-0.4**
WHP	**Taichung City**	**1.46**	**246**	*e*P	**Pg**	**14 51 13.7**	**0.0**
WUSB	**Renai**	**1.48**	**233**	P	**Pb**	**14 51 13.0**	**+0.3**
WUSB				*e*S	**Sg**	**14 51 33.0**	**-0.2**
WARBT	**Fenglin Townsh**	**1.49**	**219**	*e*P	**Pn**	**14 51 11.7**	**0.0**
JKRS	**Kuro-shima**	**1.60**	**114**	*e*P	**Pg**	**14 51 15.6**	**-0.6**
WCS	**Beigang Elemen**	**1.60**	**239**	*e*P	**Pn**	**14 51 13.2**	**+0.1**
WCS				*e*S	**Sn**	**14 51 34.0**	**+0.6**
VWDT	**VWDT**	**1.62**	**226**	*e*P	**Pb**	**14 51 14.8**	**-0.1**
VWDT				*e*S	**Sn**	**14 51 33.9**	**0.0**
HGSD	**Ruisui**	**1.66**	**213**	*e*P	**Pn**	**14 51 13.6**	**-0.3**
SSLB	**Suanglung**	**1.72**	**231**	*e*P	**Pn**	**14 51 15.7**	**+0.8**
SSLB				S	**Sn**	**14 51 36.2**	**-0.4**
YULB	**Yu-li**	**1.80**	**214**	*e*P	**Pn**	**14 51 15.2**	**-0.7**
WHYT	**Xinyi Township**	**1.85**	**230**	*e*P	**Pb**	**14 51 19.3**	**+0.3**
ALS	**Alishan**	**2.01**	**227**	*e*P	**Pb**	**14 51 20.9**	**-0.9**
ALS				*e*S	**Sb**	**14 51 46.6**	**-0.1**

IDC ***14*** *14:58:34.6±1.1, 12°10N×140°59E, h0km, mb3.9/8, mbtmp3.9/8, MS3.3/7, Error ellipse: s-maj=38.7km s-min=22.8km az=89.0*

NEIC ***14*** *14:58:38.2±0.9, 12°2N±0°1×140°3E±0°1, h10km±1km, mb4.6/45, Error ellipse: s-maj=20.9km s-min=17.4km az=163.0*

ISC 14 14:58:40.2±0.6, 12°10N±0°10×140°30E±0°09, h30km, n273, σ0s52/254, mb4.5/31, MS3.2/6, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.69**	**71**	Pn	**Pn**	**14 59 49.7**	**+0.6**
MANU	**Manus Island**	**15.71**	**153**	P	**P**	**15 02 23.9**	**+0.7**
FAKI	**Fak Fak**	**16.93**	**209**		**P**	**15 02 37.7**	**+0.8**
PATS	**Pohnpei**	**18.52**	**105**	P	**P**	**15 02 54.0**	**-0.4**
TGY	**Tagaytay City**	**18.96**	**278**	LR	LR	15 10 23.7	
	comp=Z,76nm,18.7s,baz=294,slow=37						
KRVT	**Keravat (AS076**	**20.04**	**144**	LR	LR	15 09 03.6	
	comp=Z,40nm,21.4s,baz=302,slow=32						
TPUB	**Ta-pu**	**21.77**	**303**	P	**P**	**15 03 29.8**	**+0.1**
TPUB				IAmb	IAmb	15 03 40.6	
	comp=Z,39nm,1.2s						
TOLI2	**Tolitoli**	**22.23**	**242**	P	**P**	**15 03 34.3**	**-0.4**
JNU	**Nakatsue**	**22.63**	**339**	LR	LR	15 10 47.8	
	comp=Z,70nm,20.9s,baz=122,slow=32						
KSRS	**Korea Array**	**27.58**	**338**	LR	LR	15 13 39.6	
	comp=Z,46nm,20.9s,baz=235,slow=33						
WRA	**Warramunga Arr**	**32.38**	**191**	P	**P**	**15 05 06.6**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=6.3,slow=9.7,SNR=4.9						
	comp=Z,0.6nm,0.9s						
WRA	**Warramunga Arr**	**32.38**	**191**	P	**P**	**15 05 06.6**	**-0.8**
AS31	**Alice Springs**	**36.09**	**190**	P	**P**	**15 05 39.7**	**+0.1**
ASAR	**Alice Springs**	**36.09**	**190**	P	**P**	**15 05 38.7**	**-0.9**
	comp=Z,0.9nm,1.1s,baz=18,slow=11,SNR=2.8						
	comp=Z,0.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.33**	**284**	P	**P**	**15 06 17.0**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=105,slow=5.9,SNR=1.9						
	comp=Z,0.3nm,0.4s						
TLY	**Talaya**	**49.34**	**331**	LR	LR	15 27 27.8	
	comp=Z,31nm,20.5s,baz=179,slow=35						
EVN	**Everest**	**52.27**	**296**	P	**P**	**15 07 48.8**	**-1.1**
EVN				IAmb	IAmb	15 07 49.2	
	comp=Z,8.4nm,1.5s						
KIWB	**Kanaga Island**	**52.39**	**32**	P	**P**	**15 07 49.2**	**-0.4**
SPIA	**Saint Paul Isl**	**58.60**	**29**	P	**P**	**15 08 33.3**	**-0.9**
	baz=240						
UNV	**Unalaska Valle**	**59.00**	**34**	P	**P**	**15 08 36.7**	**-0.3**
	baz=246						
MKAR	**Makanchi Array**	**59.51**	**317**	P	**P**	**15 08 40.6**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=99,slow=7.6,SNR=3.7						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.51**	**317**	P	**P**	**15 08 41.2**	**+0.4**
GAMB	**Gambell**	**61.49**	**22**	P	**P**	**15 08 53.9**	**+0.1**
	baz=236						
M11K	**Mekoryuk**	**61.98**	**27**	P	**P**	**15 08 57.4**	**+0.2**
	baz=243						
SDPT	**Sand Point**	**62.82**	**33**	P	**P**	**15 09 03.0**	**+0.1**
	baz=251						
KURK	**Kurchatov**	**62.89**	**321**	P	**P**	**15 09 03.8**	**+0.2**
KURK				IAmb	IAmb	15 09 04.5	
	comp=Z,2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**62.92**	**321**	P	**P**	**15 09 04.0**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=105,slow=6.9,SNR=13						
	comp=Z,1.2nm,0.6s						
CHNA	**Chernabura Isl**	**63.14**	**34**	P	**P**	**15 09 04.9**	**-0.1**
	baz=252						
M13K	**Dall Lake**	**63.27**	**28**	P	**P**	**15 09 06.1**	**+0.2**
	baz=246						
K13K	**Kusilvak Mount**	**63.35**	**26**	P	**P**	**15 09 06.6**	**+0.3**
	baz=244						
S14K	**Fog Glacier**	**63.62**	**33**	P	**P**	**15 09 08.6**	**+0.2**
	baz=251						
O14K	**Tigyukauivet M**	**63.79**	**29**	P	**P**	**15 09 09.2**	**-0.1**
	baz=248						
TNA	**Tin City**	**63.82**	**21**	P	**P**	**15 09 09.9**	**+0.5**
	baz=239						
N14K	**Kuskokwak Cree**	**63.84**	**28**	P	**P**	**15 09 10.0**	**+0.4**
	baz=248						
L14K	**Kuka Creek**	**63.95**	**27**	P	**P**	**15 09 10.6**	**+0.3**
	baz=246						
M14K	**Bethel**	**64.03**	**28**	P	**P**	**15 09 11.2**	**+0.3**
	baz=247						
CHGN	**Chignik**	**64.22**	**33**	P	**P**	**15 09 12.2**	**0.0**
	baz=252						
ANM	**Nome**	**64.27**	**23**	P	**P**	**15 09 12.4**	**0.0**
	baz=242						
F14K	**Arctic Creek**	**64.35**	**22**	P	**P**	**15 09 13.7**	**+0.8**
	baz=240						
O15K	**Ungalikthiuk R**	**64.45**	**30**	P	**P**	**15 09 13.6**	**-0.1**
	baz=250						
M15K	**Kasigluk River**	**64.59**	**28**	P	**P**	**15 09 14.7**	**+0.1**
	baz=248						
L15K	**Ungalak Mounta**	**64.61**	**27**	P	**P**	**15 09 14.4**	**-0.3**
	baz=247						
N15K	**Kwethluk River**	**64.67**	**28**	P	**P**	**15 09 15.2**	**+0.1**
	baz=249						
G15K	**Niukluk**	**64.97**	**23**	P	**P**	**15 09 17.5**	**+0.6**
	baz=243						
F15K	**North Star Dit**	**65.08**	**22**	P	**P**	**15 09 18.2**	**+0.5**
	baz=242						
P16K	**Nushagak River**	**65.29**	**30**	P	**P**	**15 09 19.0**	**-0.1**
	baz=251						
N16K	**Nishlik Lake**	**65.40**	**28**	P	**P**	**15 09 19.5**	**-0.3**
	baz=250						
O16K	**Kokwok River B**	**65.42**	**29**	P	**P**	**15 09 19.9**	**-0.1**
	baz=251						
M16K	**Timber Creek**	**65.50**	**28**	P	**P**	**15 09 20.7**	**+0.2**
	baz=250						
L16K	**Owhat River**	**65.51**	**27**	P	**P**	**15 09 20.0**	**-0.5**
L16K	**Owhat River**	**65.51**	**27**	P	**P**	**15 09 20.4**	**-0.1**
	baz=249						
CHIR	**Chirikof Islan**	**65.59**	**34**	P	**P**	**15 09 21.1**	**-0.1**
	baz=255						
J16K	**Anvik River**	**65.62**	**25**	P	**P**	**15 09 21.6**	**+0.4**
	baz=247						
G16K	**Koyuk River**	**65.79**	**23**	P	**P**	**15 09 22.4**	**+0.2**
	baz=244						
I17K	**Unalakleet**	**65.82**	**25**	P	**P**	**15 09 23.0**	**+0.5**
	baz=247						
C16K	**Lisburne Hills**	**66.08**	**19**	P	**P**	**15 09 24.4**	**+0.4**
	baz=240						
P17K	**Kvichak River**	**66.11**	**30**	P	**P**	**15 09 24.2**	**-0.1**
	baz=253						
N17K	**Nushagak Hills**	**66.16**	**29**	P	**P**	**15 09 24.6**	**-0.1**
	baz=252						
L17K	**Donlin**	**66.18**	**27**	P	**P**	**15 09 25.1**	**+0.3**
	baz=250						
J17K	**VABM Dome**	**66.30**	**25**	P	**P**	**15 09 26.0**	**+0.4**
	baz=249						
M17K	**Holitna River**	**66.32**	**28**	P	**P**	**15 09 25.8**	**0.0**
	baz=251						
K17K	**Iditarod**	**66.38**	**26**	P	**P**	**15 09 26.7**	**+0.5**
K17K	**Iditarod**	**66.38**	**26**	P	**P**	**15 09 26.2**	**+0.1**
	baz=250						
G17K	**Kiwalik Mounta**	**66.48**	**23**	P	**P**	**15 09 26.7**	**0.0**
	baz=246						
H17K	**Granite Mounta**	**66.54**	**24**	P	**P**	**15 09 27.4**	**+0.3**
	baz=247						
D17K	**Noatak River**	**66.55**	**20**	P	**P**	**15 09 27.6**	**+0.5**
	baz=243						
SII	**Sitkinak Islan**	**66.56**	**33**	P	**P**	**15 09 26.6**	**-0.7**
	baz=256						
F17K	**Baldwin Pennin**	**66.65**	**22**	P	**P**	**15 09 28.4**	**+0.7**
F17K	**Baldwin Pennin**	**66.65**	**22**	P	**P**	**15 09 27.8**	**+0.1**
	baz=245						
Q18K	**Katmai Hardscr**	**66.66**	**31**	P	**P**	**15 09 27.4**	**-0.7**
	baz=254						
E17K	**Hotham Inlet**	**66.71**	**21**	P	**P**	**15 09 28.4**	**+0.3**
	baz=244						
P18K	**Big Mountain,**	**66.76**	**30**	P	**P**	**15 09 28.4**	**-0.3**
	baz=254						
N18K	**Kilae Creek**	**66.81**	**29**	P	**P**	**15 09 28.9**	**0.0**
	baz=253						
C17K	**DeLong Mountai**	**66.88**	**20**	P	**P**	**15 09 29.5**	**+0.3**
	baz=242						
O18K	**Koktuh Hills**	**66.90**	**30**	P	**P**	**15 09 28.9**	**-0.6**
	baz=254						
L18K	**Granite Mounta**	**66.92**	**27**	P	**P**	**15 09 30.2**	**+0.6**
L18K				IAmb	IAmb	15 09 59.5	
	comp=Z,6.0nm,1.4s						
L18K	**Granite Mounta**	**66.92**	**27**	P	**P**	**15 09 29.4**	**-0.2**
	baz=251						
M18K	**Stony River**	**67.08**	**28**	P	**P**	**15 09 30.4**	**-0.3**
	baz=252						
H18K	**Honhosa River**	**67.23**	**24**	P	**P**	**15 09 31.1**	**-0.4**
	baz=248						
E18K	**Tukpahlearik C**	**67.29**	**21**	P	**P**	**15 09 32.5**	**+0.7**
E18K				IAmb	IAmb	15 09 33.5	
	comp=Z,2.9nm,0.8s						
E18K	**Tukpahlearik C**	**67.29**	**21**	P	**P**	**15 09 32.2**	**+0.4**
	baz=246						
F18K	**Selawik**	**67.30**	**22**	P	**P**	**15 09 31.8**	**-0.1**
	baz=247						
G18K	**Tagagawik**	**67.39**	**23**	P	**P**	**15 09 32.8**	**+0.2**
G18K				IAmb	IAmb	15 09 33.7	
	comp=Z,4.4nm,0.9s						
G18K	**Tagagawik**	**67.39**	**23**	P	**P**	**15 09 32.4**	**-0.1**
	baz=248						
O19K	**Port Alsworth**	**67.42**	**29**	P	**P**	**15 09 32.2**	**-0.5**
	baz=254						
Q19K	**Cape Douglas,**	**67.42**	**31**	P	**P**	**15 09 32.0**	**-0.8**
	baz=256						
N19K	**Bonanza Creek**	**67.51**	**29**	P	**P**	**15 09 33.0**	**-0.4**
	baz=254						
C18K	**Utukok River**	**67.61**	**20**	P	**P**	**15 09 34.0**	**+0.1**
	baz=244						
GCSA	**Galena City Sc**	**67.68**	**24**	P	**P**	**15 09 34.0**	**-0.3**
	baz=250						
KDAK	**Kodiak Island**	**67.69**	**32**	P	**P**	**15 09 33.7**	**-0.7**
	baz=257						
L19K	**White Mountain**	**67.73**	**27**	P	**P**	**15 09 34.5**	**-0.3**
	baz=253						
P19K	**Oil Pt**	**67.81**	**30**	P	**P**	**15 09 35.0**	**-0.3**
	baz=256						
J19K	**Poorman**	**67.95**	**25**	P	**P**	**15 09 36.2**	**+0.1**
	baz=252						
F19K	**Shaleruckik Mo**	**68.08**	**22**	P	**P**	**15 09 37.0**	**+0.2**
	baz=248						
G19K	**Purcell Mounta**	**68.08**	**23**	P	**P**	**15 09 37.0**	**+0.2**
	baz=249,SNR=6.3						
H19K	**Roundabout Mou**	**68.12**	**24**		**P**	**15 09 37.4**	**+0.4**
H19K	**Roundabout Mou**	**68.12**	**24**	P	**P**	**15 09 37.1**	**0.0**
	baz=250,SNR=6.5						
C19K	**Lookout Ridge**	**68.33**	**20**	P	**P**	**15 09 39.1**	**+0.7**
	baz=246						
BVAR	**Borovoye Array**	**68.35**	**322**	P	**P**	**15 09 39.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=98,slow=6.6,SNR=8.8						
	comp=Z,1.5nm,0.6s						
K20K	**Telida**	**68.42**	**26**	P	**P**	**15 09 39.1**	**+0.1**
	baz=253						
M20K	**Styx River**	**68.43**	**28**	P	**P**	**15 09 39.2**	**0.0**
	baz=255						
E19K	**Redstone River**	**68.50**	**22**	P	**P**	**15 09 40.2**	**+0.8**
E19K				IAmb	IAmb	15 09 41.0	
	comp=Z,4.0nm,0.8s						
E19K	**Redstone River**	**68.50**	**22**	P	**P**	**15 09 40.1**	**+0.6**
	baz=248						
D19K	**Kuna River**	**68.58**	**20**	P	**P**	**15 09 40.4**	**+0.5**
	baz=248						
HOM	**Homer**	**68.59**	**30**	P	**P**	**15 09 40.1**	**0.0**
	baz=257						
J20K	**Nowinta River**	**68.62**	**25**	P	**P**	**15 09 40.3**	**+0.1**
	baz=253						
I20K	**Naaghedeneel**	**68.67**	**25**	P	**P**	**15 09 40.2**	**-0.3**
	baz=252						
SPCR	**Spurr Chakacha**	**68.68**	**29**	P	**P**	**15 09 40.3**	**-0.4**
	baz=256						
H20K	**Anotleneega Mo**	**68.72**	**24**	P	**P**	**15 09 40.9**	**+0.1**
	baz=252						
F20K	**Avaraart Lake**	**68.91**	**22**	P	**P**	**15 09 42.5**	**+0.6**
F20K	**Avaraart Lake**	**68.91**	**22**	P	**P**	**15 09 42.3**	**+0.3**
	baz=250						
BRSE	**Bradley Lake S**	**69.06**	**30**	P	**P**	**15 09 42.2**	**-0.9**
	baz=258						
PPLA	**Purkeypile**	**69.11**	**27**	P	**P**	**15 09 42.7**	**-0.8**
	baz=255						
E20K	**Nigu River**	**69.16**	**21**	P	**P**	**15 09 44.2**	**+0.6**
	baz=250						
D20K	**Etivluk River**	**69.17**	**20**	P	**P**	**15 09 44.4**	**+0.8**
D20K	**Etivluk River**	**69.17**	**20**	P	**P**	**15 09 44.5**	**+0.8**
	baz=249						
SKT	**Skwentna**	**69.18**	**28**	P	**P**	**15 09 43.6**	**-0.3**
	baz=256						
CAST	**Castle Rocks**	**69.29**	**26**	P	**P**	**15 09 45.0**	**+0.5**
	baz=255						
CHUM	**Lake Minchumin**	**69.31**	**26**	P	**P**	**15 09 45.0**	**+0.4**
	baz=255						
B20K	**Meade River**	**69.47**	**19**	P	**P**	**15 09 46.4**	**+1.1**
	baz=248						
G21K	**Allakaket**	**69.57**	**23**	P	**P**	**15 09 46.6**	**+0.5**
	baz=253						
H21K	**Melozitna Rive**	**69.60**	**24**	IAmb	IAmb	15 09 47.8	
	comp=Z,3.5nm,0.9s						
H21K	**Melozitna Rive**	**69.60**	**24**	P	**P**	**15 09 46.3**	**0.0**
	baz=254						
O22K	**Cooper Landing**	**69.71**	**30**	P	**P**	**15 09 46.6**	**-0.4**
	baz=258						
SEW	**Seward**	**69.77**	**30**	P	**P**	**15 09 47.0**	**-0.4**
	baz=259						
F21K	**Alatna River**	**69.79**	**22**	P	**P**	**15 09 47.7**	**+0.2**
	baz=252						
I21K	**Tanana**	**69.80**	**25**	IAmb	IAmb	15 09 49.5	
	comp=Z,5.5nm,1.2s						
I21K	**Tanana**	**69.80**	**25**	P	**P**	**15 09 47.8**	**+0.3**
	baz=255						
RC01	**Rabbit Creek A**	**69.83**	**29**	P	**P**	**15 09 47.6**	**-0.2**
	baz=258						
CUT	**Chulitna**	**69.86**	**28**	P	**P**	**15 09 47.7**	**-0.2**
	baz=257						
C21K	**Knifeblade Rid**	**69.95**	**20**	P	**P**	**15 09 49.0**	**+0.6**
	baz=251						
E21K	**Killik River**	**69.99**	**21**	P	**P**	**15 09 49.0**	**+0.3**
	baz=252						
TRF	**Thorofare Moun**	**70.08**	**27**	P	**P**	**15 09 48.6**	**-0.9**
	baz=257						
A21K	**Barrow**	**70.13**	**18**	P	**P**	**15 09 50.6**	**+1.2**
	baz=248						
B21K	**Ikpikpuk River**	**70.16**	**20**	P	**P**	**15 09 49.7**	**+0.1**
	baz=251						
PMR	**Palmer**	**70.21**	**29**	P	**P**	**15 09 49.6**	**-0.5**
	baz=259						
H22K	**Ishlitna Cre**	**70.23**	**24**	P	**P**	**15 09 50.4**	**+0.2**
	baz=255						
MLY	**Manley**	**70.27**	**25**		**P**	**15 09 50.7**	**+0.3**
MLY				IAmb	IAmb	15 09 51.6	
	comp=Z,3.7nm,0.8s						
MLY	**Manley**	**70.27**	**25**	P	**P**	**15 09 50.5**	**0.0**
	baz=256,SNR=6.0						
F22K	**John River**	**70.36**	**22**	P	**P**	**15 09 51.7**	**+0.8**
	baz=254,SNR=6.4						
G22K	**Bettles**	**70.45**	**23**	P	**P**	**15 09 52.1**	**+0.7**
	baz=254						
KNK	**Knik Glacier**	**70.50**	**29**	P	**P**	**15 09 52.1**	**+0.2**
	baz=259						
A22K	**Sinclair Lake**	**70.52**	**18**	P	**P**	**15 09 52.6**	**+0.9**
	baz=250						
SML	**Sawmill**	**70.63**	**28**	P	**P**	**15 09 52.7**	**0.0**
	baz=259						
E22K	**Anaktuvuk Pass**	**70.67**	**22**	IAmb	IAmb	15 09 54.5	
	comp=Z,4.8nm,0.9s						
E22K	**Anaktuvuk Pass**	**70.67**	**22**	P	**P**	**15 09 53.2**	**+0.4**
	baz=254						
MCK	**McKinley**	**70.74**	**26**	P	**P**	**15 09 53.0**	**-0.4**
	baz=258						
P23K	**Montague Islan**	**70.76**	**30**	P	**P**	**15 09 53.5**	**0.0**
	baz=261						
B22K	**Teshekpuk Lake**	**70.78**	**19**	P	**P**	**15 09 54.2**	**+0.8**
	baz=252						
NEA2	**Nenana**	**70.86**	**26**	P	**P**	**15 09 54.3**	**+0.3**
	baz=258						
I23K	**Minto, Yukon-K**	**70.86**	**25**	IAmb	IAmb	15 09 55.2	
	comp=Z,3.1nm,0.7s						
I23K	**Minto, Yukon-K**	**70.86**	**25**	P	**P**	**15 09 54.3**	**+0.3**
	baz=257						
H23K	**Yukon River**	**70.94**	**24**	IAmb	IAmb	15 09 56.0	
	comp=Z,3.8nm,0.8s						
H23K	**Yukon River**	**70.94**	**24**	P	**P**	**15 09 55.0**	**+0.5**
	baz=257						
G23K	**Bananza Creek**	**70.96**	**23**	IAmb	IAmb	15 10 06.6	
	comp=Z,6.2nm,1.2s						
G23K	**Bananza Creek**	**70.96**	**23**	P	**P**	**15 09 55.1**	**+0.4**
	baz=256,SNR=5.2						
COLD	**Coldfoot**	**71.02**	**23**	IAmb	IAmb	15 09 56.7	
	comp=Z,4.8nm,0.9s						
COLD	**Coldfoot**	**71.02**	**23**	P	**P**	**15 09 55.5**	**+0.5**
	baz=256						
WAT6	**Susitna Watana**	**71.04**	**28**	P	**P**	**15 09 55.4**	**0.0**
	baz=260						
SCM	**Sheep Creek Mo**	**71.10**	**29**	P	**P**	**15 09 55.7**	**0.0**
	baz=260						
Q23K	**Middleton Isla**	**71.20**	**31**	P	**P**	**15 09 56.5**	**+0.3**
	baz=262						
D23K	**Nanushuk River**	**71.30**	**21**	IAmb	IAmb	15 09 58.7	
	comp=Z,6.3nm,1.0s						
D23K	**Nanushuk River**	**71.30**	**21**	P	**P**	**15 09 57.2**	**+0.6**
	baz=255						
DHY	**Denali Highway**	**71.30**	**27**	P	**P**	**15 09 57.2**	**+0.3**
	baz=260						
E23K	**Chandalar**	**71.44**	**22**		**P**	**15 09 58.8**	**+1.1**
E23K	**Chandalar**	**71.44**	**22**	P	**P**	**15 09 58.3**	**+0.7**
	baz=256,SNR=9.1						
C23K	**Itkillik River**	**71.55**	**20**	P	**P**	**15 09 58.9**	**+0.8**
	baz=254,SNR=5.3						
TOLK	**Toolik Lake Re**	**71.60**	**21**	P	**P**	**15 09 59.3**	**+0.8**
	baz=256						
H24K	**Noodor Dome**	**71.61**	**24**	P	**P**	**15 09 59.0**	**+0.3**
	baz=258						
POKR	**Poker Plat Res**	**71.65**	**25**	P	**P**	**15 09 59.3**	**+0.5**
	baz=259						
EYAK	**Cordova Ski Ar**	**71.66**	**30**	P	**P**	**15 09 59.1**	**+0.2**
	baz=262						
M24K	**Tolsona, Glenn**	**71.68**	**28**	P	**P**	**15 09 59.2**	**0.0**
	baz=261						
KLU	**Klutina**	**71.71**	**29**	P	**P**	**15 09 59.3**	**0.0**
	baz=262						
HDA	**Harding Lake**	**71.73**	**26**	P	**P**	**15 09 58.8**	**-0.5**
	baz=260						
ILAR	**Eielson Array**	**71.82**	**26**	P	**P**	**15 09 58.5**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=247,slow=6.1,SNR=27						
	comp=Z,1.8nm,0.6s						
ILAR	**Eielson Array**	**71.82**	**26**	P	**P**	**15 09 58.4**	**-1.5**
E24K	**Your Creek**	**71.86**	**22**	P	**P**	**15 10 00.7**	**+0.6**
	baz=257						
G24K	**Hadweenzic Riv**	**71.95**	**23**	P	**P**	**15 10 01.3**	**+0.7**
	baz=258						
F24K	**Squaw Lake**	**71.96**	**23**	P	**P**	**15 10 01.3**	**+0.6**
	baz=258						
D24K	**Happy Valley**	**71.99**	**21**	P	**P**	**15 10 01.6**	**+0.9**
	baz=256,SNR=6.1						
K24K	**Donnelly Dome**	**72.13**	**27**	P	**P**	**15 10 01.5**	**-0.2**
	baz=261						
HARP	**HAARP**	**72.20**	**28**	P	**P**	**15 10 01.2**	**-1.0**
	baz=262						
KAIM	**Kayak Island**	**72.24**	**31**	P	**P**	**15 10 02.4**	**0.0**
	baz=263						
BMRM	**Bremner River**	**72.27**	**30**	P	**P**	**15 10 02.6**	**-0.1**
	baz=263						
N25K	**Chitina, Valde**	**72.35**	**29**	P	**P**	**15 10 03.2**	**0.0**
	baz=263						
J25K	**Salcha River,**	**72.43**	**26**	P	**P**	**15 10 03.6**	**0.0**
	baz=261						
G25K	**Bearman Lake**	**72.50**	**24**	P	**P**	**15 10 04.1**	**+0.3**
	baz=260						
PRP	**Porcupine Dome**	**72.51**	**25**	P	**P**	**15 10 04.1**	**0.0**
	baz=261						
RIDG	**Independent Ri**	**72.53**	**27**	P	**P**	**15 10 03.9**	**-0.2**
	baz=262						
F25K	**Christian Rive**	**72.82**	**23**	P	**P**	**15 10 06.2**	**+0.3**
	baz=260						
D25K	**Kavik River**	**72.88**	**21**	IAmb	IAmb	15 10 07.6	
	comp=Z,3.6nm,0.9s						
D25K	**Kavik River**	**72.88**	**21**	P	**P**	**15 10 06.7**	**+0.5**
	baz=259,SNR=5.0						
SCRK	**Sand Creek**	**72.94**	**27**	P	**P**	**15 10 06.5**	**-0.2**
	baz=262						
E25K	**Arctic Village**	**72.94**	**22**	P	**P**	**15 10 07.1**	**+0.6**
	baz=260						
CRQE	**Cirque**	**72.98**	**30**	P	**P**	**15 10 07.7**	**+0.7**
	baz=264						
MCARA	**McCarthy VSAT**	**73.08**	**29**	P	**P**	**15 10 07.3**	**-0.1**
	baz=264						
L26K	**Log Cabin Wild**	**73.11**	**28**	P	**P**	**15 10 07.8**	**+0.2**
	baz=263						
M26K	**Nabesna, AK**	**73.20**	**28**	P	**P**	**15 10 08.4**	**+0.2**
	baz=264						
F26K	**Sheenjek River**	**73.40**	**23**	IAmb	IAmb	15 10 11.2	
	comp=Z,4.2nm,0.8s						
F26K	**Sheenjek River**	**73.40**	**23**	P	**P**	**15 10 09.9**	**+0.6**
	baz=261,SNR=6.0						
G26K	**Porcupine Rive**	**73.43**	**23**	P	**P**	**15 10 09.8**	**+0.5**
	baz=262						
C26K	**Camden Bay**	**73.49**	**20**	P	**P**	**15 10 10.6**	**+0.9**
	baz=260						
M27K	**Edge Creek, AK**	**73.71**	**28**	P	**P**	**15 10 10.8**	**-0.4**
	baz=265						
C27K	**Jago River**	**73.86**	**21**	P	**P**	**15 10 12.7**	**+0.8**
C27K				IAmb	IAmb	15 10 21.2	

	baz=267							
HYT	**Haines Junctio**	**75.72**	**30**	P		**P**	**15 10 23.3**	**+0.3**
	baz=269							
K29M	**Barlow Dome**	**75.78**	**27**	P		**P**	**15 10 23.8**	**+0.6**
	baz=268							
E29M	**Blow River**	**75.81**	**22**	P		**P**	**15 10 24.3**	**+1.2**
	baz=267							
N30M	**Aishikik Lake**	**75.93**	**29**	P		**P**	**15 10 24.6**	**+0.5**
	baz=269							
P30M	**Million Dollar**	**75.98**	**31**	P		**P**	**15 10 24.6**	**+0.2**
	baz=270							
M30M	**Minto, Yukon**	**76.08**	**28**	P		**P**	**15 10 25.2**	**+0.4**
	baz=269							
EPYK	**Eagle Plains**	**76.19**	**24**	P		**P**	**15 10 25.9**	**+0.6**
	baz=268							
PLBC	**Pleasant Camp**	**76.29**	**31**	P		**P**	**15 10 26.3**	**+0.3**
	baz=270							
I30M	**Mount Dempster**	**76.30**	**26**	P		**P**	**15 10 26.3**	**+0.2**
	baz=269							
J30M	**Hart River**	**76.31**	**26**	P		**P**	**15 10 26.6**	**+0.3**
	baz=269							
S31K	**Pelican**	**76.38**	**33**	P		**P**	**15 10 26.5**	**0.0**
	baz=271							
G30M	**tAoh Zraii Nji**	**76.40**	**24**	IAmb		IAmb	15 10 27.5	
	comp=Z,6.8nm,0.9s							
G30M	**tAoh Zraii Nji**	**76.40**	**24**	P		**P**	**15 10 26.9**	**+0.3**
	baz=269							
O30N	**Mendenhall**	**76.41**	**30**	P		**P**	**15 10 27.0**	**+0.2**
	baz=270							
N31M	**Braeburn, Yuko**	**76.56**	**29**	P		**P**	**15 10 27.8**	**+0.2**
	baz=271							
F30M	**Barrier River**	**76.58**	**23**	P		**P**	**15 10 28.1**	**+0.6**
	baz=269							
SKAG	**Skagway**	**76.82**	**31**	P		**P**	**15 10 29.2**	**+0.2**
	baz=271							
SIT	**Sitka**	**76.89**	**34**	P		**P**	**15 10 29.9**	**+0.5**
	baz=272							
WHY	**Whitehorse**	**77.01**	**30**	P		**P**	**15 10 30.3**	**+0.1**
	baz=272							
H31M	**Peel River**	**77.15**	**25**	P		**P**	**15 10 31.1**	**+0.3**
	baz=271							
G31M	**Satah River**	**77.17**	**24**			**P**	**15 10 30.6**	**-0.1**
G31M				IAmb		IAmb	15 10 31.6	
	comp=Z,6.2nm,0.9s							
G31M	**Satah River**	**77.17**	**24**	P		**P**	**15 10 31.2**	**+0.4**
	baz=271							
M31M	**Drury Creek, Y**	**77.20**	**29**	P		**P**	**15 10 31.3**	**+0.1**
	baz=272							
R32K	**Eaglecrest**	**77.28**	**33**	P		**P**	**15 10 31.5**	**-0.2**
	baz=272							
S32K	**Killisnoo**	**77.28**	**33**	P		**P**	**15 10 31.2**	**-0.4**
	baz=272							
F31M	**Tsiigehtchic**	**77.36**	**23**	P		**P**	**15 10 32.1**	**+0.2**
	baz=271							
INK	**Inuvik**	**77.43**	**22**	P		**P**	**15 10 32.9**	**+0.6**
	baz=271							
P32M	**Atlin**	**77.63**	**31**	P		**P**	**15 10 33.8**	**+0.1**
	baz=273							
P33M	**Teslin, Yukon**	**78.05**	**31**	P		**P**	**15 10 36.0**	**-0.1**
	baz=273							
U33K	**Whale Pass**	**78.16**	**35**	P		**P**	**15 10 36.3**	**-0.2**
	baz=274							
CRAG	**Craig**	**78.20**	**35**	P		**P**	**15 10 36.9**	**+0.1**
	baz=274							
Q32M	**Nakina River**	**78.41**	**32**	P		**P**	**15 10 38.2**	**0.0**
	baz=274							
WRAK	**Wrangell Islan**	**78.56**	**34**	P		**P**	**15 10 38.9**	**+0.1**
	baz=275							
MMPY	**Sheldon Lake,**	**78.64**	**28**	P		**P**	**15 10 39.8**	**+0.6**
	baz=274							
R33M	**Jennings River**	**79.05**	**31**	P		**P**	**15 10 41.8**	**+0.2**
	baz=275							
DLBC	**Dease Lake**	**79.62**	**32**	P		**P**	**15 10 44.5**	**-0.2**
	baz=276							
T35M	**Bob Quinn**	**79.66**	**34**	P		**P**	**15 10 44.7**	**-0.1**
	baz=276							
C36M	**Paulatuk**	**80.75**	**21**	P		**P**	**15 10 50.6**	**+0.1**
	baz=280							
WRGLY	**Wrigley**	**82.09**	**27**	P		**P**	**15 10 58.4**	**+0.7**
	baz=281							
KOTAN	**Kotaneelee Air**	**82.41**	**30**	P		**P**	**15 11 00.1**	**+0.7**
	baz=281							
YKAW1	**Yellowknife Wh**	**86.26**	**27**	P		**P**	**15 11 16.7**	**-2.2**
FINES	**FINESS Array B**	**90.58**	**334**	P		**P**	**15 11 38.3**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=79,slow=5.1,SNR=14							
FINES				LR		LR	15 55 03.8	
	comp=Z,38nm,19.1s,baz=80,slow=37							
	comp=Z,1.9nm,0.5s							
EIL	**Elat**	**97.05**	**302**	LR		LR	15 59 20.7	
	comp=Z,34nm,19.0s,baz=235,slow=38							

*IDC **14** 14:59:09.1±0.9,49°.95S×122°.61E,h0km,mb4.0/6, mbtmp4.1/7, ML2.4/1, MS3.9/14, Error ellipse: s-maj=43.0km s-min=17.7km az=97.0*
*NEIC **14** 14:59:10.4±1.1,50°.01S±0°.04×122°.5E±0°.4,h10km±2km, mb4.3/9, Error ellipse: s-maj=38.1km s-min=6.0km az=88.0*

ISC 14 14:59:10.4±0.7,49°.98S±0°.09×122°.6E±0°.2,h10km,n34, σ0s68/19,mb4.1/7,MS3.9/14,1C,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
H01W1	**Cape Leeuwin H**	**16.29**	**335**	T	T	15 19 27.6		
	baz=159,slow=74,SNR=100							
H01W2	**Cape Leeuwin H**	**16.29**	**335**	T	T	15 19 35.7		
	baz=159,slow=74,SNR=99							
H01W3	**Cape Leeuwin H**	**16.30**	**335**	T	T	15 19 42.9		
	baz=159,slow=74,SNR=92							
CASY	**Casey**	**17.47**	**196**	Pn	**Pn**	**15 03 13.0**		**-0.8**
NWAO	**Narrogin (SRO)**	**17.49**	**345**	P	**P**	**15 03 15.2**		**-0.2**
	0.6nm,0.3s,baz=166,slow=12,SNR=6.5							
	12nm,0.7s							
NWAO	**Narrogin (SRO)**	**17.49**	**345**	P	**P**	**15 03 15.4**		**0.0**
NWAO				IAmb	IAmb	15 03 30.4		
	comp=Z,45nm,1.2s							
MGBR	**Mount Gambier**	**17.80**	**53**	P	**P**	**15 03 19.0**		**+0.2**
STKA	**Stephens Creek**	**23.00**	**45**	P	**P**	**15 04 15.9**		**+0.7**
	comp=Z,2.1nm,0.7s,baz=187,slow=7.4,SNR=6.1							
STKA				LR	LR	15 11 28.6		
	comp=Z,200nm,19.2s,baz=213,slow=32							
	comp=Z,2.1nm,0.7s							
ASAR	**Alice Springs**	**27.73**	**23**	P	**P**	**15 04 58.1**		**-0.8**
	comp=Z,1.4nm,0.8s,baz=198,slow=9.2,SNR=9.3							
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**27.73**	**23**	P	**P**	**15 04 58.5**		**-0.4**
AS31	**Alice Springs**	**27.73**	**23**	P	**P**	**15 04 59.0**		**0.0**
VNDA	**Vanda**	**31.34**	**165**	P	**P**	**15 05 29.7**		**-0.7**
	comp=Z,1.4nm,1.0s,baz=295,slow=7.7,SNR=4.4							
VNDA				LR	LR	15 17 23.1		
	comp=Z,355nm,19.0s,baz=322,slow=35							
	comp=Z,1.4nm,1.0s							
VNDA	**Vanda**	**31.34**	**165**	P	**P**	**15 05 29.7**		**-0.7**
VNDA				IAmb	IAmb	15 06 11.9		
	comp=Z,2.9nm,1.1s							
FITZ	**Fitzroy Crossi**	**31.91**	**6**	LR	LR	15 17 00.5		
	comp=Z,184nm,21.4s,baz=182,slow=34							
BATI	**Baumata**	**39.66**	**2**	LR	LR	15 23 30.1		
	comp=Z,499nm,18.8s,baz=223,slow=37							
QSPA	**South Pole Qui**	**40.14**	**180**	P	**P**	**15 06 47.1**		**+0.9**
	comp=Z,5.0nm,1.0s,baz=311,slow=1.5,SNR=12							
QSPA				LR	LR	15 22 10.2		
	comp=Z,236nm,21.1s,baz=16,slow=34							
	comp=Z,5.0nm,1.0s							
QSPA	**South Pole Qui**	**40.14**	**180**	P	**P**	**15 06 46.9**		**+0.8**
QSPA				IAmb	IAmb	15 06 53.5		
	comp=Z,7.8nm,1.1s							
LEM	**Lembang**	**44.80**	**339**	LR	LR	15 24 01.2		
	comp=Z,154nm,20.4s,baz=162,slow=33							
KAPI	**Kappang**	**44.88**	**356**	LR	LR	15 28 12.4		
	comp=Z,153nm,18.3s,baz=178,slow=39							
SIJI	**Sorong**	**49.49**	**11**	LR	LR	15 31 09.4		
	comp=Z,54nm,18.0s,baz=243,slow=39							
BELA	**Belgrano 2**	**51.63**	**186**	P	**P**	**15 08 15.8**		**-0.6**
SNAA	**Sanae**	**52.69**	**199**	⇑P	**P**	**15 08 25.3**		**+1.0**
	comp=Z,80nm,0.8s							
SNAA	**Sanae**	**52.69**	**199**	P	**P**	**15 08 25.4**		**+1.0**
	comp=Z,4.5nm,0.9s,baz=147,slow=9.1,SNR=8.1							
	comp=Z,4.5nm,0.9s							
SNAA	**Sanae**	**52.69**	**199**		**P**	**15 08 24.9**		**+0.5**
SNAA				IAmb	IAmb	15 08 28.1		
	comp=Z,5.5nm,1.0s							
MSVF	**Nonsavu**	**54.57**	**75**	LR	LR	15 28 20.5		
	comp=Z,80nm,18.4s,baz=176,slow=32							
DAV	**Davao City (W)**	**56.88**	**4**	LR	LR	15 34 20.6		
	comp=Z,62nm,18.1s,baz=150,slow=37							

CMAR	**Chiang Mai Arr**	**71.27**	**336**	P	**P**	**15 10 29.7**		**0.0**
	comp=Z,1.2nm,0.7s,baz=188,slow=5.5,SNR=9.3							
CMAR				LR	LR	15 41 28.4		
	comp=Z,52nm,18.7s,baz=175,slow=36							
	comp=Z,1.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**71.27**	**336**		**P**	**15 10 29.3**		**-0.5**
CHTO	**Chiang Mai**	**71.61**	**336**	P	**P**	**15 10 32.2**		**+0.4**
CHTO				IAmb	IAmb	15 10 34.6		
	comp=Z,4.5nm,1.2s							
MATP	**Matopo**	**77.17**	**254**	LR	LR	15 37 26.1		
	comp=Z,97nm,18.8s,baz=34,slow=30							
BRDH	**Bariadhala**	**77.36**	**331**	LR	LR	15 44 06.1		
	comp=Z,177nm,18.9s,baz=180,slow=35							
KSRS	**Korea Array**	**87.19**	**4**	LR	LR	15 55 55.3		
	comp=Z,18nm,18.0s,baz=195,slow=39							
H10S2	**ASCENSION HYDR**	**10.47**	**226**	T	T	17 18 41.7		
	baz=150,slow=74,SNR=5.4							
H10S3	**ASCENSION HYDR**	**10.49**	**226**	T	T	17 18 45.4		
	baz=70,slow=74,SNR=6.6							

*DNK **14** 15:18:45.6±1.9,53°.19N×6°.65E,h28km±8km,ML2.0, Presumed earthquake*
*BER **14** 15:18:46.2±1.9,53°.27N×6°.66E,h3km,ML1.3*
*UCC **14** 15:18:46.8,53°.31N×6°.46E,h3km,ML2.9*
*BGR **14** 15:18:47.8±0.4,53°.37N×6°.57E,h3km,ML2.6/8, Error ellipse: s-maj=7.8km s-min=4.4km az=113.0*
*BNS **14** 15:18:49.6±0.7,53°.22N×6°.56E,h3km,ML2.4*

ISC 14 15:18:44.9±0.8,53°.44N±0°.03×6°.74E±0°.05,h0km,n58, σ1s73/109,9D,The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
RAST	**Rastdorf**	**0.79**	**131**	*e*Pg	**Pn**	**15 19 04.3**		**+1.1**
	SNR=1.9							
RAST				*e*Sg	**Sn**	**15 19 16.9**		**+1.1**
	SNR=3.3							
HLG	**Helgoland**	**1.01**	**42**	*i* P	**Pn**	**15 19 08.1**		**+1.8**
HLG				*i* S	**Sn**	**15 19 23.4**		**+2.2**
HLG	**Helgoland**	**1.01**	**42**	*e*Pg	**Pn**	**15 19 08.7**		**+2.3**
	SNR=1.2							
HLG				*e*Sg	**Sn**	**15 19 24.3**		**+3.1**
	SNR=1.8							
HLG	**Helgoland**	**1.01**	**42**	*i* P	**Pn**	**15 19 08.1**		**+1.8**
HLG				*i* S	**Sn**	**15 19 23.4**		**+2.2**
IBBN	**Ibbenburen**	**1.29**	**151**	*e*Pg	**Pn**	**15 19 11.4**		**+1.3**
	SNR=5.0							
IBBN				*e*Sg	**Sn**	**15 19 28.8**		**+0.8**
	SNR=2.9							
WTSB	**Winterswijk**	**1.47**	**178**	*e*Pn	**Pn**	**15 19 12.2**		**-0.4**
WTSB				*e*Pg	**Pb**	**15 19 14.1**		**+1.0**
	SNR=5.2							
WTSB				*e*Sn	**Sg**	**15 19 30.4**		**-1.7**
WTSB				*e*Sg	**Sb**	**15 19 32.2**		**-0.1**
	SNR=2.6							
RETH	**Rethem/Aller,**	**1.73**	**113**	*e*Pn	**Pb**	**15 19 17.5**		**0.0**
BUG	**Bochum--Univer**	**2.02**	**171**	*e*Pn	**Pn**	**15 19 20.1**		**-0.1**
BUG				*e*Sg	**Sg**	**15 19 49.9**		**+0.1**
	SNR=2.3							
KASTN	**Kahler Asten**	**2.46**	**155**	*e*Pn	**Pb**	**15 19 29.5**		**-0.5**
KASTN				*e*Pg	**Pg**	**15 19 34.5**		**+2.5**
	SNR=8.0							
KASTN				*e*Sg	**Sg**	**15 20 03.6**		**-0.3**
	SNR=1.9							
HOBG	**Hohbusch**	**2.48**	**171**	*e*Pn	**Pn**	**15 19 26.9**		**+0.4**
HOBG				*e*Sn	**Sn**	**15 19 55.5**		**-2.0**
	43nm,0.2s							
HGN	**Heimansgroeve**	**2.72**	**191**	*e*Pn	**Pn**	**15 19 30.1**		**+0.3**
HGN				*e*Pg	**Pg**	**15 19 37.7**		**+0.7**
	SNR=1.0							
HGN				*e*Sn	**Sn**	**15 20 00.9**		**-2.5**
	SNR=2.1							
BEBN	**Eben Emael**	**2.72**	**194**	*d*P	**Pn**	**15 19 31.4**		**+1.6**
ASSE	**Asse, Remlinge**	**2.73**	**117**	*e*Pn	**Pn**	**15 19 30.6**		**+0.8**
ASSE				*e*Sn	**Sn**	**15 20 02.9**		**-0.4**
	SNR=1.9							
DREG	**Dreilaegerbach**	**2.79**	**187**	*e*Pn	**Pn**	**15 19 30.0**		**-0.8**
DREG				*e*Sn	**Sn**	**15 20 01.8**		**-3.4**
	13nm,0.1s							
KLL	**Kalltalsperre**	**2.81**	**186**	*e*Pn	**Pn**	**15 19 30.4**		**-0.6**
KLL				*e*Sn	**Sn**	**15 20 01.5**		**-4.0**
	12nm,0.2s							
STB	**Steinbach**	**2.85**	**179**	*e*Pn	**Pn**	**15 19 31.2**		**-0.3**
STB				*e*Sn	**Sn**	**15 20 03.0**		**-3.5**
	13nm,0.4s							
MEM	**Membach**	**2.87**	**189**	*d*P	**Pn**	**15 19 32.0**		**+0.2**
MEM				*d*S	**Sn**	**15 20 04.3**		**-2.7**
KOE	**Koeppel**	**3.08**	**168**	*e*Pn	**Pn**	**15 19 35.2**		**+0.5**
KOE				*e*Sn	**Sn**	**15 20 09.6**		**-2.6**
	12nm,0.4s							
HILG	**Hillesheim**	**3.15**	**181**	*e*Pn	**Pn**	**15 19 36.2**		**+0.5**
BGES	**Gesves**	**3.22**	**199**	*d*P	**Pn**	**15 19 36.0**		**-0.6**
BGES				*d*S	**Sn**	**15 20 14.1**		**-1.7**
BGG	**Burgeitz**	**3.26**	**173**	*e*Pn	**Pn**	**15 19 38.0**		**+0.9**
BGG				*e*Sn	**Sn**	**15 20 13.8**		**-2.7**
LKLB	**Kalborn**	**3.36**	**187**	*d*P	**Pn**	**15 19 38.9**		**+0.3**
LKLB				*d*S	**Sn**	**15 20 15.3**		**-3.9**
TNS	**Taunus Mts**	**3.39**	**161**	*e*Pn	**Pn**	**15 19 40.1**		**+1.1**
RCHB	**Rochefort**	**3.42**	**197**	*e*Pn	**Pn**	**15 19 40.4**		**+1.1**
RCHB				*e*Sn	**Sn**	**15 20 18.1**		**-2.4**
	SNR=2.4							
DOU	**Dourbes**	**3.60**	**203**	*d*P	**Pn**	**15 19 42.2**		**+0.3**
DOU				*d*S	**Sn**	**15 20 20.9**		**-4.1**
LUNU	**Lund**	**4.49**	**58**	*i* P	**Pn**	**15 19 55.3**		**+1.3**
LUNU				*i* S	**Sn**	**15 20 46.2**		**-0.6**
LUNU	**Lund**	**4.49**	**58**	*i* P	**Pn**	**15 19 55.3**		**+1.3**
LUNU				*i* S	**Sn**	**15 20 46.2**		**-0.6**
BJUU	**Bjuv**	**4.50**	**52**	*i* P	**Pn**	**15 19 54.8**		**+0.6**
BJUU				*i* S	**Sn**	**15 20 46.2**		**-0.9**
BJUU	**Bjuv**	**4.50**	**52**	*i* P	**Pn**	**15 19 54.8**		**+0.6**
BJUU				*i* S	**Sn**	**15 20 46.2**		**-0.9**
ONAU	**Onsala**	**4.95**	**35**	*e*P	**Pn**	**15 20 01.5**		**+1.2**
ONAU				*e*S	**Sn**	**15 20 56.1**		**-2.1**
ONAU	**Onsala**	**4.95**	**35**	*i* P	**Pn**	**15 20 00.2**		**-0.1**
ONAU				*e*P	**Pn**	**15 20 01.5**		**+1.2**
ONAU				*i* S	**Sn**	**15 20 55.9**		**-2.3**
ONAU				*e*S	**Sn**	**15 20 56.1**		**-2.1**
HOMB	**Homborsund**	**4.95**	**11**	*e*P	**Pn**	**15 20 01.9**		**+1.6**
HOMB				*e*S	**Sn**	**15 20 57.7**		**-0.5**
HOMB	**Homborsund**	**4.95**	**11**	*i* P	**Pn**	**15 20 00.0**		**-0.3**
HOMB				*e*P	**Pn**	**15 20 01.9**		**+1.6**
HOMB				*i* S	**Sn**	**15 20 56.6**		**-1.6**
HOMB				*e*S	**Sn**	**15 20 57.7**		**-0.5**
FABU	**Falkenberg**	**4.95**	**41**	*i* P	**Pn**	**15 19 59.6**		**-0.8**
FABU	**Falkenberg**	**4.95**	**41**	*i* P	**Pn**	**15 19 59.6**		**-0.8**
BSD	**Bornholm Skovb**	**5.08**	**67**	*e*S	**Sn**	**15 20 59.0**		**-2.4**
BSD				IAML		15 21 28.9		
	comp=Z,0.9nm,0.2s							
BSD	**Bornholm Skovb**	**5.08**	**67**	*e*S	**Sn**	**15 20 59.0**		**-2.4**
BSD				IAML		15 21 28.9		
	comp=Z,0.9nm,0.2s							
DEL	**Delary**	**5.11**	**51**	*i* P	**Pn**	**15 20 03.0**		**+0.4**
DEL				IAML		15 21 04.1		
	comp=Z,0.4nm,0.3s							
DEL	**Delary**	**5.11**	**51**	*i* P	**Pn**	**15 20 03.0**		**+0.4**
DEL				*i* P	**Pn**	**15 20 03.0**		**+0.4**
DEL				IAML		15 21 04.1		
	comp=Z,0.4nm,0.3s							
TJOU	**Tjoern**	**5.37**	**29**	*i* P	**Pn**	**15 20 07.4**		**+1.2**
TJOU				*i* S	**Sn**	**15 21 06.3**		**-2.3**
TJOU	**Tjoern**	**5.37**	**29**	*i* P	**Pn**	**15 20 07.4**		**+1.2**
TJOU				*i* S	**Sn**	**15 21 06.3**		**-2.3**
STAV	**Stavanger**	**5.54**	**354**	*e*P	**Pn**	**15 20 09.3**		**+0.7**
KMY	**Karmoy**	**5.85**	**352**	*e*P	**Pn**	**15 20 13.2**		**+0.5**
KMY				*e*S	**Sn**	**15 21 17.9**		**-2.5**
KMY				IAML		15 21 19.7		
	comp=Z,1.3nm,0.6s							
KMY	**Karmoy**	**5.85**	**352**	*e*P	**Pn**	**15 20 13.2**		**+0.5**
KMY				*e*S	**Sn**	**15 21 17.9**		**-2.5**
KMY				IAML		15 21 19.7		
	comp=Z,1.3nm,0.6s							
BLEU	**Blekinge**	**5.98**	**58**	*i* P	**Pn**	**15 20 14.0**		**-0.5**
BLEU	**Blekinge**	**5.98**	**58**	*i* P	**Pn**	**15 20 14.0**		**-0.5**
BLS5	**Blasjo**	**6.00**	**359**	*e*P	**Pn**	**15 20 16.9**		**+2.0**
BLS5	**Blasjo**	**6.00**	**359**	*e*P	**Pn**	**15 20 16.9**		**+2.0**
STRU	**Stroemstad**	**6.13**	**22**	*e*P	**Pn**	**15 20 18.0**		**+1.4**
STRU				*i* S	**Sn**	**15 21 23.5**		**-3.9**
STRU	**Stroemstad**	**6.13**	**22**	*i* P	**Pn**	**15 20 16.6**		**-0.1**
STRU				*e*P	**Pn**	**15 20 18.0**		**+1.4**
STRU				*i* S	**Sn**	**15 21 23.5**		**-3.9**
KONO	**Kongsberg**	**6.43**	**13**	*i* P	**Pn**	**15 20 20.4**		**-0.2**
KONO				*i* S	**Sn**	**15 21 31.9**		**-2.7**
KONO	**Kongsberg**	**6.43**	**13**	*i* P	**Pn**	**15 20 20.4**		**-0.2**
KONO				*e*P	**Pn**	**15 20 21.8**		**+1.2**
KONO				*i* S	**Sn**	**15 21 31.9**		**-2.7**
KONO				*e*S	**Sn**	**15 21 34.0**		**-0.6**
SKAR	**Skarslia**	**7.32**	**6**	*e*P	**Pn**	**15 20 33.6**		**+0.7**
SKAR	**Skarslia**	**7.32**	**6**	*e*P	**Pn**	**15 20 33.6**		**+0.7**
NC602	**NORSAR Array S**	**7.77**	**18**	*e*P	**Pn**	**15 20 38.9**		**-0.2**
NC602				*e*S	**Sn**	**15 22 04.9**		**-2.8**
NC602	**NORSAR Array S**	**7.77**	**18**	*e*P	**Pn**	**15 20 38.9**		**-0.2**
NC602				*e*S	**Sn**	**15 22 04.9**		**-2.8**
NC303	**NORSAR Array S**	**8.20**	**16**	*e*P	**Pn**	**15 20 45.8**		**+0.8**
NC303	**NORSAR Array S**	**8.20**	**16**	*e*P	**Pn**	**15 20 45.8**		**+0.8**

IDC 14 15:22:40.2±1.1,25°.65N×140°.55E,h0km,mb3.8/4, mbtmp3.9/5,ML4.2/1,Error ellipse: s-maj=52.8km s-min=20.8km az=107.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
JCJ	**Chichijima**	**2.05**	**45**	Pn	Pn	15 23 16.9		+0.8
	74nm,0.3s,baz=225,slow=7.1,SNR=36							
JCJ				Sn	Sn	15 23 37.1		-5.3
	90nm,0.3s,baz=283,slow=22,SNR=21							
	248nm,0.4s							
WRA	**Warramunga Arr**	**45.72**	**188**	P	P	15 31 03.3		0.0
	2.5nm,0.8s,baz=7.8,slow=8.6,SNR=17							
	2.5nm,0.8s							
ASAR	**Alice Springs**	**49.45**	**188**	P	P	15 31 32.1		-0.2
	0.2nm,0.6s,baz=16,slow=13,SNR=5.9							
	0.2nm,0.6s							
NRIK	**Noril'sk**	**53.47**	**339**	P	P	15 32 02.2		+0.4
	2.8nm,0.4s,baz=104,slow=5.8,SNR=4.6							
	2.8nm,0.4s							
ILAR	**Eielson Array**	**59.68**	**28**	P	P	15 32 45.1		-1.0
	0.4nm,0.8s,baz=274,slow=5.7,SNR=4.6							
	0.4nm,0.8s							

*WEL **14** 15:23:01.5±0.9,31°.5S×18°.0E±1°.6,h12km,M4.5/12, mB5.0/8, ML4.5/13, MLv4.7/12, Mw(mB)4.3/8, Error ellipse: s-maj=23.4km s-min=4.7km az=116.2*
*NOU **14** 15:23:35.2,33°.53S×177°.94E,h278km,mb3.6/5, North of New Zealand*

ISC 14 15:23:01.1±2.3,31°.1S±0°.2×179°.8E±0°.2,h10km,n55, σ2s16/58,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
GLKZ	**Green Lake**	**2.69**	**48**	S	**Sn**	**15 24 19.3**		**+2.2**
MXZ	**Matakaoa Point**	**6.57**	**190**	P	**Pn**	**15 24 40.6**		**+2.8**
MXZ	**Matakaoa Point**	**6.57**	**190**	P	**Pn**	**15 24 38.3**		**+0.5**
MXZ				S	**Sn**	**15 25 52.8**		**+0.1**
WMGZ	**Waiomatatini S**	**6.81**	**189**	P	**Pn**	**15 24 41.9**		**+0.9**
WMGZ				S	**Sn**	**15 25 59.8**		**+1.2**
HAZ	**Te Kaha**	**6.85**	**193**	P	**Pn**	**15 24 41.6**		**0.0**
HAZ				S	**Sn**	**15 26 04.6**		**+4.9**
PKGZ	**Pakihiroa**	**6.91**	**191**	P	**Pn**	**15 24 42.4**		**0.0**
RUGZ	**Raukumara Rang**	**7.08**	**194**	P	**Pn**	**15 24 45.2**		**+0.4**
RUGZ				S	**Sn**	**15 26 06.4**		**+1.0**
PUZ	**Puketiti**	**7.08**	**190**	P	**Pn**	**15 24 43.8**		**-1.0**
PUZ				S	**Sn**	**15 26 06.0**		**+0.8**
TWGZ	**Tauwhareparae**	**7.22**	**191**	P	**Pn**	**15 24 47.2**		**+0.4**
TWGZ				S	**Sn**	**15 26 11.0**		**+2.1**
MWZ	**Matawai**	**7.46**	**194**	P	**Pn**	**15 24 48.4**		**-1.6**
MWZ				S	**Sn**	**15 26 15.9**		**+1.2**
URZ	**Urewera**	**7.48**	**196**	P	**Pn**	**15 24 49.2**		**-1.1**
URZ	**Urewera**	**7.48**	**196**	P	**Pn**	**15 24 49.6**		**-0.7**
URZ				S	**Sn**	**15 26 17.1**		**+1.9**
CNGZ	**Carnagh Statio**	**7.49**	**190**	P	**Pn**	**15 24 49.7**		**-0.7**
TKGZ	**Te Karaka**	**7.50**	**192**	P	**Pn**	**15 24 51.0**		**+0.5**
TKGZ				S	**Sn**	**15 26 16.4**		**+0.7**
RAGZ	**Rawiri**	**7.64**	**194**	P	**Pn**	**15 24 53.1**		**+0.6**
MUGZ	**Murupara**	**7.78**	**198**	P	**Pn**	**15 24 53.9**		**-0.4**
MUGZ				S	**Sn**	**15 26 24.5**		**+2.1**
RIGZ	**Rimuhau**	**7.78**	**192**	P	**Pn**	**15 24 51.4**		**-3.0**
RIGZ				S	**Sn**	**15 26 21.8**		**-0.7**
RTZ	**Ruatahuna**	**7.85**	**196**	P	**Pn**	**15 24 53.6**		**-1.8**
RTZ				S	**Sn**	**15 26 24.3**		**-0.2**
SNGZ	**Shannon Statio**	**7.93**	**194**	P	**Pn**	**15 24 54.6**		**-1.9**
SNGZ				S	**Sn**	**15 26 25.6**		**-0.7**
PRGZ	**Paritu Road**	**7.97**	**191**	P	**Pn**	**15 24 57.7**		**+0.7**
TLZ	**Tolley Road**	**8.02**	**205**	P	**Pn**	**15 25 01.8**		**+4.0**
MTHZ	**Maungataniwha**	**8.11**	**197**

comp=Z,117nm,19.9s,baz=156,slow=32
TBI Tubuai 46.42 41 *e*T T 16 38 33.1
4.4nm,0.2s
MSVF Nonsavu 47.48 358 LR LR 16 07 36.4
comp=Z,55nm,18.5s,baz=197,slow=34
H01W1 Cape Leeuwin H 48.66 275 T T 16 42 08.0
baz=149,slow=76,SNR=19
H01W2 Cape Leeuwin H 48.66 275 T T 16 42 10.0
baz=149,slow=76,SNR=16
H01W3 Cape Leeuwin H 48.67 275 T T 16 42 09.8
baz=149,slow=76,SNR=20
NWAO Narrogin (SRO) 49.06 280 LR LR 16 05 10.0
comp=Z,402nm,21.0s,baz=132,slow=30
CTA Charters Tower 50.17 318 LR LR 16 06 41.5
comp=Z,150nm,21.2s,baz=162,slow=31
ASAR Alice Springs 50.80 302 P **P** **15 49 40.6 -0.1**
1.4nm,0.6s,baz=155,slow=7.2,SNR=22
ASAR LR LR 16 09 56.8
comp=Z,149nm,18.3s,baz=160,slow=35
1.4nm,0.6s
TVO Taravao 51.78 39 *e*T T 16 45 15.2
4.0nm,0.2s
PAE Paea 51.81 38 *e*T T 16 45 15.9
3.0nm,0.2s
PPT2 Papeete2 51.88 38 *e*LR LR 16 04 06.5
52nm,21.8s
PPT Papeete 51.90 38 LR LR 16 06 01.4
comp=Z,56nm,18.6s,baz=130,slow=29
WRA Warramunga Arr 54.08 304 P **P** **15 50 04.9 -0.1**
2.5nm,1.0s,baz=157,slow=6.5,SNR=9.6
2.5nm,1.0s
VAH Vaihoa 54.65 40 *e*T T 16 48 53.0
14nm,0.2s
HNR Honiara 57.38 337 LR LR 16 11 05.3
comp=Z,14nm,20.5s,baz=272,slow=32
RPN Rapa Nui 57.80 85 LR LR 16 10 13.2
comp=Z,119nm,18.1s,baz=192,slow=31
FITZ Fitzroy Crossi 58.94 296 LR LR 16 11 51.5
comp=Z,185nm,21.9s,baz=176,slow=32
PMG Port Moresby 60.12 322 LR LR 16 11 50.9
comp=Z,245nm,21.4s,baz=162,slow=31
PLCA Paso Flores 61.27 125 LR LR 16 11 12.4
comp=Z,115nm,20.4s,baz=200,slow=30
H03S2 Juan Fernandez 64.36 115 T T 17 01 48.1
baz=205,slow=74,SNR=17
H03S1 Juan Fernandez 64.36 115 T T 17 01 49.4
baz=205,slow=74,SNR=16
H03S3 Juan Fernandez 64.38 115 T T 17 01 51.4
baz=205,slow=74,SNR=20
H03N3 Juan Fernandez 64.70 115 T T 17 02 16.3
baz=212,slow=73,SNR=9.9
H03N2 Juan Fernandez 64.71 115 T T 17 02 15.7
baz=212,slow=73,SNR=28
H03N1 Juan Fernandez 64.72 115 T T 17 02 16.5
baz=212,slow=73,SNR=8.3
JAY Jayapura 68.46 318 LR LR 16 18 39.6
comp=Z,128nm,19.5s,baz=206,slow=33
SIJI Sorong 72.91 309 LR LR 16 25 22.1
comp=Z,77nm,18.2s,baz=117,slow=37
KAPI Kappang 73.16 296 LR LR 16 21 59.7
comp=Z,96nm,18.1s,baz=162,slow=34
LEM Lembang 76.31 284 LR LR 16 21 25.4
comp=Z,106nm,20.0s,baz=173,slow=32
CPUP Villa Florida 78.83 130 LR LR 16 23 21.7
comp=Z,50nm,21.1s,baz=248,slow=32
SUR Sutherland 81.30 198 LR LR 16 25 23.8
comp=Z,125nm,20.4s,baz=157,slow=33
DAV Davao City (W) 82.25 306 LR LR 16 29 24.9
comp=Z,37nm,19.3s,baz=159,slow=36
LPAZ La Paz 84.30 117 LR LR 16 22 10.3
comp=Z,68nm,21.3s,baz=206,slow=30
LBTB Lobatse 87.82 203 LR LR 16 31 07.0
comp=Z,45nm,18.5s,baz=154,slow=34
ATAH Atahualpa 88.59 104 LR LR 16 23 57.2
comp=Z,162nm,21.0s,baz=209,slow=29
TGY Tagaytay City 90.39 304 LR LR 16 35 34.8
comp=Z,40nm,18.8s,baz=192,slow=36
BDFB Brasilia 91.76 135 LR LR 16 31 39.5
comp=Z,69nm,21.6s,baz=161,slow=33
MATP Matopo 91.78 207 LR LR 16 31 09.4
comp=Z,108nm,19.9s,baz=120,slow=33
TSUM Tsumeb 94.70 197 LR LR 16 34 23.3
comp=Z,123nm,19.4s,baz=182,slow=34
JCJ Chichijima 96.46 327 LR LR 16 31 24.3
comp=Z,84nm,18.4s,baz=98,slow=32
ILAR Eielson Array 131.99 19 PKP **PKiKP** **15 59 53.1 -0.1**
2.6nm,1.0s,baz=226,slow=2.4,SNR=5.4
BRTR Keskin Array B 147.82 234 PKPbc **PKPbc** **16 00 25.2 +0.6**
0.9nm,0.4s,baz=141,slow=4.1,SNR=8.4

IDC 14 15:52:43.4±2.4, 65°14S×178°50E, h0km, mb3.7/2, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=79.6km s-min=40.1km az=69.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.43 196**		Pn		Pn	Pn	15 55 53.2	-1.7
	baz=34,slow=14,SNR=7.1								
	0.3nm,0.6s								
H01W1	**Cape Leeuwin H**	**48.20 276**		T		T	T	16 54 00.9	
	baz=149								
H01W2	**Cape Leeuwin H**	**48.20 276**		T		T	T	16 54 11.7	
	baz=149								
H01W3	**Cape Leeuwin H**	**48.22 276**		T		T	T	16 54 09.8	
	baz=149								
ASAR	**Alice Springs**	**50.38 303**		P		P	P	16 01 42.1	0.0
	0.6nm,0.6s,baz=158,slow=8.1,SNR=16								
	0.6nm,0.6s								
WRA	**Warramunga Arr**	**53.66 306**		P		P	P	16 02 06.0	-0.5
	0.8nm,0.9s,baz=162,slow=7.4,SNR=7.0								
	0.8nm,0.9s								
ILAR	**Eielson Array**	**132.04 19**		PKP		PKPdf	PKPdf	16 11 55.3	-1.7
	0.7nm,0.9s,baz=211,slow=4.4,SNR=4.1								
BRTR	**Keskin Array B**	**147.51 236**		PKPbc		PKPbc	PKPbc	16 12 29.4	+0.8
	0.8nm,0.6s,baz=134,slow=4.2,SNR=5.3								

*JMA **14** 16:01:19.9±1.1, 45°N±5°×14°9E±°, h30km, MV3.6/12, SE OFF ETOROFU*
*SKHL **14** 16:01:20.4±0.4, 44°30N×149°00E, h33km±3km, mb4.4/4*
ISC 14 16:01:18.6±3.9, 44°35N±0°09×149°2E±0°2, h42km, n15, σ0s99/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
REI	**Reidovoe**	**1.23 319**		*i* P		P	**Pn**	**16 01 39.5**	**+0.3**
REI						AMB	AMB	16 01 40.5	
	90nm,0.3s								
REI				*e*S			**Sn**	**16 01 53.5**	**-1.1**
REI				A		A	A	16 01 54.4	
	400nm,0.3s								
REI				A		A	A	16 01 54.4	
	380nm,0.3s								
KUR	**Kuril'sk**	**1.28 314**		*i* P			**Pn**	**16 01 40.1**	**+0.2**
KUR						AMB	AMB	16 01 40.6	
	170nm,0.4s								
KUR				*i* S			**Sn**	**16 01 55.1**	**-0.7**
KUR				A		A	A	16 01 56.1	
	340nm,0.3s								
KUR				A		A	A	16 01 56.1	
	450nm,0.3s								
SHO	**Shikotan**	**1.74 255**		*e*P			Pn	16 01 58.6	+12
SHO						AMB	AMB	16 02 03.3	
	50nm,0.2s								
SHO				*e*S			Sn	16 02 17.7	+10
SHO				A		A	A	16 02 21.1	
	280nm,0.3s								
SHO				A		A	A	16 02 21.1	
	260nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**2.39 264**		*i* P			**Pn**	**16 01 55.7**	**+0.5**
YUK						AMB	AMB	16 01 58.4	
	70nm,0.3s								
YUK				*i* S			**Sn**	**16 02 22.3**	**-1.0**
YUK				A		A	A	16 02 27.6	
	330nm,0.4s								
YUK				A		A	A	16 02 27.6	
	300nm,0.4s								
NEM2	**Nemuro 2**	**2.66 249**		P		P	**Pn**	**16 01 58.8**	**-0.1**
NMR	**Nemuro--Hokkai**	**2.67 250**		*i* P		P	**Pn**	**16 01 59.0**	**0.0**
NMR				*e*S			**Sn**	**16 02 28.7**	**-1.3**
JRA	**Rausu**	**2.93 263**		P		P	**Pn**	**16 02 03.4**	**+0.8**
JRA				*e*S			**Sn**	**16 02 37.4**	**+0.7**
JNK	**Nakash**	**3.29 258**		P		P	**Pn**	**16 02 08.6**	**+0.9**
JNK				*e*S			**Sn**	**16 02 44.7**	**-0.9**
AKK	**Akkeshi**	**3.40 248**		*e*P		P	**Pn**	**16 02 09.6**	**+0.5**
JAK	**Akkeshi**	**3.51 249**		P		P	**Pn**	**16 02 10.3**	**-0.2**
JTKR	**Abashiri--Toko**	**3.80 266**		P		P	**Pn**	**16 02 16.8**	**+2.3**
JAR	**Ashorobuto**	**4.04 257**		P		P	**Pn**	**16 02 19.1**	**+1.2**
JOB	**Onbets**	**4.13 251**		P		P	**Pn**	**16 02 19.9**	**+0.8**
JCH	**Churui**	**4.56 250**		P		P	**Pn**	**16 02 25.9**	**+0.9**
JCH				*e*S			**Sn**	**16 03 15.5**	**-1.2**
JNBK	**Urakawa-nobuka**	**5.11 248**		P		P	**Pn**	**16 02 32.9**	**+0.4**

*BUL **14** 16:10:01.1±0.6, 18°.88S×25°.70E, h10km, MD3.1, Presumed earthquake*
*BGSI **14** 16:10:08.0±0.6, 18°.76S×26°.03E, h13km±7km, ML2.7, Presumed earthquake*
ISC 14 16:10:04.9±1.2, 18°.74S±0°.05×26°.17E±0°.07, h10km, n6, σ1s33/11, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSANE	**Kasane**	**1.34 314**		*i* P		P	**Pn**	**16 10 29.9**	**+0.1**
KSANE				*i* S			**Sb**	**16 10 45.5**	**-1.9**
KSANE				IAML				16 10 52.7	
	comp=N,161nm,0.2s								
SOOWA	**Sowa**	**1.82 179**		*i* P		P	**Pn**	**16 10 37.2**	**+0.8**
BROLN	**Tlhalogang**	**2.59 155**		*i* P		P	**Pn**	**16 10 48.4**	**+1.3**
BROLN				*i* S			**Sn**	**16 11 18.9**	**+0.1**
BROLN				IAML				16 11 28.4	
	comp=E,80nm,0.5s								
BLWY	**Bulawayo**	**2.69 122**		*i* P		P	**Pn**	**16 10 46.7**	**-1.8**
BLWY				*i* S			**Sn**	**16 11 20.6**	**-0.7**
MATP	**Matopo**	**2.77 128**		*i* P		P	**Pn**	**16 10 49.0**	**-0.4**
MATP				*i* S			**Sn**	**16 11 24.2**	**+1.2**
LSZ	**Lusaka**	**3.95 30**		*i* P		P	**Pn**	**16 11 06.7**	**+1.0**
LSZ				*i* S			**Sn**	**16 11 53.5**	**+1.3**

*IDC **14** 16:17:25.7±0.8, 65°.19S×179°.82E, h0km, mb4.1/6, mbtmp4.0/7, ML3.1/1, MS3.9/31, Error ellipse: s-maj=37.1km s-min=19.7km az=58.0*
*NEIC **14** 16:17:27.9±0.3, 65°.2S±0°.1×179°.7E±0°.3, h10km±1km, mb4.6/10, Error ellipse: s-maj=21.7km s-min=16.5km az=119.0*
*GCMT **14** 16:17:28.9±0.3, 65°.12S±0°.04×179°.78E±0°.07, h13km±1km, MW4.8/82, Moment Tensor Solution. s10,c12; s82,c103; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.12±.19; Mθθ=0.90±.11; Mϕϕ=1.22±.12; Mrθ=0.38±.40; Mrϕ=0.60±.07; Mθϕ=-0.03±.28; Best double couple: Mo=1.93000×10^16 NP1: ϕs=31.00000°, δ=42.00000°, λ=-100.00000°. NP2: ϕs=225.00000°, δ=49.00000°, λ=-81.00000°. Principal axes: T 1.6910, Plg3.0000°, Azm308.0000°; N 0.4770, Plg7.0000°, Azm39.0000°; P -2.1690, Plg82.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 16:17:27.4±0.6, 65°.20S±0°.10×179°.7E±0°.2, h10km, n69, σ0s98/33, mb4.3/9, MS4.0/31, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.30 192**					**Pn**	**16 20 35.8**	**-0.1**
VNDA	**Vanda**	**13.52 197**		Pn			**Pn**	**16 20 39.1**	**+0.2**
	0.1nm,0.3s,baz=46,slow=18,SNR=21								
VNDA						LR	LR	16 24 29.3	
	comp=Z,347nm,21.7s,baz=39,slow=31								
	1.8nm,0.8s								
RPZ	**Rata Peaks**	**22.07 343**				LR	LR	16 28 51.3	
	comp=Z,128nm,21.5s,baz=150,slow=31								
OXZ	**Oxford**	**22.34 345**		P			**P**	**16 22 25.2**	**+0.1**
OXZ						IAmb	IAmb	16 22 29.0	
	comp=Z,28nm,1.4s								
QSPA	**South Pole Qui**	**24.89 180**		P			**P**	**16 22 50.6**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=56,slow=2.1,SNR=7.9								
QSPA						LR	LR	16 31 37.3	
	comp=Z,521nm,18.8s,baz=40,slow=34								
	comp=Z,2.7nm,0.9s								
QSPA	**South Pole Qui**	**24.89 180**		P			**P**	**16 22 50.6**	**+0.5**
QSPA						IAmb	IAmb	16 22 58.7	
	comp=Z,19nm,1.2s								
URZ	**Urewera**	**27.02 355**		LR		LR	LR	16 32 19.4	
	comp=Z,284nm,19.6s,baz=154,slow=33								
RAO	**Raoul Island**	**35.99 4**		LR		LR	LR	16 37 09.7	
	comp=Z,89nm,18.7s,baz=124,slow=33								
MAW	**Mawson**	**40.14 212**		LR		LR	LR	16 41 29.2	
	comp=Z,184nm,18.9s,baz=116,slow=36								
STKA	**Stephens Creek**	**40.64 306**		P			**P**	**16 25 08.8**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=153,slow=6.8,SNR=3.8								
STKA						LR	LR	16 39 52.0	
	comp=Z,170nm,20.2s,baz=203,slow=33								
	comp=Z,1.0nm,0.3s								
PMSA	**Palmer Station**	**42.33 145**		LR		LR	LR	16 40 56.2	
	comp=Z,134nm,18.2s,baz=208,slow=33								
SNAA	**Sanae**	**43.38 179**		P			**P**	**16 25 29.9**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=176,slow=4.9,SNR=3.1								
SNAA						LR	LR	16 43 09.2	
	comp=Z,281nm,18.9s,baz=215,slow=36								
	comp=Z,0.7nm,0.5s								
SNAA	**Sanae**	**43.38 179**		P			**P**	**16 25 29.8**	**+0.5**
SNAA						IAmb	IAmb	16 25 36.7	
	comp=Z,8.2nm,1.3s								
RAR	**Rarotonga**	**45.99 27**		LR		LR	LR	16 43 05.1	
	comp=Z,103nm,18.3s,baz=282,slow=34								
MSVF	**Nonsavu**	**47.44 358**		P			**P**	**16 26 02.2**	**+0.2**
H01W1	**Cape Leeuwin H**	**48.72 275**		T		T	T	17 18 56.4	
	baz=149,slow=76,SNR=15								
H01W2	**Cape Leeuwin H**	**48.73 275**		T		T	T	17 18 58.6	
	baz=149,slow=76,SNR=17								
H01W3	**Cape Leeuwin H**	**48.74 275**		T		T	T	17 18 59.8	
	baz=149,slow=76,SNR=15								
NWAO	**Narrogin (SRO)**	**49.13 279**		LR		LR	LR	16 41 56.6	
	comp=Z,393nm,20.7s,baz=118,slow=30								
NWAO	**Narrogin (SRO)**	**49.13 279**		P			**P**	**16 26 14.9**	**+0.1**
CTA	**Charters Tower**	**50.19 318**		LR		LR	LR	16 44 59.5	
	comp=Z,78nm,18.3s,baz=153,slow=33								
ASAR	**Alice Springs**	**50.84 302**		P			**P**	**16 26 28.1**	**+0.1**
	comp=Z,4.3nm,1.0s,baz=154,slow=7.4,SNR=19								
ASAR						LR	LR	16 44 41.7	
	comp=Z,113nm,18.5s,baz=136,slow=32								
	comp=Z,4.3nm,1.0s								
AS31	**Alice Springs**	**50.85 302**		P			**P**	**16 26 28.1**	**0.0**
WR8	**Warramunga Arr**	**54.05 304**		P			**P**	**16 26 52.1**	**+0.3**
WR8						IAmb	IAmb	16 26 53.4	
	comp=Z,16nm,1.3s								
WRA	**Warramunga Arr**	**54.12 304**		P			**P**	**16 26 51.6**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=163,slow=6.2,SNR=10								
WRA						PcP	**PcP**	**16 27 56.4**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=155,slow=3.3,SNR=1.6								
	comp=Z,3.2nm,0.9s								
WRA	**Warramunga Arr**	**54.12 304**		P			**P**	**16 26 51.6**	**-0.7**
WRA							**PcP**	**16 27 56.4**	**-0.6**
WB0	**Warramunga Arr**	**54.26 304**		P			**P**	**16 26 53.2**	**-0.2**
WB0						IAmb	IAmb	16 26 54.7	
	comp=Z,12nm,1.1s								
HNR	**Honiara**	**57.37 337**		LR		LR	LR	16 48 11.0	
	comp=Z,10nm,20.1s,baz=280,slow=32								
RPN	**Rapa Nui**	**57.72 85**		LR		LR	LR	16 45 56.2	
	comp=Z,189nm,21.1s,baz=186,slow=30								
FITZ	**Fitzroy Crossi**	**58.98 296**		LR		LR	LR	16 49 14.6	
	comp=Z,250nm,19.5s,baz=183,slow=32								
PMG	**Port Moresby**	**60.13 322**		LR		LR	LR	16 48 15.2	
	comp=Z,181nm,21.7s,baz=157,slow=31								
PLCA	**Paso Flores**	**61.24 125**		LR		LR	LR	16 47 36.6	
	comp=Z,104nm,22.0s,baz=192,slow=30								
H03S2	**Juan Fernandez**	**64.31 115**		T		T	T	17 38 40.6	
	baz=205,slow=74,SNR=17								
H03S1	**Juan Fernandez**	**64.31 115**		T		T	T	17 38 41.8	
	baz=205,slow=74,SNR=15								
H03S3	**Juan Fernandez**	**64.33 115**		T		T	T	17 38 39.2	
	baz=205,slow=74,SNR=14								
H03N3	**Juan Fernandez**	**64.65 115**		T		T	T	17 38 58.9	
	baz=211,slow=75								
H03N2	**Juan Fernandez**	**64.66 115**		T		T	T	17 38 58.3	
	baz=211,slow=75								
H03N1	**Juan Fernandez**	**64.67 115**		T		T	T	17 38 59.6	
	baz=211,slow=75								
JAY	**Jayapura**	**68.47 317**		LR		LR	LR	16 54 53.2	
	comp=Z,92nm,19.7s,baz=194,slow=33								
SIJI	**Sorong**	**72.94 308**		LR		LR	LR	17 01 50.6	
	comp=Z,69nm,18.4s,baz=148,slow=36								
KAPI	**Kappang**	**73.20 296**		LR		LR	LR	16 57 12.7	
	comp=Z,40nm,21.5s,baz=144,slow=33								
LEM	**Lembang**	**76.36 283**		LR		LR	LR	17 00 20.8	
	comp=Z,76nm,19.0s,baz=190,slow=34								
CPUP	**Villa Florida**	**78.81 130**		LR		LR	LR	17 00 18.6	
	comp=Z,38nm,19.5s,baz=253,slow=33								
SUR	**Sutherland**	**81.36 198**		LR		LR	LR	17 02 19.8	
	comp=Z,108nm,19.8s,baz=150,slow=33								
DAV	**Davao City (W)**	**82.28 306**		LR		LR	LR	17 07 04.5	
	comp=Z,53nm,18.4s,baz=154,slow=36								
LPAZ	**La Paz**	**84.26 117**		P			**P**	**16 29 59.8**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=188,slow=6.5,SNR=5.2								
LPAZ						LR	LR	16 58 23.1	
	comp=Z,96nm,21.4s,baz=208,slow=29								
	comp=Z,1.3nm,0.8s								
LPAZ	**La Paz**	**84.26 117**		P			**P**	**16 30 00.6**	**+0.8**
LPAZ						IAmb	IAmb	16 30 00.8	
	comp=Z,3.5nm,1.1s								
BOSA	**Boshof**	**84.42 202**		LR		LR	LR	17 07 12.8	
	comp=Z,42nm,18.1s,baz=182,slow=35								
ATAH	**Atahualpa**	**88.53 104**		LR		LR	LR	17 01 03.5	
	comp=Z,163nm,21.2s,baz=204,slow=30								
H08S2	**Diego Garcia H**	**90.23 251**		T		T	T	18 11 00.4	
	baz=156								
H08S1	**Diego Garcia H**	**90.24 251**		T		T	T	18 11 05.8	
	baz=156								
H08S3	**Diego Garcia H**	**90.25 251**		T		T	T	18 11 00.7	
	baz=156								
TGY	**Tagaytay City**	**90.43 304**		LR		LR	LR	17 14 05.4	
	comp=Z,39nm,18.0s,baz=192,slow=38								
BDFB	**Brasilia**	**91.74 134**		LR		LR	LR	17 08 36.0	
	comp=Z,52nm,21.1s,baz=150,slow=34								
MATP	**Matopo**	**91.85 207**		LR		LR	LR	17 07 24.5	
	comp=Z,68nm,21.8s,baz=138,slow=33								
TSUM	**Tsumeb**	**94.76 197**		LR		LR	LR	17 11 18.4	
	comp=Z,116nm,19.5s,baz=160,slow=34								
TORD	**Torodi Ar. Bea**	**128.00 182**		PKP			**PKPdf**	**16 36 32.5**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=225,slow=1.6,SNR=1.9								
ILAR	**Eielson Array**	**131.93 18**		PKP			**PKPdf**	**16 36 39.8**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=236,slow=2.8,SNR=13								
MKAR	**Makanchi Array**	**134.13 288**		PKP			**PKPdf**	**16 36 44.4**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=131,slow=6.5,SNR=4.8								
KURBB	**Kurchatov Arra**	**138.69 289**		PKP			**PKPdf**	**16 36 49.5**	**-2.6**
	comp=Z,0.4nm,0.8s,baz=136,slow=2.3,SNR=4.1								
KURK	**Kurchatov**	**138.72 289**					**PKPdf**	**16 36 49.5**	**-2.7**
SCHQ	**Schefferville**	**146.78 76**		PKPbc			**PKPdf**	**16 37 07.1**	**+0.7**
	comp=Z,6.5nm,0.9s,baz=228,slow=8.4,SNR=4.4								
BRTR	**Keskin Array B**	**147.90 234**		PKPbc			**PKPdf**	**16 37 10.4**	**+1.5**
	comp=Z,2.1nm,0.9s,baz=158,slow=4.0,SNR=8.7								
BRTR	**Keskin Array B**	**147.90 234**					**PKPbc**	**16 37 12.1**	**+0.2**
KBZ	**Khabaz**	**147.95 249**		PKPbc			**PKPbc**	**16 37 11.2**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=136,slow=5.9,SNR=5.6								
NRIK	**Noril'sk**	**148.58 317**		PKPbc			**PKPbc**	**16 37 12.5**	**-0.1**
	comp=Z,5.3nm,0.8s,baz=116,slow=3.6,SNR=6.4								
KEST	**Kesra**	**149.94 196**		PKPbc			**PKPbc**	**16 37 16.9**	**-0.2**
	comp=Z,6.0nm,1.0s,baz=270,slow=3.0,SNR=4.5								
ESDC	**Sonseca Array**	**154.34 173**		PKPbc			**PKPbc**	**16 37 25.2**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=198,slow=3.7,SNR=1.9								
AKASG	**Malin Array Be**	**158.94 241**		PKPab			**PKPab**	**16 37 59.3**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=128,slow=3.0,SNR=4.1								

*IDC **14** 16:40:15.0±3.1, 14°.88S×167°.37E, h138km±24km, mb3.7/6, mbtmp4.1/7, MS3.4/2, Error ellipse: s-maj=31.6km s-min=15.4km az=69.0*
*NEIC **14** 16:40:14.4±1.2, 14°.87S±0°.08×167°.5E±0°.1, h129km±6km, mb4.4/19, Error ellipse: s-maj=16.8km s-min=11.4km az=82.0*
*NOU **14** 16:40:16.2, 14°.93S×167°.30E, h112km, mb4.3/23, Vanuatu Islands*
ISC 14 16:40:14.1±0.6, 14°.86S±0°.06×167°.44E±0°.08, h129km, n50, σ0s99/52, mb4.2/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.63 202**		P		P	**Pn**	**16 40 34.1**	**+0.2**
SANVU	**Saraoutou**	**0.63 202**		S		S	**Sn**	**16 40 49.4**	**+0.5**
SANVU	**Saraoutou**	**0.63 202**					**Pn**	**16 40 34.1**	**+0.2**
DVP	**Devils Point**	**2.94 166**		P		P	**Pn**	**16 41 01.2**	**+1.3**
KOUNC	**Koumac, New Ca**	**6.41 208**		P		P	**Pn**	**16 41 47.0**	**+0.9**
KOUNC	**Koumac, New Ca**	**6.41 208**		S		S	**Sn**	**16 42 57.4**	**-0.6**
KOUNC	**Koumac, New Ca**	**6.41 208**		Pn		Pn	**Pn**	**16 41 45.7**	**-0.4**
HURO	**Huro Makira**	**6.95 308**		P		P	**Pn**	**16 41 53.8**	**+0.3**
YATNC	**Mamie plateau,**	**7.18 184**		P		P	**Pn**	**16 41 56.3**	**-0.2**
DZM	**Mont Dzumac**	**7.24 187**		P		P	**Pn**	**16 41 58.2**	**+0.8**
	5.4nm,0.3s,baz=24,slow=19,SNR=57								
DZM						S	**Sn**	**16 43 17.0**	**-1.2**
	8.2nm,0.4s,baz=304,slow=18,SNR=6.4								
NOUC	**Port Laguerre**	**7.28 188**		P		P	**Pn**	**16 41 59.7**	**+1.8**
ONTNC	**Ouen Toro**	**7.47 187**		P		P	**Pn**	**16 42 02.2**	**+1.8**
ONTNC	**Ouen Toro**	**7.47 187**		S		S	**Sn**	**16 43 25.1**	**+1.5**
ONTNC	**Ouen Toro**	**7.47 187**		Pn		Pn	**Pn**	**16 42 00.6**	**+0.3**
OUENC	**Ouen Island, N**	**7.54 184**		P		P	**Pn**	**16 42 03.0**	**+1.6**
OUENC	**Ouen Island, N**	**7.54 184**		S		S	**Sn**	**16 43 25.9**	**+0.5**
OUENC	**Ouen Island, N**	**7.54 184**		Pn		Pn	**Pn**	**16 42 01.8**	**+0.5**
NGOA	**Tingoa Renbel**	**7.90 294**		P		P	**Pn**	**16 42 07.6**	**+1.3**
HNR	**Honiara**	**9.10 306**		P		P	**Pn**	**16 42 24.2**	**+1.7**
	0.8nm,0.3s,baz=117,slow=4.5,SNR=8.6								
HNR						S	**Sn**	**16 44 02.3**	**-0.9**
	2.6nm,0.8s,baz=214,slow=11,SNR=6.3								
HNR	**Honiara**	**9.10 306**					**Pn**	**16 42 23.6**	**+1.2**
HNR							**Sn**	**16 44 02.4**	**-0.9**
TATA	**Tatamba Isabel**	**9.87 310**		P		P	**Pn**	**16 42 35.7**	**+3.0**
TATA	**Tatamba Isabel**	**9.87 310**		S		S	**Sn**	**16 44 22.8**	**+1.0**
EIDS	**Eidsvold**	**18.56 233**		P		P	**P**	**16 44 21.2**	**+0.1**
EIDS						IAmb	IAmb	16 45 00.0	
	comp=Z,28nm,1.4s								
RAO	**Raoul Island**	**19.70 139**		P		P	**P**	**16 44 32.5**	**-0.9**
ARMA	**Armidale**	**21.24 221**		P		P	**P**	**16 44 49.4**	**-0.7**
ARMA						IAmb	IAmb	16 45 23.6	
	comp=Z,16nm,1.1s								
TOZ	**Tahuroa Road**	**23.88 164**		P		P	**P**	**16 45 15.6**	**-0.1**
TOZ						IAmb	IAmb	16 45 43.2	
	comp=Z,13nm,1.4s								
RTZ	**Ruatahuna**	**25.12 162**		P		P	**P**	**16 45 26.1**	**-1.0**
RTZ						IAmb	IAmb	16 45 53.1	
	comp=Z,20nm,1.3s		

*IDC **14** 16:43:05.5±1.5,8.71S×127.57E,h0km,mb3.6/3, mbtmp3.6/7,ML3.6/4,Error ellipse: s-maj=45.6km s-min=24.9km az=78.0*

ISC 14 16:43:10.0±1.3,**9.06S**±0.10×**127.62E**±0.10,**h35**km,**n7,** σ3s**10**/11,**mb3.7**/3,**Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.07**	**253**	Pn	**Pn**	**16 44 09.8**	**0.0**
	2.8nm,0.3s,baz=168,slow=4.8,SNR=6.8						
BATI				Sn	**Sn**	**16 44 56.5**	**+0.4**
	4.4nm,0.3s,baz=311,slow=22,SNR=1.9 11nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.19**	**192**	Pn	**Pn**	**16 45 23.6**	**+3.5**
	0.6nm,0.3s,baz=18,slow=10,SNR=26						
FITZ				Sn	**Sn**	**16 46 58.6**	**-3.7**
	1.8nm,0.3s,baz=279,slow=11,SNR=8.7 1.6nm,0.3s						
WRA	**Warramunga Arr**	**12.62**	**150**	Pn	**Pn**	**16 46 11.3**	**+4.2**
	0.4nm,0.3s,baz=324,slow=13,SNR=23						
WRA				Sn	**Sn**	**16 48 21.6**	**-4.9**
	0.4nm,0.3s,baz=322,slow=28,SNR=6.2 0.3nm,0.3s						
ASAR	**Alice Springs**	**15.72**	**158**	Pn	**P**	**16 46 52.9**	**+0.3**
	0.2nm,0.3s,baz=336,slow=12,SNR=13						
ASAR				Sn	**Sn**	**16 49 41.5**	**-0.7**
	0.1nm,0.3s,baz=315,slow=18,SNR=4.5 0.4nm,0.5s						
MKAR	**Makanchi Array**	**68.69**	**328**	P	**P**	**16 54 10.7**	**+0.7**
	0.2nm,0.6s,baz=130,slow=5.8,SNR=2.0 0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**72.41**	**335**	P	**P**	**16 54 29.9**	**-2.5**
	0.3nm,0.3s,baz=112,slow=3.9,SNR=2.0 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**73.06**	**330**	P	**P**	**16 54 35.1**	**-1.3**
	0.3nm,0.3s,baz=120,slow=5.5,SNR=0.8 0.3nm,0.3s						

IDC 14 16:46:23.6±25.0,**65.16S**×**179.81W**,**h0**km,**mb3.4**/2, **mbtmp3.4**/3,**ML2.2**/1,**Error ellipse: s-maj=656.9km s-min=50.0km az=82.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.61**	**197**	Pn	Pn	16 49 37.4	-0.1
	baz=41,slow=15,SNR=2.5 0.5nm,0.9s						
H01W1	**Cape Leeuwin H**	**48.91**	**275**	T	T	17 47 51.2	
	baz=147						
H01W2	**Cape Leeuwin H**	**48.92**	**275**	T	T	17 47 51.4	
	baz=147						
H01W3	**Cape Leeuwin H**	**48.93**	**275**	T	T	17 47 56.4	
	baz=147						
ASAR	**Alice Springs**	**50.99**	**301**	P	P	16 55 26.9	0.0
	0.3nm,0.7s,baz=154,slow=7.8,SNR=5.6 0.3nm,0.7s						
WRA	**Warramunga Arr**	**54.26**	**304**	P	P	16 55 50.9	-0.2
	0.5nm,0.7s,baz=160,slow=6.7,SNR=3.0 0.5nm,0.7s						

IDC 14 16:52:05.4±5.4,**65.14S**×**178.97W**,**h0**km,**mb3.5**/3, **mbtmp3.4**/4,**ML2.5**/1,**Error ellipse: s-maj=168.1km s-min=30.4km az=69.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.74**	**198**	Pn	Pn	16 55 20.2	-0.8
	baz=45,slow=17,SNR=3.1 0.7nm,1.1s						
QSPA	**South Pole Qui**	**24.95**	**180**	P	P	16 57 30.4	+0.2
	1.3nm,1.1s,baz=135,slow=13,SNR=2.2 1.3nm,1.1s						
H01W1	**Cape Leeuwin H**	**49.27**	**274**	T	T	17 53 39.5	
	baz=149						
H01W2	**Cape Leeuwin H**	**49.27**	**274**	T	T	17 53 38.8	
	baz=149						
H01W3	**Cape Leeuwin H**	**49.28**	**274**	T	T	17 53 36.6	
	baz=149						
ASAR	**Alice Springs**	**51.28**	**301**	P	P	17 01 11.2	+0.3
	0.5nm,0.7s,baz=154,slow=6.7,SNR=9.0 0.5nm,0.7s						
WRA	**Warramunga Arr**	**54.54**	**303**	P	P	17 01 34.4	-0.6
	0.3nm,0.7s,baz=155,slow=7.3,SNR=1.5 0.3nm,0.7s						

*IDC **14** 16:53:06.9±5.1,32.07S×179.98E,h424km±60km,mb2.5/2, mbtmp3.7/4,Error ellipse: s-maj=61.2km s-min=51.2km az=169.0*
*WEL **14** 16:53:11.6±0.5,32.5±.5°×18.0E±1.0,h12km,M4.3/15, mB4.9/13,ML4.3/20,MLv4.6/15,Mw(mB)4.2/13,Error ellipse: s-maj=14.1km s-min=4.1km az=112.3*
*NOU **14** 16:53:13.0,32.71S×179.43W,h434km,mb3.9/13,South of Kermadec Islands*

ISC 14 16:53:06.8±1.8,**32.1S**±0.1×**179.8W**±0.2,**h450**km,**n77,** σ2s**07**/90,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.25**	**29**	P	P	16 54 04.8	-11
GLKZ				S	S	16 54 45.7	-26
MXZ	**Matakaoa Point**	**5.66**	**196**	P	**P**	**16 54 38.0**	**+0.5**
MXZ	**Matakaoa Point**	**5.66**	**196**	P	**S**	**16 55 48.6**	**-3.1**
MXZ	**Matakaoa Point**	**5.66**	**196**	P	**P**	**16 54 37.6**	**0.0**
MXZ				S	**S**	**16 55 48.8**	**-3.0**
WMGZ	**Waiomatatini S**	**5.88**	**194**	P	**P**	**16 54 41.3**	**+1.6**
WMGZ				S	**S**	**16 55 53.1**	**-2.7**
PKGZ	**Pakihiroa**	**6.01**	**197**	P	**P**	**16 54 42.9**	**+1.9**
PKGZ				S	**S**	**16 55 55.3**	**-2.9**
PUZ	**Puketiti**	**6.16**	**195**	P	**P**	**16 54 43.7**	**+1.0**
PUZ				S	**S**	**16 55 59.7**	**-1.4**
RUGZ	**Raukumara Rang**	**6.20**	**199**	P	**P**	**16 54 44.2**	**+1.0**
RUGZ				S	**S**	**16 55 59.4**	**-2.7**
WCZ	**Waipu Caves**	**6.21**	**231**	P	**P**	**16 54 43.1**	**0.0**
WIAZ	**Waiheke Island**	**6.29**	**221**	P	**P**	**16 54 46.0**	**+2.0**
TWGZ	**Tauwhareparae**	**6.33**	**196**	P	**P**	**16 54 47.1**	**+2.7**
TWGZ				S	**S**	**16 56 05.0**	**+0.8**
OUZ	**Omahuta**	**6.35**	**239**	P	**P**	**16 54 43.7**	**-1.0**
MARZ	**Manawahe**	**6.55**	**206**	P	**P**	**16 54 49.4**	**+2.7**
CNGZ	**Carnagh Statio**	**6.57**	**194**	P	**P**	**16 54 48.6**	**+1.8**
CNGZ				S	**S**	**16 56 04.1**	**-4.6**
MWZ	**Matawai**	**6.59**	**199**	P	**P**	**16 54 47.7**	**+0.5**
MWZ				S	**S**	**16 56 07.4**	**-1.9**
TKGZ	**Te Karaka**	**6.61**	**197**	P	**P**	**16 54 48.7**	**+1.5**
TKGZ				S	**S**	**16 56 08.3**	**-1.2**
URZ	**Urewera**	**6.64**	**202**	P	**P**	**16 54 47.5**	**-0.1**
	22nm,0.3s,baz=322,slow=13,SNR=90						
URZ				S	**S**	**16 56 07.0**	**-3.2**
	11nm,0.4s,baz=41,slow=20,SNR=12						
URZ	**Urewera**	**6.64**	**202**	P	**P**	**16 54 47.5**	**-0.1**
URZ	**Urewera**	**6.64**	**202**	P	**S**	**16 56 08.0**	**-2.2**
URZ	**Urewera**	**6.64**	**202**	P	**P**	**16 54 47.9**	**+0.3**
URZ				S	**S**	**16 56 08.6**	**-1.6**
KARZ	**Kaharoa**	**6.74**	**208**	P	**P**	**16 54 51.6**	**+2.9**
RAGZ	**Rawiri**	**6.77**	**199**	P	**P**	**16 54 50.1**	**+1.0**
RIGZ	**Rimuhau**	**6.88**	**196**	P	**P**	**16 54 51.7**	**+1.6**
RIGZ				S	**S**	**16 56 13.3**	**-1.5**
MUGZ	**Murupara**	**6.95**	**203**	P	**P**	**16 54 51.9**	**+1.0**
MUGZ				S	**S**	**16 56 16.0**	**-0.2**
HRRZ	**Handcock Road**	**7.05**	**206**	P	**P**	**16 54 55.2**	**+3.3**
PRGZ	**Paritu Road**	**7.06**	**195**	P	**P**	**16 54 53.7**	**+1.7**
SNGZ	**Shannon Statio**	**7.06**	**199**	P	**P**	**16 54 53.8**	**+1.7**
PRRZ	**Plateau Road**	**7.10**	**205**	P	**P**	**16 54 55.1**	**+2.6**
KNZ	**Kokohu**	**7.20**	**196**	P	**P**	**16 54 56.0**	**+2.5**
WPRZ	**Whakapapataran**	**7.21**	**206**	P	**P**	**16 54 56.6**	**+2.9**
RAHZ	**Arahi**	**7.26**	**200**	P	**P**	**16 54 55.6**	**+1.5**
MTHZ	**Maungataniwha**	**7.27**	**202**	P	**P**	**16 54 55.7**	**+1.4**
MHGZ	**Mahia Peninsul**	**7.27**	**195**	P	**P**	**16 54 57.7**	**+3.4**
TLZ	**Tolley Road**	**7.30**	**211**	P	**P**	**16 54 58.8**	**+4.1**
WHHZ	**Waihua**	**7.37**	**199**	P	**P**	**16 54 58.9**	**+3.6**
MRHZ	**Matea Rd**	**7.39**	**204**	P	**P**	**16 54 57.3**	**+1.6**
NMHZ	**Naumai**	**7.51**	**201**	P	**P**	**16 54 58.2**	**+1.3**
ARHZ	**Aropaoanui**	**7.61**	**199**	P	**P**	**16 54 59.7**	**+1.9**
RATZ	**Rangitukua**	**7.66**	**207**	P	**P**	**16 55 00.8**	**+2.3**
BKZ	**Black Stump Fm**	**7.67**	**202**	P	**P**	**16 54 59.0**	**+0.4**
BKZ	**Black Stump Fm**	**7.67**	**202**	S	**S**	**16 56 28.3**	**-2.0**
HIZ	**Hauiti**	**7.75**	**213**	P	**P**	**16 55 03.8**	**+4.3**
HIZ	**Hauiti**	**7.75**	**213**	P	**P**	**16 55 03.8**	**+4.3**
MCHZ	**McNeill Hill**	**7.86**	**201**	P	**P**	**16 55 02.0**	**+1.5**
TMVZ	**Te Maari**	**7.90**	**207**	P	**P**	**16 55 02.9**	**+1.7**
ETVZ	**East Tongariro**	**7.92**	**207**	P	**P**	**16 55 02.9**	**+1.6**
KWHZ	**Kaweka Forest**	**7.93**	**202**	P	**P**	**16 55 02.6**	**+1.3**
CKHZ	**Cape Kidnapper**	**7.95**	**198**	P	**P**	**16 55 04.8**	**+3.3**
OTVZ	**Oturere**	**7.96**	**207**	P	**P**	**16 55 03.0**	**+1.2**
TWVZ	**Taurewa**	**7.97**	**208**	P	**P**	**16 55 03.7**	**+1.9**
SNVZ	**South Ngauruho**	**7.99**	**207**	P	**P**	**16 55 03.8**	**+1.6**
NGZ	**Ngauruhoe**	**7.99**	**207**	P	**P**	**16 55 04.4**	**+2.2**
TUVZ	**Tukino**	**8.05**	**206**	P	**P**	**16 55 04.0**	**+1.2**
FWVZ	**Far West T-bar**	**8.08**	**207**	P	**P**	**16 55 03.9**	**+0.7**
WHVZ	**Whangaehu Hut**	**8.09**	**207**	P	**P**	**16 55 05.0**	**+1.7**
BHHZ	**Black Hill Sta**	**8.10**	**204**	P	**P**	**16 55 02.7**	**-0.6**
WNVZ	**Wahianoa**	**8.13**	**206**	P	**P**	**16 55 04.0**	**+0.4**
KAHZ	**Kahuranaki**	**8.13**	**199**	P	**P**	**16 55 04.8**	**+1.2**
MOVZ	**Moawhango**	**8.14**	**205**	P	**P**	**16 55 04.8**	**+1.1**
KRHZ	**Kereru**	**8.14**	**202**	P	**P**	**16 55 04.7**	**+1.0**
MTVZ	**Mangateitei**	**8.22**	**207**	P	**P**	**16 55 07.8**	**+3.2**
PXZ	**Pawanui**	**8.36**	**198**	P	**P**	**16 55 07.1**	**+1.2**
PNHZ	**Pukenui**	**8.44**	**202**	P	**P**	**16 55 07.3**	**+0.4**
WPHZ	**Waipukurau**	**8.51**	**200**	P	**P**	**16 55 09.5**	**+2.0**
PRHZ	**Porangahau**	**8.64**	**199**	P	**P**	**16 55 11.5**	**+2.5**
TSZ	**Takapari Road**	**8.65**	**202**	P	**P**	**16 55 10.2**	**+1.0**
ANWZ	**Angora Road**	**8.86**	**199**	P	**P**	**16 55 14.0**	**+2.6**
BFZ	**Birch Farm**	**9.13**	**200**	P	**P**	**16 55 16.4**	**+2.1**
BFZ	**Birch Farm**	**9.13**	**200**	S	**S**	**16 56 57.4**	**-1.9**
QRZ	**Quartz Range**	**10.68**	**213**	P	**P**	**16 55 33.7**	**+2.5**
QRZ	**Quartz Range**	**10.68**	**213**	S	**S**	**16 57 30.3**	**+0.1**
KHZ	**Kahutara**	**11.58**	**206**	P	**P**	**16 55 44.0**	**+3.1**
KHZ	**Kahutara**	**11.58**	**206**	S	**S**	**16 57 47.1**	**-1.0**
RPZ	**Rata Peaks**	**13.65**	**209**	P	**P**	**16 56 04.9**	**+1.6**
	2.6nm,1.0s,baz=23,slow=13,SNR=2.4						
RPZ				S	**S**	**16 58 29.2**	**0.0**
	0.4nm,0.4s,baz=0.0,slow=20,SNR=0.9						
ASAR	**Alice Springs**	**41.56**	**270**	P	**P**	**17 00 14.2**	**+0.3**
	0.4nm,0.9s,baz=112,slow=8.1,SNR=1.7 0.4nm,0.9s						
WRA	**Warramunga Arr**	**42.71**	**275**	P	**P**	**17 00 22.8**	**-0.2**
	0.2nm,0.3s,baz=111,slow=8.1,SNR=5.2 0.2nm,0.3s						
FINES	**FINES Array B**	**146.20**	**338**	PKPbc	**PKPab**	**17 11 56.3**	**-0.7**
	0.3nm,0.3s,baz=27,slow=5.8,SNR=1.7						

*UPP **14** 17:00:27.5±0.1,67.06N×20.94E,h0km,ML2.2,Suspected explosion*
*IDC **14** 17:00:28.0±0.8,67.05N×21.18E,h0km,mbtmp2.9/4, ML1.9/4,Error ellipse: s-maj=14.0km s-min=6.1km az=116.0*

ISC 14 17:00:27.0±0.9,**67.04N**±0.03×**20.93E**±0.03,**h0**km,**n16,** σ0s**96**/21,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.16**	**299**	P	**Pg**	**17 00 30.8**	**+0.7**
DUNU				S	**Sg**	**17 00 33.2**	**+1.0**
MASU	**Masugnsbyn**	**0.59**	**44**	P	**Pg**	**17 00 38.5**	**+0.3**
MASU				S	**Sg**	**17 00 46.3**	**+0.5**
ERTU	**Ertsjaerv**	**0.70**	**134**	P	**Pg**	**17 00 40.7**	**+0.3**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**17 00 44.2**	**+0.3**
RATU	**Laukkuluspa**	**0.94**	**327**	P	**Pg**	**17 00 44.7**	**-0.3**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**17 00 44.7**	**-0.4**
SALU	**Saltoluokta**	**1.00**	**291**	*e*P	**Pg**	**17 00 46.4**	**+0.2**
SALU	**Saltoluokta**	**1.00**	**291**	P	**Pg**	**17 00 46.5**	**+0.2**
LANU	**Lannavaara**	**1.09**	**22**	*e*P	**Pg**	**17 00 47.1**	**-0.7**
LANU	**Lannavaara**	**1.09**	**22**	P	**Pg**	**17 00 47.2**	**-0.7**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**17 00 47.8**	**-0.4**
I37NO	**I37NO**	**2.22**	**338**	I	I	17 13 47.3	
	baz=157,slow=321,SNR=2.1						
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**17 01 16.8**	**+0.7**
	0.3nm,0.3s,baz=219,slow=14,SNR=42						
ARCES				Sn	**Sn**	**17 01 54.1**	**+1.2**
	0.8nm,0.3s,baz=216,slow=20,SNR=4.3						
ARCES				Lg	Lg	17 02 00.4	
	0.8nm,0.3s,baz=214,slow=32,SNR=10 3.4nm,0.2s						
FINES	**FINES Array B**	**6.05**	**156**	Pn	**Pn**	**17 01 59.0**	**+1.4**
	0.1nm,0.3s,baz=344,slow=13,SNR=12						
FINES				Sn	**Sn**	**17 03 05.8**	**-1.7**
	0.3nm,0.3s,baz=345,slow=22,SNR=17						
FINES				Lg	Lg	17 03 37.8	
	0.2nm,0.3s,baz=344,slow=25,SNR=2.8 0.7nm,0.2s						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**17 02 15.8**	**0.0**
	baz=64,slow=14,SNR=7.7						
NOA				Sn	**Sn**	**17 03 39.3**	**-0.8**
	baz=12,slow=19,SNR=4.5						
NOA				Lg	Lg	17 04 22.3	
	baz=62,slow=19,SNR=2.0 0.1nm,0.5s						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**17 02 19.1**	**-0.3**
	0.1nm,0.3s,baz=26,slow=14,SNR=8.0						
HFS				Sn	**Sn**	**17 03 44.3**	**-2.4**
	0.1nm,0.3s,baz=15,slow=22,SNR=1.3						
HFS				Lg	Lg	17 04 24.2	
	0.1nm,0.3s,baz=35,slow=30,SNR=1.7 0.3nm,0.3s						

IDC 14 17:02:24.1±5.4,**65.13S**×**178.58W**,**h0**km,**mb3.5**/3, **mbtmp3.4**/4,**ML2.6**/1,**Error ellipse: s-maj=169.2km s-min=30.1km az=69.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.80**	**198**	Pn	Pn	17 05 40.6	0.0
	baz=58,slow=9.5,SNR=2.6 0.4nm,0.7s						
QSPA	**South Pole Qui**	**24.96**	**180**	P	P	17 07 48.9	-0.1
	2.2nm,1.1s,baz=313,slow=3.4,SNR=2.2 2.2nm,1.1s						
H01W1	**Cape Leeuwin H**	**49.43**	**274**	T	T	18 03 56.7	
	baz=149,slow=75,SNR=4.1						
H01W2	**Cape Leeuwin H**	**49.44**	**274**	T	T	18 03 56.6	
	baz=149,slow=75,SNR=4.6						
H01W3	**Cape Leeuwin H**	**49.45**	**274**	T	T	18 03 56.8	
	baz=149,slow=75,SNR=4.4						
ASAR	**Alice Springs**	**51.42**	**300**	P	P	17 11 30.8	+0.1
	0.3nm,0.6s,baz=152,slow=7.5,SNR=5.9 0.3nm,0.6s						
WRA	**Warramunga Arr**	**54.68**	**302**	P	P	17 11 54.5	-0.2
	0.2nm,0.5s,baz=158,slow=7.4,SNR=3.2 0.2nm,0.5s						

*IDC **14** 17:04:40.0±0.8,65.20N×25.06E,h0km,mbtmp3.3/6, ML2.3/4,Error ellipse: s-maj=15.1km s-min=6.9km az=97.0*
*HEL **14** 17:04:40.0±0.1,65.22N×24.82E,h0km,ML2.2,Explosion*

ISC 14 17:04:38.6±0.7,**65.23N**±0.02×**24.75E**±0.03,**h0**km,**n66,** σ1s**52**/88,**Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBF4	**Vikkela, Lumij**	**0.45**	**160**	*e*P	**Pg**	**17 04 47.4**	**+0.2**
OBF4				*e*S	**Sg**	**17 04 52.9**	**0.0**
OUL	**Oulu**	**0.51**	**106**	*e*P	**Pg**	**17 04 48.5**	**+0.2**
OUL				*e*S	**Sg**	**17 04 53.9**	**-1.0**
OBF0	**Syolatti, Pyha**	**0.77**	**197**	*e*P	**Pg**	**17 04 53.5**	**+0.2**
OBF0				*e*S	**Sg**	**17 05 02.8**	**-0.4**
OUF	**Merijarvi**	**0.87**	**180**	*e*P	**Pg**	**17 04 55.3**	**+0.1**
OUF				*e*S	**Sg**	**17 05 04.0**	**-2.4**
TOF	**Tornio**	**0.87**	**349**	*e*P	**Pg**	**17 04 56.1**	**+0.9**
TOF				*e*S	**Sg**	**17 05 06.8**	**+0.3**
RANF	**Ranua**	**1.16**	**46**	*e*P	**Pg**	**17 05 00.5**	**-0.2**
RANF				*e*S	**Sg**	**17 05 15.9**	**+0.3**
RNF	**Rovaniemi**	**1.48**	**20**	*e*P	**Pn**	**17 05 06.6**	**+0.2**
RNF				*e*S	**Sg**	**17 05 25.9**	**-0.1**
KU2	**Taivalkoski**	**1.53**	**70**	*e*P	**Pn**	**17 05 07.0**	**-0.2**
KU2				*e*S	**Sg**	**17 05 26.2**	**-1.5**
BURU	**Burvik**	**1.58**	**247**	*e*P	**Pn**	**17 05 08.4**	**+0.6**
BURU				*e*S	**Sn**	**17 05 27.8**	**-1.0**
ERTU	**Ertsjaerv**	**1.69**	**323**	*e*P	**Pn**	**17 05 10.4**	**+1.0**
ERTU				*e*S	**Sn**	**17 05 31.0**	**-0.7**
KLF	**Kolari**	**2.04**	**351**	*e*PB	**Pn**	**17 05 15.9**	**+1.8**
KLF				*e*S	**Sn**	**17 05 39.9**	**-0.2**
KLF				smax	smax	17 05 44.8	
	comp=Z,12nm,0.1s						
KU1	**Kurvinen**	**2.04**	**78**	*e*PB	**Pn**	**17 05 15.2**	**+1.1**
KU1				*e*S	**Sn**	**17 05 38.4**	**-1.9**
KU1				smax	smax	17 05 42.1	
	comp=Z,14nm,0.1s						
OLKF	**Oulanka, Finla**	**2.21**	**58**	*e*PB	**Pn**	**17 05 18.5**	**+2.0**
OLKF				*e*S	**Sn**	**17 05 44.3**	**-0.1**
OLKF				smax	smax	17 05 48.1	
	comp=Z,10nm,0.1s						
KU6	**Riekki**	**2.28**	**67**	*e*PB	**Pn**	**17 05 18.9**	**+1.5**
KU6				*e*S	**Sn**	**17 05 45.9**	**-0.2**
KU6				smax	smax	17 05 50.1	
	comp=Z,21nm,0.2s						
NIF	**Nilsia**	**2.28**	**143**	*e*PB	**Pn**	**17 05 19.0**	**+1.5**
NIF				*e*S	**Sn**	**17 05 45.5**	**-0.7**
NIF				smax	smax	17 05 50.0	
	comp=Z,9.9nm,0.1s						
SGF	**Sodankyl**	**2.33**	**17**	*e*P	**Pn**	**17 05 19.1**	**+1.0**
VAF	**Ylistaro**	**2.38**	**203**	*e*P	**Pn**	**17 05 20.2**	**+1.5**
VAF	**Ylistaro**	**2.38**	**203**	*e*P	**Pn**	**17 05 20.3**	**+1.5**
VAF				*e*S	**Sn**	**17 05 49.1**	**+0.5**
RMF	**Romuvaara**	**2.45**	**112**	*e*PB	**Pn**	**17 05 21.8**	**+2.1**
RMF				*e*S	**Sn**	**17 05 50.3**	**0.0**
SUF	**Sumiainen**	**2.60**	**166**	*e*P	**Pn**	**17 05 23.6**	**+1.8**
SUF	**Sumiainen**	**2.60**	**166**	*e*P	**Pn**	**17 05 23.6**	**+1.8**
SUF				*e*S	**Sn**	**17 05 51.9**	**-2.2**
LANU	**Lannavaara**	**3.03**	**340**	*e*P	**Pn**	**17 05 30.4**	**+2.6**
LANU	**Lannavaara**	**3.03**	**340**	*e*P	**Pn**	**17 05 30.4**	**+2.6**
LANU				*e*S	**Sn**	**17 06 04.4**	**-0.4**
KEF	**Keuruu**	**3.08**	**179**	*e*P	**Pn**	**17 05 30.1**	**+1.7**
KEF	**Keuruu**	**3.08**	**179**	*e*P	**Pn**	**17 05 30.1**	**+1.7**
VRF	**Varrio**	**3.19**	**35**	*e*P	**Pn**	**17 05 30.3**	**+0.3**
KAF	**Kangasniemi**	**3.21**	**167**	*e*P	**Pn**	**17 05 31.8**	**+1.6**
HEF	**Hetta**	**3.22**	**353**	*e*P	**Pn**	**17 05 31.7**	**+1.3**
HEF	**Hetta**	**3.22**	**353**	*e*P	**Pn**	**17 05 32.0**	**+1.7**
SALU	**Saltoluokta**	**3.32**	**313**	*e*P	**Pn**	**17 05 33.7**	**+2.0**
RAJF	**Raja-Jooseppi**	**3.55**	**22**	*e*P	**Pn**	**17 05 35.5**	**+0.7**
RAJF				*e*S	**Sn**	**17 06 18.1**	**+0.6**
KPF	**Kankaanpaa**	**3.62**	**201**	*e*P	**Pn**	**17 05 37.7**	**+1.9**
JOF	**Joensuu**	**3.70**	**126**	*e*P	**Pn**	**17 05 38.0**	**+1.1**
JOF	**Joensuu**	**3.70**	**126**	*e*P	**Pn**	**17 05 38.0**	**+1.1**
KTK1	**Kautokeino**	**3.84**	**352**	*e*P	**Pn**	**17 05 41.1**	**+2.2**
KTK1	**Kautokeino**	**3.84**	**352**	*e*P	**Pn**	**17 05 40.9**	**+2.0**
FIA1	**FINESS Array S**	**3.85**	**170**	*e*P	**Pn**	**17 05 40.7**	**+1.8**
FIA0	**FINESS Array S**	**3.85**	**170**	*e*P	**Pn**	**17 05 40.7**	**+1.7**
FINES	**FINESS Array B**	**3.85**	**170**	Pn	**Pn**	**17 05 40.7**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=353,slow=13,SNR=16						
FINES				Lg	Lg	17 06 38.8	
	comp=Z,2.6nm,0.3s,baz=358,slow=31,SNR=12 comp=Z,1.3nm,0.2s						
HEMU	**Hemsoen**	**3.92**	**232**	*e*P	**Pn**	**17 05 40.4**	**+0.5**
RUF	**Ruokolahti**	**4.26**	**152**	*e*P	**Pn**	**17 05 46.2**	**+1.5**
ARA0	**ARCESS Array S**	**4.33**	**4**	*e*P	**Pn**	**17 05 46.5**	**+0.9**
ARA0	**ARCESS Array S**	**4.33**	**4**	*e*P	**Pn**	**17 05 46.6**	**+0.9**
ARCES	**ARCESS Array B**	**4.33**	**4**	Pn	**Pn**	**17 05 46.4**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=178,slow=13,SNR=37						
ARCES				Pg	**Pb**	**17 05 55.2**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=183,slow=16,SNR=5.2						
ARCES				Sn	**Sn**	**17 06 34.1**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=184,slow=24,SNR=3.2						
ARCES				Lg	Lg	17 06 50.7	
	comp=Z,1.2nm,0.3s,baz=181,slow=26,SNR=8.7 comp=Z,2.4nm,0.3s						
MOR8	**Moi Rana**	**4.36**	**287**	*e*P	**Pn**	**17 05 45.0**	**-1.0**
RAF	**Rauma**	**4.44**	**199**	*e*P	**Pn**	**17 05 49.6**	**+2.5**
RAF	**Rauma**	**4.44**	**199**	*e*P	**Pn**	**17 05 48.8**	**+1.8**
I37NO	**I37NO**	**4.54**	**331**	I	I	17 30 20.0	
	baz=147,slow=317,SNR=2.5						
KEV	**Kevo**	**4.63**	**10**	*e*P	**Pn**	**17 05 49.9**	**+0.2**
STEI	**Steigen**	**4.66**	**310**	*e*P	**Pn**	**17 05 51.4**	**+1.3**
PVF	**Pernaja**	**4.73**	**173**	*e*P	**Pn**	**17 05 52.9**	**+1.8**
NUR	**Nurmijarvi**	**4.74**	**181**	*e*P	**Pn**	**17 05 53.0**	**+1.7**
VJF	**Virojoki**	**4.88**	**163**	*e*P	**Pn**	**17 05 55.3**	**+2.1**
VAGH	**Vaagaholmen**	**4.92**	**293**	*e*P	**Pn**	**17 05 54.5**	**+0.8**
MEF	**Metsahovi**	**5.04**	**182**	*e*P	**Pn**	**17 05 57.2**	**+2.0**
MEF	**Metsahovi**	**5.04**	**182**	*e*P	**Pn**	**17 05 57.2**	**+2.0**
VUOS	**Vuosaari Helsi**	**5.07**	**178**	*e*P	**Pn**	**17 06 00.4**	**+4.7**
TVF	**Tvarminne**	**5.45**	**188**	*e*P	**Pn**	**17 06 02.6**	**+1.6**
AAL	**Aland**	**5.52**	**205**	*e*P	**Pn**	**17 06 02.9**	**+1.0**
AAL	**Aland**	**5.52**	**205**	*e*P	**Pn**	**17 06 02.8**	**+0.8**
ARBE	**Arbavere**	**5.85**	**174**	*e*P	**Pn**	**17 06 05.2**	**-1.2**
MTSE	**Matsula**	**6.56**	**184**	*e*P	**Pn**	**17 06 17.2**	**+1.1**
HFS	**Hagfors**	**7.21**	**230**	Pn	**Pn**	**17 06 25.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=10						
HFS				Pg	**Pb**	**17 06 45.7**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=42,slow=18

SIJI	**Sorong**	**6.30**	**28**	P	**Pn**	**17 38 10.5**	**+0.7**
	1.4nm,0.2s,baz=238,slow=19,SNR=12						
SIJI				S	**S**	**17 39 20.4**	**-4.4**
	3.1nm,0.2s,baz=71,slow=23,SNR=10						
KAPI	**Kappang**	**8.60**	**279**	P	**Pn**	**17 38 37.2**	**-0.5**
	5.5nm,0.3s,baz=87,slow=16,SNR=5.0						
FITZ	**Fitzroy Crossi**	**11.86**	**192**	P	**P**	**17 39 19.6**	**+0.5**
	2.1nm,0.9s,baz=28,slow=11,SNR=8.0						
FITZ				S	**S**	**17 41 30.9**	**+1.2**
	1.8nm,0.7s,baz=18,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**14.65**	**157**	P	**P**	**17 39 51.6**	**+1.6**
	0.4nm,0.5s,baz=332,slow=12,SNR=9.8						
WRA				S	**S**	**17 42 28.8**	**-1.8**
	0.3nm,0.7s,baz=332,slow=23,SNR=1.5						
ASAR	**Alice Springs**	**17.95**	**163**	P	**P**	**17 40 28.6**	**+2.6**
	0.5nm,0.7s,baz=345,slow=12,SNR=9.7						
ASAR				S	**S**	**17 43 31.8**	**-4.5**
	0.5nm,0.9s,baz=354,slow=23,SNR=1.8						
TGY	**Tagaytay City**	**21.68**	**340**	P	**P**	**17 41 04.4**	**+0.3**
	216nm,0.4s,baz=160,slow=15,SNR=3.7						
KSRS	**Korea Array**	**43.68**	**360**	P	**P**	**17 44 13.9**	**+1.4**
	0.6nm,0.5s,baz=183,slow=9.0,SNR=4.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**66.84**	**327**	P	**P**	**17 46 58.0**	**+1.2**
	0.6nm,0.4s,baz=119,slow=8.2,SNR=13						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**70.34**	**334**	P	**P**	**17 47 18.1**	**0.0**
	0.5nm,0.6s,baz=104,slow=6.1,SNR=2.2						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**71.15**	**329**	P	**P**	**17 47 24.2**	**+1.1**
	0.4nm,0.5s,baz=136,slow=5.2,SNR=5.7						
	0.4nm,0.5s						

*IDC **14** 17:37:37.5±1.1,65°.19S×180°.00W,h0km,mb3.9/4,*
mbtmp3.8/5,ML2.9/1,MS3.5/7,Error ellipse: s-maj=45.5km
s-min=26.6km az=54.0

ISC 14 17:37:38.9±1.2**,65°.1S**±0°.2×**179°.9W**±0°.3**,h10km,n14,**
σ0s82/7,mb3.8/4,MS3.4/6,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.64**	**197**	Pn	**Pn**	**17 40 52.5**	**+0.5**
	0.1nm,0.3s,baz=44,slow=10,SNR=8.8						
VNDA				LR	LR	17 44 41.1	
	comp=Z,82nm,19.4s,baz=0.5,slow=31						
	0.6nm,0.8s						
QSPA	**South Pole Qui**	**24.97**	**180**	P	**P**	**17 43 01.5**	**-0.7**
	2.1nm,1.1s,baz=20,slow=6.4,SNR=4.6						
QSPA				LR	LR	17 51 41.0	
	comp=Z,94nm,19.2s,baz=31,slow=34						
	2.1nm,1.1s						
URZ	**Urewera**	**26.96**	**355**	LR	LR	17 51 37.2	
	comp=Z,86nm,20.2s,baz=196,slow=31						
SNAA	**Sanae**	**43.46**	**179**	LR	LR	18 02 51.6	
	comp=Z,67nm,19.1s,baz=74,slow=35						
H01W1	**Cape Leeuwin H**	**48.88**	**275**	T	T	18 39 06.9	
	baz=149,slow=75,SNR=726						
H01W2	**Cape Leeuwin H**	**48.88**	**275**	T	T	18 39 06.9	
	baz=149,slow=75,SNR=722						
H01W3	**Cape Leeuwin H**	**48.89**	**275**	T	T	18 39 06.9	
	baz=149,slow=75,SNR=697						
ASAR	**Alice Springs**	**50.94**	**302**	P	**P**	**17 46 40.1**	**-0.1**
	0.5nm,0.6s,baz=156,slow=7.5,SNR=6.1						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**54.21**	**304**	P	**P**	**17 47 04.4**	**-0.1**
	1.4nm,1.2s,baz=156,slow=6.5,SNR=3.2						
	1.4nm,1.2s						
PMG	**Port Moresby**	**60.17**	**322**	LR	LR	18 10 29.0	
	comp=Z,91nm,18.5s,baz=256,slow=33						
PLCA	**Paso Flores**	**61.15**	**125**	LR	LR	18 08 27.6	
	comp=Z,17nm,21.1s,baz=166,slow=30						
LPAZ	**La Paz**	**84.15**	**116**	P	**P**	**17 50 10.7**	**-0.1**
	1.0nm,0.3s,baz=160,slow=18,SNR=12						
LPAZ				LR	LR	18 20 27.9	
	comp=Z,26nm,18.1s,baz=178,slow=30						
	1.0nm,0.3s						
ILAR	**Eielson Array**	**131.81**	**18**	PKP	**PKiKP**	**17 56 52.4**	**+1.1**
	0.9nm,0.9s,baz=214,slow=3.1,SNR=5.6						
BRTR	**Keskin Array B**	**148.08**	**234**	PKPbc	**PKPbc**	**17 57 23.0**	**-0.8**
	0.7nm,0.8s,baz=151,slow=3.3,SNR=5.0						

*DJA **14** 18:01:41.2±0.3,1°.N±4°×12°.6E±°,h10km,M3.9/12,mb4.1/2,*
MLv3.8/12
*IDC **14** 18:01:42.1±3.8,1°.37N×126°.09E,h46km±40km,mb3.5/7,*
mbtmp3.7/9,ML3.3/2,MS2.5/1,Error ellipse: s-maj=37.0km
s-min=17.4km az=71.0

ISC 14 18:01:42.6±0.8**,1°.50N**±0°.08×**126°.33E**±0°.06**,h47km,n15,**
σ1s41/17,mb3.9/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**125**	P	**Pn**	**18 02 04.2**	**+0.3**
TNTI				S	**Sn**	**18 02 20.4**	**+0.7**
MNI	**Manado**	**1.48**	**268**	P	**Pn**	**18 02 07.5**	**+0.6**
SGSI	**Sangihe**	**2.32**	**340**	P	**Pn**	**18 02 19.4**	**+1.1**
GTOI	**Gorontalo**	**3.42**	**256**	P	**Pn**	**18 02 36.1**	**+2.6**
LUWI	**Luwuk**	**4.36**	**235**	P	**Pn**	**18 02 47.9**	**+1.6**
SIJI	**Sorong**	**5.47**	**115**	P	**Pn**	**18 03 04.0**	**+2.4**
	0.4nm,0.3s,baz=328,slow=13,SNR=3.7						
	3.3nm,0.6s						
DAV	**Davao City (W)**	**5.59**	**352**	LR	LR	18 05 36.3	
	comp=Z,48nm,19.8s,baz=162,slow=41						
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P	**P**	**18 06 03.5**	**-2.2**
	0.1nm,0.3s,baz=6.0,slow=10,SNR=1.4						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**18 06 39.2**	**-1.4**
	1.9nm,0.4s,baz=340,slow=11,SNR=24						
WRA				PcP	**PcP**	**18 10 31.4**	**-0.3**
	0.2nm,0.5s,baz=337,slow=1.9,SNR=1.7						
	1.9nm,0.4s						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**18 07 11.4**	**-0.5**
	0.5nm,0.5s,baz=350,slow=14,SNR=12						
ASAR				PcP	**PcP**	**18 10 38.6**	**-0.3**
	0.3nm,0.4s,baz=339,slow=2.2,SNR=5.4						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.71**	**304**	P	**P**	**18 08 01.6**	**-0.6**
	0.2nm,0.3s,baz=120,slow=4.3,SNR=4.3						
	0.2nm,0.3s						
PETK	**Petropavlovsk-**	**57.64**	**22**	P	**P**	**18 11 28.9**	**+1.0**
	0.8nm,0.5s,baz=183,slow=4.7,SNR=8.2						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**18 11 37.9**	**-0.9**
	1.1nm,0.7s,baz=122,slow=7.2,SNR=9.3						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**62.39**	**334**	P	**P**	**18 12 00.3**	**-0.1**
	0.4nm,0.5s,baz=130,slow=4.3,SNR=1.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	**P**	**18 12 06.3**	**-0.9**
	1.0nm,0.7s,baz=125,slow=6.4,SNR=18						
	1.0nm,0.7s						

IDC 14 18:12:17.2±25.0**,65°.18S×179°.80W,h0km,mb3.4/2,**
mbtmp3.4/3,ML2.5/1,Error ellipse: s-maj=638.4km
s-min=48.3km az=82.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.60**	**197**	Pn	**Pn**	**18 15 30.5**	**-0.4**
	baz=52,slow=17,SNR=7.2						
	0.6nm,0.7s						
H01W1	**Cape Leeuwin H**	**48.92**	**275**	T	T	19 13 34.4	
	baz=150						
H01W2	**Cape Leeuwin H**	**48.92**	**275**	T	T	19 13 34.0	
	baz=150						
H01W3	**Cape Leeuwin H**	**48.93**	**275**	T	T	19 13 35.6	
	baz=150						
ASAR	**Alice Springs**	**51.00**	**301**	P	P	18 21 20.8	+0.2
	0.3nm,0.7s,baz=154,slow=7.4,SNR=8.3						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**54.27**	**304**	P	P	18 21 44.3	-0.5
	0.6nm,0.9s,baz=157,slow=7.3,SNR=2.3						
	0.6nm,0.9s						

IDC 14 18:18:05.8±4.9**,65°.20S×179°.92W,h0km,mb3.8/3,**
mbtmp3.8/4,ML3.0/1,MS3.6/11,Error ellipse:
s-maj=157.7km s-min=27.3km az=69.0,
Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.56**	**197**	Pn	**Pn**	**18 21 18.1**	**-0.9**
	0.1nm,0.3s,baz=45,slow=18,SNR=20						
VNDA				LR	LR	18 25 20.1	
	comp=Z,138nm,19.8s,baz=11,slow=32						
	2.2nm,0.7s						
RPZ	**Rata Peaks**	**22.11**	**342**	LR	LR	18 30 03.2	
	comp=Z,35nm,19.2s,baz=108,slow=32						
QSPA	**South Pole Qui**	**24.89**	**180**	P	P	18 23 30.3	+0.2
	2.1nm,0.9s,baz=5.5,slow=2.7,SNR=6.4						
QSPA				LR	LR	18 31 47.3	
	comp=Z,151nm,20.7s,baz=42,slow=33						
	2.1nm,0.9s						
URZ	**Urewera**	**27.04**	**355**	LR	LR	18 33 38.3	
	comp=Z,123nm,18.1s,baz=178,slow=34						
MAW	**Mawson**	**40.22**	**212**	LR	LR	18 41 48.1	
	comp=Z,151nm,20.4s,baz=114,slow=35						
SNAA	**Sanae**	**43.38**	**179**	LR	LR	18 42 59.8	
	comp=Z,95nm,19.3s,baz=94,slow=34						
RAR	**Rarotonga**	**45.92**	**27**	LR	LR	18 44 45.9	
	comp=Z,118nm,18.2s,baz=174,slow=35						
H01W1	**Cape Leeuwin H**	**48.87**	**275**	T	T	19 19 28.1	
	baz=149,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**48.87**	**275**	T	T	19 19 21.2	
	baz=149,slow=76,SNR=15						
H01W3	**Cape Leeuwin H**	**48.89**	**275**	T	T	19 19 26.6	
	baz=149,slow=76,SNR=15						
ASAR	**Alice Springs**	**50.97**	**302**	P	P	18 27 09.2	+0.2
	0.7nm,0.6s,baz=156,slow=7.7,SNR=17						
	0.7nm,0.6s						
PPT	**Papeete**	**51.74**	**38**	LR	LR	18 46 38.0	
	comp=Z,35nm,18.6s,baz=158,slow=33						
WRA	**Warramunga Arr**	**54.24**	**304**	P	P	18 27 32.7	-0.5
	1.2nm,0.8s,baz=157,slow=6.3,SNR=5.5						
	1.2nm,0.8s						
H03S2	**Juan Fernandez**	**64.18**	**115**	T	T	19 39 30.0	
	baz=205,slow=74,SNR=5.4						
H03S1	**Juan Fernandez**	**64.18**	**115**	T	T	19 39 29.8	
	baz=205,slow=74,SNR=5.5						
H03S3	**Juan Fernandez**	**64.19**	**115**	T	T	19 39 26.4	
	baz=205,slow=74,SNR=5.4						
SIJI	**Sorong**	**73.06**	**308**	LR	LR	19 00 35.6	
	comp=Z,91nm,18.6s,baz=166,slow=35						
MATP	**Matopo**	**91.91**	**207**	LR	LR	19 09 10.2	
	comp=Z,53nm,19.9s,baz=260,slow=33						
TSUM	**Tsumeb**	**94.80**	**197**	LR	LR	19 13 11.7	
	comp=Z,34nm,18.6s,baz=166,slow=35						

*STR **14** 18:26:46.5±0.0,41°.4N±0°.3×7°.6E±0°.1,h5km,MLv2.7/13,*
LOCSAT earthModelID alpes_taup-2.11 preliminary
*LDG **14** 18:26:49.1±0.2,41°.32N×7°.56E,h25km,Ml2.8/10,Error*
ellipse: s-maj=5.3km s-min=4.4km az=33.0

ISC 14 18:26:44.1±2.4**,41°.3N**±0°.1×**7°.53E**±0°.04**,h13km**±13km,n27,**
σ1s83/46,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJAC	**Base Areonaval**	**1.13**	**54**	Pg	**Pg**	**18 27 06.0**	**+0.1**
AJAC				Sg	**Sg**	**18 27 18.9**	**-1.7**
SMPL	**Sampolo**	**1.55**	**58**	Pg	**Pn**	**18 27 12.8**	**+1.4**
SMPL				Sg	**Sn**	**18 27 30.4**	**-1.0**
PGF	**Pioggiola**	**1.68**	**40**	*e*Pn	**Pn**	**18 27 14.4**	**+1.1**
PGF				*e*Sn	**Sn**	**18 27 33.4**	**-1.3**
	93nm,0.3s						
PGF	**Pioggiola**	**1.68**	**40**	Pg	**Pn**	**18 27 14.4**	**+1.1**
PGF				Sn	**Sn**	**18 27 34.1**	**-0.6**
MORSI	**Morsiglia**	**2.16**	**39**	Pn	**Pn**	**18 27 21.6**	**+1.8**
MORSI				Sn	**Sn**	**18 27 45.4**	**-1.1**
LMR	**La Mourre**	**2.19**	**340**	*e*Pn	**Pn**	**18 27 21.1**	**+0.9**
LMR				*e*Sn	**Sn**	**18 27 44.8**	**-2.4**
	21nm,0.3s						
CALF	**Calern**	**2.52**	**350**	Pn	**Pn**	**18 27 25.5**	**+0.8**
CALF				Sn	**Sn**	**18 27 53.7**	**-1.7**
SBF	**Sospel**	**2.59**	**359**	*e*Pn	**Pn**	**18 27 26.4**	**+0.7**
SBF				*e*Sn	**Sn**	**18 27 55.0**	**-2.0**
	4.4nm,0.1s						
ARTF	**Artigues**	**2.64**	**332**	Pn	**Pn**	**18 27 28.1**	**+1.7**
ARTF				Sn	**Sn**	**18 27 58.4**	**+0.2**
SAOF	**Saorge**	**2.71**	**0**	Pn	**Pn**	**18 27 28.1**	**+0.7**
SPIF	**crte de Spivo**	**2.79**	**356**	Pn	**Pn**	**18 27 29.4**	**+0.9**
SPIF				Sn	**Sn**	**18 27 59.4**	**-2.7**
PIAF	**les Granges de**	**2.84**	**1**	Pn	**Pn**	**18 27 30.0**	**+0.8**
BLAF	**les Blancs**	**2.89**	**338**	Pn	**Pn**	**18 27 31.6**	**+1.8**
BLAF				Sn	**Sn**	**18 28 04.4**	**-0.1**
ISO	**Isola**	**2.93**	**353**	Pn	**Pn**	**18 27 32.2**	**+1.9**
ISO				Sn	**Sn**	**18 28 04.2**	**-1.2**
ENR	**Entracque**	**2.95**	**359**	Pn	**Pn**	**18 27 32.2**	**+1.5**
GBOS	**Grotte di Boss**	**2.97**	**4**	Pn	**Pn**	**18 27 32.2**	**+1.2**
GBOS				Sn	**Sn**	**18 28 05.0**	**-1.5**
SMRF	**Simiane la Rot**	**3.06**	**333**	*e*Pn	**Pn**	**18 27 34.4**	**+2.2**
SMRF				*e*Sn	**Sn**	**18 28 11.2**	**+2.5**
	9.6nm,0.4s						
RUSF	**Rustrel**	**3.06**	**331**	Pn	**Pn**	**18 27 34.5**	**+2.3**
RUSF				Sn	**Sn**	**18 28 09.2**	**+0.5**
JAUF	**Jausiers**	**3.20**	**350**	Pn	**Pn**	**18 27 36.5**	**+2.3**
PZZ	**Stroppo**	**3.24**	**355**	Pn	**Pn**	**18 27 37.1**	**+2.3**
PZZ				Sn	**Sn**	**18 28 14.5**	**+1.2**
MBDF	**Montbardon**	**3.49**	**351**	*e*Pn	**Pn**	**18 27 42.1**	**+3.9**
MBDF				*e*Sn	**Sn**	**18 28 20.9**	**+1.4**
	4.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.84**	**342**	*e*Sn	**Sn**	**18 28 26.4**	**-1.5**
	1.1nm,0.2s						
RSP	**Reno Superiore**	**3.88**	**357**	Pn	**Pn**	**18 27 44.8**	**+1.3**
LASF	**Ste Croix**	**3.89**	**317**	*e*Pn	**Pn**	**18 27 44.3**	**+0.7**
LASF				*e*Sn	**Sn**	**18 28 25.6**	**-3.6**
	3.7nm,0.3s						
VIVF	**Saint-Julien-l**	**4.14**	**331**	*e*Pn	**Pn**	**18 27 48.4**	**+1.3**
VIVF				*e*Sn	**Sn**	**18 28 33.1**	**-2.3**
	1.4nm,0.4s						
MTLF	**Montolieu**	**4.45**	**299**	*e*Sn	**Sn**	**18 28 39.5**	**-3.3**
	9.4nm,0.6s						
SSB	**Saint Sauveur**	**4.56**	**332**	Pn	**Pn**	**18 27 54.5**	**+1.8**

*IDC **14** 18:26:37.9±8.1,40°.70N×142°.64E,h0km,mb3.7/2,*
mbtmp3.6/3,ML2.6/1,MS3.6/2,Error ellipse:
s-maj=221.6km s-min=51.3km az=148.0
*JMA **14** 18:26:53.9±0.1,39°.1N±0°.3×142°.4E±0°.8,h32km±1km,*
MV3.2/38,E OFF IWATE PREF

ISC 14 18:26:50.8±2.2**,39°.01N**±0°.04×**142°.42E**±0°.09**,h13km**±11km,**
n21,σ1s34/22,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.59**	**277**	⇓*i*P	**Pn**	**18 27 05.6**	**+0.7**
OFUJ				⇓*e*S	**Sn**	**18 27 13.7**	**-0.6**
MIYJ	**Miyakonagasawa**	**0.73**	**321**	⇓*i*P	**Pb**	**18 27 06.2**	**+0.8**
MIYJ				⇓S	**Sb**	**18 27 14.8**	**-0.6**
JKMT	**Kesennumamotoy**	**0.76**	**255**	*i* P	**Pn**	**18 27 08.6**	**+1.3**
JKMT				S	**Sn**	**18 27 18.9**	**+0.3**
JMK	**Ichinoseki**	**0.94**	**267**	*i* P	**Pn**	**18 27 11.1**	**+1.5**
JOM	**Ohasama**	**0.99**	**298**	⇓*i*P	**Pn**	**18 27 11.1**	**+0.7**
JOM				⇓S	**Sn**	**18 27 23.6**	**-0.7**
JIO	**Ouri**	**1.00**	**237**	P	**Pn**	**18 27 12.2**	**+1.6**
JIO				*e*S	**Sn**	**18 27 25.2**	**+0.6**
JTH	**Tanohata**	**1.02**	**335**	*e*S	**Sg**	**18 27 22.7**	**-1.2**
JKZ	**Kuzumaki**	**1.29**	**319**	⇓*e*P	**Pn**	**18 27 15.1**	**+0.6**
JKZ				⇓*e*S	**Sb**	**18 27 30.4**	**-1.0**
JRG	**Rokugo**	**1.44**	**286**	*e*P	**Pg**	**18 27 19.4**	**+0.9**
JRG				*e*S	**Sg**	**18 27 37.8**	**+0.6**
JANG	**Nango**	**1.53**	**333**	P	**Pn**	**18 27 18.2**	**+0.3**
JANG				*e*S	**Sn**	**18 27 36.8**	**-0.8**
MJAR	**Matsushiro Arr**	**4.15**	**235**	Pn	**Pb**	**18 27 59.6**	**-4.1**
	0.2nm,0.3s,baz=39,slow=11,SNR=20						
MJAR				Sn	**Sg**	**18 29 04.6**	**+0.6**
	0.1nm,0.3s,baz=123,slow=36,SNR=1.9						
	3.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.56**	**125**	T	T	19 03 11.3	
	baz=317,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**28.57**	**125**	T	T	19 03 14.4	
	baz=317,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.58**	**125**	T	T	19 03 13.5	
	baz=317,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.34**	**127**	T	T	19 04 11.6	
	baz=318,slow=76,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**29.34**	**127**	T	T	19 04 12.2	
	baz=318,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**29.36**	**127**	T	T	19 04 16.4	
	baz=318,slow=76,SNR=6.0						
TLY	**Talaya**	**29.69**	**308**	LR	LR	18 45 22.0	
	comp=Z,34nm,18.4s,baz=209,slow=39						
WRA	**Warramunga Arr**	**59.13**	**189**	P	**P**	**18 36 51.6**	**+0.4**
	0.7nm,0.5s,baz=5.9,slow=7.1,SNR=18						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**62.86**	**189**	P	**P**	**18 37 17.2**	**+0.8**
	0.4nm,0.7s,baz=11,slow=5.5,SNR=5.0						
	0.4nm,0.7s						
BELG	**Belogornoye**	**62.90**	**317**	LR	LR	19 05 53.8	
	comp=Z,150nm,18.2s,baz=96,slow=38						

IDC 14 18:30:36.1±4.8**,65°.17S×179°.90E,h0km,mb3.8/3,**
mbtmp3.8/4,ML3.4/1,MS3.5/8,Error ellipse:
s-maj=154.7km s-min=26.6km az=69.0,Balleny Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.56**	**197**	Pn	**Pn**	**18 33 48.0**	**-1.5**
	0.2nm,0.3s,baz=42,slow=17,SNR=20						
VNDA				LR	LR	18 37 27.3	
	comp=Z,154nm,21.7s,baz=31,slow=30						
	2.5nm,0.7s						
RPZ	**Rata Peaks**	**22.06**	**343**	LR	LR	18 42 58.9	
	comp=Z,19nm,18.3s,baz=237,slow=34						
QSPA	**South Pole Qui**	**24.92**	**180**	P	P	18 36 01.0	+0.4
	2.0nm,0.9s,baz=31,slow=2.1,SNR=8.5						
QSPA				LR	LR	18 44 27.4	
	comp=Z,111nm,20.2s,baz=36,slow=33						
	2.0nm,0.9s						
URZ	**Urewera**	**27.00**	**355**	LR	LR	18 45 19.6	
	comp=Z,104nm,19.2s,baz=162,slow=33						
MAW	**Mawson**	**40.20**	**212**	LR	LR	18 54 27.6	
	comp=Z,108nm,18.1s,baz=102,slow=36						
SNAA	**Sanae**	**43.41**	**179**	LR	LR	18 55 49.6	
	comp=Z,99nm,19.2s,baz=48,slow=35						
H01W1	**Cape Leeuwin H**	**48.79**	**275**	T	T	19 33 06.5	
	baz=158						
H01W2	**Cape Leeuwin H**	**48.80**	**275**	T	T	19 33 07.8	
	baz=158						
H01W3	**Cape Leeuwin H**	**48.81**	**275**	T	T	19 33 07.6	
	baz=158						
ASAR	**Alice Springs**	**50.89**	**302**	P	P	18 39 39.0	+0.3
	0.8nm,0.6s,baz=156,slow=7.5,SNR=21						
	0.8nm,0.6s						
PPT	**Papeete**	**51.76**	**38**	LR	LR	18 55 40.1	
	comp=Z,33nm,19.0s,baz=155,slow=29						
WRA	**Warramunga Arr**	**54.16**	**304**	P	P	18 40 02.4	-0.5
	1.0nm,0.9s,baz=155,slow=6.5,SNR=6.9						
	1.0nm,0.9s						
H03S2	**Juan Fernandez**	**64.26**	**115**	T	T	19 52 00.0	
	baz=205,slow=74,SNR=7.7						
H03S1	**Juan Fernandez**	**64.26**	**115**	T	T	19 51 52.6	
	baz=205,slow=74,SNR=6.8						
H03S3	**Juan Fernandez**	**64.28**	**115**	T	T	19 51 55.2	
	baz=205,slow=74,SNR=7.0						
DAV	**Davao City (W)**	**82.32**	**306**	LR	LR	19 19 23.9	
	comp=Z,76nm,18.1s,baz=223,slow=36						

*ISK **14** 18:31:57.2,34°.63N×33°.88E,h25km,ML2.9/15*
*AFAD **14** 18:31:58.3,34°.76N×33°.71E,h50km±1km,ML2.2*
*GII **14** 18:31:58.6±0.0,34°.598N±0°.002×33°.854E±0°.001,h0km,*
Mws2.4,confirmed
*GRAL **14** 18:31:59.6±0.3,34°.69N×33°.98E,h106km±31km,MD3.1*
*NIC **14** 18:31:59.4,34°.65N×33°.85E,h17km±1km,Ml1.9/8*

ISC 14 18:31:58.7±1.0**,34°.66N**±0°.02×**33°.89E**±0°.02**,h31km**±10km,**
n59,σ0s75/98,2C-3D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARAL	**Paralimni**	**0.35**	**20**	⇓*i*P	**Pn**	**18 32 07.7**	**0.0**
PARAL				S	**Sn**	**18 32 14.1**	**+0.4**
PARAL				AML	AML	18 32 15.3	
	0.6nm,0.3s						
PARAL				AML	AML	18 32 17.1	
	0.7nm,0.8s						
MVOU	**Mavrovouni**	**0.41**	**329**	⇑*e*P	**Pb**	**18 32 07.7**	**-0.1**
MVOU				S	**Sb**	**18 32 14.1**	**0.0**
MVOU				AML	AML	18 32 14.8	
	0.4nm,0.3s						
MVOU				AML	AML	18 32 14.8	
	0.4nm,0.2s						
ASGA	**Asgata**	**0.55**	**283**	⇑*i*P	**Pn**	**18 32 10.0**	**-0.3**
ASGA				S	**Sn**	**18 32 18.2**	**-0.2**
ASGA				AML	AML	18 32 20.3	
	0.2nm,0.2s						
ASGA				AML	AML	18 32 20.3	
	0.2nm,0.2s						
CSS	**Mathiatis**	**0.55**	**303**	Pg	**Pb**	**18 32 09.4**	**-0.6**
CSS				Sg	**Sb**	**18 32 17.6**	**-0.1**
CSS	**Mathiatis**	**0.55**	**303**	⇓*i*P	**Pb**	**18 32 10.0**	**0.0**
CSS				S	**Sn**	**18 32 17.9**	**-0.7**
CSS				AML	AML	18 32 19.3	
	0.2nm,0.3s						
CSS				AML	AML	18 32 21.4	
	0.2nm,0.6s						
CSS	**Mathiatis**	**0.55**	**303**	P	**Pb**	**18 32 09.6**	**-0.3**
CSS				S	**Sn**	**18 32 18.1**	**-0.5**
ATHAL	**Athalassa**	**0.63**	**320**	P	**Pb**	**18 32 10.8**	**-0.4**
ATHAL				S	**Sn**	**18 32 21.1**	**+0.7**
ATHAL				AML	AML	18 32 29.8	
	0.2nm,0.6s						
ATHAL				AML	AML	18 32 33.2	
	0.3nm,0.5s						
LFK	**Lefkose**	**0.68**	**334**	Pg	**Pb**	**18 32 12.0**	**-0.2**
LFK				Sg	**Sn**	**18 32 22.6**	**+0.7**
XYLS	**Xyliatos**	**0.78**	**297**	⇓*i*P	**Pb**	**18 32 13.2**	**-0.6**
XYLS				S	**Sb**	**18 32 23.7**	**-0.3**
XYLS				AML	AML	18 32 25.5	
	0.2nm,0.4s						
XYLS				AML	AML	18 32 26.4	
	0.1nm,0.3s						
APOL	**The Sanctuary**	**0.85**	**271**	P	**Pn**	**18 32 14

NATI				S	Sn	18 32 57.0	+0.9	
OSC2	**CSNet OBS 4**	**2.08**	**221**	P	Pb	18 32 33.7	-2.1	
OFRI	**`Ofer**	**2.23**	**156**	P	Pn	18 32 33.8	+0.2	
OFRI				S	Sn	18 33 00.2	+0.1	
KNHM	**Kefar Nahum**	**2.26**	**141**	P	Pn	18 32 34.5	+0.6	
KNHM				S	Sn	18 33 01.6	+0.8	
YAYL	**Yayladag**	**2.27**	**52**	P	Pb	18 32 37.4	-1.7	
YAYL				S	Sn	18 33 02.9	+1.7	
YAYL				IAML		18 33 07.0		
	comp=N,21nm,0.4s							
YAYL				IAML		18 33 07.0		
	comp=E,19nm,0.4s							
KSHT	**Keshet**	**2.31**	**136**	P	Pn	18 32 35.4	+0.7	
KSHT				S	Sn	18 33 03.3	+1.1	
TAHT	**Tahtakopru-Hat**	**2.53**	**47**	Pn	Pn	18 32 38.3	+0.6	
MMLI	**Mount Malkishu**	**2.56**	**150**	Pn	Pn	18 32 38.3	+0.2	
MMLI	**Mount Malkishu**	**2.56**	**150**	P	Pn	18 32 38.5	+0.4	
MMLI				S	Sn	18 33 08.8	+0.6	
HDMB	**Hadim**	**2.56**	**334**	Pn	Pn	18 32 38.3	0.0	
SLTI	**Sal'it**	**2.60**	**158**	P	Pn	18 32 38.8	+0.2	
SLTI				S	Sn	18 33 09.9	+0.7	
KKBE	**Karaman, Kazim**	**2.67**	**343**	P	Pn	18 32 41.4	+1.8	
KKBE				S	Sn	18 33 11.1	+0.1	
GULE	**Gulek**	**2.71**	**15**	P	Pn	18 32 40.2	-0.1	
GULE				S	Sn	18 33 11.0	-1.1	
GULE				IAML		18 33 17.0		
	comp=E,15nm,0.5s							
GULE				IAML		18 33 29.0		
	comp=N,8.4nm,0.5s							
KERG	**Konya-Eregli**	**2.75**	**4**	P	Pn	18 32 42.4	+1.6	
KERG				S	Sn	18 33 13.8	+0.7	
KERG				IAML		18 33 17.0		
	comp=E,8.8nm,0.4s							
KERG				IAML		18 33 19.0		
	comp=N,12nm,0.2s							
RGMN	**Argaman**	**2.84**	**151**	P	Pn	18 32 42.3	+0.5	
RGMN				S	Sn	18 33 15.4	+0.5	
MZS	**Mizpe Shalem**	**3.33**	**157**	P	Pn	18 32 49.1	+0.4	
MZS				S	Sn	18 33 27.8	+0.5	
MSBI	**Mazada**	**3.56**	**159**	P	Pn	18 32 52.3	+0.5	
MSBI				S	Sn	18 33 32.8	0.0	
GHAJ	**Ghor Haditha**	**3.63**	**157**	P	Pn	18 32 53.4	+0.6	
GHAJ				S	Sn	18 33 35.1	+0.5	
KZIT	**Kziot**	**3.77**	**173**	P	Pn	18 32 54.9	+0.2	
KZIT				S	Sn	18 33 38.0	0.0	
RMNI	**Mount Ramon**	**4.12**	**170**	P	Pn	18 32 59.9	+0.3	
RMNI				S	Sn	18 33 46.7	-0.1	
HRFI	**Mount Harif**	**4.71**	**168**	P	Pn	18 33 07.9	+0.2	
HRFI				S	Sn	18 34 01.7	+0.4	

IDC 14 18:45:02.5±7.3, 6°80S×117°89E, h297km±67km, mb2.5/3, mbtmp3.3/4, Error ellipse: s-maj=167.7km s-min=27.6km az=55.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.64**	**121**	P	Pn	18 46 39.9	+0.3
	9.9nm,0.3s,baz=283,slow=20,SNR=1.4						
BATI				S	S	18 47 57.7	-0.2
	6.8nm,0.2s,baz=35,slow=23,SNR=1.2						
WRA	**Warramunga Arr**	**20.63**	**131**	P	P	18 49 20.4	+0.2
	0.4nm,0.8s,baz=304,slow=12,SNR=4.8						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**22.76**	**139**	P	P	18 49 39.9	0.0
	0.6nm,1.1s,baz=318,slow=11,SNR=1.6						
	0.6nm,1.1s						
MKAR	**Makanchi Array**	**62.01**	**333**	P	P	18 54 51.5	-0.2
	0.1nm,0.4s,baz=126,slow=7.4,SNR=2.6						
	0.1nm,0.4s						

*NEIC **14** 18:47:51.0±2.2, 5°.90N±0°.06×126°.8E±0°.1, h95km±8km, mb4.3/13, Error ellipse: s-maj=17.3km s-min=5.2km az=64.0*
*IDC **14** 18:47:52.4±4.3, 5°.94N×126°.91E, h116km±31km, mb3.5/8, mbtmp3.9/8, MS3.7/2, Error ellipse: s-maj=98.9km s-min=14.5km az=68.0*
*MAN **14** 18:47:53.0, 5°.87N×126°.65E, h62km, MS3.4*

ISC 14 18:47:50.3±1.1, 5°.89N±0°.04×126°.86E±0°.09, h99km±11km, n34, σ1°78/41, mb4.0/14, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.73**	**313**	P	Pn	18 48 20.8	+1.3
	306nm,0.3s,baz=249,slow=4.1,SNR=3.8						
DAV				S	Sn	18 48 45.6	+4.0
	133nm,0.3s,baz=260,slow=22,SNR=6.7						
DAV	**Davao City (W)**	**1.73**	**313**	Pn	Pn	18 48 17.9	-1.5
DAV				Sn	Sn	18 48 42.0	+0.4
DMPH	**Davao City--Mi**	**1.79**	**311**	*i* P	Pn	18 48 20.9	+0.6
DMPH				*i* S	Sn	18 48 42.7	-0.3
CDOP	**Cateel, Davao**	**1.93**	**347**	*i* P	Pn	18 48 21.8	-0.2
CDOP				*i* S	Sn	18 48 43.3	-2.8
BUKP	**Musuan**	**2.67**	**318**	*i* P	Pn	18 48 32.2	+0.5
BUKP				*i* S	Sn	18 49 04.0	+0.5
TSSP	**Tandag City**	**3.20**	**348**	*e*P	Pn	18 48 39.9	+1.1
TSSP				*e*S	Sn	18 49 10.3	-5.8
CGP	**Cagayan de Oro**	**3.33**	**320**	*e*P	Pn	18 48 43.0	+2.4
CGP				*e*S	Sn	18 49 20.7	+1.4
TNTI	**Ternate**	**5.11**	**174**	Pn	Pn	18 49 04.5	-0.1
TNTI				Sn	Sn	18 50 02.6	+0.2
TOLI2	**Tolitoli**	**7.71**	**232**	Pn	Pn	18 49 39.0	-0.9
TOLI2				Sn	Sn	18 51 00.6	-5.0
LUWI	**Luwuk**	**8.01**	**211**	Pn	Pn	18 49 44.5	+0.5
YULB	**Yu-li**	**18.21**	**343**	P	P	18 51 54.5	-1.2
TPUB	**Ta-pu**	**18.32**	**341**	P	P	18 51 55.1	-1.9
KNRA	**Kununurra**	**21.51**	**175**	P	P	18 52 32.5	+1.1
KNRA				IAmb	IAmb	18 52 33.9	
	comp=Z,8.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.87**	**183**	P	P	18 52 55.2	+0.4
	comp=Z,2.6nm,0.5s,baz=5.3,slow=8.3,SNR=6.7						
	comp=Z,2.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.87**	**183**	P	P	18 52 55.2	+0.4
PMG	**Port Moresby**	**25.30**	**127**	P	P	18 53 08.2	+0.2
WRA	**Warramunga Arr**	**26.70**	**164**	P	P	18 53 21.8	+1.2
	comp=Z,0.5nm,0.6s,baz=343,slow=10,SNR=5.3						
	comp=Z,0.5nm,0.6s						
MBWA	**Marble Bar**	**27.78**	**194**	P	P	18 53 28.7	-1.4
MBWA				IAmb	IAmb	18 53 35.8	
	comp=Z,8.9nm,1.2s						
ASAR	**Alice Springs**	**30.17**	**167**	P	P	18 53 52.8	+1.4
	comp=Z,0.2nm,0.5s,baz=342,slow=8.8,SNR=1.3						
	comp=Z,0.2nm,0.5s						
FORT	**Forrest**	**36.48**	**178**	P	P	18 54 46.6	+0.6
NWAO	**Narrogin (SRO)**	**39.67**	**193**	P	P	18 55 14.0	+1.2
DZM	**Mont Dzumac**	**47.69**	**127**	LR	LR	19 17 55.4	
	comp=Z,329nm,19.4s,baz=176,slow=38						
PETK	**Petropavlovsk-**	**53.39**	**23**	LR	LR	19 22 50.4	
	comp=Z,17nm,19.2s,baz=154,slow=39						
MKAR	**Makanchi Array**	**55.88**	**324**	P	P	18 57 18.2	+0.4
	comp=Z,0.3nm,0.3s,baz=121,slow=7.5,SNR=9.8						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**55.88**	**324**	P	P	18 57 18.0	+0.1
MAKZ	**Makanchi**	**56.07**	**324**	P	P	18 57 18.9	-0.3
ZALV	**Zalesovo Beam**	**58.74**	**332**	P	P	18 57 37.7	-0.1
	comp=Z,0.5nm,0.4s,baz=123,slow=6.4,SNR=2.6						
	comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**60.01**	**327**	P	P	18 57 46.5	0.0
KURK				IAmb	IAmb	18 57 47.6	
	comp=Z,1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**60.01**	**327**	P	P	18 57 46.5	-0.1
	comp=Z,3.0nm,0.2s,baz=121,slow=6.2,SNR=4.0						
	comp=Z,3.0nm,0.2s						
BVAR	**Borovoye Array**	**65.60**	**326**	P	P	18 58 24.0	+0.3
	comp=Z,1.1nm,0.8s,baz=132,slow=8.0,SNR=4.8						
	comp=Z,1.1nm,0.8s						
O16K	**Kokwok River B**	**77.39**	**30**	P	P	18 59 34.1	-0.3
O16K				IAmb	IAmb	18 59 50.9	
	comp=Z,6.5nm,1.4s						
O18K	**Koktuh Hills**	**78.87**	**30**	P	P	18 59 44.4	+1.8
O18K				IAmb	IAmb	19 00 05.7	
	comp=Z,14nm,1.4s						
D19K	**Kuna River**	**79.07**	**21**	P	P	18 59 44.8	+1.2
D19K				IAmb	IAmb	19 00 23.5	
	comp=Z,9.2nm,1.5s						
FINES	**FINESS Array B**	**90.00**	**332**	P	P	19 00 37.7	-1.0
	comp=Z,0.5nm,0.5s,baz=109,slow=7.3,SNR=4.4						
	comp=Z,0.5nm,0.5s						

*IDC **14** 18:51:51.1±1.2, 2°.88N×126°.17E, h0km, mb3.9/6, mbtmp3.9/7, ML3.5/1, MS3.6/3, Error ellipse: s-maj=56.6km s-min=19.2km az=62.0*
*DJA **14** 18:51:56.6±0.7, 3°N×12°.7E±°, h10km, M3.7/9, MLv3.7/9*
*NEIC **14** 18:52:00.3±2.6, 2°.85N±0°.09×126°.39E±0°.07, h72km±9km, mb4.4/12, Error ellipse: s-maj=14.1km s-min=9.9km az=206.0*

ISC 14 18:51:58.8±0.6, 2°.96N±0°.04×126°.48E±0°.06, h63km, n38, σ1°89/42, mb4.3/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.20**	**307**	P	Pn	18 52 19.5	-0.1
MNI	**Manado**	**2.22**	**228**	P	Pn	18 52 36.2	+2.8
TNTI	**Ternate**	**2.34**	**158**	Pn	Pn	18 52 34.6	-0.4
TNTI				Sn	Sn	18 53 03.8	+1.0
TNTI	**Ternate**	**2.34**	**158**	P	Pn	18 52 36.2	+1.1
GTOI	**Gorontalo**	**4.16**	**236**	P	Pn	18 53 03.4	+3.5
CTBH	**Cotabato--PC H**	**4.79**	**332**	*e*P	Pn	18 53 09.9	+1.5
CTBH				*i* S	Sn	18 54 07.4	+4.8
CDOP	**Cateel, Davao**	**4.80**	**360**	*e*P	Pn	18 53 08.8	+0.2
CDOP				*i* S	Sn	18 54 01.4	-1.5
BUKP	**Musuan**	**5.09**	**344**	*i* P	Pn	18 53 21.6	+8.9
BUKP				*i* S	Sn	18 54 12.3	+2.1
BIPH	**Bislig**	**5.20**	**359**	*e*P	Pn	18 53 15.1	+1.0
BIPH				*e*S	Sn	18 54 07.8	-4.9
LUWI	**Luwuk**	**5.43**	**223**	Pn	Pn	18 53 18.6	+1.3
TOLI2	**Tolitoli**	**5.98**	**252**		Pn	18 53 26.4	+1.5
TOLI2				Sn	Sn	18 54 28.7	-3.3
SIJI	**Sorong**	**6.11**	**128**	Pn	Pn	18 53 27.4	+0.8
	1.0nm,0.3s,baz=332,slow=20,SNR=7.8						
SIJI				Sn	Sn	18 54 37.4	+2.2
	0.3nm,0.3s,baz=221,slow=23,SNR=1.5						
	2.7nm,0.3s						
IPIL	**Ipil**	**6.18**	**321**	*e*P	Pn	18 53 28.2	+0.7
IPIL				*e*S	Sn	18 54 35.1	-1.8
FAKI	**Fak Fak**	**8.21**	**135**	Pn	Pn	18 53 56.7	+1.4
KNRA	**Kununurra**	**18.65**	**173**		P	18 56 09.6	-2.1
KNRA				IAmb	IAmb	18 56 25.5	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.94**	**182**	P	P	18 56 34.5	-2.1
	comp=Z,2.8nm,1.0s,baz=351,slow=13,SNR=1.9						
	comp=Z,2.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.94**	**182**	P	P	18 56 34.5	-2.1
TPUB	**Ta-pu**	**21.00**	**345**	P	P	18 56 36.1	-1.2
TPUB				IAmb	IAmb	18 56 51.1	
	comp=Z,31nm,1.3s						
GUMO	**Guam**	**21.02**	**59**	LR	LR	19 03 49.8	
	comp=Z,34nm,18.3s,baz=202,slow=34						
WRA	**Warramunga Arr**	**24.03**	**162**	P	P	18 57 08.0	-0.2
	comp=Z,1.1nm,0.4s,baz=342,slow=10.0,SNR=15						
	comp=Z,1.1nm,0.4s						
WR8	**Warramunga Arr**	**24.09**	**161**		P	18 57 07.8	-0.9
WR8				IAmb	IAmb	18 57 44.4	
	comp=Z,7.5nm,1.3s						
ASAR	**Alice Springs**	**27.43**	**165**	P	P	18 57 39.2	+0.2
	comp=Z,0.5nm,0.6s,baz=340,slow=8.2,SNR=6.6						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**27.43**	**165**	P	P	18 57 38.9	0.0
MORW	**Morawa**	**33.38**	**197**	P	P	18 58 28.7	-2.6
MORW				IAmb	IAmb	18 58 38.6	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**36.71**	**166**	P	P	18 58 59.7	-0.3
STKA	**Stephens Creek**	**37.50**	**159**	P	P	18 59 06.9	+0.2
	comp=Z,1.1nm,0.5s,baz=333,slow=9.0,SNR=1.8						
	comp=Z,1.1nm,0.5s						
ARMA	**Armidale**	**40.97**	**146**	P	P	18 59 34.6	-1.2
MSVF	**Nonsavu**	**54.82**	**114**	LR	LR	19 21 55.3	
	comp=Z,118nm,21.3s,baz=259,slow=33						
PEA0B	**Petropavlovsk-**	**56.24**	**22**	P	P	19 01 34.1	+1.5
ZALV	**Zalesovo Beam**	**61.16**	**333**	P	P	19 02 06.6	-0.1
	comp=Z,0.3nm,0.5s,baz=133,slow=8.1,SNR=1.9						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**62.25**	**328**	P	P	19 02 14.1	0.0
	comp=Z,2.1nm,0.2s,baz=119,slow=6.2,SNR=1.6						
	comp=Z,2.1nm,0.2s						
KURK	**Kurchatov**	**62.26**	**328**	P	P	19 02 14.1	-0.1
AFI	**Afiamalu**	**63.46**	**107**	LR	LR	19 25 15.4	
	comp=Z,77nm,20.6s,baz=17,slow=31						
AB31	**Akbulak array**	**72.59**	**321**	P	P	19 03 19.0	-0.5
ABKAR	**Akbulak array**	**72.59**	**321**	P	P	19 03 19.4	-0.1
M14K	**Bethel**	**78.48**	**28**	P	P	19 03 54.8	+2.0
M14K				IAmb	IAmb	19 03 59.7	
	comp=Z,5.2nm,1.2s						
M16K	**Timber Creek**	**79.97**	**28**	P	P	19 04 02.9	+1.8
M16K				IAmb	IAmb	19 04 04.5	
	comp=Z,8.8nm,1.4s						
K20K	**Telida**	**82.64**	**27**	P	P	19 04 16.1	+1.0
K20K				IAmb	IAmb	19 04 51.4	
	comp=Z,6.5nm,1.5s						

*SJA **14** 18:53:51.5±1.2, 31°.51S×72°.11W, h17km±7km, ML3.7, MW3.7*
*GUC **14** 18:53:55.6±0.8, 31°.58S×71°.69W, h43km±2km, ML3.8*

ISC 14 18:53:53.3±2.1, 31°.55S±0°.02×71°.84W±0°.06, h4km±15km, n61, σ1°21/87, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.80**	**65**	*i* P	Pn	18 54 10.6	-0.8
CO02				IAML		18 54 26.0	
	comp=Z,2µm,0.2s						
CO02	**Combarbal**	**0.80**	**65**	↓*i* P	Pn	18 54 10.6	-0.8
CO02				*i* S	Sn	18 54 21.3	-2.4
CO02				IAML		18 54 24.4	
	comp=N,15µm,0.2s						
CO04	**Los Pelederos**	**0.88**	**124**	↓*i* P	Pb	18 54 11.9	+0.6
CO04				*i* S	Sb	18 54 23.4	-0.2
CO04				IAML		18 54 25.6	
	comp=N,7µm,0.3s						
CO06	**Fray Jorge**	**0.89**	**11**	↓*i* P	Pb	18 54 12.1	+0.9
CO06				*i* S	Sb	18 54 24.2	+0.7
CO06				IAML		18 54 27.7	
	comp=E,4µm,0.2s						
CO03	**El Pedregal**	**1.21**	**55**	*i* P	Pn	18 54 17.2	+0.1
CO03				*e*S	Sn	18 54 32.8	-1.1
CO03				IAML		18 54 33.7	
	comp=Z,1µm,0.1s						
CO03	**El Pedregal**	**1.21**	**55**	↓*i* P	Pn	18 54 17.1	+0.1
CO03				*i* S	Sn	18 54 32.7	-1.2
CO03				IAML		18 54 36.2	
	comp=E,3µm,0.4s						
VA01	**Torpederas**	**1.48**	**174**	*i* P	Pn	18 54 20.6	0.0
ROCH	**El Roble**	**1.58**	**154**	*e*P	Pn	18 54 22.6	+0.3
ROCH				*i* S	Sn	18 54 42.5	-0.8
ROCH				IAML		18 54 48.5	
	comp=N,1µm,0.4s						
VA03	**San Esteban**	**1.63**	**138**	*i* P	Pn	18 54 23.8	+1.0
VA03	**San Esteban**	**1.63**	**138**	*e*P	Pn	18 54 22.6	-0.2
VA03				*i* S	Sn	18 54 43.3	-1.0
VA03				IAML		18 54 49.2	
	comp=E,2µm,0.6s						
GO04	**Tololo Observa**	**1.64**	**33**	*i* P	Pn	18 54 23.6	+0.5
GO04				*e*S	Sg	18 54 46.0	+0.1
GO04	**Tololo Observa**	**1.64**	**33**	↑*i* P	Pn	18 54 23.5	+0.5
GO04				*i* S	Sg	18 54 45.7	-0.3
GO04				IAML		18 54 53.3	
	comp=N,8µm,0.5s						
CO05	**La Serena**	**1.71**	**18**	*e*P	Pn	18 54 24.4	+0.7
CO05				*i* S	Sb	18 54 47.2	+0.3
CO05				IAML		18 54 53.9	
	comp=E,1µm,0.4s						
MT02	**Curacav**	**1.80**	**161**	*i* P	Pn	18 54 25.6	+0.4
MT02	**Curacav**	**1.80**	**161**	*e*P	Pn	18 54 25.4	+0.2
MT02				*i* S	Sn	18 54 48.0	-0.5
PEL	**Peldehue**	**1.86**	**149**	*i* P	Pn	18 54 26.9	+0.8
PEL	**Peldehue**	**1.86**	**149**	*e*P	Pn	18 54 26.9	+0.8
PEL				*i* S	Sn	18 54 49.4	-0.7
MT10	**Hacienda Santa**	**2.04**	**148**	↑*i* P	Pn	18 54 29.5	+0.9
MT10				*e*S	Sn	18 54 54.4	-0.1
MT10				IAML		18 55 02.2	
	comp=E,2µm,0.4s						
MT05	**Renca**	**2.06**	**153**	*i* P	Pn	18 54 30.1	+1.4
MT05	**Renca**	**2.06**	**153**	*e*P	Pn	18 54 30.0	+1.3
MT05				*e*S	Sn	18 54 54.7	-0.2
MT05				IAML		18 55 03.6	
	comp=N,993nm,0.5s						
VA05	**Santo Domingo**	**2.11**	**175**	*e*P	Pn	18 54 29.4	+0.1
VA05				*e*S	Sn	18 54 55.7	-0.3
VA05				IAML		18 55 06.5	
	comp=E,692nm,0.5s						
MT14	**Cerro Cal¡n**	**2.15**	**149**	*e*P	Pn	18 54 30.8	+0.9
MT14				*e*S	Sn	18 54 56.2	-0.8
MT14				IAML		18 55 09.0	
	comp=E,2µm,0.5s						
CO01	**Juntas del Tor**	**2.17**	**44**	*e*P	Pb	18 54 32.0	-1.2
CO01	**Juntas del Tor**	**2.17**	**44**	↑*i*P	Pb	18 54 32.0	-1.2
CO01				*i* S	Sb	18 54 59.2	-1.4
CO01				IAML		18 55 03.5	
	comp=E,497nm,0.2s						
MT16	**CCHEN**	**2.18**	**150**	*e*P	Pn	18 54 31.2	+0.8
MT16				*e*S	Sn	18 54 57.4	-0.4
MT16				IAML		18 55 08.0	
	comp=N,510nm,0.6s						
RTLS	**Leoncito**	**2.18**	**97**	*i* P	Pb	18 54 33.9	+0.5
MT03	**Universidad Ad**	**2.24**	**150**	*i* P	Pn	18 54 31.9	+0.6
MT03	**Universidad Ad**	**2.24**	**150**	*e*P	Pn	18 54 31.7	+0.5
MT03				*e*S	Sn	18 54 59.0	-0.4
MT03				IAML		18 55 11.5	
	comp=N,762nm,0.3s						
MT09	**Talagante**	**2.33**	**162**	*e*P	Pn	18 54 33.4	+0.9
MT09				*i* S	Sn	18 55 01.9	+0.2
MT09				IAML		18 55 15.5	
	comp=E,362nm,0.4s						
MT04	**Ro Olivares**	**2.34**	**143**	*i* P	Pn	18 54 34.3	+1.6
MT04				*i* P	Pb	18 54 34.5	-1.7
MT04	**Ro Olivares**	**2.34**	**143**	*e*P	Pn	18 54 34.1	+1.3
MT04				*e*S	Sn	18 55 02.3	+0.2
MT01	**Popeta**	**2.36**	**168**	*i* P	Pn	18 54 33.0	+0.2
MT01	**Popeta**	**2.36**	**168**	*e*P	Pn	18 54 33.0	+0.2
MT01				*e*S	Sn	18 55 02.8	+0.6
MT12	**Pirque**	**2.43**	**154**	*e*P	Pn	18 54 34.4	+0.5
MT12				*e*S	Sn	18 55 03.1	-1.0
MT12				IAML		18 55 20.1	
	comp=E,1µm,0.6s						
MT08	**Bocatoma Ro**	**2.44**	**141**	*i* P	Pb	18 54 36.6	-1.2
MT08	**Bocatoma Ro**	**2.44**	**141**	*e*P	Pb	18 54 36.8	-1.1
MT08				*i* S	Sn	18 55 04.2	-0.2
MT08				IAML		18 55 15.8	
	comp=N,416nm,0.5s						
AROD	**Rodeo**	**2.46**	**56**	*i* P	Pb	18 54 38.2	0.0
ACCO	**Cerro Coronel**	**2.56**	**69**	*i* P	Pb	18 54 39.5	-0.5
BO04	**La Punta**	**2.64**	**157**	*e*P	Pn	18 54 38.2	+1.5
LMEL	**Las Melosas**	**2.67**	**149**	*e*P	Pn	18 54 38.8	+1.6
LMEL				*i* S	Sn	18 55 10.6	+0.4
LMEL				IAML		18 55 20.2	
	comp=E,397nm,0.8s						
ZON	**Zonda**	**2.70**	**91**	*i* P	Pb	18 54 41.0	-1.1
ACDV	**Cuesta del Vie**	**2.71**	**60**	*i* P	Pb	18 54 42.0	-0.4
LCO	**Las Campanas**	**2.71**	**22**	*i* P	Pn	18 54 38.3	+0.4
ARCO	**CERRO ARCO**	**2.78**	**118**	*i* P	Pb	18 54 43.0	-0.7
SJA	**San Juan**	**2.80**	**90**	*i* P	Pb	18 54 41.8	-2.1
RTLL	**Cerro Villicun**	**2.88**	**87**	*i* P	Pb	18 54 44.9	-0.4
BO01	**Tunca**	**2.90**	**168**	*i* P	Pn	18 54 40.8	+0.5
BO01	**Tunca**	**2.90**	**168**	*e*P	Pn	18 54 42.1	+1.9
AAGR	**Agrelo**	**2.97**	**122**	*e*P	Pb	18 54 46.3	-0.6
AC05	**El Transito**	**3.02**	**27**	*i* P	Pn	18 54 42.8	+0.8
AC05	**El Transito**	**3.02**	**27**	*e*P	Pn	18 54 43.5	+1.4
CFA	**Coronel Fontan**	**3.07**	**92**	*i* P	Pb	18 54 46.2	-2.3
BO02	**Sierra Bellavi**	**3.35**	**165**	*i* P	Pn	18 54 47.5	+0.9
AC04	**Llanos de Chal**	**3.40**	**11**	*i* P	Pn	18 54 47.0	-0.1
AC04	**Llanos de Chal**	**3.40**	**11**	*e*P	Pn	18 54 46.9	-0.2
AVFE	**Valle Fertil**	**3.86**	**78**	*i* P	Pn	18 54 56.7	+3.2
ACAN	**Cantantal**	**4.02**	**102**	*i* P	Pn	18 54 57.7	+2.1
GO03	**Copiapo**	**4.18**	**20**	*i* P	Pn	18 54 58.6	+0.7
VCA	**Vinchina**	**4.21**	**49**	*i* P	Pn	18 55 02.7	+4.3
ACLC	**CERRO LA CRUZ**	**4.72**	**65**	*i* P	Pn	18 55 08.2	+2.8
TINO	**Tinogasta**	**5.08**	**48**	*i* P	Pn	18 55 13.8	+3.4

*IDC **14** 18:56:04.8±1.2, 26°.29N×103°.02E, h0km, mb3.5/5, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=48.1km s-min=19.8km az=75.0*

ISC 14 18:56:09.2±1.0, 26°.30N±0°.10×102°.9E±0°.3, h35km, n7, σ1°09/7, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.63**	**206**	Pn	Pn	18 58 11.0	-0.7
	0.1nm,0.3s,baz=30,slow=11,SNR=4.6						
	0.2nm,0.4s						
LZDM	**Lanzhou Array**	**9.65**	**4**	Pn	Pn	18 58 24.9	-1.1
	baz=194,slow=11						
	3.1nm,0.4s						
SONM	**Songino Array**	**21.67**	**6**	P	P	19 00 57.2	+0.3
	1.7nm,0.7s,baz=187,slow=10,SNR=5.1						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**26.18**	**327**	P	P	19 01 42.1	+1.6
	0.6nm,0.6s,baz=127,slow=7.2,SNR=7.8						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**30.71**	**339**	P	P	19 02 21.0	+0.3
	1.4nm,0.8s,baz=140,slow=9.4,SNR=5.9						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**55.16**	**143**	P	P	19 05 38.6	+0.1
	0.4nm,0.8s,baz=326,slow=7.8,SNR=1.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**58.01**	**146**	P	P	19 05 59.4	+0.6
	0.1nm,0.5s,baz=325,slow=7.7,SNR=1.1						
	0.1nm,0.5s						

**IDC 14 18:56:33.4±1.8, 25°.

MAW	**Mawson**	**40.33**	**212**	LR	LR	19 27 07.2		
	comp=Z,301nm,19.4s,baz=117,slow=36							
PMSA	**Palmer Station**	**42.17**	**145**	LR	LR	19 25 36.4		
	comp=Z,40nm,18.8s,baz=206,slow=32							
SNAA	**Sanae**	**43.40**	**178**	LR	LR	19 27 57.0		
	comp=Z,163nm,21.9s,baz=218,slow=34							
TBI	**Tubuai**	**46.13**	**40**	*e*LR	LR	19 24 18.4		
	778nm,29.2s							
TBI				*e*T	T	20 01 04.2		
	3.8nm,0.2s							
H01W1	**Cape Leeuwin H**	**49.03**	**274**	T	T	20 04 20.2		
	baz=149,slow=76,SNR=11							
H01W2	**Cape Leeuwin H**	**49.03**	**274**	T	T	20 04 20.5		
	baz=149,slow=76,SNR=12							
H01W3	**Cape Leeuwin H**	**49.04**	**274**	T	T	20 04 21.4		
	baz=149,slow=76,SNR=12							
ASAR	**Alice Springs**	**51.09**	**301**	P	P	19 12 07.3	+0.2	
	1.2nm,0.6s,baz=155,slow=7.7,SNR=24							
	1.2nm,0.6s							
PPT2	**Papeete2**	**51.60**	**37**	*e*LR	LR	19 26 50.0		
	129nm,26.0s							
WRA	**Warramunga Arr**	**54.36**	**303**	P	P	19 12 30.8	-0.4	
	1.8nm,0.9s,baz=156,slow=6.4,SNR=8.9							
	1.8nm,0.9s							
VAH	**Vaihoa**	**54.36**	**39**	*e*T	T	20 11 32.8		
	18nm,0.1s							
RPN	**Rapa Nui**	**57.42**	**84**	LR	LR	19 31 26.4		
	comp=Z,83nm,21.0s,baz=178,slow=30							
H03S2	**Juan Fernandez**	**64.05**	**115**	T	T	20 24 20.8		
	baz=205,slow=74,SNR=9.6							
H03S1	**Juan Fernandez**	**64.05**	**115**	T	T	20 24 21.6		
	baz=205,slow=74,SNR=8.7							
H03S3	**Juan Fernandez**	**64.06**	**115**	T	T	20 24 25.7		
	baz=205,slow=74,SNR=7.5							
SUR	**Sutherland**	**81.48**	**197**	LR	LR	19 48 56.3		
	comp=Z,75nm,18.8s,baz=142,slow=34							
LBTB	**Lobatse**	**88.03**	**203**	LR	LR	19 53 51.7		
	comp=Z,72nm,18.2s,baz=150,slow=35							
MATP	**Matopo**	**92.01**	**206**	LR	LR	19 53 55.8		
	comp=Z,74nm,20.4s,baz=110,slow=33							
TSUM	**Tsumeb**	**94.88**	**196**	LR	LR	19 57 28.7		
	comp=Z,75nm,19.4s,baz=184,slow=34							

WEL ***14*** *19:08:39.3±0.5, 45°S±3°×167°7′E±°, h5km, M3.5/15, ML3.3/18, MLv3.5/15, Error ellipse: s-maj=5.6km s-min=2.9km az=119.8*

NOU ***14*** *19:08:41.3, 44°64′S×167°38′E, h21km, MLv3.9/15, South Island, New Zealand*

ISC 14 19:08:38.2±1.4, 44°66′S±0°04′×167°35′E±0°05, h8km±10km, n65, σ1§28/73, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.41**	**92**	P	**Pg**	**19 08 46.7**	**+0.5**
MSZ				S	**Sg**	**19 08 50.8**	**-0.8**
GLNY	**Glenorchy**	**0.78**	**106**	P	**Pg**	**19 08 52.8**	**-0.4**
TAFS	**Te Anau Fire S**	**0.80**	**161**	P	**Pg**	**19 08 54.3**	**+0.7**
TAFS				S	**Sg**	**19 09 04.4**	**+0.3**
DCZ	**Deep Cove**	**0.82**	**190**	P	**Pg**	**19 08 53.9**	**-0.1**
DCZ				S	**Sg**	**19 09 03.4**	**-1.2**
MLZ	**Mavora Lakes**	**0.89**	**143**	P	**Pg**	**19 08 55.2**	**-0.2**
MLZ				S	**Sg**	**19 09 06.1**	**-0.9**
QTPS	**Queenstown Pol**	**1.00**	**112**	P	**Pb**	**19 08 57.0**	**-0.9**
NSBS	**Neils Beach**	**1.15**	**55**	P	**Pb**	**19 09 01.0**	**+0.7**
JCZ	**Jackson Bay**	**1.18**	**61**	P	**Pb**	**19 09 02.1**	**+1.1**
JCZ	**Jackson Bay**	**1.18**	**61**	S	**Sg**	**19 09 17.2**	**+0.9**
JCZ	**Jackson Bay**	**1.18**	**61**	P	**Pb**	**19 09 01.7**	**+0.8**
JCZ				S	**Sb**	**19 09 16.5**	**0.0**
MOSS	**Mossburn Schoo**	**1.19**	**148**	P	**Pb**	**19 09 00.7**	**-0.3**
WKZ	**Wanaka**	**1.20**	**99**	P	**Pb**	**19 09 00.8**	**-0.4**
WKZ				S	**Sb**	**19 09 14.2**	**-2.7**
WHZ	**Wether Hill Ro**	**1.30**	**161**	P	**Pn**	**19 09 02.5**	**-0.2**
WHZ				S	**Sb**	**19 09 18.0**	**-1.8**
MECS	**Makarora Emerg**	**1.41**	**73**	P	**Pn**	**19 09 05.0**	**+0.8**
RRKS	**Rarakau**	**1.49**	**177**	P	**Pn**	**19 09 06.1**	**+0.8**
EAZ	**Earnscleugh**	**1.50**	**113**	P	**Pn**	**19 09 05.6**	**+0.2**
EAZ				S	**Sn**	**19 09 22.7**	**-2.5**
PYZ	**Puysegur Point**	**1.58**	**197**	P	**Pn**	**19 09 08.5**	**+2.0**
PYZ	**Puysegur Point**	**1.58**	**197**	S	**Sb**	**19 09 29.0**	**+1.2**
PYZ	**Puysegur Point**	**1.58**	**197**	P	**Pn**	**19 09 05.0**	**-1.5**
ORPS	**Orepuki**	**1.65**	**170**	P	**Pn**	**19 09 08.4**	**+0.9**
LBZ	**Lake Benmore**	**2.04**	**83**	P	**Pn**	**19 09 14.4**	**+1.5**
TUZ	**Tuapeka**	**2.06**	**130**	P	**Pn**	**19 09 15.2**	**+2.1**
FOZ	**Fox Glacier**	**2.10**	**58**	P	**Pn**	**19 09 13.3**	**-0.4**
SYZ	**Scrubby Hill**	**2.26**	**147**	P	**Pn**	**19 09 17.2**	**+1.4**
SYZ	**Scrubby Hill**	**2.26**	**147**	S	**Sn**	**19 09 45.1**	**+1.3**
SYZ	**Scrubby Hill**	**2.26**	**147**	P	**Pn**	**19 09 17.6**	**+1.8**
ODZ	**Otahua Downs**	**2.37**	**100**	P	**Pn**	**19 09 19.1**	**+1.7**
ODZ	**Otahua Downs**	**2.37**	**100**	S	**Sn**	**19 09 47.0**	**+0.4**
ODZ	**Otahua Downs**	**2.37**	**100**	P	**Pn**	**19 09 18.6**	**+1.2**
GCSZ	**Gaunt Creek Bo**	**2.53**	**59**	P	**Pn**	**19 09 19.0**	**-0.6**
HHSZ	**Highcliff Hill**	**2.60**	**119**	P	**Pn**	**19 09 22.5**	**+2.0**
TMZ	**Timaru**	**2.63**	**85**	P	**Pn**	**19 09 21.8**	**+0.8**
RPZ	**Rata Peaks**	**2.83**	**72**	P	**Pn**	**19 09 25.3**	**+1.7**
RPZ	**Rata Peaks**	**2.83**	**72**	S	**Sn**	**19 09 59.4**	**+1.6**
RPZ	**Rata Peaks**	**2.83**	**72**	P	**Pn**	**19 09 24.8**	**+1.2**
ARCZ	**Arundel**	**2.84**	**77**	P	**Pn**	**19 09 24.4**	**+0.6**
WVZ	**Waitaha Valley**	**2.92**	**58**	P	**Pn**	**19 09 24.1**	**-0.8**
MHCZ	**Mount Hutt**	**3.24**	**71**	P	**Pn**	**19 09 29.9**	**+0.5**
WACZ	**Wakanui South**	**3.30**	**79**	P	**Pn**	**19 09 30.8**	**+0.7**
INZ	**Inchbonnie**	**3.54**	**58**	P	**Pn**	**19 09 33.8**	**+0.3**
RACZ	**Rakaia**	**3.57**	**77**	P	**Pn**	**19 09 34.2**	**+0.4**
OXZ	**Oxford**	**3.63**	**70**	P	**Pn**	**19 09 34.5**	**-0.3**
LTZ	**Lake Taylor**	**4.03**	**64**	P	**Pn**	**19 09 40.0**	**-0.2**
AMCZ	**Amberley**	**4.11**	**71**	P	**Pn**	**19 09 39.4**	**-1.8**
OKCZ	**Okains Bay**	**4.21**	**79**	P	**Pn**	**19 09 43.2**	**+0.6**
DSZ	**Denniston Nort**	**4.37**	**50**	P	**Pn**	**19 09 44.7**	**-0.2**
GVZ	**Greta Valley S**	**4.45**	**70**	P	**Pn**	**19 09 46.2**	**+0.3**
THZ	**Tophouse**	**4.99**	**56**	P	**Pn**	**19 09 54.0**	**+0.7**
KHZ	**Kahutara**	**5.03**	**66**	P	**Pn**	**19 09 55.6**	**+1.8**
KHZ	**Kahutara**	**5.03**	**66**	S	**Sn**	**19 10 53.3**	**+1.3**
MRNZ	**Matariki Terra**	**5.13**	**52**	P	**Pn**	**19 09 55.9**	**+0.6**
QRZ	**Quartz Range**	**5.40**	**47**	P	**Pn**	**19 09 58.9**	**-0.2**
QRZ	**Quartz Range**	**5.40**	**47**	P	**Pn**	**19 09 59.0**	**0.0**
QRZ				S	**Sn**	**19 10 57.7**	**-3.8**
TKNZ	**Takaka Hill**	**5.49**	**51**	P	**Pn**	**19 10 00.3**	**+0.1**
BSWZ	**Blackbirch Sta**	**5.60**	**61**	P	**Pn**	**19 10 04.8**	**+3.0**
NNZ	**Nelson**	**5.60**	**54**	P	**Pn**	**19 10 02.5**	**+0.7**
TUWZ	**Tuamarina**	**5.81**	**59**	P	**Pn**	**19 10 07.0**	**+2.4**
TCW	**Tory Channel**	**6.14**	**58**	P	**Pn**	**19 10 10.7**	**+1.5**
DUWZ	**D'Urville Isla**	**6.18**	**54**	P	**Pn**	**19 10 10.9**	**+1.1**
SNZO	**South Karori**	**6.35**	**61**	P	**Pn**	**19 10 14.2**	**+2.2**
KIW	**Kapiti Island**	**6.73**	**58**	P	**Pn**	**19 10 17.8**	**+0.4**
HOWZ	**Holdsworth Sta**	**7.08**	**61**	P	Pn	19 10 28.2	+6.0
KHEZ	**Kahui Hut**	**7.30**	**45**	P	**Pn**	**19 10 25.5**	**+0.3**
KHEZ	**Kahui Hut**	**7.30**	**45**	P	**Pn**	**19 10 25.5**	**+0.3**
NEZ	**North Egmont**	**7.36**	**45**	P	**Pn**	**19 10 26.6**	**+0.5**

NEIC ***14*** *19:15:15.8±1.7, 14°87′S±0°07′×167°46′E±0°08, h161km±4km, mb4.9/130, Mww5.1/12, Error ellipse: s-maj=10.9km s-min=9.7km az=63.0*

NOU ***14*** *19:15:16.6, 14°88′S×167°40′E, h160km, mb4.9/75, Vanuatu Islands*

GCMT ***14*** *19:15:16.9±0.2, 14°96′S±0°01′×167°28′E±0°01, h176km±1km, MW5.1/120, Moment Tensor Solution. s59,c72; s120,c171; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.05±.11; Mθθ-2.75±.15; Mϕϕ-1.29±.15; Mrθ-0.69±.12; Mθϕ2.97±.13; Mϕr-2.91±.11; Best double couple: M₀5.51400×10¹⁶ NP1:ϕ₁282.00000°, δ44.00000°, λ46.00000°. NP2:ϕ₂155.00000°, δ60.00000°, λ124.00000°. Principal axes: T 5.7580, Plg60.0000°, Azm117.0000°; N -0.4780, Plg29.0000°, Azm317.0000°; P -5.2700, Plg9.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***14*** *19:15:16.6±0.2, 15°S±3°×167°7′E±°, h168km, M4.8/36, mb4.9/36*

MOS ***14*** *19:15:16.0±0.9, 14°85′S×167°40′E, h180km, mb4.9/23, Error ellipse: s-maj=10.4km s-min=7.7km az=123.3*

BJI ***14*** *19:15:17.0, 14°18′S×167°21′E, h160km, mB4.8/13, mb4.8/58*

IDC ***14*** *19:15:17.2±1.0, 14°93′S×167°26′E, h176km±8km, mb4.3/22, mbtmp4.8/24, MS3.6/9, Error ellipse: s-maj=9.1km s-min=8.9km az=71.0*

ISC 14 19:15:15.8±0.3, 14°86′S±0°04′×167°45′E±0°04, h168km±2km, h168km:pP-P, n526, σ1§13/510, mb4.8/126, 24C-14D,

Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.63**	**202**	P	**Pn**	**19 15 40.3**	**+0.5**
SANVU	**Saraoutou**	**0.63**	**202**	S	**Sn**	**19 15 58.3**	**0.0**
SANVU	**Saraoutou**	**0.63**	**202**		**Pn**	**19 15 39.4**	**-0.4**
SANVU				Sn	**Sn**	**19 15 57.0**	**-1.4**
SANVU	**Saraoutou**	**0.63**	**202**	P	**Pn**	**19 15 39.7**	**-0.1**
KOUNC	**Koumac, New Ca**	**6.41**	**208**	S	**Sn**	**19 18 01.6**	**+0.9**
KOUNC	**Koumac, New Ca**	**6.41**	**208**	P	**Pn**	**19 16 48.9**	**+0.8**
KOUNC	**Koumac, New Ca**	**6.41**	**208**		**Pn**	**19 16 49.0**	**+0.8**
KOUNC				Sn	**Sn**	**19 18 00.4**	**-0.3**
MARNC	**Mare, Loyalty**	**6.61**	**175**	P	**Pn**	**19 16 50.3**	**-0.4**
MARNC	**Mare, Loyalty**	**6.61**	**175**		**Pn**	**19 16 49.9**	**-0.9**
MARNC				Sn	**Sn**	**19 18 01.4**	**-4.0**
HURO	**Huro Makira**	**6.95**	**308**	P	**Pn**	**19 16 56.1**	**+0.8**
YATNC	**Mamie plateau,**	**7.18**	**184**	P	**Pn**	**19 16 58.9**	**+0.6**
YATNC	**Mamie plateau,**	**7.18**	**184**	S	**Sn**	**19 18 19.7**	**+0.6**
DZM	**Mont Dzumac**	**7.24**	**187**	P	**Pn**	**19 17 00.6**	**+1.5**
	48nm,0.7s,baz=5.9,slow=16,SNR=66						
DZM				S	**Sn**	**19 18 20.2**	**-0.3**
	26nm,0.5s,baz=298,slow=20,SNR=5.7						
NOUC	**Port Laguerre**	**7.29**	**188**	P	**Pn**	**19 17 00.8**	**+1.1**
NOUC	**Port Laguerre**	**7.29**	**188**	S	**Sn**	**19 18 22.3**	**+0.8**
ONTNC	**Ouen Toro**	**7.47**	**187**		**Pn**	**19 17 02.2**	**+0.1**
OUENC	**Ouen Island, N**	**7.54**	**184**		**Pn**	**19 17 02.4**	**-0.7**
NGOA	**Tingoa Renbel**	**7.91**	**294**	P	**Pn**	**19 17 09.6**	**+1.7**
NGOA	**Tingoa Renbel**	**7.91**	**294**	S	**Sn**	**19 18 37.0**	**+0.6**
HNR	**Honiara**	**9.10**	**305**	P	**Pn**	**19 17 24.4**	**+0.6**
	9.6nm,0.7s,baz=289,slow=4.7,SNR=12						
HNR				S	**Sn**	**19 19 05.7**	**+0.6**
	2.7nm,0.6s,baz=190,slow=19,SNR=1.3						
HNR				LR	LR	19 20 37.9	
	comp=Z,26nm,18.7s,baz=186,slow=36						
HNR	**Honiara**	**9.10**	**305**	P	**Pn**	**19 17 24.5**	**+0.7**
HNR	**Honiara**	**9.10**	**305**	S	**Sn**	**19 19 06.3**	**+1.1**
HNR	**Honiara**	**9.10**	**305**	P	**Pn**	**19 17 25.2**	**+1.4**
TATA	**Tatamba Isabel**	**9.87**	**310**	P	**Pn**	**19 17 35.1**	**+1.2**
MSVF	**Nonsavu**	**10.57**	**107**	P	**P**	**19 17 47.7**	**-3.9**
	25nm,0.7s,baz=264,slow=14,SNR=13						
MSVF	**Nonsavu**	**10.57**	**107**	P	**Pn**	**19 17 45.4**	**+2.2**
MSVF	**Nonsavu**	**10.57**	**107**	P	**Pn**	**19 17 44.0**	**+0.8**
MSVF	**Nonsavu**	**10.57**	**107**		**Pn**	**19 17 44.0**	**+0.8**
MSVF	**Nonsavu**	**10.57**	**107**	P	**Pn**	**19 17 46.4**	**+3.3**
LKBA	**Tubou, Lakemba**	**13.59**	**106**	P	**P**	**19 18 24.0**	**-1.2**
RABL	**Rabaul**	**18.41**	**304**	P	**Pn**	**19 19 20.7**	**+0.1**
KRVT	**Keravat (AS076**	**18.45**	**303**	LR	LR	19 27 00.3	
	comp=Z,56nm,18.9s,baz=100,slow=38						
EIDS	**Eidsvold**	**18.57**	**233**	P	**Pn**	**19 19 22.3**	**0.0**
EIDS	**Eidsvold**	**18.57**	**233**		**Pn**	**19 19 21.7**	**-0.6**
GLKZ	**Green Lake**	**19.70**	**139**	P	**Pn**	**19 19 34.5**	**-1.0**
AFI	**Afiamalu**	**20.15**	**90**	P	**P**	**19 19 38.8**	**+1.5**
	36nm,0.6s,baz=6.9,slow=6.2,SNR=7.5						
	36nm,0.6s						
AFI	**Afiamalu**	**20.15**	**90**	P	**P**	**19 19 37.9**	**+0.6**
AFI	**Afiamalu**	**20.15**	**90**	P	**P**	**19 19 37.9**	**+0.6**
AFI	**Afiamalu**	**20.15**	**90**	P	Pn	19 19 40.5	-0.7
AFI	**Afiamalu**	**20.15**	**90**	P	Pn	19 19 39.3	-1.8
PMG	**Port Moresby**	**20.56**	**283**	P	**P**	**19 19 42.1**	**+0.6**
	20nm,1.0s,baz=100,slow=9.0,SNR=2.2						
	20nm,1.0s						
PMG	**Port Moresby**	**20.56**	**283**	P	**P**	**19 19 42.4**	**+0.8**
PMG	**Port Moresby**	**20.56**	**283**	P	**P**	**19 19 42.4**	**+0.8**
PMG	**Port Moresby**	**20.56**	**283**	P	**P**	**19 19 42.0**	**+0.5**
CTA	**Charters Tower**	**20.87**	**253**	P	**P**	**19 19 45.4**	**+0.6**
	58nm,1.0s,baz=76,slow=12,SNR=28						
	58nm,1.0s						
CTAO	**Charters Tower**	**20.87**	**253**	P	**P**	**19 19 45.8**	**+0.9**
CTAO	**Charters Tower**	**20.87**	**253**	P	**P**	**19 19 45.8**	**+0.9**
CTAO	**Charters Tower**	**20.87**	**253**	P	**P**	**19 19 45.8**	**+0.9**
CTAO	**Charters Tower**	**20.87**	**253**	P	**P**	**19 19 44.3**	**-0.6**
RMQ	**Roma**	**20.93**	**233**	P	**P**	**19 19 45.9**	**+0.4**
OUZ	**Omahuta**	**21.02**	**166**	P	**P**	**19 19 48.8**	**+2.6**
OUZ	**Omahuta**	**21.02**	**166**	P	**P**	**19 19 48.9**	**+2.7**
OUZ	**Omahuta**	**21.02**	**166**	P	**P**	**19 19 48.1**	**+1.9**
ARMA	**Armidale**	**21.24**	**221**	P	**P**	**19 19 50.6**	**+1.7**
ARMA	**Armidale**	**21.24**	**221**		**P**	**19 19 50.1**	**+1.3**
WCZ	**Waipu Caves**	**21.88**	**165**	P	**P**	**19 19 57.7**	**+2.3**
NIUE	**Niue**	**22.04**	**104**	P	**P**	**19 19 58.6**	**+1.5**
NIUE	**Niue**	**22.04**	**104**	P	**P**	**19 19 57.3**	**+0.2**
MTSU	**Mount Surprise**	**22.41**	**258**	P	**P**	**19 20 01.8**	**+1.0**
GRZ	**Great Barrier**	**22.48**	**163**	P	**P**	**19 20 03.4**	**+2.3**
ABAZ	**Army Bay**	**22.63**	**164**	P	**P**	**19 20 05.0**	**+2.5**
MBAZ	**Motutapu North**	**22.81**	**164**	P	**P**	**19 20 05.4**	**+1.2**
WIAZ	**Waiheke Island**	**22.89**	**164**	P	**P**	**19 20 06.3**	**+1.4**
MKAZ	**Moumakai**	**23.20**	**164**	P	**P**	**19 20 09.0**	**+1.4**
PATS	**Pohnpei**	**23.38**	**337**	P	**P**	**19 20 10.7**	**+1.1**
PATS	**Pohnpei**	**23.38**	**337**	P	**P**	**19 20 09.5**	**0.0**
MANU	**Manus Island**	**23.56**	**301**	P	**P**	**19 20 10.3**	**-0.9**
MANU				IAmb	IAmb	19 20 46.7	
	comp=Z,50nm,1.3s						
TOZ	**Tahuroa Road**	**23.88**	**164**		**P**	**19 20 13.2**	**-0.7**
TOZ				IAmb	IAmb	19 20 18.1	
	comp=Z,76nm,1.5s						
TOZ	**Tahuroa Road**	**23.88**	**164**	P	**P**	**19 20 15.3**	**+1.4**
HIZ	**Hauiti**	**24.45**	**166**	P	**P**	**19 20 21.9**	**+2.8**
HIZ	**Hauiti**	**24.45**	**166**	P	**P**	**19 20 20.9**	**+1.8**
HAZ	**Te Kaha**	**24.58**	**160**	P	**P**	**19 20 21.3**	**+1.0**
MXZ	**Matakaoa Point**	**24.58**	**159**	P	**P**	**19 20 21.7**	**+1.4**
MXZ	**Matakaoa Point**	**24.58**	**159**	P	**P**	**19 20 19.8**	**-0.5**
MXZ				IAmb	IAmb	19 20 29.1	
	comp=Z,32nm,0.5s						
MXZ	**Matakaoa Point**	**24.58**	**159**	P	**P**	**19 20 20.3**	**+0.1**
QLP	**Quilpie**	**24.60**	**238**	P	**P**	**19 20 21.7**	**+1.1**
URZ	**Urewera**	**24.83**	**162**	P	**P**	**19 20 23.4**	**+0.9**
URZ	**Urewera**	**24.83**	**162**	P	**P**	**19 20 23.3**	**+0.8**
URZ	**Urewera**	**24.83**	**162**	P	**P**	**19 20 22.8**	**+0.3**
MUGZ	**Murupara**	**24.93**	**162**	P	**P**	**19 20 25.1**	**+1.7**
MWZ	**Matawai**	**25.02**	**161**	P	**P**	**19 20 25.0**	**+0.6**
PUZ	**Puketiti**	**25.02**	**160**	P	**P**	**19 20 24.0**	**+0.3**
RTZ	**Ruatahuna**	**25.12**	**162**		**P**	**19 20 25.6**	**+0.3**
RTZ				IAmb	IAmb	19 20 36.0	
	comp=Z,26nm,0.5s						
RTZ	**Ruatahuna**	**25.12**	**162**	P	**P**	**19 20 25.3**	**+0.1**
WTVZ	**West Tongariro**	**25.20**	**165**	P	**P**	**19 20 29.9**	**+3.9**
TMVZ	**Te Maari**	**25.23**	**165**	P	**P**	**19 20 31.1**	**+4.8**
ETVZ	**East Tongariro**	**25.25**	**165**	P	**P**	**19 20 29.6**	**+3.1**
NGZ	**Ngauruhoe**	**25.26**	**165**	P	**P**	**19 20 30.4**	**+3.8**
OTVZ	**Ofurere**	**25.27**	**165**	P	**P**	**19 20 29.1**	**+2.4**
SNVZ	**South Ngauruho**	**25.28**	**165**	P	**P**	**19 20 30.4**	**+3.6**
MTHZ	**Maungataniwha**	**25.30**	**163**	P	**P**	**19 20 27.8**	**+1.0**
TUVZ	**Tukino**	**25.36**	**165**	P	**P**	**19 20 30.5**	**+2.9**
SNGZ	**Shannon Statio**	**25.38**	**162**	P	**P**	**19 20 27.9**	**+0.4**
RAHZ	**Arahi**	**25.43**	**162**	P	**P**	**19 20 28.9**	**+1.0**
BKZ	**Black Stump Fm**	**25.49**	**164**	P	**P**	**19 20 29.6**	**+1.0**
BKZ	**Black Stump Fm**	**25.49**	**164**	P	**P**	**19 20 29.6**	**+1.0**
NMHZ	**Naumai**	**25.51**	**163**	P	**P**	**19 20 30.0**	**+1.2**
MOVZ	**Moawhango**	**25.52**	**165**	P	**P**	**19 20 30.0**	**+1.2**
BHHZ	**Black Hill Sta**	**25.68**	**164**	P	**P**	**19 20 31.1**	**+0.9**
KNZ	**Kokohu**	**25.70**	**161**	P	**P**	**19 20 30.5**	**+0.2**
KWHZ	**Kaweka Forest**	**25.71**	**164**	P	**P**	**19 20 31.4**	**+0.8**
ARHZ	**Aropaoanui**	**25.72**	**163**	P	**P**	**19 20 31.6**	**+1.0**
MCHZ	**McNeill Hill**	**25.80**	**163**	P	**P**	**19 20 32.5**	**+1.2**
MHGZ	**Mahia Peninsul**	**25.89**	**161**	P	**P**	**19 20 32.4**	**+0.3**
KRHZ	**Kereru**	**25.90**	**164**	P	**P**	**19 20 32.8**	**+0.5**
CMSA	**Cobar Meteorol**	**25.91**	**226**	P	**P**	**19 20 33.4**	**+1.1**
CMSA	**Cobar Meteorol**	**25.91**	**226**	P	**P**	**19 20 33.5**	**+1.1**
CKHZ	**Cape Kidnapper**	**26.11**	**163**	P	**P**	**19 20 34.2**	**+0.1**
PNHZ	**Pukenui**	**26.11**	**165**	P	**P**	**19 20 34.2**	**+0.1**
KAHZ	**Kahuranaki**	**26.18**	**163**	P	**P**	**19 20 35.0**	**+0.2**
TSZ	**Takapari Road**	**26.19**	**165**	P	**P**	**19 20 35.4**	**+0.6**
QRZ	**Quartz Range**	**26.25**	**171**	P	**P**	**19 20 37.5**	**+2.2**
QRZ	**Quartz Range**	**26.25**	**171**	P	**P**	**19 20 39.6**	**+4.3**
QRZ	**Quartz Range**	**26.25**	**171**	P	**P**	**19 20 35.4**	**+0.1**
PXZ	**Pawanui**	**26.40**	**164**	P	**P**	**19 20 36.2**	**+0.4**
DVHZ	**Dannevirke**	**26.47**	**165**	P	**P**	**19 20 37.3**	**0.0**
MRZ	**Mangatainoka R**	**26.67**	**166**	P	**P**	**19 20 38.6**	**-0.4**
BFZ	**Birch Farm**	**26.85**	**165**	P	**P**	**19 20 41.6**	**+0.9**
BFZ	**Birch Farm**	**26.85**	**165**	P	**P**	**19 20 40.4**	**-0.3**
BFZ	**Birch Farm**	**26.85**	**165**	P	**P**	**19 20 40.2**	**-0.5**
SNZO	**South Karori**	**27.10**	**168**	P	**P**	**19 20 45.2**	**+2.3**
QIS	**Mount Isa**	**27.10**	**254**	P	**P**	**19 20 43.7**	**+0.5**
THZ	**Tophouse**	**27.22**	**171**	P	**P**	**19 20 45.1**	**+1.1**
MMPI	**Merauke**	**27.24**	**280**	P	**P**	**19 20 44.4**	**0.0**
INKA	**Innaminka**	**27.91**	**238**		**P**	**19 20 50.9**	**+0.6**
INKA				IAmb	IAmb	19 20 52.3	
	comp=Z,13nm,0.9s						
KHZ	**Kahutara**	**27.96**	**170**	P	**P**	**19 20 52.0**	**+1.5**
KHZ	**Kahutara**	**27.96**	**170**	P	**P**	**19 20 50.9**	**+0.4**
KHZ	**Kahutara**	**27.96**	**170**	P	**P**	**19 20 50.4**	**-0.1**
INZ	**Inchbonnie**	**27.98**	**174**	P	**P**	**19 20 51.5**	**+0.7**
INZ	**Inchbonnie**	**27.98**	**174**	P	**P**	**19 20 51.3**	**+0.6**
LTZ	**Lake Taylor**	**28.13**	**172**	P	**P**	**19 20 52.7**	**+0.5**
WVZ	**Waitaha Valley**	**28.26**	**175**	P	**P**	**19 20 54.9**	**+1.7**
FOZ	**Fox Glacier**	**28.65**	**176**	P	**P**	**19 20 57.6**	**+1.0**
FOZ	**Fox Glacier**	**28.65**	**176**	P	**P**	**19 20 57.9**	**+1.3**
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**19 20 59.3**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=220,slow=3.4,SNR=7.9						
	comp=Z,1.6nm,0.4s						
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**19 21 00.1**	**+1.0**
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**19 20 59.8**	**+0.6**
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**19 20 59.7**	**+0.6**
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**19 21 01.7**	**+1.4**
	comp=Z,14nm,0.3s,baz=46,slow=7.6,SNR=69						
STKA				PcP	**PcP**	**19 24 05.1**	**+0.7**
	comp=Z,7.5nm,0.8s,baz=26,slow=2.5,SNR=5.3						
STKA				PKiKP	**PKiKP**	**19 31 37.2**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=180,slow=1.0,SNR=5.0						
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**19 21 01.7**	**+1.4**
JAY	**Jayapura**	**29.09**	**292**	P	**P**	**19 21 02.3**	**+1.3**
	comp=Z,11nm,1.0s						
LBZ	**Lake Benmore**	**29.52**	**176**	P	**P**	**19 21 05.0**	**+0.7**
GENI	**Genyem**	**29.54**	**292**	P	**P**	**19 21 05.0**	**+0.1**
	comp=Z,16nm,0.8s						
TMZ	**Timaru**	**29.58**	**175**	P	**P**	**19 21 04.7**	**-0.2**
MSZ	**Milford Sound**	**29.72**	**179**	P	**P**	**19 21 07.3**	**+1.3**
TOO	**Toolangi**	**29.85**	**217**	P	**P**	**19 21 08.1**	**+0.7**
TOO				pmax	pmax		
	comp=Z,14nm,1.6s						
TOO	**Toolangi**	**29.85**	**217**	P	**P**	**19 21 08.1**	**+0.7**
WKZ	**Wanaka**	**29.90**	**178**	P	**P**	**19 21 09.2**	**+1.4**
ODZ	**Otahua Downs**	**30.21**	**175**	P	**P**	**19 21 11.4**	**+1.0**
ODZ	**Otahua Downs**	**30.21**	**175**	P	**P**	**19 21 10.5**	**+0.1**
ODZ	**Otahua Downs**	**30.21**	**175**	P	**P**	**19 21 10.6**	**+0.1**
EAZ	**Earnscleugh**	**30.32**	**177**	P	**P**	**19 21 12.0**	**+0.6**
MLZ	**Mavora Lakes**	**30.42**	**179**	P	**P**	**19 21 13.2**	**+0.9**
DCZ	**Deep Cove**	**30.51**	**180**	IAmb	IAmb	19 21 14.8	
	comp=Z,38nm,1.0s						
DCZ

JMN Monobe 57.95 327 P P 19 24 50.5 -0.2
MJAR Matsushiro Arr 58.10 332 P P 19 24 51.0 -0.7
comp=Z,5.7nm,0.5s,baz=176,slow=7.9,SNR=46
comp=Z,5.7nm,0.5s
MAJO Matsushiro 58.10 332 P P 19 24 53.0 +1.3
MAJO Matsushiro 58.10 332 ⇑iP P 19 24 51.3 -0.4
MAJO pmax pmax
comp=Z,14nm,0.8s
MAJO Matsushiro 58.10 332 P P 19 24 51.1 -0.6
MAJO lAmb lAmb 19 24 53.9
comp=Z,13nm,0.8s
MAJO Matsushiro 58.10 332 P P 19 24 51.4 -0.3
MAJO Matsushiro 58.10 332 P P 19 24 51.3 -0.4
MAJO pP pP 19 25 30.5 +0.6
MJB9 Matsu-Tunnel 58.10 332 lAmb lAmb 19 24 54.9
comp=Z,13nm,0.8s
JSU Suzuyama 58.19 323 P P 19 24 52.0 -0.4
YULB Yu-li 59.01 309 P P 19 24 59.6 +1.4
YULB Yu-li 59.01 309 P P 19 24 57.6 -0.7
YULB lAmb lAmb 19 26 30.7
comp=Z,44nm,1.7s
TPUB Ta-pu 59.46 309 P P 19 25 02.7 +1.4
TPUB Ta-pu 59.46 309 P P 19 25 00.2 -1.1
SSLB Suanglung 59.49 310 P P 19 25 03.0 +1.4
SSLB Suanglung 59.49 310 P P 19 25 00.8 -0.8
SSLB lAmb lAmb 19 25 01.7
comp=Z,38nm,1.5s
YHNB Yeheng 59.70 311 P P 19 25 03.1 +0.1
YHNB lAmb lAmb 19 25 07.0
comp=Z,56nm,1.5s
JTM Tenmabayashi 60.53 337 P P 19 25 09.8 +1.6
JTM Tenmabayashi 60.53 337 P P 19 25 08.1 -0.2
ERM Erimo 60.87 339 eP P 19 25 13.2 +2.8
ERM pmax pmax
comp=Z,23nm,1.0s
ERM Erimo 60.87 339 P P 19 25 10.7 +0.3
ERM lAmb lAmb 19 26 48.5
comp=Z,44nm,1.1s
VNDA Vanda 62.74 181 P P 19 25 23.1 +0.5
comp=Z,8.3nm,0.7s,baz=357,slow=7.6,SNR=56
comp=Z,8.3nm,0.7s
VNDA Vanda 62.74 181 P P 19 25 22.7 +0.2
VNDA pmax pmax
comp=Z,44nm,1.6s
VNDA Vanda 62.74 181 P P 19 25 22.7 +0.2
VNDA lAmb lAmb 19 25 25.2
comp=Z,44nm,1.6s
VNDA Vanda 62.74 181 P P 19 25 22.9 +0.4
JKA Kamikawa-asahi 62.92 340 P P 19 25 25.1 +1.0
ASAJ Asahikawa 62.92 340 P P 19 25 25.1 +0.9
ASAJ pmax pmax
comp=Z,70nm,1.4s
SBA Scott Base 63.01 180 P P 19 25 25.3 +1.0
SBA pmax pmax
comp=Z,98nm,1.6s
SBA Scott Base 63.01 180 P P 19 25 25.3 +1.0
SBA Scott Base 63.01 180 P P 19 25 25.7 +1.4
CASY Casey 63.47 202 P P 19 25 28.1 +0.5
KSRS Korea Array 63.94 326 P P 19 25 31.1 +0.2
comp=Z,2.1nm,0.6s,baz=138,slow=7.3,SNR=9.0
comp=Z,2.1nm,0.6s
CCD Concordia, Ant 64.81 191 P P 19 25 36.9 +0.2
YSS Yuzhno-Sakhali 65.41 342 oeP P 19 25 41.3 +1.1
YSS e*PP pwP 19 26 21.5 -0.2
YSS eS S 19 34 10.1 -0.9
YSS pmax pmax
comp=Z,20nm,0.8s
YSS pmax pmax
comp=Z,100nm,4.5s
YSS smax smax
comp=N,100nm,8.6s
YSS Yuzhno-Sakhali 65.41 342 P P 19 25 40.9 +0.6
YSS Yuzhno-Sakhali 65.41 342 P P 19 25 41.6 +1.4
YSS Yuzhno-Sakhali 65.41 342 P P 19 25 41.4 +1.1
NJ2 Nanjing 65.89 316 eP P 19 25 46.0 +2.3
NJ2 pmax pmax
comp=N,23nm,0.6s
USA0B Ussuriysk Arra 67.08 333 c iP P 19 25 51.6 +0.6
USRK Ussuriysk Ar. 67.08 333 P P 19 25 52.1 +1.2
comp=N,5.0nm,0.5s,baz=129,slow=6.2,SNR=21
comp=N,5.0nm,0.5s
BKNI Bangkinang 67.32 277 P P 19 25 53.0 -0.3
KIWB Kanaga Island 67.77 10 P P 19 25 55.6 +0.4
KIWB lAmb lAmb 19 28 27.0
comp=Z,21nm,0.9s
ADK Adak 67.88 11 P P 19 25 56.1 +0.3
ADK pmax pmax
comp=Z,29nm,1.2s
ADK Adak 67.88 11 P P 19 25 56.1 +0.3
ADK lAmb lAmb 19 27 21.3
comp=Z,29nm,1.1s
PET Petropavlovsk 68.03 354 i P P 19 25 57.2 +0.5
PET pmax pmax
comp=Z,16nm,1.3s
PEA0B Petropavlovsk- 68.21 354 ⇓iP P 19 25 58.8 +0.9
PEA0B Petropavlovsk- 68.21 354 lAmb lAmb 19 25 59.7
comp=Z,60nm,1.8s
PETK Petropavlovsk- 68.21 354 P P 19 25 58.4 +0.5
comp=Z,6.2nm,0.8s,baz=133,slow=6.3,SNR=13
comp=Z,6.2nm,0.8s
MDJ Mudanjiang 68.48 332 lAmb lAmb 19 26 04.0
comp=Z,16nm,0.9s
MDJ Mudanjiang 68.48 332 P P 19 26 00.4 +0.7
MDJ pmax pmax
comp=Z,21nm,1.2s
MDJ Mudanjiang 68.48 332 P P 19 26 00.7 +0.9
DL2 Dalian 68.50 323 P P 19 26 00.4 +0.4
DL2 pP pP 19 26 40.6 +0.9
DL2 sP sP 19 26 55.0 -2.6
DL2 eS S 19 34 47.8 -0.7
DL2 pmax pmax
comp=Z,15nm,0.7s
DL2 pmax pmax
comp=Z,220nm,4.3s
TYV Tymovskoe 68.95 343 eP P 19 26 02.5 0.0
TYV pmax pmax
comp=Z,9.0nm,0.8s
TYV pmax pmax
comp=Z,100nm,3.4s
TIA Tai'an 69.55 318 P P 19 26 06.8 +0.2
TIA pmax pmax
comp=Z,8.0nm,0.6s
CN2 Changchun 69.84 329 eP P 19 26 08.8 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
RPSI Rantau Prapat 70.02 278 P P 19 26 08.9 -1.0
RPSI lAmb lAmb 19 26 10.4
comp=Z,29nm,1.4s
PSI Prapat 70.05 279 P P 19 26 08.9 -1.3
PSI pmax pmax
comp=Z,29nm,1.4s
BNX BinXian 70.33 331 ⇑P P 19 26 11.3 +0.2
BNX pmax pmax
comp=Z,49nm,0.5s
GRNR Gornyy 70.77 340 ⇑iP P 19 26 15.1 +1.4
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GSI Gunungsitoli 70.92 277 P P 19 26 16.4 +1.0
GSI Gunungsitoli 70.92 277 P P 19 26 14.2 -1.1
GSI lAmb lAmb 19 26 16.6
comp=Z,32nm,1.0s
GSI Gunungsitoli 70.92 277 P P 19 26 15.9 +0.5
ENH Enshi 71.58 309 lAmb lAmb 19 27 03.4
comp=Z,31nm,1.4s
ENH Enshi 71.58 309 P P 19 26 18.6 -0.4
ENH x x 19 26 58.7
ENH sP sP 19 27 16.2 -0.6
LYN LuoYang 71.69 315 P P 19 26 20.1 +0.6
LYN pmax pmax
comp=Z,39nm,0.5s
HNS HongShan 71.81 318 ⇑P P 19 26 20.9 +0.7
HNS pP pwP 19 27 01.8 -0.4
HNS pmax pmax
comp=Z,16nm,0.7s
GYA Guiyang 71.93 305 ⇑P P 19 26 21.3 0.0
GYA pmax pmax
comp=Z,13nm,1.0s
GYA L L
comp=Z,110nm,10.9s
GYA L L
comp=Z,140nm,16.7s
GYA L L
comp=Z,210nm,9.8s
BJI2 Beijing 72.46 321 P P 19 26 24.8 +0.8
BJI2 pP pP 19 27 05.3 +1.3
BJI2 PP PP 19 29 08.8 +1.1
BJI2 S S 19 35 35.3 +0.9
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJI2 pmax pmax
comp=Z,58nm,6.6s
BJI2 L L
comp=Z,41nm,14.6s
BJI2 L L
comp=Z,44nm,16.4s
BJI2 L L
comp=Z,41nm,16.9s
BJT Baijiatuan 72.46 321 P P 19 26 24.9 +0.8
HEH HeiHe 73.75 335 eP P 19 26 31.1 -0.2
HEH pmax pmax
comp=Z,7.0nm,0.9s
XAN Xi'an 73.90 313 P P 19 26 33.1 +0.4
XAN pP pP 19 27 13.4 +0.5
XAN pmax pmax
comp=Z,15nm,0.8s
SPIA Saint Paul Isl 74.13 12 P P 19 26 33.0 -0.3
SPIA lAmb lAmb 19 28 55.2
comp=Z,26nm,1.2s
KMI2 Kunming 74.53 302 ⇑P P 19 26 38.0 +1.3
KMI2 pP pP 19 27 18.8 +1.8
KMI2 pmax pmax
comp=Z,11nm,1.3s
XLT XiLinHaoTe 74.91 324 eP P 19 26 40.0 +1.7
XLT pP pwP 19 27 20.3 -0.4
XLT pmax pmax
comp=Z,34nm,0.7s
XLT pmax pmax
comp=Z,89nm,5.0s
CM31 Chiang Mai Arr 75.16 294 P P 19 26 39.4 -0.7
CMAR Chiang Mai Arr 75.16 294 P P 19 26 41.3 +1.1
comp=Z,3.3nm,0.7s,baz=129,slow=4.9,SNR=32
comp=Z,3.3nm,0.7s
CMAR Chiang Mai Arr 75.16 294 P P 19 26 39.9 -0.3
CMAR Chiang Mai Arr 75.16 294 P 19 26 39.9 -0.3
CMAR pP 19 27 17.5 -2.8
QSPA South Pole Qui 75.17 180 P P 19 26 39.6 0.0
comp=Z,9.9nm,0.6s,baz=318,slow=0.4,SNR=106
comp=Z,9.9nm,0.6s
QSPA South Pole Qui 75.17 180 P P 19 26 39.5 0.0
QSPA lAmb lAmb 19 26 41.0
comp=Z,59nm,1.6s
QSPA South Pole Qui 75.17 180 P P 19 26 39.9 +0.3
QSPA South Pole Qui 75.17 180 P P 19 26 39.7 0.0
CHTO Chiang Mai 75.29 294 P P 19 26 42.2 +1.3
CHTO Chiang Mai 75.29 294 P P 19 26 40.7 -0.2
CHTO pP 19 27 19.9 -1.1
CHTO Chiang Mai 75.29 294 P P 19 26 40.6 -0.3
CHTO Chiang Mai 75.29 294 P P 19 26 42.0 +1.1
MA2 Magadan 75.40 351 P P 19 26 41.3 +0.7
MA2 pmax pmax
comp=Z,36nm,1.3s
MA2 Magadan 75.40 351 P P 19 26 41.3 +0.7
MA2 lAmb lAmb 19 27 39.6
comp=Z,36nm,1.3s
HHC Hu-ho-hao-te 75.80 320 eP P 19 26 47.9 +4.4
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,92nm,5.2s
PZH PanZhiHua 75.91 303 P P 19 26 44.1 -0.4
PZH pmax pmax
comp=Z,10.0nm,0.9s
VNFG Fog Glacier, M 76.07 18 P P 19 26 43.4 -1.2
VNFG lAmb lAmb 19 26 46.8
comp=Z,20nm,0.6s
CHGN Chignik 76.44 19 P P 19 26 44.8 -1.7
CHGN lAmb lAmb 19 26 49.0
comp=Z,67nm,1.9s
ZEA Zeya 76.48 337 eP P 19 26 48.1 +1.2
ZEA pmax pmax
comp=Z,10.0nm,0.7s
HILR Hailar Array B 76.68 330 P P 19 26 48.2 +0.1
comp=Z,2.4nm,0.5s,baz=135,slow=9.1,SNR=2.2
comp=Z,2.4nm,0.5s
BTO2 Baotou 76.80 319 eP P 19 26 50.8 +1.6
BTO2 pP pP 19 27 33.4 +3.6
BTO2 pmax pmax
comp=Z,26nm,1.6s
BTO2 pmax pmax
comp=Z,160nm,7.2s
TNCH TengChong 77.98 300 P P 19 26 57.5 +1.3
TNCH pmax pmax
comp=Z,6.0nm,0.3s
NPW Naypyitaw 78.11 294 P P 19 26 57.4 +0.7
SEY Seymchan 78.43 353 iP P 19 26 57.2 -0.3
SEY pmax pmax
comp=Z,26nm,1.5s
LZH Lanzhou 78.53 312 eP P 19 27 00.5 +1.6
LZH pP pP 19 27 41.3 +1.7
LZH sP sP 19 27 57.3 +0.1
LZH pmax pmax
comp=Z,34nm,1.3s
PBA Port Blair 78.54 285 P P 19 26 59.6 +0.4
N14K Kuskokwak Cree 78.58 15 lAmb lAmb 19 27 11.0
comp=Z,27nm,1.5s
N15K Kwethluk River 79.21 16 lAmb lAmb 19 27 04.1
comp=Z,33nm,1.9s
K13K Kusilvak Mount 79.65 13 P P 19 27 04.3 +0.2
IMP Imphal 81.77 298 eP P 19 27 16.0 -0.4
MAW Mawson 81.83 202 P P 19 27 16.1 +0.3
comp=Z,8.9nm,0.8s,baz=123,slow=6.8,SNR=16
MAW LR LR 19 57 28.3
comp=Z,47nm,21.8s,baz=76,slow=31
comp=Z,8.9nm,0.8s
MAW Mawson 81.83 202 P P 19 27 16.5 +0.7
MAW pmax pmax
comp=Z,7.0nm,1.4s
MAW Mawson 81.83 202 P 19 27 16.5 +0.7
KOHI KOHIMA 81.95 299 eP P 19 27 17.8 +0.4
YAK Yakutsk 82.20 343 c iP P 19 27 17.6 0.0
YAK pmax pmax
comp=Z,39nm,0.8s
YAK Yakutsk 82.20 343 P P 19 27 18.1 +0.4
YAK Yakutsk 82.20 343 P P 19 27 18.0 +0.4
YAK Yakutsk 82.20 343 P P 19 27 18.0 +0.4
YAK pP pP 19 27 58.5 -0.3
ULN Ulaanbaatar 82.34 324 c iP P 19 27 19.5 +0.6
ULN pmax pmax
comp=Z,13nm,0.9s
ULN Ulaanbaatar 82.34 324 P P 19 27 19.1 +0.2
ULN Ulaanbaatar 82.34 324 P P 19 27 19.8 +0.8
ULN Ulaanbaatar 82.34 324 P P 19 27 19.5 +0.6
ULN pP pP 19 28 00.8 +0.9
BILL Bilibino 82.67 360 ⇑iP P 19 27 20.0 0.0
BILL pmax pmax
comp=Z,26nm,1.6s
SONM Songino Array 82.70 324 P P 19 27 21.3 +0.5
comp=Z,6.4nm,0.5s,baz=148,slow=6.7,SNR=29
comp=Z,6.4nm,0.5s
GTA2 Gaotai 82.95 314 eP P 19 27 23.3 +1.0
GTA2 pP pP 19 28 04.3 +0.9
GTA2 pmax pmax
comp=Z,14nm,0.8s
H17K Granite Mounta 83.32 13 lAmb lAmb 19 27 25.4
comp=Z,22nm,1.8s
TEZP TEZPUR 83.36 300 eP P 19 27 24.9 +0.4
GUWA GUWAHATI 84.15 299 eP P 19 27 29.1 +0.6
F17K Baldwin Pennin 84.33 12 lAmb lAmb 19 27 31.4
comp=Z,6.1nm,0.7s
I20K Naaghedenei 84.51 15 lAmb lAmb 19 28 19.0
comp=Z,21nm,0.9s
G19K Purcell Mounta 84.98 14 lAmb lAmb 19 27 35.3
comp=Z,9.0nm,0.8s
YBH Yreka Blue Hor 85.39 45 LR LR 19 59 45.3
comp=Z,38nm,18.5s,baz=191,slow=31
I21K Tanana 85.47 16 lAmb lAmb 19 27 36.7
comp=Z,7.1nm,0.6s
DHUB DHUBRI 85.53 298 eP P 19 27 35.6 +0.2
ZAK Zakamensk 85.76 325 eP P 19 27 34.9 -1.2
ZAK pmax pmax
comp=Z,17nm,1.8s
LSA Lhasa 85.78 302 P P 19 27 38.1 +1.0
E19K Redstone River 86.04 13 lAmb lAmb 19 27 39.9
comp=Z,8.8nm,0.7s
TLY Talaya 86.19 326 d iP P 19 27 38.5 +0.4
TLY pmax pmax
comp=Z,22nm,1.6s
TLY Talaya 86.19 326 P P 19 27 38.2 +0.2
TLY pP pP 19 28 20.3 +0.9
C18K Utukok River 86.26 11 lAmb lAmb 19 29 44.5
comp=Z,36nm,1.8s
BELA Belgrano 2 86.58 175 lAmb lAmb 19 27 40.4
comp=Z,8.7nm,1.0s
ILAR Eielson Array 86.60 18 P P 19 27 38.5 -1.2
comp=Z,1.1nm,0.7s,baz=239,slow=5.2,SNR=5.0
D19K Kuna River 86.72 12 lAmb lAmb 19 28 20.0
comp=Z,31nm,1.9s
CLC China Lake 86.82 52 P P 19 27 41.4 -0.2
CLC pmax pmax
comp=Z,3.0nm,0.7s
CLC China Lake 86.82 52 P 19 27 41.4 -0.2
CCCA Chr Cany lake 86.89 52 lAmb lAmb 19 27 46.0
comp=Z,7.7nm,0.7s
PFO Pinyon Flats O 86.93 54 LR LR 20 03 23.8
comp=Z,40nm,18.1s,baz=219,slow=33
DSP Deep Springs 87.09 50 P 19 27 43.2 +0.5
G23K Bananza Creek 87.16 16 lAmb lAmb 19 28 30.2
comp=Z,13nm,1.5s
D20K Etivluk River 87.21 12 lAmb lAmb 19 27 46.8
comp=Z,10nm,0.9s
NVAR Mina Array Bea 87.22 49 P P 19 27 43.9 +0.2
comp=Z,1.2nm,0.7s,baz=228,slow=8.2,SNR=5.7
comp=Z,1.2nm,0.7s
G24K Hadweenzic Riv 87.83 16 lAmb lAmb 19 27 51.4
comp=Z,24nm,2.0s
WCT Wildcat Mounta 87.89 51 lAmb lAmb 19 27 47.6
comp=Z,10nm,1.6s
TPNV Topopah Spring 88.23 51 lAmb lAmb 19 30 50.9
comp=Z,17nm,1.9s
F24K Squaw Lake 88.32 16 lAmb lAmb 19 28 54.4
comp=Z,14nm,1.9s
B21K Ikpikpuk River 88.37 12 lAmb lAmb 19 27 52.4
comp=Z,7.9nm,0.8s
D23K Nanushuk River 88.72 14 lAmb lAmb 19 28 39.0
comp=Z,19nm,1.6s
EVN Everest 88.83 299 lAmb lAmb 19 27 53.2
comp=Z,13nm,0.7s
EVN Everest 88.83 299 P P 19 27 51.9 -0.1
EVN pP pP 19 28 33.8 -0.1
G26K Porcupine Rive 89.04 17 lAmb lAmb 19 27 55.3
comp=Z,25nm,1.9s
LPIG La Paz 89.10 65 LR LR 20 01 03.1
comp=Z,33nm,18.0s,baz=234,slow=31
KNGR Kungurtug, Tuv 89.14 323 ⇑iP P 19 27 52.5 +0.2
KNGR pmax pmax
comp=Z,9.0nm,1.1s
PRN Pahroc Range 89.28 51 P 19 27 53.2 -0.1
C23K Itkillik River 89.40 13 lAmb lAmb 19 27 57.1
comp=Z,7.5nm,1.0s
ELIB Princess Elisa 90.12 191 dP P 19 27 56.4 -0.2
comp=Z,7.6nm,0.0s
TIXI Tiksi 90.13 349 i P P 19 27 55.9 -0.3
TIXI pmax pmax
comp=Z,11nm,1.6s
B08A Colville Reser 90.21 40 P P 19 27 55.2 -2.0
TROLL Troll, Antarti 92.75 185 ⇑P P 19 28 08.4 -0.4
comp=Z,930nm,0.5s
WMQ Urumqi 92.94 315 eP P 19 28 11.8 +1.8
WMQ pmax pmax
comp=Z,17nm,1.9s
NVL N'lazarevskaya 92.95 188 eP P 19 28 06.2 -3.3
NVL pmax pmax
comp=Z,7.0nm,0.9s
SNAA Sanae 93.43 183 ⇑P P 19 28 10.9 -0.9
comp=Z,118nm,0.5s
SNAA Sanae 93.43 183 P P 19 28 10.9 -0.9
comp=Z,4.9nm,0.6s,baz=202,slow=7.1,SNR=20
comp=Z,4.9nm,0.6s
SNAA Sanae 93.43 183 ⇑iP P 19 28 10.4 -1.5
SNAA pmax pmax
comp=Z,22nm,1.5s
SNAA Sanae 93.43 183 P 19 28 10.3 -1.5
SNAA Sanae 93.43 183 P P 19 28 11.1 -0.8
VNA2 Neumayer--Watz 94.36 182 ⇑P P 19 28 15.2 -0.8
comp=Z,16nm,0.5s,baz=176,slow=4.5
VNA2 Neumayer--Watz 94.36 182 P P 19 28 15.4 -0.6
VNA1 Neumayer--Stat 94.66 181 ⇑P P 19 28 16.5 -0.8
comp=Z,6.6nm,0.7s
DGZ Jazzator, Alta 94.87 320 ⇑iP P 19 28 18.7 -0.2
DGZ pmax pmax
comp=Z,5.0nm,0.6s
PDAR Pinedale Array 94.91 47 LR LR 20 03 44.4
comp=Z,14nm,20.9s,baz=230,slow=31
ANMO Albuquerque 95.23 55 LR LR 20 05 57.0
comp=Z,36nm,18.7s,baz=278,slow=32
TXAR Lajitas Array 96.19 61 P P 19 28 25.4 +0.2
comp=Z,0.3nm,0.5s,baz=219,slow=5.7,SNR=7.2
TXAR PP PP 19 32 20.3 -0.6
comp=Z,0.2nm,0.9s,baz=292,slow=3.9,SNR=3.5
comp=Z,0.3nm,0.5s
MK31 Makanchi Array 97.42 316 i P Pdif 19 28 30.8 +0.5
MK31 i *PP pP 19 29 12.4 +0.2
MKAR Makanchi Array 97.42 316 P Pdif 19 28 30.6 +0.2
comp=Z,5.0nm,0.6s,baz=88,slow=6.4,SNR=58
MKAR PKiKP PKiKP 19 33 04.2 -0.2
comp=Z,0.4nm,0.5s,baz=231,slow=0.5,SNR=11
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 97.42 316 ceP Pdif 19 28 30.8 +0.5
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 97.42 316 P 19 28 30.1 -0.2
MKAR pP 19 29 09.7 -2.4
ZAA0 Zalesovo Array 97.60 324 lAmb lAmb 19 28 31.8
comp=Z,6.0nm,1.0s
ZALV Zalesovo Beam 97.60 324 P P 19 28 30.3 -0.6
comp=Z,2.4nm,0.5s,baz=119,slow=4.0,SNR=18
comp=Z,2.4nm,0.5s
MAKZ Makanchi 97.63 316 P P 19 28 30.9 -0.3
MAKZ *PP pP 19 29 11.7 -1.3
MAKZ pmax pmax
comp=Z,26nm,1.8s
MAKZ Makanchi 97.63 316 P 19 28 30.9 -0.3
MAKZ pP 19 29 11.7 -1.3
MAKZ Makanchi 97.63 316 P Pdif 19 28 31.3 0.0
MAKZ pP pP 19 29 13.2 +0.3
NRIK Noril'sk 100.25 339 c iP P Pdif 19 28 42.2 -0.2
NRIK pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 100.61 320 P Pdif 19 28 44.4 0.0
KURK Kurchatov 100.61 320 P Pdif 19 28 44.4 0.0
KURBB Kurchatov Arra 100.65 320 P Pdif 19 28 44.4 -0.2
comp=Z,0.5nm,0.5s,baz=90,slow=5.0,SNR=4.6
KURBB PKiKP PKiKP 19 33 09.5 -0.4
comp=Z,0.4nm,0.4s,baz=120,slow=1.9,SNR=4.5
BVAR Borovoye Array 105.95 321 Pdiff Pdif 19 29 07.8 -0.3
comp=Z,0.6nm,0.5s,baz=114,slow=3.7,SNR=2.8
BVAR PKiKP PKiKP 19 33 19.7 +0.1
comp=Z,1.5nm,0.6s,baz=60,slow=0.7,SNR=9.1
ARTI Arti 112.80 325 ⇓iPKiKP PKiKP 19 33 32.1 -0.2
SPA0 Spitsbergen Ar 115.08 354 e PKiKP PKiKP 19 33 35.9 -0.3
SPITS Spitsbergen Ar 115.08 354 PKP PKiKP 19 33 35.9 -0.3
comp=Z,2.3nm,0.5s,baz=79,slow=9.4,SNR=10
LPAZ La Paz 117.00 117 PKP PKPdf 19 33 41.5 -0.8
comp=Z,1.0nm,0.5s,baz=18,slow=1.5,SNR=4.3
KIRV Kirov 117.07 329 ⇓iPKiKP PKPdf 19 33 40.3 -0.1
VADS Vadso 119.05 345 e PKPdf 19 33 43.8 -0.2
VADS lAmb lAmb 19 33 46.0
comp=Z,7.4nm,0.8s
KEV Kevo 119.89 345 PKiKP PKPdf 19 33 45.1 -0.5
KEV Kevo 119.89 345 PKPdf 19 33 45.1 -0.5
HAMF Hammerfest 120.02 347 eP PKPdf 19 33 45.2 -0.6
HAMF lAmb lAmb 19 33 45.5
comp=Z,12nm,0.6s
ARA0 ARCESS Array S 120.42 345 eP PKPdf 19 33 46.6 0.0
ARCES ARCESS Array B 120.42 345 PKP PKPdf 19 33 46.4 -0.2
comp=Z,10nm,0.5s,baz=74,slow=1.6,SNR=153
ARCES PKKPbc PKKPab 19 43 53.2 -1.2
comp=Z,0.5nm,0.5s,baz=225,slow=3.7,SNR=6.2
KLMR Klimovskoe 120.88 333 ePKiKP PKPdf 19 33 45.2 -2.5
KLMR e 19 34 29.1
KLMR pmax pmax
comp=Z,16nm,1.6s
KTK1 Kautokeino 121.35 346 eP PKPdf 19 33 47.5 -0.9
TRO Tromso 121.83 348 eP PKPdf 19 33 48.6 -0.6
SCHQ Schefferville 122.31 34 PKKPbc PKKPbc 19 43 48.0 -0.6
comp=Z,2.1nm,0.7s,baz=90,slow=5.1,SNR=3.7
BOSA Boshof 123.39 220 PKP PKiKP 19 33 54.0 0.0
comp=Z,3.3nm,0.7s,baz=156,slow=0.9,SNR=7.9
STEI Steigen 124.00 348 eP PKPdf 19 33 53.1 -0.4
LOF Lofoten 124.17 349 eP PKPdf 19 33 53.9 +0.1
FAUS Fauske 124.45 347 eP PKPdf 19 33 54.3 -0.1
LPSR Galich'ya Gora 124.70 325 ePKiKP PKiKP 19 33 55.5 -0.1
LPSR pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 124.80 288 PKiKP PKPdf 19 33 56.2 -0.3
RAYN Ar Rayn 124.80 288 PKPdf 19 33 56.2 -0.3

VORR	**Voronezh**	**124.90**	**323**	*e*PKIKP	**PKPdf**	**19**	**33**	**55.1 -0.6**
VORR				pmax	pmax			
	comp=Z,24nm,0.4s							
OBN	**Obninsk**	**124.90**	**328**	*c i*PKIKP	**PKPdf**	**19**	**33**	**55.0 -0.6**
OBN				*i*		19	34	39.7
OBN				*e*PPP	PPP	19	38	27.0
OBN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KBZ	**Khabaz**	**124.97**	**313**	PKP	**PKiKP**	**19**	**33**	**56.3 -0.1**
	comp=Z,2.3nm,0.8s,baz=210,slow=1.1,SNR=3.9							
VSR	**Storozhevoye**	**125.09**	**323**	*e*PKIKP	**PKPdf**	**19**	**33**	**54.0 -2.1**
VSR				pmax	pmax			
	comp=Z,7.0nm,0.5s							
VAGH	**Vaagaholmen**	**125.43**	**348**	*e*P	**PKPdf**	**19**	**33**	**56.2 0.0**
MOR8	**Moi Rana**	**125.66**	**347**	*e*P	**PKPdf**	**19**	**33**	**56.2 -0.6**
KONS	**Konsvik**	**125.66**	**348**	*e*P	**PKPdf**	**19**	**33**	**56.7 0.0**
TRCB	**Terra Rica**	**125.77**	**133**		**PKPdf**	**19**	**33**	**57.5 -0.9**
STOK	**Stokkvaagen**	**125.82**	**348**	*e*P	**PKPdf**	**19**	**33**	**57.1 +0.1**
FINES	**FINESS Array B**	**125.91**	**338**	PKP	**PKPdf**	**19**	**33**	**57.2 -0.1**
	comp=Z,2.5nm,0.4s,baz=38,slow=2.3,SNR=50							
FINES	**FINESS Array B**	**125.91**	**338**	PKIKP	**PKPdf**	**19**	**33**	**56.5 -0.8**
FINES	**FINESS Array B**	**125.91**	**338**		**PKPdf**	**19**	**33**	**56.5 -0.8**
LEIR	**Leirfjorden**	**125.99**	**347**	*e*P	**PKPdf**	**19**	**33**	**57.3 0.0**
NSS	**Namsos**	**127.60**	**347**	*e*P	**PKPdf**	**19**	**34**	**00.3 -0.2**
MOL	**Molde**	**130.27**	**348**	*e*P	**PKiKP**	**19**	**34**	**06.2 -0.3**
AKN	**Aaknes**	**130.74**	**348**	*e*P	**PKiKP**	**19**	**34**	**07.0 -0.5**
NB2	**NORSAR Subarra**	**130.79**	**345**	PKPdf	**PKPdf**	**19**	**34**	**06.8 +0.1**
	comp=Z,0.9nm,0.5s,baz=31,slow=1.9							
NB2				SKPa		19	37	15.9
	comp=Z,3.8nm,0.8s,baz=33,slow=3.0							
NOA	**NORSAR Array B**	**130.79**	**345**	PKP	**PKPdf**	**19**	**34**	**06.9 +0.2**
	comp=Z,1.7nm,0.5s,baz=35,slow=2.0,SNR=25							
NOA				SKPbc	**SKPbc**	**19**	**37**	**15.0 -0.2**
	comp=Z,1.6nm,0.6s,baz=32,slow=2.8,SNR=11							
HFS	**Hagfors**	**130.90**	**343**	PKP	**PKPdf**	**19**	**34**	**06.6 -0.3**
	comp=Z,2.1nm,0.5s,baz=73,slow=5.4,SNR=14							
HFS				SKPbc	**SKPab**	**19**	**37**	**15.8 -0.1**
	comp=Z,1.9nm,0.6s,baz=83,slow=4.6,SNR=6.5							
AKASG	**Malin Array Be**	**130.94**	**326**	PKP	**PKPdf**	**19**	**34**	**07.2 0.0**
	comp=Z,0.9nm,0.5s,baz=52,slow=1.1,SNR=8.6							
AKASG				SKPbc	**SKPab**	**19**	**37**	**16.2 -0.2**
	comp=Z,2.3nm,0.7s,baz=50,slow=4.5,SNR=12							
AKBB	**Malin Array Si**	**130.94**	**326**	*ij i*PKIKP	**PKPdf**	**19**	**34**	**07.0 -0.2**
AKBB	**Malin Array Si**	**130.94**	**326**	P	**PKPdf**	**19**	**34**	**07.4 +0.2**
KIEV	**Kiev**	**130.95**	**326**	P	**PKPdf**	**19**	**34**	**07.3 0.0**
AK04	**Malin Array Si**	**130.96**	**326**	P	**PKPdf**	**19**	**34**	**07.6 +0.3**
NC602	**NORSAR Array S**	**130.97**	**345**	*e*P	**PKiKP**	**19**	**34**	**07.6 -0.4**
LUBAR	**Lubar, Ukraine**	**132.15**	**326**	P	**PKPdf**	**19**	**34**	**08.9 -0.7**
SUE	**Sulen**	**132.20**	**349**	*e*P	**PKiKP**	**19**	**34**	**09.8 -0.5**
RNPP5	**Staryi Chortor**	**132.41**	**328**	P	**PKPdf**	**19**	**34**	**09.9 -0.1**
ASK	**Askoy**	**132.64**	**348**	*e*P	**PKPdf**	**19**	**34**	**10.6 +0.5**
BR131	**Keskin Array S**	**132.72**	**311**	*ij i*PKIKP	**PKPdf**	**19**	**34**	**10.0 -1.2**
BRTR	**Keskin Array B**	**132.72**	**311**	PKP	**PKPdf**	**19**	**34**	**11.2 0.0**
	comp=Z,1.0nm,0.5s,baz=150,slow=4.9,SNR=7.6							
BRTR				SKPbc	**SKPbc**	**19**	**37**	**22.9 0.0**
	comp=Z,0.6nm,0.6s,baz=110,slow=5.2,SNR=3.9							
BR104	**Keskin Array S**	**132.73**	**311**	P	**PKPdf**	**19**	**34**	**10.2 -1.0**
BR106	**Keskin Array S**	**132.74**	**311**	P	**PKPdf**	**19**	**34**	**11.0 -0.2**
BR105	**Keskin Array S**	**132.74**	**311**	P	**PKPdf**	**19**	**34**	**10.8 -0.4**
KMPD	**K-Podol'skiy**	**133.60**	**325**	P	**PKPdf**	**19**	**34**	**11.6 -0.7**
BDFB	**Brasilia**	**133.67**	**129**	PKP	**PKPdf**	**19**	**34**	**13.5 -0.1**
	comp=Z,3.5nm,0.6s,baz=95,slow=10,SNR=3.6							
KMY	**Karmoy**	**133.80**	**347**	*e*P	**PKiKP**	**19**	**34**	**13.7 0.0**
BURAR	**Bucovina Array**	**134.81**	**324**		**PKPdf**	**19**	**34**	**15.4 +0.6**
KOLS	**Kolonicke sedl**	**135.65**	**327**	*e*PKIKP	**PKiKP**	**19**	**34**	**18.9 +1.1**
KOLS	**Kolonicke sedl**	**135.65**	**327**	*e*PKP	**PKiKP**	**19**	**34**	**18.9 +1.1**
OJC	**Ojcow**	**136.06**	**330**	P	**PKPdf**	**19**	**34**	**16.5 -0.4**
MORC	**Moravsky Berou**	**137.43**	**331**	*e*PKP	**PKPdf**	**19**	**34**	**19.7 +0.2**
KRLC	**Kraliky**	**137.56**	**332**	*e*PKIKP	**PKPdf**	**19**	**34**	**19.6 -0.2**
KRLC	**Kraliky**	**137.56**	**332**	*e*PKPDF	**PKPdf**	**19**	**34**	**19.6 -0.2**
MAUC	**Maruska**	**137.58**	**331**	*e*PKPDF	**PKPdf**	**19**	**34**	**20.4 +0.6**
VRAC	**Vranov**	**138.20**	**331**	*e*PKP	**PKPdf**	**19**	**34**	**20.7 -0.2**
BRG	**Berggiesshubel**	**138.20**	**335**	*ij e*PKPf		19	34	15.2
BRG				Amp		19	34	15.9
	comp=Z,1.9nm,0.6s							
BRG	**Berggiesshubel**	**138.20**	**335**	P	**PKiKP**	**19**	**34**	**23.1 +0.1**
BRG				Amp		19	34	23.6
	comp=Z,3.1nm,0.6s							
KRUC	**Moravsky**	**138.46**	**331**	*e*PKP	**PKPdf**	**19**	**34**	**21.8 +0.4**
EKA	**Eskdalemuir Ar**	**138.96**	**352**	PKhKP	PKPpre	19	34	12.1
	comp=Z,0.4nm,0.4s,baz=1.8,slow=2.7,SNR=5.2							
EKA				PKP	**PKPdf**	**19**	**34**	**21.9 -0.2**
	comp=Z,1.1nm,0.5s,baz=5.8,slow=1.9,SNR=12							
WINA	**Alland / Wiene**	**139.29**	**331**	*e*PKP	PKPpre	19	34	18.4
	comp=Z,0.7nm,0.4s							
WINA				*e*PKiKP	**PKiKP**	**19**	**34**	**25.9 +0.7**
	comp=Z,2.9nm,0.6s							
RONA	**Rosalia, Austr**	**139.47**	**330**	*i* PKP	PKPpre	19	34	18.8
	comp=Z,1.3nm,0.4s							
RONA				*e*PKiKP	**PKiKP**	**19**	**34**	**26.0 +0.4**
	comp=Z,1.9nm,0.5s							
CONA	**Conrad Observa**	**139.51**	**330**	*e*PKP	PKPpre	19	34	19.8
	comp=Z,4.0nm,0.6s							
CKRC	**Cesky Krumlov**	**139.59**	**333**	*e*PKHKP	PKPpre	19	34	15.7
CKRC	**Cesky Krumlov**	**139.59**	**333**	*e*PKPpre	PKPpre	19	34	15.7
KHC	**Kasperske Hory**	**139.68**	**333**	*ij i*PKIKP	**PKPdf**	**19**	**34**	**24.8 +1.1**
KHC	**Kasperske Hory**	**139.68**	**333**	*e*PKPpre	PKPpre	19	34	17.2
GERES	**GERESS Array B**	**139.84**	**333**	PKhKP	PKPpre	19	34	17.4
	comp=Z,0.8nm,0.5s,baz=25,slow=3.5,SNR=11							
GERES				PKP	**PKPdf**	**19**	**34**	**23.2 -0.9**
	comp=Z,2.0nm,0.6s,baz=48,slow=1.5,SNR=10							
MOA	**Molln**	**140.32**	**332**	*i* PKP	PKPpre	19	34	21.3
	comp=Z,1.4nm,0.4s							
SESA	**Seetaler Alpe**	**140.71**	**331**	*e*PKP	PKPpre	19	34	21.5
	comp=Z,4.4nm,0.5s							
SOKA	**Soboth**	**140.80**	**330**	*e*PKP	PKPpre	19	34	21.5
	comp=Z,0.6nm,0.5s							
MEM	**Membach**	**141.30**	**341**	*d*PKiKP	**PKiKP**	**19**	**34**	**29.3 0.0**
KBA	**Koelnbreinsper**	**141.31**	**331**	*e*PKP	PKPpre	19	34	22.0
	comp=Z,1.4nm,0.5s							
LESA	**Schwarzleotal**	**141.36**	**332**	*e*PKP	PKPpre	19	34	22.0
	comp=Z,3.2nm,0.6s,SNR=5.4							
MYKA	**Terra Mystica**	**141.50**	**331**	*e*PKP	PKPpre	19	34	21.6
	comp=Z,2.8nm,0.5s							
BCLA	**Clavier**	**141.69**	**342**	*d*PKPdf	PKPpre	19	34	21.9
WATA	**Walderalm**	**141.91**	**333**	*e*PKP	PKPpre	19	34	23.7
	comp=Z,2.8nm,0.6s							
ABTA	**Abfaltersbach**	**141.94**	**332**	*e*PKP	PKPpre	19	34	23.2
	comp=Z,6.5nm,1.1s							
WTTA	**Wattenberg**	**141.94**	**333**	*e*PKP	PKPpre	19	34	23.9
	comp=Z,8.7nm,1.2s,SNR=5.5							
RCHB	**Rochefort**	**141.94**	**341**	*d*PKPdf	**PKPdf**	**19**	**34**	**27.0 -0.6**
RCHB				*dp*PKPdf	**pPKPdf**	**19**	**35**	**11.1 +0.1**
BMRD	**Maredsous**	**141.95**	**342**	*d*PKPdf	**PKPdf**	**19**	**34**	**27.4 -0.2**
WLF	**Walferdange**	**142.08**	**340**	*d*PKPdf	PKPpre	19	34	24.1
MOTA	**Moosalm**	**142.11**	**334**	*e*PKP	PKPpre	19	34	24.2
	comp=Z,10nm,1.3s,SNR=5.1							
RETA	**Reutte**	**142.14**	**334**	*i* PKP	PKPpre	19	34	24.6
	comp=Z,0.4nm,0.2s							
SQTA	**Sankt Quirin**	**142.16**	**333**	*e*PKP	PKPpre	19	34	24.3
	comp=Z,7.9nm,1.2s,SNR=7.7							
BFO	**Black Forest**	**142.44**	**337**	PKIKP	PKPpre	19	34	25.5
BFO	**Black Forest**	**142.44**	**337**		PKPpre	19	34	25.5
FETA	**Feichten**	**142.52**	**334**	*e*PKP	PKPpre	19	34	25.7
	comp=Z,12nm,0.9s,SNR=13							
DAVA	**Damuels**	**142.67**	**335**	*e*PKP	PKPpre	19	34	26.1
	comp=Z,7.2nm,0.7s,SNR=6.5							
TUE	**Stuetta**	**143.54**	**334**		PKPbc	19	34	28.9 +0.3
SENIN	**Lac Senin/Sane**	**144.46**	**336**		**PKPab**	**19**	**34**	**31.2 +0.1**
CEL	**Celeste**	**145.74**	**318**		**PKPdf**	**19**	**34**	**34.0 -0.7**
RAFF	**Raffo Rosso**	**147.33**	**318**		**PKPbc**	**19**	**34**	**39.9 -0.1**
KEST	**Kesra**	**151.42**	**321**	PKPbc	**PKiKP**	**19**	**34**	**51.0 +0.3**
	comp=Z,11nm,0.6s,baz=298,slow=1.6,SNR=13							
PBRG	**Braganca**	**152.68**	**351**	*e*PKPab	**PKPab**	**19**	**35**	**04.4 +0.4**
PGAV	**Gavieira, Arco**	**152.74**	**353**	*e*PKPbc	**PKiKP**	**19**	**34**	**53.6 +0.4**
POLO	**Lamas de Olo**	**153.26**	**352**	*e*PKPbc	**PKiKP**	**19**	**34**	**54.8 +0.4**
PVRL	**Vila Real**	**153.34**	**352**	*e*PKPbc	**PKiKP**	**19**	**34**	**54.9 +0.4**
MVO	**Moncorvo**	**153.38**	**351**	*e*PKPbc	**PKiKP**	**19**	**34**	**55.0 +0.5**
ESDC	**Sonseca Array**	**154.16**	**345**	PKP	**PKPdf**	**19**	**34**	**47.4 -0.4**
	comp=Z,0.3nm,0.4s,baz=13,slow=38,SNR=1.8							
ESDC				PKPbc	**PKiKP**	**19**	**34**	**56.2 0.0**
	comp=Z,1.3nm,0.7s,baz=8.7,slow=3.6,SNR=9.2							
ESDC				PKPab	**PKPab**	**19**	**35**	**10.3 -0.1**
	comp=Z,1.8nm,0.7s,baz=19,slow=4.2,SNR=8.1							
MTE	**Manteigas**	**154.18**	**351**	*e*PKPbc	**PKiKP**	**19**	**34**	**56.6 +0.4**
MTE				*e*PKPab	**PKPab**	**19**	**35**	**11.3 +0.8**
PSARD	**Sardoal**	**155.05**	**352**	*e*PKPbc	PKPdf	19	34	57.8 +8.8
PARRA	**Arraiolos**	**155.81**	**351**	*e*PKPab	**PKPab**	**19**	**35**	**17.2 -0.2**
PBEJ	**Beja**	**156.55**	**351**	*e*PKPab	**PKPab**	**19**	**35**	**20.5 -0.1**
TORD	**Torodi Ar. Bea**	**166.07**	**265**	PKP	**PKPdf**	**19**	**35**	**00.9 -0.8**
	comp=Z,2.1nm,0.5s,baz=344,slow=1.4,SNR=21							
TORD				PKPab	**PKPab**	**19**	**36**	**02.9 -0.2**
	comp=Z,1.6nm,0.5s,baz=80,slow=3.8,SNR=11							
DBIC	**Dimbokro**	**168.90**	**224**	PKP	**PKPdf**	**19**	**35**	**03.1 -0.7**
	comp=Z,3.9nm,0.5s,baz=103,slow=1.2,SNR=12							
DBIC				PKPab	**PKPab**	**19**	**36**	**15.6 +0.2**
	comp=Z,5.4nm,1.0s,baz=110,slow=13,SNR=1.9							

ANF **14** *19:17:34.9±0.5,58.°19N×137.°88W,h14km±3km, ML3.7/28, Error ellipse: s-maj=2.1km s-min=1.4km az=34.0*
PGC **14** *19:17:34.7±0.0,58.°27N×137.°93W,h1km, ML3.4/16, ML3.3(AEIC),179km southeast of Yakutat, Ak Southeastern Alaska*
NEIC **14** *19:17:34.8±1.9,58.°27N±0.°03×137.°92W±0.°08,h18km±7km, ML3.4/108, ML3.3(AEIC), Error ellipse: s-maj=6.7km s-min=3.3km az=58.0*
AEIC **14** *19:17:34.3±1.5,58.°18N±0.°04×138.°03W±0.°06,h4km±6km, Error ellipse: s-maj=6.9km s-min=3.6km az=201.0*

ISC 14 19:17:35.4±1.1,58.°15N±0.°04×137.°94W±0.°04, h22km±11km, n186, σ1§27/230, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time h	m	s	Res ISC
S31K	**Pelican**	**0.93**	**101**			**Pb**	**19**	**17**	**52.0**	**-0.7**
S31K						**Sb**	**19**	**18**	**04.4**	**-0.2**
S31K				IAML			19	18	05.0	
	comp=N,752nm,0.4s									
S31K	**Pelican**	**0.93**	**101**	P		**Pb**	**19**	**17**	**52.0**	**-0.7**
	baz=285									
S31K				S		**Sb**	**19**	**18**	**04.4**	**-0.2**
	baz=285									
R31K	**City Hall, Gus**	**1.19**	**76**	S		**Sb**	**19**	**18**	**11.8**	**-0.4**
R31K	**City Hall, Gus**	**1.19**	**76**			**Pn**	**19**	**17**	**55.2**	**-1.4**
R31K						**Sb**	**19**	**18**	**11.8**	**-0.4**
R31K	**City Hall, Gus**	**1.19**	**76**	S		**Sb**	**19**	**18**	**12.0**	**-0.1**
	baz=259									
P29M	**Windy Craggy**	**1.49**	**4**	P		**Pn**	**19**	**17**	**59.2**	**-1.6**
P29M				Sn		**Sn**	**19**	**18**	**17.1**	**-2.3**
P29M	**Windy Craggy**	**1.49**	**4**			**Pn**	**19**	**17**	**59.0**	**-1.7**
P29M						**Sn**	**19**	**18**	**17.2**	**-2.3**
P29M	**Windy Craggy**	**1.49**	**4**	P		**Pn**	**19**	**17**	**59.1**	**-1.6**
	baz=182									
P29M				S		**Sn**	**19**	**18**	**17.2**	**-2.3**
	baz=182									
PLBC	**Pleasant Camp**	**1.54**	**31**	P		**Pn**	**19**	**18**	**00.5**	**-1.0**
PLBC	**Pleasant Camp**	**1.54**	**31**			**Pn**	**19**	**18**	**00.5**	**-1.0**
PLBC						**Sn**	**19**	**18**	**19.2**	**-1.6**
PLBC	**Pleasant Camp**	**1.54**	**31**	P		**Pn**	**19**	**18**	**00.5**	**-1.0**
	baz=211,SNR=846									
PLBC				S		**Sn**	**19**	**18**	**19.5**	**-1.4**
	baz=211									
YKU2	**Yakutat**	**1.63**	**327**	Pn		**Pn**	**19**	**18**	**02.1**	**-0.6**
BESE	**Bessie Mountai**	**1.68**	**74**	Pn		**Pn**	**19**	**18**	**03.1**	**-0.3**
BESE	**Bessie Mountai**	**1.68**	**74**			**Pn**	**19**	**18**	**03.1**	**-0.3**
BESE						**Sn**	**19**	**18**	**23.7**	**-0.7**
SIT	**Sitka**	**1.79**	**127**			**Pn**	**19**	**18**	**05.0**	**+0.2**
SIT						**Sn**	**19**	**18**	**27.1**	**+0.3**
SIT	**Sitka**	**1.79**	**127**	P		**Pn**	**19**	**18**	**04.9**	**+0.1**
	baz=311									
SIT				S		**Sn**	**19**	**18**	**27.4**	**+0.6**
	baz=311									
R32K	**Eaglecrest**	**1.81**	**85**			**Pn**	**19**	**18**	**05.3**	**0.0**
R32K						**Sn**	**19**	**18**	**28.7**	**+1.2**
R32K				IAML			19	18	30.9	
	comp=N,437nm,0.3s									
R32K				IAML			19	18	38.0	
	comp=E,340nm,0.5s									
R32K	**Eaglecrest**	**1.81**	**85**	P		**Pn**	**19**	**18**	**05.0**	**-0.3**
	baz=268									
R32K				S		**Sn**	**19**	**18**	**28.1**	**+0.5**
	baz=268									
JIS	**Juneau Island**	**1.89**	**85**			**Pn**	**19**	**18**	**06.0**	**-0.2**
JIS						**Sb**	**19**	**18**	**31.7**	**-0.5**
SKAG	**Skagway**	**1.89**	**45**			**Pn**	**19**	**18**	**05.9**	**-0.3**
SKAG						**Sn**	**19**	**18**	**30.6**	**+1.3**
SKAG	**Skagway**	**1.89**	**45**	P		**Pn**	**19**	**18**	**05.9**	**-0.3**
	baz=226,SNR=42									
SKAG				S		**Sn**	**19**	**18**	**30.3**	**+1.0**
	baz=226									
S32K	**Killisnoo**	**1.93**	**109**			**Pn**	**19**	**18**	**06.9**	**+0.2**
S32K				IAML			19	18	43.1	
	comp=E,222nm,0.8s									
S32K	**Killisnoo**	**1.93**	**109**	P		**Pn**	**19**	**18**	**06.7**	**-0.1**
	baz=294									
S32K				S		**Sn**	**19**	**18**	**30.8**	**+0.6**
	baz=294									
P30M	**Million Dollar**	**2.04**	**14**	Pn		**Pn**	**19**	**18**	**07.6**	**-0.7**
P30M				Sn		**Sn**	**19**	**18**	**33.0**	**-0.1**
P30M	**Million Dollar**	**2.04**	**14**			**Pn**	**19**	**18**	**07.7**	**-0.7**
P30M						**Sn**	**19**	**18**	**34.2**	**+1.0**
P30M				IAML			19	18	37.2	
	comp=N,215nm,0.5s									
P30M	**Million Dollar**	**2.04**	**14**	P		**Pn**	**19**	**18**	**07.9**	**-0.5**
	baz=193									
P30M				S		**Sn**	**19**	**18**	**33.6**	**+0.4**
	baz=193									
O29M	**Mount Kennedy**	**2.18**	**352**	Pn		**Pn**	**19**	**18**	**09.5**	**-0.9**
O29M				Sn		**Sn**	**19**	**18**	**35.2**	**-1.6**
O29M	**Mount Kennedy**	**2.18**	**352**			**Pn**	**19**	**18**	**09.5**	**-0.9**
O29M				IAML			19	18	42.4	
	comp=N,405nm,0.3s									
O29M	**Mount Kennedy**	**2.18**	**352**	P		**Pn**	**19**	**18**	**09.5**	**-0.9**
	baz=170									
PINM	**Pinnacle**	**2.29**	**330**	P		**Pn**	**19**	**18**	**11.8**	**0.0**
	baz=146									
PINM				S		**Sn**	**19**	**18**	**40.3**	**+1.0**
	baz=146									
PCA	**Pinnacle**	**2.29**	**329**	Pn		**Pn**	**19**	**18**	**11.6**	**-0.2**
PCA	**Pinnacle**	**2.29**	**329**			**Pn**	**19**	**18**	**11.5**	**-0.2**
PCA						**Sn**	**19**	**18**	**39.7**	**+0.4**
YUK7	**Dusty Glacier**	**2.39**	**358**	Pn		**Pn**	**19**	**18**	**12.8**	**-0.5**
YUK7				Sg		**Sb**	**19**	**18**	**44.8**	**-2.0**
YUK7	**Dusty Glacier**	**2.39**	**358**			**Pn**	**19**	**18**	**13.2**	**-0.1**
YUK7						**Sn**	**19**	**18**	**43.0**	**+1.0**
P32M	**Atlin**	**2.62**	**55**	Pn		**Pn**	**19**	**18**	**15.8**	**-0.6**
P32M				Sg		**Sb**	**19**	**18**	**54.0**	**+0.5**
P32M	**Atlin**	**2.62**	**55**			**Pn**	**19**	**18**	**16.0**	**-0.4**
P32M						**Sn**	**19**	**18**	**49.7**	**+2.1**
P32M	**Atlin**	**2.62**	**55**	P		**Pn**	**19**	**18**	**16.0**	**-0.4**
	baz=238,SNR=130									
HYT	**Haines Junctio**	**2.69**	**5**	Pn		**Pn**	**19**	**18**	**16.8**	**-0.6**
HYT	**Haines Junctio**	**2.69**	**5**			**Pn**	**19**	**18**	**16.8**	**-0.6**
HYT						**Sn**	**19**	**18**	**50.1**	**+0.8**
HYT				IAML			19	18	53.8	
	comp=E,180nm,1.1s									
HYT				IAML			19	18	56.0	
	comp=N,238nm,0.8s									
HYT	**Haines Junctio**	**2.69**	**5**	P		**Pn**	**19**	**18**	**17.0**	**-0.4**
	baz=184,SNR=41									
O30N	**Mendenhall**	**2.79**	**19**	Pn		**Pn**	**19**	**18**	**18.3**	**-0.3**
O30N				Sg		**Sb**	**19**	**18**	**56.9**	**-1.3**
O30N	**Mendenhall**	**2.79**	**19**			**Pn**	**19**	**18**	**18.5**	**-0.2**
O30N						**Sn**	**19**	**18**	**52.8**	**+1.1**
O30N				IAML			19	18	57.9	
	comp=E,188nm,0.6s									
O30N	**Mendenhall**	**2.79**	**19**	P		**Pn**	**19**	**18**	**18.4**	**-0.3**
	baz=200,SNR=145									
YUK6	**Outpost Mounta**	**2.81**	**356**	Pn		**Pn**	**19**	**18**	**18.7**	**-0.4**
YUK6	**Outpost Mounta**	**2.81**	**356**			**Pn**	**19**	**18**	**18.9**	**-0.2**
YUK6	**Outpost Mounta**	**2.81**	**356**	P		**Pn**	**19**	**18**	**18.8**	**-0.4**
	baz=174,SNR=19									
YUK6				S		**Sn**	**19**	**18**	**53.9**	**+1.5**
	baz=174									
O28M	**Mount Upton**	**2.87**	**337**	Pn		**Pn**	**19**	**18**	**19.3**	**-0.7**
O28M	**Mount Upton**	**2.87**	**337**			**Pn**	**19**	**18**	**19.3**	**-0.7**
O28M				IAML			19	19	09.1	
	comp=E,135nm,0.5s									
O28M				IAML			19	19	09.1	
	comp=N,126nm,0.6s									
O28M	**Mount Upton**	**2.87**	**337**	P		**Pn**	**19**	**18**	**19.3**	**-0.7**
	baz=154									
WHY	**Whitehorse**	**2.96**	**31**	Pn		**Pn**	**19**	**18**	**20.8**	**-0.3**
WHY				Sg		**Sb**	**19**	**19**	**02.8**	**-0.4**
WHY	**Whitehorse**	**2.96**	**31**			**Pn**	**19**	**18**	**20.6**	**-0.5**
WHY						**Sn**	**19**	**18**	**57.7**	**+1.7**
WHY				IAML			19	19	03.8	
	comp=N,179nm,0.5s									
WHY				IAML			19	19	10.1	
	comp=E,185nm,0.8s									
WHY	**Whitehorse**	**2.96**	**31**	P		**Pn**	**19**	**18**	**20.8**	**-0.3**
	baz=212,SNR=42									
WHY				Sb		**Sb**	**19**	**19**	**03.3**	**+0.1**
	baz=212									
YUK5	**Granite Creek**	**2.99**	**1**	Pn		**Pn**	**19**	**18**	**21.7**	**+0.2**
YUK5	**Granite Creek**	**2.99**	**1**			**Pn**	**19**	**18**	**21.7**	**+0.2**
YUK5						**Sn**	**19**	**18**	**57.3**	**+0.6**

Q32M	**Nakina River**	**3.08**	**72**	Pn		**Pn**	**19**	**18 23.8 +1.0**
Q32M	**Nakina River**	**3.08**	**72**			**Pn**	**19**	**18 22.9 +0.1**
LOGN	**Logan Glacier**	**3.10**	**331**	Pn		**Pn**	**19**	**18 23.5 +0.4**
LOGN	**Logan Glacier**	**3.10**	**331**			**Pn**	**19**	**18 22.4 -0.6**
LOGN				IAML			19	19 12.0
	comp=N,88nm,0.6s							
LOGN				IAML			19	19 20.3
	comp=E,92nm,1.0s							
YUK4	**Talbot Arm**	**3.22**	**354**	Pn		**Pn**	**19**	**18 26.1 +1.4**
YUK4	**Talbot Arm**	**3.22**	**354**	P		**Pn**	**19**	**18 25.8 +1.0**
YUK4	baz=173,SNR=9.8			S		**Sn**	**19**	**19 05.0 +2.4**
	baz=173							
GRNC	**Granite Creek**	**3.24**	**325**	Pn		**Pn**	**19**	**18 24.5 -0.5**
GRNC	**Granite Creek**	**3.24**	**325**			**Pn**	**19**	**18 24.3 -0.7**
GRNC				IAML			19	19 25.3
	comp=N,89nm,1.0s							
BARK	**Barkley Ridge**	**3.25**	**316**			**Pn**	**19**	**18 23.7 -1.3**
BARK						Pb	19	18 24.0 -8.3
BRWY	**Burwash Landin**	**3.27**	**351**	Sb		**Sb**	**19**	**19 14.1 +1.9**
	baz=169							
YUK8	**Steele Glacier**	**3.27**	**344**	Pn		**Pn**	**19**	**18 25.8 +0.3**
YUK8	**Steele Glacier**	**3.27**	**344**	P		**Pn**	**19**	**18 25.4 -0.1**
	baz=162,SNR=12							
YUK8				Sb		**Sb**	**19**	**19 14.2 +1.9**
	baz=162							
U33K	**Whale Pass**	**3.33**	**126**	Pn		**Pn**	**19**	**18 27.1 +1.1**
U33K	**Whale Pass**	**3.33**	**126**	P		**Pn**	**19**	**18 26.9 +0.9**
	baz=311							
N30M	**Aishikik Lake**	**3.34**	**7**	Pn		**Pn**	**19**	**18 26.1 -0.2**
N30M				Sg		**Sb**	**19**	**19 13.5 -0.7**
N30M	**Aishikik Lake**	**3.34**	**7**			**Pn**	**19**	**18 25.6 -0.7**
N30M				IAML			19	19 15.0
	comp=E,122nm,1.1s							
N30M	**Aishikik Lake**	**3.34**	**7**	P

EYAK			IAML		19 21 26.2		
	comp=N,38nm,4.3s						
N25K	**Chitina, Valde**	**4.82 319**	P	**Pn**	**19 18 47.7**	**+1.1**	
	baz=132						
HIN	**Hinchinbrook I**	**4.93 301**	Pn	**Pn**	**19 18 46.7**	**-1.4**	
M26K	**Nabesna, AK**	**4.95 332**		**Pn**	**19 18 46.1**	**-2.2**	
DIV	**Divide**	**4.97 310**	Pn	**Pn**	**19 18 47.2**	**-1.4**	
DIV			IAML		19 20 08.9		
	comp=N,32nm,3.6s						
DIV			IAML		19 21 26.9		
	comp=E,20nm,3.7s						
L29M	**L29M**	**4.97 359**		**Pn**	**19 18 46.7**	**-1.9**	
L29M	**L29M**	**4.97 359**	P	**Pn**	**19 18 49.0**	**+0.4**	
	baz=178						
FID	**Port Fidalgo**	**5.08 304**	Pn	**Pn**	**19 18 49.2**	**-0.8**	
FID			IAML		19 20 35.6		
	comp=E,31nm,3.0s						
FID			IAML		19 22 07.9		
	comp=N,28nm,3.7s						
P23K	**Montague Islan**	**5.22 295**	Pn	**Pn**	**19 18 51.2**	**-0.8**	
KLU	**Klutina**	**5.24 313**		**Pn**	**19 18 50.2**	**-2.1**	
KLU			IAML		19 19 56.1		
	comp=E,21nm,0.5s						
KLU			IAML		19 20 45.4		
	comp=N,21nm,2.9s						
KLU	**Klutina**	**5.24 313**	P	**Pn**	**19 18 52.5**	**+0.2**	
	baz=126						
BCAR	**Beaver Creek A**	**5.28 341**	Pn	**Pn**	**19 18 50.4**	**-2.5**	
L27K	**Beaver Creek,**	**5.28 340**	Pn	**Pn**	**19 18 50.3**	**-2.6**	
L26K	**Log Cabin Wild**	**5.57 334**	Pn	**Pn**	**19 18 55.4**	**-1.4**	
HARP	**HAARP**	**5.57 323**	Pn	**Pn**	**19 18 56.0**	**-0.8**	
MMPY	**Sheldon Lake,**	**5.57 34**	Pn	**Pn**	**19 18 56.8**	**0.0**	
MMPY			Pg	**Pb**	**19 19 13.1**	**+1.3**	
MMPY			Sg	**Sb**	**19 20 23.8**	**+5.7**	
MMPY	**Sheldon Lake,**	**5.57 34**		**Pn**	**19 18 54.8**	**-2.0**	
MMPY	**Sheldon Lake,**	**5.57 34**	P	**Pn**	**19 18 57.1**	**+0.2**	
	baz=219,SNR=23						
M24K	**Tolsona, Glenn**	**5.71 317**	Pn	**Pn**	**19 18 57.7**	**-1.1**	
M24K	**Tolsona, Glenn**	**5.71 317**	P	**Pn**	**19 19 00.3**	**+1.5**	
	baz=130						
K29M	**Barlow Dome**	**5.71 2**		**Pn**	**19 18 56.7**	**-2.1**	
K29M	**Barlow Dome**	**5.71 2**	P	**Pn**	**19 18 59.9**	**+1.0**	
	baz=182						
DIB	**Dawson Inlet,**	**5.84 146**	Pn	**Pn**	**19 19 01.1**	**+0.5**	
DAWY	**Dawson**	**5.97 354**	Pn	**Pn**	**19 19 02.1**	**-0.3**	
DAWY			Sn	**Sn**	**19 20 07.5**	**-2.6**	
DAWY	**Dawson**	**5.97 354**		**Pn**	**19 19 00.8**	**-1.6**	
DAWY	**Dawson**	**5.97 354**	P	**Pn**	**19 19 02.5**	**+0.1**	
	baz=172,SNR=6.6						
SCM	**Sheep Creek Mo**	**5.98 312**		**Pn**	**19 19 00.9**	**-1.6**	
SCM	**Sheep Creek Mo**	**5.98 312**	P	**Pn**	**19 19 03.4**	**+0.9**	
	baz=123						
MOBC	**Moresby Island**	**6.05 144**	Pn	**Pn**	**19 19 02.2**	**-1.3**	
K27K	**Chicken**	**6.23 343**		**Pn**	**19 19 04.4**	**-1.4**	
SML	**Sawmill**	**6.37 309**		**Pn**	**19 19 07.1**	**-0.8**	
SML	**Sawmill**	**6.37 309**	P	**Pn**	**19 19 09.0**	**+1.1**	
	baz=120						
J30M	**Hart River**	**6.49 6**		**Pn**	**19 19 07.9**	**-1.7**	
J30M	**Hart River**	**6.49 6**	P	**Pn**	**19 19 10.4**	**+0.8**	
	baz=187						
RIDG	**Independent Ri**	**6.53 332**	Pn	**Pn**	**19 19 08.0**	**-2.1**	
SCRK	**Sand Creek**	**6.54 336**	Pn	**Pn**	**19 19 07.8**	**-2.4**	
WAT6	**Susitna Watana**	**6.58 317**		**Pn**	**19 19 10.9**	**+0.1**	
WAT6	**Susitna Watana**	**6.58 317**	P	**Pn**	**19 19 11.3**	**+0.5**	
	baz=128						
GHO	**Glory Hole Cre**	**6.60 308**	Pn	**Pn**	**19 19 10.7**	**-0.3**	
SLKM	**Skilak Lake**	**6.71 296**		**Pn**	**19 19 10.5**	**-2.0**	
K24K	**Donnelly Dome**	**6.83 329**	Pn	**Pn**	**19 19 12.8**	**-1.3**	
CNPM	**China Poot**	**7.04 287**	Pn	**Pn**	**19 19 14.5**	**-2.5**	
I30M	**Mount Dempster**	**7.13 5**		**Pn**	**19 19 15.9**	**-2.4**	
I30M	**Mount Dempster**	**7.13 5**	P	**Pn**	**19 19 19.3**	**+1.0**	
	baz=186						
I28M	**Miner Creek**	**7.38 353**	Pn	**Pn**	**19 19 19.0**	**-2.7**	
J25K	**Salcha River,**	**7.39 334**	Pn	**Pn**	**19 19 19.1**	**-2.8**	
I27K	**Kandik River**	**7.67 349**	Pn	**Pn**	**19 19 22.4**	**-3.3**	
L22K	**Petersville**	**7.72 310**	P	**Pn**	**19 19 27.0**	**+0.6**	
	baz=118						
SPU	**Mount Spurr**	**7.76 299**	Pn	**Pn**	**19 19 24.7**	**-2.2**	
KDAK	**Kodiak Island**	**7.80 273**		**Pn**	**19 19 25.9**	**-1.4**	
KDAK	**Kodiak Island**	**7.80 273**	P	**Pn**	**19 19 28.0**	**+0.6**	
	baz=81						
SKT	**Skwentna**	**7.80 305**	P	**Pn**	**19 19 27.4**	**0.0**	
	baz=113						
H31M	**Peel River**	**7.86 11**	P	**Pn**	**19 19 28.5**	**+0.2**	
	baz=194						
P19K	**Oil Pt**	**8.06 287**	P	**Pn**	**19 19 31.8**	**+0.8**	
	baz=94						
OHAK	**Old Harbor**	**8.28 270**		**Pn**	**19 19 32.4**	**-1.5**	
KTH	**Kantishna Hill**	**8.32 316**		**Pn**	**19 19 32.3**	**-2.3**	
M20K	**Styx River**	**8.47 303**	P	**Pn**	**19 19 37.1**	**+0.4**	
	baz=109						
PPLA	**Purkeypile**	**8.47 310**	P	**Pn**	**19 19 38.0**	**+1.2**	
	baz=117						
Q18K	**Katmai Hardscr**	**8.98 280**	P	**Pn**	**19 19 44.3**	**+0.7**	
	baz=86						
CHUM	**Lake Minchumin**	**9.03 316**	P	**Pn**	**19 19 44.4**	**+0.3**	
	baz=123						
L19K	**White Mountain**	**9.34 303**	P	**Pn**	**19 19 47.5**	**-0.9**	
	baz=108						
Q17K	**Contact Creek**	**9.47 278**	P	**Pn**	**19 19 50.8**	**+0.4**	
	baz=83						
P17K	**Kvichak River**	**9.69 284**	P	**Pn**	**19 19 54.2**	**+1.0**	
	baz=88						
R17L	**Mt. Peulik Vol**	**9.82 275**	P	**Pn**	**19 19 56.7**	**+1.6**	
	baz=79						
J19K	**Poorman**	**10.35 312**	P	**Pn**	**19 20 02.4**	**+0.2**	
	baz=116						
P16K	**Nushagak River**	**10.50 283**	P	**Pn**	**19 20 05.7**	**+1.4**	
	baz=86						
O15K	**Ungalikthiuk R**	**11.43 284**	P	**Pn**	**19 20 17.9**	**+0.8**	
	baz=86						

*IDC **14** 19:19:53.2±3.9, 65°.23S×179°.60E, h0km, mb4.0/4, mbtmp4.0/5, ML3.3/1, MS3.7/7, Error ellipse: s-maj=133.9km s-min=24.7km az=68.0*

ISC 14 19:19:54.9±3.1, 65°.3S±0°.2×179°.4E±0°.6, h10km, n20, σ0°76/6, mb4.0/4, MS3.7/7, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VNDA	**Vanda**	**13.42**	**196**	Pn		**Pn**	**Pn**	**19 23 05.0**	**0.0**
	0.1nm,0.3s,baz=46,slow=17,SNR=31								
	2.9nm,0.7s								
QSPA	**South Pole Qui**	**24.83**	**180**	P		**P**	**P**	**19 25 16.9**	**-0.2**
	1.7nm,0.8s,baz=39,slow=6.5,SNR=7.7								
QSPA				LR		LR	LR	19 33 23.3	
	comp=Z,156nm,19.9s,baz=51,slow=33								
	1.7nm,0.8s								
URZ	**Urewera**	**27.07**	**356**	LR		LR	LR	19 35 13.3	
	comp=Z,73nm,18.9s,baz=142,slow=34								
MAW	**Mawson**	**40.01**	**212**	LR		LR	LR	19 43 56.7	
	comp=Z,140nm,19.9s,baz=95,slow=36								
STKA	**Stephens Creek**	**40.55**	**307**	P		**P**	**P**	**19 27 33.2**	**-0.9**
	4.4nm,0.8s,baz=135,slow=7.1,SNR=3.7								
	4.4nm,0.8s								
SNAA	**Sanae**	**43.33**	**179**	LR		LR	LR	19 45 39.9	
	comp=Z,60nm,18.3s,baz=115,slow=36								
RAR	**Rarotonga**	**46.11**	**27**	LR		LR	LR	19 43 54.0	
	comp=Z,93nm,20.4s,baz=264,slow=31								
H01W1	**Cape Leeuwin H**	**48.58**	**276**	T		T	T	20 21 08.6	
	baz=149,slow=75,SNR=36								
H01W2	**Cape Leeuwin H**	**48.58**	**276**	T		T	T	20 21 09.5	
	baz=149,slow=75,SNR=31								
H01W3	**Cape Leeuwin H**	**48.59**	**276**	T		T	T	20 21 10.1	
	baz=149,slow=75,SNR=37								
ASAR	**Alice Springs**	**50.75**	**302**	P		**P**	**P**	**19 28 55.7**	**+0.9**
	1.4nm,0.5s,baz=156,slow=7.4,SNR=16								
ASAR				LR		LR	LR	19 48 37.9	
	comp=Z,89nm,18.8s,baz=318,slow=34								
	1.4nm,0.5s								
WRA	**Warramunga Arr**	**54.02**	**305**	P		**P**	**P**	**19 29 19.4**	**+0.3**
	1.1nm,0.7s,baz=158,slow=6.5,SNR=7.3								
	1.1nm,0.7s								
H03S2	**Juan Fernandez**	**64.43**	**115**	T		T	T	20 41 18.0	
	baz=205,slow=74,SNR=13								
H03S1	**Juan Fernandez**	**64.43**	**115**	T		T	T	20 41 14.2	
	baz=205,slow=74,SNR=15								
H03S3	**Juan Fernandez**	**64.44**	**115**	T		T	T	20 41 13.3	
	baz=205,slow=74,SNR=16								
H03N3	**Juan Fernandez**	**64.77**	**115**	T		T	T	20 41 37.3	
	baz=208,slow=78,SNR=7.7								
H03N2	**Juan Fernandez**	**64.78**	**115**	T		T	T	20 41 33.2	
	baz=208,slow=78,SNR=18								
H03N1	**Juan Fernandez**	**64.78**	**115**	T		T	T	20 41 35.4	
	baz=208,slow=78,SNR=7.4								

OPO	**Ambohidratompo**	**88.91**	**225**	LR		LR	20 08 15.7	
	comp=Z,320nm,20.0s,baz=88,slow=33							
BRTR	**Keskin Array B**	**147.74**	**234**	PKPbc		**PKPbc**	**19 39 39.2**	**+0.3**
	1.0nm,0.9s,baz=174,slow=1.4,SNR=4.5							

IDC 14 19:33:09.9±5.5, 17°.64S×176°.25W, h0km, mb4.0/3, mbtmp4.0/3, MS3.2/1, Error ellipse: s-maj=184.6km s-min=104.2km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DZM	**Mont Dzumac**	**16.86**	**252**	LR		LR	LR	19 42 54.6	
	comp=Z,84nm,20.6s,baz=150,slow=35								
STKA	**Stephens Creek**	**40.56**	**241**	P			P	19 40 51.4	+0.1
	1.1nm,0.4s,baz=95,slow=11,SNR=2.9								
	1.1nm,0.4s								
WRA	**Warramunga Arr**	**46.70**	**259**	P		P	P	19 41 40.6	-0.3
	0.4nm,0.4s,baz=95,slow=8.7,SNR=12								
WRA				PcP		PcP	PcP	19 43 14.3	-0.4
	0.4nm,0.9s,baz=95,slow=2.8,SNR=1.4								
	0.4nm,0.4s								
ASAR	**Alice Springs**	**46.84**	**254**	P		P	P	19 41 42.0	0.0
	3.3nm,0.7s,baz=94,slow=7.8,SNR=41								
	3.3nm,0.7s								

TAP 14 19:44:09.2, 24°.27N×121°.58E, h33km±1km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
NACB	**Ninganchiao**	**0.09**	**173**	*i*	P		Pb	19 44 14.4	-0.4
ETLH	**Xiulin Townshi**	**0.11**	**238**		P		Pb	19 44 15.3	+0.2
ETLH					S		Sb	19 44 19.7	+0.7
TWD	**Chiawan**	**0.18**	**176**		P		Pb	19 44 15.0	-0.5
TWD					S		Sn	19 44 19.4	+0.2
ENA	**Nanau**	**0.22**	**42**	*e*	P		Pb	19 44 14.4	-1.5
ENA				*e*	S		Sn	19 44 19.6	-0.7
EWUT	**Wuta**	**0.25**	**45**		P		Pb	19 44 16.2	-0.1
EWUT					S		Sn	19 44 21.3	0.0
TWT	**Tachien**	**0.37**	**268**	*e*	P		Pn	19 44 19.4	+1.0
TWT				*e*	S		Sn	19 44 26.9	+2.3
ENTT	**Nioudou**	**0.37**	**358**	*e*	P		Pn	19 44 18.4	+0.1
ENTT				*e*	S		Sn	19 44 25.7	+1.2

IDC 14 19:45:51.8±1.8, 1°.98N×126°.17E, h0km, mb3.2/4, mbtmp3.3/4, MS3.7/1, Error ellipse: s-maj=184.1km s-min=22.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**23.21**	**160**	P		P	P	19 50 59.9	-0.7
	0.3nm,0.4s,baz=339,slow=11,SNR=11								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**26.57**	**164**	P		P	P	19 51 32.7	+0.9
	0.2nm,0.3s,baz=341,slow=8.2,SNR=5.1								
	0.2nm,0.3s								
PALK	**Pallekele**	**45.60**	**278**	LR		LR	LR	20 14 56.2	
	comp=Z,74nm,18.6s,baz=170,slow=38								
MKAR	**Makanchi Array**	**58.68**	**326**	P		P	P	19 55 50.8	-0.4
	0.1nm,0.3s,baz=110,slow=7.7,SNR=5.4								
	0.1nm,0.3s								
KURBB	**Kurchatov Arra**	**62.92**	**328**	P		P	P	19 56 20.1	+0.2
	0.1nm,0.5s,baz=134,slow=7.2,SNR=2.4								
	0.1nm,0.5s								

*TRN **14** 19:46:45.0, 10°.87N×62°.15W, h65km, MD2.8, North of the Paria peninsula.*

FUNV 14 19:47:04.4, 11°.19N×61°.00W, h0km, MW2.8, Presumed earthquake, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TRN	**Trinidad (W)**	**0.67**	**216**	*e*	P		Pg	19 47 17.8	+0.4
TRN				*e*	S		Sg	19 47 27.4	+1.3
TRN	**Trinidad (W)**	**0.67**	**216**	*e*	P		Pg	19 47 17.1	-0.3
TRN				*e*	S		Sb	19 47 27.5	-1.4
DMDM	**Guralp CMG5TDE**	**0.73**	**228**	*e*	P		Pg	19 47 15.1	-3.5
DMDM				*e*	S		Sg	19 47 24.6	-3.5
PSMG	**Mucurapo Girls**	**0.74**	**225**	*e*	S		Sg	19 47 25.3	-2.9
GRFF	**Grenada Fort F**	**1.12**	**320**	*e*	P		Sg	19 47 22.6	-3.2
GRFF				*e*	S		Sg	19 47 38.1	-2.3
GRGR	**Grenville**	**1.13**	**325**	*e*	P		Pg	19 47 25.1	-1.0
GRGR				*e*	S		Sg	19 47 41.3	+0.4
GRGR	**Grenville**	**1.13**	**325**	*e*	P		Pg	19 47 23.6	-2.6
GRGR				*e*	S		Sg	19 47 41.2	+0.3
GCMP	**Grenada, Carri**	**1.35**	**342**	*e*	P		Pg	19 47 29.3	-1.1
GCMP				*e*	S		Sn	19 47 49.3	+0.1
GCMP	**Grenada, Carri**	**1.35**	**342**	*e*	P		Pg	19 47 29.9	-1.5
GCMP				*e*	S		Sn	19 47 50.7	+1.5

*IDC **14** 19:57:20.4±4.5, 28°.69S×175°.51W, h120km±28km, mb3.1/2, mbtmp3.8/4, Error ellipse: s-maj=42.1km s-min=31.6km az=74.0*

ISC 14 19:57:18.0±1.5, 28°.3S±0°.1×175°.5W±0°.1, h100km, n15, σ2°58/24, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
RAO	**Raoul Island**	**2.34**	**245**	P		**Pn**	**Pn**	**19 57 54.5**	**-0.5**
	1μm,0.2s,baz=79,slow=16,SNR=39								
RAO				S			**Sn**	**19 58 24.4**	**+1.0**
	1μm,0.2s,baz=78,slow=22,SNR=14								
RAO	**Raoul Island**	**2.34**	**245**	P		**Pn**	**Pn**	**19 57 54.5**	**-0.5**
RAO				S			**Sn**	**19 58 24.6**	**+1.2**
GLKZ	**Green Lake**	**2.35**	**245**	P		**Pn**	**Pn**	**19 57 54.5**	**-0.5**
GLKZ				S			**Sn**	**19 58 24.3**	**+0.8**
RIZ	**Raoul Island**	**2.35**	**245**	P		**Pn**	**Pn**	**19 57 54.7**	**-0.4**
RIZ				S			**Sn**	**19 58 24.9**	**+1.4**
MXZ	**Matakaoa Point**	**10.61**	**208**	P		**Pn**	**Pn**	**19 59 45.1**	**-1.9**
MXZ				S			**Sn**	**20 01 47.8**	**+4.0**
HAZ	**Te Kaha**	**11.00**	**209**	P		**Pn**	**Pn**	**19 59 50.1**	**-2.1**
HAZ				S			Sn	20 01 59.6	+6.4
PUZ	**Puketiti**	**11.07**	**207**	P		**Pn**	**Pn**	**19 59 50.7**	**-2.6**
PUZ				S			**Sn**	**20 01 60.0**	**+5.0**
MWZ	**Matawai**	**11.59**	**208**	P		**Pn**	**Pn**	**19 59 58.4**	**-1.9**
MWZ				S			**Sn**	**20 02 11.5**	**+3.8**
URZ	**Urewera**	**11.71**	**210**	P		**Pn**	**Pn**	**19 59 58.7**	**-3.0**
	2.1nm,0.4s,baz=241,slow=4.3,SNR=6.8								
URZ				S			**Sn**	**20 02 04.9**	**-5.5**
	8.0nm,0.6s,baz=214,slow=22,SNR=11								
URZ	**Urewera**	**11.71**	**210**	P		**Pn**	**Pn**	**19 59 58.2**	**-3.5**
URZ				S			**Sn**	**20 02 12.0**	**+1.6**
DZM	**Mont Dzumac**	**17.48**	**287**	P		**P**	**P**	**20 01 16.4**	**+1.0**
	5.1nm,0.7s,baz=68,slow=7.6,SNR=6.1								
ASAR	**Alice Springs**	**45.47**	**264**	P		**P**	**P**	**20 05 27.1**	**-0.3**
	0.6nm,0.8s,baz=105,slow=8.0,SNR=9.3								
	0.6nm,0.8s								
WRA	**Warramunga Arr**	**46.27**	**269**	P		**P**	**P**	**20 05 33.1**	**-0.7**
	0.5nm,0.8s,baz=107,slow=7.9,SNR=7.6								
	0.5nm,0.8s								
FINES	**FINESS Array B**	**143.85**	**343**	PKP		**PKPdf**		**20 16 41.6**	**+0.8**
	1.0nm,0.9s,baz=25,slow=4.6,SNR=3.6								
NOA	**NORSAR Array B**	**146.94**	**354**	PKPbc		**PKPbc**		**20 16 50.2**	**+1.8**
	0.7nm,0.9s,baz=19,slow=2.7,SNR=3.2								

*SJA **14** 19:59:07.7±0.8, 22°.56S×70°.37W, h27km±2km, ML4.0, MW4.1*
*GUC **14** 19:59:09.5±0.8, 22°.60S×70°.35W, h28km±2km, ML4.0*
*IDC **14** 19:59:14.4±3.8, 22°.50S×70°.04W, h72km±25km, mb3.9/1, mbtmp4.0/5, MS3.1/2, Error ellipse: s-maj=59.5km s-min=28.3km az=93.0*

ISC 14 19:59:08.0±1.1, 22°.58S±0°.02×70°.42W±0°.05, h26km±10km, n47, σ1°75/59, 3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PB05	**IPOC Station P**	**0.34**	**144**	*e*	P	**Pb**	**Pb**	**19 59 16.0**	**+0.1**
PB05	**IPOC Station P**	**0.34**	**144**	*e*	P	**Pn**	**Pn**	**19 59 16.7**	**-0.7**
PB05				*i*	S	**Sn**	**Sn**	**19 59 21.9**	**-1.6**
PB05					IAML			19 59 22.8	
	comp=E,11μm,0.4s								
PB06	**IPOC Station P**	**0.79**	**100**	*e*	P	**Pn**	**Pn**	**19 59 22.7**	**-1.0**
PB06	**IPOC Station P**	**0.79**	**100**	*i*	P	**Pn**	**Pn**	**19 59 22.9**	**-0.8**
PB06				*e*	S	**Sb**	**Sb**	**19 59 32.7**	**-1.1**
PB06					IAML			19 59 34.0	
	comp=E,5μm,0.6s								
PB03	**IPOC Station P**	**0.81**	**50**	*e*	P	**Pn**	**Pn**	**19 59 23.7**	**-0.2**
PB03					IAML			19 59 36.3	
	comp=Z,5μm,0.4s								

PB03	**IPOC Station P**	**0.81**	**50**	*i*	P	**Pn**	**19 59 23.9**	**0.0**
PB03				*e*	S	**Sn**	**19 59 34.2**	**-1.0**
PB03					IAML		19 59 35.0	
	comp=N,13μm,0.2s							
PB07	**IPOC Station P**	**0.98**	**30**	*e*	P	**Pb**	**19 59 26.0**	**-0.5**
PB07				*e*	S	**Sn**	**19 59 39.9**	**+0.5**
PB07					IAML		19 59 40.2	
	comp=Z,9μm,0.4s							
PB07	**IPOC Station P**	**0.98**	**30**	*i*	P	**Pb**	**19 59 26.8**	**+0.3**
PB07				*e*	S	**Sn**	**19 59 39.5**	**+0.2**
PB07					IAML		19 59 40.2	
	comp=N,12μm,0.4s							
PB09	**IPOC Station P**	**1.34**	**55**	*e*	P	**Pb**	**19 59 32.3**	**-0.2**
PB09				*e*	S	**Sb**	**19 59 50.0**	**+0.7**
PB09					IAML		19 59 52.2	
	comp=Z,3μm,0.3s							
PB09	**IPOC Station P**	**1.34**	**55**	*e*	P	**Pb**	**19 59 32.6**	**0.0**
PB09				*e*	S	**Sb**	**19 59 50.2**	**+0.9**
PB09					IAML		19 59 52.5	
	comp=N,2μm,0.3s							
PB02	**IPOC Station P**	**1.34**	**21**	*e*	P	**Pb**	**19 59 31.7**	**-0.9**
PB02				*e*	S	**Sb**	**19 59 50.5**	**+1.1**
PB02					IAML		19 59 55.8	
	comp=Z,4μm,0.3s							
PB02	**IPOC Station P**	**1.34**	**21**	*i*	P	**Pb**	**19 59 32.2**	**-0.4**
PB02				*e*	S	**Sb**	**19 59 50.4**	**+1.0**
PB02					IAML		19 59 52.7	
	comp=E,5μm,0.3s							
PB14	**IPOC Station P**	**2.04**	**180**	*e*	P	**Pn**	**19 59 40.9**	**-0.1**
PB14				*e*	S	**Sb**	**20 00 10.4**	**+0.7**
PB14					IAML		20 00 13.8	
	comp=Z,425nm,0.7s							
PB14	**IPOC Station P**	**2.04**	**180**	*e*	P	**Pn**	**19 59 41.0**	**0.0**
PB14				*i*	S	**Sb**	**20 00 10.3**	**+0.6**
AF01	**San Pedro de A**	**2.10**	**101**	*e*	P	**Pb**	**19 59 42.3**	**-2.7**
AF01				*e*	P	**Pb**	**19 59 45.6**	**0.0**
AF01					IAML		20 00 28.4	
	comp=Z,4μm,0.5s							
AF01	**San Pedro de A**	**2.10**	**101**	*e*	P	**Pb**	**19 59 45.7**	**0.0**
AF01				*i*	S	**Sb**	**20 00 11.2**	**-0.2**
TA02	**Huaiquique**	**2.31**	**7**	*e*	P	**Pn**	**19 59 42.9**	**-1.5**
TA02				*e*	S	**Sn**	**20 00 13.4**	**+1.5**
TA02					IAML		20 00 25.6	
	comp=Z,499nm,0.6s							
TA02	**Huaiquique**	**2.31**	**7**	*e*	P	**Pb**	**19 59 48.0**	**-1.0**
TA02				*i*	S	**Sb**	**20 00 17.0**	**-0.2**
PB08	**IPOC Station P**	**2.69**	**26**	*e*	P	**Pn**	**19 59 51.8**	**+1.8**
PB08	**IPOC Station P**	**2.69**	**26**	*e*	P	**Pn**	**19 59 52.4**	**-3.4**
PB11	**IPOC Station P**	**2.89**	**14**	*e*	P	**Pn**	**19 59 53.4**	**+0.8**
PB11				*e*	S	**Sb**	**20 00 30.9**	**-3.1**
PB11					IAML		20 00 38.9	
	comp=Z,462nm,0.6s							
PB11	**IPOC Station P**	**2.89**	**14**	*e*	P	**Pn**	**19 59 54.6**	**+2.1**
PB11				*i*	S	**Sb**	**20 00 31.5**	**-2.5**
PB11					IAML		20 00 39.2	
	comp=N,997nm,0.5s							
PSGCX	**Pisagua**	**2.98**	**5**	*e*	P	**Pn**	**19 59 54.3**	**+0.6**
PSGCX				*e*	S	**Sn**	**20 00 31.4**	**+2.8**
PSGCX					IAML		20 00 51.4	
	comp=Z,284nm,0.4s							
PSGCX	**Pisagua**	**2.98**	**5**	*e*	P	**Pn**	**19 59 54.3**	**+0.6**
PSGCX				*i*	S	**Sb**	**20 00 34.3**	**-2.1**
GO01	**Chusmiza**	**3.11**	**22**	*e*	P	**Pb**	**19 59 58.7**	**-4.3**
GO01	**Chusmiza**	**3.11**	**22**	*e*	P	**Pb**	**19 59 59.6**	**-3.4**
AC01	**Pan de Azucar**	**3.56**	**183**	*e*	P	**Pn**	**20 00 00.5**	**-1.1**
AC01				*e*	S	**Sb**	**20 00 50.4**	**-2.7**
AC01	**Pan de Azucar**	**3.56**	**183**	*e*	P	**Pn**	**20 00 00.7**	**-0.9**
PB12	**IPOC Station P**	**3.94**	**1**	*e*	P	**Pn**	**20 00 08.0**	**+1.0**
PB12				*e*	S	**Sn**	**20 00 55.2**	**+2.8**
PB12					IAML		20 01 10.2	
	comp=Z,144nm,0.4s							
PB16	**IPOC Station P**	**4.30**	**12**	*e*	P	**Pn**	**20 00 14.8**	**+2.4**
PB16				*e*	S	**Sb**	**20 01 16.4**	**+1.3**
PB16					IAML		20 01 33.4	
	comp=Z,144nm,0.6s							
AC02	**Maricunga**	**4.40**	**165**	*e*	P	**Pn**	**20 00 15.4**	**+1.8**
AC02				*e*	S	**Sn**	**20 01 08.3**	**+4.0**
AC02					IAML		20 01 29.1	
	comp=Z,109nm,0.5s							
LPAZ	**La Paz**	**6.62**	**19**	P		**Pn**	**20 00 47.8**	**+3.6**
	comp=Z,2.8nm,0.3s,baz=199,slow=8.2,SNR=13							
LPAZ				LR		LR	20 04 05.6	
	comp=Z,61nm,19.2s,baz=218,slow=45							
CFA	**Coronel Fontan**	**9.20**	**168**	P		Pn	20 01 24.4	+5.3
	comp=Z,1.1nm,0.3s,baz=355,slow=11,SNR=5.2							
CFA				S		Sn	20 02 47.4	-14
	comp=Z,0.9nm,0.4s,baz=207,slow=21,SNR=1.4							
SIV	**San

JCZ	**Jackson Bay**	**21.32 202**	P	**P**	**20 04 01.0**	**+0.2**
CTAO	**Charters Tower**	**31.24 272**	P	**P**	**20 05 28.3**	**0.0**
CTAO			IAmb	IAmb	20 05 32.7	
	comp=Z,11nm,1.1s					
BBOO	**Buckleboo**	**38.92 248**	P	**P**	**20 06 31.2**	**-0.9**
BBOO			IAmb	IAmb	20 06 47.5	
	comp=Z,27nm,1.5s					
ASAR	**Alice Springs**	**41.67 262**	P	**P**	**20 06 54.1**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=93,slow=7.4,SNR=1.8					
	comp=Z,0.4nm,0.8s					
WR8	**Warramunga Arr**	**41.97 267**	P	**P**	**20 06 55.8**	**-0.8**
WR8			IAmb	IAmb	20 07 00.0	
	comp=Z,14nm,1.5s					
WRA	**Warramunga Arr**	**42.12 267**	P	**P**	**20 06 57.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=99,slow=6.9,SNR=7.6					
WRA			ScP	**ScP**	**20 11 42.4**	**+2.3**
	comp=Z,0.9nm,1.0s,baz=102,slow=3.6,SNR=3.1					
	comp=Z,0.5nm,0.5s					
WRA	**Warramunga Arr**	**42.12 267**	P	**P**	**20 06 57.2**	**-0.6**
WRA				**ScP**	**20 11 42.4**	**+2.3**
FORT	**Forrest**	**45.82 250**	P	**P**	**20 07 25.3**	**-1.0**
KNRA	**Kununurra**	**48.44 271**	P	**P**	**20 07 46.4**	**+0.1**
KNRA			IAmb	IAmb	20 08 05.4	
	comp=Z,13nm,1.1s					
QSPA	**South Pole Qui**	**65.41 180**		**P**	**20 09 42.3**	**+0.4**
TXAR	**Lajitas Array**	**91.05 58**	P	**P**	**20 12 01.1**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=210,slow=7.2,SNR=7.3					
	comp=Z,0.5nm,0.8s					
BVAR	**Borovoye Array**	**120.85 318**	PKP	**PKPdf**	**20 17 43.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=89,slow=2.5,SNR=3.2					
ARCES	**ARCESS Array B**	**132.59 348**	PKP	**PKPdf**	**20 18 05.7**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=86,slow=3.7,SNR=3.7					
FINES	**FINESS Array B**	**139.09 341**	PKhKP	PKPpre	20 18 10.2	
	comp=Z,0.6nm,0.7s,baz=20,slow=4.4,SNR=3.7					
FINES			PKP	**PKiKP**	**20 18 19.4**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=97,slow=3.4,SNR=4.3					
HFS	**Hagfors**	**143.25 348**	PKP	PKPab	20 18 22.8	-0.3
	comp=Z,3.3nm,0.4s,baz=64,slow=3.4,SNR=24					
AKASG	**Malin Array Be**	**145.48 326**	PKPbc	**PKPdf**	**20 18 29.6**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=50,slow=2.9,SNR=2.3					
EKA	**Eskdalemuir Ar**	**149.30 3**	PKPbc	**PKPbc**	**20 18 40.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=351,slow=3.3,SNR=5.5					

*MAN **14** 20:26:42.0,5.°87N×125.°99E,h51km, MS3.8*
*IDC **14** 20:27:07.5±9.4, 1.°04N×123.°86E, h0km, mb3.2/3, mbtmp3.3/3, MS3.6/1, Error ellipse: s-maj=208.4km s-min=145.4km az=62.0*
ISC 14 20:26:41.7±1.1,**5.°77N**±0.°07×**126.°05E**±0.°07,**h50**km,**n12**, σ1**s50**/18,**mb3.0**/3,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.14**	**286**	*i* P		**Pn**	**20 27 01.0**	**-0.5**
GSPH				*i* S		**Sn**	**20 27 14.8**	**-1.3**
DMPH	**Davao City--Mi**	**1.41**	**337**	*i* P		**Pn**	**20 27 04.5**	**-0.6**
DMPH				*i* S		**Sn**	**20 27 20.7**	**-1.7**
CDOP	**Cateel, Davao**	**2.03**	**11**	*eP*		**Pn**	**20 27 12.8**	**-0.7**
CDOP				*i* S		**Sn**	**20 27 37.1**	**-0.7**
CTBH	**Cotabato--PC H**	**2.30**	**309**	*i* P		**Pn**	**20 27 17.4**	**+0.2**
BUKP	**Musuan**	**2.31**	**335**	*i* P		**Pn**	**20 27 17.1**	**-0.3**
BUKP				*i* S		**Sn**	**20 27 43.7**	**-1.0**
BIPH	**Bislig**	**2.41**	**7**	*eP*		**Pn**	**20 27 18.2**	**-0.6**
BIPH				*eS*		**Sn**	**20 27 47.5**	**+0.4**
CGP	**Cagayan de Oro**	**2.98**	**333**	*eP*		**Pn**	**20 27 25.8**	**-0.9**
CGP				*eS*		**Sn**	**20 28 05.7**	**+4.6**
TSSP	**Tandag City**	**3.25**	**3**	*eP*		**Pn**	**20 27 29.7**	**-0.6**
TSSP				*eS*		**Sn**	**20 28 08.4**	**+0.7**
WRA	**Warramunga Arr**	**26.82**	**163**	P		**P**	**20 32 17.9**	**+0.3**
	0.3nm,0.7s,baz=332,slow=11,SNR=8.8							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**30.25**	**166**	P		**P**	**20 32 46.8**	**-1.3**
	0.3nm,0.9s,baz=348,slow=8.7,SNR=4.1							
	0.3nm,0.9s							
STKA	**Stephens Creek**	**40.27**	**159**	P		**P**	**20 34 15.5**	**+1.5**
	0.7nm,0.6s,baz=332,slow=15,SNR=1.1							
	0.7nm,0.6s							
SONM	**Songino Array**	**45.16**	**341**	LR		LR	20 59 57.9	
	comp=Z,54nm,18.2s,baz=260,slow=40							

*JMA **14** 20:40:49.9±0.1,24.°4N±0.°4×121.°6E±0.°8, h51km±1km, MV3.0/13, TAIWAN REGION*
*TAP **14** 20:40:50.9,24.°46N×121.°72E, h38km, ML4.0, B*
ISC 14 20:40:51.6±0.9,**24.°45N**±0.°01×**121.°73E**±0.°02,**h32**km±1km, **n152**, σ1**s05**/258,**3C-5D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.02**	**153**	⇓*iP*		**Pb**	**20 40 55.8**	**-1.1**
ENA				*S*		**Sb**	**20 41 00.6**	**0.0**
EWUT	**Wuta**	**0.04**	**94**	⇑*iP*		**Pb**	**20 40 57.3**	**+0.4**
EWUT				*i* S		**Sb**	**20 41 01.8**	**+1.2**
EAHA	**Aohua**	**0.12**	**176**	P		Pn	20 40 57.4	+0.1
EAHA				S		**Sb**	**20 41 03.1**	**+1.8**
EHP	**Heping Village**	**0.14**	**176**	*eP*		Pn	20 40 57.2	-0.4
EHP				S		**Sb**	**20 41 03.3**	**+1.7**
ESAO	**Su ao**	**0.16**	**40**	*iP*		**Pn**	**20 40 58.0**	**+0.1**
ESAO				S		**Sb**	**20 41 03.0**	**+1.1**
NDS	**Dongshan**	**0.18**	**356**	*iP*		**Pn**	**20 40 57.9**	**-0.3**
NDS				S		**Sb**	**20 41 02.8**	**+0.6**
TWC	**Suao**	**0.19**	**34**	*iP*		**Pn**	**20 40 58.3**	**0.0**
TWC				*eS*		**Sb**	**20 41 03.5**	**+1.1**
LATG	**Datong**	**0.20**	**295**	*iP*		**Pn**	**20 40 58.1**	**-0.5**
LATG				S		**Sn**	**20 41 03.4**	**+0.5**
ENTT	**Nioudou**	**0.24**	**322**	*iP*		**Pb**	**20 40 58.5**	**0.0**
ENTT				S		**Sn**	**20 41 03.8**	**+0.1**
NDT	**Datong Townshi**	**0.25**	**308**	*iP*		**Pb**	**20 40 58.7**	**0.0**
NDT				*eS*		**Sn**	**20 41 04.0**	**+0.1**
TWE	**Neicheng**	**0.28**	**348**	*iP*		**Pb**	**20 40 59.0**	**0.0**
TWE				S		**Sn**	**20 41 04.7**	**+0.1**
NACB	**Ninganchiao**	**0.30**	**204**	P		**Pb**	**20 40 59.0**	**-0.3**
NACB	**Ninganchiao**	**0.30**	**204**	*iP*		**Pb**	**20 40 58.6**	**-0.7**
NACB				*eS*		**Sb**	**20 41 04.6**	**+0.2**
ETL	**Fush Village**	**0.30**	**199**	*eP*		**Pb**	**20 40 59.1**	**-0.3**
ETL				*eS*		**Sb**	**20 41 05.7**	**+1.1**
ILA	**Ilan**	**0.32**	**3**	*eP*		**Pb**	**20 40 59.6**	**+0.1**
ILA				S		**Sb**	**20 41 06.1**	**+1.2**
NNSB	**Datong**	**0.32**	**266**	*iP*		**Pb**	**20 40 59.5**	**-0.1**
NNSB				S		**Sb**	**20 41 05.2**	**+0.2**
NNS	**Nan Shan**	**0.33**	**269**	*iP*		**Pb**	**20 40 59.6**	**-0.1**
NNS				S		**Sb**	**20 41 05.6**	**+0.2**
ETLH	**Xiulin Townshi**	**0.33**	**223**	P		**Pb**	**20 40 59.5**	**-0.2**
ETLH				S		**Sb**	**20 41 05.3**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.34**	**337**	*iP*		**Pb**	**20 40 59.6**	**-0.3**
FUSB				S		**Sb**	**20 41 05.6**	**+0.2**
NWLT	**Wulai**	**0.39**	**328**	⇓*iP*		**Pb**	**20 41 00.2**	**-0.2**
NWLT				S		**Sb**	**20 41 06.5**	**0.0**
TWD	**Chiawan**	**0.39**	**198**	*iP*		**Pb**	**20 40 59.8**	**-0.6**
TWD				*eS*		**Sb**	**20 41 06.7**	**+0.2**
YHNB	**Yeheng**	**0.39**	**304**	P		**Pb**	**20 41 00.1**	**-0.5**
YHNB	**Yeheng**	**0.39**	**304**	⇓*iP*		**Pb**	**20 41 00.3**	**-0.2**
YHNB				S		**Sb**	**20 41 06.3**	**-0.4**
NSK	**Sanguang**	**0.41**	**304**	⇓*iP*		**Pb**	**20 41 00.5**	**-0.3**
NSK				S		**Sb**	**20 41 07.0**	**-0.1**
NTC	**Toucheng**	**0.41**	**13**	*eP*		**Pb**	**20 41 01.2**	**+0.3**
NTC				*eS*		**Sb**	**20 41 08.1**	**+1.0**
EGS		**0.44**	**25**	⇑*iP*		**Pb**	**20 41 01.5**	**+0.3**
EGS				S		**Sb**	**20 41 08.9**	**+1.2**
EOS2	**EOS2**	**0.46**	**94**	*eP*		**Pb**	**20 41 02.3**	**+0.9**
HWA	**Hwalien**	**0.48**	**194**	*eP*		**Pb**	**20 41 01.5**	**-0.4**
HWA				*eS*		**Sb**	**20 41 10.6**	**+1.7**
FUSS	**Fushou**	**0.49**	**246**	P		**Pb**	**20 41 01.9**	**-0.3**
FUSS				*eS*		**Sb**	**20 41 09.3**	**0.0**
LXIB	**Xiulin Townshi**	**0.51**	**214**	*iP*		**Pb**	**20 41 01.5**	**-1.0**
LXIB				S		**Sb**	**20 41 10.0**	**+0.1**
WHF	**Hehuan Shan**	**0.52**	**235**	*eP*		**Pb**	**20 41 02.3**	**-0.5**
WHF				S		**Sb**	**20 41 10.1**	**-0.3**
ETM	**Tongmen**	**0.53**	**204**	*eP*		**Pb**	**20 41 01.4**	**-1.2**
ETM				*eS*		**Sb**	**20 41 09.6**	**-0.5**
TIPB	**Shuangxi**	**0.53**	**10**	*iP*		**Pb**	**20 41 02.5**	**-0.1**
TIPB				S		**Sb**	**20 41 10.1**	**-0.1**
TWT	**Tachien**	**0.54**	**249**	P		**Pb**	**20 41 03.2**	**+0.3**
TWT				*i* S		**Sb**	**20 41 11.4**	**+0.7**
NHDH	**Xindian Distri**	**0.55**	**340**	P		**Pb**	**20 41 02.6**	**-0.3**
NHDH				S		**Sb**	**20 41 11.2**	**+0.6**
TWA	**Mucha**	**0.55**	**346**	*iP*		**Pb**	**20 41 02.6**	**-0.3**
TWA				*i* S		**Sb**	**20 41 11.0**	**+0.4**
TDCB	**Techi**	**0.56**	**250**	P		**Pb**	**20 41 03.1**	**-0.1**
TDCB				S		**Sb**	**20 41 11.1**	**0.0**
EOS3	**EOS3**	**0.56**	**107**	*iP*		**Pb**	**20 41 03.7**	**+0.7**
TATO	**Taipei**	**0.57**	**337**	P		**Pb**	**20 41 02.6**	**-0.6**
TATO	**Taipei**	**0.57**	**337**	*S*		**Sb**	**20 41 11.6**	**+0.4**
NFF	**Wufeng Townshi**	**0.59**	**288**	*i* P		**Pb**	**20 41 03.3**	**-0.3**
NFF				S		**Sb**	**20 41 11.7**	**-0.1**
TEYL	**Yanliau Villag**	**0.59**	**192**	*eP*		**Pb**	**20 41 02.8**	**-0.8**
TEYL				S		**Sb**	**20 41 13.1**	**+1.3**
KSHI	**Guanxi Townshi**	**0.60**	**303**	P		**Pn**	**20 41 03.8**	**-0.1**
KSHI				S		**Sb**	**20 41 13.4**	**+1.3**
TWB1	**Santiao Chiao**	**0.60**	**23**	*eP*		**Pb**	**20 41 03.7**	**-0.1**
TWB1				*i* S		**Sb**	**20 41 12.8**	**+0.6**
NHY	**Taipei**	**0.61**	**346**	P		**Pn**	**20 41 03.4**	**-0.6**
NHY				S		**Sb**	**20 41 12.4**	**+0.1**
NWF	**Wu-fen Shan**	**0.62**	**4**	*i* P		**Pn**	**20 41 03.9**	**-0.4**
NWF				S		**Sb**	**20 41 13.1**	**+0.3**
WFSB	**Wu-fen Shan**	**0.62**	**4**	⇓*i*P		**Pn**	**20 41 03.8**	**-0.4**
WFSB				S		**Sb**	**20 41 12.9**	**+0.2**
TAP	**Taipei**	**0.62**	**341**	*eP*		**Pn**	**20 41 03.4**	**-0.8**
TAP				S		**Sb**	**20 41 13.0**	**+0.3**
EOS4	**EOS4**	**0.63**	**121**	*eP*		**Pn**	**20 41 03.8**	**-0.2**
EOS4				*eS*		**Sn**	**20 41 13.8**	**+1.2**
SXI1	**Grass Mountain**	**0.66**	**12**	*eP*		**Pn**	**20 41 04.4**	**-0.4**
SXI1				S		**Sb**	**20 41 14.3**	**+0.6**
SHUL	**Shoufeng**	**0.68**	**193**	*eP*		**Pn**	**20 41 04.1**	**-0.8**
SHUL				S		**Sb**	**20 41 14.5**	**+0.4**
LIOB	**Emei**	**0.68**	**287**	*iP*		**Pn**	**20 41 05.0**	**0.0**
LIOB				*i* S		**Sb**	**20 41 14.9**	**+0.6**
ESL	**Shilin**	**0.69**	**203**	P		**Pn**	**20 41 03.1**	**-2.0**
ESL				*eS*		**Sb**	**20 41 12.4**	**-2.1**
NSTT	**Nanjuang**	**0.69**	**285**	*iP*		**Pn**	**20 41 05.0**	**-0.1**
NSTT				S		**Sb**	**20 41 14.5**	**0.0**
TNOU	**National Taiwa**	**0.70**	**3**	*eP*		**Pn**	**20 41 04.5**	**-0.7**
TNOU				S		**Sb**	**20 41 14.6**	**-0.2**
OWD	**Renai**	**0.70**	**226**	*iP*		**Pn**	**20 41 04.4**	**-0.7**
OWD				S		**Sb**	**20 41 14.7**	**-0.5**
TWS1	**Kuangyinshan**	**0.71**	**336**	*eP*		**Pn**	**20 41 04.8**	**-0.6**
TWS1				*i* S		**Sn**	**20 41 15.4**	**+0.2**
YM01	**YM01**	**0.71**	**348**	*eP*		**Pn**	**20 41 04.4**	**-1.0**
YM01				*eS*		**Sb**	**20 41 15.9**	**+0.8**
NCUH	**Zhongli**	**0.72**	**316**	P		**Pn**	**20 41 05.1**	**-0.4**
NCUH				*i* S		**Sn**	**20 41 15.8**	**+0.4**
WUSB	**Renai**	**0.72**	**231**	*iP*		**Pn**	**20 41 05.4**	**-0.3**
WUSB				S		**Sn**	**20 41 15.6**	**-0.1**
ZUZH	**Zhuzihu**	**0.73**	**347**	*iP*		**Pn**	**20 41 04.7**	**-1.1**
ZUZH				S		**Sn**	**20 41 14.2**	**-1.6**
WHP	**Taichung City**	**0.73**	**257**	P		**Pn**	**20 41 06.2**	**+0.4**
WHP				*i* S		**Sn**	**20 41 16.4**	**+0.4**
YM08	**YM08**	**0.75**	**350**	*eP*		**Pn**	**20 41 04.7**	**-1.3**
YM08				*eS*		**Sn**	**20 41 15.2**	**-1.0**
TEGC	**Jichi Village**	**0.76**	**193**	*eP*		**Pn**	**20 41 05.2**	**-0.9**
NTST	**Danshui**	**0.76**	**340**	P		**Pn**	**20 41 05.4**	**-0.6**
NTST				S		**Sn**	**20 41 17.2**	**+0.8**
ANP	**Anpu**	**0.76**	**346**	*eP*		**Pn**	**20 41 04.9**	**-1.2**
SBCB	**Hsinchu**	**0.76**	**297**	*iP*		**Pn**	**20 41 06.1**	**0.0**
SBCB				S		**Sn**	**20 41 17.3**	**+0.9**
HSN	**Hsinchu**	**0.78**	**297**	P		**Pn**	**20 41 06.0**	**-0.3**
HSN				*eS*		**Sn**	**20 41 16.5**	**-0.4**
WARBT	**Fenglin Townsh**	**0.79**	**203**	*eP*		**Pn**	**20 41 04.5**	**-2.1**
TWY	**Chenhua**	**0.83**	**352**	P		**Pn**	**20 41 06.5**	**-0.6**
TWY				*eS*		**Sn**	**20 41 18.1**	**-0.1**
WCS	**Beigang Elemen**	**0.84**	**243**	*eP*		**Pn**	**20 41 07.5**	**+0.3**
WCS				*eS*		**Sn**	**20 41 19.3**	**+0.8**
NMLH	**Miaoli**	**0.86**	**276**	*eP*		**Pn**	**20 41 08.2**	**+0.7**
NMLH				S		**Sn**	**20 41 20.7**	**+1.8**
VWDT	**VWDT**	**0.88**	**218**	P		**Pn**	**20 41 07.3**	**-0.4**
VWDT				S		**Sn**	**20 41 20.1**	**+0.8**
SMLT	**Sun Moon Lake**	**0.94**	**234**	*iP*		**Pn**	**20 41 08.8**	**+0.1**
SMLT				*eS*		**Sn**	**20 41 22.1**	**+0.9**
TYC	**Yuchr**	**0.96**	**236**	*iP*		**Pn**	**20 41 08.2**	**+0.3**
SSLB	**Suanglung**	**0.97**	**227**	P		**Pn**	**20 41 08.5**	**-0.5**
SSLB	**Suanglung**	**0.97**	**227**	S		**Sn**	**20 41 22.0**	**+0.4**
SSLB	**Suanglung**	**0.97**	**227**	⇑*iP*		**Sn**	**20 41 08.5**	**-0.5**
SSLB				*eS*		**Sn**	**20 41 21.8**	**+0.2**
HGSD	**Ruisui**	**0.99**	**196**	*eP*		**Pn**	**20 41 08.1**	**-1.2**
WDJ	**Dajia District**	**1.00**	**264**	*eP*		**Pn**	**20 41 10.0**	**+0.6**
WDJ				*eS*		**Sn**	**20 41 24.0**	**+1.7**
TCU	**Taichung**	**1.01**	**253**	P		**Pn**	**20 41 09.9**	**+0.4**
EHY	**Hungye**	**1.01**	**202**	*eP*		**Pn**	**20 41 07.2**	**-2.3**
EHY				*eS*		**Sn**	**20 41 19.5**	**-3.1**
EHYH	**Wanrong**	**1.01**	**200**	*eP*		**Pn**	**20 41 07.1**	**-2.5**
EHYH				*eS*		**Sn**	**20 41 20.0**	**-2.8**
WHYT	**Xinyi Township**	**1.10**	**227**	P		**Pn**	**20 41 11.1**	**+0.3**
WHYT				*eS*		**Sn**	**20 41 26.1**	**+1.2**
JYNG	**Yonagunijimaku**	**1.11**	**90**	P		**Pn**	**20 41 10.7**	**-0.2**
JYNG				S		**Sn**	**20 41 25.6**	**+0.6**
WNT	**Mingjian**	**1.11**	**239**	*iP*		**Pn**	**20 41 11.9**	**+1.0**
WNT				*i* S		**Sn**	**20 41 24.8**	**+1.8**
YULB	**Yu-li**	**1.12**	**201**	P		**Pn**	**20 41 09.8**	**-1.3**
YULB	**Yu-li**	**1.12**	**201**	S		**Sn**	**20 41 26.0**	**+0.5**
YULB	**Yu-li**	**1.12**	**201**	*eP*		**Pn**	**20 41 08.6**	**-2.5**
WCH1	**Changhua City**	**1.14**	**251**	*eS*		**Sb**	**20 41 28.4**	**+1.1**
ECBN	**Changbin**	**1.16**	**193**	*eP*		**Pn**	**20 41 10.7**	**-0.8**
ECBN				*eS*		**Sn**	**20 41 25.9**	**-0.3**
EYUL	**Yuli**	**1.16**	**199**	*iP*		**Pn**	**20 41 11.5**	**-0.1**
TWF1	**Yuli**	**1.16**	**200**	*eP*		**Pn**	**20 41 11.2**	**-0.4**
YOJ	**Yonaguni jima**	**1.17**	**89**	P		**Pn**	**20 41 11.1**	**-0.6**
YOJ	**Yonaguni jima**	**1.17**	**89**	S		**Sn**	**20 41 26.9**	**+0.4**
YOJ	**Yonaguni jima**	**1.17**	**89**	*iP*		**Pn**	**20 41 11.4**	**-0.3**
YOJ				*eS*		**Sn**	**20 41 27.1**	**+0.6**
YOJ	**Yonaguni jima**	**1.17**	**89**	P		**Pn**	**20 41 11.3**	**-0.4**
YOJ				S		**Sn**	**20 41 27.4**	**+0.8**
PCYT	**Pengchaiyu**	**1.22**	**15**	*eP*		**Pn**	**20 41 11.7**	**-0.6**
ALS	**Alishan**	**1.26**	**222**	*eP*		**Pn**	**20 41 14.8**	**+1.6**
ALS				*i* S		**Sn**	**20 41 32.4**	**+1.2**
CHN5	**Tsauling**	**1.28**	**229**	*iP*		**Pn**	**20 41 14.5**	**+1.1**
CHN5				*i* S		**Sb**	**20 41 32.2**	**+0.8**
CHKH	**Chenggong**	**1.29**	**194**	*eP*		**Pn**	**20 41 12.8**	**-0.6**
CHKH				*eS*		**Sn**	**20 41 29.0**	**-0.4**
FULB	**Fuli**	**1.31**	**198**	*eP*		**Pn**	**20 41 13.3**	**-0.3**
WDL	**Douliou City**	**1.31**	**236**	*eP*		**Pn**	**20 41 15.3**	**+1.7**
WDL				*eS*		**Sb**	**20 41 32.9**	**+0.8**
WDLH	**Douliu**	**1.33**	**235**	P		**Pn**	**20 41 15.0**	**+1.1**
WDLH				*eS*		**Sb**	**20 41 33.3**	**+0.8**
WRL	**Guolierlin Hig**	**1.35**	**246**	P		**Pn**	**20 41 14.5**	**+0.3**
WRL				*eS*		**Sn**	**20 41 32.1**	**+1.1**
RLNB	**Erlin**	**1.37**	**246**	*eP*		**Pn**	**20 41 14.9**	**+0.5**
RLNB				*eS*		**Sn**	**20 41 33.1**	**+1.6**
CHKT	**Chengkung**	**1.38**	**194**	*eP*		**Pn**	**20 41 14.4**	**-0.3**
CHKT				S		**Sn**	**20 41 30.9**	**-1.0**
ELDTW	**Lidau**	**1.41**	**208**	*eP*		**Pn**	**20 41 13.7**	**-1.5**
ECS	**Chishang**	**1.43**	**199**	*eP*		**Pn**	**20 41 15.7**	**+0.4**
WCHO	**Fanlu**	**1.44**	**226**	*eP*		**Pn**	**20 41 15.8**	**+1.4**
WCKO				*eS*		**Sb**	**20 41 36.9**	**+1.1**
WTK	**Tuku**	**1.44**	**239**	*eP*		**Pn**	**20 41 16.1**	**+0.6**
WTK				*eS*		**Sn**	**20 41 35.3**	**+2.0**
WTCT	**Ta-ch'eng**	**1.45**	**247**	*eP*		**Pn**	**20 41 15.4**	**-0.1**
CHN4	**Tsaushan**	**1.51**	**224**	*eP*		**Pn**	**20 41 18.1**	**+1.7**
CHN4				*eS*		**Sb**	**20 41 38.9**	**+1.1**
EDH	**Donghe**	**1.52**	**195**	*eP*		**Pn**	**20 41 15.5**	**-1.0**
EDH				*eS*		**Sn**	**20 41 35.1**	**-0.1**
TPUB	**Ta-pu**	**1.52**	**222**	P		**Pn**	**20 41 17.2**	**+0.6**
TPUB	**Ta-pu**	**1.52**	**222**	*eP*		**Pn**	**20 41 17.9**	**+1.3**
TPUB				*eS*		**Sn**	**20 41 37.9**	**+2.6**
CHY	**Chiayi**	**1.52**	**232**	*eP*		**Pn**	**20 41 17.5**	**+0.9**
CHY				*eS*		**Sb**	**20 41 38.9**	**+0.7**
STYH	**Taoyuan**	**1.54**	**215**	*eP*		**Pn**	**20 41 17.4**	**+0.5**
STYH				S		**Sn**	**20 41 37.8**	**+2.0**
WTP	**Ta-pu**	**1.57**	**221**	*eP*		**Pn**	**20 41 18.7**	**+1.3**
WTP				S		**Sb**	**20 41 39.9**	**+0.2**
WSF	**Szhu**	**1.60**	**240**	*eP*		**Pn**	**20 41 18.0**	**+0.4**
WSF				*eS*		**Sn**	**20 41 39.0**	**+1.9**
WSL	**Shuilin Townsh**	**1.65**	**236**	*iP*		**Pn**	**20 41 19.1**	**+0.7**
WSL				*eS*		**Sn**	**20 41 41.1**	**+2.6**
CHN1	**Nanshi**	**1.67**	**221**	*eP*		**Pn**	**20 41 20.0**	**+1.3**
CHN1				*eS*		**Sn**	**20 41 42.2**	**+3.2**
ICHU	**Yijhu**	**1.71**	**231**	*eP*		**Pn**	**20 41 20.3**	**+1.1**
ICHU				S		**Sn**	**20 41 43.2**	**+3.3**
SGST	**Jiashian**	**1.72**	**218**	*eP*		**Pn**	**20 41 19.6**	**+0.3**
SGST				*eS*		**Sn**	**20 41 41.9**	**+1.7**
TWG	**Pinlang**	**1.73**	**201**	*eP*		**Pn**	**20 41 18.9**	**-0.5**
TWGBT	**Beinan**	**1.73**	**200**	P		**Pn**	**20 41 19.3**	**-0.1**
TWGBT	**Beinan**	**1.73**	**200**	*eP*		**Pn**	**20 41 19.4**	**-0.1**
CHN8	**Yiju**	**1.77**	**232**	P		**Pn**	**20 41 21.3**	**+1.3**
CHN8				*eS*		**Sb**	**20 41 45.2**	**0.0**
LDUT	**Ludao**	**1.78**	**188**	*eP*		**Pn**	**20 41 18.6**	**-1.6**
LDUT				*eS*		**Sn**	**20 41 40.3**	**-1.4**
IRIF	**Iriomote-Funau**	**1.83**	**93**	*eP*		**Pn**	**20 41 20.3**	**-0.5**
IRIF				*eS*		**Sn**	**20 41 42.9**	**+0.1**
SCLT	**Jiali**	**1.89**	**228**	*eS*		**Sb**	**20 41 48.7**	**-0.1**
SCST	**Cishan**	**1.93**	**216**	*eP*		**Pn**	**20 41 23.9**	**+1.8**
SSD	**Sandimen**	**1.97**	**211**	*eP*		**Pn**	**20 41 24.3**	**+1.5**
ECL	**Taimali**	**1.98**	**201**	*eP*		**Pn**	**20 41 22.3**	**-0.5**
TSCK	**Chigu Township**	**1.99**	**230**	*eS*		**Sn**	**20 41 50.2**	**+3.5**
MASBT	**Mashibuluo**	**2.09**	**209**	*eP*		**Pn**	**20 41 26.0**	**+1.6**
MASBT				*eS*		**Sn**	**20 41 52.6**	**+3.4**
JKRS	**Kuro-shima**	**2.09**	**95**	*eS*		**Sn**	**20 41 50.5**	**+1.2**
VWUC	**VWUC**	**2.14**	**285**	*eP*		**Pn**	**20 41 24.0**	**-1.1**
PNG	**Penghu**	**2.17**	**247**	*eS*		**Sn**	**20 41 50.6**	**-0.8**
PHUB	**P'eng-hu**	**2.18**	**245**	P		**Pn**	**20 41 25.0**	**-0.6**
PHUB				S		**Sn**	**20 41 50.8**	**-0.8**
JIJ	**Ishigaki jima**	**2.20**	**92**	P		**Pn**	**20 41 25.6**	**-0.3**
JIJ				*eS*		**Sn**	**20 41 52.1**	**0.0**
SSPT	**Xinbi**	**2.23**	**209**	*eP*		**Pn**	**20 41 27.4**	**+1.1**
WDGT	**Dungji**	**2.23**	**238**	*eP*		**Pn**	**20 41 26.5**	**+0.1**
WDGT				S		**Sn**	**20 41 52.3**	**+0.4**
SCZT	**Fangliau**	**2.31**	**206**	P		**Pn**	**20 41 28.4**	**+1.1**
SCZT				S		**Sn**	**20 41 56.5**	**+1.9**
MATB	**Ma-tsu**	**2.34**	**317**	*eP*		**Pn**	**20 41 26.6**	**-1.2**
JISG	**Ishigakijimahi**	**2.35**	**86**	P		**Pn**	**20 41 28.1**	**+0.1**
JISG				S		**Sn**	**20 41 56.8**	**+0.9**
SLIU	**Shizi**	**2.38**	**201**	*eP*		**Pn**	**20 41 30.2**	**+1.8**
SLIU				*eS*		**Sn**	**20 41 58.5**	**+2.0**
LAY	**Lan-yu**	**2.40**	**184**	*eS*		**Sn**	**20 41 54.5**	**-2.7**
VCHM	**Qimei**	**2.44**	**240**	*eP*		**Pn**	**20 41 29.0**	**-0.2**
VCHM				S		**Sn**	**20 41 57.6**	**-0.4**
PTMZ	**Houxiangcun**	**2.44**	**284**	*eP*		**Pn**	**20 41 27.9**	**-1.4**
SMST	**Manzhou Townsh**	**2.55**	**199**	P		**Pn**	**20 41 31.4**	**+0.6**
SMST				S		**Sn**	**20 42 01.1**	**+0.3**
TWKBT	**Hengchun**	**2.63**	**199**	*eP*		**Pn**	**20 41 32.8**	**+0.9**

*GRAL **14** 20:44:55.2±0.

comp=Z,4.6nm,0.7s
WRA Warramunga Arr 21.56 218 P **P** **20 49 54.6 -3.0**
EIDS Eidsvold 22.25 173 P **P** **20 50 03.4 -1.5**
EIDS IAmb IAmb 20 50 21.4
comp=Z,13nm,1.1s
KNRA Kununurra 22.93 236 P **P** **20 50 11.1 -1.2**
KNRA IAmb IAmb 20 50 17.5
comp=Z,12nm,1.1s
AS31 Alice Springs 24.71 213 **P** **20 50 29.2 -0.1**
ASAR Alice Springs 24.71 213 P **P** **20 50 30.1 +0.8**
comp=Z,5.2nm,0.8s,baz=48,slow=7.6,SNR=20
ASAR LR LR 21 00 22.8
comp=Z,389nm,18.5s,baz=32,slow=37
comp=Z,5.2nm,0.8s
ASAR Alice Springs 24.71 213 **P** **20 50 29.2 -0.1**
DAV Davao City (W) 24.87 294 LR LR 20 59 36.8
comp=Z,446nm,21.3s,baz=306,slow=35
BATI Baumata 25.46 253 LR LR 21 03 14.9
comp=Z,670nm,19.1s,baz=48,slow=42
INKA Innaminka 25.50 196 P **P** **20 50 36.3 -0.1**
INKA IAmb IAmb 20 50 41.7
comp=Z,9.9nm,1.2s
DZM Mont Dzumac 25.75 138 LR LR 20 59 34.4
comp=Z,440nm,18.7s,baz=302,slow=34
FITZ Fitzroy Crossi 26.74 235 LR LR 21 01 58.2
comp=Z,334nm,19.9s,baz=34,slow=38
FITZ Fitzroy Crossi 26.74 235 P **P** **20 50 47.5 -0.2**
FITZ IAmb IAmb 20 50 55.0
comp=Z,10nm,1.4s
H11S3 WAKE ISLAND Hy 28.10 39 T T 21 20 09.6
baz=220,slow=76,SNR=600
H11S2 WAKE ISLAND Hy 28.11 39 T T 21 20 10.0
baz=220,slow=76,SNR=467
H11S1 WAKE ISLAND Hy 28.12 39 T T 21 20 10.9
baz=220,slow=76,SNR=616
KAPI Kappang 28.56 265 LR LR 21 02 29.1
comp=Z,155nm,18.7s,baz=100,slow=36
H11N1 WAKE ISLAND Hy 29.14 38 T T 21 21 29.9
baz=219,slow=76,SNR=49
H11N3 WAKE ISLAND Hy 29.15 38 T T 21 21 29.9
baz=219,slow=76,SNR=77
H11N2 WAKE ISLAND Hy 29.15 38 T T 21 21 31.3
baz=219,slow=76,SNR=99
STKA Stephens Creek 29.27 192 LR LR 21 03 32.8
comp=Z,236nm,21.5s,baz=18,slow=38
JCJ Chichijima 30.65 349 LR LR 21 03 12.9
comp=Z,109nm,19.1s,baz=88,slow=35
TGY Tagaytay City 32.12 303 LR LR 21 03 04.7
comp=Z,61nm,22.0s,baz=35,slow=33
MSVF Nonsavu 32.54 119 LR LR 21 03 17.4
comp=Z,124nm,20.5s,baz=356,slow=34
JOW Kunigami 35.55 328 LR LR 21 03 44.2
comp=Z,139nm,20.1s,baz=46,slow=31
GIRL Giralia 38.30 237 P **P** **20 52 28.3 -0.4**
JNU Nakatsue 39.67 337 LR LR 21 07 43.3
comp=Z,42nm,19.0s,baz=177,slow=34
MJAR Matsushiro Arr 40.60 347 LR LR 21 07 02.8
comp=Z,109nm,21.6s,baz=172,slow=32
LEM Lembang 40.71 263 LR LR 21 11 25.8
comp=Z,167nm,18.6s,baz=68,slow=39
URZ Urewera 43.73 147 LR LR 21 08 32.5
comp=Z,176nm,19.7s,baz=306,slow=32
RPZ Rata Peaks 45.14 157 LR LR 21 08 33.7
comp=Z,51nm,20.4s,baz=228,slow=31
CM31 Chiang Mai Arr 53.15 296 P **P** **20 54 25.8 -0.4**
CM31 IAmb IAmb 20 54 31.8
comp=Z,7.3nm,1.1s
CMAR Chiang Mai Arr 53.15 296 P **P** **20 54 29.3 +3.2**
comp=Z,2.9nm,1.0s,baz=114,slow=5.7,SNR=19
CMAR LR LR 21 17 23.9
comp=Z,49nm,18.9s,baz=190,slow=36
comp=Z,2.9nm,1.0s
CMAR Chiang Mai Arr 53.15 296 **P** **20 54 25.3 -0.8**
CHTO Chiang Mai 53.26 296 P **P** **20 54 26.3 -0.7**
CHTO IAmb IAmb 20 54 40.4
comp=Z,8.8nm,1.5s
RAR Rarotonga 53.52 114 LR LR 21 15 35.8
comp=Z,111nm,18.1s,baz=275,slow=34
RAR Rarotonga 53.52 114 P **P** **20 54 28.7 -0.2**
PETK Petropavlovsk- 56.61 7 LR LR 21 15 40.1
comp=Z,56nm,22.0s,baz=214,slow=32
PETK Petropavlovsk- 56.61 7 P **P** **20 54 50.7 +0.1**
HON Honolulu 57.87 62 P **P** **20 54 59.9 -0.2**
HILR Hailar Array B 58.02 338 P **P** **20 55 02.5 +1.8**
comp=Z,3.7nm,0.5s,baz=133,slow=8.3,SNR=4.3
comp=Z,3.7nm,0.5s
ULN Ulaanbaatar 62.29 330 P **P** **20 55 30.9 +0.7**
ULN IAmb IAmb 20 55 36.2
comp=Z,5.7nm,1.3s
MA2 Magadan 62.57 1 LR LR 21 25 14.0
comp=Z,35nm,18.1s,baz=145,slow=38
SONM Songino Array 62.60 330 P **P** **20 55 34.4 +2.2**
comp=Z,1.1nm,0.7s,baz=157,slow=8.0,SNR=6.8
SONM LR LR 21 23 29.6
comp=Z,56nm,19.1s,baz=75,slow=37
comp=Z,1.1nm,0.7s
SONM Songino Array 62.60 330 P **P** **20 55 33.2 +1.0**
SONM IAmb IAmb 20 55 37.3
comp=Z,2.6nm,1.0s
EVN Everest 66.68 302 P **P** **20 55 59.1 -0.8**
VNDA Vanda 74.66 177 P **P** **20 56 47.4 +0.5**
comp=Z,0.4nm,0.8s,baz=337,slow=7.7,SNR=6.6
comp=Z,0.4nm,0.8s
VNDA Vanda 74.66 177 P **P** **20 56 47.1 +0.3**
MKAR Makanchi Array 76.17 320 P **P** **20 56 58.3 +2.2**
comp=Z,2.4nm,1.0s,baz=101,slow=6.3,SNR=9.8
MKAR LR LR 21 30 59.6
comp=Z,40nm,18.8s,baz=114,slow=36
comp=Z,2.4nm,1.0s
MKAR Makanchi Array 76.17 320 **P** **20 56 56.3 +0.2**
MAKZ Makanchi 76.38 320 **P** **20 56 57.3 +0.1**
J16K Anvik River 76.42 21 P **P** **20 56 57.5 +0.4**
J16K IAmb IAmb 20 57 29.6
comp=Z,9.4nm,1.5s
KDAK Kodiak Island 76.78 28 LR LR 21 24 37.9
comp=Z,36nm,19.9s,baz=262,slow=31
ZAA0 Zalesovo Array 77.34 327 P **P** **20 57 03.1 +0.7**
ZALV Zalesovo Beam 77.34 327 P **P** **20 57 03.7 +1.3**
comp=Z,2.3nm,0.8s,baz=103,slow=6.4,SNR=8.4
ZALV LR LR 21 30 12.0
comp=Z,42nm,21.9s,baz=113,slow=35
comp=Z,2.3nm,0.8s
ZALV Zalesovo Beam 77.34 327 P **P** **20 57 02.2 -0.2**
PRZ Przheval'sk 77.48 315 P **P** **20 57 03.2 -0.6**
TARG Taragay, Kyrgy 77.70 314 P **P** **20 57 04.0 -1.3**
TARG IAmb IAmb 20 57 14.3
comp=Z,4.0nm,1.1s
L19K White Mountain 77.99 24 P **P** **20 57 06.7 +0.8**
CAST Castle Rocks 79.71 23 P **P** **20 57 15.6 +0.2**
CAST IAmb IAmb 20 57 26.0
comp=Z,5.0nm,1.3s
KURK Kurchatov 79.75 323 **P** **20 57 16.1 +0.3**
KURBB Kurchatov Arra 79.77 323 P **P** **20 57 17.7 +1.8**
comp=Z,2.1nm,0.8s,baz=109,slow=4.7,SNR=11
comp=Z,2.1nm,0.8s
AAK Ala-Archa 80.31 314 LR LR 21 33 06.4
comp=Z,35nm,19.8s,baz=128,slow=36
ARSB Arslanbob 81.12 312 P **P** **20 57 22.9 -0.7**
ARSB IAmb IAmb 20 57 45.1
comp=Z,7.2nm,1.4s
BVAR Borovoye Array 85.27 324 P **P** **20 57 46.1 +1.5**
comp=Z,1.3nm,0.7s,baz=134,slow=4.3,SNR=5.5
comp=Z,1.3nm,0.7s
MAW Mawson 85.37 203 LR LR 21 33 38.4
comp=Z,70nm,21.1s,baz=76,slow=34
DLBC Dease Lake 88.29 31 LR LR 21 30 43.1
comp=Z,266nm,19.5s,baz=214,slow=31
BBB Bella Bella 88.51 38 LR LR 21 29 23.3
comp=Z,44nm,20.8s,baz=212,slow=30
ARTI Arti 92.57 326 LR LR 21 39 31.4
comp=Z,108nm,21.5s,baz=90,slow=35
AKTO Aktyubinsk 92.61 320 LR LR 21 40 36.4
comp=Z,71nm,19.2s,baz=256,slow=36
TORD Torodi Ar. Bea 145.56 289 PKPbc **PKPab** **21 04 49.3 +1.8**
comp=Z,4.7nm,1.2s,baz=59,slow=3.0,SNR=9.3

NIED ***14*** *20:48:03.8,36.64N×140.75E,h90km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=7.14; Mθθ0.67; Mφφ6.47; Mrθ0.19; Mθφ-0.85; Mφr1.76; Fault plane solution: M0 7.09000×10^14 NP1: φs349.00000°,δ38.00000°,λ-95.00000°. NP2: φs175.00000°,δ52.00000°,λ-86.00000°.*
JMA ***14*** *20:48:03.8±0.1,36.6N±0.3×140.7E±0.6,h90km,MD3.8/38, MV4.1/38,NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .
NEIC ***14*** *20:48:03.8±2.0,36.67N±0.06×140.77E±0.09,h94km±8km, mb4.3/24,Error ellipse: s-maj=11.2km s-min=7.8km az=110.0*
IDC ***14*** *20:48:05.2±1.6,36.55N×140.65E,h108km±16km, mb3.4/13,mbtmp3.8/17,Error ellipse: s-maj=19.1km s-min=11.1km az=75.0*
ISC 14 20:48:03.3±0.7,36.68N±0.04×140.73E±0.05,h91km±6km, n82,σ1.956/94,mb4.1/23,15D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.15**	**242**	*i*	P	**Pn**	**20 48 16.9 +0.5**
JHO				⇓	S	**Sn**	**20 48 26.3 +0.3**
JHYU	**Hitachinakayam**	**0.36**	**199**	⇓ *i*	P	**Pn**	**20 48 17.5 +0.3**
JHYU				⇓	S	**Sn**	**20 48 27.7 +0.2**
ONAJ	**Iwakimizuishiy**	**0.42**	**7**	⇓ *i*	P	**Pn**	**20 48 18.2 +0.4**
ONAJ					A	A	20 48 18.2
	comp=N,13nm,0.3s,comp=E,16nm,0.9s						
ONAJ				⇓	S	**Sn**	**20 48 28.6 +0.1**
JFFD	**Fukushimafurud**	**0.43**	**342**	⇓ *i*	P	**Pn**	**20 48 18.6 +0.8**
JFFD					A	A	20 48 18.6
	comp=N,11nm,0.5s,comp=E,6.0nm,0.3s						
JFFD				⇓	S	**Sn**	**20 48 28.9 +0.5**
JYT	**Yasato**	**0.63**	**224**		A	A	20 48 19.5
	comp=N,19nm,0.3s,comp=E,28nm,0.4s						
JFK	**Kawauchi**	**0.69**	**9**	⇓ *i*	P	**Pn**	**20 48 20.5 +0.5**
JFK					A	A	20 48 20.5
	comp=N,4.0nm,0.8s,comp=E,8.0nm,0.8s						
JFK				⇓	S	**Sn**	**20 48 32.7 +0.4**
JSB	**Shiboa**	**0.71**	**294**		A	A	20 48 20.8
	comp=N,5.0nm,1.0s,comp=E,6.0nm,1.5s						
JOTO	**OTAMA OYAMA**	**0.93**	**340**	*i*	P	**Pn**	**20 48 23.2 +0.8**
JOTO					S	**Sn**	**20 48 37.8 +1.1**
JAG	**Ashikaga**	**1.06**	**256**	⇓ *i*	P	**Pn**	**20 48 24.5 +0.7**
JAG					A	A	20 48 24.5
	comp=N,10.0nm,0.3s,comp=E,6.0nm,0.5s						
JAG				⇓	S	**Sn**	**20 48 39.5 +0.3**
JFY	**Yanaizu**	**1.10**	**312**	⇓ *i*	P	**Pn**	**20 48 25.4 +1.1**
JMM	**Marumori**	**1.19**	**2**	⇓ *i*	P	**Pn**	**20 48 25.8 +0.5**
JMM				⇓	S	**Sn**	**20 48 42.1 +0.4**
JKT	**Katashina**	**1.19**	**275**	*i*	P	**Pn**	**20 48 26.6 +1.2**
JKT					A	A	20 48 26.6
	comp=N,5.0nm,1.2s,comp=E,8.0nm,1.7s						
JKT					S	**Sn**	**20 48 44.2 +2.1**
JUON	**Uonuma**	**1.44**	**292**		S	**Sn**	**20 48 49.4 +2.0**
JNS	**Sasagawa**	**1.60**	**316**		P	**Pn**	**20 48 31.3 +0.9**
JRY	**Ryogami san**	**1.62**	**246**	*i*	P	**Pn**	**20 48 31.5 +0.9**
MJAR	**Matsushiro Arr**	**2.03**	**267**		P	**Pn**	**20 48 37.2 +1.2**
	comp=E,122nm,0.7s,baz=84,slow=14,SNR=285						
MJAR					S	**Sn**	**20 48 57.8 -3.2**
	comp=E,84nm,0.5s,baz=101,slow=17,SNR=6.3						
MJAR	**Matsushiro Arr**	**2.03**	**267**			**Pn**	**20 48 36.9 +0.8**
MAJO	**Matsushiro**	**2.04**	**267**			**Pn**	**20 48 37.5 +1.5**
MAJO					Sn	**Sn**	**20 48 57.7 -3.4**
MJB9	**Matsu-Tunnel**	**2.04**	**267**			**Pn**	**20 48 38.4 +2.3**
MJB9					Sn	**Sn**	**20 49 00.5 -0.6**
JSG	**Sagara**	**2.88**	**227**		Pn	**Pn**	**20 48 48.2 +0.9**
JSG					Sn	**Sn**	**20 49 20.3 -0.8**
JGF	**Kuroka**	**2.94**	**249**			**Pn**	**20 48 49.6 +1.5**
JGF					Sn	**Sn**	**20 49 24.2 +1.7**
INU	**Inuyama**	**3.29**	**247**			**Pn**	**20 48 53.9 +1.2**
INU					Sn	**Sn**	**20 49 29.9 -1.1**
JHJ	**Hachijo jima 2**	**3.64**	**193**		P	**Pn**	**20 48 57.5 0.0**
	comp=E,57nm,0.3s,baz=330,slow=18,SNR=21						
JHJ					S	**Sn**	**20 49 38.4 -1.0**
	comp=E,140nm,0.3s,baz=256,slow=23,SNR=18						
JHJ2	**Mitsune**	**3.64**	**192**		Pn	**Pn**	**20 48 56.9 -0.6**
JHJ2					Sn	**Sn**	**20 49 36.6 -2.8**
JTM	**Tenmabayashi**	**4.11**	**4**		Pn	**Pn**	**20 49 03.4 -0.5**
JTM					Sn	**Sn**	**20 49 50.4 -0.4**
ERM	**Erimo**	**5.65**	**19**		Pn	**Pn**	**20 49 23.5 -1.2**
ERM					Sn	**Sn**	**20 50 22.4 -5.8**
JMN	**Monobe**	**6.33**	**244**			**Pn**	**20 49 35.1 +0.9**
JMN						**Sn**	**20 50 41.8 -3.3**
JKA	**Kamikawa-asahi**	**7.56**	**10**		Pn	**Pn**	**20 49 48.3 -2.5**
JKA					Sn	**Sn**	**20 51 07.9 -6.9**
JNU	**Nakatsue**	**8.84**	**249**		P	**Pn**	**20 50 10.1 +1.8**
	comp=E,20nm,0.8s,baz=51,slow=10,SNR=7.5						
JSU	**Suzuyama**	**9.96**	**242**		Pn	**Pn**	**20 50 22.2 -1.3**
USRK	**Ussuriysk Ar.**	**10.04**	**321**		P	**Pn**	**20 50 27.4 +3.0**
	comp=E,1.5nm,0.7s,baz=130,slow=14,SNR=4.3						
USRK	**Ussuriysk Ar.**	**10.04**	**321**			**Pn**	**20 50 22.2 -2.2**
KSRS	**Korea Array**	**10.27**	**278**		P	**Pn**	**20 50 30.1 +2.5**
	comp=E,2.8nm,0.8s,baz=100,slow=14,SNR=10						
PETK	**Petropavlovsk-**	**20.27**	**31**		P	Pn	20 52 34.5 +0.4
	comp=E,0.7nm,0.4s,baz=224,slow=6.0,SNR=1.9						
	comp=E,0.7nm,0.4s						
PETK	**Petropavlovsk-**	**20.27**	**31**		P	**P**	**20 52 30.6 -0.7**
ENH	**Enshi**	**26.76**	**265**			**P**	**20 53 33.8 -0.8**
SONM	**Songino Array**	**27.53**	**305**		P	**P**	**20 53 41.8 +0.3**
	comp=E,0.6nm,0.6s,baz=109,slow=10,SNR=3.8						
	comp=E,0.6nm,0.6s						
SONM	**Songino Array**	**27.53**	**305**		P	**P**	**20 53 40.6 -0.9**
H11N2	**WAKE ISLAND Hy**	**28.45**	**119**		T	T	21 23 57.0
	baz=313						
H11N1	**WAKE ISLAND Hy**	**28.45**	**119**		T	T	21 24 01.9
	baz=313,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.46**	**119**		T	T	21 24 00.3
	baz=313,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.14**	**121**		T	T	21 24 53.0
	baz=315						
H11S3	**WAKE ISLAND Hy**	**29.14**	**121**		T	T	21 24 53.1
	baz=315						
H11S2	**WAKE ISLAND Hy**	**29.15**	**121**		T	T	21 24 54.2
	baz=315						
ZALV	**Zalesovo Beam**	**41.75**	**313**		P	**P**	**20 55 43.8 +0.5**
	comp=E,0.9nm,0.5s,baz=89,slow=7.7,SNR=4.5						
	comp=E,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**41.75**	**313**		P	**P**	**20 55 42.3 -0.9**
K13K	**Kusilvak Mount**	**41.91**	**35**		P	**P**	**20 55 44.6 +0.2**
K13K					IAmb	IAmb	20 55 46.1
	comp=Z,7.5nm,1.2s						
N14K	**Kuskokwak Cree**	**43.04**	**39**		P	**P**	**20 55 54.5 +0.9**
N14K					IAmb	IAmb	20 56 03.0
	comp=Z,7.8nm,1.1s						
MKAR	**Makanchi Array**	**43.84**	**302**		P	**P**	**20 56 00.7 +0.4**
	comp=Z,0.7nm,0.8s,baz=98,slow=8.9,SNR=7.3						
	comp=Z,0.7nm,0.8s						
N15K	**Kwethluk River**	**43.86**	**38**		P	**P**	**20 55 59.9 -0.3**
N15K					IAmb	IAmb	20 56 00.8
	comp=Z,8.8nm,1.4s						
O15K	**Ungalikthiuk R**	**43.92**	**40**		P	**P**	**20 55 59.5 -1.2**
O15K					IAmb	IAmb	20 56 03.8
	comp=Z,2.8nm,0.8s						
VNFG	**Fog Glacier, M**	**43.96**	**44**		P	**P**	**20 56 00.7 -0.5**
MAKZ	**Makanchi**	**44.05**	**302**		P	**P**	**20 56 02.6 +0.6**
M16K	**Timber Creek**	**44.49**	**37**		P	**P**	**20 56 04.2 -1.0**
M16K					IAmb	IAmb	20 56 18.7
	comp=Z,9.3nm,1.4s						
C18K	**Utukok River**	**44.84**	**26**		P	**P**	**20 56 08.5 +0.5**
C19K	**Lookout Ridge**	**45.51**	**26**		P	**P**	**20 56 13.7 +0.4**
C19K					IAmb	IAmb	20 56 30.2
	comp=Z,4.2nm,1.2s						
KURK	**Kurchatov**	**45.72**	**308**		P	**P**	**20 56 15.3 +0.2**
KURBB	**Kurchatov Arra**	**45.79**	**308**		P	**P**	**20 56 15.3 -0.4**
	comp=Z,0.9nm,0.4s,baz=81,slow=7.4,SNR=5.0						
	comp=Z,0.9nm,0.4s						
D19K	**Kuna River**	**45.90**	**27**		P	**P**	**20 56 16.6 +0.3**
D19K					IAmb	IAmb	20 56 28.0
	comp=Z,8.3nm,1.4s						
H19K	**Roundabout Mou**	**46.08**	**31**		P	**P**	**20 56 18.7 +1.0**
H19K					IAmb	IAmb	20 56 20.3
	comp=Z,3.1nm,0.9s						
PDGK	**Podgornoye**	**46.46**	**298**		P	**P**	**20 56 21.9 +0.8**
B20K	**Meade River**	**46.54**	**25**		P	**P**	**20 56 22.5 +1.3**
E21K	**Killik River**	**47.40**	**27**		P	**P**	**20 56 28.8 +0.7**
ILAR	**Eielson Array**	**50.09**	**32**		P	**P**	**20 56 49.1 +0.5**
	comp=Z,1.5nm,0.7s,baz=272,slow=6.5,SNR=16						
	comp=Z,1.5nm,0.7s						
D25K	**Kavik River**	**50.21**	**26**		P	**P**	**20 56 50.3 +0.7**
D25K					IAmb	IAmb	20 56 51.3
	comp=Z,1.5nm,0.6s						
BVAR	**Borovoye Array**	**50.41**	**312**		P	**P**	**20 56 51.7 +0.6**
	comp=Z,0.5nm,0.5s,baz=79,slow=9.4,SNR=1.6						
	comp=Z,0.5nm,0.5s						
I28M	**Miner Creek**	**52.95**	**31**		P	**P**	**20 57 11.6 +1.6**
I28M					IAmb	IAmb	20 57 12.3
	comp=Z,1.6nm,0.7s						
I30M	**Mount Dempster**	**54.46**	**31**		P	**P**	**20 57 22.8 +1.7**
ARTI	**Arti**	**56.37**	**319**		P	**P**	**20 57 34.5 -0.3**
WB0	**Warramunga Arr**	**56.46**	**187**		P	**P**	**20 57 34.8 -0.9**
WRA	**Warramunga Arr**	**56.64**	**187**		P	**P**	**20 57 36.2 -0.8**
	comp=Z,1.6nm,0.6s,baz=3.8,slow=7.3,SNR=27						
	comp=Z,1.6nm,0.6s						
AB31	**Akbulak array**	**57.75**	**310**		P	**P**	**20 57 44.5 0.0**
ABKAR	**Akbulak array**	**57.75**	**310**		P	**P**	**20 57 44.4 -0.2**
AS31	**Alice Springs**	**60.37**	**187**		P	**P**	**20 58 01.8 -1.1**
AS31					IAmb	IAmb	20 58 08.1
	comp=Z,2.5nm,1.4s						
ASAR	**Alice Springs**	**60.37**	**187**		P	**P**	**20 58 02.5 -0.3**
	comp=Z,0.5nm,0.6s,baz=357,slow=5.5,SNR=6.1						
	comp=Z,0.5nm,0.6s						
FIA1	**FINESS Array S**	**68.87**	**332**		P	**P**	**20 58 56.8 -1.0**
FINES	**FINESS Array B**	**68.87**	**332**		P	**P**	**20 58 57.7 0.0**
	comp=Z,1.0nm,0.7s,baz=52,slow=9.9,SNR=4.9						
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**68.87**	**332**		P	**P**	**20 58 56.4 -1.4**
NB2	**NORSAR Subarra**	**74.30**	**337**		P	**P**	**20 59 30.3 -0.2**
	comp=Z,0.4nm,0.5s,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**74.30**	**337**		P	**P**	**20 59 30.2 -0.2**
	comp=Z,0.7nm,0.7s,baz=39,slow=5.8,SNR=5.4						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**75.64**	**53**		P	**P**	**20 59 40.0 +1.3**
	comp=Z,0.6nm,0.6s,baz=293,slow=6.0,SNR=4.1						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**90.77**	**52**		P	**P**	**21 00 57.4 +0.8**
	comp=Z,0.3nm,0.6s,baz=290,slow=3.2,SNR=6.1						
	comp=Z,0.3nm,0.6s						

IDC ***14*** *21:03:25.2±1.0,3.17N×129.31E,h0km,mb3.6/8, mbtmp3.6/9,ML3.1/1,Error ellipse: s-maj=54.5km s-min=16.4km az=75.0*
ISC 14 21:03:30.2±0.9,3.1N±0.1×129.5E±0.3,h35km,n9, σ0.980/10,mb3.8/8,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.30**	**156**	Pn	**Pn**	**21 04 33.7**	**+0.5**
	1.0nm,0.3s,baz=335,slow=19,SNR=10						
SIJI				Sn	**Sn**	**21 05 21.4**	**-0.9**
	0.6nm,0.3s,baz=238,slow=15,SNR=1.6						
	2.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**21.40**	**190**	P	**P**	**21 08 15.1**	**+0.1**
	4.3nm,1.1s,baz=14,slow=8.3,SNR=2.3						
	4.3nm,1.1s						
WRA	**Warramunga Arr**	**23.38**	**169**	P	**P**	**21 08 35.9**	**+0.1**
	0.6nm,0.5s,baz=346,slow=9.4,SNR=7.2						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.94**	**171**	P	**P**	**21 09 09.0**	**+0.5**
	0.2nm,0.6s,baz=352,slow=11,SNR=1.1						
	0.2nm,0.6s						
SONM	**Songino Array**	**48.83**	**339**	P	**P**	**21 12 13.3**	**+1.0**
	0.3nm,0.5s,baz=134,slow=4.2,SNR=1.5						
	0.3nm,0.5s						
PETK	**Petropavlovsk-**	**55.01**	**20**	P	**P**	**21 12 57.9**	**-0.2**
	0.6nm,0.6s,baz=228,slow=8.1,SNR=2.5						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**59.68**	**324**	P	**P**	**21 13 30.1**	**-1.0**
	0.9nm,0.4s,baz=117,slow=7.7,SNR=11						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**63.79**	**327**	P	**P**	**21 13 57.7**	**-1.0**
	0.5nm,0.5s,baz=124,slow=6.0,SNR=7.6						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**69.38**	**326**	P	**P**	**21 14 34.4**	**0.0**
	0.5nm,0.5s,baz=111,slow=11,SNR=1.2						
	0.5nm,0.5s						

CATAC ***14*** *21:09:42.0±0.1,13.7N±1.×87.4W±0.9,h4km±1km,M3.9/28, MLv3.9/28,Error ellipse: s-maj=3.2km s-min=1.5km az=25.7,confirmed*
SNET ***14*** *21:09:43.6±8.4,13.93N×87.32W,h18km,ML3.9, Presumed earthquake*
ISC 14 21:09:40.8±1.1,13.12N±0.05×87.30W±0.03,h4km±10km, n60,σ1.906/89,4C-12D,Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.29**	**241**	⇓	P	**Pg**	**21 09 45.9 -0.5**
CSGN					S	**Sg**	**21 09 48.7 -1.5**
CRIN	**San Cristobal**	**0.48**	**149**	⇓	P	**Pg**	**21 09 51.3 +1.2**
CNCH	**Conchagua**	**0.54**	**287**	⇓	P	**Pb**	**21 09 52.7 -0.3**
CNCH					S	**Sg**	**21 10 00.8 +2.5**
LCND	**La Caada**	**0.61**	**289**	⇓	P	**Pb**	**21 09 53.8 -0.1**
LCND					S	**Sg**	**21 10 01.6 +1.3**
LCND	**La Caada**	**0.61**	**289**	*e*	P	**Pb**	**21 09 53.8 -0.1**
LCND				*e*	S	**Sg**	**21 10 02.6 +2.2**
HERN	**Volcan Telica**	**0.68**	**138**	⇓	P	**Pg**	**21 09 54.6 +0.7**
TEL3	**Telica 3**	**0.70**	**141**		P	**Pg**	**21 09 55.5 +1.3**
INTP	**Intipuca**	**0.74**	**276**	*e*	P	**Pg**	**21 09 55.1 +0.1**
INTP				*e*	S	**Sg**	**21 10 04.9 +0.3**
PLRN	**Geotermica Pol**	**0.74**	**136**		P	**Pg**	**21 09 55.4 +0.4**
ILCN	**San Idelfonso**	**0.79**	**132**	⇓	P	**Pg**	**21 09 56.5 +0.5**
ILCN					S	**Sg**	**21 10 07.8 +1.5**
CNGN	**Cerro Negro**	**0.85**	**136**	⇓	P	**Pg**	**21 09 57.4 +0.3**
CNGN					S	**Sg**	**21 10 08.2 +0.2**
CNGA	**Al SSO del Vol**	**0.85**	**137**		P	**Pg**	**21 09 57.3 +0.2**
CNGA					S	**Sg**	**21 10 08.9 +0.8**
MACN	**El Madrono**	**0.89**	**137**		P	**Pg**	**21 09 58.0 +0.1**
MACN					S	**Sg**	**21 10 10.2 +0.8**
LIMN	**Finca el Limon**	**0.91**	**93**	⇑	P	**Pn**	**21 10 00.2 -0.2**
LIMN					S	**Sn**	**21 10 14.4 +0.4**
OCON	**Estacion meteo**	**0.95**	**57**		P	Pn	21 10 02.4 +1.4
OCON					S	Sn	21 10 17.2 +2.3
BLLM	**Bellamira**	**0.97**	**290**	*e*	P	**Pb**	**21 09 59.7 -0.4**
BLLM				*e*	S	**Sg**	**21 10 13.2 +1.2**
VSM	**San Miguel**	**1.00**	**288**	*e*	P	**Pg**	**21 10 00.3 +0.4**
RANC	**El Ranchito**	**1.01**	**288**	⇑	P	**Pb**	**21 10 00.6 -0.4**
RANC	**El Ranchito**	**1.01**	**288**	*i*	P	**Pb**	**21 10 00.6 -0.4**
RANC					S	**Sb**	**21 10 15.4 +0.7**
LCY	**Lacayo**	**1.02**	**288**	*i*	P	**Pg**	**21 10 00.4 +0.1**
LCY				*i*	Sg	**Sg**	**21 10 14.8 +1.3**
MOMN	**Momotombo**	**1.02**	**133**		P	**Pg**	**21 10 00.5 +0.1**
MOMN					S	**Sg**	**21 10 14.3 +0.6**
MOM2	**El Cardon**	**1.04**	**130**		P	**Pn**	**21 10 01.1 -1.1**
MOM2					S	**Sb**	**21 10 15.8 +0.4**
PACA	**Pacayal**	**1.06**	**290**	⇓	P	**Pn**	**21 10 01.4 -1.0**
PACA					S	**Sn**	**21 10 17.1 -0.6**
PACA	**Pacayal**	**1.06**	**290**	⇓ *i*	P	**Pb**	**21 10 01.3 -0.4**
RCFN	**Al S de San Ju**	**1.14**	**69**		P	Pn	21 10 05.1 +1.5
RCFN					S

JAYA	**Jayaque - finc**	**2.16**	**285**	*e*P		**Pn**	**21 10 18.3**	**+0.7**
JAYA				S		**Sb**	**21 10 47.7**	**0.0**
JAYA	**Jayaque - finc**	**2.16**	**285**	*e*P		**Pn**	**21 10 18.4**	**+0.7**
JAYA				*e*S		**Sn**	**21 10 46.2**	**+1.3**
SNJE	**San Jose**	**2.37**	**289**	*e*P		**Pb**	**21 10 22.9**	**-1.1**
SNJE				*e*P		**Pg**	**21 10 23.6**	**-2.5**
CEVE	**Cerro Verde**	**2.37**	**288**	⇓*e*P		**Pb**	**21 10 23.7**	**-0.5**
SBLS	**San Blas**	**2.37**	**288**	*e*P		**Pb**	**21 10 22.8**	**-1.4**
SBLS				⇑*i*Sg		**Sg**	**21 10 56.1**	**-1.0**
MTO3	**Montecristo**	**2.37**	**303**	⇑*i*P		**Pg**	**21 10 23.8**	**-2.5**
NUBE	**Las Nubes**	**2.54**	**288**	P		**Pn**	**21 10 23.8**	**+0.9**
NUBE	**Las Nubes**	**2.54**	**288**	*e*P		**Pb**	**21 10 24.3**	**-2.7**
NUBE				*i*Sg		**Sb**	**21 10 59.7**	**+1.1**

*UCR **14** 21:33:58.3±2.1,2°.77S×83°.93W,h0km±999km, MB4.2(NEIC),Presumed earthquake*
*NEIC **14** 21:35:14.4±1.7,2°.7N±0°.1×84°.5W±0°.1,h10km±2km, mb4.2/5, Error ellipse: s-maj=25.6km s-min=13.7km az=239.0*
*IDC **14** 21:35:14.4±0.9,2°.94N×84°.13W,h0km,mb3.7/6, mbtmp3.8/8,ML3.8/2,MS3.5/27,Error ellipse: s-maj=68.6km s-min=20.1km az=59.0*
ISC 14 21:35:15.3±0.8,**2°.80N**±0°.09×**84°.3W**±0°.1,**h10**km,**n71,**
σ1§08/46,mb3.8/6,MS3.5/22,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALCO	**Alturas Coton,**	**6.28**	**13**	*e*P	**Pn**	**21 36 46.8**	**-1.3**
OTAV	**Otavalo**	**6.36**	**113**		**Pn**	**21 36 49.6**	**+0.1**
SLOR	**San Lorenzo -**	**6.76**	**121**	Pn	**Pn**	**21 36 56.7**	**+1.6**
PICV	**PH. Pirrs**	**6.78**	**1**	*e*P	**Pn**	**21 36 52.8**	**-2.2**
PIEC	**Cerro El Cedra**	**6.79**	**3**	*e*P	**Pn**	**21 36 53.8**	**-1.4**
VICA	**Volcano Irazu**	**7.15**	**3**	*e*P	**Pn**	**21 36 59.9**	**-0.5**
HDC	**Heredia**	**7.16**	**1**	Pn	**Pn**	**21 36 59.6**	**-0.6**
VTCV	**VTCV, Calle Va**	**7.16**	**4**	*e*P	**Pn**	**21 36 59.7**	**-0.6**
VTR0	**Volcan Turrial**	**7.19**	**4**	*e*P	**Pn**	**21 36 59.8**	**-1.2**
CVTR	**Volcan Turrial**	**7.19**	**4**	*e*P	**Pn**	**21 36 59.3**	**-1.6**
NYURE	**Nandayure**	**7.21**	**352**	*e*P	**Pn**	**21 36 59.9**	**-1.0**
CMARA	**Lajas Hojancha**	**7.26**	**351**	*e*P	**Pn**	**21 37 00.0**	**-1.5**
VBV1	**V. Barva**	**7.27**	**1**	*e*P	**Pn**	**21 37 00.1**	**-1.8**
JUD3	**Juan Diaz 3**	**7.42**	**350**	Pn	**Pn**	**21 37 03.2**	**-0.6**
JUD3	**Juan Diaz 3**	**7.42**	**350**	*e*P	**Pn**	**21 37 02.6**	**-1.2**
JTS	**Las Juntas de**	**7.47**	**355**	LR	LR	21 39 26.3	
	comp=Z,414nm,21.1s,baz=177,slow=34						
JTS	**Las Juntas de**	**7.47**	**355**	Pn	**Pn**	**21 37 03.8**	**-0.6**
JTS	**Las Juntas de**	**7.47**	**355**	*e*P	**Pn**	**21 37 03.9**	**-0.5**
CASO	**Castillo**	**7.60**	**357**	*e*P	**Pn**	**21 37 07.0**	**+0.8**
CHIK	**Chiripa**	**7.62**	**355**	*e*P	**Pn**	**21 37 06.7**	**+0.1**
ARE1	**Arenal 1**	**7.62**	**357**	*e*P	**Pn**	**21 37 07.7**	**+1.2**
VARE2	**V. Arenal**	**7.62**	**357**	*e*P	**Pn**	**21 37 07.8**	**+1.2**
CEDE	**Laguna Cedeo**	**7.65**	**357**	*e*P	**Pn**	**21 37 07.7**	**+0.8**
TABAC	**Tabacon**	**7.66**	**356**	*e*P	**Pn**	**21 37 08.3**	**+1.2**
COTE	**Lago Cote**	**7.75**	**355**	*e*P	**Pn**	**21 37 08.7**	**+0.4**
CUI	**Cuipilapa**	**7.86**	**354**	*e*P	**Pn**	**21 37 09.9**	**+0.1**
TENO	**El Achiote**	**7.88**	**355**	*e*P	**Pn**	**21 37 09.9**	**-0.2**
HORNC	**Hornillas**	**7.91**	**354**	*e*P	**Pn**	**21 37 10.5**	**0.0**
MESS	**Mesas**	**7.94**	**354**	*e*P	**Pn**	**21 37 11.4**	**+0.5**
LAPC	**Finca la Perla**	**8.00**	**352**	*e*P	**Pn**	**21 37 11.5**	**-0.2**
VRLE	**La Escondida,**	**8.01**	**352**	*e*P	**Pn**	**21 37 11.6**	**-0.2**
ROSC	**El Rosal**	**10.15**	**78**	Pn	**Pn**	**21 37 43.9**	**+2.4**
ATAH	**Atahualpa**	**11.49**	**149**	Pn	**Pn**	**21 37 58.7**	**-1.1**
	0.2nm,0.3s,baz=331,slow=10,SNR=1.7						
ATAH				LR	LR	21 42 01.6	
	comp=Z,249nm,19.3s,baz=320,slow=35 1.8nm,0.6s						
APG	**El Apazote**	**13.57**	**334**	LR	LR	21 42 49.3	
	comp=Z,31nm,20.1s,baz=248,slow=34						
SDV	**Santo Domingo**	**14.86**	**65**	LR	LR	21 44 02.1	
	comp=Z,135nm,21.5s,baz=258,slow=36						
SDV	**Santo Domingo**	**14.86**	**65**	Pn	**Pn**	**21 38 45.4**	**-0.4**
SDV				IAmb	IAmb	21 38 54.9	
	comp=Z,8.2nm,0.9s						
CZSB	**Cruzeiro do Su**	**15.58**	**132**	Pn	**Pn**	**21 38 53.8**	**-1.5**
NNA	**Nana**	**16.45**	**153**	Pn	**P**	**21 39 07.5**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=336,slow=18,SNR=1.6 comp=Z,5.1nm,0.3s						
CMIG	**Matias Romero**	**17.61**	**324**	LR	LR	21 44 46.4	
	comp=Z,162nm,21.2s,baz=184,slow=32						
SJG	**San Juan**	**23.40**	**48**	LR	LR	21 49 46.2	
	comp=Z,26nm,20.3s,baz=140,slow=38						
BOAV	**Boa Vista**	**23.74**	**90**	P	**P**	**21 40 28.3**	**+0.4**
BOAV				IAmb	IAmb	21 40 44.6	
	comp=Z,5.8nm,1.2s						
LPAZ	**La Paz**	**24.79**	**140**	P	**P**	**21 40 39.2**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=331,slow=7.6,SNR=5.9						
LPAZ				LR	LR	21 51 18.1	
	comp=Z,153nm,19.3s,baz=272,slow=39 comp=Z,1.1nm,0.5s						
LPAZ	**La Paz**	**24.79**	**140**	P	**P**	**21 40 38.2**	**-0.1**
LPAZ				IAmb	IAmb	21 40 54.8	
	comp=Z,9.9nm,1.2s						
TKL	**Tuckaleechee C**	**32.70**	**1**	LR	LR	21 54 56.6	
	comp=Z,65nm,18.7s,baz=212,slow=36						
LPIG	**La Paz**	**32.87**	**312**	LR	LR	21 51 17.5	
	comp=Z,52nm,19.6s,baz=170,slow=39						
H03N2	**Juan Fernandez**	**36.40**	**172**	T	T	22 20 57.2	
	baz=351,slow=76,SNR=21						
H03N1	**Juan Fernandez**	**36.40**	**172**	T	T	22 20 58.2	
	baz=351,slow=76,SNR=19						
H03N3	**Juan Fernandez**	**36.41**	**172**	T	T	22 20 57.0	
	baz=351,slow=76,SNR=18						
ANMO	**Albuquerque**	**38.05**	**330**	LR	LR	21 57 45.0	
	comp=Z,23nm,18.7s,baz=130,slow=36						
RPN	**Rapa Nui**	**38.33**	**217**	LR	LR	21 54 06.4	
	comp=Z,56nm,21.5s,baz=192,slow=29						
CPUP	**Villa Florida**	**38.96**	**140**	LR	LR	22 01 07.0	
	comp=Z,113nm,18.2s,baz=356,slow=40						
SADO	**Sadowa**	**42.04**	**5**	LR	LR	21 59 15.3	
	comp=Z,61nm,21.3s,baz=178,slow=34						
PFO	**Pinyon Flats O**	**42.92**	**319**	LR	LR	22 00 05.7	
	comp=Z,38nm,18.1s,baz=118,slow=35						
PLCA	**Paso Flores**	**45.11**	**165**	LR	LR	21 57 20.9	
	comp=Z,51nm,21.7s,baz=334,slow=29						
PDAR	**Pinedale Array**	**45.74**	**334**	P	**P**	**21 43 36.5**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=107,slow=5.4,SNR=5.8						
PDAR				LR	LR	22 03 37.8	
	comp=Z,80nm,19.5s,baz=142,slow=37 comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**45.74**	**334**	P	**P**	**21 43 35.8**	**-1.3**
NVAR	**Mina Array Bea**	**47.14**	**323**	P	**P**	**21 43 48.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=125,slow=7.4,SNR=4.6 comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	**48.29**	**350**	LR	LR	22 04 21.4	
	comp=Z,29nm,18.8s,baz=352,slow=36						
NEW	**Newport**	**53.35**	**333**	LR	LR	22 06 53.0	
	comp=Z,52nm,21.1s,baz=156,slow=36						
YKA	**Yellowknife Ar**	**63.69**	**345**	LR	LR	22 17 31.0	
	comp=Z,33nm,18.2s,baz=120,slow=40						
DLBC	**Dease Lake**	**65.93**	**336**	LR	LR	22 16 32.5	
	comp=Z,52nm,18.5s,baz=123,slow=38						
PPT	**Papeete**	**67.44**	**250**	LR	LR	22 08 35.5	
	comp=Z,90nm,19.2s,baz=108,slow=30						
RES	**Resolute Bay**	**72.08**	**357**	LR	LR	22 19 12.9	
	comp=Z,28nm,18.5s,baz=16,slow=37						
INK	**Inuvik**	**73.29**	**343**	LR	LR	22 20 12.1	
	comp=Z,41nm,20.8s,baz=130,slow=37						
ILAR	**Eielson Array**	**76.06**	**337**	P	**P**	**21 47 03.7**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=117,slow=6.3,SNR=2.2						
ILAR				LR	LR	22 22 13.2	
	comp=Z,51nm,20.1s,baz=87,slow=37 comp=Z,0.3nm,0.8s						
KDAK	**Kodiak Island**	**76.18**	**329**	LR	LR	22 19 39.8	
	comp=Z,30nm,18.6s,baz=146,slow=35						
BORG	**Borgarnes**	**76.19**	**23**	LR	LR	22 16 22.7	
	comp=Z,21nm,19.9s,baz=159,slow=32						
TORD	**Torodi Ar. Bea**	**85.46**	**77**	P	**P**	**21 47 53.4**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=264,slow=6.1,SNR=3.3 comp=Z,0.7nm,0.6s						
QSPA	**South Pole Qui**	**92.83**	**180**	P	**P**	**21 48 29.5**	**+1.5**
	comp=Z,1.5nm,1.0s,baz=138,slow=3.3,SNR=6.2						
QSPA				LR	LR	22 23 08.0	
	comp=Z,50nm,18.1s,baz=212,slow=31 comp=Z,1.5nm,1.0s						
KURBB	**Kurchatov Arra**	**124.78**	**13**	PKP	**PKiKP**	**21 54 16.7**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=337,slow=2.3,SNR=8.1						
MKAR	**Makanchi Array**	**129.22**	**12**	PKP	**PKiKP**	**21 54 25.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=339,slow=3.7,SNR=3.9						

*ISK **14** 21:48:42.9,34°.31N×25°.99E,h10km,ML2.9/10*
*IDC **14** 21:48:42.6±1.5,34°.48N×25°.63E,h0km,mb3.5/4, mbtmp3.4/7,ML3.1/3,MS2.9/1,Error ellipse: s-maj=42.6km s-min=25.3km az=151.0*
*THE **14** 21:48:47.5,35°.N±5°.×2°.6E±°,h0km±4km,M2.9/8,MLh2.9/8*
*ATH **14** 21:48:51.6±0.8,34°.59N×25°.96E,h38km±9km,ML3.1/7, Latitude uncertainty: 6 km; Longitude uncertainty: 3 km*
ISC 14 21:48:45.0±1.8,**34°.45N**±0°.08×**25°.94E**±0°.03,**h5**km±10km,
n40,σ1§36/51,mb3.4/3,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.70**	**19**	Pg	**Pb**	**21 48 59.5**	**-0.2**
ZKR				Sg	**Sn**	**21 49 11.2**	**-1.6**
ZKR	**Zakros**	**0.70**	**19**	P	**Pb**	**21 48 59.2**	**-0.5**
ZKR	**Zakros**	**0.70**	**19**	P	**Pn**	**21 49 04.0**	**+2.5**
ZKR				S	**Sn**	**21 49 13.4**	**+0.6**
STIA	**Sitia Lasithi**	**0.76**	**9**	P	**Pn**	**21 49 05.1**	**+2.8**
STIA				S	**Sn**	**21 49 14.9**	**+0.7**
SIT2	**Siteia**	**0.76**	**10**	P	**Pn**	**21 49 04.2**	**+1.8**
SIT2				S	**Sn**	**21 49 15.1**	**+0.7**
NPS	**Neapolis**	**0.85**	**342**	P	**Pg**	**21 49 00.7**	**-0.6**
NPS				S	**Sg**	**21 49 10.9**	**-1.5**
NPS	**Neapolis**	**0.85**	**342**	P	**Pn**	**21 49 06.5**	**+2.8**
NPS				S	**Sn**	**21 49 17.2**	**+0.6**
SIVA	**Sivas**	**1.09**	**301**	P	**Pg**	**21 49 04.8**	**-1.1**
SIVA				S	**Sg**	**21 49 18.8**	**-1.1**
IDI	**Anoyia**	**1.20**	**314**	Pn	**Pb**	**21 49 08.0**	**-0.3**
IDI				Sn	**Sn**	**21 49 26.6**	**+1.3**
IDI	**Anoyia**	**1.20**	**314**	P	**Pb**	**21 49 07.2**	**-1.0**
IDI				S	**Sg**	**21 49 23.1**	**-0.4**
IDI	**Anoyia**	**1.20**	**314**	P	**Pn**	**21 49 10.6**	**+2.1**
IDI				S	**Sn**	**21 49 25.1**	**-0.1**
KARP	**Karpathos**	**1.48**	**42**	Pn	**Pn**	**21 49 11.1**	**-1.3**
KARP	**Karpathos**	**1.48**	**42**	P	**Pg**	**21 49 14.6**	**+1.2**
KARP	**Karpathos**	**1.48**	**42**	P	**Pg**	**21 49 13.8**	**+0.5**
GVD	**Gavdhos**	**1.58**	**285**	Pn	**Pn**	**21 49 12.3**	**-1.3**
GVD	**Gavdhos**	**1.58**	**285**	P	**Pn**	**21 49 12.8**	**-0.8**
GVD	**Gavdhos**	**1.58**	**285**	P	**Pg**	**21 49 17.8**	**+2.6**
GVD				S	**Sb**	**21 49 36.2**	**+1.4**
VAM	**Vamos**	**1.72**	**304**	P	**Pn**	**21 49 16.0**	**+0.4**
VAM				S	**Sn**	**21 49 36.1**	**-1.8**
VAM	**Vamos**	**1.72**	**304**	P	**Pb**	**21 49 18.6**	**+1.5**
IMMV	**Iera Moni Meta**	**1.90**	**303**	Pn	**Pn**	**21 49 18.0**	**-0.1**
IMMV	**Iera Moni Meta**	**1.90**	**303**	P	**Pn**	**21 49 19.0**	**+0.9**
IMMV				S	**Sb**	**21 49 43.5**	**-0.6**
IMMV	**Iera Moni Meta**	**1.90**	**303**	P	**Pn**	**21 49 19.6**	**+1.5**
THERA	**Ancient Thera,**	**1.95**	**349**	P	**Pn**	**21 49 19.6**	**+0.9**
THERA	**Ancient Thera,**	**1.95**	**349**	P	**Pb**	**21 49 21.6**	**+0.6**
THR5	**Thira Island,**	**2.02**	**346**	Pn	**Pn**	**21 49 20.1**	**+0.4**
ARG	**Arkhangelos**	**2.51**	**45**	P	**Pn**	**21 49 28.4**	**+2.0**
DAT	**Datca**	**2.63**	**30**	Pn	**Pn**	**21 49 28.3**	**0.0**
BODT	**Bodrum**	**2.83**	**23**	Pn	**Pn**	**21 49 31.3**	**+0.4**
TURN	**Turunc**	**2.98**	**38**	Pn	**Pn**	**21 49 33.2**	**+0.3**
DALY	**Dalyan (Mula)**	**3.23**	**42**	Pn	**Pn**	**21 49 36.5**	**+0.1**
YER	**Yerkesik**	**3.28**	**35**	Pn	**Pn**	**21 49 37.4**	**+0.2**
VLI	**Veliai**	**3.33**	**314**	P	**Pn**	**21 49 39.8**	**+2.0**
MMAI	**Mount Meron Ar**	**8.01**	**98**	Pn	**Pn**	**21 50 44.9**	**+2.8**
	0.4nm,0.3s,baz=243,slow=13,SNR=2.1 0.3nm,0.4s						
KEST	**Kesra**	**13.65**	**280**	LR	LR	21 57 40.6	
	comp=Z,51nm,19.5s,baz=56,slow=40						
KBZ	**Khabaz**	**16.07**	**50**	Pn	**P**	**21 52 34.2**	**-0.8**
	0.1nm,0.3s,baz=238,slow=16,SNR=5.9 0.7nm,0.6s						
GERES	**GERESS Array B**	**17.01**	**331**	Pn	**Pn**	**21 52 42.0**	**-1.7**
	baz=159,slow=8.4,SNR=2.1 0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**30.54**	**232**	P	P	21 54 56.0	-3.5
	0.4nm,0.6s,baz=42,slow=12,SNR=2.8 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**41.07**	**50**	P	**P**	**21 56 29.2**	**-0.2**
	0.8nm,0.9s,baz=277,slow=8.8,SNR=12 0.8nm,0.9s						
MKAR	**Makanchi Array**	**43.63**	**56**	P	**P**	**21 56 50.4**	**+0.1**
	0.3nm,0.6s,baz=277,slow=7.0,SNR=8.8 0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.03**	**46**	P	**P**	**21 57 00.5**	**-0.9**
	0.2nm,0.3s,baz=258,slow=5.7,SNR=4.0 0.2nm,0.3s						

*IDC **14** 22:15:15.1±0.9,54°.80N×111°.97E,h0km,mb3.4/9, mbtmp3.6/15,ML3.9/4,MS3.2/8,Error ellipse: s-maj=16.0km s-min=14.5km az=125.0*
*MOS **14** 22:15:15.7±1.1,54°.86N×111°.71E,h10km,mb3.7/1,Error ellipse: s-maj=13.2km s-min=7.4km az=73.3*
*BYKL **14** 22:15:17.2±0.1,54°.87N×111°.70E,h9km±3km*
ISC 14 22:15:15.3±0.5,**54°.83N**±0°.02×**111°.79E**±0°.02,**h10**km,**n72,**
σ2§95/120,mb3.4/7,MS3.3/7,2C-5D,Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.36**	**277**	⇓*i*Pg	**Pg**	**22 15 22.6**	**0.0**
	440nm,0.4s						
YLYR				⇓*i*Pg	**Pg**	**22 15 22.6**	**0.0**
	5μm,0.4s						
YLYR				⇑*i*Pg	**Pg**	**22 15 22.6**	**0.0**
	4μm,0.4s						
YLYR				Pmax		22 15 22.8	
	3μm,0.2s						
YLYR				*e*Sg	**Sg**	**22 15 27.3**	**-0.1**
YLYR				Smax		22 15 27.6	
	11μm,0.3s						
KMO	**Kumora**	**1.11**	**343**	⇑*i*Pg	**Pb**	**22 15 35.7**	**-0.9**
KMO				Pmax		22 15 36.2	
	565nm,0.4s						
KMO				*e*Sg	**Sg**	**22 15 50.3**	**-0.7**
KMO				*e*Sb	**Sn**	**22 15 53.0**	**+0.7**
KMO				max		22 16 00.5	
	2μm,1.0s						
UKT	**Uakit**	**1.24**	**57**	⇓*i*PG	**Pg**	**22 15 39.2**	**0.0**
UKT				*e*		22 15 56.9	
UKT				pmax	pmax		
	comp=Z,365nm,0.6s						
UKT				smax	smax		
	comp=N,2μm,1.2s						
UKT	**Uakit**	**1.24**	**57**	*e*Pg	**Pg**	**22 15 39.2**	**0.0**
UKT				*e*Pb	**Pb**	**22 15 40.5**	**+1.5**
UKT				*e*		22 15 42.0	
UKT				max		22 15 42.1	
	comp=N,369nm,0.4s						
UKT				*e*		22 15 43.5	
UKT				*e*Sg	**Sn**	**22 15 56.4**	**+0.7**
UKT				*e*Sb	**Sg**	**22 15 57.8**	**+2.4**
UKT				max		22 16 03.8	
	comp=N,2μm,1.0s						
YOAB	**Uoyan, Buryati**	**1.31**	**358**	*e*PG	**Pg**	**22 15 39.9**	**-0.5**
YOAB				*e*		22 15 57.9	
YOAB				pmax	pmax		
	comp=Z,136nm,0.2s						
YOAB				smax	smax		
	comp=E,2μm,0.5s						
YOAB	**Uoyan, Buryati**	**1.31**	**358**	*e*Pg	**Pg**	**22 15 40.0**	**-0.5**
YOAB				Pmax		22 15 44.2	
	comp=E,212nm,0.3s						
YOAB				*e*Sg	**Sg**	**22 15 57.8**	**+0.3**
YOAB				*e*		22 16 02.2	
YOAB				max		22 16 16.7	
	comp=E,2μm,0.6s						
SYVR	**Suvo**	**1.58**	**222**	*e*PN	**Pg**	**22 15 45.4**	**-0.2**
SYVR				*e*		22 16 06.8	
SYVR				pmax	pmax		
	comp=Z,303nm,0.5s						
SYVR				smax	smax		
	comp=E,2μm,0.7s						
SYVR	**Suvo**	**1.58**	**222**	*e*Pg	**Pg**	**22 15 45.4**	**-0.2**
SYVR				Pmax		22 15 47.2	
	comp=E,304nm,0.6s						
SYVR				*e*Sg	**Sg**	**22 16 06.8**	**+0.8**
SYVR				Smax		22 16 09.9	
	comp=E,2μm,0.4s						
SYVR				*e*		22 16 25.4	
NIZB	**Nizh Angarsk**	**1.59**	**307**	*e*PG	**Pb**	**22 15 44.8**	**0.0**
NIZB				*e*		22 16 05.8	
NIZB				pmax	pmax		
	comp=Z,182nm,0.4s						
NIZB				smax	smax		
	comp=E,817nm,0.3s						
NIZB	**Nizh Angarsk**	**1.59**	**307**	*e*Pg	**Pb**	**22 15 44.3**	**-0.5**
NIZB				Pmax		22 15 46.8	
	comp=E,181nm,0.4s						
NIZB				*e*Sg	**Sb**	**22 16 05.7**	**+0.8**
NIZB				*e*		22 16 08.3	
NIZB				max		22 16 09.3	
	comp=E,817nm,0.3s						
SVKR	**Severomuysk**	**1.64**	**37**	*e*PN	**Pg**	**22 15 47.4**	**+0.7**
SVKR				*e*		22 16 09.3	
SVKR				pmax	pmax		
	comp=Z,585nm,0.4s						
SVKR				smax	smax		
	comp=E,3μm,0.3s						
SVKR	**Severomuysk**	**1.64**	**37**	*e*Pg	**Pg**	**22 15 47.4**	**+0.7**
SVKR				*e*Pb	**Pb**	**22 15 48.2**	**+2.6**
SVKR				max		22 15 48.4	
	comp=E,587nm,0.4s						
SVKR				*e*Sg	**Sg**	**22 16 09.5**	**+1.6**
SVKR				Smax		22 16 14.8	
	comp=E,3μm,0.3s						
MXMB	**Maximikha**	**2.39**	**230**	*e*Pn	**Pb**	**22 15 57.1**	**-1.3**
MXMB				*e*Pg	**Pg**	**22 16 00.3**	**-0.7**
MXMB				*e*Sn	**Sb**	**22 16 26.1**	**-1.7**
MXMB				*e*Sg	**Sg**	**22 16 31.0**	**-0.9**
OGRR	**Ongureny**	**2.73**	**246**	*e*PN	**Pn**	**22 16 01.6**	**+2.3**
OGRR				*e*		22 16 06.1	
OGRR				*e*		22 16 40.6	
OGRR				pmax	pmax		
	comp=Z,75nm,0.3s						
OGRR				smax	smax		
	comp=N,566nm,0.6s						
OGRR	**Ongureny**	**2.73**	**246**	*e*Pn	**Pn**	**22 16 01.5**	**+2.3**
OGRR				*e*Pg	**Pb**	**22 16 05.6**	**+1.3**
OGRR				Pmax		22 16 07.2	
	comp=N,76nm,0.3s						
OGRR				*e*Sn	**Sn**	**22 16 34.2**	**+1.8**
OGRR				*e*Sg	**Sg**	**22 16 41.0**	**-2.1**
OGRR				Smax		22 16 42.4	
	comp=N,566nm,0.4s						
NLYR	**Nelyaty**	**2.77**	**52**	*e*PN	**Pb**	**22 16 02.3**	**-2.6**
NLYR				*e*		22 16 07.4	
NLYR				*e*		22 16 43.9	
NLYR				pmax	pmax		
	comp=Z,160nm,0.8s						
NLYR				smax	smax		
	comp=E,854nm,1.5s						
NLYR	**Nelyaty**	**2.77**	**52**	⇓*i*Pn	**Pb**	**22 16 02.7**	**-2.2**
NLYR				*e*Pg	**Pg**	**22 16 07.3**	**-1.1**
NLYR				Pmax		22 16 14.0	
	comp=E,160nm,0.8s						
NLYR				*e*Sg	**Sg**	**22 16 43.9**	**-0.4**
NLYR				Smax		22 16 47.4	
	comp=E,866nm,1.2s						
GORB	**Goryachinsk**	**2.78**	**230**	*e*Pn	**Pn**	**22 16 02.3**	**+2.4**
GORB				*e*Pg	**Pg**	**22 16 07.2**	**-1.3**
GORB				*e*Sg	**Sg**	**22 16 43.3**	**-1.2**
UZR	**Uzur**	**2.82**	**239**	*e*Pn	**Pn**	**22 16 02.6**	**+2.1**
UZR				*e*Pg	**Pb**	**22 16 07.4**	**+1.6**
UZR				Pmax		22 16 09.3	
	comp=E,22nm,0.2s						
UZR				*e*Sn	**Sn**	**22 16 36.1**	**+1.5**
UZR				*e*Sg	**Sg**	**22 16 44.3**	**-1.7**
UZR				Smax		22 16 45.7	
	comp=E,417nm,0.5s						
CIT	**Chita**	**3.01**	**159**	*e*PN	**Pg**	**22 16 10.8**	**-2.2**
CIT				*e*		22 16 50.7	
CIT				pmax	pmax		
	comp=Z,198nm,0.8s						
CIT				smax	smax		
	comp=E,2μm,0.2s						
CIT	**Chita**	**3.01**	**159**	*e*Pg	**Pg**	**22 16 11.5**	**-1.5**
CIT				Pmax		22 16 16.4	
	comp=E,136nm,0.3s						
CIT				*e*Sg	**Sg**	**22 16 51.2**	**-0.7**
CIT				Smax		22 16 53.9	
	comp=E,2μm,0.3s						
CIT				*e*		22 16 59.4	
BOD	**Bodaibo**	**3.24**	**22**	*e*PN	**Pn**	**22 16 07.7**	**+1.6**
BOD				*e*		22 16 14.8	
BOD				*e*		22 16 57.2	
BOD				pmax	pmax		
	comp=Z,43nm,0.5s						
BOD				smax	smax		
	comp=N,229nm,0.5s						
BOD	**Bodaibo**	**3.24**	**22**	*e*Pn	**Pn**	**22 16 08.9**	**+2.8**
BOD				*e*Pg	**Pg**	**22 16 14.8**	**-2.5**
BOD				Pmax		22 16 19.5	
	comp=N,43nm,0.5s						
BOD				*e*Sg	**Sg**	**22 16 56.3**	**-2.9**
BOD				Smax		22 17 06.9	
	comp=N,222nm,0.5s						
TRG	**Tyrgan**	**3.84**	**239**	*e*PN	**Pn**	**22 16 15.9**	**+1.5**
TRG				*e*		22 16 25.2	
TRG				*e*S	**Sn**	**22 17 00.6**	**+1.0**
TRG				*e*		22 17 14.6	
TRG				pmax	pmax		
	comp=Z,30nm,0.4s						
TRG				smax	smax		
	comp=E,249nm,0.4s						
TRG	**Tyrgan**	**3.84**	**239**	*e*Pn	**Pn**	**22 16 16.7**	**+2.3**
TRG				*e*Pg	**Pb**	**22 16 25.0**	**+1.9**
TRG				Pmax		22 16 27.9	
	comp=E,30nm,0.4s						
TRG				*e*Sg	**Sg**	**22 17 14.7**	**-3.7**
TRG				Smax		22 17 21.3	
	comp=E,246nm,0.4s						
UUDB	**Ulan-Yde**	**3.87**	**221**	*e*Pn	**Pn**	**22 16 17.2**	**+2.4**
UUDB				*e*Pg	**Pg**	**22 16 27.2**	**-2.1**
UUDB				Pmax		22 16 30.4	
	comp=E,66nm,0.6s						
UUDB				*e*Sg	**S

	comp=E,264nm,1.1s							
IRK	**Irkutsk**	**5.18**	**243**	*e*Pg		**Pb**	**22 16 49.0**	**+3.1**
IRK				Pmax			22 16 51.6	
	comp=E,27nm,0.1s							
IRK				*e*Sg		**Sg**	**22 17 56.0**	**-5.5**
IRK				Smax			22 18 02.7	
	comp=E,435nm,0.5s							
IVK	**Ivanovka**	**5.36**	**239**	*e*Pn		**Pn**	**22 16 37.4**	**+2.0**
IVK				*e*Pg		**Pb**	**22 16 52.5**	**+3.4**
IVK				Pmax			22 16 59.3	
	comp=E,29nm,0.6s							
IVK				*e*Sg		**Sg**	**22 18 01.6**	**-5.8**
IVK				Smax			22 18 13.1	
	comp=E,209nm,1.1s							
TLY	**Talaya**	**5.82**	**240**	Pn		**Pn**	**22 16 44.0**	**+2.4**
	comp=E,0.9nm,0.3s,baz=62,slow=9.6,SNR=6.2							
TLY				Lg	Lg		22 18 12.1	
	comp=E,4.2nm,0.3s,baz=108,slow=20,SNR=7.8							
	comp=E,2.3nm,0.4s							
YKLR	**Yuktali**	**5.85**	**68**	*e*Sg		**Sg**	**22 18 19.7**	**-3.2**
ARS	**Arshan**	**6.32**	**246**	*e*Pg		Pb	22 17 10.3	+5.0
ARS				Pmax			22 17 17.1	
	comp=E,32nm,0.6s							
ARS				*e*Sg		**Sg**	**22 18 32.1**	**-5.9**
ARS				Smax			22 18 34.7	
	comp=E,380nm,0.9s							
ZAK	**Zakamensk**	**6.83**	**233**	*e*PG		**Pg**	**22 17 24.7**	**-1.4**
ZAK				*e*			22 18 49.4	
ZAK				pmax	pmax			
	comp=Z,5.0nm,0.5s							
ZAK				smax	smax			
	comp=N,60nm,0.8s							
ZAK	**Zakamensk**	**6.83**	**233**	*e*Pn		**Pn**	**22 16 58.0**	**+2.4**
ZAK				*e*Pg		Pg	22 17 20.3	-5.8
ZAK				Pmax			22 17 29.3	
	comp=N,16nm,0.7s							
ZAK				*e*Sg		**Sg**	**22 18 49.5**	**-5.0**
ZAK				Smax			22 19 11.0	
	comp=N,62nm,1.2s							
HILR	**Hailar Array B**	**7.20**	**134**	Pn		**Pn**	**22 17 01.5**	**+0.9**
	baz=326,slow=14							
HILR				Lg	Lg		22 19 00.7	
	baz=336,slow=31							
	comp=N,3.4nm,0.3s							
MOY	**Mondy**	**7.21**	**248**	*e*PG		Pg	22 17 28.1	-5.2
MOY				*e*			22 18 59.4	
MOY				pmax	pmax			
	comp=Z,14nm,0.7s							
MOY				smax	smax			
	comp=E,156nm,0.7s							
MOY	**Mondy**	**7.21**	**248**	*e*Pn		**Pn**	**22 17 04.4**	**+3.6**
MOY				*e*Pg		Pb	22 17 25.5	+4.9
MOY				Pmax			22 17 30.9	
	comp=E,15nm,0.7s							
MOY				*e*			22 18 23.6	
MOY				*e*Sg		**Sg**	**22 18 58.4**	**-8.2**
MOY				Smax			22 19 14.6	
	comp=E,156nm,1.3s							
HIA	**Hailar**	**7.42**	**135**	*e*Sg		**Sg**	**22 19 09.6**	**-3.8**
HIA				Smax			22 19 27.6	
	comp=E,144nm,1.8s							
ORL	**Orlik**	**7.47**	**257**	*e*Pn		**Pn**	**22 17 07.7**	**+3.2**
ORL				*e*			22 18 29.7	
ORL				*e*Sg		**Sg**	**22 19 06.5**	**-8.5**
ORL				Smax			22 19 14.0	
	comp=E,136nm,1.2s							
ULN	**Ulaanbaatar**	**7.58**	**205**	*e*Pn		**Pn**	**22 17 08.3**	**+2.4**
ULN				*e*Pg		Pg	22 17 33.8	-6.6
ULN				Pmax			22 17 39.4	
	comp=E,11nm,0.5s							
ULN				*e*			22 18 33.6	
ULN				*e*Sg		**Sg**	**22 19 12.0**	**-6.4**
ULN				Smax			22 19 34.5	
	comp=E,172nm,1.8s							
CLNS	**Chul'man**	**7.65**	**69**	*e*Pg		Pg	22 17 35.9	-5.7
CLNS				*e*Sn		**Sn**	**22 18 32.7**	**-0.7**
CLNS				*e*Sg		**Sg**	**22 19 15.8**	**-4.8**
SONM	**Songino Array**	**7.78**	**208**	Pn		**Pn**	**22 17 11.3**	**+2.7**
	comp=E,2.6nm,0.3s,baz=23,slow=12,SNR=36							
SONM				Sn		**Sn**	**22 18 42.4**	**+5.6**
	comp=E,1.7nm,0.3s,baz=27,slow=26,SNR=2.8							
SONM				Lg	Lg		22 19 20.6	
	comp=E,3.2nm,0.3s,baz=23,slow=27,SNR=6.0							
	comp=E,3.8nm,0.3s							
YAK	**Yakutsk**	**11.80**	**45**	Sn		**Sn**	**22 20 06.2**	**-8.8**
	comp=E,2.9nm,0.3s,baz=225,slow=8.6,SNR=1.7							
YAK				Lg	Lg		22 21 17.9	
	comp=E,0.7nm,0.3s,baz=180,slow=10,SNR=5.1							
ZALV	**Zalesovo Beam**	**15.70**	**278**	Pn		**Pn**	**22 18 56.9**	**+0.5**
	comp=E,3.4nm,0.9s,baz=80,slow=11,SNR=11							
ZALV				Lg	Lg		22 23 25.6	
	baz=67,slow=30							
USRK	**Ussuriysk Ar.**	**16.82**	**121**	Lg		Lg	22 24 03.7	
	comp=E,0.1nm,0.3s,baz=314,slow=26,SNR=5.7							
NRIK	**Noril'sk**	**18.23**	**332**	P		**P**	**22 19 28.1**	**-0.2**
	comp=E,0.4nm,0.3s,baz=128,slow=14,SNR=2.4							
NRIK				S		**Sn**	**22 22 42.3**	**-9.1**
	comp=E,2.8nm,0.7s,baz=116,slow=18,SNR=2.2							
NRIK				Lg	Lg		22 24 45.0	
	comp=E,0.3nm,0.3s,baz=173,slow=8.1,SNR=1.5							
NRIK				LR	LR		22 28 06.5	
	comp=E,68nm,18.3s,baz=96,slow=42							
	comp=E,1.8nm,0.4s							
LZDM	**Lanzhou Array**	**19.69**	**200**	P		**Pn**	**22 19 46.6**	**+0.3**
	comp=E,1.2nm,0.3s,baz=34,slow=14,SNR=2.6							
MKAR	**Makanchi Array**	**20.18**	**259**	P		Pn	22 19 53.2	+1.5
	comp=E,0.4nm,0.5s,baz=54,slow=6.2,SNR=6.6							
MKAR				Lg		Lg	22 25 49.5	
	comp=E,0.1nm,0.3s,baz=53,slow=28,SNR=5.7							
	comp=E,0.4nm,0.5s							
KURK	**Kurchatov**	**20.37**	**272**	P		Pn	22 19 54.1	+0.3
KURBB	**Kurchatov Arra**	**20.46**	**272**	P		Pn	22 19 54.1	-0.8
	comp=E,0.8nm,0.5s,baz=70,slow=11,SNR=7.8							
KURBB				Lg		Lg	22 26 01.0	
	baz=76,slow=31,SNR=1.8							
	comp=E,0.8nm,0.5s							
KSRS	**Korea Array**	**20.58**	**141**	LR		LR	22 28 43.4	
	comp=E,22nm,18.4s,baz=240,slow=40							
SEY	**Seymchan**	**22.14**	**52**	P		**P**	**22 20 12.9**	**+2.2**
	comp=E,0.5nm,0.3s,baz=253,slow=19,SNR=1.6							
	comp=E,0.5nm,0.3s							
BVAR	**Borovoye Array**	**24.19**	**283**	P		**P**	**22 20 34.6**	**+3.0**
	comp=E,1.0nm,0.5s,baz=74,slow=9.1,SNR=6.4							
	comp=E,1.0nm,0.5s							
AKTO	**Aktyubinsk**	**32.25**	**285**	LR		LR	22 36 08.0	
	comp=E,39nm,19.6s,baz=118,slow=39							
ARCES	**ARCESS Array B**	**39.04**	**326**	LR		LR	22 43 10.2	
	comp=E,40nm,19.3s,baz=106,slow=43							
FINES	**FINESS Array B**	**42.60**	**315**	P		**P**	**22 23 12.7**	**+1.6**
	comp=E,0.3nm,0.4s,baz=63,slow=9.5,SNR=5.5							
	comp=E,0.3nm,0.4s							
GNI	**Garni**	**45.83**	**280**	LR		LR	22 45 20.3	
	comp=E,41nm,18.7s,baz=12,slow=39							
ILAR	**Eielson Array**	**46.51**	**35**	P		**P**	**22 23 43.2**	**+1.0**
	comp=E,0.2nm,0.5s,baz=297,slow=4.0,SNR=4.4							
	comp=E,0.2nm,0.5s							
AKASG	**Malin Array Be**	**47.38**	**301**	LR		LR	22 47 19.6	
	comp=E,30nm,18.7s,baz=314,slow=40							
HFS	**Hagfors**	**48.29**	**318**	P		**P**	**22 23 57.8**	**+1.6**
	comp=E,1.4nm,0.8s,baz=62,slow=10.0,SNR=5.5							
	comp=E,1.4nm,0.8s							
NOA	**NORSAR Array B**	**48.63**	**320**	P		**P**	**22 24 01.6**	**+2.8**
	comp=E,0.3nm,0.8s,baz=51,slow=7.9,SNR=1.6							
NOA				LR		LR	22 48 36.1	
	comp=E,18nm,19.4s,baz=50,slow=41							
	comp=E,0.3nm,0.8s							
VRAC	**Vranov**	**54.38**	**307**	LR		LR	22 50 29.3	
	comp=E,42nm,18.7s,baz=217,slow=39							
WRA	**Warramunga Arr**	**76.93**	**158**	P		**P**	**22 27 06.8**	**-0.9**
	comp=E,0.3nm,0.6s,baz=348,slow=6.1,SNR=5.1							
	comp=E,0.3nm,0.6s							

SOME ***14*** *22:29:55.9, 47.62N×81.45E, h10km*
ASRS ***14*** *22:29:55.5±0.3, 48.2N×8.2E±°, h8km, MLh3.4/12, Error ellipse: s-maj=4.7km s-min=3.4km az=118.8, confirmed*
NNC ***14*** *22:29:56.6±0.8, 47.60N×81.62E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=8.6km s-min=4.0km az=59.0*

ISC 14 22:29:55.9±0.8,**47.73N**±0.02×**81.60E**±0.03,**h10**km,**n32,** σ1§91/57,**7C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**0.96**	**164**	⇓P	**Pg**	**22 30 13.1**	**-1.2**
	4.1nm,0.3s						
MAKZ				⇓S	**Sg**	**22 30 24.4**	**-2.3**
	25nm,0.4s						
MAKZ	**Makanchi**	**0.96**	**164**	Pg	**Pg**	**22 30 13.3**	**-0.9**
MAKZ				Sg	**Sg**	**22 30 24.4**	**-2.3**
MK31	**Makanchi Array**	**1.05**	**153**	⇓P	**Pg**	**22 30 15.0**	**-1.0**
	2.6nm,0.2s,baz=298,slow=11,SNR=1371						
MK31				⇓S	**Sg**	**22 30 26.6**	**-3.0**
	20nm,0.4s,baz=337,slow=32,SNR=45						
ZSN	**Zaisan**	**2.23**	**96**	Pg	**Pg**	**22 30 38.2**	**-0.4**
	15nm,0.3s						
ZSN				Lg	Lg	22 31 08.1	
	104nm,0.2s						
ZSN	**Zaisan**	**2.23**	**96**	*e*P	**Pg**	**22 30 38.2**	**-0.4**
	15nm,0.3s						
ZSN				*e*S	**Sg**	**22 31 08.1**	**+0.6**
	104nm,0.2s						
SEM	**Semipalatinsk**	**2.83**	**342**	Pg	**Pg**	**22 30 49.1**	**-0.9**
	5.9nm,0.2s						
SEM				Lg	Lg	22 31 27.4	
	45nm,0.3s						
SEM	**Semipalatinsk**	**2.83**	**342**	*e*P	**Pg**	**22 30 49.1**	**-0.9**
	7.2nm,0.2s						
SEM				*e*S	**Sg**	**22 31 27.4**	**+0.8**
	47nm,0.1s						
KAPS	**Kapalarasan**	**2.89**	**213**	Pg	**Pb**	**22 30 45.6**	**-2.0**
	1.6nm,0.1s						
KAPS				Lg	Lg	22 31 21.6	
	52nm,0.1s						
KAPS	**Kapalarasan**	**2.89**	**213**	*e*P	**Pb**	**22 30 45.6**	**-2.0**
	1.6nm,0.1s						
KAPS				*e*S	**Sb**	**22 31 21.6**	**-1.5**
	52nm,0.1s						
KURBB	**Kurchatov Arra**	**3.53**	**326**	⇑Pg	**Pg**	**22 31 02.9**	**-0.5**
	2.0nm,0.3s						
KURBB				⇑Lg	Lg	22 31 53.6	
	52nm,0.7s						
KURK	**Kurchatov**	**3.57**	**328**	⇑Pg	**Pg**	**22 31 03.3**	**-0.9**
	0.3nm,0.2s						
KURK				⇑Lg	Lg	22 31 53.6	
	6.5nm,0.5s						
KURK	**Kurchatov**	**3.57**	**328**	Pg	**Pg**	**22 31 03.2**	**-1.1**
KURK				Sg	**Sg**	**22 31 50.8**	**+0.3**
DJR	**Jarkent**	**3.62**	**201**	Pg	**Pb**	**22 31 01.1**	**+1.0**
	2.1nm,0.4s						
DJR				Lg	Lg	22 31 47.7	
	8.0nm,0.4s						
DJR	**Jarkent**	**3.62**	**201**	*e*P	**Pb**	**22 31 01.1**	**+1.0**
	2.1nm,0.4s						
DJR				*e*S	**Sb**	**22 31 47.7**	**+3.6**
	8.0nm,0.4s						
KNOS	**Konyrlen**	**3.77**	**207**	Pg	**Pb**	**22 31 01.9**	**-0.7**
	1.0nm,0.1s						
KNOS				Lg	Lg	22 31 48.1	
	4.7nm,0.3s						
UKR	**Ust'-Kan**	**3.82**	**32**	Pn	**Pb**	**22 30 59.1**	**-4.4**
UKR				Pg	**Pg**	**22 31 08.8**	**-0.3**
UKR				Sg	**Sg**	**22 31 58.8**	**+0.1**
TUNR	**Tungur**	**3.96**	**50**	Pn	**Pn**	**22 30 55.9**	**-0.8**
TUNR				Pg	**Pg**	**22 31 11.8**	**+0.2**
TUNR				Sg	**Sg**	**22 32 04.2**	**+1.4**
BLB	**Baldybastay**	**4.23**	**212**	Pg	**Pb**	**22 31 12.0**	**+1.5**
	1.1nm,0.1s						
BLB				Lg	Lg	22 32 06.4	
	7.4nm,0.5s						
DGZ	**Jazzator, Alta**	**4.34**	**61**	Pg	**Pb**	**22 31 14.2**	**+1.9**
DGZ				Sg	**Sg**	**22 32 13.6**	**-1.5**
ELDR	**Elanda**	**4.56**	**38**	Pg	**Pg**	**22 31 21.2**	**-1.9**
ELDR				Sg	**Sg**	**22 32 23.1**	**+1.0**
PDGK	**Podgornoye**	**4.64**	**199**	⇑Pn	**Pn**	**22 31 08.8**	**+2.6**
	1.8nm,0.6s						
PDGK				⇑Sn	**Sn**	**22 32 01.7**	**+1.6**
	1.9nm,0.5s						
PDGK				⇑Lg	Lg	22 32 19.3	
	19nm,0.7s						
CHBI	**Chibit, Altay**	**4.67**	**54**	Pg	**Pg**	**22 31 23.6**	**-1.6**
CHBI				Sg	**Sg**	**22 32 26.7**	**+1.0**
AKAR	**Aktash**	**4.74**	**55**	Pg	**Pg**	**22 31 26.5**	**-0.1**
SHLS	**Shalkode**	**4.81**	**199**	Pg	**Pb**	**22 31 20.5**	**+0.2**
	2.3nm,0.2s						
SHLS				Lg	Lg	22 32 22.2	
	18nm,0.5s						
SHLS	**Shalkode**	**4.81**	**199**	*e*P	**Pb**	**22 31 20.5**	**+0.2**
	2.3nm,0.2s						
SHLS				*e*S	**Sb**	**22 32 22.2**	**+3.9**
	18nm,0.5s						
UZB	**Uzynbulak**	**4.93**	**203**	Pg	**Pb**	**22 31 23.9**	**+1.6**
	1.6nm,0.4s						
UZB				Lg	Lg	22 32 27.6	
	10nm,0.3s						
UZB	**Uzynbulak**	**4.93**	**203**	*e*P	**Pb**	**22 31 23.9**	**+1.6**
	1.6nm,0.4s						
UZB				*e*S	**Sg**	**22 32 27.6**	**-6.4**
	10nm,0.3s						
CUR	**Chagan-Uzun**	**5.04**	**59**	Pn	**Pn**	**22 31 14.8**	**+3.1**
CUR				Pg	**Pg**	**22 31 32.1**	**-0.4**
CUR				Sg	**Sg**	**22 32 37.1**	**-0.6**
ULGR	**Ulagan, Altay**	**5.08**	**53**	Pn	**Pn**	**22 31 13.8**	**+1.7**
ULGR				Pg	**Pg**	**22 31 33.3**	**+0.1**
ULGR				Sg	**Sg**	**22 32 36.7**	**-2.2**
ARTR	**Artybash**	**5.49**	**40**	Pn	**Pn**	**22 31 17.8**	**+0.1**
ARTR				Sg	**Sg**	**22 32 50.6**	**-1.5**
YALR	**Yailyu, Altay**	**5.62**	**42**	Pn	Pn	22 31 25.0	+5.6
YALR				Sg	**Sg**	**22 32 54.6**	**-1.5**
TEL	**Teeli**	**6.51**	**56**	Pn	**Pn**	**22 31 29.5**	**-2.3**
TEL				Pg	**Pg**	**22 31 58.0**	**-2.5**
TEL				Sg	**Sg**	**22 33 24.1**	**-0.6**

RSNC ***14*** *22:29:57.2±0.4, 3°S±3°×7°6W±°, h0km, M3.4, mb4.5, ML3.1*
IGQ ***14*** *22:30:03.8±0.7, 3°S±3°×7°7W±°, h115km±6km, M3.6/14, MLv3.6/14*

ISC 14 22:29:59.2±1.4,**2.73S**±0.06×**76.52W**±0.06,**h146**km±16km, **n44,** σ1§98/51,**1C-16D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAIS	**Taisha**	**1.04**	**289**	P	**Pn**	**22 30 25.0**	**+1.0**
TAIS				S	**Sn**	**22 30 42.2**	**-0.6**
PKYU	**Pakayacu**	**1.52**	**315**	⇓P	**Pn**	**22 30 29.5**	**+0.7**
PKYU				S	**Sn**	**22 30 49.7**	**-1.6**
PUYO	**Puyo, Santa Ro**	**1.94**	**309**	⇓P	**Pn**	**22 30 34.7**	**+1.1**
PUYO				S	**Sn**	**22 30 58.3**	**-1.6**
BPAT	**Tungurahua Vol**	**2.27**	**302**	⇓P	**Pn**	**22 30 39.0**	**+1.1**
ARRY	**Arrayan**	**2.29**	**302**	⇓P	**Pn**	**22 30 38.9**	**+1.0**
JUI6	**Juive**	**2.34**	**303**	P	**Pn**	**22 30 39.1**	**+0.5**
BBIL	**Ulba Tungurahu**	**2.34**	**303**	⇑P	**Pn**	**22 30 40.0**	**+1.4**
PIAT	**Ana Tenorio**	**2.45**	**314**	⇓P	**Pn**	**22 30 41.0**	**+1.1**
PIAT	**Ana Tenorio**	**2.45**	**314**	P	**Pn**	**22 30 40.3**	**+0.4**
PIAT				S	**Sn**	**22 31 09.8**	**-1.4**
IGUA	**Igualata**	**2.45**	**300**	P	**Pn**	**22 30 42.5**	**+2.3**
PIS1	**Pisayambo**	**2.50**	**311**	P	**Pn**	**22 30 42.2**	**+1.5**
PORT	**Chimborazo Vol**	**2.58**	**299**	P	**Pn**	**22 30 44.0**	**+2.3**
CHSH	**Refugio Sur-Vo**	**2.65**	**297**	P	**Pn**	**22 30 45.4**	**+2.7**
VCES	**Cotopaxi**	**2.68**	**315**	⇓P	**Pn**	**22 30 44.8**	**+1.8**
TAMB	**Tambo**	**2.74**	**317**	P	**Pn**	**22 30 45.6**	**+1.9**
ANTS	**Antisana-Sarah**	**2.76**	**323**	⇓P	**Pn**	**22 30 45.5**	**+1.4**
ANTM	**Antisana-La Mi**	**2.76**	**322**	⇓P	**Pn**	**22 30 45.5**	**+1.5**
BTAM	**Cotopaxi Volca**	**2.77**	**317**	⇓P	**Pn**	**22 30 46.3**	**+2.2**
BMOR	**Cotopaxi Volca**	**2.77**	**316**	⇓P	**Pn**	**22 30 46.5**	**+2.3**
BVC2	**Cotopaxi Volca**	**2.79**	**317**	⇓P	**Pn**	**22 30 46.8**	**+2.4**
ANTI	**Antisana**	**2.80**	**324**	P	**Pn**	**22 30 45.8**	**+1.4**
VC1	**Cotopaxi 1**	**2.80**	**318**	⇓P	**Pn**	**22 30 46.8**	**+2.4**
SLOR	**San Lorenzo -**	**2.80**	**315**	P	**Pn**	**22 30 46.9**	**+2.5**
BREF	**Cotopaxi Volca**	**2.81**	**317**	⇓P	**Pn**	**22 30 47.1**	**+2.5**
ANTG	**Antisana-Guama**	**2.81**	**322**	⇓P	**Pn**	**22 30 46.2**	**+1.6**
BNAS	**Cotopaxi Volca**	**2.83**	**316**	⇓P	**Pn**	**22 30 46.8**	**+2.0**
CASC	**Dorado de Casc**	**2.96**	**344**	⇓P	**Pn**	**22 30 47.3**	**+1.2**
CASC	**Dorado de Casc**	**2.96**	**344**	P	**Pn**	**22 30 47.0**	**+0.9**
CASC				S	**Sn**	**22 31 20.2**	**-2.1**
GGPT	**Toaza - Volcan**	**3.26**	**320**	P	**Pn**	**22 30 53.0**	**+2.8**
TERV	**Terraza Guagua**	**3.28**	**320**	P	**Pn**	**22 30 53.6**	**+3.0**
PTLC	**Puerto Leguiza**	**3.35**	**31**	P	**Pn**	**22 30 49.0**	**-2.0**
PTLC				S	Sn	22 31 23.9	-7.2
ZUMB	**Zumba**	**3.38**	**231**	P	**Pn**	**22 30 52.9**	**+1.5**
OTAV	**Otavalo**	**3.52**	**327**	P	**Pn**	**22 30 55.8**	**+2.2**
PAC1	**Pacto, Paraso**	**3.74**	**323**	P	**Pn**	**22 30 59.0**	**+2.7**
PAC1	**Pacto, Paraso**	**3.74**	**323**	P	**Pn**	**22 30 59.2**	**+3.0**
CHL1	**Volcn Chiles**	**3.78**	**338**	P	Pn	22 31 02.0	+5.0
MCRA	**Macar, Loja**	**3.80**	**244**	P	**Pn**	**22 30 56.6**	**-0.2**
MCRA	**Macar, Loja**	**3.80**	**244**	P	**Pn**	**22 30 56.4**	**-0.5**
MCRA				S	**Sn**	**22 31 40.8**	**-0.8**
FLOC	**Florencia**	**4.37**	**11**	P	**Pn**	**22 31 05.0**	**+0.7**
PPLP	**Puerto Lpez**	**4.42**	**285**	P	**Pn**	**22 31 04.7**	**-0.2**
PPLP				S	**Sn**	**22 31 51.6**	**-4.4**
GARC	**Garzon, Huila**	**4.99**	**12**	P	**Pn**	**22 31 14.2**	**+1.5**
MACC	**Macarena, Meta**	**5.52**	**29**	P	**Pn**	**22 31 21.4**	**+1.8**
	48nm,0.9s						
CZSB	**Cruzeiro do Su**	**6.25**	**143**	P	**Pn**	**22 31 31.6**	**+2.2**
	15nm,0.4s						
CZSB				S	**Sn**	**22 32 40.8**	**+0.9**
	15nm,0.4s						
URMC	**La Uribe, Meta**	**6.30**	**20**	P	**Pn**	**22 31 33.4**	**+3.3**

IDC ***14*** *22:37:00.9±1.2, 3.29S×148.87E, h0km, mb3.9/10, mbtmp3.9/11, ML3.2/1, MS3.3/2, Error ellipse: s-maj=37.2km s-min=21.0km az=99.0*
NEIC ***14*** *22:37:02.5±2.8, 3.0S±0.1×148.85E±0.08, h10km±1km, mb4.3/11, Error ellipse: s-maj=24.8km s-min=10.2km az=204.0*

ISC 14 22:37:02.5±0.7,**3.11S**±0.08×**148.78E**±0.09,**h10**km,**n36,** σ1§33/30,**mb4.1**/16,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**1.76**	**307**	Pn	**Pn**	**22 37 31.2**	**-2.0**
RABL	**Rabaul**	**3.54**	**108**	Pn	**Pn**	**22 37 56.0**	**-1.6**
PMG	**Port Moresby**	**6.46**	**194**	Sn	**Sn**	**22 39 51.8**	**+0.2**
	0.2nm,0.3s,baz=51,slow=7.9,SNR=5.0						
PMG				LR	LR	22 41 01.7	
	comp=Z,266nm,21.2s,baz=320,slow=38						
JAY	**Jayapura**	**8.09**	**274**	Pn	**Pn**	**22 39 01.0**	**+0.9**
	0.3nm,0.3s,baz=69,slow=7.8,SNR=2.0						
JAY				LR	LR	22 41 50.9	
	comp=Z,250nm,19.9s,baz=44,slow=35						
	4.5nm,0.6s						
WB0	**Warramunga Arr**	**21.71**	**219**	P	**P**	**22 41 54.0**	**-0.1**
WB0				IAmb	IAmb	22 42 17.8	
	comp=Z,14nm,1.1s						
WR8	**Warramunga Arr**	**21.79**	**219**	P	**P**	**22 41 52.5**	**-2.2**
WRA	**Warramunga Arr**	**21.88**	**219**	P	**P**	**22 41 54.1**	**-1.7**
	comp=Z,2.1nm,0.7s,baz=44,slow=11,SNR=16						
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	**21.88**	**219**	P	**P**	**22 41 53.3**	**-2.5**
AS31	**Alice Springs**	**24.99**	**214**	P	**P**	**22 42 26.4**	**-0.3**
ASAR	**Alice Springs**	**24.99**	**214**	P	**P**	**22 42 26.0**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=36,slow=10,SNR=22						
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**24.99**	**214**	P	**P**	**22 42 27.1**	**+0.4**
INKA	**Innaminka**	**25.67**	**197**	P	**P**	**22 42 34.0**	**+1.3**
INKA				IAmb	IAmb	22 43 00.6	
	comp=Z,8.5nm,1.4s						
FITZ	**Fitzroy Crossi**	**27.13**	**235**	P	**P**	**22 42 47.3**	**+1.3**
FITZ				IAmb	IAmb	22 42 51.7	
	comp=Z,3.6nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**27.78**	**39**	T	T	23 12 06.6	
	baz=220,slow=76,SNR=462						
H11S2	**WAKE ISLAND Hy**	**27.79**	**39**	T	T	23 12 05.3	
	baz=220,slow=76,SNR=354						
H11S1	**WAKE ISLAND Hy**	**27.80**	**39**	T	T	23 12 05.9	
	baz=220,slow=76,SNR=276						
H11N1	**WAKE ISLAND Hy**	**28.83**	**37**	T	T	23 13 25.7	
	baz=219,slow=76,SNR=37						
H11N3	**WAKE ISLAND Hy**	**28.84**	**37**	T	T	23 13 26.8	
	baz=219,slow=76,SNR=42						
H11N2	**WAKE ISLAND Hy**	**28.84**	**37**	T	T	23 13 26.9	
	baz=219,slow=76,SNR=80						
CM31	**Chiang Mai Arr**	**53.53**	**296**	P	**P**	**22 46 23.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**53.53**	**296**	P	**P**	**22 46 25.9**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=106,slow=7.6,SNR=7.8						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.53**	**296**	P	**P**	**22 46 23.2**	**-0.7**
SONM	**Songino Array**	**62.80**	**329**	P	**P**	**22 47 30.4**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=153,slow=9.7,SNR=4.1						
	comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**62.80**	**329**	P	**P**	**22 47 27.4**	**-1.1**
SONM				IAmb	IAmb	22 47 34.1	
	comp=Z,2.1nm,1.2s						
EVN	**Everest**	**67.04**	**302**	P	**P**	**22 47 55.7**	**-1.3**
EVN				IAmb	IAmb	22 48 02.8	
	comp=Z,3.8nm,0.9s						
VNDA	**Vanda**	**74.68**	**177**	P	**P**	**22 48 40.7**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=351,slow=6.1,SNR=2.3						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**76.43**	**320**	P	**P**	**22 48 53.4**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=100,slow=7.9,SNR=6.5						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**76.43**	**320**	P	**P**	**22 48 53.3**	**+0.8**
ZAA0	**Zalesovo Array**	**77.54**	**327**	P	**P**	**22 48 57.2**	**-1.3**
ZAA0				IAmb	IAmb	22 49 01.7	
	comp=Z,

EHY	Hungye	0.68	359	⇓	eP	Pb	22 41 53.4	-1.1	
SGST	Jiashian	0.74	291		i P	Pb	22 41 54.8	-0.7	
SGST					i S	Sb	22 42 05.0	-0.4	
SCST	Cishan	0.78	275		i P	Pn	22 41 56.5	+0.7	
SCST					i S	Sn	22 42 07.6	+1.1	
SLIU	Shizi	0.78	220	⇑	P	Pb	22 41 54.9	-1.2	
SLIU					S	Sb	22 42 05.0	-1.4	
SSPT	Xinbi	0.78	245		eP	Pn	22 41 56.5	+0.6	
SSPT					eS	Sb	22 42 06.7	+0.2	
WTP	Ta-pu	0.79	303	⇓	iP	Pn	22 41 56.4	+0.4	
WTP					i S	Sn	22 42 07.1	+0.3	
SCZT	Fangliau	0.80	236		P	Pb	22 41 55.8	-0.6	
SCZT					eS	Sb	22 42 05.9	-1.0	
LAY	Lan-yu	0.80	166		eP	Pb	22 41 56.2	-0.4	
LAY					eS	Sb	22 42 07.1	0.0	
TPUB	Ta-pu	0.81	307		P	Pn	22 41 56.6	+0.4	
TPUB	Ta-pu	0.81	307	⇓	iP	Pn	22 41 56.6	+0.4	
TPUB					i S	Sn	22 42 07.4	+0.2	
CHN1	Nanshi	0.83	296	⇓	iP	Pn	22 41 57.3	+0.7	
CHN1					S	Sn	22 42 08.6	+0.9	
TWM1	Shoushan	0.84	270		eP	Pn	22 41 58.2	+1.5	
ALS	Alishan	0.84	325	⇓	iP	Pn	22 41 57.2	+0.2	
ALS					S	Sb	22 42 08.1	-0.4	
LYUB	Lan-yu	0.85	164		eP	Pb	22 41 54.4	-2.8	
LYUB					eS	Sb	22 42 06.1	-2.2	
CHN4	Tsaushan	0.86	308	⇓	iP	Pn	22 41 57.7	+0.7	
CHN4					eS	Sn	22 42 09.7	+1.1	
WARBT	Fenglin Townsh	0.90	3		eP	Pb	22 41 56.2	-1.9	
TEGC	Jichi Village	0.91	12		P	Pb	22 41 57.9	-0.3	
WCKO	Fanlu	0.91	313		eP	Pb	22 41 58.9	+0.5	
WCKO					eS	Sn	22 42 11.0	+1.3	
SMST	Manzhou Townsh	0.92	210		P	Pb	22 41 57.2	-0.5	
SMST					S	Sb	22 42 08.4	-2.0	
VWDT	VWDT	0.95	349		P	Pn	22 41 58.1	0.0	
WHYT	Xinyi Township	0.98	333		eP	Pb	22 41 59.5	0.0	
WHYT					eS	Sn	22 42 11.9	+0.5	
HEN	Hengchun	0.98	214		eP	Pb	22 42 00.9	+1.5	
SHUL	Shoufeng	0.99	12		eP	Pn	22 41 58.6	-0.1	
ESL	Shilin	0.99	5		eP	Pn	22 41 57.8	-1.0	
WLCH	Liuqiu	1.00	242		eP	Pb	22 42 02.6	+2.8	
TSEB	Hengchuen, Pin	1.00	204		eP	Pn	22 41 59.2	+0.3	
TSEB					eS	Sn	22 42 12.8	+0.9	
TWKBT	Hengchun	1.00	209		eP	Pn	22 41 58.9	0.0	
TWKBT					eS	Sn	22 42 12.6	+0.7	
TWK1	Hengchun	1.00	209		P	Pn	22 41 58.9	0.0	
TWK1					eS	Sn	22 42 11.9	0.0	
TWP	Hsiaoliuchiu	1.01	242		eP	Pb	22 42 03.0	+2.9	
SSLB	Suanglung	1.02	340		P	Pb	22 41 59.7	-0.6	
SSLB	Suanglung	1.02	340		P	Pn	22 41 59.6	+0.3	
SSLB					eS	Sb	22 42 12.6	-0.8	
TEYL	Yanliau Villag	1.07	13		eP	Pb	22 42 00.4	-0.6	
TEYL					eS	Sb	22 42 16.9	+2.2	
CHY	Chiayi	1.08	309		eP	Pb	22 42 01.6	+0.5	
CHY					eS	Sb	22 42 16.1	+1.3	
ICHU	Yijhu	1.11	299		P	Pb	22 42 01.9	+0.2	
ICHU					S	Sb	22 42 16.8	+1.0	
SMLT	Sun Moon Lake	1.13	339		eP	Pb	22 42 02.1	0.0	
SMLT					eS	Sb	22 42 17.1	+0.5	
WDLH	Douliu	1.13	320		eP	Pb	22 42 03.0	+0.9	
WDLH					eS	Sb	22 42 18.3	+1.8	
OWD	Renai	1.14	353		eP	Pn	22 42 00.6	-0.4	
ETM	Tongmen	1.15	7		eP	Pn	22 41 59.9	-1.0	
CHN8	Yiju	1.16	297		eP	Pb	22 42 02.3	-0.2	
CHN8					eS	Sb	22 42 17.8	+0.6	
TYC	Yuchr	1.17	338		i P	Pb	22 42 03.1	+0.5	
TYC					S	Sb	22 42 18.4	+1.1	
WUSB	Renai	1.18	350		P	Pn	22 42 01.6	+0.1	
WUSB					eS	Sn	22 42 16.0	+0.6	
LXIB	Xiulin Townshi	1.20	3		i P	Pn	22 42 00.6	-1.2	
LXIB					S	Sn	22 42 14.7	-2.3	
WNT	Mingjian	1.21	331		eP	Pb	22 42 04.2	+0.9	
WNT					eS	Sb	22 42 20.0	+1.3	
WTK	Tuku	1.23	315		eP	Pb	22 42 03.2	-0.5	
WTK					eS	Sb	22 42 19.2	+0.1	
WSL	Shuilin Townsh	1.24	305		eP	Pn	22 42 02.9	+0.8	
WSL					eS	Sb	22 42 19.4	+0.1	
TWD	Chiawan	1.28	11		eP	Pn	22 42 02.0	-0.7	
WCS	Beigang Elemen	1.29	343		eP	Pb	22 42 04.7	0.0	
WCS					eS	Sb	22 42 20.7	-0.2	
WSF	Szhu	1.31	309		eS	Sb	22 42 21.3	-0.1	
WHF	Hehuan Shan	1.32	357		eP	Pn	22 42 03.7	0.0	
ETL	Fush Village	1.36	11		eP	Pn	22 42 04.1	+0.2	
NACB	Ninganchiao	1.37	10		P	Pn	22 42 03.1	-0.9	
NACB	Ninganchiao	1.37	10		eP	Pn	22 42 02.8	-1.1	
ETLH	Xiulin Townshi	1.39	6		eP	Pn	22 42 04.5	-0.9	
FUSS	Fushou	1.42	357		i P	Pn	22 42 05.5	+0.5	
FUSS					eS	Sn	22 42 22.6	-0.1	
TWT	Tachien	1.43	354		eP	Pb	22 42 06.3	-1.0	
TDCB	Techi	1.44	354		eP	Pb	22 42 06.1	-1.1	
TCU	Taichung	1.45	336		eS	Sb	22 42 25.7	+0.1	
WHP	Taichung City	1.49	346		P	Pb	22 42 07.9	-0.3	
WHP					S	Sb	22 42 27.1	+0.3	
EOS4	EOS4	1.58	35		eP	Pn	22 42 07.6	+1.1	
EOS4					eS	Sn	22 42 26.3	+0.6	
NNSB	Datong	1.60	2		eP	Pn	22 42 07.3	0.0	
WDGT	Dungji	1.60	286		eP	Pn	22 42 07.1	-0.1	
WDGT					eS	Sn	22 42 26.8	0.0	
NNS	Nan Shan	1.61	1		eP	Pn	22 42 08.2	+0.7	
ENA	Nanau	1.64	13		eP	Pn	22 42 06.7	-1.0	
EOS3	EOS3	1.72	32		eP	Pn	22 42 09.4	+0.8	
EOS3					eS	Sb	22 42 30.9	-2.1	
LATG	Datong	1.72	6		eP	Pn	22 42 08.5	-0.3	
NDT	Datong Townshi	1.78	5		eP	Pn	22 42 11.5	-1.5	
EOS2	EOS2	1.79	27		eP	Pn	22 42 11.6	-1.5	
EOS2					eS	Sb	22 42 33.5	-1.6	
PNG	Penghu	1.80	295		eP	Pn	22 42 10.1	+0.2	
PNG					eS	Sn	22 42 31.0	-0.6	
NFF	Wufeng Townshi	1.81	354		eP	Pb	22 42 12.3	-1.3	
NFF					eS	Sb	22 42 35.9	-0.2	
ENTT	Nioudou	1.82	7		eP	Pn	22 42 10.7	+0.4	
NDS	Dongshan	1.84	11		eP	Pn	22 42 10.8	+0.4	
LIOB	Emei	1.84	351		eP	Pb	22 42 12.8	-1.3	
TWC	Suao	1.84	15		eP	Pn	22 42 12.0	+1.5	
TWC					eS	Sn	22 42 33.8	+1.1	
YHNB	Yeheng	1.84	1		P	Pn	22 42 11.9	+1.4	
YHNB	Yeheng	1.84	1		eP	Pn	22 42 11.7	+1.1	
NSK	Sanguang	1.85	1		eP	Pn	22 42 11.7	+1.0	
TWE	Neicheng	1.92	9		eP	Pn	22 42 12.1	+0.7	
FUSB	Fushanzhiwuyua	1.94	7		eP	Pn	22 42 12.8	+0.9	
NWLI	Wulai	1.95	4		eP	Pn	22 42 13.5	+1.5	
TIPB	Shuangxi	2.19	12		eP	Pn	22 42 17.0	+1.7	
JYNG	Yonagunijimaku	2.19	42		eP	Pn	22 42 17.5	+2.2	
JYNG					eS	Sn	22 42 43.4	+2.0	
YOJ	Yonaguni jima	2.24	43		S	Sn	22 42 44.8	+2.2	
YOJ	Yonaguni jima	2.24	43		eP	Pn	22 42 17.9	+1.9	
YOJ					eS	Sn	22 42 43.6	+1.0	
YOJ	Yonaguni jima	2.24	43		eS	Sn	22 42 44.3	+1.7	
SXI1	Grass Mountain	2.32	12		eP	Pn	22 42 18.8	+1.7	
HATJ	Hateruma jima	2.58	61		eS	Sn	22 42 51.8	+0.9	
IRIF	Iriomote-Funau	2.67	55		eP	Pn	22 42 23.8	+2.0	
VWUC	VWUC	2.77	322		eP	Pn	22 42 23.9	+0.7	
VWUC					eS	Sn	22 42 54.9	-0.5	
JKRS	Kuro-shima	2.83	60		eS	Sn	22 42 58.5	+1.4	
PTMZ	Houxiangcun	3.00	318		eP	Pn	22 42 26.8	+0.4	
PTMZ					eS	Sn	22 43 00.4	-0.9	
JIJ	Ishigaki jima	3.00	59		eP	Pn	22 42 27.7	+1.4	
JIJ					eS	Sn	22 43 01.8	+0.5	
KNMB	Chin-men Tao	3.16	302		eP	Pn	22 42 29.0	+0.5	
JISG	Ishigakijimahi	3.25	57		P	Pn	22 42 31.0	+1.3	
JISG					eS	Sn	22 43 07.7	+0.3	
ZPLA	Ao Xicun	3.47	289		eP	Pn	22 42 33.5	+0.6	
ZPLA					eS	Sn	22 43 10.8	-2.1	
MATB	Ma-tsu	3.55	339		eP	Pn	22 42 34.5	+0.5	
AXDP	Jialang	3.71	305		eP	Pn	22 42 36.7	+0.5	
AXDP					eS	Sn	22 43 17.3	-1.6	

IDC **14** *22:44:18.0±1.3,3.˙19S×148.˙94E,h0km,mb3.8/10, mbtmp3.8/10,MS2.6/1,Error ellipse: s-maj=43.5km s-min=20.1km az=102.0*

ISC 14 22:44:23.4±1.2,3.˙2S±0.˙2×148.˙9E±0.˙3,h35km,n18, o085/11,mb3.8/10,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.31	109	LR	LR	22 46 13.2	
	comp=Z,83nm,18.2s,baz=340,slow=35						
WRA	Warramunga Arr	21.84	219	P	P	22 49 12.8	-0.2
	3.7nm,0.9s,baz=41,slow=11,SNR=14						
	3.7nm,0.9s						

ASAR	Alice Springs	24.94	214		P	P	22 49 44.5	+0.8	
	2.8nm,0.9s,baz=36,slow=10,SNR=16								
	2.8nm,0.9s								
FITZ	Fitzroy Crossi	27.14	235		P	P	22 50 04.5	+0.9	
	8.1nm,1.0s,baz=64,slow=15,SNR=5.5								
	8.1nm,1.0s								
H11S3	WAKE ISLAND Hy	27.82	38		T	T	23 19 23.5		
	baz=220,slow=76,SNR=119								
H11S2	WAKE ISLAND Hy	27.83	38		T	T	23 19 24.1		
	baz=220,slow=76,SNR=85								
H11S1	WAKE ISLAND Hy	27.84	38		T	T	23 19 24.9		
	baz=220,slow=76,SNR=93								
H11N1	WAKE ISLAND Hy	28.87	37		T	T	23 20 43.8		
	baz=219,slow=76,SNR=22								
H11N3	WAKE ISLAND Hy	28.88	37		T	T	23 20 45.7		
	baz=219,slow=76,SNR=21								
H11N2	WAKE ISLAND Hy	28.89	37		T	T	23 20 44.0		
	baz=219,slow=76,SNR=61								
CMAR	Chiang Mai Arr	53.68	296		P	P	22 53 41.5	-0.7	
	0.6nm,0.3s,baz=113,slow=7.7,SNR=1.3								
	0.6nm,0.3s								
SONM	Songino Array	62.96	329		P	P	22 54 47.0	+0.4	
	0.4nm,0.6s,baz=134,slow=6.2,SNR=3.7								
	0.4nm,0.6s								
VNDA	Vanda	74.55	177		P	P	22 55 57.4	-0.8	
	0.3nm,0.5s,baz=323,slow=20,SNR=3.1								
	0.3nm,0.5s								
MKAR	Makanchi Array	76.60	320		P	P	22 56 09.5	-1.0	
	0.2nm,0.4s,baz=102,slow=6.5,SNR=6.3								
	0.2nm,0.4s								
ZALV	Zalesovo Beam	77.71	327		P	P	22 56 15.8	-0.7	
	0.6nm,0.6s,baz=117,slow=5.0,SNR=4.3								
	0.6nm,0.6s								
KURBB	Kurchatov Arra	80.18	322		P	P	22 56 31.1	+1.0	
	1.1nm,0.9s,baz=104,slow=4.8,SNR=7.7								
	1.1nm,0.9s								
ILAR	Eielson Array	82.22	23		P	P	22 56 41.2	+0.5	
	0.3nm,0.9s,baz=234,slow=7.7,SNR=4.3								
	0.3nm,0.9s								
TORD	Torodi Ar. Bea	146.11	289	PKPbc		PKPab	23 04 01.4	-0.1	
	0.8nm,0.7s,baz=77,slow=3.2,SNR=3.7								

IDC **14** *22:49:16.9±0.5,3.˙08S×142.˙11E,h0km,mb4.5/20, mbtmp4.5/27,ML4.0/4,MS4.1/32,Error ellipse: s-maj=13.5km s-min=7.9km az=95.0*

BJI **14** *22:49:17.4,2.˙94S×142.˙41E,h13km,mB5.2/22,mb4.9/57, Ms4.6/15,Ms7 4.3/16*

NEIC **14** *22:49:19.6±2.0,2.˙98S±0.˙08×142.˙08E±0.˙06,h10km±1km, mb4.9/88,Error ellipse: s-maj=14.4km s-min=9.2km az=21.0*

GFZ **14** *22:49:20.1±0.3,3.˚S±4.˚×14.˚2E±.˚,h10km,M5.0/22, mb4.8/22*

GCMT **14** *22:49:20.5±0.2,2.˙98S±0.˙02×142.˙28E±0.˙02,h13km, MW5.0/101,Moment Tensor Solution. s55,c61; s101,c144; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.15±.15; Mθθ-0.89±.09; Mϕϕ-2.26±.10; Mrθ-0.08±.21; Mθϕ1.25±.06; Mϕr2.22±.26; Best double couple: Ms3.78200×10¹⁶ NP1:ϕs137.00000°,δ30.00000°, λ66.00000°. NP2:ϕs345.00000°,δ63.00000°,λ103.00000°. Principal axes: T 3.9700, Plg69.0000°, Azm282.0000°; N -0.3790, Plg12.0000°, Azm158.0000°; P -3.5950, Plg17.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **14** *22:49:32.4±0.3,3.˚S±3.˚×14.˚2E±.˚,h47km±3km,M5.1/54, mB5.6/25,mb5.0/54,MLv5.0/9,Mw(mB)5.1/25, MwMwp4.7/1,Mwp5.0/1*

ISC 14 22:49:19.7±0.5,3.˙04S±0.˙04×142.˙19E±0.˙05,h14km±3km, h15km:pP-P,n229,σ1§53/197,mb4.9/81,MS4.2/34,2C-5D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.57	289	Pg	Pn	22 49 44.4	-2.9
	17nm,0.3s,baz=102,slow=5.4,SNR=59						
JAY				LR	LR	22 50 15.1	
	comp=Z,4μm,21.1s,baz=319,slow=38						
JAY	Jayapura	1.57	289	P	Pn	22 49 44.8	-2.5
GENI	Genyem	2.07	282	P	Pn	22 49 52.8	-1.2
GENI	Genyem	2.07	282	P	Pn	22 49 52.9	-1.2
WAMI	Wamena	3.57	256	P	Pn	22 50 15.4	+0.7
MANU	Manus Island	5.26	79	Pn	Pn	22 50 39.4	+1.4
MMPI	Merauke	5.68	198	P	Pb	22 50 58.8	+0.1
SRPI	Serui, Papua	6.06	281	P	Pn	22 50 49.7	+0.7
	1.5nm364nm,1.1s						
BAKI	Biak	6.35	287	P	Pn	22 50 54.4	+1.4
	0.8nm252nm,0.8s						
PMG	Port Moresby	8.02	142	Pn	Pn	22 51 15.0	-0.9
	4.8nm,0.3s,baz=313,slow=14,SNR=1.3						
PMG				Sn	Sn	22 52 50.4	+3.9
	1.0nm,0.3s,baz=324,slow=19,SNR=1.7						
PMG	Port Moresby	8.02	142	Pn	Pn	22 51 17.9	+2.1
PMG	Port Moresby	8.02	142	P	Pb	22 51 35.9	-2.6
	87nm,0.9s						
KRVT	Keravat (AS076	9.89	98	LR	LR	22 54 52.8	
	comp=Z,654nm,21.2s,baz=215,slow=34						
FAKI	Fak Fak	9.93	270	Pn	Pn	22 51 41.4	-0.8
FAKI	Fak Fak	9.93	270	P	Pn	22 51 43.6	+1.5
RABL	Rabaul	10.02	97	Pn	Pn	22 51 46.3	+2.9
SIJI	Sorong	11.13	281	Pn	Pn	22 51 58.2	-0.4
	2.2nm,0.3s,baz=99,slow=13,SNR=8.2						
SIJI				LR	LR	22 57 28.5	
	comp=Z,2μm,18.8s,baz=73,slow=44						
	8.9nm,0.4s						
SIJI	Sorong	11.13	281	P	Pn	22 51 59.3	+0.7
BNDI	Bandanaira	12.35	263	P	Pn	22 52 18.2	+3.0
MTN	Manton Dam	14.65	228	Pn	Pn	22 52 45.4	-1.3
NLAI	Namlea	15.07	269	P	Pn	22 52 53.8	+1.4
	64nm,1.1s						
MTSU	Mount Surprise	15.14	172	P	Pn	22 52 54.6	+1.2
GAMI	Galela, Maluku	15.19	288	P	Pn	22 52 54.5	+0.4
	5μm69nm,0.5s						
TNTI	Ternate	15.30	284	Pn	Pn	22 52 53.8	-1.6
TNTI				IAmb	IAmb	22 53 01.4	
	comp=Z,49nm,1.2s						
TNTI	Ternate	15.30	284	P	Pn	22 52 55.7	+0.3
	comp=Z,55nm,0.9s						
TNTI	Ternate	15.30	284	P	P	22 52 58.0	-2.2
SANI	Sanana	16.22	273	P	Pn	22 53 08.4	+1.1
	comp=Z,41nm,1.0s						
GUMO	Guam	16.74	9	LR	LR	22 58 42.4	
	comp=Z,344nm,19.9s,baz=186,slow=34						
CTA	Charters Tower	17.40	167	P	Pn	22 53 21.8	-0.4
	comp=Z,0.1nm,0.3s,baz=0.0,slow=10,SNR=1.6						
CTA				Lg	Lg	22 58 31.8	
	comp=Z,0.4nm,0.3s,baz=349,slow=5.2,SNR=1.8						
CTA				LR	LR	22 59 23.3	
	comp=Z,208nm,18.9s,baz=354,slow=35						
	comp=Z,0.7nm,0.3s						
QIS	Mount Isa	17.59	188	P	P	22 53 27.2	+1.5
MNI	Manado	17.91	284	P	Pn	22 53 28.3	-0.3
SGSI	Sangihe	17.95	292	P	P	22 53 30.3	+0.7
KNRA	Kununurra	18.23	226		Pn	22 53 32.2	-0.3
WB0	Warramunga Arr	18.28	204		P	22 53 32.3	-1.0
WR8	Warramunga Arr	18.41	203	P	Pn	22 53 35.5	+0.8
WRAB	Tennant Creek	18.45	204	P	Pn	22 53 35.6	+0.4
WRAB	Tennant Creek	18.45	204	P	P	22 53 34.8	-0.3
WRA	Warramunga Arr	18.46	204	P	P	22 53 33.9	-1.3
	comp=Z,1.0nm,0.3s,baz=27,slow=11,SNR=33						
WRA				S	Sn	22 57 01.9	+0.3
	comp=Z,6.5nm,1.1s,baz=18,slow=23,SNR=4.4						
WRA				Lg	Lg	22 59 01.0	
	baz=24,slow=31						
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	18.46	204		P	22 53 32.7	-2.6
HNR	Honiara	18.75	111	P	P	22 53 36.4	-2.0
	comp=Z,0.3nm,0.3s,baz=270,slow=2.0,SNR=7.4						
HNR				LR	LR	23 01 27.2	
	comp=Z,15nm,18.7s,baz=16,slow=39						
	comp=Z,8.0nm,0.8s						
HNR	Honiara	18.75	111	P	Pn	22 53 38.9	+0.1
HNR	Honiara	18.75	111	P	Pn	22 53 39.4	+0.6
SOEI	Soe	19.01	249	P	P	22 53 41.1	-0.3
SOEI	Soe	19.01	249	P	Pn	22 53 46.2	+4.0
SOEI	Soe	19.01	249	P	Pn	22 53 43.1	+0.9
DAV	Davao City (W)	19.39	301	P	P	22 53 45.6	+0.2
	comp=Z,57nm,0.3s,baz=112,slow=5.3,SNR=4.8						
DAV				LR	LR	23 00 51.8	
	comp=Z,271nm,19.2s,baz=119,slow=36						
DAV	Davao City (W)	19.39	301	P	P	22 53 44.3	-1.1
DAV	Davao City (W)	19.39	301	P	Pn	22 53 46.7	+0.1
LUWI	Luwuk	19.51	275	P	P	22 53 45.9	-0.9

LUWI	Luwuk	19.51	275		P	Pn	22 53 49.6	+1.6	
	comp=Z,6μmcomp=Z,107nm,1.1s								
KDI	Kendari	19.56	267		P	Pn	22 53 50.4	+1.8	
BATI	Baumata	19.72	248		P	P	22 53 46.8	-2.3	
	comp=Z,46nm,0.8s,baz=115,slow=19,SNR=8.1								
BATI	Baumata	19.72	248		P	Pn	22 53 54.4	+3.8	
	comp=Z,135nm,1.1s								
TOLI2	Tolitoli	21.80	281		P	P	22 54 10.7	-0.9	
TOLI2					IAmb	IAmb	22 54 26.7		
	comp=Z,104nm,1.3s								
TOLI2	Tolitoli	21.80	281		P	P	22 54 11.4	-0.2	
AS31	Alice Springs	22.01	201		P	P	22 54 13.7	-0.1	
ASAR	Alice Springs	22.01	201		P	P	22 54 12.7	-1.2	
	comp=Z,12nm,1.0s,baz=23,slow=11,SNR=35								
ASAR					S	S	22 58 14.0	-2.6	
	comp=Z,4.2nm,1.2s,baz=20,slow=27,SNR=2.3								
ASAR					Lg	Lg	23 00 56.5		
	baz=23,slow=32								
ASAR					LR	LR	23 03 37.4		
	comp=Z,630nm,20.4s,baz=22,slow=39								
	comp=Z,12nm,1.0s								
FITZ	Fitzroy Crossi	22.07	226		P	P	22 54 13.6	-0.9	
	comp=Z,31nm,1.0s,baz=49,slow=7.9,SNR=13								
FITZ					S	S	22 58 15.6	-2.0	
	comp=Z,5.7nm,0.9s,baz=77,slow=19,SNR=1.8								
FITZ					LR	LR	23 03 27.0		
	comp=Z,2μm,19.4s,baz=42,slow=39								
	comp=Z,31nm,1.0s								
FITZ	Fitzroy Crossi	22.07	226		P	P	22 54 12.4	-2.0	
FITZ	Fitzroy Crossi	22.07	226		P	P	22 54 14.1	-0.3	
PCI	Palu	22.44	275		P	P	22 54 21.2	+2.7	
KAPI	Kappang	22.47	264		P	P	22 54 17.5	-1.3	
	comp=Z,4.9nm,0.4s,baz=88,slow=19,SNR=2.0								
KAPI					LR	LR	23 05 03.8		
	comp=Z,456nm,20.4s,baz=85,slow=42								
	comp=Z,4.9nm,0.4s								
KAPI	Kappang	22.47	264		P	P	22 54 16.9	-1.9	
MMSI	Mamuju	23.25	270		P	P	22 54 27.4	+0.4	
	comp=Z,932nmcomp=Z,48nm,0.8s								
QLP	Quilpie	23.49	175		P	P	22 54 30.9	+1.8	
EIDS	Eidsvold	23.79	160		P	P	22 54 33.8	+1.7	
EIDS	Eidsvold	23.79	160		P	P	22 54 34.5	+2.4	
INKA	Innaminka	24.60	183		P	P	22 54 39.0	-0.6	
BKB	Balikpapan	25.34	273		P	P	22 54 44.6	-1.8	
BKB	Balikpapan	25.34	273		P	P	22 54 48.9	+2.4	
TGY	Tagaytay City	27.10	309		P	P	22 55 02.7	+0.2	
	comp=Z,61nm,0.3s,baz=198,slow=20,SNR=4.5								
MBWA	Marble Bar	28.32	229		P	P	22 55 11.8	-1.5	
MBWA					IAmb	IAmb	22 55 39.9		
	comp=Z,34nm,1.3s								
CMSA	Cobar Meteorol	28.54	174		P	P	22 55 16.9	+1.9	
STKA	Stephens Creek	28.69	181		P	P	22 55 16.3	-0.1	
	comp=Z,8.4nm,0.9s,baz=355,slow=10.0,SNR=10								
STKA					LR	LR	23 06 20.5		
	comp=Z,516nm,20.1s,baz=356,slow=36								
	comp=Z,8.4nm,0.9s								
STKA	Stephens Creek	28.69	181		P	P	22 55 17.4	+1.0	
H11S3	WAKE ISLAND Hy	32.25	48		T	T	23 29 36.7		
	baz=232,slow=76,SNR=47								
H11S2	WAKE ISLAND Hy	32.26	48		T	T	23 29 39.5		
	baz=232,slow=76,SNR=36								
H11S1	WAKE ISLAND Hy	32.27	48		T	T	23 29 37.0		
	baz=232,slow=76,SNR=35								
H11N1	WAKE ISLAND Hy	33.17	46		T	T	23 30 48.6		
	baz=230,slow=76,SNR=379								
H11N2	WAKE ISLAND Hy	33.19	46		T	T	23 30 44.4		
	baz=230,slow=76,SNR=379								
H11N3	WAKE ISLAND Hy	33.19	46		T	T	23 30 42.9		
	baz=230,slow=76,SNR=281								
LEM	Lembang	34.64	262		LR	LR	23 13 18.4		
	comp=Z,234nm,18.5s,baz=155,slow=42								
MORW	Morawa	35.88	221		P	P	22 56 19.4	-0.1	
MORW					IAmb	IAmb	22 56 24.1		
	comp=Z,33nm,1.1s								
JHJ	Hachijo jima 2	36.04	357		LR	LR	23 09 35.0		
	comp=Z,286nm,18.4s,baz=98,slow=34								
NWAO

XAN				S	**S**	**23 05 03.3**	**+1.4**	
XAN				pmax	pmax			
	comp=Z,20nm,1.3s							
XAN				pmax	pmax			
	comp=Z,240nm,5.7s							
XAN				L	L			
	comp=Z,230nm,16.0s							
XAN				L	L			
	comp=Z,190nm,17.7s							
XAN				L	L			
	comp=Z,250nm,17.0s							
PZH	**PanZhiHua**	**48.89**	**309**	P	**P**	**22 58 05.4**	**-0.1**	
PZH				pmax	pmax			
	comp=Z,10.0nm,1.2s							
CD2	**Chengdu**	**49.81**	**316**	P	**P**	**22 58 13.3**	**+0.9**	
CD2				S	**S**	**23 05 20.4**	**-1.4**	
CD2				pmax	pmax			
	comp=Z,30nm,0.6s							
BNX	**BinXian**	**50.32**	**347**	⇓P	**P**	**22 58 15.8**	**-0.1**	
BNX				sP	**pP**	**22 58 20.3**	**+0.1**	
BNX				S	**S**	**23 05 29.6**	**+1.3**	
BNX				sS	**sS**	**23 05 35.8**	**+0.2**	
BNX				pmax	pmax			
	comp=Z,13nm,0.8s							
BNX				L	L			
	comp=Z,170nm,10.3s							
BNX				L	L			
	comp=Z,76nm,8.1s							
BNX				L	L			
	comp=Z,140nm,20.6s							
NPW	**Naypyitaw**	**50.59**	**299**	P	**P**	**22 58 19.4**	**+1.0**	
TNCH	**TengChong**	**50.72**	**306**	P	**P**	**22 58 20.6**	**+1.0**	
TNCH				pmax	pmax			
	comp=Z,23nm,0.3s							
HHC	**Hu-ho-hao-te**	**51.87**	**331**	*e*P	**P**	**22 58 31.9**	**+4.1**	
HHC				pmax	pmax			
	comp=Z,5.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,92nm,5.4s							
BTO2	**Baotou**	**52.63**	**329**	*e*P	**P**	**22 58 33.8**	**+0.2**	
BTO2				pP	**pP**	**22 58 38.3**	**+0.3**	
BTO2				sP	**sP**	**22 58 40.8**	**+1.1**	
BTO2				S	**S**	**23 06 01.5**	**+0.8**	
BTO2				sS	**pS**	**23 06 07.9**	**+1.8**	
BTO2				SS	**SS**	**23 09 37.9**	**-1.5**	
BTO2				pmax	pmax			
	comp=Z,21nm,0.9s							
BTO2				pmax	pmax			
	comp=Z,330nm,7.6s							
BTO2				L	L			
	comp=Z,610nm,16.3s							
BTO2				L	L			
	comp=Z,320nm,11.1s							
BTO2				L	L			
	comp=Z,670nm,20.0s							
LZH	**Lanzhou**	**52.88**	**321**	*e*P	**P**	**22 58 35.9**	**+0.3**	
LZH				pP	pP	22 58 41.9	+1.9	
LZH				pmax	pmax			
	comp=Z,24nm,1.3s							
LZH				pmax	pmax			
	comp=Z,220nm,4.5s							
LZH				L	L			
	comp=Z,190nm,16.2s							
LZH				L	L			
	comp=Z,180nm,15.5s							
LZDM	**Lanzhou Array**	**52.90**	**321**	P	**P**	**22 58 35.9**	**0.0**	
	comp=Z,1.0nm,0.3s,baz=110,slow=11,SNR=4.7							
	comp=Z,1.0nm,0.3s							
SHL	**Shillong**	**56.40**	**303**	P	**P**	**22 59 00.7**	**-0.7**	
SHL				IAmb	IAmb	22 59 02.8		
	comp=Z,28nm,1.6s							
PETK	**Petropavlovsk-**	**57.45**	**11**	LR	LR	23 19 43.9		
	comp=Z,151nm,21.9s,baz=204,slow=32							
GTA2	**Gaotai**	**57.52**	**322**	P	**P**	**22 59 09.6**	**+0.6**	
GTA2				pmax	pmax			
	comp=Z,20nm,1.0s							
RAR	**Rarotonga**	**59.19**	**113**	LR	LR	23 22 25.3		
	comp=Z,46nm,21.6s,baz=289,slow=34							
ULN	**Ulaanbaatar**	**59.28**	**333**	P	**P**	**22 59 20.1**	**-1.0**	
ULN	**Ulaanbaatar**	**59.28**	**333**	P	**P**	**22 59 21.6**	**+0.5**	
SONM	**Songino Array**	**59.55**	**333**	P	**P**	**22 59 22.6**	**-0.3**	
	comp=Z,1.1nm,0.8s,baz=142,slow=7.3,SNR=4.8							
	comp=Z,1.1nm,0.8s							
SONM	**Songino Array**	**59.55**	**333**	P	**P**	**22 59 22.5**	**-0.5**	
SONM				IAmb	IAmb	22 59 30.8		
	comp=Z,18nm,2.0s							
EVN	**Everest**	**61.49**	**304**	P	**P**	**22 59 36.2**	**-1.0**	
EVN				IAmb	IAmb	22 59 39.3		
	comp=Z,13nm,0.9s							
EVN	**Everest**	**61.49**	**304**	P	**P**	**22 59 38.2**	**+1.1**	
SHEM	**Shemya Is, Ala**	**61.73**	**21**	LR	LR	23 20 53.9		
	comp=Z,237nm,21.6s,baz=222,slow=31							
MA2	**Magadan**	**62.80**	**5**	LR	LR	23 28 21.0		
	comp=Z,58nm,18.2s,baz=158,slow=37							
TLY	**Talaya**	**63.58**	**334**	P	**P**	**22 59 48.0**	**-2.0**	
	comp=Z,4.9nm,0.6s,baz=153,slow=9.0,SNR=1.8							
	comp=Z,4.9nm,0.6s							
TLY	**Talaya**	**63.58**	**334**	P	**P**	**22 59 48.3**	**-1.6**	
TLY				IAmb	IAmb	22 59 55.1		
	comp=Z,8.2nm,0.8s							
YAK	**Yakutsk**	**65.60**	**354**	P	**P**	**23 00 01.4**	**-1.5**	
	comp=Z,8.0nm,0.4s,baz=166,slow=11,SNR=1.5							
YAK				LR	LR	23 24 59.9		
	comp=Z,115nm,21.8s,baz=164,slow=33							
	comp=Z,8.0nm,0.4s							
YAK	**Yakutsk**	**65.60**	**354**	P	**P**	**23 00 02.3**	**-0.5**	
WMQ	**Urumqi**	**67.46**	**320**	*e*P	**P**	**23 00 16.4**	**+1.1**	
WMQ				pP	pP	23 00 21.0	+1.2	
WMQ				sP	sP	23 00 23.0	+1.5	
WMQ				S	**S**	**23 09 13.0**	**+1.9**	
WMQ				pmax	pmax			
	comp=Z,17nm,0.7s							
PPT	**Papeete**	**68.34**	**108**	LR	LR	23 26 25.2		
	comp=Z,64nm,21.6s,baz=316,slow=33							
PPT2	**Papeete2**	**68.34**	**108**	*e*S	**S**	**23 09 27.5**	**+4.9**	
	comp=Z,92nm,23.0s							
PPT2				*e*LR	LR	23 21 01.8		
	comp=Z,231nm,30.5s							
PPT2				*e*LR	LR	23 21 06.3		
	comp=Z,144nm,33.5s							
TBI	**Tubuai**	**68.94**	**114**	*e*LR	LR	23 21 25.6		
	comp=Z,1µm,36.8s							
MKAR	**Makanchi Array**	**72.20**	**321**	P	**P**	**23 00 44.1**	**-0.3**	
	comp=Z,6.0nm,1.0s,baz=117,slow=6.1,SNR=33							
	comp=Z,6.0nm,1.0s							
MKAR	**Makanchi Array**	**72.20**	**321**	P	**P**	**23 00 43.6**	**-0.7**	
MAKZ	**Makanchi**	**72.40**	**321**	P	**P**	**23 00 45.2**	**-0.3**	
MAKZ				IAmb	IAmb	23 00 51.4		
	comp=Z,8.7nm,0.8s							
MAKZ	**Makanchi**	**72.40**	**321**	P	**P**	**23 00 45.9**	**+0.4**	
PDGK	**Podgornoye**	**72.65**	**317**	P	**P**	**23 00 45.8**	**-1.5**	
ZAA0	**Zalesovo Array**	**74.00**	**329**	P	**P**	**23 00 53.0**	**-1.8**	
ZALV	**Zalesovo Beam**	**74.00**	**329**	P	**P**	**23 00 53.5**	**-1.2**	
	comp=Z,4.0nm,0.8s,baz=112,slow=6.7,SNR=18							
	comp=Z,4.0nm,0.8s							
ZALV	**Zalesovo Beam**	**74.00**	**329**	P	**P**	**23 00 53.2**	**-1.6**	
KSH2	**Kashi**	**74.04**	**312**	P	**P**	**23 00 56.4**	**+0.8**	
KSH2				pP	pP	23 01 01.8	+1.6	
KSH2				pmax	pmax			
	comp=Z,11nm,1.3s							
NIL	**Nilore**	**74.32**	**306**	P	**P**	**23 00 56.9**	**-0.3**	
NIL	**Nilore**	**74.32**	**306**	P	**P**	**23 00 57.9**	**+0.7**	
BOOM	**Boomskoye usch**	**74.81**	**315**	IAmb	IAmb	23 01 08.9		
	comp=Z,12nm,1.0s							
VNDA	**Vanda**	**75.17**	**176**	P	**P**	**23 01 01.1**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=331,slow=6.2,SNR=10							
	comp=Z,1.3nm,0.7s							
VNDA	**Vanda**	**75.17**	**176**	P	**P**	**23 01 00.8**	**-0.4**	
VNDA				IAmb	IAmb	23 01 06.7		
	comp=Z,24nm,2.0s							
AAK	**Ala-Archa**	**75.87**	**315**	P	**P**	**23 01 06.0**	**-0.1**	
AAK				IAmb	IAmb	23 01 13.2		
	comp=Z,19nm,1.7s							
AAK	**Ala-Archa**	**75.87**	**315**	P	**P**	**23 01 07.3**	**+1.2**	
KURK	**Kurchatov**	**76.00**	**324**	P	**P**	**23 01 05.4**	**-1.0**	
KURK				IAmb	IAmb	23 01 12.3		
	comp=Z,9.3nm,1.2s							
KURK	**Kurchatov**	**76.00**	**324**	P	**P**	**23 01 06.2**	**-0.2**	
KURBB	**Kurchatov Arra**	**76.02**	**324**	P	**P**	**23 01 05.8**	**-0.7**	
	comp=Z,2.3nm,1.0s,baz=113,slow=5.0,SNR=13							
	comp=Z,2.3nm,1.0s							
O14K	**Tigyukauivet M**	**76.25**	**26**	P	**P**	**23 01 06.8**	**-0.9**	
O14K				IAmb	IAmb	23 01 13.8		
	comp=Z,5.5nm,0.8s							
N14K	**Kuskokwak Cree**	**76.42**	**25**	P	**P**	**23 01 09.4**	**+0.9**	
N14K				IAmb	IAmb	23 01 23.1		
	comp=Z,11nm,1.1s							
MANEM	**Manem**	**76.54**	**310**	P	**P**	**23 01 10.0**	**-0.1**	
MANEM				IAmb	IAmb	23 01 16.9		
	comp=Z,57nm,1.4s							
ARSB	**Arslanbob**	**76.57**	**314**	IAmb	IAmb	23 01 26.8		
	comp=Z,13nm,1.0s							
TAOE	**Nuku Hiva Isla**	**77.35**	**98**	*e*LR	LR	23 25 10.6		
	comp=Z,336nm,29.8s							
BTK	**Batken**	**77.82**	**312**	IAmb	IAmb	23 01 23.8		
	comp=Z,29nm,1.9s							
O16K	**Kokwok River B**	**77.83**	**27**	IAmb	IAmb	23 03 29.5		
	comp=Z,18nm,1.7s							
KBL	**Kabul**	**77.92**	**306**	P	**P**	**23 01 16.5**	**-1.4**	
KBL				IAmb	IAmb	23 01 37.0		
	comp=Z,8.4nm,1.1s							
GAR	**Garm**	**77.94**	**311**	P	**P**	**23 01 18.0**	**+0.2**	
KK31	**Karatay Array**	**78.81**	**315**	P	**P**	**23 01 21.9**	**-0.5**	
KK31				IAmb	IAmb	23 01 28.9		
	comp=Z,27nm,1.6s							
KKAR	**Karatay Array**	**78.81**	**315**	P	**P**	**23 01 21.0**	**-1.4**	
K17K	**Iditarod**	**79.24**	**24**	IAmb	IAmb	23 01 45.0		
	comp=Z,13nm,1.0s							
J17K	**VABM Dome**	**79.26**	**23**	P	**P**	**23 01 25.4**	**+1.0**	
KDAK	**Kodiak Island**	**79.65**	**30**	LR	LR	23 30 45.9		
	comp=Z,206nm,21.8s,baz=264,slow=31							
N19K	**Bonanza Creek**	**79.99**	**26**	P	**P**	**23 01 28.2**	**-0.3**	
N19K				IAmb	IAmb	23 01 32.2		
	comp=Z,16nm,1.3s							
NRIK	**Noril'sk**	**81.04**	**343**	P	**P**	**23 01 33.7**	**-0.1**	
	comp=Z,5.3nm,0.8s,baz=140,slow=5.7,SNR=5.2							
	comp=Z,5.3nm,0.8s							
H19K	**Roundabout Mou**	**81.29**	**22**	IAmb	IAmb	23 01 46.7		
	comp=Z,10nm,1.1s							
G19K	**Purcell Mounta**	**81.35**	**21**	IAmb	IAmb	23 01 42.5		
	comp=Z,13nm,1.1s							
J20K	**Nowinta River**	**81.57**	**23**	P	**P**	**23 01 37.5**	**+0.7**	
BVAR	**Borovoye Array**	**81.58**	**325**	P	**P**	**23 01 37.0**	**-0.1**	
	comp=Z,5.8nm,0.7s,baz=103,slow=6.5,SNR=19							
	comp=Z,5.8nm,0.7s							
BORK	**Borovoye**	**81.63**	**325**	P	**P**	**23 01 36.5**	**-0.9**	
BORK				IAmb	IAmb	23 01 46.4		
	comp=Z,11nm,0.9s							
E19K	**Redstone River**	**81.92**	**20**	IAmb	IAmb	23 01 58.2		
	comp=Z,9.6nm,1.1s							
CAST	**Castle Rocks**	**82.09**	**24**	IAmb	IAmb	23 01 49.6		
	comp=Z,27nm,1.9s							
D19K	**Kuna River**	**82.14**	**19**	IAmb	IAmb	23 01 46.3		
	comp=Z,7.8nm,0.9s							
L22K	**Petersville**	**82.30**	**26**	IAmb	IAmb	23 02 05.1		
	comp=Z,10nm,1.2s							
MAW	**Mawson**	**83.13**	**202**	P	**P**	**23 01 45.3**	**+0.5**	
	comp=Z,6.3nm,0.8s,baz=75,slow=7.7,SNR=10.0							
MAW				LR	LR	23 36 19.2		
	comp=Z,118nm,19.3s,baz=72,slow=34							
	comp=Z,6.3nm,0.8s							
MAW	**Mawson**	**83.13**	**202**	P	**P**	**23 01 45.4**	**+0.5**	
NEA2	**Nenana**	**83.76**	**24**	IAmb	IAmb	23 01 57.5		
	comp=Z,9.6nm,1.3s							
WRH	**Wood River Hil**	**84.12**	**24**	IAmb	IAmb	23 01 55.2		
	comp=Z,11nm,1.0s							
CCB	**Clear Creek Bu**	**84.29**	**24**	IAmb	IAmb	23 01 55.9		
	comp=Z,8.8nm,0.9s							
IL31		**84.71**	**24**	IAmb	IAmb	23 01 58.5		
	comp=Z,4.8nm,0.8s							
ILAR	**Eielson Array**	**84.71**	**24**	P	**P**	**23 01 51.5**	**-1.5**	
	comp=Z,2.7nm,0.8s,baz=258,slow=5.7,SNR=16							
	comp=Z,2.7nm,0.8s							
ILAR	**Eielson Array**	**84.71**	**24**	P	**P**	**23 01 50.9**	**-2.1**	
F24K	**Squaw Lake**	**85.23**	**21**	IAmb	IAmb	23 02 22.0		
	comp=Z,6.1nm,1.1s							
E25K	**Arctic Village**	**86.26**	**21**	IAmb	IAmb	23 02 06.2		
	comp=Z,13nm,1.2s							
D25K	**Kavik River**	**86.35**	**20**	IAmb	IAmb	23 02 08.4		
	comp=Z,8.4nm,1.0s							
BCAR	**Beaver Creek A**	**86.39**	**26**	P	**P**	**23 02 01.8**	**+0.3**	
QSPA	**South Pole Qui**	**86.91**	**180**	P	**P**	**23 02 04.0**	**-0.1**	
	comp=Z,13nm,0.9s,baz=346,slow=3.5,SNR=22							
	comp=Z,13nm,0.9s							
QSPA	**South Pole Qui**	**86.91**	**180**	P	**P**	**23 02 03.8**	**-0.3**	
AB31	**Akbulak array**	**87.22**	**319**	P	**P**	**23 02 04.4**	**-1.4**	
ABKAR	**Akbulak array**	**87.22**	**319**	P	**P**	**23 02 03.7**	**-2.1**	
H27K	**Steamboat Moun**	**87.26**	**23**	P	**P**	**23 02 06.1**	**+0.5**	
H27K				IAmb	IAmb	23 02 10.8		
	comp=Z,12nm,1.4s							
I28M	**Miner Creek**	**87.72**	**24**	IAmb	IAmb	23 02 14.7		
	comp=Z,12nm,1.6s							
K29M	**Barlow Dome**	**88.43**	**26**	IAmb	IAmb	23 02 17.8		
	comp=Z,6.9nm,0.9s							
I30M	**Mount Dempster**	**89.15**	**25**	IAmb	IAmb	23 02 19.0		
	comp=Z,9.3nm,1.4s							
INK	**Inuvik**	**90.69**	**22**	LR	LR	23 38 33.9		
	comp=Z,94nm,20.9s,baz=238,slow=33							
DLBC	**Dease Lake**	**91.41**	**32**	LR	LR	23 38 01.5		
	comp=Z,94nm,19.9s,baz=243,slow=32							
BBB	**Bella Bella**	**92.19**	**28**	LR	LR	23 36 47.8		
	comp=Z,122nm,19.7s,baz=234,slow=31							
ELIB	**Princess Elisa**	**95.75**	**196**	*d*P	**P**	**23 02 45.6**	**+0.4**	
	comp=Z,3.4nm,1.1s							
YBH	**Yreka Blue Hor**	**95.82**	**49**	LR	LR	23 38 17.4		
	comp=Z,215nm,20.3s,baz=287,slow=31							
MDPB	**Devils Postpil**	**98.77**	**53**	P	**P**	**23 02 56.5**	**-3.2**	
YKA	**Yellowknife Ar**	**98.78**	**27**	LR	LR	23 42 24.2		
	comp=Z,121nm,21.8s,baz=300,slow=32							
NVAR	**Mina Array Bea**	**99.33**	**52**	LR	LR	23 43 01.8		
	comp=Z,82nm,18.8s,baz=291,slow=32							
NEW	**Newport**	**99.38**	**42**	LR	LR	23 38 50.0		
	comp=Z,88nm,21.9s,baz=293,slow=30							
TROLL	**Troll, Antarti**	**100.74**	**192**	⇑Pdiff	**Pdif**	**23 03 09.0**	**+1.4**	
	comp=Z,121nm,0.7s							
TXAR	**Lajitas Array**	**112.48**	**60**	PKiKP	**PKiKP**	**23 07 55.4**	**-1.0**	
	comp=Z,0.3nm,0.9s,baz=300,slow=3.9,SNR=2.1							
TXAR	**Lajitas Array**	**112.48**	**60**		**PKiKP**	**23 07 54.2**	**-2.1**	
BMRD	**Maredsous**	**120.80**	**330**	*d*PKP	**PKiKP**	**23 08 11.3**	**-0.4**	
BMRD				*dp*PKP	**pPKPdf**	**23 08 14.9**	**-1.5**	
PLCA	**Paso Flores**	**127.16**	**149**	PKP	**PKiKP**	**23 08 23.9**	**-0.9**	
	comp=Z,1.5nm,0.8s,baz=239,slow=5.9,SNR=3.2							
TORD	**Torodi Ar. Bea**	**139.69**	**287**	PKP	**PKPdf**	**23 08 47.6**	**-0.7**	
	comp=Z,1.1nm,0.8s,baz=54,slow=2.3,SNR=5.6							
ROSC	**El Rosal**	**143.53**	**86**	PKP	**PKPdf**	**23 08 53.6**	**-2.2**	
	comp=Z,10nm,0.6s,baz=262,slow=14,SNR=6.3							
ROSC	**El Rosal**	**143.53**	**86**		PKPbc	23 08 53.2	+0.2	
LPAZ	**La Paz**	**144.40**	**124**	PKP	**PKPdf**	**23 08 56.4**	**-1.0**	
	comp=Z,5.4nm,0.8s,baz=297,slow=4.5,SNR=18							
CPUP	**Villa Florida**	**145.22**	**148**	PKPbc	**PKPdf**	**23 08 57.5**	**-0.3**	
	comp=Z,5.9nm,1.0s,baz=222,slow=4.4,SNR=5.0							
DBIC	**Dimbokro**	**146.98**	**278**	PKPbc	**PKPbc**	**23 09 02.2**	**-1.0**	
	comp=Z,5.7nm,0.8s,baz=95,slow=5.0,SNR=4.6							

*IDC **14** 22:57:42.2±0.7,2°.13N×126°.37E,h0km,mb3.9/12, mbtmp3.9/13,ML3.4/1,Error ellipse: s-maj=43.6km s-min=13.3km az=66.0*
*DJA **14** 22:57:47.3±0.3,2°.N±4°×12°.7E±°,h10km,M4.2/16,mb4.3/6, MLv4.1/16*
*NEIC **14** 22:57:49.7±2.0,2°.26N±0°.09×126°.83E±0°.08,h57km±7km, mb4.3/15,Error ellipse: s-maj=14.9km s-min=10.5km az=215.0*

ISC 14 22:57:49.2±0.6,**2°.31N**±0°.06×**126°.87E**±0°.06,**h53km,n40,** σ1s**30/42,mb4.0/17,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.03**	**117**	P	**Pn**	**22 58 07.6**	**+0.3**
GAMI				S	**Sn**	**22 58 22.1**	**+1.4**
TNTI	**Ternate**	**1.60**	**162**	P	**Pn**	**22 58 14.2**	**-1.0**
TNTI	**Ternate**	**1.60**	**162**	P	**Pn**	**22 58 15.5**	**+0.3**
SGSI	**Sangihe**	**1.92**	**316**	P	**Pn**	**22 58 19.5**	**+0.1**
MNI	**Manado**	**2.21**	**247**	P	**Pn**	**22 58 24.1**	**+0.7**
GTOI	**Gorontalo**	**4.20**	**247**	P	**Pn**	**22 58 53.6**	**+2.8**
LUWI	**Luwuk**	**5.28**	**231**	Pn	**Pn**	**22 59 07.3**	**+1.8**
LUWI	**Luwuk**	**5.28**	**231**	P	**Pn**	**22 59 07.3**	**+1.8**
SIJI	**Sorong**	**5.41**	**126**	Pn	**Pn**	**22 59 08.6**	**+1.3**
	1.0nm,0.3s,baz=287,slow=19,SNR=5.1						
	3.6nm,0.4s						
SIJI	**Sorong**	**5.41**	**126**	P	**Pn**	**22 59 09.1**	**+1.8**
TOLI2	**Tolitoli**	**6.20**	**259**	Pn	**Pn**	**22 59 17.3**	**-1.0**
KNRA	**Kununurra**	**17.97**	**174**		**P**	**23 01 55.0**	**-0.3**
KNRA				IAmb	IAmb	23 02 29.8	
	comp=Z,21nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.31**	**183**	P	**P**	**23 02 18.7**	**-2.3**
	comp=Z,12nm,1.0s,baz=4.7,slow=12,SNR=9.4						
	comp=Z,12nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.31**	**183**	P	**P**	**23 02 19.7**	**-1.2**
FITZ				IAmb	IAmb	23 02 39.0	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**23.15**	**162**	P	**P**	**23 02 50.3**	**-0.8**
WB0				IAmb	IAmb	23 02 57.4	
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**23.30**	**162**	P	**P**	**23 02 51.1**	**-1.5**
	comp=Z,2.9nm,0.5s,baz=341,slow=10.0,SNR=18						
	comp=Z,2.9nm,0.5s						
WRA	**Warramunga Arr**	**23.30**	**162**	P	**P**	**23 02 50.6**	**-1.9**
WR8	**Warramunga Arr**	**23.36**	**162**	P	**P**	**23 02 52.2**	**-0.9**
WR8				IAmb	IAmb	23 03 22.8	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**26.71**	**166**	P	**P**	**23 03 21.5**	**-2.2**
ASAR	**Alice Springs**	**26.71**	**166**	P	**P**	**23 03 22.9**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=341,slow=8.6,SNR=9.2						
ASAR				PcP	**PcP**	**23 06 46.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=326,slow=2.1,SNR=4.3						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**26.71**	**166**	P	**P**	**23 03 22.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**31.73**	**302**	P	**P**	**23 04 05.8**	**-2.6**
	comp=Z,0.7nm,0.3s,baz=110,slow=8.6,SNR=6.1						
	comp=Z,0.7nm,0.3s						
CHTO	**Chiang Mai**	**31.89**	**303**	P	**P**	**23 04 10.1**	**+0.3**
CHTO				IAmb	IAmb	23 04 10.4	
	comp=Z,4.0nm,1.2s						
KSRS	**Korea Array**	**34.99**	**1**	P	**P**	**23 04 38.5**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=179,slow=9.4,SNR=4.2						
	comp=Z,0.7nm,0.3s						
BBOO	**Buckleboo**	**35.99**	**167**	P	**P**	**23 04 44.8**	**-0.4**
STKA	**Stephens Creek**	**36.76**	**159**	P	**P**	**23 04 52.2**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=341,slow=6.9,SNR=7.4						
	comp=Z,3.8nm,0.7s						
ARMA	**Armidale**	**40.21**	**146**	P	**P**	**23 05 21.2**	**+0.4**
ARMA				IAmb	IAmb	23 05 42.7	
	comp=Z,21nm,1.2s						
SONM	**Songino Array**	**48.68**	**342**	P	**P**	**23 06 29.4**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=184,slow=6.8,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**23 07 41.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=124,slow=7.2,SNR=8.6						
	comp=Z,0.4nm,0.3s						
KDJ	**Kajisay**	**59.50**	**319**	P	**P**	**23 07 47.0**	**-0.2**
KDJ				IAmb	IAmb	23 08 12.6	
	comp=Z,3.3nm,1.0s						
YAK	**Yakutsk**	**59.62**	**2**	P	**P**	**23 07 47.6**	**+0.2**
LBZ	**Lake Benmore**	**60.43**	**146**	P	**P**	**23 07 54.2**	**+0.8**
ZALV	**Zalesovo Beam**	**61.91**	**333**	P	**P**	**23 08 02.5**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=136,slow=7.3,SNR=2.2						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.01**	**328**	P	**P**	**23 08 09.7**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=128,slow=6.8,SNR=11						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**63.01**	**328**	P	**P**	**23 08 09.6**	**-0.9**
KURK				IAmb	IAmb	23 08 11.5	
	comp=Z,1.4nm,0.6s						
BVAR	**Borovoye Array**	**68.58**	**327**	P	**P**	**23 08 45.4**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=138,slow=6.9,SNR=3.0						
	comp=Z,0.4nm,0.3s						
AB31	**Akbulak array**	**73.34**	**321**	P	**P**	**23 09 14.0**	**-1.3**
ABKAR	**Akbulak array**	**73.34**	**321**	P	**P**	**23 09 13.8**	**-1.5**
VNDA	**Vanda**	**82.01**	**173**	P	**P**	**23 10 03.4**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=318,slow=6.5,SNR=2.5						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**82.01**	**173**	P	**P**	**23 10 02.6**	**-0.4**
VNDA				IAmb	IAmb	23 10 17.7	
	comp=Z,3.0nm,1.5s						

KRSC 14 23:01:02.1±2.0,**49°.30N**×**158°.17E,h49**km±49km,**MI3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.92**	**317**	*e*P	Pn	23 01 33.2	+1.0
SKR				*e*S	Sn	23 01 57.2	+2.1
PAU	**Pauzhetka**	**2.34**	**339**	*e*P	Pn	23 01 40.8	+2.8
PAU				*e*S	Sn	23 02 10.1	+4.6
KDTR	**Khodutka, Kamc**	**2.52**	**359**	*e*P	Pn	23 01 43.2	+2.8
KDTR				*e*S	Sn	23 02 14.0	+4.2
ASAK	**Asacha**	**3.10**	**357**	*e*P	Pn	23 01 51.7	+3.2
ASAK				*e*S	Sn	23 02 28.6	+4.4
MIPR	**Malaya Ipel'ka**	**3.11**	**344**	*e*S	Sn	23 02 29.3	+4.7
RUS	**Russkaya**	**3.15**	**4**	*e*P	Pn	23 01 51.8	+2.7
RUS				*e*S	Sn	23 02 28.2	+2.8
MTVR	**Mutnovka**	**3.19**	**0**	*e*P	Pn	23 01 52.9	+3.1
MTVR				*e*S	Sn	23 02 30.7	+4.1
GRL	**Gorelyy**	**3.26**	**359**	*e*P	Pn	23 01 54.1	+3.3
GRL				*e*S	Sn	23 02 33.4	+5.0
KRMR	**Karymshinsk

DJA ***14*** *23:33:58.0±0.1, 7°S±1°×12°0E±°, h607km±1km, M5.5/174, mB5.9/139, mb5.7/174, MLv6.3/46, Mw5.8/47, Mw(mB)5.5/139, MwMwp5.2/31, Mwp5.5/31*

NEIC ***14*** *23:33:58.9, 7°23S×120°46E, h598km*

NEIC ***14*** *23:33:58.2±2.0, 7°20S±0°08×120°46E±0°09, h584km±5km, mb5.3/242, Mwb5.8/51, Mww5.7/40, Error ellipse: s-maj=12.9km s-min=11.7km az=59.0*

IPGP ***14*** *23:33:58.0, 7°24S×120°45E, h592km, Mw5.8, Fault plane solution: NP1:φ±24.00000°, δ23.00000°, λ-128.00000°. NP2:φ±244.00000°, δ72.00000°, λ-75.00000°.*

NEIC ***14*** *23:33:58.4, 7°22S×120°45E, h589km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.30; Mθθ0.03; Mφφ1.28; Mrθ4.19; Mθφ1.79; Mφr2.83; Fault plane solution: M₀5.52000×10¹⁷ NP1:φ±236.77000°, δ81.02000°, λ-76.67000°. NP2:φ±0.15000°, δ16.03000°, λ-145.57000°. Principal axes: T 5.8740, Plg35.0000°, Azm315.0000°; N -0.8040, Plg13.0000°, Azm55.0000°; P -5.0701, Plg52.0000°, Azm162.0000°;*

GFZ ***14*** *23:33:59.0, 7°19S×120°48E, h609km, Mw5.7/120, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.95; Mθθ0.54; Mφφ1.40; Mrθ3.29; Mθφ1.56; Mφr1.80; Fault plane solution: M₀4.42271×10¹⁷ NP1: φ±238.49125°, δ75.67084°, λ-75.51148°. NP2:φ±12.25564°, δ20.26890°, λ-134.40478°. Principal axes: T 4.5413, Plg29.2300°, Azm316.7951°; N -0.2477, Plg14.0284°, Azm54.8320°; P -4.2937, Plg56.9636°, Azm167.4265°;*

IDC ***14*** *23:33:59.0±0.3, 7°23S×120°52E, h600km±2km, mb4.8/36, mbtmp5.7/42 Error ellipse: s-maj=8.4km s-min=5.0km az=70.0*

NEIC ***14*** *23:33:59.5, 7°23S×120°46E, h610km, Moment Tensor Solution. Duration: 3ᵻ9 Moment tensor: Scale 10¹⁷Nm; Mrr-2.82; Mθθ0.88; Mφφ1.94; Mrθ3.82; Mθφ1.67; Mφr1.94; Fault plane solution: M₀5.23000×10¹⁷ NP1:φ±316.43000°, δ21.44000°, λ-129.25000°. NP2:φ±237.70000°, δ73.55000°, λ-76.04000°. Principal axes: T 5.1568, Plg27.0000°, Azm317.0000°; N 0.1432, Plg13.0000°, Azm54.0000°; P -5.2999, Plg59.0000°, Azm167.0000°;*

GFZ ***14*** *23:33:59.0±0.1, 7°S±2°×12°0E±°, h598km±2km, M5.3/127, mB5.7/76, mb5.4/127, Mw(mB)5.3/76*

GCMT ***14*** *23:34:01.2±0.1, 7°18S±0°01×120°47E±0°01, h603km±1km, MW5.8/138, Moment Tensor Solution. s138,c264; Duration: 1ᵻ9 Moment tensor: Scale 10¹⁷Nm; Mrr-2.71±.06; Mθθ0.28±.08; Mφφ2.43±.09; Mrθ4.02±.08; Mθφ1.81±.08; Mφr2.66±.08; Best double couple: M₀5.75900×10¹⁷ NP1:φ±5.00000°, δ21.00000°, λ-135.00000°. NP2:φ±232.00000°, δ75.00000°, λ-74.00000°. Principal axes: T 5.8250, Plg28.0000°, Azm310.0000°; N -0.1370, Plg15.0000°, Azm48.0000°; P -5.6920, Plg57.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 14 23:33:58.8±0.2, 7°23S±0°02×120°44E±0°03, h604km±1km, h606km:pP-P,n1502,σ1ᵻ47/1679, mb5.3/283, 93C-21D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBFI	**Labuhan Bajo,**	**1.35**	**203**	P	**P**	**23 35 09.4**	**-1.9**
MMRI	**Maumere**	**2.27**	**128**	P	**P**	**23 35 12.9**	**-1.7**
MMRI	**Maumere**	**2.27**	**128**	S	**S**	**23 36 13.2**	**-3.1**
MMRI	**Maumere**	**2.27**	**128**		**P**	**23 35 12.6**	**-2.0**
MMRI	**Maumere**	**2.27**	**128**	P	**P**	**23 35 12.8**	**-1.8**
MMRI	**Maumere**	**2.27**	**128**	P	**P**	**23 35 13.0**	**-1.6**
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 16.5**	**+1.7**
	14µm,0.7s,baz=170,slow=3.4,SNR=3249						
KAPI				S	**S**	**23 36 18.0**	**+1.5**
	1µm,1.0s,baz=77,slow=22,SNR=15						
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 15.7**	**+0.9**
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 16.2**	**+1.4**
KAPI				S	**S**	**23 36 18.2**	**+1.6**
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 15.8**	**+0.9**
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 15.8**	**+0.9**
KAPI	**Kappang**	**2.30**	**343**	P	**P**	**23 35 16.6**	**+1.7**
WSI	**Waingapu**	**2.43**	**183**	P	**P**	**23 35 14.2**	**-1.1**
PLAI	**Plampang**	**3.07**	**239**	P	**P**	**23 35 18.5**	**-0.3**
PLAI	**Plampang**	**3.07**	**239**	S	**S**	**23 36 20.7**	**-3.1**
PLAI	**Plampang**	**3.07**	**239**	P	**P**	**23 35 18.4**	**-0.3**
PLAI	**Plampang**	**3.07**	**239**	P	**P**	**23 35 18.4**	**-0.4**
TWSI	**Taliwang, Sumb**	**3.83**	**247**	P	**P**	**23 35 22.5**	**-0.9**
KDI	**Kendari**	**3.91**	**34**	P	**P**	**23 35 24.8**	**+0.8**
BATI	**Baumata**	**4.35**	**133**	P	**P**	**23 35 22.9**	**-4.1**
	6µm,0.4s,baz=316,slow=0.9,SNR=682						
BATI				S	**S**	**23 36 31.8**	**-7.3**
	3µm,0.6s,baz=330,slow=20,SNR=3.8						
BATI	**Baumata**	**4.35**	**133**	P	**P**	**23 35 22.5**	**-4.6**
SOEI	**Soe**	**4.54**	**124**	S	**S**	**23 36 39.6**	**-2.3**
SOEI	**Soe**	**4.54**	**124**	P	**P**	**23 35 27.8**	**-0.8**
SOEI				S	**S**	**23 36 38.9**	**-2.9**
SOEI	**Soe**	**4.54**	**124**	P	**P**	**23 35 27.1**	**-1.5**
MMSI	**Mamuju**	**4.76**	**341**	P	**P**	**23 35 31.9**	**+1.7**
KHKI	**Kahang-Kahang**	**4.91**	**256**	P	**P**	**23 35 31.5**	**+0.2**
IGBI	**Denpasar**	**5.47**	**253**	P	**P**	**23 35 34.8**	**-0.9**
PCI	**Palu**	**6.31**	**355**	P	**P**	**23 35 43.5**	**+0.5**
	10nm18µm28µm3µm,1.1s						
JAGI	**Jajag, Banyuwa**	**6.35**	**258**	P	**P**	**23 35 42.0**	**-1.2**
JAGI	**Jajag, Banyuwa**	**6.35**	**258**	S	**S**	**23 37 04.6**	**-3.9**
JAGI	**Jajag, Banyuwa**	**6.35**	**258**	P	**P**	**23 35 41.5**	**-1.8**
JAGI	**Jajag, Banyuwa**	**6.35**	**258**	P	**P**	**23 35 41.4**	**-1.8**
	26nm14µm689nm,0.6s						
JAGI	**Jajag, Banyuwa**	**6.35**	**258**	P	**P**	**23 35 42.0**	**-1.2**
LUWI	**Luwuk**	**6.57**	**21**	P	**P**	**23 35 46.0**	**+0.7**
LUWI	**Luwuk**	**6.57**	**21**	P	**P**	**23 35 46.0**	**+0.7**
LUWI				S	**S**	**23 37 12.9**	**+0.7**
LUWI	**Luwuk**	**6.57**	**21**	P	**P**	**23 35 45.5**	**+0.3**
	18nm57µm5µm,1.2s						
LUWI	**Luwuk**	**6.57**	**21**	P	**P**	**23 35 46.2**	**+1.0**
BKB	**Balikpapan**	**6.90**	**329**	P	**P**	**23 35 50.3**	**+2.1**
BKB	**Balikpapan**	**6.90**	**329**	P	**P**	**23 35 51.9**	**+3.7**
BKB	**Balikpapan**	**6.90**	**329**	P	**P**	**23 35 50.1**	**+1.9**
	11nm12µm26µm2µm,0.9s						
BKB	**Balikpapan**	**6.90**	**329**	P	**P**	**23 35 52.4**	**+4.2**
SANI	**Sanana**	**7.56**	**47**	P	**P**	**23 35 54.1**	**-0.1**
SANI				S	**S**	**23 37 27.6**	**-1.0**
SANI	**Sanana**	**7.56**	**47**	P	**P**	**23 35 53.6**	**-0.6**
NLAI	**Namlea**	**7.73**	**59**	P	**P**	**23 35 55.6**	**-0.2**
GTOI	**Gorontalo**	**8.23**	**18**	P	**P**	**23 36 01.3**	**+0.8**
	28µm3µm,1.1s						
TOLI2	**Tolitoli**	**8.29**	**2**	P	**P**	**23 36 00.9**	**-0.3**
TOLI2	**Tolitoli**	**8.29**	**2**	S	**S**	**23 37 40.5**	**-0.8**
TOLI2	**Tolitoli**	**8.29**	**2**	P	**P**	**23 36 00.8**	**-0.3**
TOLI2	**Tolitoli**	**8.29**	**2**	P	**P**	**23 36 01.3**	**+0.1**
SNJI	**Sawahan-Nganju**	**8.62**	**266**	P	**P**	**23 36 04.1**	**-0.3**
	11µm555nm,0.5s						
MNI	**Manado**	**9.67**	**27**	P	**P**	**23 36 14.5**	**0.0**
BNDI	**Bandanaira**	**9.80**	**75**	P	**P**	**23 36 15.2**	**-0.5**
BNDI	**Bandanaira**	**9.80**	**75**	S	**S**	**23 38 07.2**	**-0.8**
BNDI	**Bandanaira**	**9.80**	**75**	P	**P**	**23 36 15.5**	**-0.2**
	29µm1µm,0.5s						
BNDI	**Bandanaira**	**9.80**	**75**	P	**P**	**23 36 16.4**	**+0.7**
UGM	**Wanagama**	**9.85**	**265**	P	**P**	**23 36 16.4**	**+0.1**
UGM	**Wanagama**	**9.85**	**265**	S	**S**	**23 38 06.4**	**-2.7**
UGM	**Wanagama**	**9.85**	**265**	P	**P**	**23 36 16.1**	**-0.2**
UGM	**Wanagama**	**9.85**	**265**	P	**P**	**23 36 15.5**	**-0.8**
	412nm,0.5s						
UGM	**Wanagama**	**9.85**	**265**	P	**P**	**23 36 16.6**	**+0.3**
SMRI	**Semarang**	**9.92**	**270**	P	**P**	**23 36 17.5**	**+0.6**
SMRI	**Semarang**	**9.92**	**270**	P	**P**	**23 36 16.3**	**-0.7**
SMRI	**Semarang**	**9.92**	**270**	P	**P**	**23 36 16.5**	**-0.4**
	319nm,0.7s						
SMRI	**Semarang**	**9.92**	**270**	P	**P**	**23 36 17.3**	**+0.3**
YOGI	**Yogyakarta**	**10.07**	**266**	P	**P**	**23 36 17.8**	**-0.6**
	819nm,0.9s						
TNTI	**Ternate**	**10.54**	**41**	P	**P**	**23 36 22.8**	**-0.3**
TNTI	**Ternate**	**10.54**	**41**	S	**S**	**23 38 20.6**	**-0.8**
TNTI	**Ternate**	**10.54**	**41**	P	**P**	**23 36 21.5**	**-1.6**
TNTI	**Ternate**	**10.54**	**41**	P	**P**	**23 36 21.8**	**-1.3**
	313nm,0.5s						
TNTI	**Ternate**	**10.54**	**41**	P	**P**	**23 36 22.0**	**-1.0**
SAUI	**Saumlaki**	**10.80**	**95**	P	**P**	**23 36 24.9**	**-0.7**
SAUI	**Saumlaki**	**10.80**	**95**	S	**S**	**23 38 26.7**	**+0.6**
SAUI	**Saumlaki**	**10.80**	**95**	P	**P**	**23 36 23.4**	**-2.2**
SAUI	**Saumlaki**	**10.80**	**95**	P	**P**	**23 36 23.5**	**-2.2**
	2µm,0.7s						
SAUI	**Saumlaki**	**10.80**	**95**	P	**P**	**23 36 23.9**	**-1.8**
TARAI	**Tarakan**	**10.87**	**345**	P	**P**	**23 36 26.4**	**0.0**
	1µm,0.7s						
DRS	**Darwin Rock St**	**11.53**	**117**	P	**P**	**23 36 33.6**	**+0.7**
GAMI	**Galela, Maluku**	**11.62**	**39**	P	**P**	**23 36 31.4**	**-2.5**
	13µm1µm,1.1s						
KNRA	**Kununurra**	**11.70**	**137**	P	**P**	**23 36 33.5**	**-1.1**
	comp=Z,770nm,1.6s,comp=Z,0.0nm						
KNRA	**Kununurra**	**11.70**	**137**	P	**P**	**23 36 33.2**	**-1.4**
MTN	**Manton Dam**	**11.92**	**119**	P	**P**	**23 36 35.5**	**-1.3**
	comp=Z,2µm,0.5s,comp=Z,0.0nmcomp=Z,0.0nm						
MTN	**Manton Dam**	**11.92**	**119**	P	**P**	**23 36 35.0**	**-1.8**
FITZ	**Fitzroy Crossi**	**11.93**	**155**	P	**P**	**23 36 36.0**	**-0.8**
	comp=Z,119nm,1.4s						
FITZ	**Fitzroy Crossi**	**11.93**	**155**	P	**P**	**23 36 35.9**	**-1.0**
	comp=Z,240nm,0.7s,baz=341,slow=7.8,SNR=443						
FITZ				S	**S**	**23 38 42.2**	**-4.5**
	comp=Z,162nm,0.7s,baz=319,slow=22,SNR=14						
FITZ	**Fitzroy Crossi**	**11.93**	**155**	P	**P**	**23 36 38.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**11.93**	**155**	P	**P**	**23 36 35.4**	**-1.5**
FITZ	**Fitzroy Crossi**	**11.93**	**155**	P	**P**	**23 36 36.2**	**-0.6**
SGSI	**Sangihe**	**11.98**	**25**	P	**P**	**23 36 35.5**	**-1.9**
	comp=Z,13µmcomp=Z,1µm,1.0s						
SIJI	**Sorong**	**12.51**	**60**	P	**P**	**23 36 41.1**	**-1.7**
	comp=Z,183nm,0.4s,baz=254,slow=5.0,SNR=97						
SIJI				S	**S**	**23 38 51.6**	**-5.9**
	comp=Z,39nm,0.6s,baz=261,slow=19,SNR=25						
SIJI				ScP	**ScP**	**23 44 05.9**	**+0.5**
	comp=Z,21nm,0.7s,baz=0.0,slow=6.1,SNR=6.9						
SIJI	**Sorong**	**12.51**	**60**	P	**P**	**23 36 40.8**	**-2.0**
	comp=Z,357nm,0.8s						
FAKI	**Fak Fak**	**12.52**	**71**	P	**P**	**23 36 42.2**	**-0.7**
FAKI	**Fak Fak**	**12.52**	**71**	P	**P**	**23 36 40.7**	**-2.2**
FAKI	**Fak Fak**	**12.52**	**71**	P	**P**	**23 36 40.7**	**-2.2**
	comp=Z,539nm,0.6s						
FAKI	**Fak Fak**	**12.52**	**71**	P	**P**	**23 36 41.0**	**-1.9**
BBJI	**Bungbulang**	**12.68**	**268**	P	**P**	**23 36 43.2**	**-1.4**
BBJI	**Bungbulang**	**12.68**	**268**	S	**S**	**23 38 58.6**	**-2.2**
BBJI	**Bungbulang**	**12.68**	**268**	P	**P**	**23 36 42.6**	**-1.9**
BBJI	**Bungbulang**	**12.68**	**268**	P	**P**	**23 36 43.2**	**-1.4**
	comp=Z,10µmcomp=Z,999nm,0.7s						
BBJI	**Bungbulang**	**12.68**	**268**	P	**P**	**23 36 43.0**	**-1.5**
LEM	**Lembang**	**12.73**	**271**	P	**P**	**23 36 44.9**	**-0.3**
	comp=Z,270nm,0.5s,baz=59,slow=9.4,SNR=30						
LEM				S	**S**	**23 38 58.0**	**-3.7**
	comp=Z,632nm,0.8s,baz=76,slow=23,SNR=4.2						
KDU	**Kakadu**	**13.03**	**116**	P	**P**	**23 36 46.0**	**-1.9**
	comp=Z,419nm,0.7s,comp=Z,0.0nm						
TPI	**Tanjungpandan**	**13.48**	**289**	P	**P**	**23 36 53.0**	**+0.4**
	comp=Z,9µmcomp=Z,11µmcomp=Z,1µm,1.1s						
KMPI	**Kaimana, Papua**	**13.68**	**76**	P	**P**	**23 36 53.2**	**-1.3**
MBWA	**Marble Bar**	**13.86**	**183**	P	**P**	**23 36 55.3**	**-0.9**
	comp=Z,417nm,0.8s						
MBWA	**Marble Bar**	**13.86**	**183**	P	**P**	**23 36 55.6**	**-0.7**
MBWA	**Marble Bar**	**13.86**	**183**	S	**S**	**23 39 21.9**	**+0.5**
MBWA	**Marble Bar**	**13.86**	**183**	P	**P**	**23 36 55.5**	**-0.7**
MBWA	**Marble Bar**	**13.86**	**183**	P	**P**	**23 36 55.1**	**-1.2**
MBWA	**Marble Bar**	**13.86**	**183**	P	**P**	**23 36 55.5**	**-0.7**
XMI	**Christmas Isla**	**14.92**	**257**	P	**P**	**23 37 06.8**	**+0.6**
XMI	**Christmas Isla**	**14.92**	**257**	S	**S**	**23 39 40.7**	**+1.6**
DAV	**Davao City (W)**	**15.10**	**20**	P	**P**	**23 37 07.8**	**-0.1**
	comp=Z,146nm,0.3s,baz=72,slow=3.2,SNR=11						
DAV				S	**S**	**23 39 37.2**	**-5.0**
	comp=Z,166nm,0.6s,baz=287,slow=17,SNR=5.3						
DAV	**Davao City (W)**	**15.10**	**20**	P	**P**	**23 37 06.6**	**-1.3**
DAV				S	**S**	**23 39 38.3**	**-3.9**
DAV	**Davao City (W)**	**15.10**	**20**	P	**P**	**23 37 07.1**	**-0.8**
DAV	**Davao City (W)**	**15.10**	**20**	P	**P**	**23 37 07.1**	**-0.8**
DAV	**Davao City (W)**	**15.10**	**20**	P	**P**	**23 37 07.0**	**-0.8**
PPBI	**Pangkal Pinang**	**15.11**	**289**	P	**P**	**23 37 07.9**	**-0.1**
KLI	**Kotaluми**	**15.67**	**278**	P	**P**	**23 37 12.5**	**-0.6**
	comp=Z,11µmcomp=Z,233nm,0.8s						
KASI	**Kota Agung**	**15.93**	**275**	P	**P**	**23 37 13.3**	**-2.2**
	comp=Z,8µmcomp=Z,1µm,1.0s						
PMBI	**Palembang**	**16.17**	**285**	P	**P**	**23 37 20.1**	**+2.4**
PMBI	**Palembang**	**16.17**	**285**	P	**P**	**23 37 20.4**	**+2.6**
PMBI	**Palembang**	**16.17**	**285**	P	**P**	**23 37 19.6**	**+1.9**
PMBI	**Palembang**	**16.17**	**285**	P	**P**	**23 37 20.5**	**+2.8**
GIRL	**Giralia**	**16.45**	**201**	P	**P**	**23 37 21.0**	**+0.9**
	comp=Z,398nm,1.3s,comp=Z,0.0nm						
GIRL	**Giralia**	**16.45**	**201**	P	**P**	**23 37 21.1**	**+1.0**
SRPI	**Serui, Papua**	**16.62**	**72**	P	**P**	**23 37 22.3**	**+0.5**
	comp=Z,6µmcomp=Z,743nm,0.7s						
BAKI	**Biak**	**16.73**	**70**	P	**P**	**23 37 23.3**	**+0.4**
	comp=Z,236nm,0.6s						
DSRI	**Dabo**	**17.18**	**292**	P	**P**	**23 37 27.3**	**+0.4**
	comp=Z,7µmcomp=Z,620nm,1.0s						
MNAI	**Manna**	**17.62**	**278**	P	**P**	**23 37 31.5**	**+0.5**
MNAI	**Manna**	**17.62**	**278**	P	**P**	**23 37 29.1**	**-1.9**
MNAI	**Manna**	**17.62**	**278**	P	**P**	**23 37 31.0**	**0.0**
	comp=Z,711nm,0.8s						
JMBI	**JAMBI**	**17.64**	**288**	P	**P**	**23 37 32.1**	**+1.0**
	comp=Z,15µmcomp=Z,1µm,1.5s						
KSI	**Kapahiang**	**18.11**	**280**	P	**P**	**23 37 35.6**	**+0.1**
	comp=Z,9µmcomp=Z,532nm,1.2s						
WRA	**Warramunga Arr**	**18.48**	**135**	P	**P**	**23 37 38.5**	**-0.2**
	comp=Z,112nm,0.6s,baz=314,slow=10,SNR=579						
WRA				S	**S**	**23 40 34.6**	**-2.4**
	comp=Z,39nm,0.9s,baz=306,slow=17,SNR=6.1						
WRA				ScP	**ScP**	**23 44 17.1**	**+0.4**
	comp=Z,16nm,0.9s,baz=316,slow=2.7,SNR=1.8						
WRA	**Warramunga Arr**	**18.48**	**135**	P	**P**	**23 37 38.8**	**+0.1**
WRAB	**Tennant Creek**	**18.48**	**134**	P	**P**	**23 37 38.9**	**+0.2**
WRAB	**Tennant Creek**	**18.48**	**134**	S	**S**	**23 40 39.5**	**+2.4**
WRAB	**Tennant Creek**	**18.48**	**134**	*c iP*	**P**	**23 37 38.8**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,113nm,0.4s						
WRAB	**Tennant Creek**	**18.48**	**134**	P	**P**	**23 37 38.4**	**-0.3**
WRAB	**Tennant Creek**	**18.48**	**134**	P	**P**	**23 37 39.0**	**+0.3**
WRKA	**Warakurna**	**19.24**	**158**	P	**P**	**23 37 44.2**	**-1.3**
	comp=Z,98nm,0.7s						
MEEK	**Meekatharra**	**19.38**	**185**	P	**P**	**23 37 45.9**	**-0.9**
	comp=Z,767nm,0.9s,comp=Z,0.0nm						
MEEK	**Meekatharra**	**19.38**	**185**	P	**P**	**23 37 47.2**	**+0.4**
MEEK	**Meekatharra**	**19.38**	**185**	P	**P**	**23 37 46.8**	**0.0**
MMPI	**Merauke**	**19.80**	**95**	P	**P**	**23 37 49.8**	**-0.9**
GENI	**Genyem**	**20.19**	**78**	P	**P**	**23 37 55.9**	**+1.7**
GENI	**Genyem**	**20.19**	**78**	P	**P**	**23 37 54.1**	**-0.1**
GENI	**Genyem**	**20.19**	**78**	P	**P**	**23 37 55.1**	**+0.8**
JAY	**Jayapura**	**20.73**	**78**	P	**P**	**23 37 58.6**	**-0.5**
	comp=Z,7.9nm,0.3s,baz=229,slow=12,SNR=7.9						
JAY	**Jayapura**	**20.73**	**78**	P	**P**	**23 37 59.3**	**+0.2**
PPSI	**Pulau Pagai**	**20.82**	**281**	P	**P**	**23 37 59.8**	**-0.1**
	comp=Z,1µm,1.3s						
AS31	**Alice Springs**	**20.84**	**143**	P	**P**	**23 37 59.9**	**-0.1**
	comp=Z,37nm,0.5s,comp=Z,0.0nm						
ASAR	**Alice Springs**	**20.84**	**143**	P	**P**	**23 37 59.8**	**-0.2**
	comp=Z,67nm,0.4s,baz=321,slow=8.3,SNR=552						
ASAR				S	**S**	**23 41 11.0**	**-3.5**
	comp=Z,30nm,0.7s,baz=313,slow=14,SNR=5.4						
ASAR				PcP	**PcP**	**23 41 42.0**	**+0.3**
	comp=Z,25nm,0.5s,baz=331,slow=1.5,SNR=7.7						
ASAR				ScP	**ScP**	**23 44 22.7**	**+0.4**
	comp=Z,28nm,0.5s,baz=321,slow=2.4,SNR=8.4						
	comp=Z,67nm,0.4s						
AS01	**Alice Springs**	**20.87**	**143**	P	**P**	**23 38 01.7**	**+1.5**
AS09	**Alice Springs**	**20.89**	**143**	P	**P**	**23 38 00.3**	**-0.2**
	comp=Z,98nm,0.7s						
PPI	**Padang Panjang**	**21.08**	**288**	P	**P**	**23 38 02.5**	**+0.2**
	comp=Z,3µmcomp=Z,214nm,1.0s						
TGY	**Tagaytay City**	**21.20**	**1**	P	**P**	**23 38 04.0**	**+0.7**
	comp=Z,334nm,0.3s,baz=182,slow=4.4,SNR=14						
TGY				S	**S**	**23 41 19.6**	**-0.7**
	comp=Z,240nm,0.7s,baz=180,slow=20,SNR=3.1						
	comp=Z,334nm,0.3s						
MORW	**Morawa**	**22.11**	**190**	P	**P**	**23 38 11.5**	**+0.2**
	comp=Z,246nm,0.9s,comp=Z,0.0nm						
MORW	**Morawa**	**22.11**	**190**	P	**P**	**23 38 11.7**	**+0.4**
MORW	**Morawa**	**22.11**	**190**	S	**S**	**23 41 34.2**	**-0.1**
MORW	**Morawa**	**22.11**	**190**	P	**P**	**23 38 10.7**	**-0.6**
MORW	**Morawa**	**22.11**	**190**	P	**P**	**23 38 11.5**	**+0.2**
DLV	**Lat**	**22.45**	**328**	P	**P**	**23 38 15.8**	**+1.2**
DLV	**Lat**	**22.45**	**328**	P	**P**	**23 38 16.1**	**+1.4**
QIS	**Mount Isa**	**22.80**	**127**	P	**P**	**23 38 17.7**	**+0.2**
	comp=Z,176nm,0.5s,comp=Z,0.0nm						
QIS	**Mount Isa**	**22.80**	**127**	P	**P**	**23 38 17.9**	**+0.3**
QIS	**Mount Isa**	**22.80**	**127**	P	**P**	**23 38 17.7**	**+0.2**
BLDU	**Ballidu**	**23.52**	**188**	P	**P**	**23 38 23.5**	**-0.2**
	comp=Z,411nm,0.7s,comp=Z,0.0nm						
BLDU	**Ballidu**	**23.52**	**188**	P	**P**	**23 38 23.7**	**-0.1**
BLDU	**Ballidu**	**23.52**	**188**	P	**P**	**23 38 23.6**	**-0.1**
RPSI	**Rantau Prapat**	**23.62**	**294**	P	**P**	**23 38 25.4**	**+0.5**
PSI	**Prapat**	**23.67**	**294**	P	**P**	**23 38 26.2**	**+0.8**
PSI	**Prapat**	**23.67**	**294**	S	**S**	**23 41 58.4**	**-1.0**
PSI	**Prapat**	**23.67**	**294**	P	**P**	**23 38 25.4**	**0.0**
PSI	**Prapat**	**23.67**	**294**	P	**P**	**23 38 25.0**	**-0.4**
KMBL	**Kambalda**	**24.05**	**177**	P	**P**	**23 38 28.0**	**-0.4**
	comp=Z,105nm,1.5s						
GSI	**Gunungsitoli**	**24.33**	**290**	P	**P**	**23 38 30.7**	**-0.5**
GSI	**Gunungsitoli**	**24.33**	**290**	P	**P**	**23 38 30.2**	**-1.0**
GSI	**Gunungsitoli**	**24.33**	**290**	P	**P**	**23 38 30.1**	**-1.0**
	comp=Z,7µmcomp=Z,619nm,1.2s						
GSI	**Gunungsitoli**	**24.33**	**290**	P	**P**	**23 38 30.7**	**-0.5**
KLBR	**Kellerberin**	**24.37**	**186**	P	**P**	**23 38 31.0**	**-0.1**
	comp=Z,598nm,0.7s						
KLBR	**Kellerberin**	**24.37**	**186**	P	**P**	**23 38 31.1**	**-0.1**
KLBR	**Kellerberin**	**24.37**	**186**	P	**P**	**23 38 31.2**	**0.0**
FORT	**Forrest**	**24.49**	**164**	P	**P**	**23 38 32.3**	**0.0**
	comp=Z,189nm,1.0s,comp=Z,0.0nm						
FORT	**Forrest**	**24.49**	**164**	P	**P**	**23 38 31.9**	**-0.4**
SZP	**Santa**	**24.62**	**0**	P	**P**	**23 38 34.3**	**+0.7**
SZP	**Santa**	**24.62**	**0**	S	**S**	**23 42 15.0**	**+1.1**
SZP	**Santa**	**24.62**	**0**	P	**P**	**23 38 33.9**	**+0.4**
MUN	**Mundaring**	**24.94**	**189**	P	**P**	**23 38 36.2**	**0.0**
	comp=Z,207nm,1.1s						
MUN	**Mundaring**	**24.94**	**189**	P	**P**	**23 38 36.0**	**-0.2**
MUN	**Mundaring**	**24.94**	**189**	S	**S**	**23 42 20.5**	**+1.9**
MTKN	**Mount Kenneth**	**24.96**	**189**	P	**P**	**23 38 37.4**	**+1.0**
AUKUL	**Kulin High Sch**	**25.40**	**184**	P	**P**	**23 38 39.9**	**-0.4**
MTSU	**Mount Surprise**	**25.66**	**117**	P	**P**	**23 38 42.9**	**+0.1**
	comp=Z,64nm,0.6s						
MTSU	**Mount Surprise**	**25.66**	**117**	P	**P**	**23 38 43.5**	**+0.7**
MTSU	**Mount Surprise**	**25.66**	**117**	S	**S**	**23 42 33.0**	**+2.7**
MTSU	**Mount Surprise**	**25.66**	**117**	P	**P**	**23 38 43.5**	**+0.7**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 43.5**	**+0.3**
	comp=Z,538nm,1.0s						
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 44.5**	**+1.2**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 43.8**	**+0.5**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	S	**S**	**23 42 32.9**	**+1.7**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 43.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 43.7**	**+0.4**
NWAO	**Narrogin (SRO)**	**25.74**	**186**	P	**P**	**23 38 43.0**	**-0.2**
SNSI	**Sinabang, Aceh**	**25.89**	**291**	P	**P**	**23 38 45.6**	**+0.7**
AUHAR	**St Anne's Scho**	**26.07**	**189**	P	**P**	**23 38 47.8**	**+1.6**
AUHAR	**St Anne's Scho**	**26.07**	**189**	S	**S**	**23 42 39.3**	**+3.0**
LHMI	**Lhok Sumawe**	**26.51**	**297**	P	**P**	**23 38 51.4**	**+1.1**
LHMI	**Lhok Sumawe**	**26.51**	**297**	S	**S**	**23 42 43.6**	**0.0**
LHMI	**Lhok Sumawe**	**26.51**	**297**	P	**P**	**23 38 49.9**	**-0.3**
LHMI	**Lhok Sumawe**	**26.51**	**297**	P	**P**	**23 38 51.2**	**+0.9**
	comp=Z,7µmcomp=Z,539nm,1.1s						
LHMI	**Lhok Sumawe**	**26.51**	**297**	P	**P**	**23 38 50.7**	**+0.4**
PMG	**Port Moresby**	**26.53**	**97**	P	**P**	**23 38 50.8**	**+0.3**
	comp=Z,59nm,0.5s,baz=270,slow=11,SNR=20						
PMG				ScP	**ScP**	**23 44 40.1**	**+2.0**
	comp=Z,14nm,0.5s,baz=236,slow=3.6,SNR=4.

CMSA Cobar Meteorol 33.77 139 P **P** **23 39 53.2 +1.0**
comp=Z,118nm,0.6s
CMSA Cobar Meteorol 33.77 139 P **P** **23 39 53.8 +1.6**
CMSA Cobar Meteorol 33.77 139 P **P** **23 39 53.9 +1.6**
GULI GuiLin 33.78 343 P **P** **23 39 55.8 +3.4**
GULI pP **PP** **23 41 37.8 +2.3**
GULI S **S** **23 44 39.5 +4.7**
GULI sS **SS** **23 47 48.8 -0.2**
GULI pmax pmax
comp=Z,140nm,0.9s
GULI pmax pmax
comp=Z,500nm,5.1s
GULI LR LR
comp=N,2μm,17.3s
GULI LR LR
comp=E,800nm,14.2s
GULI LR LR
comp=Z,600nm,19.0s
GULI GuiLin 33.78 343 P **P** **23 39 52.5 +0.1**
GULI S **S** **23 44 35.4 +0.6**
GULI sS **sS** **23 47 41.9 +4.6**
GULI pmax pmax
comp=Z,330nm,1.3s
GULI pmax pmax
comp=Z,580nm,7.0s
GD1S Gladstone Soft 33.78 123 P **P** **23 39 54.1 +1.7**
DGPR DIGLIPUR 34.02 306 *ex* x 23 38 20.2
AULRC Lightning Ridg 34.05 134 P **P** **23 39 56.4 +1.8**
EIDS Eidsvold 34.36 125 P **P** **23 39 57.9 +0.6**
comp=Z,47nm,1.8s
EIDS Eidsvold 34.36 125 P **P** **23 39 58.9 +1.6**
EIDS Eidsvold 34.36 125 P **P** **23 39 59.1 +1.9**
ARPS Mount Arapiles 35.29 150 P **P** **23 40 05.2 +0.5**
comp=Z,293nm,0.7s
MGBR Mount Gambier 35.43 152 P **P** **23 40 06.3 +0.4**
CNSH ChangSha 35.94 349 P **P** **23 40 10.6 +0.4**
CNSH pmax pmax
comp=Z,210nm,1.0s
NPW Naypyitaw 35.95 319 P **P** **23 40 11.8 +1.3**
GYA Guiyang 36.06 339 ⇑P **P** **23 40 12.4 +1.0**
GYA S **S** **23 45 08.9 -0.2**
GYA sS sS 23 48 19.4 +6.0
GYA pmax pmax
comp=Z,330nm,0.9s
GYA pmax pmax
comp=Z,1μm,3.1s
TW1H Toowoomba 1 Ha 36.06 128 P **P** **23 40 13.4 +2.0**
AUDCS Dubbo College 36.15 137 P **P** **23 40 13.4 +1.4**
KMI2 Kunming 36.50 332 ⇑P **P** **23 40 17.3 +2.2**
KMI2 sP sP 23 42 59.8 -4.1
KMI2 ScP **S** **23 45 14.6 -1.3**
KMI2 S **ScP** **23 45 19.0 +6.9**
KMI2 sS SS 23 48 28.9 -5.8
KMI2 pmax pmax
comp=Z,410nm,1.0s
KMI2 pmax pmax
comp=Z,1μm,4.1s
AUBSH Beerwah State 36.53 126 P **P** **23 40 17.0 +1.9**
AUHPC Hawkesdale P12 36.57 150 P **P** **23 40 17.1 +1.8**
BRAT Ballarat 36.96 148 P **P** **23 40 20.0 +1.6**
AUPHS Peel High Scho 37.07 134 P **P** **23 40 21.3 +1.8**
ARMA Armidale 37.24 132 P **P** **23 40 22.5 +1.5**
comp=Z,72nm,1.0s
ARMA Armidale 37.24 132 P **P** **23 40 22.8 +1.8**
ARMA Armidale 37.24 132 IAmb IAmb 23 40 25.5
comp=Z,176nm,1.6s
ARMA Armidale 37.24 132 P **P** **23 40 21.8 +0.8**
MLBS Spotswood, Mel 37.68 148 P **P** **23 40 26.2 +2.0**
TOO Toolangi 37.81 147 P **P** **23 40 26.4 +1.0**
comp=Z,36nm,1.2s
TOO Toolangi 37.81 147 IAmb IAmb 23 40 28.3
comp=Z,100nm,1.6s
WHN Wuhan 38.01 351 ⇑*i*P **P** **23 40 28.1 +1.1**
WHN PP **PP** **23 42 13.9 -0.5**
WHN ScP **ScP** **23 45 18.9 +1.5**
WHN S **S** **23 45 37.4 -0.1**
WHN SS **SS** **23 48 53.8 -5.0**
WHN pmax pmax
comp=Z,1μm,1.6s
WHN pmax pmax
comp=Z,3μm,4.2s
SSE Sheshan 38.12 1 P **P** **23 40 28.8 +0.9**
SSE pmax pmax
comp=Z,70nm,0.9s
PZH PanZhiHua 38.12 332 P **P** **23 40 29.0 +0.8**
PZH PP **PP** **23 42 19.6 +4.0**
PZH ScP **ScP** **23 45 19.8 +1.6**
PZH S **S** **23 45 39.8 +0.2**
PZH SS **SS** **23 48 59.0 -2.1**
PZH pmax pmax
comp=Z,160nm,1.0s
PZH pmax pmax
comp=Z,950nm,3.7s
AUMTS Mt Stromlo 38.32 141 P **P** **23 40 31.1 +1.5**
CAN Canberra 38.32 141 P **P** **23 40 30.7 +1.1**
comp=Z,132nm,1.0s
CAN Canberra 38.32 141 P **P** **23 40 30.9 +1.3**
CAN Canberra 38.32 141 IAmb IAmb 23 40 34.9
comp=Z,88nm,0.7s
CAN Canberra 38.32 141 P **P** **23 40 31.1 +1.5**
AUDAR Daramalan Coll 38.36 141 P **P** **23 40 31.4 +1.5**
AUMHS Melrose High S 38.40 141 P **P** **23 40 31.9 +1.6**
SYDH Sydney Hard Ro 38.49 138 P **P** **23 40 32.9 +2.0**
TNCH TengChong 38.52 327 P **P** **23 40 32.6 +1.1**
TNCH PP **PP** **23 42 20.9 +1.6**
TNCH sP sP 23 43 20.6 -1.1
TNCH S **S** **23 45 49.1 +3.5**
TNCH ScS **ScS** **23 49 28.8 -4.0**
TNCH pmax pmax
comp=Z,270nm,1.4s
ENH Enshi 38.74 345 P **P** **23 40 33.5 +0.5**
ENH Enshi 38.74 345 P **P** **23 40 33.5 +0.5**
ENH Enshi 38.74 345 P **P** **23 40 33.3 +0.3**
ENH ScP **ScP** **23 45 22.1 +1.8**
WOLH Wollongong Har 38.96 138 P **P** **23 40 36.9 +2.2**
SAVO Savo Central 39.01 96 P **P** **23 40 36.7 +1.3**
TATA Tatamba Isabel 39.01 94 P **P** **23 40 37.0 +1.6**
NJ2 Nanjing 39.09 358 ⇑*i*P **P** **23 40 36.6 +0.9**
NJ2 PP **PP** **23 42 23.6 -0.6**
NJ2 ScP **ScP** **23 45 22.6 +1.0**
NJ2 S **S** **23 45 50.3 -3.0**
NJ2 SS **SS** **23 49 13.8 -2.7**
NJ2 ScS **ScS** **23 49 34.9 -0.6**
NJ2 pmax pmax
comp=Z,650nm,1.0s
HNR Honiara 39.14 96 P **P** **23 40 38.0 +1.5**
HNR Honiara 39.14 96 P **P** **23 40 36.9 +0.4**
HNR pmax pmax
comp=Z,318nm,0.9s
HNR Honiara 39.14 96 P **P** **23 40 36.9 +0.4**
HNR Honiara 39.14 96 P **P** **23 40 37.4 +0.9**
MILA Mila 39.55 143 P **P** **23 40 40.6 +1.2**
JSU Suzuyama 39.69 13 P **P** **23 40 40.6 0.0**
JSU Suzuyama 39.69 13 IAmb IAmb 23 40 40.9
comp=Z,70nm,0.9s
JSU Suzuyama 39.69 13 P **P** **23 40 40.3 -0.3**
JCJ Chichijima 40.10 31 P **P** **23 40 43.1 -0.8**
comp=Z,308nm,0.7s,baz=285,slow=12,SNR=10.0
comp=Z,308nm,0.7s
JCJ Chichijima 40.10 31 P **P** **23 40 45.3 +1.4**
JCJ Chichijima 40.10 31 P **P** **23 40 43.3 -0.6**
JCJ Chichijima 40.10 31 P **P** **23 40 44.5 +0.6**
BRDH Bariadhala 40.96 317 P **P** **23 40 52.0 +1.3**
comp=Z,654nm,0.8s,baz=92,slow=6.1,SNR=19
comp=Z,654nm,0.8s
HURO Huro Makira 41.08 98 P **P** **23 40 53.6 +1.7**
CD2 Chengdu 41.15 338 ⇑P **P** **23 40 52.8 +0.6**
CD2 PP **PP** **23 42 42.0 -1.2**
CD2 ScP **ScP** **23 45 32.0 +2.1**
CD2 S **S** **23 46 22.3 -1.0**
CD2 sS sS 23 49 34.5 +2.0
CD2 pmax pmax
comp=Z,860nm,0.7s
CD2 pmax pmax
comp=Z,1μm,3.9s
JNU Nakatsue 41.34 13 P **P** **23 40 52.7 -0.9**
comp=Z,38nm,0.9s,baz=217,slow=2.2,SNR=17
JNU ScP **ScP** **23 45 32.5 +1.9**
comp=Z,5.4nm,0.8s,baz=211,slow=5.9,SNR=1.3
comp=Z,38nm,0.9s
LKP Lekhapani 41.80 326 ⇑*i*x x 23 40 30.2
LKP *i* x x 23 42 21.5
HALK Hakmana 41.81 287 P **P** **23 40 57.9 +0.3**

PALK Pallekele 42.16 289 P **P** **23 41 00.7 +0.2**
comp=Z,127nm,0.9s,baz=99,slow=6.2,SNR=34
PALK ScP **ScP** **23 45 36.6 +2.2**
comp=Z,16nm,0.6s,baz=95,slow=2.1,SNR=9.5
comp=Z,127nm,0.9s
PALK Pallekele 42.16 289 *i* P **P** **23 41 00.5 +0.1**
SNR=8.3
PALK Pallekele 42.16 289 P **P** **23 41 00.7 +0.2**
PALK Pallekele 42.16 289 P **P** **23 40 59.8 -0.6**
PALK Pallekele 42.16 289 P **P** **23 40 59.6 -0.9**
PALK Pallekele 42.16 289 P **P** **23 41 00.5 +0.1**
LYN LuoYang 42.23 350 ⇑P **P** **23 41 00.3 -0.2**
LYN pP PcP 23 42 41.4 +1.3
LYN sP sP 23 43 49.3 -3.5
LYN ScP **ScP** **23 45 36.0 +2.0**
LYN S **S** **23 46 37.5 -1.0**
LYN ScS **ScS** **23 49 57.3 +2.5**
LYN pmax pmax
comp=Z,200nm,0.9s
LYN pmax pmax
comp=Z,1μm,3.5s
MOO Moorlands 42.28 150 P **P** **23 41 02.3 +1.5**
comp=Z,67nm,2.3s
MOO Moorlands 42.28 150 P **P** **23 41 02.7 +1.8**
MOO Moorlands 42.28 150 P **P** **23 41 02.4 +1.5**
MOO Moorlands 42.28 150 P **P** **23 41 03.2 +2.4**
JTU Tsushima 42.38 11 P **P** **23 41 01.9 +0.2**
XAN Xi'an 42.47 346 ⇑P **P** **23 41 02.4 -0.1**
XAN pP pwP 23 42 47.8 -1.1
XAN sP sP 23 43 52.6 -1.7
XAN ScP **ScP** **23 45 36.3 +1.2**
XAN PcS **PcS** **23 46 31.5 -2.8**
XAN S **S** **23 46 39.8 -2.3**
XAN sS ScS 23 49 56.5 +0.1
XAN pmax pmax
comp=Z,650nm,0.7s
XAN pmax pmax
comp=Z,2μm,4.1s
JMN Monobe 42.68 17 P **P** **23 41 05.0 +0.9**
JMN Monobe 42.68 17 IAmb IAmb 23 41 05.4
comp=Z,104nm,1.1s
JMN Monobe 42.68 17 P **P** **23 41 04.4 +0.3**
MALK Mahakanadarawa 42.69 291 P **P** **23 41 04.1 -0.4**
MALK Mahakanadarawa 42.69 291 P **P** **23 41 04.9 +0.4**
TAU Tasmania Unive 42.70 151 P **P** **23 41 06.1 +2.1**
TAU Tasmania Unive 42.70 151 P **P** **23 41 05.3 +1.2**
TAU pmax pmax
comp=Z,316nm,1.8s
TAU Tasmania Unive 42.70 151 P **P** **23 41 05.3 +1.2**
TAU Tasmania Unive 42.70 151 P **P** **23 41 05.8 +1.7**
SHL Shillong 42.82 321 P **P** **23 41 05.1 -0.4**
SHL pmax pmax
comp=Z,333nm,1.0s
SHL Shillong 42.82 321 P **P** **23 41 05.6 +0.1**
SNR=77
SHL Shillong 42.82 321 P **P** **23 41 05.1 -0.4**
SHL Shillong 42.82 321 ⇑*i*P **P** **23 41 05.6 +0.1**
SHL *i* pP **PP** **23 42 57.5 -1.1**
TEZP TEZPUR 43.02 323 *e*P **P** **23 41 06.5 -0.3**
TEZP *i* x x 23 42 57.0
TIA Tai'an 43.32 356 P **P** **23 41 08.5 -0.5**
TIA pP **pP** **23 42 53.9 -0.7**
TIA ScP **ScP** **23 45 39.8 +1.3**
TIA S **S** **23 46 50.5 -3.5**
TIA ScS **ScS** **23 50 04.5 +2.9**
TIA pmax pmax
comp=Z,98nm,0.7s
TIA pmax pmax
comp=Z,590nm,4.1s
LHI Lord Howe Isla 43.37 129 P **P** **23 41 13.5 +4.0**
GUWA GUWAHATI 43.39 321 *e*P **P** **23 41 09.4 -0.3**
GUWA *i* x x 23 43 03.6
GUWA *ex* x 23 46 51.0
BWNR Bhubaneshwar 43.64 309 ⇑*i*P **P** **23 41 12.1 +0.3**
TJN Taejon 43.86 8 P **P** **23 41 14.3 +1.2**
TJN Taejon 43.86 8 ⇓*i*P **P** **23 41 12.8 -0.3**
TJN pmax pmax
comp=Z,3.0nm,1.1s
JHJ Hachijo jima 2 44.14 24 P **P** **23 41 15.2 -0.2**
comp=Z,68nm,0.4s,baz=240,slow=20,SNR=6.2
comp=Z,68nm,0.4s
VIS Vishakhapatnam 44.25 304 ⇑*i*P **P** **23 41 17.0 +0.6**
VIS IAmb IAmb 23 41 19.1
comp=Z,151nm,0.8s
VIS *i* x x 23 43 04.6
DHUB DHUBRI 44.35 319 *ex* x 23 41 17.6
KOUNC Koumac, New Ca 44.43 112 P **P** **23 41 19.4 +1.6**
KOUNC Koumac, New Ca 44.43 112 P **P** **23 41 18.1 +0.3**
KOUNC IAmb IAmb 23 41 21.9
comp=Z,62nm,0.6s
HNS HongShan 44.72 354 ⇑P **P** **23 41 19.5 -0.2**
HNS pP **pP** **23 43 08.9 +2.6**
HNS ScP **ScP** **23 45 45.8 +1.6**
HNS S **S** **23 47 10.3 -3.3**
HNS ScS **ScS** **23 50 10.3 -0.2**
HNS sS **sS** **23 50 28.5 +2.1**
HNS pmax pmax
comp=Z,220nm,1.1s
MDRS Chennai 44.73 297 ⇑*i*P **P** **23 41 20.6 +0.5**
MDRS *i* x x 23 43 09.4
INCN Inchon 44.86 7 P **P** **23 41 21.8 +1.0**
INCN Inchon 44.86 7 P **P** **23 41 17.8 -3.0**
RAGD RAYAGADA 44.94 306 ⇑*i*P **P** **23 41 21.9 +0.2**
RAGD *i* x x 23 43 11.4
KSAR Wonju Array Be 44.98 8 P **P** **23 41 21.8 +0.1**
KSAR Wonju Array Be 44.98 8 P **P** **23 41 21.8 +0.1**
KSRS Korea Array 45.00 8 P **P** **23 41 22.2 +0.4**
comp=Z,46nm,0.8s,baz=188,slow=8.3,SNR=116
KSRS PcP **PcP** **23 42 50.0 +0.4**
comp=Z,7.2nm,0.9s,baz=185,slow=3.4,SNR=6.3
KSRS ScP **ScP** **23 45 46.5 +1.1**
comp=Z,8.4nm,0.7s,baz=188,slow=3.9,SNR=12
comp=Z,46nm,0.8s
INU Inuyama 45.15 19 P **P** **23 41 22.8 -0.2**
INU Inuyama 45.15 19 P **P** **23 41 22.5 -0.4**
INU Inuyama 45.15 19 P **P** **23 41 19.0 -4.0**
HJU Haeju 45.31 6 P **P** **23 41 23.8 -0.3**
HJU S **S** **23 47 18.5 -3.3**
HJU AmB
comp=Z,754nm,3.3s
TIY Taiyuan 45.33 351 P **P** **23 41 24.1 -0.4**
TIY pP **pP** **23 43 13.0 +1.7**
TIY ScS ScS 23 50 15.4 +0.6
TIY pmax pmax
comp=Z,130nm,0.7s
TIY pmax pmax
comp=Z,510nm,9.9s
JGF Kuroka 45.49 19 P **P** **23 41 26.6 +1.0**
JGF Kuroka 45.49 19 P **P** **23 41 24.3 -1.3**
BOK Bokaro 45.70 313 ⇑*i*P **P** **23 41 27.8 +0.3**
BOK IAmb IAmb 23 41 29.5
comp=Z,46nm,0.5s
BOK *i* x x 23 43 17.1
LZDM Lanzhou Array 45.75 341 P **P** **23 41 29.1 +1.1**
comp=Z,40nm,0.4s,baz=171,slow=10,SNR=109
LZDM ScP **ScP** **23 45 50.5 +1.6**
comp=Z,3.9nm,0.4s,baz=163,slow=5.4,SNR=1.4
comp=Z,40nm,0.4s
LZH Lanzhou 45.82 341 *e*P **P** **23 41 29.8 +1.5**
LZH sP sP 23 44 20.6 -1.0
LZH ScP **ScP** **23 45 51.5 +2.4**
LZH S **S** **23 47 29.8 +0.3**
LZH ScS **ScS** **23 50 19.8 +1.5**
LZH sS sS 23 50 43.9 +0.5
LZH pmax pmax
comp=Z,500nm,1.3s
LZH pmax pmax
comp=Z,2μm,5.8s
VJD Vijayawada 45.89 301 *ex* x 23 41 35.5
DL2 Dalian 45.91 1 P **P** **23 41 27.1 -1.6**
DL2 pP **pP** **23 43 14.3 -2.1**
DL2 ScP **ScP** **23 45 48.4 -0.7**
DL2 S **S** **23 47 25.9 -4.3**
DL2 ScS **ScS** **23 50 18.1 -0.2**
DL2 pmax pmax
comp=Z,140nm,0.8s
DL2 pmax pmax
comp=Z,640nm,4.6s
JMUI Jamui 46.17 315 *e*P **P** **23 41 31.0 0.0**
LSA Lhasa 46.27 324 *i* P **P** **23 41 33.5 +1.3**
SNR=107
LSA Lhasa 46.27 324 P **P** **23 41 33.6 +1.4**
LSA Lhasa 46.27 324 P **P** **23 41 33.7 +1.4**

LSA Lhasa 46.27 324 P **P** **23 41 33.2 +1.0**
PYAG Pyongyang 46.31 6 P **P** **23 41 31.4 -0.3**
PYAG pP **pP** **23 43 19.4 -0.3**
PYAG S **S** **23 47 33.1 -2.6**
PYAG AmB
comp=Z,344nm,1.7s
SANVU Saraoutou 46.49 104 P **P** **23 41 35.4 +1.9**
SANVU Saraoutou 46.49 104 P **P** **23 41 34.8 +1.2**
SANVU Saraoutou 46.49 104 P **P** **23 41 35.3 +1.8**
NOUC Port Laguerre 46.57 114 P **P** **23 41 35.4 +1.3**
MJAR Matsushiro Arr 46.63 20 P **P** **23 41 33.4 -0.8**
comp=Z,92nm,1.0s,baz=191,slow=7.9,SNR=102
MJAR ScP **ScP** **23 45 53.4 +1.2**
comp=Z,12nm,0.7s,baz=178,slow=5.3,SNR=15
comp=Z,92nm,1.0s
MJAR Matsushiro Arr 46.63 20 P **P** **23 41 33.0 -1.2**
MJAR IAmb IAmb 23 41 34.6
comp=Z,95nm,1.0s
MAJO Matsushiro 46.63 20 P **P** **23 41 33.8 -0.4**
MAJO Matsushiro 46.63 20 P **P** **23 41 33.3 -0.9**
MAJO pmax pmax
comp=Z,140nm,1.2s
MAJO Matsushiro 46.63 20 P **P** **23 41 33.2 -0.9**
MAJO IAmb IAmb 23 41 34.5
comp=Z,140nm,1.2s
MAJO Matsushiro 46.63 20 P **P** **23 41 33.5 -0.7**
MJB9 Matsu-Tunnel 46.63 20 IAmb IAmb 23 41 35.5
comp=Z,150nm,1.2s
ONTNC Ouen Toro 46.75 114 P **P** **23 41 37.0 +1.6**
ONTNC Ouen Toro 46.75 114 P **P** **23 41 36.1 +0.7**
ONTNC IAmb IAmb 23 41 40.2
comp=Z,74nm,0.6s
GAYA Gaya 46.79 314 ⇑*i*P **P** **23 41 35.7 +0.1**
GAYA IAmb IAmb 23 41 37.3
comp=Z,122nm,0.7s
YATNC Mamie plateau, 47.10 113 P **P** **23 41 40.0 +2.0**
OUENC Ouen Island, N 47.12 114 P **P** **23 41 40.1 +1.9**
OUENC Ouen Island, N 47.12 114 IAmb IAmb 23 41 43.0
comp=Z,60nm,0.8s
BJI2 Beijing 47.18 356 P **P** **23 41 38.3 +0.1**
BJI2 PcP **PcP** **23 42 58.8 +1.4**
BJI2 ScP **ScP** **23 45 56.1 +1.7**
BJI2 S **S** **23 47 45.9 -1.8**
BJI2 ScS **ScS** **23 50 26.8 0.0**
BJI2 pmax pmax
comp=Z,110nm,1.0s
BJT Baijiatuau 47.18 356 P **P** **23 41 39.0 +0.8**
BJT Baijiatuau 47.18 356 P **P** **23 41 38.5 +0.2**
HHU Hamhung 47.38 7 P **P** **23 41 39.5 -0.2**
HHU AmB
comp=Z,279nm,1.9s
BLSP Bilaspur 47.49 309 ⇑*i*P **P** **23 41 40.7 -0.2**
BLSP *i* x x 23 43 31.5
DVP Devils Point 47.65 107 P **P** **23 41 44.2 +2.0**
EVN Everest 47.74 319 P **P** **23 41 44.4 +1.0**
EVN Everest 47.74 319 P **P** **23 41 44.4 +1.0**
KAAM Kaadhehdhoo 47.94 277 P **P** **23 41 45.2 +0.8**
KAAM Kaadhehdhoo 47.94 277 P **P** **23 41 46.1 +1.7**
MARNC Mare, Loyalty 48.03 112 P **P** **23 41 46.6 +1.6**
MARNC Mare, Loyalty 48.03 112 IAmb IAmb 23 41 50.3
comp=Z,105nm,0.8s
HYB Hyderabad 48.09 301 *e*P **P** **23 41 45.1 -0.3**
HYB IAmb IAmb 23 41 45.7
comp=Z,150nm,0.6s
HYB Hyderabad 48.09 301 *e*P **P** **23 41 45.0 -0.5**
HYB *e*S **S** **23 48 02.2 +1.2**
HHC Hu-ho-hao-te 48.53 351 ⇑*i*P **P** **23 41 48.6 +0.2**
HHC pP pP 23 43 40.0 +2.3
HHC S **S** **23 48 05.8 -0.7**
HHC sS sS 23 51 29.3 +6.0
HHC pmax pmax
comp=Z,71nm,1.6s
HHC pmax pmax
comp=Z,340nm,6.7s
BTO2 Baotou 48.72 349 *e*P **P** **23 41 49.6 -0.2**
BTO2 pP **pP** **23 43 39.3 +0.1**
BTO2 PP **PP** **23 43 53.5 +1.8**
BTO2 sP **sP** **23 44 43.9 -1.8**
BTO2 S **S** **23 48 07.8 -1.2**
BTO2 sS **sS** **23 51 25.8 -0.2**
BTO2 SS **SS** **23 51 55.5 +4.8**
BTO2 pmax pmax
comp=Z,250nm,1.3s
BTO2 pmax pmax
comp=Z,2μm,7.8s
SNY Shenyang 48.90 3 ⇑P **P** **23 41 50.3 -0.7**
SNY S **S** **23 48 08.4 -2.8**
SNY pmax pmax
comp=Z,89nm,0.9s
SNY pmax pmax
comp=Z,430nm,2.8s
GOMU GeErMu 49.45 333 P **P** **23 41 56.0 +0.4**
GOMU S **S** **23 48 21.0 +1.3**
GOMU pmax pmax
comp=Z,98nm,1.4s
MNGI Mangalore 49.49 294 *e*P **P** **23 41 56.2 +0.4**
ALBI Allahabad 49.58 312 ⇑*i*P **P** **23 41 55.9 -0.4**
ALBI *i* x x 23 43 47.9
GTA2 Gaotai 50.27 339 P **P** **23 42 02.8 +1.6**
GTA2 pP pwP 23 43 55.8 +2.4
GTA2 ScP **ScP** **23 46 10.0 +2.1**
GTA2 S **S** **23 48 31.0 +0.8**
GTA2 ScS **ScS** **23 50 48.8 +0.5**
GTA2 sS sS 23 51 55.1 +6.4
GTA2 pmax pmax
comp=Z,400nm,1.0s
GTA2 pmax pmax
comp=Z,1μm,7.0s
PSTR Posyet 50.53 10 *d i*P **P** **23 42 03.2 +0.3**
PSTR pmax pmax
comp=Z,10.0nm,0.7s
BNDA BANDA 50.77 311 *e*P **P** **23 42 04.2 -0.8**
CN2 Changchun 50.99 5 ⇑P **P** **23 42 04.9 -1.3**
CN2 *e*pP pP 23 43 55.0 -2.2
CN2 *e*S **S** **23 48 39.3 -0.1**
CN2 ScS **ScS** **23 50 49.5 -3.3**
CN2 *e*SS **SS** **23 52 27.0 +0.8**
CN2 pmax pmax
comp=Z,200nm,6.0s
XLT XiLinHaoTe 51.04 356 *e*P **P** **23 42 06.5 -0.2**
XLT pP pP 23 43 56.9 -1.2
XLT sP sP 23 45 03.4 -0.6
XLT S **S** **23 48 39.8 -0.4**
XLT ScS **ScS** **23 50 53.3 -0.1**
XLT sS sS 23 52 01.5 +1.9
XLT pmax pmax
comp=Z,170nm,0.7s
XLT pmax pmax
comp=Z,470nm,5.6s
BRCI Bahraich 51.05 314 ⇑*i*P **P** **23 42 07.4 +0.4**
BRCI IAmb IAmb 23 42 08.8
comp=Z,503nm,0.5s
VLA Vladivostok 51.18 11 *d i*P **P** **23 42 07.9 +0.4**
VLA pmax pmax
comp=Z,103nm,1.0s
GOA Goa 51.40 296 *e*P **P** **23 42 10.1 +0.5**
GOA *i* x x 23 44 10.3
JTM Tenmabayashi 51.41 20 IAmb IAmb 23 42 10.3
comp=Z,152nm,0.9s
KAD Karad 51.80 299 *e*P **P** **23 42 11.7 -0.8**
KAD IAmb IAmb 23 42 14.2
comp=Z,445nm,1.7s
BHPL Bhopal 51.81 307 ⇑*i*P **P** **23 42 11.6 -1.0**
BHPL IAmb IAmb 23 42 13.7
comp=Z,84nm,0.8s
BHPL *i* x x 23 44 06.1
USRK Ussuriysk Ar. 52.24 10 P **P** **23 42 15.2 0.0**
comp=Z,69nm,0.4s,baz=191,slow=6.8,SNR=191
USRK pP **pP** **23 44 06.7 -0.4**
comp=Z,17nm,0.9s,baz=192,slow=6.0,SNR=2.2
USRK ScP **ScP** **23 46 17.5 +1.3**
comp=Z,11nm,0.8s,baz=213,slow=5.1,SNR=6.0
comp=Z,69nm,0.4s
USRK Ussuriysk Ar. 52.24 10 P **P** **23 42 14.6 -0.6**
USA0B Ussuriysk Arra 52.25 10 P **P** **23 42 15.5 +0.4**
USA0B pmax pmax
comp=Z,119nm,0.9s
USA0B Ussuriysk Arra 52.25 10 P **P** **23 42 15.5 +0.4**
USA0B IAmb IAmb 23 42 16.2
comp=Z,119nm,0.9s
MDJ Mudanjiang 52.26 8 P **P** **23 42 16.2 +0.9**
MDJ Mudanjiang 52.26 8 IAmb IAmb 23 42 16.5
comp=Z,131nm,0.7s
MDJ Mudanjiang 52.26 8 P **P** **23 42 15.3 0.0**

MDJ S **S** **23 48 57.4 +1.1**
MDJ SS **SS** **23 52 47.8 +1.7**
MDJ pmax pmax
comp=Z,210nm,0.7s
MDJ **Mudanjiang** **52.26 8** P **P** **23 42 15.5 +0.2**
MDJ **Mudanjiang** **52.26 8** P **P** **23 42 15.3 0.0**
MDJ PcP **PcP** **23 43 17.8 +1.6**
MDJ ScP **ScP** **23 46 17.4 +1.1**
POO **Poona** **52.59 300** *eP* **P** **23 42 17.9 -0.3**
POO *i* x x 23 43 05.5
BNX **BinXian** **53.10 6** ⇑P **P** **23 42 20.3 -0.9**
BNX pP **pP** **23 44 13.3 -0.3**
BNX PP **PP** **23 44 33.3 +2.9**
BNX S **S** **23 49 02.4 -4.8**
BNX pmax pmax
comp=Z,56nm,0.6s
BNX pmax pmax
comp=Z,240nm,3.1s
ERM **Erimo** **53.23 21** ⇑*i*P **P** **23 42 22.9 +0.7**
ERM pmax pmax
comp=Z,84nm,1.0s
ERM **Erimo** **53.23 21** P **P** **23 42 22.8 +0.6**
PTH **Pithoragarh** **53.25 315** ⇑*i*P **P** **23 42 21.6 -1.2**
PTH IAmb IAmb 23 42 24.3
comp=Z,118nm,0.4s
PTH *i* x x 23 44 31.5
JOSI **Joshimath** **54.28 316** *e*P **P** **23 42 29.5 -0.6**
ASOR **Ausora** **54.50 313** *e*P **P** **23 42 30.5 -0.8**
BISR **Bishrakh** **54.63 313** *e*P **P** **23 42 30.9 -1.4**
NDI **New Delhi** **54.86 313** ⇑*i*P **P** **23 42 32.1 -1.8**
NDI *i* x x 23 44 28.8
NPLP **NPLP New Delhi** **54.87 313** *e*P **P** **23 42 32.4 -1.6**
JKA **Kamikawa-asahi** **54.90 19** IAmb IAmb 23 42 35.4
comp=Z,172nm,1.0s
JKA **Kamikawa-asahi** **54.90 19** P **P** **23 42 34.4 +0.5**
DCZ **Deep Cove** **55.42 142** P **P** **23 42 37.6 +0.1**
DCZ IAmb IAmb 23 42 39.7
comp=Z,190nm,1.6s
DCZ **Deep Cove** **55.42 142** P **P** **23 42 38.4 +0.9**
UDPR **Udaipur** **55.42 306** ⇑*i*P **P** **23 42 37.1 -0.8**
PYZ **Puysegur Point** **55.48 142** P **P** **23 42 39.5 +1.6**
PYZ **Puysegur Point** **55.48 142** IAmb IAmb 23 42 41.6
comp=Z,86nm,0.6s
PYZ **Puysegur Point** **55.48 142** P **P** **23 42 38.8 +1.0**
MSZ **Milford Sound** **55.53 140** P **P** **23 42 39.4 +1.1**
AJM **Ajmer** **55.61 309** ⇑*i*P **P** **23 42 38.5 -0.7**
AJM IAmb IAmb 23 42 40.8
comp=Z,163nm,0.7s
AJM *i* x x 23 44 35.3
KLP **Kalpa** **55.76 316** ⇑*i*P **P** **23 42 41.0 +0.6**
KLP *i* x x 23 44 35.1
KLP *ex* x 23 49 38.4
JCZ **Jackson Bay** **55.81 139** P **P** **23 42 41.8 +1.4**
JCZ **Jackson Bay** **55.81 139** P **P** **23 42 41.3 +0.9**
KKR **Kurukshetra** **55.86 314** *eP* **P** **23 42 40.1 -0.7**
MLZ **Mavora Lakes** **55.98 141** P **P** **23 42 41.6 +0.2**
OUZ **Omahuta** **56.02 128** P **P** **23 42 43.6 +1.7**
WHZ **Wether Hill Ro** **56.12 142** IAmb IAmb 23 42 45.7
comp=Z,82nm,0.7s
WHZ **Wether Hill Ro** **56.12 142** P **P** **23 42 42.4 +0.1**
ULN **Ulaanbaatar** **56.12 349** *c*P **P** **23 42 43.0 +0.6**
ULN pmax pmax
comp=Z,133nm,1.1s
ULN **Ulaanbaatar** **56.12 349** P **P** **23 42 42.9 +0.4**
ULN **Ulaanbaatar** **56.12 349** P **P** **23 42 42.5 +0.1**
ULN IAmb IAmb 23 42 44.4
comp=Z,261nm,1.5s
ULN **Ulaanbaatar** **56.12 349** P **P** **23 42 42.3 -0.1**
comp=Z,8µmcomp=Z,402nm,1.2s
ULN pP **pP** **23 44 35.8 -1.4**
comp=Z,8µmcomp=Z,402nm,1.2s
ULN **Ulaanbaatar** **56.12 349** P **P** **23 42 43.1 +0.7**
ULN **Ulaanbaatar** **56.12 349** P **P** **23 42 43.0 +0.6**
ULN PcP **PcP** **23 43 33.0 +1.6**
ULN pP **pP** **23 44 37.0 -0.2**
SONM **Songino Array** **56.21 349** P **P** **23 42 43.6 +0.5**
comp=Z,121nm,0.9s,baz=164,slow=8.3,SNR=452
SONM pP **pP** **23 44 38.2 +0.4**
comp=Z,19nm,1.1s,baz=164,slow=7.7,SNR=4.3
SONM ScP **ScP** **23 46 35.2 +1.5**
comp=Z,5.8nm,0.7s,baz=168,slow=5.5,SNR=3.8
SONM S **S** **23 49 45.2 -2.7**
comp=Z,0.8nm,0.8s,baz=275,slow=27,SNR=1.7
SONM PKPPKP **P'P'df** **00 12 21.6 -6.5**
comp=Z,1.1nm,1.0s,baz=318,slow=1.9,SNR=6.9
comp=Z,121nm,0.9s
SONM **Songino Array** **56.21 349** P **P** **23 42 43.5 +0.5**
SONM IAmb IAmb 23 42 44.8
comp=Z,202nm,1.2s
FOZ **Fox Glacier** **56.25 138** P **P** **23 42 43.1 -0.2**
FOZ **Fox Glacier** **56.25 138** P **P** **23 42 43.2 0.0**
HIA **Hailar** **56.26 359** P **P** **23 42 43.4 +0.2**
HIA **Hailar** **56.26 359** P **P** **23 42 43.3 +0.1**
WKZ **Wanaka** **56.30 140** P **P** **23 42 44.9 +1.3**
MCQ **Macquarie Isla** **56.33 154** P **P** **23 42 45.2 +1.6**
comp=Z,83nm,1.3s
HILR **Hailar Array B** **56.55 359** P **P** **23 42 45.5 +0.3**
comp=Z,21nm,0.4s,baz=182,slow=10,SNR=38
HILR pP **pP** **23 44 40.0 +0.3**
comp=Z,2.4nm,0.4s,baz=183,slow=17,SNR=1.7
comp=Z,21nm,0.4s
EAZ **Earnscleugh** **56.66 140** P **P** **23 42 45.9 -0.2**
WVZ **Waitaha Valley** **56.67 138** P **P** **23 42 46.5 +0.4**
LBZ **Lake Benmore** **56.85 139** P **P** **23 42 46.9 -0.5**
DSZ **Denniston Nort** **56.88 136** P **P** **23 42 49.4 +1.7**
BHK **Bhakra** **56.98 315** ⇑*i*x x 23 42 48.3
BHK *i* x x 23 44 45.0
MSVF **Nonsavu** **57.02 106** P **P** **23 42 50.7 +1.6**
MSVF **Nonsavu** **57.02 106** P **P** **23 42 49.9 +0.8**
MSVF pmax pmax
comp=Z,54nm,0.9s
MSVF **Nonsavu** **57.02 106** P **P** **23 42 49.9 +0.8**
MSVF **Nonsavu** **57.02 106** P **P** **23 42 50.6 +1.5**
QRZ **Quartz Range** **57.04 134** P **P** **23 42 50.5 +1.8**
QRZ **Quartz Range** **57.04 134** IAmb IAmb 23 42 55.7
comp=Z,74nm,0.6s
QRZ **Quartz Range** **57.04 134** P **P** **23 42 49.9 +1.2**
QRZ **Quartz Range** **57.04 134** P **P** **23 42 50.6 +1.8**
RPZ **Rata Peaks** **57.14 138** P **P** **23 42 50.4 +1.0**
RPZ **Rata Peaks** **57.14 138** P **P** **23 42 49.7 +0.4**
SYZ **Scrubby Hill** **57.15 142** P **P** **23 42 49.7 +0.4**
TUZ **Tuapeka** **57.19 141** P **P** **23 42 49.7 +0.1**
TMZ **Timaru** **57.39 139** P **P** **23 42 51.2 +0.2**
ODZ **Otahua Downs** **57.43 140** P **P** **23 42 51.7 +0.4**
BKNR **BIKANER** **57.45 310** *eP* **P** **23 42 50.5 -1.3**
YSS **Yuzhno-Sakhali** **57.48 18** P **P** **23 42 52.1 +0.6**
YSS **Yuzhno-Sakhali** **57.48 18** *c*P **P** **23 42 51.8 +0.4**
YSS pmax pmax
comp=Z,207nm,1.4s
YSS **Yuzhno-Sakhali** **57.48 18** P **P** **23 42 52.0 +0.6**
YSS IAmb IAmb 23 42 53.0
comp=Z,227nm,1.3s
YSS **Yuzhno-Sakhali** **57.48 18** P **P** **23 42 52.0 +0.5**
HEH **HeiHe** **57.57 5** *eP* **P** **23 42 51.8 -0.2**
HEH pP **pP** **23 44 50.3 +3.2**
HEH ScP **ScP** **23 46 39.9 +0.5**
HEH S **S** **23 50 01.3 -3.5**
HEH ScS **ScS** **23 51 37.9 -2.1**
HEH pmax pmax
comp=Z,170nm,1.1s
LTZ **Lake Taylor** **57.59 137** P **P** **23 42 52.6 +0.1**
KHEZ **Kahui Hut** **57.59 132** P **P** **23 42 54.6 +2.1**
NEZ **North Egmont** **57.64 132** P **P** **23 42 55.9 +2.9**
OXZ **Oxford** **57.64 137** IAmb IAmb 23 42 56.6
comp=Z,102nm,0.6s
OXZ **Oxford** **57.64 137** P **P** **23 42 52.8 +0.1**
THZ **Tophouse** **57.65 135** IAmb IAmb 23 42 57.2
comp=Z,123nm,0.8s
THZ **Tophouse** **57.65 135** P **P** **23 42 53.2 +0.3**
WIAZ **Waiheke Island** **57.67 129** P **P** **23 42 54.7 +1.6**
DREZ **Durham Road** **57.69 132** P **P** **23 42 55.1 +1.9**
HHSZ **Highcliff Hill** **57.76 141** P **P** **23 42 54.9 +1.3**
MKAZ **Moumakai** **57.78 130** P **P** **23 42 55.6 +1.8**
NNZ **Nelson** **57.78 135** P **P** **23 42 53.8 0.0**
TSSA **Tissa** **57.96 316** ⇑*i*P **P** **23 42 54.6 -0.7**
TSSA *i* x x 23 50 05.3
HIZ **Hauiti** **57.97 131** P **P** **23 42 57.0 +1.9**
VRZ **Vera Road** **58.09 132** P **P** **23 42 57.4 +1.6**
GVZ **Greta Valley S** **58.18 137** IAmb IAmb 23 43 00.1
comp=Z,141nm,0.7s
GVZ **Greta Valley S** **58.18 137** P **P** **23 42 56.5 +0.1**
MQZ **McQueen's Vall** **58.20 138** IAmb IAmb 23 43 01.5
comp=Z,276nm,1.7s
MQZ **McQueen's Vall** **58.20 138** P **P** **23 42 57.5 +1.0**
TOZ **Tahuroa Road** **58.22 130** IAmb IAmb 23 43 00.6
comp=Z,207nm,1.7s
TOZ **Tahuroa Road** **58.22 130** P **P** **23 42 59.1 +2.3**
KHZ **Kahutara** **58.32 136** P **P** **23 42 57.8 +0.5**
KHZ **Kahutara** **58.32 136** IAmb IAmb 23 43 00.6
comp=Z,91nm,0.6s
KHZ **Kahutara** **58.32 136** P **P** **23 42 57.6 +0.3**
KHZ **Kahutara** **58.32 136** P **P** **23 42 57.9 +0.6**
TLZ **Tolley Road** **58.42 131** P **P** **23 42 60.0 +1.8**
WAZ **Wanganui** **58.45 133** P **P** **23 42 59.6 +1.3**
DGTI **Dogotuki** **58.58 105** P **P** **23 43 01.2 +1.7**
KIW **Kapiti Island** **58.75 134** P **P** **23 42 59.9 -0.4**
SNZO **South Karori** **58.76 134** P **P** **23 43 02.4 +2.2**
SNZO **South Karori** **58.76 134** P **P** **23 42 59.3 -1.0**
SNZO IAmb IAmb 23 43 02.4
comp=Z,134nm,0.6s
SNZO **South Karori** **58.76 134** P **P** **23 43 00.3 +0.1**
JASL **Jaisalmer** **58.76 307** *eP* **P** **23 43 00.2 -0.4**
WMQ **Urumqi** **58.82 333** ⇑P **P** **23 43 02.0 +1.3**
WMQ PcP **PcP** **23 43 36.5 -5.6**
WMQ pP pP 23 44 56.3 +0.3
WMQ sP sP 23 46 02.9 +3.1
WMQ S **S** **23 50 21.0 0.0**
WMQ ScS **ScS** **23 51 49.3 -0.6**
WMQ pmax pmax
comp=Z,390nm,0.7s
WMQ pmax pmax
comp=Z,760nm,3.6s
JMU **Jammu** **58.85 315** ⇑*i*P **P** **23 43 01.4 +0.4**
JMU IAmb IAmb 23 43 03.6
comp=Z,311nm,0.5s
CAW **Cannon Point** **58.95 134** P **P** **23 43 01.1 -0.5**
MRZ **Mangatainoka R** **59.17 133** P **P** **23 43 02.7 -0.3**
UGL **Uglegorsk** **59.19 16** *eP* **P** **23 43 04.0 +1.1**
UGL *eS* **S** **23 50 24.8 -0.4**
UGL pmax pmax
comp=Z,800nm,4.5s
UGL smax smax
comp=E,900nm,9.6s
UGL smax smax
comp=N,800nm,11.0s
TSZ **Takapari Road** **59.26 133** P **P** **23 43 03.8 +0.1**
MTW **Mount Morrison** **59.27 134** P **P** **23 43 04.0 +0.2**
ZAK **Zakamensk** **59.28 347** *eP* **P** **23 43 03.5 -0.1**
ZAK *e* 23 43 44.3
ZAK pmax pmax
comp=Z,92nm,1.3s
ZAK pmax pmax
comp=Z,40nm,1.7s
CASY **Casey** **59.35 185** P **P** **23 43 03.5 -0.3**
CASY **Casey** **59.35 185** P **P** **23 43 02.4 -1.3**
BKZ **Black Stump Fm** **59.38 131** P **P** **23 43 05.7 +1.1**
BKZ **Black Stump Fm** **59.38 131** P **P** **23 43 04.7 +0.1**
BKZ **Black Stump Fm** **59.38 131** P **P** **23 43 05.0 +0.4**
GRNR **Gornyy** **59.40 12** ⇑*i*P **P** **23 43 05.2 +0.9**
GRNR pmax pmax
comp=N,40nm,1.2s
GRNR pmax pmax
comp=Z,100nm,1.1s
URZ **Urewera** **59.59 130** P **P** **23 43 05.8 -0.1**
RTZ **Ruatahuna** **59.59 131** IAmb IAmb 23 43 09.8
comp=Z,95nm,0.7s
RTZ **Ruatahuna** **59.59 131** P **P** **23 43 05.8 -0.1**
BFZ **Birch Farm** **59.66 133** P **P** **23 43 06.4 +0.1**
MWZ **Matawai** **59.92 130** P **P** **23 43 08.2 0.0**
KNZ **Kokohu** **60.22 131** P **P** **23 43 09.6 -0.4**
MXZ **Matakaoa Point** **60.32 129** P **P** **23 43 12.8 +2.1**
MXZ **Matakaoa Point** **60.32 129** P **P** **23 43 10.7 0.0**
MXZ IAmb IAmb 23 43 14.3
comp=Z,118nm,0.7s
MXZ **Matakaoa Point** **60.32 129** P **P** **23 43 11.2 +0.5**
PUZ **Puketiti** **60.41 130** P **P** **23 43 11.2 -0.1**
TLY **Talaya** **60.43 348** *i*P **P** **23 43 11.7 +0.6**
TLY pmax pmax
comp=Z,92nm,1.0s
TLY **Talaya** **60.43 348** P **P** **23 43 11.7 +0.6**
TLY **Talaya** **60.43 348** P **P** **23 43 11.5 +0.4**
TLY **Talaya** **60.43 348** P **P** **23 43 12.0 +0.9**
TLY **Talaya** **60.43 348** P **P** **23 43 11.9 +0.9**
TLY PcP **PcP** **23 43 49.4 +1.0**
TLY pP **pP** **23 45 10.4 +2.0**
NIL **Nilore** **60.43 315** P **P** **23 43 11.8 +0.3**
NIL pmax pmax
comp=Z,382nm,0.6s
NIL **Nilore** **60.43 315** P **P** **23 43 11.0 -0.5**
NIL **Nilore** **60.43 315** P **P** **23 43 11.8 +0.3**
NIL **Nilore** **60.43 315** P **P** **23 43 11.5 -0.1**
IRK **Irkutsk** **60.83 349** *eP* **P** **23 43 12.7 -1.0**
IRK *eS* **S** **23 50 47.1 +1.4**
IRK pmax pmax
comp=Z,140nm,1.5s
KNGR **Kungurtug, Tuv** **60.92 344** *c*P **P** **23 43 15.0 +0.5**
KNGR pmax pmax
comp=Z,108nm,1.4s
TYV **Tymovskoe** **60.97 16** *eP* **P** **23 43 16.2 +1.6**
TYV *eS* **S** **23 50 49.7 +2.4**
TYV pmax pmax
comp=Z,500nm,3.3s
TYV pmax pmax
comp=Z,85nm,0.9s
TYV smax smax
comp=N,400nm,6.3s
TYV smax smax
comp=E,1µm,6.3s
ZEA **Zeya** **61.01 5** *eP* **P** **23 43 15.2 +0.4**
ZEA *e* 23 45 11.9
ZEA pmax pmax
comp=Z,130nm,0.9s
ZEA MLR MLR
comp=E,100nm,20.0s
ZEA MLR MLR
comp=Z,300nm,18.0s
WUS **Wushi** **61.24 325** P **P** **23 43 18.0 +1.2**
WUS **Wushi** **61.24 325** P **P** **23 43 18.1 +1.2**
KSH2 **Kashi** **62.08 322** P **P** **23 43 23.1 +0.8**
KSH2 pP pwP 23 45 21.3 -0.4
KSH2 S **S** **23 50 59.8 -2.1**
KSH2 ScS **SKSac** **23 52 14.3 -0.7**
KSH2 pmax pmax
comp=Z,570nm,0.7s
TARG **Taragay, Kyrgy** **62.39 325** IAmb IAmb 23 43 34.1
comp=Z,144nm,0.8s
TARG **Taragay, Kyrgy** **62.39 325** P **P** **23 43 25.8 +1.3**
SHLS **Shalkode** **62.42 327** *c*P **P** **23 43 23.9 -0.5**
SHLS *eS* **S** **23 51 04.6 -1.1**
SHLS pmax pmax
comp=Z,93nm,0.5s
SHLS **Shalkode** **62.42 327** ⇑*i*P **P** **23 43 24.0 -0.5**
comp=Z,94nm,0.5s
SHLS *eS* **S** **23 51 04.7 -1.1**
PRZ **Przheval'sk** **62.55 326** P **P** **23 43 27.4 +2.1**
ASAI **AK-SAY(Kyrgyzs** **62.61 324** P **P** **23 43 26.9 +1.0**
UZB **Uzynbulak** **62.65 327** *c*P **P** **23 43 26.9 +1.0**
UZB *eS* **S** **23 51 10.2 +1.6**
UZB pmax pmax
comp=Z,123nm,1.1s
UZB **Uzynbulak** **62.65 327** ⇑*i*P **P** **23 43 26.9 +1.0**
comp=Z,123nm,1.1s
UZB *eS* **S** **23 51 10.3 +1.6**
ZSN **Zaisan** **62.88 334** *c*P **P** **23 43 28.1 +1.0**
ZSN *eS* **S** **23 51 12.6 +1.7**
ZSN pmax pmax
comp=Z,63nm,1.1s
ZSN **Zaisan** **62.88 334** ⇑*i*P **P** **23 43 28.1 +1.0**
comp=Z,63nm,1.1s
ZSN *eS* **S** **23 51 12.6 +1.7**
SATY **Saty** **62.93 327** *c*P **P** **23 43 28.6 +1.0**
SATY *eS* **S** **23 51 13.5 +1.6**
SATY pmax pmax
comp=Z,105nm,0.8s
SATY **Saty** **62.93 327** ⇑*i*P **P** **23 43 28.7 +1.0**
comp=Z,105nm,0.8s
SATY *eS* **S** **23 51 13.6 +1.6**
KDJ **Kajisay** **63.00 325** P **P** **23 43 29.4 +1.2**
NRN **Naryn** **63.24 324** IAmb IAmb 23 43 31.5
comp=Z,156nm,0.8s
MK31 **Makanchi Array** **63.56 332** *c*P **P** **23 43 32.2 +0.7**
MKAR **Makanchi Array** **63.56 332** P **P** **23 43 32.9 +1.4**
comp=Z,336nm,0.6s,baz=141,slow=7.4,SNR=2761
MKAR pP **pP** **23 45 30.2 +0.8**
comp=Z,15nm,0.9s,baz=132,slow=7.7,SNR=2.6
MKAR S **S** **23 51 20.7 +1.5**
comp=Z,5.5nm,1.1s,baz=126,slow=17,SNR=5.9
MKAR PKP2bc **P'P'bc** **00 12 23.2 -1.5**
comp=Z,0.9nm,0.8s,baz=5.2,slow=1.3,SNR=6.2
MKAR P4KPbc 00 20 19.6
comp=Z,0.7nm,0.8s,baz=161,slow=5.3,SNR=4.0
comp=Z,336nm,0.6s
MKAR **Makanchi Array** **63.56 332** P **P** **23 43 32.6 +1.1**
DGZ **Jazzator, Alta** **63.57 337** *c*P **P** **23 43 32.5 +0.9**
DGZ pmax pmax
comp=Z,452nm,1.1s
ULHL **Ulahol** **63.61 325** P **P** **23 43 33.3 +1.1**
SNR=8.1
MANEM **Manem** **63.64 318** IAmb IAmb 23 43 35.6
comp=Z,2µm,1.2s
MAKZ **Makanchi** **63.72 332** P **P** **23 43 33.2 +0.7**
MAKZ pmax pmax
comp=Z,265nm,1.0s
MAKZ **Makanchi** **63.72 332** P **P** **23 43 33.2 +0.7**
MAKZ **Makanchi** **63.72 332** P **P** **23 43 33.2 +0.7**
MAKZ **Makanchi** **63.72 332** P **P** **23 43 33.0 +0.5**
MAKZ pP **pwP** **23 45 33.9 +0.8**
TNSS **Tian-Shan** **63.72 326** *eP* **P** **23 43 33.6 +0.6**
TNSS **Tian-Shan** **63.72 326** *eP* **P** **23 43 33.6 +0.6**
MDOK **Medeo** **63.75 326** *eP* **P** **23 43 33.9 +1.0**
MDOK *eS* **S** **23 51 23.3 +1.5**
MDOK **Medeo** **63.75 326** *eP* **P** **23 43 33.9 +1.0**
MDOK *eS* **S** **23 51 23.4 +1.5**
RER **Riviere de l'E** **63.85 250** IAmb IAmb 23 43 38.0
comp=Z,150nm,0.9s
RER **Riviere de l'E** **63.85 250** P **P** **23 43 36.2 +2.3**
AAA **Alma-Ata** **63.85 326** *eP* **P** **23 43 34.5 +1.1**
AAA pmax pmax
comp=Z,137nm,0.9s
AAA **Alma-Ata** **63.85 326** *eP* **P** **23 43 34.6 +1.1**
comp=Z,136nm,0.9s
KBL **Kabul** **63.87 314** P **P** **23 43 34.4 +0.5**
KBL pmax pmax
comp=Z,307nm,0.9s
KBL **Kabul** **63.87 314** P **P** **23 43 34.4 +0.5**
SNR=129
KBL S **S** **23 51 19.8 -3.9**
KBL **Kabul** **63.87 314** P **P** **23 43 34.4 +0.5**
KBL **Kabul** **63.87 314** P **P** **23 43 34.2 +0.3**
BOOM **Boomskoye usch** **63.94 325** P **P** **23 43 35.1 +1.0**
TDK **Taldyqorghan** **64.23 328** *c*P **P** **23 43 36.9 +1.1**
TDK *eS* **S** **23 51 29.2 +1.9**
TDK **Taldyqorghan** **64.23 328** ⇑*i*P **P** **23 43 36.9 +1.1**
TDK *eS* **S** **23 51 29.2 +1.9**
TKM2 **Tokmak 2** **64.41 325** P **P** **23 43 37.9 +0.8**
SNR=222
UCH **Uchtor** **64.60 324** P **P** **23 43 39.6 +0.9**
SNR=120
KBK **Karagaybulak** **64.61 324** P **P** **23 43 39.5 +1.1**
SNR=128
OHH **Osh** **64.62 321** P **P** **23 43 37.8 -0.6**
DRK **Karamyk** **64.64 320** P **P** **23 43 40.1 +1.2**
AAK **Ala-Archa** **64.87 324** P **P** **23 43 41.1 +1.1**
SNR=97
AAK **Ala-Archa** **64.87 324** *i* P **P** **23 43 41.1 +1.1**
SNR=102
AAK **Ala-Archa** **64.87 324** *c*P **P** **23 43 41.1 +1.1**
AAK pmax pmax
comp=Z,180nm,0.7s
AAK **Ala-Archa** **64.87 324** P **P** **23 43 41.0 +1.1**
AAK S **S** **23 51 36.5 +1.2**
AAK **Ala-Archa** **64.87 324** P **P** **23 43 41.2 +1.1**
AAK **Ala-Archa** **64.87 324** P **P** **23 43 41.2 +1.1**
AAK **Ala-Archa** **64.87 324** P **P** **23 43 41.3 +1.3**
AAK pP **pwP** **23 45 40.0 -1.3**
FRU1 **Bishkek** **64.89 324** IAmb IAmb 23 43 42.2
comp=Z,258nm,1.4s
CHMS **Chumysh** **64.94 325** P **P** **23 43 40.7 +0.4**
SNR=45
BOD **Bodaibo** **65.04 356** *eP* **P** **23 43 40.2 -0.3**
BOD pmax pmax
comp=Z,153nm,1.2s
USP **Ospenovka** **65.25 325** P **P** **23 43 42.9 +0.7**
SNR=101
SGDS **Sogindy** **65.29 325** *eP* **P** **23 43 43.3 +0.7**
comp=Z,42nm,0.5s
EKS2 **Erkin-Say** **65.30 324** P **P** **23 43 43.2 +0.6**
SNR=212
GAR **Garm** **65.33 319** P **P** **23 43 43.6 +0.7**
SKR **Severo-Kuril's** **65.41 24** ⇓*i*P **P** **23 43 44.1 +1.2**
SKR pmax pmax
comp=Z,1.0nm,1.1s
BTK **Batken** **65.59 320** P **P** **23 43 45.2 +0.8**
CTZ **Chatham Island** **65.59 135** P **P** **23 43 45.3 +1.0**
CHGR **Chuyangaron** **65.91 318** *c*P **P** **23 43 46.6 +0.1**
CHGR pmax pmax
comp=Z,1µm,1.4s
SHAA **Shahritus** **66.04 317** IAmb IAmb 23 43 47.2
comp=Z,323nm,1.1s
JLN **Jalan Bani Buh** **66.50 298** P **P** **23 43 50.5 +0.2**
SNR=5.7
BTLS **Baital** **66.61 326** *eP* **P** **23 43 51.5 +1.0**
BTLS **Baital** **66.61 326** *eP* **P** **23 43 51.5 +1.0**
DZA **Taraz** **66.89 323** *eP* **P** **23 43 52.7 +0.4**
DZA **Taraz** **66.89 323** *eP* **P** **23 43 52.8 +0.4**
WBK **Wadi Bani Khal** **67.04 298** P **P** **23 43 54.5 +0.8**
SNR=11
IUG **Iuzhnay** **67.25 322** *eP* **P** **23 43 55.7 +1.0**
IUG pmax pmax
comp=Z,93nm,0.7s
IUG **Iuzhnay** **67.25 322** *eP* **P** **23 43 55.7 +1.0**
comp=Z,93nm,0.7s
MHTO **MHTO** **67.42 296** P **P** **23 43 56.2 +0.3**
SNR=7.6
DQM **DQM** **67.48 295** P **P** **23 43 57.0 +0.6**
SNR=5.8
KK31 **Karatay Array** **67.50 323** IAmb IAmb 23 43 58.3
comp=Z,205nm,1.4s
KKAR **Karatay Array** **67.50 323** P **P** **23 43 55.9 -0.2**
KKAR **Karatay Array** **67.50 323** P **P** **23 43 55.9 -0.2**
WSAR **Wadi Sarin** **67.53 299** P **P** **23 43 57.8 +1.1**
SNR=26
JMDO **Jabal Madar** **67.72 298** P **P** **23 43 58.4 +0.6**
SNR=14
BRLS **Boroldaу** **67.87 322** *eP* **P** **23 43 58.5 +0.2**
BRLS pmax pmax
comp=Z,53nm,1.0s
BRLS **Boroldaу** **67.87 322** *eP* **P** **23 43 58.6 +0.2**
comp=Z,53nm,1.0s
PEA0B **Petropavlovsk-** **67.90 23** *c*P **P** **23 43 59.3 +1.1**
PEA0B **Petropavlovsk-** **67.90 23** IAmb IAmb 23 44 00.4
comp=Z,72nm,0.8s
PETK **Petropavlovsk-** **67.90 23** P **P** **23 43 59.6 +1.4**
comp=Z,63nm,0.8s,baz=215,slow=3.8,SNR=116
PETK pP **pP** **23 45 58.6 -0.6**
comp=Z,13nm,1.1s,baz=211,slow=2.6,SNR=2.7
comp=Z,63nm,0.8s
PETK **Petropavlovsk-** **67.90 23** P **P** **23 43 59.1 +0.9**
ZALV **Zalesovo Beam** **67.92 338** P **P** **23 43 58.2 -0.1**
comp=Z,121nm,0.4s,baz=136,slow=4.9,SNR=613
ZALV pP **pP** **23 45 58.9 +0.1**
comp=Z,19nm,0.9s,baz=127,slow=6.3,SNR=2.3
ZALV S **S** **23 52 07.3 -3.0**
comp=Z,7.8nm,0.9s,baz=150,slow=10,SNR=12
ZALV PKP2bc **P'P'bc** **00 12 12.9 +0.4**
comp=Z,1.6nm,0.6s,baz=336,slow=2.2,SNR=7.0
comp=Z,121nm,0.4s
ZALV **Zalesovo Beam** **67.92 338** P **P** **23 43 57.7 -0.6**
SMDO **Samad** **67.98 298** P **P** **23 44 00.0 +0.5**
SNR=11
KURBB **Kurchatov Arra** **68.04 333** P **P** **23 43 59.8 +0.6**
comp=Z,107nm,0.8s,baz=145,slow=5.1,SNR=320
KURBB PP **PP** **23 46 42.3 +1.8**
comp=Z,26nm,1.1s,baz=133,slow=9.3,SNR=7.2
KURBB S **S** **23 52 12.2 +0.5**
comp=Z,1.0nm,0.2s,baz=106,slow=20,SNR=6.4
KURBB PKP2bc **P'P'bc** **00 12 09.5 -2.9**
comp=Z,0.4nm,0.3s,baz=307,slow=3.9,SNR=6.9
KURBB P4KPbc 00 20 38.7
comp=Z,0.1nm,0.3s,baz=138,slow=3.5,SNR=3.1
comp=Z,107nm,0.8s
BIDO **Bidbid** **68.06 299** P **P** **23 44 01.0 +1.1**
SNR=36
KURK **Kurchatov** **68.06 333** P **P** **23 43 59.8 +0.5**
KURK pmax pmax
comp=Z,182nm,0.8s
KURK **Kurchatov** **68.06 333** P **P** **23 43 59.7 +0.4**
KURK **Kurchatov** **68.06 333** P **P** **23 43 59.8 +0.5**
KURK **Kurchatov** **68.06 333** P **P** **23 43 59.8 +0.5**
KURK **Kurchatov** **68.06 333** P **P** **23 43 60.0 +0.7**
KURK pP **pwP** **23 46 03.1 +0.9**
PET **Petropavlovsk** **68.21 24** P **P** **23 44 01.3 +1.2**

PET	**Petropavlovsk**	**68.21**	**24**	*ce*	P		**P**	**23 44 01.1 +1.0**
PET				*e**	PP		**pP**	**23 46 01.8 +0.7**
PET				*e**	SP		**sP**	**23 47 04.9 +0.9**
PET				*e*	S		**S**	**23 52 14.4 +0.8**
PET				*e*				23 52 58.2
PET					pmax		pmax	
	comp=Z,300nm,4.6s							
PET					pmax		pmax	
	comp=Z,91nm,1.4s							
PET					pmax		pmax	
	comp=Z,100nm,4.7s							
PET	**Petropavlovsk**	**68.21**	**24**		P		**P**	**23 43 59.8 -0.3**
	comp=Z,964nmcomp=Z,83nm,1.2s							
PET	**Petropavlovsk**	**68.21**	**24**		P		**P**	**23 44 01.1 +1.0**
BSY	**Bisya**	**68.63**	**298**		P		**P**	**23 44 03.8 +0.5**
	SNR=11							
SHAO	**Shalim**	**68.69**	**292**		P		**P**	**23 44 04.5 +0.7**
HRA	**Herat**	**68.77**	**311**		IAmb		IAmb	23 44 07.1
	comp=Z,156nm,1.5s							
HOQ	**Hoqain**	**68.79**	**299**		P		**P**	**23 44 05.0 +0.7**
	SNR=26							
DMTO	**DMTO**	**69.23**	**292**		P		**P**	**23 44 07.4 +0.4**
ARQ	**Araqi**	**69.41**	**298**		P		**P**	**23 44 08.6 +0.6**
	SNR=7.7							
YAK	**Yakutsk**	**69.43**	**5**		S		**S**	**23 52 22.2 -5.0**
	comp=Z,18nm,0.4s,baz=18,slow=1.8,SNR=2.1							
YAK	**Yakutsk**	**69.43**	**5**	*c*	P		**P**	**23 44 07.1 -0.1**
YAK				*i*	*PP		**pP**	**23 46 09.6 +1.2**
YAK					pmax		pmax	
	comp=Z,242nm,0.9s							
YAK	**Yakutsk**	**69.43**	**5**		P		**P**	**23 44 07.4 +0.2**
YAK	**Yakutsk**	**69.43**	**5**		P		**P**	**23 44 07.4 +0.2**
YAK	**Yakutsk**	**69.43**	**5**		P		**P**	**23 44 07.4 +0.2**
YAK					pP		**pP**	**23 46 09.0 +0.6**
SOHO	**SOHO**	**69.64**	**299**	*i*	P		**P**	**23 44 09.5 +0.2**
	SNR=34							
SOHO	**SOHO**	**69.64**	**299**		P		**P**	**23 44 09.8 +0.5**
RBK	**Rabkut**	**69.87**	**292**		P		**P**	**23 44 11.5 +0.7**
	SNR=5.1							
UOSS	**Minazif**	**70.18**	**300**	*i*	P		**P**	**23 44 12.4 -0.1**
	SNR=15							
UOSS	**Minazif**	**70.18**	**300**		P		**P**	**23 44 12.7 +0.2**
UOSS	**Minazif**	**70.18**	**300**		P		**P**	**23 44 11.8 -0.6**
UOSS	**Minazif**	**70.18**	**300**		P		**P**	**23 44 12.7 +0.2**
HATD	**Hatta, Dubai**	**70.20**	**300**	*i*	P		**P**	**23 44 13.2 +0.5**
	SNR=43							
HATD	**Hatta, Dubai**	**70.20**	**300**		P		**P**	**23 44 13.5 +0.9**
	SNR=16							
MDH	**Madha**	**70.21**	**300**	*i*	P		**P**	**23 44 12.1 -0.5**
	SNR=7.6							
MDH	**Madha**	**70.21**	**300**		P		**P**	**23 44 12.3 -0.3**
ASHO	**Ashiyiah**	**70.22**	**299**	*i*	P		**P**	**23 44 13.4 +0.6**
	SNR=55							
ASHO	**Ashiyiah**	**70.22**	**299**		P		**P**	**23 44 14.0 +1.2**
	SNR=21							
ALNE	**Al Ain**	**70.30**	**299**	*i*	P		**P**	**23 44 13.7 +0.5**
	SNR=20							
ALNE	**Al Ain**	**70.30**	**299**		P		**P**	**23 44 13.7 +0.5**
	SNR=26							
MSFE	**Esma-Masafi**	**70.34**	**300**	*i*	P		**P**	**23 44 14.1 +0.6**
	SNR=23							
MASF	**Masafi**	**70.35**	**300**		P		**P**	**23 44 14.4 +0.9**
	SNR=12							
WHFO	**Wadi Hawf**	**70.37**	**292**		P		**P**	**23 44 13.6 -0.1**
	SNR=6.9							
BANOM	**Banah**	**70.40**	**301**		P		**P**	**23 44 15.1 +1.3**
UMZA	**Um Al Zommool**	**70.42**	**297**		P		**P**	**23 44 14.1 +0.2**
SHME	**Shamm**	**70.58**	**301**	*i*	P		**P**	**23 44 15.4 +0.6**
	SNR=28							
SHME	**Shamm**	**70.58**	**301**		P		**P**	**23 44 15.7 +0.9**
	SNR=14							
FAQ	**Al Faqa, Dubai**	**70.64**	**299**	*i*	P		**P**	**23 44 15.7 +0.4**
	SNR=20							
FAQ	**Al Faqa, Dubai**	**70.64**	**299**		P		**P**	**23 44 16.0 +0.8**
	SNR=30							
NAZ	**Nazwa, Dubai**	**70.66**	**300**	*i*	P		**P**	**23 44 15.7 +0.4**
	SNR=60							
NAZ	**Nazwa, Dubai**	**70.66**	**300**		P		**P**	**23 44 16.0 +0.7**
	SNR=26							
UMQ	**Umm Al-Quwin**	**70.82**	**300**	*i*	P		**P**	**23 44 17.6 +1.4**
	SNR=10							
UMQ	**Umm Al-Quwin**	**70.82**	**300**		P		**P**	**23 44 17.9 +1.7**
	SNR=14							
ASUD	**Al Ashush, Dub**	**70.84**	**299**	*i*	P		**P**	**23 44 16.9 +0.6**
	SNR=85							
ASUD	**Al Ashush, Dub**	**70.84**	**299**		P		**P**	**23 44 17.4 +1.1**
	SNR=32							
MA2	**Magadan**	**70.84**	**16**		P		**P**	**23 44 17.1 +1.5**
MA2	**Magadan**	**70.84**	**16**	⇑*i*	P		**P**	**23 44 16.8 +1.2**
MA2					pmax		pmax	
	comp=Z,121nm,0.8s							
MA2	**Magadan**	**70.84**	**16**		P		**P**	**23 44 16.4 +0.8**
MA2					IAmb		IAmb	23 44 17.9
	comp=Z,114nm,0.8s							
MA2	**Magadan**	**70.84**	**16**		P		**P**	**23 44 15.1 -0.5**
	comp=Z,2µmcomp=Z,205nm,1.1s							
MA2	**Magadan**	**70.84**	**16**		P		**P**	**23 44 16.8 +1.2**
AJN	**Ajban**	**71.11**	**299**	*i*	P		**P**	**23 44 18.0 0.0**
	SNR=9.9							
AJN	**Ajban**	**71.11**	**299**		P		**P**	**23 44 17.9 0.0**
	SNR=18							
MAW	**Mawson**	**71.37**	**200**		P		**P**	**23 44 19.6 +1.0**
	comp=Z,24nm,1.3s,comp=Z,0.0nm							
MAW	**Mawson**	**71.37**	**200**		P		**P**	**23 44 19.6 +1.0**
	comp=Z,138nm,1.2s,baz=61,slow=6.3,SNR=68							
MAW					pP		**pP**	**23 46 21.4 +1.3**
	comp=Z,6.4nm,0.8s,baz=55,slow=9.0,SNR=2.8							
	comp=Z,138nm,1.2s							
MAW	**Mawson**	**71.37**	**200**		P		**P**	**23 44 19.6 +1.0**
MAW	**Mawson**	**71.37**	**200**		P		**P**	**23 44 19.6 +1.0**
ABPO	**Ambohimpanom**	**71.84**	**252**		P		**P**	**23 44 23.2 +0.7**
ABPO					pmax		pmax	
	comp=Z,33nm,1.0s							
ABPO	**Ambohimpanom**	**71.84**	**252**		P		**P**	**23 44 23.2 +0.7**
ABPO	**Ambohimpanom**	**71.84**	**252**		P		**P**	**23 44 23.6 +1.0**
ABPO	**Ambohimpanom**	**71.84**	**252**		P		**P**	**23 44 24.1 +1.6**
MZWR	**Madinat Zayed**	**71.85**	**298**		P		**P**	**23 44 22.7 +0.5**
MZR	**Muzera**	**71.98**	**297**	*i*	P		**P**	**23 44 23.5 +0.5**
	SNR=76							
MZR	**Muzera**	**71.98**	**297**		P		**P**	**23 44 23.7 +0.6**
	SNR=29							
FOMA	**Nahampoana Res**	**72.01**	**246**		P		**P**	**23 44 24.5 +1.4**
FOMA					IAmb		IAmb	23 44 26.7
	comp=Z,94nm,1.1s							
FOMA	**Nahampoana Res**	**72.01**	**246**		P		**P**	**23 44 24.8 +1.6**
FOMA	**Nahampoana Res**	**72.01**	**246**		P		**P**	**23 44 25.1 +1.9**
VOI	**Vohitsoka**	**72.19**	**249**		P		**P**	**23 44 25.5 +1.0**
	SNR=5.3							
VOI	**Vohitsoka**	**72.19**	**249**		IAmb		IAmb	23 44 26.5
	comp=Z,77nm,0.8s							
VOI	**Vohitsoka**	**72.19**	**249**		P		**P**	**23 44 25.4 +1.0**
VOI	**Vohitsoka**	**72.19**	**249**		P		**P**	**23 44 25.8 +1.3**
GHWR	**Ruwais**	**72.78**	**298**		P		**P**	**23 44 28.4 +0.8**
JRN	**Qarnain Island**	**73.08**	**299**		P		**P**	**23 44 29.9 +0.6**
	SNR=9.1							
BVAR	**Borovoye Array**	**73.43**	**331**		P		**P**	**23 44 30.7 0.0**
	comp=Z,49nm,0.8s,baz=133,slow=6.3,SNR=232							
BVAR					pP		**pP**	**23 46 33.8 +0.1**
	comp=Z,8.6nm,0.8s,baz=120,slow=8.8,SNR=1.5							
BVAR					S		**S**	**23 53 09.7 -2.6**
	comp=Z,4.4nm,0.8s,baz=144,slow=18,SNR=11							
	comp=Z,49nm,0.8s							
BORK	**Borovoye**	**73.47**	**331**	*c*	*i* P		**P**	**23 44 31.0 +0.1**
BORK					pmax		pmax	
	comp=Z,181nm,1.5s							
BORK	**Borovoye**	**73.47**	**331**		P		**P**	**23 44 30.9 -0.1**
VNDA	**Vanda**	**73.51**	**171**		P		**P**	**23 44 31.2 +0.5**
	comp=Z,50nm,0.7s,baz=316,slow=6.4,SNR=434							
VNDA					pP		**pP**	**23 46 35.6 +1.7**
	comp=Z,2.8nm,0.6s,baz=314,slow=7.5,SNR=1.2							
	comp=Z,50nm,0.7s							
VNDA	**Vanda**	**73.51**	**171**		P		**P**	**23 44 30.4 -0.3**
VNDA					IAmb		IAmb	23 44 33.7
	comp=Z,203nm,1.6s							
VNDA	**Vanda**	**73.51**	**171**		P		**P**	**23 44 31.4 +0.6**
VNDA					PcP		**PcP**	**23 44 46.4 +3.5**
VNDA					pP		**pP**	**23 46 38.5 +4.6**
SLWR	**Sila**	**73.86**	**298**		P		**P**	**23 44 34.4 +0.7**
SEY	**Seymchan**	**74.10**	**15**	*c*	*i* P		**P**	**23 44 35.3 +1.1**
SEY					pmax		pmax	
	comp=Z,127nm,0.9s							
SBA	**Scott Base**	**74.49**	**171**		P		**P**	**23 44 37.5 +1.2**
SBA					pmax		pmax	
	comp=Z,41nm,0.8s							
SBA	**Scott Base**	**74.49**	**171**		P		**P**	**23 44 37.5 +1.2**
SHEM	**Shemya Is, Ala**	**75.03**	**30**		IAmb		IAmb	23 44 41.6
	comp=Z,62nm,0.8s							
SMY	**Shemya**	**75.03**	**30**		P		**P**	**23 44 40.8 +1.2**
SMY	**Shemya**	**75.03**	**30**		IAmb		IAmb	23 44 40.7
	comp=Z,90nm,0.9s							
SAKB	**Bahrain**	**75.38**	**299**		P		**P**	**23 44 43.0 +0.8**
ABKAR	**Akbulak array**	**76.95**	**324**		P		**P**	**23 44 50.1 -0.2**
TIXI	**Tiksi**	**78.92**	**3**		pP		**pP**	**23 47 06.7 +0.4**
	comp=Z,45nm,1.1s,baz=172,slow=6.4,SNR=3.8							
TIXI					S		**S**	**23 54 04.5 -5.4**
	comp=Z,3.3nm,0.3s,baz=114,slow=18,SNR=1.3							
TIXI	**Tiksi**	**78.92**	**3**		P		**P**	**23 45 00.1 -0.2**
TIXI					pmax		pmax	
	comp=Z,158nm,1.0s							
TIXI	**Tiksi**	**78.92**	**3**		P		**P**	**23 45 00.1 -0.2**
TIXI					IAmb		IAmb	23 45 01.1
	comp=Z,158nm,0.9s							
RAYN	**Ar Rayn**	**79.22**	**296**	*i*	P		**P**	**23 45 03.9 +0.9**
	SNR=132							
RAYN	**Ar Rayn**	**79.22**	**296**	⇑	P		**P**	**23 45 04.1 +1.0**
RAYN	**Ar Rayn**	**79.22**	**296**		P		**P**	**23 45 03.9 +0.9**
RAYN	**Ar Rayn**	**79.22**	**296**		P		**P**	**23 45 03.7 +0.7**
RAYN					IAmb		IAmb	23 45 05.0
	comp=Z,65nm,0.7s							
RAYN	**Ar Rayn**	**79.22**	**296**		P		**P**	**23 45 04.0 +1.0**
RAYN	**Ar Rayn**	**79.22**	**296**		P		**P**	**23 45 04.0 +1.0**
RAYN					pP		**pP**	**23 47 09.8 +0.6**
ATD	**Arta Tunnel**	**79.39**	**283**		P		**P**	**23 45 07.0 +2.9**
NRIK	**Noril'sk**	**79.70**	**349**		P		**P**	**23 45 04.8 +0.3**
	comp=Z,16nm,0.4s,baz=133,slow=5.9,SNR=29							
NRIK					pP		**pP**	**23 47 11.2 +0.3**
	comp=Z,13nm,0.8s,baz=136,slow=5.2,SNR=5.1							
NRIK					PP		**PP**	**23 48 17.6 +0.5**
	comp=Z,17nm,1.0s,baz=128,slow=5.5,SNR=6.2							
NRIK					S		**S**	**23 54 14.8 -3.3**
	comp=Z,1.8nm,0.6s,baz=211,slow=23,SNR=9.5							
	comp=Z,16nm,0.4s							
SYO	**Syowa Base**	**80.01**	**201**	⇓	*i* P		**P**	**23 45 06.6 +0.4**
SVE	**Sverdlovsk**	**80.22**	**331**		*e* P		**P**	**23 45 07.3 -0.1**
SVE					*e* S		**S**	**23 54 20.0 -3.8**
SVE					pmax		pmax	
	comp=Z,161nm,1.4s							
ATKA	**Atka Island**	**81.03**	**34**		P		**P**	**23 45 13.3 +1.6**
ARTI	**Arti**	**81.10**	**330**		S		**S**	**23 54 26.8 -6.0**
	comp=Z,0.9nm,0.4s,baz=351,slow=22,SNR=8.1							
ARTI	**Arti**	**81.10**	**330**	*c*	*i* P		**P**	**23 45 11.0 -1.0**
ARTI					*PP		**pP**	**23 47 17.8 -1.1**
ARTI								23 48 29.7
ARTI					S		**S**	**23 54 31.9 -0.9**
ARTI					SS		**SS**	**00 00 06.9 +0.7**
ARTI					pmax		pmax	
	comp=Z,81nm,1.4s							
ARTI	**Arti**	**81.10**	**330**		P		**P**	**23 45 11.1 -0.9**
ARTI					IAmb		IAmb	23 45 12.3
	comp=Z,55nm,0.5s							
BILL	**Bilibino**	**81.71**	**16**	⇑	*i* P		**P**	**23 45 14.9 0.0**
BILL					pmax		pmax	
	comp=Z,16nm,0.9s							
KIBK	**Kibwezi**	**82.16**	**269**		P		**P**	**23 45 20.5 +2.0**
KIBK	**Kibwezi**	**82.16**	**269**		P		**P**	**23 45 19.6 +1.1**
KIBK	**Kibwezi**	**82.16**	**269**		P		**P**	**23 45 20.2 +1.7**
MAK	**Makhachkala**	**82.59**	**315**	*c*	*i* P		**P**	**23 45 19.1 -0.8**
MAK					*e**	PP	**pP**	**23 47 26.6 -0.6**
MAK					*e**	SP	**sP**	**23 48 27.7 -0.4**
MAK					*e*			23 48 38.7
MAK					*e*	S	**SKSac**	**23 54 42.4 -1.8**
MAK					*e*	SSS	SSS	00 04 02.2
MAK					pmax		pmax	
	comp=Z,115nm,1.4s							
QSPA	**South Pole Qui**	**82.75**	**180**		P		**P**	**23 45 20.5 +0.1**
	comp=Z,47nm,0.7s,baz=312,slow=1.0,SNR=396							
QSPA					pP		**pP**	**23 47 27.3 -0.9**
	comp=Z,14nm,1.1s,baz=259,slow=1.7,SNR=2.3							
QSPA					S		**SKSac**	**23 54 40.9 -3.8**
	comp=Z,4.2nm,1.0s,baz=69,slow=19,SNR=14							
	comp=Z,47nm,0.7s							
QSPA	**South Pole Qui**	**82.75**	**180**		P		**P**	**23 45 20.3 -0.1**
QSPA					IAmb		IAmb	23 45 22.2
	comp=Z,252nm,1.6s							
QSPA	**South Pole Qui**	**82.75**	**180**		P		**P**	**23 45 20.8 +0.3**
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 27.4 +1.1**
GNI	**Garni**	**83.82**	**312**	⇑	*i* P		**P**	**23 45 27.4 +1.1**
GNI					pmax		pmax	
	comp=Z,96nm,1.2s							
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 27.5 +1.2**
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 27.4 +1.1**
GNI					IAmb		IAmb	23 45 31.2
	comp=Z,88nm,1.2s							
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 26.5 +0.2**
	comp=Z,999nmcomp=Z,69nm,1.2s							
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 27.7 +1.4**
GNI	**Garni**	**83.82**	**312**		P		**P**	**23 45 27.7 +1.4**
HAKT	**HAKKARI**	**83.97**	**309**		P		**P**	**23 45 28.1 +1.0**
GEVA	**Gevas**	**84.64**	**310**		IAmb		IAmb	23 45 32.9
	comp=Z,147nm,1.0s							
DIGO	**Kars**	**84.90**	**312**		P		**P**	**23 45 33.0 +1.3**
SPIA	**Saint Paul Isl**	**85.07**	**31**		P		**P**	**23 45 32.0 +0.3**
	baz=249							
BELG	**Belogornoye**	**85.36**	**324**	*c*	*i* P		**P**	**23 45 32.7 -0.5**
BELG					pmax		pmax	
	comp=Z,39nm,1.3s							
ELIB	**Princess Elisa**	**85.38**	**198**	*d*	P		**P**	**23 45 34.1 +1.0**
	comp=Z,64nm,1.4s							
ELIB				*d*	pP		**pP**	**23 47 45.1 +3.4**
GURO	**Guroymak-BITLI**	**85.48**	**310**		IAmb		IAmb	23 45 37.0
	comp=Z,114nm,1.1s							
LODK	**Lodwar**	**85.55**	**274**		P		**P**	**23 45 36.3 +1.2**
	SNR=7.2							
LODK	**Lodwar**	**85.55**	**274**		P		**P**	**23 45 37.1 +2.0**
POGA	**Pongola**	**85.60**	**243**		P		**P**	**23 45 36.9 +1.9**
POGA	**Pongola**	**85.60**	**243**		P		**P**	**23 45 37.0 +1.9**
EPOS	**Posof**	**85.63**	**313**		P		**P**	**23 45 36.6 +1.6**
UNV	**Unalaska Valle**	**85.95**	**35**		P		**P**	**23 45 36.2 +0.2**
	baz=252							
KBZ	**Khabaz**	**86.04**	**315**		P		**P**	**23 45 37.1 +0.5**
	comp=Z,24nm,0.9s,baz=125,slow=2.3,SNR=34							
KBZ					pP		**pP**	**23 47 44.2 -1.3**
	comp=Z,7.9nm,0.9s,baz=64,slow=4.6,SNR=4.0							
	comp=Z,24nm,0.9s							
SHA1	**Shidzhatmaz**	**86.21**	**315**	*c*	*i* P		**P**	**23 45 37.8 0.0**
KIV	**Kislovodsk**	**86.24**	**315**	⇑	P		**P**	**23 45 37.8 0.0**
KIV	**Kislovodsk**	**86.24**	**315**	*i*	P		**P**	**23 45 38.0 +0.2**
	SNR=6.8							
KIV	**Kislovodsk**	**86.24**	**315**		*e* P		**P**	**23 45 38.3 +0.5**
KIV					*e**	PP	**pP**	**23 47 45.4 -1.3**
KIV					*e**	SP	**sP**	**23 48 46.1 -1.2**
KIV					*e*			23 49 04.8
KIV					*e*			23 55 07.2
KIV					pmax		pmax	
	comp=Z,20nm,1.0s							
KIV					MLR		MLR	
	comp=Z,92nm,20.0s							
KIV	**Kislovodsk**	**86.24**	**315**		P		**P**	**23 45 37.7 0.0**
KIV	**Kislovodsk**	**86.24**	**315**		P		**P**	**23 45 38.8 +1.0**
KIV	**Kislovodsk**	**86.24**	**315**		P		**P**	**23 45 37.1 -0.7**
	comp=Z,399nmcomp=Z,23nm,1.2s							
KIV	**Kislovodsk**	**86.24**	**315**		P		**P**	**23 45 38.3 +0.5**
GOF	**Gofitskoye**	**86.26**	**316**	*c*	*i* P		**P**	**23 45 38.4 +0.7**
KIRV	**Kirov**	**86.42**	**330**		P		**P**	**23 45 38.0 -0.1**
	comp=Z,31nm,0.7s,baz=110,slow=1.7,SNR=13							
KIRV					pP		**pP**	**23 47 46.8 -0.5**
	comp=Z,8.3nm,0.9s,baz=102,slow=12,SNR=1.8							
KIRV					PP		**PP**	**23 49 13.3 +2.2**
	comp=Z,23nm,0.9s,baz=110,slow=12,SNR=8.5							
KIRV					S		**SKSac**	**23 55 05.4 -1.9**
	comp=Z,4.1nm,0.6s,baz=281,slow=22,SNR=7.8							
	comp=Z,31nm,0.7s							
KIRV	**Kirov**	**86.42**	**330**		P		**P**	**23 45 38.0 -0.1**
GAMB	**Gambell**	**86.90**	**24**		P		**P**	**23 45 40.6 +0.4**
	baz=247							
TBI	**Tubuai**	**87.27**	**113**		*e* P		P	23 45 35.9 -7.0
	comp=Z,724nm,31.0s							
TBI					*e* S		S	23 55 22.0 -12
	comp=Z,1µm,29.5s							
TBI					*e* sS		sS	23 59 17.2 -7.4
	comp=Z,2µm,29.2s							
LABN	**Labinsk**	**87.77**	**315**		*e* P		**P**	**23 45 43.9 -0.9**
LABN					*e**	PP	**pP**	**23 47 51.4 -3.0**
LABN					*e*			23 55 15.7
LABN					pmax		pmax	
	comp=Z,40nm,1.0s							
PPT2	**Papeete2**	**87.84**	**107**		*e* P		P	23 45 36.4 -9.4
	comp=Z,122nm,25.5s							
PPT2					*e* pP		pP	23 47 53.9 -1.5
	comp=Z,141nm,24.8s							
PPT2					*e* S		**S**	**23 55 38.8 -0.6**
	comp=Z,172nm,26.8s							
PPT2					*e* sS		sS	23 59 20.6 -10
	comp=Z,340nm,26.5s							
KELT	**Kelkit**	**87.92**	**311**		P		**P**	**23 45 47.1 +1.3**
M11K	**Mekoryuk**	**88.13**	**28**		P		**P**	**23 45 46.7 +0.7**
	baz=252							
ERBR	**Yeremizino-Bor**	**88.16**	**316**	*e*	P		**P**	**23 45 45.5 -1.1**
ERBR				*e**	PP		**pP**	**23 47 57.5 +1.2**
ERBR				*e*				23 55 16.8
ERBR					pmax		pmax	
	comp=Z,62nm,2.0s							
SOC	**Sochi**	**88.26**	**314**	*e*	P		**P**	**23 45 50.3 +3.2**
SOC				*e*				23 49 24.1
SOC				*e*	PPP		PPP	23 51 25.8
SOC				*e*	S		**SKSac**	**23 55 23.1 +4.1**
SOC				*e*	SS		**SS**	**00 01 52.9 +2.3**
SOC				*e*	SSS		SSS	00 05 27.0
ASF	**Jabal al Asfar**	**88.37**	**303**		P		**P**	**23 45 49.9 +1.9**
ARPR	**Arapgir-MALATY**	**88.42**	**310**		P		**P**	**23 45 49.5 +1.3**
VRH	**Novokhopyorsk**	**88.57**	**322**	*e*	P		**P**	**23 45 44.2 -4.1**
VRH				*e**	PP		**pP**	**23 47 57.2 -1.0**
VRH					pmax		pmax	
	comp=Z,30nm,1.0s							
GAZ	**Gaziantep**	**88.95**	**308**		IAmb		IAmb	23 45 52.3
	comp=Z,86nm,1.7s							
TNA	**Tin City**	**89.06**	**23**		P		**P**	**23 45 50.7 +0.4**
	baz=250							
HSNJ	**Maan**	**89.09**	**300**		P		**P**	**23 45 55.8 +4.4**
NVL	**N'lazarevskaya**	**89.25**	**198**	*i*	P		**P**	**23 45 49.2 -2.0**
NVL					pmax		pmax	
	comp=Z,24nm,1.0s							
K13K	**Kusilvak Mount**	**89.31**	**27**		P		**P**	**23 45 52.1 +0.5**
	baz=253							
GHAJ	**Ghor Haditha**	**89.35**	**302**		IAmb		IAmb	23 45 54.6
	comp=Z,33nm,0.7s							
GHAJ	**Ghor Haditha**	**89.35**	**302**		P		**P**	**23 45 54.4 +2.0**
GHAJ	**Ghor Haditha**	**89.35**	**302**		P		**P**	**23 45 53.7 +1.3**
M13K	**Dall Lake**	**89.50**	**29**		P		**P**	**23 45 53.0 +0.6**
	baz=254							
QRNJ	**Al-Qirein**	**89.50**	**303**		P		**P**	**23 45 55.0 +1.9**
UJAP	**Al Uja**	**89.54**	**302**		P		**P**	**23 45 56.8 +3.6**
UJAP	**Al Uja**	**89.54**	**302**		P		**P**	**23 45 54.8 +1.5**
GEM	**Giv'at Ha'Em**	**89.56**	**303**		P		**P**	**23 45 55.7 +2.3**
HRFI	**Mount Harif**	**89.61**	**300**		P		**P**	**23 45 55.2 +1.5**
HRFI	**Mount Harif**	**89.61**	**300**		P		**P**	**23 45 54.6 +0.9**
MBAR	**Mbarara**	**89.62**	**269**		P		**P**	**23 45 55.0 +0.7**
EIL	**Elat**	**89.63**	**300**		P		**P**	**23 45 55.6 +1.8**
EIL	**Elat**	**89.63**	**300**		P		**P**	**23 45 55.2 +1.4**
MMLI	**Mount Malkishu**	**89.65**	**303**		P		**P**	**23 45 55.7 +1.9**
F14K	**Arctic Creek**	**89.67**	**24**		P		**P**	**23 45 53.8 +0.7**
	baz=252							
ANDN	**Andirin**	**89.70**	**308**		P		**P**	**23 45 54.7 +0.6**
SDPT	**Sand Point**	**89.73**	**34**		P		**P**	**23 45 53.4 -0.2**
	baz=257							
YTIR	**Yattir**	**89.74**	**302**		P		**P**	**23 45 56.4 +2.0**
MMAI	**Mount Meron Ar**	**89.75**	**303**		P		**P**	**23 45 55.9 +1.5**
	comp=Z,4.5nm,0.5s,baz=63,slow=8.8,SNR=26							
MMAI					pP		**pP**	**23 48 04.5 -0.1**
	comp=Z,4.9nm,0.8s,baz=200,slow=12,SNR=5.9							
	comp=Z,4.5nm,0.5s							
ANM	**Nome**	**89.77**	**25**		P		**P**	**23 45 53.9 +0.2**
	baz=253							
SALP	**Salfit**	**89.78**	**302**		P		**P**	**23 45 56.4 +1.9**
VORD	**Divnogorie**	**90.02**	**321**	*e*	P		**P**	**23 45 51.5 -3.5**
VORD				*e**	PP		**pP**	**23 48 03.1 -2.2**
VORD					pmax		pmax	
	comp=Z,20nm,1.0s							
TOKA	**Tokat**	**90.04**	**311**		IAmb		IAmb	23 45 57.3
	comp=Z,46nm,1.0s							
L14K	**Kuka Creek**	**90.06**	**28**		P		**P**	**23 45 55.4 +0.4**
	baz=255							
ANN	**Anapa**	**90.10**	**315**	*e*	P		**P**	**23 45 54.6 -1.0**
ANN				*e**	PP		**pP**	**23 48 01.0 -4.7**
ANN				*e*				23 55 25.4
ANN					pmax		pmax	
	comp=Z,56nm,1.0s							
CHNA	**Chernabura Isl**	**90.12**	**35**		P		**P**	**23 45 55.8 +0.4**
	baz=258							
VSR	**Storozhevoye**	**90.14**	**322**	*e*	P		**P**	**23 45 54.3 -1.3**
VSR				*e**	PP		**pP**	**23 48 06.7 +0.8**
VSR				*e*	S		**SKSac**	**23 55 25.9 -3.6**
VSR					pmax		pmax	
	comp=Z,41

I17K	Unalakleet	91.57	26	IAmb	IAmb	23 46 06.3		
	comp=Z,37nm,1.4s							
I17K	Unalakleet	91.57	26	P	P	23 46 02.5	+0.6	
	baz=257							
L16K	Owhat River	91.64	28	P	P	23 46 02.6	+0.3	
	baz=258,SNR=10.0							
RDOG	Red Dog Mine	91.71	21	P	P	23 46 03.2	+0.6	
	baz=255							
N16K	Nishlik Lake	91.72	29	P	P	23 46 03.4	+0.7	
	baz=258,SNR=16							
C17K	DeLong Mountai	91.72	21	P	P	23 46 03.3	+0.7	
	baz=255,SNR=6.3							
CSS	Mathiatis	91.73	305	P	P	23 46 02.7	-0.7	
	comp=Z,18nm,1.1s							
CSS	Mathiatis	91.73	305	P	P	23 46 04.0	+0.6	
CSS	Mathiatis	91.73	305	P	P	23 46 03.4	0.0	
M16K	Timber Creek	91.74	29	P	P	23 46 03.1	+0.3	
	baz=258,SNR=11							
KIRS	Kirsehir-Merke	91.82	309	⇑P	P	23 46 03.4	-0.4	
P16K	Nushagak River	91.83	31	IAmb	IAmb	23 46 05.0		
	comp=Z,41nm,0.8s							
P16K	Nushagak River	91.83	31	P	P	23 46 03.4	+0.2	
	baz=259							
KLMR	Klimovskoe	91.85	331	*e*P	P	23 46 00.3	-3.0	
KLMR				*e**PP	pP	23 48 10.4	-3.5	
KLMR				pmax	pmax			
	comp=Z,120nm,1.5s							
E17K	Hotham Inlet	91.86	23	P	P	23 46 04.0	+0.7	
	baz=256,SNR=11							
O16K	Kokwok River B	91.88	30	P	P	23 46 03.8	+0.3	
	baz=259,SNR=12							
MOS	Moscow	91.89	326	*e*P	P	23 46 03.7	+0.2	
MOS				*e**PP	pP	23 48 13.6	-0.5	
MOS				*e*		23 49 51.7		
MOS				*e*S	SKSac	23 55 38.7	-0.3	
MOS				*e*		23 57 35.2		
MOS				pmax	pmax			
	comp=Z,42nm,0.8s							
MOS				pmax	pmax			
	comp=Z,100nm,1.4s							
KHWEE	KHWEE	91.93	248	IAmb	IAmb	23 46 06.5		
	comp=Z,57nm,1.4s							
MAKGR	Makgori	91.93	244	IAmb	IAmb	23 47 58.4		
	comp=Z,64nm,1.8s							
MAKGR	Makgori	91.93	244	P	P	23 46 05.3	+0.6	
F17K	Baldwin Pennin	91.93	23	P	P	23 46 04.2	+0.6	
	baz=256,SNR=8.4							
G17K	Kiwalik Mounta	91.95	24	P	P	23 46 04.3	+0.6	
	baz=257,SNR=30							
BR104	Keskin Array S	92.11	310	P	P	23 46 04.5	-0.7	
	comp=Z,135nmcomp=Z,16nm,1.1s							
BR131	Keskin Array S	92.11	310	*c* *i*P	P	23 46 04.5	-0.7	
BR131	Keskin Array S	92.11	310	P	P	23 46 05.0	-0.2	
	SNR=12							
BR131	Keskin Array S	92.11	310	IAmb	IAmb	23 46 05.8		
	comp=Z,28nm,1.1s							
BRTR	Keskin Array B	92.11	310	P	P	23 46 04.8	-0.4	
	comp=Z,13nm,0.9s,baz=127,slow=5.1,SNR=56							
BRTR				pP	pP	23 48 15.2	-0.5	
	comp=Z,3.8nm,1.0s,baz=119,slow=4.8,SNR=6.6							
BRTR				PP	PP	23 49 56.3	-0.1	
	comp=Z,5.1nm,0.9s,baz=104,slow=7.5,SNR=5.1							
	comp=Z,13nm,0.9s							
BRTR	Keskin Array B	92.11	310	P	P	23 46 04.6	-0.7	
BR105	Keskin Array S	92.13	310	P	P	23 46 04.5	-0.8	
	comp=Z,157nmcomp=Z,19nm,1.2s							
BR106	Keskin Array S	92.13	310	P	P	23 46 04.6	-0.7	
	comp=Z,136nmcomp=Z,16nm,1.1s							
H17K	Granite Mounta	92.13	25	IAmb	IAmb	23 46 06.2		
	comp=Z,26nm,0.9s							
H17K	Granite Mounta	92.13	25	P	P	23 46 05.3	+0.8	
	baz=258,SNR=7.6							
J17K	VABM Dome	92.17	26	IAmb	IAmb	23 46 08.8		
	comp=Z,35nm,1.6s							
J17K	VABM Dome	92.17	26	P	P	23 46 05.1	+0.4	
	baz=258							
L17K	Donlin	92.27	28	P	P	23 46 05.8	+0.6	
	baz=259,SNR=10							
OBN	Obninsk	92.38	325	⇓P	P	23 46 05.7	0.0	
OBN	Obninsk	92.38	325	*c* *i*P	P	23 46 05.1	-0.7	
OBN				*i* *PP	pP	23 48 16.3	-0.1	
OBN				*i* *SP	sP	23 49 15.1	-1.3	
OBN				*e*		23 49 55.4		
OBN				*e*PPP	PPP	23 52 02.6		
OBN				pmax	pmax			
	comp=Z,44nm,1.1s							
OBN	Obninsk	92.38	325	P	P	23 46 05.2	-0.6	
OBN	Obninsk	92.38	325	P	P	23 46 04.8	-1.0	
	comp=Z,759nmcomp=Z,69nm,1.2s							
OBN	Obninsk	92.38	325	P	P	23 46 05.4	-0.4	
K17K	Iditarod	92.38	27	P	P	23 46 06.2	+0.5	
	baz=259,SNR=10							
E18K	Tukpahlearik C	92.41	22	IAmb	IAmb	23 46 07.6		
	comp=Z,20nm,0.9s							
E18K	Tukpahlearik C	92.41	22	P	P	23 46 06.6	+0.9	
	baz=257,SNR=16							
R17L	Mt. Peulik Vol	92.42	32	P	P	23 46 06.4	+0.4	
	baz=260							
SIM	Simferopol'	92.45	315	*e*P	P	23 46 06.3	-0.1	
SIM				pmax	pmax			
	comp=Z,19nm,1.0s							
C18K	Utukok River	92.47	21	IAmb	IAmb	23 47 53.8		
	comp=Z,59nm,1.9s							
C18K	Utukok River	92.47	21	P	P	23 46 06.7	+0.6	
	baz=257							
N17K	Nushagak Hills	92.50	29	IAmb	IAmb	23 46 09.7		
	comp=Z,52nm,1.9s							
N17K	Nushagak Hills	92.50	29	P	P	23 46 06.8	+0.5	
	baz=260,SNR=7.7							
M17K	Holitna River	92.53	28	P	P	23 46 07.0	+0.6	
	baz=260,SNR=6.9							
F18K	Selawik	92.59	23	P	P	23 46 06.7	+0.2	
	baz=258							
KKUL	Konya-Kulu	92.59	309	P	P	23 46 07.5	+0.1	
P17K	Kvichak River	92.64	31	P	P	23 46 07.5	+0.5	
	baz=260							
Q17K	Contact Creek	92.77	32	P	P	23 46 08.0	+0.3	
	baz=261							
H18K	Honhosa River	92.82	25	IAmb	IAmb	23 46 11.5		
	comp=Z,32nm,1.6s							
H18K	Honhosa River	92.82	25	P	P	23 46 07.9	+0.2	
	baz=259,SNR=6.2							
G18K	Tagagawik	92.84	24	P	P	23 46 07.9	+0.1	
	baz=259,SNR=13							
A19K	Wainwright	92.87	20	P	P	23 46 08.5	+0.7	
	baz=257							
SKOMA	Sekoma	92.91	245	P	P	23 46 10.0	+0.9	
ADZR	Andozero	93.00	334	*e*P	P	23 46 04.6	-3.8	
ADZR				*e**PP	pP	23 48 18.1	-1.1	
ADZR				S	SKSac	23 55 40.4	-4.3	
ADZR				pmax	pmax			
	comp=Z,50nm,1.3s							
L18K	Granite Mounta	93.03	28	P	P	23 46 09.2	+0.6	
	baz=260,SNR=11							
SNAA	Sanae	93.07	195	⇓P	P	23 46 09.3	+0.4	
	comp=Z,547nm,0.5s							
SNAA	Sanae	93.07	195	P	P	23 46 09.5	+0.6	
	comp=Z,24nm,0.6s,baz=169,slow=4.8,SNR=83							
SNAA				pP	pP	23 48 18.4	-1.3	
	comp=Z,3.3nm,0.9s,baz=144,slow=6.8,SNR=3.2							
	comp=Z,24nm,0.6s							
SNAA	Sanae	93.07	195	P	P	23 46 09.4	+0.6	
SNAA	Sanae	93.07	195	P	P	23 46 09.5	+0.6	
C19K	Lookout Ridge	93.14	21	IAmb	IAmb	23 46 11.5		
	comp=Z,38nm,1.1s							
C19K	Lookout Ridge	93.14	21	P	P	23 46 09.9	+0.8	
	baz=258,SNR=8.1							
N18K	Kilae Creek	93.16	29	IAmb	IAmb	23 46 12.4		
	comp=Z,55nm,1.8s							
N18K	Kilae Creek	93.16	29	P	P	23 46 09.7	+0.4	
	baz=261							
J18K	Innoko River	93.22	27	P	P	23 46 09.9	+0.3	
	baz=260							
P18K	Big Mountain,	93.29	31	P	P	23 46 10.3	+0.3	
	baz=261							
Q18K	Katmai Hardscr	93.29	31	P	P	23 46 10.2	+0.1	
	baz=262							
M18K	Stony River	93.31	29	P	P	23 46 10.4	+0.5	
	baz=261,SNR=9.7							
O18K	Koktuh Hills	93.36	30	P	P	23 46 10.4	+0.1	
	baz=262							
GCSA	Galena City Sc	93.37	25	P	P	23 46 10.4	+0.3	
	baz=260							
F19K	Shaleruckik Mo	93.37	23	P	P	23 46 10.2	+0.1	
	baz=260,SNR=9.7							
SII	Sitkinak Islan	93.43	34	P	P	23 46 11.3	+0.6	
G19K	Purcell Mounta	93.52	24	IAmb	IAmb	23 46 12.6		
	comp=Z,32nm,0.8s							
G19K	Purcell Mounta	93.52	24	P	P	23 46 11.5	+0.6	
	baz=260,SNR=29							
D19K	Kuna River	93.55	21	IAmb	IAmb	23 46 12.6		
	comp=Z,22nm,1.1s							
D19K	Kuna River	93.55	21	P	P	23 46 11.6	+0.6	
	baz=259,SNR=8.2							
H19K	Roundabout Mou	93.68	24	IAmb	IAmb	23 46 15.8		
	comp=Z,21nm,0.8s							
H19K	Roundabout Mou	93.68	24	P	P	23 46 12.3	+0.8	
	baz=261,SNR=27							
E19K	Redstone River	93.69	23	IAmb	IAmb	23 46 13.4		
	comp=Z,30nm,0.8s							
E19K	Redstone River	93.69	23	P	P	23 46 12.4	+0.8	
	baz=260,SNR=34							
J19K	Poorman	93.79	26	P	P	23 46 12.8	+0.7	
	baz=261,SNR=10							
N19K	Bonanza Creek	93.86	29	IAmb	IAmb	23 46 14.0		
	comp=Z,24nm,1.0s							
N19K	Bonanza Creek	93.86	29	P	P	23 46 13.1	+0.5	
	baz=262,SNR=14							
L19K	White Mountain	93.87	28	P	P	23 46 13.1	+0.5	
	baz=262,SNR=9.2							
BELA	Belgrano 2	93.90	185	P	P	23 46 12.3	-0.2	
BELA				IAmb	IAmb	23 46 15.1		
	comp=Z,27nm,0.7s							
M19K	Big River Lodg	94.05	28	P	P	23 46 13.9	+0.6	
	baz=262							
D20K	Etivluk River	94.12	21	IAmb	IAmb	23 46 17.8		
	comp=Z,60nm,1.6s							
D20K	Etivluk River	94.12	21	P	P	23 46 14.2	+0.6	
	baz=261,SNR=13							
B20K	Meade River	94.15	20	P	P	23 46 14.6	+1.0	
	baz=260							
F20K	Avaraart Lake	94.20	23	IAmb	IAmb	23 46 18.2		
	comp=Z,16nm,1.0s							
F20K	Avaraart Lake	94.20	23	P	P	23 46 14.7	+0.8	
	baz=262,SNR=16							
E20K	Nigu River	94.21	22	P	P	23 46 14.9	+0.9	
	baz=261,SNR=23							
SUR	Sutherland	94.23	237	P	P	23 46 15.8	+0.6	
H20K	Anotleneega Mo	94.32	25	P	P	23 46 15.2	+0.7	
	baz=262,SNR=7.3							
P19K	Oil Pt	94.33	31	P	P	23 46 15.2	+0.5	
	baz=263							
K20K	Telida	94.39	27	IAmb	IAmb	23 46 18.8		
	comp=Z,12nm,0.9s							
K20K	Telida	94.39	27	P	P	23 46 15.7	+0.8	
	baz=263,SNR=13							
I20K	Naaghedeneel	94.39	25	P	P	23 46 15.4	+0.6	
	baz=262							
J20K	Nowinta River	94.46	26	IAmb	IAmb	23 46 19.2		
	comp=Z,17nm,1.2s							
J20K	Nowinta River	94.46	26	P	P	23 46 15.6	+0.5	
	baz=263,SNR=7.6							
A21K	Barrow	94.54	19	P	P	23 46 16.0	+0.7	
	baz=261							
M20K	Styx River	94.64	28	IAmb	IAmb	23 46 17.4		
	comp=Z,17nm,1.0s							
M20K	Styx River	94.64	28	P	P	23 46 16.5	+0.4	
	baz=263,SNR=7.1							
RED	Redoubt Volcan	94.65	30	IAmb	IAmb	23 46 15.9		
	comp=Z,11nm,0.8s							
O20K	Slope Mountain	94.68	30	P	P	23 46 16.8	+0.4	
	baz=264							
VNA2	Neumayer--Watz	94.70	195	⇓P	P	23 46 16.9	+0.7	
	comp=Z,22nm,0.6s,baz=123,slow=4.6							
VNA2	Neumayer--Watz	94.70	195	P	P	23 46 16.7	+0.5	
C21K	Knifeblade Rid	94.84	21	P	P	23 46 17.4	+0.6	
	baz=262							
B21K	Ikpikpuk River	94.96	21	IAmb	IAmb	23 46 19.3		
	comp=Z,19nm,1.1s							
B21K	Ikpikpuk River	94.96	21	P	P	23 46 17.8	+0.5	
	baz=263							
G21K	Allakaket	95.00	24	IAmb	IAmb	23 46 19.2		
	comp=Z,14nm,1.0s							
G21K	Allakaket	95.00	24	P	P	23 46 18.0	+0.5	
	baz=264,SNR=15							
SPCR	Spurr Chakacha	95.00	29	P	P	23 46 17.8	0.0	
	baz=264							
A22K	Sinclair Lake	95.02	19	P	P	23 46 18.2	+0.7	
	baz=262							
E21K	Killik River	95.05	22	P	P	23 46 18.2	+0.4	
	baz=263							
LVZ	Lovozero	95.06	338	⇑P	P	23 46 17.1	-0.7	
LVZ	Lovozero	95.06	338	P	P	23 46 16.9	-0.9	
LVZ				IAmb	IAmb	23 46 17.4		
	comp=Z,14nm,1.0s							
LVZ	Lovozero	95.06	338	P	P	23 46 16.3	-1.5	
	comp=Z,17nm,1.1s							
F21K	Alatna River	95.09	23	P	P	23 46 18.3	+0.3	
	baz=264							
VNA1	Neumayer--Stat	95.10	195	⇓P	P	23 46 18.6	+0.7	
	comp=Z,10nm,0.6s							
PPLA	Purkeypile	95.18	27	IAmb	IAmb	23 46 22.0		
	comp=Z,44nm,1.6s							
PPLA	Purkeypile	95.18	27	P	P	23 46 18.3	-0.3	
	baz=264							
H21K	Melozitna Rive	95.19	25	IAmb	IAmb	23 46 20.3		
	comp=Z,31nm,1.6s							
H21K	Melozitna Rive	95.19	25	P	P	23 46 18.7	+0.2	
	baz=264,SNR=11							
CHUM	Lake Minchumin	95.22	26	P	P	23 46 18.9	+0.3	
	baz=264,SNR=7.7							
CAST	Castle Rocks	95.28	27	P	P	23 46 18.5	-0.5	
	baz=264,SNR=15							
SKT	Skwentna	95.40	28	IAmb	IAmb	23 46 19.2		
	comp=Z,16nm,1.1s							
SKT	Skwentna	95.40	28	P	P	23 46 18.4	-1.1	
	baz=265,SNR=7.2							
YLV	Yalova	95.45	310	P	P	23 46 19.5	-0.8	
	comp=Z,22nm,1.1s							
B22K	Teshekpuk Lake	95.46	20	P	P	23 46 20.0	+0.6	
	baz=264							
I21K	Tanana	95.49	25	IAmb	IAmb	23 46 24.0		
	comp=Z,26nm,1.5s							
I21K	Tanana	95.49	25	P	P	23 46 20.3	+0.5	
	baz=265							
APA	Apatity	95.49	337	*e*P	P	23 46 20.0	+0.3	
APA				*e**PP	pP	23 48 30.7	0.0	
APA				*e*		23 50 20.4		
APA				pmax	pmax			
	comp=Z,6.0nm,0.9s							
APA				MLR	MLR			
	comp=Z,458nm,23.3s							
BRSE	Bradley Lake S	95.59	31	P	P	23 46 20.7	+0.3	
	baz=265							
F22K	John River	95.62	23	P	P	23 46 21.2	+0.8	
	baz=265							
L22K	Petersville	95.80	28	IAmb	IAmb	23 46 22.1		
	comp=Z,17nm,0.9s							
L22K	Petersville	95.80	28	P	P	23 46 20.9	-0.4	
	baz=266,SNR=11							
H22K	Ishtalitna Cre	95.80	24	IAmb	IAmb	23 46 23.2		
	comp=Z,21nm,1.5s							
H22K	Ishtalitna Cre	95.80	24	P	P	23 46 21.6	+0.4	
	baz=265,SNR=10							
SLKM	Skilak Lake	95.91	30	IAmb	IAmb	23 46 22.1		
	comp=Z,37nm,1.0s							
MLY	Manley	96.00	25	P	P	23 46 22.4	+0.3	
	baz=266,SNR=10							
TRF	Thorofare Moun	96.09	27	IAmb	IAmb	23 46 25.6		
	comp=Z,16nm,1.0s							
TRF	Thorofare Moun	96.09	27	P	P	23 46 22.8	0.0	
	baz=266,SNR=9.6							
RC01	Rabbit Creek A	96.19	29	IAmb	IAmb	23 46 25.8		
	comp=Z,19nm,0.9s							
AK09	Malin Array Si	96.26	320	P	P	23 46 22.8	-0.8	
AK08	Malin Array Si	96.28	320	P	P	23 46 22.6	-0.8	
AK10	Malin Array Si	96.28	320	P	P	23 46 22.6	-1.0	
D23K	Nanushuk River	96.29	21	IAmb	IAmb	23 46 25.8		
	comp=Z,20nm,1.2s							
D23K	Nanushuk River	96.29	21	P	P	23 46 24.1	+0.8	
	baz=266,SNR=9.7							
AKASG	Malin Array Be	96.31	320	P	P	23 46 22.9	-0.9	
	comp=Z,5.6nm,0.7s,baz=82,slow=4.3,SNR=17							
AKASG				pP	pP	23 48 34.1	-0.7	
	comp=Z,0.2nm,0.3s,baz=79,slow=5.0,SNR=2.2							
AKASG				PP	PP	23 50 29.1	+1.2	
	comp=Z,17nm,1.0s,baz=83,slow=6.8,SNR=13							
	comp=Z,5.6nm,0.7s							
AKASG	Malin Array Be	96.31	320	P	P	23 46 22.5	-1.2	
AKASG				IAmb	IAmb	23 46 24.0		
	comp=Z,17nm,1.4s							
AKBB	Malin Array Si	96.31	320	⇑*i*P	P	23 46 22.2	-1.5	
AKBB				pmax	pmax			
	comp=Z,17nm,1.0s							
AKBB	Malin Array Si	96.31	320	IAmb	IAmb	23 46 23.7		
	comp=Z,12nm,0.9s							
AKBB	Malin Array Si	96.31	320	P	P	23 46 22.7	-1.0	
AK03	Malin Array Si	96.31	320	P	P	23 46 22.9	-0.9	
AK07	Malin Array Si	96.31	320	P	P	23 46 23.0	-0.8	
AK01	Malin Array Si	96.31	320	P	P	23 46 23.0	-0.8	
KIEV	Kiev	96.31	320	⇑P	P	23 46 23.4	-0.4	
KIEV	Kiev	96.31	320	*i* P	P	23 46 22.7	-1.1	
	SNR=6.3							
KIEV	Kiev	96.31	320	⇑P	P	23 46 23.4	-0.4	
KIEV	Kiev	96.31	320	P	P	23 46 22.8	-1.0	
	comp=Z,65nm,1.2s							
KIEV	Kiev	96.31	320	P	P	23 46 22.6	-1.1	
AK11	Malin Array Si	96.34	320	P	P	23 46 22.9	-1.0	
COLD	Coldfoot	96.37	23	P	P	23 46 23.7	0.0	
COLD				IAmb	IAmb	23 46 25.7		
	comp=Z,17nm,1.1s							
COLD	Coldfoot	96.37	23	P	P	23 46 24.4	+0.8	
	baz=267,SNR=13							
C23K	Itkillik River	96.37	20	P	P	23 46 24.3	+0.7	
	baz=266,SNR=9.9							
G23K	Bananza Creek	96.41	24	IAmb	IAmb	23 46 26.0		
	comp=Z,20nm,1.1s							
G23K	Bananza Creek	96.41	24	P	P	23 46 24.5	+0.6	
	baz=267,SNR=19							
PMR	Palmer	96.51	29	P	P	23 46 24.3	-0.1	
PMR	Palmer	96.51	29	P	P	23 46 24.8	+0.4	
	baz=267							
H23K	Yukon River	96.55	24	P	P	23 46 25.1	+0.6	
	baz=267							
I23K	Minto, Yukon-K	96.59	25	IAmb	IAmb	23 46 28.7		
	comp=Z,26nm,1.1s							
I23K	Minto, Yukon-K	96.59	25	P	P	23 46 25.2	+0.5	
	baz=267,SNR=22							
E23K	Chandalar	96.63	22	IAmb	IAmb	23 46 27.1		
	comp=Z,28nm,1.3s							
E23K	Chandalar	96.63	22	P	P	23 46 25.4	+0.4	
	baz=267,SNR=14							
TOLK	Toolik Lake Re	96.68	22	P	P	23 46 25.4	+0.3	
	baz=267,SNR=6.9							
NEA2	Nenana	96.69	26	P	P	23 46 25.2	+0.1	
	baz=267							
MCK	McKinley	96.71	27	IAmb	IAmb	23 46 25.8		
	comp=Z,17nm,1.0s							
MCK	McKinley	96.71	27	P	P	23 46 24.7	-0.6	
	baz=267							
SORM	Soroca	96.72	318	⇑P	P	23 46 25.3	-0.4	
SORM	Soroca	96.72	318	⇑P	P	23 46 25.3	-0.4	
SORM	Soroca	96.72	318	P	P	23 46 24.5	-1.1	
	comp=Z,449nmcomp=Z,17nm,1.0s							
RND	Reindeer	96.73	27	IAmb	IAmb	23 46 25.6		
	comp=Z,22nm,0.9s							
KARP	Karpathos	96.81	305	P	P	23 46 25.6	-0.8	
	comp=Z,84nm,1.1s							
KNK	Knik Glacier	96.83	29	P	P	23 46 25.7	-0.2	
	baz=268,SNR=6.9							
WAT1	Susitna Watana	96.84	28	P	P	23 46 25.8	-0.2	
	baz=268							
SML	Sawmill	96.90	29	IAmb	IAmb	23 46 27.1		
	comp=Z,26nm,0.9s							
SML	Sawmill	96.90	29	P	P	23 46 26.2	0.0	
	baz=268,SNR=8.2							
D24K	Happy Valley	96.97	21	IAmb	IAmb	23 46 30.4		
	comp=Z,16nm,1.2s							
D24K	Happy Valley	96.97	21	P	P	23 46 26.9	+0.6	
	baz=268							
E24K	Your Creek	97.06	22	IAmb	IAmb	23 46 31.1		
	comp=Z,22nm,2.0s							
E24K	Your Creek	97.06	22	P	P	23 46 27.3	+0.5	
	baz=268							
WRH	Wood River Hil	97.11	26	P	Pdif	23 46 25.6	-1.5	
WRH				IAmb	IAmb	23 46 29.8		
	comp=Z,15nm,1.0s							
VADS	Vadso	97.11	340	*e*SKSac	SKSac	23 56 04.5	-1.5	
VADS				*e*SS	SS	00 03 56.9	+3.0	
MI29	MI29, Kamyanyy	97.17	320	P	Pdif	23 46 26.1	-1.5	
	comp=Z,114nm,1.5s							
M23K	Glacier View	97.19	29	P	P	23 46 27.5	0.0	
	baz=268							
LUBAR	Lubar, Ukraine	97.20	319	P	Pdif	23 46 27.2	-0.6	
WAT6	Susitna Watana	97.21	28	P	Pdif	23 46 27.6	-0.1	
	baz=268							
H24K	Noodor Dome	97.24	25	IAmb	IAmb	23 46 29.6		
	comp=Z,19nm,1.3s							
H24K	Noodor Dome	97.24	25	P	P	23 46 28.3	+0.7	
	baz=268,SNR=8.6							
F24K	Squaw Lake	97.27	23	IAmb	IAmb	23 46 32.5		
	comp=Z,25nm,1.5s							
F24K	Squaw Lake	97.27	23	P	P	23 46 28.4	+0.6	
	baz=269,SNR=9.8							
P23K	Montague Islan	97.29	30	P	P	23 46 28.6	+0.6	
	baz=268							
MI28	Mi28,Pidlybu	97.30	320	P	Pdif	23 46 26.5	-1.7	
MNK	Minsk	97.31	324	*i* P	P	23 46 28.2	0.0	
	comp=E,6.0nm,0.9s							
MNK				*i* P	P	23 46 28.2	0.0	
	comp=N,20nm,1.2s							
MNK				*i* P	P	23 46 28.2	0.0	
	comp=Z,21nm,1.0s,baz=92							
MNK				*i* pP	pP	23 48 38.1	-1.3	
MNK				*i* sP	sP	23 49 38.7	-0.5	
MNK				*i* PP	PP	23 50 36.0	+0.6	
MNK				*i* PPP	PPP	23 52 46.0		
MNK				*i* SKS		23 55 28.7		
MNK				*i* S	SKSac	23 56 08.0	+0.4	
MNK				*i* sS	pS	00 00 16.2	+29	
MNK				*i* SS	SS	00 03 49.7	-7.8	
MNK				*i* SSS	SSS	00 07 56.6		
MNK	Minsk	97.31	324	*i* P	P	23 46 28.2	0.0	
MNK				*i* *PP	pP	23 48 38.0	-1.3	
MNK				*i* *SP	sP	23 49 38.7	-0.5	
MNK				*i*		23 50 36.0		
MNK				*i* PPP	PPP	23 52 46.0		
MNK				*i* S	SKSac	23 56 08.0	+0.4	
MNK				*i* SSS	SSS	00 07 56.6		
MNK				pmax	pmax			
	comp=Z,21nm,1.0s							
MNK				pmax	pmax			
	comp=E,6.0nm,0.9s							
MNK				pmax	pmax			
	comp=N,20nm,1.2s							
SCM	Sheep Creek Mo	97.38	29	P	Pdif	23 46 28.4	0.0	
	baz=268							
DHY	Denali Highway	97.39	27	IAmb	IAmb	23 46 32.0		
	comp=Z,16nm,0.7s							
DHY	Denali Highway	97.39	27	P	P	23 46 28.6	+0.1	
	baz=269							
POKR	Poker Plat Res	97.41	25	P	P	23 46 29.0	+0.6	
	baz=269							

NEHR **Nehoiu** 98.00 315 ⇑P P 23 46 31.8 +0.2
KLU **Klutina** 98.04 29 P P 23 46 31.8 +0.4
baz=270
VSU **Vasula** 98.05 328 P Pdif 23 46 30.3 -1.0
K24K **Donnelly Dome** 98.11 27 P P 23 46 32.1 +0.5
baz=270
EYAK **Cordova Ski Ar** 98.12 30 P P 23 46 32.1 +0.5
baz=270
SGF **Sodankyl** 98.13 337 P Pdif 23 46 30.4 -1.1
F25K **Christian Rive** 98.13 23 P P 23 46 32.3 +0.6
baz=271
E25K **Arctic Village** 98.15 22 P P 23 46 32.4 +0.7
baz=271
PRP **Porcupine Dome** 98.21 25 P P 23 46 32.5 +0.4
baz=271
TURR **Turia** 98.22 315 ⇑P Pdif 23 46 30.0 -2.4
MLR **Muntele Rosu** 98.25 315 ⇑P P 23 46 33.1 +0.3
MLR **Muntele Rosu** 98.25 315 ⇑P P 23 46 33.1 +0.3
MLR **Muntele Rosu** 98.25 315 P Pdif 23 46 32.0 -0.8
comp=Z,9.2nm,1.8s
MLR **Muntele Rosu** 98.25 315 P P 23 46 32.9 +0.1
HOPEN **Hopen** 98.25 346 eSKSac SKSac 23 56 11.7 +0.2
J25K **Salcha River,** 98.28 26 P P 23 46 32.7 +0.3
baz=271
C26K **Camden Bay** 98.34 20 P P 23 46 33.1 +0.7
baz=272
FINES **FINESS Array B** 98.39 331 P Pdif 23 46 32.4 -0.4
comp=Z,6.7nm,0.7s,baz=98,slow=5.8,SNR=33
FINES PP PP 23 50 41.6 -1.6
comp=Z,9.5nm,1.0s,baz=96,slow=7.2,SNR=6.1
FINES PKiKP PKiKP 23 51 00.6 -0.4
comp=Z,1.7nm,0.5s,baz=99,slow=2.7,SNR=7.8
FINES PKKPbc PKKPbc 00 03 00.3 -2.8
comp=Z,0.6nm,0.4s,baz=214,slow=1.7,SNR=11
comp=Z,6.7nm,0.7s
FINES **FINESS Array B** 98.39 331 Pdif Pdif 23 46 31.4 -1.4
HARP **HAARP** 98.40 28 P P 23 46 33.2 +0.3
baz=270
OUL **Oulu** 98.42 335 P Pdif 23 46 32.1 -0.7
RNPP5 **Staryi Chortor** 98.44 321 P Pdif 23 46 32.3 -0.9
RNPP9 **Sopachiv** 98.44 321 P Pdif 23 46 32.4 -0.8
ARBE **Arbavere** 98.44 329 P P 23 46 33.2 +0.1
ARA0 **ARCESS Array S** 98.45 339 eP Pdif 23 46 32.6 -0.3
ARA0 IAmb IAmb 23 46 33.2
comp=Z,28nm,1.1s
ARA0 ePP pP 23 48 44.2 -0.1
ARA0 eSKSac SKSac 23 56 13.2 +0.4
ARCES **ARCESS Array B** 98.45 339 P Pdif 23 46 32.6 -0.3
comp=Z,16nm,1.0s,baz=90,slow=4.9,SNR=21
ARCES PP PP 23 50 41.6 -1.9
comp=Z,5.8nm,0.9s,baz=70,slow=10,SNR=5.5
ARCES S SKSac 23 56 07.0 -5.8
comp=Z,2.7nm,0.7s,baz=109,slow=7.0,SNR=5.5
ARCES PKKPbc PKKPbc 00 02 59.6 -3.5
comp=Z,0.5nm,0.4s,baz=272,slow=4.2,SNR=5.6
comp=Z,16nm,1.0s
ARCES **ARCESS Array B** 98.45 339 Pdif Pdif 23 46 31.9 -1.1
ARCES IAmb IAmb 23 46 33.5
comp=Z,22nm,1.1s
RNPP8 **Varash** 98.46 321 P Pdif 23 46 32.7 -0.6
RIDG **Independent Ri** 98.53 27 P P 23 46 33.9 +0.4
baz=271,SNR=5.9
N25K **Chitina, Valde** 98.68 29 P P 23 46 34.6 +0.3
baz=271
BMRM **Bremner River** 98.68 29 P P 23 46 34.6 +0.3
baz=271
F26K **Sheenjek River** 98.70 23 P P 23 46 35.1 +0.9
baz=272,SNR=6.2
C27K **Jago River** 98.78 21 P P 23 46 34.9 +0.5
baz=273,SNR=14
KAIM **Kayak Island** 98.79 31 P P 23 46 34.7 0.0
baz=271
BURAR **Bucovina Array** 98.81 317 ⇑P P 23 46 36.0 +0.8
BURAR **Bucovina Array** 98.81 317 ⇑P P 23 46 36.0 +0.8
G26K **Porcupine Rive** 98.88 23 P P 23 46 35.1 +0.2
baz=272,SNR=9.6
SCRK **Sand Creek** 98.90 26 P Pdif 23 46 35.2 0.0
baz=272
HAMF **Hammerfest** 99.02 340 eP Pdif 23 46 35.1 -0.3
HAMF IAmb IAmb 23 46 35.3
comp=Z,18nm,0.8s
HAMF eSKSac SKSac 23 56 16.4 +0.9
HAMF eSS SS 00 04 22.2 +2.0
ARR **Arges** 99.17 315 ⇑P Pdif 23 46 36.7 0.0
ARR **Arges** 99.17 315 P Pdif 23 46 36.1 -0.7
KTK1 **Kautokeino** 99.29 339 eP Pdif 23 46 36.2 -0.4
KTK1 eSKSac SKSac 23 56 17.0 +0.1
M26K **Nabesna, AK** 99.41 28 P Pdif 23 46 37.4 0.0
baz=272
CRQE **Cirque** 99.43 30 P Pdif 23 46 37.5 -0.2
baz=272
MCARA **McCarthy VSAT** 99.44 29 P Pdif 23 46 37.6 +0.1
baz=272
MTSE **Matsula** 99.58 328 P Pdif 23 46 38.2 +0.2
PABE **Paberze** 99.58 325 P Pdif 23 46 38.5 +0.4
E27K **Coleen River** 99.64 22 P Pdif 23 46 38.5 +0.2
baz=275,SNR=5.7
G27K **Doyon Strip** 99.72 23 P Pdif 23 46 39.1 +0.4
baz=274,SNR=7.1
D27M **Malcolm River** 99.77 21 P Pdif 23 46 39.2 +0.3
baz=276
LOT **Lotru** 99.78 315 ⇑P Pdif 23 46 39.9 +0.4
LOT **Lotru** 99.78 315 P Pdif 23 46 39.6 +0.1
H27K **Steamboat Moun** 99.82 24 P Pdif 23 46 39.4 +0.2
baz=274,SNR=7.6
I27K **Kandik River** 99.83 25 P Pdif 23 46 39.8 +0.6
baz=274,SNR=11
SPA0 **Spitsbergen Ar** 99.91 348 eP Pdif 23 46 38.7 -0.6
SPA0 IAmb IAmb 23 46 39.3
comp=Z,75nm,1.4s
SPA0 eSKSac SKSac 23 56 20.3 +0.7
SPITS **Spitsbergen Ar** 99.91 348 P Pdif 23 46 38.7 -0.6
comp=Z,7.8nm,0.5s,baz=96,slow=8.5,SNR=24
comp=Z,7.8nm,0.5s
L27K **Beaver Creek,** 99.91 27 P Pdif 23 46 40.0 +0.4
baz=274
M27K **Edge Creek, AK** 99.93 28 P Pdif 23 46 39.7 -0.2
baz=273
BMR **Baia Mare** 99.97 317 P Pdif 23 46 40.9 +0.7
MARR **Marisel-Cluj** 100.23 316 ⇑P Pdif 23 46 42.1 +0.6
JETT **Jettan, Norway** 100.24 339 eP Pdif 23 46 40.8 -0.1
JETT IAmb IAmb 23 46 41.2
comp=Z,40nm,0.7s
F28M **Old Crow** 100.34 23 P Pdif 23 46 41.5 +0.1
baz=276
E28M **Babbage River** 100.35 22 P Pdif 23 46 41.5 +0.1
baz=277
BVCY **Beaver Creek** 100.40 28 P Pdif 23 46 41.7 -0.1
baz=274
KWP **Kalwaria Pacla** 100.47 319 ePdif Pdif 23 46 42.1 -0.3
KWP ePKiKP PP 23 51 00.2 +1.1
KWP **Kalwaria Pacla** 100.47 319 P Pdif 23 46 41.8 -0.6
comp=Z,16nm,1.6s
DRGR 100.51 316 P Pdif 23 46 42.6 -0.1
I28M **Miner Creek** 100.54 25 P Pdif 23 46 42.3 -0.1
baz=276,SNR=14
KBS **Kingsbay** 100.58 349 eP Pdif 23 46 41.8 -0.4
KBS eSKSac SKSac 23 56 23.5 +0.7
TRPA **Tarpa** 100.61 318 P Pdif 23 46 43.0 0.0
YUK3 **Moose Creek** 100.64 29 P Pdif 23 46 43.1 0.0
baz=275
TRO **Tromso** 100.74 340 eP Pdif 23 46 42.2 -0.8
TRO IAmb IAmb 23 46 43.2
comp=Z,6.4nm,0.8s
TRO eSKSac SKSac 23 56 20.5 -3.3
KOLS **Kolonicke sedl** 100.77 318 eP Pdif 23 46 44.7 +1.0
KOLS e 23 51 02.8
KOLS **Kolonicke sedl** 100.77 318 P Pdif 23 46 44.7 +1.0
KOLS **Kolonicke sedl** 100.77 318 ePDIFF Pdif 23 46 44.7 +1.0
KOLS ePP PP 23 51 02.8 +1.4
O28M **Mount Upton** 100.85 30 P Pdif 23 46 43.9 -0.2
baz=275
PINM **Pinnacle** 100.87 30 P Pdif 23 46 43.8 -0.2
baz=274
DAWY **Dawson** 100.92 26 P Pdif 23 46 44.0 -0.1
baz=276
E29M **Blow River** 100.98 22 P Pdif 23 46 44.3 +0.1
baz=278
YUK8 **Steele Glacier** 101.01 29 P Pdif 23 46 44.4 -0.4
baz=275
H29M **Whitestone** 101.09 24 P Pdif 23 46 44.8 0.0
baz=277
G29M **Pine Creek** 101.14 23 P Pdif 23 46 45.3 +0.3
baz=278
MDVR **Moldovita** 101.24 314 ⇑P Pdif 23 46 46.1 +0.1
SIRR **Siria** 101.25 316 ⇑P Pdif 23 46 46.4 +0.5

BZS **Buzias** 101.29 315 P Pdif 23 46 45.6 -0.5
STHS **Stebnicka Huta** 101.43 319 ePP PP 23 51 05.9 -0.3
ABAH **Abaujker** 101.47 318 P Pdif 23 46 47.2 +0.3
M29M **Somme Creek** 101.51 28 P Pdif 23 46 47.0 +0.1
baz=276
L29M **L29M** 101.58 27 P Pdif 23 46 47.3 +0.2
baz=277
O29M **Mount Kennedy** 101.69 30 P Pdif 23 46 47.2 -0.5
baz=276
YUK6 **Outpost Mounta** 101.72 29 P Pdif 23 46 47.4 -0.6
baz=276
EPYK **Eagle Plains** 101.73 24 P Pdif 23 46 47.9 +0.2
baz=279
K29M **Barlow Dome** 101.76 26 P Pdif 23 46 47.8 -0.2
baz=278
G30M **tAoh Zraii Nji** 101.83 23 P Pdif 23 46 48.0 0.0
baz=280
F30M **Barrier River** 101.89 22 P Pdif 23 46 48.6 +0.4
baz=280
NIE **Niedzica** 102.05 319 ePdif Pdif 23 46 51.2 +1.8
NIE **Niedzica** 102.05 319 P Pdif 23 46 49.5 +0.1
comp=Z,2.3nm,1.7s
I30M **Mount Dempster** 102.05 25 P Pdif 23 46 49.2 0.0
baz=279
HYT **Haines Junctio** 102.16 29 P Pdif 23 46 49.7 -0.1
baz=277
J30M **Hart River** 102.17 25 P Pdif 23 46 49.8 0.0
baz=279
P29M **Windy Craggy** 102.18 31 P Pdif 23 46 49.8 0.0
baz=277
M30M **Minto, Yukon** 102.26 28 P Pdif 23 46 50.4 +0.3
baz=278
N30M **Aishikik Lake** 102.28 29 P Pdif 23 46 50.4 +0.2
baz=278
OJC **Ojcow** 102.33 320 P Pdif 23 46 49.8 -0.8
comp=Z,3.3nm,0.9s
OJC **Ojcow** 102.33 320 P Pdif 23 46 51.2 +0.6
STEI **Steigen** 102.36 338 eP Pdif 23 46 49.5 -0.7
STEI IAmb IAmb 23 46 50.5
comp=Z,11nm,0.7s
STEI eSKSac SKSac 23 56 32.5 +1.0
FAUS **Fauske** 102.45 338 eP Pdif 23 46 50.1 -0.6
FAUS IAmb IAmb 23 46 50.9
comp=Z,6.3nm,0.9s
FAUS eSKSac SKSac 23 56 31.3 -0.6
P30M **Million Dollar** 102.51 30 P Pdif 23 46 51.4 +0.1
baz=277
INK **Inuvik** 102.59 21 P Pdif 23 46 51.8 +0.5
baz=282
G31M **Satah River** 102.60 23 P Pdif 23 46 51.9 +0.5
baz=281
LANS **Liptovska Anna** 102.61 319 ePP PP 23 51 21.3 +6.4
F31M **Tsiigehtchic** 102.69 22 P Pdif 23 46 52.1 +0.3
baz=282
H31M **Peel River** 102.78 24 P Pdif 23 46 52.5 +0.2
baz=281
O30N **Mendenhall** 102.85 29 P Pdif 23 46 52.9 +0.1
baz=278
N31M **Braeburn, Yuko** 102.89 29 P Pdif 23 46 53.1 +0.2
baz=279
PLBC **Pleasant Camp** 102.90 31 P Pdif 23 46 53.0 +0.1
baz=278
LOF **Lofoten** 102.94 338 eSKSac SKSac 23 56 33.6 -0.5
LOF eSP SP 23 59 28.7 +1.8
MOR8 **Moi Rana** 103.02 336 eP Pdif 23 46 52.1 -1.2
MOR8 eSKSac SKSac 23 56 35.0 +0.3
RAUS **Rausandaksla** 103.12 337 eSKSac SKSac 23 56 35.4 +0.3
S31K **Pelican** 103.16 32 P Pdif 23 46 54.1 0.0
baz=278
MORH **Mrgy, Hungar** 103.34 316 P Pdif 23 46 54.5 -0.7
VAGH **Vaagaholmen** 103.36 337 eSKSac SKSac 23 56 35.6 -0.5
VAGH ePS PS 00 00 49.4 +2.5
R31K **City Hall, Gus** 103.36 32 P Pdif 23 46 55.0 +0.1
baz=278
SKAG **Skagway** 103.42 31 P Pdif 23 46 55.3 +0.1
baz=279
M31M **Drury Creek, Y** 103.43 28 P Pdif 23 46 55.5 +0.2
baz=280
WHY **Whitehorse** 103.45 29 P Pdif 23 46 55.4 -0.1
baz=279
KONS **Konsvik** 103.47 337 eSKSac SKSac 23 56 34.6 -2.0
KONS ePS PS 00 00 50.5 +2.6
STOK **Stokkvaagen** 103.55 337 ePP PP 23 51 21.3 +0.1
STOK eSKSac SKSac 23 56 37.8 +0.8
STOK ePS PS 00 00 48.8 +0.1
LEIR **Leirfjorden** 103.56 336 eP Pdif 23 46 55.9 +0.2
LEIR IAmb IAmb 23 46 56.8
comp=Z,5.6nm,0.7s
LEIR eSKSac SKSac 23 56 38.2 +1.2
LEIR ePS PS 00 00 49.4 +0.7
SIT **Sitka** 103.77 33 P Pdif 23 46 56.6 -0.2
baz=278
JAVC **Velka Javorina** 103.81 318 ePDIFF Pdif 23 46 57.0 -0.3
R32K **Eaglecrest** 104.02 32 P Pdif 23 46 57.7 -0.2
baz=279
MPLH **Magyarpolny** 104.03 317 P Pdif 23 46 57.9 -0.3
comp=Z,8.3nm,1.1s
MODS **Modra-Piesok** 104.11 318 ePP PP 23 51 25.8 -0.1
P32M **Atlin** 104.21 30 P Pdif 23 46 58.6 -0.2
baz=280
KRLC **Kraliky** 104.27 320 eSKS SKSac 23 56 42.0 +0.9
NSS **Namsos** 104.40 335 eP Pdif 23 46 58.9 -0.6
KSP **Ksiaz** 104.50 321 P Pdif 23 46 59.9 -0.3
DPC **Dobruska-Polom** 104.54 320 eSKS SKSac 23 56 44.8 +2.5
P33M **Teslin, Yukon** 104.54 30 P Pdif 23 47 00.1 -0.2
baz=281
HFS **Hagfors** 104.55 330 Pdiff Pdif 23 47 00.0 -0.2
comp=Z,6.6nm,0.7s,baz=116,slow=3.4,SNR=22
HFS PKiKP PKiKP 23 51 11.7 -0.5
comp=Z,2.1nm,0.6s,baz=88,slow=3.6,SNR=4.5
HFS PP PP 23 51 28.8 +0.1
comp=Z,22nm,1.1s,baz=103,slow=6.4,SNR=9.5
OSTC **Ostas** 104.58 320 eSKS SKSac 23 56 43.9 +1.5
MMPY **Sheldon Lake,** 104.77 27 P Pdif 23 47 01.3 0.0
baz=283
RONA **Rosalia, Austr** 104.83 317 iPP PP 23 51 30.6 -0.6
comp=Z,8.8nm,1.1s
Q32M **Nakina River** 105.06 31 P PKiKP 23 51 13.3 -0.1
baz=281
CONA **Conrad Observa** 105.10 318 iPP PP 23 51 31.3 -1.9
comp=Z,14nm,1.2s
CONA ePKKP PKKPbc 00 02 42.2 -1.3
comp=Z,2.5nm,0.9s
U33K **Whale Pass** 105.12 34 P PKiKP 23 51 13.4 +0.1
baz=280
CRAG **Craig** 105.23 34 P PKiKP 23 51 13.6 +0.1
baz=280
ARSA **Arzberg** 105.39 317 ePP PP 23 51 33.2 -2.1
comp=Z,6.2nm,1.0s
NC602 **NORSAR Array S** 105.47 331 eP Pdif 23 47 03.8 -0.6
NC602 eSKSac SKSac 23 56 46.5 +0.6
WRAK **Wrangell Islan** 105.50 33 P PKiKP 23 51 14.0 0.0
baz=280
NB2 **NORSAR Subarra** 105.56 332 P Pdif 23 47 03.8 -1.0
comp=Z,3.8nm,0.8s,baz=76,slow=4.4
NB2 PP PKiKP 23 51 19.9 +5.8
comp=Z,4.5nm,0.9s,baz=50,slow=8.6
NB2 PKP SKiKP 23 53 53.1 +0.2
comp=Z,0.6nm,0.7s,baz=76,slow=3.3
NB2 **NORSAR Subarra** 105.56 332 P Pdif 23 47 03.8 -1.0
NOA **NORSAR Array B** 105.56 332 Pdiff Pdif 23 47 04.3 -0.4
comp=Z,3.0nm,0.8s,baz=76,slow=4.4,SNR=14
NOA SKP SKiKP 23 53 53.5 +0.6
comp=Z,1.7nm,0.9s,baz=261,slow=3.2,SNR=4.1
C36M **Paulatuk** 105.57 19 P PKiKP 23 51 14.1 +0.3
baz=292
R33M **Jennings River** 105.62 30 P PKiKP 23 51 14.6 +0.2
baz=282
PVCC **Panska Ves** 105.63 320 epPKP 23 53 32.2
PRU **Pruhonice** 105.72 320 epPKP 23 53 26.3
PRU eSKS SKSac 23 56 48.5 +1.1
PRU AMS AMS 00 37 40.0
comp=Z,200nm,21.4s
SOKA **Soboth** 105.79 316 ePP PP 23 51 35.4 -2.8
comp=Z,8.9nm,1.7s
BRG **Berggiesshubel** 105.97 321↓ ePif 23 47 07.0
BRG Amp 23 47 07.3
comp=Z,1.7nm,1.0s
BRG **Berggiesshubel** 105.97 321 P PKiKP 23 51 14.3 -0.7
BRG Amp 23 51 14.4
comp=Z,2.7nm,0.9s
BRG **Berggiesshubel** 105.97 321 P PKiKP 23 51 22.8 +7.7
BRG Amp 23 51 24.4
comp=Z,7.8nm,1.2s
BRG **Berggiesshubel** 105.97 321 SP SP 00 00 00.0 +1.1
CKRC **Cesky Krumlov** 106.02 319 ePP PP 23 51 45.6 +5.9

CKRC epPKP 23 53 33.1
OSL **Oslo** 106.05 330 eSKSac SKSac 23 56 48.6 +0.3
SESA **Seetaler Alpe,** 106.06 317 ePP PP 23 51 38.6 -1.7
comp=Z,25nm,1.2s
V35K **Ketchikan** 106.10 34 P PKiKP 23 51 15.1 0.0
baz=281
OBKA **Obir** 106.14 316 ePP PP 23 51 40.2 -0.6
comp=Z,27nm,1.1s
MOA **Molln** 106.17 318 iPP PP 23 51 40.3 -0.6
comp=Z,13nm,1.2s
DLBC **Dease Lake** 106.31 31 P PKiKP 23 51 15.7 +0.2
baz=283
HSKC **Hora Svate Kat** 106.33 321 eSKS SKSac 23 56 50.6 +0.5
GERES **GERESS Array B** 106.41 319 Pdiff Pdif 23 47 08.7 -0.3
comp=Z,0.1nm,0.3s,baz=86,slow=1.9,SNR=3.6
GERES PKiKP PKiKP 23 51 16.9 +0.8
comp=Z,1.5nm,0.8s,baz=45,slow=1.8,SNR=6.7
GERES PP PP 23 51 37.9 -4.8
comp=Z,3.5nm,0.9s,baz=97,slow=5.4,SNR=7.4
GERES SKP 23 53 55.5
comp=Z,1.2nm,0.8s,baz=190,slow=0.8,SNR=4.3
GERES PKKPbc PKKPbc 00 02 38.5 -1.0
comp=Z,0.6nm,0.5s,baz=266,slow=2.2,SNR=8.6
KHC **Kasperske Hory** 106.45 319 eSKS SKSac 23 56 50.3 -0.5
KHC ex x 23 59 57.5
KHC AMS AMS 00 37 00.0
comp=Z,200nm,19.6s
T35M **Bob Quinn** 106.52 33 P PKiKP 23 51 16.1 +0.2
baz=282
BIOA **Bad Ischl, Aus** 106.61 318 ePP PP 23 51 43.0 -1.1
comp=Z,10nm,1.2s
BIOA ePKKP PKKPbc 00 02 37.9 -1.0
comp=Z,2.2nm,0.6s
KONO **Kongsberg** 106.67 330 eSKSac SKSac 23 56 52.1 +1.0
MYKA **Terra Mystica** 106.75 316 ePP PP 23 51 43.9 -1.2
comp=Z,10nm,1.4s
MYKA ePKKP PKKPbc 00 02 37.6 -0.8
comp=Z,2.1nm,0.5s
KBA **Koelnbreinsper** 106.89 317 ePP PP 23 51 44.9 -1.4
comp=Z,7.2nm,1.2s
KBA ePKKP PKKPbc 00 02 37.0 -1.2
comp=Z,1.5nm,0.5s
NKC **Novy Kostel** 107.01 320 epPKP 23 53 37.9
NKC eSKS SKSac 23 56 52.9 -0.2
SKAR **Skarslia** 107.03 332 eSKSac SKSac 23 56 52.1 -0.6
SKAR eSP SP 00 00 12.4 +3.5
SKAR eSS SS 00 06 13.0 +3.9
AKN **Aaknes** 107.19 333 eSKSac SKSac 23 56 53.3 0.0
LESA **Schwarzleotal** 107.29 317 ePP PP 23 51 47.4 -1.7
comp=Z,1.7nm,0.5s
LESA ePKKP PKKPbc 00 02 36.2 -0.6
comp=Z,4.3nm,1.1s
MOX **Moxa** 107.47 321 eL L 00 41 36.8
comp=Z,119nm,20.5s
ABTA **Abfaltersbach** 107.50 317 ePP PP 23 51 48.4 -2.1
comp=Z,15nm,1.2s
HOMB **Homborsund** 107.58 329 eSKSac SKSac 23 56 54.4 -0.5
HYA **Hoyanger** 107.87 332 eSKSac SKSac 23 56 55.2 -0.9
GRF **Grafenberg Arr** 107.89 320 ePP PP 23 51 48.7 -4.4
GRF eL L 00 38 08.6
comp=Z,202nm,21.5s
WTTA **Wattenberg** 108.02 317 ePKiKP PKiKP 23 51 19.6 +0.3
comp=Z,7.4nm,0.9s
WTTA ePP PP 23 51 52.5 -1.9
comp=Z,13nm,1.1s
WATA **Walderalm** 108.05 317 ePP PP 23 51 52.5 -2.0
comp=Z,13nm,1.4s
FOO **Floro** 108.25 333 eSKSac SKSac 23 56 58.1 +0.4
SQTA **Sankt Quirin** 108.31 317 ePP PP 23 51 53.5 -2.9
comp=Z,19nm,1.2s
SQTA eSKP 23 53 60.0
comp=Z,8.1nm,1.3s
MOTA **Moosalm** 108.36 317 ePP PP 23 51 54.6 -2.1
comp=Z,14nm,1.0s
MOTA eSKP 23 53 58.6
comp=Z,1.8nm,0.6s
BER **Bergen** 108.52 332 eSKSac SKSac 23 56 58.5 -0.4
ASK **Askoy** 108.55 332 eSKSac SKSac 23 57 00.3 +1.3
SUE **Sulen** 108.56 332 eSKSac SKSac 23 56 58.4 -0.6
RETA **Reutte** 108.57 318 ePP PP 23 51 56.5 -1.6
comp=Z,8.9nm,1.2s
FETA **Feichten** 108.67 317 ePP PP 23 51 57.2 -1.8
comp=Z,13nm,1.2s
FETA eSKP 23 54 00.4
comp=Z,5.7nm,1.4s
JNW **Jan Mayen West** 108.77 344 eSKSac SKSac 23 57 01.1 +1.6
JMIC **Jan Mayen** 108.81 344 eSKSac SKSac 23 57 01.4 +1.6
JMIC eSP SP 00 00 27.2 +2.1
KMY **Karmoy** 108.93 331 ePP PP 23 52 00.8 +0.7
KMY eSKSac SKSac 23 57 01.7 +1.0
DAVA **Damuels** 109.19 318 ePKiKP PKiKP 23 51 21.9 +0.5
comp=Z,1.5nm,0.4s
DAVA PP PP 23 52 01.4 -1.3
comp=Z,11nm,1.1s
DAVA eSKP 23 54 01.8
comp=Z,8.2nm,1.2s
DAVA ePKKP PKKPbc 00 02 30.8 -0.2
comp=Z,2.3nm,0.6s
MEM **Membach** 110.96 322 dPKiKP PKiKP 23 51 24.9 +0.4
MEM dPP PP 23 52 15.5 +0.6
WLF **Walferdange** 111.11 321 PP PP 23 52 18.1 +2.2
WLF **Walferdange** 111.11 321 dPP PP 23 52 14.9 -1.0
KEST **Kesra** 111.29 305 PP PP 23 52 14.8 -3.1
comp=Z,29nm,1.0s,baz=58,slow=3.4,SNR=18
KEST PKKPbc PKKPbc 00 02 22.7 -1.1
comp=Z,2.2nm,0.7s,baz=169,slow=3.2,SNR=6.0
BMRD **Maredsous** 111.81 321 dPP PP 23 52 22.1 +1.4
UCC **Uccle** 111.92 322 dPP PP 23 52 23.2 +1.6
DOU **Dourbes** 111.97 321 dPP PP 23 52 23.0 +1.1
YKA **Yellowknife Ar** 112.00 24 PKiKP PKiKP 23 51 26.2 +0.1
comp=Z,2.0nm,0.5s,baz=300,slow=1.5,SNR=16
YKA SKP SKPdf 23 54 04.2 -0.8
comp=Z,3.1nm,0.7s,baz=302,slow=2.1,SNR=5.5
YKA PKKPbc PKKPbc 00 02 19.8 -2.5
comp=Z,3.2nm,0.9s,baz=116,slow=3.3,SNR=4.7
EKA **Eskdalemuir Ar** 114.60 328 PKP PKiKP 23 51 31.4 +0.1
comp=Z,0.5nm,0.3s,baz=51,slow=3.1,SNR=19
EKA PP PP 23 52 32.4 -7.5
comp=Z,15nm,1.0s,baz=66,slow=8.3,SNR=10
EKA SKP SKPdf 23 54 09.4 -0.9
comp=Z,0.6nm,0.5s,baz=358,slow=2.2,SNR=3.6
EKA PKKPbc PKKPbc 00 02 11.8 -1.7
comp=Z,1.3nm,0.5s,baz=239,slow=2.7,SNR=14
J04A **Umpqua Nationa** 114.81 46 PKiKP PKiKP 23 51 33.2 +0.9
NEW **Newport** 116.66 39 PKP PKiKP 23 51 36.9 +1.3
comp=Z,2.6nm,0.7s,baz=319,slow=1.7,SNR=6.5
NEW SKP SKPdf 23 54 14.6 0.0
comp=Z,0.9nm,0.4s,baz=117,slow=2.3,SNR=3.1
NEW PKKPbc PKKPbc 00 02 06.2 -0.1
comp=Z,1.9nm,0.6s,baz=129,slow=5.5,SNR=3.8
BEKR **Beckworth** 116.90 49 PKiKP 23 51 37.3 +0.8
ECHE **Chera** 118.61 311 PP PP 23 53 05.0 -3.2
NVAR **Mina Array Bea** 118.80 50 PKP PKiKP 23 51 41.4 +1.1
comp=Z,4.3nm,0.7s,baz=245,slow=2.0,SNR=14
NVAR SKP SKPdf 23 54 19.4 +0.1
comp=Z,2.7nm,0.7s,baz=246,slow=2.5,SNR=7.6
NVAR PKKPbc PKKPbc 00 01 58.4 -0.3
comp=Z,2.1nm,0.8s,baz=104,slow=4.0,SNR=7.5
NVAR **Mina Array Bea** 118.80 50 PKPdf PKiKP 23 51 41.1 +0.8
TORD **Torodi Ar. Bea** 119.54 281 PKP PKiKP 23 51 42.1 +0.1
comp=Z,5.0nm,0.5s,baz=51,slow=2.0,SNR=48
TORD PP PP 23 53 12.2 -3.1
comp=Z,1.1nm,0.6s,baz=75,slow=4.9,SNR=4.2
TORD SKP SKPdf 23 54 21.8 +0.8
comp=Z,1.9nm,0.5s,baz=74,slow=1.7,SNR=6.8
TORD PKKPbc PKKPbc 00 01 54.8 -0.4
comp=Z,0.8nm,0.5s,baz=305,slow=2.3,SNR=7.7
TORD SKKPbc SKKPbc 00 04 42.1 -2.9
comp=Z,1.1nm,0.9s,baz=253,slow=4.6,SNR=4.0
TORD **Torodi Ar. Bea** 119.54 281 PKPdf 23 51 41.2 -0.8
UCM **Universidad Co** 120.09 313 PP PP 23 53 14.2 -3.8
ELK **Elko** 120.42 47 PKP PKiKP 23 51 44.5 +1.1
comp=Z,4.3nm,0.6s,baz=300,slow=3.6,SNR=20
ELK SKP SKPdf 23 54 22.5 +0.2
comp=Z,3.1nm,0.8s,baz=304,slow=4.9,SNR=6.4
ELK PKKPbc PKKPbc 00 01 52.6 -0.4
comp=Z,2.5nm,0.7s,baz=84,slow=4.2,SNR=11
ESDC **Sonseca Array** 120.80 312 PKP PKiKP 23 51 44.2 +0.3
comp=Z,2.0nm,0.9s,baz=6.7,slow=2.6,SNR=9.5
ESDC PP PP 23 53 19.7 -3.2
comp=Z,7.4nm,1.1s,baz=68,slow=7.0,SNR=8.9
ESDC SKP SKPdf 23 54 23.5 +0.7
comp=Z,2.0nm,0.8s,baz=21,slow=2.6,SNR=6.4
ESDC PKKPbc PKKPbc 00 01 50.5 -0.9
comp=Z,0.5nm,0.5s,baz=265,slow=3.7,SNR=8.0
ESDC **Sonseca Array** 120.80 312 PKPdf PKiKP 23 51 44.4 +0.4

PFO	**Pinyon Flats O**	**121.41**	**55**	PKP	**PKiKP**	**23 51 46.4**	**+1.0**
	comp=Z,6.6nm,0.7s,baz=265,slow=3.8,SNR=12						
PFO	**Pinyon Flats O**	**121.41**	**55**	PKPdf	**PKiKP**	**23 51 46.3**	**+0.9**
MD01	**Midelt array s**	**123.28**	**305**	PKPdf	**PKPdf**	**23 51 48.9**	**0.0**
PDAR	**Pinedale Array**	**123.66**	**43**	PKP	**PKiKP**	**23 51 50.2**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=126,slow=1.4,SNR=14						
PDAR				pPKP	**pPKPdf**	**23 54 07.2**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=304,slow=1.7,SNR=5.2						
PDAR				SKP	**SKPdf**	**23 54 28.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=191,slow=1.5,SNR=5.3						
PDAR				PKKPbc	**PKKPab**	**00 01 40.7**	**0.0**
	comp=Z,3.1nm,0.6s,baz=111,slow=6.5,SNR=20						
PDAR	**Pinedale Array**	**123.66**	**43**	PKPdf	**PKPdf**	**23 51 49.2**	**-0.2**
NRS	**Narsarsuaq**	**125.16**	**352**	PKiKP	**PKiKP**	**23 51 51.7**	**-0.1**
NRS	**Narsarsuaq**	**125.16**	**352**	PKPdf	**PKiKP**	**23 51 51.7**	**-0.1**
DBIC	**Dimbokro**	**125.72**	**273**	PKP	**PKiKP**	**23 51 54.7**	**+0.4**
	comp=Z,4.4nm,0.4s,baz=93,slow=2.7,SNR=11						
DBIC				pPKP	**pPKPdf**	**23 54 12.6**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=116,slow=4.7,SNR=2.6						
DBIC	**Dimbokro**	**125.72**	**273**	PKPdf	**PKiKP**	**23 51 54.6**	**+0.3**
COYC	**Coyhaique**	**126.25**	**169**	PKPdf	**PKiKP**	**23 51 54.9**	**+0.4**
TUC	**Tucson**	**126.35**	**55**	PKIKP	**PKiKP**	**23 51 55.6**	**+0.4**
TUC	**Tucson**	**126.35**	**55**	PKPdf	**PKiKP**	**23 51 55.6**	**+0.4**
RSSD	**Black Hills**	**126.63**	**39**	PKIKP	**PKPdf**	**23 51 53.9**	**-1.2**
RSSD	**Black Hills**	**126.63**	**39**	PKPdf	**PKPdf**	**23 51 53.9**	**-1.2**
ULM	**Lac du Bonnet**	**127.53**	**29**	PKP	**PKiKP**	**23 51 57.1**	**+0.3**
	comp=Z,2.6nm,0.5s,baz=326,slow=3.6,SNR=6.1						
ULM				pPKP	**pPKPdf**	**23 54 16.2**	**+1.0**
	comp=Z,7.4nm,0.5s,baz=305,slow=3.3,SNR=9.4						
ANMO	**Albuquerque**	**128.92**	**50**	PKP	**PKiKP**	**23 52 01.3**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=174,slow=3.2,SNR=12						
ANMO				SKPbc	SKiKP	23 54 25.6	-14
	comp=Z,24nm,0.9s,baz=263,slow=3.1,SNR=43						
ANMO	**Albuquerque**	**128.92**	**50**	PKIKP	**PKiKP**	**23 52 01.4**	**+1.0**
PLCA	**Paso Flores**	**131.21**	**169**	PKP	**PKiKP**	**23 52 05.5**	**+0.8**
	comp=Z,6.2nm,0.7s,baz=119,slow=0.5,SNR=3.4						
PLCA				SKPbc	**SKPbc**	**23 54 33.1**	**0.0**
	comp=Z,17nm,1.0s,baz=204,slow=4.7,SNR=14						
PLCA	**Paso Flores**	**131.21**	**169**	PKPdf	**PKPdf**	**23 52 04.0**	**+0.3**
PLCA	**Paso Flores**	**131.21**	**169**	*eP*	**PKPdf**	**23 51 58.9**	**-4.9**
SCHQ	**Schefferville**	**132.17**	**6**	PKP	**PKiKP**	**23 52 06.6**	**+0.5**
	comp=Z,4.6nm,0.5s,baz=6.6,slow=4.2,SNR=9.6						
SCHQ				SKPbc	**SKPbc**	**23 54 36.3**	**+0.3**
	comp=Z,31nm,0.8s,baz=28,slow=3.7,SNR=16						
TXAR	**Lajitas Array**	**133.08**	**56**	PKhKP	PKPpre	23 51 56.0	
	comp=Z,1.2nm,0.6s,baz=257,slow=3.4,SNR=13						
TXAR				PKP	**PKiKP**	**23 52 09.1**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=198,slow=2.0,SNR=17						
TXAR				SKPbc	**SKPbc**	**23 54 39.5**	**-0.5**
	comp=Z,6.4nm,0.6s,baz=292,slow=2.4,SNR=23						
TXAR	**Lajitas Array**	**133.08**	**56**	PKIKP	**PKiKP**	**23 52 09.3**	**+0.4**
TXAR						00 51 55.3	
TXAR	**Lajitas Array**	**133.08**	**56**		PKPpre	23 51 55.3	
TXAR				PKPdf	**PKiKP**	**23 52 09.3**	**+0.4**
TRQA	**Tornquist**	**134.89**	**177**	PKIKP	**PKiKP**	**23 52 12.4**	**+0.2**
TRQA	**Tornquist**	**134.89**	**177**	PKPdf	**PKiKP**	**23 52 12.4**	**+0.2**
CCM	**Cathedral Cave**	**138.01**	**38**	PKHKP	PKPpre	23 52 08.0	
CCM	**Cathedral Cave**	**138.01**	**38**	PKPpre	PKPpre	23 52 08.0	
ANCO	**Parque Anchore**	**138.69**	**182**	*eP*	**PKPdf**	**23 52 12.6**	**-5.1**
CFA	**Coronel Fontan**	**140.50**	**168**	PKP	**PKiKP**	**23 52 23.4**	**-0.5**
	comp=Z,11nm,0.4s,baz=254,slow=4.6,SNR=11						
CFA				SKPbc	**SKPbc**	**23 55 02.1**	**+0.6**
	comp=Z,7.7nm,0.6s,baz=158,slow=4.2,SNR=8.4						
WCI	**Wyandotte Cave**	**140.80**	**34**	PKHKP	PKPpre	23 52 13.9	
WCI	**Wyandotte Cave**	**140.80**	**34**	PKPpre	PKPpre	23 52 13.9	
WVT	**Waverly**	**141.34**	**38**	PKHKP	PKPpre	23 52 16.6	
WVT	**Waverly**	**141.34**	**38**	PKPpre	PKPpre	23 52 16.6	
R50A	**Paris**	**141.83**	**32**	PKPpre	PKPpre	23 52 18.6	
PSAL	**Palomas, Salto**	**141.86**	**183**	*eP*	**PKPdf**	**23 52 20.0**	**-3.5**
CPSB	**Cacapava Do Su**	**142.12**	**189**	*eP*	**PKPdf**	**23 52 20.0**	**-4.0**
LCO	**Las Campanas**	**142.41**	**164**	PKIKP	**PKPdf**	**23 52 22.2**	**-2.7**
LCO	**Las Campanas**	**142.41**	**164**	PKPdf	**PKPdf**	**23 52 22.1**	**-2.7**
Q54A	**Coxs Mills**	**143.03**	**28**	PKPdf	PKPbc	23 52 24.1	+0.5
346A	**Big Creek Wild**	**143.16**	**45**	PKPdf	**PKPdf**	**23 52 25.3**	**-0.4**
HRV	**Adam Dziewonsk**	**143.30**	**15**	PKIKP	PKPbc	23 52 24.8	+0.5
HRV	**Adam Dziewonsk**	**143.30**	**15**	PKPdf	PKPbc	23 52 24.8	+0.5
PAGS	**Pennsylvania G**	**143.73**	**22**		PKPbc	23 52 24.6	-1.1
CMIG	**Matias Romero**	**144.17**	**71**	SKPbc	**SKPbc**	**23 55 11.0**	**+0.2**
	comp=Z,9.0nm,0.8s,baz=319,slow=3.0,SNR=7.0						
CMIG				SKKPbc	**SKKPbc**	**00 03 16.0**	**-0.8**
	comp=Z,11nm,1.1s,baz=145,slow=7.1,SNR=9.2						
ITAB	**Concordia**	**144.99**	**192**	PKPdf	**PKPab**	**23 52 30.6**	**-0.3**
ITAB	**Concordia**	**144.99**	**192**	*eP*	**PKPdf**	**23 52 27.2**	**-1.9**
CAM01	**Campos-RJ**	**146.20**	**211**	*eP*	**PKPdf**	**23 52 28.9**	**-2.3**
CPUP	**Villa Florida**	**146.57**	**184**	PKPbc	**PKPbc**	**23 52 34.6**	**+0.3**
	comp=Z,56nm,0.7s,baz=176,slow=2.0,SNR=75						
CPUP	**Villa Florida**	**146.57**	**184**	PKPdf	**PKPdf**	**23 52 32.2**	**+0.5**
CPUP	**Villa Florida**	**146.57**	**184**	*eP*	**PKPdf**	**23 52 30.2**	**-1.5**
ALF01	**Guarapari-ES**	**146.70**	**213**	*eP*	**PKPdf**	**23 52 29.2**	**-2.9**
SPB	**Sao Paulo**	**147.15**	**201**		**PKPbc**	**23 52 36.5**	**+0.5**
PTGB	**Pitanga**	**147.42**	**193**	*eP*	**PKPdf**	**23 52 30.3**	**-3.0**
VAO	**Valinhos**	**147.52**	**202**	*eP*	**PKPdf**	**23 52 30.7**	**-2.8**
RIB01	**Linhares ES**	**147.56**	**215**	*eP*	**PKPdf**	**23 52 30.3**	**-3.2**
Y58A	**Scranton**	**147.60**	**32**		**PKPbc**	**23 52 37.3**	**+0.5**
SJP	**San Joaquin**	**147.79**	**186**	*eP*	**PKPdf**	**23 52 19.4**	**-7.4**
FRTB	**Fartura**	**148.08**	**198**	*eP*	PKPdf	23 52 25.3	-9.1
BSFB	**Barra de Sao F**	**148.20**	**215**	*eP*	**PKPdf**	**23 52 33.0**	**-1.5**
RCLB	**Rio Claro- Sao**	**148.26**	**202**	*eP*	**PKPdf**	**23 52 27.9**	**-6.8**
LDASE	**Londrina, Braz**	**148.46**	**195**	*eP*	**PKPdf**	**23 52 32.0**	**-3.0**
SJMB	**Sao Joao De Ma**	**148.49**	**215**	*eP*	**PKPdf**	**23 52 30.9**	**-4.2**
APG	**El Apazote**	**148.74**	**73**	PKPbc	**PKiKP**	**23 52 41.4**	**0.0**
	comp=Z,3.4nm,0.5s,baz=163,slow=11,SNR=32						
GUA01	**Guaratinga, BA**	**149.31**	**219**	*eP*	**PKPdf**	**23 52 34.9**	**-1.5**
TRCB	**Terra Rica**	**149.40**	**193**	*eP*	**PKPdf**	**23 52 36.4**	**-0.1**
AMBA	**Amambai (Brazi**	**149.70**	**188**	*eP*	**PKPdf**	**23 52 33.9**	**-3.1**
CANS	**Sao Roque de M**	**149.74**	**205**	*eP*	**PKPdf**	**23 52 35.2**	**-2.0**
BB19B	**Bebedouro**	**149.86**	**201**	*eP*	**PKPdf**	**23 52 33.0**	**-4.3**
CMC01	**Camacan, BA**	**150.03**	**221**	*eP*	**PKPdf**	**23 52 36.2**	**-1.4**
DIAM	**Diamantina, MG**	**150.18**	**212**	*eP*	**PKPdf**	**23 52 36.8**	**-1.1**
ARCA	**Araçuai, MG**	**150.41**	**216**	*eP*	**PKPdf**	**23 52 38.2**	**+0.1**
MURT	**Porto Murtinho**	**151.23**	**184**	*eP*	**PKPdf**	**23 52 38.2**	**-1.0**
PMNB	**Patos De Minas**	**151.31**	**207**	*eP*	**PKPdf**	**23 52 38.4**	**-1.1**
NBPV	**Pedro Velho**	**152.25**	**241**	*eP*	**PKPdf**	**23 52 40.1**	**-0.8**
IPMB	**Ipameri, GO**	**152.55**	**204**	*eP*	**PKPdf**	**23 52 40.2**	**-1.2**
COIM	**Forte Coimbra**	**152.97**	**184**	*eP*	**PKPdf**	**23 52 39.5**	**-2.3**
NBTA	**Tacaratu-PE**	**153.11**	**233**	*eP*	**PKPdf**	**23 52 39.0**	**-3.2**
JANB	**Januaria**	**153.19**	**214**	*eP*	**PKPdf**	**23 52 40.7**	**-1.6**
NBPN	**Ponto Novo - B**	**153.66**	**227**	*eP*	**PKPdf**	**23 52 42.8**	**-0.2**
NNA	**Nana**	**154.31**	**138**	PKPbc	**PKPbc**	**23 52 53.0**	**+0.2**
	comp=Z,9.0nm,0.5s,baz=265,slow=4.6,SNR=5.6						
NNA	**Nana**	**154.31**	**138**	PKIKP	**PKPbc**	**23 52 53.0**	**+0.2**
BDFB	**Brasilia**	**154.56**	**207**	PKP	**PKPdf**	**23 52 44.5**	**+0.2**
	comp=Z,12nm,0.8s,baz=168,slow=1.4,SNR=15						
BDFB				PKPab	**PKPab**	**23 53 11.3**	**+0.4**
	comp=Z,24nm,0.8s,baz=100,slow=2.6,SNR=14						
BDFB	**Brasilia**	**154.56**	**207**	PKIKP	**PKPdf**	**23 52 44.3**	**0.0**
BDFB						23 53 11.5	
BDFB	**Brasilia**	**154.56**	**207**	PKPdf	**PKPdf**	**23 52 44.3**	**0.0**
BDFB					**PKPab**	**23 53 11.5**	**+0.6**
NBMA	**Muriti-CE**	**154.69**	**235**	*eP*	**PKPdf**	**23 52 40.7**	**-3.8**
JTS	**Las Juntas de**	**154.73**	**81**	PKPbc	**PKPbc**	**23 52 55.1**	**+1.5**
	comp=Z,10.0nm,0.6s,baz=207,slow=2.3,SNR=11						
PP1B	**Ponte de Pedra**	**154.90**	**191**	*eP*	**PKPdf**	**23 52 41.0**	**-3.5**
LPAZ	**La Paz**	**155.14**	**160**	PKP	**PKPdf**	**23 52 45.5**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=139,slow=0.6,SNR=19						
LPAZ				PKPab	**PKPab**	**23 53 14.3**	**+0.2**
	comp=Z,31nm,0.6s,baz=159,slow=2.6,SNR=20						
LPAZ				SKP	**SKPdf**	**23 55 23.1**	**+0.8**
	comp=Z,8.1nm,0.9s,baz=177,slow=9.3,SNR=4.3						
LPAZ	**La Paz**	**155.14**	**160**	*eP*	**PKPdf**	**23 52 43.8**	**-1.9**
SDBA	**SAO DESIDERIO**	**155.65**	**217**	*eP*	**PKPdf**	**23 52 44.2**	**-1.5**
BBSD	**Serra de San D**	**155.72**	**178**	*eP*	**PKPdf**	**23 52 44.3**	**-1.4**
ARAG	**Araguaiana, MT**	**155.95**	**199**	*eP*	**PKPdf**	**23 52 45.3**	**-0.7**
ATAH	**Atahualpa**	**156.41**	**127**	PKP	**PKPdf**	**23 52 47.1**	**0.0**
	comp=Z,7.5nm,0.9s,baz=83,slow=8.1,SNR=7.4						
SALV	**Santo Antonio**	**156.70**	**189**	*eP*	**PKPdf**	**23 52 43.4**	**-3.6**
SIV	**San Ignacio**	**156.88**	**176**	PKP	**PKPdf**	**23 52 47.2**	**0.0**
	comp=Z,8.2nm,1.0s,baz=178,slow=1.6,SNR=13						
SIV				PKPab	**PKPab**	**23 53 21.6**	**+0.8**
	comp=Z,31nm,0.7s,baz=183,slow=3.8,SNR=26						
SIV				PP	**PP**	**23 57 00.7**	**+0.5**
	comp=Z,15nm,1.1s,baz=204,slow=6.8,SNR=6.9						
PTLB	**Pontes e Lacer**	**157.46**	**181**	*eP*	**PKPdf**	**23 52 45.7**	**-2.2**
NBPS	**Pedro II - PI**	**158.54**	**238**	*eP*	**PKPdf**	**23 52 47.3**	**-2.1**
SNDB	**Serra Nova Dou**	**159.22**	**203**	*eP*	**PKPdf**	**23 52 45.0**	**-5.0**
VILB	**Vilhena**	**159.94**	**178**	*eP*	**PKPdf**	**23 52 51.1**	**+0.2**
SMTB	**Santa Maria do**	**160.05**	**217**	*eP*	**PKPdf**	**23 52 49.5**	**-1.5**
CZSB	**Cruzeiro do Su**	**160.19**	**138**	*eP*	**PKPdf**	**23 52 50.5**	**-0.6**
CLDB	**Colider**	**161.63**	**192**	*eP*	**PKPdf**	**23 52 49.4**	**-3.3**
PRPB	**Parauapebas**	**163.51**	**216**	*eP*	**PKPdf**	**23 52 51.5**	**-3.0**
ROSC	**El Rosal**	**165.14**	**98**	PKPab	**PKPab**	**23 53 59.5**	**+1.5**
	comp=Z,3.1nm,0.3s,baz=255,slow=13,SNR=1.4						
NPGB	**Novo Progresso**	**165.21**	**197**	*eP*	**PKPdf**	**23 52 54.7**	**-1.3**
ITTB	**Itaituba**	**167.86**	**198**	*eP*	**PKPdf**	**23 52 57.3**	**-0.6**
SDV	**Santo Domingo**	**168.92**	**81**	PKP	**PKPdf**	**23 52 59.4**	**+0.6**
	comp=Z,6.1nm,1.0s,baz=283,slow=5.2,SNR=4.5						
SDV				PKPab	**PKPab**	**23 54 14.7**	**+0.2**
	comp=Z,13nm,0.8s,baz=280,slow=2.3,SNR=10						
SDV	**Santo Domingo**	**168.92**	**81**	*eP*	**PKPdf**	**23 52 54.8**	**-4.0**
SGC2	**Sao Gabriel da**	**169.59**	**134**	*eP*	**PKPdf**	**23 52 59.2**	**+0.2**
MACA	**Manacapuru-AM**	**169.62**	**174**	*eP*	**PKPdf**	**23 52 56.0**	**-3.0**
MDP	**Montagnes des**	**172.80**	**253**	PKPab	**PKPab**	**23 54 32.0**	**+0.5**
	comp=Z,13nm,1.1s,baz=109,slow=5.3,SNR=4.5						
BOAV	**Boa Vista**	**175.10**	**169**	PKPdf	**PKPdf**	**23 53 01.0**	**-0.4**
BOAV					**PKPab**	**23 54 41.8**	**+0.7**
BOAV	**Boa Vista**	**175.10**	**169**	*eP*	**PKPdf**	**23 52 59.8**	**-1.6**

*UPP **14** 23:41:10.8±0.0, 67°19N×20°66E, h0km, ML2.0, Confirmed Induced event*
*IDC **14** 23:41:15.8±1.2, 67°15N×22°90E, h0km, mbtmp2.5/3, ML1.6/3, Error ellipse: s-maj=24.5km s-min=8.6km az=102.0*
ISC 14 23:41:10.9±1.1, **67°20N**±0°03×**20°68E**±0°04, **h0km, n13, σ0s44/14, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.09**	**209**	P		**Pg**		**23 41 12.6**	**+0.1**
DUNU				S		**Sg**		**23 41 13.7**	**+0.1**
MASU	**Masugnsbyn**	**0.57**	**62**	P		**Pg**		**23 41 22.0**	**+0.1**
RATU	**Laukkuluspa**	**0.76**	**327**	P		**Pg**		**23 41 25.1**	**-0.2**
RATU				S		**Sg**		**23 41 35.3**	**+0.1**
KUA	**Kurravaara**	**0.77**	**350**	P		**Pg**		**23 41 25.3**	**-0.4**
SALU	**Saltoluokta**	**0.86**	**283**	*eP*		**Pg**		**23 41 27.1**	**-0.3**
SALU	**Saltoluokta**	**0.86**	**283**	P		**Pg**		**23 41 26.9**	**-0.5**
ERTU	**Ertsjaerv**	**0.88**	**137**	P		**Pg**		**23 41 26.8**	**-0.9**
NIKU	**Nikkaluokta**	**0.92**	**318**	P		**Pg**		**23 41 28.1**	**-0.5**
LANU	**Lannavaara**	**0.99**	**30**	*eP*		**Pg**		**23 41 29.6**	**-0.3**
LANU	**Lannavaara**	**0.99**	**30**	P		**Pg**		**23 41 29.4**	**-0.5**
ARCES	**ARCESS Array B**	**2.95**	**35**	Pn		**Pn**		**23 41 59.4**	**+0.4**
	0.1nm,0.3s,baz=206,slow=15,SNR=9.1								
ARCES				Lg		Lg		23 42 36.6	
	0.4nm,0.3s,baz=200,slow=34,SNR=11								
	0.4nm,0.3s								
FINES	**FINESS Array B**	**6.23**	**155**	Pn		**Pn**		**23 42 44.3**	**+0.3**
	baz=350,slow=21,SNR=4.1								
FINES				Lg		Lg		23 44 21.4	
	0.2nm,0.3s,baz=348,slow=20,SNR=7.5								
	0.6nm,0.8s								
NOA	**NORSAR Array B**	**7.43**	**218**	Pn		Pb		23 43 10.9	-10
	baz=35,slow=14,SNR=2.9								
	0.3nm,0.8s								

*MOS **14** 23:50:19.2, 42°63N×48°31E, h17km, MPVA3.7*
*DRS **14** 23:50:20.9, 42°69N×48°38E, h18km*
ISC 14 23:50:19.0±1.4, **42°67N**±0°03×**48°46E**±0°04, **h17km**±9km, **n61, σ0s99/98, 6C, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.63**	**250**	*ePg*		**Pb**		**23 50 31.3**	**-0.2**
SGKR				*eS*		**Sg**		**23 50 39.4**	**-0.4**
SGKR	**Sergokala**	**0.63**	**250**	*ePg*		**Pb**		**23 50 31.3**	**-0.2**
SGKR				*eSg*		**Sg**		**23 50 39.4**	**-0.4**
DRN	**Derbent**	**0.65**	**188**	*ePG*		**Pn**		**23 50 33.0**	**-0.3**
DRN				*eS*		**Sn**		**23 50 43.2**	**0.0**
DRN				pmax		pmax			
	comp=Z,296nm,0.4s								
DRN	**Derbent**	**0.65**	**188**	*ePg*		**Pn**		**23 50 32.9**	**-0.5**
DRN				*eSg*		**Sn**		**23 50 42.7**	**-0.5**
MAK	**Makhachkala**	**0.76**	**293**	*ePG*		**Pn**		**23 50 34.6**	**-0.3**
MAK				*eS*		**Sb**		**23 50 45.4**	**+1.7**
MAK				pmax		pmax			
	comp=Z,72nm,0.2s								
MAK	**Makhachkala**	**0.76**	**293**	*ePg*		**Pb**		**23 50 34.1**	**+0.4**
MAK				*eSg*		**Sb**		**23 50 44.0**	**+0.3**
URKR	**Urkarakh**	**0.80**	**231**	*ePG*		**Pb**		**23 50 34.3**	**-0.1**
URKR				*eS*		**Sb**		**23 50 45.0**	**+0.1**
URKR	**Urkarakh**	**0.80**	**231**	*ePg*		**Pb**		**23 50 34.3**	**-0.1**
URKR				*eSg*		**Sb**		**23 50 45.0**	**+0.1**
KANR	**Karaman**	**0.88**	**307**	*ePG*		**Pn**		**23 50 37.3**	**+0.7**
KANR				*eS*		**Sn**		**23 50 49.4**	**+0.4**
KANR	**Karaman**	**0.88**	**307**	*ePg*		**Pn**		**23 50 37.3**	**+0.7**
KANR				*eSg*		**Sn**		**23 50 49.4**	**+0.4**
BUJR	**Buynaksk**	**1.01**	**279**	*ePG*		**Pb**		**23 50 38.3**	**+0.4**
BUJR				*i* S		**Sb**		**23 50 52.0**	**+1.2**
BUJR				pmax		pmax			
	comp=Z,46nm,0.3s								
BUJR	**Buynaksk**	**1.01**	**279**	*ePg*		**Pg**		**23 50 38.1**	**-0.4**
BUJR				*i* Sg		**Sb**		**23 50 52.1**	**+1.2**
ARKR	**Arakani**	**1.08**	**267**	*ePG*		**Pb**		**23 50 39.2**	**-0.1**
ARKR				*eS*		**Sb**		**23 50 53.6**	**+0.5**
ARKR	**Arakani**	**1.08**	**267**	*ePg*		**Pb**		**23 50 39.2**	**-0.1**
ARKR				*eSg*		**Sb**		**23 50 53.6**	**+0.5**
KSMR	**Kasumkent**	**1.10**	**193**	*ePG*		**Pn**		**23 50 39.8**	**+0.2**
KSMR				*eS*		**Sn**		**23 50 55.5**	**+1.1**
KMKR	**Kumukh**	**1.14**	**242**	*ePG*		**Pb**		**23 50 40.1**	**-0.3**
KMKR				*eS*		**Sg**		**23 50 55.8**	**-0.4**
KMKR	**Kumukh**	**1.14**	**242**	*ePg*		**Pb**		**23 50 40.1**	**-0.3**
KMKR				*eSg*		**Sg**		**23 50 55.8**	**-0.4**
KRNR	**Karanay**	**1.15**	**278**	*ePG*		**Pb**		**23 50 40.1**	**-0.4**
KRNR				*eS*		**Sb**		**23 50 55.8**	**+0.6**
KRNR				pmax		pmax			
	comp=Z,24nm,0.4s								
KRNR	**Karanay**	**1.15**	**278**	*ePg*		**Pb**		**23 50 40.0**	**-0.4**
KRNR				*eSg*		**Sb**		**23 50 55.8**	**+0.6**
UNCR	**Uncukul**	**1.23**	**272**	*ePG*		**Pn**		**23 50 41.2**	**-0.2**
UNCR				*eS*		**Sb**		**23 50 57.6**	**+0.3**
UNCR	**Uncukul**	**1.23**	**272**	*ePg*		**Pn**		**23 50 41.1**	**-0.2**
UNCR				*eSg*		**Sb**		**23 50 57.6**	**+0.3**
DBC	**Dubki**	**1.25**	**287**	*ePG*		**Pn**		**23 50 41.6**	**-0.1**
DBC				*eS*		**Sb**		**23 50 58.1**	**+0.2**
DBC	**Dubki**	**1.25**	**287**	*ePg*		**Pn**		**23 50 41.6**	**-0.1**
DBC				*eSg*		**Sb**		**23 50 58.1**	**+0.2**
DLMR	**Dylym**	**1.40**	**287**	*ePG*		**Pn**		**23 50 44.3**	**+0.5**
DLMR				*eS*		**Sg**		**23 51 03.6**	**-0.7**
DLMR	**Dylym**	**1.40**	**287**	*ePg*		**Pn**		**23 50 44.3**	**+0.5**
DLMR				*eSg*		**Sg**		**23 51 03.6**	**-0.7**
BTLR	**Botlikh**	**1.65**	**270**	*ePN*		**Pb**		**23 50 48.5**	**-0.4**
BTLR	**Botlikh**	**1.65**	**270**	*ePg*		**Pb**		**23 50 48.5**	**-0.4**
BTLR				*eSg*		**Sb**		**23 51 10.6**	**+1.1**
TLTR	**Tlyarata**	**1.66**	**251**	*ePN*		**Pn**		**23 50 47.9**	**+0.5**
TLTR	**Tlyarata**	**1.66**	**251**	*ePg*		**Pn**		**23 50 47.9**	**+0.5**
TLTR				*eSg*		**Sn**		**23 51 09.6**	**+1.2**
DVE	**Vedeno**	**1.74**	**280**	*ePN*		**Pn**		**23 50 49.7**	**+1.3**
LGD	**Lagodekhi**	**1.85**	**244**	P		**Pb**		**23 50 51.9**	**-0.4**
LGD	**Lagodekhi**	**1.85**	**244**	PN		**Pb**		**23 50 51.9**	**-0.4**
GROC	**Groznyy**	**2.03**	**286**	*ePN*		**Pg**		**23 50 59.7**	**+1.8**
GROC				*eS*		**Sg**		**23 51 23.6**	**-0.6**
GROC	**Groznyy**	**2.03**	**286**	*ePg*		**Pg**		**23 50 59.7**	**+1.8**
GROC				*eSg*		**Sg**		**23 51 23.6**	**-0.6**
SHTL	**Shatili**	**2.44**	**271**	P		**Pb**		**23 51 01.1**	**-1.3**
SHTL	**Shatili**	**2.44**	**271**	PN		**Pb**		**23 51 01.1**	**-1.3**
DGRG	**David-gareji**	**2.60**	**243**	P		**Pb**		**23 51 03.7**	**-1.5**
DGRG				S		**Sb**		**23 51 36.9**	**+0.1**
DGRG	**David-gareji**	**2.60**	**243**	PN		**Pb**		**23 51 03.7**	**-1.5**
DGRG				S		**Sb**		**23 51 36.9**	**+0.1**
CHRG	**Chargali**	**2.63**	**264**	P		**Pb**		**23 51 03.7**	**-2.1**
CHRG				S		**Sg**		**23 51 40.9**	**-2.8**
KMGR	**Komgaron**	**2.67**	**279**	*ePN*		**Pb**		**23 51 04.5**	**-1.8**
KMGR	**Komgaron**	**2.67**	**279**	*ePn*		**Pb**		**23 51 04.5**	**-1.8**
KMGR				*eSn*		**Sn**		**23 51 33.0**	**-0.1**
LACR	**Lac**	**3.07**	**274**	*ePN*		**Pb**		**23 51 12.5**	**-0.7**
LACR	**Lac**	**3.07**	**274**	*ePn*		**Pb**		**23 51 12.5**	**-0.7**
LACR				*eSn*		**Sb**		**23 51 47.5**	**-2.9**
NCK	**Nalchik**	**3.66**	**285**	*i* PN		**Pn**		**23 51 15.0**	**+0.3**
GNI	**Garni**	**3.77**	**229**	*i* PN		**Pn**		**23 51 19.3**	**+2.9**
KBZ	**Khabaz**	**4.20**	**286**	*ePN*		**Pn**		**23 51 23.2**	**+1.1**
KBZ	**Khabaz**	**4.20**	**286**	*ePn*		**Pn**		**23 51 23.2**	**+1.1**
KBZ				*eSn*		**Sn**		**23 52 08.6**	**-2.2**
SHA1	**Shidzhatmaz**	**4.37**	**286**	*ePN*		**Pn**		**23 51 25.2**	**+0.4**
SHA1	**Shidzhatmaz**	**4.37**	**286**	*ePn*		**Pn**		**23 51 25.2**	**+0.4**
SHA1				*eSn*		**Sn**		**23 52 14.2**	**-1.2**
KIV	**Kislovodsk**	**4.40**	**289**	*ePN*		**Pn**		**23 51 26.3**	**+1.2**
KIV	**Kislovodsk**	**4.40**	**289**	*ePn*		**Pn**		**23 51 26.3**	**+1.2**
KIV				*eSn*		**Sn**		**23 52 14.6**	**-1.4**
BELG	**Belogornoye**	**9.74**	**357**	*eP*		**Pn**		**23 52 37.7**	**-0.4**
BR131	**Keskin Array S**	**11.55**	**260**	*eP*		**Pn**		**23 53 04.3**	**+1.2**
OBN	**Obninsk**	**14.67**	**332**	*eP*		**Pn**		**23 53 46.5**	**+1.0**
OBN				pmax		pmax			
	comp=Z,4.0nm,0.4s								
OBN				MLR		MLR			
	comp=Z,103nm,10.0s								
ARTI	**Arti**	**15.14**	**22**	*eP*		**Pn**		**23 53 52.1**	**+0.3**
AKBB	**Malin Array Si**	**15.42**	**308**	*eP*		**Pn**		**23 53 55.4**	**-0.1**
CHGR	**Chuyangaron**	**16.20**	**97**	*eP*		**Pn**		**23 54 06.2**	**+0.4**
CHGR				pmax		pmax			
	comp=Z,10.0nm,1.0s								
BORK	**Borovoye**	**17.89**	**47**	*eP*		**Pn**		**23 54 25.2

PCVE					*i* IAML			00 30 12.1	
PCVE					*i* IAML			00 30 12.1	
PCVE					*i* IAML			00 30 13.0	
PBEJ	**Beja**	**4.58**	**92**	*eP*		**Pn**		**00 29 19.9**	**+2.2**
PBEJ				*eS*		**Sn**		**00 30 09.3**	**-1.6**
PBEJ				*i* IAML				00 30 14.2	
PBEJ				*i* IAML				00 30 15.8	
PBEJ				*i* IAML				00 30 15.8	
PBDV	**Barranco-do-Ve**	**4.67**	**101**	P		**Pn**		**00 29 20.7**	**+1.8**
PBDV				S		**Sn**		**00 30 12.2**	**-0.8**
PBDV	**Barranco-do-Ve**	**4.67**	**101**	*eP*		**Pn**		**00 29 21.1**	**+2.3**
PBDV				*eS*		**Sn**		**00 30 11.1**	**-1.9**
PBDV				*i* IAML				00 30 16.3	
PBDV				*i* IAML				00 30 17.1	
PBDV				*i* IAML				00 30 17.2	
PVAQ	**Vaqueiros**	**4.79**	**99**	*eP*		**Pn**		**00 29 22.7**	**+2.2**
PVAQ				*eS*		**Sn**		**00 30 13.7**	**-2.5**
PVAQ				*i* IAML				00 30 20.7	
PVAQ				*i* IAML				00 30 21.1	
PVAQ				*i* IAML				00 30 21.6	
PVAQ	**Vaqueiros**	**4.79**	**99**	P		**Pn**		**00 29 21.3**	**+0.7**
PVAQ				S		**Sn**		**00 30 14.0**	**-2.1**
PESTR	**Estremoz**	**4.80**	**81**	P		**Pn**		**00 29 22.0**	**+1.3**
PESTR				S		**Sn**		**00 30 14.8**	**-1.4**
PESTR	**Estremoz**	**4.80**	**81**	*eP*		**Pn**		**00 29 22.6**	**+2.0**
PESTR				*eS*		**Sn**		**00 30 15.1**	**-1.1**
PESTR				*i* IAML				00 30 17.8	
PESTR				*i* IAML				00 30 19.4	
PESTR				*i* IAML				00 30 21.0	
PESTR	**Estremoz**	**4.80**	**81**	P		**Pn**		**00 29 20.5**	**-0.2**
PESTR				S		**Sn**		**00 30 14.7**	**-1.6**
EGRO	**El Granado**	**4.95**	**97**	P		**Pn**		**00 29 24.2**	**+1.5**
EGRO				S		**Sn**		**00 30 17.5**	**-2.5**
EGRO	**El Granado**	**4.95**	**97**	Pn		**Pn**		**00 29 24.7**	**+2.0**
EGRO				⇑*i*Vmb_VC				00 29 25.0	
	comp=N,214nm,SNR=1.7								
EGRO				Sn		**Sn**		**00 30 16.9**	**-3.1**
PMRV	**Marv??o**	**5.03**	**75**	*eP*		**Pn**		**00 29 25.4**	**+1.6**
PMRV				*eS*		**Sn**		**00 30 20.9**	**-1.1**
PMRV				*i* IAML				00 30 22.8	
PMRV				*i* IAML				00 30 25.9	
PMRV				*i* IAML				00 30 26.2	
PCBR	**Castelo Branco**	**5.06**	**70**	*eP*		**Pn**		**00 29 26.3**	**+2.1**
PCBR				*eS*		**Sn**		**00 30 21.3**	**-1.4**
PCBR				*i* IAML				00 30 24.3	
PCBR				*i* IAML				00 30 26.4	
EXAYA	**Ayamonte**	**5.08**	**100**	Sn		**Sn**		**00 30 23.5**	**+0.4**
PVIS	**Viseu**	**5.08**	**60**	*eS*		**Sn**		**00 30 22.3**	**-0.9**
MTE	**Manteigas**	**5.19**	**64**	*eP*		**Pn**		**00 29 27.5**	**+1.4**
MTE				*eS*		**Sn**		**00 30 24.3**	**-1.7**
MTE				*i* IAML				00 30 28.0	
MTE				*i* IAML				00 30 28.8	
MTE				*i* IAML				00 30 33.0	
PBAR	**Barrancos**	**5.22**	**89**	P		**Pn**		**00 29 28.2**	**+1.7**
PBAR				S		**Sn**		**00 30 25.0**	**-1.7**
PBAR	**Barrancos**	**5.22**	**89**	*eP*		**Pn**		**00 29 28.4**	**+2.0**
PBAR				*eS*		**Sn**		**00 30 24.2**	**-2.5**
PBAR				*i* IAML				00 30 28.8	
PBAR				*i* IAML				00 30 31.5	
PBAR				*i* IAML				00 30 36.4	
EBAD	**Badajoz**	**5.24**	**83**	P		**Pn**		**00 29 27.9**	**+1.2**
EBAD				S		**Sn**		**00 30 25.4**	**-1.7**
EBAD	**Badajoz**	**5.24**	**83**	Pn		**Pn**		**00 29 28.4**	**+1.7**
EBAD				⇑*i*IVmb_VC				00 29 29.4	
	comp=N,149nm,SNR=1.4								
EBAD				Sn		**Sn**		**00 30 24.5**	**-2.6**
EZAM	**Zamans**	**5.41**	**43**	⇑*i*IVmb_VC				00 29 31.8	
	comp=N,325nm,SNR=1.9								
EZAM				Sn		**Sn**		**00 30 28.7**	**-2.8**
EXHU	**Huelva**	**5.43**	**99**	Sn		**Sn**		**00 30 34.1**	**+2.1**
POLO	**Lamas de Olo**	**5.47**	**54**	*eP*		**Pn**		**00 29 31.5**	**+1.6**
POLO				*eS*		**Sn**		**00 30 31.8**	**-1.2**
PGAV	**Gavieira, Arco**	**5.53**	**47**	*eP*		**Pn**		**00 29 32.3**	**+1.5**
PGAV				*eS*		**Sn**		**00 30 31.6**	**-2.8**
PGAV				*i* IAML				00 30 37.1	
PGAV				*i* IAML				00 30 37.2	
PGAV				*i* IAML				00 30 37.5	
EMIN	**Mina Concepcio**	**5.55**	**93**	P		**Pn**		**00 29 32.7**	**+1.8**
EMIN				S		**Sn**		**00 30 32.9**	**-1.9**
EMIN	**Mina Concepcio**	**5.55**	**93**	Pn		**Pn**		**00 29 33.4**	**+2.4**
EMIN				⇑*i*IVmb_VC				00 29 34.6	
	comp=N,126nm,SNR=1.3								
EMIN				Sn		**Sn**		**00 30 35.5**	**+0.7**
ELOB	**Lobios**	**5.59**	**49**	Pn		**Pn**		**00 29 32.3**	**+0.7**
ELOB				⇑*i*IVmb_VC				00 29 35.2	
	comp=N,231nm,SNR=1.3								
ELOB				Sn		**Sn**		**00 30 34.5**	**-1.4**
EPLA	**Plasencia**	**6.16**	**71**	Pn		**Pn**		**00 29 41.2**	**+1.8**
EPLA				⇑*i*IVmb_VC				00 29 43.8	
	comp=N,61nm,SNR=0.7								
EPLA				Sn		**Sn**		**00 30 48.6**	**-1.2**
EAGO	**Agolada(Pontev**	**6.19**	**42**	Pn		**Pn**		**00 29 40.0**	**+0.2**
EAGO				⇑*i*IVmb_VC				00 29 41.5	
	comp=N,300nm,SNR=2.6								
EAGO				Sn		**Sn**		**00 30 44.3**	**-6.3**
ESPR	**Espera**	**6.37**	**101**	P		**Pn**		**00 29 44.8**	**+2.6**
ESPR	**Espera**	**6.37**	**101**	Pn		Pn		00 29 46.1	+4.0
ESPR				⇑*i*IVmb_VC				00 29 47.3	
	comp=N,197nm,SNR=2.1								
ESPR				Sn		**Sn**		**00 30 55.3**	**+0.5**
PBRG	**Braganca**	**6.37**	**54**	*eP*		**Pn**		**00 29 43.6**	**+1.4**
ECAL	**Calabor**	**6.44**	**53**	P		**Pn**		**00 29 44.0**	**+0.7**
ECAL				S		**Sn**		**00 30 54.3**	**-2.6**
ECAL	**Calabor**	**6.44**	**53**	Pn		**Pn**		**00 29 44.5**	**+1.3**
ECAL				⇑*i*IVmb_VC				00 29 45.8	
	comp=N,131nm,SNR=0.6								
ECAL				Sn		**Sn**		**00 30 55.4**	**-1.5**
ECAB	**El Cabril**	**6.50**	**89**	P		**Pn**		**00 29 45.6**	**+1.5**
ECAB				S		**Sn**		**00 30 56.3**	**-2.1**
ECAB	**El Cabril**	**6.50**	**89**	Pn		**Pn**		**00 29 45.9**	**+1.9**
ECAB				⇑*i*IVmb_VC				00 29 46.9	
	comp=N,68nm,SNR=0.7								
ECAB				Sn		**Sn**		**00 30 56.2**	**-2.1**
EJIF	**Jimena Fronter**	**6.78**	**103**	Pn		**Pn**		**00 29 49.2**	**+1.3**
EPON	**Pontenova**	**7.05**	**42**	Pn		**Pn**		**00 29 52.4**	**+0.9**
EPON				⇑*i*IVmb_VC				00 29 54.1	
	comp=N,200nm,SNR=1.3								
EPON				Sn		**Sn**		**00 31 06.3**	**-5.5**
EADA	**Adamuz**	**7.16**	**88**	P		**Pn**		**00 29 54.1**	**+1.1**
EADA				S		**Sn**		**00 31 12.7**	**-1.8**
EADA	**Adamuz**	**7.16**	**88**	Pn		**Pn**		**00 29 54.8**	**+1.8**
EADA				⇑*i*IVmb_VC				00 29 55.6	
	comp=N,76nm,SNR=1.1								
EADA				Sn		**Sn**		**00 31 13.0**	**-1.5**
EMIJ	**Mijas**	**7.29**	**101**	P		**Pn**		**00 29 57.1**	**+2.2**
EMIJ				S		**Sn**		**00 31 15.5**	**-2.1**
PAB	**San Pablo**	**7.37**	**77**	Pn		**Pn**		**00 29 57.3**	**+1.2**
PAB				⇑*i*IVmb_VC				00 29 58.0	
	comp=N,90nm,SNR=1.5								
PAB				Sn		**Sn**		**00 31 18.1**	**-1.7**
ZHG	**ZHG**	**7.48**	**128**	P		**Pn**		**00 29 55.7**	**-1.8**
ESDC	**Sonseca Array**	**7.69**	**77**	Pn		**Pn**		**00 30 02.4**	**+2.1**
ESDC				⇑*i*IVmb_VC				00 30 03.6	
	comp=N,58nm,SNR=1.1								
ESDC				Sn		**Sn**		**00 31 27.4**	**0.0**
ESBB	**Sonseca Array**	**7.69**	**77**	Pn		**Pn**		**00 30 02.8**	**+2.5**
ESBB				⇑*i*IVmb_VC				00 30 03.7	
	comp=N,56nm,SNR=1.1								
PSIM	**Granatula de C**	**7.79**	**83**	Pn		**Pn**		**00 30 03.2**	**+1.5**
PSIM				Sn		**Sn**		**00 31 27.0**	**-2.9**
ELGU	**Los Guajares,**	**8.10**	**97**	P		**Pn**		**00 30 08.0**	**+2.0**
ELGU				S		**Sn**		**00 31 34.5**	**-3.2**
ELGU	**Los Guajares,**	**8.10**	**97**	⇑*i*IVmb_VC				00 30 10.9	
	comp=N,46nm,SNR=1.0								
ELGU				Sn		**Sn**		**00 31 39.0**	**+1.3**
EARI	**Arriondas**	**8.13**	**49**	Pn		**Pn**		**00 30 08.2**	**+1.7**
EARI				⇑*i*IVmb_VC				00 30 10.2	
	comp=N,34nm,SNR=0.2								
EQES	**Quesada**	**8.38**	**90**	Pn		**Pn**		**00 30 11.0**	**+1.1**
EQES				⇑*i*IVmb_VC				00 30 15.1	
	comp=N,64nm,SNR=1.0								
EQES				Sn		**Sn**		**00 31 44.2**	**-0.4**
IFR	**Ifrane**	**8.41**	**122**	S		**Sn**		**00 31 39.9**	**-5.5**
OUK	**Oukaimeden**	**8.53**	**144**	P		**Pn**		**00 30 10.1**	**-2.1**
MD31	**MD31**	**9.05**	**124**	P		**Pn**		**00 30 17.9**	**-1.2**
MDT	**Midelt**	**9.18**	**124**	P		**Pn**		**00 30 18.5**	**-2.4**
OUZM	**OUZ**	**9.31**	**140**	P		**Pn**		**00 30 23.7**	**+1.0**

SNET ***15*** *00:33:37.4±0.8, 13°.20N×88°.96W, h72km, ML3.2, Presumed earthquake*

CATAC ***15*** *00:33:38.1±0.3, 13°.N±3°×8°.9W±°, h48km±3km, M3.3/23, MLv3.3/23, Error ellipse: s-maj=6.4km s-min=2.4km az=25.4, confirmed*

GCG ***15*** *00:33:38.6±0.9, 13°.24N×88°.99W, h64km±8km, MD4.0, ML4.0, Presumed earthquake*

ISC 15 00:33:38.1±1.6, 13.17N±0.07×88.97W±0.03, h68km±9km, n68, σ0ˢ59/102, 6C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.41**	**26**	P	**Pn**		**00 33 49.5**	**-0.5**
TECO	**Alcaldia de Te**	**0.41**	**26**	*i* P	**Pn**		**00 33 49.4**	**-0.6**
TECO				*eS*	**Sn**		**00 33 58.6**	**0.0**
SJTE	**Alcalda de S**	**0.44**	**355**	⇓*i*P	**Pn**		**00 33 49.8**	**-0.6**
SJTE				*eS*	**Sn**		**00 33 59.9**	**+0.6**
COEG	**Centro de Oper**	**0.46**	**11**	P	**Pn**		**00 33 50.0**	**-0.5**
COEG	**Centro de Oper**	**0.46**	**11**	⇓*i*P	**Pn**		**00 33 50.0**	**-0.5**
COEG				*eS*	**Sn**		**00 34 00.1**	**+0.7**
LFRS	**El Faro**	**0.46**	**349**	⇑*i*P	**Pn**		**00 33 49.9**	**-0.7**
LALI	**Alcalda de L**	**0.47**	**313**	P	**Pn**		**00 33 50.1**	**-0.4**
LALI	**Alcalda de L**	**0.47**	**313**	*i* P	**Pn**		**00 33 49.9**	**-0.6**
LALI	**Alcalda de L**	**0.47**	**313**	⇓*i*P	**Pn**		**00 33 49.9**	**-0.6**
LALI				*eS*	**Sn**		**00 33 59.7**	**+0.2**
PANCS	**Alcalda de**	**0.49**	**335**	P	**Pn**		**00 33 50.2**	**-0.5**
PANCS				S	**Sn**		**00 34 00.2**	**+0.3**
PANCS	**Alcalda de**	**0.49**	**335**	*eP*	**Pn**		**00 33 50.2**	**-0.5**
PANCS				*eS*	**Sn**		**00 33 60.0**	**0.0**
LOMA	**Loma Larga**	**0.51**	**337**	P	**Pn**		**00 33 50.8**	**-0.3**
LOMA	**Loma Larga**	**0.51**	**337**	*eP*	**Pn**		**00 33 50.6**	**-0.5**
LOMA				*eS*	**Sn**		**00 34 01.3**	**+0.8**
PAVA	**Las Pavas**	**0.54**	**3**	P	**Pn**		**00 33 50.8**	**-0.5**
PAVA	**Las Pavas**	**0.54**	**3**	⇓*i*P	**Pn**		**00 33 50.9**	**-0.5**
PAVA				*eS*	**Sn**		**00 34 01.6**	**+0.6**
TECA	**Tecapa**	**0.56**	**54**	⇑*i*P	**Pn**		**00 33 51.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.58**	**24**	S	**Sn**		**00 34 02.6**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.58**	**24**	*eP*	**Pn**		**00 33 51.2**	**-0.4**
SEMO	**Seminario San**	**0.59**	**335**	P	**Pn**		**00 33 51.5**	**-0.2**
SEMO				S	**Sn**		**00 34 02.6**	**+0.9**
MAGS	**Ministerio de**	**0.60**	**329**	⇓*i*P	**Pn**		**00 33 51.6**	**-0.3**
MAGS				*eS*	**Sn**		**00 34 02.6**	**+0.6**
PQSS	**Presa 15 de Se**	**0.60**	**41**	S	**Sn**		**00 34 02.5**	**+0.6**
PQSS	**Presa 15 de Se**	**0.60**	**41**	*eS*	**Sn**		**00 34 02.2**	**+0.3**
UEES	**Universidad Ev**	**0.60**	**334**	P	**Pn**		**00 33 51.7**	**-0.3**
UEES				S	**Sn**		**00 34 02.9**	**+0.8**
UEES	**Universidad Ev**	**0.60**	**334**	*eP*	**Pn**		**00 33 51.5**	**-0.5**
PIC2	**El Picacho**	**0.64**	**334**	*eP*	**Pn**		**00 33 52.3**	**-0.2**
BOQS	**Boqueron**	**0.64**	**332**	*eP*	**Pn**		**00 33 52.2**	**-0.2**
JAYA	**Jayaque - finc**	**0.67**	**316**	P	**Pn**		**00 33 52.4**	**-0.4**
JAYA				S	**Sn**		**00 34 04.2**	**+0.7**
JAYA	**Jayaque - finc**	**0.67**	**316**	*i* P	**Pn**		**00 33 52.4**	**-0.4**
JAYA				*i* S	**Sn**		**00 34 02.5**	**-1.1**
JAYA				IAML			00 34 05.9	
	comp=N,5μm,0.2s							
JAYA	**Jayaque - finc**	**0.67**	**316**	⇓*i*P	**Pn**		**00 33 52.4**	**-0.4**
JAYA				*eS*	**Sn**		**00 34 03.5**	**-0.1**
PACA	**Pacayal**	**0.69**	**65**	P	**Pn**		**00 33 52.7**	**-0.3**
PACA				S	**Sn**		**00 34 05.1**	**+1.2**
PACA	**Pacayal**	**0.69**	**65**	*eP*	**Pn**		**00 33 52.7**	**-0.3**
PACA				*eS*	**Sn**		**00 34 04.3**	**+0.4**
LCY	**Lacayo**	**0.70**	**69**	*eP*	**Pn**		**00 33 52.7**	**-0.3**
RANC	**El Ranchito**	**0.71**	**68**	P	**Pn**		**00 33 52.9**	**-0.2**
RANC				S	**Sn**		**00 34 05.8**	**+0.7**
RANC	**El Ranchito**	**0.71**	**68**	*eP*	**Pn**		**00 33 52.8**	**-0.4**
RANC				*eS*	**Sn**		**00 34 05.0**	**+0.7**
VSM	**San Miguel**	**0.72**	**69**	*eP*	**Pn**		**00 33 53.0**	**-0.5**
CEDA	**San Andres**	**0.76**	**327**	P	**Pn**		**00 33 53.7**	**+0.2**
CEDA				S	**Sn**		**00 34 05.5**	**+0.5**
P5NO	**Presa 5 de nov**	**0.84**	**14**	P	**Pn**		**00 33 53.8**	**-0.7**
P5NO				S	**Sn**		**00 34 06.3**	**-0.4**
P5NO	**Presa 5 de nov**	**0.84**	**14**	⇓*i*P	**Pn**		**00 33 53.8**	**-0.7**
P5NO				*i* Sg	**Sn**		**00 34 05.9**	**-0.8**
INTP	**Intipuca**	**0.89**	**88**	⇑*i*P	**Pn**		**00 33 54.5**	**-0.6**
INTP				*eS*	**Sn**		**00 34 07.7**	**-0.1**
CEVE	**Cerro Verde**	**0.91**	**316**	P	**Pn**		**00 33 55.8**	**0.0**
CEVE	**Cerro Verde**	**0.91**	**316**	*eP*	**Pn**		**00 33 55.8**	**0.0**
CEVE				*eS*	**Sn**		**00 34 10.4**	**+1.7**
SBLS	**San Blas**	**0.92**	**316**	*eP*	**Pn**		**00 33 55.6**	**-0.2**
SBLS				*i* Sg	**Sn**		**00 34 10.4**	**+1.6**
SBLS				*eS*			00 34 11.1	
SNJE	**San Jose**	**0.93**	**318**	*eP*	**Pn**		**00 33 55.2**	**-0.6**
SNJE				*i* P			00 33 55.3	
RTR	**El Retiro**	**0.98**	**318**	*eP*	**Pn**		**00 33 56.2**	**-0.2**
UNIC	**Universidad Ca**	**0.98**	**325**	P	**Pn**		**00 33 56.0**	**-0.4**
UNIC				S	**Sn**		**00 34 09.9**	**-0.1**
UNIC	**Universidad Ca**	**0.98**	**325**	*eP*	**Pn**		**00 33 55.8**	**-0.6**
LLGN	**La Laguna**	**0.99**	**1**	P	**Pn**		**00 33 55.7**	**-0.8**
LLGN				S	**Sn**		**00 34 10.4**	**+0.3**
LCND	**La Caada**	**1.06**	**82**	P	**Pn**		**00 33 56.7**	**-0.5**
LCND	**La Caada**	**1.06**	**82**	⇑*i*P	**Pn**		**00 33 56.7**	**-0.5**
LCND				*eP*			00 33 56.8	
NUBE	**Las Nubes**	**1.07**	**313**	P	**Pn**		**00 33 57.1**	**-0.5**
NUBE				S	**Sn**		**00 34 12.0**	**-0.1**
NUBE	**Las Nubes**	**1.07**	**313**	*i* P	**Pn**		**00 33 57.1**	**-0.5**
NUBE	**Las Nubes**	**1.07**	**313**	*eP*	**Pn**		**00 33 56.9**	**-0.7**
NUBE				*eS*	**Sn**		**00 34 12.2**	**0.0**
CNCH	**Conchagua**	**1.11**	**84**	P	**Pn**		**00 33 57.5**	**-0.6**
CNCH	**Conchagua**	**1.11**	**84**	⇑*i*P	**Pn**		**00 33 57.4**	**-0.6**
CNCH				*eP*			00 33 57.8	
CNCH				*eS*	**Sn**		**00 34 13.9**	**+1.0**
LOAL	**Lomas de Alarc**	**1.14**	**316**	P	**Pn**		**00 33 58.1**	**-0.3**
LOAL				S	**Sn**		**00 34 14.3**	**+0.8**
SLOZ	**Alcaldia de Sa**	**1.16**	**317**	P	**Pn**		**00 33 58.3**	**-0.3**
SLOZ				S	**Sn**		**00 34 14.7**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.16**	**317**	⇑*i*P	**Pn**		**00 33 58.5**	**-0.2**
RBDL	**Robledal**	**1.17**	**323**	*eP*	**Pn**		**00 33 58.5**	**-0.4**
RBDL				*eS*	**Sn**		**00 34 15.1**	**+0.8**
FAME	**Alcaldia de Sa**	**1.22**	**303**	P	**Pn**		**00 33 59.1**	**-0.3**
MTO3	**Montecristo**	**1.28**	**343**	P	**Pn**		**00 33 59.8**	**-0.6**
MTO3	**Montecristo**	**1.28**	**343**	*i* P	**Pn**		**00 33 59.7**	**-0.6**
MTO3	**Montecristo**	**1.28**	**343**	⇓*i*P	**Pn**		**00 33 59.7**	**-0.6**
MTO3				*eS*	**Sn**		**00 34 16.3**	**-0.7**
CSGN	**Cosiguina Volc**	**1.39**	**98**	P	**Pn**		**00 34 01.0**	**-0.6**
CSGN				S	**Sn**		**00 34 19.8**	**+0.6**
ESQI	**Esquipulas**	**1.43**	**345**	P	**Pn**		**00 34 02.0**	**-0.2**
ESQI				S	**Sn**		**00 34 21.1**	**+0.8**
SARH	**Santa Rosa de**	**1.61**	**7**	P	**Pn**		**00 34 04.7**	**-0.1**
SARH				S	**Sn**		**00 34 25.0**	**+0.5**
SARH	**Santa Rosa de**	**1.61**	**7**	*i* P	**Pn**		**00 34 04.6**	**+0.1**
FG16	**Alotenango, Sa**	**1.86**	**306**	*i* P	Pn		00 34 13.4	+5.4
FG8	**Yepocapa, Chim**	**1.89**	**305**	*i* P	Pn		00 34 14.4	+6.0

SCB 15 00:36:36.9±0.9, 18°.38S×63°.16W, h25km±6km, MB5.6, ML2.5/1, Error ellipse: s-maj=4.0km s-min=4.0km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.98**	**275**	Pg	Pn	Pb	00 37 13.9	+1.5
BBSD	**Serra de San D**	**2.70**	**64**	P	Pn	Pb	00 37 24.3	-0.3
SIV	**San Ignacio**	**3.10**	**40**	Pn	Pn	Pb	00 37 29.4	-2.0
MOCB	**Mochara**	**3.69**	**219**	Pn	Pn	Pb	00 37 38.1	-3.6
MOCB				Sn	Sn	Sb	00 38 23.9	-2.3
MOCB				IAML			00 38 43.5	
	8.2nm,0.5s							
BBOJ	**La Paz, Jacaqu**	**4.99**	**285**	Pn	Pn		00 37 56.3	+5.5
SOEJ	**Jacaque**	**4.99**	**285**	Pn	Pn		00 37 56.7	+5.9
LPAZ	**La Paz**	**5.18**	**293**	Pn	Pn		00 37 58.2	+4.8
BBOB	**La Paz, Bander**	**5.24**	**294**	Pn	Pn		00 37 59.0	+4.8
BBOD	**La Paz, Gloria**	**5.47**	**288**	Pn	Pn		00 38 02.6	+5.3

IDC ***15*** *00:42:55.3±1.2, 18°.86S×169°.34E, h0km, mb4.0/7, mbtmp4.0/9, ML5.3/1, MS3.7/5, Error ellipse: s-maj=30.8km s-min=24.7km az=165.0*

NOU ***15*** *00:42:56.5, 18°.98S×169°.33E, h0km, MLv4.3/8, Vanuatu Islands*

NEIC ***15*** *00:42:57.5±1.8, 19°.01S±0°.02×169°.5E±0°.1, h10km±2km, mb4.3/9, Error ellipse: s-maj=21.3km s-min=3.0km az=87.0*

ISC 15 00:42:57.3±0.6, 18°.93S±0°.05×169°.38E±0°.08, h10km, n48, σ1ˢ04/46, mb4.1/11, MS3.6/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.45**	**321**	P	**Pn**		**00 43 22.8**	**-0.8**
DVP	**Devils Point**	**1.65**	**316**	P	**Pb**		**00 43 26.4**	**-1.4**
MARNC	**Mare, Loyalty**	**2.84**	**206**	P	**Pn**		**00 43 41.9**	**-0.8**
MARNC	**Mare, Loyalty**	**2.84**	**206**	S	**Sn**		**00 44 16.6**	**-0.3**
MARNC	**Mare, Loyalty**	**2.84**	**206**	P	**Pn**		**00 43 41.3**	**-1.4**
MARNC	**Mare, Loyalty**	**2.84**	**206**	P	**Pn**		**00 43 41.5**	**-1.1**
YATNC	**Mamie plateau,**	**3.89**	**216**	P	**Pn**		**00 43 56.4**	**-0.8**
YATNC	**Mamie plateau,**	**3.89**	**216**	P	**Pn**		**00 43 56.1**	**-1.1**
SANVU	**Saraoutou**	**4.04**	**329**	P	**Pn**		**00 43 59.7**	**+0.4**
SANVU	**Saraoutou**	**4.04**	**329**	Pn	**Pn**		**00 44 00.8**	**+1.6**
DZM	**Mont Dzumac**	**4.17**	**221**	Pn	**Pn**		**00 44 01.3**	**+0.2**
	10nm,0.5s,baz=58,slow=13,SNR=48							
DZM				Sn	**Sn**		**00 44 52.0**	**+2.2**
	baz=355,slow=15							
OUENC	**Ouen Island, N**	**4.21**	**214**	P	**Pn**		**00 44 01.4**	**-0.1**
OUENC	**Ouen Island, N**	**4.21**	**214**	P	**Pn**		**00 44 02.2**	**+0.7**
OUENC	**Ouen Island, N**	**4.21**	**214**		**Pn**		**00 44 01.7**	**+0.2**
NOUC	**Port Laguerre**	**4.28**	**222**	P	**Pn**		**00 44 04.0**	**+1.5**
ONTNC	**Ouen Toro**	**4.34**	**219**	P	**Pn**		**00 44 05.3**	**+2.0**
ONTNC	**Ouen Toro**	**4.34**	**219**	Pn	**Pn**		**00 44 02.6**	**-0.7**
KOUNC	**Koumac, New Ca**	**5.06**	**251**	Pn	**Pn**		**00 44 15.2**	**+1.9**
MSVF	**Nonsavu**	**8.32**	**83**	Pn	**Pn**		**00 44 58.4**	**+0.3**
	1.2nm,0.3s,baz=264,slow=9.2,SNR=5.6							
MSVF				LR	LR		00 47 33.6	
	comp=Z,515nm,19.0s,baz=129,slow=33 5.6nm,0.7s							
MSVF	**Nonsavu**	**8.32**	**83**	Pn	**Pn**		**00 44 59.4**	**+1.3**
HNR	**Honiara**	**13.14**	**315**	LR	LR		00 50 33.4	
	comp=Z,3nm,19.4s,baz=220,slow=35							
AFI	**Afiamalu**	**18.75**	**77**	LR	LR		00 52 46.3	
	comp=Z,184nm,19.4s,baz=134,slow=32							
CTA	**Charters Tower**	**21.83**	**263**	LR	LR		00 54 39.2	
	comp=Z,104nm,21.8s,baz=36,slow=32							
STKA	**Stephens Creek**	**28.12**	**237**	P	**P**		**00 48 50.1**	**+0.5**
	2.7nm,0.7s,baz=90,slow=9.1,SNR=3.7							
STKA				LR	LR		00 58 26.7	
	comp=Z,155nm,20.5s,baz=36,slow=33 2.7nm,0.7s							
WB0	**Warramunga Arr**	**32.99**	**263**	P	**P**		**00 49 32.4**	**-0.3**
WB0				IAmb	IAmb		00 49 59.1	
	comp=Z,9.4nm,1.2s							
WRA	**Warramunga Arr**	**33.03**	**262**	P	**P**		**00 49 32.0**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=99,slow=7.2,SNR=5.4 comp=Z,1.0nm,0.9s							
WRA	**Warramunga Arr**	**33.03**	**262**	P	**P**		**00 49 31.5**	**-1.6**
AS31	**Alice Springs**	**33.33**	**256**	P	**P**		**00 49 34.9**	**-0.8**
AS31				IAmb	IAmb		00 49 45.9	
	comp=Z,1.8nm,0.7s							
ASAR	**Alice Springs**	**33.33**	**256**	P	**P**		**00 49 34.5**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=83,slow=9.1,SNR=14							
ASAR				LR	LR		01 02 00.2	
	comp=Z,194nm,18.1s,baz=104,slow=34 comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**33.33**	**256**	P	**P**		**00 49 35.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**41.41**	**264**	P	**P**		**00 50 44.7**	**+0.5**
MBWA	**Marble Bar**	**46.55**	**258**	P

PMSA	**Palmer Station**	**42.27**	**145**	LR	LR	01 15 28.8		
	comp=Z,57nm,21.9s,baz=208,slow=31							
TROLL	**Troll, Antarti**	**42.85**	**181**	⇑P	**P**	**01 01 40.3**	**+1.2**	
	comp=Z,312nm,0.9s							
TROLL				pP	**pwP**	**01 01 46.4**	**-0.3**	
	comp=Z,312nm,0.9s							
SNAA	**Sanae**	**43.20**	**179**	⇑P	**P**	**01 01 42.1**	**+0.2**	
	comp=Z,124nm,0.9s							
SNAA				pP	**pwP**	**01 01 48.4**	**-1.0**	
	comp=Z,124nm,0.9s							
SNAA	**Sanae**	**43.20**	**179**	P	**P**	**01 01 43.0**	**+1.1**	
	comp=Z,7.0nm,1.1s,baz=190,slow=6.3,SNR=8.2							
SNAA				LR	LR	01 19 30.4		
	comp=Z,292nm,18.1s,baz=222,slow=36							
	comp=Z,7.0nm,1.1s							
SNAA	**Sanae**	**43.20**	**179**		**P**	**01 01 42.2**	**+0.4**	
SNAA	**Sanae**	**43.20**	**179**	P	**P**	**01 01 43.4**	**+1.6**	
RMQ	**Roma**	**43.44**	**319**	P	**P**	**01 01 44.1**	**-0.2**	
VNA2	**Neumayer--Watz**	**43.88**	**177**	P	**P**	**01 01 47.6**	**+0.3**	
	comp=Z,3.3nm,1.1s,baz=184,slow=6.5							
VNA2				pP	**pwP**	**01 01 53.3**	**-1.6**	
	comp=Z,4.6nm,0.8s,baz=182,slow=6.6							
VNA2	**Neumayer--Watz**	**43.88**	**177**	P	**P**	**01 01 48.6**	**+1.3**	
EIDS	**Eidsvold**	**43.88**	**322**		**P**	**01 01 47.7**	**-0.1**	
EIDS				IAmb	IAmb	01 01 55.4		
	comp=Z,24nm,1.1s							
EIDS	**Eidsvold**	**43.88**	**322**	P	**P**	**01 01 48.8**	**+1.0**	
VNA1	**Neumayer--Stat**	**44.13**	**176**	P	**P**	**01 01 50.7**	**+1.4**	
	comp=Z,14nm,1.0s							
VNA1				pP	**pwP**	**01 01 56.5**	**-0.4**	
	comp=Z,14nm,1.0s							
QLP	**Quilpie**	**44.67**	**313**	P	**P**	**01 01 54.9**	**+0.7**	
INKA	**Innaminka**	**44.70**	**308**	P	**P**	**01 01 54.6**	**+0.2**	
INKA				IAmb	IAmb	01 02 03.1		
	comp=Z,16nm,1.1s							
RAR	**Rarotonga**	**46.24**	**27**	LR	LR	01 16 31.9		
	comp=Z,217nm,19.4s,baz=212,slow=30							
FORT	**Forrest**	**46.53**	**292**	P	**P**	**01 02 08.7**	**0.0**	
FORT				IAmb	IAmb	01 02 16.2		
	comp=Z,20nm,1.2s							
TBI	**Tubuai**	**46.61**	**41**	*e*LR	LR	01 15 01.5		
	comp=Z,2μm,25.8s							
TBI				*e*T	T	01 51 49.1		
	comp=Z,22nm,0.3s							
MSVF	**Nonsavu**	**47.63**	**358**	LR	LR	01 19 44.0		
	comp=Z,91nm,18.1s,baz=100,slow=33							
H01W1	**Cape Leeuwin H**	**48.56**	**276**	T	T	01 55 08.1		
	baz=149,slow=76,SNR=67							
H01W2	**Cape Leeuwin H**	**48.57**	**276**	T	T	01 55 05.6		
	baz=149,slow=76,SNR=55							
H01W3	**Cape Leeuwin H**	**48.58**	**276**	T	T	01 55 13.4		
	baz=149,slow=76,SNR=55							
NWAO	**Narrogin (SRO)**	**48.99**	**280**	LR	LR	01 18 08.1		
	comp=Z,241nm,21.4s,baz=118,slow=30							
ASAR	**Alice Springs**	**50.80**	**303**	P	**P**	**01 02 42.0**	**+0.3**	
	comp=Z,7.1nm,0.7s,baz=156,slow=7.1,SNR=73							
	comp=Z,7.1nm,0.7s							
ASAR	**Alice Springs**	**50.80**	**303**		**P**	**01 02 41.6**	**-0.1**	
AS31	**Alice Springs**	**50.80**	**303**		**P**	**01 02 41.3**	**-0.4**	
MG05	**Puerto Natales**	**51.01**	**130**	P	**P**	**01 02 43.4**	**+0.5**	
AFI	**Afiamalu**	**51.78**	**11**	LR	LR	01 20 09.1		
	comp=Z,88nm,20.6s,baz=80,slow=31							
TVO	**Taravao**	**51.97**	**39**	*e*T	T	01 58 29.1		
	comp=Z,19nm,0.3s							
PAE	**Paea**	**52.00**	**39**	*e*T	T	01 58 33.5		
	comp=Z,8.8nm,0.3s							
PPT2	**Papeete2**	**52.07**	**39**	*e*S	**S**	**01 10 13.1**	**-1.4**	
	comp=Z,76nm,23.2s							
PPT2				*e*LR	LR	01 17 27.5		
	comp=Z,474nm,25.5s							
PPT2				*e*LR	LR	01 17 35.0		
	comp=Z,360nm,27.0s							
PPT2				*e*T	T	01 58 35.4		
	comp=Z,3.3nm,0.3s							
PPT	**Papeete**	**52.09**	**39**	LR	LR	01 18 55.4		
	comp=Z,183nm,20.6s,baz=160,slow=29							
WRA	**Warramunga Arr**	**54.08**	**305**	P	**P**	**01 03 05.7**	**-0.3**	
	comp=Z,8.3nm,0.9s,baz=161,slow=6.5,SNR=24							
	comp=Z,8.3nm,0.9s							
WRA	**Warramunga Arr**	**54.08**	**305**		**P**	**01 03 05.3**	**-0.8**	
WB0	**Warramunga Arr**	**54.22**	**305**		**P**	**01 03 06.1**	**-1.0**	
WB0				IAmb	IAmb	01 03 13.4		
	comp=Z,29nm,1.1s							
VAH	**Vaihoa**	**54.84**	**40**	*e*T	T	02 02 08.3		
	comp=Z,41nm,0.3s							
RPN	**Rapa Nui**	**57.92**	**85**	LR	LR	01 23 07.1		
	comp=Z,59nm,18.1s,baz=186,slow=31							
FITZ	**Fitzroy Crossi**	**58.91**	**297**	LR	LR	01 25 57.1		
	comp=Z,114nm,19.4s,baz=185,slow=33							
FITZ	**Fitzroy Crossi**	**58.91**	**297**		**P**	**01 03 40.2**	**-0.2**	
KNRA	**Kununurra**	**59.98**	**301**	P	**P**	**01 03 47.0**	**-0.8**	
PMG	**Port Moresby**	**60.18**	**323**	LR	LR	01 26 12.1		
	comp=Z,88nm,19.7s,baz=170,slow=32							
PLCA	**Paso Flores**	**61.27**	**126**	P	**P**	**01 03 56.8**	**+0.3**	
	comp=Z,3.3nm,1.0s,baz=237,slow=13,SNR=3.2							
	comp=Z,3.3nm,1.0s							
PLCA	**Paso Flores**	**61.27**	**126**		**P**	**01 03 55.7**	**-0.8**	
PLCA				IAmb	IAmb	01 04 03.4		
	comp=Z,9.8nm,1.0s							
PLCA	**Paso Flores**	**61.27**	**126**	P	**P**	**01 03 56.6**	**+0.1**	
GO06	**Curarrehue**	**61.98**	**124**	P	**P**	**01 04 00.3**	**-1.0**	
GO06	**Curarrehue**	**61.98**	**124**	P	**P**	**01 04 02.5**	**+1.1**	
TAOE	**Nuku Hiva Isla**	**63.04**	**46**	*e*LR	LR	01 22 39.5		
	comp=Z,378nm,27.3s							
H03S2	**Juan Fernandez**	**64.39**	**115**	T	T	02 15 14.8		
	baz=205,slow=74,SNR=22							
H03S1	**Juan Fernandez**	**64.39**	**115**	T	T	02 15 16.2		
	baz=205,slow=74,SNR=25							
H03S3	**Juan Fernandez**	**64.41**	**115**	T	T	02 15 14.4		
	baz=205,slow=74,SNR=25							
BI02	**San Fabin de**	**64.67**	**123**	P	**P**	**01 04 18.7**	**-0.4**	
BI02				IAmb	IAmb	01 04 25.7		
	comp=Z,19nm,1.3s							
H03N3	**Juan Fernandez**	**64.73**	**115**	T	T	02 15 31.0		
	baz=208							
H03N2	**Juan Fernandez**	**64.74**	**115**	T	T	02 15 33.6		
	baz=208							
H03N1	**Juan Fernandez**	**64.75**	**115**	T	T	02 15 33.8		
	baz=208							
BO02	**Sierra Bellavi**	**66.52**	**122**		**P**	**01 04 29.7**	**-1.4**	
BO02				IAmb	IAmb	01 04 38.2		
	comp=Z,23nm,1.1s							
BO02	**Sierra Bellavi**	**66.52**	**122**	P	**P**	**01 04 30.2**	**-0.9**	
BO04	**La Punta**	**67.31**	**122**	P	**P**	**01 04 35.1**	**-1.0**	
BO04				IAmb	IAmb	01 04 47.8		
	comp=Z,27nm,1.2s							
AC05	**El Transito**	**72.09**	**120**	P	**P**	**01 05 04.9**	**-0.9**	
AC05				IAmb	IAmb	01 05 14.7		
	comp=Z,31nm,1.6s							
GO03	**Copiapo**	**73.23**	**120**	P	**P**	**01 05 11.9**	**-0.5**	
AC02	**Maricunga**	**74.33**	**120**	P	**P**	**01 05 19.0**	**-0.4**	
AC02				IAmb	IAmb	01 05 44.1		
	comp=Z,16nm,1.4s							
AC02	**Maricunga**	**74.33**	**120**	P	**P**	**01 05 19.4**	**0.0**	
SALTA		**77.71**	**122**	P	**P**	**01 05 38.5**	**-0.2**	
AF01	**San Pedro de A**	**78.21**	**120**	P	**P**	**01 05 40.8**	**-0.5**	
TOLI2	**Tolitoli**	**78.40**	**299**	P	**P**	**01 05 40.6**	**-1.3**	
CPUP	**Villa Florida**	**78.82**	**130**	P	**P**	**01 05 43.4**	**-0.8**	
	comp=Z,0.7nm,0.6s,baz=176,slow=15,SNR=4.8							
	comp=Z,0.7nm,0.6s							
CPUP	**Villa Florida**	**78.82**	**130**	P	**P**	**01 05 43.9**	**-0.3**	
CPUP				IAmb	IAmb	01 06 02.8		
	comp=Z,44nm,1.9s							
PB11	**IPOC Station P**	**80.58**	**117**	P	**P**	**01 05 54.0**	**0.0**	
PB11				IAmb	IAmb	01 06 01.1		
	comp=Z,9.4nm,0.8s							
SUR	**Sutherland**	**81.12**	**198**	LR	LR	01 38 19.8		
	comp=Z,218nm,20.5s,baz=150,slow=33							
PB16	**IPOC Station P**	**81.94**	**117**	P	**P**	**01 06 02.3**	**+0.5**	
BOSA	**Boshof**	**84.17**	**203**	P	**P**	**01 06 12.7**	**0.0**	
	comp=Z,4.7nm,1.1s,baz=162,slow=10,SNR=4.2							
BOSA				LR	LR	01 41 20.5		
	comp=Z,177nm,19.3s,baz=178,slow=34							
	comp=Z,4.7nm,1.1s							
BOSA	**Boshof**	**84.17**	**203**	P	**P**	**01 06 13.1**	**+0.4**	
LPAZ	**La Paz**	**84.33**	**117**	P	**P**	**01 06 13.3**	**-0.9**	
	comp=Z,1.5nm,0.8s,baz=194,slow=8.5,SNR=5.2							
	comp=Z,1.5nm,0.8s							
LPAZ	**La Paz**	**84.33**	**117**		**P**	**01 06 13.2**	**-1.0**	
LPAZ	**La Paz**	**84.33**	**117**	P	**P**	**01 06 13.7**	**-0.5**	
MAKGR	**Makgori**	**86.99**	**203**	P	**P**	**01 06 26.8**	**0.0**	
LBTB	**Lobatse**	**87.64**	**204**	LR	LR	01 44 15.2		
	comp=Z,165nm,18.1s,baz=160,slow=35							
PTLB	**Pontes e Lacer**	**88.34**	**125**	P	**P**	**01 06 33.5**	**+0.4**	
PTLB				IAmb	IAmb	01 06 39.2		
	comp=Z,12nm,1.5s							
RPSI	**Rantau Prapat**	**88.42**	**280**	P	**P**	**01 06 32.8**	**-0.7**	
RPSI				IAmb	IAmb	01 06 34.6		
	comp=Z,15nm,1.4s							
ATAH	**Atahualpa**	**88.65**	**104**	LR	LR	01 37 08.2		
	comp=Z,92nm,19.8s,baz=176,slow=29							
OPO	**Ambohidratompo**	**88.80**	**225**	LR	LR	01 44 15.9		
	comp=Z,103nm,18.1s,baz=89,slow=34							
VILB	**Vilhena**	**90.28**	**123**	P	**P**	**01 06 42.0**	**-0.3**	
VILB				IAmb	IAmb	01 06 56.9		
	comp=Z,8.8nm,0.8s							
CZSB	**Cruzeiro do Su**	**90.39**	**110**	P	**P**	**01 06 42.5**	**-0.3**	
CZSB				IAmb	IAmb	01 06 49.1		
	comp=Z,8.0nm,1.0s							
MATP	**Matopo**	**91.59**	**207**	LR	LR	01 45 53.0		
	comp=Z,168nm,18.0s,baz=132,slow=34							
TSUM	**Tsumeb**	**94.53**	**197**	LR	LR	01 47 59.6		
	comp=Z,182nm,19.1s,baz=157,slow=34							
LSZ	**Lusaka**	**96.67**	**208**	LR	LR	01 47 53.9		
	comp=Z,178nm,19.8s,baz=160,slow=34							
PZH	**PanZhiHua**	**108.80**	**292**	PKP	**PKiKP**	**01 12 12.0**	**+1.7**	
HHC	**Hu-ho-hao-te**	**118.12**	**307**	*e*P	**PKPdf**	**01 12 25.3**	**-2.3**	
HHC				LR	LR			
	comp=N,110nm,16.1s							
HHC				LR	LR			
	comp=E,140nm,16.9s							
HHC				LR	LR			
	comp=Z,110nm,16.5s							
PDAR	**Pinedale Array**	**120.97**	**54**	PKP	**PKiKP**	**01 12 34.2**	**+0.9**	
	comp=Z,0.6nm,0.7s,baz=166,slow=3.1,SNR=5.6							
PDAR	**Pinedale Array**	**120.97**	**54**	PKPdf	**PKiKP**	**01 12 34.0**	**+0.7**	
TORD	**Torodi Ar. Bea**	**127.80**	**183**	PKP	**PKPdf**	**01 12 46.0**	**-0.8**	
	comp=Z,2.1nm,1.0s,baz=178,slow=4.5,SNR=4.3							
F33A	**5 Mile Ranch,**	**128.37**	**63**		**PKPdf**	**01 12 45.8**	**-1.1**	
RAYN	**Ar Rayn**	**128.79**	**238**		**PKPdf**	**01 12 47.7**	**-0.8**	
WMQ	**Urumqi**	**129.43**	**290**	*e*PKP	**PKiKP**	**01 12 51.3**	**+1.5**	
KSH2	**Kashi**	**130.41**	**277**	PKP	**PKiKP**	**01 12 52.6**	**+0.5**	
ILAR	**Eielson Array**	**132.17**	**19**	PKP	**PKPdf**	**01 12 53.5**	**0.0**	
	comp=Z,3.6nm,1.2s,baz=247,slow=2.3,SNR=11							
MKAR	**Makanchi Array**	**134.02**	**288**	PKP	**PKPdf**	**01 12 58.2**	**+0.6**	
	comp=Z,0.2nm,0.4s,baz=169,slow=1.9,SNR=3.8							
KKAR	**Karatay Array**	**135.81**	**276**		**PKPdf**	**01 12 59.8**	**-1.3**	
KURBB	**Kurchatov Arra**	**138.58**	**289**	PKhKP	PKPpre	01 12 59.1		
	comp=Z,0.2nm,0.3s,baz=160,slow=2.1,SNR=4.3							
KURBB				PKP	**PKPdf**	**01 13 06.3**	**+0.4**	
	comp=Z,1.6nm,1.1s,baz=176,slow=2.3,SNR=6.2							
BVAR	**Borovoye Array**	**143.68**	**285**	PKP	PKPbc	01 13 13.4	+0.7	
	comp=Z,1.5nm,0.9s,baz=155,slow=4.9,SNR=7.9							
GNI	**Garni**	**143.95**	**248**		PKPbc	01 13 14.8	+0.8	
GAZ	**Gaziantep**	**144.12**	**237**		**PKPab**	**01 13 15.2**	**+1.1**	
ABKAR	**Akbulak array**	**145.14**	**272**		**PKPbc**	**01 13 16.8**	**-0.5**	
AKAS	**Kas**	**145.76**	**226**		**PKPdf**	**01 13 18.9**	**-0.5**	
BNN	**Bunyan**	**146.10**	**236**		**PKPdf**	**01 13 19.2**	**-0.7**	
ELL	**Elmali**	**146.15**	**227**		**PKPdf**	**01 13 20.2**	**+0.2**	
SCHQ	**Schefferville**	**147.00**	**76**	PKPbc	**PKPdf**	**01 13 22.1**	**+1.4**	
	comp=Z,5.6nm,0.9s,baz=216,slow=6.6,SNR=4.2							
SCHQ	**Schefferville**	**147.00**	**76**		**PKPdf**	**01 13 21.4**	**+0.8**	
TOKA	**Tokat**	**147.19**	**238**	PKPbc	**PKPbc**	**01 13 24.2**	**+0.4**	
BR131	**Keskin Array S**	**147.65**	**234**	PKPbc	**PKPdf**	**01 13 24.6**	**+2.2**	
BRTR	**Keskin Array B**	**147.65**	**234**	PKPbc	**PKPdf**	**01 13 24.8**	**+2.3**	
	comp=Z,13nm,1.1s,baz=160,slow=3.9,SNR=36							
BRTR	**Keskin Array B**	**147.65**	**234**	PKPbc	**PKPdf**	**01 13 24.2**	**+1.7**	
KIV	**Kislovodsk**	**147.99**	**249**	PKPbc	**PKPbc**	**01 13 26.0**	**+0.1**	
NRIK	**Noril'sk**	**148.59**	**317**	PKPbc	**PKPbc**	**01 13 26.1**	**-0.5**	
	comp=Z,5.1nm,0.9s,baz=118,slow=4.5,SNR=7.0							
KEST	**Kesra**	**149.77**	**196**	PKPbc	**PKPbc**	**01 13 30.9**	**+0.3**	
	comp=Z,8.1nm,1.1s,baz=259,slow=2.9,SNR=6.3							
RES	**Resolute Bay**	**150.14**	**32**	PKPbc	**PKPbc**	**01 13 29.5**	**-0.8**	
ESDC	**Sonseca Array**	**154.18**	**174**	PKP	**PKPdf**	**01 13 32.8**	**+0.4**	
	comp=Z,2.6nm,1.2s,baz=144,slow=1.3,SNR=5.9							
ESDC				PKPbc	**sPKPdf**	**01 13 38.5**	**+1.0**	
	comp=Z,2.5nm,1.1s,baz=222,slow=1.4,SNR=7.4							
ESDC	**Sonseca Array**	**154.18**	**174**		**PKPdf**	**01 13 32.0**	**-0.3**	
AKASG	**Malin Array Be**	**158.69**	**241**	PKPab	**PKPab**	**01 14 12.8**	**-0.7**	
	comp=Z,1.3nm,0.8s,baz=157,slow=3.7,SNR=11							
KIEV	**Kiev**	**158.69**	**241**		**PKPab**	**01 14 14.1**	**+0.7**	
ARSA	**Arzberg**	**159.84**	**214**	*e*PKP	**PKPab**	**01 14 20.0**	**+1.4**	
	comp=Z,6.7nm,1.2s							
ABTA	**Abfaltersbach**	**160.00**	**207**	*e*PKP	**PKPab**	**01 14 20.7**	**+1.4**	
	comp=Z,4.4nm,1.0s							
RONA	**Rosalia, Austr**	**160.07**	**215**	*e*PKP	**PKPab**	**01 14 20.9**	**+1.3**	
	comp=Z,3.3nm,0.8s							
CONA	**Conrad Observa**	**160.39**	**215**	*e*PKP	**PKPab**	**01 14 21.9**	**+0.8**	
	comp=Z,12nm,1.6s							
MODS	**Modra-Piesok**	**160.46**	**218**	*e*PKP	**PKPab**	**01 14 21.9**	**+0.7**	
WINA	**Niland / Wiene**	**160.51**	**215**	*e*PKP	**PKPab**	**01 14 22.4**	**+1.0**	
	comp=Z,46nm,1.8s							
LANS	**Liptovska Anna**	**160.57**	**223**	*e*PKP	**PKPab**	**01 14 22.8**	**+1.1**	
MOA	**Molln**	**160.69**	**212**	*e*PKP	**PKPab**	**01 14 23.2**	**+1.0**	
	comp=Z,6.6nm,1.2s							
JAVC	**Velka Javorina**	**160.80**	**219**	*e*PKP	**PKPab**	**01 14 24.0**	**+1.3**	
MOTA	**Moosalm**	**160.83**	**205**	*ep*PKP	**PKPab**	**01 14 26.9**	**+3.9**	
	comp=Z,4.6nm,1.1s							
KRUC	**Moravsky**	**161.32**	**217**	*e*PKP	**PKPab**	**01 14 24.6**	**-0.3**	
VRAC	**Vranov**	**161.49**	**218**	*e*PKP	**PKPab**	**01 14 25.7**	**0.0**	
MORC	**Moravsky Berou**	**161.67**	**220**	*e*PKP	**PKPab**	**01 14 26.2**	**-0.3**	
GERES	**GERESS Array B**	**161.75**	**212**	PKP	**PKPdf**	**01 13 40.2**	**-1.2**	
	comp=Z,0.3nm,0.7s,baz=4.8,slow=1.2,SNR=5.4							
GERES	**GERESS Array B**	**161.75**	**212**	PKPdf	**PKPdf**	**01 13 39.3**	**-2.1**	
FINES	**FINESS Array B**	**167.43**	**264**	PKPab	**PKPab**	**01 14 51.0**	**-0.6**	
	comp=Z,1.0nm,0.9s,baz=123,slow=6.9,SNR=2.3							
ARCES	**ARCESS Array B**	**169.18**	**304**	PKPab	**PKPab**	**01 14 58.6**	**-0.5**	
	comp=Z,2.1nm,0.8s,baz=64,slow=2.1,SNR=4.7							

*NOU **15** 01:30:44.7, 14.˚65S×167.˚32E, h5km, MLv4.7/7, Vanuatu Islands*
*IDC **15** 01:30:53.3±14.0, 15.˚41S×168.˚27E, h0km, mb3.7/3, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=251.6km s-min=45.5km az=75.0*

ISC 15 01:30:59.3±2.8, 15.˚5S±0.˚2×167.˚6E±0.˚2, h10km, n6, σ2s38/6, mb3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.41**	**276**	P	Pg	01 30 59.9	-7.4
SANVU	**Saraoutou**	**0.41**	**276**	S	**Sg**	**01 31 11.9**	**-0.8**
DZM	**Mont Dzumac**	**6.64**	**190**	Pn	**Pn**	**01 32 34.1**	**-2.9**
	0.3nm,0.3s,baz=109,slow=18,SNR=1.7						
DZM				Sn	**Sn**	**01 33 54.8**	**+1.9**
	0.2nm,0.3s,baz=89,slow=18,SNR=2.2						
	3.9nm,0.6s						
STKA	**Stephens Creek**	**28.77**	**231**	P	**P**	**01 36 59.3**	**+2.0**
	1.0nm,0.3s,baz=56,slow=7.3,SNR=3.6						
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**31.98**	**257**	P	**P**	**01 37 25.8**	**-0.1**
	0.2nm,0.6s,baz=83,slow=7.6,SNR=1.3						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**32.73**	**250**	P	**P**	**01 37 33.0**	**+0.6**
	0.6nm,0.5s,baz=83,slow=8.9,SNR=7.9						
	0.6nm,0.5s						

WEL 15 01:32:10.7±0.5, 40.˚5S±3.˚7×17.˚7E±.˚, h18km±6km, M3.8/14, ML3.9/15, MLv3.8/14, Error ellipse: s-maj=6.6km s-min=3.2km az=104.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CKHZ	**Cape Kidnapper**	**0.20**	**285**	P	Pg	01 32 15.7	0.0
CKHZ				S	Sb	01 32 20.1	+1.0
HNPS	**Havelock North**	**0.35**	**277**	P	Pb	01 32 18.6	+0.2
HNPS				S	Sb	01 32 25.3	+1.7
KAHZ	**Kahuranaki**	**0.36**	**257**	P	Pb	01 32 19.3	+0.7
KAHZ				S	Sn	01 32 26.1	-1.7
NCHS	**Napier Colenso**	**0.39**	**301**	P	Pb	01 32 19.2	+0.1
NCHS				S	Sb	01 32 26.3	+1.5
NGHS	**Napier Girls H**	**0.39**	**305**	P	Pb	01 32 19.3	+0.2
NGHS				S	Sb	01 32 26.3	+1.4
NAAS	**Napier Airport**	**0.43**	**304**	P	Pb	01 32 20.2	+0.5
NAAS				S	Sn	01 32 27.9	-1.4
PWZ	**Pawanui**	**0.48**	**228**	P	Pb	01 32 21.6	+0.9
PWZ				S	Sn	01 32 30.6	-0.1
PXZ	**Pawanui**	**0.48**	**228**	P	Pb	01 32 21.5	+0.9
PXZ				S	Sn	01 32 30.8	+0.1
ARHZ	**Aropaoanui**	**0.52**	**330**	P	Pb	01 32 21.8	+0.6
ARHZ				S	Sn	01 32 30.7	-0.9
MCHZ	**McNeill Hill**	**0.56**	**298**	P	Pb	01 32 22.4	+0.4
MCHZ				S	Sn	01 32 31.9	-0.7
WPWS	**Waipawa Distri**	**0.62**	**248**	P	Pb	01 32 23.4	+0.4
WPWS				S	Sn	01 32 33.1	-1.0
WHHZ	**Waihua**	**0.64**	**353**	P	Pb	01 32 24.0	+0.7
WHHZ				S	Sn	01 32 35.0	+0.4
MHGZ	**Mahia Peninsul**	**0.72**	**39**	P	Pn	01 32 25.4	-0.6
NMHZ	**Naumai**	**0.73**	**326**	P	Pg	01 32 25.5	+0.4
NMHZ				S	Sn	01 32 37.0	-0.1
KNZ	**Kokohu**	**0.74**	**21**	P	Pg	01 32 25.4	+0.2
KRHZ	**Kereru**	**0.74**	**275**	P	Pb	01 32 25.2	0.0
KWHZ	**Kaweka Forest**	**0.76**	**292**	P	Pb	01 32 25.5	+0.1
PRHZ	**Porangahau**	**0.77**	**224**	P	Pb	01 32 25.5	-0.1
WPHZ	**Waipukurau**	**0.77**	**242**	P	Pb	01 32 25.6	0.0
RAHZ	**Arahi**	**0.82**	**347**	P	Pg	01 32 26.8	+0.1
PNHZ	**Pukenui**	**0.89**	**257**	P	Pb	01 32 27.4	-0.3
PRGZ	**Paritu Road**	**0.90**	**29**	P	Pb	01 32 27.8	0.0
SNGZ	**Shannon Statio**	**0.93**	**1**	P	Pb	01 32 28.4	+0.1
MTHZ	**Maungataniwha**	**0.94**	**336**	P	Pb	01 32 28.3	-0.2
ANWZ	**Angora Road**	**0.99**	**221**	P	Pg	01 32 30.9	+0.9
BHHZ	**Black Hill Sta**	**1.00**	**282**	P	Pb	01 32 28.8	-0.8
RIGZ	**Rimuhau**	**1.06**	**19**	P	Pb	01 32 30.0	-0.6
DVHZ	**Dannevirke**	**1.07**	**236**	P	Pb	01 32 29.5	-1.2
TSZ	**Takapari Road**	**1.11**	**251**	P	Pb	01 32 30.2	-1.2
MRHZ	**Matea Rd**	**1.13**	**321**	P	Pn	01 32 31.3	-0.4
RTZ	**Ruatahuna**	**1.13**	**346**	P	Pn	01 32 31.0	-0.7
RAGZ	**Rawiri**	**1.22**	**3**	P	Pn	01 32 32.2	-0.7
MOVZ	**Moawhango**	**1.25**	**284**	P	Pn	01 32 33.6	+0.2
HATZ	**Hinemaiaia**	**1.26**	**310**	P	Pg	01 32 34.9	-0.2
BFZ	**Birch Farm**	**1.27**	**220**	P	Pn	01 32 32.0	-1.7
MUGZ	**Murupara**	**1.31**	**340**	P	Pn	01 32 33.7	-0.4
TKGZ	**Te Karaka**	**1.33**	**18**	P	Pn	01 32 33.5	-1.0
PRWZ	**Pori Road**	**1.34**	**231**	P	Pn	01 32 33.4	-1.2
TUVZ	**Tukino**	**1.37**	**288**	P	Pb	01 32 35.7	-0.2
POWZ	**Post Office Ro**	**1.38**	**240**	P	Pn	01 32 33.9	-1.2
ETVZ	**East Tongariro**	**1.38**	**294**	P	Pn	01 32 35.4	+0.2
ALRZ	**Allen Road**	**1.38**	**326**	P	Pb	01 32 36.2	+0.2
MWZ	**Matawai**	**1.38**	**7**	P	Pn	01 32 34.1	-1.1
TMVZ	**Te Maari**	**1.39**	**295**	P	Pn	01 32 35.7	+0.3
WNVZ	**Wahianoa**	**1.39**	**285**	P	Pn	01 32 35.6	+0.1
OTVZ	**Oturere**	**1.40**	**293**	P	Pn	01 32 35.8	+0.2
CNGZ	**Carnagh Statio**	**1.40**	**29**	P	Pn	01 32 34.8	-0.7
SNVZ	**South Ngauruho**	**1.41**	**291**	P	Pb	01 32 36.2	-0.4
PRRZ	**Plateau Road**	**1.41**	**329**	P	Pg	01 32 37.5	-0.4
WHVZ	**Whangaehu Hut**	**1.41**	**287**	P	Pn	01 32 36.0	+0.2
NTVZ	**North Tongarir**	**1.42**	**295**	P	Pn	01 32 36.0	+0.2
MAVZ	**Matarangi**	**1.44**	**287**	P	Pb	01 32 37.5	+0.3
TRVZ	**Turoa**	**1.44**	**286**	P	Pb	01 32 37.2	+0.1
NGZ	**Ngauruhoe**	**1.44**	**291**	P	Pb	01 32 36.8	-0.3
KRVZ	**Karewarewa**	**1.45**	**295**	P	Pb	01 32 37.5	+0.3
FWVZ	**Far West T-bar**	**1.45**	**288**	P	Pn	01 32 36.4	+0.2
URZ	**Urewera**	**1.46**	**353**	P	Pn	01 32 35.4	-0.8
KATZ	**Kakaramea**	**1.47**	**300**	P	Pg	01 32 38

Error ellipse: s-maj=7.0km s-min=4.0km az=168.0
KRNET 15 01:56:49.5±0.1,40°.35N×75°.11E,h25km,mb3.7
ISC 15 01:56:50.3±0.9,40°.39N±0°.04×75°.07E±0°.02,h10km,n73,
σ1§87/114,29C-25D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SALK	**Salom-Alik**	**1.07**	**298**	⇑*eP*	**Pg**	**01 57 10.2**	**-0.7**
SALK				⇑*eS*	**Sb**	**01 57 25.3**	**+0.2**
NRN	**Naryn**	**1.25**	**34**	⇓*eP*	**Pn**	**01 57 12.7**	**-1.5**
NRN				⇓*eS*	**Sb**	**01 57 29.5**	**-1.0**
SFK	**Sufi-Kurgan**	**1.26**	**253**	⇑*eP*	**Pn**	**01 57 13.0**	**-1.2**
SFK				⇑*eS*	**Sb**	**01 57 30.0**	**-0.7**
OHH	**Osh**	**1.75**	**275**	⇑*eP*	**Pb**	**01 57 21.7**	**-0.8**
OHH				⇑*eS*	**Sb**	**01 57 45.1**	**+0.5**
ARSB	**Arslanbob**	**1.84**	**301**	⇑*eP*	**Pb**	**01 57 23.2**	**-0.9**
ARSB				⇑*eS*	**Sb**	**01 57 47.8**	**+0.6**
UCH	**Uchtor** SNR=152	**1.88**	**347**	P	**Pg**	**01 57 26.1**	**-0.3**
UCH	**Uchtor**	**1.88**	**347**	⇑*eP*	**Pb**	**01 57 24.1**	**-0.9**
UCH				⇑*eS*	**Sb**	**01 57 49.2**	**+0.5**
ULHL	**Ulahol** SNR=30	**2.05**	**25**	P	**Pb**	**01 57 28.0**	**+0.3**
ULHL	**Ulahol**	**2.05**	**25**	⇓*eP*	**Pb**	**01 57 25.9**	**-1.8**
ULHL				⇓*eS*	**Sb**	**01 57 52.5**	**-0.8**
BOOM	**Boomskoye usch**	**2.19**	**17**	*eP*	**Pn**	**01 57 28.0**	**+1.1**
BOOM				⇑*eS*	**Sb**	**01 57 56.1**	**-1.3**
KBK	**Karagaybulak** SNR=60	**2.26**	**358**	P	**Pg**	**01 57 32.8**	**-0.9**
KBK	**Karagaybulak**	**2.26**	**358**	⇓*eP*	**Pn**	**01 57 29.1**	**+1.2**
KBK				⇓*eS*	**Sb**	**01 57 58.0**	**-1.4**
AAK	**Ala-Archa** SNR=8.6	**2.28**	**349**	P	**Pg**	**01 57 33.6**	**-0.5**
AAK	**Ala-Archa** 14nm,0.5s	**2.28**	**349**	⇑Pg	**Pg**	**01 57 33.4**	**-0.7**
AAK				⇑Lg	Lg	01 58 04.2	
AAK	**Ala-Archa** 13nm,0.4s	**2.28**	**349**	⇓*eP*	**Pn**	**01 57 29.5**	**+1.3**
AAK				⇓*eS*	**Sb**	**01 57 58.6**	**-1.4**
KDJ	**Kajisay**	**2.35**	**42**	⇑*eP*	**Pn**	**01 57 29.9**	**+0.8**
KDJ				⇑*eS*	**Sn**	**01 57 59.6**	**+1.4**
FRU1	**Bishkek**	**2.44**	**352**	⇓*eP*	**Pn**	**01 57 31.8**	**+1.6**
FRU1				⇓*eS*	**Sb**	**01 58 02.6**	**-1.7**
TARG	**Taragay, Kyrgy**	**2.46**	**56**	⇓*eP*	**Pn**	**01 57 31.4**	**+0.6**
TARG				⇓*eS*	**Sn**	**01 58 01.9**	**+0.8**
EKS2	**Erkin-Say** SNR=15	**2.47**	**337**	P	**Pg**	**01 57 36.8**	**-0.7**
EKS2	**Erkin-Say**	**2.47**	**337**	⇓*eP*	**Pn**	**01 57 32.0**	**+1.4**
EKS2				⇓*eS*	**Sb**	**01 58 03.0**	**-2.2**
TKM2	**Tokmak 2** SNR=59	**2.56**	**9**	P	**Pb**	**01 57 36.6**	**+0.3**
TKM2	**Tokmak 2**	**2.56**	**9**	⇓*eP*	**Pn**	**01 57 33.2**	**+1.2**
TKM2				⇓*eS*	**Sn**	**01 58 05.0**	**+1.8**
CHMS	**Chumysh** SNR=25	**2.61**	**355**	P	**Pg**	**01 57 39.2**	**-1.1**
CHMS	**Chumysh**	**2.61**	**355**	⇓*eP*	**Pn**	**01 57 33.8**	**+1.2**
CHMS				⇓*eS*	**Sn**	**01 58 06.2**	**+1.8**
DRK	**Karamyk**	**2.68**	**251**	⇑*eP*	**Pn**	**01 57 34.4**	**+0.7**
DRK				⇑*eS*	**Sn**	**01 58 07.2**	**+0.9**
MRKS	**Merke** 20nm,1.1s	**2.73**	**330**	Pg	**Pb**	**01 57 40.4**	**+1.2**
MRKS				Lg	Lg	01 58 18.2	
MRKS	**Merke** 20nm,1.1s	**2.73**	**330**	*eP*	**Pb**	**01 57 40.4**	**+1.2**
MRKS				*eS*	**Sg**	**01 58 18.2**	**+0.3**
KST	**Kastek** 47nm,0.4s	**2.73**	**14**	Pg	**Pb**	**01 57 39.9**	**+0.6**
KST				Lg	Lg	01 58 17.7	
KST	**Kastek** 47nm,0.4s	**2.73**	**14**	*eP*	**Pb**	**01 57 39.9**	**+0.6**
KST				*eS*	**Sg**	**01 58 17.7**	**-0.2**
MNAS	**Manas**	**2.85**	**318**	⇓*eP*	**Pn**	**01 57 37.3**	**+1.4**
MNAS				⇓*eS*	**Sn**	**01 58 12.2**	**+1.9**
IZV	**Izvestkoviy** 29nm,0.4s	**2.88**	**23**	Pg	**Pb**	**01 57 40.0**	**-1.9**
IZV				Lg	Lg	01 58 17.8	
IZV	**Izvestkoviy** 29nm,0.4s	**2.88**	**23**	*eP*	**Pb**	**01 57 40.0**	**-1.9**
IZV				*eS*	**Sb**	**01 58 17.8**	**+0.6**
USP	**Ospenovka** SNR=28	**2.90**	**352**	P	**Pb**	**01 57 41.5**	**-0.7**
MTBS	**Maitube** 48nm,0.3s	**2.92**	**20**	Pg	**Pg**	**01 57 43.9**	**-2.3**
MTBS				Lg	Lg	01 58 24.1	
MTBS	**Maitube** 48nm,0.3s	**2.92**	**20**	*eP*	**Pg**	**01 57 43.9**	**-2.3**
MTBS				*eS*	**Sg**	**01 58 24.1**	**+0.2**
TNSS	**Tian-Shan** 25nm,0.4s	**2.99**	**27**	Pg	**Pg**	**01 57 45.5**	**-2.1**
TNSS				Lg	Lg	01 58 26.8	
TNSS	**Tian-Shan** 25nm,0.4s	**2.99**	**27**	*eP*	**Pg**	**01 57 45.5**	**-2.1**
TNSS				*eS*	**Sg**	**01 58 26.8**	**+0.4**
SGDS	**Sogindy** 15nm,0.6s	**3.07**	**354**	Pg	**Pb**	**01 57 46.0**	**+0.9**
SGDS				Lg	Lg	01 58 27.8	
ANVS	**Anan'yevo**	**3.08**	**38**	⇑*eP*	**Pn**	**01 57 40.0**	**+0.9**
ANVS				⇑*eS*	**Sn**	**01 58 17.1**	**+1.0**
MDOK	**Medeo** 66nm,0.7s	**3.14**	**27**	Pg	**Pb**	**01 57 47.7**	**+1.5**
MDOK				Lg	Lg	01 58 30.5	
KNDC	**Almaty** 70nm,0.5s	**3.16**	**26**	⇓Pg	**Pb**	**01 57 48.1**	**+1.7**
KNDC				⇓Lg	Lg	01 58 30.2	
TRKS	**Terek-Say** 125nm,0.6s	**3.19**	**292**	⇑*eP*	**Pn**	**01 57 41.2**	**+0.6**
TRKS				⇑*eS*	**Sn**	**01 58 18.9**	**+0.2**
PRZ	**Przheval'sk**	**3.26**	**49**	⇑*eP*	**Pn**	**01 57 42.5**	**+0.9**
PRZ				⇑*eS*	**Sn**	**01 58 21.3**	**+0.8**
BTK	**Batken**	**3.27**	**265**	⇑*eP*	**Pn**	**01 57 42.8**	**+1.1**
BTK				⇑*eS*	**Sn**	**01 58 21.7**	**+0.9**
KTBS	**Karatobe** 1.5nm,0.5s	**3.52**	**19**	Pg	**Pb**	**01 57 54.1**	**+1.3**
KTBS				Lg	Lg	01 58 41.6	
KTBS	**Karatobe** 1.5nm,0.5s	**3.52**	**19**	*eP*	**Pb**	**01 57 54.1**	**+1.3**
KTBS				*eS*	**Sg**	**01 58 41.6**	**-1.8**
SATY	**Saty** 16nm,0.7s	**3.65**	**42**	Pg	**Pb**	**01 57 56.1**	**+1.2**
SATY				Lg	Lg	01 58 45.1	
SATY	**Saty** 16nm,0.7s	**3.65**	**42**	*eP*	**Pb**	**01 57 56.1**	**+1.2**
SATY				*eS*	**Sg**	**01 58 45.1**	**-2.3**
KURS	**Kuram** 11nm,0.6s	**3.86**	**36**	Pg	**Pb**	**01 58 00.4**	**+2.0**
KURS				Lg	Lg	01 58 52.8	
KURS	**Kuram** 11nm,0.6s	**3.86**	**36**	*eP*	**Pb**	**01 58 00.4**	**+2.0**
KURS				*eS*	**Sg**	**01 58 52.8**	**-1.3**
GAR	**Garm**	**3.92**	**251**	⇓*eP*	**Pn**	**01 57 51.5**	**+0.8**
GAR				⇓*eS*	**Sn**	**01 58 36.8**	**-0.1**
UZB	**Uzynbulak** 13nm,1.1s	**4.04**	**46**	Pg	**Pb**	**01 58 02.7**	**+1.2**
UZB				Lg	Lg	01 58 56.3	
UZB	**Uzynbulak** 13nm,1.1s	**4.04**	**46**	*eP*	**Pb**	**01 58 02.7**	**+1.2**
UZB				*eS*	**Sg**	**01 58 56.3**	**-3.5**
KPKS	**Kokpek** 12nm,0.8s	**4.08**	**40**	Pg	**Pb**	**01 58 03.4**	**+1.1**
KPKS				Lg	Lg	01 58 58.2	
KPKS	**Kokpek** 12nm,0.8s	**4.08**	**40**	*eP*	**Pb**	**01 58 03.4**	**+1.1**
KPKS				*eS*	**Sg**	**01 58 58.2**	**-3.2**
SHLS	**Shalkode** 14nm,0.4s	**4.29**	**48**	Pg	**Pg**	**01 58 12.9**	**+0.5**
SHLS				Lg	Lg	01 59 14.4	
SHLS	**Shalkode** 28nm,1.3s	**4.29**	**48**	*eP*	**Pg**	**01 58 12.9**	**+0.5**
SHLS				*eS*	**Sg**	**01 59 14.4**	**+6.5**
ARXS	**Arharly** 11nm,0.8s	**4.33**	**27**	Pg	**Pb**	**01 58 08.3**	**+1.8**
ARXS				Lg	Lg	01 59 06.6	
ARXS	**Arharly** 11nm,0.8s	**4.33**	**27**	*eP*	**Pb**	**01 58 08.3**	**+1.8**
ARXS				*eS*	**Sg**	**01 59 06.6**	**-2.6**
KK31	**Karatay Array** 0.4nm,0.3s,baz=125,slow=13,SNR=5.8	**4.36**	**310**	Pn	**Pn**	**01 57 59.1**	**+2.5**
KK31				⇓Pg	**Pg**	**01 58 10.6**	**-3.1**
KK31	1.6nm,0.3s,baz=129,slow=17,SNR=19			⇑Lg	Lg	01 59 10.3	
PDGK	**Podgornoye** 15nm,0.7s	**4.41**	**47**	⇑Pg	**Pb**	**01 58 09.5**	**+1.5**
PDGK				⇑Lg	Lg	01 59 08.0	
BLB	**Baldybastay** 7.9nm,0.5s	**4.48**	**33**	Pg	**Pg**	**01 58 12.7**	**-3.4**
BLB				Lg	Lg	01 59 14.2	
BTLS	**Baital** 4.5nm,0.6s	**4.71**	**351**	Pg	**Pb**	**01 58 15.1**	**+2.2**
BTLS				Lg	Lg	01 59 18.2	
BTLS	**Baital** 4.5nm,0.6s	**4.71**	**351**	*eP*	**Pb**	**01 58 15.1**	**+2.2**
BTLS				*eS*	**Sg**	**01 59 18.2**	**-3.1**
BRLS	**Boroldaу** 7.8nm,0.5s	**4.72**	**306**	Pg	**Pb**	**01 58 16.1**	**+2.9**
BRLS				Lg	Lg	01 59 20.0	
BRLS	**Boroldaу** 7.8nm,0.5s	**4.72**	**306**	*eP*	**Pb**	**01 58 16.1**	**+2.9**
BRLS				*eS*	**Sg**	**01 59 20.0**	**-1.9**
KTMS	**Ketmen** 2.0nm,0.4s	**4.98**	**51**	Pg	**Pb**	**01 58 19.5**	**+1.8**
KTMS				Lg	Lg	01 59 25.3	
KTMS	**Ketmen** 2.0nm,0.4s	**4.98**	**51**	*eP*	**Pb**	**01 58 19.4**	**+1.8**
KTMS				*eS*	**Sg**	**01 59 25.3**	**-4.9**
KNOS	**Konyrlen** 4.2nm,1.1s	**4.99**	**36**	Pg	**Pb**	**01 58 20.4**	**+2.6**
KNOS				Lg	Lg	01 59 27.4	
DJR	**Jarkent** 3.1nm,0.5s	**5.26**	**40**	Pg	**Pb**	**01 58 26.0**	**+3.6**
DJR				Lg	Lg	01 59 37.3	
DJR	**Jarkent** 3.1nm,0.5s	**5.26**	**40**	*eP*	**Pb**	**01 58 26.0**	**+3.6**
DJR				*eS*	**Sg**	**01 59 37.3**	**-1.9**
KAPS	**Kapalarasan** 6.9nm,0.6s	**5.81**	**31**	Pg	**Pb**	**01 58 35.1**	**+3.3**
KAPS				Lg	Lg	01 59 52.5	
KAPS	**Kapalarasan** 6.9nm,0.6s	**5.81**	**31**	*eP*	**Pb**	**01 58 35.1**	**+3.3**
KAPS				*eS*	**Sg**	**01 59 52.5**	**-4.3**

NOU 15 02:01:05.8,39°.17S×174°.78E,h217km,MLv3.7/19,North Island, New Zealand
WEL 15 02:01:08.8±0.9,39°.5±14°×17°.5E±°,h202km±6km,M2.8/11, ML2.6/7,MLv2.8/11,Error ellipse: s-maj=19.0km s-min=10.6km az=171.6
ISC 15 02:01:03.0±1.7,39°.10S±0°.05×174°.79E±0°.05,h243km±9km,
n144,σ1§62/155,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
VRZ	**Vera Road**	**0.03**	**229**	P	**Pn**	**02 01 35.2**	**+1.0**
VRZ				S	**S**	**02 01 56.9**	**-1.9**
DREZ	**Durham Road**	**0.47**	**259**	P	**Pn**	**02 01 36.6**	**+1.7**
LREZ	**Lake Rotokare**	**0.47**	**220**	P	**Pn**	**02 01 36.8**	**+1.9**
LREZ				S	**S**	**02 02 00.1**	**+0.1**
PKVZ	**Pokaka**	**0.47**	**113**	P	**Pn**	**02 01 36.5**	**+1.5**
PKVZ				S	**S**	**02 01 58.1**	**-2.0**
TWVZ	**Taurewa**	**0.51**	**86**	P	**Pn**	**02 01 36.4**	**+1.2**
TWVZ				S	**S**	**02 01 58.2**	**-2.2**
PREZ	**Palmer Road**	**0.55**	**244**	P	**Pn**	**02 01 37.1**	**+1.9**
NEZ	**North Egmont**	**0.56**	**253**	P	**Pn**	**02 01 37.2**	**+1.9**
NEZ				S	**S**	**02 02 00.5**	**-0.2**
HIZ	**Hauiti**	**0.59**	**5**	P	**Pn**	**02 01 36.5**	**+1.1**
HIZ	**Hauiti**	**0.59**	**5**	P	**Pn**	**02 01 36.4**	**+1.1**
HIZ				S	**S**	**02 01 59.3**	**-1.5**
COVZ	**Chateau Observ**	**0.59**	**100**	P	**Pn**	**02 01 38.0**	**+2.5**
COVZ				S	**S**	**02 01 59.0**	**-2.0**
FWVZ	**Far West T-bar**	**0.61**	**105**	P	**Pn**	**02 01 37.2**	**+1.5**
FWVZ				S	**S**	**02 01 59.1**	**-2.2**
TRVZ	**Turoa**	**0.62**	**109**	P	**Pn**	**02 01 37.3**	**+1.6**
TRVZ				S	**S**	**02 01 59.2**	**-2.1**
MAVZ	**Matarangi**	**0.62**	**106**	P	**Pn**	**02 01 37.4**	**+1.6**
MAVZ				S	**S**	**02 01 59.4**	**-2.1**
WTVZ	**West Tongariro**	**0.62**	**91**	P	**Pn**	**02 01 37.1**	**+1.5**
WTVZ				S	**S**	**02 01 59.2**	**-2.0**
KHEZ	**Kahui Hut**	**0.63**	**252**	P	**Pn**	**02 01 37.4**	**+1.8**
KHEZ	**Kahui Hut**	**0.63**	**252**	S	**S**	**02 02 00.9**	**-0.2**
KHEZ	**Kahui Hut**	**0.63**	**252**	P	**Pn**	**02 01 37.3**	**+1.8**
NGZ	**Ngauruhoe**	**0.64**	**97**	P	**Pn**	**02 01 37.3**	**+1.6**
WHVZ	**Whangaehu Hut**	**0.65**	**106**	P	**Pn**	**02 01 37.4**	**+1.6**
KRVZ	**Karewarewa**	**0.66**	**89**	P	**Pn**	**02 01 37.3**	**+1.5**
SNVZ	**South Ngauruho**	**0.67**	**97**	P	**Pn**	**02 01 37.5**	**+1.7**
WNVZ	**Wahianoa**	**0.67**	**110**	P	**Pn**	**02 01 37.5**	**+1.7**
WAZ	**Wanganui**	**0.67**	**167**	P	**Pn**	**02 01 37.7**	**+2.1**
OTVZ	**Oturere**	**0.68**	**95**	P	**Pn**	**02 01 37.7**	**+1.8**
NTVZ	**North Tongarir**	**0.69**	**90**	P	**Pn**	**02 01 37.5**	**+1.6**
TMVZ	**Te Maari**	**0.71**	**91**	P	**Pn**	**02 01 37.8**	**+1.9**
ETVZ	**East Tongariro**	**0.72**	**93**	P	**Pn**	**02 01 37.7**	**+1.7**
KATZ	**Kakaramea**	**0.72**	**80**	P	**Pn**	**02 01 37.6**	**+1.6**
NMEZ	**Namu Road**	**0.77**	**246**	P	**Pn**	**02 01 37.8**	**+1.8**
MOVZ	**Moawhango**	**0.81**	**112**	P	**Pn**	**02 01 37.6**	**+1.3**
WATZ	**Wairara**	**0.84**	**62**	P	**Pn**	**02 01 38.0**	**+1.5**
TLZ	**Tolley Road**	**0.97**	**37**	P	**Pn**	**02 01 38.2**	**+1.1**
KUTZ	**Kaahu Road**	**1.01**	**53**	P	**Pn**	**02 01 38.9**	**+1.5**
BHHZ	**Black Hill Sta**	**1.06**	**112**	P	**Pn**	**02 01 39.0**	**+1.4**
OHWZ	**Ohakea**	**1.17**	**160**	P	**Pn**	**02 01 40.6**	**+2.4**
MRHZ	**Matea Rd**	**1.30**	**79**	P	**Pn**	**02 01 40.2**	**+1.0**
KWHZ	**Kaweka Forest**	**1.31**	**105**	P	**Pn**	**02 01 41.2**	**+2.0**
TSZ	**Takapari Road**	**1.31**	**137**	P	**Pn**	**02 01 41.2**	**+2.0**
BKZ	**Black Stump Fm**	**1.33**	**93**	P	**Pn**	**02 01 40.5**	**+1.1**
BKZ	**Black Stump Fm**	**1.33**	**93**	S	**S**	**02 02 05.3**	**-2.6**
ALRZ	**Allen Road**	**1.33**	**66**	P	**Pn**	**02 01 40.7**	**+1.3**
KRHZ	**Kereru**	**1.34**	**114**	P	**Pn**	**02 01 41.3**	**+1.9**
HRRZ	**Handcock Road**	**1.37**	**59**	P	**Pn**	**02 01 41.2**	**+1.5**
TOZ	**Tahuroa Road**	**1.48**	**22**	P	**Pn**	**02 01 40.5**	**+0.1**
POWZ	**Post Office Ro**	**1.49**	**150**	P	**Pn**	**02 01 42.3**	**+1.8**
MCHZ	**McNeill Hill**	**1.52**	**104**	P	**Pn**	**02 01 43.2**	**+2.5**
RRRZ	**Republican Roa**	**1.55**	**61**	P	**Pn**	**02 01 42.3**	**+1.2**
NMHZ	**Naumai**	**1.57**	**90**	P	**Pn**	**02 01 43.6**	**+2.4**
OMRZ	**Omania**	**1.59**	**52**	P	**Pn**	**02 01 42.4**	**+1.0**
DVHZ	**Dannevirke**	**1.60**	**139**	P	**Pn**	**02 01 43.2**	**+1.9**
TARZ	**Mount Tarawera**	**1.60**	**58**	P	**Pn**	**02 01 42.9**	**+1.4**
MTHZ	**Maungataniwha**	**1.62**	**82**	P	**Pn**	**02 01 42.9**	**+1.3**
MRZ	**Mangatainoka R**	**1.67**	**159**	P	**Pn**	**02 01 43.5**	**+1.6**
MUGZ	**Murupara**	**1.67**	**69**	P	**Pn**	**02 01 42.7**	**+0.7**
PRWZ	**Pori Road**	**1.71**	**148**	P	**Pn**	**02 01 44.4**	**+2.1**
ARHZ	**Aropaoanui**	**1.72**	**96**	P	**Pn**	**02 01 44.6**	**+2.2**
OGWZ	**Otaki Gorge**	**1.74**	**170**	P	**Pn**	**02 01 44.4**	**+2.0**
KAHZ	**Kahuranaki**	**1.76**	**114**	P	**Pn**	**02 01 45.2**	**+2.5**
KIW	**Kapiti Island**	**1.76**	**177**	P	**Pn**	**02 01 44.3**	**+1.7**
RTZ	**Ruatahuna**	**1.78**	**75**	P	**Pn**	**02 01 44.2**	**+1.2**
TGRZ	**Tauranga**	**1.79**	**41**	P	**Pn**	**02 01 44.5**	**+1.4**
RAHZ	**Arahi**	**1.80**	**85**	P	**Pn**	**02 01 44.9**	**+1.8**
DUWZ	**D'Urville Isla**	**1.82**	**201**	P	**Pn**	**02 01 45.0**	**+1.8**
PRHZ	**Porangahau**	**1.84**	**130**	P	**Pn**	**02 01 45.5**	**+2.2**
PXZ	**Pawanui**	**1.85**	**121**	P	**Pn**	**02 01 45.7**	**+2.3**
CKHZ	**Cape Kidnapper**	**1.86**	**108**	P	**Pn**	**02 01 46.0**	**+2.5**
TIWZ	**Tintock**	**1.87**	**154**	P	**Pn**	**02 01 45.4**	**+1.7**
HOWZ	**Holdsworth Sta**	**1.88**	**163**	P	**Pn**	**02 01 45.3**	**+1.6**
ANWZ	**Angora Road**	**1.88**	**137**	P	**Pn**	**02 01 45.9**	**+2.2**
BFZ	**Birch Farm**	**1.93**	**145**	P	**Pn**	**02 01 45.8**	**+1.6**
BFZ	**Birch Farm**	**1.93**	**145**	S	**S**	**02 02 15.4**	**-1.3**
BFZ	**Birch Farm**	**1.93**	**145**	P	**Pn**	**02 01 45.9**	**+1.8**
URZ	**Urewera**	**2.00**	**66**	P	**Pn**	**02 01 45.2**	**+0.3**
URZ	**Urewera**	**2.00**	**66**	P	**Pn**	**02 01 45.5**	**+0.6**
CAW	**Cannon Point**	**2.01**	**174**	P	**Pn**	**02 01 46.6**	**+1.7**
SNGZ	**Shannon Statio**	**2.02**	**82**	P	**Pn**	**02 01 46.7**	**+1.7**
MKAZ	**Moumakai**	**2.02**	**8**	P	**Pn**	**02 01 46.7**	**+1.7**
AWAZ	**Awhitu Peninsu**	**2.04**	**357**	P	**Pn**	**02 01 47.2**	**+1.9**
MTW	**Mount Morrison**	**2.12**	**165**	P	**Pn**	**02 01 47.4**	**+1.5**
RAGZ	**Rawiri**	**2.14**	**74**	P	**Pn**	**02 01 47.5**	**+1.2**
TCW	**Tory Channel**	**2.14**	**190**	P	**Pn**	**02 01 48.2**	**+2.1**
ETAZ	**East Tamaki Re**	**2.15**	**3**	P	**Pn**	**02 01 48.1**	**+1.8**
TMWZ	**Te Maipa**	**2.17**	**157**	P	**Pn**	**02 01 48.1**	**+1.7**
WTAZ	**Waiatarua**	**2.17**	**355**	P	**Pn**	**02 01 48.6**	**+2.1**
WEL	**Wellington**	**2.18**	**180**	P	**Pn**	**02 01 48.3**	**+1.9**
SNZO	**South Karori**	**2.21**	**182**	P	**Pn**	**02 01 48.1**	**+1.4**
SNZO	**South Karori**	**2.21**	**182**	P	**S**	**02 02 19.8**	**-1.4**
KNZ	**Kokohu**	**2.25**	**89**	P	**Pn**	**02 01 49.0**	**+1.8**
MWZ	**Matawai**	**2.28**	**71**	P	**Pn**	**02 01 48.5**	**+1.0**
WIAZ	**Waiheke Island**	**2.32**	**7**	P	**Pn**	**02 01 49.8**	**+1.8**
PAWZ	**Paruwai Farm**	**2.33**	**168**	P	**Pn**	**02 01 49.5**	**+1.6**
MBAZ	**Motutapu North**	**2.33**	**2**	P	**Pn**	**02 01 49.9**	**+1.8**
MSWZ	**Moikau Station**	**2.34**	**171**	P	**Pn**	**02 01 49.5**	**+1.5**
RIGZ	**Rimuhau**	**2.35**	**81**	P	**Pn**	**02 01 50.0**	**+1.8**
NNZ	**Nelson**	**2.37**	**207**	P	**Pn**	**02 01 49.9**	**+1.6**
TRWZ	**Traveller**	**2.39**	**164**	P	**Pn**	**02 01 50.3**	**+1.7**
TUWZ	**Tuamarina**	**2.41**	**195**	P	**Pn**	**02 01 51.3**	**+2.6**
PRGZ	**Paritu Road**	**2.42**	**87**	P	**Pn**	**02 01 50.7**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.42**	**92**	P	**Pn**	**02 01 51.1**	**+2.2**
QRZ	**Quartz Range**	**2.44**	**225**	P	**Pn**	**02 01 49.8**	**+0.7**
QRZ	**Quartz Range**	**2.44**	**225**	S	**S**	**02 02 23.1**	**-2.4**
QRZ	**Quartz Range**	**2.44**	**225**	P	**Pn**	**02 01 50.0**	**+0.9**
TKGZ	**Te Karaka**	**2.48**	**75**	P	**Pn**	**02 01 51.2**	**+1.7**
PLWZ	**Palliser**	**2.49**	**172**	P	**Pn**	**02 01 51.0**	**+1.4**
RUGZ	**Raukumara Rang**	**2.53**	**64**	P	**Pn**	**02 01 50.3**	**+0.1**
TWGZ	**Tauwhareparae**	**2.67**	**71**	P	**Pn**	**02 01 53.7**	**+2.2**
BSWZ	**Blackbirch Sta**	**2.70**	**195**	P	**Pn**	**02 01 53.8**	**+2.1**
HAZ	**Te Kaha**	**2.71**	**61**	P	**Pn**	**02 01 52.1**	**+0.3**
CNGZ	**Carnagh Statio**	**2.74**	**78**	P	**Pn**	**02 01 51.5**	**-0.7**
MRNZ	**Matariki Terra**	**2.77**	**213**	P	**Pn**	**02 01 53.5**	**+1.1**
PKGZ	**Pakihiroa**	**2.86**	**65**	P	**Pn**	**02 01 54.6**	**+1.1**
GRZ	**Great Barrier**	**2.90**	**11**	P	**Pn**	**02 01 56.0**	**+2.0**
PUZ	**Puketiti**	**2.91**	**70**	P	**Pn**	**02 01 55.5**	**+1.5**
THZ	**Tophouse**	**3.02**	**208**	P	**Pn**	**02 01 56.6**	**+1.4**
WMGZ	**Waiomatatini S**	**3.12**	**67**	P	**Pn**	**02 01 57.2**	**+0.8**
MXZ	**Matakaoa Point**	**3.17**	**62**	P	**Pn**	**02 01 58.2**	**+1.2**
MXZ	**Matakaoa Point**	**3.17**	**62**	P	**Pn**	**02 01 57.8**	**+1.0**
WCZ	**Waipu Caves**	**3.18**	**353**	P	**Pn**	**02 01 59.2**	**+2.2**
KHZ	**Kahutara**	**3.44**	**196**	P	**Pn**	**02 02 01.5**	**+1.7**
KHZ	**Kahutara**	**3.44**	**196**	P	**S**	**02 02 43.3**	**-1.6**
KHZ	**Kahutara**	**3.44**	**196**	P	**Pn**	**02 02 01.6**	**+1.7**
DSZ	**Denniston Nort**	**3.49**	**220**	P	**Pn**	**02 02 01.4**	**+0.9**
GVZ	**Greta Valley S**	**4.08**	**198**	P	**Pn**	**02 02 08.6**	**+1.2**
LTZ	**Lake Taylor**	**4.14**	**207**	P	**Pn**	**02 02 09.3**	**+1.2**
AMCZ	**Amberley**	**4.38**	**201**	P	**Pn**	**02 02 12.3**	**+1.5**
OXZ	**Oxford**	**4.70**	**205**	P	**Pn**	**02 02 15.5**	**+0.8**
OKCZ	**Okains Bay**	**4.79**	**195**	P	**Pn**	**02 02 16.9**	**+0.9**
MQZ	**McQueen's Vall**	**4.87**	**199**	P	**Pn**	**02 02 17.2**	**+0.4**
WVZ	**Waitaha Valley**	**5.01**	**216**	P	**Pn**	**02 02 19.1**	**+0.6**
RACZ	**Rakaia**	**5.03**	**202**	P	**Pn**	**02 02 19.5**	**+0.8**
MHCZ	**Mount Hutt**	**5.04**	**208**	P	**Pn**	**02 02 19.9**	**+0.8**
WACZ	**Wakanui South**	**5.32**	**204**	P	**Pn**	**02 02 23.4**	**+1.1**
GCSZ	**Gaunt Creek Bo**	**5.39**	**217**	P	**Pn**	**02 02 24.3**	**+1.0**
RPZ	**Rata Peaks**	**5.39**	**210**	P	**Pn**	**02 02 24.4**	**+1.1**
RPZ	**Rata Peaks**	**5.39**	**210**	P	**Pn**	**02 02 24.0**	**+0.7**
ARCZ	**Arundel**	**5.55**	**208**	P	**Pn**	**02 02 25.8**	**+0.6**
FOZ	**Fox Glacier**	**5.80**	**219**	P	**Pn**	**02 02 28.8**	**+0.6**
TMZ	**Timaru**	**5.99**	**207**	P	**Pn**	**02 02 32.0**	**+1.3**
LBZ	**Lake Benmore**	**6.30**	**212**	P	**Pn**	**02 02 35.5**	**+0.9**
ODZ	**Otahua Downs**	**6.69**	**206**	P	**Pn**	**02 02 41.5**	**+2.0**
ODZ	**Otahua Downs**	**6.69**	**206**	P	**Pn**	**02 02 40.7**	**+1.2**
JCZ	**Jackson Bay**	**6.70**	**220**	P	**Pn**	**02 02 40.5**	**+0.7**
JCZ	**Jackson Bay**	**6.70**	**220**	P	**Pn**	**02 02 39.9**	**+0.2**
WKZ	**Wanaka**	**7.15**	**215**	P	**Pn**	**02 02 45.6**	**+0.2**

SJA 15 02:05:10.6±0.7,31°.83S×71°.61W,h28km±3km, ML3.3, MW3.5
GUC 15 02:05:13.9±0.9,31°.84S×71°.29W,h58km±3km, ML3.4
ISC 15 02:05:13.8±1.2,31°.85S±0°.02×71°.44W±0°.04,h26km±12km,
n55,σ1§36/98,9C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CO04	**Los Peladeros**	**0.44**	**116**	⇑*eP*	**Pb**	**02 05 24.2**	**+0.9**
CO04				*eS*	**Sn**	**02 05 31.9**	**-0.2**
CO04				IAML		02 05 32.4	
	comp=E,8μm,0.2s		

GO04 IAML 02 06 07.1
comp=E,2µm,0.3s
MT03 Universidad Ad 1.82 155 *e*P **Pn 02 05 43.4 -0.2**
MT03 *e*S **Sn 02 06 07.3 +1.4**
MT03 IAML 02 06 10.5
comp=Z,196nm,0.4s
MT03 Universidad Ad 1.82 155 *e*P **Pn 02 05 43.2 -0.3**
MT03 *e*S **Sn 02 06 05.0 -0.9**
MT03 IAML 02 06 10.2
comp=E,593nm,0.3s
RTLS Leoncito 1.83 89 *e*P **Pn 02 05 43.9 0.0**
RTLS *e*S **Sb 02 06 08.5 -0.8**
RTLS IAML 02 06 10.9
comp=Z,351nm,0.7s
MT04 Ro Olivares 1.91 145 *e*P **Pn 02 05 45.0 +0.1**
MT04 *e*S **Sb 02 06 10.6 -0.9**
MT04 IAML 02 06 17.4
comp=Z,130nm,0.6s
MT04 Ro Olivares 1.91 145 *e*P **Pn 02 05 44.0 -0.9**
MT04 *e*S **Sn 02 06 06.7 -1.4**
MT04 IAML 02 06 16.8
comp=E,272nm,0.3s
CO05 La Serena 1.93 5 *i*P **Pn 02 05 45.0 0.0**
CO05 *i*S **Sn 02 06 08.3 -0.1**
CO05 IAML 02 06 13.3
comp=N,358nm,0.2s
MT09 Talagante 1.96 169⇑ *e*P **Pn 02 05 45.8 +0.2**
MT09 *e*S **Sn 02 06 09.5 +0.1**
MT09 IAML 02 06 15.2
comp=E,309nm,0.3s
MT08 Bocatoma Ro 2.00 143 *e*P **Pn 02 05 47.4 +1.3**
MT08 *e*S Sn 02 05 54.9 -16
MT08 IAML 02 06 18.2
comp=Z,107nm,0.6s
MT08 Bocatoma Ro 2.00 143 *i*P **Pn 02 05 46.3 +0.1**
MT08 *i*S **Sn 02 06 07.8 -2.6**
MT08 IAML 02 06 18.3
comp=N,176nm,0.4s
MT01 Popeta 2.02 175 *e*P **Pn 02 05 46.0 -0.2**
MT01 *e*S **Sb 02 06 13.8 -0.7**
MT01 IAML 02 06 18.0
comp=Z,176nm,0.5s
MT01 Popeta 2.02 175⇑ *e*P **Pn 02 05 46.0 -0.2**
MT01 *e*S **Sn 02 06 10.6 0.0**
MT01 IAML 02 06 17.8
comp=E,244nm,0.3s
MT12 Pirque 2.02 158⇑ *e*P **Pn 02 05 45.8 -0.5**
MT12 *e*S **Sn 02 06 09.7 -1.2**
MT12 IAML 02 06 19.0
comp=N,355nm,0.5s
CO01 Juntas del Tor 2.20 32 *e*P **Pn 02 05 48.5 -0.3**
CO01 *e*S **Sn 02 06 15.2 -0.1**
CO01 IAML 02 06 15.5
comp=Z,159nm,0.6s
CO01 Juntas del Tor 2.20 32⇑ *e*P **Pn 02 05 48.6 -0.3**
CO01 *e*S **Sn 02 06 14.2 -1.2**
ARCO CERRO ARCO 2.35 116 *e*P **Pn 02 05 52.5 +1.6**
ARCO *e*S **Sb 02 06 28.6 +4.6**
ARCO IAML 02 06 31.4
comp=Z,107nm,0.3s
ZON Zonda 2.38 83 *e*P **Pn 02 05 52.0 +0.8**
ZON *e*S **Sb 02 06 22.9 -2.0**
ZON IAML 02 06 26.5
comp=Z,77nm,0.5s
AROD Rodeo 2.38 46 *e*P **Pn 02 05 52.5 +1.0**
AROD *e*S **Sb 02 06 24.3 -1.0**
ACCO Cerro Coronel 2.39 59 *e*P **Pn 02 05 52.8 +1.2**
ACCO *e*S **Sb 02 06 24.5 -1.1**
ACCO IAML 02 06 25.6
comp=Z,115nm,0.3s
SJA San Juan 2.48 83 *e*P **Pn 02 05 55.4 +2.9**
SJA IAML 02 06 45.5
comp=Z,59nm,0.3s
AAGR Agrelo 2.53 120 *e*P **Pn 02 05 55.3 +1.9**
AAGR *e*S Sn 02 06 13.4 -10
AAGR IAML 02 06 14.2
comp=Z,110nm,0.3s
RTLL Cerro Villicun 2.59 79 *e*P **Pn 02 05 55.3 +1.2**
RTLL *e*S **Sb 02 06 28.3 -2.6**
RTLL IAML 02 06 30.2
comp=Z,136nm,0.4s
ACDV Cuesta del Vie 2.60 51 *e*P **Pn 02 05 56.0 +1.6**
ACDV IAML 02 06 46.1
comp=Z,44nm,0.6s
CFA Coronel Fontan 2.74 86 *e*P **Pn 02 05 56.7 +0.4**
CFA *e*S **Sb 02 06 33.4 -2.0**
CFA IAML 02 06 35.9
comp=Z,62nm,0.2s
LCO Las Campanas 2.90 13 *e*P **Pn 02 05 58.2 -0.4**
LCO *e*S **Sn 02 06 36.6 +3.8**
LCO IAML 02 06 43.3
comp=Z,198nm,0.3s
AVIZ Vizcacheras 2.95 124 *e*P Pb 02 06 13.5 +7.6
BO02 Sierra Bellavi 2.99 169 *e*P **Pn 02 05 59.6 -0.1**
BO02 *e*S **Sn 02 06 34.4 -0.2**
BO02 IAML 02 06 47.5
comp=Z,109nm,0.2s
AC05 El Transito 3.17 19 *e*P **Pn 02 06 01.9 -0.2**
AC05 *e*S **Sn 02 06 39.8 +0.6**
AC05 IAML 02 06 54.4
comp=Z,63nm,0.2s
GO05 Hualane 3.18 187 *e*P **Pn 02 06 01.4 -0.9**
GO05 *e*S **Sb 02 06 51.0 +3.1**
GO05 IAML 02 06 58.1
comp=Z,34nm,0.5s
AVFE Valle Fertil 3.62 72 *e*P **Pn 02 06 07.7 -0.6**
AVFE IAML 02 06 57.3
comp=Z,115nm,0.4s
AC04 Llanos de Chal 3.65 5 *e*S **Sn 02 06 52.3 +1.5**
AC04 IAML 02 07 01.9
comp=Z,56nm,0.7s
VCA Vinchina 4.18 43 *e*P **Pn 02 06 17.7 +1.6**
VCA *e*S **Sb 02 07 18.2 +1.4**
VCA IAML 02 07 21.7
comp=Z,85nm,0.6s
ACLC CERRO LA CRUZ 4.56 59 *e*P **Pn 02 06 21.1 -0.3**
ACLC *e*S **Sn 02 07 12.8 -0.9**
ACLC IAML 02 07 24.0
comp=Z,36nm,0.4s
MRA San Martin 4.89 98 *e*P **Pn 02 06 24.4 -1.4**
MRA *e*S **Sn 02 07 24.9 +3.3**
MRA IAML 02 07 25.1
comp=Z,28nm,0.6s
TINO Tinogasta 5.05 43 *e*S **Sn 02 07 30.1 +4.4**
TINO IAML 02 07 37.0
comp=Z,26nm,0.4s

IDC 15 02:17:10.2±6.0, 23°44S×179°28W, h488km±41km, mb3.4/3, mbtmp4.3/3, Error ellipse: s-maj=127.1km s-min=55.4km az=151.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.51**	**248**	P	P	02 23 25.1	-0.1
	1.6nm,0.5s,baz=96,slow=10,SNR=4.7 1.6nm,0.5s						
ASAR	**Alice Springs**	**42.76**	**260**	P	P	02 24 24.2	+0.1
ASAR	2.4nm,0.5s,baz=102,slow=7.2,SNR=24 0.7nm,0.8s,baz=90,slow=4.1,SNR=3.6 2.4nm,0.5s			ScP	ScP	02 29 08.4	-0.5
WRA	**Warramunga Arr**	**43.10**	**265**	P	P	02 24 26.3	-0.5
	3.2nm,0.5s,baz=103,slow=8.0,SNR=55 3.2nm,0.5s						
HFS	**Hagfors**	**142.22**	**349**	PKP	PKPdf	02 35 45.4	-0.5
	0.5nm,0.3s,baz=64,slow=3.4,SNR=7.8						

*TEH **15** 02:23:26.8, 26°.50N×53°.47E, h14km±60km, ML3.5, Presumed earthquake*
*DSN **15** 02:23:29.9±1.3, 26°.71N×53°.72E, h10km, ML2.8/8, Error ellipse: s-maj=18.0km s-min=12.4km az=28.0*
*IDC **15** 02:23:30.5±3.3, 27°.26N×53°.41E, h0km, mb3.5/6, mbtmp3.5/7, ML4.1/1, Error ellipse: s-maj=64.2km s-min=34.2km az=155.0*

ISC 15 02:23:28.2±0.8, 26°.63N±0°.06×53°.50E±0°.09, h10km, n22, σ1s43/24, mb3.6/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.77**	**337**	Pg	**Pb**	**02 23 43.8**	**+0.1**
LMD1				Sg	**Sn**	**02 23 56.4**	**-0.5**
KHL1	**Khalili_Fars**	**1.02**	**350**	Pg	**Pg**	**02 23 48.2**	**+0.3**
QIR1	**Qir**	**1.89**	**348**	Pn	**Pb**	**02 24 02.4**	**-0.5**
GENO	**Geno**	**2.51**	**72**	Pn	**Pn**	**02 24 09.8**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.54**	**129**	P	**Pn**	**02 24 10.7**	**+1.1**
ASUD	**Al Ashush, Dub**	**2.59**	**140**	P	**Pn**	**02 24 12.1**	**+1.9**
MDH	**Madha**	**2.85**	**117**	P	**Pn**	**02 24 14.0**	**+0.3**
UOSS	**Minazif**	**2.96**	**124**	P	**Pn**	**02 24 14.7**	**-0.6**
HATD	**Hatta, Dubai**	**2.98**	**126**	P	**Pn**	**02 24 15.1**	**-0.5**
ASHO	**Ashiyiah**	**3.02**	**129**	P	**Pn**	**02 24 16.7**	**+0.6**
ASHO				S	**Sn**	**02 24 52.6**	**+0.2**
SOHO	**SOHO**	**3.70**	**131**	P	**Pn**	**02 24 25.3**	**-0.2**
CHMN	**Cheshme madani**	**4.81**	**47**	Pn	**Pn**	**02 24 43.0**	**+2.0**
IMEH	**Mehriz**	**4.85**	**11**	Pn	**Pn**	**02 24 42.7**	**+1.2**
KBAM	**BAM**	**5.05**	**59**	Pn	**Pn**	**02 24 44.9**	**+0.8**
TAFT	**Taft - Yazd**	**5.11**	**6**	Pn	**Pn**	**02 24 46.4**	**+1.3**
MMAI	**Mount Meron Ar**	**16.93**	**296**	Pn	**Pn**	**02 27 22.6**	**-2.7**
	0.7nm,0.3s,baz=108,slow=17,SNR=1.3 0.2nm,0.3s						
BRTR	**Keskin Array B**	**21.08**	**313**	P	**P**	**02 28 12.0**	**-0.9**
	0.3nm,0.6s,baz=121,slow=12,SNR=1.8 0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**35.75**	**32**	P	**P**	**02 30 26.4**	**-0.8**
	0.9nm,0.6s,baz=250,slow=9.2,SNR=4.5 0.9nm,0.6s						
FINES	**FINESS Array B**	**39.40**	**340**	P	**P**	**02 30 56.9**	**-1.0**
	1.0nm,0.6s,baz=143,slow=11,SNR=8.1 1.0nm,0.6s						
HFS	**Hagfors**	**43.10**	**332**	P	**P**	**02 31 27.6**	**-0.8**
	0.7nm,0.5s,baz=134,slow=8.5,SNR=7.4 0.7nm,0.5s						
NOA	**NORSAR Array B**	**44.62**	**332**	P	**P**	**02 31 38.8**	**-1.9**
	0.2nm,0.5s,baz=121,slow=8.5,SNR=2.5 0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**50.21**	**265**	P	**P**	**02 32 28.5**	**+3.8**
	0.4nm,0.8s,baz=72,slow=9.4,SNR=1.2 0.4nm,0.8s						

*NEIC **15** 02:33:12.6±2.2, 8°.47S±0°.09×116°.80E±0°.03, h153km±7km, mb4.0/9, Error ellipse: s-maj=12.8km s-min=4.8km az=178.0*
*IDC **15** 02:33:14.9±2.8, 8°.36S×116°.96E, h173km±26km, mb3.5/10, mbtmp4.0/11, MS2.6/1, Error ellipse: s-maj=27.9km s-min=11.4km az=55.0*
*DJA **15** 02:33:14.1±0.3, 9°.5S×11°.7E±°, h136km±4km, M4.5/18, mb4.4/5, MLv4.5/18*

ISC 15 02:33:12.3±0.5, 8°.47S±0°.06×116°.84E±0°.05, h150km, n53, σ1s35/59, mb3.9/10, 2C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.27**	**172**	P	**Pn**	**02 33 32.9**	**+0.1**
TWSI				S	**Sn**	**02 33 47.6**	**-0.8**
PLAI	**Plampang**	**0.99**	**111**	P	**Pn**	**02 33 37.5**	**+0.5**
PLAI				S	**Sn**	**02 33 55.1**	**-0.7**
KHKI	**Kahang-Kahang**	**1.23**	**275**	P	**Pn**	**02 33 40.6**	**+1.4**
IGBI	**Denpasar**	**1.71**	**258**	P	**Pn**	**02 33 45.0**	**+0.8**
IGBI				S	**Sn**	**02 34 08.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**2.66**	**270**		**Pn**	**02 33 56.1**	**+0.6**
JAGI				Sn	**Sn**	**02 34 28.4**	**-0.4**
JAGI	**Jajag, Banyuwa**	**2.66**	**270**	P	**Pn**	**02 33 55.9**	**+0.4**
WSI	**Waingapu**	**3.61**	**109**	P	**Pn**	**02 34 10.4**	**+2.8**
KAPI	**Kappang**	**4.49**	**40**	P	**Pn**	**02 34 21.0**	**+2.0**
	9.2nm,0.3s,baz=217,slow=10,SNR=9.0						
KAPI				S	**Sn**	**02 35 12.4**	**+1.4**
	6.2nm,0.4s,baz=90,slow=16,SNR=1.5						
KAPI	**Kappang**	**4.49**	**40**		**Pn**	**02 34 20.7**	**+1.7**
KAPI	**Kappang**	**4.49**	**40**	P	**Pn**	**02 34 21.0**	**+2.0**
SNJI	**Sawahan-Nganju**	**5.08**	**277**	P	**Pn**	**02 34 29.2**	**+2.2**
MMRI	**Maumere**	**5.34**	**92**	Pn	**Pn**	**02 34 30.9**	**+0.6**
UGM	**Wanagama**	**6.28**	**275**	Pn	**Pn**	**02 34 41.8**	**-1.1**
UGM	**Wanagama**	**6.28**	**275**	P	**Pn**	**02 34 44.6**	**+1.7**
	153nm,2.1s						
BATI	**Baumata**	**6.95**	**105**	P	**Pn**	**02 34 47.7**	**-4.0**
	40nm,0.4s,baz=348,slow=12,SNR=3.2						
BATI				S	Sn	02 35 56.4	-13
	22nm,0.3s,baz=261,slow=9.1,SNR=1.4						
SOEI	**Soe**	**7.44**	**100**	Pn	**Pn**	**02 34 58.1**	**-0.4**
BBJI	**Bungbulang**	**9.16**	**276**	Pn	**Pn**	**02 35 19.3**	**-2.1**
FITZ	**Fitzroy Crossi**	**12.83**	**139**	P	**Pn**	**02 36 08.6**	**-0.9**
	2.9nm,0.8s,baz=323,slow=7.5,SNR=9.3						
FITZ				S	Sn	02 38 21.5	-10
	7.4nm,0.5s,baz=172,slow=18,SNR=14						
MBWA	**Marble Bar**	**12.92**	**168**	Pn	**Pn**	**02 36 09.4**	**-1.1**
KNRA	**Kununurra**	**13.67**	**123**	Pn	**Pn**	**02 36 19.4**	**-0.8**
GIRL	**Giralia**	**14.31**	**190**		**Pn**	**02 36 28.8**	**+0.6**
MTN	**Manton Dam**	**14.70**	**108**		**Pn**	**02 36 32.0**	**-1.1**
FAKI	**Fak Fak**	**16.29**	**71**		**Pn**	**02 36 51.4**	**-1.3**
WB0	**Warramunga Arr**	**20.36**	**125**	P	**P**	**02 37 36.8**	**-0.5**
WB0				IAmb	IAmb	02 37 56.5	
	comp=Z,20nm,1.5s						
WRA	**Warramunga Arr**	**20.41**	**126**	P	**P**	**02 37 38.4**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=295,slow=12,SNR=21						
WRA				S	**S**	**02 41 18.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=292,slow=25,SNR=5.0 comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**20.41**	**126**	P	**P**	**02 37 38.1**	**+0.3**
AS31	**Alice Springs**	**22.25**	**135**	P	**P**	**02 37 57.3**	**0.0**
ASAR	**Alice Springs**	**22.25**	**135**	P	**P**	**02 37 57.5**	**+0.2**
	comp=Z,4.2nm,0.6s,baz=312,slow=9.7,SNR=46						
ASAR				PcP	**PcP**	**02 41 47.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=297,slow=2.1,SNR=2.5 comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**22.25**	**135**	P	**P**	**02 37 57.1**	**-0.1**
FORT	**Forrest**	**24.54**	**156**	P	**P**	**02 38 18.3**	**+0.1**
STKA	**Stephens Creek**	**32.73**	**139**	P	**P**	**02 39 31.1**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=319,slow=10,SNR=5.3 comp=Z,1.3nm,0.4s						
GUMO	**Guam**	**35.42**	**52**	LR	LR	02 55 08.4	
	comp=Z,8.6nm,18.5s,baz=60,slow=37						
SONM	**Songino Array**	**56.82**	**352**	P	**P**	**02 42 40.9**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=167,slow=8.4,SNR=4.3 comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**56.82**	**352**	P	**P**	**02 42 40.9**	**-0.2**
SONM				IAmb	IAmb	02 43 05.8	
	comp=Z,1.1nm,1.1s						
MKAR	**Makanchi Array**	**63.04**	**334**	P	**P**	**02 43 21.7**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=146,slow=7.0,SNR=3.6 comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**63.04**	**334**	P	**P**	**02 43 22.2**	**-1.3**
KURBB	**Kurchatov Arra**	**67.57**	**335**	P	**P**	**02 43 51.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=150,slow=6.4,SNR=2.0 comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**67.81**	**340**	P	**P**	**02 43 52.1**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=134,slow=6.2,SNR=4.0 comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**67.81**	**340**	P	**P**	**02 43 51.5**	**-2.5**
VNDA	**Vanda**	**72.84**	**171**	P	**P**	**02 44 24.4**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=358,slow=5.6,SNR=12 comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**72.84**	**171**	P	**P**	**02 44 23.7**	**-0.5**
VNDA				IAmb	IAmb	02 44 27.4	
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**81.52**	**180**	P	**P**	**02 45 13.8**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=296,slow=1.3,SNR=12 comp=Z,1.2nm,0.7s						
QSPA	**South Pole Qui**	**81.52**	**180**	P	**P**	**02 45 13.5**	**+0.5**
QSPA				IAmb	IAmb	02 45 21.6	
	comp=Z,2.0nm,1.2s						
TROLL	**Troll, Antarti**	**89.28**	**196**	⇑P	**P**	**02 45 53.7**	**+2.4**
	comp=Z,110nm,0.6s						
SNAA	**Sanae**	**90.92**	**196**	P	**P**	**02 46 01.2**	**+2.3**
	comp=Z,45nm,0.7s						
SNAA	**Sanae**	**90.92**	**196**	P	**P**	**02 46 00.9**	**+2.1**
	comp=Z,1.5nm,0.7s,baz=127,slow=5.1,SNR=5.4 comp=Z,1.5nm,0.7s						
SNAA	**Sanae**	**90.92**	**196**	P	**P**	**02 45 59.9**	**+1.0**
SNAA				IAmb	IAmb	02 46 13.6	
	comp=Z,4.8nm,1.3s						
VNA2	**Neumayer--Watz**	**92.56**	**196**	⇑P	**P**	**02 46 08.3**	**+1.9**
	comp=Z,1.4nm,0.6s,baz=117,slow=4.9						
TORD	**Torodi Ar. Bea**	**116.27**	**280**	PKP	**PKPdf**	**02 51 38.1**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=42,slow=2.0,SNR=1.8						
CPUP	**Villa Florida**	**144.95**	**189**	PKPbc	**PKPdf**	**02 52 32.8**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=243,slow=0.5,SNR=9.7						
P53A	**Whipple**	**145.06**	**25**	PKPbc	**PKPbc**	**02 52 31.5**	**-0.5**
BDFB	**Brasilia**	**151.73**	**212**	PKPbc	**PKPbc**	**02 52 50.5**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=180,slow=2.8,SNR=3.5						
LPAZ	**La Paz**	**154.91**	**169**	PKPbc	**PKiKP**	**02 52 59.5**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=241,slow=8.0,SNR=1.6						

*IDC **15** 02:41:06.8±1.5, 49°.83S×122°.62E, h0km, mb4.0/6, mbtmp4.0/6, MS3.7/14, Error ellipse: s-maj=73.5km s-min=18.2km az=107.0*

*NEIC **15** 02:41:06.8±1.2, 49°.85S±0°.1×122°.7E±0°.3, h10km±1km, mb4.5/8, Error ellipse: s-maj=33.0km s-min=14.9km az=116.0*

ISC 15 02:41:07.3±0.8, 49°.85S±0°.1×122°.8E±0°.2, h10km, n31, σ1s14/20, mb4.2/9, MS3.7/13, 4C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.17**	**334**	T	T	03 01 33.8	
	baz=159,slow=74,SNR=142						
H01W2	**Cape Leeuwin H**	**16.17**	**334**	T	T	03 01 36.3	
	baz=159,slow=74,SNR=139						
H01W3	**Cape Leeuwin H**	**16.18**	**334**	T	T	03 01 37.3	
	baz=159,slow=74,SNR=126						
NWAO	**Narrogin (SRO)**	**17.34**	**344**	LR	LR	02 50 09.0	
	comp=Z,542nm,21.9s,baz=230,slow=31						
NWAO	**Narrogin (SRO)**	**17.34**	**344**	Pn	**Pn**	**02 45 08.0**	**-1.2**
NWAO				IAmb	IAmb	02 45 27.3	
	comp=Z,66nm,1.5s						
STKA	**Stephens Creek**	**22.74**	**45**	P	**P**	**02 46 11.1**	**+1.7**
	comp=Z,4.7nm,0.9s,baz=212,slow=9.5,SNR=5.9						
STKA				LR	LR	02 54 06.5	
	comp=Z,142nm,18.3s,baz=206,slow=34 comp=Z,4.7nm,0.9s						
ASAR	**Alice Springs**	**27.48**	**23**	P	**P**	**02 46 55.9**	**+2.3**
	comp=Z,0.8nm,0.8s,baz=195,slow=9.2,SNR=4.7						
ASAR				LR	LR	02 56 48.6	
	comp=Z,88nm,18.7s,baz=208,slow=34 comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**27.48**	**23**	P	**P**	**02 46 52.1**	**-1.4**
AS31	**Alice Springs**	**27.48**	**23**	P	**P**	**02 46 52.5**	**-1.1**
WRA	**Warramunga Arr**	**31.16**	**21**	P	**P**	**02 47 28.1**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=197,slow=8.6,SNR=2.0 comp=Z,0.5nm,0.8s						
VNDA	**Vanda**	**31.50**	**165**	P	**P**	**02 47 29.8**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=301,slow=8.8,SNR=11						
VNDA				LR	LR	02 59 21.5	
	comp=Z,233nm,19.0s,baz=324,slow=35 comp=Z,1.9nm,0.8s						
VNDA	**Vanda**	**31.50**	**165**	P	**P**	**02 47 28.7**	**0.0**
FITZ	**Fitzroy Crossi**	**31.68**	**5**	LR	LR	02 58 34.8	
	comp=Z,248nm,20.2s,baz=186,slow=33						
SBA	**Scott Base**	**32.55**	**164**	P	**P**	**02 47 37.1**	**-0.9**
SBA				IAmb	IAmb	02 47 57.0	
	comp=Z,7.3nm,1.4s						
LHI	**Lord Howe Isla**	**32.59**	**70**	P	**P**	**02 47 37.1**	**-1.7**
RPZ	**Rata Peaks**	**33.14**	**98**	LR	LR	02 57 45.0	
	comp=Z,22nm,21.1s,baz=196,slow=30						
URZ	**Urewera**	**39.89**	**94**	LR	LR	03 03 52.9	
	comp=Z,56nm,19.1s,baz=241,slow=34						
QSPA	**South Pole Qui**	**40.35**	**180**	P	**P**	**02 48 45.5**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=336,slow=5.6,SNR=12						
QSPA				LR	LR	03 05 10.7	
	comp=Z,138nm,18.1s,baz=12,slow=36 comp=Z,3.6nm,0.9s						
QSPA	**South Pole Qui**	**40.35**	**180**	P	**P**	**02 48 44.4**	**-0.4**
QSPA				IAmb	IAmb	02 48 55.5	
	comp=Z,6.0nm,1.1s						
DZM	**Mont Dzumac**	**43.98**	**67**	LR	LR	03 05 06.1	
	comp=Z,97nm,18.9s,slow=33						
TROLL	**Troll, Antarti**	**51.53**	**200**	⇑P	**P**	**02 50 12.8**	**+0.1**
	comp=Z,133nm,0.7s						
BELA	**Belgrano 2**	**51.86**	**186**	P	**P**	**02 50 14.4**	**-0.6**
SNAA	**Sanae**	**52.93**	**199**	⇑P	**P**	**02 50 23.1**	**0.0**
	comp=Z,121nm,0.8s						
SNAA	**Sanae**	**52.93**	**199**	P	**P**	**02 50 23.2**	**+0.1**
	comp=Z,5.3nm,0.8s,baz=151,slow=9.7,SNR=16						
SNAA				LR	LR	03 11 44.2	
	comp=Z,67nm,18.1s,baz=144,slow=35 comp=Z,5.3nm,0.8s						
SNAA	**Sanae**	**52.93**	**199**	P	**P**	**02 50 23.1**	**0.0**
SNAA				IAmb	IAmb	02 50 24.3	
	comp=Z,7.7nm,0.9s						
VNA2	**Neumayer--Watz**	**54.44**	**198**	⇑P	**P**	**02 50 34.4**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=144,slow=8.2						
VNA2				pP	**pwP**	**02 50 41.8**	**+0.7**
	comp=Z,3.3nm,0.7s						
VNA1	**Neumayer--Stat**	**54.84**	**198**	⇑P	**P**	**02 50 37.2**	**+0.2**
	comp=Z,3.8nm,0.7s						
PMSA	**Palmer Station**	**65.67**	**177**	LR	LR	03 18 56.5	
	comp=Z,60nm,21.9s,baz=206,slow=35						
PALK	**Pallekele**	**67.57**	**314**	LR	LR	03 14 55.5	
	comp=Z,87nm,20.7s,baz=102,slow=30						
CMAR	**Chiang Mai Arr**	**71.14**	**336**	LR	LR	03 24 02.7	
	comp=Z,20nm,18.3s,baz=190,slow=36						
PLCA	**Paso Flores**	**89.11**	**170**	LR	LR	03 30 42.1	
	comp=Z,32nm,20.8s,baz=160,slow=33						

*IDC **15** 03:04:51.6±0.5, 35°.51N×140°.11E, h66km±5km, mb3.5/10, mbtmp3.7/13, MS2.4/1, Error ellipse: s-maj=13.0km s-min=7.3km az=65.0*
*JMA **15** 03:04:51.6±0.2, 35°.6N±0°.4×140°.1E±0°.7, h66km±1km, MV3.3/40, CENTRAL CHIBA PREF*
JMA Felt I J1 at CENTRAL CHIBA PREF

ISC 15 03:04:51.9±0.7, 35°.54N±0°.05×140°.09E±0°.05, h71km±6km, n33, σ0s59/36, mb3.8/10, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCCN	**Chibachonan**	**0.20**	**141**	P	**Pn**	**03 05 02.6**	**-0.1**
JCCN				*e*S	**Sn**	**03 05 11.3**	**+0.8**
I30JP	**ISUMI INFRASON**	**0.30**	**141**	P	**Pn**	**03 05 03.5**	**+0.2**
	baz=339,slow=25						
I30JP				S	**Sn**	**03 05 11.9**	**+0.4**
	baz=319,slow=513						
JSMT	**Sammumatsuo**	**0.31**	**70**	P	**Pn**	**03 05 02.8**	**-0.5**
BSO3	**Boso 3**	**0.81**	**155**	*i*P	**Pn**	**03 05 07.5**	**-0.4**
JOD2	**Odawara 2**	**0.86**	**252**	⇓*i*P	**Pn**	**03 05 08.7**	**-0.1**
JOD2				⇓S	**Sn**	**03 05 20.7**	**-0.6**
JIM2	**Oshima 3**	**0.98**	**213**	P	**Pn**	**03 05 09.7**	**-0.6**
JIM2				*e*S	**Sn**	**03 05 23.2**	**-0.7**
JAG	**Ashikaga**	**1.02**	**330**	⇓*i*P	**Pn**	**03 05 10.2**	**-0.6**
JRY	**Ryogami san**	**1.07**	**297**	⇓*i*P	**Pn**	**03 05 11.8**	**+0.3**
BSO1	**Boso 1**	**1.15**	**140**	*e*P	**Pn**	**03 05 10.8**	**-1.0**
BSO1				*e*S	**Sn**	**03 05 26.6**	**-0.1**
JYN	**Shimob**	**1.26**	**269**	⇓*i*P	**Pn**	**03 05 14.0**	**+0.2**
JYN				⇓*e*S	**Sn**	**03 05 30.5**	**+0.2**
JIZS	**Izushimoda**	**1.28**	**231**	⇓P	**Pn**	**03 05 14.0**	**-0.1**
JIZS				⇓*e*S	**Sn**	**03 05 29.9**	**-0.8**
JKT	**Katashina**	**1.40**	**331**	*e*P	**Pn**	**03 05 15.2**	**-0.5**
MJAR	**Matsushiro Arr**	**1.82**	**304**	P	**Pn**	**03 05 21.6**	**+0.3**
	61nm,0.4s,baz=132,slow=16,SNR=125						
MJAR				S	**Sn**	**03 05 42.6**	**-0.9**
	28nm,0.4s,baz=158,slow=18,SNR=2.6						
JHJ	**Hachijo jima 2**	**2.43**	**186**	P	**Pn**	**03 05 29.7**	**+0.4**
	111nm,0.3s,baz=68,slow=21,SNR=15						
JHJ				S	**Sn**	**03 05 57.3**	**-0.7**
	263nm,0.3s,baz=246,slow=23,SNR=11						
KSRS	**Korea Array**	**9.98**	**285**	P	**Pn**	**03 07 13.0**	**+0.6**
	0.4nm,0.3s,baz=80,slow=14,SNR=4.3						
KSRS				LR	LR	03 11 23.2	
	comp=Z,21nm,19.0s,baz=230,slow=39						
USRK	**Ussuriysk Ar.**	**10

0.8nm,0.5s
ASAR Alice Springs 59.17 187 P **P** **03 14 45.7 +0.3**
0.2nm,0.4s,baz=8.4,slow=8.3,SNR=6.9
0.2nm,0.4s
FINES FINESS Array B 69.63 332 P **P** **03 15 53.8 +0.5**
1.5nm,0.7s,baz=53,slow=7.4,SNR=6.2
1.5nm,0.7s
AKASG Malin Array Be 74.82 322 P **P** **03 16 24.5 +0.1**
0.6nm,0.4s,baz=51,slow=5.8,SNR=4.0
0.6nm,0.4s
NB2 NORSAR Subarra 75.14 337 P **P** **03 16 26.6 +0.5**
comp=Z,0.2nm,0.5s,baz=40,slow=5.9
NOA NORSAR Array B 75.14 337 P **P** **03 16 26.1 -0.1**
comp=Z,0.4nm,0.7s,baz=42,slow=2.6,SNR=3.6
comp=Z,0.4nm,0.7s

NEIC ***15*** *03:16:16.3±1.2, 1°.60S±0°.08×149°.91E±0°.06, h10km±1km, mb4.6/65, Error ellipse: s-maj=12.8km s-min=10.9km az=7.0*
IDC ***15*** *03:16:22.0±4.2, 1°.65S×150°.05E, h53km±37km, mb3.9/16, mbtmp4.2/19, ML2.9/2, MS3.6/23, Error ellipse: s-maj=27.8km s-min=14.4km az=88.0*
ISC 15 03:16:20.1±0.4, **1°.63S**±0°.07×**149°.89E**±0°.06, **h36**km, **n327, s0°63/305, mb4.5/53, MS3.7/21, 1C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**2.56**	**261**			**Pn**	**03 16 58.6**	**-0.4**
MANU				Sn		**Sn**	**03 17 29.3**	**+0.4**
KRVT	**Keravat (AS076**	**3.41**	**141**	LR		LR	03 18 25.6	
	comp=Z,57nm,21.7s,baz=213,slow=38							
RABL	**Rabaul**	**3.41**	**138**	Pn		**Pn**	**03 17 10.5**	**-0.3**
PMG	**Port Moresby**	**8.19**	**199**	P		**Pn**	**03 18 20.7**	**+4.3**
	0.9nm,0.3s,baz=12,slow=10.0,SNR=4.8							
	9.2nm,0.5s							
PMG	**Port Moresby**	**8.19**	**199**	Pn		**Pn**	**03 18 14.7**	**-1.7**
JAY	**Jayapura**	**9.22**	**264**	LR		LR	03 21 57.7	
	comp=Z,842nm,18.2s,baz=342,slow=36							
GUMO	**Guam**	**15.92**	**342**	LR		LR	03 24 49.9	
	comp=Z,47nm,20.2s,baz=114,slow=32							
FAKI	**Fak Fak**	**17.68**	**266**			**Pn**	**03 20 22.3**	**-1.4**
FAKI				IAmb		IAmb	03 20 25.7	
	comp=Z,83nm,1.2s							
SIJI	**Sorong**	**18.64**	**272**	P		**Pn**	**03 20 37.1**	**+1.7**
	comp=Z,8.7nm,0.6s,baz=93,slow=13,SNR=6.4							
CTA	**Charters Tower**	**18.68**	**191**	P		**Pn**	**03 20 36.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=21,slow=12,SNR=7.7							
CTA				LR		LR	03 27 12.7	
	comp=Z,87nm,19.8s,baz=271,slow=35							
	comp=Z,8.1nm,0.9s							
WB0	**Warramunga Arr**	**23.55**	**219**			**P**	**03 21 27.9**	**+0.5**
WB0				IAmb		IAmb	03 21 30.6	
	comp=Z,12nm,0.8s							
WR0	**Warramunga Arr**	**23.60**	**218**	P		**P**	**03 21 27.2**	**-0.7**
WR0				IAmb		IAmb	03 21 29.4	
	comp=Z,10nm,0.8s							
WR8	**Warramunga Arr**	**23.62**	**219**			**P**	**03 21 27.7**	**-0.5**
WRAB	**Tennant Creek**	**23.70**	**219**	P		**P**	**03 21 27.6**	**-1.2**
WRAB				IAmb		IAmb	03 21 38.1	
	comp=Z,18nm,1.1s							
WB2	**Warramunga Arr**	**23.71**	**219**	P		**P**	**03 21 29.3**	**+0.4**
WB2				IAmb		IAmb	03 21 38.1	
	comp=Z,33nm,1.4s							
WRA	**Warramunga Arr**	**23.72**	**219**	P		**P**	**03 21 29.2**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=44,slow=10.0,SNR=58							
WRA				PcP		**PcP**	**03 25 13.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=46,slow=2.6,SNR=5.2							
	comp=Z,5.8nm,0.7s							
WRA	**Warramunga Arr**	**23.72**	**219**			**P**	**03 21 28.1**	**-0.9**
WRA						**PcP**	**03 25 11.8**	**-0.8**
KNRA	**Kununurra**	**25.08**	**235**	P		P	**03 21 40.6**	**-0.8**
KNRA				IAmb		IAmb	03 21 42.6	
	comp=Z,16nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**25.94**	**39**	T		T	03 48 53.6	
	baz=221,slow=75							
H11S2	**WAKE ISLAND Hy**	**25.95**	**39**	T		T	03 48 55.5	
	baz=221,slow=75							
H11S1	**WAKE ISLAND Hy**	**25.96**	**39**	T		T	03 48 52.3	
	baz=221,slow=75							
AS31	**Alice Springs**	**26.83**	**214**			**P**	**03 21 57.2**	**-0.1**
ASAR	**Alice Springs**	**26.83**	**214**	P		**P**	**03 21 57.9**	**+0.5**
	comp=Z,6.1nm,0.7s,baz=46,slow=8.2,SNR=32							
ASAR				PcP		**PcP**	**03 25 20.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=13,slow=2.5,SNR=3.6							
ASAR				LR		LR	03 32 21.4	
	comp=Z,196nm,18.4s,baz=19,slow=36							
	comp=Z,6.1nm,0.7s							
ASAR	**Alice Springs**	**26.83**	**214**	P		**P**	**03 21 56.8**	**-0.5**
ASAR						**PcP**	**03 25 17.7**	**-1.9**
H11N1	**WAKE ISLAND Hy**	**26.99**	**37**	T		T	03 50 11.2	
	baz=220,slow=76,SNR=362							
H11N3	**WAKE ISLAND Hy**	**27.00**	**37**	T		T	03 50 08.7	
	baz=220,slow=76,SNR=1226							
H11N2	**WAKE ISLAND Hy**	**27.01**	**37**	T		T	03 50 11.9	
	baz=220,slow=76,SNR=556							
FITZ	**Fitzroy Crossi**	**28.89**	**234**	LR		LR	03 35 44.3	
	comp=Z,234nm,20.2s,baz=34,slow=40							
FITZ	**Fitzroy Crossi**	**28.89**	**234**	P		**P**	**03 22 15.0**	**-0.7**
KAPI	**Kappang**	**30.27**	**263**	LR		LR	03 35 55.2	
	comp=Z,96nm,19.4s,baz=126,slow=39							
KAPI	**Kappang**	**30.27**	**263**	P		**P**	**03 22 26.5**	**-1.6**
STKA	**Stephens Creek**	**31.09**	**194**	P		**P**	**03 22 34.3**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=350,slow=11,SNR=4.7							
STKA				LR		LR	03 34 07.2	
	comp=Z,149nm,19.1s,baz=24,slow=34							
	comp=Z,2.0nm,0.6s							
MSVF	**Nonsavu**	**31.95**	**122**	LR		LR	03 35 03.0	
	comp=Z,148nm,18.8s,baz=235,slow=35							
LEM	**Lembang**	**42.45**	**262**	LR		LR	03 44 46.0	
	comp=Z,88nm,18.1s,baz=170,slow=40							
KSRS	**Korea Array**	**43.90**	**335**	P		**P**	**03 24 24.6**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=151,slow=9.5,SNR=4.4							
	comp=Z,1.0nm,0.7s							
NJ2	**Nanjing**	**44.57**	**321**	*e*P		**P**	**03 24 28.5**	**-0.3**
NJ2				pmax		pmax		
	comp=Z,16nm,0.5s							
BNX	**BinXian**	**51.20**	**340**	⇑P		**P**	**03 25 20.3**	**+0.4**
BNX				pmax		pmax		
	comp=Z,9.0nm,0.7s							
XAN	**Xi'an**	**52.34**	**317**	P		P	03 25 35.5	+6.8
XAN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CM31	**Chiang Mai Arr**	**53.92**	**294**	P		**P**	**03 25 40.8**	**+0.3**
CM31				IAmb		IAmb	03 25 43.1	
	comp=Z,6.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**53.92**	**294**	P		**P**	**03 25 42.0**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=113,slow=5.8,SNR=11							
	comp=Z,1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**53.92**	**294**	P		**P**	**03 25 39.9**	**-0.7**
PZH	**PanZhiHua**	**54.19**	**305**	P		**P**	**03 25 42.8**	**+0.3**
HHC	**Hu-ho-hao-te**	**54.80**	**325**	*e*P		**P**	**03 25 47.6**	**+0.9**
HHC				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC				pmax		pmax		
	comp=Z,51nm,4.5s							
HHC				LR		LR		
	comp=N,84nm,12.0s							
HHC				LR		LR		
	comp=E,90nm,11.4s							
HHC				LR		LR		
	comp=Z,52nm,11.8s							
PETK	**Petropavlovsk-**	**54.94**	**6**	P		**P**	**03 25 47.8**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=145,slow=5.7,SNR=7.9							
PETK				LR		LR	03 45 13.2	
	comp=Z,37nm,20.8s,baz=201,slow=32							
	comp=Z,3.1nm,0.6s							
PETK	**Petropavlovsk-**	**54.94**	**6**	P		**P**	**03 25 46.3**	**-1.0**
LZH	**Lanzhou**	**56.95**	**316**	*e*P		**P**	**03 26 01.8**	**-0.5**
LZH				sP		pP	03 26 09.3	-3.8
LZH				pmax		pmax		
	comp=Z,23nm,1.0s							
SHEM	**Shemya Is, Ala**	**57.86**	**17**	LR		LR	03 45 30.0	
	comp=Z,12nm,21.8s,baz=322,slow=30							
MA2	**Magadan**	**61.03**	**1**	LR		LR	03 55 14.0	
	comp=Z,22nm,18.0s,baz=226,slow=38							
SONM	**Songino Array**	**62.12**	**328**	P		**P**	**03 26 38.7**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=151,slow=5.6,SNR=3.7							
	comp=Z,0.6nm,0.7s							
SONM	**Songino Array**	**62.12**	**328**	P		**P**	**03 26 37.8**	**+0.1**
UNV	**Unalaska Valle**	**66.04**	**27**	P		**P**	**03 27 02.9**	**-0.1**
	baz=229							
SPIA	**Saint Paul Isl**	**66.79**	**22**	P		**P**	**03 27 08.3**	**+0.5**
	baz=224							
SDPT	**Sand Point**	**69.72**	**28**	P		**P**	**03 27 26.6**	**+0.4**
	baz=234							
CHNA	**Chernabura Isl**	**69.84**	**28**	P		**P**	**03 27 27.3**	**+0.4**
	baz=235							
CASY	**Casey**	**70.21**	**196**	P		**P**	**03 27 30.3**	**+1.3**
M11K	**Mekoryuk**	**70.54**	**21**	P		**P**	**03 27 31.6**	**+0.5**
	baz=227							
S14K	**Fog Glacier**	**70.69**	**27**	P		**P**	**03 27 32.5**	**+0.3**
	baz=235							
GAMB	**Gambell**	**71.18**	**17**	P		**P**	**03 27 35.5**	**+0.6**
	baz=221							
WMQ	**Urumqi**	**71.46**	**318**	*e*P		**P**	**03 27 39.3**	**+2.1**
M13K	**Dall Lake**	**71.62**	**22**	P		**P**	**03 27 38.4**	**+0.7**
	baz=230							
O14K	**Tigyukauivet M**	**71.72**	**24**	P		**P**	**03 27 37.7**	**-0.5**
O14K				IAmb		IAmb	03 27 39.6	
	comp=Z,4.8nm,0.9s							
O14K	**Tigyukauivet M**	**71.72**	**24**	P		**P**	**03 27 38.8**	**+0.6**
	baz=232							
N14K	**Kuskokwak Cree**	**71.96**	**23**	P		**P**	**03 27 39.8**	**+0.2**
	baz=232							
K13K	**Kusilvak Mount**	**72.14**	**21**	P		**P**	**03 27 41.5**	**+0.7**
	baz=228							
O15K	**Ungalikthiuk R**	**72.26**	**25**	P		**P**	**03 27 41.1**	**-0.4**
O15K	**Ungalikthiuk R**	**72.26**	**25**	P		**P**	**03 27 41.9**	**+0.3**
	baz=234							
M14K	**Bethel**	**72.37**	**23**	P		**P**	**03 27 42.0**	**-0.1**
M14K	**Bethel**	**72.37**	**23**	P		**P**	**03 27 42.3**	**+0.2**
	baz=231							
L14K	**Kuka Creek**	**72.47**	**22**	P		**P**	**03 27 43.0**	**+0.3**
	baz=230							
N15K	**Kwethluk River**	**72.75**	**24**	P		**P**	**03 27 44.6**	**+0.2**
	baz=233							
M15K	**Kasigluk River**	**72.83**	**23**	P		**P**	**03 27 45.3**	**+0.5**
	baz=233							
R17L	**Mt. Peulik Vol**	**72.90**	**27**	P		**P**	**03 27 45.6**	**+0.2**
	baz=238							
L15K	**Ungalak Mounta**	**73.13**	**22**	P		**P**	**03 27 47.3**	**+0.7**
	baz=232							
O16K	**Kokwok River B**	**73.23**	**25**	P		**P**	**03 27 47.3**	**+0.1**
	baz=235							
SII	**Sitkinak Islan**	**73.35**	**29**	P		**P**	**03 27 48.3**	**+0.2**
	baz=240							
Q17K	**Contact Creek**	**73.45**	**27**	P		**P**	**03 27 48.5**	**-0.2**
	baz=238							
N16K	**Nishlik Lake**	**73.46**	**24**	P		**P**	**03 27 48.6**	**-0.1**
	baz=234							
K15K	**Wolf Creek Mou**	**73.50**	**21**	P		**P**	**03 27 48.2**	**-0.6**
K15K	**Wolf Creek Mou**	**73.50**	**21**	P		**P**	**03 27 49.2**	**+0.3**
	baz=231,SNR=5.1							
TNA	**Tin City**	**73.59**	**17**	P		**P**	**03 27 50.1**	**+0.8**
	baz=224							
ANM	**Nome**	**73.67**	**18**	P		**P**	**03 27 50.3**	**+0.5**
	baz=227							
M16K	**Timber Creek**	**73.70**	**23**	P		**P**	**03 27 50.6**	**+0.5**
	baz=234							
P17K	**Kvichak River**	**73.71**	**26**	P		**P**	**03 27 50.0**	**0.0**
	baz=237							
L16K	**Owhat River**	**73.91**	**23**	P		**P**	**03 27 51.5**	**+0.2**
	baz=234							
Q18K	**Katmai Hardscr**	**74.04**	**26**	P		**P**	**03 27 52.1**	**-0.1**
	baz=238							
OHAK	**Old Harbor**	**74.11**	**28**	P		**P**	**03 27 52.6**	**+0.1**
	baz=240							
N17K	**Nushagak Hills**	**74.13**	**24**	P		**P**	**03 27 53.0**	**+0.4**
	baz=236							
P18K	**Big Mountain,**	**74.34**	**26**	P		**P**	**03 27 54.2**	**+0.3**
	baz=238							
G15K	**Niukluk**	**74.39**	**19**	P		**P**	**03 27 54.2**	**+0.3**
	baz=228							
J16K	**Anvik River**	**74.45**	**21**	P		**P**	**03 27 54.6**	**+0.2**
	baz=232							
M17K	**Holitna River**	**74.52**	**23**	P		**P**	**03 27 54.5**	**-0.4**
M17K				IAmb		IAmb	03 27 57.4	
	comp=Z,6.9nm,1.0s							
M17K	**Holitna River**	**74.52**	**23**	P		**P**	**03 27 55.2**	**+0.4**
	baz=236							
O18K	**Koktuh Hills**	**74.59**	**25**	P		**P**	**03 27 55.9**	**+0.6**
	baz=238							
L17K	**Donlin**	**74.61**	**23**	P		**P**	**03 27 55.7**	**+0.4**
	baz=235							
F15K	**North Star Dit**	**74.67**	**18**	P		**P**	**03 27 56.4**	**+0.7**
	baz=228							
KDAK	**Kodiak Island**	**74.72**	**28**	LR		LR	03 54 24.5	
	comp=Z,56nm,21.6s,baz=263,slow=31							
KDAK	**Kodiak Island**	**74.72**	**28**	P		**P**	**03 27 56.7**	**+0.7**
	baz=241							
H16K	**Elim**	**74.74**	**19**	P		**P**	**03 27 56.9**	**+1.0**
	baz=230							
N18K	**Kilae Creek**	**74.75**	**24**	P		**P**	**03 27 56.8**	**+0.6**
	baz=237							
I17K	**Unalakleet**	**74.79**	**20**	P		**P**	**03 27 56.9**	**+0.6**
	baz=232							
K17K	**Iditarod**	**74.95**	**22**			**P**	**03 27 56.7**	**-0.5**
K17K				IAmb		IAmb	03 27 59.2	
	comp=Z,5.2nm,0.9s							
K17K	**Iditarod**	**74.95**	**22**	P		**P**	**03 27 57.8**	**+0.6**
	baz=234							
J17K	**VABM Dome**	**75.06**	**21**	P		**P**	**03 27 58.1**	**+0.2**
J17K				IAmb		IAmb	03 27 59.4	
	comp=Z,4.5nm,0.9s							
J17K	**VABM Dome**	**75.06**	**21**	P		**P**	**03 27 58.6**	**+0.7**
	baz=234							
G16K	**Koyuk River**	**75.19**	**19**	P		**P**	**03 27 59.2**	**+0.6**
	baz=230							
M18K	**Stony River**	**75.22**	**24**	P		**P**	**03 27 59.2**	**+0.4**
	baz=237							
L18K	**Granite Mounta**	**75.28**	**23**	P		**P**	**03 27 59.5**	**+0.3**
	baz=236							
P19K	**Oil Pt**	**75.35**	**26**	P		**P**	**03 28 00.2**	**+0.5**
	baz=240							
H17K	**Granite Mounta**	**75.70**	**20**	P		**P**	**03 28 02.4**	**+0.8**
	baz=232							
G17K	**Kiwalik Mounta**	**75.81**	**19**	P		**P**	**03 28 03.1**	**+0.9**
	baz=232							
J18K	**Innoko River**	**75.97**	**22**	P		**P**	**03 28 03.4**	**+0.3**
	baz=236							
L19K	**White Mountain**	**75.98**	**23**			**P**	**03 28 03.3**	**0.0**
L19K				IAmb		IAmb	03 28 05.0	
	comp=Z,5.0nm,0.8s							
L19K	**White Mountain**	**75.98**	**23**	P		**P**	**03 28 03.8**	**+0.6**
	baz=238,SNR=6.1							
M19K	**Big River Lodg**	**76.02**	**24**	P		**P**	**03 28 04.1**	**+0.7**
	baz=238							
MKAR	**Makanchi Array**	**76.05**	**319**	P		**P**	**03 28 04.2**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=101,slow=8.3,SNR=6.4							
	comp=Z,0.9nm,0.7s							
MKAR	**Makanchi Array**	**76.05**	**319**	P		**P**	**03 28 03.5**	**-0.5**
VNDA	**Vanda**	**76.09**	**177**	P		**P**	**03 28 03.3**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=316,slow=6.1,SNR=4.8							
	comp=Z,0.8nm,0.8s							
VNDA	**Vanda**	**76.09**	**177**	P		**P**	**03 28 02.9**	**-0.7**
F17K	**Baldwin Pennin**	**76.21**	**18**	P		**P**	**03 28 05.0**	**+0.6**
	baz=231							
C16K	**Lisburne Hills**	**76.23**	**16**	P		**P**	**03 28 05.4**	**+0.9**
	baz=226							
MAKZ	**Makanchi**	**76.26**	**319**			**P**	**03 28 04.7**	**-0.5**
H18K	**Honhosa River**	**76.36**	**20**	P		**P**	**03 28 05.9**	**+0.5**
	baz=234							
E17K	**Hotham Inlet**	**76.44**	**18**	P		**P**	**03 28 06.3**	**+0.6**
	baz=230							
D17K	**Noatak River**	**76.47**	**17**	P		**P**	**03 28 06.7**	**+0.9**
	baz=229							
BRSE	**Bradley Lake S**	**76.49**	**27**	P		**P**	**03 28 06.3**	**+0.1**
	baz=242							
M20K	**Styx River**	**76.52**	**24**	P		**P**	**03 28 07.3**	**+0.9**
	baz=240							
J19K	**Poorman**	**76.67**	**22**	P		**P**	**03 28 07.3**	**+0.2**
	baz=237							
G18K	**Tagagawik**	**76.70**	**19**	P		**P**	**03 28 07.7**	**+0.4**
	baz=234							
RDOG	**Red Dog Mine**	**76.76**	**16**	P		**P**	**03 28 08.2**	**+0.7**
	baz=229							
CAPN	**Captain Cook N**	**76.80**	**26**	P		**P**	**03 28 08.7**	**+0.9**
	baz=242							
F18K	**Selawik**	**76.81**	**18**	P		**P**	**03 28 09.1**	**+1.3**
	baz=232							
STLK	**Strandline Lak**	**76.86**	**25**	P		**P**	**03 28 06.9**	**-1.4**
K20K	**Telida**	**76.91**	**23**	P		**P**	**03 28 08.7**	**+0.2**
K20K				IAmb		IAmb	03 28 10.3	
	comp=Z,5.0nm,0.9s							
K20K	**Telida**	**76.91**	**23**	P		**P**	**03 28 09.2**	**+0.7**
	baz=238,SNR=5.0							
ZAA0	**Zalesovo Array**	**76.93**	**327**	P		**P**	**03 28 07.5**	**-1.2**
ZALV	**Zalesovo Beam**	**76.93**	**327**	P		**P**	**03 28 08.4**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=77,slow=6.4,SNR=3.7							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**76.93**	**327**	P		**P**	**03 28 07.7**	**-1.0**
C17K	**DeLong Mountai**	**76.96**	**16**	P		**P**	**03 28 09.6**	**+0.9**
	baz=229							
E18K	**Tukpahlearik C**	**77.02**	**18**	P		**P**	**03 28 09.5**	**+0.5**
	baz=231							
SKT	**Skwentna**	**77.22**	**24**	P		**P**	**03 28 10.6**	**+0.3**
	baz=241							
H19K	**Roundabout Mou**	**77.23**	**20**			**P**	**03 28 09.9**	**-0.3**
H19K	**Roundabout Mou**	**77.23**	**20**	P		**P**	**03 28 10.5**	**+0.4**
	baz=236							
SEW	**Seward**	**77.24**	**27**	P		**P**	**03 28 10.7**	**+0.4**
	baz=243							
J20K	**Nowinta River**	**77.31**	**22**			**P**	**03 28 10.7**	**0.0**
J20K					IAmb	IAmb	03 28 12.5	
	comp=Z,3.8nm,0.9s							
J20K	**Nowinta River**	**77.31**	**22**	P		**P**	**03 28 11.3**	**+0.6**
	baz=238							
G19K	**Purcell Mounta**	**77.37**	**19**			**P**	**03 28 11.7**	**+0.7**
G19K					IAmb	IAmb	03 28 13.1	
	comp=Z,4.6nm,0.8s							
G19K	**Purcell Mounta**	**77.37**	**19**	P		**P**	**03 28 11.5**	**+0.6**
	baz=235							
PPLA	**Purkeypile**	**77.41**	**23**	P		**P**	**03 28 11.3**	**-0.2**
	baz=240							
F19K	**Shaleruckik Mo**	**77.55**	**19**	P		**P**	**03 28 12.1**	**+0.2**
F19K					IAmb	IAmb	03 28 13.1	
	comp=Z,3.5nm,0.8s							
F19K	**Shaleruckik Mo**	**77.55**	**19**	P		**P**	**03 28 12.2**	**+0.2**
	baz=234							
RC01	**Rabbit Creek A**	**77.56**	**26**	P		**P**	**03 28 12.5**	**+0.3**
	baz=243							
C18K	**Utukok River**	**77.63**	**16**	P		**P**	**03 28 13.0**	**+0.5**
	baz=230							
M22K	**Willow**	**77.70**	**25**	P		**P**	**03 28 13.3**	**+0.4**
	baz=242							
CAST	**Castle Rocks**	**77.71**	**23**	P		**P**	**03 28 12.6**	**-0.4**
CAST	**Castle Rocks**	**77.71**	**23**	P		**P**	**03 28 13.1**	**+0.1**
	baz=240,SNR=5.8							
H20K	**Anotleneega Mo**	**77.76**	**21**	P		**P**	**03 28 13.6**	**+0.4**
	baz=237							
L22K	**Petersville**	**77.80**	**24**	P		**P**	**03 28 13.1**	**-0.4**
	baz=242							
CHUM	**Lake Minchumin**	**77.85**	**23**	P		**P**	**03 28 14.7**	**+1.0**
	baz=240,SNR=10.0							
PMR	**Palmer**	**78.05**	**25**	P		**P**	**03 28 15.7**	**+0.9**
	baz=243							
E19K	**Redstone River**	**78.08**	**18**			**P**	**03 28 14.4**	**-0.5**
E19K	**Redstone River**	**78.08**	**18**	P		**P**	**03 28 15.5**	**+0.5**
	baz=235							
P23K	**Montague Islan**	**78.12**	**27**	P		**P**	**03 28 15.2**	**0.0**
	baz=245							
KTH	**Kantishna Hill**	**78.23**	**23**	P		**P**	**03 28 14.8**	**-1.1**
KNK	**Knik Glacier**	**78.26**	**26**	P		**P**	**03 28 16.1**	**+0.1**
	baz=244							
F20K	**Avaraart Lake**	**78.33**	**19**	P		**P**	**03 28 16.8**	**+0.6**
	baz=236							
C19K	**Lookout Ridge**	**78.37**	**16**	P		**P**	**03 28 16.8**	**+0.3**
	baz=232							
Q23K	**Middleton Isla**	**78.37**	**28**	P		**P**	**03 28 16.6**	**0.0**
	baz=246							
D19K	**Kuna River**	**78.42**	**17**	P		**P**	**03 28 16.8**	**-0.1**
D19K					IAmb	IAmb	03 28 18.1	
	comp=Z,8.2nm,1.1s							
D19K	**Kuna River**	**78.42**	**17**	P		**P**	**03 28 17.1**	**+0.3**
	baz=234							
TRF	**Thorofare Moun**	**78.43**	**23**	P		**P**	**03 28 16.6**	**-0.5**
	baz=242							
SML	**Sawmill**	**78.49**	**25**	P		**P**	**03 28 17.5**	**+0.1**
	baz=244							
H21K	**Melozitna Rive**	**78.58**	**21**	P		**P**	**03 28 18.2**	**+0.5**
	baz=239							
GLI	**Glacier Island**	**78.63**	**26**	P		**P**	**03 28 18.1**	**+0.1**
	baz=245							
I21K	**Tanana**	**78.63**	**21**	P		**P**	**03 28 18.8**	**+0.9**
	baz=240							
G21K	**Allakaket**	**78.78**	**20**	P		**P**	**03 28 19.3**	**+0.5**
	baz=238							
WAT1	**Susitna Watana**	**78.85**	**24**	P		**P**	**03 28 18.9**	**-0.4**
	baz=244							
E20K	**Nigu River**	**78.87**	**18**	P		**P**	**03 28 19.6**	**+0.2**
	baz=235							
SCM	**Sheep Creek Mo**	**78.93**	**25**	P		**P**	**03 28 19.7**	**-0.1**
	baz=245							
D20K	**Etivluk River**	**79.00**	**17**	P		**P**	**03 28 20.4**	**+0.4**
	baz=235							
MLY	**Manley**	**79.02**	**22**			**P**	**03 28 20.3**	**+0.1**
MLY					IAmb	IAmb	03 28 21.3	
	comp=Z,5.8nm,0.8s							
MLY	**Manley**	**79.02**	**22**	P		**P**	**03 28 20.1**	**-0.1**
	baz=241,SNR=12							
WAT6	**Susitna Watana**	**79.07**	**25**	P		**P**	**03 28 20.7**	**0.0**
	baz=244							
EYAK	**Cordova Ski Ar**	**79.10**	**27**	P		**P**	**03 28 20.9**	**+0.3**
	baz=247							
MCK	**McKinley**	**79.10**	**23**			**P**	**03 28 20.0**	**-0.7**
MCK	**McKinley**	**79.10**	**23**	P		**P**	**03 28 20.7**	**+0.1**
	baz=243							
F21K	**Alatna River**	**79.16**	**19**	P		**P**	**03 28 20.9**	**0.0**
	baz=238							
H22K	**Ishtalitna Cre**	**79.20**	**21**	P		**P**	**03 28 21.6**	**+0.5**
	baz=240							
KLU	**Klutina**	**79.40**	**26**	P		**P**	**03 28 22.4**	**+0.1**
	baz=246							
DHY	**Denali Highway**	**79.44**	**24**	P		**P**	**03 28 21.6**	**-1.1**
DHY					IAmb	IAmb	03 28 23.5	
	comp=Z,5.5nm,0.8s							
DHY	**Denali Highway**	**79.44**	**24**	P		**P**	**03 28 22.4**	**-0.2**
	baz=245							
NEA2	**Nenana**	**79.44**	**23**	P		**P**	**03 28 21.5**	**-1.0**
NEA2					IAmb	IAmb	03 28 22.6	
	comp=Z,4.8nm,0.8s							
NEA2	**Nenana**	**79.44**	**23**	P

baz=244
MCARA McCarthy VSAT 80.64 27 P P 03 28 29.5 +0.5
baz=249
RIDG Independent Ri 80.75 24 P P 03 28 29.8 +0.2
baz=247
E23K Chandalar 80.86 19 P P 03 28 29.6 -0.6
E23K Chandalar 80.86 19 P P 03 28 30.0 -0.2
baz=242
J25K Salcha River, 80.89 23 P P 03 28 29.7 -0.6
J25K Salcha River, 80.89 23 P P 03 28 30.4 +0.1
baz=246
D23K Nanushuk River 80.96 18 P 03 28 30.7 +0.2
D23K Nanushuk River 80.96 18 P P 03 28 31.1 +0.6
baz=241,SNR=9.0
G24K Hadweenzic Riv 80.98 21 P 03 28 31.0 +0.3
G24K IAmb IAmb 03 28 32.0
comp=Z,6.3nm,0.8s
G24K Hadweenzic Riv 80.98 21 P P 03 28 30.6 -0.1
baz=244,SNR=6.5
M26K Nabesna, AK 81.02 26 P P 03 28 31.4 +0.3
baz=249
L26K Log Cabin Wild 81.10 25 P P 03 28 31.0 -0.5
L26K IAmb IAmb 03 28 32.5
comp=Z,4.8nm,0.8s
L26K Log Cabin Wild 81.10 25 P P 03 28 31.5 0.0
baz=248
TOLK Toolik Lake Re 81.15 19 P P 03 28 31.8 +0.2
baz=242
SCRK Sand Creek 81.19 24 P 03 28 31.5 -0.6
SCRK Sand Creek 81.19 24 P P 03 28 32.2 +0.1
baz=248
F24K Squaw Lake 81.20 20 P 03 28 31.6 -0.3
F24K IAmb IAmb 03 28 33.7
comp=Z,7.0nm,0.8s
F24K Squaw Lake 81.20 20 P P 03 28 32.3 +0.4
baz=244,SNR=11
E24K Your Creek 81.25 20 P P 03 28 32.6 +0.4
baz=243
C23K Itkillik River 81.41 18 P P 03 28 33.9 +1.0
baz=241
M27K Edge Creek, AK 81.50 26 P P 03 28 33.8 0.0
M27K Edge Creek, AK 81.50 26 P P 03 28 34.2 +0.5
baz=250
G25K Bearman Lake 81.50 21 P P 03 28 34.1 +0.7
baz=245
D24K Happy Valley 81.63 19 P P 03 28 34.0 -0.1
D24K IAmb IAmb 03 28 35.3
comp=Z,3.8nm,0.8s
D24K Happy Valley 81.63 19 P P 03 28 34.3 +0.1
baz=242
L27K Beaver Creek, 81.76 25 P P 03 28 35.4 +0.4
L27K IAmb IAmb 03 28 35.8
comp=Z,4.3nm,1.1s
L27K Beaver Creek, 81.76 25 P P 03 28 35.2 +0.2
baz=250
BVCY Beaver Creek 81.96 26 P P 03 28 35.9 -0.2
baz=251
F25K Christian Rive 82.01 20 P P 03 28 36.5 +0.3
F25K Christian Rive 82.01 20 P P 03 28 36.1 -0.1
baz=246
YUK8 Steele Glacier 82.09 27 P P 03 28 37.6 +0.5
baz=252
E25K Arctic Village 82.25 20 P P 03 28 37.9 +0.5
baz=246
O29M Mount Kennedy 82.35 28 P P 03 28 38.7 +0.5
baz=253
G26K Porcupine Rive 82.41 21 P P 03 28 38.7 +0.5
baz=248
BRWY Burwash Landin 82.45 27 P P 03 28 38.8 +0.1
baz=253
D25K Kavik River 82.49 19 P P 03 28 38.5 -0.2
baz=245
P29M Windy Craggy 82.56 29 P P 03 28 39.0 -0.2
baz=254
F26K Sheenjek River 82.57 21 P P 03 28 39.0 -0.1
baz=247
YUK4 Talbot Arm 82.62 27 P P 03 28 40.0 +0.3
baz=253
YUK6 Outpost Mounta 82.64 28 P P 03 28 39.3 -0.6
baz=253
I27K Kandik River 82.73 23 P 03 28 40.2 +0.2
I27K Kandik River 82.73 23 P P 03 28 40.2 +0.2
baz=250
H27K Steamboat Moun 82.99 22 P 03 28 41.8 +0.5
H27K IAmb IAmb 03 28 42.8
comp=Z,3.4nm,0.8s
H27K Steamboat Moun 82.99 22 P P 03 28 41.3 0.0
baz=250
HYT Haines Junctio 83.01 28 P P 03 28 41.6 0.0
baz=254
M29M Somme Creek 83.03 26 P P 03 28 41.8 +0.1
baz=253
P30M Million Dollar 83.07 29 P P 03 28 41.9 0.0
baz=255
DAWY Dawson 83.12 25 P P 03 28 42.1 0.0
baz=252
G27K Doyon Strip 83.14 22 P P 03 28 42.4 +0.3
baz=250
C26K Camden Bay 83.21 18 P P 03 28 42.2 -0.1
baz=246
I28M Miner Creek 83.34 23 P P 03 28 43.2 0.0
baz=251
L29M L29M 83.37 26 P P 03 28 43.0 -0.4
L29M L29M 83.37 26 P P 03 28 43.5 +0.1
baz=253
N30M Aishikik Lake 83.38 28 P P 03 28 43.5 +0.1
baz=254
C27K Jago River 83.47 19 P P 03 28 44.4 +0.7
baz=247
S32K Killisnoo 83.62 32 P P 03 28 44.9 +0.3
baz=257
E27K Coleen River 83.65 20 P P 03 28 44.8 +0.1
baz=249
O30N Mendenhall 83.66 28 P P 03 28 44.9 0.0
baz=255
K29M Barlow Dome 83.85 25 P 03 28 46.0 +0.2
K29M IAmb IAmb 03 28 47.6
comp=Z,3.5nm,0.8s
K29M Barlow Dome 83.85 25 P P 03 28 45.8 -0.1
baz=254
H02S1 DAWSON INLET T 83.90 36 T T 05 01 32.0
SNR=75
H02S2 DAWSON INLET T 83.90 36 T T 05 01 31.9
SNR=79
CRAG Craig 83.98 34 P P 03 28 46.0 -0.5
baz=258
F28M Old Crow 84.07 21 P P 03 28 46.7 -0.1
baz=251
U33K Whale Pass 84.11 33 P P 03 28 47.3 +0.1
baz=258
H29M Whitestone 84.19 23 P P 03 28 47.3 -0.1
baz=253
WHY Whitehorse 84.21 29 P P 03 28 47.3 -0.5
baz=256
E28M Babbage River 84.51 20 P P 03 28 49.3 +0.2
baz=251
P32M Atlin 84.53 30 P P 03 28 49.4 0.0
baz=258
G29M Pine Creek 84.53 22 P P 03 28 49.3 +0.1
baz=253
J30M Hart River 84.55 25 P P 03 28 49.3 -0.1
J30M IAmb IAmb 03 28 50.8
comp=Z,3.4nm,0.8s
J30M Hart River 84.55 25 P P 03 28 49.3 -0.1
baz=255
WRAK Wrangell Islan 84.59 33 P P 03 28 49.6 0.0
baz=259
I30M Mount Dempster 84.70 24 P P 03 28 50.2 0.0
I30M Mount Dempster 84.70 24 P P 03 28 50.0 -0.2
baz=255
V35K Ketchikan 84.79 34 P P 03 28 50.5 -0.2
baz=260
EPYK Eagle Plains 84.88 23 P P 03 28 50.8 -0.2
baz=254
BVAR Bonvoyage Array 84.98 323 P P 03 28 51.4 -0.3
comp=Z,0.9nm,0.6s,baz=118,slow=5.5,SNR=2.9
comp=Z,0.9nm,0.6s
E29M Blow River 85.02 21 P P 03 28 51.9 +0.4
baz=253
P33M Teslin, Yukon 85.11 29 P P 03 28 52.4 +0.1
baz=258
G30M tAoh Zraii Nji 85.23 22 P P 03 28 52.5 -0.2
baz=255
S34M Telegraph Cree 85.52 32 P P 03 28 54.1 -0.2
baz=260
F30M Barrier River 85.56 22 P 03 28 54.3 0.0
F30M Barrier River 85.56 22 P P 03 28 54.5 +0.2
baz=255
H31M Peel River 85.67 24 P P 03 28 54.9 0.0
baz=256
T35M Bob Quinn 85.83 33 P P 03 28 55.7 -0.1
baz=261
R33M Jennings River 85.87 30 P P 03 28 56.2 0.0
baz=260
G31M Satah River 85.96 23 P P 03 28 56.6 +0.4
baz=256
DLBC Dease Lake 86.19 31 LR LR 04 00 30.7
comp=Z,52nm,20.0s,baz=243,slow=31
DLBC Dease Lake 86.19 31 P P 03 28 58.2 +0.5
baz=261
F31M Tsiigehtchic 86.28 22 P P 03 28 58.6 +0.8
baz=257
MMPY Sheldon Lake, 86.31 27 P P 03 28 58.7 +0.5
baz=259
BBB Bella Bella 86.36 38 LR LR 04 01 05.2
comp=Z,48nm,19.6s,baz=226,slow=31
INK Inuvik 86.56 21 P P 03 28 59.5 +0.4
baz=257
MAW Mawson 87.36 203 P P 03 29 03.3 +0.2
comp=Z,4.6nm,0.7s,baz=104,slow=8.1,SNR=9.7
comp=Z,4.6nm,0.7s
MAW Mawson 87.36 203 P P 03 29 03.1 0.0
QSPA South Pole Qui 88.31 180 P P 03 29 08.0 +0.2
comp=Z,1.1nm,0.8s,baz=262,slow=2.4,SNR=5.5
comp=Z,1.1nm,0.8s
QSPA South Pole Qui 88.31 180 P P 03 29 07.4 -0.4
YBH Yreka Blue Hor 89.13 48 LR LR 04 03 10.8
comp=Z,45nm,18.4s,baz=255,slow=32
NVAR Mina Array Bea 92.42 52 P P 03 29 27.7 -0.1
comp=Z,0.9nm,0.8s,baz=307,slow=5.4,SNR=4.5
NVAR LR LR 04 02 02.8
comp=Z,46nm,21.9s,baz=255,slow=30
comp=Z,0.9nm,0.8s
NVAR Mina Array Bea 92.42 52 P P 03 29 26.8 -1.0
NEW Newport 93.20 42 LR LR 04 09 02.6
comp=Z,24nm,18.1s,baz=278,slow=34
PFO Pinyon Flats O 93.94 57 LR LR 04 05 25.8
comp=Z,51nm,19.2s,baz=219,slow=31
YKA Yellowknife Ar 93.99 28 LR LR 04 11 27.3
comp=Z,23nm,18.1s,baz=13,slow=35
PDAR Pinedale Array 98.85 47 LR LR 04 07 29.4
comp=Z,26nm,21.2s,baz=248,slow=31
ELIB Princess Elisa 99.13 195 dP Pdif 03 29 57.5 0.0
LPIG La Paz 99.61 66 LR LR 04 05 30.0
comp=Z,48nm,21.3s,baz=222,slow=30
TORD Torodi Ar. Bea 146.50 292 PKPbc PKPab 03 35 59.1 -0.6
comp=Z,3.4nm,0.6s,baz=43,slow=3.5,SNR=44
TORD Torodi Ar. Bea 146.50 292 PKPdf 03 35 56.3 -1.0

NEIC 15 03:22:26.7±2.0, 31°.36S±0°.01×68°.3W±0°.1, h104km±7km, mb4.8/7, Error ellipse: s-maj=15.2km s-min=1.7km az=89.0, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.36	238		Pn	03 22 42.0	-0.1
ZON				Sn	Sn	03 22 52.5	-1.1
CO01	Juntas del Tor	2.06	311		Pn	03 23 01.4	+1.0
CO03	El Pedregal	2.10	284		Pn	03 23 01.7	+0.9
CO02	Combarbal	2.30	273		Pn	03 23 04.0	+0.6
VA03	San Esteban	2.36	233	Pn	Pn	03 23 04.6	+0.4
CO04	Los Peladeros	2.37	252	Pn	Pn	03 23 04.5	+0.1
GO04	Tololo Observa	2.44	298		Pn	03 23 05.5	+0.1
MT08	Bocatoma Ro	2.53	214		Pn	03 23 08.2	+1.6
PEL	Peldehue	2.68	228	Pn	Pn	03 23 09.2	+0.9
MT16	CCHEN	2.78	222	Pn	Pn	03 23 10.2	+0.5
MT03	Universidad Ad	2.82	220	Pn	Pn	03 23 10.0	-0.2
MT05	Renca	2.88	225	Pn	Pn	03 23 11.6	+0.5
CO06	Fray Jorge	2.93	283	Pn	Pn	03 23 10.3	-1.3
AC05	El Transito	3.03	325		Pn	03 23 13.4	+0.4
MT02	Curacav	3.05	231	Pn	Pn	03 23 13.1	-0.1
LCO	Las Campanas	3.12	318		Pn	03 23 14.1	-0.3
BO04	La Punta	3.26	216	Pn	Pn	03 23 16.7	+0.7
VA01	Torpederas	3.27	239	Pn	Pn	03 23 16.2	+0.1
MT09	Talagante	3.30	222	Pn	Pn	03 23 15.9	-0.7
MT01	Popeta	3.52	224	Pn	Pn	03 23 17.8	-1.6
AC04	Llanos de Chal	3.95	322		Pn	03 23 25.1	-0.2
BO02	Sierra Bellavi	4.00	210	Pn	Pn	03 23 26.3	+0.3
GO03	Copiapo	4.11	336	Pn	Pn	03 23 27.3	-0.2
AC02	Maricunga	4.56	351		Pn	03 23 34.0	+0.1
GO05	Hualane	4.74	219	Pn	Pn	03 23 33.6	-2.3
ML02	Panimavida	5.10	210	Pn	Pn	03 23 39.5	-1.2
AC01	Pan de Azucar	5.56	338	Pn	Pn	03 23 46.0	-1.1
BI02	San Fabin de	5.83	204	Pn	Pn	03 23 49.7	-1.1
TRQA	Tornquist	8.48	144	Pn	Pn	03 24 25.7	-0.9
LPAZ	La Paz	15.00	1	Pn	Pn	03 25 51.7	-2.2
NNA	Nana	20.82	336	P	P	03 27 00.2	+0.1
NNA				IAmb	IAmb	03 27 00.5	
	comp=Z,26nm,1.2s						
PMSA	Palmer Station	33.55	177	P	P	03 28 56.6	+0.5
PMSA				IAmb	IAmb	03 29 01.1	
	comp=Z,48nm,1.1s						
BOAV	Boa Vista	34.38	14	P	P	03 29 02.5	-1.4
BIM	Bigot	46.14	10	P	P	03 30 39.6	-1.2
BIM				IAmb	IAmb	03 30 41.9	
	comp=Z,52nm,1.1s						
FDFM	Morne la Roset	46.34	10	P	P	03 30 41.5	-0.9
QSPA	South Pole Qui	58.88	180	P	P	03 32 15.4	+1.0
QSPA				IAmb	IAmb	03 32 18.0	
	comp=Z,5.9nm,1.5s						
DBIC	Dimbokro	71.34	70	P	P	03 33 33.9	-1.7
DBIC				IAmb	IAmb	03 33 41.1	
	comp=Z,12nm,1.4s						

*GFZ **15** 03:51:40.6±0.3, 27°.5S×178°.5E×17°.9E±°, h645km±11km, M5.5/23, mb5.7/23*

*GFZ **15** 03:51:40.8, 26°.55S×178°.26E, h605km, Mw5.3/18, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.31; Mθθ=0.81; Mϕϕ=-0.50; Mrθ=-0.43; Mθϕ=0.47; Mϕr=0.32; Fault plane solution: M0=1.00751×10^17^ NP1: ϕs=298.08740°, δ53.15333°, λ=-9.04556°. NP2:ϕs=33.54079°, δ82.77223°, λ=-142.80864°. Principal axes: T 1.1440, Plg19.5768°, Azm160.2573°; N -0.3888, Plg52.2127°, Azm42.9551°; P -0.7552, Plg30.8638°, Azm262.5282°;*

*BJI **15** 03:51:40.8, 26°.23S×178°.50E, h622km, mB5.1/15, mb5.3/69*

*NEIC **15** 03:51:41.7±1.6, 26°.58S±0°.09×178°.35E±0°.03, h616km±5km, mb4.9/334, Error ellipse: s-maj=12.6km s-min=4.5km az=179.0*

*NOU **15** 03:51:41.2, 26°.62S×178°.36E, h618km, ML5.3/132, South of Fiji Islands*

*IDC **15** 03:51:41.6±0.4, 26°.56S×178°.29E, h617km±4km, mb4.5/22, mbtmp5.5/26, Error ellipse: s-maj=9.8km s-min=8.3km az=80.0*

*GCMT **15** 03:51:42.7±0.2, 26°.50S±0°.02×178°.15E±0°.03, h626km±2km, MW5.4/92, Moment Tensor Solution. s92,c135; Duration: 1s2 Moment tensor: Scale 10^17^Nm; Mrr=0.31±.03; Mθθ=1.12±.04; Mϕϕ=-0.80±.05; Mrθ=-0.52±.04; Mθϕ=0.61±.04; Mϕr=0.58±.04; Best double couple: M0=1.37900×10^17^ NP1:ϕs=299.00000°, δ54.00000°, λ=-7.00000°. NP2:ϕs=33.00000°, δ84.00000°, λ=-143.00000°. Principal axes: T 1.5410, Plg20.0000°, Azm160.0000°; N -0.3200, Plg53.0000°, Azm41.0000°; P -1.2160, Plg29.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 15 03:51:41.6±0.3, 26°.63S±0°.04×178°.36E±0°.04, h623km±2km, h625km:pP-P, n1179, σ1s11/1187, mb5.0/234, 81C-21D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.20	129	P	P	03 53 10.7	+0.7
RAO	2μm,0.4s,baz=252,slow=24,SNR=32			S	S	03 54 22.8	+0.4
	491nm,0.3s,baz=125,slow=20,SNR=4.0						
RAO	Raoul Island	4.20	129	P	P	03 53 10.6	+0.6
RAO	Raoul Island	4.20	129	P	P	03 53 10.1	+0.1
RAO					S	03 54 22.3	-0.1
RAO	Raoul Island	4.20	129	P	P	03 53 10.5	+0.5
GLKZ	Green Lake	4.21	129	P	P	03 53 10.6	+0.6
GLKZ					S	03 54 24.9	+2.5
LKBA	Tubou, Lakemba	8.76	18	P	P	03 53 48.0	-1.0
LKBA	Tubou, Lakemba	8.76	18	S	S	03 55 32.6	-0.7
MSVF	Nonsavu	8.86	358	P	P	03 53 47.9	-2.1
	476nm,0.4s,baz=174,slow=7.1,SNR=612						
MSVF				S	S	03 55 31.8	-3.4
	54nm,0.7s,baz=131,slow=22,SNR=0.9						
MSVF	Nonsavu	8.86	358	P	P	03 53 47.9	-2.1
MSVF	Nonsavu	8.86	358	S	S	03 55 33.2	-2.1
MSVF	Nonsavu	8.86	358	P	P	03 53 47.5	-2.5
MSVF	Nonsavu	8.86	358	P	P	03 53 48.1	-2.0
OUZ	Omahuta	9.49	204	P	P	03 53 57.4	+1.8
OUZ	Omahuta	9.49	204	P	P	03 53 58.1	+2.4
NFK	Norfolk Island	9.53	253	P	P	03 53 56.6	+0.4
	comp=Z,1μm,0.9s						
WCZ	Waipu Caves	9.89	199	P	P	03 54 02.0	+2.5
GRZ	Great Barrier	9.90	194	P	P	03 54 00.8	+1.1
TAVE	Taveuni	10.01	10	P	P	03 53 59.9	-1.1
DGTI	Dogotuki	10.36	7	P	P	03 54 03.2	-1.3
DGTI	Dogotuki	10.36	7	P	S	03 56 01.4	-0.3
ABAZ	Army Bay	10.38	196	P	P	03 54 06.7	+2.4
WIAZ	Waiheke Island	10.50	194	P	P	03 54 07.4	+1.9
MBAZ	Motutapu North	10.53	195	P	P	03 54 07.8	+2.0
RVAZ	Riverhead Bore	10.61	197	P	P	03 54 08.5	+1.9
HBAZ	Herne Bay Bore	10.64	196	P	P	03 54 08.8	+1.9
EPAZ	Eden Park BICE	10.67	196	P	P	03 54 09.0	+1.9
ETAZ	East Tamaki Re	10.70	195	P	P	03 54 09.5	+2.0
MARNC	Mare, Loyalty	10.74	296	P	P	03 54 08.2	+0.1
MARNC	Mare, Loyalty	10.74	296	S	S	03 56 09.1	+0.8
MARNC	Mare, Loyalty	10.74	296		P	03 54 07.6	-0.5
WTAZ	Waiatarua	10.76	196	P	P	03 54 10.0	+1.9
MYRZ	Mayor Island	10.77	189	P	P	03 54 10.0	+1.8
KBAZ	Karaka Road Bo	10.84	195	P	P	03 54 11.1	+2.2
AWAZ	Awhitu Peninsu	10.87	196	P	P	03 54 10.8	+1.7
MXZ	Matakaoa Point	10.90	180	P	P	03 54 06.6	-2.8
MXZ	Matakaoa Point	10.90	180	S	S	03 56 09.3	-1.5
MXZ	Matakaoa Point	10.90	180	P	P	03 54 06.4	-3.0
MXZ	Matakaoa Point	10.90	180	P	P	03 54 06.6	-2.8
MXZ				S	S	03 56 06.0	-4.8
WIZ	White Island	10.91	185	P	P	03 54 09.0	-0.5
HAZ	Te Kaha	11.10	182	P	P	03 54 08.7	-2.7
WMGZ	Waiomatatini S	11.16	180	P	P	03 54 09.8	-2.2
WMGZ				S	S	03 56 11.2	-4.1
PKGZ	Pakihiroa	11.21	181	P	P	03 54 09.8	-2.7
TGRZ	Tauranga	11.21	189	P	P	03 54 14.1	+1.6
WHRZ	Whale Island	11.25	186	P	P	03 54 13.9	+1.0
OUENC	Ouen Island, N	11.29	289	P	P	03 54 12.5	-1.0
OUENC	Ouen Island, N	11.29	289	S	S	03 56 19.0	+0.9
OUENC	Ouen Island, N	11.29	289		P	03 54 13.5	0.0
RUGZ	Raukumara Rang	11.32	183	P	P	03 54 10.4	-3.2
TOZ	Tahuroa Road	11.33	192		P	03 54 14.2	+0.6
TOZ	Tahuroa Road	11.33	192	P	P	03 54 14.9	+1.3
KMRZ	Kaimai	11.37	190	P	P	03 54 15.8	+1.7
YATNC	Mamie plateau,	11.40	291	P	P	03 54 14.8	+0.2
YATNC	Mamie plateau,	11.40	291	S	S	03 56 20.8	+0.7
PUZ	Puketiti	11.41	180	P	P	03 54 11.8	-2.6
TWGZ	Tauwhareparae	11.52	181	P	P	03 54 13.3	-2.2
EDRZ	Edgecumbe	11.53	186	P	P	03 54 15.5	-0.1
OMRZ	Omania	11.56	188	P	P	03 54 17.0	+1.0
URZ	Urewera	11.64	185	P	P	03 54 13.7	-3.0
	comp=Z,406nm,0.7s,baz=263,slow=3.5,SNR=216						
URZ				S	S	03 56 17.8	-6.0
	comp=Z,221nm,0.7s,baz=56,slow=22,SNR=9.6						
URZ				ScP	ScP	04 01 43.0	+0.4
	comp=Z,14nm,0.7s,baz=34,slow=3.6,SNR=4.5						
URZ	Urewera	11.64	185	P	P	03 54 13.9	-2.7
URZ	Urewera	11.64	185	S	S	03 56 24.0	+0.2
URZ	Urewera	11.64	185	P	P	03 54 13.7	-3.0
URZ	Urewera	11.64	185	P	P	03 54 14.4	-2.2
UTU	Utuhina	11.66	188	P	P	03 54 18.8	+2.0
ONTNC	Ouen Toro	11.66	289	P	P	03 54 16.5	-0.6
ONTNC	Ouen Toro	11.66	289	S	S	03 56 25.5	+0.9
ONTNC	Ouen Toro	11.66	289		P	03 54 17.0	-0.1
TARZ	Mount Tarawera	11.68	187	P	P	03 54 17.3	+0.2
MWZ	Matawai	11.69	183	P	P	03 54 14.6	-2.6
HLRZ	Highlands Stat	11.71	188	P	P	03 54 17.8	+0.4
DZM	Mont Dzumac	11.77	290	P	P	03 54 18.8	+0.5
	comp=Z,391nm,0.7s,baz=111,slow=14,SNR=190						
DZM				S	S	03 56 26.2	-0.5
	comp=Z,161nm,1.1s,baz=263,slow=23,SNR=7.2						
DZM				ScP	ScP	04 01 44.6	+1.4
	comp=Z,18nm,0.6s,baz=184,slow=2.6,SNR=12						
RRRZ	Republican Roa	11.78	187	P	P	03 54 17.7	-0.3
TKGZ	Te Karaka	11.78	182	P	P	03 54 16.1	-1.9
CNGZ	Carnagh Statio	11.82	181	P	P	03 54 16.5	-1.9
HRRZ	Handcock Road	11.86	188	P	P	03 54 19.0	+0.3
RAGZ	Rawiri	11.86	184	P	P	03 54 17.3	-1.5
NOUC	Port Laguerre	11.88	290	P	P	03 54 19.9	+0.7
MUGZ	Murupara	11.89	186	P	P	03 54 16.9	-2.1
TLZ	Tolley Road	11.90	191	P	P	03 54 20.8	+1.6
PRRZ	Plateau Road	11.95	187	P	P	03 54 19.1	-0.6
WPRZ	Whakapapatarin	12.00	188	P	P	03 54 20.5	+0.3
RTZ	Ruatahuna	12.01	185		P	03 54 16.8	-3.4
RTZ	Ruatahuna	12.01	185	P	P	03 54 17.8	-2.5
KUTZ	Kaahu Road	12.02	190	P	P	03 54 21.8	+1.5
ALRZ	Allen Road	12.02	188	P	P	03 54 19.6	-0.7
RIGZ	Rimuhau	12.05	182	P	P	03 54 18.1	-2.5
POIZ	Poihipi	12.12	189	P	P	03 54 21.2	-0.2
SNGZ	Shannon Statio	12.15	184	P	P	03 54 18.7	-2.9
HIZ	Hauiti	12.21	193	P	P	03 54 24.1	+2.0
HIZ	Hauiti	12.21	193		P	03 54 23.1	+0.9
HIZ	Hauiti	12.21	193	P	P	03 54 23.9	+1.7
HIZ	Hauiti	12.21	193	P	P	03 54 24.1	+2.0
WATZ	Wairara	12.24	190	P	P	03 54 23.6	+1.1
MTHZ	Maungataniwha	12.26	186	P	P	03 54 20.6	-2.0
PRGZ	Paritu Road	12.27	182	P	P	03 54 20.4	-2.3
MRHZ	Matea Rd	12.28	187	P	P	03 54 21.3	-1.5
RAHZ	Arahi	12.30	185	P	P	03 54 21.0	-2.0
KNZ	Kokohu	12.37	182	P	P	03 54 21.2	-2.4
HATZ	Hinemaiaia	12.37	188	P	P	03 54 22.9	-0.8
RATZ	Rangitukua	12.39	189	P	P	03 54 23.8	-0.1
WHHZ	Waihua	12.45	184	P	P	03 54 22.3	-2.1
MHGZ	Mahia Peninsul	12.49	182	P	P	03 54 22.8	-2.0
NMHZ	Naumai	12.50	186	P	P	03 54 23.3	-1.7
KATZ	Kakaramea	12.51	190	P	P	03 54 25.9	+0.8
BKZ	Black Stump Fm	12.60	187	P	P	03 54 23.4	-2.5
BKZ	Black Stump Fm	12.60	187	P	P	03 54 23.9	-2.0
NTVZ	North Tongarir	12.64	190	P	P	03 54 25.9	-0.5
KRVZ	Karewarewa	12.64	190	P	P	03 54 27.1	+0.7
TWVZ	Taurewa	12.64	190	P	P	03 54 26.7	+0.2
TMVZ	Te Maari	12.65	189	P	P	03 54 25.8	-0.7
ARHZ	Aropaoanui	12.65	185	P	P	03 54 24.3	-2.0
WTVZ	West Tongariro	12.66	190	P	P	03 54 26.1	-0.6
ETVZ	East Tongariro	12.67	189	P	P	03 54 25.6	-1.0
FUTU	Fugatoga	12.70	16	P	P	03 54 24.9	-2.3
OTVZ	Oturere	12.70	190	P	P	03 54 25.3	-1.7
RTV	Rentapao	12.72	312	P	P	03 54 26.7	-0.7
NGZ	Ngauruhoe	12.72	190	P	P	03 54 26.8	-0.4
SNVZ	South Ngauruho	12.73	190	P	P	03 54 26.2	-1.1
COVZ	Chateau Observ	12.76	190	P	P	03 54 27.0	-0.5
TUVZ	Tukino	12.80	190	P	P	03 54 27.1	-0.9
FWVZ	Far West T-bar	12.81	190	P	P	03 54 27.5	-0.7
MAVZ	Matarangi	12.82	190	P	P	03 54 27.5	-0.9
VRZ	Vera Road	12.82	193	P	P	03 54 30.1	+2.1
WHVZ	Whangaehu Hut	12.83	190	P	P	03 54 27.0	-1.3
TRVZ	Turoa	12.85	190	P	P	03 54 28.0	-0.6
MCHZ	McNeill Hill	12.86	186	P	P	03 54 25.5	-2.9
KWHZ	Kaweka Forest	12.86	187	P	P	03 54 25.9	-2.6
WNVZ	Wahianoa	12.87	190	P	P	03 54 27.2	-1.5
PKVZ	Pokaka	12.87	191	P	P	03 54 27.9	-0.7
DVP	Devils Point	12.93	311	P	P	03 54 28.6	-0.8
MOVZ	Moawhango	12.93	189	P	P	03 54 27.5	-1.7
BHHZ	Black Hill Sta	12.97	188	P	P	03 54 27.1	-2.4
CKHZ	Cape Kidnapper	13.04	184	P	P	03 54 28.7	-1.4
KRHZ	Kereru	13.08	187	P	P	03 54 27.8	-2.8
NEZ	North Egmont	13.10	195	P	P	03 54 33.4	+2.6
KHEZ	Kahui Hut	13.14	195	P	P	03 54 33.5	+2.3
NIUE	Niue	13.15	58	P	P	03 54 31.8	+0.3
	comp=Z,487nm,1.2s						
NIUE	Niue	13.15	58	P	P	03 54 32.3	+0.7
NIUE	Niue	13.15	58	P	P	03 54 30.9	-0.6
NIUE	Niue	13.15	58	P	P	03 54 37.3	+5.8
NIUE					S	03 56 58.4	+7.6
KAHZ	Kahuranaki	13.19	185	P	P	03 54 28.8	-2.9
PNHZ	Pukenui	13.37	187	P	P	03 54 30.6	-2.8
WAZ	Wanganui	13.39	191	P	P	03 54 33.2	-0.3
PXZ	Pawanui	13.42	185	P	P	03 54 31.6	-2.2
TSZ	Takapari Road	13.54	188	P	P	03 54 32.8	-2.3
BFZ	Birch Farm	14.12	187	P	P	03 54 38.4	-2.2
BFZ	Birch Farm	14.12	187	P	P	03 54 37.7	-2.9
BFZ	Birch Farm	14.12	187	P	P	03 54 38.2	-2.4
MRZ	Mangatainoka R	14.18	189	P	P	03 54 37.9	-3.2
KOUNC	Koumac, New Ca	14.24	292	P	P	03 54 43.1	+1.1
KOUNC	Koumac, New Ca	14.24	292		P	03 54 41.8	-0.2
TCW	Tory Channel	14.93	192	P	P	03 54 46.7	-1.2
SNZO	South Karori	14.95	191	P	P	03 54 47.4	-0.7

SNZO South Karori 14.95 191 P P 03 54 47.0 -1.1
SNZO South Karori 14.95 191 P P 03 54 48.1 +0.1
QRZ Quartz Range 14.96 197 P P 03 54 49.5 +1.3
QRZ Quartz Range 14.96 197 P 03 54 49.3 +1.1
QRZ Quartz Range 14.96 197 P P 03 54 49.7 +1.5
MSWZ Moikau Station 14.97 189 P P 03 54 47.1 -1.2
TKNZ Takaka Hill 15.04 196 P P 03 54 49.4 +0.4
NNZ Nelson 15.12 195 P P 03 54 49.8 +0.2
PLWZ Palliser 15.12 189 P P 03 54 48.3 -1.4
TUWZ Tuamarina 15.21 193 P P 03 54 50.8 +0.4
SANVU Saraoutou 15.23 315 P P 03 54 50.9 -0.1
SANVU Saraoutou 15.23 315 P 03 54 50.6 -0.4
SANVU Saraoutou 15.23 315 P P 03 54 50.3 -0.7
MRNZ Matariki Terra 15.44 196 P P 03 54 53.1 +0.6
CMWZ Cape Campbell 15.46 192 P P 03 54 50.2 +0.4
BSWZ Blackbirch Sta 15.49 193 P 03 54 53.1 0.0
AFI Afiamalu 15.67 38 P P 03 54 52.5 -2.6
comp=Z,56nm,0.3s,baz=320,slow=2.4,SNR=12
AFI S S 03 57 27.6 -5.1
comp=Z,162nm,0.7s,baz=71,slow=23,SNR=9.2
AFI Afiamalu 15.67 38 P P 03 54 52.7 -2.4
AFI Afiamalu 15.67 38 P P 03 54 53.5 -1.6
THZ Tophouse 15.75 195 P P 03 54 55.3 -0.2
DSZ Denniston Nort 16.01 198 P P 03 54 58.6 +0.7
KHZ Kahutara 16.24 193 P P 03 54 59.6 -0.2
KHZ Kahutara 16.24 193 P P 03 54 59.1 -0.7
KHZ Kahutara 16.24 193 P P 03 54 59.4 -0.3
LTZ Lake Taylor 16.86 196 P P 03 55 06.3 -0.3
GVZ Greta Valley S 16.87 194 P P 03 55 06.0 +0.4
INZ Inchbonnie 17.02 198 P P 03 55 07.2 +0.2
AMCZ Amberley 17.15 194 P P 03 55 08.0 -0.1
CTZ Chatham Island 17.55 168 P P 03 55 14.1 +2.4
CTZ Chatham Island 17.55 168 P P 03 55 13.7 +2.0
LHI Lord Howe Isla 17.55 249 P P 03 55 14.8 +2.8
comp=Z,2µm,0.7s,comp=Z,0.0nm
LHI Lord Howe Isla 17.55 249 P 03 55 11.7 -0.3
FUNA Funafuti 18.02 3 P P 03 55 15.4 -1.1
FUNA Funafuti 18.02 3 P P 03 55 16.0 -0.6
RPZ Rata Peaks 18.05 197 P P 03 55 15.5 -0.9
comp=Z,86nm,0.4s,baz=358,slow=2.2,SNR=63
RPZ S S 03 58 07.2 -3.3
comp=Z,11nm,0.7s,baz=95,slow=19,SNR=3.0
RPZ ScP ScP 04 01 54.6 +0.3
comp=Z,2.9nm,0.5s,baz=317,slow=2.6,SNR=5.3
RPZ Rata Peaks 18.05 197 P P 03 55 15.6 -0.7
RPZ Rata Peaks 18.05 197 P 03 55 15.8 -0.6
RPZ ScP 04 01 52.1 -2.2
FOZ Fox Glacier 18.24 200 P P 03 55 18.0 0.0
JCZ Jackson Bay 19.05 202 P P 03 55 25.3 -0.2
ODZ Otahua Downs 19.39 197 P P 03 55 27.8 -0.7
ODZ Otahua Downs 19.39 197 P P 03 55 27.9 -0.6
WKZ Wanaka 19.65 200 P P 03 55 30.4 -0.5
MLZ Mavora Lakes 20.42 201 P P 03 55 38.5 +0.7
RAR Rarotonga 20.70 80 P P 03 55 41.2 +0.6
comp=Z,41nm,0.8s,baz=235,slow=7.6,SNR=5.3
comp=Z,41nm,0.8s
RAR Rarotonga 20.70 80 P P 03 55 41.2 +0.6
RAR Rarotonga 20.70 80 P P 03 55 40.9 +0.3
DCZ Deep Cove 20.83 203 P P 03 55 41.9 +0.5
WHZ Wether Hill Ro 20.94 201 P P 03 55 43.0 +0.6
SYZ Scrubby Hill 21.17 198 P P 03 55 44.8 +0.4
PYZ Puysegur Point 21.60 202 P P 03 55 48.1 -0.2
NGOA Tingoa Renbel 22.84 308 P P 03 55 59.6 -0.1
TW1H Toowoomba 1 Ha 23.50 262 P P 03 56 05.5 0.0
ARMA Armidale 23.77 255 P P 03 56 09.8 +1.9
comp=Z,327nm,0.8s,comp=Z,0.0nm
ARMA Armidale 23.77 255 P P 03 56 09.3 +1.4
ARMA Armidale 23.77 255 P P 03 56 08.9 +1.0
ARMA Armidale 23.77 255 P P 03 56 09.8 +1.9
EIDS Eidsvold 24.53 267 P P 03 56 15.5 +0.9
comp=Z,1µm,0.7s,comp=Z,0.0nm
EIDS Eidsvold 24.53 267 P P 03 56 15.0 +0.4
EIDS Eidsvold 24.53 267 P 03 56 15.2 +0.6
EIDS Eidsvold 24.53 267 P P 03 56 15.5 +0.9
SAVO Savo Central 24.71 311 P P 03 56 16.4 +0.1
SYDH Sydney Hard Ro 24.86 247 P P 03 56 17.5 +0.2
TATA Tatamba Isabel 25.28 312 P P 03 56 19.7 -1.6
RK1H Rockhampton Ha 25.44 271 P P 03 56 22.8 +0.3
CNB Canberra Magne 26.25 244 P P 03 56 31.4 +1.8
RMQ Roma 26.45 264 P P 03 56 32.8 +1.3
comp=Z,319nm,1.1s
RMQ Roma 26.45 264 P P 03 56 32.7 +1.3
RMQ Roma 26.45 264 P P 03 56 33.2 +1.8
CAN Canberra 26.55 244 P P 03 56 33.8 +1.6
comp=Z,332nm,0.7s
CAN Canberra 26.55 244 P P 03 56 33.8 +1.6
CAN Canberra 26.55 244 P 03 56 33.8 +1.6
CAN Canberra 26.55 244 P P 03 56 34.0 +1.8
MILA Mila 26.80 240 P P 03 56 36.4 +2.0
comp=Z,245nm,1.2s
MILA Mila 26.80 240 P P 03 56 35.9 +1.5
TARA Tarawa 28.31 348 P P 03 56 47.5 -0.2
GLAD Gladstone 28.83 232 P P 03 56 51.5 -0.3
CMSA Cobar Meteorol 28.90 252 P P 03 56 53.3 +0.7
comp=Z,513nm,0.7s,comp=Z,0.0nm
CMSA Cobar Meteorol 28.90 252 P P 03 56 52.9 +0.3
CMSA Cobar Meteorol 28.90 252 P P 03 56 53.5 +0.9
TOO Toolangi 29.76 240 P P 03 57 01.4 +1.4
comp=Z,118nm,1.2s
TOO Toolangi 29.76 240 P 03 57 00.8 +0.8
MOO Moorlands 29.92 230 P P 03 57 02.7 +1.5
comp=Z,112nm,1.1s
MOO Moorlands 29.92 230 P P 03 57 02.8 +1.6
MOO Moorlands 29.92 230 P P 03 57 02.4 +1.2
MOO Moorlands 29.92 230 P P 03 56 58.6 -2.6
TAU Tasmania Unive 30.01 229 P P 03 57 03.2 +1.3
TAU Tasmania Unive 30.01 229 P P 03 57 03.7 +1.7
CTA Charters Tower 30.13 276 P P 03 57 04.0 +0.7
comp=Z,280nm,0.7s,comp=Z,0.0nm
CTA Charters Tower 30.13 276 ScP ScP 04 02 30.4 +2.0
comp=Z,11nm,0.8s,baz=119,slow=2.5,SNR=3.8
CTA Charters Tower 30.13 276 P P 03 57 03.7 +0.4
CTAO Charters Tower 30.13 276 P P 03 57 03.9 +0.6
CTAO Charters Tower 30.13 276 P P 03 57 03.9 +0.6
CTAO Charters Tower 30.13 276 P P 03 57 04.2 +0.8
CTAO Charters Tower 30.13 276 P P 03 57 03.5 +0.2
CTAO ScP ScP 04 02 31.0 +2.6
QLP Quilpie 30.46 262 P P 03 57 06.4 +0.4
comp=Z,913nm,0.5s,comp=Z,0.0nm
QLP Quilpie 30.46 262 P P 03 57 06.3 +0.3
QLP Quilpie 30.46 262 P P 03 57 06.5 +0.4
PAE Paea 30.94 80 eT T 04 25 31.0
comp=Z,22nm,0.3s
PPT2 Papeete2 30.97 80 eS S 04 01 26.5 -6.8
comp=Z,154nm,36.8s
PPT2 eS sS 04 04 38.2 +2.5
comp=Z,191nm,27.8s
PPT2 eT T 04 25 31.6
comp=Z,4.7nm,0.4s
BRAT Ballarat 30.98 241 P P 03 57 10.4 +0.2
TVO Taravao 31.18 80 eP P 03 57 13.2 +0.8
comp=Z,229nm,1.3s
STKA Stephens Creek 32.39 252 P P 03 57 23.1 +0.8
comp=Z,1µm,0.6s,comp=Z,0.0nm
STKA Stephens Creek 32.39 252 P P 03 57 23.1 +0.8
comp=Z,181nm,0.4s,baz=96,slow=10,SNR=808
STKA PcP PcP 03 59 49.5 -0.7
comp=Z,30nm,0.7s,baz=148,slow=3.4,SNR=2.8
STKA ScP ScP 04 02 37.6 +1.6
comp=Z,23nm,0.8s,baz=106,slow=5.4,SNR=5.3
STKA ScS ScS 04 06 38.0 +0.8
comp=Z,3.7nm,1.0s,baz=225,slow=22,SNR=7.3
comp=Z,181nm,0.4s
STKA Stephens Creek 32.39 252 P P 03 57 22.3 -0.1
STKA Stephens Creek 32.39 252 P P 03 57 23.3 +0.9
ARPS Mount Arapiles 32.51 243 P P 03 57 24.1 +0.9
comp=Z,161nm,1.0s
MTSU Mount Surprise 32.51 278 P P 03 57 24.4 +0.8
comp=Z,392nm,0.8s
MTSU Mount Surprise 32.51 278 P P 03 57 23.7 +0.1
MTSU Mount Surprise 32.51 278 P P 03 57 24.4 +0.8
INKA Innaminka 33.39 259 P 03 57 31.5 +0.7
RABL Rabaul 33.55 307 P P 03 57 30.7 -1.6
MGBR Mount Gambier 33.63 241 P P 03 57 33.5 +0.8
PMG Port Moresby 34.12 294 P P 03 57 36.4 -0.6
PMG Port Moresby 34.12 294 P P 03 57 35.7 -1.3
PMG Port Moresby 34.12 294 P P 03 57 36.8 -0.2
HTT Hallett 34.66 249 P P 03 57 41.7 +0.4
comp=Z,266nm,0.9s,comp=Z,0.0nm
HTT Hallett 34.66 249 P P 03 57 41.3 0.0
PTPS Port Pirie 35.43 250 P P 03 57 48.1 +0.5
QIS Mount Isa 35.93 271 P P 03 57 51.8 -0.1
comp=Z,328nm,1.2s,comp=Z,0.0nm
QIS Mount Isa 35.93 271 P P 03 57 51.5 -0.4
QIS Mount Isa 35.93 271 P P 03 57 51.9 0.0
XMAS Kiritimati 36.85 43 P P 03 58 01.2 +1.7
BBOO Buckleboo 37.06 250 P P 03 58 00.7 -0.3
comp=Z,444nm,0.9s,comp=Z,0.0nm
BBOO Buckleboo 37.06 250 P P 03 58 00.3 -0.7
BBOO Buckleboo 37.06 250 P P 03 58 00.9 -0.1
MANU Manus Island 38.50 304 P P 03 58 12.2 -0.6
AS17 Alice Springs 40.12 264 P P 03 58 25.9 +0.2
comp=Z,615nm,1.1s
AS01 Alice Springs 40.16 264 P P 03 58 25.7 -0.3
AS31 Alice Springs 40.20 264 P P 03 58 26.4 0.0
comp=Z,174nm,0.5s,comp=Z,0.0nm
ASAR Alice Springs 40.20 264 P P 03 58 26.4 0.0
comp=Z,272nm,0.6s,baz=95,slow=6.9,SNR=1937
ASAR ScP ScP 04 03 06.0 +0.6
comp=Z,7.4nm,0.8s,baz=97,slow=4.2,SNR=4.4
ASAR S S 04 03 43.2 -7.1
comp=Z,7.9nm,0.8s,baz=104,slow=13,SNR=5.8
ASAR ScS ScS 04 07 22.1 0.0
comp=Z,1.8nm,0.9s,baz=115,slow=5.4,SNR=4.2
comp=Z,272nm,0.6s
ASAR Alice Springs 40.20 264 P P 03 58 26.2 -0.1
ASAR ScP 04 03 06.3 +0.9
WRAB Tennant Creek 40.82 270 P P 03 58 30.6 -0.6
WRAB Tennant Creek 40.82 270 P P 03 58 30.9 -0.4
WRAB Tennant Creek 40.82 270 P P 03 58 31.0 -0.3
WRAB Tennant Creek 40.82 270 P P 03 58 30.6 -0.6
WRA Warramunga Arr 40.82 270 P P 03 58 30.6 -0.7
comp=Z,480nm,0.7s,baz=106,slow=7.7,SNR=541
WRA PcP pP 04 00 15.8 +0.1
comp=Z,22nm,0.8s,baz=108,slow=3.1,SNR=5.4
WRA ScP ScP 04 03 08.8 +0.9
comp=Z,11nm,0.8s,baz=109,slow=4.0,SNR=7.0
WRA S S 04 03 56.2 -3.2
comp=Z,8.4nm,0.9s,baz=100,slow=13,SNR=5.4
WRA Warramunga Arr 40.82 270 P P 03 58 30.9 -0.4
WRA IAmb IAmb 03 58 31.8
comp=Z,70nm,0.8s
WRA PcP 04 00 17.0 +0.4
WRA ScP 04 03 08.3 +0.5
JAY Jayapura 43.33 297 P P 03 58 50.0 -0.9
GENI Genyem 43.71 297 P P 03 58 53.3 -0.5
GENI Genyem 43.71 297 P P 03 58 51.7 -2.1
GENI Genyem 43.71 297 P P 03 58 53.5 -0.3
FORT Forrest 44.02 252 P P 03 58 55.2 -0.7
comp=Z,555nm,0.7s,comp=Z,0.0nm
WRKA Warakurna 44.85 260 P P 03 59 00.8 -1.7
comp=Z,170nm,0.8s,comp=Z,0.0nm
KDU Kakadu 45.14 279 P P 03 59 04.0 -0.7
comp=Z,203nm,0.7s,comp=Z,0.0nm
MTN Manton Dam 46.26 278 P P 03 59 12.1 -1.1
comp=Z,115nm,0.5s,comp=Z,0.0nm
DRV Dumont d'Urvil 46.48 200 P P 03 59 14.5 +0.5
DRV ScP ScP 04 03 30.5 +0.3
DRS Darwin Rock St 46.64 278 P P 03 59 15.6 -0.5
KNRA Kununurra 47.27 273 P P 03 59 20.9 +0.1
comp=Z,696nm,0.8s,comp=Z,0.0nm
SRPI Serui, Papua 47.31 294 P P 03 59 20.1 -1.0
BAKI Biak 47.81 295 P P 03 59 25.0 +0.2
KMBL Kambalda 49.17 250 P P 03 59 33.8 -0.8
comp=Z,58nm,0.7s
FITZ Fitzroy Crossi 49.20 269 P P 03 59 35.1 0.0
comp=Z,111nm,0.8s
FITZ Fitzroy Crossi 49.20 269 P P 03 59 35.0 0.0
FAKI Fak Fak 50.03 290 P P 03 59 40.4 -0.7
FAKI Fak Fak 50.03 290 P P 03 59 40.3 -0.9
FAKI Fak Fak 50.03 290 P P 03 59 40.2 -0.9
BNDI Bandanaira 51.19 287 P P 03 59 49.2 -0.3
VNDA Vanda 51.55 185 P P 03 59 52.7 +1.6
comp=Z,34nm,0.5s,baz=4.6,slow=8.2,SNR=280
VNDA ScP ScP 04 03 52.9 +1.1
comp=Z,14nm,0.9s,baz=358,slow=4.5,SNR=7.2
comp=Z,34nm,0.5s
VNDA Vanda 51.55 185 P P 03 59 52.2 +1.1
VNDA IAmb IAmb 03 59 53.2
comp=Z,41nm,0.7s
VNDA ScP 04 03 53.1 +1.3
GUMO Guam 51.55 317 P P 03 59 51.6 -0.4
SBA Scott Base 51.58 183 P P 03 59 52.8 +1.5
SBA Scott Base 51.58 183 P P 03 59 53.8 +2.6
SBA PcP PcP 04 00 52.2 -1.8
SBA ScP ScP 04 03 53.7 +1.9
SIJI Sorong 51.97 292 P P 03 59 54.4 -0.7
PUH Pauahi 52.43 32 P P 03 59 58.6 +0.4
MLH Mauna Loa 52.45 32 P P 03 59 58.9 +0.3
KNHH Kane Nui o Ham 52.46 32 P P 03 59 58.1 -0.3
STCH Steam Cracks 52.48 32 P P 03 59 58.4 -0.2
RKGY Rocky Gully 52.72 246 P P 03 59 59.6 -0.5
comp=Z,174nm,1.4s
NWAO Narrogin (SRO) 52.79 248 P P 04 00 00.0 -0.6
comp=Z,66nm,0.7s
NWAO Narrogin (SRO) 52.79 248 P P 04 00 00.3 -0.4
NWAO Narrogin (SRO) 52.79 248 P P 04 00 00.2 -0.4
NWAO Narrogin (SRO) 52.79 248 P P 04 00 00.1 -0.6
NWAO IAmb IAmb 04 00 00.5
comp=Z,54nm,0.8s
MEEK Meekatharra 52.95 256 P P 04 00 00.9 -1.0
comp=Z,105nm,0.7s
MEEK Meekatharra 52.95 256 P P 04 00 00.9 -1.0
MBWA Marble Bar 53.49 263 P P 04 00 05.0 -0.7
comp=Z,195nm,1.1s
MBWA Marble Bar 53.49 263 P P 04 00 05.2 -0.5
MBWA Marble Bar 53.49 263 P P 04 00 05.3 -0.5
MBWA Marble Bar 53.49 263 P P 04 00 04.9 -0.9
SOEI Soe 53.66 278 P P 04 00 08.8 +1.6
SOEI Soe 53.66 278 P P 04 00 08.2 +1.0
BLDU Ballidu 53.67 250 P P 04 00 06.3 -0.6
comp=Z,296nm,0.8s
BLDU Ballidu 53.67 250 P P 04 00 06.4 -0.6
MUN Mundaring 53.82 249 P P 04 00 07.7 -0.2
comp=Z,147nm,1.4s
MUN Mundaring 53.82 249 P P 04 00 07.7 -0.2
BATI Baumata 54.00 277 P P 04 00 06.7 -2.8
MORW Morawa 54.58 252 P P 04 00 12.9 -0.5
comp=Z,255nm,0.9s
MORW Morawa 54.58 252 P P 04 00 12.8 -0.5
CCD Concordia, Ant 55.72 195 P P 04 00 21.4 +0.5
CCD pP pwP 04 02 19.6 -1.8
CCD ScP ScP 04 04 11.1 +0.5
SANI Sanana 55.80 287 P P 04 00 21.4 -0.5
SANI Sanana 55.80 287 P P 04 00 20.7 -1.2
MMRI Maumere 55.95 278 P P 04 00 24.0 +1.0
MMRI Maumere 55.95 278 P P 04 00 22.4 -0.6
TNTI Ternate 56.12 291 P P 04 00 23.0 -1.1
TNTI Ternate 56.12 291 P P 04 00 23.4 -0.7
CASY Casey 57.02 207 P P 04 00 29.8 +0.5
CASY IAmb IAmb 04 00 30.1
comp=Z,47nm,0.7s
WSI Waingapu 57.23 276 P P 04 00 31.1 -0.5
KDI Kendari 57.77 283 P P 04 00 34.4 -0.9
GIRL Giralia 57.89 259 P P 04 00 36.3 +0.3
comp=Z,289nm,1.0s
LBFI Labuhan Bajo, 58.10 277 P P 04 00 36.9 -0.7
LUWI Luwuk 59.08 286 P P 04 00 44.3 +0.2
LUWI Luwuk 59.08 286 P P 04 00 43.3 -0.8
SGSI Sangihe 59.25 292 P P 04 00 44.0 -1.2
KAPI Kappang 59.79 280 P P 04 00 50.1 +1.3
KAPI Kappang 59.79 280 P P 04 00 48.8 0.0
KAPI IAmb IAmb 04 00 49.7
comp=Z,226nm,1.5s
KAPI Kappang 59.79 280 P P 04 00 48.3 -0.5
KAPI Kappang 59.79 280 P P 04 00 48.2 -0.6
KAPI ScP ScP 04 04 26.5 -2.7
PLAI Plampang 59.84 275 P P 04 00 48.8 -0.3
PLAI Plampang 59.84 275 P P 04 00 48.3 -0.8
TWSI Taliwang, Sumb 60.67 275 P P 04 00 53.9 -0.7
MMSI Mamuju 61.62 282 P P 04 01 00.1 -0.7
comp=Z,1µmcomp=Z,175nm,0.6s
PCI Palu 61.68 284 P P 04 01 01.6 +0.4
TOLI2 Tolitoli 61.88 287 P P 04 01 01.4 -1.1
TOLI2 Tolitoli 61.88 287 P P 04 01 01.3 -1.1
TOLI2 IAmb IAmb 04 01 03.2
comp=Z,67nm,0.6s
KHKI Kahang-Kahang 61.97 275 P P 04 01 02.6 -0.4
IGBI Denpasar 62.19 274 P P 04 01 03.9 -0.5
JAGI Jajag, Banyuwa 63.22 274 P P 04 01 10.7 -0.4
JAGI Jajag, Banyuwa 63.22 274 P P 04 01 09.8 -1.3
QSPA South Pole Qui 63.46 180 P P 04 01 13.4 +1.5
comp=Z,179nm,0.5s,baz=288,slow=0.2,SNR=1553
comp=Z,179nm,0.5s
QSPA South Pole Qui 63.46 180 P P 04 01 13.3 +1.5
QSPA South Pole Qui 63.46 180 P P 04 01 13.2 +1.3
SNJI Sawahan-Nganju 65.65 273 P P 04 01 26.6 0.0
MYLDM Lahad Datu 65.94 289 IAmb IAmb 04 01 40.9
comp=Z,41nm,0.8s
UGM Wanagama 66.70 273 P P 04 01 33.1 +0.2
SMRI Semarang 67.15 274 P P 04 01 35.6 0.0
TGY Tagaytay City 68.92 299 P P 04 01 46.4 +0.2
comp=Z,219nm,0.5s,baz=278,slow=5.2,SNR=4.2
comp=Z,219nm,0.5s
BBJI Bungbulang 69.47 272 P P 04 01 49.1 -0.5
BBJI Bungbulang 69.47 272 P P 04 01 48.8 -0.8
BBJI Bungbulang 69.47 272 P P 04 01 48.4 -1.2
JHJ2 Mitsune 69.81 326 P P 04 01 51.1 +0.1
XMI Christmas Isla 69.96 268 P P 04 01 52.8 +0.3
TPI Tanjungpandan 71.53 276 P P 04 02 01.3 -0.3
INU Inuyama 72.99 326 IAmb IAmb 04 02 10.1
comp=Z,50nm,0.9s
INU Inuyama 72.99 326 P P 04 02 09.2 -0.3
JGF Kuroka 73.01 326 P P 04 02 09.4 -0.3
JGF Kuroka 73.01 326 IAmb IAmb 04 02 10.2
comp=Z,40nm,0.7s
KASI Kota Agung 73.12 272 P P 04 02 09.3 -1.5
comp=Z,3µmcomp=Z,232nm,0.9s
PPBI Pangkal Pinang 73.15 276 P P 04 02 10.4 -0.5
MJAR Matsushiro Arr 73.34 327 P P 04 02 10.6 -0.8
comp=Z,28nm,0.7s,baz=160,slow=5.9,SNR=69
MJAR pP pP 04 04 17.1 +0.5
comp=Z,5.6nm,0.9s,baz=155,slow=6.1,SNR=5.5
comp=Z,28nm,0.7s
MJAR Matsushiro Arr 73.34 327 P P 04 02 11.2 -0.3
MJAR IAmb IAmb 04 02 11.7
comp=Z,29nm,0.7s
MAJO Matsushiro 73.34 327 P P 04 02 11.2 -0.3
MAJO Matsushiro 73.34 327 P P 04 02 11.0 -0.4
MAJO IAmb IAmb 04 02 11.8
comp=Z,37nm,0.8s
MJB9 Matsu-Tunnel 73.34 327 IAmb IAmb 04 02 12.7
comp=Z,36nm,0.8s
JMN Monobe 73.39 322 P P 04 02 11.8 0.0
JSU Suzuyama 73.70 319 P P 04 02 13.6 0.0
YOJ Yonaguni jima 73.73 309 P P 04 02 14.4 +0.5
BELA Belgrano 2 73.92 173 P P 04 02 14.8 +0.7
TWGBT Beinan 74.06 306 P P 04 02 14.0 -1.8
SMAI San Martin Ant 74.09 159 IAmb IAmb 04 02 17.3
comp=Z,40nm,0.8s
YULB Yu-li 74.27 307 P P 04 02 17.1 +0.1
YULB Yu-li 74.27 307 P P 04 02 15.0 -2.0
YULB IAmb IAmb 04 02 20.1
comp=Z,26nm,0.5s
NACB Ninganchiao 74.54 308 IAmb IAmb 04 02 18.2
comp=Z,74nm,1.2s
MAW Mawson 74.68 201 P P 04 02 19.4 +0.8
comp=Z,9.2nm,0.8s
MAW Mawson 74.68 201 P P 04 02 19.5 +1.0
comp=Z,30nm,0.6s,baz=132,slow=6.0,SNR=86
comp=Z,30nm,0.6s
MAW Mawson 74.68 201 P P 04 02 19.5 +1.0
TPUB Ta-pu 74.69 306 P P 04 02 18.3 -1.1
SSLB Suanglung 74.76 307 P P 04 02 18.6 -1.1
SSLB Suanglung 74.76 307 P P 04 02 18.1 -1.6
SSLB IAmb IAmb 04 02 18.6
comp=Z,72nm,1.1s
YHNB Yeheng 75.01 308 P P 04 02 21.6 +0.4
YHNB Yeheng 75.01 308 IAmb IAmb 04 02 21.7
comp=Z,21nm,0.8s
MNAI Manna 75.01 273 P P 04 02 21.6 +0.2
JTM Tenmabayashi 75.49 332 P P 04 02 23.6 +0.3
KSI Kapahiang 75.65 273 P P 04 02 24.1 -0.9
ERM Erimo 75.65 334 P P 04 02 25.8 +1.6
JEM Erimo 75.66 334 P P 04 02 25.9 +1.7
JTU Tsushima 76.48 320 P P 04 02 29.2 +0.3
JKA Kamikawa-asahi 77.65 334 IAmb IAmb 04 02 37.7
comp=Z,55nm,1.1s
ADK Adak 78.29 3 P P 04 02 39.0 +0.7
ADK Adak 78.29 3 P P 04 02 38.3 +0.1
ATKA Atka Island 78.76 5 P P 04 02 40.9 +0.2
ATKA Atka Island 78.76 5 IAmb IAmb 04 02 41.5
comp=Z,58nm,0.8s
PPI Padang Panjang 79.03 275 P P 04 02 41.3 -1.8
KSRS Korea Array 79.41 321 P P 04 02 45.0 +0.5
comp=Z,22nm,0.7s,baz=138,slow=5.8,SNR=77
KSRS pP pP 04 04 52.6 +0.1
comp=Z,2.8nm,0.9s,baz=137,slow=5.8,SNR=3.6
comp=Z,22nm,0.7s
KSAR Wonju Array Be 79.42 321 P P 04 02 44.9 +0.3
KS19 Wonju Array Si 79.48 321 IAmb IAmb 04 02 45.6
comp=Z,24nm,0.8s
YSS Yuzhno-Sakhali 79.99 336 P P 04 02 48.3 +0.9
YSS Yuzhno-Sakhali 79.99 336 P P 04 02 48.5 +1.2
ELIB Princess Elisa 80.17 188 dP P 04 02 48.7 +0.5
comp=Z,89nm,0.7s
MG03 Isla Dawson 80.36 146 IAmb IAmb 04 02 51.5
comp=Z,54nm,1.1s
MG05 Puerto Natales 80.44 143 IAmb IAmb 04 02 52.3
comp=Z,62nm,0.9s
QIZ Qiongzhong 80.47 297 IAmb IAmb 04 02 51.3
comp=Z,28nm,0.6s
QIZ Qiongzhong 80.47 297 P P 04 02 50.8 +0.4
QIZ S S 04 12 10.3 +3.1
QIZ pmax pmax
comp=Z,41nm,0.6s
UNV Unalaska Valle 81.21 9 P P 04 02 53.6 +0.2
UNV Unalaska Valle 81.21 9 P P 04 02 53.3 -0.1
baz=194
NJ2 Nanjing 81.36 312 ⇓P P 04 02 54.9 +0.2
NJ2 pmax pmax
comp=Z,120nm,0.8s
PEA0B Petropavlovsk- 81.42 348 IAmb IAmb 04 02 56.1
comp=Z,91nm,1.4s
PETK Petropavlovsk- 81.42 348 P P 04 02 55.0 +0.4
comp=Z,24nm,0.7s,baz=123,slow=5.6,SNR=36
PETK pP pP 04 05 02.9 -0.6
comp=Z,6.0nm,0.9s,baz=139,slow=7.7,SNR=4.8
comp=Z,24nm,0.7s
PETK Petropavlovsk- 81.42 348 P P 04 02 55.3 +0.8
PETK pP pP 04 05 03.4 -0.2
TROLL Troll, Antarti 81.59 181 ⇑P P 04 02 56.1 +0.6
comp=Z,7µm,0.5s
AKUT Akutan 81.59 9 P P 04 02 55.3 0.0
RPSI Rantau Prapat 81.77 277 P P 04 02 56.4 -0.9
PSI Prapat 81.82 277 P P 04 02 56.8 -0.9
PSI Prapat 81.82 277 P P 04 02 56.0 -1.7
SNAA Sanae 81.97 180 ⇑P P 04 02 57.6 +0.3
comp=Z,1µm,0.5s
SNAA ⇑SKSac SKSac 04 12 16.7 -2.0
comp=N,149nm,1.0s
SNAA Sanae 81.97 180 P P 04 02 57.6 +0.3
comp=N,60nm,0.6s,baz=205,slow=6.0,SNR=190
comp=N,60nm,0.6s
SNAA Sanae 81.97 180 P P 04 02 57.8 +0.5
GO08 Villa O'Higgin 82.07 141 IAmb IAmb 04 03 01.1
comp=Z,29nm,0.9s
USA0B Ussuriysk Arra 82.27 328 IAmb IAmb 04 03 00.8
comp=Z,63nm,0.9s
USRK Ussuriysk Ar. 82.27 328 P P 04 02 59.7 +0.7
comp=Z,50nm,0.7s,baz=129,slow=3.7,SNR=87
comp=Z,50nm,0.7s
GSI Gunungsitoli 82.34 275 P P 04 03 00.7 +0.5
GSI Gunungsitoli 82.34 275 P P 04 03 00.5 +0.3
VNA2 Neumayer--Watz 82.63 178 ⇑P P 04 03 01.0 +0.4
comp=Z,118nm,0.6s,baz=179,slow=4.2
VNA2 ⇑SKSac SKSac 04 12 22.6 -0.3
comp=N,13nm,1.1s
VNA1 Neumayer--Stat 82.88 178 ⇑P P 04 03 02.2 +0.4
comp=Z,38nm,0.6s
VNA1 ⇑SKSac SKSac 04 12 25.0 +0.6
comp=N,2.3nm,0.9s
CNSH ChangSha 83.16 306 P P 04 03 04.3 +0.4
CNSH pmax pmax
comp=N,47nm,1.1s
CHNA Chernabura Isl 83.32 13 P P 04 03 04.1 +0.1
CHNA Chernabura Isl 83.32 13 P P 04 03 04.3 +0.3
baz=200
GULI GuiLin 83.44 302 ⇓P P 04 03 04.4 -1.0
GULI pmax pmax
comp=N,76nm,0.8s
WHN Wuhan 83.51 309 ⇓iP P 04 03 06.0 +0.4
WHN pmax pmax
comp=N,170nm,0.8s
SDPT Sand Point 83.64 12 P P 04 03 05.4 -0.1
SDPT Sand Point 83.64 12 P P 04 03 05.6 +0.1
baz=199
MDJ Mudanjiang 83.72 327 IAmb IAmb 04 03 08.2
comp=Z,74nm,1.1s
MDJ Mudanjiang 83.72 327 P P 04 03 07.0 +0.7
MDJ pmax pmax

comp=Z,74nm,1.0s
MDJ Mudanjiang 83.72 327 P P 04 03 06.6 +0.3
MDJ pP **pP** **04 05 15.6 -0.6**
COYC Coyhaique 83.87 138 IAmb IAmb 04 03 10.4
comp=Z,65nm,1.1s
SNSI Sinabang, Aceh 83.95 276 P P 04 03 07.9 -0.3
DL2 Dalian 84.02 319 P P 04 03 07.1 -0.7
DL2 pmax pmax
comp=Z,74nm,0.8s
SPIA Saint Paul Isl 84.03 6 P P 04 03 08.2 +0.8
baz=190
LHMI Lhok Sumawe 84.68 279 P P 04 03 11.4 -0.3
S14K Fog Glacier 84.69 12 P P 04 03 11.4 +0.6
baz=200
CHGN Chignik 84.93 13 P P 04 03 12.4 +0.6
baz=201
TIA Tai'an 85.06 315 P P 04 03 13.8 +0.8
TIA pP **pwP** **04 05 29.3 -0.1**
TIA pmax pmax
comp=Z,92nm,0.9s
CBX Cerro Bola 85.22 50 IAmb IAmb 04 03 16.8
comp=Z,24nm,0.8s
CN2 Changchun 85.22 325 P P 04 03 13.8 +0.2
CN2 pP pP 04 05 23.3 -0.8
CN2 S **S** **04 12 55.4 +2.5**
CN2 pmax pmax
comp=Z,100nm,0.9s
DPP Dos Picos Cty 85.42 50 IAmb IAmb 04 03 17.3
comp=Z,19nm,0.7s
SLBS Sierra La Lagu 85.43 61 P P 04 03 16.6 +1.4
SLBS IAmb IAmb 04 03 18.3
comp=Z,17nm,0.8s
ESJX Sierra Juarez 85.53 51 IAmb IAmb 04 03 19.6
comp=Z,41nm,1.7s
BNX BinXian 85.60 327 ⇓P **P** **04 03 15.0 -0.3**
BNX S **S** **04 12 57.4 +0.9**
BNX pmax pmax
comp=Z,57nm,0.8s
TPO Tropico Hills 85.67 48 IAmb IAmb 04 03 18.6
comp=Z,17nm,0.9s
VES Vestal, Richgr 85.68 46 IAmb IAmb 04 03 17.9
comp=Z,20nm,0.7s
YUH Yuha Desert 85.92 50 IAmb IAmb 04 03 20.1
comp=Z,37nm,1.6s
ISA Isabella, Lake 85.97 47 IAmb IAmb 04 03 20.0
comp=Z,18nm,0.8s
SII Sitkinak Islan 86.07 15 P P 04 03 17.8 +0.5
baz=204
SUTB Sutter Butte 86.08 42 IAmb IAmb 04 03 19.9
comp=Z,18nm,0.8s
PFO Pinyon Flats O 86.11 49 P P 04 03 19.0 +0.8
KHBM Hayfork Bally 86.15 41 IAmb IAmb 04 03 21.2
comp=Z,25nm,1.1s
BSI Banda Aceh 86.26 278 P P 04 03 18.5 -0.8
SLVN Son La 86.42 296 P P 04 03 20.2 +0.3
SLVN IAmb IAmb 04 03 22.3
comp=Z,83nm,1.7s
ORV Oroville 86.46 42 IAmb IAmb 04 03 22.0
comp=Z,26nm,1.5s
R17L Mt. Peulik Vol 86.58 13 P P 04 03 20.4 +0.6
baz=202,SNR=18
CLC China Lake 86.64 47 IAmb IAmb 04 03 23.0
comp=Z,15nm,0.7s
BELC Belle Mtn. Jos 86.64 49 IAmb IAmb 04 03 23.5
comp=Z,12nm,0.7s
O03E Paynes Creek 86.75 41 IAmb IAmb 04 03 23.4
comp=Z,38nm,1.1s
LR05 Currie 86.76 134 IAmb IAmb 04 03 24.2
comp=Z,50nm,1.1s
ENH Enshi 86.82 306 P P 04 03 21.4 -0.1
M02C Callahan 86.83 40 IAmb IAmb 04 03 24.8
comp=Z,24nm,0.9s
GYA Guiyang 86.88 302 ⇑P **P** **04 03 21.9 -0.1**
GYA pmax pmax
comp=Z,33nm,0.7s
OHAK Old Harbor 86.88 15 P P 04 03 22.0 +1.0
baz=205
GLA Glamis 86.91 51 IAmb IAmb 04 03 25.1
comp=Z,17nm,0.8s
PIX Pinacate 87.03 53 IAmb IAmb 04 03 25.2
comp=Z,20nm,0.9s
WAKR Walker 87.07 44 IAmb IAmb 04 03 25.5
comp=Z,23nm,1.3s
LYN LuoYang 87.13 311 P P 04 03 23.9 +1.1
LYN S **S** **04 13 11.8 +0.5**
LYN pmax pmax
comp=Z,110nm,1.1s
YBH Yreka Blue Hor 87.13 40 P **P** **04 03 24.5 +1.7**
comp=Z,13nm,0.7s,baz=197,slow=2.9,SNR=21
comp=Z,19nm,0.7s
YBH Yreka Blue Hor 87.13 40 IAmb IAmb 04 03 25.7
comp=Z,17nm,0.9s
QSM Queen of Sheba 87.20 47 IAmb IAmb 04 03 25.4
comp=Z,32nm,1.7s
O14K Tigyukauivet M 87.21 10 P **P** **04 03 23.1 +0.6**
baz=198,SNR=8.6
Q17K Contact Creek 87.27 13 P **P** **04 03 23.2 +0.1**
baz=203
IRM Iron Mountain 87.31 50 IAmb IAmb 04 03 26.8
comp=Z,33nm,1.5s
HNS HongShan 87.32 314 ⇓P **P** **04 03 24.8 +1.2**
HNS pP **pwP** **04 05 41.8 +0.8**
HNS pmax pmax
comp=Z,60nm,1.2s
PNTR Pine Nut 87.33 43 IAmb IAmb 04 03 26.5
comp=Z,32nm,1.1s
ACHA Angle Creek He 87.33 14 IAmb IAmb 04 03 27.3
comp=Z,30nm,1.9s
BEKR Beckworth 87.34 43 IAmb IAmb 04 03 26.3
comp=Z,21nm,1.2s
J01E Myrtle Point 87.36 38 IAmb IAmb 04 03 26.6
comp=Z,35nm,0.8s
O15K Ungalikthiuk R 87.38 11 P **P** **04 03 23.7 +0.3**
baz=199
PLCA Paso Flores 87.42 135 P **P** **04 03 26.4 +2.0**
comp=Z,22nm,0.9s,baz=220,slow=4.4,SNR=33
comp=Z,22nm,0.9s
PLCA Paso Flores 87.42 135 IAmb IAmb 04 03 27.4
comp=Z,37nm,1.1s
PLCA Paso Flores 87.42 135 *e*P **P** **04 03 23.7 -0.7**
PLCA *ep*P pP 04 05 25.3 -11
GO06 Curarrehue 87.45 133 IAmb IAmb 04 03 27.5
comp=Z,29nm,1.3s
HSIG 87.48 56 IAmb IAmb 04 03 27.5
comp=Z,24nm,0.9s
Q16K King Salmon 87.50 13 P **P** **04 03 24.2 +0.3**
baz=202
LHV Little Huntoon 87.50 45 IAmb IAmb 04 03 27.3
comp=Z,26nm,1.3s
KDAK Kodiak Island 87.55 15 P P 04 03 24.9 +0.7
baz=206
P16K Nushagak River 87.57 12 P P 04 03 25.3 +1.1
baz=201
M11K Mekoryuk 87.62 8 P P 04 03 25.4 +1.0
baz=194
L04D Klamath Falls 87.67 40 IAmb IAmb 04 03 27.9
comp=Z,35nm,0.8s
EFI East Falkland 87.67 149 P P 04 03 26.3 +1.1
NVAR Mina Array Bea 87.74 45 P P 04 03 27.4 +1.5
comp=Z,8.5nm,1.0s,baz=222,slow=7.9,SNR=42
NVAR pP **pP** **04 05 39.4 +1.0**
comp=Z,1.7nm,0.9s,baz=223,slow=8.8,SNR=4.7
comp=Z,8.5nm,1.0s
NVAR Mina Array Bea 87.74 45 P **P** **04 03 26.6 +0.7**
N14K Kuskokwak Cree 87.79 10 IAmb IAmb 04 03 27.1
comp=Z,27nm,0.6s
N14K Kuskokwak Cree 87.79 10 P P 04 03 26.1 +0.9
baz=198,SNR=9.1
Q18K Katmai Hardscr 87.80 14 P P 04 03 25.7 +0.2
baz=204,SNR=18
PAHR Pah Rah Range 87.84 43 P **P** **04 03 26.7 +0.5**
PAHR IAmb IAmb 04 03 28.6
comp=Z,22nm,1.2s
BBOR Butler Butte 87.89 39 IAmb IAmb 04 03 28.9
comp=Z,18nm,0.7s
BJI2 Beijing 87.98 317 P **P** **04 03 27.4 +0.7**
BJI2 PP **PP** **04 07 06.9 +1.3**
BJI2 SKS **SKSac** **04 12 59.3 +2.9**
BJI2 S **ScS** **04 13 21.3 -1.2**
BJI2 pmax pmax
comp=Z,26nm,0.8s
BJI2 pmax pmax
comp=Z,110nm,4.4s
BJT Baijiatuau 87.98 317 P **P** **04 03 27.3 +0.6**
BJT pP **pP** **04 05 38.4 0.0**
M13K Dall Lake 88.01 9 P **P** **04 03 26.8 +0.5**
baz=196
P17K Kvichak River 88.02 13 P **P** **04 03 26.3 -0.1**
baz=202,SNR=12
O16K Kokwok River B 88.08 12 P P 04 03 26.1 -0.5
baz=201,SNR=5.3
TPNV Topopah Spring 88.18 47 IAmb IAmb 04 03 30.4
comp=Z,16nm,1.1s
TPH Tonopah 88.21 45 IAmb IAmb 04 03 30.4
comp=Z,20nm,1.0s
N15K Kwethluk River 88.27 11 P P 04 03 28.8 +1.3
baz=199,SNR=27
P18K Big Mountain, 88.44 13 P P 04 03 28.2 -0.2
baz=203,SNR=11
M14K Bethel 88.54 10 IAmb IAmb 04 03 33.1
comp=Z,11nm,0.8s
M14K Bethel 88.54 10 P P 04 03 29.5 +0.8
baz=198,SNR=6.4
I04A Tendick Farm, 88.62 38 IAmb IAmb 04 03 31.8
comp=Z,20nm,0.9s
Y14A Wickenburg 88.66 51 IAmb IAmb 04 03 32.7
comp=Z,10nm,0.8s
M15K Kasigluk River 88.68 10 P P 04 03 30.1 +0.7
baz=199,SNR=9.6
N16K Nishlik Lake 88.78 11 P P 04 03 31.0 +1.1
baz=200,SNR=18
K05A Summer Lake 88.80 40 IAmb IAmb 04 03 33.5
comp=Z,27nm,0.9s
HEH HeiHe 88.84 330 *e*P **P** **04 03 30.8 +0.4**
HEH pmax pmax
comp=Z,18nm,1.0s
MA2 Magadan 88.86 346 P P 04 03 29.9 -0.3
comp=Z,30nm,0.9s
O18K Koktuh Hills 88.87 13 P P 04 03 30.5 +0.1
baz=203
S11A Rachel 88.91 46 IAmb IAmb 04 03 33.7
comp=Z,17nm,1.3s
J05D Fort Rock, OR 88.96 39 IAmb IAmb 04 03 34.1
comp=Z,35nm,1.1s
TIY Taiyuan 88.97 314 *e*P **P** **04 03 32.8 +1.4**
TIY pmax pmax
comp=Z,110nm,0.7s
L14K Kuka Creek 89.00 9 P P 04 03 31.6 +0.8
baz=197,SNR=6.6
CMAR Chiang Mai Arr 89.10 291 P P 04 03 34.0 +1.6
comp=Z,11nm,0.8s,baz=144,slow=3.9,SNR=46
CMAR pP **pP** **04 05 45.7 +1.3**
comp=Z,0.9nm,0.3s,baz=132,slow=3.5,SNR=1.7
CMAR PP **PP** **04 07 12.6 -2.1**
comp=Z,1.8nm,0.3s,baz=126,slow=6.1,SNR=8.3
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 89.10 291 P P 04 03 32.3 0.0
CMAR **pP** **04 05 44.8 +0.4**
P19K Oil Pt 89.10 14 P P 04 03 31.7 +0.3
baz=205
N17K Nushagak Hills 89.11 12 IAmb IAmb 04 05 51.9
comp=Z,25nm,1.9s
N17K Nushagak Hills 89.11 12 P P 04 03 31.8 +0.4
baz=202
WIFE Three Sisters- 89.12 39 IAmb IAmb 04 03 34.6
comp=Z,15nm,0.9s
BI02 San Fabin de 89.17 131 IAmb IAmb 04 03 35.1
comp=Z,24nm,0.8s
PRN Pahroc Range 89.23 47 IAmb IAmb 04 03 35.7
comp=Z,18nm,1.2s
KMI2 Kunming 89.25 299 ⇓P **P** **04 03 34.4 +1.2**
KMI2 pmax pmax
comp=Z,47nm,0.8s
CHTO Chiang Mai 89.26 291 P P 04 03 34.1 +1.0
CHTO Chiang Mai 89.26 291 P P 04 03 34.2 +1.1
CHTO pP **pP** **04 05 46.2 +1.0**
M16K Timber Creek 89.27 11 IAmb IAmb 04 03 34.3
comp=Z,18nm,1.1s
M16K Timber Creek 89.27 11 P P 04 03 33.3 +1.2
baz=200,SNR=13
XAN Xi'an 89.27 309 ⇓P **P** **04 03 33.6 +0.7**
XAN pP pP 04 05 44.8 -0.2
XAN SKS **SKSac** **04 13 06.8 +2.5**
XAN S **ScS** **04 13 33.8 +0.1**
XAN pmax pmax
comp=Z,110nm,0.7s
XAN pmax pmax
comp=Z,190nm,3.8s
H04A Detroit Lake 89.31 38 IAmb IAmb 04 03 34.7
comp=Z,49nm,1.8s
K13K Kusilvak Mount 89.31 8 P P 04 03 33.0 +0.8
baz=195
TUC Tucson 89.35 53 P P 04 03 34.7 +1.4
O19K Port Alsworth 89.36 13 P P 04 03 32.5 0.0
baz=204
PINE Pine Mountain 89.44 39 IAmb IAmb 04 03 36.4
comp=Z,20nm,0.8s
HOM Homer 89.46 15 P P 04 03 33.1 +0.1
baz=206
L15K Ungalak Mounta 89.49 9 P P 04 03 33.5 +0.4
baz=198
N18K Kilae Creek 89.50 12 IAmb IAmb 04 03 34.0
comp=Z,45nm,1.9s
N18K Kilae Creek 89.50 12 P P 04 03 33.4 +0.1
baz=203
GO05 Hualane 89.61 129 P P 04 03 35.5 +0.9
GO05 IAmb IAmb 04 03 36.9
comp=Z,22nm,1.0s
O20K Slope Mountain 89.62 14 P P 04 03 33.8 -0.1
baz=206
BRSE Bradley Lake S 89.74 15 P P 04 03 34.8 +0.4
baz=207
L16K Owhat River 89.83 10 IAmb IAmb 04 03 36.4
comp=Z,11nm,1.0s
L16K Owhat River 89.83 10 P P 04 03 35.4 +0.7
baz=200,SNR=7.5
M17K Holitna River 89.89 11 IAmb IAmb 04 03 37.1
comp=Z,22nm,0.8s
M17K Holitna River 89.89 11 P P 04 03 36.0 +1.1
baz=202
RED Redoubt Volcan 89.89 14 IAmb IAmb 04 03 36.1
comp=Z,27nm,1.0s
N19K Bonanza Creek 89.90 13 IAmb IAmb 04 03 35.5
comp=Z,14nm,0.8s
N19K Bonanza Creek 89.90 13 P P 04 03 34.8 -0.3
baz=204
WVOR Wild Horse Val 89.94 41 IAmb IAmb 04 03 38.4
comp=Z,22nm,1.2s
X16A Lo Mia Camp, P 90.01 51 IAmb IAmb 04 03 39.4
comp=Z,10nm,0.8s
K15K Wolf Creek Mou 90.07 9 IAmb IAmb 04 05 57.3
comp=Z,40nm,1.4s
K15K Wolf Creek Mou 90.07 9 P P 04 03 36.7 +0.9
baz=198,SNR=6.6
LCMT Little Creek M 90.20 48 IAmb IAmb 04 03 39.8
comp=Z,14nm,0.8s
M18K Stony River 90.26 12 P P 04 03 37.4 +0.7
baz=203
SEW Seward 90.36 15 P P 04 03 38.1 +0.9
baz=208
XLT XiLinHaoTe 90.40 320 *e*P **P** **04 03 38.3 +0.4**
XLT pmax pmax
comp=Z,39nm,0.8s
L17K Donlin 90.42 11 P P 04 03 38.5 +1.1
baz=201,SNR=9.2
GAMB Gambell 90.44 4 P P 04 03 38.0 +0.6
baz=189
KNB Kanab 90.48 48 IAmb IAmb 04 03 41.3
comp=Z,17nm,0.7s
G06A Carlson Farm, 90.51 38 IAmb IAmb 04 03 40.5
comp=Z,8.0nm,0.8s
U15A North Rim 90.52 49 IAmb IAmb 04 03 41.7
comp=Z,21nm,0.7s
BO02 Sierra Bellavi 90.52 130 IAmb IAmb 04 03 41.2
comp=Z,18nm,0.8s
Q23K Middleton Isla 90.56 17 P P 04 03 38.4 +0.3
baz=211
J08A Circle Bar Ran 90.59 41 IAmb IAmb 04 03 41.1
comp=Z,15nm,1.4s
SZCU Shurtz Canyon 90.62 48 IAmb IAmb 04 03 42.0
comp=Z,12nm,0.9s
O22K Cooper Landing 90.63 15 P P 04 03 38.7 +0.3
baz=208
PSUT Pine Spring 90.64 47 IAmb IAmb 04 03 41.7
comp=Z,9.1nm,0.8s
WUAZ Wupatki 90.65 50 IAmb IAmb 04 03 42.0
comp=Z,8.3nm,0.9s
PZH PanZhiHua 90.70 299 P P 04 03 39.9 +0.1
PZH pmax pmax
comp=Z,10.0nm,0.7s
SPCR Spurr Chakacha 90.72 14 P P 04 03 39.1 +0.1
baz=206
SPU Mount Spurr 90.74 14 IAmb IAmb 04 03 39.1
comp=Z,8.3nm,0.8s
L18K Granite Mounta 90.78 11 IAmb IAmb 04 03 40.9
comp=Z,12nm,0.9s
L18K Granite Mounta 90.78 11 P P 04 03 39.6 +0.5
baz=202,SNR=9.7
GNW Green Mountain 90.81 35 IAmb IAmb 04 03 41.8
comp=Z,27nm,1.5s
M19K Big River Lodg 90.92 13 IAmb IAmb 04 03 40.6
comp=Z,11nm,0.7s
M19K Big River Lodg 90.92 13 P P 04 03 39.9 +0.1
baz=204
MT09 Talagante 90.93 129 IAmb IAmb 04 03 42.9
comp=Z,22nm,0.9s
K17K Iditarod 90.97 11 IAmb IAmb 04 03 41.5
comp=Z,13nm,1.1s
K17K Iditarod 90.97 11 P P 04 03 40.6 +0.6
baz=201,SNR=6.2
D05A Enumclaw 91.01 36 IAmb IAmb 04 03 43.2
comp=Z,30nm,1.1s
STLK Strandline Lak 91.07 14 IAmb IAmb 04 03 40.4
comp=Z,12nm,0.7s
L19K White Mountain 91.08 12 P P 04 03 41.2 +0.6
baz=204
M20K Styx River 91.14 13 P P 04 03 40.7 -0.2
baz=205
J16K Anvik River 91.15 9 IAmb IAmb 04 03 42.5
comp=Z,14nm,1.1s
J16K Anvik River 91.15 9 P P 04 03 41.5 +0.7
baz=199,SNR=5.2
RC01 Rabbit Creek A 91.17 15 IAmb IAmb 04 03 41.9
comp=Z,20nm,0.8s
RC01 Rabbit Creek A 91.17 15 P P 04 03 41.2 +0.3
baz=208,SNR=7.8
HHC Hu-ho-hao-te 91.31 316 *e*P **P** **04 03 43.4 +1.2**
HHC S **S** **04 13 50.0 +1.0**
HHC SS **SS** **04 20 18.8 +3.7**
HHC pmax pmax
comp=Z,19nm,0.7s
HHC pmax pmax
comp=Z,64nm,3.9s
CD2 Chengdu 91.35 304 P P 04 03 43.3 +0.7
CD2 pmax pmax
comp=Z,80nm,0.9s
MTPU Mount Pierson 91.47 48 IAmb IAmb 04 03 46.6
comp=Z,20nm,0.8s
J17K VABM Dome 91.49 10 IAmb IAmb 04 03 43.8
comp=Z,7.3nm,0.7s
J17K VABM Dome 91.49 10 P P 04 03 43.0 +0.7
baz=200,SNR=7.7
KAIM Kayak Island 91.50 18 P P 04 03 43.1 +0.6
baz=213
SKT Skwentna 91.56 14 P P 04 03 41.9 -0.9
baz=207,SNR=8.2
TCRU Three Creeks R 91.60 47 IAmb IAmb 04 03 46.7
comp=Z,11nm,0.9s
GLI Glacier Island 91.62 16 P P 04 03 42.7 -0.3
baz=210
CRAG Craig 91.65 25 P P 04 03 42.5 -0.7
baz=222
M22K Willow 91.67 14 P P 04 03 43.4 +0.2
baz=208
EYAK Cordova Ski Ar 91.67 17 P P 04 03 43.6 +0.4
baz=212
I17K Unalakleet 91.71 9 P P 04 03 43.8 +0.5
baz=199
KNK Knik Glacier 91.75 15 IAmb IAmb 04 04 45.3
comp=Z,18nm,0.8s
KNK Knik Glacier 91.75 15 P P 04 03 43.8 +0.1
baz=209
PMR Palmer 91.75 15 IAmb IAmb 04 03 44.4
comp=Z,16nm,1.0s
PMR Palmer 91.75 15 P P 04 03 43.8 +0.2
baz=209,SNR=6.8
HIA Hailar 91.81 326 IAmb IAmb 04 03 45.0
comp=Z,19nm,1.1s
J18K Innoko River 91.93 11 IAmb IAmb 04 03 45.7
comp=Z,16nm,0.8s
J18K Innoko River 91.93 11 P P 04 03 44.8 +0.4
baz=202,SNR=20
HILR Hailar Array B 91.99 326 P **P** **04 03 45.4 +0.3**
comp=Z,6.4nm,0.7s,baz=133,slow=11,SNR=11
comp=Z,6.4nm,0.7s
SIT Sitka 92.04 23 P P 04 03 44.7 -0.3
baz=220
SML Sawmill 92.12 15 P P 04 03 45.5 +0.1
baz=209
V35K Ketchikan 92.13 26 P P 04 03 44.8 -0.6
baz=223
U33K Whale Pass 92.14 25 P P 04 03 45.4 0.0
baz=222
DIV Divide 92.17 17 IAmb IAmb 04 03 46.7
comp=Z,10nm,0.8s
CUT Chulitna 92.22 14 P P 04 03 45.6 0.0
baz=208,SNR=8.1
L22K Petersville 92.22 14 IAmb IAmb 04 03 45.9
comp=Z,17nm,0.8s
L22K Petersville 92.22 14 P P 04 03 45.2 -0.6
baz=207,SNR=16
H16K Elim 92.22 8 P P 04 03 45.9 +0.3
baz=197
DUG Dugway, Tooele 92.23 46 IAmb IAmb 04 03 48.5
comp=Z,13nm,1.5s
PPLA Purkeypile 92.25 13 P P 04 03 45.9 -0.2
baz=206
M23K Glacier View 92.25 15 P P 04 03 46.1 +0.1
baz=210
K20K Telida 92.31 12 P P 04 03 46.3 +0.2
baz=204,SNR=7.4
BTO2 Baotou 92.31 315 *e*P **P** **04 03 46.0 -0.9**
BTO2 pP **pP** **04 05 56.8 -2.6**
BTO2 pmax pmax
comp=Z,20nm,1.1s
BTO2 pmax pmax
comp=Z,250nm,6.5s
CO02 Combarbal 92.32 127 P P 04 03 47.9 +0.6
BMRM Bremner River 92.33 17 IAmb IAmb 04 03 48.0
comp=Z,14nm,0.8s
BMRM Bremner River 92.33 17 P P 04 03 46.7 +0.4
baz=213
G15K Niukluk 92.34 7 P P 04 03 46.6 +0.4
baz=196
SCM Sheep Creek Mo 92.39 16 P P 04 03 46.4 -0.2
baz=210,SNR=10
KLU Klutina 92.44 16 IAmb IAmb 04 04 57.8
comp=Z,36nm,1.7s
KLU Klutina 92.44 16 P P 04 03 46.9 +0.1
baz=212
CRQE Cirque 92.56 18 P P 04 03 47.3 -0.2
baz=214
F14K Arctic Creek 92.56 6 P P 04 03 47.3 +0.1
baz=194
Q16A Castle Valley 92.61 47 IAmb IAmb 04 03 51.9
comp=Z,7.5nm,0.8s
J19K Poorman 92.61 11 P P 04 03 47.5 0.0
baz=203,SNR=5.7
S32K Killisnoo 92.62 23 P P 04 03 47.3 -0.3
baz=221
CAST Castle Rocks 92.74 13 P P 04 03 47.0 -1.2
baz=206,SNR=12
CO03 El Pedregal 92.75 126 IAmb IAmb 04 03 51.5
comp=Z,22nm,1.2s
H17K Granite Mounta 92.82 9 P P 04 03 47.8 -0.6
baz=199
PINM Pinnacle 92.83 19 P P 04 03 47.8 -0.8
baz=216
F10A Beach Ranch, E 92.86 39 IAmb IAmb 04 03 52.5
comp=Z,6.8nm,0.9s
N25K Chitina, Valde 92.87 17 P P 04 03 49.1 +0.3
baz=213,SNR=5.2
MPU Maple Canyon 92.89 46 IAmb IAmb 04 03 52.0
comp=Z,8.9nm,0.9s
M24K Tolsona, Glenn 92.90 16 P P 04 03 48.6 -0.3
baz=211
G16K Koyuk River 92.93 8 P P 04 03 49.0 +0.1
baz=197
WAT6 Susitna Watana 92.94 15 P P 04 03 48.9 -0.4
baz=210,SNR=9.1
GLB Gilahina Butte 92.94 17 IAmb IAmb 04 03 50.4
comp=Z,9.6nm,0.8s
F15K North Star Dit 92.97 7 P P 04 03 49.4 +0.3
baz=195
WAT1 Susitna Watana 92.97 15 P P 04 03 48.5 -0.7
baz=209
J20K Nowinta River 93.04 12 P P 04 03 50.1 +0.7
baz=204,SNR=5.5
KTH Kantishna Hill 93.10 13 IAmb IAmb 04 03 49.7
comp=Z,12nm,0.9s
MCARA McCarthy VSAT 93.10 18 P P 04 03 50.1 +0.3
baz=214
CHUM Lake Minchumin 93.12 13 P P 04 03 49.1 -0.6

baz=206,SNR=7.8
TXAR Lajitas Array 93.12 59 P **P** **04 03 52.5 +1.7**
comp=Z,2.5nm,0.9s,baz=214,slow=6.5,SNR=28
TXAR pP **pP** **04 06 04.6 +0.2**
comp=Z,1.5nm,1.0s,baz=242,slow=2.7,SNR=5.3
TXAR PKKPbc **PKKPbc** **04 20 57.2 +1.4**
comp=Z,0.7nm,0.6s,baz=97,slow=3.3,SNR=10.0
comp=Z,2.5nm,0.9s
TXAR Lajitas Array 93.12 59 P **P** **04 03 50.6 -0.2**
TXAR **pP** **04 06 04.1 -0.3**
HVU Hansel Valley 93.13 44 IAmb IAmb 04 03 52.7
comp=Z,7.2nm,0.7s
SRU San Rafael Swe 93.14 47 IAmb IAmb 04 03 52.8
comp=Z,12nm,1.1s
TRF Thorofare Moun 93.14 14 P **P** **04 03 49.1 -1.0**
baz=208,SNR=20
P29M Windy Craggy 93.23 21 P **P** **04 03 50.1 -0.3**
baz=218
H18K Honhosa River 93.25 10 P **P** **04 03 50.0 -0.4**
baz=201
G17K Kiwalik Mounta 93.25 9 P **P** **04 03 49.9 -0.5**
baz=199
O28M Mount Upton 93.39 19 P **P** **04 03 51.0 -0.5**
baz=216
HARP HAARP 93.40 16 P **P** **04 03 52.0 +0.9**
baz=212
DHY Denali Highway 93.45 15 P **P** **04 03 51.8 +0.3**
baz=210
PLBC Pleasant Camp 93.53 21 P **P** **04 03 52.3 +0.5**
baz=220
I20K Naaghedeneel 93.55 11 P **P** **04 03 52.0 +0.3**
baz=204
MCK McKinley 93.68 14 P **P** **04 03 52.2 -0.2**
baz=209,SNR=6.3
PV10 Paradox Valley 93.74 49 IAmb IAmb 04 07 08.8
comp=Z,33nm,2.0s
PV19 Morning Glory 93.75 49 IAmb IAmb 04 03 56.1
comp=Z,23nm,1.7s
TASM ASL Pad, Albuq 93.79 53 IAmb IAmb 04 06 14.6
comp=Z,12nm,1.6s
TASM ASL Pad, Albuq 93.79 53 IAmb IAmb 04 06 14.6
comp=Z,8.8nm,1.4s
ANMO Albuquerque 93.80 53 P **P** **04 03 54.0 +0.1**
PV23 Carpenter Ridg 93.80 49 IAmb IAmb 04 03 55.7
comp=Z,5.5nm,0.9s
P30M Million Dollar 93.86 21 P **P** **04 03 53.2 -0.1**
baz=219
T35M Bob Quinn 93.86 25 P **P** **04 03 53.3 -0.1**
baz=224
PV02 Paradox Valley 93.86 49 IAmb IAmb 04 06 15.1
comp=Z,35nm,1.9s
PV12 Saucer Basin, 93.87 49 IAmb IAmb 04 03 56.0
comp=Z,18nm,1.4s
SKAG Skagway 93.88 22 P **P** **04 03 53.1 -0.2**
baz=220
LZH Lanzhou 93.89 309 *e*P **P** **04 03 55.4 +1.2**
LZH pP pP 04 06 07.3 +0.4
LZH pmax pmax
comp=Z,31nm,1.5s
H19K Roundabout Mou 93.89 10 IAmb IAmb 04 03 54.8
comp=Z,28nm,2.0s
H19K Roundabout Mou 93.89 10 P **P** **04 03 53.4 +0.2**
baz=202
G18K Tagagawik 93.90 9 P **P** **04 03 53.4 0.0**
baz=200
YUK8 Steele Glacier 93.93 19 P **P** **04 03 53.9 0.0**
baz=217
LZDM Lanzhou Argy 93.93 308 P **P** **04 03 55.6 +1.0**
comp=Z,4.7nm,0.5s,baz=103,slow=4.7,SNR=6.6
comp=Z,4.7nm,0.5s
M26K Nabesna, AK 93.95 17 IAmb IAmb 04 04 04.2
comp=Z,25nm,1.9s
M26K Nabesna, AK 93.95 17 P **P** **04 03 54.4 +0.6**
baz=214
YUK6 Outpost Mounta 94.07 20 P **P** **04 03 54.2 -0.3**
baz=218
F17K Baldwin Pennin 94.07 8 IAmb IAmb 04 03 55.5
comp=Z,10nm,0.8s
F17K Baldwin Pennin 94.07 8 P **P** **04 03 54.5 +0.5**
baz=198
H20K Anotleneega Mo 94.12 11 P **P** **04 03 54.7 +0.4**
baz=204,SNR=7.1
YUK3 Moose Creek 94.13 18 P **P** **04 03 55.1 +0.3**
baz=216
S34M Telegraph Cree 94.20 24 P **P** **04 03 55.3 +0.5**
baz=224
BRWY Burwash Landin 94.21 19 P **P** **04 03 55.3 +0.4**
baz=217
M27K Edge Creek, AK 94.21 17 IAmb IAmb 04 03 57.4
comp=Z,9.0nm,1.1s
M27K Edge Creek, AK 94.21 17 P **P** **04 03 55.5 +0.5**
baz=215
MENT Mentasta 94.22 16 IAmb IAmb 04 03 56.1
comp=Z,4.5nm,0.7s
HYT Haines Junctio 94.24 20 P **P** **04 03 55.8 +0.7**
baz=219
YUK4 Talbot Arm 94.30 19 P **P** **04 03 55.7 +0.2**
baz=218
I21K Tanana 94.35 12 IAmb IAmb 04 03 56.2
comp=Z,8.6nm,0.8s
I21K Tanana 94.35 12 P **P** **04 03 55.3 -0.1**
baz=206
G19K Purcell Mounta 94.37 10 IAmb IAmb 04 03 56.7
comp=Z,6.0nm,1.1s
G19K Purcell Mounta 94.37 10 P **P** **04 03 55.0 -0.4**
baz=202
L26K Log Cabin Wild 94.38 16 P **P** **04 03 55.4 -0.2**
baz=214
NEA2 Nenana 94.40 13 P **P** **04 03 55.0 -0.6**
baz=209,SNR=5.1
F18K Selawik 94.43 9 P **P** **04 03 55.1 -0.6**
baz=200
K24K Donnelly Dome 94.45 15 IAmb IAmb 04 03 57.0
comp=Z,10nm,0.7s
K24K Donnelly Dome 94.45 15 P **P** **04 03 55.9 0.0**
baz=212,SNR=5.6
MLY Manley 94.45 13 P **P** **04 03 55.2 -0.7**
baz=207,SNR=6.3
WRH Wood River Hil 94.50 14 IAmb IAmb 04 03 56.5
comp=Z,12nm,0.9s
P32M Atlin 94.51 22 P **P** **04 03 55.3 -1.0**
baz=222
BVCY Beaver Creek 94.53 18 P **P** **04 03 56.5 +0.2**
baz=216
E17K Hotham Inlet 94.61 8 P **P** **04 03 56.8 +0.4**
baz=198
RIDG Independent Ri 94.61 16 P **P** **04 03 56.6 -0.1**
baz=212
H21K Melozitna Rive 94.63 12 P **P** **04 03 56.8 +0.2**
baz=206,SNR=8.2
O30N Mendenhall 94.63 21 P **P** **04 03 57.1 +0.3**
baz=220
HDA Harding Lake 94.70 14 P **P** **04 03 56.8 -0.2**
HDA IAmb IAmb 04 03 58.1
comp=Z,6.2nm,0.6s
HDA Harding Lake 94.70 14 P **P** **04 03 57.0 0.0**
baz=211,SNR=7.2
CCB Clear Creek Bu 94.72 14 IAmb IAmb 04 03 57.3
comp=Z,6.9nm,0.8s
IMAR Indian Mountai 94.76 11 P **P** **04 03 57.2 0.0**
L27K Beaver Creek, 94.80 17 P **P** **04 03 57.7 +0.2**
baz=215
I23K Minto, Yukon-K 94.83 13 P **P** **04 03 57.8 +0.2**
baz=209
N30M Aishikik Lake 94.86 20 P **P** **04 03 57.8 -0.1**
baz=219
COLA College 94.91 14 P **P** **04 03 58.0 +0.1**
baz=210
F19K Shaleruckik Mo 94.91 9 IAmb IAmb 04 03 58.9
comp=Z,4.3nm,0.8s
F19K Shaleruckik Mo 94.91 9 P **P** **04 03 57.8 0.0**
baz=201
WHY Whitehorse 94.93 21 P **P** **04 03 58.3 0.0**
baz=221
DLBC Dease Lake 94.98 24 P **P** **04 03 58.7 +0.2**
baz=225
SCRK Sand Creek 95.02 16 P **P** **04 03 58.3 -0.2**
baz=213
IL31 95.03 14 IAmb IAmb 04 06 18.6
comp=Z,5.5nm,1.1s
ILAR Eielson Array 95.03 14 P **P** **04 03 57.8 -0.6**
comp=Z,2.3nm,0.6s,baz=215,slow=5.2,SNR=32
ILAR pP **pP** **04 06 12.0 +0.4**
comp=Z,2.8nm,1.0s,baz=236,slow=5.4,SNR=6.3
comp=Z,2.3nm,0.6s
ILAR Eielson Array 95.03 14 P **P** **04 03 57.9 -0.5**
ILAR **pP** **04 06 11.6 0.0**
D17K Noatak River 95.06 7 P **P** **04 03 59.1 +0.6**
baz=197
E18K Tukpahlearik C 95.08 8 IAmb IAmb 04 04 00.1
comp=Z,6.8nm,0.8s
E18K Tukpahlearik C 95.08 8 P **P** **04 03 58.9 +0.2**
baz=199
H22K Ishtalitna Cre 95.10 12 P **P** **04 03 59.2 +0.5**
H22K IAmb IAmb 04 03 59.8
comp=Z,5.7nm,0.9s
H22K Ishtalitna Cre 95.10 12 P **P** **04 03 58.9 +0.1**
baz=207,SNR=7.0
POKR Poker Plat Res 95.21 14 P **P** **04 03 58.9 -0.3**
baz=210
M29M Somme Creek 95.23 19 P **P** **04 03 59.5 0.0**
baz=218
J25K Salcha River, 95.23 15 P **P** **04 03 59.7 +0.2**
baz=212,SNR=6.5
P33M Teslin, Yukon 95.28 22 P **P** **04 03 59.6 -0.2**
baz=222
G21K Allakaket 95.29 11 P **P** **04 03 59.9 +0.3**
baz=205
R33M Jennings River 95.33 23 P **P** **04 04 00.4 +0.3**
baz=224
LDM Libby Dam 95.36 38 IAmb IAmb 04 04 01.8
comp=Z,6.0nm,1.0s
C16K Lisburne Hills 95.39 6 P **P** **04 04 00.6 +0.6**
baz=195
H23K Yukon River 95.39 13 P **P** **04 04 00.7 +0.6**
baz=208
F20K Avaraart Lake 95.42 10 P **P** **04 04 00.4 +0.3**
baz=203
K27K Chicken 95.54 16 IAmb IAmb 04 04 02.5
comp=Z,4.7nm,0.9s
E19K Redstone River 95.57 9 IAmb IAmb 04 04 02.3
comp=Z,7.0nm,0.8s
E19K Redstone River 95.57 9 P **P** **04 04 01.4 +0.5**
baz=202
PDAR Pinedale Array 95.67 45 P **P** **04 04 02.8 +0.5**
comp=Z,1.1nm,0.6s,baz=195,slow=2.5,SNR=13
PDAR pP **pP** **04 06 16.1 +0.2**
comp=Z,1.1nm,0.9s,baz=204,slow=3.3,SNR=3.2
PDAR PP **PP** **04 08 05.5 +0.3**
comp=Z,0.1nm,0.3s,baz=279,slow=7.7,SNR=4.0
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 95.67 45 P **P** **04 04 02.6 +0.4**
H24K Nodoz Dome 95.74 13 P **P** **04 04 02.2 +0.5**
baz=210
C17K DeLong Mountai 95.80 7 P **P** **04 04 02.0 +0.1**
baz=196
M30M Minto, Yukon 95.82 19 P **P** **04 04 02.3 +0.2**
baz=219
L29M L29M 95.85 18 IAmb IAmb 04 04 04.7
comp=Z,6.7nm,1.1s
L29M L29M 95.85 18 P **P** **04 04 02.7 +0.5**
baz=218
F21K Alatna River 95.93 11 P **P** **04 04 02.8 +0.3**
baz=205
PRP Porcupine Dome 95.97 14 P **P** **04 04 03.4 +0.5**
baz=212
G23K Bananza Creek 96.08 12 P **P** **04 04 04.1 +0.9**
baz=208
C18K Utukok River 96.18 7 P **P** **04 04 04.5 +0.9**
baz=198
DAWY Dawson 96.26 17 P **P** **04 04 04.6 +0.6**
baz=217
F22K John River 96.41 11 P **P** **04 04 04.9 +0.3**
baz=206
D19K Kuna River 96.42 9 P **P** **04 04 05.3 +0.6**
baz=201
E20K Nigu River 96.46 9 P **P** **04 04 05.4 +0.5**
baz=203
COLD Coldfoot 96.51 12 IAmb IAmb 04 04 06.8
comp=Z,8.2nm,1.4s
COLD Coldfoot 96.51 12 P **P** **04 04 05.7 +0.7**
baz=208
G24K Hadweenzic Riv 96.57 13 P **P** **04 04 05.9 +0.6**
baz=210
K29M Barlow Dome 96.59 18 IAmb IAmb 04 06 28.6
comp=Z,24nm,1.8s
K29M Barlow Dome 96.59 18 P **P** **04 04 06.3 +0.6**
baz=219
C19K Lookout Ridge 96.81 8 P **P** **04 04 06.6 +0.2**
baz=200
D20K Etivluk River 96.83 9 P **P** **04 04 07.1 +0.6**
baz=202
G25K Bearman Lake 96.91 13 P **P** **04 04 07.3 +0.5**
baz=212
I27K Kandik River 96.94 16 P **P** **04 04 07.2 +0.1**
baz=215
E22K Anaktuvuk Pass 97.03 11 P **P** **04 04 07.8 +0.4**
baz=207
F24K Squw Lake 97.20 12 P **P** **04 04 08.7 +0.5**
baz=210
I28M Miner Creek 97.23 16 IAmb IAmb 04 06 34.9
comp=Z,6.0nm,1.2s
I28M Miner Creek 97.23 16 P **P** **04 04 09.0 +0.6**
baz=217
E23K Chandalar 97.35 12 IAmb IAmb 04 04 11.0
comp=Z,15nm,1.9s
E23K Chandalar 97.35 12 P **P** **04 04 09.6 +0.7**
baz=209
H27K Steamboat Moun 97.47 15 IAmb IAmb 04 07 42.5
comp=Z,13nm,1.8s
H27K Steamboat Moun 97.47 15 P **P** **04 04 10.2 +0.7**
baz=216
J30M Hart River 97.49 18 P **P** **04 04 10.1 +0.4**
baz=220
C21K Knifeblade Rid 97.50 9 P **P** **04 04 10.3 +0.8**
baz=204
MMPY Sheldon Lake, 97.55 21 P **P** **04 04 10.0 +0.1**
baz=224
G26K Porcupine Rive 97.56 14 P **P** **04 04 10.5 +0.8**
baz=214
E24K Your Creek 97.57 12 P **P** **04 04 10.2 +0.3**
baz=210
A19K Wainwright 97.68 7 P **P** **04 04 10.7 +0.6**
baz=198
F25K Christian River 97.71 13 P **P** **04 04 11.0 +0.6**
baz=202
ULN Ulaanbaatar 97.84 320 P Pdif 04 04 10.8 -0.8
TOLK Toolik Lake Re 97.87 11 P **P** **04 04 11.5 +0.4**
baz=209
G27K Doyon Strip 97.92 15 P **P** **04 04 11.9 +0.5**
baz=216
B21K Ikpikpuk River 97.95 9 P **P** **04 04 11.8 +0.5**
baz=204
B20K Meade River 97.96 8 P **P** **04 04 12.0 +0.6**
baz=202
D23K Nanushuk River 97.97 11 P **P** **04 04 12.0 +0.5**
baz=208
I30M Mount Dempster 97.98 18 P **P** **04 04 11.9 +0.1**
baz=220
F26K Sheenjek River 98.10 14 P **P** **04 04 13.0 +0.8**
baz=213
E25K Arctic Village 98.17 13 P **P** **04 04 13.0 +0.5**
baz=212
SONM Songino Array 98.20 320 P Pdif 04 04 13.1 -0.2
comp=Z,6.6nm,0.6s,baz=154,slow=4.0,SNR=11
comp=Z,2.6nm,0.6s
SONM Songino Array 98.20 320 Pdif 04 04 13.1 -0.1
SONM IAmb IAmb 04 04 16.0
comp=Z,5.2nm,1.2s
H29M Whitestone 98.23 16 P **P** **04 04 13.1 +0.3**
baz=218
GTA2 Gaotai 98.36 310 *e*P **P** **04 04 14.6 +0.4**
GTA2 pP pP 04 06 27.0 -0.3
GTA2 pmax pmax
comp=Z,16nm,1.1s
D24K Happy Valley 98.45 11 P **P** **04 04 14.3 +0.7**
baz=209
C23K Itkillik River 98.75 10 P **P** **04 04 15.4 +0.4**
baz=208
EPYK Eagle Plains 98.77 17 P **P** **04 04 15.3 +0.1**
baz=220
G29M Pine Creek 98.87 16 P **P** **04 04 15.6 0.0**
baz=219
H31M Peel River 98.98 18 P **P** **04 04 16.2 +0.1**
baz=222
F28M Old Crow 98.98 15 P **P** **04 04 16.6 +0.4**
baz=217
D25K Kavik River 99.04 12 P **Pdif** **04 04 16.6 +0.3**
baz=212
E27K Coleen River 99.06 14 P **Pdif** **04 04 16.8 +0.4**
baz=216
G30M tAoh Zrail Nji 99.37 16 P **Pdif** **04 04 18.1 +0.3**
baz=220
C27K Jago River 99.81 13 P **Pdif** **04 04 19.7 +0.1**
baz=214
C26K Camden Bay 99.82 12 P **Pdif** **04 04 19.8 +0.1**
baz=213
G31M Satah River 99.83 17 P **Pdif** **04 04 20.3 +0.5**
baz=222
E28M Babbage River 99.85 14 P **Pdif** **04 04 20.3 +0.4**
baz=218
F30M Barrier River 99.96 16 P **Pdif** **04 04 20.8 +0.4**
baz=221
D27M Malcolm River 100.05 14 P **Pdif** **04 04 21.1 +0.3**
baz=216
E29M Blow River 100.05 15 P **Pdif** **04 04 20.8 0.0**
baz=219
F31M Tsiigehtchic 100.36 17 P **Pdif** **04 04 22.6 +0.5**
baz=222
INK Inuvik 101.05 16 P **Pdif** **04 04 25.3 +0.1**
baz=223
LPAZ La Paz 102.63 116 PKKPbc PKKPbc 04 20 29.2 -1.4
comp=Z,0.9nm,0.6s,baz=71,slow=3.9,SNR=5.2
C36M Paulatuk 104.27 18 P **Pdif** **04 04 39.9 +0.4**
baz=231
CPUP Villa Florida 104.84 130 PKKPbc PKKPbc 04 20 23.0 -0.6
comp=Z,1.5nm,0.7s,baz=40,slow=5.2,SNR=4.6
A36M Sachs Harbour 105.64 16 P **PKiKP** **04 08 54.4 +0.1**
baz=231
ZSN Zaisan 111.37 313 *e*PKiKP **PKiKP** **04 09 05.9 0.0**
MKAR Makanchi Array 112.89 312 Pdiff **Pdif** **04 05 19.9 +1.4**
comp=Z,1.9nm,0.6s,baz=95,slow=6.5,SNR=17
MKAR PKiKP **PKiKP** **04 09 08.2 -0.6**
comp=Z,3.3nm,0.5s,baz=203,slow=0.8,SNR=24
MKAR PP **PP** **04 10 08.9 -1.3**
comp=Z,2.6nm,1.0s,baz=101,slow=10.0,SNR=4.6
MKAR PKKPbc **PKKPbc** **04 19 59.0 +0.5**
comp=Z,0.8nm,0.4s,baz=289,slow=2.8,SNR=6.0
MKAR PKKPab **PKKPab** **04 20 07.1 +0.2**
comp=Z,1.4nm,0.8s,baz=290,slow=4.2,SNR=7.5
ZALV Zalesovo Beam 113.09 320 PKiKP **PKiKP** **04 09 07.8 -1.1**
comp=Z,3.1nm,0.6s,baz=174,slow=0.6,SNR=14
ZALV PKKPbc **PKKPbc** **04 19 58.0 0.0**
comp=Z,1.4nm,0.3s,baz=47,slow=28,SNR=6.7
SHLS Shalkode 113.90 308 *e*PKiKP **PKiKP** **04 09 10.1 -0.9**
UZB Uzynbulak 114.21 308 *e*PKP PKPdf 04 09 11.2 -0.4
KPKS Kokpek 114.53 308 *e*PKP PKPdf 04 09 11.8 -0.3
RES Resolute Bay 114.60 17 PKPdf 04 09 10.4 -0.8
SATY Saty 114.62 307 *e*PKP PKPdf 04 09 12.0 -0.4
SATY *e*PP **PP** **04 10 21.6 -0.8**
NRIK Noril'sk 114.91 337 PKP PKPdf 04 09 10.5 -1.4
comp=Z,5.2nm,0.6s,baz=102,slow=2.7,SNR=5.0
NRIK Noril'sk 114.91 337 PKPdf 04 09 11.5 -0.4
MDOK Medeo 115.62 307 *e*PKP **PKPdf** **04 09 13.9 -0.5**
TNSS Tian-Shan 115.66 307 *e*PKP **PKPdf** **04 09 13.9 -0.8**
KSH2 Kashi 115.75 303 PKP **PKiKP** **04 09 14.8 +0.1**
ULHL Ulahol 115.98 306 P **PKiKP** **04 09 15.4 +0.2**
SNR=7.8
KURK Kurchatov 116.13 316 **PKPdf** **04 09 13.9 -1.0**
KURBB Kurchatov Arra 116.17 316 PKP **PKPdf** **04 09 14.2 -0.7**
comp=Z,9.5nm,0.7s,baz=106,slow=1.9,SNR=62
KURBB PP **PP** **04 10 30.0 -2.6**
comp=Z,0.6nm,0.6s,baz=103,slow=7.2,SNR=4.4
KURBB PKKPbc **PKKPbc** **04 19 48.3 +0.8**
comp=Z,1.5nm,0.7s,baz=277,slow=4.1,SNR=12
TKM2 Tokmak 2 116.60 307 P **PKPdf** **04 09 15.8 -0.5**
SNR=10.0
CHMS Chumysh 117.22 307 P **PKPdf** **04 09 17.1 -0.2**
SNR=5.6
UCH Uchtor 117.23 306 P **PKiKP** **04 09 18.2 +0.3**
SNR=9.7
AAK Ala-Archa 117.33 306 **PKPdf** **04 09 17.4 -0.3**
SGDS Sogindy 117.40 307 *e*PKP **PKPdf** **04 09 17.2 -0.5**
USP Ospenovka 117.46 307 P **PKPdf** **04 09 17.4 -0.4**
SNR=5.2
BTLS Baital 118.12 309 *e*PKP **PKPdf** **04 09 18.6 -0.2**
BDFB Brasilia 118.40 128 PKKPbc PKKPbc 04 19 39.5 -0.5
comp=Z,7.1nm,0.8s,baz=65,slow=1.6,SNR=7.4
BDFB PKKPab **PKKPab** **04 19 45.2 -0.8**
comp=Z,6.5nm,0.7s,baz=90,slow=6.1,SNR=9.6
POIN Pond Inlet 119.26 19 **PKPdf** **04 09 19.6 -0.6**
BOSA Boshof 119.31 207 PKP **PKPdf** **04 09 21.3 -0.7**
comp=Z,3.0nm,0.8s,baz=161,slow=1.8,SNR=5.5
BOSA SKP **SKPdf** **04 11 59.9 +0.5**
comp=Z,4.7nm,1.0s,baz=262,slow=6.3,SNR=3.8
BOSA PKKPbc **PKKPbc** **04 19 35.7 -1.6**
comp=Z,5.5nm,1.0s,baz=300,slow=2.6,SNR=5.0
DZA Taraz 119.67 306 *e*PKP **PKPdf** **04 09 21.5 -0.5**
KBL Kabul 119.74 296 **PKiKP** **04 09 22.8 +0.1**
KKAR Karatay Array 120.30 306 **PKPdf** **04 09 23.0 -0.2**
IUG Iuzhnay 120.49 305 *e*PKP **PKPdf** **04 09 23.2 -0.5**
BRLS Boroldday 120.77 306 *e*PKP **PKPdf** **04 09 23.8 -0.3**
CHM Chimkent 120.83 305 *e*PKP **PKPdf** **04 09 23.9 -0.4**
JANB Januaria 121.38 130 *e*P **PKPdf** **04 09 25.2 -0.9**
BVAR Borovoye Array 121.47 318 PKP **PKPdf** **04 09 24.8 -0.3**
comp=Z,25nm,0.5s,baz=91,slow=1.8,SNR=67
BVAR PP **PP** **04 11 08.4 -0.1**
comp=Z,3.4nm,0.7s,baz=86,slow=7.4,SNR=4.7
BVAR SKP **SKPdf** **04 12 03.1 +0.8**
comp=Z,5.6nm,0.8s,baz=90,slow=1.5,SNR=6.7
BORK Borovoye 121.52 318 **PKPdf** **04 09 25.2 +0.1**
NEEM North Greenlan 124.22 12 *i* P **PKPdf** **04 09 29.1 -1.0**
SCHQ Schefferville 125.52 40 PKP **PKPdf** **04 09 32.4 -0.4**
comp=Z,7.4nm,0.9s,baz=30,slow=2.9,SNR=7.0
SCHQ Schefferville 125.52 40 **PKPdf** **04 09 32.5 -0.3**
KOOLE Kule 126.33 205 **PKiKP** **04 09 37.1 +0.9**
SPA0 Spitsbergen Ar 127.72 355 *e*P **PKPdf** **04 09 36.5 +0.1**
SPITS Spitsbergen Ar 127.72 355 PKP **PKPdf** **04 09 36.5 +0.1**
comp=Z,10nm,0.5s,baz=93,slow=5.4,SNR=26
ABKAR Abkulak array 128.02 313 **PKPdf** **04 09 37.2 -0.5**
ARTI Arti 128.26 322 PKP **PKPdf** **04 09 38.0 0.0**
comp=Z,18nm,0.6s,baz=184,slow=0.2,SNR=28
ARTI Arti 128.26 322 **PKPdf** **04 09 38.2 +0.3**
ILULI Ilulissat 128.62 20 *i* P **PKPdf** **04 09 37.9 -0.4**
DAG Danmarks Havn 129.12 5 *i* P **PKPdf** **04 09 38.0 -1.1**
AKTO Aktyubinsk 129.19 315 PKP **PKPdf** **04 09 39.9 0.0**
comp=Z,14nm,0.6s,baz=85,slow=2.4,SNR=41
LSZ Lusaka 129.25 218 **PKPdf** **04 09 41.5 +0.2**
SUMG Summit 129.87 14 **PKiKP** **04 09 41.7 -0.3**
SUMG Summit 129.87 14 *i* P **PKPdf** **04 09 41.0 -0.1**
NBMA Muriti-CE 130.63 128 *e*P **PKiKP** **04 09 44.7 -0.2**
BJO1 Bjornoya 130.89 353 *e*P **PKiKP** **04 09 45.2 +1.7**
DBG Daneborg 131.29 7 *i* P **PKPdf** **04 09 41.8 -1.4**
KIBK Kibwezi 132.08 239 **PKPdf** **04 09 45.5 -1.1**
VADS Vadso 132.95 346 *e*P **PKiKP** **04 09 47.8 +0.1**
HAMF Hammerfest 133.64 349 *e*P **PKPdf** **04 09 47.5 -0.2**
ARCES ARCESS Array B 134.22 347 PKP **PKPdf** **04 09 48.5 -0.3**
comp=Z,12nm,0.7s,baz=40,slow=2.2,SNR=12
ARCES SKPbc **SKPbc** **04 12 22.8 +1.8**
comp=Z,4.5nm,0.5s,baz=43,slow=3.4,SNR=9.4
KTK1 Kautokeino 135.11 348 *e*P PKPpre 04 09 42.4
TRO Tromso 135.32 350 *e*P **PKPdf** **04 09 50.7 -0.2**
STEI Steigen 137.43 351 *e*P PKPpre 04 09 47.5
STEI *e* 04 09 56.4
FAUS Fauske 137.93 350 *e*P PKPpre 04 09 51.3
VAGH Vaagaholmen 138.83 351 *e*P PKPpre 04 09 52.8
RAUS Rausandaksla 139.00 350 *e*P PKPpre 04 09 54.4
KONS Konsvik 139.07 351 *e*P PKPpre 04 09 49.1
MOR8 Moi Rana 139.18 350 *e*P PKPpre 04 09 49.5
STOK Stokkvaagen 139.24 351 *e*P PKPpre 04 09 50.6
LEIR Leirfjorden 139.44 351 *e*P PKPpre 04 09 50.8
OBN Obninsk 140.26 326 PKP **PKPdf** **04 09 59.7 -0.7**
comp=Z,14nm,0.5s,baz=98,slow=8.6,SNR=6.2
OBN Obninsk 140.26 326 **PKPdf** **04 10 00.0 -0.3**
OBN Obninsk 140.26 326 P **PKPdf** **04 09 59.6 -0.7**
FINES FINESS Array B 140.51 339 PKhKP PKPpre 04 09 53.9
comp=Z,19nm,0.6s,baz=40,slow=5.2,SNR=77
FINES SKPbc **SKiKP** **04 12 40.5 -0.7**
comp=Z,9.2nm,0.7s,baz=66,slow=4.6,SNR=8.3
FINES SKKPbc **SKKPab** **04 21 09.8 -1.9**
comp=Z,1.4nm,0.6s,baz=207,slow=1.7,SNR=7.6
NSS Namsos 141.09 351 *e*P PKPpre 04 09 56.4
KTUT Trabzon 143.09 304 ⇑P PKPbc 04 10 04.8 +0.4
MOL Molde 143.55 353 *e*P PKPab 04 10 05.1 +0.1
DOMB Dombas 143.87 351 *e*P PKPbc 04 10 05.8 -0.3
AKN Aaknes 143.99 353 *e*P **PKPdf** **04 10 06.6 -0.1**
NB2 NORSAR Subarra 144.51 349 PKP **PKPdf** **04 10 07.5 -0.2**
comp=Z,29nm,0.6s,baz=15,slow=2.9
NB2 SKKP **SKKPbc** **04 20 54.4 -1.6**
comp=Z,0.8nm,0.7s,baz=194,slow=4.4
NB2 NORSAR Subarra 144.51 349 PKPab **PKPdf** **04 10 07.5 -0.2**
NOA NORSAR Array B 144.51 349 PKP **PKPdf** **04 10 07.6 -0.2**
comp=Z,34nm,0.8s,baz=16,slow=4.6,SNR=180
NOA SKP **SKPbc** **04 12 45.1 -3.9**
comp=Z,1.7nm,0.7s,baz=18,slow=2.5,SNR=3.4
NOA SKPbc **SKiKP** **04 12 49.8 +0.2**
comp=Z,1.1nm,0.8s,baz=15,slow=2.5,SNR=2.1
NOA SKKPbc **SKKPab** **04 20 54.1 +0.2**
comp=Z,2.1nm,1.0s,baz=200,slow=4.3,SNR=7.0
NC602 NORSAR Array S 144.74 349 *e*P **PKPdf** **04 10 08.1 0.0**
FOO Floro 144.75 354 *e*P PKPbc 04 10 08.4 -0.2

HFS Hagfors 144.89 347 PKP **PKPdf 04 10 08.3 0.0**
comp=Z,50nm,0.4s,baz=66,slow=3.6,SNR=572
HFS SKKPbc SKKPbc 04 20 51.7 -2.6
comp=Z,5.6nm,0.8s,baz=169,slow=3.0,SNR=11
HYA Hoyanger 145.07 353 *e*P **PKPbc 04 10 09.2 -0.4**
SKAR Skarslia 145.29 351 *e*P **PKPbc 04 10 10.3 -0.1**
SUE Sulen 145.31 355 *e*P **PKPbc 04 10 10.3 -0.1**
OSL Oslo 145.63 349 *e*P **PKPbc 04 10 11.1 -0.2**
ASK Askoy 145.84 354 *e*P **PKPbc 04 10 11.8 0.0**
BER Bergen 145.92 354 *e*P **PKPbc 04 10 12.0 +0.2**
KONO Kongsberg 146.09 350 *e*P **PKPbc 04 10 12.2 -0.4**
KONO Kongsberg 146.09 350 **PKPbc 04 10 12.2 -0.4**
ASF Jabal al Asfar 146.10 289 P **PKiKP 04 10 14.8 -1.1**
ODD1 Odda 146.25 353 *e*P **PKPbc 04 10 13.4 +0.3**
AK03 Malin Array Si 146.36 324 P **PKPdf 04 10 10.2 -0.9**
AKASG Malin Array Be 146.37 324 PKPbc **PKPbc 04 10 13.4 -0.3**
comp=Z,75nm,0.6s,baz=47,slow=4.0,SNR=222
AKASG SKP **SKPbc 04 12 46.5 -7.0**
comp=Z,2.2nm,0.7s,baz=46,slow=2.2,SNR=6.1
AKASG SKPbc **SKiKP 04 12 52.8 -1.0**
comp=Z,2.1nm,0.7s,baz=48,slow=2.7,SNR=2.6
AKASG Malin Array Be 146.37 324 PKPbc **PKPbc 04 10 13.5 -0.1**
AKBB Malin Array Si 146.37 324 P **PKPdf 04 10 10.2 -0.9**
KIEV Kiev 146.39 324 ⇑P **PKPdf 04 10 10.9 -0.3**
KIEV Kiev 146.39 324 PKPbc **PKPbc 04 10 13.6 0.0**
KIEV Kiev 146.39 324 P **PKPdf 04 10 10.5 -0.6**
LRW Lerwick 146.50 360 *e*P **PKPbc 04 10 12.8 -0.9**
BEIL Beino 146.65 293 *e*P **PKPbc 04 10 15.8 +0.8**
HSUJ Al Zarqa 146.70 289 P **PKiKP 04 10 16.8 -0.3**
BLS5 Blasjo 146.74 352 *e*P **PKPbc 04 10 13.5 -0.9**
SWQJ Swaqa 146.79 287 P **PKiKP 04 10 17.2 -0.2**
HWQ Hawqa 146.86 293 *e*P **PKPbc 04 10 16.0 +0.3**
RCY Rachaya 146.98 291 *e*P **PKiKP 04 10 17.1 -0.7**
SHBL Chebaa 147.06 291 *e*P **PKiKP 04 10 17.3 -0.7**
HSNJ Maan 147.07 285 P **PKiKP 04 10 18.0 -0.1**
SUW Suwalki 147.07 333 *e*PKPbc **PKPbc 04 10 15.5 +0.1**
KMY Karmoy 147.08 353 *e*P **PKPbc 04 10 15.0 -0.2**
KMY IAmb IAmb 04 10 16.2
comp=Z,79nm,0.9s
BZK Bozkurt 147.09 307 ⇑P **PKiKP 04 10 16.9 -0.6**
QRWL Qaraoun 147.11 291 *e*P **PKiKP 04 10 17.1 -0.8**
BHL Bhannes 147.12 292 *e*P **PKPbc 04 10 16.9 +0.6**
GEM Giv'at Ha'Em 147.13 291 P **PKiKP 04 10 17.6 -0.3**
DQRL Deir Qamar 147.19 291 *e*P **PKiKP 04 10 17.7 -0.5**
GHAJ Ghor Haditha 147.22 287 P **PKiKP 04 10 17.9 -0.2**
QRNJ Al-Qirein 147.22 289 P **PKiKP 04 10 17.9 -0.2**
LISJ El Lisan 147.29 287 P **PKiKP 04 10 18.6 +0.4**
MMAI Mount Meron Ar 147.36 290 PKPbc **PKiKP 04 10 18.1 -0.4**
comp=Z,70nm,0.6s,baz=42,slow=7.9,SNR=106
MSBI Mazada 147.40 287 P **PKiKP 04 10 18.3 -0.1**
SALP Salfit 147.55 288 P **PKiKP 04 10 18.8 -0.1**
HOMB Homborsund 147.58 350 *e*P **PKPbc 04 10 16.6 +0.1**
HOMB IAmb IAmb 04 10 17.5
comp=Z,77nm,1.0s
LUBAR Lubar, Ukraine 147.59 324 P **PKPdf 04 10 12.1 -1.1**
YTIR Yattir 147.60 287 P **PKiKP 04 10 19.0 -0.1**
HRFI Mount Harif 147.62 285 P **PKiKP 04 10 18.7 -0.4**
EIL Elat 147.68 284 P **PKiKP 04 10 18.6 -0.6**
CIDE Kastamonu/Cide 147.87 307 ⇓P **PKPbc 04 10 18.2 +0.4**
BRTR Keskin Array B 147.92 303 PKPbc **PKPbc 04 10 18.4 +0.1**
comp=Z,19nm,0.5s,baz=331,slow=1.5,SNR=62
BRTR pPKPbc **pPKPdf 04 12 36.7 +0.3**
comp=Z,1.8nm,0.8s,baz=116,slow=3.4,SNR=2.8
BRTR Keskin Array B 147.92 303 PKPbc **PKPbc 04 10 18.3 0.0**
PURM Purcari 148.14 317 ⇑P **PKPbc 04 10 18.8 +0.4**
KZIT Kziot 148.21 286 P **PKiKP 04 10 19.2 0.0**
SORM Soroca 148.25 320 ⇑P **PKPbc 04 10 17.3 -1.2**
CSS Mathiatis 148.95 294 **PKPbc 04 10 21.0 +0.2**
MCD Coleburn Disti 149.05 2 *e*P **PKPbc 04 10 19.6 -0.6**
KMPD K-Podol'skiy 149.07 323 P **PKPdf 04 10 14.5 -1.1**
BSD Bornholm Skovb 149.08 341 *i*P **PKPbc 04 10 19.1 -1.2**
KPL Plockton 149.18 4 *e*P **PKPbc 04 10 19.4 -1.1**
MUD Monsted U'grnd 149.20 348 *i*P **PKPbc 04 10 19.9 -0.6**
COP Copenhagen 149.22 344 *i*P **PKPbc 04 10 20.8 +0.1**
R9F13 Warsaw-Wawer 149.22 332 *e*PKP **PKiKP 04 10 21.3 -0.3**
VASR Vaslui 149.34 318 ⇑P **PKiKP 04 10 22.0 0.0**
TLCR 149.41 315 ⇑P **PKiKP 04 10 22.2 0.0**
JURR Jurilovca 149.56 314 ⇑P **PKiKP 04 10 22.7 +0.1**
VLDR Vladesti 149.56 317 ⇑P **PKiKP 04 10 23.1 +0.6**
LLD Lille Linde 149.59 344 *i*P **PKPbc 04 10 21.1 -0.4**
BEL Belsk 149.66 332 *e*PKPbc **PKiKP 04 10 22.7 +0.2**
BEL *e*PKPab **PKPab 04 10 30.4 +0.5**
GIUM Giurgiulesti 149.66 316 ⇑P **PKPbc 04 10 19.8 -2.3**
VARL Varlezi 149.68 317 ⇑P **PKiKP 04 10 23.3 +0.6**
SCTR Scanteiesti 149.70 317 ⇑P **PKiKP 04 10 23.4 +0.6**
DRUM Mains of Drumt 149.73 1 *e*P **PKPbc 04 10 21.8 -0.1**
TPGR Topolog 149.81 315 ⇑P **PKiKP 04 10 23.4 +0.3**
NEGRR Negrea 149.84 316 ⇑P **PKiKP 04 10 23.8 +0.7**
CFR Carcaliu 149.84 316 ⇓P **PKiKP 04 10 23.0 -0.1**
GHRR 149.87 318 ⇑P **PKiKP 04 10 24.3 +1.1**
PRAR RASCA 149.87 321 ⇑P **PKiKP 04 10 23.3 +0.2**
SCHLR Schela 149.90 316 ⇑P **PKiKP 04 10 23.7 +0.6**
GKP Gorka Klasztor 149.90 337 *e*PKPbc **PKiKP 04 10 22.8 -0.1**
IZVR Izvoarele 149.90 317 ⇑P **PKiKP 04 10 23.9 +0.7**
GIRR Girov 149.94 320 ⇑P **PKiKP 04 10 23.5 +0.3**
TIRR Tirgusor 150.00 314 ⇑P **PKiKP 04 10 23.7 +0.3**
EFOR EFORIE 150.02 313 ⇓P **PKPbc 04 10 22.9 0.0**
COSR Cosmesti PH 150.03 317 ⇑P **PKiKP 04 10 24.6 +1.1**
SSRD Sdr. Stenderup 150.03 347 *i*P **PKPbc 04 10 22.6 0.0**
TESR Tescani 150.09 319 ⇑P **PKPbc 04 10 23.1 +0.1**
PANC Panciu 150.12 318 ⇑P **PKiKP 04 10 24.3 +0.6**
MANR Mangalia 150.16 313 ⇑P **PKiKP 04 10 24.1 +0.3**
INVG Invergeldie, C 150.18 3 *e*P **PKPbc 04 10 22.4 -0.5**
TLBR Topalu 150.19 315 ⇑P **PKiKP 04 10 24.5 +0.6**
LAWE Loch Awe, Argy 150.27 4 *e*P **PKPbc 04 10 22.5 -0.6**
CVDA Cernavoda 150.29 314 ⇑P **PKiKP 04 10 24.7 +0.7**
BURAR Bucovina Array 150.29 322 ⇑P **PKiKP 04 10 24.7 +0.6**
BURAR Bucovina Array 150.29 322 **PKiKP 04 10 24.7 +0.6**
ONER Baraj Valea Uz 150.33 319 ⇑P **PKiKP 04 10 25.0 +0.9**
KWP Kalwaria Pacla 150.34 327 *e*PKPbc **PKiKP 04 10 24.1 +0.1**
KWP *e*PKPab **PKPab 04 10 33.0 +0.2**
VRI Vrincioaia 150.37 318 ⇑P **PKiKP 04 10 24.1 -0.1**
EAB Aberfoyle 150.40 3 *e*P **PKPbc 04 10 23.1 -0.3**
PLOR Plostina 150.43 318 ⇑P **PKiKP 04 10 24.3 -0.1**
GRER 150.47 317 ⇑P **PKiKP 04 10 24.9 +0.5**
SAHR Sahastru 150.47 318 ⇑P **PKiKP 04 10 24.7 +0.2**
ICOR Ion Corvin 150.54 314 ⇑P **PKiKP 04 10 24.9 +0.3**
COVR Voineasa-Covas 150.70 318 ⇑P **PKPbc 04 10 24.7 +0.1**
TURR Turia 150.70 319 ⇓P **PKiKP 04 10 25.9 +0.9**
EDI Edinburgh 150.71 2 *e*P **PKPbc 04 10 23.4 -0.7**
OZUR 150.81 319 ⇑P **PKPbc 04 10 24.7 -0.1**
NEHR Nehoiu 150.86 317 ⇑P **PKiKP 04 10 25.6 +0.3**
ISR Istrita 150.86 317 ⇑P **PKiKP 04 10 25.8 +0.5**
BOSR Bodos 150.90 319 ⇑P **PKiKP 04 10 26.1 +0.8**
KOLS Kolonicke sedl 151.02 327 *e*PKP **PKPdf 04 10 19.2 +0.6**
KOLS *e* 04 10 26.5
KOLS *e* 04 10 35.4
MLR Muntele Rosu 151.04 318 PKPbc **PKPbc 04 10 25.4 -0.1**
comp=Z,12nm,0.5s,baz=285,slow=4.0,SNR=22
MLR Muntele Rosu 151.04 318 ⇑P **PKiKP 04 10 25.7 -0.1**
MLR Muntele Rosu 151.04 318 **PKPbc 04 10 25.6 +0.1**
ARCR ARCALIA 151.08 322 ⇑P **PKiKP 04 10 26.3 +0.7**
STHS Stebnicka Huta 151.19 328 *e*PKP **PKPbc 04 10 25.3 -0.2**
STHS *e* 04 10 37.0
IDGL Inch Island, C 151.26 7 *e*P **PKPbc 04 10 25.1 -0.4**
OJC Ojcow 151.27 331 *e*PKPbc **PKiKP 04 10 26.1 +0.2**
OJC *e*PKPab **PKPab 04 10 36.5 -0.3**
EKA Eskdalemuir Ar 151.30 2 PKPbc **PKPbc 04 10 25.4 -0.1**
comp=Z,6.5nm,0.4s,baz=326,slow=2.1,SNR=14
EKA PKPab **PKPab 04 10 36.4 -0.3**
comp=Z,3.5nm,0.4s,baz=334,slow=2.9,SNR=10
EKA SKP **SKPdf 04 12 53.2 -1.0**
comp=Z,2.3nm,0.8s,baz=356,slow=2.2,SNR=3.8
ESK Eskdalemuir 151.32 2 *e*P **PKPbc 04 10 25.0 -0.5**
BSEG Bad Segeberg 151.32 345 *e*PKPbc **PKiKP 04 10 26.3 +0.5**
baz=28,slow=2.1
BSEG *e*PKPab **PKPab 04 10 37.4 +0.6**
baz=25,slow=4.3
CLGH Cloghs, Cushen 151.39 5 *e*P **PKiKP 04 10 26.1 +0.1**
NEWG New Galloway 151.48 3 *e*P **PKPbc 04 10 25.5 -0.4**
VOIR 151.60 318 ⇑P **PKiKP 04 10 26.9 +0.1**
MDB Medias 151.61 320 ⇓P **PKiKP 04 10 28.1 +1.3**
NIE Niedzica 151.62 329 *e*PKPbc **PKiKP 04 10 27.5 +0.8**
NIE *e*PKPab **PKPab 04 10 38.8 +0.5**
RAZG Razgrad 151.63 314 ⇑P **PKiKP 04 10 27.2 +0.3**
RUE Ruedersdorf 151.70 340 *e*PKPbc **PKiKP 04 10 27.2 +0.6**
baz=28,slow=2.1
RUE *e*PKPab **PKPab 04 10 39.0 +0.6**
baz=25,slow=4.3
CJR Cluj-Napoca 151.72 322 ⇑P **PKiKP 04 10 27.6 +0.5**
MESR Meseseni 151.81 323 ⇑P **PKPbc 04 10 24.1 -2.9**

BAND Balkesir-Ban 151.82 307 ⇓P **PKiKP 04 10 27.7 +0.3**
EDMD Edmundbyers 151.82 0 *e*P **PKPbc 04 10 26.4 -0.3**
ARR Arges 151.89 319 ⇑P **PKPdf 04 10 21.5 +1.3**
GORT1 Trebel 151.94 343 *e*PKPdf **PKPdf 04 10 20.5 +0.8**
baz=30,slow=1.4
GORT1 *e*PKPbc **PKiKP 04 10 27.8 +0.7**
baz=28,slow=2.1
GORT1 *e*PKPab **PKPab 04 10 39.5 +0.1**
baz=25,slow=4.3
MARR Marisel-Cluj 152.00 322 ⇑P **PKiKP 04 10 28.1 +0.4**
KESW Keswick, Cumbr 152.05 2 *e*P **PKPbc 04 10 26.6 -0.6**
HUMR Humele 152.12 317 ⇓P **PKiKP 04 10 27.8 -0.1**
DRGR 152.16 323 ⇑P **PKiKP 04 10 28.4 +0.4**
COPA Copaceança 152.17 316 ⇑P **PKPbc 04 10 27.5 -0.3**
KECS Kecovo 152.19 328 *e*PKP **PKiKP 04 10 30.3 +2.4**
KECS *e* 04 10 41.5
LANS Liptovska Anna 152.20 330 *e*PKP **PKiKP 04 10 29.4 +1.5**
LANS *e* 04 10 42.1
KSP Ksiaz 152.22 335 *e*PKPbc **PKiKP 04 10 28.6 +0.7**
KSP *e*PKPab **PKPab 04 10 41.0 +0.3**
STEB Steborice 152.35 332 ⇑*e*PKP **PKiKP 04 10 28.6 +0.5**
STEB *e*PKPAB **PKPab 04 10 41.8 +0.5**
LOT Lotru 152.35 319 ⇑P **PKPbc 04 10 28.1 -0.3**
OSTC Ostas 152.47 335 ⇑*e*PKP **PKiKP 04 10 29.6 +1.2**
CHVC Chvalec 152.51 335 ⇑*e*PKP **PKiKP 04 10 29.3 +0.8**
FLTG Flechtingen 152.56 343 *e*PKPdf **PKPdf 04 10 21.0 +0.2**
baz=30,slow=1.4
FLTG *e*PKPbc **PKiKP 04 10 28.8 +0.3**
baz=28,slow=2.1
FLTG *e*PKPab **PKPab 04 10 42.1 0.0**
baz=25,slow=4.3
MORC Moravsky Berou 152.56 332 ⇑P **PKiKP 04 10 29.6 +0.9**
MORC Moravsky Berou 152.56 332 *e*PKP **PKPdf 04 10 21.1 +0.2**
MORC *e* 04 10 29.0
MORC *e* 04 10 42.4
UPC Upice 152.59 335 ⇑*e*PKP **PKiKP 04 10 29.4 +0.8**
UPC *e*PKPAB **PKPab 04 10 42.9 +0.6**
DPC Dobruska-Polom 152.60 335 ⇑*e*PKP **PKiKP 04 10 29.4 +0.7**
DPC *e*PKPAB **PKPab 04 10 43.2 +0.8**
KRLC Kraliky 152.64 334 ⇑*e*PKP **PKiKP 04 10 29.3 +0.5**
KRLC *e*PKPAB **PKPab 04 10 43.1 +0.5**
RETH Rethem/Aller, 152.65 345 *e*PKPdf **PKPdf 04 10 21.4 +0.6**
baz=30,slow=1.4
RETH *e*PKPbc **PKiKP 04 10 29.1 +0.5**
baz=28,slow=2.1
RETH *e*PKPab **PKPab 04 10 42.7 +0.3**
baz=25,slow=4.3
HPK Haverah Park 152.70 360 *e*P **PKPbc 04 10 28.1 -0.5**
MAUC Maruska 152.76 332 ⇑*e*PKP **PKiKP 04 10 30.1 +1.0**
PSZ Piszkesteto 152.87 327 ⇑P **PKiKP 04 10 29.8 +0.4**
ASSE Asse, Remlinge 152.89 343 *e*PKPdf **PKPdf 04 10 21.3 +0.2**
baz=30,slow=1.4
ASSE *e*PKPbc **PKiKP 04 10 29.6 +0.5**
baz=28,slow=2.1
ASSE *e*PKPab **PKPab 04 10 44.0 +0.6**
baz=25,slow=4.3
GZR Gura Zlata 152.96 320 ⇑P **PKiKP 04 10 29.9 +0.2**
BRG Berggiesshubel 153.03 338 *e*PKPdf **PKPdf 04 10 21.8 +0.3**
baz=30,slow=1.4
BRG *e*PKPbc **PKiKP 04 10 30.1 +0.6**
baz=28,slow=2.1
BRG *e*PKPab **PKPab 04 10 44.8 +0.6**
baz=25,slow=4.3
BRG Berggiesshubel 153.03 338 ⇓*e*PKPf 04 10 21.5
BRG Amp 04 10 22.3
comp=Z,5.1nm,0.9s
BRG ⇑PKPb 04 10 29.9
BRG Amp 04 10 30.7
comp=Z,19nm,0.7s
BRG PKPab **PKPab 04 10 44.7 +0.6**
BRG Amp 04 10 45.0
comp=Z,16nm,0.9s
BRG pPKP pPKPab 04 12 56.1 -2.7
BRG Amp 04 12 59.2
comp=Z,4.6nm,0.9s
SIRR Siria 153.05 323 ⇑P **PKiKP 04 10 30.5 +0.8**
PVCC Panska Ves 153.10 337 ⇑*e*PKP **PKiKP 04 10 30.3 +0.6**
PVCC *e*PKPAB **PKPab 04 10 45.3 +0.8**
JAVC Velka Javorina 153.21 331 *e*PKP **PKPdf 04 10 23.0 +1.1**
JAVC *e* 04 10 31.4
JAVC *e* 04 10 46.5
CLZ Clausthal 153.23 343 *e*PKPdf **PKPdf 04 10 22.1 +0.3**
baz=30,slow=1.4
CLZ *e*PKPbc **PKiKP 04 10 30.7 +0.7**
baz=28,slow=2.1
CLZ *e*PKPab **PKPab 04 10 45.7 +0.6**
baz=25,slow=4.3
VRAC Vranov 153.32 333 PKP **PKPdf 04 10 22.2 +0.2**
comp=Z,1.6nm,0.4s,baz=348,slow=0.5,SNR=5.4
VRAC PKPbc **PKiKP 04 10 30.6 +0.4**
comp=Z,3.2nm,0.5s,baz=31,slow=2.9,SNR=8.2
VRAC PKPab **PKPab 04 10 46.1 +0.6**
comp=Z,15nm,0.8s,baz=49,slow=4.3,SNR=13
VRAC SKP **SKPdf 04 12 56.4 -0.6**
comp=Z,1.7nm,0.4s,baz=48,slow=2.1,SNR=3.0
VRAC Vranov 153.32 333 *e*PKP **PKPdf 04 10 21.7 -0.3**
VRAC *e* 04 10 30.4
VRAC *e* 04 10 46.0
IBBN Ibbenburen 153.40 347 *e*PKPdf **PKPdf 04 10 22.8 +0.8**
baz=30,slow=1.4
IBBN *e*PKPab **PKPab 04 10 46.1 +0.5**
baz=25,slow=4.3
NEUB Neuenburg 153.41 341 *e*PKPdf **PKPdf 04 10 22.7 +0.7**
baz=30,slow=1.4
NEUB *e*PKPbc **PKiKP 04 10 30.9 +0.6**
baz=28,slow=2.1
NEUB *e*PKPab **PKPab 04 10 46.4 +0.6**
baz=25,slow=4.3
HSKC Hora Svate Kat 153.42 338 ⇑*e*PKP **PKiKP 04 10 30.9 +0.5**
HSKC *e*PKPAB **PKPab 04 10 46.6 +0.7**
HERR Herculane 153.46 320 ⇑P **PKPbc 04 10 30.2 -0.4**
BZS Buzias 153.48 322 ⇑P **PKiKP 04 10 31.1 +0.5**
PRU Pruhonice 153.56 336 ⇑*e*PKP **PKiKP 04 10 31.2 +0.6**
PRU *e*PKPAB **PKPab 04 10 46.8 +0.3**
KRUC Moravsky 153.59 333 *e*PKP **PKPdf 04 10 22.1 -0.3**
KRUC *e* 04 31.0
KRUC *e* 04 10 47.0
GTTG Gottingen 153.60 344 *e*PKPbc **PKiKP 04 10 31.3 +0.6**
baz=28,slow=2.1
GTTG *e*PKPab **PKPab 04 10 47.2 +0.6**
baz=25,slow=4.3
SRO Srobarova 153.69 329 *e*PKP **PKiKP 04 10 31.9 +0.9**
SRO *e* 04 10 47.9
FOEL Foel Wylfa 153.75 2 *e*P **PKPbc 04 10 30.7 -0.2**
MODS Modra-Piesok 153.75 331 *e*PKP **PKPdf 04 10 23.1 +0.5**
MODS *e* 04 10 32.2
MODS *e* 04 10 48.3
TREC Trest 153.77 334 ⇑*e*PKP **PKiKP 04 10 31.7 +0.6**
TREC *e*PKPAB **PKPab 04 10 47.8 +0.3**
TANN Tannenbergstha 153.90 339 *e*PKPdf **PKPdf 04 10 22.9 +0.1**
baz=30,slow=1.4
TANN *e*PKPbc **PKiKP 04 10 31.9 +0.5**
baz=28,slow=2.1
TANN *e*PKPab **PKPab 04 10 48.5 +0.5**
baz=25,slow=4.3
MDVR Moldovita 153.93 320 ⇑P **PKiKP 04 10 32.0 +0.4**
PLN Plauen 153.94 340 *e*PKPdf **PKPdf 04 10 23.1 +0.3**
baz=30,slow=1.4
PLN *e*PKPbc **PKiKP 04 10 31.9 +0.5**
baz=28,slow=2.1
PLN *e*PKPab **PKPab 04 10 48.7 +0.6**
baz=25,slow=4.3
MOX Moxa 153.96 341 *e*PKPdf **PKPdf 04 10 23.1 +0.3**
baz=30,slow=1.4
MOX *e*PKPbc **PKiKP 04 10 31.8 +0.3**
baz=28,slow=2.1
MOX *e*PKPab **PKPab 04 10 48.7 +0.5**
baz=25,slow=4.3
NKC Novy Kostel 154.06 339 *e*PKPAB **PKPab 04 10 49.2 +0.5**
ZVC Zvikov 154.14 336 ⇑*e*PKP **PKiKP 04 10 32.6 +0.7**
UBBA Unterbreizbach 154.26 343 *e*PKPab **PKPab 04 10 49.5 +0.2**
baz=25,slow=4.3
KASTN Kahler Asten 154.29 345 *e*PKPdf **PKPdf 04 10 23.7 +0.4**
baz=30,slow=1.4
KASTN *e*PKPbc **PKPbc 04 10 32.6 +0.4**
baz=28,slow=2.1
KASTN *e*PKPab **PKPab 04 10 49.7 0.0**
baz=25,slow=4.3
WINA Alland / Wiene 154.47 332 *e*PKP **PKPdf 04 10 24.1 +0.5**
comp=Z,8.0nm,1.3s
WINA *e*PKP **PKPbc 04 10 33.3 +0.7**
comp=Z,70nm,1.5s
WINA *e*PKP **PKPab 04 10 51.2 +0.7**
comp=Z,141nm,1.6s
ROTZ Rotzenmuhle 154.55 339 *e*PKPdf **PKPdf 04 10 23.8 +0.1**
baz=30,slow=1.4
ROTZ *e*PKPbc **PKPbc 04 10 33.0 +0.3**
baz=28,slow=2.1
ROTZ *e*PKPab **PKPab 04 10 51.4 +0.7**
baz=25,slow=4.3
CKRC Cesky Krumlov 154.61 335 ⇑*e*PKP **PKPbc 04 10 33.6 +0.7**
KHC Kasperske Hory 154.62 336 ⇑*e*PKP **PKPbc 04 10 33.5 +0.5**
KHC *e*PKPAB **PKPab 04 10 51.8 +0.7**
KHC *ex* x 04 13 05.6
MORH Mrgy, Hungar 154.66 326 ⇑P **PKPbc 04 10 33.6 +0.5**
RONA Rosalia, Austr 154.69 331 *e*PKP **PKPdf 04 10 23.4 -0.6**
comp=Z,4.1nm,1.0s
RONA *e*PKP **PKPbc 04 10 33.5 +0.4**
comp=Z,12nm,0.7s
RONA *e*PKP **PKPab 04 10 51.9 +0.4**
comp=Z,17nm,0.7s
RONA *e*SKP **SKPdf 04 12 57.8 -1.1**
comp=Z,6.7nm,1.2s
CONA Conrad Observa 154.70 332 *e*PKP **PKPdf 04 10 23.4 -0.7**
comp=Z,3.8nm,1.0s
CONA *e*PKP **PKPbc 04 10 33.6 +0.4**
comp=Z,10.0nm,0.8s
CONA *e*PKP **PKPab 04 10 52.0 +0.4**
comp=Z,19nm,0.6s
GEC2 GERESS Array S 154.81 336 *e*PKPdf **PKPdf 04 10 24.0 -0.2**
baz=30,slow=1.4
GEC2 *e*PKPbc **PKPbc 04 10 33.8 +0.4**
baz=28,slow=2.1
GEC2 *e*PKPab **PKPab 04 10 52.3 +0.2**
baz=25,slow=4.3
GERES GERESS Array B 154.81 336 PKP **PKPdf 04 10 24.0 -0.2**
comp=Z,2.0nm,0.9s,baz=191,slow=0.7,SNR=16
GERES PKPbc **PKPbc 04 10 33.8 +0.4**
comp=Z,4.4nm,0.8s,baz=20,slow=1.6,SNR=20
GERES PKPab **PKPab 04 10 52.2 +0.2**
comp=Z,10nm,0.8s,baz=28,slow=3.6,SNR=21
GERES SKP **SKPdf 04 12 57.6 -1.5**
comp=Z,1.9nm,0.9s,baz=325,slow=1.6,SNR=3.5
GERES GERESS Array B 154.81 336 **PKPdf 04 10 23.7 -0.5**
GERES **PKPbc 04 10 33.9 +0.4**
GERES **PKPab 04 10 52.3 +0.2**
WET Wettzell 154.86 337 *e*PKPdf **PKPdf 04 10 23.9 -0.3**
baz=30,slow=1.4
WET *e*PKPbc **PKiKP 04 10 52.8 +0.7**
baz=25,slow=4.3
GRF Grafenberg Arr 154.92 340 *e*PKPab **PKPab 04 10 53.2 +0.8**
baz=25,slow=4.3
TNS Taunus Mts 155.20 344 *e*PKPbc PKPbc 04 10 34.5
baz=28,slow=2.1
TNS *e*PKPab **PKPab 04 10 54.0 +0.4**
baz=25,slow=4.3
VAY Valandovo 155.25 312 *i*P **PKPab 04 10 54.1 0.0**
MEM Membach 155.35 348 *d*PKP **PKPab 04 10 53.5 -0.7**
ARSA Arzberg 155.37 331 *e*PKP **PKPdf 04 10 24.7 -0.2**
comp=Z,2.2nm,1.2s
ARSA *i* PKP **PKPab 04 10 54.5 +0.1**
comp=Z,7.5nm,0.7s,SNR=5.8
MOA Molln 155.42 334 *e*PKP **PKPdf 04 10 25.6 +0.7**
comp=Z,1.2nm,0.6s
MOA *e*PKP PKPbc 04 10 34.5
comp=Z,3.2nm,0.7s
MOA *i* PKP **PKPab 04 10 54.8 +0.2**
comp=Z,12nm,0.9s,SNR=6.5
BHOU Houvegnez 155.59 348 *d*PKP **PKPab 04 10 55.6 +0.4**
BIOA Bad Ischl, Aus 155.79 334 *e*PKP **PKPdf 04 10 25.5 +0.1**
comp=Z,1.0nm,0.4s
BIOA *i* PKP **PKPab 04 10 56.4 +0.2**
comp=Z,20nm,1.0s,SNR=5.9
BMRD Maredsous 155.85 350 *d*PKP **PKPab 04 10 56.2 -0.1**
SESA Seetaler Alpe, 155.88 332 *e*PKP **PKPdf 04 10 25.3 -0.5**
comp=Z,8.0nm,0.8s
SESA *e*PKP PKPbc 04 10 35.6
comp=Z,9.2nm,0.8s
SESA *i* PKP **PKPab 04 10 56.8 0.0**
comp=Z,49nm,0.6s,SNR=18
SOKA Soboth 156.02 331 *e*PKP **PKPdf 04 10 25.4 -0.5**
comp=Z,3.0nm,1.1s
SOKA *i* PKP **PKPab 04 10 56.9 -0.4**
comp=Z,9.2nm,0.5s,SNR=8.4
SOKA *e*SKP **SKPdf 04 13 01.6 +1.0**
comp=Z,3.4nm,1.2s
RJOB Jochberg 156.07 335 *e*PKPab **PKPab 04 10 58.3 +0.9**
baz=25,slow=4.3
DOU Dourbes 156.08 350 *d*PKP **PKPab 04 10 56.7 -0.6**
WLF Walferdange 156.23 347 *d*PKP **PKPab 04 10 58.1 +0.2**
WLF Walferdange 156.23 347 *e*PKPdf **PKPdf 04 10 26.6 +0.7**
baz=30,slow=1.4
WLF *e*PKPbc PKPbc 04 10 37.3
baz=28,slow=2.1
WLF *e*PKPab **PKPab 04 10 58.4 +0.5**
baz=25,slow=4.3
FUR Furstenfeldbru 156.24 338 *e*PKPdf **PKPdf 04 10 26.4 +0.4**
baz=30,slow=1.4
FUR *e*PKPab **PKPab 04 10 58.8 +0.7**
baz=25,slow=4.3
STU Stuttgart 156.34 342 *e*PKPab **PKPab 04 10 58.8 +0.3**
baz=25,slow=4.3
OBKA Obir 156.37 331 *i* PKP **PKPab 04 10 58.3 -0.5**
comp=Z,14nm,1.0s,SNR=5.6
LESA Schwarzleotal 156.38 335 *e*PKP **PKPdf 04 10 26.3 0.0**
comp=Z,2.9nm,0.8s
LESA *i* PKP **PKPab 04 10 58.9 0.0**
comp=Z,10nm,0.6s,SNR=6.9
KBA Koelnbreinsper 156.41 334 *e*PKP **PKPab 04 10 58.6 -0.5**
comp=Z,7.7nm,0.9s
BLY Banja Luka 156.42 325 ⇑P **PKPab 04 10 59.1 +0.1**
MYKA Terra Mystica 156.65 333 *i* PKP **PKPab 04 10 59.2 -0.8**
comp=Z,15nm,0.5s,SNR=7.5
LJU Ljubljana 156.74 331 *e*PKPdf **PKPdf 04 10 26.3 -0.4**
LJU *i* 04 10 37.9
LJU *i* PKPab **PKPab 04 11 00.0 -0.3**
BOJS Bojanci 156.82 329 *i* PKPdf **PKPdf 04 10 26.6 -0.2**
BOJS *i* PKPab **PKPab 04 11 00.7 -0.1**
WATA Walderalm 156.85 337 *e*PKP **PKPab 04 11 00.9 0.0**
comp=Z,8.6nm,0.6s
WTTA Wattenberg 156.90 337 *e*PKP **PKPdf 04 10 28.2 +1.1**
comp=Z,3.6nm,0.8s
WTTA *e*PKP **PKPab 04 11 01.3 +0.1**
comp=Z,14nm,0.6s
BFO Black Forest 156.98 343 **PKPab 04 11 01.6 +0.3**
BFO Black Forest 156.98 343 *e*PKPab **PKPab 04 11 01.6 +0.3**
baz=25,slow=4.3
ABTA Abfaltersbach 157.00 335 *i* PKP **PKPab 04 11 00.6 -0.9**
comp=Z,21nm,1.0s,SNR=7.8
ABTA *e*SKP **SKPdf 04 13 04.9 +3.2**
comp=Z,7.7nm,1.4s
RETA Reutte 157.00 338 *i* PKP **PKPab 04 11 01.8 +0.3**
comp=Z,15nm,0.7s,SNR=10
MOTA Moosalm 157.01 337 *i* PKP **PKPab 04 11 01.6 -0.1**
comp=Z,24nm,0.9s,SNR=8.3
CEY Cerknica 157.02 330 *i* PKPab **PKPab 04 11 00.9 -0.7**
SQTA Sankt Quirin 157.08 337 *i* PKP **PKPab 04 11 02.1 +0.1**
comp=Z,14nm,0.6s,SNR=7.5
FETA Feichten 157.42 338 *e*PKP **PKPdf 04 10 27.1 -0.6**
comp=Z,4.2nm,1.0s
FETA *i* PKP **PKPab 04 11 03.2 -0.3**
comp=Z,8.5nm,0.8s,SNR=7.7
DAVA Damuels 157.47 339 *i* PKP **PKPab 04 11 03.6 0.0**
comp=Z,27nm,1.0s,SNR=7.4
DAVOX Davos/Dischmat 157.91 339 PKP **PKPdf 04 10 28.3 0.0**
comp=Z,3.8nm,0.8s,baz=58,slow=5.5,SNR=5.4
DAVOX PKPab **PKPab 04 11 06.2 +0.6**
comp=Z,16nm,0.9s,baz=312,slow=2.0,SNR=11
TUE Stuetta 158.36 339 **PKPdf 04 10 28.3 -0.6**
DBIC Dimbokro 159.91 171 PKP **PKPdf 04 10 29.0 -2.3**
comp=Z,6.6nm,1.0s,baz=332,slow=5.5,SNR=3.8
DBIC PKPab **PKPab 04 11 15.5 +0.7**
comp=Z,13nm,0.8s,baz=190,slow=4.3,SNR=8.2
TORD Torodi Ar. Bea 166.23 194 PKP **PKPdf 04 10 37.2 0.0**
comp=Z,6.6nm,1.0s,baz=337,slow=0.3,SNR=20
TORD PKPab **PKPab 04 11 42.9 +0.4**
comp=Z,12nm,0.7s,baz=137,slow=2.6,SNR=18
TORD PP **PP 04 15 31.6 +1.2**
comp=Z,2.3nm,1.0s,baz=158,slow=3.8,SNR=4.2
TORD Torodi Ar. Bea 166.23 194 **PKPdf 04 10 36.6 -0.6**
TORD **PKPab 04 11 43.0 +0.4**
ESDC Sonseca Array 166.85 8 PKP **PKPdf 04 10 37.4 +0.3**
comp=Z,1.1nm,0.9s,baz=274,slow=23,SNR=5.0
ESDC PKPab **PKPab 04 11 44.7 -0.2**
comp=Z,4.9nm,1.1s,baz=358,slow=3.8,SNR=12
ESDC Sonseca Array 166.85 8 **PKPdf 04 10 37.1 0.0**
ESDC **PKP

IDC ***15*** *04:09:00.1±1.4, 60.52S×46.50W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=61.2km s-min=34.4km az=84.0*

ISC 15 04:09:01.0±1.5, 60.5S±0.2×46.6W±0.4, h10km, n9, σ0°91/6, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.40**	**141**	**P**	**P**	**04 13 37.8**	**+0.1**
	0.4nm,0.3s,baz=279,slow=13,SNR=4.4 0.4nm,0.3s						
QSPA	**South Pole Qui**	**29.75**	**180**	P	**P**	**04 15 07.1**	**-0.1**
	1.1nm,0.9s,baz=176,slow=8.4,SNR=4.2 1.1nm,0.9s						
H10N3	**ASCENSION HYDR**	**57.78**	**39**	T	T	05 21 46.6	
	baz=199,slow=75,SNR=16						
H10N1	**ASCENSION HYDR**	**57.78**	**39**	T	T	05 21 46.9	
	baz=199,slow=75,SNR=11						
H10N2	**ASCENSION HYDR**	**57.80**	**39**	T	T	05 21 45.6	
	baz=199,slow=75,SNR=11						
TORD	**Torodi Ar. Bea**	**82.86**	**47**	P	**P**	**04 21 25.0**	**-0.5**
	0.8nm,0.9s,baz=182,slow=4.2,SNR=1.8 0.8nm,0.9s						
ILAR	**Eielson Array**	**145.36**	**312**	PKPbc	**PKPdf**	**04 28 37.6**	**+0.3**
	0.4nm,0.6s,baz=141,slow=2.0,SNR=4.2						
BVAR	**Borovoye Array**	**145.92**	**74**	PKPbc	**PKPab**	**04 28 41.2**	**+1.2**
	0.9nm,0.6s,baz=222,slow=3.9,SNR=2.2						
MKAR	**Makanchi Array**	**147.67**	**92**	PKPbc	**PKPbc**	**04 28 43.9**	**-0.8**
	0.4nm,0.7s,baz=234,slow=1.2,SNR=4.0						

ISK ***15*** *04:19:12.9, 38.22N×38.72E, h5km, ML3.5/6*
AFAD ***15*** *04:19:13.7, 38.26N×38.76E, h7km±1km, MW3.4*

ISC 15 04:19:14.0±0.9, 38.25N±0.02×38.75E±0.02, h11km±8km, n28, σ0°81/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.23**	**74**	Pg	**Pg**	**04 19 19.8**	**+0.9**
MDYL				Sg	**Sg**	**04 19 23.2**	**+0.9**
MAYA	**Malatya/Merkez**	**0.27**	**287**	P	**Pg**	**04 19 19.4**	**-0.2**
MAYA				S	**Sb**	**04 19 24.0**	**-1.5**
ELZG	**Elazig**	**0.31**	**36**	P	**Pg**	**04 19 20.1**	**-0.2**
ELZG				S	**Sg**	**04 19 24.3**	**-0.3**
NARI	**Adyaman-Kaht**	**0.36**	**179**	P	**Pb**	**04 19 21.4**	**-1.2**
NARI				S	**Sg**	**04 19 26.2**	**+0.1**
CNGT	**ngs**	**0.43**	**94**	P	**Pg**	**04 19 21.8**	**-0.7**
CNGT				S	**Sg**	**04 19 28.3**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.46**	**73**	Pg	**Pg**	**04 19 22.4**	**-0.6**
ESIJ	**Sivrice-Elazig**	**0.48**	**65**	Pg	**Pg**	**04 19 23.3**	**-0.2**
ESIJ				Sg	**Sb**	**04 19 31.4**	**-0.4**
ELZ	**Elazig**	**0.57**	**39**	P	**Pg**	**04 19 24.4**	**-0.7**
ELZ				S	**Sg**	**04 19 32.4**	**-0.2**
AZEY	**Adyaman-Merk**	**0.59**	**222**	P	**Pb**	**04 19 26.1**	**-0.3**
AKCD	**Akcadag**	**0.65**	**274**	P	**Pb**	**04 19 26.6**	**-0.9**
AKCD				S	**Sb**	**04 19 35.8**	**-0.9**
HANM	**anlurfa/Hi**	**0.68**	**171**	P	**Pb**	**04 19 27.1**	**-0.7**
HANM				S	**Sb**	**04 19 36.7**	**-0.5**
MDNT	**Maden**	**0.75**	**79**	P	**Pg**	**04 19 27.9**	**-0.6**
MDNT				S	**Sg**	**04 19 38.2**	**0.0**
URFA	**Urfa**	**0.81**	**176**	Pg	**Pg**	**04 19 28.2**	**-1.4**
URFA				Sg	**Sg**	**04 19 39.7**	**-0.5**
ATAB	**Bozova**	**0.86**	**205**	P	**Pb**	**04 19 30.6**	**-0.3**
ARPR	**Arapgir-MALATY**	**0.90**	**339**	Pg	**Pb**	**04 19 31.5**	**-0.3**
ARPR				Sg	**Sb**	**04 19 44.4**	**+0.5**
AKCA	**Adyaman/G¶l**	**0.95**	**242**	P	**Pb**	**04 19 32.6**	**0.0**
AKCA				S	**Sn**	**04 19 47.0**	**-0.1**
SANL	**SANLIURFA_Merk**	**1.09**	**170**	P	**Pn**	**04 19 35.4**	**+0.2**
DIYA	**Diyarbakir**	**1.13**	**106**	P	**Pn**	**04 19 35.2**	**-0.3**
DIYA				S	**Sn**	**04 19 51.3**	**0.0**
DYBB	**Diyarbakir**	**1.13**	**105**	Pn	**Pb**	**04 19 35.6**	**-0.1**
ILIC	**ilic-Erzincan**	**1.21**	**353**	Pn	**Pn**	**04 19 37.1**	**+0.1**
GZT	**Gaziantep**	**1.30**	**227**	P	**Pb**	**04 19 39.1**	**+0.6**
GZT				S	**Sn**	**04 19 57.8**	**+2.2**
SURC	**SANLIURFA_SURC**	**1.37**	**185**	P	**Pg**	**04 19 40.3**	**0.0**
SURC				S	**Sn**	**04 19 57.9**	**+0.6**
GAZ	**Gaziantep**	**1.63**	**229**	Pn	**Pn**	**04 19 42.6**	**-0.1**
KMRS	**Kahramanmaras**	**1.64**	**244**	Pn	**Pn**	**04 19 42.9**	**0.0**
BNGB	**Bingl**	**1.68**	**63**	Pn	**Pb**	**04 19 44.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.93**	**92**	Pn	**Pn**	**04 19 47.6**	**+0.8**
BEIL	**Beino**	**4.24**	**210**	*eP*	**Pn**	**04 20 20.4**	**+1.8**
HWQ	**Hawqa**	**4.56**	**211**	*eP*	**Pn**	**04 20 25.0**	**+1.9**

IDC ***15*** *04:20:08.8±4.0, 65.16S×179.62E, h0km, mb4.1/4, mbtmp4.2/5, ML3.4/1, MS3.6/14, Error ellipse: s-maj=140.6km s-min=22.4km az=66.0*
NEIC ***15*** *04:20:09.9±1.1, 65.3S±0.1×179.1E±0.3, h10km±1km, mb4.6/9, Error ellipse: s-maj=24.2km s-min=13.0km az=46.0*

ISC 15 04:20:09.4±1.1, 65.2S±0.1×179.3E±0.2, h10km, n41, σ1°05/18, mb4.3/7, MS3.7/13, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.26**	**192**		**Pn**	**04 23 16.4**	**-0.9**
VNDA	**Vanda**	**13.47**	**196**	Pn	**Pn**	**04 23 20.6**	**+0.4**
	0.2nm,0.3s,baz=48,slow=17,SNR=49						
VNDA				Sn	Sn	04 25 41.4	-8.3
	0.1nm,0.3s,baz=83,slow=7.1,SNR=1.5						
VNDA				LR	LR	04 27 23.3	
	comp=Z,170nm,21.4s,baz=5.5,slow=32 5.3nm,0.7s						
VNDA	**Vanda**	**13.47**	**196**		**Pn**	**04 23 20.3**	**+0.1**
MCQ	**Macquarie Isla**	**14.74**	**307**	Pn	**Pn**	**04 23 36.9**	**-0.7**
RPZ	**Rata Peaks**	**22.02**	**344**	LR	LR	04 32 22.1	
	comp=Z,42nm,18.3s,baz=56,slow=33						
QSPA	**South Pole Qui**	**24.89**	**180**	P	**P**	**04 25 33.9**	**+1.8**
	5.1nm,0.8s,baz=39,slow=6.9,SNR=16						
QSPA				LR	LR	04 34 20.7	
	comp=Z,150nm,18.8s,baz=46,slow=34 5.1nm,0.8s						
QSPA	**South Pole Qui**	**24.89**	**180**	P	**P**	**04 25 32.3**	**+0.2**
QSPA				IAmb	IAmb	04 25 36.4	
	comp=Z,6.2nm,0.9s						
URZ	**Urewera**	**27.01**	**356**	LR	LR	04 34 06.9	
	comp=Z,157nm,21.4s,baz=158,slow=31						
MXZ	**Matakaoa Point**	**27.68**	**358**	P	**P**	**04 25 58.0**	**+0.8**
MAW	**Mawson**	**40.05**	**212**	LR	LR	04 43 49.7	
	comp=Z,173nm,19.4s,baz=106,slow=35						
BBOO	**Buckleboo**	**41.62**	**300**	P	**P**	**04 27 56.5**	**-0.8**
BBOO				IAmb	IAmb	04 28 35.8	
	comp=Z,27nm,1.3s						
PMSA	**Palmer Station**	**42.42**	**145**	LR	LR	04 44 31.7	
	comp=Z,32nm,18.2s,baz=172,slow=34						
PMSA	**Palmer Station**	**42.42**	**145**	P	**P**	**04 28 01.9**	**-1.5**
SNAA	**Sanae**	**43.38**	**179**	P	**P**	**04 28 12.2**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=225,slow=10.0,SNR=4.5						
SNAA				LR	LR	04 45 53.6	
	comp=Z,153nm,18.7s,baz=184,slow=36 comp=Z,1.3nm,0.7s						
SNAA	**Sanae**	**43.38**	**179**	P	**P**	**04 28 12.3**	**+0.9**
RAR	**Rarotonga**	**46.07**	**28**	LR	LR	04 44 16.4	
	comp=Z,86nm,19.6s,baz=247,slow=32						
H01W1	**Cape Leeuwin H**	**48.56**	**276**	T	T	05 21 39.8	
	baz=149,slow=76,SNR=41						
H01W2	**Cape Leeuwin H**	**48.56**	**276**	T	T	05 21 21.7	
	baz=149,slow=76,SNR=40						
H01W3	**Cape Leeuwin H**	**48.57**	**276**	T	T	05 21 22.2	
	baz=149,slow=76,SNR=32						
ASAR	**Alice Springs**	**50.70**	**302**	P	**P**	**04 29 11.2**	**+2.3**
	comp=Z,2.3nm,0.6s,baz=157,slow=7.3,SNR=19 comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**50.70**	**302**	P	**P**	**04 29 09.2**	**+0.3**
PPT	**Papeete**	**51.94**	**39**	LR	LR	04 47 11.9	
	comp=Z,50nm,18.7s,baz=188,slow=31						
PAF	**Port-aux-Franc**	**53.44**	**230**	P	**P**	**04 29 28.4**	**-0.6**
WR8	**Warramunga Arr**	**53.91**	**305**	P	**P**	**04 29 32.9**	**+0.2**
WR8				IAmb	IAmb	04 29 42.8	
	comp=Z,6.7nm,1.1s						
WRA	**Warramunga Arr**	**53.98**	**305**	P	**P**	**04 29 34.0**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=156,slow=6.5,SNR=11 comp=Z,2.7nm,0.9s						
WRA	**Warramunga Arr**	**53.98**	**305**	P	**P**	**04 29 34.0**	**+0.7**
WB0	**Warramunga Arr**	**54.13**	**305**	P	**P**	**04 29 34.5**	**+0.1**
WB0				IAmb	IAmb	04 29 36.4	
	comp=Z,7.1nm,1.0s						
RPN	**Rapa Nui**	**57.89**	**85**	LR	LR	04 48 42.1	
	comp=Z,42nm,20.7s,baz=196,slow=30						
H03S2	**Juan Fernandez**	**64.46**	**115**	T	T	05 41 30.1	
	baz=205,slow=74,SNR=21						
H03S1	**Juan Fernandez**	**64.47**	**115**	T	T	05 41 31.1	
	baz=205,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**64.48**	**115**	T	T	05 41 30.6	
	baz=205,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**64.80**	**115**	T	T	05 41 49.8	
	baz=202,slow=78,SNR=14						
H03N2	**Juan Fernandez**	**64.81**	**115**	T	T	05 41 43.7	
	baz=202,slow=78,SNR=45						
H03N1	**Juan Fernandez**	**64.82**	**115**	T	T	05 41 54.3	
	baz=202,slow=78,SNR=8.0						
SUR	**Sutherland**	**81.31**	**198**	LR	LR	05 04 19.2	
	comp=Z,65nm,21.8s,baz=136,slow=33						
NNA	**Nana**	**84.92**	**107**	LR	LR	05 00 15.6	
	comp=Z,64nm,18.4s,baz=338,slow=28						
LBTB	**Lobatse**	**87.81**	**204**	LR	LR	05 11 01.8	
	comp=Z,38nm,18.1s,baz=144,slow=35						
H08S2	**Diego Garcia H**	**90.07**	**252**	T	T	06 13 41.3	
	baz=157,slow=76						
H08S1	**Diego Carcia H**	**90.08**	**252**	T	T	06 13 42.5	
	baz=157						
H08S3	**Diego Garcia H**	**90.09**	**252**	T	T	06 13 43.2	
	baz=157,slow=76						
TSUM	**Tsumeb**	**94.71**	**197**	LR	LR	05 14 59.4	
	comp=Z,42nm,19.1s,baz=152,slow=35						

IDC 15 04:25:23.9±4.5, 67.58N×33.35E, h0km, mbtmp2.3/1, ML1.0/1, Error ellipse: s-maj=62.6km s-min=31.4km az=39.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**3.49**	**308**	Pn	Pn	04 26 18.6	-0.7
	baz=121,slow=14,SNR=5.1						
ARCES				Lg	Lg	04 27 13.6	
	0.1nm,0.3s,baz=122,slow=32,SNR=1.4 1.4nm,1.0s						
I37NO	**I37NO**	**5.66**	**292**	I	I	04 58 35.0	
	baz=97,slow=316,SNR=7.7						
I43RU	**DUBNA INFRASON**	**11.04**	**169**	I	I	05 34 20.0	
	baz=351,slow=310,SNR=0.2						

IDC ***15*** *04:45:26.3±1.5, 35.87N×69.96E, h0km, mb3.8/7, mbtmp3.6/10, ML2.9/3, Error ellipse: s-maj=28.4km s-min=25.2km az=158.0*
NEIC ***15*** *04:45:38.1±2.0, 36.13N±0.03×70.17E±0.08, h105km±12km, mb4.2/5, Error ellipse: s-maj=9.7km s-min=3.8km az=98.0*
NNC ***15*** *04:45:39.1±5.3, 36.71N×69.67E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=42.7km s-min=30.0km az=171.0*

ISC 15 04:45:37.7±0.8, 36.22N±0.06×70.12E±0.06, h100km, n49, σ1°49/51, mb3.8/5, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.82**	**43**		**Pn**	**04 46 08.8**	**+0.6**
MANEM				Sn	**Sn**	**04 46 33.7**	**+2.3**
KBL	**Kabul**	**1.89**	**208**		**Pn**	**04 46 08.8**	**-0.3**
KBL				Sn	**Sn**	**04 46 32.3**	**-0.7**
SHAA	**Shahritus**	**2.09**	**311**		**Pn**	**04 46 13.9**	**+2.5**
CHGR	**Chuyangaron**	**2.55**	**343**	Pn	**Pn**	**04 46 20.0**	**+2.4**
GAR	**Garm**	**2.78**	**3**		**Pn**	**04 46 22.6**	**+1.9**
DRK	**Karamyk**	**3.52**	**22**		**Pn**	**04 46 32.4**	**+1.8**
NIL	**Nilore**	**3.63**	**134**		**Pn**	**04 46 32.4**	**+0.5**
BTK	**Batken**	**3.87**	**8**		**Pn**	**04 46 37.5**	**+2.3**
KSH2	**Kashi**	**5.21**	**54**	Pn	**Pn**	**04 46 55.8**	**+2.4**
KSH2				Sn	**Sn**	**04 47 51.9**	**-0.4**
KSH2				smax	smax		
	comp=N,80nm,0.6s						
KSH2				smax	smax		
	comp=E,63nm,0.6s						
ARSB	**Arslanbob**	**5.57**	**23**		**Pn**	**04 46 58.5**	**+0.3**
TSSA	**Tissa**	**6.01**	**122**	*e*P	Pn	04 46 56.6	-7.7
TSSA				*ex*	x	04 47 07.7	
TSSA				*e*S	Sn	04 47 57.0	-15
TSSA				IAML		04 48 03.3	
	comp=N,42nm,0.5s						
TSSA				IAML		04 48 03.6	
	comp=E,79nm,0.0s						
DHRM	**DHARAMSHALA**	**6.47**	**126**	*e*P	Pn	04 47 01.9	-8.7
DHRM				*e*S	Sn	04 48 08.2	-15
DHRM				IAML		04 48 12.1	
	comp=E,116nm,0.4s						
DHRM				IAML		04 48 12.4	
	comp=E,104nm,0.4s						
KK31	**Karatay Array**	**6.88**	**2**	⇑P	**Pn**	**04 47 14.9**	**-1.0**
	comp=E,4.6nm,0.5s,baz=189,slow=15,SNR=41						
KK31				⇑S	**Sn**	**04 48 30.9**	**-1.8**
	comp=E,24nm,0.6s,baz=192,slow=20						
KK31	**Karatay Array**	**6.88**	**2**		**Pn**	**04 47 17.1**	**+1.1**
KKAR	**Karatay Array**	**6.88**	**2**		**Pn**	**04 47 17.2**	**+1.3**
UCH	**Uchur**	**6.90**	**28**	P	**Pn**	**04 47 16.6**	**0.0**
	SNR=9.9						
EKS2	**Erkin-Say**	**7.03**	**23**	P	**Pn**	**04 47 19.7**	**+1.7**
	SNR=12						
AAK	**Ala-Archa**	**7.25**	**26**	P	**Pn**	**04 47 21.5**	**+0.5**
	SNR=6.2						
AAK	**Ala-Archa**	**7.25**	**26**	⇓P	**Pn**	**04 47 22.5**	**+1.5**
	comp=E,1.1nm,0.4s						
AAK				⇓S	**Sn**	**04 48 42.9**	**+1.1**
	comp=E,3.3nm,0.5s						
AAK	**Ala-Archa**	**7.25**	**26**		**Pn**	**04 47 21.1**	**0.0**
CHMS	**Chumysh**	**7.66**	**26**	P	**Pn**	**04 47 26.6**	**+0.2**
	SNR=5.7						
BOOM	**Boomskoye usch**	**7.71**	**34**		**Pn**	**04 47 27.5**	**+0.1**
USP	**Ospenovka**	**7.80**	**24**	P	**Pn**	**04 47 28.8**	**+0.3**
	SNR=6.5						
TKM2	**Tokmak 2**	**7.92**	**31**	P	**Pn**	**04 47 30.0**	**-0.2**
	SNR=8.1						
HNLY	**HANLEY**	**8.07**	**113**	*e*S	Sn	04 48 45.9	-17
KLP	**Kalpa**	**8.21**	**122**	*e*S	Sn	04 48 48.6	-17
KLP				IAML		04 48 57.0	
	comp=E,36nm,0.3s						
KLP				IAML		04 48 58.0	
	comp=N,22nm,0.5s						
KUDL	**Kundal**	**9.69**	**144**	*e*P	Pn	04 47 46.3	-7.8
KUDL				*e*S	Sn	04 49 22.2	-19
KUDL				IAML		04 49 27.2	
	comp=E,9.8nm,0.3s						
MKAR	**Makanchi Array**	**13.94**	**37**	Pn	**Pn**	**04 48 49.2**	**-1.5**
	comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=2.6 comp=E,0.2nm,0.4s						
MKAR	**Makanchi Array**	**13.94**	**37**		**Pn**	**04 48 49.6**	**-1.0**
AB31	**Akbulak array**	**15.00**	**333**	P	**Pn**	**04 49 05.3**	**+1.0**
	comp=E,1.8nm,0.3s,baz=154,slow=12,SNR=54						
AB31				⇑S	**Sn**	**04 51 46.7**	**-3.0**
	comp=E,1.2nm,0.5s						
AB31	**Akbulak array**	**15.00**	**333**	Pn	**Pn**	**04 49 05.7**	**+1.4**
AB31				IAmb	IAmb	04 49 06.8	
	comp=Z,5.7nm,0.6s						
ABKAR	**Akbulak array**	**15.00**	**333**	Pn	**P**	**04 49 06.0**	**-1.3**
KURBB	**Kurchatov Arra**	**15.62**	**20**	Pn	**Pn**	**04 49 11.1**	**-1.0**
	baz=203,slow=10,SNR=1.3 comp=Z,0.2nm,0.3s						
AKTO	**Aktyubinsk**	**16.68**	**332**	⇑P	**P**	**04 49 26.5**	**+0.6**
	comp=Z,2.9nm,0.8s						
AKTO				⇑S	**Sn**	**04 52 27.0**	**-3.3**
	comp=Z,2.7nm,0.8s						
BVAR	**Borovoye Array**	**16.81**	**1**	P	**Pn**	**04 49 26.8**	**+0.1**
	baz=172,slow=11,SNR=3.1 comp=Z,0.5nm,0.5s						
BORK	**Borovoye**	**16.83**	**0**		**Pn**	**04 49 26.7**	**-0.2**
ZAA0	**Zalesovo Array**	**20.47**	**25**	P	**P**	**04 50 07.2**	**0.0**
ZAA0				IAmb	IAmb	04 50 12.8	
	comp=Z,3.7nm,0.3s						
ZALV	**Zalesovo Beam**	**20.47**	**25**	P	**P**	**04 50 07.9**	**+0.8**
	comp=Z,3.5nm,0.3s,baz=218,slow=11,SNR=16 comp=Z,3.5nm,0.3s						
ZALV	**Zalesovo Beam**	**20.47**	**25**	P	**P**	**04 50 06.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.95**	**117**	P	**P**	**04 51 45.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=311,slow=8.8,SNR=2.1 comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.95**	**117**	P	**P**	**04 51 44.2**	**-1.2**
FINES	**FINESS Array B**	**37.33**	**327**	P	**P**	**04 52 41.7**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=106,slow=15,SNR=2.3 comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**37.33**	**327**	P	**P**	**04 52 37.5**	**-2.3**
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**04 53 14.0**	**+2.5**
	comp=Z,1.4nm,0.8s,baz=122,slow=8.5,SNR=3.9 comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**04 53 11.9**	**+0.4**
ARCES				IAmb	IAmb	04 53 23.3	
	comp=Z,8.3nm,1.2s						
HFS	**Hagfors**	**42.85**	**322**	P	**P**	**04 53 27.9**	**+2.3**
	comp=Z,0.8nm,0.5s,baz=119,slow=9.0,SNR=2.5 comp=Z,0.8nm,0.5s						
NOA	**NORSAR Array B**	**44.18**	**323**	P	**P**	**04 53 38.2**	**+1.9**
	comp=Z,0.1nm,0.4s,baz=99,slow=8.0,SNR=2.3 comp=Z,0.1nm,0.4s						
NAO01	**NORSAR Array S**	**44.32**	**323**	P	**P**	**04 53 37.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**65.00**	**268**	P	**P**	**04 56 07.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=54,slow=5.7,SNR=4.7 comp=Z,0.2nm,0.4s						

IDC 15 05:12:46.1±3.9, 65.26S×179.29E, h0km, mb3.9/3, mbtmp3.9/4, ML3.4/1, MS3.6/14, Error ellipse: s-maj=136.9km s-min=26.2km az=68.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.41**	**196**	Pn	Pn	05 15 56.4	-0.9
	0.2nm,0.3s,baz=47,slow=18,SNR=46						
VNDA				LR	LR	05 19 58.4	
	comp=Z,178nm,20.6s,baz=21,slow=32 4.3nm,0.7s						
RPZ	**Rata Peaks**	**22.07**	**344**	LR	LR	05 24 09.7	
	comp=Z,42nm,20.8s,baz=196,slow=31						
QSPA	**South Pole Qui**	**24.83**	**180**	P	P	05 18 09.9	+0.1
	2.9nm,0.8s,baz=42,slow=4.2,SNR=14						
QSPA				LR	LR	05 26 45.9	
	comp=Z,176nm,19.1s,baz=46,slow=34 2.9nm,0.8s						
URZ	**Urewera**	**27.07**	**356**	LR	LR	05 27 38.3	
	comp=Z,168nm,18.4s,baz=158,slow=33						
MAW	**Mawson**	**39.99**	**212**	LR	LR	05 36 48.0	
	comp=Z,164nm,20.6s,baz=108,slow=36						
SNAA	**Sanae**	**43.33**	**179**	LR	LR	05 38 29.7	
	comp=Z,93nm,18.7s,baz=159,slow=36						
H01W1	**Cape Leeuwin H**	**48.54**	**276**	T	T	06 14 02.4	
	baz=149,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**48.55**	**276**	T	T	06 14 04.0	
	baz=149,slow=76,SNR=12						
H01W3	**Cape Leeuwin H**	**48.56**	**276**	T	T	06 14 05.2	
	baz=149,slow=76,SNR=9.9						
ASAR	**Alice Springs**	**50.72**	**303**	P	P	05 21 47.6	+0.3
	1.0nm,0.6s,baz=154,slow=7.5,SNR=9.0						
ASAR				LR	LR	05 40 43.9	
	comp=Z,49nm,18.0s,baz=324,slow=33 1.0nm,0.6s						
PPT	**Papeete**	**51.99**	**39**	LR	LR	05 39 30.2	
	comp=Z,25nm,18.1s,baz=121,slow=31						
WRA	**Warramunga Arr**	**54.00**	**305**	P	P	05 22 11.1	-0.5
	0.6nm,0.6s,baz=158,slow=6.6,SNR=5.6 0.6nm,0.6s						
RPN	**Rapa Nui**	**57.91**	**85**	LR	LR	05 42 21.9	
	comp=Z,41nm,18.9s,baz=230,slow=31						
H03S2	**Juan Fernandez**	**64.45**	**115**	T	T	06 34 08.3	
	baz=205,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**64.46**	**115**	T	T	06 34 08.6	
	baz=205,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**64.47**	**115**	T	T	06 34 14.4	
	baz=205,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**64.79**	**115**	T	T	06 34 36.9	
	baz=213,slow=72						
H03N2	**Juan Fernandez**	**64.81**	**115**	T	T	06 34 29.0	
	baz=213,slow=72						
H03N1	**Juan Fernandez**	**64.81**	**115**	T	T	06 34 36.8	
	baz=213,slow=72						
SUR	**Sutherland**	**81.25**	**198**	LR	LR	05 59 02.3	
	comp=Z,59nm,18.4s,baz=122,slow=34						
BOSA	**Boshof**	**84.29**	**203**	LR	LR	06 02 44.5	
	comp=Z,37nm,18.2s,baz=182,slow=36						
ATAH	**Atahualpa**	**88.69**	**104**	LR	LR	05 56 44.4	
	comp=Z,29nm,18.3s,baz=117,slow=30						
MATP	**Matopo**	**91.71**	**207**	LR	LR	06 02 44.1	
	comp=Z,47nm,20.4s,baz=94,slow=33						
TSUM	**Tsumeb**	**94.65**	**197**	LR	LR	06 08 01.1	
	comp=Z,56nm,18.5s,baz=160,slow=35						
BRTR	**Keskin Array B**	**147.72**	**235**	PKPbc	PKPbc	05 32 31.1	-0.7
	0.5nm,0.3s,baz=171,slow=3.6,SNR=4.8						

UPA ***15*** *05:14:56.6±1.3, 6.93N×82.39W, h19km±17km, MW3.6, Presumed earthquake*
UCR ***15*** *05:14:57.9±1.5, 7.16N×82.36W, h7km±18km, MW3.6, Presumed earthquake*

ISC 15 05:14:54.8±2.9, 6.9N±0.1×82.40W±0.06, h15km±15km, n49, σ0°84/68, 9C-3D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMNES	**Limones**	**1.26**	**339**	*e*P	**Pn**	**05 15 17.6**	**-0.4**
LMNES				*e*S	**Sg**	**05 15 36.0**	**+0.5**
PTPM	**Petroterminale**	**1.36**	**340**	*e*P	**Pn**	**05 15 19.5**	**+0.1**
GMAL	**Guarumal, Vera**	**1.43**	**54**	⇓*i*P	**Pn**	**05 15 20.1**	**-0.2**
GMAL				*e*S	**Sn**	**05 15 37.6**	**-1.2**
GMAL	**Guarumal, Vera**	**1.43**	**54**	*e*P	**Pn**	**05 15 20.1**	**-0.2**
GMAL				*e*S	**Sn**	**05 15 37.7**	**-1.0**
DVD	**David**	**1.51**	**358**	*e*P	**Pn**	**05 15 21.5**	**+0.2**
DVD				*e*S	**Sn**	**05 15 39.6**	**-1.1**
PDCAN	**Manzana , Fuen**	**1.53**	**27**	⇓*i*P	**Pn**	**05 15 21.4**	**-0.3**
BGUAL	**Bijagual, Pana**	**1.58**	**2**	*e*P	**Pn**	**05 15 23.0**	**+0.7**
BGUAL				*e*S	**Sn**	**05 15 42.5**	**-0.1**
PIRO	**Carate, Puerto**	**1.74**	**328**	⇑*i*P	**Pn**	**05 15 24.1**	**-0.5**
PIRO	**Carate, Puerto**	**1.74**	**328**	*e*P	**Pn**	**05 15 24.2**	**-0.4**
PTAR3	**Potrerillos Ar**	**1.76**	**357**	*e*P	**Pn**	**05 15 25.9**	**+1.0**
PTAR3				*e*S	**Sn**	**05 15 47.7**	**+0.4**
NELY	**Ciudad Neily**	**1.80**	**343**	⇑*i*P	**Pn**	**05 15 25.5**	**+0.1**
NELY				*e*

az=25.0, confirmed
*GCG **15** 05:38:00.4±0.9, 13°.63N×90°.09W, h65km±9km, MD3.8, Presumed earthquake*
ISC 15 05:38:01.8±1.5, 13°.62N±0°.05×90°.04W±0°.04, h67km±7km, n62, σ0.95/95, 2C-13D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.22**	**6**	P	**Pn**	**05 38 11.2**	**-1.1**
NUBE	**Las Nubes**	**0.38**	**42**	P	**Pn**	**05 38 12.6**	**-0.9**
NUBE	**Las Nubes**	**0.38**	**42**	*i* P	**Pn**	**05 38 12.6**	**-0.9**
NUBE	**Las Nubes**	**0.38**	**42**	⇓*i*P	**Pn**	**05 38 12.5**	**-0.9**
NUBE				*e*S	**Sn**	**05 38 22.8**	**+0.8**
CEVE	**Cerro Verde**	**0.45**	**63**	P	**Pn**	**05 38 13.6**	**-0.6**
CEVE				S	**Sn**	**05 38 24.1**	**+0.8**
LOAL	**Lomas de Alarc**	**0.45**	**33**	P	**Pn**	**05 38 13.0**	**-1.0**
LOAL	**Lomas de Alarc**	**0.45**	**33**	*e*P	**Pn**	**05 38 13.4**	**-0.6**
LOAL				*e*S	**Sn**	**05 38 23.7**	**+0.8**
SBLS	**San Blas**	**0.46**	**61**	*i* P	**Pn**	**05 38 13.4**	**-0.8**
SBLS				*e*S	**Sn**	**05 38 23.2**	**-0.1**
RTR	**El Retiro**	**0.47**	**54**	⇓*i*P	**Pn**	**05 38 13.7**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.47**	**31**	P	**Pn**	**05 38 13.4**	**-0.8**
SLOZ	**Alcaldia de Sa**	**0.47**	**31**	⇓*i*P	**Pn**	**05 38 13.2**	**-0.9**
SLOZ				*e*S	**Sn**	**05 38 24.2**	**+1.0**
SNJE	**San Jose**	**0.49**	**59**	*e*S	**Sn**	**05 38 23.9**	**+0.2**
JAYA	**Jayaque - finc**	**0.57**	**86**	P	**Pn**	**05 38 14.4**	**-0.9**
JAYA				S	**Sn**	**05 38 26.0**	**+0.8**
JAYA	**Jayaque - finc**	**0.57**	**86**	*i* P	**Pn**	**05 38 14.3**	**-0.9**
JAYA				*i* S	**Sn**	**05 38 25.1**	**-0.1**
JAYA	**Jayaque - finc**	**0.57**	**86**	*i* P	**Pn**	**05 38 14.3**	**-0.9**
JAYA				⇑*i*Sg	**Sn**	**05 38 26.2**	**+1.0**
UNIC	**Universidad Ca**	**0.60**	**53**	P	**Pn**	**05 38 14.5**	**-1.0**
UNIC	**Universidad Ca**	**0.60**	**53**	*e*P	**Pn**	**05 38 14.4**	**-1.0**
UNIC				*e*S	**Sn**	**05 38 25.8**	**+0.4**
RBDL	**Robledal**	**0.60**	**35**	⇓*i*P	**Pn**	**05 38 14.6**	**-0.9**
RBDL				*e*S	**Sn**	**05 38 26.4**	**+0.7**
CEDA	**San Andres**	**0.65**	**74**	P	**Pn**	**05 38 15.0**	**-1.0**
CEDA				S	**Sn**	**05 38 27.6**	**+1.2**
CEDA	**San Andres**	**0.65**	**74**	⇓*i*P	**Pn**	**05 38 15.1**	**-0.9**
CEDA				*i* Sg	**Sn**	**05 38 26.7**	**+0.3**
PCG5	**San Vicente Pa**	**0.68**	**331**	*i* P	**Pn**	**05 38 18.3**	**+1.9**
LALI	**Alcalda de L**	**0.71**	**100**	P	**Pn**	**05 38 16.0**	**-0.6**
LALI	**Alcalda de L**	**0.71**	**100**	*i* P	**Pn**	**05 38 15.3**	**-1.3**
LALI	**Alcalda de L**	**0.71**	**100**	*e*P	**Pn**	**05 38 15.4**	**-1.2**
LALI				*e*S	**Sn**	**05 38 28.2**	**+0.7**
MAGS	**Ministerio de**	**0.73**	**85**	⇓*i*P	**Pn**	**05 38 15.8**	**-1.2**
MAGS				*e*S	**Sn**	**05 38 28.7**	**+0.5**
JUAM	**Asuncion Mita**	**0.78**	**24**	*i* P	**Pn**	**05 38 16.2**	**-1.3**
JUAM				*i* S	**Sn**	**05 38 28.7**	**-0.4**
UEES	**Universidad Ev**	**0.78**	**83**	P	**Pn**	**05 38 17.2**	**-0.3**
UEES	**Universidad Ev**	**0.78**	**83**	*e*P	**Pn**	**05 38 16.8**	**-0.8**
UEES				*e*S	**Sn**	**05 38 30.5**	**+1.3**
SEMO	**Seminario San**	**0.80**	**84**	P	**Pn**	**05 38 17.4**	**-0.3**
SEMO				S	**Sn**	**05 38 30.9**	**+1.5**
FG16	**Alotenango, Sa**	**0.80**	**325**	*i* P	**Pn**	**05 38 20.7**	**+2.8**
FG8	**Yepocapa, Chim**	**0.81**	**321**	*i* P	Pn	05 38 21.2	+3.2
PANCS	**Alcalda de**	**0.83**	**90**	P	**Pn**	**05 38 18.0**	**-0.2**
PANCS	**Alcalda de**	**0.83**	**90**	*e*P	**Pn**	**05 38 17.3**	**-0.8**
PANCS				*e*S	**Sn**	**05 38 30.8**	**+0.6**
LOMA	**Loma Larga**	**0.84**	**88**	P	**Pn**	**05 38 18.1**	**-0.2**
LOMA	**Loma Larga**	**0.84**	**88**	*e*P	**Pn**	**05 38 17.6**	**-0.7**
LOMA				*e*S	**Sn**	**05 38 31.1**	**+0.5**
LFRS	**El Faro**	**0.95**	**90**	*e*P	**Pn**	**05 38 19.1**	**-0.5**
LFRS				*e*S	**Sn**	**05 38 33.5**	**+0.7**
SJTE	**Alcalda de S**	**1.00**	**90**	⇓*i*P	**Pn**	**05 38 19.4**	**-0.8**
SJTE				⇓*e*S	**Sn**	**05 38 34.8**	**+0.8**
MTO3	**Montecristo**	**1.02**	**40**	P	**Pn**	**05 38 19.4**	**-1.1**
MTO3	**Montecristo**	**1.02**	**40**	*i* P	**Pn**	**05 38 19.5**	**-1.1**
MTO3	**Montecristo**	**1.02**	**40**	⇓*i*P	**Pn**	**05 38 19.4**	**-1.1**
MTO3				⇓*e*S	**Sn**	**05 38 34.4**	**-0.1**
PAVA	**Las Pavas**	**1.07**	**85**	P	**Pn**	**05 38 20.4**	**-0.8**
PAVA	**Las Pavas**	**1.07**	**85**	*e*P	**Pn**	**05 38 20.0**	**-1.2**
PAVA				*e*S	**Sn**	**05 38 36.5**	**+0.9**
ESSG	**Sabana Grande**	**1.08**	**315**	*i* P	**Pn**	**05 38 19.0**	**-2.3**
COEG	**Centro de Oper**	**1.12**	**90**	P	**Pn**	**05 38 21.2**	**-0.7**
COEG	**Centro de Oper**	**1.12**	**90**	⇓*i*P	**Pn**	**05 38 21.1**	**-0.7**
COEG				*e*S	**Sn**	**05 38 37.3**	**+0.6**
ESQI	**Esquipulas**	**1.15**	**36**	P	**Pn**	**05 38 21.3**	**-0.9**
ESQI				S	**Sn**	**05 38 38.0**	**+0.5**
ESQI	**Esquipulas**	**1.15**	**36**	⇓*i*P	**Pn**	**05 38 21.4**	**-0.9**
ESQI				*e*S	**Sn**	**05 38 38.1**	**+0.6**
LLGN	**La Laguna**	**1.19**	**63**	P	**Pn**	**05 38 21.7**	**-1.0**
LLGN				S	**Sn**	**05 38 38.6**	**+0.2**
TECO	**Alcaldia de Te**	**1.22**	**94**	P	**Pn**	**05 38 22.0**	**-1.1**
TECO				S	**Sn**	**05 38 39.6**	**+0.6**
TECO	**Alcaldia de Te**	**1.22**	**94**	*e*P	**Pn**	**05 38 21.7**	**-1.4**
TECO				*e*S	**Sn**	**05 38 38.8**	**-0.2**
P5NO	**Presa 5 de nov**	**1.29**	**73**	P	**Pn**	**05 38 22.5**	**-1.4**
P5NO				S	**Sn**	**05 38 40.2**	**-0.4**
P5NO	**Presa 5 de nov**	**1.29**	**73**	⇓*i*P	**Pn**	**05 38 22.3**	**-1.6**
P5NO				⇓*i*P		05 38 22.4	
P5NO				*e*S	**Sn**	**05 38 39.8**	**-0.8**
PQSS	**Presa 15 de Se**	**1.44**	**90**	P	**Pn**	**05 38 25.4**	**-0.4**
PQSS				S	**Sn**	**05 38 44.9**	**+1.0**
STS5	**El Palmar, Qui**	**1.49**	**302**	*i* P	Pn	05 38 29.0	+3.2
PACA	**Pacayal**	**1.67**	**95**	P	**Pn**	**05 38 30.0**	**+1.0**
SARH	**Santa Rosa de**	**1.69**	**47**	P	**Pn**	**05 38 29.2**	**0.0**
SARH				S	**Sn**	**05 38 50.9**	**+0.8**
SARH	**Santa Rosa de**	**1.69**	**47**	*i* P	**Pn**	**05 38 28.9**	**-0.4**
RANC	**El Ranchito**	**1.71**	**96**	S	**Sn**	**05 38 51.2**	**+0.5**
RTAL	**Retalhuleu**	**1.84**	**299**	P	Pn	**05 38 30.2**	**-1.1**
RTAL				S	**Sn**	**05 38 52.2**	**-1.5**
LCND	**La Caada**	**2.11**	**98**	P	**Pn**	**05 38 35.2**	**+0.3**
CSGN	**Cosiguina Volc**	**2.50**	**105**	P	**Pn**	**05 38 40.6**	**+0.4**
PETF	**Flores**	**3.28**	**3**	P	**Pn**	**05 38 50.8**	**0.0**
PETF				S	**Sn**	**05 39 30.1**	**+1.4**

*IDC **15** 05:43:17.2±1.3, 25°.66N×142°.34E, h217km±31km, mb3.7/2, mbtmp4.4/4, MS3.5/5, Error ellipse: s-maj=142.4km s-min=29.5km az=70.0*
*JMA **15** 05:43:19.3±0.3, 25°.N±2°×14°.1E±°, h100km, MV4.3/14, IOTO ISLANDS REGION*
ISC 15 05:43:11.7±1.1, 25°.02N±0°.10×140°.6E±0°.1, h100km, n16, σ2.9 44/14, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.17**	**42**	P	**Pn**	**05 43 49.8**	**+3.3**
JHH2				S	**Sn**	**05 44 12.9**	**-0.3**
CBIJ	**Chichi jima**	**2.54**	**35**	P	**Pn**	**05 43 54.1**	**+2.8**
CBIJ				S	**Sn**	**05 44 20.9**	**-0.7**
JCJ	**Chichijima**	**2.54**	**35**	P	**Pn**	**05 43 52.9**	**+1.6**
	98nm,0.4s,baz=126,slow=16,SNR=8.5						
JCJ				S	**Sn**	**05 44 19.2**	**-2.5**
	177nm,0.2s,baz=100,slow=23,SNR=18						
JHJ	**Hachijo jima 2**	**8.10**	**355**	P	**Pn**	**05 45 07.5**	**+0.9**
	150nm,0.8s,baz=118,slow=15,SNR=1.6						
BSO3	**Boso 3**	**9.75**	**360**	*e*P	**Pn**	**05 45 27.1**	**-1.6**
BSO4	**Boso 4**	**9.94**	**359**	*e*P	**Pn**	**05 45 31.3**	**-0.2**
JAG	**Ashikaga**	**11.41**	**356**	*e*P	**Pn**	**05 45 48.8**	**-2.7**
JHO	**Hitachi**	**11.55**	**0**	*e*P	**Pn**	**05 45 50.4**	**-3.0**
KSRS	**Korea Array**	**16.42**	**322**	P	**P**	**05 47 00.7**	**+3.7**
	2.7nm,0.8s,baz=138,slow=11,SNR=5.0						
PMG	**Port Moresby**	**34.82**	**169**	LR	LR	06 03 28.4	
	comp=Z,81nm,18.2s,baz=12,slow=34						
WRA	**Warramunga Arr**	**45.10**	**188**	P	**P**	**05 51 18.6**	**+0.4**
	2.0nm,0.4s,baz=16,slow=7.0,SNR=31						
	2.0nm,0.4s						
STKA	**Stephens Creek**	**56.59**	**179**	P	**P**	**05 52 42.0**	**-2.1**
	2.6nm,0.9s,baz=7.2,slow=6.3,SNR=3.0						
	2.6nm,0.9s						
KDAK	**Kodiak Island**	**56.90**	**36**	LR	LR	06 13 43.2	
	comp=Z,19nm,21.8s,baz=169,slow=33						
GNI	**Garni**	**78.48**	**309**	LR	LR	06 32 24.3	
	comp=Z,55nm,18.9s,baz=260,slow=37						
EKA	**Eskdalemuir Ar**	**94.17**	**340**	LR	LR	06 43 19.6	
	comp=Z,19nm,18.3s,baz=160,slow=38						
DAVOX	**Davos/Dischmat**	**95.78**	**328**	LR	LR	06 43 13.5	
	comp=Z,23nm,18.6s,baz=233,slow=37						

RSNC 15 05:44:27.9±0.0, 2°.N±2°×8°.0W±°, h13km±2km, M3.2, mb3.7, ML2.7, MLv3.5, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GR1C	**Gorgona, Isla**	**1.80**	**69**	P	Pn	05 44 56.4	-2.2
GR1C				S	Sn	05 45 16.3	-5.1
PAC1	**Pacto, Paraso**	**2.33**	**153**	P	Pn	05 45 05.5	-0.7
PAC1				S	Sn	05 45 33.3	-1.5
CUSE	**Cuicocha Este**	**2.50**	**145**	P	Pn	05 45 08.8	0.0
CUSE				S	Sn	05 45 37.9	-1.5
OTAV	**Otavalo**	**2.53**	**146**	P	Pn	05 45 08.8	-0.3
OTAV				S	Sn	05 45 39.1	-1.0
BBAC	**Balboa, Cauca**	**2.62**	**97**	P	Pn	05 45 09.4	-0.8
BBAC				S	Sn	05 45 39.8	-2.2
CRUC	**La Cruz**	**3.00**	**105**	P	Pn	05 45 16.7	+1.2
CRUC				S	Sn	05 45 51.8	+0.2
POPC	**Popayan, Colom**	**3.18**	**87**	P	Pn	05 45 17.0	-0.8
POPC				S	Sn	05 45 52.6	-3.1
JAMC	**Jamundi, Valle**	**3.29**	**75**	P	Pn	05 45 18.1	-1.2
JAMC				S	Sn	05 45 53.0	-5.4
CASC	**Dorado de Casc**	**3.34**	**131**	P	Pn	05 45 23.4	+3.4
CASC				S	Sn	05 46 02.6	+2.9
PIZC	**Pizarro, Choco**	**3.59**	**44**	P	Pn	05 45 22.4	-0.9
PIZC				S	Sn	05 46 01.9	-3.6
FLOC	**Florencia**	**4.26**	**100**	P	Pn	05 45 33.7	+1.1
FLOC				S	Sn	05 46 21.3	-1.0
GARC	**Garzon, Huila**	**4.36**	**92**	P	Pn	05 45 35.5	+1.4
GARC				S	Sn	05 46 23.5	-1.4
PLMC	**San Jos del P**	**4.37**	**55**	P	Pn	05 45 31.3	-2.8
PLMC				S	Sn	05 46 20.3	-4.6
PRAC	**Prado**	**5.14**	**75**	P	Pn	05 45 46.2	+1.6
PRAC				S	Sn	05 46 43.0	-0.9
GUY2C	**Guyana, Caldas**	**5.30**	**57**	P	Pn	05 45 47.9	+0.6
	0.0nm6.8nm,0.8s						
GUY2C				S	Sn	05 46 46.9	-1.6
	0.0nm6.8nm,0.8s						
AZU	**Azuero**	**5.41**	**356**	P	Pn	05 45 46.8	-1.6
	19nm,1.3s						
AZU				S	Sn	05 46 43.2	-7.4
	19nm,1.3s						
URMC	**La Uribe, Meta**	**5.54**	**81**	P	Pn	05 45 51.4	+1.3
URMC				S	Sn	05 46 52.5	-1.3
ROSC	**El Rosal**	**6.04**	**66**	P	Pn	05 45 55.9	-1.5
	8.9nm,1.9s						
ROSC				S	Sn	05 47 05.6	-1.1
	8.9nm,1.9s						
CVER	**Cruz Verde, Cu**	**6.15**	**69**	P	Pn	05 45 57.6	-1.4
CVER				S	Sn	05 47 07.8	-1.7
VILC	**Villavicencio,**	**6.39**	**74**	P	Pn	05 46 04.5	+2.6
VILC				S	Sn	05 47 14.7	-0.2
CHIC	**Chingaza**	**6.51**	**70**	P	Pn	05 46 05.0	+1.2
CHIC				S	Sn	05 47 15.6	-2.6

*IDC **15** 05:55:19.7±3.6, 54°.15N×87°.40E, h0km, mbtmp2.5/2, ML2.4/2, Error ellipse: s-maj=31.7km s-min=19.6km az=49.0*
ASRS 15 05:55:19.0±0.4, 54°.10N×87°.14E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**264**	I	I	06 03 50.0	
	baz=81,slow=317,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.38**	**264**	Pg	Pb	05 55 46.7	+1.1
	0.6nm,0.3s,baz=81,slow=16,SNR=7.8						
ZALV				Lg	Lg	05 56 08.8	
	1.3nm,0.3s,baz=84,slow=29,SNR=10						
KURBB	**Kurchatov Arra**	**6.32**	**240**	Pn	Pn	05 56 56.8	+3.4
	0.1nm,0.3s,baz=56,slow=14,SNR=2.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.94**	**205**	Pn	Pn	05 57 19.1	+3.4
	0.1nm,0.3s,baz=24,slow=13,SNR=1.7						
	0.1nm,0.4s						

*ASRS **15** 05:59:47.0±0.8, 54°.42N×86°.92E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 15 05:59:49.5±3.5, 54°.43N×86°.89E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=31.4km s-min=19.6km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**249**	I	I	06 06 33.5	
	baz=69,slow=315,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.31**	**249**	Pg	Pg	06 00 13.2	-1.4
	0.7nm,0.3s,baz=65,slow=17,SNR=9.8						
ZALV				Lg	Lg	06 00 31.9	
	0.8nm,0.3s,baz=68,slow=30,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.37**	**237**	Pn	Pn	06 01 25.4	+0.9
	baz=53,slow=14,SNR=5.6						
MKAR	**Makanchi Array**	**8.18**	**203**	Pn	Pn	06 01 50.6	+1.1
	0.1nm,0.3s,baz=26,slow=13,SNR=1.9						
	0.1nm,0.4s						

*ASRS **15** 06:15:46.0±1.6, 54°.55N×83°.60E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 15 06:15:48.9±2.2, 54°.61N×83°.76E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=17.9km s-min=10.2km az=169.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**136**	I	I	06 21 00.0	
	baz=316,slow=315,SNR=2.5						
ZALV	**Zalesovo Beam**	**0.91**	**136**	Pg	Pg	06 16 05.5	-0.9
	2.1nm,0.3s,baz=317,slow=15,SNR=18						
ZALV				Lg	Lg	06 16 20.4	
	6.3nm,0.3s,baz=318,slow=29,SNR=26						
ZALV				Rg	Rg	06 16 23.9	
	20nm,0.6s,baz=321,slow=34,SNR=12						
KURBB	**Kurchatov Arra**	**5.11**	**221**	Pn	Pn	06 17 06.4	-0.2
	baz=39,slow=13,SNR=2.7						
KURBB				Pg	Pb	06 17 18.6	-0.4
	0.1nm,0.3s,baz=38,slow=17,SNR=7.1						
KURBB				Lg	Lg	06 18 31.1	
	0.3nm,0.5s,baz=43,slow=30,SNR=6.0						
MKAR	**Makanchi Array**	**7.88**	**187**	Pn	Pn	06 17 44.6	-0.1
	0.1nm,0.3s,baz=13,slow=12,SNR=1.8						
MKAR				Lg	Lg	06 19 55.2	
	0.2nm,0.3s,baz=6.9,slow=25,SNR=1.9						
	0.2nm,0.5s						

*IDC **15** 06:20:38.7±1.0, 29°.78N×139°.64E, h424km±11km, mb3.1/7, mbtmp3.9/10, Error ellipse: s-maj=43.1km s-min=14.3km az=66.0*
*JMA **15** 06:20:39.3±0.3, 30°.N±2°×14°.0E±°, h435km, MV3.8/18, NEAR TORISHIMA IS*
ISC 15 06:20:39.5±0.9, 29°.8N±0°.1×139°.8E±0°.2, h450km, n18, σ1.9 97/20, mb3.5/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.31**	**0**	P	**P**	**06 21 47.7**	**-1.1**
	62nm,0.6s,baz=68,slow=24,SNR=0.8						
JHJ				S	**S**	**06 22 40.9**	**-4.3**
	55nm,0.4s,baz=33,slow=7.5,SNR=1.5						
CBIJ	**Chichi jima**	**3.44**	**141**	*e*S	**S**	**06 22 45.0**	**-2.1**
JCJ	**Chichijima**	**3.44**	**141**	P	**P**	**06 21 48.8**	**-1.2**
	36nm,0.4s,baz=263,slow=21,SNR=1.4						
JCJ				S	**S**	**06 22 43.7**	**-3.5**
	100nm,0.4s,baz=293,slow=22,SNR=8.7						
JHH2	**Haha-jima-NKT2**	**3.81**	**145**	*e*S	**S**	**06 22 51.6**	**-1.1**
BSO1	**Boso 1**	**4.95**	**12**	*e*P	**P**	**06 22 03.4**	**+0.7**
JIE	**Ise**	**5.26**	**331**	*e*P	**P**	**06 22 05.3**	**-1.0**
JKN2	**Miekihoku**	**5.33**	**327**	*e*P	**P**	**06 22 05.8**	**-1.1**
JOD2	**Odawara 2**	**5.48**	**354**	P	**P**	**06 22 07.5**	**-1.0**
JAG	**Ashikaga**	**6.62**	**358**	P	**P**	**06 22 18.5**	**-1.6**
JHO	**Hitachi**	**6.83**	**6**	P	**P**	**06 22 22.5**	**+0.2**
MJAR	**Matsushiro Arr**	**6.85**	**350**	P	**P**	**06 22 21.0**	**-1.6**
	2.0nm,0.3s,baz=173,slow=11,SNR=4.4						
KURBB	**Kurchatov Arra**	**49.63**	**313**	P	**P**	**06 28 47.6**	**-0.5**
	0.3nm,0.3s,baz=94,slow=6.6,SNR=3.3						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**54.62**	**316**	P	**P**	**06 29 24.6**	**+0.4**
	1.5nm,0.4s,baz=86,slow=7.5,SNR=5.0						
	1.5nm,0.4s						
ARCES	**ARCESS Array B**	**70.29**	**340**	P	**P**	**06 31 08.2**	**+2.3**
	1.4nm,0.8s,baz=60,slow=5.4,SNR=4.7						
	1.4nm,0.8s						
FINES	**FINESS Array B**	**74.58**	**333**	P	**P**	**06 31 32.6**	**+1.6**
	0.7nm,0.5s,baz=76,slow=5.8,SNR=5.9						
	0.7nm,0.5s						
HFS	**Hagfors**	**80.10**	**336**	P	**P**	**06 32 03.2**	**+2.0**
	1.1nm,0.6s,baz=73,slow=11,SNR=5.9						
	1.1nm,0.6s						
NOA	**NORSAR Array B**	**80.31**	**337**	P	**P**	**06 32 04.6**	**+2.3**
	0.3nm,0.5s,baz=55,slow=6.2,SNR=3.2						
	0.3nm,0.5s						
NVAR	**Mina Array Bea**	**80.52**	**51**	P	**P**	**06 32 04.9**	**+0.8**
	0.1nm,0.4s,baz=294,slow=3.6,SNR=1.8						
	0.1nm,0.4s						

*NEIC **15** 06:20:41.8±1.2, 20°.5S±0°.1×177°.5W±0°.1, h496km±4km, mb4.2/18, Error ellipse: s-maj=20.5km s-min=15.5km az=134.0*
*IDC **15** 06:20:43.2±1.6, 20°.39S×177°.68W, h509km±16km, mb3.5/11, mbtmp4.3/15, Error ellipse: s-maj=20.3km s-min=15.6km az=117.0*
ISC 15 06:20:41.7±0.6, 20°.4S±0°.1×177°.5W±0°.0, h500km, n46, σ1.9 51/44, mb4.2/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.91**	**302**	P	**P**	**06 22 10.4**	**+2.3**
	46nm,0.5s,baz=134,slow=5.4,SNR=90						
MSVF	**Nonsavu**	**4.91**	**302**	P	**P**	**06 22 09.6**	**+1.5**
NIUE	**Niue**	**7.32**	**81**	P	**P**	**06 22 30.5**	**-0.7**
AFI	**Afiamalu**	**8.51**	**42**	P	**P**	**06 22 44.4**	**+0.8**
	11nm,0.4s,baz=215,slow=21,SNR=1.4						
AFI				S	**S**	**06 24 18.6**	**-5.0**
	22nm,0.3s,baz=118,slow=20,SNR=6.9						
DZM	**Mont Dzumac**	**14.99**	**261**	P	**P**	**06 23 52.0**	**0.0**
	7.9nm,0.8s,baz=98,slow=17,SNR=4.5						
URZ	**Urewera**	**18.38**	**193**	P	**P**	**06 24 25.2**	**-0.2**
	2.0nm,0.5s,baz=349,slow=5.2,SNR=0.9						
EIDS	**Eidsvold**	**29.25**	**254**	P	**P**	**06 26 02.3**	**-0.4**
EIDS				IAmb	IAmb	06 26 35.7	
	comp=Z,12nm,1.3s						
ARMA	**Armidale**	**29.47**	**244**	P	**P**	**06 26 05.0**	**+0.4**
CTAO	**Charters Tower**	**33.89**	**264**	P	**P**	**06 26 42.9**	**+0.4**
STKA	**Stephens Creek**	**38.19**	**244**	P	**P**	**06 27 18.4**	**+0.4**
	comp=Z,7.7nm,0.5s,baz=99,slow=12,SNR=4.3						
	comp=Z,2.7nm,0.5s						
BBOO	**Buckleboo**	**42.95**	**243**	P	**P**	**06 27 55.5**	**-0.6**
WR8	**Warramunga Arr**	**44.85**	**262**	P	**P**	**06 28 10.5**	**-0.6**
WR8				IAmb	IAmb	06 28 45.4	
	comp=Z,9.2nm,1.2s						
AS31	**Alice Springs**	**44.93**	**257**	P	**P**	**06 28 11.6**	**0.0**
AS31				IAmb	IAmb	06 28 12.0	
	comp=Z,3.6nm,0.6s						
ASAR	**Alice Springs**	**44.93**	**257**	P	**P**	**06 28 11.3**	**-0.3**
	comp=Z,13nm,0.5s,baz=98,slow=7.5,SNR=209						
ASAR				PcP	**PcP**	**06 29 42.6**	**0.0**
	comp=Z,1.0nm,0.7s,baz=101,slow=3.6,SNR=3.8						
ASAR				S	**S**	**06 34 09.3**	**-3.7**
	comp=Z,1.4nm,1.0s,baz=96,slow=13,SNR=8.2						
	comp=Z,13nm,0.5s						
WB0	**Warramunga Arr**	**44.98**	**262**	P	**P**	**06 28 11.6**	**-0.5**
WB0				IAmb	IAmb	06 28 11.7	
	comp=Z,6.4nm,0.7s						
WRAB	**Tennant Creek**	**45.00**	**262**	P	**P**	**06 28 11.7**	**-0.5**
WRAB				IAmb	IAmb	06 28 11.8	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**45.01**	**262**	P	**P**	**06 28 11.6**	**-0.7**
	comp=Z,3.2nm,0.3s,baz=97,slow=7.5,SNR=234						
WRA				S	**S**	**06 34 08.9**	**-5.3**
	comp=Z,0.4nm,0.8s,baz=102,slow=14,SNR=3.0						
	comp=Z,3.2nm,0.3s						
WRA	**Warramunga Arr**	**45.01**	**262**	P	**P**	**06 28 11.6**	**-0.7**
MTN	**Manton Dam**	**49.56**	**270**	P	**P**	**06 28 46.2**	**-0.4**
MTN				IAmb	IAmb	06 29 11.2	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**49.70**	**247**	P	**P**	**06 28 46.9**	**-0.6**
FORT				IAmb	IAmb	06 28 47.4	
	comp=Z,7.0nm,0.6s						
KNRA	**Kununurra**	**51.06**	**266**	P	**P**	**06 28 57.4**	**-0.3**
KNRA				IAmb	IAmb	06 28 57.9	
	comp=Z,7.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.43**	**262**	P	**P**	**06 29 14.7**	**+0.1**
MBWA	**Marble Bar**	**58.26**	**257**	P	**P**	**06 29 47.8**	**-0.5**
MBWA				IAmb	IAmb	06 29 48.1	
	comp=Z,8.3nm,0.7s						
MORW	**Morawa**	**60.23**	**248**	P	**P**	**06 30 01.0**	**-0.3**
QSPA	**South Pole Qui**	**69.67**	**180**	P	**P**	**06 31 02.2**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=320,slow=0.9,SNR=10						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**69.67**	**180**	P	**P**	**06 31 00.4**	**0.0**
QSPA				IAmb	IAmb	06 31 08.2	
	comp=Z,4.8nm,1.3s						
MJAR	**Matsushiro Arr**	**70.36**	**323**	P	**P**	**06 31 04.9**	**+0.1**
	comp=Z

GVD	**Gavdhos**	**1.60**	**289**	P		**Pg**	06 21 20.9	**+0.2**
VAM	**Vamos**	**1.78**	**308**	P		**Pg**	06 21 25.1	**+1.0**
VAM	**Vamos**	**1.78**	**308**	P		**Pn**	06 21 21.8	**-0.2**
IMMV	**Iera Moni Meta**	**1.96**	**306**	P		**Pg**	06 21 27.4	**-0.2**
IMMV	**Iera Moni Meta**	**1.96**	**306**	P		**Pn**	06 21 24.3	**-0.1**
MMAI	**Mount Meron Ar**	**8.01**	**97**	Pn		**Pn**	06 22 48.1	**+0.4**
	0.7nm,0.3s,baz=291,slow=14,SNR=2.1							
	0.7nm,0.3s							
BRTR	**Keskin Array B**	**8.19**	**47**	Pn		**Pn**	06 22 51.8	**+1.7**
	0.1nm,0.3s,baz=219,slow=11,SNR=1.7							
BRTR				LR		LR	06 26 53.6	
	comp=Z,113nm,19.3s,baz=230,slow=44							
	0.3nm,0.4s							
EIL	**Elat**	**8.96**	**119**	Pn		**Pn**	06 22 59.4	**-1.2**
	0.8nm,0.3s,baz=318,slow=14,SNR=3.9							
EIL				Sn		**Sn**	06 24 38.4	**-3.9**
	0.4nm,0.3s,baz=80,slow=20,SNR=1.6							
	5.8nm,0.7s							
ASF	**Jabal al Asfar**	**9.44**	**100**	Pn		**Pn**	06 23 06.9	**-0.4**
	0.3nm,0.3s,baz=287,slow=17,SNR=2.1							
	1.6nm,0.4s							
AKASG	**Malin Array Be**	**16.54**	**7**	Pn		**Pn**	06 24 44.2	**+1.0**
	0.5nm,0.3s,baz=196,slow=10,SNR=4.4							
	0.2nm,0.3s							
GERES	**GERESS Array B**	**17.11**	**332**	P		**P**	06 24 52.6	**+0.2**
	baz=150,slow=14,SNR=2.0							
	0.3nm,0.4s							
ESDC	**Sonseca Array**	**24.39**	**291**	P		**P**	06 26 10.3	**+0.4**
	0.6nm,0.8s,baz=88,slow=9.9,SNR=3.2							
	0.6nm,0.8s							
HFS	**Hagfors**	**27.03**	**347**	P		**P**	06 26 35.4	**+1.9**
	1.8nm,1.0s,baz=151,slow=12,SNR=1.8							
	1.8nm,1.0s							
FINES	**FINESS Array B**	**27.14**	**0**	P		**P**	06 26 33.5	**-0.9**
	0.4nm,0.5s,baz=161,slow=13,SNR=3.8							
	0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**30.45**	**232**	P		**P**	06 27 05.5	**+1.0**
	1.5nm,0.6s,baz=34,slow=9.1,SNR=9.9							
	1.5nm,0.6s							
ARCES	**ARCESS Array B**	**35.26**	**360**	P		**P**	06 27 45.6	**-0.3**
	1.4nm,0.8s,baz=188,slow=8.5,SNR=3.8							
	1.4nm,0.8s							
KURBB	**Kurchatov Arra**	**41.16**	**50**	P		**P**	06 28 36.9	**+1.0**
	1.2nm,0.7s,baz=278,slow=8.7,SNR=15							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**43.72**	**56**	P		**P**	06 28 57.8	**+1.1**
	1.3nm,0.6s,baz=275,slow=5.8,SNR=9.9							
	1.3nm,0.6s							
ZALV	**Zalesovo Beam**	**45.13**	**46**	P		**P**	06 29 08.0	**0.0**
	0.6nm,0.3s,baz=263,slow=9.4,SNR=4.9							
	0.6nm,0.3s							
TLY	**Talaya**	**56.71**	**47**	LR		LR	06 56 28.2	
	comp=Z,32nm,19.0s,baz=260,slow=38							
SONM	**Songino Array**	**59.53**	**50**	P		**P**	06 30 55.4	**+0.2**
	0.5nm,0.6s,baz=282,slow=8.7,SNR=2.8							
	0.5nm,0.6s							

*ASRS **15** 06:29:58.0±1.1,54.˚15N×86.˚45E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 15 06:30:00.9±2.8,54.˚14N×86.˚43E,h0km,mbtmp3.0/2, ML2.8/2,Error ellipse: s-maj=21.4km s-min=13.4km az=62.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**260**	I		I	06 35 10.0	
	baz=81,slow=315,SNR=1.7							
ZALV	**Zalesovo Beam**	**0.97**	**259**	Pg		Pg	06 30 17.7	**-1.7**
	1.1nm,0.3s,baz=77,slow=17,SNR=9.0							
ZALV				Lg		Lg	06 30 33.7	
	2.0nm,0.3s,baz=78,slow=29,SNR=11							
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn		Pn	06 31 30.9	+0.3
	0.1nm,0.3s,baz=54,slow=13,SNR=6.7							
KURBB				Lg		Lg	06 33 13.8	
	baz=52,slow=32,SNR=4.5							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**7.81**	**201**	Pn		Pn	06 31 57.7	+1.9
	0.3nm,0.3s,baz=25,slow=15,SNR=2.8							
	0.4nm,0.3s							

*TIR **15** 06:32:29.7,40.˚52N×21.˚00E,h4km±2km,Ml3.7/6*
*THE **15** 06:32:30.4,40.˚5N±0.˚9×2.˚1E±.˚,h0km±1km,M3.4/20, MLh3.4/20*
*ATH **15** 06:32:31.5,40.˚49N×20.˚85E,h6km±2km,ML3.5/28, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **15** 06:32:31.0,40.˚40N×20.˚80E,h8km,ML3.7*
*MCSM **15** 06:32:31.1±105.0,41.˚N±5.˚×2.˚1E±.˚,h11km±894km,mb4.1, MLv3.8*
*BEO **15** 06:32:31.3±0.3,40.˚50N×20.˚88E,h0km,ML3.2/18*
*PDG **15** 06:32:31.1±0.5,40.˚51N×20.˚82E,h10km±1km,ML3.5/13, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*IDC **15** 06:32:34.8±1.6,40.˚45N×20.˚72E,h46km±18km,mb3.3/9, mbtmp3.5/15,ML3.4/5,Error ellipse: s-maj=16.9km s-min=12.8km az=65.0*

ISC 15 06:32:31.0±0.8,40.˚50N±0.˚01×20.˚82E±0.˚02,h10km±5km, n199,σ1§46/277,mb3.6/7,11C-11D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBN	**Korca**	**0.13**	**349**	P		**Pg**	06 32 34.0	**-0.2**
KBN				Sg		**Sg**	06 32 36.5	**0.0**
KBN				AML		AML	06 32 37.4	
	121nm,0.3s							
KBN	**Korca**	**0.13**	**349**	P		**Pg**	06 32 34.1	**-0.1**
KBN				S		**Sg**	06 32 36.4	**0.0**
PENT	**Pentalofos**	**0.39**	**141**	P		**Pg**	06 32 38.5	**-0.2**
PENT				S		**Sb**	06 32 45.3	**-0.8**
PENT	**Pentalofos**	**0.39**	**141**	P		**Pg**	06 32 39.1	**+0.4**
PENT				S		**Sg**	06 32 44.2	**+0.4**
OHR	**Ohrid**	**0.62**	**359**	*i* Pg		**Pb**	06 32 43.5	**-0.4**
OHR				*i* Sg		**Sb**	06 32 54.3	**+1.6**
OHR				*e*Lg		Lg	06 32 54.5	
	comp=E,5μm,0.6s							
OHR				*e*Lg		Lg	06 32 54.5	
	comp=N,2μm,0.5s							
KPRO	**Kipourio**	**0.68**	**142**	P		**Pg**	06 32 43.6	**-0.6**
KPRO				S		**Sb**	06 32 54.6	**0.0**
KPRO	**Kipourio**	**0.68**	**142**	P		**Pg**	06 32 43.8	**-0.4**
KPRO				S		**Sg**	06 32 53.6	**+0.4**
KZN	**Kozani**	**0.75**	**104**	P		**Pg**	06 32 45.4	**-0.1**
KZN				S		**Sb**	06 32 57.6	**+1.0**
KZN	**Kozani**	**0.75**	**104**	P		**Pb**	06 32 46.0	**-0.2**
KZN				S		**Sb**	06 32 56.3	**-0.3**
MSVA	**Metsovo**	**0.78**	**159**	P		**Pb**	06 32 46.6	**0.0**
MSVA				S		**Sg**	06 32 56.3	**+0.1**
JAN	**Janina**	**0.84**	**178**	P		**Pg**	06 32 45.5	**-1.7**
JAN				S		**Sg**	06 32 58.2	**+0.1**
JAN	**Janina**	**0.84**	**178**	P		**Pg**	06 32 47.0	**-0.2**
SRN	**Sarande**	**0.88**	**226**	P		**Pg**	06 32 47.2	**-0.8**
SRN				S		**Sn**	06 33 04.3	**+2.1**
SRN	**Sarande**	**0.88**	**226**	P		**Pg**	06 32 46.2	**-1.7**
SRN				S		**Sb**	06 33 00.7	**+0.6**
NASA	**Naoussa**	**0.96**	**81**	P		**Pn**	06 32 50.7	**+0.1**
NASA				S		**Sg**	06 33 02.2	**+0.1**
PRMD	**Pramanda**	**0.99**	**167**	P		**Pg**	06 32 48.8	**-1.2**
PRMD				S		**Sb**	06 33 03.8	**+0.5**
PRMD	**Pramanda**	**0.99**	**167**	P		**Pg**	06 32 49.6	**-0.4**
PRMD				S		**Sg**	06 33 02.6	**-0.3**
KTI	**Kastanea**	**1.00**	**95**	P		**Pg**	06 32 49.8	**-0.4**
VLO	**Vlora**	**1.01**	**269**	Pg		**Pb**	06 32 50.9	**+0.3**
VLO				Sg		**Sn**	06 33 08.2	**+2.7**
VLO				AML		AML	06 33 14.6	
	comp=N,27nm,0.5s							
IGT	**Igoumenitsa**	**1.03**	**201**	Pg		**Pg**	06 32 49.9	**-0.9**
IGT				Sg		**Sn**	06 33 07.8	**+1.7**
IGT	**Igoumenitsa**	**1.03**	**201**	P		**Pg**	06 32 49.2	**-1.7**
IGT	**Igoumenitsa**	**1.03**	**201**	*e*Pg		**Pg**	06 32 50.4	**-0.5**
IGT				*e*Sg		**Sn**	06 33 06.1	**+0.1**
IGT	**Igoumenitsa**	**1.03**	**201**	P		**Pg**	06 32 50.7	**-0.2**
IGT				S		**Sb**	06 33 05.4	**+0.9**
KEK	**Kerkira**	**1.10**	**225**	P		**Pg**	06 32 49.9	**-2.4**
KEK				S		**Sn**	06 33 09.3	**+1.5**
KEK	**Kerkira**	**1.10**	**225**	P		**Pn**	06 32 52.8	**+0.2**
KEK				S		**Sn**	06 33 08.3	**+0.5**
TIR	**Tirane**	**1.12**	**320**	Pg		**Pb**	06 32 52.5	**0.0**
TIR				S		**Sn**	06 33 10.6	**+2.4**
TIR				AML		AML	06 33 17.3	
	comp=N,2.9nm,0.6s							
LFKM	**Lefkimmi**	**1.20**	**209**	P		**Pg**	06 32 53.2	**-0.8**
TETR	**Tetrakomo, Epi**	**1.20**	**163**	P		**Pg**	06 32 52.5	**-1.6**
TETR	**Tetrakomo, Epi**	**1.20**	**163**	P		**Pb**	06 32 54.0	**+0.1**
PHP	**Peshkopia**	**1.22**	**347**	Pg		**Pg**	06 32 53.3	**-1.2**
PHP				S		**Sn**	06 33 11.4	**+0.5**
PHP				AML		AML	06 33 20.2	
	comp=N,6.4nm,0.8s							
PHP	**Peshkopia**	**1.22**	**347**	P		**Pg**	06 32 53.2	**-1.4**
PRGA	**Parga**	**1.25**	**195**	P		**Pn**	06 32 55.3	**+0.8**
GRG	**Griva**	**1.29**	**69**	P		**Pg**	06 32 55.1	**-0.7**
GRG				S		**Sn**	06 33 16.4	**+4.0**
GRG	**Griva**	**1.29**	**69**	P		**Pg**	06 32 55.1	**-0.7**
GRG				S		**Sn**	06 33 13.3	**+0.9**
THL	**Klokotos Trika**	**1.31**	**135**	P		**Pn**	06 32 54.8	**-0.5**
THL				S		**Sn**	06 33 16.5	**+3.8**
THL	**Klokotos Trika**	**1.31**	**135**	P		**Pb**	06 32 55.9	**+0.2**
LIT	**Litokhoron**	**1.34**	**107**	P		**Pn**	06 32 56.0	**+0.2**
LIT	**Litokhoron**	**1.34**	**107**	P		**Pg**	06 32 56.5	**-0.2**
LIT				S		**Sg**	06 33 12.8	**-1.3**
TYRN	**Tyrnavos**	**1.34**	**125**	P		**Pn**	06 32 55.9	**+0.1**
TYRN				S		**Sn**	06 33 17.5	**+3.9**
TYRN	**Tyrnavos**	**1.34**	**125**	P		**Pn**	06 32 56.0	**+0.3**
SKO	**Skopje**	**1.55**	**17**	*i* Pg		**Pb**	06 32 59.8	**0.0**
SKO				*i* Sg		**Sg**	06 33 23.7	**+2.9**
VAY	**Valandovo**	**1.56**	**58**	*i* Pg		**Pn**	06 32 59.8	**+0.9**
VAY				*i* Sg		**Sg**	06 33 23.2	**+1.9**
VAY				*e*Lg		Lg	06 33 25.1	
	comp=N,648nm,1.0s							
VAY				*e*Lg		Lg	06 33 26.1	
	comp=E,409nm,0.5s							
AMPL	**Ampelaki**	**1.60**	**169**	P		**Pn**	06 32 59.3	**-0.1**
AMPL				S		**Sg**	06 33 27.8	**+5.3**
AMPL	**Ampelaki**	**1.60**	**169**	P		**Pn**	06 33 00.3	**+0.9**
THE	**Thessaloniki**	**1.64**	**85**	P		**Pn**	06 33 00.2	**+0.3**
THE				Sn		**Sn**	06 33 20.6	**-0.4**
THE				AML		AML	06 33 23.9	
	comp=E,0.8nm,0.7s							
THE	**Thessaloniki**	**1.64**	**85**	P		**Pn**	06 33 00.5	**+0.6**
TSLK	**Tsoukalades, L**	**1.67**	**184**	P		**Pb**	06 33 01.8	**-0.1**
TSLK				S		**Sg**	06 33 28.6	**+3.8**
TSLK	**Tsoukalades, L**	**1.67**	**184**	P		**Pb**	06 33 01.8	**-0.1**
LKD2	**Lefkada island**	**1.71**	**184**	P		**Pb**	06 33 02.8	**+0.3**
LKD2				Sn		**Sg**	06 33 28.2	**+2.2**
LKD2	**Lefkada island**	**1.71**	**184**	P		**Pb**	06 33 02.8	**+0.3**
LKD2				S		**Sg**	06 33 28.8	**+2.9**
LKD2	**Lefkada island**	**1.71**	**184**	P		**Pb**	06 33 02.5	**0.0**
KNT	**Kendrikon**	**1.71**	**66**	P		**Pn**	06 33 01.4	**+0.4**
HORT	**Hortiatis**	**1.74**	**86**	P		**Pn**	06 33 03.1	**0.0**
EVR	**Evrytania**	**1.75**	**154**	P		**Pb**	06 33 02.9	**-0.4**
EVR				S		**Sg**	06 33 29.8	**+2.4**
EVR	**Evrytania**	**1.75**	**154**	P		**Pb**	06 33 02.8	**-0.5**
NYDR	**Nydri-Lefkada**	**1.78**	**183**	P		**Pb**	06 33 03.8	**+0.1**
NYDR				S		**Sg**	06 33 30.8	**+2.5**
DRAG	**Dragano-Lefkad**	**1.82**	**186**	P		**Pb**	06 33 03.8	**-0.6**
SDA	**Shkodra**	**1.85**	**328**	Pg		**Pb**	06 33 04.9	**0.0**
SDA				Sg		**Sg**	06 33 33.1	**+2.7**
SDA				AML		AML	06 33 44.3	
	comp=E,1.7nm,1.2s							
AGG	**Agios Georgios**	**1.88**	**141**	P		**Pn**	06 33 04.0	**+0.8**
AGG	**Agios Georgios**	**1.88**	**141**	P		**Pn**	06 33 04.1	**+0.8**
EVGI	**Lefkada island**	**1.88**	**184**	P		**Pb**	06 33 04.6	**-0.8**
EVGI	**Lefkada island**	**1.88**	**184**	P		**Pb**	06 33 04.6	**-0.8**
ULC	**Ulcinj**	**1.89**	**322**	⇓*i* Pn		**Pn**	06 33 04.4	**+1.0**
ULC				*i* Sn		**Sb**	06 33 30.4	**+1.2**
PVO	**Paravola**	**1.95**	**164**	P		**Pn**	06 33 05.0	**+0.7**
PVO	**Paravola**	**1.95**	**164**	P		**Pn**	06 33 04.9	**+0.7**
SOH	**Sokhos**	**1.96**	**80**	P		**Pn**	06 33 05.2	**+0.9**
PLG	**Polygyros**	**2.01**	**93**	P		**Pn**	06 33 06.0	**+1.0**
PLG	**Polygyros**	**2.01**	**93**	P		**Pn**	06 33 05.9	**+0.9**
FSK	**Fiskardo**	**2.04**	**186**	P		**Pn**	06 33 06.7	**+1.2**
FSK	**Fiskardo**	**2.04**	**186**	P		**Pn**	06 33 06.6	**+1.2**
ANX	**Ano Chora**	**2.08**	**155**	P		**Pb**	06 33 08.6	**-0.3**
ANX	**Ano Chora**	**2.08**	**155**	P		**Pn**	06 33 06.5	**+0.4**
DRME	**Dracevica, Mon**	**2.09**	**324**	*e*Pn		**Pn**	06 33 07.9	**+1.8**
DRME	**Dracevica, Mon**	**2.09**	**324**	⇑*i* Pn		**Pn**	06 33 07.2	**+1.1**
DRME				*i* Sn		**Sb**	06 33 35.3	**+0.2**
PLEV	**Plevrona-Mesol**	**2.13**	**167**	P		**Pn**	06 33 09.3	**-0.4**
PLEV	**Plevrona-Mesol**	**2.13**	**167**	P		**Pn**	06 33 08.0	**+1.4**
PVY	**Plav**	**2.19**	**343**	⇑*i* Pn		**Pn**	06 33 08.6	**+0.9**
PVY				*i* Sn		**Sb**	06 33 37.7	**-0.5**
SRS	**Serrai**	**2.19**	**73**	P		**Pn**	06 33 07.7	**+0.1**
SRS	**Serrai**	**2.19**	**73**	*e*Pg		**Pn**	06 33 08.2	**+0.6**
SRS				*e*Sg		**Sg**	06 33 40.4	**-1.2**
SRS	**Serrai**	**2.19**	**73**	P		**Pn**	06 33 08.1	**+0.5**
NEO	**Neokhori**	**2.20**	**122**	P		**Pn**	06 33 08.1	**+0.5**
KKB	**Krupnik**	**2.20**	**52**	P		**Pn**	06 33 08.8	**+1.1**
AGRP	**Agrapidokambos**	**2.21**	**161**	P		**Pn**	06 33 08.5	**+0.7**
EFP	**Efpalio**	**2.23**	**157**	P		**Pb**	06 33 11.8	**+0.4**
AXAR	**Agios Charalam**	**2.24**	**140**	P		**Pn**	06 33 08.8	**+0.6**
PDG	**Podgorica**	**2.26**	**329**	⇑P		**Pb**	06 33 10.8	**-1.2**
PDG				⇑S		**Sb**	06 33 42.0	**+2.0**
PDG	**Podgorica**	**2.26**	**329**	*e*Pn		**Pn**	06 33 10.3	**+1.8**
PDG				*e*Sn		**Sb**	06 33 40.4	**+0.4**
PDG	**Podgorica**	**2.26**	**329**	*e*Pn		**Pn**	06 33 10.4	**+1.9**
PDG	**Podgorica**	**2.26**	**329**	*e*Pn		**Pn**	06 33 09.5	**+1.0**
PDG				*i* Sn		**Sb**	06 33 39.3	**-0.7**
SERG	**Sergoula**	**2.29**	**155**	P		**Pb**	06 33 11.4	**-1.0**
BUM	**Brajici-Budva**	**2.31**	**322**	*e*Pn		**Pn**	06 33 10.3	**+1.0**
BUM				*i* Sn		**Sb**	06 33 40.6	**-0.9**
VLS	**Valsamata**	**2.32**	**184**	P		**Pn**	06 33 10.3	**+1.0**
VLS	**Valsamata**	**2.32**	**184**	P		**Pn**	06 33 10.4	**+1.0**
AXS	**Araxos**	**2.34**	**169**	P		**Pn**	06 33 10.4	**+0.9**
KALE	**Kalithea**	**2.34**	**154**	P		**Pn**	06 33 10.4	**+0.8**
RTZL	**Ratzakli, Kefa**	**2.42**	**181**	P		**Pn**	06 33 11.9	**+1.3**
OUR	**Ouranopolis**	**2.42**	**93**	P		**Pn**	06 33 11.3	**+0.7**
BARS	**Barje**	**2.44**	**18**	*e*Pn		**Pn**	06 33 11.7	**+0.8**
BARS				*e*Sn		**Sn**	06 33 42.6	**+1.8**
IVA	**Berane**	**2.47**	**344**	*e*Pn		**Pn**	06 33 12.4	**+0.9**
IVA				*i* Sn		**Sn**	06 33 44.4	**+2.6**
ATAL	**Atalanti**	**2.48**	**136**	P		**Pn**	06 33 12.1	**+0.6**
LKR	**Lokris**	**2.50**	**137**	P		**Pn**	06 33 12.4	**+0.7**
CEME	**Cevo**	**2.50**	**326**	⇑*i* Pn		**Pn**	06 33 12.7	**+0.9**
CEME				*i* Sn		**Sn**	06 33 45.1	**+2.8**
KOME	**Kolasin**	**2.55**	**338**	*e*Pn		**Pn**	06 33 13.5	**+1.0**
KOME				*i* Sn		**Sn**	06 33 46.3	**+2.7**
HCY	**Herceg Novi**	**2.62**	**319**	*e*Pn		**Pn**	06 33 14.1	**+0.7**
HCY	**Herceg Novi**	**2.62**	**319**	*e*Pn		**Pn**	06 33 14.4	**+1.0**
HCY				*i* Sn		**Sn**	06 33 48.0	**+2.8**
DRO	**Drossia**	**2.63**	**164**	P		**Pn**	06 33 14.6	**+1.0**
ORTH	**Orthonies,Zaky**	**2.64**	**182**	P		**Pn**	06 33 15.0	**+1.3**
KLV	**Kalavryta, Ach**	**2.66**	**157**	P		**Pn**	06 33 14.6	**+0.6**
NKME	**Niksic**	**2.67**	**329**	*e*Pn		**Pn**	06 33 15.1	**+1.0**
NKME				*i* Sn		**Sn**	06 33 49.1	**+2.6**
AOS2	**Alonissos-2**	**2.69**	**119**	P		**Pn**	06 33 14.5	**+0.2**
VTS	**Vitosha**	**2.79**	**40**	*e*Pn		**Pn**	06 33 16.8	**+0.9**
VTS				*e*Sn		**Sn**	06 33 50.7	**+1.0**
SJES	**Sjenica**	**2.83**	**347**	*e*Pn		**Pn**	06 33 17.8	**+1.3**
SJES				*e*Sn		**Sb**	06 33 54.8	**-1.8**
SJES	**Sjenica**	**2.83**	**347**	*e*Pn		**Pn**	06 33 17.7	**+1.3**
KAVA	**Kavala**	**2.85**	**79**	P		**Pn**	06 33 17.8	**+0.5**
TREB	**Trebinje**	**2.89**	**321**	*e*Pn		**Pn**	06 33 17.8	**+0.7**
TREB				*e*Sn		**Sn**	06 33 53.2	**+1.3**
TREB	**Trebinje**	**2.89**	**321**	*e*Pn		**Pn**	06 33 17.6	**+0.5**
BRY	**Bratogost**	**2.95**	**325**	*e*Pn		**Pn**	06 33 19.5	**+1.4**
BRY	**Bratogost**	**2.95**	**325**	*e*Pn		**Pn**	06 33 19.1	**+1.0**
BRY				*i* Sn		**Sn**	06 33 56.0	**+2.4**
VIL2	**Platees**	**2.97**	**139**	P		**Pn**	06 33 20.1	**+1.9**
THAS	**Thassos island**	**2.97**	**87**	P		**Pn**	06 33 18.0	**-0.3**
LTK	**Loutraki**	**2.98**	**145**	P		**Pn**	06 33 19.3	**+1.0**
PLE	**Pljevlja**	**3.03**	**340**	*e*Pn		**Pn**	06 33 20.1	**+1.0**
PLE				*i* Sn		**Sn**	06 33 57.8	**+2.3**
UPM	**Unac-Piva**	**3.06**	**333**	*e*Pn		**Pn**	06 33 21.9	**+2.3**
UPM	**Unac-Piva**	**3.06**	**333**	*e*Pn		**Pn**	06 33 20.6	**+1.0**
UPM				*i* Sn		**Sn**	06 33 58.6	**+2.2**
GOCS	**Kraljevo Serbi**	**3.07**	**1**	*e*Pn		**Pn**	06 33 20.7	**+1.1**
GOCS				*e*Sn		**Sn**	06 33 57.4	**+1.0**
ZAPS	**Zavoj**	**3.09**	**25**	*e*Pn		**Pn**	06 33 21.1	**+1.2**
ZAPS				*e*Sn		**Sn**	06 33 57.7	**+0.8**
IVAS	**Ivanjica**	**3.12**	**351**	*e*Pn		**Pn**	06 33 20.3	**0.0**
IVAS				*e*Sn		**Sn**	06 34 00.5	**+2.8**
STFN	**Stefani**	**3.13**	**137**	P		**Pn**	06 33 21.3	**+0.8**
MATE	**Matera**	**3.14**	**274**	⇑P		**Pn**	06 33 21.9	**+1.4**
MATE				⇓S		**Sn**	06 34 01.8	**+3.8**
KYMI	**Kymi, Euboea I**	**3.15**	**125**	P		**Pn**	06 33 21.5	**+0.9**
KLINJ	**Klinje**	**3.15**	**329**	*e*Pn		**Pn**	06 33 23.0	**+2.2**
MAGU	**Magoula**	**3.19**	**138**	P		**Pn**	06 33 22.3	**+1.0**
STON	**Ston**	**3.33**	**316**	*e*Pn		**Pn**	06 33 23.7	**+0.6**
STON				*e*Sn		**Sn**	06 34 04.7	**+2.0**
PLD	**Plovdiv**	**3.39**	**60**	*e*Pn		**Pn**	06 33 25.5	**+1.6**
PLD				*e*Sn		**Sn**	06 34 04.1	**-0.1**
TIP	**Timpagrande**	**3.39**	**248**	⇓P		**Pn**	06 33 24.5	**+0.5**
TIP	**Timpagrande**	**3.39**	**248**	P		**Pn**	06 33 24.0	**-0.1**
GRUS	**Gruza**	**3.39**	**359**	*e*Pn		**Pn**	06 33 25.0	**+1.0**
GRUS				*e*Sn		**Sn**	06 34 06.2	**+1.9**
ZAGS	**Zajecar**	**3.48**	**17**	*e*Pn		**Pn**	06 33 26.0	**+0.8**
ZAGS				*e*Sn		**Sn**	06 34 06.0	**-0.4**
BBLS	**Lazi&#263i**	**3.53**	**343**	*e*Pn		**Pn**	06 33 27.7	**+1.7**
BBLS				*e*Sn		**Sn**	06 34 09.9	**+2.1**
BBLS	**Lazi&#263i**	**3.53**	**343**	*e*Pn		**Pn**	06 33 26.7	**+0.7**
DIVS	**Divibare**	**3.65**	**351**	*e*Pn		**Pn**	06 33 29.6	**+1.9**
DIVS				*e*Sn		**Sn**	06 34 14.0	**+3.1**
BORS2	**Bor- Borsko je**	**3.70**	**14**	*e*Pn		**Pn**	06 33 28.2	**-0.1**
BORS2				*e*Sn		**Sn**	06 34 12.4	**+0.5**
TRUS	**Trudelj**	**3.74**	**355**	*e*Pn		**Pn**	06 33 30.9	**+2.1**
KUBS	**Kucevo**	**3.97**	**9**	*e*Pn		**Pn**	06 33 31.8	**-0.1**
PLVB	**Pleven**	**4.05**	**43**	⇓P		**Pn**	06 33 34.9	**+1.9**
PLVB				⇓S		**Sn**	06 34 24.2	**+3.7**
TEKS	**Tekeris**	**4.16**	**347**	*e*Pn		**Pn**	06 33 35.6	**+1.0**
TEKS	**Tekeris**	**4.16**	**347**	*e*Pn		**Pn**	06 33 34.9	**+0.3**
EZN	**Ezine**	**4.27**	**97**	P		**Pn**	06 33 36.0	**-0.1**
MDVR	**Moldovita**	**4.33**	**8**	⇑P		**Pn**	06 33 40.0	**+3.0**
CEL	**Celeste**	**4.42**	**241**	P		**Pn**	06 33 38.2	**0.0**
HERR	**Herculane**	**4.54**	**15**	⇓P		**Pn**	06 33 41.8	**+2.0**
FRGS	**Fruska Gora**	**4.72**	**351**	*e*Pn		**Pn**	06 33 41.2	**-1.1**
BLY	**Banja Luka**	**5.03**	**329**	*e*Pn		**Pn**	06 33 44.6	**-1.9**
GZR	**Gura Zlata**	**5.10**	**16**	⇑P		**Pn**	06 33 49.3	**+1.8**
BZS	**Buzias**	**5.15**	**6**	⇑P		**Pn**	06 33 50.6	**+2.4**
VOIR		**5.83**	**31**	⇓P		**Pn**	06 34 00.1	**+2.5**
VOIR		**5.83**	**31**	P		**Pn**	06 33 57.2	**-0.4**
	comp=E,0.0nmcomp=E,4.4nm,0.6s							
MORH	**Mrgy, Hungar**	**5.93**	**345**	⇑P		**Pn**	06 34 00.9	**+2.1**
MORH	**Mrgy, Hungar**	**5.93**	**345**	*e*Pn		**Pn**	06 33 59.8	**+0.9**
MORH	**Mrgy, Hungar**	**5.93**	**345**	P		**Pn**	06 33 58.6	**-0.3**
	comp=E,0.0nmcomp=E,6.2nm,1.1s							
IDI	**Anoyia**	**6.11**	**147**	P		**Pn**	06 34 04.0	**+2.5**
	comp=E,3.8nm,0.4s,baz=15,slow=19,SNR=1.5							
IDI				S		**Sn

YUK				*e*S		Sn	06 34 47.3 -1.1
YUK				A		A	06 34 49.8
	220nm,0.4s						
YUK				A		A	06 34 49.8
	300nm,0.4s						
NEM2	**Nemuro 2**	**1.66**	**253**	P		**Pn**	**06 34 31.4 +0.7**
NEM2				S		**Sn**	**06 34 51.2 -1.2**
NMR	**Nemuro--Hokkai**	**1.67**	**253**	*i* P		**Pn**	**06 34 31.5 +0.7**
NMR				*i* S		**Sn**	**06 34 51.1 -1.5**
JRA	**Rausu**	**2.02**	**273**	P		**Pn**	**06 34 37.3 +1.6**
JRA				S		**Sn**	**06 35 01.5 +0.1**
JNSB	**Nemuroshibetsu**	**2.11**	**269**	P		**Pn**	**06 34 38.5 +1.6**
JNSB				S		**Sn**	**06 35 03.7 +0.1**
JKHN	**Kushirohamanak**	**2.15**	**250**	P		**Pn**	**06 34 38.5 +1.0**
JNK	**Nakash**	**2.34**	**264**	P		**Pn**	**06 34 41.0 +1.0**
AKK	**Akkeshi**	**2.40**	**250**	*e*P		**Pn**	**06 34 41.5 +0.7**
JAK	**Akkeshi**	**2.50**	**251**	P		**Pn**	**06 34 43.0 +0.7**
JAK				S		**Sn**	**06 35 11.5 -1.8**
JAR	**Ashorobuto**	**3.07**	**261**	*e*P		**Pn**	**06 34 51.8 +1.7**
JAR				*e*S		**Sn**	**06 35 27.1 -0.1**
JOB	**Onbets**	**3.13**	**254**	*e*S		**Sn**	**06 35 27.3 -1.3**

RSNC ***15*** *06:40:05.9±0.0,7°N±1°×7°3W±°, h148km±1km, M2.7, ML2.3*
FUNV ***15*** *06:40:07.2, 7°16N×73°19W, h0km, MW2.7, Presumed earthquake*

ISC 15 06:40:04.2±1.5, 6°88N±0°03×73°17W±0°05, h156km±8km, n22, σ1°18/44, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**183**	P	**Pn**	**06 40 25.9**	**+0.1**
BARC				S	**Sn**	**06 40 41.1**	**-1.1**
BRJC	**Barrancabermej**	**0.58**	**279**	P	**Pn**	**06 40 27.5**	**+0.8**
BRJC				S	**Sn**	**06 40 44.6**	**+0.8**
PAMC	**Pamplona, Colo**	**0.65**	**45**	P	**Pn**	**06 40 28.7**	**+1.0**
PAMC				S	**Sn**	**06 40 45.8**	**+0.2**
RUSC	**La Rusia**	**0.98**	**175**	P	**Pn**	**06 40 29.7**	**-0.3**
RUSC				S	**Sn**	**06 40 48.7**	**-1.1**
RUSC	**La Rusia**	**0.98**	**175**	*e*P	**Pn**	**06 40 29.5**	**-0.5**
RUSC				*e*S	**Sn**	**06 40 48.4**	**-1.3**
PTBC	**PUERTO BERRIO,**	**1.32**	**255**	P	**Pn**	**06 40 32.4**	**-0.1**
PTBC				S	**Sn**	**06 40 53.3**	**-0.8**
OCAC	**Ocana**	**1.36**	**354**	P	**Pn**	**06 40 33.9**	**+0.9**
OCAC				S	**Sn**	**06 40 56.4**	**+1.2**
SPBC	**San Pablo de B**	**1.51**	**216**	P	**Pn**	**06 40 34.7**	**+0.2**
SPBC				S	**Sn**	**06 40 57.0**	**-0.8**
CHIC	**Chingaza**	**2.30**	**194**	P	**Pn**	**06 40 44.2**	**+0.5**
CHIC				S	**Sn**	**06 41 13.3**	**-0.9**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**06 40 46.6**	**+2.6**
ROSC				S	**Sn**	**06 41 16.1**	**+1.5**
UREC	**San Jos de Ur**	**2.50**	**290**	P	**Pn**	**06 40 45.8**	**+0.1**
UREC				S	**Sn**	**06 41 16.3**	**-1.4**
CVER	**Cruz Verde, Cu**	**2.51**	**201**	P	**Pn**	**06 40 47.4**	**+1.1**
CVER				S	**Sn**	**06 41 19.5**	**+0.8**
GUY2C	**Guyana, Caldas**	**2.73**	**233**	P	**Pn**	**06 40 51.0**	**+2.0**
GUY2C				S	**Sn**	**06 41 23.9**	**+0.4**
VILC	**Villavicencio,**	**2.80**	**191**	P	**Pn**	**06 40 49.3**	**-0.2**
VILC				S	**Sn**	**06 41 22.9**	**-1.6**
CBOC	**Ciudad Bolivar**	**3.00**	**251**	P	**Pn**	**06 40 53.5**	**+1.5**
CBOC				S	**Sn**	**06 41 27.7**	**-1.3**
SDV	**Santo Domingo**	**3.21**	**51**	*e*P	**Pn**	**06 40 55.9**	**+1.2**
SDV				*e*S	**Sn**	**06 41 32.6**	**-1.2**
APAC	**Apartado, Choc**	**3.53**	**287**	P	**Pn**	**06 40 59.6**	**+1.0**
APAC				S	**Sn**	**06 41 40.8**	**0.0**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**06 40 59.8**	**+0.5**
PRAC				S	**Sn**	**06 41 41.8**	**-0.2**
SJCC	**San Jacinto, C**	**3.60**	**327**	P	**Pn**	**06 40 59.8**	**+0.3**
SJCC				S	**Sn**	**06 41 41.3**	**-1.2**
SJCC	**San Jacinto, C**	**3.60**	**327**	*e*P	**Pn**	**06 40 59.6**	**+0.1**
SJCC				*e*S	**Sn**	**06 41 39.7**	**-2.9**
PLMC	**San Jos del P**	**3.67**	**238**	P	**Pn**	**06 41 00.8**	**+0.4**
PLMC				S	**Sn**	**06 41 42.1**	**-1.9**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**06 41 02.7**	**+0.5**
URMC				S	**Sn**	**06 41 45.9**	**-1.4**

IDC 15 06:51:12.3±1.8, 19°94S×176°92W, h0km, mb3.4/4, mbtmp3.4/4, MS3.2/1, Error ellipse: s-maj=51.1km s-min=43.1km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**16.11**	**97**	LR	LR	06 59 44.1	
	comp=Z,95nm,21.7s,baz=228,slow=32						
ASAR	**Alice Springs**	**45.64**	**256**	P	P	06 59 35.0	0.0
	0.6nm,0.8s,baz=110,slow=8.0,SNR=5.0						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**45.69**	**261**	P	P	06 59 35.1	-0.3
	0.2nm,0.3s,baz=96,slow=8.2,SNR=6.5						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	**70.13**	**180**	P	P	07 02 26.6	+0.1
	0.5nm,1.0s,baz=90,slow=4.0,SNR=0.8						
	0.5nm,1.0s						
ILAR	**Eielson Array**	**87.55**	**12**	P	P	07 04 01.7	-0.1
	0.2nm,0.6s,baz=205,slow=6.0,SNR=1.9						
	0.2nm,0.6s						

ASRS ***15*** *07:00:11.0±1.3, 53°55N×87°66E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***15*** *07:00:13.0±4.4, 53°50N×87°82E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=34.6km s-min=18.3km az=66.0, Suspected Mining explosion.*
IDC ***15*** *07:00:14.4±3.1, 53°56N×87°77E, h0km, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=28.7km s-min=15.0km az=55.0*

ISC 15 07:00:13.5±3.5, 53°6N±0°1×87°7E±0°2, h0km, n9, σ1°04/12, 6C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.76**	**283**	I	I	07 11 10.0	
	0.1nm,0.8s,baz=103,slow=308,SNR=1.1						
ZAA0	**Zalesovo Array**	**1.76**	**283**	⇑P	**Pn**	**07 00 45.6**	**+0.3**
	1.1nm,0.2s,baz=101,slow=16						
ZAA0				⇑S	**Sg**	**07 01 10.2**	**+0.1**
	2.7nm,0.2s,baz=106,slow=24						
ZALV	**Zalesovo Beam**	**1.76**	**283**	Pg	**Pb**	**07 00 46.0**	**-0.7**
	2.1nm,0.3s,baz=100,slow=16,SNR=18						
ZALV				Lg	Lg	07 01 11.4	
	4.5nm,0.3s,baz=112,slow=23,SNR=14						
KURK	**Kurchatov**	**6.30**	**246**	Pn	**Pn**	**07 01 48.3**	**+0.7**
KURBB	**Kurchatov Arra**	**6.40**	**246**	Pn	**Pn**	**07 01 50.9**	**+1.9**
	0.1nm,0.3s,baz=61,slow=14,SNR=8.5						
KURBB				Lg	Lg	07 03 38.9	
	0.1nm,0.3s,baz=63,slow=32,SNR=4.6						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**6.40**	**246**	⇑Pn	**Pn**	**07 01 49.2**	**+0.3**
	0.6nm,0.2s						
MK31	**Makanchi Array**	**7.65**	**209**	Pn	**Pn**	**07 02 05.5**	**-0.7**
	0.2nm,0.5s,baz=31,slow=14,SNR=12						
MK31				⇑Sn	**Sn**	**07 03 33.2**	**-0.4**
	0.4nm,0.6s,baz=35,slow=27						
MKAR	**Makanchi Array**	**7.65**	**209**	Pn	**Pn**	**07 02 08.1**	**+1.9**
	0.4nm,0.3s,baz=31,slow=14,SNR=14						
MKAR				Sn	**Sn**	**07 03 33.7**	**+0.1**
	0.2nm,0.3s,baz=35,slow=28,SNR=1.8						
	0.5nm,0.3s						
MAKZ	**Makanchi**	**7.73**	**211**	⇑Pn	**Pn**	**07 02 07.2**	**-0.1**
	1.2nm,0.6s						
MAKZ				⇑Sn	**Sn**	**07 03 34.6**	**-0.9**
	1.1nm,1.1s						

IDC ***15*** *07:02:03.5±2.0, 34°42S×178°59W, h0km, mb3.7/3, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=42.4km s-min=33.1km az=97.0*
WEL ***15*** *07:02:03.3±0.7, 34°S±8°×17°9W±1°8, h12km, M4.2/9, mB4.7/7, ML4.2/13, MLv4.3/9, Mw(mB)4.0/7, Error ellipse: s-maj=25.4km s-min=3.9km az=114.1*

ISC 15 07:02:02.2±1.3, 34°30S±0°09×178°3W±0°2, h10km, n27, σ1°78/45, mb3.6/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**4.67**	**215**	P	**Pn**	**07 03 12.3**	**-0.4**
PUZ				S	**Sn**	**07 04 06.6**	**-0.3**
HAZ	**Te Kaha**	**4.67**	**221**	P	**Pn**	**07 03 14.5**	**+1.8**
HAZ				S	**Sn**	**07 04 07.9**	**+1.0**
RUGZ	**Raukumara Rang**	**4.88**	**220**	P	**Pn**	**07 03 17.3**	**+1.5**
RUGZ				S	**Sn**	**07 04 12.8**	**+0.5**
TWGZ	**Tauwhareparae**	**4.88**	**216**	P	**Pn**	**07 03 17.5**	**+1.8**
TWGZ				S	**Sn**	**07 04 12.5**	**+0.2**
CNGZ	**Carnagh Statio**	**5.02**	**213**	P	**Pn**	**07 03 17.9**	**+0.4**
CNGZ				S	**Sn**	**07 04 12.4**	**-3.3**
GLKZ	**Green Lake**	**5.03**	**4**	P	Pn	07 03 14.4	-3.4
GLKZ				S	**Sn**	**07 04 12.5**	**-3.5**
TKGZ	**Te Karaka**	**5.15**	**216**	P	**Pn**	**07 03 19.5**	**+0.2**
TKGZ				S	**Sn**	**07 04 17.8**	**-1.0**
MWZ	**Matawai**	**5.23**	**218**	P	**Pn**	**07 03 21.2**	**+0.6**
MWZ				S	**Sn**	**07 04 18.9**	**-2.0**
URZ	**Urewera**	**5.40**	**222**	Pn	**Pn**	**07 03 22.8**	**+0.1**
	1.5nm,0.3s,baz=25,slow=3.6,SNR=3.2						
URZ				Sn	**Sn**	**07 04 21.9**	**-3.0**
	7.7nm,0.3s,baz=121,slow=15,SNR=14						
	8.1nm,0.6s						
URZ	**Urewera**	**5.40**	**222**	P	**Pn**	**07 03 23.9**	**+1.2**
URZ				S	**Sn**	**07 04 24.4**	**-0.6**
RIGZ	**Rimuhau**	**5.41**	**214**	S	**Sn**	**07 04 24.3**	**-0.9**
PRGZ	**Paritu Road**	**5.53**	**212**	P	**Pn**	**07 03 24.6**	**0.0**
PRGZ				S	**Sn**	**07 04 27.2**	**-1.0**
SNGZ	**Shannon Statio**	**5.67**	**217**	P	**Pn**	**07 03 26.3**	**-0.2**
SNGZ				S	**Sn**	**07 04 31.0**	**-0.7**
MHGZ	**Mahia Peninsul**	**5.71**	**211**	P	**Pn**	**07 03 25.9**	**-1.1**
MHGZ				S	**Sn**	**07 04 32.5**	**0.0**
RAHZ	**Arahi**	**5.90**	**217**	P	**Pn**	**07 03 31.5**	**+1.8**
RAHZ				S	**Sn**	**07 04 35.7**	**-1.6**
MTHZ	**Maungataniwha**	**5.97**	**219**	P	**Pn**	**07 03 31.7**	**+1.0**
MTHZ				S	**Sn**	**07 04 38.3**	**-0.9**
NMHZ	**Naumai**	**6.18**	**218**	P	**Pn**	**07 03 35.2**	**+1.7**
NMHZ				S	**Sn**	**07 04 42.7**	**-1.5**
KAHZ	**Kahuranaki**	**6.69**	**213**	P	**Pn**	**07 03 39.0**	**-1.5**
OTVZ	**Oturere**	**6.84**	**223**	P	**Pn**	**07 03 44.7**	**+2.0**
OTVZ				S	**Sn**	**07 04 57.9**	**-2.8**
WNVZ	**Wahianoa**	**6.99**	**222**	P	**Pn**	**07 03 46.7**	**+1.9**
WNVZ				S	**Sn**	**07 05 01.1**	**-3.2**
PNHZ	**Pukenui**	**7.10**	**216**	P	**Pn**	**07 03 44.7**	**-1.5**
PNHZ				S	**Sn**	**07 05 02.6**	**-4.4**
MRZ	**Mangatainoka R**	**7.98**	**215**	P	**Pn**	**07 03 56.5**	**-1.7**
MRZ				S	Sn	07 05 21.9	-6.7
RPZ	**Rata Peaks**	**12.50**	**218**	Pn	**Pn**	**07 04 57.6**	**-2.5**
	0.1nm,0.3s,baz=7.8,slow=19,SNR=1.6						
RPZ				Sn	Sn	07 07 06.4	-13
	0.2nm,0.3s,baz=73,slow=12,SNR=11						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**42.76**	**271**	P	**P**	**07 10 01.8**	**+1.7**
	0.7nm,0.7s,baz=109,slow=7.1,SNR=8.0						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**44.10**	**276**	P	**P**	**07 10 11.8**	**+0.9**
	0.4nm,0.4s,baz=116,slow=8.1,SNR=8.2						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**55.82**	**180**	P	**P**	**07 11 41.7**	**+2.2**
	0.9nm,0.9s,baz=33,slow=1.5,SNR=1.8						
	0.9nm,0.9s						
FINES	**FINESS Array B**	**148.66**	**338**	PKPbc	**PKiKP**	**07 21 50.8**	**+0.6**
	1.0nm,0.7s,baz=66,slow=5.0,SNR=3.2						

JMA 15 07:26:22.3±0.1, 25°7N±0°8×14°1E±°, h155km, MV4.2/14, IOTO ISLANDS REGION, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.35**	**44**	P	Pn	07 26 50.9	+0.2
JHH2				*e*S	Sn	07 27 12.8	+0.2
CBIJ	**Chichi jima**	**1.72**	**33**	*e*P	Pn	07 26 54.9	+0.3
CBIJ				*e*S	Sn	07 27 19.7	+0.3
BSO3	**Boso 3**	**9.13**	**357**	*e*P	Pn	07 28 26.6	-3.7
BSO4	**Boso 4**	**9.32**	**356**	*e*P	Pn	07 28 30.1	-3.0
JAG	**Ashikaga**	**10.82**	**353**	*e*P	Pn	07 28 47.9	-5.2
JHO	**Hitachi**	**10.93**	**358**	*e*P	Pn	07 28 49.4	-4.9

IDC ***15*** *07:34:47.6±0.5, 28°42S×178°19W, h193km±3km, mb3.9/13, mbtmp4.4/17, MS3.2/1, Error ellipse: s-maj=17.3km s-min=12.4km az=75.0*
NEIC ***15*** *07:34:48.8±1.8, 28°47S±0°09×178°3W±0°2, h194km±6km, mb4.4/24, Error ellipse: s-maj=21.2km s-min=12.8km az=86.0*

ISC 15 07:34:49.7±0.6, 29°12S±0°05×178°62W±0°09, h200km, n79, σ2°14/79, mb4.3/22, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**0.61**	**101**	P	**Pn**	**07 35 17.0**	**-0.2**
RIZ				S	**Sn**	**07 35 37.2**	**-1.4**
RAO	**Raoul Island**	**0.62**	**102**	P	**Pn**	**07 35 16.9**	**-0.4**
	3µm,0.2s,baz=105,slow=7.8,SNR=116						
RAO				LR	LR	07 35 22.2	
	comp=Z,136nm,20.2s,baz=357,slow=40						
RAO				S	**Sn**	**07 35 38.0**	**-0.6**
	3µm,0.2s,baz=92,slow=23,SNR=22						
GLKZ	**Green Lake**	**0.62**	**103**	P	**Pn**	**07 35 16.9**	**-0.4**
GLKZ				S	**Sn**	**07 35 37.2**	**-1.4**
MXZ	**Matakaoa Point**	**8.80**	**196**	S	**Sn**	**07 38 33.6**	**+1.6**
HAZ	**Te Kaha**	**9.12**	**198**	P	**Pn**	**07 36 55.4**	**-2.0**
HAZ				S	**Sn**	**07 38 45.1**	**+5.5**
PUZ	**Puketiti**	**9.30**	**195**	P	**Pn**	**07 36 59.6**	**-0.1**
PUZ				S	**Sn**	**07 38 44.4**	**+0.5**
MWZ	**Matawai**	**9.73**	**198**	P	**Pn**	**07 37 05.6**	**+0.3**
MWZ				S	**Sn**	**07 38 54.4**	**+0.2**
URZ	**Urewera**	**9.78**	**200**	P	Pn	07 37 13.6	+7.6
	1.9nm,0.3s,baz=128,slow=23,SNR=1.5						
URZ				S	**Sn**	**07 38 57.0**	**+1.7**
	12nm,0.3s,baz=306,slow=22,SNR=11						
URZ	**Urewera**	**9.78**	**200**	P	**Pn**	**07 37 04.0**	**-2.0**
URZ				S	**Sn**	**07 38 55.1**	**-0.2**
MSVF	**Nonsavu**	**11.74**	**344**	P	Pn	07 37 21.5	-10
	1.0nm,0.3s,baz=285,slow=23,SNR=4.8						
MRZ	**Mangatainoka R**	**12.45**	**201**	P	**Pn**	**07 37 40.3**	**+0.1**
MRZ				S	**Sn**	**07 39 53.2**	**-5.8**
TIWZ	**Tintock**	**12.46**	**200**	P	**P**	**07 37 44.1**	**-0.3**
TIWZ				S	**Sn**	**07 39 56.1**	**-3.2**
HOWZ	**Holdsworth Sta**	**12.69**	**201**	P	**Pn**	**07 37 43.4**	**+0.2**
HOWZ				S	**Sn**	**07 39 59.6**	**-5.1**
KIW	**Kapiti Island**	**12.85**	**203**	P	**P**	**07 37 49.0**	**+0.3**
KIW				S	**S**	**07 40 04.7**	**-3.8**
TRWZ	**Traveller**	**13.10**	**199**	P	**P**	**07 37 52.8**	**+1.4**
TRWZ				S	**S**	**07 40 10.1**	**-4.1**
MSWZ	**Moikau Station**	**13.24**	**201**	P	**P**	**07 37 53.9**	**+0.9**
MSWZ				S	**S**	**07 40 13.4**	**-4.3**
TUWZ	**Tuamarina**	**13.69**	**204**	P	**P**	**07 37 57.1**	**-0.8**
TUWZ				S	**S**	**07 40 24.4**	**-3.6**
NNZ	**Nelson**	**13.72**	**206**	P	**P**	**07 37 57.1**	**-1.1**
NNZ				S	**S**	**07 40 26.2**	**-2.5**
MRNZ	**Matariki Terra**	**14.12**	**208**	P	**P**	**07 38 03.0**	**+0.3**
MRNZ				S	**S**	**07 40 36.1**	**-2.0**
THZ	**Tophouse**	**14.37**	**206**	P	**Pn**	**07 38 04.7**	**+0.6**
THZ				S	**S**	**07 40 42.6**	**-1.3**
DZM	**Mont Dzumac**	**15.19**	**294**	P	**Pn**	**07 38 12.5**	**-1.9**
	5.8nm,1.0s,baz=138,slow=8.7,SNR=13						
DZM				LR	LR	07 42 48.4	
	comp=Z,82nm,18.9s,baz=4.5,slow=32						
AFI	**Afiamalu**	**16.41**	**24**	P	P	07 38 17.9	-10
	18nm,0.7s,baz=198,slow=22,SNR=1.5						
ARMA	**Armidale**	**25.83**	**260**	P	**P**	**07 40 06.5**	**+3.7**
EIDS	**Eidsvold**	**27.16**	**271**	P	**P**	**07 40 16.1**	**+1.4**
EIDS				IAmb	IAmb	07 40 27.0	
	comp=Z,14nm,1.2s						
CAN	**Canberra**	**28.00**	**249**	P	**P**	**07 40 24.5**	**+2.4**
CTAO	**Charters Tower**	**33.08**	**278**	P	**P**	**07 41 07.9**	**+1.1**
CTAO				IAmb	IAmb	07 41 11.6	
	comp=Z,8.6nm,0.7s						
STKA	**Stephens Creek**	**34.26**	**255**	P	**P**	**07 41 20.1**	**+3.2**
	comp=Z,3.1nm,0.4s,baz=103,slow=11,SNR=10						
	comp=Z,3.1nm,0.4s						
BBOO	**Buckleboo**	**38.81**	**253**	P	**P**	**07 41 57.8**	**+2.5**
AS31	**Alice Springs**	**42.65**	**266**	P	**P**	**07 42 29.1**	**+2.2**
ASAR	**Alice Springs**	**42.65**	**266**	P	**P**	**07 42 28.2**	**+1.4**
	comp=Z,1.7nm,0.4s,baz=102,slow=7.4,SNR=44						
ASAR				PcP	**PcP**	**07 44 14.7**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=92,slow=3.5,SNR=2.0						
	comp=Z,1.7nm,0.4s						
WR8	**Warramunga Arr**	**43.38**	**271**	P	**P**	**07 42 33.7**	**+1.1**
WR8				IAmb	IAmb	07 42 39.3	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**43.52**	**271**	P	**P**	**07 42 35.0**	**+1.3**
WRAB				IAmb	IAmb	07 43 13.4	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**43.52**	**271**	P	**P**	**07 42 34.5**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=109,slow=7.9,SNR=5.8						
	comp=Z,2.4nm,0.4s						
WRA	**Warramunga Arr**	**43.52**	**271**	P	**P**	**07 42 34.6**	**+0.8**
WB0	**Warramunga Arr**	**43.54**	**271**	P	**P**	**07 42 34.7**	**+0.8**
WB0				IAmb	IAmb	07 42 59.7	
	comp=Z,13nm,1.4s						
FORT	**Forrest**	**45.87**	**254**	P	**P**	**07 42 53.6**	**+1.4**
FORT				IAmb	IAmb	07 42 54.4	
	comp=Z,10nm,0.6s						
MTN	**Manton Dam**	**49.26**	**278**	P	**P**	**07 43 19.0**	**+0.6**
MTN				IAmb	IAmb	07 43 30.2	
	comp=Z,7.7nm,1.2s						
SBA	**Scott Base**	**49.27**	**184**	P	P	07 43 23.6	+6.1
SBA				IAmb	IAmb	07 43 25.0	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**49.31**	**186**	P	P	07 43 23.0	+5.1
	comp=Z,1.5nm,0.7s,baz=15,slow=8.6,SNR=11						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**49.31**	**186**	IAmb	IAmb	07 43 23.8	
	comp=Z,1.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.83**	**269**	P	**P**	**07 43 39.9**	**+2.3**
	comp=Z,2.9nm,0.4s,baz=80,slow=5.9,SNR=19						
	comp=Z,2.9nm,0.4s						
SIJI	**Sorong**	**55.37**	**291**	P	**P**	**07 44 02.8**	**-0.6**
	comp=Z,9.0nm,0.5s,baz=112,slow=12,SNR=3.9						
	comp=Z,9.0nm,0.5s						
MBWA	**Marble Bar**	**55.84**	**263**	P	**P**	**07 44 07.3**	**+0.7**
MBWA				IAmb	IAmb	07 44 44.1	
	comp=Z,14nm,1.2s						
MORW	**Morawa**	**56.39**	**253**	P	**P**	**07 44 11.4**	**+0.9**
QSPA	**South Pole Qui**	**60.98**	**180**	P	**P**	**07 44 45.0**	**+3.3**
	comp=Z,3.7nm,0.7s,baz=329,slow=0.9,SNR=30						
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**60.98**	**180**	IAmb	IAmb	07 44 47.0	
	comp=Z,3.7nm,0.7s						
BELA	**Belgrano 2**	**71.12**	**172**	P	**P**	**07 45 47.2**	**+1.4**
BBJI	**Bungbulang**	**72.21**	**271**	P	**P**	**07 45 52.9**	**-0.6**
MAW	**Mawson**	**73.31**	**201**	P	**P**	**07 46 01.8**	**+2.9**
	comp=Z,3.4nm,0.6s,baz=145,slow=6.4,SNR=9.5						
	comp=Z,3.4nm,0.6s						
MAW	**Mawson**	**73.31**	**201**	IAmb	IAmb	07 46 02.4	
	comp=Z,2.2nm,1.4s						
MJAR	**Matsushiro Arr**	**76.89**	**326**	P	**P**	**07 46 17.0**	**-2.7**
	comp=Z,2.6nm,0.7s,baz=162,slow=5.5,SNR=5.8						
	comp=Z,2.6nm,0.7s						
MJAR	**Matsushiro Arr**	**76.89**	**326**	IAmb	IAmb	07 46 18.8	
	comp=Z,5.5nm,1.1s						
SNAA	**Sanae**	**79.44**	**179**	P	**P**	**07 46 36.1**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=226,slow=7.7,SNR=2.2						
	comp=Z,0.4nm,0.3s						
SNAA	**Sanae**	**79.44**	**179**	IAmb	IAmb	07 47 11.1	
	comp=Z,4.8nm,1.3s						
H03S2	**Juan Fernandez**	**81.62**	**124**	T	T	09 16 53.7	
	baz=239,slow=74,SNR=7.9						
H03S1	**Juan Fernandez**	**81.63**	**124**	T	T	09 16 54.6	
	baz=239,slow=74,SNR=9.8						
H03S3	**Juan Fernandez**	**81.64**	**124**	T	T	09 16 52.7	
	baz=239,slow=74,SNR=9.4						
KSRS	**Korea Array**	**83.03**	**320**	P	**P**	**07 46 50.6**	**-2.0**
	comp=Z,1.5nm,0.7s,baz=153,slow=5.1,SNR=5.9						
	comp=Z,1.5nm,0.7s						
PETK	**Petropavlovsk-**	**84.45**	**346**	P	**P**	**07 46 56.8**	**-2.6**
	comp=Z,0.8nm,0.6s,baz=177,slow=6.2,SNR=2.1						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**92.47**	**290**	P	**P**	**07 47 38.4**	**0.0**
	comp=Z,1.3nm,0.2s,baz=162,slow=3.2,SNR=4.3						
	comp=Z,1.3nm,0.2s						
SONM	**Songino Array**	**101.84**	**318**	P	**Pdif**	**07 48 16.9**	**-3.2**
	comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=1.6						
MKAR	**Makanchi Array**	**116.54**	**311**	PKP	**PKPdf**	**07 53 07.0**	**-2.6**
	comp=Z,0.4nm,0.4s,baz=133,slow=0.5,SNR=6.3						
KURK	**Kurchatov**	**119.78**	**314**		**PKPdf**	**07 53 14.2**	**-1.3**
KURBB	**Kurchatov Arra**	**119.82**	**314**	PKP	**PKPdf**	**07 53 14.2**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=116,slow=1.9,SNR=9.9						
BVAR	**Borovoye Array**	**125.12**	**316**	PKP	**PKPdf**	**07 53 24.9**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=90,slow=0.4,SNR=5.7						
H10S2	**ASCENSION HYDR**	**139.10**	**155**	T	T	10 29 41.9	
	baz=204						
H10S3	**ASCENSION HYDR**	**139.10**	**155**	T	T	10 29 42.6	
	baz=16						
H10N3	**ASCENSION HYDR**	**140.19**	**155**	T	T	10 30 46.3	
	baz=204,slow=75,SNR=5.0						
H10N1	**ASCENSION HYDR**	**140.19**	**155**	T	T	10 30 47.0	
	baz=204,slow=75,SNR=5.2						
H10N2	**ASCENSION HYDR**	**140.21**	**155**	T	T	10 30 59.8	
	baz=204,slow=75,SNR=4.5						
FINES	**FINESS Array B**	**143.77**	**340**	PKP	PKPab	07 53 55.0	-2.6
	comp=Z,1.9nm,0.7s,baz=45,slow=

KWHZ			S	Sn	07 51 02.6	-0.3	
FWVZ	**Far West T-bar**	**8.60 196**	P	**Pn**	**07 49 26.3**	**+0.2**	
FWVZ			S	Sn	07 51 03.8	+0.5	
WHVZ	**Whangaehu Hut**	**8.62 195**	P	**Pn**	**07 49 26.5**	**+0.1**	
WHVZ			S	Sn	07 51 06.3	+2.5	
TRVZ	**Turoa**	**8.65 196**	P	**Pn**	**07 49 27.8**	**+1.1**	
TRVZ			S	Sn	07 51 02.0	-2.4	
WNVZ	**Wahianoa**	**8.66 195**	P	**Pn**	**07 49 27.9**	**+1.0**	
WNVZ			S	Sn	07 51 06.9	+2.3	
PKVZ	**Pokaka**	**8.68 197**	P	**Pn**	**07 49 29.0**	**+1.9**	
BHHZ	**Black Hill Sta**	**8.72 193**	P	**Pn**	**07 49 27.4**	**-0.2**	
BHHZ			S	Sn	07 51 03.8	-2.2	
KAHZ	**Kahuranaki**	**8.89 188**	P	**Pn**	**07 49 28.5**	**-1.4**	
KAHZ			S	Sn	07 51 01.3	-8.8	
PNHZ	**Pukenui**	**9.11 191**	P	Pn	07 49 28.4	-4.5	
PNHZ			S	**Sn**	**07 51 09.4**	**-6.0**	
PXZ	**Pawanui**	**9.13 188**	P	Pn	07 49 30.2	-2.9	
PXZ			S	Sn	07 51 08.2	-7.7	
BFZ	**Birch Farm**	**9.85 190**	P	Pn	07 49 38.7	-4.3	
QRZ	**Quartz Range**	**10.96 205**	P	**Pn**	**07 49 56.5**	**-1.6**	
KHZ	**Kahutara**	**12.09 198**	P	Pn	07 50 05.0	-8.6	
JCZ	**Jackson Bay**	**15.16 208**	P	Pn	07 50 35.7	-20	

NNC ***15*** *07:57:49.1±3.4, 42°.91N×85°.46E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=24.9km s-min=15.0km az=139.0*
SOME ***15*** *07:57:49.5, 43°.13N×85°.47E, h10km*
ISC 15 07:57:44.0±3.5, 42°.8N±0°.1×85°.5E±0°.1, h10km, n20, σ1§16/27, 4C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**4.44**	**292**	Pg	**Pg**	**07 59 09.9**	**+1.0**
	1.7nm,0.3s						
DJR				Lg	Lg	08 00 07.5	
	2.9nm,0.5s						
DJR	**Jarkent**	**4.44**	**292**	*eP*	**Pg**	**07 59 09.9**	**+1.0**
	1.7nm,0.3s						
DJR				*eS*	**Sg**	**08 00 07.5**	**+1.1**
	2.9nm,0.5s						
PDGK	**Podgornoye**	**4.45**	**279**	⇑Pg	**Pg**	**07 59 07.9**	**-1.3**
	2.4nm,0.3s						
PDGK				⇑Lg	Lg	08 00 07.4	
	29nm,0.9s						
SHLS	**Shalkode**	**4.46**	**277**	Pg	**Pb**	**07 59 03.7**	**+1.2**
	9.8nm,0.6s						
SHLS				Lg	Lg	07 59 56.8	
	30nm,0.4s						
SHLS	**Shalkode**	**4.46**	**277**	*eP*	**Pb**	**07 59 03.7**	**+1.2**
	9.8nm,0.6s						
SHLS				*eS*	**Sb**	**07 59 56.9**	**+0.6**
	30nm,0.4s						
MK31	**Makanchi Array**	**4.61**	**331**	⇑Pg	**Pg**	**07 59 10.5**	**-1.7**
	0.2nm,0.3s,baz=158,slow=15,SNR=4.4						
MK31				Lg	Lg	08 00 14.0	
	0.7nm,0.3s,baz=143,slow=29						
MAKZ	**Makanchi**	**4.73**	**329**	⇓Pg	**Pg**	**07 59 14.5**	**-0.1**
	3.9nm,1.4s						
MAKZ				⇑Lg	Lg	08 00 17.7	
	3.5nm,1.0s						
UZB	**Uzynbulak**	**4.78**	**276**	Pg	**Pg**	**07 59 14.7**	**-0.8**
	2.3nm,0.4s						
UZB				Lg	Lg	08 00 15.6	
	7.9nm,0.3s						
UZB	**Uzynbulak**	**4.78**	**276**	*eP*	**Pg**	**07 59 14.7**	**-0.8**
	2.3nm,0.4s						
UZB				*eS*	**Sg**	**08 00 15.6**	**-1.9**
	7.9nm,0.3s						
KNOS	**Konyrlen**	**4.86**	**291**	Pg	**Pg**	**07 59 17.6**	**+0.5**
	1.7nm,0.4s						
KNOS				Lg	Lg	08 00 20.6	
	6.4nm,0.6s						
SATY	**Saty**	**5.23**	**275**	Pg	**Pg**	**07 59 24.3**	**+0.2**
	2.3nm,0.1s						
SATY				Lg	Lg	08 00 32.0	
	6.8nm,0.2s						
SATY	**Saty**	**5.23**	**275**	*eP*	**Pg**	**07 59 24.3**	**+0.2**
	2.3nm,0.1s						
SATY				*eS*	**Sg**	**08 00 32.0**	**+0.2**
	6.8nm,0.2s						
BLB	**Baldybastay**	**5.29**	**287**	Pg	**Pg**	**07 59 26.3**	**+1.1**
	17nm,0.9s						
BLB				Lg	Lg	08 00 35.1	
	8.7nm,0.6s						
ARXS	**Arharly**	**5.77**	**287**	Pg	**Pg**	**07 59 33.5**	**-0.9**
	2.4nm,0.5s						
ARXS				Lg	Lg	08 00 47.9	
	5.5nm,0.6s						
ARXS	**Arharly**	**5.77**	**287**	*eP*	**Pg**	**07 59 33.5**	**-0.9**
	2.4nm,0.5s						
ARXS				*eS*	**Sg**	**08 00 47.9**	**-1.3**
	5.5nm,0.6s						
TNSS	**Tian-Shan**	**6.30**	**275**	Pg	**Pg**	**07 59 44.3**	**-0.3**
	0.7nm,0.3s						
TNSS				Lg	Lg	08 01 06.1	
	1.6nm,0.8s						
TNSS	**Tian-Shan**	**6.30**	**275**	*eP*	**Pg**	**07 59 44.3**	**-0.3**
	0.7nm,0.3s						
TNSS				*eS*	**Sg**	**08 01 06.1**	**-0.1**
	1.6nm,0.8s						
KTBS	**Karatobe**	**6.52**	**281**	Pg	**Pg**	**07 59 47.2**	**-1.5**
	0.5nm,0.4s						
KTBS				Lg	Lg	08 01 11.3	
	3.6nm,0.9s						
KTBS	**Karatobe**	**6.52**	**281**	*eP*	**Pg**	**07 59 47.2**	**-1.5**
	0.5nm,0.4s						
KTBS				*eS*	**Sg**	**08 01 11.3**	**-1.8**
	3.6nm,0.9s						
KST	**Kastek**	**7.02**	**275**	Pg	**Pg**	**07 59 56.7**	**-1.7**
	0.9nm,0.4s						
KST				Lg	Lg	08 01 27.5	
	7.2nm,0.8s						

IDC ***15*** *08:00:25.0±1.0, 13°.27N×120°.79E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=28.4km s-min=9.9km az=94.0*
MAN ***15*** *08:00:26.0, 13°.40N×120°.75E, h1km, MS3.2*
ISC 15 08:00:27.0±1.7, 13°.39N±0°.06×120°.75E±0°.08, h13km±10km, n12, σ1§53/17, mb3.6/6, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.23**	**60**	*eP*	**Pg**	**08 00 31.3**	**-0.7**
PGP				*eS*	**Sg**	**08 00 35.0**	**-0.3**
TGY	**Tagaytay City**	**0.73**	**14**	Pg	**Pg**	**08 00 41.5**	**+0.2**
	280nm,0.3s,baz=206,slow=2.6,SNR=17						
TGY				Lg	Lg	08 00 53.3	
	545nm,0.3s,baz=148,slow=21,SNR=9.6						
TGY	**Tagaytay City**	**0.73**	**14**	*eP*	**Pg**	**08 00 41.5**	**+0.2**
TGY				*eS*	**Sb**	**08 00 52.4**	**+0.7**
LQP	**Lukban**	**1.05**	**47**	*eP*	**Pb**	**08 00 45.9**	**-1.4**
LQP				*eS*	**Sb**	**08 00 59.5**	**-1.6**
GQP	**Guinayangan**	**1.73**	**73**	*eP*	**Pb**	**08 00 59.5**	**+0.9**
GQP				*i S*	**Sg**	**08 01 26.3**	**+3.6**
IBAJ	**Ibajay, Aklan**	**2.09**	**138**	*i P*	**Pn**	**08 01 00.7**	**-1.1**
IBAJ				*eS*	**Sb**	**08 01 31.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**21.56**	**286**	P	**P**	**08 05 18.9**	**+2.4**
	1.0nm,0.3s,baz=98,slow=11,SNR=6.5						
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**35.72**	**158**	P	**P**	**08 07 24.2**	**-1.5**
	2.9nm,0.9s,baz=336,slow=9.5,SNR=25						
	2.9nm,0.9s						
SONM	**Songino Array**	**36.37**	**344**	P	**P**	**08 07 30.9**	**-0.2**
	0.2nm,0.3s,baz=176,slow=9.6,SNR=1.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**39.01**	**161**	P	**P**	**08 07 53.0**	**-0.6**
	1.5nm,0.5s,baz=338,slow=6.8,SNR=35						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**46.31**	**324**	P	**P**	**08 08 53.0**	**+0.4**
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.6						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**50.47**	**326**	P	**P**	**08 09 24.4**	**-0.3**
	0.2nm,0.4s,baz=130,slow=7.7,SNR=2.4						
	0.2nm,0.4s						

IDC 15 08:28:51.8±52.0, 16°.41S×175°.04W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=976.7km s-min=189.9km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.17**	**240**	P	P	08 36 47.0	+0.6
	1.9nm,1.0s,baz=83,slow=8.1,SNR=3.7						
	1.9nm,1.0s						
WRA	**Warramunga Arr**	**48.09**	**258**	P	P	08 37 33.2	-0.4
	0.4nm,0.9s,baz=94,slow=8.3,SNR=1.7						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**48.30**	**253**	P	P	08 37 34.9	-0.4
	0.9nm,0.6s,baz=89,slow=8.0,SNR=14						
	0.9nm,0.6s						

TIR ***15*** *08:44:05.9, 41°.60N×20°.60E, h10km±1km, Ml2.6/5*
PDG ***15*** *08:44:06.8±0.3, 41°.62N×20°.54E, h2km, ML2.7/12, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
SKO ***15*** *08:44:06.1, 41°.55N×20°.59E, h13km, ML2.7*
BEO ***15*** *08:44:07.4±0.4, 41°.60N×20°.64E, h0km, ML2.5/5*
ISC 15 08:44:05.8±1.0, 41°.59N±0°.02×20°.61E±0°.02, h7km±9km, n31, σ1§19/60, 4C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.15**	**306**	P	**Pg**	**08 44 08.5**	**-0.5**
PHP				Sg	**Sg**	**08 44 11.2**	**0.0**
PHP				AML	AML	08 44 14.6	
	12nm,0.6s						
OHR	**Ohrid**	**0.50**	**163**	*i* Pg	**Pg**	**08 44 15.4**	**-0.1**
OHR				*i* Sg	**Sb**	**08 44 23.3**	**-1.2**
OHR				*eLg*	Lg	08 44 23.9	
	comp=E,938nm,0.5s						
OHR				*eLg*	Lg	08 44 24.1	
	comp=N,386nm,0.3s						
TIR	**Tirane**	**0.61**	**246**	P	**Pg**	**08 44 17.6**	**+0.1**
TIR				Sg	**Sb**	**08 44 26.8**	**-0.8**
TIR				AML	AML	08 44 28.4	
	comp=N,1.0nm,0.6s						
SKO	**Skopje**	**0.73**	**58**	*i* Pg	**Pb**	**08 44 20.9**	**+0.1**
SKO				*i* Sg	**Sb**	**08 44 31.9**	**+0.8**
SDA	**Shkodra**	**0.95**	**299**	P	**Pb**	**08 44 24.5**	**-0.1**
SDA				Sg	**Sn**	**08 44 38.6**	**-0.7**
SDA				AML	AML	08 44 42.6	
	comp=N,0.7nm,0.4s						
KBN	**Korca**	**0.98**	**172**	Pg	**Pn**	**08 44 25.8**	**-0.2**
KBN				Sg	**Sb**	**08 44 39.0**	**+0.8**
KBN				AML	AML	08 44 41.5	
	comp=N,0.7nm,0.5s						
ULC	**Ulcinj**	**1.08**	**290**	⇑*i* Pg	**Pg**	**08 44 25.3**	**-1.3**
ULC				*i* Sg	**Sn**	**08 44 42.1**	**-0.7**
DRME	**Dracevica, Mon**	**1.22**	**300**	⇓*i* Pg	**Pb**	**08 44 28.3**	**-0.8**
DRME				*i* Sg	**Sn**	**08 44 46.7**	**+0.7**
PDG	**Podgorica**	**1.31**	**310**	Pg	**Pn**	**08 44 30.2**	**-0.3**
PDG				Sg	**Sn**	**08 44 49.4**	**+1.2**
PDG	**Podgorica**	**1.31**	**310**	*ePg*	**Pn**	**08 44 30.3**	**-0.2**
PDG				*eSg*	**Sn**	**08 44 50.6**	**+2.4**
PDG	**Podgorica**	**1.31**	**310**	⇓*i* Pg	**Pn**	**08 44 29.9**	**-0.6**
PDG				*i* Sg	**Sn**	**08 44 49.6**	**+1.4**
IVA	**Berane**	**1.38**	**338**	⇑*i* Pg	**Pg**	**08 44 32.1**	**-0.2**
IVA				*i* Sg	**Sg**	**08 44 53.1**	**+2.8**
BUM	**Brajici-Budva**	**1.46**	**300**	⇓*i* Pg	**Pn**	**08 44 32.3**	**-0.4**
BUM				*i* Sg	**Sg**	**08 44 54.6**	**+1.9**
KOME	**Kolasin**	**1.50**	**328**	⇓*i* Pg	**Pg**	**08 44 34.4**	**-0.1**
KOME				*i* Sg	**Sg**	**08 44 57.0**	**+3.1**
VAY	**Valandovo**	**1.50**	**100**	*i* Pg	**Pb**	**08 44 34.1**	**+0.1**
VAY				*i* Sg	**Sg**	**08 44 55.1**	**+1.1**
VAY				*eLg*	Lg	08 44 56.2	
	comp=N,65nm,0.6s						
VAY				*eLg*	Lg	08 44 56.9	
	comp=E,53nm,0.6s						
BARS	**Barje**	**1.52**	**36**	*ePn*	**Pb**	**08 44 34.4**	**+0.1**
BARS				*eSn*	**Sg**	**08 44 55.9**	**+1.4**
CEME	**Cevo**	**1.58**	**308**	⇑*i* Pg	**Pb**	**08 44 34.8**	**-0.5**
CEME				*i* Sg	**Sg**	**08 44 58.8**	**+2.3**
NKME	**Niksic**	**1.70**	**314**	⇓*i* Pn	**Pg**	**08 44 37.7**	**-0.7**
NKME				*i* Sn	**Sg**	**08 45 02.8**	**+2.4**
SJES	**Sjenica**	**1.73**	**344**	*ePn*	**Pg**	**08 44 38.3**	**-0.7**
SJES				*eSn*	**Sg**	**08 45 03.2**	**+1.8**
SRN	**Sarande**	**1.77**	**195**	P	**Pg**	**08 44 39.6**	**-0.1**
SRN				Sg	**Sg**	**08 45 02.5**	**-0.2**
SRN				AML	AML	08 45 09.8	
	comp=E,0.2nm,0.6s						
HCY	**Herceg Novi**	**1.79**	**299**	⇓*i* Pn	**Pb**	**08 44 38.5**	**-0.4**
HCY				*i* Sn	**Sg**	**08 45 04.9**	**+1.6**
PLE	**Pljevlja**	**1.96**	**333**	⇓*i* Pn	**Pb**	**08 44 41.9**	**+0.1**
PLE				*i* Sn	**Sg**	**08 45 09.7**	**+1.1**
GOCS	**Kraljevo Serbi**	**1.98**	**6**	*ePn*	**Pb**	**08 44 41.2**	**-1.0**
GOCS				*eSn*	**Sb**	**08 45 06.3**	**-0.8**
IVAS	**Ivanjica**	**2.01**	**351**	*ePn*	**Pb**	**08 44 41.3**	**-1.4**
BRY	**Bratogost**	**2.02**	**311**	⇓*i* Pn	**Pb**	**08 44 42.7**	**-0.2**
BRY				*i* Sn	**Sg**	**08 45 10.1**	**-0.5**
UPM	**Unac-Piva**	**2.04**	**322**	⇑*i* Pn	**Pb**	**08 44 42.4**	**-1.0**
UPM				*i* Sn	**Sg**	**08 45 10.9**	**-0.6**
IGT	**Igoumenitsa**	**2.07**	**186**	*ePn*	**Pb**	**08 44 43.6**	**-0.1**
VTS	**Vitosha**	**2.21**	**61**	*ePn*	**Pb**	**08 44 44.7**	**-1.4**
VTS				*eSn*	**Sb**	**08 45 13.7**	**0.0**
ZAPS	**Zavoj**	**2.25**	**41**	*ePn*	**Pb**	**08 44 45.7**	**-1.1**
ZAPS				*eSn*	**Sb**	**08 45 13.6**	**-1.3**
STON	**Ston**	**2.51**	**302**	*ePn*	**Pb**	**08 44 49.4**	**-1.7**
STON				*eSn*	**Sb**	**08 45 23.3**	**+1.1**
ZAGS	**Zajecar**	**2.52**	**28**	*ePn*	**Pb**	**08 44 50.1**	**-1.3**
ZAGS				*eSn*	**Sb**	**08 45 21.1**	**-1.5**

ISK 15 08:52:37.0, 36°.49N×28°.43E, h8km, ML2.0/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.37**	**222**	Pg	Pg	08 52 44.7	+0.4
ARG				Sg	Sg	08 52 50.5	+1.3
BODT	**Bodrum**	**1.06**	**303**	Pg	Pb	08 52 57.9	+0.2
BODT				Sg	Sn	08 53 12.9	-0.5
APMY	**Acipayam-Deniz**	**1.20**	**35**	Pn	Pn	08 53 00.4	+0.2
NAZL	**Nazilli-Aydin**	**1.47**	**356**	Pn	Pb	08 53 04.5	-0.2
AYDB	**Zeytinkoy-Aydi**	**1.51**	**344**	Pn	Pb	08 53 05.2	-0.2

AFAD ***15*** *08:52:46.8, 37°.24N×28°.13E, h7km±2km, ML1.5*
ISK 15 08:52:47.8, 37°.20N×28°.18E, h0km, ML1.7/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.10**	**126**	Pg	Pg	08 52 50.0	+0.3
YER	**Yerkesik**	**0.10**	**126**	Pg	Pg	08 52 50.0	+0.3
YER				Sg	Sg	08 52 52.8	+1.7
MULA	**Mugla, Merkez-**	**0.13**	**61**	P	Pg	08 52 48.9	-1.4
TURN	**Turunc**	**0.42**	**173**	Pg	Pg	08 52 56.6	+0.7
TURN				Sg	Sb	08 53 03.2	-1.8
TURN	**Turunc**	**0.42**	**173**	P	Pg	08 52 56.5	+0.6
AYDN	**Tasoluk**	**0.52**	**333**	P	Pg	08 52 56.9	-0.9
AYDN				S	Sg	08 53 03.4	-1.3
AYDN				IAML		08 53 05.0	
	comp=N,42nm,0.3s						
DALY	**Dalyan (Mula)**	**0.54**	**135**	Pg	Pg	08 52 58.8	+0.8
DALY				Sg	Sb	08 53 06.9	-1.4
DALY	**Dalyan (Mula)**	**0.54**	**135**	P	Pg	08 52 58.9	+0.8
DALY				S	Sb	08 53 07.5	-0.8
DALY				IAML		08 53 25.0	
	comp=N,25nm,1.0s						
BDRM	**Kayabasi**	**0.60**	**258**	P	Pg	08 52 58.1	-1.2
ESEN	**Aydn-Nazilli**	**0.62**	**13**	P	Pg	08 52 57.7	-2.0
ESEN				S	Sg	08 53 06.3	-1.4
TAVA	**DENIZLI_Tavas**	**0.65**	**65**	P	Pg	08 53 00.0	-0.1
DAT	**Datca**	**0.67**	**226**	Pg	Pg	08 53 01.4	+0.8
BODT	**Bodrum**	**0.71**	**259**	Pg	Pb	08 53 02.2	-0.8
SABU	**Mula-Dalaman**	**0.73**	**120**	P	Pg	08 53 00.0	-1.8
NAZL	**Nazilli-Aydin**	**0.77**	**7**	Pg	Pg	08 53 03.2	+0.6
AYDB	**Zeytinkoy-Aydi**	**0.79**	**343**	Pg	Pg	08 53 03.4	+0.5
AYDB				Sg	Sb	08 53 15.1	-0.6
GCAM	**G?zelcaml?**	**0.91**	**304**	Pg	Pb	08 53 05.9	-0.5
APMY	**Acipayam-Deniz**	**0.94**	**72**	Pg	Pb	08 53 06.4	-0.6

IDC ***15*** *08:56:27.4±0.8, 56°.56S×25°.30W, h0km, mb4.3/7, mbtmp4.3/8, ML3.8/1, MS3.7/9, Error ellipse: s-maj=38.3km s-min=18.8km az=64.0*
GFZ ***15*** *08:56:30.1±0.8, 57°.S±14°×2°.5W±2°.0, h10km, M4.7/19, mb4.7/19, confirmed*
NEIC ***15*** *08:56:33.4±1.6, 56°.78S±0°.08×25°.8W±0°.2, h35km±1km, mb4.8/47, Error ellipse: s-maj=18.8km s-min=6.6km az=228.0*
ISC 15 08:56:32.8±0.4, 56°.72S±0°.07×25°.83W±0°.09, h33km, n102, σ0§92/88, mb4.7/28, MS3.6/8, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.53**	**287**	Pn	**Pn**	**08 58 06.1**	**-0.2**
VNA1	**Neumayer--Stat**	**15.89**	**158**	⇑P	**Pn**	**09 00 13.1**	**-0.6**
	comp=Z,21nm,0.9s						
VNA2	**Neumayer--Watz**	**16.29**	**158**	⇑P	**Pn**	**09 00 18.0**	**-0.8**
	comp=Z,1.3nm,0.2s,baz=328,slow=15						
VNA2	**Neumayer--Watz**	**16.29**	**158**	P	**Pn**	**09 00 17.9**	**-0.8**
ESPZ	**Base Esperanza**	**16.79**	**234**	Pn	**Pn**	**09 00 23.9**	**-1.2**
SNAA	**Sanae**	**17.82**	**156**	⇑P	**P**	**09 00 38.8**	**+0.4**
	comp=Z,26nm,0.2s						
SNAA	**Sanae**	**17.82**	**156**	P	**P**	**09 00 38.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=308,slow=11,SNR=18						
SNAA				LR	LR	09 05 41.6	
	comp=Z,153nm,18.9s,baz=349,slow=31						
	comp=Z,9.5nm,0.9s						
SNAA	**Sanae**	**17.82**	**156**		**Pn**	**09 00 37.5**	**-0.4**
SNAA	**Sanae**	**17.82**	**156**	P	**P**	**09 00 38.4**	**0.0**
TROLL	**Troll, Antarti**	**19.31**	**153**	⇑P	**P**	**09 00 55.1**	**+0.3**
	comp=Z,116nm,0.7s						
PMSA	**Palmer Station**	**20.04**	**231**	LR	LR	09 07 51.1	
	comp=Z,225nm,18.1s,baz=86,slow=34						
BELA	**Belgrano 2**	**21.47**	**185**		**P**	**09 01 18.4**	**+0.4**
BELA				IAmb	IAmb	09 01 22.5	
	comp=Z,54nm,1.4s						
MG02	**Cerro Sombrero**	**25.03**	**261**	P	**P**	**09 01 52.8**	**-0.6**
TRQA	**Tornquist**	**30.28**	**293**	P	**P**	**09 02 40.7**	**0.0**
TRQA				IAmb	IAmb	09 02 42.2	
	comp=Z,10nm,1.2s						
QSPA	**South Pole Qui**	**33.53**	**180**	P	**P**	**09 03 09.9**	**+0.8**
	comp=Z,3.7nm,0.5s,baz=197,slow=7.2,SNR=49						
QSPA				LR	LR	09 16 06.6	
	comp=Z,108nm,21.1s,baz=212,slow=35						
	comp=Z,3.7nm,0.5s						
QSPA	**South Pole Qui**	**33.53**	**180**	IAmb	IAmb	09 03 23.4	
	comp=Z,27nm,1.5s						
QSPA	**South Pole Qui**	**33.53**	**180**	P	**P**	**09 03 11.0**	**+1.9**
GO05	**Hualane**	**37.78**	**285**	P	**P**	**09 03 45.0**	**-0.7**
GO05				IAmb	IAmb	09 04 02.8	
	comp=Z,20nm,1.4s						
CPUP	**Villa Florida**	**37.82**	**310**	P	**P**	**09 03 46.2**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=160,slow=11,SNR=4.9						
	comp=Z,3.6nm,1.0s						
CPUP	**Villa Florida**	**37.82**	**310**	P	**P**	**09 03 46.4**	**+0.4**
CPUP				IAmb	IAmb	09 03 47.7	
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**37.82**	**310**	PcP	**PcP**	**09 06 01.0**	**-1.1**
MT09	**Talagante**	**38.23**	**287**	P	**P**	**09 03 48.4**	**-1.2**
MT09				IAmb	IAmb	09 04 12.1	
	comp=Z,17nm,1.4s						
MT01	**Popeta**	**38.30**	**287**	P	**P**	**09 03 49.4**	**-0.7**
MT01				IAmb	IAmb	09 03 49.6	
	comp=Z,24nm,1.4s						
MT02	**Curacav**	**38.71**	**288**	P	**P**	**09 03 53.0**	**-0.5**
MT02				IAmb	IAmb	09 04 05.0	
	comp=Z,21nm,1.5s						
ZON	**Zonda**	**38.79**	**292**	P	**P**	**09 03 54.0**	**-0.2**
VA03	**San Esteban**	**38.79**	**289**	P	**P**	**09 03 54.9**	**+0.6**
VA03				IAmb	IAmb	09 04 16.5	
	comp=Z,20nm,1.4s						
MAW	**Mawson**	**39.16**	**143**	P	**P**	**09 03 55.9**	**-0.9**
	comp=Z,4.7nm,1.2s,baz=234,slow=8.7,SNR=3.2						
MAW				LR	LR	09 17 39.3	
	comp=Z,86nm,20.9s,baz=270,slow=32						
	comp=Z,4.7nm,1.2s						
MAW	**Mawson**	**39.16**	**143**	IAmb	IAmb	09 03 57.6	
	comp=Z,1.9nm,1.4s						
SUR	**Sutherland**	**40.10**	**73**	LR	LR	09 17 07.2	
	comp=Z,171nm,18.6s,baz=164,slow=31						
CO01	**Juntas del Tor**	**40.77**	**292**	P	**P**	**09 04 10.9**	**0.0**
AC05	**El Transito**	**41.78**	**293**		**P**	**09 04 19.6**	**+0.5**
AC05				IAmb	IAmb	09 04 20.6	
	comp=Z,6.8nm,0.8s						
AC05	**El Transito**	**41.78**	**293**	P	**P**	**09 04 19.2**	**+0.1**
LCO	**Las Campanas**	**41.86**	**292**	P	**P**	**09 04 20.3**	**+0.4**
AQDB	**Aquidauana**	**42.40**	**316**		**P**	**09 04 23.7**	**-0.3**
AQDB	**Aquidauana**	**42.40**	**316**	P	**P**	**09 04 24.4**	**+0.3**
AC04	**Llanos de Chal**	**42.70**	**292**	P	**P**	**09 04 26.9**	**+0.4**
AC04				IAmb	IAmb	09 04 27.7	
	comp=Z,8.0nm,0.7s						
AC04	**Llanos de Chal**	**42.70**	**292**	P	**P**	**09 04 26.6**	**+0.2**
AC02	**Maricunga**	**42.85**	**296**		**P**	**09 04 28.4**	**+0.2**
AC02	**Maricunga**	**42.85**	**296**	P	**P**	**09 04 29.3**	**+1.1**
SALTA		**43.69**	**301**	P	**P**	**09 04 35.8**	**+0.8**
AC01	**Pan de Azucar**	**44.15**	**295**	P	**P**	**09 04 38.7**	**+0.5**
AC01	**Pan de Azucar**	**44.15**	**295**	P	**P**	**09 04 38.9**	**+0.8**
BOSA	**Boshof**	**45.42**	**74**	LR	LR	09 21 54.0	
	comp=Z,214nm,18.1s,baz=206,slow=34						
SBA	**Scott Base**	**45.46**	**184**	P	**P**	**09 04 48.9**	**+1.0**
SBA				IAmb	IAmb	09 04 50.8	
	comp=Z,9.0nm,1.3s						
AF01	**San Pedro de A**	**45.65**	**300**		**P**	**09 04 51.1**	**+0.7**
VNDA	**Vanda**	**45.94**	**182**	P	**P**	**09 04 52.2**	**+0.5**
	comp=Z,2.0nm,1.0s,baz=181,slow=5.6,SNR=4.5						
	comp=Z,2.0nm,1.0s						
VNDA	**Vanda**	**45.94**	**182**		**P**	**09 04 51.3**	**-0.4**
VNDA	**Vanda**	**45.94**	**182**	P	**P**	**09 04 52.7**	**+0.9**
VNDA				PcP	**PcP**	**09 06 29.7**	**+1.7**
PB06	**IPOC Station P**	**46.52**	**298**	P	**P**	**09 04 57.5**	**+0.3**
PB06				IAmb	IAmb	09 05 05.0	
	comp=Z,9.9nm,0.8s						

CZSB	**Cruzeiro do Su**	**60.99**	**304**	P		**P**	**09 06 42.5**	**-0.4**
BOAV	**Boa Vista**	**65.27**	**321**			**P**	**09 07 10.7**	**-0.5**
BOAV				IAmb		IAmb	09 07 11.8	
	comp=Z,6.3nm,1.0s							
MPGF	**Montagnes des**	**65.40**	**330**	P		**P**	**09 07 11.9**	**-0.1**
MPGF				x		x	09 07 29.4	
OTAV	**Otavalo**	**70.65**	**303**	P		**P**	**09 07 44.9**	**-0.7**
OTAV				IAmb		IAmb	09 07 49.7	
	comp=Z,10nm,1.3s							
OTAV	**Otavalo**	**70.65**	**303**	P		**P**	**09 07 47.5**	**+1.9**
OTAV	**Otavalo**	**70.65**	**303**	P		**P**	**09 07 46.9**	**+1.3**
SACV	**Santiago Islan**	**71.44**	**2**	P		**P**	**09 07 50.2**	**+0.5**
SACV	**Santiago Islan**	**71.44**	**2**	P		**P**	**09 07 50.3**	**+0.6**
TORD	**Torodi Ar. Bea**	**73.28**	**28**	P		**P**	**09 07 59.0**	**-1.6**
	comp=Z,1.0nm,0.9s,baz=195,slow=6.5,SNR=3.9							
	comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.28**	**28**	IAmb		IAmb	09 08 02.6	
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**98.12**	**161**	P		**P**	**09 10 05.3**	**-0.8**
	comp=Z,1.0nm,1.1s,baz=193,slow=8.5,SNR=1.6							
	comp=Z,1.0nm,1.1s							
WMQ	**Urumqi**	**137.30**	**78**	*e*PKP		**PKPdf**	**09 15 52.1**	**+0.2**
NJ2	**Nanjing**	**145.35**	**120**	*e*P		**PKPab**	**09 16 08.3**	**+1.6**
NJ2				pmax		pmax		
	comp=Z,20nm,0.5s							
HHC	**Hu-ho-hao-te**	**148.37**	**102**	*e*P		**PKPbc**	**09 16 14.5**	**-0.6**
SONM	**Songino Array**	**150.02**	**87**	PKPbc		**PKPbc**	**09 16 17.6**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=234,slow=1.9,SNR=6.0							
ILAR	**Eielson Array**	**151.12**	**311**	PKPbc		**PKPbc**	**09 16 20.4**	**-0.5**
	comp=Z,4.3nm,1.0s,baz=116,slow=1.2,SNR=19							
ILAR	**Eielson Array**	**151.12**	**311**			**PKPbc**	**09 16 20.9**	**0.0**
D25K	**Kavik River**	**151.57**	**320**	PKPdf		**PKPbc**	**09 16 19.7**	**-2.2**

AEIC ***15*** *08:59:53.5±2.4,51.83N±0.08×177.39W±0.03,h7km±2km, Error ellipse: s-maj=11.4km s-min=1.4km az=169.0*

BJI ***15*** *08:59:53.0,52.00N×177.30W,h10km,mB5.1/21, mb4.8/53,Ms5.1/57,Ms7 4.8/57*

NEIC ***15*** *08:59:54.8,51.98N×177.38W,h12km*

MOS ***15*** *08:59:54.6±1.3,51.89N×177.40W,h22km,mb5.3/48, MS4.5/10,Error ellipse: s-maj=8.7km s-min=5.4km az=113.0*

ANF ***15*** *08:59:54.4±2.0,51.80N×177.54W,h12km±9km,Error ellipse: s-maj=10.0km s-min=4.3km az=44.0*

NEIC ***15*** *08:59:54.8±1.5,51.98N±0.04×177.38W±0.02,h12km±1km, mb5.3/641,ML5.4/14,Mwb5.2/34,Mww5.2/72,ML5.1(AEIC), Error ellipse: s-maj=6.3km s-min=1.6km az=173.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-0.91; Mθθ1.40; Mφφ-0.49; Mrθ2.30; Mθφ-5.96; Mφr-3.27; Fault plane solution: M₀7.28000×10¹⁶ NP1: φs175.31000°,δ84.37000°,λ27.56000°. NP2:φs82.38000°, δ62.58000°,λ173.66000°. Principal axes: T 8.1547, Plg23.0000°, Azm42.0000°; N -2.3108, Plg02.0000°, Azm186.0000°; P -5.8439, Plg15.0000°, Azm306.0000°;*

NEIC ***15*** *08:59:55.6,51.62N×177.39W,h12km,Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10¹⁶Nm; Mrr-0.04; Mθθ1.64; Mφφ-1.60; Mrθ3.85; Mθφ-6.98; Mφr-1.44; Fault plane solution: M₀8.26000×10¹⁶ NP1: φs176.18000°,δ64.92000°,λ9.33000°. NP2:φs82.20000°, δ81.56000°,λ154.62000°. Principal axes: T 8.9137, Plg24.0000°, Azm36.0000°; N -1.5139, Plg63.0000°, Azm245.0000°; P -7.3998, Plg11.0000°, Azm132.0000°;*

GCMT ***15*** *08:59:55.8±0.1,51.94N±0.01×177.40W±0.01,h15km, MW5.3/142,Moment Tensor Solution. s91,c128; s142,c245; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.03±.01; Mθθ0.17±.02; Mφφ-0.20±.01; Mrθ0.22±.04; Mθφ-0.87±.01; Mφr-0.62±.04; Best double couple: M₀1.10100×10¹⁷ NP1:φs81.00000°,δ55.00000°, λ175.00000°. NP2:φs174.00000°,δ86.00000°,λ35.00000°. Principal axes: T 1.1670, Plg27.0000°, Azm44.0000°; N -0.1330, Plg55.0000°, Azm181.0000°; P -1.0350, Plg21.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***15*** *08:59:55.1±0.1,52.52N±3.13×17.72W±.7,h10km,M5.0/95, mb5.1/95,confirmed*

NEIC ***15*** *08:59:55,52.02N×177.39W,h10km*

IDC ***15*** *08:59:56.5±1.6,51.91N×177.34W,h26km±9km,mb4.6/33, mbtmp4.8/38,ML5.2/4,MS4.5/85,Error ellipse: s-maj=10.4km s-min=8.3km az=10.0*

BGR ***15*** *09:00:05.5,52.57N×177.96W,h33km,mb4.6,Ms4.5*

ISC 15 08:59:55.3±0.5,51.94N±0.03×177.37W±0.02,h13km±2km, n1223,σ1°60/970,mb5.2/399,MS4.6/127,22C-23D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KICM	**Kanaga Island**	**0.11**	**103**		**Pg**	**08 59 58.3**	**-0.1**
KICM					**Sg**	**09 00 01.1**	**+0.6**
KIKV	**Kanaga Island**	**0.14**	**118**		**Pg**	**08 59 58.2**	**-0.6**
KIKV					**Sg**	**09 00 00.9**	**-0.3**
KINC	**Kanaga Island**	**0.15**	**94**		**Pg**	**08 59 58.9**	**0.0**
KINC					**Sg**	**09 00 01.5**	**+0.5**
KIWB	**Kanaga Island**	**0.16**	**124**	Pg	**Pg**	**08 59 58.2**	**-0.9**
KIWB					**Sg**	**09 00 00.7**	**-1.1**
KIWB				IAML		09 00 01.6	
	comp=N,1666μm,0.7s						
KIWB				IAML		09 00 04.0	
	comp=E,1245μm,0.6s						
KIRH	**Kanaga Island**	**0.17**	**104**		**Pg**	**08 59 59.2**	**-0.1**
KIRH					**Sg**	**09 00 02.2**	**+0.1**
KIMD	**Kanaga Island**	**0.20**	**156**		**Pg**	**08 59 58.0**	**-1.7**
KIMD					**Sg**	**09 00 00.5**	**-2.2**
TAPA	**Tanaga Point A**	**0.30**	**245**		**Pn**	**09 00 05.2**	**-0.3**
TAFL	**Tanaga Flats**	**0.38**	**241**		**Pg**	**09 00 01.7**	**-1.1**
TAFL					**Sg**	**09 00 07.6**	**-0.3**
ADK	**Adak**	**0.43**	**98**	P	**Pg**	**09 00 02.5**	**-1.2**
ADK	**Adak**	**0.43**	**98**	P	**Pn**	**09 00 08.9**	**+1.8**
ADK	**Adak**	**0.43**	**98**		**Pg**	**09 00 03.0**	**-0.8**
ADK				IAML		09 00 09.4	
	comp=E,168μm,0.4s						
ADK	**Adak**	**0.43**	**98**		**Sg**	**09 00 09.1**	**-0.4**
ADK	**Adak**	**0.43**	**98**	P	**Pg**	**09 00 03.0**	**-0.8**
TASE	**Tanaga Southea**	**0.43**	**256**		**Pg**	**09 00 03.0**	**-0.8**
TASE					**Sg**	**09 00 09.6**	**0.0**
TANO	**Tanaga North**	**0.47**	**267**		**Pg**	**09 00 04.0**	**-0.5**
TANO					**Sg**	**09 00 11.1**	**+0.4**
ADAG	**Mount Adagdak**	**0.47**	**85**		**Pg**	**09 00 04.5**	**-0.1**
ADAG					**Sg**	**09 00 11.6**	**+0.6**
ETKA	**Kagalaska Isla**	**0.60**	**97**		**Sg**	**09 00 14.1**	**-0.9**
GSSP	**Great Sitkin S**	**0.75**	**78**		**Pg**	**09 00 09.2**	**-0.7**
GSSP					**Sb**	**09 00 20.5**	**+0.1**
GSTD	**Great Sitkin T**	**0.76**	**81**		**Pg**	**09 00 09.3**	**-0.8**
GSTD					**Sb**	**09 00 20.6**	**-0.2**
GSMY	**Great Sitkin M**	**0.82**	**82**		**Pg**	**09 00 10.0**	**-1.1**
GSMY					**Sg**	**09 00 22.1**	**+0.3**
GSTR	**Great Sitkin T**	**0.82**	**79**		**Pg**	**09 00 10.6**	**-0.6**
GSTR				IAML		09 00 27.3	
	comp=E,155μm,0.9s						
GANE	**Gareloi Northe**	**0.88**	**262**		**Pg**	**09 00 10.9**	**-1.4**
GANE					**Sg**	**09 00 23.6**	**-0.3**
GALAA	**Gareloi Lava P**	**0.89**	**259**		**Sg**	**09 00 23.4**	**-0.7**
CEPE	**Semis' Perret**	**1.85**	**272**		**Pn**	**09 00 25.3**	**-1.3**
KOWE	**Korovin West**	**1.97**	**76**		**Pn**	**09 00 27.1**	**-1.2**
KOWE					**Pb**	**09 00 27.6**	**-3.3**
KOWE					**Sb**	**09 00 55.9**	**+0.6**
ATKA	**Atka Island**	**1.98**	**81**	P	**Pn**	**09 00 27.4**	**-0.9**
ATKA	**Atka Island**	**1.98**	**81**	S	**Sb**	**09 00 54.4**	**-1.1**
ATKA	**Atka Island**	**1.98**	**81**		**Sn**	**09 00 53.7**	**+0.8**
ATKA	**Atka Island**	**1.98**	**81**		**Pn**	**09 00 27.5**	**-0.9**
ATKA	**Atka Island**	**1.98**	**81**	IAML		09 00 55.4	
	comp=N,69μm,1.0s						
ATKA				IAML		09 01 02.6	
	comp=E,48μm,1.0s						
KOKL	**Mount Kliuchef**	**1.99**	**78**		**Pn**	**09 00 27.5**	**-1.1**
KOKL					**Pb**	**09 00 27.7**	**-3.6**
KOFP	**Korovin Flat P**	**2.04**	**79**		**Pn**	**09 00 28.4**	**-1.0**
KOSE	**Korovin Southe**	**2.08**	**78**		**Pn**	**09 00 29.3**	**-0.6**
AMKA	**Amchitka**	**2.15**	**256**		**Pn**	**09 00 29.9**	**-0.9**
AMKA				IAML		09 01 00.6	
	comp=E,38μm,1.0s						
LSPA	**Little Sitkin**	**2.51**	**272**		**Pn**	**09 00 35.1**	**-0.7**
LSSE	**Little Sitkin**	**2.52**	**271**		**Pn**	**09 00 34.7**	**-1.1**
LSNW	**Little Sitkin**	**2.55**	**272**		**Pn**	**09 00 35.1**	**-1.1**
SHEM	**Shemya Is, Ala**	**5.29**	**282**	Pn	**Pn**	**09 01 12.2**	**-1.7**
	comp=E,14nm,0.3s,baz=36,slow=4.9,SNR=18						
SHEM				Sn	**Sn**	**09 02 13.9**	**-0.8**
	comp=E,46nm,0.3s,baz=75,slow=24,SNR=5.8						
SHEM				LR	LR	09 03 05.0	
	comp=E,6μm,20.3s,baz=41,slow=36						
	comp=E,400nm,0.9s						
SMY	**Shemya**	**5.29**	**282**	P	**Pn**	**09 01 14.3**	**+0.4**
SMY	**Shemya**	**5.29**	**282**	S	**Sn**	**09 02 19.2**	**+4.5**
SMY	**Shemya**	**5.29**	**282**	P	**Pn**	**09 01 12.2**	**-1.7**
SMY	**Shemya**	**5.29**	**282**		**Pn**	**09 01 12.2**	**-1.7**
SMY	**Shemya**	**5.29**	**282**	IAML		09 02 31.0	
	comp=N,1μm,1.0s						
SMY				IAML		09 02 55.9	
	comp=E,1μm,1.1s						
OKCE	**Okmok Cone E**	**5.79**	**72**		**Pn**	**09 01 20.9**	**0.0**
OKNC	**Okmok New Cone**	**5.82**	**71**		**Pn**	**09 01 22.2**	**+1.0**
OKTU	**Okmok Mt. Tuli**	**5.86**	**72**		**Pn**	**09 01 22.5**	**+0.7**
OKFG	**Magazine Ridge**	**5.94**	**72**		**Pn**	**09 01 23.7**	**+0.9**
MGOD	**Makushin Gods**	**6.62**	**70**		**Pn**	**09 01 32.2**	**0.0**
SPIA	**Saint Paul Isl**	**6.68**	**35**	P	**Pn**	**09 01 31.5**	**-1.4**
SPIA	**Saint Paul Isl**	**6.68**	**35**	S	**Sn**	**09 02 49.1**	**+0.3**
SPIA	**Saint Paul Isl**	**6.68**	**35**		**Pn**	**09 01 31.9**	**-1.1**
SPIA	**Saint Paul Isl**	**6.68**	**35**	P	**Pn**	**09 01 31.8**	**-1.2**
	baz=222,SNR=30						
SPIA				S	**Sn**	**09 02 45.7**	**-3.1**
	baz=222						
MNAT	**Makushin Natee**	**6.75**	**69**		**Pn**	**09 01 33.6**	**-0.3**
UNV	**Unalaska Valle**	**6.84**	**70**	P	**Pn**	**09 01 36.0**	**+0.8**
UNV	**Unalaska Valle**	**6.84**	**70**	S	**Sn**	**09 02 54.5**	**+1.6**
UNV	**Unalaska Valle**	**6.84**	**70**		**Pn**	**09 01 36.3**	**+1.1**
UNV	**Unalaska Valle**	**6.84**	**70**	P	**Pn**	**09 01 35.9**	**+0.6**
	baz=259,SNR=38						
AKRB	**Akutan Reef Bi**	**7.16**	**68**		**Pn**	**09 01 39.4**	**-0.2**
LVA	**Lava Point**	**7.18**	**68**		**Pn**	**09 01 40.3**	**+0.4**
ZRO	**Akutan Zero**	**7.20**	**68**		**Pn**	**09 01 40.5**	**+0.3**
AKV	**Akutan Volcano**	**7.22**	**68**		**Pn**	**09 01 41.1**	**+0.7**
AKLV	**Akutan Long Va**	**7.23**	**68**		**Pn**	**09 01 40.8**	**+0.3**
AHB	**Akutan Harbor**	**7.30**	**68**		**Pn**	**09 01 42.4**	**+0.9**
AKUT	**Akutan**	**7.33**	**68**	P	**Pn**	**09 01 43.5**	**+1.6**
AKUT	**Akutan**	**7.33**	**68**	S	**Sn**	**09 03 06.3**	**+1.5**
AKUT	**Akutan**	**7.33**	**68**		**Pn**	**09 01 43.4**	**+1.6**
AKSA	**Akutan Strait**	**7.37**	**68**		**Pn**	**09 01 43.4**	**+0.9**
SSBA	**Shishaldin**	**8.41**	**65**		**Pn**	**09 01 57.0**	**+0.2**
SSLN	**Shishaldin Nor**	**8.49**	**65**		**Pn**	**09 01 58.1**	**+0.2**
ISNN	**Isanotski Nort**	**8.62**	**65**		**Pn**	**09 02 00.1**	**+0.5**
DT1	**Dutton Round H**	**9.53**	**65**		**Pn**	**09 02 13.3**	**+1.3**
DTNA	**Dutton South F**	**9.55**	**64**		**Pn**	**09 02 13.2**	**+0.9**
PN7A	**Pavlof North-7**	**9.76**	**63**		**Pn**	**09 02 16.4**	**+1.1**
M11K	**Mekoryuk**	**10.49**	**32**		**Pn**	**09 02 24.0**	**-1.1**
M11K	**Mekoryuk**	**10.49**	**32**	P	**Pn**	**09 02 25.2**	**+0.1**
	baz=222,SNR=23						
SDPT	**Sand Point**	**10.59**	**65**	P	**Pn**	**09 02 28.3**	**+1.8**
SDPT	**Sand Point**	**10.59**	**65**		**Pn**	**09 02 27.4**	**+0.9**
SDPT	**Sand Point**	**10.59**	**65**	P	**Pn**	**09 02 27.4**	**+0.9**
	baz=259,SNR=34						
CNBA	**Chernabura Isl**	**11.00**	**68**		**Pn**	**09 02 31.9**	**-0.2**
CHNA	**Chernabura Isl**	**11.00**	**68**	P	**Pn**	**09 02 33.1**	**+1.0**
CHNA	**Chernabura Isl**	**11.00**	**68**	P	**Pn**	**09 02 32.7**	**+0.5**
	baz=262,SNR=9.0						
S14K	**Fog Glacier**	**11.31**	**60**	P	**Pn**	**09 02 38.6**	**+2.1**
	baz=255,SNR=61						
M13K	**Dall Lake**	**11.51**	**37**		**Pn**	**09 02 40.4**	**+1.4**
M13K	**Dall Lake**	**11.51**	**37**	P	**Pn**	**09 02 40.5**	**+1.4**
	baz=232,SNR=27						
O14K	**Tigyukauivet M**	**11.66**	**45**		**Pn**	**09 02 41.0**	**-0.1**
O14K	**Tigyukauivet M**	**11.66**	**45**	P	**Pn**	**09 02 42.2**	**+1.0**
	baz=238,SNR=38						
N14K	**Kuskokwak Cree**	**11.86**	**41**		**Pn**	**09 02 43.2**	**-0.6**
N14K	**Kuskokwak Cree**	**11.86**	**41**	P	**Pn**	**09 02 43.3**	**-0.5**
	baz=235,SNR=95						
CHGN	**Chignik**	**11.93**	**61**		**Pn**	**09 02 45.5**	**+0.6**
CHGN	**Chignik**	**11.93**	**61**	P	**Pn**	**09 02 45.9**	**+1.1**
	baz=257,SNR=42						
K13K	**Kusilvak Mount**	**12.15**	**30**		**Pn**	**09 02 46.9**	**-1.0**
K13K	**Kusilvak Mount**	**12.15**	**30**	P	**Pn**	**09 02 48.4**	**+0.5**
	baz=221,SNR=11						
GAMB	**Gambell**	**12.23**	**12**		**Pn**	**09 02 48.3**	**-0.7**
GAMB	**Gambell**	**12.23**	**12**	P	**Pn**	**09 02 49.2**	**+0.3**
	baz=197						
M14K	**Bethel**	**12.25**	**38**	P	**Pn**	**09 02 50.8**	**+1.6**
	baz=231,SNR=136						
O15K	**Ungalikthiuk R**	**12.26**	**47**		**Pn**	**09 02 48.9**	**-0.6**
O15K	**Ungalikthiuk R**	**12.26**	**47**	P	**Pn**	**09 02 51.0**	**+1.6**
	baz=242,SNR=61						
L14K	**Kuka Creek**	**12.38**	**35**		**Pn**	**09 02 52.0**	**+1.1**
L14K	**Kuka Creek**	**12.38**	**35**	P	**Pn**	**09 02 52.9**	**+2.0**
	baz=227,SNR=52						
N15K	**Kwethluk River**	**12.66**	**43**	P	**Pn**	**09 02 57.1**	**+2.3**
	baz=237,SNR=90						
M15K	**Kasigluk River**	**12.71**	**40**	P	**Pn**	**09 02 57.0**	**+1.5**
	baz=234,SNR=189						
L15K	**Ungalak Mounta**	**13.03**	**35**	P	**Pn**	**09 03 02.5**	**+2.7**
	baz=229						
P16K	**Nushagak River**	**13.05**	**49**		**Pn**	**09 03 00.6**	**+0.6**
P16K	**Nushagak River**	**13.05**	**49**	P	**Pn**	**09 03 02.2**	**+2.2**
	baz=246,SNR=19						
O16K	**Kokwok River B**	**13.24**	**47**	P	**Pn**	**09 03 04.1**	**+1.3**
	baz=243,SNR=48						
R17L	**Mt. Peulik Vol**	**13.36**	**57**	P	**Pn**	**09 03 05.9**	**+1.4**
	baz=254,SNR=24						
N16K	**Nishlik Lake**	**13.38**	**43**	P	**Pn**	**09 03 05.6**	**+1.0**
	baz=239,SNR=48						
K15K	**Wolf Creek Mou**	**13.43**	**33**	P	**Pn**	**09 03 06.8**	**+1.5**
	baz=227,SNR=50						
Q16K	**King Salmon**	**13.55**	**52**	P	**Pn**	**09 03 08.4**	**+1.5**
	baz=250,SNR=93						
M16K	**Timber Creek**	**13.60**	**41**	P	**Pn**	**09 03 08.8**	**+1.2**
	baz=236,SNR=112						
Q17K	**Contact Creek**	**13.79**	**54**	P	**Pn**	**09 03 11.4**	**+1.0**
	baz=252,SNR=76						
L16K	**Owhat River**	**13.79**	**38**	P	**Pn**	**09 03 11.0**	**+0.7**
	baz=233,SNR=101						
P17K	**Kvichak River**	**13.85**	**50**	P	**Pn**	**09 03 12.8**	**+1.8**
	baz=248,SNR=31						
N17K	**Nushagak Hills**	**14.08**	**45**	P	**Pn**	**09 03 15.4**	**+1.2**
	baz=242,SNR=30						
ANM	**Nome**	**14.10**	**22**	P	**Pn**	**09 03 14.5**	**0.0**
	baz=212,SNR=8.1						
SII	**Sitkinak Islan**	**14.29**	**62**	P	**Pn**	**09 03 18.7**	**+1.6**
SII	**Sitkinak Islan**	**14.29**	**62**	P	**Pn**	**09 03 17.6**	**+0.5**
	baz=261						
Q18K	**Katmai Hardscr**	**14.35**	**53**	P	**Pn**	**09 03 20.2**	**+2.2**
	baz=252,SNR=183						
M17K	**Holitna River**	**14.42**	**41**	P	**Pn**	**09 03 19.5**	**+0.6**
	baz=238,SNR=36						
J16K	**Anvik River**	**14.43**	**32**	P	**Pn**	**09 03 20.5**	**+1.6**
	baz=226,SNR=148						
TNA	**Tin City**	**14.48**	**16**	P	**Pn**	**09 03 20.7**	**+1.1**
	baz=204,SNR=6.1						
L17K	**Donlin**	**14.49**	**38**	P	**Pn**	**09 03 20.7**	**+0.9**
	baz=234,SNR=70						
P18K	**Big Mountain,**	**14.49**	**50**	P	**Pn**	**09 03 21.2**	**+1.3**
	baz=249,SNR=220						
PET	**Petropavlovsk**	**14.64**	**284**	P	**Pn**	**09 03 23.9**	**+2.1**
PET	**Petropavlovsk**	**14.64**	**284**	*e*P	**Pn**	**09 03 23.0**	**+1.2**
PET				*e*S	**Sn**	**09 05 59.1**	**-4.6**
PET				pmax	pmax		
	comp=Z,800nm,4.8s						
PET				pmax	pmax		
	comp=Z,115nm,1.5s						
PET				MLR	MLR		
	comp=Z,1μm,18.0s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s						
PET	**Petropavlovsk**	**14.64**	**284**		**Pn**	**09 03 23.0**	**+1.2**
PET	**Petropavlovsk**	**14.64**	**284**	P	**Pn**	**09 03 21.3**	**-0.5**
	comp=Z,2μmcomp=Z,106nm,1.6s						
PET	**Petropavlovsk**	**14.64**	**284**	P	**Pn**	**09 03 23.7**	**+1.9**
O18K	**Koktuh Hills**	**14.68**	**49**	P	**Pn**	**09 03 23.6**	**+1.2**
	baz=247,SNR=85						
F14K	**Arctic Creek**	**14.69**	**18**	P	**Pn**	**09 03 23.0**	**+0.5**
	baz=208,SNR=7.2						
N18K	**Kilae Creek**	**14.72**	**45**	P	**Pn**	**09 03 23.9**	**+0.9**
	baz=243,SNR=73						
G15K	**Niukluk**	**14.78**	**23**	P	**Pn**	**09 03 24.2**	**+0.5**
	baz=214,SNR=22						
I17K	**Unalakleet**	**14.82**	**30**	P	**Pn**	**09 03 25.7**	**+1.4**
	baz=224,SNR=48						
K17K	**Iditarod**	**14.84**	**36**	P	**Pn**	**09 03 25.5**	**+0.9**
	baz=232,SNR=58						
OHAK	**Old Harbor**	**14.89**	**60**	P	**Pn**	**09 03 25.5**	**+0.4**
	baz=260						
H16K	**Elim**	**14.95**	**26**	P	**Pn**	**09 03 26.8**	**+0.9**
	baz=219,SNR=24						
J17K	**VABM Dome**	**15.01**	**33**	P	**Pn**	**09 03 28.3**	**+1.5**
	baz=229,SNR=88						
M18K	**Stony River**	**15.13**	**42**	P	**Pn**	**09 03 29.2**	**+0.8**
	baz=241,SNR=70						
L18K	**Granite Mounta**	**15.16**	**39**	IAmb	IAmb	09 03 31.4	
	comp=Z,348nm,2.0s						
L18K	**Granite Mounta**	**15.16**	**39**	P	**Pn**	**09 03 29.7**	**+0.8**
	baz=237,SNR=53						
PEA0B	**Petropavlovsk-**	**15.20**	**284**	*d*P	**Pn**	**09 03 28.8**	**-0.6**
PETK	**Petropavlovsk-**	**15.20**	**284**	Pn	**Pn**	**09 03 28.9**	**-0.6**
	comp=Z,109nm,1.0s,baz=79,slow=13,SNR=116						
PETK				Sn	**Sn**	**09 06 15.3**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=92,slow=20,SNR=1.1						
PETK				LR	LR	09 08 42.3	
	comp=Z,2μm,21.2s,baz=98,slow=34						
PETK				ScP	**ScP**	**09 12 05.2**	**-3.3**
	comp=Z,1.2nm,0.6s,baz=78,slow=2.1,SNR=4.6						
O19K	**Port Alsworth**	**15.22**	**48**	IAmb	IAmb	09 03 36.2	
	comp=Z,298nm,1.2s						
O19K	**Port Alsworth**	**15.22**	**48**	P	**Pn**	**09 03 30.7**	**+1.1**
	baz=248,SNR=89						
F15K	**North Star Dit**	**15.24**	**20**	P	**Pn**	**09 03 30.6**	**+0.7**
	baz=211						
KDAK	**Kodiak Island**	**15.37**	**58**	Pn	**Pn**	**09 03 30.4**	**-1.2**
	comp=Z,4.8nm,0.3s,baz=240,slow=7.6,SNR=82						
KDAK				Sn	**Sn**	**09 06 20.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=19,slow=18,SNR=1.3						
KDAK				LR	LR	09 10 14.3	
	comp=Z,11μm,18.6s,baz=236,slow=40						
	comp=Z,15nm,0.5s						
KDAK	**Kodiak Island**	**15.37**	**58**	P	**Pn**	**09 03 30.8**	**-0.8**
KDAK				pmax	pmax		
	comp=Z,229nm,0.9s						
KDAK	**Kodiak Island**	**15.37**	**58**		**Pn**	**09 03 30.8**	**-0.8**
KDAK				IAmb	IAmb	09 03 36.7	
	comp=Z,229nm,0.9s						
KDAK	**Kodiak Island**	**15.37**	**58**	P	**Pn**	**09 03 32.2**	**+0.7**
	baz=259						
KDAK	**Kodiak Island**	**15.37**	**58**	P	**P**	**09 03 34.6**	**-1.6**
N19K	**Bonanza Creek**	**15.40**	**46**	P	**Pn**	**09 03 33.2**	**+1.1**
	baz=245,SNR=94						
P19K	**Oil Pt**	**15.54**	**51**	P	**Pn**	**09 03 35.5**	**+1.6**
	baz=251,SNR=47						
H17K	**Granite Mounta**	**15.82**	**28**		**Pn**	**09 03 37.7**	**+0.2**
H17K				IAmb	IAmb	09 03 40.6	
	comp=Z,233nm,1.4s						
H17K	**Granite Mounta**	**15.82**	**28**	P	**Pn**	**09 03 38.9**	**+1.4**
	baz=223,SNR=206						
J18K	**Innoko River**	**15.87**	**35**	IAmb	IAmb	09 03 45.1	
	comp=Z,340nm,1.1s						
J18K	**Innoko River**	**15.87**	**35**	P	**Pn**	**09 03 38.6**	**+0.5**
	baz=233,SNR=353						
L19K	**White Mountain**	**15.88**	**41**	IAmb	IAmb	09 03 45.5	
	comp=Z,284nm,1.0s						
L19K	**White Mountain**	**15.88**	**41**	P	**Pn**	**09 03 39.2**	**+1.0**
	baz=240,SNR=184						
M19K	**Big River Lodg**	**15.93**	**42**	IAmb	IAmb	09 03 45.9	
	comp=Z,207nm,0.9s						
M19K	**Big River Lodg**	**15.93**	**42**	P	**Pn**	**09 03 39.7**	**+0.8**
	baz=242						
O20K	**Slope Mountain**	**15.97**	**50**	P	**Pn**	**09 03 41.2**	**+1.7**
	baz=251,SNR=89						
G17K	**Kiwalik Mounta**	**16.04**	**26**	P	**Pn**	**09 03 40.9**	**+0.6**
	baz=220,SNR=103						
HOM	**Homer**	**16.31**	**52**	P	**Pn**	**09 03 44.7**	**+1.0**
	baz=253,SNR=12						
H18K	**Honnosa River**	**16.44**	**29**	P	**P**	**09 03 47.1**	**-0.9**
	baz=226,SNR=331						
M20K	**Styx River**	**16.45**	**43**	P	**P**	**09 03 47.2**	**-1.1**
	baz=244						
SPCR	**Spurr Chakacha**	**16.57**	**46**	P	**Pn**	**09 03 48.4**	**+1.3**
	baz=248,SNR=118						
J19K	**Poorman**	**16.58**	**35**	P	**Pn**	**09 03 48.2**	**+1.0**
	baz=234,SNR=520						
GCSA	**Galena City Sc**	**16.63**	**32**	P	**P**	**09 03 49.3**	**-0.8**
	baz=229,SNR=74						
F17K	**Baldwin Pennin**	**16.63**	**23**	P	**Pn**	**09 03 48.5**	**+0.8**
	baz=217,SNR=72						
SPU	**Mount Spurr**	**16.63**	**46**	IAmb	IAmb	09 03 53.4	
	comp=Z,556nm,1.4s						
BRLK	**Bradley Lake**	**16.71**	**52**	IAmb	IAmb	09 03 52.2	
	comp=Z,204nm,1.2s						
BRSE	**Bradley Lake S**	**16.77**	**52**	P	**Pn**	**09 03 50.2**	**+0.5**
	baz=254,SNR=19						
K20K	**

KNK **Knik Glacier** 18.34 48 P P 09 04 09.3 +0.2
baz=252,SNR=49
E19K **Redstone River** 18.43 25 IAmb IAmb 09 04 14.6
comp=Z,299nm,0.9s
E19K **Redstone River** 18.43 25 P Pn 09 04 11.9 +1.8
baz=222,SNR=337
C18K **Utukok River** 18.46 19 IAmb IAmb 09 04 15.5
comp=Z,339nm,1.4s
C18K **Utukok River** 18.46 19 P Pn 09 04 12.3 +1.8
baz=213,SNR=69
P23K **Montague Islan** 18.47 52 IAmb IAmb 09 04 13.8
comp=Z,296nm,1.0s
P23K **Montague Islan** 18.47 52 P Pn 09 04 10.8 +0.2
baz=258,SNR=22
SML **Sawmill** 18.52 47 IAmb IAmb 09 04 15.3
comp=Z,212nm,1.0s
SML **Sawmill** 18.52 47 P P 09 04 10.5 -0.7
baz=251,SNR=61
F20K **Avaraart Lake** 18.54 27 P Pn 09 04 12.4 +1.0
baz=226
H21K **Melozitna Rive** 18.54 33 IAmb IAmb 09 04 16.4
comp=Z,258nm,1.1s
H21K **Melozitna Rive** 18.54 33 P Pn 09 04 12.5 +1.0
baz=234,SNR=296
I21K **Tanana** 18.55 35 IAmb IAmb 09 04 15.2
comp=Z,292nm,1.0s
I21K **Tanana** 18.55 35 P Pn 09 04 12.6 +1.1
baz=237,SNR=309
WAT1 **Susitna Watana** 18.79 43 P P 09 04 14.3 +0.2
baz=248
M23K **Glacier View** 18.79 47 P P 09 04 14.2 +0.1
baz=252,SNR=125
GLI **Glacier Island** 18.82 50 IAmb IAmb 09 04 19.4
comp=Z,187nm,0.8s
GLI **Glacier Island** 18.82 50 P P 09 04 13.6 -0.8
baz=256,SNR=14
G21K **Allakaket** 18.84 30 IAmb IAmb 09 04 19.5
comp=Z,252nm,0.8s
G21K **Allakaket** 18.84 30 P Pn 09 04 16.4 +1.4
baz=231,SNR=292
Q23K **Middleton Isla** 18.88 54 P Pn 09 04 15.6 0.0
baz=261
MID **Middleton Isla** 18.89 54 IAmb IAmb 09 04 19.5
comp=Z,307nm,1.0s
RND **Reindeer** 18.89 42 IAmb IAmb 09 04 20.1
comp=Z,263nm,0.8s
MLY **Manley** 18.91 36 IAmb IAmb 09 04 22.4
comp=Z,289nm,1.0s
MLY **Manley** 18.91 36 P Pn 09 04 17.4 +1.3
baz=239,SNR=415
SCM **Sheep Creek Mo** 18.98 47 P P 09 04 16.5 +0.3
baz=252,SNR=133
MCK **McKinley** 18.99 41 IAmb IAmb 09 04 21.0
comp=Z,376nm,1.0s
MCK **McKinley** 18.99 41 P P 09 04 16.7 +0.4
baz=245,SNR=137
HIN **Hinchinbrook I** 18.99 52 IAmb IAmb 09 04 22.1
comp=Z,131nm,0.8s
D19K **Kuna River** 19.00 22 IAmb IAmb 09 04 25.6
comp=Z,349nm,0.9s
D19K **Kuna River** 19.00 22 P Pn 09 04 18.1 +1.0
baz=219,SNR=223
WAT6 **Susitna Watana** 19.05 45 P Pn 09 04 17.5 -0.3
baz=250,SNR=248
FID **Port Fidalgo** 19.09 50 IAmb IAmb 09 04 18.8
comp=Z,322nm,0.9s
H22K **Ishtalitna Cre** 19.16 33 IAmb IAmb 09 04 23.5
comp=Z,168nm,1.1s
H22K **Ishtalitna Cre** 19.16 33 P Pn 09 04 20.3 +1.3
baz=236,SNR=136
C19K **Lookout Ridge** 19.17 19 P Pn 09 04 20.0 +0.9
baz=215,SNR=78
E20K **Nigu River** 19.29 24 P Pn 09 04 20.9 +0.4
baz=223
F21K **Alatna River** 19.30 28 IAmb IAmb 09 04 27.2
comp=Z,214nm,1.1s
F21K **Alatna River** 19.30 28 P Pn 09 04 21.5 +0.8
baz=229,SNR=193
NEA2 **Nenana** 19.32 38 P Pn 09 04 21.0 +0.1
baz=243,SNR=329
MA2 **Magadan** 19.33 306 P P 09 04 19.8 -0.1
comp=Z,3.4nm,0.3s,baz=99,slow=9.4,SNR=43
MA2 S S 09 07 59.2 +1.0
comp=Z,4.1nm,0.8s,baz=132,slow=14,SNR=1.6
MA2 LR LR 09 12 14.1
comp=Z,1μm,18.5s,baz=108,slow=38
comp=Z,155nm,0.9s
MA2 **Magadan** 19.33 306 P Pn 09 04 23.2 +2.2
MA2 **Magadan** 19.33 306 P Pn 09 04 20.8 -0.3
MA2 IAmb IAmb 09 04 24.9
comp=Z,202nm,1.0s
MA2 **Magadan** 19.33 306 P P 09 04 19.7 -0.3
comp=Z,3μmcomp=Z,237nm,1.0s
MA2 **Magadan** 19.33 306 P Pn 09 04 21.3 +0.2
DHY **Denali Highway** 19.38 43 P Pn 09 04 21.3 -0.5
baz=249,SNR=751
EYAK **Cordova Ski Ar** 19.39 51 P Pn 09 04 22.0 +0.3
EYAK **Cordova Ski Ar** 19.39 51 P P 09 04 20.5 -0.1
baz=258,SNR=24
SEY **Seymchan** 19.44 316 P P 09 04 20.8 -0.3
comp=Z,3.0nm,0.3s,baz=114,slow=11,SNR=139
SEY S S 09 08 00.4 +0.1
comp=Z,5.4nm,1.1s,baz=13,slow=23,SNR=1.2
SEY LR LR 09 12 43.6
comp=Z,2μm,18.8s,baz=106,slow=39
comp=Z,252nm,0.9s
SEY **Seymchan** 19.44 316 *d iP* Pn 09 04 22.5 +0.2
SEY pmax pmax
comp=Z,301nm,0.9s
I23K **Minto, Yukon-K** 19.48 37 P Pn 09 04 22.9 +0.2
baz=241,SNR=407
D20K **Etivluk River** 19.52 23 P Pn 09 04 23.6 +0.3
baz=221,SNR=183
KLU **Klutina** 19.53 48 P Pn 09 04 23.8 +0.3
baz=255,SNR=219
M24K **Tolsona, Glenn** 19.59 47 P Pn 09 04 24.2 0.0
baz=253,SNR=231
WRH **Wood River Hil** 19.65 39 IAmb IAmb 09 04 28.9
comp=Z,246nm,1.1s
G22K **Bettles** 19.72 31 P Pn 09 04 25.7 +0.1
baz=233
H23K **Yukon River** 19.76 35 IAmb IAmb 09 04 31.9
comp=Z,305nm,1.1s
H23K **Yukon River** 19.76 35 P Pn 09 04 26.1 0.0
baz=239
A19K **Wainwright** 19.81 16 P Pn 09 04 26.4 -0.3
baz=211
CCB **Clear Creek Bu** 19.83 39 IAmb IAmb 09 04 31.0
comp=Z,325nm,1.2s
F22K **John River** 19.87 29 P Pn 09 04 27.2 -0.2
baz=231
RAGM **Ragged Mountai** 19.88 52 IAmb IAmb 09 04 31.4
comp=Z,228nm,1.0s
COLA **College** 19.92 38 P Pn 09 04 27.5 -0.4
COLA **College** 19.92 38 P P 09 04 26.6 +0.3
COLA pmax pmax
comp=Z,193nm,0.8s
COLA **College** 19.92 38 P P 09 04 26.6 +0.3
COLA IAmb IAmb 09 04 31.5
comp=Z,193nm,0.8s
COLA **College** 19.92 38 P P 09 04 26.0 -0.2
baz=244
COLA **College** 19.92 38 P P 09 04 26.3 0.0
KAIM **Kayak Island** 19.93 53 P P 09 04 26.1 -0.4
KAIM IAmb IAmb 09 04 34.0
comp=Z,214nm,1.2s
KAIM **Kayak Island** 19.93 53 P P 09 04 26.8 +0.4
baz=261
E21K **Killik River** 19.99 25 IAmb IAmb 09 04 32.5
comp=Z,266nm,1.2s
E21K **Killik River** 19.99 25 P P 09 04 28.1 +1.0
baz=226
BMRM **Bremner River** 20.03 50 IAmb IAmb 09 04 31.3
comp=Z,249nm,0.9s
BMRM **Bremner River** 20.03 50 P P 09 04 28.5 +0.9
baz=258,SNR=74
HDA **Harding Lake** 20.07 40 IAmb IAmb 09 04 31.3
comp=Z,184nm,0.9s
HDA **Harding Lake** 20.07 40 P P 09 04 27.0 -1.0
baz=246,SNR=163
G23K **Bananza Creek** 20.07 32 P Pn 09 04 29.5 -0.4
G23K **Bananza Creek** 20.07 32 P Pn 09 04 29.9 +0.1
baz=236,SNR=314
HARP **HAARP** 20.13 46 P Pn 09 04 30.3 -0.2
baz=254,SNR=142
N25K **Chitina, Valde** 20.17 49 P P 09 04 30.2 +1.0
baz=256,SNR=416
POKR **Poker Plat Res** 20.18 38 P P 09 04 29.5 +0.3
baz=244
IL31 20.24 39 IAmb IAmb 09 04 35.3
comp=Z,119nm,0.9s
ILAR **Eielson Array** 20.24 39 P P 09 04 28.6 -1.3
comp=Z,49nm,0.8s,baz=242,slow=9.5,SNR=351
ILAR ScP ScP 09 12 15.2 -3.8
comp=Z,1.5nm,0.7s,baz=276,slow=4.0,SNR=7.0
ILAR LR LR 09 13 03.6
comp=Z,3μm,19.8s,baz=226,slow=39
comp=Z,49nm,0.8s
ILAR **Eielson Array** 20.24 39 P P 09 04 28.7 -1.2
C21K **Knifeblade Rid** 20.30 23 P Pn 09 04 31.7 -0.7
baz=223,SNR=138
COLD **Coldfoot** 20.31 31 P Pn 09 04 32.3 -0.3
baz=235,SNR=497
K24K **Donnelly Dome** 20.31 42 P P 09 04 31.2 +0.6
baz=249,SNR=339
H24K **Noodor Dome** 20.36 36 P Pn 09 04 32.6 -0.6
baz=241,SNR=1000
BERG **Berg Lake** 20.36 52 IAmb IAmb 09 04 35.9
comp=Z,247nm,1.1s
E22K **Anaktuvuk Pass** 20.38 28 P Pn 09 04 32.9 -0.6
baz=230
B20K **Meade River** 20.40 20 IAmb IAmb 09 04 33.7
comp=Z,259nm,1.1s
B20K **Meade River** 20.40 20 P P 09 04 32.2 +0.7
baz=219
B21K **Ikpikpuk River** 20.68 23 P P 09 04 35.1 +0.6
baz=223,SNR=149
RIDG **Independent Ri** 20.68 43 P P 09 04 35.0 +0.4
baz=251,SNR=174
CRQE **Cirque** 20.71 51 P P 09 04 36.3 +1.2
baz=260,SNR=95
J25K **Salcha River,** 20.78 40 P P 09 04 34.5 -1.3
baz=248,SNR=492
TGL **Tana Glacier** 20.84 51 IAmb IAmb 09 04 42.8
comp=Z,258nm,1.0s
MCARA **McCarthy VSAT** 20.86 50 P Pn 09 04 38.0 -1.1
baz=259,SNR=92
MENT **Mentasta** 20.92 45 P Pn 09 04 38.9 -0.8
G24K **Hadweenzic Riv** 20.93 34 P Pn 09 04 39.2 -0.6
baz=240,SNR=895
E23K **Chandalar** 20.98 29 P P 09 04 39.3 +1.3
baz=234,SNR=359
PRP **Porcupine Dome** 21.08 38 P P 09 04 38.0 -1.0
baz=245,SNR=448
M26K **Nabesna, AK** 21.10 47 P P 09 04 40.4 +1.2
baz=256,SNR=117
L26K **Log Cabin Wild** 21.10 45 P P 09 04 41.0 +1.8
baz=254,SNR=850
SCRK **Sand Creek** 21.12 42 P P 09 04 39.6 +0.2
baz=251,SNR=726
F24K **Squaw Lake** 21.22 32 P P 09 04 42.4 +1.9
baz=238,SNR=533
D23K **Nanushuk River** 21.24 27 P P 09 04 41.7 +1.1
baz=230
E24K **Your Creek** 21.34 30 IAmb IAmb 09 04 46.7
comp=Z,117nm,0.7s
E24K **Your Creek** 21.34 30 P P 09 04 42.6 +0.9
baz=235
TOLK **Toolik Lake Re** 21.35 28 P P 09 04 43.2 +1.4
baz=233,SNR=295
G25K **Bearman Lake** 21.43 34 P P 09 04 44.3 +1.6
baz=242,SNR=277
B22K **Teshekpuk Lake** 21.49 22 P P 09 04 43.6 +0.4
baz=223,SNR=41
A21K **Barrow** 21.57 18 P P 09 04 44.2 +0.1
baz=217
M27K **Edge Creek, AK** 21.60 47 P P 09 04 46.2 +1.6
baz=258,SNR=236
A22K **Sinclair Lake** 21.64 20 P P 09 04 45.2 +0.4
baz=220
LOGN **Logan Glacier** 21.74 52 P P 09 04 47.7 +1.5
LOGN IAmb IAmb 09 04 53.0
comp=Z,154nm,1.1s
L27K **Beaver Creek,** 21.78 46 P P 09 04 48.0 +1.5
baz=256
BCAR **Beaver Creek A** 21.80 46 P P 09 04 48.1 +1.4
C23K **Itkillik River** 21.83 25 P P 09 04 47.8 +1.0
baz=229,SNR=450
D24K **Happy Valley** 21.88 27 P P 09 04 48.4 +1.0
baz=233
I26K **Coal Creek Min** 21.91 39 IAmb IAmb 09 04 49.8
comp=Z,93nm,0.9s
I26K **Coal Creek Min** 21.91 39 P P 09 04 46.7 -1.2
baz=249
F25K **Christian Rive** 21.99 33 P P 09 04 50.1 +1.4
baz=240,SNR=324
PCA **Pinnacle** 22.02 54 P P 09 04 50.7 +1.5
PCA IAmb IAmb 09 04 59.0
comp=Z,91nm,0.9s
PINM **Pinnacle** 22.03 54 P P 09 04 50.4 +1.2
baz=265,SNR=11
BVCY **Beaver Creek** 22.07 47 P P 09 04 50.3 +0.6
baz=259
O28M **Mount Upton** 22.13 52 IAmb IAmb 09 05 04.3
comp=Z,73nm,0.8s
O28M **Mount Upton** 22.13 52 P P 09 04 51.0 +0.5
baz=264,SNR=27
YUK3 **Moose Creek** 22.14 49 P P 09 04 51.3 +0.7
baz=261
E25K **Arctic Village** 22.28 31 P P 09 04 52.8 +1.0
baz=240,SNR=414
G26K **Porcupine Rive** 22.33 35 P P 09 04 52.9 +0.6
baz=244,SNR=666
YUK8 **Steele Glacier** 22.40 51 P P 09 04 54.6 +1.2
baz=263,SNR=21
F26K **Sheenjek River** 22.55 33 IAmb IAmb 09 04 59.3
comp=Z,124nm,1.0s
F26K **Sheenjek River** 22.55 33 P P 09 04 55.7 +1.1
baz=248,SNR=204
I27K **Kandik River** 22.62 39 IAmb IAmb 09 04 55.7
comp=Z,80nm,1.0s
I27K **Kandik River** 22.62 39 P P 09 04 54.4 -1.1
baz=250,SNR=69
D25K **Kavik River** 22.68 28 P P 09 04 56.2 +0.1
baz=236,SNR=282
BRWY **Burwash Landin** 22.76 51 P P 09 04 58.2 +1.2
baz=263,SNR=29
H27K **Steamboat Moun** 22.87 38 P P 09 04 56.5 -1.7
baz=249,SNR=74
O29M **Mount Kennedy** 22.88 53 P P 09 04 58.9 +0.6
baz=266,SNR=13
YUK4 **Talbot Arm** 22.94 51 P P 09 05 00.4 +1.3
baz=264,SNR=45
YUK6 **Outpost Mounta** 23.04 52 P P 09 05 00.8 +0.7
baz=265,SNR=17
G27K **Doyon Strip** 23.04 36 P P 09 04 58.6 -1.2
baz=248,SNR=79
DAWY **Dawson** 23.08 44 IAmb IAmb 09 05 06.3
comp=Z,162nm,0.9s
DAWY **Dawson** 23.08 44 P P 09 05 01.6 +1.3
baz=256,SNR=197
M29M **Somme Creek** 23.18 48 IAmb IAmb 09 05 09.9
comp=Z,126nm,0.9s
M29M **Somme Creek** 23.18 48 P P 09 05 01.1 -0.3
baz=261,SNR=103
I28M **Miner Creek** 23.23 40 P P 09 05 01.3 -0.6
baz=253,SNR=164
P29M **Windy Craggy** 23.27 55 P P 09 05 03.6 +1.4
baz=268,SNR=8.9
L29M **L29M** 23.44 46 P P 09 05 04.4 +0.5
baz=260,SNR=151
C26K **Camden Bay** 23.44 28 P P 09 05 04.6 +0.8
baz=237,SNR=225
HYT **Haines Junctio** 23.44 52 IAmb IAmb 09 05 13.9
comp=Z,68nm,0.9s
HYT **Haines Junctio** 23.44 52 P P 09 05 04.6 +0.5
baz=266,SNR=48
E27K **Coleen River** 23.63 33 P P 09 05 06.5 +0.8
baz=245,SNR=178
C27K **Jago River** 23.64 29 IAmb IAmb 09 05 07.9
comp=Z,79nm,0.7s
C27K **Jago River** 23.64 29 P P 09 05 06.2 +0.4
baz=239,SNR=153
J29N **Klondike Camp** 23.67 43 IAmb IAmb 09 05 19.3
comp=Z,100nm,0.9s
J29N **Klondike Camp** 23.67 43 P P 09 05 07.3 +1.1
baz=257,SNR=7.1
P30M **Million Dollar** 23.67 54 P P 09 05 05.9 -0.4
baz=268
N30M **Aishikik Lake** 23.70 51 P P 09 05 06.7 +0.2
baz=265,SNR=22
KUR **Kuril'sk** 23.79 267 P P 09 05 12.1 +4.7
KUR *e*SSS SSS 09 10 26.9
KUR MLR MLR
comp=Z,900nm,15.0s
K29M **Barlow Dome** 23.84 45 P P 09 05 07.5 -0.4
baz=259,SNR=418
M30M **Minto, Yukon** 23.96 48 IAmb IAmb 09 05 19.2
comp=Z,67nm,1.1s
M30M **Minto, Yukon** 23.96 48 P P 09 05 09.7 +0.7
baz=263,SNR=31
PLBC **Pleasant Camp** 23.96 56 P P 09 05 09.2 +0.3
baz=270
F28M **Old Crow** 23.99 35 P P 09 05 09.4 +0.3
baz=248,SNR=180
S31K **Pelican** 24.07 59 P P 09 05 10.0 0.0
baz=274
H29M **Whitestone** 24.08 39 P P 09 05 09.5 -0.5
baz=253,SNR=107
O30N **Mendenhall** 24.13 52 P P 09 05 10.9 +0.3
baz=267
D27M **Malcolm River** 24.30 31 P P 09 05 13.2 +1.1
baz=243
R31K **City Hall, Gus** 24.31 58 P P 09 05 12.3 +0.2
baz=273
N31M **Braeburn, Yuko** 24.33 51 P P 09 05 14.1 +1.7
baz=266,SNR=17
G29M **Pine Creek** 24.42 37 P P 09 05 13.4 +0.2
baz=252,SNR=126
E28M **Babbage River** 24.50 33 P P 09 05 14.6 +0.8
baz=246,SNR=279
J30M **Hart River** 24.50 43 P P 09 05 14.1 +0.1
baz=259,SNR=241
I30M **Mount Dempster** 24.61 42 P P 09 05 13.8 -1.2
baz=257,SNR=453
SIT **Sitka** 24.64 61 P P 09 05 15.6 +0.5
baz=276
WHY **Whitehorse** 24.72 53 P P 09 05 15.0 -1.1
baz=269
TYV **Tymovskoe** 24.75 283 *e*P P 09 05 24.7 +8.5
TYV pmax pmax
comp=Z,14nm,1.3s
TYV pmax pmax
comp=Z,400nm,4.5s
TYV MLR MLR
comp=N,3μm,20.0s
TYV MLR MLR
comp=Z,2μm,20.0s
EPYK **Eagle Plains** 24.76 39 P P 09 05 15.3 -0.9
baz=254,SNR=169
R32K **Eaglecrest** 24.96 58 P P 09 05 18.7 +0.6
baz=274
E29M **Blow River** 24.97 34 P P 09 05 18.4 +0.4
E29M **Blow River** 24.97 34 P P 09 05 18.4 +0.4
baz=249,SNR=177
S32K **Killisnoo** 25.00 60 P P 09 05 19.1 +0.7
baz=276
M31M **Drury Creek, Y** 25.04 49 IAmb IAmb 09 05 25.3
comp=Z,46nm,0.8s
M31M **Drury Creek, Y** 25.04 49 P P 09 05 20.5 +1.8
baz=266,SNR=42
D28M **Stokes Point** 25.05 32 P P 09 05 19.9 +1.2
baz=246,SNR=5.1
G30M **tAoh Zraii Nji** 25.12 38 P P 09 05 20.1 +0.6
baz=254,SNR=104
P32M **Atlin** 25.31 55 P P 09 05 21.7 +0.4
baz=272
F30M **Barrier River** 25.46 36 P P 09 05 24.0 +1.5
baz=253,SNR=188
H31M **Peel River** 25.57 41 P P 09 05 23.2 -0.4
baz=256,SNR=76
N32M **Quiet Lake** 25.61 52 P P 09 05 23.6 -0.4
baz=269
P33M **Teslin, Yukon** 25.75 54 P P 09 05 25.2 -0.1
baz=272,SNR=8.9
G31M **Satah River** 25.85 38 P P 09 05 26.3 +0.3
G31M IAmb IAmb 09 05 46.5
comp=Z,79nm,0.9s
G31M **Satah River** 25.85 38 P P 09 05 26.3 +0.3
baz=256,SNR=39
T33K **Petersburg** 25.96 62 P P 09 05 27.0 -0.1
baz=278
U33K **Whale Pass** 25.97 63 P P 09 05 27.1 -0.1
baz=280
Q32M **Nakina River** 26.09 57 P P 09 05 28.3 -0.2
baz=274
CRAG **Craig** 26.09 65 P P 09 05 28.4 +0.2
baz=281
YSS **Yuzhno-Sakhali** 26.16 275 P P 09 05 32.1 +3.1
YSS **Yuzhno-Sakhali** 26.16 275 *e*P P 09 05 29.1 +0.1
YSS *e*S S 09 09 57.3 -2.9
YSS pmax pmax
comp=Z,20nm,0.9s
YSS pmax pmax
comp=Z,100nm,3.2s
YSS MLR MLR
comp=Z,1μm,17.0s
YSS MLR MLR
comp=N,1μm,14.0s
YSS MLR MLR
comp=E,1μm,18.0s
YSS **Yuzhno-Sakhali** 26.16 275 P P 09 05 28.8 -0.2
F31M **Tsiigehtchic** 26.18 37 IAmb IAmb 09 05 34.1
comp=Z,91nm,1.1s
F31M **Tsiigehtchic** 26.18 37 P P 09 05 28.4 -0.6
baz=256,SNR=12
WRAK **Wrangell Islan** 26.35 62 P P 09 05 30.9 +0.2
baz=280
INK **Inuvik** 26.48 35 IAmb IAmb 09 05 40.5
comp=Z,129nm,1.1s
INK **Inuvik** 26.48 35 P P 09 05 31.9 +0.2
baz=254,SNR=70
INK **Inuvik** 26.48 35 P P 09 05 32.1 +0.4
MMPY **Sheldon Lake,** 26.51 48 IAmb IAmb 09 05 37.3
comp=Z,53nm,0.8s
MMPY **Sheldon Lake,** 26.51 48 P P 09 05 31.7 -0.5
baz=268,SNR=58
R33M **Jennings River** 26.72 55 P P 09 05 34.4 +0.3
baz=275
S34M **Telegraph Cree** 26.79 59 P P 09 05 34.7 +0.1
baz=278
V35K **Ketchikan** 26.96 65 P P 09 05 36.2 +0.1
baz=282
H02S1 **DAWSON INLET T** 26.98 69 P P 09 05 36.6 +0.3
SNR=12
H02S2 **DAWSON INLET T** 26.98 69 P P 09 05 38.5 +2.2
SNR=12
DLBC **Dease Lake** 27.30 57 LR LR 09 17 32.6
comp=Z,2μm,19.6s,baz=267,slow=39
DLBC **Dease Lake** 27.30 57 P P 09 05 38.2 -1.1
baz=277
T35M **Bob Quinn** 27.40 61 P P 09 05 39.3 -0.8
baz=280
JKA **Kamikawa-asahi** 27.60 270 P P 09 05 40.5 -1.5
JKA IAmb IAmb 09 06 14.1
comp=Z,71nm,1.2s
JKA **Kamikawa-asahi** 27.60 270 P P 09 05 44.9 +2.9
ASAJ **Asahikawa** 27.60 270 P P 09 05 40.5 -1.5
ASAJ pmax pmax
comp=Z,71nm,1.2s
YAK **Yakutsk** 29.72 311 LR LR 09 18 35.3
comp=Z,983nm,18.5s,baz=87,slow=38
YAK **Yakutsk** 29.72 311 *e*P P 09 05 59.2 -1.5
YAK *e**PP pP 09 06 04.6 +0.1
YAK *e*PPP PPP 09 07 01.2
YAK *e* 09 09 01.7
YAK *e*S S 09 10 56.9 +0.9
YAK *e*SS ScP 09 12 26.0 -20
YAK *e*SSS SSS 09 12 45.2
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,52nm,1.6s
YAK pmax pmax
comp=N,45nm,2.0s
YAK pmax pmax
comp=E,100nm,2.8s
YAK smax smax
comp=E,51nm,3.0s
YAK smax smax
comp=N,50nm,2.4s
YAK MLR MLR
comp=Z,2μm,27.0s
YAK MLR MLR
comp=N,622nm,14.0s
YAK MLR MLR
comp=E,498nm,14.0s
BBB **Bella Bella** 29.82 70 LR LR 09 17 36.3
comp=E,946nm,18.1s,baz=289,slow=36

C36M	**Paulatuk**	**30.05**	**35**	P	**P**	**09 06 03.1**	**-0.5**		
	baz=262,SNR=9.2								
WRGLY	**Wrigley**	**30.08**	**47**	IAmb	IAmb	09 06 16.7			
	comp=Z,35nm,1.0s								
WRGLY	**Wrigley**	**30.08**	**47**	P	**P**	**09 06 03.5**	**-0.3**		
	baz=274,SNR=5.7								
KOTAN	**Kotaneelee Air**	**30.11**	**53**	P	**P**	**09 06 04.5**	**+0.3**		
	baz=279								
A36M	**Sachs Harbour**	**30.16**	**29**		**P**	**09 06 05.8**	**+1.4**		
A36M	**Sachs Harbour**	**30.16**	**29**	P	**P**	**09 06 06.0**	**+1.5**		
	baz=257,SNR=38								
TIXI	**Tiksi**	**30.59**	**330**	LR	LR	09 19 25.8			
	comp=Z,2µm,18.5s,baz=119,slow=38								
TIXI	**Tiksi**	**30.59**	**330**	ǁ *eP*	**P**	**09 06 08.6**	**+0.3**		
TIXI				pmax	pmax				
	comp=Z,26nm,1.0s								
CBB	**Campbell River**	**32.22**	**72**	IAmb	IAmb	09 06 33.2			
	comp=Z,35nm,1.3s								
ZEA	**Zeya**	**32.79**	**295**	*eP*	**P**	**09 06 26.5**	**-1.3**		
ZEA				*e*		09 14 01.9			
ZEA				MLR	MLR				
	comp=E,500nm,16.0s								
ZEA				MLR	MLR				
	comp=N,300nm,10.0s								
ZEA				MLR	MLR				
	comp=Z,600nm,16.0s								
CLRS	**Cowichan Lake**	**33.46**	**74**	IAmb	IAmb	09 06 35.5			
	comp=Z,36nm,0.8s								
PGC	**Sidney**	**33.94**	**74**	IAmb	IAmb	09 06 47.0			
	comp=Z,49nm,1.5s								
KIP	**Kipapa**	**33.97**	**146**	P	**P**	**09 06 42.0**	**+3.7**		
KIP	**Kipapa**	**33.97**	**146**	P	**P**	**09 06 42.1**	**+3.7**		
KIP	**Kipapa**	**33.97**	**146**	⇑ *eP*	**P**	**09 06 39.5**	**+1.2**		
KIP				pmax	pmax				
	comp=Z,134nm,1.3s								
KIP	**Kipapa**	**33.97**	**146**	P	**P**	**09 06 38.5**	**+0.2**		
HEH	**HeiHe**	**34.02**	**290**	*eP*	**P**	**09 06 40.3**	**+1.8**		
HEH				pmax	pmax				
	comp=Z,10.0nm,0.9s								
HEH				L	L				
	comp=Z,1µm,16.3s								
HEH				L	L				
	comp=Z,1µm,18.2s								
HEH				L	L				
	comp=Z,1µm,19.5s								
USA0B	**Ussuriysk Arra**	**34.11**	**277**	*c i* P	**P**	**09 06 37.2**	**-2.2**		
USRK	**Ussuriysk Ar.**	**34.11**	**277**	P	**P**	**09 06 37.0**	**-2.4**		
	comp=Z,13nm,0.9s,baz=59,slow=11,SNR=5.2								
USRK				LR	LR	09 19 27.9			
	comp=Z,960nm,21.6s,baz=69,slow=34								
	comp=Z,13nm,0.9s								
USRK	**Ussuriysk Ar.**	**34.11**	**277**	P	**P**	**09 06 37.0**	**-2.4**		
YKA	**Yellowknife Ar**	**34.19**	**47**	P	**P**	**09 06 39.0**	**-0.9**		
	comp=Z,7.8nm,0.7s,baz=282,slow=8.3,SNR=19								
YKA				PcP	**PcP**	**09 09 13.6**	**-2.8**		
	comp=Z,1.1nm,0.7s,baz=282,slow=2.9,SNR=1.0								
YKA				ScP	**ScP**	**09 12 57.5**	**-3.2**		
	comp=Z,2.5nm,0.7s,baz=284,slow=3.5,SNR=5.9								
YKA				LR	LR	09 22 48.8			
	comp=Z,4µm,18.9s,baz=276,slow=40								
	comp=Z,7.8nm,0.7s								
YKA	**Yellowknife Ar**	**34.19**	**47**	P	**P**	**09 06 38.1**	**-1.8**		
H11N2	**WAKE ISLAND Hy**	**34.43**	**207**	T	T	09 42 55.7			
	baz=18,slow=76								
H11N3	**WAKE ISLAND Hy**	**34.44**	**207**	T	T	09 42 56.4			
	baz=18,slow=76								
H11N1	**WAKE ISLAND Hy**	**34.45**	**207**	T	T	09 42 57.1			
	baz=18,slow=76								
A05A	**Maple Falls**	**34.59**	**72**	IAmb	IAmb	09 06 44.7			
	comp=Z,32nm,0.8s								
VLA	**Vladivostok**	**34.75**	**276**	ǁ *eP*	**P**	**09 06 44.1**	**-0.8**		
VLA				pmax	pmax				
	comp=Z,43nm,1.1s								
MAJO	**Matsushiro**	**34.75**	**261**	P	**P**	**09 06 48.4**	**+3.3**		
MAJO	**Matsushiro**	**34.75**	**261**	*c i* P	**P**	**09 06 44.7**	**-0.4**		
MAJO				pmax	pmax				
	comp=Z,26nm,1.2s								
MAJO	**Matsushiro**	**34.75**	**261**	P	**P**	**09 06 44.1**	**-0.9**		
MAJO	**Matsushiro**	**34.75**	**261**	P	**P**	**09 06 45.3**	**+0.2**		
MJAR	**Matsushiro Arr**	**34.75**	**261**	P	**P**	**09 06 44.3**	**-0.8**		
	comp=Z,3.9nm,0.7s,baz=48,slow=7.4,SNR=11								
MJAR				PcP	**PcP**	**09 09 17.5**	**-0.9**		
	comp=Z,1.6nm,0.7s,baz=71,slow=2.4,SNR=4.7								
MJAR				ScP	**ScP**	**09 13 01.4**	**-1.8**		
	comp=Z,3.8nm,0.9s,baz=62,slow=3.7,SNR=6.4								
MJAR				LR	LR	09 18 36.6			
	comp=Z,314nm,21.0s,baz=59,slow=32								
	comp=Z,3.9nm,0.7s								
MJAR	**Matsushiro Arr**	**34.75**	**261**	P	**P**	**09 06 44.8**	**-0.3**		
GNW	**Green Mountain**	**34.81**	**75**	IAmb	IAmb	09 06 47.5			
	comp=Z,38nm,0.9s								
MDJ	**Mudanjiang**	**35.36**	**280**	P	**P**	**09 06 52.0**	**+1.8**		
MDJ				S	**S**	**09 12 24.8**	**+0.8**		
MDJ				pmax	pmax				
	comp=Z,10.0nm,1.3s								
MDJ				L	L				
	comp=Z,1µm,17.2s								
MDJ				L	L				
	comp=Z,1µm,19.2s								
MDJ				L	L				
	comp=Z,1µm,21.3s								
H11S1	**WAKE ISLAND Hy**	**35.65**	**207**	T	T	09 44 27.0			
	baz=17,slow=76								
H11S2	**WAKE ISLAND Hy**	**35.66**	**207**	T	T	09 44 25.0			
	baz=17,slow=76								
H11S3	**WAKE ISLAND Hy**	**35.66**	**207**	T	T	09 44 25.1			
	baz=17,slow=76								
PSTR	**Posyet**	**35.67**	**276**	*c e* P	**P**	**09 06 52.1**	**-0.7**		
JGF	**Kuroka**	**35.89**	**261**	P	**P**	**09 06 58.2**	**+3.3**		
JGF	**Kuroka**	**35.89**	**261**	P	**P**	**09 06 55.2**	**+0.4**		
I02E	**Swisshome, OR**	**35.92**	**81**	P	**P**	**09 06 56.2**	**+1.2**		
I02E				IAmb	IAmb	09 06 57.7			
	comp=Z,52nm,0.8s								
COR	**Corvallis**	**36.00**	**80**	P	**P**	**09 06 56.6**	**+0.9**		
COR				pmax	pmax				
	comp=Z,81nm,0.9s								
COR	**Corvallis**	**36.00**	**80**	P	**P**	**09 06 56.6**	**+0.9**		
COR	**Corvallis**	**36.00**	**80**	P	**P**	**09 06 57.5**	**+1.8**		
JHJ	**Hachijo jima 2**	**36.10**	**256**	LR	LR	09 19 28.3			
	comp=Z,422nm,21.0s,baz=335,slow=32								
BNX	**BinXian**	**36.11**	**283**	⇑ P	**P**	**09 06 53.9**	**-2.7**		
BNX				PP	**PnPn**	**09 08 17.3**	**-0.4**		
BNX				S	**S**	**09 12 34.8**	**-0.8**		
BNX				pmax	pmax				
	comp=Z,20nm,0.9s								
BNX				pmax	pmax				
	comp=Z,110nm,6.0s								
BNX				L	L				
	comp=Z,2µm,22.2s								
BNX				L	L				
	comp=Z,1µm,20.6s								
BNX				L	L				
	comp=Z,2µm,18.7s								
LTY	**Liberty**	**36.24**	**74**	IAmb	IAmb	09 06 58.9			
	comp=Z,43nm,1.3s								
B08A	**Colville Reser**	**36.51**	**72**	IAmb	IAmb	09 07 01.0			
	comp=Z,36nm,0.8s								
HOOD	**Mount Hood Mea**	**36.62**	**78**	IAmb	IAmb	09 07 09.1			
	comp=Z,74nm,1.0s								
EPH	**Ephrata**	**36.84**	**74**	IAmb	IAmb	09 07 03.5			
	comp=Z,45nm,0.9s								
I05D	**Terrebonne, OR**	**37.32**	**79**	IAmb	IAmb	09 07 09.1			
	comp=Z,66nm,1.0s								
HAWA	**Hanford**	**37.35**	**75**	IAmb	IAmb	09 07 08.6			
	comp=Z,64nm,0.8s								
F07A	**Phinny Hill Vi**	**37.37**	**76**	IAmb	IAmb	09 07 08.9			
	comp=Z,57nm,0.8s								
E08A	**Dider Farm, El**	**37.58**	**75**	IAmb	IAmb	09 07 10.2			
	comp=Z,38nm,0.9s								
EDM	**Edmonton**	**37.76**	**62**	IAmb	IAmb	09 07 34.9			
	comp=Z,28nm,0.7s								
NEW	**Newport**	**37.85**	**71**	LR	LR	09 20 09.6			
	comp=Z,886nm,21.1s,baz=297,slow=32								
NEW	**Newport**	**37.85**	**71**	IAmb	IAmb	09 07 11.9			
	comp=Z,28nm,0.8s								
NEW	**Newport**	**37.85**	**71**	P	**P**	**09 07 11.0**	**-0.5**		
PINE	**Pine Mountain**	**37.86**	**79**	IAmb	IAmb	09 07 19.6			
	comp=Z,94nm,1.1s								
YPT	**Yellepit**	**37.87**	**75**	IAmb	IAmb	09 07 12.7			
	comp=Z,53nm,0.9s								
L04D	**Klamath Falls**	**37.90**	**82**	IAmb	IAmb	09 07 14.3			
	comp=Z,66nm,0.9s								
YBH	**Yreka Blue Hor**	**37.92**	**83**	LR	LR	09 20 47.2			
	comp=Z,644nm,18.3s,baz=302,slow=33								
YBH	**Yreka Blue Hor**	**37.92**	**83**	IAmb	IAmb	09 07 14.9			
	comp=Z,48nm,1.1s								
E09A	**Wood Farm, Sta**	**38.12**	**74**	IAmb	IAmb	09 07 22.9			
	comp=Z,63nm,1.2s								
CN2	**Changchun**	**38.32**	**281**	P	**P**	**09 07 16.0**	**+0.6**		
CN2				sP	sP	09 07 22.6	+2.1		
CN2				PP	**PnPn**	**09 08 46.4**	**+1.9**		
CN2				S	**S**	**09 13 08.1**	**-1.0**		
CN2				L	L				
	comp=Z,2µm,16.0s								
CN2				L	L				
	comp=Z,1µm,16.0s								
CN2				L	L				
	comp=Z,1µm,20.0s								
BOD	**Bodaibo**	**38.36**	**307**	*eP*	**P**	**09 07 12.6**	**-2.9**		
BOD				pmax	pmax				
	comp=Z,22nm,1.1s								
K05A	**Summer Lake**	**38.48**	**81**	IAmb	IAmb	09 07 19.6			
	comp=Z,98nm,0.9s								
I07A	**Izee**	**38.58**	**78**	IAmb	IAmb	09 07 19.4			
	comp=Z,50nm,0.9s								
HILR	**Hailar Array B**	**38.76**	**292**	LR	LR	09 23 21.2			
	comp=Z,738nm,20.9s,baz=70,slow=36								
RES	**Resolute Bay**	**38.86**	**25**	LR	LR	09 27 10.4			
	comp=Z,1µm,18.2s,baz=276,slow=42								
RES	**Resolute Bay**	**38.86**	**25**	P	**P**	**09 07 20.6**	**+1.0**		
JCJ	**Chichijima**	**39.12**	**246**	LR	LR	09 20 40.8			
	comp=Z,538nm,21.7s,baz=62,slow=32								
HATC	**Hat Creek Radi**	**39.22**	**84**	IAmb	IAmb	09 07 25.4			
	comp=Z,76nm,0.8s								
O03E	**Paynes Creek**	**39.32**	**85**	P	**P**	**09 07 23.6**	**-0.3**		
O03E				IAmb	IAmb	09 07 26.7			
	comp=Z,97nm,1.2s								
J08A	**Circle Bar Ran**	**39.60**	**78**	IAmb	IAmb	09 07 35.3			
	comp=Z,84nm,1.3s								
WVOR	**Wild Horse Val**	**40.02**	**80**	IAmb	IAmb	09 07 32.0			
	comp=Z,61nm,0.8s								
WVOR	**Wild Horse Val**	**40.02**	**80**	P	**P**	**09 07 30.6**	**+0.8**		
KSRS	**Korea Array**	**40.52**	**271**	P	**P**	**09 07 33.4**	**-0.3**		
	comp=Z,7.5nm,0.9s,baz=55,slow=7.5,SNR=16								
KSRS				LR	LR	09 24 17.0			
	comp=Z,312nm,18.5s,baz=35,slow=36								
	comp=Z,7.5nm,0.9s								
KSAR	**Wonju Array Be**	**40.55**	**271**	P	**P**	**09 07 31.5**	**-2.5**		
KSAR	**Wonju Array Be**	**40.55**	**271**	P	**P**	**09 07 31.5**	**-2.5**		
MPK	**Martis Peak**	**41.01**	**85**	IAmb	IAmb	09 07 40.0			
	comp=Z,65nm,1.1s								
PAHR	**Pah Rah Range**	**41.16**	**84**	IAmb	IAmb	09 07 46.3			
	comp=Z,104nm,1.4s								
PNTR	**Pine Nut**	**41.40**	**85**	IAmb	IAmb	09 07 44.6			
	comp=Z,79nm,0.7s								
JNU	**Nakatsue**	**41.52**	**264**	P	**P**	**09 07 41.0**	**-1.2**		
	comp=Z,21nm,1.1s,baz=51,slow=11,SNR=4.7								
JNU				LR	LR	09 23 28.8			
	comp=Z,231nm,21.5s,baz=47,slow=34								
	comp=Z,21nm,1.1s								
TJN	**Taejon**	**41.55**	**270**	P	**P**	**09 07 45.6**	**+3.3**		
BLKN	**Baker Lake**	**41.63**	**40**	IAmb	IAmb	09 07 44.4			
	comp=Z,82nm,1.8s								
HLID	**Hailey**	**41.93**	**76**	P	**P**	**09 07 45.6**	**+0.1**		
BCYI	**Bear Canyon**	**42.11**	**74**	IAmb	IAmb	09 07 47.7			
	comp=Z,47nm,0.8s								
HULI	**Fort Hunter Li**	**42.31**	**89**	IAmb	IAmb	09 07 56.3			
	comp=Z,56nm,0.9s								
NVAR	**Mina Array Bea**	**42.60**	**84**	P	**P**	**09 07 51.0**	**-0.1**		
	comp=Z,14nm,0.7s,baz=292,slow=7.5,SNR=116								
NVAR				PcP	**PcP**	**09 09 43.0**	**-0.1**		
	comp=Z,2.9nm,0.9s,baz=293,slow=4.0,SNR=5.8								
NVAR				ScP	**ScP**	**09 13 31.4**	**-2.0**		
	comp=Z,1.5nm,0.7s,baz=303,slow=4.2,SNR=5.0								
NVAR				LR	LR	09 23 14.6			
	comp=Z,309nm,19.7s,baz=302,slow=33								
	comp=Z,14nm,0.7s								
JSU	**Suzuyama**	**42.89**	**262**	P	**P**	**09 07 56.4**	**+3.1**		
ELK	**Elko**	**43.07**	**80**	LR	LR	09 24 20.4			
	comp=Z,758nm,19.3s,baz=306,slow=34								
YHB	**Horse Butte**	**43.18**	**72**	IAmb	IAmb	09 07 56.1			
	comp=Z,42nm,0.9s								
TPH	**Tonopah**	**43.49**	**84**	IAmb	IAmb	09 08 05.2			
	comp=Z,59nm,1.2s								
DL2	**Dalian**	**43.50**	**278**	P	**P**	**09 07 56.5**	**-1.6**		
DL2				S	**S**	**09 14 21.8**	**-4.5**		
DL2				pmax	pmax				
	comp=Z,25nm,0.8s								
DL2				pmax	pmax				
	comp=Z,160nm,4.1s								
DL2				L	L				
	comp=Z,730nm,15.8s								
DL2				L	L				
	comp=Z,740nm,15.3s								
DL2				L	L				
	comp=Z,810nm,19.0s								
YNR	**Norris Junctio**	**43.50**	**72**	IAmb	IAmb	09 08 10.6			
	comp=Z,35nm,0.9s								
H17A	**Grant Village**	**43.74**	**72**	IAmb	IAmb	09 08 12.7			
	comp=Z,39nm,0.8s								
VES	**Vestal, Richgr**	**43.76**	**88**	IAmb	IAmb	09 08 01.3			
	comp=Z,58nm,0.8s								
YMP	**Mirror Lake Pl**	**43.80**	**72**	IAmb	IAmb	09 08 10.0			
	comp=Z,76nm,1.7s								
FLWY	**Flagg Ranch**	**43.85**	**73**	IAmb	IAmb	09 08 02.2			
	comp=Z,29nm,0.8s								
XLT	**XiLinHaoTe**	**43.88**	**287**	*eP*	**P**	**09 08 04.1**	**+2.8**		
XLT				S	**S**	**09 14 36.3**	**+4.3**		
XLT				pmax	pmax				
	comp=Z,11nm,1.0s								
XLT				L	L				
	comp=Z,180nm,19.9s								
XLT				L	L				
	comp=Z,1µm,20.3s								
XLT				L	L				
	comp=Z,620nm,20.8s								
HVU	**Hansel Valley**	**43.95**	**77**	IAmb	IAmb	09 08 03.0			
	comp=Z,38nm,0.8s								
POIN	**Pond Inlet**	**44.02**	**25**	IAmb	IAmb	09 08 03.6			
	comp=Z,30nm,0.8s								
TULEG	**Thule**	**44.16**	**19**	*i* P	P	09 08 10.6	+7.6		
BGU	**Big Grassy Mou**	**44.30**	**78**	IAmb	IAmb	09 08 15.3			
	comp=Z,42nm,1.1s								
NRIK	**Noril'sk**	**44.37**	**330**	P	**P**	**09 08 05.4**	**+0.7**		
	comp=Z,13nm,0.9s,baz=76,slow=9.3,SNR=16								
NRIK				LR	LR	09 26 55.9			
	comp=Z,726nm,22.0s,baz=70,slow=36								
	comp=Z,13nm,0.9s								
AHID	**Auburn Hatcher**	**44.37**	**75**	P	**P**	**09 08 05.2**	**-0.2**		
SPUT	**South Promonto**	**44.42**	**77**	IAmb	IAmb	09 08 16.1			
	comp=Z,39nm,1.0s								
ILON	**Igloolik, Nuna**	**44.50**	**30**	P	**P**	**09 08 04.4**	**-1.3**		
ILON				IAmb	IAmb	09 08 07.5			
	comp=Z,29nm,0.8s								
S11A	**Rachel**	**44.67**	**83**	IAmb	IAmb	09 08 14.6			
	comp=Z,73nm,1.2s								
FURC	**Furnace Creek,**	**44.73**	**86**	IAmb	IAmb	09 08 09.7			
	comp=Z,47nm,0.8s								
HWUT	**Hardware Ranch**	**44.78**	**76**	P	**P**	**09 08 08.6**	**0.0**		
OSI	**Osito Audit: C**	**44.78**	**89**	IAmb	IAmb	09 08 15.3			
	comp=Z,55nm,0.9s								
DUG	**Dugway, Tooele**	**44.88**	**79**	IAmb	IAmb	09 08 10.8			
	comp=Z,73nm,1.1s								
DUG	**Dugway, Tooele**	**44.88**	**79**	P	**P**	**09 08 09.8**	**+0.4**		
TPO	**Tropico Hills**	**44.92**	**88**	IAmb	IAmb	09 08 16.3			
	comp=Z,28nm,1.0s								
LAO	**LASA Array**	**44.98**	**67**	IAmb	IAmb	09 08 17.9			
	comp=Z,18nm,0.7s								
NOQ	**North Oquirrh**	**45.02**	**78**	IAmb	IAmb	09 08 11.5			
	comp=Z,35nm,0.8s								
GWY	**Greenwater Val**	**45.03**	**86**	IAmb	IAmb	09 08 21.4			
	comp=Z,47nm,1.2s								
QSM	**Queen of Sheba**	**45.05**	**86**	IAmb	IAmb	09 08 17.9			
	comp=Z,36nm,0.9s								
TCUT	**Toone Canyon**	**45.17**	**77**	IAmb	IAmb	09 08 12.8			
	comp=Z,36nm,0.9s								
PSUT	**Pine Spring**	**45.27**	**81**	IAmb	IAmb	09 08 13.7			
	comp=Z,35nm,0.8s								
BW06	**Boulder Array**	**45.29**	**74**	IAmb	IAmb	09 08 13.0			
	comp=Z,41nm,0.8s								
PD31	**Pinedale Array**	**45.29**	**74**	IAmb	IAmb	09 08 13.0			
	comp=Z,43nm,0.9s								
PDAR	**Pinedale Array**	**45.29**	**74**	P	**P**	**09 08 11.9**	**-0.8**		
	comp=Z,32nm,0.8s,baz=308,slow=4.0,SNR=294								
PDAR				PcP	**PcP**	**09 09 51.1**	**-1.1**		
	comp=Z,2.0nm,0.5s,baz=116,slow=1.4,SNR=4.2								
PDAR				ScP	**ScP**	**09 13 40.8**	**-3.6**		
	comp=Z,1.1nm,0.9s,baz=307,slow=3.9,SNR=4.5								
PDAR				LR	LR	09 24 47.2			
	comp=Z,475nm,21.0s,baz=298,slow=33								
	comp=Z,32nm,0.8s								
PDAR	**Pinedale Array**	**45.29**	**74**	P	**P**	**09 08 12.2**	**-0.5**		
PASC	**Pasadena Art C**	**45.41**	**89**	IAmb	IAmb	09 08 19.8			
	comp=Z,50nm,1.4s								
MWC	**Mount Wilson**	**45.45**	**89**	IAmb	IAmb	09 08 20.1			
	comp=Z,37nm,0.8s								
NLU	**North Lily Min**	**45.47**	**78**	IAmb	IAmb	09 08 22.2			
	comp=Z,34nm,1.0s								
GSC	**Goldstone, Bar**	**45.52**	**87**	IAmb	IAmb	09 08 15.8			
	comp=Z,55nm,0.9s								
BFSC	**Mount Baldy Ra**	**45.69**	**89**	IAmb	IAmb	09 08 22.4			
	comp=Z,36nm,0.8s								
BSUT	**Blindstream Ca**	**45.91**	**77**	IAmb	IAmb	09 08 26.5			
	comp=Z,39nm,1.1s								
TCRU	**Three Creeks R**	**46.08**	**80**	IAmb	IAmb	09 08 20.7			
	comp=Z,34nm,0.8s								
BJI2	**Beijing**	**46.14**	**282**	P	**P**	**09 08 18.5**	**-0.7**		
BJI2				pP	**pP**	**09 08 23.0**	**0.0**		
BJI2				S	**S**	**09 15 02.1**	**-2.5**		
BJI2				pmax	pmax				
	comp=Z,6.0nm,0.9s								
BJI2				pmax	pmax				
	comp=Z,32nm,6.1s								
BJI2				L	L				
	comp=Z,470nm,21.1s								
BJI2				L	L				
	comp=Z,320nm,22.2s								
BJI2				L	L				
	comp=Z,560nm,20.6s								
BJT	**Baijiatuau**	**46.14**	**282**	P	**P**	**09 08 18.2**	**-1.0**		
BJT				pmax	pmax				
	comp=Z,9.0nm,0.9s								
BJT	**Baijiatuau**	**46.14**	**282**	P	**P**	**09 08 18.2**	**-1.0**		
MTPC	**Mountain Pass**	**46.17**	**86**	IAmb	IAmb	09 08 20.9			
	comp=Z,26nm,0.7s								
NOR	**Nord**	**46.30**	**4**	P	**P**	**09 08 20.6**	**+0.7**		
NOR	**Nord**	**46.30**	**4**	*i* P	**P**	**09 08 18.6**	**-1.2**		
NOR				IAmb	IAmb	09 08 24.9			
	comp=Z,168nm,2.2s								
TLY	**Talaya**	**46.51**	**303**	LR	LR	09 29 16.1			
	comp=Z,782nm,19.9s,baz=46,slow=38								
P17A	**Butcher Ranch,**	**46.58**	**78**	IAmb	IAmb	09 08 24.0			
	comp=Z,30nm,0.9s								
MTPU	**Mount Pierson**	**46.60**	**81**	IAmb	IAmb	09 08 25.0			
	comp=Z,35nm,0.9s								
LCMT	**Little Creek M**	**46.61**	**82**	IAmb	IAmb	09 08 24.7			
	comp=Z,44nm,0.9s								
Q16A	**Castle Valley**	**46.66**	**79**	IAmb	IAmb	09 08 30.5			
	comp=Z,66nm,1.2s								
NEEM	**North Greenlan**	**46.67**	**14**	*i* P	**P**	**09 08 23.3**	**+0.1**		
NEEM				IAmb	IAmb	09 08 24.3			
	comp=Z,130nm,1.4s								
P18A	**Preston Nutter**	**46.78**	**78**	IAmb	IAmb	09 08 34.2			
	comp=Z,59nm,1.2s								
ULN	**Ulaanbaatar**	**46.81**	**297**	ǁ *eP*	**P**	**09 08 22.6**	**-1.9**		
ULN				pmax	pmax				
	comp=Z,4.0nm,1.1s								
ULN	**Ulaanbaatar**	**46.81**	**297**	P	**P**	**09 08 22.7**	**-1.9**		
PFO	**Pinyon Flats O**	**46.85**	**88**	LR	LR	09 25 38.7			
	comp=Z,474nm,20.0s,baz=296,slow=33								
PFO	**Pinyon Flats O**	**46.85**	**88**	P	**P**	**09 08 24.9**	**-0.1**		
PFO				pmax	pmax				
	comp=Z,37nm,1.4s								
PFO	**Pinyon Flats O**	**46.85**	**88**	P	**P**	**09 08 24.9**	**-0.1**		
PFO				IAmb	IAmb	09 08 33.9			
	comp=Z,37nm,1.4s								
KNB	**Kanab**	**46.86**	**82**	IAmb	IAmb	09 08 32.3			
	comp=Z,55nm,1.0s								
SRU	**San Rafael Swe**	**46.94**	**78**	IAmb	IAmb	09 08 34.5			
	comp=Z,44nm,0.8s								
BORC	**Borrego Spring**	**47.11**	**89**	IAmb	IAmb	09 08 33.5			
	comp=Z,28nm,1.0s								
K22A	**Casper**	**47.15**	**72**	IAmb	IAmb	09 08 36.0			
	comp=Z,20nm,0.8s								
SONM	**Songino Array**	**47.19**	**297**	P	**P**	**09 08 25.6**	**-1.9**		
	comp=Z,1.1nm,0.5s,baz=54,slow=8.1,SNR=7.4								
SONM				ScP	**ScP**	**09 13 49.2**	**-2.9**		
	comp=Z,1.1nm,0.7s,baz=106,slow=3.1,SNR=3.0								
SONM				LR	LR	09 30 19.2			
	comp=Z,1µm,18.1s,baz=87,slow=39								
	comp=Z,1.1nm,0.5s								
SONM	**Songino Array**	**47.19**	**297**	P	**P**	**09 08 25.9**	**-1.5**		
IRM	**Iron Mountain**	**47.30**	**87**	P	**P**	**09 08 28.0**	**-0.4**		
IRM				IAmb	IAmb	09 08 34.8			
	comp=Z,25nm,1.0s								
BAR	**Barrett**	**47.35**	**89**	IAmb	IAmb	09 08 29.9			
	comp=Z,18nm,0.9s								
ZAK	**Zakamensk**	**47.42**	**301**	*eP*	**P**	**09 08 27.5**	**-1.7**		
ZAK				pmax	pmax				
	comp=Z,17nm,1.7s								
W13A	**Hualapai Mount**	**47.45**	**85**	IAmb	IAmb	09 08 30.8			
	comp=Z,24nm,0.7s								
JOW	**Kunigami**	**47.55**	**260**	LR	LR	09 26 44.8			
	comp=Z,280nm,20.7s,baz=13,slow=34								
RSSD	**Black Hills**	**47.72**	**69**	P	**P**	**09 08 29.8**	**-1.9**		
RSSD				pmax	pmax				

comp=Z,59nm,1.0s
KBS Kingsbay 49.27 358 P P 09 08 44.1 +1.2
KBS Kingsbay 49.27 358 *i* P **P 09 08 41.7 -1.2**
MVCO Mesa Verde 49.38 79 P **P 09 08 44.3 -0.3**
X16A Lo Mia Camp, P 49.41 84 IAmb IAmb 09 08 51.8
comp=Z,30nm,1.0s
BTO2 Baotou 49.45 287 *e*P **P 09 08 42.8 -2.2**
BTO2 pP **pP 09 08 47.3 -1.6**
BTO2 sP **sP 09 08 49.8 -0.4**
BTO2 S **S 09 15 47.0 -4.9**
BTO2 SS **SS 09 19 15.9 -7.3**
BTO2 pmax pmax
comp=Z,13nm,0.4s
BTO2 pmax pmax
comp=Z,230nm,8.6s
BTO2 L L
comp=Z,5μm,19.6s
BTO2 L L
comp=Z,2μm,19.9s
BTO2 L L
comp=Z,1μm,18.6s
ISCO Idaho Springs 49.45 74 P **P 09 08 44.9 -0.3**
NJ2 Nanjing 49.68 272 *e*P **P 09 08 46.3 -0.3**
NJ2 pmax pmax
comp=Z,25nm,0.5s
AGMN Agassiz Nation 49.78 60 P **P 09 08 43.7 -3.5**
SPA0 Spitsbergen Ar 49.87 356 *e*P **P 09 08 47.1 -0.4**
SPA0 IAmb IAmb 09 08 55.8
comp=Z,78nm,0.9s
SPA0 *e*S **S 09 15 58.1 +1.5**
SPA0 IAMs_20 IAMs_20 09 35 10.5
comp=Z,654nm,11.9s
SPITS Spitsbergen Ar 49.87 356 P **P 09 08 47.2 -0.3**
comp=Z,38nm,0.7s,baz=46,slow=6.0,SNR=40
SPITS LR LR 09 31 49.8
comp=Z,379nm,18.3s,baz=12,slow=38
comp=Z,38nm,0.7s
SPITS Spitsbergen Ar 49.87 356 P **P 09 08 47.6 +0.1**
SPITS pmax pmax
comp=Z,74nm,1.0s
SPB2 Spitsbergen Ar 49.87 356 P **P 09 08 47.6 +0.1**
S22A 4UR Ranch, Cre 50.04 77 IAmb IAmb 09 08 51.1
comp=Z,29nm,1.1s
X18A Snowflake 50.25 83 IAmb IAmb 09 08 52.7
comp=Z,32nm,0.8s
KNGR Kungurtug, Tuv 50.29 304⇑ *e*P **P 09 08 49.8 -1.4**
KNGR pmax pmax
comp=Z,8.0nm,1.0s
SUSD Miller 50.42 66 IAmb IAmb 09 09 34.6
comp=Z,29nm,0.8s
NUUG Nuugaatsiaq 50.68 20 *i* P **P 09 08 52.7 -0.9**
NUUG IAmb IAmb 09 08 54.2
comp=Z,12nm,0.8s
SDCO Great Sand Dun 50.84 76 IAmb IAmb 09 08 56.7
comp=Z,27nm,0.9s
DAG Danmarks Havn 50.84 6 P **P 09 08 54.9 +0.1**
DAG Danmarks Havn 50.84 6 *i* P **P 09 08 54.0 -0.9**
DAG IAmb IAmb 09 08 55.5
comp=Z,36nm,1.3s
OGNE Ogallala 50.84 71 IAmb IAmb 09 09 05.0
comp=Z,28nm,0.7s
HSPB Hornsund (broa 51.07 356 P **P 09 08 57.6 +1.0**
NIAQ Niaqornat 51.14 21 *i* P **P 09 08 57.1 0.0**
NIAQ IAmb IAmb 09 08 58.9
comp=Z,28nm,0.7s
K30B Basset 51.15 68 IAmb IAmb 09 09 05.2
comp=Z,51nm,1.0s
TUC Tucson 51.24 85 P **P 09 08 58.7 +0.2**
TUC pmax pmax
comp=Z,48nm,1.1s
TUC Tucson 51.24 85 P **P 09 08 58.7 +0.2**
TUC IAmb IAmb 09 09 05.1
comp=Z,48nm,1.1s
TUC Tucson 51.24 85 P **P 09 08 58.8 +0.3**
SAATT Saattut 51.56 20 *i* P **P 09 08 59.0 -1.3**
SAATT IAmb IAmb 09 09 03.7
comp=Z,13nm,1.0s
KSCO Kaye Shedlock' 51.73 73 IAmb IAmb 09 09 10.5
comp=Z,82nm,1.2s
T25A Trinidad 51.89 76 IAmb IAmb 09 09 05.1
comp=Z,62nm,0.9s
LYN LuoYang 51.92 279 P **P 09 09 03.4 -0.1**
LYN S **S 09 16 23.6 -2.3**
LYN pmax pmax
comp=Z,19nm,0.8s
LYN pmax pmax
comp=Z,250nm,12.0s
LYN L L
comp=Z,860nm,18.2s
LYN L L
comp=Z,930nm,18.9s
LYN L L
comp=Z,1μm,17.2s
FRB Frobisher Bay 52.08 32 LR LR 09 34 31.4
comp=Z,1μm,18.9s,baz=300,slow=40
FRB Frobisher Bay 52.08 32 P **P 09 09 03.4 -0.9**
TASM ASL Pad, Albuq 52.11 80 IAmb IAmb 09 09 11.7
comp=Z,29nm,1.3s
ANMO Albuquerque 52.11 80 LR LR 09 30 11.7
comp=Z,527nm,18.2s,baz=308,slow=35
ANMO Albuquerque 52.11 80 *c* *i*P **P 09 09 04.8 -0.4**
ANMO pmax pmax
comp=Z,21nm,1.0s
ANMO Albuquerque 52.11 80 P **P 09 09 04.7 -0.5**
ANMO Albuquerque 52.11 80 P **P 09 09 05.0 -0.2**
ECSD EROS Data Cent 52.18 65 P **P 09 09 03.0 -2.3**
GDH Godhavn 52.34 22 *i* P **P 09 09 04.5 -1.6**
GDH IAmb IAmb 09 09 06.7
comp=Z,12nm,0.9s
Y22A Socorro 52.48 81 IAmb IAmb 09 09 14.9
comp=Z,48nm,1.1s
SUMG Summit 52.53 14 P **P 09 09 08.0 0.0**
SUMG pmax pmax
comp=Z,44nm,1.2s
SUMG Summit 52.53 14 P **P 09 09 08.0 0.0**
SUMG IAmb IAmb 09 09 09.9
comp=Z,44nm,1.2s
SUMG Summit 52.53 14 P **P 09 09 08.5 +0.5**
SUMG Summit 52.53 14 *i* P **P 09 09 07.4 -0.6**
SUMG IAmb IAmb 09 09 18.4
comp=Z,25nm,1.0s
319A Douglas 52.81 85 IAmb IAmb 09 09 16.8
comp=Z,41nm,1.1s
ILULI Ilulissat 52.92 21 P **P 09 09 11.0 +0.6**
ILULI Ilulissat 52.92 21 *i* P **P 09 09 09.0 -1.4**
ILULI IAmb IAmb 09 09 11.0
comp=Z,16nm,0.8s
121A Cookes Peak, D 52.93 83 IAmb IAmb 09 09 17.9
comp=Z,34nm,0.9s
DBG Daneborg 53.10 8 P **P 09 09 11.4 -0.2**
DBG Daneborg 53.10 8 *i* P **P 09 09 09.1 -2.5**
DBG IAmb IAmb 09 09 11.9
comp=Z,20nm,1.1s
BJO1 Bjornoya 53.36 355 *e*P **P 09 09 13.9 +0.3**
BJO1 IAMs_20 IAMs_20 09 43 15.2
comp=Z,494nm,12.4s
RTBA Rita Blanca 53.36 76 IAmb IAmb 09 09 14.6
comp=Z,34nm,0.9s
L34A Svendsen Farm, 53.45 66 IAmb IAmb 09 09 18.6
comp=Z,28nm,0.6s
WHN Wuhan 53.51 274 P **P 09 09 13.5 -1.8**
CBKS Cedar Bluff 53.57 72 IAmb IAmb 09 09 24.0
comp=Z,48nm,0.8s
SSLB Suanglung 54.27 263 P **P 09 09 24.2 +3.2**
SSLB Suanglung 54.27 263 P **P 09 09 19.9 -1.1**
ZALV Zalesovo Beam 54.29 314 P **P 09 09 20.5 -0.2**
comp=Z,0.7nm,0.5s,baz=47,slow=2.6,SNR=4.3
ZALV PcP **PcP 09 10 23.0 -1.6**
comp=Z,1.8nm,0.7s,baz=40,slow=5.6,SNR=3.9
ZALV LR LR 09 35 55.0
comp=Z,401nm,18.3s,baz=38,slow=40
XAN Xi'an 54.42 281 P **P 09 09 23.3 +1.3**
XAN S **S 09 17 03.3 +3.2**
XAN pmax pmax
comp=Z,9.0nm,1.0s
XAN pmax pmax
comp=Z,170nm,4.6s
XAN L L
comp=Z,1μm,17.9s
XAN L L
comp=Z,750nm,18.0s
XAN L L
comp=Z,1μm,19.8s
R32A Long Quarter, 54.43 71 IAmb IAmb 09 09 31.0
comp=Z,18nm,0.8s
N35A Tabor 54.59 67 IAmb IAmb 09 09 56.1
comp=Z,40nm,0.8s
SFJD Kangerlussuaq 54.79 23 LR LR 09 36 31.8
comp=Z,547nm,19.1s,baz=316,slow=40
SFJD Kangerlussuaq 54.79 23 P **P 09 09 24.0 -0.1**
SFJD pmax pmax
comp=Z,12nm,0.8s
SFJD Kangerlussuaq 54.79 23 P **P 09 09 24.0 -0.1**
SFJD Kangerlussuaq 54.79 23 *i* P **P 09 09 23.6 -0.5**
SFJD IAmb IAmb 09 09 26.2
comp=Z,12nm,0.8s
MNTX Cornudas Mount 54.98 82 IAmb IAmb 09 09 32.6
comp=Z,48nm,1.0s
MNTX Cornudas Mount 54.98 82 P **P 09 09 26.2 +0.2**
MSTX Muleshoe 55.01 78 IAmb IAmb 09 09 32.3
comp=Z,61nm,1.3s
AMTX Amarillo 55.04 76 IAmb IAmb 09 09 34.5
comp=Z,23nm,0.8s
NOKA Waynoka 55.50 73 IAmb IAmb 09 09 36.3
comp=Z,25nm,0.9s
TPB28 55.54 81 IAmb IAmb 09 09 37.0
comp=Z,31nm,1.0s
TPB11 China Draw 55.64 81 IAmb IAmb 09 09 36.5
comp=Z,26nm,1.0s
OK038 West end E0370 55.72 73 IAmb IAmb 09 09 31.0
comp=Z,34nm,1.0s
KAN01 Argonia South 55.84 72 IAmb IAmb 09 09 39.0
comp=Z,27nm,0.9s
VHRN Van Horn 55.86 82 IAmb IAmb 09 09 39.0
comp=Z,48nm,1.0s
DGZ Jazzator, Alta 55.88 309‖ *e*P **P 09 09 31.8 -0.7**
DGZ pmax pmax
comp=Z,6.0nm,1.2s
TPB13 Reeves - Culbe 56.02 81 IAmb IAmb 09 10 34.7
comp=Z,21nm,0.8s
LZH Lanzhou 56.08 287 *e*P P 09 09 38.9 +4.8
LZH pP sP 09 09 44.6 +5.3
LZH pmax pmax
comp=Z,19nm,1.3s
LZH L L
comp=Z,2μm,16.5s
LZH L L
comp=Z,1μm,16.2s
LZH L L
comp=Z,1μm,16.2s
128A Castleberry Fa 56.11 79 IAmb IAmb 09 09 40.1
comp=Z,51nm,1.1s
CROK Carrier 56.15 72 IAmb IAmb 09 09 41.2
comp=Z,86nm,1.6s
GTA2 Gaotai 56.16 292 *e*P **P 09 09 32.6 -2.0**
GTA2 sS sS 09 17 33.8 +3.9
GTA2 pmax pmax
comp=Z,6.0nm,1.0s
GTA2 L L
comp=Z,1μm,20.3s
GTA2 L L
comp=Z,1μm,19.7s
GTA2 L L
comp=Z,730nm,19.0s
LZDM Lanzhou Array 56.26 287 LR LR 09 34 57.7
comp=Z,679nm,19.4s,baz=70,slow=37
L40A Anamosa 56.28 63 IAmb IAmb 09 09 46.6
comp=Z,40nm,1.6s
DKNS Dickens 56.33 77 IAmb IAmb 09 09 36.1
comp=Z,45nm,0.8s
TPB06 Permian Basin 56.34 80 IAmb IAmb 09 09 41.5
comp=Z,24nm,0.9s
POST Post 56.40 78 IAmb IAmb 09 09 36.5
comp=Z,43nm,0.9s
ODSA Odessa 56.42 79 IAmb IAmb 09 09 42.0
comp=Z,35nm,1.0s
TPB01 Permian Basin 56.49 81 IAmb IAmb 09 09 42.6
comp=Z,40nm,1.1s
SCO Scoresbysund 56.60 10 P **P 09 09 38.0 +1.0**
SCO Scoresbysund 56.60 10 *i* P **P 09 09 36.2 -0.8**
SCO IAmb IAmb 09 09 38.3
comp=Z,16nm,1.1s
VADS Vadso 56.71 349 *e*P **P 09 09 38.2 +0.4**
VADS *e*S **S 09 17 30.9 +1.4**
VADS IAMs_20 IAMs_20 09 43 13.2
comp=Z,484nm,16.4s
SN07 Snyder 07 56.75 77 IAmb IAmb 09 09 46.3
comp=Z,72nm,1.5s
TPB05 Hovey Rd 56.78 81 IAmb IAmb 09 09 43.9
comp=Z,33nm,1.0s
HAMF Hammerfest 56.78 352 *e*P **P 09 09 38.5 +0.2**
HAMF *e*S **S 09 17 32.1 +1.6**
HAMF IAMs_20 IAMs_20 09 39 47.9
comp=Z,534nm,18.5s
OK048 Pawnee Station 56.82 72 IAmb IAmb 09 09 46.0
comp=Z,43nm,1.2s
OK051 E0350 and S346 56.82 72 IAmb IAmb 09 09 45.9
comp=Z,41nm,1.4s
MNHN Monahans 56.83 80 IAmb IAmb 09 09 45.0
comp=Z,43nm,0.8s
WMOK Wichita Mounta 56.88 75 IAmb IAmb 09 09 39.8
comp=Z,21nm,0.8s
WMOK Wichita Mounta 56.88 75 P **P 09 09 38.8 -0.8**
OK029 Liberty Lake 56.94 73 P **P 09 09 38.1 -1.9**
OK029 IAmb IAmb 09 09 46.6
comp=Z,38nm,0.9s
ALPN Alpine 56.97 82 IAmb IAmb 09 09 47.8
comp=Z,28nm,0.9s
TMB01 Midkiff 57.02 79 IAmb IAmb 09 09 46.4
comp=Z,21nm,1.0s
JNW Jan Mayen West 57.08 4 *e*S **S 09 17 35.6 +1.3**
JNW IAMs_20 IAMs_20 09 37 31.5
comp=Z,464nm,23.9s
JMIC Jan Mayen 57.12 4 IAMs_20 IAMs_20 09 39 13.9
comp=Z,326nm,15.2s
JNE Jan Mayen East 57.12 4 IAMs_20 IAMs_20 09 37 32.2
comp=Z,443nm,23.4s
JMI Jan Mayen 57.16 4 IAMs_20 IAMs_20 09 38 21.3
comp=Z,741nm,30.6s
OK052 Battle Ridge R 57.19 72 IAmb IAmb 09 09 48.9
comp=Z,80nm,1.4s
KEV Kevo 57.32 350 P **P 09 09 46.1 +3.9**
FNO Franklin 57.34 73 IAmb IAmb 09 09 50.4
comp=Z,76nm,1.4s
LPIG La Paz 57.36 92 LR LR 09 31 02.7
comp=Z,250nm,18.1s,baz=310,slow=32
DEOK Depew 57.48 72 IAmb IAmb 09 09 50.8
comp=Z,56nm,1.3s
SOEG Soedalen 57.53 14 *i* P **P 09 09 42.7 -0.9**
SOEG IAmb IAmb 09 09 55.9
comp=Z,20nm,1.1s
X34A Smith Ranch, M 57.54 74 IAmb IAmb 09 09 52.4
comp=Z,52nm,1.3s
ARA0 ARCESS Array S 57.68 351 *e*P **P 09 09 44.6 -0.2**
ARA0 IAmb IAmb 09 09 50.1
comp=Z,52nm,1.2s
ARA0 *e*S **S 09 17 43.0 +0.6**
ARA0 IAMs_20 IAMs_20 09 36 53.5
comp=Z,642nm,19.0s
ARA0 IAMs_20 IAMs_20 09 36 53.6
comp=Z,642nm,19.0s
ARCES ARCESS Array B 57.68 351 P **P 09 09 44.5 -0.2**
comp=Z,13nm,0.8s,baz=28,slow=8.1,SNR=24
ARCES LR LR 09 37 21.2
comp=Z,472nm,19.0s,baz=4.0,slow=39
comp=Z,13nm,0.8s
ARCES ARCESS Array B 57.68 351 P **P 09 09 43.9 -0.9**
ARCES IAmb IAmb 09 09 50.4
comp=Z,40nm,1.1s
TX31 Lajitas Ar. Si 57.69 83 IAmb IAmb 09 09 51.5
comp=Z,61nm,1.1s
TXAR Lajitas Array 57.69 83 P **P 09 09 44.4 -1.1**
comp=Z,15nm,0.8s,baz=297,slow=4.7,SNR=160
TXAR ScP **ScP 09 14 35.0 -2.8**
comp=Z,0.8nm,0.8s,baz=326,slow=4.2,SNR=4.5
TXAR LR LR 09 33 06.3
comp=Z,376nm,18.2s,baz=314,slow=34
comp=Z,15nm,0.8s
TXAR Lajitas Array 57.69 83 P **P 09 09 44.9 -0.6**
WTFS Witchita Falls 57.74 75 IAmb IAmb 09 09 45.7
comp=Z,32nm,0.9s
TUL3 Leonard 57.84 72 IAmb IAmb 09 09 53.3
comp=Z,89nm,1.6s
SLBS Sierra La Lagu 57.89 92 P **P 09 09 46.7 -0.2**
SLBS Sierra La Lagu 57.89 92 P **P 09 09 47.3 +0.4**
LVZ Lovozero 58.11 346 *d* iP **P 09 09 51.1 +3.3**
LVZ pmax pmax
comp=Z,62nm,1.0s
LVZ Lovozero 58.11 346 P **P 09 09 47.5 -0.3**
LVZ IAmb IAmb 09 09 53.7
comp=Z,53nm,1.0s
LVZ Lovozero 58.11 346 P **P 09 09 47.2 -0.6**
comp=Z,71nm,1.0s
LVZ Lovozero 58.11 346 P **P 09 09 51.6 +3.8**
JETT Jettan, Norway 58.12 353 *e*P **P 09 09 48.2 +0.3**
JETT IAmb IAmb 09 10 01.5
comp=Z,46nm,1.1s
OZNA Ozona 58.12 79 IAmb IAmb 09 09 55.7
comp=Z,24nm,0.9s
TRO Tromso 58.15 353 *e*P **P 09 09 48.4 +0.4**
TRO IAmb IAmb 09 09 55.5
comp=Z,31nm,1.1s
TRO *e*S **S 09 17 49.9 +1.4**
TRO IAMs_20 IAMs_20 09 41 42.1
comp=Z,439nm,19.6s
HPIG 58.17 86 IAmb IAmb 09 09 55.0
comp=Z,30nm,1.0s
HPIG 58.17 86 P **P 09 09 48.5 -0.6**
KTK1 Kautokeino 58.41 351 *e*P **P 09 09 49.6 -0.2**
KTK1 IAmb IAmb 09 09 55.0
comp=Z,86nm,1.8s
KTK1 IAMs_20 IAMs_20 09 40 12.7
comp=Z,428nm,20.4s
APA Apatity 58.59 347 *e*P **P 09 09 54.0 +2.9**
APA pmax pmax
comp=Z,13nm,1.1s
ZSN Zaisan 58.67 308 *e*P **P 09 09 53.1 +1.1**
ZSN Zaisan 58.67 308 *e*P **P 09 09 53.1 +1.1**
P43A Skaggs, Pawnee 58.87 64 IAmb IAmb 09 10 19.9
comp=Z,17nm,0.8s
CCM Cathedral Cave 58.99 67 P **P 09 09 51.4 -2.9**
SCHQ Schefferville 59.01 39 P **P 09 09 53.0 -1.2**
comp=Z,11nm,0.9s,baz=318,slow=6.5,SNR=9.4
SCHQ LR LR 09 37 46.0
comp=Z,848nm,18.9s,baz=316,slow=38
comp=Z,11nm,0.9s
BRDY Brady 59.16 78 IAmb IAmb 09 09 55.7
comp=Z,21nm,1.1s
JCT Junction City 59.24 79 IAmb IAmb 09 10 00.9
comp=Z,28nm,0.9s
KURK Kurchatov 59.27 314 P **P 09 09 56.0 -0.1**
KURK pmax pmax
comp=Z,21nm,1.2s
KURK Kurchatov 59.27 314 P **P 09 09 56.0 -0.1**
KURK IAmb IAmb 09 10 24.5
comp=Z,21nm,1.2s
KURK Kurchatov 59.27 314 P **P 09 09 56.2 +0.2**
KURBB Kurchatov Arra 59.38 314 P **P 09 09 55.2 -1.6**
comp=Z,2.6nm,0.7s,baz=42,slow=6.5,SNR=13
KURBB LR LR 09 38 47.2
comp=Z,506nm,18.2s,baz=260,slow=39
comp=Z,2.6nm,0.7s
FVM French Village 59.51 66 IAmb IAmb 09 10 42.1
comp=Z,27nm,1.2s
SGF Sodankyl 59.59 350 P **P 09 09 58.7 +0.7**
Q44A Meyer Farm, Va 59.66 65 IAmb IAmb 09 10 06.0
comp=Z,19nm,1.1s
SFIN Lafayette 59.70 62 IAmb IAmb 09 09 59.4
comp=Z,16nm,0.9s
GULI GuiLin 59.71 273 P **P 09 09 56.5 -3.0**
GULI S **S 09 18 07.4 -2.5**
GULI pmax pmax
comp=Z,21nm,1.0s
GULI L L
comp=Z,310nm,19.4s
GULI L L
comp=Z,270nm,19.0s
GULI L L
comp=Z,430nm,17.3s
CD2 Chengdu 59.73 282 P **P 09 09 58.3 -1.3**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
CD2 L L
comp=Z,660nm,16.5s
CD2 L L
comp=Z,690nm,17.1s
CD2 L L
comp=Z,630nm,16.5s
WMQ Urumqi 59.78 303 ⇑P **P 09 10 02.0 +2.2**
WMQ pmax pmax
comp=Z,23nm,0.6s
WMQ L L
comp=Z,2μm,21.7s
WMQ L L
comp=Z,940nm,23.1s
WMQ L L
comp=Z,700nm,17.7s
LOF Lofoten 59.97 355 *e*P **P 09 10 01.3 +0.7**
LOF IAmb IAmb 09 10 05.0
comp=Z,39nm,1.3s
LOF *e*S **S 09 18 14.1 +2.1**
LOF IAMs_20 IAMs_20 09 34 34.1
comp=Z,347nm,24.2s
STEI Steigen 60.08 355 *e*P **P 09 10 01.6 +0.2**
STEI IAmb IAmb 09 10 06.6
comp=Z,67nm,1.9s
STEI IAMs_20 IAMs_20 09 34 56.5
comp=Z,349nm,25.1s
MIAR Mount Ida 60.09 71 P **P 09 10 00.8 -1.1**
BUKO Buck Lake 60.17 53 IAmb IAmb 09 11 14.1
comp=Z,24nm,1.2s
OLIL Olney 60.29 64 IAmb IAmb 09 10 27.6
comp=Z,17nm,0.8s
WHAR Wooly Hollow 60.32 70 IAmb IAmb 09 10 09.8
comp=Z,79nm,1.9s
MK31 Makanchi Array 60.38 309⇑ *e*P **P 09 10 04.4 +0.6**
MKAR Makanchi Array 60.38 309 P **P 09 10 03.0 -0.8**
comp=Z,2.2nm,0.9s,baz=64,slow=5.5,SNR=5.9
MKAR LR LR 09 37 51.4
comp=Z,593nm,18.6s,baz=33,slow=38
FAUS Fauske 60.62 354 *e*P **P 09 10 05.2 +0.1**
FAUS IAmb IAmb 09 10 10.6
comp=Z,52nm,1.3s
FAUS *e*S **S 09 18 22.6 +2.2**
FAUS IAMs_20 IAMs_20 09 43 28.6
comp=Z,419nm,17.1s
SADO Sadowa 60.78 54 LR LR 09 36 57.3
comp=Z,772nm,20.8s,baz=346,slow=36
BLO Bloomington 60.86 63 IAmb IAmb 09 10 58.9
comp=Z,47nm,1.6s
833A Chaparral WMA, 61.03 80 P **P 09 10 07.6 -0.8**
833A IAmb IAmb 09 10 14.5
comp=Z,51nm,1.1s
BVAR Borovoye Array 61.03 320 P **P 09 10 07.0 -1.1**
comp=Z,12nm,0.7s,baz=38,slow=7.0,SNR=23
comp=Z,12nm,0.7s
BORK Borovoye 61.04 320 *d* iP **P 09 10 07.8 -0.4**
BORK pmax pmax
comp=Z,10.0nm,0.8s
BORK Borovoye 61.04 320 P **P 09 10 07.0 -1.1**
GYA Guiyang 61.15 277 ⇑P **P 09 10 11.3 +1.9**
GYA pP pP 09 10 13.3 0.0
GYA pmax pmax
comp=Z,14nm,0.5s
ADZR Andozero 61.16 343 *e*P **P 09 10 09.8 +1.0**
ADZR pmax pmax
comp=Z,68nm,1.0s
VAGH Vaagaholmen 61.38 355 IAMs_20 IAMs_20 09 49 38.5
comp=Z,249nm,12.5s
NATX Nacogdoches 61.42 74 IAmb IAmb 09 10 11.4
comp=Z,29nm,0.8s
Z41A Richland Creek 61.46 72 IAmb IAmb 09 10 18.6
comp=Z,24nm,1.0s
SVE Sverdlovsk 61.59 328 *e*P **P 09 10 13.4 +1.6**
SVE *e*S S 09 18 44.3 +11
SVE pmax pmax
comp=Z,19nm,0.9s
SVE MLR MLR
comp=Z,690nm,17.0s
KONS Konsvik 61.62 355 *e*P **P 09 10 12.2 +0.4**
KONS IAmb IAmb 09 10 20.9
comp=Z,35nm,1.2s
KONS IAMs_20 IAMs_20 09 35 53.7
comp=Z,376nm,21.1s
RAUS Rausandaksla 61.63 355 *e*P **P 09 10 12.0 0.0**
RAUS IAmb IAmb 09 10 17.4
comp=Z,26nm,1.1s
RAUS *e*S **S 09 18 32.8 -0.5**
TGY Tagaytay City 61.65 256 LR LR 09 36 28.4
comp=Z,125nm,19.6s,baz=32,slow=36
WCI Wyandotte Cave 61.65 63 P **P 09 10 10.0 -2.5**
STOK Stokkvaagen 61.79 355 *e*P **P 09 10 13.5 +0.5**
STOK IAmb IAmb 09 10 19.2
comp=Z,33nm,1.0s
STOK *e*S **S 09 18 36.0 +0.8**
MOR8 Moi Rana 61.87 355 *e*P **P 09 10 12.6 -1.0**
MOR8 IAmb IAmb 09 10 17.8
comp=Z,20nm,1.3s
MOR8 *e*S **S 09 18 35.4 -1.0**

OUL	**Oulu**	**61.93**	**349**	P	**P**	**09 10 14.3**	**+0.4**
LEIR	**Leirfjorden**	**62.00**	**355**	*e*P	**P**	**09 10 13.9**	**-0.5**
LEIR				IAmb	IAmb	09 10 19.9	
	comp=Z,61nm,1.4s						
LEIR				*e*S	**S**	**09 18 40.4**	**+2.4**
HKT	**Hockley**	**62.02**	**76**	P	**P**	**09 10 14.5**	**-0.5**
HKT				pmax	pmax		
	comp=Z,58nm,1.5s						
HKT	**Hockley**	**62.02**	**76**	P	**P**	**09 10 14.5**	**-0.5**
HKT				IAmb	IAmb	09 10 15.8	
	comp=Z,58nm,1.5s						
HKT	**Hockley**	**62.02**	**76**	P	**P**	**09 10 14.8**	**-0.2**
T47A	**Sharon Grove**	**62.08**	**65**	IAmb	IAmb	09 10 39.6	
	comp=Z,18nm,0.9s						
BORG	**Borgarnes**	**62.17**	**11**	LR	LR	09 37 11.4	
	comp=Z,426nm,20.6s,baz=336,slow=36						
WVT	**Waverly**	**62.28**	**66**	P	**P**	**09 10 14.8**	**-2.0**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVT	**Waverly**	**62.28**	**66**	P	**P**	**09 10 14.8**	**-2.0**
WVT	**Waverly**	**62.28**	**66**	P	**P**	**09 10 15.0**	**-1.9**
HBVL	**Hebbronville**	**62.38**	**81**	P	**P**	**09 10 17.2**	**-0.4**
HBVL				IAmb	IAmb	09 10 24.9	
	comp=Z,56nm,1.5s						
PECO	**Prince Edward**	**62.45**	**53**	IAmb	IAmb	09 10 52.1	
	comp=Z,17nm,1.0s						
143A	**Socs Landing,**	**62.67**	**71**	IAmb	IAmb	09 10 27.0	
	comp=Z,53nm,1.3s						
ARTI	**Arti**	**62.68**	**329**	LR	LR	09 41 24.7	
	comp=Z,381nm,18.1s,baz=30,slow=40						
ARTI	**Arti**	**62.68**	**329**	*d* P	**P**	**09 10 20.1**	**+1.0**
ARTI						09 10 58.6	
ARTI				S	**S**	**09 18 50.5**	**+3.7**
ARTI				SS	**SS**	**09 22 53.2**	**+2.8**
ARTI				pmax	pmax		
	comp=Z,34nm,1.9s						
ARTI				MLR	MLR		
	comp=Z,481nm,20.0s						
ARTI	**Arti**	**62.68**	**329**	P	**P**	**09 10 19.6**	**+0.4**
ARTI				IAmb	IAmb	09 10 25.8	
	comp=Z,38nm,1.3s						
Q51A	**Peebles**	**62.70**	**61**	IAmb	IAmb	09 11 16.0	
	comp=Z,16nm,0.8s						
O52A	**Adamsville**	**62.72**	**59**	IAmb	IAmb	09 10 43.8	
	comp=Z,31nm,0.9s						
MMNY	**Mt. Morris Dam**	**62.87**	**55**	IAmb	IAmb	09 10 26.3	
	comp=Z,17nm,1.0s						
P52A	**Corning**	**62.91**	**60**	IAmb	IAmb	09 10 56.9	
	comp=Z,51nm,1.8s						
O53A	**New Philadelph**	**62.96**	**59**	IAmb	IAmb	09 10 45.9	
	comp=Z,14nm,0.9s						
ZAIG	**Zacatecas**	**63.13**	**87**	P	**P**	**09 10 21.7**	**-1.3**
ZAIG				IAmb	IAmb	09 10 29.0	
	comp=Z,22nm,1.0s						
ZAIG	**Zacatecas**	**63.13**	**87**	P	**P**	**09 10 22.5**	**-0.4**
TATA	**Tatamba Isabel**	**63.21**	**205**	P	**P**	**09 10 27.1**	**+4.0**
Q52A	**Bidwell**	**63.32**	**60**	IAmb	IAmb	09 10 27.1	
	comp=Z,10nm,0.5s						
P53A	**Whipple**	**63.41**	**59**	IAmb	IAmb	09 10 33.6	
	comp=Z,18nm,1.0s						
O54A	**Avella**	**63.45**	**58**	IAmb	IAmb	09 10 48.8	
	comp=Z,15nm,0.8s						
KIRV	**Kirov**	**63.45**	**335**	LR	LR	09 40 14.4	
	comp=Z,356nm,19.4s,baz=23,slow=38						
KIRV	**Kirov**	**63.45**	**335**	*ce*P	**P**	**09 10 24.8**	**+0.6**
L56A	**Greenwood**	**63.48**	**55**	P	**P**	**09 10 23.1**	**-1.7**
TDK	**Taldyqorghan**	**63.54**	**310**	*e*P	**P**	**09 10 26.3**	**+1.2**
TDK	**Taldyqorghan**	**63.54**	**310**	*e*P	**P**	**09 10 26.3**	**+1.2**
K57A	**Scipio Center**	**63.57**	**54**	IAmb	IAmb	09 10 33.4	
	comp=Z,70nm,1.7s						
NSS	**Namsos**	**63.64**	**356**	*e*P	**P**	**09 10 25.8**	**+0.4**
KLMR	**Klimovskoe**	**63.74**	**341**	*e*P	**P**	**09 10 25.7**	**-0.4**
KLMR				*e*		09 11 01.0	
KLMR				pmax	pmax		
	comp=Z,61nm,1.2s						
D62A	**Allapoint, All**	**63.87**	**46**	IAmb	IAmb	09 10 31.5	
	comp=Z,27nm,1.2s						
SAVO	**Savo Central**	**63.94**	**205**	P	**P**	**09 10 32.3**	**+4.4**
Q54A	**Coxs Mills**	**64.08**	**59**	IAmb	IAmb	09 10 53.0	
	comp=Z,33nm,1.3s						
PZH	**PanZhiHua**	**64.12**	**280**	P	**P**	**09 10 32.8**	**+3.5**
PZH				pmax	pmax		
	comp=Z,30nm,1.3s						
HNR	**Honiara**	**64.17**	**205**	LR	LR	09 35 13.7	
	comp=Z,13nm,18.6s,baz=106,slow=33						
BINY	**Binghamton**	**64.22**	**54**	IAmb	IAmb	09 11 04.3	
	comp=Z,68nm,1.8s						
Z47A	**Carrollton**	**64.25**	**69**	IAmb	IAmb	09 10 35.5	
	comp=Z,19nm,0.7s						
W50A	**Signal Mountai**	**64.37**	**65**	IAmb	IAmb	09 10 37.0	
	comp=Z,11nm,0.7s						
TZTN	**Tazewell**	**64.38**	**63**	IAmb	IAmb	09 10 46.1	
	comp=Z,63nm,1.8s						
TZTN	**Tazewell**	**64.38**	**63**	P	**P**	**09 10 28.2**	**-2.5**
SHLS	**Shalkode**	**64.40**	**308**	*e*P	**P**	**09 10 30.4**	**-0.5**
SHLS	**Shalkode**	**64.40**	**308**	*e*P	**P**	**09 10 30.4**	**-0.5**
KMI2	**Kunming**	**64.50**	**279**	P	**P**	**09 10 30.8**	**-1.1**
KMI2				pmax	pmax		
	comp=Z,20nm,1.3s						
KMI2				L	L		
	comp=Z,340nm,24.1s						
KMI2				L	L		
	comp=Z,250nm,20.6s						
KMI2				L	L		
	comp=Z,550nm,16.6s						
DAV	**Davao City (W)**	**64.52**	**247**	LR	LR	09 33 12.3	
	comp=Z,474nm,21.8s,baz=57,slow=31						
UZB	**Uzynbulak**	**64.62**	**308**	*e*P	**P**	**09 10 33.4**	**+1.0**
UZB	**Uzynbulak**	**64.62**	**308**	*e*P	**P**	**09 10 33.4**	**+1.0**
QIZ	**Qiongzhong**	**64.67**	**269**	P	**P**	**09 10 32.8**	**0.0**
QIZ				S	**S**	**09 19 13.4**	**+0.8**
QIZ				SS	**SS**	**09 23 21.4**	**-1.8**
QIZ				L	L		
	comp=Z,290nm,17.2s						
QIZ				L	L		
	comp=Z,230nm,14.7s						
QIZ				L	L		
	comp=Z,300nm,15.7s						
JAY	**Jayapura**	**64.79**	**228**	LR	LR	09 33 27.8	
	comp=Z,504nm,22.0s,baz=9.5,slow=31						
KSPA	**Keystone Colle**	**64.81**	**54**	IAmb	IAmb	09 11 35.5	
	comp=Z,71nm,1.9s						
TKL	**Tuckaleechee C**	**64.90**	**64**	LR	LR	09 37 15.9	
	comp=Z,675nm,22.0s,baz=326,slow=34						
TKL	**Tuckaleechee C**	**64.90**	**64**	IAmb	IAmb	09 10 49.8	
	comp=Z,20nm,1.2s						
R55A	**Marlinton**	**64.97**	**59**	IAmb	IAmb	09 11 17.8	
	comp=Z,20nm,1.1s						
SATY	**Saty**	**64.99**	**308**	*e*P	**P**	**09 10 35.6**	**+0.9**
SATY	**Saty**	**64.99**	**308**	*e*P	**P**	**09 10 35.6**	**+0.9**
U54A	**Nelsons Funny**	**65.34**	**62**	IAmb	IAmb	09 11 27.2	
	comp=Z,14nm,0.9s						
KUU	**Kurty**	**65.35**	**310**	*e*P	**P**	**09 10 37.9**	**+1.0**
KUU	**Kurty**	**65.35**	**310**	*e*P	**P**	**09 10 38.0**	**+1.0**
V53A	**Saluda**	**65.42**	**63**	IAmb	IAmb	09 10 53.1	
	comp=Z,41nm,1.6s						
FINES	**FINESS Array B**	**65.42**	**348**	P	**P**	**09 10 36.6**	**-0.4**
	comp=Z,12nm,0.8s,baz=28,slow=8.6,SNR=18						
FINES				LR	LR	09 44 29.3	
	comp=Z,358nm,18.2s,baz=19,slow=41						
	comp=Z,12nm,0.8s						
BTLS	**Baital**	**65.54**	**312**	*e*P	**P**	**09 10 39.0**	**+0.9**
BTLS	**Baital**	**65.54**	**312**	*e*P	**P**	**09 10 39.1**	**+0.9**
MDOK	**Medeo**	**65.56**	**309**	*e*P	**P**	**09 10 39.5**	**+1.0**
MDOK	**Medeo**	**65.56**	**309**	*e*P	**P**	**09 10 39.6**	**+1.0**
BLA	**Blacksburg**	**65.60**	**60**	IAmb	IAmb	09 11 14.4	
	comp=Z,16nm,0.9s						
TNSS	**Tian-Shan**	**65.71**	**309**	*e*P	**P**	**09 10 40.2**	**+0.5**
TNSS	**Tian-Shan**	**65.71**	**309**	*e*P	**P**	**09 10 40.2**	**+0.5**
MOL	**Molde**	**65.77**	**358**	*e*P	**P**	**09 10 39.8**	**+0.6**
MOL				IAmb	IAmb	09 10 42.3	
	comp=Z,20nm,0.9s						
BG3	**Lake Jocassee**	**65.85**	**64**	IAmb	IAmb	09 10 55.7	
	comp=Z,33nm,1.3s						
V55A	**Taylorsville**	**66.17**	**62**	IAmb	IAmb	09 10 50.2	
	comp=Z,16nm,1.1s						
AKN	**Aaknes**	**66.17**	**358**	*e*P	**P**	**09 10 42.4**	**+0.4**
AKN				IAmb	IAmb	09 10 44.5	
	comp=Z,153nm,1.9s						
DOMB	**Dombas**	**66.25**	**357**	*e*P	**P**	**09 10 42.7**	**+0.2**
DOMB				IAmb	IAmb	09 10 50.5	
	comp=Z,28nm,1.1s						
U56A	**King**	**66.25**	**61**	IAmb	IAmb	09 11 11.9	
	comp=Z,18nm,1.2s						
SGDS	**Sogindy**	**66.49**	**311**	*e*P	**P**	**09 10 45.5**	**+1.1**
SLVN	**Son La**	**66.62**	**275**	P	**P**	**09 10 45.2**	**-0.2**
SLVN	**Son La**	**66.62**	**275**	P	**P**	**09 10 44.6**	**-0.9**
SLVN				IAmb	IAmb	09 10 50.5	
	comp=Z,18nm,1.0s						
KMSC	**Kings Mountain**	**66.63**	**63**	IAmb	IAmb	09 11 14.8	
	comp=Z,19nm,1.0s						
GOGA	**Godfrey**	**66.72**	**65**	P	**P**	**09 10 44.1**	**-1.8**
FOO	**Floro**	**66.79**	**359**	*e*S	**S**	**09 19 38.6**	**+1.3**
NB2	**NORSAR Subarra**	**67.16**	**355**	P	**P**	**09 10 48.0**	**-0.3**
	comp=Z,38nm,1.4s,baz=7.4,slow=6.5						
NB2	**NORSAR Subarra**	**67.16**	**355**	P	**P**	**09 10 48.0**	**-0.3**
NOA	**NORSAR Array B**	**67.16**	**355**	P	**P**	**09 10 48.1**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=4.4,slow=6.4,SNR=19						
NOA				LR	LR	09 44 34.7	
	comp=Z,224nm,18.0s,baz=340,slow=40						
	comp=Z,4.4nm,0.8s						
AAK	**Ala-Archa**	**67.18**	**310**	LR	LR	09 42 53.2	
	comp=Z,359nm,18.2s,baz=36,slow=38						
AAK	**Ala-Archa**	**67.18**	**310**	*de*P	**P**	**09 10 48.8**	**-0.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HYA	**Hoyanger**	**67.20**	**358**	*e*P	**P**	**09 10 48.9**	**+0.4**
HYA				IAmb	IAmb	09 10 50.3	
	comp=Z,48nm,1.3s						
JSC	**Jenkinsville**	**67.31**	**63**	IAmb	IAmb	09 11 05.6	
	comp=Z,17nm,1.0s						
352A	**Blakely**	**67.32**	**68**	IAmb	IAmb	09 10 55.9	
	comp=Z,35nm,1.0s						
M65A	**Busby, Falmout**	**67.33**	**51**	P	**P**	**09 10 49.2**	**-0.4**
	baz=320						
SUE	**Suilen**	**67.34**	**359**	*e*P	**P**	**09 10 52.6**	**+3.3**
ARBE	**Arbavere**	**67.38**	**347**	P	**P**	**09 10 50.2**	**+0.6**
NC602	**NORSAR Array S**	**67.45**	**355**	*e*P	**P**	**09 10 50.3**	**+0.3**
NC602				IAmb	IAmb	09 10 55.5	
	comp=Z,26nm,1.2s						
NC602				*e*S	**S**	**09 19 46.9**	**+1.7**
154A	**Montrose**	**67.51**	**66**	IAmb	IAmb	09 10 56.9	
	comp=Z,27nm,1.0s						
SKAR	**Skarslia**	**67.64**	**357**	*e*P	**P**	**09 10 49.9**	**-1.4**
SKAR				IAmb	IAmb	09 10 57.0	
	comp=Z,43nm,1.5s						
SKAR				*e*S	**S**	**09 19 47.6**	**0.0**
AKTO	**Aktyubinsk**	**67.73**	**325**	LR	LR	09 45 21.3	
	comp=Z,483nm,18.4s,baz=32,slow=40						
HFS	**Hagfors**	**67.92**	**354**	P	**P**	**09 10 53.0**	**0.0**
	comp=Z,6.3nm,0.8s,baz=29,slow=3.4,SNR=18						
	comp=Z,6.3nm,0.8s						
SIJI	**Sorong**	**68.00**	**237**	P	**P**	**09 10 53.6**	**-0.6**
	comp=Z,39nm,0.8s,baz=39,slow=7.5,SNR=10						
SIJI				LR	LR	09 35 14.5	
	comp=Z,310nm,21.8s,baz=36,slow=31						
	comp=Z,39nm,0.8s						
ABKAR	**Akbulak array**	**68.02**	**324**	P	**P**	**09 10 53.2**	**-0.6**
LSA	**Lhasa**	**68.09**	**290**	*e*P	P	09 10 44.3	-11
VSU	**Vasula**	**68.21**	**347**	*ce*P	**P**	**09 10 55.0**	**+0.1**
VSU				pmax	pmax		
	comp=Z,62nm,0.9s						
VSU	**Vasula**	**68.21**	**347**	P	**P**	**09 10 55.6**	**+0.8**
PMG	**Port Moresby**	**68.29**	**218**	LR	LR	09 38 03.3	
	comp=Z,250nm,19.3s,baz=55,slow=34						
MTSE	**Matsula**	**68.36**	**348**	P	**P**	**09 10 56.4**	**+0.7**
SANVU	**Saraoutou**	**68.44**	**196**	P	**P**	**09 11 00.8**	**+4.1**
SANVU	**Saraoutou**	**68.44**	**196**	P	**P**	**09 10 56.9**	**+0.2**
SANVU				IAmb	IAmb	09 11 02.3	
	comp=Z,25nm,0.7s						
SANVU	**Saraoutou**	**68.44**	**196**	P	**P**	**09 10 58.7**	**+2.0**
DZA	**Taraz**	**68.45**	**313**	*e*P	**P**	**09 10 57.6**	**+0.9**
DZA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
DZA	**Taraz**	**68.45**	**313**	*e*P	**P**	**09 10 57.7**	**+1.0**
	comp=Z,4.5nm,0.4s						
ODD1	**Odda**	**68.45**	**358**	*e*P	**P**	**09 10 57.4**	**+1.0**
ODD1				IAmb	IAmb	09 10 58.2	
	comp=Z,24nm,1.2s						
TAOE	**Nuku Hiva Isla**	**68.47**	**140**	*e*LR	LR	09 31 27.9	
	comp=Z,665nm,30.9s						
TAOE				*e*T	T	10 25 02.4	
	comp=Z,80nm,0.2s						
KONO	**Kongsberg**	**68.62**	**356**	*e*P	**P**	**09 10 57.8**	**+0.4**
KONO				pmax	pmax		
	comp=Z,37nm,1.4s						
KONO	**Kongsberg**	**68.62**	**356**	*e*P	**P**	**09 10 58.0**	**+0.5**
KONO				IAmb	IAmb	09 11 03.4	
	comp=Z,46nm,1.4s						
KONO				*e*S	**S**	**09 19 59.9**	**+0.6**
KONO	**Kongsberg**	**68.62**	**356**	P	**P**	**09 10 56.9**	**-0.5**
KONO				IAmb	IAmb	09 11 03.7	
	comp=Z,47nm,1.4s						
KONO	**Kongsberg**	**68.62**	**356**	P	**P**	**09 10 57.5**	**0.0**
KKAR	**Karatay Array**	**68.65**	**313**	P	**P**	**09 10 56.8**	**-1.2**
KKAR	**Karatay Array**	**68.65**	**313**	P	**P**	**09 10 56.8**	**-1.2**
NHSC	**New Hope**	**68.78**	**63**	P	**P**	**09 10 57.1**	**-1.7**
MOS	**Moscow**	**68.84**	**340**	*e*P	P	09 11 05.0	+6.1
MOS				pmax	pmax		
	comp=Z,42nm,0.6s						
BLS5	**Blasjo**	**68.95**	**358**	*e*P	**P**	**09 11 00.3**	**+0.8**
BRLS	**Borolday**	**69.02**	**314**	*e*P	**P**	**09 11 03.0**	**+2.8**
BRLS	**Borolday**	**69.02**	**314**	*e*P	**P**	**09 11 03.0**	**+2.8**
KMY	**Karmoy**	**69.18**	**359**	*e*P	**P**	**09 11 01.8**	**+0.9**
KMY				IAmb	IAmb	09 11 06.3	
	comp=Z,29nm,1.1s						
KMY				*e*S	**S**	**09 20 07.5**	**+1.7**
KSH2	**Kashi**	**69.36**	**307**	P	**P**	**09 11 01.6**	**-1.0**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH2				L	L		
	comp=Z,1μm,19.6s						
KSH2				L	L		
	comp=Z,710nm,15.8s						
KSH2				L	L		
	comp=Z,640nm,18.2s						
BELG	**Belogornoye**	**69.37**	**332**	LR	LR	09 44 34.9	
	comp=Z,503nm,19.6s,baz=27,slow=39						
BELG	**Belogornoye**	**69.37**	**332**	*e*P	**P**	**09 11 03.5**	**+1.3**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MSVF	**Nonsavu**	**69.49**	**185**	LR	LR	09 38 31.8	
	comp=Z,280nm,18.6s,baz=358,slow=33						
TLIG	**Tlapa**	**69.50**	**88**	IAmb	IAmb	09 11 18.6	
	comp=Z,21nm,1.2s						
SLIT	**Slitere, Latvi**	**69.61**	**349**	P	**P**	**09 11 02.4**	**-1.2**
IUG	**Iuzhnay**	**69.63**	**313**	*e*P	**P**	**09 11 05.0**	**+0.9**
IUG				pmax	pmax		
	comp=Z,15nm,1.3s						
IUG	**Iuzhnay**	**69.63**	**313**	*e*P	**P**	**09 11 05.0**	**+0.9**
	comp=Z,15nm,1.3s						
OBN	**Obninsk**	**69.65**	**340**	LR	LR	09 48 16.1	
	comp=Z,348nm,18.6s,baz=7.5,slow=42						
OBN	**Obninsk**	**69.65**	**340**	*ce*P	**P**	**09 11 05.0**	**+1.2**
OBN				*e*		09 11 26.6	
OBN				*e*		09 13 37.7	
OBN				*e*PPP	PPP	09 15 17.8	
OBN				pmax	pmax		
	comp=Z,31nm,1.0s						
OBN				MLR	MLR		
	comp=Z,358nm,19.0s						
CHM	**Chimkent**	**69.68**	**313**	*e*P	**P**	**09 11 05.4**	**+1.1**
CHM	**Chimkent**	**69.68**	**313**	*e*P	**P**	**09 11 05.5**	**+1.1**
MYLDM	**Lahad Datu**	**70.16**	**252**	P	**P**	**09 11 11.3**	**+3.7**
MYLDM	**Lahad Datu**	**70.16**	**252**	P	**P**	**09 11 06.8**	**-0.8**
MYLDM				IAmb	IAmb	09 11 48.1	
	comp=Z,30nm,0.9s						
MYLDM	**Lahad Datu**	**70.16**	**252**	P	**P**	**09 11 08.3**	**+0.8**
PMOR	**Pomariorio Ree**	**71.41**	**150**	*e*T	T	10 28 51.7	
	comp=Z,32nm,0.2s						
LPSR	**Galich'ya Gora**	**71.45**	**338**	*e*P	**P**	**09 11 16.5**	**+1.6**
LPSR				pmax	pmax		
	comp=Z,65nm,1.1s						
PABE	**Paberze**	**71.47**	**347**	P	**P**	**09 11 16.1**	**+1.2**
CHTO	**Chiang Mai**	**71.57**	**277**	P	**P**	**09 11 18.7**	**+2.6**
CHTO	**Chiang Mai**	**71.57**	**277**	P	**P**	**09 11 14.3**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,13nm,1.2s						
CHTO	**Chiang Mai**	**71.57**	**277**	P	**P**	**09 11 14.3**	**-1.8**
CHTO	**Chiang Mai**	**71.57**	**277**	P	**P**	**09 11 15.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**71.84**	**277**	P	**P**	**09 11 16.6**	**-1.1**
	comp=Z,8.5nm,1.0s,baz=29,slow=7.0,SNR=24						
CMAR				LR	LR	09 46 06.5	
	comp=Z,236nm,18.8s,baz=30,slow=38						
	comp=Z,8.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.84**	**277**	*i* P	**P**	**09 11 16.7**	**-1.1**
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.84**	**277**	P	**P**	**09 11 15.1**	**-2.7**
MNK	**Minsk**	**71.86**	**345**	*i* P	**P**	**09 11 18.4**	**+1.0**
	comp=E,22nm,0.9s						
MNK				*i* P	**P**	**09 11 18.4**	**+1.0**
	comp=Z,21nm,1.1s,baz=16						
MNK				*i* PP	**PP**	**09 13 58.0**	**+1.9**
MNK				*i* PPP	PPP	09 15 46.5	
MNK				*i* S	**S**	**09 20 40.1**	**+2.9**
MNK				*i* SS	**SS**	**09 25 22.8**	**+11**
MNK				*i* SSS	SSS	09 28 30.2	
MNK				*i* LO	LO	09 38 27.9	
MNK				*i* LR	LR	09 43 31.8	
MNK				*i* LRM	MLR	09 45 26.8	
	comp=E,458nm,20.2s						
MNK				*i* LRM	MLR	09 45 26.8	
	comp=N,458nm,19.2s						
MNK				*i* LRM	MLR	09 46 23.6	
	comp=Z,205nm,14.7s						
MNK	**Minsk**	**71.86**	**345**	*i* P	**P**	**09 11 18.3**	**+1.0**
MNK				*i*		09 13 57.9	
MNK				*i* PPP	PPP	09 15 46.5	
MNK				*i* S	**S**	**09 20 40.1**	**+2.9**
MNK				*i* SSS	SSS	09 28 30.2	
MNK				pmax	pmax		
	comp=E,22nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				pmax	pmax		
	comp=Z,21nm,1.1s						
MNK				MLR	MLR		
	comp=N,458nm,19.0s						
MNK				MLR	MLR		
	comp=E,458nm,20.0s						
MNK				MLR	MLR		
	comp=Z,205nm,15.0s						
GAR	**Garm**	**72.00**	**311**	P	**P**	**09 11 21.4**	**+2.8**
VRH	**Novokhopyorsk**	**72.05**	**335**	*e*P	**P**	**09 11 18.9**	**+0.4**
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
CMIG	**Matias Romero**	**72.13**	**85**	LR	LR	09 40 26.8	
	comp=Z,324nm,19.2s,baz=307,slow=34						
VORR	**Voronezh**	**72.25**	**337**	*e*P	**P**	**09 11 21.6**	**+1.9**
VORR				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR	**Storozhevoye**	**72.68**	**337**	*e*P	**P**	**09 11 23.1**	**+0.8**
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
CHGR	**Chuyangaron**	**72.81**	**311**	*i* P	**P**	**09 11 25.8**	**+2.4**
CHGR				pmax	pmax		
	comp=Z,23nm,0.8s						
VORD	**Divnogorie**	**72.88**	**337**	*e*P	**P**	**09 11 24.8**	**+1.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**72.98**	**3**	P	**P**	**09 11 24.7**	**+0.6**
	comp=Z,3.5nm,0.5s,baz=358,slow=4.5,SNR=20						
	comp=Z,3.5nm,0.5s						
ESK	**Eskdalemuir**	**73.00**	**3**	P	**P**	**09 11 24.3**	**+0.2**
ESK				pmax	pmax		
	comp=Z,20nm,1.0s						
ESK	**Eskdalemuir**	**73.00**	**3**	P	**P**	**09 11 24.3**	**+0.2**
ESK				IAmb	IAmb	09 11 26.5	
	comp=Z,20nm,1.0s						
ESK	**Eskdalemuir**	**73.00**	**3**	P	**P**	**09 11 24.1**	**0.0**
BRDH	**Bariadhala**	**73.07**	**285**	LR	LR	09 45 19.1	
	comp=Z,477nm,19.4s,baz=36,slow=37						
PPT2	**Papeete2**	**73.36**	**152**	*e*S	**SKiKP**	**09 21 01.1**	**+3.7**
	comp=Z,170nm,30.8s						
PPT2				*e*SS	**SS**	**09 25 34.8**	**-3.1**
	comp=Z,85nm,23.0s						
PPT2				*e*LR	LR	09 33 43.1	
	comp=Z,304nm,26.5s						
PPT2				*e*LR	LR	09 33 48.5	
	comp=Z,512nm,27.8s						
PPT2				*e*T	T	10 31 23.3	
	comp=Z,28nm,0.3s						
PAE	**Paea**	**73.42**	**152**	*e*T	T	10 31 23.7	
	comp=Z,42nm,0.3s						
TVO	**Taravao**	**73.63**	**152**	*e*T	T	10 31 47.8	
	comp=Z,12nm,0.3s						
COEN	**Coen**	**73.99**	**220**	P	P	09 11 35.8	+5.5
	comp=Z,754nm,0.7s						
BSEG	**Bad Segeberg**	**74.30**	**355**	*e*L	L	09 48 33.7	
	comp=Z,232nm,19.9s						
BSEG	**Bad Segeberg**	**74.30**	**355**	P	**P**	**09 11 33.6**	**+1.9**
SOR	**Soroa**	**74.98**	**72**	IAmb	IAmb	09 11 44.0	
	comp=Z,36nm,1.1s						
SOR	**Soroa**	**74.98**	**72**	P	**P**	**09 11 35.6**	**-0.7**
DZM	**Mont Dzumac**	**75.05**	**196**	P	**P**	**09 11 35.9**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=92,slow=20,SNR=8.6						
	comp=Z,3.4nm,0.7s						
GORT1	**Trebel**	**75.19**	**355**	*e*P	**P**	**09 11 39.4**	**+2.6**
	comp=Z,18nm,1.1s,baz=5.7,slow=5.6						
AK21	**Malin Array Si**	**75.24**	**343**	P	**P**	**09 11 37.2**	**-0.1**
AK22	**Malin Array Si**	**75.25**	**343**	P	**P**	**09 11 37.2**	**-0.1**
AK03	**Malin Array Si**	**75.25**	**343**	P	**P**	**09 11 37.2**	**-0.1**
AK04	**Malin Array Si**	**75.27**	**343**	P	**P**	**09 11 37.2**	**-0.2**
AK20	**Malin Array Si**	**75.28**	**343**	P	**P**	**09 11 37.3**	**-0.2**
AKASG	**Malin Array Be**	**75.28**	**343**	P	**P**	**09 11 37.8**	**+0.3**
	comp=Z,7.2nm,0.7s,baz=21,slow=5.8,SNR=20						
AKASG				LR	LR	09 49 16.2	
	comp=Z,310nm,19.9s,baz=37,slow=39						
	comp=Z,7.2nm,0.7s						
AKASG	**Malin Array Be**	**75.28**	**343**	*i* P	**P**	**09 11 41.0**	**+3.5**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKASG	**Malin Array Be**	**75.28**	**343**	IAmb	IAmb	09 11 43.2	
	comp=Z,9.0nm,1.2s						
AKBB	**Malin Array Si**	**75.28**	**343**	*de*P	**P**	**09 11 37.5**	**0.0**
AKBB				pmax	pmax		
	comp=Z,20nm,1.0

comp=Z,29nm,1.2s
HSKC Hora Svate Kat 77.42 353 P **P** 09 11 50.8 +1.1
DPC Dobruska-Polom 77.42 351 AMS AMS 09 53 30.0
comp=Z,400nm,17.4s
DPC Dobruska-Polom 77.42 351 P **P** 09 11 49.4 -0.4
DPC Dobruska-Polom 77.42 351 P **P** 09 11 51.0 +1.2
UBBA Unterbreizbach 77.42 355 *e*P **P** 09 11 51.7 +2.2
comp=Z,8.9nm,1.3s,baz=5.7,slow=5.6
MOX Moxa 77.50 354 *e*P **P** 09 11 52.3 +2.1
comp=Z,6.8nm,0.9s,baz=5.7,slow=5.6
MOX *e*L L 09 51 28.9
comp=Z,295nm,21.1s
MOX Moxa 77.50 354 P **P** 09 11 52.8 +2.6
KDU Kakadu 77.55 230 P **P** 09 11 53.8 +3.1
comp=Z,16nm,1.1s
PLN Plauen 77.63 354 *e*P **P** 09 11 52.6 +1.8
comp=Z,1.2nm,0.9s,baz=5.7,slow=5.6
HGN Heimansgroeve 77.63 358 P **P** 09 11 52.5 +1.7
TANN Tannenbergstha 77.68 354 *e*P **P** 09 11 53.2 +2.0
comp=Z,3.5nm,1.0s,baz=5.7,slow=5.6
TANN Tannenbergstha 77.68 354 P **P** 09 11 52.3 +1.1
KAPI Kappang 77.71 245 P **P** 09 11 52.4 +0.7
comp=Z,5.2nm,0.4s,baz=86,slow=6.6,SNR=4.6
KAPI LR LR 09 54 35.8
comp=Z,54nm,18.1s,baz=36,slow=42
comp=Z,5.2nm,0.4s
KAPI Kappang 77.71 245 P **P** 09 11 52.4 +0.7
KAPI pmax pmax
comp=Z,34nm,1.3s
KAPI Kappang 77.71 245 IAmb IAmb 09 12 13.4
comp=Z,34nm,1.2s
MEM Membach 77.78 358 *d*P **P** 09 11 53.0 +1.3
comp=Z,12nm,1.2s
MEM Membach 77.78 358 P **P** 09 11 53.2 +1.5
MAK Makhachkala 77.80 328 *e*P **P** 09 11 48.5 -3.4
MAK *e* 09 14 42.6
MAK *e*S **S** 09 21 38.4 -5.5
MAK *e*SS **SS** 09 26 38.5 -4.4
MAK *e*SSS SSS 09 30 06.8
MAK pmax pmax
comp=Z,29nm,0.3s
BAL3X Bal3x, Balta 77.86 342 P **P** 09 11 52.8 +0.7
NKC Novy Kostel 77.86 354 P **P** 09 11 53.3 +1.1
MORC Moravsky Berou 77.87 350 *e*P **P** 09 11 53.4 +1.2
PRU Pruhonice 77.94 352 P **P** 09 11 54.7 +2.1
TNS Taunus Mts 78.09 356 *e*P **P** 09 11 55.3 +1.8
comp=Z,6.9nm,0.9s,baz=5.7,slow=5.6
TNS *e*L L 09 51 50.2
comp=Z,199nm,20.0s
TNS Taunus Mts 78.09 356 P **P** 09 11 55.3 +1.8
KOLS Kolonicke sedl 78.11 347 *e*P **P** 09 11 56.4 +2.8
KOLS Kolonicke sedl 78.11 347 P **P** 09 11 56.2 +2.6
KOLS Kolonicke sedl 78.11 347 *e*P **P** 09 11 56.4 +2.8
BMRD Maredsous 78.11 359 *d*P **P** 09 11 55.3 +1.8
LANS Liptovska Anna 78.27 349 *e*P **P** 09 11 58.7 +4.2
LANS Liptovska Anna 78.27 349 *e*P **P** 09 11 58.7 +4.2
DOU Dourbes 78.32 359 *d*P **P** 09 11 56.4 +1.7
MTN Manton Dam 78.33 231 P **P** 09 11 55.4 +0.3
comp=Z,20nm,0.8s
MTN Manton Dam 78.33 231 P **P** 09 11 54.6 -0.4
ROTZ Rotzenmuhle 78.34 354 *e*P **P** 09 11 57.2 +2.4
comp=Z,1.0nm,1.1s,baz=5.7,slow=5.6
GRA3 Grafenberg Arr 78.40 354 P **P** 09 11 56.3 +1.2
KIV Kislovodsk 78.40 332 *e*P **P** 09 11 56.3 +0.9
KIV pmax pmax
comp=Z,11nm,1.1s
VRAC Vranov 78.43 351 LR LR 09 51 39.4
comp=Z,212nm,19.2s,baz=7.0,slow=40
VRAC Vranov 78.43 351 *e*P **P** 09 11 56.5 +1.2
VRAC Vranov 78.43 351 P **P** 09 11 56.3 +1.0
CTA Charters Tower 78.45 215 P **P** 09 11 57.5 +1.9
CTA Charters Tower 78.45 215 P **P** 09 11 56.1 +0.5
comp=Z,4.8nm,0.8s,baz=342,slow=8.5,SNR=4.5
CTA LR LR 09 42 30.1
comp=Z,176nm,21.8s,baz=22,slow=33
comp=Z,4.8nm,0.8s
CTA Charters Tower 78.45 215 P **P** 09 11 58.6 +3.0
CTAO Charters Tower 78.45 215 P **P** 09 11 59.5 +3.9
GRF Grafenberg Arr 78.48 354 *e*P **P** 09 11 58.0 +2.4
comp=Z,14nm,1.0s,baz=5.7,slow=5.6
GRF *e*L L 09 52 08.0
comp=Z,236nm,19.7s
ZVC Zvikov 78.52 352 AMS AMS 09 51 10.0
comp=Z,400nm,21.3s
SHA1 Shidzhatmaz 78.61 332⇑ *e*P **P** 09 11 58.4 +1.7
GRB4 Grafenberg Arr 78.68 354 P **P** 09 11 59.6 +2.9
KRUC Moravsky 78.69 351 *e*P **P** 09 11 58.8 +2.0
WLF Walferdange 78.72 358 *d*P **P** 09 11 57.0 +0.1
JAVC Velka Javorina 78.76 350 *e*P **P** 09 11 59.2 +2.0
TBI Tubuai 78.86 154 *e*S **S** 09 21 55.6 +0.3
comp=Z,1μm,32.5s
TBI *e*SS **SS** 09 27 08.0 +7.0
comp=Z,543nm,23.5s
TBI *e*LR LR 09 36 11.9
comp=Z,2μm,31.5s
TBI *e*LR LR 09 36 15.7
comp=Z,692nm,37.8s
TBI *e*T T 10 38 15.0
comp=Z,13nm,0.4s
TRPA Tarpa 78.86 347 P **P** 09 12 00.8 +3.1
KHC Kasperske Hory 78.87 353 *e*P **P** 09 12 00.6 +2.8
KHC MLR MLR
comp=Z,400nm,23.2s
KHC Kasperske Hory 78.87 353 *e*P **P** 09 12 00.6 +2.8
KHC AMS AMS 09 50 20.0
comp=Z,400nm,23.2s
KHC Kasperske Hory 78.87 353 P **P** 09 12 00.5 +2.6
WET Wettzell 78.91 353 *e*P **P** 09 12 00.4 +2.4
comp=Z,3.2nm,0.9s,baz=5.7,slow=5.6
WET *e*L L 09 51 36.1
comp=Z,354nm,20.9s
WET Wettzell 78.91 353 P **P** 09 12 00.7 +2.6
BURAR Bucovina Array 78.95 345 P **P** 09 11 58.0 -0.4
GEC2 GERESS Array S 79.15 353 *e*P **P** 09 12 01.3 +1.9
comp=Z,2.9nm,0.8s,baz=5.7,slow=5.6
GERES GERESS Array B 79.15 353 P **P** 09 11 58.0 -1.4
comp=Z,1.9nm,0.9s,baz=25,slow=3.5,SNR=9.6
comp=Z,1.9nm,0.9s
GERES GERESS Array B 79.15 353 P **P** 09 11 58.0 -1.4
MODS Modra-Piesok 79.28 350 *e*P **P** 09 12 02.9 +2.9
MODS Modra-Piesok 79.28 350 *e*P **P** 09 12 02.9 +2.9
PSZ Piszkesteto 79.43 348 P **P** 09 12 00.5 -0.4
SOC Sochi 79.59 334 *e*P **P** 09 12 02.2 +0.4
SOC *e* 09 15 03.6
SOC *e*PPP PPP 09 16 52.8
SOC *e*S **S** 09 22 05.3 +2.3
WINA Alland / Wiene 79.67 351 *e*PcP P 09 12 08.5 +6.4
comp=Z,4.3nm,0.8s
CONA Conrad Observa 79.86 351 *e*pP **P** 09 12 05.9 +2.6
comp=Z,11nm,1.3s
BATI Baumata 79.87 239 LR LR 09 42 27.1
comp=Z,59nm,22.0s,baz=136,slow=32
BFO Black Forest 79.99 356 *e*P **P** 09 12 06.3 +2.4
comp=Z,2.7nm,0.8s,baz=5.7,slow=5.6
BFO *e*L L 09 53 05.7
comp=Z,183nm,18.6s
FUR Furstenfeldbru 80.00 354 *e*L L 09 50 52.8
comp=Z,243nm,21.6s
RONA Rosalia, Austr 80.05 351 *e*pP **P** 09 12 07.0 +2.8
comp=Z,3.6nm,0.9s
ECH Echery 80.14 357 P **P** 09 12 07.0 +2.3
RJOB Jochberg 80.32 353 *e*P **P** 09 12 06.5 +0.8
comp=Z,2.8nm,0.8s,baz=5.7,slow=5.6
VRI Vrincioaia 80.39 343 P P 09 12 11.1 +5.1
CLF Chambon-Foret 80.41 0 P **P** 09 12 09.9 +3.9
ARSA Arzberg 80.57 351 *e*pP **P** 09 12 09.8 +2.8
comp=Z,4.5nm,0.9s
LESA Schwarzleotal 80.64 353 *e*PcP **P** 09 12 11.8 +4.3
comp=Z,2.5nm,0.7s
SESA Seetaler Alpe, 80.79 352 *e*pP **P** 09 12 09.6 +1.1
comp=Z,9.8nm,1.1s
WATA Walderalm 80.80 354 *e*pP **P** 09 12 11.2 +2.8
comp=Z,3.8nm,0.5s
MOTA Moosalm 80.83 354 *e*pP **P** 09 12 11.5 +3.0
comp=Z,12nm,1.2s
RAO Raoul Island 80.84 180 LR LR 09 40 03.1
comp=Z,230nm,21.3s,baz=24,slow=30
WTTA Wattenberg 80.87 354 *e*pP **P** 09 12 11.5 +2.7
comp=Z,8.0nm,1.0s
WTTA Wattenberg 80.87 354 P **P** 09 12 11.5 +2.7
MLR Muntele Rosu 80.89 344 LR LR 09 53 17.9
comp=Z,212nm,18.1s,baz=15,slow=40
MLR Muntele Rosu 80.89 344 P **P** 09 12 11.1 +2.2
KBA Koelnbreinsper 80.93 353 *e*pP **P** 09 12 10.7 +1.6
comp=Z,12nm,0.9s
KBA Koelnbreinsper 80.93 353 P **P** 09 12 10.8 +1.6
SQTA Sankt Quirin 80.94 354 *e*pP **P** 09 12 11.8 +2.7
comp=Z,9.5nm,1.0s
VOIR 81.09 344 P **P** 09 12 12.4 +2.4
FETA Feichten 81.17 354 *e*pP **P** 09 12 11.8 +1.4
comp=Z,6.1nm,1.1s
SOKA Soboth 81.18 351 *e*pP **P** 09 12 12.6 +2.2
comp=Z,15nm,1.5s
GNI Garni 81.23 329 LR LR 09 52 60.0
comp=Z,748nm,20.8s,baz=24,slow=39
ABTA Abfaltersbach 81.32 353 *e*pP **P** 09 12 13.0 +1.9
comp=Z,12nm,1.1s
MYKA Terra Mystica 81.35 352 *e*pP **P** 09 12 14.0 +2.7
comp=Z,7.6nm,1.4s
QIS Mount Isa 81.38 220 P **P** 09 12 12.0 +0.5
comp=Z,8.1nm,1.0s
QIS Mount Isa 81.38 220 P **P** 09 12 15.4 +3.9
QIS Mount Isa 81.38 220 P **P** 09 12 12.0 +0.5
OBKA Obir 81.39 352 *e*pP **P** 09 12 12.6 +1.1
comp=Z,3.8nm,0.8s
OBKA Obir 81.39 352 P **P** 09 12 12.7 +1.1
TIRR Tirgusor 81.43 342 P **P** 09 12 10.3 -1.2
BNALP Bannalp 81.44 356 P **P** 09 12 14.7 +2.9
BZS Buzias 81.45 347 P **P** 09 12 14.4 +2.7
TUE Stuetta 81.79 355 P **P** 09 12 16.6 +2.8
EIDS Eidsvold 81.80 209 P P 09 12 18.8 +5.2
comp=Z,18nm,1.2s
KNRA Kununurra 81.91 232 P **P** 09 12 12.8 -1.5
comp=Z,19nm,1.1s
WR8 Warramunga Arr 82.98 225 IAmb IAmb 09 12 24.2
comp=Z,57nm,1.8s
WRAB Tennant Creek 83.03 225 P **P** 09 12 24.1 +3.9
WRAB Tennant Creek 83.03 225 P **P** 09 12 19.7 -0.5
WRAB pmax pmax
comp=Z,31nm,1.5s
WRAB Tennant Creek 83.03 225 P **P** 09 12 19.7 -0.5
WRAB IAmb IAmb 09 12 24.5
comp=Z,31nm,1.4s
WRAB Tennant Creek 83.03 225 P **P** 09 12 20.5 +0.4
WRA Warramunga Arr 83.04 225 P **P** 09 12 18.7 -1.6
comp=Z,5.0nm,0.9s,baz=33,slow=5.8,SNR=16
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 83.04 225 *i* P **P** 09 12 20.2 0.0
WRA pmax pmax
comp=Z,7.0nm,0.7s
WRA Warramunga Arr 83.04 225 P **P** 09 12 20.0 -0.2
JUD3 Juan Diaz 3 83.21 82 IAmb IAmb 09 12 29.7
comp=Z,32nm,1.2s
PSI Prapat 83.92 267 P **P** 09 12 28.5 +3.3
BR131 Keskin Array S 84.79 336⇓ *e*P **P** 09 12 29.5 +0.2
BRTR Keskin Array B 84.79 336 P **P** 09 12 28.1 -1.1
comp=Z,4.4nm,0.8s,baz=7.6,slow=3.7,SNR=5.1
BRTR LR LR 09 54 49.0
comp=Z,194nm,19.3s,baz=34,slow=39
comp=Z,4.4nm,0.8s
BRTR Keskin Array B 84.79 336 P **P** 09 12 28.3 -1.0
BRTR Keskin Array B 84.79 336 P **P** 09 12 28.3 -1.0
HYB Hyderabad 84.84 292 *e*P **P** 09 12 29.4 -0.3
HYB *e*PKiKP **PKiKP** 09 17 41.7 -0.6
PDG Podgorica 84.91 348 P **P** 09 12 31.3 +1.7
QLP Quilpie 85.13 214 P **P** 09 12 33.6 +2.9
comp=Z,56nm,1.0s
QLP Quilpie 85.13 214 P **P** 09 12 34.0 +3.3
PHP Peshkopia 85.47 347 P **P** 09 12 35.6 +3.1
FITZ Fitzroy Crossi 85.51 233 P **P** 09 12 33.9 +1.1
comp=Z,4.6nm,1.1s
FITZ Fitzroy Crossi 85.51 233 LR LR 09 47 43.2
comp=Z,261nm,20.1s,baz=28,slow=34
FITZ Fitzroy Crossi 85.51 233 P **P** 09 12 36.5 +3.7
FITZ Fitzroy Crossi 85.51 233 P **P** 09 12 33.9 +1.1
KNT Kendrikon 85.61 345 P **P** 09 12 35.3 +2.1
GSI Gunungsitoli 85.92 267 P **P** 09 12 37.8 +2.7
GSI Gunungsitoli 85.92 267 P **P** 09 12 34.9 -0.2
ARMA Armidale 86.41 206 P P 09 12 42.0 +4.9
comp=Z,43nm,1.5s
ARMA Armidale 86.41 206 P **P** 09 12 40.3 +3.2
AS17 Alice Springs 86.47 224 P **P** 09 12 39.5 +2.0
comp=Z,16nm,1.2s
AS15 Alice Springs 86.48 224 P **P** 09 12 38.4 +0.9
comp=Z,13nm,0.8s
AS01 Alice Springs 86.49 224 P **P** 09 12 39.9 +2.3
AS31 Alice Springs 86.51 224 P **P** 09 12 39.4 +1.7
comp=Z,4.5nm,0.7s
ASAR Alice Springs 86.51 224 P **P** 09 12 37.5 -0.2
comp=Z,6.9nm,0.7s,baz=25,slow=5.6,SNR=31
ASAR LR LR 09 51 10.1
comp=Z,114nm,18.7s,baz=22,slow=36
comp=Z,6.9nm,0.7s
AS09 Alice Springs 86.52 224 P **P** 09 12 37.8 0.0
comp=Z,19nm,0.9s
AUALC St Philip's Co 86.54 224 P **P** 09 12 40.8 +3.0
AULRC Lightning Ridg 86.54 210 P **P** 09 12 41.3 +3.7
SJG San Juan 88.30 62 LR LR 09 56 01.8
comp=Z,548nm,18.5s,baz=319,slow=38
ESDC Sonseca Array 88.58 5 P **P** 09 12 48.1 +0.5
comp=Z,1.2nm,0.8s,baz=346,slow=6.0,SNR=4.9
comp=Z,1.2nm,0.8s
CMSA Cobar Meteorol 89.22 211 P **P** 09 12 52.5 +2.2
comp=Z,35nm,2.6s
CMSA Cobar Meteorol 89.22 211 P **P** 09 12 54.0 +3.6
SJCC San Jacinto, C 89.69 74 P **P** 09 12 52.8 -0.4
APAC Apartado, Choc 90.43 77 P **P** 09 12 56.7 +0.1
MMAI Mount Meron Ar 90.65 333 LR LR 09 59 56.4
comp=Z,214nm,19.2s,baz=30,slow=40
STKA Stephens Creek 90.89 214 P **P** 09 12 58.4 +0.2
comp=Z,13nm,0.6s,baz=345,slow=5.0,SNR=12
comp=Z,13nm,0.6s
IDI Anoyia 90.97 342 LR LR 09 58 45.5
comp=Z,186nm,19.2s,baz=340,slow=39
ASF Jabal al Asfar 91.01 331 LR LR 10 01 47.6
comp=Z,177nm,18.3s,baz=26,slow=41
PALK Pallekele 91.61 284 LR LR 09 57 55.7
comp=Z,164nm,20.2s,baz=31,slow=38
CBOC Ciudad Bolivar 92.38 77 P **P** 09 13 04.7 -1.2
PTBC PUERTO BERRIO, 92.78 76 P **P** 09 13 05.1 -2.4
PLMC San Jos del P 92.97 78 P **P** 09 13 07.2 -1.3
SDV Santo Domingo 93.19 71 LR LR 09 55 19.7
comp=Z,254nm,21.2s,baz=292,slow=36
SDV Santo Domingo 93.19 71 P **P** 09 13 08.2 -1.4
GUY2C Guyana, Caldas 93.28 77 P **P** 09 13 09.2 -1.2
BARC Barichara 93.50 75 P **P** 09 13 09.4 -1.7
SPBC San Pablo de B 93.72 76 P **P** 09 13 10.4 -1.5
EIL Elat 93.93 332 LR LR 10 00 10.5
comp=Z,179nm,19.9s,baz=64,slow=38
JAMC Jamundi, Valle 94.07 80 P **P** 09 13 13.6 -0.1
RUSC La Rusia 94.12 75 P **P** 09 13 11.9 -2.4
ROSC El Rosal 94.21 77 LR LR 09 58 01.7
comp=Z,91nm,20.0s,baz=21,slow=37
POPC Popayan, Colom 94.60 80 P **P** 09 13 15.2 -0.9
PRAC Prado 94.76 78 P **P** 09 13 15.0 -1.7
MDT Midelt 95.37 6 LR LR 10 00 14.2
comp=Z,119nm,18.6s,baz=358,slow=38
URMC La Uribe, Meta 95.44 78 P **P** 09 13 16.2 -3.6
RPZ Rata Peaks 95.80 188 LR LR 09 48 49.2
comp=Z,84nm,21.8s,baz=41,slow=31
RPN Rapa Nui 98.62 123 LR LR 09 47 42.5
comp=Z,94nm,19.8s,baz=322,slow=29
TORD Torodi Ar. Bea 115.18 1 PKP **PKiKP** 09 18 33.5 -2.9
comp=Z,0.7nm,0.5s,baz=356,slow=2.5,SNR=7.1
TORD PKKPbc **PKKPbc** 09 29 08.9 -0.5
comp=Z,1.2nm,0.6s,baz=204,slow=3.2,SNR=5.7
H03N2 Juan Fernandez 120.44 106 T T 11 30 41.5
baz=317,slow=77,SNR=981
H03N1 Juan Fernandez 120.46 106 T T 11 30 44.3
baz=317,slow=77,SNR=1306
H03N3 Juan Fernandez 120.46 106 T T 11 30 23.4
baz=317,slow=77,SNR=1329
BDFB Brasilia 126.06 67 PKP **PKPdf** 09 18 55.5 -1.8
comp=Z,3.4nm,0.6s,baz=60,slow=8.1,SNR=4.7
BI02 San Fabin de 127.22 104 PKPdf 09 18 57.1 -1.8
CPUP Villa Florida 128.65 84 PKP **PKPdf** 09 19 00.2 -1.6
comp=Z,2.4nm,0.7s,baz=135,slow=0.8,SNR=7.9
PLCA Paso Flores 130.29 108 PKP **PKPdf** 09 19 03.8 -0.9
comp=Z,3.5nm,0.8s,baz=316,slow=0.7,SNR=8.5
PLCA SKPbc **SKPab** 09 22 23.5 -3.5
comp=Z,5.6nm,1.1s,baz=330,slow=9.5,SNR=3.8
QSPA South Pole Qui 141.70 180 PKiKP PKPpre 09 19 19.0
comp=Z,4.7nm,0.6s,baz=302,slow=1.2,SNR=22
MAW Mawson 147.48 218 P **PKPbc** 09 19 37.3 -0.1
MAW Mawson 147.48 218 PKPbc **PKPbc** 09 19 36.5 -0.9
comp=Z,14nm,1.0s,baz=52,slow=2.6,SNR=19
MAW Mawson 147.48 218 PKP2 **PKPbc** 09 19 36.7 -0.7
MAW Mawson 147.48 218 **PKPbc** 09 19 36.7 -0.7
BOSA Boshof 151.23 315 PKPbc **PKPbc** 09 19 46.0 -2.2
comp=Z,3.2nm,0.6s,baz=72,slow=1.7,SNR=11
SYO Syowa Base 155.62 212⇓ *e*P **PKPab** 09 20 12.1 -1.3
SYO Syowa Base 155.62 212⇑ *e*P **PKPab** 09 20 16.3 +2.9
ELIB Princess Elisa 157.93 197 *d*PKP **PKPab** 09 20 23.4 -0.2
TROLL Troll, Antarti 159.86 180 ⇑PKPdf **PKPdf** 09 19 51.4 -1.1
comp=Z,118nm,0.8s
TROLL ⇓PKPab **PKPab** 09 20 31.8 -0.1
comp=Z,134nm,0.5s
SNAA Sanae 160.05 175 ⇑PKPdf **PKPdf** 09 19 51.2 -1.5
comp=Z,34nm,0.7s
SNAA ⇑PKPab **PKPab** 09 20 32.6 0.0
comp=Z,74nm,0.6s
SNAA Sanae 160.05 175 PKP **PKPdf** 09 19 53.0 +0.4
comp=Z,1.2nm,0.9s,baz=270,slow=4.0,SNR=2.9
SNAA PKPab **PKPab** 09 20 30.8 -1.8
comp=Z,4.0nm,0.8s,baz=196,slow=2.8,SNR=7.8
SNAA Sanae 160.05 175 PKIKP **PKPdf** 09 19 53.0 +0.4
SNAA 09 20 32.1
VNA2 Neumayer--Watz 160.41 170 ⇓PKPdf **PKPdf** 09 19 51.1 -1.8
comp=Z,1.7nm,0.6s,baz=318,slow=0.9
VNA2 ⇓PKPab **PKPab** 09 20 33.3 -0.8
comp=Z,9.3nm,0.8s,baz=198,slow=1.9
VNA1 Neumayer--Stat 160.57 169 ⇓PKPab **PKPab** 09 20 34.7 -0.1
comp=Z,5.9nm,0.8s

*SOME **15** 09:06:13.5, 40.˚15N×75.˚13E, h10km*
*NNC **15** 09:06:15.7±1.5, 40.˚27N×75.˚13E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=10.0km s-min=8.0km az=174.0*
*KRNET **15** 09:06:17.8±0.1, 40.˚38N×75.˚08E, h16km, mb3.0*

ISC 15 09:06:15.7±1.8, 40.˚30N±0.˚06×75.˚18E±0.˚04, h8km±13km, n30, σ1ı32/44, 20C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALK	**Salom-Alik**	**1.19**	**300**	⇑ *i*P		**Pn**		**09 06 38.3**	**-0.5**
SALK				⇑ *i*S		**Sg**		**09 06 53.0**	**-0.9**
NRN	**Naryn**	**1.29**	**28**	⇑ *e*P		**Pb**		**09 06 41.2**	**+0.7**
NRN				⇑ *i*S		**Sb**		**09 06 58.0**	**+0.6**
SFK	**Sufi-Kurgan**	**1.32**	**258**	⇓ *i*P		**Pg**		**09 06 41.5**	**+0.6**
SFK				⇓ *i*S		**Sn**		**09 06 58.7**	**+0.2**
UCH	**Uchtor** SNR=31	**1.99**	**346**	P		**Pg**		**09 06 54.6**	**+0.8**
UCH	**Uchtor**	**1.99**	**346**	⇑ *e*P		**Pb**		**09 06 52.7**	**+0.2**
UCH				⇑ *i*S		**Sb**		**09 07 18.2**	**+0.6**
ULHL	**Ulahol** SNR=27	**2.10**	**22**	P		**Pg**		**09 06 56.2**	**+0.2**
ULHL	**Ulahol**	**2.10**	**22**	⇑ *i*P		**Pb**		**09 06 55.2**	**+1.0**
ULHL				⇑ *i*S		**Sb**		**09 07 22.4**	**+1.8**
BOOM	**Boomskoye usch**	**2.26**	**14**	⇑ *i*P		**Pb**		**09 06 57.0**	**+0.1**
BOOM				⇑ *i*S		**Sb**		**09 07 25.6**	**+0.4**
KBK	**Karagaybulak** SNR=11	**2.36**	**356**	P		**Pg**		**09 07 01.4**	**+0.4**
KBK	**Karagaybulak**	**2.36**	**356**	⇑ *i*P		**Pb**		**09 06 58.2**	**-0.4**
KBK				⇑ *i*S		**Sb**		**09 07 27.4**	**-0.6**
KDJ	**Kajisay**	**2.37**	**39**	⇑ *i*P		**Pb**		**09 06 59.4**	**+0.6**
KDJ				⇑ *e*S		**Sb**		**09 07 29.7**	**+1.4**
AAK	**Ala-Archa** SNR=8.0	**2.39**	**348**	P		**Pg**		**09 07 01.2**	**-0.3**
AAK	**Ala-Archa** 2.5nm,0.5s	**2.39**	**348**	⇑ Pg		**Pb**		**09 07 00.1**	**+1.0**
AAK	19nm,1.1s			⇑ Lg		Lg		09 07 32.9	
TKM2	**Tokmak 2** SNR=12	**2.64**	**7**	P		**Pg**		**09 07 06.2**	**0.0**
CHMS	**Chumysh** SNR=8.5	**2.72**	**353**	P		**Pg**		**09 07 07.3**	**-0.4**
KST	**Kastek** 11nm,0.4s	**2.81**	**12**	Pg		**Pb**		**09 07 08.1**	**+2.0**
KST	11nm,0.4s			Lg		Lg		09 07 47.4	
KST	**Kastek** 11nm,0.4s	**2.81**	**12**	*e*P		**Pb**		**09 07 08.1**	**+2.0**
KST	11nm,0.4s			*e*S		**Sg**		**09 07 47.4**	**+1.6**
MRKS	**Merke** 3.6nm,0.3s	**2.85**	**330**	Pg		**Pb**		**09 07 07.4**	**+0.5**
MRKS	9.5nm,0.5s			Lg		Lg		09 07 46.1	
MRKS	**Merke** 3.6nm,0.3s	**2.85**	**330**	*e*P		**Pb**		**09 07 07.4**	**+0.5**
MRKS	9.5nm,0.5s			*e*S		**Sg**		**09 07 46.1**	**-1.1**
USP	**Ospenovka** SNR=5.4	**3.01**	**351**	P		**Pg**		**09 07 12.2**	**-1.1**
TNSS	**Tian-Shan** 4.7nm,0.5s	**3.04**	**25**	Pg		**Pb**		**09 07 12.5**	**+2.3**
TNSS	4.7nm,0.6s			Lg		Lg		09 07 54.5	
TNSS	**Tian-Shan** 4.7nm,0.5s	**3.04**	**25**	*e*P		**Pb**		**09 07 12.6**	**+2.3**
TNSS	4.7nm,0.6s			*e*S		**Sg**		**09 07 54.5**	**+1.2**
ANVS	**Anan'yevo**	**3.11**	**36**	⇑ *e*P		**Pb**		**09 07 09.0**	**-2.3**
ANVS				⇑ *e*S		**Sb**		**09 07 47.1**	**-2.3**
SGDS	**Sogindy** 3.5nm,0.3s	**3.18**	**353**	Pg		**Pb**		**09 07 13.9**	**+1.4**
SGDS	5.7nm,0.3s			Lg		Lg		09 07 57.2	
MDOK	**Medeo** 12nm,0.4s	**3.19**	**25**	Pg		**Pb**		**09 07 14.4**	**+1.8**
MDOK	12nm,0.9s			Lg		Lg		09 07 58.0	
KRBS	**Karabastau** 5.0nm,0.4s	**3.42**	**6**	Pg		**Pb**		**09 07 18.0**	**+1.5**
KRBS	1.4nm,0.4s			Lg		Lg		09 08 04.0	
KRBS	**Karabastau** 5.0nm,0.4s	**3.42**	**6**	*e*P		**Pb**		**09 07 18.0**	**+1.5**
KRBS	1.4nm,0.4s			*e*S		**Sg**		**09 08 04.0**	**-1.4**
KTBS	**Karatobe** 1.3nm,0.3s	**3.59**	**18**	Pg		**Pb**		**09 07 20.9**	**+1.5**
KTBS	9.3nm,0.4s			Lg		Lg		09 08 08.9	
KTBS	**Karatobe** 1.3nm,0.3s	**3.59**	**18**	*e*P		**Pb**		**09 07 20.9**	**+1.5**
KTBS	9.3nm,0.4s			*e*S		**Sg**		**09 08 08.9**	**-2.0**
PDGK	**Podgornoye** 3.8nm,0.7s	**4.42**	**45**	⇑ Pn		**Pn**		**09 07 21.7**	**-1.5**
PDGK	6.9nm,0.5s			⇑ Sn		Sn		09 07 50.3	-25

*IDC **15** 09:15:04.0±3.3, 53.˚56N×87.˚88E, h0km, mbtmp2.9/2, ML2.9/1, Error ellipse: s-maj=30.8km s-min=19.2km az=50.0*

ASRS 15 09:14:59.0±1.0, 53.˚62N×87.˚87E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.3nm,0.7s,baz=100,slow=314,SNR=4.2	**1.84**	**281**	I		I		09 26 40.0	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=99,slow=16,SNR=7.8	**1.84**	**281**	Pn		Pg		09 15 36.4	+2.2
ZALV	2.1nm,0.3s,baz=101,slow=31,SNR=9.2			Lg		Lg		09 16 03.1	
KURBB	**Kurchatov Arra** 0.6nm,0.4s,baz=63,slow=14,SNR=1.6	**6.49**	**246**	Pn		Pn		09 16 41.3	+5.7
KURBB	baz=63,slow=32			Lg		Lg		09 18 27.6	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=30,slow=14,SNR=1.9 0.2nm,0.3s	**7.71**	**210**	Pn		Pn		09 16 58.0	+5.4

BER 15 09:18:50.6±2.8, 73.˚99N×8.˚90E, h10km, Mw3.9, Confirmed Earthquake, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**3.46**	**26**	*e*P		Pn		09 19 42.7	-1.7
HSPB				IAML				09 19 50.6	
	comp=Z,3.1nm,0.9s								
HSPB				*e*S		Sn		09 20 19.1	-6.1
SPA0	**Spitsbergen Ar**	**4.58**	**20**	*e*P		Pn		09 19 59.5	-0.2
SPA0				IAML				09 20 06.2	
	comp=Z,5.9nm,0.3s								
HOPEN	**Hopen**	**4.82**	**51**	*e*P		Pn		09 20 00.9	-2.1
HOPEN				IAML				09 20 08.2	
	comp=Z,9.6nm,0.8s								
HOPEN				*e*S		Sn		09 20 51.1	-7.7
KBS	**Kingsbay**	**5.02**	**7**	*e*P		Pn		09 20 04.8	-0.9
KBS				IAML				09 20 08.6	

comp=Z,4.0nm,1.1s
JNE Jan Mayen East 5.99 248 *e*P Pn 09 20 15.1 -3.9
JNE IAML 09 20 17.2
comp=Z,17nm,0.6s
JNW Jan Mayen West 6.00 249 *e*P Pn 09 20 16.5 -2.6
JNW IAML 09 20 19.6
comp=Z,5.2nm,1.1s
STEI Steigen 6.43 158 *e*P Pn 09 20 23.9 -1.2

IDC ***15*** *09:23:35.8±1.1,33°.77S×178°.48W,h0km,mb4.1/3, mbtmp4.1/6,ML3.7/3,Error ellipse: s-maj=33.1km s-min=25.8km az=112.0*
NEIC ***15*** *09:23:37.0±1.3,33°.9S±0°.1×178°.2W±0°.2,h10km±2km, mb4.3/14,Error ellipse: s-maj=26.4km s-min=19.6km az=124.0*
WEL ***15*** *09:23:36.7±0.8,34°.S±9°.×17°.9W±2°.1,h12km,M4.5/13, mB5.1/6,ML4.4/14,MLv4.7/13,Mw(mB)4.4/6,Error ellipse: s-maj=29.8km s-min=4.5km az=111.8*
NOU ***15*** *09:23:41.1,34°.03S×178°.29W,h201km,mb4.0/11,South of Kermadec Islands*
ISC 15 09:23:37.1±1.0,33°.89S±0°.08×178°.3W±0°.1,h10km,n61,
σ1ᵽ23/64,mb4.3/10,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
MXZ	**Matakaoa Point**	**4.61**	**216**	P		**Pn**	**09 24 48.4**	**+1.5**	
MXZ	**Matakaoa Point**	**4.61**	**216**	S		**Sn**	**09 25 42.8**	**+2.4**	
MXZ	**Matakaoa Point**	**4.61**	**216**	Pn		**Pn**	**09 24 46.5**	**-0.3**	
MXZ				Sn		**Sn**	**09 25 41.0**	**+0.5**	
MXZ	**Matakaoa Point**	**4.61**	**216**	P		**Pn**	**09 24 48.3**	**+1.4**	
MXZ				S		**Sn**	**09 25 41.6**	**+1.1**	
GLKZ	**Green Lake**	**4.63**	**4**	P		Pn	09 24 41.3	-5.8	
GLKZ				S		Sn	09 25 32.5	-8.4	
WMGZ	**Waiomatatini S**	**4.76**	**214**	P		**Pn**	**09 24 50.3**	**+1.3**	
HAZ	**Te Kaha**	**5.03**	**219**	P		**Pn**	**09 24 53.8**	**+1.3**	
PUZ	**Puketiti**	**5.04**	**213**	P		**Pn**	**09 24 52.7**	**-0.1**	
PUZ				S		**Sn**	**09 25 52.5**	**+1.3**	
RUGZ	**Raukumara Rang**	**5.24**	**218**	P		**Pn**	**09 24 56.2**	**+0.6**	
RUGZ				S		**Sn**	**09 25 57.7**	**+1.6**	
TWGZ	**Tauwhareparae**	**5.25**	**214**	P		**Pn**	**09 24 56.6**	**+0.8**	
CNGZ	**Carnagh Statio**	**5.40**	**211**	P		**Pn**	**09 24 57.9**	**+0.1**	
TKGZ	**Te Karaka**	**5.53**	**214**	P		**Pn**	**09 25 00.3**	**+0.9**	
MWZ	**Matawai**	**5.60**	**216**	P		**Pn**	**09 25 00.0**	**-0.4**	
MWZ				S		**Sn**	**09 26 05.6**	**+0.8**	
URZ	**Urewera**	**5.75**	**219**	Pn		**Pn**	**09 25 03.5**	**+0.9**	
	8.5nm,0.3s,baz=264,slow=4.3,SNR=46								
URZ				Sn		**Sn**	**09 26 07.4**	**-1.2**	
	18nm,0.3s,baz=139,slow=18,SNR=26								
	21nm,0.3s								
URZ	**Urewera**	**5.75**	**219**	P		**Pn**	**09 25 04.0**	**+1.4**	
URZ	**Urewera**	**5.75**	**219**	S		**Sn**	**09 26 08.9**	**+0.3**	
URZ	**Urewera**	**5.75**	**219**	P		**Pn**	**09 25 02.3**	**-0.3**	
URZ				S		**Sn**	**09 26 07.9**	**-0.7**	
RAGZ	**Rawiri**	**5.78**	**216**	P		**Pn**	**09 25 05.0**	**+2.0**	
RIGZ	**Rimuhau**	**5.78**	**213**	P		**Pn**	**09 25 03.7**	**+0.6**	
PRGZ	**Paritu Road**	**5.91**	**211**	P		**Pn**	**09 25 04.4**	**-0.4**	
SNGZ	**Shannon Statio**	**6.04**	**215**	P		**Pn**	**09 25 07.1**	**+0.6**	
RTZ	**Ruatahuna**	**6.09**	**218**			**Pn**	**09 25 07.7**	**+0.5**	
RTZ	**Ruatahuna**	**6.09**	**218**	P		**Pn**	**09 25 08.7**	**+1.4**	
MHGZ	**Mahia Peninsul**	**6.09**	**209**	P		**Pn**	**09 25 07.0**	**-0.3**	
RAHZ	**Arahi**	**6.27**	**216**	P		**Pn**	**09 25 11.0**	**+1.3**	
MTHZ	**Maungataniwha**	**6.34**	**217**	P		**Pn**	**09 25 12.1**	**+1.5**	
TOZ	**Tahuroa Road**	**6.36**	**231**	Pn		**Pn**	**09 25 12.2**	**+1.3**	
TOZ	**Tahuroa Road**	**6.36**	**231**	P		**Pn**	**09 25 14.0**	**+3.1**	
BKZ	**Black Stump Fm**	**6.75**	**217**	P		**Pn**	**09 25 15.7**	**-0.7**	
BKZ	**Black Stump Fm**	**6.75**	**217**	S		**Sn**	**09 26 32.5**	**-0.8**	
OTVZ	**Oturere**	**7.19**	**221**	P		**Pn**	**09 25 22.9**	**+0.4**	
OTVZ				S		**Sn**	**09 26 42.2**	**-1.9**	
BFZ	**Birch Farm**	**8.07**	**211**	P		**Pn**	**09 25 33.6**	**-0.8**	
BFZ	**Birch Farm**	**8.07**	**211**	S		**Sn**	**09 27 02.8**	**-2.9**	
KHZ	**Kahutara**	**10.68**	**215**	P		Pn	09 26 07.2	-2.9	
RPZ	**Rata Peaks**	**12.86**	**217**	Pn		**Pn**	**09 26 40.1**	**+0.1**	
	0.1nm,0.3s,baz=356,slow=16,SNR=3.2								
RPZ				Sn		Sn	09 28 50.4	-13	
	0.3nm,0.3s,baz=129,slow=22,SNR=11								
	1.7nm,0.9s								
ODZ	**Otahua Downs**	**14.04**	**214**	P		Pn	09 26 50.2	-5.8	
JCZ	**Jackson Bay**	**14.30**	**221**	P		Pn	09 26 52.3	-7.4	
DZM	**Mont Dzumac**	**17.91**	**307**	P		**Pn**	**09 27 45.3**	**-1.1**	
	0.2nm,0.3s,baz=146,slow=16,SNR=5.7								
	10nm,1.0s								
EIDS	**Eidsvold**	**27.90**	**280**	P		**P**	**09 29 26.3**	**-1.1**	
EIDS				IAmb		IAmb	09 29 27.3		
	comp=Z,4.8nm,1.1s								
CTAO	**Charters Tower**	**34.31**	**284**	P		**P**	**09 30 23.3**	**-0.6**	
CTAO				IAmb		IAmb	09 30 30.1		
	comp=Z,5.3nm,1.1s								
INKA	**Innaminka**	**35.57**	**269**	P		**P**	**09 30 34.8**	**+0.1**	
INKA				IAmb		IAmb	09 30 47.7		
	comp=Z,2.1nm,0.9s								
AS31	**Alice Springs**	**42.83**	**271**	P		**P**	**09 31 34.2**	**-1.4**	
ASAR	**Alice Springs**	**42.83**	**271**	P		P	09 31 33.8	-1.7	
	comp=Z,3.3nm,0.7s,baz=111,slow=7.6,SNR=50								
ASAR				PcP		**PcP**	**09 33 26.1**	**-0.6**	
	comp=Z,0.5nm,0.5s,baz=119,slow=3.7,SNR=6.0								
	comp=Z,3.3nm,0.7s								
ASAR	**Alice Springs**	**42.83**	**271**	P		**P**	**09 31 34.2**	**-1.3**	
WR8	**Warramunga Arr**	**43.99**	**276**	P		**P**	**09 31 43.4**	**-1.6**	
WR8				IAmb		IAmb	09 32 03.3		
	comp=Z,7.5nm,1.1s								
WRAB	**Tennant Creek**	**44.13**	**276**	P		**P**	**09 31 44.5**	**-1.4**	
WRAB				IAmb		IAmb	09 32 03.8		
	comp=Z,4.1nm,0.9s								
WRA	**Warramunga Arr**	**44.13**	**276**	P		P	09 31 44.4	-1.7	
	comp=Z,4.3nm,0.8s,baz=116,slow=7.8,SNR=38								
WRA				PcP		**PP**	**09 33 29.6**	**+0.7**	
	comp=Z,0.4nm,0.8s,baz=110,slow=2.6,SNR=1.2								
	comp=Z,4.3nm,0.8s								
WRA	**Warramunga Arr**	**44.13**	**276**	P		**P**	**09 31 44.5**	**-1.6**	
WB0	**Warramunga Arr**	**44.17**	**276**	P		P	09 31 44.2	-2.1	
WB0				IAmb		IAmb	09 31 56.5		
	comp=Z,7.1nm,0.9s								
FORT	**Forrest**	**45.05**	**259**	P		**P**	**09 31 52.6**	**-0.6**	
KNRA	**Kununurra**	**50.85**	**277**	P		**P**	**09 32 37.9**	**-0.4**	
KNRA				IAmb		IAmb	09 33 04.4		
	comp=Z,5.8nm,1.0s								
CASY	**Casey**	**51.98**	**209**	P		**P**	**09 32 46.0**	**-0.1**	
FITZ	**Fitzroy Crossi**	**52.23**	**273**	P		**P**	**09 32 47.6**	**-1.0**	
QSPA	**South Pole Qui**	**56.23**	**180**	P		**P**	**09 33 18.2**	**+0.9**	
	comp=Z,0.6nm,0.8s,baz=117,slow=2.3,SNR=3.5								
	comp=Z,0.6nm,0.8s								
QSPA	**South Pole Qui**	**56.23**	**180**	P		**P**	**09 33 17.2**	**0.0**	
QSPA				IAmb		IAmb	09 33 34.4		
	comp=Z,3.7nm,1.1s								
MYLDM	**Lahad Datu**	**71.15**	**290**	P		**P**	**09 34 56.6**	**+0.3**	
FINES	**FINESS Array B**	**148.32**	**338**	PKPbc		**PKPdf**	**09 43 22.6**	**+3.2**	
	comp=Z,1.8nm,0.4s,baz=46,slow=4.0,SNR=20								
NB2	**NORSAR Subarra**	**152.16**	**350**	PKP		**PKPbc**	**09 43 33.3**	**+1.1**	
	comp=Z,0.4nm,0.6s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	**152.16**	**350**	PKPbc		**PKPbc**	**09 43 32.1**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=16,slow=2.8,SNR=3.8								
HFS	**Hagfors**	**152.60**	**347**	PKPbc		**PKPbc**	**09 43 33.0**	**-0.1**	
	comp=Z,0.4nm,0.3s,baz=77,slow=3.1,SNR=4.2								
BRTR	**Keskin Array B**	**153.90**	**292**	PKPbc		**PKPbc**	**09 43 36.4**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=119,slow=1.8,SNR=4.5								

NEIC ***15*** *09:29:27.8±0.9,33°.8S±0°.1×178°.2W±0°.2,h10km±2km, mb4.5/14,Error ellipse: s-maj=28.3km s-min=19.1km az=126.0*
IDC ***15*** *09:29:27.5±0.8,33°.78S×178°.54W,h0km,mb4.3/6, mbtmp4.3/10,ML4.3/4,MS3.9/3,Error ellipse: s-maj=24.6km s-min=21.8km az=105.0*
WEL ***15*** *09:29:28.4±0.8,34°.S±9°.×17°.9W±2°.0,h12km,M4.5/22, mB4.9/10,ML4.7/24,MLv4.9/22,Mw(mB)4.2/10,Error ellipse: s-maj=28.2km s-min=4.1km az=111.9*
ISC 15 09:29:32.6±0.7,33°.74S±0°.06×178°.4W±0°.1,h41km,n75,
σ1ᵽ48/89,mb4.4/14,MS4.1/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
GLKZ	**Green Lake**	**4.49**	**6**	P		Pn	09 30 32.9	-5.2	
GLKZ				S		**Sn**	**09 31 23.4**	**-5.6**	
MXZ	**Matakaoa Point**	**4.64**	**214**	Pn		**Pn**	**09 30 38.0**	**-2.1**	
MXZ				Sn		**Sn**	**09 31 32.8**	**0.0**	
RUGZ	**Raukumara Rang**	**5.26**	**216**	P		**Pn**	**09 30 47.5**	**-1.3**	
RUGZ				S		**Sn**	**09 31 49.3**	**+1.1**	
TWGZ	**Tauwhareparae**	**5.29**	**212**	P		**Pn**	**09 30 49.7**	**+0.5**	
TWGZ				S		**Sn**	**09 31 49.7**	**+0.9**	
CNGZ	**Carnagh Statio**	**5.46**	**209**	P		**Pn**	**09 30 50.3**	**-1.0**	
CNGZ				S		**Sn**	**09 31 55.7**	**+2.9**	
MWZ	**Matawai**	**5.63**	**214**	P		**Pn**	**09 30 51.3**	**-2.4**	
MWZ				S		**Sn**	**09 31 57.7**	**+0.6**	
URZ	**Urewera**	**5.77**	**217**	Pn		**Pn**	**09 30 54.2**	**-1.5**	
	8.8nm,0.3s,baz=38,slow=1.7,SNR=31								
URZ				Sn		**Sn**	**09 31 58.9**	**-1.7**	
	24nm,0.3s,baz=120,slow=21,SNR=18								
	23nm,0.3s								
URZ	**Urewera**	**5.77**	**217**	P		**Pn**	**09 30 54.2**	**-1.5**	
URZ				S		**Sn**	**09 31 59.8**	**-0.8**	
RAGZ	**Rawiri**	**5.81**	**214**	P		**Pn**	**09 30 54.7**	**-1.5**	
RAGZ				S		**Sn**	**09 32 02.5**	**+0.9**	
RIGZ	**Rimuhau**	**5.83**	**211**	P		**Pn**	**09 30 55.4**	**-1.0**	
RIGZ				S		**Sn**	**09 32 02.0**	**0.0**	
PRGZ	**Paritu Road**	**5.96**	**209**	P		**Pn**	**09 30 55.2**	**-3.1**	
PRGZ				S		**Sn**	**09 32 03.7**	**-1.6**	
SNGZ	**Shannon Statio**	**6.08**	**213**	P		**Pn**	**09 30 57.9**	**-1.9**	
SNGZ				S		**Sn**	**09 32 08.0**	**-0.2**	
RTZ	**Ruatahuna**	**6.11**	**216**			**Pn**	**09 30 59.8**	**-0.7**	
RTZ	**Ruatahuna**	**6.11**	**216**	P		**Pn**	**09 30 59.6**	**-0.8**	
RTZ				S		**Sn**	**09 32 08.2**	**-0.9**	
RRRZ	**Republican Roa**	**6.14**	**220**	P		**Pn**	**09 31 00.7**	**-0.1**	
RRRZ				S		**Sn**	**09 32 09.9**	**+0.1**	
MHGZ	**Mahia Peninsul**	**6.15**	**208**	P		**Pn**	**09 31 00.3**	**-0.5**	
MHGZ				S		**Sn**	**09 32 08.4**	**-1.5**	
RAHZ	**Arahi**	**6.30**	**214**	P		**Pn**	**09 31 02.7**	**-0.2**	
PRRZ	**Plateau Road**	**6.33**	**220**	P		**Pn**	**09 31 03.2**	**-0.1**	
WHHZ	**Waihua**	**6.36**	**212**	P		**Pn**	**09 31 04.0**	**+0.2**	
MTHZ	**Maungataniwha**	**6.37**	**215**	P		**Pn**	**09 31 03.7**	**-0.1**	
NMHZ	**Naumai**	**6.58**	**214**	P		**Pn**	**09 31 05.7**	**-1.0**	
ARHZ	**Aropaoanui**	**6.62**	**212**	P		**Pn**	**09 31 06.7**	**-0.6**	
MCHZ	**McNeill Hill**	**6.91**	**213**	P		**Pn**	**09 31 10.3**	**-0.9**	
KWHZ	**Kaweka Forest**	**7.02**	**215**	P		**Pn**	**09 31 12.0**	**-0.8**	
KAHZ	**Kahuranaki**	**7.11**	**211**	P		**Pn**	**09 31 11.0**	**-3.2**	
TMVZ	**Te Maari**	**7.14**	**220**	P		**Pn**	**09 31 13.4**	**-1.2**	
ETVZ	**East Tongariro**	**7.15**	**220**	P		**Pn**	**09 31 12.6**	**-2.2**	
OTVZ	**Oturere**	**7.20**	**220**	P		**Pn**	**09 31 15.1**	**-0.3**	
KRHZ	**Kereru**	**7.21**	**214**	P		**Pn**	**09 31 13.0**	**-2.5**	
SNVZ	**South Ngauruho**	**7.23**	**220**	P		**Pn**	**09 31 15.3**	**-0.6**	
BHHZ	**Black Hill Sta**	**7.24**	**216**	P		**Pn**	**09 31 14.7**	**-1.1**	
MOVZ	**Moawhango**	**7.33**	**218**	P		**Pn**	**09 31 16.2**	**-1.0**	
WNVZ	**Wahianoa**	**7.35**	**219**	P		**Pn**	**09 31 16.9**	**-0.6**	
TRVZ	**Turoa**	**7.36**	**219**	P		**Pn**	**09 31 17.4**	**-0.2**	
PNHZ	**Pukenui**	**7.51**	**213**	P		**Pn**	**09 31 16.8**	**-2.7**	
BFZ	**Birch Farm**	**8.12**	**210**	P		**Pn**	**09 31 25.1**	**-2.8**	
MRZ	**Mangatainoka R**	**8.39**	**213**	P		**Pn**	**09 31 28.2**	**-3.4**	
RPZ	**Rata Peaks**	**12.89**	**216**	Pn		**Pn**	**09 32 31.4**	**-1.7**	
	0.3nm,0.3s,baz=18,slow=5.3,SNR=6.6								
RPZ				Sn		Sn	09 34 40.5	-15	
	0.3nm,0.3s,baz=343,slow=17,SNR=7.8								
	1.2nm,0.6s								
MSVF	**Nonsavu**	**16.25**	**348**	Pn		**Pn**	**09 33 18.8**	**+0.8**	
	0.2nm,0.3s,baz=195,slow=22,SNR=2.1								
	7.7nm,1.0s								
DZM	**Mont Dzumac**	**17.68**	**307**	P		**P**	**09 33 36.5**	**0.0**	
	0.6nm,0.3s,baz=126,slow=13,SNR=13								
	13nm,1.0s								
STKA	**Stephens Creek**	**33.50**	**262**	P		**P**	**09 36 07.2**	**-1.0**	
	2.2nm,0.9s,baz=119,slow=13,SNR=2.0								
	2.2nm,0.9s								
CTAO	**Charters Tower**	**34.11**	**284**	P		**P**	**09 36 12.8**	**-0.7**	
CTAO				IAmb		IAmb	09 36 22.1		
	comp=Z,8.4nm,1.1s								
INKA	**Innaminka**	**35.42**	**269**	P		**P**	**09 36 24.1**	**-0.7**	
INKA				IAmb		IAmb	09 36 38.8		
	comp=Z,4.0nm,0.9s								
BBOO	**Buckleboo**	**37.82**	**258**	P		**P**	**09 36 45.4**	**+0.2**	
BBOO				IAmb		IAmb	09 36 51.7		
	comp=Z,14nm,1.1s								
COEN	**Coen**	**39.95**	**290**			**P**	**09 37 03.8**	**+0.7**	
AS31	**Alice Springs**	**42.67**	**271**	P		**P**	**09 37 25.2**	**-0.3**	
ASAR	**Alice Springs**	**42.67**	**271**	P		**P**	**09 37 25.6**	**+0.1**	
	comp=Z,6.6nm,0.8s,baz=110,slow=7.5,SNR=72								
ASAR				PcP		**PcP**	**09 39 17.4**	**+0.5**	
	comp=Z,1.3nm,0.7s,baz=120,slow=4.4,SNR=5.1								
	comp=Z,6.6nm,0.8s								
ASAR	**Alice Springs**	**42.67**	**271**	P		**P**	**09 37 25.2**	**-0.2**	
WR8	**Warramunga Arr**	**43.82**	**276**			**P**	**09 37 34.9**	**+0.2**	
WR8				IAmb		IAmb	09 37 46.9		
	comp=Z,8.9nm,0.8s								
WRAB	**Tennant Creek**	**43.95**	**276**	P		**P**	**09 37 35.9**	**+0.1**	
WRAB				IAmb		IAmb	09 37 36.6		
	comp=Z,7.8nm,0.8s								
WRA	**Warramunga Arr**	**43.96**	**276**	P		**P**	**09 37 35.7**	**-0.2**	
	comp=Z,7.5nm,0.8s,baz=117,slow=7.8,SNR=61								
WRA				PcP		**PcP**	**09 39 20.8**	**-0.4**	
	comp=Z,1.3nm,1.2s,baz=125,slow=3.7,SNR=1.0								
	comp=Z,7.5nm,0.8s								
WRA	**Warramunga Arr**	**43.96**	**276**			**P**	**09 37 35.8**	**0.0**	
WB0	**Warramunga Arr**	**43.99**	**276**			**P**	**09 37 36.3**	**+0.2**	
SBA	**Scott Base**	**44.69**	**184**	P		**P**	**09 37 39.9**	**-1.0**	
SBA				IAmb		IAmb	09 37 57.5		
	comp=Z,2.5nm,0.9s								
FORT	**Forrest**	**44.92**	**258**	P		**P**	**09 37 43.7**	**+0.3**	
FORT				IAmb		IAmb	09 38 04.4		
	comp=Z,5.0nm,1.0s								
KNRA	**Kununurra**	**50.67**	**277**	P		**P**	**09 38 28.2**	**+0.1**	
KNRA				IAmb		IAmb	09 38 35.8		
	comp=Z,7.0nm,1.1s								
FITZ	**Fitzroy Crossi**	**52.06**	**273**	P		**P**	**09 38 38.9**	**+0.4**	
QSPA	**South Pole Qui**	**56.38**	**180**	P		**P**	**09 39 10.3**	**+0.8**	
	comp=Z,0.8nm,0.7s,baz=26,slow=6.1,SNR=5.1								
	comp=Z,0.8nm,0.7s								
QSPA	**South Pole Qui**	**56.38**	**180**	P		**P**	**09 39 08.3**	**-1.1**	
SIJI	**Sorong**	**57.27**	**294**	LR		LR	10 04 21.9		
	comp=Z,60nm,18.1s,baz=148,slow=37								
MAW	**Mawson**	**69.06**	**201**	P		**P**	**09 40 34.8**	**+1.1**	
	comp=Z,0.8nm,0.6s,baz=94,slow=3.3,SNR=3.8								
	comp=Z,0.8nm,0.6s								
VNA2	**Neumayer--Watz**	**75.43**	**177**	P		**P**	**09 41 12.4**	**+0.7**	
	comp=Z,4.5nm,0.9s,baz=175,slow=5.2								
PFO	**Pinyon Flats O**	**88.74**	**47**	LR		LR	10 14 49.8		
	comp=Z,76nm,18.8s,baz=150,slow=31								
LPAZ	**La Paz**	**97.10**	**115**	P		Pdif	09 43 03.0	+1.2	
	comp=Z,1.3nm,0.4s,baz=240,slow=5.9,SNR=8.9								
	comp=Z,1.3nm,0.4s								
NEW	**Newport**	**98.28**	**36**	LR		LR	10 20 41.8		
	comp=Z,77nm,19.6s,baz=130,slow=31								
KURBB	**Kurchatov Arra**	**123.08**	**312**	PKP		**PKiKP**	**09 48 24.8**	**+0.5**	
	comp=Z,0.3nm,0.4s,baz=114,slow=1.9,SNR=4.9								
LANU	**Lannavaara**	**143.70**	**347**	*e*P		**Pdif**	**09 46 31.7**	**+4.8**	
FINES	**FINESS Array B**	**148.12**	**338**	PKPbc		**PKPbc**	**09 49 13.1**	**+0.1**	
	comp=Z,2.3nm,0.4s,baz=44,slow=4.0,SNR=21								
FINES	**FINESS Array B**	**148.12**	**338**			**PKiKP**	**09 49 14.2**	**-0.5**	
MMAI	**Mount Meron Ar**	**151.80**	**278**	PKPbc		**PKiKP**	**09 49 24.8**	**+1.3**	
	comp=Z,1.4nm,0.4s,baz=56,slow=6.1,SNR=2.2								
NB2	**NORSAR Subarra**	**151.98**	**350**	PKP		**PKiKP**	**09 49 23.5**	**+0.7**	
	comp=Z,0.5nm,0.5s,baz=15,slow=2.6								
NOA	**NORSAR Array B**	**151.98**	**350**	PKPbc		**PKiKP**	**09 49 23.3**	**+0.4**	
	comp=Z,0.3nm,0.6s,baz=15,slow=4.5,SNR=6.5								
HFS	**Hagfors**	**152.42**	**347**	PKPbc		**PKiKP**	**09 49 25.8**	**+2.1**	
	comp=Z,2.1nm,0.7s,baz=87,slow=3.0,SNR=7.5								
BRTR	**Keskin Array B**	**153.69**	**292**	PKPbc		**PKiKP**	**09 49 27.9**	**+0.7**	
	comp=Z,1.4nm,0.5s,baz=128,slow=3.4,SNR=7.0								
BRTR				PKPab		**PKPab**	**09 49 40.8**	**+0.7**	
	comp=Z,1.7nm,0.8s,baz=64,slow=8.4,SNR=4.1								
BRTR	**Keskin Array B**	**153.69**	**292**	PKPbc		**PKiKP**	**09 49 28.8**	**+1.6**	
BRTR				PKPab		**PKPab**	**09 49 40.6**	**+0.5**	

IDC ***15*** *09:31:15.5±5.5,53°.59N×90°.79E,h0km,mbtmp2.8/3, ML2.5/3,Error ellipse: s-maj=57.4km s-min=29.7km az=48.0*
ASRS 15 09:31:08.0±2.0,53°.76N×91°.07E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
I46RU	**ZALESOVO INFRA**	**3.71**	**276**	I		I	09 53 00.0		
	0.2nm,1.0s,baz=92,slow=315,SNR=4.1								
ZALV	**Zalesovo Beam**	**3.71**	**275**	Pn		Pb	09 32 12.2	-2.1	
	0.5nm,0.3s,baz=93,slow=15,SNR=7.9								
ZALV				Lg		Lg	09 33 08.2		
	0.8nm,0.3s,baz=93,slow=27,SNR=8.0								
	0.9nm,0.5s								
KURBB	**Kurchatov Arra**	**8.32**	**253**	Pn		Pn	09 33 14.7	+5.0	
	baz=65,slow=14,SNR=3.7								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**8.95**	**222**	Pn		Pn	09 33 22.9	+4.4	
	0.2nm,0.3s,baz=47,slow=10,SNR=1.3								
	0.3nm,0.4s								

SOME ***15*** *09:32:13.3,39°.32N×71°.82E,h10km*
IDC ***15*** *09:32:14.3±1.1,38°.88N×71°.00E,h0km,mb3.6/8, mbtmp3.7/14,ML3.2/6,Error ellipse: s-maj=15.5km s-min=13.2km az=151.0*
KRNET ***15*** *09:32:15.6±0.1,39°.05N×70°.99E,h11km,mb4.2*
NNC ***15*** *09:32:19.8±5.5,39°.51N×71°.86E,h0km,mb4.3,mpv4.1, Error ellipse: s-maj=41.7km s-min=24.6km az=174.0*
ISC 15 09:32:16.3±1.2,39°.07N±0°.05×70°.94E±0°.03,h8km±8km,
n60,σ2ᵽ34/89,mb3.6/9,21C-22D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
GAR	**Garm**	**0.49**	**263**	⇑	*i*P	**Pg**	**09 32 25.8**	**0.0**	
GAR				⇑	*i*S	**Sg**	**09 32 33.2**	**+0.9**	
DRK	**Karamyk**	**0.78**	**58**	⇑	*e*P	**Pg**	**09 32 30.0**	**-1.4**	
DRK				⇑	*e*S	**Sg**	**09 32 40.6**	**-1.1**	
BTK	**Batken**	**1.00**	**355**	⇓	*i*P	**Pb**	**09 32 35.0**	**-0.9**	
BTK				⇓	*i*S	**Sb**	**09 32 49.0**	**-0.2**	
CHGR	**Chuyangaron**	**1.45**	**254**	⇑	*i*P	**Pn**	**09 32 43.3**	**+0.4**	
CHGR				⇑	*i*S	**Sg**	**09 33 03.6**	**+0.7**	
OHH	**Osh**	**2.03**	**44**	⇑	*i*P	**Pn**	**09 32 52.3**	**+1.3**	
OHH				⇑	*i*S	**Sb**	**09 33 19.5**	**+0.4**	
SFK	**Sufi-Kurgan**	**2.19**	**64**	⇑	*i*P	**Pn**	**09 32 54.9**	**+1.6**	
SFK				⇑	*i*S	**Sb**	**09 33 23.4**	**-0.5**	
TRKS	**Terek-Say**	**2.47**	**3**	⇑	*i*P	**Pn**	**09 32 58.2**	**+1.2**	
TRKS				⇑	*i*S	**Sn**	**09 33 29.2**	**+1.8**	
ARSB	**Arslanbob**	**2.74**	**34**	⇑	*e*P	**Pn**	**09 33 02.6**	**+1.8**	
ARSB				⇑	*i*S	**Sn**	**09 33 36.8**	**+2.6**	
SALK	**Salom-Alik**	**2.86**	**50**	⇓	*i*P	**Pn**	**09 33 04.0**	**+1.6**	
SALK				⇓	*i*S	**Sn**	**09 33 39.4**	**+2.2**	
IUG	**Iuzhnay**	**3.15**	**348**	Pg		**Pb**	**09 33 12.0**	**-0.7**	
	130nm,0.4s								
IUG				Lg		Lg	09 33 54.0		
	333nm,1.0s								
IUG	**Iuzhnay**	**3.15**	**348**	*e*P		**Pb**	**09 33 12.0**	**-0.7**	
	130nm,0.4s								
IUG				*e*S		**Sb**	**09 33 54.0**	**+2.7**	
	333nm,1.0s								
CHM	**Chimkent**	**3.41**	**343**	*e*P		**Pb**	**09 33 16.1**	**-0.9**	
	84nm,0.3s								
CHM				*e*S		**Sb**	**09 34 00.4**	**+1.9**	
	188nm,0.5s								
KSH2	**Kashi**	**3.60**	**87**	Pn		**Pb**	**09 33 21.0**	**+0.7**	
KSH2				Sn		**Sg**	**09 34 13.5**	**+1.6**	
KSH2				smax		smax			
	comp=N,130nm,0.9s								
KSH2				smax		smax			
	comp=E,120nm,1.0s								
MNAS	**Manas**	**3.62**	**19**	⇓	*e*P	**Pn**	**09 33 14.9**	**+2.1**	
MNAS			

ARCES	**ARCES Array B**	**38.77**	**336**	P		**P**	**09 39 39.0**	**-1.9**	
	comp=E,1.4nm,0.8s,baz=125,slow=7.8,SNR=3.9								
HFS	**Hagfors**	**41.05**	**320**	P		**P**	**09 40 00.3**	**+0.5**	
	comp=E,1.1nm,0.5s,baz=85,slow=8.8,SNR=9.4								
	comp=E,1.1nm,0.5s								
NB2	**NORSAR Subarra**	**42.33**	**321**	P		**P**	**09 40 10.8**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=93,slow=7.9								
NOA	**NORSAR Array B**	**42.33**	**321**	P		**P**	**09 40 10.7**	**+0.3**	
	comp=Z,0.2nm,0.5s,baz=103,slow=7.3,SNR=2.3								
	comp=Z,0.2nm,0.5s								
EKA	**Eskdalemuir Ar**	**50.43**	**315**	P		**P**	**09 41 15.1**	**+0.9**	
	comp=Z,1.1nm,0.6s,baz=76,slow=7.4,SNR=3.5								
	comp=Z,1.1nm,0.6s								
ILAR	**Eielson Array**	**72.33**	**16**	P		**P**	**09 43 41.3**	**-0.8**	
	comp=Z,0.4nm,0.8s,baz=328,slow=3.2,SNR=4.5								
	comp=Z,0.4nm,0.8s								
WRA	**Warramunga Arr**	**83.39**	**122**	P		**P**	**09 44 42.5**	**-1.8**	
	comp=Z,0.3nm,0.7s,baz=316,slow=5.3,SNR=5.8								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**85.76**	**125**	P		**P**	**09 44 55.1**	**-1.1**	
	comp=Z,0.2nm,0.6s,baz=325,slow=4.3,SNR=2.0								
	comp=Z,0.2nm,0.6s								

BER ***15*** *09:58:26.5±1.4, 64.°92N×25.°13E, h0km, ML1.7(HEL), Suspected explosion*
IDC ***15*** *09:58:28.1±0.7, 65.°23N×24.°98E, h0km, mbtmp3.3/6, ML2.4/4, Error ellipse: s-maj=11.3km s-min=5.7km az=93.0*
UPP ***15*** *09:58:28.7±1.3, 65.°20N×24.°69E, h0km, ML3.1, Presumed earthquake*
HEL ***15*** *09:58:28.9±0.1, 65.°21N×24.°80E, h0km, ML1.7, Explosion*
DNK ***15*** *09:58:28.9±1.3, 65.°24N×24.°80E, h5km±12km, Presumed earthquake*

ISC 15 09:58:26.5±0.7, 65.°24N±0.°02×24.°70E±0.°03, h0km, n53, σ1ᵖ77/65, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBF4	**Vikkela, Lumij**	**0.46**	**158**	*eP*	**Pg**	**09 58 36.1**	**+0.8**
OBF4				*eS*	**Sg**	**09 58 41.1**	**-0.1**
OUL	**Oulu**	**0.53**	**107**	*eP*	**Pg**	**09 58 37.5**	**+0.9**
OBF0	**Syolatti, Pyha**	**0.77**	**195**	*eP*	**Pg**	**09 58 42.2**	**+1.0**
OBF0				*eS*	**Sg**	**09 58 52.2**	**+1.0**
TOF	**Tornio**	**0.86**	**350**	*eP*	**Pb**	**09 58 44.6**	**+0.4**
TOF				*eS*	**Sb**	**09 58 56.1**	**-0.1**
OUF	**Merijarvi**	**0.88**	**179**	*eP*	**Pg**	**09 58 44.0**	**+0.8**
OBF8	**Ulkokalla**	**1.06**	**211**	*eP*	**Pb**	**09 58 47.8**	**+0.1**
OBF8				*eS*	**Sg**	**09 59 01.2**	**+0.8**
RANF	**Ranua**	**1.17**	**47**	*eP*	**Pb**	**09 58 49.5**	**+0.1**
RNF	**Rovaniemi**	**1.48**	**21**	*eP*	**Pb**	**09 58 55.8**	**+1.1**
KU2	**Taivalkoski**	**1.55**	**71**	*eP*	**Pb**	**09 58 56.1**	**+0.1**
KU2				smax	smax	09 59 15.1	
	comp=Z,4.7nm,0.1s						
BURU	**Burvik**	**1.56**	**247**	P	**Pg**	**09 58 57.1**	**+0.8**
BURU				S	**Sg**	**09 59 18.2**	**+1.6**
BURU	**Burvik**	**1.56**	**247**	*eP*	**Pg**	**09 58 57.4**	**+1.0**
BURU	**Burvik**	**1.56**	**247**	P	**Pg**	**09 58 57.1**	**+0.8**
BURU				S	**Sg**	**09 59 18.2**	**+1.6**
ERTU	**Ertsjaerv**	**1.67**	**323**	*eP*	**Pg**	**09 58 59.4**	**+0.9**
HARU	**Harads**	**1.80**	**303**	P	**Pg**	**09 59 01.6**	**+0.7**
HARU	**Harads**	**1.80**	**303**	P	**Pg**	**09 59 01.6**	**+0.7**
ODEU	**Stanfors**	**1.90**	**246**	P	**Pb**	**09 59 02.4**	**+0.5**
ODEU	**Stanfors**	**1.90**	**246**	P	**Pb**	**09 59 02.4**	**+0.5**
KLF	**Kolari**	**2.02**	**352**	*eP*	**Pb**	**09 59 05.2**	**+1.1**
KU1	**Kurvinen**	**2.06**	**79**	*eP*	**Pb**	**09 59 04.2**	**-0.5**
KU1				smax	smax	09 59 30.2	
	comp=Z,5.5nm,0.1s						
OLKF	**Oulanka, Finla**	**2.22**	**59**	*eP*	**Pb**	**09 59 06.6**	**-0.8**
OLKF				smax	smax	09 59 37.6	
	comp=Z,7.5nm,0.1s						
NIF	**Nilsia**	**2.30**	**142**	*eP*	**Pb**	**09 59 07.9**	**-0.9**
NIF				smax	smax	09 59 37.3	
	comp=Z,2.3nm,0.1s						
VAF	**Ylistaro**	**2.38**	**203**	*eP*	**Pn**	**09 59 08.8**	**+2.2**
SUF	**Sumiainen**	**2.61**	**165**	*eP*	**Pb**	**09 59 12.9**	**-1.2**
LANU	**Lannavaara**	**3.02**	**340**	*eP*	**Pb**	**09 59 18.9**	**-2.2**
KEF	**Keuruu**	**3.09**	**178**	*eP*	**Pn**	**09 59 19.4**	**+2.4**
HEF	**Hetta**	**3.21**	**353**	*eP*	**Pn**	**09 59 21.1**	**+3.0**
SALU	**Saltoluokta**	**3.30**	**313**	*eP*	**Pn**	**09 59 22.6**	**+3.3**
JOF	**Joensuu**	**3.72**	**126**	*eP*	**Pn**	**09 59 27.3**	**+2.2**
KTK1	**Kautokeino**	**3.83**	**352**	*eP*	**Pn**	**09 59 29.6**	**+3.0**
FINES	**FINESS Array B**	**3.86**	**170**	Pn	**Pn**	**09 59 29.6**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=355,slow=12,SNR=26						
FINES				Pg	**Pb**	**09 59 34.6**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=1.9,slow=17,SNR=7.1						
FINES				Sn	**Sn**	**10 00 13.5**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=351,slow=22,SNR=6.6						
FINES				Lg	Lg	10 00 27.6	
	comp=Z,4.3nm,0.3s,baz=352,slow=29,SNR=12						
	comp=Z,1.2nm,0.3s						
ARA0	**ARCESS Array S**	**4.33**	**4**	*eP*	**Pn**	**09 59 35.6**	**+2.2**
ARCES	**ARCESS Array B**	**4.33**	**4**	Pn	**Pn**	**09 59 34.5**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=176,slow=15,SNR=61						
ARCES				Pg	**Pb**	**09 59 43.2**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=188,slow=17,SNR=5.7						
ARCES				Sn	**Sn**	**10 00 23.1**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=182,slow=28,SNR=1.3						
ARCES				Lg	Lg	10 00 41.0	
	comp=Z,1.0nm,0.3s,baz=182,slow=28,SNR=6.6						
	comp=Z,2.6nm,0.3s						
FAUS	**Fauske**	**4.36**	**304**	*eP*	**Pn**	**09 59 36.5**	**+2.6**
RAF	**Rauma**	**4.44**	**199**	*eP*	**Pn**	**09 59 37.3**	**+2.4**
I37NO	**I37NO**	**4.52**	**331**	I	I	10 26 40.0	
	baz=146,slow=316,SNR=2.0						
STEI	**Steigen**	**4.64**	**310**	*eP*	**Pn**	**09 59 40.4**	**+2.8**
LEIR	**Leirfjorden**	**4.87**	**286**	*eP*	**Pn**	**09 59 42.4**	**+1.5**
VAGH	**Vaagaholmen**	**4.90**	**293**	*eP*	**Pn**	**09 59 43.7**	**+2.4**
MEF	**Metsahovi**	**5.04**	**182**	*eP*	**Pn**	**09 59 45.8**	**+2.5**
AAL	**Aland**	**5.52**	**205**	*eP*	**Pn**	**09 59 52.0**	**+2.2**
ARBE	**Arbavere**	**5.86**	**174**	*eP*	**Pn**	**09 59 52.7**	**-1.7**
MTSE	**Matsula**	**6.56**	**184**	*eP*	**Pn**	**10 00 05.5**	**+1.4**
HFS	**Hagfors**	**7.20**	**230**	Pn	**Pn**	**10 00 14.5**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=42,slow=15,SNR=12						
HFS				Pg	**Pb**	**10 00 32.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=46,slow=12,SNR=5.6						
HFS				Sn	**Sn**	**10 01 33.1**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=51,slow=23,SNR=2.3						
HFS				Lg	Lg	10 02 09.4	
	comp=Z,0.9nm,0.3s,baz=45,slow=33,SNR=5.2						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**7.41**	**242**	Pn	**Pn**	**10 00 16.1**	**+0.3**
	baz=51,slow=11,SNR=4.2						
NOA				Sn	**Sn**	**10 01 39.6**	**-0.9**
	baz=49,slow=24,SNR=3.3						
NOA				Lg	Lg	10 02 20.4	
	comp=Z,0.1nm,0.3s,baz=37,slow=24,SNR=5.1						
	comp=Z,0.1nm,0.3s						
MOL	**Molde**	**8.01**	**258**	*i* P	**Pn**	**10 00 24.1**	**+0.1**
SKAR	**Skarslia**	**8.74**	**246**	*i* P	**Pn**	**10 00 33.8**	**-0.3**
SKAR				*i* S	**Sn**	**10 02 06.2**	**-7.0**
STRU	**Stroemstad**	**8.86**	**232**	*i* P	**Pn**	**10 00 36.1**	**+0.5**
TJOU	**Tjoern**	**9.52**	**227**	*i* P	**Pn**	**10 00 45.0**	**+0.4**
BLEU	**Blekinge**	**9.95**	**210**	*i* P	**Pn**	**10 00 50.2**	**-0.3**
ONAU	**Onsala**	**9.96**	**224**	*i* P	**Pn**	**10 00 50.8**	**+0.2**
DEL	**Delary**	**10.24**	**216**	*i* P	**Pn**	**10 00 53.0**	**-1.5**
SPITS	**Spitsbergen Ar**	**13.24**	**353**	Pn	**Pn**	**10 01 33.3**	**-2.0**
	comp=Z,11nm,1.0s,baz=150,slow=10.0,SNR=2.4						
AKASG	**Malin Array Be**	**14.77**	**169**	Pn	Pn	10 01 49.4	-7.0
	comp=Z,0.3nm,0.3s,baz=355,slow=12,SNR=1.8						

JMA ***15*** *10:15:38.8±0.3, 24.°N±2.°×123.°3E±0.°6, h54km±4km, MV2.9/10, NEAR ISHIGAKIJIMA ISLAND*

ISC 15 10:15:39.1±1.5, 23.°75N±0.°07×123.°28E±0.°03, h27km±14km, n21, σ0ᵍ73/26, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.57**	**57**	*eS*	**Sn**	**10 15 59.9**	**-0.1**
IRIF	**Iriomote-Funau**	**0.72**	**35**	P	**Pb**	**10 15 53.3**	**+0.3**
IRIF				S	**Sn**	**10 16 03.9**	**+0.3**
YOJ	**Yonaguni jima**	**0.75**	**341**	P	**Pb**	**10 15 53.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.75**	**341**	S	**Sn**	**10 16 04.2**	**-0.3**
YOJ	**Yonaguni jima**	**0.75**	**341**	*eP*	**Pb**	**10 15 53.8**	**+0.2**
YOJ				*eS*	**Sb**	**10 16 03.8**	**+0.2**
JYNG	**Yonagunijimaku**	**0.77**	**337**	P	**Pb**	**10 15 53.7**	**-0.1**
JYNG				*eS*	**Sn**	**10 16 04.9**	**+0.1**
JKRS	**Kuro-shima**	**0.83**	**54**	P	**Pb**	**10 15 54.9**	**0.0**
JKRS				*eS*	**Sn**	**10 16 06.6**	**+0.2**
JIJ	**Ishigaki jima**	**1.00**	**52**	*eP*	**Pn**	**10 15 56.7**	**-0.7**
JIJ				*eS*	**Sb**	**10 16 10.0**	**-0.6**
JISG	**Ishigakijimahi**	**1.26**	**48**	*eP*	**Pn**	**10 16 00.2**	**-0.8**
NACB	**Ninganchiao**	**1.60**	**286**	P	**Pn**	**10 16 05.8**	**+0.2**
NACB	**Ninganchiao**	**1.60**	**286**	P	**Sn**	**10 16 24.5**	**-0.9**
YULB	**Yu-li**	**1.85**	**259**	P	**Pn**	**10 16 08.1**	**-1.0**
YULB	**Yu-li**	**1.85**	**259**	P	**Sn**	**10 16 30.2**	**-1.4**
YHNB	**Yeheng**	**1.96**	**298**	P	**Pn**	**10 16 11.2**	**+0.5**
YHNB	**Yeheng**	**1.96**	**298**	P	**Sn**	**10 16 34.6**	**0.0**
JMJ	**Miyako jima 2**	**2.13**	**60**	P	**Pb**	**10 16 18.5**	**+1.6**
SSLB	**Suanglung**	**2.13**	**272**	P	**Pn**	**10 16 13.0**	**+0.1**
SSLB	**Suanglung**	**2.13**	**272**	S	**Sn**	**10 16 39.7**	**+1.2**
TWGBT	**Beinan**	**2.22**	**246**	P	**Pn**	**10 16 13.3**	**-0.9**
TPUB	**Ta-pu**	**2.47**	**260**	P	**Pn**	**10 16 18.6**	**+1.0**
TPUB	**Ta-pu**	**2.47**	**260**	S	**Sn**	**10 16 47.5**	**+0.6**

IDC ***15*** *10:18:35.0±3.5, 65.°12S×179.°22E, h0km, mb4.1/4, mbtmp4.2/5, ML3.9/1, MS4.0/29, Error ellipse: s-maj=128.8km s-min=22.5km az=67.0*
GCMT ***15*** *10:18:36.9±0.3, 65.°15S±0.°02×179.°28E±0.°05, h18km±1km, MW4.9/87, Moment Tensor Solution. s12,c14; s87,c111; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.65±.16; Mθθ3.13±.15; Mϕϕ-2.48±.12; Mrθ-0.77±.27; Mθϕ-0.56±.09; Mϕr-0.79±.27; Best double couple: Mo3.09700×10¹⁶ NP1:ϕ8319.00000°, δ67.00000°, λ-9.00000°. NP2: ϕ53.00000°, δ82.00000°, λ-157.00000°. Principal axes: T 3.3110, Plg10.0000°, Azm184.0000°; N -0.4290, Plg66.0000°, Azm71.0000°; P -2.8830, Plg22.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***15*** *10:18:37.9±0.8, 65.°3S±0.°1×178.°5E±0.°4, h10km±1km, mb4.4/14 Error ellipse: s-maj=29.5km s-min=17.4km az=78.0*

ISC 15 10:18:37.5±1.0, 65.°3S±0.°1×178.°6E±0.°2, h10km, n64, σ0ᵍ79/23, mb4.4/10, MS4.0/28, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.15**	**191**		**Pn**	**10 21 43.6**	**-0.3**
VNDA	**Vanda**	**13.32**	**196**	Pn	**Pn**	**10 21 48.0**	**+1.6**
	0.6nm,0.3s,baz=40,slow=13,SNR=44						
VNDA				LR	LR	10 25 49.4	
	comp=Z,642nm,19.9s,baz=7.5,slow=32						
	5.9nm,0.7s						
VNDA	**Vanda**	**13.32**	**196**		**Pn**	**10 21 45.9**	**-0.4**
RPZ	**Rata Peaks**	**21.99**	**345**	LR	LR	10 30 47.1	
	comp=Z,119nm,18.3s,baz=152,slow=33						
QSPA	**South Pole Qui**	**24.83**	**180**	P	**P**	**10 23 60.0**	**+0.3**
	10nm,1.0s,baz=26,slow=5.1,SNR=18						
QSPA				LR	LR	10 32 37.5	
	comp=Z,673nm,18.9s,baz=40,slow=34						
	10nm,1.0s						
QSPA	**South Pole Qui**	**24.83**	**180**	P	**P**	**10 23 59.8**	**+0.1**
CASY	**Casey**	**26.71**	**237**	P	**P**	**10 24 15.5**	**-1.0**
URZ	**Urewera**	**27.05**	**357**	LR	LR	10 33 07.2	
	comp=Z,522nm,20.3s,baz=162,slow=32						
BELA	**Belgrano 2**	**35.69**	**169**	P	**P**	**10 25 35.8**	**+0.5**
BELA				IAmb	IAmb	10 25 36.5	
	comp=Z,1.8nm,0.7s						
RAO	**Raoul Island**	**36.09**	**5**	LR	LR	10 39 43.0	
	comp=Z,144nm,19.0s,baz=75,slow=35						
MAW	**Mawson**	**39.83**	**213**	LR	LR	10 42 37.7	
	comp=Z,734nm,19.6s,baz=176,slow=36						
STKA	**Stephens Creek**	**40.29**	**308**	LR	LR	10 41 10.5	
	comp=Z,95nm,18.4s,baz=206,slow=34						
BBOO	**Buckleboo**	**41.37**	**301**	P	**P**	**10 26 23.8**	**+0.4**
BBOO				IAmb	IAmb	10 26 45.2	
	comp=Z,8.8nm,1.1s						
PMSA	**Palmer Station**	**42.55**	**146**	LR	LR	10 41 14.8	
	comp=Z,164nm,18.3s,baz=254,slow=32						
SNAA	**Sanae**	**43.33**	**179**	P	**P**	**10 26 38.1**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=175,slow=7.8,SNR=3.2						
SNAA				LR	LR	10 44 11.3	
	comp=Z,420nm,19.5s,baz=196,slow=35						
	comp=Z,1.3nm,0.7s						
SNAA	**Sanae**	**43.33**	**179**	P	**P**	**10 26 38.7**	**-0.4**
DZM	**Mont Dzumac**	**43.90**	**344**	LR	LR	10 42 48.6	
	comp=Z,220nm,18.8s,baz=181,slow=33						
FORT	**Forrest**	**46.19**	**293**	P	**P**	**10 27 01.9**	**-0.3**
RAR	**Rarotonga**	**46.27**	**28**	LR	LR	10 41 03.5	
	comp=Z,184nm,20.3s,baz=192,slow=29						
TBI	**Tubuai**	**46.72**	**42**	*e*LR	LR	10 39 45.5	
	comp=Z,2μm,30.2s						
TBI				*e*T	T	11 16 22.8	
	comp=Z,8.6nm,0.2s						
NIUE	**Niue**	**46.78**	**15**	P	**P**	**10 27 06.7**	**-0.2**
MSVF	**Nonsavu**	**47.49**	**359**	LR	LR	10 43 42.2	
	comp=Z,102nm,19.6s,baz=187,slow=32						
H01W1	**Cape Leeuwin H**	**48.24**	**276**	T	T	11 19 49.2	
	baz=149,slow=76,SNR=75						
H01W2	**Cape Leeuwin H**	**48.24**	**276**	T	T	11 19 50.9	
	baz=149,slow=76,SNR=69						
H01W3	**Cape Leeuwin H**	**48.26**	**276**	T	T	11 19 52.1	
	baz=149,slow=76,SNR=52						
NWAO	**Narrogin (SRO)**	**48.66**	**281**	LR	LR	10 43 30.9	
	comp=Z,197nm,18.7s,baz=142,slow=31						
CTA	**Charters Tower**	**49.90**	**319**	LR	LR	10 46 13.2	
	comp=Z,118nm,18.4s,baz=159,slow=33						
ASAR	**Alice Springs**	**50.46**	**303**	P	**P**	**10 27 35.5**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=156,slow=7.3,SNR=26						
ASAR				LR	LR	10 45 48.0	
	comp=Z,90nm,20.6s,baz=152,slow=32						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**50.46**	**303**	P	**P**	**10 27 35.4**	**+0.1**
AS31	**Alice Springs**	**50.46**	**303**	P	**P**	**10 27 33.1**	**-2.2**
AFI	**Afiamalu**	**51.71**	**12**	LR	LR	10 45 21.2	
	comp=Z,99nm,20.2s,baz=150,slow=31						
TVO	**Taravao**	**52.07**	**40**	*e*T	T	11 23 20.3	
	comp=Z,4.9nm,0.1s						
PAE	**Paea**	**52.09**	**40**	*e*T	T	11 23 22.6	
	comp=Z,6.9nm,0.2s						
PPT2	**Papeete2**	**52.16**	**40**	*e*LR	LR	10 42 05.1	
	comp=Z,358nm,28.0s						
PPT2				*e*LR	LR	10 42 11.6	
	comp=Z,239nm,31.8s						
PPT2				*e*T	T	11 23 27.3	
	comp=Z,1.3nm,0.2s						
PPT	**Papeete**	**52.18**	**40**	LR	LR	10 45 49.2	
	comp=Z,108nm,18.3s,baz=150,slow=32						
WR0	**Warramunga Arr**	**53.66**	**306**	P	**P**	**10 27 59.3**	**+0.2**
WR0				IAmb	IAmb	10 28 10.3	
	comp=Z,6.2nm,1.1s						
WR8	**Warramunga Arr**	**53.68**	**306**	P	**P**	**10 27 59.8**	**+0.5**
WR8				IAmb	IAmb	10 28 01.6	
	comp=Z,6.0nm,1.1s						
WB2	**Warramunga Arr**	**53.74**	**306**	P	**P**	**10 28 00.2**	**+0.5**
WB2				IAmb	IAmb	10 28 02.4	
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**53.75**	**306**	P	**P**	**10 27 59.3**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=158,slow=6.6,SNR=12						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**53.75**	**306**	P	**P**	**10 28 00.6**	**+0.9**
WRAB	**Tennant Creek**	**53.75**	**306**	P	**P**	**10 28 00.1**	**+0.4**
WB0	**Warramunga Arr**	**53.89**	**306**	P	**P**	**10 28 00.9**	**+0.1**
WB0				IAmb	IAmb	10 28 08.1	
	comp=Z,5.5nm,1.0s						
VAH	**Vaihoa**	**54.94**	**41**	*e*T	T	11 26 54.0	
	comp=Z,28nm,0.1s						
PMOR	**Pomariorio Ree**	**55.09**	**41**	*e*T	T	11 27 01.1	
	comp=Z,1.4nm,0.2s						
RPN	**Rapa Nui**	**58.22**	**86**	LR	LR	10 47 12.1	
	comp=Z,172nm,21.9s,baz=204,slow=30						
FITZ	**Fitzroy Crossi**	**58.57**	**297**	LR	LR	10 49 40.2	
	comp=Z,204nm,19.7s,baz=180,slow=32						
PMG	**Port Moresby**	**59.88**	**324**	LR	LR	10 49 38.9	
	comp=Z,92nm,21.2s,baz=150,slow=31						
TAOE	**Nuku Hiva Isla**	**63.18**	**47**	*e*LR	LR	10 47 18.9	
	comp=Z,170nm,25.2s						
H03S2	**Juan Fernandez**	**64.73**	**116**	T	T	11 39 58.6	
	baz=205,slow=74,SNR=34						
H03S1	**Juan Fernandez**	**64.73**	**116**	T	T	11 39 59.9	
	baz=205,slow=74,SNR=32						
H03S3	**Juan Fernandez**	**64.75**	**116**	T	T	11 39 58.1	
	baz=205,slow=74,SNR=38						
SIJI	**Sorong**	**72.60**	**310**	LR	LR	11 01 23.2	
	comp=Z,46nm,20.1s,baz=235,slow=35						
KAPI	**Kappang**	**72.79**	**297**	LR	LR	10 58 49.5	
	comp=Z,77nm,19.8s,baz=177,slow=33						
SUR	**Sutherland**	**81.15**	**199**	LR	LR	11 03 38.1	
	comp=Z,193nm,19.6s,baz=142,slow=33						
DAV	**Davao City (W)**	**81.92**	**307**	LR	LR	11 07 02.3	
	comp=Z,39nm,18.9s,baz=240,slow=35						
BOSA	**Boshof**	**84.17**	**203**	LR	LR	11 06 51.9	
	comp=Z,61nm,18.1s,baz=192,slow=34						
LBTB	**Lobatse**	**87.63**	**204**	LR	LR	11 09 03.1	
	comp=Z,132nm,18.4s,baz=150,slow=34						
H08S2	**Diego Garcia H**	**89.75**	**252**	T	T	12 12 04.9	
	baz=154,slow=76,SNR=22						
H08S1	**Diego Garcia H**	**89.75**	**252**	T	T	12 12 04.0	
	baz=154,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**89.77**	**252**	T	T	12 12 06.4	
	baz=154,slow=76,SNR=28						
MATP	**Matopo**	**91.57**	**208**	LR	LR	11 08 22.5	
	comp=Z,164nm,21.7s,baz=211,slow=32						
TSUM	**Tsumeb**	**94.56**	**198**	LR	LR	11 13 07.5	
	comp=Z,190nm,19.0s,baz=147,slow=34						
LSZ	**Lusaka**	**96.64**	**209**	LR	LR	11 12 52.4	
	comp=Z,127nm,19.4s,baz=162,slow=34						
BRTR	**Keskin Array B**	**147.47**	**235**	PKPbc	**PKPbc**	**10 38 21.4**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=163,slow=4.7,SNR=6.2						

IDC ***15*** *11:07:00.0±7.4, 3.°16S×103.°09E, h0km, mb4.1/4, mbtmp4.1/5, ML4.1/1, Error ellipse: s-maj=184.7km s-min=121.3km az=38.0*
DJA ***15*** *11:07:33.9±0.3, 5.°5S±4.°×107.°5E±.°, h109km±3km, M3.9/19, mb5.4/1, mb4.2/5, MLv3.8/19, Mw(mB)4.8/1*

ISC 15 11:07:33.4±1.0, 5.°4S±0.°1×104.°50E±0.°07, h100km, n11, σ1ᵍ97/12, mb3.9/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLI	**Kotabumi**	**0.61**	**36**	P	**Pn**	**11 07 51.4**	**+1.4**
KLI				S	**Sn**	**11 08 04.4**	**+2.0**
MNAI	**Manna**	**1.83**	**303**	P	**Pn**	**11 08 04.8**	**+1.0**
EGSI	**Enggano, Bengk**	**2.21**	**270**	P	**Pn**	**11 08 11.6**	**+2.9**
LEM	**Lembang**	**3.43**	**115**	Pn	**Pn**	**11 08 27.4**	**+2.4**
	5.1nm,0.3s,baz=341,slow=19,SNR=5.6						
	36nm,0.7s						
BBJI	**Bungbulang**	**3.77**	**124**	P	**Pn**	**11 08 31.0**	**+1.5**
PPSI	**Pulau Pagai**	**5.17**	**300**	P	**Pn**	**11 08 46.9**	**-1.5**
UGM	**Wanagama**	**6.50**	**113**	P	**Pn**	**11 09 07.2**	**+0.6**
	152nm,2.1s						
FITZ	**Fitzroy Crossi**	**24.23**	**123**	P	**P**	**11 12 40.4**	**-0.7**
	0.7nm,0.4s,baz=302,slow=15,SNR=1.3						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**32.44**	**119**	P	**P**	**11 13 52.0**	**-2.3**
	0.7nm,0.4s,baz=297,slow=8.3,SNR=30						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**33.66**	**126**	P	**P**	**11 14 03.4**	**-1.6**
	0.7nm,0.3s,baz=294,slow=7.8,SNR=25						
	0.7nm,0.3s						
STKA	**Stephens Creek**	**43.58**	**132**	P	**P**	**11 15 26.9**	**-0.9**
	3.3nm,0.4s,baz=314,slow=7.5,SNR=16						
	3.3nm,0.4s						

IDC ***15*** *11:11:51.6±4.7, 5.°71S×154.°41E, h133km±44km, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=28.9km s-min=25.8km az=166.0*

ISC 15 11:11:50.1±1.2, 5.°7S±0.°2×154.°5E±0.°2, h118km, n7, σ0ᵍ71/7, mb3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.13**	**242**	P	**Pn**	**11 13 46.3**	**+0.9**
	46nm,0.7s,baz=78,slow=5.3,SNR=12						
DZM	**Mont Dumac**	**20.00**	**146**	P	**P**	**11 16 13.9**	**+0.2**
	2.2nm,0.5s,baz=298,slow=15,SNR=11						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**24.17**	**232**	P	**P**	**11 16 55.5**	**-0.1**
	0.8nm,0.5s,baz=57,slow=10,SNR=23						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.68**	**226**	P	**P**	**11 17 17.9**	**-0.4**
	0.6nm,0.4s,baz=58,slow=9.2,SNR=21						
	0.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**30.73**	**244**	P	**P**	**11 17 53.3**	**-1.0**
	2.5nm,0.9s,baz=80,slow=11,SNR=1.9						
	2.5nm,0.9s						
SONM	**Songino Array**	**67.95**	**327**	P	**P**	**11 22 36.6**	**+0.2**
	0.3nm,0.5s,baz=126,slow=7.3,SNR=2.1						

n125,σ1ᵍ52/164,mb3.7/11,MS3.0/6,1C,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.73**	**307**	Pg	**Pg**	**12 16 50.9**	**0.0**
KARP				Sg	**Sg**	**12 16 59.7**	**-0.8**
KARP	**Karpathos**	**0.73**	**307**	P	**Pg**	**12 16 49.4**	**-1.5**
KARP				S	**Sg**	**12 16 59.5**	**-1.0**
KARP				AML	AML	12 17 10.2	
	12nm,0.5s						
KARP				AML	AML	12 17 10.8	
	8.8nm,0.5s						
KARP	**Karpathos**	**0.73**	**307**	P	**Pg**	**12 16 49.4**	**-1.5**
ARG	**Arkhangelos**	**1.12**	**10**	Pg	**Pb**	**12 16 58.9**	**+0.9**
ARG				Sg	**Sg**	**12 17 13.2**	**+0.2**
ARG	**Arkhangelos**	**1.12**	**10**	P	**Pg**	**12 16 58.3**	**-0.1**
ARG				S	**Sg**	**12 17 12.9**	**-0.1**
ARG				AML	AML	12 17 23.6	
	8.4nm,1.1s						
ARG				AML	AML	12 17 30.4	
	4.8nm,1.5s						
ARG	**Arkhangelos**	**1.12**	**10**	P	**Pg**	**12 16 58.7**	**+0.3**
ARG				S	**Sb**	**12 17 13.5**	**+0.9**
ZKR	**Zakros**	**1.36**	**271**	Pn	**Pn**	**12 17 02.9**	**+1.4**
ZKR				Sn	**Sb**	**12 17 20.3**	**+0.9**
ZKR	**Zakros**	**1.36**	**271**	P	**Pn**	**12 17 01.3**	**-0.2**
ZKR				S	**Sb**	**12 17 19.9**	**+0.5**
ZKR				AML	AML	12 17 28.8	
	2.3nm,0.6s						
ZKR				AML	AML	12 17 35.0	
	4.0nm,1.4s						
ZKR	**Zakros**	**1.36**	**271**	P	**Pg**	**12 17 03.3**	**+0.4**
ZKR				S	**Sn**	**12 17 21.7**	**+2.3**
YAZI	**Mula-Datşa-**	**1.61**	**348**	P	**Pn**	**12 17 06.0**	**+1.1**
YAZI				S	**Sb**	**12 17 27.4**	**+0.9**
YAZI				IAML		12 17 32.0	
	comp=E,646nm,1.0s						
DAT	**Datca**	**1.63**	**352**	Pn	**Pn**	**12 17 05.9**	**+0.5**
DAT	**Datca**	**1.63**	**352**	P	**Pg**	**12 17 08.2**	**0.0**
DAT				S	**Sg**	**12 17 28.8**	**-0.5**
DAT				IAML		12 17 35.0	
	comp=N,911nm,0.6s						
TURN	**Turunc**	**1.69**	**10**	Pn	**Pn**	**12 17 06.8**	**+0.8**
TURN	**Turunc**	**1.69**	**10**	P	**Pb**	**12 17 08.2**	**+0.5**
TURN				S	**Sg**	**12 17 30.7**	**-0.4**
TURN				IAML		12 17 38.0	
	comp=E,668nm,0.7s						
IZZE	**Mula-Seydike**	**1.72**	**39**	P	**Pn**	**12 17 06.8**	**+0.4**
AKAS	**Kas**	**1.80**	**51**	P	**Pn**	**12 17 09.0**	**+1.3**
AKAS				S	**Sn**	**12 17 29.4**	**-1.1**
AKAS				IAML		12 17 37.0	
	comp=N,299nm,0.4s						
DALY	**Dalyan (Mula)**	**1.82**	**20**	Pn	**Pn**	**12 17 08.7**	**+1.0**
DALY	**Dalyan (Mula)**	**1.82**	**20**	P	**Pn**	**12 17 08.4**	**+0.7**
NPS	**Neapolis**	**1.86**	**275**	P	**Pn**	**12 17 10.0**	**+1.6**
NPS				S	**Sb**	**12 17 34.3**	**+0.4**
SABU	**Mula-Dalaman**	**1.93**	**27**	P	**Pn**	**12 17 09.0**	**-0.3**
BDRM	**Kayabasi**	**1.98**	**350**	P	**Pn**	**12 17 11.4**	**+1.4**
BDRM				S	**Sb**	**12 17 37.5**	**+0.1**
BDRM				IAML		12 17 44.0	
	comp=N,359nm,0.9s						
BODT	**Bodrum**	**2.00**	**347**	Pn	**Pn**	**12 17 10.6**	**+0.3**
YER	**Yerkesik**	**2.05**	**9**	Pn	**Pn**	**12 17 12.3**	**+1.3**
YKAV	**Yalikavak-Bodr**	**2.07**	**347**	Pn	**Pn**	**12 17 11.7**	**+0.5**
CAME	**Cameli-Denizli**	**2.16**	**32**	Pn	**Pn**	**12 17 14.4**	**+1.7**
MULA	**Mugla, Merkez-**	**2.17**	**9**	P	**Pb**	**12 17 15.8**	**-0.2**
MULA				S	**Sg**	**12 17 50.0**	**+3.4**
MULA				IAML		12 17 59.0	
	comp=N,200nm,0.8s						
KNIK	**Mula-Seydike**	**2.21**	**38**	P	**Pn**	**12 17 13.6**	**+0.3**
KNIK				S	**Sn**	**12 17 42.7**	**+2.0**
KNIK				IAML		12 17 49.0	
	comp=E,134nm,0.5s						
ELL	**Elmali**	**2.32**	**45**	Pn	**Pn**	**12 17 17.1**	**+2.3**
ELL	**Elmali**	**2.32**	**45**	P	**Pn**	**12 17 15.9**	**+1.0**
ELL				S	**Sn**	**12 17 44.6**	**+1.2**
THERA	**Ancient Thera,**	**2.32**	**303**	P	**Pn**	**12 17 16.3**	**+1.6**
THERA				S	**Sn**	**12 17 45.6**	**+2.5**
CAEL	**Denizli, Camel**	**2.32**	**30**	P	**Pn**	**12 17 16.6**	**+1.7**
THR8	**Santorini-Mono**	**2.34**	**304**	P	**Pn**	**12 17 16.5**	**+1.6**
THR6	**Thira Island,**	**2.37**	**302**	P	**Pn**	**12 17 17.3**	**+2.0**
THR2	**Thira island,**	**2.39**	**305**	P	**Pn**	**12 17 17.5**	**+1.8**
THR3	**Thira Island,**	**2.40**	**303**	P	**Pn**	**12 17 17.2**	**+1.5**
SNT5	**Nea Kammeni, S**	**2.40**	**303**	P	**Pn**	**12 17 17.6**	**+1.8**
DDIM	**Aydin, Didim**	**2.40**	**348**	P	**Pb**	**12 17 20.9**	**+1.1**
THR5	**Thira Island,**	**2.44**	**303**	P	**Pn**	**12 17 18.2**	**+1.9**
SAP3	**Santorini-Thir**	**2.45**	**303**	P	**Pn**	**12 17 18.0**	**+1.6**
IDI	**Anoyia**	**2.45**	**275**	Pn	**Pn**	**12 17 17.6**	**+1.1**
	19nm,0.3s,baz=56,slow=2.3,SNR=23						
IDI				Sn	**Sn**	**12 17 44.1**	**-2.3**
	12nm,0.3s,baz=280,slow=22,SNR=6.0						
IDI	**Anoyia**	**2.45**	**275**	Pn	**Pn**	**12 17 18.3**	**+1.7**
IDI	**Anoyia**	**2.45**	**275**	P	**Pn**	**12 17 18.6**	**+2.0**
TAVA	**DENIZLI_Tavas**	**2.50**	**19**	P	**Pn**	**12 17 18.8**	**+1.6**
SIVA	**Sivas**	**2.52**	**269**	P	**Pn**	**12 17 19.2**	**+1.9**
GOLH	**Golhisar**	**2.52**	**32**	P	**Pn**	**12 17 18.5**	**+0.9**
AYDN	**Tasoluk**	**2.55**	**0**	P	**Pn**	**12 17 19.0**	**+1.2**
APMY	**Acipayam-Deniz**	**2.62**	**26**	Pn	**Pn**	**12 17 20.2**	**+1.3**
GCAM	**G?zelcaml?**	**2.64**	**349**	Pn	**Pn**	**12 17 19.9**	**+0.9**
GCAM	**G?zelcaml?**	**2.64**	**349**	P	**Pn**	**12 17 20.1**	**+1.1**
DNIZ	**Denizli-Tavas-**	**2.68**	**20**	P	**Pn**	**12 17 20.1**	**+0.4**
ESEN	**Aydn-Nazilli**	**2.71**	**8**	P	**Pn**	**12 17 21.5**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**2.83**	**0**	Pn	**Pn**	**12 17 22.9**	**+1.1**
NAZL	**Nazilli-Aydin**	**2.87**	**7**	Pn	**Pn**	**12 17 23.5**	**+1.2**
INCE	**Denizli-Bozkur**	**2.93**	**27**	P	**Pn**	**12 17 23.9**	**+0.7**
VAM	**Vamos**	**3.02**	**277**	P	**Pn**	**12 17 26.1**	**+1.8**
DGB	**zmir**	**3.04**	**345**	P	**Pn**	**12 17 24.7**	**+0.1**
KIRA	**zmir-Kiraz**	**3.11**	**8**	P	**Pn**	**12 17 26.9**	**+1.3**
DUVT	**Torbali**	**3.12**	**354**	P	**Pn**	**12 17 27.7**	**+2.0**
GVD	**Gavdhos**	**3.12**	**266**	Pn	**Pn**	**12 17 27.8**	**+2.1**
GVD	**Gavdhos**	**3.12**	**266**	P	**Pn**	**12 17 27.4**	**+1.7**
IMMV	**Iera Moni Meta**	**3.21**	**277**	Pn	**Pn**	**12 17 29.1**	**+2.2**
IMMV	**Iera Moni Meta**	**3.21**	**277**	P	**Pn**	**12 17 28.8**	**+1.9**
OSC1	**CSNet OBS 1**	**3.24**	**119**	P	**Pn**	**12 17 27.6**	**+0.3**
OSC1				S	**Sn**	**12 18 08.8**	**+3.0**
OSC1				AML	AML	12 18 12.0	
	0.1nm,0.3s						
OSC1				AML	AML	12 18 19.4	
	0.2nm,0.4s						
CHOS	**Chios island**	**3.58**	**336**	P	**Pn**	**12 17 33.2**	**+1.1**
AKMS	**Akamas**	**3.66**	**90**	P	**Pn**	**12 17 33.8**	**+0.7**
AKMS				S	**Sn**	**12 18 18.5**	**+2.3**
AKMS				AML	AML	12 18 24.3	
	0.2nm,1.1s						
AKMS				AML	AML	12 18 25.8	
	0.3nm,0.6s						
AKMS	**Akamas**	**3.66**	**90**	P	**Pn**	**12 17 34.1**	**+1.0**
ANKY	**Antikythira Is**	**3.81**	**283**	P	**Pn**	**12 17 36.8**	**+1.7**
ALFC	**Alefka**	**3.87**	**88**	P	**Pn**	**12 17 36.3**	**+0.2**
ALFC				S	**Sn**	**12 18 23.5**	**+2.1**
ALFC				AML	AML	12 18 27.7	
	0.4nm,0.6s						
ALFC				AML	AML	12 18 28.3	
	0.2nm,0.8s						
ALFC	**Alefka**	**3.87**	**88**	P	**Pn**	**12 17 36.7**	**+0.7**
KTHA	**Kythira Island**	**4.08**	**288**	P	**Pn**	**12 17 40.5**	**+1.6**
TROD	**Troodos**	**4.10**	**91**	P	**Pn**	**12 17 39.2**	**-0.2**
TROD				S	**Sn**	**12 18 29.5**	**+2.2**
TROD				AML	AML	12 18 37.5	
	0.2nm,0.6s						
TROD				AML	AML	12 18 43.4	
	0.2nm,0.7s						
OSC2	**CSNet OBS 4**	**4.17**	**118**	P	**Pn**	**12 17 42.0**	**+1.9**
OSC2				S	**Sn**	**12 18 32.0**	**+3.3**
OSC2				AML	AML	12 18 42.1	
	0.3nm,0.5s						
OSC2				AML	AML	12 18 51.7	
	0.2nm,0.6s						
XYLS	**Xyliatos**	**4.24**	**90**	P	**Pn**	**12 17 42.7**	**+1.5**
XYLS				S	**Sn**	**12 18 32.9**	**+2.3**
XYLS				AML	AML	12 18 38.3	
	0.2nm,0.4s						
XYLS				AML	AML	12 18 45.1	
	0.2nm,1.0s						
VLY	**Voula,Athens**	**4.28**	**311**	P	**Pn**	**12 17 43.1**	**+1.5**
VLI	**Veliai**	**4.32**	**293**	P	**Pn**	**12 17 43.3**	**+1.2**
DION	**Dionisos Attik**	**4.34**	**314**	P	**Pn**	**12 17 43.8**	**+1.3**
ASGA	**Asgata**	**4.42**	**93**	P	**Pn**	**12 17 44.1**	**+0.5**
ASGA				S	**Sn**	**12 18 37.9**	**+2.9**
ASGA				AML	AML	12 18 42.9	
	0.5nm,0.5s						
ASGA				AML	AML	12 18 43.7	
	0.3nm,0.6s						
ASGA	**Asgata**	**4.42**	**93**	P	**Pn**	**12 17 44.6**	**+1.0**
CSS	**Mathiatis**	**4.48**	**90**	P	**Pn**	**12 17 45.9**	**+1.5**
CSS				S	**Sn**	**12 18 37.9**	**+1.5**
CSS				AML	AML	12 18 42.9	
	0.1nm,0.7s						
CSS				AML	AML	12 18 50.1	
	0.1nm,0.8s						
CSS	**Mathiatis**	**4.48**	**90**	P	**Pn**	**12 17 44.5**	**+0.1**
CSS	**Mathiatis**	**4.48**	**90**	P	**Pn**	**12 17 48.1**	**+3.7**
CSS				S	**Sn**	**12 18 39.8**	**+3.5**
CSS	**Mathiatis**	**4.48**	**90**	P	**Pn**	**12 17 45.3**	**+1.0**
MVOU	**Mavrovouni**	**4.72**	**89**	P	**Pn**	**12 17 49.6**	**+1.9**
MVOU				S	**Sn**	**12 18 45.4**	**+3.1**
MVOU				AML	AML	12 18 58.1	
	0.1nm,0.5s						
MVOU				AML	AML	12 18 59.6	
	0.1nm,0.5s						
YLV	**Yalova**	**5.58**	**12**	P	**Pn**	**12 17 59.0**	**-0.5**
	0.1nm17nm,1.0s						
BR105	**Keskin Array S**	**6.48**	**43**	P	**Pn**	**12 18 12.1**	**+0.1**
	0.0nm58nm4.5nm,0.9s						
BR104	**Keskin Array S**	**6.49**	**43**	P	**Pn**	**12 18 12.1**	**0.0**
	0.0nm55nm6.6nm,1.0s						
BR104				S	**Sn**	**12 19 28.0**	**+1.9**
	0.0nm55nm6.6nm,1.0s						
BR106	**Keskin Array S**	**6.49**	**43**	P	**Pn**	**12 18 12.2**	**0.0**
	0.0nm40nm4.3nm,0.9s						
BRTR	**Keskin Array B**	**6.50**	**43**	Pn	**Pn**	**12 18 12.2**	**-0.1**
	0.5nm,0.3s,baz=221,slow=16,SNR=11						
BRTR				Sn	**Sn**	**12 19 23.6**	**-2.8**
	0.6nm,0.3s,baz=208,slow=24,SNR=7.2						
BRTR				LR	LR	12 21 39.4	
	comp=Z,191nm,18.7s,baz=222,slow=47						
	1.6nm,0.4s						
MMA0B	**Mount Meron ar**	**6.59**	**106**	⇑P	**Pn**	**12 18 15.5**	**+2.1**
MMA0B				S	**Sn**	**12 19 30.1**	**+1.7**
MMAI	**Mount Meron Ar**	**6.59**	**106**	Pn	**Pn**	**12 18 13.9**	**+0.5**
	4.6nm,0.3s,baz=297,slow=12,SNR=7.5						
MMAI				Sn	**Sn**	**12 19 28.9**	**+0.5**
	7.4nm,0.3s,baz=352,slow=11,SNR=5.6						
	1.3nm,0.3s						
GEM	**Giv'at Ha'Em**	**6.73**	**104**	P	**Pn**	**12 18 17.6**	**+2.3**
GEM				S	**Sn**	**12 19 33.1**	**+1.4**
MMLI	**Mount Malkishu**	**6.82**	**111**	P	**Pn**	**12 18 18.3**	**+1.7**
MMLI				S	**Sn**	**12 19 33.6**	**-0.6**
KZIT	**Kziot**	**6.89**	**126**	P	**Pn**	**12 18 18.1**	**+0.5**
KZIT				S	**Sn**	**12 19 33.6**	**-2.3**
MZS	**Mizpe Shalem**	**7.22**	**117**	P	**Pn**	**12 18 23.1**	**+1.2**
MZS				S	**Sn**	**12 19 43.4**	**-0.4**
MSBI	**Mazada**	**7.32**	**119**	P	**Pn**	**12 18 24.3**	**+0.9**
MSBI				S	**Sn**	**12 19 45.1**	**-1.2**
RMNI	**Mount Ramon**	**7.33**	**126**	P	**Pn**	**12 18 24.1**	**+0.4**
RMNI				S	**Sn**	**12 19 44.6**	**-2.2**
GHAJ	**Ghor Haditha**	**7.48**	**118**	P	**Pn**	**12 18 26.3**	**+0.7**
GHAJ				S	**Sn**	**12 19 49.6**	**-0.6**
HRFI	**Mount Harif**	**7.88**	**128**	P	**Pn**	**12 18 31.3**	**+0.2**
HRFI				S	**Sn**	**12 19 57.1**	**-3.0**
EIL	**Elat**	**8.07**	**130**	Pn	**Pn**	**12 18 33.4**	**-0.3**
	1.8nm,0.3s,baz=323,slow=5.1,SNR=10.0						
EIL				Sn	**Sn**	**12 20 00.9**	**-4.1**
	3.3nm,0.3s,baz=328,slow=17,SNR=8.2						
	5.3nm,0.3s						
EIL	**Elat**	**8.07**	**130**	P	**Pn**	**12 18 34.3**	**+0.6**
EIL				S	**Sn**	**12 20 01.9**	**-3.0**
TIP	**Timpagrande**	**9.76**	**298**	P	**Pn**	**12 18 56.4**	**-0.5**
	4.8nm,0.8s						
CEL	**Celeste**	**10.12**	**292**	P	**Pn**	**12 19 01.6**	**-0.3**
	11nm,0.7s						
MLR	**Muntele Rosu**	**10.47**	**353**	Pn	**Pn**	**12 19 07.7**	**+1.0**
	0.2nm,0.3s,baz=133,slow=19,SNR=1.4						
MLR				LR	LR	12 23 57.1	
	comp=Z,95nm,20.7s,baz=170,slow=42						
	0.8nm,0.3s						
MLR	**Muntele Rosu**	**10.47**	**353**	P	**Pn**	**12 19 07.1**	**+0.4**
	9.5nm,1.4s						
KEST	**Kesra**	**15.13**	**278**	Pn	**Pn**	**12 20 11.3**	**+1.1**
	0.3nm,0.3s,baz=16,slow=13,SNR=4.7						
	1.0nm,0.5s						
NIE	**Niedzica**	**15.35**	**341**	P	**Pn**	**12 20 13.6**	**+0.6**
NIE				pP	**P**	**12 20 16.3**	**-1.4**
AKASG	**Malin Array Be**	**15.62**	**3**	Pn	**Pn**	**12 20 15.8**	**-0.7**
	0.6nm,0.3s,baz=197,slow=11,SNR=4.1						
AKASG				LR	LR	12 26 17.6	
	comp=Z,70nm,19.6s,baz=178,slow=38						
	0.2nm,0.3s						
GERES	**GERESS Array B**	**17.26**	**327**	P	**Pn**	**12 20 37.2**	**-0.3**
	baz=133,slow=13,SNR=5.7						
	0.5nm,0.4s						
DAVOX	**Davos/Dischmat**	**17.86**	**316**	LR	LR	12 28 27.2	
	comp=Z,51nm,18.1s,baz=91,slow=40						
ESDC	**Sonseca Array**	**25.63**	**290**	P	**P**	**12 22 05.8**	**-0.2**
	0.9nm,0.6s,baz=82,slow=9.1,SNR=7.9						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**26.38**	**358**	P	**P**	**12 22 10.7**	**-1.9**
	1.3nm,0.7s,baz=178,slow=9.5,SNR=4.3						
FINES				LR	LR	12 33 29.7	
	comp=Z,39nm,18.7s,baz=92,slow=39						
	1.3nm,0.7s						
AKTO	**Aktyubinsk**	**26.67**	**46**	LR	LR	12 35 21.1	
	comp=Z,31nm,18.4s,baz=350,slow=42						
HFS	**Hagfors**	**26.68**	**344**	P	**P**	**12 22 13.0**	**-2.3**
	1.7nm,0.7s,baz=171,slow=10,SNR=6.9						
	1.7nm,0.7s						
NOA	**NORSAR Array B**	**28.06**	**343**	P	**P**	**12 22 25.0**	**-2.7**
	0.4nm,0.7s,baz=152,slow=8.2,SNR=3.8						
NOA				LR	LR	12 35 44.5	
	comp=Z,32nm,18.9s,baz=145,slow=41						
	0.4nm,0.7s						
ARTI	**Arti**	**29.69**	**35**	LR	LR	12 36 50.2	
	comp=Z,38nm,18.3s,baz=200,slow=41						
TORD	**Torodi Ar. Bea**	**32.21**	**234**	P	**P**	**12 23 04.3**	**-0.4**
	1.1nm,0.5s,baz=32,slow=8.8,SNR=12						
	1.1nm,0.5s						
ARCES	**ARCESS Array B**	**34.51**	**359**	P	**P**	**12 23 24.0**	**-0.3**
	0.6nm,0.6s,baz=170,slow=9.1,SNR=1.9						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**39.42**	**51**	P	**P**	**12 24 05.8**	**-0.5**
	0.8nm,0.3s,baz=273,slow=8.9,SNR=6.1						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**41.94**	**57**	P	**P**	**12 24 27.8**	**+0.6**
	0.4nm,0.4s,baz=271,slow=6.7,SNR=4.1						
	0.4nm,0.4s						
SPITS	**Spitsbergen Ar**	**43.46**	**357**	P	**P**	**12 24 39.7**	**+0.6**
	4.0nm,0.8s,baz=145,slow=10,SNR=5.6						
	4.0nm,0.8s						
MATP	**Matopo**	**55.23**	**179**	LR	LR	12 52 54.5	
	comp=Z,79nm,19.3s,baz=44,slow=39						
SONM	**Songino Array**	**57.79**	**51**	P	**P**	**12 26 28.4**	**+0.6**
	0.4nm,0.4s,baz=294,slow=7.2,SNR=3.6						
	0.4nm,0.4s						
SCHQ	**Schefferville**	**64.66**	**320**	P	**P**	**12 27 13.4**	**-0.7**
	1.3nm,0.6s,baz=59,slow=9.1,SNR=1.6						
	1.3nm,0.6s						
YAK	**Yakutsk**	**64.80**	**31**	LR	LR	13 01 29.2	
	comp=Z,13nm,19.9s,baz=284,slow=42						
ILAR	**Eielson Array**	**80.36**	**358**	P	**P**	**12 28 46.6**	**-0.8**
	0.3nm,0.9s,baz=8.7,slow=5.5,SNR=2.4						
	0.3nm,0.9s						

*LDG **15** 12:28:24.9±0.4,41˚.48N×7˚.69E,h10km,Ml2.7/7, Error ellipse: s-maj=8.5km s-min=4.0km az=8.0*
*ROM **15** 12:28:25.0±0.2,41˚.457N±0˚.004×7˚.58E±0˚.03,h39km, ML2.3/10, Error ellipse: s-maj=2.3km s-min=0.5km az=270.0*

ISC 15 12:28:23.9±2.5,41˚.4N±0˚.2×7˚.54E±0˚.05,h33km±6km,n19,σ0ᵍ99/31,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPL	**Sampolo**	**1.48**	**61**	P	**Pb**	**12 28 50.4**	**-0.3**
SMPL				S	**Sn**	**12 29 05.8**	**-0.5**
PGF	**Pioggiola**	**1.58**	**43**	*e*Pn	**Pn**	**12 28 50.1**	**+0.5**
PGF				*e*Sn	**Sn**	**12 29 09.1**	**+0.1**
	37nm,0.2s						
PGF	**Pioggiola**	**1.58**	**43**	P	**Pn**	**12 28 50.2**	**+0.6**
PGF				S	**Sn**	**12 29 09.2**	**+0.1**
PGF				AML	AML		
	comp=E,154μm,1.0s						
PGF				AML	AML		
	comp=N,136μm,0.9s						
PGF				AML	AML		
	comp=N,136μm,1.1s						
LMR	**La Mourre**	**2.08**	**339**	*e*Pn	**Pn**	**12 28 56.6**	**+0.2**
LMR				*e*Sn	**Sn**	**12 29 21.0**	**-0.1**
	comp=N,9.0nm,0.1s						
SBF	**Sospel**	**2.46**	**358**	*e*Pn	**Pn**	**12 29 02.4**	**+0.7**
SBF				*e*Sn	**Sn**	**12 29 30.5**	**-0.2**
	comp=N,4.6nm,0.2s						
IMI	**Imperia**	**2.52**	**6**	P	**Pn**	**12 29 02.7**	**+0.2**
IMI				S	**Sn**	**12 29 30.8**	**-1.4**
IMI				AML	AML		
	comp=E,19μm,1.5s						
IMI				AML	AML		
	comp=N,27μm,0.6s						
IMI				AML	AML		
	comp=E,19μm,0.5s						
SAOF	**Saorge**	**2.58**	**0**	P	**Pn**	**12 29 03.7**	**+0.3**
SAOF				S	**Sn**	**12 29 31.7**	**-1.9**
RORO	**Rocca Rossa**	**2.74**	**8**	P	**Pn**	**12 29 05.9**	**+0.5**
ENR	**Entracque**	**2.83**	**358**	P	**Pn**	**12 29 07.8**	**+1.0**
ENR				S	**Sn**	**12 29 39.8**	**+0.1**
ENR				AML	AML		
	comp=E,28μm,1.1s						
ENR				AML	AML		
	comp=N,19μm,0.4s						
ENR				AML	AML		
	comp=E,28μm,0.9s						
GBOS	**Grotte di Boss**	**2.85**	**4**	P	**Pn**	**12 29 07.9**	**+0.9**
GBOS				AML	AML		
	comp=E,10μm,1.4s						
GBOS				AML	AML		
	comp=N,11μm,0.9s						
STV	**Sant Anna di V**	**2.85**	**357**	P	**Pn**	**12 29 08.1**	**+1.0**
STV				S	**Sn**	**12 29 40.4**	**+0.2**
CANO	**Canova, Maglio**	**2.85**	**10**	P	**Pn**	**12 29 07.4**	**+0.3**
SMRF	**Simiane la Rot**	**2.95**	**331**	*e*Pn	**Pn**	**12 29 09.6**	**+1.1**
SMRF				*e*Sn	**Sn**	**12 29 44.0**	**+1.2**
	comp=N,2.5nm,0.2s						
PZZ	**Stroppo**	**3.12**	**354**	P	**Pn**	**12 29 12.8**	**+1.9**
PCP	**Piancastagn**	**3.23**	**13**	P	**Pn**	**12 29 12.6**	**+0.4**
PCP				S	**Sn**	**12 29 48.6**	**-0.8**
GORR	**Gorreto**	**3.45**	**21**	AML	AML		
	comp=E,35μm,0.6s						
GORR				AML	AML		
	comp=N,22μm,1.3s						
GORR				AML	AML		
	comp=N,22μm,0.7s						
ORIF	**Oris-en-Rattie**	**3.72**	**342**	*e*Pn	**Pn**	**12 29 20.9**	**+1.9**
LASF	**Ste Croix**	**3.81**	**316**	*e*Pn	**Pn**	**12 29 20.2**	**0.0**
LASF				*e*Sn	**Sn**	**12 30 02.1**	**-1.7**
	comp=N,1.2nm,0.1s						
VIVF	**Saint-Julien-l**	**4.04**	**330**	*e*Pn	**Pn**	**12 29 24.1**	**+0.7**
VIVF				*e*Sn	**Sn**	**12 30 08.2**	**-1.4**
	comp=N,0.5nm,0.2s						

*MDD **15** 12:45:18.1±0.8,36˚.24N×5˚.80E,h12km±15km,Mb4.5/27, M_mb4.0/27, Error ellipse: s-maj=16.8km s-min=5.3km az=141.0*
*IDC **15** 12:45:21.5±1.2,36˚.36N×5˚.15E,h0km,mb3.6/8, mbtmp3.6/12,ML3.9/3,MS3.1/13,Error ellipse: s-maj=22.4km s-min=19.9km az=22.0*
*CRAAG **15** 12:45:21.1,36˚.62N×5˚.30E,Ml3.9,Algrie 05km SE Aokas*
*CNRM **15** 12:45:39.6,36˚.25N×3˚.90E,h30km*

ISC 15 12:45:24.2±0.6,36˚.47N±0˚.004×5˚.30E±0˚.03,h19km,n60,σ1ᵍ20/55,mb3.5/7,MS3.1/9,11C,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCHA	**Tamokra**	**0.53**	**266**	P	**Pb**	**12 45 32.6**	**-2.1**
CBHR	**Beni Haroun da**	**0.79**	**82**	P	**Pb**	**12 45 36.9**	**-2.3**
CJSR	**Ain Djasser**	**0.80**	**139**	P	**Pn**	**12 45 40.5**	**0.0**
COAT	**Oued Athmania**	**0.83**	**106**	P	**Pb**	**12 45 38.4**	**-1.5**
CBOS	**Bilal Ibnou Ra**	**0.88**	**68**	P	**Pb**	**12 45 38.4**	**-2.4**
ATKJ	**Tikjda**	**0.95**	**269**	P	**Pb**	**12 45 40.9**	**-1.2**
CTEI	**Djebel Teioual**	**0.98**	**114**	P	**Pn**	**12 45 41.9**	**-1.1**
CASM	**Ain Smara**	**0.98**	**102**	P	**Pb**	**12 45 41.1**	**-1.5**
CSGS	**Sigus**	**1.19**	**106**	P	**Pb**	**12 45 45.4**	**-0.7**
AKET	**Djebel Ketaf**	**1.22**	**250**	P	**Pg**	**12 45 46.4**	**-1.4**
CKTS	**El Kantara**	**1.28**	**166**	P	**Pg**	**12 45 49.1**	**+0.2**
ABSD	**Ouled Sidi Bra**	**1.36**	**221**	P	**Pg**	**12 45 49.3**	**-1.2**
CTGD	**Timgad**	**1.37**	**133**	P	**Pg**	**12 45 49.3**	**-1.3**
CBST	**Bordj Sabath**	**1.45**	**92**	P	**Pn**	**12 45 48.5**	**-1.0**
ABA	**Alger-Bouzarea**	**1.85**	**281**	P	**Pb**	**12 45 55.9**	**-1.5**
AFRS	**Ain Fares**	**1.87**	**202**	P	**Pb**	**12 45 56.7**	**-1.1**
CRHA	**Rehia**	**2.02**	**110**	P	**Pn**	**12 45 57.5**	**+0.2**
KEST	**Kesra**	**3.36**	**101**	Pn	**Pn**	**12 46 15.7**	**+0.1**
	16nm,0.3s,baz=209,slow=2.1,SNR=55						
KEST				Sn	**Sb**	**12 47 00.9**	**-2.6**
	3.8nm,0.3s,baz=245,slow=23,SNR=5.5						
	70nm,0.5s						
ETOS	**Mallorca**	**3.84**	**330**	Pn	**Pn**	**12 46 20.8**	**-1.4**
EIBI	**Ibiza**	**4.05**	**310**	Pn	**Pn**	**12 46 24.4**	**-0.7**
EIBI				⇑*i*Vm

HFS	**Hagfors**	**24.29**	**10**	LR	LR	13 01 03.3	
	comp=Z,42nm,19.2s,baz=190,slow=39						
NOA	**NORSAR Array B**	**24.88**	**7**	P	**P**	**12 50 47.2**	**+1.7**
	0.3nm,0.7s,baz=188,slow=9.9,SNR=1.6						
NOA				LR	LR	13 01 06.0	
	comp=Z,25nm,18.6s,baz=195,slow=38						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**28.22**	**21**	LR	LR	13 03 26.4	
	comp=Z,42nm,18.5s,baz=224,slow=38						
DBIC	**Dimbokro**	**31.08**	**200**	LR	LR	13 05 52.5	
	comp=Z,52nm,18.4s,baz=142,slow=40						
ARCES	**ARCESS Array B**	**34.91**	**12**	LR	LR	13 06 43.4	
	comp=Z,29nm,18.4s,baz=100,slow=37						
ARTI	**Arti**	**40.44**	**43**	LR	LR	13 11 41.7	
	comp=Z,31nm,18.1s,baz=155,slow=39						
KURBB	**Kurchatov Arra**	**52.82**	**50**	P	**P**	**12 54 39.9**	**+1.8**
	1.1nm,0.2s,baz=288,slow=8.2,SNR=4.4						
	1.1nm,0.2s						
ZALV	**Zalesovo Beam**	**55.67**	**45**	P	**P**	**12 54 60.0**	**+1.2**
	0.5nm,0.2s,baz=310,slow=6.8,SNR=2.3						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**56.31**	**54**	P	**P**	**12 55 05.3**	**+1.7**
	0.5nm,0.5s,baz=294,slow=6.1,SNR=4.3						
	0.5nm,0.5s						
SONM	**Songino Array**	**70.56**	**45**	LR	LR	13 28 09.9	
	comp=Z,40nm,18.9s,baz=210,slow=36						
ILAR	**Eielson Array**	**76.76**	**348**	P	**P**	**12 57 15.1**	**+1.2**
	0.3nm,0.9s,baz=352,slow=7.2,SNR=4.3						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**134.21**	**89**	PKhKP	PKPpre	13 04 38.3	
	0.3nm,0.9s,baz=299,slow=2.2,SNR=2.1						

*TAP **15** 13:04:26.1,24˚.80N×122˚.20E,h95km,ML3.8,B*
*JMA **15** 13:04:26.0±0.2,25˚N±1˚×122˚.2E±0˚.4,h95km±2km,*
MV2.7/14,TAIWAN REGION
ISC 15 13:04:26.2±1.2,24˚.79N±0˚.03×122˚.21E±0˚.02,h96km±5km,
n166,σ0°76/304,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EGS		**0.26**	**282**	P		**Pn**	**13 04 40.5**	**+0.4**
TWB1	**Santiao Chiao**	**0.29**	**317**	*i* P		**Pn**	**13 04 40.3**	**0.0**
TWB1				*i* S		**Sn**	**13 04 50.4**	**-0.5**
EOS2	**EOS2**	**0.37**	**177**	*e*P		**Pn**	**13 04 41.2**	**+0.7**
EOS2				*e*S		**Sn**	**13 04 52.0**	**+0.8**
TWC	**Suao**	**0.38**	**241**	*i* P		**Pn**	**13 04 40.7**	**0.0**
TWC				*e*S		**Sn**	**13 04 50.4**	**-1.2**
TIPB	**Shuangxi**	**0.39**	**297**	*i* P		**Pn**	**13 04 40.9**	**0.0**
TIPB				*i* S		**Sn**	**13 04 51.2**	**-0.6**
ESAO	**Su ao**	**0.40**	**237**	P		**Pn**	**13 04 41.0**	**+0.2**
ESAO				S		**Sn**	**13 04 51.2**	**-0.6**
ILA	**Ilan**	**0.42**	**267**	*i* P		**Pn**	**13 04 41.2**	**+0.2**
ILA				*i* S		**Sn**	**13 04 52.2**	**+0.2**
SXI1	**Grass Mountain**	**0.43**	**315**	*e*P		**Pn**	**13 04 41.1**	**-0.1**
SXI1				*e*S		**Sn**	**13 04 52.7**	**+0.3**
NDS	**Dongshan**	**0.48**	**251**	*e*P		**Pn**	**13 04 41.4**	**+0.1**
NDS				*e*S		**Sn**	**13 04 52.4**	**-0.3**
WFSB	**Wu-fen Shan**	**0.48**	**306**	P		**Pn**	**13 04 41.5**	**+0.1**
WFSB				S		**Sn**	**13 04 52.5**	**-0.3**
TWE	**Neicheng**	**0.50**	**262**	*i* P		**Pn**	**13 04 41.7**	**+0.2**
TWE				S		**Sn**	**13 04 52.8**	**-0.3**
EOS3	**EOS3**	**0.51**	**169**	*e*P		**Pn**	**13 04 42.4**	**+0.9**
EOS3				*e*S		**Sn**	**13 04 54.1**	**+1.2**
EWUT	**Wuta**	**0.52**	**229**	P		**Pn**	**13 04 42.0**	**+0.3**
EWUT				*e*S		**Sn**	**13 04 53.5**	**+0.2**
TNOU	**National Taiwa**	**0.53**	**312**	*i* P		**Pn**	**13 04 41.8**	**0.0**
TNOU				S		**Sn**	**13 04 53.4**	**-0.1**
ENA	**Nanau**	**0.56**	**230**	*e*P		**Pn**	**13 04 41.6**	**-0.4**
ENA				*e*S		**Sn**	**13 04 53.4**	**-0.5**
FUSB	**Fushanzhiwuyua**	**0.57**	**267**	*i* P		**Pn**	**13 04 42.2**	**0.0**
FUSB				*e*S		**Sn**	**13 04 53.3**	**-0.8**
TWA	**Mucha**	**0.60**	**288**	*i* P		**Pn**	**13 04 42.2**	**-0.1**
TWA				*i* S		**Sn**	**13 04 53.6**	**-0.8**
ENTT	**Nioudou**	**0.60**	**256**	P		**Pn**	**13 04 43.0**	**+0.6**
ENTT				*e*S		**Sn**	**13 04 55.4**	**+0.8**
EAHA	**Aohua**	**0.63**	**223**	*e*P		**Pn**	**13 04 42.6**	**0.0**
EAHA				*e*S		**Sn**	**13 04 55.6**	**+0.7**
NHY	**Taipei**	**0.63**	**293**	P		**Pn**	**13 04 42.8**	**+0.2**
NHY				*e*S		**Sn**	**13 04 54.6**	**-0.3**
NWLT	**Wulai**	**0.64**	**269**	P		**Pn**	**13 04 42.7**	**-0.1**
NWLT				*e*S		**Sn**	**13 04 54.8**	**-0.4**
NHDH	**Xindian Distri**	**0.65**	**285**	*i* P		**Pn**	**13 04 42.7**	**0.0**
NHDH				*i* S		**Sn**	**13 04 54.3**	**-0.8**
NDT	**Datong Townshi**	**0.66**	**254**	P		**Pn**	**13 04 43.6**	**+0.7**
NDT				S		**Sn**	**13 04 56.2**	**+0.8**
LATG	**Datong**	**0.67**	**248**	P		**Pn**	**13 04 43.6**	**+0.5**
LATG				S		**Sn**	**13 04 56.5**	**+0.7**
EOS4	**EOS4**	**0.68**	**172**	*e*P		**Pn**	**13 04 42.6**	**0.0**
EOS4				S		**Sn**	**13 04 54.9**	**0.0**
YM01	**YM01**	**0.68**	**301**	*i* P		**Pn**	**13 04 43.1**	**0.0**
YM01				S		**Sn**	**13 04 55.2**	**-0.6**
TATO	**Taipei**	**0.68**	**286**	P		**Pn**	**13 04 43.1**	**+0.1**
TATO	**Taipei**	**0.68**	**286**	*e*P		**Pn**	**13 04 42.7**	**-0.3**
TATO				*e*S		**Sn**	**13 04 54.6**	**-1.1**
TAP	**Taipei**	**0.69**	**291**	*e*P		**Pn**	**13 04 42.7**	**-0.4**
TAP				*e*S		**Sn**	**13 04 55.4**	**-0.3**
YM08	**YM08**	**0.69**	**305**	*e*P		**Pn**	**13 04 43.0**	**-0.1**
YM08				*e*S		**Sn**	**13 04 55.0**	**-0.9**
ZUZH	**Zhuzihu**	**0.71**	**302**	*e*P		**Pn**	**13 04 43.4**	**0.0**
ZUZH				*e*S		**Sn**	**13 04 55.4**	**-0.8**
TWY	**Chenhua**	**0.73**	**311**	*i* P		**Pn**	**13 04 43.7**	**+0.2**
TWY				*e*S		**Sn**	**13 04 56.8**	**+0.3**
ANP	**Anpu**	**0.74**	**302**	*e*P		**Pn**	**13 04 43.9**	**+0.2**
ANP				*e*S		**Sn**	**13 04 56.0**	**-0.8**
NSM	**Shimen**	**0.75**	**311**	P		**Pn**	**13 04 44.0**	**+0.3**
NSM				*e*S		**Sn**	**13 04 57.4**	**+0.6**
JYNG	**Yonagunijimaku**	**0.75**	**117**	P		**Pn**	**13 04 43.7**	**0.0**
JYNG				*e*S		**Sn**	**13 04 56.7**	**-0.1**
YHNB	**Yeheng**	**0.77**	**261**	P		**Pn**	**13 04 44.2**	**+0.2**
YHNB	**Yeheng**	**0.77**	**261**	P		**Pn**	**13 04 57.4**	**+0.1**
YHNB	**Yeheng**	**0.77**	**261**	P		**Pn**	**13 04 44.2**	**+0.2**
YHNB				S		**Sn**	**13 04 57.0**	**-0.3**
TWS1	**Kuangyinshan**	**0.78**	**293**	*i* P		**Pn**	**13 04 44.2**	**+0.2**
TWS1				S		**Sn**	**13 04 57.1**	**-0.3**
NSK	**Sanguang**	**0.78**	**262**	*i* P		**Pn**	**13 04 44.3**	**+0.2**
NSK				S		**Sn**	**13 04 57.2**	**-0.3**
NTST	**Danshui**	**0.78**	**298**	P		**Pn**	**13 04 44.3**	**+0.3**
NTST				*e*S		**Sn**	**13 04 57.1**	**-0.4**
YOJ	**Yonaguni jima**	**0.80**	**114**	P		**Pn**	**13 04 44.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.80**	**114**	P		**Pn**	**13 04 57.3**	**-0.4**
YOJ	**Yonaguni jima**	**0.80**	**114**	P		**Pn**	**13 04 44.3**	**+0.1**
YOJ				S		**Sn**	**13 04 57.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.80**	**114**	P		**Pn**	**13 04 44.2**	**+0.1**
YOJ				*e*S		**Sn**	**13 04 57.4**	**-0.3**
ETL	**Fush Village**	**0.83**	**220**	*e*P		**Pn**	**13 04 44.5**	**0.0**
ETL				*e*S		**Sn**	**13 04 58.6**	**+0.3**
NACB	**Ninganchiao**	**0.83**	**222**	P		**Pn**	**13 04 44.2**	**-0.4**
NACB	**Ninganchiao**	**0.83**	**222**	P		**Pn**	**13 04 58.0**	**-0.3**
NACB	**Ninganchiao**	**0.83**	**222**	P		**Pn**	**13 04 44.1**	**-0.4**
NACB				S		**Sn**	**13 04 57.8**	**-0.5**
NNSB	**Datong**	**0.84**	**244**	*i* P		**Pn**	**13 04 45.1**	**+0.4**
NNSB				*i* S		**Sn**	**13 04 58.7**	**+0.1**
NNSH	**Datong**	**0.84**	**244**	*i* P		**Pn**	**13 04 45.0**	**+0.3**
NNSH				*e*S		**Sn**	**13 04 58.8**	**+0.2**
NNS	**Nan Shan**	**0.84**	**245**	*i* P		**Pn**	**13 04 45.2**	**+0.5**
NNS				*i* S		**Sn**	**13 04 58.8**	**+0.2**
PCYT	**Pengchaiyu**	**0.84**	**351**	*i* P		**Pn**	**13 04 44.9**	**+0.2**
NTY	**Taoyuan**	**0.85**	**284**	*e*P		**Pn**	**13 04 45.3**	**+0.6**
NTY				*e*S		**Sn**	**13 04 59.1**	**+0.4**
ETLH	**Xiulin Townshi**	**0.88**	**229**	*e*P		**Pn**	**13 04 45.1**	**-0.1**
ETLH				*e*S		**Sn**	**13 04 59.4**	**0.0**
TWD	**Chiawan**	**0.90**	**218**	P		**Pn**	**13 04 45.2**	**-0.1**
TWD				S		**Sn**	**13 04 59.5**	**-0.1**
KSHI	**Guanxi Townshi**	**0.94**	**269**	P		**Pn**	**13 04 46.1**	**+0.5**
KSHI				S		**Sn**	**13 05 01.1**	**+0.7**
NCUH	**Zhongli**	**0.95**	**281**	P		**Pn**	**13 04 46.3**	**+0.5**
NCUH				S		**Sn**	**13 05 01.0**	**+0.5**
HWA	**Hwalien**	**0.98**	**214**	P		**Pn**	**13 04 46.6**	**+0.5**
HWA				S		**Sn**	**13 05 01.6**	**+0.5**
NFF	**Wufeng Townshi**	**1.01**	**261**	P		**Pn**	**13 04 46.6**	**+0.2**
NFF				S		**Sn**	**13 05 01.6**	**-0.1**
NJD	**Zhudong**	**1.02**	**267**	P		**Pn**	**13 04 47.0**	**+0.5**
NJD				*e*S		**Sn**	**13 05 02.1**	**+0.2**
FUSS	**Fushou**	**1.03**	**239**	*i* P		**Pn**	**13 04 47.4**	**+0.4**
FUSS				*i* S		**Sn**	**13 05 02.9**	**+0.4**
ETM	**Tongmen**	**1.05**	**219**	*e*P		**Pn**	**13 04 46.3**	**-0.6**
ETM				*e*S		**Sn**	**13 05 01.6**	**-0.9**
LXIB	**Xiulin Townshi**	**1.06**	**224**	*e*P		**Pn**	**13 04 46.5**	**-0.6**
LXIB				*e*S		**Sn**	**13 05 02.7**	**-0.1**
TEYL	**Yanliau Villag**	**1.08**	**211**	*e*P		**Pn**	**13 04 47.0**	**-0.1**
TEYL				*e*S		**Sn**	**13 05 02.5**	**-0.5**
WHF	**Hehuan Shan**	**1.08**	**233**	*e*P		**Pn**	**13 04 47.8**	**+0.2**
WHF				*e*S		**Sn**	**13 05 03.5**	**-0.2**
NHW	**Xinwu Township**	**1.08**	**282**	*e*P		**Pn**	**13 04 47.5**	**+0.4**
NHW				*e*S		**Sn**	**13 05 03.3**	**+0.3**
HSN1	**Hsinchu**	**1.08**	**270**	P		**Pn**	**13 04 47.6**	**+0.4**
HSN1				S		**Sn**	**13 05 03.5**	**+0.3**
TWT	**Tachien**	**1.08**	**241**	P		**Pn**	**13 04 48.3**	**+0.8**
TWT				S		**Sn**	**13 05 04.0**	**+0.6**
LIOB	**Emei**	**1.10**	**263**	*i* P		**Pn**	**13 04 47.6**	**+0.2**
LIOB				*i* S		**Sn**	**13 05 03.3**	**-0.1**
TDCB	**Techi**	**1.10**	**241**	*i* P		**Pn**	**13 04 48.1**	**+0.5**
TDCB				*i* S		**Sn**	**13 05 03.7**	**0.0**
NSTT	**Nanjuang**	**1.11**	**262**	P		**Pn**	**13 04 47.6**	**+0.1**
NSTT				*e*S		**Sn**	**13 05 02.8**	**-0.9**
SBCB	**Hsinchu**	**1.11**	**270**	P		**Pn**	**13 04 48.1**	**+0.6**
SBCB				S		**Sn**	**13 05 03.6**	**-0.1**
HSN	**Hsinchu**	**1.13**	**271**	*i* P		**Pn**	**13 04 47.6**	**-0.1**
HSN				S		**Sn**	**13 05 03.2**	**-0.8**
SHUL	**Shoufeng**	**1.16**	**211**	*e*P		**Pn**	**13 04 48.4**	**+0.2**
SHUL				*e*S		**Sn**	**13 05 04.6**	**-0.1**
ESL	**Shilin**	**1.21**	**216**	*e*P		**Pn**	**13 04 47.8**	**-0.9**
ESL				*e*S		**Sn**	**13 05 03.5**	**-2.1**
TEGC	**Jichi Village**	**1.24**	**210**	*e*P		**Pn**	**13 04 49.6**	**+0.6**
OWD	**Renai**	**1.26**	**229**	*i* P		**Pn**	**13 04 49.5**	**+0.1**
OWD				*e*S		**Sn**	**13 05 07.1**	**+0.1**
WHP	**Taichung City**	**1.26**	**246**	*e*P		**Pn**	**13 04 50.1**	**+0.7**
WHP				*e*S		**Sn**	**13 05 07.1**	**+0.1**
WUSB	**Renai**	**1.28**	**232**	*i* P		**Pn**	**13 04 50.1**	**+0.5**
WUSB				*i* S		**Sn**	**13 05 07.6**	**+0.3**
WARBT	**Fenglin Townsh**	**1.31**	**215**	*e*P		**Pn**	**13 04 48.7**	**-1.2**
WARBT				*e*S		**Sn**	**13 05 05.9**	**-1.9**
NMLH	**Miaoli**	**1.32**	**259**	*e*P		**Pn**	**13 04 50.6**	**+0.7**
NMLH				*e*S		**Sn**	**13 05 09.2**	**+1.2**
EGFH	**Guangfu**	**1.33**	**213**	*e*P		**Pn**	**13 04 49.6**	**-0.5**
NSY	**Sanyi**	**1.37**	**254**	*e*P		**Pn**	**13 04 51.1**	**+0.5**
NSY				*e*S		**Sn**	**13 05 08.8**	**-0.4**
TWQ1	**Liyutan**	**1.38**	**252**	*e*P		**Pn**	**13 04 50.8**	**0.0**
TWQ1				*e*S		**Sn**	**13 05 09.3**	**-0.1**
WPL	**Puli Township**	**1.38**	**236**	*e*P		**Pn**	**13 04 51.5**	**+0.7**
WPL				*e*S		**Sn**	**13 05 10.4**	**+1.0**
WCS	**Beigang Elemen**	**1.39**	**239**	P		**Pn**	**13 04 51.6**	**+0.7**
WCS				S		**Sn**	**13 05 10.3**	**+0.7**
DPDB	**Guoxing**	**1.39**	**237**	*e*P		**Pn**	**13 04 51.8**	**+0.8**
VWDT	**VWDT**	**1.42**	**224**	P		**Pn**	**13 04 51.7**	**+0.4**
VWDT				*e*S		**Sn**	**13 05 10.1**	**-0.1**
IRIF	**Iriomote-Funau**	**1.46**	**108**	P		**Pn**	**13 04 51.9**	**+0.3**
IRIF				*e*S		**Sn**	**13 05 10.5**	**-0.5**
HGSD	**Ruisui**	**1.48**	**209**	*e*P		**Pn**	**13 04 52.0**	**0.0**
HGSD				*e*S		**Sn**	**13 05 12.2**	**+0.7**
WDJ	**Dajia District**	**1.50**	**253**	*e*P		**Pn**	**13 04 52.4**	**+0.2**
WDJ				*e*S		**Sn**	**13 05 12.5**	**+0.7**
SMLT	**Sun Moon Lake**	**1.50**	**233**	*e*P		**Pn**	**13 04 53.0**	**+0.7**
SMLT				*e*S		**Sn**	**13 05 13.7**	**+1.6**
EHYH	**Wanrong**	**1.52**	**212**	*e*P		**Pn**	**13 04 51.9**	**-0.6**
EHYH				*e*S		**Sn**	**13 05 10.6**	**-1.7**
EHY	**Hungye**	**1.52**	**213**	*e*P		**Pn**	**13 04 52.1**	**-0.4**
TYC	**Yuchr**	**1.52**	**235**	*e*P		**Pn**	**13 04 53.2**	**+0.7**
TYC				*e*S		**Sn**	**13 05 13.8**	**+1.5**
SSLB	**Suanglung**	**1.52**	**229**	P		**Pn**	**13 04 53.3**	**+0.8**
SSLB	**Suanglung**	**1.52**	**229**	*e*P		**Pn**	**13 04 53.3**	**+0.8**
SSLB				*e*S		**Sn**	**13 05 13.6**	**+1.0**
WWF	**Wufeng**	**1.57**	**242**	*e*P		**Pn**	**13 04 53.5**	**+0.4**
WWF				*e*S		**Sn**	**13 05 14.2**	**+0.8**
YULB	**Yu-li**	**1.62**	**211**	P		**Pn**	**13 04 53.1**	**-0.7**
YULB	**Yu-li**	**1.62**	**211**	P		**Sn**	**13 05 13.0**	**-1.8**
YULB	**Yu-li**	**1.62**	**211**	*e*P		**Pn**	**13 04 52.9**	**-1.2**
YULB				*e*S		**Sn**	**13 05 13.6**	**-2.2**
ECBN	**Changbin**	**1.62**	**205**	*e*P		**Pn**	**13 04 54.0**	**+0.2**
ECBN				*e*S		**Sn**	**13 05 13.6**	**-1.2**
WHYT	**Xinyi Township**	**1.65**	**229**	*i* P		**Pn**	**13 04 55.3**	**+1.1**
WHYT				*e*S		**Sn**	**13 05 17.2**	**+1.8**
WNT1	**Nantou City**	**1.65**	**238**	*e*P		**Pn**	**13 04 54.8**	**+0.7**
WNT1				*e*S		**Sn**	**13 05 16.2**	**+0.9**
TWF1	**Yuli**	**1.66**	**210**	*e*P		**Pn**	**13 04 53.5**	**-0.7**
TWF1				*e*S		**Sn**	**13 05 13.4**	**-2.2**
WNT	**Mingjian**	**1.66**	**237**	*e*P		**Pn**	**13 04 54.9**	**+0.6**
WCHH	**Zhanghua**	**1.66**	**245**	*e*P		**Pn**	**13 04 54.4**	**+0.1**
WCHH				*e*S		**Sn**	**13 05 15.4**	**-0.2**
WCH1	**Changhua City**	**1.68**	**245**	*e*P		**Pn**	**13 04 54.8**	**+0.4**
WCH1				*e*S		**Sn**	**13 05 16.5**	**+0.6**
JKRS	**Kuro-shima**	**1.73**	**108**	P		**Pn**	**13 04 55.6**	**+0.5**
JKRS				*e*S		**Sn**	**13 05 17.1**	**0.0**
CHKH	**Chenggong**	**1.76**	**205**	*e*S		**Sn**	**13 05 16.6**	**-1.2**
FULB	**Fuli**	**1.79**	**208**	P		**Pn**	**13 04 56.0**	**0.0**
FULB				S		**Sn**	**13 05 18.6**	**0.0**
ALS	**Alishan**	**1.81**	**225**	*i* P		**Pn**	**13 04 57.8**	**+1.3**
ALS				S		**Sn**	**13 05 21.2**	**+1.8**
JIJ	**Ishigaki jima**	**1.81**	**103**	P		**Pn**	**13 04 56.2**	**+0.1**
JIJ				S		**Sn**	**13 05 18.2**	**-0.8**
CHN5	**Tsauling**	**1.84**	**230**	P		**Pn**	**13 04 57.4**	**+0.8**
CHN5				S		**Sn**	**13 05 20.7**	**+1.0**
CHKT	**Chengkung**	**1.85**	**205**	*e*P		**Pn**	**13 04 55.9**	**-0.8**
CHKT				*e*S		**Sn**	**13 05 18.6**	**-1.4**
WGK	**Gukeng**	**1.86**	**234**	*e*P		**Pn**	**13 04 57.8**	**+0.9**
EHD	**Haiduan**	**1.88**	**210**	*e*P		**Pn**	**13 04 56.8**	**-0.3**
EHD				*e*S		**Sn**	**13 05 19.4**	**-1.1**
WDLH	**Douliu**	**1.88**	**235**	P		**Pn**	**13 04 57.9**	**+0.8**
WDLH				*e*S		**Sn**	**13 05 21.7**	**+1.1**
WRL	**Guolierlin Hig**	**1.89**	**242**	*e*P		**Pn**	**13 04 57.1**	**-0.1**
WRL				*i* S		**Sn**	**13 05 20.2**	**-0.7**
RLNB	**Erlin**	**1.91**	**242**	P		**Pn**	**13 04 57.7**	**+0.2**
RLNB				*e*S		**Sn**	**13 05 21.9**	**+0.7**
JISG	**Ishigakijimahi**	**1.92**	**96**	P		**Pn**	**13 04 58.0**	**+0.5**
JISG				S		**Sn**	**13 05 21.2**	**-0.3**
ELDTW	**Lidau**	**1.93**	**215**	P		**Pn**	**13 04 57.6**	**-0.3**
ELDTW				S		**Sn**	**13 05 21.0**	**-1.0**
EDH	**Donghe**	**1.99**	**205**	P		**Pn**	**13 04 57.9**	**-0.6**
EDH				*i* S		**Sn**	**13 05 21.6**	**-1.6**
WCKO	**Fanlu**	**1.99**	**228**	P		**Pn**	**13 04 59.5**	**+1.0**
WCKO				*i* S		**Sn**	**13 05 24.9**	**+1.7**
WTK	**Tuku**	**1.99**	**237**	*e*P		**Pn**	**13 04 58.8**	**+0.3**
WTK				S		**Sn**	**13 05 23.6**	**+0.4**
CHN4	**Tsaushan**	**2.06**	**226**	*e*P		**Pn**	**13 05 00.4**	**+1.0**
TPUB	**Ta-pu**	**2.07**	**225**	P		**Pn**	**13 05 00.5**	**+0.9**
TPUB	**Ta-pu**	**2.07**	**225**	S		**Sn**	**13 05 25.9**	**+0.8**
TPUB	**Ta-pu**	**2.07**	**225**	*i* P		**Pn**	**13 05 00.2**	**+0.6**
TPUB				*e*S		**Sn**	**13 05 26.2**	**+1.1**
CHY	**Chiayi**	**2.08**	**232**	*e*P		**Pn**	**13 05 00.2**	**+0.6**
CHY				S		**Sn**	**13 05 25.6**	**+0.5**
STYH	**Taoyuan**	**2.08**	**219**	*e*P		**Pn**	**13 05 00.9**	**+1.3**
STYH				*e*S		**Sn**	**13 05 26.2**	**+1.0**
STYT	**Tauyuan**	**2.10**	**220**	*e*P		**Pn**	**13 05 00.8**	**+0.8**
WTP	**Ta-pu**	**2.12**	**224**	P		**Pn**	**13 05 01.1**	**+0.8**
WTP				S		**Sn**	**13 05 27.5**	**+1.3**
WSF	**Szhu**	**2.15**	**238**	*e*P		**Pn**	**13 05 00.6**	**+0.1**
WSF				*e*S		**Sn**	**13 05 27.2**	**+0.4**
WSL	**Shuilin Townsh**	**2.21**	**235**	P		**Pn**	**13 05 01.8**	**+0.5**
WSL				S		**Sn**	**13 05 28.7**	**+0.5**
SNST	**Tainan City**	**2.21**	**225**	*e*P		**Pn**	**13 05 02.0**	**+0.6**
SNST				*e*S		**Sn**	**13 05 29.4**	**+1.0**
LDUT	**Ludao**	**2.22**	**198**	*e*S		**Sn**	**13 05 25.2**	**-3.2**
CHN1	**Nanshi**	**2.22**	**224**	P		**Pn**	**13 05 02.2**	**+0.7**
CHN1				S		**Sn**	**13 05 29.7**	**+1.2**
TWGBT	**Beinan**	**2.22**	**208**	P		**Pn**	**13 05 02.4**	**+0.9**
TWGBT	**Beinan**	**2.22**	**208**	*e*P		**Pn**	**13 05 00.6**	**-1.0**
TWGBT				*e*S		**Sn**	**13 05 26.7**	**-1.8**
TWG	**Pinlang**	**2.22**	**208**	*e*P		**Pn**	**13 05 01.3**	**-0.3**
TWG				S		**Sn**	**13 05 26.6**	**-2.0**
TTN	**Taitung**	**2.25**	**206**	*e*S		**Sn**	**13 05 28.1**	**-1.1**
SGST	**Jiashian**	**2.26**	**222**	*e*P		**Pn**	**13 05 02.5**	**+0.4**
SGST				*e*S		**Sn**	**13 05 30.3**	**+0.8**
ICHU	**Yijhu**	**2.27**	**231**	*e*P		**Pn**	**13 05 02.4**	**+0.3**
ICHU				*e*S		**Sn**	**13 05 30.0**	**+0.4**
JTJ	**Tarama**	**2.27**	**93**	*e*P		**Pn**	**13 05 03.0**	**+0.9**
JTJ				*e*S		**Sn**	**13 05 30.2**	**+0.6**
CHN8	**Yiju**	**2.33**	**232**	*e*P		**Pn**	**13 05 03.3**	**+0.5**
CHN8				*e*S		**Sn**	**13 05 31.6**	**+0.6**
SHHT	**Tainan City**	**2.45**	**224**	*e*P		**Pn**	**13 05 05.3**	**+0.8**
MATB	**Ma-tsu**	**2.45**	**304**	*e*P		**Pn**	**13 05 04.7**	**+0.1**
MATB				*e*S		**Sn**	**13 05 33.6**	**-0.4**
SCST	**Cishan**	**2.46**	**220**	*e*P		**Pn**	**13 05 05.8**	**+1.1**
SCST				*e*S		**Sn**	**13 05 35.8**	**+1.5**
SSD	**Sandimen**	**2.50**	**216**	*e*P		**Pn**	**13 05 05.6**	**+0.5**
SSD				*e*S		**Sn**	**13 05 35.7**	**+0.6**
VWUC	**VWUC**	**2.52**	**275**	*e*P		**Pn**	**13 05 05.2**	**-0.1**
VWUC				*e*S		**Sn**	**13 05 35.0**	**-0.5**
TSCK	**Chigu Township**	**2.54**	**230**	P		**Pn**	**13 05 06.0**	**+0.3**
TSCK				S		**Sn**	**13 05 36.5**	**+0.4**
MASBT	**Mashibuluo**	**2.61**	**214**	*e*P		**Pn**	**13 05 07.9**	**+1.3**
MASBT				*e*S		**Sn**	**13 05 38.6**	**+1.0**
EAST	**Anshuo**	**2.70**	**208**	*e*P		**Pn**	**13 05 09.1**	**+1.2**
EAST				*e*S		**Sn**	**13 05 39.3**	**-0.7**
PNG	**Penghu**	**2.71**	**244**	*e*P		**Pn**	**13 05 07.1**	**-0.9**
PNG				*e*S		**Sn**	**13 05 39.2**	**-1.0**
PHUB	**P'eng-hu**	**2.73**	**243**	*e*P		**Pn**	**13 05 07.3**	**-0.8**
PHUB				*e*S		**Sn**	**13 05 38.6**	**-1.8**
TAWH	**Dawu Township**	**2.73**	**207**	*e*P		**Pn**	**13 05 09.5**	**+1.3**
TAWH				*e*S		**Sn**	**13 05 38.4**	**-2.1**
WDGT	**Dungji**	**2.79**	**237**	*e*P		**Pn**	**13 05 08.9**	**-0.1**
WDGT				*e*S		**Sn**	**13 05 41.2**	**-0.7**
XPSS	**Dashiqiu**	**2.80**	**320**	*e*P		**Pn**	**13 05 08.6**	**-0.6**
XPSS				*e*S		**Sn**	**13 05 42.2**	**0.0**
JMJ	**Miyako jima 2**	**2.80**	**89**	*e*P		**Pn**	**13 05 09.5**	**+0.3**
JMJ				*e*S		**Sn**	**13 05 43.3**	**+1.0**
SCZT	**Fangliau**	**2.82**	**212**	*e*P		**Pn**	**13 05 10.6**	**+1.2**
SCZT				*e*S		**Sn**	**13 05 43.6**	**+1.0**
PTMZ	**Houxiangcun**	**2.82**	**276**	*e*P		**Pn**	**13 05 09.0**	**-0.3**
LYJJ	**Jianjiangzhen**	**2.82**	**309**	*e*P		**Pn**	**13 05 09.0**	**-0.4**
LYJJ				*e*S		**Sn**	**13 05 42.2**	**-0.5**
VCHM	**Qimei**	**2.99**	**239**	*e*P		**Pn**	**13 05 11.2**	**-0.5**
VCHM				*e*S		**Sn**	**13 05 45.5**	**-1.3**
AXDP	**Jialang**	**3.85**	**272**	*e*P		**Pn**	**13 05 23.3**	**0.0**
AXDP				*e*S		**Sn**	**13 06 07.0**	**-0.6**

*IDC **15** 13:14:05.4±2.2,32˚.20N×141˚.71E,h0km,mb3.7/5,*
mbtmp3.7/6,ML2.5/1,MS2.8/3,Error ellipse: s-maj=72.0km
*s-min=18.

VA03				IAML			13 21 26.6	
	comp=E,709nm,0.5s							
VA01	**Torpederas**	**2.26**	**177**	IAML			13 21 28.4	
	comp=E,149nm,0.4s							
ROCH	**El Roble**	**2.30**	**164**	*eP*		**Pb**	**13 20 47.4**	**+0.2**
ROCH				*eS*		**Sg**	**13 21 18.4**	**-0.2**
ROCH				IAML			13 21 24.2	
	comp=N,555nm,0.4s							
AC05	**El Transito**	**2.32**	**35**	*eP*		**Pn**	**13 20 45.0**	**+0.8**
AC05				*eS*		**Sn**	**13 21 14.6**	**+1.1**
AC05				*eS*		**Sb**	**13 21 16.1**	**-0.7**
AC05				IAML			13 21 23.6	
	comp=Z,199nm,0.7s							
AC05	**El Transito**	**2.32**	**35**	*eP*		**Pn**	**13 20 45.5**	**+1.2**
AC05				*eS*		**Sn**	**13 21 13.4**	**-0.1**
AC05				IAML			13 21 16.7	
	comp=N,502nm,0.4s							
ACCO	**Cerro Coronel**	**2.34**	**86**	*eP*		**Pg**	**13 20 49.2**	**-0.5**
ACCO				IAML			13 21 22.0	
	comp=Z,199nm,0.4s							
ACCO				*eS*		**Sg**	**13 21 22.2**	**+2.0**
RTLS	**Leoncito**	**2.36**	**117**	*eP*		**Pg**	**13 20 49.9**	**-0.2**
RTLS				IAML			13 21 31.4	
	comp=Z,651nm,0.7s							
ACDV	**Cuesta del Vie**	**2.37**	**76**	*eP*		**Pb**	**13 20 49.1**	**+0.8**
ACDV				*eP*		**Pb**	**13 20 49.2**	**+0.8**
ACDV				*eS*		**Sg**	**13 21 21.8**	**+0.9**
ACDV				IAML			13 21 27.4	
	comp=Z,175nm,0.6s							
MT02	**Curacav**	**2.55**	**168**	*eP*		**Pb**	**13 20 50.8**	**-0.5**
MT02				*eS*		**Sb**	**13 21 21.1**	**-2.0**
MT02				IAML			13 21 32.9	
	comp=Z,163nm,0.6s							
MT02	**Curacav**	**2.55**	**168**	*eP*		**Pb**	**13 20 50.5**	**-0.8**
MT02				*eS*		**Sb**	**13 21 23.4**	**+0.3**
MT02				IAML			13 21 33.8	
	comp=N,172nm,0.6s							
PEL	**Peldehue**	**2.55**	**159**	*eP*		**Pb**	**13 20 51.0**	**-0.3**
PEL				*eS*		**Sb**	**13 21 22.1**	**-1.1**
PEL				IAML			13 21 35.4	
	comp=Z,250nm,0.7s							
PEL	**Peldehue**	**2.55**	**159**	*eP*		**Pb**	**13 20 51.0**	**-0.3**
PEL				IAML			13 21 32.2	
	comp=E,328nm,0.5s							
AC04	**Llanos de Chal**	**2.62**	**14**	*eP*		**Pn**	**13 20 47.9**	**-0.3**
AC04				*eS*		**Sn**	**13 21 21.1**	**+0.4**
AC04				IAML			13 21 31.0	
	comp=Z,156nm,0.9s							
AC04	**Llanos de Chal**	**2.62**	**14**	*eP*		**Pn**	**13 20 47.8**	**-0.3**
AC04				IAML			13 21 34.1	
	comp=N,224nm,0.4s							
MT10	**Hacienda Santa**	**2.72**	**157**	*eP*		**Pb**	**13 20 53.6**	**-0.6**
MT10				*eS*		**Sb**	**13 21 28.4**	**+0.4**
MT05	**Renca**	**2.77**	**162**	*eP*		**Pb**	**13 20 54.9**	**-0.1**
MT05				*eS*		**Sb**	**13 21 30.6**	**+1.1**
MT05				IAML			13 21 42.0	
	comp=Z,181nm,0.8s							
MT05	**Renca**	**2.77**	**162**	*eP*		**Pb**	**13 20 54.4**	**-0.6**
MT05				*eS*		**Sb**	**13 21 28.4**	**-1.0**
ZON	**Zonda**	**2.77**	**107**	*eP*		Pn	13 20 39.3	-11
ZON				*eS*		**Sb**	**13 21 31.1**	**+1.5**
ZON				IAML			13 21 43.2	
	comp=Z,141nm,0.6s							
MT14	**Cerro Cal¡n**	**2.83**	**158**	*eP*		**Pb**	**13 20 55.1**	**-1.0**
MT14				IAML			13 21 44.6	
	comp=E,519nm,0.6s							
SJA	**San Juan**	**2.86**	**106**	*eP*		**Pb**	**13 20 55.1**	**-1.6**
SJA				IAML			13 21 44.6	
	comp=Z,151nm,0.3s							
RTLL	**Cerro Villicun**	**2.89**	**102**	*eP*		**Pb**	**13 20 56.5**	**-0.7**
RTLL				*eS*		**Sb**	**13 21 34.1**	**+1.0**
RTLL				IAML			13 21 44.9	
	comp=Z,232nm,0.4s							
MT03	**Universidad Ad**	**2.93**	**159**	*eP*		**Pb**	**13 20 57.4**	**-0.4**
MT03				*eS*		**Sg**	**13 21 39.1**	**+0.2**
MT03				IAML			13 21 49.6	
	comp=Z,182nm,0.5s							
MT03	**Universidad Ad**	**2.93**	**159**	*eP*		**Pb**	**13 20 56.5**	**-1.3**
MT03				IAML			13 21 48.0	
	comp=E,378nm,0.4s							
MT04	**Ro Olivares**	**2.98**	**153**	*eP*		**Pb**	**13 20 58.5**	**-0.3**
MT04				*eS*		**Sb**	**13 21 37.6**	**+1.8**
MT04				IAML			13 21 44.7	
	comp=Z,109nm,0.6s							
MT08	**Bocatoma Ro**	**3.06**	**151**	*eP*		**Pn**	**13 20 55.1**	**+0.6**
MT08				*eP*		**Pb**	**13 20 59.8**	**-0.4**
MT08				*eS*		**Sg**	**13 21 40.6**	**-2.7**
MT08				IAML			13 21 52.0	
	comp=Z,114nm,0.5s							
MT09	**Talagante**	**3.08**	**168**	*eP*		**Pb**	**13 20 58.3**	**-2.1**
MT09				IAML			13 21 53.0	
	comp=E,193nm,0.2s							
MT01	**Popeta**	**3.12**	**172**	*eP*		**Pb**	**13 20 59.1**	**-2.0**
MT01				*eS*		**Sb**	**13 21 41.1**	**+1.4**
MT01				IAML			13 21 55.3	
	comp=Z,84nm,0.5s							
CFA	**Coronel Fontan**	**3.15**	**106**	*eS*		**Sb**	**13 21 37.6**	**-2.9**
CFA				IAML			13 21 53.6	
	comp=Z,132nm,0.6s							
TINO	**Tinogasta**	**4.55**	**55**	IAML			13 22 43.4	
	comp=Z,69nm,0.7s							

*IDC **15** 13:28:05.6±2.8, 3°.04N×122°.52E, h557km±41km, mb3.1/11, mbtmp4.1/13, Error ellipse: s-maj=29.2km s-min=12.5km az=79.0*
*DJA **15** 13:28:05.3±0.5, 3°N±6'×12°.3E±°, h528km±5km, M4.2/25, mB4.7/7, mb4.2/16, MLv4.5/25, Mw(mB)3.9/7*
ISC 15 13:28:05.1±0.7, 3°.10N±0'.08×122°.6E±0'.1, h552km, n22, σ1§04/24, mb3.6/12, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**4.09**	**193**	P	**P**	**13 29 30.9**	**+3.1**
LUWI	**Luwuk**	**4.12**	**177**	P	**P**	**13 29 27.2**	**-0.9**
DDMP	**Don Marcelino,**	**4.32**	**46**	*i* P	**P**	**13 29 29.6**	**0.0**
DDMP				*eS*	**S**	**13 30 36.7**	**-1.8**
MYLDM	**Lahad Datu**	**4.56**	**297**	P	**P**	**13 29 29.7**	**-1.7**
PCI	**Palu**	**4.83**	**215**	P	**P**	**13 29 33.1**	**-0.6**
	0.3nm3µm59nm,1.1s						
TNTI	**Ternate**	**5.32**	**116**	P	**P**	**13 29 37.4**	**-0.4**
	0.3nm16nm,0.8s						
SANI	**Sanana**	**6.15**	**146**	P	**P**	**13 29 44.9**	**-0.3**
	0.3nm53nm,0.8s						
SPSI	**Sidrap Palu**	**7.56**	**202**	P	**P**	**13 29 59.6**	**+1.0**
SIJI	**Sorong**	**9.54**	**114**	P	**P**	**13 30 18.6**	**+0.1**
	15nm,0.5s,baz=331,slow=14,SNR=13						
JAY	**Jayapura**	**18.96**	**107**	P	**P**	**13 31 53.2**	**+1.3**
	18nm,0.8s,baz=218,slow=6.5,SNR=6.9						
FITZ	**Fitzroy Crossi**	**21.28**	**172**	P	**P**	**13 32 12.4**	**-0.3**
	1.4nm,0.9s,baz=352,slow=7.1,SNR=1.1						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**25.65**	**154**	P	**P**	**13 32 51.4**	**-0.2**
	0.7nm,0.5s,baz=336,slow=9.5,SNR=15						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**28.80**	**158**	P	**P**	**13 33 18.9**	**-0.3**
	0.3nm,0.5s,baz=341,slow=7.0,SNR=8.0						
	0.3nm,0.5s						
KSRS	**Korea Array**	**34.54**	**8**	P	**P**	**13 34 08.4**	**+0.6**
	1.3nm,0.7s,baz=187,slow=9.5,SNR=8.1						
	1.3nm,0.7s						
USRK	**Ussuriysk Ar.**	**41.77**	**10**	P	**P**	**13 35 06.5**	**+0.1**
	2.8nm,0.5s,baz=198,slow=5.8,SNR=5.8						
	2.8nm,0.5s						
HILR	**Hailar Array B**	**46.35**	**357**	P	**P**	**13 35 42.3**	**+0.5**
	7.0nm,0.5s,baz=175,slow=9.3,SNR=7.6						
	7.0nm,0.5s						
SONM	**Songino Array**	**46.70**	**345**	P	**P**	**13 35 45.1**	**+0.5**
	2.1nm,0.7s,baz=162,slow=8.8,SNR=13						
	2.1nm,0.7s						
MKAR	**Makanchi Array**	**55.78**	**328**	P	**P**	**13 36 50.7**	**+0.5**
	1.5nm,0.4s,baz=121,slow=8.5,SNR=20						
MKAR				PcP	**PcP**	**13 37 41.3**	**+0.2**
	0.6nm,0.6s,baz=113,slow=4.7,SNR=4.2						
	1.5nm,0.4s						
PETK	**Petropavlovsk-**	**57.64**	**24**	P	**P**	**13 37 03.2**	**+0.5**
	1.2nm,0.7s,baz=216,slow=8.1,SNR=6.4						
	1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**59.34**	**335**	P	**P**	**13 37 13.3**	**-0.8**
	0.9nm,0.4s,baz=103,slow=9.6,SNR=5.5						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**60.09**	**329**	P	**P**	**13 37 19.4**	**+0.2**
	1.3nm,0.5s,baz=133,slow=6.6,SNR=20						
	1.3nm,0.5s						
SPITS	**Spitsbergen Ar**	**90.28**	**349**	P	**P**	**13 40 05.9**	**-0.9**
	11nm,1.2s,baz=104,slow=10,SNR=5.6						

*AZER **15** 13:30:20.1, 38°.21N×44°.69E, h7km, ml2.6*
*AFAD **15** 13:30:23.5, 38°.41N×44°.46E, h7km±2km, ML2.5*
ISC 15 13:30:22.2±1.3, 38°.30N±0'.03×44°.57E±0'.03, h5km±11km, n21, σ1§64/33, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.58**	**309**	P	**Pg**	**13 30 32.8**	**-0.6**
YOVA	**Hakkari_Yksek**	**0.75**	**197**	P	**Pn**	**13 30 39.9**	**+0.3**
YOVA				S	**Sb**	**13 30 48.7**	**+0.3**
TVAN	**Van**	**0.94**	**284**	P	**Pg**	**13 30 39.6**	**-0.7**
HAKT	**HAKKARI**	**1.01**	**223**	P	**Pn**	**13 30 43.7**	**+0.4**
HAKT				S	**Sn**	**13 30 59.1**	**+1.2**
HAKT				IAML		13 31 02.0	
	comp=N,99nm,0.3s						
HAKT	**HAKKARI**	**1.01**	**223**	P	**Pg**	**13 30 40.6**	**-1.0**
HAKT				S	**Sn**	**13 30 58.8**	**+0.9**
VMUR	**Van-Muradiye**	**1.04**	**312**	P	**Pg**	**13 30 41.4**	**-0.8**
VMUR				S	**Sb**	**13 30 56.0**	**-0.8**
VMUR				IAML		13 30 59.0	
	comp=E,188nm,0.5s						
VMUR				IAML		13 31 01.0	
	comp=N,191nm,0.4s						
NAX	**Nakhchivan**	**1.13**	**39**	P	**Pn**	**13 30 44.1**	**-0.7**
NAX				S	**Sn**	**13 31 00.7**	**-0.1**
GEVA	**Gevas**	**1.19**	**271**	P	**Pg**	**13 30 43.8**	**-1.2**
GEVA				S	**Sb**	**13 31 00.9**	**-0.2**
GEVA				IAML		13 31 10.0	
	comp=N,91nm,0.5s						
ORD	**Ordubad**	**1.28**	**60**	P	**Pg**	**13 30 46.5**	**-0.3**
ORD				S	**Sn**	**13 31 04.5**	**+0.1**
CUKT	**Cukurca**	**1.30**	**216**	P	**Pg**	**13 30 48.7**	**+1.6**
SBZ	**Shahbuz**	**1.34**	**35**	P	**Pg**	**13 30 47.5**	**-0.4**
SBZ				S	**Sn**	**13 31 08.7**	**+2.8**
DYDN	**Diyadin**	**1.42**	**331**	P	Pn	13 30 41.6	-7.3
HYR	**Heyderabad**	**1.43**	**9**	P	**Pg**	**13 30 50.7**	**+1.0**
HYR				S	**Sg**	**13 31 13.0**	**+4.8**
ADCV	**BITLIS_Adilcev**	**1.53**	**290**	P	**Pn**	**13 30 50.2**	**-0.2**
IGDI	**IGDIR**	**1.61**	**346**	P	**Pg**	**13 30 53.3**	**+0.2**
IGDI				S	**Sg**	**13 31 17.1**	**+3.1**
DORK	**Agr/Tutak/Do**	**1.77**	**308**	P	**Pb**	**13 30 53.9**	**-1.3**
KOTA	**Agri, Merkez-K**	**1.84**	**325**	P	**Pb**	**13 30 55.5**	**-0.9**
SRTM	**Siirt_Merkez**	**2.11**	**262**	P	**Pg**	**13 31 01.5**	**-1.1**
GDB	**GEDABAY**	**2.58**	**20**	P	**Pb**	**13 31 07.7**	**-1.4**
GDB				S	**Sg**	**13 31 42.6**	**-2.6**
GANJ	**Ganja**	**2.71**	**30**	P	**Pb**	**13 31 08.7**	**-2.4**
GANJ				S	**Sb**	**13 31 45.8**	**+1.2**
YRD	**Yardimli**	**2.94**	**77**	P	**Pn**	**13 31 10.7**	**+0.9**
YRD				S	**Sb**	**13 31 49.1**	**-2.4**

*BGSI **15** 13:32:05.2±1.3, 26°.35S×30°.89E, h0km±194km, ML2.7, Presumed earthquake*
ISC 15 13:32:34.5±3.0, 24°.9S±0'.1×28°.9E±0'.1, h10km, n6, σ1§98/11, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.96**	**267**	*i* P	**Pn**	**13 33 19.3**	**-2.4**
LBTB				*i* S	**Sg**	**13 34 10.9**	**+1.1**
LPHEP	**Lephephe**	**3.13**	**298**	*i* P	**Pn**	**13 33 25.3**	**+1.3**
BROLN	**Tlhalogang**	**4.03**	**339**	*i* P	**Pn**	**13 33 35.9**	**-0.4**
BROLN				*i* S	**Sg**	**13 34 41.2**	**-2.6**
BROLN				IAML		13 35 14.6	
	comp=E,13nm,0.5s						
KDWAN	**Kaudwane**	**4.12**	**291**	*i* P	**Pn**	**13 33 37.6**	**0.0**
KDWAN				*i* S	**Sg**	**13 34 47.4**	**+0.5**
KDWAN				IAML		13 35 02.6	
	comp=N,18nm,0.7s						
MATP	**Matopo**	**4.46**	**356**	*i* P	**Pn**	**13 33 45.1**	**+2.9**
MATP				*i* S	**Sg**	**13 34 55.5**	**-2.1**
BLWY	**Bulawayo**	**4.73**	**357**	*i* P	**Pn**	**13 33 45.6**	**-0.5**
BLWY				*i* S	**Sb**	**13 34 56.2**	**+1.5**

*IDC **15** 13:42:07.9±0.7, 15°.80S×67°.40E, h0km, mb4.0/13, mbtmp4.0/13, MS3.8/41, Error ellipse: s-maj=21.7km s-min=21.0km az=11.0*
*NEIC **15** 13:42:09.9±1.1, 15°.75S±0'.09×67°.20E±0'.04, h10km±1km, mb4.7/24, Error ellipse: s-maj=15.8km s-min=5.6km az=169.0*
ISC 15 13:42:09.5±0.5, 15°.77S±0'.09×67°.26E±0'.09, h10km, n91, σ0§68/48, mb4.5/21, MS3.9/42, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**5.43**	**223**	Pn	**Pn**	**13 43 29.8**	**-0.7**
H08S1	**Diego Carcia H**	**9.55**	**33**	T	T	13 54 21.8	
	baz=212,slow=75,SNR=216						
H08S2	**Diego Garcia H**	**9.56**	**33**	T	T	13 54 14.5	
	baz=212,slow=75,SNR=369						
H08S3	**Diego Garcia H**	**9.57**	**33**	T	T	13 54 20.0	
	baz=212,slow=75,SNR=541						
DGAR	**Diego Garcia**	**9.74**	**32**	Pn	**Pn**	**13 44 29.8**	**+0.1**
RER	**Riviere de l'E**	**12.17**	**242**	Pn	**Pn**	**13 45 02.5**	**-0.6**
PALK	**Pallekele**	**26.48**	**31**	LR	LR	13 55 33.1	
	comp=Z,216nm,19.8s,baz=203,slow=30						
H04N2	**CROZET ISLANDS**	**32.95**	**200**	T	T	14 23 26.7	
	baz=29,slow=75,SNR=121						
H04N1	**CROZET ISLANDS**	**32.95**	**200**	T	T	14 23 29.9	
	baz=29,slow=75,SNR=98						
H04N3	**CROZET ISLANDS**	**32.97**	**200**	T	T	14 23 29.0	
	baz=29,slow=75,SNR=99						
KMBO	**Kilima Mbogo**	**32.98**	**293**	LR	LR	13 58 57.8	
	comp=Z,164nm,21.1s,baz=102,slow=30						
ATD	**Arta Tunnel**	**36.33**	**317**	LR	LR	14 02 44.5	
	comp=Z,6.3nm,19.2s,baz=164,slow=34						
MATP	**Matopo**	**37.08**	**257**	LR	LR	14 03 21.8	
	comp=Z,240nm,18.0s,baz=91,slow=34						
PBA	**Port Blair**	**37.13**	**44**	P	**P**	**13 49 20.0**	**-0.6**
LSZ	**Lusaka**	**37.62**	**265**	LR	LR	14 03 35.4	
	comp=Z,397nm,18.6s,baz=138,slow=34						
MBAR	**Mbarara**	**39.06**	**289**	LR	LR	14 02 54.5	
	comp=Z,211nm,21.8s,baz=122,slow=32						
LBTB	**Lobatse**	**39.99**	**250**	LR	LR	14 03 24.6	
	comp=Z,376nm,19.3s,baz=90,slow=32						
LEM	**Lembang**	**40.49**	**82**	LR	LR	14 02 58.5	
	comp=Z,180nm,21.0s,baz=192,slow=31						
BOSA	**Boshof**	**40.74**	**244**	P	**P**	**13 49 52.5**	**+1.6**
	2.8nm,0.8s,baz=94,slow=3.8,SNR=3.9						
BOSA				LR	LR	14 03 43.5	
	comp=Z,202nm,18.2s,baz=43,slow=32						
	2.8nm,0.8s						
BOSA	**Boshof**	**40.74**	**244**	P	**P**	**13 49 50.2**	**-0.8**
BOSA				IAmb	IAmb	13 50 23.9	
	comp=Z,18nm,1.5s						
GRHM	**Grahamstown, E**	**40.77**	**237**	P	**P**	**13 49 50.1**	**-1.0**
BRDH	**Bariadhala**	**45.05**	**33**	LR	LR	14 09 32.5	
	comp=Z,149nm,18.6s,baz=182,slow=36						
SUR	**Sutherland**	**45.15**	**240**	LR		14 06 19.0	
	comp=Z,174nm,18.1s,baz=87,slow=32						
H01W3	**Cape Leeuwin H**	**45.98**	**123**	T	T	14 39 35.2	
	baz=282,slow=75,SNR=20						
H01W2	**Cape Leeuwin H**	**45.98**	**123**	T	T	14 39 37.5	
	baz=282,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**46.00**	**123**	T	T	14 39 54.6	
	baz=282,slow=75,SNR=19						
CM31	**Chiang Mai Arr**	**46.15**	**44**	P	**P**	**13 50 33.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**46.15**	**44**	P	**P**	**13 50 34.5**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=238,slow=9.8,SNR=7.9						
CMAR				LR	LR	14 07 28.2	
	comp=Z,166nm,20.2s,baz=225,slow=33						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**46.15**	**44**	P	**P**	**13 50 33.6**	**-1.0**
CHTO	**Chiang Mai**	**46.41**	**43**	P	**P**	**13 50 34.6**	**-1.9**
CHTO				IAmb	IAmb	13 50 38.6	
	comp=Z,7.7nm,1.4s						
TSUM	**Tsumeb**	**47.38**	**258**	LR	LR	14 08 58.2	
	comp=Z,164nm,19.1s,baz=148,slow=34						
SHL	**Shillong**	**47.57**	**31**		**P**	**13 50 45.9**	**+0.1**
SHL				IAmb	IAmb	13 50 53.8	
	comp=Z,9.4nm,1.0s						
MORE	**Moreh**	**47.73**	**34**	P	**P**	**13 50 46.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**48.17**	**120**	LR	LR	14 07 21.6	
	comp=Z,124nm,18.7s,baz=325,slow=32						
NWAO	**Narrogin (SRO)**	**48.17**	**120**	P	**P**	**13 50 50.8**	**+0.6**
MAW	**Mawson**	**51.88**	**182**	LR	LR	14 08 17.3	
	comp=Z,65nm,18.5s,baz=56,slow=30						
KAPI	**Kappang**	**52.59**	**84**	LR		14 09 48.5	
	comp=Z,149nm,22.0s,baz=262,slow=32						
EIL	**Elat**	**54.89**	**325**	LR	LR	14 11 28.8	
	comp=Z,75nm,21.3s,baz=108,slow=32						
FITZ	**Fitzroy Crossi**	**55.70**	**101**	LR	LR	14 12 42.0	
	comp=Z,179nm,20.1s,baz=219,slow=33						
FITZ	**Fitzroy Crossi**	**55.70**	**101**	P	**P**	**13 51 47.0**	**+0.4**
FORT	**Forrest**	**57.19**	**117**	P	**P**	**13 51 57.1**	**+0.1**
FORT				IAmb	IAmb	13 52 04.0	
	comp=Z,6.7nm,1.0s						
AAK	**Ala-Archa**	**58.50**	**6**	LR	LR	14 15 16.0	
	comp=Z,126nm,21.4s,baz=198,slow=34						
KK31	**Karatay Array**	**58.66**	**3**	P	**P**	**13 52 06.6**	**-0.3**
KKAR	**Karatay Array**	**58.66**	**3**		**P**	**13 52 07.4**	**+0.5**
CSS	**Mathiatis**	**59.86**	**328**	P	**P**	**13 52 15.2**	**-0.3**
CSS				IAmb	IAmb	13 52 26.9	
	comp=Z,11nm,1.1s						
PDGK	**Podgornoye**	**59.87**	**10**	P	**P**	**13 52 15.2**	**-0.3**
TGY	**Tagaytay City**	**60.79**	**64**	LR	LR	14 16 41.5	
	comp=Z,62nm,20.2s,baz=14,slow=34						
ARPR	**Arapgir-MALATY**	**60.91**	**334**	P	**P**	**13 52 22.9**	**+0.1**
ARPR				IAmb	IAmb	13 52 38.0	
	comp=Z,10nm,1.1s						
DAV	**Davao City (W)**	**62.04**	**73**	LR	LR	14 17 45.9	
	comp=Z,40nm,19.4s,baz=236,slow=34						
ASAR	**Alice Springs**	**62.75**	**109**	P	**P**	**13 52 34.7**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=270,slow=6.3,SNR=11						
ASAR				LR	LR	14 16 35.3	
	comp=Z,185nm,19.1s,baz=255,slow=33						
	comp=Z,1.5nm,0.9s						
ASAR	**Alice Springs**	**62.75**	**109**	P	**P**	**13 52 35.3**	**-0.1**
AKAS	**Kas**	**62.78**	**326**	P	**P**	**13 52 34.2**	**-1.2**
WRA	**Warramunga Arr**	**63.62**	**105**	P	**P**	**13 52 40.2**	**-1.0**
	comp=Z,3.1nm,1.0s,baz=267,slow=6.3,SNR=11						
	comp=Z,3.1nm,1.0s						
WRA	**Warramunga Arr**	**63.62**	**105**	P	**P**	**13 52 41.5**	**+0.3**
MKAR	**Makanchi Array**	**63.73**	**11**	P	**P**	**13 52 41.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=212,slow=7.3,SNR=5.0						
MKAR				LR	LR	14 18 51.2	
	comp=Z,53nm,19.1s,baz=217,slow=35						
	comp=Z,0.5nm,0.7s						
WR8	**Warramunga Arr**	**63.76**	**105**	P	**P**	**13 52 41.9**	**-0.2**
WR8				IAmb	IAmb	13 52 49.2	
	comp=Z,7.8nm,1.0s						
SIJI	**Sorong**	**64.78**	**83**	LR	LR	14 20 39.4	
	comp=Z,42nm,19.1s,baz=222,slow=36						
AB31	**Akbulak array**	**65.06**	**355**	P	**P**	**13 52 50.2**	**+0.3**
AB31				IAmb	IAmb	13 52 56.9	
	comp=Z,6.5nm,1.4s						
ABKAR	**Akbulak array**	**65.06**	**355**	P	**P**	**13 52 50.4**	**+0.4**
KURBB	**Kurchatov Arra**	**66.84**	**8**	P	**P**	**13 53 01.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=201,slow=6.1,SNR=6.4						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**66.94**	**8**	P	**P**	**13 53 02.3**	**+0.3**
STKA	**Stephens Creek**	**68.71**	**118**	LR	LR	14 18 40.4	
	comp=Z,110nm,20.5s,baz=212,slow=32						
SNAA	**Sanae**	**68.91**	**199**	LR	LR	14 16 32.1	
	comp=Z,76nm,20.8s,baz=60,slow=30						
TORD	**Torodi Ar. Bea**	**70.92**	**290**	P	**P**	**13 53 28.9**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=111,slow=3.8,SNR=5.2						
	comp=Z,0.4nm,0.4s						
ZAA0	**Zalesovo Array**	**71.05**	**11**	P	**P**	**13 53 27.2**	**-0.2**
ZAA0				IAmb	IAmb	13 53 34.1	
	comp=Z,5.2nm,1.4s						
ZALV	**Zalesovo Beam**	**71.05**	**11**	P	**P**	**13 53 27.5**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=186,slow=6.0,SNR=5.4						
ZALV				LR	LR	14 24 54.3	
	comp=Z,37nm,18.3s,baz=190,slow=36						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**71.05**	**11**	P	**P**	**13 53 27.2**	**-0.2**
MLR	**Muntelo Rosu**	**71.54**	**331**	LR	LR	14 24 52.9	
	comp=Z,20nm,18.1s,baz=178,slow=36						
SONM	**Songino Array**	**72.33**	**27**	P	**P**	**13 53 35.6**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=221,slow=5.8,SNR=6.6						
SONM				LR	LR	14 24 36.7	
	comp=Z,48nm,18.4s,baz=216,slow=35						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**72.33**	**27**	P	**P**	**13 53 36.6**	**+1.1**
SONM				IAmb	IAmb	13 53 43.4	
	comp=Z,4.9nm,1.2s						
JAY	**Jayapura**	**73.39**	**88**	LR	LR	14 29 14.9	
	comp=Z,35nm,18.1s,baz=220,slow=39						
AKASG	**Malin Array Be**	**74.11**	**336**	P	**P**	**13 53 45.6**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=152,slow=5.2,SNR=4.3						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**74.11**	**336**	P	**P**	**13 53 46.3**	**+0.6**
TLY	**Talaya**	**74.26**	**23**	LR	LR	14 25 57.8	
	comp=Z,49nm,18.6s,baz=210,slow=35						
QSPA	**South Pole Qui**	**74.31**	**180**	P	**P**	**13 53 46.6**	**-0.5**
	comp=Z,3.1nm,1.0s,baz=281,slow=3.1,SNR=5.6						
	comp=Z,3.1nm,1.0s						
QSPA	**South Pole Qui**	**74.31**	**180**	P	**P**	**13 53 47.3**	**+0.3**
QSPA				IAmb	IAmb	13 53 58.9	
	comp=Z,10nm,1.1s						
CTA	**Charters Tower**	**74.63**	**107**	LR	LR	14 25

AOPR				IAmb	IAmb	14 41 19.9	
	comp=Z,18nm,1.0s						
ITAB	**Concordia**	**36.67 210**		P	**P**	**14 40 53.7**	**+1.2**
SDV	**Santo Domingo**	**37.82 279**		LR	LR	14 56 48.4	
	comp=Z,48nm,18.1s,baz=58,slow=37						
SDV	**Santo Domingo**	**37.82 279**		P	**P**	**14 41 02.3**	**-0.4**
MDT	**Midelt**	**38.55 40**		LR	LR	14 56 32.3	
	comp=Z,72nm,18.2s,baz=230,slow=36						
CPUP	**Villa Florida**	**38.79 217**		LR	LR	14 56 34.5	
	comp=Z,57nm,20.1s,baz=73,slow=35						
BANI	**BANI**	**39.21 294**		P	**P**	**14 41 15.2**	**+0.9**
LPAZ	**La Paz**	**40.60 239**		LR	LR	14 57 06.0	
	comp=Z,49nm,21.5s,baz=79,slow=34						
PESTR	**Estremoz**	**41.15 30**		P	**P**	**14 41 30.5**	**+0.5**
PESTR				IAmb	IAmb	14 41 30.9	
	comp=Z,36nm,1.5s						
ROSC	**El Rosal**	**41.38 272**		LR	LR	14 59 32.9	
	comp=Z,139nm,18.2s,baz=262,slow=37						
PB16	**IPOC Station P**	**42.72 237**		P	**P**	**14 41 42.4**	**-1.4**
EDA	**Edea**	**42.84 89**		P	**P**	**14 41 43.1**	**-1.1**
ESDC	**Sonseca Array**	**43.64 33**		P	**P**	**14 41 51.3**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=240,slow=10,SNR=2.2						
	comp=Z,0.5nm,0.7s						
NNA	**Nana**	**46.76 249**		P	**P**	**14 42 15.5**	**0.0**
AC01	**Pan de Azucar**	**47.64 228**		P	**P**	**14 42 23.1**	**+0.9**
AC01				IAmb	IAmb	14 42 30.2	
	comp=Z,7.6nm,1.2s						
CEST	**Esterri de Car**	**48.51 34**		P	**P**	**14 42 28.6**	**-0.1**
CEST				IAmb	IAmb	14 42 58.3	
	comp=Z,10nm,1.2s						
CO01	**Juntas del Tor**	**49.51 224**		P	**P**	**14 42 36.7**	**-0.1**
CO01				IAmb	IAmb	14 43 15.5	
	comp=Z,11nm,1.5s						
CO06	**Fray Jorge**	**50.99 224**		P	**P**	**14 42 47.4**	**-0.3**
MT08	**Bocatoma Ro**	**51.62 220**		P	**P**	**14 42 53.3**	**+0.7**
MT08				IAmb	IAmb	14 43 00.5	
	comp=Z,7.1nm,1.2s						
PAL	**Palisades**	**51.72 321**		P	**P**	**14 42 53.4**	**+0.4**
JTS	**Las Juntas de**	**51.99 279**		LR	LR	15 06 26.1	
	comp=Z,45nm,21.4s,baz=107,slow=38						
BO01	**Tunca**	**52.90 220**		P	**P**	**14 43 02.2**	**+0.4**
V55A	**Taylorsville**	**54.34 312**		P	**P**	**14 43 12.9**	**+0.5**
V55A				IAmb	IAmb	14 43 28.7	
	comp=Z,5.0nm,1.2s						
TKL	**Tuckaleechee C**	**56.19 310**		LR	LR	15 02 21.4	
	comp=Z,39nm,21.7s,baz=60,slow=31						
PLCA	**Paso Flores**	**56.75 214**		LR	LR	15 07 39.8	
	comp=Z,54nm,18.6s,baz=62,slow=36						
SCHQ	**Schefferville**	**57.21 337**		P	**P**	**14 43 33.1**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=159,slow=8.6,SNR=3.7						
	comp=Z,3.2nm,0.9s						
SCHQ	**Schefferville**	**57.21 337**		P	**P**	**14 43 33.4**	**+0.8**
SCHQ				IAmb	IAmb	14 44 11.9	
	comp=Z,13nm,1.4s						
MLR	**Muntele Rosu**	**65.20 41**		LR	LR	15 11 04.1	
	comp=Z,54nm,20.0s,baz=190,slow=34						
NC602	**NORSAR Array S**	**65.27 22**		P	**P**	**14 44 27.1**	**-0.1**
NC602				IAmb	IAmb	14 44 30.0	
	comp=Z,4.6nm,1.1s						
NOA	**NORSAR Array B**	**65.34 22**		P	**P**	**14 44 27.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=226,slow=5.9,SNR=3.6						
NOA				LR	LR	15 10 50.4	
	comp=Z,12nm,19.2s,baz=230,slow=34						
	comp=Z,0.5nm,0.8s						
AKBB	**Malin Array Si**	**69.04 37**		P	**P**	**14 44 51.5**	**+0.1**
AKBB				IAmb	IAmb	14 45 05.8	
	comp=Z,4.7nm,1.1s						
BRTR	**Keskin Array B**	**69.08 49**		P	**P**	**14 44 51.0**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=243,slow=5.4,SNR=5.6						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**69.08 49**		P	**P**	**14 44 51.3**	**-0.7**
FINES	**FINESS Array B**	**71.57 26**		P	**P**	**14 45 07.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=232,slow=4.6,SNR=3.7						
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**71.57 26**		P	**P**	**14 45 07.7**	**+1.1**
ANMO	**Albuquerque**	**74.05 305**		LR	LR	15 13 38.2	
	comp=Z,46nm,21.6s,baz=78,slow=32						
LPIG	**La Paz**	**76.78 294**		LR	LR	15 21 59.8	
	comp=Z,18nm,18.2s,baz=178,slow=38						
PD31	**Pinedale Array**	**77.24 313**		P	**P**	**14 45 40.8**	**+0.5**
PDAR	**Pinedale Array**	**77.24 313**		P	**P**	**14 45 41.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=114,slow=6.2,SNR=3.9						
PDAR				LR	LR	15 18 11.8	
	comp=Z,24nm,19.2s,baz=50,slow=34						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**77.24 313**		P	**P**	**14 45 40.1**	**-0.2**
HSIG		**77.47 299**		P	**P**	**14 45 40.9**	**-0.7**
HSIG				IAmb	IAmb	14 45 41.8	
	comp=Z,6.2nm,0.6s						
ELK	**Elko**	**81.35 310**		LR	LR	15 20 40.8	
	comp=Z,26nm,18.1s,baz=55,slow=35						
PFO	**Pinyon Flats O**	**82.25 303**		LR	LR	15 19 02.4	
	comp=Z,31nm,21.3s,baz=84,slow=33						
KVN	**Kaiserville**	**83.54 309**		P	**P**	**14 46 13.3**	**-0.9**
NVAR	**Mina Array Bea**	**83.71 308**		LR	LR	15 19 06.5	
	comp=Z,37nm,22.0s,baz=343,slow=33						
YBH	**Yreka Blue Hor**	**86.97 311**		LR	LR	15 23 13.5	
	comp=Z,24nm,19.8s,baz=46,slow=34						
D25K	**Kavik River**	**93.94 341**		P	**P**	**14 47 05.0**	**+1.8**
D25K				IAmb	IAmb	14 47 12.4	
	comp=Z,3.3nm,1.1s						
G26K	**Porcupine Rive**	**93.95 338**		P	**P**	**14 47 02.0**	**-1.2**
G26K				IAmb	IAmb	14 47 45.3	
	comp=Z,4.0nm,1.4s						
O28M	**Mount Upton**	**94.49 332**		P	**P**	**14 47 05.9**	**-0.3**
IL31		**95.96 337**		P	**P**	**14 47 10.9**	**-1.5**
IL31				IAmb	IAmb	14 47 11.6	
	comp=Z,1.8nm,1.2s						
ILAR	**Eielson Array**	**95.96 337**		P	**P**	**14 47 12.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=66,slow=3.9,SNR=4.2						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**95.96 337**		P	**P**	**14 47 11.7**	**-0.8**

NOU 15 14:35:23.4, 15°.13S×166°.24E, h0km, ML4.1/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.98**	**109**	P	Pb	14 35 43.7	+0.4
SANVU	**Saraoutou**	**0.98**	**109**	S	Sb	14 35 56.0	-0.8
DVP	**Devils Point**	**3.19**	**144**	P	Pn	14 36 15.1	+0.3
KOUNC	**Koumac, New Ca**	**5.70**	**199**	P	Pn	14 36 50.3	+0.9
NOUC	**Port Laguerre**	**6.93**	**180**	P	Pn	14 37 06.8	+0.5

*SKHL **15** 14:44:22.8±0.3, 44°.40N×148°.20E, h42km±3km, mb4.1/4*
*JMA **15** 14:44:22.2±0.3, 44°.№1°×14°.8E±°, h0km, MV3.5/24, SE OFF ETOROFU*

ISC 15 14:44:19.4±3.7, 44°.31N±0°.09×148°.1E±0°.1, h5km±27km, n17, σ1°63/27, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.94**	**349**	*i* P	**Pb**	**14 44 38.0**	**-0.2**
KUR				AMB	AMB	14 44 39.0	
	110nm,0.3s						
KUR				*i* S	**Sb**	**14 44 49.2**	**-1.7**
KUR				A	A	14 44 50.4	
	260nm,0.3s						
KUR				A	A	14 44 50.4	
	380nm,0.3s						
REI	**Reidovoe**	**0.96**	**356**	*i* P	**Pb**	**14 44 38.1**	**-0.4**
REI				AMB	AMB	14 44 39.6	
	50nm,0.2s						
REI				*e*S	**Sb**	**14 44 49.5**	**-1.9**
REI				A	A	14 44 50.2	
	280nm,0.3s						
REI				A	A	14 44 50.2	
	310nm,0.3s						
SHO	**Shikotan**	**1.03**	**245**	*e*P	Pg	14 44 54.0	+15
SHO				AMB	AMB	14 44 55.0	
	40nm,0.2s						
SHO				*e*S	Sn	14 45 06.5	+11
SHO				A	A	14 45 08.0	
	100nm,0.3s						
SHO				A	A	14 45 08.0	
	270nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.65**	**261**	*e*P	**Pn**	**14 44 50.0**	**+1.0**
YUK				AMB	AMB	14 44 51.6	
	100nm,0.4s						
YUK				*e*S	**Sn**	**14 45 10.2**	**-0.4**
YUK				A	A	14 45 16.3	
	180nm,0.5s						
YUK				A	A	14 45 16.3	
	350nm,0.5s						
NEM2	**Nemuro 2**	**1.96**	**242**	*e*P	**Pn**	**14 44 53.9**	**+0.5**
NEM2				*e*S	**Sn**	**14 45 16.6**	**-1.7**
NMR	**Nemuro--Hokkai**	**1.97**	**242**	*i* P	**Pn**	**14 44 54.1**	**+0.7**
NMR				*i* S	**Sn**	**14 45 17.8**	**-0.7**
JRA	**Rausu**	**2.19**	**261**	*e*P	**Pb**	**14 44 58.8**	**-0.7**
JRA				*e*S	**Sb**	**14 45 25.2**	**-1.7**
JNSB	**Nemuroshibetsu**	**2.31**	**258**	*e*P	**Pn**	**14 45 00.2**	**+2.1**
JNSB				*e*S	**Sb**	**14 45 28.6**	**-1.8**
JKHN	**Kushirohamanak**	**2.47**	**241**	*e*P	**Pn**	**14 45 01.4**	**+1.0**
JKHN				*e*S	**Sn**	**14 45 30.5**	**-0.4**
JNK	**Nakash**	**2.56**	**255**	P	**Pn**	**14 45 03.5**	**+1.9**
JNK				*e*S	**Sn**	**14 45 33.5**	**+0.4**
AKK	**Akkeshi**	**2.71**	**243**	*e*P	**Pn**	**14 45 04.7**	**+1.1**
JAK	**Akkeshi**	**2.81**	**243**	*e*P	**Pn**	**14 45 06.0**	**+1.1**
JAK				*e*S	**Sn**	**14 45 38.3**	**-0.9**
JTKR	**Abashiri--Toko**	**3.05**	**265**	*e*P	**Pn**	**14 45 11.5**	**+3.2**
JAR	**Ashorobuto**	**3.31**	**254**	*e*P	**Pn**	**14 45 14.6**	**+2.8**
JAR				*e*S	**Sn**	**14 45 53.2**	**+1.7**
JOB	**Onbets**	**3.42**	**247**	*e*P	**Pn**	**14 45 15.5**	**+2.2**
JMP	**Maruseppu**	**3.44**	**267**	*e*P	**Pn**	**14 45 15.7**	**+2.1**
JCH	**Churui**	**3.86**	**246**	*e*S	**Sn**	**14 46 05.8**	**+0.7**

*CFUSG **15** 14:52:02.2, 40°.48N×33°.74E, h6km, Mb2.8/4, MD3.1/1, MSH2.2/1*
*IDC **15** 14:52:03.9±1.4, 40°.63N×32°.84E, h0km, mb3.1/3, mbtmp3.2/4, ML3.7/1, MS2.5/1, Error ellipse: s-maj=23.6km s-min=9.6km az=68.0*
*AFAD **15** 14:52:04.0, 40°.71N×32°.88E, h12km±2km, MW3.5*
*ISK **15** 14:52:04.1, 40°.71N×32°.91E, h5km, ML3.6/18*

ISC 15 14:52:04.4±0.9, 40.72N±0°.02×32°.92E±0°.02, h4km±8km, n59, σ1°17/72, mb3.1/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YALI	**Yalozu-CANKI**	**0.07**	**45**	Pg	**Pg**	**14 52 06.4**	**+0.4**
YALI				Sg	**Sg**	**14 52 08.2**	**+1.1**
DERS	**Karabk-Eskip**	**0.31**	**296**	P	**Pb**	**14 52 11.4**	**-1.2**
KZCM	**Kizilcahamam**	**0.34**	**213**	P	**Pg**	**14 52 11.2**	**+0.1**
KZCM				S	**Sg**	**14 52 15.6**	**0.0**
KZCM				IAML		14 52 18.0	
	comp=N,2μm,0.3s						
CMDR	**Camlidere-ANKA**	**0.41**	**237**	P	**Pg**	**14 52 11.9**	**-0.3**
CMDR				S	**Sg**	**14 52 18.2**	**+0.6**
CMDR				IAML		14 52 21.0	
	comp=E,2μm,0.3s						
ELDT	**Eldivan**	**0.45**	**120**	P	**Pg**	**14 52 13.5**	**+0.4**
ELDT				S	**Sg**	**14 52 19.4**	**+0.5**
ELDT				IAML		14 52 21.0	
	comp=N,4μm,0.3s						
CANT	**Cankiri**	**0.55**	**102**	Pg	**Pg**	**14 52 14.7**	**-0.2**
CANT				Sg	**Sb**	**14 52 23.3**	**-1.5**
SAFT	**Safranbolu**	**0.55**	**341**	Pg	**Pg**	**14 52 15.1**	**+0.1**
SAFT				Sg	**Sb**	**14 52 23.6**	**-1.3**
KBUK	**KARABUK-Merkez**	**0.56**	**337**	P	**Pg**	**14 52 15.3**	**0.0**
KBUK				S	**Sg**	**14 52 23.4**	**+0.9**
KBUK				IAML		14 52 24.0	
	comp=N,1μm,0.3s						
KBUK				IAML		14 52 24.0	
	comp=E,839nm,0.6s						
KRGN	**Kargin**	**0.64**	**131**	P	**Pb**	**14 52 17.3**	**-1.0**
PELI	**Kastamonı-Ara**	**0.65**	**27**	P	**Pg**	**14 52 17.1**	**+0.1**
PELI				S	**Sg**	**14 52 25.7**	**+0.2**
PELI				IAML		14 52 27.0	
	comp=N,431nm,0.2s						
PELI				IAML		14 52 33.0	
	comp=E,533nm,0.8s						
BCAM	**Yenicaga**	**0.66**	**279**	P	**Pg**	**14 52 16.7**	**-0.3**
BCAM				S	**Sg**	**14 52 25.5**	**0.0**
BCAM				IAML		14 52 26.0	
	comp=N,632nm,0.4s						
ILGA	**Ilgaz**	**0.69**	**61**	P	**Pg**	**14 52 17.4**	**-0.3**
YENC	**ankr-Yen**	**0.70**	**93**	P	**Pb**	**14 52 18.2**	**-1.1**
YENC				S	**Sb**	**14 52 28.5**	**-0.9**
YENC				IAML		14 52 29.0	
	comp=N,1μm,0.5s						
GOKD	**Ankara-Kalecik**	**0.77**	**146**	P	**Pb**	**14 52 19.3**	**-1.2**
DEVR	**Zonguldak/Devr**	**0.83**	**301**	P	**Pn**	**14 52 21.8**	**-1.1**
LOD	**Lodumlu**	**0.84**	**188**	Pg	**Pb**	**14 52 20.5**	**-1.1**
RUZG	**Kolk¶y-BOLU**	**0.85**	**271**	Pg	**Pg**	**14 52 20.6**	**-0.2**
KIBS	**BOLU**	**0.86**	**250**	P	**Pg**	**14 52 20.4**	**-0.6**
TOS	**Tosya**	**0.90**	**69**	Pg	**Pg**	**14 52 21.3**	**-0.3**
KMON	**Kastamonu**	**0.93**	**45**	Pg	**Pb**	**14 52 22.4**	**-0.7**
YUVA	**Yuva-Kibriscik**	**0.99**	**251**	Pg	**Pb**	**14 52 23.4**	**-0.9**
DELI	**KIRIKKALE**	**1.05**	**133**	P	**Pg**	**14 52 24.1**	**-0.5**
DELI				S	**Sg**	**14 52 37.3**	**-0.9**
DELI				IAML		14 52 42.0	
	comp=N,576nm,0.4s						
SEYI	**Kastamonu-Seyd**	**1.11**	**34**	P	**Pn**	**14 52 26.2**	**-0.6**
SEYI				S	**Sb**	**14 52 40.9**	**-0.1**
SEYI				IAML		14 52 46.0	
	comp=N,263nm,0.5s						
KURC	**Kurucasile-Bar**	**1.13**	**353**	Pn	**Pn**	**14 52 26.7**	**-0.4**
BR131	**Keskin Array S**	**1.14**	**151**	Pn	**Pg**	**14 52 25.7**	**-0.5**
BRTR	**Keskin Array B**	**1.14**	**151**	Pg	**Pg**	**14 52 25.4**	**-0.8**
	86nm,0.3s,baz=331,slow=14,SNR=373						
BRTR				Lg	Lg	14 52 41.0	
	45nm,0.3s,baz=328,slow=24,SNR=22						
SUNG	**orum-Sungurl**	**1.14**	**117**	P	**Pg**	**14 52 25.7**	**-0.6**
CIDE	**Kastamonu/Cide**	**1.16**	**1**	P	**Pn**	**14 52 27.1**	**-0.4**
POLA	**Polatl-ANKAR**	**1.17**	**210**	Pn	**Pb**	**14 52 26.6**	**-0.7**
BBAL	**Bala**	**1.19**	**172**	P	**Pb**	**14 52 26.7**	**-0.9**
KESK	**Krkkale-Ke**	**1.20**	**155**	P	**Pg**	**14 52 26.8**	**-0.5**
KESK				S	**Sg**	**14 52 42.1**	**-0.8**
KESK				IAML		14 52 46.0	
	comp=N,954nm,0.5s						
KAGI	**orum-Kargı**	**1.25**	**70**	P	**Pg**	**14 52 27.9**	**-0.5**
AFSR	**Afar-Bala (An**	**1.28**	**175**	Pn	**Pn**	**14 52 28.9**	**-0.2**
AFSR				Sn	**Sn**	**14 52 46.8**	**0.0**
BTAS	**Taskesti**	**1.47**	**265**	P	**Pb**	**14 52 31.7**	**-0.6**
AKPI	**Kirsehir/Akpin**	**1.47**	**145**	P	**Pb**	**14 52 31.6**	**-0.8**
AYAZ	**Ayas K¶y, M**	**1.48**	**91**	P	**Pn**	**14 52 31.5**	**-0.4**
KAMT	**Kaman**	**1.48**	**155**	Pn	**Pb**	**14 52 31.7**	**-0.9**
BZK	**Bozkurt**	**1.48**	**33**	Pn	**Pg**	**14 52 32.8**	**-0.1**
KKU	**Konya-Kulu**	**1.55**	**180**	P	**Pb**	**14 52 33.1**	**-0.6**
CDAG	**Cicekdag**	**1.56**	**134**	P	**Pb**	**14 52 33.1**	**-0.9**
SAHE	**Sakarya_HENDEK**	**1.57**	**276**	P	**Pb**	**14 52 33.7**	**-0.4**
SUSU	**Bolu-G¶ynk-**	**1.63**	**257**	P	**Pb**	**14 52 34.5**	**-0.6**
AUSIV	**SIVRIHISAR**	**1.66**	**220**	P	**Pb**	**14 52 34.5**	**-1.1**
KULU	**Kulu**	**1.68**	**178**	Pn	**Pb**	**14 52 34.9**	**-1.0**
SERE	**Sereflikochisa**	**1.84**	**164**	Pn	**Pb**	**14 52 37.5**	**-1.2**
KAYN	**Sakarya, Kayna**	**1.97**	**278**	P	**Pb**	**14 52 39.2**	**-1.6**
GEYV	**SAKARYA_Geyve**	**2.01**	**264**	P	**Pb**	**14 52 40.8**	**-0.7**
KOZK	**Kozakli-Nevseh**	**2.12**	**135**	Pn	**Pn**	**14 52 41.2**	**+0.4**
YOZ	**Yozgat**	**2.13**	**120**	Pn	**Pb**	**14 52 41.8**	**-1.9**
YARM	**Yarimca-Ladik(**	**2.22**	**84**	Pn	**Pn**	**14 52 42.6**	**+0.5**
SEV	**Sevastopol'**	**3.86**	**8**	*e*P	**Pn**	**14 53 07.8**	**+3.2**
SEV				pmax	pmax	14 53 17.7	
	comp=Z,2.0nm,0.3s						
SEV				*e*S	**Sb**	**14 53 57.6**	**-2.6**
SEV				smax	smax	14 53 58.2	
	comp=N,2.0nm,0.3s						
SEV				smax	smax	14 53 58.2	
	comp=E,4.0nm,0.3s						
SUDU	**Sudak**	**4.44**	**19**	*e*P	**Pn**	**14 53 15.4**	**+2.9**
SUDU				pmax	pmax	14 53 19.6	
	comp=Z,11nm,0.4s						
DNZ2	**Donuzlav2**	**4.66**	**3**	*e*P	**Pb**	**14 53 22.8**	**-3.9**
DNZ2				pmax	pmax	14 53 24.0	
	comp=Z,19nm,0.4s						
TARU	**Tarkhankut**	**4.66**	**357**	*e*P	Pb	14 53 21.6	-5.2
TARU				pmax	pmax	14 53 22.8	
	comp=Z,13nm,0.5s						
GNI	**Garni**	**9.04**	**90**	LR	LR	14 58 30.0	
	comp=Z,29nm,19.1s,baz=216,slow=42						
AKASG	**Malin Array Be**	**10.31**	**347**	Pn	**Pn**	**14 54 30.7**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=167,slow=12,SNR=2.0						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**21.17**	**351**	P	**P**	**14 56 52.1**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=153,slow=9.4,SNR=4.3						
	comp=Z,0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**32.90**	**57**	P	**P**	**14 58 40.8**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=277,slow=9.2,SNR=2.4						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**35.69**	**63**	P	**P**	**14 59 05.9**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=286,slow=6.6,SNR=2.9						
	comp=Z,0.3nm,0.8s						

*BJI **15** 15:00:36.6, 16°.27S×66°.51E, h10km, mB5.2/12, mb4.8/33, Ms4.8/26, Ms7 4.6/26*
*IDC **15** 15:00:41.3±0.4, 15°.76S×67°.32E, h0km, mb4.2/28, mbtmp4.2/29, MS4.3/65, Error ellipse: s-maj=14.7km s-min=13.1km az=83.0*
*MOS **15** 15:00:43.4±0.9, 15°.73S×67°.30E, h16km, mb5.0/45, MS4.2/5, Error ellipse: s-maj=11.0km s-min=5.8km az=83.4*
*GFZ **15** 15:00:43.5±0.2, 16°S±4°×6°7E±°, h10km, M4.8/32, mb4.5/32*
*GFZ **15** 15:00:44.2, 15°.91S×67°.24E, h12km, Mw5.1/77, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-5.39; Mθθ1.67; Mϕϕ3.72; Mrθ1.49; Mθϕ-2.67; Mϕr-1.19; Fault plane solution: M₀5.79565×10¹⁶ NP1: ϕs151.24213°, δ36.03419°, λ-80.77651°. NP2: ϕs319.88778°, δ54.50288°, λ-96.65070°. Principal axes: T 5.8510, Plg9.2779°, Azm54.6476°; N -0.1124, Plg5.4105°, Azm323.7611°; P -5.7386, Plg79.2355°, Azm203.8813°;*
*NEIC **15** 15:00:44.2±1.6, 15°.9S±0°.1×67°.4E±0°.1, h10km±1km, mb5.0/62 Error ellipse: s-maj=18.6km s-min=17.0km az=149.0*
*GCMT **15** 15:00:44.2±0.2, 15°.78S±0°.01×67°.20E±0°.01, h12km, MW5.1/129, Moment Tensor Solution. s61,c80; s129,c234; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-5.44±.09; Mθθ0.97±.09; Mϕϕ4.47±.08; Mrθ0.66±.27; Mθϕ-2.09±.07; Mϕr0.65±.27; Best double couple: M₀5.52000×10¹⁶ NP1:ϕs326.00000°, δ44.00000°, λ-103.00000°. NP2:ϕs164.00000°, δ47.00000°, λ-78.00000°. Principal axes: T 5.4550, Plg2.0000°, Azm245.0000°; N 0.1310, Plg9.0000°, Azm335.0000°; P -5.5850, Plg81.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:00:43.8±0.3, 15°.88S±0°.06×67°.22E±0°.06, h10km, n330, σ1°33/294, mb4.8/96, MS4.5/80, 12C-4D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.66**	**33**	T	T	15 12 44.8	
	baz=212,slow=75,SNR=2411						
H08S2	**Diego Garcia H**	**9.67**	**33**	T	T	15 12 45.5	
	baz=212,slow=75,SNR=1793						
H08S3	**Diego Garcia H**	**9.68**	**33**	T	T	15 12 57.3	
	baz=212,slow=75,SNR=4078						
KAAM	**Kaadhehdhoo**	**17.24**	**20**	P	**P**	**15 04 45.8**	**-0.5**
OPO	**Ambohidratompo**	**19.32**	**259**	P	**Pn**	**15 05 11.2**	**+0.8**
	3.0nm,0.9s,baz=72,slow=12,SNR=3.7						
ABPO	**Ambohimpanom**	**19.32**	**258**	P	**Pn**	**15 05 11.7**	**+1.1**
ABPO				pmax	pmax		
	comp=Z,30nm,1.4s						
ABPO	**Ambohimpanom**	**19.32**	**258**	P	**Pn**	**15 05 11.7**	**+1.1**
ABPO	**Ambohimpanom**	**19.32**	**258**	P	**P**	**15 05 07.3**	**-2.2**
PALK	**Pallekele**	**26.60**	**31**	LR	LR	15 14 07.3	
	comp=Z,844nm,21.1s,baz=208,slow=30						
PALK	**Pallekele**	**26.60**	**31**	P	**P**	**15 06 22.7**	**+0.2**
	comp=Z,11nm,1.6s						
KIBK	**Kibwezi**	**31.72**	**292**	P	**P**	**15 07 07.0**	**-1.2**
H04N2	**CROZET ISLANDS**	**32.83**	**200**	T	T	15 42 02.4	
	baz=30,slow=74,SNR=212						
H04N1	**CROZET ISLANDS**	**32.84**	**200**	T	T	15 42 04.1	
	baz=30,slow=74,SNR=178						
H04N3	**CROZET ISLANDS**	**32.85**	**200**	T	T	15 42 03.9	
	baz=30,slow=74,SNR=201						
KMBO	**Kilima Mbogo**	**32.98**	**293**	LR	LR	15 17 54.8	
	comp=Z,579nm,20.5s,baz=101,slow=31						
GSI	**Gunungsitoli**	**34.51**	**63**	P	**P**	**15 07 32.2**	**-0.3**
GSI	**Gunungsitoli**	**34.51**	**63**	P	**P**	**15 07 32.0**	**-0.5**
	comp=Z,24nm,2.0s						
GSI	**Gunungsitoli**	**34.51**	**63**	P	**P**	**15 07 32.6**	**+0.1**
HYB	**Hyderabad**	**34.92**	**19**	*e*P	**P**	**15 07 35.6**	**-0.4**
HYB				*e*S	**S**	**15 13 07.8**	**+0.2**
KCSI	**Kotacane, Aceh**	**35.85**	**60**	P	**P**	**15 07 42.1**	**-1.9**
PDSI	**Padang**	**36.00**	**69**	P	**P**	**15 07 45.6**	**+0.3**
ATD	**Arta Tunnel**	**36.38**	**317**	LR	LR	15 20 49.3	
	comp=Z,34nm,20.2s,baz=150,slow=33						
RPSI	**Rantau Prapat**	**36.38**	**62**	P	**P**	**15 07 49.4**	**+0.9**
RPSI				IAmb	IAmb	15 09 05.9	
	comp=Z,33nm,2.0s						
PSI	**Prapat**	**36.43**	**62**	P	**P**	**15 07 49.4**	**+0.2**
PSI				pmax	pmax		
	comp=Z,33nm,2.0s						
SDSI	**Sungai Dareh**	**36.86**	**70**	P	**P**	**15 07 53.5**	**+0.9**
LODK	**Lodwar**	**36.89**	**299**	P	**P**	**15 07 54.7**	**+1.7**
LODK	**Lodwar**	**36.89**	**299**	P	**P**	**15 07 52.7**	**-0.3**
MATP	**Matopo**	**37.01**	**257**	LR	LR	15 21 55.6	
	comp=Z,981nm,18.1s,baz=79,slow=34						
LSZ	**Lusaka**	**37.56**	**265**	LR	LR	15 22 10.1	
	comp=Z,2μm,18.7s,baz=115,slow=34						
LSZ	**Lusaka**	**37.56**	**265**	P	**P**	**15 07 56.3**	**-2.5**
MBAR	**Mbarara**	**39.05**	**289**	LR	LR	15 21 30.0	
	comp=Z,1μm,21.7s,baz=107,slow=32						
DSRI	**Dabo**	**39.90**	**71**	P	**P**	**15 08 16.4**	**-2.0**
LBTB	**Lobatse**	**39.91**	**250**	LR	LR	15 22 39.8	
	comp=Z,2μm,18.3s,baz=84,slow=33

NIL pmax pmax
comp=Z,58nm,2.0s
NIL Nilore 49.59 7 P P 15 09 35.4 +0.2
KBL Kabul 50.17 2 P P 15 09 40.1 +0.2
KBL pmax pmax
comp=Z,14nm,1.2s
KBL Kabul 50.17 2 P P 15 09 40.1 +0.2
KBL lAmb lAmb 15 09 41.6
comp=Z,14nm,1.2s
SLVN Son La 51.60 45 P P 15 09 50.0 -0.7
MAW Mawson 51.77 182 P P 15 09 51.8 +0.5
comp=Z,2.5nm,0.9s,baz=24,slow=8.5,SNR=4.8
MAW LR LR 15 26 21.9
comp=Z,313nm,21.6s,baz=349,slow=30
comp=Z,2.5nm,0.9s
MAW Mawson 51.77 182 P P 15 09 51.9 +0.7
KAPI Kappang 52.64 84 LR LR 15 28 45.4
comp=Z,703nm,21.8s,baz=234,slow=32
MANEM Manem 53.30 4 P P 15 10 02.5 -0.8
MANEM lAmb lAmb 15 10 22.2
comp=Z,42nm,1.5s
QIZ Qiongzhong 54.43 52 P P 15 10 12.8 +1.2
QIZ S S **15 17 53.8 +3.4**
QIZ L L
comp=Z,320nm,20.5s
QIZ L L
comp=Z,380nm,16.6s
QIZ L L
comp=Z,540nm,16.6s
GAR Garm 54.67 3 P P 15 10 12.7 -0.4
GAR lAmb lAmb 15 10 13.3
comp=Z,17nm,1.2s
GAR Garm 54.67 3 P P 15 10 11.8 -1.2
MYLDM Lahad Datu 54.89 72 P P 15 10 15.0 -0.1
MYLDM Lahad Datu 54.89 72 P P 15 10 14.5 -0.6
EIL Elat 54.95 325 LR LR 15 30 03.8
comp=Z,341nm,21.8s,baz=94,slow=32
BATI Baumata 55.15 92 LR LR 15 30 03.1
comp=Z,627nm,21.7s,baz=243,slow=32
KSH2 Kashi 55.29 8 P P 15 10 17.8 +0.2
KSH2 S S **15 17 59.8 -1.9**
KSH2 pmax pmax
comp=Z,11nm,1.7s
KSH2 pmax pmax
comp=Z,190nm,5.0s
KSH2 L L
comp=Z,370nm,19.2s
KSH2 L L
comp=Z,380nm,15.5s
KSH2 L L
comp=Z,560nm,19.2s
TOLI2 Tolitoli 55.51 77 P P 15 10 17.9 -1.6
TOLI2 lAmb lAmb 15 10 20.6
comp=Z,33nm,1.5s
TOLI2 Tolitoli 55.51 77 P P 15 10 18.9 -0.7
FITZ Fitzroy Crossi 55.72 101 LR LR 15 30 04.2
comp=Z,1µm,21.9s,baz=264,slow=32
BTK Batken 55.75 3 P P 15 10 19.9 -0.9
BTK pmax pmax
comp=Z,41nm,2.0s
BTK Batken 55.75 3 P P 15 10 19.9 -0.9
BTK lAmb lAmb 15 10 22.3
comp=Z,41nm,2.0s
BTK Batken 55.75 3 P P 15 10 21.5 +0.7
ASF Jabal al Asfar 55.92 329 LR LR 15 31 28.1
comp=Z,235nm,21.0s,baz=206,slow=33
FORT Forrest 57.18 117 P P 15 10 30.5 -0.7
FORT lAmb lAmb 15 10 33.2
comp=Z,24nm,1.4s
MMAI Mount Meron Ar 57.34 328 LR LR 15 31 57.6
comp=Z,203nm,21.9s,baz=147,slow=33
IUG Iuzhnay 57.79 2 *eP* **P 15 10 35.6 +0.3**
IUG pmax pmax
comp=Z,13nm,1.0s
IUG Iuzhnay 57.79 2 *eP* **P 15 10 35.7 +0.3**
comp=Z,13nm,1.0s
WUS Wushi 57.87 11 P P 15 10 35.1 -0.8
WUS Wushi 57.87 11 P P 15 10 36.1 +0.2
CHM Chimkent 57.95 2 *eP* **P 15 10 36.9 +0.6**
CHM pmax pmax
comp=Z,17nm,1.2s
CHM Chimkent 57.95 2 *eP* **P 15 10 36.9 +0.6**
comp=Z,17nm,1.2s
KDJ Kajisay 58.44 9 P P 15 10 39.6 -0.4
KDJ pmax pmax
comp=Z,4.0nm,0.9s
KDJ Kajisay 58.44 9 P P 15 10 39.6 -0.4
KDJ Kajisay 58.44 9 P P 15 10 38.4 -1.6
DZA Taraz 58.60 4 *eP* **P 15 10 41.4 +0.6**
DZA pmax pmax
comp=Z,9.0nm,1.3s
DZA Taraz 58.60 4 *eP* **P 15 10 41.5 +0.6**
comp=Z,8.9nm,1.3s
AAK Ala-Archa 58.61 6 *c iP* **P 15 10 41.6 +0.5**
AAK pmax pmax
comp=Z,9.0nm,1.2s
AAK Ala-Archa 58.61 6 P P 15 10 40.8 -0.3
AAK Ala-Archa 58.61 6 P P 15 10 41.2 +0.1
KK31 Karatay Array 58.77 3 P P 15 10 41.5 -0.5
KK31 pmax pmax
comp=Z,12nm,1.5s
KK31 Karatay Array 58.77 3 P P 15 10 41.5 -0.5
KK31 lAmb lAmb 15 10 44.0
comp=Z,12nm,1.4s
KKAR Karatay Array 58.77 3 P P 15 10 41.4 -0.6
KKAR Karatay Array 58.77 3 P P 15 10 41.4 -0.6
PRZ Przheval'sk 58.98 10 P P 15 10 43.5 -0.2
PRZ pmax pmax
comp=Z,12nm,1.1s
PRZ Przheval'sk 58.98 10 P P 15 10 43.5 -0.2
PRZ lAmb lAmb 15 10 50.3
comp=Z,12nm,1.1s
TNSS Tian-Shan 59.30 8 *eP* **P 15 10 46.2 0.0**
TNSS Tian-Shan 59.30 8 *eP* **P 15 10 46.2 0.0**
MDOK Medeo 59.44 8 *eP* **P 15 10 46.9 +0.1**
MDOK Medeo 59.44 8 *eP* **P 15 10 47.0 +0.1**
AAA Alma-Ata 59.47 8 *eP* **P 15 10 47.1 +0.2**
AAA Alma-Ata 59.47 8 *eP* **P 15 10 47.2 +0.2**
GNI Garni 59.54 340 LR LR 15 35 02.7
comp=Z,124nm,21.1s,baz=148,slow=35
GNI Garni 59.54 340⇑ *eP* **P 15 10 48.4 +0.8**
GNI pmax pmax
comp=Z,26nm,1.8s
SATY Saty 59.54 9 *eP* **P 15 10 47.7 +0.2**
SATY pmax pmax
comp=Z,12nm,1.2s
SATY Saty 59.54 9 *eP* **P 15 10 47.8 +0.2**
comp=Z,12nm,1.2s
EDA Edea 59.72 284 P P 15 10 49.2 +0.1
UZB Uzynbulak 59.73 10 *eP* **P 15 10 49.0 +0.2**
UZB pmax pmax
comp=Z,6.0nm,1.2s
UZB Uzynbulak 59.73 10 *eP* **P 15 10 49.1 +0.2**
comp=Z,6.1nm,1.2s
SHLS Shalkode 59.81 10 *eP* **P 15 10 50.1 +0.8**
SHLS Shalkode 59.81 10 *eP* **P 15 10 50.1 +0.8**
PDGK Podgornoye 59.98 10 P P 15 10 49.6 -1.0
PDGK Podgornoye 59.98 10 P P 15 10 49.6 -1.0
TGY Tagaytay City 60.88 64 LR LR 15 33 51.4
comp=Z,355nm,21.8s,baz=254,slow=33
MAK Makhachkala 61.29 344 *eP* **P 15 10 55.7 -3.6**
MAK *eS* **S 15 19 14.7 -4.8**
MAK pmax pmax
comp=Z,21nm,0.3s
MAK MLR MLR
comp=Z,101nm,17.0s
ENH Enshi 61.34 42 P P 15 10 58.5 -1.4
ENH Enshi 61.34 42 P P 15 11 00.2 +0.3
TDK Taldyqorghan 61.44 9 *eP* **P 15 11 00.6 +0.3**
TDK pmax pmax
comp=Z,5.0nm,0.7s
TDK Taldyqorghan 61.44 9 *eP* **P 15 11 00.6 +0.3**
comp=Z,5.0nm,0.7s
LZDM Lanzhou Array 62.04 33 LR LR 15 37 15.7
comp=Z,134nm,21.5s,baz=250,slow=36
DAV Davao City (W) 62.11 73 LR LR 15 36 31.4
comp=Z,215nm,19.9s,baz=230,slow=35
LZH Lanzhou 62.22 33 *eP* **P 15 11 06.3 +0.4**
LZH sP pwP 15 11 16.6 +4.9
LZH pmax pmax
comp=Z,16nm,1.3s
LZH L L
comp=Z,250nm,16.5s
LZH L L
comp=Z,240nm,15.2s
LZH L L
comp=Z,310nm,14.9s
ASAR Alice Springs 62.76 109 P P 15 11 08.7 -1.1
comp=Z,3.5nm,0.9s,baz=267,slow=6.3,SNR=24
ASAR LR LR 15 36 15.1
comp=Z,956nm,18.0s,baz=267,slow=34
comp=Z,3.5nm,0.9s
ASAR Alice Springs 62.76 109 P P 15 11 09.4 -0.4
ASAR Alice Springs 62.76 109 P P 15 11 09.3 -0.4
AS31 Alice Springs 62.76 109 P P 15 11 08.7 -1.1
GTA2 Gaotai 62.90 28 *eP* **P 15 11 09.3 -1.1**
GTA2 S S **15 19 43.3 +3.0**
GTA2 pmax pmax
comp=Z,13nm,1.8s
GTA2 L L
comp=Z,230nm,17.5s
GTA2 L L
comp=Z,260nm,19.4s
GTA2 L L
comp=Z,290nm,19.0s
KBZ Khabaz 63.36 340 LR LR 15 38 08.9
comp=Z,123nm,19.3s,baz=164,slow=36
BR104 Keskin Array S 63.55 332 P P 15 11 16.0 +1.3
comp=Z,41nmcomp=Z,2.8nm,1.1s
BR131 Keskin Array S 63.56 332 P P 15 11 15.5 +0.7
BR131 pmax pmax
comp=Z,16nm,1.9s
BR131 Keskin Array S 63.56 332 P P 15 11 15.5 +0.7
BR131 lAmb lAmb 15 11 22.3
comp=Z,16nm,1.9s
BRTR Keskin Array B 63.56 332 P P 15 11 15.0 +0.2
comp=Z,0.3nm,0.6s,baz=132,slow=6.0,SNR=1.3
BRTR LR LR 15 37 22.3
comp=Z,102nm,19.8s,baz=110,slow=35
comp=Z,0.3nm,0.6s
BRTR Keskin Array B 63.56 332 P P 15 11 14.2 -0.6
BRTR Keskin Array B 63.56 332 P P 15 11 14.2 -0.6
XAN Xi'an 63.57 38 P P 15 11 12.0 -2.8
XAN pP sP 15 11 19.4 +1.2
XAN S S **15 19 45.0 -3.7**
XAN pmax pmax
comp=Z,26nm,1.2s
XAN pmax pmax
comp=Z,170nm,4.1s
XAN L L
comp=Z,450nm,16.7s
XAN L L
comp=Z,470nm,18.0s
XAN L L
comp=Z,730nm,21.8s
BR106 Keskin Array S 63.58 332 P P 15 11 15.9 +1.0
comp=Z,2.2nm,1.2s
KIV Kislovodsk 63.63 340 *eP* **P 15 11 15.2 +0.1**
KIV pmax pmax
comp=Z,6.0nm,1.0s
WRA Warramunga Arr 63.63 105 P P 15 11 14.5 -1.1
comp=Z,9.3nm,1.1s,baz=263,slow=6.3,SNR=22
comp=Z,9.3nm,1.1s
WRA Warramunga Arr 63.63 105 P P 15 11 15.1 -0.5
WRA pmax pmax
comp=Z,3.0nm,1.5s
WRA Warramunga Arr 63.63 105 P P 15 11 15.1 -0.5
WRAB Tennant Creek 63.64 105 P P 15 11 15.6 -0.1
WRAB pmax pmax
comp=Z,36nm,1.4s
WRAB Tennant Creek 63.64 105 P P 15 11 15.6 -0.1
WRAB Tennant Creek 63.64 105 P P 15 11 16.2 +0.6
WB0 Warramunga Arr 63.71 104 P P 15 11 15.0 -1.1
WR8 Warramunga Arr 63.78 105 P P 15 11 15.8 -0.7
MAKZ Makanchi 63.79 11 P P 15 11 15.4 -0.6
MAKZ pmax pmax
comp=Z,8.0nm,1.3s
MAKZ Makanchi 63.79 11 P P 15 11 15.4 -0.6
MAKZ lAmb lAmb 15 11 16.3
comp=Z,7.8nm,1.3s
MAKZ Makanchi 63.79 11 P P 15 11 15.9 -0.2
MK31 Makanchi Array 63.84 11⇑ *eP* **P 15 11 15.0 -1.3**
MKAR Makanchi Array 63.84 11 P P 15 11 14.6 -1.8
comp=Z,1.4nm,0.8s,baz=206,slow=7.4,SNR=13
MKAR LR LR 15 37 25.6
comp=Z,232nm,21.0s,baz=174,slow=35
comp=Z,1.4nm,0.8s
MKAR Makanchi Array 63.84 11 P P 15 11 15.4 -0.9
MKAR Makanchi Array 63.84 11 P P 15 11 15.4 -0.9
NVL N'lazarevskaya 64.04 198 *eP* **P 15 11 21.4 +4.0**
NVL *eS* **S 15 19 58.9 +5.4**
NVL pmax pmax
comp=Z,9.0nm,0.9s
SIJI Sorong 64.84 83 P P 15 11 22.1 -1.5
comp=Z,6.5nm,1.0s,baz=266,slow=7.4,SNR=5.2
SIJI LR LR 15 36 31.4
comp=Z,204nm,21.9s,baz=236,slow=33
comp=Z,6.5nm,1.0s
ZSN Zaisan 65.00 13 *eP* **P 15 11 24.4 +0.6**
ZSN Zaisan 65.00 13 *eP* **P 15 11 24.5 +0.6**
AB31 Akbulak array 65.16 355 P P 15 11 24.7 -0.2
AB31 lAmb lAmb 15 11 25.5
comp=Z,15nm,1.4s
ABKAR Akbulak array 65.16 355 P P 15 11 24.8 -0.1
LYN LuoYang 66.06 40 *eP* **P 15 11 32.4 +1.4**
LYN S S **15 20 25.1 +5.7**
LYN pmax pmax
comp=Z,12nm,0.6s
LYN pmax pmax
comp=Z,270nm,11.3s
LYN L L
comp=Z,770nm,18.6s
LYN L L
comp=Z,380nm,18.9s
LYN L L
comp=Z,640nm,22.3s
ANN Anapa 66.19 337 *eP* **P 15 11 31.1 -0.5**
ANN *e*PP* **sP 15 11 34.5 -0.3**
ANN *e* 15 13 54.3
ANN *eS* **S 15 20 19.2 -1.2**
ANN pmax pmax
comp=Z,43nm,1.0s
AKTO Aktyubinsk 66.52 354 P P 15 11 31.6 -2.0
comp=Z,1.9nm,0.9s,baz=164,slow=5.4,SNR=9.0
AKTO LR LR 15 40 12.9
comp=Z,95nm,19.0s,baz=118,slow=36
comp=Z,1.9nm,0.9s
KURBB Kurchatov Arra 66.95 8 P P 15 11 34.1 -2.2
comp=Z,1.4nm,0.7s,baz=202,slow=6.9,SNR=14
KURBB LR LR 15 40 21.9
comp=Z,286nm,18.5s,baz=162,slow=36
comp=Z,1.4nm,0.7s
KURK Kurchatov 67.06 8⇑ *iP* **P 15 11 37.1 +0.1**
KURK pmax pmax
comp=Z,12nm,1.5s
KURK Kurchatov 67.06 8 P P 15 11 36.6 -0.4
KURK lAmb lAmb 15 11 49.7
comp=Z,12nm,1.4s
KURK Kurchatov 67.06 8 P P 15 11 37.2 +0.2
DGZ Jazzator, Alta 67.69 14⇑ *eP* **P 15 11 41.7 +0.4**
DGZ pmax pmax
comp=Z,15nm,2.0s
QIS Mount Isa 68.42 106 P P 15 11 46.9 +0.4
BVAR Borovoye Array 68.67 2 P P 15 11 44.9 -2.3
comp=Z,2.1nm,0.9s,baz=167,slow=7.0,SNR=10
comp=Z,2.1nm,0.9s
BORK Borovoye 68.69 2⇑ *iP* **P 15 11 47.0 -0.3**
BORK pmax pmax
comp=Z,9.0nm,1.5s
BORK Borovoye 68.69 2 P P 15 11 46.9 -0.3
STKA Stephens Creek 68.69 118 P P 15 11 46.5 -1.5
comp=Z,0.5nm,0.3s,baz=180,slow=10,SNR=3.3
STKA LR LR 15 37 14.5
comp=Z,499nm,21.6s,baz=238,slow=32
comp=Z,0.5nm,0.3s
STKA Stephens Creek 68.69 118⇓ *eP* **P 15 11 48.1 +0.2**
SNAA Sanae 68.79 199 P P 15 11 48.2 +0.4
comp=Z,0.6nm,0.4s,baz=65,slow=5.1,SNR=3.7
SNAA LR LR 15 36 53.4
comp=Z,355nm,18.1s,baz=38,slow=32
comp=Z,0.6nm,0.4s
SNAA Sanae 68.79 199⇑ *eP* **P 15 11 49.4 +1.5**
SNAA pmax pmax
comp=Z,17nm,1.9s
SNAA Sanae 68.79 199 P P 15 11 48.5 +0.7
SNAA lAmb lAmb 15 12 09.3
comp=Z,15nm,1.5s
SNAA Sanae 68.79 199 P P 15 11 47.6 -0.2
VNA2 Neumayer--Watz 70.08 200 P P 15 11 55.7 -0.1
comp=Z,5.3nm,0.8s,baz=82,slow=5.9
VNA2 Neumayer--Watz 70.08 200 P P 15 11 55.4 -0.4
BELG Belogornoye 70.08 347 *c iP* **P 15 11 55.4 -0.4**
BELG pmax pmax
comp=Z,4.0nm,1.5s
VRH Novokhopyorsk 70.42 343 *eP* P 15 12 07.7 +10
VRH pmax pmax
comp=Z,9.0nm,0.4s
TORD Torodi Ar. Bea 70.92 290 P P 15 12 00.5 -1.3
comp=Z,2.8nm,1.1s,baz=159,slow=1.8,SNR=11
comp=Z,2.8nm,1.1s
TORD Torodi Ar. Bea 70.92 290 P P 15 12 02.3 +0.5
ZAA0 Zalesovo Array 71.16 11 P P 15 12 01.6 -0.9
ZAA0 lAmb lAmb 15 12 03.5
comp=Z,36nm,2.0s
ZALV Zalesovo Beam 71.16 11 P P 15 11 59.7 -2.7
comp=Z,1.3nm,0.6s,baz=212,slow=5.3,SNR=8.3
ZALV LR LR 15 43 30.3
comp=Z,199nm,18.1s,baz=184,slow=36
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 71.16 11 *i P* **P 15 12 02.2 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 71.16 11 P P 15 12 01.4 -1.0
VSR Storozhevoye 71.17 342 *eP* **P 15 12 01.7 -0.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
KNGR Kungurtug, Tuv 71.34 20⇓ *eP* **P 15 12 04.6 +0.8**
KNGR pmax pmax
comp=Z,10.0nm,1.6s
VRI Vrincioaia 71.53 331 P P 15 12 05.7 +0.8
comp=Z,14nm,2.1s
VRI Vrincioaia 71.53 331 P P 15 12 04.5 -0.3
VORR Voronezh 71.56 342 *eP* **P 15 12 04.7 -0.2**
VORR pmax pmax
comp=Z,34nm,0.4s
MLR Muntele Rosu 71.61 331 P P 15 12 05.7 +0.2
comp=Z,1.4nm,0.4s,baz=193,slow=3.9,SNR=5.7
MLR LR LR 15 43 55.3
comp=Z,110nm,18.4s,baz=168,slow=36
comp=Z,1.4nm,0.4s
MLR Muntele Rosu 71.61 331 P P 15 12 06.2 +0.7
MLR pmax pmax
comp=Z,23nm,1.7s
MLR Muntele Rosu 71.61 331 P P 15 12 06.2 +0.7
MLR lAmb lAmb 15 12 08.2
comp=Z,23nm,1.7s
MLR Muntele Rosu 71.61 331 P P 15 12 06.4 +0.9
comp=Z,5.8nm,1.6s
PHP Peshkopia 71.73 325 P P 15 12 04.8 -1.4
BJT Baijiatuau 71.87 38 P P 15 12 06.5 -0.5
BJT pmax pmax
comp=Z,7.0nm,0.5s
BJT Baijiatuau 71.87 38 P P 15 12 06.5 -0.5
BJT lAmb lAmb 15 12 19.8
comp=Z,6.7nm,0.5s
ARTI Arti 72.37 355 P P 15 12 07.8 -1.8
comp=Z,1.4nm,0.6s,baz=187,slow=6.4,SNR=4.6
comp=Z,1.4nm,0.6s
ARTI Arti 72.37 355 *c iP* **P 15 12 09.7 +0.1**
ARTI 15 14 44.7
ARTI S S **15 21 34.6 +1.6**
ARTI SS SS **15 26 14.7 +2.9**
ARTI pmax pmax
comp=Z,7.0nm,1.4s
ARTI MLR MLR
comp=Z,259nm,19.0s
SONM Songino Array 72.44 27 P P 15 12 08.9 -1.5
comp=Z,3.7nm,0.9s,baz=216,slow=6.2,SNR=19
SONM LR LR 15 43 01.3
comp=Z,308nm,20.4s,baz=208,slow=35
comp=Z,3.7nm,0.9s
LPSR Galich'ya Gora 72.46 342 *eP* **P 15 12 10.0 -0.2**
LPSR pmax pmax
comp=Z,12nm,0.6s
ULN Ulaanbaatar 72.75 27 *c iP* **P 15 12 12.8 +0.5**
ULN pmax pmax
comp=Z,14nm,1.8s
ULN Ulaanbaatar 72.75 27 P P 15 12 12.3 0.0
ULN lAmb lAmb 15 12 19.3
comp=Z,26nm,1.8s
ULN Ulaanbaatar 72.75 27 P P 15 12 13.6 +1.3
ULN Ulaanbaatar 72.75 27 P P 15 12 12.0 -0.4
JOW Kunigami 72.90 55 LR LR 15 40 30.8
comp=Z,367nm,21.9s,baz=199,slow=33
JAY Jayapura 73.43 88 LR LR 15 43 41.6
comp=Z,99nm,20.5s,baz=222,slow=35
AK09 Malin Array Si 74.10 336 P P 15 12 20.1 +0.1
AK10 Malin Array Si 74.10 336 P P 15 12 20.1 +0.1
AK06 Malin Array Si 74.11 336 P P 15 12 20.1 0.0
AK08 Malin Array Si 74.13 336 P P 15 12 20.1 0.0
AK05 Malin Array Si 74.14 336 P P 15 12 20.2 0.0
AK02 Malin Array Si 74.16 336 P P 15 12 20.3 -0.1
AKASG Malin Array Be 74.19 336 P P 15 12 19.1 -1.5
comp=Z,0.3nm,0.3s,baz=146,slow=4.9,SNR=9.3
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 74.19 336 *i P* **P 15 12 20.7 +0.2**
AKASG Malin Array Be 74.19 336 P P 15 12 20.6 +0.1
AKBB Malin Array Si 74.19 336 P P 15 12 20.5 0.0
AKBB pmax pmax
comp=Z,10.0nm,1.3s
AKBB Malin Array Si 74.19 336 P P 15 12 20.5 0.0
KIEV Kiev 74.19 336 P P 15 12 21.4 +0.9
KIEV Kiev 74.19 336 P P 15 12 21.4 +0.9
KIEV Kiev 74.19 336 P P 15 12 20.9 +0.4
QSPA South Pole Qui 74.21 180 P P 15 12 19.8 -0.9
comp=Z,4.7nm,1.1s,baz=278,slow=0.5,SNR=12
QSPA LR LR 15 41 23.5
comp=Z,181nm,18.6s,baz=262,slow=33
comp=Z,4.7nm,1.1s
QSPA South Pole Qui 74.21 180 P P 15 12 20.9 +0.2
QSPA South Pole Qui 74.21 180 P P 15 12 20.2 -0.6
XLT XiLinHaoTe 74.35 34 *eP* **P 15 12 22.4 +0.6**
XLT S S **15 21 58.5 +2.3**
XLT pmax pmax
comp=Z,10.0nm,1.3s
XLT L L
comp=Z,15nm,18.4s
XLT L L
comp=Z,140nm,16.0s
XLT L L
comp=Z,190nm,18.2s
TLY Talaya 74.38 23 LR LR 15 44 23.0
comp=Z,276nm,18.9s,baz=205,slow=35
CTA Charters Tower 74.64 107 LR LR 15 44 05.3
comp=Z,576nm,18.4s,baz=250,slow=35
DBIC Dimbokro 74.76 282 P P 15 12 23.2 -1.4
comp=Z,4.2nm,0.8s,baz=188,slow=9.3,SNR=3.1
DBIC LR LR 15 45 14.0
comp=Z,173nm,18.2s,baz=140,slow=36
comp=Z,4.2nm,0.8s
KEST Kesra 75.03 315 LR LR 15 44 18.4
comp=Z,236nm,20.6s,baz=230,slow=35
OBN Obninsk 75.34 342 *eP* **P 15 12 28.5 +1.5**
OBN *e* 15 12 37.6
OBN *ePPP* PPP 15 17 01.6
OBN pmax pmax
comp=Z,9.0nm,0.4s
MOS Moscow 75.58 343 *eP* **P 15 12 30.0 +1.6**
VNDA Vanda 75.61 167 P P 15 12 28.1 -0.3
comp=Z,3.0nm,1.3s,baz=265,slow=9.6,SNR=6.0
VNDA LR LR 15 41 42.6
comp=Z,83nm,18.1s,baz=230,slow=32
comp=Z,3.0nm,1.3s
VNDA Vanda 75.61 167 P P 15 12 28.7 +0.2
VNDA pmax pmax
comp=Z,17nm,1.8s
VNDA Vanda 75.61 167 P P 15 12 28.7 +0.2
VNDA lAmb lAmb 15 12 31.0
comp=Z,17nm,1.8s
KIRV Kirov 75.62 350 LR LR 15 45 26.2
comp=Z,70nm,19.7s,baz=156,slow=36
KIRV Kirov 75.62 350⇓ *eP* **P 15 12 28.7 +0.1**
RNPP9 Sopachiv 76.08 335 P P 15 12 32.1 +0.7
PSZ Piszkesteto 76.25 329 P P 15 12 31.7 -0.9
PSZ pmax pmax
comp=Z,9.0nm,1.4s
PSZ Piszkesteto 76.25 329 P P 15 12 31.7 -0.9
SBA Scott Base 76.59 168 P P 15 12 35.5 +1.5
SBA pmax pmax
comp=Z,37nm,1.9s
SBA Scott Base 76.59 168 P P 15 12 35.5 +1.5
SBA lAmb lAmb 15 13 32.8
comp=Z,37nm,1.9s
BELA Belgrano 2 77.06 192 P P 15 12 37.0 +0.3
BELA lAmb lAmb 15 12 39.4
comp=Z,27nm,1.8s
MNK Minsk 77.69 338 *i P* **P 15 12 42.9 +2.5**

	comp=E,28nm,0.8s								
MNK					*i* P		**P**	**15 12 42.9**	**+2.5**
	comp=N,10.0nm,0.6s								
MNK					*i* P		**P**	**15 12 42.9**	**+2.5**
	comp=Z,26nm,0.7s,baz=141								
MNK					*i* PcP		**PcP**	**15 12 55.9**	**+5.5**
MNK					*i* PP		**PP**	**15 15 40.3**	**+4.4**
MNK					*i* PPP		PPP	15 17 27.7	
MNK					*i* S		**S**	**15 22 32.1**	**-0.2**
MNK					*i* SS		SS	15 27 15.0	-18
MNK					*i* SSS		SSS	15 31 02.0	
MNK					*i* LQ		LQ	15 41 53.5	
MNK					*i* LR		LR	15 47 03.2	
MNK					*i* LRM		MLR	15 49 41.7	
	comp=N,100nm,21.6s								
MNK					*i* LRM		MLR	15 49 53.3	
	comp=Z,84nm,21.7s								
MNK					*i* LRM		MLR	15 49 57.2	
	comp=E,84nm,20.7s								
MNK	**Minsk**	**77.69**	**338**		*i* P		**P**	**15 12 42.8**	**+2.5**
MNK					*i*			15 12 55.9	
MNK					*i*			15 15 40.3	
MNK					*i* PPP		PPP	15 17 27.7	
MNK					*i* S		**S**	**15 22 32.0**	**-0.2**
MNK					pmax		pmax		
	comp=N,10.0nm,0.6s								
MNK					pmax		pmax		
	comp=E,28nm,0.8s								
MNK					pmax		pmax		
	comp=Z,26nm,0.7s								
MNK					MLR		MLR		
	comp=N,100nm,22.0s								
MNK					MLR		MLR		
	comp=Z,84nm,22.0s								
MNK					MLR		MLR		
	comp=E,84nm,21.0s								
KSAR	**Wonju Array Be**	**77.84**	**45**		P		**P**	**15 12 40.2**	**-1.5**
KSAR	**Wonju Array Be**	**77.84**	**45**		P		**P**	**15 12 40.2**	**-1.5**
JNU	**Nakatsue**	**77.85**	**50**		LR		LR	15 47 43.6	
	comp=E,304nm,19.3s,baz=220,slow=36								
KSRS	**Korea Array**	**77.87**	**45**		P		**P**	**15 12 39.6**	**-2.2**
	comp=E,2.0nm,0.8s,baz=242,slow=5.4,SNR=8.4								
KSRS					LR		LR	15 46 14.3	
	comp=E,118nm,20.9s,baz=235,slow=35								
	comp=E,2.0nm,0.8s								
PMG	**Port Moresby**	**77.88**	**96**		LR		LR	15 45 11.5	
	comp=E,274nm,20.2s,baz=260,slow=34								
JAVC	**Velka Javorina**	**77.98**	**329**		*e*P		**P**	**15 12 43.3**	**+1.0**
ARSA	**Arzberg**	**78.03**	**327**		P		**P**	**15 12 42.1**	**-0.5**
ARSA					IAmb		IAmb	15 12 56.2	
	comp=Z,8.4nm,1.0s								
MORC	**Moravsky Berou**	**78.66**	**330**		P		**P**	**15 12 46.4**	**+0.4**
MORC					pmax		pmax		
	comp=Z,21nm,1.8s								
MORC	**Moravsky Berou**	**78.66**	**330**		P		**P**	**15 12 46.4**	**+0.4**
MORC					IAmb		IAmb	15 12 47.3	
	comp=Z,21nm,1.8s								
MORC	**Moravsky Berou**	**78.66**	**330**		*e*P		**P**	**15 12 46.1**	**+0.1**
MORC	**Moravsky Berou**	**78.66**	**330**		P		**P**	**15 12 46.4**	**+0.4**
KRUC	**Moravsky**	**78.75**	**329**		*e*P		**P**	**15 12 46.7**	**+0.3**
VRAC	**Vranov**	**78.81**	**329**		*e*P		**P**	**15 12 47.2**	**+0.4**
KRLC	**Kraliky**	**79.22**	**330**		P		**P**	**15 12 50.0**	**+0.9**
KLMR	**Klimovskoe**	**79.63**	**347**		*e*P		**P**	**15 12 49.3**	**-1.6**
KLMR					pmax		pmax		
	comp=Z,18nm,1.3s								
KLMR					MLR		MLR		
	comp=Z,146nm,18.0s								
CN2	**Changchun**	**79.67**	**39**		P		**P**	**15 12 51.4**	**-0.2**
CN2					S		**S**	**15 22 54.5**	**+0.5**
CN2					SS		**SS**	**15 28 05.8**	**+2.9**
CN2					L		L		
	comp=Z,210nm,20.0s								
CN2					L		L		
	comp=Z,300nm,20.0s								
CN2					L		L		
	comp=Z,380nm,22.0s								
HIA	**Hailar**	**79.74**	**32**		P		**P**	**15 12 51.7**	**-0.2**
HIA					pmax		pmax		
	comp=Z,8.0nm,0.8s								
HIA	**Hailar**	**79.74**	**32**		P		**P**	**15 12 51.7**	**-0.2**
HILR	**Hailar Array B**	**79.93**	**32**		P		**P**	**15 12 52.3**	**-0.7**
	comp=Z,5.2nm,0.7s,baz=193,slow=6.1,SNR=5.9								
	comp=Z,5.2nm,0.7s								
GERES	**GERESS Array B**	**79.99**	**327**		P		**P**	**15 12 52.9**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=134,slow=5.8,SNR=3.8								
	comp=Z,0.2nm,0.6s								
GERES	**GERESS Array B**	**79.99**	**327**		P		**P**	**15 12 53.5**	**+0.1**
GERES	**GERESS Array B**	**79.99**	**327**		P		**P**	**15 12 53.5**	**+0.1**
KHC	**Kasperske Hory**	**80.23**	**328**		P		**P**	**15 12 54.6**	**+0.1**
KHC					pmax		pmax		
	comp=Z,6.0nm,1.2s								
KHC	**Kasperske Hory**	**80.23**	**328**		P		**P**	**15 12 54.6**	**+0.1**
DAVOX	**Davos/Dischmat**	**80.83**	**324**		LR		LR	15 51 10.6	
	comp=Z,22nm,18.2s,baz=88,slow=38								
BRG	**Berggiesshubel**	**81.13**	**329**		*e*P		**P**	**15 13 00.7**	**+1.5**
BRG					Amp			15 13 01.9	
	comp=Z,9.6nm,1.5s								
BRG	**Berggiesshubel**	**81.13**	**329**		S		**S**	**15 23 17.0**	**+8.0**
NKC	**Novy Kostel**	**81.48**	**328**		P		**P**	**15 13 02.2**	**+0.9**
BNX	**BinXian**	**81.89**	**38**		*e*P		**P**	**15 13 03.1**	**-0.3**
BNX					pmax		pmax		
	comp=Z,6.0nm,1.2s								
BNX					pmax		pmax		
	comp=Z,130nm,8.1s								
SENIN	**Lac Senin/Sane**	**82.08**	**323**		P		**P**	**15 13 04.0**	**-0.7**
GUMO	**Guam**	**82.15**	**74**		LR		LR	15 46 20.8	
	comp=Z,55nm,20.8s,baz=264,slow=33								
MOX	**Moxa**	**82.16**	**328**		P		**P**	**15 13 05.3**	**+0.5**
BFO	**Black Forest**	**82.57**	**325**		P		**P**	**15 13 06.9**	**-0.1**
BFO					pmax		pmax		
	comp=Z,25nm,1.8s								
BFO	**Black Forest**	**82.57**	**325**		P		**P**	**15 13 06.9**	**-0.1**
BFO					IAmb		IAmb	15 13 08.9	
	comp=Z,25nm,1.8s								
MDJ	**Mudanjiang**	**82.62**	**40**		P		**P**	**15 13 06.6**	**-0.7**
KRVT	**Keravat (AS076**	**83.85**	**93**		LR		LR	15 47 22.9	
	comp=Z,34nm,20.6s,baz=149,slow=33								
MDT	**Midelt**	**83.91**	**306**		LR		LR	15 51 26.0	
	comp=Z,280nm,19.6s,baz=100,slow=36								
USA0B	**Ussuriysk Arra**	**83.91**	**41**		*e*P		**P**	**15 13 14.2**	**+0.3**
USRK	**Ussuriysk Ar.**	**83.91**	**41**		P		**P**	**15 13 11.8**	**-2.1**
	comp=Z,4.8nm,0.9s,baz=245,slow=6.3,SNR=7.5								
USRK					LR		LR	15 51 52.1	
	comp=Z,196nm,18.6s,baz=227,slow=37								
	comp=Z,4.8nm,0.9s								
USRK	**Ussuriysk Ar.**	**83.91**	**41**		P		**P**	**15 13 12.2**	**-1.7**
USRK	**Ussuriysk Ar.**	**83.91**	**41**		P		**P**	**15 13 12.2**	**-1.7**
JCJ	**Chichijima**	**84.30**	**60**		LR		LR	15 46 39.4	
	comp=Z,107nm,18.6s,baz=326,slow=33								
MJAR	**Matsushiro Arr**	**84.77**	**50**		P		**P**	**15 13 17.5**	**-1.0**
	comp=Z,3.9nm,1.0s,baz=230,slow=5.1,SNR=7.8								
MJAR					LR		LR	15 50 39.2	
	comp=Z,195nm,20.3s,baz=227,slow=35								
	comp=Z,3.9nm,1.0s								
MJAR	**Matsushiro Arr**	**84.77**	**50**		P		**P**	**15 13 17.5**	**-1.0**
MJAR					pmax		pmax		
	comp=Z,26nm,1.7s								
MJAR	**Matsushiro Arr**	**84.77**	**50**		P		**P**	**15 13 17.5**	**-1.0**
ZEA	**Zeya**	**86.17**	**31**		*e*P		**P**	**15 13 25.3**	**+0.3**
ZEA					pmax		pmax		
	comp=Z,10.0nm,1.1s								
ZEA					MLR		MLR		
	comp=E,100nm,17.0s								
ZEA					MLR		MLR		
	comp=N,100nm,14.0s								
ZEA					MLR		MLR		
	comp=Z,100nm,15.0s								
ESDC	**Sonseca Array**	**86.18**	**313**		P		**P**	**15 13 24.9**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=110,slow=4.1,SNR=8.9								
ESDC					LR		LR	15 54 34.5	
	comp=Z,91nm,18.1s,baz=127,slow=38								
	comp=Z,2.2nm,0.9s								
ESDC	**Sonseca Array**	**86.18**	**313**		P		**P**	**15 13 25.7**	**+0.2**
NRIK	**Noril'sk**	**86.21**	**7**		LR		LR	15 53 37.5	
	comp=Z,114nm,19.4s,baz=188,slow=37								
RPZ	**Rata Peaks**	**88.83**	**135**		LR		LR	15 46 26.9	
	comp=Z,37nm,18.7s,baz=278,slow=31								
LANU	**Lannavaara**	**89.83**	**345**		*e*P		P	15 13 51.7	+9.4
HNR	**Honiara**	**90.05**	**100**		LR		LR	15 54 12.8	
	comp=Z,11nm,18.4s,baz=314,slow=36								
ARCES	**ARCESS Array B**	**90.11**	**346**		LR		LR	15 56 02.9	
	comp=Z,40nm,19.1s,baz=114,slow=37								
SALU	**Saltoluokta**	**90.29**	**343**		*e*P		P	15 13 53.4	+8.9
ASAJ	**Asahikawa**	**90.78**	**44**		LR		LR	15 52 54.5	
	comp=Z,136nm,21.7s,baz=253,slow=35								
PMSA	**Palmer Station**	**91.51**	**199**		LR		LR	15 47 31.7	
	comp=Z,174nm,20.0s,baz=116,slow=31								
YAK	**Yakutsk**	**91.72**	**25**		LR		LR	15 54 57.4	
	comp=Z,312nm,21.1s,baz=232,slow=36								
URZ	**Urewera**	**95.17**	**132**		LR		LR	15 50 02.3	
	comp=Z,137nm,18.3s,baz=261,slow=31								
TIXI	**Tiksi**	**96.50**	**16**		LR		LR	15 57 44.5	
	comp=Z,361nm,21.9s,baz=233,slow=36								
SPITS	**Spitsbergen Ar**	**98.09**	**351**		LR		LR	16 02 05.2	
	comp=Z,90nm,19.9s,baz=108,slow=38								
ILAR	**Eielson Array**	**125.96**	**17**		PKP		**PKPdf**	**15 19 45.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=276,slow=2.8,SNR=4.4								
ILAR	**Eielson Array**	**125.96**	**17**		PKIKP		**PKPdf**	**15 19 45.3**	**-0.3**
ILAR	**Eielson Array**	**125.96**	**17**		PKPdf		**PKPdf**	**15 19 45.3**	**-0.3**
I30M	**Mount Dempster**	**128.19**	**12**		PKPdf		**PKPdf**	**15 19 50.0**	**-0.1**
PPT2	**Papeete2**	**130.80**	**131**		*e*LR		LR	16 01 12.3	
	comp=Z,129nm,28.2s								
PPT2					*e*LR		LR	16 01 26.8	
	comp=Z,140nm,27.5s								
NEW	**Newport**	**147.51**	**5**		PKPbc		**PKPbc**	**15 20 27.5**	**-0.8**
	comp=Z,8.6nm,1.1s,baz=353,slow=3.9,SNR=11								
NEW	**Newport**	**147.51**	**5**		PKP2		**PKPdf**	**15 20 26.4**	**+0.7**
NEW	**Newport**	**147.51**	**5**				**PKPdf**	**15 20 26.4**	**+0.7**
PDAR	**Pinedale Array**	**153.06**	**355**		PKPbc		**PKPbc**	**15 20 40.4**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=54,slow=2.6,SNR=12								
PDAR	**Pinedale Array**	**153.06**	**355**		PKPdf		**PKPdf**	**15 20 33.4**	**-1.4**
NVAR	**Mina Array Bea**	**157.01**	**11**		PKPab		**PKPab**	**15 21 09.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=300,slow=3.3,SNR=4.9								
NVAR	**Mina Array Bea**	**157.01**	**11**		PKPdf		**PKPdf**	**15 20 40.0**	**-0.4**
NVAR					PKPab		**PKPab**	**15 21 09.3**	**-1.1**
TXAR	**Lajitas Array**	**164.19**	**329**		PKP		**PKPdf**	**15 20 47.9**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=298,slow=2.7,SNR=4.9								
TXAR					PKPab		**PKPab**	**15 21 40.6**	**-1.1**
	comp=Z,0.8nm,1.1s,baz=114,slow=3.1,SNR=3.6								

NAO ***15*** *15:02:32.0,35°.94N×23°.68E,h10km,MB3.3*
IDC ***15*** *15:02:48.7±8.2,37°.57N×20°.91E,h0km,mb3.4/6, mbtmp3.4/6,MS2.9/1,Error ellipse: s-maj=157.2km s-min=36.0km az=34.0*
THE ***15*** *15:02:49.3,37°N±2°×2°1E±°,h6km±3km,M3.1/16, MLh3.1/16*
ATH ***15*** *15:02:50.0,37°.34N×20°.67E,h8km,ML3.3/52,Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 15 15:02:49.4±1.2,37.33N±0°.03×20.67E±0°.03,h11km±8km, n107,σ0°81/173,mb3.5/6,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.40**	**20**	P		P	**Pb**	**15 02 58.2**	**-0.4**
LTHK				S		S	**Sg**	**15 03 03.4**	**+0.6**
KYPS	**Kipseli, Zakin**	**0.50**	**14**	P		P	**Pb**	**15 03 00.3**	**0.0**
KYPS				S		S	**Sg**	**15 03 06.3**	**+0.3**
ORTH	**Orthonies,Zaky**	**0.52**	**3**	P		P	**Pg**	**15 02 60.0**	**+0.3**
ORTH				S		S	**Sb**	**15 03 08.0**	**-0.2**
ORTH	**Orthonies,Zaky**	**0.52**	**3**	P		P	**Pb**	**15 03 00.1**	**-0.5**
ORTH				S		S	**Sg**	**15 03 07.2**	**+0.7**
CLEM	**Kyllini,Ilia,G**	**0.67**	**34**	P		P	**Pb**	**15 03 03.1**	**-0.1**
CLEM				S		S	**Sb**	**15 03 11.9**	**-0.5**
RTZL	**Ratzakli, Kefa**	**0.75**	**6**	P		P	**Pg**	**15 03 04.1**	**+0.1**
RTZL				S		S	**Sb**	**15 03 16.0**	**+1.3**
RTZL	**Ratzakli, Kefa**	**0.75**	**6**	P		P	**Pg**	**15 03 03.9**	**0.0**
RTZL				S		S	**Sb**	**15 03 14.3**	**-0.4**
LCHA	**Lechaina**	**0.77**	**38**	P		P	**Pb**	**15 03 05.1**	**+0.2**
LCHA				S		S	**Sg**	**15 03 14.6**	**+0.2**
ZARO	**Zacharo**	**0.80**	**78**	P		P	**Pb**	**15 03 05.4**	**+0.1**
ZARO				S		S	**Sb**	**15 03 16.0**	**-0.1**
KFL1	**Kefalonia,Entr**	**0.84**	**351**	P		P	**Pb**	**15 03 06.2**	**+0.1**
KFL1				S		S	**Sb**	**15 03 18.0**	**+0.5**
VLS	**Valsamata**	**0.85**	**356**	P		P	**Pb**	**15 03 06.2**	**0.0**
VLS				S		S	**Sn**	**15 03 19.2**	**-0.5**
VLS	**Valsamata**	**0.85**	**356**	P		P	**Pg**	**15 03 05.8**	**+0.1**
VLS				S		S	**Sb**	**15 03 18.1**	**+0.5**
AMT	**Artemida-Makis**	**0.85**	**76**	P		P	**Pg**	**15 03 05.6**	**-0.4**
AMT	**Artemida-Makis**	**0.85**	**76**	P		P	**Pg**	**15 03 05.9**	**0.0**
AMT				S		S	**Sb**	**15 03 18.1**	**+0.3**
ARG2	**Argostoli**	**0.86**	**351**	P		P	**Pg**	**15 03 06.1**	**+0.1**
ARG2				S		S	**Sb**	**15 03 18.3**	**+0.5**
SMHA	**Samh**	**0.92**	**359**	P		P	**Pg**	**15 03 06.5**	**-0.7**
SMHA				S		S	**Sg**	**15 03 19.0**	**-0.1**
PYL1	**Pylos**	**0.92**	**116**	P		P	**Pg**	**15 03 06.8**	**-0.4**
PYL1				S		S	**Sb**	**15 03 20.5**	**+0.9**
DMLN	**Damoulianata-K**	**0.94**	**346**	P		P	**Pb**	**15 03 07.6**	**-0.1**
DMLN	**Damoulianata-K**	**0.94**	**346**	P		P	**Pb**	**15 03 07.9**	**+0.2**
DMLN				S		S	**Sb**	**15 03 21.1**	**+1.0**
PYL	**PYLOS**	**0.96**	**116**	P		P	**Pg**	**15 03 06.8**	**-1.2**
PYL				S		S	**Sb**	**15 03 21.2**	**+0.3**
PYL	**PYLOS**	**0.96**	**116**	P		P	**Pb**	**15 03 08.4**	**+0.2**
PYL				S		S	**Sb**	**15 03 21.8**	**+0.9**
RLS	**Riolos of Patr**	**0.96**	**41**	P		P	**Pg**	**15 03 07.7**	**-0.3**
RLS				S		S	**Sb**	**15 03 21.7**	**+0.8**
MTHA	**Methoni**	**0.98**	**121**	P		P	**Pn**	**15 03 09.7**	**+0.7**
MTHA				S		S	**Sb**	**15 03 21.8**	**+0.6**
ITM	**Ithomi**	**1.02**	**98**	P		P	**Pg**	**15 03 08.3**	**-0.7**
ITM	**Ithomi**	**1.02**	**98**	P		P	**Pb**	**15 03 09.5**	**+0.4**
ITM				S		S	**Sb**	**15 03 23.4**	**+1.0**
AXS	**Araxos**	**1.03**	**33**	P		P	**Pg**	**15 03 08.8**	**-0.5**
AXS	**Araxos**	**1.03**	**33**	P		P	**Pg**	**15 03 08.8**	**-0.5**
AXS				S		S	**Sb**	**15 03 23.9**	**+1.1**
DRO	**Drossia**	**1.04**	**53**	P		P	**Pg**	**15 03 09.1**	**-0.3**
DRO	**Drossia**	**1.04**	**53**	P		P	**Pg**	**15 03 09.1**	**-0.3**
DRO				S		S	**Sb**	**15 03 23.4**	**+0.4**
VALY	**Valyra**	**1.07**	**99**	P		P	**Pg**	**15 03 09.2**	**-0.7**
VALY	**Valyra**	**1.07**	**99**	P		P	**Pg**	**15 03 09.8**	**-0.1**
VALY				S		S	**Pg**	**15 03 23.9**	**+0.1**
VSK1	**VASILIKIADES**	**1.08**	**356**	P		P	**Pg**	**15 03 09.8**	**-0.4**
FSK	**Fiskardo**	**1.13**	**356**	P		P	**Pg**	**15 03 10.3**	**-0.9**
FSK	**Fiskardo**	**1.13**	**356**	P		P	**Pn**	**15 03 11.9**	**+0.7**
FSK				S		S	**Sn**	**15 03 27.5**	**+0.8**
AAMF	**Ano Amfeia**	**1.14**	**101**	P		P	**Pn**	**15 03 11.9**	**+0.5**
AAMF				S		S	**Sb**	**15 03 27.1**	**+1.1**
MSL1	**Messolongi**	**1.20**	**30**	P		P	**Pn**	**15 03 12.5**	**+0.3**
MSL1				S		S	**Sb**	**15 03 28.5**	**+0.8**
PLEV	**Plevrona-Mesol**	**1.23**	**28**	P		P	**Pg**	**15 03 12.1**	**-1.0**
PLEV	**Plevrona-Mesol**	**1.23**	**28**	P		P	**Pg**	**15 03 12.6**	**-0.4**
PLEV				S		S	**Sn**	**15 03 30.4**	**+1.2**
PATG	**Patra B**	**1.24**	**43**	P		P	**Pn**	**15 03 13.4**	**+0.8**
PATG				S		S	**Sb**	**15 03 29.4**	**+0.7**
PATC	**Patra C**	**1.28**	**42**	P		P	**Pg**	**15 03 14.6**	**+0.7**
PATC				S		S	**Sb**	**15 03 30.2**	**+0.4**
EVGI	**Lefkada island**	**1.29**	**360**	P		P	**Pn**	**15 03 13.5**	**+0.1**
EVGI				S		S	**Sn**	**15 03 31.4**	**+0.8**
UPR	**University Cam**	**1.30**	**43**	P		P	**Pg**	**15 03 14.6**	**+0.1**
UPR				S		S	**Sg**	**15 03 31.3**	**-0.1**
RIOA	**Rio**	**1.31**	**42**	P		P	**Pb**	**15 03 14.3**	**+0.2**
RIOA				S		S	**Sb**	**15 03 30.7**	**-0.2**
KLV1	**Kalavrita**	**1.34**	**58**	P		P	**Pn**	**15 03 14.6**	**+0.4**
KLV1				S		S	**Sn**	**15 03 33.5**	**+1.5**
DRAG	**Dragano-Lefkad**	**1.35**	**357**	P		P	**Pn**	**15 03 14.8**	**+0.5**
DRAG				S		S	**Sb**	**15 03 32.4**	**+0.3**
AGRP	**Agrapidokambos**	**1.35**	**38**	P		P	**Pb**	**15 03 15.0**	**+0.2**
AGRP				S		S	**Sb**	**15 03 32.1**	**0.0**
VLX	**Vlachokerasia**	**1.37**	**88**	P		P	**Pn**	**15 03 14.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.38**	**58**	P		P	**Pn**	**15 03 14.2**	**-0.4**
KLV	**Kalavryta, Ach**	**1.38**	**58**	P		P	**Pn**	**15 03 14.7**	**+0.1**
KLV				S		S	**Sb**	**15 03 32.9**	**0.0**
NYDR	**Nydri-Lefkada**	**1.38**	**1**	P		P	**Pn**	**15 03 14.8**	**+0.2**
NYDR	**Nydri-Lefkada**	**1.38**	**1**	P		P	**Pn**	**15 03 15.1**	**+0.5**
NYDR				S		S	**Sg**	**15 03 34.3**	**+0.4**
AGEO	**AgiosGiorgios,**	**1.45**	**49**	P		P	**Pg**	**15 03 16.9**	**-0.3**
AGEO				S		S	**Sn**	**15 03 34.9**	**+0.4**
PVO	**Paravola**	**1.45**	**28**	P		P	**Pg**	**15 03 17.7**	**+0.3**
PVO				S		S	**Sg**	**15 03 35.6**	**-0.6**
LKD2	**Lefkada island**	**1.46**	**360**	P		P	**Pn**	**15 03 16.2**	**+0.5**
LKD2	**Lefkada island**	**1.46**	**360**	P		P	**Pb**	**15 03 16.8**	**+0.2**
LKD2				S		S	**Sg**	**15 03 36.5**	**+0.2**
TEME	**Temeni, Aigial**	**1.46**	**52**	P		P	**Pg**	**15 03 17.4**	**-0.1**
TEME				S		S	**Sb**	**15 03 35.8**	**+0.6**
GUR	**Goura**	**1.46**	**65**	P		P	**Pn**	**15 03 15.6**	**-0.2**
GUR	**Goura**	**1.46**	**65**	P		P	**Pn**	**15 03 16.4**	**+0.6**
GUR				S		S	**Sn**	**15 03 35.3**	**+0.3**
EFP	**Efpalio**	**1.47**	**42**	P		P	**Pb**	**15 03 16.8**	**0.0**
EFP				S		S	**Sg**	**15 03 36.3**	**-0.4**
MG00	**Magoula, Dorid**	**1.48**	**43**	P		P	**Pb**	**15 03 17.2**	**+0.2**
MG00				S		S	**Sn**	**15 03 35.6**	**+0.2**
TSLK	**Tsoukalades, L**	**1.49**	**360**	P		P	**Pg**	**15 03 17.8**	**-0.3**
TSLK				S		S	**Sg**	**15 03 37.0**	**-0.4**
PYRG	**Pyrgos, Dorida**	**1.52**	**44**	P		P	**Pg**	**15 03 18.3**	**-0.3**
PYRG				S		S	**Sg**	**15 03 37.8**	**-0.5**
SERG	**Sergoula**	**1.54**	**45**	P		P	**Pb**	**15 03 18.0**	**0.0**
SERG				S		S	**Sn**	**15 03 37.7**	**+0.7**
PSARO	**Psaromita, Dor**	**1.56**	**50**	P		P	**Pb**	**15 03 18.5**	**+0.2**
PSARO				S		S	**Sb**	**15 03 38.3**	**+0.3**
KALE	**Kalithea**	**1.58**	**47**	P		P	**Pb**	**15 03 19.1**	**+0.5**
KALE				S		S	**Sn**	**15 03 38.7**	**+0.9**
ANX	**Ano Chora**	**1.60**	**38**	P		P	**Pb**	**15 03 18.8**	**-0.3**
ANX				S		S	**Sn**	**15 03 38.4**	**-0.2**
AMPL	**Ampelaki**	**1.65**	**15**	P		P	**Pb**	**15 03 20.3**	**+0.5**
AMPL				S		S	**Sb**	**15 03 41.4**	**+0.8**
EVR	**Evrytania**	**1.82**	**29**	P		P	**Pn**	**15 03 21.6**	**+0.8**
EVR				S		S	**Sn**	**15 03 45.1**	**+1.2**
ART2	**Arta**	**1.83**	**8**	P		P	**Pn**	**15 03 22.1**	**+1.2**
ART2				S		S	**Sb**	**15 03 45.7**	**-0.2**
DLFA	**Delphi**	**1.85**	**51**	P		P	**Pn**	**15 03 21.7**	**+0.6**
DLFA				S		S	**Sn**	**15 03 45.5**	**+1.0**
VLI	**Veliai**	**1.92**	**108**	P		P	**Pn**	**15 03 23.5**	**+1.5**
VLI				S		S	**Sb**	**15 03 48.0**	**-0.3**
LTK	**Loutraki**	**1.95**	**69**	P		P	**Pn**	**15 03 23.4**	**+0.9**
LTK				S		S	**Sn**	**15 03 48.3**	**+1.3**
MET3	**Ano Fanari,Met**	**2.05**	**82**	P		P	**Pn**	**15 03 24.3**	**+0.4**
MET3				S		S	**Sn**	**15 03 51.2**	**+1.7**
TETR	**Tetrakomo, Epi**	**2.07**	**13**	P		P	**Pn**	**15 03 25.7**	**+1.5**
TETR				S		S	**Sn**	**15 03 51.1**	**+1.1**
AXAR	**Agios Charalam**	**2.13**	**47**	P		P	**Pn**	**15 03 26.3**	**+1.4**
AXAR				S		S	**Sn**	**15 03 52.8**	**+1.4**
AGG	**Agios Georgios**	**2.14**	**37**	P		P	**Pn**	**15 03 26.9**	**+1.8**
AGG				S		S	**Sn**	**15 03 53.5**	**+1.8**
MET2	**Kameni Chora,**	**2.14**	**82**	P		P	**Pn**	**15 03 25.7**	**+0.6**
MET2				S		S	**Sn**	**15 03 53.5**	**+2.0**
MET6	**Megalochori,Me**	**2.16**	**82**	P		P	**Pb**	**15 03 27.2**	**-1.2**
MET6				S		S	**Sn**	**15 03 52.3**	**+0.3**
MET5	**Makryloggos,Me**	**2.16**	**81**	P		P	**Pn**	**15 03 26.1**	**+0.7**
MET5				S		S	**Sn**	**15 03 54.1**	**+1.9**
MET4	**Agioi Theodoro**	**2.19**	**82**	P		P	**Pn**	**15 03 26.5**	**+0.7**
MET4				S		S	**Sn**	**15 03 54.5**	**+1.6**
KTHA	**Kythira Island**	**2.20**	**118**	P		P	**Pn**	**15 03 27.4**	**+1.5**
KTHA				S		S	**Sn**	**15 03 55.2**	**+2.0**
PRMD	**Pramanda**	**2.22**	**9**	P		P	**Pn**	**15 03 27.3**	**+1.1**
VIL2	**Platees**	**2.24**	**66**	P		P	**Pn**	**15 03 27.5**	**+1.0**
LKR	**Lokris**	**2.27**	**54**	P		P	**Pn**	**15 03 28.0**	**+1.2**
JAN	**Janina**	**2.33**	**4**	P		P	**Pn**	**15 03 28.8**	**+1.1**
STFN	**Stefani**	**2.43**	**69**	P		P	**Pn**	**15 03 29.7**	**+0.6**
THL	**Klokotos Trika**	**2.47**	**25**	P		P	**Pn**	**15 03 31.0**	**+1.4**
KEK	**Kerkira**	**2.47**	**344**	P		P	**Pn**	**15 03 30.5**	**+0.9**
VLY	**Voula,Athens**	**2.54**	**77**	P		P	**Pn**	**15 03 30.5**	**-0.1**
ATHU	**Athens Univers**	**2.56**	**75**	P		P	**Pn**	**15 03 31.9**	**+1.1**
ANKY	**Antikythira Is**	**2.58**	**124**	P		P	**Pn**	**15 03 32.3**	**+1.2**
DION	**Dionisos Attik**	**2.70**	**73**	P		P	**Pn**	**15 03 33.4**	**+0.6**
NEO	**Neok

W35A Tecumseh 1.79 165 Pn Pn 15 07 52.9 +1.3
R32A Long Quarter, 1.83 327 Pn Pb 15 07 53.6 -0.8
X34A Smith Ranch, M 2.30 188 Pn Pn 15 07 59.5 +0.8
X34A IAmb_Lg 15 08 35.2
comp=Z,74nm,0.8s
KSU1 Kansas State U 2.31 16 Pn Pn 15 08 00.5 +1.8
KSU1 Kansas State U 2.31 16 IAmb_Lg 15 08 36.6
comp=Z,87nm,0.7s
WMOK Wichita Mounta 2.40 207 Pn Pn 15 08 01.2 +1.2
U38A Gravette 2.50 99 Pn Pn 15 08 02.1 +0.8
CBKS Cedar Bluff 2.64 317 Pn Pn 15 08 04.5 +1.2
HHAR Hobbs 2.88 101 Pn Pn 15 08 08.0 +1.3
LOOK Love County 2.90 176 Pn Pn 15 08 07.7 +0.9
WTFS Witchita Falls 3.22 195 Pn Pn 15 08 12.5 +1.2
S39A Bolivar 3.38 75 Pn Pn 15 08 14.9 +1.4
FW06 Azle 3.91 181 Pn Pn 15 08 21.6 +1.0
MIAR Mount Ida 3.92 125 Pn Pn 15 08 21.8 +1.0
PH02 Texas Public H 3.94 249 Pn Pn 15 08 23.3 +2.1
PH02 IAmb_Lg 15 09 36.1
comp=Z,59nm,0.9s
AMTX Amarillo 3.98 241 Pn Pn 15 08 23.1 +1.4
P38A Dawn 4.12 47 Pn Pn 15 08 25.0 +1.4
PLPT Palo Pinto 4.13 190 Pn Pn 15 08 25.0 +1.3
Z38A Mt. Pleasant 4.14 150 Pn Pn 15 08 25.1 +1.2
APMT Aspermont 4.18 212 Pn Pn 15 08 26.0 +1.6
N35A Tabor 4.21 19 Pn Pn 15 08 26.6 +1.7
RTBA Rita Blanca 4.28 266 Pn Pn 15 08 27.2 +1.3
RTBA IAmb_Lg 15 09 41.3
comp=Z,48nm,0.8s
DKNS Dickens 4.29 223 Pn Pn 15 08 27.9 +1.9
DKNS IAmb_Lg 15 09 47.1
comp=Z,41nm,0.9s
TREL Terrell 4.29 165 IAmb_Lg 15 09 41.7
comp=Z,47nm,0.8s
R40A Maddies Statio 4.34 70 Pn Pn 15 08 28.3 +1.7
R40A IAmb_Lg 15 09 49.4
comp=Z,46nm,0.8s
FCAR Ozark Folk Cen 4.41 101 Pn Pn 15 08 28.9 +1.4
FCAR IAmb_Lg 15 09 39.2
comp=Z,46nm,0.7s
X40A Basin Creek Fa 4.45 121 Pn Pn 15 08 29.7 +1.6
X40A IAmb_Lg 15 09 53.5
comp=Z,39nm,0.7s
WHAR Wooly Hollow 4.47 109 Pn Pn 15 08 29.3 +0.9
WHAR IAmb_Lg 15 09 41.7
comp=Z,72nm,0.8s
FW13 Cleburne 4.53 180 Pn Pn 15 08 30.9 +1.7
BGNE Belgrade 4.55 353 Pn Pn 15 08 31.5 +2.0
KSCO Kaye Shedlock' 4.61 299 Pn Pn 15 08 32.1 +1.6
KSCO IAmb_Lg 15 09 59.7
comp=Z,45nm,0.9s
ABTX Abilene, Hawle 4.62 204 Pn Pn 15 08 31.4 +0.9
UALR University of 4.65 115 IAmb_Lg 15 09 48.2
comp=Z,27nm,0.7s
SN07 Snyder 07 4.73 218 IAmb_Lg 15 09 51.1
comp=Z,28nm,0.9s
WLAR White Oak Lake 4.77 131 IAmb_Lg 15 09 50.5
comp=Z,54nm,0.7s
WHTX Lake Whitney, 4.88 180 Pn Pn 15 08 35.2 +1.1
P40A Paris 5.00 57 Pn Pn 15 08 36.9 +1.2
P40A IAmb_Lg 15 10 08.7
comp=Z,70nm,0.8s
POST Post 5.06 222 IAmb_Lg 15 10 12.9
comp=Z,35nm,1.0s
CCM Cathedral Cave 5.07 75 Pn Pn 15 08 38.0 +1.4
CCM Cathedral Cave 5.07 75 Pn 15 08 38.3 +1.7
CCM IAmb_Lg 15 10 05.2
comp=Z,70nm,0.7s
T42A Van Buren 5.09 86 Pn Pn 15 08 38.1 +1.2
T42A IAmb_Lg 15 10 09.4
comp=Z,33nm,0.7s
N38A Joes South For 5.10 39 Pn Pn 15 08 37.8 +0.7
N38A IAmb_Lg 15 10 15.1
comp=Z,70nm,0.7s
LCAR Lake Charles 5.13 97 Pn Pn 15 08 38.5 +1.0
LCAR IAmb_Lg 15 10 05.2
comp=Z,26nm,0.8s
MSTX Muleshoe 5.23 238 IAmb_Lg 15 10 18.4
comp=Z,31nm,0.8s
Z41A Richland Creek 5.25 132 IAmb_Lg 15 10 19.0
comp=Z,59nm,0.7s
OGNE Ogallala 5.41 320 Pn Pn 15 08 43.1 +1.7
CCAR Cane Creek 5.50 121 IAmb_Lg 15 10 21.9
comp=Z,30nm,0.7s
T25A Trinidad 5.58 275 Pn Pn 15 08 44.8 +1.0
T25A IAmb_Lg 15 10 27.3
comp=Z,34nm,0.8s
NATX Nacogdoches 5.61 155 IAmb_Lg 15 10 32.3
comp=Z,57nm,0.8s
PBMO Poplar Bluff 5.63 89 IAmb_Lg 15 10 17.7
comp=Z,60nm,0.9s
HBAR Harrisburg 5.65 102 IAmb_Lg 15 10 29.0
comp=Z,57nm,0.7s
FVM French Village 5.69 77 Pn Pn 15 08 46.6 +1.4
BRDY Brady 5.73 193 Pn Pn 15 08 45.9 +0.1
BRDY IAmb_Lg 15 10 31.5
comp=Z,22nm,0.8s
SGCY Sterling City 5.82 213 Pn Pn 15 08 48.3 +1.3
SGCY IAmb_Lg 15 10 36.7
comp=Z,58nm,1.1s
128A Castleberry Fa 5.94 226 Pn Pn 15 08 49.9 +1.2
SCIA State Center 5.99 32 Pn Pn 15 08 50.2 +1.0
SCIA IAmb_Lg 15 10 37.1
comp=Z,56nm,0.9s
435B Jarrell 6.09 181 IAmb_Lg 15 10 46.9
comp=Z,35nm,0.8s
N41A Harden Midland 6.41 51 Pn Pn 15 08 55.8 +0.8
TMB01 Midkiff 6.47 218 IAmb_Lg 15 11 02.5
comp=Z,4.8nm,0.7s
SDCO Great Sand Dun 6.48 280 Pn Pn 15 08 57.9 +1.6
JCT Junction City 6.69 198 IAmb_Lg 15 11 06.1
comp=Z,48nm,1.1s
OZNA Ozona 6.69 208 Pn Pn 15 08 59.2 +0.3
OZNA IAmb_Lg 15 11 10.7
comp=Z,22nm,0.8s
P43A Skaggs, Pawnee 6.81 64 Pn Pn 15 09 01.4 +0.8
ECSD EROS Data Cent 6.87 5 Pn Pn 15 09 01.5 +0.1
OXF Oxford 6.95 108 IAmb_Lg 15 11 06.5
comp=Z,29nm,0.9s
CLNB Carlsbad 7.03 231 Pn Pn 15 09 04.8 +1.1
ISCO Idaho Springs 7.05 297 IAmb_Lg 15 11 16.7
comp=Z,19nm,0.7s
L40A Anamosa 7.06 41 Pn Pn 15 09 04.6 +0.7
L40A IAmb_Lg 15 11 11.1
comp=Z,34nm,0.9s
MNHN Monahans 7.07 220 Pn Pn 15 09 04.7 +0.4
MNHN IAmb_Lg 15 11 21.6
comp=Z,17nm,1.0s
TPB06 Permian Basin 7.08 224 IAmb_Lg 15 11 19.5
comp=Z,22nm,0.8s
HDIL Hopedale 7.35 58 Pn Pn 15 09 08.5 +0.6
HNDO Hondo 7.50 192 Pn Pn 15 09 09.4 -0.7
HNDO IAmb_Lg 15 11 27.4
comp=Z,23nm,0.8s
TPB13 Reeves - Culbe 7.51 227 IAmb_Lg 15 11 32.9
comp=Z,38nm,0.9s
ANMO Albuquerque 7.56 258 Pg Pb 15 09 38.5 +6.4
comp=Z,0.3nm,0.3s,baz=72,slow=19,SNR=5.5
ANMO Lg Lg 15 11 17.7
comp=Z,2.6nm,0.3s,baz=360,slow=21,SNR=10
ALQ Albuquerque 7.57 258 IAmb_Lg 15 11 20.6
comp=Z,7.8nm,0.8s
ALQ IAmb_Lg 15 11 20.7
comp=Z,7.8nm,0.8s
TASM ASL Pad, Albuq 7.57 258 IAmb_Lg 15 11 27.1
comp=Z,12nm,1.2s
TASM IAmb_Lg 15 11 27.2
comp=Z,13nm,1.2s
SUSD Miller 7.63 352 IAmb_Lg 15 11 37.2
comp=Z,40nm,0.8s
I37A Lemond, Waseca 7.76 22 IAmb_Lg 15 11 48.6
comp=Z,22nm,0.7s
TPB28 7.82 230 IAmb_Lg 15 11 51.9
comp=Z,7.0nm,0.8s
L42A Oliver, Polo 7.89 47 Pn 15 09 14.5 -0.9
L42A IAmb_Lg 15 11 34.2
comp=Z,39nm,0.7s
TPB01 Permian Basin 7.93 223 IAmb_Lg 15 11 51.2
comp=Z,15nm,0.8s
SAND Sanderson 7.94 211 Pn Pn 15 09 16.1 -0.1
SAND IAmb_Lg 15 11 50.2
comp=Z,17nm,0.9s
JFWS Jewell Farm 8.17 40 Pn Pn 15 09 18.1 -1.1
JFWS Jewell Farm 8.17 40 IAmb_Lg 15 11 43.3
comp=Z,26nm,0.7s
Y22A Socorro 8.31 252 IAmb_Lg 15 12 03.0
comp=Z,17nm,0.8s
MNTX Cornudas Mount 8.36 234 Pn Pn 15 09 22.7 +0.8
MNTX IAmb_Lg 15 12 09.0
comp=Z,15nm,0.9s
HAYD Hayden 8.49 298 IAmb_Lg 15 12 03.0
comp=Z,13nm,0.9s
Z47A Carrollton 8.52 113 IAmb_Lg 15 12 07.3
comp=Z,14nm,1.0s
I40A Norwalk 8.72 35 IAmb_Lg 15 12 00.2
comp=Z,22nm,0.9s
RSSD Black Hills 8.79 327 Pn Pn 15 09 30.1 +2.1
RSSD IAmb_Lg 15 12 09.3
comp=Z,20nm,0.9s
SPMN Marine on St. 9.04 21 IAmb_Lg 15 12 21.3
comp=Z,11nm,0.8s
K22A Casper 9.05 312 Pn Pn 15 09 31.3 -0.1
K22A IAmb_Lg 15 12 20.9
comp=Z,22nm,0.8s
TXAR Lajitas Array 9.16 216 Pn Pn 15 09 33.4 +0.5
comp=Z,0.2nm,0.3s,baz=39,slow=11,SNR=12
TXAR Pg 15 10 07.2
comp=Z,0.5nm,0.3s,baz=32,slow=15,SNR=5.7
TXAR Lg Lg 15 12 10.4
comp=Z,0.9nm,0.3s,baz=31,slow=27,SNR=7.8
comp=Z,0.3nm,0.4s
TXAR Lajitas Array 9.16 216 Pn Pn 15 09 32.6 -0.3
I42A Draeger Farm, 9.55 40 IAmb_Lg 15 12 49.1
comp=Z,25nm,1.1s
PDAR Pinedale Array 11.01 306 Pn Pn 15 09 57.7 -0.6
comp=Z,0.1nm,0.3s,baz=123,slow=13,SNR=2.9
PDAR Pg 15 10 42.8
comp=Z,0.3nm,0.3s,baz=110,slow=20,SNR=7.4
PDAR Lg Lg 15 12 59.0
comp=Z,0.4nm,0.3s,baz=105,slow=29,SNR=7.9
comp=Z,0.2nm,0.4s
TKL Tuckaleechee C 11.11 92 Lg Lg 15 13 05.7
comp=Z,0.7nm,0.3s,baz=152,slow=22,SNR=4.9
ULM Lac du Bonnet 13.40 4 Pn Pn 15 10 27.4 -3.4
comp=Z,3.2nm,0.8s,baz=180,slow=14,SNR=1.8
SADO Sadowa 15.91 55 Lg Lg 15 15 34.9
comp=Z,0.3nm,0.3s,baz=5.9,slow=22,SNR=4.1

*IDC **15** 15:11:41.1±0.6, 15.°78S×67.°36E, h0km, mb4.1/18, mbtmp4.1/18, MS4.2/18, Error ellipse: s-maj=19.9km s-min=17.4km az=98.0*
*NEIC **15** 15:11:43.2±2.1, 15.°9S±0.°1×67.°3E±0.°1, h10km±1km, mb4.7/33, Error ellipse: s-maj=21.2km s-min=20.2km az=134.0*
*GCMT **15** 15:11:45.2±0.2, 15.°78S±0.°03×67.°23E±0.°02, h18km, MW5.0/101, Moment Tensor Solution. s32,c34; s101,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.86±.22; Mθθ1.12±.12; Mϕϕ2.74±.14; Mrθ0.76±.36; Mθϕ-0.83±.07; Mϕr-0.46±.32; Best double couple: M₀3.57700×10^16 NP1:ϕ₁163.00000°, δ39.00000°, λ-80.00000°. NP2:ϕ₂330.00000°, δ51.00000°, λ-98.00000°. Principal axes: T 3.1650, Plg6.0000°, Azm66.0000°; N 0.8240, Plg6.0000°, Azm335.0000°; P -3.9890, Plg82.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:11:42.7±0.5, 15.°8S±0.°1×67.°3E±0.°1, h10km, n108, σ0°86/83, mb4.5/34, MS4.2/19, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.59**	**33**	T	T	15 23 48.8	
	baz=212,slow=75,SNR=807						
H08S2	**Diego Garcia H**	**9.60**	**33**	T	T	15 23 52.7	
	baz=212,slow=75,SNR=816						
H08S3	**Diego Garcia H**	**9.61**	**33**	T	T	15 23 51.7	
	baz=212,slow=75,SNR=1917						
PALK	**Pallekele**	**26.52**	**31**	LR	LR	15 25 07.8	
	comp=Z,381nm,20.8s,baz=213,slow=30						
H04N2	**CROZET ISLANDS**	**32.90**	**200**	T	T	15 53 04.3	
	baz=30,slow=75,SNR=103						
H04N1	**CROZET ISLANDS**	**32.91**	**200**	T	T	15 53 13.3	
	baz=30,slow=75,SNR=124						
H04N3	**CROZET ISLANDS**	**32.92**	**200**	T	T	15 53 04.0	
	baz=30,slow=75,SNR=116						
KMBO	**Kilima Mbogo**	**33.03**	**293**	LR	LR	15 28 44.9	
	comp=Z,301nm,20.2s,baz=102,slow=31						
ATD	**Arta Tunnel**	**36.39**	**317**	LR	LR	15 32 09.4	
	comp=Z,15nm,19.3s,baz=142,slow=34						
MATP	**Matopo**	**37.09**	**257**	LR	LR	15 32 29.0	
	comp=Z,307nm,18.3s,baz=88,slow=34						
LSZ	**Lusaka**	**37.64**	**265**	LR	LR	15 33 01.1	
	comp=Z,823nm,19.4s,baz=130,slow=34						
MBAR	**Mbarara**	**39.10**	**289**	LR	LR	15 32 51.2	
	comp=Z,413nm,19.7s,baz=94,slow=32						
LBTB	**Lobatse**	**39.99**	**250**	LR	LR	15 33 21.5	
	comp=Z,725nm,19.2s,baz=86,slow=32						
LEM	**Lembang**	**40.47**	**82**	LR	LR	15 32 43.3	
	comp=Z,396nm,19.6s,baz=194,slow=31						
BOSA	**Boshof**	**40.74**	**244**	P	**P**	**15 19 24.9**	**+0.7**
	2.2nm,0.8s,baz=43,slow=7.7,SNR=3.4						
BOSA				LR	LR	15 32 57.5	
	comp=Z,344nm,20.9s,baz=62,slow=31 2.2nm,0.8s						
BOSA	**Boshof**	**40.74**	**244**	P	**P**	**15 19 22.8**	**-1.4**
BOSA				IAmb	IAmb	15 19 48.9	
	comp=Z,25nm,1.5s						
BRDH	**Bariadhala**	**45.09**	**33**	LR	LR	15 39 35.2	
	comp=Z,218nm,18.0s,baz=179,slow=37						
SUR	**Sutherland**	**45.15**	**240**	LR	LR	15 35 26.1	
	comp=Z,374nm,21.1s,baz=68,slow=32						
H01W3	**Cape Leeuwin H**	**45.92**	**123**	T	T	16 09 10.1	
	baz=282,slow=75,SNR=24						
H01W2	**Cape Leeuwin H**	**45.93**	**123**	T	T	16 09 11.8	
	baz=282,slow=75,SNR=30						
H01W1	**Cape Leeuwin H**	**45.94**	**123**	T	T	16 09 14.4	
	baz=282,slow=75,SNR=27						
CM31	**Chiang Mai Arr**	**46.18**	**44**	P	**P**	**15 20 07.2**	**-0.8**
CM31				IAmb	IAmb	15 20 12.0	
	comp=Z,5.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**46.18**	**44**	P	**P**	**15 20 07.4**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=238,slow=9.4,SNR=13						
CMAR				LR	LR	15 36 42.6	
	comp=Z,371nm,21.2s,baz=225,slow=33 comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.18**	**44**	P	**P**	**15 20 08.3**	**+0.4**
CHTO	**Chiang Mai**	**46.43**	**43**	P	**P**	**15 20 10.7**	**+0.7**
CHTO				IAmb	IAmb	15 20 13.7	
	comp=Z,7.8nm,1.2s						
TSUM	**Tsumeb**	**47.40**	**258**	LR	LR	15 39 34.0	
	comp=Z,264nm,18.1s,baz=147,slow=35						
EVN	**Everest**	**47.46**	**24**	P	**P**	**15 20 19.2**	**+0.6**
EVN				IAmb	IAmb	15 20 33.1	
	comp=Z,8.7nm,1.0s						
SHL	**Shillong**	**47.61**	**31**	P	**P**	**15 20 19.8**	**+0.5**
MORE	**Moreh**	**47.76**	**34**	P	**P**	**15 20 21.2**	**+0.9**
MORE				IAmb	IAmb	15 20 30.6	
	comp=Z,14nm,1.0s						
NWAO	**Narrogin (SRO)**	**48.11**	**120**	LR	LR	15 35 56.1	
	comp=Z,168nm,21.4s,baz=223,slow=30						
SLVN	**Son La**	**51.52**	**45**	P	**P**	**15 20 49.6**	**+0.6**
SLVN				IAmb	IAmb	15 20 53.2	
	comp=Z,6.5nm,0.9s						
MAW	**Mawson**	**51.82**	**182**	LR	LR	15 37 44.5	
	comp=Z,68nm,20.6s,baz=1.0,slow=30						
KAPI	**Kappang**	**52.57**	**84**	LR	LR	15 39 34.8	
	comp=Z,297nm,21.9s,baz=246,slow=32						
MANEM	**Manem**	**53.25**	**4**	P	**P**	**15 21 03.1**	**+1.3**
MANEM				IAmb	IAmb	15 21 05.6	
	comp=Z,9.3nm,0.8s						
GAR	**Garm**	**54.62**	**3**	P	**P**	**15 21 11.7**	**+0.1**
GAR				IAmb	IAmb	15 21 24.7	
	comp=Z,12nm,1.2s						
EIL	**Elat**	**54.95**	**325**	LR	LR	15 41 14.3	
	comp=Z,120nm,21.8s,baz=93,slow=32						
FITZ	**Fitzroy Crossi**	**55.66**	**101**	LR	LR	15 41 04.7	
	comp=Z,410nm,21.9s,baz=272,slow=32						
IUG	**Iuzhnay**	**57.74**	**2**	eP	**P**	**15 21 34.9**	**+1.0**
	comp=Z,6.0nm,0.9s						
CHM	**Chimkent**	**57.90**	**2**	eP	**P**	**15 21 36.1**	**+1.3**
DZA	**Taraz**	**58.55**	**3**	eP	**P**	**15 21 40.8**	**+1.4**
AAK	**Ala-Archa**	**58.55**	**6**	P	**P**	**15 21 38.6**	**-1.1**
KK31	**Karatay Array**	**58.72**	**3**	P	**P**	**15 21 40.1**	**-0.5**
KKAR	**Karatay Array**	**58.72**	**3**	P	**P**	**15 21 40.8**	**+0.2**
PRZ	**Przheval'sk**	**58.92**	**10**	P	**P**	**15 21 42.5**	**+0.3**
TNSS	**Tian-Shan**	**59.24**	**8**	eP	**P**	**15 21 45.4**	**+0.6**
MDOK	**Medeo**	**59.38**	**8**	eP	**P**	**15 21 46.4**	**+1.0**
AAA	**Alma-Ata**	**59.41**	**8**	eP	**P**	**15 21 46.6**	**+1.1**
SATY	**Saty**	**59.48**	**9**	eP	**P**	**15 21 47.3**	**+1.2**
	comp=Z,7.6nm,1.3s						
UZB	**Uzynbulak**	**59.67**	**10**	eP	**P**	**15 21 48.7**	**+1.3**
	comp=Z,6.1nm,1.3s						
SHLS	**Shalkode**	**59.75**	**10**	eP	**P**	**15 21 49.5**	**+1.6**
	comp=Z,5.0nm,1.7s						
EDA	**Edea**	**59.77**	**284**	P	**P**	**15 21 48.2**	**-0.4**
PDGK	**Podgornoye**	**59.92**	**10**	P	**P**	**15 21 49.1**	**0.0**
ENH	**Enshi**	**61.25**	**42**	P	**P**	**15 21 58.3**	**0.0**
TDK	**Taldyqorghan**	**61.38**	**9**	eP	**P**	**15 22 00.0**	**+1.2**
ASAR	**Alice Springs**	**62.71**	**109**	P	**P**	**15 22 07.7**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=254,slow=7.1,SNR=8.9 comp=Z,1.5nm,1.0s						
ASAR	**Alice Springs**	**62.71**	**109**	P	**P**	**15 22 07.8**	**-0.5**
WRA	**Warramunga Arr**	**63.57**	**105**	P	**P**	**15 22 14.6**	**+0.4**
	comp=Z,4.2nm,1.1s,baz=264,slow=6.0,SNR=8.5 comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**63.57**	**105**	P	**P**	**15 22 14.1**	**0.0**
MAKZ	**Makanchi**	**63.73**	**11**	P	**P**	**15 22 14.1**	**-0.5**
MAKZ				IAmb	IAmb	15 22 16.8	
	comp=Z,5.0nm,1.3s						
MKAR	**Makanchi Array**	**63.78**	**11**	P	**P**	**15 22 14.6**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=219,slow=8.7,SNR=9.0 comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**63.78**	**11**	P	**P**	**15 22 13.9**	**-1.0**
ZSN	**Zaisan**	**64.93**	**13**	eP	**P**	**15 22 23.8**	**+1.4**
AB31	**Akbulak array**	**65.12**	**355**	P	**P**	**15 22 23.1**	**-0.4**
AB31				IAmb	IAmb	15 22 25.8	
	comp=Z,8.8nm,1.4s						
ABKAR	**Akbulak array**	**65.12**	**355**	P	**P**	**15 22 22.7**	**-0.9**
KURBB	**Kurchatov Arra**	**66.90**	**8**	P	**P**	**15 22 34.6**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=203,slow=6.8,SNR=7.7 comp=Z,1.3nm,0.3s						
KURK	**Kurchatov**	**67.00**	**8**		**P**	**15 22 35.3**	**-0.3**
KURK				IAmb	IAmb	15 23 13.9	
	comp=Z,3.2nm,0.8s						
BVAR	**Borovoye Array**	**68.62**	**2**	P	**P**	**15 22 45.5**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=155,slow=7.7,SNR=7.3 comp=Z,0.9nm,0.7s						
BORK	**Borovoye**	**68.64**	**2**	P	**P**	**15 22 45.1**	**-0.8**
SNAA	**Sanae**	**68.86**	**199**	LR	LR	15 48 13.9	
	comp=Z,170nm,18.9s,baz=46,slow=32						
TORD	**Torodi Ar. Bea**	**70.97**	**290**	P	**P**	**15 23 01.6**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=134,slow=4.3,SNR=6.4 comp=Z,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**70.97**	**290**	P	**P**	**15 23 01.3**	**+0.2**
ZAA0	**Zalesovo Array**	**71.10**	**11**	P	**P**	**15 23 00.4**	**-0.6**
ZALV	**Zalesovo Beam**	**71.10**	**11**	P	**P**	**15 23 00.8**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=200,slow=5.2,SNR=11 comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**71.10**	**11**	P	**P**	**15 23 00.2**	**-0.8**
SONM	**Songino Array**	**72.37**	**26**	P	**P**	**15 23 09.7**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=238,slow=4.0,SNR=8.9 comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**72.37**	**26**	P	**P**	**15 23 09.2**	**+0.2**
AKASG	**Malin Array Be**	**74.18**	**336**	P	**P**	**15 23 18.2**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=126,slow=4.9,SNR=6.8 comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**74.25**	**180**	P	**P**	**15 23 19.9**	**0.0**
	comp=Z,5.6nm,1.1s,baz=285,slow=1.3,SNR=11 comp=Z,5.6nm,1.1s						
QSPA	**South Pole Qui**	**74.25**	**180**	P	**P**	**15 23 20.1**	**+0.2**
QSPA				IAmb	IAmb	15 23 33.8	
	comp=Z,13nm,1.2s						
BLY	**Banja Luka**	**75.54**	**326**	P	**P**	**15 23 28.0**	**+0.6**
BLY				IAmb	IAmb	15 24 06.8	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**75.64**	**167**	P	**P**	**15 23 28.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=300,slow=4.6,SNR=3.1 comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**75.64**	**167**	P	**P**	**15 23 29.1**	**+1.5**
KSAR	**Wonju Array Be**	**77.76**	**45**	P	**P**	**15 23 39.8**	**-0.4**
KSRS	**Korea Array**	**77.79**	**45**	P	**P**	**15 23 39.3**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=244,slow=5.9,SNR=6.2 comp=Z,1.2nm,0.8s						
JAVC	**Velka Javorina**	**77.98**	**329**	eP	**P**	**15 23 42.6**	**+1.4**
ARSA	**Arzberg**	**78.03**	**327**	P	**P**	**15 23 41.3**	**-0.2**
ARSA				IAmb	IAmb	15 23 56.3	
	comp=Z,8.1nm,1.2s						
MORC	**Moravsky Berou**	**78.65**	**330**	eP	**P**	**15 23 45.2**	**+0.3**
KRUC	**Moravsky**	**78.75**	**329**	eP	**P**	**15 23 45.8**	**+0.4**
VRAC	**Vranov**	**78.81**	**329**	eP	**P**	**15 23 47.6**	**+1.9**
HILR	**Hailar Array B**	**79.85**	**32**	P	**P**	**15 23 50.8**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=187,slow=11,SNR=3.6 comp=Z,1.7nm,0.5s						
GRA1	**Grafenberg Arr**	**81.79**	**327**	P	**P**	**15 24 02.5**	**+0.7**
MDJ	**Mudanjiang**	**82.54**	**40**	P	**P**	**15 24 05.9**	**+0.1**
MDJ				IAmb	IAmb	15 24 15.4	
	comp=Z,5.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**83.83**	**41**	P	**P**	**15 24 12.3**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=235,slow=6.7,SNR=4.4 comp=Z,3.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**83.83**	**41**	P	**P**	**15 24 11.8**	**-0.6**
MJAR	**Matsushiro Arr**	**84.68**	**50**	P	**P**	**15 24 16.4**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=251,slow=7.5,SNR=3.4 comp=Z,0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**84.68**	**50**	P	**P**	**15 24 17.1**	**+0.1**
MJAR				IAmb	IAmb	15 24 23.8	
	comp=Z,9.1nm,1.5s						
ESDC	**Sonseca Array**	**86.20**	**313**	P	**P**	**15 24 24.9**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=86,slow=3.1,SNR=8.3 comp=Z,1.6nm,0.8s						
ESDC	**Sonseca Array**	**86.20**	**313**	P	**P**	**15 24 24.5**	**-0.1**
LPAZ	**La Paz**	**125.65**	**236**	PKP	**PKiKP**	**15 30 47.3**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=166,slow=4.5,SNR=4.0						
ILAR	**Eielson Array**	**125.89**	**17**	PKP	**PKPdf**	**15 30 42.9**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=298,slow=5.3,SNR=2.2						
NEW	**Newport**	**147.45**	**5**	PKPbc	**PKPbc**	**15 31 26.2**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=82,slow=5.1,SNR=6.3						
NEW	**Newport**	**147.45**	**5**		**PKPbc**	**15 31 26.7**	**-0.4**
I37A	**Lemond, Waseca**	**147.47**	**334**	PKPbc	**PKPbc**	**15 31 26.2**	**-0.9**
P46A	**Rosedale**	**147.48**	**322**	PKPbc	**PKPbc**	**15 31 26.5**	**-0.8**
PDAR	**Pinedale Array**	**153.02**	**355**	PKPbc	**PKPbc**	**15 31 40.2**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=36,slow=2.8,SNR=8.0						
PDAR	**Pinedale Array**	**153.02**	**355**	PKPdf	**PKPdf**	**15 31 31.8**	**-1.9**
NVAR	**Mina Array Bea**	**156.95**	**11**	PKPab	**PKPab**	**15 32 07.5**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=63,slow=2.0,SNR=4.6						
TXAR	**Lajitas Array**	**164.19**	**330**	PKP	**PKPdf**	**15 31 48.7**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=105,slow=5.1,SNR=5.1						
TXAR				PKPab	**PKPab**	**15 32 41.7**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=149,slow=2.6,SNR=3.5						

*MAN **15** 15:13:13.0, 6.°25N×127.°18E, h36km, MS4.1*
*IDC **15** 15:13:18.6±1.8, 6.°36N×126.°95E, h96km±14km, mb3.6/10, mbtmp3.9/11, Error ellipse: s-maj=35.5km s-min=13.1km az=54.0*

ISC 15 15:13:15.5±1.1, 6.°28N±0.°05×127.°07E±0.°07, h71km±10km, n26, σ2°01/36, mb4.0/10, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.36**	**263**	*i* P	**Pn**	**15 13 38.1**	**-0.5**
DDMP				*i* S	**Sn**	**15 13 53.8**	**-2.3**
CDOP	**Cateel, Davao**	**1.62**	**337**	*i* P	**Pn**	**15 13 42.1**	**0.0**
CDOP				*i* S	**Sn**	**15 14 00.1**	**-2.2**
DAV	**Davao City (W)**	**1.68**	**298**	P	**Pn**	**15 13 44.0**	**+1.2**
	437nm,0.6s,baz=248,slow=1.4,SNR=8.7						
DAV				S	**Sn**	**15 14 05.4**	**+1.8**
	381nm,0.3s,baz=280,slow=14,SNR=27						
DAV				LR	LR	15 14 21

WRA	**Warramunga Arr**	**27.02**	**165**	P		**P**	**15 18 54.5**	**+3.4**
	0.2nm,0.5s,baz=344,slow=11,SNR=5.3							
	0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**29.97**	**296**	P		**P**	**15 19 17.6**	**+0.1**
	0.5nm,0.4s,baz=95,slow=7.5,SNR=4.4							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**30.50**	**168**	P		**P**	**15 19 22.9**	**+0.8**
	0.2nm,0.9s,baz=347,slow=7.0,SNR=4.3							
	0.2nm,0.9s							
PETK	**Petropavlovsk-**	**52.96**	**23**	P		**P**	**15 22 25.8**	**+1.1**
	0.9nm,0.8s,baz=203,slow=5.2,SNR=4.4							
	0.9nm,0.8s							
MKAR	**Makanchi Array**	**55.69**	**324**	P		**P**	**15 22 43.0**	**-1.6**
	1.3nm,0.6s,baz=122,slow=8.1,SNR=18							
	1.3nm,0.6s							
KURBB	**Kurchatov Arra**	**59.80**	**326**	P		**P**	**15 23 13.1**	**-0.2**
	1.7nm,0.2s,baz=127,slow=6.2,SNR=10.0							
	1.7nm,0.2s							
BVAR	**Borovoye Array**	**65.39**	**326**	P		**P**	**15 23 50.4**	**-0.2**
	1.8nm,0.6s,baz=124,slow=7.9,SNR=7.3							
	1.8nm,0.6s							
ASF	**Jabal al Asfar**	**86.85**	**302**	P		**P**	**15 25 52.9**	**-0.1**
	3.4nm,0.8s,baz=73,slow=4.7,SNR=5.8							
	3.4nm,0.8s							
BRTR	**Keskin Array B**	**88.67**	**310**	P		**P**	**15 25 59.8**	**-1.7**
	0.6nm,0.5s,baz=68,slow=6.8,SNR=3.5							
	0.6nm,0.5s							
AKASG	**Malin Array Be**	**90.14**	**321**	P		**P**	**15 26 06.5**	**-1.5**
	0.3nm,0.4s,baz=72,slow=3.1,SNR=4.2							
	0.3nm,0.4s							
TORD	**Torodi Ar. Bea**	**122.42**	**290**	PKP		**PKPdf**	**15 32 03.4**	**-0.4**
	0.4nm,0.6s,baz=30,slow=2.7,SNR=3.8							

*IDC **15** 15:16:50.4±1.7, 1°.1S×126°.82E, h0km, mb3.1/3, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=50.3km s-min=28.9km az=62.0*
*DJA **15** 15:16:53.8±0.2, 1°.5S±1°×12°.7E±°, h10km, M3.1/11, MLv3.1/11*

ISC 15 15:16:54.3±1.0, **0°.87S**±0°.07×**127°.54E**±0°.10, **h31**km, **n7,** σ0**s69/8, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.64**	**354**	P		**Pb**	**15 17 23.2**	**-0.8**
TNTI				S		**Sb**	**15 17 44.9**	**+0.6**
SANI	**Sanana**	**1.95**	**233**	P		**Pn**	**15 17 25.6**	**+0.4**
MNI	**Manado**	**3.55**	**310**	P		**Pn**	**15 17 48.1**	**+0.8**
SIJI	**Sorong**	**3.72**	**90**	Pn		**Pb**	**15 17 59.3**	**-0.1**
	0.7nm,0.3s,baz=244,slow=20,SNR=2.0							
	4.9nm,0.5s							
WRA	**Warramunga Arr**	**20.09**	**161**	P		**P**	**15 21 24.9**	**-0.6**
	0.2nm,0.4s,baz=341,slow=12,SNR=3.0							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**23.48**	**165**	P		**P**	**15 22 01.9**	**+0.4**
	0.5nm,0.6s,baz=345,slow=11,SNR=5.4							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**61.79**	**326**	P		**P**	**15 27 09.9**	**-0.4**
	0.2nm,0.5s,baz=120,slow=7.6,SNR=3.2							
	0.2nm,0.5s							

TRN 15 15:42:44.0, 15°.83N×59°.73W, h56km, MD3.5, Far North-east of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	**1.50**	**275**	*e*P		Pn	15 43 10.1	+1.4
MAGL				*e*S		Sn	15 43 30.4	+3.2
DWS	**Wesley**	**1.55**	**261**	*e*S		Sn	15 43 30.7	+2.4
DSLB	**Salisbury**	**1.68**	**257**	*e*P		Pn	15 43 12.6	+1.5
DSLB				*e*S		Sn	15 43 33.5	+2.0
BIM	**Bigot**	**1.84**	**225**	*e*P		Pn	15 43 15.1	+1.8
BIM				*e*S		Sn	15 43 36.5	+1.0
TBG	**Guadaloupe-3**	**1.85**	**271**	*e*P		Pn	15 43 14.8	+1.5
TBG				*e*S		Sn	15 43 37.9	+2.3
MMLZ	**Guadeloupe Bro**	**1.88**	**277**	*e*P		Pn	15 43 14.6	+0.8
MMLZ				*e*S		Sn	15 43 37.1	+0.6
DHSZ	**Broadband at M**	**2.01**	**283**	*e*P		Pn	15 43 17.8	+2.2
DHSZ				*e*S		Sn	15 43 41.8	+2.2
SLBI	**Saint Lucia, B**	**2.17**	**214**	*e*P		Pn	15 43 20.1	+2.4
MBWH	**Windy Hill**	**2.54**	**291**	*e*P		Pn	15 43 25.3	+2.5
MBWH				*e*S		Sn	15 43 54.4	+1.8
ANWB	**Willy Bob**	**2.69**	**313**	*e*P		Pn	15 43 25.6	+0.7
ANWB				*e*S		Sn	15 43 57.9	+1.6

*IDC **15** 15:52:35.9±0.9, 54°.43S×39°.76W, h0km, mb3.9/7, mbtmp3.9/7, MS3.5/3, Error ellipse: s-maj=34.9km s-min=19.2km az=67.0*

ISC 15 15:52:37.2±0.8, **54°.4S**±0°.1×**39°.7W**±0°.2, **h10**km, **n22,** σ1**s01/13, mb4.0/8, 3C, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**16.00**	**220**	LR		LR	16 01 17.5	
	comp=Z,178nm,18.6s,baz=50,slow=33							
VNA1	**Neumayer--Stat**	**21.41**	**152**	⇑P		**P**	**15 57 26.8**	**+2.1**
	comp=Z,14nm,0.8s							
VNA2	**Neumayer--Watz**	**21.80**	**152**	⇑P		**P**	**15 57 30.4**	**+1.4**
	comp=Z,12nm,0.8s,baz=307,slow=12							
SNAA	**Sanae**	**23.45**	**151**	⇑P		**P**	**15 57 46.7**	**+0.4**
	comp=Z,43nm,0.7s							
SNAA	**Sanae**	**23.45**	**151**	P		**P**	**15 57 46.2**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=312,slow=10,SNR=5.7							
SNAA				LR		LR	16 05 11.6	
	comp=Z,70nm,20.7s,baz=186,slow=32							
	comp=Z,1.4nm,0.7s							
PLCA	**Paso Flores**	**24.64**	**291**	P		**P**	**15 57 57.6**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=146,slow=8.0,SNR=4.8							
PLCA				LR		LR	16 07 37.7	
	comp=Z,143nm,19.4s,baz=134,slow=37							
	comp=Z,2.2nm,0.7s							
CPUP	**Villa Florida**	**30.89**	**328**	P		**P**	**15 58 53.9**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=184,slow=9.6,SNR=3.9							
	comp=Z,1.9nm,0.7s							
QSPA	**South Pole Qui**	**35.87**	**180**	P		**P**	**15 59 36.6**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=191,slow=2.8,SNR=13							
	comp=Z,4.0nm,0.9s							
LPAZ	**La Paz**	**43.93**	**319**	P		**P**	**16 00 45.7**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=216,slow=2.8,SNR=5.4							
	comp=Z,1.2nm,0.7s							
VNDA	**Vanda**	**47.68**	**186**	P		**P**	**16 01 12.7**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=130,slow=3.1,SNR=3.0							
	comp=Z,0.6nm,0.8s							
H10S2	**ASCENSION HYDR**	**49.54**	**33**	T		T	16 55 00.2	
	baz=200,slow=74,SNR=4219							
H10S3	**ASCENSION HYDR**	**49.54**	**33**	T		T	16 55 00.3	
	baz=20,slow=74,SNR=3966							
H10N3	**ASCENSION HYDR**	**50.64**	**33**	T		T	16 56 23.9	
	baz=199,slow=75,SNR=2039							
H10N1	**ASCENSION HYDR**	**50.64**	**33**	T		T	16 56 22.5	
	baz=199,slow=75,SNR=1995							
H10N2	**ASCENSION HYDR**	**50.66**	**33**	T		T	16 56 23.5	
	baz=199,slow=75,SNR=2081							
H04S2	**CROZET ISLANDS**	**54.65**	**123**	T		T	17 02 08.9	
	baz=225,slow=75,SNR=50							
H04S3	**CROZET ISLANDS**	**54.66**	**123**	T		T	17 02 02.8	
	baz=225,slow=75,SNR=42							
H04S1	**CROZET ISLANDS**	**54.67**	**123**	T		T	17 02 02.7	
	baz=225,slow=75,SNR=47							
TORD	**Torodi Ar. Bea**	**75.88**	**42**	P		**P**	**16 04 23.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=200,slow=6.7,SNR=5.6							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**143.36**	**77**	PKP		**PKPdf**	**16 12 09.3**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=243,slow=5.3,SNR=4.0							
ILAR	**Eielson Array**	**143.78**	**316**	PKP		**PKPdf**	**16 12 11.1**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=89,slow=1.4,SNR=4.5							
ZALV	**Zalesovo Beam**	**148.24**	**68**	PKPbc		**PKiKP**	**16 12 23.5**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=250,slow=4.3,SNR=3.7							

*SNET **15** 15:57:41.4±1.2, 13°.05N×89°.27W, h46km, ML3.5, Presumed earthquake*
*CATAC **15** 15:57:41.6±0.5, 13°.N±3°×8°.9W±°, h27km±2km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=6.3km s-min=3.1km az=19.7, confirmed*
*GCG **15** 15:57:43.0±0.5, 13°.16N×89°.31W, h51km±8km, MD3.4, Presumed earthquake*

ISC 15 15:57:42.4±1.8, **13°.07N**±0°.09×**89°.24W**±0°.05, **h44**km±15km, **n36,** σ0**s53/61, 2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.42**	**350**	P		**Pn**	**15 57 52.2**	**-0.1**
LALI	**Alcalda de L**	**0.42**	**350**	⇓*e*P		**Pn**	**15 57 52.3**	**-0.1**
LALI				*e*S		**Sn**	**15 57 59.3**	**0.0**
PANCS	**Alcalda de**	**0.54**	**7**	P		**Pn**	**15 57 53.4**	**-0.4**
PANCS				S		**Sn**	**15 58 02.2**	**+0.2**
LOMA	**Loma Larga**	**0.57**	**7**	P		**Pn**	**15 57 54.1**	**-0.2**
LOMA				S		**Sn**	**15 58 03.6**	**+0.6**
LOMA	**Loma Larga**	**0.57**	**7**	*e*P		**Pn**	**15 57 54.1**	**-0.2**
JAYA	**Jayaque - finc**	**0.61**	**341**	P		**Pn**	**15 57 54.5**	**-0.4**
JAYA	**Jayaque - finc**	**0.61**	**341**	*i* P		**Pn**	**15 57 54.5**	**-0.4**
JAYA				*e*S		**Sn**	**15 58 03.8**	**0.0**
JAYA	**Jayaque - finc**	**0.61**	**341**	*e*P		**Pn**	**15 57 54.5**	**-0.4**
JAYA				*e*S		**Sn**	**15 58 03.9**	**0.0**
SEMO	**Seminario San**	**0.63**	**2**	P		**Pn**	**15 57 54.8**	**-0.2**
SEMO				S		**Sn**	**15 58 04.4**	**+0.3**
UEES	**Universidad Ev**	**0.64**	**0**	P		**Pn**	**15 57 55.1**	**-0.1**
UEES				S		**Sn**	**15 58 05.0**	**+0.6**
TECO	**Alcaldia de Te**	**0.64**	**44**	P		**Pn**	**15 57 54.5**	**-0.7**
TECO				S		**Sn**	**15 58 04.2**	**-0.2**
COEG	**Centro de Oper**	**0.65**	**33**	P		**Pn**	**15 57 54.7**	**-0.6**
COEG	**Centro de Oper**	**0.65**	**33**	*e*P		**Pn**	**15 57 54.7**	**-0.6**
COEG				*e*S		**Sn**	**15 58 04.5**	**0.0**
LBRS	**Las Brisas**	**0.69**	**16**	*e*P		**Pn**	**15 57 55.6**	**-0.3**
PAVA	**Las Pavas**	**0.70**	**25**	P		**Pn**	**15 57 55.7**	**-0.4**
PAVA				S		**Sn**	**15 58 06.4**	**+0.5**
CEDA	**San Andres**	**0.74**	**348**	P		**Pn**	**15 57 56.2**	**-0.3**
CEDA				S		**Sn**	**15 58 07.4**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.80**	**39**	S		**Sn**	**15 58 08.7**	**+0.6**
CEVE	**Cerro Verde**	**0.84**	**334**	P		**Pn**	**15 57 57.8**	**-0.2**
CEVE	**Cerro Verde**	**0.84**	**334**	*e*P		**Pn**	**15 57 57.7**	**-0.3**
CEVE				*e*S		**Sn**	**15 58 10.6**	**+1.2**
PQSS	**Presa 15 de Se**	**0.86**	**50**	S		**Sn**	**15 58 10.3**	**+0.8**
UNIC	**Universidad Ca**	**0.95**	**342**	P		**Pn**	**15 57 59.3**	**-0.1**
UNIC				S		**Sn**	**15 58 12.7**	**+0.8**
NUBE	**Las Nubes**	**0.98**	**328**	P		**Pn**	**15 57 59.3**	**-0.5**
NUBE	**Las Nubes**	**0.98**	**328**	⇓*i* P		**Pn**	**15 57 59.3**	**-0.5**
NUBE				*e*S		**Sn**	**15 58 12.6**	**+0.1**
PACA	**Pacayal**	**0.98**	**66**	P		**Pn**	**15 57 59.9**	**+0.1**
PACA				S		**Sn**	**15 58 13.6**	**+1.0**
RANC	**El Ranchito**	**1.00**	**69**	P		**Pn**	**15 58 00.0**	**0.0**
RANC				S		**Sn**	**15 58 13.9**	**+0.8**
P5NO	**Presa 5 de nov**	**1.02**	**27**	P		**Pn**	**15 57 59.8**	**-0.5**
P5NO				S		**Sn**	**15 58 13.6**	**+0.1**
LOAL	**Lomas de Alarc**	**1.06**	**330**	P		**Pn**	**15 58 00.7**	**-0.2**
LOAL				S		**Sn**	**15 58 15.5**	**+1.1**
FAME	**Alcaldia de Sa**	**1.07**	**316**	P		**Pn**	**15 58 00.2**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.08**	**331**	P		**Pn**	**15 58 01.2**	**+0.1**
SLOZ				S		**Sn**	**15 58 15.8**	**+0.7**
LLGN	**La Laguna**	**1.12**	**15**	P		**Pn**	**15 58 01.1**	**-0.6**
LLGN				S		**Sn**	**15 58 16.4**	**+0.4**
INTP	**Intipuca**	**1.16**	**84**	*e*P		**Pn**	**15 58 01.6**	**-0.6**
INTP				*e*S		**Sn**	**15 58 16.4**	**-0.6**
MTO3	**Montecristo**	**1.32**	**355**	P		**Pn**	**15 58 04.1**	**-0.5**
MTO3				S		**Sn**	**15 58 21.2**	**0.0**
MTO3	**Montecristo**	**1.32**	**355**	*e*P		**Pn**	**15 58 04.2**	**-0.5**
MTO3				*e*S		**Sn**	**15 58 20.2**	**-0.9**
LCND	**La Caada**	**1.34**	**80**	P		**Pn**	**15 58 04.2**	**-0.4**
LCND				S		**Sn**	**15 58 22.2**	**+1.0**
LCND	**La Caada**	**1.34**	**80**	*e*P		**Pn**	**15 58 04.5**	**-0.1**
ESQI	**Esquipulas**	**1.48**	**356**	P		**Pn**	**15 58 06.5**	**-0.2**
ESQI				S		**Sn**	**15 58 25.2**	**+0.4**

JMA 15 15:59:26.7±0.2, **25°.N**±2°×**124°.2E**±0°.8, **h119**km±2km, **MV3.2/13, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.49**	**172**	P		Pn	15 59 44.6	+0.2
JISG				S		Sn	15 59 58.1	+0.3
JTJ	**Tarama**	**0.60**	**135**	P		Pn	15 59 45.6	+0.4
JTJ				S		Sn	15 59 59.4	+0.3
JIJ	**Ishigaki jima**	**0.71**	**187**	P		Pn	15 59 45.9	-0.1
JIJ				S		Sn	16 00 00.4	-0.1
JKRS	**Kuro-shima**	**0.86**	**194**	P		Pn	15 59 47.5	+0.2
JKRS				S		Sn	16 00 03.5	+0.8
IRIF	**Iriomote-Funau**	**0.87**	**212**	P		Pn	15 59 47.2	-0.1
IRIF				S		Sn	16 00 03.4	+0.5
JIRJ	**Irabujima**	**0.90**	**105**	P		Pn	15 59 47.6	-0.1
JIRJ				S		Sn	16 00 03.2	-0.2
JIKM	**Ikemajima**	**0.93**	**99**	P		Pn	15 59 48.0	+0.1
JIKM				S		Sn	16 00 04.2	+0.2
JMJ	**Miyako jima 2**	**0.99**	**105**	P		Pn	15 59 49.3	+0.8
JMJ	**Miyako jima 2**	**0.99**	**105**	S		Sn	16 00 06.7	+1.7
JMJ2	**Miyako jima3**	**1.04**	**108**	P		Pn	15 59 49.4	+0.3
JMJ2				S		Sn	16 00 06.4	+0.5
HATJ	**Hateruma jima**	**1.08**	**201**	S		Sn	16 00 07.4	+0.7
JOGS	**Gusukube**	**1.11**	**106**	P		Pn	15 59 50.0	+0.4
JOGS				S		Sn	16 00 07.7	+0.6
YOJ	**Yonaguni jima**	**1.27**	**242**	P		Pn	15 59 51.8	+0.4
YOJ	**Yonaguni jima**	**1.27**	**242**	*e*P		Pn	15 59 51.8	+0.4
YOJ				*e*S		Sn	16 00 10.4	+0.2
NACB	**Ninganchiao**	**2.56**	**250**	P		Pn	16 00 06.2	-1.1
YHNB	**Yeheng**	**2.63**	**262**	P		Pn	16 00 09.1	+0.9
YULB	**Yu-li**	**3.16**	**239**	P		Pn	16 00 13.5	-1.6
SSLB	**Suanglung**	**3.25**	**248**	P		Pn	16 00 15.8	-0.5
SSLB	**Suanglung**	**3.25**	**248**	S		Sn	16 00 14.9	+0.6
TPUB	**Ta-pu**	**3.73**	**243**	S		Sn	16 01 06.4	+0.3
TPUB	**Ta-pu**	**3.73**	**243**	P		Pn	16 00 23.0	+0.3
JOW	**Kunigami**	**4.04**	**63**	P		Pn	16 00 24.4	-2.3

TAP 15 16:00:22.7, 24°.86N×122°.17E, h16km±1km, ML1.8, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.22**	**265**	*e*P		Pb	16 00 28.1	-0.2
EGS				*e*S		Sb	16 00 32.2	+0.1
TWB1	**Santiao Chiao**	**0.22**	**310**	P		Pb	16 00 28.5	+0.2
TWB1				*i* S		Sg	16 00 31.6	+0.3
TIPB	**Shuangxi**	**0.33**	**289**	*e*P		Pb	16 00 30.8	+0.5
TIPB				*e*S		Sb	16 00 35.5	+0.1
SXI1	**Grass Mountain**	**0.35**	**310**	P		Pb	16 00 30.8	+0.1
SXI1				S		Sb	16 00 36.4	+0.3
TWC	**Suao**	**0.39**	**229**	*e*P		Pg	16 00 30.5	-0.2
TWC				*e*S		Sg	16 00 36.4	+0.3
EOS2	**EOS2**	**0.45**	**173**	*e*P		Pg	16 00 31.2	-0.5
EOS2				*e*S		Sb	16 00 38.2	-0.3
NDS	**Dongshan**	**0.48**	**241**	*e*P		Pb	16 00 32.5	-0.1
NDS				*e*S		Sb	16 00 39.4	0.0
SSLB	**Neicheng**	**0.48**	**253**	*e*P		Pg	16 00 32.8	0.0
EOS3	**EOS3**	**0.59**	**167**	*e*P		Pg	16 00 33.5	-0.9
EOS3				*e*S		Sb	16 00 42.4	-0.1
YOJ	**Yonaguni jima**	**0.86**	**118**	*e*P		Pb	16 00 36.3	-2.9

*IDC **15** 16:06:58.4±1.8, 1°.25N×126°.46E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=177.0km s-min=21.4km az=66.0*
*DJA **15** 16:07:02.6±0.6, 1°.N±2°×12°.6E±°, h12km±5km, M3.3/11, MLv3.3/11*

ISC 15 16:07:05.2±1.0, **0°.97N**±0°.07×**126°.14E**±0°.06, **h44**km, **n9,** σ1**s26/12, mb3.4/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**99**	P		**Pn**	**16 07 25.7**	**-0.3**
TNTI				S		**Sn**	**16 07 43.5**	**+1.9**
MNI	**Manado**	**1.39**	**290**	P		**Pn**	**16 07 27.6**	**-0.5**
MNI				S		**Sn**	**16 07 45.4**	**+0.1**
SGSI	**Sangihe**	**2.77**	**347**	P		**Pn**	**16 07 46.1**	**-1.0**
SGSI				S		**Sn**	**16 08 21.1**	**+1.8**
SANI	**Sanana**	**3.00**	**183**	P		**Pn**	**16 07 49.1**	**-1.1**
GTOI	**Gorontalo**	**3.15**	**264**	P		**Pn**	**16 07 53.7**	**+1.4**
WRA	**Warramunga Arr**	**22.28**	**159**	P		**P**	**16 11 58.6**	**-0.2**
	0.6nm,0.5s,baz=339,slow=11,SNR=10							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**25.62**	**163**	P		**P**	**16 12 31.8**	**+1.0**
	0.3nm,0.4s,baz=344,slow=11,SNR=22							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**59.50**	**326**	P		**P**	**16 17 03.1**	**-0.9**
	0.2nm,0.4s,baz=120,slow=8.1,SNR=5.4							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**63.75**	**328**	P		**P**	**16 17 31.5**	**-1.0**
	0.5nm,0.7s,baz=123,slow=6.6,SNR=4.6							
	0.5nm,0.7s							

*BER **15** 16:16:12.9±1.9, 67°.39N×34°.20E, h0km, Suspected explosion*

*KOLA **15** 16:16:14.0±0.6, 67°.62N±0°.02×34°.08E±0°.06, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **15** 16:16:17.6±2.7, 67°.55N×33°.25E, h0km, mbtmp2.7/2, ML1.9/2, Error ellipse: s-maj=29.3km s-min=10.1km az=78.0*

ISC 15 16:16:12.6±1.0, **67°.56N**±0°.04×**34°.11E**±0°.04, **h0**km, **n16,** σ1**s25/26, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.27**	**273**	S		**Sg**	**16 16 21.9**	**+0.7**
LVZ	**Lovozero**	**0.40**	**31**	P		**Pg**	**16 16 20.4**	**+0.2**
LVZ				S		**Sg**	**16 16 25.1**	**-0.4**
APA0	**Apatity Array**	**0.43**	**277**	P		**Pg**	**16 16 21.1**	**+0.2**
APA0				S		**Sg**	**16 16 26.6**	**+0.2**
KVDA	**Kovda**	**0.99**	**210**	P		**Pb**	**16 16 33.2**	**+0.6**
KVDA				S		**Sb**	**16 16 46.5**	**+0.3**
TERR	**Teriberka**	**1.70**	**12**	P		**Pn**	**16 16 42.9**	**-0.5**
TERR				S		**Sn**	**16 17 04.6**	**-1.2**
VADS	**Vadso**	**3.10**	**328**	*e*P		**Pn**	**16 17 02.6**	**-0.1**
VADS				*e*S		**Sn**	**16 17 41.5**	**+1.1**
VADS	**Vadso**	**3.10**	**328**	P		**Pn**	**16 17 03.8**	**+1.2**
VADS				S		**Sn**	**16 17 41.1**	**+0.8**
KEV	**Kevo**	**3.41**	**314**	*e*P		**Pn**	**16 17 07.7**	**+0.8**
KEV				*e*S		**Sn**	**16 17 47.6**	**-0.4**
ARA0	**ARCESS Array S**	**3.73**	**306**	*e*S		**Sn**	**16 17 53.2**	**-2.8**
ARCES	**ARCESS Array B**	**3.73**	**306**	Pn		**Pn**	**16 17 11.3**	**-0.1**
	0.2nm,0.3s,baz=121,slow=14,SNR=19							
ARCES				Pg		**Pb**	**16 17 19.9**	**+0.6**
	0.3nm,0.3s,baz=115,slow=15,SNR=7.7							
ARCES				Sn		**Sn**	**16 17 53.7**	**-2.3**
	0.3nm,0.3s,baz=121,slow=26,SNR=8.0							
ARCES				Lg		Lg	16 18 06.2	
	0.7nm,0.3s,baz=126,slow=30,SNR=8.1							
	0.6nm,0.2s							
ARCES	**ARCESS Array B**	**3.73**	**306**	P		**Pn**	**16 17 11.6**	**+0.2**
ARCES				S		**Sn**	**16 17 55.5**	**-0.4**
HEF	**Hetta**	**4.03**	**287**	*e*S		**Sn**	**16 18 01.5**	**-2.0**
KTK1	**Kautokeino**	**4.29**	**295**	*e*S		**Sn**	**16 18 08.4**	**-1.4**
I37NO	**I37NO**	**5.94**	**292**	I		I	16 50 10.0	
	baz=97,slow=319,SNR=3.9							
FINES	**FINESS Array B**	**7.04**	**213**	Pn		**Pn**	**16 17 57.3**	**+0.5**
	0.1nm,0.3s,baz=36,slow=12,SNR=1.3							
FINES				Sn		**Sn**	**16 19 15.9**	**-1.5**
	0.1nm,0.3s,baz=38,slow=23,SNR=1.9							
FINES				Lg		Lg	16 19 49.8	
	0.2nm,0.3s,baz=25,slow=23,SNR=5.2							
	0.6nm,0.7s							
FAUS	**Fauske**	**7.23**	**277**	S		**Sn**	**16 19 19.1**	**-2.8**

*JMA **15** 16:24:18.6±0.3, 45°.N±2°×14°.6E±°, h34km, MV2.5/12, SOUTHERN SEA OF OKHOTSK*
*SKHL **15** 16:24:19.1±0.6, 45°.10N×146°.00E, h25km±3km, mb4.0/4*

ISC 15 16:24:17.2±2.6, **45°.1N**±0°.1×**146°.12E**±0°.08, **h7**km±14km, **n10,** σ0**s55/16, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.04**	**190**	*i* P		**Pg**	**16 24 37.4**	**+0.3**
YUK				AMB		AMB	16 24 38.4	
	150nm,0.6s							
YUK				*i* S		**Sg**	**16 24 50.1**	**-0.5**
YUK				A		A	16 24 53.8	
	260nm,0.4s							
YUK				A		A	16 24 53.8	
	310nm,0.4s							
KUR	**Kuril'sk**	**1.25**	**81**	*i* P		**Pn**	**16 24 41.6**	**+0.6**
KUR				AMB		AMB	16 24 42.5	
	40nm,0.3s							
KUR				*i* S		**Sb**	**16 24 57.4**	**+0.1**
KUR				A		A	16 24 58.2	
	100nm,0.2s							
KUR				A		A	16 24 58.2	
	80nm,0.2s							
SHO	**Shikotan**	**1.29**	**157**	*e*P		Pg	16 24 53.3	+11
SHO				AMB		AMB	16 24 54.2	
	70nm,0.3s							
SHO				*e*S		Sn	16 25 09.0	+10
SHO				A		A	16 25 09.9	
	420nm,0.4s							
SHO				A		A	16 25 09.9	
	100nm,0.4s							
JRA	**Rausu**	**1.33**	**213**	*e*P		**Pn**	**16 24 42.1**	**0.0**
JRA				*e*S		**Sb**	**16 24 59.4**	**-0.2**
REI	**Reidovoe**	**1.36**	**80**	*e*P		**Pn**	**16 24 42.7**	**+0.2**
REI				AMB		AMB	16 24 43.8	
	20nm,0.4s							
REI				*e*S		**Sb**	**16 24 59.2**	**-1.3**
REI				A		A	16 25 00.6	
	30nm,0.3s

HSPB	**Hornsund (broa**	**3.36**	**124**	*eP*	**Pb**	**16 46 03.2**	**-0.9**
NOR	**Nord**	**4.10**	**316**	*i* P	**Pn**	**16 46 09.4**	**+2.2**
NOR				*eS*	**Sn**	**16 46 52.0**	**-3.1**
NOR				IAML		16 47 02.4	
	comp=Z,0.3nm,0.2s						
DAG	**Danmarks Havn**	**5.13**	**253**	*eP*	**Pn**	**16 46 24.1**	**+2.6**
DAG				*eS*	**Sn**	**16 47 18.9**	**-1.7**
DAG	**Danmarks Havn**	**5.13**	**253**	*i* P	**Pn**	**16 46 24.0**	**+2.6**
DAG				*i* S	**Sn**	**16 47 18.8**	**-1.8**
DAG				IAML		16 47 27.3	
	comp=Z,0.8nm,0.2s						
DBG	**Daneborg**	**7.20**	**240**	*eS*	**Sn**	**16 48 08.5**	**-2.8**
DBG	**Daneborg**	**7.20**	**240**	*i* P	**Pn**	**16 46 51.5**	**+1.9**
DBG				*i* S	**Sn**	**16 48 07.9**	**-3.4**
DBG				IAML		16 48 14.6	
	comp=Z,0.5nm,0.2s						

IDC 15 16:58:58.9±3.9, 65°05S×179°57E, h0km, mb4.2/3, mbtmp4.2/4, ML3.5/1, MS3.7/11, Error ellipse: s-maj=136.9km s-min=25.4km az=68.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.64**	**196**	Pn	Pn	17 02 12.3	-0.9
	0.2nm,0.3s,baz=45,slow=18,SNR=28						
VNDA				LR	LR	17 06 03.5	
	comp=Z,267nm,21.9s,baz=19,slow=31						
	4.0nm,0.7s						
RPZ	**Rata Peaks**	**21.90**	**343**	LR	LR	17 10 32.5	
	comp=Z,52nm,19.1s,baz=246,slow=32						
QSPA	**South Pole Qui**	**25.04**	**180**	P	P	17 04 24.3	-0.1
	6.1nm,1.0s,baz=41,slow=6.0,SNR=11						
QSPA				LR	LR	17 13 19.6	
	comp=Z,140nm,18.3s,baz=46,slow=34						
	6.1nm,1.0s						
URZ	**Urewera**	**26.87**	**356**	LR	LR	17 13 41.0	
	comp=Z,182nm,19.0s,baz=180,slow=33						
MAW	**Mawson**	**40.23**	**212**	LR	LR	17 23 01.5	
	comp=Z,171nm,20.1s,baz=110,slow=36						
PMSA	**Palmer Station**	**42.49**	**145**	LR	LR	17 21 01.0	
	comp=Z,65nm,19.8s,baz=224,slow=31						
SNAA	**Sanae**	**43.53**	**179**	LR	LR	17 24 54.8	
	comp=Z,116nm,18.3s,baz=164,slow=36						
RAR	**Rarotonga**	**45.88**	**27**	LR	LR	17 21 47.9	
	comp=Z,43nm,19.8s,baz=188,slow=30						
TBI	**Tubuai**	**46.28**	**41**	*eT*	T	17 56 47.8	
	15nm,0.3s						
H01W1	**Cape Leeuwin H**	**48.64**	**275**	T	T	18 00 19.3	
	baz=149,slow=76,SNR=40						
H01W2	**Cape Leeuwin H**	**48.65**	**275**	T	T	18 00 16.7	
	baz=149,slow=76,SNR=40						
H01W3	**Cape Leeuwin H**	**48.66**	**275**	T	T	18 00 20.5	
	baz=149,slow=76,SNR=36						
ASAR	**Alice Springs**	**50.71**	**302**	P	P	17 08 00.1	+0.1
	2.3nm,0.8s,baz=155,slow=7.3,SNR=64						
	2.3nm,0.8s						
TVO	**Taravao**	**51.63**	**39**	*eT*	T	18 03 31.7	
	15nm,0.3s						
PPT2	**Papeete2**	**51.73**	**39**	*eLR*	LR	17 22 12.8	
	52nm,24.0s						
WRA	**Warramunga Arr**	**53.98**	**304**	P	P	17 08 23.8	-0.5
	2.3nm,0.7s,baz=156,slow=6.5,SNR=17						
	2.3nm,0.7s						
VAH	**Vaihoa**	**54.50**	**40**	*eT*	T	18 07 07.9	
	32nm,0.3s						
H03S2	**Juan Fernandez**	**64.44**	**115**	T	T	18 20 20.8	
	baz=205,slow=74,SNR=17						
H03S1	**Juan Fernandez**	**64.44**	**115**	T	T	18 20 27.7	
	baz=205,slow=74,SNR=17						
H03S3	**Juan Fernandez**	**64.45**	**115**	T	T	18 20 19.1	
	baz=205,slow=74,SNR=23						
H03N3	**Juan Fernandez**	**64.78**	**115**	T	T	18 20 42.7	
	baz=207,slow=76,SNR=9.4						
H03N2	**Juan Fernandez**	**64.79**	**115**	T	T	18 20 43.3	
	baz=207,slow=76,SNR=39						
H03N1	**Juan Fernandez**	**64.79**	**115**	T	T	18 20 46.1	
	baz=207,slow=76,SNR=5.9						
KAPI	**Kappang**	**73.08**	**296**	LR	LR	17 40 07.0	
	comp=Z,46nm,18.1s,baz=260,slow=34						
SUR	**Sutherland**	**81.48**	**198**	LR	LR	17 42 48.3	
	comp=Z,100nm,20.9s,baz=118,slow=32						
H08S2	**Diego Garcia H**	**90.22**	**251**	T	T	18 52 32.0	
	baz=154,slow=76,SNR=12						
H08S1	**Diego Garcia H**	**90.22**	**251**	T	T	18 52 26.0	
	baz=154,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**90.24**	**251**	T	T	18 52 30.4	
	baz=154,slow=76,SNR=10						
LSZ	**Lusaka**	**97.02**	**208**	LR	LR	17 53 35.3	
	comp=Z,107nm,18.5s,baz=128,slow=34						
BRTR	**Keskin Array B**	**147.94**	**234**	PKPbc	PKPbc	17 18 45.2	+0.1
	0.4nm,0.5s,baz=177,slow=1.9,SNR=2.3						

IDC 15 17:08:24.6±2.8, 4°.88S×101°.38E, h0km, mb3.5/6, mbtmp3.6/7, ML4.2/1, Error ellipse: s-maj=105.5km s-min=19.6km az=53.0
NEIC 15 17:08:32.6±2.5, 4°.5S±0°.1×101°.86E±0°.06, h35km±2km, mb4.1/5, Error ellipse: s-maj=21.0km s-min=8.6km az=198.0
DJA 15 17:08:33.7±0.4, 5°.5S×107°.2E±°, h59km±17km, M4.4/25, mB5.8/2, mb4.9/6, MLv4.2/25, Mw(mB)5.4/2
ISC 15 17:08:31.6±0.9, 4°.66S±0°.08×101°.89E±0°.08, h37km, n40, σ1s60/34, mb3.6/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.10**	**75**		**Pn**	**17 08 52.6**	**+2.1**
MNAI	**Manna**	**1.10**	**75**	P	**Pn**	**17 08 52.3**	**+1.8**
MNAI				S	**Sn**	**17 09 06.7**	**+2.2**
KSI	**Kapahiang**	**1.22**	**35**	P	**Pn**	**17 08 53.1**	**+0.9**
KSI				S	**Sn**	**17 09 08.3**	**+0.8**
PPSI	**Pulau Pagai**	**2.66**	**315**	P	**Pn**	**17 09 14.4**	**+2.6**
KLI	**Kotabumi**	**2.96**	**94**	P	**Pn**	**17 09 16.9**	**+0.8**
PPI	**Padang Panjang**	**4.43**	**340**	P	**Pn**	**17 09 37.5**	**+1.2**
DSRI	**Dabo**	**4.94**	**33**	P	**Pn**	**17 09 43.0**	**-0.3**
LEM	**Lembang**	**6.09**	**111**		**Pn**	**17 10 03.3**	**+4.0**
	4.6nm,0.3s,baz=290,slow=12,SNR=4.5						
	8.0nm,0.3s						
BBJI	**Bungbulang**	**6.37**	**116**		**Pn**	**17 10 04.8**	**+1.8**
BBJI				Sn	**Sn**	**17 11 10.8**	**-3.8**
BBJI	**Bungbulang**	**6.37**	**116**	P	**Pn**	**17 10 04.3**	**+1.3**
GSI	**Gunungsitoli**	**7.32**	**324**		**Pn**	**17 10 16.8**	**+0.7**
RPSI	**Rantau Prapat**	**7.88**	**338**	Pn	**Pn**	**17 10 23.1**	**-0.6**
UGM	**Wanagama**	**9.17**	**111**	Pn	**Pn**	**17 10 42.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**23.15**	**353**	P	**P**	**17 13 33.3**	**-1.5**
	0.3nm,0.4s,baz=170,slow=9.6,SNR=2.0						
	0.3nm,0.4s						
H08S2	**Diego Garcia H**	**29.37**	**263**	T	T	17 44 49.0	
	baz=85,slow=75,SNR=12						
H08S3	**Diego Garcia H**	**29.38**	**263**	T	T	17 44 57.4	
	baz=85,slow=75,SNR=18						
H08S1	**Diego Garcia H**	**29.39**	**263**	T	T	17 44 58.0	
	baz=85,slow=75,SNR=4.5						
WB0	**Warramunga Arr**	**35.04**	**118**	P	**P**	**17 15 22.1**	**+1.0**
WB0				IAmb	IAmb	17 15 41.7	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**35.05**	**118**	P	**P**	**17 15 22.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=307,slow=9.6,SNR=6.6						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**35.05**	**118**	P	**P**	**17 15 21.7**	**+0.4**
WR8	**Warramunga Arr**	**35.20**	**118**	P	**P**	**17 15 23.1**	**+0.6**
ASAR	**Alice Springs**	**36.19**	**125**	P	**P**	**17 15 31.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=296,slow=7.9,SNR=7.5						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**36.19**	**125**	P	**P**	**17 15 32.0**	**+1.0**
AS31	**Alice Springs**	**36.19**	**125**	P	**P**	**17 15 30.5**	**-0.5**
AS31				IAmb	IAmb	17 15 31.3	
	comp=Z,1.1nm,1.2s						
SONM	**Songino Array**	**52.42**	**4**	P	**P**	**17 17 40.7**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=187,slow=9.4,SNR=7.7						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**52.42**	**4**	P	**P**	**17 17 40.4**	**-0.1**
SONM				IAmb	IAmb	17 18 17.0	
	comp=Z,3.1nm,1.4s						
MKAR	**Makanchi Array**	**54.09**	**343**	P	**P**	**17 17 52.0**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=150,slow=8.1,SNR=4.2						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.09**	**343**	P	**P**	**17 17 50.1**	**-2.5**
H04N2	**CROZET ISLANDS**	**59.84**	**218**	T	T	18 23 20.0	
	baz=62,slow=75,SNR=80						
H04N1	**CROZET ISLANDS**	**59.85**	**218**	T	T	18 23 17.1	
	baz=62,slow=75,SNR=65						
H04N3	**CROZET ISLANDS**	**59.85**	**218**	T	T	18 23 14.2	
	baz=62,slow=75,SNR=61						
H04S1	**CROZET ISLANDS**	**60.09**	**217**	T	T	18 23 37.6	
	baz=61,slow=75,SNR=9.2						
H04S3	**CROZET ISLANDS**	**60.10**	**217**	T	T	18 23 33.6	
	baz=61,slow=75,SNR=17						
H04S2	**CROZET ISLANDS**	**60.10**	**217**	T	T	18 23 36.9	
	baz=61,slow=75,SNR=16						
ZALV	**Zalesovo Beam**	**60.12**	**348**	P	**P**	**17 18 34.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=172,slow=3.9,SNR=3.9						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**60.12**	**348**	P	**P**	**17 18 33.0**	**-2.0**
TX31	**Lajitas Ar. Si**	**145.54**	**42**	PKPdf	**PKPdf**	**17 28 06.9**	**+0.2**
TXAR	**Lajitas Array**	**145.54**	**42**	PKPbc	**PKPdf**	**17 28 07.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=286,slow=1.5,SNR=18						
TXAR	**Lajitas Array**	**145.54**	**42**		**PKPdf**	**17 28 06.8**	**+0.1**
T42A	**Van Buren**	**145.65**	**19**	PKPdf	**PKPdf**	**17 28 06.0**	**-0.5**

IDC 15 17:13:25.6±3.0, 33°.25S×178°.28W, h0km, mb4.2/3, mbtmp4.2/4, ML3.9/1, MS3.2/3, Error ellipse: s-maj=65.6km s-min=44.8km az=125.0
NEIC 15 17:13:27.9±1.1, 33°.45S±0°.1×178°.3W±0°.2, h10km±1km, mb4.5/11, Error ellipse: s-maj=24.9km s-min=15.7km az=120.0
WEL 15 17:13:27.4±0.8, 33°S±15°×17°9W±3°8, h12km, M4.2/6, mB4.8/4, ML4.3/11, MLv4.3/6, Mw(mB)4.0/4, Error ellipse: s-maj=53.3km s-min=4.1km az=111.0
ISC 15 17:13:30.1±1.0, 33°.34S±0°.08×178°.3W±0°.1, h41km, n44, σ1s85/61, mb4.4/9, MS3.2/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.07**	**4**	P	**Pn**	**17 14 27.6**	**-2.3**
GLKZ				S	**Sn**	**17 15 11.2**	**-5.1**
MXZ	**Matakaoa Point**	**5.06**	**213**	P	**Pn**	**17 14 43.6**	**+0.1**
MXZ				S	**Sn**	**17 15 41.5**	**+0.7**
WMGZ	**Waiomatatini S**	**5.23**	**210**	P	**Pn**	**17 14 47.3**	**+1.5**
WMGZ				S	**Sn**	**17 15 45.6**	**+0.7**
HAZ	**Te Kaha**	**5.47**	**215**	P	**Pn**	**17 14 49.4**	**+0.4**
HAZ				S	**Sn**	**17 15 53.0**	**+2.4**
PUZ	**Puketiti**	**5.51**	**210**	P	**Pn**	**17 14 47.7**	**-1.9**
PUZ				S	**Sn**	**17 15 50.6**	**-1.1**
RUGZ	**Raukumara Rang**	**5.68**	**214**	P	**Pn**	**17 14 50.1**	**-2.0**
RUGZ				S	**Sn**	**17 15 56.4**	**+0.3**
TWGZ	**Tauwhareparae**	**5.72**	**211**	P	**Pn**	**17 14 53.6**	**+1.1**
TWGZ				S	**Sn**	**17 15 57.4**	**+0.5**
CNGZ	**Carnagh Statio**	**5.88**	**208**	P	**Pn**	**17 14 54.2**	**-0.6**
TKGZ	**Te Karaka**	**5.99**	**211**	P	**Pn**	**17 14 56.2**	**-0.1**
TKGZ				S	**Sn**	**17 16 02.7**	**-0.9**
MWZ	**Matawai**	**6.05**	**213**	P	**Pn**	**17 14 56.8**	**-0.3**
MWZ				S	**Sn**	**17 16 05.1**	**0.0**
URZ	**Urewera**	**6.19**	**216**	Pn	**Pn**	**17 14 58.3**	**-0.6**
	3.0nm,0.3s,baz=256,slow=3.8,SNR=17						
URZ				Sn	**Sn**	**17 16 06.0**	**-2.4**
	3.1nm,0.3s,baz=158,slow=23,SNR=8.5						
	5.7nm,0.3s						
URZ	**Urewera**	**6.19**	**216**	P	**Pn**	**17 14 58.3**	**-0.6**
URZ				S	**Sn**	**17 16 06.6**	**-1.8**
RIGZ	**Rimuhau**	**6.25**	**210**	P	**Pn**	**17 14 58.1**	**-1.8**
RIGZ				S	**Sn**	**17 16 10.0**	**0.0**
SNGZ	**Shannon Statio**	**6.50**	**212**	P	**Pn**	**17 15 03.1**	**-0.2**
SNGZ				S	**Sn**	**17 16 14.8**	**-1.3**
RTZ	**Ruatahuna**	**6.53**	**215**		**Pn**	**17 15 02.0**	**-1.7**
RTZ	**Ruatahuna**	**6.53**	**215**	P	**Pn**	**17 15 03.0**	**-0.8**
RTZ				S	**Sn**	**17 16 16.0**	**-1.0**
KNZ	**Kokohu**	**6.56**	**209**	P	**Pn**	**17 15 02.6**	**-1.4**
KNZ				S	**Sn**	**17 16 15.4**	**-2.1**
TOZ	**Tahuroa Road**	**6.72**	**228**	Pn	**Pn**	**17 15 05.1**	**-1.0**
RAHZ	**Arahi**	**6.72**	**213**	P	**Pn**	**17 15 06.5**	**+0.2**
RAHZ				S	**Sn**	**17 16 20.8**	**-0.8**
MTHZ	**Maungataniwha**	**6.79**	**214**	P	**Pn**	**17 15 07.2**	**0.0**
MTHZ				S	**Sn**	**17 16 22.0**	**-1.1**
NMHZ	**Naumai**	**7.00**	**213**	P	**Pn**	**17 15 10.4**	**+0.3**
NMHZ				S	**Sn**	**17 16 27.2**	**-1.2**
OTVZ	**Oturere**	**7.61**	**218**	P	**Pn**	**17 15 18.3**	**-0.3**
BFZ	**Birch Farm**	**8.55**	**209**	P	**Pn**	**17 15 28.3**	**-3.0**
BFZ				S	**Sn**	**17 17 01.0**	**-5.4**
MRZ	**Mangatainoka R**	**8.82**	**212**	Pn	**Pn**	**17 15 33.9**	**-1.1**
MRZ	**Mangatainoka R**	**8.82**	**212**	P	**Pn**	**17 15 33.5**	**-1.5**
MRZ				S	**Sn**	**17 17 05.5**	**-7.5**
AFI	**Afiamalu**	**20.22**	**18**	LR	LR	17 28 32.3	
	comp=Z,28nm,18.5s,baz=336,slow=45						
EIDS	**Eidsvold**	**27.81**	**278**	P	**P**	**17 19 17.4**	**+1.9**
EIDS				IAmb	IAmb	17 19 51.6	
	comp=Z,12nm,1.2s						
CTA	**Charters Tower**	**34.17**	**284**	P	**P**	**17 20 13.3**	**+1.7**
	comp=Z,1.9nm,0.6s,baz=116,slow=12,SNR=2.0						
	comp=Z,1.9nm,0.6s						
CTAO	**Charters Tower**	**34.17**	**284**	P	**P**	**17 20 12.5**	**+0.9**
CTAO				IAmb	IAmb	17 20 38.9	
	comp=Z,16nm,1.4s						
INKA	**Innaminka**	**35.58**	**268**	P	**P**	**17 20 23.7**	**0.0**
INKA				IAmb	IAmb	17 20 23.9	
	comp=Z,7.0nm,1.4s						
AS31	**Alice Springs**	**42.82**	**270**	P	**P**	**17 21 25.3**	**+1.1**
AS31				IAmb	IAmb	17 21 26.3	
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**42.82**	**270**	P	**P**	**17 21 25.0**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=110,slow=7.3,SNR=56						
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**42.82**	**270**	P	**P**	**17 21 24.5**	**+0.3**
WR8	**Warramunga Arr**	**43.93**	**275**	P	**P**	**17 21 33.7**	**+0.5**
WR8				IAmb	IAmb	17 22 07.5	
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**44.07**	**275**	P	**P**	**17 21 35.0**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=115,slow=7.7,SNR=36						
	comp=Z,1.7nm,0.6s						
WB0	**Warramunga Arr**	**44.11**	**276**	P	**P**	**17 21 35.2**	**+0.6**
WB0				IAmb	IAmb	17 21 52.0	
	comp=Z,8.9nm,1.2s						
MTN	**Manton Dam**	**50.29**	**282**	P	**P**	**17 22 23.9**	**+1.1**
MTN				IAmb	IAmb	17 22 44.9	
	comp=Z,11nm,1.3s						
KNRA	**Kununurra**	**50.77**	**277**	P	**P**	**17 22 28.0**	**+1.5**
FITZ	**Fitzroy Crossi**	**52.20**	**272**	P	**P**	**17 22 38.2**	**+1.1**
BO01	**Tunca**	**84.08**	**127**	P	**P**	**17 25 58.4**	**+1.6**
PETK	**Petropavlovsk-**	**88.60**	**346**	P	**P**	**17 26 18.9**	**+0.7**
KDAK	**Kodiak Island**	**93.31**	**13**	LR	LR	18 02 59.9	
	comp=Z,22nm,18.5s,baz=171,slow=32						
MA2	**Magadan**	**96.06**	**345**	LR	LR	18 07 10.2	
	comp=Z,7.9nm,18.7s,baz=160,slow=34						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKPbc**	**17 33 10.8**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=46,slow=4.0,SNR=6.5						

IDC 15 17:21:24.0±4.8, 65°.16S×179°.31E, h0km, mb3.8/3, mbtmp3.9/4, ML3.6/1, MS3.6/12, Error ellipse: s-maj=158.6km s-min=26.4km az=69.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.50**	**196**	Pn	Pn	17 24 36.0	-0.4
	0.3nm,0.3s,baz=38,slow=14,SNR=33						
VNDA				LR	LR	17 28 38.7	
	comp=Z,126nm,19.9s,baz=358,slow=32						
	2.2nm,0.6s						
RPZ	**Rata Peaks**	**21.98**	**344**	LR	LR	17 33 26.7	
	comp=Z,98nm,18.1s,baz=334,slow=33						
QSPA	**South Pole Qui**	**24.93**	**180**	P	P	17 26 48.5	0.0
	4.1nm,0.9s,baz=55,slow=1.8,SNR=9.1						
QSPA				LR	LR	17 35 26.8	
	comp=Z,146nm,18.9s,baz=41,slow=34						
	4.1nm,0.9s						
URZ	**Urewera**	**26.97**	**356**	LR	LR	17 35 33.7	
	comp=Z,151nm,20.9s,baz=168,slow=32						
MAW	**Mawson**	**40.08**	**212**	LR	LR	17 45 26.8	
	comp=Z,114nm,18.9s,baz=120,slow=36						
SNAA	**Sanae**	**43.42**	**179**	LR	LR	17 47 19.1	
	comp=Z,73nm,18.1s,baz=259,slow=36						
DZM	**Mont Dzumac**	**43.89**	**343**	LR	LR	17 47 20.6	
	comp=Z,113nm,18.5s,baz=184,slow=36						
TBI	**Tubuai**	**46.44**	**41**	*eT*	T	18 19 25.4	
	13nm,0.4s						
MSVF	**Nonsavu**	**47.40**	**358**	LR	LR	17 47 43.3	
	comp=Z,46nm,18.6s,baz=232,slow=33						
H01W1	**Cape Leeuwin H**	**48.54**	**276**	T	T	18 22 44.8	
	baz=149,slow=76,SNR=36						
H01W2	**Cape Leeuwin H**	**48.55**	**276**	T	T	18 22 44.0	
	baz=149,slow=76,SNR=39						
H01W3	**Cape Leeuwin H**	**48.56**	**276**	T	T	18 22 46.0	
	baz=149,slow=76,SNR=25						
ASAR	**Alice Springs**	**50.67**	**302**	P	P	17 30 25.3	+0.4
	0.8nm,0.8s,baz=156,slow=7.4,SNR=14						
	0.8nm,0.8s						
TVO	**Taravao**	**51.79**	**39**	*eT*	T	18 26 12.3	
	8.6nm,0.3s						
PPT2	**Papeete2**	**51.89**	**39**	*eLR*	LR	17 44 51.5	
	94nm,26.5s						
PPT	**Papeete**	**51.91**	**39**	LR	LR	17 48 36.2	
	comp=Z,39nm,18.1s,baz=123,slow=32						
WRA	**Warramunga Arr**	**53.95**	**305**	P	P	17 30 48.6	-0.6
	0.8nm,0.8s,baz=156,slow=7.2,SNR=6.6						
	0.8nm,0.8s						
VAH	**Vaihoa**	**54.66**	**40**	*eT*	T	18 29 46.7	
	25nm,0.2s						
H03S2	**Juan Fernandez**	**64.49**	**115**	T	T	18 42 48.1	
	baz=205,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**64.49**	**115**	T	T	18 42 46.5	
	baz=205,slow=74,SNR=25						
H03S3	**Juan Fernandez**	**64.51**	**115**	T	T	18 42 43.0	
	baz=205,slow=74,SNR=33						
H03N3	**Juan Fernandez**	**64.83**	**115**	T	T	18 43 08.9	
	baz=208,slow=78,SNR=12						
H03N2	**Juan Fernandez**	**64.84**	**115**	T	T	18 43 09.2	
	baz=208,slow=78,SNR=68						
H03N1	**Juan Fernandez**	**64.85**	**115**	T	T	18 42 58.2	
	baz=208,slow=78,SNR=7.6						
SUR	**Sutherland**	**81.34**	**198**	LR	LR	18 06 48.3	
	comp=Z,80nm,18.4s,baz=110,slow=34						
LBTB	**Lobatse**	**87.85**	**204**	LR	LR	18 14 15.1	
	comp=Z,46nm,18.0s,baz=98,slow=36						
H08S2	**Diego Garcia H**	**90.08**	**252**	T	T	19 14 51.2	
	baz=154,slow=76,SNR=15						
H08S1	**Diego Garcia H**	**90.08**	**252**	T	T	19 14 53.9	
	baz=154,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**90.10**	**252**	T	T	19 14 53.0	
	baz=154,slow=76,SNR=13						
TSUM	**Tsumeb**	**94.75**	**197**	LR	LR	18 13 07.8	
	comp=Z,50nm,20.9s,baz=152,slow=33						

NNC 15 17:33:48.4±1.6, 37°.05N×71°.43E, h0km, mb4.6, mpv4.8, Error ellipse: s-maj=13.2km s-min=11.7km az=165.0
IDC 15 17:33:50.2±3.9, 36°.77N×71°.54E, h75km±33km, mb3.6/16, mbtmp4.0/19, MS3.3/2, Error ellipse: s-maj=24.1km s-min=13.7km az=8.0
NEIC 15 17:33:54.7±1.1, 37°.04N±0°.07×71°.46E±0°.09, h102km±14km, mb4.0/6, Error ellipse: s-maj=11.7km s-min=8.2km az=124.0
GFZ 15 17:33:54.7±0.3, 37°.7N±3°×7°1E±°, h93km, M4.2/11, mb4.2/11
BJI 15 17:33:58.4, 37°.21N×71°.99E, h103km, mB4.6/1, mb4.2/14
ISC 15 17:33:53.7±0.5, 36°.92N±0°.05×71°.46E±0°.05, h106km, n128, σ1s37/133, mb3.9/18, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**0.64**	**16**		**Pn**	**17 34 11.5**	**-0.1**
GAR	**Garm**	**2.26**	**337**		**Pn**	**17 34 29.7**	**-0.3**
CHGR	**Chuyangaron**	**2.51**	**314**		**Pn**	**17 34 32.3**	**-0.9**
CHGR	**Chuyangaron**	**2.51**	**314**	P	**Pn**	**17 34 32.4**	**-0.8**
DRK	**Karamyk**	**2.57**	**6**		**Pn**	**17 34 33.2**	**-0.7**
DRK	**Karamyk**	**2.57**	**6**	P	**Pn**	**17 34 33.2**	**-0.9**
SHAA	**Shahritus**	**2.74**	**284**		**Pn**	**17 34 35.3**	**-0.8**
KBL	**Kabul**	**3.08**	**220**		**Pn**	**17 34 43.2**	**+2.2**
KBL	**Kabul**	**3.08**	**220**	P	**Pn**	**17 34 41.9**	**+1.0**
BTK	**Batken**	**3.17**	**351**		**Pn**	**17 34 42.8**	**+0.9**
BTK	**Batken**	**3.17**	**351**	P	**Pn**	**17 34 43.1**	**+1.2**
NIL	**Nilore**	**3.58**	**155**		**Pn**	**17 34 49.6**	**+2.3**
NIL	**Nilore**	**3.58**	**155**	P	**Pn**	**17 34 49.8**	**+2.4**
OHH	**Osh**	**3.74**	**16**	P	**Pn**	**17 34 49.0**	**-0.5**
KSH2	**Kashi**	**3.93**	**54**	P	**Pn**	**17 34 53.8**	**+1.6**
KSH2				S	**Sn**	**17 35 38.6**	**+1.2**
KSH2				SMN			
	720nm,0.4s						
KSH2				SME			
	460nm,0.6s						
ARSB	**Arslanbob**	**4.55**	**15**		**Pn**	**17 34 59.6**	**-0.9**
JMU	**Jammu**	**4.98**	**145**	*eP*	**Pn**	**17 35 08.0**	**+1.8**
JMU				*eS*	**Sn**	**17 36 01.3**	**-1.3**
JMU				IAML		17 36 05.8	
	comp=E,364nm,0.3s						
JMU				IAML		17 36 06.1	
	comp=N,290nm,0.1s						
IUG	**luzhnay**	**5.33**	**349**	*eP*	**Pn**	**17 35 10.7**	**-0.3**
IUG				*eS*	**Sn**	**17 36 09.8**	**-1.5**
CHM	**Chimkent**	**5.58**	**346**	*eP*	**Pn**	**17 35 14.2**	**0.0**
TSSA	**Tissa**	**5.61**	**135**	*eP*	**Pn**	**17 35 14.5**	**-0.5**
TSSA				*eS*	Sn	17 36 13.2	-5.0
TSSA				IAML		17 36 16.6	
	comp=N,647nm,0.4s						
TSSA				IAML		17 36 20.1	
	comp=E,357nm,0.2s						
NRN	**Naryn**	**5.72**	**37**		**Pn**	**17 35 15.5**	**-1.0**
UCH	**Uchtor**	**5.80**	**23**	P	**Pn**	**17 35 17.5**	**-0.2**
	SNR=51						
DZA	**Taraz**	**5.96**	**359**	*eP*	**Pn**	**17 35 19.1**	**-0.4**
DZA				*eS*	**Sn**	**17 36 24.8**	**-1.6**
**

BTLS	**Baital**	**8.34**	**13**	*eP*		**Pn**	17 35 50.7	**-1.0**
UZB	**Uzynbulak**	**8.50**	**41**	*eP*		**Pn**	17 35 53.3	**-0.7**
SHLS	**Shalkode**	**8.74**	**42**	*eP*		**Pn**	17 35 59.8	**+2.5**
PDGK	**Podgornoye**	**8.87**	**41**			**Pn**	17 35 57.7	**-1.4**
TDK	**Taldyqorghan**	**9.63**	**31**	*eP*		**Pn**	17 36 07.9	**-1.3**
PTH	**Pithoragarh**	**10.35**	**132**	*eP*		**Pn**	17 36 18.1	**-1.1**
PTH				*eS*		Sn	17 38 04.1	-9.3
PTH				IAML			17 38 10.1	
	comp=N,29nm,0.1s							
PTH				IAML			17 38 11.6	
	comp=E,26nm,0.6s							
LGTI	**Lohaghat**	**10.42**	**134**	*eP*		Pn	17 36 18.0	-2.2
LGTI				*eS*		Sn	17 38 03.7	-11
MAKZ	**Makanchi**	**12.60**	**35**	P		**Pn**	17 36 48.1	**-0.9**
MAKZ	**Makanchi**	**12.60**	**35**			**Pn**	17 36 46.9	**-2.1**
MK31	**Makanchi Array**	**12.73**	**36**	P		**Pn**	17 36 49.9	**-0.9**
	comp=E,2.4nm,0.9s,baz=221,slow=12,SNR=26							
MKAR	**Makanchi Array**	**12.73**	**36**	P		**Pn**	17 36 49.0	**-1.8**
	comp=E,2.9nm,0.8s,baz=222,slow=13,SNR=24							
MKAR	**Makanchi Array**	**12.73**	**36**			**Pn**	17 36 49.5	**-1.3**
WMQ	**Urumqi**	**14.15**	**56**	*eP*		**Pn**	17 37 11.0	**+1.7**
ZSN	**Zaisan**	**14.45**	**39**	*eP*		**Pn**	17 37 12.9	**-0.1**
KURBB	**Kurchatov Arra**	**14.61**	**18**	P		Pn	17 37 10.8	-4.1
	comp=E,1.4nm,0.7s,baz=213,slow=13,SNR=14							
KURBB	**Kurchatov Arra**	**14.61**	**18**	P		**Pn**	17 37 14.6	**-0.3**
KURK	**Kurchatov**	**14.71**	**18**	P		**Pn**	17 37 15.4	**-0.9**
KURK	**Kurchatov**	**14.71**	**18**			**Pn**	17 37 17.2	**+0.9**
AB31	**Akbulak array**	**14.90**	**329**	P		**Pn**	17 37 17.9	**-0.8**
	comp=E,1.8nm,0.3s,baz=138,slow=13,SNR=138							
AB31	**Akbulak array**	**14.90**	**329**			**Pn**	17 37 15.5	**-3.2**
ABKAR	**Akbulak array**	**14.90**	**329**			**Pn**	17 37 15.4	**-3.3**
EVN	**Everest**	**15.73**	**120**			**Pn**	17 37 26.5	**-3.5**
EVN				IAmb		IAmb	17 37 32.5	
	comp=Z,5.5nm,0.6s							
BVA0	**Borovoye Array**	**16.12**	**358**	P		**Pn**	17 37 34.2	**+0.3**
	baz=168,slow=13,SNR=31							
BVAR	**Borovoye Array**	**16.12**	**358**	P		**Pn**	17 37 31.0	**-3.0**
	comp=Z,2.8nm,0.3s,baz=160,slow=11,SNR=22							
BORK	**Borovoye**	**16.14**	**358**			**Pn**	17 37 31.8	**-2.5**
AKTO	**Aktyubinsk**	**16.60**	**329**	P		**Pn**	17 37 39.1	**-0.8**
	comp=Z,13nm,0.6s,baz=140,slow=10,SNR=24							
AKTO				S		Sn	17 40 32.4	-12
	comp=Z,10.0nm,0.8s,baz=235,slow=16,SNR=5.5							
AKTO				LR		LR	17 44 22.6	
	comp=Z,37nm,19.2s,baz=189,slow=38							
AKTO	**Aktyubinsk**	**16.60**	**329**	⇓P		**Pn**	17 37 39.8	**-0.2**
	comp=Z,6.4nm,0.7s							
ZAA0	**Zalesovo Array**	**19.38**	**24**	IAmb		IAmb	17 38 11.9	
	comp=Z,6.7nm,0.6s							
ZALV	**Zalesovo Beam**	**19.38**	**24**	P		**P**	17 38 10.1	**-0.8**
	comp=Z,6.7nm,0.4s,baz=221,slow=10,SNR=44							
ZALV	**Zalesovo Beam**	**19.38**	**24**			**P**	17 38 09.7	**-1.2**
GNI	**Garni**	**21.12**	**287**	P		**P**	17 38 31.0	**+1.0**
	comp=Z,4.2nm,0.5s,baz=213,slow=4.7,SNR=7.3							
	comp=Z,4.2nm,0.5s							
GNI	**Garni**	**21.12**	**287**			**P**	17 38 30.4	**+0.4**
GNI	**Garni**	**21.12**	**287**	P		**P**	17 38 31.9	**+1.8**
ARTI	**Arti**	**21.37**	**340**	P		**P**	17 38 34.1	**+1.8**
	comp=Z,1.6nm,0.3s,baz=192,slow=6.2,SNR=5.8							
	comp=Z,1.6nm,0.3s							
ARTI	**Arti**	**21.37**	**340**			**P**	17 38 32.1	**-0.2**
ARTI				IAmb		IAmb	17 38 48.4	
	comp=Z,4.8nm,0.7s							
HAKT	**HAKKARI**	**22.07**	**280**	P		**P**	17 38 41.5	**+1.2**
GTA2	**Gaotai**	**22.35**	**75**	*eP*		**P**	17 38 44.8	**+1.8**
GTA2				pP		pP	17 39 09.8	+5.0
GTA2				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KBZ	**Khabaz**	**22.74**	**296**	P		**P**	17 38 47.6	**+0.9**
	comp=Z,0.6nm,0.4s,baz=147,slow=8.9,SNR=5.1							
	comp=Z,0.6nm,0.4s							
KELT	**Kelkit**	**25.32**	**287**	P		**P**	17 39 12.6	**+1.9**
RAYN	**Ar Rayn**	**26.00**	**246**			**P**	17 39 17.9	**+1.1**
RAYN				IAmb		IAmb	17 39 23.9	
	comp=Z,4.0nm,0.8s							
RAYN	**Ar Rayn**	**26.00**	**246**	P		**P**	17 39 17.6	**+0.8**
ARPR	**Arapgir-MALATY**	**26.11**	**285**	P		**P**	17 39 19.9	**+2.1**
NPW	**Naypyitaw**	**27.51**	**122**	P		**P**	17 39 32.5	**+2.2**
SONM	**Songino Array**	**27.79**	**56**	P		**P**	17 39 33.0	**+0.2**
	comp=Z,0.4nm,0.4s,baz=261,slow=9.6,SNR=1.9							
	comp=Z,0.4nm,0.4s							
BRTR	**Keskin Array B**	**29.66**	**287**	P		**P**	17 39 51.2	**+1.9**
	comp=Z,1.7nm,0.8s,baz=94,slow=7.4,SNR=8.7							
	comp=Z,1.7nm,0.8s							
HHC	**Hu-ho-hao-te**	**31.27**	**70**	*eP*		**P**	17 40 06.0	**+2.4**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,50nm,4.3s							
FINES	**FINESS Array B**	**37.34**	**326**	P		**P**	17 40 56.5	**+1.0**
	comp=Z,2.2nm,0.7s,baz=118,slow=10,SNR=8.9							
	comp=Z,2.2nm,0.7s							
FINES	**FINESS Array B**	**37.34**	**326**	P		**P**	17 40 56.1	**+0.7**
VADS	**Vadso**	**40.05**	**339**	*eP*		**P**	17 41 19.1	**+1.1**
ARA0	**ARCESS Array S**	**40.90**	**337**	*eP*		**P**	17 41 25.9	**+0.9**
ARCES	**ARCESS Array B**	**40.90**	**337**	P		**P**	17 41 25.9	**+1.0**
	comp=Z,2.5nm,0.7s,baz=113,slow=8.9,SNR=9.2							
	comp=Z,2.5nm,0.7s							
KTK1	**Kautokeino**	**41.38**	**336**	*eP*		**P**	17 41 29.8	**+0.9**
HFS	**Hagfors**	**42.96**	**322**	P		**P**	17 41 42.7	**+0.8**
	comp=Z,2.6nm,0.5s,baz=98,slow=11,SNR=17							
	comp=Z,2.6nm,0.5s							
MOR8	**Moi Rana**	**43.63**	**330**	*eP*		**P**	17 41 47.6	**+0.4**
STEI	**Steigen**	**43.76**	**333**	*eP*		**P**	17 41 49.2	**+1.1**
NC602	**NORSAR Array S**	**44.08**	**322**	*eP*		**P**	17 41 51.9	**+1.0**
VAGH	**Vaagaholmen**	**44.21**	**331**	*eP*		**P**	17 41 53.7	**+1.9**
KONS	**Konsvik**	**44.22**	**331**	*eP*		**P**	17 41 52.9	**+1.0**
NB2	**NORSAR Subarra**	**44.27**	**323**	P		**P**	17 41 53.4	**+1.0**
	comp=Z,1.2nm,0.5s,baz=93,slow=7.9							
NB2	**NORSAR Subarra**	**44.27**	**323**	P		**P**	17 41 53.4	**+1.0**
NOA	**NORSAR Array B**	**44.27**	**323**	P		**P**	17 41 53.2	**+0.8**
	comp=Z,2.5nm,0.7s,baz=95,slow=7.8,SNR=21							
	comp=Z,2.5nm,0.7s							
EKA	**Eskdalemuir Ar**	**52.24**	**316**	P		**P**	17 42 53.6	**0.0**
	comp=Z,0.3nm,0.4s,baz=86,slow=5.7,SNR=3.9							
	comp=Z,0.3nm,0.4s							
ESDC	**Sonseca Array**	**57.59**	**298**	P		**P**	17 43 32.9	**+0.4**
	comp=Z,0.7nm,0.5s,baz=53,slow=7.8,SNR=7.4							
	comp=Z,0.7nm,0.5s							
PETK	**Petropavlovsk-**	**59.41**	**44**	P		**P**	17 43 46.7	**+1.9**
	comp=Z,0.7nm,0.6s,baz=291,slow=12,SNR=4.4							
	comp=Z,0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P		**P**	17 44 28.5	**-1.2**
	comp=Z,1.0nm,0.7s,baz=50,slow=5.9,SNR=6.1							
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**80.81**	**3**	P		**P**	17 45 55.6	**+0.4**
	comp=Z,0.5nm,0.5s,baz=356,slow=5.0,SNR=1.8							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**81.90**	**122**	P		**P**	17 46 00.7	**-0.9**
	comp=Z,0.4nm,0.4s,baz=324,slow=4.8,SNR=15							
	comp=Z,0.4nm,0.4s							
DLBC	**Dease Lake**	**83.31**	**11**	LR		LR	18 27 44.5	
	comp=Z,34nm,18.2s,baz=192,slow=39							
ASAR	**Alice Springs**	**84.20**	**125**	P		**P**	17 46 12.7	**-0.7**
	comp=Z,0.6nm,0.6s,baz=310,slow=4.5,SNR=24							
	comp=Z,0.6nm,0.6s							

IDC 15 17:36:52.8±5.0, 65.08S×179.15W, h0km, mb3.5/3, mbtmp3.5/4, ML3.2/1, MS3.0/3, Error ellipse: s-maj=157.8km s-min=29.1km az=69.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.77**	**197**		Pn	Pn	17 40 06.7	-2.2
	0.1nm,0.3s,baz=44,slow=18,SNR=16							
VNDA					LR	LR	17 44 10.2	
	comp=Z,50nm,20.3s,baz=359,slow=32							
	0.6nm,0.5s							
RPZ	**Rata Peaks**	**22.10**	**341**		LR	LR	17 49 01.7	
	comp=Z,16nm,18.1s,baz=292,slow=33							
QSPA	**South Pole Qui**	**25.01**	**180**		P	P	17 42 18.6	+0.6
	2.5nm,1.0s,baz=51,slow=1.8,SNR=4.5							
QSPA					LR	LR	17 50 36.5	
	comp=Z,72nm,19.2s,baz=30,slow=33							
	2.5nm,1.0s							
H01W1	**Cape Leeuwin H**	**49.19**	**274**		T	T	18 38 33.6	
	baz=149,slow=75,SNR=9.2							
H01W2	**Cape Leeuwin H**	**49.19**	**274**		T	T	18 38 37.9	
	baz=149,slow=75,SNR=9.6							
H01W3	**Cape Leeuwin H**	**49.20**	**274**		T	T	18 38 40.1	
	baz=149,slow=75,SNR=9.7							
ASAR	**Alice Springs**	**51.19**	**301**		P	P	17 45 57.7	+0.1
	0.2nm,0.6s,baz=151,slow=7.5,SNR=8.5							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**54.45**	**303**		P	P	17 46 21.2	-0.5
	0.7nm,1.1s,baz=139,slow=7.8,SNR=2.7							
	0.7nm,1.1s							
H03S2	**Juan Fernandez**	**63.93**	**114**		T	T	18 57 47.7	
	baz=206,slow=74,SNR=9.2							
H03S1	**Juan Fernandez**	**63.93**	**114**		T	T	18 57 53.8	
	baz=206,slow=74,SNR=4.3							
H03S3	**Juan Fernandez**	**63.95**	**114**		T	T	18 57 47.7	
	baz=206,slow=74,SNR=8.0							

CATAC 15 17:37:03.6±0.2, 13°N±5°×8°7W±°, h3km±3km, M4.0/17, MLv4.0/17, 2C-11D, Error ellipse: s-maj=12.0km s-min=3.3km az=29.0, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.19**	**281**		⇓P	Pg	17 37 07.3	-0.1
CSGN					S	Sg	17 37 10.5	+0.5
CRIN	**San Cristobal**	**0.39**	**128**		⇓P	Pb	17 37 12.5	-0.7
CRIN					S	Sb	17 37 19.4	-0.3
QUEN	**Al S del Volca**	**0.61**	**125**		P	Pg	17 37 15.8	+0.5
HERN	**Volcan Telica**	**0.62**	**122**		P	Pg	17 37 16.0	+0.5
HERN					S	Sg	17 37 24.6	+1.1
TEL3	**Telica 3**	**0.63**	**126**		P	Pg	17 37 16.1	+0.5
LCND	**La Caada**	**0.63**	**306**		⇓P	Pg	17 37 15.2	-0.5
PLRN	**Geotermica Pol**	**0.68**	**121**		P	Pg	17 37 17.1	+0.3
ROCN	**Rota Cerro Neg**	**0.74**	**125**		⇓P	Pg	17 37 17.8	0.0
ROCN					S	Sb	17 37 28.7	-1.0
ILCN	**San Idelfonso**	**0.74**	**119**		⇓P	Pg	17 37 18.0	+0.1
ILCN					S	Sb	17 37 29.0	-0.8
CNGN	**Cerro Negro**	**0.78**	**124**		⇓P	Pg	17 37 18.6	-0.1
CNGN					S	Sg	17 37 29.8	+1.0
CNGA	**Al SSO del Vol**	**0.79**	**124**		P	Pg	17 37 18.6	-0.1
AESN	**El Sauce Leon**	**0.81**	**94**		P	Pg	17 37 18.7	-0.4
AESN					S	Sg	17 37 29.9	+0.4
MACN	**El Madrono**	**0.82**	**125**		P	Pg	17 37 19.2	-0.2
MACN					S	Sb	17 37 31.2	-0.9
MOM3	**MOM3**	**0.93**	**117**		⇓P	Pg	17 37 20.9	-0.6
MOM3					S	Sb	17 37 34.6	-0.6
MOMN	**Momotombo**	**0.96**	**123**		P	Pg	17 37 21.8	-0.3
MOMN					S	Sb	17 37 35.5	-0.7
LIMN	**Finca el Limon**	**0.98**	**83**		⇑P	Pg	17 37 21.6	-0.9
LIMN					S	Sb	17 37 36.0	-0.7
MOM2	**El Cardon**	**0.99**	**120**		⇓P	Pg	17 37 22.4	-0.3
MOM2					S	Sb	17 37 37.2	+0.2
RANC	**El Ranchito**	**1.02**	**299**		P	Pg	17 37 22.3	-1.0
RANC					S	Sg	17 37 36.7	+0.1
COPN	**Copaltepe**	**1.07**	**135**		⇓P	Pg	17 37 23.2	-0.9
PACA	**Pacayal**	**1.07**	**299**		⇓P	Pg	17 37 22.9	-1.3
PACA					S	Sg	17 37 37.5	-0.7
OCON	**Estacion meteo**	**1.10**	**51**		P	Pg	17 37 24.0	-0.8
OCON					S	Sg	17 37 38.8	-0.3
AMTN	**Mateare**	**1.15**	**127**		S	Sb	17 37 41.5	0.0
SAPS	**Ciudad Sandino**	**1.21**	**129**		P	Pg	17 37 26.5	-0.4
SAPS					S	Sb	17 37 43.4	+0.1
APYN	**Apoyeque**	**1.22**	**125**		S	Sb	17 37 43.1	-0.3
APQ2	**Apoyeque**	**1.25**	**126**		P	Pg	17 37 27.1	-0.7
APQ2					S	Sn	17 37 45.1	-0.4
RCFN	**Al S de San Ju**	**1.27**	**62**		P	Pg	17 37 26.6	-1.3
RCFN					S	Sg	17 37 44.1	-0.3
RCON	**San Juan de Ri**	**1.29**	**65**		⇑P	Pg	17 37 27.3	-1.2
RCON					S	Sg	17 37 45.4	+0.1
RCVN	**Varillal2**	**1.31**	**61**		⇓P	Pg	17 37 27.1	-1.6
RCVN					S	Sg	17 37 45.3	-0.4
ABCN	**Banco Central**	**1.31**	**128**		P	Pg	17 37 28.2	-0.6
ABCN					S	Sg	17 37 46.0	+0.1
ALLN	**Telcor Managua**	**1.32**	**126**		S	Sb	17 37 46.4	-0.1
TISN	**Laguna Tiscapa**	**1.33**	**126**		P	Pn	17 37 27.8	-1.4
MGAN	**Managua**	**1.35**	**126**		P	Pn	17 37 28.1	-1.3
MGAN					S	Sg	17 37 46.8	-0.2
UNAN	**Cigeo UNAN**	**1.35**	**128**		P	Pn	17 37 28.2	-1.2
UNAN					S	Sb	17 37 47.5	+0.2
RCPN	**Sur Rio San Ju**	**1.37**	**65**		P	Pn	17 37 28.6	-1.1
WILN	**Americas 2**	**1.39**	**124**		P	Pn	17 37 28.6	-1.3
WILN					S	Sn	17 37 48.6	-0.1
MATN	**Matagalpa**	**1.40**	**90**		P	Pn	17 37 28.6	-1.7
MATN					S	Sg	17 37 47.8	-1.0
AERN	**Aeropuerto Man**	**1.41**	**124**		S	Sg	17 37 48.8	-0.3
MAS3	**Al N del Volca**	**1.48**	**128**		P	Pn	17 37 30.2	-1.0
MAS3					S	Sb	17 37 50.2	-0.8
TECO	**Alcaldia de Te**	**1.50**	**293**		P	Pn	17 37 30.3	-1.3
TECO					S	Sn	17 37 50.7	-1.0
MASN	**Masaya**	**1.52**	**129**		P	Pn	17 37 30.9	-0.9
MASN					S	Sn	17 37 52.1	0.0
SCLA	**Alcaldia de Sa**	**1.53**	**300**		P	Pn	17 37 30.9	-1.0
COEG	**Centro de Oper**	**1.62**	**295**		P	Pn	17 37 31.7	-1.6
COEG					S	Sn	17 37 54.5	-0.2
P5NO	**Presa 5 de nov**	**1.71**	**308**		P	Pn	17 37 33.3	-1.0
P5NO					S	Sn	17 37 56.6	-0.1
PAVA	**Las Pavas**	**1.71**	**297**		P	Pn	17 37 33.9	-0.7
PAVA					S	Sn	17 37 56.8	-0.2
BOAB	**BOACO BROADBAN**	**1.73**	**106**		P	Pn	17 37 33.3	-1.3
BOAB					S	Sb	17 37 57.9	-0.2
NADN	**Granada**	**1.76**	**132**		P	Pn	17 37 35.0	0.0
NADN					S	Sb	17 37 58.8	-0.3
PANCS	**Alcalda de**	**1.89**	**291**		S	Sn	17 38 01.7	+0.4
LOMA	**Loma Larga**	**1.89**	**292**		P	Pn	17 37 36.9	-0.1
LOMA					S	Sn	17 38 01.6	+0.1
LLGN	**La Laguna**	**1.96**	**308**		P	Pn	17 37 37.5	-0.4
SEMO	**Seminario San**	**1.96**	**293**		S	Sb	17 38 04.7	-0.3
LALI	**Alcalda de L**	**1.98**	**286**		P	Pn	17 37 37.9	-0.2
LALI					S	Sn	17 38 03.8	+0.3
JAYA	**Jayaque - finc**	**2.15**	**289**		P	Pn	17 37 40.6	0.0
JAYA					S	Sb	17 38 10.2	-0.3
MORN	**Al O del Volca**	**2.18**	**129**		P	Pn	17 37 41.3	+0.4
MORN					S	Sb	17 38 10.0	-1.2
CONN	**Concepcion**	**2.18**	**129**		P	Pn	17 37 41.1	+0.2
CONN					S	Sn	17 38 09.8	+1.3
SARH	**Santa Rosa de**	**2.27**	**324**		P	Pn	17 37 43.5	+1.3
SARH					S	Sn	17 38 12.0	+1.2
ACON	**Acoyapa**	**2.35**	**114**		P	Pn	17 37 44.2	+1.1
ACON					S	Sb	17 38 16.0	-0.1

*MDD **15** 18:04:45.0±1.1, 34°33N×5°73W, h3km±10km, mb_Lg2.8/6, Error ellipse: s-maj=8.0km s-min=5.0km az=116.0*
*CNRM **15** 18:04:45.7, 34°16N×5°82W, h4km*
ISC 15 18:04:44.6±1.3, 34°31N±0°03×5°79W±0°04, h17km±10km, n17, σ1°03/32, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SICH	**Sidi Chahed**	**0.44**	**118**		P	**Pb**	**18 04 53.8**	**-0.2**
SICH					S	**Sb**	**18 05 00.4**	**+0.1**
LCRM	**LCR**	**0.99**	**129**		P	**Pb**	**18 05 03.5**	**0.0**
LCRM					S	**Sn**	**18 05 17.6**	**-0.1**
ZHG	**ZHG**	**1.12**	**220**		P	**Pn**	**18 05 06.1**	**+0.5**
ZHG					S	**Sn**	**18 05 22.5**	**+1.8**
CZD	**Col de Zad**	**1.42**	**154**		P	**Pg**	**18 05 11.5**	**-0.5**
CZD					S	**Sg**	**18 05 30.1**	**-0.5**
AKLM	**AKL**	**1.60**	**82**		P	**Pg**	**18 05 15.5**	**+0.1**
AKLM					S	**Sg**	**18 05 36.0**	**-0.3**
MD31	**MD31**	**1.68**	**149**		P	**Pb**	**18 05 15.2**	**+0.1**
MD31					S	**Sb**	**18 05 35.6**	**-0.4**
AVE	**Averroes**	**1.69**	**234**		P	**Pb**	**18 05 15.4**	**+0.1**
AVE					S	**Sb**	**18 05 36.7**	**+0.4**
PALE	**Palemas**	**1.77**	**59**		P	**Pg**	**18 05 17.9**	**-0.7**
PALE					S	**Sg**	**18 05 43.5**	**+2.0**
MDT	**Midelt**	**1.79**	**146**		P	**Pn**	**18 05 15.2**	**+0.4**
MDT					S	**Sn**	**18 05 37.6**	**+0.3**
TISM	**Timmit**	**2.64**	**192**		P	**Pn**	**18 05 27.0**	**+0.6**
OUZM	**OUZ**	**3.49**	**194**		P	**Pb**	**18 05 44.1**	**-1.9**
EGRO	**El Granado**	**3.50**	**337**		P	**Pn**	**18 05 39.3**	**+1.1**
EGRO					S	**Sn**	**18 06 18.6**	**-0.5**
EGRO				*i*	lVmb_Lg		18 06 21.8	
EMIN	**Mina Concepcio**	**3.52**	**348**		P	**Pn**	**18 05 38.9**	**+0.3**
EMIN					S	**Sn**	**18 06 19.2**	**-0.6**
EMIN				*i*	lVmb_Lg		18 06 25.7	
ECAB	**El Cabril**	**3.77**	**4**		P	**Pn**	**18 05 43.3**	**+1.4**
ECAB					S	**Sn**	**18 06 24.1**	**-1.7**
ECAB				*i*	lVmb_Lg		18 06 26.8	
EADA	**Adamuz**	**3.97**	**14**		P	**Pn**	**18 05 45.1**	**+0.4**
EADA					S	**Sn**	**18 06 29.7**	**-1.1**
EADA				*i*	lVmb_Lg		18 06 33.5	
EBAD	**Badajoz**	**4.54**	**348**		P	**Pn**	**18 05 54.1**	**+1.5**
EBAD					S	**Sn**	**18 06 43.6**	**-1.3**
EBAD				*i*	lVmb_Lg		18 06 46.7	
PSIM	**Granatula de C**	**4.78**	**19**		P	**Pn**	**18 05 57.5**	**+1.5**
PSIM					S	**Sn**	**18 06 49.7**	**-1.4**

*NEIC **15** 18:21:48.4±1.3, 45°17N±0°04×106°92W±0°04, h0km±1km, ML3.2/62, Error ellipse: s-maj=8.3km s-min=3.8km az=153.0*
*IDC **15** 18:21:50.0±1.1, 44°79N×106°61W, h0km, mbtmp4.0/2, ML3.7/2, Error ellipse: s-maj=49.6km s-min=8.8km az=138.0*
ISC 15 18:21:49.2±1.2, 45°22N±0°07×106°93W±0°06, h0km, n25, σ0s85/17, Montana

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LAO	**LASA Array**	**1.55**	**18**			**Pb**	**18 22 18.6**	**-0.2**
LAO				IAML			18 22 44.3	
	330nm,0.4s							
RLMT	**Red Lodge**	**1.66**	**267**			**Pn**	**18 22 20.1**	**+0.4**
RLMT				IAML			18 22 47.8	
	236nm,0.7s							
RLMT				IAML			18 22 50.4	
	225nm,0.6s							
GCMT	**Greycliff**	**2.01**	**287**			**Pn**	**18 22 25.3**	**+0.8**
YNE	**Yellowstone No**	**2.19**	**265**			**Pn**	**18 22 27.9**	**+0.8**
YNE				IAML			18 23 00.9	
	comp=E,129nm,0.4s							
YNE				IAML			18 23 02.8	
	comp=N,129nm,0.5s							
RSSD	**Black Hills**	**2.34**	**117**			**Pn**	**18 22 28.8**	**-0.3**
RSSD				IAML			18 23 04.1	
	comp=N,154nm,0.6s							
YMP	**Mirror Lake Pl**	**2.34**	**259**			**Pn**	**18 22 28.9**	**-0.3**
YMP				IAML			18 23 06.9	
	comp=N,173nm,0.7s							
LKWY	**Lake**	**2.55**	**256**			**Pn**	**18 22 32.8**	**+0.7**
LKWY				IAML			18 22 52.4	
	comp=N,60nm,0.6s							
LKWY				IAML			18 23 31.9	
	comp=N,99nm,0.8s							
K22A	**Casper**	**2.59**	**173**			**Pn**	**18 22 32.3**	**-0.1**
K22A				IAML			18 23 08.3	
	comp=N,75nm,0.3s							
K22A				IAML			18 23 12.5	
	comp=N,129nm,0.3s							
YNR	**Norris Junctio**	**2.71**	**261**			**Pn**	**18 22 34.2**	**0.0**
YNR				IAML			18 23 15.8	
	comp=E,78nm,0.5s							
YNR				IAML			18 23 16.8	
	comp=N,51nm,0.5s							
YHH	**Holmes Hill**	**2.81**	**263**			**Pn**	**18 22 35.8**	**+0.1**
YFT	**Old Faithful**	**2.88**	**256**			**Pb**	**18 22 41.7**	**0.0**
YMR	**Madison River**	**2.92**	**261**			**Pn**	**18 22 36.5**	**-0.6**
YMR				IAML			18 23 45.8	
	comp=E,87nm,0.9s							
YPP	**Pitchstone Pla**	**2.92**	**252**			**Pb**	**18 22 41.5**	**-0.8**
FLWY	**Flagg Ranch**	**2.92**	**248**			**Pn**	**18 22 35.5**	**-1.6**
FLWY				IAML			18 23 33.6	
	comp=E,71nm,0.7s							
YHL	**Hebgen Lake**	**3.04**	**264**	IAML			18 23 43.8	
	comp=E,70nm,0.6s							
YHL				IAML			18 23 47.9	
	comp=N,63nm,0.9s							
YHB	**Horse Butte**	**3.06**	**263**	IAML			18 23 30.4	
	comp=N,39nm,0.7s							
YHB				IAML			18 23 30.5	
	comp=E,63nm,0.7s							
PDAR	**Pinedale Array**	**3.10**	**219**	Pn		**Pn**	**18 22 41.0**	**+1.5**
	comp=E,9.0nm,0.3s,baz=43,slow=22,SNR=207							
PDAR					Lg	Lg	18 23 22.0	
	comp=E,9.8nm,0.3s,baz=54,slow=39,SNR=2.6							
	comp=E,13nm,0.4s							
AHID	**Auburn Hatcher**	**3.88**	**232**			**Pn**	**18 22 51.7**	**+1.4**
AHID				IAML			18 24 04.7	
	comp=E,31nm,0.7s							
AHID				IAML			18 25 10.

FTIG	**Fresnillo de T**	**4.96 295**	*e*P	**Pn**	**18 39 02.1 +4.5**	
FTIG			*e*S	**Sn**	**18 39 52.2 -1.9**	
MGIG	**Malinaltepec**	**5.20 286**	*e*P	**Pn**	**18 39 02.6 +1.9**	
MGIG			*e*S	**Sn**	**18 39 58.2 -1.7**	
TLIG	**Tlapa**	**5.22 290**	*e*P	**Pn**	**18 39 05.5 +4.4**	
TLIG			*e*S	**Sn**	**18 39 59.4 -1.1**	
CRIG	**Cruz Grande**	**5.56 280**	*e*P	**Pn**	**18 39 07.0 +1.5**	
CRIG			*e*S	**Sn**	**18 40 06.2 -2.2**	
CXUV	**Coxquihui**	**5.86 318**	*e*P	**Pn**	**18 39 11.6 +2.1**	
CXUV			*e*S	**Sn**	**18 40 13.9 -1.6**	
DAIG	**Los Arroyos**	**6.10 282**	*e*P	**Pn**	**18 39 15.4 +2.6**	
DAIG			*e*S	**Sn**	**18 40 21.4 0.0**	
YAIG	**Yautepec**	**6.17 300**	*e*P	Pn	18 39 19.1 +5.2	
YAIG			*e*S	**Sn**	**18 40 21.4 -2.0**	
CAIG	**El Cayaco**	**6.69 281**	*e*P	**Sn**	**18 39 22.8 +2.1**	
CAIG			*e*S	**Sn**	**18 40 34.5 -1.1**	
ARIG	**Puente Sto Nin**	**7.06 291**	*i* P	Pn	18 39 31.1 +5.3	
ARIG			*e*S	**Sn**	**18 40 43.3 -1.3**	

*NEIC **15** 18:40:38.6±1.1, 6°.23S×0°.04×148°.12E±0°.09, h66km±7km, mb4.1/12, Error ellipse: s-maj=14.2km s-min=3.7km az=111.0*
*IDC **15** 18:40:39.9±1.8, 6°.26S×147°.93E, h84km±16km, mb3.7/10, mbtmp4.0/13, MS3.1/12, Error ellipse: s-maj=28.3km s-min=11.2km az=104.0*

ISC 15 18:40:37.3±0.6, 6°.18S±0°.06×148°.04E±0°.10, h60km, n51, σ1s52/43, mb3.8/12, MS3.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.32 195**		P		**Pn**	**18 41 27.8**	**+1.0**
	126nm,0.6s,baz=47,slow=6.5,SNR=66							
PMG				S		**Sn**	**18 42 05.3**	**+0.3**
	76nm,0.3s,baz=30,slow=22,SNR=8.8							
PMG	**Port Moresby**	**3.32 195**		P		**Pn**	**18 41 27.8**	**+1.0**
PMG	**Port Moresby**	**3.32 195**		S		**Sn**	**18 42 06.5**	**+1.5**
PMG	**Port Moresby**	**3.32 195**		P		**Pn**	**18 41 27.6**	**+0.8**
PMG	**Port Moresby**	**3.32 195**		S		**Sn**	**18 42 06.6**	**+1.5**
PMG	**Port Moresby**	**3.32 195**				**Pn**	**18 41 27.6**	**+0.8**
MANU	**Manus Island**	**4.17 351**		Pn		**Pn**	**18 41 40.4**	**+2.0**
KRVT	**Keravat (AS076**	**4.38 65**		LR		LR	18 43 31.0	
	comp=Z,55nm,20.8s,baz=320,slow=38							
RABL	**Rabaul**	**4.56 64**		Pn		**Pn**	**18 41 44.3**	**+0.5**
JAY	**Jayapura**	**8.17 296**		P		**Pn**	**18 42 35.5**	**+2.1**
	4.2nm,0.8s,baz=137,slow=13,SNR=2.3							
MTSU	**Mount Surprise**	**12.42 197**		P		**Pn**	**18 43 33.6**	**+2.2**
CTA	**Charters Tower**	**13.93 187**		LR		LR	18 48 44.7	
	comp=Z,150nm,19.5s,baz=338,slow=35							
SIJI	**Sorong**	**17.55 287**		LR		LR	18 52 19.2	
	comp=Z,75nm,21.0s,baz=60,slow=40							
WB0	**Warramunga Arr**	**18.93 223**		P		**P**	**18 44 53.5**	**+0.1**
WB0				IAmb		IAmb	18 45 08.3	
	comp=Z,15nm,1.5s							
WR8	**Warramunga Arr**	**18.99 223**		P		**P**	**18 44 54.1**	**-0.1**
WRAB	**Tennant Creek**	**19.07 223**		P		**P**	**18 44 55.4**	**+0.3**
WRA	**Warramunga Arr**	**19.09 223**		P		**P**	**18 44 55.2**	**0.0**
	comp=Z,2.3nm,0.8s,baz=52,slow=10.0,SNR=13							
WRA				S		**S**	**18 48 22.6**	**-6.1**
	comp=Z,1.4nm,0.9s,baz=49,slow=22,SNR=3.7							
WRA	**Warramunga Arr**	**19.09 223**		P		**P**	**18 44 54.0**	**-1.2**
EIDS	**Eidsvold**	**19.30 172**		Pn		**Pn**	**18 44 59.0**	**0.0**
EIDS				IAmb		IAmb	18 45 02.3	
	comp=Z,14nm,1.1s							
GUMO	**Guam**	**19.89 351**		LR		LR	18 51 53.9	
	comp=Z,29nm,18.8s,baz=125,slow=34							
QLP	**Quilpie**	**20.61 197**		P		Pn	18 45 14.0	-0.5
KNRA	**Kununurra**	**21.13 242**		P		**P**	**18 45 17.5**	**+0.2**
AS01	**Alice Springs**	**22.04 216**		P		**P**	**18 45 27.6**	**+0.5**
AS31	**Alice Springs**	**22.07 217**		P		**P**	**18 45 28.0**	**+0.5**
ASAR	**Alice Springs**	**22.07 217**		P		**P**	**18 45 27.9**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=56,slow=8.7,SNR=62							
ASAR				S		**S**	**18 49 23.6**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=30,slow=21,SNR=5.6							
	comp=Z,1.3nm,0.7s							
INKA	**Innaminka**	**22.53 197**				**P**	**18 45 32.1**	**-0.2**
INKA				IAmb		IAmb	18 45 36.5	
	comp=Z,3.6nm,0.8s							
FITZ	**Fitzroy Crossi**	**24.86 240**		P		**P**	**18 45 55.0**	**+0.5**
	comp=Z,20nm,0.7s,baz=59,slow=7.8,SNR=61							
	comp=Z,20nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.86 240**		P		**P**	**18 45 55.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**24.86 240**		P		**P**	**18 45 55.0**	**+0.5**
FITZ				IAmb		IAmb	18 45 55.8	
	comp=Z,3.9nm,0.6s							
STKA	**Stephens Creek**	**26.26 192**		P		**P**	**18 46 06.9**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=34,slow=14,SNR=4.9							
STKA				LR		LR	18 56 12.0	
	comp=Z,93nm,18.1s,baz=14,slow=36							
	comp=Z,1.7nm,0.6s							
FORT	**Forrest**	**30.83 215**		P		**P**	**18 46 46.7**	**-1.0**
FORT				IAmb		IAmb	18 46 56.7	
	comp=Z,6.8nm,1.1s							
MBWA	**Marble Bar**	**31.19 239**		P		**P**	**18 46 51.5**	**+0.5**
TGY	**Tagaytay City**	**33.61 307**		LR		LR	19 02 04.9	
	comp=Z,20nm,18.0s,baz=96,slow=38							
MJAR	**Matsushiro Arr**	**43.49 348**		P		**P**	**18 48 34.7**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=169,slow=7.9,SNR=6.5							
MJAR				LR		LR	19 04 33.3	
	comp=Z,17nm,18.1s,baz=176,slow=33							
	comp=Z,2.7nm,0.9s							
MJAR	**Matsushiro Arr**	**43.49 348**		IAmb		IAmb	18 49 10.8	
	comp=Z,5.2nm,0.9s							
KSRS	**Korea Array**	**47.30 338**		LR		LR	19 06 49.7	
	comp=Z,12nm,20.7s,baz=130,slow=33							
PETK	**Petropavlovsk-**	**59.63 7**		P		**P**	**18 50 36.1**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=193,slow=6.1,SNR=5.5							
	comp=Z,2.7nm,0.8s							
PETK	**Petropavlovsk-**	**59.63 7**		P		**P**	**18 50 35.6**	**+0.6**
MA2	**Magadan**	**65.58 2**		LR		LR	19 22 56.6	
	comp=Z,8.7nm,18.0s,baz=231,slow=39							
TLY	**Talaya**	**68.99 332**		LR		LR	19 21 18.5	
	comp=Z,17nm,20.9s,baz=158,slow=35							
MKAR	**Makanchi Array**	**78.30 320**		P		**P**	**18 52 30.2**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=100,slow=6.3,SNR=7.9							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**78.30 320**		P		**P**	**18 52 30.8**	**-0.3**
ZALV	**Zalesovo Beam**	**79.72 328**		P		**P**	**18 52 39.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=117,slow=5.5,SNR=2.3							
ZALV				LR		LR	19 26 39.3	
	comp=Z,11nm,21.7s,baz=130,slow=35							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**79.72 328**		P		**P**	**18 52 38.6**	**+0.1**
QSPA	**South Pole Qui**	**83.79 180**		P		**P**	**18 53 00.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=319,slow=1.2,SNR=10							
	comp=Z,0.7nm,0.6s							
QSPA	**South Pole Qui**	**83.79 180**		P		**P**	**18 53 00.5**	**+0.5**
ILAR	**Eielson Array**	**85.24 23**		P		**P**	**18 53 05.8**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=281,slow=5.4,SNR=4.1							
	comp=Z,0.5nm,0.9s							
BVAR	**Borovoye Array**	**87.53 324**		P		**P**	**18 53 16.8**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=130,slow=6.3,SNR=3.8							
	comp=Z,0.3nm,0.5s							
YBH	**Yreka Blue Hor**	**93.51 49**		LR		LR	19 28 12.9	
	comp=Z,17nm,20.9s,baz=9.5,slow=30							
PTLB	**Pontes e Lacer**	**145.55 129**		PKPdf		**PKPdf**	**19 00 07.6**	**-2.2**
TORD	**Torodi Ar. Bea**	**146.14 284**		PKPbc		**PKPdf**	**19 00 11.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=66,slow=4.3,SNR=6.2							

*OSPL **15** 19:02:23.6±1.9, 19°.61N×69°.73W, h5km±16km, ML2.4, Presumed earthquake*
*SDD **15** 19:02:24.2±2.1, 19°.48N×69°.79W, h23km±20km, MD2.9, ML2.5, MW3.0, Presumed earthquake*

ISC 15 19:02:23.6±1.1, 19°.59N±0°.05×69°.71W±0°.04, h30km±8km, n18, σ2s9o6/26, 12C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.23 290**		⇑*i* Pn		**Pb**	**19 02 28.8**	**-1.4**
CADR				⇑*e*Sg		**Sb**	**19 02 33.8**	**-0.8**
CADR				IAML			19 02 34.1	
	comp=N,2μm,0.4s							
CADR				IAML			19 02 34.5	
	comp=E,1μm,0.2s							
LONA1	**Toro Cenizo, N**	**0.26 215**		*i* P		**Pn**	**19 02 35.3**	**+3.9**
LONA1				*e*S		**Sb**	**19 02 39.6**	**+4.5**
SMDR	**Samana, DR**	**0.58 121**		⇑*e*Pg		**Pb**	**19 02 34.7**	**-0.6**
SMDR				⇑*e*Sg		**Sn**	**19 02 44.6**	**+0.4**
SMDR				IAML			19 02 44.8	
	comp=E,159nm,0.8s							
SMDR				IAML			19 02 47.5	
	comp=N,170nm,0.2s							
HATOM	**Hato Mayor del**	**0.86 159**		⇑*e*Pg		**Pb**	**19 02 37.7**	**-2.4**
HATOM				⇓*e*Sg		**Sb**	**19 02 49.4**	**-1.8**
HATOM				IAML			19 02 49.8	
	comp=E,177nm,0.1s							
HATOM				IAML			19 02 50.2	
	comp=N,110nm,0.2s							
SC01	**Santiago de lo**	**0.97 261**		IAML			19 02 59.0	
	comp=E,90nm,0.3s							
SC01	**Santiago de lo**	**0.97 261**		*i* P		**Pn**	**19 02 41.6**	**+0.3**
ABDR	**Alto Bandera**	**1.16 228**		⇑*e*Pg		**Pn**	**19 02 41.8**	**-2.4**
ABDR				⇓*e*Sg		**Sb**	**19 02 56.1**	**-4.1**
ABDR				IAML			19 02 57.8	
	comp=E,1.9nm,0.3s							
LUDR	**Luperon**	**1.21 285**		⇓*e*Sg		**Sb**	**19 03 01.0**	**-0.2**
LUDR				IAML			19 03 01.5	
	comp=E,2μm,0.4s							
HIDR	**Higuey Centro**	**1.37 136**		⇑*e*Pg		**Pn**	**19 02 47.2**	**+0.5**
HIDR				IAML			19 03 09.2	
	comp=N,126nm,0.2s							
HIDR				IAML			19 03 09.7	
	comp=E,119nm,0.2s							
LOPP1	**Punta Rusia, P**	**1.43 281**		*i* P		**Pn**	**19 02 47.8**	**+0.2**
LOPP1				*e*S		**Sb**	**19 03 06.6**	**-0.8**
LOPP1				IAML			19 03 10.8	
	comp=Z,60nm,0.6s							
SDDR	**Presa de Saban**	**1.61 248**		⇑*e*Pg		**Pn**	**19 02 49.2**	**-0.9**
SDDR				⇑*e*Sg		**Sn**	**19 03 09.7**	**-0.2**
SDDR				IAML			19 03 12.8	
	comp=E,34nm,0.6s							
SDDR				IAML			19 03 13.3	
	comp=N,35nm,0.3s							
SDDR	**Presa de Saban**	**1.61 248**		*i* P		**Pn**	**19 02 49.2**	**-0.9**
SDDR				*e*S		**Sn**	**19 03 09.7**	**-0.2**
SDDR				IAML			19 03 13.0	
	comp=Z,679nm,0.1s							
REDR	**Restauracion**	**1.64 255**		⇑*e*Pg		**Pb**	**19 02 53.8**	**+0.5**
REDR				⇑*e*Sg		**Sb**	**19 03 17.3**	**+3.7**
REDR				IAML			19 03 18.7	
	comp=N,345nm,0.1s							
PCDR	**Punta Cana, DR**	**1.65 130**		⇑*e*Pg		**Pn**	**19 02 52.1**	**+1.5**
PCDR				IAML			19 03 17.5	
	comp=E,18nm,0.2s							
PCDR				IAML			19 03 18.5	
	comp=N,77nm,1.9s							
PCDR	**Punta Cana, DR**	**1.65 130**		*i* P		**Pn**	**19 02 52.1**	**+1.5**
PCDR				IAML			19 03 18.0	
	comp=Z,50nm,1.1s							
MCDR	**Montecristi**	**1.86 280**		IAML			19 03 22.5	
	comp=N,82nm,0.4s							
MCDR				IAML			19 03 23.4	
	comp=E,71nm,0.2s							
LONE3	**El Aguacate, B**	**1.92 240**		*i* P		**Pn**	**19 02 54.9**	**+0.4**
LONE3				*e*S		**Sn**	**19 03 19.1**	**+1.3**
LONE3				IAML			19 03 20.7	
	comp=Z,18nm,1.5s							
GRTK	**Grand Turk**	**2.33 325**		*i* P		**Pn**	**19 03 00.7**	**+0.7**
GRTK				IAML			19 03 32.3	
	comp=Z,16nm,0.5s							

*IDC **15** 19:17:02.2±0.9, 28°.54N×142°.44E, h0km, mb3.9/13, mbtmp3.9/17, ML3.4/4, MS2.9/5, Error ellipse: s-maj=31.3km s-min=13.5km az=81.0*
*NEIC **15** 19:17:03.8±1.9, 28°.54N±0°.02×142°.5E±0°.2, h10km±1km, mb4.5/15, Error ellipse: s-maj=23.1km s-min=3.2km az=90.0*

ISC 15 19:17:05.8±0.7, 28°.57N±0°.06×142°.4E±0°.2, h25km, n52, σ1s14/47, mb4.3/21, MS3.1/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.48 187**		Pn		**Pn**	**19 17 30.1**	**-0.7**
	24nm,0.3s,baz=279,slow=23,SNR=5.2							
JCJ				Sn		**Sb**	**19 17 49.3**	**-1.6**
	62nm,0.3s,baz=56,slow=22,SNR=10.0							
JCJ	**Chichijima**	**1.48 187**				**Pn**	**19 17 29.1**	**-1.7**
JHJ	**Hachijo jima 2**	**5.05 334**		Pn		**Pn**	**19 18 19.4**	**-0.5**
	4.6nm,0.3s,baz=295,slow=23,SNR=1.3							
JHJ				Sn		**Sn**	**19 19 14.6**	**-2.9**
	8.7nm,0.3s,baz=93,slow=23,SNR=2.0							
	41nm,0.5s							
JYT	**Yasato**	**7.86 347**		Pn		**Pn**	**19 18 57.1**	**-1.3**
MJAR	**Matsushiro Arr**	**8.69 337**		Pn		**Pn**	**19 19 09.6**	**-0.4**
	0.2nm,0.3s,baz=158,slow=9.4,SNR=14							
MJAR				Sn		**Sn**	**19 20 43.8**	**-3.3**
	0.1nm,0.3s,baz=323,slow=46,SNR=1.5							
	2.9nm,0.5s							
MJAR	**Matsushiro Arr**	**8.69 337**				**Pn**	**19 19 10.0**	**0.0**
MAJO	**Matsushiro**	**8.69 337**		Pn		**Pn**	**19 19 09.1**	**-0.9**
MJB9	**Matsu-Tunnel**	**8.70 337**		Pn		**Pn**	**19 19 09.6**	**-0.5**
JNU	**Nakatsue**	**10.87 298**		LR		LR	19 22 54.7	
	comp=Z,45nm,20.7s,baz=147,slow=32							
KSRS	**Korea Array**	**15.00 310**		Pn		**Pn**	**19 20 36.0**	**-0.1**
	0.2nm,0.3s,baz=112,slow=12,SNR=7.3							
KSRS				LR		LR	19 25 47.5	
	comp=Z,25nm,20.6s,baz=115,slow=35							
	0.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**17.67 335**		P		**Pn**	**19 21 09.7**	**-0.5**
	0.3nm,0.3s,baz=141,slow=11,SNR=3.9							
	1.6nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**24.01 106**		T		T	19 47 27.8	
	baz=298,slow=74							
H11N1	**WAKE ISLAND Hy**	**24.01 106**		T		T	19 47 18.7	
	baz=298							
H11N3	**WAKE ISLAND Hy**	**24.02 106**		T		T	19 47 32.6	
	baz=298,slow=74							
SONM	**Songino Array**	**33.79 315**		P		**P**	**19 23 45.9**	**+0.1**
	0.5nm,0.5s,baz=113,slow=10,SNR=2.6							
	0.5nm,0.5s							
SONM	**Songino Array**	**33.79 315**		IAmb		IAmb	19 24 25.5	
	comp=Z,4.2nm,1.4s							
TLY	**Talaya**	**36.92 320**		LR		LR	19 38 49.9	
	comp=Z,30nm,18.5s,baz=171,slow=35							
CMAR	**Chiang Mai Arr**	**40.89 266**		P		**P**	**19 24 46.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=57,slow=12,SNR=2.0							
CMAR				LR		LR	19 41 31.5	
	comp=Z,14nm,18.7s,baz=210,slow=36							
	comp=Z,0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**48.50 318**		P		**P**	**19 25 47.0**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=90,slow=8.7,SNR=7.5							
ZALV				PcP		**PcP**	**19 27 12.1**	**0.0**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=1.6,SNR=2.0							
	comp=Z,1.2nm,0.4s							
ZALV	**Zalesovo Beam**	**48.50 318**		P		**P**	**19 25 46.1**	**-0.2**
WB0	**Warramunga Arr**	**48.67 190**		P		**P**	**19 25 47.9**	**0.0**
WB0				IAmb		IAmb	19 25 59.9	
	comp=Z,4.7nm,0.7s							
WR8	**Warramunga Arr**	**48.84 190**		P		**P**	**19 25 49.2**	**-0.1**
WRA	**Warramunga Arr**	**48.85 190**		P		**P**	**19 25 49.6**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=12,slow=8.4,SNR=16							
	comp=Z,1.9nm,0.7s							
WRA	**Warramunga Arr**	**48.85 190**		P		**P**	**19 25 48.4**	**-1.0**
MKAR	**Makanchi Array**	**49.68 309**		P		**P**	**19 25 56.3**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=95,slow=8.6,SNR=7.5							
MKAR				PcP		**PcP**	**19 27 16.9**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=104,slow=4.8,SNR=1.8							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**49.68 309**		P		**P**	**19 25 55.7**	**+0.1**
PDGK	**Podgornoye**	**51.84 304**		P		**P**	**19 26 12.2**	**+0.1**
O18K	**Koktuh Hills**	**51.96 35**		P		**P**	**19 26 12.6**	**+0.1**
O18K				IAmb		IAmb	19 26 41.1	
	comp=Z,10nm,1.4s							
KURK	**Kurchatov**	**52.08 314**				**P**	**19 26 14.5**	**+1.0**
KURK				IAmb		IAmb	19 26 15.8	
	comp=Z,4.1nm,0.8s							
KURBB	**Kurchatov Arra**	**52.14 314**		P		**P**	**19 26 14.9**	**+1.0**
	comp=Z,3.1nm,0.5s,baz=92,slow=8.5,SNR=54							
	comp=Z,3.1nm,0.5s							
ASAR	**Alice Springs**	**52.57 190**		P		**P**	**19 26 17.0**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=8.5,slow=6.5,SNR=5.2							
	comp=Z,0.1nm,0.4s							
CAST	**Castle Rocks**	**53.94 30**		P		**P**	**19 26 25.8**	**-1.3**
BOOM	**Boomskoye usch**	**54.53 304**		P		**P**	**19 26 33.9**	**+2.0**
I23K	**Minto, Yukon-K**	**55.33 29**		IAmb		IAmb	19 26 36.5	
	comp=Z,3.2nm,0.6s							
D24K	**Happy Valley**	**56.08 24**		P		**P**	**19 26 43.9**	**+1.5**
D24K				IAmb		IAmb	19 26 45.1	
	comp=Z,3.0nm,0.7s							
ILAR	**Eielson Array**	**56.35 29**		P		**P**	**19 26 44.7**	**+0.4**
	comp=Z,0.6nm,1.1s,baz=247,slow=10.0,SNR=2.0							
	comp=Z,0.6nm,1.1s							
BVAR	**Borovoye Array**	**57.08 317**		P		**P**	**19 26 51.0**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=93,slow=8.4,SNR=15							
	comp=Z,3.1nm,0.7s							
C27K	**Jago River**	**57.93 23**		IAmb		IAmb	19 27 00.7	
	comp=Z,3.0nm,0.7s							
KK31	**Karatay Array**	**58.37 305**		P		**P**	**19 27 00.5**	**+1.5**
KKAR	**Karatay Array**	**58.37 305**		P		**P**	**19 27 00.4**	**+1.4**
CHGR	**Chuyangaron**	**60.34 300**		P		**P**	**19 27 13.2**	**+0.3**
AB31	**Akbulak array**	**64.19 314**		IAmb		IAmb	19 27 41.9	
	comp=Z,3.4nm,0.6s							
ABKAR	**Akbulak array**	**64.19 314**				**P**	**19 27 39.1**	**+0.8**
YBH	**Yreka Blue Hor**	**74.98 51**		LR		LR	19 56 14.5	
	comp=Z,16nm,20.9s,baz=9.0,slow=31							
FINES	**FINESS Array B**	**76.70 334**		P		**P**	**19 28 55.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=87,slow=7.8,SNR=5.1							
	comp=Z,0.6nm,0.6s							
FINES	**FINESS Array B**	**76.70 334**		P		**P**	**19 28 54.5**	**0.0**
KBZ	**Khabaz**	**77.13 313**		P		**P**	**19 28 59.1**	**+1.9**
	comp=Z,2.0nm,0.8s,baz=90,slow=2.0,SNR=3.9							
	comp=Z,2.0nm,0.8s							
NB2	**NORSAR Subarra**	**82.31 338**		P		**P**	**19 29 24.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=41,slow=5.1							
NOA	**NORSAR Array B**	**82.31 338**		P		**P**	**19 29 24.4**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=42,slow=5.3,SNR=5.1							
	comp=Z,0.5nm,0.6s							
RAYN	**Ar Rayn**	**84.71 294**				**P**	**19 29 39.3**	**+1.2**
RAYN				IAmb		IAmb	19 29 40.8	
	comp=Z,4.0nm,0.7s							
BRTR	**Keskin Array B**	**85.13 313**		P		**P**	**19 29 41.9**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=72,slow=4.0,SNR=4.2							
	comp=Z,0.7nm,0.8s							
LPAZ	**La Paz**	**149.36 73**		PKPbc		**PKiKP**	**19 36 54.2**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=63,slow=2.3,SNR=3.9							

*SJA **15** 19:23:19.7±0.7, 23°.97S×67°.74W, h167km, ML3.7, MW3.7*
*IDC **15** 19:23:20.6±4.2, 23°.92S×67°.44W, h144km±43km, mb3.7/3, mbtmp4.1/4, Error ellipse: s-maj=44.8km s-min=26.1km az=118.0*
*NEIC **15** 19:23:20.7±1.9, 23°.99S±0°.07×67°.7W±0°.2, h153km±10km, mb4.2/2, ML4.0(GUC), Error ellipse: s-maj=22.6km s-min=9.8km az=101.0*
*GUC **15** 19:23:22.2±0.6, 23°.90S×68°.02W, h187km±6km, ML4.0*

ISC 15 19:23:20.6±0.8, 23°.96S±0°.04×67°.78W±0°.05, h163km±8km, n56, σ1s23/80, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.06 340**		*e*P		**Pn**	**19 23 47.8**	**+0.3**
AF01				*e*P			19 23 50.1	
AF01				*e*S		**Sn**	**19 24 08.9**	**+0.7**
AF01				IAML			19 24 10.0	
	comp=Z,495nm,1.1s							
AF01	**San Pedro de A**	**1.06 340**		*e*P		**Pn**	**19 23 48.4**	**+0.8**
AF01	**San Pedro de A**	**1.06 340**				**Pn**	**19 23 48.1**	**+0.5**
SALTA		**1.34 102**		*e*P		**Pn**	**19 23 50.0**	**-0.2**
SALTA				*e*P		**Pn**	**19 23 50.0**	**-0.2**
SALTA				*e*P			19 23 50.1	
SALTA				*e*P			19 23 50.2	
PB06	**IPOC Station P**	**2.06 307**		*e*P		**Pn**	**19 23 57.8**	**+0.4**
PB06				*e*S		**Sn**	**19 24 26.3**	**+0.4**
PB06				IAML			19 24 27.8	
	comp=Z,552nm,0.3s							
PB06	**IPOC Station P**	**2.06 307**		*e*P		**Pn**	**19 23 58.5**	**+1.1**
PB06				*i* S		**Sn**	**19 24 25.8**	**0.0**
PB06				IAML			19 24 29.3	
	comp=N,976nm,0.3s							
PB06	**IPOC Station P**	**2.06 307**				**Pn**	**19 23 58.1**	**+0.6**
SLA	**San Lorenzo**	**2.21 111**		*e*P		**Pn**	**19 24 00.1**	**+1.0**
PB05	**IPOC Station P**	**2.48 296**		*e*P		**Pn**	**19 24 03.0**	**+0.7**
PB05				*e*S		**Sn**	**19 24 35.1**	**+0.6**
PB05				IAML			19 24 43.4	
	comp=Z,90nm,0.4s							
PB05	**IPOC Station P**	**2.48 296**		*e*P		**Pn**	**19 24 02.8**	**+0.5**
PB05				*i* S		**Sn**	**19 24 33.4**	**-1.1**
PB05				IAML			19 24 38.7	
	comp=N,196nm,0.3s							
PB05	**IPOC Station P**	**2.48 296**				**Pn**	**19 24 02.7**	**+0.5**
PB14	**IPOC Station P**	**2.48 254**		*e*P		**Pn**	**19 24 03.4**	**+0.9**
PB14				*e*S		**Sn**	**19 24 35.0**	**+0.1**
PB14				IAML			19 24 36.4	
	comp=Z,190nm,0.5s							
PB14	**IPOC Station P**	**2.48 254**		*e*P		**Pn**	**19 24 03.4**	**+0.9**
PB14	**IPOC Station P**	**2.48 254**				**Pn**	**19 24 02.8**	**+0.4**
PB09	**IPOC Station P**	**2.54 328**		*e*P	

CO04	Los Peleaderos	8.54	199	Pn	Pn	19 25 19.6	-1.6
BDFB	Brasilia	20.34	70	P	P	19 27 42.8	-1.6
	comp=Z,2.3nm,0.3s,baz=225,slow=5.7,SNR=4.4						
	comp=Z,2.3nm,0.3s						
BDFB	Brasilia	20.34	70	IAmb	IAmb	19 27 44.1	
	comp=Z,7.9nm,0.9s						
QSPA	South Pole Qui	66.25	180	P	P	19 33 53.1	+2.3
	comp=Z,0.8nm,0.6s,baz=41,slow=0.9,SNR=13						
	comp=Z,0.8nm,0.6s						
QSPA	South Pole Qui	66.25	180	IAmb	IAmb	19 34 24.9	
	comp=Z,5.8nm,1.4s						
TORD	Torodi Ar. Bea	77.22	69	P	P	19 34 57.3	+0.3
	comp=Z,3.1nm,0.7s,baz=254,slow=5.4,SNR=24						
	comp=Z,3.1nm,0.7s						
MKAR	Makanchi Array	146.94	39	PKPbc	PKPab	19 42 45.2	-0.3
	comp=Z,0.3nm,0.6s,baz=297,slow=2.8,SNR=5.0						

NNC ***15*** *19:30:47.5±1.4, 41.°77N×80.°50E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=15.0km s-min=8.1km az=42.0*
SOME ***15*** *19:30:55.5, 42.°38N×80.°72E, h10km*

ISC 15 19:30:41.4±3.4, 42.°0N±0.°2×81.°4E±0.°1, h10km, n7, σ1s27/11, 2C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	1.87	310	eP		Pn	19 31 13.5	0.0
	2.6nm,0.3s							
SHLS				eS		Sn	19 31 26.9	-10
	8.5nm,0.4s							
PDGK	Podgornoye	1.96	314	⇑Pn		Pg	19 31 18.9	-0.1
	1.2nm,0.8s							
PDGK				⇓Sn		Sb	19 31 42.7	+0.8
	3.0nm,0.4s							
UZB	Uzynbulak	2.12	304	eP		Pg	19 31 22.6	+0.6
	2.1nm,0.2s							
UZB				eS		Sn	19 31 42.0	-1.5
	2.7nm,0.2s							
SATY	Saty	2.47	297	eP		Pg	19 31 30.7	+1.9
	1.3nm,0.2s							
SATY				eS		Sb	19 31 55.9	-0.7
	7.2nm,0.2s							
DJR	Jarkent	2.64	334	eP		Pg	19 31 33.9	+1.9
	0.7nm,0.2s							
DJR				eS		Sb	19 32 01.4	+0.1
	2.1nm,0.4s							
MAKZ	Makanchi	4.85	5	⇑Pn		Pb	19 32 05.2	-1.3
	5.0nm,2.2s							
MAKZ				⇓Lg		Lg	19 33 30.1	
	1.5nm,1.6s							
MK31	Makanchi Array	4.86	7	Pn		Pb	19 32 06.5	-0.2
	0.1nm,0.3s,baz=197,slow=14,SNR=5.3							
MK31				⇓Lg		Lg	19 33 32.2	
	0.2nm,0.4s,baz=196,slow=28							

IDC ***15*** *20:00:07.5±5.1, 18.°56S×177.°69W, h582km±62km, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=43.9km s-min=22.5km az=165.0*

ISC 15 20:00:08.6±0.9, 18.°6S±0.°2×177.°8W±0.°2, h600km, n10, σ0s91/11, mb3.5/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.13	192	P		P	20 04 02.6	-0.7
	7.0nm,0.6s,baz=356,slow=16,SNR=2.2							
	7.0nm,0.6s							
WRA	Warramunga Arr	45.12	260	P		P	20 07 33.6	+0.4
	1.0nm,0.5s,baz=98,slow=6.9,SNR=21							
WRA				PcP		PcP	20 09 01.2	+0.5
	0.2nm,0.4s,baz=101,slow=2.8,SNR=2.0							
	1.0nm,0.5s							
ASAR	Alice Springs	45.21	255	P		P	20 07 34.8	+0.9
	1.9nm,0.6s,baz=92,slow=7.7,SNR=38							
ASAR				PcP		PcP	20 09 01.2	+0.3
	0.4nm,0.4s,baz=93,slow=3.7,SNR=9.3							
	1.9nm,0.6s							
NVAR	Mina Array Bea	79.47	43	P		P	20 11 14.6	+0.2
	0.7nm,0.8s,baz=255,slow=8.4,SNR=4.3							
	0.7nm,0.8s							
TXAR	Lajitas Array	85.83	57	P		P	20 11 47.5	+1.4
	0.7nm,0.6s,baz=212,slow=7.4,SNR=8.7							
	0.7nm,0.6s							
ILAR	Eielson Array	86.38	13	P		P	20 11 46.9	-0.9
	0.3nm,0.4s,baz=219,slow=4.4,SNR=4.4							
	0.3nm,0.4s							
EKA	Eskdalemuir Ar	143.06	5	PKhKP	PKPpre		20 18 31.9	
	0.2nm,0.4s,baz=352,slow=5.5,SNR=1.5							
BRTR	Keskin Array B	145.67	315	PKPbc	PKPbc	20 18 41.2	-0.5	
	0.7nm,0.8s,baz=99,slow=3.6,SNR=4.1							
MMAI	Mount Meron Ar	147.01	302	PKPbc	PKiKP	20 18 46.5	-0.8	
	0.7nm,0.4s,baz=146,slow=2.8,SNR=2.0							
GERES	GERESS Array B	148.39	345	PKPbc	PKiKP	20 18 48.7	-0.9	
	0.7nm,0.7s,baz=9.5,slow=1.6,SNR=7.7							

IDC ***15*** *20:08:45.3±1.7, 19.°05N×145.°43E, h226km±16km, mb3.3/13, mbtmp4.1/17, Error ellipse: s-maj=26.2km s-min=10.0km az=83.0*
NEIC ***15*** *20:08:45.0±1.2, 19.°01N±0.°07×145.°5E±0.°1, h214km±8km, mb4.3/23, Error ellipse: s-maj=16.9km s-min=10.1km az=83.0*

ISC 15 20:08:44.3±0.6, 19.°05N±0.°05×145.°4E±0.°1, h214km, n50, σ1s24/47, mb3.9/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DPSS	Saipan	3.81	174			Pn	20 09 44.4	+0.1
DPSS						S	20 10 28.2	-3.0
GUMO	Guam	5.45	185	P		Pn	20 10 06.8	+2.0
	59nm,0.3s,baz=7.0,slow=6.6,SNR=24							
GUMO				S		S	20 11 08.9	+0.4
	94nm,0.3s,baz=203,slow=20,SNR=6.4							
GUMO	Guam	5.45	185	Pn		Pn	20 10 05.2	+0.3
JCJ	Chichijima	8.53	340	P		Pn	20 10 46.1	+1.7
	62nm,0.5s,baz=267,slow=16,SNR=2.3							
JCJ				S		S	20 12 15.4	-5.2
	91nm,0.5s,baz=304,slow=23,SNR=1.9							
JHJ	Hachijo jima 2	14.88	341	P		P	20 12 05.8	+0.8
	150nm,1.0s,baz=55,slow=12,SNR=1.9							
JOW	Kunigami	17.55	299	Pn		Pn	20 12 37.8	+1.4
INU	Inuyama	17.85	337	Pn		Pn	20 12 40.4	+0.6
JGF	Kuroka	17.95	338	P		Pn	20 12 40.9	-0.1
MJAR	Matsushiro Arr	18.53	342	P		P	20 12 45.9	+0.9
	2.8nm,0.4s,baz=166,slow=9.7,SNR=10							
MAJO	Matsushiro	18.54	342	P		P	20 12 45.4	+0.4
MAJO				IAmb		IAmb	20 12 52.9	
	comp=Z,20nm,1.3s							
MJB9	Matsu-Tunnel	18.54	342	P		P	20 12 46.1	+1.0
MJB9				IAmb		IAmb	20 12 53.9	
	comp=Z,22nm,1.4s							
H11S3	WAKE ISLAND Hy	20.18	88	T		T	20 34 33.4	
	baz=275							
H11S1	WAKE ISLAND Hy	20.19	88	T		T	20 34 39.3	
	baz=275							
H11S2	WAKE ISLAND Hy	20.20	88	T		T	20 34 35.6	
	baz=275							
H11N1	WAKE ISLAND Hy	20.30	85	T		T	20 34 59.9	
	baz=264							
H11N2	WAKE ISLAND Hy	20.31	85	T		T	20 34 59.8	
	baz=264							
H11N3	WAKE ISLAND Hy	20.32	85	T		T	20 34 55.1	
	baz=264							
MANU	Manus Island	21.05	174	P		P	20 13 11.9	-0.1
KSRS	Korea Array	23.86	324	P		P	20 13 39.1	+0.9
	comp=Z,1.2nm,0.7s,baz=152,slow=8.9,SNR=7.7							
	comp=Z,1.2nm,0.7s							
FAKI	Fak Fak	25.37	212	P		P	20 13 50.5	-1.6
WB0	Warramunga Arr	40.05	196	P		P	20 15 59.0	0.0
WB0				IAmb		IAmb	20 16 00.3	
	comp=Z,14nm,1.4s							
WR8	Warramunga Arr	40.21	196	P		P	20 16 00.4	+0.2
WR8				IAmb		IAmb	20 16 02.1	
	comp=Z,6.5nm,1.1s							
WRA	Warramunga Arr	40.23	196	P		P	20 16 00.9	+0.5
	comp=Z,2.4nm,0.5s,baz=24,slow=8.7,SNR=35							
	comp=Z,2.4nm,0.5s							
FITZ	Fitzroy Crossi	41.70	209	P		P	20 16 13.0	+0.7
SONM	Songino Array	42.69	321	P		P	20 16 20.9	+0.7
	comp=Z,0.4nm,0.6s,baz=128,slow=5.5,SNR=1.7							
	comp=Z,0.4nm,0.6s							
CMAR	Chiang Mai Arr	43.88	277	P		P	20 16 29.2	-0.8
	comp=Z,0.4nm,0.5s,baz=62,slow=8.1,SNR=1.2							
	comp=Z,0.4nm,0.5s							
CMAR	Chiang Mai Arr	43.88	277	P		P	20 16 29.5	-0.5
AS31	Alice Springs	43.91	195	P		P	20 16 29.1	-0.9
ASAR	Alice Springs	43.91	195	P		P	20 16 30.2	+0.1
	comp=Z,1.4nm,0.5s,baz=14,slow=6.5,SNR=29							
	comp=Z,1.4nm,0.5s							
STKA	Stephens Creek	50.77	184	P		P	20 17 22.5	-0.2
	comp=Z,0.9nm,0.4s,baz=8.4,slow=12,SNR=3.7							
	comp=Z,0.9nm,0.4s							
FORT	Forrest	52.27	199	P		P	20 17 34.1	+0.3
FORT				IAmb		IAmb	20 18 05.3	
	comp=Z,7.2nm,1.0s							
BBOO	Buckleboo	52.33	190	P		P	20 17 34.2	-0.1
BBOO				IAmb		IAmb	20 17 48.0	
	comp=Z,14nm,1.4s							
N14K	Kuskokwak Cree	55.43	29	P		P	20 17 56.9	+0.6
N14K				IAmb		IAmb	20 18 35.2	
	comp=Z,19nm,1.4s							
O15K	Ungalikthiuk R	56.02	30	P		P	20 18 01.4	+0.9
O15K				IAmb		IAmb	20 18 24.2	
	comp=Z,3.5nm,1.1s							
N15K	Kwethluk River	56.26	29	P		P	20 18 03.2	+1.0
N15K				IAmb		IAmb	20 18 14.2	
	comp=Z,6.8nm,1.4s							
L16K	Owhat River	57.12	28	P		P	20 18 08.6	+0.3
L16K				IAmb		IAmb	20 18 15.0	
	comp=Z,10nm,1.5s							
MKAR	Makanchi Array	58.01	314	P		P	20 18 14.7	-0.1
	comp=Z,0.3nm,0.6s,baz=86,slow=9.7,SNR=4.7							
	comp=Z,0.3nm,0.6s							
O18K	Koktuh Hills	58.46	31	P		P	20 18 17.9	+0.2
O18K				IAmb		IAmb	20 18 46.4	
	comp=Z,11nm,1.4s							
H18K	Honhosa River	58.93	24	P		P	20 18 21.5	+0.7
J20K	Nowinta River	60.27	26	P		P	20 18 31.3	+1.4
J20K				IAmb		IAmb	20 18 34.7	
	comp=Z,4.2nm,1.4s							
KURK	Kurchatov	60.81	318	P		P	20 18 33.1	-0.7
KURBB	Kurchatov Arra	60.86	318	P		P	20 18 33.8	-0.4
	comp=Z,0.3nm,0.3s,baz=92,slow=7.6,SNR=12							
	comp=Z,0.3nm,0.3s							
CAST	Castle Rocks	60.92	27	P		P	20 18 34.7	+0.3
D20K	Etivluk River	60.98	21	P		P	20 18 35.9	+1.2
D20K				IAmb		IAmb	20 18 40.8	
	comp=Z,8.5nm,1.5s							
ILAR	Eielson Array	63.46	26	P		P	20 18 50.0	-1.2
	comp=Z,0.2nm,0.3s,baz=253,slow=6.2,SNR=4.8							
	comp=Z,0.2nm,0.3s							
BVAR	Borovoye Array	66.02	320	P		P	20 19 07.8	0.0
	comp=Z,1.3nm,0.5s,baz=98,slow=7.7,SNR=12							
	comp=Z,1.3nm,0.5s							
NVAR	Mina Array Bea	83.16	52	P		P	20 20 47.4	+0.5
	comp=Z,0.8nm,0.8s,baz=268,slow=6.9,SNR=4.1							
	comp=Z,0.8nm,0.8s							
NVAR	Mina Array Bea	83.16	52	P		P	20 20 46.5	-0.5
KBZ	Khabaz	85.69	315	P		P	20 20 60.0	+0.8
	comp=Z,1.2nm,0.4s,baz=0.0,slow=4.0,SNR=4.3							
	comp=Z,1.2nm,0.4s							
FINES	FINESS Array B	86.44	335	P		P	20 21 00.8	-1.7
	comp=Z,0.4nm,0.3s,baz=72,slow=3.2,SNR=12							
	comp=Z,0.4nm,0.3s							

IDC ***15*** *20:34:55.5±17.0, 34.°72N×69.°96E, h0km, mb3.5/3, mbtmp3.3/5, ML2.5/2, Error ellipse: s-maj=315.3km s-min=37.6km az=157.0*
NDI ***15*** *20:34:55.8±1.9, 36.°04N×70.°77E, h90km, ML3.3, MW3.4, Presumed earthquake*

ISC 15 20:34:59.9±1.5, 34.°6N±0.°1×70.°3E±0.°1, h42km, n13, σ2s26/16, mb3.5/3, 1C-1D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JMU	Jammu	4.19	115	eS		Sn	20 36 54.0	+5.0
TSSA	Tissa	5.18	109	eP		Pn	20 36 14.8	-0.2
TSSA				eS		Sn	20 37 13.6	0.0
TSSA				IAML			20 37 16.6	
	comp=N,67nm,0.2s							
TSSA				IAML			20 37 16.6	
	comp=E,41nm,0.2s							
DHRM	DHARAMSHALA	5.53	114	eP		Pn	20 36 20.4	+0.4
DHRM				eS		Sn	20 37 21.5	-1.0
DHRM				IAML			20 37 51.0	
	comp=E,46nm,0.6s							
DHRM				IAML			20 37 51.8	
	comp=N,36nm,0.3s							
KK31	Karatay Array	8.46	1	⇓Pn		Pn	20 37 02.1	+2.2
	comp=N,0.6nm,0.3s,baz=188,slow=13,SNR=5.4							
KK31				⇑Sn		Sn	20 38 35.1	+1.2
	comp=N,4.5nm,0.8s,baz=186,slow=22							
PTH	Pithoragarh	9.77	118	eS		Sn	20 39 03.0	-3.6
LGTI	Lohaghat	9.79	120	eP		Pn	20 37 20.0	+1.6
LGTI				ex		x	20 38 55.4	
MKAR	Makanchi Array	15.14	33	Pn		P	20 38 32.7	-2.6
	comp=N,0.1nm,0.3s,baz=221,slow=11,SNR=4.2							
	comp=N,0.3nm,0.7s							
AB31	Akbulak array	16.50	335	P		P	20 38 50.5	+0.2
	comp=N,0.3nm,0.4s,baz=158,slow=12,SNR=13							
KURBB	Kurchatov Arra	17.06	18	Pn		Pn	20 38 52.2	-3.0
	baz=206,slow=10,SNR=1.7							
	comp=N,0.1nm,0.5s							
ZALV	Zalesovo Beam	21.84	23	P		P	20 39 49.1	+0.6
	comp=N,0.4nm,0.3s,baz=224,slow=12,SNR=3.6							
	comp=N,0.4nm,0.3s							
HFS	Hagfors	44.21	323	P		P	20 43 04.2	-0.3
	comp=N,0.8nm,0.5s,baz=111,slow=8.0,SNR=6.3							
	comp=N,0.8nm,0.5s							
NB2	NORSAR Subarra	45.55	324	P		P	20 43 14.5	-0.7
	comp=Z,0.3nm,0.5s,baz=99,slow=7.9							
NOA	NORSAR Array B	45.55	324	P		P	20 43 14.6	-0.7
	comp=Z,0.3nm,0.4s,baz=100,slow=7.8,SNR=4.9							
	comp=Z,0.3nm,0.4s							

SCB ***15*** *20:40:49.8±1.3, 21.°34S×66.°81W, h198km±18km, ML3.8/2, Error ellipse: s-maj=7.5km s-min=4.5km az=0.0*

ISC 15 20:40:48.2±2.5, 21.°40S±0.°07×66.°82W±0.°07, h219km±21km, n22, σ1s24/34, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MOCB	Mochara	1.11	83	P		Pn	20 41 21.0	-0.2
YJA	Yavi	1.44	123	P		Pn	20 41 24.0	+0.4
PB09	IPOC Station P	2.29	260	eP		Pn	20 41 33.0	+1.7
PB09				iS		Sn	20 42 05.9	+1.1
PB09				IAML			20 42 08.9	
	comp=E,23nm,0.1s							
PB09	IPOC Station P	2.29	260	P		Pn	20 41 32.9	+1.7
PB08	IPOC Station P	2.52	299	eP		Pn	20 41 35.4	+1.5
PB08				iS		Sn	20 42 10.4	+0.9
PB08				IAML			20 42 13.7	
	comp=E,46nm,0.2s							
PB08	IPOC Station P	2.52	299	P		Pn	20 41 34.9	+1.0
PB03	IPOC Station P	2.80	256	eP		Pn	20 41 37.6	+0.8
PB03				iS		Sn	20 42 13.8	-1.0
PB03				IAML			20 42 15.8	
	comp=E,73nm,0.1s							
GO01	Chusmiza	2.81	307	P		Pn	20 41 38.0	+0.7
PB06	IPOC Station P	2.87	242	eP		Pn	20 41 39.0	+1.5
PB06				iS		Sn	20 42 15.6	-0.5
PB06				IAML			20 42 21.6	
	comp=E,23nm,0.2s							
PB06	IPOC Station P	2.87	242	P		Pn	20 41 39.3	+1.8
PB02	IPOC Station P	2.87	271	eP		Pn	20 41 37.9	+0.4
PB02				iS		Sn	20 42 14.6	-1.5
PB02	IPOC Station P	2.87	271	P		Pn	20 41 38.0	+0.5
PB02				S		Sn	20 42 14.8	-1.3
PB02				IAML			20 42 17.1	
	comp=E,158nm,0.2s							
PB07	IPOC Station P	2.87	263	eP		Pn	20 41 38.2	+0.6
PB07				iS		Sn	20 42 15.0	-1.3
PB07				IAML			20 42 15.8	
	comp=E,82nm,0.3s							
PB11	IPOC Station P	3.12	301	eP		Pn	20 41 40.5	+0.2
PB11				iS		Sn	20 42 20.3	-1.0
PB11	IPOC Station P	3.12	301	P		Pn	20 41 40.4	0.0
PB11				S		Sn	20 42 20.0	-1.3
PB11				IAML			20 42 22.9	
	comp=E,261nm,0.2s							
PB05	IPOC Station P	3.46	245	eP		Pn	20 41 44.7	+0.5
PB05				iS		Sn	20 42 26.0	-2.3
PB05				IAML			20 42 29.8	
	comp=N,19nm,0.4s							
PSGCX	Pisagua	3.58	299	eP		Pn	20 41 44.9	-0.8
PSGCX				iS		Sn	20 42 28.3	-2.6
PB16	IPOC Station P	3.96	320	eP		Pn	20 41 51.2	+0.4
PB16				iS		Sn	20 42 40.7	+0.7
PB16	IPOC Station P	3.96	320	P		Pn	20 41 52.0	+1.2
BBOJ	La Paz, Jacaqu	4.58	343	P		Pn	20 42 00.0	+1.5
LPAZ	La Paz	5.23	346	P		Pn	20 42 06.7	0.0
BBOB	La Paz, Bander	5.37	346	P		Pn	20 42 09.1	+0.8

IDC ***15*** *20:45:50.6±1.4, 23.°81S×179.°75W, h514km±16km, mb3.4/13, mbtmp4.4/17, Error ellipse: s-maj=15.4km s-min=14.6km az=54.0*
NEIC ***15*** *20:45:50.4±1.0, 23.°85S±0.°07×179.°6W±0.°1, h519km±11km, mb4.5/22, Error ellipse: s-maj=17.3km s-min=2.7km az=57.0*

ISC 15 20:45:49.5±0.5, 23.°86S±0.°07×179.°58W±0.°08, h512km, n49, σ1s47/50, mb4.3/25, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.57	165	P		P	20 47 24.3	+2.1
	302nm,0.3s,baz=248,slow=19,SNR=2.6							
MSVF	Nonsavu	6.49	340	P		P	20 47 32.6	+1.4
	4.4nm,0.4s,baz=224,slow=3.8,SNR=11							
MSVF	Nonsavu	6.49	340	P		P	20 47 32.0	+0.8
NIUE	Niue	10.17	64			P	20 48 09.2	+0.4
MARNC	Mare, Loyalty	11.68	279	P		P	20 48 25.2	+0.6
AFI	Afiamalu	12.34	38	P		P	20 48 32.3	+0.5
	16nm,0.4s,baz=290,slow=15,SNR=1.8							
AFI				S		S	20 50 39.9	-5.7
	25nm,0.7s,baz=359,slow=21,SNR=1.3							
OUENC	Ouen Island, N	12.58	274	P		P	20 48 35.6	+1.5
DZM	Mont Dzumac	13.00	275	P		P	20 48 36.9	-1.7
	5.2nm,0.9s,baz=100,slow=12,SNR=1.7							
URZ	Urewera	14.63	190	P		P	20 48 54.7	-0.7
	11nm,0.4s,baz=40,slow=3.9,SNR=14							
URZ				S		S	20 51 23.5	-5.3
	3.9nm,0.4s,baz=118,slow=8.2,SNR=1.4							
BFZ	Birch Farm	17.14	191	P		P	20 49 20.8	-0.3
MRZ	Mangatainoka R	17.24	193	P		P	20 49 19.5	-2.5
ARMA	Armidale	26.40	249	P		P	20 50 45.5	+0.7
EIDS	Eidsvold	26.69	261	P		P	20 50 47.7	+0.4
EIDS				IAmb		IAmb	20 50 48.0	
	comp=Z,9.9nm,0.7s							
CTAO	Charters Tower	31.86	270	P		P	20 51 32.6	+0.3
TOO	Toolangi	32.79	237	P		P	20 51 40.1	0.0
TOO				IAmb		IAmb	20 52 14.3	
	comp=Z,8.8nm,1.5s							
TAU	Tasmania Unive	33.24	227	P		P	20 51 43.9	+0.3
TAU				IAmb		IAmb	20 52 20.8	
	comp=Z,38nm,1.4s							
STKA	Stephens Creek	35.09	248	P		P	20 51 59.5	+0.1
	comp=Z,1.7nm,0.4s,baz=95,slow=9.1,SNR=13							
	comp=Z,1.7nm,0.4s							
COEN	Coen	36.49	279	P		P	20 52 11.4	+0.2
BBOO	Buckleboo	39.81	247	P		P	20 52 36.9	-1.2
BBOO				IAmb		IAmb	20 53 04.9	
	comp=Z,30nm,1.5s							
AS31	Alice Springs	42.42	260	P		P	20 52 58.6	-0.4
AS31				IAmb		IAmb	20 52 59.5	
	comp=Z,3.1nm,1.1s							
ASAR	Alice Springs	42.42	260	P		P	20 52 58.9	-0.2
	comp=Z,6.9nm,0.7s,baz=96,slow=7.5,SNR=112							
	comp=Z,6.9nm,0.7s							
ASAR	Alice Springs	42.42	260	P		P	20 52 58.4	-0.6
WR8	Warramunga Arr	42.64	266	P		P	20 53 00.2	-0.5
WR8				IAmb		IAmb	20 53 00.8	
	comp=Z,12nm,0.9s							
WB0	Warramunga Arr	42.78	266			P	20 53 01.2	-0.7
WB0				IAmb		IAmb	20 53 01.9	
	comp=Z,16nm,0.7s							
WRAB	Tennant Creek	42.78	266	P		P	20 53 01.3	-0.6
WRAB				IAmb		IAmb	20 53 01.8	
	comp=Z,11nm,0.8s							
WRA	Warramunga Arr	42.79	266	P		P	20 53 01.4	-0.6
	comp=Z,12nm,0.5s,baz=97,slow=8.3,SNR=149							
	comp=Z,12nm,0.5s							
WRA	Warramunga Arr	42.79	266			P	20 53 00.7	-1.3
JAY	Jayapura	43.85	293	P		P	20 53 09.8	-0.5
	comp=Z,6.9nm,0.5s,baz=123,slow=3.1,SNR=9.9							
	comp=Z,6.9nm,0.5s							
FORT	Forrest	46.69	250	P		P	20 53 30.9	-0.9
FORT				IAmb		IAmb	20 53 31.7	
	comp=Z,9.2nm,0.7s							
KNRA	Kununurra	49.07	270	P		P	20 53 49.6	-0.2
KNRA				IAmb		IAmb	20 53 49.8	
	comp=Z,26nm,1.1s							
FITZ	Fitzroy Crossi	51.22	265	P		P	20 54 05.5	0.0
	comp=Z,3.3nm,0.3s,baz=102,slow=6.9,SNR=13							
	comp=Z,3.3nm,0.3s							
FITZ	Fitzroy Crossi	51.22	265	P		P	20 54 05.6	+0.1
SIJI	Sorong	52.79	288	P		P	20 54 16.5	-0.4
	comp=Z,12nm,0.6s,baz=123,slow=9.3,SNR=7.7							
	comp=Z,12nm,0.6s							
VNDA	Vanda	54.45	185	P		P	20 54 29.4	+1.7
	comp=Z,0.4nm,0.6s,baz=28,slow=4.8,SNR=1.9							
	comp=Z,0.4nm,0.6s							
VNDA	Vanda	54.45	185	P		P	20 54 28.9	+1.2
SOEI	Soe	55.22	275	P		P	20 54 33.6	-0.7
SOEI				IAmb		IAmb	20 55 08.8	
	comp=Z,61nm,1.4s							
QSPA	South Pole Qui	66.22	180	P		P	20 55 47.3	+1.2
	comp=Z,1.1nm,0.6s,baz=54,slow=1.4,SNR=9.5							
	comp=Z,1.1nm,0.6s							
QSPA	South Pole Qui	66.22	180	P		P	20 55 46.4	+0.3
MAW	Mawson	77.92	200	P		P	20 56 54.8	+1.0
	comp=Z,2.5nm,0.9s,baz=154,slow=6.2,SNR=6.2							
	comp=Z,2.5nm,0.9s							
MAW	Mawson	77.92	200	P		P	20 56 54.5	+0.8
PETK	Petropavlovsk-	79.15	346	P		P	20 57 00.2	-0.2
	comp=Z,1.0nm,0.6s,baz=67,slow=3.7,SNR=4.3							
	comp=Z,1.0nm,0.6s							
L22K	Petersville	89.10	13	P		P	20 57 49.7	+0.3
L22K				IAmb		IAmb	20 57 50.8	
	comp=Z,3.5nm,0.8s							
CMAR	Chiang Mai Arr	89.87	290	P		P	20 57 54.7	+0.7
	comp=Z,0.3nm,0.3s,

USRK	**Ussuriysk Ar.**	**15.04**	**340**	P		**P**	**20 50 02.6**	**+1.1**
	1.5nm,0.4s,baz=163,slow=8.4,SNR=5.9							
SONM	**Songino Array**	**30.51**	**314**	P		**P**	**20 52 25.3**	**-0.8**
	0.6nm,0.4s,baz=130,slow=8.8,SNR=4.1							
	0.6nm,0.4s							
CMAR	**Chiang Mai Arr**	**38.06**	**261**	P		**P**	**20 53 28.8**	**-1.5**
	0.5nm,0.6s,baz=55,slow=7.0,SNR=5.5							
	0.5nm,0.6s							
ZALV	**Zalesovo Beam**	**45.28**	**318**	P		**P**	**20 54 27.2**	**-0.2**
	0.6nm,0.3s,baz=104,slow=6.9,SNR=5.1							
ZALV				PcP		**PcP**	**20 55 58.3**	**-0.4**
	0.4nm,0.4s,baz=98,slow=4.9,SNR=2.2							
	0.6nm,0.3s							
MKAR	**Makanchi Array**	**46.31**	**307**	P		**P**	**20 54 35.2**	**-0.2**
	0.4nm,0.3s,baz=84,slow=10,SNR=11							
MKAR				PcP		**PcP**	**20 56 03.0**	**+0.4**
	0.2nm,0.5s,baz=61,slow=12,SNR=2.0							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**48.84**	**313**	P		**P**	**20 54 54.3**	**-0.1**
	1.7nm,0.5s,baz=91,slow=7.6,SNR=35							
	1.7nm,0.5s							
BVAR	**Borovoye Array**	**53.84**	**316**	P		**P**	**20 55 30.8**	**-0.1**
	1.8nm,0.4s,baz=93,slow=7.6,SNR=17							
	1.8nm,0.4s							
ILAR	**Eielson Array**	**56.44**	**30**	P		**P**	**20 55 49.7**	**+0.7**
	0.3nm,0.6s,baz=273,slow=7.4,SNR=2.2							
	0.3nm,0.6s							
STKA	**Stephens Creek**	**61.76**	**177**	P		**P**	**20 56 27.2**	**+1.8**
	2.5nm,1.2s,baz=302,slow=9.5,SNR=1.0							
ARCES	**ARCESS Array B**	**69.69**	**340**	P		**P**	**20 57 15.4**	**+0.5**
	2.7nm,1.0s,baz=65,slow=6.3,SNR=6.6							
	2.7nm,1.0s							
KBZ	**Khabaz**	**73.82**	**311**	P		**P**	**20 57 39.8**	**+0.3**
	1.2nm,0.7s,baz=63,slow=2.3,SNR=2.5							
	1.2nm,0.7s							
FINES	**FINESS Array B**	**73.91**	**333**	P		**P**	**20 57 39.7**	**0.0**
	0.8nm,0.3s,baz=73,slow=4.5,SNR=20							
	0.8nm,0.3s							
AKASG	**Malin Array Be**	**78.44**	**322**	P		**P**	**20 58 03.1**	**-2.0**
	0.4nm,0.3s,baz=53,slow=5.7,SNR=3.3							
	0.4nm,0.3s							
HFS	**Hagfors**	**79.45**	**335**	P		**P**	**20 58 10.0**	**-0.4**
	0.8nm,0.4s,baz=66,slow=3.6,SNR=6.6							
	0.8nm,0.4s							
NOA	**NORSAR Array B**	**79.68**	**337**	P		**P**	**20 58 10.8**	**-0.8**
	0.3nm,0.6s,baz=44,slow=5.3,SNR=3.4							
	0.3nm,0.6s							
BRTR	**Keskin Array B**	**81.81**	**311**	P		**P**	**20 58 22.9**	**-0.5**
	0.7nm,0.6s,baz=90,slow=3.0,SNR=4.9							
	0.7nm,0.6s							

*IDC **15** 20:49:08.5±1.2,5.°81S×128.°80E,h250km±19km,mb2.8/1, mbtmp4.0/6,Error ellipse: s-maj=24.4km s-min=12.1km az=112.0*

*NEIC **15** 20:49:09.8±1.4,5.°9S±0.°1×128.°7E±0.°1,h254km±17km, mb4.2/3,Error ellipse: s-maj=22.8km s-min=11.9km az=122.0*

ISC 15 20:49:08.8±0.8,5.°82S±0.°07×128.°86E±0.°09,h264km,n13, σ1998/18,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.44**	**50**	P		**Pn**	**Pn**	**20 50 20.2**	**+1.8**
FAKI				Sn		**S**	**Sn**	**20 51 08.7**	**-5.2**
SIJI	**Sorong**	**5.47**	**26**	P		**Pn**	**Pn**	**20 50 32.5**	**+1.6**
	9.8nm,0.2s,baz=129,slow=6.5,SNR=54								
SIJI				S		**S**	**Sn**	**20 51 34.9**	**-1.6**
	9.6nm,0.2s,baz=206,slow=23,SNR=15								
SOEI	**Soe**	**6.00**	**229**	Pn		**Pn**	**Pn**	**20 50 39.7**	**+2.2**
BATI	**Baumata**	**6.75**	**229**	P		**Pn**	**Pn**	**20 50 45.4**	**-1.2**
	17nm,0.4s,baz=167,slow=2.4,SNR=11								
BATI				S		**S**	**Sn**	**20 52 02.7**	**-2.5**
	4.2nm,0.3s,baz=274,slow=18,SNR=1.1								
MTN	**Manton Dam**	**7.33**	**162**	Pn		**Pn**	**Pn**	**20 50 54.8**	**+0.9**
FITZ	**Fitzroy Crossi**	**12.61**	**194**	P		**P**	**P**	**20 52 00.9**	**-0.5**
	2.1nm,0.5s,baz=18,slow=9.8,SNR=19								
FITZ				S		**S**	**Sn**	**20 54 17.4**	**-2.5**
	1.0nm,0.4s,baz=69,slow=20,SNR=1.7								
FITZ	**Fitzroy Crossi**	**12.61**	**194**	P		**P**	**P**	**20 52 02.1**	**+0.7**
WRA	**Warramunga Arr**	**15.02**	**160**	P		**P**	**P**	**20 52 28.2**	**+0.1**
	0.8nm,0.3s,baz=340,slow=11,SNR=13								
WRA				S		**S**	**S**	**20 55 14.4**	**+0.6**
	0.2nm,0.4s,baz=344,slow=21,SNR=1.6								
WR8	**Warramunga Arr**	**15.09**	**159**			**P**	**P**	**20 52 29.4**	**+0.5**
MBWA	**Marble Bar**	**17.63**	**209**	P		**P**	**P**	**20 52 56.4**	**-0.3**
MBWA				IAmb		IAmb	IAmb	20 53 39.7	
	comp=Z,21nm,1.3s								
AS31	**Alice Springs**	**18.40**	**165**	P		**P**	**P**	**20 53 05.1**	**+0.1**
AS31				IAmb		IAmb	IAmb	20 53 06.9	
	comp=Z,2.0nm,0.7s								
ASAR	**Alice Springs**	**18.40**	**165**	P		**P**	**P**	**20 53 06.1**	**+1.1**
	comp=Z,2.5nm,0.3s,baz=349,slow=12,SNR=18								
MKAR	**Makanchi Array**	**66.62**	**327**	P		**P**	**P**	**20 59 32.1**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=113,slow=8.9,SNR=3.0								
	comp=Z,0.2nm,0.4s								

*BUT **15** 20:55:34.1±2.3,44.°36N±0.°02×115.°19W±0.°03,h9km,8km, Error ellipse: s-maj=3.1km s-min=2.3km az=218.0*

NEIC 15 20:55:33.3±1.2,44.°37N±0.°02×115.°15W±0.°02,h10km±2km, ML2.5/22,ML2.6/11(BUT),Error ellipse: s-maj=3.2km s-min=3.1km az=193.0,Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLID	**Pearl Lake**	**0.94**	**320**			Pg		20 55 51.5	0.0
PLID						Sg		20 56 03.9	+0.2
PLID	**Pearl Lake**	**0.94**	**320**	IAML				20 56 07.8	
	106nm,0.2s								
PLID				IAML				20 56 08.0	
	151nm,0.4s								
HLID	**Hailey**	**0.96**	**146**			Pg		20 55 51.9	0.0
HLID						Sb		20 56 04.8	-0.3
HLID	**Hailey**	**0.96**	**146**	IAML				20 56 07.9	
	87nm,0.2s								
HLID				IAML				20 56 08.9	
	86nm,0.3s								
MFID	**Camas Ranch**	**1.07**	**207**			Pg		20 55 53.6	-0.3
MFID						Sb		20 56 08.1	0.0
BCYI	**Bear Canyon**	**1.25**	**92**			Pg		20 55 57.8	+0.4
CNCI	**Crows Nest Can**	**1.30**	**109**			Pg		20 55 58.7	+0.4
ICI	**Italian Canyon**	**1.59**	**91**			Pb		20 56 02.9	0.0
BMO	**Blue Mountains**	**1.61**	**288**			Pn		20 56 02.0	0.0
MCMT	**McKenzie Canyo**	**1.71**	**74**			Pb		20 56 04.4	-0.6
DLMT	**Dillon**	**2.07**	**60**			Pb		20 56 12.0	+0.9
F10A	**Beach Ranch, E**	**2.18**	**318**			Pn		20 56 10.1	+0.4
VCMT	**Victor**	**2.18**	**18**			Pn		20 56 10.9	+1.1
MSO	**Missoula**	**2.60**	**19**			Pn		20 56 16.5	+0.9
J08A	**Circle Bar Ran**	**2.61**	**248**			Pn		20 56 16.0	+0.4
J08A				IAML				20 56 31.0	
	comp=E,19nm,0.8s								
LNOR	**Lincton Mounta**	**2.68**	**305**			Pn		20 56 17.6	+1.1
BOZ	**Bozeman (W)**	**2.79**	**63**			Pg		20 56 25.2	-1.5
BOZ				IAML				20 57 34.7	
	comp=E,29nm,0.4s								
YHL	**Hebgen Lake**	**2.88**	**79**			Pn		20 56 17.7	-1.8
LYMT	**Lyon Mountain**	**3.29**	**37**			Pb		20 56 33.7	+1.8

*IDC **15** 21:00:57.0±1.3,52.°34N×170.°24W,h0km,mb3.7/7, mbtmp3.6/9,ML2.8/2,MS2.6/2,Error ellipse: s-maj=37.3km s-min=23.6km az=166.0*

*NEIC **15** 21:01:03.0±1.9,52.°1N±0.°1×170.°41W±0.°08,h35km±2km, mb3.5/9,ML3.8/12,ML3.3(AEIC),Error ellipse: s-maj=19.7km s-min=6.2km az=164.0*

*AEIC **15** 21:01:03.5±2.7,52.°1N±0.°1×170.°43W±0.°09,h21km±5km, Error ellipse: s-maj=17.3km s-min=5.6km az=159.0*

ISC 15 21:01:03.0±1.7,52.°2N±0.°2×170.°38W±0.°07,h47km±15km, n57,σ0°99/59,mb3.7/9,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKCE	**Okmok Cone E**	**1.84**	**46**			**Pn**	**Pn**	**21 01 33.4**	**+1.2**
OKTU	**Okmok Mt. Tuli**	**1.87**	**49**			**Pn**	**Pn**	**21 01 33.5**	**+1.0**
OKFG	**Magazine Ridge**	**1.95**	**49**			**Pn**	**Pn**	**21 01 34.4**	**+0.9**
KOSE	**Korovin Southe**	**2.26**	**276**			**Pn**	**Pn**	**21 01 38.0**	**+0.1**
KOSE						**Sn**	**Sn**	**21 02 04.1**	**-0.5**
KOFP	**Korovin Flat P**	**2.29**	**274**			**Pn**	**Pn**	**21 01 38.6**	**+0.3**
KOFP						**Sn**	**Sn**	**21 02 05.5**	**+0.3**
KONE	**Korovin Northe**	**2.31**	**277**			**Pn**	**Pn**	**21 01 39.2**	**+0.7**
KOKV	**Korovin Volcan**	**2.33**	**276**			**Pn**	**Pn**	**21 01 39.2**	**+0.4**
KOKV						**Sn**	**Sn**	**21 02 06.8**	**+0.4**
ATKA	**Atka Island**	**2.35**	**272**			**Pn**	**Pn**	**21 01 38.2**	**-0.8**
ATKA				Sn		**Sn**	**Sn**	**21 02 04.5**	**-2.1**
MREP	**Makushin Rep't**	**2.74**	**52**			**Pn**	**Pn**	**21 01 46.3**	**+1.8**
MNAT	**Makushin Natee**	**2.81**	**51**			**Pn**	**Pn**	**21 01 47.5**	**+2.0**
UNV	**Unalaska Valle**	**2.88**	**53**	Pn		**Pn**	**Pn**	**21 01 46.3**	**0.0**
UNV				Sn		**Sn**	**Sn**	**21 02 18.9**	**-0.8**
UNV				IAML				21 02 30.2	
	comp=E,155nm,0.7s								
GSIG	**Igitkin Island**	**3.43**	**269**				**Pn**	**21 01 54.4**	**+0.6**
GSIG							**Sn**	**21 02 33.0**	**-0.2**
GSTR	**Great Sitkin T**	**3.50**	**271**	Pn			**Pn**	**21 01 55.5**	**+0.6**
GSTR				Sn			**Sn**	**21 02 33.9**	**-1.1**
GSMY	**Great Sitkin M**	**3.50**	**270**				**Pn**	**21 01 55.8**	**+0.9**
GSMY							**Sn**	**21 02 35.9**	**+0.8**
ETKA	**Kagalaska Isla**	**3.73**	**268**				**Pn**	**21 01 58.5**	**+0.5**
ADK	**Adak**	**3.90**	**268**				**Pn**	**21 02 00.3**	**0.0**
ADK				Sn			**Sn**	**21 02 43.3**	**-1.6**
ADK				IAML				21 03 02.9	
	comp=E,130nm,0.6s								
ADK				IAML				21 03 03.9	
	comp=E,158nm,0.8s								
KIWB	**Kanaga Island**	**4.20**	**268**	Pn			**Pn**	**21 02 05.2**	**+0.9**
KIWB				Sn			**Sn**	**21 02 52.0**	**-0.1**
KIWB				IAML				21 03 15.7	
	comp=E,177nm,0.7s								
KIWB				IAML				21 03 16.0	
	comp=N,125nm,0.7s								
KIKV	**Kanaga Island**	**4.20**	**269**				**Pn**	**21 02 05.4**	**+0.9**
TAFL	**Tanaga Flats**	**4.67**	**268**				**Pn**	**21 02 11.4**	**+0.6**
SPIA	**Saint Paul Isl**	**5.02**	**1**	Pn			**Pn**	**21 02 16.4**	**+0.8**
SPIA				IAML				21 05 38.9	
	comp=E,100nm,1.0s								
O14K	**Tigyukauivet M**	**8.76**	**32**	Pn			**Pn**	**21 03 07.5**	**+0.6**
M13K	**Dall Lake**	**9.13**	**22**	Pn			**Pn**	**21 03 12.5**	**+0.5**
N14K	**Kuskokwak Cree**	**9.16**	**29**	Pn			**Pn**	**21 03 13.2**	**+0.9**
SHEM	**Shemya Is, Ala**	**9.50**	**279**	LR		LR		21 06 19.9	
	comp=E,35nm,20.5s,baz=252,slow=34								
M16K	**Timber Creek**	**10.86**	**31**	Pn			**Pn**	**21 03 35.7**	**+0.1**
N17K	**Nushagak Hills**	**11.10**	**36**				**Pn**	**21 03 38.7**	**-0.2**
K17K	**Iditarod**	**12.38**	**27**	Pn			**Pn**	**21 03 57.4**	**+1.1**
H18K	**Honhosa River**	**14.40**	**21**				**P**	**21 04 28.7**	**-0.9**
RND	**Reindeer**	**15.97**	**37**	Pn			**P**	**21 04 46.4**	**-0.7**
ILAR	**Eielson Array**	**17.47**	**35**	P			**Pn**	**21 05 00.6**	**-2.2**
	baz=225,slow=8.9,SNR=2.2								
	comp=E,0.1nm,0.5s								
H24K	**Noodor Dome**	**17.78**	**31**				**P**	**21 05 08.8**	**+1.7**
H24K				IAmb		IAmb	IAmb	21 05 40.8	
	comp=Z,4.4nm,1.4s								
J25K	**Salcha River,**	**17.92**	**36**				**P**	**21 05 09.8**	**+1.2**
J25K				IAmb		IAmb	IAmb	21 05 31.2	
	comp=Z,4.7nm,1.4s								
SCRK	**Sand Creek**	**18.12**	**39**	Pn			**P**	**21 05 09.5**	**-1.3**
PETK	**Petropavlovsk-**	**19.31**	**285**	P			**P**	**21 05 23.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=82,slow=12,SNR=5.2								
	comp=Z,1.9nm,0.6s								
I27K	**Kandik River**	**19.80**	**36**	P			**P**	**21 05 29.2**	**+0.1**
I27K				IAmb		IAmb	IAmb	21 05 31.3	
	comp=Z,3.4nm,1.3s								
HYT	**Haines Junctio**	**19.91**	**51**	P			**P**	**21 05 30.9**	**+0.5**
I28M	**Miner Creek**	**20.34**	**38**	P			**P**	**21 05 35.0**	**-0.1**
J30M	**Hart River**	**21.42**	**41**	P			**P**	**21 05 47.0**	**+0.3**
J30M				IAmb		IAmb	IAmb	21 05 52.6	
	comp=Z,2.7nm,1.4s								
I30M	**Mount Dempster**	**21.62**	**40**	P			**P**	**21 05 49.5**	**+0.6**
I30M				IAmb		IAmb	IAmb	21 06 25.4	
	comp=Z,3.1nm,1.4s								
MA2	**Magadan**	**22.74**	**304**	LR		LR	LR	21 14 12.8	
	comp=Z,16nm,20.2s,baz=298,slow=35								
YKA	**Yellowknife Ar**	**30.84**	**48**	P			**P**	**21 07 12.0**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=275,slow=8.9,SNR=2.9								
	comp=Z,0.7nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**36.91**	**217**	T			T	21 47 24.9	
	baz=22								
H11N3	**WAKE ISLAND Hy**	**36.92**	**217**	T			T	21 47 29.2	
	baz=22,slow=74								
H11N1	**WAKE ISLAND Hy**	**36.93**	**217**	T			T	21 47 26.2	
	baz=22,slow=74								
H11S1	**WAKE ISLAND Hy**	**38.11**	**217**	T			T	21 48 56.9	
	baz=22,slow=76,SNR=18								
H11S2	**WAKE ISLAND Hy**	**38.12**	**217**	T			T	21 48 54.8	
	baz=22,slow=76,SNR=18								
H11S3	**WAKE ISLAND Hy**	**38.12**	**217**	T			T	21 49 17.5	
	baz=22,slow=76,SNR=12								
NVAR	**Mina Array Bea**	**38.28**	**90**	P			**P**	**21 08 18.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=309,slow=39,SNR=2.9								
	comp=Z,0.3nm,0.5s								
NVAR	**Mina Array Bea**	**38.28**	**90**	P			**P**	**21 08 19.3**	**+0.4**
BVAR	**Borovoye Array**	**63.50**	**324**	P			**P**	**21 11 28.8**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=43,slow=5.8,SNR=4.4								
	comp=Z,0.4nm,0.4s								
FINES	**FINESS Array B**	**65.97**	**351**	P			**P**	**21 11 42.4**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=11,slow=7.0,SNR=4.0								
	comp=Z,0.5nm,0.7s								
FINES	**FINESS Array B**	**65.97**	**351**	P			**P**	**21 11 43.4**	**-0.4**
HFS	**Hagfors**	**68.00**	**358**	P			**P**	**21 11 56.7**	**0.0**
	comp=Z,0.5nm,0.4s,baz=29,slow=3.3,SNR=8.6								
	comp=Z,0.5nm,0.4s								
CMAR	**Chiang Mai Arr**	**76.05**	**282**	P			**P**	**21 12 46.9**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=41,slow=7.2,SNR=10								
	comp=Z,1.2nm,0.8s								
CMAR	**Chiang Mai Arr**	**76.05**	**282**	P			**P**	**21 12 45.0**	**-0.5**
ASAR	**Alice Springs**	**89.79**	**229**	P			**P**	**21 13 57.6**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=8.3,slow=8.1,SNR=4.9								
	comp=Z,0.6nm,0.9s								
ASAR	**Alice Springs**	**89.79**	**229**	P			**P**	**21 13 56.9**	**+0.6**

*IDC **15** 21:18:46.1±0.7,4.°69S×151.°22E,h142km±17km,mb3.2/4, mbtmp3.7/5,Error ellipse: s-maj=72.1km s-min=14.2km az=126.0*

ISC 15 21:18:46.1±1.1,4.°8S±0.°2×151.°4E±0.°2,h150km,n7, σ0°70/9,mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I40PG	**Keravat**	**0.81**	**53**	P		**Pn**	**Pn**	**21 19 09.2**	**-0.2**
	baz=246,slow=35								
I40PG				S		**Sn**	**Sn**	**21 19 27.1**	**+0.1**
	baz=256,slow=356								
PMG	**Port Moresby**	**6.20**	**222**	P		**Pn**	**Pn**	**21 20 14.6**	**-0.9**
	7.1nm,0.2s,baz=243,slow=13,SNR=7.2								
PMG				S		**Sn**	**Sn**	**21 21 26.2**	**+0.7**
	12nm,0.3s,baz=166,slow=9.1,SNR=7.2								
WRA	**Warramunga Arr**	**22.40**	**226**	P		**P**	**P**	**21 23 33.1**	**+0.7**
	1.3nm,0.3s,baz=52,slow=11,SNR=14								
	1.3nm,0.3s								
ASAR	**Alice Springs**	**25.21**	**220**	P		**P**	**P**	**21 23 58.7**	**+0.6**
	0.3nm,0.3s,baz=41,slow=10,SNR=8.0								
	0.3nm,0.3s								
SONM	**Songino Array**	**65.56**	**328**	P		**P**	**P**	**21 29 14.3**	**+0.5**
	0.4nm,0.5s,baz=147,slow=8.6,SNR=1.7								
	0.4nm,0.5s								
BVAR	**Borovoye Array**	**88.38**	**323**	P		**P**	**P**	**21 31 20.4**	**-0.6**
	0.1nm,0.2s,baz=113,slow=11,SNR=1.6								
	0.1nm,0.2s								
TORD	**Torodi Ar. Bea**	**148.94**	**288**	PKPbc		**PKPbc**	**PKPbc**	**21 38 16.9**	**-0.4**
	0.2nm,0.5s,baz=69,slow=1.9,SNR=2.5								

JMA 15 21:22:50.6±0.3,25.°N±1.°×123.°5E±0.°4,h20km,NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.56**	**156**			*e*P	Pb	21 23 01.5	-0.3
IRIF						*e*S	Sb	21 23 09.4	0.0
YOJ	**Yonaguni jima**	**0.58**	**228**			*e*P	Pb	21 23 01.8	-0.3
YOJ						*e*S	Sb	21 23 09.3	-0.5
JKRS	**Kuro-shima**	**0.78**	**142**			*e*P	Pb	21 23 05.6	+0.1
JKRS						*e*S	Sb	21 23 15.5	-0.2

TAP 15 21:23:26.4,24.°26N×121.°71E,h59km,ML2.3,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.06**	**29**			*e*P	Pn	21 23 35.6	+0.3
EAHA	**Aohua**	**0.07**	**20**			*e*P	Pn	21 23 36.0	+0.8
EAHA						*e*S	Sn	21 23 43.2	+1.5
ETL	**Fush Village**	**0.13**	**218**			*i* P	Pn	21 23 35.5	0.0
ETL						S	Sn	21 23 42.4	+0.3
NACB	**Ninganchiao**	**0.14**	**231**			P	Pn	21 23 35.0	-0.5
NACB						S	Sn	21 23 41.4	-0.6
ENA	**Nanau**	**0.17**	**9**			P	Pn	21 23 36.0	+0.4
ENA						*e*S	Sn	21 23 42.7	+0.5
EWUT	**Wuta**	**0.19**	**18**			*i* P	Pn	21 23 36.0	+0.3
EWUT						S	Sn	21 23 43.3	+0.9
TWD	**Chiawan**	**0.21**	**210**			*e*P	Pn	21 23 35.6	-0.2
TWD						*e*S	Sn	21 23 43.1	+0.6
ETLH	**Xiulin Townshi**	**0.22**	**255**			*e*P	Pn	21 23 36.0	0.0
ETLH						*e*S	Sn	21 23 42.7	-0.1
LATG	**Datong**	**0.32**	**328**	P			Pn	21 23 36.9	+0.1
LATG				S			Sn	21 23 44.6	+0.4
ESAO	**Su ao**	**0.34**	**21**	*i* P			Pn	21 23 37.2	+0.5
ESAO				S			Sn	21 23 45.3	+1.2
NNSB	**Datong**	**0.34**	**299**	P			Pn	21 23 37.3	+0.4
NNSB				S			Sn	21 23 44.7	+0.1
NNSH	**Datong**	**0.34**	**299**	P			Pn	21 23 37.2	+0.3
NNSH				*e*S			Sn	21 23 45.0	+0.4
NNS	**Nan Shan**	**0.36**	**300**	P			Pn	21 23 37.3	+0.2
NNS				S			Sn	21 23 45.1	+0.4
ETM	**Tongmen**	**0.36**	**214**	P			Pn	21 23 36.5	-0.5
ETM				S			Sn	21 23 44.1	-0.4
LXIB	**Xiulin Townshi**	**0.36**	**229**	*e*P			Pn	21 23 36.7	-0.5
LXIB				*e*S			Sn	21 23 45.6	+0.7
TWC	**Suao**	**0.37**	**20**	*i* P			Pn	21 23 37.5	+0.5
TWC				*i* S			Sn	21 23 45.8	+1.1
NDS	**Dongshan**	**0.37**	**1**	*i* P			Pn	21 23 37.4	+0.4
NDS				*i* S			Sn	21 23 45.2	+0.5
NDT	**Datong Townshi**	**0.39**	**332**	P			Pn	21 23 37.7	+0.5
NDT				S			Sn	21 23 45.6	+0.7
ENTT	**Nioudou**	**0.40**	**341**	*i* P			Pn	21 23 37.7	+0.4
ENTT				S			Sn	21 23 46.0	+0.8
TEYL	**Yanliau Villag**	**0.41**	**195**	*e*P			Pn	21 23 37.8	+0.5
TEYL				*e*S			Sn	21 23 46.6	+1.3
WHF	**Hehuan Shan**	**0.42**	**254**	*i* P			Pn	21 23 38.4	+0.3
WHF				S			Sn	21 23 46.8	+0.4
FUSS	**Fushou**	**0.43**	**268**	*i* P			Pn	21 23 38.4	+0.5
FUSS				S			Sn	21 23 46.8	+0.7
TWE	**Neicheng**	**0.46**	**355**	P			Pn	21 23 38.5	+0.6
TWE				*e*S			Sn	21 23 47.2	+1.0
TWT	**Tachien**	**0.49**	**269**	P			Pn	21 23 39.4	+1.0
TWT				S			Sn	21 23 48.0	+1.0
SHUL	**Shoufeng**	**0.49**	**196**	P			Pn	21 23 38.8	+0.6
SHUL				*e*S			Sn	21 23 48.2	+1.5
EOS2	**EOS2**	**0.50**	**72**	*e*P			Pn	21 23 38.9	+0.8
EOS2				*e*S			Sn	21 23 45.9	-0.8
TDCB	**Techi**	**0.51**	**269**	P			Pn	21 23 39.4	+0.8
TDCB				S			Sn	21 23 48.0	+0.7
FUSB	**Fushanzhiwuyua**	**0.51**	**347**	P			Pn	21 23 39.0	+0.5
FUSB				S			Sn	21 23 48.1	+0.9
YHNB	**Yeheng**	**0.51**	**323**	*e*P			Pn	21 23 39.1	+0.6
YHNB				*e*S			Sn	21 23 47.4	+0.1
ESL	**Shilin**	**0.51**	**210**	*e*P			Pn	21 23 38.0	-0.5
NSK	**Sanguang**	**0.52**	**322**	P			Pn	21 23 39.2	+0.5
NSK				S			Sn	21 23 47.7	+0.2
NWLT	**Wulai**	**0.55**	**340**	P			Pn	21 23 39.6	+0.8
NWLT				S			Sn	21 23 48.2	+0.3
EOS3	**EOS3**	**0.55**	**87**	*e*P			Pn	21 23 39.3	+0.5
EOS3				*e*S			Sn	21 23 49.0	+1.4
EOS4	**EOS4**	**0.57**	**104**	*e*P			Pn	21 23 39.6	+0.9
OWD	**Renai**	**0.58**	**238**	*e*P			Pn	21 23 39.9	+0.5
OWD				*e*S			Sn	21 23 49.0	+0.3
WUSB	**Renai**	**0.61**	**244**	P			Pn	21 23 40.4	+0.7
WUSB				*e*S			Sn	21 23 50.0	+0.8
EGS		**0.61**	**19**	*e*P			Pn	21 23 40.5	+0.9
EGS				*e*S			Sn	21 23 50.5	+1.3
WARBT	**Fenglin Townsh**	**0.62**	**209**	*e*P			Pn	21 23 39.0	-0.7
NFF	**Wufeng Townshi**	**0.66**	**304**	*e*P			Pn	21 23 41.4	+1.3
NFF				*e*S			Sn	21 23 51.8	+1.6
WHP	**Taichung City**	**0.70**	**271**	*e*P			Pn	21 23 42.0	+1.3
WHP			

λ29.00000°. NP2:φ$_s$160.00000°,δ79.00000°,λ111.00000°. Principal axes: T 5.0200, Plg52.0000°, Azm94.0000°; N -0.0290, Plg20.0000°, Azm336.0000°; P -4.9860, Plg31.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC ***15*** *21:39:52.2, 7.47N×81.82W, h18km, Moment Tensor Solution. Duration: 4s2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.66; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$-0.30; $M_{r\theta}$2.49; $M_{r\phi}$1.61; $M_{\theta\phi}$-5.49; Fault plane solution: M_o6.43000×10^{17} NP1: φ$_s$275.33000°,δ15.00000°,λ32.15000°. NP2: φ$_s$154.06000°,δ82.08000°,λ102.78000°. Principal axes: T 6.3754, Plg51.0000°, Azm79.0000°; N 0.1096, Plg13.0000°, Azm332.0000°; P -6.4851, Plg36.0000°, Azm233.0000°;*

BGR ***15*** *21:39:53.4, 8.72N×80.68W, h33km, mb5.8, mB_BB6.1, Ms5.5*

ISC 15 21:39:40.2±0.4,**7.40N**±0.02×**81.88W**±0.02,**h10**km±2km, **n1898,**σ1°**61**/2087,**mb5.7**/330,**MS5.5**/407,**71C-48D, Panama**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ISECA	**Islas Secas**	**0.59**	**345**	*eP*			**Pg**	**21 39 51.3**	**-0.5**
ISECA				*eS*			**Sg**	**21 39 59.6**	**-0.1**
ISECA	**Islas Secas**	**0.59**	**345**	*eP*			**Pg**	**21 39 52.0**	**+0.3**
ISECA				*eS*			**Sg**	**21 39 59.8**	**+0.2**
PVID3	**Puerto Vidal,**	**0.70**	**23**	*i P*			**Pg**	**21 39 53.0**	**-0.7**
PVID3				*i S*			**Sg**	**21 40 02.3**	**-0.6**
GMAL	**Guarumal, Vera**	**0.73**	**61**	P			**Pg**	**21 39 53.8**	**-0.6**
GMAL	**Guarumal, Vera**	**0.73**	**61**	P			**Pg**	**21 39 54.0**	**-0.4**
GMAL	**Guarumal, Vera**	**0.73**	**61**	*eP*			**Pg**	**21 39 54.0**	**-0.4**
GMAL	**Guarumal, Vera**	**0.73**	**61**	*eP*			**Pg**	**21 39 54.1**	**-0.4**
GMAL				*i S*			**Sb**	**21 40 04.6**	**-0.7**
NANC3	**Nancito, Chiri**	**0.84**	**10**	*i P*			**Pg**	**21 39 55.6**	**-0.9**
NANC3				*i S*			**Sb**	**21 40 08.4**	**-0.1**
PDCAN	**Manzana , Fuen**	**0.90**	**12**	*eP*			**Pg**	**21 39 56.3**	**-1.3**
RSUS3	**Rio de Jesus,**	**0.92**	**51**	*eP*	⇓		**Pg**	**21 39 57.0**	**-0.9**
RSUS3				*i S*			**Sg**	**21 40 09.7**	**-0.2**
CHIR3	**Chiriqui UPA,**	**1.08**	**336**	*eP*			**Pg**	**21 39 60.0**	**-1.1**
CHIR3				*eS*			**Sn**	**21 40 16.0**	**-0.6**
STIA3	**Santiago, Vera**	**1.14**	**52**	*iP*	⇑		**Pb**	**21 40 00.8**	**-1.1**
STIA3				*eS*			**Sn**	**21 40 18.6**	**+0.7**
DVD	**David**	**1.17**	**331**	*i P*			**Pb**	**21 40 01.6**	**-1.0**
DVD				*eS*			**Sb**	**21 40 17.9**	**0.0**
BGUAL	**Bijagual, Pana**	**1.19**	**338**	*eP*			**Pb**	**21 40 02.1**	**-0.7**
BGUAL				*eS*			**Sb**	**21 40 18.3**	**0.0**
LMNES	**Limones**	**1.19**	**306**	*iP*	⇓		**Pb**	**21 40 01.5**	**-1.4**
LMNES				*eS*			**Sn**	**21 40 23.1**	**+3.8**
LIMO3	**Limones**	**1.20**	**306**	*iP*	⇓		**Pb**	**21 40 01.5**	**-1.5**
LIMO3				*eS*			**Sb**	**21 40 17.5**	**-1.0**
PTPA	**Petro Terminal**	**1.26**	**309**	*eP*			**Pn**	**21 40 02.2**	**-1.8**
PTPM	**Petroterminale**	**1.27**	**309**	*iP*	⇓		**Pn**	**21 40 02.6**	**-1.5**
PTPM				*eS*			**Sb**	**21 40 19.0**	**-1.6**
SAFE3	**Santa Fe, Vera**	**1.36**	**36**	*eP*	⇑		**Pn**	**21 40 04.0**	**-1.4**
SAFE3				*i S*			**Sb**	**21 40 22.8**	**-0.6**
CALO3	**Calobre, Verag**	**1.38**	**48**	*iP*	⇑		**Pn**	**21 40 04.5**	**-1.0**
CALO3				*eS*			**Sg**	**21 40 24.6**	**+0.1**
PTAR3	**Potrerillos Ar**	**1.42**	**335**	*eP*	⇑		**Pn**	**21 40 05.8**	**-0.4**
PTAR3				*eS*			**Sb**	**21 40 25.4**	**+0.3**
TOSI3	**Tonosi**	**1.43**	**90**	*iP*	⇑		**Pn**	**21 40 05.2**	**-1.0**
TOSI3				*eS*			**Sb**	**21 40 25.4**	**+0.2**
KKNTU	**Kakint②**	**1.43**	**3**	*eP*			**Pn**	**21 40 05.0**	**-1.3**
KKNTU	**Kakint②**	**1.43**	**3**	*i P*			**Pn**	**21 40 05.5**	**-0.7**
KKNTU				*eS*			**Sb**	**21 40 25.4**	**+0.1**
BQSF3	**Alto Boquete,**	**1.44**	**338**	*eP*	⇑		**Pn**	**21 40 05.8**	**-0.6**
BQSF3				*eS*			**Sn**	**21 40 25.5**	**-0.1**
BQTLY	**Boquete Panama**	**1.46**	**337**	*eP*			**Pn**	**21 40 05.8**	**-1.1**
BQTLY	**Boquete Panama**	**1.46**	**337**	*i P*			**Pn**	**21 40 06.0**	**-0.9**
BQTLY				*eS*			**Sn**	**21 40 26.2**	**0.0**
LPPC	**Paso Canoas**	**1.47**	**320**	*eP*			**Pn**	**21 40 05.2**	**-1.6**
LPPC				*eS*			**Sn**	**21 40 25.1**	**-1.0**
LNBQ3	**Los Naranjos,**	**1.49**	**338**	*iP*	⇓		**Pn**	**21 40 06.1**	**-1.0**
LNBQ3				*eS*			**Sb**	**21 40 27.4**	**+0.4**
RBALA	**Bur**	**1.49**	**350**	*eP*			**Pn**	**21 40 06.6**	**-0.5**
RBALA	**Bur**	**1.49**	**350**	*eP*			**Pn**	**21 40 06.7**	**-0.5**
RBALA				*eS*			**Sn**	**21 40 26.5**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**1.51**	**348**	*eP*			**Pn**	**21 40 06.2**	**-1.2**
PBNVO	**Pueblo Nuevo,**	**1.51**	**348**	*i P*			**Pn**	**21 40 06.6**	**-0.8**
PBNVO				*eS*			**Sn**	**21 40 25.8**	**-1.3**
CLLRA	**Cordillera,**	**1.52**	**331**	*i P*			**Pn**	**21 40 07.0**	**-0.6**
CLLRA				*eS*			**Sg**	**21 40 30.4**	**+1.3**
CDITO	**Canoas**	**1.52**	**320**	P			**Pn**	**21 40 07.3**	**-0.3**
CHGR2	**Aguacate**	**1.55**	**350**	*eP*	⇑		**Pn**	**21 40 07.2**	**-0.7**
CHGR2				*i S*			**Sn**	**21 40 26.4**	**-1.6**
CHIT3	**Chitre**	**1.55**	**69**	*iP*	⇑		**Pn**	**21 40 07.7**	**-0.2**
CHIT3				*eS*			**Sb**	**21 40 28.6**	**-0.1**
BRU2	**Volcan**	**1.60**	**330**	P			**Pn**	**21 40 07.3**	**+0.3**
BRU2	**Volcan**	**1.60**	**330**				**Pn**	**21 40 07.9**	**-0.8**
BRU2						Sn	**Sn**	**21 40 27.2**	**-2.3**
BRU2	**Volcan**	**1.60**	**330**	P			**Pn**	**21 40 07.9**	**-0.8**
BRU2	**Volcan**	**1.60**	**330**	*eP*			**Pn**	**21 40 07.7**	**-1.0**
BRU2	**Volcan**	**1.60**	**330**	P			**Pn**	**21 40 08.0**	**-0.7**
BRU2	**Volcan**	**1.60**	**330**	*i P*			**Pn**	**21 40 08.0**	**-0.7**
BRU2					⇓	*iP*	**Pb**	**21 40 08.1**	**-1.8**
BRU2				*eS*			**Sb**	**21 40 30.0**	**-0.3**
BRU2				*eS*			**Sg**	**21 40 30.8**	**-1.0**
NELY	**Ciudad Neily**	**1.63**	**320**	*eP*			**Pn**	**21 40 07.7**	**-1.3**
NELY	**Ciudad Neily**	**1.63**	**320**	*eP*			**Pn**	**21 40 07.9**	**-1.0**
NELY				*eS*			**Sg**	**21 40 35.2**	**+2.6**
AZU	**Azuero**	**1.64**	**76**	P			**Pn**	**21 40 08.9**	**-0.2**
AZU	**Azuero**	**1.64**	**76**	P			**Pn**	**21 40 09.0**	**-0.2**
AZU	**Azuero**	**1.64**	**76**	*eP*			**Pn**	**21 40 08.9**	**-0.2**
AZU	**Azuero**	**1.64**	**76**	*iP*	⇑		**Pn**	**21 40 09.0**	**-0.1**
AZU				*eS*			**Sn**	**21 40 30.2**	**+0.3**
ACHO3	**Achotines, Los**	**1.69**	**89**	*iP*	⇑		**Pn**	**21 40 09.2**	**-0.6**
ACHO3				*eS*			**Sb**	**21 40 32.6**	**-0.3**
FITO	**Golfito**	**1.75**	**314**	*eP*			**Pn**	**21 40 08.5**	**-2.1**
FITO	**Golfito**	**1.75**	**314**	*eS*			**Sn**	**21 40 31.8**	**-1.2**
PIRO	**Carate, Puerto**	**1.75**	**305**	P			**Pn**	**21 40 09.9**	**-0.8**
PIRO						S	**Sg**	**21 40 38.2**	**+1.5**
PIRO	**Carate, Puerto**	**1.75**	**305**				**Pn**	**21 40 08.7**	**-2.0**
PIRO	**Carate, Puerto**	**1.75**	**305**	*eP*			**Pn**	**21 40 08.5**	**-2.2**
PIRO	**Carate, Puerto**	**1.75**	**305**	*iP*	⇓		**Pn**	**21 40 08.8**	**-1.8**
PIRO				*eS*			**Sn**	**21 40 31.2**	**-1.8**
PIRO				*eS*			**Sg**	**21 40 42.1**	**+5.5**
VITO	**San Vito**	**1.77**	**323**	*i P*			**Pn**	**21 40 11.6**	**+0.5**
VITO				*eS*			**Sg**	**21 40 37.6**	**+0.3**
ALCO	**Alturas Coton,**	**1.80**	**329**	*eP*			**Pn**	**21 40 10.6**	**-0.9**
PEDA3	**Pedasi**	**1.84**	**86**	*iP*	⇑		**Pn**	**21 40 11.4**	**-0.6**
PEDA3				*eS*			**Sn**	**21 40 35.8**	**+0.5**
PNME	**Penonome**	**1.88**	**55**	P			**Pn**	**21 40 12.8**	**+0.4**
PNME	**Penonome**	**1.88**	**55**	*iP*	⇑		**Pn**	**21 40 12.7**	**+0.2**
PNME				*eS*			**Sn**	**21 40 36.9**	**+0.7**
EDP2	**Potrero Grande**	**2.05**	**321**	*eP*			**Pn**	**21 40 14.5**	**-0.3**
CNI2	**El Empalme, Bo**	**2.09**	**344**	*eP*			**Pb**	**21 40 17.3**	**-0.9**
CNI2				*eS*			**Sn**	**21 40 42.1**	**+0.6**
VTON	**El Valle, Cocl**	**2.12**	**55**	*i P*			**Pn**	**21 40 16.9**	**+1.1**
VTON				*eS*			**Sg**	**21 40 46.9**	**-1.7**
FIMO	**Fila Mora**	**2.15**	**317**	*eP*			**Pn**	**21 40 16.1**	**-0.2**
PANP	**Palmar Norte**	**2.20**	**315**	*eP*			**Pn**	**21 40 16.0**	**-0.8**
BURE	**Buenos Aires**	**2.27**	**321**	*eP*			**Pn**	**21 40 17.2**	**-0.7**
DRK0	**Durika**	**2.29**	**324**	*eP*			Pn	21 40 07.2	-11
DRK0	**Durika**	**2.29**	**324**	*iP*	⇓		Pn	21 40 07.0	-11
DRK0				*eP*			Pb	21 40 07.5	-14
DRK0				*eS*			Sn	21 40 36.2	-10
RGM0	**Gandoca**	**2.29**	**342**	P			**Pb**	**21 40 20.2**	**-1.4**
RGM0				S			**Sg**	**21 40 57.1**	**+3.2**
RGM0	**Gandoca**	**2.29**	**342**				**Pn**	**21 40 18.1**	**0.0**
RGM0						Sn	**Sn**	**21 40 46.5**	**+0.1**
RGM0	**Gandoca**	**2.29**	**342**	P			**Pn**	**21 40 20.1**	**-1.6**
RGM0	**Gandoca**	**2.29**	**342**	*eP*	⇑		**Pb**	**21 40 20.2**	**-1.4**
EDPE	**Pejibaye, P**	**2.42**	**316**	*eP*			**Pn**	**21 40 19.3**	**-0.6**
OCHAL	**Ojochal**	**2.43**	**314**	P			**Pn**	**21 40 19.3**	**-0.7**
OCHAL						S	**Sb**	**21 40 55.2**	**+1.2**
SAJE	**San Jernim**	**2.52**	**320**	*eP*			**Pn**	**21 40 20.7**	**-0.6**
ZANG	**Zanguenga, Cho**	**2.52**	**52**	*eP*			**Pn**	**21 40 21.9**	**+0.6**
ZANG	**Zanguenga, Cho**	**2.52**	**52**	*eP*			**Pn**	**21 40 22.3**	**+1.1**
ZANG					⇑	*eP*	**Pn**	**21 40 22.4**	**+1.1**
ZANG				*eS*			**Sn**	**21 40 52.2**	**+0.1**
CHOR3	**La Chorrera**	**2.57**	**54**	*iP*	⇑		**Pn**	**21 40 23.2**	**+1.3**
CHOR3				*eS*			**Sn**	**21 40 54.2**	**+0.9**
BCIP	**Isla Barro Col**	**2.68**	**49**	P			**Pn**	**21 40 24.1**	**+0.7**
BCIP	**Isla Barro Col**	**2.68**	**49**	P			**Pn**	**21 40 24.3**	**+0.8**
BCIP						S	**Sb**	**21 41 03.5**	**+2.3**
BCIP	**Isla Barro Col**	**2.68**	**49**				**Pn**	**21 40 24.1**	**+0.7**
BCIP	**Isla Barro Col**	**2.68**	**49**	P			**Pn**	**21 40 24.2**	**+0.8**
BCIP	**Isla Barro Col**	**2.68**	**49**	*eP*			**Pn**	**21 40 23.3**	**-0.1**
BCIP	**Isla Barro Col**	**2.68**	**49**		⇑	*iP*	**Pn**	**21 40 24.2**	**+0.8**
BCIP				*eS*			**Sn**	**21 40 57.7**	**+1.8**
TABO3	**Taboga, Panama**	**2.69**	**59**	*eP*			**Pn**	**21 40 25.0**	**+1.4**
TABO3				*eS*			**Pn**	**21 40 26.8**	**+3.2**
TABO3				*eS*			**Sn**	**21 40 57.8**	**+1.7**
ARRA3	**Arraijan, Pana**	**2.69**	**55**	*eP*	⇑		**Pn**	**21 40 24.5**	**+0.9**
ARRA3				*eS*			**Sn**	**21 40 57.6**	**+1.2**
GAMB1	**Gamboa**	**2.74**	**51**	*eP*	⇓		**Pn**	**21 40 24.9**	**+0.5**
GAMB1				*eS*			**Sn**	**21 40 58.7**	**+1.1**
FLAM	**Flamenco Islan**	**2.76**	**57**	*iP*	⇑		**Pn**	**21 40 25.9**	**+1.3**
FLAM					⇑	*iP*	**Pn**	**21 40 25.9**	**+1.3**
FLAM				*eS*			**Sn**	**21 40 59.3**	**+1.2**
FRIJ	**El Hiral**	**2.79**	**50**	*eP*	⇑		**Pn**	**21 40 25.7**	**+0.6**
FRIJ				*eS*			**Sn**	**21 40 59.9**	**+1.1**
PIEC	**Cerro El Cedra**	**3.01**	**317**	*eP*			**Pn**	**21 40 27.9**	**-0.4**
QUEP	**Quepos**	**3.03**	**312**	P			**Pn**	**21 40 28.5**	**+0.2**
QUEP				S			**Sb**	**21 41 08.7**	**-2.6**
REPA	**Paraso**	**3.11**	**321**	*eP*			**Pn**	**21 40 29.3**	**-0.2**
VTCV	**VTCV, Calle Va**	**3.15**	**325**	*eP*			**Pn**	**21 40 30.3**	**+0.3**
ABRB	**Las Abras (San**	**3.16**	**325**	*eP*			**Pn**	**21 40 30.4**	**+0.1**
VTR0	**Volcan Turrial**	**3.19**	**325**	*eP*			**Pn**	**21 40 31.2**	**+0.3**
CVTR	**Volcan Turrial**	**3.20**	**325**	*eP*			**Pn**	**21 40 31.1**	**+0.2**
CHPO	**Chepo, Panama**	**3.25**	**57**	*iP*	⇑		**Pn**	**21 40 31.9**	**+0.6**
CHPO				*eS*			**Sn**	**21 41 10.9**	**+0.7**
CORON	**Coronado**	**3.31**	**321**	*eP*			**Pn**	**21 40 32.0**	**-0.2**
CVIMO	**Finca Echandi**	**3.31**	**322**	*eP*			**Pb**	**21 40 36.6**	**-2.6**
ECI	**Escuela Centro**	**3.31**	**320**	*eP*			**Pn**	**21 40 32.2**	**0.0**
HDC	**Heredia**	**3.40**	**320**				**Pn**	**21 40 33.7**	**+0.2**
HDC	**Heredia**	**3.40**	**320**	P			**Pn**	**21 40 34.2**	**+0.7**
HDC	**Heredia**	**3.40**	**320**	*eP*			**Pn**	**21 40 33.4**	**-0.1**
HDC	**Heredia**	**3.40**	**320**	*eP*			**Pn**	**21 40 33.9**	**+0.5**
HDC				*eS*			**Sn**	**21 41 16.3**	**+2.4**
HDC	**Heredia**	**3.40**	**320**	P			**Pn**	**21 40 34.2**	**+0.7**
BELE	**Belen**	**3.43**	**318**	*eP*			**Pn**	**21 40 33.8**	**0.0**
CNTA3	**Canitas, Panam**	**3.47**	**58**	*eS*			**Pn**	**21 40 34.3**	**0.0**
CNTA3					⇓	*eP*	**Pn**	**21 40 34.9**	**+0.6**
CNTA3				*eS*			**Sn**	**21 41 16.2**	**+0.7**
VBV1	**V. Barva**	**3.47**	**321**	*eP*			**Pn**	**21 40 34.6**	**0.0**
TCS1	**Tacares**	**3.55**	**318**	P			**Pn**	**21 40 37.3**	**+1.8**
TCS1	**Tacares**	**3.55**	**318**	P			**Pn**	**21 40 36.2**	**+0.7**
TCS1	**Tacares**	**3.55**	**318**	*eP*			**Pn**	**21 40 35.6**	**0.0**
TRB2	**Turrubares**	**3.56**	**315**	S			**Sb**	**21 41 24.4**	**-2.2**
VPS8	**V Poas**	**3.61**	**320**	*eP*			**Pn**	**21 40 36.6**	**0.0**
TRT2	**Tortugero**	**3.63**	**330**	P			**Pn**	**21 40 38.1**	**+1.6**
TRT2				S			**Sb**	**21 41 27.6**	**-1.1**
TRT2	**Tortugero**	**3.63**	**330**	P			**Pn**	**21 40 36.5**	**0.0**
TRT2	**Tortugero**	**3.63**	**330**	*eP*			**Pn**	**21 40 35.9**	**-0.7**
TRT2	**Tortugero**	**3.63**	**330**	*eP*			**Pn**	**21 40 35.8**	**-0.7**
TRT2					⇓	*iP*	**Pn**	**21 40 36.3**	**-0.2**
TRT2				*eS*			**Sn**	**21 41 19.4**	**-0.1**
TOTI	**Torti**	**3.85**	**67**	*iP*	⇑		**Pn**	**21 40 39.6**	**+0.1**
TOTI				*eS*			**Sn**	**21 41 25.1**	**+0.3**
UPD2	**Meteti**	**3.99**	**73**	P			**Pn**	**21 40 45.1**	**+3.6**
UPD2	**Meteti**	**3.99**	**73**	*eP*			**Pn**	**21 40 44.6**	**+3.0**
PTAC	**Punta Ardita,**	**4.05**	**93**	P			**Pn**	**21 40 40.7**	**-1.6**
PTAC	**Punta Ardita,**	**4.05**	**93**	*iP*	⇑		**Pn**	**21 40 40.9**	**-1.4**
COVE	**Coope Vega, Sa**	**4.13**	**323**	P			**Pb**	**21 40 48.8**	**-4.2**
ARE1	**Arenal 1**	**4.13**	**318**	*eP*			**Pn**	**21 40 43.9**	**+0.4**
JTS	**Las Juntas de**	**4.18**	**314**	Pn			**Pn**	**21 40 44.2**	**+0.1**
	19nm,0.3s,baz=123,slow=9.6,SNR=39								
JTS						Sn	**Sn**	**21 41 32.2**	**-0.8**
	53nm,0.3s,baz=142,slow=10,SNR=3.6								
JTS						LR	LR	21 42 10.0	
	comp=Z,25μm,18.8s,baz=128,slow=36 134nm,0.5s								
JTS	**Las Juntas de**	**4.18**	**314**	P			**Pn**	**21 40 44.2**	**+0.1**
JTS								21 41 32.2	
JTS	**Las Juntas de**	**4.18**	**314**				**Pn**	**21 40 42.4**	**-1.7**
JTS	**Las Juntas de**	**4.18**	**314**	P			**Pn**	**21 40 44.2**	**+0.1**
JTS	**Las Juntas de**	**4.18**	**314**	*eP*			**Pn**	**21 40 42.0**	**-2.1**
JTS	**Las Juntas de**	**4.18**	**314**	P			**Pn**	**21 40 44.9**	**+0.8**
JTS	**Las Juntas de**	**4.18**	**314**	*eP*	⇓		**Pn**	**21 40 43.2**	**-0.8**
JUD3	**Juan Diaz 3**	**4.54**	**307**				**Pn**	**21 40 47.9**	**-1.2**
SOLC	**Bahia Solano**	**4.59**	**104**	P			**Pn**	**21 40 48.8**	**-1.0**
BLUN	**Bluefields**	**4.94**	**338**	P			**Pn**	**21 40 54.1**	**-0.4**
CARN	**Rivas**	**5.20**	**317**				**Pn**	**21 40 57.3**	**-0.8**
APAC	**Apartado, Choc**	**5.28**	**84**	P			**Pn**	**21 41 01.0**	**+1.8**
	120μm88μm5μm,1.7s								
ACON	**Acoyapa**	**5.58**	**325**	P			**Pn**	**21 41 06.0**	**+2.7**
ACON						S	**Sn**	**21 42 15.3**	**+7.8**
DBBC	**Dabeiba**	**5.64**	**94**	P			**Pn**	**21 41 04.6**	**+0.3**
LCBC	**Los crdobas,**	**5.65**	**75**	P			**Pn**	**21 41 06.2**	**+1.9**
	178μm131μm5μm,1.6s								
GR1C	**Gorgona, Isla**	**5.72**	**140**	P			**Pn**	**21 41 04.6**	**-0.8**
PRVC	**Isla de Provid**	**5.96**	**5**	P			**Pn**	**21 41 09.8**	**+1.3**
PRVC	**Isla de Provid**	**5.96**	**5**	P			**Pn**	**21 41 10.0**	**+1.5**
PRVC	**Isla de Provid**	**5.96**	**5**	P			**Pn**	**21 41 09.7**	**+1.1**
	47μm31μm1μm,1.0s								
PRVC	**Isla de Provid**	**5.96**	**5**	*eP*			**Pn**	**21 41 07.1**	**-1.4**
PRVC	**Isla de Provid**	**5.96**	**5**	*iP*	⇓		**Pn**	**21 41 09.7**	**+1.1**
PRVC				*eS*			**Sn**	**21 42 16.8**	**-0.1**
CBOC	**Ciudad Bolivar**	**6.03**	**104**	P			**Pn**	**21 41 09.1**	**-0.6**
	67μm13μm640nm,1.2s								
PLMC	**San Jos del P**	**6.09**	**114**	P			**Pn**	**21 41 09.3**	**-1.2**
	55μm8μm399nm,1.1s								
BOAB	**BOACO BROADBAN**	**6.25**	**324**				**Pn**	**21 41 11.3**	**-1.2**
BOAB	**BOACO BROADBAN**	**6.25**	**324**	P			**Pn**	**21 41 11.8**	**-0.8**
BOAB	**BOACO BROADBAN**	**6.25**	**324**	P			**Pn**	**21 41 11.7**	**-0.9**
UREC	**San Jos de Ur**	**6.30**	**86**	P			**Pn**	**21 41 14.2**	**+0.9**
	70μm15μm693nm,1.1s								
UREC	**San Jos de Ur**	**6.30**	**86**	*iP*	⇑		**Pn**	**21 41 14.2**	**+0.9**
MGAN	**Managua**	**6.38**	**318**				**Pn**	**21 41 12.8**	**-1.6**
MGAN	**Managua**	**6.38**	**318**	P			Pn	21 41 20.1	+5.7
	19μm1μm,1.0s								
MGAN	**Managua**	**6.38**	**318**	P			**Pn**	**21 41 13.8**	**-0.6**
HELC	**Santa Helena**	**6.42**	**100**	P			**Pn**	**21 41 16.4**	**+1.1**
HELC	**Santa Helena**	**6.42**	**100**	P			**Pn**	**21 41 16.2**	**+0.9**
	46μm13μm580nm,0.9s								
HELC	**Santa Helena**	**6.42**	**100**		⇑	*iP*	**Pn**	**21 41 16.3**	**+1.1**
HELC						*eS*	**Sn**	**21 42 27.5**	**-1.4**
JAMC	**Jamundi, Valle**	**6.65**	**128**	P			**Pn**	**21 41 17.9**	**-0.3**
	25μm5μm284nm,1.1s								
BILN	**Bilwi Airport**	**6.77**	**348**				**Pn**	**21 41 19.6**	**-0.1**
GUY2C	**Guyana, Caldas**	**6.83**	**108**	P			**Pn**	**21 41 21.6**	**+0.7**
	33μm9μm663nm,1.0s								
SIUN	**Universidad Ur**	**6.89**	**336**				**Pn**	**21 41 20.8**	**-0.6**
CNGN	**Cerro Negro**	**6.94**	**317**	P			**Pn**	**21 41 22.2**	**+0.1**
BBAC	**Balboa, Cauca**	**7.06**	**139**	P			**Pn**	**21 41 26.9**	**+2.9**
	24μm5μm373nm,0.9s								
SJCC	**San Jacinto, C**	**7.07**	**69**	P			**Pn**	**21 41 24.5**	**+0.5**
SJCC	**San Jacinto, C**	**7.07**	**69**	P			**Pn**	**21 41 24.4**	**+0.5**
	70μm23μm2μm,1.0s								
SJCC	**San Jacinto, C**	**7.07**	**69**		⇑	*iP*	**Pn**	**21 41 24.2**	**+0.3**
SJCC					⇑	*iP*	**Pn**	**21 41 24.3**	**+0.3**
POPC	**Popayan, Colom**	**7.09**	**133**	P			**Pn**	**21 41 24.3**	**0.0**
	24μm6μm428nm,1.1s								
HERN	**Volcan Telica**	**7.11**	**317**	Pn			**Pn**	**21 41 24.1**	**-0.4**
CRIN	**San Cristobal**	**7.32**	**316**	Pn			**Pn**	**21 41 26.6**	**-0.7**
CRIN	**San Cristobal**	**7.32**	**316**	P			**Pn**	**21 41 27.1**	**-0.3**
PTBC	**PUERTO BERRIO,**	**7.42**	**96**	P			**Pn**	**21 41 29.5**	**+0.8**
	47μm9μm632nm,1.3s								
ORTC	**Ortega, Tolima**	**7.46**	**117**	P			**Pn**	**21 41 31.1**	**+1.9**
	23μm16μm1μm,1.2s								
PAC1	**Pacto, Paraso**	**7.73**	**156**	P			**Pn**	**21 41 35.8**	**+2.7**
	3μm205nm,0.9s								
TULM	**Tulcn-Chalpat**	**7.80**	**148**	P			**Pn**	**21 41 38.6**	**+4.3**
	6μm778nm,1.1s								
CUSE	**Cuicocha Este**	**7.86**	**154**	P			**Pn**	**21 41 36.6**	**+1.5**
	12μm267nm,0.7s								
PRAC	**Prado**	**7.87**	**117**	P			**Pn**	**21 41 36.0**	**+1.2**
PRAC	**Prado**	**7.87**	**117**	P			**Pn**	**21 41 36.5**	**+1.7**
	25μm12μm475nm,1.3s								
OTAV	**Otavalo**	**7.90**	**154**	P			**Pn**	**21 41 36.3**	**+0.7**
OTAV	**Otavalo**	**7.90**	**154**				**Pn**	**21 41 36.3**	**+0.7**
OTAV	**Otavalo**	**7.90**	**154**	*eP*			**Pn**	**21 41 35.0**	**-0.6**
OTAV				*eS*			**Sn**	**21 43 04.1**	**-1.2**
OTAV	**Otavalo**	**7.90**	**154**	P			**Pn**	**21 41 37.2**	**+1.5**
OTAV	**Otavalo**	**7.90**	**154**	*eP*			**Pn**	**21 41 37.0**	**+1.4**
OTAV				*eS*			Sb	21 43 21.0	-11
ARGC	**Ariguani, Magd**	**7.93**	**72**	P			**Pn**	**21 41 36.5**	**+0.8**
	43μm19μm1μm,1.1s								
ROSC	**El Rosal**	**7.94**	**108**	Pn			**Pn**	**21 41 38.7**	**+2.6**
	8.8nm,0.3s,baz=300,slow=12,SNR=115								
ROSC						Sn	**Sn**	**21 43 07.2**	**+0.9**
	4.0nm,0.3s,baz=169,slow=21,SNR=1.2								
ROSC						LR	LR	21 44 24.4	
	comp=Z,42μm,19.9s,baz=282,slow=36								
ROSC	**El Rosal**	**7.94**	**108**	P			**Pn**	**21 41 36.8**	**+0.7**
ROSC	**El Rosal**	**7.94**	**108**				**Pn**	**21 41 36.8**	**+0.7**
SPBC	**San Pablo de B**	**7.95**	**102**	P			**Pn**	**21 41 38.3**	**+2.3**
	29μm10μm573nm,1.5s								
GARC	**Garzon, Huila**	**8.21**	**129**	P			**Pn**	**21 41 42.0**	**+2.3**
	29μm6μm411nm,1.1s								
CVER	**Cruz Verde, Cu**	**8.28**	**110**	P			**Pn**	**21 41 44.6**	**+3.8**
	80μm12μm758nm,1.6s								
FLOC	**Florencia**	**8.48**	**133**	P			**Pn**	**21 41 46.5**	**+3.2**
	14μm6μm535nm,1.2s								
OCAC	**Ocana**	**8.52**	**84**	P			**Pn**	**21 41 45.0**	**+1.1**
	29μm15μm1μm,0.6s								
**

GRGR	**Grenville**	**20.48**	**75**	P		Pn	21 44 19.7	-0.8
TRN	**Trinidad (W)**	**20.48**	**79**	*e*P		**P**	**21 44 12.0**	**-6.4**
TRN				x		x	21 48 10.9	
DWPF	**Disney Wildern**	**20.60**	**1**	P		**P**	**21 44 18.6**	**-1.0**
DWPF	**Disney Wildern**	**20.60**	**1**	P		Pn	21 44 21.2	-0.7
GCMP	**Grenada, Carri**	**20.77**	**74**	*e*P		**P**	**21 44 20.3**	**-1.2**
GCMP				x		x	21 48 21.6	
SABA	**Saba**	**20.82**	**59**	*e*P		**P**	**21 44 19.3**	**-2.8**
SABA				x		x	21 48 27.4	
SABA	**Saba**	**20.82**	**59**	P		**P**	**21 44 22.1**	**0.0**
SEUS	**St. Eustatius**	**20.98**	**60**	*e*P		**P**	**21 44 21.2**	**-2.6**
SEUS				x		x	21 48 27.4	
SEUS	**St. Eustatius**	**20.98**	**60**	P		**P**	**21 44 23.6**	**-0.2**
SKI	**Saint Kitts**	**21.12**	**60**	*e*P		**P**	**21 44 23.1**	**-2.3**
SMRT	**St. Maarten**	**21.15**	**58**	P		**P**	**21 44 24.8**	**-0.9**
SMRT					IAmb	IAmb	21 44 34.7	
	comp=Z,436nm,1.4s							
SMRT	**St. Maarten**	**21.15**	**58**	*e*P		**P**	**21 44 19.4**	**-6.3**
SMRT	**St. Maarten**	**21.15**	**58**	P		**P**	**21 44 24.0**	**-1.7**
TBG	**Guadaloupe-3**	**21.51**	**65**	*e*P		**P**	**21 44 26.3**	**-3.2**
TDBA	**Terre de Bas,**	**21.52**	**65**	P		**P**	**21 44 28.6**	**-1.0**
TDBA					IAmb	IAmb	21 44 31.9	
	comp=Z,676nm,1.6s							
TDBA	**Terre de Bas,**	**21.52**	**65**	P		**P**	**21 44 29.8**	**+0.2**
DHSZ	**Broadband at M**	**21.55**	**64**	*e*P		**P**	**21 44 28.6**	**-1.4**
DHSZ				x		x	21 48 37.0	
MMLZ	**Guadeloupe Bro**	**21.55**	**65**	*e*P		**P**	**21 44 27.5**	**-2.5**
MMLZ				x		x	21 48 42.2	
SLBI	**Saint Lucia, B**	**21.56**	**70**	*e*P		**P**	**21 44 26.9**	**-3.1**
SLBI				x		x	21 48 35.1	
DSLB	**Salisbury**	**21.57**	**66**	*e*P		**P**	**21 44 28.6**	**-1.7**
DSLB				x		x	21 48 39.1	
SLAC	**Saint Lucia, A**	**21.60**	**71**	*e*P		**P**	**21 44 28.9**	**-1.7**
SLAC				x		x	21 48 41.8	
CXM	**Morne La Croix**	**21.60**	**68**	P		**P**	**21 44 29.6**	**-1.1**
CXM					IAmb	IAmb	21 44 41.4	
	comp=Z,810nm,1.8s							
BIM	**Bigot**	**21.61**	**69**	P		**P**	**21 44 30.2**	**-0.4**
BIM	**Bigot**	**21.61**	**69**	*e*P		**P**	**21 44 28.1**	**-2.6**
BIM				x		x	21 48 38.9	
BIM	**Bigot**	**21.61**	**69**	P		**P**	**21 44 30.5**	**-0.2**
SVN	**Savane Anatole**	**21.61**	**68**	*e*P		**P**	**21 44 26.9**	**-3.8**
SVN				x		x	21 48 39.9	
CBE	**Ff, Capester**	**21.62**	**65**	P		**P**	**21 44 31.0**	**+0.3**
DWS	**Wesley**	**21.71**	**66**	*e*P		**P**	**21 44 30.9**	**-0.8**
DWS				x		x	21 48 37.0	
MPOM	**Morne Pois Mar**	**21.78**	**69**		IAMs_20	IAMs_20	21 53 16.6	
	comp=Z,13µm,22.0s							
MPOM	**Morne Pois Mar**	**21.78**	**69**	P		**P**	**21 44 32.6**	**+0.2**
BOAV	**Boa Vista**	**21.85**	**102**	P		**P**	**21 44 33.5**	**+0.3**
BOAV	**Boa Vista**	**21.85**	**102**	*e*P		**P**	**21 44 33.0**	**-0.3**
BOAV				*e*S		**S**	**21 48 34.5**	**-0.5**
656A	**Willston**	**21.86**	**358**		IAMs_20	IAMs_20	21 53 22.0	
	comp=Z,15µm,18.0s							
ABD	**La Joyeuse, An**	**21.87**	**64**	P		**P**	**21 44 32.7**	**-0.8**
ANWB	**Willy Bob**	**22.09**	**61**	P		**P**	**21 44 33.3**	**-2.4**
ANWB					IAmb	IAmb	21 44 54.6	
	comp=Z,300nm,1.1s							
ANWB	**Willy Bob**	**22.09**	**61**	*e*P		**P**	**21 44 30.6**	**-5.1**
ANWB	**Willy Bob**	**22.09**	**61**	P		**P**	**21 44 34.3**	**-1.4**
DSDZ	**La Diserade, G**	**22.19**	**65**	*e*P		**P**	**21 44 30.6**	**-6.2**
DSDZ				x		x	21 48 50.5	
GDSD	**La Dsirade Is**	**22.19**	**65**	P		**P**	**21 44 36.3**	**-0.6**
GDSD					IAmb	IAmb	21 44 55.0	
	comp=Z,449nm,1.7s							
BBGH	**Gun Hill**	**22.68**	**74**	P		**P**	**21 44 41.3**	**-0.9**
BBGH	**Gun Hill**	**22.68**	**74**	P		**P**	**21 44 42.3**	**+0.2**
MACA	**Manacapuru-AM**	**23.61**	**116**	P		**P**	**21 44 51.1**	**-0.6**
MACA	**Manacapuru-AM**	**23.61**	**116**	*e*P		**P**	**21 44 51.4**	**-0.3**
257A	**Skidaway Islan**	**24.46**	**2**		IAMs_20	IAMs_20	21 54 52.1	
	comp=Z,16µm,18.0s							
ZAIG	**Zacatecas**	**25.09**	**310**	P		**P**	**21 45 05.1**	**-0.5**
ZAIG					IAmb	IAmb	21 45 14.1	
	comp=Z,150nm,1.4s							
ZAIG	**Zacatecas**	**25.09**	**310**	P		**P**	**21 45 08.5**	**+2.9**
154A	**Montrose**	**25.11**	**358**	P		**P**	**21 45 04.3**	**-1.0**
NHSC	**New Hope**	**25.63**	**3**		IAMs_20	IAMs_20	21 55 48.0	
	comp=Z,14µm,18.0s							
GOGA	**Godfrey**	**25.92**	**357**	P		**P**	**21 45 11.8**	**-0.9**
GOGA					pmax	pmax		
	comp=Z,132nm,1.4s							
GOGA					MLR	MLR		
	comp=Z,6µm,18.0s							
GOGA	**Godfrey**	**25.92**	**357**	P		**P**	**21 45 11.8**	**-0.9**
GOGA					IAmb	IAmb	21 45 18.0	
	comp=Z,132nm,1.4s							
GOGA	**Godfrey**	**25.92**	**357**	P		**P**	**21 45 13.6**	**+0.9**
HKT	**Hockley**	**25.98**	**331**	*d* iP		**P**	**21 45 12.5**	**-0.7**
HKT					pmax	pmax		
	comp=Z,151nm,1.5s							
HKT	**Hockley**	**25.98**	**331**	P		**P**	**21 45 13.5**	**+0.4**
Y57A	**Sumter**	**26.52**	**3**		IAMs_20	IAMs_20	21 55 37.7	
	comp=Z,11µm,20.0s							
JSC	**Jenkinsville**	**26.75**	**1**	P		**P**	**21 45 19.8**	**-0.4**
JSC					pmax	pmax		
	comp=Z,233nm,1.6s							
JSC	**Jenkinsville**	**26.75**	**1**	P		**P**	**21 45 19.8**	**-0.4**
JSC					IAmb	IAmb	21 45 34.2	
	comp=Z,232nm,1.6s							
X58A	**Rowland**	**27.12**	**5**		IAMs_20	IAMs_20	21 56 17.6	
	comp=Z,12µm,20.0s							
LPAZ	**La Paz**	**27.19**	**150**	P		**P**	**21 45 26.1**	**+1.2**
	comp=Z,35nm,1.1s,baz=337,slow=8.9,SNR=40							
LPAZ					LR	LR	21 58 11.5	
	comp=Z,6µm,18.5s,baz=316,slow=41							
	comp=Z,35nm,1.1s							
LPAZ	**La Paz**	**27.19**	**150**	P		**P**	**21 45 26.2**	**+1.2**
LPAZ	**La Paz**	**27.19**	**150**	P		**P**	**21 45 25.3**	**+0.3**
LPAZ					IAmb	IAmb	21 45 41.4	
	comp=Z,110nm,1.2s							
LPAZ	**La Paz**	**27.19**	**150**	*e*P		**P**	**21 45 23.0**	**-1.9**
LPAZ	**La Paz**	**27.19**	**150**	P		**P**	**21 45 26.4**	**+1.4**
KMSC	**Kings Mountain**	**27.61**	**1**	P		**P**	**21 45 27.4**	**-0.5**
KMSC					IAmb	IAmb	21 45 42.9	
	comp=Z,146nm,1.4s							
W52A	**Murphy**	**27.62**	**356**		IAMs_20	IAMs_20	21 56 16.8	
	comp=Z,8µm,21.0s							
PB18	**Visviri**	**27.69**	**154**	P		**P**	**21 45 29.3**	**-0.1**
PB18					IAmb	IAmb	21 46 11.2	
	comp=Z,282nm,1.4s							
PB18					IAMs_20	IAMs_20	21 52 22.1	
	comp=Z,7µm,20.0s							
PB18	**Visviri**	**27.69**	**154**	P		**P**	**21 45 33.0**	**+3.6**
TKL	**Tuckaleechee C**	**28.18**	**357**	LR		LR	21 56 45.3	
	comp=Z,9µm,20.5s,baz=182,slow=37							
PB12	**IPOC Station P**	**28.25**	**156**	P		**P**	**21 45 33.8**	**-0.1**
PB12					IAmb	IAmb	21 45 42.2	
	comp=Z,140nm,1.3s							
PB12	**IPOC Station P**	**28.25**	**156**	P		**P**	**21 45 36.3**	**+2.4**
PB16	**IPOC Station P**	**28.34**	**155**	P		**P**	**21 45 35.4**	**+0.2**
PB16					IAmb	IAmb	21 45 45.8	
	comp=Z,200nm,1.2s							
PB16					IAMs_20	IAMs_20	21 57 04.3	
	comp=Z,9µm,20.0s							
PB16	**IPOC Station P**	**28.34**	**155**	P		**P**	**21 45 38.0**	**+2.8**
V58A	**Windy Hill, Pi**	**28.37**	**5**		IAMs_20	IAMs_20	21 57 05.7	
	comp=Z,9µm,20.0s							
JCT	**Junction City**	**28.45**	**326**	P		**P**	**21 45 34.0**	**-1.5**
JCT					pmax	pmax		
	comp=Z,116nm,1.7s							
JCT	**Junction City**	**28.45**	**326**	P		**P**	**21 45 34.0**	**-1.5**
ITTB	**Itaituba**	**28.59**	**113**	*e*P		**P**	**21 45 36.9**	**0.0**
V61A	**Roper**	**28.67**	**9**		IAMs_20	IAMs_20	21 57 26.7	
	comp=Z,8µm,18.0s							
TZTN	**Tazewell**	**29.05**	**357**	P		**P**	**21 45 39.7**	**-1.0**
TZTN					IAmb	IAmb	21 46 09.3	
	comp=Z,287nm,1.8s							
TZTN					IAMs_20	IAMs_20	21 57 47.5	
	comp=Z,9µm,18.0s							
TZTN	**Tazewell**	**29.05**	**357**	P		**P**	**21 45 41.5**	**+0.8**
MIAR	**Mount Ida**	**29.08**	**340**	P		**P**	**21 45 39.1**	**-1.9**
MIAR					pmax	pmax		
	comp=Z,36nm,1.0s							
MIAR	**Mount Ida**	**29.08**	**340**	P		**P**	**21 45 39.1**	**-1.9**
MIAR	**Mount Ida**	**29.08**	**340**	P		**P**	**21 45 40.2**	**-0.8**
WVT	**Waverly**	**29.11**	**350**	P		**P**	**21 45 41.2**	**0.0**
MDP	**Montagnes des**	**29.15**	**93**	LR		LR	21 57 43.4	
	comp=Z,14µm,21.4s,baz=276,slow=37							
PSGCX	**Pisagua**	**29.22**	**157**	P		**P**	**21 45 42.8**	**+0.3**
PSGCX					IAmb	IAmb	21 45 50.5	
	comp=Z,133nm,1.3s							
SAND	**Sanderson**	**29.41**	**322**	P		**P**	**21 45 42.6**	**-1.5**
BBSR	**BB Station**	**29.54**	**30**		IAMs_20	IAMs_20	21 56 30.4	
	comp=Z,7µm,19.0s							
VILB	**Vilhena**	**29.55**	**133**	P		**P**	**21 45 45.3**	**-0.1**
VILB	**Vilhena**	**29.55**	**133**	*e*P		**P**	**21 45 45.6**	**+0.3**
VILB				*e*S		**S**	**21 50 39.4**	**-1.1**
PB11	**IPOC Station P**	**29.55**	**156**	P		**P**	**21 45 46.1**	**+0.6**
PB11					IAmb	IAmb	21 45 54.1	
	comp=Z,176nm,1.2s							
PB11	**IPOC Station P**	**29.55**	**156**	P		**P**	**21 45 47.8**	**+2.3**
GO01	**Chusmiza**	**29.66**	**155**	P		**P**	**21 45 48.5**	**+1.7**
GO01	**Chusmiza**	**29.66**	**155**	P		**P**	**21 45 49.8**	**+3.0**
HPIG		**29.79**	**314**	P		**P**	**21 45 47.1**	**-0.5**
HPIG		**29.79**	**314**	P		**P**	**21 45 49.6**	**+1.9**
TA02	**Huaiquique**	**29.83**	**157**	P		**P**	**21 45 50.8**	**+3.0**
FCAR	**Ozark Folk Cen**	**29.87**	**343**	P		**P**	**21 45 46.1**	**-1.9**
TXAR	**Lajitas Array**	**29.94**	**320**	P		**P**	**21 45 50.8**	**+1.9**
	comp=Z,6.5nm,1.0s,baz=133,slow=9.1,SNR=12							
TXAR					PcP	**PcP**	**21 48 52.6**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=133,slow=4.6,SNR=3.9							
TXAR					LR	LR	21 58 51.0	
	comp=Z,2µm,20.4s,baz=122,slow=38							
TXAR					P3KPbc		22 17 46.8	
	comp=Z,1.2nm,1.1s,baz=300,slow=3.7,SNR=3.6							
	comp=Z,6.5nm,1.0s							
TXAR	**Lajitas Array**	**29.94**	**320**	P		**P**	**21 45 50.8**	**+1.9**
TXAR							21 48 52.6	
TXAR	**Lajitas Array**	**29.94**	**320**	P		**P**	**21 45 47.0**	**-1.9**
NPGB	**Novo Progresso**	**30.09**	**118**	*e*P		**P**	**21 45 50.2**	**0.0**
PB08	**IPOC Station P**	**30.10**	**156**	P		**P**	**21 45 51.5**	**+0.9**
PB08					IAmb	IAmb	21 45 59.9	
	comp=Z,154nm,1.2s							
PB08	**IPOC Station P**	**30.10**	**156**	P		**P**	**21 45 52.1**	**+1.5**
S51A	**Beattyville**	**30.14**	**357**		IAMs_20	IAMs_20	21 57 54.4	
	comp=Z,8µm,20.0s							
S54A	**Dingess, Beckl**	**30.26**	**1**		IAMs_20	IAMs_20	21 58 13.3	
	comp=Z,12µm,19.0s							
S61A	**Accomac**	**30.66**	**10**		IAMs_20	IAMs_20	21 57 50.5	
	comp=Z,11µm,20.0s							
R50A	**Paris**	**30.82**	**356**		IAMs_20	IAMs_20	21 58 07.4	
	comp=Z,8µm,20.0s							
APMT	**Aspermont**	**30.84**	**329**	P		**P**	**21 45 55.3**	**-1.4**
PB02	**IPOC Station P**	**30.87**	**158**	P		**P**	**21 45 57.0**	**-0.1**
PB02					IAmb	IAmb	21 46 07.7	
	comp=Z,83nm,1.2s							
PB02	**IPOC Station P**	**30.87**	**158**	P		**P**	**21 45 59.3**	**+2.2**
R49A	**Shelbyville**	**30.89**	**355**		IAMs_20	IAMs_20	22 00 35.4	
	comp=Z,7µm,18.0s							
WCI	**Wyandotte Cave**	**30.95**	**353**	P		**P**	**21 45 56.1**	**-1.4**
WCI					pmax	pmax		
	comp=Z,323nm,2.0s							
WCI					MLR	MLR		
	comp=Z,5µm,18.0s							
WCI	**Wyandotte Cave**	**30.95**	**353**	P		**P**	**21 45 56.1**	**-1.4**
WCI	**Wyandotte Cave**	**30.95**	**353**	P		**P**	**21 45 57.5**	**0.0**
PB07	**IPOC Station P**	**31.25**	**158**	P		**P**	**21 46 01.1**	**+0.6**
PB07					IAmb	IAmb	21 46 09.7	
	comp=Z,146nm,1.3s							
PB07	**IPOC Station P**	**31.25**	**158**	P		**P**	**21 46 02.5**	**+2.1**
WMOK	**Wichita Mounta**	**31.34**	**333**	P		**P**	**21 45 59.3**	**-1.7**
WMOK					pmax	pmax		
	comp=Z,83nm,2.0s							
WMOK					MLR	MLR		
	comp=Z,2µm,20.0s							
WMOK	**Wichita Mounta**	**31.34**	**333**	P		**P**	**21 45 59.3**	**-1.7**
WMOK	**Wichita Mounta**	**31.34**	**333**	P		**P**	**21 45 59.0**	**-2.1**
R61A	**Willards**	**31.35**	**10**		IAMs_20	IAMs_20	21 58 19.7	
	comp=Z,11µm,20.0s							
SLBS	**Sierra La Lagu**	**31.41**	**304**	P		**P**	**21 46 01.4**	**-0.5**
SLBS					IAmb	IAmb	21 46 10.4	
	comp=Z,138nm,1.4s							
SLBS	**Sierra La Lagu**	**31.41**	**304**	P		**P**	**21 46 04.9**	**+3.0**
Q51A	**Peebles**	**31.51**	**358**		IAMs_20	IAMs_20	21 58 54.8	
	comp=Z,10µm,18.0s							
PB09	**IPOC Station P**	**31.55**	**157**	P		**P**	**21 46 04.2**	**+1.0**
PB09					IAmb	IAmb	21 46 13.4	
	comp=Z,183nm,1.3s							
PB09	**IPOC Station P**	**31.55**	**157**	P		**P**	**21 46 05.2**	**+2.0**
OK052	**Battle Ridge R**	**31.57**	**336**	P		**P**	**21 46 01.0**	**-2.0**
PB03	**IPOC Station P**	**31.59**	**158**	P		**P**	**21 46 03.9**	**+0.4**
PB03	**IPOC Station P**	**31.59**	**158**	P		**P**	**21 46 06.2**	**+2.7**
Q56A	**Snyder Ridge,**	**31.59**	**4**		IAMs_20	IAMs_20	21 58 55.9	
	comp=Z,12µm,20.0s							
CCM	**Cathedral Cave**	**31.67**	**346**	P		**P**	**21 46 01.9**	**-2.0**
CCM					pmax	pmax		
	comp=Z,47nm,0.8s							
CCM	**Cathedral Cave**	**31.67**	**346**	P		**P**	**21 46 01.9**	**-2.0**
CCM					IAmb	IAmb	21 46 09.0	
	comp=Z,47nm,0.8s							
CCM	**Cathedral Cave**	**31.67**	**346**	P		**P**	**21 46 03.3**	**-0.6**
CLDB	**Colider**	**31.68**	**125**	*e*P		**P**	**21 46 03.7**	**-0.4**
CLDB				*e*S		**S**	**21 51 13.9**	**-0.3**
CLDB	**Colider**	**31.68**	**125**	P		**P**	**21 46 03.8**	**-0.4**
PTLB	**Pontes e Lacer**	**31.99**	**135**	P		**P**	**21 46 06.5**	**-0.4**
PTLB					IAmb	IAmb	21 46 08.7	
	comp=Z,90nm,1.2s							
PTLB	**Pontes e Lacer**	**31.99**	**135**	*e*P		**P**	**21 46 07.1**	**+0.3**
PTLB				*e*S		**S**	**21 51 19.1**	**+0.4**
P48A	**Milroy**	**32.08**	**355**		IAMs_20	IAMs_20	21 59 07.7	
	comp=Z,6µm,19.0s							
MCWV	**Mont Chateau**	**32.17**	**3**		IAMs_20	IAMs_20	21 59 14.2	
	comp=Z,9µm,19.0s							
PB05	**IPOC Station P**	**32.17**	**159**	P		**P**	**21 46 08.5**	**0.0**
PB05					IAmb	IAmb	21 46 18.4	
	comp=Z,208nm,1.7s							
PB05	**IPOC Station P**	**32.17**	**159**	P		**P**	**21 46 10.8**	**+2.3**
SDMD	**Soldier's Deli**	**32.19**	**7**	P		**P**	**21 46 08.3**	**-0.1**
BBSD	**Serra de San D**	**32.23**	**139**	*e*P		**P**	**21 46 09.2**	**+0.1**
BBSD				*e*S		**S**	**21 51 22.8**	**+0.3**
PB06	**IPOC Station P**	**32.26**	**158**	P		**P**	**21 46 09.1**	**-0.3**
PB06					IAmb	IAmb	21 46 18.4	
	comp=Z,105nm,1.2s							
PB06	**IPOC Station P**	**32.26**	**158**	P		**P**	**21 46 12.4**	**+3.1**
O52A	**Adamsville**	**32.57**	**0**		IAMs_20	IAMs_20	21 59 34.8	
	comp=Z,10µm,19.0s							
MNTX	**Cornudas Mount**	**32.63**	**321**	P		**P**	**21 46 12.3**	**-0.1**
O49A	**Covington**	**32.72**	**357**		IAMs_20	IAMs_20	21 59 15.7	
	comp=Z,9µm,20.0s							
P61A	**Hammonton**	**32.76**	**10**		IAMs_20	IAMs_20	21 59 11.9	
	comp=Z,7µm,20.0s							
O48B	**Farmland**	**32.84**	**355**		IAMs_20	IAMs_20	21 59 41.0	
	comp=Z,8µm,19.0s							
AF01	**San Pedro de A**	**33.01**	**156**	P		**P**	**21 46 17.9**	**+1.8**
N49A	**Columbus Grove**	**33.44**	**357**		IAMs_20	IAMs_20	21 59 46.8	
	comp=Z,10µm,20.0s							
N47A	**Urbana**	**33.51**	**355**		IAMs_20	IAMs_20	22 00 19.6	
	comp=Z,6µm,18.0s							
N58A	**Sunbury**	**33.61**	**7**		IAMs_20	IAMs_20	21 59 32.5	
	comp=Z,11µm,20.0s							
HDIL	**Hopedale**	**33.67**	**350**	P		**P**	**21 46 20.0**	**-1.3**
HDIL					IAmb	IAmb	21 46 27.5	
	comp=Z,179nm,1.6s							
PB14	**IPOC Station P**	**33.74**	**161**	P		**P**	**21 46 23.1**	**+0.6**
PB14					IAmb	IAmb	21 46 31.6	
	comp=Z,107nm,1.2s							
PB14	**IPOC Station P**	**33.74**	**161**	P		**P**	**21 46 25.7**	**+3.2**
PAL	**Palisades**	**34.21**	**11**		IAMs_20	IAMs_20	21 58 57.3	
	comp=Z,6µm,20.0s							
N62A	**Caumsett State**	**34.22**	**11**		IAMs_20	IAMs_20	22 00 51.6	
	comp=Z,7µm,19.0s							
WSPT	**Westport, CT**	**34.48**	**11**		IAMs_20	IAMs_20	22 00 49.5	
	comp=Z,8µm,20.0s							
ERPA	**Erie**	**34.61**	**2**		IAMs_20	IAMs_20	22 00 49.9	
	comp=Z,5µm,19.0s							
121A	**Cookes Peak, D**	**34.70**	**320**	P		**P**	**21 46 29.1**	**-1.6**
PRPB	**Parauapebas**	**34.72**	**112**	*e*P		**P**	**21 46 30.7**	**-0.1**
SALV	**Santo Antonio**	**34.76**	**132**	*e*P		**P**	**21 46 30.4**	**-0.7**
HSIG		**34.82**	**312**	P		**P**	**21 46 30.8**	**-0.6**
SALTA		**34.90**	**155**	P		**P**	**21 46 35.9**	**+3.1**
SRIG	**Santa Rosalia**	**34.93**	**308**	P		**P**	**21 46 32.3**	**-0.2**
SRIG					IAmb	IAmb	21 46 42.7	
	comp=Z,94nm,1.1s							
SRIG	**Santa Rosalia**	**34.93**	**308**	P		**P**	**21 46 34.7**	**+2.2**
M63A	**Gales Ferry**	**34.97**	**13**		IAMs_20	IAMs_20	21 59 40.5	
	comp=Z,9µm,20.0s							
BINY	**Binghamton**	**35.05**	**8**		IAMs_20	IAMs_20	22 03 20.4	
	comp=Z,5µm,19.0s							
BINY	**Binghamton**	**35.05**	**8**	P		**P**	**21 46 35.3**	**+2.0**
AC01	**Pan de Azucar**	**35.10**	**162**	P		**P**	**21 46 34.5**	**+0.5**
AC01					IAmb	IAmb	21 46 42.1	
	comp=Z,155nm,1.6s							
AC01	**Pan de Azucar**	**35.10**	**162**	P		**P**	**21 46 36.2**	**+2.2**
L42A	**Oliver, Polo**	**35.14**	**350**		IAMs_20	IAMs_20	22 02 44.8	
	comp=Z,4µm,18.0s							
L59A	**Walton**	**35.17**	**9**		IAMs_20	IAMs_20	22 00 35.7	
	comp=Z,9µm,20.0s							
K50A	**Casco**	**35.24**	**359**		IAMs_20	IAMs_20	22 01 17.3	
	comp=Z,8µm,18.0s							
M65A	**Busby, Falmout**	**35.45**	**15**		IAMs_20	IAMs_20	22 00 09.0	
	comp=Z,10µm,20.0s							
M65A	**Busby, Falmout**	**35.45**	**15**	P		**P**	**21 46 37.4**	**+0.7**
	baz=200							
M65A				S		**S**	**21 52 16.2**	**+4.4**
	baz=200							
K57A	**Scipio Center**	**35.50**	**7**		IAMs_20	IAMs_20	22 00 18.5	
	comp=Z,10µm,21.0s							
ALQ	**Albuquerque**	**35.52**	**324**		IAMs_20	IAMs_20	22 01 29.3	
	comp=Z,2µm,19.0s							
ANMO	**Albuquerque**	**35.52**	**324**	LR		LR	22 03 44.2	
	comp=Z,2µm,18.3s,baz=126,slow=41							
ANMO	**Albuquerque**	**35.52**	**324**	*d* iP		**P**	**21 46 37.3**	**-0.4**
ANMO					pmax	pmax		
	comp=Z,33nm,1.0s							
ANMO	**Albuquerque**	**35.52**	**324**	P		**P**	**21 46 36.8**	**-0.9**
ANMO	**Albuquerque**	**35.52**	**324**	P		**P**	**21 46 38.4**	**+0.7**
L64A	**Middleborough**	**35.76**	**14**		IAMs_20	IAMs_20	22 01 06.4	
	comp=Z,9µm,20.0s							
SCIA	**State Center**	**35.80**	**345**	P		**P**	**21 46 38.1**	**-1.7**
SCIA					IAmb	IAmb	21 46 44.8	
	comp=Z,58nm,0.8s							
L61B	**Northampton**	**35.84**	**12**		IAMs_20	IAMs_20	22 00 29.5	
	comp=Z,7µm,20.0s							
TRY	**Troy**	**35.92**	**10**		IAMs_20	IAMs_20	21 59 48.7	
	comp=Z,6µm,22.0s							
SNDB	**Serra Nova Dou**	**36.00**	**122**	*e*P		**P**	**21 46 40.2**	**-1.6**
COIM	**Forte Coimbra**	**36.04**	**139**	*e*P		**P**	**21 46 42.0**	**-0.1**
COIM				*e*S		**S**	**21 52 21.0**	**-0.3**
BCX	**Boston College**	**36.06**	**14**		IAMs_20	IAMs_20	22 01 53.3	
	comp=Z,9µm,20.0s							
WES	**Weston**	**36.07**	**13**		IAMs_20	IAMs_20	22 00 20.6	
	comp=Z,9µm,20.0s							
HRV	**Adam Dziewonsk**	**36.13**	**13**		IAMs_20	IAMs_20	22 00 44.3	
	comp=Z,9µm,20.0s							
HRV	**Adam Dziewonsk**	**36.13**	**13**	P		**P**	**21 46 44.7**	**+2.1**
K62A	**Royalston**	**36.14**	**12**		IAMs_20	IAMs_20	22 00 48.4	
	comp=Z,9µm,20.0s							
AC02	**Maricunga**	**36.21**	**160**	P		**P**	**21 46 47.6**	**+3.6**
J57A	**Williamstown**	**36.23**	**7**		IAMs_20	IAMs_20	22 00 17.9	
	comp=Z,7µm,21.0s							
I49A	**Point Hope**	**36.40**	**359**		IAMs_20	IAMs_20	22 02 02.2	
	comp=Z,7µm,18.0s							
PP1B	**Ponte de Pedra**	**36.45**	**133**	*e*P		**P**	**21 46 46.0**	**+0.4**
J59A	**Piesco**	**36.50**	**9**		IAMs_20	IAMs_20	22 01 15.9	
	comp=Z,8µm,21.0s							
TUC	**Tucson**	**36.55**	**317**	P		**P**	**21 46 46.3**	**-0.2**
TUC					pmax	pmax		
	comp=Z,224nm,2.0s							
TUC					MLR	MLR		
	comp=Z,6µm,20.0s							
TUC	**Tucson**	**36.55**	**317**	P		**P**	**21 46 46.3**	**-0.2**
TUC					IAmb	IAmb	21 46 50.4	
	comp=Z,224nm,1.9s							
TUC	**Tucson**	**36.55**	**317**		IAMs_20	IAMs_20	22 02 04.5	
	comp=Z,6µm,20.0s							
TUC	**Tucson**	**36.55**	**317**	P		**P**	**21 46 48.3**	**+1.9**
GO03	**Copiapo**	**36.57**	**162**	P		**P**	**21 46 49.5**	**+3.0**
I45A	**Fountain**	**36.69**	**355**		IAMs_20	IAMs_20	22 01 57.7	
	comp=Z,6µm,20.0s							
J61A	**Chester**	**36.73**	**11**		IAMs_20	IAMs_20	22 01 47.0	
	comp=Z,7µm,20.0s							
AC04	**Llanos de Chal**

CPUP Villa Florida 41.14 145 P P 21 47 24.0 -0.8
CPUP pmax pmax
comp=Z,66nm,1.2s
CPUP Villa Florida 41.14 145 P P 21 47 24.0 -0.8
CPUP Villa Florida 41.14 145 P P 21 47 24.8 0.0
LMQ La Malbaie 41.20 12 P P 21 47 24.7 -0.4
EYMN Ely 41.22 350 P P 21 47 24.4 -0.9
EYMN Ely 41.22 350 IAMs_20 IAMs_20 22 05 19.6
comp=Z,4μm,19.0s
EYMN Ely 41.22 350 P P 21 47 23.4 -1.9
PFO Pinyon Flats O 41.24 314 LR LR 22 05 00.2
comp=Z,4μm,20.6s,baz=128,slow=37
PFO Pinyon Flats O 41.24 314*d i* P P **21 47 27.4 +1.6**
PFO pmax pmax
comp=Z,347nm,2.5s
PFO Pinyon Flats O 41.24 314 P P 21 47 25.9 +0.2
VA03 San Esteban 41.37 165 P P 21 47 27.3 +0.5
VA03 IAmb IAmb 21 47 36.6
comp=Z,215nm,1.2s
VA03 San Esteban 41.37 165 P P 21 47 29.6 +2.9
RSSD Black Hills 41.38 336 P P 21 47 26.1 -0.8
RSSD pmax pmax
comp=Z,96nm,1.5s
RSSD Black Hills 41.38 336 P P 21 47 26.1 -0.8
RSSD Black Hills 41.38 336 P P 21 47 27.3 +0.4
TRCB Terra Rica 41.47 137 P P 21 47 26.5 -1.2
TRCB Terra Rica 41.47 137 *eP* P **21 47 26.9 -0.8**
TRCB Terra Rica 41.47 137 P P 21 47 27.0 -0.7
TBO Thunder Bay 41.59 352 P P 21 47 27.6 -0.7
SDBA SAO DESIDÉRIO 41.69 118 *eP* P **21 47 28.8 -0.9**
SDBA *eS* S **21 53 45.7 -1.2**
PEL Peldehue 41.70 166 P P 21 47 30.1 +0.7
PEL pmax pmax
comp=Z,161nm,1.4s
PEL Peldehue 41.70 166 P P 21 47 30.1 +0.7
PEL IAmb IAmb 21 47 39.0
comp=Z,161nm,1.4s
PEL Peldehue 41.70 166 P P 21 47 33.0 +3.5
IPMB Ipameri, GO 41.73 128 *eP* P **21 47 29.3 -0.5**
IPMB *eS* S **21 53 46.5 -0.8**
MT05 Renca 41.93 166 P P 21 47 32.1 +0.8
NBPS Pedro II - PI 42.02 105 *eP* P **21 47 32.0 -0.3**
NBPS *eS* S **21 53 50.6 -1.1**
MT03 Universidad Ad 42.08 166 P P 21 47 33.0 +0.5
MT03 IAmb IAmb 21 47 42.2
comp=Z,294nm,1.4s
MT08 Bocatoma Ro 42.16 165 P P 21 47 33.6 +0.3
MT08 IAmb IAmb 21 47 43.8
comp=Z,171nm,1.1s
MT09 Talagante 42.24 166 P P 21 47 34.3 +0.5
MT09 IAmb IAmb 21 47 43.2
comp=Z,228nm,1.3s
MT01 Popeta 42.26 167 P P 21 47 34.9 +0.9
MT13 San Alfonso 42.37 166 P P 21 47 35.3 +0.4
MT13 IAmb IAmb 21 47 45.0
comp=Z,267nm,1.3s
AGMN Agassiz Nation 42.45 346 P P 21 47 34.1 -1.1
BO04 La Punta 42.53 166 P P 21 47 36.8 +0.6
BO04 IAmb IAmb 21 47 45.4
comp=Z,262nm,1.4s
BO03 Pichilemu 42.72 168 P P 21 47 40.4 +2.9
DUG Dugway, Tooele 42.78 325 IAMs_20 IAMs_20 22 08 05.3
comp=Z,4μm,18.0s
DUG Dugway, Tooele 42.78 325 P P 21 47 39.3 +1.0
BO01 Tunca 42.80 167 P P 21 47 43.8 +5.5
BW06 Boulder Array 42.83 330 IAMs_20 IAMs_20 22 08 01.4
comp=Z,4μm,19.0s
PD31 Pinedale Array 42.83 330 P P 21 47 37.9 -0.8
PDAR Pinedale Array 42.83 330 P P 21 47 38.2 -0.5
comp=Z,8.6nm,1.1s,baz=106,slow=4.8,SNR=26
PDAR PcP **PcP 21 49 30.3 +0.4**
comp=Z,8.9nm,1.0s,baz=148,slow=4.5,SNR=4.5
PDAR S **S 21 54 02.0 -1.3**
comp=Z,0.2nm,0.3s,baz=273,slow=13,SNR=1.4
comp=Z,8.6nm,1.1s
PDAR Pinedale Array 42.83 330 P P 21 47 38.0 -0.8
LDASE Londrina, Braz 42.91 136 *eP* P **21 47 38.1 -1.3**
TPNV Topopah Spring 42.91 318 P P 21 47 39.6 +0.2
TPNV pmax pmax
comp=Z,349nm,2.0s
TPNV MLR MLR
comp=Z,4μm,19.0s
TPNV Topopah Spring 42.91 318 P P 21 47 39.6 +0.2
TPNV IAmb IAmb 21 47 46.6
comp=Z,349nm,2.0s
TPNV IAMs_20 IAMs_20 22 08 14.8
comp=Z,4μm,19.0s
HWUT Hardware Ranch 43.05 327 P P 21 47 39.6 -0.9
HWUT Hardware Ranch 43.05 327 P P 21 47 40.6 +0.1
FURC Furnace Creek, 43.05 317 IAMs_20 IAMs_20 22 08 53.5
comp=Z,5μm,19.0s
WCT Wildcat Mounta 43.07 318 P P 21 47 40.6 -0.1
WCT IAmb IAmb 21 47 49.9
comp=Z,159nm,1.6s
NBMO Morrinhos-CE 43.09 103 *eP* P **21 47 40.5 -0.4**
NBMO *eS* S **21 54 05.4 -2.0**
PTGB Pitanga 43.17 139 *eP* P **21 47 40.3 -1.2**
PTGB *eS* S **21 54 08.2 -0.2**
GO05 Hualane 43.22 168 P P 21 47 42.1 +0.5
GO05 IAmb IAmb 21 47 49.0
comp=Z,156nm,1.4s
GO05 Hualane 43.22 168 P P 21 47 44.0 +2.4
BO02 Sierra Bellavi 43.26 167 P P 21 47 45.1 +3.0
BB19B Bebedouro 43.28 131 *eP* P **21 47 41.9 -0.5**
EPLO Experimental L 43.29 349 P P 21 47 40.2 -1.9
OSI Osito Audit: C 43.37 314 P P 21 47 42.1 -0.9
OSI IAmb IAmb 21 47 52.9
comp=Z,287nm,1.4s
JANB Januaria 43.41 121 *eP* P **21 47 43.1 -0.5**
RPN Rapa Nui 43.42 217 LR LR 22 01 08.0
comp=Z,9μm,20.9s,baz=46,slow=30
PMNB Patos De Minas 43.44 127 *eP* P **21 47 42.8 -1.0**
PMNB Patos De Minas 43.44 127 P P 21 47 43.5 -0.3
VA02 Isla de Pascua 43.51 217 P P 21 47 43.9 -0.2
VA02 Isla de Pascua 43.51 217 pP pP 21 47 50.9 +3.7
AHID Auburn Hatcher 43.61 329 P P 21 47 43.3 -1.8
CWC Cottonwood Cre 43.86 317 IAMs_20 IAMs_20 22 09 33.9
comp=Z,5μm,18.0s
SNOW Snow King Moun 43.94 330 P P 21 47 47.3 -0.4
ML02 Panimavida 44.05 168 P P 21 47 50.6 +2.2
ULM Lac du Bonnet 44.28 347 P P 21 47 48.2 -1.8
comp=Z,15nm,0.6s,baz=148,slow=7.5,SNR=17
ULM PP **PcP 21 49 36.7 +2.4**
comp=Z,8.4nm,0.8s,baz=189,slow=9.7,SNR=3.5
comp=Z,15nm,0.6s
ULM Lac du Bonnet 44.28 347*d i* P **P 21 47 50.6 +0.6**
ULM Lac du Bonnet 44.28 347 P P 21 47 48.3 -1.8
ULM IAmb IAmb 21 47 55.6
comp=Z,96nm,1.0s
TIN Tinemaha, Big 44.29 317 IAMs_20 IAMs_20 22 09 43.3
comp=Z,5μm,18.0s
LAO LASA Array 44.37 336 P P 21 47 50.0 -0.9
CANS Sao Roque de M 44.45 129 *eP* P **21 47 51.8 -0.1**
CANS *eS* S **21 54 26.3 -0.9**
ELK Elko 44.55 323 IAMs_20 IAMs_20 22 09 16.1
comp=Z,4μm,19.0s
BI05 Punta Hualpn 44.67 170 P P 21 47 53.8 +0.5
BI05 IAmb IAmb 21 48 02.0
comp=Z,117nm,1.1s
PSAL Palomas, Salto 44.77 150 *eP* P **21 47 53.3 -0.9**
PSAL *eS* S **21 54 31.1 -0.3**
RCLB Rio Claro- Sao 44.84 132 *eP* P **21 47 54.7 -0.2**
ITAB Concordia 44.89 141 P P 21 47 54.6 -0.6
ITAB Concordia 44.89 141 *eP* P **21 47 53.9 -1.4**
ITAB *eS* S **21 54 32.8 -0.5**
ITAB Concordia 44.89 141 P P 21 47 55.2 -0.1
ITAB pP **sP 21 47 58.9 -0.6**
BI02 San Fabin de 44.95 168 P P 21 47 58.5 +2.9
NVAR Mina Array Bea 45.09 319 P P 21 47 58.8 +1.8
comp=Z,6.8nm,0.8s,baz=128,slow=6.2,SNR=15
NVAR LR LR 22 10 42.1
comp=Z,5μm,18.3s,baz=131,slow=41
comp=Z,6.8nm,0.8s
NVAR Mina Array Bea 45.09 319 P P 21 47 56.9 -0.1
NBPN Ponto Novo - B 45.27 113 *eP* P **21 47 57.9 -0.6**
PKD Bear Valley Ra 45.31 315 P P 21 47 58.3 -0.3
PKD IAMs_20 IAMs_20 22 09 44.5
comp=Z,3μm,18.0s
NBMA Muriti-CE 45.43 108 *eP* P **21 47 59.2 -0.6**
DIAM Diamantina, MG 45.54 125 *eP* P **21 48 00.2 -0.5**
DIAM *eS* S **21 54 42.3 -0.9**
VAO Valinhos 45.60 132 P P 21 48 00.4 -0.6
VAO IAmb IAmb 21 48 05.5
comp=Z,73nm,1.1s

VAO Valinhos 45.60 132 *eP* P **21 48 00.5 -0.6**
BSCB Bom Sucesso 46.09 129 *eP* P **21 48 04.4 -0.6**
BSCB Bom Sucesso 46.09 129 P P 21 48 05.3 +0.4
CMB Columbia Colle 46.26 317 IAMs_20 IAMs_20 22 10 54.5
comp=Z,3μm,18.0s
CPSB Cacapava Do Su 46.45 145 P P 21 48 07.5 0.0
CPSB Cacapava Do Su 46.45 145 *eP* P **21 48 07.3 -0.2**
CPSB Cacapava Do Su 46.45 145 P P 21 48 07.7 +0.2
CPSB pP **sP 21 48 11.3 -0.5**
MFID Camas Ranch 46.59 326 IAMs_20 IAMs_20 22 11 18.0
comp=Z,3μm,19.0s
NBTA Tacaratu-PE 46.64 110 *eP* P **21 48 08.8 -0.6**
EGMT Eagleton 46.89 335 P P 21 48 10.0 -0.8
EGMT IAmb IAmb 21 48 15.4
comp=Z,135nm,1.8s
ANCO Parque Anchore 47.23 153 *eP* P **21 48 13.6 +0.1**
WVOR Wild Horse Val 47.60 323 P P 21 48 15.8 -0.8
WVOR pmax pmax
comp=Z,131nm,1.4s
WVOR MLR MLR
comp=Z,4μm,19.0s
WVOR Wild Horse Val 47.60 323 P P 21 48 15.8 -0.8
WVOR IAMs_20 IAMs_20 22 10 53.5
comp=Z,4μm,19.0s
WVOR Wild Horse Val 47.60 323 P P 21 48 17.1 +0.5
CMC01 Camacan, BA 47.68 118 *eP* P **21 48 16.7 -0.6**
LR04 Corral 47.69 171 P P 21 48 17.8 +0.8
RCBR Riachuelo 47.72 105 LR LR 22 10 08.6
comp=Z,5μm,18.7s,baz=302,slow=38
RCBR Riachuelo 47.72 105 P P 21 48 17.7 -0.1
RCBR pmax pmax
comp=Z,153nm,1.7s
RCBR MLR MLR
comp=Z,14μm,18.0s
RCBR Riachuelo 47.72 105 P P 21 48 17.7 -0.1
RCBR IAmb IAmb 21 48 19.6
comp=Z,153nm,1.7s
RCBR Riachuelo 47.72 105 *eP* P **21 48 17.1 -0.7**
RCBR *eS* S **21 55 12.9 -1.5**
RCBR Riachuelo 47.72 105 P P 21 48 18.1 +0.3
GO06 Curarrehue 47.73 169 P P 21 48 18.1 +0.6
GO06 IAmb IAmb 21 48 24.9
comp=Z,126nm,1.6s
GO06 Curarrehue 47.73 169 P P 21 48 20.1 +2.6
SJMB Sao Joao De Ma 47.78 123 *eP* P **21 48 17.7 -0.4**
SUTB Sutter Butte 47.81 318 P P 21 48 18.2 +0.1
SUTB IAmb IAmb 21 48 25.3
comp=Z,93nm,1.1s
SUTB IAMs_20 IAMs_20 22 11 42.3
comp=Z,3μm,18.0s
MSO Missoula 47.92 331 IAMs_20 IAMs_20 22 11 16.8
comp=Z,3μm,19.0s
GUA01 Guaratinga, BA 47.96 120 *eP* P **21 48 17.4 -2.2**
BSFB Barra de Sao F 48.13 123 *eP* P **21 48 20.1 -0.6**
BSFB Barra de Sao F 48.13 123 P P 21 48 21.0 +0.2
BSFB pP **sP 21 48 24.8 -0.1**
LR05 Currie 48.26 170 P P 21 48 22.2 +0.8
HATC Hat Creek Radi 48.43 320 IAMs_20 IAMs_20 22 09 58.6
comp=Z,4μm,21.0s
RIB01 Linhares ES 48.73 124 *eP* P **21 48 24.5 -1.0**
SCHQ Schefferville 48.81 12 P P 21 48 24.2 -1.3
comp=Z,36nm,1.1s,baz=178,slow=6.2,SNR=15
comp=Z,36nm,1.1s
TRQA Tornquist 48.88 159 P P 21 48 26.2 -0.1
TRQA pmax pmax
comp=Z,202nm,1.4s
TRQA MLR MLR
comp=Z,2μm,20.0s
TRQA Tornquist 48.88 159 P P 21 48 26.2 -0.1
O02D Mt. Diablo Mer 48.96 318 IAMs_20 IAMs_20 22 11 17.6
comp=Z,3μm,19.0s
PLCA Paso Flores 49.02 169 P P 21 48 28.9 +1.5
comp=Z,23nm,1.0s,baz=340,slow=8.4,SNR=34
PLCA LR LR 22 06 00.4
comp=Z,818nm,20.2s,baz=352,slow=32
comp=Z,23nm,1.0s
PLCA Paso Flores 49.02 169 P P 21 48 28.9 +1.5
PLCA Paso Flores 49.02 169 P P 21 48 27.7 +0.3
PLCA IAmb IAmb 21 48 35.6
comp=Z,159nm,1.4s
PLCA Paso Flores 49.02 169 *eP* P **21 48 28.8 +1.5**
PLCA *eS* S **21 55 32.4 +0.4**
PLCA Paso Flores 49.02 169 P P 21 48 29.8 +2.4
ALF01 Guarapari-ES 49.10 125 *eP* P **21 48 27.9 -0.3**
KHBM Hayfork Bally 49.49 319 IAMs_20 IAMs_20 22 10 57.6
comp=Z,4μm,22.0s
LNOR Lincton Mounta 49.51 327 P P 21 48 30.3 -0.8
M02C Callahan 49.63 320 IAMs_20 IAMs_20 22 13 04.3
comp=Z,4μm,18.0s
YBH Yreka Blue Hor 49.72 320 LR LR 22 13 49.9
comp=Z,4μm,18.8s,baz=153,slow=41
L04D Klamath Falls 49.72 321 P P 21 48 32.5 -0.4
FFC Flin Flon 49.87 345 P P 21 48 32.9 -0.7
FFC pmax pmax
comp=Z,69nm,1.4s
FFC MLR MLR
comp=Z,3μm,18.0s
FFC Flin Flon 49.87 345 P P 21 48 32.9 -0.7
FFC IAmb IAmb 21 48 40.8
comp=Z,69nm,1.4s
FFC Flin Flon 49.87 345 IAMs_20 IAMs_20 22 12 51.3
comp=Z,3μm,18.0s
FFC Flin Flon 49.87 345 P P 21 48 33.5 -0.1
KHMM Horse Mountain 49.94 319 IAMs_20 IAMs_20 22 11 11.4
comp=Z,3μm,20.0s
NEW Newport 50.47 330 IAMs_20 IAMs_20 22 12 24.3
comp=Z,3μm,18.0s
NEW Newport 50.47 330 P P 21 48 38.8 +0.4
HAWA Hanford 50.52 327 P P 21 48 38.2 -0.5
LL02 Futaleuf 51.17 171 P P 21 48 44.6 +1.0
LL02 IAmb IAmb 21 48 51.6
comp=Z,133nm,1.2s
LL02 Futaleuf 51.17 171 P P 21 48 46.2 +2.7
FCC Fort Churchill 52.09 352 P P 21 48 49.0 -1.2
FCC pmax pmax
comp=Z,68nm,1.3s
FCC Fort Churchill 52.09 352 P P 21 48 49.0 -1.2
COYC Coyhaique 53.46 171 P P 21 49 01.4 +0.8
COYC IAmb IAmb 21 49 08.1
comp=Z,146nm,1.4s
COYC Coyhaique 53.46 171 P P 21 49 03.3 +2.8
NLWA Neilton Lookou 53.50 326 P P 21 49 00.2 -0.8
NLWA IAmb IAmb 21 49 14.0
comp=Z,73nm,1.4s
AY03 Cochrane 55.04 172 P P 21 49 12.9 +0.9
GO08 Villa O'Higgin 56.23 173 P P 21 49 21.3 +0.8
GO08 IAmb IAmb 21 49 48.7
comp=Z,143nm,1.8s
GO08 Villa O'Higgin 56.23 173 P P 21 49 24.2 +3.6
PFCBR Castelo Branco 56.92 49 *eP* P **21 49 27.8 +2.1**
PFCBR *i* IAmb IAmb 21 49 32.2
comp=Z,164nm,2.1s
CALA Caldeira 56.95 48 *eP* P **21 49 27.1 +1.0**
CALA *i* IAmb IAmb 21 49 32.3
comp=Z,483nm,1.4s
PCED Cedros 56.97 48 *eP* P **21 49 27.1 +1.0**
PCED *i* IAmb IAmb 21 49 32.5
comp=Z,404nm,2.0s
HOR Horta 56.99 49 *eP* P **21 49 27.1 +0.9**
HOR *i* IAmb IAmb 21 49 30.8
comp=Z,326nm,1.6s
FRB Frobisher Bay 57.06 7 LR LR 22 15 42.8
comp=Z,5μm,18.1s,baz=197,slow=38
FRB Frobisher Bay 57.06 7 P P 21 49 24.4 -1.7
PCAN Candelaria 57.08 49 *eP* P **21 49 29.4 +2.5**
PCAN *i* IAmb IAmb 21 49 32.5
comp=Z,235nm,0.8s
PICO Pico 57.13 49 *eP* P **21 49 29.0 +1.7**
PICO *i* IAmb IAmb 21 49 33.5
comp=Z,468nm,0.9s
PPNO Prainha do Nor 57.24 49 *eP* P **21 49 29.4 +1.3**
PPNO *i* IAmb IAmb 21 49 34.1
comp=Z,538nm,1.6s
ROSA Rosais 57.34 48 *eP* P **21 49 30.3 +1.6**
ROSA *i* IAmb IAmb 21 49 34.8
comp=Z,608nm,1.6s
ROSA Rosais 57.34 48 P P 21 49 31.4 +2.7
PMAN Manadas 57.42 49 *eP* P **21 49 30.3 +1.0**
PMAN *i* IAmb IAmb 21 49 35.2
comp=Z,650nm,1.0s
SACV Santiago Islan 57.52 77 IAMs_20 IAMs_20 22 13 26.6
comp=Z,2μm,19.0s
SRBC Serra Branca 57.59 48 *eP* P **21 49 31.0 +0.5**
SRBC *i* IAmb IAmb 21 49 36.5
comp=Z,760nm,1.8s

PGRA Graciosa 57.63 48 *eP* P **21 49 32.1 +1.4**
PGRA *i* IAmb IAmb 21 49 36.7
comp=Z,376nm,2.0s
PSBA Serra de Santa 58.03 49 *eP* P **21 49 34.4 +0.7**
PSBA *i* IAmb IAmb 21 49 39.0
comp=Z,152nm,0.9s
ADH Angra Heroismo 58.07 49 *eP* P **21 49 35.2 +1.4**
ADH *i* IAmb IAmb 21 49 37.8
comp=Z,136nm,0.9s
PAGU Agualva, Azore 58.14 49 *eP* P **21 49 35.6 +1.3**
PAGU *i* IAmb IAmb 21 49 38.6
comp=Z,179nm,1.2s
PSCM Serra do Cume 58.17 49 *eP* P **21 49 38.8 +4.2**
PSCM *i* IAmb IAmb 21 49 40.8
comp=Z,198nm,1.0s
BBB Bella Bella 58.45 329 LR LR 22 17 38.0
comp=Z,2μm,20.1s,baz=138,slow=39
PGRON Lagoa das Cont 59.22 50 *eP* P **21 49 43.2 +1.3**
PGRON *i* IAmb IAmb 21 49 46.1
comp=Z,342nm,1.1s
IVI Ivigtut 59.24 18 IAMs_20 IAMs_20 22 12 21.5
comp=Z,4μm,22.0s
IVI Ivigtut 59.24 18 *i* P P 21 49 34.7 -6.9
IVI IAmb IAmb 21 49 45.0
comp=Z,134nm,1.7s
PSMN Pico do Norte, 59.25 51 *eP* P **21 49 42.2 +0.1**
PSMN *i* IAmb IAmb 21 49 47.5
comp=Z,242nm,1.2s
BART Pico Bartolome 59.38 50 *eP* P **21 49 44.0 +1.0**
BART *i* IAmb IAmb 21 49 48.4
comp=Z,524nm,1.4s
MG05 Puerto Natales 59.40 173 P P 21 49 43.4 +0.7
MG05 Puerto Natales 59.40 173 P P 21 49 46.9 +4.2
YKA Yellowknife Ar 59.95 343 P P 21 49 45.9 -0.6
comp=Z,28nm,1.1s,baz=136,slow=7.4,SNR=25
comp=Z,28nm,1.1s
YKA Yellowknife Ar 59.95 343 P P 21 49 47.2 +0.7
YKA Yellowknife Ar 59.95 343 P P 21 49 47.2 +0.7
NRS Narsarsuaq 60.09 19 P P 21 49 46.7 -0.7
NRS pmax pmax
comp=Z,133nm,1.7s
NRS MLR MLR
comp=Z,3μm,18.0s
NRS Narsarsuaq 60.09 19 P P 21 49 46.6 -0.7
NRS IAmb IAmb 21 49 51.4
comp=Z,133nm,1.7s
NRS IAMs_20 IAMs_20 22 16 53.9
comp=Z,3μm,18.0s
NRS Narsarsuaq 60.09 19 P P 21 49 47.0 -0.4
NRS Narsarsuaq 60.09 19 *i* P P 21 49 41.6 -5.7
NRS IAmb IAmb 21 49 50.9
comp=Z,116nm,1.6s
TAOE Nuku Hiva Isla 60.27 255 *eP* P **21 49 48.3 -1.3**
comp=Z,430nm,23.3s
TAOE *eS* S **21 58 02.4 -2.0**
comp=Z,1μm,25.7s
TAOE *eSS* SS **22 01 55.5 -6.5**
comp=Z,667nm,25.5s
TAOE *eLQ* LQ 22 05 05.0
comp=Z,17μm,30.8s
TAOE *eLR* LR 22 07 30.4
comp=Z,3μm,25.4s
NUUK Nuuk 60.62 15 P P 21 49 51.3 +0.3
NUUK Nuuk 60.62 15 *i* P P 21 49 43.6 -7.3
NUUK IAmb IAmb 21 49 52.6
comp=Z,45nm,1.1s
KOTAN Kotaneelee Air 61.40 337 P P 21 49 56.6 +0.2
baz=131,SNR=7.7
KOTAN S S **21 58 17.7 +0.5**
baz=131
LIRD Liard River Hi 61.74 336 P P 21 49 59.4 +0.7
baz=128,SNR=6.7
LIRD S S **21 58 21.3 -0.2**
baz=128
MG03 Isla Dawson 61.78 172 P P 21 50 00.1 +1.2
V35K Ketchikan 61.88 330 IAMs_20 IAMs_20 22 21 17.8
comp=Z,3μm,19.0s
V35K Ketchikan 61.88 330 P P 21 50 01.3 +1.6
baz=121
V35K S S **21 58 27.5 +4.1**
baz=121
T35M Bob Quinn 62.11 332 IAMs_20 IAMs_20 22 21 02.6
comp=Z,2μm,18.0s
T35M Bob Quinn 62.11 332 P P 21 50 03.4 +2.2
baz=123
T35M S S **21 58 29.9 +3.6**
baz=123
EFI East Falkland 62.30 164 P P 21 50 02.9 +0.4
EFI pmax pmax
comp=Z,95nm,1.3s
EFI East Falkland 62.30 164 P P 21 50 02.9 +0.4
EFI IAmb IAmb 21 50 11.1
comp=Z,95nm,1.2s
EFI East Falkland 62.30 164 P P 21 50 07.5 +5.0
CRAG Craig 62.69 330 P P 21 50 06.9 +1.8
baz=120
WRAK Wrangell Islan 62.79 331 P P 21 50 06.5 +0.7
baz=121
WRAK S S **21 58 40.5 +5.6**
baz=121
DLBC Dease Lake 62.81 334 P P 21 50 07.7 +1.7
baz=124,SNR=17
DLBC S S **21 58 38.3 +3.1**
baz=124
U33K Whale Pass 63.01 331 IAMs_20 IAMs_20 22 22 19.8
comp=Z,3μm,19.0s
U33K Whale Pass 63.01 331 P P 21 50 09.0 +1.7
baz=120
U33K S S **21 58 41.9 +4.3**
baz=120
S34M Telegraph Cree 63.01 333 P P 21 50 08.9 +1.6
baz=123
S34M S S **21 58 42.9 +5.3**
baz=123
SFJD Kangerlussuaq 63.20 13 LR LR 22 17 19.8
comp=Z,4μm,20.4s,baz=218,slow=36
SFJD Kangerlussuaq 63.20 13 P P 21 50 06.9 -1.4
SFJD pmax pmax
comp=Z,64nm,1.7s
SFJD MLR MLR
comp=Z,5μm,20.0s
SFJD Kangerlussuaq 63.20 13 P P 21 50 06.9 -1.4
SFJD IAmb IAmb 21 50 48.2
comp=Z,64nm,1.6s
SFJD Kangerlussuaq 63.20 13 P P 21 50 06.5 -1.8
SFJD Kangerlussuaq 63.20 13 *i* P P 21 50 03.6 -4.7
SFJD IAmb IAmb 21 50 11.6
comp=Z,161nm,2.2s
WRGLY Wrigley 63.25 340 P P 21 50 10.5 +1.8
baz=133
WRGLY S S **21 58 39.2 -1.1**
baz=133
WTLY Watson Lake, Y 63.25 336 P P 21 50 10.7 +1.9
baz=126
WTLY S S **21 58 42.6 +2.0**
baz=126
T33K Petersburg 63.28 331 P P 21 50 10.7 +1.7
baz=120
R33M Jennings River 63.75 334 IAMs_20 IAMs_20 22 19 59.9
comp=Z,2μm,20.0s
R33M Jennings River 63.75 334 P P 21 50 13.9 +1.6
baz=123,SNR=8.8
R33M S S **21 58 50.0 +3.0**
baz=123
TGTN Hyland Airport 63.89 337 P P 21 50 14.6 +1.5
baz=127
TGTN S S **21 58 52.1 +3.6**
baz=127
Q32M Nakina River 64.08 334 IAMs_20 IAMs_20 22 19 59.7
comp=Z,3μm,20.0s
Q32M Nakina River 64.08 334 P P 21 50 16.4 +1.8
baz=122,SNR=11
Q32M S S **21 58 55.2 +3.9**
baz=122
S32K Killisnoo 64.38 332 IAMs_20 IAMs_20 22 23 35.8
comp=Z,3μm,18.0s
S32K Killisnoo 64.38 332 P P 21 50 16.7 +0.5
baz=119
GDH Godhavn 64.49 11 *i* P P 21 50 13.5 -3.2
GDH IAmb IAmb 21 50 20.4
comp=Z,117nm,1.9s
SIT Sitka 64.54 331 P P 21 50 18.1 +0.8
baz=118
SIT S S **21 59 01.3 +4.8**
baz=118
R32K Eaglecrest 64.74 332 IAMs_20 IAMs_20 22 23 47.5
comp=Z,3μm,18.0s

R32K Eaglecrest 64.74 332 P **P** 21 50 20.4 +1.8
baz=119
R32K S **S** 21 59 03.8 +4.7
baz=119
PMOZ Porto Moniz, M 64.78 57 *e*P **P** 21 50 21.5 +2.0
PMOZ *i* IAmb IAmb 21 50 55.0
comp=Z,251nm,1.3s
PMOZ *e*S **S** 21 59 07.7 +7.0
PMOZ *e*LR LR 22 10 08.6
PMOZ *i* IAMs_20 IAMs_20 22 15 11.7
comp=Z,848nm,20.0s
MACI Morro de la Ar 64.86 62 P **P** 21 50 19.9 -0.4
MACI Morro de la Ar 64.86 62 P **P** 21 50 22.1 +1.9
ILULI Ilulissat 64.93 12 IAMs_20 IAMs_20 22 17 49.4
comp=Z,4µm,20.0s
ILULI Ilulissat 64.93 12 P **P** 21 50 18.8 -0.8
ILULI Ilulissat 64.93 12 *i* P P 21 50 14.5 -5.1
ILULI IAmb IAmb 21 50 23.1
comp=Z,315nm,2.4s
P33M Teslin, Yukon 64.98 335 P **P** 21 50 21.8 +1.5
baz=122,SNR=9.2
P33M S **S** 21 59 05.4 +3.3
baz=122
PMAR Madeira 65.00 57 *e*P **P** 21 50 23.2 +2.2
PMAR *i* IAmb IAmb 21 50 26.2
comp=Z,281nm,1.9s
FUL Funchal 65.01 58 *e*P **P** 21 50 23.7 +2.9
P32M Atlin 65.04 334 IAMs_20 IAMs_20 22 23 24.1
comp=Z,3µm,19.0s
P32M Atlin 65.04 334 P **P** 21 50 22.1 +1.5
baz=121,SNR=6.2
P32M S **S** 21 59 06.0 +3.2
baz=121
BESE Bessie Mountai 65.05 333 IAMs_20 IAMs_20 22 22 04.5
comp=Z,2µm,19.0s
POIN Pond Inlet 65.28 1 P **P** 21 50 20.6 -1.2
POIN IAmb IAmb 21 50 41.0
comp=Z,53nm,1.5s
R31K City Hall, Gus 65.37 332 P **P** 21 50 24.3 +1.7
baz=118
S31K Pelican 65.39 332 P **P** 21 50 24.3 +1.5
baz=118
S31K S **S** 21 59 11.7 +4.7
baz=118
SAQQ Saqqaq 65.43 11 *i* P **P** 21 50 18.5 -4.4
SAQQ IAmb IAmb 21 50 31.0
comp=Z,153nm,1.8s
PMPST Porto Santo, M 65.53 57 *e*P **P** 21 50 27.8 +3.5
N32M Quiet Lake 65.59 335 IAMs_20 IAMs_20 22 23 50.5
comp=Z,3µm,19.0s
N32M Quiet Lake 65.59 335 P **P** 21 50 25.4 +1.3
baz=122
N32M S **S** 21 59 12.1 +2.6
baz=122
MMPY Sheldon Lake, 65.67 337 P **P** 21 50 26.3 +1.6
baz=124,SNR=27
MMPY S **S** 21 59 14.2 +3.8
baz=124
SKAG Skagway 65.69 333 P **P** 21 50 26.2 +1.4
baz=119
SKAG S **S** 21 59 14.1 +3.5
baz=119
ANGG Ammassalik, Gr 65.71 19 IAMs_20 IAMs_20 22 15 30.1
comp=Z,3µm,22.0s
NIAQ Niaqornat 65.79 10 *i* P **P** 21 50 20.5 -4.7
NIAQ IAmb IAmb 21 51 10.9
comp=Z,518nm,2.5s
WHY Whitehorse 66.09 335 P **P** 21 50 28.1 +0.6
baz=120
WHY S **S** 21 59 17.6 +1.8
baz=120
PLBC Pleasant Camp 66.15 333 P **P** 21 50 29.6 +1.8
baz=118
PLBC S **S** 21 59 21.9 +5.6
baz=118
SAATT Saattut 66.17 10 *i* P **P** 21 50 24.2 -3.4
SAATT IAmb IAmb 21 50 32.5
comp=Z,159nm,1.7s
NUUG Nuugaatsiaq 66.51 10 *i* P P 21 50 23.5 -6.3
NUUG IAmb IAmb 21 50 37.1
comp=Z,88nm,1.7s
O30N Mendenhall 66.66 334 IAMs_20 IAMs_20 22 24 34.9
comp=Z,2µm,18.0s
O30N Mendenhall 66.66 334 P **P** 21 50 32.4 +1.3
baz=119,SNR=8.3
O30N S **S** 21 59 25.8 +3.2
baz=119
M31M Drury Creek, Y 66.67 336 P **P** 21 50 32.8 +1.7
baz=121
P30M Million Dollar 66.73 333 P **P** 21 50 33.4 +1.9
baz=118
P30M S **S** 21 59 28.5 +5.1
baz=118
P29M Windy Craggy 66.85 333 P **P** 21 50 32.0 -0.2
P29M IAmb IAmb 21 50 41.2
comp=Z,93nm,1.4s
P29M IAMs_20 IAMs_20 22 21 50.1
comp=Z,3µm,22.0s
P29M Windy Craggy 66.85 333 P **P** 21 50 34.2 +1.9
baz=117,SNR=6.3
P29M S **S** 21 59 28.6 +3.7
baz=117
N31M Braeburn, Yuko 66.88 335 IAMs_20 IAMs_20 22 21 32.6
comp=Z,2µm,20.0s
N31M Braeburn, Yuko 66.88 335 P **P** 21 50 33.9 +1.5
baz=119,SNR=6.8
N31M S **S** 21 59 28.3 +3.2
baz=119
UPNV Upernavik 67.16 8 *i* P **P** 21 50 29.5 -4.4
UPNV IAmb IAmb 21 52 28.7
comp=Z,89nm,1.7s
HYT Haines Junctio 67.30 334 P **P** 21 50 37.0 +1.8
baz=118
HYT S **S** 21 59 35.1 +4.7
baz=118
N30M Aishikik Lake 67.42 335 IAMs_20 IAMs_20 22 24 17.9
comp=Z,2µm,20.0s
N30M Aishikik Lake 67.42 335 P **P** 21 50 37.6 +1.8
baz=118,SNR=9.4
N30M S **S** 21 59 34.7 +3.0
baz=118
O29M Mount Kennedy 67.53 333 IAMs_20 IAMs_20 22 25 34.0
comp=Z,3µm,18.0s
O29M Mount Kennedy 67.53 333 P **P** 21 50 38.5 +1.8
baz=116
O29M S **S** 21 59 37.5 +4.2
baz=116
C36M Paulatuk 67.64 345 P **P** 21 50 36.9 -0.1
baz=134
C36M S **S** 21 59 31.4 -2.5
baz=134
RES Resolute Bay 67.66 356 LR LR 22 21 28.4
comp=Z,6µm,18.4s,baz=164,slow=37
RES Resolute Bay 67.66 356 P **P** 21 50 35.9 -1.1
RES pmax pmax
comp=Z,80nm,1.5s
RES Resolute Bay 67.66 356 P **P** 21 50 35.9 -1.1
RES IAmb IAmb 21 50 43.9
comp=Z,80nm,1.5s
RES Resolute Bay 67.66 356 P **P** 21 50 36.8 -0.2
YUK6 Outpost Mounta 67.72 334 P **P** 21 50 39.9 +1.9
baz=117
YUK6 S **S** 21 59 40.1 +4.3
baz=117
M30M Minto, Yukon 67.83 336 IAMs_20 IAMs_20 22 24 07.7
comp=Z,2µm,20.0s
M30M Minto, Yukon 67.83 336 P **P** 21 50 39.9 +1.5
baz=119,SNR=38
M30M S **S** 21 59 38.5 +1.9
baz=119
YUK4 Talbot Arm 68.03 334 P **P** 21 50 41.7 +1.8
baz=117
PINM Pinnacle 68.20 333 P **P** 21 50 42.2 +1.4
baz=115
PINM S **S** 21 59 45.4 +4.2
baz=115
PCA Pinnacle 68.20 333 IAMs_20 IAMs_20 22 21 50.7
comp=Z,2µm,20.0s
BRWY Burwash Landin 68.21 334 P **P** 21 50 42.5 +1.7
baz=116
M29M Somme Creek 68.45 335 P **P** 21 50 44.1 +1.7
baz=117,SNR=35
M29M S **S** 21 59 47.2 +3.0
baz=117
O28M Mount Upton 68.46 333 IAMs_20 IAMs_20 22 25 20.4
comp=Z,2µm,20.0s
O28M Mount Upton 68.46 333 P **P** 21 50 44.9 +2.2
baz=115
O28M S **S** 21 59 49.3 +4.6
baz=115
YUK8 Steele Glacier 68.49 334 P **P** 21 50 44.7 +1.8
baz=116,SNR=8.4
YUK8 S **S** 21 59 48.5 +3.6
baz=116
H31M Peel River 68.55 339 IAMs_20 IAMs_20 22 26 16.8
comp=Z,3µm,18.0s
H31M Peel River 68.55 339 P **P** 21 50 44.4 +1.6
baz=122,SNR=29
H31M S **S** 21 59 46.0 +0.9
baz=122
L29M L29M 68.62 336 IAMs_20 IAMs_20 22 23 06.7
comp=Z,2µm,19.0s
L29M L29M 68.62 336 P **P** 21 50 44.8 +1.5
baz=118,SNR=27
L29M S **S** 21 59 46.6 +0.6
baz=118
KULLO Kullorsuaq 68.62 7 *i* P P 21 50 35.5 -7.7
KULLO IAmb IAmb 21 50 48.3
comp=Z,100nm,1.6s
J30M Hart River 68.63 338 IAMs_20 IAMs_20 22 22 47.9
comp=Z,2µm,20.0s
J30M Hart River 68.63 338 P **P** 21 50 45.1 +1.6
baz=120,SNR=30
J30M S **S** 21 59 48.3 +2.1
baz=120
K29M Barlow Dome 68.73 337 P **P** 21 50 45.5 +1.4
baz=119,SNR=34
K29M S **S** 21 59 47.3 -0.1
baz=119
LOGN Logan Glacier 68.84 333 IAMs_20 IAMs_20 22 22 58.6
comp=Z,2µm,20.0s
I30M Mount Dempster 68.97 338 P **P** 21 50 47.5 +1.9
baz=120,SNR=49
I30M S **S** 21 59 52.0 +1.7
baz=120
YUK3 Moose Creek 69.00 334 P **P** 21 50 47.5 +1.5
baz=115,SNR=10
YUK3 S **S** 21 59 53.8 +2.9
baz=115
ASCN Ascension 69.02 101 P **P** 21 50 45.9 -0.8
G31M Satah River 69.13 340 P **P** 21 50 47.6 +1.2
baz=123,SNR=23
G31M S **S** 21 59 53.0 +1.2
baz=123
GRNC Granite Creek 69.14 333 IAMs_20 IAMs_20 22 22 20.5
comp=Z,2µm,20.0s
BARN Barnard Glacie 69.23 333 IAMs_20 IAMs_20 22 23 09.9
comp=Z,2µm,21.0s
F31M Tsiigehtchic 69.24 341 P **P** 21 50 48.4 +1.3
baz=124
F31M S **S** 21 59 52.5 -0.6
baz=124
J29N Klondike Camp 69.28 337 P **P** 21 50 49.2 +1.7
baz=118
J29N S **S** 21 59 54.8 +0.9
baz=118
BVCY Beaver Creek 69.44 335 P **P** 21 50 50.4 +1.9
baz=115
BVCY S **S** 21 59 58.4 +2.7
baz=115
TULEG Thule 69.46 3 P **P** 21 50 47.7 -0.6
TULEG Thule 69.46 3 P **P** 21 50 48.1 -0.2
DAWY Dawson 69.56 337 P **P** 21 50 49.7 +0.4
baz=117,SNR=6.6
DAWY S **S** 21 59 57.5 +0.4
baz=117
TGL Tana Glacier 69.64 333 IAMs_20 IAMs_20 22 23 26.6
comp=Z,2µm,20.0s
INK Inuvik 69.66 342 P **P** 21 50 49.5 -0.1
INK pmax pmax
comp=Z,65nm,1.1s
INK Inuvik 69.66 342 P **P** 21 50 49.5 -0.1
INK IAmb IAmb 21 50 58.2
comp=Z,65nm,1.1s
INK Inuvik 69.66 342 P **P** 21 50 50.4 +0.8
baz=124,SNR=46
INK S **S** 21 59 58.8 +0.9
baz=124
INK Inuvik 69.66 342 P **P** 21 50 50.1 +0.5
EPYK Eagle Plains 69.67 339 P **P** 21 50 51.4 +1.5
baz=120
EPYK S **S** 22 00 01.1 +2.7
baz=120
CRQE Cirque 69.75 333 P **P** 21 50 52.5 +2.0
baz=112
A36M Sachs Harbour 69.76 347 P **P** 21 50 50.6 +0.4
baz=134,SNR=8.6
A36M S **S** 21 59 56.6 -2.4
baz=134
CRQM Cirque 69.78 333 IAMs_20 IAMs_20 22 23 29.8
comp=Z,2µm,20.0s
G30M tAoh Zraii Nji 69.81 340 IAMs_20 IAMs_20 22 26 32.1
comp=Z,3µm,19.0s
G30M tAoh Zraii Nji 69.81 340 P **P** 21 50 51.6 +0.9
baz=121
G30M S **S** 21 59 59.8 -0.2
baz=121
M27K Edge Creek, AK 69.85 335 P **P** 21 50 52.8 +1.6
baz=114,SNR=21
M27K S **S** 22 00 02.3 +1.6
baz=114
BERG Berg Lake 69.90 332 IAMs_20 IAMs_20 22 25 39.6
comp=Z,2µm,18.0s
MCARA McCarthy VSAT 69.96 333 P **P** 21 50 54.0 +2.3
baz=112,SNR=10.0
MCARA S **S** 22 00 05.0 +3.1
baz=112
F30M Barrier River 70.00 341 P **P** 21 50 52.9 +1.1
baz=122,SNR=44
F30M S **S** 22 00 03.3 +1.3
baz=122
KAIM Kayak Island 70.07 332 IAMs_20 IAMs_20 22 27 32.1
comp=Z,3µm,18.0s
KAIM Kayak Island 70.07 332 P **P** 21 50 54.4 +2.1
baz=111
KAIM S **S** 22 00 07.5 +4.4
baz=111
BCAR Beaver Creek A 70.10 335 P **P** 21 50 52.8 +0.2
L27K Beaver Creek, 70.11 335 P **P** 21 50 52.4 -0.3
L27K IAmb IAmb 21 51 01.8
comp=Z,54nm,1.1s
L27K IAMs_20 IAMs_20 22 27 36.3
comp=Z,3µm,18.0s
L27K Beaver Creek, 70.11 335 P **P** 21 50 54.4 +1.8
baz=114
L27K S **S** 22 00 06.9 +3.2
baz=114
SUMG Summit 70.18 13 P **P** 21 50 52.3 -1.0
SUMG pmax pmax
comp=Z,243nm,1.8s
SUMG MLR MLR
comp=Z,5µm,19.0s
SUMG Summit 70.18 13 P **P** 21 50 52.2 -1.0
SUMG Summit 70.18 13 P **P** 21 50 52.5 -0.8
SUMG Summit 70.18 13 *i* P **P** 21 50 52.0 -1.3
SUMG IAmb IAmb 21 50 58.9
comp=Z,513nm,2.2s
H29M Whitestone 70.18 339 IAMs_20 IAMs_20 22 26 55.9
comp=Z,2µm,18.0s
H29M Whitestone 70.18 339 P **P** 21 50 54.7 +1.8
baz=118,SNR=23
H29M S **S** 22 00 07.1 +2.8
baz=118
GLB Gilahina Butte 70.34 333 IAMs_20 IAMs_20 22 27 44.2
comp=Z,2µm,19.0s
M26K Nabesna, AK 70.34 334 IAMs_20 IAMs_20 22 26 39.3
comp=Z,2µm,19.0s
M26K Nabesna, AK 70.34 334 P **P** 21 50 55.8 +1.7
baz=113,SNR=12
M26K S **S** 22 00 09.4 +3.1
baz=113
RAGM Ragged Mountai 70.35 332 IAMs_20 IAMs_20 22 23 26.6
comp=Z,2µm,18.0s
G29M Pine Creek 70.39 340 IAMs_20 IAMs_20 22 27 12.5
comp=Z,3µm,18.0s
G29M Pine Creek 70.39 340 P **P** 21 50 55.7 +1.4
baz=119,SNR=41
G29M S **S** 22 00 09.8 +3.1
baz=119
I28M Miner Creek 70.39 338 P **P** 21 50 55.8 +1.4
baz=117,SNR=15
I28M S **S** 22 00 09.5 +2.6
baz=117
BMRM Bremner River 70.52 333 IAMs_20 IAMs_20 22 24 04.1
comp=Z,2µm,20.0s
BMRM Bremner River 70.52 333 P **P** 21 50 56.8 +1.6
baz=111,SNR=7.2
BMRM S **S** 22 00 11.2 +2.8
baz=111
L26K Log Cabin Wild 70.73 335 IAMs_20 IAMs_20 22 24 39.6
comp=Z,3µm,21.0s
L26K Log Cabin Wild 70.73 335 P **P** 21 50 58.4 +2.0
baz=113,SNR=9.5
L26K S **S** 22 00 12.6 +1.7
baz=113
N25K Chitina, Valde 70.75 333 P **P** 21 50 58.5 +1.9
baz=111,SNR=7.9
N25K S **S** 22 00 13.6 +2.4
baz=111
Q23K Middleton Isla 70.82 331 P **P** 21 50 59.0 +2.1
baz=109
EYAK Cordova Ski Ar 70.91 332 P **P** 21 50 59.5 +2.1
baz=110
EYAK S **S** 22 00 15.5 +2.7
baz=110
BORG Borgarnes 71.05 23 LR LR 22 20 44.8
comp=Z,3µm,18.8s,baz=248,slow=35
BORG Borgarnes 71.05 23 IAMs_20 IAMs_20 22 20 33.6
comp=Z,3µm,19.0s
E29M Blow River 71.08 341 P **P** 21 50 58.4 +0.1
E29M Blow River 71.08 341 P **P** 21 50 59.3 +0.9
baz=120,SNR=22
E29M S **S** 22 00 17.1 +2.5
baz=120
I27K Kandik River 71.09 338 IAMs_20 IAMs_20 22 27 48.0
comp=Z,3µm,19.0s
I27K Kandik River 71.09 338 P **P** 21 51 00.2 +1.6
baz=115,SNR=52
I27K S **S** 22 00 18.1 +3.1
baz=115
DIV Divide 71.11 333 IAMs_20 IAMs_20 22 26 55.7
comp=Z,2µm,19.0s
HARP HAARP 71.28 334 IAMs_20 IAMs_20 22 27 37.0
comp=Z,2µm,19.0s
HARP HAARP 71.28 334 P **P** 21 51 01.6 +1.9
baz=111
HARP S **S** 22 00 20.4 +3.2
baz=111
PPT Papeete 71.30 249 LR LR 22 15 12.4
comp=Z,2µm,18.2s,baz=71,slow=30
PPT2 Papeete2 71.30 249 *e*P **P** 21 51 00.2 -0.5
comp=Z,286nm,22.2s
PPT2 *e*PP **PP** 21 53 34.0 -5.0
comp=Z,92nm,21.8s
PPT2 *e*S **S** 22 00 15.8 -3.2
comp=Z,1µm,25.8s
PPT2 *e*SS **SS** 22 04 49.0 -4.4
comp=Z,716nm,25.5s
PPT2 *e*LQ LQ 22 09 39.6
comp=Z,732nm,26.2s
PPT2 *e*LR LR 22 12 45.7
comp=Z,4µm,24.2s
PPT2 *e*LR LR 22 12 52.0
comp=Z,3µm,26.5s
KLU Klutina 71.30 333 IAMs_20 IAMs_20 22 24 36.7
comp=Z,2µm,20.0s
KLU Klutina 71.30 333 P **P** 21 51 01.7 +1.8
baz=110
KLU S **S** 22 00 18.8 +1.2
baz=110
FID Port Fidalgo 71.31 332 IAMs_20 IAMs_20 22 21 18.2
comp=Z,3µm,20.0s
H27K Steamboat Moun 71.33 338 IAMs_20 IAMs_20 22 28 11.2
comp=Z,3µm,20.0s
H27K Steamboat Moun 71.33 338 P **P** 21 51 01.5 +1.6
baz=115,SNR=21
H27K S **S** 22 00 20.2 +2.6
baz=115
F28M Old Crow 71.36 340 P **P** 21 51 01.2 +1.1
baz=118,SNR=31
F28M S **S** 22 00 19.2 +1.3
baz=118
SCRK Sand Creek 71.36 336 P **P** 21 51 02.0 +1.7
baz=112,SNR=18
SCRK S **S** 22 00 21.6 +3.3
baz=112
P23K Montague Islan 71.51 331 IAMs_20 IAMs_20 22 23 57.3
comp=Z,2µm,20.0s
P23K Montague Islan 71.51 331 P **P** 21 51 02.3 +1.2
baz=108
M24K Tolsona, Glenn 71.62 333 IAMs_20 IAMs_20 22 27 10.2
comp=Z,2µm,22.0s
M24K Tolsona, Glenn 71.62 333 P **P** 21 51 03.9 +2.0
baz=110,SNR=8.4
M24K S **S** 22 00 23.9 +2.6
baz=110
G27K Doyon Strip 71.62 339 IAMs_20 IAMs_20 22 27 49.0
comp=Z,2µm,18.0s
G27K Doyon Strip 71.62 339 P **P** 21 51 03.0 +1.3
baz=116,SNR=22
G27K S **S** 22 00 23.4 +2.4
baz=116
RIDG Independent Ri 71.63 335 P **P** 21 51 01.8 -0.1
RIDG IAmb IAmb 21 51 10.9
comp=Z,94nm,1.4s
RIDG IAMs_20 IAMs_20 22 28 15.2
comp=Z,2µm,18.0s
RIDG Independent Ri 71.63 335 P **P** 21 51 03.6 +1.7
baz=112,SNR=33
RIDG S **S** 22 00 24.4 +3.2
baz=112
GLI Glacier Island 71.64 332 IAMs_20 IAMs_20 22 21 25.7
comp=Z,2µm,20.0s
GLI Glacier Island 71.64 332 P **P** 21 51 02.7 +0.8
baz=108
GLI S **S** 22 00 21.3 0.0
baz=108
JOKA Jonika Flow 71.70 288 P **P** 21 51 02.2 -0.8
E28M Babbage River 71.71 341 IAMs_20 IAMs_20 22 26 26.3
comp=Z,2µm,18.0s
E28M Babbage River 71.71 341 P **P** 21 51 02.5 +0.3
baz=118,SNR=35
E28M S **S** 22 00 22.8 +0.8
baz=118
D28M Stokes Point 71.81 342 P **P** 21 51 04.0 +1.3
baz=119
D28M S **S** 22 00 24.8 +1.9
baz=119
KNHH Kane Nui o Ham 71.85 288 P **P** 21 51 03.8 -0.3
PMAFR Mafra 71.86 52 *e*P **P** 21 51 05.6 +1.9
NEEM North Greenlan 71.87 7 *i* P P 21 50 56.4 -6.9
NEEM IAmb IAmb 21 51 08.9
comp=Z,504nm,2.0s
LIS Lisbon 71.94 52 *e*P **P** 21 51 05.1 +1.0
LIS *e*S **S** 22 00 27.7 +2.1
LIS IAMs_20 IAMs_20 22 15 57.8
comp=Z,4µm,24.1s
LIS Lisbon 71.94 52 *e*P **P** 21 51 07.2 +3.1
LIS *i* IAmb IAmb 21 51 07.6
comp=Z,214nm,1.6s
K24K Donnelly Dome 72.04 335 IAMs_20 IAMs_20 22 25 19.1
comp=Z,2µm,21.0s
K24K Donnelly Dome 72.04 335 P **P** 21 51 05.7 +1.4
baz=111,SNR=9.8
K24K S **S** 22 00 28.5 +2.6
baz=111
SCM Sheep Creek Mo 72.05 333 P **P** 21 51 05.0 +0.6
SCM pmax pmax
comp=Z,57nm,1.2s
SCM MLR MLR
comp=Z,2µm,18.0s
SCM Sheep Creek Mo 72.05 333 P **P** 21 51 05.0 +0.6
SCM IAmb IAmb 21 51 14.2
comp=Z,57nm,1.2s
SCM IAMs_20 IAMs_20 22 27 39.4
comp=Z,2µm,18.0s
SCM Sheep Creek Mo 72.05 333 P **P** 21 51 05.6 +1.2
baz=108,SNR=10
SCM S **S** 22 00 26.9 +0.7
baz=108
MLH Mauna Loa 72.06 288 P **P** 21 51 04.7 -0.8
PFVI Vila Bisbo 72.06 53 *e*P **P** 21 51 05.6 +0.7
PFVI *i* IAmb IAmb 21 51 14.7
comp=Z,220nm,1.6s
J25K Salcha River, 72.16 336 IAMs_20 IAMs_20 22 27 23.3
comp=Z,3µm,18.0s
J25K Salcha River, 72.16 336 P **P** 21 51 06.7 +1.6
baz=111,SNR=42
J25K S **S** 22 00 29.3 +1.9
baz=111
PTEO Sao Teotonio 72.18 53 *e*P **P** 21 51 06.6 +1.1
PTEO *i* IAmb IAmb 21 51 08.5
comp=Z,166nm,1.8s

E27K Coleen River 72.20 340 P **P** 21 51 06.2 +1.1
baz=116,SNR=27
E27K S **S** 22 00 29.3 +1.7
baz=116
PWL Port Wells 72.21 332 IAMs_20 IAMs_20 22 26 42.7
comp=Z,2µm,18.0s
PWL Port Wells 72.21 332 P **P** 21 51 06.2 +0.9
baz=107
PWL S **S** 22 00 28.3 +0.4
baz=107
M23K Glacier View 72.22 333 P **P** 21 51 06.5 +1.1
baz=108,SNR=7.1
M23K S **S** 22 00 28.6 +0.6
baz=108
MORF Marmelete 72.22 53 *e*P **P** 21 51 06.9 +1.0
MORF *e*S **S** 22 00 31.0 +2.1
MORF IAMs_20 IAMs_20 22 15 54.5
comp=E,2µm,19.8s
MORF Marmelete 72.22 53 *e*P **P** 21 51 06.8 +0.9
MORF *i* IAmb IAmb 21 51 15.6
comp=E,298nm,1.7s
MORF Marmelete 72.22 53 *e*P **P** 21 51 06.9 +1.0
MORF *e*S **S** 22 00 31.0 +2.1
MORF Marmelete 72.22 53 P **P** 21 51 05.8 -0.1
PSBE So Bento 72.28 51 *e*P **P** 21 51 07.2 +1.0
PSBE *i* IAmb IAmb 21 51 15.8
comp=E,158nm,1.9s
KNK Knik Glacier 72.43 332 IAMs_20 IAMs_20 22 25 14.6
comp=Z,2µm,21.0s
KNK Knik Glacier 72.43 332 P **P** 21 51 08.0 +1.4
baz=107,SNR=6.9
KNK S **S** 22 00 30.4 -0.1
baz=107
G26K Porcupine Rive 72.45 339 P **P** 21 51 08.1 +1.6
baz=114
G26K S **S** 22 00 32.4 +2.1
baz=114
PLOUS Minas do Lousa 72.45 53 *e*P **P** 21 51 07.7 +0.5
PLOUS *i* IAmb IAmb 21 51 16.8
comp=Z,171nm,1.7s
D27M Malcolm River 72.47 341 IAMs_20 IAMs_20 22 27 24.2
comp=Z,3µm,18.0s
D27M Malcolm River 72.47 341 P **P** 21 51 07.8 +1.0
baz=117,SNR=20
D27M S **S** 22 00 31.9 +1.1
baz=117
DHY Denali Highway 72.47 334 IAMs_20 IAMs_20 22 25 44.5
comp=Z,2µm,18.0s
DHY Denali Highway 72.47 334 P **P** 21 51 07.9 +0.9
baz=109
DHY S **S** 22 00 32.1 +0.9
baz=109
WAT6 Susitna Watana 72.47 334 P **P** 21 51 08.2 +1.2
baz=108,SNR=12
WAT6 S **S** 22 00 31.6 +0.4
baz=108
SML Sawmill 72.49 333 IAMs_20 IAMs_20 22 28 55.2
comp=Z,2µm,19.0s
SML Sawmill 72.49 333 P **P** 21 51 08.2 +1.1
baz=108,SNR=9.2
SML S **S** 22 00 32.2 +1.0
baz=108
SEW Seward 72.52 331 IAMs_20 IAMs_20 22 28 31.0
comp=Z,2µm,18.0s
SEW Seward 72.52 331 P **P** 21 51 08.2 +1.1
baz=106
SEW S **S** 22 00 31.2 -0.3
baz=106
MOE Montemor 72.55 52 *e*P **P** 21 51 08.6 +0.8
MOE *i* IAmb IAmb 21 51 11.1
comp=Z,140nm,1.6s
PRP Porcupine Dome 72.55 337 IAMs_20 IAMs_20 22 28 24.6
comp=Z,3µm,19.0s
PRP Porcupine Dome 72.55 337 P **P** 21 51 08.6 +1.2
baz=111,SNR=25
PRP S **S** 22 00 33.3 +1.3
baz=111
PCAS Casmilo, Conde 72.56 50 *e*P **P** 21 51 08.8 +1.0
PCAS *i* IAmb IAmb 21 51 11.5
comp=Z,275nm,1.4s
PTO Porto 72.58 49 *e*P **P** 21 51 08.9 +1.1
PTO *i* IAmb IAmb 21 51 17.1
comp=Z,172nm,1.8s
PMTG Montargil 72.69 51 *e*P **P** 21 51 09.1 +0.5
PMTG *i* IAmb IAmb 21 51 17.1
comp=Z,126nm,1.6s
TBI Tubuai 72.71 243 *e*PKP1 P 21 51 01.3 -7.7
comp=Z,703nm,22.5s
TBI *e*S **S** 22 00 35.4 +0.6
comp=Z,7µm,28.0s
TBI *e*SS **SS** 22 05 14.6 -0.1
comp=Z,2µm,38.5s
TBI *e*LQ LQ 22 10 15.7
comp=Z,6µm,32.0s
TBI *e*LR LR 22 13 22.7
comp=Z,4µm,28.0s
TBI *e*LR LR 22 13 28.5
comp=Z,18µm,28.0s
PCVE Castro Verde 72.73 53 *e*P **P** 21 51 09.8 +0.9
PCVE *i* IAmb IAmb 21 51 17.8
comp=Z,133nm,1.9s
HDA Harding Lake 72.73 336 P **P** 21 51 08.0 -0.3
HDA IAmb IAmb 21 51 15.2
comp=Z,64nm,1.0s
HDA IAMs_20 IAMs_20 22 29 14.3
comp=Z,2µm,20.0s
HDA Harding Lake 72.73 336 P **P** 21 51 09.0 +0.7
baz=110,SNR=44
HDA S **S** 22 00 33.9 +0.1
baz=110
GHO Glory Hole Cre 72.75 333 IAMs_20 IAMs_20 22 29 13.0
comp=Z,3µm,18.0s
O22K Cooper Landing 72.76 331 IAMs_20 IAMs_20 22 25 53.2
comp=Z,2µm,20.0s
O22K Cooper Landing 72.76 331 P **P** 21 51 09.3 +0.7
baz=106
PSARD Sardoal 72.78 51 *e*P **P** 21 51 09.8 +0.7
PSARD *i* IAmb IAmb 21 51 18.4
comp=Z,158nm,1.6s
PBDV Barranco-do-Ve 72.78 53 *e*P **P** 21 51 10.5 +1.2
PBDV *i* IAmb IAmb 21 51 18.6
comp=Z,184nm,1.9s
PMR Palmer 72.79 333 P **P** 21 51 09.6 +0.9
baz=107
PMR S **S** 22 00 34.5 0.0
baz=107
EVO Evora 72.81 52 *e*P **P** 21 51 10.0 +0.6
EVO *i* IAmb IAmb 21 51 18.0
comp=Z,104nm,1.7s
PARRA Arraiolos 72.81 52 *e*P **P** 21 51 09.8 +0.4
PARRA *i* IAmb IAmb 21 51 17.8
comp=Z,99nm,2.1s
ILAR Eielson Array 72.83 336 P **P** 21 51 08.9 +0.1
comp=Z,4.1nm,0.7s,baz=114,slow=4.3,SNR=27
ILAR S **S** 22 00 34.0 -0.8
comp=Z,0.1nm,0.3s,baz=105,slow=22,SNR=1.1
ILAR LR LR 22 28 10.8
comp=Z,3µm,18.0s,baz=104,slow=40
comp=Z,4.1nm,0.7s
ILAR Eielson Array 72.83 336 P **P** 21 51 09.0 +0.1
ILAR Eielson Array 72.83 336 P **P** 21 51 09.0 +0.1
FYU Fort Yukon 72.83 338 IAMs_20 IAMs_20 22 28 26.9
comp=Z,2µm,19.0s
F26K Sheenjek River 72.87 339 IAMs_20 IAMs_20 22 27 07.0
comp=Z,2µm,18.0s
F26K Sheenjek River 72.87 339 P **P** 21 51 10.3 +1.2
baz=113,SNR=28
F26K S **S** 22 00 37.8 +2.5
baz=113
PBEJ Beja 72.89 53 *e*P **P** 21 51 11.4 +1.5
PBEJ *i* IAmb IAmb 21 51 19.5
comp=Z,122nm,1.8s
WAT1 Susitna Watana 72.90 334 P **P** 21 51 10.6 +1.1
baz=108
WAT1 S **S** 22 00 36.5 +0.7
baz=108
PGAV Gavieira, Arco 72.90 48 *e*P **P** 21 51 11.0 +1.1
PGAV *i* IAmb IAmb 21 51 18.3
comp=Z,186nm,2.0s
PGAV *e*S **S** 22 00 32.0 -4.7
PGAV *e*LR LR 22 14 29.3
PGAV *i* IAMs_20 IAMs_20 22 17 36.5
comp=Z,2µm,24.0s
VAL Valentia 72.91 38 P **P** 21 51 10.9 +1.4
VAL Valentia 72.91 38 P **P** 21 51 10.5 +0.9
RC01 Rabbit Creek A 72.93 332 P **P** 21 51 09.1 -0.5
RC01 IAMs_20 IAMs_20 22 22 16.8
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 72.93 332 P **P** 21 51 10.7 +1.1
baz=106,SNR=6.3
RC01 S **S** 22 00 36.7 +0.6
baz=106
PVAQ Vaqueiros 72.97 53 *e*P **P** 21 51 11.8 +1.6
PVAQ *i* IAmb IAmb 21 51 20.1
comp=Z,171nm,1.7s
PVAQ Vaqueiros 72.97 53 P **P** 21 51 09.4 -0.9
PVAQ Vaqueiros 72.97 53 P **P** 21 51 12.3 +2.1
AVE Averroes 73.00 58 P **P** 21 51 10.5 -0.1
AVE Averroes 73.00 58 P **P** 21 51 12.7 +2.1
SLKM Skilak Lake 73.00 331 IAMs_20 IAMs_20 22 25 04.7
comp=Z,2µm,22.0s
BRSE Bradley Lake S 73.05 330 P **P** 21 51 11.1 +0.7
baz=105
BRSE S **S** 22 00 38.4 +0.8
baz=105
TIO Tiouine 73.05 60 P **P** 21 51 13.5 +2.4
PCAB Cabril 73.06 49 *e*P **P** 21 51 11.2 +0.4
PCAB *i* IAmb IAmb 21 51 17.7
comp=Z,116nm,1.7s
PVIS Viseu 73.07 50 *e*P **P** 21 51 11.3 +0.4
ESPZ Base Esperanza 73.10 169 P **P** 21 51 10.8 +0.4
ESPZ IAmb IAmb 21 51 17.3
comp=Z,74nm,1.2s
BRLK Bradley Lake 73.13 330 IAMs_20 IAMs_20 22 25 57.3
comp=Z,1µm,19.0s
CCB Clear Creek Bu 73.16 336 IAMs_20 IAMs_20 22 27 48.6
comp=Z,2µm,20.0s
POKR Poker Plat Res 73.16 336 P **P** 21 51 12.3 +1.3
baz=109
POKR S **S** 22 00 40.7 +2.1
baz=109
PESTR Estremoz 73.17 52 *e*P **P** 21 51 12.1 +0.6
PESTR *i* IAmb IAmb 21 51 20.9
comp=Z,90nm,1.6s
PESTR Estremoz 73.17 52 P **P** 21 51 11.4 -0.1
PESTR IAmb IAmb 21 51 14.1
comp=Z,133nm,1.6s
PESTR Estremoz 73.17 52 P **P** 21 51 12.6 +1.2
POLO Lamas de Olo 73.21 49 *e*P **P** 21 51 12.1 +0.3
POLO *i* IAmb IAmb 21 51 17.9
comp=Z,58nm,1.6s
RND Reindeer 73.21 334 IAMs_20 IAMs_20 22 28 13.1
comp=Z,2µm,19.0s
WRH Wood River Hil 73.22 336 IAMs_20 IAMs_20 22 28 33.3
comp=Z,3µm,18.0s
G25K Bearman Lake 73.22 338 P **P** 21 51 13.1 +1.9
baz=111,SNR=18
G25K S **SKiKP** 22 00 44.5 +1.1
baz=111
CNPM China Poot 73.24 330 IAMs_20 IAMs_20 22 25 50.1
comp=Z,2µm,19.0s
COLA College 73.25 336*c* *i*P **P** 21 51 12.4 +1.1
COLA pmax pmax
comp=Z,50nm,1.6s
COLA College 73.25 336 IAMs_20 IAMs_20 22 28 03.2
comp=Z,2µm,20.0s
COLA College 73.25 336 P **P** 21 51 12.5 +1.1
baz=109
COLA S **S** 22 00 40.3 +0.7
baz=109
COLA College 73.25 336 P **P** 21 51 12.4 +1.1
PVRL Vila Real 73.26 49 *e*P **P** 21 51 13.2 +1.2
PVRL *i* IAmb IAmb 21 51 17.9
comp=Z,135nm,1.7s
SCO Scoresbysund 73.29 18 P **P** 21 51 11.0 -0.5
SCO pmax pmax
comp=Z,37nm,1.3s
SCO MLR MLR
comp=Z,3µm,21.0s
SCO Scoresbysund 73.29 18 P **P** 21 51 11.0 -0.5
SCO IAMs_20 IAMs_20 22 20 42.4
comp=Z,3µm,21.0s
SCO Scoresbysund 73.29 18 P **P** 21 51 11.6 0.0
SCO Scoresbysund 73.29 18 *i* P P 21 51 04.4 -7.1
SCO IAmb IAmb 21 51 17.3
comp=Z,142nm,2.2s
M22K Willow 73.29 333 IAMs_20 IAMs_20 22 25 43.3
comp=Z,2µm,21.0s
M22K Willow 73.29 333 P **P** 21 51 12.8 +1.1
baz=106
M22K S **S** 22 00 41.5 +1.3
baz=106
MTE Manteigas 73.31 50 *e*P **P** 21 51 13.7 +1.3
MTE *e*S **S** 22 00 41.6 +0.2
MTE *e*LR LR 22 13 58.3
MTE *i* IAMs_20 IAMs_20 22 17 24.9
comp=Z,3µm,22.0s
MTE Manteigas 73.31 50 P **P** 21 51 11.4 -1.0
PCBR Castelo Branco 73.32 51 *e*P **P** 21 51 12.6 +0.3
PCBR *i* IAmb IAmb 21 51 21.7
comp=Z,140nm,1.7s
MCK McKinley 73.34 335 IAMs_20 IAMs_20 22 27 28.5
comp=Z,2µm,21.0s
MCK McKinley 73.34 335 P **P** 21 51 13.5 +1.4
baz=108,SNR=6.2
MCK S **S** 22 00 40.6 -0.2
baz=108
PMRV Marv??o 73.36 51 *e*P **P** 21 51 13.0 +0.4
PMRV *i* IAmb IAmb 21 51 21.6
comp=Z,102nm,1.6s
PMRV *e*S **S** 22 00 40.6 -1.2
PMRV *e*LQ LQ 22 11 12.5
PMRV *e*LR LR 22 13 40.8
PMRV *i* IAMs_20 IAMs_20 22 17 13.6
comp=Z,3µm,22.0s
F25K Christian Rive 73.36 339 P **P** 21 51 13.9 +1.8
baz=112,SNR=40
F25K S **SKiKP** 22 00 43.4 -0.3
baz=112
HOM Homer 73.47 330 IAMs_20 IAMs_20 22 26 07.3
comp=Z,2µm,19.0s
HOM Homer 73.47 330 P **P** 21 51 14.5 +1.7
baz=104
HOM S **SKiKP** 22 00 44.2 +0.3
baz=104
C27K Jago River 73.51 341 IAMs_20 IAMs_20 22 27 42.8
comp=Z,3µm,18.0s
C27K Jago River 73.51 341 P **P** 21 51 14.3 +1.4
baz=114,SNR=27
C27K S **SKiKP** 22 00 43.3 -0.5
baz=114
CAPN Captain Cook N 73.51 331 P **P** 21 51 14.1 +1.1
baz=105
KDAK Kodiak Island 73.52 328 LR LR 22 27 19.0
comp=Z,1µm,18.8s,baz=102,slow=39
KDAK Kodiak Island 73.52 328‖ *e*P **P** 21 51 13.7 +0.6
KDAK pmax pmax
comp=Z,130nm,3.1s
KDAK Kodiak Island 73.52 328 IAMs_20 IAMs_20 22 28 14.6
comp=Z,2µm,19.0s
KDAK Kodiak Island 73.52 328 P **P** 21 51 14.4 +1.3
baz=103
KDAK S **SKiKP** 22 00 43.5 -0.5
baz=103
E25K Arctic Village 73.53 339 IAMs_20 IAMs_20 22 29 52.5
comp=Z,2µm,20.0s
E25K Arctic Village 73.53 339 P **P** 21 51 14.7 +1.6
baz=112,SNR=32
E25K S **SKiKP** 22 00 46.8 +2.9
baz=112
CUT Chulitna 73.54 333 IAMs_20 IAMs_20 22 29 46.7
comp=Z,3µm,18.0s
CUT Chulitna 73.54 333 P **P** 21 51 14.3 +1.2
baz=106
CUT S **SKiKP** 22 00 44.3 +0.4
baz=106
PBAR Barrancos 73.55 52 *e*P **P** 21 51 14.4 +0.7
PBAR *i* IAmb IAmb 21 51 23.2
comp=Z,148nm,1.7s
H24K Noodor Dome 73.58 337 IAMs_20 IAMs_20 22 28 54.7
comp=Z,2µm,19.0s
H24K Noodor Dome 73.58 337 P **P** 21 51 14.9 +1.5
baz=109,SNR=24
H24K S **SKiKP** 22 00 46.8 +2.7
baz=109
NEA2 Nenana 73.66 336 IAMs_20 IAMs_20 22 28 45.9
comp=Z,2µm,18.0s
NEA2 Nenana 73.66 336 P **P** 21 51 15.0 +1.2
baz=108,SNR=11
NEA2 S **S** 22 00 45.1 +0.8
baz=108
IGLA Glengowla, Co 73.68 36 P **P** 21 51 15.4 +1.3
G24K Hadweenzic Riv 73.71 338 IAMs_20 IAMs_20 22 28 55.2
comp=Z,2µm,20.0s
G24K Hadweenzic Riv 73.71 338 P **P** 21 51 15.8 +1.7
baz=110,SNR=24
G24K S **S** 22 00 49.2 +4.4
baz=110
MVO Moncorvo 73.76 49 *e*P **P** 21 51 15.3 +0.3
MVO *i* IAmb IAmb 21 51 24.3
comp=Z,123nm,1.8s
MVO *e*S **S** 22 00 46.5 0.0
MVO *e*LR LR 22 14 10.6
MVO *i* IAMs_20 IAMs_20 22 18 07.5
comp=Z,1µm,20.0s
OHAK Old Harbor 73.78 328 P **P** 21 51 15.3 +0.7
baz=102
OHAK S **S** 22 00 47.6 +1.9
baz=102
L22K Petersville 73.80 333 P **P** 21 51 16.1 +1.3
baz=106
L22K S **S** 22 00 46.1 +0.1
baz=106
TRF Thorofare Moun 73.84 334 IAMs_20 IAMs_20 22 29 54.7
comp=Z,2µm,18.0s
TRF Thorofare Moun 73.84 334 P **P** 21 51 16.5 +1.4
baz=106
TRF S **S** 22 00 46.6 -0.1
baz=106
I23K Minto, Yukon-K 73.95 336 IAMs_20 IAMs_20 22 26 31.5
comp=Z,2µm,22.0s
I23K Minto, Yukon-K 73.95 336 P **P** 21 51 17.0 +1.5
baz=108,SNR=28
I23K S **S** 22 00 48.2 +0.8
baz=108
SKT Skwentna 74.00 333 P **P** 21 51 17.1 +1.2
baz=105,SNR=15
SKT S **S** 22 00 48.2 0.0
baz=105
C26K Camden Bay 74.01 341 P **P** 21 51 17.4 +1.6
baz=113,SNR=34
C26K S **S** 22 00 50.7 +2.7
baz=113
PBRG Braganca 74.03 49 *e*P **P** 21 51 17.3 +0.8
PBRG *i* IAmb IAmb 21 51 25.9
comp=Z,104nm,1.7s
ECAL Calabor 74.04 49 P **P** 21 51 17.6 +1.0
O20K Slope Mountain 74.06 331 P **P** 21 51 17.4 +1.1
baz=103
O20K S **S** 22 00 49.3 +0.2
baz=103
SPCR Spurr Chakacha 74.12 332 P **P** 21 51 17.8 +1.1
baz=104
SPCR S **S** 22 00 49.2 -0.5
baz=104
SII Sitkinak Islan 74.13 327 P **P** 21 51 17.5 +0.8
baz=101
KTH Kantishna Hill 74.14 334 IAMs_20 IAMs_20 22 30 03.7
comp=Z,3µm,18.0s
F24K Squaw Lake 74.14 339 P **P** 21 51 18.3 +1.7
baz=110,SNR=20
F24K S **S** 22 00 52.2 +2.5
baz=110
H23K Yukon River 74.22 337 IAMs_20 IAMs_20 22 30 15.8
comp=Z,2µm,20.0s
H23K Yukon River 74.22 337 P **P** 21 51 18.6 +1.4
baz=108
H23K S **S** 22 00 50.3 -0.4
baz=108
D25K Kavik River 74.26 341 IAMs_20 IAMs_20 22 28 09.5
comp=Z,3µm,18.0s
D25K Kavik River 74.26 341 P **P** 21 51 18.5 +1.2
baz=112,SNR=57
D25K S **S** 22 00 51.7 +0.7
baz=112
P19K Oil Pt 74.26 330 P **P** 21 51 18.9 +1.4
baz=102
P19K S **S** 22 00 51.7 +0.4
baz=102
Q19K Cape Douglas, 74.31 329 IAMs_20 IAMs_20 22 30 00.4
comp=Z,3µm,19.0s
MLY Manley 74.47 336 IAMs_20 IAMs_20 22 29 59.4
comp=Z,2µm,18.0s
MLY Manley 74.47 336 P **P** 21 51 19.6 +1.0
baz=106,SNR=31
MLY S **S** 22 00 53.2 -0.3
baz=106
PPLA Purkeypile 74.52 333 P **P** 21 51 20.0 +0.8
baz=104,SNR=6.4
PPLA S **S** 22 00 53.5 -0.9
baz=104
E24K Your Creek 74.54 339 P **P** 21 51 20.7 +1.6
baz=109
E24K S **S** 22 00 56.7 +2.5
baz=109
CAST Castle Rocks 74.61 334 IAMs_20 IAMs_20 22 27 58.0
comp=Z,2µm,20.0s
CAST Castle Rocks 74.61 334 P **P** 21 51 20.2 +0.8
baz=105,SNR=28
CAST S **S** 22 00 53.0 -2.1
baz=105
G23K Bananza Creek 74.68 338 P **P** 21 51 21.5 +1.7
baz=107,SNR=30
G23K S **S** 22 00 58.0 +2.2
baz=107
M20K Styx River 74.71 332 IAMs_20 IAMs_20 22 27 41.7
comp=Z,2µm,19.0s
M20K Styx River 74.71 332 P **P** 21 51 21.2 +1.1
baz=103
M20K S **S** 22 00 56.0 -0.4
baz=103
CHIR Chirikof Islan 74.79 326 IAMs_20 IAMs_20 22 27 07.2
comp=Z,2µm,20.0s
CHIR Chirikof Islan 74.79 326 P **P** 21 51 21.7 +1.2
baz=99
CHUM Lake Minchumin 74.83 334 P **P** 21 51 21.6 +1.0
baz=104
CHUM S **S** 22 00 56.2 -1.2
baz=104
COLD Coldfoot 74.90 338 P **P** 21 51 22.9 +1.9
baz=107
COLD S **S** 22 01 02.4 +4.2
baz=107
O19K Port Alsworth 74.91 330 IAMs_20 IAMs_20 22 30 13.1
comp=Z,1µm,19.0s
O19K Port Alsworth 74.91 330 P **P** 21 51 22.4 +1.2
baz=102
O19K S **S** 22 00 57.6 -0.8
baz=102
IFR Ifrane 74.92 57 P **P** 21 51 23.1 +1.1
E23K Chandalar 74.94 339 P **P** 21 51 23.1 +1.7
baz=108,SNR=29
E23K S **S** 22 01 03.1 +4.3
baz=108
Q18K Katmai Hardscr 74.95 329 P **P** 21 51 22.3 +0.7
baz=101
Q18K S **S** 22 00 59.3 0.0
baz=101
H22K Ishtalitna Cre 74.97 337 P **P** 21 51 22.5 +1.1
baz=106,SNR=16
H22K S **S** 22 01 00.8 +1.9
baz=106
D24K Happy Valley 75.02 340 P **P** 21 51 22.7 +1.1
baz=109
D24K S **S** 22 01 01.1 +1.8
baz=109
I21K Tanana 75.02 336 IAMs_20 IAMs_20 22 29 53.8
comp=Z,2µm,20.0s
I21K Tanana 75.02 336 P **P** 21 51 22.6 +0.9
baz=105
I21K S **S** 22 01 01.1 +1.6
baz=105
IDGL Inch Island, C 75.03 35 P **P** 21 51 21.0 -0.9
IWEX Carrickbyrne, 75.08 38 P **P** 21 51 22.4 +0.1
IWEX Carrickbyrne, 75.08 38 P **P** 21 51 22.6 +0.3
TOLK Toolik Lake Re 75.11 339 P **P** 21 51 23.7 +1.5
baz=108
TOLK S **S** 22 01 02.1 +1.6
baz=108
N19K Bonanza Creek 75.11 331 IAMs_20 IAMs_20 22 30 21.5
comp=Z,2µm,18.0s
N19K Bonanza Creek 75.11 331 P **P** 21 51 23.4 +0.9
baz=102
N19K S **S** 22 01 00.2 -0.7
baz=102
P18K Big Mountain, 75.20 330 P **P** 21 51 23.6 +0.6
baz=101
P18K S **S** 22 01 00.2 -1.6
baz=101
MD01 Midelt array s 75.22 58 P **P** 21 51 23.9 +0.1
O18K Koktuh Hills 75.28 330 P **P** 21 51 24.4 +1.0
baz=101,SNR=6.7

O18K S S 22 01 01.9 -0.8
baz=101
M19K Big River Lodg 75.30 332 P P 21 51 24.6 +1.2
baz=102
M19K S S 22 01 02.7 0.0
baz=102
G22K Bettles 75.30 338 P P 21 51 25.0 +1.7
baz=106
G22K S S 22 01 05.9 +3.3
baz=106
Q17K Contact Creek 75.34 328 P P 21 51 25.2 +1.3
baz=100
Q17K S S 22 01 04.4 +0.8
baz=100
MDT Midelt 75.34 58 P P 21 51 25.1 +0.7
comp=Z,15nm,1.0s,baz=266,slow=6.4,SNR=20
MDT LR LR 22 20 56.1
comp=Z,1μm,20.2s,baz=286,slow=33
comp=Z,15nm,1.0s
DSB Dublin 75.43 37 P P 21 51 24.4 0.0
DSB Dublin 75.43 37 P P 21 51 23.8 -0.5
DSB IAmb IAmb 21 51 26.1
comp=Z,124nm,1.8s
DSB IAMs_20 IAMs_20 22 17 59.5
comp=Z,2μm,21.0s
DSB Dublin 75.43 37 P P 21 51 25.1 +0.8
DBG Daneborg 75.45 14 P P 21 51 23.4 -0.6
DBG Daneborg 75.45 14 *i* P P 21 51 19.3 -4.7
DBG IAmb IAmb 21 51 28.7
comp=Z,55nm,1.7s
K20K Telida 75.46 334 P P 21 51 25.4 +1.1
baz=103
K20K S S 22 01 02.2 -2.3
baz=103
H21K Melozitna Rive 75.47 336 IAMs_20 IAMs_20 22 28 52.8
comp=Z,1μm,20.0s
H21K Melozitna Rive 75.47 336 P P 21 51 25.5 +1.1
baz=104
H21K S S 22 01 03.2 -1.3
baz=104
R17L Mt. Peulik Vol 75.48 328 P P 21 51 25.8 +1.2
baz=99
R17L S S 22 01 05.7 +0.7
baz=99
ILTH Belurgan, Co L 75.56 36 P P 21 51 24.7 -0.3
ILTH Belurgan, Co L 75.56 36 P P 21 51 25.6 +0.6
EMAL Malaga-Limoner 75.56 54 P P 21 51 27.6 +2.2
L19K White Mountain 75.57 332 IAMs_20 IAMs_20 22 31 16.4
comp=Z,2μm,20.0s
L19K White Mountain 75.57 332 P P 21 51 26.5 +1.5
baz=102
L19K S S 22 01 05.0 -0.8
baz=102
D23K Nanushuk River 75.59 340 P P 21 51 27.1 +2.2
baz=107,SNR=22
D23K S S 22 01 07.3 +1.5
baz=107
J20K Nowinta River 75.68 334 IAMs_20 IAMs_20 22 30 06.3
comp=Z,2μm,19.0s
J20K Nowinta River 75.68 334 P P 21 51 26.5 +0.9
baz=103,SNR=15
J20K S S 22 01 05.6 -1.2
baz=103
F22K John River 75.71 338 P P 21 51 27.2 +1.5
baz=106,SNR=20
F22K S S 22 01 09.4 +2.2
baz=106
PAB San Pablo 75.72 51 P P 21 51 26.4 0.0
PAB pmax pmax
comp=Z,219nm,1.7s
PAB MLR MLR
comp=Z,4μm,22.0s
PAB San Pablo 75.72 51 P P 21 51 26.4 0.0
PAB San Pablo 75.72 51 P P 21 51 28.3 +1.9
N18K Kilae Creek 75.77 331 IAMs_20 IAMs_20 22 30 51.8
comp=Z,2μm,18.0s
N18K Kilae Creek 75.77 331 P P 21 51 27.1 +0.9
baz=100,SNR=6.8
N18K S S 22 01 06.8 -1.2
baz=100
P17K Kvichak River 75.78 329 P P 21 51 27.2 +1.0
baz=100
P17K S S 22 01 06.6 -1.4
baz=100
CCA1 Carnmenellis 75.81 40 P P 21 51 27.9 +1.4
Q16K King Salmon 75.81 329 P P 21 51 28.3 +2.0
baz=99
C23K Itkillik River 75.83 341 P P 21 51 27.7 +1.4
baz=108,SNR=25
C23K S S 22 01 09.4 +1.1
baz=108
M18K Stony River 75.88 332 P P 21 51 27.9 +1.1
baz=101,SNR=18
M18K S S 22 01 08.9 -0.3
baz=101
I20K Naaghedeneel 75.96 335 IAMs_20 IAMs_20 22 27 55.6
comp=Z,2μm,21.0s
I20K Naaghedeneel 75.96 335 P P 21 51 28.2 +1.1
baz=103
I20K S S 22 01 09.6 -0.2
baz=103
G21K Allakaket 75.96 337 IAMs_20 IAMs_20 22 28 57.7
comp=Z,2μm,20.0s
G21K Allakaket 75.96 337 P P 21 51 29.1 +1.9
baz=104,SNR=20
G21K S S 22 01 11.8 +1.8
baz=104
ESDC Sonseca Array 76.02 51 P P 21 51 28.4 +0.4
comp=Z,20nm,0.9s,baz=274,slow=4.7,SNR=61
ESDC S S 22 01 06.9 -4.8
comp=Z,0.5nm,1.1s,baz=279,slow=5.6,SNR=1.7
ESDC LR LR 22 19 11.4
comp=Z,3μm,21.9s,baz=266,slow=31
comp=Z,20nm,0.9s
ESDC Sonseca Array 76.02 51 P P 21 51 28.3 +0.2
SMAI San Martin Ant 76.08 174 P P 21 51 28.5 +0.9
F21K Alatna River 76.13 338 IAMs_20 IAMs_20 22 30 18.0
comp=Z,2μm,20.0s
F21K Alatna River 76.13 338 P P 21 51 29.8 +1.7
baz=104,SNR=27
F21K S S 22 01 14.4 +2.6
baz=104
O17K Koliganek Bris 76.20 330 P P 21 51 29.8 +1.2
baz=99
O17K S S 22 01 12.4 -0.3
baz=99
J19K Poorman 76.27 334 IAMs_20 IAMs_20 22 30 44.0
comp=Z,2μm,18.0s
J19K Poorman 76.27 334 P P 21 51 29.7 +0.8
baz=102
J19K S S 22 01 11.1 -2.3
baz=102
H20K Anotleneega Mo 76.27 336 P P 21 51 29.9 +0.9
baz=102
H20K S S 22 01 12.8 -0.6
baz=102
RSBS Rosebush, Pemb 76.28 38 *e*P P 21 51 29.4 +0.2
DBIC Dimbokro 76.35 85 P P 21 51 30.4 0.0
comp=Z,69nm,1.1s,baz=278,slow=6.5,SNR=24
DBIC S S 22 01 10.9 -5.1
comp=Z,5.5nm,1.1s,baz=216,slow=15,SNR=2.2
DBIC LR LR 22 22 55.2
comp=Z,2μm,20.2s,baz=274,slow=34
comp=Z,69nm,1.1s
DBIC Dimbokro 76.35 85 ⇑P P 21 51 31.0 +0.7
DBIC Dimbokro 76.35 85 P P 21 51 30.1 -0.3
DBIC Dimbokro 76.35 85 P P 21 51 31.1 +0.7
HTL Hartland 76.35 39 P P 21 51 30.9 +1.3
N17K Nushagak Hills 76.37 331 IAMs_20 IAMs_20 22 28 30.8
comp=Z,2μm,21.0s
N17K Nushagak Hills 76.37 331 P P 21 51 30.6 +1.1
baz=99,SNR=6.3
N17K S S 22 01 13.6 -1.0
baz=99
CHGN Chignik 76.41 326 P P 21 51 31.2 +1.4
baz=97
L18K Granite Mounta 76.42 332 IAMs_20 IAMs_20 22 28 12.9
comp=Z,2μm,21.0s
L18K Granite Mounta 76.42 332 P P 21 51 31.3 +1.5
baz=100
L18K S S 22 01 13.9 -1.2
baz=100
P16K Nushagak River 76.55 329 IAMs_20 IAMs_20 22 31 32.5
comp=Z,1μm,19.0s
P16K Nushagak River 76.55 329 P P 21 51 31.7 +1.2
baz=98
P16K S S 22 01 15.3 -1.2
baz=98
UCM Universidad Co 76.59 50 P P 21 51 32.7 +1.4
E21K Killik River 76.61 339 IAMs_20 IAMs_20 22 29 30.8
comp=Z,2μm,18.0s
E21K Killik River 76.61 339 P P 21 51 32.1 +1.3
baz=104
E21K S S 22 01 17.3 +0.3
baz=104
IOMK Kirk Michael 76.62 36 *e*P P 21 51 31.5 +0.4
IOMK IAmb IAmb 21 51 33.9
comp=Z,9.8nm,1.0s
M17K Holitna River 76.63 331 IAMs_20 IAMs_20 22 31 31.6
comp=Z,2μm,19.0s
M17K Holitna River 76.63 331 P P 21 51 32.4 +1.3
baz=99
M17K S S 22 01 16.0 -1.4
baz=99
J18K Innoko River 76.65 334 IAMs_20 IAMs_20 22 32 01.0
comp=Z,2μm,18.0s
J18K Innoko River 76.65 334 P P 21 51 32.5 +1.4
baz=100
J18K S S 22 01 17.3 -0.3
baz=100
O16K Kokwok River B 76.68 329 IAMs_20 IAMs_20 22 31 32.0
comp=Z,2μm,18.0s
O16K Kokwok River B 76.68 329 P P 21 51 32.5 +1.2
baz=98
O16K S S 22 01 16.8 -1.2
baz=98
LPW Lampeter 76.71 38 *e*P P 21 51 31.5 -0.1
LPW IAmb IAmb 21 51 35.0
comp=Z,14nm,1.1s
PGBU Glenifferbraes 76.83 34 *e*P P 21 51 31.8 -0.4
DAG Danmarks Havn 76.85 12 P P 21 51 31.3 -0.7
DAG Danmarks Havn 76.85 12 *i* P P 21 51 31.0 -1.0
DAG IAmb IAmb 21 51 36.9
comp=Z,94nm,1.8s
B22K Teshekpuk Lake 76.89 341 P P 21 51 33.4 +1.1
baz=105
B22K S S 22 01 21.6 +1.7
baz=105
NEWG New Galloway 76.90 35 *e*P P 21 51 32.3 -0.4
NEWG IAmb IAmb 21 51 38.9
comp=Z,14nm,0.8s
CNBA Chernabura Isl 76.91 325 IAMs_20 IAMs_20 22 27 10.3
comp=Z,2μm,19.0s
CHNA Chernabura Isl 76.91 325 P P 21 51 34.2 +1.5
baz=96
CHNA S S 22 01 22.1 +1.5
baz=96
H19K Roundabout Mou 76.92 336 IAMs_20 IAMs_20 22 32 03.1
comp=Z,2μm,18.0s
H19K Roundabout Mou 76.92 336 P P 21 51 34.3 +1.8
baz=101,SNR=19
H19K S S 22 01 21.0 +0.6
baz=101
F20K Avaraart Lake 76.94 337 IAMs_20 IAMs_20 22 31 12.6
comp=Z,2μm,18.0s
F20K Avaraart Lake 76.94 337 P P 21 51 34.6 +2.0
baz=102
F20K S S 22 01 23.1 +2.5
baz=102
EAB Aberfoyle 76.95 34 *e*P P 21 51 32.9 -0.1
EAB IAmb IAmb 21 51 38.4
comp=Z,13nm,1.0s
GCSA Galena City Sc 76.95 335 P P 21 51 34.2 +1.4
baz=100
GCSA S S 22 01 20.7 0.0
baz=100
S14K Fog Glacier 77.04 326 P P 21 51 35.0 +1.5
baz=96
S14K S S 22 01 24.3 +2.0
baz=96
VNFG Fog Glacier, M 77.04 326 IAMs_20 IAMs_20 22 31 28.6
comp=Z,2μm,19.0s
C21K Knifeblade Rid 77.06 339 P P 21 51 35.1 +1.8
baz=104
C21K S S 22 01 22.8 +0.9
baz=104
B21K Ikpikpuk River 77.11 340 IAMs_20 IAMs_20 22 30 32.1
comp=Z,2μm,19.0s
B21K Ikpikpuk River 77.11 340 P P 21 51 34.8 +1.2
baz=104
B21K S S 22 01 22.8 +0.5
baz=104
N16K Nishlik Lake 77.14 330 P P 21 51 35.0 +1.1
baz=98
N16K S S 22 01 22.9 -0.1
baz=98
INVG Invergeldie, C 77.14 34 *e*P P 21 51 33.5 -0.5
INVG IAmb IAmb 21 51 42.3
comp=Z,15nm,1.1s
L17K Donlin 77.15 332 P P 21 51 35.2 +1.3
baz=99
L17K S S 22 01 20.4 -2.7
baz=99
K17K Iditarod 77.24 333 IAMs_20 IAMs_20 22 32 26.6
comp=Z,2μm,20.0s
K17K Iditarod 77.24 333 P P 21 51 35.7 +1.3
baz=99
K17K S S 22 01 21.8 -2.2
baz=99
G19K Purcell Mounta 77.30 336 IAMs_20 IAMs_20 22 30 08.0
comp=Z,2μm,18.0s
G19K Purcell Mounta 77.30 336 P P 21 51 36.0 +1.3
baz=101,SNR=20
G19K S S 22 01 25.5 +1.0
baz=101
FOEL Foel Wylfa 77.30 38 P P 21 51 34.8 -0.2
M16K Timber Creek 77.30 331 IAMs_20 IAMs_20 22 28 29.4
comp=Z,2μm,20.0s
M16K Timber Creek 77.30 331 P P 21 51 36.4 +1.6
baz=98
M16K S S 22 01 25.3 +0.5
baz=98
MCH1 Michaelchurch 77.36 38 *e*P P 21 51 34.8 -0.5
MCH1 IAmb IAmb 21 51 40.9
comp=Z,20nm,1.1s
E20K Nigu River 77.37 338 P P 21 51 36.8 +1.7
baz=102,SNR=13
E20K S S 22 01 26.6 +1.3
baz=102
SDPT Sand Point 77.46 325 P P 21 51 37.6 +1.9
baz=95
SDPT S S 22 01 28.8 +2.2
baz=95
MONM Monmouth 77.47 39 *e*P P 21 51 35.7 -0.2
MONM IAmb IAmb 21 51 42.3
comp=Z,18nm,0.8s
HLM1 Long Mynd 77.47 38 *e*P P 21 51 35.6 -0.4
HLM1 IAmb IAmb 21 51 41.7
comp=Z,16nm,1.0s
KESW Keswick, Cumbr 77.50 36 P P 21 51 36.7 +0.7
O15K Ungalikthiuk R 77.50 329 IAMs_20 IAMs_20 22 32 10.8
comp=Z,2μm,19.0s
O15K Ungalikthiuk R 77.50 329 P P 21 51 36.3 +0.4
baz=97
O15K S S 22 01 24.0 -3.0
baz=97
ESK Eskdalemuir 77.51 35 P P 21 51 35.7 -0.3
ESK pmax pmax
comp=Z,117nm,1.4s
ESK MLR MLR
comp=Z,2μm,20.0s
ESK Eskdalemuir 77.51 35 P P 21 51 35.7 -0.3
ESK IAmb IAmb 21 51 43.7
comp=Z,117nm,1.4s
ESK Eskdalemuir 77.51 35 IAMs_20 IAMs_20 22 25 21.1
comp=Z,2μm,20.0s
ESK Eskdalemuir 77.51 35 P P 21 51 36.6 +0.5
ESK Eskdalemuir 77.51 35 *e*P P 21 51 35.5 -0.6
ESK IAmb IAmb 21 51 39.5
comp=Z,11nm,0.8s
EKA Eskdalemuir Ar 77.53 35 P P 21 51 35.6 -0.6
comp=Z,9.9nm,0.7s,baz=261,slow=5.6,SNR=28
EKA LR LR 22 23 29.7
comp=Z,1μm,18.4s,baz=264,slow=34
comp=Z,9.9nm,0.7s
EKA Eskdalemuir Ar 77.53 35 P P 21 51 35.6 -0.6
A22K Sinclair Lake 77.56 341 P P 21 51 37.3 +1.2
baz=104
A22K S S 22 01 27.5 +0.3
baz=104
JMI Jan Mayen 77.56 19 *e*P P 21 51 37.1 +1.1
JMI IAmb IAmb 21 51 41.6
comp=Z,216nm,1.8s
JMI *e*PP PP 21 54 31.5 +0.7
JMI *e*S S 22 01 28.8 +1.6
JMI IAMs_20 IAMs_20 22 17 45.6
E19K Redstone River 77.60 338 P P 21 51 37.5 +1.2
baz=101
E19K S S 22 01 29.3 +1.6
baz=101
D20K Etivluk River 77.61 339 P P 21 51 38.0 +1.6
baz=102,SNR=9.9
D20K S S 22 01 29.9 +2.0
baz=102
L16K Owhat River 77.64 332 IAMs_20 IAMs_20 22 32 14.3
comp=Z,2μm,19.0s
L16K Owhat River 77.64 332 P P 21 51 38.3 +1.7
baz=98,SNR=20
L16K S S 22 01 28.6 +0.2
baz=98
H18K Honhosa River 77.65 335 IAMs_20 IAMs_20 22 32 39.3
comp=Z,2μm,19.0s
H18K Honhosa River 77.65 335 P P 21 51 38.5 +1.9
baz=99,SNR=17
H18K S S 22 01 30.1 +1.7
baz=99
JMIC Jan Mayen 77.65 19 LR LR 22 23 12.5
comp=Z,1μm,21.4s,baz=258,slow=34
JMIC Jan Mayen 77.65 19 *e*P P 21 51 37.5 +1.0
JMIC IAmb IAmb 21 51 42.0
comp=Z,223nm,2.0s
JMIC *e*PP PP 21 54 32.1 +0.7
JMIC *e*S S 22 01 29.9 +1.7
JMIC IAMs_20 IAMs_20 22 22 31.3
comp=Z,1μm,21.1s
JNW Jan Mayen West 77.68 19 *e*P P 21 51 37.8 +1.1
JNW IAmb IAmb 21 51 42.1
comp=Z,443nm,2.5s
JNW *e*PP PP 21 54 31.9 +0.2
JNW *e*S S 22 01 28.9 +0.4
JNW IAMs_20 IAMs_20 22 22 43.6
comp=Z,1μm,20.5s
J17K VABM Dome 77.69 333 IAMs_20 IAMs_20 22 29 01.5
comp=Z,2μm,19.0s
J17K VABM Dome 77.69 333 P P 21 51 38.8 +1.8
baz=98,SNR=7.3
J17K S S 22 01 29.6 +0.8
baz=98
F19K Shaleruckik Mo 77.69 337 IAMs_20 IAMs_20 22 30 02.4
comp=Z,2μm,20.0s
F19K Shaleruckik Mo 77.69 337 P P 21 51 37.9 +1.0
baz=100,SNR=18
F19K S S 22 01 30.1 +1.4
baz=100
MCD Coleburn Disti 77.69 33 *e*P P 21 51 36.6 -0.4
MCD IAmb IAmb 21 51 39.7
comp=Z,27nm,1.0s
JNE Jan Mayen East 77.72 19 *e*P P 21 51 37.9 +1.0
JNE IAmb IAmb 21 51 42.1
comp=Z,531nm,2.5s
JNE *e*PP PP 21 54 31.7 -0.3
JNE *e*S S 22 01 29.9 +1.1
JNE IAMs_20 IAMs_20 22 22 45.1
comp=Z,1μm,19.5s
N15K Kwethluk River 77.75 330 IAMs_20 IAMs_20 22 32 28.3
comp=Z,1μm,19.0s
N15K Kwethluk River 77.75 330 P P 21 51 38.9 +1.5
baz=97
N15K S S 22 01 29.0 -0.7
baz=97
STRD Stroud 77.86 39 *e*P P 21 51 37.9 -0.2
STRD IAmb IAmb 21 51 47.5
comp=Z,20nm,0.8s
G18K Tagagawik 77.88 336 IAMs_20 IAMs_20 22 32 49.5
comp=Z,2μm,19.0s
G18K Tagagawik 77.88 336 P P 21 51 39.6 +1.6
baz=99,SNR=26
G18K S S 22 01 33.8 +2.9
baz=99
STNC Stoke 77.92 37 P P 21 51 39.5 +1.1
DRUM Mains of Drumt 78.05 33 P P 21 51 39.5 +0.5
B20K Meade River 78.06 340 P P 21 51 40.7 +1.8
baz=101
B20K S S 22 01 33.6 +1.0
baz=101
M15K Kasigluk River 78.10 330 P P 21 51 41.2 +1.9
baz=96,SNR=6.6
M15K S S 22 01 33.6 +0.2
baz=96
D19K Kuna River 78.11 339 IAMs_20 IAMs_20 22 32 14.5
comp=Z,3μm,20.0s
D19K Kuna River 78.11 339 P P 21 51 41.1 +1.9
baz=100
D19K S S 22 01 34.6 +1.2
baz=100
EMUR La Murta 78.12 53 P P 21 51 40.5 +0.6
A21K Barrow 78.15 341 P P 21 51 40.6 +1.2
baz=102
A21K S S 22 01 33.4 -0.1
baz=102
EDMD Edmundbyers 78.18 36 P P 21 51 40.2 +0.4
EDMD Edmundbyers 78.18 36 *e*P P 21 51 39.2 -0.6
EDMD IAmb IAmb 21 51 42.2
comp=Z,10.0nm,0.9s
LBWR Ladybower, Pea 78.23 37 P P 21 51 41.1 +1.0
LBWR Ladybower, Pea 78.23 37 *e*P P 21 51 39.9 -0.2
LBWR IAmb IAmb 21 51 43.5
comp=Z,24nm,0.9s
O14K Tigyukauivet M 78.25 329 IAMs_20 IAMs_20 22 32 14.5
comp=Z,2μm,19.0s
O14K Tigyukauivet M 78.25 329 P P 21 51 41.2 +1.1
baz=95
O14K S S 22 01 34.1 -0.8
baz=95
H17K Granite Mounta 78.26 335 IAMs_20 IAMs_20 22 29 16.6
comp=Z,2μm,20.0s
H17K Granite Mounta 78.26 335 P P 21 51 42.0 +1.9
baz=98
H17K S S 22 01 37.3 +2.3
baz=98
J16K Anvik River 78.36 333 IAMs_20 IAMs_20 22 29 38.1
comp=Z,2μm,19.0s
J16K Anvik River 78.36 333 P P 21 51 43.1 +2.4
baz=97
J16K S S 22 01 39.0 +3.0
baz=97
F18K Selawik 78.39 337 P P 21 51 42.2 +1.4
baz=98,SNR=5.7
F18K S S 22 01 38.0 +1.8
baz=98
CWF Charnwood Fore 78.44 38 P P 21 51 41.3 0.0
CWF Charnwood Fore 78.44 38 *e*P P 21 51 40.5 -0.8
CWF IAmb IAmb 21 51 49.5
comp=Z,11nm,1.1s
I17K Unalakleet 78.47 334 IAMs_20 IAMs_20 22 31 42.1
comp=Z,2μm,18.0s
I17K Unalakleet 78.47 334 P P 21 51 43.5 +2.3
baz=97
I17K S S 22 01 40.6 +3.4
baz=97
N14K Kuskokwak Cree 78.52 330 IAMs_20 IAMs_20 22 32 53.7
comp=Z,1μm,18.0s
N14K Kuskokwak Cree 78.52 330 P P 21 51 43.2 +1.6
baz=95
N14K S S 22 01 38.0 +0.2
baz=95
ATE Arette 78.55 48 P P 21 51 43.2 +1.0
L15K Ungalak Mounta 78.59 331 P P 21 51 44.0 +2.1
baz=96,SNR=7.7
L15K S S 22 01 41.0 +2.5
baz=96
G17K Kiwalik Mounta 78.65 335 P P 21 51 44.2 +2.0
baz=97,SNR=11
G17K S S 22 01 41.6 +2.5
baz=97
K15K Wolf Creek Mou 78.67 332 IAMs_20 IAMs_20 22 32 54.5
comp=Z,2μm,19.0s
K15K Wolf Creek Mou 78.67 332 P P 21 51 44.3 +1.9
baz=96
K15K S S 22 01 42.9 +3.5
baz=96
M14K Bethel 78.73 330 IAMs_20 IAMs_20 22 29 33.2
comp=Z,2μm,19.0s
M14K Bethel 78.73 330 P P 21 51 44.9 +2.1
baz=95,SNR=6.1
M14K S S 22 01 42.3 +2.2
baz=95
C19K Lookout Ridge 78.74 339 P P 21 51 45.2 +2.5
baz=99
C19K S S 22 01 42.6 +2.5
baz=99
GDLE Glaisdale, N Y 78.82 36 *e*P P 21 51 43.5 +0.1

GDLE IAmb IAmb 21 51 46.6
comp=Z,36nm,1.0s
E18K Tukpahlearik C 78.87 337 IAMs_20 IAMs_20 22 28 15.7
comp=Z,1µm,22.0s
E18K Tukpahlearik C 78.87 337 P **P** **21 51 45.0 +1.6**
baz=98
E18K S **S** **22 01 41.9 +0.4**
baz=98
F17K Baldwin Pennin 79.00 336 IAMs_20 IAMs_20 22 33 30.1
comp=Z,1µm,20.0s
F17K Baldwin Pennin 79.00 336 P **P** **21 51 45.5 +1.4**
baz=97
F17K S **S** **22 01 45.2 +2.4**
baz=97
L14K Kuka Creek 79.13 331 IAMs_20 IAMs_20 22 30 14.8
comp=Z,1µm,19.0s
L14K Kuka Creek 79.13 331 P **P** **21 51 46.5 +1.7**
baz=94
L14K S **S** **22 01 44.7 +0.4**
baz=94
NOR Nord 79.18 8 P **P** **21 51 44.3 -0.6**
NOR Nord 79.18 8 *i* P P 21 51 38.3 -6.6
NOR IAmb IAmb 21 51 51.0
comp=Z,98nm,1.7s
H16K Elim 79.22 334 P **P** **21 51 46.7 +1.4**
baz=96
H16K S **S** **22 01 47.4 +2.2**
baz=96
C18K Utukok River 79.25 339 P **P** **21 51 47.3 +1.7**
baz=97
C18K S **S** **22 01 45.9 +0.3**
baz=97
E17K Hotham Inlet 79.31 337 P **P** **21 51 47.0 +1.3**
baz=96,SNR=13
E17K S **S** **22 01 47.4 +1.3**
baz=96
M13K Dall Lake 79.39 330 IAMs_20 IAMs_20 22 32 58.6
comp=Z,1µm,20.0s
M13K Dall Lake 79.39 330 P **P** **21 51 48.4 +2.0**
baz=94
M13K S **S** **22 01 49.0 +1.9**
baz=94
A19K Wainwright 79.42 340 P **P** **21 51 48.3 +2.0**
baz=98
A19K S **S** **22 01 48.9 +1.9**
baz=98
J14K Nanvaranak Lak 79.64 332 IAMs_20 IAMs_20 22 31 31.3
comp=Z,1µm,20.0s
J14K Nanvaranak Lak 79.64 332 P **P** **21 51 50.2 +2.5**
baz=94,SNR=6.9
J14K S **S** **22 01 52.8 +3.1**
baz=94
RDOG Red Dog Mine 79.82 338 P **P** **21 51 50.0 +1.4**
baz=96
D17K Noatak River 79.85 337 P **P** **21 51 50.6 +1.9**
baz=95
D17K S **S** **22 01 53.2 +1.4**
baz=95
C17K DeLong Mountai 79.96 338 P **P** **21 51 50.9 +1.5**
baz=95
C17K S **S** **22 01 53.3 +0.3**
baz=95
CEST Esterri de Car 79.99 48 P **P** **21 51 49.6 -0.5**
CEST IAmb IAmb 21 51 53.5
comp=Z,181nm,1.7s
G15K Niukluk 80.02 335 P **P** **21 51 51.8 +2.2**
baz=94
G15K S **S** **22 01 56.7 +3.1**
baz=94
K13K Kusilvak Mount 80.11 332 IAMs_20 IAMs_20 22 32 26.6
comp=Z,2µm,20.0s
K13K Kusilvak Mount 80.11 332 P **P** **21 51 52.6 +2.3**
baz=93
K13K S **S** **22 01 56.5 +1.8**
baz=93
F15K North Star Dit 80.32 335 IAMs_20 IAMs_20 22 34 16.9
comp=Z,2µm,20.0s
F15K North Star Dit 80.32 335 P **P** **21 51 53.6 +2.3**
baz=94
F15K S **S** **22 02 00.0 +3.2**
baz=94
ANM Nome 80.56 334 IAMs_20 IAMs_20 22 34 27.4
comp=Z,2µm,19.0s
ANM Nome 80.56 334 P **P** **21 51 54.6 +2.0**
baz=93
ANM S **S** **22 02 01.6 +2.1**
baz=93
CLF Chambon-Foret 80.63 43 P **P** **21 51 53.7 +0.3**
CLF Chambon-Foret 80.63 43 P **P** **21 51 54.2 +0.9**
C16K Lisburne Hills 80.75 338 P **P** **21 51 55.4 +1.9**
baz=93
C16K S **S** **22 02 03.7 +2.6**
baz=93
M11K Mekoryuk 80.80 330 IAMs_20 IAMs_20 22 27 33.0
comp=Z,1µm,21.0s
M11K Mekoryuk 80.80 330 P **P** **21 51 56.4 +2.4**
baz=91
M11K S **S** **22 02 04.7 +2.8**
baz=91
UNV Unalaska Valle 80.90 323 P **P** **21 51 56.8 +2.2**
baz=90
UNV S **S** **22 02 05.7 +2.5**
baz=90
F14K Arctic Creek 81.00 335 P **P** **21 51 57.4 +2.4**
baz=92
F14K S **S** **22 02 08.2 +4.2**
baz=92
ACRG Accra 81.06 85 P **P** **21 51 55.8 -0.5**
ACRG IAmb IAmb 21 52 03.7
comp=Z,105nm,1.2s
ACRG Accra 81.06 85 P **P** **21 51 56.7 +0.4**
SAF Saint Jean de 81.19 48 P **P** **21 51 58.1 +1.6**
EJON La Jonquera 81.20 48 P **P** **21 51 58.5 +1.9**
RAR Rarotonga 81.49 247 LR LR 22 20 12.5
comp=Z,3µm,18.0s,baz=76,slow=30
TNA Tin City 81.67 335 IAMs_20 IAMs_20 22 30 33.7
comp=Z,2µm,20.0s
TNA Tin City 81.67 335 P **P** **21 52 00.6 +2.1**
baz=90
TNA S **S** **22 02 14.9 +4.0**
baz=90
UCC Uccle 81.94 40 P **P** **21 51 59.8 -0.4**
UCC pmax pmax
comp=Z,211nm,2.0s
UCC Uccle 81.94 40 P **P** **21 51 59.8 -0.4**
UCC Uccle 81.94 40 *d*P **P** **21 52 00.0 -0.2**
comp=Z,17nm,1.7s
UCC *d*PP **PP** **21 55 05.1 -2.5**
UCC Uccle 81.94 40 P **P** **21 52 00.3 0.0**
SUE Sulen 81.95 29 *e*P **P** **21 51 59.9 -0.1**
SUE IAmb IAmb 21 52 05.5
comp=Z,278nm,2.2s
SUE *e*PP **PP** **21 55 06.5 -0.9**
SUE *e*S **S** **22 02 15.5 +1.7**
SUE IAMs_20 IAMs_20 22 20 06.1
comp=Z,1µm,25.1s
FOO Floro 82.08 29 *e*P **P** **21 52 01.4 +0.7**
FOO IAmb IAmb 21 52 06.3
comp=Z,141nm,1.8s
FOO *e*PP **PP** **21 55 08.5 +0.1**
FOO *e*S **S** **22 02 16.6 +1.5**
FOO IAMs_20 IAMs_20 22 25 12.1
comp=Z,2µm,19.7s
DOU Dourbes 82.11 40 *d*P **P** **21 52 01.2 0.0**
comp=Z,20nm,1.5s
TORD Torodi Ar. Bea 82.12 78 P **P** **21 52 02.2 +0.3**
comp=Z,15nm,0.6s,baz=291,slow=3.4,SNR=80
TORD S **S** **22 02 12.4 -5.0**
comp=Z,0.6nm,1.0s,baz=293,slow=0.6,SNR=2.0
TORD LR LR 22 27 28.1
comp=Z,2µm,20.9s,baz=264,slow=35
comp=Z,15nm,0.6s
TORD Torodi Ar. Bea 82.12 78 P **P** **21 52 01.5 -0.5**
ASK Askoy 82.17 30 *e*P **P** **21 52 01.2 0.0**
ASK IAmb IAmb 21 52 06.6
comp=Z,502nm,2.4s
ASK *e*PP **PP** **21 55 10.1 +0.9**
ASK *e*S **S** **22 02 18.2 +2.1**
ASK IAMs_20 IAMs_20 22 27 40.6
comp=Z,3µm,17.8s
BMRD Maredsous 82.22 40 *d*P **P** **21 52 01.6 -0.1**
comp=Z,15nm,1.7s
KMY Karmoy 82.22 31 *e*P **P** **21 52 01.1 -0.4**
KMY IAmb IAmb 21 52 06.3
comp=Z,117nm,1.5s
KMY *e*PP **PP** **21 55 10.3 +0.6**
KMY *e*S **S** **22 02 18.4 +1.6**

KMY IAMs_20 IAMs_20 22 20 37.7
comp=Z,2µm,21.0s
BER Bergen 82.24 30 *e*P **P** **21 52 01.7 +0.1**
BER IAmb IAmb 21 52 08.2
comp=Z,106nm,1.5s
BER *e*PP **PP** **21 55 09.9 +0.1**
BER *e*S **S** **22 02 18.5 +1.6**
BER IAMs_20 IAMs_20 22 27 42.0
comp=Z,2µm,18.6s
SSB Saint Sauveur 82.28 45 IAMs_20 IAMs_20 22 24 19.4
comp=Z,2µm,20.0s
SSB Saint Sauveur 82.28 45 P **P** **21 52 03.1 +0.9**
BGES Gesves 82.42 40 *d*P **P** **21 52 03.5 +0.8**
comp=Z,22nm,1.5s
RCHB Rochefort 82.52 40 *d*P **P** **21 52 03.2 -0.1**
comp=Z,12nm,1.3s
RCHB Rochefort 82.52 40 P **P** **21 52 03.5 +0.2**
BCLA Clavier 82.56 40 *d*P **P** **21 52 03.5 0.0**
comp=Z,15nm,1.5s
HYA Hoyanger 82.64 29 *e*P **P** **21 52 03.8 +0.2**
HYA IAmb IAmb 21 52 09.1
comp=Z,389nm,2.4s
HYA *e*PP **PP** **21 55 16.6 +3.6**
HYA *e*S **S** **22 02 22.9 +2.0**
HYA IAMs_20 IAMs_20 22 26 44.3
comp=Z,2µm,19.2s
BSTI Sart Tilman 82.72 40 *d*P **P** **21 52 04.7 +0.4**
comp=Z,6.3nm,1.7s
BEBN Eben Emael 82.78 40 *d*P **P** **21 52 04.8 +0.2**
OPLO Oploo 82.82 39 P **P** **21 52 06.4 +1.6**
BLS5 Blasjo 82.83 31 *e*P **P** **21 52 05.2 +0.4**
BLS5 IAmb IAmb 21 52 11.8
comp=Z,113nm,1.3s
BLS5 *e*PP **PP** **21 55 14.3 -0.5**
BLS5 *e*S **SKSac** **22 02 25.0 -1.4**
BLS5 IAMs_20 IAMs_20 22 20 13.9
comp=Z,2µm,25.5s
ODD1 Odda 82.90 31 *e*P **P** **21 52 05.8 +0.7**
ODD1 IAmb IAmb 21 52 10.9
comp=Z,395nm,2.3s
ODD1 *e*PP **PP** **21 55 15.3 -0.1**
ODD1 *e*S **S** **22 02 25.3 +1.4**
ODD1 *e*SS **SS** **22 07 46.3 -0.2**
ODD1 IAMs_20 IAMs_20 22 20 44.8
comp=Z,2µm,24.3s
HGN Heimansgroeve 82.94 40 P **P** **21 52 05.6 +0.2**
SPIA Saint Paul Isl 82.95 327 IAMs_20 IAMs_20 22 35 22.0
comp=Z,2µm,18.0s
SPIA Saint Paul Isl 82.95 327 P **P** **21 52 07.3 +2.0**
baz=87
AKN Aaknes 82.98 28 *e*P **P** **21 52 05.6 +0.1**
AKN IAmb IAmb 21 52 12.3
comp=Z,56nm,1.3s
AKN *e*S **S** **22 02 25.3 +0.7**
AKN *e*SS **SS** **22 07 49.9 +2.3**
AKN IAMs_20 IAMs_20 22 19 14.3
comp=Z,2µm,26.2s
MEM Membach 83.00 40 *d*P **P** **21 52 05.7 0.0**
comp=Z,21nm,1.5s
MEM Membach 83.00 40 P **P** **21 52 06.0 +0.3**
BHOU Houvegnez 83.01 40 *d*P **P** **21 52 06.2 +0.4**
comp=Z,23nm,1.5s
RUSF Rustrel 83.02 47 P **P** **21 52 08.3 +2.2**
BTNL Ternell 83.08 40 *d*P **P** **21 52 06.2 0.0**
comp=Z,9.2nm,1.3s
WLF Walferdange 83.14 41 P **P** **21 52 06.6 +0.1**
WLF pmax pmax
comp=Z,161nm,1.5s
WLF MLR MLR
comp=Z,4µm,19.0s
WLF Walferdange 83.14 41 P **P** **21 52 06.6 +0.1**
WLF Walferdange 83.14 41 *d*P **P** **21 52 07.0 +0.5**
comp=Z,29nm,1.1s
WLF Walferdange 83.14 41 *e*P **P** **21 52 07.1 +0.6**
comp=Z,170nm,1.7s,baz=277,slow=5.0
WLF Walferdange 83.14 41 P **P** **21 52 07.2 +0.7**
MOL Molde 83.22 28 *e*P **P** **21 52 07.6 +1.0**
MOL IAmb IAmb 21 52 12.2
comp=Z,361nm,2.8s
MOL *e*PP **PP** **21 55 17.8 0.0**
MOL *e*S **SKSac** **22 02 28.4 -0.3**
MOL *e*SS **SS** **22 07 53.6 +2.6**
MOL IAMs_20 IAMs_20 22 20 46.9
comp=Z,2µm,29.3s
GAMB Gambell 83.34 333 IAMs_20 IAMs_20 22 36 22.8
comp=Z,2µm,19.0s
GAMB Gambell 83.34 333 P **P** **21 52 09.4 +2.2**
baz=87
GAMB S **SKSac** **22 02 30.9 +1.5**
baz=87
GIMEL St. Georges / 83.41 44 P **P** **21 52 08.7 +0.6**
WTSB Winterswijk 83.41 39 P **P** **21 52 08.2 +0.4**
KBS Kingsbay 83.52 11 *c i* P **P** **21 52 08.8 +0.8**
KBS Kingsbay 83.52 11 *e*P **P** **21 52 09.1 +1.1**
KBS IAmb IAmb 21 52 15.5
comp=Z,87nm,1.5s
KBS *e*SKSac **SKSac** **22 02 30.0 -0.3**
KBS *e*SS **SS** **22 07 58.3 +3.4**
KBS IAMs_20 IAMs_20 22 36 57.8
comp=Z,3µm,17.1s
KBS Kingsbay 83.52 11 P **P** **21 52 08.4 +0.4**
KBS IAmb IAmb 21 52 15.9
comp=Z,78nm,1.4s
KBS Kingsbay 83.52 11 P **P** **21 52 09.8 +1.8**
KBS Kingsbay 83.52 11 *i* P **P** **21 52 03.2 -4.8**
SKAR Skarslia 83.69 30 *e*P **P** **21 52 09.4 +0.2**
SKAR IAmb IAmb 21 52 16.1
comp=Z,494nm,2.6s
SKAR *e*PP **PP** **21 55 22.7 +0.9**
SKAR *e*SKSac **SKSac** **22 02 32.1 0.0**
SKAR *e*SS **SS** **22 08 00.9 +2.7**
SKAR IAMs_20 IAMs_20 22 28 38.5
comp=Z,2µm,17.6s
BUG Bochum--Univer 83.74 39 *e*P **P** **21 52 09.8 +0.3**
comp=Z,132nm,1.6s,baz=277,slow=5.0
BUG Bochum--Univer 83.74 39 P **P** **21 52 09.9 +0.4**
ECH Echery 83.90 42 P **P** **21 52 10.1 -0.4**
ECH pmax pmax
comp=Z,118nm,1.4s
ECH MLR MLR
comp=Z,2µm,19.0s
ECH Echery 83.90 42 P **P** **21 52 10.1 -0.4**
ECH IAMs_20 IAMs_20 22 26 27.9
comp=Z,2µm,19.0s
ECH Echery 83.90 42 P **P** **21 52 10.8 +0.3**
DOMB Dombas 83.96 28 *e*P **P** **21 52 09.4 -1.1**
DOMB IAmb IAmb 21 52 17.7
comp=Z,568nm,3.1s
DOMB *e*PP **PP** **21 55 20.8 -3.2**
DOMB *e*SKSac **S** **22 02 34.5 0.0**
DOMB *e*SS **SS** **22 08 04.6 +2.5**
DOMB IAMs_20 IAMs_20 22 19 57.5
comp=Z,2µm,25.1s
HOMB Homborsund 83.97 32 *e*P **P** **21 52 10.5 0.0**
HOMB IAmb IAmb 21 52 17.6
comp=Z,304nm,2.1s
HOMB *e*PP **PP** **21 55 23.8 -0.1**
HOMB *e*SKSac **SKSac** **22 02 34.0 +0.3**
HOMB *e*SS **SS** **22 08 03.8 +1.6**
HOMB IAMs_20 IAMs_20 22 26 19.2
comp=Z,1µm,18.1s
IBBN Ibbenburen 83.98 38 *e*P **P** **21 52 11.1 +0.3**
comp=Z,142nm,1.6s,baz=277,slow=5.0
IBBN Ibbenburen 83.98 38 P **P** **21 52 11.1 +0.3**
BOURR Bourrignon 84.01 43 P **P** **21 52 11.4 +0.2**
ISO Isola 84.13 46 P **P** **21 52 13.4 +1.6**
SENIN Lac Senin/Sane 84.14 44 P **P** **21 52 11.9 -0.1**
SENIN IAMs_20 IAMs_20 22 29 48.4
comp=Z,2µm,18.0s
ESCA l'Escarene 84.39 47 P **P** **21 52 14.6 +1.4**
KONO Kongsberg 84.42 31 ||P **P** **21 52 14.1 +1.3**
KONO Kongsberg 84.42 31 *e*P **P** **21 52 13.6 +0.7**
KONO IAmb IAmb 21 52 18.4
comp=Z,303nm,2.5s
KONO *e*PP **PP** **21 55 28.3 +0.7**
KONO *e*SKSac **SKSac** **22 02 37.4 +0.7**
KONO *e*SS **SS** **22 08 11.9 +3.1**
KONO IAMs_20 IAMs_20 22 21 40.0
comp=Z,2µm,26.1s
KONO Kongsberg 84.42 31 P **P** **21 52 12.6 -0.2**
KONO IAmb IAmb 21 52 20.0
comp=Z,127nm,1.9s
KONO Kongsberg 84.42 31 IAMs_20 IAMs_20 22 29 16.5
comp=Z,1µm,20.0s
KONO Kongsberg 84.42 31 P **P** **21 52 13.9 +1.1**

GOET G??ttrup 84.45 33 *i* P **P** **21 52 10.2 -2.9**
GOET IAmb IAmb 21 52 20.0
comp=Z,117nm,1.3s
MUD Monsted U'grnd 84.47 34 *i* P **P** **21 52 09.2 -4.0**
MUD IAmb IAmb 21 52 19.0
comp=Z,970nm,2.7s
KASTN Kahler Asten 84.48 39 *e*P **P** **21 52 13.5 +0.1**
comp=Z,71nm,1.5s,baz=277,slow=5.0
SPA0 Spitsbergen Ar 84.50 12 *e*P **P** **21 52 13.8 +0.9**
SPA0 IAmb IAmb 21 52 19.5
comp=Z,156nm,1.7s
SPA0 *e*PP **PP** **21 55 28.7 +0.7**
SPA0 *e*SKSac **SKSac** **22 02 37.4 +0.8**
SPA0 *e*SS **SS** **22 08 11.9 +2.6**
SPA0 IAMs_20 IAMs_20 22 30 20.3
comp=Z,3µm,19.3s
SPITS Spitsbergen Ar 84.50 12 P **P** **21 52 13.1 +0.2**
comp=Z,24nm,1.2s,baz=60,slow=8.5,SNR=4.2
SPITS S **SKSac** **22 02 34.4 -2.3**
comp=Z,5.2nm,0.8s,baz=243,slow=16,SNR=12
SPITS LR LR 22 29 56.4
comp=Z,2µm,21.5s,baz=274,slow=36
comp=Z,24nm,1.2s
SPITS Spitsbergen Ar 84.50 12 P **P** **21 52 13.1 +0.2**
SPB2 Spitsbergen Ar 84.50 12 P **P** **21 52 13.0 +0.1**
SPB2 IAmb IAmb 21 52 19.9
comp=Z,103nm,1.6s
HSPB Hornsund (broa 84.51 13 *e*P **P** **21 52 13.3 +0.3**
HSPB *e*S **S** **22 02 45.8 +6.5**
HSPB *e*L L 22 30 05.4
comp=Z,3µm,20.9s
HSPB Hornsund (broa 84.51 13 P **P** **21 52 14.8 +1.9**
TNS Taunus Mts 84.58 40 *e*P **P** **21 52 14.4 +0.5**
comp=Z,175nm,1.7s,baz=277,slow=5.0
TNS *e*L L 22 24 06.5
comp=Z,2µm,22.0s
TNS Taunus Mts 84.58 40 P **P** **21 52 14.4 +0.5**
BFO Black Forest 84.67 42 P **P** **21 52 13.5 -0.9**
BFO pmax pmax
comp=Z,32nm,1.1s
BFO MLR MLR
comp=Z,3µm,19.0s
BFO Black Forest 84.67 42 P **P** **21 52 13.5 -0.9**
BFO IAmb IAmb 21 52 17.1
comp=Z,32nm,1.1s
BFO Black Forest 84.67 42 *e*P **P** **21 52 14.2 -0.2**
comp=Z,35nm,1.1s,baz=277,slow=5.0
BFO *e*L L 22 26 32.5
comp=Z,3µm,19.6s
SKMB Sankelmark Bun 84.78 36 P **P** **21 52 15.4 +0.7**
TAM Tamanrasset 84.79 68 P **P** **21 52 16.3 +0.5**
TAM pmax pmax
comp=Z,181nm,1.3s
TAM MLR MLR
comp=Z,1µm,21.0s
TAM Tamanrasset 84.79 68 P **P** **21 52 16.2 +0.5**
TAM IAMs_20 IAMs_20 22 25 51.2
comp=Z,1µm,21.0s
TAM Tamanrasset 84.79 68 P **P** **21 52 17.6 +1.9**
SSRD Sdr. Stenderup 84.82 35 *i* P **P** **21 52 12.2 -2.8**
SSRD IAmb IAmb 21 52 22.1
comp=Z,483nm,2.0s
SLE Schleitheim 84.83 43 P **P** **21 52 15.4 +0.1**
NC204 NORSAR Array S 84.84 29 P **P** **21 52 15.0 0.0**
NC204 IAmb IAmb 21 52 18.0
comp=Z,34nm,1.1s
BNALP Bannalp 84.87 44 P **P** **21 52 16.5 +0.9**
RETH Rethem/Aller, 84.92 38 *e*P **P** **21 52 16.2 +0.8**
comp=Z,154nm,1.6s,baz=277,slow=5.0
RETH Rethem/Aller, 84.92 38 P **P** **21 52 16.2 +0.8**
OVD Ostervraa, Den 84.96 33 *i* P **P** **21 52 14.1 -1.4**
OVD IAmb IAmb 21 52 22.7
comp=Z,595nm,2.4s
OSL Oslo 84.96 30 *e*P **P** **21 52 17.1 +1.5**
OSL IAmb IAmb 21 52 21.1
comp=Z,1µm,2.8s
OSL *e*SKSac **SKSac** **22 02 40.5 +0.4**
OSL *e*SS **SS** **22 08 15.6 -1.1**
NSS Namsos 85.03 26 *e*P **P** **21 52 16.7 +0.9**
NSS IAmb IAmb 21 52 21.6
comp=Z,64nm,1.4s
NSS IAMs_20 IAMs_20 22 26 36.7
comp=Z,2µm,19.4s
NB2 NORSAR Subarra 85.08 29 P **P** **21 52 16.4 +0.1**
comp=Z,376nm,2.5s,baz=275,slow=5.1
NB2 NORSAR Subarra 85.08 29 P **P** **21 52 16.4 +0.1**
NOA NORSAR Array B 85.08 29 P **P** **21 52 16.3 +0.1**
comp=Z,35nm,1.2s,baz=276,slow=4.6,SNR=19
NOA LR LR 22 29 22.7
comp=Z,1µm,18.4s,baz=270,slow=35
comp=Z,35nm,1.2s
NOA NORSAR Array B 85.08 29 P **P** **21 52 16.3 +0.1**
STU Stuttgart 85.20 42 P **P** **21 52 16.6 -0.5**
STU pmax pmax
comp=Z,56nm,1.0s
STU MLR MLR
comp=Z,2µm,18.0s
STU Stuttgart 85.20 42 P **P** **21 52 16.6 -0.5**
STU IAmb IAmb 21 52 20.9
comp=Z,56nm,1.0s
STU IAMs_20 IAMs_20 22 34 05.3
comp=Z,2µm,18.0s
STU Stuttgart 85.20 42 *e*P **P** **21 52 17.4 +0.4**
comp=Z,123nm,0.9s,baz=277,slow=5.0
STU Stuttgart 85.20 42 P **P** **21 52 17.5 +0.5**
LOF Lofoten 85.21 22 *e*P **P** **21 52 15.9 -0.7**
LOF IAmb IAmb 21 52 23.0
comp=Z,216nm,2.1s
LOF *e*PP **PP** **21 55 34.2 +0.3**
LOF *e*SKSac **SKSac** **22 02 40.5 -0.9**
LOF *e*SS **SS** **22 08 23.0 +3.0**
LOF IAMs_20 IAMs_20 22 26 35.3
comp=Z,1µm,19.5s
STOK Stokkvaagen 85.24 24 *e*P **P** **21 52 16.4 -0.4**
STOK IAmb IAmb 21 52 22.2
comp=Z,700nm,2.9s
STOK *e*PP **PP** **21 55 34.6 +0.5**
STOK *e*SKSac **SKSac** **22 02 41.2 -0.4**
STOK *e*SS **SS** **22 08 23.5 +2.9**
STOK IAMs_20 IAMs_20 22 30 31.2
comp=Z,3µm,17.6s
KONS Konsvik 85.26 24 *e*P **P** **21 52 17.1 +0.2**
KONS IAmb IAmb 21 52 23.0
comp=Z,56nm,1.3s
KONS *e*PP **PP** **21 55 35.0 +0.7**
KONS *e*SKSac **SKSac** **22 02 42.2 +0.4**
KONS *e*SS **SS** **22 08 24.0 +3.1**
KONS IAMs_20 IAMs_20 22 22 34.4
comp=Z,3µm,23.5s
NC602 NORSAR Array S 85.27 29 *e*P **P** **21 52 17.1 0.0**
NC602 IAmb IAmb 21 52 24.2
comp=Z,2µm,4.0s
NC602 *e*SKSac **SKSac** **22 02 41.5 -0.6**
NC602 *e*SS **SS** **22 08 23.6 +2.2**
NC602 IAMs_20 IAMs_20 22 19 51.2
comp=Z,3µm,45.7s
VAGH Vaagaholmen 85.29 23 *e*P **P** **21 52 17.1 0.0**
VAGH IAmb IAmb 21 52 23.9
comp=Z,173nm,2.2s
VAGH *e*PP **PP** **21 55 35.2 +0.6**
VAGH *e*SKSac **SKSac** **22 02 42.3 +0.3**
VAGH *e*SS **SS** **22 08 24.2 +2.9**
VAGH IAMs_20 IAMs_20 22 24 42.9
comp=Z,3µm,20.5s
LEIR Leirfjorden 85.31 24 *e*P **P** **21 52 17.8 +0.6**
LEIR IAmb IAmb 21 52 19.9
comp=Z,74nm,1.3s
LEIR *e*PP **PP** **21 55 35.4 +0.7**
LEIR *e*SKSac **SKSac** **22 02 42.4 +0.3**
LEIR *e*SS **SS** **22 08 23.9 +2.3**
LEIR IAMs_20 IAMs_20 22 24 18.7
comp=Z,3µm,22.4s
BSEG Bad Segeberg 85.37 36 *e*P **P** **21 52 18.2 +0.5**
comp=Z,68nm,1.6s,baz=277,slow=5.0
BSEG *e*L L 22 25 09.9
comp=Z,971nm,21.5s
BSEG Bad Segeberg 85.37 36 P **P** **21 52 18.2 +0.5**
GTTG Gottingen 85.41 39 *e*P **P** **21 52 18.6 +0.6**
comp=Z,102nm,1.5s,baz=277,slow=5.0
GTTG Gottingen 85.41 39 P **P** **21 52 18.6 +0.6**
UBBA Unterbreizbach 85.51 39 *e*P **P** **21 52 18.8 +0.5**
comp=Z,77nm,1.6s,baz=277,slow=5.0
UBBA Unterbreizbach 85.51 39 P **P** **21 52 18.9 +0.5**
TUE Stuetta 85.54 44 P **P** **21 52 19.0 -0.1**
TUE Stuetta 85.54 44 P **P** **21 52 19.5 +0.4**

comp=Z,7µmcomp=Z,204nm,1.2s
TUE Stuetta 85.54 44 P **P 21 52 20.0 +0.9**
CLZ Clausthal 85.63 38 *e*P **P 21 52 19.8 +0.7**
comp=Z,74nm,1.1s,baz=277,slow=5.0
CLZ Clausthal 85.63 38 P **P 21 52 19.9 +0.7**
RAUS Rausandaksla 85.64 24 *e*P **P 21 52 19.0 +0.1**
RAUS IAmb IAmb 21 52 24.6
comp=Z,211nm,1.8s
RAUS *e*PP **PP 21 55 37.8 +0.4**
RAUS *e*SKSac **SKSac 22 02 44.6 +0.4**
RAUS *e*SS **SS 22 08 29.1 +2.6**
RAUS IAMs_20 IAMs_20 22 22 44.1
comp=Z,3µm,24.8s
ASSE Asse, Remlinge 85.78 38 *e*P **P 21 52 20.5 +0.8**
comp=Z,164nm,1.6s,baz=277,slow=5.0
ASSE Asse, Remlinge 85.78 38 P **P 21 52 20.6 +0.8**
DAVA Damuels 85.81 43 *i* P **P 21 52 21.0 +0.7**
comp=Z,102nm,1.2s,SNR=26
DAVA Damuels 85.81 43 P **P 21 52 21.1 +0.7**
BJO1 Bjornoya 85.82 15 *e*P **P 21 52 20.5 +0.9**
BJO1 IAmb IAmb 21 52 26.5
comp=Z,95nm,1.2s
BJO1 *e*PP **PP 21 55 39.5 +0.8**
BJO1 *e*SKSac **SKSac 22 02 45.7 +0.7**
BJO1 *e*SS **SS 22 08 32.8 +4.0**
BJO1 IAMs_20 IAMs_20 22 26 34.2
comp=Z,2µm,21.1s
MOR8 Moi Rana 85.84 24 *e*P **P 21 52 20.4 +0.5**
MOR8 IAmb IAmb 21 52 26.9
comp=Z,48nm,1.2s
MOR8 *e*PP **PP 21 55 40.8 +1.8**
MOR8 *e*SKSac **SKSac 22 02 46.2 +0.7**
MOR8 *e*SS **SS 22 08 35.4 +5.9**
MOR8 IAMs_20 IAMs_20 22 22 52.9
comp=Z,3µm,26.4s
DAVOX Davos/Dischmat 85.87 44 P **P 21 52 21.3 +0.6**
comp=Z,23nm,0.9s,baz=272,slow=3.7,SNR=36
DAVOX LR LR 22 28 08.2
comp=Z,2µm,18.5s,baz=280,slow=34
comp=Z,23nm,0.9s
DAVOX Davos/Dischmat 85.87 44 P **P 21 52 21.3 +0.6**
STEI Steigen 85.87 22 *e*P **P 21 52 19.7 -0.2**
STEI IAmb IAmb 21 52 36.0
comp=Z,105nm,1.5s
STEI *e*PP **PP 21 55 39.8 +0.6**
STEI *e*SKSac **SKSac 22 02 45.2 -0.3**
STEI *e*SS **SS 22 08 32.0 +2.2**
STEI IAMs_20 IAMs_20 22 23 27.1
comp=Z,1µm,22.9s
FAUS Fauske 85.98 23 *e*P **P 21 52 20.4 -0.1**
FAUS IAmb IAmb 21 52 27.0
comp=Z,92nm,1.4s
FAUS *e*PP **PP 21 55 40.8 +0.7**
FAUS *e*SKSac **SKSac 22 02 47.5 +1.2**
FAUS *e*SS **SS 22 08 35.6 +4.2**
FAUS IAMs_20 IAMs_20 22 23 01.1
comp=Z,2µm,23.0s
GORT1 Trebel 86.07 37 *e*P **P 21 52 21.4 +0.3**
comp=Z,109nm,1.6s,baz=277,slow=5.0
FLTG Flechtingen 86.10 38 *e*P **P 21 52 21.5 +0.1**
comp=Z,145nm,1.6s,baz=277,slow=5.0
FUORN Ofenpass-Fuorn 86.15 44 P **P 21 52 22.4 +0.2**
FUORN Ofenpass-Fuorn 86.15 44 P **P 21 52 23.1 +0.9**
LLD Lille Linde 86.30 35 *i* P P 21 52 17.1 -5.2
LLD IAmb IAmb 21 52 29.2
comp=Z,72nm,1.0s
VSL Villasalto 86.32 51 IAMs_20 IAMs_20 22 24 17.8
comp=Z,2µm,21.0s
VSL Villasalto 86.32 51 P **P 21 52 24.1 +1.2**
WIMM Wimmelburg 86.37 39 P **P 21 52 23.3 +0.6**
COP Copenhagen 86.37 34 *i* P P 21 52 17.1 -5.5
COP IAmb IAmb 21 52 28.2
comp=Z,98nm,1.1s
RETA Reutte 86.39 43 *i* P **P 21 52 23.6 +0.5**
comp=Z,68nm,1.6s,SNR=25
HFS Hagfors 86.41 30 P **P 21 52 22.4 -0.4**
comp=Z,22nm,1.0s,baz=238,slow=2.8,SNR=29
HFS LR LR 22 31 35.6
comp=Z,1µm,18.4s,baz=273,slow=36
comp=Z,22nm,1.0s
HFS Hagfors 86.41 30 P **P 21 52 22.4 -0.4**
GRFO Grafenberg 86.42 41 P **P 21 52 23.8 +0.7**
GRA1 Grafenberg Arr 86.42 41 P **P 21 52 22.9 -0.2**
GRA1 IAmb IAmb 21 52 26.2
comp=Z,98nm,1.3s
GRA1 Grafenberg Arr 86.42 41 P **P 21 52 23.8 +0.7**
GRF Grafenberg Arr 86.42 41 P **P 21 52 22.9 -0.2**
GRF pmax pmax
comp=Z,98nm,1.3s
GRF MLR MLR
comp=Z,3µm,22.0s
GRF Grafenberg Arr 86.42 41 *e*P **P 21 52 23.8 +0.7**
comp=Z,83nm,1.2s,baz=277,slow=5.0
GRF *e*L L 22 24 27.2
comp=Z,3µm,21.9s
FETA Feichten 86.42 43 *i* P **P 21 52 24.0 +0.7**
comp=Z,59nm,1.2s,SNR=32
SALO Salr 86.45 45 P **P 21 52 22.9 -0.4**
GRA3 Grafenberg Arr 86.47 40 P **P 21 52 24.3 +0.9**
MOX Moxa 86.55 40 *e*P **P 21 52 24.2 +0.5**
comp=Z,90nm,1.6s,baz=277,slow=5.0
MOX *e*L L 22 26 37.3
comp=Z,2µm,19.8s
MOX Moxa 86.55 40 P **P 21 52 24.2 +0.5**
NEUB Neuenburg 86.58 39 *e*P **P 21 52 24.4 +0.6**
comp=Z,179nm,1.7s,baz=277,slow=5.0
NEUB Neuenburg 86.58 39 P **P 21 52 24.4 +0.6**
MOTA Moosalm 86.63 43 *i* P **P 21 52 24.6 +0.2**
comp=Z,62nm,1.7s,SNR=24
FUR Furstenfeldbru 86.64 42 *e*P **P 21 52 25.1 +0.8**
comp=Z,119nm,1.5s,baz=277,slow=5.0
FUR *e*L L 22 29 50.9
comp=Z,2µm,18.4s
FUR Furstenfeldbru 86.64 42 P **P 21 52 25.2 +0.9**
GRB4 Grafenberg Arr 86.67 41 P **P 21 52 25.0 +0.7**
GRC4 Grafenberg Arr 86.69 41 P **P 21 52 24.9 +0.4**
GRC1 Grafenberg Arr 86.70 41 P **P 21 52 24.8 +0.3**
SQTA Sankt Quirin 86.72 43 *i* P **P 21 52 25.2 +0.4**
comp=Z,54nm,1.2s,SNR=15
KEST Kesra 86.72 55 P **P 21 52 25.0 0.0**
comp=Z,11nm,1.1s,baz=262,slow=2.0,SNR=8.9
KEST LR LR 22 26 25.0
comp=Z,639nm,21.3s,baz=326,slow=32
comp=Z,11nm,1.1s
KEST Kesra 86.72 55 P **P 21 52 24.7 -0.2**
KEST IAmb IAmb 21 53 05.5
comp=Z,88nm,1.6s
GRB1 Grafenberg Arr 86.74 41 P **P 21 52 26.1 +1.4**
HOPEN Hopen 86.75 13 *e*P **P 21 52 25.1 +0.9**
HOPEN *e*PP **PP 21 55 47.1 +1.0**
HOPEN *e*SKSac **SKSac 22 02 52.4 +1.6**
HOPEN *e*SS **SS 22 08 46.3 +4.0**
HOPEN IAMs_20 IAMs_20 22 33 03.4
comp=Z,4µm,17.5s
GRB2 Grafenberg Arr 86.76 41 P **P 21 52 25.6 +0.8**
GRB5 Grafenberg Arr 86.79 41 P **P 21 52 25.6 +0.6**
GRB3 Grafenberg Arr 86.84 41 P **P 21 52 26.0 +0.8**
TRO Tromso 86.86 20 *e*P **P 21 52 24.4 -0.4**
TRO IAmb IAmb 21 52 31.2
comp=Z,78nm,1.4s
TRO *e*PP **PP 21 55 48.0 +0.8**
TRO *e*SKSac **SKSac 22 02 52.0 +0.4**
TRO *e*SS **SS 22 08 46.7 +2.5**
TRO IAMs_20 IAMs_20 22 31 32.6
comp=Z,2µm,17.8s
PLN Plauen 86.91 40 *e*P **P 21 52 26.0 +0.5**
comp=Z,23nm,1.2s,baz=277,slow=5.0
WATA Walderalm 86.95 43 *i* pP **P 21 52 26.9 +0.9**
comp=Z,33nm,1.4s,SNR=13
WTTA Wattenberg 87.00 43 *i* pP **P 21 52 27.3 +1.1**
comp=Z,54nm,1.5s,SNR=19
WTTA Wattenberg 87.00 43 P **P 21 52 26.7 +0.4**
RGN Rugen 87.04 36 P **P 21 52 25.8 -0.1**
RGN IAMs_20 IAMs_20 22 28 33.3
comp=Z,2µm,20.0s
RGN Rugen 87.04 36 *e*P **P 21 52 26.8 +0.9**
comp=Z,134nm,1.1s,baz=277,slow=5.0
RGN Rugen 87.04 36 P **P 21 52 27.3 +1.4**
ROTZ Rotzenmuhle 87.04 40 *e*P **P 21 52 27.0 +0.8**
comp=Z,22nm,1.6s,baz=277,slow=5.0
TANN Tannenbergstha 87.11 40 *e*P **P 21 52 27.2 +0.7**
comp=Z,130nm,1.6s,baz=277,slow=5.0
TANN Tannenbergstha 87.11 40 P **P 21 52 27.2 +0.7**
NKC Novy Kostel 87.13 40 *e*P **P 21 52 27.3 +0.7**
NKC *e* 22 03 00.2
NKC MLR MLR
comp=Z,3µm,22.1s
NKC Novy Kostel 87.13 40 *e*P **P 21 52 27.3 +0.7**
NKC *e*SKS **S 22 03 00.2 -6.0**
NKC *ex* x 22 09 09.9
NKC AMS AMS 22 24 20.0
comp=Z,3µm,22.1s
NKC Novy Kostel 87.13 40 P **P 21 52 27.4 +0.7**
ADK Adak 87.19 322 P **P 21 52 28.6 +1.9**
CGRP Cima Grappa 87.30 44 P **P 21 52 28.1 +0.4**
JETT Jettan, Norway 87.38 20 *e*P **P 21 52 27.2 -0.2**
JETT IAmb IAmb 21 52 33.8
comp=Z,207nm,1.6s
JETT IAMs_20 IAMs_20 22 28 08.8
comp=Z,2µm,19.0s
WET Wettzell 87.56 41 *e*P **P 21 52 29.5 +0.8**
comp=Z,107nm,1.3s,baz=277,slow=5.0
WET *e*L L 22 30 18.4
comp=Z,3µm,18.4s
WET Wettzell 87.56 41 P **P 21 52 29.5 +0.8**
RUE Ruedersdorf 87.62 38 *e*P **P 21 52 29.1 +0.2**
comp=Z,123nm,1.6s,baz=277,slow=5.0
RUE Ruedersdorf 87.62 38 P **P 21 52 30.0 +1.2**
ABTA Abfaltersbach 87.67 43 *i* P **P 21 52 29.5 +0.2**
comp=Z,58nm,1.1s,SNR=37
LESA Schwarzleotal 87.68 43 *i* P **P 21 52 29.8 +0.4**
comp=Z,56nm,1.1s,SNR=42
HSKC Hora Svate Kat 87.70 39 *e*P **P 21 52 29.3 0.0**
HSKC AMS AMS 22 24 00.0
HSKC Hora Svate Kat 87.70 39 P **P 21 52 30.0 +0.6**
RJOB Jochberg 87.72 42 *e*P **P 21 52 29.9 +0.4**
comp=Z,58nm,1.6s,baz=277,slow=5.0
RJOB Jochberg 87.72 42 P **P 21 52 29.9 +0.4**
BSD Bornholm Skovb 87.86 35 P **P 21 52 30.8 +0.9**
BSD Bornholm Skovb 87.86 35 *i* P P 21 52 24.1 -5.8
BSD IAmb IAmb 21 52 36.3
comp=Z,1µm,3.9s
BRG Berggiesshubel 87.98 39 *e*P **P 21 52 31.3 +0.6**
comp=Z,102nm,1.6s,baz=277,slow=5.0
BRG Berggiesshubel 87.98 39 P **P 21 52 31.2 +0.6**
BRG Berggiesshubel 87.98 39 *e*P **P 21 52 31.0 +0.4**
BRG Amp 21 52 32.6
comp=Z,101nm,1.6s
BRG PP **PP 21 55 54.7 -2.0**
BRG Amp 21 56 06.0
comp=Z,22nm,1.8s
KHC Kasperske Hory 88.02 41 *e*P **P 21 52 31.6 +0.7**
KHC *e* 22 02 56.5
KHC pmax pmax
comp=Z,27nm,1.0s
KHC MLR MLR
comp=Z,2µm,23.5s
KHC Kasperske Hory 88.02 41 *e*P **P 21 52 31.6 +0.7**
comp=Z,27nm,1.0s
KHC *e*SKS **SKSac 22 02 56.5 -3.2**
KHC *ex* x 22 09 16.0
KHC AMS AMS 22 24 00.0
comp=Z,2µm,23.5s
KHC Kasperske Hory 88.02 41 P **P 21 52 31.2 +0.3**
comp=Z,1µmcomp=Z,35nm,1.5s
KHC Kasperske Hory 88.02 41 P **P 21 52 31.6 +0.7**
FUSE Fusea 88.05 44 P **P 21 52 31.3 +0.2**
GEC2 GERESS Array S 88.15 41 P **P 21 52 31.1 -0.5**
GEC2 IAmb IAmb 21 52 39.0
comp=Z,70nm,1.4s
GEC2 GERESS Array S 88.15 41 *e*P **P 21 52 31.9 +0.4**
comp=Z,88nm,1.6s,baz=277,slow=5.0
GEC2 *e*L L 22 29 49.3
comp=Z,2µm,19.5s
GERES GERESS Array B 88.15 41 P **P 21 52 31.3 -0.3**
comp=Z,12nm,0.9s,baz=268,slow=4.0,SNR=49
GERES LR LR 22 30 18.2
comp=Z,2µm,18.2s,baz=274,slow=34
comp=Z,12nm,0.9s
GERES GERESS Array B 88.15 41 P **P 21 52 31.3 -0.3**
KBA Koelnbreinsper 88.18 43 *i* pP **P 21 52 32.8 +0.9**
comp=Z,83nm,1.3s,SNR=40
KBA Koelnbreinsper 88.18 43 P **P 21 52 32.1 +0.2**
BIOA Bad Ischl, Aus 88.28 42 *i* P **P 21 52 32.7 +0.5**
comp=Z,77nm,1.5s,SNR=46
ZVC Zvikov 88.37 40 *e*P **P 21 52 34.2 +1.7**
ZVC *e*SKS **SKSac 22 03 02.2 +0.5**
ZVC *ex* x 22 09 15.9
ZVC AMS AMS 22 25 00.0
comp=Z,3µm,21.3s
ACOM Acomizza, Ital 88.38 43 P **P 21 52 33.3 +0.4**
PVCC Panska Ves 88.43 39 P **P 21 52 33.4 +0.7**
MYKA Terra Mystica 88.45 43 *i* P **P 21 52 33.6 +0.5**
comp=Z,43nm,1.2s,SNR=18
KTK1 Kautokeino 88.50 20 *e*P **P 21 52 33.1 +0.4**
KTK1 IAmb IAmb 21 52 37.4
comp=Z,196nm,2.4s
KTK1 *e*PP **PP 21 56 00.9 +0.5**
KTK1 *e*SKSac **SKSac 22 03 02.0 +0.3**
KTK1 *e*SS **SS 22 09 11.0 +2.8**
KTK1 IAMs_20 IAMs_20 22 28 42.0
comp=Z,2µm,20.2s
PRU Pruhonice 88.50 40 *e*P **P 21 52 35.0 +1.9**
PRU MLR MLR
comp=Z,4µm,22.1s
PRU Pruhonice 88.50 40 *e*P **P 21 52 35.0 +1.9**
PRU AMS AMS 22 25 30.0
comp=Z,4µm,22.1s
PRU Pruhonice 88.50 40 P **P 21 52 33.5 +0.4**
MOA Molln 88.68 42 *i* P **P 21 52 34.8 +0.8**
comp=Z,28nm,1.5s,SNR=14
MOA Molln 88.68 42 P **P 21 52 34.4 +0.3**
AQU L'Aquila 88.95 48 P **P 21 52 35.9 +0.4**
comp=Z,568nmcomp=Z,21nm,1.8s
AQU L'Aquila 88.95 48 P **P 21 52 36.7 +1.2**
SESA Seetaler Alpe, SNR=23 89.00 43 *i* P **P 21 52 35.7 -0.1**
BELA Belgrano 2 89.01 171 P **P 21 52 35.3 +0.4**
BELA IAmb IAmb 21 52 45.4
comp=Z,53nm,1.6s
OBKA Obir 89.09 43 *i* P **P 21 52 36.3 +0.2**
comp=Z,27nm,1.6s,SNR=14
OBKA Obir 89.09 43 P **P 21 52 36.3 +0.2**
ARA0 ARCESS Array S 89.11 20 *e*P **P 21 52 36.2 +0.7**
ARA0 IAmb IAmb 21 52 41.4
comp=Z,41nm,1.4s
ARA0 *e*PP **PP 21 56 06.0 +0.8**
ARA0 *e*SKSac **SKSac 22 03 05.2 -0.1**
ARA0 *e*SS **SS 22 09 21.3 +4.3**
ARA0 IAMs_20 IAMs_20 22 30 10.4
comp=Z,2µm,19.0s
ARA0 IAMs_20 IAMs_20 22 30 11.1
comp=Z,2µm,19.0s
ARCES ARCESS Array B 89.11 20 P **P 21 52 33.9 -1.7**
comp=Z,14nm,1.2s,baz=280,slow=2.7,SNR=10
ARCES LR LR 22 30 29.0
comp=Z,2µm,19.8s,baz=284,slow=34
comp=Z,14nm,1.2s
ARCES ARCESS Array B 89.11 20 P **P 21 52 35.0 -0.6**
ARCES ARCESS Array B 89.11 20 P **P 21 52 35.0 -0.6**
LJU Ljubljana 89.16 44 *i* P **P 21 52 36.9 +0.6**
LJU *e*PP PP 21 56 28.9 +23
LJU *e*SKSac **SKSac 22 03 05.6 -0.9**
LJU *e*S **S 22 03 24.1 -1.4**
TREC Trest 89.23 40 P **P 21 52 37.2 +0.6**
UPC Upice 89.34 39 P **P 21 52 37.9 +0.8**
SOKA Soboth 89.39 43 *i* P **P 21 52 37.4 -0.1**
comp=Z,27nm,1.7s,SNR=16
KSP Ksiaz 89.45 39 *e*P **P 21 52 38.0 +0.5**
KSP *e*S **SKSac 22 03 07.5 -0.5**
KSP *e*L L 22 29 26.9
comp=Z,3µm,20.2s
KSP Ksiaz 89.45 39 P **P 21 52 37.9 +0.4**
comp=Z,1µmcomp=Z,39nm,2.6s
OSTC Ostas 89.46 39 *e*P **P 21 52 38.8 +1.2**
OSTC MLR MLR
comp=Z,3µm,19.6s
OSTC Ostas 89.46 39 *e*P **P 21 52 38.8 +1.2**
OSTC AMS AMS 22 28 30.0
comp=Z,3µm,19.6s
KEV Kevo 89.53 19 IAMs_20 IAMs_20 22 30 49.6
comp=Z,2µm,20.0s
GKP Gorka Klasztor 89.55 36 *e*P **P 21 52 38.3 +0.4**
GKP *e*S **SKSac 22 03 05.7 -2.7**
GKP *e*L L 22 30 27.5
comp=Z,3µm,19.7s
CLTB Caltabellotta 89.56 52 P **P 21 52 39.9 +1.4**
DPC Dobruska-Polom 89.56 39 *e*P **P 21 52 39.3 +1.1**
DPC *e* 21 56 29.9
DPC *e* 22 03 21.1
APA *e*S **S 22 03 53.2 -2.4**
APA *e*PS **PS 22 05 07.3 -0.3**
APA pmax pmax
comp=Z,3µm,18.8s
DPC Dobruska-Polom 89.56 39 *e*P **P 21 52 39.3 +1.1**
DPC *e*SKS **SKSac 22 03 11.7 +2.9**
DPC *ex* x 22 09 38.6
DPC AMS AMS 22 28 10.0
comp=Z,3µm,18.8s
DPC Dobruska-Polom 89.56 39 P **P 21 52 38.7 +0.5**
comp=Z,1µmcomp=Z,50nm,2.0s
DPC Dobruska-Polom 89.56 39 P **P 21 52 39.1 +0.9**
ARSA Arzberg 89.62 42 P **P 21 52 38.1 -0.4**
ARSA Arzberg 89.62 42 *i* P **P 21 52 39.3 +0.8**
comp=Z,21nm,1.4s,SNR=13
ARSA Arzberg 89.62 42 P **P 21 52 38.7 +0.2**
CONA Conrad Observa 89.72 42 *i* P **P 21 52 39.6 +0.6**
comp=Z,48nm,1.2s,SNR=34
BOJS Bojanci 89.75 44 *i* P **P 21 52 39.7 +0.6**
BOJS *i* SKSac **SKSac 22 03 09.0 -1.0**
WINA Alland / Wiene SNR=16 89.83 42 *i* pP **P 21 52 40.8 +1.4**
KRUC Moravsky 89.86 41 *e*P **P 21 52 39.6 +0.1**
KRUC *e*SKS **SKSac 22 03 11.3 +0.8**
KRUC Moravsky 89.86 41 P **P 21 52 40.2 +0.7**
KRLC Kraliky 89.91 40 P **P 21 52 40.9 +1.1**
VRAC Vranov 89.94 40 P **P 21 52 39.7 -0.2**
comp=Z,29nm,1.2s,baz=289,slow=6.0,SNR=38
VRAC LR LR 22 27 19.5
comp=Z,2µm,21.9s,baz=284,slow=32
comp=Z,29nm,1.2s
VRAC Vranov 89.94 40 ⇑P **P 21 52 40.7 +0.8**
VRAC Vranov 89.94 40 ⇑P **P 21 52 40.7 +0.8**
VRAC Vranov 89.94 40 *e*P **P 21 52 40.1 +0.2**
VRAC *e*SKS **SKSac 22 03 11.1 +0.1**
VRAC Vranov 89.94 40 P **P 21 52 40.6 +0.7**
RONA Rosalia, Austr SNR=24 90.05 42 *i* P **P 21 52 41.0 +0.5**
comp=Z,38nm,1.2s,SNR=24
VADS Vadso 90.15 19 *e*P **P 21 52 41.5 +1.1**
VADS IAmb IAmb 21 52 41.6
comp=Z,74nm,1.4s
VADS *e*PP **PP 21 56 14.2 +0.7**
VADS *e*SKSac **SKSac 22 03 10.7 -0.6**
VADS *e*SS **SS 22 09 36.0 +4.0**
SOP Sopron 90.23 42 P **P 21 52 41.8 +0.5**
KOGS Kog 90.26 43 *i* P **P 21 52 41.8 +0.3**
KOGS IAmb IAmb 21 52 44.6
comp=Z,17nm,1.1s
MORC Moravsky Berou 90.45 40 ⇓P **P 21 52 43.7 +1.4**
MORC Moravsky Berou 90.45 40 ⇓P **P 21 52 43.7 +1.4**
MORC Moravsky Berou 90.45 40 P **P 21 52 42.0 -0.3**
MORC IAmb IAmb 21 52 50.6
comp=Z,105nm,1.8s
MORC Moravsky Berou 90.45 40 *e*P **P 21 52 42.6 +0.3**
MORC *e*SKS **SKSac 22 03 13.6 -0.4**
MORC Moravsky Berou 90.45 40 P **P 21 52 43.4 +1.1**
VAE Valguarnera 90.51 52 LR LR 22 33 38.8
comp=Z,3µm,18.1s,baz=212,slow=36
STEB Steborice 90.56 40 *e*P **P 21 52 42.9 +0.1**
MODS Modra-Piesok 90.56 41 *e*P **P 21 52 43.8 +1.0**
MODS pmax pmax
comp=Z,203nm,1.6s
MODS Modra-Piesok 90.56 41 P **P 21 52 44.0 +1.1**
MODS Modra-Piesok 90.56 41 *e*P **P 21 52 43.8 +1.0**
BEHE Becsehely 90.61 43 P **P 21 52 44.9 +1.8**
SMOL Smolenice 90.64 41 *e*P **P 21 52 44.4 +1.3**
SMOL pmax pmax
comp=Z,45nm,1.7s
OUL Oulu 90.71 24 P **P 21 52 42.4 -0.7**
JAVC Velka Javorina 90.72 41 *e*P **P 21 52 45.0 +1.4**
JAVC *e*SKS **SKSac 22 03 16.8 +1.2**
JAVC Velka Javorina 90.72 41 P **P 21 52 45.5 +1.9**
OKC Ostrava-Krasne 90.82 40 P **P 21 52 45.1 +1.1**
MPLH Magyarpolny 90.98 42 P **P 21 52 44.8 0.0**
comp=Z,2µmcomp=Z,67nm,2.3s
MPLH Magyarpolny 90.98 42 P **P 21 52 45.4 +0.6**
MARCO Tramutola 91.09 49 P **P 21 52 46.6 +1.1**
BILL Bilibino 91.16 340⇓ *e*P **P 21 52 47.4 +2.3**
BILL pmax pmax
comp=Z,79nm,2.1s
BILL Bilibino 91.16 340 P **P 21 52 45.2 +0.1**
BILL IAmb IAmb 21 53 07.2
comp=Z,40nm,1.2s
BILL IAMs_20 IAMs_20 22 31 03.3
comp=Z,1µm,19.0s
BLY Banja Luka 91.23 45 ⇑P **P 21 52 46.9 +0.9**
BLY Banja Luka 91.23 45 IAMs_20 IAMs_20 22 31 10.2
comp=Z,2µm,20.0s
BLY Banja Luka 91.23 45 P **P 21 52 46.9 +0.9**
SRO Srobarova 91.36 42 *e*P **P 21 52 47.6 +1.1**
SRO pmax pmax
comp=Z,42nm,1.6s
SRO Srobarova 91.36 42 P **P 21 52 47.7 +1.2**
SRO Srobarova 91.36 42 *e*P **P 21 52 47.6 +1.1**
CEL Celeste 91.53 51 IAMs_20 IAMs_20 22 26 15.8
comp=Z,2µm,22.0s
EDA Edea 91.53 86 P **P 21 52 47.2 -0.8**
EDA IAmb IAmb 21 52 51.9
comp=Z,41nm,1.5s
VNA1 Neumayer--Stat 91.57 161 P **P 21 52 48.0 +1.1**
comp=Z,31nm,1.3s
VNA1 ⇑PP **PP 21 56 29.6 +4.5**
comp=Z,13nm,1.2s
AFI Afiamalu 91.65 256 LR LR 22 26 41.8
comp=Z,838nm,18.0s,baz=88,slow=31
OJC Ojcow 91.77 39 *e*P **P 21 52 48.8 +0.4**
OJC *e*S **SKSac 22 03 19.3 -2.2**
OJC *e*L L 22 30 35.7
comp=Z,3µm,19.7s
OJC Ojcow 91.77 39 P **P 21 52 48.1 -0.3**
OJC Ojcow 91.77 39 P **P 21 52 48.1 -0.3**
OJC Ojcow 91.77 39 P **P 21 52 48.2 -0.2**
comp=Z,874nmcomp=Z,35nm,1.7s
OJC Ojcow 91.77 39 P **P 21 52 49.2 +0.8**
LANS Liptovska Anna 91.81 40 *e*P **P 21 52 50.6 +2.0**
LANS pmax pmax
comp=Z,17nm,1.2s
LANS Liptovska Anna 91.81 40 *e*P **P 21 52 50.6 +2.0**
BUD Budapest 91.90 42 P **P 21 52 49.6 +0.6**
MORH Mrgy, Hungar 91.93 43 ⇑P **P 21 52 49.6 +0.4**
MORH Mrgy, Hungar 91.93 43 P **P 21 52 49.2 0.0**
comp=Z,582nmcomp=Z,18nm,2.1s
MORH Mrgy, Hungar 91.93 43 P **P 21 52 49.6 +0.4**
VNA2 Neumayer--Watz 91.93 162 ⇑P **P 21 52 49.2 +0.6**
comp=Z,10nm,1.3s,baz=294,slow=4.3
VNA2 ⇑PP **PP 21 56 30.9 +3.0**
comp=Z,4.9nm,1.1s,baz=299,slow=9.5
VNA2 Neumayer--Watz 91.93 162 P **P 21 52 49.0 +0.4**
BEL Belsk 91.98 37 *e*P **P 21 52 50.0 +0.7**
BEL *e*L L 22 30 52.0
comp=Z,3µm,20.8s
FINES FINESS Array B 91.99 27 P **P 21 52 47.8 -1.3**
comp=Z,7.3nm,1.1s,baz=256,slow=4.1,SNR=14
FINES PP **PP 21 56 25.0 -3.2**
comp=Z,2.0nm,1.0s,baz=276,slow=4.1,SNR=3.9
FINES LR LR 22 31 48.2
comp=Z,2µm,19.8s,baz=283,slow=34
comp=Z,7.3nm,1.1s
FINES FINESS Array B 91.99 27 *i* P **P 21 52 49.0 -0.1**
FINES pmax pmax
comp=Z,7.0nm,1.1s
FINES FINESS Array B 91.99 27 P **P 21 52 48.1 -1.0**
FIA1 FINESS Array S 91.99 27 P **P 21 52 48.4 -0.7**
FIA1 IAmb IAmb 21 52 50.1
comp=Z,58nm,1.3s
TIP Timpagrande 92.02 50 P **P 21 52 49.6 -0.3**
comp=Z,391nmcomp=Z,15nm,1.5s
TIP Timpagrande 92.02 50 P **P 21 52 49.9 0.0**
R9F13 Warsaw-Wawer 92.10 37 *e*P **P 21 52 51.0 +1.2**
R9F13 *e*S **S 22 03 53.3 +1.1**
NIE Niedzica 92.28 40 *e*P **P 21 52 52.0 +1.2**
NIE *e*S **SKSac 22 03 25.5 +1.2**
NIE *e*L L 22 27 47.9
comp=Z,2µm,23.9s
NIE Niedzica 92.28 40 P **P 21 52 51.2 +0.4**
comp=Z,393nmcomp=Z,13nm,2.5s
PSZ Piszkesteto 92.38 41 ⇑P **P 21 52 53.3 +2.0**
PSZ Piszkesteto 92.38 41 ⇑P **P 21 52 53.3 +2.0**
PSZ Piszkesteto 92.38 41 IAMs_20 IAMs_20 22 33 08.0
comp=Z,899nm,18.0s
PSZ Piszkesteto 92.38 41 P **P 21 52 52.6 +1.3**
APA Apatity 92.54 20 *e*P **P 21 52 51.0 -0.5**
APA *e* 21 56 29.9
APA *e* 22 03 21.1

APA MLR MLR
comp=Z,6.0nm,1.2s

ARBE Arbavere 92.61 29 P **P** **21 52 52.0 0.0**
BSZH Besenyszg 92.77 42 P **P** **21 52 54.2 +1.3**
SUW Suwalki 92.80 35 *e*P **P** **21 52 52.2 -0.8**
SUW *e*S **SKSac** **22 03 23.3 -3.7**
SUW *e*L L 22 30 47.4
comp=Z,1µm,22.6s
SUW Suwalki 92.80 35 P **P** **21 52 52.8 -0.2**
SUW MLR MLR
comp=Z,1µm,20.0s
SUW Suwalki 92.80 35 P **P** **21 52 52.8 -0.2**
SUW IAMs_20 IAMs_20 22 34 31.4
comp=Z,1µm,20.0s
PABE Paberze 92.80 33 P **P** **21 52 52.4 -0.5**
PABE IAmb IAmb 21 52 59.5
comp=Z,54nm,1.3s
PABE IAMs_20 IAMs_20 22 34 58.4
comp=Z,2µm,20.0s
PABE Paberze 92.80 33 P **P** **21 52 53.2 +0.3**
ABAH Abaujker 93.16 41 P **P** **21 52 56.0 +1.2**
PDG Podgorica 93.20 47 IAMs_20 IAMs_20 22 32 00.5
comp=Z,958nm,20.0s
PDG Podgorica 93.20 47 P **P** **21 52 56.1 +1.0**
VSU Vasula 93.30 30*c i*P **P** **21 52 53.0 -2.2**
VSU pmax pmax
comp=Z,42nm,1.2s
VSU Vasula 93.30 30 P **P** **21 52 53.8 -1.3**
AMBH Ambrzfalva 93.30 43 P **P** **21 52 57.6 +2.1**
SNAA Sanae 93.54 162 ⇑P **P** **21 52 56.6 +0.5**
comp=Z,365nm,1.3s
SNAA Sanae 93.54 162 P **P** **21 52 56.5 +0.4**
comp=Z,6.6nm,1.1s,baz=247,slow=2.7,SNR=8.5
SNAA PP **PP** **21 56 42.0 +1.4**
comp=Z,4.3nm,1.2s,baz=289,slow=8.8,SNR=3.5
comp=Z,6.6nm,1.1s
SNAA Sanae 93.54 162*ce*P **P** **21 52 56.9 +0.8**
SNAA pmax pmax
comp=Z,51nm,1.4s
SNAA Sanae 93.54 162 P **P** **21 52 56.3 +0.2**
SNAA IAmb IAmb 21 53 04.1
comp=Z,62nm,1.4s
SNAA Sanae 93.54 162 P **P** **21 52 57.3 +1.2**
KOLS Kolonicke sedl 93.65 40 *e*P **P** **21 52 58.5 +1.4**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 93.65 40 P **P** **21 52 58.9 +1.8**
KOLS Kolonicke sedl 93.65 40 *e*P **P** **21 52 58.5 +1.4**
KWP Kalwaria Pacla 93.74 39 *e*P **P** **21 52 58.5 +1.0**
KWP *e*S **SKSac** **22 03 31.1 -1.4**
KWP *e*L L 22 31 59.6
comp=Z,2µm,20.1s
KWP Kalwaria Pacla 93.74 39 P **P** **21 52 57.7 +0.2**
comp=Z,907nmcomp=Z,33nm,1.9s
LTVH Ltavrtes, Hu 93.82 41 P **P** **21 52 59.1 +1.3**
SIRR Siria 93.95 43 ⇓P **P** **21 52 59.9 +1.3**
TRPA Tarpa 94.04 41 P **P** **21 53 00.1 +1.2**
BZS Buzias 94.09 43 ⇑P **P** **21 52 59.9 +0.7**
BZS Buzias 94.09 43 ⇑P **P** **21 52 59.9 +0.7**
BZS Buzias 94.09 43 P **P** **21 52 59.9 +0.7**
KEK Kerkira 94.21 49 P **P** **21 53 00.9 +1.1**
PHP Peshkopia 94.23 47 P **P** **21 53 01.2 +1.3**
SRN Sarande 94.32 49 P **P** **21 53 00.4 0.0**
MDVR Moldovita 94.37 44 ⇓P **P** **21 53 01.2 +0.7**
BMR Baia Mare 94.78 41 ⇑P **P** **21 53 03.5 +1.2**
BMR Baia Mare 94.78 41 ⇑P **P** **21 53 03.5 +1.2**
BMR Baia Mare 94.78 41 P **P** **21 53 03.6 +1.3**
HERR Herculane 94.83 44 ⇑P **P** **21 52 02.9 +0.3**
GZR Gura Zlata 94.93 43 ⇑P **P** **21 53 04.9 +1.8**
GZR Gura Zlata 94.93 43 ⇑P **P** **21 53 04.9 +1.8**
CJR Cluj-Napoca 95.12 42 ⇑P **P** **21 53 05.7 +1.8**
CJR Cluj-Napoca 95.12 42 ⇑P **P** **21 53 05.7 +1.8**
RNPP9 Sopachiv 95.15 37 P **P** **21 53 03.4 -0.5**
RNPP8 Varash 95.16 37 P **P** **21 53 03.4 -0.5**
RNPP5 Staryi Chortor 95.21 37 P **P** **21 53 03.9 -0.2**
MNK Minsk 95.26 33 *i*P **P** **21 53 03.6 -0.7**
comp=E,9.0nm,1.3s
MNK *i*P **P** **21 53 03.6 -0.7**
comp=N,4.0nm,0.8s
MNK *i*P **P** **21 53 03.6 -0.7**
comp=Z,13nm,1.2s,baz=290
MNK *i*PP PP 21 56 35.4 -19
MNK *i*PPP PPP 21 58 55.3
MNK *i*SKS 22 03 04.0
MNK *i*S **SKSac** **22 03 38.6 -1.7**
MNK *i*PS PS 22 05 58.0 +20
MNK *i*SS **SS** **22 10 46.9 +0.9**
MNK *i*SSS SSS 22 14 29.7
MNK *i*LQ LQ 22 28 20.8
MNK *i*LRM MLR 22 36 28.1
comp=N,1µm,17.1s
MNK *i*LRM MLR 22 36 31.9
comp=Z,2µm,19.2s
MNK *i*LRM MLR 22 36 49.3
comp=E,540nm,17.1s
MNK Minsk 95.26 33 *i*P **P** **21 53 03.6 -0.7**
MNK *i*S **SKSac** **22 03 38.6 -1.7**
MNK *i*SS **SS** **22 10 46.8 +0.9**
MNK *i*SSS SSS 22 14 29.7
MNK pmax pmax
comp=N,4.0nm,0.8s
MNK pmax pmax
comp=E,9.0nm,1.3s
MNK pmax pmax
comp=Z,13nm,1.2s
MNK MLR MLR
comp=N,1µm,17.0s
MNK MLR MLR
comp=Z,2µm,19.0s
MNK MLR MLR
comp=E,540nm,17.0s
TROLL Troll, Antarti 95.26 162 ⇑P **P** **21 53 05.1 +1.0**
comp=Z,2µm,1.4s
TROLL ⇓PP **PP** **21 56 55.6 +1.5**
comp=Z,431nm,1.2s
LOT Lotru 95.59 43 P **P** **21 53 06.2 0.0**
GRG Griva 95.84 48 P **P** **21 53 08.3 +1.0**
VALD Valchedram 95.85 45 *e*P **P** **21 53 07.8 +0.6**
BURAR Bucovina Array 95.91 41 ⇑P **P** **21 53 09.0 +1.4**
BURAR Bucovina Array 95.91 41 ⇑P **P** **21 53 09.0 +1.4**
BURAR Bucovina Array 95.91 41 P **P** **21 53 07.8 +0.2**
BLSH Balsha 95.97 46 *e*P **P** **21 53 09.5 +1.6**
VTS Vitosha 96.00 46 *e*P **P** **21 53 09.1 +0.9**
ADZR Andozero 96.05 23 *e*P **P** **21 53 06.4 -1.3**
ADZR *e* 21 56 58.5
ADZR S **SKSac** **22 03 42.3 -1.8**
ADZR pmax pmax
comp=Z,29nm,1.3s
KKB Krupnik 96.13 47 *e*P **P** **21 53 10.4 +1.8**
KNT Kendrikon 96.15 47 P **P** **21 53 09.2 +0.6**
MPEP Malo Peshtene 96.16 45 *e*P **P** **21 53 10.8 +2.1**
PLNA Plana 96.17 46 *e*P **P** **21 53 10.7 +1.8**
ARR Arges 96.20 43 ⇓P **P** **21 53 09.0 +0.1**
ARR Arges 96.20 43 P **P** **21 53 09.4 +0.5**
AGG Agios Georgios 96.28 49 P **P** **21 53 11.1 +1.7**
MI28 MI28,Pidlybu 96.37 37 P **P** **21 53 09.2 -0.2**
KMPD K-Podol'skiy 96.41 39 P **P** **21 53 08.6 -1.1**
VOIR 96.46 43 ⇑P **P** **21 53 11.7 +1.6**
VOIR 96.46 43 ⇑P **P** **21 53 11.7 +1.6**
VOIR 96.46 43 P **P** **21 53 11.2 +1.1**
SOH Sokhos 96.57 47 P **P** **21 53 11.3 +0.6**
MI29 MI29, Kamyanyy 96.65 37 P **P** **21 53 10.5 -0.2**
comp=Z,56nm,1.1s
MMB Musomishta 96.66 47 *e*P P 21 53 17.6 +6.5
HUMR Humele 96.68 44 P **P** **21 53 10.9 -0.1**
LUBAR Lubar, Ukraine 96.76 38 P **P** **21 53 11.2 -0.1**
MLR Muntele Rosu 97.04 42 P **P** **21 53 12.3 -0.5**
comp=Z,31nm,1.2s,baz=282,slow=2.4,SNR=23
MLR LR LR 22 37 13.9
comp=Z,1µm,18.0s,baz=283,slow=36
MLR Muntele Rosu 97.04 42 ⇑P Pdif 21 53 13.4 +0.5
MLR Muntele Rosu 97.04 42 ⇑P Pdif 21 53 13.4 +0.5
MLR Muntele Rosu 97.04 42 P **P** **21 53 12.1 -0.7**
MLR IAMs_20 IAMs_20 22 37 38.6
comp=Z,2µm,19.0s
MLR Muntele Rosu 97.04 42 P **P** **21 53 12.0 -0.8**
comp=Z,577nmcomp=Z,32nm,1.4s
MLR Muntele Rosu 97.04 42 P Pdif 21 53 13.3 +0.4
COVR Voineasa-Covas 97.10 42 ⇑P Pdif 21 53 14.7 +1.6
AK20 Malin Array Si 97.23 37 P **P** **21 53 13.3 0.0**
AK21 Malin Array Si 97.24 37 P **P** **21 53 13.2 -0.2**
AK19 Malin Array Si 97.24 37 P **P** **21 53 13.2 -0.2**

AK22 Malin Array Si 97.26 37 P **P** **21 53 13.3 -0.2**
AK18 Malin Array Si 97.27 37 P **P** **21 53 13.4 -0.1**
AK17 Malin Array Si 97.28 37 P **P** **21 53 13.4 -0.2**
AK16 Malin Array Si 97.31 37 P **P** **21 53 13.5 -0.2**
AK04 Malin Array Si 97.33 37 P **P** **21 53 13.6 -0.2**
RZN Rozhen 97.33 46 *e*P Pdif 21 53 15.1 +0.7
AK11 Malin Array Si 97.35 37 P **P** **21 53 13.7 -0.2**
AKASG Malin Array Be 97.37 37 P **P** **21 53 13.4 -0.5**
comp=Z,0.2nm,0.3s,baz=274,slow=4.4,SNR=7.6
AKASG PP **PP** **21 57 06.0 -4.4**
comp=Z,0.1nm,0.3s,baz=287,slow=7.4,SNR=7.0
AKASG LR LR 22 33 51.9
comp=Z,2µm,21.2s,baz=288,slow=34
AKASG Malin Array Be 97.37 37 *i*P **P** **21 53 13.5 -0.5**
AKASG Malin Array Be 97.37 37 P **P** **21 53 12.7 -1.3**
AKBB Malin Array Si 97.37 37 ⇓*i*P **P** **21 53 13.2 -0.8**
AKBB pmax pmax
comp=Z,10.0nm,1.8s
AKBB Malin Array Si 97.37 37 P **P** **21 53 12.1 -1.9**
AKBB IAmb IAmb 21 57 09.2
comp=Z,20nm,1.5s
AKBB Malin Array Si 97.37 37 P **P** **21 53 13.1 -0.9**
QSPA South Pole Qui 97.40 180 P Pdif 21 53 14.5 +0.6
comp=Z,4.3nm,1.0s,baz=135,slow=4.1,SNR=5.2
QSPA LR LR 22 29 31.4
comp=Z,547nm,21.9s,baz=158,slow=31
comp=Z,4.3nm,1.0s
QSPA South Pole Qui 97.40 180 P **P** **21 53 13.9 0.0**
VRI Vrincioaia 97.44 42 P Pdif 21 53 16.3 +1.8
SORM Soroca 97.74 39 ⇑P Pdif 21 53 16.3 +0.5
SORM Soroca 97.74 39 ⇑P Pdif 21 53 16.3 +0.5
SORM Soroca 97.74 39 P Pdif 21 53 15.8 0.0
KDZ Kurdzhali 97.78 46 *e*P Pdif 21 53 17.2 +1.1
RDO Rodhopi 98.07 47 P **P** **21 53 16.0 -1.3**
RDO IAmb IAmb 21 53 19.3
comp=Z,16nm,1.4s
RDO Rodhopi 98.07 47 P Pdif 21 53 18.4 +1.0
KLMR Klimovskoe 98.13 25 *e*P **P** **21 53 15.1 -2.0**
KLMR *e* 21 57 13.5
KLMR pmax pmax
comp=Z,29nm,1.4s
KLMR MLR MLR
comp=Z,969nm,18.0s
NVL N'lazarevskaya 98.17 160 *e*P **P** **21 53 15.1 -1.9**
NVL *e*S **SKSac** **22 03 51.0 -3.6**
NVL *e*SS **SS** **22 11 27.5 +0.7**
NVL pmax pmax
comp=Z,11nm,1.0s
NVL MLR MLR
comp=Z,840nm,17.0s
TIXI Tiksi 98.55 351 LR LR 22 41 56.5
comp=Z,3µm,18.5s,baz=34,slow=38
TIXI Tiksi 98.55 351 ⇑*e*P Pdif 21 53 19.5 +0.7
TIXI pmax pmax
comp=Z,26nm,1.1s
BAL3X Bal3x, Balta 98.60 39 P **P** **21 53 19.3 -0.3**
SEY Seymchan 98.69 338 ⇓*e*P Pdif 21 53 20.2 +0.5
SEY pmax pmax
comp=Z,11nm,1.9s
PRD Provadia 98.77 44 *e*P Pdif 21 53 26.2 +5.7
RAO Raoul Island 98.82 242 LR LR 22 31 42.6
comp=Z,548nm,18.2s,baz=60,slow=32
TIRR Tirgusor 99.03 43 IAMs_20 IAMs_20 22 41 11.4
comp=Z,1µm,18.0s
PSN Preselentsi 99.12 44 *e*P **Pdif** **21 53 26.2 +4.2**
OBN Obninsk 99.59 31 LR LR 22 35 25.8
comp=Z,766nm,20.4s,baz=328,slow=34
OBN Obninsk 99.59 31*d i*P **Pdif** **21 53 23.9 +0.1**
OBN *i* 21 57 26.9
OBN *i*S **SKSac** **22 03 58.5 -4.0**
OBN *e*SS **SS** **22 11 46.9 +0.1**
OBN *e*SSS SSS 22 15 35.7
OBN pmax pmax
comp=Z,15nm,1.4s
OBN MLR MLR
comp=Z,1µm,20.0s
OBN Obninsk 99.59 31 P **Pdif** **21 53 22.9 -0.9**
OBN IAMs_20 IAMs_20 22 35 42.8
comp=Z,1µm,20.0s
MOS Moscow 99.83 30 *e*P **Pdif** **21 53 26.5 +1.6**
MOS *e* 21 57 30.4
MOS *e*PPP PPP 21 59 38.6
MOS *e*S **SKSac** **22 04 02.7 -1.0**
MOS *e*PS **PS** **22 06 30.3 +2.7**
MOS pmax pmax
comp=Z,12nm,0.6s
KARP Karpathos 100.94 52 IAMs_20 IAMs_20 22 38 37.0
comp=Z,902nm,20.0s
PET Petropavlovsk 101.11 328 IAMs_20 IAMs_20 22 48 01.2
comp=Z,1µm,20.0s
PETK Petropavlovsk- 101.57 328 PP PP 21 57 28.0 -14
comp=Z,0.5nm,0.3s,baz=63,slow=8.9,SNR=4.3
SBA Scott Base 101.63 192 IAMs_20 IAMs_20 22 30 23.6
comp=Z,827nm,20.0s
ELIB Princess Elisa 101.70 162 *d*PP **PP** **21 57 44.1 +0.9**
ELIB *d*PKiKP **PKiKP** **21 57 56.6 +0.2**
MSVF Nonsavu 101.77 253 IAMs_20 IAMs_20 22 36 50.2
comp=Z,1µm,18.0s
SIM Simferopol' 102.62 41 *e*P **Pdif** **21 53 34.6 -3.0**
SIM pmax pmax
comp=Z,5.0nm,1.3s
NRIK Noril'sk 103.08 4 PP **PP** **21 57 50.1 -2.9**
comp=Z,2.3nm,0.7s,baz=332,slow=5.1,SNR=5.7
BRTR Keskin Array B 104.36 46 Pdiff **Pdif** **21 53 46.6 +0.9**
comp=Z,0.8nm,1.0s,baz=248,slow=5.2,SNR=3.8
BRTR PKiKP **PKiKP** **21 58 02.1 -0.1**
comp=Z,1.4nm,1.1s,baz=299,slow=3.0,SNR=4.7
ARPR Arapgir-MALATY 107.94 45 IAMs_20 IAMs_20 22 39 15.4
comp=Z,867nm,22.0s
KIV Kislovodsk 108.53 39 IAMs_20 IAMs_20 22 38 54.3
comp=Z,1µm,21.0s
KBZ Khabaz 108.78 39 PP **PP** **21 58 34.0 -1.9**
comp=Z,1.3nm,0.7s,baz=313,slow=14,SNR=4.0
MAK Makhachkala 112.03 38 *e*P **Pdif** **21 54 19.0 -0.4**
MAK *e*PPP PPP 22 01 19.1
MAK *e* 22 04 55.5
MAK *e*PS **PS** **22 08 26.9 -6.0**
MAK pmax pmax
comp=Z,33nm,0.9s
SANVU Saraoutou 112.04 256 IAMs_20 IAMs_20 22 34 04.4
comp=Z,1µm,21.0s
MAW Mawson 115.38 166 PP **PP** **21 59 23.8 +1.3**
comp=Z,4.8nm,1.2s,baz=213,slow=14,SNR=3.9
ERM Erimo 115.91 324 IAMs_20 IAMs_20 22 54 25.0
comp=Z,1µm,21.0s
LODK Lodwar 116.46 82 IAMs_20 IAMs_20 22 54 00.6
comp=Z,1µm,18.0s
ZAA0 Zalesovo Array 117.86 9 **PKPdf** **21 58 25.2 -1.9**
ZALV Zalesovo Beam 117.86 9 PKP **PKPdf** **21 58 26.0 -1.0**
comp=Z,2.2nm,0.8s,baz=328,slow=1.9,SNR=8.2
ZALV PP **PP** **21 59 37.2 -2.4**
comp=Z,1.1nm,0.7s,baz=359,slow=12,SNR=4.7
ZALV Zalesovo Beam 117.86 9 PKiKP **PKPdf** **21 58 26.0 -1.0**
ZALV Zalesovo Beam 117.86 9 **PKPdf** **21 58 25.7 -1.4**
KURK Kurchatov 119.70 14 ⇑*i*PKiKP **PKPdf** **21 58 30.4 -0.3**
KURK Kurchatov 119.70 14 **PKPdf** **21 58 30.4 -0.3**
KURBB Kurchatov Arra 119.77 14 PKP **PKPdf** **21 58 30.1 -0.8**
comp=Z,3.0nm,0.9s,baz=334,slow=2.3,SNR=8.3
KURBB PP **PP** **21 59 49.3 -3.6**
comp=Z,1.8nm,1.1s,baz=337,slow=5.3,SNR=4.8
KIBK Kibwezi 119.97 88 IAMs_20 IAMs_20 22 51 38.0
comp=Z,1µm,20.0s
RAYN Ar Rayn 120.13 57 IAMs_20 IAMs_20 22 56 53.9
comp=Z,717nm,19.0s
ATD Arta Tunnel 121.89 72 IAMs_20 IAMs_20 22 54 51.5
comp=Z,773nm,18.0s
KNGR Kungurtug, Tuv 122.23 0 ⇓*i*PKiKP **PKiKP** **21 58 36.1 +0.2**
MJAR Matsushiro Arr 122.36 322 PKP **PKPdf** **21 58 35.1 -1.2**
comp=Z,3.0nm,1.0s,baz=122,slow=2.5,SNR=4.5
MJAR Matsushiro Arr 122.36 322 PKiKP **PKPdf** **21 58 35.1 -1.2**
MAJO Matsushiro 122.36 322 IAMs_20 IAMs_20 22 46 50.9
comp=Z,856nm,21.0s
DGZ Jazzator, Alta 122.38 8 ⇓*i*PKiKP **PKiKP** **21 58 37.3 +1.0**
CN2 Changchun 123.34 337 PKP **PKPdf** **21 58 36.5 -1.4**
CN2 L L
comp=Z,1µm,17.0s
CN2 L L
comp=Z,380nm,17.0s
CN2 L L
comp=Z,2µm,17.0s
BRLS Borolday 123.60 25 *e*PKiKP **PKiKP** **21 58 38.9 +0.2**
BRLS Borolday 123.60 25 *e*PKP **PKiKP** **21 58 38.9 +0.2**
INU Inuyama 123.87 322 IAMs_20 IAMs_20 22 46 05.7
comp=Z,638nm,21.0s
CHM Chimkent 124.09 25 *e*PKiKP **PKiKP** **21 58 39.8 +0.1**

CHM Chimkent 124.09 25 *e*PKP **PKiKP** **21 58 39.8 +0.1**
ZSN Zaisan 124.14 11 *e*PKiKP **PKiKP** **21 58 39.6 0.0**
ZSN Zaisan 124.14 11 *e*PKP **PKiKP** **21 58 39.6 0.0**
MAKZ Makanchi 124.15 13 PKiKP **PKPdf** **21 58 38.5 -0.9**
MAKZ MLR MLR
comp=Z,2µm,20.0s
MAKZ Makanchi 124.15 13 **PKPdf** **21 58 38.5 -0.9**
MK31 Makanchi Array 124.23 13*c i*PKiKP **PKPdf** **21 58 39.6 0.0**
MKAR Makanchi Array 124.23 13 PKP **PKPdf** **21 58 38.1 -1.5**
comp=Z,2.8nm,0.9s,baz=8.5,slow=2.5,SNR=8.7
MKAR PP **PP** **22 00 18.2 -5.1**
comp=Z,1.3nm,1.0s,baz=5.1,slow=5.5,SNR=4.3
MKAR Makanchi Array 124.23 13 PKiKP **PKPdf** **21 58 38.8 -0.8**
MKAR Makanchi Array 124.23 13 **PKPdf** **21 58 38.8 -0.8**
DZA Taraz 124.32 24 *e*PKiKP **PKPdf** **21 58 39.9 +0.1**
DZA Taraz 124.32 24 *e*PKP **PKPdf** **21 58 40.0 +0.1**
ULN Ulaanbaatar 124.41 353*c i*PKiKP **PKiKP** **21 58 40.9 +0.5**
ULN Ulaanbaatar 124.41 353 **PKiKP** **21 58 40.2 -0.1**
SONM Songino Array 124.52 353 PKP **PKPdf** **21 58 39.6 -0.6**
comp=Z,6.2nm,1.0s,baz=318,slow=2.0,SNR=8.6
SONM PP **PP** **22 00 23.0 -2.2**
comp=Z,2.1nm,1.0s,baz=1.9,slow=4.5,SNR=3.7
SONM Songino Array 124.52 353 PKiKP **PKPdf** **21 58 39.6 -0.6**
SONM Songino Array 124.52 353 **PKPdf** **21 58 39.3 -0.9**
TDK Taldyqorghan 124.90 17 *e*PKiKP **PKiKP** **21 58 41.2 0.0**
TDK Taldyqorghan 124.90 17 *e*PKP **PKiKP** **21 58 41.3 0.0**
SGDS Sogindy 125.08 21 *e*PKP **PKiKP** **21 58 41.7 0.0**
AAK Ala-Archa 125.74 21 ⇑*i*PKiKP **PKiKP** **21 58 44.4 +1.2**
AAK Ala-Archa 125.74 21 IAMs_20 IAMs_20 22 53 02.4
comp=Z,1µm,21.0s
AAA Alma-Ata 126.07 19 *e*PKiKP **PKPdf** **21 58 43.4 +0.2**
AAA Alma-Ata 126.07 19 *e*PKP **PKPdf** **21 58 43.4 +0.2**
MDOK Medeo 126.15 19 *e*PKiKP **PKPdf** **21 58 43.6 +0.1**
MDOK Medeo 126.15 19 *e*PKP **PKPdf** **21 58 43.6 +0.1**
TNSS Tian-Shan 126.23 19 *e*PKiKP **PKPdf** **21 58 43.8 -0.2**
TNSS Tian-Shan 126.23 19 *e*PKP **PKPdf** **21 58 43.9 -0.2**
SATY Saty 126.67 18 *e*PKiKP **PKPdf** **21 58 44.5 0.0**
SATY Saty 126.67 18 *e*PKP **PKPdf** **21 58 44.5 0.0**
UZB Uzynbulak 126.78 17 *e*PKiKP **PKPdf** **21 58 44.8 +0.1**
UZB Uzynbulak 126.78 17 *e*PKP **PKPdf** **21 58 44.8 +0.1**
CHGR Chuyangaron 126.85 28 ⇑*e*PKiKP **PKPdf** **21 58 43.3 -1.6**
SHLS Shalkode 126.90 17 *e*PKiKP **PKiKP** **21 58 45.4 0.0**
SHLS Shalkode 126.90 17 *e*PKP **PKiKP** **21 58 45.4 0.0**
KDJ Kajisay 127.12 19 PKiKP **PKPdf** **21 58 44.9 -0.6**
KDJ Kajisay 127.12 19 **PKPdf** **21 58 44.9 -0.6**
KSRS Korea Array 127.40 330 PKP **PKPdf** **21 58 45.5 -0.3**
comp=Z,7.0nm,1.0s,baz=31,slow=1.4,SNR=17
KSRS Korea Array 127.40 330 PKiKP **PKPdf** **21 58 45.6 -0.3**
KSAR Wonju Array Be 127.43 330 PKiKP **PKPdf** **21 58 45.1 -0.8**
KSAR Wonju Array Be 127.43 330 **PKPdf** **21 58 45.1 -0.8**
UOSS Minazif 128.04 50 IAMs_20 IAMs_20 22 58 21.6
comp=Z,961nm,21.0s
WMQ Urumqi 128.15 10 PKP **PKPdf** **21 58 47.3 +0.1**
WMQ SKKS 22 07 44.6
WMQ PPMZ
comp=Z,230nm,8.5s
WMQ L L
comp=Z,2µm,19.5s
WMQ L L
comp=Z,1µm,15.3s
WMQ L L
comp=Z,1µm,15.3s
DL2 Dalian 129.02 336 PKP **PKiKP** **21 58 54.0 +4.4**
DL2 SS SS 22 18 15.0 +1.0
DL2 PPMZ
comp=Z,200nm,4.7s
DL2 L L
comp=Z,660nm,16.6s
DL2 L L
comp=Z,2µm,21.1s
GUMO Guam 129.12 294 IAMs_20 IAMs_20 22 52 00.6
comp=Z,562nm,20.0s
KSH2 Kashi 129.18 23 PKP **PKPdf** **21 58 49.8 +0.4**
KSH2 PP **PP** **22 00 56.6 +0.2**
KSH2 SS SS 22 18 18.3 +1.9
KSH2 PPMZ
comp=Z,510nm,8.2s
KSH2 L L
comp=Z,820nm,19.9s
KSH2 L L
comp=Z,2µm,18.9s
KSH2 L L
comp=Z,1µm,19.9s
BJI2 Beijing 129.95 342 ⇓PKP **PKPdf** **21 58 49.3 -1.4**
BJI2 PP **PP** **22 01 01.4 +0.3**
BJI2 SS SS 22 18 22.6 -2.7
BJI2 PPMZ
comp=Z,95nm,10.2s
BJI2 L L
comp=Z,900nm,18.2s
BJI2 L L
comp=Z,470nm,17.7s
BJI2 L L
comp=Z,1µm,17.1s
HHC Hu-ho-hao-te 130.42 347 *e*PKP **PKPdf** **21 58 47.8 -3.9**
HHC SS SS 22 18 29.0 -2.1
HHC PPMZ
comp=Z,240nm,7.7s
HHC L L
comp=Z,1µm,18.2s
HHC L L
comp=Z,3µm,18.8s
BTO2 Baotou 130.88 348 *e*PKP **PKPdf** **21 58 50.3 -2.3**
BTO2 PP **PP** **22 01 10.9 +3.7**
BTO2 PPMZ
comp=Z,320nm,4.2s
BTO2 L L
comp=Z,5µm,20.7s
HNS HongShan 132.81 342 ⇑PKP **PKiKP** **21 58 59.0 +1.7**
HNS PPMZ
comp=Z,190nm,8.2s
HNS L L
comp=Z,1µm,17.6s
HNS L L
comp=Z,2µm,21.2s
STKA Stephens Creek 132.81 233 PKP **PKiKP** **21 58 57.2 -0.2**
comp=Z,6.2nm,1.0s,baz=36,slow=3.9,SNR=5.2
STKA Stephens Creek 132.81 233 PKiKP **PKiKP** **21 58 57.2 -0.2**
NIL Nilore 132.84 29 IAMs_20 IAMs_20 22 59 53.5
comp=Z,1µm,22.0s
TIA Tai'an 133.08 339 PKP **PKiKP** **21 58 59.3 +1.4**
TIA L L
comp=Z,770nm,18.8s
TIA L L
comp=Z,290nm,13.3s
TIA L L
comp=Z,990nm,22.0s
GTA2 Gaotai 133.32 358 *e*PKP **PKPdf** **21 58 57.8 +0.6**
GTA2 PP **PP** **22 01 22.8 0.0**
GTA2 PPMZ
comp=Z,420nm,6.7s
GTA2 L L
comp=Z,1µm,20.6s
GTA2 L L
comp=Z,1µm,20.9s
GTA2 L L
comp=Z,2µm,20.3s
SSE Sheshan 135.81 331 PKP **PKPdf** **21 59 02.4 +0.5**
SSE SS SS 22 19 42.3 +5.4
SSE PPMZ
comp=Z,180nm,4.5s
SSE L L
comp=Z,240nm,23.5s
SSE L L
comp=Z,590nm,23.9s
NJ2 Nanjing 136.06 334 *e*PKP **PKPdf** **21 59 00.1 -2.3**
NJ2 L L
comp=Z,5µm,23.5s
LZH Lanzhou 136.41 353 PKP **PKiKP** **21 59 06.4 +1.5**
LZH PKS **PKSdf** **22 02 37.1 -2.5**
LZH PPMZ
comp=Z,350nm,5.8s
LZH L L
comp=Z,1µm,16.5s
LZH L L
comp=Z,2µm,18.7s
LZDM Lanzhou Array 136.56 353 PKP **PKiKP** **21 59 04.5 -0.8**
comp=Z,0.9nm,0.3s,baz=43,slow=6.7,SNR=4.1
XAN Xi'an 137.53 347 PKP **PKPdf** **21 59 04.8 -0.3**
XAN PP **PP** **22 01 53.8 +4.4**
XAN SS SS 22 20 01.6 +4.7
XAN PPMZ
comp=Z,320nm,10.0s
XAN L L
comp=Z,4µm,19.8s

UTK	**UTTARKASHI**	137.65	25	*i* x		**PP**		**22 01 54.3**	**+3.8**
BHUJ	**Bhuj**	138.73	42	*e*P		**PKiKP**		**21 59 09.5**	**-0.1**
SONA	**Sohna**	139.14	29	*i* x		**PP**		**22 02 05.6**	**+5.8**
TKRD	**Thakurdwara**	139.20	26	*i* x		**PP**		**22 02 07.1**	**+7.1**
PTH	**Pithoragarh**	139.39	24	*e*P		**PKPdf**		**21 59 09.7**	**+0.9**
PTH				*i* x		**PP**		**22 02 01.9**	**+0.5**
UDPR	**Udaipur**	140.29	36	*i* x		**PP**		**22 02 05.6**	**-1.6**
ENH	**Enshi**	140.98	344			**PKPdf**		**21 59 09.7**	**-1.8**
NACB	**Ninganchiao**	141.14	325	IAMs_20	IAMs_20	23 13 40.1			
	comp=Z,894nm,19.0s								
CD2	**Chengdu**	141.52	352	PKP	**PKPdf**	**21 59 11.0**	**-1.5**		
CD2				PKS	PP	22 02 50.6	+37		
CD2				SKKS		22 09 03.9			
CD2				L	L				
	comp=Z,1μm,18.4s								
CD2				L	L				
	comp=Z,2μm,20.3s								
YULB	**Yu-li**	141.92	324	IAMs_20	IAMs_20	23 08 16.7			
	comp=Z,888nm,20.0s								
ASAR	**Alice Springs**	142.07	241	PKhKP	PKPpre	21 59 08.4			
	comp=Z,4.1nm,0.8s,baz=108,slow=3.2,SNR=17								
WR0	**Warramunga Arr**	142.57	247		**PKPdf**	**21 59 11.0**	**-3.5**		
WR8	**Warramunga Arr**	142.61	247		**PKPdf**	**21 59 11.6**	**-3.1**		
WRAB	**Tennant Creek**	142.75	247	*e*PKIKP	**PKPdf**	**21 59 14.9**	**0.0**		
WRA	**Warramunga Arr**	142.76	247	PKhKP	PKPpre	21 59 11.3			
	comp=Z,4.5nm,0.8s,baz=100,slow=2.9,SNR=25								
WRA	**Warramunga Arr**	142.76	247	PKHKP	PKPpre	21 59 11.1			
WRA	**Warramunga Arr**	142.76	247		**PKPdf**	**21 59 11.1**	**-3.8**		
EVN	**Everest**	143.19	17		PKPbc	21 59 12.8	-0.3		
BHPL	**Bhopal**	143.43	33	*ex*	PKPbc	21 59 13.1	-0.1		
POO	**Poona**	144.82	43	*e*P	**PKPdf**	**21 59 18.4**	**-0.2**		
AKL	**Akola**	145.21	36	*e*P	**PKPbc**	**21 59 18.6**	**-0.1**		
GYA	**Guiyang**	145.33	346	PKPbc	**PKPab**	**21 59 19.3**	**+0.1**		
GYA				sPKP	sPKPbc	21 59 24.4	+0.9		
KAD	**Karad**	145.90	44	*e*P	**PKPdf**	**21 59 20.8**	**+0.3**		
NGP	**Nagpur**	145.99	33	*e*P	**PKPdf**	**21 59 20.5**	**0.0**		
PZH	**PanZhiHua**	146.11	354	PKPbc	**PKPdf**	**21 59 21.1**	**+0.4**		
PZH				PP	**PP**	**22 02 43.8**	**+2.2**		
PZH				SS	SS	22 21 38.4	+1.8		
PZH				PPMZ					
	comp=Z,280nm,6.1s								
PZH				L	L				
	comp=Z,690nm,19.8s								
PZH				L	L				
	comp=Z,520nm,18.0s								
PZH				L	L				
	comp=Z,1μm,18.8s								
SHL	**Shillong**	146.67	10	*e*P	**PKPbc**	**21 59 22.7**	**-0.6**		
BOK	**Bokaro**	146.77	21	*e*P	**PKPab**	**21 59 24.1**	**-0.4**		
BLSP	**Bilaspur**	146.78	28	*e*P	**PKPab**	**21 59 24.3**	**-0.4**		
MTN	**Manton Dam**	147.07	258	PKPdf	**PKPdf**	**21 59 21.1**	**-1.4**		
KMI2	**Kunming**	147.33	352	PKPbc	**PKPdf**	**21 59 22.8**	**-0.2**		
KMI2				PP	PP	22 02 57.3	+8.4		
KMI2				PPMZ					
	comp=Z,330nm,9.9s								
KMI2				L	L				
	comp=Z,860nm,22.6s								
KMI2				L	L				
	comp=Z,890nm,20.3s								
KMI2				L	L				
	comp=Z,1μm,21.9s								
TNCH	**TengChong**	147.76	359	PKPbc	**PKPbc**	**21 59 26.5**	**+0.1**		
TNCH				pPKP	pPKPbc	21 59 30.0	+0.3		
TNCH				SS	SS	22 21 54.8	-0.6		
TNCH				PPMZ					
	comp=Z,370nm,8.2s								
TNCH				L	L				
	comp=Z,460nm,25.3s								
TNCH				L	L				
	comp=Z,520nm,16.2s								
TNCH				L	L				
	comp=Z,1μm,21.2s								
MORE	**Moreh**	148.33	7		**PKPdf**	**21 59 22.6**	**-1.8**		
MORE				IAMs_20	IAMs_20	23 11 43.6			
	comp=Z,923nm,20.0s								
HYB	**Hyderabad**	148.66	38	*e*P	**PKPbc**	**21 59 29.5**	**+0.7**		
HYB	**Hyderabad**	148.66	38	*e*PKPdf	**PKPdf**	**21 59 23.1**	**-2.0**		
KNRA	**Kununurra**	148.91	252		**PKPdf**	**21 59 27.0**	**+1.6**		
DAV	**Davao City (W)**	149.07	297	P	**PKPbc**	**21 59 29.0**	**-0.9**		
TNTI	**Ternate**	149.72	284	IAMs_20	IAMs_20	23 02 23.7			
	comp=Z,728nm,19.0s								
RAGD	**RAYAGADA**	149.83	28	*e*P	**PKiKP**	**21 59 32.5**	**-0.1**		
VIS	**Vishakhapatnam**	151.07	30	*e*P	**PKPdf**	**21 59 31.1**	**+2.3**		
FITZ	**Fitzroy Crossi**	151.18	246		**PKPdf**	**21 59 30.6**	**+1.7**		
QIZ	**Qiongzhong**	151.31	336	PKPbc	**PKPdf**	**21 59 31.4**	**+2.2**		
QIZ				PP	**PP**	**22 03 12.8**	**+0.7**		
QIZ				SS	SS	22 22 40.4	+5.1		
QIZ				L	L				
	comp=Z,540nm,16.7s								
QIZ				L	L				
	comp=Z,880nm,15.7s								
QIZ				L	L				
	comp=Z,1μm,19.2s								
SALM	**Salem**	152.56	47	*e*P	**PKPdf**	**21 59 32.2**	**+1.0**		
KOD	**Kodaikanal**	152.99	50	*e*P	**PKPdf**	**21 59 33.5**	**+1.4**		
CM31	**Chiang Mai Arr**	154.29	358		**PKPdf**	**21 59 32.2**	**-1.3**		
CMAR	**Chiang Mai Arr**	154.29	358	PKP	**PKPdf**	**21 59 34.2**	**+0.6**		
	comp=Z,5.0nm,0.9s,baz=12,slow=0.9,SNR=17								
CMAR	**Chiang Mai Arr**	154.29	358	PKIKP	**PKPdf**	**21 59 34.2**	**+0.6**		
CMAR	**Chiang Mai Arr**	154.29	358		**PKPdf**	**21 59 32.6**	**-0.9**		
LUWI	**Luwuk**	154.63	283	IAMs_20	IAMs_20	23 08 53.0			
	comp=Z,635nm,19.0s								
TOLI2	**Tolitoli**	155.86	290	IAMs_20	IAMs_20	22 58 40.0			
	comp=Z,554nm,20.0s								
KAPI	**Kappang**	158.37	275	IAMs_20	IAMs_20	23 14 48.7			
	comp=Z,652nm,20.0s								
PSI	**Prapat**	169.83	355	PKIKP	**PKPdf**	**21 59 46.6**	**-2.9**		
RPSI	**Rantau Prapat**	169.94	355	PKPdf	**PKPdf**	**21 59 46.6**	**-2.8**		

NNC ***15*** *21:40:35.2±5.4, 41°.36N×80°.68E, h0km, mb2.9, mpv2.4, Error ellipse: s-maj=42.0km s-min=32.6km az=22.0*
SOME ***15*** *21:40:49.4, 42°.28N×81°.12E, h10km*
ISC 15 21:40:45.6±3.3, **41°.9N**±0°.1×**80°.81E**±0°.09, **h16**km±13km, **n8, σ3°63/16, 2C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.63**	**323**	*e*P	**Pn**	**21 41 12.6**	**-1.2**
	2.4nm,0.2s						
SHLS				*e*S	**Sn**	**21 41 29.4**	**-5.1**
	5.3nm,0.3s						
PDGK	**Podgornoye**	**1.76**	**327**	⇓Pn	**Pn**	**21 41 12.4**	**-3.1**
	0.9nm,0.7s						
PDGK				⇓Sn	**Sg**	**21 41 41.4**	**-0.8**
	2.0nm,0.5s						
UZB	**Uzynbulak**	**1.84**	**315**	*e*P	**Pg**	**21 41 23.2**	**+2.3**
	1.5nm,0.2s						
UZB				*e*S	**Sg**	**21 41 47.5**	**+2.7**
	2.6nm,0.2s						
SATY	**Saty**	**2.14**	**305**	*e*P	**Pg**	**21 41 28.6**	**+1.9**
	1.5nm,0.2s						
SATY				*e*S	**Sg**	**21 41 56.8**	**+2.4**
	4.5nm,0.1s						
DJR	**Jarkent**	**2.58**	**344**	*e*P	**Pg**	**21 41 31.6**	**-3.4**
	0.5nm,0.3s						
DJR				*e*S	**Sb**	**21 42 01.8**	**-1.1**
	1.1nm,0.2s						
ARXS	**Arharly**	**3.21**	**318**	*e*P	**Pg**	**21 41 44.0**	**-3.0**
	0.5nm,0.3s						
ARXS				*e*S	**Sb**	**21 42 23.1**	**+2.0**
	2.0nm,0.6s						
MAKZ	**Makanchi**	**5.01**	**9**	⇑Pn	**Pn**	**21 41 58.3**	**-1.9**
	3.3nm,1.8s						
MAKZ				⇓Sn	**Sn**	**21 43 03.7**	**+5.9**
	2.9nm,2.0s						
MK31	**Makanchi Array**	**5.04**	**12**	Pn	**Pn**	**21 41 59.4**	**-1.2**
	0.2nm,0.7s,baz=203,slow=13,SNR=6.1						
MK31				⇑Sn	**Sn**	**21 43 04.3**	**+5.8**
	0.4nm,0.7s,baz=200,slow=22						

SNET ***15*** *21:57:49.2±1.0, 13°.32N×90°.04W, h59km, ML3.0, Presumed earthquake*
CATAC ***15*** *21:57:50.3±0.5, 13°N±3°×9°.0W±°, h2km±2km, M3.0/14, MLv3.0/14, Error ellipse: s-maj=6.1km s-min=3.5km az=29.9, confirmed*
GCG ***15*** *21:57:50.6±1.1, 13°.34N×89°.97W, h32km±8km, MD4.0, Presumed earthquake*
ISC 15 21:57:52.5±1.7, **13°.39N**±0°.07×**89°.85W**±0°.05, **h25**km±14km, **n34, σ1°14/49, El Salvador**

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

JAYA	**Jayaque - finc**	0.47	56	P		**Pn**		**21 58 02.8**	**-1.0**
JAYA	**Jayaque - finc**	0.47	56	*i* P		**Pn**		**21 58 02.4**	**-1.5**
JAYA	**Jayaque - finc**	0.47	56	*e*P		**Pn**		**21 58 02.8**	**-1.0**
FAME	**Alcaldia de Sa**	0.48	341	P		**Pb**		**21 58 02.0**	**-0.3**
CEVE	**Cerro Verde**	0.49	27	P		**Pn**		**21 58 03.4**	**-0.8**
CEVE				*S*		**Sn**		**21 58 12.1**	**+0.1**
CEVE	**Cerro Verde**	0.49	27	*e*P		**Pn**		**21 58 03.2**	**-0.9**
CEVE				*eS*		**Sn**		**21 58 14.7**	**+2.7**
NUBE	**Las Nubes**	0.52	8	P		**Pn**		**21 58 03.3**	**-1.1**
NUBE	**Las Nubes**	0.52	8	*i* P		**Pn**		**21 58 03.3**	**-1.1**
NUBE				*i* S		**Sn**		**21 58 12.2**	**-0.3**
LALI	**Alcalda de L**	0.53	79	P		**Pn**		**21 58 03.2**	**-1.3**
LALI				S		**Sn**		**21 58 12.0**	**-0.5**
CEDA	**San Andres**	0.61	47	S		**Sn**		**21 58 14.6**	**0.0**
LOAL	**Lomas de Alarc**	0.61	7	P		**Pn**		**21 58 04.9**	**-0.7**
LOAL				S		**Sn**		**21 58 15.9**	**+1.2**
SLOZ	**Alcaldia de Sa**	0.64	6	P		**Pn**		**21 58 05.1**	**-0.9**
SLOZ				S		**Sn**		**21 58 15.6**	**+0.3**
BOQS	**Boqueron**	0.66	58	*e*P		**Pn**		**21 58 05.5**	**-0.9**
UNIC	**Universidad Ca**	0.66	27	P		**Pn**		**21 58 05.6**	**-0.7**
UNIC				S		**Sn**		**21 58 16.6**	**+0.7**
UEES	**Universidad Ev**	0.68	61	S		**Sn**		**21 58 17.4**	**+0.9**
PANCS	**Alcalda de**	0.69	71	S		**Sn**		**21 58 16.1**	**-0.6**
LOMA	**Loma Larga**	0.71	69	P		**Pn**		**21 58 05.9**	**-1.1**
LOMA				*S*		**Sn**		**21 58 17.3**	**0.0**
LFRS	**El Faro**	0.81	73	*e*P		**Pn**		**21 58 08.4**	**+0.1**
PAVA	**Las Pavas**	0.95	70	P		**Pn**		**21 58 10.2**	**-0.1**
PAVA				S		**Sn**		**21 58 24.1**	**+1.0**
COEG	**Centro de Oper**	0.97	76	P		**Pn**		**21 58 10.0**	**-0.6**
COEG				S		**Sn**		**21 58 24.6**	**+0.9**
TECO	**Alcaldia de Te**	1.05	82	P		**Pn**		**21 58 11.0**	**-0.6**
TECO				S		**Sn**		**21 58 25.9**	**+0.3**
FG16	**Alotenango, Sa**	1.08	324	*e*P		**Pb**		**21 58 14.4**	**+1.7**
FG8	**Yepocapa, Chim**	1.10	322	*e*P		**Pb**		**21 58 14.9**	**+1.9**
MTO3	**Montecristo**	1.11	25	P		**Pn**		**21 58 11.4**	**-1.3**
MTO3				S		**Sn**		**21 58 28.1**	**+0.7**
MTO3	**Montecristo**	1.11	25	*i* P		**Pn**		**21 58 11.3**	**-1.4**
SCLA	**Alcaldia de Sa**	1.14	74	S		**Sn**		**21 58 29.2**	**+1.5**
LLGN	**La Laguna**	1.17	49	P		**Pb**		**21 58 13.3**	**-0.9**
LLGN				S		**Sn**		**21 58 29.6**	**+1.0**
P5NO	**Presa 5 de nov**	1.22	61	S		**Sn**		**21 58 31.3**	**+1.6**
ESQI	**Esquipulas**	1.27	23	P		**Pn**		**21 58 14.4**	**-0.2**
ESQI				S		**Sb**		**21 58 32.0**	**+0.3**
ESSG	**Sabana Grande**	1.37	316	*e*P		**Pn**		**21 58 13.2**	**-2.9**
PACA	**Pacayal**	1.49	87	P		**Pn**		**21 58 17.0**	**-0.8**
PACA				S		**Sb**		**21 58 37.8**	**-0.4**
RANC	**El Ranchito**	1.52	88	S		**Sb**		**21 58 40.7**	**+1.6**
APG	**El Apazote**	1.71	340	*e*P		**Pn**		**21 58 19.9**	**-1.0**
SARH	**Santa Rosa de**	1.74	37	S		**Sb**		**21 58 43.9**	**-1.3**

NEIC ***15*** *22:25:22.7±1.6, 16°.38S±0°.04×73°.93W±0°.08, h11km±3km, mb4.5/41, Mwr4.4/34, Error ellipse: s-maj=11.4km s-min=5.6km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.73; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$3.38; $M_{r\theta}$-1.33; $M_{\theta\phi}$-1.04; $M_{\phi r}$-3.20; Fault plane solution: M_{o4}4.77000×10^{15} NP1:ϕ_s12.43000°, δ70.64000°, λ-66.68000°. NP2:ϕ_s139.98000°, δ29.96000°, λ-138.42000°. Principal axes: T 4.7857, Plg22.0000°, Azm85.0000°; N -0.0378, Plg22.0000°, Azm184.0000°; P -4.7479, Plg58.0000°, Azm314.0000°;*
VAO ***15*** *22:25:23.2±0.4, 16°.23S×73°.87W, h10km, mb4.7, Presumed earthquake*
NEIC ***15*** *22:25:24.3, 16°.38S×73°.91W, h21km*
IDC ***15*** *22:25:31.2±1.8, 16°.33S×73°.84W, h82km±16km, mb4.1/12, mbtmp4.4/17, MS4.1/6, Error ellipse: s-maj=19.7km s-min=10.8km az=54.0*
ISC 15 22:25:25.2±0.4, **16°.36S**±0°.05×**73°.85W**±0°.05, **h30**km, **n166, σ1°43/149, mb4.5/29, MS4.1/5, 2C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.90**	**121**		**Pn**	**22 26 20.8**	**-2.3**
PB12	**IPOC Station P**	**4.04**	**124**		**Pn**	**22 26 25.6**	**+0.6**
PB18	**Visviri**	**4.35**	**107**		**Pn**	**22 26 31.2**	**+1.4**
PB16	**IPOC Station P**	**4.58**	**116**		**Pn**	**22 26 34.2**	**+1.2**
PSGCX	**Pisagua**	**4.79**	**133**		**Pn**	**22 26 36.0**	**+0.6**
PB11	**IPOC Station P**	**5.23**	**131**		**Pn**	**22 26 42.0**	**+0.5**
NNA	**Nana**	**5.23**	**326**	P	**Pn**	**22 26 44.6**	**+3.1**
	74nm,0.3s,baz=154,slow=11,SNR=18						
NNA				S	**Sn**	**22 27 47.0**	**+6.2**
	163nm,0.4s,baz=181,slow=8.1,SNR=4.5						
NNA	**Nana**	**5.23**	**326**		**Pn**	**22 26 41.1**	**-0.4**
LPAZ	**La Paz**	**5.49**	**90**	P	Pn	22 26 50.5	+5.0
	110nm,0.9s,baz=282,slow=7.4,SNR=148						
LPAZ				S	**Sb**	**22 28 02.8**	**-3.6**
	149nm,0.8s,baz=24,slow=19,SNR=5.5						
LPAZ				LR	LR	22 29 06.8	
	comp=Z,877nm,20.9s,baz=268,slow=39						
LPAZ	**La Paz**	**5.49**	**90**		**Pn**	**22 26 49.4**	**+3.8**
LPAZ	**La Paz**	**5.49**	**90**	*e*P	**Pn**	**22 26 45.4**	**-0.1**
GO01	**Chusmiza**	**5.51**	**127**		**Pn**	**22 26 47.2**	**+1.5**
PB08	**IPOC Station P**	**5.83**	**131**		**Pn**	**22 26 51.5**	**+1.5**
PB02	**IPOC Station P**	**6.19**	**143**		**Pn**	**22 26 55.1**	**+0.4**
PB07	**IPOC Station P**	**6.52**	**146**		**Pn**	**22 26 59.2**	**-0.1**
PB03	**IPOC Station P**	**6.86**	**146**		**Pn**	**22 27 03.9**	**+0.1**
PB09	**IPOC Station P**	**6.94**	**142**		**Pn**	**22 27 06.8**	**+1.7**
PB05	**IPOC Station P**	**7.31**	**153**		**Pn**	**22 27 09.3**	**-0.8**
PB06	**IPOC Station P**	**7.49**	**148**		**Pn**	**22 27 12.0**	**-0.6**
AF01	**San Pedro de A**	**8.45**	**142**	Pn	**Pn**	**22 27 25.5**	**-0.4**
CZSB	**Cruzeiro do Su**	**8.65**	**8**		**Pn**	**22 27 28.0**	**-0.4**
CZSB	**Cruzeiro do Su**	**8.65**	**8**	*e*P	**Pn**	**22 27 26.9**	**-1.6**
CZSB				*eS*	**Sn**	**22 29 02.6**	**-2.5**
PB14	**IPOC Station P**	**8.83**	**159**		**Pn**	**22 27 30.4**	**-0.8**
ATAH	**Atahualpa**	**10.19**	**334**	P	Pn	22 27 55.8	+5.8
	7.4nm,0.6s,baz=135,slow=8.6,SNR=8.1						
ATAH				S	**Sn**	**22 29 49.2**	**+5.7**
	8.0nm,0.6s,baz=11,slow=13,SNR=1.3						
AC01	**Pan de Azucar**	**10.20**	**163**	Pn	**Pn**	**22 27 48.5**	**-1.1**
AC02	**Maricunga**	**11.30**	**158**		**Pn**	**22 28 04.5**	**-0.7**
SIV	**San Ignacio**	**12.28**	**90**	P	**Pn**	**22 28 19.6**	**+1.5**
	23nm,0.8s,baz=263,slow=12,SNR=36						
SIV				S	**Sn**	**22 30 37.7**	**+3.6**
	8.3nm,0.8s,baz=146,slow=9.4,SNR=5.9						
BBSD	**Serra de San D**	**12.70**	**96**	*e*P	**Pn**	**22 28 23.7**	**-0.3**
BBSD				*eS*	**Sn**	**22 30 48.1**	**+3.6**
AC05	**El Transito**	**12.84**	**166**		**Pn**	**22 28 25.7**	**-0.2**
VILB	**Vilhena**	**13.63**	**77**		**Pn**	**22 28 36.3**	**-0.3**
VILB	**Vilhena**	**13.63**	**77**	*e*P	**Pn**	**22 28 37.7**	**+1.1**
VILB				*eS*	**Sn**	**22 31 09.4**	**+2.3**
CO01	**Juntas del Tor**	**13.98**	**166**	Pn	**Pn**	**22 28 41.1**	**-0.4**
GO04	**Tololo Observa**	**14.03**	**169**		**Pn**	**22 28 41.2**	**-1.0**
PTLB	**Pontes e Lacer**	**14.18**	**88**		**Pn**	**22 28 43.1**	**-1.0**
PTLB	**Pontes e Lacer**	**14.18**	**88**	*e*P	**Pn**	**22 28 44.5**	**+0.4**
CO03	**El Pedegal**	**14.70**	**169**		**Pn**	**22 28 45.3**	**-1.9**
CO02	**Combarbal**	**15.00**	**171**	Pn	**Pn**	**22 28 53.3**	**-1.9**
COIM	**Forte Coimbra**	**15.66**	**105**	*e*P	**Pn**	**22 29 02.2**	**-1.7**
CO04	**Los Peladeros**	**15.83**	**171**	Pn	**Pn**	**22 29 05.3**	**-0.9**
ZON	**Zonda**	**15.83**	**164**		**Pn**	**22 29 05.1**	**-0.9**
CFA	**Coronel Fontan**	**16.01**	**162**	P	**P**	**22 29 12.6**	**+1.0**
	9.6nm,0.9s,baz=337,slow=12,SNR=26						
SLOR	**San Lorenzo -**	**16.20**	**343**	Pn	**Pn**	**22 29 11.3**	**+0.1**
SLOR				IAmb	IAmb	22 29 45.6	
	comp=Z,21nm,0.7s						
OTAV	**Otavalo**	**17.11**	**344**	Pn	**Pn**	**22 29 22.1**	**-0.7**
OTAV	**Otavalo**	**17.11**	**344**	*e*P	**Pn**	**22 29 21.6**	**-1.1**
SALV	**Santo Antonio**	**17.45**	**91**	*e*P	**P**	**22 29 27.5**	**0.0**
SGC2	**Sao Gabriel da**	**17.48**	**23**	*e*P	**Pn**	**22 29 25.1**	**-1.7**
MT09	**Talagante**	**17.53**	**172**		**Pn**	**22 29 26.9**	**-0.7**
H03N1	**Juan Fernandez**	**17.61**	**194**	T	T	22 47 53.8	
	baz=16,slow=74,SNR=2785						
H03N2	**Juan Fernandez**	**17.61**	**194**	T	T	22 48 02.0	
	baz=16,slow=74,SNR=3705						
H03N3	**Juan Fernandez**	**17.63**	**194**	T	T	22 47 52.5	
	baz=16,slow=74,SNR=2831						
AQDB	**Aquidauana**	**17.70**	**106**		**Pn**	**22 29 29.5**	**-0.1**
H03S3	**Juan Fernandez**	**17.98**	**194**	T	T	22 48 18.7	
	baz=8.4,slow=76						
H03S2	**Juan Fernandez**	**17.99**	**194**	T	T	22 48 35.7	
	baz=8.4,slow=76						
H03S1	**Juan Fernandez**	**17.99**	**194**	T	T	22 48 19.4	
	baz=8.4,slow=76						
PP1B	**Ponte de Pedra**	**18.18**	**97**	*e*P	**Pn**	**22 29 35.1**	**-0.5**
CPUP	**Villa Florida**	**18.29**	**126**	P	**Pn**	**22 29 38.0**	**+1.3**
	comp=Z,3.3nm,0.8s,baz=314,slow=14,SNR=6.8						
CPUP	**Villa Florida**	**18.29**	**126**	P	**P**	**22 29 36.0**	**-0.7**
CLDB	**Colider**	**18.37**	**75**	*e*P	**Pn**	**22 29 38.4**	**+0.6**
MACA	**Manacapuru-AM**	**18.43**	**46**	P	**Pn**	**22 29 37.0**	**-1.3**
MACA				IAmb	IAmb	22 29 47.9	
	comp=Z,38nm,0.6s						

MACA	**Manacapuru-AM**	**18.43**	**46**	*e*P		**Pn**		**22 29 38.7**	**+0.1**
BO02	**Sierra Bellavi**	**18.56**	**172**	P		**P**		**22 29 38.6**	**-1.1**
SJPY	**San Joaquin**	**18.68**	**120**	*e*P		**Pn**		**22 29 42.8**	**+1.3**
AMBA	**Amambai (Brazi**	**18.91**	**113**	*e*P		**Pn**		**22 29 45.3**	**+0.9**
NPGB	**Novo Progresso**	**20.32**	**65**	*e*P		**P**		**22 29 59.5**	**+0.4**
PSAL	**Palomas, Salto**	**20.83**	**138**	*e*P		Pn		22 30 07.2	+0.1
TRCB	**Terra Rica**	**20.97**	**111**	P		**P**		**22 30 05.3**	**-0.9**
TRCB	**Terra Rica**	**20.97**	**111**	*e*P		Pn		22 30 08.6	-0.2
ROSC	**El Rosal**	**21.07**	**359**	P		**P**		**22 30 09.8**	**+2.2**
	comp=Z,6.0nm,0.4s,baz=198,slow=21,SNR=3.8								
ROSC	comp=Z,6.0nm,0.4s								
ROSC	**El Rosal**	**21.07**	**359**	P		**P**		**22 30 08.2**	**+0.6**
ROSC				IAmb	IAmb	22 30 21.6			
	comp=Z,21nm,0.9s								
ARAG	**Araguaiana, MT**	**21.19**	**91**	*e*P		**P**		**22 30 09.4**	**+0.9**
ITTB	**Itaituba**	**21.41**	**58**	*e*P		**P**		**22 30 10.7**	**-0.1**
PTGB	**Pitanga**	**22.00**	**116**	*e*P		**P**		**22 30 19.4**	**+2.1**
SNDB	**Serra Nova Dou**	**22.29**	**82**	*e*P		**P**		**22 30 20.6**	**+0.3**
LDASE	**Londrina, Braz**	**22.47**	**112**	*e*P		**P**		**22 30 22.1**	**-0.1**
BOAV	**Boa Vista**	**22.82**	**36**	P		**P**		**22 30 25.1**	**-0.7**
BOAV				IAmb	IAmb	22 30 34.3			
	comp=Z,12nm,0.9s								
BOAV	**Boa Vista**	**22.82**	**36**	*e*P		**P**		**22 30 25.9**	**0.0**
ANCO	**Parque Anchore**	**22.84**	**144**	*e*P		**P**		**22 30 27.7**	**+1.8**
ITAB	**Concordia**	**22.84**	**122**	P		**P**		**22 30 25.3**	**-0.8**
ITAB				IAmb	IAmb	22 30 41.9			
	comp=Z,33nm,1.2s								
GO06	**Curarrehue**	**23.23**	**175**	P		**P**		**22 30 30.0**	**0.0**
CPSB	**Cacapava Do Su**	**23.32**	**130**	P		**P**		**22 30 30.3**	**-0.6**
CPSB				IAmb	IAmb	22 30 49.9			
	comp=Z,20nm,1.2s								
TRQA	**Tornquist**	**24.00**	**156**	P		**P**		**22 30 37.0**	**-0.4**
BB19B	**Bebedouro**	**24.42**	**105**	*e*P		**P**		**22 30 43.4**	**+2.0**
PLCA	**Paso Flores**	**24.45**	**174**	P		**P**		**22 30 42.4**	**+0.9**
	comp=Z,7.5nm,1.0s,baz=347,slow=10,SNR=13								
	comp=Z,7.5nm,1.0s								
PLCA	**Paso Flores**	**24.45**	**174**	P		**P**		**22 30 40.8**	**-0.7**
PLCA				IAmb	IAmb	22 30 43.7			
	comp=Z,11nm,1.1s								
PLCA	**Paso Flores**	**24.45**	**174**	*e*P		**P**		**22 30 42.7**	**+1.2**
IPMB	**Ipameri, GO**	**24.54**	**98**	*e*P		**P**		**22 30 43.7**	**+1.1**
BDFB	**Brasilia**	**24.84**	**92**	P		**P**		**22 30 46.5**	**+1.2**
	comp=Z,11nm,0.8s,baz=262,slow=10,SNR=18								
	comp=Z,11nm,0.8s								
BDFB	**Brasilia**	**24.84**	**92**	P		**P**		**22 30 44.0**	**-1.3**
PRPB	**Parauapebas**	**25.62**	**69**	*e*P		**P**		**22 30 52.4**	**+0.1**
SMTB	**Santa Maria do**	**26.66**	**77**	*e*P		**P**		**22 31 02.3**	**+0.8**
JANB	**Januaria**	**28.45**	**92**	*e*P		**P**		**22 31 19.2**	**+1.3**
JTS	**Las Juntas de**	**28.67**	**337**	LR	LR	22 42 06.7			
	comp=Z,394nm,18.0s,baz=73,slow=35								
DIAM	**Diamantina, MG**	**28.85**	**98**	*e*P		**P**		**22 31 22.7**	**+1.2**
MDP	**Montagnes des**	**29.91**	**46**	LR	LR	22 44 29.1			
	comp=Z,566nm,21.3s,baz=219,slow=38								
NBPN	**Ponto Novo - B**	**33.13**	**85**	*e*P		**P**		**22 32 00.1**	**+1.0**
NBIT	**Itapeh - BA**	**33.15**	**92**	*e*P		**P**		**22 32 00.5**	**+1.3**
RPN	**Rapa Nui**	**34.55**	**246**	LR

	comp=Z,1.1nm,0.7s,baz=142,slow=1.8,SNR=9.6							
WB0	**Warramunga Arr**	**134.62**	**219**	PKPdf	**PKPdf**		**22 44 40.1**	**-1.5**
ZALV	**Zalesovo Beam**	**138.97**	**19**	PKP	**PKPdf**		**22 44 48.9**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=294,slow=2.6,SNR=11							
ZALV	**Zalesovo Beam**	**138.97**	**19**		**PKPdf**		**22 44 48.3**	**-0.3**
KURBB	**Kurchatov Arra**	**139.25**	**27**	PKP	**PKPdf**		**22 44 49.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=314,slow=2.8,SNR=4.6							
MKAR	**Makanchi Array**	**143.77**	**28**	PKP	PKPbc		22 44 54.9	-0.2
	comp=Z,1.2nm,0.7s,baz=325,slow=3.8,SNR=14							
MKAR	**Makanchi Array**	**143.77**	**28**		PKPbc		22 44 55.2	0.0
KDJ	**Kajisay**	**144.28**	**38**	PKPdf	**PKPdf**		**22 44 58.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**144.69**	**327**	PKP	**PKPab**		**22 44 56.2**	**-1.6**
	comp=Z,2.0nm,0.7s,baz=0.0,slow=7.2,SNR=6.1							
USRK	**Ussuriysk Ar.**	**144.69**	**327**		**PKPab**		**22 44 56.7**	**-1.2**
PDGK	**Podgornoye**	**144.83**	**35**	PKPdf	PKPbc		22 44 58.8	+0.1
KSH2	**Kashi**	**144.95**	**44**	PKPbc	**PKPdf**		**22 45 00.5**	**+0.5**
KSH2				pPKP	pPKPdf		22 45 08.1	-1.5
HILR	**Hailar Array B**	**145.10**	**344**	PKPbc	**PKPbc**		**22 44 58.0**	**-1.3**
	comp=Z,4.3nm,0.5s,baz=64,slow=3.4,SNR=5.8							
MJAR	**Matsushiro Arr**	**145.21**	**311**	PKPbc	**PKPbc**		**22 44 58.7**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=99,slow=2.3,SNR=6.7							
NIL	**Nilore**	**145.77**	**54**	PKPbc	**PKPdf**		**22 45 01.3**	**-0.1**
WMQ	**Urumqi**	**148.46**	**26**	*e*PKPbc	**PKPdf**		**22 45 06.3**	**+0.7**
SONM	**Songino Array**	**148.62**	**360**	PKPbc	**PKPbc**		**22 45 09.2**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=337,slow=1.3,SNR=19							
SONM	**Songino Array**	**148.62**	**360**		**PKPbc**		**22 45 08.7**	**-0.8**
KSRS	**Korea Array**	**151.53**	**322**	PKPbc	**PKPbc**		**22 45 16.7**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=350,slow=1.8,SNR=17							
KSAR	**Wonju Array Be**	**151.56**	**322**	PKPbc	**PKPbc**		**22 45 15.8**	**-0.9**
HHC	**Hu-ho-hao-te**	**155.15**	**350**	*e*P	**PKPdf**		**22 45 12.4**	**-3.4**

GFZ ***15*** *22:47:17.7±0.2,20.°S±1.°×7.°0W±.°, h15km, M4.5/7, mb4.2/7*
SJA ***15*** *22:47:19.1±0.8,20.°16S×70.°27W, h52km×7km, ML4.2, MW4.3*
NEIC ***15*** *22:47:20.7±1.5,20.°17S±0.°03×70.°27W±0.°06, h42km±13km, mb4.0/4, ML4.2(GUC), Error ellipse: s-maj=7.7km s-min=3.7km az=99.0*
GUC ***15*** *22:47:21.3±0.7,20.°15S×70.°23W, h45km±2km, ML4.2*
IDC ***15*** *22:47:28.2±2.6,20.°36S×69.°47W, h86km±25km, mb3.0/3, mbtmp3.6/7, Error ellipse: s-maj=30.6km s-min=20.7km az=105.0*

ISC 15 22:47:19.6±0.9, 20.°16S±0.°03×70.°29W±0.°06, h41km±8km, n101, σ1§66/121, 7C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.19**	**126**	*e*P	**Pn**	**22 47 28.0**	**+1.1**
TA02				IAML		22 47 38.6	
	comp=Z,11μm,0.1s						
TA02	**Huaiquique**	**0.19**	**126**	*e*P	**Pn**	**22 47 28.0**	**+1.1**
TA02				*e*S	**Sn**	**22 47 33.1**	**+1.2**
TA02	**Huaiquique**	**0.19**	**126**	P	**Pn**	**22 47 26.5**	**-0.5**
PSGCX	**Pisagua**	**0.58**	**16**	Pn	**Pn**	**22 47 31.8**	**+0.2**
PSGCX				Sn	**Sn**	**22 47 40.3**	**+0.2**
PSGCX	**Pisagua**	**0.58**	**16**	P	**Pn**	**22 47 31.9**	**+0.2**
PB11	**IPOC Station P**	**0.72**	**57**	*e*P	**Pn**	**22 47 33.8**	**+0.3**
PB11				IAML		22 47 45.1	
	comp=Z,9μm,0.3s						
PB11	**IPOC Station P**	**0.72**	**57**	⇑*i*P	**Pn**	**22 47 34.0**	**+0.5**
PB11				*e*S	**Sn**	**22 47 44.1**	**+0.6**
PB11	**IPOC Station P**	**0.72**	**57**		**Pn**	**22 47 33.8**	**+0.3**
PB11					**Sn**	**22 47 43.2**	**-0.3**
PB11	**IPOC Station P**	**0.72**	**57**	P	**Pn**	**22 47 34.0**	**+0.5**
PB11				S	**Sn**	**22 47 43.8**	**+0.3**
PB08	**IPOC Station P**	**1.07**	**89**	*e*P	**Pn**	**22 47 39.3**	**+0.8**
PB08				*e*S	**Sn**	**22 47 52.5**	**+0.1**
PB08	**IPOC Station P**	**1.07**	**89**	⇓*i*P	**Pn**	**22 47 39.3**	**+0.8**
PB08				*e*S	**Sn**	**22 47 52.7**	**+0.3**
PB08	**IPOC Station P**	**1.07**	**89**		**Pn**	**22 47 39.3**	**+0.8**
PB08					**Sn**	**22 47 52.9**	**+0.5**
PB08	**IPOC Station P**	**1.07**	**89**	P	**Pn**	**22 47 39.5**	**+0.9**
GO01	**Chusmiza**	**1.14**	**65**	*e*P	**Pn**	**22 47 40.2**	**+0.6**
GO01				*e*S	**Sn**	**22 47 56.3**	**+1.9**
GO01	**Chusmiza**	**1.14**	**65**	*e*P	**Pn**	**22 47 40.4**	**+0.8**
GO01				*e*S	**Sn**	**22 47 55.6**	**+1.2**
GO01				IAML		22 48 01.8	
	comp=N,15μm,0.1s						
GO01	**Chusmiza**	**1.14**	**65**		**Pn**	**22 47 40.4**	**+0.8**
GO01					**Sn**	**22 47 55.6**	**+1.2**
GO01	**Chusmiza**	**1.14**	**65**	P	**Pn**	**22 47 40.5**	**+0.8**
PB02	**IPOC Station P**	**1.21**	**162**	*e*P	**Pn**	**22 47 40.9**	**+0.7**
PB02				*e*S	**Sn**	**22 47 57.8**	**+2.2**
PB02				IAML		22 48 00.5	
	comp=Z,9μm,0.2s						
PB02	**IPOC Station P**	**1.21**	**162**	⇑*i*P	**Pn**	**22 47 41.5**	**+1.2**
PB02				*e*S	**Sn**	**22 47 57.3**	**+1.8**
PB02				IAML		22 48 01.1	
	comp=E,11μm,0.5s						
PB02	**IPOC Station P**	**1.21**	**162**		**Pn**	**22 47 41.5**	**+1.2**
PB02					**Sn**	**22 47 56.6**	**+1.0**
PB02	**IPOC Station P**	**1.21**	**162**	P	**Pn**	**22 47 40.6**	**+0.4**
PB12	**IPOC Station P**	**1.54**	**359**	*e*P	**Pn**	**22 47 44.9**	**+0.2**
PB12				*e*S	**Sn**	**22 48 05.8**	**+2.3**
PB12				IAML		22 48 06.8	
	comp=Z,4μm,0.5s						
PB12	**IPOC Station P**	**1.54**	**359**	*e*P	**Pn**	**22 47 45.5**	**+0.8**
PB12				*e*S	**Sn**	**22 48 04.8**	**+1.4**
PB12				IAML		22 48 07.7	
	comp=E,7μm,0.3s						
PB12	**IPOC Station P**	**1.54**	**359**		**Pn**	**22 47 45.4**	**+0.8**
PB12				Sn	**Sn**	**22 48 04.7**	**+1.2**
PB12	**IPOC Station P**	**1.54**	**359**	P	**Pn**	**22 47 45.9**	**+1.2**
PB12				S	**Sn**	**22 48 04.5**	**+1.1**
PB07	**IPOC Station P**	**1.61**	**166**	*e*P	**Pn**	**22 47 46.6**	**+0.9**
PB07				*e*S	**Sn**	**22 48 08.3**	**+3.0**
PB07				IAML		22 48 12.8	
	comp=Z,3μm,0.3s						
PB07	**IPOC Station P**	**1.61**	**166**	⇑*i*P	**Pn**	**22 47 47.2**	**+1.5**
PB07				*e*S	**Sn**	**22 48 07.0**	**+1.6**
PB07				IAML		22 48 12.5	
	comp=E,3μm,0.6s						
PB07	**IPOC Station P**	**1.61**	**166**		**Pn**	**22 47 46.9**	**+1.2**
PB07				Sn	**Sn**	**22 48 06.4**	**+1.0**
PB07	**IPOC Station P**	**1.61**	**166**	P	**Pn**	**22 47 46.4**	**+0.7**
AP01	**Chacalluta**	**1.78**	**359**	*e*P	**Pn**	**22 47 49.0**	**+1.1**
AP01				*e*S	**Sn**	**22 48 12.6**	**+3.3**
AP01				IAML		22 48 20.1	
	comp=Z,3μm,0.5s						
AP01	**Chacalluta**	**1.78**	**359**	*e*P	**Pn**	**22 47 49.5**	**+1.6**
AP01				*e*S	**Sn**	**22 48 11.6**	**+2.3**
AP01	**Chacalluta**	**1.78**	**359**		**Pn**	**22 47 49.0**	**+1.1**
AP01				Sn	**Sn**	**22 48 11.6**	**+2.3**
AP01	**Chacalluta**	**1.78**	**359**	P	**Pn**	**22 47 49.7**	**+1.8**
AP01				S	**Sn**	**22 48 12.1**	**+2.8**
PB09	**IPOC Station P**	**1.90**	**149**	*e*P	**Pn**	**22 47 51.9**	**+2.1**
PB09				*e*S	**Sn**	**22 48 12.8**	**+0.1**
PB09				IAML		22 48 21.7	
	comp=Z,3μm,1.0s						
PB09	**IPOC Station P**	**1.90**	**149**	*e*P	**Pn**	**22 47 52.4**	**+2.6**
PB09	**IPOC Station P**	**1.90**	**149**		**Pn**	**22 47 52.0**	**+2.2**
PB09	**IPOC Station P**	**1.90**	**149**	P	**Pn**	**22 47 50.7**	**+0.9**
PB09				S	**Sn**	**22 48 16.7**	**+4.1**
PB03	**IPOC Station P**	**1.95**	**165**	*e*P	**Pn**	**22 47 51.4**	**+1.0**
PB03				*e*P		22 47 51.9	
PB03				*e*S	**Sn**	**22 48 18.5**	**+4.8**
PB03				IAML		22 48 21.1	
	comp=Z,1μm,0.2s						
PB03	**IPOC Station P**	**1.95**	**165**	⇑*i*P	**Pn**	**22 47 51.9**	**+1.5**
PB03				IAML		22 48 21.9	
	comp=E,2μm,0.4s						
PB03	**IPOC Station P**	**1.95**	**165**		**Pn**	**22 47 51.8**	**+1.5**
PB03	**IPOC Station P**	**1.95**	**165**	P	**Pn**	**22 47 51.4**	**+1.0**
PB03				S	**Sn**	**22 48 14.2**	**+0.5**
PB16	**IPOC Station P**	**1.96**	**22**	*e*P	**Pn**	**22 47 51.6**	**+0.7**
PB16				*e*S	**Sn**	**22 48 12.8**	**-1.8**
PB16				IAML		22 48 20.2	
	comp=Z,1000nm,0.3s						
PB16	**IPOC Station P**	**1.96**	**22**	⇑*i*P	**Pn**	**22 47 52.4**	**+1.4**
PB16	**IPOC Station P**	**1.96**	**22**		**Pn**	**22 47 52.4**	**+1.4**
PB16	**IPOC Station P**	**1.96**	**22**	P	**Pn**	**22 47 51.8**	**+0.9**
PB06	**IPOC Station P**	**2.62**	**165**	*e*P	**Pn**	**22 48 00.7**	**+1.0**
PB06				*e*S	**Sn**	**22 48 32.3**	**+1.9**
PB06				IAML		22 48 48.5	
	comp=Z,957nm,1.2s						
PB06	**IPOC Station P**	**2.62**	**165**	⇑*i*P	**Pn**	**22 48 00.5**	**+0.8**
PB06	**IPOC Station P**	**2.62**	**165**		**Pn**	**22 48 00.5**	**+0.8**
PB06	**IPOC Station P**	**2.62**	**165**	P	**Pn**	**22 47 59.1**	**-0.6**
PB18	**Visviri**	**2.67**	**17**	*e*P	**Pn**	**22 48 04.3**	**+3.7**
PB18	**Visviri**	**2.67**	**17**		**Pn**	**22 48 03.8**	**+3.2**
PB18	**Visviri**	**2.67**	**17**	P	**Pn**	**22 48 03.0**	**+2.4**
PB05	**IPOC Station P**	**2.68**	**178**	*e*P	**Pn**	**22 48 00.4**	**-0.1**
PB05				*e*S	**Sn**	**22 48 34.6**	**+2.8**
PB05				IAML		22 48 46.6	
	comp=Z,859nm,0.7s						
PB05	**IPOC Station P**	**2.68**	**178**	⇑*i*P	**Pn**	**22 48 00.4**	**-0.1**
PB05	**IPOC Station P**	**2.68**	**178**		**Pn**	**22 48 00.2**	**-0.3**
PB05	**IPOC Station P**	**2.68**	**178**	P	**Pn**	**22 48 00.1**	**-0.3**
AF01	**San Pedro de A**	**3.41**	**145**	*e*P	Pn	22 48 22.3	+12
AF01				*e*S	Sn	22 49 04.3	+14
AF01				IAML		22 49 22.2	
	comp=Z,2μm,0.5s						
AF01	**San Pedro de A**	**3.41**	**145**	*e*P	**Pn**	**22 48 14.2**	**+3.6**
AF01	**San Pedro de A**	**3.41**	**145**		**Pn**	**22 48 12.4**	**+1.9**
LPAZ	**La Paz**	**4.36**	**28**	P	Pn	22 48 29.2	+5.2
	comp=Z,15nm,0.4s,baz=201,slow=7.7,SNR=99						
LPAZ	**La Paz**	**4.36**	**28**		**Pn**	**22 48 26.5**	**+2.5**
LPAZ	**La Paz**	**4.36**	**28**	P	**Pn**	**22 48 26.4**	**+2.3**
PB14	**IPOC Station P**	**4.45**	**181**	*e*P	**Pn**	**22 48 24.1**	**-0.8**
PB14				*e*S	**Sn**	**22 49 15.3**	**-0.3**
PB14				IAML		22 49 47.4	
	comp=Z,145nm,1.2s						
PB14	**IPOC Station P**	**4.45**	**181**		**Pn**	**22 48 23.3**	**-1.6**
PB14	**IPOC Station P**	**4.45**	**181**	P	**Pn**	**22 48 23.3**	**-1.6**
SALTA		**5.46**	**139**	P	**Pn**	**22 48 41.5**	**+2.6**
AC01	**Pan de Azucar**	**5.97**	**183**		**Pn**	**22 48 43.6**	**-1.9**
AC01	**Pan de Azucar**	**5.97**	**183**	P	**Pn**	**22 48 43.1**	**-2.4**
AC02	**Maricunga**	**6.73**	**171**		**Pn**	**22 48 56.5**	**+0.1**
AC02	**Maricunga**	**6.73**	**171**	P	**Pn**	**22 48 56.2**	**-0.2**
GO03	**Copiapo**	**7.40**	**180**	Pn	**Pn**	**22 49 04.7**	**-0.6**
GO03	**Copiapo**	**7.40**	**180**	P	**Pn**	**22 49 04.9**	**-0.4**
AC05	**El Transito**	**8.64**	**180**	Pn	**Pn**	**22 49 20.1**	**-2.1**
AC05	**El Transito**	**8.64**	**180**	P	**Pn**	**22 49 19.9**	**-2.4**
SIV	**San Ignacio**	**9.70**	**66**	P	**Pn**	**22 49 36.9**	**+0.1**
	comp=Z,6.1nm,0.5s,baz=251,slow=11,SNR=30						
SIV				S	**Sn**	**22 51 19.1**	**-5.4**
	comp=Z,0.7nm,0.4s,baz=167,slow=15,SNR=3.5						
CO01	**Juntas del Tor**	**9.78**	**179**	Pn	**Pn**	**22 49 36.4**	**-1.5**
CO01	**Juntas del Tor**	**9.78**	**179**	P	**Pn**	**22 49 37.1**	**-0.9**
GO04	**Tololo Observa**	**9.98**	**183**	P	**Pn**	**22 49 39.3**	**-1.5**
CO03	**El Pedregal**	**10.64**	**182**	P	**Pn**	**22 49 47.1**	**-2.5**
CO02	**Combarbal**	**11.02**	**183**	P	**Pn**	**22 49 53.5**	**-1.3**
CFA	**Coronel Fontan**	**11.55**	**171**	P	Pn	22 50 07.2	+5.2
	comp=Z,0.5nm,0.4s,baz=353,slow=14,SNR=3.8						
CFA				S	Sn	22 52 19.9	+10
	comp=Z,0.5nm,0.5s,baz=242,slow=18,SNR=1.3						
VILB	**Vilhena**	**12.04**	**55**		**Pn**	**22 50 09.8**	**+1.1**
MT02	**Curacav**	**13.07**	**183**	Pn	**Pn**	**22 50 21.6**	**-1.1**
CPUP	**Villa Florida**	**13.40**	**120**	P	**Pn**	**22 50 25.9**	**-1.5**
	comp=Z,1.0nm,0.4s,baz=239,slow=14,SNR=3.4						
H03N1	**Juan Fernandez**	**15.29**	**208**	T	T	23 06 05.4	
	baz=32						
H03N2	**Juan Fernandez**	**15.30**	**208**	T	T	23 06 18.1	
	baz=32,slow=74						
H03N3	**Juan Fernandez**	**15.31**	**208**	T	T	23 06 25.2	
	baz=32,slow=74						
ITAB	**Concordia**	**18.05**	**116**		**Pn**	**22 51 27.5**	**0.0**
ITAB				IAmb	IAmb	22 51 53.7	
	comp=Z,24nm,1.3s						
TRQA	**Tornquist**	**19.24**	**160**	P	**P**	**22 51 40.2**	**-0.3**
TRQA				IAmb	IAmb	22 51 59.6	
	comp=Z,9.1nm,1.2s						
MACA	**Manacapuru-AM**	**19.32**	**30**	P	**P**	**22 51 41.6**	**+0.1**
PLCA	**Paso Flores**	**20.51**	**181**	P	Pn	22 51 56.2	-0.6
	comp=Z,1.0nm,0.6s,baz=18,slow=9.9,SNR=2.9						
	comp=Z,1.0nm,0.6s						
BOAV	**Boa Vista**	**24.38**	**24**	P	**P**	**22 52 34.0**	**-0.2**
TXAR	**Lajitas Array**	**58.80**	**326**	P	P	22 57 23.3	+9.2
	comp=Z,0.1nm,0.6s,baz=146,slow=4.0,SNR=1.7						
	comp=Z,0.1nm,0.6s						
TORD	**Toyodi Ar. Bea**	**78.14**	**71**	P	**P**	**22 59 14.5**	**-0.6**
	comp=Z,0.6nm,1.0s,baz=245,slow=5.7,SNR=4.8						
	comp=Z,0.6nm,1.0s						
H11S2	**WAKE ISLAND Hyl**	**26.41**	**279**	T	T	01 25 41.5	
	baz=102,slow=74,SNR=78						
H11S1	**WAKE ISLAND Hyl**	**26.42**	**279**	T	T	01 25 41.0	
	baz=102,slow=74,SNR=75						
H11S3	**WAKE ISLAND Hyl**	**26.43**	**279**	T	T	01 25 42.8	
	baz=102,slow=74,SNR=56						
H11N3	**WAKE ISLAND Hyl**	**26.46**	**280**	T	T	01 25 41.7	
	baz=101,slow=75,SNR=37						
H11N2	**WAKE ISLAND Hyl**	**26.48**	**280**	T	T	01 25 43.4	
	baz=101,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hyl**	**26.48**	**280**	T	T	01 25 43.2	
	baz=101,slow=75,SNR=38						
MKAR	**Makanchi Array**	**145.28**	**34**	PKPbc	**PKPdf**	**23 06 53.1**	**0.0**
	comp=Z,0.2nm,0.7s,baz=332,slow=4.3,SNR=2.4						

IDC 15 22:50:18.8±4.1, 10.°09S×116.°34E, h0km, mb3.5/3, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=276.3km s-min=22.9km az=49.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.03**	**132**	Pn	Pn	22 53 09.8	-1.8
	0.1nm,0.3s,baz=300,slow=14,SNR=2.6						
	3.0nm,0.9s						
WRA	**Warramunga Arr**	**19.94**	**121**	P	P	22 54 51.7	-0.9
	0.1nm,0.3s,baz=292,slow=12,SNR=2.7						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**21.52**	**131**	P	P	22 55 11.1	+1.3
	0.6nm,0.5s,baz=305,slow=10,SNR=12						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**68.81**	**335**	P	P	23 01 24.9	+0.1
	0.3nm,0.6s,baz=147,slow=5.2,SNR=4.0						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.16**	**341**	P	P	23 01 26.8	-0.1
	0.8nm,0.5s,baz=150,slow=6.5,SNR=4.7						
	0.8nm,0.5s						

IDC ***15*** *22:52:02.0±5.0, 10.°97S×114.°04E, h0km, mb3.2/5, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=279.0km s-min=20.6km az=44.0*

ISC 15 22:52:04.9±3.3, 11.°6S±0.°9×113.°4E±0.°7, h35km, n6, σ1§40/7, mb3.5/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.46**	**120**	Pn	**Pn**	**22 55 12.7**	**-0.8**
	0.1nm,0.3s,baz=302,slow=9.5,SNR=1.7						
FITZ				Sn	**Sn**	**22 57 43.5**	**+1.7**
	0.1nm,0.3s,baz=136,slow=24,SNR=1.4						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**21.75**	**115**	P	**P**	**22 56 51.7**	**-1.9**
	0.2nm,0.7s,baz=291,slow=9.7,SNR=1.4						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**22.88**	**124**	P	**P**	**22 57 06.0**	**+0.5**
	0.1nm,0.3s,baz=300,slow=10,SNR=2.1						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**64.45**	**337**	P	**P**	**23 02 38.0**	**+0.3**
	0.3nm,0.7s,baz=148,slow=7.2,SNR=4.2						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**69.01**	**337**	P	**P**	**23 03 07.5**	**+0.8**
	0.6nm,0.6s,baz=151,slow=5.6,SNR=8.2						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**69.66**	**342**	P	**P**	**23 03 10.8**	**+0.2**
	0.6nm,0.6s,baz=134,slow=4.3,SNR=4.6						
	0.6nm,0.6s						

IDC 15 23:05:37.8±1.8, 7.°51S×127.°83E, h0km, mb3.6/2, mbtmp3.6/5, ML3.6/3, Error ellipse: s-maj=103.4km s-min=25.7km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.74**	**191**	Pn	Pn	23 08 13.4	+0.5
	0.4nm,0.3s,baz=12,slow=9.3,SNR=10.0						
FITZ				Sn	Sn	23 10 06.2	-7.7
	0.8nm,0.3s,baz=315,slow=15,SNR=5.7						
	2.8nm,0.6s						
WRA	**Warramunga Arr**	**13.88**	**154**	Pn	Pn	23 08 55.9	0.0
	0.3nm,0.3s,baz=327,slow=14,SNR=6.7						
WRA				Sn	Sn	23 11 23.7	-7.1
	0.3nm,0.3s,baz=336,slow=21,SNR=5.0						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**17.09**	**161**	Pn	Pn	23 09 37.8	-0.5
	0.3nm,0.3s,baz=341,slow=11,SNR=11						
ASAR				Sn	Sn	23 12 42.2	-6.8
	baz=326,slow=24						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**67.49**	**328**	P	P	23 16 35.9	+0.2
	0.5nm,0.8s,baz=136,slow=7.6,SNR=5.4						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**71.83**	**329**	P	P	23 17 02.1	-0.2
	0.4nm,0.8s,baz=127,slow=5.4,SNR=6.2						
	0.4nm,0.8s						

IDC ***15*** *23:10:06.5±0.8,9.°06S×159.°32E, h0km, mb3.8/7, mbtmp3.9/8, ML4.5/1, MS3.9/2, Error ellipse: s-maj=24.6km s-min=8.4km az=30.0*

ISC 15 23:10:10.7±0.9, 9.°2S±0.°2×159.°5E±0.°1, h35km, n17, σ0§96/9, mb3.8/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.49**	**123**	Pg	**Pn**	**23 10 21.1**	**-0.1**
	28nm,0.3s,baz=279,slow=4.1,SNR=40						
HNR				Lg	Lg	23 10 30.2	
	58nm,0.3s,baz=177,slow=20,SNR=21						
JAY	**Jayapura**	**19.85**	**288**	P	**P**	**23 14 38.7**	**-0.2**
	1.3nm,0.3s,baz=78,slow=3.5,SNR=6.6						
	7.0nm,0.5s						
MSVF	**Nonsavu**	**19.91**	**117**	LR	LR	23 23 04.4	
	comp=Z,150nm,18.1s,baz=337,slow=39						
WRA	**Warramunga Arr**	**26.59**	**243**	P	**P**	**23 15 43.9**	**-2.1**
	0.8nm,0.8s,baz=68,slow=9.4,SNR=7.5						
	0.8nm,0.8s						
STKA	**Stephens Creek**	**28.07**	**214**	P	**P**	**23 15 59.2**	**+0.1**
	0.9nm,0.5s,baz=18,slow=14,SNR=1.8						
	0.9nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**28.37**	**14**	T	T	23 44 53.4	
	baz=194,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**28.37**	**14**	T	T	23 44 54.0	
	baz=194,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**28.39**	**14**	T	T	23 44 54.3	
	baz=194,slow=76,SNR=16						
ASAR	**Alice Springs**	**28.43**	**236**	P	**P**	**23 16 03.3**	**+0.9**
	0.4nm,0.8s,baz=69,slow=9.1,SNR=2.4						
	0.4nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**29.59**	**14**	T	T	23 46 48.4	
	baz=194,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**29.60**	**14**	T	T	23 46 20.7	
	baz=194,slow=76,SNR=19						
H11N2	**WAKE ISLAND Hy**	**29.61**	**14**	T	T	23 46 35.1	
	baz=194,slow=76,SNR=29						
KSRS	**Korea Array**	**55.01**	**329**	P	**P**	**23 19 38.9**	**+0.2**
	0.8nm,0.6s,baz=148,slow=7.2,SNR=4.9						
	0.8nm,0.6s						
SONM	**Songino Array**	**73.61**	**326**	P	**P**	**23 21 41.0**	**+0.4**
	1.9nm,0.7s,baz=134,slow=5.5,SNR=7.5						
	1.9nm,0.7s						
TIXI	**Tiksi**	**83.17**	**351**	LR	LR	23 58 22.4	
	comp=Z,143nm,20.3s,baz=234,slow=35						
ILAR	**Eielson Array**	**83.78**	**20**	P	**P**	**23 22 35.6**	**-0.4**
	0.2nm,0.4s,baz=250,slow=5.7,SNR=4.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**88.00**	**318**	P	**P**	**23 22 57.5**	**+0.1**
	0.9nm,0.6s,baz=98,slow=5.8,SNR=12						
	0.9nm,0.6s						

JMA ***15*** *23:33:54.8±0.2,23.°7N±1.°0×123.°3E±0.°5, h48km±3km, MD3.9/12, MV3.5/12, NEAR ISHIGAKIJIMA ISLAND*
IDC ***15*** *23:34:06.9±7.4,25.°01N×123.°75E, h92km±73km, mb3.3/7, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=38.7km s-min=25.3km az=73.0*

ISC 15 23:33:52.7±1.3, 23.°62N±0.°06×123.°23E±0.°04, h26km±10km, n28, σ1§36/33, mb3.5/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.69**	**51**	*i* P	**Pn**	**23 34 07.2**	**+0.5**
HATJ				A	A	23 34 07.2	
	comp=N,14nm,1.7s,comp=E,10.0nm,0.3s						
HATJ				S	**Sn**	**23 34 16.3**	**-0.3**
IRIF	**Iriomote-Funau**	**0.85**	**33**	*i* P	**Pb**	**23 34 09.6**	**+0.8**
IRIF				A	A	23 34 09.6	
	comp=N,10.0nm,1.3s,comp=E,8.0nm,0.8s						
IRIF				S	**Sn**	**23 34 20.2**	**-0.5**
YOJ	**Yonaguni jima**	**0.86

0.2nm22nm,0.8s
SANI Sanana 6.67 166 P **Pn** **23 57 03.7 -0.3**
0.2nm30nm,0.7s
TARAI Tarakan 6.92 261 P **Pn** **23 57 09.8 +2.3**
WRA Warramunga Arr 26.15 158 P **P** **00 01 00.4 +0.1**
0.9nm,0.5s,baz=337,slow=9.0,SNR=7.7
0.9nm,0.5s
ASAR Alice Springs 29.46 162 P **P** **00 01 30.2 +0.2**
0.2nm,0.3s,baz=345,slow=8.4,SNR=1.6
0.2nm,0.3s
MKAR Makanchi Array 55.64 326 P **P** **00 05 03.4 +1.5**
0.2nm,0.4s,baz=119,slow=8.9,SNR=4.3
0.2nm,0.4s
KURBB Kurchatov Arra 59.88 328 P **P** **00 05 31.6 +0.1**
0.2nm,0.4s,baz=128,slow=6.0,SNR=4.9
0.2nm,0.4s

IDC 16 00:00:09.2±2.2, 16°45S×173°50W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=63.8km s-min=52.4km az=27.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.52**	**258**	P	P	00 09 01.4	-0.7
	0.2nm,0.5s,baz=95,slow=6.7,SNR=1.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**49.70**	**253**	P	P	00 09 03.6	+0.2
	1.2nm,0.7s,baz=91,slow=8.1,SNR=9.9						
	1.2nm,0.7s						
QSPA	**South Pole Qui**	**73.60**	**180**	P	P	00 11 44.4	+0.1
	1.2nm,1.1s,baz=19,slow=4.0,SNR=3.3						
	1.2nm,1.1s						
BRTR	**Keskin Array B**	**146.90**	**320**	PKPbc	PKPbc	00 19 53.2	-0.8
	0.9nm,0.8s,baz=104,slow=3.4,SNR=7.6						

UCR ***16*** *00:10:50.8±1.2, 7.92N×83.15W, h12km±12km, MW4.3, Presumed earthquake*
UPA ***16*** *00:10:51.5±1.4, 7.98N×83.12W, h12km±2km, ML4.2, MW4.0, Presumed earthquake*
CATAC ***16*** *00:10:53.7±0.6, 8°N×3.8°W×°, h8km±2km, M4.6/19, mB5.5/2, mb5.6/1, MLv4.1/19, Mw(mB)4.9/2, Error ellipse: s-maj=7.5km s-min=3.8km az=26.8, confirmed*
ISC 16 00:10:50.1±1.6, 7.91N±0.06×83.15W±0.03, h14km±9km, n72, σ1°15/94, 18D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIMO3	**Limones**	**0.34**	**56**	*eP*	**Pb**	**00 10 58.6**	**+0.6**
LIMO3				*eS*	**Sg**	**00 11 02.0**	**+0.2**
LMNES	**Limones**	**0.35**	**56**	*i P*	**Pb**	**00 10 58.8**	**+0.8**
PTPM	**Petroterminale**	**0.40**	**42**	*i P*	**Pb**	**00 10 59.5**	**+0.6**
PTPM				*eS*	**Sg**	**00 11 03.8**	**+0.2**
PTPA	**Petro Terminal**	**0.40**	**44**	*eP*	**Pb**	**00 10 59.5**	**+0.5**
ARIEL	**Armuelles**	**0.48**	**38**	*i P*	**Pb**	**00 11 01.5**	**+1.2**
PIRO	**Carate, Puerto**	**0.53**	**340**	P	**Pg**	**00 11 00.6**	**+0.1**
PIRO				S	**Sb**	**00 11 08.4**	**-0.2**
PIRO	**Carate, Puerto**	**0.53**	**340**	*eP*	**Pg**	**00 11 00.6**	**+0.1**
PIRO				*eS*	**Sb**	**00 11 08.4**	**-0.2**
PIRO	**Carate, Puerto**	**0.53**	**340**	*i P*	**Pg**	**00 11 00.7**	**+0.1**
PIRO				*eS*	**Sb**	**00 11 08.4**	**-0.2**
FITO	**Golfito**	**0.71**	**360**	*eP*	**Pg**	**00 11 03.4**	**-0.5**
FITO				*eS*	**Sb**	**00 11 13.8**	**-0.2**
NELY	**Ciudad Neily**	**0.77**	**15**	*eP*	**Pg**	**00 11 04.7**	**-0.3**
NELY				*eS*	**Sb**	**00 11 16.4**	**+0.9**
NELY	**Ciudad Neily**	**0.77**	**15**	*i P*	**Pg**	**00 11 05.1**	**+0.1**
DVD	**David**	**0.87**	**53**	*i P*	**Pg**	**00 11 07.0**	**+0.1**
DVD				*eS*	**Sg**	**00 11 18.4**	**+0.1**
CHIR3	**Chiriqui UPA,**	**0.95**	**59**	*i P*	**Pg**	**00 11 08.2**	**-0.2**
CHIR3				*eS*	**Sg**	**00 11 21.0**	**+0.2**
CLLRA	**Cordillera,**	**0.99**	**32**	*i P*	**Pg**	**00 11 08.9**	**-0.3**
BRU2	**Volcan**	**0.99**	**27**	*eP*	**Pg**	**00 11 09.0**	**-0.2**
BRU2	**Volcan**	**0.99**	**27**	*i P*	**Pg**	**00 11 09.1**	**-0.2**
BRU2				*eS*	**Sb**	**00 11 22.9**	**+0.7**
BRU2				IAML		00 11 27.5	
	comp=E,7μm,0.5s						
BGUAL	**Bijagual, Pana**	**1.01**	**53**	*i P*	**Pg**	**00 11 08.9**	**-0.6**
PTAR3	**Potrerillos Ar**	**1.01**	**40**	*i P*	**Pg**	**00 11 09.4**	**-0.3**
PTAR3				*eS*	**Sg**	**00 11 22.7**	**-0.3**
ALCO	**Alturas Coton,**	**1.08**	**17**	*eP*	**Pg**	**00 11 10.2**	**-0.9**
ALCO				*eS*	**Sb**	**00 11 25.1**	**+0.3**
BQTLY	**Boquete Panama**	**1.09**	**39**	*eP*	**Pg**	**00 11 10.3**	**-0.7**
BQTLY	**Boquete Panama**	**1.09**	**39**	*i P*	**Pg**	**00 11 10.4**	**-0.7**
PANP	**Palmar Norte**	**1.09**	**344**	*eP*	**Pb**	**00 11 09.9**	**-0.8**
BQSF3	**Alto Boquete,**	**1.09**	**40**	*eP*	**Pg**	**00 11 10.2**	**-1.0**
BQSF3				*eS*	**Sg**	**00 11 24.7**	**-0.8**
FIMO	**Fila Mora**	**1.09**	**349**	*eP*	**Pg**	**00 11 10.2**	**-1.0**
EDP2	**Potrero Grande**	**1.10**	**359**	*eP*	**Pb**	**00 11 10.7**	**-0.2**
LNBQ3	**Los Naranjos,**	**1.12**	**39**	*eP*	**Pb**	**00 11 10.4**	**-1.0**
LNBQ3				*eS*	**Sg**	**00 11 25.1**	**-1.4**
BURE	**Buenos Aires**	**1.27**	**352**	*eP*	**Pn**	**00 11 13.4**	**-0.1**
OCHAL	**Ojochal**	**1.28**	**338**	P	**Pn**	**00 11 12.8**	**-0.8**
OCHAL				S	**Sb**	**00 11 29.7**	**-0.6**
EDPE	**Pejibaye, P**	**1.31**	**342**	*eP*	**Pn**	**00 11 13.8**	**-0.3**
DRK0	**Durika**	**1.35**	**356**	*eP*	Pn	00 11 03.8	-11
PBNVO	**Pueblo Nuevo,**	**1.36**	**44**	*eP*	**Pn**	**00 11 13.9**	**-0.8**
PBNVO	**Pueblo Nuevo,**	**1.36**	**44**	*i P*	**Pn**	**00 11 14.0**	**-0.7**
RBALA	**Bur**	**1.38**	**46**	*eP*	**Pn**	**00 11 14.6**	**-0.3**
RBALA	**Bur**	**1.38**	**46**	*i P*	**Pn**	**00 11 13.0**	**-1.9**
NANC3	**Nancito, Chiri**	**1.44**	**77**	*eP*	**Pn**	**00 11 15.4**	**-0.4**
SAJE	**San Jernim**	**1.47**	**346**	*eP*	**Pn**	**00 11 15.9**	**-0.4**
KKNTU	**Kakint[9]**	**1.62**	**55**	*eP*	**Pn**	**00 11 17.6**	**-0.7**
CNI2	**El Empalme, Bo**	**1.65**	**24**	*eP*	**Pn**	**00 11 18.4**	**-0.2**
CNI2				*eS*	**Sn**	**00 11 38.8**	**-0.9**
RGM0	**Gandoca**	**1.76**	**18**	P	**Pb**	**00 11 22.2**	**+0.2**
RGM0				S	**Sg**	**00 11 47.3**	**+0.6**
RGM0	**Gandoca**	**1.76**	**18**	*eP*	**Pn**	**00 11 20.5**	**+0.4**
QUEP	**Quepos**	**1.82**	**327**	P	**Pn**	**00 11 21.5**	**+0.6**
QUEP				S	**Sn**	**00 11 42.2**	**-1.5**
GMAL	**Guarumal, Vera**	**1.91**	**94**	*eP*	**Pn**	**00 11 22.6**	**+0.4**
GMAL	**Guarumal, Vera**	**1.91**	**94**	*eP*	**Pn**	**00 11 22.2**	**+0.1**
PICV	**PH. Pirrs**	**2.00**	**329**	*eP*	**Pn**	**00 11 23.1**	**-0.4**
SAFE3	**Santa Fe, Vera**	**2.14**	**73**	*eP*	**Pn**	**00 11 26.8**	**+1.4**
VTCV	**VTCV, Calle Va**	**2.14**	**345**	*eP*	**Pn**	**00 11 26.6**	**+1.0**
VICA	**Volcano Irazu**	**2.17**	**342**	*eP*	**Pn**	**00 11 27.1**	**+0.8**
CVTR	**Volcan Turrial**	**2.18**	**344**	*eP*	**Pn**	**00 11 27.3**	**+0.9**
HDC	**Heredia**	**2.29**	**335**	*eP*	**Pn**	**00 11 28.1**	**+0.5**
HEME	**Heredia, Merce**	**2.29**	**335**	*eP*	**Pn**	**00 11 28.4**	**+0.8**
BELE	**Belen**	**2.30**	**334**	*eP*	**Pn**	**00 11 27.8**	**+0.1**
TCS1	**Tacares**	**2.41**	**332**	P	**Pn**	**00 11 29.9**	**+0.7**
TRT2	**Tortugero**	**2.70**	**348**	P	**Pn**	**00 11 34.6**	**+1.5**
TRT2				S	**Sn**	**00 12 07.5**	**+2.0**
TRT2	**Tortugero**	**2.70**	**348**	*eP*	**Pn**	**00 11 34.2**	**+1.2**
TRT2	**Tortugero**	**2.70**	**348**	*eP*	**Pn**	**00 11 34.9**	**+1.8**
CHIT3	**Chitre**	**2.71**	**89**	*eP*	**Pn**	**00 11 34.0**	**+0.8**
AZU	**Azuero**	**2.85**	**92**	*eP*	**Pn**	**00 11 36.2**	**+1.0**
AZU				*eS*	**Sn**	**00 12 09.6**	**+0.2**
JTS	**Las Juntas de**	**2.96**	**323**	P	**Pn**	**00 11 37.7**	**+0.9**
JTS				S	**Sn**	**00 12 10.2**	**-1.9**
JTS	**Las Juntas de**	**2.96**	**323**	*eP*	**Pn**	**00 11 37.6**	**+0.9**
JTS	**Las Juntas de**	**2.96**	**323**	*i P*	**Pn**	**00 11 38.0**	**+1.3**
COVE	**Coope Vega, Sa**	**3.06**	**336**	P	**Pn**	**00 11 40.5**	**+2.5**
CMARA	**Lajas Hojancha**	**3.07**	**313**	P	**Pn**	**00 11 38.4**	**+0.1**
CMARA				S	**Sn**	**00 12 12.2**	**-2.7**
CUI	**Cuipilapa**	**3.38**	**324**	*eP*	**Pn**	**00 11 44.1**	**+1.6**
MESS	**Mesas**	**3.46**	**325**	*eP*	**Pn**	**00 11 45.0**	**+1.4**
UPAL	**Upala**	**3.49**	**328**	P	**Pn**	**00 11 45.2**	**+1.2**
BCIP	**Isla Barro Col**	**3.51**	**69**	P	**Pb**	**00 11 49.9**	**-2.0**
BCIP				S	**Sb**	**00 12 35.8**	**+1.3**
BLUN	**Bluefields**	**4.12**	**351**	P	**Pn**	**00 11 54.6**	**+2.0**
ESPN	**Las Esperanzas**	**4.41**	**345**	P	**Pn**	**00 12 01.0**	**+4.4**
ACON	**Acoyapa**	**4.50**	**334**	P	**Pn**	**00 11 59.8**	**+1.9**
BOAB	**BOACO BROADBAN**	**4.15**	**331**	P	**Pn**	**00 12 08.2**	**+1.4**
MACN	**El Madrono**	**5.71**	**323**	P	**Pn**	**00 12 17.1**	**+2.6**
RCVN	**Varillal2**	**6.38**	**332**	P	**Pn**	**00 12 26.5**	**+2.6**

TEH ***16*** *00:17:50.5, 38.36N×45.34E, h6km±43km, ML2.5, Presumed earthquake*
AZER ***16*** *00:17:50.6, 38.50N×45.28E, h6km, ml2.7*
AFAD ***16*** *00:17:51.6, 38.46N×45.37E, h7km±3km, ML2.0*
ISC 16 00:17:50.5±1.1, 38.46N±0.02×45.35E±0.02, h5km±10km, n41, σ1°13/73, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.27**	**129**	Pg	**Pg**	**00 17 56.1**	**+0.2**
IMRD	**Marand**	**0.38**	**47**	Pg	**Pb**	**00 17 59.4**	**-0.5**
ITBZ	**Tabriz**	**0.67**	**109**	Pg	**Pg**	**00 18 02.2**	**-1.1**
ITBZ				Sg	**Sg**	**00 18 12.1**	**0.0**
ORD	**Ordubad**	**0.69**	**47**	P	**Pb**	**00 18 05.1**	**0.0**
ORD				S	**Sb**	**00 18 15.7**	**+0.6**
NAX	**Nakhchivan**	**0.73**	**9**	P	**Pb**	**00 18 06.2**	**+0.5**
NAX				S	**Sb**	**00 18 17.5**	**+1.5**
IAZR	**Azarshahr**	**0.92**	**147**	Pg	**Pg**	**00 18 07.2**	**-1.0**
SBZ	**Shahbuz**	**0.95**	**10**	P	**Pn**	**00 18 10.4**	**-0.3**
SBZ				S	**Sn**	**00 18 23.8**	**-0.9**
OZAP	**Van, Ozalp-Mer**	**1.08**	**281**	P	**Pb**	**00 18 11.8**	**0.0**
OZAP				S	**Sn**	**00 18 27.1**	**-0.8**
OZAP				IAML		00 18 35.0	
	comp=N,33nm,0.6s						
OZAP				IAML		00 18 35.0	
	comp=E,32nm,0.7s						
YOVA	**Hakkari_Yksek**	**1.20**	**224**	P	**Pg**	**00 18 13.0**	**-0.5**
YOVA				S	**Sg**	**00 18 27.7**	**-1.5**
CLDR	**Caldiran**	**1.31**	**302**	P	**Pn**	**00 18 14.4**	**-1.2**
CLDR				S	**Sg**	**00 18 31.7**	**-0.9**
CLDR				IAML		00 18 43.0	
	comp=N,32nm,0.6s						
HYR	**Heyderabad**	**1.32**	**343**	P	**Pg**	**00 18 16.1**	**+0.4**
HYR				S	**Sn**	**00 18 35.8**	**+2.1**
IHRS	**Heris**	**1.34**	**95**	Pg	**Pn**	**00 18 15.9**	**-0.2**
VMUR	**Van-Muradiye**	**1.49**	**292**	P	**Pn**	**00 18 17.7**	**-0.3**
VMUR				S	**Sb**	**00 18 37.8**	**-0.2**
VMUR				IAML		00 18 44.0	
	comp=N,18nm,1.0s						
HAKT	**HAKKARI**	**1.57**	**236**	P	**Pg**	**00 18 20.7**	**0.0**
HAKT				S	**Sb**	**00 18 40.6**	**+0.1**
HAKT	**HAKKARI**	**1.57**	**236**	P	**Pg**	**00 18 22.0**	**+1.3**
HAKT				S	**Sg**	**00 18 46.3**	**+5.2**
MAHB	**Mahabad**	**1.71**	**170**	Pg	**Pn**	**00 18 20.1**	**-0.9**
IGDI	**IGDIR**	**1.72**	**325**	P	**Pb**	**00 18 22.3**	**-0.4**
IGDI				S	**Sg**	**00 18 46.7**	**+0.9**
IGDI	**IGDIR**	**1.72**	**325**	P	**Pg**	**00 18 23.4**	**-0.1**
IGDI				S	**Sg**	**00 18 48.2**	**+2.5**
GEVA	**Gevas**	**1.80**	**266**	P	**Pb**	**00 18 23.3**	**-0.8**
GEVA				S	**Sg**	**00 18 49.6**	**+1.2**
GEVA				IAML		00 19 00.0	
	comp=E,11nm,0.7s						
CUKT	**Cukurca**	**1.83**	**229**	P	**Pb**	**00 18 24.4**	**-0.1**
CUKT				S	**Sb**	**00 18 47.9**	**+0.1**
CUKT				IAML		00 18 54.0	
	comp=N,16nm,0.8s						
CUKT				IAML		00 19 05.0	
	comp=E,21nm,0.7s						
QRD	**Qoradiz**	**1.84**	**56**	P	**Pg**	**00 18 25.6**	**-0.2**
QRD				S	**Sg**	**00 18 50.1**	**+0.6**
IHSH	**Hashtrud**	**1.90**	**127**	Pn	**Pn**	**00 18 24.3**	**+0.4**
ISRB	**Sarab**	**1.94**	**108**	Pn	**Pb**	**00 18 25.9**	**-0.5**
GRMI	**Germi**	**2.03**	**79**	Pn	**Pb**	**00 18 27.5**	**-0.3**
BLQ	**Beylaqan**	**2.14**	**53**	P	**Pb**	**00 18 29.9**	**+0.2**
BLQ				S	**Sg**	**00 18 59.3**	**+0.2**
KOTA	**Agri, Merkez-K**	**2.14**	**310**	P	**Pg**	**00 18 30.8**	**-0.7**
KOTA				S	**Sg**	**00 18 59.0**	**-0.2**
AGDM	**Agdam**	**2.14**	**39**	P	**Pb**	**00 18 30.2**	**+0.4**
AGDM				S	**Sg**	**00 19 00.4**	**+1.0**
DORK	**Agr/Tutak/Do**	**2.21**	**296**	P	**Pb**	**00 18 29.8**	**-1.2**
DORK				S	**Sg**	**00 19 00.4**	**-0.9**
GDB	**GEDABAY**	**2.29**	**8**	P	**Pb**	**00 18 32.3**	**0.0**
GDB				S	**Sg**	**00 19 03.9**	**-0.1**
BRDA	**Brd**	**2.30**	**38**	P	**Pb**	**00 18 32.8**	**+0.4**
BRDA				S	**Sg**	**00 19 05.0**	**+0.7**
YRD	**Yardimli**	**2.31**	**78**	P	**Pb**	**00 18 33.0**	**+0.2**
YRD				S	**Sg**	**00 19 06.1**	**+1.3**
GANJ	**Ganja**	**2.31**	**19**	P	**Pb**	**00 18 33.1**	**+0.4**
GANJ				S	**Sg**	**00 19 05.7**	**+0.9**
LRK	**Lerik**	**2.36**	**85**	P	**Pb**	**00 18 34.1**	**+0.5**
LRK				S	**Sg**	**00 19 06.8**	**+0.6**
GLBA	**Clilabad**	**2.51**	**71**	P	**Pb**	**00 18 36.5**	**+0.5**
GLBA				S	**Sg**	**00 19 12.0**	**+1.0**
QZX	**Qazax, Azerbai**	**2.60**	**0**	P	**Pb**	**00 18 36.3**	**-1.3**
QZX				S	**Sg**	**00 19 12.7**	**-1.3**
LKRN	**Lenkeran, Azer**	**2.70**	**84**	P	**Pb**	**00 18 39.6**	**+0.2**
LKRN				S	**Sg**	**00 19 16.4**	**-0.9**
ASTR	**Astara**	**2.71**	**87**	P	**Pb**	**00 18 38.5**	**-0.8**
ASTR				S	**Sg**	**00 19 17.4**	**0.0**
SRTM	**Siirt_Merkez**	**2.73**	**261**	P	**Pg**	**00 18 43.2**	**+0.3**
SEKA	**Sheki**	**3.10**	**27**	P	**Pb**	**00 18 45.4**	**-0.7**
SEKA				S	**Sg**	**00 19 27.4**	**-2.6**
QBL	**Gabala**	**3.14**	**37**	P	**Pb**	**00 18 45.4**	**-1.5**
QBL				S	**Sb**	**00 19 27.6**	**+2.0**
IML	**Ismayilli**	**3.20**	**42**	P	**Pb**	**00 18 45.9**	**-2.0**
IML				S	**Sb**	**00 19 28.1**	**+1.0**

BER ***16*** *00:30:08.7±1.9, 81.67N×4.20W, h24km±26km, Mw3.3, ML1.4(DNK), Confirmed Earthquake*
DNK ***16*** *00:30:09.4±3.9, 81.68N×3.84W, h36km±32km, ML1.4, Presumed earthquake*
ISC 16 00:30:05.5±1.6, 81.5N±0.1×4.44W±0.05, h11km, n12, σ2°02/18, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.82**	**280**	*eP*	**Pn**	**00 30 37.1**	**+0.5**
NOR				*eS*	**Sn**	**00 30 58.0**	**-1.6**
NOR				IAMLHF		00 30 59.5	
	comp=Z,2.1nm,0.2s						
NOR	**Nord**	**1.82**	**280**	*i P*	**Pn**	**00 30 38.9**	**+2.3**
NOR				*i S*	**Sn**	**00 30 56.0**	**-3.6**
NOR				IAML		00 31 02.1	
	comp=Z,3.2nm,0.3s						
KBS	**Kingsbay**	**3.77**	**124**	*eP*	**Pn**	**00 31 04.6**	**+1.2**
KBS				IAML		00 31 07.0	
	comp=Z,2.2nm,0.4s						
KBS				*eS*	**Sn**	**00 31 45.7**	**-2.1**
KBS	**Kingsbay**	**3.77**	**124**	*i P*	**Pn**	**00 31 04.7**	**+1.2**
KBS				*i S*	**Sn**	**00 31 45.0**	**-2.7**
SPA0	**Spitsbergen Ar**	**4.92**	**121**	*eP*	**Pn**	**00 31 20.8**	**+1.7**
SPA0				IAML		00 31 22.8	
	comp=Z,2.6nm,0.4s						
SPA0				*eS*	**Sn**	**00 32 14.2**	**-1.7**
DAG	**Danmarks Havn**	**5.41**	**217**	*eP*	**Pn**	**00 31 28.0**	**+2.1**
DAG				*eS*	**Sn**	**00 32 26.3**	**-1.7**
DAG				IAMLHF		00 32 35.8	
	comp=Z,2.2nm,0.2s						
DAG	**Danmarks Havn**	**5.41**	**217**	*i P*	**Pn**	**00 31 28.0**	**+2.1**
DAG				*i S*	**Sn**	**00 32 26.6**	**-1.4**
DAG				IAML		00 32 35.5	
	comp=Z,2.6nm,0.1s						
HSPB	**Hornsund (broa**	**5.79**	**130**	*eP*	**Pn**	**00 31 32.9**	**+1.8**
HSPB				IAML		00 31 34.9	
	comp=Z,2.3nm,0.6s						
DBG	**Daneborg**	**7.87**	**213**	*eP*	**Pn**	**00 32 00.9**	**+1.2**
DBG				*eS*	Sn	00 33 25.0	-3.6
DBG				IAMLHF		00 33 30.6	
	comp=Z,0.6nm,0.1s						
DBG	**Daneborg**	**7.87**	**213**	*i P*	**Pn**	**00 32 00.9**	**+1.2**
DBG				*i S*	Sn	00 33 25.2	-3.4
DBG				IAML		00 33 32.7	
	comp=Z,0.9nm,0.2s						
NEEM	**North Greenlan**	**9.15**	**269**	*i S*	Sn	00 33 53.3	-7.1
NEEM				IAML		00 33 58.1	
	comp=Z,0.6nm,0.2s						
SUMG	**Summit**	**11.44**	**238**	*i P*	**Pn**	**00 32 48.4**	**-0.4**
SUMG				*eS*	Sn	00 34 46.3	-10
SUMG				IAML		00 34 53.9	
	comp=Z,0.5nm,0.2s						

IDC ***16*** *00:34:49.2±0.7, 6.54N×125.19E, h0km, mb3.9/12, mbtmp3.9/12, MS3.3/9, Error ellipse: s-maj=18.4km s-min=8.8km az=122.0*
MAN ***16*** *00:34:50.0, 6.68N×125.27E, h1km, MS4.3*
MAN INSTITUTO III - KIBLAWAN MATANAO SULOP HAGONOY AND STA. CRUZ DAVAO DEL SUR; DIGOS CITY; . INTENSITY II - KIDAPAWAN CITY.
DJA ***16*** *00:34:51.7±0.7, 7°N±4°×12°5E±°, h10km, M4.7/6, mb5.0/6, mB5.1/5, MLv4.7/6, Mw(mB)4.5/5*
NEIC ***16*** *00:34:51.1±1.9, 6.54N±0.09×125.2E±0.1, h10km±1km, mb4.2/12, Error ellipse: s-maj=26.5km s-min=6.0km az=121.0*
ISC 16 00:34:50.1±1.2, 6.54N±0.03×125.22E±0.03, h5km±8km, n63, σ1°42/73, mb4.0/18, MS3.4/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.48**	**344**	*eP*	**Pg**	**00 34 58.7**	**-0.7**
KCP				*i S*	**Sg**	**00 35 05.3**	**-0.4**
GSPH	**General Santos**	**0.53**	**211**	*i P*	**Pb**	**00 35 03.6**	**+1.6**
GSPH				*i S*	**Sn**	**00 35 14.7**	**+0.8**
DMPH	**Davao City--Mi**	**0.60**	**28**	*eP*	**Pg**	**00 35 01.8**	**0.0**
DMPH				*i S*	**Sg**	**00 35 11.1**	**+1.4**
DAV	**Davao City (W)**	**0.63**	**34**	Pg	**Pg**	**00 35 02.3**	**0.0**
	631nm,0.3s,baz=258,slow=8.6,SNR=18						
DAV				Lg	Lg	00 35 10.4	
	1μm,0.3s,baz=246,slow=20,SNR=17						
DAV				LR	LR	00 35 32.3	
	comp=Z,3μm,20.7s,baz=174,slow=66						
DAV	**Davao City (W)**	**0.63**	**34**		**Pg**	**00 35 02.8**	**+0.6**
DAV				Sg	**Sg**	**00 35 10.9**	**+0.4**
DAV	**Davao City (W)**	**0.63**	**34**	P	**Pg**	**00 35 01.5**	**-0.8**
DAV				S	**Sg**	**00 35 11.3**	**+0.8**
DAV	**Davao City (W)**	**0.63**	**34**	P	**Pb**	**00 35 04.0**	**+0.3**
DDMP	**Don Marcelino,**	**0.65**	**132**	*i P*	**Pb**	**00 35 04.4**	**+0.4**
DDMP				*i S*	**Sn**	**00 35 16.6**	**-0.1**
CTBH	**Cotabato--PC H**	**1.18**	**305**	*i P*	**Pb**	**00 35 10.7**	**-2.3**
BUKP	**Musuan**	**1.34**	**353**	*eP*	**Pn**	**00 35 13.0**	**-2.5**
BUKP				*eS*	**Sb**	**00 35 31.2**	**-2.0**
CDOP	**Cateel, Davao**	**1.72**	**44**	*eP*	**Pn**	**00 35 19.6**	**-1.1**
CDOP				*eS*	**Sn**	**00 35 42.7**	**-0.5**
CGP	**Cagayan de Oro**	**1.97**	**345**	*i P*	**Pn**	**00 35 24.0**	**-0.2**
CGP				*i S*	**Sn**	**00 35 48.0**	**-1.3**
BIPH	**Bislig**	**1.98**	**35**	*eP*	**Pn**	**00 35 23.5**	**-0.9**
PAGZ	**Pagadian**	**2.24**	**305**	*eP*	**Pn**	**00 35 30.1**	**+2.2**
PAGZ				*eS*	**Sn**	**00 35 56.1**	**+0.2**
BUTP	**Butuan**	**2.44**	**9**	*eP*	**Pn**	**00 35 30.5**	**+0.2**
BUTP				*eS*	**Sn**	**00 36 02.1**	**+1.2**
TSSP	**Tandag City**	**2.67**	**21**	*eP*	**Pn**	**00 35 34.6**	**+0.9**
TSSP				*i S*	**Sg**	**00 36 15.2**	**-0.6**
DCPH	**Dipolog City**	**2.75**	**318**	*i P*	**Pb**	**00 35 39.0**	**-0.7**
DCPH				*i S*	**Sb**	**00 36 14.8**	**+1.0**
SGSI	**Sangihe**	**2.86**	**174**	P	**Pb**	**00 35 40.3**	**-1.3**
SGSI				S	**Sb**	**00 36 15.6**	**-1.3**
LSIP	**Lazi, Siquijor**	**3.02**	**329**	*eP*	**Pn**	**00 35 39.9**	**+1.3**
LSIP				*eS*	**Sb**	**00 36 22.7**	**+1.2**
TBP	**Tagbilaran**	**3.41**	**337**	*eP*	**Pb**	**00 35 49.7**	**-1.3**
SNPH	**Sibulan**	**3.41**	**325**	*eP*	**Pb**	**00 35 52.1**	**+1.0**
SNPH				*eS*	Sg	00 36 58.7	+19
LLP	**Lapu-Lapu**	**3.95**	**342**	*eP*	**Pg**	**00 36 05.1**	**-0.8**
LLP				*eS*	**Sb**	**00 36 51.9**	**+3.5**
PLP	**Palo**	**4.60**	**357**	*eP*	**Pn**	**00 35 59.2**	**-1.1**
PLP				*eS*	**Sn**	**00 37 00.5**	**+6.2**
GTOI	**Gorontalo**	**6.27**	**201**	P	**Pn**	**00 36 24.8**	**+1.4**
	0.4nm1μm108nm,0.6s						
TOLI2	**Tolitoli**	**6.98**	**220**	Pn	**Pn**	**00 36 31.6**	**-1.5**
LUWI	**Luwuk**	**7.92**	**198**	P	**Pn**	**00 36 49.4**	**+3.3**
KAPI	**Kappang**	**12.71**	**206**	LR	LR	00 44 02.4	
	comp=Z,72nm,18.6s,baz=26,slow=44						
KNRA	**Kununurra**	**22.35**	**171**	P	**P**	**00 39 47.5**	**-1.7**
FITZ	**Fitzroy Crossi**	**24.49**	**179**	P	**P**	**00 40 10.1**	**-0.4**
WB0	**Warramunga Arr**	**27.66**	**161**	P	**P**	**00 40 37.6**	**-1.6**
WB0				IAmb	IAmb	00 40 51.4	
	comp=Z,5.2nm,0.9s						
WRA	**Warramunga Arr**	**27.81**	**161**	P	**P**	**00 40 40.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=331,slow=10,SNR=5.5						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**27.81**	**161**	P	**P**	**00 40 38.2**	**-2.2**
CMAR	**Chiang Mai Arr**	**28.21**	**297**	P	**P**	**00 40 43.7**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=121,slow=8.0,SNR=4.7						
CMAR				LR	LR	00 54 51.8	
	comp=Z,28nm,18.1s,baz=245,slow=43						
	comp=Z,0.7nm,0.3s						
KSRS	**Korea Array**	**30.87**	**4**	P	**P**	**00 41 07.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=2.0						
	comp=Z,0.3nm,0.3s						
AS31	**Alice Springs**	**31.20**	**165**	P	**P**	**00 41 10.9**	**+0.4**
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**00 41 10.1**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=350,slow=8.1,SNR=13						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**31.20**	**165**	P	**P**	**00 41 10.6**	**0.0**
MJAR	**Matsushiro Ar**	**32.13**	**20**	LR	LR	00 52 31.4	

SSLB	**Suanglung**	0.31	173	P	**Pb**	01 01 01.5	-0.8
SSLB	**Suanglung**	0.31	173	⇑*i*P	**Pb**	01 01 01.5	-0.8
SSLB				*i* S	**Sb**	01 01 06.4	-0.8
WJS	**Zhushan**	0.32	212	*e*P	**Pb**	01 01 02.1	-0.4
WJS				*e*S	**Sb**	01 01 07.8	+0.3
WCHH	**Zhanghua**	0.33	268	*e*P	**Pb**	01 01 02.7	+0.2
WCHH				S	**Sn**	01 01 09.1	-1.2
WHF	**Hehuan Shan**	0.33	81	⇓*i*P	**Pb**	01 01 03.0	+0.1
WHF				*i* S	**Sb**	01 01 08.8	+0.7
FUSS	**Fushou**	0.34	63	⇓*i*P	**Pb**	01 01 02.5	-0.4
FUSS				*e*S	**Sb**	01 01 07.7	-0.5
WDJ	**Dajia District**	0.35	315	⇑*i*P	**Pb**	01 01 03.7	+0.7
WDJ				*e*S	**Sn**	01 01 10.5	-0.5
VWDT	**VWDT**	0.40	148	⇓*i*P	**Pb**	01 01 03.4	-0.2
VWDT				S	**Sb**	01 01 09.4	-0.1
WHYT	**Xinyi Township**	0.40	188	⇑*i*P	**Pb**	01 01 03.4	-0.4
WHYT				S	**Sb**	01 01 09.8	+0.2
LXIB	**Xiulin Townshi**	0.46	99	⇓*i*P	**Pb**	01 01 04.3	-0.5
LXIB				*e*S	**Sb**	01 01 11.6	+0.2
WDL	**Douliou City**	0.51	222	*e*P	**Pb**	01 01 05.1	-0.4
WDL				*e*S	**Sn**	01 01 13.8	-1.0
WRL	**Guolierlin Hig**	0.53	249	*e*P	**Pb**	01 01 05.5	-0.3
WRL				*e*S	**Sb**	01 01 13.5	+0.5
WDLH	**Douliu**	0.53	220	P	**Pb**	01 01 05.5	-0.3
WDLH				S	**Sb**	01 01 14.0	+0.8
ETLH	**Xiulin Townshi**	0.53	78	P	**Pb**	01 01 05.6	-0.4
ETLH				*e*S	**Sb**	01 01 13.2	0.0
CHN5	**Tsauling**	0.54	204	⇑*i*P	**Pb**	01 01 05.7	-0.4
CHN5				*i* S	**Sb**	01 01 13.8	+0.3
NSTT	**Nanjuang**	0.54	8	*e*P	**Pb**	01 01 05.6	-0.5
NSTT				*e*S	**Sb**	01 01 14.3	+0.8
NNS	**Nan Shan**	0.54	51	*e*P	**Pb**	01 01 05.8	-0.3
NNS				*e*S	**Sb**	01 01 12.8	-0.8
NNSB	**Datong**	0.54	52	P	**Pb**	01 01 05.3	-0.9
NNSB				S	**Sb**	01 01 12.6	-1.1
ETM	**Tongmen**	0.55	103	*i* P	**Pb**	01 01 05.7	-0.5
ETM				*i* S	**Sb**	01 01 13.0	-0.6
RLNB	**Erlin**	0.55	248	*e*P	**Pb**	01 01 05.7	-0.4
RLNB				*e*S	**Sb**	01 01 14.8	+1.2
ESL	**Shilin**	0.55	120	P	**Pb**	01 01 05.9	-0.4
ESL				S	**Sb**	01 01 13.3	-0.5
LIOB	**Emei**	0.56	10	P	**Pb**	01 01 06.5	+0.1
LIOB				*e*S	**Sb**	01 01 14.5	+0.5
NFF	**Wufeng Townshi**	0.57	19	P	**Pb**	01 01 06.5	-0.1
NFF				S	**Sb**	01 01 14.6	+0.3
WARBT	**Fenglin Townsh**	0.57	131	⇓*i*P	**Pb**	01 01 06.1	-0.5
WARBT				S	**Sb**	01 01 13.8	-0.6
ALS	**Alishan**	0.59	190	⇑*i*P	**Pb**	01 01 06.6	-0.4
ALS				*i* S	**Sb**	01 01 15.6	+0.4
WTCT	**Ta-ch'eng**	0.62	249	*e*P	**Pb**	01 01 06.8	-0.8
WTCT				*e*S	**Sb**	01 01 16.4	+0.6
TWD	**Chiawan**	0.62	91	⇑P	**Pb**	01 01 07.0	-0.5
TWD				*i* S	**Sb**	01 01 15.3	-0.5
NACB	**Ninganchiao**	0.63	83	P	**Pb**	01 01 06.9	-0.6
NACB	**Ninganchiao**	0.63	83	P	**Pb**	01 01 06.8	-0.6
NACB				*i* S	**Sb**	01 01 15.3	-0.6
WTK	**Tuku**	0.63	230	P	**Pb**	01 01 07.1	-0.4
WTK				S	**Sn**	01 01 17.1	-0.6
HWA	**Hwalien**	0.64	100	*e*P	**Pb**	01 01 07.7	0.0
HWA				*i* S	**Sb**	01 01 17.0	+0.7
ETL	**Fush Village**	0.65	84	P	**Pb**	01 01 07.3	-0.6
ETL				*e*S	**Sb**	01 01 16.0	-0.6
TEYL	**Yanliau Villag**	0.67	110	*e*P	**Pb**	01 01 06.4	-1.8
TEYL				*e*S	**Sb**	01 01 17.0	0.0
SHUL	**Shoufeng**	0.67	117	P	**Pb**	01 01 08.2	0.0
SHUL				*e*S	**Sb**	01 01 17.5	+0.5
CHN2	**Minshiung**	0.69	216	*e*P	**Pb**	01 01 08.5	0.0
CHN2				S	**Sn**	01 01 18.6	-0.6
TEGC	**Jichi Village**	0.69	124	*e*P	**Pn**	01 01 08.8	-0.5
EHY	**Hungye**	0.69	147	*e*P	**Pb**	01 01 08.3	-0.3
EHY				*e*S	**Sb**	01 01 17.5	-0.3
NSK	**Sanguang**	0.71	35	P	**Pb**	01 01 08.6	-0.3
NSK				*e*S	**Sb**	01 01 18.5	+0.2
LATG	**Datong**	0.71	52	P	**Pb**	01 01 08.2	-0.8
LATG				*e*S	**Sb**	01 01 17.8	-0.6
WCKO	**Fanlu**	0.71	203	*e*P	**Pb**	01 01 08.3	-0.6
WCKO				S	**Sb**	01 01 18.7	+0.4
YHNB	**Yeheng**	0.71	36	P	**Pb**	01 01 08.5	-0.5
YHNB	**Yeheng**	0.71	36	S	**Sb**	01 01 17.9	-0.5
YHNB	**Yeheng**	0.71	36	*i* P	**Pb**	01 01 08.4	-0.5
YHNB				S	**Sb**	01 01 18.5	+0.1
EHYH	**Wanrong**	0.72	146	P	**Pb**	01 01 08.4	-0.6
EHYH				*i* S	**Sb**	01 01 18.1	-0.3
KSHI	**Guanxi Townshi**	0.72	19	*e*P	**Pn**	01 01 09.6	-0.2
KSHI				*e*S	**Sn**	01 01 19.9	-0.1
CHY	**Chiayi**	0.74	217	*e*P	**Pb**	01 01 09.0	-0.5
CHY				*e*S	**Sb**	01 01 19.6	+0.4
NDT	**Datong Townshi**	0.74	47	*e*P	**Pb**	01 01 08.8	-0.7
NDT				*e*S	**Sb**	01 01 19.3	0.0
HGSD	**Ruisui**	0.76	142	*e*P	**Pb**	01 01 09.6	-0.1
HGSD				*e*S	**Sn**	01 01 20.6	-0.4
WSF	**Szhu**	0.78	234	*e*P	**Pb**	01 01 09.7	-0.3
WSF				*i* S	**Sb**	01 01 21.0	+0.8
YULB	**Yu-li**	0.78	153	P	**Pb**	01 01 09.6	-0.5
YULB	**Yu-li**	0.78	153	⇑*i*P	**Pb**	01 01 09.8	-0.3
YULB				*i* S	**Sb**	01 01 20.2	-0.2
EAHA	**Aohua**	0.79	73	*e*P	**Pb**	01 01 09.7	-0.5
CHN4	**Tsaushan**	0.80	202	*e*P	**Pb**	01 01 10.2	-0.1
CHN4				*e*S	**Sn**	01 01 22.3	+0.4
ENTT	**Nioudou**	0.81	47	*e*P	**Pb**	01 01 10.2	-0.4
TWF1	**Yuli**	0.82	154	*i* P	**Pb**	01 01 10.5	-0.2
TWF1				S	**Sb**	01 01 21.1	-0.3
ENA	**Nanau**	0.82	66	*e*P	**Pb**	01 01 08.6	-2.0
EYUL	**Yuli**	0.83	153	*e*P	**Pb**	01 01 10.4	-0.6
EYUL				*i* S	**Sb**	01 01 21.6	-0.1
TPUB	**Ta-pu**	0.83	198	P	**Pb**	01 01 10.2	-0.8
TPUB	**Ta-pu**	0.83	198	S	**Sb**	01 01 21.6	-0.2
TPUB	**Ta-pu**	0.83	198	P	**Pb**	01 01 10.6	-0.3
TPUB				S	**Sn**	01 01 22.3	-0.5
WSL	**Shuilin Townsh**	0.85	228	P	**Pb**	01 01 10.7	-0.5
WSL				*e*S	**Sn**	01 01 23.1	0.0
EWUT	**Wuta**	0.86	66	*e*P	**Pb**	01 01 10.6	-0.9
EWUT				*e*S	**Sb**	01 01 22.9	+0.3
NWLT	**Wulai**	0.87	38	*e*P	**Pb**	01 01 11.6	0.0
NWLT				*e*S	**Sb**	01 01 23.0	+0.2
WTP	**Ta-pu**	0.89	198	*e*P	**Pb**	01 01 11.6	-0.4
WTP				*e*S	**Sb**	01 01 23.6	+0.2
FUSB	**Fushanzhiwuyua**	0.90	43	P	**Pb**	01 01 11.6	-0.6
FUSB				S	**Sn**	01 01 25.0	+0.3
ELDTW	**Lidau**	0.91	174	*e*P	**Pb**	01 01 11.7	-0.6
NDS	**Dongshan**	0.91	54	*i* P	**Pb**	01 01 11.7	-0.5
NDS				S	**Sb**	01 01 24.2	+0.2
ECBN	**Changbin**	0.92	147	*e*P	**Pn**	01 01 12.9	+0.4
ECBN				*e*S	**Sn**	01 01 26.5	+1.6
TWE	**Neicheng**	0.93	48	*e*P	**Pn**	01 01 12.9	+0.3
TWE				*e*S	**Sn**	01 01 25.3	+0.1
ICHU	**Yijhu**	0.93	219	*e*P	**Pb**	01 01 12.0	-0.6
ICHU				S	**Sn**	01 01 25.4	+0.1
FULB	**Fuli**	0.96	159	*e*P	**Pn**	01 01 13.0	0.0
FULB				*e*S	**Sn**	01 01 26.9	+1.0
CHN1	**Nanshi**	0.97	201	*e*P	**Pb**	01 01 13.0	-0.3
CHN1				S	**Sn**	01 01 26.5	+0.2
EHD	**Haiduan**	0.98	164	*e*P	**Pb**	01 01 13.0	-0.4
EHD				*e*S	**Sb**	01 01 25.8	-0.1
CHN8	**Yiju**	0.98	221	*e*P	**Pb**	01 01 12.6	-1.0
CHN8				*e*S	**Sn**	01 01 27.0	+0.5
TWC	**Suao**	1.00	59	*e*P	**Pb**	01 01 13.5	-0.2
TWC				*e*S	**Sn**	01 01 27.1	+0.2
CHKH	**Chenggong**	1.00	154	*e*P	**Pn**	01 01 14.0	+0.4
CHKH				*e*S	**Sn**	01 01 27.6	+0.7
TATO	**Taipei**	1.02	31	P	**Pb**	01 01 14.7	+0.5
ECS	**Chishang**	1.03	164	*e*S	**Sn**	01 01 28.2	+0.5
SGST	**Jiashian**	1.05	197	*e*P	**Pn**	01 01 13.5	-0.9
SGST				S	**Sb**	01 01 28.1	+0.1
TWA	**Mucha**	1.07	35	*e*P	**Pb**	01 01 15.4	+0.3
TWA				*e*S	**Sn**	01 01 29.3	+0.5
SLGT	**Liugui**	1.12	193	*e*S	**Sn**	01 01 31.5	+1.5
SCLT	**Jiali**	1.13	216	*e*S	**Sn**	01 01 30.9	+0.8
CHN3	**Shinhua**	1.13	207	*e*S	**Sn**	01 01 32.8	+2.7
EDH	**Donghe**	1.17	162	*e*P	**Pb**	01 01 16.9	+0.2
EDH				*e*S	**Sn**	01 01 33.0	+1.8
EGS		1.19	51	*e*P	**Pb**	01 01 17.9	+0.9
EGS				*e*S	**Sb**	01 01 34.5	+2.4
TIPB	**Shuangxi**	1.21	43	*e*P	**Pb**	01 01 17.2	-0.2
TIPB				*e*S	**Sb**	01 01 33.1	+0.6
YM01	**YM01**	1.21	30	*e*P	**Pn**	01 01 15.9	-0.6
ZUZH	**Zhuzihu**	1.21	28	*e*S	**Sn**	01 01 31.2	-1.0
TAI1	**Yung-k'ang**	1.22	211	*e*S	**Sb**	01 01 35.9	+3.0
EOS2	**EOS2**	1.25	75	*e*P	**Pb**	01 01 18.7	+0.8
YM08	**YM08**	1.25	29	*e*P	**Pb**	01 01 18.4	+0.3
SCST	**Cishan**	1.26	198	*e*P	**Pb**	01 01 18.4	+0.1
TWG	**Pinlang**	1.28	173	*e*P	**Pb**	01 01 18.3	-0.2
TWG				*e*S	**Sb**	01 01 36.0	+1.6
TWGBT	**Beinan**	1.28	173	P	**Pb**	01 01 18.4	-0.2
TWGBT	**Beinan**	1.28	173	*e*P	**Pb**	01 01 18.1	-0.4
TWGBT				*e*S	**Sb**	01 01 35.2	+0.6
EOS4	**EOS4**	1.28	89	*e*P	**Pb**	01 01 17.8	-0.6
EOS4				*e*S	**Sb**	01 01 34.9	+0.5
EOS3	**EOS3**	1.30	81	*e*P	**Pb**	01 01 18.3	-0.5
SXI1	**Grass Mountain**	1.33	41	*e*P	**Pb**	01 01 19.6	+0.2
SXI1				*e*S	**Sb**	01 01 37.2	+1.1
TWB1	**Santiao Chiao**	1.34	47	*e*P	**Pb**	01 01 19.4	-0.2
TWB1				*e*S	**Sb**	01 01 36.7	+0.4
PNG	**Penghu**	1.35	247	*e*P	**Pn**	01 01 17.2	-1.2
PNG				*e*S	**Sb**	01 01 36.5	-0.1
PHUB	**P'eng-hu**	1.36	245	*e*P	**Pn**	01 01 16.8	-1.7
PHUB				*e*S	**Sn**	01 01 35.8	0.0
WDGT	**Dungji**	1.42	234	*e*P	**Pn**	01 01 18.8	-0.5
WDGT				*e*S	**Sn**	01 01 37.5	+0.3
MASBT	**Mashibuluo**	1.50	190	*e*P	**Pn**	01 01 21.0	+0.5
MASBT				*e*S	**Sb**	01 01 41.2	+0.4
LDUT	**Ludao**	1.50	160	*e*P	**Pn**	01 01 18.5	-2.1
LDUT				*e*S	**Sn**	01 01 39.7	+0.3
WSSB	**Gushan**	1.56	203	*e*P	**Pn**	01 01 22.4	+1.0
VWUC	**VWUC**	1.60	304	*e*P	**Pn**	01 01 20.2	-1.7
VCHM	**Qimei**	1.62	237	*e*P	**Pn**	01 01 20.8	-1.4
VCHM				*e*S	**Sn**	01 01 42.1	-0.1
SLIU	**Shizi**	1.87	183	*e*S	**Sb**	01 01 51.3	-0.4
PTMZ	**Houxiangcun**	1.89	300	*e*P	**Pn**	01 01 24.0	-1.8
JYNG	**Yonagunijimaku**	1.89	79	*e*P	**Pn**	01 01 26.8	+0.9
JYNG				*e*S	**Sb**	01 01 50.7	-1.4
YOJ	**Yonaguni jima**	1.95	79	P	**Pn**	01 01 27.5	+0.8
YOJ	**Yonaguni jima**	1.95	79	*e*P	**Pn**	01 01 27.7	+1.0
JIJ	**Ishigaki jima**	2.96	84	*e*P	**Pn**	01 01 41.1	+0.5
JIJ				*e*S	**Sn**	01 02 15.8	+0.4
JISG	**Ishigakijimahi**	3.14	80	P	**Pn**	01 01 43.6	+0.6
JISG				*e*S	**Sn**	01 02 20.9	+1.2

*IDC **16** 01:09:11.2±3.4, 10°.03S×112°.33E, h0km, mb3.6/7, mbtmp3.7/8, ML3.3/1, MS3.0/1, Error ellipse: s-maj=173.1km s-min=20.4km az=48.0*
*DJA **16** 01:09:12.2±1.1, 10°.5S±10°×11°.2E±°, h10km, M4.2/12, mb4.1/1, MLv4.2/12*

ISC 16 01:09:15.7±1.1, 10°.2S±0°.1×112°.22E±0°.07, h35km, n14, σ1§02/16, mb4.0/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJI	**Sawahan-Nganju**	2.45	349	P	**Pn**	**01 09 53.8**	**+0.3**
SNJI				S	**Sn**	**01 10 22.6**	**+0.3**
JAGI	**Jajag, Banyuwa**	2.57	48	P	**Pn**	**01 09 55.8**	**+0.9**
JAGI				S	**Sn**	**01 10 23.9**	**-1.1**
UGM	**Wanagama**	2.83	324	P	**Pn**	**01 09 59.8**	**+1.3**
KHKI	**Kahang-Kahang**	3.81	62	P	**Pn**	**01 10 14.1**	**+2.1**
TWSI	**Taliwang, Sumb**	4.82	73	P	**Pn**	**01 10 26.5**	**+0.6**
BBJI	**Bungbulang**	5.28	301	P	**Pn**	**01 10 32.4**	**+0.2**
FITZ	**Fitzroy Crossi**	15.19	123	Pn	**Pn**	**01 12 46.0**	**-1.8**
	0.1nm,0.3s,baz=306,slow=14,SNR=1.4						
FITZ				Sn	Sn	01 15 20.8	-14
	0.1nm,0.3s,baz=3.5,slow=19,SNR=1.4						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	23.42	117	P	**P**	**01 14 21.8**	**-0.1**
	0.2nm,0.4s,baz=292,slow=11,SNR=1.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	24.64	126	P	**P**	**01 14 34.4**	**+1.2**
	0.5nm,0.6s,baz=307,slow=9.5,SNR=4.2						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	31.35	335	P	**P**	**01 15 33.0**	**-0.3**
	0.9nm,0.3s,baz=149,slow=8.7,SNR=1.5						
CMAR				LR	LR	01 28 12.4	
	comp=Z,31nm,21.4s,baz=275,slow=36						
	0.9nm,0.3s						
SONM	**Songino Array**	58.02	355	P	**P**	**01 19 05.0**	**-0.1**
	0.8nm,0.5s,baz=181,slow=8.0,SNR=4.3						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	62.73	337	P	**P**	**01 19 37.5**	**+0.2**
	0.4nm,0.3s,baz=150,slow=7.5,SNR=8.0						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	67.30	337	P	**P**	**01 20 06.5**	**-0.3**
	0.1nm,0.3s,baz=155,slow=6.1,SNR=1.8						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	68.00	343	P	**P**	**01 20 10.8**	**-0.4**
	0.7nm,0.5s,baz=174,slow=3.0,SNR=4.6						
	0.7nm,0.5s						

*IDC **16** 01:20:03.4±0.8, 19°.67N×147°.62E, h0km, mb4.0/13, mbtmp4.0/13, MS3.0/3, Error ellipse: s-maj=23.8km s-min=19.4km az=84.0*
*NEIC **16** 01:20:05.4±1.1, 19°.61N±0°.06×147°.6E±0°.1, h10km±1km, mb4.5/39, Error ellipse: s-maj=23.4km s-min=7.9km az=291.0*

ISC 16 01:20:07.4±0.6, 19°.60N±0°.07×147°.6E±0°.1, h29km, n73, σ0§77/67, mb4.4/34, MS2.8/3, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	4.67	202	Pn	**Pn**	**01 21 16.4**	**+0.3**
DPSS				Sn	**Sn**	**01 22 10.0**	**+0.7**
JHJ2	**Mitsune**	15.15	334	Pn	**Pn**	**01 23 39.3**	**-0.1**
H11S3	**WAKE ISLAND Hy**	18.07	90	T	T	01 42 48.8	
	baz=277,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	18.09	90	T	T	01 42 45.0	
	baz=277,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	18.09	90	T	T	01 42 47.2	
	baz=277,slow=74,SNR=9.8						
H11N1	**WAKE ISLAND Hy**	18.17	86	T	T	01 42 55.0	
	baz=273,slow=75,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	18.17	86	T	T	01 42 53.4	
	baz=273,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	18.18	86	T	T	01 42 56.3	
	baz=273,slow=75,SNR=4.5						
RABL	**Rabaul**	24.07	169	P	**P**	**01 25 19.8**	**-0.6**
KSRS	**Korea Array**	24.72	320	P	**P**	**01 25 26.8**	**+0.6**
	2.8nm,0.8s,baz=140,slow=9.7,SNR=13						
	2.8nm,0.8s						
DAV	**Davao City (W)**	24.75	243	P	**P**	**01 25 26.0**	**-0.7**
ASAJ	**Asahikawa**	24.80	351	LR	LR	01 33 56.0	
	comp=Z,24nm,21.7s,baz=152,slow=34						
SHEM	**Shemya Is, Ala**	38.94	26	LR	LR	01 41 51.9	
	comp=Z,15nm,19.6s,baz=48,slow=34						
WB0	**Warramunga Arr**	41.21	199	P	**P**	**01 27 49.7**	**-0.1**
WB0				IAmb	IAmb	01 27 58.0	
	comp=Z,9.8nm,1.4s						
WR8	**Warramunga Arr**	41.36	199	P	**P**	**01 27 51.6**	**+0.6**
WR8				IAmb	IAmb	01 28 10.0	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	41.39	199	P	**P**	**01 27 52.0**	**+0.6**
WRA	**Warramunga Arr**	41.40	199	P	**P**	**01 27 51.6**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=26,slow=8.3,SNR=9.0						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	41.40	199	P	**P**	**01 27 49.8**	**-1.6**
FITZ	**Fitzroy Crossi**	43.23	211	P	**P**	**01 28 06.6**	**+0.3**
SONM	**Songino Array**	43.59	320	P	**P**	**01 28 10.3**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=142,slow=12,SNR=4.6						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	43.59	320	P	**P**	**01 28 09.3**	**+0.2**
ASAR	**Alice Springs**	45.03	198	P	**P**	**01 28 21.7**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=23,slow=7.2,SNR=7.2						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	45.03	198	P	**P**	**01 28 20.9**	**+0.1**
M11K	**Mekoryuk**	52.15	27	P	**P**	**01 29 15.4**	**+0.4**
K13K	**Kusilvak Mount**	53.58	26	P	**P**	**01 29 26.9**	**+1.4**
K13K				IAmb	IAmb	01 29 34.1	
	comp=Z,6.7nm,1.4s						
O14K	**Tigyukauivet M**	53.84	30	P	**P**	**01 29 28.2**	**+0.7**
O15K	**Ungalikthiuk R**	54.48	30	P	**P**	**01 29 32.6**	**+0.4**
O15K				IAmb	IAmb	01 29 34.1	
	comp=Z,10nm,1.3s						
N15K	**Kwethluk River**	54.76	29	P	**P**	**01 29 35.5**	**+1.3**
N15K				IAmb	IAmb	01 30 14.5	
	comp=Z,9.2nm,1.4s						
O16K	**Kokwok River B**	55.46	30	P	**P**	**01 29 39.8**	**+0.6**
O16K				IAmb	IAmb	01 29 53.4	
	comp=Z,6.8nm,1.3s						
J16K	**Anvik River**	55.87	25	P	**P**	**01 29 42.9**	**+0.7**
J16K				IAmb	IAmb	01 29 54.5	
	comp=Z,8.5nm,1.5s						
P17K	**Kvichak River**	56.11	31	P	**P**	**01 29 44.4**	**+0.5**
N17K	**Nushagak Hills**	56.23	29	P	**P**	**01 29 45.4**	**+0.6**
N17K				IAmb	IAmb	01 29 47.8	
	comp=Z,3.2nm,1.0s						
K17K	**Iditarod**	56.58	27	P	**P**	**01 29 47.6**	**+0.4**
K17K				IAmb	IAmb	01 29 49.9	
	comp=Z,3.5nm,0.9s						
N18K	**Kilae Creek**	56.88	29	P	**P**	**01 29 50.5**	**+1.1**
O18K	**Koktuh Hills**	56.92	30	P	**P**	**01 29 51.1**	**+1.4**
O18K				IAmb	IAmb	01 29 58.0	
	comp=Z,5.0nm,1.1s						
G18K	**Tagagawik**	57.79	23	P	**P**	**01 29 57.1**	**+1.4**
M19K	**Big River Lodg**	57.98	28	P	**P**	**01 29 57.5**	**+0.4**
M19K				IAmb	IAmb	01 30 23.9	
	comp=Z,8.0nm,1.4s						
ZALV	**Zalesovo Beam**	58.41	322	P	**P**	**01 30 00.4**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=108,slow=6.6,SNR=5.4						
ZALV				PcP	**PcP**	**01 30 49.5**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=92,slow=4.3,SNR=3.6						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	58.41	322	P	**P**	**01 30 00.4**	**+0.1**
ZALV					**PcP**	**01 30 50.1**	**-0.6**
H19K	**Roundabout Mou**	58.46	24	P	**P**	**01 30 00.8**	**+0.4**
H19K				IAmb	IAmb	01 30 38.2	
	comp=Z,7.2nm,1.5s						
G19K	**Purcell Mounta**	58.47	23	P	**P**	**01 30 00.9**	**+0.4**
CNPM	**China Poot**	58.75	31	P	**P**	**01 30 02.5**	**-0.1**
J20K	**Nowinta River**	58.86	26	P	**P**	**01 30 03.8**	**+0.6**
J20K				IAmb	IAmb	01 30 05.7	
	comp=Z,2.6nm,1.0s						
C19K	**Lookout Ridge**	58.95	19	P	**P**	**01 30 04.4**	**+0.6**
D19K	**Kuna River**	59.14	20	P	**P**	**01 30 05.7**	**+0.6**
D19K				IAmb	IAmb	01 30 24.9	
	comp=Z,7.8nm,1.5s						
MK31	**Makanchi Array**	59.15	313	P	**P**	**01 30 05.4**	**-0.1**
MKAR	**Makanchi Array**	59.15	313	P	**P**	**01 30 06.0**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=95,slow=8.3,SNR=7.5						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	59.15	313	P	**P**	**01 30 04.4**	**-1.2**
SKT	**Skwentna**	59.29	29	P	**P**	**01 30 05.6**	**-0.7**
SKT				IAmb	IAmb	01 30 07.5	
	comp=Z,3.6nm,1.1s						
CAST	**Castle Rocks**	59.48	27	P	**P**	**01 30 08.4**	**+0.9**
CAST				IAmb	IAmb	01 30 09.6	
	comp=Z,5.7nm,1.5s						
D20K	**Etivluk River**	59.73	20	P	**P**	**01 30 10.1**	**+0.9**
MLY	**Manley**	60.53	25	P	**P**	**01 30 15.4**	**+0.6**
MLY				IAmb	IAmb	01 30 51.1	
	comp=Z,5.4nm,1.5s						
PDGK	**Podgornoye**	61.02	309	P	**P**	**01 30 18.4**	**-0.2**
E22K	**Anaktuvuk Pass**	61.14	22	P	**P**	**01 30 19.6**	**+0.7**
E22K				IAmb	IAmb	01 30 21.0	
	comp=Z,2.2nm,0.9s						
SCM	**Sheep Creek Mo**	61.17	29	P	**P**	**01 30 18.9**	**-0.3**
KURK	**Kurchatov**	61.81	318	P	**P**	**01 30 23.0**	**-0.6**
KURK				IAmb	IAmb	01

comp=Z,2.4nm,1.2s
ELL Elmali 56.27 299 P **P** 01 31 33.2 -0.2
MORW Morawa 57.09 158 P **P** 01 31 38.9 -0.1
WB0 Warramunga Arr 58.48 135 P **P** 01 31 48.2 -0.8
WB0 IAmb IAmb 01 31 56.8
comp=Z,17nm,1.5s
WRA Warramunga Arr 58.58 136 P **P** 01 31 50.2 +0.5
comp=Z,0.3nm,0.8s,baz=321,slow=7.6,SNR=4.6
comp=Z,0.3nm,0.8s
WRA Warramunga Arr 58.58 136 P **P** 01 31 49.3 -0.3
FINES FINESS Array B 58.62 328 P **P** 01 31 49.0 -0.4
comp=Z,2.1nm,1.0s,baz=93,slow=8.4,SNR=4.2
comp=Z,2.1nm,1.0s
FINES FINESS Array B 58.62 328 P **P** 01 31 49.1 -0.2
BURAR Bucovina Array 58.78 312 P **P** 01 31 50.6 -0.3
BURAR IAmb IAmb 01 32 18.5
comp=Z,2.1nm,0.9s
PABE Paberze 59.38 321 P **P** 01 31 54.5 -0.3
PABE IAmb IAmb 01 31 55.1
comp=Z,6.1nm,0.6s
ASAR Alice Springs 61.07 139 P **P** 01 32 07.2 +0.4
comp=Z,0.3nm,0.4s,baz=324,slow=6.5,SNR=2.0
comp=Z,0.3nm,0.4s
ASAR Alice Springs 61.07 139 P **P** 01 32 06.6 -0.1
HFS Hagfors 64.68 327 P **P** 01 32 29.9 -0.3
comp=Z,0.7nm,0.6s,baz=111,slow=6.3,SNR=4.4
comp=Z,0.7nm,0.6s
NOA NORSAR Array B 65.79 328 P **P** 01 32 36.8 -0.8
comp=Z,0.4nm,0.8s,baz=103,slow=6.6,SNR=2.4
comp=Z,0.4nm,0.8s
NC204 NORSAR Array S 65.98 328 P **P** 01 32 36.7 -2.0
NC204 IAmb IAmb 01 32 47.7
comp=Z,11nm,1.4s
GERES GERESS Array B 66.27 315 P **P** 01 32 40.7 -0.3
comp=Z,1.8nm,0.7s,baz=123,slow=3.6,SNR=16
comp=Z,1.8nm,0.7s
EKA Eskdalemuir Ar 74.55 324 P **P** 01 33 30.9 -0.3
comp=Z,0.4nm,0.6s,baz=71,slow=5.6,SNR=2.0
comp=Z,0.4nm,0.6s

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*IDC **16** 01:23:18.5±0.6,2.˚66S×29.˚05E,h0km,mb4.0/15, mbtmp4.0/19,ML1.8/1,MS2.6/1,Error ellipse: s-maj=18.8km s-min=8.6km az=113.0*
*GFZ **16** 01:23:18.8±0.3,3.˚3S×2.˚9E±˚,h10km,M4.4/10,mb4.4/10*
*NEIC **16** 01:23:20.7±1.2,2.˚69S±0.˚05×29.˚10E±0.˚08,h10km±1km, mb4.4/24,Error ellipse: s-maj=14.7km s-min=7.0km az=251.0*
*BGR **16** 01:23:20.2,2.˚75S×29.˚00E,h33km,mb4.0,Ms3.4*

ISC 16 01:23:20.1±0.4,2.72S±0.˚05×29.11E±0.˚07,h12km,n91, σ1s55/95,mb4.3/37,1D,Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**2.66**	**38**	Pn	**Pn**	**01 24 04.3**	**+1.3**
	398nm,0.3s,baz=224,slow=18,SNR=88						
MBAR				Pg	**Pb**	**01 24 07.1**	**-0.7**
	109nm,0.3s,baz=231,slow=19,SNR=221						
MBAR				Lg	Lg	01 24 40.1	
	705nm,0.3s,baz=138,slow=23,SNR=8.4						
MBAR	**Mbarara**	**2.66**	**38**	Pn	**Pn**	**01 24 03.1**	**+0.1**
MBAR	**Mbarara**	**2.66**	**38**	P	**Pn**	**01 24 05.3**	**+2.3**
KMBO	**Kilima Mbogo**	**8.29**	**79**	Pn	**Pn**	**01 25 21.9**	**+1.3**
	baz=248,slow=18						
KMBO				Sn	**Sn**	**01 26 51.5**	**-3.0**
	baz=264,slow=19						
KMBO				Lg	Lg	01 27 36.5	
	baz=230,slow=16						
LODK	**Lodwar**	**8.73**	**46**	Pn	**Pn**	**01 25 26.3**	**-0.2**
LODK	**Lodwar**	**8.73**	**46**	P	**Pn**	**01 25 29.1**	**+2.7**
KIBK	**Kibwezi**	**8.94**	**88**	Pn	**Pn**	**01 25 29.8**	**+0.5**
KIBK	**Kibwezi**	**8.94**	**88**	P	**Pn**	**01 25 32.0**	**+2.7**
LSZ	**Lusaka**	**12.52**	**184**	Pn	**Pn**	**01 26 17.9**	**-0.4**
	1.3nm,0.5s,baz=18,slow=10,SNR=6.0						
LSZ				Sn	**Sn**	**01 28 33.8**	**-4.1**
	0.5nm,0.3s,baz=332,slow=13,SNR=3.7						
LSZ				Lg	Lg	01 29 55.0	
	0.9nm,0.3s,baz=33,slow=12,SNR=4.6						
LSZ				LR	LR	01 30 28.8	
	comp=Z,25nm,18.5s,baz=332,slow=34						
LSZ	**Lusaka**	**12.52**	**184**	Pn	**Pn**	**01 26 18.8**	**+0.4**
LSZ	**Lusaka**	**12.52**	**184**	P	**Pn**	**01 26 15.2**	**-3.1**
MATP	**Matopo**	**17.61**	**182**	P	**Pn**	**01 27 25.9**	**+0.1**
	2.9nm,0.7s,baz=3.2,slow=12,SNR=6.7						
MATP				S	**Sn**	**01 30 44.6**	**+2.5**
	2.0nm,0.7s,baz=338,slow=19,SNR=1.7						
MATP				Lg	Lg	01 32 36.3	
	0.2nm,0.3s,baz=274,slow=19,SNR=4.3						
TSUM	**Tsumeb**	**19.89**	**214**	P	**P**	**01 27 51.3**	**-0.4**
	0.1nm,0.3s,baz=356,slow=16,SNR=2.2						
TSUM				S	**Sn**	**01 31 38.2**	**+1.2**
	3.9nm,0.8s,baz=252,slow=9.7,SNR=3.7						
TSUM				Lg	Lg	01 33 48.5	
	0.1nm,0.3s,baz=79,slow=6.7,SNR=6.1						
	1.4nm,0.7s						
TSUM	**Tsumeb**	**19.89**	**214**		**P**	**01 27 52.3**	**+0.6**
TSUM	**Tsumeb**	**19.89**	**214**	P	**P**	**01 27 47.5**	**-4.3**
EDA	**Edea**	**20.01**	**289**	P	**P**	**01 27 52.2**	**-0.8**
EDA				IAmb	IAmb	01 27 58.1	
	comp=Z,17nm,0.8s						
LBTB	**Lobatse**	**22.43**	**188**	P	**P**	**01 28 18.2**	**-0.8**
LBTB				IAmb	IAmb	01 28 24.3	
	comp=Z,10nm,0.9s						
LBTB	**Lobatse**	**22.43**	**188**	P	**P**	**01 28 17.6**	**-1.5**
SBV	**Sambava**	**23.18**	**119**	P	**P**	**01 28 26.2**	**-0.8**
ABPO	**Ambohimpanom**	**24.02**	**134**	P	**P**	**01 28 34.3**	**-1.1**
VOI	**Vohitsoka**	**25.68**	**139**	P	**P**	**01 28 48.7**	**-1.7**
VOI				IAmb	IAmb	01 28 50.9	
	comp=Z,23nm,1.3s						
BOSA	**Boshof**	**26.02**	**188**	P	**P**	**01 28 54.5**	**+1.2**
	comp=Z,4.0nm,0.7s,baz=4.6,slow=9.1,SNR=8.1						
	comp=Z,4.0nm,0.7s						
BOSA	**Boshof**	**26.02**	**188**	P	**P**	**01 28 55.6**	**+2.3**
BOSA				IAmb	IAmb	01 28 56.6	
	comp=Z,6.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.44**	**301**	P	**P**	**01 29 40.9**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=109,slow=7.9,SNR=24						
	comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**42.44**	**5**	P	**P**	**01 31 15.9**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=187,slow=9.0,SNR=15						
	comp=Z,2.3nm,0.7s						
BRTR	**Keskin Array B**	**42.44**	**5**	P	**P**	**01 31 15.5**	**+0.4**
BR131	**Keskin Array S**	**42.44**	**5**	P	**P**	**01 31 15.7**	**+0.6**
BR131				IAmb	IAmb	01 31 21.1	
	comp=Z,3.6nm,0.8s						
TOKA	**Tokat**	**43.36**	**8**	P	**P**	**01 31 22.9**	**+0.5**
TOKA				IAmb	IAmb	01 31 28.5	
	comp=Z,4.2nm,0.7s						
ARR	**Arges**	**48.04**	**356**	P	**P**	**01 31 58.2**	**-1.1**
MORH	**Mrgy, Hungar**	**49.59**	**350**	P	**P**	**01 32 10.4**	**-0.8**
DRGR		**49.62**	**354**	P	**P**	**01 32 11.2**	**-0.3**
BURAR	**Bucovina Array**	**50.24**	**357**	P	**P**	**01 32 16.8**	**+0.6**
BUR08	**Bucovina Ar. S**	**50.27**	**357**	P	**P**	**01 32 16.9**	**+0.5**
BUR08				IAmb	IAmb	01 32 22.5	
	comp=Z,4.1nm,1.1s						
BMR	**Baia Mare**	**50.42**	**355**	P	**P**	**01 32 17.4**	**-0.1**
TRPA	**Tarpa**	**50.96**	**354**	P	**P**	**01 32 21.0**	**-0.5**
ARSA	**Arzberg**	**51.17**	**348**	P	**P**	**01 32 23.5**	**+0.4**
ARSA	**Arzberg**	**51.17**	**348**	eP	**P**	**01 32 23.9**	**+0.8**
	comp=Z,1.5nm,0.7s						
SESA	**Seetaler Alpe,**	**51.24**	**347**	eP	**P**	**01 32 23.9**	**0.0**
	comp=Z,6.3nm,0.8s						
CONA	**Conrad Observa**	**51.75**	**349**	eP	**P**	**01 32 28.4**	**+0.8**
	comp=Z,3.9nm,1.4s						
ESDC	**Sonseca Array**	**51.97**	**328**	P	**P**	**01 32 29.0**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=137,slow=6.8,SNR=4.0						
	comp=Z,1.0nm,1.0s						
ESDC	**Sonseca Array**	**51.97**	**328**	P	**P**	**01 32 28.8**	**-0.5**
LESA	**Schwarzleotal**	**51.97**	**346**	epP	**P**	**01 32 33.0**	**+3.7**
	comp=Z,3.5nm,0.9s						
MOA	**Molln**	**52.01**	**347**	eP	**P**	**01 32 29.5**	**+0.1**
	comp=Z,5.8nm,0.8s						
MOA	**Molln**	**52.01**	**347**	P	**P**	**01 32 28.6**	**-0.8**
WTTA	**Wattenberg**	**52.08**	**345**	epP	**P**	**01 32 34.0**	**+3.8**
	comp=Z,4.4nm,1.0s						
SQTA	**Sankt Quirin**	**52.16**	**345**	eP	**P**	**01 32 34.1**	**+3.5**
	comp=Z,2.6nm,0.7s						
MOTA	**Moosalm**	**52.30**	**345**	eP	**P**	**01 32 34.9**	**+3.1**
	comp=Z,2.9nm,0.8s						
RETA	**Reutte**	**52.52**	**344**	P	**P**	**01 32 36.5**	**+3.2**
	comp=Z,2.9nm,0.7s						
SENIN	**Lac Senin/Sane**	**52.53**	**341**	P	**P**	**01 32 33.2**	**-0.4**
DAVA	**Damuels**	**52.58**	**344**	eP	**P**	**01 32 36.8**	**+3.0**
	comp=Z,7.5nm,0.9s						
DAVA	**Damuels**	**52.58**	**344**	P	**P**	**01 32 32.4**	**-1.5**
KRUC	**Moravsky**	**52.74**	**350**	eP	**P**	**01 32 34.0**	**-0.8**
VRAC	**Vranov**	**52.94**	**350**	eP	**P**	**01 32 35.7**	**-0.6**
GEC2	**GERESS Array S**	**53.07**	**347**	P	**P**	**01 32 37.8**	**+0.4**
GEC2				IAmb	IAmb	01 32 41.4	
	comp=Z,2.5nm,0.8s						
GEC2	**GERESS Array S**	**53.07**	**347**	eP	**P**	**01 32 36.7**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=157,slow=7.1						
GERES	**GERESS Array B**	**53.07**	**347**	P	**P**	**01 32 37.0**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=171,slow=6.9,SNR=15						
	comp=Z,1.9nm,0.7s						
GERES	**GERESS Array B**	**53.07**	**347**	P	**P**	**01 32 38.7**	**+1.3**
TREC	**Trest**	**53.13**	**349**	P	**P**	**01 32 37.0**	**-0.7**
AKASG	**Malin Array Be**	**53.21**	**0**	P	**P**	**01 32 37.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=185,slow=6.7,SNR=2.0						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**53.21**	**0**	P	**P**	**01 32 38.2**	**-0.1**
MORC	**Moravsky Berou**	**53.23**	**351**	eP	**P**	**01 32 38.0**	**-0.5**
KHC	**Kasperske Hory**	**53.37**	**347**	P	**P**	**01 32 41.7**	**+2.2**
KHC				IAmb	IAmb	01 32 43.5	
	comp=Z,4.3nm,0.8s						
WET	**Wettzell**	**53.53**	**347**	eP	**P**	**01 32 39.8**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=157,slow=7.1						
ROTZ	**Rotzenmuhle**	**54.27**	**347**	eP	**P**	**01 32 45.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=157,slow=7.1						
GRF	**Grafenberg Arr**	**54.44**	**346**	eP	**P**	**01 32 46.1**	**-1.2**
	comp=Z,4.1nm,0.8s,baz=157,slow=7.1						
GRF				eL	L	01 58 25.2	
	comp=Z,30nm,19.9s						
MOX	**Moxa**	**55.23**	**347**	eL	L	01 59 03.2	
	comp=Z,31nm,19.4s						
SUW	**Suwalki**	**56.74**	**356**	P	**P**	**01 33 04.3**	**+0.6**
KK31	**Karatay Array**	**58.89**	**34**	P	**P**	**01 33 18.6**	**-0.5**
KK31				IAmb	IAmb	01 33 19.7	
	comp=Z,3.5nm,1.4s						
KKAR	**Karatay Array**	**58.89**	**34**	P	**P**	**01 33 19.4**	**+0.3**
ARTI	**Arti**	**63.55**	**18**	P	**P**	**01 33 49.5**	**-0.9**
HFS	**Hagfors**	**63.82**	**351**	P	**P**	**01 33 52.1**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=211,slow=8.2,SNR=1.8						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**64.02**	**358**	P	**P**	**01 33 53.4**	**0.0**
	comp=Z,3.0nm,0.8s,baz=176,slow=4.2,SNR=5.1						
	comp=Z,3.0nm,0.8s						
FIA1	**FINESS Array S**	**64.02**	**358**	P	**P**	**01 33 53.6**	**+0.2**
NOA	**NORSAR Array B**	**65.07**	**351**	P	**P**	**01 33 60.0**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=162,slow=6.2,SNR=3.9						
	comp=Z,1.8nm,0.9s						
NC303	**NORSAR Array S**	**65.22**	**351**	P	**P**	**01 34 01.2**	**0.0**
NC204	**NORSAR Array S**	**65.36**	**350**	P	**P**	**01 34 02.4**	**+0.1**
BVAR	**Borovoye Array**	**65.42**	**26**	P	**P**	**01 34 01.9**	**-0.9**
	comp=Z,8.8nm,0.7s,baz=237,slow=6.7,SNR=2.6						
	comp=Z,0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**67.82**	**32**	P	**P**	**01 34 18.6**	**+0.6**
	comp=Z,0.9nm,0.2s,baz=238,slow=6.8,SNR=5.1						
	comp=Z,0.9nm,0.2s						
MKAR	**Makanchi Array**	**67.85**	**36**	P	**P**	**01 34 18.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=216,slow=7.5,SNR=12						
	comp=Z,1.5nm,0.7s						
KURK	**Kurchatov**	**67.92**	**31**	P	**P**	**01 34 18.3**	**-0.4**
KURK				IAmb	IAmb	01 34 33.1	
	comp=Z,2.1nm,0.5s						
MAW	**Mawson**	**68.80**	**167**	P	**P**	**01 34 27.6**	**+3.7**
SNAA	**Sanae**	**71.77**	**190**	P	**P**	**01 34 43.4**	**+1.3**
SNAA				IAmb	IAmb	01 35 04.1	
	comp=Z,4.3nm,1.5s						
CMAR	**Chiang Mai Arr**	**71.82**	**70**	P	**P**	**01 34 44.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=220,slow=7.6,SNR=1.2						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**71.82**	**70**	P	**P**	**01 34 43.6**	**+0.2**
VNA2	**Neumayer--Wtz**	**72.04**	**192**	ǁP	**P**	**01 34 46.5**	**+2.8**
	comp=Z,1.9nm,0.7s,baz=34,slow=6.0						
ARCES	**ARCESS Array B**	**72.15**	**359**	P	**P**	**01 34 44.0**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=187,slow=6.1,SNR=4.5						
	comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**72.15**	**359**	P	**P**	**01 34 45.0**	**+0.7**
ZALV	**Zalesovo Beam**	**72.86**	**31**	P	**P**	**01 34 48.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=236,slow=9.7,SNR=2.3						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**72.86**	**31**	P	**P**	**01 34 48.8**	**-0.1**
HOPE	**Hope Point**	**73.73**	**214**	P	**P**	**01 34 54.0**	**0.0**
HHC	**Hu-ho-hao-te**	**86.06**	**49**	eP	**P**	**01 36 01.1**	**-0.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						

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*IDC **16** 01:29:48.5±1.1,65.˚33S×178.˚61E,h0km,mb4.1/5, mbtmp4.2/6,ML3.9/1,MS3.9/18,Error ellipse: s-maj=46.7km s-min=21.2km az=62.0*
*NEIC **16** 01:29:49.6±0.8,65.˚3S±0.˚1×178.˚8E±0.˚3,h10km±1km, mb4.6/8,Error ellipse: s-maj=21.6km s-min=18.9km az=69.0*

ISC 16 01:29:49.7±0.7,65.3S±0.˚1×178.7E±0.˚2,h10km,n59, σ0s76/34,mb4.3/9,MS4.0/18,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.09**	**191**		**Pn**	**01 32 54.5**	**-0.8**
VNDA	**Vanda**	**13.27**	**196**	Pn	**Pn**	**01 32 57.5**	**-0.2**
	0.6nm,0.3s,baz=51,slow=18,SNR=75						
VNDA				LR	LR	01 37 01.6	
	comp=Z,408nm,20.2s,baz=355,slow=33						
	6.9nm,0.7s						
VNDA	**Vanda**	**13.27**	**196**		**Pn**	**01 32 57.7**	**-0.1**
MCQ	**Macquarie Isla**	**14.61**	**309**	Pn	**Pn**	**01 33 16.1**	**0.0**
RPZ	**Rata Peaks**	**22.08**	**345**	LR	LR	01 41 40.3	
	comp=Z,8.2nm,19.3s,baz=186,slow=32						
QSPA	**South Pole Qui**	**24.76**	**180**	P		**01 35 11.8**	**+0.6**
	9.7nm,0.9s,baz=28,slow=8.0,SNR=23						
QSPA				PcP	**PcP**	**01 38 48.9**	**+1.7**
	1.6nm,0.9s,baz=72,slow=0.8,SNR=3.0						
QSPA				LR	LR	01 43 49.5	
	comp=Z,385nm,19.6s,baz=50,slow=34						
	9.7nm,0.9s						
QSPA	**South Pole Qui**	**24.76**	**180**	P	**P**	**01 35 12.0**	**+0.8**
QSPA				IAmb	IAmb	01 35 14.4	
	comp=Z,13nm,0.9s						
QSPA					**PcP**	**01 38 49.1**	**+1.9**
URZ	**Urewera**	**27.13**	**357**	LR	LR	01 43 44.4	
	comp=Z,453nm,22.0s,baz=188,slow=31						
MAW	**Mawson**	**39.80**	**213**	LR	LR	01 53 50.0	
	comp=Z,342nm,19.8s,baz=138,slow=36						
TROLL	**Troll, Antarti**	**42.90**	**182**	P	**P**	**01 37 48.3**	**+0.5**
	comp=Z,146nm,0.9s						
SNAA	**Sanae**	**43.26**	**179**	P	**P**	**01 37 51.0**	**+0.4**
	comp=Z,69nm,1.0s						
SNAA	**Sanae**	**43.26**	**179**	P	**P**	**01 37 50.5**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=201,slow=7.8,SNR=6.7						
SNAA				LR	LR	01 55 41.5	
	comp=Z,250nm,18.1s,baz=302,slow=36						
	comp=Z,1.9nm,0.7s						
SNAA	**Sanae**	**43.26**	**179**	P	**P**	**01 37 50.7**	**+0.1**
VNA1	**Neumayer--Stat**	**44.20**	**177**	P	**P**	**01 37 58.1**	**0.0**
	comp=Z,4.8nm,0.9s						
MSVF	**Nonsavu**	**47.56**	**359**	LR	LR	01 55 37.8	
	comp=Z,129nm,18.3s,baz=158,slow=33						
H01W1	**Cape Leeuwin H**	**48.31**	**276**	T	T	02 31 05.2	
	baz=149,slow=76,SNR=61						
H01W2	**Cape Leeuwin H**	**48.31**	**276**	T	T	02 31 07.0	
	baz=149,slow=76,SNR=59						
H01W3	**Cape Leeuwin H**	**48.32**	**276**	T	T	02 31 06.3	
	baz=149,slow=76,SNR=69						
ASAR	**Alice Springs**	**50.55**	**303**	P	**P**	**01 38 48.6**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=155,slow=7.2,SNR=25						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**50.55**	**303**	P	**P**	**01 38 48.2**	**+0.1**
AFI	**Afiamalu**	**51.77**	**12**	LR	LR	01 56 24.7	
	comp=Z,56nm,21.2s,baz=170,slow=31						
WR8	**Warramunga Arr**	**53.77**	**306**	P	**P**	**01 39 11.7**	**-0.4**
WR8				IAmb	IAmb	01 39 33.4	
	comp=Z,8.3nm,1.2s						
WB2	**Warramunga Ar**	**53.84**	**305**	P	**P**	**01 39 12.1**	**-0.4**
WB2				IAmb	IAmb	01 39 26.7	
	comp=Z,5.9nm,0.9s						
WRA	**Warramunga Ar**	**53.84**	**305**	P	**P**	**01 39 12.2**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=158,slow=6.5,SNR=14						
	comp=Z,2.3nm,0.9s						
WB0	**Warramunga Arr**	**53.99**	**306**	P	**P**	**01 39 13.4**	**-0.2**
WB0				IAmb	IAmb	01 39 15.1	
	comp=Z,5.2nm,0.9s						
HNR	**Honiara**	**57.32**	**338**	LR	LR	02 00 45.9	
	comp=Z,5.8nm,20.1s,baz=262,slow=32						
HOPE	**Hope Point**	**57.72**	**156**	P	**P**	**01 39 39.8**	**-0.1**
RPN	**Rapa Nui**	**58.16**	**86**	LR	LR	01 59 33.6	
	comp=Z,60nm,19.0s,baz=203,slow=31						
H03S2	**Juan Fernandez**	**64.64**	**116**	T	T	02 51 08.1	
	baz=205,slow=74,SNR=36						
H03S1	**Juan Fernandez**	**64.64**	**116**	T	T	02 51 10.0	
	baz=205,slow=74,SNR=33						
H03S3	**Juan Fernandez**	**64.66**	**116**	T	T	02 51 09.5	
	baz=205,slow=74,SNR=36						
H03N3	**Juan Fernandez**	**64.98**	**116**	T	T	02 51 34.7	
	baz=212,slow=73,SNR=35						
H03N2	**Juan Fernandez**	**64.99**	**116**	T	T	02 51 21.2	
	baz=212,slow=73,SNR=78						
H03N1	**Juan Fernandez**	**65.00**	**116**	T	T	02 51 41.0	
	baz=212,slow=73,SNR=25						
KAPI	**Kappang**		**72.88**	**297**	LR	LR	02 10 43.3
	comp=Z,54nm,18.8s,baz=154,slow=34						
SUR	**Sutherland**		**81.10**	**199**	LR	LR	02 15 19.9
	comp=Z,168nm,19.4s,baz=144,slow=34						
BOSA	**Boshof**		**84.13**	**203**	LR	LR	02 16 49.5
	comp=Z,40nm,21.3s,baz=172,slow=34						
BOSA	**Boshof**		**84.13**	**203**	P	**P**	**01 42 20.1**	**-0.7**
LPAZ	**La Paz**		**84.58**	**118**	P	**P**	**01 42 24.3**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=225,slow=5.7,SNR=4.1						
LPAZ					LR	LR	02 10 48.1	
	comp=Z,28nm,20.0s,baz=134,slow=29						
	comp=Z,0.7nm,0.7s						
LPAZ	**La Paz**		**84.58**	**118**	P	**P**	**01 42 22.0**	**-1.8**
LBTB	**Lobatse**		**87.59**	**204**	LR	LR	02 20 08.1	
	comp=Z,62nm,18.4s,baz=138,slow=34						
ATAH	**Atahualpa**		**88.91**	**105**	LR	LR	02 13 37.2
	comp=Z,80nm,19.1s,baz=145,slow=30						
H08S2	**Diego Garcia H**		**89.78**	**252**	T	T	03 23 14.2
	baz=154,slow=76,SNR=21						
H08S1	**Diego Garcia H**		**89.79**	**252**	T	T	03 23 19.6
	baz=154,slow=76,SNR=25						
H08S3	**Diego Garcia H**		**89.80**	**252**	T	T	03 23 15.7
	baz=154,slow=76,SNR=28						
MATP	**Matopo**		**91.53**	**208**	LR	LR	02 19 34.9
	comp=Z,107nm,21.8s,baz=185,slow=33						
TSUM	**Tsumeb**		**94.51**	**198**	LR	LR	02 23 30.8
	comp=Z,106nm,19.5s,baz=155,slow=34						
LSZ	**Lusaka**		**96.60**	**209**	LR	LR	02 25 11.2
	comp=Z,88nm,18.5s,baz=172,slow=34						
TORD	**Torodi Ar. Bea**		**127.84**	**184**	PKP	**PKiKP**	**01 48 55.8**	**0.0**
	comp=Z,1.0nm,1.1s,baz=222,slow=1.9,SNR=3.0						
M19K	**Big River Lodg**		**128.48**	**16**	PKPdf	**PKiKP**	**01 48 55.4**	**-0.2**
ILAR	**Eielson Array**		**132.19**	**19**	PKP	**PKPdf**	**01 49 01.5**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=256,slow=2.7,SNR=4.5						
ILAR	**Eielson Array**		**132.19**	**19**		**PKiKP**	**01 49 02.8**	**-0.2**
ABKAR	**Akbulak array**		**144.89**	**273**	PKPdf	**PKPdf**	**01 49 26.0**	**+0.5**
BRTR	**Keskin Array B**		**147.47**	**235**	PKPbc	**PKPbc**	**01 49 32.4**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=149,slow=5.0,SNR=7.4						
BRTR	**Keskin Array B**		**147.47**	**235**		**PKPbc**	**01 49 31.8**	**-1.2**
KBZ	**Khabaz**		**147.50**	**250**	PKPbc	**PKPbc**	**01 49 32.1**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=169,slow=5.2,SNR=2.4						
KIV	**Kislovodsk**		**147.77**	**250**	PKPdf	**PKPdf**	**01 49 31.1**	**+0.3**
KEST	**Kesra**		**149.69**	**197**	PKPbc	**PKPbc**	**01 49 38.5**	**-0.3**
	comp=Z,3.7nm,1.0s,baz=130,slow=7.9,SNR=3.2						
RAFF	**Raffo Rosso**		**150.38**	**206**	PKPdf	**PKPdf**	**01 49 36.4**	**+1.3**

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*JMA **16** 01:32:41.3±0.4,34.˚N±1.˚×141.˚1E±˚,h51km±2km,MV3.2/31, FAR S OFF BOSO PENINSULA*
*IDC **16** 01:32:45.4±1.1,33.˚74N×138.˚50E,h0km,mb3.6/4, mbtmp3.5/5,ML2.4/1,Error ellipse: s-maj=32.5km s-min=15.6km az=47.0*

ISC 16 01:32:43.6±1.3,34.49N±0.˚05×141.0E±0.˚1,h55km,n21, σ1s06/19,mb3.6/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.17**	**353**	P	**Pn**	**01 32 49.8**	**-1.8**
BSO3	**Boso 3**	**0.51**	**308**	P	**Pn**	**01 32 54.0**	**-1.0**
BSO4	**Boso 4**	**0.74**	**313**	P	**Pn**	**01 32 57.4**	**-0.6**
KTR	**Katsuura**	**0.87**	**320**	P	**Pn**	**01 32 58.7**	**-1.0**
KTR				*e*S	**Sn**	**01 33 11.1**	**-0.4**
JKUC	**kamogawauchiur**	**0.94**	**316**	P	**Pn**	**01 32 59.6**	**-1.1**
JKUC				*e*S	**Sn**	**01 33 12.3**	**-1.0**
TATJ	**Tateyama 2**	**1.06**	**301**	P	**Pn**	**01 33 01.7**	**-0.6**
JMKN	**Mikurajimanish**	**1.31**	**244**	P	**Pn**	**01 33 05.0**	**-0.6**
JIM2	**Oshima 3**	**1.32**	**281**	P	**Pn**	**01 33 04.2**	**-1.4**
JTHY	**Toshimahigashi**	**1.42**	**272**	P	**Pn**	**01 33 06.2**	**-0.8**
JHJ	**Hachijo jima 2**	**1.70**	**217**	Pn	**Pn**	**01 33 10.7**	**-0.2**
	35nm,0.3s,baz=287,slow=17,SNR=17						
JHJ				Sn	**Sn**	**01 33 30

PNHZ S Sb 01 42 22.1 +1.0
PRWZ Pori Road 0.62 249 P Pn 01 42 15.5 +0.4
PRWZ S Sn 01 42 26.2 +1.9
TSZ Takapari Road 0.65 295 P Pb 01 42 14.7 +0.3
TRMS Tiraumea 0.66 239 P Pn 01 42 16.0 +0.4
WDPS Woodville Poli 0.66 269 P Pn 01 42 15.7 +0.1
WAKS Wakarara Rangi 0.67 327 P Pb 01 42 15.5 +0.8
CPWZ Castlepoint 0.70 215 P Pn 01 42 17.2 +1.0
CKHZ Cape Kidnapper 0.73 22 P Pb 01 42 16.7 +1.0
POWZ Post Office Ro 0.73 265 P Pn 01 42 17.0 +0.3
KRHZ Kereru 0.74 338 P Pb 01 42 16.6 +0.6
TIWZ Tintock 0.78 235 P Pn 01 42 17.8 +0.5
MCHZ McNeill Hill 0.89 359 P Pb 01 42 19.5 +1.1
MRZ Mangatainoka R 0.93 249 Pn 01 42 19.5 +0.1
MRZ Sn 01 42 31.2 -0.9
MRZ Mangatainoka R 0.93 249 P Pn 01 42 19.5 +0.1
KWHZ Kaweka Forest 0.94 345 P Pb 01 42 19.9 +0.6
BHHZ Black Hill Sta 0.98 329 P Pn 01 42 20.2 +0.1
TMWZ Te Maipa 1.00 219 P Pn 01 42 20.4 0.0
HOWZ Holdsworth Sta 1.08 238 P Pn 01 42 21.4 0.0
OHWZ Ohakea 1.09 276 P Pb 01 42 23.3 +1.5
ARHZ Aropaoanui 1.09 11 P Pn 01 42 22.2 +0.6
FXBS Foxton Beach S 1.15 263 P Pb 01 42 23.6 +0.7
FXBS S Sb 01 42 41.1 +3.7
BKZ Black Stump Fm 1.18 351 P Pn 01 42 23.2 +0.4
BKZ Black Stump Fm 1.18 351 Pn 01 42 22.9 +0.1
BKZ Sn Sn 01 42 37.2 -1.0
MOVZ Moawhango 1.19 321 P Pn 01 42 23.7 +0.7
NMHZ Naumai 1.24 3 P Pn 01 42 24.5 +0.8
MTW Mount Morrison 1.24 228 P Pn 01 42 23.3 -0.3
OGWZ Otaki Gorge 1.28 247 P Pn 01 42 24.3 +0.2
WHZ Waihua 1.31 108 P Pn 01 42 25.1 +0.4
TRWZ Traveller 1.32 216 P Pn 01 42 24.6 -0.2
WNVZ Wahianoa 1.33 319 P Pb 01 42 26.3 +0.2
TUVZ Tukino 1.35 322 P Pb 01 42 26.7 +0.3
MTVZ Mangateitei 1.35 314 P Pb 01 42 27.2 +0.8
WHVZ Whangaehu Hut 1.37 320 P Pb 01 42 26.8 0.0
TRVZ Turoa 1.38 318 P Pb 01 42 26.8 0.0
MAVZ Matarangi 1.39 319 P Pb 01 42 27.7 +0.5
FWVZ Far West T-bar 1.41 320 P Pb 01 42 27.3 -0.1
SNVZ South Ngauruho 1.42 323 P Pb 01 42 27.7 +0.1
OTVZ Oturere 1.43 325 P Pb 01 42 27.8 +0.1
ETVZ East Tongariro 1.43 326 P Pb 01 42 27.9 +0.2
PAWZ Paruwai Farm 1.44 223 P Pn 01 42 25.8 -0.6
RAHZ Arahi 1.44 11 P Pn 01 42 27.0 +0.5
NGZ Ngauruhoe 1.45 323 P Pb 01 42 28.8 +0.7
TMVZ Te Maari 1.45 327 P Pb 01 42 28.1 0.0
COVZ Chateau Observ 1.45 321 P Pb 01 42 28.5 +0.4
WAZ Wanganui 1.46 293 P Pn 01 42 28.6 +0.5
NTVZ North Tongariro 1.48 326 P Pb 01 42 28.9 +0.4
CAW Cannon Point 1.48 238 P Pn 01 42 26.7 -0.2
KIW Kapiti Island 1.48 249 P Pn 01 42 27.1 +0.1
MTHZ Maungataniwha 1.48 3 P Pn 01 42 27.6 +0.6
PKVZ Pokaka 1.49 314 P Pb 01 42 29.1 +0.4
MHGZ Mahia Peninsul 1.49 38 P Pn 01 42 26.8 -0.3
KRVZ Karewarewa 1.49 326 P Pb 01 42 30.1 +1.2
WTVZ West Tongariro 1.50 324 P Pb 01 42 29.7 +0.7
KNZ Kokohu 1.50 29 P Pn 01 42 26.6 -0.6
MRHZ Matea Rd 1.52 351 P Pn 01 42 28.7 +1.3
HATZ Hinemaiaia 1.52 341 P Pb 01 42 30.6 +1.3
MSWZ Moikau Station 1.56 226 Pn 01 42 27.5 -0.5
MSWZ Moikau Station 1.56 226 Pn 01 42 27.3 -0.7
KATZ Kakaramea 1.57 329 P Pb 01 42 31.5 +1.3
TWVZ Taurewa 1.60 321 P Pb 01 42 31.0 +0.3
SNGZ Shannon Statio 1.62 17 P Pn 01 42 29.1 +0.2
RATZ Rangitukua 1.64 333 P Pb 01 42 32.3 +1.1
PLWZ Palliser 1.66 222 Pn 01 42 28.9 -0.5
PLWZ Palliser 1.66 222 P Pn 01 42 28.6 -0.9
PRGZ Paritu Road 1.67 33 P Pn 01 42 28.9 -0.6
RTZ Ruatahuna 1.73 7 Pn 01 42 30.8 +0.4
RTZ Ruatahuna 1.73 7 P Pn 01 42 30.8 +0.4
WEL Wellington 1.76 237 P Pn 01 42 30.6 -0.2
ARAZ Aratiatia Land 1.77 344 P Pb 01 42 36.2 +2.8
WHTZ Whakaora 1.77 340 P Pb 01 42 36.4 +2.9
POIZ Poihipi 1.78 342 P Pb 01 42 36.8 +3.1
ALRZ Allen Road 1.79 350 P Pb 01 42 33.5 -0.4
WATZ Wairara 1.79 334 P Pb 01 42 34.7 +0.8
RIGZ Rimuhau 1.81 27 P Pn 01 42 31.0 -0.5
SNZO South Karori 1.82 237 P Pn 01 42 31.1 -0.4
SNZO South Karori 1.82 237 Pn 01 42 31.0 -0.6
PRRZ Plateau Road 1.85 352 P Pb 01 42 34.9 +0.1
MUGZ Murupara 1.85 1 P Pn 01 42 32.6 +0.6
WPRZ Whakapapatarin 1.86 346 P Pb 01 42 35.5 +0.5
RAGZ Rawiri 1.91 16 P Pn 01 42 32.9 0.0
VRZ Vera Road 1.91 308 P Pb 01 42 35.8 +0.5
HRRZ Handcock Road 1.97 350 P Pb 01 42 37.1 +0.2
KUTZ Kaahu Road 1.97 339 P Pb 01 42 38.0 +1.1
LREZ Lake Rotokare 1.99 295 P Pn 01 42 33.2 -0.7
RRRZ Republican Roa 2.00 355 P Pb 01 42 37.8 +0.4
TCW Tory Channel 2.06 244 Pn 01 42 34.3 -0.5
TCW Tory Channel 2.06 244 P Pn 01 42 34.3 -0.5
TKGZ Te Karaka 2.08 25 P Pn 01 42 34.6 -0.6
MWZ Matawai 2.09 18 P Pn 01 42 34.9 -0.5
URZ Urewera 2.09 8 Pn Pn 01 42 35.1 -0.2
39nm,0.3s,baz=217,slow=7.3,SNR=162
URZ Sn Sn 01 43 00.6 0.0
45nm,0.3s,baz=152,slow=15,SNR=9.5
111nm,0.4s
URZ Urewera 2.09 8 P Pn 01 42 35.2 -0.2
URZ Urewera 2.09 8 P Pn 01 42 35.1 -0.2
TARZ Mount Tarawera 2.10 355 P Pn 01 42 36.4 +0.9
CNGZ Carnagh Statio 2.17 32 P Pn 01 42 35.9 -0.6
DUWZ D'Urville Isla 2.19 257 P Pn 01 42 37.3 +0.6
TLZ Tolley Road 2.20 335 P Pb 01 42 40.5 -0.4
PREZ Palmer Road 2.21 296 P Pb 01 42 39.6 -1.4
MHEZ Mangahewa 2.24 303 P Pb 01 42 44.2 +2.7
OMRZ Omania 2.24 353 P Pb 01 42 43.7 +2.2
DREZ Durham Road 2.26 300 P Pb 01 42 43.3 +1.5
NEZ North Egmont 2.29 297 P Pb 01 42 41.1 -1.3
HIZ Hauiti 2.32 321 P Pn 01 42 40.6 +2.1
HIZ Hauiti 2.32 321 Pn Pn 01 42 38.3 -0.3
HIZ Hauiti 2.32 321 P Pn 01 42 40.6 +2.1
KHEZ Kahui Hut 2.33 296 P Pb 01 42 41.4 -1.7
KHEZ Kahui Hut 2.33 296 P Pb 01 42 44.9 +1.8
TWGZ Tauwhareparae 2.36 25 P Pn 01 42 38.7 -0.4
CMWZ Cape Campbell 2.37 233 Pn 01 42 38.6 -0.6
CMWZ Cape Campbell 2.37 233 P Pn 01 42 38.8 -0.4
NMEZ Namu Road 2.38 292 P Pb 01 42 42.2 -1.6
TUWZ Tuamarina 2.38 242 Pn Pn 01 42 39.2 -0.1
TUWZ Tuamarina 2.38 242 P Pn 01 42 39.1 -0.1
RUGZ Raukumara Rang 2.48 18 P Pn 01 42 40.3 -0.4
PUZ Puketiti 2.55 28 P Pn 01 42 40.2 -1.5
BSWZ Blackbirch Sta 2.56 236 Pn 01 42 40.7 -1.1
BSWZ Blackbirch Sta 2.56 236 P Pn 01 42 40.7 -1.1
PKGZ Pakihiroa 2.68 24 P Pn 01 42 42.4 -1.1
NNZ Nelson 2.69 250 Pn Pn 01 42 43.7 +0.2
NNZ Nelson 2.69 250 P Pn 01 42 43.7 +0.2
HAZ Te Kaha 2.70 18 P Pn 01 42 43.6 -0.1
TOZ Tahuroa Road 2.77 339 Pn Pn 01 42 44.3 -0.3
WMGZ Waiomatatini S 2.83 28 P Pn 01 42 44.3 -1.2
TKNZ Takaka Hill 2.95 255 Pn 01 42 46.9 -0.3
TKNZ Takaka Hill 2.95 255 P Pn 01 42 47.3 +0.8
MXZ Matakaoa Point 3.03 25 P Pn 01 42 47.2 -1.0
MXZ Matakaoa Point 3.03 25 Pn Pn 01 42 47.2 -1.0
MXZ Matakaoa Point 3.03 25 P Pn 01 42 47.6 -0.6
KHZ Kahutara 3.17 228 P Pn 01 42 47.9 -2.3
KHZ Kahutara 3.17 228 Pn 01 42 48.3 -1.9
KHZ Kahutara 3.17 228 P Pn 01 42 48.2 -1.9
MRNZ Matariki Terra 3.19 249 Pn Pn 01 42 50.7 +0.2
MRNZ Matariki Terra 3.19 249 P Pn 01 42 50.7 +0.2
THZ Tophouse 3.22 242 Pn Pn 01 42 49.6 -1.4
THZ Tophouse 3.22 242 P Pn 01 42 49.6 -1.4
QRZ Quartz Range 3.23 260 P Pn 01 42 50.6 -0.4
QRZ Quartz Range 3.23 260 Pn 01 42 50.8 -0.2
QRZ Quartz Range 3.23 260 P Pn 01 42 50.9 -0.2
GVZ Greta Valley S 3.82 225 Pn Pn 01 42 57.4 -1.7
DSZ Denniston Nort 3.98 248 Pn Pn 01 43 00.0 -1.3
LTZ Lake Taylor 4.14 232 Pn 01 43 01.3 -2.2
OXZ Oxford 4.61 228 Pn Pn 01 43 07.5 -2.4
RPZ Rata Peaks 5.41 229 Pn Pn 01 43 19.4 -1.5
0.2nm,0.3s,baz=316,slow=3.5,SNR=8.9
RPZ Sn Sn 01 44 16.7 -5.8
2.2nm,0.3s,baz=89,slow=23,SNR=14
RPZ Rata Peaks 5.41 229 P Pn 01 43 19.7 -1.2
CTZ Chatham Island 6.01 127 Pn 01 43 30.1 +0.9
ODZ Otahua Downs 6.50 222 P Pn 01 43 33.6 -2.3
JCZ Jackson Bay 6.98 235 P Pn 01 43 40.8 -1.8
SYZ Scrubby Hill 8.30 219 P Pn 01 43 57.9 -2.6
RAO Raoul Island 11.89 23 Pn Pn 01 44 50.0 +0.2
98nm,0.3s,baz=233,slow=20,SNR=2.4

RAO Raoul Island 11.89 23 Pn 01 44 49.7 -0.2
DZM Mont Dzumac 20.19 331 P Pn 01 46 36.2 -0.6
4.4nm,0.8s,baz=175,slow=11,SNR=6.3
4.4nm,0.8s
TOO Toolangi 24.38 266 P P 01 47 17.4 -0.7
TOO IAmb IAmb 01 47 47.0
comp=E,8.6nm,1.4s
STKA Stephens Creek 29.46 275 P P 01 48 04.7 +0.9
comp=Z,1.6nm,0.6s,baz=126,slow=14,SNR=4.3
comp=Z,1.6nm,0.6s
BBOO Buckleboo 33.28 270 P P 01 48 36.5 -0.9
HNR Honiara 34.20 330 P P 01 48 44.2 -1.3
AS31 Alice Springs 39.52 282 P P 01 49 30.3 -0.5
ASAR Alice Springs 39.52 282 P P 01 49 30.9 +0.2
comp=Z,2.9nm,0.6s,baz=134,slow=9.0,SNR=35
comp=Z,2.9nm,0.6s
ASAR Alice Springs 39.52 282 P P 01 49 29.9 -0.9
WR8 Warramunga Arr 41.30 287 P P 01 49 45.6 +0.1
WR8 IAmb IAmb 01 50 03.6
comp=Z,13nm,1.4s
WB2 Warramunga Arr 41.42 287 P P 01 49 46.4 -0.1
WB2 IAmb IAmb 01 49 47.2
comp=Z,9.2nm,0.7s
WRA Warramunga Arr 41.43 287 P P 01 49 46.8 +0.2
comp=Z,4.9nm,0.5s,baz=126,slow=8.1,SNR=64
comp=Z,4.9nm,0.5s
WRA Warramunga Arr 41.43 287 P P 01 49 46.8 +0.2
WB0 Warramunga Arr 41.50 287 P P 01 49 46.9 -0.3
WB0 IAmb IAmb 01 49 47.9
comp=Z,6.0nm,0.6s
FITZ Fitzroy Crossi 49.02 281 P P 01 50 46.7 -0.2
FITZ IAmb IAmb 01 51 15.9
comp=Z,3.5nm,1.4s
QSPA South Pole Qui 49.80 180 P P 01 50 53.2 +0.9
QSPA IAmb IAmb 01 51 18.7
comp=Z,6.8nm,1.5s
SNAA Sanae 68.30 180 P P 01 53 02.1 +1.7
comp=Z,1.0nm,0.8s,baz=101,slow=5.2,SNR=2.9
comp=Z,1.0nm,0.8s
HHC Hu-ho-hao-te 100.16 316 *e*P Pdif 01 55 46.9 +1.4
HHC pmax pmax
comp=Z,5.0nm,0.7s
ZALV Zalesovo Beam 122.35 316 PKP **PKPdf** 02 00 53.1 -0.9
comp=Z,0.5nm,0.5s,baz=116,slow=6.6,SNR=1.9
ZALV Zalesovo Beam 122.35 316 **PKPdf** 02 00 53.3 -0.7
KURK Kurchatov 124.48 310 **PKiKP** 02 00 59.2 +0.6
KURBB Kurchatov Arra 124.50 310 PKP **PKPdf** 02 00 58.3 0.0
comp=Z,0.1nm,0.3s,baz=34,slow=0.3,SNR=1.6
ARCES ARCESS Array B 147.05 342 PKPbc **PKPab** 02 01 42.3 -0.7
comp=Z,3.4nm,0.7s,baz=45,slow=3.6,SNR=14
ARCES ARCESS Array B 147.05 342 **PKPbc** 02 01 41.0 -0.4
BRTR Keskin Array B 151.86 281 PKPbc **PKiKP** 02 01 55.1 +0.3
comp=Z,0.4nm,0.7s,baz=141,slow=4.1,SNR=3.6
FINES FINESS Array B 152.32 330 PKPbc **PKiKP** 02 01 54.9 0.0
comp=Z,1.3nm,0.8s,baz=27,slow=6.4,SNR=5.7
TORD Torodi Ar. Bea 152.57 191 PKPbc **PKiKP** 02 01 57.5 +0.7
comp=Z,0.5nm,0.8s,baz=164,slow=1.9,SNR=2.3

*ASRS **16** 02:05:31.0±1.5,53.°92N×85.°60E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 16 02:05:34.5±2.0, 53.°95N×85.°50E, h0km, mbtmp2.4/2, ML2.3/2, Error ellipse: s-maj=13.1km s-min=5.6km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.40**	**270**	I		I	I	02 08 00.0	
	0.8nm,0.9s,baz=90,slow=321,SNR=87								
ZALV	**Zalesovo Beam**	**0.40**	**270**	Pg		Pg	Pg	02 05 41.4	-0.8
	2.0nm,0.3s,baz=88,slow=18,SNR=26								
ZALV				Lg		Lg	Lg	02 05 48.1	
	2.7nm,0.3s,baz=91,slow=31,SNR=33								
KURBB	**Kurchatov Arra**	**5.42**	**235**	Pn		Pn	Pn	02 06 57.6	+1.1
	baz=54,slow=12,SNR=5.1								
KURBB				Lg		Lg	Lg	02 08 28.1	
	baz=55,slow=31,SNR=6.2								
	0.4nm,0.5s								
MKAR	**Makanchi Array**	**7.45**	**197**	Pn		Pn	Pn	02 07 25.9	+1.5
	0.1nm,0.3s,baz=15,slow=13,SNR=3.2								
MKAR				Lg		Lg	Lg	02 09 32.5	
	baz=20,slow=31,SNR=3.4								
	0.1nm,0.4s								

*IDC **16** 02:10:25.3±0.9,21.°75N×70.°92E, h0km, mb3.6/12, mbtmp3.6/12, Error ellipse: s-maj=28.5km s-min=17.5km az=29.0*
*NDI **16** 02:10:28.9±3.0,22.°13N×70.°86E, h10km, ML4.0, MW3.9, Presumed earthquake*
*NEIC **16** 02:10:29.1±1.1,22.°3N±0.°1×71.°0E±0.°1, h10km±2km, mb4.1/12, Error ellipse: s-maj=23.5km s-min=18.5km az=74.0*
ISC 16 02:10:28.0±0.5, 22.°13N±0.°05×70.°99E±0.°05, h10km, n56, σ2s 23/57, mb3.9/22, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BHV	**Bhavnagar**	**1.14**	**109**	*e*P		P	Pn	02 11 51.7	+1.7
BHV				*e*S		S	Sn	02 11 08.6	+2.9
BHUJ	**Bhuj**	**1.66**	**312**	*e*P		P	Pn	02 10 56.9	-0.3
BHUJ				*e*S		S	Sn	02 11 19.8	+1.1
BHUJ				IAML				02 11 23.4	
	comp=E,6μm,0.6s								
BHUJ				IAML				02 11 24.6	
	comp=E,3μm,0.2s								
UDPR	**Udaipur**	**3.49**	**45**	*e*P		P	Pn	02 11 23.9	+1.5
UDPR				*e*S		S	Sn	02 12 05.9	+2.1
UDPR				*e*S		S	Sn	02 12 06.1	+2.3
BOM	**Bombay**	**3.65**	**152**	*e*P		P	Pn	02 11 26.9	+2.4
BOM				*ex*		x		02 12 06.7	
POO	**Poona**	**4.48**	**143**	*e*P		P	Pn	02 11 36.5	+0.4
POO				*e*S		S	Sn	02 12 28.9	+0.6
POO				IAML				02 13 05.3	
	comp=E,146nm,0.9s								
AJM	**Ajmer**	**5.41**	**37**	IAML				02 13 20.4	
	comp=E,249nm,0.8s								
KAD	**Karad**	**5.67**	**147**	*e*P		P	Pn	02 11 53.1	+0.7
KAD				*e*S		S	Sn	02 12 55.6	-1.9
KAD				*e*S		S	Sn	02 12 57.3	-0.2
BHPL	**Bhopal**	**6.04**	**78**	*e*P		P	Pn	02 11 59.0	+1.4
BHPL				*e*S		S	Sn	02 13 08.5	+1.6
BHPL				IAML				02 13 49.0	
	comp=E,150nm,0.6s								
BKNR	**BIKANER**	**6.22**	**19**	*e*P		P	Pb	02 12 09.4	-7.0
BKNR				*e*S		S	Sn	02 13 18.5	+7.5
BKNR				IAML				02 13 51.4	
	comp=E,610nm,1.3s								
GUNA	**GUNA**	**6.34**	**66**	*e*S		S	Sn	02 13 12.6	-1.5
GUNA				IAML				02 13 14.7	
	comp=E,132nm,0.2s								
LATR	**Latur**	**6.39**	**124**	*e*P		P	Pn	02 12 04.6	+2.3
NGP	**Nagpur**	**7.56**	**96**	*e*S		S	Sn	02 13 44.7	+0.5
JHNI	**Jhansi**	**7.72**	**63**	*e*P		P	Pn	02 12 22.2	+1.6
JHNI				*e*S		S	Sn	02 13 42.7	-5.5
JHNI				*e*S		S	Sn	02 13 43.3	-4.9
JHNI				IAML				02 13 44.0	
	comp=N,48nm,0.2s								
BLSP	**Bilaspur**	**10.37**	**88**	*ex*		x		02 15 14.7	
ALBI	**Allahabad**	**10.40**	**70**	*ex*		x		02 14 05.2	
ALBI				IAML				02 14 08.1	
	comp=N,52nm,0.2s								
PTH	**Pithoragarh**	**11.13**	**46**	*e*P		P	Pn	02 13 07.3	-0.1
PTH				*e*S		S	Sn	02 15 05.0	-7.0
NIL	**Nilore**	**11.64**	**9**	Pn		Pn	Pn	02 13 12.2	-2.1
KBL	**Kabul**	**12.48**	**353**	Pn		Pn	Pn	02 13 23.9	-2.0
UOSS	**Minazif**	**13.85**	**285**	Pn		Pn	Pn	02 13 44.4	-0.1
MANEM	**Manem**	**15.37**	**2**	Pn		Pn	Pn	02 14 04.0	-1.3
MANEM				IAmb		IAmb	IAmb	02 14 22.4	
	comp=Z,15nm,0.7s								
HMDM	**Hanimaadhoo**	**15.42**	**172**	Pn		Pn	Pn	02 14 07.4	+1.7
EVN	**Everest**	**15.47**	**65**			Pn	Pn	02 14 06.9	-0.1
SHAA	**Shahritus**	**15.57**	**351**	Pn		Pn	Pn	02 14 07.6	-0.1
SHAA				IAmb		IAmb	IAmb	02 14 37.3	
	comp=Z,12nm,0.9s								
CHGR	**Chuyangaron**	**16.54**	**355**	Pn		Pn	Pn	02 14 19.0	-1.2
BTK	**Batken**	**17.87**	**360**			Pn	Pn	02 14 36.8	0.0
BTK				IAmb		IAmb	IAmb	02 15 03.8	
	comp=Z,8.6nm,1.0s								
NRN	**Naryn**	**19.70**	**11**	P		Pn	Pn	02 14 58.9	-0.3
NRN				IAmb		IAmb	IAmb	02 15 35.6	
	comp=Z,6.1nm,1.1s								
AAK	**Ala-Archa**	**20.66**	**7**	P		Pn	Pn	02 15 10.6	+0.3
	comp=Z,1.5nm,0.4s,baz=191,slow=13,SNR=4.7								
	comp=Z,1.5nm,0.4s								
AAK	**Ala-Archa**	**20.66**	**7**	P		P	Pn	02 15 06.0	-2.0
KK31	**Karatay Array**	**20.91**	**359**	P		P	Pn	02 15 10.8	+0.1
KKAR	**Karatay Array**	**20.91**	**359**	P		P	Pn	02 15 10.7	+0.1
WMQ	**Urumqi**	**25.68**	**29**	*e*P		P	Pn	02 16 00.6	+2.4
WMQ				pP		sP	Pn	02 16 05.4	+2.8
WMQ				pmax		pmax			
	comp=Z,14nm,0.9s								
MKAR	**Makanchi Array**	**26.25**	**18**	P		P	Pn	02 16 06.5	+3.2
	comp=Z,2nm,0.6s,baz=201,slow=7.7,SNR=6.2								
	comp=Z,0.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**26.45**	**93**	P		P	Pn	02 16 04.3	-1.2
	comp=Z,0.9nm,0.3s,baz=283,slow=10,SNR=6.9								
	comp=Z,0.9nm,0.3s								
ABKAR	**Akbulak array**	**28.45**	**345**	P		P		02 16 22.7	-0.3
KURBB	**Kurchatov Arra**	**29.04**	**10**	P		P		02 16 30.5	+2.3
	comp=Z,0.2nm,0.2s,baz=203,slow=9.0,SNR=2.2								
	comp=Z,0.2nm,0.2s								
BRTR	**Keskin Array B**	**36.21**	**308**	P		P		02 17 33.5	+2.3
	comp=Z,0.1nm,0.5s,baz=125,slow=12,SNR=2.0								
	comp=Z,0.1nm,0.5s								
ELL	**Elmali**	**38.33**	**302**	P		P		02 17 48.9	-0.3
ELL				IAmb		IAmb		02 17 52.7	
	comp=Z,8.8nm,1.0s								
HHC	**Hu-ho-hao-te**	**38.89**	**52**	*e*P		P		02 17 54.9	+1.0
HHC				pmax		pmax			
	comp=Z,10.0nm,0.7s								
AKASG	**Malin Array Be**	**43.21**	**322**	P		P		02 18 30.6	+1.5
	comp=Z,0.2nm,0.2s,baz=120,slow=6.6,SNR=4.7								
	comp=Z,0.2nm,0.2s								
MLR	**Muntele Rosu**	**43.36**	**314**	P		P		02 18 30.1	-0.6
MLR				IAmb		IAmb		02 18 40.3	
	comp=Z,4.8nm,1.1s								
BURAR	**Bucovina Array**	**44.49**	**316**	P		P		02 18 39.7	+0.1
BUR08	**Bucovina Ar. S**	**44.51**	**316**	P		P		02 18 40.0	+0.2
BUR08				IAmb		IAmb		02 18 47.9	
	comp=Z,2.9nm,1.1s								
KSRS	**Korea Array**	**50.99**	**59**	P		P		02 19 29.3	-0.8
	comp=Z,0.8nm,0.5s,baz=264,slow=8.0,SNR=2.5								
	comp=Z,0.8nm,0.5s								
SOKA	**Soboth**	**51.02**	**313**	*e*pP		P		02 19 36.7	+6.4
	comp=Z,1.0nm,0.6s								
SESA	**Seetaler Alpe,**	**51.40**	**313**	*e*pP		P		02 19 40.3	+7.0
	comp=Z,1.7nm,0.4s								
MOA	**Molln**	**51.72**	**314**	*e*pP		P		02 19 42.0	+6.5
	comp=Z,0.4nm,0.2s								
BIOA	**Bad Ischl, Aus**	**52.11**	**314**	*e*pP		P		02 19 44.7	+6.2
	comp=Z,1.1nm,0.4s								
GERES	**GERESS Array B**	**52.25**	**315**	P		P		02 19 38.9	-0.6
	comp=Z,0.1nm,0.4s,baz=92,slow=7.0,SNR=9.6								
	comp=Z,0.1nm,0.4s								
GERES	**GERESS Array B**	**52.25**	**315**	P		P		02 19 39.8	+0.4
LESA	**Schwarzleotal**	**52.72**	**313**	*e*pP		P		02 19 48.8	+5.8
	comp=Z,2.6nm,0.4s								
ABTA	**Abfaltersbach**	**52.75**	**313**	*e*pP		P		02 19 50.1	+6.9
	comp=Z,1.4nm,0.5s								
MOTA	**Moosalm**	**53.77**	**313**	P		P		02 19 49.9	-1.0
	comp=Z,1.2nm,0.5s								
ESDC	**Sonseca Array**	**64.91**	**305**	P		P		02 21 07.2	-0.7
	comp=Z,0.1nm,0.3s,baz=74,slow=6.5,SNR=5.1								
	comp=Z,0.1nm,0.3s								
TORD	**Torodi Ar. Bea**	**66.17**	**275**	P		P		02 21 14.5	-1.9
	comp=Z,0.4nm,0.8s,baz=68,slow=5.2,SNR=2.7								
	comp=Z,0.4nm,0.8s								
WRA	**Warramunga Arr**	**74.68**	**119**	P		P		02 22 06.5	-1.7
	comp=Z,1.2nm,0.9s,baz=306,slow=5.6,SNR=6.4								
	comp=Z,1.2nm,0.9s								
ASAR	**Alice Springs**	**76.26**	**123**	P		P		02 22 16.1	-1.1
	comp=Z,0.9nm,0.8s,baz=312,slow=6.6,SNR=6.2								
	comp=Z,0.9nm,0.8s								

*IDC **16** 02:25:22.8±1.3,37.°87N×73.°66E, h0km, mb3.6/10, mbtmp3.7/16, ML3.0/5, MS3.2/4, Error ellipse: s-maj=21.8km s-min=14.7km az=128.0*
*BJI **16** 02:25:26.8, 38.°01N×73.°77E, h7km, mB4.6/2, mb4.9/13, ML3.8/3, Ms3.9/2, Ms7 3.9/1*
*NNC **16** 02:25:29.5±6.1, 38.°18N×73.°87E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=43.1km s-min=31.7km az=166.0*
*NEIC **16** 02:25:29.8±1.8, 37.°99N±0.°06×73.°55E±0.°03, h45km±7km, mb4.6/14, Error ellipse: s-maj=10.0km s-min=1.7km az=160.0*
ISC 16 02:25:28.8±0.4, 37.°95N±0.°04×73.°62E±0.°04, h35km, n86, σ2s 04/95, mb4.4/21, MS3.9/4, 8C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**1.59**	**256**				**Pn**	**02 25 53.8**	**-0.8**
MANEM						Sn	**Sn**	**02 26 14.7**	**+0.6**
KSH2	**Kashi**	**1.94**	**52**			Pn	**Pn**	**02 25 58.8**	**-0.6**
KSH2						Sn	**Sn**	**02 26 22.3**	**-0.3**
KSH2						SMN			
	2μm,0.7s								
KSH2						SME			
	1μm,0.8s								
DRK	**Karamyk**	**2.08**	**318**				**Pn**	**02 26 02.2**	**+0.6**
GAR	**Garm**	**2.79**	**293**			Pn	**Pn**	**02 26 12.4**	**+1.3**
BTK	**Batken**	**3.03**	**315**				**Pn**	**02 26 15.5**	**+1.2**
CHGR	**Chuyangaron**	**3.58**	**283**			Pn	**Pn**	**02 26 23.3**	**+1.4**
NRN	**Naryn**	**3.93**	**27**				**Pn**	**02 26 27.2**	**+0.2**
NIL	**Nilore**	**4.30**	**184**				**Pn**	**02 26 34.0**	**+2.2**
UCH	**Uchtor**	**4.33**	**9**	P		Pn	**Pn**	**02 26 34.8**	**+2.3**
	SNR=70								
SHAA	**Shahritus**	**4.37**	**267**				**Pn**	**02 26 33.4**	**+0.7**
EKS2	**Erkin-Say**	**4.71**	**1**	P		Pn	**Pn**	**02 26 40.0**	**+2.5**
	SNR=12								
AAK	**Ala-Archa**	**4.73**	**8**	Pn		Pn	**Pn**	**02 26 40.7**	**+3.0**
	2.5nm,0.3s,baz=215,slow=14,SNR=14								
AAK						Sn	**Sn**	**02 27 37.3**	**+5.9**
	3.5nm,0.3s,baz=207,slow=24,SNR=5.6								
AAK				Lg		Lg	Lg	02 27 55.2	
	3.6nm,0.3s,baz=298,slow=13,SNR=5.3								
AAK				LR		LR		02 28 08.3	
	comp=Z,35nm,19.7s,baz=184,slow=34								
	11nm,0.6s								
AAK	**Ala-Archa**	**4.73**	**8**	P		Pn	**Pn**	**02 26 40.3**	**+2.5**

KLP					*e*S		**Sn**	**02 28 34.7 -4.1**
KLP					IAML			02 28 45.8
	comp=E,54nm,0.4s							
KLP					IAML			02 28 52.5
	comp=E,55nm,0.4s							
UTK	**UTTARKASHI**	**8.24**	**150**		*e*P		**Pn**	**02 27 28.8 +2.8**
UTK					*e*S		**Sn**	**02 28 55.3 -2.5**
UTK					IAML			02 28 59.9
	comp=N,132nm,0.3s							
UTK					IAML			02 29 04.8
	comp=Z,40nm,0.3s							
KUDL	**Kundal**	**10.07**	**165**		*e*P		**Pn**	**02 27 54.8 +3.8**
KUDL					*e*S		**Sn**	**02 29 38.9 -3.8**
MKAR	**Makanchi Array**	**10.91**	**33**		Pn		**Pn**	**02 28 02.5 +0.1**
	comp=Z,0.1nm,0.3s,baz=210,slow=14,SNR=6.4							
MKAR					Lg		Lg	02 31 07.9
	baz=214,slow=26,SNR=3.9							
	comp=Z,1.1nm,0.8s							
MKAR	**Makanchi Array**	**10.91**	**33**		Pn		**Pn**	**02 28 03.0 +0.6**
WMQ	**Urumqi**	**12.16**	**57**		*e*P		Pn	02 28 24.8 +5.3
WMQ					pmax		pmax	
	comp=Z,19nm,0.6s							
KURBB	**Kurchatov Arra**	**13.14**	**14**		Pn		**Pn**	**02 28 30.7 -2.1**
	baz=204,slow=12,SNR=5.3							
KURBB					Lg		Lg	02 32 19.2
	baz=204,slow=31,SNR=8.6							
	comp=Z,0.4nm,0.4s							
KURK	**Kurchatov**	**13.25**	**14**		Pn		**Pn**	**02 28 32.7 -1.6**
EVN	**Everest**	**14.89**	**128**		Pn		**Pn**	**02 28 58.3 +1.0**
AB31	**Akbulak array**	**15.00**	**323**		⇑Pn		**Pn**	**02 28 54.2 -3.8**
	comp=Z,1.2nm,0.5s,baz=130,slow=13,SNR=38							
AB31					⇓Sn		**Sn**	**02 31 45.9 +3.1**
	comp=Z,6.4nm,0.9s,baz=134,slow=27,SNR=6.4							
AB31	**Akbulak array**	**15.00**	**323**		Pn		**Pn**	**02 28 55.1 -2.9**
ABKAR	**Akbulak array**	**15.00**	**323**		Pn		**Pn**	**02 28 54.0 -4.0**
BVAR	**Borovoye Array**	**15.24**	**353**		Pn		**Pn**	**02 28 58.5 -2.8**
	baz=165,slow=12,SNR=16							
BVAR					Lg		Lg	02 33 27.6
	baz=157,slow=27,SNR=2.1							
	comp=Z,3.3nm,0.8s							
BORK	**Borovoye**	**15.27**	**352**				**Pn**	**02 29 00.3 -1.3**
BORK					IAmb		IAmb	02 29 07.4
	comp=Z,14nm,1.0s							
AKTO	**Aktyubinsk**	**16.71**	**323**		Pn		**Pn**	**02 29 18.6 -1.6**
	comp=Z,5.9nm,0.8s,baz=127,slow=12,SNR=19							
AKTO					Sn		**Sn**	**02 32 18.3 -6.2**
	comp=Z,0.3nm,0.3s,baz=156,slow=10.0,SNR=6.8							
AKTO					Lg		Lg	02 34 19.1
	comp=Z,0.1nm,0.3s,baz=174,slow=11,SNR=1.4							
AKTO	**Aktyubinsk**	**16.71**	**323**		⇑Pn		**P**	**02 29 21.9 -0.2**
	comp=Z,8.5nm,1.0s							
AKTO					⇓Sn		**Sn**	**02 32 28.8 +4.3**
	comp=Z,2.6nm,0.8s							
ZAA0	**Zalesovo Array**	**17.76**	**22**		Pn		**Pn**	**02 29 31.7 -1.3**
ZALV	**Zalesovo Beam**	**17.76**	**22**		P		**Pn**	**02 29 31.9 -1.1**
	comp=Z,0.3nm,0.3s,baz=213,slow=13,SNR=6.0							
	comp=Z,1.1nm,0.4s							
ZALV	**Zalesovo Beam**	**17.76**	**22**				**Pn**	**02 29 32.6 -0.4**
UOSS	**Minazif**	**19.68**	**234**		P		**P**	**02 29 53.9 -1.0**
HYB	**Hyderabad**	**20.91**	**167**		*e*P		**P**	**02 30 08.7 +0.3**
HYB					*e*S		**S**	**02 34 00.4 +0.8**
ARTI	**Arti**	**21.06**	**336**		P		**P**	**02 30 08.4 -1.2**
	comp=Z,2.7nm,0.7s,baz=124,slow=7.0,SNR=5.2							
	comp=Z,2.7nm,0.7s							
KBZ	**Khabaz**	**23.86**	**294**		P		**P**	**02 30 39.2 +0.5**
	comp=Z,1.3nm,0.9s,baz=108,slow=9.0,SNR=2.5							
	comp=Z,1.3nm,0.9s							
LZH	**Lanzhou**	**24.16**	**85**		*e*P		**P**	**02 30 40.1 -1.8**
LZH					sP		pP	02 30 49.3 -3.9
LZH					pmax		pmax	
	comp=Z,21nm,1.2s							
CD2	**Chengdu**	**25.76**	**97**		P		**P**	**02 30 56.8 +0.5**
CD2					pmax		pmax	
	comp=Z,20nm,0.4s							
SONM	**Songino Array**	**25.79**	**57**		P		**P**	**02 30 56.6 +0.1**
	comp=Z,0.7nm,0.6s,baz=248,slow=11,SNR=4.5							
	comp=Z,0.7nm,0.6s							
HHC	**Hu-ho-hao-te**	**29.32**	**72**		*e*P		**P**	**02 31 28.0 -0.1**
HHC					pmax		pmax	
	comp=Z,15nm,0.6s							
HHC					pmax		pmax	
	comp=Z,32nm,5.0s							
CMAR	**Chiang Mai Arr**	**29.43**	**124**		LR		LR	02 45 47.4
	comp=Z,16nm,19.5s,baz=190,slow=42							
GYA	**Guiyang**	**30.07**	**103**		⇑P		**P**	**02 31 35.3 +0.3**
GYA					pmax		pmax	
	comp=Z,22nm,0.9s							
GYA					pmax		pmax	
	comp=Z,100nm,5.2s							
GYA					L		L	
	comp=Z,420nm,17.9s							
GYA					L		L	
	comp=Z,300nm,18.0s							
GYA					L		L	
	comp=Z,510nm,40.4s							
BRTR	**Keskin Array B**	**31.01**	**286**		P		**P**	**02 31 41.9 -1.3**
	comp=Z,0.1nm,0.3s,baz=106,slow=7.7,SNR=1.8							
	comp=Z,0.1nm,0.3s							
NJ2	**Nanjing**	**37.24**	**85**		*e*P		**P**	**02 32 37.0 0.0**
NJ2					pmax		pmax	
	comp=Z,23nm,0.6s							
FINES	**FINESS Array B**	**37.48**	**324**		P		**P**	**02 32 38.5 -0.3**
	comp=Z,0.7nm,0.7s,baz=114,slow=10,SNR=6.2							
	comp=Z,0.7nm,0.7s							
ARCES	**ARCESS Array B**	**40.63**	**336**		P		**P**	**02 33 04.2 -0.8**
	comp=Z,0.8nm,0.6s,baz=107,slow=8.1,SNR=8.0							
	comp=Z,0.8nm,0.6s							
HFS	**Hagfors**	**43.24**	**321**		P		**P**	**02 33 26.1 -0.2**
	comp=Z,0.6nm,0.5s,baz=123,slow=11,SNR=4.7							
	comp=Z,0.6nm,0.5s							
NOA	**NORSAR Array B**	**44.50**	**322**		P		**P**	**02 33 35.5 -1.0**
	comp=Z,0.3nm,0.6s,baz=93,slow=7.8,SNR=2.9							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.83**	**270**		P		**P**	**02 36 22.7 -1.0**
	comp=Z,0.6nm,0.6s,baz=52,slow=6.6,SNR=7.1							
	comp=Z,0.6nm,0.6s							
BWN	**Browne**	**72.69**	**18**		P		**P**	**02 36 52.0 -0.6**
BWN					IAmb		IAmb	02 36 59.2
	comp=Z,17nm,1.0s							
SKT	**Skwentna**	**73.95**	**20**		P		**P**	**02 36 59.3 -0.8**
P23K	**Montague Islan**	**76.72**	**20**		P		**P**	**02 37 15.7 -0.4**
P23K					IAmb		IAmb	02 37 24.2
	comp=Z,37nm,1.5s							
BARN	**Barnard Glacie**	**77.22**	**17**		P		**P**	**02 37 16.6 -2.5**
BARN					IAmb		IAmb	02 37 19.9
	comp=Z,5.2nm,1.1s							
BLKN	**Baker Lake**	**77.74**	**355**		P		**P**	**02 37 21.1 -0.5**
BLKN					IAmb		IAmb	02 37 24.5
	comp=Z,4.5nm,1.1s							
YKA	**Yellowknife Ar**	**79.68**	**4**		P		**P**	**02 37 32.2 -0.1**
	comp=Z,0.4nm,0.5s,baz=350,slow=5.2,SNR=2.6							
	comp=Z,0.4nm,0.5s							
YKA	**Yellowknife Ar**	**79.68**	**4**		P		**P**	**02 37 32.0 -0.4**
BOSA	**Boshof**	**80.21**	**222**		P		**P**	**02 37 35.4 -0.4**
BOSA					IAmb		IAmb	02 37 38.9
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**81.02**	**124**		P		**P**	**02 37 40.8 +0.6**
Q32M	**Nakina River**	**81.07**	**13**		P		**P**	**02 37 39.8 -0.4**
Q32M					IAmb		IAmb	02 37 47.8
	comp=Z,15nm,1.5s							
R32K	**Eaglecrest**	**81.28**	**15**		P		**P**	**02 37 40.0 -1.0**
R32K					IAmb		IAmb	02 37 43.3
	comp=Z,4.7nm,1.3s							
NWAO	**Narrogin (SRO)**	**81.37**	**144**		LR		LR	03 15 03.3
	comp=Z,50nm,19.0s,baz=254,slow=37							
NWAO	**Narrogin (SRO)**	**81.37**	**144**		P		**P**	**02 37 41.5 -0.2**
V35K	**Ketchikan**	**84.61**	**14**		P		**P**	**02 37 57.1 -1.2**
CTA	**Charters Tower**	**89.28**	**116**		LR		LR	03 23 22.0
	comp=Z,50nm,18.0s,baz=228,slow=39							
K57A	**Scipio Center**	**95.22**	**338**		P		**P**	**02 38 49.5 +0.7**

*SNET **16** 02:25:44.5±2.1, 12.°97N×87.°35W, h4km, ML2.9, Presumed earthquake*
*CATAC **16** 02:25:45.0, 13.°0N±0.°8×87.°4W±0.°8, h5km±2km, M2.9/9, MLv2.9/9, confirmed*

ISC 16 02:25:44.9±1.1, 12.°98N±0.°06×87.°36W±0.°03, h8km±10km, n14, σ0.°56/23, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.19**	**270**	P	**Pg**	**02 25 49.3**	**+0.4**
CSGN				S	**Sg**	**02 25 51.8**	**+0.2**
LCND	**La Caada**	**0.61**	**303**	*e*P	**Pg**	**02 25 57.1**	**+0.3**
LCND				*e*S	**Sb**	**02 26 06.4**	**-0.2**
PLRN	**Geotermica Pol**	**0.70**	**124**	P	**Pb**	**02 25 59.3**	**-0.1**
PLRN				S	**Sb**	**02 26 08.9**	**-0.3**
INTP	**Intipuca**	**0.71**	**288**	*e*P	**Pg**	**02 25 58.8**	**+0.2**
INTP				*e*S	**Sb**	**02 26 08.7**	**-0.7**
ILCN	**San Idelfonso**	**0.76**	**121**	P	**Pb**	**02 26 00.0**	**-0.3**
ILCN				S	**Sb**	**02 26 10.5**	**-0.4**
CNGN	**Cerro Negro**	**0.80**	**126**	P	**Pb**	**02 26 00.7**	**-0.4**
CNGA	**Al SSO del Vol**	**0.80**	**127**	P	**Pb**	**02 26 01.1**	**-0.1**
MACN	**El Madrono**	**0.84**	**127**	P	**Pg**	**02 26 01.2**	**+0.1**
LIMN	**Finca el Limon**	**0.98**	**85**	P	**Pg**	**02 26 03.7**	**-0.1**
LIMN				S	**Sb**	**02 26 17.4**	**+0.2**
MOM2	**El Cardon**	**1.01**	**122**	P	**Pb**	**02 26 05.0**	**+0.3**
MOM2				S	**Sb**	**02 26 18.6**	**+0.4**
COPN	**Copaltepe**	**1.09**	**136**	P	**Pg**	**02 26 05.4**	**-0.6**
RCVN	**Varillal2**	**1.29**	**62**	P	**Pg**	**02 26 09.2**	**-0.5**
RCVN				S	**Sb**	**02 26 27.0**	**+0.7**
COEG	**Centro de Oper**	**1.61**	**294**	*e*S	**Sn**	**02 26 35.1**	**+0.4**
JAYA	**Jayaque - finc**	**2.14**	**289**	*e*P	**Pb**	**02 26 22.8**	**-1.2**
JAYA				*e*S	**Sn**	**02 26 49.1**	**+1.2**

*IDC **16** 02:27:37.3±4.3, 24.°62N×92.°51E, h29km±32km, mb3.7/14, mbtmp3.9/16, ML4.2/2, MS3.7/1, Error ellipse: s-maj=24.0km s-min=14.9km az=59.0*
*NEIC **16** 02:27:38.7±1.0, 24.°61N±0.°04×92.°40E±0.°07, h40km±7km, mb4.4/14, Error ellipse: s-maj=9.9km s-min=5.5km az=68.0*
*NDI **16** 02:27:39.8±2.7, 24.°68N×92.°38E, h30km±8km, ML4.0, MW4.0, Presumed earthquake*

ISC 16 02:27:36.4±1.2, 24.°56N±0.°04×92.°39E±0.°03, h24km±9km, n52, σ1.°03/60, mb4.3/22, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SILR	**SILCHAR**	**0.44**	**60**	*e*Pg	**Pn**	**02 27 47.7**	**+0.5**
SILR				*i* Sg	**Sn**	**02 27 55.9**	**+1.4**
SILR				IAML		02 27 59.3	
	comp=E,9μm,0.3s						
SILR				IAML		02 28 06.3	
	comp=E,8μm,0.4s						
SHL	**Shillong**	**1.10**	**336**		**Pb**	**02 27 57.3**	**+0.3**
SHL				Sn	**Sb**	**02 28 10.0**	**-1.0**
SHL	**Shillong**	**1.10**	**336**	*e*P	**Pb**	**02 27 57.4**	**+0.5**
SHL				*e*S	**Sn**	**02 28 12.2**	**+1.0**
SHL				IAML		02 28 13.2	
	comp=E,11μm,0.2s						
SHL				IAML		02 28 20.9	
	comp=E,8μm,0.2s						
IMP	**Imphal**	**1.45**	**79**	*e*P	**Pb**	**02 28 03.4**	**+0.7**
IMP				*e*S	**Sb**	**02 28 23.2**	**+2.5**
GUWA	**GUWAHATI**	**1.75**	**339**	*e*P	**Pn**	**02 28 05.6**	**+0.3**
GUWA				*e*S	**Sn**	**02 28 25.4**	**-1.3**
GUWA				*ex*	x	02 28 38.6	
GUWA				*ex*	x	02 28 38.7	
MORE	**Moreh**	**1.78**	**100**	Pn	**Pb**	**02 28 07.3**	**-0.9**
KOHI	**KOHIMA**	**1.94**	**53**	*e*P	**Pb**	**02 28 10.6**	**-0.6**
KOHI				*e*S	**Sb**	**02 28 33.3**	**-1.8**
KOHI				*e*S	**Sn**	**02 28 34.2**	**+2.4**
KOHI				IAML		02 28 44.9	
	comp=E,1μm,0.7s						
KOHI				IAML		02 28 45.8	
	comp=E,2μm,0.8s						
BRDH	**Bariadhala**	**1.99**	**200**	Pn	**Pb**	**02 28 10.5**	**-1.5**
	comp=E,51nm,0.3s,baz=78,slow=20,SNR=7.1						
BRDH				Sn	**Sb**	**02 28 36.7**	**+0.4**
	comp=E,352nm,0.3s,baz=253,slow=18,SNR=12						
BRDH				Lg	Lg	02 28 44.3	
	comp=E,206nm,0.3s,baz=261,slow=21,SNR=15						
	comp=E,135nm,0.3s						
TEZP	**TEZPUR**	**2.08**	**10**	*e*P	**Pn**	**02 28 09.7**	**-0.2**
TEZP				*i* x	x	02 28 13.4	
TEZP				*e*S	**Sn**	**02 28 35.0**	**-0.2**
TEZP				IAML		02 28 40.3	
	comp=E,3μm,0.1s						
TEZP				IAML		02 28 44.4	
	comp=E,3μm,0.1s						
DHUB	**DHUBRI**	**2.61**	**304**	*e*P	**Pn**	**02 28 19.2**	**+2.1**
DHUB				*e*S	**Sn**	**02 28 49.5**	**+1.5**
DHUB				IAML		02 28 57.5	
	comp=E,363nm,0.3s						
DHUB				IAML		02 29 04.6	
	comp=E,814nm,0.1s						
LSA	**Lhasa**	**5.24**	**348**	*e*Pn	Pn	02 28 48.5	-5.2
LSA				Sn	Sn	02 29 24.9	-29
LSA				smax	smax		
	comp=N,55nm,1.0s						
LSA				smax	smax		
	comp=E,64nm,0.8s						
LSA	**Lhasa**	**5.24**	**348**	Pn	**Pn**	**02 28 53.9**	**+0.1**
BOK	**Bokaro**	**5.98**	**264**	*e*P	**Pn**	**02 29 06.5**	**+3.0**
BOK				*e*S	**Sn**	**02 30 09.8**	**-1.6**
CMAR	**Chiang Mai Arr**	**8.61**	**134**	Pn	**Pn**	**02 29 39.0**	**-0.6**
	comp=E,0.9nm,0.3s,baz=322,slow=14,SNR=1.7						
	comp=E,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**8.61**	**134**		**Pn**	**02 29 40.3**	**+0.7**
ENH	**Enshi**	**16.21**	**66**	Pn	**Pn**	**02 31 21.9**	**-0.8**
DLV	**Lat**	**19.75**	**127**	P	**P**	**02 32 05.2**	**+0.2**
MKAR	**Makanchi Array**	**23.61**	**343**	P	**P**	**02 32 44.9**	**-0.8**
	comp=E,0.5nm,0.6s,baz=171,slow=8.5,SNR=5.2						
	comp=E,0.5nm,0.6s						
MKAR	**Makanchi Array**	**23.61**	**343**	P	**P**	**02 32 45.2**	**-0.4**
SONM	**Songino Array**	**25.75**	**22**	P	**P**	**02 33 04.6**	**-0.7**
	comp=E,0.5nm,0.5s,baz=202,slow=11,SNR=2.4						
	comp=E,0.5nm,0.5s						
SONM	**Songino Array**	**25.75**	**22**	P	**P**	**02 33 04.5**	**-0.7**
ZALV	**Zalesovo Beam**	**29.89**	**351**	P	**P**	**02 33 42.3**	**+0.2**
	comp=E,0.5nm,0.4s,baz=158,slow=8.5,SNR=1.8						
	comp=E,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**29.89**	**351**	P	**P**	**02 33 40.5**	**-1.6**
BVAR	**Borovoye Array**	**32.92**	**335**	P	P	02 34 04.0	-4.8
	comp=E,1.7nm,0.6s,baz=156,slow=11,SNR=5.4						
AB31	**Akbulak array**	**35.34**	**323**	P	**P**	**02 34 31.0**	**+1.1**
ABKAR	**Akbulak array**	**35.34**	**323**	P	**P**	**02 34 30.8**	**+1.0**
ASF	**Jabal al Asfar**	**48.96**	**292**	LR	LR	03 00 25.4	
	comp=E,78nm,18.9s,baz=206,slow=40						
ALN	**Alexandroupoli**	**56.87**	**304**	P	**P**	**02 37 18.3**	**-1.0**
ALN				IAmb	IAmb	02 37 19.1	
	comp=Z,3.2nm,1.1s						
FINES	**FINESS Array B**	**57.43**	**329**	P	**P**	**02 37 22.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=93,slow=5.6,SNR=5.8						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**60.11**	**133**	P	**P**	**02 37 41.6**	**-0.6**
WRA	**Warramunga Arr**	**60.20**	**134**	P	**P**	**02 37 42.2**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=322,slow=7.2,SNR=25						
	comp=Z,1.9nm,0.6s						
WB2	**Warramunga Arr**	**60.21**	**134**	P	**P**	**02 37 42.0**	**-0.9**
WB2				IAmb	IAmb	02 38 25.2	
	comp=Z,8.6nm,1.3s						
WR8	**Warramunga Arr**	**60.32**	**133**	P	**P**	**02 37 43.2**	**-0.3**
WR8				IAmb	IAmb	02 37 57.5	
	comp=Z,9.2nm,1.4s						
MORC	**Moravsky Berou**	**62.03**	**315**	P	**P**	**02 37 53.8**	**-1.1**
MORC				IAmb	IAmb	02 37 55.2	
	comp=Z,3.5nm,1.4s						
AS31	**Alice Springs**	**62.60**	**137**	P	**P**	**02 37 58.5**	**-0.5**
AS31				IAmb	IAmb	02 38 42.2	
	comp=Z,3.2nm,1.4s						
ASAR	**Alice Springs**	**62.60**	**137**	P	**P**	**02 37 59.0**	**0.0**
	comp=Z,2.0nm,0.6s,baz=319,slow=6.7,SNR=26						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**62.60**	**137**	P	**P**	**02 37 58.4**	**-0.6**
HFS	**Hagfors**	**63.44**	**327**	P	**P**	**02 38 03.9**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=98,slow=4.5,SNR=13						
	comp=Z,1.6nm,0.4s						
NB2	**NORSAR Subarra**	**64.59**	**328**	P	**P**	**02 38 11.0**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**64.59**	**328**	P	**P**	**02 38 11.3**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=90,slow=5.8,SNR=3.9						
	comp=Z,0.6nm,0.6s						
GERES	**GERESS Array B**	**64.64**	**314**	P	**P**	**02 38 12.7**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=76,slow=5.6,SNR=9.4						
	comp=Z,0.7nm,0.5s						
GERES	**GERESS Array B**	**64.64**	**314**	P	**P**	**02 38 12.1**	**-0.2**
KEST	**Kesra**	**70.73**	**301**	P	**P**	**02 38 52.0**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=45,slow=7.1,SNR=2.5						
	comp=Z,2.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**73.21**	**324**	P	**P**	**02 39 05.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=68,slow=7.4,SNR=4.4						
	comp=Z,0.8nm,0.6s						
D23K	**Nanushuk River**	**76.32**	**19**	P	**P**	**02 39 23.5**	**+0.5**
D23K				IAmb	IAmb	02 39 25.6	
	comp=Z,8.2nm,1.4s						
E24K	**Your Creek**	**77.49**	**20**	P	**P**	**02 39 29.8**	**0.0**
E24K				IAmb	IAmb	02 39 32.1	
	comp=Z,3.9nm,0.9s						
F25K	**Christian Rive**	**78.64**	**19**	P	**P**	**02 39 36.2**	**+0.1**
F25K				IAmb	IAmb	02 39 39.0	
	comp=Z,3.0nm,1.1s						
ILAR	**Eielson Array**	**79.98**	**22**	P	**P**	**02 39 43.4**	**0.0**
	comp=Z,0.7nm,0.9s,baz=303,slow=5.1,SNR=5.9						
	comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**79.98**	**22**	P	**P**	**02 39 42.7**	**-0.8**
BOSA	**Boshof**	**83.44**	**235**	P	**P**	**02 40 02.8**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=90,slow=2.0,SNR=3.5						
	comp=Z,1.6nm,0.6s						
BOSA	**Boshof**	**83.44**	**235**	P	**P**	**02 40 01.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**85.25**	**282**	P	**P**	**02 40 12.3**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=53,slow=5.6,SNR=4.2						
	comp=Z,0.5nm,0.7s						

*SOME **16** 02:30:21.5, 39.°00N×75.°43E, h5km*

NNC 16 02:30:31.9±4.7, 38.°31N×73.°82E, h0km, mb3.9, mpv3.5, 4C-2D, Error ellipse: s-maj=33.1km s-min=25.4km az=162.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.36**	**7**	⇓Pn	Pn	02 31 40.1	+0.6
	4.9nm,0.9s						
AAK				⇑Sn	Sn	02 32 33.0	+2.0
	3.5nm,0.7s						
AAK				⇓Lg	Lg	02 32 47.4	
	3.9nm,0.6s						
MRKS	**Merke**	**4.46**	**354**	Pg	Pn	02 31 38.0	-2.8
	2.8nm,0.3s						
MRKS				Lg	Lg	02 32 33.2	
	8.4nm,0.7s						
MRKS	**Merke**	**4.46**	**354**	*e*P	Pn	02 31 38.0	-2.8
	2.8nm,0.3s						
MRKS				*e*S	Sn	02 32 33.2	-0.2
	8.4nm,0.7s						
IUG	**Iuzhnay**	**4.81**	**324**	Pg	Pb	02 31 57.7	+0.7
	21nm,0.6s						
IUG				Lg	Lg	02 33 07.2	
	31nm,0.8s						
IUG	**Iuzhnay**	**4.81**	**324**	*e*P	Pb	02 31 57.7	+0.7
	21nm,0.6s						
IUG				*e*S	Sg	02 33 07.2	+0.9
	31nm,0.8s						
KK31	**Karatay Array**	**5.41**	**333**	⇑Pn	Pn	02 31 53.6	-0.2
	1.2nm,0.5s,baz=144,slow=11,SNR=9.1						
KK31				⇑Sn	Sn	02 32 57.8	+1.0
	4.0nm,0.7s,baz=148,slow=24						
KK31				⇑Lg	Lg	02 33 24.6	
	1.5nm,0.4s,baz=139,slow=28						
BRLS	**Borolday**	**5.61**	**329**	Pg	Pb	02 32 09.0	-1.6
	0.8nm,0.2s						
BRLS				Lg	Lg	02 33 26.0	
	4.9nm,0.4s						
BRLS	**Borolday**	**5.61**	**329**	*e*P	Pb	02 32 09.0	-1.6
	0.8nm,0.2s						
BRLS				*e*S	Sg	02 33 26.0	-5.9
	3.3nm,0.1s						

NNC 16 02:34:37.1±6.2, 38.°34N×68.°69E, h0km, mb3.7, mpv3.3, 3C-3D, Error ellipse: s-maj=49.6km s-min=45.5km az=119.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.94**	**15**	Pg	Pb	02 35 45.2	-2.4
	9.6nm,0.3s						
IUG				Lg	Lg	02 36 44.9	
	32nm,0.9s						
BRLS	**Borolday**	**4.77**	**10**	Pg	Pb	02 35 56.2	-5.3
	1.5nm,0.4s						
BRLS				Lg	Lg	02 37 04.0	
	8.9nm,0.5s						
KK31	**Karatay Array**	**4.96**	**16**	⇓Pn	Pn	02 35 53.7	+0.8
	0.2nm,0.2s,baz=183,slow=12,SNR=7.0						
KK31				⇓Pg	Pg	02 36 11.0	-1.1
	5.2nm,0.8s,baz=195,slow=18,SNR=11						
KK31				⇓Lg	Lg	02 37 14.9	
	5.9nm,0.6s,baz=195,slow=28,SNR=5.5						
MRKS	**Merke**	**5.60**	**37**	Pg	Pn	02 36 06.6	+4.9
	3.4nm,0.3s						
MRKS				Lg	Lg	02 37 21.3	
	3.8nm,0.5s						
AAK	**Ala-Archa**	**6.17**	**44**	⇑Pn	Pn	02 36 10.9	+1.3
	0.8nm,0.5s						
AAK				⇑Sn	Sn	02 37 21.7	+0.8
	3.3nm,1.2s						
AAK				⇑Lg	Lg	02 37 49.3	
	2.6nm,0.9s						

*CNRM **16** 02:42:05.5, 34.°20N×5.°85W, h4km*
*MDD **16** 02:42:05.6±0.5, 34.°34N×5.°75W, h0km, mb_Lg2.6/4, Error ellipse: s-maj=6.1km s-min=3.5km az=88.0*

ISC 16 02:42:05.2±1.4, 34.°36N±0.°03×5.°76W±0.°04, h14km±11km, n18, σ1.°01/28, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.44**	**124**	P	**Pb**	**02 42 14.7**	**-0.1**
SICH				S	**Sb**	**02 42 21.0**	**-0.3**
LCRM	**LCR**	**1.00**	**132**	P	**Pb**	**02 42 24.3**	**-0.1**
LCRM				S	**Sn**	**02 42 39.2**	**+0.2**
ZHG	**ZHG**	**1.17**	**219**	P	**Pb**	**02 42 26.9**	**-0.4**
ZHG				S	**Sb**	**02 42 43.0**	**+0.8**
CZD	**Col de Zad**	**1.45**	**155**	P	**

BANOM	**Banah**	**1.92**	135	P	**Pb**	**02 43 39.4**	**+1.3**
BANOM				S	**Sn**	**02 44 01.5**	**+2.2**
UMQ	**Umm Al-Quwin**	**1.93**	**156**	P	**Pn**	**02 43 36.8**	**+1.1**
UMQ				S	**Sb**	**02 44 02.3**	**+0.1**
QIR1	**Qir**	**1.95**	**307**	Pn	**Pn**	**02 43 38.5**	**+2.5**
MASF	**Masafi**	**2.27**	**147**	P	**Pn**	**02 43 42.3**	**+1.8**
MASF				S	**Sn**	**02 44 08.4**	**+0.2**
MSFE	**Esma-Masafi**	**2.29**	**148**	P	**Pn**	**02 43 41.7**	**+1.1**
MDH	**Madha**	**2.40**	**146**	P	**Pn**	**02 43 44.2**	**+2.0**
MDH	**Madha**	**2.40**	**146**	P	**Pn**	**02 43 44.8**	**+2.6**
MDH				S	**Sn**	**02 44 12.8**	**+1.6**
NAZ	**Nazwa, Dubai**	**2.43**	**161**	P	**Pn**	**02 43 44.5**	**+1.9**
NAZ	**Nazwa, Dubai**	**2.43**	**161**	P	**Pn**	**02 43 44.8**	**+2.2**
NAZ				S	**Sn**	**02 44 11.8**	**-0.2**
FAQ	**Al Faqa, Dubai**	**2.64**	**164**	P	**Pn**	**02 43 47.9**	**+2.3**
FAQ				S	**Sn**	**02 44 19.6**	**+2.4**
KHNJ	**Kahnooj**	**2.65**	**75**	Pn	**Pn**	**02 43 46.7**	**+1.1**
UOSS	**Minazif**	**2.66**	**152**	P	**Pn**	**02 43 45.7**	**-0.1**
UOSS	**Minazif**	**2.66**	**152**	P	**Pn**	**02 43 46.4**	**+0.6**
UOSS				S	**Sn**	**02 44 18.9**	**+1.2**
ASUD	**Al Ashush, Dub**	**2.71**	**170**	P	**Pn**	**02 43 46.8**	**+0.4**
ASUD	**Al Ashush, Dub**	**2.71**	**170**	P	**Pn**	**02 43 48.4**	**+2.0**
ASUD				S	**Sn**	**02 44 17.8**	**-1.0**
HATD	**Hatta, Dubai**	**2.74**	**154**	P	**Pn**	**02 43 48.5**	**+1.6**
HATD	**Hatta, Dubai**	**2.74**	**154**	P	**Pn**	**02 43 49.5**	**+2.6**
HATD				S	**Sn**	**02 44 21.7**	**+2.1**
ASHO	**Ashiyiah**	**2.84**	**156**	P	**Pn**	**02 43 50.2**	**+1.9**
ASHO				S	**Sb**	**02 44 27.4**	**-1.0**
ASHO	**Ashiyiah** SNR=21	**2.84**	**156**	P	**Pn**	**02 43 50.3**	**+2.0**
ASHO				S	**Sn**	**02 44 25.2**	**+3.1**
NGRK	**Negar Kerman**	**2.88**	**36**	Pn	**Pn**	**02 43 50.2**	**+1.0**
JASK	**Jask - Hormozg**	**3.09**	**117**	Pn	**Pn**	**02 43 52.2**	**+0.5**
KHGB	**Koh Gabri**	**3.39**	**25**	Pn	**Pn**	**02 43 58.3**	**+2.2**
CHMN	**Cheshme madani**	**3.50**	**43**	Pn	**Pn**	**02 43 59.9**	**+2.3**
SOHO	**SOHO**	**3.52**	**153**	P	**Pn**	**02 43 58.8**	**+1.3**
KBAM	**BAM**	**3.70**	**60**	Pn	**Pn**	**02 44 02.0**	**+1.9**
KRM1	**Kerman Provinc**	**3.85**	**34**	Pn	**Pn**	**02 44 04.5**	**+2.1**
IMEH	**Mehriz**	**4.08**	**358**	Pn	**Pn**	**02 44 07.7**	**+2.3**
ARQ	**Araqi** SNR=8.4	**4.24**	**158**	P	**Pn**	**02 44 11.2**	**+3.7**
IBAF	**Bafgh**	**4.32**	**9**	Pn	**Pn**	**02 44 10.4**	**+1.7**
HOQ	**Hoqain**	**4.34**	**148**	P	**Pn**	**02 44 12.2**	**+3.3**
HOQ				S	**Sn**	**02 44 59.9**	**+0.7**
TAFT	**Taft - Yazd**	**4.44**	**353**	Pn	**Pn**	**02 44 12.5**	**+2.0**
MZR	**Muzera**	**4.45**	**196**	P	**Pn**	**02 44 11.9**	**+1.5**
MZR				S	**Sn**	**02 45 03.3**	**+1.5**
UMZA	**Um Al Zommool**	**4.58**	**176**	P	**Pn**	**02 44 14.1**	**+1.9**
UMZA				S	**Sn**	**02 45 04.0**	**-1.1**
BIDO	**Bidbid**	**4.82**	**141**	P	**Pn**	**02 44 17.0**	**+1.6**
BSY	**Bisya**	**5.03**	**154**	P	**Pn**	**02 44 19.4**	**+1.0**
BSY				S	**Sn**	**02 45 20.2**	**+4.0**
SMDO	**Samad**	**5.15**	**145**	P	**Pn**	**02 44 21.0**	**+1.0**
SMDO				S	**Sn**	**02 45 21.3**	**+2.1**
WSAR	**Wadi Sarin**	**5.33**	**139**	P	**Pn**	**02 44 23.6**	**+1.1**
WSAR				S	**Sn**	**02 45 24.0**	**+0.6**
CHBR	**Chabahar**	**5.36**	**107**	Pn	**Pn**	**02 44 23.8**	**+0.8**
JMDO	**Jabal Madar**	**5.75**	**148**	P	**Pn**	**02 44 29.5**	**+1.2**
JMDO				S	**Sn**	**02 45 34.8**	**+0.8**
WBK	**Wadi Bani Khal** SNR=9.3	**6.01**	**140**	P	**Pn**	**02 44 33.0**	**+1.1**
JLN	**Jalan Bani Buh**	**6.62**	**140**	P	**Pn**	**02 44 40.5**	**+0.3**
JLN				S	**Sn**	**02 45 55.0**	**-0.4**
MHTO	**MHTO**	**6.92**	**155**	P	**Pn**	**02 44 44.8**	**+0.5**
DQM	**DQM** SNR=13	**7.76**	**161**	P	**Pn**	**02 44 56.0**	**+0.2**
WHFO	**Wadi Hawf** SNR=12	**9.39**	**186**	P	**Pn**	**02 45 19.0**	**+0.7**
GNI	**Garni** 0.4nm,0.3s,baz=166,slow=12,SNR=1.6	**15.29**	**329**	Pn	**P**	**02 46 42.9**	**-0.7**
GNI	0.6nm,0.3s,baz=24,slow=21,SNR=1.5 2.8nm,0.4s			Sn	**Sn**	**02 49 31.1**	**+3.2**
ASF	**Jabal al Asfar** 0.3nm,0.3s,baz=105,slow=12,SNR=2.1 1.0nm,0.3s	**16.29**	**292**	Pn	**Pn**	**02 46 51.4**	**-0.3**
MMAI	**Mount Meron Ar** 0.3nm,0.3s,baz=45,slow=14,SNR=1.8 0.5nm,0.5s	**17.71**	**293**	P	**Pn**	**02 47 09.4**	**-0.2**
KBZ	**Khabaz** 0.1nm,0.3s,baz=158,slow=9.2,SNR=3.8 1.4nm,0.9s	**19.01**	**333**	P	**P**	**02 47 24.9**	**+0.4**
KVAR	**Kislovodsk Arr** baz=100,slow=6.1 0.7nm,0.4s	**19.28**	**333**	P	**P**	**02 47 28.0**	**+0.4**
BRTR	**Keskin Array B** 0.9nm,0.8s,baz=137,slow=12,SNR=8.0 0.9nm,0.8s	**21.50**	**311**	P	**P**	**02 47 52.1**	**+0.3**
BVAR	**Borovoye Array** 0.9nm,0.3s,baz=232,slow=7.1,SNR=5.4 0.9nm,0.3s	**28.19**	**20**	P	**P**	**02 48 54.8**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=229,slow=10,SNR=2.8 0.2nm,0.4s	**29.08**	**41**	P	**P**	**02 49 03.1**	**-0.2**
KURBB	**Kurchatov Arra** 0.2nm,0.2s,baz=231,slow=8.9,SNR=1.6 0.2nm,0.2s	**29.47**	**31**	P	**P**	**02 49 06.2**	**-0.4**
ZALV	**Zalesovo Beam** 2.5nm,0.4s,baz=241,slow=9.4,SNR=12 2.5nm,0.4s	**34.56**	**31**	P	**P**	**02 49 50.2**	**-1.0**
FINES	**FINESS Array B** 0.7nm,0.4s,baz=145,slow=8.8,SNR=16 0.7nm,0.4s	**39.19**	**339**	P	**P**	**02 50 30.2**	**-0.2**
HFS	**Hagfors** 0.4nm,0.4s,baz=138,slow=9.6,SNR=6.9 0.4nm,0.4s	**43.07**	**331**	P	**P**	**02 51 01.6**	**-0.8**
NOA	**NORSAR Array B** 0.2nm,0.5s,baz=134,slow=7.9,SNR=3.0 0.2nm,0.5s	**44.58**	**331**	P	**P**	**02 51 13.4**	**-1.2**
ARCES	**ARCESS Array B** 1.3nm,0.8s,baz=134,slow=10,SNR=1.7 1.3nm,0.8s	**45.57**	**346**	P	**P**	**02 51 21.9**	**-0.5**
ESDC	**Sonseca Array** 0.4nm,0.6s,baz=72,slow=6.9,SNR=6.4 0.4nm,0.6s	**49.74**	**300**	P	**P**	**02 51 54.6**	**-0.6**
EKA	**Eskdalemuir Ar** 0.1nm,0.3s,baz=86,slow=7.9,SNR=1.4 0.1nm,0.3s	**49.90**	**321**	P	**P**	**02 51 55.4**	**-0.6**
TORD	**Torodi Ar. Bea** 0.9nm,0.6s,baz=60,slow=6.9,SNR=13 0.9nm,0.6s	**51.43**	**265**	P	**P**	**02 52 07.6**	**-0.6**
SPITS	**Spitsbergen Ar** 17nm,1.2s,baz=99,slow=7.6,SNR=1.5	**53.83**	**351**	P	**P**	**02 52 24.1**	**-1.0**
DBIC	**Dimbokro** 1.3nm,0.5s,baz=45,slow=1.4,SNR=1.3 1.3nm,0.5s	**60.06**	**262**	P	**P**	**02 53 08.7**	**-1.5**
BOSA	**Boshof** 1.6nm,0.7s,baz=23,slow=7.7,SNR=1.8 1.6nm,0.7s	**62.41**	**209**	P	**P**	**02 53 25.3**	**-0.5**

*IDC **16** 03:07:52.8±1.3,6˚.50S×131˚.49E,h0km,mb4.1/4, mbtmp4.3/9,ML4.5/5,MS3.5/3,Error ellipse: s-maj=41.5km s-min=21.4km az=98.0*

*DJA **16** 03:07:58.7±0.3,6˚.3˚×13˚.2E±˚,h131km±7km,M4.4/12, mB5.4/3,mb4.2/4,MLv4.4/12,Mw(mB)4.8/3*

*NEIC **16** 03:08:00.2±1.1,6˚.09S±0˚.05×131˚.2E±0˚.1,h35km±2km, mb4.6/9,Error ellipse: s-maj=18.6km s-min=5.9km az=109.0*

ISC 16 03:07:58.5±0.6,6˚31S±0˚.05×131˚.57E±0˚.07,h35km,n38, σ2^{2}60/33,mb4.3/9,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.68**	**189**	Pn	**Pn**	**03 08 29.6**	**+4.0**
SAUI	**Saumlaki**	**1.68**	**189**	P	Pn	03 08 30.8	+5.3
BNDI	**Bandanaira**	**2.43**	**317**	P	Pn	03 08 41.4	+5.7
BNDI				S	**Sn**	**03 09 11.2**	**+7.0**
KMPI	**Kaimana, Papua**	**3.38**	**39**	P	**Pn**	**03 08 48.4**	**-0.5**
KMPI				S	**Sn**	**03 09 25.4**	**-2.4**
FAKI	**Fak Fak**	**3.44**	**11**		**Pn**	**03 08 49.5**	**-0.1**
FAKI				Sn	**Sn**	**03 09 26.7**	**-2.4**
FAKI	**Fak Fak**	**3.44**	**11**	P	**Pn**	**03 08 49.8**	**+0.2**
FAKI				S	**Sn**	**03 09 27.8**	**-1.3**
SIJI	**Sorong** 7.8nm,0.3s,baz=253,slow=23,SNR=17	**5.41**	**357**	Pn	**Pn**	**03 09 17.4**	**+0.6**
SIJI	5.7nm,0.3s,baz=245,slow=23,SNR=6.1 20nm,0.2s			Sn	**Sn**	**03 10 15.2**	**-2.8**
SIJI	**Sorong**	**5.41**	**357**	P	**Pn**	**03 09 17.2**	**+0.4**
MTN	**Manton Dam**	**6.51**	**184**		**Pn**	**03 09 32.0**	**+0.1**
BATI	**Baumata** 22nm,0.3s,baz=57,slow=3.0,SNR=4.2	**8.73**	**243**	Pn	**Pn**	**03 10 00.4**	**-2.0**
BATI				Sn	**Sn**	**03 11 34.1**	**-5.5**
	7.9nm,0.3s,baz=69,slow=20,SNR=1.3 43nm,0.3s						
KAPI	**Kappang** comp=Z,111nm,20.1s,baz=120,slow=37	**11.83**	**276**	LR	LR	03 15 09.6	
FITZ	**Fitzroy Crossi** 3.9nm,0.3s,baz=31,slow=10,SNR=61	**13.07**	**206**	Pn	Pn	03 10 57.9	-3.8
FITZ	1.6nm,0.3s,baz=177,slow=9.0,SNR=6.9 7.6nm,0.3s			Sn	Sn	03 13 15.9	-10
FITZ	**Fitzroy Crossi**	**13.07**	**206**		**Pn**	**03 11 00.8**	**-1.0**
WB0	**Warramunga Arr**	**13.66**	**169**		Pn	03 11 04.3	-5.6
WRA	**Warramunga Arr** 1.2nm,0.3s,baz=345,slow=14,SNR=28	**13.82**	**169**	Pn	Pn	03 11 06.5	-5.6
WRA	1.3nm,0.3s,baz=2.6,slow=22,SNR=7.2 2.6nm,0.6s			Sn	Sn	03 13 30.1	-14
WRA	**Warramunga Arr**	**13.82**	**169**		Pn	03 11 04.8	-7.2
WB2	**Warramunga Arr**	**13.82**	**169**	Pn	Pn	03 11 06.1	-6.0
WR8	**Warramunga Arr**	**13.86**	**168**	Pn	Pn	03 11 06.8	-5.8
AS31	**Alice Springs**	**17.40**	**173**	P	**Pn**	**03 11 55.0**	**-3.7**
ASAR	**Alice Springs** 0.8nm,0.3s,baz=351,slow=7.7,SNR=22	**17.40**	**173**	P	**Pn**	**03 11 54.3**	**-4.5**
ASAR	1.2nm,0.6s,baz=359,slow=28,SNR=6.2 0.9nm,0.4s			S	Sn	03 14 57.5	-14
ASAR	**Alice Springs**	**17.40**	**173**	P	**Pn**	**03 11 55.6**	**-3.2**
CTAO	**Charters Tower**	**19.77**	**135**	P	**Pn**	**03 12 30.4**	**+2.9**
FORT	**Forrest**	**24.57**	**187**	P	**P**	**03 13 16.6**	**+1.3**
FORT	comp=Z,7.4nm,0.9s			IAmb	IAmb	03 13 28.6	
CAN	**Canberra**	**33.03**	**153**	P	**P**	**03 14 34.6**	**+3.9**
USRK	**Ussuriysk Ar.** comp=Z,0.9nm,0.6s,baz=141,slow=5.5,SNR=2.0 comp=Z,0.9nm,0.6s	**50.28**	**0**	P	**P**	**03 16 51.7**	**+0.3**
CASY	**Casey**	**61.63**	**189**	P	**P**	**03 18 13.3**	**+0.9**
CASY	comp=Z,15nm,1.4s			IAmb	IAmb	03 18 17.3	
PETK	**Petropavlovsk-** comp=Z,1.8nm,0.6s,baz=198,slow=3.9,SNR=5.0 comp=Z,1.8nm,0.6s	**63.20**	**17**	P	**P**	**03 18 23.4**	**+0.4**
PETK	**Petropavlovsk-**	**63.20**	**17**	P	**P**	**03 18 23.8**	**+0.8**
MA2	**Magadan** comp=Z,13nm,19.2s,baz=190,slow=35	**67.43**	**10**	LR	LR	03 47 42.3	
MK31	**Makanchi Array** comp=Z,3.9nm,1.4s	**68.52**	**326**	P	**P**	**03 18 57.1**	**-0.4**
MK31				IAmb	IAmb	03 19 14.4	
MKAR	**Makanchi Array** comp=Z,1.2nm,0.8s,baz=118,slow=8.2,SNR=13 comp=Z,1.2nm,0.6s	**68.52**	**326**	P	**P**	**03 18 58.9**	**+1.4**
MKAR	**Makanchi Array**	**68.52**	**326**	P	**P**	**03 18 56.6**	**-0.9**
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.2s,baz=125,slow=5.1,SNR=7.6 comp=Z,0.5nm,0.2s	**72.75**	**328**	P	**P**	**03 19 22.9**	**-0.2**
KURK	**Kurchatov** comp=Z,4.7nm,1.4s	**72.75**	**328**	P	**P**	**03 19 22.2**	**-0.9**
KURK				IAmb	IAmb	03 19 33.2	
ADK	**Adak** comp=Z,36nm,1.1s	**72.80**	**31**	P	**P**	**03 19 25.1**	**+1.7**
ADK				IAmb	IAmb	03 20 01.4	
UNV	**Unalaska Valle**	**79.09**	**32**	P	**P**	**03 20 00.4**	**+1.2**
ABKAR	**Akbulak array**	**82.94**	**321**	P	**P**	**03 20 19.6**	**-0.3**
SNAA	**Sanae** comp=Z,90nm,21.7s,baz=248,slow=34	**96.69**	**193**	LR	LR	04 02 10.3	

*LDG **16** 03:19:45.6±0.1,46˚.82N×0˚.34W,h2km,Md3.8/1,Ml3.6/42, Error ellipse: s-maj=1.4km s-min=1.2km az=43.0*

*STR **16** 03:19:46.1±0.0,46˚.82N±0˚.05×0˚.36W±0˚.06,h5km, MLv3.5/6,LOCSAT earthModelID haslach_taup-2.11 preliminary*

*INMG **16** 03:19:47.9±2.7,46˚.79N×0˚.39W,h11km±14km,ML2.5, Error ellipse: s-maj=8.1km s-min=6.0km az=44.0, #DIST_RANGE: REGIONAL #IPMA_REGION: France*

ISC 16 03:19:45.0±0.9,46˚82N±0˚.01×0˚34W±0˚.02,h15km±6km, n82,σ2^{2}37/188,17D,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFF	**Saint Martin d** baz=328	**0.25**	**149**	*e*Pg	**Pg**	**03 19 50.2**	**-0.2**
MFF	**Saint Martin d**	**0.25**	**149**	*e*Pg	**Pg**	03 19 50.3	-0.2
MFF				*e*Sg	**Sg**	03 19 54.0	-0.2
MFF	1µm,0.2s			*e*Sg	**Sg**	03 19 54.1	-0.2
CRNF	**Coron - 49109**	**0.38**	**326**	Pg	**Pg**	03 19 52.9	+0.2
CRNF				Sg	**Sg**	03 19 58.1	+0.1
CHIF	**Chize**	**0.69**	**184**	Pg	**Pg**	03 19 58.9	+0.4
CHIF				Sg	**Sg**	03 20 07.3	-0.2
GIZF	**Gizeux - Indre**	**0.69**	**32**	Pg	**Pg**	03 19 59.5	+0.9
GIZF				Sg	**Sg**	03 20 08.6	+0.9
SDOF	**Saint-Denis-d'**	**1.07**	**224**	Pg	**Pb**	03 20 06.1	+0.9
SDOF				Sg	**Sb**	03 20 20.8	+1.7
TSDF	**Thoir-sur-Di**	**1.08**	**30**	Pg	**Pb**	03 20 06.8	+1.5
TSDF				Sg	**Sn**	03 20 21.7	+1.5
UNIO	**Chateau-d'Oler**	**1.10**	**213**	Pg	**Pb**	03 20 06.8	+1.1
UNIO				Sg	**Sb**	03 20 21.9	+2.0
CLMF	**Criteuil-la-Ma**	**1.30**	**176**	Pg	**Pn**	03 20 10.2	+1.6
CLMF				Sg	**Sn**	03 20 26.2	+0.5
BEGF	**Beganne - 5601**	**1.54**	**302**	Pn	**Pn**	03 20 12.6	+0.7
BEGF				Sn	**Sb**	03 20 33.9	+1.5
GRR	**Gorron**	**1.61**	**348**	*e*Pn	**Pn**	03 20 13.5	+0.6
GRR				*e*Pg	**Pb**	03 20 15.5	+1.1
GRR	237nm,0.2s			*e*Sg	**Sb**	03 20 36.2	+1.6
LDF	**La Druitiere**	**1.78**	**5**	*e*Pn	**Pn**	03 20 15.8	+0.5
LDF				*e*Pg	**Pb**	03 20 18.6	+1.2
LDF	233nm,0.2s			*e*Sg	**Sb**	03 20 42.0	+2.5
TCF	**Toulx Ste Croi**	**1.83**	**106**	*e*Pn	**Pn**	03 20 16.9	+0.8
TCF				*e*Pg	**Pb**	03 20 19.1	+0.8
TCF	208nm,0.3s			*e*Sg	**Sb**	03 20 42.5	+1.4
GUEF	**Guhenno - 56**	**1.89**	**305**	Pn	**Pn**	03 20 17.4	+0.6
GUEF				Sn	**Sb**	03 20 43.8	+1.1
FLN	**La Foliniere**	**1.95**	**357**	*e*Pn	**Pn**	03 20 17.9	+0.3
FLN				*e*Pg	**Pb**	03 20 21.2	+1.0
FLN				*e*Pg	Pg	03 20 21.5	-0.9
FLN	332nm,0.3s			*e*Sg	**Sb**	03 20 46.7	+2.4
LOUF	**Saint-Loup**	**1.97**	**341**	Pn	**Pn**	03 20 18.3	+0.5
LOUF				Pg	**Pb**	03 20 21.6	+1.1
LOUF				Sn	**Sb**	03 20 47.2	+2.4
RJF	**Les Rejaudoux**	**1.99**	**139**	*e*Pn	**Pn**	03 20 18.6	+0.4
RJF				*e*Pg	**Pb**	03 20 21.6	+0.7
RJF	294nm,0.2s			*e*Sg	**Sb**	03 20 48.0	+2.5
LFF	**La Frestale**	**2.02**	**158**	*e*Pn	**Pn**	03 20 19.1	+0.5
LFF				*e*Pg	**Pb**	03 20 22.3	+0.8
LFF	352nm,0.3s			*e*Sg	**Sb**	03 20 48.2	+1.7
SGMF	**Saint Gilles**	**2.08**	**314**	*e*Pn	**Pn**	03 20 19.7	+0.3
SGMF				*e*Pg	**Pb**	03 20 23.2	+0.7
SGMF	84nm,0.3s			*e*Sg	**Sb**	03 20 49.8	+1.7
HYF	**Humbligny**	**2.08**	**76**	*e*Pn	**Pn**	03 20 21.1	+1.6
HYF				*e*Pg	**Pb**	03 20 23.8	+1.3
HYF	569nm,0.2s			*e*Sg	**Sb**	03 20 50.8	+2.6
CLEV	**Clevilliers**	**2.09**	**33**	Pn	**Pn**	03 20 20.2	+0.7
CLEV				Pg	**Pb**	03 20 24.1	+1.5
CLEV				Sn	**Sb**	03 20 50.7	+2.4
PLEF	**Pleven - 22200**	**2.15**	**322**	Pn	**Pn**	03 20 20.8	+0.4
PLEF				Pg	**Pb**	03 20 24.5	+0.8
PLEF				Sn	**Sb**	03 20 52.4	+2.2
BGF	**Bois d'Agland**	**2.21**	**96**	*e*Pn	**Pn**	03 20 22.5	+1.4
BGF				*e*Pg	**Pb**	03 20 26.5	+1.9
BGF	319nm,0.3s			*e*Sg	**Sb**	03 20 52.2	+0.4
QUIF	**Quistinic**	**2.21**	**301**	*e*Pn	**Pn**	03 20 21.7	+0.5
QUIF				*e*Pg	**Pb**	03 20 26.5	+1.8
QUIF	129nm,0.2s			*e*Sg	**Sb**	03 20 53.5	+1.5
VERF	**Verneugheol**	**2.23**	**118**	Pn	**Pn**	03 20 22.1	+0.6
VERF				Pg	**Pb**	03 20 27.2	+2.2
VERF				Sg	**Sb**	03 20 54.3	+1.9
PLOF	**Ploemeur**	**2.30**	**295**	Pn	**Pn**	03 20 23.9	+1.5
PLOF				Pg	**Pb**	03 20 28.4	+2.2
PLOF				Sn	**Sn**	03 20 50.4	-0.1
FRNF	**Fournols**	**2.47**	**124**	Pn	**Pn**	03 20 25.5	+0.7
FRNF				Pg	**Pb**	03 20 31.9	+2.7
FRNF				Sn	**Sn**	03 20 53.2	-1.6
FRNF				Sg	**Sb**	03 21 03.6	+4.1
ROSF	**Rostrenen**	**2.50**	**308**	*e*Pn	**Pn**	03 20 25.7	+0.5
ROSF				*e*Pg	**Pb**	03 20 32.1	+2.4
ROSF	87nm,0.2s			*e*Sg	**Sb**	03 21 02.9	+2.6
CAF	**Calviac**	**2.53**	**138**	*e*Pn	**Pn**	03 20 26.0	+0.4
CAF				*e*Pg	**Pb**	03 20 31.8	+1.7
CAF	108nm,0.3s			*e*Sg	**Sb**	03 21 04.9	+3.8
AVF	**Avril sur Loir**	**2.53**	**89**	*e*Pn	**Pn**	03 20 26.3	+0.7
AVF				*e*Pg	**Pb**	03 20 33.0	+2.8
AVF	83nm,0.3s			*e*Sg	**Sb**	03 21 02.0	+0.8
SSF	**Saint Saulge**	**2.64**	**83**	*e*Pn	**Pn**	03 20 27.7	+0.6
SSF				*e*Pg	**Pb**	03 20 35.1	+3.0
SSF	76nm,0.3s			*e*Sg	**Sb**	03 21 06.2	+1.9
OLIV	**Plomelin**	**2.81**	**294**	Pn	**Pn**	03 20 30.4	+1.0
OLIV				Pg	**Pb**	03 20 38.4	+3.5
OLIV				Sg	**Sb**	03 21 13.4	+4.2
PLDF	**La Plantade**	**2.87**	**106**	Pn	**Pn**	03 20 30.9	+0.7
PLDF				Pg	Pb	03 20 40.0	+4.0
PLDF				Sg	**Sg**	03 21 16.7	-0.4
SMF	**Signal de Mont**	**2.88**	**92**	*e*Pn	**Pn**	03 20 31.0	+0.6
SMF				*e*Pg	**Pb**	03 20 38.9	+2.8
SMF	40nm,0.2s			*e*Sg	**Sb**	03 21 12.6	+1.5
LOR	**Lormes**	**2.90**	**80**	*e*Pn	**Pn**	03 20 31.2	+0.5
LOR				*e*Pg	**Pb**	03 20 38.7	+2.2
LOR	134nm,0.2s			*e*Sg	**Sb**	03 21 13.9	+2.1
LOCF	**Locquirec - 29**	**2.92**	**311**	Pn	**Pn**	03 20 31.8	+0.9
LOCF				Pg	**Pb**	03 20 40.2	+3.4
MLZA	**Monlezun-d-Arm**	**2.99**	**177**	Pn	**Pn**	03 20 33.4	+1.5
MLZA				Sg	**Sg**	03 21 20.6	-0.6
SLVF	**La Salvetat-Pe**	**3.16**	**145**	Pn	**Pn**	03 20 34.7	+0.4
SLVF				Pg	**Pb**	03 20 44.8	+3.9
SLVF				Sn	**Sn**	03 21 09.0	-2.7
CRAS	**Crastes**	**3.19**	**166**	Pn	**Pn**	03 20 35.6	+1.0
CRAS				Pg	**Pg**	03 20 45.2	-0.2
TERF	**Tercis-les-Bai**	**3.19**	**190**	Pn	**Pn**	03 20 35.2	+0.6
PLYF	**Puligny Montra**	**3.49**	**86**	Pn	**Pn**	03 20 40.3	+1.5
SJPF	**Ste Jean**	**3.76**	**190**	*e*Pn	**Pn**	03 20 42.2	-0.3
SJPF				*e*Pg	**Pb**	03 20 55.2	+4.1
SJPF				*e*Sn	**Sb**	03 21 41.5	+5.1
EPF	**Esparros**	**3.82**	**173**	*e*Pn	**Pn**	03 20 43.5	+0.2
EPF				*e*Pg	**Pb**	03 20 55.8	+3.7
EPF				*e*Sn	**Sn**	03 21 26.0	-2.0
EPF	36nm,0.3s			*e*Sg	**Sg**	03 21 46.5	-1.1
SFTF	**Sexfontaines**	**3.90**	**67**	*e*Pn	**Pn**	03 20 44.4	0.0
SFTF				*e*Pg	Pb	03 20 57.7	+4.3
SFTF	42nm,0.5s			*e*Sg	**Sb**	03 21 47.0	+6.6
MTLF	**Montolieu**	**3.92**	**152**	*e*Pn	**Pn**	03 20 44.9	+0.2
MTLF				*e*Pg	**Pb**	03 20 57.6	+3.8
MTLF				*e*Sn	**Sn**	03 21 28.7	-1.7
MTLF	48nm,0.4s			*e*Sg	**Sg**	03 21 49.2	-1.6
ETSF	**Etsaut**	**3.92**	**182**	*e*Pn	**Pn**	03 20 44.7	-0.1
ETSF				*e*Pg	Pb	03 20 58.4	+4.5
ETSF	18nm,0.3s			*e*Sg	**Sb**	03 21 47.4	+6.2
MEZF	**Maizieres J'vi**	**4.01**	**63**	*e*Pg	Pb	03 21 00.2	+4.8
MEZF				*e*Sg	**Sb**	03 21 50.1	+6.4
VIVF	**Saint-Julien-l**	**4.01**	**117**	*e*Pn	**Pn**	03 20 47.1	+1.1
VIVF				*e*Pg	Pb	03 21 00.3	+4.9
VIVF	35nm,0.4s			*e*Sg	**Sb**	03 21 50.2	+6.4
LASF	**Ste Croix**	**4.03**	**131**	*e*Pn	**Pn**	03 20 47.1	+0.9
LASF				*e*Pg	Pb	03 21 00.6	+4.9
LASF	36nm,0.3s			*e*Sg	**Sg**	03 21 52.9	-1.4
TRBF	**Trabuc cave**	**4.06**	**130**	Pn	**Pn**	03 20 47.5	+0.9
TRBF				Pg	**Pg**	03 21 01.8	-0.9
SAVF	**Savonnieres en**	**4.10**	**62**	*e*Pn	**Pn**	03 20 47.0	-0.1
SAVF	**Savonnieres en**	**4.10**	**62**	*e*Pn	**Pn**	03 20 47.7	+0.6
SAVF				*e*Pg	Pb	03 21 02.0	+5.1
SAVF				*e*Pg	Pg	03 21 03.2	-0.3
SAVF				*e*Sg	**Sg**	03 21 54.4	-2.2
SAVF	20nm,0.4s			*e*Sg	**Sb**	03 21 54.7	+8.5
CABF	**La Chapelle**	**4.42**	**90**	*e*Pn	**Pn**	03 20 53.1	+1.4
CABF				*e*Sn	**Sn**	03 21 39.4	-3.6
CABF	9.9nm,0.5s			*e*Sg	**Sb**	03 22 03.0	+7.4
BAIF	**Baives**	**4.43**	**41**	*e*Pn	**Pn**	03 20 52.5	+0.8
BAIF				*e*Pg	Pb	03 21 07.1	+4.5
BAIF				*e*Sn	**Sn**	03 21 40.8	-2.2
BAIF	4.9nm,0.2s			*e*Sg	**Sb**	03 22 03.7	+7.9
PAGF	**Fort de Pagny**	**4.45**	**65**	*e*Pn	**Pn**	03 20 52.0	+0.1
PAGF	**Fort de Pagny**	**4.45**	**65**	*e*Pn	**Pn**	03 20 52.5	+0.6
PAGF				*e*Pg	Pb	03 21 07.3	+4.5
PAGF				*e*Pg	Pg	03 21 09.1	-1.0
PAGF				*e*Sn	**Sn**	03 21 41.4	-2.0
PAGF	16nm,0

MVO	**Moncorvo**	**7.43**	**223**	*e*Pn	**Pn**	**03**	**21**	**32.6 -0.4**
MVO				*e*Sn	**Sn**	**03**	**22**	**51.7 -5.3**
PGAV	**Gavieira, Arco**	**7.47**	**232**	*e*Pn	**Pn**	**03**	**21**	**33.0 -0.5**
PGAV				*e*Sn	**Sn**	**03**	**22**	**52.6 -5.4**
POLO	**Lamas de Olo**	**7.64**	**227**	*e*Pn	**Pn**	**03**	**21**	**35.3 -0.6**
PMRV	**Marv??o**	**9.01**	**217**	*e*Pn	**Pn**	**03**	**21**	**53.0 -1.5**
PBAR	**Barrancos**	**9.95**	**212**	*e*P	**Pn**	**03**	**22**	**07.3 -0.1**

BER ***16*** *03:29:47.1±2.1, 82°.36N×6°.37W, h10km, Mw3.6, Confirmed Earthquake*

ISC 16 03:29:45.7±2.0, 82°.2N±0°.1×6°.42W±0°.05, h10km, n10, σ1§72/16, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.56**	**254**	*e*P		**Pn**	**Pn**	**03 30 13.8**	**+0.4**
NOR				*e*S		**Sn**	**Sn**	**03 30 32.8**	**-0.8**
NOR				IAML	HF			03 30 36.5	
	comp=Z,6.0nm,0.1s								
NOR	**Nord**	**1.56**	**254**	*i* P		**Pn**	**Pn**	**03 30 14.0**	**+0.6**
NOR				*i* S		**Sn**	**Sn**	**03 30 32.2**	**-1.4**
NOR				IAML				03 30 34.8	
	comp=Z,32nm,0.4s								
KBS	**Kingsbay**	**4.41**	**128**	*e*P		**Pn**	**Pn**	**03 30 53.7**	**+1.2**
KBS				IAML				03 30 55.2	
	comp=Z,1.8nm,0.1s								
KBS				*e*S		**Sn**	**Sn**	**03 31 41.5**	**-2.4**
BRBB	**Barentsburg B**	**5.36**	**128**	*e*P		**Pn**	**Pn**	**03 31 07.4**	**+1.9**
SPA0	**Spitsbergen Ar**	**5.53**	**124**	*e*P		**Pn**	**Pn**	**03 31 08.5**	**+0.6**
SPA0				IAML				03 31 12.9	
	comp=Z,2.6nm,0.8s								
SPA0				*e*S		**Sn**	**Sn**	**03 32 08.9**	**-2.5**
DAG	**Danmarks Havn**	**5.84**	**209**	*e*P		**Pn**	**Pn**	**03 31 14.4**	**+2.3**
DAG				*e*S		**Sn**	**Sn**	**03 32 17.6**	**-1.4**
DAG				IAML	HF			03 32 22.1	
	comp=Z,2.5nm,0.2s								
DAG	**Danmarks Havn**	**5.84**	**209**	*i* P		**Pn**	**Pn**	**03 31 13.8**	**+1.7**
DAG				*i* S		**Sn**	**Sn**	**03 32 17.2**	**-1.8**
DAG				IAML				03 32 23.3	
	comp=Z,2.3nm,0.2s								
HSPB	**Hornsund (broa**	**6.46**	**131**	*e*P		**Pn**	**Pn**	**03 31 22.7**	**+2.1**
HSPB				IAML				03 31 23.7	
	comp=Z,2.4nm,1.0s								
DBG	**Daneborg**	**8.34**	**207**	*e*P		**Pn**	**Pn**	**03 31 47.2**	**+0.9**
DBG				*e*S		Sn	**Sn**	**03 33 16.1**	**-4.2**
DBG				IAML	HF			03 33 23.4	
	comp=Z,0.3nm,0.2s								
DBG	**Daneborg**	**8.34**	**207**	*i* P		**Pn**	**Pn**	**03 31 46.2**	**-0.1**
DBG				*i* S		Sn	**Sn**	**03 33 13.3**	**-7.1**
DBG				IAML				03 33 21.9	
	comp=Z,0.5nm,0.2s								

ANF ***16*** *03:42:27.5±0.1, 58°.32N×133°.48W, h0km, ML3.6/29, Error ellipse: s-maj=1.3km s-min=1.0km az=59.0*

NEIC ***16*** *03:42:27.9±1.2, 58°.34N±0°.02×133°.48W±0°.02, h5km±2km, ML3.3/70, ML3.1(AEIC), Error ellipse: s-maj=3.3km s-min=2.9km az=332.0*

PGC ***16*** *03:42:28.9±0.0, 58°.38N×133°.47W, h3km, ML3.5/27, ML3.3(NEIC), 55km east of Juneau, Alaska, Usa Southeastern Alaska*

AEIC ***16*** *03:42:28.0±1.1, 58°.33N±0°.01×133°.47W±0°.02, h1km±6km, Error ellipse: s-maj=2.0km s-min=1.1km az=201.0*

ISC 16 03:42:27.2±1.1, 58°.35N±0°.02×133°.46W±0°.01, h2km±10km, n141, σ1§41/191, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.49**	**262**				**Pg**	**03 42 37.2**	**+0.6**
JIS							**Sg**	**03 42 43.9**	**+0.8**
R32K	**Eaglecrest**	**0.56**	**263**				**Pg**	**03 42 38.4**	**+0.3**
R32K					Sg		**Sg**	**03 42 45.2**	**-0.1**
R32K	**Eaglecrest**	**0.56**	**263**	P			**Pg**	**03 42 38.6**	**+0.5**
	baz=83,SNR=28								
R32K				S			**Sg**	**03 42 46.1**	**+0.8**
	baz=83								
BESE	**Bessie Mountai**	**0.77**	**288**	P			**Pg**	**03 42 42.2**	**+0.2**
BESE				S			**Sg**	**03 42 52.7**	**+0.7**
BESE	**Bessie Mountai**	**0.77**	**288**				**Pg**	**03 42 42.0**	**+0.1**
BESE					Sg		**Sg**	**03 42 52.4**	**+0.4**
Q32M	**Nakina River**	**0.88**	**45**	P			**Pg**	**03 42 44.6**	**+0.6**
Q32M	**Nakina River**	**0.88**	**45**				**Pg**	**03 42 44.6**	**+0.6**
Q32M					Sg		**Sb**	**03 42 57.2**	**-0.3**
Q32M	**Nakina River**	**0.88**	**45**	P			**Pg**	**03 42 44.7**	**+0.6**
	baz=226,SNR=89								
Q32M				S			**Sn**	**03 42 59.3**	**-0.9**
	baz=226								
S32K	**Killisnoo**	**1.06**	**215**				**Pg**	**03 42 47.5**	**0.0**
S32K					Sg		**Sb**	**03 43 02.1**	**-0.6**
S32K	**Killisnoo**	**1.06**	**215**	P			**Pg**	**03 42 47.8**	**+0.2**
	baz=33,SNR=55								
S32K				S			**Sn**	**03 43 03.3**	**-1.1**
	baz=33								
R31K	**City Hall, Gus**	**1.20**	**274**	P			**Pb**	**03 42 50.1**	**-0.6**
R31K				S			**Sg**	**03 43 06.5**	**+0.7**
R31K	**City Hall, Gus**	**1.20**	**274**				**Pg**	**03 42 50.7**	**+0.5**
R31K							**Sn**	**03 43 07.4**	**-0.5**
R31K	**City Hall, Gus**	**1.20**	**274**	P			**Pb**	**03 42 50.3**	**-0.4**
	baz=92								
R31K				S			**Sg**	**03 43 06.5**	**+0.7**
	baz=92								
P32M	**Atlin**	**1.25**	**354**	P			**Pn**	**03 42 50.9**	**-0.9**
P32M				S			**Sg**	**03 43 08.5**	**+0.9**
P32M	**Atlin**	**1.25**	**354**				**Pn**	**03 42 51.1**	**-0.8**
P32M					Sg		**Sg**	**03 43 08.3**	**+0.7**
P32M	**Atlin**	**1.25**	**354**	P			**Pn**	**03 42 51.1**	**-0.8**
	baz=174,SNR=126								
P32M				S			**Sn**	**03 43 09.4**	**+0.1**
	baz=174								
S34M	**Telegraph Cree**	**1.31**	**108**	P			**Pn**	**03 42 51.9**	**-0.6**
S34M				S			**Sg**	**03 43 09.6**	**+0.4**
S34M	**Telegraph Cree**	**1.31**	**108**	Pn			**Pn**	**03 42 51.3**	**-1.2**
S34M				Sn			**Sg**	**03 43 10.0**	**+0.7**
S34M				IAML				03 43 15.3	
	comp=E,684nm,0.9s								
S34M				IAML				03 43 17.9	
	comp=N,477nm,1.1s								
S34M	**Telegraph Cree**	**1.31**	**108**	P			**Pn**	**03 42 51.8**	**-0.6**
	baz=290,SNR=150								
S34M				S			**Sg**	**03 43 10.3**	**+1.1**
	baz=290								
SKAG	**Skagway**	**1.48**	**320**				**Pb**	**03 42 55.1**	**-0.3**
SKAG				IAML				03 43 20.2	
	comp=N,304nm,0.7s								
SKAG				IAML				03 43 23.8	
	comp=E,360nm,1.0s								
SKAG	**Skagway**	**1.48**	**320**				**Sg**	**03 43 15.6**	**+0.9**
SKAG	**Skagway**	**1.48**	**320**	P			**Pn**	**03 42 54.7**	**-0.2**
	baz=139,SNR=42								
SKAG				S			**Sg**	**03 43 16.0**	**+1.2**
	baz=139								
S31K	**Pelican**	**1.52**	**256**				**Pn**	**03 42 54.9**	**-0.5**
S31K	**Pelican**	**1.52**	**256**	P			**Pn**	**03 42 54.8**	**-0.5**
	baz=74,SNR=13								
S31K				S			**Sg**	**03 43 16.4**	**+0.4**
	baz=74								
T33K	**Petersburg**	**1.56**	**170**	Sn			**Sg**	**03 43 17.4**	**+0.2**
T33K	**Petersburg**	**1.56**	**170**				**Pb**	**03 42 56.1**	**-0.7**
T33K							**Sg**	**03 43 17.2**	**-0.1**
T33K	**Petersburg**	**1.56**	**170**	S			**Sg**	**03 43 17.7**	**+0.4**
	baz=350								
SIT	**Sitka**	**1.64**	**219**				**Pb**	**03 42 57.1**	**-0.9**
SIT				IAML				03 43 26.6	
	comp=N,250nm,1.1s								
SIT	**Sitka**	**1.64**	**219**				**Sb**	**03 43 18.7**	**-0.3**
SIT	**Sitka**	**1.64**	**219**	P			**Pb**	**03 42 57.1**	**-0.9**
	baz=37,SNR=6.8								
SIT				S			**Sg**	**03 43 19.2**	**-0.5**
	baz=37								
R33M	**Jennings River**	**1.67**	**50**	Pn			**Pb**	**03 42 58.1**	**-0.6**
R33M				Sn			**Sb**	**03 43 20.7**	**+0.4**
R33M	**Jennings River**	**1.67**	**50**				**Pb**	**03 42 58.0**	**-0.8**
R33M				IAML				03 43 24.9	
	comp=E,328nm,0.8s								
R33M				IAML				03 43 24.9	
	comp=N,362nm,1.1s								
R33M	**Jennings River**	**1.67**	**50**				**Sg**	**03 43 21.3**	**+0.5**
R33M	**Jennings River**	**1.67**	**50**	P			**Pb**	**03 42 57.9**	**-0.8**
	baz=232,SNR=83								
R33M				S			**Sg**	**03 43 21.2**	**+0.5**
	baz=232								
DLBC	**Dease Lake**	**1.81**	**86**	Pn			**Pb**	**03 43 00.3**	**-0.8**
DLBC				Sn			**Sb**	**03 43 23.5**	**-0.8**
DLBC	**Dease Lake**	**1.81**	**86**				**Pb**	**03 43 00.4**	**-0.7**
DLBC	**Dease Lake**	**1.81**	**86**	P			**Pn**	**03 42 59.4**	**-0.1**
	baz=268,SNR=123								
DLBC				Sg			**Sg**	**03 43 27.3**	**+2.0**
	baz=268								
PLBC	**Pleasant Camp**	**1.88**	**308**	Pn			**Pb**	**03 43 01.0**	**-1.1**
PLBC				Sn			**Sn**	**03 43 24.6**	**+0.1**
PLBC	**Pleasant Camp**	**1.88**	**308**				**Pb**	**03 43 01.9**	**-0.3**
PLBC							**Sb**	**03 43 25.9**	**-0.2**
PLBC	**Pleasant Camp**	**1.88**	**308**	P			**Pn**	**03 43 00.8**	**+0.5**
	baz=126,SNR=105								
PLBC				Sb			**Sg**	**03 43 27.9**	**+0.5**
	baz=126								
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn			**Pn**	**03 43 01.0**	**+0.2**
P33M				Sn			**Sb**	**03 43 25.6**	**-1.3**
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn			**Pn**	**03 43 01.3**	**+0.5**
P33M				IAML				03 43 29.7	
	comp=N,157nm,0.8s								
P33M	**Teslin, Yukon**	**1.90**	**10**	P			**Pn**	**03 43 01.2**	**+0.5**
	baz=191,SNR=58								
P33M				Sb			**Sg**	**03 43 29.0**	**+0.7**
	baz=191								
WRAK	**Wrangell Islan**	**2.02**	**162**	Pn			**Pn**	**03 43 02.8**	**+0.5**
WRAK				Sn			**Sb**	**03 43 28.3**	**-2.0**
WRAK	**Wrangell Islan**	**2.02**	**162**				**Pn**	**03 43 02.2**	**-0.1**
WRAK				IAML				03 43 34.3	
	comp=N,189nm,0.8s								
WRAK				IAML				03 43 37.7	
	comp=N,281nm,0.7s								
WRAK	**Wrangell Islan**	**2.02**	**162**	P			**Pn**	**03 43 02.6**	**+0.3**
	baz=343,SNR=16								
WRAK				S			**Sb**	**03 43 29.1**	**-1.1**
	baz=343								
T35M	**Bob Quinn**	**2.20**	**127**	Pn			**Pn**	**03 43 05.5**	**+0.6**
T35M				Sg			**Sg**	**03 43 38.3**	**+0.4**
T35M	**Bob Quinn**	**2.20**	**127**				**Pn**	**03 43 04.7**	**-0.1**
T35M				IAML				03 43 40.6	
	comp=N,219nm,0.8s								
T35M				IAML				03 43 42.4	
	comp=E,298nm,0.8s								
T35M	**Bob Quinn**	**2.20**	**127**	P			**Pn**	**03 43 05.7**	**+0.9**
	baz=310,SNR=38								
T35M				Sb			**Sg**	**03 43 37.9**	**0.0**
	baz=310								
U33K	**Whale Pass**	**2.25**	**175**				**Pn**	**03 43 04.9**	**-0.4**
U33K				IAML				03 43 44.7	
	comp=E,219nm,1.1s								
U33K	**Whale Pass**	**2.25**	**175**	P			**Pn**	**03 43 05.3**	**0.0**
	baz=355								
U33K				Sb			**Sg**	**03 43 38.3**	**-1.0**
	baz=355								
WHY	**Whitehorse**	**2.43**	**343**	Pn			**Pn**	**03 43 08.3**	**+0.2**
WHY				Sn			**Sn**	**03 43 38.7**	**+0.3**
WHY	**Whitehorse**	**2.43**	**343**				**Pn**	**03 43 07.9**	**-0.1**
WHY				IAML				03 43 47.4	
	comp=E,190nm,0.8s								
WHY				IAML				03 43 51.6	
	comp=N,157nm,0.8s								
WHY	**Whitehorse**	**2.43**	**343**	P			**Pn**	**03 43 08.2**	**+0.2**
	baz=162,SNR=8.6								
WHY				S			**Sb**	**03 43 39.9**	**-2.3**
	baz=162								
P30M	**Million Dollar**	**2.53**	**316**	Pn			**Pn**	**03 43 09.7**	**+0.3**
P30M				Sn			**Sn**	**03 43 40.9**	**+0.1**
P30M	**Million Dollar**	**2.53**	**316**				**Pn**	**03 43 11.1**	**+1.7**
P30M	**Million Dollar**	**2.53**	**316**	IAML				03 43 50.3	
	comp=E,135nm,0.8s								
P30M				IAML				03 43 59.5	
	comp=N,154nm,1.1s								
P30M	**Million Dollar**	**2.53**	**316**	P			**Pn**	**03 43 10.5**	**+1.1**
	baz=134								
P30M				Sb			**Sb**	**03 43 46.4**	**+1.4**
	baz=134								
P29M	**Windy Craggy**	**2.56**	**302**	Sn			**Sn**	**03 43 41.7**	**+0.1**
P29M	**Windy Craggy**	**2.56**	**302**				**Pn**	**03 43 09.7**	**-0.1**
P29M				IAML				03 43 55.7	
	comp=E,145nm,0.8s								
P29M	**Windy Craggy**	**2.56**	**302**	P			**Pn**	**03 43 10.1**	**+0.3**
	baz=119,SNR=11								
P29M				Sb			**Sg**	**03 43 48.4**	**-1.1**
	baz=119								
O30N	**Mendenhall**	**2.78**	**332**	Pn			**Pn**	**03 43 13.7**	**+1.0**
O30N				Sg			**Sg**	**03 43 55.5**	**-0.8**
O30N	**Mendenhall**	**2.78**	**332**				**Pn**	**03 43 13.2**	**+0.4**
O30N				IAML				03 44 08.6	
	comp=N,126nm,1.0s								
O30N	**Mendenhall**	**2.78**	**332**	P			**Pn**	**03 43 13.5**	**+0.8**
	baz=150,SNR=26								
O30N				Sb			**Sg**	**03 43 54.9**	**-1.5**
	baz=150								
N32M	**Quiet Lake**	**2.82**	**4**	Pn			**Pn**	**03 43 14.6**	**+1.3**
N32M				Sg			**Sg**	**03 43 56.3**	**-1.4**
N32M	**Quiet Lake**	**2.82**	**4**				**Pn**	**03 43 15.0**	**+1.6**
N32M	**Quiet Lake**	**2.82**	**4**	P			**Pn**	**03 43 14.7**	**+1.3**
	baz=184								
CRAG	**Craig**	**2.89**	**176**					**03 43 14.6**	**+0.4**
CRAG	**Craig**	**2.89**	**176**	IAML				03 44 03.7	
	comp=N,85nm,1.1s								
CRAG				IAML				03 44 10.2	
	comp=E,98nm,1.0s								
CRAG	**Craig**	**2.89**	**176**	P			**Pn**	**03 43 14.6**	**+0.4**
	baz=356								
CRAG				S			**Sn**	**03 43 51.1**	**+1.6**
	baz=356								
WTLY	**Watson Lake, Y**	**2.98**	**52**	Sg			**Sg**	**03 44 02.1**	**-0.8**
WTLY	**Watson Lake, Y**	**2.98**	**52**	Sb			**Sg**	**03 44 01.3**	**-1.6**
	baz=236								
HYT	**Haines Junctio**	**3.23**	**322**	Pn			**Pn**	**03 43 20.5**	**+1.5**
HYT				Sg			**Sg**	**03 44 08.5**	**-2.3**
HYT	**Haines Junctio**	**3.23**	**322**				**Pn**	**03 43 19.4**	**+0.4**
HYT				IAML				03 44 18.4	
	comp=N,93nm,1.1s								
HYT				IAML				03 44 20.4	
	comp=E,101nm,1.0s								
HYT	**Haines Junctio**	**3.23**	**322**	P			**Pn**	**03 43 20.3**	**+1.3**
	baz=139,SNR=10								
HYT				Sb			**Sb**	**03 44 07.8**	**+2.8**
	baz=139								
YUK7	**Dusty Glacier**	**3.24**	**314**	Pn			**Pn**	**03 43 19.5**	**+0.2**
YUK7				Sg			**Sg**	**03 44 09.9**	**-1.4**
O29M	**Mount Kennedy**	**3.27**	**309**	Pn			**Pn**	**03 43 20.2**	**+0.6**
O29M				Sg			**Sg**	**03 44 10.7**	**-1.6**
O29M	**Mount Kennedy**	**3.27**	**309**	Pn			**Pn**	**03 43 20.4**	**+0.8**
O29M				IAML				03 44 23.7	
	comp=N,102nm,0.7s								
O29M	**Mount Kennedy**	**3.27**	**309**	Pb			**Pb**	**03 43 26.1**	**0.0**
	baz=125,SNR=30								
O29M				Sb			**Sg**	**03 44 09.9**	**-2.5**
	baz=125								
N31M	**Braeburn, Yuko**	**3.36**	**341**	Pn			**Pn**	**03 43 21.6**	**+0.8**
N31M	**Braeburn, Yuko**	**3.36**	**341**				**Pn**	**03 43 20.9**	**+0.2**
N31M	**Braeburn, Yuko**	**3.36**	**341**	P			**Pn**	**03 43 21.6**	**+0.8**
	baz=159,SNR=20								
YUK5	**Granite Creek**	**3.57**	**323**	Pn			**Pn**	**03 43 24.4**	**+0.6**
YUK5				Sg			**Sg**	**03 44 19.6**	**-2.3**
YUK5	**Granite Creek**	**3.57**	**323**				**Pn**	**03 43 25.2**	**+1.5**
N30M	**Aishikik Lake**	**3.62**	**331**	Pn			**Pn**	**03 43 25.5**	**+1.1**
N30M				Sg			**Sg**	**03 44 20.2**	**-3.1**
N30M	**Aishikik Lake**	**3.62**	**331**				**Pn**	**03 43 24.8**	**+0.5**
N30M				IAML				03 44 27.6	
	comp=E,71nm,0.7s								
N30M				IAML				03 44 28.3	
	comp=N,80nm,0.7s								
N30M	**Aishikik Lake**	**3.62**	**331**	P			**Pn**	**03 43 25.3**	**+1.0**
	baz=148,SNR=14								
N30M				Sb			**Sb**	**03 44 19.8**	**+3.5**
	baz=148								
M31M	**Drury Creek, Y**	**3.90**	**354**	Pn			**Pn**	**03 43 28.5**	**+0.4**
M31M	**Drury Creek, Y**	**3.90**	**354**				**Pn**	**03 43 28.3**	**+0.2**
M31M				IAML				03 44 39.4	
	comp=E,66nm,1.1s								
M31M				IAML				03 44 46.0	
	comp=N,48nm,0.9s								
M31M	**Drury Creek, Y**	**3.90**	**354**	P			**Pn**	**03 43 29.2**	**+1.1**
	baz=173,SNR=17								
PINM	**Pinnacle**	**3.91**	**300**	Pb			**Pb**	**03 43 37.2**	**+0.4**
	baz=114								
PCA	**Pinnacle**	**3.91**	**300**	Pn			**Pn**	**03 43 27.5**	**-0.9**
LIRD	**Liard River Hi**	**3.97**	**71**	Sn			**Sn**	**03 44 16.1**	**+0.1**
BRWY	**Burwash Landin**	**4.13**	**320**	Sg			**Sb**	**03 44 35.5**	**+4.4**
O28M	**Mount Upton**	**4.20**	**308**	Sg			**Sg**	**03 44 38.4**	**-3.7**
O28M	**Mount Upton**	**4.20**	**308**	IAML				03 44 50.9	
	comp=E,41nm,0.9s								
O28M	**Mount Upton**	**4.20**	**308**	Pb			**Pb**	**03 43 42.9**	**+1.0**
	baz=123,SNR=11								
YUK8	**Steele Glacier**	**4.34**	**315**	Pn			**Pn**	**03 43 34.8**	**+0.4**
YUK8				Sg			**Sg**	**03 44 42.3**	**-4.1**
YUK8	**Steele Glacier**	**4.34**	**315**	P			**Pn**	**03 43 35.2**	**+0.8**
	baz=130								
MMPY	**Sheldon Lake,**	**4.42**	**13**	Sg			**Sg**	**03 44 45.0**	**-4.2**
MMPY	**Sheldon Lake,**	**4.42**	**13**	P			**Pn**	**03 43 36.8**	**+1.5**
	baz=195								
M30M	**Minto, Yukon**	**4.55**	**340**	Pn			**Pn**	**03 43 37.8**	**+0.7**
M30M				Sg			**Sb**	**03 44 48.3**	**+5.2**
M30M	**Minto, Yukon**	**4.55**	**340**				**Pn**	**03 43 38.0**	**+0.8**
M30M	**Minto, Yukon**	**4.55**	**340**	IAML				03 45 03.1	
	comp=N,39nm,1.1s								
M30M	**Minto, Yukon**	**4.55**	**340**	P			**Pn**	**03 43 37.6**	**+0.4**
	baz=158,SNR=6.0								
LOGN	**Logan Glacier**	**4.57**	**306**	IAML				03 45 03.9	
	comp=N,23nm,0.8s								
LOGN				IAML				03 45 09.8	
	comp=E,28nm,1.0s								
M29M	**Somme Creek**	**4.80**	**331**	Pn			**Pn**	**03 43 41.6**	**+1.1**
M29M				Sg			**Sb**	**03 44 55.4**	**+5.2**
M29M	**Somme Creek**	**4.80**	**331**	P			**Pn**	**03 43 41.7**	**+1.1**
	baz=147								
GRNC	**Granite Creek**	**4.85**	**303**	Pn			**Pn**	**03 43 42.0**	**+0.6**
GRNC	**Granite Creek**	**4.85**	**303**	IAML				03 45 17.8	
	comp=N,17nm,1.1s								
YUK3	**Moose Creek**	**4.91**	**317**	Pn			**Pn**	**03 43 42.4**	**+0.1**
BARN	**Barnard Glacie**	**4.96**	**307**	IAML				03 45 15.1	
	comp=E,15nm,1.0s								
YUK2	**White River**	**5.06**	**316**	Pn			**Pn**	**03 43 44.0**	**-0.1**
KIAG	**Kiagna River**	**5.20**	**304**	Pn			**Pn**	**03 43 46.4**	**+0.2**
L29M	**L29M**	**5.30**	**336**	Pn			**Pn**	**03 43 48.0**	**+0.6**
L29M				Sg			**Sg**	**03 45 12.8**	**-4.5**
L29M	**L29M**	**5.30**	**336**	P			**Pn**	**03 43 47.7**	**+0.3**
	baz=152								
TGL	**Tana Glacier**	**5.34**	**301**	IAML				03 45 17.2	
	comp=N,15nm,1.2s								
TGL				IAML				03 46 04.5	
	comp=E,11nm,1.0s								
BVCY	**Beaver Creek**	**5.49**	**321**	Sg			**Sg**	**03 45 18.3**	**-5.0**
M27K	**Edge Creek, AK**	**5.80**	**317**	P			**Pn**	**03 43 55.6**	**+1.2**
	baz=139								
K29M	**Barlow Dome**	**5.86**	**342**	Pn			**Pn**	**03 43 55.5**	**+0.4**
K29M				Sg			**Sg**	**03 45 28.8**	**-6.4**
K29M	**Barlow Dome**	**5.86**	**342**	P			**Pn**	**03 43 55.6**	**+0.5**
	baz=159,SNR=9.6								
J30M	**Hart River**	**6.40**	**349**	Pn			**Pn**	**03 44 03.4**	**+0.9**
J30M	**Hart River**	**6.40**	**349**	P			**Pn**	**03 44 03.1**	**+0.6**
	baz=166,SNR=14								
DAWY	**Dawson**	**6.41**	**336**	Pn			**Pn**	**03 44 02.8**	**+0.2**
I30M	**Mount Dempster**	**7.04**	**350**	Pn			**Pn**	**03 44 11.8**	**+0.5**
I30M	**Mount Dempster**	**7.04**	**350**	P			**Pn**	**03 44 13.7**	**+2.4**
	baz=168								
H31M	**Peel River**	**7.50**	**357**	Pn			**Pn**	**03 44 17.6**	**0.0**
H31M	**Peel River**	**7.50**	**357**	P			**Pn**	**03 44 18.1**	**+0.6**
	baz=176,SNR=12								
I28M	**Miner Creek**	**7.75**	**340**	Pn			**Pn**	**03 44 20.9**	**-0.1**
I28M	**Miner Creek**	**7.75**	**340**	P			**Pn**	**03 44 21.7**	**+0.7**
	baz=154								
H29M	**Whitestone**	**8.22**	**346**	Pn			**Pn**	**03 44 27.3**	**-0.1**
G31M	**Satah River**	**8.62**	**358**	Pn			**Pn**	**03 44 32.9**	**+0.1**
G31M	**Satah River**	**8.62**	**358**	P			**Pn**	**03 44 33.8**	**+1.0**
	baz=177,SNR=7.5								
H27K	**Steamboat Moun**	**8.75**	**338**	Pn			**Pn**	**03 44 34.8**	**+0.1**
G30M	**tAoh Zrail Nji**	**8.76**	**353**	Pn			**Pn**	**03 44 34.8**	**0.0**
G29M	**Pine Creek**	**8.85**	**348**	Pn			**Pn**	**03 44 36.2**	**+0.2**
F30M	**Barrier River**	**9.36**	**355**	Pn			**Pn**	**03 44 43.2**	**+0.2**
F30M	**Barrier River**	**9.36**	**355**	P			**Pn**	**03 44 44.5**	**+1.5**
	baz=172,SNR=5.8								
L22K	**Petersville**	**9.52**	**303**	P			**Pn**	**03 44 45.2**	**0.0**
	baz=108,SNR=7.2								
F28M	**Old Crow**	**9.74**	**345**	Pn			**Pn**	**03 44 47.5**	**-0.7**
F28M	**Old Crow**	**9.74**	**345**	P			**Pn**	**03 44 49.3**	**+1.1**
	baz=160								

NOU ***16*** *03:49:03.2, 38°.04S×176°.16E, h222km, MLv3.6/6, North Island, New Zealand*

WEL ***16*** *03:49:11.7±0.8, 38°.5S±5°×17°.6E±°, h145km±7km, M2.7/12, ML2.6/2, MLv2.7/12, Error ellipse: s-maj=7.2km s-min=5.6km az=177.2*

ISC 16 03:49:05.6±1.9, 38°.22S±0°.06×176°.02E±0°.05, h194km±11km, n76, σ1§94/86, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLZ	**Tolley Road**	**0.40**	**254**	P			**Pn**	**03 49 33.0**	**+1.3**
TOZ	**Tahuroa Road**	**0.64**	**320**	P			**Pn**	**03 49 34.0**	**+1.5**
TOZ				S			**Sn**	**03 49 52.0**	**-1.3**
MRHZ	**

NNZ	Nelson	3.62	213	P	Pn	03 50 03.4 +1.1
QRZ	Quartz Range	3.75	225	P	Pn	03 50 05.2 +1.3
QRZ	Quartz Range	3.75	225	P	Pn	03 50 04.9 +1.0
BSWZ	Blackbirch Sta	3.86	205	P	Pn	03 50 06.4 +1.1
KHZ	Kahutara	4.60	204	P	Pn	03 50 15.4 +0.8
KHZ	Kahutara	4.60	204	P	Pn	03 50 15.6 +1.1
GVZ	Greta Valley S	5.26	205	P	Pn	03 50 23.8 +0.8
LTZ	Lake Taylor	5.38	211	P	Pn	03 50 25.5 +0.8
MQZ	McQueen's Vall	6.04	204	P	Pn	03 50 32.6 -0.6
TMZ	Timaru	7.22	210	P	Pn	03 50 48.9 +0.4

IDC ***16*** *04:31:42.5±1.6, 35˚.24N×26˚.76E, h0km, mb3.3/4, mbtmp3.2/7, ML3.0/3, Error ellipse: s-maj=35.6km s-min=22.9km az=148.0*
ISK ***16*** *04:31:43.5, 35˚.55N×26˚.74E, h8km, ML3.4/11*
ATH ***16*** *04:31:44.2, 35˚.59N×26˚.75E, h7km±3km, ML3.5/6, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
MCSM ***16*** *04:31:44.0±3.1, 36˚N±20˚×2˚.7E±1˚.6, h11km±11km, mb3.4, MLv3.5*
THE ***16*** *04:31:44.1, 36˚.N±4˚×2˚.7E±˚, h7km±6km, M3.3/17, MLh3.3/17*
AFAD ***16*** *04:31:49.1, 35˚.82N×26˚.93E, h28km±3km, ML2.8*

ISC 16 04:31:43.9±1.0, 35˚.59N±0˚.03×26˚.75E±0˚.02, h8km±8km, n104, σ1°26/138, mb3.1/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.34	98	Pg	Pg	04 31 50.8	+0.2
KARP				Sg	Sg	04 31 56.1	+1.1
KARP	Karpathos	0.34	98	P	Pg	04 31 50.7	+0.2
KARP				S	Sg	04 31 55.8	+0.8
KARP	Karpathos	0.34	98	P	Pg	04 31 51.4	+0.9
KARP	Karpathos	0.34	98	P	Pg	04 31 50.5	0.0
KARP				S	Sg	04 31 55.7	+0.8
ZKR	Zakros	0.65	223	Pg	Pg	04 31 55.4	-1.0
ZKR				Sg	Sg	04 32 04.8	0.0
ZKR	Zakros	0.65	223	P	Pg	04 31 55.4	-1.0
ZKR	Zakros	0.65	223	P	Pg	04 31 55.4	-1.0
ZKR				S	Sg	04 32 05.0	+0.1
SIT2	Siteia	0.65	234	P	Pg	04 31 56.8	+0.3
SIT2				S	Sg	04 32 05.7	+0.6
AGNA	Agios Nikolaos	0.94	245	P	Pg	04 32 02.3	+0.4
NPS	Neapolis	0.99	251	P	Pg	04 32 03.0	+0.2
NPS				S	Sg	04 32 15.2	-0.5
NPS	Neapolis	0.99	251	P	Pg	04 32 03.1	+0.2
YAZI	Mula-Dat§a-	1.23	27	P	Pb	04 32 07.2	-0.2
YAZI				S	Sg	04 32 21.4	-2.0
ARG	Arkhangelos	1.28	60	Pn	Pg	04 32 08.6	+0.2
ARG				Sn	Sn	04 32 26.9	+1.5
ARG	Arkhangelos	1.28	60	P	Pg	04 32 08.6	+0.2
ARG				S	Sn	04 32 26.6	+1.3
ARG	Arkhangelos	1.28	60	P	Pg	04 32 08.7	+0.2
THERA	Ancient Thera,	1.29	307	P	Pn	04 32 08.1	-0.2
THERA				S	Sn	04 32 26.1	+0.3
THR8	Santorini-Mono	1.31	309	P	Pn	04 32 08.5	0.0
DAT	Datca	1.32	30	Pn	Pg	04 32 09.3	+0.1
DAT	Datca	1.32	30	P	Pg	04 32 09.6	+0.4
DAT				S	Sb	04 32 24.5	-1.6
DAT				IAML		04 32 40.0	
	comp=E,146nm,0.8s						
DAT				IAML		04 32 43.0	
	comp=N,215nm,0.8s						
THR6	Thira Island,	1.34	305	P	Pn	04 32 08.9	0.0
THR6	Thira Island,	1.34	305	P	Pn	04 32 09.2	+0.3
SFIR	Foira Santorin	1.36	308	P	Pn	04 32 09.0	-0.2
SFIR				S	Sb	04 32 26.8	-0.3
THR3	Thira Island,	1.37	307	P	Pn	04 32 09.3	+0.1
THR3	Thira Island,	1.37	307	P	Pn	04 32 09.4	+0.1
THR9	Santorini-Faro	1.37	304	P	Pn	04 32 09.6	+0.3
THR9	Santorini-Faro	1.37	304	P	Pn	04 32 09.7	+0.5
SNT5	Nea Kammeni, S	1.37	307	P	Pb	04 32 10.2	+0.5
SNT5				S	Sb	04 32 27.6	+0.3
SNT5	Nea Kammeni, S	1.37	307	P	Pb	04 32 09.8	+0.1
THR2	Thira island,	1.37	309	P	Pn	04 32 09.6	+0.3
THR2	Thira island,	1.37	309	P	Pn	04 32 09.6	+0.3
KLNA	Kalymnos	1.37	7	P	Pg	04 32 10.3	+0.1
THR5	Thira Island,	1.41	306	P	Pn	04 32 09.7	-0.1
THR5	Thira Island,	1.41	306	P	Pn	04 32 09.9	+0.1
SAP3	Santorini-Thir	1.42	307	P	Pn	04 32 09.3	-0.7
SAP3				S	Sn	04 32 29.3	+0.5
BODT	Bodrum	1.53	17	Pn	Pb	04 32 12.4	-0.2
BODT	Bodrum	1.53	17	P	Pn	04 32 12.1	+0.5
BODT				S	Sb	04 32 32.8	+0.6
IDI	Anoyia	1.55	259	Pn	Pn	04 32 11.9	0.0
IDI				Sn	Sn	04 32 32.5	+0.2
IDI	Anoyia	1.55	259	P	Pn	04 32 10.3	-1.6
IDI				S	Sn	04 32 31.4	-0.8
IDI	Anoyia	1.55	259	P	Pn	04 32 12.3	+0.4
BDRM	Kayabasi	1.57	21	P	Pg	04 32 14.0	-0.1
BDRM				S	Sn	04 32 29.7	-3.0
BDRM				IAML		04 32 40.0	
	comp=N,104nm,0.5s						
TURN	Turunc	1.69	45	Pn	Pn	04 32 14.2	+0.5
TURN	Turunc	1.69	45	P	Pn	04 32 14.4	+0.7
TURN				S	Sn	04 32 35.0	-0.5
TURN				IAML		04 32 50.0	
	comp=E,100nm,0.6s						
TURN				IAML		04 32 53.0	
	comp=N,125nm,0.4s						
SIVA	Sivas	1.69	251	P	Pn	04 32 14.4	+0.7
SIVA				S	Sb	04 32 36.7	+0.1
SIVA	Sivas	1.69	251	P	Pb	04 32 15.4	+0.2
DDIM	Aydin, Didim	1.90	12	P	Pg	04 32 26.2	+5.8
DDIM				IAML		04 32 58.0	
	comp=N,135nm,0.6s						
DDIM				IAML		04 33 15.0	
	comp=E,152nm,0.9s						
DALY	Dalyan (Mula)	1.96	51	Pn	Pb	04 32 18.9	-1.0
DALY	Dalyan (Mula)	1.96	51	P	Pb	04 32 19.5	-0.4
DALY				S	Sb	04 32 43.6	-0.9
DALY				IAML		04 32 57.0	
	comp=N,96nm,0.6s						
DALY				IAML		04 32 59.0	
	comp=E,132nm,0.9s						
YER	Yerkesik	1.97	38	Pn	Pn	04 32 18.7	+1.0
YER	Yerkesik	1.97	38	P	Pn	04 32 18.1	+0.4
YER				S	Sn	04 32 43.0	+0.4
MULA	Mugla, Merkez-	2.09	37	P	Pb	04 32 21.2	-0.9
MULA				S	Sn	04 32 44.5	-1.1
VAM	Vamos	2.09	266	P	Pn	04 32 19.2	-0.1
GCAM	G?zelcaml?	2.14	10	Pn	Pn	04 32 21.4	+1.5
GCAM	G?zelcaml?	2.14	10	P	Pg	04 32 27.0	+2.1
GCAM				IAML		04 33 06.0	
	comp=E,75nm,1.1s						
SABU	Mula-Dalaman	2.17	55	P	Pb	04 32 22.3	-1.1
SABU				IAML		04 33 11.0	
	comp=E,71nm,0.6s						
SABU				IAML		04 33 13.0	
	comp=N,84nm,0.9s						
IZZE	Mula-Seydike	2.17	66	P	Pb	04 32 22.3	-1.2
IZZE				IAML		04 33 08.0	
	comp=N,131nm,0.4s						
IZZE				IAML		04 33 13.0	
	comp=E,86nm,0.6s						
MHLO	Agia Marina, M	2.20	301	P	Pn	04 32 21.6	+0.9
MHLO				S	Sn	04 32 49.1	+1.0
MHLO	Agia Marina, M	2.20	301	P	Pn	04 32 21.3	+0.6
AYDN	Tasoluk	2.25	23	P	Pb	04 32 23.6	-1.3
AYDN				IAML		04 33 03.0	
	comp=E,57nm,0.8s						
IMMV	Iera Moni Meta	2.27	267	Pn	Pn	04 32 21.5	-0.1
IMMV	Iera Moni Meta	2.27	267	P	Pn	04 32 21.6	-0.1
IMMV				S	Sn	04 32 49.3	-0.4
GVD	Gavdhos	2.31	252	Pn	Pn	04 32 22.8	+0.6
AKAS	Kas	2.40	74	Pn	Pn	04 32 24.6	+0.9
AKAS	Kas	2.40	74	P	Pb	04 32 25.9	-1.6
AKAS				S	Sb	04 32 56.1	-1.2
AKAS				IAML		04 33 15.0	
	comp=E,58nm,0.7s						
DGB	zmir	2.46	2	P	Pb	04 32 28.9	+0.5
DGB				IAML		04 33 13.0	
	comp=N,71nm,1.0s						
DGB				IAML		04 33 13.0	
	comp=E,90nm,0.6s						
CAME	Cameli-Denizli	2.46	56	Pn	Pn	04 32 25.9	+1.4
ESEN	Aydn-Nazilli	2.55	30	P	Pn	04 32 26.2	+0.7
ESEN				S	Sn	04 32 56.4	-0.4
TAVA	DENIZLI_Tavas	2.55	42	P	Pb	04 32 28.3	-1.7
TAVA				S	Sn	04 32 55.0	-2.1
TAVA				IAML		04 33 15.0	
	comp=N,48nm,0.6s						
TAVA				IAML		04 33 19.0	
	comp=E,58nm,0.6s						
CAEL	Denizli, Camel	2.57	53	P	Pb	04 32 29.4	-1.0
KNIK	Mula-Seydike	2.60	60	P	Pn	04 32 28.3	+1.9
KNIK				IAML		04 33 23.0	
	comp=N,37nm,0.8s						
ZEYE	Izmir, Urla-Ze	2.65	356	P	Pb	04 32 31.7	+0.1
ZEYE				IAML		04 33 18.0	
	comp=E,76nm,0.9s						
ZEYE				IAML		04 33 27.0	
	comp=N,68nm,0.7s						
DNIZ	Denizli-Tavas-	2.74	42	P	Pn	04 32 30.1	+1.9
DNIZ				S	Sn	04 33 02.8	+1.1
DNIZ				IAML		04 33 18.0	
	comp=N,83nm,0.6s						
DNIZ				IAML		04 33 23.0	
	comp=E,91nm,0.4s						
APMY	Acipayam-Deniz	2.78	47	Pn	Pn	04 32 29.8	+1.0
GOLH	Golhisar	2.80	53	P	Pn	04 32 31.1	+2.1
GOLH				S	Sb	04 33 06.7	-1.9
GOLH				IAML		04 33 20.0	
	comp=N,71nm,1.0s						
GOLH				IAML		04 33 33.0	
	comp=E,56nm,0.7s						
ELL	Elmali	2.80	65	Pn	Pn	04 32 30.3	+1.2
ANKY	Antikythira Is	2.82	277	P	Pn	04 32 28.6	-0.7
CHOS	Chios island	2.84	349	P	Pn	04 32 29.4	-0.3
KIRA	zmir-Kiraz	2.92	26	P	Pn	04 32 32.3	+1.6
SULTU	Buldan	2.94	33	P	Pn	04 32 31.8	+0.8
SULTU				IAML		04 33 41.0	
	comp=E,28nm,1.4s						
SULTU				IAML		04 33 45.0	
	comp=N,32nm,0.8s						
KARY	Karystos	3.06	323	P	Pn	04 32 32.4	-0.2
KTHA	Kythira Island	3.07	284	P	Pn	04 32 32.4	-0.3
INCE	Denizli-Bozkur	3.10	46	P	Pn	04 32 35.8	+2.6
INCE				S	Sn	04 33 12.4	+1.9
INCE				IAML		04 33 31.0	
	comp=N,44nm,0.6s						
INCE				IAML		04 33 38.0	
	comp=E,29nm,0.9s						
CAMT	Merkez	3.18	8	P	Pn	04 32 37.2	+3.0
CAMT				S	Sg	04 33 23.9	-2.2
CAMT				IAML		04 33 40.0	
	comp=N,39nm,0.9s						
CAMT				IAML		04 33 43.0	
	comp=E,56nm,0.7s						
MANT	Manisa	3.23	26	P	Pn	04 32 37.1	+1.9
MANT				S	Sn	04 33 08.8	-5.2
KTTT	Salihli	3.27	19	P	Pn	04 32 37.8	+2.3
VLI	Velial	3.29	291	P	Pn	04 32 35.9	+0.2
STFN	Stefani	3.64	316	P	Pn	04 32 41.9	+1.3
VLX	Vlachokerasia	3.95	298	P	Pn	04 32 46.5	+1.6
ITM	Ithomi	4.20	294	P	Pn	04 32 49.9	+1.6
EZN	Ezine	4.24	356	P	Pn	04 32 47.3	-1.5
GUR	Gucura	4.24	305	P	Pn	04 32 51.1	+2.2
KLV	Kalavryta, Ach	4.43	305	P	Pn	04 32 53.8	+2.3
YLV	Yalova	5.38	22	P	Pn	04 33 04.2	-0.3
	0.0nm5.1nm,0.7s						
CSS	Mathiatis	5.42	95	P	Pn	04 33 05.0	0.0
	0.1nm25nm,1.1s						
CSS				Sn	Sn	04 34 07.1	-0.5
	0.1nm25nm,1.1s						
BRTR	Keskin Array B	6.84	51	Pn	Pn	04 33 29.4	+4.7
	0.2nm,0.3s,baz=215,slow=14,SNR=1.7						
	0.5nm,0.6s						
LUBAR	Lubar, Ukraine	14.34	3	P	Pn	04 35 05.7	-1.4
AKASG	Malin Array Be	15.21	6	Pn	P	04 35 24.0	+0.1
	0.5nm,0.3s,baz=196,slow=11,SNR=4.3						
	0.1nm,0.3s						
AK03	Malin Array Si	15.23	6	P	Pn	04 35 17.9	-1.3
AK22	Malin Array Si	15.25	6	P	Pn	04 35 18.2	-1.3
RNPP9	Sopachiv	15.83	358	P	Pn	04 35 25.7	-1.2
GERES	GERESS Array B	16.36	328	Pn	P	04 35 36.8	-0.1
	baz=153,slow=12,SNR=5.1						
	0.2nm,0.3s						
ESDC	Sonseca Array	24.60	289	P	P	04 37 04.5	-0.1
	0.3nm,0.6s,baz=84,slow=9.7,SNR=4.6						
	0.3nm,0.6s						
EKA	Eskdalemuir Ar	28.46	323	P	P	04 37 42.5	+3.4
	0.5nm,0.5s,baz=116,slow=9.0,SNR=2.2						
	0.5nm,0.5s						
TORD	Torodi Ar. Bea	31.77	232	P	P	04 38 07.4	-1.4
	0.2nm,0.4s,baz=31,slow=7.2,SNR=5.4						
	0.2nm,0.4s						
MKAR	Makanchi Array	42.45	57	P	P	04 39 39.9	+0.7
	0.1nm,0.3s,baz=272,slow=8.2,SNR=5.1						
	0.1nm,0.3s						

DNK ***16*** *04:39:28.3±2.3, 79˚.05N×3˚.12E, h40km±52km, ML1.0, Presumed earthquake*
KOLA ***16*** *04:39:31.0, 79˚.05N×4˚.29E, h0km, ML1.9, Error ellipse: s-maj=26.6km s-min=22.0km az=130.0, Greenland sea,Knipovich ridge, north*
BER ***16*** *04:39:30.7±2.1, 79˚.20N×2˚.97E, h30km±20km, Mw3.7, Confirmed Earthquake*

ISC 16 04:39:23.9±1.0, 79˚.08N±0˚.07×2˚.47E±0˚.03, h10km, n16, σ2°50/29, 1C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.82	90	i P	Pb	04 39 57.0	-0.3
KBS				eS	Sn	04 40 15.7	-2.6
KBS				IAMLHF		04 40 18.4	
	comp=Z,16nm,0.2s						
KBS	Kingsbay	1.82	90	P	Pb	04 39 56.7	-0.6
KBS				S	Sn	04 40 15.4	-3.0
KBS	Kingsbay	1.82	90	i P	Pn	04 39 55.8	+0.5
KBS				i S	Sn	04 40 14.4	-4.0
BRBB	Barentsburg B	2.54	107	eP	Pb	04 40 08.3	-1.1
BRBB				eS	Sn	04 40 34.8	-1.1
BRBB	Barentsburg B	2.54	107	S	Sn	04 40 35.5	-0.3
SPA0	Spitsbergen Ar	2.90	101	eP	Pn	04 40 13.0	+3.0
SPA0				eS	Sn	04 40 43.9	-0.9
SPA0				IAMLHF		04 40 48.4	
	comp=Z,2.5nm,0.2s						
SPITS	Spitsbergen Ar	2.90	101	P	Pn	04 40 12.9	+3.0
SPITS				S	Sn	04 40 45.1	+0.3
HSPB	Hornsund (broa	3.42	121	eP	Pn	04 40 21.3	+4.1
HSPB				eS	Sn	04 40 57.3	-0.4
HSPB				IAMLHF		04 41 03.3	
	comp=Z,0.8nm,0.2s						
HSPB	Hornsund (broa	3.42	121	P	Pn	04 40 20.3	+3.1
HSPB				S	Sn	04 40 57.1	-0.7
NOR	Nord	4.08	317	e	Pn	04 40 29.0	+2.8
NOR				eS	Sn	04 41 12.6	-1.2
NOR	Nord	4.08	317	i P	Pn	04 40 27.2	+1.0
NOR				eS	Sn	04 41 14.3	+0.5
NOR				IAML		04 41 16.6	
	comp=Z,0.4nm,0.2s						
DAG	Danmarks Havn	4.98	253	eP	Pn	04 40 43.5	+5.0
DAG				eS	Sn	04 41 35.7	-0.3
DAG				IAMLHF		04 41 39.5	
	comp=Z,1.3nm,0.1s						
DAG	Danmarks Havn	4.98	253	i P	Pn	04 40 42.0	+3.5
DAG				i S	Sn	04 41 34.1	-1.9
DAG				IAML		04 41 40.0	
	comp=Z,1.5nm,0.1s						
HOPEN	Hopen	5.40	107	eP	Pn	04 40 46.7	+2.4
HOPEN				eS	Sn	04 41 43.0	-3.4
HOPEN				IAMLHF		04 41 47.1	
	comp=Z,1.9nm,0.2s						
DBG	Daneborg	7.03	239	eP	Pn	04 41 12.5	+5.8
DBG				eS	Sn	04 42 24.3	-2.3
DBG				IAMLHF		04 42 26.5	
	comp=Z,0.3nm,0.1s						
DBG	Daneborg	7.03	239	i P	Pn	04 41 08.8	+2.1
DBG				i S	Sn	04 42 21.3	-5.3
DBG				IAML		04 43 20.6	
	comp=Z,0.4nm,0.3s						

CATAC ***16*** *05:04:47.4, 14˚N±4˚×9˚2W±˚, h1km±2km, M3.3/13, MLv3.3/13, confirmed*
MEX ***16*** *05:04:49.5±0.7, 13˚.62N×92˚.50W, h10km, MD3.8*
GCG ***16*** *05:04:49.7±1.4, 13˚.62N×92˚.16W, h33km, MD4.4, Presumed earthquake*

ISC 16 05:04:47.5±2.0, 13˚.6N±0˚.1×92˚.28W±0˚.09, h21km±6km, n27, σ0°88/39, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.08	32	P	Pb	05 05 07.8	+0.2
RTAL	Retalhuleu	1.08	32	eP	Pb	05 05 08.1	+0.5
RTAL				eS	Sn	05 05 23.3	+1.4
STG5	El Palmar, Qui	1.21	48	i P	Pb	05 05 09.9	+0.1
STG8	El Palmar, Qui	1.24	47	i P	Pb	05 05 10.7	+0.4
THIG		1.30	1	eP	Pn	05 05 10.3	-0.2
THIG				eS	Sn	05 05 26.2	-1.1
CHUJ	Union Juarez	1.50	6	eP	Pn	05 05 12.9	-0.5
CHUJ				eS	Sn	05 05 31.6	-0.8
PATR	El Naranjo	1.51	2	eP	Pn	05 05 13.5	-0.1
PATR				eS	Sn	05 05 32.3	-0.4
PAVE	Pavencul	1.59	4	eP	Pn	05 05 14.6	0.0
PAVE				eS	Sn	05 05 33.1	-1.6
HUEH	Huehuetenango	1.87	24	P	Pn	05 05 19.7	+1.2
HUEH	Huehuetenango	1.87	24	eP	Pn	05 05 19.3	+0.8
HUEH				eS	Sb	05 05 44.3	+0.2
HUEH	Huehuetenango	1.87	24	i P	Pb	05 05 19.8	-1.3
FAME	Alcaldia de Sa	2.21	83	P	Pn	05 05 23.6	+0.5
FAME				S	Sn	05 05 47.3	-2.5
APG	El Apazote	2.25	51	eP	Pn	05 05 25.0	+1.4
NUBE	Las Nubes	2.45	83	P	Pn	05 05 26.1	-0.2
NUBE				S	Sn	05 05 55.2	-0.6
NUBE	Las Nubes	2.45	83	i P	Pn	05 05 25.9	-0.5
SLOZ	Alcaldia de Sa	2.46	80	P	Pn	05 05 27.2	+0.8
JAYA	Jayaque - finc	2.75	88	P	Pn	05 05 31.6	+1.0
JAYA				S	Sn	05 06 02.9	-0.4
JAYA	Jayaque - finc	2.75	88	i P	Pn	05 05 30.4	-0.2
MTO3	Montecristo	2.94	74	P	Pn	05 05 33.6	+0.3
MTO3	Montecristo	2.94	74	i P	Pn	05 05 33.4	+0.2
ESQU	Esquipulas	3.01	71	P	Pn	05 05 33.8	-0.2
TGIG		3.27	346	eP	Pn	05 05 38.5	+1.0
TGIG				eS	Sn	05 06 15.1	-0.7
COEG	Centro de Oper	3.31	89	P	Pn	05 05 39.3	+1.2
COEG				S	Sn	05 06 16.3	-0.5
TECO	Alcaldia de Te	3.40	91	P	Pn	05 05 39.9	+0.5
TECO				S	Sn	05 06 19.0	-0.2
SARH	Santa Rosa de	3.61	71	P	Pn	05 05 43.0	+0.8
LCND	La Caada	4.28	93	P	Pn	05 05 51.4	0.0
CMIG	Matias Romero	4.29	324	eP	Pn	05 05 52.6	+1.1
CMIG				eS	Sn	05 06 31.7	-9.3

WEL 16 05:23:11.0±1.0, 36˚S±9˚×17˚9E±1˚2, h209km±11km, M3.7/13, ML3.7/17, MLv3.7/13, Error ellipse: s-maj=15.5km s-min=11.7km az=103.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.69	186	P	Pn	05 23 46.8	-0.3
MXZ				S	S	05 24 15.6	+0.5
WMGZ	Waiomatatini S	1.93	182	P	Pn	05 23 50.0	+0.5
WMGZ				S	S	05 24 21.3	+2.0
HAZ	Te Kaha	1.96	197	P	Pn	05 23 49.4	-0.3
HAZ				S	S	05 24 19.8	+0.1
RUGZ	Raukumara Rang	2.18	198	P	Pn	05 23 51.5	-0.6
PUZ	Puketiti	2.19	185	P	Pn	05 23 52.8	+0.7
PUZ				S	S	05 24 24.3	+0.2
MWZ	Matawai	2.57	198	P	Pn	05 23 56.3	+0.1
TKGZ	Te Karaka	2.61	192	P	Pn	05 23 56.8	+0.2
TKGZ				S	S	05 24 32.9	+1.0
CNGZ	Carnagh Statio	2.61	185	P	Pn	05 23 57.6	+1.0
URZ	Urewera	2.62	205	P	Pn	05 23 56.4	-0.3
URZ				S	S	05 24 32.8	+0.5
RAGZ	Rawiri	2.75	198	P	Pn	05 23 58.7	+0.4
RIGZ	Rimuhau	2.88	192	P	Pn	05 23 59.8	+0.1
MUGZ	Murupara	2.94	208	P	Pn	05 24 00.1	-0.3
RTZ	Ruatahuna	2.99	204	P	Pn	05 24 00.5	-0.5
SNGZ	Shannon Statio	3.04	198	P	Pn	05 24 01.9	+0.4
SNGZ				S	S	05 24 42.0	+1.1
PRGZ	Paritu Road	3.08	189	P	Pn	05 24 01.8	-0.2
KNZ	Kokohu	3.20	192	P	Pn	05 24 03.1	-0.3
KNZ				S	S	05 24 44.5	+0.3
RAHZ	Arahi	3.23	200	P	Pn	05 24 03.6	-0.3
MTHZ	Maungataniwha	3.25	204	P	Pn	05 24 04.0	0.0
MHGZ	Mahia Peninsul	3.30	188	P	Pn	05 24 04.7	+0.1
WCZ	Waipu Caves	3.38	268	P	Pn	05 24 05.7	+0.1
NMHZ	Naumai	3.48	202	P	Pn	05 24 06.7	+0.1
NMHZ				S	S	05 24 52.0	+1.7
ARHZ	Aropaoanui	3.58	199	P	Pn	05 24 07.5	-0.4
MCHZ	McNeill Hill	3.84	202	P	Pn	05 24 10.9	-0.1
KWHZ	Kaweka Forest	3.91	205	P	Pn	05 24 11.6	-0.3
TMVZ	Te Maari	3.92	214	P	Pn	05 24 11.8	-0.4
HIZ	Hauiti	3.93	227	P	Pn	05 24 13.7	+1.6
ETVZ	East Tongariro	3.94	214	P	Pn	05 24 11.9	-0.5
OTVZ	Oturere	3.98	214	P	Pn	05 24 12.4	-0.6
SNVZ	South Ngauruho	4.01	214	P	Pn	05 24 12.8	-0.5
FWVZ	Far West T-bar	4.11	214	P	Pn	05 24 13.8	-0.8
KAHZ	Kahuranaki	4.11	198	P	Pn	05 24 13.5	-1.0
KAHZ				S	S	05 25 04.8	+0.6
KRHZ	Kereru	4.12	204	P	Pn	05 24 13.2	-1.4
PXZ	Pawanui	4.34	197	P	Pn	05 24 16.1	-1.1
PNHZ	Pukenui	4.42	204	P	Pn	05 24 16.7	-1.6
PRHZ	Porangahau	4.62	198	P	Pn	05 24 18.2	-2.5
DVHZ	Dannevirke	4.78	202	P	Pn	05 24 20.9	-1.9
BFZ	Birch Farm	5.11	200	P	Pn	05 24 25.0	-1.9

NIED ***16*** *05:34:07.0, 40˚.94N×143˚.10E, h14km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.75; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-0.88; $M_{r\theta}$0.54; $M_{\theta\phi}$0.04; $M_{\phi r}$0.97; Fault plane solution: M_o1.38000×10^{14} NP1: ϕ_s156.00000°, δ24.00000°, λ46.00000°. NP2:ϕ_s22.00000°, δ73.00000°, λ107.00000°.*

JMA 16 05:34:07.0±0.3, 40˚.9N±0˚.4×143˚.1E±0˚.7, h14km±3km, MV3.5/33, E OFF AOMORI PREF, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	1.07	2	eP	Pb	05 34 27.0	-0.3
JEM				eS	Sg	05 34 41.5	-0.1
JKEN	Kujiedanarisaw	1.29	236	P	Pn	05 34 30.2	-0.4
JKEN				S	S

baz=128,slow=22
7.9nm,0.5s
JAY Jayapura 5.87 76 P **Pn 05 54 18.5 +0.4**
12nm,0.9s
WRA Warramunga Arr 15.93 182 Pn **Pn 05 56 32.7 -2.5**
0.4nm,0.3s,baz=4.5,slow=13,SNR=16
WRA Sn Sn 05 59 19.5 -12
0.2nm,0.3s,baz=0.3,slow=24,SNR=2.4
FITZ Fitzroy Crossi 16.80 212 Pn **Pn 05 56 45.1 -1.1**
1.0nm,0.3s,baz=38,slow=12,SNR=20
FITZ Sn Sn 05 59 40.3 -12
0.9nm,0.3s,baz=184,slow=16,SNR=6.5
CTA Charters Tower 19.45 147 P **P 05 57 19.6 +2.1**
0.7nm,0.3s,baz=326,slow=11,SNR=8.6
5.1nm,0.7s
ASAR Alice Springs 19.65 183 P **Pn 05 57 22.6 +1.4**
2.6nm,0.3s,baz=8.5,slow=10,SNR=188
ASAR S **S 06 00 55.8 -4.5**
1.7nm,1.0s,baz=8.8,slow=19,SNR=4.2
16nm,0.8s
MKAR Makanchi Array 68.54 324 P **P 06 03 54.1 +0.9**
1.0nm,0.6s,baz=116,slow=8.2,SNR=12
1.0nm,0.6s
KURBB Kurchatov Arra 72.63 326 P **P 06 04 20.3 +2.3**
0.2nm,0.3s,baz=116,slow=6.3,SNR=1.1
0.2nm,0.3s
ILAR Eielson Array 88.48 25 P **P 06 05 41.3 -1.3**
0.4nm,0.8s,baz=259,slow=5.3,SNR=3.3
0.4nm,0.8s

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*MAN **16** 05:57:00.0,6.58N×125.13E,h1km,MS3.5*
ISC 16 05:57:01.4±1.2,6.59N±0.03×125.15E±0.04,h11km±10km, n11,σ1§18/19,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.43**	**352**	*eP*		**Pg**		**05 57 09.2**	**-0.7**
KCP				*i* S		**Sg**		**05 57 15.6**	**+0.1**
GSPH	**General Santos**	**0.53**	**202**	*i* P		**Pn**		**05 57 14.5**	**-0.6**
GSPH				*i* S		**Sn**		**05 57 23.9**	**-0.2**
DAV	**Davao City (W)**	**0.64**	**41**	P		**Sg**		**05 57 22.0**	**-0.4**
DDMP	**Don Marcelino,**	**0.73**	**131**	*i* P		**Pg**		**05 57 15.7**	**+0.1**
DDMP				*i* S		**Sb**		**05 57 27.5**	**+1.2**
CTBH	**Cotabato--PC H**	**1.10**	**305**	*i* P		**Pb**		**05 57 21.6**	**-0.8**
BUKP	**Musuan**	**1.29**	**356**	*eP*		**Pn**		**05 57 23.9**	**-1.5**
BUKP				*eS*		**Sb**		**05 57 41.5**	**-0.8**
CDOP	**Cateel, Davao**	**1.75**	**47**	*eP*		**Pn**		**05 57 32.0**	**+0.3**
CDOP				*eS*		**Sn**		**05 57 54.5**	**+0.6**
CGP	**Cagayan de Oro**	**1.91**	**346**	*eP*		**Pn**		**05 57 33.2**	**-0.8**
CGP				*i* S		**Sn**		**05 57 58.3**	**+0.2**
BIPH	**Bislig**	**1.99**	**37**	*eP*		**Pn**		**05 57 36.0**	**+1.0**
BIPH				*eS*		**Sb**		**05 58 03.0**	**+0.4**
PAGZ	**Pagadian**	**2.16**	**306**	*eP*		**Pb**		**05 57 38.9**	**-1.6**
DCPH	**Dipolog City**	**2.67**	**318**	*i* P		**Pg**		**05 57 55.4**	**+2.8**
DCPH				*i* S		**Sg**		**05 58 28.8**	**+1.5**

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*ANF **16** 06:31:21.8±0.3,58.32N×133.51W,h1km±2km, ML3.6/28, Error ellipse: s-maj=1.3km s-min=1.0km az=73.0*
*NEIC **16** 06:31:21.9±0.9,58.35N±0.02×133.47W±0.03,h4km±6km, ML3.3/58,ML3.3(AEIC),Error ellipse: s-maj=2.8km s-min=1.8km az=149.0*
*AEIC **16** 06:31:21.9±1.2,58.33N±0.02×133.47W±0.03,h3km±6km, Error ellipse: s-maj=3.0km s-min=2.0km az=142.0*
*PGC **16** 06:31:22.6±0.1,58.32N×133.48W,h2km,ML3.5/27, ML3.2(NEIC),53km east of Juneau, Alaska, Usa Southeastern Alaska*
ISC 16 06:31:21.2±1.1,58.38N±0.02×133.49W±0.02,h2km±10km, n162,σ1§64/235,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.48**	**258**			**Pg**		**06 31 31.4**	**+1.0**
JIS						**Sg**		**06 31 38.0**	**+1.4**
R32K	**Eaglecrest**	**0.55**	**259**			**Pg**		**06 31 32.6**	**+0.9**
R32K						**Sg**		**06 31 39.5**	**+0.6**
R32K	**Eaglecrest**	**0.55**	**259**	P		**Pg**		**06 31 32.6**	**+0.9**
	baz=84,SNR=55								
R32K				S		**Sg**		**06 31 40.0**	**+1.1**
	baz=84								
BESE	**Bessie Mountai**	**0.74**	**286**	P		**Pg**		**06 31 36.2**	**+0.8**
BESE				S		**Sg**		**06 31 46.2**	**+1.1**
BESE	**Bessie Mountai**	**0.74**	**286**			**Pg**		**06 31 36.2**	**+0.8**
BESE				Sg		**Sg**		**06 31 46.5**	**+1.5**
Q32M	**Nakina River**	**0.86**	**47**	P		**Pg**		**06 31 38.6**	**+1.0**
Q32M				S		**Sb**		**06 31 51.7**	**+0.7**
Q32M	**Nakina River**	**0.86**	**47**			**Pb**		**06 31 38.9**	**-0.1**
Q32M						**Sb**		**06 31 50.3**	**-0.7**
Q32M	**Nakina River**	**0.86**	**47**	P		**Pb**		**06 31 38.7**	**-0.2**
	baz=225,SNR=176								
Q32M				S		**Sb**		**06 31 51.2**	**+0.2**
	baz=225								
S32K	**Killisnoo**	**1.08**	**213**			**Pg**		**06 31 42.0**	**+0.1**
S32K				Sg		**Sb**		**06 31 56.5**	**-0.7**
S32K	**Killisnoo**	**1.08**	**213**	P		**Pg**		**06 31 41.4**	**-0.5**
	baz=34,SNR=86								
S32K				Sb		**Sn**		**06 31 57.4**	**-1.6**
	baz=34								
R31K	**City Hall, Gus**	**1.19**	**272**	P		**Pg**		**06 31 44.9**	**+1.1**
R31K				S		**Sn**		**06 32 00.4**	**-1.0**
R31K	**City Hall, Gus**	**1.19**	**272**			**Pb**		**06 31 44.2**	**-0.2**
R31K						**Sn**		**06 32 01.4**	**0.0**
R31K	**City Hall, Gus**	**1.19**	**272**	P		**Pn**		**06 31 44.4**	**-0.4**
	baz=93,SNR=10								
R31K				S		**Sn**		**06 32 00.7**	**-0.7**
	baz=93								
P32M	**Atlin**	**1.22**	**355**	P		**Pn**		**06 31 44.5**	**-0.7**
P32M				S		**Sn**		**06 32 03.6**	**+1.3**
P32M	**Atlin**	**1.22**	**355**			**Pn**		**06 31 44.9**	**-0.4**
P32M				IAML				06 32 05.2	
	comp=E,345nm,0.5s								
P32M	**Atlin**	**1.22**	**355**	P		**Pb**		**06 31 45.2**	**+0.3**
	baz=174,SNR=148								
P32M				S		**Sn**		**06 32 02.0**	**-0.4**
	baz=174								
S34M	**Telegraph Cree**	**1.34**	**110**	P		**Pn**		**06 31 45.6**	**-1.2**
S34M				S		**Sg**		**06 32 04.3**	**+0.3**
S34M	**Telegraph Cree**	**1.34**	**110**			**Pn**		**06 31 45.7**	**-1.1**
S34M						**Sg**		**06 32 04.3**	**+0.3**
S34M				IAML				06 32 07.5	
	comp=N,712nm,0.3s								
S34M	**Telegraph Cree**	**1.34**	**110**	P		**Pn**		**06 31 45.9**	**-0.9**
	baz=290,SNR=190								
S34M				S		**Sg**		**06 32 05.1**	**+1.1**
	baz=290								
SKAG	**Skagway**	**1.44**	**319**			**Pb**		**06 31 48.8**	**+0.1**
SKAG						**Sg**		**06 32 08.6**	**+1.2**
SKAG				IAML				06 32 14.2	
	comp=E,379nm,0.6s								
SKAG				IAML				06 32 14.2	
	comp=N,305nm,0.7s								
SKAG	**Skagway**	**1.44**	**319**	P		**Pb**		**06 31 48.9**	**+0.2**
	baz=139,SNR=56								
SKAG				S		**Sg**		**06 32 09.9**	**+2.5**
	baz=139								
S31K	**Pelican**	**1.51**	**255**			**Pb**		**06 31 49.4**	**-0.5**
S31K	**Pelican**	**1.51**	**255**	P		**Pn**		**06 31 49.1**	**-0.1**
	baz=75,SNR=9.5								
S31K				S		**Sg**		**06 32 10.0**	**+0.3**
	baz=75								
T33K	**Petersburg**	**1.60**	**169**	Pn		**Pb**		**06 31 50.3**	**-1.1**
T33K				Sn		**Sb**		**06 32 11.2**	**-0.8**
T33K	**Petersburg**	**1.60**	**169**			**Pn**		**06 31 50.1**	**-0.3**
T33K	**Petersburg**	**1.60**	**169**	P		**Pb**		**06 31 50.3**	**-1.1**
	baz=350,SNR=20								
T33K				S		**Sg**		**06 32 11.6**	**-0.8**
	baz=350								
SIT	**Sitka**	**1.66**	**217**			**Pn**		**06 31 51.2**	**0.0**
SIT						**Sb**		**06 32 12.5**	**-1.0**
SIT				IAML				06 32 19.5	
	comp=N,260nm,1.0s								
SIT	**Sitka**	**1.66**	**217**	P		**Pn**		**06 31 51.1**	**0.0**
	baz=37,SNR=9.8								
SIT				S		**Sb**		**06 32 12.9**	**-0.7**
	baz=37								
R33M	**Jennings River**	**1.66**	**51**	Pn		**Pb**		**06 31 52.3**	**-0.2**
R33M				Sn		**Sg**		**06 32 14.9**	**+0.6**
R33M	**Jennings River**	**1.66**	**51**			**Pb**		**06 31 52.0**	**-0.5**
R33M				IAML				06 32 17.3	
	comp=N,559nm,1.0s								
R33M				IAML				06 32 20.3	
	comp=E,377nm,0.7s								
R33M	**Jennings River**	**1.66**	**51**	P		**Pb**		**06 31 52.3**	**-0.2**
	baz=232								
R33M				S		**Sg**		**06 32 15.8**	**+1.5**
	baz=232								
DLBC	**Dease Lake**	**1.82**	**87**	Pn		**Pb**		**06 31 54.1**	**-1.2**
DLBC				Sn		**Sb**		**06 32 17.5**	**-1.1**
DLBC	**Dease Lake**	**1.82**	**87**			**Pb**		**06 31 54.5**	**-0.8**
DLBC	**Dease Lake**	**1.82**	**87**	P		**Pb**		**06 31 54.2**	**-1.0**
	baz=268,SNR=241								
DLBC				Sb		**Sg**		**06 32 21.0**	**+1.4**
	baz=268								
PLBC	**Pleasant Camp**	**1.84**	**307**	Pn		**Pb**		**06 31 55.3**	**-0.2**
PLBC				Sn		**Sb**		**06 32 19.1**	**+0.1**
PLBC	**Pleasant Camp**	**1.84**	**307**			**Pb**		**06 31 55.5**	**0.0**
PLBC						**Sb**		**06 32 20.1**	**+1.1**
PLBC	**Pleasant Camp**	**1.84**	**307**	Pb		**Pb**		**06 31 56.1**	**+0.6**
	baz=126,SNR=111								
PLBC				S		**Sg**		**06 32 20.5**	**+0.3**
	baz=126								
P33M	**Teslin, Yukon**	**1.87**	**10**	Pn		**Pb**		**06 31 55.5**	**-0.5**
P33M				Sn		**Sb**		**06 32 20.6**	**+0.8**
P33M	**Teslin, Yukon**	**1.87**	**10**			**Pb**		**06 31 55.5**	**-0.5**
P33M				IAML				06 32 23.7	
	comp=N,185nm,0.8s								
P33M	**Teslin, Yukon**	**1.87**	**10**	P		**Pb**		**06 31 55.4**	**-0.6**
	baz=190								
P33M				S		**Sg**		**06 32 21.4**	**+0.3**
	baz=190								
WRAK	**Wrangell Islan**	**2.06**	**162**	Pn		**Pn**		**06 31 56.3**	**-0.5**
WRAK				Sn		**Sn**		**06 32 21.9**	**-1.2**
WRAK	**Wrangell Islan**	**2.06**	**162**			**Pn**		**06 31 56.9**	**+0.1**
WRAK				IAML				06 32 27.7	
	comp=N,209nm,0.7s								
WRAK				IAML				06 32 36.4	
	comp=N,182nm,0.8s								
WRAK	**Wrangell Islan**	**2.06**	**162**	P		**Pn**		**06 31 56.6**	**-0.1**
	baz=343,SNR=28								
WRAK				Sb		**Sg**		**06 32 26.5**	**-0.9**
	baz=343								
T35M	**Bob Quinn**	**2.24**	**128**	Pn		**Pn**		**06 31 59.8**	**+0.5**
T35M				Sg		**Sg**		**06 32 32.0**	**-0.9**
T35M	**Bob Quinn**	**2.24**	**128**			**Pn**		**06 31 59.9**	**+0.7**
T35M				IAML				06 32 34.8	
	comp=N,274nm,0.8s								
T35M				IAML				06 32 39.1	
	comp=E,252nm,0.8s								
T35M	**Bob Quinn**	**2.24**	**128**	P		**Pn**		**06 31 59.2**	**-0.1**
	baz=309,SNR=42								
T35M				Sb		**Sg**		**06 32 32.2**	**-0.7**
	baz=309								
U33K	**Whale Pass**	**2.28**	**175**			**Pn**		**06 31 59.4**	**-0.4**
U33K				IAML				06 32 41.9	
	comp=E,136nm,1.0s								
U33K	**Whale Pass**	**2.28**	**175**	P		**Pn**		**06 31 59.3**	**-0.4**
	baz=355,SNR=12								
U33K				Sb		**Sg**		**06 32 32.8**	**-1.6**
	baz=355								
WHY	**Whitehorse**	**2.39**	**343**	Pn		**Pn**		**06 32 02.6**	**+1.1**
WHY				Sn		**Sb**		**06 32 34.0**	**-1.0**
WHY	**Whitehorse**	**2.39**	**343**			**Pn**		**06 32 02.8**	**+1.3**
WHY				IAML				06 32 42.5	
	comp=N,184nm,0.7s								
WHY	**Whitehorse**	**2.39**	**343**	P		**Pn**		**06 32 02.8**	**+1.3**
	baz=162								
WHY				S		**Sb**		**06 32 34.4**	**-0.6**
	baz=162								
P30M	**Million Dollar**	**2.50**	**316**	Pn		**Pb**		**06 32 04.8**	**-1.9**
P30M				Sn		**Sb**		**06 32 35.7**	**-2.2**
P30M	**Million Dollar**	**2.50**	**316**			**Pb**		**06 32 05.1**	**-1.6**
P30M				IAML				06 32 52.1	
	comp=N,137nm,1.1s								
P30M				IAML				06 32 53.2	
	comp=E,124nm,1.0s								
P30M	**Million Dollar**	**2.50**	**316**	P		**Pn**		**06 32 04.6**	**+1.8**
	baz=134								
P30M				S		**Sb**		**06 32 37.1**	**-0.7**
	baz=134								
P29M	**Windy Craggy**	**2.53**	**301**	Pn		**Pb**		**06 32 05.4**	**-1.8**
P29M				Sn		**Sn**		**06 32 36.4**	**+1.8**
P29M	**Windy Craggy**	**2.53**	**301**			**Pn**		**06 32 03.8**	**+0.6**
P29M				IAML				06 32 58.8	
	comp=E,133nm,0.8s								
P29M	**Windy Craggy**	**2.53**	**301**	P		**Pn**		**06 32 04.4**	**+1.2**
	baz=119								
P29M				Sb		**Sg**		**06 32 41.9**	**-0.4**
	baz=119								
O30N	**Mendenhall**	**2.74**	**332**	Pn		**Pn**		**06 32 07.5**	**+1.4**
O30N				Sn		**Sn**		**06 32 41.5**	**+1.7**
O30N	**Mendenhall**	**2.74**	**332**			**Pn**		**06 32 07.9**	**+1.8**
O30N				IAML				06 32 52.5	
	comp=E,160nm,0.6s								
O30N				IAML				06 33 02.6	
	comp=N,108nm,1.1s								
O30N	**Mendenhall**	**2.74**	**332**	P		**Pn**		**06 32 07.6**	**+1.4**
	baz=150								
O30N				Sb		**Sg**		**06 32 49.0**	**0.0**
	baz=150								
N32M	**Quiet Lake**	**2.79**	**4**	Pn		**Pn**		**06 32 08.5**	**+1.7**
N32M				Sg		**Sg**		**06 32 51.4**	**+0.9**
N32M	**Quiet Lake**	**2.79**	**4**			**Pn**		**06 32 08.8**	**+2.0**
N32M	**Quiet Lake**	**2.79**	**4**	P		**Pn**		**06 32 08.7**	**+2.0**
	baz=184								
N32M				Sb		**Sg**		**06 32 51.4**	**+0.9**
	baz=184								
CRAG	**Craig**	**2.93**	**176**	Pn		**Pn**		**06 32 08.6**	**-0.1**
CRAG	**Craig**	**2.93**	**176**	P		**Pn**		**06 32 08.8**	**+0.2**
	baz=356								
WTLY	**Watson Lake, Y**	**2.97**	**52**	Sb		**Sg**		**06 32 56.4**	**0.0**
	baz=235								
HYT	**Haines Junctio**	**3.19**	**322**	Pn		**Pn**		**06 32 14.4**	**+2.0**
HYT				Sg		**Sg**		**06 33 03.5**	**0.0**
HYT	**Haines Junctio**	**3.19**	**322**			**Pn**		**06 32 14.8**	**+2.3**
HYT				IAML				06 33 11.9	
	comp=N,122nm,0.9s								
HYT				IAML				06 33 14.5	
	comp=E,87nm,1.2s								
HYT	**Haines Junctio**	**3.19**	**322**	P		**Pn**		**06 32 14.0**	**+1.6**
	baz=139								
HYT				Sb		**Sg**		**06 33 02.5**	**-1.0**
	baz=139								
YUK7	**Dusty Glacier**	**3.21**	**314**	Pn		**Pn**		**06 32 13.9**	**+1.2**
YUK7				Sn		**Sn**		**06 32 52.1**	**+0.5**
V35K	**Ketchikan**	**3.23**	**161**			**Pn**		**06 32 12.8**	**0.0**
V35K				IAML				06 33 07.1	
	comp=N,60nm,0.9s								
V35K				IAML				06 33 13.3	
	comp=E,64nm,1.2s								
O29M	**Mount Kennedy**	**3.24**	**309**	Pn		**Pn**		**06 32 14.1**	**+1.0**
O29M	**Mount Kennedy**	**3.24**	**309**			**Pn**		**06 32 14.2**	**+1.1**
O29M				IAML				06 33 08.9	
	comp=N,99nm,0.7s								
O29M				IAML				06 33 09.0	
	comp=E,97nm,0.8s								
O29M	**Mount Kennedy**	**3.24**	**309**	Pb		**Pb**		**06 32 20.5**	**+1.1**
	baz=125								
O29M				Sb		**Sg**		**06 33 03.7**	**-1.4**
	baz=125								
N31M	**Braeburn, Yuko**	**3.32**	**341**	Pn		**Pn**		**06 32 15.9**	**+1.7**
N31M				Sg		**Sg**		**06 33 07.5**	**-0.2**
N31M	**Braeburn, Yuko**	**3.32**	**341**	P		**Pn**		**06 32 16.0**	**+1.9**
	baz=159,SNR=26								
N31M				Sb		**Sg**		**06 33 07.0**	**-0.7**
	baz=159								
YUK5	**Granite Creek**	**3.53**	**323**	Pn		**Pn**		**06 32 19.3**	**+2.2**
YUK5				Sg		**Sg**		**06 33 13.4**	**-1.1**
N30M	**Aishikik Lake**	**3.58**	**331**	Pn		**Pn**		**06 32 19.9**	**+2.2**
N30M				Sg		**Sg**		**06 33 14.9**	**-1.1**
N30M	**Aishikik Lake**	**3.58**	**331**			**Pn**		**06 32 19.6**	**+1.9**
N30M				IAML				06 33 24.8	
	comp=E,62nm,0.7s								
N30M				IAML				06 33 28.0	
	comp=N,71nm,0.6s								
N30M	**Aishikik Lake**	**3.58**	**331**	P		**Pn**		**06 32 19.8**	**+2.1**
	baz=148,SNR=17								
N30M				Sb		**Sg**		**06 33 14.9**	**-1.1**
	baz=148								
M31M	**Drury Creek, Y**	**3.86**	**354**	Pn		**Pn**		**06 32 24.0**	**+2.5**
M31M	**Drury Creek, Y**	**3.86**	**354**			**Pn**		**06 32 24.3**	**+2.8**
M31M				IAML				06 33 29.5	
	comp=E,78nm,1.0s								
M31M				IAML				06 33 40.1	
	comp=N,50nm,1.0s								
M31M	**Drury Creek, Y**	**3.86**	**354**	P		**Pn**		**06 32 23.9**	**+2.4**
	baz=173,SNR=27								
M31M				Sb		**Sg**		**06 33 21.9**	**-3.1**
	baz=173								
PINM	**Pinnacle**	**3.88**	**299**	P		**Pn**		**06 32 23.2**	**+1.4**
	baz=114								
PINM				S		**Sn**		**06 33 10.5**	**+2.6**
	baz=114								
PCA	**Pinnacle**	**3.88**	**299**	Pn		**Pn**		**06 32 22.9**	**+1.1**
LIRD	**Liard River Hi**	**3.97**	**72**	Sg		**Sg**		**06 33 25.0**	**-3.5**
LIRD	**Liard River Hi**	**3.97**	**72**	Sb		**Sg**		**06 33 27.0**	**-1.6**
	baz=257								
O28M	**Mount Upton**	**4.17**	**308**	Pn		**Pn**		**06 32 27.7**	**+1.8**
O28M				Sg		**Sg**		**06 33 32.0**	**-2.9**
YUK8	**Steele Glacier**	**4.30**	**315**	Pn		**Pn**		**06 32 29.0**	**+1.2**
MMPY	**Sheldon Lake,**	**4.39**	**14**	Pn		**Pn**		**06 32 30.4**	**+1.6**
MMPY				Sg		**Sg**		**06 33 39.2**	**-2.8**
MMPY	**Sheldon Lake,**	**4.39**	**14**	Sb		**Sg**		**06 33 39.6**	**-2.4**
	baz=195								
RUBB	**Prince Rupert**	**4.45**	**155**	Sg		**Sb**		**06 33 37.9**	**+4.0**
M30M	**Minto, Yukon**	**4.51**	**340**	Pn		**Pn**		**06 32 31.9**	**+1.4**
M30M				Sg		**Sg**		**06 33 43.5**	**-2.4**
M30M	**Minto, Yukon**	**4.51**	**340**	Pn		**Pn**		**06 32 32.1**	**+1.5**
M30M				IAML				06 33 56.4	
	comp=N,29nm,1.1s								
M30M	**Minto, Yukon**	**4.51**	**340**	P		**Pn**		**06 32 32.0**	**+1.5**
	baz=157,SNR=15								
LOGN	**Logan Glacier**	**4.54**	**306**	Sg		**Sg**		**06 33 43.1**	**-3.6**
M29M	**Somme Creek**	**4.76**	**331**	Pn		**Pn**		**06 32 35.9**	**+1.9**
M29M				Sg		**Sg**		**06 33 51.6**	**-2.3**
M29M	**Somme Creek**	**4.76**	**331**	Pn		**Pn**		**06 32 36.2**	**+2.2**
M29M	**Somme Creek**	**4.76**	**331**	P		**Pn**		**06 32 35.6**	**+1.7**
	baz=147								
YUK3	**Moose Creek**	**4.87**	**317**	Pn		**Pn**		**06 32 37.0**	**+1.4**
YUK3				Sg		**Sg**		**06 33 54.3**	**-3.3**
YUK2	**White River**	**5.02**	**316**	Pn		**Pn**		**06 32 37.8**	**+0.3**
YUK2				Sg		**Sg**		**06 33 58.1**	**-4.1**
NBC1	**NorthernBC 1**	**5.16**	**72**	Sg		**Sg**		**06 34 02.5**	**-4.1**
BALM	**Baldy**	**5.21**	**304**	Pn		**Pn**		**06 32 40.8**	**+0.6**
DIB	**Dawson Inlet,**	**5.22**	**173**	Pn		**Pn**		**06 32 40.5**	**+0.3**
DIB	**Dawson Inlet,**	**5.22**	**173**	Pn		**Pn**		**06 32 40.8**	**+0.6**
L29M	**L29M**	**5.26**	**336**	Pn		**Pn**		**06 32 41.5**	**+0.8**
L29M				Sg		**Sg**		**06 34 06.2**	**-3.6**
L29M	**L29M**	**5.26**	**336**			**Pn**		**06 32 42.4**	**+1.6**
L29M	**L29M**	**5.26**	**336**	P		**Pn**		**06 32 42.1**	**+1.4**
	baz=152								
PTPK	**Patty Peak**	**5.33**	**306**	Pn		**Pn**		**06 32 42.8**	**+0.9**
BVCY	**Beaver Creek**	**5.45**	**321**	Sg		**Sg**		**06 34 12.8**	**-3.2**
K29M	**Barlow Dome**	**5.82**	**342**	Pn		**Pn**		**06 32 50.3**	**+1.9**
K29M				Sg		**Sg**		**06 34 25.1**	**-2.6**
K29M	**Barlow Dome**	**5.82**	**342**			**Pn**		**06 32 50.6**	**+2.1**
K29M	**Barlow Dome**	**5.82**	**342**	P		**Pn**		**06 32 50.4**	**+1.9**
	baz=159,SNR=11								
BCAR	**Beaver Creek A**	**6.21**	**323**	Pn		**Pn**		**06 32 55.9**	**+2.1**
BC04	**Beaver Creek A**	**6.22**	**323**			**Pn**		**06 32 56.0**	**+2.1**
L27K	**Beaver Creek,**	**6.22**	**322**	Sg		**Sg**		**06 34 37.0**	**-3.8**
L27K	**Beaver Creek,**	**6.22**	**322**	Pn		**Pn**		**06 32 55.6**	**+1.7**
HG4B	**Hotspring**	**6.24**	**167**	Pn		**Pn**		**06 32 54.9**	**+0.7**
J30M	**Hart River**	**6.36**	**349**	Pn		**Pn**		**06 32 56.9**	**+0.9**
J30M				Sg		**Sg**		**06 34 41.2**	**-4.1**
J30M	**Hart River**	**6.36**	**349**			**Pn**		**06 32 58.5**	**+2.5**
J30M	**Hart River**	**6.36**	**349**	P		**Pn**		**06 32 58.2**	**+2.2**
	baz=166,SNR=17								
DAWY	**Dawson**	**6.37**	**336**	Pn		**Pn**		**06 32 57.4**	**+1.3**
DAWY				Sg		**Sg**		**06 34 42.7**	**-2.8**
DAWY	**Dawson**	**6.37**	**336**			**Pn**		**06 32 57.8**	**+1.7**
DAWY	**Dawson**	**6.37**	**336**	P		**Pn**		**06 32 57.8**	**+1.7**
	baz=151								
I30M	**Mount Dempster**	**7.00**	**350**	Pn		**Pn**		**06 33 04.8**	**+0.1**
I30M	**Mount Dempster**	**7.00**	**350**			**Pn**		**06 33 07.9**	**+3.2**
I30M	**Mount Dempster**	**7.00**	**350**	P		**Pn**		**06 33 07.8**	**+3.1**
	baz=167,SNR=55								
K27K	**Chicken**	**7.02**	**327**			**Pn**		**06 33 07.5**	**+2.7**
H31M	**Peel River**	**7.46**	**357**	Pn		**Pn**		**06 33 11.4**	**+0.5**
H31M				Sg		**Sg**		**06 35 16.9**	**-3.6**
H31M	**Peel River**	**7.46**	**357**			**Pn**		**06 33 13.1**	**+2.1**
H31M	**Peel River**	**7.46**	**357**	P		**Pn**		**06 33 13.6**	**+2.6**
	baz=176,SNR=12								
SCRK	**Sand Creek**	**7.56**	**322**	Pn		**Pn**		**06 33 14.3**	**+2.0**
SCRK	**Sand Creek**	**7.56**	**322**	P		**Pn**		**06 33 14.4**	**+2.0**
	baz=133								
I28M	**Miner Creek**	**7.71**	**340**	Pn		**Pn**		**06 33 14.3**	**-0.1**
I28M				Sg		**Sg**		**06 35 24.1**	**-4.4**
I28M	**Miner Creek**	**7.71**	**340**	Pn		**Pn**		**06 33 15.9**	**+1.5**
EPYK	**Eagle Plains**	**8.15**	**351**	Pn		**Pn**		**06 33 20.3**	**-0.1**
EPYK	**Eagle Plains**	**8.15**	**351**	P		**Pn**		**06 33 22.9**	**+2.4**
	baz=168,SNR=21								
H29M	**Whitestone**	**8.18**	**346**	Pn		**Pn**		**06 33 21.2**	**+0.4**
H29M				Sg		**Sg**		**06 35 40.7**	**-2.9**
H29M	**Whitestone**	**8.18**	**346**	Pn		**Pn**		**06 33 23.4**	**+2.6**
H29M	**Whitestone**	**8.18**	**346**	P		**Pn**		**06 33 23.2**	**+2.4**
	baz=162								
G31M	**Satah River**	**8.58**	**358**	Pn		**Pn**		**06 33 26.6**	**+0.4**
G31M	**Satah River**	**8.58**	**358**			**Pn**		**06 33 27.5**	**+1.3**
G31M	**Satah River**	**8.58**	**358**	P		**Pn**		**06 33 28.7**	**+2.5**
	baz=177,SNR=8.0								
H27K	**Steamboat Moun**	**8.71**	**338**	Pn		**Pn**		**06 33 28.

NNZ	**Nelson**	**0.48**	**90**	P		**Pn**	**06 57 57.1**	**+0.8**
NNZ				S		**Sn**	**06 58 12.5**	**-1.1**
THZ	**Tophouse**	**0.56**	**167**	P		**Pn**	**06 57 58.0**	**+1.2**
THZ				S		**Sn**	**06 58 13.6**	**-1.0**
HAVS	**Havelock**	**0.79**	**94**	P		**Pn**	**06 57 59.4**	**+1.4**
HAVS				S		**Sn**	**06 58 15.9**	**-0.7**
DSZ	**Denniston Nort**	**0.88**	**233**	P		**Pn**	**06 57 59.8**	**+1.1**
DSZ				S		**Sn**	**06 58 15.9**	**-2.1**
BWRS	**Waikakaho Road**	**0.90**	**105**	P		**Pn**	**06 57 60.0**	**+1.2**
TUWZ	**Tuamarina**	**0.93**	**104**	P		**Pn**	**06 58 01.1**	**+2.1**
TUWZ				S		**Sn**	**06 58 18.2**	**-0.3**
LOKS	**Mount Lookout**	**0.97**	**145**	P		**Pn**	**06 58 01.0**	**+1.5**
DUWZ	**D'Urville Isla**	**0.98**	**65**	P		**Pn**	**06 58 00.9**	**+1.4**
BSWZ	**Blackbirch Sta**	**0.99**	**121**	P		**Pn**	**06 58 00.8**	**+1.3**
BSWZ				S		**Sn**	**06 58 19.3**	**0.0**
GLOS	**29 km south-we**	**1.03**	**129**	P		**Pn**	**06 58 01.1**	**+1.2**
TCW	**Tory Channel**	**1.16**	**90**	P		**Pn**	**06 58 02.2**	**+1.3**
TCW				S		**Sn**	**06 58 20.6**	**-1.2**
KEKS	**Kekerengu Vall**	**1.19**	**129**	P		**Pn**	**06 58 02.3**	**+1.1**
KHZ	**Kahutara**	**1.34**	**154**	P		**Pn**	**06 58 03.6**	**+1.1**
KHZ	**Kahutara**	**1.34**	**154**	P		**Sn**	**06 58 23.5**	**-1.3**
KHZ	**Kahutara**	**1.34**	**154**	P		**Pn**	**06 58 03.9**	**+1.4**
KHZ				S		**Sn**	**06 58 23.0**	**-1.8**
MKBS	**Makara Bunker**	**1.48**	**91**	P		**Pn**	**06 58 05.0**	**+1.1**
SNZO	**South Karori**	**1.48**	**94**	P		**Pn**	**06 58 04.6**	**+0.7**
SNZO	**South Karori**	**1.48**	**94**	P		**Sn**	**06 58 25.5**	**-1.7**
WEL	**Wellington**	**1.53**	**93**	P		**Pn**	**06 58 05.5**	**+1.1**
LTZ	**Lake Taylor**	**1.60**	**193**	P		**Pn**	**06 58 06.8**	**+1.5**
KIW	**Kapiti Island**	**1.68**	**78**	P		**Pn**	**06 58 07.1**	**+1.1**
CAW	**Cannon Point**	**1.76**	**87**	P		**Pn**	**06 58 07.8**	**+0.9**
GVZ	**Greta Valley S**	**1.76**	**173**	P		**Pn**	**06 58 08.5**	**+1.6**
INZ	**Inchbonnie**	**1.79**	**212**	P		**Pn**	**06 58 08.4**	**+1.2**
OGWZ	**Otaki Gorge**	**1.88**	**78**	P		**Pn**	**06 58 09.7**	**+1.5**
MSWZ	**Moikau Station**	**1.90**	**97**	P		**Pn**	**06 58 09.3**	**+0.8**
PLWZ	**Palliser**	**1.92**	**101**	P		**Pn**	**06 58 09.6**	**+0.9**
AMCZ	**Amberley**	**1.96**	**182**	P		**Pn**	**06 58 10.6**	**+1.6**
PAWZ	**Paruwai Farm**	**2.03**	**96**	P		**Pn**	**06 58 10.7**	**+0.8**
MTW	**Mount Morrison**	**2.08**	**89**	P		**Pn**	**06 58 11.3**	**+0.8**
HOWZ	**Holdsworth Sta**	**2.12**	**82**	P		**Pn**	**06 58 11.7**	**+0.8**
NBEZ	**Newall Road No**	**2.13**	**24**	P		**Pn**	**06 58 12.7**	**+1.6**
OXZ	**Oxford**	**2.17**	**194**	P		**Pn**	**06 58 12.5**	**+1.1**
WAZ	**Wanganui**	**2.25**	**50**	P		**Pn**	**06 58 14.6**	**+2.1**
WVZ	**Waitaha Valley**	**2.38**	**218**	P		**Pn**	**06 58 15.0**	**+1.0**
MHCZ	**Mount Hutt**	**2.47**	**200**	P		**Pn**	**06 58 15.9**	**+0.8**
MQZ	**McQueen's Vall**	**2.49**	**181**	P		**Pn**	**06 58 16.0**	**+0.8**
OKCZ	**Okains Bay**	**2.52**	**175**	P		**Pn**	**06 58 16.8**	**+1.2**
PRWZ	**Pori Road**	**2.54**	**76**	P		**Pn**	**06 58 17.0**	**+1.2**
RACZ	**Rakaia**	**2.55**	**190**	P		**Pn**	**06 58 16.9**	**+1.0**
AKCZ	**Akaroa Harbour**	**2.66**	**177**	P		**Pn**	**06 58 18.2**	**+0.9**
BFZ	**Birch Farm**	**2.71**	**80**	P		**Pn**	**06 58 18.8**	**+0.9**
BFZ	**Birch Farm**	**2.71**	**80**	S		**Sn**	**06 58 50.3**	**-1.8**
BFZ	**Birch Farm**	**2.71**	**80**	P		**Pn**	**06 58 18.8**	**+0.9**
DVHZ	**Dannevirke**	**2.76**	**72**	P		**Pn**	**06 58 19.0**	**+0.4**
GCSZ	**Gaunt Creek Bo**	**2.76**	**220**	P		**Pn**	**06 58 19.6**	**+1.1**
PKVZ	**Pokaka**	**2.77**	**47**	P		**Pn**	**06 58 20.2**	**+1.4**
RPZ	**Rata Peaks**	**2.79**	**206**	P		**Pn**	**06 58 20.3**	**+1.4**
RPZ	**Rata Peaks**	**2.79**	**206**	P		**Pn**	**06 58 20.3**	**+1.4**
WACZ	**Wakanui South**	**2.80**	**193**	P		**Pn**	**06 58 20.1**	**+1.1**
TRVZ	**Turoa**	**2.88**	**49**	P		**Pn**	**06 58 19.4**	**-0.9**
WNVZ	**Wahianoa**	**2.89**	**50**	P		**Pn**	**06 58 21.3**	**+1.0**
PNHZ	**Pukenui**	**2.94**	**65**	P		**Pn**	**06 58 21.2**	**+0.4**
TUVZ	**Tukino**	**2.96**	**50**	P		**Pn**	**06 58 21.5**	**+0.3**
ARCZ	**Arundel**	**2.96**	**202**	P		**Pn**	**06 58 21.8**	**+0.7**
OTVZ	**Oturere**	**3.04**	**48**	P		**Pn**	**06 58 23.0**	**+0.9**
WPHZ	**Waipukurau**	**3.04**	**69**	P		**Pn**	**06 58 22.7**	**+0.6**
HIZ	**Hauiti**	**3.15**	**32**	P		**Pn**	**06 58 24.4**	**+1.0**
HIZ	**Hauiti**	**3.15**	**32**	S		**Sn**	**06 59 02.0**	**-0.1**
HIZ	**Hauiti**	**3.15**	**32**	P		**Pn**	**06 58 24.5**	**+1.0**
FOZ	**Fox Glacier**	**3.17**	**222**	P		**Pn**	**06 58 24.3**	**+0.8**
TMZ	**Timaru**	**3.41**	**201**	P		**Pn**	**06 58 27.6**	**+1.0**
BKZ	**Black Stump Fm**	**3.53**	**56**	P		**Pn**	**06 58 28.1**	**-0.2**
BKZ	**Black Stump Fm**	**3.53**	**56**	S		**Sn**	**06 59 10.0**	**-0.7**
LBZ	**Lake Benmore**	**3.68**	**210**	P		**Pn**	**06 58 30.8**	**+0.7**
NMHZ	**Naumai**	**3.77**	**57**	P		**Pn**	**06 58 31.6**	**+0.2**
JCZ	**Jackson Bay**	**4.08**	**224**	P		**Pn**	**06 58 36.0**	**+0.6**
JCZ	**Jackson Bay**	**4.08**	**224**	P		**Pn**	**06 58 36.1**	**+0.7**
ODZ	**Otahua Downs**	**4.12**	**201**	P		**Pn**	**06 58 36.9**	**+1.1**
ODZ	**Otahua Downs**	**4.12**	**201**	P		**Pn**	**06 58 36.8**	**+1.0**
WHZ	**Wether Hill Ro**	**5.83**	**215**	P		**Pn**	**06 58 58.1**	**0.0**

ASRS ***16*** *07:00:27.0±1.1, 53°.94N×86°.56E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 16 07:00:23.7±3.5, 54°.27N×86°.67E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=28.2km s-min=18.9km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.13**	**254**	I	I	07 07 00.0	
	baz=71,slow=315,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.13**	**254**	Pg	Pn	07 00 46.6	-0.2
	0.3nm,0.3s,baz=85,slow=16,SNR=6.1						
ZALV				Lg	Lg	07 00 59.0	
	1.3nm,0.3s,baz=77,slow=15,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.17**	**237**	Pn	Pn	07 01 57.4	+1.4
	baz=53,slow=14,SNR=1.3						
KURBB				Lg	Lg	07 03 42.6	
	baz=29,slow=29,SNR=1.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.98**	**202**	Pn	Pn	07 02 20.9	0.0
	0.1nm,0.3s,baz=26,slow=13,SNR=2.3						
	0.1nm,0.4s						

DJA 16 07:03:36.3±0.3, 2°S±3°×112°8E±°, h58km±10km, M3.8/12, mb4.7/2, mb4.2/1, MLv3.6/12, Mw(mB)3.9/2, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**1.81**	**273**	P	Pn	07 04 03.7	-1.5
SANI				S	Sn	07 04 25.4	-1.7
SIJI	**Sorong**	**3.69**	**70**	P	Pn	07 04 30.3	-0.6
FAKI	**Fak Fak**	**4.51**	**100**	P	Pn	07 04 39.9	-2.2
GTOI	**Gorontalo**	**5.53**	**300**	P	Pn	07 05 00.8	+4.7

IDC ***16*** *07:09:54.6±3.0, 53°.42N×87°.19E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=27.0km s-min=16.0km az=68.0*

ASRS 16 07:09:49.0±1.3, 53°.48N×87°.25E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**289**	I	I	07 19 40.0	
	baz=110,slow=314,SNR=8.3						
ZALV	**Zalesovo Beam**	**1.52**	**289**	Pg	Pg	07 10 21.1	+3.0
	0.2nm,0.3s,baz=102,slow=16,SNR=5.8						
ZALV				Lg	Lg	07 10 42.2	
	0.5nm,0.3s,baz=114,slow=24,SNR=8.2						
KURBB	**Kurchatov Arra**	**6.09**	**246**	Pn	Pn	07 11 25.8	+5.6
	baz=60,slow=14,SNR=4.3						
KURBB				Lg	Lg	07 13 08.4	
	baz=62,slow=33,SNR=6.4						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**7.41**	**207**	Pn	Pn	07 11 44.3	+6.0
	0.1nm,0.3s,baz=21,slow=12,SNR=3.1						
MKAR				Lg	Lg	07 13 46.4	
	baz=20,slow=31,SNR=2.8						
	0.2nm,0.4s						

ASRS ***16*** *07:30:40.0±0.9, 53°.93N×86°.67E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 16 07:30:44.0±3.0, 53°.90N×86°.71E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=24.3km s-min=14.2km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**273**	I	I	07 36 10.0	
	baz=91,slow=318,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.12**	**273**	Pg	Pg	07 31 03.9	-1.5
	0.8nm,0.3s,baz=89,slow=14,SNR=6.3						
ZALV				Lg	Lg	07 31 21.6	
	2.6nm,0.3s,baz=94,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**6.00**	**240**	Pn	Pn	07 32 14.7	+0.8
	0.1nm,0.3s,baz=56,slow=13,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.66**	**203**	Pn	Pn	07 32 38.0	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=3.3						
	0.1nm,0.3s						

HEL ***16*** *07:30:51.8±0.1, 63°.99N×28°.12E, h0km, ML1.7, Suspected explosion*

IDC ***16*** *07:30:52.8±1.8, 63°.93N×28°.12E, h0km, mbtmp2.5/2, ML1.7/2, Error ellipse: s-maj=46.0km s-min=10.0km az=96.0*

ISC 16 07:30:50.6±0.8, 63°.96N±0°.03×28°.21E±0°.03, h0km, n29, σ1§02/47, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.59**	**197**	PG	**Pb**	**07 31 02.6**	**-1.2**
NIF				SG	**Sg**	**07 31 10.0**	**+0.4**
NIF				smax	smax	07 31 11.3	
	comp=Z,11nm,0.2s						
RMF	**Romuvaara**	**0.80**	**70**	PG	**Pb**	**07 31 07.1**	**-0.3**
	baz=257						
RMF				smax	smax	07 31 17.5	
	comp=Z,7.1nm,0.2s						
RMF				SG	**Sb**	**07 31 17.9**	**-0.8**
SUF	**Sumiainen**	**1.55**	**218**	eP	**Pg**	**07 31 20.2**	**0.0**
SUF	**Sumiainen**	**1.55**	**218**	PG	**Pb**	**07 31 19.6**	**-0.5**
SUF				smax	smax	07 31 38.2	
	comp=Z,3.0nm,0.2s						
SUF				SG	**Sg**	**07 31 41.4**	**+1.1**
OUF	**Merijarvi**	**1.58**	**287**	PG	**Pn**	**07 31 19.3**	**-0.5**
OUF				smax	smax	07 31 37.7	
	comp=Z,4.5nm,0.2s						
OUF				SG	**Sn**	**07 31 39.4**	**-1.4**
OBF4	**Vikkela, Lumij**	**1.60**	**304**	PG	**Pn**	**07 31 19.8**	**-0.3**
	baz=124						
OBF4				smax	smax	07 31 38.2	
	comp=Z,4.2nm,0.2s						
OBF4				SN	**Sn**	**07 31 41.0**	**-0.4**
KU1	**Kurvinen**	**1.72**	**19**	PG	**Pb**	**07 31 22.5**	**-0.5**
JOF	**Joensuu**	**1.74**	**125**	eP	**Pg**	**07 31 24.0**	**+0.1**
JOF	**Joensuu**	**1.74**	**125**	PG	**Pg**	**07 31 23.5**	**-0.4**
	baz=310						
JOF				SG	**Sg**	**07 31 46.8**	**+0.3**
KU2	**Taivalkoski**	**1.76**	**0**	PG	**Pn**	**07 31 22.3**	**0.0**
	baz=179						
OBF0	**Syolatti, Pyha**	**1.82**	**289**	PG	**Pn**	**07 31 23.8**	**+0.8**
OBF0				smax	smax	07 31 44.7	
	comp=Z,7.3nm,0.2s						
OBF0				SG	**Sn**	**07 31 46.7**	**0.0**
KAF	**Kangasniemi**	**2.04**	**206**	PB	**Pb**	**07 31 28.2**	**-0.3**
KAF				smax	smax	07 31 52.7	
	comp=Z,7.0nm,0.2s						
KAF				SG	**Sg**	**07 31 55.4**	**-0.7**
OBF8	**Ulkokalla**	**2.12**	**282**	PG	**Pb**	**07 31 28.6**	**-1.2**
	baz=102						
OBF8				smax	smax	07 31 53.5	
	comp=Z,4.4nm,0.2s						
OBF8				SG	**Sb**	**07 31 57.3**	**+0.7**
KU6	**Riekki**	**2.20**	**18**	PG	**Pb**	**07 31 30.8**	**-0.3**
	baz=202						
KU6				smax	smax	07 31 56.6	
	comp=Z,1.8nm,0.2s						
KU6				SG	**Sb**	**07 31 58.6**	**-0.3**
KEF	**Keuruu**	**2.35**	**222**	eP	**Pb**	**07 31 33.7**	**-0.1**
KEF	**Keuruu**	**2.35**	**222**	PG	**Pb**	**07 31 33.4**	**-0.3**
KEF				smax	smax	07 32 01.2	
	comp=Z,4.1nm,0.2s						
KEF				SG	**Sb**	**07 32 03.1**	**-0.2**
RUF	**Ruokolahti**	**2.56**	**172**	PB	**Pb**	**07 31 36.9**	**-0.4**
RUF				smax	smax	07 32 08.5	
	comp=Z,3.6nm,0.2s						
RUF				SB	**Sg**	**07 32 10.9**	**-1.9**
VAF	**Ylistaro**	**2.65**	**252**	eP	**Pb**	**07 31 37.2**	**-1.5**
VAF	**Ylistaro**	**2.65**	**252**	PB	**Pb**	**07 31 37.4**	**-1.4**
VAF				smax	smax	07 32 09.0	
	comp=Z,3.0nm,0.2s						
VAF				SB	**Sb**	**07 32 10.8**	**-0.9**
TOF	**Tornio**	**2.69**	**324**	PB	**Pn**	**07 31 36.6**	**+1.5**
	baz=139						
TOF				SB	**Sn**	**07 32 09.1**	**+0.8**
TOF				smax	smax	07 32 09.8	
	comp=Z,1.3nm,0.2s						
FIA0	**FINESS Array S**	**2.71**	**202**	PB	**Pb**	**07 31 38.9**	**-0.9**
	baz=20						
FIA0				smax	smax	07 32 11.9	
	comp=Z,1.9nm,0.2s						
FIA0				SB	**Sb**	**07 32 12.9**	**-0.6**
FINES	**FINESS Array B**	**2.71**	**202**	Pn	**Pb**	**07 31 38.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=22,slow=15,SNR=9.9						
FINES				Sn	**Sb**	**07 32 13.2**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=19,slow=24,SNR=24						
	comp=Z,1.2nm,0.5s						
BURU	**Burvik**	**3.05**	**285**	PN	**Pn**	**07 31 40.9**	**+1.0**
BURU				SN	**Sn**	**07 32 17.7**	**+0.7**
UMAU	**Umeaa**	**3.33**	**272**	PN	**Pn**	**07 31 44.4**	**+0.6**
	baz=83						
KPF	**Kankaanpaa**	**3.52**	**236**	PN	**Pn**	**07 31 49.8**	**+3.3**
ERTU	**Ertsjaerv**	**3.63**	**319**	PN	**Pn**	**07 31 49.9**	**+1.9**
HEMU	**Hemsoen**	**4.76**	**259**	PN	**Pn**	**07 32 04.4**	**+0.9**
HEMU				SN	**Sn**	**07 33 00.4**	**+1.1**
ARCES	**ARCESS Array B**	**5.71**	**350**	Pn	**Pn**	**07 32 17.8**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=5.3						
ARCES				Sn	**Sn**	**07 33 21.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=167,slow=24,SNR=5.0						
ARCES				Lg	Lg	07 33 42.8	
	comp=Z,0.1nm,0.3s,baz=167,slow=22,SNR=8.2						
	comp=Z,0.8nm,0.8s						
I37NO	**I37NO**	**6.41**	**328**	I	I	08 07 25.0	
	baz=140,slow=317,SNR=7.6						

SNET ***16*** *07:47:33.0±1.8, 12°.95N×87°.34W, h4km, ML3.9, Presumed earthquake*

IDC ***16*** *07:47:33.4±1.4, 13°.30N×86°.91W, h0km, mb3.7/4, mbtmp3.8/6, ML3.1/3, MS3.2/9, Error ellipse: s-maj=48.2km s-min=20.4km az=45.0*

CATAC ***16*** *07:47:34.4±0.1, 13°.N±1°.×87°.4W±0°.7, h2km, M4.3/65, MLv4.3/65, Error ellipse: s-maj=2.5km s-min=1.0km az=30.1, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.29; $M_{\theta\theta}$-5.49; $M_{\phi\phi}$5.21; $M_{r\theta}$-2.17; $M_{r\phi}$-8.01; $M_{\theta\phi}$0.74; Fault plane solution: $M_0$9.90208×10^{14} NP1: ϕ_s286.72888°, δ89.05174°, λ166.56905°. NP2: ϕ_s16.95532°, δ76.57092°, λ0.97491°. Principal axes: T 9.7859, Plg10.1323°, Azm241.0488°; N 0.2284, Plg76.5362°, Azm102.7646°; P -10.0143, Plg8.7728°, Azm332.6292°; confirmed*

UCR ***16*** *07:47:36.6±2.6, 12°.68N×87°.38W, h0km±23km, MW4.7, Presumed earthquake*

ISC 16 07:47:33.7±1.1, 12°.96N±0°.02×87°.34W±0°.02, h2km±8km, n155, σ1§24/217, mb3.7/4, MS3.2/8, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.21**	**274**	P	**Pg**	**07 47 38.1**	**+0.2**
CSGN				S	**Sg**	**07 47 40.9**	**+0.2**
CRIN	**San Cristobal**	**0.38**	**133**	P	**Pb**	**07 47 43.2**	**-0.1**
CRIN				S	**Sb**	**07 47 49.9**	**+0.1**
QUEN	**Al S del Volca**	**0.60**	**128**	P	**Pg**	**07 47 46.4**	**+1.1**
HERN	**Volcan Telica**	**0.61**	**125**	P	**Pg**	**07 47 46.6**	**+1.2**
HERN				S	**Sg**	**07 47 54.4**	**+1.1**
TEL3	**Telica 3**	**0.62**	**129**	P	**Pb**	**07 47 47.7**	**+0.4**
LCND	**La Caada**	**0.64**	**303**	P	**Pg**	**07 47 46.0**	**0.0**
LCND	**La Caada**	**0.64**	**303**	eP	**Pg**	**07 47 46.0**	**0.0**
LCND				eS	**Sg**	**07 47 55.2**	**+0.9**
PLRN	**Geotermica Pol**	**0.67**	**124**	P	**Pg**	**07 47 47.2**	**+0.5**
ROCN	**Rota Cerro Neg**	**0.73**	**127**	P	**Pg**	**07 47 46.9**	**-0.8**
ROCN				S	**Sg**	**07 47 57.8**	**+0.6**
ILCN	**San Idelfonso**	**0.73**	**121**	P	**Pg**	**07 47 48.4**	**+0.6**
ILCN				S	**Sb**	**07 47 59.6**	**-0.1**
INTP	**Intipuca**	**0.73**	**289**	eP	**Pg**	**07 47 47.5**	**-0.3**
INTP				eS	**Sg**	**07 47 57.9**	**+0.5**
CNGN	**Cerro Negro**	**0.78**	**126**	P	**Pg**	**07 47 49.1**	**+0.4**
CNGN				S	**Sb**	**07 48 00.4**	**-0.6**
CNGA	**Al SSO del Vol**	**0.78**	**127**	P	**Pg**	**07 47 49.3**	**+0.7**
AESN	**El Sauce Leon**	**0.78**	**95**	P	**Pg**	**07 47 49.3**	**+0.6**
AESN				S	**Sb**	**07 48 00.7**	**-0.5**
MACN	**El Madrono**	**0.81**	**127**	P	**Pg**	**07 47 49.9**	**+0.5**
MACN				S	**Sb**	**07 48 01.8**	**-0.3**
MOM3	**MOM3**	**0.92**	**119**	P	**Pg**	**07 47 51.6**	**+0.3**
MOM3				S	**Sb**	**07 48 05.3**	**+0.2**
LIMN	**Finca el Limon**	**0.95**	**84**	P	**Pg**	**07 47 52.2**	**+0.1**
LIMN				S	**Sb**	**07 48 06.3**	**+0.1**

MOMN	**Momotombo**	**0.95**	**125**	P		**Pg**	**07 47 52.3**	**+0.3**
MOMN				S		**Sb**	**07 48 06.2**	**0.0**
MOM2	**El Cardon**	**0.98**	**122**	P		**Pg**	**07 47 52.9**	**+0.2**
MOM2				S		**Sb**	**07 48 07.2**	**+0.3**
RANC	**El Ranchito**	**1.04**	**297**	P		**Pg**	**07 47 52.8**	**-0.8**
RANC				S		**Sg**	**07 48 07.8**	**+0.7**
COPN	**Copaltepe**	**1.07**	**137**	P		**Pg**	**07 47 53.7**	**-0.5**
OCON	**Estacion meteo**	**1.07**	**52**	P		**Pg**	**07 47 54.2**	**-0.1**
OCON				S		**Sg**	**07 48 09.3**	**+1.1**
PACA	**Pacayal**	**1.08**	**298**	P		**Pg**	**07 47 53.5**	**-1.1**
PACA				S		**Sg**	**07 48 07.7**	**-0.9**
AMTN	**Mateare**	**1.14**	**129**	P		**Pg**	**07 47 55.5**	**-0.2**
AMTN				S		**Sb**	**07 48 11.9**	**+0.4**
SAPS	**Ciudad Sandino**	**1.21**	**131**	P		**Pg**	**07 47 56.5**	**-0.4**
SAPS				S		**Sb**	**07 48 14.0**	**+0.6**
APYN	**Apoyeque**	**1.21**	**127**	P		**Pg**	**07 47 56.7**	**-0.2**
APYN				S		**Sb**	**07 48 13.5**	**+0.1**
RCFN	**Al S de San Ju**	**1.23**	**63**	P		**Pg**	**07 47 57.1**	**-0.3**
RCFN				S		**Sb**	**07 48 14.7**	**+0.4**
APQ2	**Apoyeque**	**1.25**	**127**	P		**Pg**	**07 47 57.1**	**-0.6**
APQ2	**Apoyeque**	**1.25**	**127**	P		**Pg**	**07 47 57.8**	**+0.1**
APQ2				S		**Sb**	**07 48 14.8**	**+0.2**
APQ2				S		**Sn**	**07 48 15.1**	**-0.5**
RCON	**San Juan de Ri**	**1.26**	**66**	P		**Pg**	**07 47 57.6**	**-0.4**
RCON				S		**Sb**	**07 48 16.1**	**+0.9**
RCVN	**Varillal2**	**1.28**	**61**	P		**Pg**	**07 47 58.0**	**-0.2**
RCVN				S		**Sb**	**07 48 16.3**	**+0.8**
ABCN	**Banco Central**	**1.31**	**130**	P		**Pg**	**07 47 58.6**	**-0.2**
ABCN				S		**Sn**	**07 48 17.1**	**0.0**
ALLN	**Telcor Managua**	**1.31**	**128**	P		**Pg**	**07 47 58.3**	**-0.6**
ALLN				S		**Sb**	**07 48 17.2**	**+0.7**
TISN	**Laguna Tiscapa**	**1.32**	**128**	P		**Pg**	**07 47 58.4**	**-0.8**
RCPN	**Sur Rio San Ju**	**1.34**	**65**	P		**Pg**	**07 47 59.4**	**0.0**
RCPN				S		**Sb**	**07 48 18.1**	**+0.8**
MGAN	**Managua**	**1.34**	**127**	P		**Pg**	**07 47 58.5**	**-0.9**
MGAN				S		**Sb**	**07 48 17.5**	**+0.2**
UNAN	**Cigeo UNAN**	**1.34**	**129**	P		**Pg**	**07 47 58.7**	**-0.8**
UNAN				S		**Sb**	**07 48 17.6**	**+0.3**
PQSS	**Presa 15 de Se**	**1.36**	**299**	P		**Pn**	**07 47 58.6**	**-1.1**
WILN	**Americas 2**	**1.38**	**125**	P		**Pn**	**07 47 59.2**	**-0.8**
WILN				S		**Sn**	**07 48 19.1**	**+0.3**
AERN	**Aeropuerto Man**	**1.40**	**125**	P		**Pn**	**07 47 59.5**	**-0.8**
AERN				S		**Sn**	**07 48 20.1**	**+0.7**
MAS3	**Al N del Volca**	**1.47**	**129**	P		**Pn**	**07 48 00.5**	**-0.8**
MAS3				S		**Sb**	**07 48 21.1**	**+0.1**
MASN	**Masaya**	**1.51**	**130**	P		**Pn**	**07 48 00.9**	**-1.0**
MASN				S		**Sb**	**07 48 22.0**	**-0.2**
TECO	**Alcaldia de Te**	**1.52**	**292**	P		**Pn**	**07 48 00.3**	**-1.6**
TECO				S		**Sn**	**07 48 21.0**	**-1.2**
SCLA	**Alcaldia de Sa**	**1.54**	**299**	S		**Sn**	**07 48 23.2**	**+0.3**
COEG	**Centro de Oper**	**1.64**	**294**	P		**Pn**	**07 48 02.6**	**-1.0**
COEG				S		**Sn**	**07 48 25.0**	**-0.3**
COEG	**Centro de Oper**	**1.64**	**294**	eP		**Pn**	**07 48 02.5**	**-1.1**
COEG				eS		**Sn**	**07 48 25.3**	**0.0**
BOAB	**BOACO BROADBAN**	**1.71**	**107**	P		**Pn**	**07 48 03.3**	**-1.2**
BOAB				S		**Sb**	**07 48 28.6**	**+0.7**
P5NO	**Presa 5 de nov**	**1.71**	**307**	P		**Pn**	**07 48 03.8**	**-0.9**
P5NO				S		**Sn**	**07 48 27.2**	**0.0**
PAVA	**Las Pavas**	**1.73**	**296**	P		**Pn**	**07 48 04.3**	**-0.6**
PAVA				S		**Sn**	**07 48 28.4**	**+0.9**
NADN	**Granada**	**1.76**	**133**	P		**Pn**	**07 48 05.2**	**-0.1**
NADN				S		**Sb**	**07 48 29.3**	**0.0**
NADN	**Granada**	**1.76**	**133**	eP		**Pn**	**07 48 05.3**	**+0.1**
NADN				eS		**Sb**	**07 48 29.1**	**-0.2**
PANCS	**Alcalda de**	**1.90**	**290**	P		**Pn**	**07 48 05.9**	**-1.4**
PANCS				S		**Sn**	**07 48 31.7**	**-0.2**
LOMA	**Loma Larga**	**1.91**	**291**	P		**Pn**	**07 48 07.0**	**-0.4**
LOMA				S		**Sn**	**07 48 32.2**	**+0.1**
LLGN	**La Laguna**	**1.96**	**308**	P		**Pn**	**07 48 07.8**	**-0.3**
LLGN				S		**Sn**	**07 48 35.2**	**+1.8**
SEMO	**Seminario San**	**1.98**	**292**	P		**P

BILN				S		Sg	07 49 39.0	-3.6
BILN	**Bilwi Airport**	**4.00**	**74**	*e*P		**Pb**	**07 48 45.8**	**+0.7**
ARTO	**Ro Cuarto**	**4.02**	**130**	*e*P		**Pn**	**07 48 36.6**	**+0.3**
PALD	**Palmares**	**4.06**	**135**	*e*P		**Pn**	**07 48 35.9**	**-1.1**
SARCI	**Sarchi**	**4.09**	**134**	*e*P		Pn	07 48 28.0	-9.5
OROT	**Orotina**	**4.10**	**137**	*e*P		**Pn**	**07 48 38.6**	**+1.1**
ATEO	**Atenas**	**4.15**	**135**	*e*P		**Pn**	**07 48 38.9**	**+0.7**
TRB2	**Turrubares**	**4.15**	**137**	P		**Pn**	**07 48 40.7**	**+2.5**
TRB2				S		**Sn**	**07 49 28.2**	**+0.8**
TRB2	**Turrubares**	**4.15**	**137**	*e*P		**Pn**	**07 48 38.8**	**+0.6**
TCS1	**Tacares**	**4.16**	**134**	*e*P		**Pn**	**07 48 38.8**	**+0.4**
POAS	**San Pedro de P**	**4.18**	**133**	*e*P		**Pn**	**07 48 42.4**	**+3.8**
TRT2	**Tortugero**	**4.26**	**124**	P		**Pn**	**07 48 42.9**	**+3.2**
TRT2	**Tortugero**	**4.26**	**124**	*e*P		**Pb**	**07 48 47.6**	**-1.9**
BELE	**Belen**	**4.28**	**134**	*e*P		**Pn**	**07 48 41.4**	**+1.3**
SANTA	**Santa Ana**	**4.32**	**134**	*e*P		**Pn**	**07 48 40.7**	**+0.1**
HDC	**Heredia**	**4.32**	**133**	*e*P		**Pn**	**07 48 41.9**	**+1.3**
SJS	**Escuela Geolog**	**4.40**	**133**	*e*P		**Pn**	**07 48 45.4**	**+3.6**
CORON	**Coronado**	**4.42**	**132**	*e*P		**Pn**	**07 48 44.2**	**+2.2**
ACOS	**Acosta**	**4.43**	**135**	*e*P		**Pn**	**07 48 43.5**	**+1.4**
AMPA	**Desamparados**	**4.43**	**133**	*e*P		**Pn**	**07 48 43.5**	**+1.4**
RTAL	**Retalhuleu**	**4.51**	**291**	P		**Pn**	**07 48 44.5**	**+1.4**
RTAL				S		**Sn**	**07 49 37.3**	**+1.1**
PICV	**PH. Pirrs**	**4.53**	**137**	*e*P		Pn	07 48 49.1	+5.7
ABRB	**Las Abras (San**	**4.61**	**129**	*e*P		**Pn**	**07 48 48.8**	**+4.1**
VTCV	**VTCV, Calle Va**	**4.62**	**130**	*e*P		**Pn**	**07 48 45.8**	**+1.0**
RESJ	**San Isidro (Tu**	**4.65**	**128**	*e*P		**Pn**	**07 48 46.0**	**+0.8**
IRES	**Siquirres**	**4.71**	**127**	*e*P		**Pn**	**07 48 48.4**	**+2.5**
SAJE	**San Jernim**	**5.20**	**133**	*e*P		**Pn**	**07 48 54.8**	**+2.0**
EDPE	**Pejibaye, P**	**5.29**	**135**	*e*P		**Pn**	**07 48 56.9**	**+3.0**
DRK0	**Durika**	**5.45**	**132**	*e*P		Pn	07 48 47.6	-8.6
BRU2	**Volcan**	**6.16**	**132**	*e*P		**Pn**	**07 49 09.0**	**+3.0**
CMIG	**Matias Romero**	**8.36**	**300**	Pn		**Pn**	**07 49 38.1**	**+2.0**
	0.2nm,0.3s,baz=135,slow=17,SNR=3.7							
CMIG				Sn		**Sn**	**07 51 16.3**	**+5.1**
	0.4nm,0.3s,baz=102,slow=14,SNR=4.7 4.1nm,0.9s							
ATAH	**Atahualpa**	**21.86**	**156**	LR	LR		08 00 04.4	
	comp=Z,75nm,19.9s,baz=18,slow=34							
TXAR	**Lajitas Array**	**22.25**	**320**	P		**P**	**07 52 32.1**	**-0.1**
	1.9nm,0.8s,baz=141,slow=9.2,SNR=17 1.9nm,0.8s							
LPIG	**La Paz**	**24.39**	**300**	LR	LR		08 01 57.3	
	comp=Z,76nm,20.8s,baz=170,slow=35							
PDAR	**Pinedale Array**	**35.38**	**331**	LR	LR		08 11 32.3	
	comp=Z,19nm,18.0s,baz=110,slow=41							
ELK	**Elko**	**36.92**	**324**	LR	LR		08 11 05.0	
	comp=Z,37nm,19.1s,baz=158,slow=38							
NVAR	**Mina Array Bea**	**37.39**	**318**	LR	LR		08 12 49.4	
	comp=Z,47nm,18.8s,baz=154,slow=41							
YBH	**Yreka Blue Hor**	**42.03**	**320**	LR	LR		08 15 37.6	
	comp=Z,32nm,18.4s,baz=170,slow=40							
CPUP	**Villa Florida**	**48.76**	**143**	LR	LR		08 17 32.1	
	comp=Z,33nm,18.2s,baz=75,slow=37							
YKA	**Yellowknife Ar**	**53.15**	**345**	P		**P**	**07 56 51.6**	**-1.2**
	0.9nm,0.7s,baz=142,slow=7.7,SNR=15 0.9nm,0.7s							
DLBC	**Dease Lake**	**55.50**	**334**	P		**P**	**07 57 09.6**	**-0.5**
	1.9nm,0.7s,baz=114,slow=6.5,SNR=5.7 1.9nm,0.7s							
ILAR	**Eielson Array**	**65.60**	**336**	P		**P**	**07 58 17.2**	**-1.7**
	0.2nm,0.6s,baz=117,slow=3.3,SNR=4.5 0.2nm,0.6s							
KDAK	**Kodiak Island**	**65.99**	**328**	LR	LR		08 27 51.8	
	comp=Z,33nm,19.3s,baz=241,slow=37							

CATAC 16 07:48:17.1±0.3,13°N±2°×87°W±°,h3km±1km,M3.8/6, MLv3.8/6,Error ellipse: s-maj=4.5km s-min=2.5km az=38.7,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.15**	**291**	S	Sg	07 48 23.2	+1.0
LCND	**La Caada**	**0.60**	**310**	P	Pg	07 48 28.5	-0.2
HERN	**Volcan Telica**	**0.65**	**119**	P	Pg	07 48 29.3	-0.2
ROCN	**Rota Cerro Neg**	**0.77**	**121**	S	Sg	07 48 42.2	+0.5
ILCN	**San Idelfonso**	**0.77**	**116**	S	Sb	07 48 43.5	-0.7
AESN	**El Sauce Leon**	**0.85**	**92**	S	Sg	07 48 44.7	+0.3
MACN	**El Madrono**	**0.85**	**122**	P	Pg	07 48 33.4	0.0
MOM3	**MOM3**	**0.96**	**115**	S	Sb	07 48 49.0	-0.6
MOMN	**Momotombo**	**0.99**	**121**	P	Pb	07 48 36.9	-0.1
MOMN				S	Sg	07 48 48.6	-0.4
MOM2	**El Cardon**	**1.02**	**118**	S	Sb	07 48 50.8	-0.5
LIMN	**Finca el Limon**	**1.03**	**82**	S	Sb	07 48 51.1	-0.5
OCON	**Estacion meteo**	**1.15**	**52**	P	Pg	07 48 38.1	-1.0
OCON				S	Sg	07 48 53.5	-0.6
APYN	**Apoyeque**	**1.24**	**123**	S	Sg	07 48 56.8	-0.2
APQ2	**Apoyeque**	**1.28**	**124**	P	Pg	07 48 41.2	-0.4
APQ2				S	Sg	07 48 57.6	-0.7
APQ2				S	Sb	07 48 58.5	-0.2
RCFN	**Al S de San Ju**	**1.31**	**62**	P	Pg	07 48 41.9	-0.4
RCON	**San Juan de Ri**	**1.34**	**65**	P	Pb	07 48 43.1	0.0
RCON				S	Sn	07 49 01.5	+0.2
ALLN	**Telcor Managua**	**1.35**	**124**	S	Sb	07 49 00.4	+0.3
RCVN	**Varillal2**	**1.36**	**61**	P	Pn	07 48 41.7	-1.4
RCVN				S	Sb	07 49 00.9	-0.2
MGAN	**Managua**	**1.37**	**124**	S	Sg	07 49 00.7	-0.6
UNAN	**Cigeo UNAN**	**1.38**	**126**	S	Sg	07 49 01.1	-0.2
P5NO	**Presa 5 de nov**	**1.68**	**309**	S	Sn	07 49 09.8	+0.3

*NNC **16** 07:48:48.4±3.7,39°47N×75°44E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=25.4km s-min=19.4km az=167.0*
*SOME **16** 07:48:49.3,39°58N×75°12E,h20km*
*KRNET **16** 07:48:56.8±0.1,39°63N×75°46E,h35km,mb3.1*
ISC 16 07:48:58.3±3.7,39°5N±0°1×75°51E±0°06,h29km±26km, n19,σ1°66/31,14C-9D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.63**	**289**	⇑*i*P	**Pn**	**07 49 25.1**	**-0.3**
SFK				⇑*i*S	**Sn**	**07 49 45.6**	**+0.1**
SALK	**Salom-Alik**	**1.90**	**317**	⇑*i*P	**Pn**	**07 49 28.1**	**-0.8**
SALK				⇑*i*S	**Sn**	**07 49 51.2**	**-0.7**
NRN	**Naryn**	**1.97**	**11**	⇑*i*P	**Pn**	**07 49 29.1**	**-0.9**
NRN				⇑*i*S	**Sn**	**07 49 52.6**	**-1.3**
OHH	**Osh**	**2.33**	**297**	⇑*i*P	**Pn**	**07 49 34.7**	**-0.1**
OHH				⇑*i*S	**Sn**	**07 50 02.5**	**-0.1**
ULHL	**Ulahol**	**2.80**	**11**	⇓*i*P	**Pn**	**07 49 40.7**	**-0.7**
ULHL				⇓*i*S	**Sn**	**07 50 12.9**	**-1.4**
TARG	**Taragay, Kyrgy**	**2.83**	**37**	⇓*i*P	**Pn**	**07 49 42.0**	**0.0**
TARG				⇓*i*S	**Sn**	**07 50 15.1**	**-0.2**
UCH	**Uchtor**	**2.83**	**345**	⇑*i*P	**Pn**	**07 49 41.3**	**-0.7**
UCH				⇑*i*S	**Sn**	**07 50 13.7**	**-1.7**
KDJ	**Kajisay**	**2.92**	**25**	⇓*i*P	**Pn**	**07 49 42.6**	**-0.4**
KDJ				⇓*i*S	**Sn**	**07 50 16.4**	**-0.7**
BOOM	**Boomskoye usch**	**3.01**	**6**	*e*P	**Pn**	**07 49 43.7**	**-0.5**
BOOM				⇑*i*S	**Sn**	**07 50 17.6**	**-1.7**
AAK	**Ala-Archa**	**3.23**	**347**	⇑Pg	**Pn**	**07 49 49.4**	**+2.2**
	1.1nm,0.5s						
AAK				⇑Lg	Lg	07 50 30.6	
	4.3nm,0.7s						
KST	**Kastek**	**3.56**	**5**	Pg	**Pn**	**07 49 53.3**	**+1.6**
	3.4nm,0.4s						
KST				Lg	Lg	07 50 43.1	
	8.8nm,0.6s						
KST	**Kastek**	**3.56**	**5**	*e*P	**Pn**	**07 49 50.6**	**-1.1**
	3.4nm,0.4s						
KST				*e*S	**Sn**	**07 50 34.8**	**+2.0**
	8.8nm,0.6s						
ANVS	**Anan'yevo**	**3.66**	**26**	⇓*e*P	**Pn**	**07 49 53.4**	**+0.2**
ANVS				⇓*e*S	**Sn**	**07 50 33.9**	**-1.6**
MRKS	**Merke**	**3.68**	**333**	Pg	**Pn**	**07 49 54.3**	**+1.0**
	1.0nm,0.2s						
MRKS				Lg	Lg	07 50 44.6	
	3.1nm,0.5s						
MRKS	**Merke**	**3.68**	**333**	*e*P	**Pn**	**07 49 53.0**	**-0.3**
	1.0nm,0.2s						
MRKS				*e*S	**Sn**	**07 50 38.7**	**+3.0**
	3.1nm,0.5s						
TNSS	**Tian-Shan**	**3.70**	**17**	Pg	**Pn**	**07 49 56.9**	**+3.0**
	1.6nm,0.3s						
TNSS				Lg	Lg	07 50 48.8	
	2.1nm,0.6s						
TNSS	**Tian-Shan**	**3.70**	**17**	*e*P	**Pn**	**07 49 57.8**	**+3.9**
	1.8nm,0.5s						
TNSS				*e*S	**Sb**	**07 50 47.3**	**-0.4**
	2.1nm,0.6s						
MDOK	**Medeo**	**3.84**	**17**	Pg	**Pn**	**07 49 59.0**	**+3.4**
	5.4nm,0.4s						
MDOK				Lg	Lg	07 50 53.2	
	7.8nm,0.7s						
PDGK	**Podgornoye**	**4.86**	**37**	⇓Lg	Lg	07 51 21.8	
	3.5nm,0.8s						

*SJA **16** 07:58:52.4±0.9,24°05S×66°97W,h204km±6km,ML2.9, MW3.5*
*GUC **16** 07:58:54.3±0.6,24°01S×67°36W,h240km±5km,ML3.2*
ISC 16 07:58:51.8±2.0,24°05S±0°04×66°99W±0°07, h213km±14km,n26,σ1°54/47,1C-2D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.62**	**107**	*i*P	**Pn**	**07 59 21.3**	**-0.2**
SALTA				*i*S	**Sn**	**07 59 42.9**	**-1.6**
SALTA				IAML		07 59 56.4	
	comp=Z,9.8nm,3.3s						
AF01	**San Pedro de A**	**1.54**	**315**	*e*P	**Pn**	**07 59 29.4**	**+2.0**
AF01				*e*S	**Sn**	**07 59 57.2**	**+2.3**
HJA	**Humahuaca**	**1.68**	**60**	⇓*i*P	**Pn**	**07 59 28.9**	**+0.2**
HJA				IAML		08 00 04.7	
	comp=Z,3.8nm,0.8s						
FSA	**Cafayete**	**2.25**	**156**	*i*P	**Pn**	**07 59 34.6**	**+0.7**
PB06	**IPOC Station P**	**2.72**	**299**	*i*P	**Pn**	**07 59 40.4**	**+1.3**
PB06				*i*S	**Sn**	**08 00 15.0**	**-1.0**
PB06				IAML		08 00 16.4	
	comp=Z,47nm,0.2s						
PB06	**IPOC Station P**	**2.72**	**299**	⇓*i*P	**Pn**	**07 59 40.3**	**+1.3**
PB06				*i*S	**Sn**	**08 00 14.7**	**-1.3**
PB06				IAML		08 00 17.8	
	comp=E,96nm,0.2s						
PB09	**IPOC Station P**	**3.05**	**317**	*i*P	**Pn**	**07 59 44.6**	**+1.7**
PB09				*i*S	**Sn**	**08 00 22.4**	**-0.6**
PB09				IAML		08 00 50.1	
	comp=Z,124nm,1.8s						
PB09	**IPOC Station P**	**3.05**	**317**	*e*P	**Pn**	**07 59 44.8**	**+1.9**
PB09				*e*S	**Sn**	**08 00 22.7**	**-0.2**
PB14	**IPOC Station P**	**3.16**	**259**	*i*P	**Pn**	**07 59 45.5**	**+1.2**
PB14				*i*S	**Sn**	**08 00 24.3**	**-1.1**
PB14				IAML		08 00 27.0	
	comp=Z,21nm,0.4s						
PB14	**IPOC Station P**	**3.16**	**259**	*e*P	**Pn**	**07 59 45.4**	**+1.2**
PB14				*i*S	**Sn**	**08 00 23.7**	**-1.7**
PB14				IAML		08 00 59.3	
	comp=N,17nm,0.4s						
PB05	**IPOC Station P**	**3.18**	**291**	*i*P	**Pn**	**07 59 45.4**	**+1.1**
PB05				*i*S	**Sn**	**08 00 24.6**	**-0.8**
PB05				IAML		08 00 29.6	
	comp=Z,15nm,0.4s						
PB05	**IPOC Station P**	**3.18**	**291**	⇑*i*P	**Pn**	**07 59 45.1**	**+0.8**
PB05				*i*S	**Sn**	**08 00 23.1**	**-2.3**
PB05				IAML		08 00 26.6	
	comp=N,32nm,0.4s						
PB03	**IPOC Station P**	**3.23**	**308**	*i*P	**Pn**	**07 59 46.1**	**+1.2**
PB03				*i*S	**Sn**	**08 00 25.7**	**-0.9**
PB03				IAML		08 00 27.7	
	comp=Z,64nm,0.2s						
PB03	**IPOC Station P**	**3.23**	**308**	*i*P	**Pn**	**07 59 45.9**	**+1.0**
PB03				*i*S	**Sn**	**08 00 24.9**	**-1.7**
AC02	**Maricunga**	**3.38**	**214**	*i*P	**Pn**	**07 59 48.4**	**+1.4**
AC02				IAML		08 00 30.4	
	comp=Z,109nm,0.9s						
AC02	**Maricunga**	**3.38**	**214**	*e*P	**Pn**	**07 59 49.2**	**+2.2**
AC02				*i*S	**Sn**	**08 00 31.8**	**+1.4**
PB07	**IPOC Station P**	**3.53**	**310**	*i*P	**Pn**	**07 59 49.5**	**+0.9**
PB07				*i*S	**Sn**	**08 00 31.4**	**-1.7**
PB07				IAML		08 00 32.2	
	comp=Z,24nm,0.2s						
PB07	**IPOC Station P**	**3.53**	**310**	*i*P	**Pn**	**07 59 49.4**	**+0.9**
PB07				*i*S	**Sn**	**08 00 31.1**	**-1.9**
PB02	**IPOC Station P**	**3.81**	**315**	*i*P	**Pn**	**07 59 52.8**	**+0.9**
PB02				*i*S	**Sn**	**08 00 37.2**	**-2.0**
PB02				IAML		08 00 43.9	
	comp=Z,52nm,0.3s						
PB02	**IPOC Station P**	**3.81**	**315**	*e*P	**Pn**	**07 59 52.8**	**+0.9**
PB02				*i*S	**Sn**	**08 00 36.9**	**-2.3**
AC01	**Pan de Azucar**	**3.88**	**237**	*i*P	**Pn**	**07 59 52.5**	**0.0**
AC01				IAML		08 00 40.1	
	comp=Z,11nm,0.9s						
AC01	**Pan de Azucar**	**3.88**	**237**	*i*P	**Pn**	**07 59 52.5**	**0.0**
AC01				*i*S	**Sn**	**08 00 38.0**	**-2.4**
PB08	**IPOC Station P**	**4.37**	**332**	*i*P	**Pn**	**08 00 01.3**	**+2.2**
PB08				IAML		08 00 55.9	
	comp=Z,6.6nm,0.7s						
PB08	**IPOC Station P**	**4.37**	**332**	*e*P	**Pn**	**08 00 01.3**	**+2.2**
PB08				*i*S	**Sn**	**08 00 51.8**	**-0.3**
PB11	**IPOC Station P**	**4.93**	**329**	*i*P	**Pn**	**08 00 07.3**	**+1.5**
PB11				*i*S	**Sn**	**08 01 02.5**	**-1.8**
PB11				IAML		08 01 12.5	
	comp=Z,6.6nm,1.4s						
PSGCX	**Pisagua**	**5.30**	**326**	*i*P	**Pn**	**08 00 10.9**	**+0.5**
PSGCX				*i*S	**Sn**	**08 01 10.1**	**-2.6**
PSGCX				IAML		08 01 14.5	
	comp=Z,7.9nm,1.3s						

*MAN **16** 08:07:38.0,19°97N×120°41E,h15km,MS3.5*
*IDC **16** 08:07:40.3±4.5,20°19N×120°56E,h46km±45km,mb3.5/12, mbtmp3.8/14,ML3.7/2,MS2.9/1,Error ellipse: s-maj=24.4km s-min=17.1km az=70.0*
ISC 16 08:07:37.8±0.7,20°18N±0°07×120°5E±0°1,h28km,n22, σ1°03/24,mb3.8/11,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACPP	**Pamplona Cagay**	**1.91**	**153**	*e*P	**Pn**	**08 08 08.4**	**-0.1**
PACPP				*i*S	**Sn**	**08 08 29.4**	**-2.1**
SIPP	**Brgy, Tapao**	**2.24**	**180**	*e*P	**Pn**	**08 08 12.1**	**-1.0**
SIPP				*e*S	**Sn**	**08 08 39.0**	**-0.8**
SGCP	**Gonzaga**	**2.44**	**142**	*i*P	**Pn**	**08 08 15.9**	**+0.1**
SGCP				*i*S	**Sn**	**08 08 44.5**	**-0.3**
CVP	**Callao Caves**	**2.78**	**152**	*e*P	**Pn**	**08 08 21.6**	**+1.1**
CVP				*e*S	**Sn**	**08 08 54.3**	**+1.1**
PALP	**Palanan**	**3.62**	**149**	*i*P	**Pn**	**08 08 32.9**	**+0.9**
PALP				*i*S	**Sn**	**08 09 14.7**	**+0.8**
JNU	**Nakatsue**	**15.89**	**34**	P	**P**	**08 11 20.7**	**-2.4**
	0.2nm,0.3s,baz=197,slow=17,SNR=3.9 5.4nm,0.9s						
KSRS	**Korea Array**	**18.41**	**19**	P	**Pn**	**08 11 50.8**	**-0.1**
	0.3nm,0.3s,baz=200,slow=11,SNR=7.2 1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.37**	**269**	P	**P**	**08 12 12.5**	**0.0**
	0.7nm,0.3s,baz=80,slow=12,SNR=1.6						
CMAR				LR	LR	08 19 49.5	
	comp=Z,34nm,20.4s,baz=90,slow=36 0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**22.52**	**40**	P	**P**	**08 12 35.4**	**0.0**
	1.0nm,0.3s,baz=207,slow=8.6,SNR=5.2 1.0nm,0.3s						
MKAR	**Makanchi Array**	**40.84**	**320**	P	**P**	**08 15 18.4**	**+1.3**
	0.8nm,0.7s,baz=114,slow=9.3,SNR=4.2 0.8nm,0.7s						
WRA	**Warramunga Arr**	**42.13**	**160**	P	**P**	**08 15 27.8**	**-0.1**
	1.0nm,0.7s,baz=342,slow=9.1,SNR=7.5 1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**43.29**	**330**	P	**P**	**08 15 38.0**	**+1.1**
	0.6nm,0.4s,baz=120,slow=6.0,SNR=4.6 0.6nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**43.55**	**84**	T	T	09 02 21.5	
	baz=282,slow=75						
H11S1	**WAKE ISLAND Hy**	**43.56**	**84**	T	T	09 02 22.0	
	baz=282						
H11S2	**WAKE ISLAND Hy**	**43.57**	**84**	T	T	09 02 26.1	
	baz=282,slow=75						
KURBB	**Kurchatov Arra**	**44.80**	**323**	P	**P**	**08 15 50.4**	**+1.3**
	1.4nm,0.6s,baz=124,slow=7.5,SNR=12 1.4nm,0.6s						
ASAR	**Alice Springs**	**45.51**	**163**	P	**P**	**08 15 55.8**	**+0.7**
	0.9nm,0.8s,baz=347,slow=6.9,SNR=7.8 0.9nm,0.8s						
BVAR	**Borovoye Array**	**50.40**	**323**	P	**P**	**08 16 32.7**	**+0.1**
	0.4nm,0.3s,baz=103,slow=11,SNR=2.2 0.4nm,0.3s						
ILAR	**Eielson Array**	**73.08**	**27**	P	**P**	**08 19 04.2**	**-0.9**
	0.5nm,0.7s,baz=269,slow=6.3,SNR=4.7 0.5nm,0.7s						
HFS	**Hagfors**	**80.72**	**331**	P	**P**	**08 19 48.7**	**+0.4**
	0.8nm,0.5s,baz=70,slow=4.9,SNR=4.2 0.8nm,0.5s						
NOA	**NORSAR Array B**	**81.44**	**332**	P	**P**	**08 19 52.6**	**+0.4**
	0.4nm,0.5s,baz=56,slow=6.0,SNR=2.5 0.4nm,0.5s						
YKA	**Yellowknife Ar**	**86.91**	**22**	P	**P**	**08 20 19.4**	**-0.4**
	0.8nm,0.8s,baz=310,slow=4.4,SNR=8.4 0.8nm,0.8s						

SJA 16 08:19:39.0±0.7,31°21S×68°61W,h112km±2km,ML3.4, MW3.6,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.17**	**135**	*e*P	**Pn**	08 19 55.3	+0.7
RTLL				*e*S	**Sn**	08 20 07.1	+0.7
SJA	**San Juan**	**0.32**	**172**	*e*P	**Pn**	08 19 56.0	+0.9
SJA				*e*S	**Sn**	08 20 09.4	+2.1
SJA				IAML		08 20 12.3	
	comp=Z,937nm,0.1s						
ZON	**Zonda**	**0.34**	**189**	*e*P	**Pn**	08 19 46.2	-9.1
ZON				*e*P		08 19 55.9	
ZON				*e*S	**Sn**	08 20 08.3	+0.8
ZON				IAML		08 20 08.4	
	comp=Z,737nm,0.7s						
CFA	**Coronel Fontan**	**0.51**	**141**	*e*P	**Pn**	08 19 56.8	+0.6
CFA				*e*S	**Sn**	08 20 09.8	+0.7
CFA				IAML		08 20 10.2	
	comp=Z,2μm,0.3s						
ACCO	**Cerro Coronel**	**0.73**	**328**	*e*P	**Pn**	08 19 59.3	+1.1
ACCO				*e*S	**Sn**	08 20 14.0	+1.4
ACCO				IAML		08 20 15.5	
	comp=Z,961nm,0.4s						
RTLS	**Leoncito**	**0.83**	**225**	*e*P	**Pn**	08 19 59.9	+0.9
RTLS				*e*S	**Sn**	08 20 15.3	+1.2
RTLS				IAML		08 20 16.4	
	comp=Z,2μm,0.2s						
ACDV	**Cuesta del Vie**	**1.12**	**337**	*e*P	**Pn**	08 20 03.1	+1.3
ACDV				IAML		08 20 21.4	
	comp=Z,930nm,0.4s						
AVFE	**Valle Fertil**	**1.14**	**62**	*e*P	**Pn**	08 20 03.4	+1.5
AROD	**Rodeo**	**1.27**	**324**	*e*P	**Pn**	08 20 05.2	+1.5
AROD				*e*S	**Sn**	08 20 23.8	+1.5
ACAN	**Cantantal**	**1.61**	**132**	*e*P	**Pn**	08 20 08.4	+1.0
ARCO	**CERRO ARCO**	**1.65**	**189**	*e*P	**Pn**	08 20 09.1	+1.2
ARCO				*e*S	**Sn**	08 20 31.5	+1.6
ARCO				IAML		08 20 32.9	
	comp=Z,458nm,0.3s						
CO01	**Juntas del Tor**	**1.77**	**313**	*e*P	**Pn**	08 20 10.8	+1.4
CO01				*e*S	**Sn**	08 20 34.9	+2.2
CO01				IAML		08 20 35.6	
	comp=Z,396nm,0.2s						
CO03	**El Pedregal**	**1.82**	**281**	*e*P	**Pn**	08 20 11.2	+1.3
CO03				*e*S	**Sn**	08 20 35.0	+1.6
CO03				IAML		08 20 36.8	
	comp=Z,428nm,0.2s						
AAGR	**Agrelo**	**1.88**	**185**	*e*P	**Pn**	08 20 11.9	+1.2
AAGR				*e*S	**Sn**	08 20 35.5	+0.7
AAGR				IAML		08 20 37.3	
	comp=Z,287nm,0.3s						
CO02	**Combarbal**	**2.04**	**270**	*e*P	**Pn**	08 20 13.6	+0.8
CO02				*e*S	**Sn**	08 20 40.3	+1.7
CO02				IAML		08 20 43.7	
	comp=Z,303nm,0.3s						
GO04	**Tololo Observa**	**2.15**	**298**	*e*P	**Pn**	08 20 15.0	+0.8
GO04				*e*S	**Sn**	08 20 37.2	-3.9
GO04				IAML		08 20 48.0	
	comp=Z,403nm,0.2s						
AVIZ	**Vizcacheras**	**2.26**	**178**	*e*P	**Pn**	08 20 16.9	+1.4
AVIZ				*e*S	**Sn**	08 20 46.0	+2.6
VA03	**San Esteban**	**2.26**	**226**	*e*P	**Pn**	08 20 16.5	+1.0
VA03				*e*S	**Sn**	08 20 46.6	+3.2
VA03				IAML		08 20 52.6	
	comp=Z,171nm,0.7s						
ACLC	**CERRO LA CRUZ**	**2.29**	**39**	*e*P	**Pn**	08 20 17.3	+1.4
ACLC				*e*S	**Sn**	08 20 46.2	+2.1
ACLC				IAML		08 20 48.7	
	comp=Z,137nm,0.6s						
VCA	**Vinchina**	**2.49**	**8**	*e*P	**Pn**	08 20 19.8	+1.3
VCA				*e*S	**Sn**	08 20 49.9	+1.1
VCA				IAML		08 20 58.3	
	comp=Z,447nm,0.7s						
MT08	**Bocatoma Ro**	**2.53**	**208**	*e*P	**Pn**	08 20 20.4	+1.4
MT08				*e*S	**Sn**	08 20 48.3	-1.5
MT08				IAML		08 20 54.2	
	comp=Z,107nm,1.4s						
MT04	**Ro Olivares**	**2.54**	**210**	*e*P	**Pn**	08 20 20.6	+1.3
MT04				*e*S	**Sn**	08 20 49.8	-0.3
PEL	**Peldehue**	**2.61**	**222**	*e*P	**Pn**	08 20 20.6	+0.7
PEL				*e*S	**Sn**	08 20 52.0	+0.6
PEL				IAML		08 20 54.5	
	comp=Z,91nm,0.5s						
MRA	**San Martin**	**2.75**	**117**	*e*P	**Pn**	08 20 22.6	+0.8
MRA				*e*S	**Sn**	08 20 54.9	+0.2
MRA				IAML		08 20 56.2	
	comp=Z,189nm,0.2s						
AC05	**El Transito**	**2.77**	**328**	*e*P	**Pn**	08 20 23.9	+1.8
AC05				*e*S	**Sn**	08 20 58.2	+2.9
AC05				IAML		08 20 58.9	
	comp=Z,92nm,0.7s						
MT03	**Universidad Ad**	**2.79**	**215**	*e*P	**Pn**	08 20 23.6	+1.3
MT03				*e*S	**Sn**	08 20

ZALV Lg Lg 08 25 50.5
3.8nm,0.3s,baz=56,slow=27,SNR=19
KURBB Kurchatov Arra 6.21 234 Pn Pn 08 26 46.9 +0.7
0.1nm,0.3s,baz=53,slow=14,SNR=1.3
0.2nm,0.3s
MKAR Makanchi Array 8.21 200 Pn Pn 08 27 14.5 +0.9
0.1nm,0.3s,baz=22,slow=12,SNR=2.5
0.1nm,0.3s

*IDC **16** 08:31:21.5±1.4,30˚.06N×139˚.89E,h0km,mb3.4/4, mbtmp3.6/8,ML3.1/4,Error ellipse: s-maj=57.2km s-min=18.7km az=75.0*
*JMA **16** 08:31:24.2±0.2,31˚.N±1˚×14˚.3E±˚,h181km,MV3.2/9,FAR E OFF IZU ISLANDS*
ISC 16 08:31:19.2±1.1,30˚.61N±0˚.06×142˚.3E±0˚.2,h24km,n11, σ2s53/13,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.27**	**321**	Pn	**Pn**	**08 32 09.9**	**+1.0**
	5.1nm,0.3s,baz=54,slon=21,SNR=2.1						
JHJ				Sn	**Sn**	**08 32 44.1**	**-2.9**
	6.7nm,0.3s,baz=261,slow=20,SNR=1.0						
	101nm,0.9s						
JCJ	**Chichijima**	**3.50**	**181**	Pn	**Pb**	**08 32 18.5**	**-2.0**
	9.8nm,0.3s,baz=323,slow=18,SNR=2.0						
JCJ				Sn	**Sn**	**08 32 55.3**	**+2.5**
	14nm,0.3s,baz=260,slow=20,SNR=3.8						
	44nm,0.5s						
BSO1	**Boso 1**	**4.17**	**345**	*eS*	**Sn**	**08 33 11.4**	**+2.8**
JHO	**Hitachi**	**6.15**	**347**	*eP*	**Pn**	**08 32 49.9**	**+1.4**
JHO				*eS*	**Sn**	**08 33 55.9**	**-2.2**
MJAR	**Matsushiro Arr**	**6.81**	**331**	Pn	**Pn**	**08 33 00.1**	**+2.4**
	0.1nm,0.3s,baz=161,slow=11,SNR=9.8						
	1.2nm,0.4s						
JMK	**Ichinoseki**	**8.37**	**354**	*eS*	**Sn**	**08 34 48.0**	**-4.7**
USRK	**Ussuriysk Ar.**	**15.81**	**332**	Pn	**Pn**	**08 35 01.5**	**+1.3**
	0.1nm,0.3s,baz=153,slow=9.7,SNR=1.9						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**48.35**	**307**	P	P	08 39 52.9	-6.0
	0.1nm,0.5s,baz=93,slow=5.8,SNR=1.8						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**50.83**	**190**	P	**P**	**08 40 17.6**	**-0.4**
	0.5nm,0.6s,baz=5.2,slow=7.5,SNR=8.4						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**54.56**	**189**	P	**P**	**08 40 45.2**	**-0.3**
	0.2nm,0.4s,baz=6.1,slow=6.6,SNR=4.7						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**55.54**	**316**	P	**P**	**08 40 52.8**	**+0.5**
	0.5nm,0.5s,baz=70,slow=9.3,SNR=1.6						
	0.5nm,0.5s						

*IDC **16** 08:34:36.2±1.8,20˚.70S×177˚.49W,h512km±31km,mb3.0/4, mbtmp3.9/6,Error ellipse: s-maj=33.3km s-min=20.7km az=11.0*
ISC 16 08:34:35.8±0.9,20˚.8S±0˚.1×177˚.4W±0˚.1,h500km,n6, σ2s14/8,mb3.4/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.26**	**304**	P	**P**	**08 36 06.5**	**+1.3**
	5.3nm,0.7s,baz=45,slow=15,SNR=4.4						
AFI	**Afiamalu**	**8.69**	**39**	P	**P**	**08 36 41.5**	**+1.9**
	19nm,0.5s,baz=213,slow=18,SNR=7.5						
AFI				S	**S**	**08 38 18.2**	**-2.9**
	7.9nm,0.3s,baz=18,slow=17,SNR=1.7						
ASAR	**Alice Springs**	**45.00**	**257**	P	**P**	**08 42 05.1**	**-1.2**
	0.8nm,0.6s,baz=92,slow=8.2,SNR=13						
ASAR				PcP	**PcP**	**08 43 36.6**	**-0.3**
	0.2nm,0.5s,baz=104,slow=4.1,SNR=5.6						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**45.12**	**262**	P	**P**	**08 42 05.6**	**-1.6**
	0.6nm,0.6s,baz=97,slow=7.2,SNR=25						
	0.6nm,0.6s						
VNDA	**Vanda**	**57.68**	**185**	P	**P**	**08 43 36.0**	**-1.4**
	1.1nm,0.4s,baz=285,slow=23,SNR=14						
	1.1nm,0.4s						
QSPA	**South Pole Qui**	**69.29**	**180**	P	**P**	**08 44 53.9**	**+1.8**
	0.8nm,0.7s,baz=316,slow=1.9,SNR=7.4						
	0.8nm,0.7s						

*CATAC **16** 08:39:46.2±0.6,13˚.N±3˚×9˚.0W±˚,h19km±2km,M2.8/15, MLv2.8/15,Error ellipse: s-maj=7.0km s-min=4.1km az=27.1,confirmed*
*SNET **16** 08:39:46.6±2.1,13˚.17N×89˚.80W,h23km,ML2.7, Presumed earthquake*
*GCG **16** 08:39:47.3±0.8,13˚.23N×89˚.84W,h27km±4km,MD3.9, Presumed earthquake*
ISC 16 08:39:46.2±2.4,13˚.16N±0˚.10×89˚.80W±0˚.07,h26km±12km, n30,σ0s47/47,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.57**	**55**	P	**Pn**	**08 39 58.4**	**-0.3**
LALI	**Alcalda de L**	**0.57**	**55**	*i* P	**Pn**	**08 39 58.3**	**-0.3**
LALI				*eS*	**Sb**	**08 40 06.2**	**+0.8**
JAYA	**Jayaque - finc**	**0.60**	**35**	P	**Pb**	**08 39 58.7**	**+0.5**
JAYA	**Jayaque - finc**	**0.60**	**35**	*i* P	**Pb**	**08 39 58.7**	**+0.5**
JAYA				*eS*	**Sn**	**08 40 07.2**	**-1.0**
JAYA	**Jayaque - finc**	**0.60**	**35**	*eP*	**Pb**	**08 39 58.8**	**+0.5**
JAYA				*eS*	**Sn**	**08 40 08.2**	**0.0**
FAME	**Alcaldia de Sa**	**0.71**	**343**	P	**Pb**	**08 39 59.5**	**-0.5**
NUBE	**Las Nubes**	**0.74**	**2**	P	**Pb**	**08 40 00.4**	**-0.2**
NUBE	**Las Nubes**	**0.74**	**2**	*i* P	**Pb**	**08 40 00.4**	**-0.2**
NUBE				*eS*	**Sb**	**08 40 10.5**	**+0.2**
PANCS	**Alcalda de**	**0.76**	**53**	P	**Pb**	**08 40 00.5**	**-0.2**
PANCS				S	**Sb**	**08 40 11.1**	**+0.4**
BOQS	**Boqueron**	**0.77**	**42**	*eP*	**Pb**	**08 40 00.9**	**-0.2**
UEES	**Universidad Ev**	**0.78**	**45**	P	**Pb**	**08 40 01.0**	**-0.2**
UEES				S	**Sn**	**08 40 12.3**	**-0.3**
LOMA	**Loma Larga**	**0.78**	**52**	P	**Pb**	**08 40 01.2**	**0.0**
LOMA				S	**Sn**	**08 40 12.6**	**-0.1**
SEMO	**Seminario San**	**0.78**	**46**	P	**Pb**	**08 40 00.9**	**-0.3**
UNIC	**Universidad Ca**	**0.85**	**17**	P	**Pb**	**08 40 02.1**	**-0.3**
UNIC				S	**Sb**	**08 40 13.4**	**-0.1**
SLOZ	**Alcaldia de Sa**	**0.86**	**1**	P	**Pb**	**08 40 02.5**	**-0.1**
PAVA	**Las Pavas**	**1.01**	**57**	P	**Pb**	**08 40 04.9**	**-0.2**
PAVA				S	**Sn**	**08 40 18.3**	**+0.1**
COEG	**Centro de Oper**	**1.01**	**63**	P	**Pb**	**08 40 04.5**	**-0.6**
COEG	**Centro de Oper**	**1.01**	**63**	*eP*	**Pb**	**08 40 04.7**	**-0.4**
COEG				*eS*	**Sb**	**08 40 17.2**	**-0.7**
TECO	**Alcaldia de Te**	**1.06**	**69**	P	**Pb**	**08 40 05.5**	**0.0**
TECO				S	**Sb**	**08 40 19.1**	**-0.3**
JUAM	**Asuncion Mita**	**1.17**	**5**	*i* P	**Pn**	**08 40 07.0**	**0.0**
JUAM				*eS*	**Sn**	**08 40 22.7**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.18**	**63**	S	**Sn**	**08 40 23.8**	**+1.5**
LLGN	**La Laguna**	**1.30**	**40**	P	**Pn**	**08 40 09.1**	**+0.2**
LLGN				S	**Sn**	**08 40 25.6**	**+0.1**
MTO3	**Montecristo**	**1.30**	**19**	P	**Pn**	**08 40 09.1**	**+0.1**
MTO3				S	**Sb**	**08 40 26.3**	**-0.3**
MTO3	**Montecristo**	**1.30**	**19**	*i* P	**Pn**	**08 40 09.1**	**+0.1**
ESQI	**Esquipulas**	**1.46**	**18**	P	**Pn**	**08 40 11.4**	**+0.4**
ESQI				S	**Sb**	**08 40 30.6**	**-0.5**
PACA	**Pacayal**	**1.47**	**78**	P	**Pn**	**08 40 11.5**	**+0.3**
PACA				S	**Sn**	**08 40 30.5**	**+0.7**
RANC	**El Ranchito**	**1.50**	**79**	S	**Sb**	**08 40 31.6**	**-0.5**
SARH	**Santa Rosa de**	**1.90**	**32**	P	**Pn**	**08 40 17.5**	**+0.4**
SARH				S	**Sn**	**08 40 39.7**	**-0.5**
SARH	**Santa Rosa de**	**1.90**	**32**	*i* P	**Pn**	**08 40 17.7**	**+0.6**
APG	**El Apazote**	**1.94**	**341**	*eP*	**Pn**	**08 40 18.2**	**+0.4**

*NNC **16** 08:45:19.1±4.0,38˚.82N×71˚.37E,h116km±74km,mb3.5, mpv4.0,Error ellipse: s-maj=37.0km s-min=20.5km az=20.0*
*KRNET **16** 08:45:19.5±0.1,39˚.37N×71˚.53E,h35km,mb4.1*
*NEIC **16** 08:45:19.7±1.1,39˚.31N±0˚.03×71˚.66E±0˚.05,h10km±1km, mb4.3/32,Error ellipse: s-maj=7.0km s-min=4.9km az=96.0*
*SOME **16** 08:45:20.4,39˚.58N×72˚.08E,h5km*
*IDC **16** 08:45:24.1±3.9,39˚.16N×71˚.72E,h43km±33km,mb3.5/13, mbtmp3.8/16,ML3.5/3,MS2.8/5,Error ellipse: s-maj=26.8km s-min=16.9km az=11.0*
ISC 16 08:45:18.8±1.3,39˚.33N±0˚.03×71˚.65E±0˚.03,h4km±8km, n139,σ2s21/181,mb4.1/29,MS3.1/4,34C-15D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.19**	**39**	Pg	**Pg**	**08 45 22.5**	**-0.1**

BTK	**Batken**	**0.97**	**319**	⇓*iP*	**Pb**	**08 45 36.7**	**-1.5**
BTK				⇓*iS*	**Sb**	**08 45 48.9**	**-2.4**
BTK	**Batken**	**0.97**	**319**		**Pb**	**08 45 37.3**	**-0.9**
BTK				Sg	**Sb**	**08 45 51.5**	**+0.1**
GAR	**Garm**	**1.08**	**253**	⇑*iP*	**Pb**	**08 45 38.5**	**-1.7**
GAR				⇑*iS*	**Sb**	**08 45 51.8**	**-3.0**
GAR	**Garm**	**1.08**	**253**		**Pb**	**08 45 38.7**	**-1.5**
GAR				Sg	**Sb**	**08 45 54.3**	**-0.5**
OHH	**Osh**	**1.48**	**36**	⇑*iP*	**Pn**	**08 45 45.0**	**-1.3**
OHH				⇑*iS*	**Sn**	**08 46 03.6**	**-2.5**
SFK	**Sufi-Kurgan**	**1.59**	**64**	⇓*eP*	**Pn**	**08 45 47.4**	**-0.5**
SFK				⇓*iS*	**Sn**	**08 46 07.4**	**-1.6**
MANEM	**Manem**	**1.79**	**179**	Pn	**Pn**	**08 45 50.3**	**-0.4**
MANEM				Sn	**Sn**	**08 46 13.8**	**-0.1**
CHGR	**Chuyangaron**	**2.05**	**252**	⇑*iP*	**Pn**	**08 45 51.7**	**-2.5**
CHGR				⇑*iS*	**Sn**	**08 46 15.2**	**-5.1**
CHGR	**Chuyangaron**	**2.05**	**252**	Pn	**Pn**	**08 45 56.6**	**+2.4**
TRKS	**Terek-Say**	**2.23**	**350**	⇑*iP*	**Pn**	**08 45 53.8**	**-2.9**
TRKS				⇑*iS*	**Sn**	**08 46 18.6**	**-6.2**
SALK	**Salom-Alik**	**2.28**	**46**	⇑*iP*	**Pn**	**08 45 56.6**	**-0.7**
SALK				⇑*iS*	**Sn**	**08 46 24.1**	**-1.9**
KSH2	**Kashi**	**3.05**	**92**	Pn	**Pn**	**08 46 11.5**	**+3.5**
KSH2				Sn	**Sn**	**08 46 45.0**	**0.0**
KSH2				smax	smax		
	comp=N,360nm,0.7s						
KSH2				smax	smax		
	comp=E,370nm,0.7s						
IUG	**Iuzhnay**	**3.07**	**337**	*eP*	**Pb**	**08 46 16.4**	**+2.4**
	comp=E,212nm,0.4s						
IUG				*eS*	**Sg**	**08 46 56.8**	**-0.6**
	comp=E,472nm,0.5s						
MNAS	**Manas**	**3.22**	**11**	⇑*iP*	**Pn**	**08 46 08.9**	**-1.4**
MNAS				⇑*iS*	**Sn**	**08 46 44.8**	**-4.3**
SHAA	**Shahritus**	**3.28**	**239**		**Pn**	**08 46 11.1**	**+0.1**
CHM	**Chimkent**	**3.36**	**333**	*eP*	**Pb**	**08 46 21.3**	**+2.3**
	comp=E,107nm,0.1s						
CHM				*eS*	**Sb**	**08 47 04.9**	**+4.7**
	comp=E,236nm,0.2s						
DZA	**Taraz**	**3.56**	**356**	*eP*	**Pb**	**08 46 23.2**	**+0.8**
	comp=E,62nm,0.1s						
DZA				*eS*	**Sb**	**08 47 08.2**	**+2.1**
	comp=E,232nm,0.2s						
MRKS	**Merke**	**3.61**	**19**	*eP*	**Pb**	**08 46 21.7**	**-1.6**
	comp=E,19nm,0.3s						
MRKS				*eS*	**Sb**	**08 47 05.8**	**-1.8**
	comp=E,88nm,0.4s						
UCH	**Uchtor**	**3.62**	**36**	P	**Pb**	**08 46 21.4**	**-2.3**
	SNR=39						
UCH	**Uchtor**	**3.62**	**36**	⇓*iP*	**Pn**	**08 46 15.0**	**-1.1**
UCH				⇓*iS*	**Sn**	**08 46 55.5**	**-4.0**
EKS2	**Erkin-Say**	**3.70**	**25**	P	Pn	08 46 21.7	+4.9
	SNR=16						
EKS2	**Erkin-Say**	**3.70**	**25**	⇑*iP*	**Pn**	**08 46 15.9**	**-0.9**
EKS2				⇑*iS*	**Sn**	**08 46 56.7**	**-4.2**
KK31	**Karatay Array**	**3.86**	**348**	⇓P	**Pn**	**08 46 22.0**	**+3.0**
	comp=E,16nm,0.3s,baz=173,slow=12,SNR=430						
KK31				⇑S	**Sb**	**08 47 14.1**	**-0.5**
	comp=E,26nm,0.3s,baz=167,slow=20,SNR=4.7						
KK31	**Karatay Array**	**3.86**	**348**		**Pn**	**08 46 20.4**	**+1.3**
KKAR	**Karatay Array**	**3.86**	**348**		**Pn**	**08 46 22.2**	**+3.2**
NRN	**Naryn**	**3.93**	**56**	⇑*iP*	**Pn**	**08 46 19.4**	**-0.8**
NRN				⇑*iS*	**Sn**	**08 47 03.0**	**-4.0**
NRN	**Naryn**	**3.93**	**56**	Pn	**Pn**	**08 46 22.7**	**+2.4**
BRLS	**Borolday**	**3.94**	**340**	*eP*	**Pb**	**08 46 28.3**	**-0.5**
	comp=E,11nm,0.2s						
BRLS				*eS*	**Sb**	**08 47 17.1**	**+0.2**
	comp=E,41nm,0.4s						
AAK	**Ala-Archa**	**3.94**	**32**	P	Pn	08 46 25.4	+5.2
	comp=E,8.1nm,0.3s,baz=210,slow=9.3,SNR=27						
AAK				S	**Sn**	**08 47 08.9**	**+1.9**
	comp=E,19nm,0.4s,baz=200,slow=9.2,SNR=3.7						
	comp=E,19nm,0.3s						
AAK	**Ala-Archa**	**3.94**	**32**	P	**Pb**	**08 46 26.2**	**-2.8**
	SNR=24						
AAK	**Ala-Archa**	**3.94**	**32**	⇓P	**Pb**	**08 46 26.0**	**-2.9**
	comp=E,7.7nm,0.5s						
AAK				⇓S	**Sb**	**08 47 16.6**	**-0.5**
	comp=E,25nm,0.6s						
AAK	**Ala-Archa**	**3.94**	**32**	⇑*iP*	**Pn**	**08 46 19.3**	**-0.9**
AAK				⇑*iS*	**Sn**	**08 47 03.0**	**-4.1**
AAK	**Ala-Archa**	**3.94**	**32**		**Pb**	**08 46 25.9**	**-3.1**
FRU1	**Bishkek**	**4.14**	**32**	Pn	**Pn**	**08 46 21.9**	**-1.0**
KBK	**Karagaybulak**	**4.16**	**36**	P	Pn	08 46 29.0	+5.8
	SNR=10						
KBK	**Karagaybulak**	**4.16**	**36**	⇓*iP*	**Pn**	**08 46 22.4**	**-0.8**
KBK				⇓*iS*	**Sn**	**08 47 08.0**	**-4.3**
CHMS	**Chumysh**	**4.35**	**32**	P	Pn	08 46 30.6	+4.9
	SNR=14						
CHMS	**Chumysh**	**4.35**	**32**	⇑*iP*	**Pn**	**08 46 24.9**	**-0.8**
CHMS				⇑*iS*	**Sn**	**08 47 12.2**	**-4.7**
USP	**Ospenovka**	**4.48**	**28**	P	**Pn**	**08 46 32.0**	**+4.5**
	SNR=23						
USP	**Ospenovka**	**4.48**	**28**	⇓*iP*	**Pn**	**08 46 26.4**	**-1.1**
USP				⇓*iS*	**Sn**	**08 47 15.2**	**-4.9**
BOOM	**Boomskoye usch**	**4.53**	**45**	⇑*iP*	**Pn**	**08 46 27.7**	**-0.6**
BOOM				⇑*iS*	**Sn**	**08 47 17.4**	**-4.2**
BOOM	**Boomskoye usch**	**4.53**	**45**		**Pn**	**08 46 33.1**	**+4.7**
ULHL	**Ulahol**	**4.54**	**49**	P	**Pn**	**08 46 32.8**	**+4.2**
	SNR=22						
ULHL	**Ulahol**	**4.54**	**49**	⇑*iP*	**Pn**	**08 46 27.9**	**-0.6**
ULHL				⇑*iS*	**Sn**	**08 47 17.8**	**-4.1**
TKM2	**Tokmak 2**	**4.67**	**38**	P	**Pn**	**08 46 34.9**	**+4.7**
	SNR=28						
TKM2	**Tokmak 2**	**4.67**	**38**	⇑*iP*	**Pn**	**08 46 29.3**	**-0.9**
TKM2				⇑*iS*	**Sn**	**08 47 20.3**	**-4.6**
KDJ	**Kajisay**	**5.05**	**55**	⇑*iP*	**Pn**	**08 46 35.0**	**-0.4**
KDJ				⇑*iS*	**Sn**	**08 47 30.1**	**-4.2**
KDJ	**Kajisay**	**5.05**	**55**		**Pn**	**08 46 38.2**	**+2.8**
KBL	**Kabul**	**5.22**	**204**		**Pn**	**08 46 38.8**	**+1.0**
TARG	**Taragay, Kyrgy**	**5.27**	**61**	⇑*iP*	**Pn**	**08 46 38.1**	**-0.6**
TARG				⇑*iS*	**Sn**	**08 47 35.4**	**-4.7**
TARG	**Taragay, Kyrgy**	**5.27**	**61**		**Pn**	**08 46 39.0**	**+0.4**
ANVS	**Anan'yevo**	**5.71**	**51**	⇑*eP*	**Pn**	**08 46 43.9**	**-0.6**
ANVS				⇑*iS*	**Sn**	**08 47 45.6**	**-5.0**
NIL	**Nilore**	**5.82**	**167**	Pn	**Pn**	**08 46 48.9**	**+3.0**
PRZ	**Przheval'sk**	**6.01**	**56**	Pn	**Pn**	**08 46 50.0**	**+1.4**
WUS	**Wushi**	**6.09**	**70**	Pn	**Pn**	**08 46 48.8**	**-0.9**
JMU	**Jammu**	**7.03**	**157**	*ex*	x	08 48 37.8	
JMU				IAML		08 48 40.1	
	comp=N,40nm,0.3s						
JMU				IAML		08 48 42.4	
	comp=E,64nm,0.5s						
PDGK	**Podgornoye**	**7.13**	**53**		**Pn**	**08 47 06.5**	**+2.5**
TSSA	**Tissa**	**7.44**	**149**	*eP*	**Pn**	**08 47 12.3**	**+4.0**
TSSA				*eS*	**Sn**	**08 48 35.2**	**+2.0**
TSSA				IAML		08 48 44.2	
	comp=E,72nm,0.9s						
DHRM	**DHARAMSHALA**	**8.01**	**150**	*eP*	**Pn**	**08 47 19.1**	**+2.9**
DHRM				*eS*	**Sn**	**08 48 48.2**	**+0.8**
DHRM				IAML		08 48 55.1	
	comp=E,40nm,0.6s						
DHRM				IAML		08 48 55.4	
	comp=N,61nm,0.4s						
BHK	**Bhakra**	**8.81**	**153**	*eP*	**Pn**	**08 47 27.1**	**+0.1**
BHK				*eS*	**Sn**	**08 49 09.2**	**+2.5**
HNLY	**HANLEY**	**8.83**	**136**	*eP*	**Pn**	**08 47 28.6**	**+1.0**
HNLY				*eS*	**Sn**	**08 49 07.3**	**-0.6**
HRA	**Herat**	**9.00**	**240**	Pn	**Pn**	**08 47 31.0**	**+1.3**
KLP	**Kalpa**	**9.46**	**143**	*eS*	**Sn**	**08 49 23.3**	**+0.2**
KLP				IAML		08 49 28.4	
	comp=E,41nm,0.5s						
UTK	**UTTARKASHI**	**10.23**	**145**	*eS*	**Sn**	**08 49 40.8**	**-0.9**
UTK				IAML		08 49 44.8	
	comp=E,102nm,0.6s						
UTK				IAML		08 49 46.1	
	comp=N,88nm,0.8s						
MAKZ	**Makanchi**	**10.62**	**42**	Pn	**Pn**	**08 47 53.5**	**+1.7**
MK31	**Makanchi Array**	**10.78**	**43**	Pn	**Pn**	**08 47 57.5**	**+3.6**
MKAR	**Makanchi Array**	**10.78**	**43**	P	**Pn**	**08 47 57.8**	**+3.9**
	comp=N,0.2nm,0.3s,baz=232,slow=14,SNR=10						
MKAR				LR	LR	08 52 31.9	
	comp=N,27nm,18.9s,baz=173,slow=39						
	comp=N,1.0nm,0.6s						
MKAR	**Makanchi Array**	**10.78**	**43**		**Pn**	**08 47 54.2**	**+0.4**
KURBB	**Kurchatov Arra**	**12.29**	**21**	P	**Pn**	**08 48 14.8**	**+0.3**
	comp=N,0.8nm,0.4s,baz=214,slow=12,SNR=6.9						
KURBB				S	**Sn**	**08 50 37.4**	**+5.6**
	comp=N,0.2nm,0.3s,baz=258,slow=41,SNR=1.7						
KURK	**Kurchatov**	**12.40**	**21**	Pn	**Pn**	**08 48 16.4**	**+0.4**
AB31	**Akbulak array**	**12.97**	**324**	P	**Pn**	**08 48 22.6**	**-1.2**
	comp=N,1.4nm,0.4s,baz=135,slow=13,SNR=72						
AB31				⇓S	**Sn**	**08 50 46.0**	**-2.5**
	comp=N,8.2nm,0.8s,baz=143,slow=22,SNR=8.2						
AB31	**Akbulak array**	**12.97**	**324**	Pn	**Pn**	**08 48 23.0**	**-0.8**

ABKAR	**Akbulak array**	**12.97**	**324**		**Pn**	**08 48 22.3**	**-1.5**
BVAR	**Borovoye Array**	**13.72**	**357**	P	**Pn**	**08 48 33.0**	**-1.0**
	comp=N,1.3nm,0.5s,baz=150,slow=12,SNR=4.5						
BORK	**Borovoye**	**13.75**	**357**	Pn	**Pn**	**08 48 33.7**	**-0.6**
AKTO	**Aktyubinsk**	**14.69**	**324**	P	**Pn**	**08 48 46.0**	**-1.3**
	comp=N,2.9nm,0.4s,baz=130,slow=13,SNR=4.8						
AKTO				S	**Sn**	**08 51 29.1**	**-1.3**
	comp=N,7.2nm,0.8s,baz=166,slow=19,SNR=7.2						
AKTO				LR	LR	08 55 07.7	
	comp=N,47nm,19.9s,baz=166,slow=39						
AKTO	**Aktyubinsk**	**14.69**	**324**	⇓P	**Pn**	**08 48 47.8**	**+0.6**
	comp=N,8.1nm,1.1s						
AKTO				⇑S	**Sn**	**08 51 28.8**	**-1.6**
	comp=N,4.8nm,1.1s						
EVN	**Everest**	**16.95**	**127**	Pn	**Pn**	**08 49 15.3**	**-2.1**
ZAA0	**Zalesovo Array**	**17.15**	**27**	Pn	**Pn**	**08 49 19.3**	**+0.2**
ZALV	**Zalesovo Beam**	**17.15**	**27**	P	**P**	**08 49 22.9**	**+2.0**
	comp=N,1.0nm,0.3s,baz=211,slow=10,SNR=12						
	comp=N,4.2nm,0.6s						
ZALV	**Zalesovo Beam**	**17.15**	**27**		**Pn**	**08 49 19.4**	**+0.3**
ARTI	**Arti**	**19.18**	**337**	P	**P**	**08 49 43.6**	**+0.4**
	comp=N,1.2nm,0.4s,baz=122,slow=3.0,SNR=3.7						
ARTI	**Arti**	**19.18**	**337**	P	**P**	**08 49 43.1**	**-0.2**
GTA2	**Gaotai**	**21.69**	**81**	*eP*	**P**	**08 50 12.8**	**+2.0**
GTA2				pP	pP	08 50 15.9	+3.3
GTA2				pmax	pmax		
	comp=E,5.0nm,0.8s						
KBZ	**Khabaz**	**21.91**	**291**	P	**P**	**08 50 15.9**	**+3.0**
	comp=Z,0.4nm,0.3s,baz=293,slow=19,SNR=4.3						
	comp=Z,0.4nm,0.3s						
BR131	**Keskin Array S**	**29.17**	**283**	P	**P**	**08 51 20.8**	**-0.5**
BR131				IAmb	IAmb	08 51 28.3	
	comp=Z,4.9nm,1.5s						
BRTR	**Keskin Array B**	**29.17**	**283**	P	**P**	**08 51 18.9**	**-2.5**
	comp=Z,1.2nm,0.8s,baz=120,slow=8.8,SNR=4.7						
BRTR	**Keskin Array B**	**29.17**	**283**	P	**P**	**08 51 19.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**31.48**	**124**	LR	LR	09 04 25.7	
	comp=Z,3.9nm,20.6s,baz=245,slow=36						
AKASG	**Malin Array Be**	**31.65**	**305**	P	**P**	**08 51 42.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=80,slow=7.6,SNR=3.2						
AKASG				LR	LR	09 07 36.0	
	comp=Z,25nm,18.1s,baz=32,slow=42						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**31.65**	**305**	P	**P**	**08 51 42.6**	**-0.3**
AKASG				IAmb	IAmb	08 51 46.8	
	comp=Z,4.2nm,1.4s						
MNK	**Minsk**	**32.92**	**312**	*i* P	**P**	**08 51 55.8**	**+1.8**
	comp=E,18nm,0.9s						
MNK				*i* P	**P**	**08 51 55.8**	**+1.8**
	comp=N,14nm,0.7s						
MNK				*i* P	**P**	**08 51 55.8**	**+1.8**
	comp=Z,9.0nm,0.6s,baz=99						
MNK				*i* PP	**PnPn**	**08 53 04.7**	**+2.2**
MNK				*i* PPP	PPP	08 53 15.1	
MNK				*i* PcP	**PcP**	**08 54 39.6**	**+1.5**
MNK				*i* S	**S**	**08 57 14.7**	**+2.5**
MNK				*i* SS	**SnSn**	**08 59 13.2**	**+4.6**
MNK				*i* SSS	SSS	08 59 28.7	
MNK				*i* LQ	LQ	09 02 47.6	
MNK				*i* LR	LR	09 05 18.1	
MNK				*i* LRM	MLR	09 06 14.6	
	comp=N,229nm,20.5s						
MNK				*i* LRM	MLR	09 06 16.1	
	comp=E,303nm,19.6s						
MNK				*i* LRM	MLR	09 06 22.4	
	comp=Z,29nm,16.9s						
BURAR	**Bucovina Array**	**34.26**	**299**	P	**P**	**08 52 05.5**	**-0.3**
BUR08	**Bucovina Ar. S**	**34.27**	**299**	P	**P**	**08 52 05.6**	**-0.4**
FIA1	**FINESS Array S**	**35.46**	**324**	P	**P**	**08 52 15.9**	**0.0**
FINES	**FINESS Array B**	**35.46**	**324**	P	**P**	**08 52 17.7**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=112,slow=9.8,SNR=8.1						
FINES				LR	LR	09 07 51.7	
	comp=Z,42nm,18.8s,baz=276,slow=38						
	comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**	**35.46**	**324**	P	**P**	**08 52 16.1**	**+0.2**
ARCES	**ARCESS Array B**	**38.74**	**336**	P	**P**	**08 52 45.3**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=106,slow=8.9,SNR=4.7	

CATAC 16 08:50:08.5±0.3, 13°N±2°×8°7W±°, h2km±1km, M2.4/13, MLv2.4/13, Error ellipse: s-maj=4.1km s-min=2.4km az=32.6, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.20**	**284**	P	Pg	08 50 12.7	+0.3
CSGN				S	Sg	08 50 15.6	+0.6
CRIN	**San Cristobal**	**0.38**	**127**	S	Sg	08 50 21.5	+0.7
LCND	**La Caada**	**0.64**	**306**	P	Pg	08 50 20.5	-0.3
ROCN	**Rota Cerro Negro**	**0.73**	**124**	P	Pg	08 50 21.6	-0.9
ROCN				S	Sg	08 50 31.9	0.0
CNGN	**Cerro Negro**	**0.77**	**123**	P	Pg	08 50 23.6	+0.2
CNGN				S	Sg	08 50 34.2	+0.8
MACN	**El Madrono**	**0.81**	**124**	P	Pg	08 50 24.3	+0.1
MACN				S	Sg	08 50 34.8	+0.1
MOM3	**MOM3**	**0.92**	**117**	P	Pg	08 50 26.4	+0.2
MOM3				S	Sg	08 50 38.5	+0.4
MOMN	**Momotombo**	**0.95**	**123**	S	Sg	08 50 39.9	+0.7
LIMN	**Finca el Limon**	**0.98**	**82**	P	Pg	08 50 27.0	-0.3
LIMN				S	Sb	08 50 41.0	-0.6
MOM2	**El Cardon**	**0.98**	**120**	P	Pb	08 50 28.2	-0.2
MOM2				S	Sg	08 50 40.8	+0.6
COPN	**Copaltepe**	**1.06**	**135**	P	Pg	08 50 28.3	-0.6
OCON	**Estacion meteo**	**1.11**	**51**	P	Pg	08 50 29.4	-0.4
OCON				S	Sg	08 50 44.2	+0.1
RCON	**San Juan de Ri**	**1.30**	**65**	P	Pg	08 50 32.6	-0.8
RCVN	**Varillal2**	**1.31**	**60**	P	Pg	08 50 32.3	-1.3
RCVN				S	Sg	08 50 50.4	-0.3
UNAN	**Cigeo UNAN**	**1.34**	**127**	P	Pg	08 50 33.3	-0.9
UNAN				S	Sg	08 50 51.0	-0.6
RCPN	**Sur Rio San Ju**	**1.37**	**64**	P	Pn	08 50 33.9	-0.8
RCPN				S	Sg	08 50 52.1	-0.5
BOAB	**BOACO BROADBAN**	**1.72**	**106**	P	Pn	08 50 39.2	-0.3
BOAB				S	Sn	08 51 01.8	-0.2

*GCG **16** 08:50:32.9±1.4, 13°.60N×90°.81W, h35km±848km, MD4.6, ML4.4, Presumed earthquake*
*SNET **16** 08:50:33.4±1.5, 13°.61N×90°.72W, h20km, ML3.7, Presumed earthquake*

ISC 16 08:50:33.4±1.8, 13°56N±0°.08×90°72W±0°.04, h23km±15km, n36, σ1°31/46, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**0.72**	**13**	*i* P	**Pn**	**08 50 48.7**	**+0.4**
PCG5	**San Vicente Pa**	**0.74**	**27**	*i* P	**Pb**	**08 50 47.5**	**-0.2**
PCG5				IAML		08 51 02.8	
	comp=N,11μm,0.3s						
FG16	**Alotenango, Sa**	**0.74**	**16**	*i* P	**Pn**	**08 50 48.8**	**+0.1**
FAME	**Alcaldia de Sa**	**0.74**	**67**	S	**Sb**	**08 50 58.4**	**+0.9**
FAME	**Alcaldia de Sa**	**0.74**	**67**	P	**Pb**	**08 50 47.5**	**-0.2**
ESSG	**Sabana Grande**	**0.83**	**353**	*i* P	**Pb**	**08 50 47.4**	**-1.8**
NUBE	**Las Nubes**	**0.98**	**69**	S	**Sb**	**08 51 04.9**	**+0.5**
NUBE	**Las Nubes**	**0.98**	**69**	*i* P	**Pb**	**08 50 51.1**	**-0.7**
NUBE				*eS*	**Sb**	**08 51 04.5**	**+0.1**
NUBE	**Las Nubes**	**0.98**	**69**	P	**Pb**	**08 50 51.0**	**-0.7**
LOAL	**Lomas de Alarc**	**1.02**	**64**	S	**Sn**	**08 51 06.9**	**+0.9**
LOAL	**Lomas de Alarc**	**1.02**	**64**	P	**Pn**	**08 50 51.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.02**	**63**	S	**Sn**	**08 51 07.0**	**+0.8**
SLOZ	**Alcaldia de Sa**	**1.02**	**63**	P	**Pn**	**08 50 52.1**	**-0.4**
STG5	**El Palmar, Qui**	**1.04**	**324**	*i* P	**Pn**	**08 50 54.7**	**+2.0**
STG5				*eS*	**Sn**	**08 51 10.7**	**+4.1**
GCG4	**OSOP**	**1.04**	**10**	*i* P	**Pn**	**08 50 51.8**	**-1.0**
STG8	**El Palmar, Qui**	**1.08**	**326**	*i* P	**Pb**	**08 50 55.7**	**+2.2**
STG8				IAML		08 51 14.7	
	comp=E,6μm,0.3s						
CEVE	**Cerro Verde**	**1.10**	**76**	S	**Sn**	**08 51 09.4**	**+1.1**
CEVE	**Cerro Verde**	**1.10**	**76**	*eP*	**Pn**	**08 50 53.5**	**-0.3**
CEVE				*eS*	**Sn**	**08 51 09.5**	**+1.1**
CEVE	**Cerro Verde**	**1.10**	**76**	P	**Pn**	**08 50 53.4**	**-0.3**
UNIC	**Universidad Ca**	**1.22**	**70**	S	**Sn**	**08 51 11.5**	**+0.6**
UNIC	**Universidad Ca**	**1.22**	**70**	P	**Pn**	**08 50 54.7**	**-0.4**
JAYA	**Jayaque - finc**	**1.24**	**85**	S	**Sn**	**08 51 11.6**	**-0.1**
JAYA	**Jayaque - finc**	**1.24**	**85**	*i* P	**Pn**	**08 50 54.9**	**-0.6**
JAYA				*eS*	**Sn**	**08 51 10.6**	**-1.2**
JAYA				IAML		08 51 14.0	
	comp=N,6μm,0.3s						
JAYA	**Jayaque - finc**	**1.24**	**85**	P	**Pn**	**08 50 54.8**	**-0.8**
JUAM	**Asuncion Mita**	**1.25**	**52**	*i* P	**Pn**	**08 50 54.8**	**-0.8**
JUAM				*eS*	**Sn**	**08 51 11.7**	**-0.1**
JUAM				IAML		08 51 14.6	
	comp=N,5μm,0.3s						
CEDA	**San Andres**	**1.31**	**79**	*eP*	**Pn**	**08 50 56.1**	**-0.3**
CEDA				*eS*	**Sn**	**08 51 14.1**	**+0.8**
LALI	**Alcalda de L**	**1.36**	**93**	*eP*	**Pn**	**08 50 56.9**	**-0.2**
BOQS	**Boqueron**	**1.41**	**83**	*eP*	**Pn**	**08 50 57.3**	**-0.6**
APG	**El Apazote**	**1.46**	**10**	*i* P	**Pn**	**08 50 57.7**	**-0.9**
APG				*eS*	**Sn**	**08 51 16.8**	**-0.4**
MTO3	**Montecristo**	**1.56**	**57**	*i* P	**Pn**	**08 50 59.2**	**-0.8**
ESQI	**Esquipulas**	**1.67**	**53**	*i* P	**Pn**	**08 51 00.9**	**-0.5**
ESQI				*eS*	**Sn**	**08 51 22.6**	**+0.4**
ZAFR2	**Estanzuela, Za**	**1.68**	**52**	*i* P	**Pn**	**08 51 02.1**	**+0.7**
COEG	**Centro de Oper**	**1.79**	**88**	*eP*	**Pn**	**08 51 03.6**	**+0.6**
COEG				*eS*	**Sn**	**08 51 26.7**	**+1.5**
HUEH	**Huehuetenango**	**1.91**	**337**	*eP*	**Pn**	**08 51 04.0**	**-0.7**
THIG		**2.01**	**312**	*i* P	**Pn**	**08 51 03.7**	**-2.3**
THIG				*eS*	**Sn**	**08 51 26.1**	**-4.4**
SARH	**Santa Rosa de**	**2.26**	**57**	*i* P	**Pn**	**08 51 09.1**	**-0.3**

*IDC **16** 08:59:37.2±3.8, 5°.50S×147°.31E, h192km±35km, mb3.3/3, mbtmp3.9/6, Error ellipse: s-maj=60.6km s-min=26.8km az=125.0*

ISC 16 08:59:38.0±1.5, 5°5S±0°.1×147°3E±0°.4, h200km, n6, σ0°91/7, mb3.6/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.86**	**183**	P	**Pn**	**09 00 39.0**	**+0.9**
	7.5nm,0.3s,baz=4.3,slow=15,SNR=8.1						
PMG				S	**Sn**	**09 01 24.0**	**-1.4**
	42nm,0.5s,baz=96,slow=23,SNR=15						
CTA	**Charters Tower**	**14.52**	**184**	P	**P**	**09 02 56.0**	**+0.4**
	1.4nm,0.5s,baz=16,slow=13,SNR=1.8						
WRA	**Warramunga Arr**	**19.11**	**220**	P	**P**	**09 03 45.6**	**-0.4**
	4.0nm,0.4s,baz=44,slow=12,SNR=136						
ASAR	**Alice Springs**	**22.19**	**214**	P	**P**	**09 04 18.5**	**+0.3**
	5.1nm,0.8s,baz=46,slow=7.7,SNR=48						
	5.1nm,0.8s						
STKA	**Stephens Creek**	**26.76**	**191**	P	**P**	**09 04 59.3**	**0.0**
	0.6nm,0.5s,baz=5.1,slow=6.1,SNR=3.6						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**84.92**	**23**	P	**P**	**09 11 49.7**	**-0.5**
	0.4nm,0.7s,baz=251,slow=6.0,SNR=5.4						
	0.4nm,0.7s						

*IDC **16** 09:07:37.4±2.3, 38°.78N×142°.59E, h0km, mb3.8/5, mbtmp3.8/7, ML3.0/2, MS1.9/1, Error ellipse: s-maj=50.0km s-min=25.2km az=87.0*
*JMA **16** 09:07:47.8±0.1, 38°.5N±0°.2×141°.7E±0°.6, h53km, MV3.6/39, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .

ISC 16 09:07:47.0±1.2, 38°51N±0°.04×141°80E±0°.09, h53km±7km, n26, σ0°81/28, mb3.7/5, 13D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**232**	*eP*	**Pn**	**09 07 57.0**	**+0.4**
JIKH				*eS*	**Sn**	**09 08 03.6**	**0.0**
JIO	**Ouri**	**0.36**	**261**	⇓*iP*	**Pn**	**09 07 57.1**	**+0.2**
JIO				⇓*eS*	**Sn**	**09 08 03.6**	**-0.4**
JKMT	**Kesennumamotoy**	**0.39**	**320**	⇓P	**Pn**	**09 07 57.5**	**+0.3**
JKMT				⇓*eS*	**Sn**	**09 08 04.2**	**-0.4**
OFUJ	**Ofunato**	**0.57**	**350**	*i* P	**Pn**	**09 07 59.6**	**+0.3**
OFUJ				*eS*	**Sn**	**09 08 08.0**	**-0.2**
JMK	**Ichinoseki**	**0.63**	**314**	⇓*iP*	**Pn**	**09 08 00.2**	**+0.2**
JMK				⇓*eS*	**Sn**	**09 08 08.9**	**-0.5**
JOU	**Okura**	**0.90**	**261**	⇓*eP*	**Pn**	**09 08 03.4**	**-0.1**
JOU				⇓*eS*	**Sn**	**09 08 15.2**	**-0.4**
JMM	**Marumori**	**1.02**	**231**	*eP*	**Pn**	**09 08 04.7**	**-0.3**
JMM				*eS*	**Sn**	**09 08 17.8**	**-0.6**
JOM	**Ohasama**	**1.03**	**338**	⇓*iP*	**Pn**	**09 08 05.5**	**+0.2**
JYK	**Kaneyama**	**1.20**	**290**	⇓*eP*	**Pn**	**09 08 07.4**	**0.0**
JRG	**Rokugo**	**1.26**	**315**	⇓*eP*	**Pn**	**09 08 08.4**	**0.0**
JFK	**Kawauchi**	**1.36**	**213**	*eP*	**Pn**	**09 08 09.8**	**+0.2**
JYS	**Shirataka**	**1.39**	**258**	⇓*eP*	**Pn**	**09 08 10.3**	**+0.2**
JYS				⇓*eS*	**Sn**	**09 08 27.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.46**	**236**	Pn	**Pn**	**09 08 40.6**	**+2.2**
	0.3nm,0.3s,baz=36,slow=13,SNR=18						
MJAR				Sn	Sn	09 09 33.0	+15
	0.2nm,0.3s,baz=82,slow=15,SNR=4.4						
	1.8nm,0.4s						
JHJ	**Hachijo jima 2**	**5.63**	**198**	Pn	**Pn**	**09 09 09.4**	**+1.3**
	3.4nm,0.3s,baz=98,slow=18,SNR=1.4						
JHJ				Sn	**Sn**	**09 10 08.7**	**-2.6**
	5.0nm,0.3s,baz=54,slow=15,SNR=1.1						
	79nm,1.0s						
KSRS	**Korea Array**	**11.00**	**269**	LR	LR	09 13 23.4	
	comp=Z,5.9nm,21.4s,baz=215,slow=30						
H11N2	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	09 44 10.9	
	baz=317,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**28.69**	**124**	T	T	09 43 58.3	
	baz=317,slow=76,SNR=123						
H11N3	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	09 43 59.0	
	baz=317,slow=76,SNR=127						
H11S1	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	09 44 53.0	
	baz=318,slow=76,SNR=107						
H11S3	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	09 44 53.1	
	baz=318,slow=76,SNR=125						
H11S2	**WAKE ISLAND Hy**	**29.46**	**126**	T	T	09 44 54.3	
	baz=318,slow=76,SNR=95						
ZALV	**Zalesovo Beam**	**41.16**	**311**	P	**P**	**09 15 25.8**	**0.0**
	0.5nm,0.6s,baz=92,slow=8.7,SNR=2.8						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.61**	**301**	P	**P**	**09 15 45.9**	**0.0**
	0.5nm,0.6s,baz=90,slow=9.8,SNR=4.7						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**45.34**	**307**	P	**P**	**09 15 59.3**	**-0.4**
	1.7nm,0.5s,baz=81,slow=8.1,SNR=18						
	1.7nm,0.5s						
BVAR	**Borovoye Array**	**49.81**	**311**	P	**P**	**09 16 34.3**	**+0.1**
	0.5nm,0.4s,baz=72,slow=4.7,SNR=2.7						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**58.57**	**188**	P	**P**	**09 17 38.1**	**-0.1**
	0.4nm,0.7s,baz=6.8,slow=7.0,SNR=2.1						
	0.4nm,0.7s						

*MAN **16** 09:15:16.0, 5°.29N×126°.63E, h63km, MS3.7*
*DJA **16** 09:15:20.6±0.4, 6°N±3°×12°7E±°, h10km, M4.7/13, mb4.7/6, mB5.5/5, MLv4.5/13, Mw(mB)5.0/5*
*IDC **16** 09:15:22.9±1.1, 5°.62N×126°.38E, h122km±9km, mb3.8/18, mbtmp4.1/18, MS3.2/1, Error ellipse: s-maj=32.3km s-min=10.0km az=75.0*
*NEIC **16** 09:15:23.5±1.4, 5°.61N±0°.07×126°.3E±0°.1, h122km±7km, mb4.3/22, Error ellipse: s-maj=18.7km s-min=9.5km az=77.0*

ISC 16 09:15:21.1±0.9, 5°60N±0°.04×126°52E±0°.07, h104km±8km, n71, σ2°08/84, mb4.2/30, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.95**	**302**	*i* P	**Pn**	**09 15 39.6**	**-1.7**
DDMP				*i* S	**Sn**	**09 15 53.9**	**-2.5**
GSPH	**General Santos**	**1.64**	**287**	*i* P	**Pn**	**09 15 53.0**	**+3.6**
GSPH				*i* S	**Sn**	**09 16 08.2**	**-2.6**
DAV	**Davao City (W)**	**1.73**	**328**	P	**Pn**	**09 15 52.3**	**+1.8**
	348nm,0.4s,baz=239,slow=5.9,SNR=7.4						
DAV				S	**Sn**	**09 16 14.7**	**+1.8**
	509nm,0.3s,baz=79,slow=21,SNR=7.2						
DAV				LR	LR	09 16 23.4	
	comp=Z,52nm,19.6s,baz=268,slow=37						
DAV	**Davao City (W)**	**1.73**	**328**	P	**Pn**	**09 15 51.7**	**+1.2**
DAV				S	**Sn**	**09 16 16.5**	**+3.6**
KCP	**Kidapawan**	**2.00**	**315**	*eP*	**Pn**	**09 15 52.6**	**-1.2**
KCP				*i* S	**Sn**	**09 16 17.8**	**-1.1**
SGSI	**Sangihe**	**2.14**	**207**	P	**Pn**	**09 15 57.5**	**+1.8**
SGSI				S	**Sn**	**09 16 25.8**	**+3.7**
CDOP	**Cateel, Davao**	**2.17**	**358**	*eP*	**Pn**	**09 15 55.3**	**-0.8**
CDOP				*eS*	**Sn**	**09 16 21.1**	**-1.8**
BIPH	**Bislig**	**2.58**	**357**	*eP*	**Pn**	**09 16 04.6**	**+3.2**
BIPH				*eS*	**Sn**	**09 16 36.3**	**+4.0**
BUKP	**Musuan**	**2.69**	**328**	*eP*	**Pn**	**09 16 02.9**	**0.0**
BUKP				*i* S	**Sn**	**09 16 36.6**	**+1.6**
CTBH	**Cotabato--PC H**	**2.77**	**306**	*i* P	**Pn**	**09 16 03.2**	**-0.7**
CTBH				*i* S	**Sn**	**09 16 38.1**	**+1.2**
CGP	**Cagayan de Oro**	**3.37**	**328**	*i* P	**Pn**	**09 16 13.9**	**+2.1**
CGP				*i* S	**Sn**	**09 16 55.5**	**+4.4**
TSSP	**Tandag City**	**3.44**	**355**	*eP*	**Pn**	**09 16 13.7**	**+0.8**
TSSP				*eS*	**Sn**	**09 16 47.1**	**-5.7**
BUTP	**Butuan**	**3.47**	**345**	*eP*	**Pn**	**09 16 15.1**	**+1.9**
BUTP				*eS*	**Sn**	**09 16 59.5**	**+6.0**
PAGZ	**Pagadian**	**3.83**	**306**	*eP*	**Pn**	**09 16 18.0**	**-0.1**
LSIP	**Lazi, Siquijor**	**4.53**	**321**	*eP*	**Pn**	**09 16 28.8**	**+1.2**
LSIP				*eS*	**Sn**	**09 17 26.6**	**+7.4**
TNTI	**Ternate**	**4.87**	**170**	Pn	**Pn**	**09 16 34.0**	**+1.8**
TNTI	**Ternate**	**4.87**	**170**	P	**Pn**	**09 16 33.5**	**+1.4**
PLP	**Palo**	**5.74**	**345**	*eP*	**Pn**	**09 16 46.1**	**+2.2**
PLP				*eS*	**Sn**	**09 17 52.7**	**+4.2**
GTOI	**Gorontalo**	**6.05**	**216**	P	**Pn**	**09 16 48.1**	**0.0**
	0.4nm81nm,0.5s						
TOLI2	**Tolitoli**	**7.25**	**232**	Pn	**Pn**	**09 17 03.1**	**-1.4**
LUWI	**Luwuk**	**7.58**	**210**	Pn	**Pn**	**09 17 09.6**	**+0.6**
SANI	**Sanana**	**7.61**	**184**	P	**Pn**	**09 17 07.6**	**-1.8**
MYLDM	**Lahad Datu**	**7.99**	**267**	Pn	**Pn**	**09 17 16.8**	**+2.2**
MYLDM	**Lahad Datu**	**7.99**	**267**	P	**Pn**	**09 17 17.1**	**+2.5**
KNRA	**Kununurra**	**21.25**	**174**	P	**P**	**09 19 59.9**	**+0.8**
KNRA				IAmb	IAmb	09 20 16.0	
	comp=Z,38nm,1.5s						
FITZ	**Fitzroy Crossi**	**23.56**	**182**	P	**P**	**09 20 23.2**	**+0.9**
	comp=Z,2.5nm,0.5s,baz=17,slow=14,SNR=6.2						
	comp=Z,2.5nm,0.5s						
WB0	**Warramunga Arr**	**26.37**	**163**	P	**P**	**09 20 49.7**	**+1.9**
WB0				IAmb	IAmb	09 21 24.8	
	comp=Z,9.6nm,1.2s						
WRAB	**Tennant Creek**	**26.51**	**163**	P	**P**	**09 20 52.0**	**+2.9**
WRAB				IAmb	IAmb	09 21 11.8	
	comp=Z,9.1nm,1.2s						
WRA	**Warramunga Arr**	**26.52**	**163**	P	**P**	**09 20 49.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=341,slow=10,SNR=13						
WRA				PcP	**PcP**	**09 24 11.8**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=339,slow=2.5,SNR=1.6						
	comp=Z,0.5nm,0.5s						
AS31	**Alice Springs**	**29.96**	**166**	P	**P**	**09 21 20.0**	**+0.1**
ASAR	**Alice Springs**	**29.97**	**166**	P	**P**	**09 21 19.9**	**0.0**
	comp=Z,1.5nm,0.6s,baz=340,slow=6.7,SNR=32						
ASAR				PcP	**PcP**	**09 24 20.3**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=345,slow=2.3,SNR=9.3						
	comp=Z,1.5nm,0.6s						
KSRS	**Korea Array**	**31.73**	**2**	P	**P**	**09 21 35.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=181,slow=6.3,SNR=4.1						
	comp=Z,0.6nm,0.5s						
USA0B	**Ussuriysk Arra**	**38.75**	**6**	P	**P**	**09 22 36.1**	**+0.9**
USA0B				IAmb	IAmb	09 23 05.6	
	comp=Z,7.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**38.75**	**6**	P	**P**	**09 22 35.7**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=158,slow=8.5,SNR=2.9						
	comp=Z,2.0nm,0.6s						
BBOO	**Buckleboo**	**39.26**	**167**	P	**P**	**09 22 40.2**	**+0.5**
BBOO				IAmb	IAmb	09 22 41.0	
	comp=Z,7.1nm,0.7s						
NWAO	**Narrogin (SRO)**	**39.31**	**192**	P	**P**	**09 22 40.5**	**+0.4**
STKA	**Stephens Creek**	**39.94**	**160**	P	**P**	**09 22 45.9**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=334,slow=7.1,SNR=8.9						
	comp=Z,3.9nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**41.21**	**68**	T	T	10 07 03.5	
	baz=257						
H11S1	**WAKE ISLAND Hy**	**41.23**	**68**	T	T	10 07 00.8	
	baz=257						
H11S2	**WAKE ISLAND Hy**	**41.23**	**68**	T	T	10 07 01.8	
	baz=257,SNR=4.3						
PETK	**Petropavlovsk-**	**53.80**	**23**	P	**P**	**09 24 32.5**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=213,slow=4.9,SNR=4.0						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**55.91**	**325**	P	**P**	**09 24 47.2**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=123,slow=8.5,SNR=11						
MKAR				PcP	**PcP**	**09 25 44.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=107,slow=4.2,SNR=5.0						
MKAR				LR	LR	09 49 58.2	
	comp=Z,17nm,18.1s,baz=160,slow=37						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**58.84**	**333**	P	**P**	**09 25 07.3**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=133,slow=8.1,SNR=1.7						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**60.07**	**327**	P	**P**	**09 25 16.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=125,slow=6.2,SNR=10						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**60.07**	**327**	P	**P**	**09 25 16.0**	**-1.2**
KURK	**Kurchatov**	**60.07**	**327**	IAmb	IAmb	09 25 27.4	
	comp=Z,2.1nm,0.6s						
KKAR	**Karatay Array**	**61.74**	**316**	P	**P**	**09 25 27.6**	**-1.1**
BVAR	**Borovoye Array**	**65.65**	**327**	P	**P**	**09 25 53.4**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=130,slow=8.5,SNR=5.8						
	comp=Z,0.6nm,0.4s						
NRIK	**Noril'sk**	**68.58**	**346**	P	**P**	**09 26 12.4**	**0.0**
	comp=Z,4.6nm,0.6s,baz=130,slow=6.7,SNR=6.3						
	comp=Z,4.6nm,0.6s						
NRIK	**Noril'sk**	**68.58**	**346**	P	**P**	**09 26 12.8**	**+0.4**
ABKAR	**Akbulak array**	**70.58**	**320**	P	**P**	**09 26 23.4**	**-1.7**
M14K	**Bethel**	**76.15**	**29**	P	**P**	**09 26 58.4**	**+0.8**
M16K	**Timber Creek**	**77.64**	**29**	P	**P**	**09 27 06.7**	**+0.7**
M16K				IAmb	IAmb	09 27 47.8	
	comp=Z,4.1nm,1.2s						
C19K	**Lookout Ridge**	**79.08**	**21**	P	**P**	**09 27 14.7**	**+0.9**
C19K				IAmb	IAmb	09 27 15.7	
	comp=Z,14nm,1.4s						
IMAR	**Indian Mountai**	**80.73**	**24**	P	**P**	**09 27 23.6**	**+0.9**
I21K	**Tanana**	**81.38**	**25**	P	**P**	**09 27 27.2**	**+1.1**
I21K				IAmb	IAmb	09 27 27.8	
	comp=Z,4.2nm,1.3s						
MLY	**Manley**	**81.89**	**25**	P	**P**	**09 27 29.3**	**+0.4**
C23K	**Itkillik River**	**82.31**	**20**	P	**P**	**09 27 32.2**	**+1.3**
C23K				IAmb	IAmb	09 27 32.6	
	comp=Z,3.0nm,0.6s						
CCB	**Clear Creek Bu**	**83.12**	**26**	P	**P**	**09 27 35.2**	**0.0**
CCB				IAmb	IAmb	09 27 36.2	
	comp=Z,5.8nm,1.5s						
ILAR	**Eielson Array**	**83.52**	**26**	P	**P**	**09 27 36.4**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=248,slow=5.4,SNR=8.5						
	comp=Z,0.4nm,0.5s						
VRDI	**Verde Repeater**	**85.15**	**29**	P	**P**	**09 27 46.2**	**+0.4**
VRDI				IAmb	IAmb	09 28 23.4	
	comp=Z,4.5nm,1.2s						
VNDA	**Vanda**	**85.29**	**173**	P	**P**	**09 27 46.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=311,slow=5.9,SNR=3.6						
	comp=Z,0.7nm,0.7s						
BCAR	**Beaver Creek A**	**85.82**	**27**	P	**P**	**09 27 48.6**	**-0.3**
SPITS	**Spitsbergen Ar**	**88.62**	**349**	P	**P**	**09 28 01.8**	**-0.2**
	comp=Z,7.4nm,1.0s,baz=78,slow=9.0,SNR=7.3						
	comp=Z,7.4nm,1.0s						
ARCES	**ARCESS Array B**	**88.63**	**340**	P	**P**	**09 28 01.4**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=81,slow=6.5,SNR=16						
	comp=Z,4.7nm,0.8s						
ARCES	**ARCESS Array B**	**88.63**	**340**	P	**P**	**09 28 01.6**	**-0.7**
FINES	**FINESS Array B**	**90.10**	**332**	P	**P**	**09 28 08.2**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=49,slow=5.8,SNR=11						
	comp=Z,0.8nm,0.6s						
NB2	**NORSAR Subarra**	**97.03**	**334**	P	**P**	**09 28 39.1**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=70,slow=4.6						
YKA	**Yellowknife Ar**	**97.89**	**24**	P	Pdif	09 28 45.0	0.0
	comp=Z,0.2nm,0.7s,baz=114,slow=11,SNR=1.9						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**120.61**	**51**	PKP	**PKiKP**	**09 34 02.2**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=4.6,slow=5.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**122.12**	**289**	PKP	**PKPdf**	**09 34 03.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=86,slow=1.3,SNR=4.4						

*AZER **16** 09:31:21.9, 38°.49N×45°.31E, h7km, ml2.5*
*TEH **16** 09:31:23.7, 38°.42N×45°.53E, h10km±49km, ML2.9, Presumed earthquake*

ISC 16 09:31:22.3±1.4, 38°43N±0°.05×45°37E±0°.06, h8km±10km, n18, σ0°86/29, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.24**	**127**	Pg	**Pg**	**09 31 27.9**	**+0.7**
IMRD	**Marand**	**0.39**	**42**	Pg	**Pb**	**09 31 30.5**	**-1.1**
ITBZ	**Tabriz**	**0.64**	**108**	Pg	**Pg**	**09 31 33.6**	**-1.1**
ITBZ				Sg	**Sg**	**09 31 42.8**	**-0.4**
ORD	**Ordubad**	**0.70**	**44**	P	**Pb**	**09 31 36.0**	**-0.8**
ORD				S	**Sb**	**09 31 46.7**	**0.0**
NAX	**Nakhchivan**	**0.75**	**7**	P	**Pb**	**09 31 37.2**	**-0.5**
NAX				S	**Sb**	**09 31 48.3**	**+0.1**
**

BRLS	**Borolday**	**0.65**	**174**	*eP*		**Pb**	**09 59 22.9**	**+0.5**
	4.3nm,0.2s							
BRLS				*eS*		**Sn**	**09 59 35.0**	**-0.7**
	22nm,0.2s							
KK31	**Karatay Array**	**0.81**	**135**	⇑P		**Pg**	**09 59 22.5**	**-1.0**
	0.8nm,0.2s,baz=318,slow=17,SNR=96							
KK31				⇑S		**Sg**	**09 59 34.4**	**+0.4**
	12nm,0.3s,baz=313,slow=29,SNR=87							
IUG	**luzhnay**	**1.55**	**172**	P		**Pn**	**09 59 36.7**	**-0.3**
	33nm,0.2s							
IUG				S		**Sb**	**09 59 58.5**	**+0.6**
	100nm,0.4s							
IUG	**luzhnay**	**1.55**	**172**	*eP*		**Pn**	**09 59 36.7**	**-0.3**
	33nm,0.2s							
IUG				*eS*		**Sg**	**09 59 58.8**	**+1.0**
	100nm,0.4s							
MRKS	**Merke**	**2.72**	**109**	Pg		**Pb**	**09 59 58.7**	**+1.1**
	3.2nm,0.3s							
MRKS				Lg		Lg	10 00 36.6	
	14nm,0.4s							
MRKS	**Merke**	**2.72**	**109**	*eP*		**Pb**	**09 59 58.7**	**+1.1**
	3.2nm,0.3s							
MRKS				*eS*		**Sg**	**10 00 36.6**	**+1.3**
	14nm,0.4s							
BTLS	**Baital**	**3.38**	**65**	Pg		**Pg**	**10 00 12.8**	**0.0**
	19nm,0.5s							
BTLS				Lg		Lg	10 01 00.2	
	4.8nm,0.5s							
BTLS	**Baital**	**3.38**	**65**	*eP*		**Pb**	**10 00 09.8**	**+1.0**
	19nm,0.5s							
BTLS				*eS*		**Sg**	**10 00 55.7**	**-0.8**
	4.8nm,0.5s							
AAK	**Ala-Archa**	**3.63**	**105**	⇑Pg		**Pb**	**10 00 12.2**	**-1.1**
	1.5nm,0.5s							
AAK				⇓Lg		Lg	10 01 04.0	
	0.7nm,0.4s							

*KOLA **16** 10:00:33.2,64°.50N×31°.39E,h0km,ML2.3,Error ellipse: s-maj=20.7km s-min=11.6km az=150.0,Karelia*
*BER **16** 10:00:33.3±1.7,64°.63N×31°.58E,h0km,Suspected explosion*
*IDC **16** 10:00:34.4±2.1,64°.63N×31°.00E,h0km,mbtmp3.0/4, ML2.2/4,Error ellipse: s-maj=29.3km s-min=8.4km az=104.0*
*UPP **16** 10:00:34.6±2.9,64°.70N×30°.87E,h0km,ML1.8,Presumed earthquake*

ISC 16 10:00:31.0±0.9,**64°.69N**±0°.04×**31°.23E**±0°.07,**h0**km,**n26, σ1s43/34,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOF	**Joensuu**	**1.78**	**179**	*eP*		**Pg**	**10 01 04.9**	**-0.1**
KVDA	**Kovda**	**2.12**	**18**	P		**Pg**	**10 01 11.4**	**-0.2**
KVDA				S		**Sg**	**10 01 40.4**	**+1.3**
SUF	**Sumiainen**	**3.00**	**231**	*eP*		**Pn**	**10 01 20.6**	**+0.8**
APA0	**Apatity Array**	**3.02**	**13**	P		**Pb**	**10 01 24.6**	**-0.8**
APA0				S		**Sb**	**10 02 02.5**	**-0.3**
LVZ	**Lovozero**	**3.51**	**22**	S		**Sb**	**10 02 13.8**	**-3.1**
KALU	**Kalix**	**3.51**	**293**	P		**Pn**	**10 01 28.3**	**+1.6**
KALU				S		**Sn**	**10 02 08.2**	**-0.6**
KEF	**Keuruu**	**3.82**	**231**	*eP*		**Pn**	**10 01 30.6**	**-0.3**
FINES	**FINESS Array B**	**4.01**	**218**	Pn		**Pn**	**10 01 35.5**	**+1.9**
	0.2nm,0.3s,baz=36,slow=14,SNR=8.1							
FINES				Pg		**Pb**	**10 01 42.6**	**+0.1**
	0.4nm,0.3s,baz=31,slow=15,SNR=12							
FINES				Sn		**Sn**	**10 02 21.4**	**+0.1**
	0.4nm,0.3s,baz=42,slow=23,SNR=6.0							
FINES				Lg		Lg	10 02 34.7	
	1.9nm,0.3s,baz=42,slow=26,SNR=11							
	0.3nm,0.3s							
VAF	**Ylistaro**	**4.13**	**250**	*eP*		**Pn**	**10 01 35.4**	**+0.2**
ERTU	**Ertsjaerv**	**4.19**	**301**	P		**Pn**	**10 01 37.2**	**+1.2**
	baz=91							
ERTU				S		**Sn**	**10 02 25.2**	**-0.3**
HARU	**Harads**	**4.53**	**294**	P		**Pn**	**10 01 41.7**	**+1.0**
TERR	**Teriberka**	**4.78**	**17**	S		**Sn**	**10 02 41.6**	**+1.5**
HEF	**Hetta**	**4.80**	**324**	*eP*		**Pn**	**10 01 47.8**	**+3.3**
DUNU	**Dundret**	**5.00**	**304**	P		**Pn**	**10 01 48.6**	**+1.4**
LANU	**Lannavaara**	**5.01**	**316**	*eP*		**Pn**	**10 01 48.5**	**+1.1**
LANU	**Lannavaara**	**5.01**	**316**	P		**Pn**	**10 01 48.5**	**+1.1**
LANU	**Lannavaara**	**5.01**	**316**	*eP*		**Pn**	**10 01 49.8**	**+2.4**
KEV	**Kevo**	**5.34**	**344**	*eP*		**Pn**	**10 01 52.6**	**+0.7**
ARA0	**ARCESS Array S**	**5.35**	**338**	*eP*		**Pn**	**10 01 54.6**	**+2.6**
ARA0				*eS*		**Sn**	**10 02 52.9**	**-1.4**
ARCES	**ARCESS Array B**	**5.35**	**338**	Pn		**Pn**	**10 01 52.4**	**+0.4**
	0.1nm,0.3s,baz=152,slow=13,SNR=22							
ARCES				Sn		**Sn**	**10 02 53.9**	**-0.4**
	0.2nm,0.3s,baz=148,slow=21,SNR=2.0							
ARCES				Lg		Lg	10 03 15.7	
	0.6nm,0.3s,baz=150,slow=29,SNR=6.6							
	0.5nm,0.2s							
KTK1	**Kautokeino**	**5.36**	**328**	*eP*		**Pn**	**10 01 54.0**	**+1.9**
KTK1				*eS*		**Sn**	**10 02 54.0**	**-0.4**
RAF	**Rauma**	**5.68**	**234**	*eP*		**Pn**	**10 01 57.2**	**+0.7**
I37NO	**I37NO**	**6.63**	**317**	I		I	10 37 40.0	
	baz=127,slow=320,SNR=3.1							
FAUS	**Fauske**	**7.03**	**300**	S		**Sn**	**10 03 35.5**	**+0.1**
HFS	**Hagfors**	**9.31**	**249**	Pn		**Pn**	**10 02 44.5**	**-1.8**
	0.2nm,0.3s,baz=57,slow=11,SNR=7.1							
HFS				Sn		Sn	10 04 23.2	-8.4
	0.1nm,0.3s,baz=68,slow=23,SNR=3.6							
HFS				Lg		Lg	10 05 16.4	
	0.2nm,0.3s,baz=56,slow=32,SNR=4.4							
	0.4nm,0.3s							
NOA	**NORSAR Array B**	**9.83**	**257**	Pn		**Pn**	**10 02 52.3**	**-1.1**
	baz=63,slow=12,SNR=2.4							
	0.5nm,0.6s							

*TIR **16** 10:02:47.9,39°.48N×20°.79E,h4km±1km,Ml2.5/1*
*ATH **16** 10:02:47.1,39°.32N×19°.97E,h29km±3km,ML2.3/14, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 16 10:02:47.1±1.2,**39°.30N**±0°.03×**19°.97E**±0°.05,**h25**km±11km, **n28,σ0s50/42,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRGA	**Parga**	**0.33**	**92**	P		**Pb**	**10 02 54.4**	**-0.2**
IGT	**Igoumenitsa**	**0.37**	**50**	Pg		**Pb**	**10 02 55.4**	**+0.2**
IGT				Sg		**Sb**	**10 03 00.5**	**-0.1**
IGT	**Igoumenitsa**	**0.37**	**50**	P		**Pb**	**10 02 55.3**	**+0.2**
IGT				S		**Sb**	**10 03 00.3**	**-0.3**
KEK	**Kerkira**	**0.44**	**342**	P		**Pb**	**10 02 56.2**	**-0.1**
KEK				S		**Sb**	**10 03 03.5**	**+0.9**
SRN	**Sarande**	**0.58**	**2**	Pg		**Pb**	**10 02 59.2**	**+0.5**
SRN				Sg		**Sb**	**10 03 05.5**	**-1.2**
TSLK	**Tsoukalades, L**	**0.71**	**131**	P		**Pb**	**10 03 01.3**	**+0.4**
TSLK				S		**Sn**	**10 03 11.8**	**0.0**
LKD2	**Lefkada island**	**0.74**	**133**	Pg		**Pb**	**10 03 01.7**	**+0.4**
LKD2				Sg		**Sn**	**10 03 12.1**	**-0.3**
LKD2				AML	AML		10 03 13.1	
	0.9nm,0.3s							
LKD2	**Lefkada island**	**0.74**	**133**	P		**Pb**	**10 03 01.6**	**+0.3**
LKD2				S		**Sn**	**10 03 12.1**	**-0.3**
JAN	**Janina**	**0.77**	**62**	P		**Pb**	**10 03 01.8**	**-0.2**
JAN				S		**Sb**	**10 03 11.4**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.77**	**142**	P		**Pb**	**10 03 01.8**	**-0.1**
DRAG				S		**Sn**	**10 03 13.1**	**-0.2**
ART2	**Arta**	**0.81**	**100**	P		**Pb**	**10 03 02.8**	**+0.3**
ART2				S		**Sb**	**10 03 13.7**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.81**	**136**	P		**Pb**	**10 03 02.3**	**-0.3**
NYDR				S		**Sb**	**10 03 13.7**	**+0.6**
PRMD	**Pramanda**	**0.90**	**75**	P		**Pb**	**10 03 04.1**	**0.0**
PRMD				S		**Sb**	**10 03 15.7**	**-0.1**
FSK	**Fiskardo**	**0.95**	**151**	P		**Pb**	**10 03 04.6**	**-0.4**
TETR	**Tetrakomo, Epi**	**1.01**	**87**	P		**Pb**	**10 03 05.5**	**-0.6**
TETR				S		**Sb**	**10 03 19.0**	**0.0**
AMPL	**Ampelaki**	**1.04**	**111**	P		**Pn**	**10 03 05.6**	**-0.5**
DMLN	**Damoulianata-K**	**1.10**	**163**	P		**Pn**	**10 03 06.9**	**-0.1**
KPRO	**Kipourio**	**1.26**	**58**	P		**Pn**	**10 03 09.7**	**+0.4**
PENT	**Pentalofos**	**1.27**	**45**	P		**Pn**	**10 03 09.7**	**+0.2**
PVO	**Paravola**	**1.39**	**119**	P		**Pn**	**10 03 11.1**	**+0.2**
PLEV	**Plevrona-Mesol**	**1.43**	**128**	P		**Pn**	**10 03 10.8**	**-0.6**
ORTH	**Orthonies,Zaky**	**1.55**	**158**	P		**Pn**	**10 03 12.9**	**-0.4**
AXS	**Araxos**	**1.55**	**135**	P		**Pn**	**10 03 12.6**	**-0.6**
THL	**Klokotos Trika**	**1.60**	**80**	P		**Pn**	**10 03 13.6**	**-0.3**
TYRN	**Tyrnavos**	**1.80**	**76**	P		**Pn**	**10 03 15.9**	**-0.7**
AGG	**Agios Georgios**	**1.85**	**98**	P		**Pn**	**10 03 18.2**	**+0.9**
KLV	**Kalavryta, Ach**	**2.12**	**126**	Pn		**Pn**	**10 03 21.6**	**+0.6**
KLV				Sn		**Sn**	**10 03 47.5**	**+0.9**
KLV	**Kalavryta, Ach**	**2.12**	**126**	P		**Pn**	**10 03 21.5**	**+0.5**

STR 16 10:03:30.2±0.6,**45°N**×3°×±°,**h0**km,**MLv1.3/5,LOCSAT earthModelID auvergne_taup-2.11 preliminary,France**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SSB	**Saint Sauveur**	**0.34**	**320**	Pg		Pg	10 03 36.4	-0.4
SSB				Sg		Sg	10 03 42.0	+0.8
TRBF	**Trabuc cave**	**1.11**	**215**	Pg		Pg	10 03 50.9	-0.7
TRBF				Sg		Sg	10 04 05.7	-0.3

GEN 16 10:03:45.8,44°.37N×**7°.41E,h12**km±2km,**Ml0.3,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENR	**Entracque**	**0.14**	**176**	P		Pg	10 03 49.9	+0.6
ENR				S		Sg	10 03 52.1	+0.3
GBOS	**Grotte di Boss**	**0.34**	**112**	P		Pg	10 03 53.0	+0.4
GBOS				S		Sg	10 03 57.6	+0.5
SURF	**Saint Ours**	**0.44**	**285**	P		Pg	10 03 54.8	+0.3
SURF				S		Sb	10 04 01.7	-0.5
BHB	**Bricherasio**	**0.48**	**348**	P		Pg	10 03 55.3	0.0
BHB				S		Sg	10 04 01.5	-0.3
RRL	**Rocca Remolon**	**0.71**	**322**	P		Pg	10 03 59.6	0.0
RRL				S		Sg	10 04 09.3	+0.5

*IDC **16** 10:16:28.1±2.4,37°.77N×14°.80E,h0km,mb3.5/4, mbtmp3.5/5,ML3.2/1,MS3.7/2,Error ellipse: s-maj=50.1km s-min=26.4km az=147.0*
*ROM **16** 10:16:29.1±0.1,37°.860N±0°.005×14°.448E±0°.007, h5km±1km,ML3.3/88,Mw3.4,Error ellipse: s-maj=0.6km s-min=0.3km az=21.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.15; $M_{\theta\theta}$1.36; $M_{\phi\phi}$-0.21; $M_{r\theta}$-1.10; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.51; Fault plane solution: $M_0$1.78408×10^{14} NP1:ϕ_s77.00000°,δ68.00000°, λ-112.00000°. NP2:ϕ_s304.00000°,δ31.00000°, λ-47.00000°.*

ISC 16 10:16:29.7±0.8,**37°.84N**±0°.02×**14°.55E**±0°.02,**h12**km±6km, **n68,σ1s27/79,mb3.5/4,25C,Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GALF	**Gagliano Caste**	**0.13**	**173**	⇑P		**Pg**	**10 16 33.2**	**+0.2**
GALF				S		**Sg**	**10 16 36.5**	**+1.1**
GALF				AML	AML			
GALF				AML	AML			
	comp=N,31250μm,0.7s							
GALF				AML	AML			
GALF				AML	AML			
GALF				AML	AML			
	comp=E,22850μm,0.4s							
MSFR	**San Fratello**	**0.20**	**10**	⇑P		**Pg**	**10 16 34.7**	**+0.6**
MSFR				AML	AML			
	comp=E,3305μm,1.2s							
MSFR				AML	AML			
	comp=N,3395μm,0.8s							
CAGR	**Agira**	**0.22**	**190**	⇑P		**Pg**	**10 16 34.6**	**+0.2**
CAGR				AML	AML			
	comp=E,40950μm,0.5s							
CAGR				AML	AML			
	comp=N,80300μm,0.5s							
EMSG	**Monte Spagnolo**	**0.32**	**93**	P		**Pn**	**10 16 38.4**	**-1.8**
EMSG				AML	AML			
	comp=E,15350μm,0.4s							
EMSG				AML	AML			
	comp=N,15200μm,0.7s							
ECHR	**Santa Chiara**	**0.33**	**118**	P		**Pn**	**10 16 38.9**	**-1.4**
MUCR	**Ucria**	**0.33**	**52**	⇑P		**Pb**	**10 16 37.5**	**0.0**
MUCR				S		**Sb**	**10 16 43.1**	**+0.3**
MUCR				AML	AML			
	comp=N,6050μm,0.3s							
MUCR				AML	AML			
	comp=E,6240μm,1.1s							
MUCR				AML	AML			
	comp=E,6240μm,0.9s							
ESML	**S. M. di Licod**	**0.34**	**130**	P		**Pn**	**10 16 38.9**	**-1.5**
ESML				AML	AML			
	comp=N,6230μm,0.7s							
ESML				AML	AML			
	comp=E,6205μm,1.6s							
PLLN	**Pollina**	**0.35**	**296**	⇑P		**Pg**	**10 16 35.6**	**-1.3**
PLLN				S		**Sg**	**10 16 40.1**	**-1.5**
PLLN				AML	AML			
	comp=E,9525μm,0.7s							
PLLN				AML	AML			
	comp=N,13050μm,0.6s							
PLLN				AML	AML			
	comp=N,13000μm,0.6s							
ESLN	**Serra La Nave**	**0.37**	**113**	P		**Pn**	**10 16 40.1**	**-0.8**
ESLN				AML	AML			
	comp=E,7560μm,0.4s							
ESLN				AML	AML			
	comp=N,6700μm,0.4s							
VAE	**Valguarnera**	**0.38**	**197**	⇑P		**Pb**	**10 16 39.2**	**+0.9**
EMCN	**Etna Monte Con**	**0.39**	**97**	P		**Pn**	**10 16 40.2**	**-1.1**
EMCN				AML	AML			
	comp=E,11465μm,0.5s							
EMCN				AML	AML			
	comp=E,11280μm,0.5s							
EMCN				AML	AML			
	comp=N,7230μm,0.4s							
EMCN				AML	AML			
	comp=N,7380μm,0.4s							
EMCN				AML	AML			
	comp=E,11280μm,1.5s							
EMCN				AML	AML			
	comp=E,11465μm,1.5s							
CSLB	**Castelbuono**	**0.40**	**284**	⇑P		**Pg**	**10 16 35.8**	**-1.8**
CSLB				S		**Sg**	**10 16 41.0**	**-2.0**
CSLB				AML	AML			
	comp=E,1880μm,0.5s							
CSLB				AML	AML			
	comp=N,2340μm,0.9s							
CSLB				AML	AML			
	comp=N,2340μm,1.1s							
RESU	**Resuttano**	**0.43**	**244**	⇑P		**Pg**	**10 16 37.8**	**-0.4**
RESU				AML	AML			
	comp=E,5685μm,0.4s							
RESU				AML	AML			
	comp=N,6850μm,0.8s							
GIB	**Gibilmanna**	**0.44**	**290**	⇑P		**Pg**	**10 16 36.8**	**-1.6**
GIB				S		**Sg**	**10 16 41.6**	**-2.7**
GIB				AML	AML			
	comp=N,7425μm,0.6s							
GIB				AML	AML			
	comp=E,6595μm,0.6s							
CPTP	**Pietraperzia**	**0.53**	**215**	⇑P		**Pb**	**10 16 41.6**	**+0.8**
CPTP				AML	AML			
	comp=E,2870μm,1.0s							
CPTP				AML	AML			
	comp=N,3510μm,0.6s							
CPTP				AML	AML			
	comp=E,2870μm,1.0s							
HLNI	**Lentini**	**0.55**	**152**	⇑P		**Pb**	**10 16 41.1**	**-0.2**
HLNI				S		**Sn**	**10 16 51.0**	**-1.4**
HLNI				AML	AML			
	comp=E,1330μm,0.6s							
HLNI				AML	AML			
	comp=N,1365μm,0.3s							
HLNI				AML	AML			
	comp=E,1330μm,1.4s							
AIO	**Antillo**	**0.56**	**76**	⇑P		**Pn**	**10 16 41.7**	**-1.8**
AIO				S		**Sn**	**10 16 52.2**	**-0.5**
AIO				AML	AML			
	comp=E,2485μm,0.5s							
AIO				AML	AML			
	comp=N,3065μm,0.3s							
AIO				AML	AML			
	comp=N,3065μm,1.7s							
RAFF	**Raffo Rosso**	**0.63**	**193**	⇑P		**Pb**	**10 16 42.2**	**-0.4**
RAFF				AML	AML			
	comp=N,2805μm,1.5s							
RAFF				AML	AML			
	comp=E,2080μm,0.4s							
RAFF				AML	AML			
	comp=N,2805μm,0.5s							
SCIAR	**Sciara**	**0.64**	**279**	⇑P		**Pg**	**10 16 40.5**	**-1.6**
SCIAR				AML	AML			
	comp=E,2685μm,0.6s							
SCIAR				AML	AML			
	comp=E,2945μm,0.5s							
SCIAR				AML	AML			
	comp=N,3155μm,1.0s							
SCIAR				AML	AML			
	comp=N,3155μm,1.0s							
SCIAR				AML	AML			
	comp=N,3315μm,0.7s							
SCIAR				AML	AML			
	comp=E,2685μm,0.5s							
VPL	**Vulcano Piano**	**0.64**	**32**	⇑P		**Pb**	**10 16 43.0**	**+0.2**
VPL				AML	AML			
	comp=E,5170μm,1.2s							
VPL				AML	AML			
	comp=N,6390μm,0.4s							
VPL				AML	AML			
	comp=E,5170μm,0.8s							
IVGP	**Vulcano Grotta**	**0.65**	**30**	P		**Pb**	**10 16 43.0**	**+0.1**
IVUG	**Vulcano Grillo**	**0.66**	**32**	⇑P		**Pb**	**10 16 43.0**	**0.0**
HVZN	**Vizzini**	**0.67**	**168**	⇑P		**Pb**	**10 16 42.8**	**-0.5**
ILOS	**Lipari Osserat**	**0.68**	**27**	P		**Pb**	**10 16 43.8**	**+0.2**
ILOS				AML	AML			
	comp=E,15100μm,0.4s							
ILOS				AML	AML			
	comp=N,20600μm,0.9s							
ILOS				AML	AML			
	comp=E,13550μm,0.4s							
ILOS				AML	AML			
	comp=N,20150μm,0.9s							
MPNC	**Port Mandanici**	**0.71**	**64**	⇑P		**Pn**	**10 16 44.1**	**-1.3**
MPNC				S		**Sn**	**10 16 56.8**	**+0.5**
MPNC				AML	AML			
	comp=E,5515μm,0.6s							
MPNC				AML	AML			
	comp=E,5515μm,1.4s							
MPNC				AML	AML			
	comp=N,4920μm,0.6s							
IACL	**Alicudi**	**0.71**	**348**	⇑P		**Pg**	**10 16 43.5**	**0.0**
IACL				S		**Sb**	**10 16 54.2**	**+0.5**
IACL				AML	AML			
	comp=E,4750μm,0.4s							
IACL				AML	AML			
	comp=N,4475μm,0.3s							
IFIL	**Filicudi I Eol**	**0.72**	**1**	P		**Pb**	**10 16 43.9**	**-0.3**
HAGA	**Augusta**	**0.73**	**139**	⇑P		**Pn**	**10 16 44.3**	**-1.5**
HAGA				S		**Sn**	**10 16 56.7**	**-0.2**
HAGA				AML	AML			
	comp=E,2670μm,0.5s							
HAGA				AML	AML			
	comp=N,1730μm,0.6s							
MCT	**Mte Cammarata**	**0.75**	**254**	P		**Pn**	**10 16 46.4**	**+0.1**
AGST	**Augusta-Monte**	**0.79**	**137**	P		**Pn**	**10 16 45.2**	**-1.4**
AGST				AML	AML			
	comp=E,3540μm,0.8s							
AGST				AML	AML			
	comp=N,5165μm,0.5s							
MEU	**Monte Lauro**	**0.80**	**157**	⇑P		**Pb**	**10 16 44.4**	**-1.1**
MEU				S		**Sn**	**10 16 57.6**	**-1.0**
MEU				AML	AML			
	comp=E,2740μm,0.4s							
MEU				AML	AML			
	comp=N,3920μm,0.3s							
SSY	**Sortino**	**0.80**	**148**	⇑P		**Pn**	**10 16 45.4**	**-1.4**
SSY				S		**Sn**	**10 16 58.7**	**+0.1**
ACATE	**Acate (RG)**	**0.81**	**183**	P		**Pb**	**10 16 45.4**	**-0.3**
ACATE				AML	AML			
	comp=E,3360μm,1.6s							
ACATE				AML	AML			
	comp=N,3045μm,0.7s							
ACATE				AML	AML			
	comp=E,3360μm,1.6s							
ACATE				AML	AML			
	comp=E,2965μm,0.8s							
ACATE				AML	AML			
	comp=N,3000μm,0.7s							
ACATE				AML	AML			
	comp=E,3360μm,0.4s							
ACATE				AML	AML			
	comp=E,2965μm,1.2s							
ACATE				AML	AML			
	comp=N,3050μm,0.7s							
CLTA	**Licata**	**0.82**	**215**	P		**Pb**	**10 16 45.8**	**-0.1**
CLTA				AML	AML			
	comp=N,828μm,0.6s							
CLTA				AML	AML			
	comp=E,1880μm,0.8s							
CLTA				AML	AML			
	comp=E,1880μm,1.2s							
CLTA				AML	AML			
	comp=N,828μm,1.4s							
SOLUN	**Solunto**	**0.84**	**288**	⇑P		**Pg**	**10 16 44.0**	**-1.9**
SOLUN				AML	AML			
	comp=N,1354μm,0.6s							
SOLUN				AML	AML			
	comp=E,2210μm,0.7s							
SOLUN				AML	AML			
	comp=E,2210μm,1.3s							
MSRU	**Castanea**	**0.87**	**61**	⇑P		**Pn**	**10 16 47.0**	**-0.7**
MSRU				AML	AML			
	comp=E,2815μm,0.3s							
MSRU				AML	AML			
	comp=N,2275μm,0.4s							
MSRU				AML	AML			
	comp=E,2815μm,1.7s							
MTTG	**Motta San Giov**	**0.92**	**79**	P		**Pn**	**10 16 48.7**	**+0.2**
MTTG				S		**Sn**	**10 17 03.7**	**+2.1**
MTTG				AML	AML			
	comp=E,1695μm,0.6s							
MTTG				AML	AML			
	comp=E,1695μm,1.4s							
MTTG				AML	AML			
	comp=N,1975μm,0.8s							
MPG	**Monte Pellegri**	**0.99**	**289**	P		**Pg**	**10 16 47.0**	**-1.8**
CROCE	**Santa Croce Ca**	**1.00**	**181**	⇑P		**Pb**	**10 16 48.4**	**-0.6**
GMB	**Gambarie**	**1.06**	**72**	P		**Pn**	**10 16 50.5**	**0.0**
GMB				AML	AML			
	comp=E,3275μm,0.7s							
GMB				AML	AML			
	comp=N,4905μm,0.9s							
CLTB	**Caltabellotta**	**1.09**	**257**	P		**Pn**	**10 16 51.7**	**+0.9**
ISPIC	**ISPICA**	**1.09**	**165**	P		**Pn**	**10 16 50.2**	**-0.6**
IST3	**Stromboli F**	**1.10**	**29**	P		**Pb**	**10 16 50.0**	**-0.6**
CEL	**Celeste**	**1.14**	**68**	P		**Pn**	**10 16 51.5**	**0.0**
CEL				AML	AML			
	comp=E,868μm,0.4s							
CEL				AML	AML			
	comp=E,883μm,0.4s							
CEL				AML	AML			
	comp=N,1065μm,0.5s							
CEL				AML	AML			
	comp=E,868μm,1.6s							
CEL				AML	AML			
	comp=N,1100μm,0.5s							
CEL				AML	AML			
	comp=E,883μm,1.6s							
SCIAC	**Sciacca**	**1.19**	**255**	P		**Pg**	**10 16 52.1**	**-0.5**
HPAC	**Pachino**	**1.23**	**158**	P		**Pb**	**10 16 51.7**	**-1.0**
HPAC				AML	AML			
	comp=E,2310μm,1.6s							
HPAC				AML	AML			
	comp=N,2225μm,0.5s							
HPAC				AML	AML			
	comp=N,2225μm,1.5s							
HPAC				AML	AML			
	comp=E,2310μm,0.4s							
MBFT	**Monte Bonifato**	**1.27**	**275**	P		**Pg**	**10 16 52.4**	**-1.6**
JOPP	**Joppolo**	**1.30**	**54**	P		**Pn**	**10 16 53.9**	**+0.2**
JOPP				AML	AML			
	comp=E,500μm,0.5s							
JOPP				AML	AML			
	comp=N,398μm,0.6s							
USI	**Ustica**	**1.38**	**309**	P		**Pn**	**10 16 52.0**	**-2.8**
FERC	**Galatro**	**1.39**	**63**	P		**Pb**	**10 16 56.1**	**+0.6**
PLAC	**Placanica**	**1.61**	**67**	P		**Pg**	**10 16 59.7**	**-0.9**
PLAC				AML	AML			
	comp=E,879μm,0.8s							
PLAC				AML	AML			
	comp=N,452μm,0.5s							
PLAC				AML	AML			
	comp=E,457μm,0.6s							
PLAC				AML	AML			
	comp=N,930μm,0.8s							
PLAC				AML	AML			
	comp=N,930μm,1.2s						

	comp=E,457µm,1.4s							
CAR1	**CAROLEI**	**1.92**	**42**	P		**Pn**	**10 17 02.1**	**-0.1**
CAR1				AML		AML		
	comp=N,654µm,0.5s							
CAR1				AML		AML		
	comp=E,902µm,0.5s							
CAR1				AML		AML		
	comp=N,654µm,1.5s							
CAR1				AML		AML		
	comp=N,658µm,1.5s							
CAR1				AML		AML		
	comp=E,890µm,0.5s							
CET2	**Cetraro**	**2.02**	**33**	P		**Pn**	**10 17 03.3**	**-0.2**
CET2				AML		AML		
	comp=E,421µm,0.7s							
CET2				AML		AML		
	comp=N,510µm,0.4s							
CET2				AML		AML		
	comp=E,421µm,1.3s							
SPS2	**Spezzano della**	**2.02**	**43**	P		**Pn**	**10 17 04.3**	**+0.7**
SERS	**Sersale**	**2.06**	**54**	P		**Pb**	**10 17 05.2**	**-1.9**
CELI	**Celico**	**2.19**	**44**	P		**Pn**	**10 17 06.2**	**+0.2**
CELI				AML		AML		
	comp=E,148µm,1.6s							
CELI				AML		AML		
	comp=N,160µm,0.6s							
CELI				AML		AML		
	comp=N,160µm,1.4s							
CELI				AML		AML		
	comp=E,148µm,0.4s							
TIP	**Timpagrande**	**2.19**	**52**	P		**Pn**	**10 17 06.9**	**+1.0**
TIP				AML		AML		
	comp=E,142µm,1.5s							
TIP				AML		AML		
	comp=N,189µm,0.8s							
TIP				AML		AML		
	comp=E,116µm,0.7s							
TIP				AML		AML		
	comp=E,142µm,0.5s							
TIP				AML		AML		
	comp=N,189µm,1.2s							
TIP				AML		AML		
	comp=N,150µm,1.1s							
BULG	**Bulgheria - Ca**	**2.33**	**16**	P		**Pn**	**10 17 07.4**	**-0.4**
BULG				AML		AML		
	comp=E,126µm,0.6s							
BULG				AML		AML		
	comp=N,199µm,0.5s							
BULG				AML		AML		
	comp=N,199µm,1.5s							
SALB	**San Lorenzo Be**	**2.47**	**34**	P		**Pn**	**10 17 10.8**	**+0.9**
SIRI	**Monte Sirino -**	**2.56**	**23**	P		**Pn**	**10 17 11.5**	**+0.5**
SIRI				AML		AML		
	comp=E,196µm,0.4s							
SIRI				AML		AML		
	comp=N,118µm,0.5s							
SIRI				AML		AML		
	comp=E,197µm,0.4s							
SIRI				AML		AML		
	comp=N,118µm,0.5s							
MRB1	**Monte Rocchett**	**3.30**	**6**	AML		AML		
	comp=E,588µm,1.6s							
MRB1				AML		AML		
	comp=N,543µm,1.6s							
MRB1				AML		AML		
	comp=E,588µm,0.4s							
MRB1				AML		AML		
	comp=E,120µm,0.4s							
MRB1				AML		AML		
	comp=N,136µm,0.9s							
MRB1				AML		AML		
	comp=N,543µm,0.4s							
KEST	**Kesra**	**4.67**	**245**	Pn		**Pn**	**10 17 42.1**	**+2.1**
	comp=N,1.1nm,0.3s,baz=79,slow=16,SNR=10							
KEST				Sn		**Sn**	**10 18 38.8**	**+4.5**
	comp=N,0.8nm,0.3s,baz=149,slow=23,SNR=5.2							
	comp=N,4.0nm,0.5s							
EKA	**Eskdalemuir Ar**	**21.21**	**331**	P		**P**	**10 21 17.8**	**+2.9**
	comp=N,1.2nm,0.6s,baz=145,slow=11,SNR=5.5							
	comp=N,1.2nm,0.6s							
HFS	**Hagfors**	**22.32**	**359**	P		**P**	**10 21 27.7**	**+0.9**
	comp=N,0.9nm,0.6s,baz=186,slow=11,SNR=2.4							
	comp=N,0.9nm,0.6s							
FINES	**FINESS Array B**	**24.70**	**13**	P		**P**	**10 21 49.9**	**-0.4**
	comp=N,1.1nm,0.5s,baz=186,slow=8.5,SNR=9.7							
	comp=N,1.1nm,0.5s							
ARTI	**Arti**	**34.38**	**43**	LR		LR	10 37 45.4	
	comp=N,40nm,18.6s,baz=103,slow=37							
MKAR	**Makanchi Array**	**49.47**	**57**	P		**P**	**10 25 19.4**	**-0.2**
	comp=N,0.2nm,0.5s,baz=295,slow=7.4,SNR=2.5							
	comp=N,0.2nm,0.5s							
OPO	**Ambohidratompo**	**63.96**	**145**	LR		LR	10 56 43.6	
	comp=N,126nm,18.2s,baz=85,slow=38							

*IDC **16** 10:20:03.4±3.4,3˚.29S×135˚.46E,h0km,mb3.8/2, mbtmp3.7/3,ML3.4/1,MS3.5/1,Error ellipse: s-maj=153.3km s-min=30.3km az=79.0*
*DJA **16** 10:20:07.7±0.3,3˚S±3˚×13˚5E±˚,h10km,M3.8/8,mb4.1/1, MLv3.7/8*

ISC 16 10:20:09.0±1.1,3˚.49S±0˚.10×134˚.61E±0˚.08,h24km,n9, σ1°02/9,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.92**	**259**	P	**Pn**	**10 20 26.6**	**+0.2**
SRPI	**Serui, Papua**	**2.29**	**45**	P	**Pn**	**10 20 44.6**	**-0.7**
SRPI				S	**Sn**	**10 21 11.1**	**-1.6**
FAKI	**Fak Fak**	**2.42**	**283**	P	**Pn**	**10 20 46.2**	**-1.0**
MWPI	**Manokwari, Pap**	**2.60**	**347**	P	**Pn**	**10 20 50.3**	**+0.7**
BAKI	**Biak**	**2.73**	**33**	P	**Pn**	**10 20 52.4**	**+1.1**
WRA	**Warramunga Arr**	**16.36**	**181**	Pn	**Pn**	**10 23 57.2**	**-0.1**
	0.1nm,0.3s,baz=2.8,slow=12,SNR=10						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**20.07**	**182**	P	**P**	**10 24 41.5**	**+0.7**
	5.6nm,1.0s,baz=6.6,slow=11,SNR=36						
	5.6nm,1.0s						
MSVF	**Nonsavu**	**44.84**	**112**	LR	LR	10 46 03.9	
	comp=Z,51nm,18.1s,baz=289,slow=35						
MKAR	**Makanchi Array**	**67.96**	**324**	P	**P**	**10 31 06.5**	**+0.4**
	0.5nm,0.6s,baz=120,slow=8.5,SNR=5.5						
	0.5nm,0.6s						

*IDC **16** 10:23:57.3±0.7,6˚.24S×76˚.50W,h118km±6km,mb3.7/11, mbtmp4.0/15,MS2.6/2,Error ellipse: s-maj=14.0km s-min=10.8km az=159.0*
*NEIC **16** 10:23:57.8±1.4,6˚.38S±0˚.07×76˚.50W±0˚.07,h117km±7km, mb4.4/35,Error ellipse: s-maj=11.3km s-min=9.3km az=225.0*
*RSNC **16** 10:23:57.5±3.9,6˚S±3˚×7˚7W±˚,h35km±76km,M4.3,mB5.2, mb4.6,ML3.8,Mw(mB)4.5*

ISC 16 10:23:57.6±0.4,6˚.32S±0˚.05×76˚.49W±0˚.07,h120km,n79, σ1°43/77,mb4.3/20,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.06**	**247**	P	**Pn**	**10 24 32.6**	**+0.3**
	638nm,0.6s,baz=8.1,slow=5.4,SNR=445						
ATAH				S	**Sn**	**10 24 58.8**	**+0.1**
	283nm,0.4s,baz=66,slow=4.6,SNR=6.7						
ATAH				LR	LR	10 24 60.0	
	comp=Z,32nm,20.0s,baz=279,slow=30						
MCRA	**Macar, Loja**	**3.96**	**299**	P	**Pn**	**10 24 53.9**	**-2.7**
CZSB	**Cruzeiro do Su**	**4.01**	**111**		**Pn**	**10 24 57.6**	**+0.3**
CZSB	**Cruzeiro do Su**	**4.01**	**111**	P	**Pn**	**10 24 57.4**	**+0.1**
PIAT	**Ana Tenorio**	**5.57**	**341**	P	**Pn**	**10 25 17.9**	**-0.8**
NNA	**Nana**	**5.65**	**184**	P	**Pn**	**10 25 19.9**	**+0.5**
	46nm,0.3s,baz=358,slow=12,SNR=22						
NNA				S	**Sn**	**10 26 19.3**	**-3.7**
	90nm,0.3s,baz=230,slow=11,SNR=14						
NNA	**Nana**	**5.65**	**184**	P	**Pn**	**10 25 19.4**	**+0.1**
	71nm,0.5s						
SLOR	**San Lorenzo -**	**5.90**	**340**	Pn	**Pn**	**10 25 23.0**	**-0.1**
PPLP	**Puerto Lpez**	**6.38**	**318**	P	**Pn**	**10 25 28.3**	**-1.0**
CASC	**Dorado de Casc**	**6.46**	**352**	P	**Pn**	**10 25 29.7**	**-0.8**
	141nm,1.1s						
PTLC	**Puerto Leguiza**	**6.66**	**15**	P	Pn	10 25 27.2	-5.8
OTAV	**Otavalo**	**6.80**	**343**	Pn	**Pn**	**10 25 32.8**	**-2.5**
OTAV	**Otavalo**	**6.80**	**343**	P	**Pn**	**10 25 39.5**	**+4.2**
CUSE	**Cuicocha Este**	**6.85**	**344**	P	Pn	10 25 30.7	-5.2
PAC1	**Pacto, Paraso**	**6.93**	**341**	P	**Pn**	**10 25 38.0**	**+1.2**
FLOC	**Florencia**	**7.89**	**6**	P	**Pn**	**10 25 48.2**	**-1.5**
	1µm26nm,0.5s						
BBAC	**Balboa, Cauca**	**8.32**	**355**	P	**Pn**	**10 25 55.3**	**-0.3**
	29nm,0.6s						
GARC	**Garzon, Huila**	**8.50**	**7**	P	**Pn**	**10 25 57.1**	**-1.1**
POPC	**Popayan, Colom**	**8.80**	**359**	P	**Pn**	**10 26 02.5**	**+0.4**
	6.2nm,0.7s						
MACC	**Macarena, Meta**	**8.81**	**17**	P	**Pn**	**10 26 00.1**	**-2.0**
	2µm78nm,0.5s						
JAMC	**Jamundi, Valle**	**9.47**	**359**	P	Pn	10 26 05.5	-5.7
PRAC	**Prado**	**10.09**	**9**	P	**Pn**	**10 26 18.3**	**-1.1**
	23nm,0.8s						
VILC	**Villavicencio,**	**10.73**	**15**	P	**Pn**	**10 26 27.9**	**-0.2**
CVER	**Cruz Verde, Cu**	**11.03**	**13**	P	**Pn**	**10 26 31.4**	**-1.1**
	1µm62nm,0.9s						
CHIC	**Chingaza**	**11.21**	**14**	P	**Pn**	**10 26 33.9**	**-0.9**
	39nm,0.8s						
ROSC	**El Rosal**	**11.29**	**11**	P	**P**	**10 26 47.5**	**+2.5**
	50nm,0.6s,baz=142,slow=11,SNR=15						
GUY2C	**Guyana, Caldas**	**11.52**	**6**	P	**Pn**	**10 26 41.5**	**+2.6**
	9.2nm,0.7s						
RUSC	**La Rusia**	**12.59**	**16**	P	**Pn**	**10 26 52.5**	**-0.6**
	23nm,0.6s						
LPAZ	**La Paz**	**12.85**	**141**	P	**Pn**	**10 26 59.0**	**+2.4**
	0.5nm,0.6s,baz=239,slow=2.9,SNR=11						
LPAZ	**La Paz**	**12.85**	**141**		**Pn**	**10 26 60.0**	**+3.4**
LPAZ	**La Paz**	**12.85**	**141**	P	**Pn**	**10 26 59.7**	**+3.1**
	4.5nm,2.1s						
PTBC	**PUERTO BERRIO,**	**12.93**	**9**	P	**Pn**	**10 26 55.7**	**-1.3**
	4.4nm,0.8s						
BARC	**Barichara**	**13.24**	**14**	P	**Pn**	**10 27 02.6**	**+1.4**
PB16	**IPOC Station P**	**13.75**	**151**		**Pn**	**10 27 10.5**	**+2.3**
PSGCX	**Pisagua**	**14.58**	**155**		**P**	**10 27 21.1**	**-0.3**
PB11	**IPOC Station P**	**14.92**	**154**		**P**	**10 27 24.9**	**-0.4**
MACA	**Manacapuru-AM**	**16.05**	**79**		**Pn**	**10 27 36.0**	**-0.7**
PB09	**IPOC Station P**	**16.91**	**156**	Pn	**P**	**10 27 49.5**	**+2.2**
SIV	**San Ignacio**	**17.91**	**124**	P	**Pn**	**10 27 59.2**	**0.0**
	0.3nm,0.3s,baz=303,slow=11,SNR=8.9						
BOAV	**Boa Vista**	**18.14**	**62**		**P**	**10 28 01.3**	**+0.7**
ECPR	**Experimental S**	**26.44**	**22**	P	**P**	**10 29 23.7**	**+0.3**
ECPR				IAmb	IAmb	10 29 55.9	
	comp=Z,21nm,1.2s						
TEIG	**Tepich**	**28.81**	**337**	P	**P**	**10 29 45.0**	**+0.5**
TXAR	**Lajitas Array**	**44.04**	**325**	P	**P**	**10 31 54.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=146,slow=9.2,SNR=8.2						
	comp=Z,0.5nm,0.6s						
PLPT	**Palo Pinto**	**44.10**	**333**	P	**P**	**10 31 54.9**	**+0.9**
PLPT				IAmb	IAmb	10 31 55.6	
	comp=Z,4.5nm,0.6s						
APMT	**Aspermont**	**45.36**	**332**	P	**P**	**10 32 04.8**	**+0.8**
W35A	**Tecumseh**	**45.50**	**336**	P	**P**	**10 32 05.3**	**+0.2**
W35A				IAmb	IAmb	10 32 05.6	
	comp=Z,7.8nm,0.8s						
POST	**Post**	**45.81**	**330**	P	**P**	**10 32 08.1**	**+0.4**
POST				IAmb	IAmb	10 32 08.7	
	comp=Z,4.8nm,0.7s						
WMOK	**Wichita Mounta**	**45.94**	**334**	P	**P**	**10 32 07.7**	**-0.8**
OK051	**E0350 and S346**	**46.67**	**337**	P	**P**	**10 32 14.2**	**0.0**
M57A	**Sunshine Farm,**	**47.42**	**359**	P	**P**	**10 32 20.7**	**+0.8**
M57A				IAmb	IAmb	10 32 21.2	
	comp=Z,6.9nm,0.8s						
SDCO	**Great Sand Dun**	**51.50**	**331**	IAmb	IAmb	10 32 52.7	
	comp=Z,4.4nm,1.2s						
E28A	**Huff**	**56.89**	**340**		**P**	**10 33 30.1**	**+0.2**
PDAR	**Pinedale Array**	**57.35**	**331**	P	**P**	**10 33 33.1**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=138,slow=6.1,SNR=5.5						
	comp=Z,0.8nm,0.8s						
HWUT	**Hardware Ranch**	**57.47**	**329**	IAmb	IAmb	10 33 34.8	
	comp=Z,3.5nm,0.6s						
ULM	**Lac du Bonnet**	**58.79**	**346**	P	**P**	**10 33 42.0**	**-1.1**
	comp=Z,2.5nm,0.4s,baz=164,slow=7.3,SNR=8.6						
	comp=Z,2.5nm,0.4s						
ULM	**Lac du Bonnet**	**58.79**	**346**	IAmb	IAmb	10 34 23.6	
	comp=Z,7.0nm,1.3s						
NVAR	**Mina Array Bea**	**59.06**	**322**	P	**P**	**10 33 46.1**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=130,slow=7.3,SNR=4.7						
NVAR				LR	LR	10 57 46.5	
	comp=Z,18nm,18.5s,baz=206,slow=34						
	comp=Z,0.8nm,0.7s						
DBIC	**Dimbokro**	**72.63**	**81**	P	**P**	**10 35 12.7**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=215,slow=5.4,SNR=3.6						
	comp=Z,3.2nm,0.6s						
DBIC	**Dimbokro**	**72.63**	**81**	IAmb	IAmb	10 35 37.1	
	comp=Z,9.9nm,1.1s						
YKA	**Yellowknife Ar**	**74.56**	**343**	P	**P**	**10 35 22.1**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=142,slow=6.2,SNR=32						
YKA				pP	**pP**	**10 35 51.7**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=144,slow=5.9,SNR=2.7						
	comp=Z,0.9nm,0.5s						
SNAA	**Sanae**	**78.92**	**162**	P	**P**	**10 35 47.5**	**0.0**
	comp=Z,0.6nm,0.5s,baz=291,slow=8.6,SNR=2.6						
	comp=Z,0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**80.00**	**76**	P	**P**	**10 35 54.0**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=288,slow=6.2,SNR=9.4						
TORD				pP	**pP**	**10 36 24.7**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=274,slow=4.9,SNR=5.8						
	comp=Z,1.0nm,0.5s						
QSPA	**South Pole Qui**	**83.78**	**180**	P	**P**	**10 36 13.7**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=135,slow=1.9,SNR=11						
	comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**83.78**	**180**	IAmb	IAmb	10 36 16.2	
	comp=Z,8.4nm,1.3s						
BCAR	**Beaver Creek A**	**84.73**	**335**	P	**P**	**10 36 18.4**	**+0.4**
H29M	**Whitestone**	**84.83**	**339**	P	**P**	**10 36 18.4**	**0.0**
G29M	**Pine Creek**	**85.04**	**340**	P	**P**	**10 36 19.3**	**-0.2**
G29M				IAmb	IAmb	10 36 19.7	
	comp=Z,5.2nm,1.1s						
E29M	**Blow River**	**85.72**	**341**	P	**P**	**10 36 22.3**	**-0.4**
EKA	**Eskdalemuir Ar**	**85.80**	**33**	P	**P**	**10 36 22.7**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=258,slow=5.9,SNR=2.4						
	comp=Z,0.4nm,0.5s						
SML	**Sawmill**	**87.08**	**333**	P	**P**	**10 36 29.7**	**+0.1**
SML				IAmb	IAmb	10 36 29.9	
	comp=Z,4.7nm,0.7s						
ILAR	**Eielson Array**	**87.47**	**336**	P	**P**	**10 36 30.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=103,slow=4.0,SNR=7.6						
	comp=Z,0.6nm,0.7s						
F26K	**Sheenjek River**	**87.52**	**339**	P	**P**	**10 36 32.1**	**+0.5**
F26K				IAmb	IAmb	10 37 04.0	
	comp=Z,4.1nm,1.4s						
ZALV	**Zalesovo Beam**	**130.14**	**14**	PKP	**PKPdf**	**10 42 53.4**	**0.0**
	comp=Z,1.0nm,0.5s,baz=11,slow=1.5,SNR=5.3						
MKAR	**Makanchi Array**	**135.73**	**21**	PKP	**PKPdf**	**10 43 03.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=31,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**137.95**	**224**	PKP	**PKPdf**	**10 43 09.1**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=107,slow=2.0,SNR=2.0						
ASAR				pPKP	**pPKPdf**	**10 43 41.3**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=111,slow=1.3,SNR=2.0						
WRA	**Warramunga Arr**	**140.00**	**229**	PKP	**PKPdf**	**10 43 13.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=120,slow=2.1,SNR=7.4						
WRA				pPKP	**pPKPdf**	**10 43 43.2**	**-2.3**
	comp=Z,0.4nm,0.9s,baz=122,slow=2.0,SNR=1.7						
WMQ	**Urumqi**	**140.14**	**18**	*e*PKP	**PKPdf**	**10 43 08.4**	**-4.1**
WMQ				sPKP	sPKPdf	10 43 54.8	-2.8
HHC	**Hu-ho-hao-te**	**144.87**	**349**	*e*P	**PKiKP**	**10 43 23.4**	**-1.4**
NJ2	**Nanjing**	**150.66**	**333**	*e*P	**PKPdf**	**10 43 31.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,21nm,0.7s						

*IDC **16** 10:54:20.0±2.3, 19˚.00S×177˚.67W,h582km±24km,mb2.8/5, mbtmp3.6/6,Error ellipse: s-maj=34.0km s-min=22.9km az=145.0*

ISC 16 10:54:19.0±1.0,19˚.0S±0˚.2×177˚.6W±0˚.2,h570km,n8, σ0°99/8,mb3.2/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.33**	**287**	P	**P**	**10 55 45.9**	**+1.0**
	1.5nm,0.3s,baz=133,slow=18,SNR=6.4						
WRA	**Warramunga Arr**	**45.20**	**261**	P	**P**	**11 01 45.7**	**-0.5**
	0.3nm,0.4s,baz=97,slow=7.6,SNR=13						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.25**	**255**	P	**P**	**11 01 46.4**	**-0.1**
	0.8nm,0.7s,baz=86,slow=8.0,SNR=14						
	0.8nm,0.7s						
QSPA	**South Pole Qui**	**71.04**	**180**	P	**P**	**11 04 39.9**	**+0.1**
	1.3nm,0.9s,baz=66,slow=0.3,SNR=5.8						
	1.3nm,0.9s						
TXAR	**Lajitas Array**	**85.94**	**57**	P	**P**	**11 06 00.8**	**+1.1**
	0.3nm,0.7s,baz=216,slow=6.2,SNR=4.9						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**86.80**	**13**	P	**P**	**11 06 02.2**	**-0.6**
	0.1nm,0.4s,baz=223,slow=5.1,SNR=5.6						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**127.54**	**350**	PKP	**PKPdf**	**11 12 17.7**	**-1.4**
	0.9nm,0.9s,baz=33,slow=2.6,SNR=3.9						
GERES	**GERESS Array B**	**148.88**	**346**	PKPbc	**PKPbc**	**11 13 02.7**	**-0.3**
	0.3nm,0.4s,baz=38,slow=1.7,SNR=3.8						

*IDC **16** 11:00:56.9±4.5,37˚.20N×21˚.18E,h0km,mb3.4/4, mbtmp3.5/4,MS3.3/2,Error ellipse: s-maj=169.4km s-min=28.6km az=108.0*
*ATH **16** 11:00:58.5,37˚.23N×20˚.54E,h8km±2km,ML3.2/12, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **16** 11:01:00.0,37˚N±1˚×21˚E±˚,h0km,M3.0/51,MLh3.0/51*

ISC 16 11:00:58.5±1.4,37˚.22N±0˚.03×20˚.62E±0˚.04,h2km±9km, n98,σ0°72/139,mb3.5/3,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.51**	**19**	P	**Pg**	**11 01 09.1**	**+0.7**
LTHK				S	**Sg**	**11 01 15.5**	**+0.4**
LTHK	**Lithakia**	**0.51**	**19**	P	**Pg**	**11 01 08.8**	**+0.5**
LTHK				S	**Sg**	**11 01 15.6**	**+0.6**
KYPS	**Kipseli, Zakin**	**0.61**	**15**	P	**Pb**	**11 01 11.3**	**-0.7**
KYPS				S	**Sg**	**11 01 19.1**	**+0.8**
ORTH	**Orthonies,Zaky**	**0.63**	**5**	P	**Pg**	**11 01 11.2**	**+0.6**
ORTH	**Orthonies,Zaky**	**0.63**	**5**	P	**Pg**	**11 01 11.1**	**+0.6**
ORTH				S	**Sg**	**11 01 18.9**	**+0.2**
CLEM	**Kyllini,Ilia,G**	**0.78**	**31**	P	**Pb**	**11 01 14.0**	**-0.9**
CLEM				S	**Sb**	**11 01 24.8**	**-1.1**
RTZL	**Ratzakli, Kefa**	**0.86**	**8**	P	**Pg**	**11 01 14.9**	**0.0**
RTZL				S	**Sg**	**11 01 26.1**	**0.0**
RTZL	**Ratzakli, Kefa**	**0.86**	**8**	P	**Pg**	**11 01 15.0**	**0.0**
RTZL				S	**Sg**	**11 01 26.4**	**+0.3**
ZARO	**Zacharo**	**0.86**	**72**	P	**Pb**	**11 01 16.4**	**+0.2**
PYL1	**Pylos**	**0.91**	**109**	P	**Pb**	**11 01 17.6**	**+0.5**
AMT	**Artemida-Makis**	**0.92**	**70**	P	**Pb**	**11 01 17.0**	**-0.3**
AMT				S	**Sb**	**11 01 30.5**	**+0.5**
AMT	**Artemida-Makis**	**0.92**	**70**	P	**Pb**	**11 01 16.9**	**-0.3**
AMT				S	**Sb**	**11 01 30.1**	**+0.2**
VLS	**Valsamata**	**0.95**	**359**	P	**Pg**	**11 01 16.6**	**-0.1**
VLS				S	**Sb**	**11 01 30.4**	**-0.5**
VLS	**Valsamata**	**0.95**	**359**	P	**Pg**	**11 01 16.7**	**-0.1**
VLS				S	**Sg**	**11 01 29.8**	**+0.6**
PYL	**PYLOS**	**0.95**	**110**	P	**Pb**	**11 01 18.2**	**+0.4**
PYL				S	**Sn**	**11 01 32.1**	**-1.1**
PYL	**PYLOS**	**0.95**	**110**	P	**Pb**	**11 01 18.3**	**+0.4**
PYL				S	**Sn**	**11 01 32.5**	**-0.8**
ARG2	**Argostoli**	**0.96**	**354**	P	**Pg**	**11 01 15.8**	**-1.1**
ARG2				S	**Sg**	**11 01 29.0**	**-0.3**
ARG2	**Argostoli**	**0.96**	**354**	P	**Pg**	**11 01 16.7**	**-0.2**
LXR1	**Lixouri, Cepha**	**0.99**	**352**	P	**Pg**	**11 01 17.0**	**-0.4**
LXR1				S	**Sb**	**11 01 31.6**	**-0.2**
DMLN	**Damoulianata-K**	**1.03**	**349**	P	**Pg**	**11 01 18.4**	**+0.1**
DMLN				S	**Sb**	**11 01 33.9**	**+0.7**
DMLN	**Damoulianata-K**	**1.03**	**349**	P	**Pg**	**11 01 18.3**	**+0.1**
ITM	**Ithomi**	**1.04**	**92**	P	**Pb**	**11 01 19.3**	**0.0**
ITM				S	**Sn**	**11 01 34.6**	**-0.8**
ITM	**Ithomi**	**1.04**	**92**	P	**Pb**	**11 01 19.5**	**+0.2**
RLS	**Riolos of Patr**	**1.07**	**39**	P	**Pg**	**11 01 18.5**	**-0.5**
RLS				S	**Sb**	**11 01 34.3**	**+0.1**
RLS	**Riolos of Patr**	**1.07**	**39**	P	**Pb**	**11 01 19.1**	**-0.6**
RLS				S	**Sb**	**11 01 34.5**	**+0.2**
VALY	**Valyra**	**1.09**	**93**	P	**Pb**	**11 01 20.2**	**+0.2**
VALY				S	**Sn**	**11 01 35.5**	**-1.0**
DRO	**Drossia**	**1.13**	**50**	P	**Pg**	**11 01 19.7**	**-0.5**
DRO				S	**Sb**	**11 01 35.9**	**-0.1**
DRO	**Drossia**	**1.13**	**50**	P	**Pb**	**11 01 20.2**	**-0.7**
DRO				S	**Sn**	**11 01 37.4**	**-0.2**
AXS	**Araxos**	**1.14**	**31**	P	**Pg**	**11 01 19.7**	**-0.7**
AXS				S	**Sb**	**11 01 36.2**	**-0.1**
AXS	**Araxos**	**1.14**	**31**	P	**Pg**	**11 01 20.4**	**0.0**
VSK1	**VASILIKIADES**	**1.18**	**358**	P	**Pg**	**11 01 20.8**	**-0.4**
VSK1				S	**Sb**	**11 01 37.8**	**+0.3**
FSK	**Fiskardo**	**1.23**	**358**	P	**Pg**	**11 01 21.7**	**-0.4**
FSK				S	**Sb**	**11 01 39.3**	**+0.3**
FSK	**Fiskardo**	**1.23**	**358**	P	**Pg**	**11 01 21.6**	**-0.6**
PLEV	**Plevrona-Mesol**	**1.34**	**27**	P	**Pg**	**11 01 23.4**	**-0.8**
PLEV				S	**Sn**	**11 01 43.5**	**+0.8**
EVGI	**Lefkada island**	**1.40**	**1**	P	**Pg**	**11 01 24.4**	**-0.9**
EVGI				S	**Sb**	**11 01 43.5**	**-0.1**
EVGI	**Lefkada island**	**1.40**	**1**	P	**Pg**	**11 01 24.5**	**-0.7**
UPR	**University Cam**	**1.41**	**41**	P	**Pg**	**11 01 24.7**	**-0.8**
VLX	**Vlachokerasia**	**1.41**	**84**	P	**Pb**	**11 01 25.6**	**-0.1**
VLX				S	**Sn**	**11 01 45.8**	**+1.2**
DRAG	**Dragano-Lefkad**	**1.46**	**359**	P	**Pn**	**11 01 24.8**	**-1.1**
DRAG	**Dragano-Lefkad**	**1.46**	**359**	P	**Pn**	**11 01 25.6**	**-0.3**
AGRP	**Agrapidokambos**	**1.46**	**36**	P	**Pn**	**11 01 25.6**	**-0.3**
KLV	**Kalavryta, Ach**	**1.47**	**56**	P	**Pn**	**11 01 25.6**	**-0.5**
KLV				S	**Sn**	**11 01 46.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.47**	**56**	P	**Pn**	**11 01 25.5**	**-0.5**
NYDR	**Nydri-Lefkada**	**1.49**	**2**	P	**Pn**	**11 01 25.9**	**-0.4**
NYDR				S	**Sn**	**11 01 47.0**	**+0.6**
NYDR	**Nydri-Lefkada**	**1.49**	**2**	P	**Pn**	**11

KURBB **Kurchatov Arra** 42.74 53 LR LR 11 30 17.6
comp=Z,35nm,18.7s,baz=165,slow=42

*DJA **16** 11:18:31.7±0.3,9°S±4′×11°9E±°, h134km±5km, M4.6/20, mb4.3/10, mB5.9/4, MLv4.5/20, Mw(mB)5.4/4*
*IDC **16** 11:18:31.7±2.3,8.79S×118.60E, h150km±18km, mb3.6/10, mbtmp4.0/13, MS2.9/2, Error ellipse: s-maj=32.5km s-min=12.9km az=66.0*
ISC 16 11:18:30.6±0.6,**8.98S**±0.06×**118.69E**±0.04,**h150**km,**n32,** σ1℘**45**/39,**mb4.1**/12,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLAI	**Plampang**	**0.92**	**279**	P		**Pn**	**11 18 55.1**	**+0.4**
PLAI				S		**Sn**	**11 19 12.2**	**-0.8**
LBFI	**Labuhan Bajo,**	**1.28**	**68**	P		**Pn**	**11 18 58.9**	**+0.9**
WSI	**Waingapu**	**1.73**	**114**	P		**Pn**	**11 19 03.3**	**+0.6**
WSI				S		**Sn**	**11 19 27.0**	**-0.2**
KHKI	**Kahang-Kahang**	**3.11**	**281**	P		**Pn**	**11 19 19.8**	**+0.4**
KHKI				S		**Sn**	**11 19 55.7**	**-1.4**
IGBI	**Denpasar**	**3.51**	**272**	P		**Pn**	**11 19 24.4**	**-0.1**
IGBI				S		**Sn**	**11 20 04.0**	**-2.2**
MMRI	**Maumere**	**3.52**	**85**	P		**Pn**	**11 19 25.3**	**+0.6**
MMRI				S		**Sn**	**11 20 07.4**	**+0.8**
KAPI	**Kappang**	**4.07**	**15**	P		**Pn**	**11 19 32.4**	**+0.5**
	49nm,0.4s,baz=186,slow=8.5,SNR=21							
KAPI				S		**Sn**	**11 20 16.7**	**-2.8**
	29nm,0.5s,baz=76,slow=20,SNR=3.5							
KAPI	**Kappang**	**4.07**	**15**	P		**Pn**	**11 19 32.2**	**+0.3**
JAGI	**Jajag, Banyuwa**	**4.51**	**276**	P		**Pn**	**11 19 35.9**	**-1.8**
BATI	**Baumata**	**5.05**	**104**	P		**Pn**	**11 19 43.5**	**-1.2**
	42nm,0.4s,baz=314,slow=2.3,SNR=8.4							
BATI				S		**Sn**	**11 20 39.0**	**-3.6**
	93nm,0.4s,baz=290,slow=7.3,SNR=3.5							
BATI	**Baumata**	**5.05**	**104**	P		**Pn**	**11 19 43.6**	**-1.2**
	1.0nm63nm,0.7s							
SOEI	**Soe**	**5.56**	**98**	P		**Pn**	**11 19 54.5**	**+2.9**
SNJI	**Sawahan-Nganju**	**6.96**	**279**	P		**Pn**	**11 20 11.9**	**+1.5**
UGM	**Wanagama**	**8.15**	**277**	P		**Pn**	**11 20 27.4**	**+1.3**
	137nm,2.0s							
FITZ	**Fitzroy Crossi**	**11.30**	**144**	P		**Pn**	**11 21 10.2**	**+2.3**
	3.8nm,0.5s,baz=337,slow=12,SNR=37							
FITZ				S		**Sn**	**11 23 10.1**	**-2.8**
	15nm,0.6s,baz=151,slow=15,SNR=12							
SIJI	**Sorong**	**14.88**	**58**	LR		LR	11 29 57.2	
	comp=Z,30nm,19.1s,baz=94,slow=46							
WRA	**Warramunga Arr**	**18.65**	**127**	P		**Pn**	**11 22 40.0**	**+0.9**
	0.7nm,0.7s,baz=304,slow=12,SNR=17							
WRA				S		**S**	**11 25 59.7**	**-2.1**
	1.5nm,0.6s,baz=309,slow=20,SNR=9.8							
WRA				ScP		**ScP**	**11 30 22.5**	**+1.3**
	0.2nm,0.6s,baz=312,slow=2.7,SNR=5.9							
ASAR	**Alice Springs**	**20.62**	**137**	P		Pn	11 23 02.1	-0.3
	1.0nm,0.8s,baz=325,slow=12,SNR=11							
	1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**33.51**	**324**	P		**P**	**11 24 56.4**	**+0.3**
	0.5nm,0.3s,baz=160,slow=6.3,SNR=4.4							
	0.5nm,0.3s							
XAN	**Xi'an**	**43.77**	**348**	P		**P**	**11 26 22.0**	**+0.6**
XAN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KSRS	**Korea Array**	**46.99**	**10**	P		**P**	**11 26 45.9**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=185,slow=8.3,SNR=7.9							
	comp=Z,1.3nm,0.6s							
MJAR	**Matsushiro Arr**	**48.85**	**21**	LR		LR	11 47 26.8	
	comp=Z,17nm,20.3s,baz=254,slow=36							
GTA2	**Gaotai**	**51.32**	**341**	*e*P		**P**	**11 27 20.5**	**+0.8**
GTA2				pP		pP	11 27 24.6	-29
GTA2				pmax		pmax		
	comp=Z,6.0nm,1.0s							
USRK	**Ussuriysk Ar.**	**54.28**	**12**	P		**P**	**11 27 41.0**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=202,slow=6.1,SNR=7.7							
	comp=Z,1.1nm,0.4s							
SONM	**Songino Array**	**57.60**	**350**	P		**P**	**11 28 04.8**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=177,slow=8.6,SNR=6.4							
	comp=Z,3.5nm,0.4s							
HEH	**HeiHe**	**59.47**	**6**	*e*P		**P**	**11 28 17.5**	**-0.1**
HEH				pmax		pmax		
	comp=Z,11nm,1.0s							
MKAR	**Makanchi Array**	**64.30**	**333**	P		**P**	**11 28 49.8**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=146,slow=7.5,SNR=23							
	comp=Z,1.8nm,0.6s							
KURBB	**Kurchatov Arra**	**68.81**	**334**	P		**P**	**11 29 17.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=149,slow=5.5,SNR=7.9							
	comp=Z,0.6nm,0.5s							
ZALV	**Zalesovo Beam**	**68.91**	**339**	P		**P**	**11 29 17.9**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=146,slow=4.7,SNR=5.5							
	comp=Z,1.1nm,0.3s							
PETK	**Petropavlovsk-**	**70.17**	**24**	P		**P**	**11 29 27.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=195,slow=4.6,SNR=4.5							
	comp=Z,1.9nm,0.8s							
BVAR	**Borovoye Array**	**74.13**	**332**	P		**P**	**11 29 50.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=156,slow=11,SNR=3.7							
	comp=Z,0.5nm,0.3s							
YKA	**Yellowknife Ar**	**114.29**	**24**	PKP		**PKiKP**	**11 36 52.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=301,slow=1.9,SNR=5.2							

*GRAL **16** 11:22:32.7±0.3,35°26N×36°47E, h0km±2km, MD3.0*
*ISK **16** 11:22:39.2,35°59N×35°95E, h10km, ML2.5/7*
ISC 16 11:22:32.3±0.9,**35°30N**±0°04×**36°31E**±0°09,**h17**km,**n13,** σ1℘**02**/17,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BEIL	**Beino**	**0.76**	**188**	*e*P		**Pb**	**11 22 46.2**	**-0.9**
BEIL				*e*S		**Sb**	**11 22 56.0**	**-1.2**
HWQ	**Hawqa**	**1.06**	**196**	*e*P		**Pb**	**11 22 51.7**	**-0.6**
HWQ				*e*S		**Sb**	**11 23 05.9**	**0.0**
TAHT	**Tahtakopru-Hat**	**1.08**	**355**	Pg		**Pg**	**11 22 55.2**	**+2.0**
BHL	**Bhannes**	**1.49**	**201**	*e*P		**Pb**	**11 22 59.4**	**-0.2**
DQRL	**Deir Qamar**	**1.70**	**201**	*e*P		**Pb**	**11 23 02.5**	**-0.7**
RCY	**Rachaya**	**1.84**	**192**	*e*P		**Pn**	**11 23 04.0**	**+0.8**
RCY				*e*S		**Sb**	**11 23 27.5**	**-0.9**
SHBL	**Chebaa**	**2.00**	**194**	*e*P		**Pn**	**11 23 06.4**	**+0.9**
GAZ	**Gaziantep**	**2.01**	**21**	Pn		**Pg**	**11 23 12.2**	**+1.3**
GAZ				Sn		**Sg**	**11 23 36.4**	**-0.5**
KHMN	**Narli-Kahraman**	**2.20**	**18**	Pn		**Pg**	**11 23 14.9**	**+0.4**
KMRS	**Kahramanmaras**	**2.25**	**12**	Pn		**Pg**	**11 23 14.9**	**-0.6**
IKL	**Isikli**	**2.33**	**294**	Pn		**Pb**	**11 23 13.1**	**-0.7**
KEBE	**Keben-Mersin**	**2.40**	**299**	Pn		**Pb**	**11 23 14.1**	**-1.0**
CMRD	**Camardi-Nigde**	**2.59**	**336**	Pn		**Pb**	**11 23 17.2**	**-1.1**

*IDC **16** 11:42:52.1±1.7,7.07S×128.57E, h161km±20km, mb3.5/4, mbtmp4.3/9, Error ellipse: s-maj=26.4km s-min=16.5km az=137.0*
*NEIC **16** 11:42:52.4±2.2,7.12S±0.04×128.88E±0.07, h171km±10km, mb4.3/3, Error ellipse: s-maj=11.3km s-min=2.4km az=114.0*
*DJA **16** 11:42:53.4±0.2,7°S±3′×12°9E±°, h188km±6km, M4.3/18, mB4.8/7, mb4.2/16, MLv4.7/18, Mw(mB)4.1/7*
ISC 16 11:42:51.9±0.7,**7.16S**±0.05×**128.84E**±0.05,**h200**km,**n47,** σ2℘**91**/55,**mb3.8**/6,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.57**	**109**	P		**Pn**	**11 43 38.8**	**+2.1**
SAUI	**Saumlaki**	**2.57**	**109**	S		**Sn**	**11 44 12.3**	**+0.8**
SAUI	**Saumlaki**	**2.57**	**109**	Pn		**Pn**	**11 43 36.8**	**+0.1**
SAUI				Sn		**Sn**	**11 44 08.3**	**-3.3**
SAUI	**Saumlaki**	**2.57**	**109**	P		**Pn**	**11 43 38.5**	**+1.8**
SAUI				S		**Sn**	**11 44 11.2**	**-0.3**
BNDI	**Bandanaira**	**2.82**	**22**	P		**Pn**	**11 43 41.4**	**+1.9**
SOEI	**Soe**	**5.21**	**240**	P		**Pn**	**11 44 12.2**	**+3.0**
SOEI	**Soe**	**5.21**	**240**			**Pn**	**11 44 10.2**	**+1.0**
SOEI				Sn		**Sn**	**11 45 09.8**	**-0.2**
SOEI	**Soe**	**5.21**	**240**	P		**Pn**	**11 44 11.3**	**+2.1**
	0.7nm2μm78nm,0.8s							
FAKI	**Fak Fak**	**5.41**	**39**	P		**Pn**	**11 44 10.0**	**-1.6**
FAKI	**Fak Fak**	**5.41**	**39**	S		**Sn**	**11 45 08.7**	**-5.8**
FAKI	**Fak Fak**	**5.41**	**39**			**Pn**	**11 44 10.3**	**-1.3**
FAKI				Sn		**Sn**	**11 45 08.6**	**-5.9**
FAKI	**Fak Fak**	**5.41**	**39**	P		**Pn**	**11 44 10.4**	**-1.3**
	0.6nm2μm32nm,1.4s							
DRS	**Darwin Rock St**	**5.62**	**159**	P		**Pn**	**11 44 16.5**	**+2.2**
BATI	**Baumata**	**5.95**	**239**	P		**Pn**	**11 44 17.4**	**-1.2**
	152nm,0.6s,baz=127,slow=1.4,SNR=16							
BATI				S		**Sn**	**11 45 20.9**	**-6.3**
	102nm,0.4s,baz=122,slow=13,SNR=8.5							
BATI	**Baumata**	**5.95**	**239**	P		**Pn**	**11 44 17.4**	**-1.2**
KMPI	**Kaimana, Papua**	**5.96**	**55**	P		**Pn**	**11 44 18.6**	**-0.1**
MTN	**Manton Dam**	**6.09**	**158**	Pn		**Pn**	**11 44 21.8**	**+1.4**
MTN				Sn		**Sn**	**11 45 28.4**	**-1.9**
SIJI	**Sorong**	**6.70**	**21**	P		**Pn**	**11 44 28.4**	**+0.1**
	14nm,0.3s,baz=202,slow=19,SNR=7.7							
SIJI				S		**Sn**	**11 45 38.1**	**-6.7**
	27nm,0.2s,baz=240,slow=23,SNR=6.8							
SIJI	**Sorong**	**6.70**	**21**	P		**Pn**	**11 44 27.5**	**-0.8**
	0.3nm1μm9.8nm,0.5s							
MMRI	**Maumere**	**6.70**	**257**	Pn		**Pn**	**11 44 30.6**	**+2.2**
MMRI	**Maumere**	**6.70**	**257**	P		**Pn**	**11 44 30.3**	**+1.9**
	0.2nm2μm52nm,0.8s							
MWPI	**Manokwari, Pap**	**8.07**	**40**	P		**Pn**	**11 44 48.8**	**+2.6**
	67nm,0.9s							
KNRA	**Kununurra**	**8.47**	**181**			**Pn**	**11 44 52.8**	**+1.5**
KNRA				Sn		**Sn**	**11 46 22.8**	**-3.8**
BAKI	**Biak**	**9.36**	**51**	P		**Pn**	**11 45 05.6**	**+2.6**
	32nm,0.7s							
PLAI	**Plampang**	**11.08**	**261**	P		**Pn**	**11 45 25.6**	**+0.4**
PLAI	**Plampang**	**11.08**	**261**	P		**Pn**	**11 45 26.3**	**+1.1**
	31nm,1.2s							
FITZ	**Fitzroy Crossi**	**11.31**	**196**	P		**Pn**	**11 45 28.7**	**+0.6**
	6.1nm,0.3s,baz=25,slow=10,SNR=100							
FITZ				S		**Sn**	**11 47 27.0**	**-7.4**
	10nm,0.4s,baz=56,slow=14,SNR=4.2							
FITZ	**Fitzroy Crossi**	**11.31**	**196**			**Sn**	**11 47 30.5**	**-3.9**
JAY	**Jayapura**	**12.69**	**69**	P		**P**	**11 45 50.2**	**+0.9**
	5.2nm,0.7s,baz=234,slow=9.9,SNR=5.8							
WB0	**Warramunga Arr**	**13.65**	**157**			**P**	**11 45 58.5**	**-1.4**
WRAB	**Tennant Creek**	**13.78**	**158**	P		**P**	**11 46 02.7**	**+1.3**
WRAB	**Tennant Creek**	**13.78**	**158**	P		**P**	**11 46 01.3**	**-0.1**
WRA	**Warramunga Arr**	**13.79**	**158**	P		**P**	**11 46 00.3**	**-1.1**
	7.1nm,0.4s,baz=327,slow=13,SNR=70							
WRA				S		**S**	**11 48 28.2**	**-4.8**
	4.1nm,0.4s,baz=336,slow=22,SNR=5.6							
WRA	**Warramunga Arr**	**13.79**	**158**	P		**P**	**11 46 00.1**	**-1.4**
WR8	**Warramunga Arr**	**13.86**	**157**			**P**	**11 46 01.5**	**-0.8**
QIS	**Mount Isa**	**16.92**	**143**	P		**Pn**	**11 46 41.0**	**+3.6**
AS31	**Alice Springs**	**17.12**	**164**			**Pn**	**11 46 40.9**	**+1.1**
AS31				IAmb		IAmb	11 46 44.9	
	comp=Z,8.3nm,0.6s							
ASAR	**Alice Springs**	**17.12**	**164**	P		**Pn**	**11 46 43.4**	**+3.6**
	comp=Z,21nm,0.5s,baz=336,slow=9.6,SNR=245							
ASAR				S		**S**	**11 49 46.5**	**0.0**
	comp=Z,1.3nm,0.6s,baz=335,slow=22,SNR=5.5							
ASAR	**Alice Springs**	**17.12**	**164**	Pn		**Pn**	**11 46 42.5**	**+2.8**
AS01	**Alice Springs**	**17.13**	**164**	P		**Pn**	**11 46 43.5**	**+3.6**
FORT	**Forrest**	**23.51**	**182**	P		**P**	**11 47 47.5**	**+3.5**
FORT				IAmb		IAmb	11 48 22.9	
	comp=Z,8.8nm,0.8s							
PETK	**Petropavlovsk-**	**64.83**	**19**	P		P	11 53 13.2	+3.8
	comp=Z,1.5nm,0.8s,baz=220,slow=7.5,SNR=3.3							
	comp=Z,1.5nm,0.8s							
MKAR	**Makanchi Array**	**67.73**	**327**	P		P	11 53 31.3	+3.4
	comp=Z,0.7nm,0.5s,baz=116,slow=6.6,SNR=12							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**71.22**	**334**	P		**P**	**11 53 51.6**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=132,slow=8.0,SNR=3.8							
	comp=Z,0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**72.05**	**329**	P		**P**	**11 53 57.3**	**+3.3**
	comp=Z,1.1nm,0.6s,baz=131,slow=5.1,SNR=17							
	comp=Z,1.1nm,0.6s							
KURK	**Kurchatov**	**72.05**	**329**	P		**P**	**11 53 57.3**	**+3.2**
KURK	**Kurchatov**	**72.05**	**329**	IAmb		IAmb	11 53 59.0	
	comp=Z,2.1nm,0.9s							

*KOLA **16** 11:47:40.6,68°07N×33°38E, h0km, ML2.0, Error ellipse: s-maj=2.0km s-min=1.2km az=100.0, Olenegorsk City, Mines*
*HEL **16** 11:47:40.3±0.2,68°10N×33°32E, h0km, ML1.7, Suspected explosion*
*BER **16** 11:47:41.8±1.6,67°91N×33°27E, h0km, Suspected explosion*
*IDC **16** 11:47:43.6±2.6,68°01N×32°57E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=30.1km s-min=12.0km az=71.0*
ISC 16 11:47:39.8±0.8,**68°06N**±0°03×**33°36E**±0°03,**h0**km,**n29,** σ1℘**10**/48,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
APA0	**Apatity Array**	**0.48**	**197**	P		**Pg**	**11 47 49.2**	**+0.3**
APA0				S		**Sg**	**11 47 55.7**	**+0.7**
APA	**Apatity**	**0.49**	**178**	P		**Pg**	**11 47 49.5**	**+0.4**
APA				S		**Sg**	**11 47 55.8**	**+0.2**
LVZ	**Lovozero**	**0.51**	**108**	P		**Pg**	**11 47 49.9**	**+0.4**
LVZ				S		**Sg**	**11 47 56.6**	**+0.5**
LVZ	**Lovozero**	**0.51**	**108**	PG		**Pg**	**11 47 50.1**	**+0.6**
LVZ				SG		**Sg**	**11 47 56.8**	**+0.6**
TERR	**Teriberka**	**1.31**	**28**	P		**Pg**	**11 48 04.0**	**-0.9**
TERR				S		**Sg**	**11 48 20.3**	**-1.6**
KVDA	**Kovda**	**1.39**	**188**	P		**Pn**	**11 48 05.9**	**-0.4**
KVDA				S		**Sg**	**11 48 23.7**	**-0.6**
VRF	**Varrio**	**1.45**	**259**	PG		**Pn**	**11 48 06.5**	**-0.8**
	baz=72							
VRF				smax		smax	11 48 23.9	
	comp=Z,8.1nm,0.2s							
VRF				SB		**Sg**	**11 48 25.5**	**-0.8**
RAJF	**Raja-Jooseppi**	**1.93**	**285**	PG		**Pn**	**11 48 13.9**	**+0.2**
RAJF				SG		**Sn**	**11 48 38.3**	**-0.3**
OLKF	**Oulanka, Finla**	**2.33**	**223**	PG		**Pn**	**11 48 21.2**	**+1.9**
OLKF				smax		smax	11 48 49.8	
	comp=Z,3.0nm,0.2s							
OLKF				SG		**Sb**	**11 48 52.2**	**+0.4**
VADS	**Vadso**	**2.52**	**327**	*e*P		**Pb**	**11 48 24.9**	**-0.8**
VADS				*e*S		**Sn**	**11 48 53.4**	**+0.3**
VADS	**Vadso**	**2.52**	**327**	P		**Pn**	**11 48 22.3**	**+0.4**
VADS				S		**Sn**	**11 48 53.5**	**+0.3**
KEV	**Kevo**	**2.86**	**309**	*e*P		**Pn**	**11 48 27.4**	**+0.9**
KEV				*e*S		**Sn**	**11 49 02.4**	**+0.8**
KU1	**Kurvinen**	**2.92**	**213**	PB		**Pb**	**11 48 30.6**	**-2.1**
KU1				SG		**Sb**	**11 49 10.1**	**+1.2**
KU2	**Taivalkoski**	**3.11**	**223**	PB		**Pb**	**11 48 33.6**	**-2.2**
RNF	**Rovaniemi**	**3.20**	**246**	Pn		**Pn**	**11 48 31.7**	**+0.5**
	baz=61							
ARA0	**ARCESS Array S**	**3.21**	**301**	*e*P		**Pn**	**11 48 31.8**	**+0.4**
ARA0	**ARCESS Array S**	**3.21**	**301**	PN		**Pn**	**11 48 31.9**	**+0.4**
ARCES	**ARCESS Array B**	**3.21**	**301**	Pn		**Pn**	**11 48 31.8**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=120,slow=13,SNR=30							
ARCES				Pg		**Pb**	**11 48 37.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=115,slow=14,SNR=10.0							
ARCES				Lg		Lg	11 49 17.3	
	comp=Z,0.6nm,0.3s,baz=113,slow=36,SNR=6.3							
	comp=Z,0.7nm,0.2s							
ARCES	**ARCESS Array B**	**3.21**	**301**	P		**Pn**	**11 48 31.7**	**+0.2**
ARCES				S		**Sn**	**11 49 09.9**	**-0.5**
RANF	**Ranua**	**3.29**	**234**	PN		**Pn**	**11 48 32.8**	**+0.3**
	baz=44							
HEF	**Hetta**	**3.63**	**280**	*e*P		**Pn**	**11 48 37.1**	**-0.1**
HEF				*e*S		**Sn**	**11 49 18.6**	**-2.0**
KLF	**Kolari**	**3.68**	**261**	PN		**Pn**	**11 48 39.1**	**+1.3**
KLF				SG		**Sb**	**11 49 31.5**	**+0.7**
KTK1	**Kautokeino**	**3.84**	**289**	*e*P		**Pn**	**11 48 40.2**	**+0.2**
KTK1	**Kautokeino**	**3.84**	**289**	PN		**Pn**	**11 48 40.5**	**+0.5**
KTK1				SG		**Sb**	**11 49 38.9**	**+3.6**
RMF	**Romuvaara**	**4.10**	**201**	PN		**Pn**	**11 48 44.3**	**+0.7**
	baz=21							
LANU	**Lannavaara**	**4.26**	**275**	PN		**Pn**	**11 48 46.8**	**+0.9**
LANU				SG		**Sb**	**11 49 50.1**	**+2.6**
ERTU	**Ertsjaerv**	**4.58**	**256**	PN		**Pn**	**11 48 49.8**	**-0.4**
ERTU				SN		**Sn**	**11 49 43.0**	**-1.0**
I37NO	**I37NO**	**5.50**	**287**	I		I	12 19 40.0	
	comp=Z,0.1nm,0.7s,baz=94,slow=318,SNR=3.6							
FINES	**FINESS Array B**	**7.33**	**209**	Pn		**Pn**	**11 49 28.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=1.6							
FINES				Lg		Lg	11 51 24.2	
	comp=Z,0.2nm,0.3s,baz=20,slow=29,SNR=4.3							
	comp=Z,0.4nm,0.6s							

*MEX **16** 11:52:22.2±0.7, 14°62N×92°50W, h81km±9km, MD4.4*
*GCG **16** 11:52:24.7±1.5, 14°65N×92°31W, h62km±8km, MD4.4, Presumed earthquake*
ISC 16 11:52:20.1±1.4,**14°50N**±0°07×**92°48W**±0°04,**h78**km±9km, **n28,** σ2℘**26**/48,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**0.46**	**27**	*e*P		**Pn**	**11 52 34.2**	**+0.9**
THIG				*e*S		**Sn**	**11 52 42.4**	**-0.5**
THIG		**0.46**	**27**	*e*P		**Pn**	**11 52 34.2**	**+0.9**
THIG				*e*S		**Sn**	**11 52 42.2**	**-0.8**
PATR	**El Naranjo**	**0.66**	**21**	*e*P		**Pn**	**11 52 35.3**	**-0.2**
PATR				*e*S		**Sn**	**11 52 45.5**	**-1.3**
CHUJ	**Union Juarez**	**0.69**	**31**	*e*P		**Pn**	**11 52 35.8**	**0.0**
CHUJ				*e*S		**Sn**	**11 52 46.4**	**-1.0**
PAVE	**Pavencul**	**0.75**	**23**	*e*P		**Pn**	**11 52 36.6**	**+0.2**
PAVE				*e*S		**Sn**	**11 52 47.2**	**-1.3**
RTAL	**Retalhuleu**	**0.76**	**88**	*e*P		**Pn**	**11 52 38.4**	**+2.2**
RTAL				*e*S		**Sn**	**11 52 49.8**	**+1.6**
STG8	**El Palmar, Qui**	**1.09**	**92**	*i* P		**Pn**	**11 52 39.3**	**-1.1**
STG8				*e*S		**Sn**	**11 52 51.3**	**-4.3**
STG5	**El Palmar, Qui**	**1.10**	**95**	*i* P		**Pn**	**11 52 39.3**	**-1.0**
HUEH	**Huehuetenango**	**1.25**	**49**	*e*P		**Pn**	**11 52 44.2**	**+1.9**
HUEH				*e*S		**Sn**	**11 53 00.6**	**+1.7**
HUEH	**Huehuetenango**	**1.25**	**49**	*e*P		**Pn**	**11 52 44.3**	**+1.9**
HUEH				*i* S		**Sn**	**11 53 00.0**	**+1.1**
FG8	**Yepocapa, Chim**	**1.87**	**97**	*i* P		**Pn**	**11 52 48.3**	**-2.1**
FG8				*i* S		Sn	11 53 05.4	-8.0
FG16	**Alotenango, Sa**	**1.92**	**96**	*i* P		**Pn**	**11 52 49.7**	**-1.4**
APG	**El Apazote**	**2.01**	**75**	*i* P		**Pn**	**11 52 54.7**	**+2.4**
CARR	**Arriaga**	**2.23**	**322**	*e*P		**Pn**	**11 52 57.4**	**+2.4**
CARR				*e*S		**Sn**	**11 53 22.5**	**+1.0**
TGIG		**2.35**	**345**	*e*P		**Pn**	**11 52 57.1**	**+0.3**
TGIG				*e*S		**Sn**	**11 53 23.9**	**-0.9**
TGIG		**2.35**	**345**	*i* P		**Pn**	**11 52 59.6**	**+2.9**
NUBE	**Las Nubes**	**2.68**	**102**	*i* P		**Pn**	**11 53 04.8**	**+3.5**
MTO3	**Montecristo**	**3.02**	**91**	*e*P		**Pn**	**11 53 08.8**	**+2.9**
CMIG	**Matias Romero**	**3.47**	**318**	*e*P		**Pn**	**11 53 13.6**	**+1.8**
CMIG				*e*S		**Sn**	**11 53 50.5**	**-1.3**
NEUV	**Arroyo Zacate**	**4.52**	**315**	*e*P		**Pn**	**11 53 27.7**	**+1.5**
NEUV				*e*S		**Sn**	**11 54 16.0**	**-1.4**
SCIG	**Sabancuy**	**4.62**	**15**	*e*P		**Pn**	**11 53 28.1**	**+0.7**
SCIG				*e*S		**Sn**	**11 54 15.9**	**-3.9**
PEIG	**Puerto Escondi**	**4.75**	**289**	*e*P		**Pn**	**11 53 31.6**	**+2.4**
PEIG				*e*S		**Sn**	**11 54 17.8**	**-5.2**
YOIG	**Yosondua**	**5.42**	**296**	*e*P		**Pn**	**11 53 43.3**	**+4.7**
YOIG				*e*S		**Sn**	**11 54 39.3**	**-0.5**
TOIG	**Toxpalan**	**5.68**	**310**	*e*P		**Pn**	**11 53 43.8**	**+1.8**
TOIG				*e*S		**Sn**	**11 54 47.2**	**+1.4**
TXIG	**Tlaxiaco**	**5.78**	**299**	*e*P		**Pn**	**11 53 45.0**	**+1.4**
TXIG				*e*S		**Sn**	**11 54 45.6**	**-3.1**
HLIG	**Huajuapan de L**	**6.10**	**304**	*e*P		**Pn**	**11 53 46.6**	**-1.3**
HLIG				*e*S		**Sn**	**11 54 56.8**	**+0.4**
JAUV	**Jalcomulco**	**6.37**	**320**	*e*P		**Pn**	**11 53 50.9**	**-0.6**
JAUV				*e*S		**Sn**	**11 54 57.6**	**-5.2**
FTIG	**Fresnillo de T**	**6.41**	**303**	*e*P		Pn	11 53 47.8	-4.2
FTIG				*e*S		**Sn**	**11 55 02.0**	**-1.8**

NOU 16 11:52:57.1,15°27S×167°47E,h33km,mb4.4/17,**Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SANVU	**Saraoutou**	**0.31**	**236**	P		Pn	11 53 07.0	+1.7
SANVU	**Saraoutou**	**0.31**	**236**	S		Sn	11 53 13.4	+2.9
DVP	**Devils Point**	**2.54**	**164**	P		Pn	11 53 37.1	+1.1
MARNC	**Mare, Loyalty**	**6.20**	**175**	P		Pn	11 54 27.0	+0.6
MARNC	**Mare, Loyalty**	**6.20**	**175**	S		Sn	11 55 35.6	-0.5
YATNC	**Mamie plateau,**	**6.78**	**185**	P		Pn	11 54 34.9	+0.6
YATNC	**Mamie plateau,**	**6.78**	**185**	S		Sn	11 55 52.0	+1.7
OUENC	**Ouen Island, N**	**7.13**	**185**	P		Pn	11 54 39.7	+0.5

*BJI **16** 12:04:04.3,6°00S×152°87E, h30km, mB5.0/2, mb4.8/19*
*NEIC **16** 12

comp=Z,16nm,0.8s
LZH **Lanzhou** 61.06 316 *e*P P 12 14 26.4 +2.2
LZH pmax pmax
comp=Z,19nm,0.8s
SONM **Songino Array** 66.32 328 P P 12 14 57.8 -0.7
comp=Z,1.6nm,0.5s,baz=146,slow=6.4,SNR=4.2
comp=Z,1.6nm,0.5s
SONM **Songino Array** 66.32 328 IAmb IAmb 12 14 59.7
comp=Z,6.0nm,1.3s
CHGN **Chignik** 73.40 26 P P 12 15 42.9 +1.2
baz=232
GAMB **Gambell** 73.97 16 P P 12 15 46.0 +1.2
baz=218
O14K **Tigyukauivet M** 74.11 23 P P 12 15 46.0 +0.3
baz=229
M13K **Dall Lake** 74.11 21 P P 12 15 46.5 +0.9
baz=226
CHIR **Chirikof Islan** 74.38 28 P P 12 15 47.9 +0.6
baz=235
N14K **Kuskokwak Cree** 74.39 22 P P 12 15 47.9 +0.6
baz=228
O15K **Ungalikthiuk R** 74.62 23 P P 12 15 49.4 +0.7
baz=230
K13K **Kusilvak Mount** 74.72 20 P P 12 15 50.1 +0.9
baz=225
M14K **Bethel** 74.84 21 P P 12 15 50.7 +0.8
M14K IAmb IAmb 12 15 51.1
comp=Z,6.4nm,0.7s
M14K **Bethel** 74.84 21 P P 12 15 50.4 +0.5
baz=228
L14K **Kuka Creek** 74.99 21 P P 12 15 51.0 +0.3
L14K IAmb IAmb 12 15 51.8
comp=Z,6.7nm,0.8s
L14K **Kuka Creek** 74.99 21 P P 12 15 50.8 +0.1
baz=227
R17L **Mt. Peulik Vol** 75.10 26 P P 12 15 51.8 +0.2
baz=234,SNR=5.3
N15K **Kwethluk River** 75.16 23 P P 12 15 52.5 +0.7
baz=230
P16K **Nushagak River** 75.27 24 P P 12 15 52.6 +0.1
baz=232
M15K **Kasigluk River** 75.28 22 P P 12 15 52.1 -0.4
baz=229
SII **Sitkinak Islan** 75.46 27 P P 12 15 53.5 -0.2
baz=236
O16K **Kokwok River B** 75.57 24 P P 12 15 54.4 +0.3
baz=232
L15K **Ungalak Mounta** 75.64 21 P P 12 15 54.8 +0.2
baz=228
J14K **Nanvaranak Lak** 75.66 19 P P 12 15 55.0 +0.4
baz=226
Q17K **Contact Creek** 75.68 25 P P 12 15 54.7 -0.3
baz=234
N16K **Nishlik Lake** 75.86 23 P P 12 15 56.0 +0.1
baz=231
ACHA **Angle Creek He** 75.89 26 P P 12 15 55.9 -0.3
ACHA IAmb IAmb 12 15 57.5
comp=Z,10nm,1.4s
K15K **Wolf Creek Mou** 76.04 20 P P 12 15 57.5 +0.7
K15K IAmb IAmb 12 15 58.3
comp=Z,8.2nm,0.7s
K15K **Wolf Creek Mou** 76.04 20 P P 12 15 57.0 +0.2
baz=228
O17K **Koliganek Bris** 76.08 24 P P 12 15 57.4 +0.4
baz=232
M16K **Timber Creek** 76.13 22 P P 12 15 57.7 +0.3
M16K IAmb IAmb 12 15 59.0
comp=Z,9.3nm,0.8s
M16K **Timber Creek** 76.13 22 P P 12 15 57.4 0.0
baz=230
OHAK **Old Harbor** 76.23 27 P P 12 15 58.0 0.0
baz=236
Q18K **Katmai Hardscr** 76.28 25 P P 12 15 57.8 -0.6
baz=235,SNR=6.9
ANM **Nome** 76.38 17 P P 12 15 59.3 +0.6
baz=224
L16K **Owhat River** 76.38 22 IAmb IAmb 12 15 59.9
comp=Z,5.5nm,0.8s
L16K **Owhat River** 76.38 22 P P 12 15 59.1 +0.3
baz=230
N17K **Nushagak Hills** 76.51 23 P P 12 15 60.0 +0.5
baz=232
P18K **Big Mountain,** 76.62 25 P P 12 16 00.1 -0.1
baz=234
F14K **Arctic Creek** 76.77 17 P P 12 16 01.5 +0.6
baz=223
KDAK **Kodiak Island** 76.86 27 P P 12 16 01.6 +0.1
baz=237
O18K **Koktuh Hills** 76.90 24 P P 12 16 01.9 +0.2
baz=234
M17K **Holitna River** 76.95 22 P P 12 16 02.8 +0.8
M17K IAmb IAmb 12 16 04.3
comp=Z,6.1nm,0.9s
M17K **Holitna River** 76.95 22 P P 12 16 02.2 +0.3
baz=232
J16K **Anvik River** 77.02 20 P P 12 16 02.8 +0.5
baz=228
Q19K **Cape Douglas,** 77.03 26 P P 12 16 02.5 0.0
baz=236
L17K **Donlin** 77.08 22 P P 12 16 03.7 +1.0
baz=231,SNR=5.7
G15K **Niukluk** 77.09 18 P P 12 16 03.8 +1.1
baz=225
N18K **Kilae Creek** 77.11 23 P P 12 16 03.2 +0.3
N18K **Kilae Creek** 77.11 23 P P 12 16 03.6 +0.6
baz=233
I17K **Unalakleet** 77.39 19 P P 12 16 05.4 +1.1
baz=228
F15K **North Star Dit** 77.42 17 P P 12 16 05.0 +0.4
baz=224
K17K **Iditarod** 77.45 21 IAmb IAmb 12 16 06.6
comp=Z,10nm,0.8s
K17K **Iditarod** 77.45 21 P P 12 16 05.5 +0.8
baz=231,SNR=6.0
P19K **Oil Pt** 77.61 25 P P 12 16 05.4 -0.4
baz=236,SNR=5.5
J17K **VABM Dome** 77.61 20 P 12 16 06.8 +1.2
J17K IAmb IAmb 12 16 07.6
comp=Z,8.7nm,0.8s
J17K **VABM Dome** 77.61 20 P P 12 16 06.5 +0.9
baz=230,SNR=9.5
M18K **Stony River** 77.62 23 P P 12 16 06.4 +0.7
baz=233
L18K **Granite Mounta** 77.73 22 P 12 16 06.6 +0.3
L18K IAmb IAmb 12 16 08.3
comp=Z,7.8nm,0.9s
L18K **Granite Mounta** 77.73 22 P P 12 16 07.5 +1.2
baz=232,SNR=6.7
N19K **Bonanza Creek** 77.75 24 P P 12 16 07.2 +0.6
baz=235
G16K **Koyuk River** 77.88 18 IAmb IAmb 12 16 09.0
comp=Z,5.7nm,0.9s
G16K **Koyuk River** 77.88 18 P P 12 16 07.5 +0.4
baz=226
O20K **Slope Mountain** 78.10 25 P P 12 16 08.3 -0.2
baz=237,SNR=5.0
HOM **Homer** 78.28 26 P P 12 16 09.4 0.0
baz=238
H17K **Granite Mounta** 78.34 19 P P 12 16 10.1 +0.5
baz=229,SNR=11
CNPM **China Poot** 78.39 26 P 12 16 10.3 +0.2
L19K **White Mountain** 78.40 22 P 12 16 10.4 +0.4
L19K **White Mountain** 78.40 22 P P 12 16 10.3 +0.2
baz=234,SNR=15
G17K **Kiwalik Mounta** 78.48 18 P P 12 16 11.3 +0.9
baz=228
J18K **Innoko River** 78.48 21 IAmb IAmb 12 16 12.1
comp=Z,7.7nm,0.8s
J18K **Innoko River** 78.48 21 P P 12 16 10.9 +0.4
baz=232,SNR=12
BRSE **Bradley Lake S** 78.72 26 P P 12 16 12.6 +0.7
baz=238,SNR=5.1
M20K **Styx River** 78.89 23 P 12 16 13.6 +0.7
M20K IAmb IAmb 12 16 14.1
comp=Z,7.1nm,0.7s
M20K **Styx River** 78.89 23 P P 12 16 13.2 +0.3
baz=236,SNR=7.2
F17K **Baldwin Pennin** 78.93 17 P P 12 16 13.4 +0.6
baz=227
C16K **Lisburne Hills** 79.09 15 P P 12 16 14.1 +0.4
baz=223
J19K **Poorman** 79.19 21 P 12 16 15.1 +0.8
J19K IAmb IAmb 12 16 15.8
comp=Z,4.7nm,0.7s
J19K **Poorman** 79.19 21 P P 12 16 14.7 +0.4
baz=233,SNR=11
E17K **Hotham Inlet** 79.20 17 P P 12 16 14.9 +0.7
baz=227
GCSA **Galena City Sc** 79.22 20 P P 12 16 15.1 +0.7
baz=232,SNR=7.4
D17K **Noatak River** 79.27 16 P P 12 16 15.6 +0.9
baz=225
G18K **Tagagawik** 79.36 18 IAmb IAmb 12 16 16.2
comp=Z,4.3nm,0.7s
G18K **Tagagawik** 79.36 18 P P 12 16 16.0 +0.8
baz=230,SNR=5.5
K20K **Telida** 79.38 22 P 12 16 16.2 +0.8
K20K IAmb IAmb 12 16 16.9
comp=Z,7.5nm,0.7s
K20K **Telida** 79.38 22 P P 12 16 15.7 +0.3
baz=235,SNR=14
SEW **Seward** 79.46 26 P P 12 16 16.0 +0.1
baz=240,SNR=5.3
F18K **Selawik** 79.51 18 P P 12 16 16.4 +0.4
baz=229
O22K **Cooper Landing** 79.54 25 P P 12 16 16.2 -0.1
baz=239,SNR=5.2
SKT **Skwentna** 79.58 24 P P 12 16 16.2 -0.3
baz=237
E18K **Tukpahlearik C** 79.78 17 P P 12 16 17.4 -0.1
baz=228
C17K **DeLong Mountai** 79.80 15 P P 12 16 17.3 -0.3
baz=225
J20K **Nowinta River** 79.82 21 IAmb IAmb 12 16 19.4
comp=Z,9.1nm,0.8s
J20K **Nowinta River** 79.82 21 P P 12 16 18.5 +0.7
baz=234
PPLA **Purkeypile** 79.82 23 P P 12 16 18.1 +0.1
baz=236
H19K **Roundabout Mou** 79.84 19 IAmb IAmb 12 16 19.6
comp=Z,6.4nm,0.8s
H19K **Roundabout Mou** 79.84 19 P P 12 16 18.1 +0.3
baz=232,SNR=8.9
RC01 **Rabbit Creek A** 79.84 25 P P 12 16 17.6 -0.4
baz=239,SNR=11
G19K **Purcell Mounta** 80.01 19 P P 12 16 19.5 +0.8
baz=231,SNR=6.3
M22K **Willow** 80.03 24 P P 12 16 19.2 +0.3
baz=239
I20K **Naaghedeneel** 80.07 20 P P 12 16 19.9 +0.9
baz=234
CAST **Castle Rocks** 80.15 22 IAmb IAmb 12 16 20.4
comp=Z,8.1nm,0.7s
CAST **Castle Rocks** 80.15 22 P P 12 16 19.6 0.0
baz=236
L22K **Petersville** 80.17 23 IAmb IAmb 12 16 19.4
comp=Z,5.0nm,0.7s
L22K **Petersville** 80.17 23 P P 12 16 19.3 -0.5
baz=238,SNR=6.3
MKAR **Makanchi Array** 80.20 319 P P 12 16 19.5 -0.7
comp=Z,1.8nm,0.6s,baz=103,slow=6.0,SNR=14
comp=Z,1.8nm,0.6s
MKAR **Makanchi Array** 80.20 319 P 12 16 19.8 -0.4
F19K **Shaleruckik Mo** 80.23 18 IAmb IAmb 12 16 20.8
comp=Z,4.8nm,0.8s
F19K **Shaleruckik Mo** 80.23 18 P P 12 16 20.1 +0.2
baz=231,SNR=8.3
P23K **Montague Islan** 80.31 26 P P 12 16 20.4 -0.1
baz=241
CUT **Chulitna** 80.31 24 P P 12 16 20.1 -0.3
baz=238
PWL **Port Wells** 80.32 25 P P 12 16 20.1 -0.4
baz=240,SNR=18
CHUM **Lake Minchumin** 80.32 22 P P 12 16 20.4 0.0
baz=236,SNR=9.9
H20K **Anotleneega Mo** 80.34 20 P P 12 16 20.8 +0.3
baz=234
PMR **Palmer** 80.35 25 IAmb IAmb 12 16 21.0
comp=Z,5.6nm,0.8s
PMR **Palmer** 80.35 25 P P 12 16 20.4 -0.2
baz=240,SNR=5.7
MAKZ **Makanchi** 80.41 319 P 12 16 21.3 0.0
GHO **Glory Hole Cre** 80.53 24 IAmb IAmb 12 16 22.2
comp=Z,6.7nm,0.7s
KTH **Kantishna Hill** 80.66 22 IAmb IAmb 12 16 22.2
comp=Z,6.7nm,0.6s
SML **Sawmill** 80.79 25 P P 12 16 22.8 -0.3
baz=240,SNR=14
E19K **Redstone River** 80.79 18 IAmb IAmb 12 16 24.3
comp=Z,8.9nm,0.7s
E19K **Redstone River** 80.79 18 P P 12 16 23.0 +0.1
baz=231
TRF **Thorofare Moun** 80.85 23 IAmb IAmb 12 16 25.1
comp=Z,4.5nm,0.5s
TRF **Thorofare Moun** 80.85 23 P P 12 16 23.0 -0.5
baz=238,SNR=6.2
GLI **Glacier Island** 80.86 26 P P 12 16 23.3 -0.1
baz=242,SNR=5.6
F20K **Avaraart Lake** 81.00 18 P P 12 16 24.1 +0.1
baz=233,SNR=6.0
IMAR **Indian Mountai** 81.01 20 P P 12 16 24.4 +0.3
M23K **Glacier View** 81.03 25 P P 12 16 24.4 0.0
baz=241
ZALV **Zalesovo Beam** 81.13 327 P P 12 16 24.0 -1.0
comp=Z,3.0nm,0.5s,baz=113,slow=6.4,SNR=11
comp=Z,3.0nm,0.5s
H21K **Melozitna River** 81.14 20 P P 12 16 25.0 +0.2
baz=236
I21K **Tanana** 81.16 21 IAmb IAmb 12 16 26.9
comp=Z,7.2nm,1.0s
I21K **Tanana** 81.16 21 P P 12 16 24.6 -0.3
baz=236,SNR=7.1
C19K **Lookout Ridge** 81.18 16 P P 12 16 24.4 -0.6
baz=229
D19K **Kuna River** 81.19 17 P P 12 16 25.0 0.0
baz=230
WAT1 **Susitna Watana** 81.21 24 P P 12 16 25.0 -0.3
baz=240
SCM **Sheep Creek Mo** 81.22 25 P P 12 16 24.8 -0.6
baz=241
EYAK **Cordova Ski Ar** 81.29 26 P P 12 16 24.8 -0.9
baz=243
RND **Reindeer** 81.38 23 IAmb IAmb 12 16 26.2
comp=Z,9.2nm,0.7s
G21K **Allakaket** 81.40 19 P P 12 16 26.2 0.0
baz=235
WAT6 **Susitna Watana** 81.41 24 P P 12 16 25.4 -1.1
baz=241,SNR=5.6
MCK **McKinley** 81.51 23 P P 12 16 25.6 -1.3
baz=239,SNR=8.2
MLY **Manley** 81.52 21 P P 12 16 26.3 -0.6
baz=238,SNR=20
DIV **Divide** 81.55 26 P P 12 16 26.0 -1.2
E20K **Nigu River** 81.60 17 P P 12 16 27.7 +0.5
baz=232
KAIM **Kayak Island** 81.61 27 P P 12 16 26.6 -0.8
baz=244
KLU **Klutina** 81.65 25 P P 12 16 27.2 -0.5
baz=242,SNR=6.6
D20K **Etivluk River** 81.76 17 P P 12 16 27.9 -0.2
baz=232
H22K **Ishtalitna Cre** 81.76 20 P P 12 16 28.0 -0.1
baz=237
DHY **Denali Highway** 81.80 24 P P 12 16 27.9 -0.7
baz=241,SNR=8.6
F21K **Alatna River** 81.81 19 P P 12 16 28.1 -0.2
baz=235
M24K **Tolsona, Glenn** 81.83 25 P P 12 16 28.2 -0.4
baz=242
NEA2 **Nenana** 81.90 22 IAmb IAmb 12 16 28.7
comp=Z,6.8nm,0.6s
NEA2 **Nenana** 81.90 22 P P 12 16 27.9 -1.0
baz=239,SNR=6.3
BMRM **Bremner River** 81.98 26 P P 12 16 28.1 -1.3
baz=244
I23K **Minto, Yukon-K** 82.08 21 P P 12 16 29.4 -0.4
baz=239,SNR=6.4
WRH **Wood River Hil** 82.21 22 IAmb IAmb 12 16 30.2
comp=Z,4.8nm,0.8s
N25K **Chitina, Valde** 82.27 26 P P 12 16 30.6 -0.3
baz=244
G22K **Bettles** 82.28 19 P P 12 16 30.7 -0.1
baz=237
H23K **Yukon River** 82.37 21 P P 12 16 31.1 -0.2
baz=239
E21K **Killik River** 82.37 18 IAmb IAmb 12 16 32.3
comp=Z,4.8nm,0.7s
E21K **Killik River** 82.37 18 P P 12 16 31.2 -0.1
baz=234
HARP **HAARP** 82.39 25 P P 12 16 31.5 0.0
baz=243
F22K **John River** 82.39 19 P P 12 16 30.9 -0.5
baz=236
CCB **Clear Creek Bu** 82.40 22 IAmb IAmb 12 16 31.0
comp=Z,5.3nm,0.8s
KDJ **Kajisay** 82.41 314 IAmb IAmb 12 16 33.7
comp=Z,4.6nm,0.9s
B20K **Meade River** 82.42 16 P P 12 16 31.8 +0.4
baz=231
GLB **Gilahina Butte** 82.53 26 IAmb IAmb 12 16 33.4
comp=Z,7.5nm,0.8s
C21K **Knifeblade Rid** 82.56 17 P P 12 16 32.5 +0.3
baz=233
CRQE **Cirque** 82.56 27 P P 12 16 32.2 -0.3
baz=245
VRDI **Verde Repeater** 82.60 26 IAmb IAmb 12 16 33.8
comp=Z,5.7nm,0.8s
HDA **Harding Lake** 82.61 23 P P 12 16 31.8 -0.7
baz=241,SNR=6.0
G23K **Bananza Creek** 82.67 20 IAmb IAmb 12 16 34.0
comp=Z,4.2nm,0.7s
G23K **Bananza Creek** 82.67 20 P P 12 16 32.9 0.0
baz=238,SNR=8.2
POKR **Poker Plat Res** 82.77 22 P P 12 16 32.8 -0.6
baz=241
K24K **Donnelly Dome** 82.78 23 P P 12 16 33.0 -0.4
baz=242
IL31 82.81 22 IAmb IAmb 12 16 32.9
comp=Z,6.5nm,0.7s
ILAR **Eielson Array** 82.81 22 P P 12 16 32.3 -1.3
comp=Z,5.7nm,0.7s,baz=247,slow=5.5,SNR=85
comp=Z,5.7nm,0.7s
ILAR **Eielson Array** 82.81 22 P 12 16 32.4 -1.2
MCARA **McCarthy VSAT** 82.85 26 P P 12 16 34.1 +0.2
baz=245
E22K **Anaktuvuk Pass** 82.86 18 P P 12 16 33.9 +0.1
baz=236
COLD **Coldfoot** 82.88 19 P 12 16 33.4 -0.5
COLD **Coldfoot** 82.88 19 P P 12 16 34.1 +0.2
baz=238
B21K **Ikpikpuk River** 82.88 16 P P 12 16 33.8 0.0
baz=233
H24K **Noodor Dome** 82.96 21 IAmb IAmb 12 16 35.3
comp=Z,3.8nm,0.6s
H24K **Noodor Dome** 82.96 21 P P 12 16 34.4 0.0
baz=240,SNR=7.0
RIDG **Independent Ri** 83.12 24 IAmb IAmb 12 16 35.9
comp=Z,4.9nm,0.7s
RIDG **Independent Ri** 83.12 24 P P 12 16 34.9 -0.4
baz=243
GRNC **Granite Creek** 83.15 27 IAmb IAmb 12 16 36.8
comp=Z,5.8nm,0.6s
M26K **Nabesna, AK** 83.29 25 P P 12 16 35.7 -0.5
baz=245
J25K **Salcha River,** 83.31 23 P P 12 16 35.8 -0.5
baz=243,SNR=25
BARN **Barnard Glacie** 83.32 27 P P 12 16 35.9 -0.6
A21K **Barrow** 83.39 15 P P 12 16 36.9 +0.5
baz=231
L26K **Log Cabin Wild** 83.41 24 P P 12 16 37.3 +0.6
baz=245,SNR=5.9
E23K **Chandalar** 83.51 19 IAmb IAmb 12 16 38.5
comp=Z,3.9nm,0.7s
E23K **Chandalar** 83.51 19 P P 12 16 38.1 +0.9
baz=238,SNR=5.3
G24K **Hadweenzic Riv** 83.53 20 IAmb IAmb 12 16 38.3
comp=Z,4.5nm,0.9s
G24K **Hadweenzic Riv** 83.53 20 P P 12 16 37.9 +0.6
baz=240,SNR=5.5
SCRK **Sand Creek** 83.56 23 P P 12 16 37.8 +0.2
baz=244,SNR=6.7
PINM **Pinnacle** 83.59 28 P P 12 16 37.8 0.0
baz=248
D23K **Nanushuk River** 83.66 18 P P 12 16 38.8 +0.9
baz=237,SNR=16
PRP **Porcupine Dome** 83.67 22 P P 12 16 39.0 +0.8
baz=242
KURK **Kurchatov** 83.68 322 P 12 16 38.1 -0.3
KURBB **Kurchatov Arra** 83.71 322 P P 12 16 37.4 -1.1
comp=Z,1.2nm,0.8s,baz=106,slow=4.5,SNR=4.4
comp=Z,1.2nm,0.8s
M27K **Edge Creek, AK** 83.75 25 P P 12 16 39.2 +0.6
baz=246,SNR=11
F24K **Squaw Lake** 83.80 20 IAmb IAmb 12 16 40.2
comp=Z,6.3nm,0.8s
F24K **Squaw Lake** 83.80 20 P P 12 16 39.1 +0.5
baz=240,SNR=9.5
TOLK **Toolik Lake Re** 83.83 18 P P 12 16 39.2 +0.4
baz=238,SNR=6.6
O28M **Mount Upton** 83.87 27 IAmb IAmb 12 16 41.3
comp=Z,7.0nm,0.9s
O28M **Mount Upton** 83.87 27 P P 12 16 39.7 +0.2
baz=248,SNR=5.4
E24K **Your Creek** 83.88 19 P P 12 16 39.6 +0.5
baz=239
G25K **Bearman Lake** 84.04 21 P P 12 16 40.9 +1.1
baz=242
L27K **Beaver Creek,** 84.06 25 IAmb IAmb 12 16 41.4
comp=Z,2.9nm,0.7s
L27K **Beaver Creek,** 84.06 25 P P 12 16 40.3 +0.3
baz=246
BCAR **Beaver Creek A** 84.08 25 P 12 16 41.0 +0.8
YUK3 **Moose Creek** 84.14 26 P P 12 16 41.2 +0.5
baz=247,SNR=5.1
C23K **Itkillik River** 84.15 17 IAmb IAmb 12 16 41.7
comp=Z,4.2nm,1.0s
C23K **Itkillik River** 84.15 17 P P 12 16 41.0 +0.6
baz=237
BVCY **Beaver Creek** 84.21 26 P P 12 16 41.5 +0.7
baz=247,SNR=5.2
YUK8 **Steele Glacier** 84.26 27 P P 12 16 42.0 +0.6
baz=248,SNR=6.6
D24K **Happy Valley** 84.33 18 P P 12 16 41.9 +0.7
baz=239
K27K **Chicken** 84.35 24 IAmb IAmb 12 16 43.3
comp=Z,3.6nm,0.8s
O29M **Mount Kennedy** 84.45 28 P P 12 16 43.0 +0.8
baz=249
F25K **Christian Rive** 84.59 20 P P 12 16 43.7 +1.0
baz=242
P29M **Windy Craggy** 84.61 29 P P 12 16 43.8 +0.9
baz=250
BRWY **Burwash Landin** 84.62 27 P P 12 16 43.8 +0.9
baz=249,SNR=7.5
YUK4 **Talbot Arm** 84.78 27 P P 12 16 45.0 +1.0
baz=249
E25K **Arctic Village** 84.86 19 P P 12 16 44.6 +0.6
baz=242
MAW **Mawson** 84.92 203 P P 12 16 43.9 -0.4
comp=Z,1.8nm,1.0s,baz=102,slow=8.8,SNR=6.3
comp=Z,1.8nm,1.0s
G26K **Porcupine Rive** 84.94 21 P P 12 16 45.4 +1.0
baz=244,SNR=15
HYT **Haines Junctio** 85.12 28 P P 12 16 46.5 +0.9
baz=250
P30M **Million Dollar** 85.14 28 P P 12 16 46.6 +1.0
baz=251
F26K **Sheenjek River** 85.15 20 IAmb IAmb 12 16 47.7
comp=Z,4.3nm,1.1s
F26K **Sheenjek River** 85.15 20 P P 12 16 46.6 +1.1
baz=244,SNR=5.0
D25K **Kavik River** 85.17 18 IAmb IAmb 12 16 46.3
comp=Z,3.9nm,0.7s
D25K **Kavik River** 85.17 18 P P 12 16 46.0 +0.4
baz=241,SNR=7.1
I27K **Kandik River** 85.17 22 IAmb IAmb 12 16 47.0
comp=Z,6.5nm,1.0s
I27K **Kandik River** 85.17 22 P P 12 16 46.5 +0.8
baz=246,SNR=7.5
M29M **Somme Creek** 85.25 26 IAmb IAmb 12 16 47.8
comp=Z,3.6nm,0.8s
M29M **Somme Creek** 85.25 26 P P 12 16 46.4 +0.2
baz=249,SNR=6.1
DAWY **Dawson** 85.45 24 P P 12 16 47.5 +0.5
baz=248,SNR=5.6
H27K **Steamboat Moun** 85.46 22 P P 12 16 48.1 +1.0
baz=246,SNR=12
S32K **Killisnoo** 85.50 31 P P 12 16 48.1 +0.8
baz=253
N30M **Aishikik Lake** 85.53 27 P P 12 16 48.8 +1.3
baz=250
L29M **L29M** 85.63 25 IAmb IAmb 12 16 50.3
comp=Z,7.1nm,0.8s
L29M **L29M** 85.63 25 P P 12 16 48.3 +0.3
baz=249,SNR=8.6
G27K **Doyon Strip** 85.64 21 IAmb IAmb 12 16 49.4
comp=Z,2.8nm,0.7s
G27K **Doyon Strip** 85.64 21 P P 12 16 48.8 +0.8
baz=246,SNR=7.3
I28M **Miner Creek** 85.75 23 IAmb IAmb 12 16 49.6
comp=Z,3.9nm,0.6s
I28M **Miner Creek** 85.75 23 P P 12 16 49.2 +0.6
baz=248,SNR=7.8
O30N **Mendenhall** 85.76 28 P P 12 16 48.9 +0.2

	baz=251								
R32K	**Eaglecrest**	**85.77**	**31**	P		**P**	**12 16 49.1**	**+0.4**	
	baz=253								
C26K	**Camden Bay**	**85.90**	**18**	P		**P**	**12 16 50.0**	**+0.9**	
	baz=243								
M30M	**Minto, Yukon**	**86.03**	**26**	IAmb		IAmb	12 16 52.0		
	comp=Z,6.8nm,1.3s								
M30M	**Minto, Yukon**	**86.03**	**26**	P		**P**	**12 16 50.1**	**+0.2**	
	baz=251,SNR=5.3								
N31M	**Braeburn, Yuko**	**86.13**	**27**	P		**P**	**12 16 51.1**	**+0.6**	
	baz=252								
NRIK	**Noril'sk**	**86.14**	**341**	P		**P**	**12 16 49.9**	**-0.4**	
	comp=Z,2.5nm,0.5s,baz=81,slow=3.4,SNR=4.1								
	comp=Z,2.5nm,0.5s								
K29M	**Barlow Dome**	**86.14**	**25**	P		**P**	**12 16 50.9**	**+0.3**	
	baz=250,SNR=13								
C27K	**Jago River**	**86.14**	**18**	P		**P**	**12 16 50.9**	**+0.6**	
	baz=244								
E27K	**Coleen River**	**86.23**	**20**	P		**P**	**12 16 51.6**	**+0.8**	
	baz=246,SNR=15								
WHY	**Whitehorse**	**86.29**	**28**	P		**P**	**12 16 52.3**	**+0.9**	
	baz=252								
WRAK	**Wrangell Islan**	**86.39**	**33**	P		**P**	**12 16 52.7**	**+0.9**	
	baz=255								
V35K	**Ketchikan**	**86.51**	**34**	P		**P**	**12 16 53.3**	**+0.9**	
	baz=256								
P32M	**Atlin**	**86.54**	**29**	P		**P**	**12 16 53.3**	**+0.7**	
	baz=254								
F28M	**Old Crow**	**86.60**	**21**	IAmb		IAmb	12 16 54.0		
	comp=Z,4.9nm,0.7s								
F28M	**Old Crow**	**86.60**	**21**	P		**P**	**12 16 53.5**	**+0.9**	
	baz=248,SNR=6.7								
H29M	**Whitestone**	**86.64**	**22**	P		**P**	**12 16 53.3**	**+0.4**	
	baz=249								
D27M	**Malcolm River**	**86.86**	**19**	P		**P**	**12 16 54.3**	**+0.4**	
	baz=246,SNR=14								
J30M	**Hart River**	**86.88**	**24**	P		**P**	**12 16 54.9**	**+0.7**	
	baz=251,SNR=16								
M31M	**Drury Creek, Y**	**86.97**	**27**	IAmb		IAmb	12 16 55.7		
	comp=Z,4.4nm,0.8s								
M31M	**Drury Creek, Y**	**86.97**	**27**	P		**P**	**12 16 54.9**	**+0.4**	
	baz=253								
G29M	**Pine Creek**	**87.01**	**22**	IAmb		IAmb	12 16 56.9		
	comp=Z,4.7nm,0.8s								
G29M	**Pine Creek**	**87.01**	**22**	P		**P**	**12 16 55.2**	**+0.6**	
	baz=249								
I30M	**Mount Dempster**	**87.07**	**24**	IAmb		IAmb	12 16 56.2		
	comp=Z,4.1nm,0.8s								
I30M	**Mount Dempster**	**87.07**	**24**	P		**P**	**12 16 55.5**	**+0.4**	
	baz=251,SNR=7.0								
Q32M	**Nakina River**	**87.08**	**30**	P		**P**	**12 16 55.5**	**+0.1**	
	baz=255								
E28M	**Babbage River**	**87.09**	**20**	IAmb		IAmb	12 16 56.4		
	comp=Z,4.8nm,0.8s								
E28M	**Babbage River**	**87.09**	**20**	P		**P**	**12 16 55.3**	**+0.3**	
	baz=248,SNR=8.8								
P33M	**Teslin, Yukon**	**87.15**	**29**	P		**P**	**12 16 55.6**	**+0.1**	
	baz=254								
N32M	**Quiet Lake**	**87.28**	**28**	P		**P**	**12 16 56.0**	**-0.1**	
	baz=254								
EPYK	**Eagle Plains**	**87.32**	**22**	P		**P**	**12 16 56.8**	**+0.6**	
	baz=250,SNR=9.6								
S34M	**Telegraph Cree**	**87.40**	**31**	P		**P**	**12 16 57.1**	**+0.5**	
	baz=256								
E29M	**Blow River**	**87.58**	**20**	P		**P**	**12 16 57.9**	**+0.6**	
	baz=249								
D28M	**Stokes Point**	**87.63**	**19**	P		**P**	**12 16 58.0**	**+0.5**	
	baz=248								
T35M	**Bob Quinn**	**87.65**	**32**	P		**P**	**12 16 58.2**	**+0.3**	
	baz=257								
G30M	**tAoh Zraii Nji**	**87.70**	**22**	P		**P**	**12 16 58.3**	**+0.3**	
	baz=251								
R33M	**Jennings River**	**87.84**	**30**	P		**P**	**12 16 58.7**	**-0.2**	
	baz=256								
H31M	**Peel River**	**88.06**	**23**	P		**P**	**12 16 59.5**	**-0.2**	
	baz=253,SNR=6.8								
F30M	**Barrier River**	**88.07**	**21**	P		**P**	**12 16 59.9**	**+0.2**	
	baz=251								
DLBC	**Dease Lake**	**88.09**	**31**	P		**P**	**12 17 00.1**	**0.0**	
	baz=257								
G31M	**Satah River**	**88.42**	**22**	P		**P**	**12 17 01.0**	**-0.2**	
	baz=253								
MMPY	**Sheldon Lake,**	**88.49**	**27**	P		**P**	**12 17 01.9**	**+0.1**	
	baz=256								
INK	**Inuvik**	**89.09**	**21**	P		**P**	**12 17 04.1**	**-0.3**	
	baz=253								
BVAR	**Borovoye Array**	**89.17**	**323**	P		**P**	**12 17 04.4**	**-0.8**	
	comp=Z,1.7nm,0.5s,baz=106,slow=6.6,SNR=7.4								
	comp=Z,1.7nm,0.5s								
A36M	**Sachs Harbour**	**92.65**	**18**	P		**P**	**12 17 21.0**	**+0.1**	
	baz=261								
C36M	**Paulatuk**	**92.66**	**21**	P		**P**	**12 17 20.6**	**-0.4**	
	baz=262								
NVAR	**Mina Array Bea**	**92.88**	**52**	P		**P**	**12 17 23.9**	**+0.9**	
	comp=Z,0.5nm,0.7s,baz=263,slow=4.3,SNR=4.5								
	comp=Z,0.5nm,0.7s								
RPN	**Rapa Nui**	**95.22**	**118**	LR		LR	12 51 27.2		
	comp=Z,15nm,20.9s,baz=258,slow=30								
YKA	**Yellowknife Ar**	**96.12**	**28**	P		**P**	**12 17 37.3**	**+0.3**	
	comp=Z,0.6nm,0.6s,baz=276,slow=4.9,SNR=11								
	comp=Z,0.6nm,0.6s								
CLL	**Collm**	**122.89**	**331**	*e*PKPdf		**PKiKP**	**12 23 07.0**	**+1.3**	
GERES	**GERESS Array B**	**124.05**	**328**	PKP		**PKPdf**	**12 23 07.7**	**-0.3**	
	comp=Z,0.4nm,0.4s,baz=46,slow=2.8,SNR=3.3								
TORD	**Torodi Ar. Bea**	**149.78**	**287**	PKPbc		**PKPbc**	**12 23 59.6**	**-0.7**	
	comp=Z,4.6nm,0.7s,baz=66,slow=2.9,SNR=22								

*MAN **16** 12:04:20.0, 12°.59N×125°.59E, h4km, MS4.2*
*IDC **16** 12:04:21.4±1.5, 12°.28N×124°.66E, h0km, mb3.8/6, mbtmp3.8/6, MS2.9/4, Error ellipse: s-maj=47.7km s-min=27.7km az=71.0*
ISC 16 12:04:20.8±0.9,**12°.57N**±0°.04×**125°.59E**±0°.06,**h10**km,**n27, σ2s31/31,mb3.7/6,Samar**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLP	**Palo**	**1.52**	**203**	*e*P		**Pb**	**12 04 48.2**	**-0.9**
PLP				*e*S		**Sg**	**12 05 09.6**	**-0.2**
MSLP	**Maasin**	**2.53**	**197**	*e*P		**Pb**	**12 05 04.7**	**-1.6**
MSLP				*e*S		**Sb**	**12 05 37.8**	**+0.4**
LLP	**Lapu-Lapu**	**2.75**	**216**	*e*P		**Pn**	**12 05 05.7**	**+0.7**
LLP				*i* S		**Sg**	**12 05 51.8**	**+2.7**
TBP	**Tagbilaran**	**3.33**	**211**	*e*P		**Pn**	**12 05 14.1**	**+1.2**
TBP				*e*S		**Sb**	**12 06 02.1**	**+1.6**
GQP	**Guinayangan**	**3.33**	**294**	*e*P		**Pn**	**12 05 11.6**	**-1.4**
GQP				*i* S		**Sn**	**12 05 54.6**	**+1.9**
IBAJ	**Ibajay, Aklan**	**3.42**	**258**	*i* P		**Pn**	**12 05 15.7**	**+1.5**
GUIM	**Jordan**	**3.52**	**237**	*e*P		**Pn**	**12 05 16.1**	**+0.5**
GUIM				*i* S		**Sn**	**12 05 57.7**	**+0.5**
TSSP	**Tandag City**	**3.56**	**170**	*e*P		**Pn**	**12 05 16.6**	**+0.5**
TSSP				*i* S		**Sn**	**12 05 57.4**	**-0.9**
BUTP	**Butuan**	**3.58**	**179**	*i* P		**Pg**	**12 05 28.1**	**-1.3**
BUTP				*i* S		**Sn**	**12 06 01.6**	**+2.8**
SNPH	**Sibulan**	**3.95**	**216**	*e*P		**Pn**	**12 05 23.2**	**+1.6**
SNPH				*e*S		**Sb**	**12 06 15.6**	**-3.0**
LQP	**Lukban**	**4.23**	**292**	*e*P		**Pn**	**12 05 24.6**	**-0.8**
BIPH	**Bislig**	**4.43**	**170**	*e*P		**Pb**	**12 05 36.2**	**-2.4**
BIPH				*e*S		**Sn**	**12 06 17.1**	**-2.6**
DCPH	**Dipolog City**	**4.53**	**209**	*i* P		**Pn**	**12 05 30.7**	**+1.2**
DCPH				*i* S		**Sb**	**12 06 31.6**	**-3.7**
BUKP	**Musuan**	**4.69**	**186**	*i* P		Pb	12 05 38.3	-5.0
BUKP				*i* S		**Sn**	**12 06 30.6**	**+4.3**
TGY	**Tagaytay City**	**4.78**	**289**	LR		LR	12 06 58.6	
	comp=Z,52nm,21.5s,baz=88,slow=39							
DAV	**Davao City (W)**	**5.47**	**180**	LR		LR	12 08 18.5	
	comp=Z,361nm,19.1s,baz=207,slow=45							
KCP	**Kidapawan**	**5.55**	**185**	*e*P		Pb	12 05 52.3	-5.6
JCJ	**Chichijima**	**21.23**	**45**	LR		LR	12 16 58.5	
	comp=Z,29nm,19.4s,baz=198,slow=34							
KSRS	**Korea Array**	**24.86**	**4**	P		**P**	**12 09 49.5**	**+6.0**
	1.1nm,0.9s,baz=183,slow=12,SNR=5.1							
	1.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**26.32**	**286**	P		**P**	**12 09 52.6**	**-4.4**
	0.6nm,0.5s,baz=99,slow=7.5,SNR=5.1							
CMAR				LR		LR	12 21 06.6	
	comp=Z,28nm,18.6s,baz=145,slow=39							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**36.92**	**167**	P		**P**	**12 11 31.6**	**+1.5**
	0.8nm,0.6s,baz=346,slow=7.9,SNR=2.0							
	0.8nm,0.6s							
H11N1	**WAKE ISLAND Hy**	**40.23**	**74**	T		T	12 55 15.8	
	baz=266,slow=75,SNR=18							
H11N2	**WAKE ISLAND Hy**	**40.23**	**74**	T		T	12 55 16.3	
	baz=266,slow=75,SNR=20							
H11N3	**WAKE ISLAND Hy**	**40.24**	**74**	T		T	12 55 17.2	
	baz=266,slow=75,SNR=20							

MKAR	**Makanchi Array**	**49.81**	**322**	P		**P**	**12 13 13.4**	**-0.5**
	0.8nm,0.7s,baz=108,slow=7.8,SNR=7.3							
	0.8nm,0.7s							
KURBB	**Kurchatov Arra**	**53.81**	**325**	P		**P**	**12 13 43.4**	**-0.3**
	1.4nm,0.7s,baz=123,slow=7.3,SNR=8.1							
	1.4nm,0.7s							
BVAR	**Borovoye Array**	**59.41**	**325**	P		**P**	**12 14 23.2**	**-0.2**
	0.6nm,0.4s,baz=123,slow=5.3,SNR=4.4							
	0.6nm,0.4s							

*SNET **16** 12:27:46.1±1.0, 13°.09N×89°.30W, h43km, ML3.4, Presumed earthquake*
*CATAC **16** 12:27:46.1±0.4, 13°.N±2°×8°.9W±°, h29km±2km, M3.6/25, MLv3.6/25, Error ellipse: s-maj=5.3km s-min=2.5km az=31.8, confirmed*
*GCG **16** 12:27:48.1±0.7, 13°.22N×89°.34W, h45km±5km, MD4.3, ML4.4, Presumed earthquake*
ISC 16 12:27:46.1±1.5,**13°.08N**±0°.06×**89°.28W**±0°.04,**h30**km±12km, **n42,σ0s52/71,El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LALI	**Alcalda de L**	**0.41**	**355**	P		**Pn**	**12 27 56.5**	**+0.4**
LALI				S		**Sn**	**12 28 03.5**	**+0.8**
LALI	**Alcalda de L**	**0.41**	**355**	*i* P		**Pn**	**12 27 56.5**	**+0.4**
LALI				*i* S		**Sn**	**12 28 02.4**	**-0.3**
PANCS	**Alcalda de**	**0.54**	**10**	P		**Pn**	**12 27 57.7**	**-0.2**
PANCS				S		**Sn**	**12 28 06.2**	**+0.2**
LOMA	**Loma Larga**	**0.58**	**11**	P		**Pn**	**12 27 58.5**	**+0.1**
LOMA				S		**Sn**	**12 28 07.4**	**+0.4**
JAYA	**Jayaque - finc**	**0.60**	**344**	P		**Pb**	**12 27 58.5**	**+0.3**
JAYA				S		**Sn**	**12 28 07.3**	**-0.2**
JAYA	**Jayaque - finc**	**0.60**	**344**	*i* P		**Pb**	**12 27 58.6**	**+0.3**
JAYA				*i* S		**Sn**	**12 28 06.7**	**-0.8**
JAYA				IAML			12 28 10.3	
	comp=N,24μm,0.4s							
SEMO	**Seminario San**	**0.63**	**5**	P		**Pn**	**12 27 59.1**	**0.0**
SEMO				S		**Sn**	**12 28 08.7**	**+0.6**
UEES	**Universidad Ev**	**0.64**	**4**	P		**Pn**	**12 27 59.2**	**-0.1**
UEES				S		**Sn**	**12 28 09.1**	**+0.6**
BOQS	**Boqueron**	**0.66**	**0**	*i* P		**Pn**	**12 27 59.7**	**+0.1**
COEG	**Centro de Oper**	**0.67**	**36**	P		**Pb**	**12 27 59.2**	**-0.2**
COEG				S		**Sn**	**12 28 08.8**	**-0.3**
COEG	**Centro de Oper**	**0.67**	**36**	*e*P		**Pb**	**12 27 59.2**	**-0.2**
COEG				*e*S		**Sn**	**12 28 09.0**	**-0.1**
TECO	**Alcaldia de Te**	**0.67**	**47**	P		**Pb**	**12 27 59.1**	**-0.3**
TECO				S		**Sn**	**12 28 09.0**	**-0.1**
PAVA	**Las Pavas**	**0.72**	**28**	P		**Pn**	**12 28 00.2**	**-0.1**
PAVA				S		**Sn**	**12 28 10.8**	**+0.4**
CEDA	**San Andres**	**0.73**	**351**	P		**Pn**	**12 28 00.5**	**0.0**
CEDA	**San Andres**	**0.73**	**351**	*e*P		**Pn**	**12 28 00.5**	**0.0**
CEDA				*e*S		**Sn**	**12 28 11.1**	**+0.5**
CEVE	**Cerro Verde**	**0.82**	**336**	P		**Pn**	**12 28 01.8**	**-0.1**
CEVE				S		**Sn**	**12 28 13.4**	**+0.3**
CEVE	**Cerro Verde**	**0.82**	**336**	*e*P		**Pn**	**12 28 02.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.82**	**41**	S		**Sn**	**12 28 13.7**	**+0.8**
POSS	**Presa 15 de Se**	**0.89**	**52**	S		**Sn**	**12 28 14.8**	**+0.2**
UNIC	**Universidad Ca**	**0.94**	**344**	P		**Pn**	**12 28 03.5**	**+0.2**
UNIC				S		**Sb**	**12 28 16.8**	**+0.7**
NUBE	**Las Nubes**	**0.95**	**330**	P		**Pn**	**12 28 03.2**	**-0.5**
NUBE				S		**Sn**	**12 28 16.0**	**-0.3**
NUBE	**Las Nubes**	**0.95**	**330**	*i* P		**Pn**	**12 28 03.4**	**-0.3**
NUBE				*i* S		**Sn**	**12 28 15.5**	**-0.9**
PACA	**Pacayal**	**1.01**	**67**	P		**Pb**	**12 28 04.8**	**-0.3**
PACA				S		**Sb**	**12 28 18.7**	**+0.5**
RANC	**El Ranchito**	**1.03**	**70**	P		**Pn**	**12 28 05.0**	**+0.3**
RANC				S		**Sb**	**12 28 19.0**	**+0.3**
LOAL	**Lomas de Alarc**	**1.04**	**332**	P		**Pn**	**12 28 05.2**	**+0.4**
LOAL				S		**Sb**	**12 28 18.8**	**-0.1**
P5NO	**Presa 5 de nov**	**1.04**	**29**	P		**Pn**	**12 28 04.5**	**-0.1**
P5NO				S		**Sb**	**12 28 18.2**	**-0.7**
FAME	**Alcaldia de Sa**	**1.04**	**317**	P		**Pn**	**12 28 04.3**	**-0.5**
SLOZ	**Alcaldia de Sa**	**1.06**	**333**	P		**Pn**	**12 28 05.1**	**0.0**
SLOZ				S		**Sn**	**12 28 18.8**	**0.0**
LLGN	**La Laguna**	**1.13**	**17**	P		**Pn**	**12 28 05.5**	**-0.5**
LLGN				S		**Sb**	**12 28 20.5**	**-1.0**
MTO3	**Montecristo**	**1.32**	**357**	P		**Pn**	**12 28 08.4**	**-0.3**
MTO3				S		**Sn**	**12 28 25.3**	**-0.1**
MTO3	**Montecristo**	**1.32**	**357**	*i* P		**Pn**	**12 28 08.5**	**-0.3**
LCND	**La Caada**	**1.37**	**80**	P		**Pn**	**12 28 09.4**	**+0.2**
ESQI	**Esquipulas**	**1.48**	**358**	P		**Pn**	**12 28 10.9**	**+0.1**
ESQI	**Esquipulas**	**1.48**	**358**	*e*P		**Pn**	**12 28 11.1**	**+0.3**
ESQI				*e*S		**Sn**	**12 28 29.4**	**+0.2**
CSGN	**Cosiguina Volc**	**1.68**	**93**	P		**Pn**	**12 28 13.7**	**+0.1**
CSGN				S		**Sn**	**12 28 34.1**	**-0.1**
SARH	**Santa Rosa de**	**1.77**	**17**	P		**Pn**	**12 28 15.0**	**+0.3**
SARH	**Santa Rosa de**	**1.77**	**17**	*i* P		**Pn**	**12 28 15.0**	**+0.3**
MACN	**El Madrono**	**2.61**	**103**	P		**Pn**	**12 28 26.9**	**+0.6**
MACN				S		**Sn**	**12 28 56.0**	**-1.1**
MOM3	**MOM3**	**2.75**	**101**	P		**Pn**	**12 28 30.4**	**+2.1**
COPN	**Copaltepe**	**2.77**	**108**	P		**Pn**	**12 28 29.4**	**+0.9**
MOM2	**El Cardon**	**2.80**	**103**	P		**Pn**	**12 28 29.0**	**+0.1**
MOM2				S		**Sn**	**12 29 01.1**	**-0.6**
LIMN	**Finca el Limon**	**2.84**	**90**	P		**Pn**	**12 28 29.4**	**-0.2**
LIMN				S		**Sn**	**12 29 01.8**	**-1.0**

*IDC **16** 13:08:50.0±1.0, 33°.28N×76°.09E, h0km, mb3.9/13, mbtmp4.0/16, ML3.8/3, MS3.4/3, Error ellipse: s-maj=25.2km s-min=17.0km az=53.0*
*NDI **16** 13:08:52.7±2.7, 33°.14N×76°.04E, h5km, ML3.7, MW3.6, Presumed earthquake*
*NNC **16** 13:08:57.4±6.6, 33°.62N×75°.65E, h0km, mb4.3, Error ellipse: s-maj=56.8km s-min=52.8km az=77.0*
ISC 16 13:08:52.6±0.7,**33°.13N**±0°.03×**76°.12E**±0°.04,**h20**km±5km, **n43,σ2s10/68,mb3.9/12,MS3.4/4,4C-2D,Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TSSA	**Tissa**	**0.29**	**174**	*e*Pg		**Pb**	**13 08 58.5**	**-0.9**
TSSA				*i* Sg		**Sb**	**13 09 02.9**	**-1.0**
TSSA				IAML			13 09 04.1	
	comp=E,8μm,0.3s							
TSSA				IAML			13 09 04.4	
	comp=N,15μm,0.3s							
DHRM	**DHARAMSHALA**	**0.89**	**170**	*e*P		**Pn**	**13 09 10.2**	**0.0**
DHRM				*e*S		**Sn**	**13 09 23.4**	**+0.7**
DHRM				IAML			13 09 29.0	
	comp=N,967nm,0.3s							
DHRM				IAML			13 09 29.0	
	comp=E,1μm,0.4s							
JMU	**Jammu**	**1.13**	**253**	*e*P		**Pn**	**13 09 13.2**	**-0.2**
JMU				*e*S		**Sn**	**13 09 28.8**	**+0.4**
JMU				IAML			13 09 37.9	
	comp=E,1μm,0.0s							
JMU				IAML			13 09 38.0	
	comp=N,1μm,0.6s							
TLWR	**Talawar**	**1.18**	**187**	*e*P		**Pb**	**13 09 15.5**	**+1.2**
TLWR				*e*S		**Sn**	**13 09 32.5**	**+3.1**
ALCI	**Alchi Leh**	**1.40**	**39**	*e*P		**Pb**	**13 09 20.8**	**+2.4**
ALCI				*e*S		**Sb**	**13 09 38.0**	**+2.0**
ALCI				IAML			13 09 41.4	
	comp=N,533nm,0.4s							
ALCI				IAML			13 09 41.8	
	comp=E,699nm,0.3s							
SRNI	**Srinagar**	**1.43**	**310**	*e*P		**Pn**	**13 09 18.1**	**+0.5**
SRNI				*e*S		**Sb**	**13 09 39.1**	**+2.5**
SRNI				IAML			13 09 45.4	
	comp=E,2μm,0.2s							
SRNI				IAML			13 09 45.7	
	comp=N,2μm,0.2s							
BHK	**Bhakra**	**1.74**	**173**	*e*P		**Pb**	**13 09 25.2**	**+1.2**
BHK				*e*S		**Sb**	**13 09 50.2**	**+4.8**
BHK				IAML			13 09 51.7	
	comp=N,1μm,0.9s							
BHK				IAML			13 09 53.0	
	comp=E,2μm,0.6s							
KLP	**Kalpa**	**2.41**	**131**	*e*P		**Pb**	**13 09 35.4**	**-0.1**
KLP				*e*S		**Sb**	**13 10 04.4**	**-0.4**
KLP				IAML			13 10 13.6	
	comp=N,697nm,0.4s							
KLP				IAML			13 10 14.0	
	comp=E,791nm,0.3s							
UTK	**UTTARKASHI**	**3.11**	**140**	*e*P		**Pb**	**13 09 45.2**	**-2.1**
UTK				*e*S		**Sn**	**13 10 20.2**	**+3.0**
UTK				IAML			13 10 35.7	
	comp=E,766nm,0.5s							
UTK				IAML			13 10 36.0	
	comp=N,250nm,0.1s							

JOSI	**Joshimath**	**3.89**	**130**	*e*P		Pn	13 09 56.0	+4.4
JOSI				*e*S		**Sn**	**13 10 39.7**	**+3.0**
KSH2	**Kashi**	**6.02**	**356**	Pn		**Pn**	**13 10 24.8**	**+4.1**
KSH2				Sn		**Sn**	**13 11 31.8**	**+2.7**
KSH2				smax		smax		
	comp=N,35nm,0.4s							
KSH2				smax		smax		
	comp=E,29nm,0.4s							
AJM	**Ajmer**	**6.80**	**191**	*e*S		**Sn**	**13 11 47.4**	**-1.0**
PYUN	**Piuthan**	**7.76**	**128**	Pn		**Pn**	**13 10 45.9**	**+1.3**
	baz=135,slow=0.0							
PYUN				Sn		**Sn**	**13 12 11.9**	**-0.1**
	baz=135,slow=0.0							
JHNI	**Jhansi**	**7.95**	**163**	*e*P		**Pn**	**13 10 46.4**	**-0.7**
JHNI				*e*S		**Sn**	**13 12 13.3**	**-3.2**
DANN	**Dangsing**	**8.12**	**124**	Pn		**Pn**	**13 10 51.1**	**+1.4**
	baz=131,slow=0.0							
DANN				Sn		**Sn**	**13 12 20.3**	**-0.8**
	comp=E,30nm,0.4s,baz=131,slow=0.0							
KOLN	**Koldanda**	**8.38**	**128**	Pn		**Pn**	**13 10 55.7**	**+2.5**
	baz=134,slow=0.0							
KOLN				Sn		**Sn**	**13 12 28.2**	**+0.9**
	comp=E,15nm,0.3s,baz=134,slow=0.0							
DMN	**Daman**	**9.51**	**123**	Pn		**Pn**	**13 11 08.9**	**+0.1**
	baz=129,slow=0.0							
DMN				Sn		**Sn**	**13 12 53.8**	**-1.5**
	comp=E,22nm,0.4s,baz=129,slow=0.0							
AAK	**Ala-Archa**	**9.58**	**353**	Pn		**Pn**	**13 11 10.4**	**+0.9**
	comp=E,2.0nm,0.3s,baz=176,slow=8.2,SNR=12							
	comp=E,7.9nm,0.5s							
AAK	**Ala-Archa**	**9.58**	**353**	⇓Pn		**Pn**	**13 11 11.0**	**+1.5**
	comp=E,2.8nm,0.5s							
AAK				⇑Sn		**Sn**	**13 12 54.4**	**-2.2**
	comp=E,1.9nm,0.7s							
PKIN	**Phulchoki**	**9.74**	**122**	Pn		**Pn**	**13 11 11.8**	**-0.1**
	baz=128,slow=0.0							
PKIN				Sn		**Sn**	**13 12 58.8**	**-2.0**
	comp=E,26nm,0.3s,baz=128,slow=0.0							
PKI	**Pulchoki**	**9.75**	**122**	Pn		**Pn**	**13 11 12.1**	**0.0**
	baz=128,slow=0.0							
PKI				Sn		**Sn**	**13 12 59.4**	**-1.8**
	comp=E,16nm,0.3s,baz=128,slow=0.0							
PDGK	**Podgornoye**	**10.52**	**14**	⇑Pn		**Pn**	**13 11 23.3**	**+0.9**
	comp=E,5.2nm,0.5s							
PDGK				⇑Sn		**Sn**	**13 13 19.3**	**-0.4**
	comp=E,4.6nm,0.8s							
KK31	**Karatay Array**	**10.89**	**338**	⇑Pn		**Pn**	**13 11 25.6**	**-1.7**
	comp=E,3.1nm,0.5s,baz=164,slow=13,SNR=28							
KK31				⇓Sn		**Sn**	**13 13 22.3**	**-6.3**
	comp=E,12nm,0.8s,baz=170,slow=25,SNR=6.5							
RAMN	**Ramite**	**10.97**	**121**	Pn		**Pn**	**13 11 28.5**	**-0.2**
	baz=126,slow=0.0							
RAMN				Sn		**Sn**	**13 13 27.7**	**-3.3**
	comp=E,29nm,0.3s,baz=126,slow=0.0							
MKAR	**Makanchi Array**	**14.44**	**17**	Pn		**Pn**	**13 12 14.4**	**-1.4**
	comp=E,0.6nm,0.3s,baz=200,slow=14,SNR=14							
MKAR				Sn		**Sn**	**13 14 48.0**	**-7.3**
	comp=E,0.2nm,0.3s,baz=183,slow=23,SNR=3.2							
	comp=E,0.9nm,0.5s							
KURBB	**Kurchatov Arra**	**17.57**	**5**	P		**Pn**	**13 12 53.5**	**-2.7**
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=29							
	comp=E,2.7nm,0.7s							
BVAR	**Borovoye Array**	**20.31**	**350**	P		**P**	**13 13 26.8**	**-0.4**
	comp=E,2.6nm,0.3s,baz=161,slow=9.4,SNR=16							
	comp=E,2.6nm,0.3s							
ZALV	**Zalesovo Beam**	**21.71**	**14**	P		**P**	**13 13 41.0**	**-1.3**
	comp=E,1.9nm,0.4s,baz=219,slow=10,SNR=11							
	comp=E,1.9nm,0.4s							
AKTO	**Aktyubinsk**	**21.84**	**328**	P		**P**	**13 13 43.0**	**-0.7**
	comp=E,16nm,0.7s,baz=127,slow=7.4,SNR=31							
	comp=E,16nm,0.7s							
CMAR	**Chiang Mai Arr**	**25.14**	**120**	P		**P**	**13 14 18.0**	**+1.5**
	comp=E,1.7nm,0.8s,baz=309,slow=9.8,SNR=13							
	comp=E,1.7nm,0.8s							
ARTI	**Arti**	**26.29**	**338**	LR		LR	13 25 31.0	
	comp=E,77nm,19.1s,baz=98,slow=38							
SONM	**Songino Array**	**27.10**	**48**	P		**P**	**13 14 35.6**	**+1.5**
	comp=E,1.6nm,0.7s,baz=254,slow=5.4,SNR=3.5							
	comp=E,1.6nm,0.7s							
MNK	**Minsk**	**39.84**	**317**	*i

TEZP				IAML			13 36 05.1	
	comp=E,420nm,0.3s							
TEZP				eS		Sn	**13 36 09.5**	**-0.1**
TEZP				IAML			13 36 11.3	
	comp=E,544nm,0.1s							
BRDH	**Bariadhala**	**3.05 244**		Pn		**Pn**	**13 35 32.8**	**-1.4**
	comp=E,36nm,0.3s,baz=262,slow=19,SNR=1.3							
BRDH				Sn		**Sn**	**13 36 08.8**	**-1.1**
	comp=E,136nm,0.3s,baz=244,slow=21,SNR=14							
GUWA	**GUWAHATI**	**3.41 309**		eP		**Pn**	**13 35 36.9**	**-2.0**
GUWA				IAML			13 36 12.9	
	comp=E,246nm,0.1s							
GUWA				eS		**Sn**	**13 36 18.3**	**-0.1**
GUWA				IAML			13 36 19.3	
	comp=E,166nm,0.1s							
DHUB	**DHUBRI**	**4.63 296**		eP		**Pn**	**13 35 53.4**	**-2.0**
DHUB				eS		**Sn**	**13 36 47.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**6.87 143**		Pn		Pn	13 36 17.4	-8.5
	comp=E,0.4nm,0.3s,baz=316,slow=13,SNR=19							
	comp=E,0.2nm,0.4s							
BOK	**Bokaro**	**7.99 270**		ex		x	13 36 54.4	
BOK				eS		**Sn**	**13 38 04.1**	**-5.9**
MKAR	**Makanchi Array**	**24.76 340**		P		**P**	**13 40 01.9**	**+1.5**
	comp=E,1.7nm,0.5s,baz=148,slow=9.7,SNR=22							
	comp=E,1.7nm,0.5s							
KURBB	**Kurchatov Arra**	**29.32 339**		P		**P**	**13 40 42.1**	**+0.9**
	comp=E,0.3nm,0.5s,baz=146,slow=8.9,SNR=5.6							
	comp=E,0.3nm,0.5s							
BRTR	**Keskin Array B**	**53.13 303**		LR		LR	14 11 50.2	
	comp=E,24nm,19.3s,baz=73,slow=42							
WRA	**Warramunga Arr**	**58.39 135**		P		**P**	**13 44 33.0**	**-0.5**
	comp=E,0.3nm,0.3s,baz=319,slow=7.6,SNR=14							
	comp=E,0.3nm,0.3s							
FINES	**FINESS Array B**	**58.93 329**		P		**P**	**13 44 38.9**	**+2.2**
	comp=E,1.3nm,0.8s,baz=81,slow=8.6,SNR=3.6							
	comp=E,1.3nm,0.8s							
ARCES	**ARCESS Array B**	**60.40 338**		P		**P**	**13 44 48.6**	**+1.9**
	comp=E,0.3nm,0.4s,baz=100,slow=6.3,SNR=5.0							
	comp=E,0.3nm,0.4s							
ASAR	**Alice Springs**	**60.85 138**		P		**P**	**13 44 50.0**	**-0.3**
	comp=E,0.6nm,0.7s,baz=315,slow=6.3,SNR=14							
	comp=E,0.6nm,0.7s							
HFS	**Hagfors**	**64.98 327**		P		**P**	**13 45 17.6**	**+0.5**
	comp=E,0.3nm,0.4s,baz=182,slow=4.2,SNR=5.5							
	comp=E,0.3nm,0.4s							
SCHQ	**Schefferville**	**99.84 349**		LR		LR	14 38 58.7	
	comp=E,38nm,18.6s,baz=92,slow=39							

*SJA **16** 13:40:03.4±0.9,21°.58S×68°.52W,h142km,ML3.7,MW3.7*
*GUC **16** 13:40:03.9±0.8,21°.59S×68°.49W,h130km±4km,ML3.7*
*IDC **16** 13:40:33.4±16.0, 18°.20S-68°.01W,h328km±103km,*
mb3.5/2,mbtmp4.1/2,Error ellipse: s-maj=442.4km
s-min=260.9km az=6.0

ISC 16 13:40:04.4±0.9,21°.58S±0°.03×68°.59W±0°.04,h145km±8km, n35,σ0°.90/57,5C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PB09	**IPOC Station P**	**0.64 250**		eP		**Pn**	**13 40 25.8**	**-0.4**
PB09				eS		**Sn**	**13 40 43.2**	**+0.4**
PB09				IAML			13 40 45.3	
	comp=Z,550nm,0.2s							
PB09	**IPOC Station P**	**0.64 250**		⇑*i*P		**Pn**	**13 40 25.7**	**-0.5**
PB09				eS		**Sn**	**13 40 41.5**	**-1.2**
PB03	**IPOC Station P**	**1.18 246**		eP		**Pn**	**13 40 30.3**	**-0.2**
PB03				eS		**Sn**	**13 40 50.6**	**+0.3**
PB03				IAML			13 40 51.0	
	comp=Z,1μm,0.3s							
PB03	**IPOC Station P**	**1.18 246**		⇑*i*P		**Pn**	**13 40 30.3**	**-0.2**
PB03				eS		**Sn**	**13 40 49.8**	**-0.6**
PB03				IAML			13 40 51.5	
	comp=N,1μm,0.2s							
PB07	**IPOC Station P**	**1.21 263**		eP		**Pn**	**13 40 30.9**	**0.0**
PB07				eS		**Sn**	**13 40 52.3**	**+1.3**
PB07				IAML			13 40 52.4	
	comp=Z,607nm,0.4s							
PB07	**IPOC Station P**	**1.21 263**		eP		**Pn**	**13 40 30.9**	**0.0**
PB07				eS		**Sn**	**13 40 51.1**	**+0.1**
PB07				IAML			13 40 52.2	
	comp=E,1μm,0.1s							
PB02	**IPOC Station P**	**1.24 282**		eP		**Pn**	**13 40 31.0**	**0.0**
PB02				eS		**Sn**	**13 40 51.8**	**+0.5**
PB02				IAML			13 40 52.1	
	comp=Z,2μm,0.2s							
PB02	**IPOC Station P**	**1.24 282**		⇑*i*P		**Pn**	**13 40 31.1**	**0.0**
PB02				eS		**Sn**	**13 40 51.1**	**-0.3**
AF01	**San Pedro de A**	**1.42 164**		eP		**Pn**	**13 40 32.5**	**-0.6**
AF01				eS		**Sn**	**13 40 54.5**	**-0.5**
AF01				IAML			13 41 11.1	
	comp=Z,406nm,0.8s							
AF01	**San Pedro de A**	**1.42 164**		eP		**Pn**	**13 40 32.1**	**-0.9**
PB06	**IPOC Station P**	**1.44 219**		eP		**Pn**	**13 40 33.0**	**-0.2**
PB06				eS		**Sn**	**13 40 55.1**	**-0.1**
PB06				IAML			13 40 55.8	
	comp=Z,766nm,0.1s							
PB06	**IPOC Station P**	**1.44 219**		⇑*i*P		**Pn**	**13 40 33.0**	**-0.2**
PB06				eS		**Sn**	**13 40 54.6**	**-0.6**
PB06				IAML			13 40 56.6	
	comp=E,1μm,0.3s							
PB08	**IPOC Station P**	**1.52 340**		eP		**Pn**	**13 40 33.8**	**-0.5**
PB08				eS		**Sn**	**13 40 57.8**	**+0.7**
PB08				IAML			13 40 59.5	
	comp=Z,368nm,0.2s							
PB08	**IPOC Station P**	**1.52 340**		⇓*i*P		**Pn**	**13 40 34.4**	**+0.1**
PB08				eS		**Sn**	**13 40 56.8**	**-0.2**
PB08				IAML			13 40 58.1	
	comp=E,653nm,0.3s							
TA02	**Huaiquique**	**1.94 312**		eP		**Pn**	**13 40 38.3**	**-0.3**
TA02				eS		**Sn**	**13 41 05.3**	**+0.6**
TA02				IAML			13 41 06.8	
	comp=Z,622nm,0.1s							
TA02	**Huaiquique**	**1.94 312**		eP		**Pn**	**13 40 38.0**	**-0.5**
PB05	**IPOC Station P**	**1.96 229**		eP		**Pn**	**13 40 38.8**	**-0.1**
PB05				eS		**Sn**	**13 41 05.3**	**0.0**
PB05				IAML			13 41 10.3	
	comp=Z,252nm,0.3s							
PB05	**IPOC Station P**	**1.96 229**		⇑*i*P		**Pn**	**13 40 38.8**	**-0.1**
PB05				IAML			13 41 10.4	
	comp=E,483nm,0.5s							
GO01	**Chusmiza**	**1.98 343**		eP		**Pn**	**13 40 39.4**	**-0.2**
GO01				eS		**Sn**	**13 41 08.1**	**+1.6**
GO01				IAML			13 41 08.7	
	comp=Z,250nm,0.3s							
GO01	**Chusmiza**	**1.98 343**		⇓*i*P		**Pn**	**13 40 39.4**	**-0.2**
GO01				eS		**Sn**	**13 41 07.1**	**+0.7**
GO01				IAML			13 41 09.5	
	comp=E,969nm,0.2s							
PB11	**IPOC Station P**	**2.06 331**		eP		**Pn**	**13 40 39.8**	**-0.5**
PB11				eS		**Sn**	**13 41 07.3**	**-0.3**
PB11				IAML			13 41 08.2	
	comp=Z,347nm,0.3s							
PB11	**IPOC Station P**	**2.06 331**		⇓*i*P		**Pn**	**13 40 39.7**	**-0.5**
YJA	**Yavi**	**2.92 102**		eP		**Pn**	**13 40 51.6**	**+0.6**
YJA				eS		**Sn**	**13 41 25.0**	**-1.8**
PB16	**IPOC Station P**	**3.34 345**		eP		**Pn**	**13 40 56.3**	**-0.2**
PB16				eS		**Sn**	**13 41 32.5**	**-4.3**
PB16				eS			13 41 37.6	
PB16	**IPOC Station P**	**3.34 345**		eP		**Pn**	**13 40 56.7**	**+0.1**
SALTA		**3.35 142**		eP		**Pn**	**13 40 56.6**	**0.0**
SALTA				eP			13 40 56.9	
SALTA				eS		Sn	13 41 53.5	+17
HJA	**Humahuaca**	**3.36 119**		eP		**Pn**	**13 40 56.1**	**-0.5**
HJA				eP			13 40 56.3	
HJA				eS		**Sn**	**13 41 37.7**	**+0.7**
PB12	**IPOC Station P**	**3.37 331**		eP		**Pn**	**13 40 55.1**	**-1.4**
PB12				eS		**Sn**	**13 41 35.7**	**-1.1**
PB12				IAML			13 41 37.7	
	comp=Z,112nm,0.2s							
PB12	**IPOC Station P**	**3.37 331**		eP		**Pn**	**13 40 54.9**	**-1.6**
PB14	**IPOC Station P**	**3.46 208**		eP		**Pn**	**13 40 57.4**	**-0.4**
PB14				eS		**Sn**	**13 41 38.3**	**-0.9**
PB14				IAML			13 41 47.3	
	comp=Z,136nm,0.4s							
PB14	**IPOC Station P**	**3.46 208**		eP		**Pn**	**13 40 57.4**	**-0.4**
FSA	**Cafayete**	**5.11 153**		eP		Pn	13 41 14.0	-5.4
LPAZ	**La Paz**	**5.28 5**		P		**Pn**	**13 41 22.8**	**+0.7**
	comp=Z,7.3nm,0.3s,baz=174,slow=7.5,SNR=70							
DBIC	**Dimbokro**	**68.47 73**		P		**P**	**13 50 52.4**	**+0.9**
	comp=Z,3.9nm,1.1s,baz=254,slow=6.0,SNR=1.7							
	comp=Z,3.9nm,1.1s							
TORD	**Torodi Ar. Bea**	**77.10 70**		P		**P**	**13 51 42.4**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=252,slow=5.5,SNR=4.6							
	comp=Z,0.5nm,0.3s							

IDC 16 13:56:06.3±11.0, 43°.50N×134°.04E, h438km±38km, mb2.5/2,mbtmp3.4/3,Error ellipse: s-maj=233.2km s-min=41.4km az=97.0,Primorye

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
USRK	**Ussuriysk Ar.**	**1.64 296**		P		P	13 57 03.7	-0.1
	0.9nm,0.4s,baz=120,slow=5.3,SNR=4.1							
KSRS	**Korea Array**	**7.62 220**		P		P	13 57 58.2	+0.6
	1.5nm,0.5s,baz=41,slow=11,SNR=9.6							
MKAR	**Makanchi Array**	**36.11 294**		P		P	14 02 28.6	-0.7
	0.2nm,0.5s,baz=86,slow=9.2,SNR=2.2							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**37.70 301**		P		P	14 02 42.7	+0.2
	0.4nm,0.6s,baz=79,slow=8.8,SNR=5.4							
	0.4nm,0.6s							

*WEL **16** 13:56:27.0±0.7,33°.5±5°.×17°.8W±1°.1,h12km,M4.5/9,*
mB4.8/6,ML4.7/13,MLv4.8/9,Mw(mB)4.1/6,Error ellipse:
s-maj=15.7km s-min=4.2km az=109.4
*IDC **16** 13:56:28.6±3.0, 33°.35S×177°.93W,h0km,mb4.2/2,*
mbtmp4.0/4,ML3.5/2,MS3.3/2,Error ellipse: s-maj=69.8km
s-min=32.9km az=117.0

ISC 16 13:56:25.8±1.3, 33°.19S±0°.07×177°.6W±0°.2,h10km,n26, σ1s64/36,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.93 356**		P		**Pn**	**13 57 25.1**	**-1.1**
GLKZ				S		**Sn**	**13 58 10.4**	**-2.0**
WMGZ	**Waiomatatini S**	**5.66 214**		P		**Pn**	**13 57 51.3**	**+1.4**
WMGZ				S		**Sn**	**13 58 56.3**	**+1.4**
HAZ	**Te Kaha**	**5.92 218**		P		**Pn**	**13 57 55.6**	**+2.0**
HAZ				S		**Sn**	**13 59 01.7**	**+0.3**
PUZ	**Puketiti**	**5.93 214**		P		**Pn**	**13 57 53.4**	**-0.3**
PUZ				S		**Sn**	**13 58 59.9**	**-1.9**
RUGZ	**Raukumara Rang**	**6.13 218**		P		**Pn**	**13 57 57.9**	**+1.4**
RUGZ				S		**Sn**	**13 59 07.4**	**+0.5**
TWGZ	**Tauwhareparae**	**6.15 215**		P		**Pn**	**13 57 57.1**	**+0.4**
TWGZ				S		**Sn**	**13 59 05.4**	**-1.7**
CNGZ	**Carnagh Statio**	**6.29 212**		P		**Pn**	**13 57 58.7**	**+0.1**
CNGZ				S		**Sn**	**13 59 10.3**	**-0.3**
MWZ	**Matawai**	**6.49 216**		P		**Pn**	**13 58 01.6**	**+0.1**
MWZ				S		**Sn**	**13 59 13.4**	**-2.2**
URZ	**Urewera**	**6.65 219**		Pn		**Pn**	**13 58 04.0**	**+0.5**
	2.6nm,0.3s,baz=29,slow=13,SNR=12							
URZ				Sn		**Sn**	**13 59 16.3**	**-3.0**
	4.8nm,0.3s,baz=153,slow=24,SNR=15							
	13nm,0.5s							
URZ	**Urewera**	**6.65 219**		P		**Pn**	**13 58 04.0**	**+0.5**
URZ				S		**Sn**	**13 59 17.6**	**-1.7**
SNGZ	**Shannon Statio**	**6.93 215**		P		**Pn**	**13 58 08.1**	**+0.7**
SNGZ				S		**Sn**	**13 59 24.6**	**-1.8**
KNZ	**Kokohu**	**6.97 212**		P		**Pn**	**13 58 07.4**	**-0.5**
KNZ				S		**Sn**	**13 59 24.7**	**-2.6**
RTZ	**Ruatahuna**	**6.98 218**		P		**Pn**	**13 58 08.3**	**+0.1**
RAHZ	**Arahi**	**7.16 216**		P		**Pn**	**13 58 13.0**	**+2.4**
MTHZ	**Maungataniwha**	**7.23 217**		P		**Pn**	**13 58 14.1**	**+2.5**
MTHZ				S		**Sn**	**13 59 31.2**	**-2.7**
OUZ	**Omahuta**	**7.59 252**		P		Pn	13 58 20.9	+4.5
KAHZ	**Kahuranaki**	**7.96 213**		P		**Pn**	**13 58 20.9**	**-0.6**
OTVZ	**Oturere**	**8.08 221**		P		**Pn**	**13 58 25.7**	**+2.3**
BFZ	**Birch Farm**	**8.96 212**		P		**Pn**	**13 58 34.0**	**-1.2**
CTZ	**Chatham Island**	**10.55 176**		P		**Pn**	**13 58 57.8**	**+0.7**
RPZ	**Rata Peaks**	**13.76 217**		Pn		**Pn**	**13 59 39.5**	**-1.4**
	0.1nm,0.3s,baz=53,slow=15,SNR=3.6							
RPZ				Sn		Sn	14 01 58.4	-15
	0.1nm,0.3s,baz=143,slow=20,SNR=4.6							
	0.5nm,0.5s							
MSVF	**Nonsavu**	**15.89 345**		LR		LR	14 05 03.2	
	comp=Z,100nm,19.5s,baz=318,slow=32							
ASAR	**Alice Springs**	**43.39 270**		P		**P**	**14 04 30.8**	**+2.1**
	2.3nm,0.7s,baz=109,slow=7.3,SNR=32							
	2.3nm,0.7s							
WRA	**Warramunga Arr**	**44.63 275**		P		**P**	**14 04 40.5**	**+1.9**
	2.8nm,0.6s,baz=115,slow=7.9,SNR=34							
	2.8nm,0.6s							
TXAR	**Lajitas Array**	**93.59 57**		LR		LR	14 44 21.6	
	0.8nm,0.7s,baz=45,slow=2.2,SNR=6.7							
FINES	**FINESS Array B**	**147.88 339**		PKPbc		**PKPab**	**14 16 14.2**	**+1.3**
	0.8nm,0.7s,baz=45,slow=2.2,SNR=6.7							

*NEIC **16** 14:16:59.3±1.9, 18°.08S±0°.08×177°.9W±0°.2, h592km±9km,*
mb4.0/22,Error ellipse: s-maj=24.2km s-min=11.6km
az=88.0
*IDC **16** 14:17:00.1±0.9, 18°.00S×178°.05W,h604km±9km,mb3.2/14,*
mbtmp4.2/16,Error ellipse: s-maj=17.5km s-min=10.5km
az=146.0

ISC 16 14:16:58.7±0.6, 18°.1S±0°.1×177°.90W±0°.10,h590km,n52, σ1s15/55,mb4.0/26,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FUTU	**Fugatoga**	**3.78 357**		P		**P**	**14 18 22.4**	**+0.4**
MSVF	**Nonsavu**	**3.87 275**		P		**P**	**14 18 24.0**	**+1.3**
	61nm,0.8s,baz=123,slow=11,SNR=47							
MSVF				S		**S**	**14 19 34.9**	**+3.8**
	1.8nm,0.3s,baz=72,slow=19,SNR=7.2							
AFI	**Afiamalu**	**7.21 56**		P		**P**	**14 18 51.1**	**+0.7**
	36nm,0.9s,baz=241,slow=21,SNR=1.8							
AFI				S		**S**	**14 20 20.3**	**-1.6**
	27nm,0.9s,baz=102,slow=21,SNR=1.6							
AFI	**Afiamalu**	**7.21 56**		P		**P**	**14 18 49.6**	**-0.8**
STKA	**Stephens Creek**	**38.96 241**		P		**P**	**14 23 36.1**	**+0.5**
	9.4nm,1.1s,baz=88,slow=10,SNR=9.7							
	9.4nm,1.1s							
INKA	**Innaminka**	**39.12 248**		P		**P**	**14 23 37.5**	**+0.7**
WRA	**Warramunga Arr**	**45.07 260**		P		**P**	**14 24 21.6**	**-2.0**
	3.2nm,0.7s,baz=95,slow=8.2,SNR=46							
WRA				PcP		**PcP**	**14 25 51.3**	**-0.3**
	0.6nm,0.7s,baz=98,slow=3.2,SNR=3.8							
	3.2nm,0.7s							
WRA	**Warramunga Arr**	**45.07 260**		P		**P**	**14 24 22.4**	**-1.2**
WRA				PcP		**PcP**	**14 25 51.5**	**-0.1**
AS31	**Alice Springs**	**45.20 254**		P		**P**	**14 24 24.2**	**-0.4**
AS31				IAmb		IAmb	14 24 25.1	
	comp=Z,3.6nm,0.8s							
ASAR	**Alice Springs**	**45.20 254**		P		**P**	**14 24 23.7**	**-0.9**
	comp=Z,11nm,0.7s,baz=92,slow=8.1,SNR=172							
ASAR				PcP		**PcP**	**14 25 51.4**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=92,slow=3.5,SNR=7.5							
ASAR				S		**S**	**14 30 20.2**	**-2.4**
	comp=Z,0.9nm,0.9s,baz=96,slow=15,SNR=5.7							
	comp=Z,11nm,0.7s							
ASAR	**Alice Springs**	**45.20 254**		P		**P**	**14 24 23.4**	**-1.3**
ASAR				PcP		**PcP**	**14 25 51.7**	**-0.3**
VNDA	**Vanda**	**60.30 185**		P		**P**	**14 26 10.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=6.5,slow=5.2,SNR=1.9							
	comp=Z,0.3nm,0.5s							
MJAR	**Matsushiro Arr**	**68.35 323**		P		**P**	**14 27 00.4**	**-1.9**
	comp=Z,2.6nm,0.6s,baz=151,slow=6.2,SNR=8.6							
	comp=Z,2.6nm,0.6s							
MJAR	**Mashiro Arr**	**68.35 323**		P		**P**	**14 27 02.4**	**+0.1**
QSPA	**South Pole Qui**	**71.95 180**		P		**P**	**14 27 24.4**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=21,slow=0.8,SNR=11							
	comp=Z,1.2nm,0.6s							
QSPA	**South Pole Qui**	**71.95 180**		P		**P**	**14 27 24.2**	**+1.0**
PETK	**Petropavlovsk-**	**73.99 345**		P		**P**	**14 27 34.2**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=159,slow=5.3,SNR=14							
	comp=Z,4.1nm,0.7s							
PETK	**Petropavlovsk-**	**73.99 345**		P		**P**	**14 27 35.3**	**+0.5**
KSRS	**Korea Array**	**75.17 318**		P		**P**	**14 27 41.8**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=129,slow=7.1,SNR=2.8							
	comp=Z,0.6nm,0.7s							
NVAR	**Mina Array Bea**	**79.23 44**		P		**P**	**14 28 05.8**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=237,slow=5.2,SNR=5.5							
	comp=Z,0.8nm,0.7s							
M16K	**Timber Creek**	**80.31 9**		P		**P**	**14 28 10.4**	**+1.6**
M16K				IAmb		IAmb	14 28 11.1	
	comp=Z,7.2nm,1.1s							
M17K	**Holitna River**	**80.91 10**		P		**P**	**14 28 13.6**	**+1.7**
M17K				IAmb		IAmb	14 28 14.6	
	comp=Z,8.2nm,1.0s							
K15K	**Wolf Creek Mou**	**81.17 8**		P		**P**	**14 28 14.5**	**+1.2**
L18K	**Granite Mounta**	**81.80 10**		IAmb		IAmb	14 28 18.3	
	comp=Z,3.6nm,0.7s							
GHO	**Glory Hole Cre**	**82.88 13**		IAmb		IAmb	14 28 22.8	
	comp=Z,5.7nm,0.7s							
J18K	**Innoko River**	**82.97 9**		P		**P**	**14 28 22.9**	**+0.6**
J18K				IAmb		IAmb	14 28 23.6	
	comp=Z,4.7nm,0.8s							
K20K	**Telida**	**83.30 11**		IAmb		IAmb	14 28 25.1	
	comp=Z,3.4nm,0.7s							
J20K	**Nowinta River**	**84.05 10**		P		**P**	**14 28 28.3**	**+0.6**
J20K				IAmb		IAmb	14 28 28.8	
	comp=Z,2.5nm,0.7s							
TRF	**Thorofare Moun**	**84.10 12**		P		**P**	**14 28 27.7**	**-0.4**
RND	**Reindeer**	**84.35 13**		P		**P**	**14 28 29.6**	**+0.3**
CCB	**Clear Creek Bu**	**85.67 13**		P		**P**	**14 28 34.8**	**-0.7**
CCB				IAmb		IAmb	14 28 35.3	
	comp=Z,2.2nm,0.6s							
TXAR	**Lajitas Array**	**85.69 57**		P		**P**	**14 28 38.4**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=250,slow=3.5,SNR=9.0							
	comp=Z,0.8nm,0.8s							
ILAR	**Eielson Array**	**85.97 13**		P		**P**	**14 28 35.9**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=208,slow=4.7,SNR=20							
	comp=Z,0.8nm,0.4s							
ILAR	**Eielson Array**	**85.97 13**		P		**P**	**14 28 36.4**	**-0.5**
L29M	**L29M**	**86.71 17**		IAmb		IAmb	14 28 43.0	
	comp=Z,2.1nm,0.8s							
PDAR	**Pinedale Array**	**87.16 43**		P		**P**	**14 28 43.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=240,slow=4.3,SNR=6.3							
	comp=Z,0.7nm,0.8s							
COLD	**Coldfoot**	**87.51 10**		P		**P**	**14 28 44.9**	**+0.8**
COLD				IAmb		IAmb	14 28 45.5	
	comp=Z,2.2nm,0.8s							
F24K	**Squaw Lake**	**88.19 11**		P		**P**	**14 28 47.9**	**+0.6**
F24K				IAmb		IAmb	14 28 48.6	
	comp=Z,1.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**89.41 290**		P		**P**	**14 28 53.8**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=104,slow=5.5,SNR=6.8							
	comp=Z,0.7nm,0.3s							
G30M	**tAoh Zraii Nji**	**90.26 15**		P		**P**	**14 28 57.3**	**+0.3**
YKA	**Yellowknife Ar**	**94.30 25**		P		**P**	**14 29 14.8**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=243,slow=4.8,SNR=4.0							
	comp=Z,0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**112.35 318**		PKiKP		**PKiKP**	**14 34 27.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=72,slow=2.9,SNR=4.2							
BVAR	**Borovoye Array**	**117.30 321**		PKP		**PKPdf**	**14 34 35.2**	**-2.5**
	comp=Z,0.4nm,0.4s,baz=82,slow=2.0,SNR=2.4							
BRTR	**Keskin Array B**	**145.26 315**		PKPbc		**PKPdf**	**14 35 30.9**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=62,slow=3.4,SNR=9.6							
BRTR	**Keskin Array B**	**145.26 315**				**PKPdf**	**14 35 30.7**	**+0.2**
CLL	**Collm**	**145.75 348**		⇓*i*PKPbc		**PKPbc**	**14 35 32.7**	**+0.2**
	comp=Z,9.0nm,0.9s							
BRG	**Berggiesshubel**	**145.97 347**		eP		**PKPbc**	**14 35 33.5**	**+0.3**
BRG				Amp			14 35 34.0	
	comp=Z,4.0nm,0.8s							
MORC	**Moravsky Berou**	**146.04 342**		ePKP		**PKPbc**	**14 35 34.1**	**+0.7**
MMAI	**Mount Meron Ar**	**146.65 303**		PKPbc		**PKPbc**	**14 35 34.5**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=37,slow=7.4,SNR=1.9							
KRUC	**Moravsky**	**147.02 343**		ePKP		**PKPbc**	**14 35 36.3**	**+0.3**
GERES	**GERESS Array B**	**147.92 346**		PKPbc		**PKPbc**	**14 35 38.4**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=20,slow=3.3,SNR=17							
GERES	**GERESS Array B**	**147.92 346**				**PKPbc**	**14 35 38.7**	**+0.2**

*IDC **16** 14:18:56.1±4.8,36°.67N×71°.28E,h187km±45km,mb3.1/4,*
mbtmp3.7/10,MS3.2/1,Error ellipse: s-maj=38.4km
s-min=22.8km az=33.0
*NNC **16** 14:19:02.9±8.0,37°.13N×70°.95E,h164km±102km,mb2.9,*
mpv3.7,Error ellipse: s-maj=68.5km s-min=46.2km
az=25.0

ISC 16 14:18:58.0±1.1, 36°.83N±0°.09×71°.3E±0°.1,h200km,n15, σ1s68/20,mb3.2/3,5C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.29 355**		⇓P		**Pn**	**14 20 30.4**	**+1.4**
	2.7nm,0.2s,baz=176,slow=13,SNR=21							
KK31				⇓S		**Sn**	**14 21 39.5**	**-1.7**
	9.6nm,0.5s,baz=183,slow=29,SNR=6.4							
AAK	**Ala-Archa**	**6.30 22**		P		**Pn**	**14 20 30.2**	**+0.9**
	11nm,0.3s,baz=236,slow=7.3,SNR=17							
AAK				S		**Sn**	**14 21 40.2**	**-1.4**
	2.5nm,0.4s,baz=151,slow=10,SNR=3.6							
AAK	**Ala-Archa**	**6.30 22**		⇑P		**Pn**	**14 20 31.1**	**+1.8**
	2.1nm,0.4s							
AAK				⇓S		**Sn**	**14 21 39.7**	**-1.9**
	8.4nm,0.8s							
MKAR	**Makanchi Array**	**12.89 36**		P	

ASTR	**Astara**	**1.95**	**82**	P	**Pb**	**14 28 36.8**	**+1.1**
ASTR				S	**Sg**	**14 29 04.2**	**+0.8**
LKRN	**Lenkeran, Azer**	**1.97**	**78**	P	**Pb**	**14 28 36.9**	**+1.0**
LKRN				S	**Sg**	**14 29 03.6**	**-0.2**
BRDA	**Brd**	**2.06**	**19**	S	**Sg**	**14 29 06.9**	**+0.1**
GANJ	**Ganja**	**2.33**	**360**	P	**Pb**	**14 28 41.8**	**-0.4**
GANJ				S	**Sb**	**14 29 12.7**	**+1.9**
IGDI	**IGDIR**	**2.34**	**312**	P	**Pb**	**14 28 42.7**	**+0.4**
GDB	**GEDABAY**	**2.45**	**350**	P	**Pb**	**14 28 44.8**	**+0.6**
GDB				S	**Sg**	**14 29 16.9**	**-2.4**
QZX	**Qazax, Azerbai**	**2.84**	**345**	S	**Sb**	**14 29 26.5**	**+1.1**
PQL	**Pirkuli**	**3.03**	**35**	P	**Pb**	**14 28 51.5**	**-2.7**

*SJA **16** 14:37:16.0±0.7, 22.°84S×70.°20W, h68km±3km, ML4.2, MW3.9*
*NEIC **16** 14:37:18.6±2.0, 22.°83S±0.°04×70.°23W±0.°09, h60km±4km, mb4.3/4, ML4.1(GUC), Error ellipse: s-maj=11.7km s-min=5.4km az=85.0*
*GUC **16** 14:37:20.2±0.8, 22.°73S×70.°17W, h70km±3km, ML4.1*
*IDC **16** 14:37:21.5±3.5, 22.°77S×69.°78W, h84km±32km, mb3.6/6, mbtmp4.0/9, MS3.4/1, Error ellipse: s-maj=39.7km s-min=24.6km az=106.0*

ISC 16 14:37:19.0±0.7, 22°80S±0'03×70°18W±0'05, h70km±5km, n82, σ1§18/100, mb4.1/6, 9C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB05	**IPOC Station P**	**0.06**	**199**	*eP*	**Pn**	14 37 15.2	-14
PB05				*eS*	**Sn**	**14 37 38.2**	**+1.2**
PB05	**IPOC Station P**	**0.06**	**199**	⇓*eP*	**Pn**	**14 37 30.2**	**+0.8**
PB05				*eS*	**Sn**	**14 37 37.8**	**+0.8**
PB05				IAML		14 37 39.0	
	comp=N,13μm,0.5s						
PB05	**IPOC Station P**	**0.06**	**199**		**Pn**	**14 37 29.5**	**+0.1**
PB05				Sn	**Sn**	**14 37 37.8**	**+0.8**
PB06	**IPOC Station P**	**0.57**	**81**	*eP*	Pn	14 37 12.2	-21
PB06				*eS*	**Sn**	**14 37 41.1**	**-1.7**
PB06				IAML		14 37 41.6	
	comp=Z,7μm,0.1s						
PB06	**IPOC Station P**	**0.57**	**81**	⇓*eP*	**Pn**	**14 37 31.8**	**-0.9**
PB06				*eS*	**Sn**	**14 37 40.7**	**-2.1**
PB06				IAML		14 37 41.1	
	comp=E,11μm,0.1s						
PB06	**IPOC Station P**	**0.57**	**81**		**Pn**	**14 37 30.9**	**-1.8**
PB06				Sn	**Sn**	**14 37 40.9**	**-1.9**
PB03	**IPOC Station P**	**0.84**	**28**	*eP*	**Pn**	**14 37 35.6**	**-0.2**
PB03				*eS*	**Sn**	**14 37 47.6**	**-0.6**
PB03				IAML		14 37 49.3	
	comp=Z,14μm,0.2s						
PB03	**IPOC Station P**	**0.84**	**28**	⇓*eP*	**Pn**	**14 37 35.7**	**-0.2**
PB03				*eS*	**Sn**	**14 37 47.5**	**-0.8**
PB03				IAML		14 37 48.4	
	comp=N,18μm,0.4s						
PB03	**IPOC Station P**	**0.84**	**28**	Pn	**Pn**	**14 37 35.7**	**-0.2**
PB07	**IPOC Station P**	**1.10**	**14**	*eP*	**Pn**	**14 37 38.5**	**-0.5**
PB07				*eS*	**Sn**	**14 37 53.9**	**0.0**
PB07				IAML		14 37 55.6	
	comp=Z,4μm,0.1s						
PB07	**IPOC Station P**	**1.10**	**14**	⇑*eP*	**Pn**	**14 37 39.0**	**-0.1**
PB07				*eS*	**Sn**	**14 37 53.4**	**-0.5**
PB07				IAML		14 37 54.5	
	comp=N,6μm,0.1s						
PB07	**IPOC Station P**	**1.10**	**14**	Pn	**Pn**	**14 37 38.9**	**-0.1**
PB07				Sn	**Sn**	**14 37 53.9**	**0.0**
PB09	**IPOC Station P**	**1.32**	**41**	*eP*	**Pn**	**14 37 41.5**	**-0.4**
PB09				*eS*	**Sn**	**14 37 58.7**	**-0.3**
PB09				IAML		14 37 59.8	
	comp=Z,6μm,0.5s						
PB09	**IPOC Station P**	**1.32**	**41**	⇑*eP*	**Pn**	**14 37 42.1**	**+0.2**
PB09				*eS*	**Sn**	**14 37 58.9**	**-0.1**
PB09				IAML		14 38 00.5	
	comp=E,4μm,0.2s						
PB09	**IPOC Station P**	**1.32**	**41**		**Pn**	**14 37 42.0**	**+0.2**
PB02	**IPOC Station P**	**1.50**	**10**	*eP*	**Pn**	**14 37 43.8**	**-0.3**
PB02				*eS*	**Sn**	**14 38 02.8**	**-0.1**
PB02				IAML		14 38 04.2	
	comp=Z,4μm,0.2s						
PB02	**IPOC Station P**	**1.50**	**10**	⇑*eP*	**Pn**	**14 37 44.1**	**0.0**
PB02				*eS*	**Sn**	**14 38 02.3**	**-0.6**
PB02				IAML		14 38 04.3	
	comp=E,6μm,0.3s						
PB02	**IPOC Station P**	**1.50**	**10**	Pn	**Pn**	**14 37 44.0**	**0.0**
PB14	**IPOC Station P**	**1.83**	**186**	*eP*	**Pn**	**14 37 48.1**	**-0.6**
PB14				*eS*	**Sn**	**14 38 09.4**	**-1.8**
PB14	**IPOC Station P**	**1.83**	**186**	⇑*eP*	**Pn**	**14 37 48.7**	**0.0**
PB14				*eS*	**Sn**	**14 38 10.4**	**-0.8**
PB14	**IPOC Station P**	**1.83**	**186**		**Pn**	**14 37 48.6**	**-0.1**
AF01	**San Pedro de A**	**1.85**	**95**	*eP*	**Pn**	**14 37 47.7**	**-1.3**
AF01				*eS*	**Sn**	**14 38 12.7**	**+1.0**
AF01				IAML		14 38 35.2	
	comp=Z,2μm,0.4s						
AF01	**San Pedro de A**	**1.85**	**95**	*eP*	**Pn**	**14 37 50.1**	**+1.1**
AF01				*eS*	**Sn**	**14 38 13.2**	**+1.5**
AF01				IAML		14 38 23.9	
	comp=N,4μm,0.6s						
AF01	**San Pedro de A**	**1.85**	**95**	Pn	**Pn**	**14 37 50.4**	**+1.4**
TA02	**Huaiquique**	**2.52**	**1**	*eP*	**Pn**	**14 37 56.8**	**-0.9**
TA02				*eS*	**Sn**	**14 38 26.5**	**-0.8**
TA02				IAML		14 38 29.9	
	comp=Z,717nm,0.1s						
TA02	**Huaiquique**	**2.52**	**1**	⇓*eP*	**Pn**	**14 37 57.0**	**-0.7**
TA02				*eS*	**Sn**	**14 38 26.0**	**-1.3**
TA02				IAML		14 38 32.2	
	comp=N,2μm,0.1s						
PB08	**IPOC Station P**	**2.81**	**20**	*eP*	**Pn**	**14 38 02.0**	**-0.1**
PB08				*eS*	**Sn**	**14 38 35.8**	**+0.7**
PB08				IAML		14 38 53.4	
	comp=Z,276nm,0.5s						
PB08	**IPOC Station P**	**2.81**	**20**	⇑*eP*	**Pn**	**14 38 02.2**	**+0.1**
PB08				*eS*	**Sn**	**14 38 34.5**	**-0.6**
PB08	**IPOC Station P**	**2.81**	**20**		**Pn**	**14 38 02.0**	**-0.1**
PB11	**IPOC Station P**	**3.06**	**9**	*eS*	**Sn**	**14 38 41.1**	**+0.2**
PB11				IAML		14 38 59.1	
	comp=Z,322nm,0.4s						
PB11	**IPOC Station P**	**3.06**	**9**	⇑*eP*	**Pn**	**14 38 04.3**	**-1.0**
PB11				*eS*	**Sn**	**14 38 38.7**	**-2.2**
PB11	**IPOC Station P**	**3.06**	**9**		**Pn**	**14 38 04.3**	**-1.0**
PSGCX	**Pisagua**	**3.19**	**1**	*eP*	**Pn**	**14 38 05.4**	**-1.6**
PSGCX	**Pisagua**	**3.19**	**1**	⇑*eP*	**Pn**	**14 38 05.7**	**-1.2**
PSGCX				*eS*	**Sn**	**14 38 41.4**	**-2.5**
PSGCX	**Pisagua**	**3.19**	**1**		**Pn**	**14 38 05.6**	**-1.3**
GO01	**Chusmiza**	**3.25**	**17**	*eP*	**Pn**	**14 38 08.0**	**-0.1**
GO01				*eS*	Sn	14 38 57.2	+11
GO01				IAML		14 39 04.8	
	comp=Z,434nm,0.5s						
GO01	**Chusmiza**	**3.25**	**17**	⇑*eP*	**Pn**	**14 38 07.9**	**-0.2**
GO01				*eS*	**Sn**	**14 38 44.8**	**-1.1**
GO01	**Chusmiza**	**3.25**	**17**		**Pn**	**14 38 07.9**	**-0.2**
AC01	**Pan de Azucar**	**3.36**	**186**	*eP*	**Pn**	**14 38 07.5**	**-1.7**
AC01				*eS*	**Sn**	**14 38 46.0**	**-1.8**
AC01	**Pan de Azucar**	**3.36**	**186**	⇑*eP*	**Pn**	**14 38 08.1**	**-1.0**
AC01	**Pan de Azucar**	**3.36**	**186**		**Pn**	**14 38 08.2**	**-0.9**
AC02	**Maricunga**	**4.13**	**167**		**Pn**	**14 38 21.3**	**+1.2**
PB12	**IPOC Station P**	**4.17**	**358**	*eP*	**Pn**	**14 38 19.1**	**-1.2**
PB12				*eS*	**Sn**	**14 39 06.9**	**-0.9**
PB12				IAML		14 39 08.0	
	comp=Z,142nm,0.3s						
PB12	**IPOC Station P**	**4.17**	**358**		**Pn**	**14 38 19.3**	**-1.0**
AP01	**Chacalluta**	**4.41**	**358**	*eP*	**Pn**	**14 38 23.3**	**-0.2**
AP01				*eS*	**Sn**	**14 39 12.3**	**-1.2**
AP01				IAML		14 39 18.3	
	comp=Z,206nm,0.6s						
AP01	**Chacalluta**	**4.41**	**358**	*eP*	**Pn**	**14 38 22.6**	**-0.8**
AP01	**Chacalluta**	**4.41**	**358**	Pn	**Pn**	**14 38 23.0**	**-0.5**
PB16	**IPOC Station P**	**4.49**	**8**	*eP*	**Pn**	**14 38 25.5**	**+0.4**
PB16				*eS*	**Sn**	**14 39 15.3**	**-1.0**
PB16	**IPOC Station P**	**4.49**	**8**		**Pn**	**14 38 24.8**	**-0.3**
GO03	**Copiapo**	**4.78**	**181**	Pn	**Pn**	**14 38 27.9**	**-0.6**
AC04	**Llanos de Chal**	**5.44**	**188**	Pn	**Pn**	**14 38 34.6**	**-3.0**
AC05	**El Transito**	**6.01**	**181**	Pn	**Pn**	**14 38 44.2**	**-1.3**
LPAZ	**La Paz**	**6.76**	**17**	P	**Pn**	**14 38 57.5**	**+1.3**
	comp=Z,15nm,0.3s,baz=191,slow=6.1,SNR=249						
GO04	**Tololo Observa**	**7.37**	**184**	Pn	**Pn**	**14 39 01.5**	**-2.6**
SIV	**San Ignacio**	**10.94**	**53**	P	**Pn**	**14 39 49.0**	**-3.8**
	comp=Z,4.0nm,0.6s,baz=232,slow=11,SNR=18						
H03N1	**Juan Fernandez**	**13.10**	**214**	T	T	14 53 38.7	
	baz=38,slow=72,SNR=34						
H03N2	**Juan Fernandez**	**13.11**	**214**	T	T	14 53 37.6	
	baz=38,slow=72,SNR=38						
H03N3	**Juan Fernandez**	**13.12**	**214**	T	T	14 53 36.5	
	baz=38,slow=72,SNR=48						
PLCA	**Paso Flores**	**17.88**	**181**	P	**Pn**	**14 41 24.8**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=3.4,slow=17,SNR=3.6						
BDFB	**Brasilia**	**22.09**	**75**	P	**P**	**14 42 07.9**	**-0.8**
	comp=Z,2.3nm,0.4s,baz=241,slow=13,SNR=3.3						
	comp=Z,2.3nm,0.4s						
BDFB	**Brasilia**	**22.09**	**75**	P	**P**	**14 42 08.2**	**-0.6**
BDFB				IAmb	IAmb	14 42 11.7	
	comp=Z,15nm,1.4s						
BOAV	**Boa Vista**	**26.75**	**22**	P	**P**	**14 42 53.4**	**+1.1**
MDP	**Montagnes des**	**32.60**	**34**	LR	LR	14 58 00.5	
	comp=Z,64nm,19.1s,baz=148,slow=38						
VNA2	**Neumayer--Watz**	**59.83**	**160**	⇓P	**P**	**14 47 17.3**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=284,slow=7.3						
SNAA	**Sanae**	**61.45**	**161**	P	**P**	**14 47 28.1**	**+0.3**
	comp=Z,17nm,0.5s						
SNAA	**Sanae**	**61.45**	**161**	P	**P**	**14 47 28.3**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=292,slow=7.4,SNR=3.5						
	comp=Z,0.8nm,0.5s						
SNAA	**Sanae**	**61.45**	**161**	P	**P**	**14 47 28.1**	**+0.3**
TROLL	**Troll, Antarti**	**63.16**	**161**	⇓P	**P**	**14 47 40.1**	**+0.7**
	comp=Z,50nm,0.5s						
QSPA	**South Pole Qui**	**67.40**	**180**	P	**P**	**14 48 08.2**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=122,slow=1.2,SNR=9.5						
	comp=Z,1.9nm,0.9s						
QSPA	**South Pole Qui**	**67.40**	**180**	P	**P**	**14 48 07.8**	**+0.9**
QSPA				IAmb	IAmb	14 48 15.6	
	comp=Z,4.5nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.90**	**71**	P	**P**	**14 49 14.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=254,slow=4.9,SNR=4.3						
	comp=Z,0.5nm,0.5s						
BOSA	**Boshof**	**83.88**	**118**	P	**P**	**14 49 39.5**	**-2.2**
	comp=Z,1.6nm,0.9s,baz=252,slow=3.2,SNR=1.7						
	comp=Z,1.6nm,0.9s						
YKA	**Yellowknife Ar**	**92.02**	**341**	P	**P**	**14 50 20.8**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=139,slow=4.4,SNR=1.8						
	comp=Z,0.2nm,0.6s						
H11S2	**WAKE ISLAND Hyl**	**26.86**	**277**	T	T	17 16 03.4	
	baz=106,slow=75,SNR=93						
H11S1	**WAKE ISLAND Hyl**	**26.87**	**277**	T	T	17 16 03.6	
	baz=106,slow=75,SNR=97						
H11S3	**WAKE ISLAND Hyl**	**26.88**	**277**	T	T	17 16 04.5	
	baz=106,slow=75,SNR=104						
H11N3	**WAKE ISLAND Hyl**	**26.98**	**278**	T	T	17 16 19.9	
	baz=104,slow=75,SNR=77						
H11N1	**WAKE ISLAND Hyl**	**27.00**	**278**	T	T	17 16 21.3	
	baz=104,slow=75,SNR=70						
H11N2	**WAKE ISLAND Hyl**	**27.00**	**278**	T	T	17 16 13.4	
	baz=104,slow=75,SNR=75						
WRA	**Warramunga Arr**	**131.24**	**211**	PKP	**PKiKP**	**14 56 24.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=156,slow=1.4,SNR=2.0						
BNX	**BinXian**	**153.01**	**332**	⇓P	**PKiKP**	**14 57 07.9**	**-0.7**
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**161.94**	**356**	*eP*	**PKPdf**	**14 57 15.4**	**+2.9**

*SOME **16** 14:43:47.5, 39.°25N×73.°63E, h5km*
*NNC **16** 14:43:51.5±2.4, 39.°38N×73.°69E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=16.9km s-min=10.0km az=170.0*
*KRNET **16** 14:43:55.6±0.1, 39.°49N×73.°67E, h17km, mb2.9*

ISC 16 14:43:55.5±1.8, 39°53N±0'06×73°65E±0'03, h2km±11km, n26, σ1§80/45, 18C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.50**	**347**	⇑*iP*	**Pg**	**14 44 06.1**	**+1.0**
SFK				⇑*iS*	**Sg**	**14 44 13.9**	**+2.3**
OHH	**Osh**	**1.20**	**327**	⇑*iP*	**Pb**	**14 44 18.5**	**-0.5**
OHH				⇑*iS*	**Sg**	**14 44 35.2**	**+1.2**
SALK	**Salom-Alik**	**1.36**	**6**	⇑*iP*	**Pb**	**14 44 21.2**	**-0.6**
SALK				⇑*iS*	**Sg**	**14 44 40.3**	**+1.0**
DRK	**Karamyk**	**1.43**	**269**	⇓*iP*	**Pb**	**14 44 22.2**	**-0.8**
DRK				⇓*iS*	**Sg**	**14 44 41.8**	**+0.4**
JNKS	**Jany-Kuch**	**2.15**	**44**	⇓*eP*	**Pb**	**14 44 34.0**	**-1.3**
JNKS				⇓*eS*	**Sb**	**14 45 01.6**	**-0.9**
BTK	**Batken**	**2.24**	**285**	⇑*iP*	**Pb**	**14 44 35.0**	**-1.8**
BTK				⇑*iS*	**Sb**	**14 45 04.0**	**-1.0**
ARK	**Arkit**	**2.61**	**331**	⇑*eP*	**Pb**	**14 44 40.5**	**-2.5**
ARK				⇑*eS*	**Sb**	**14 45 13.0**	**-2.5**
NRN	**Naryn**	**2.62**	**43**	⇓*iP*	**Pn**	**14 44 39.7**	**+0.6**
NRN				⇓*iS*	**Sb**	**14 45 12.2**	**-3.9**
TRKS	**Terek-Say**	**2.77**	**317**	⇓*iP*	**Pn**	**14 44 41.6**	**+0.6**
TRKS				⇓*iS*	**Sn**	**14 45 15.4**	**+0.3**
UCH	**Uchtor**	**2.78**	**13**	⇑*iP*	**Pn**	**14 44 42.9**	**+1.5**
UCH				⇑*iS*	**Sb**	**14 45 17.2**	**-3.6**
MNAS	**Manas**	**3.08**	**344**	⇑*iP*	**Pn**	**14 44 47.0**	**+1.7**
MNAS				⇑*iS*	**Sn**	**14 45 24.4**	**+1.5**
AAK	**Ala-Archa**	**3.17**	**11**	⇓Pg	**Pb**	**14 44 51.7**	**-1.0**
	0.9nm,0.5s						
AAK				⇑Lg	Lg	14 45 37.0	
	10nm,0.9s						
MRKS	**Merke**	**3.23**	**354**	Pg	**Pb**	**14 44 51.4**	**-2.2**
	5.3nm,0.3s						
MRKS				Lg	Lg	14 45 38.7	
	24nm,0.5s						
MRKS	**Merke**	**3.23**	**354**	*eP*	**Pb**	**14 44 51.4**	**-2.2**
	5.3nm,0.3s						
MRKS				*eS*	**Sg**	**14 45 37.7**	**-1.6**
	22nm,0.3s						
ULHL	**Ulahol**	**3.35**	**35**	⇓*eP*	**Pn**	**14 44 50.6**	**+1.5**
ULHL				⇓*eS*	**Sn**	**14 45 30.5**	**+0.8**
BOOM	**Boomskoye usch**	**3.43**	**30**	⇑*eP*	**Pn**	**14 44 51.9**	**+1.7**
BOOM				⇑*eS*	**Sn**	**14 45 32.8**	**+1.3**
IUG	**Iuzhnay**	**3.79**	**315**	Pg	**Pb**	**14 45 01.6**	**-1.6**
	6.1nm,0.2s						
IUG				Lg	Lg	14 45 55.7	
	16nm,0.4s						
IUG	**Iuzhnay**	**3.79**	**315**	*eP*	**Pb**	**14 45 01.6**	**-1.6**
	6.1nm,0.2s						
IUG				*eS*	**Sg**	**14 45 55.2**	**-2.1**
	16nm,0.4s						
KST	**Kastek**	**3.92**	**26**	Pg	**Pb**	**14 45 05.3**	**-0.1**
	1.8nm,0.4s						
KST				Lg	Lg	14 46 01.9	
	12nm,0.5s						
KST	**Kastek**	**3.92**	**26**	*eP*	**Pb**	**14 45 05.3**	**-0.1**
	1.8nm,0.4s						
KST				*eS*	**Sg**	**14 46 01.3**	**-0.2**
	12nm,0.7s						
SGDS	**Sogindy**	**3.99**	**10**	Pg	**Pb**	**14 45 06.5**	**-0.1**
	0.9nm,0.3s						
SGDS				Lg	Lg	14 46 03.6	
	6.5nm,0.7s						
KK31	**Karatay Array**	**4.28**	**328**	⇓Pn	**Pn**	**14 45 02.0**	**+0.3**
	0.4nm,0.2s,baz=140,slow=12,SNR=4.9						
KK31				⇓Sn	**Sn**	**14 45 53.3**	**+1.0**
	0.7nm,0.3s						
KK31				⇑Lg	Lg	14 46 13.7	
	5.7nm,0.6s,baz=133,slow=28,SNR=5.0						
BRLS	**Borolday**	**4.53**	**322**	Pg	**Pb**	**14 45 13.1**	**-2.5**
	1.4nm,0.3s						
BRLS				Lg	Lg	14 46 15.8	
	5.1nm,0.3s						
BRLS	**Borolday**	**4.53**	**322**	*eP*	**Pb**	**14 45 13.1**	**-2.5**
	1.4nm,0.3s						
BRLS				*eS*	**Sb**	**14 46 15.0**	**+4.3**
	5.1nm,0.3s						
KTBS	**Karatobe**	**4.76**	**28**	Pg	**Pb**	**14 45 19.6**	**0.0**
	0.2nm,0.1s						
KTBS				Lg	Lg	14 46 26.3	
	3.4nm,0.3s						
KTBS	**Karatobe**	**4.76**	**28**	*eP*	**Pb**	**14 45 19.6**	**0.0**
	0.2nm,0.1s						
KTBS				*eS*	**Sg**	**14 46 26.3**	**-2.1**
	3.4nm,0.3s						

*IDC **16** 14:47:23.4±1.3, 4.°46S×101.°81E, h0km, mb4.2/13, mbtmp4.2/14, ML4.2/1, MS3.6/4, Error ellipse: s-maj=47.5km s-min=14.3km az=54.0*
*DJA **16** 14:47:28.1±0.4, 5.°3S×10.°2E±.°, h10km, M4.4/19, mb4.5/5, MLv4.3/19*
*NEIC **16** 14:47:30.6±1.4, 4.°4S±0.°1×101.°93E±0.°08, h39km±9km, mb4.3/10, Error ellipse: s-maj=18.9km s-min=8.8km az=205.0*

ISC 16 14:47:28.7±0.7, 4°51S±0'06×101°79E±0'08, h37km, n55, σ1§20/45, mb4.2/17, MS3.7/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGSI	**Enggano, Bengk**	**0.97**	**150**	P	**Pn**	**14 47 45.7**	**-0.1**
EGSI				S	**Sn**	**14 47 59.2**	**+0.8**
KSI	**Kapahiang**	**1.17**	**43**	P	**Pn**	**14 47 49.3**	**+0.7**
MNAI	**Manna**	**1.17**	**83**	Pn	**Pn**	**14 47 48.9**	**+0.3**
MNAI				Sn	**Sn**	**14 48 01.2**	**-2.1**
MNAI	**Manna**	**1.17**	**83**	P	**Pn**	**14 47 49.5**	**+0.9**
PPI	**Padang Panjang**	**4.26**	**341**	P	Pn	14 48 45.8	+15
DSRI	**Dabo**	**4.88**	**35**	P	**Pn**	**14 48 42.8**	**+3.2**
LEM	**Lembang**	**6.24**	**112**	Pn	**Pn**	**14 48 57.9**	**-0.5**
	5.2nm,0.3s,baz=319,slow=19,SNR=2.1						
LEM				Sn	**Sn**	**14 50 13.6**	**+4.9**
	4.6nm,0.3s,baz=322,slow=21,SNR=1.5						
	11nm,0.3s						
BBJI	**Bungbulang**	**6.53**	**117**	Pn	**Pn**	**14 49 01.7**	**-0.6**
BBJI	**Bungbulang**	**6.53**	**117**	P	**Pn**	**14 49 02.2**	**-0.1**
	26nm,0.6s						
GSI	**Gunungsitoli**	**7.14**	**324**	Pn	**Pn**	**14 49 12.1**	**+1.3**
UGM	**Wanagama**	**9.32**	**112**	Pn	**Pn**	**14 49 41.7**	**+1.1**
JAGI	**Jajag, Banyuwa**	**12.90**	**108**	Pn	**Pn**	**14 50 29.1**	**-0.5**
KAPI	**Kappang**	**17.91**	**92**	LR	LR	14 59 15.4	
	comp=Z,148nm,21.5s,baz=271,slow=40						
MMRI	**Maumere**	**20.72**	**102**	P	**P**	**14 52 04.5**	**-1.7**
MMRI				IAmb	IAmb	14 52 10.5	
	comp=Z,18nm,0.9s						
BATI	**Baumata**	**22.41**	**106**	P	**P**	**14 52 23.7**	**-0.7**
	comp=Z,11nm,0.3s,baz=277,slow=8.1,SNR=2.4						
	comp=Z,11nm,0.3s						
CMAR	**Chiang Mai Arr**	**22.99**	**353**	P	**P**	**14 52 29.4**	**-0.9**
	comp=Z,0.4nm,0.2s,baz=166,slow=9.0,SNR=2.5						
	comp=Z,0.4nm,0.2s						
FITZ	**Fitzroy Crossi**	**26.96**	**122**	P	**P**	**14 53 07.5**	**+0.5**
KNRA	**Kununurra**	**28.74**	**115**	P	**P**	**14 53 22.6**	**-0.4**
KNRA				IAmb	IAmb	14 54 04.4	
	comp=Z,18nm,1.4s						
H08S2	**Diego Garcia H**	**29.29**	**262**	T	T	15 23 48.2	
	baz=86,slow=75,SNR=151						
H08S3	**Diego Garcia H**	**29.30**	**262**	T	T	15 23 48.8	
	baz=86,slow=75,SNR=229						
H08S1	**Diego Carcia H**	**29.31**	**262**	T	T	15 23 49.7	
	baz=86,slow=75,SNR=156						
H01W3	**Cape Leeuwin H**	**32.32**	**161**	T	T	15 27 39.4	
	baz=337,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	**32.33**	**161**	T	T	15 27 45.2	
	baz=337,slow=76,SNR=8.7						
H01W1	**Cape Leeuwin H**	**32.33**	**161**	T	T	15 27 42.4	
	baz=337,slow=76,SNR=12						
WB0	**Warramunga Arr**	**35.20**	**118**	P	**P**	**14 54 20.2**	**+0.6**
WB0				IAmb	IAmb	14 54 24.0	
	comp=Z,3.4nm,0.9s						
WRA	**Warramunga Arr**	**35.21**	**119**	P	**P**	**14 54 20.0**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=297,slow=7.7,SNR=21						
WRA				PcP	**PcP**	**14 56 50.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=297,slow=2.0,SNR=2.1						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**35.21**	**119**	P	**P**	**14 54 20.3**	**+0.6**
WRA				PcP	**PcP**	**14 56 50.6**	**+0.2**
WR8	**Warramunga Arr**	**35.36**	**119**	P	**P**	**14 54 21.1**	**+0.1**
AS31	**Alice Springs**	**36.35**	**125**	P	**P**	**14 54 30.4**	**+0.8**
AS31				IAmb	IAmb	14 54 43.0	
	comp=Z,2.8nm,1.3s						
ASAR	**Alice Springs**	**36.35**	**125**	P	**P**	**14 54 29.9**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=298,slow=8.5,SNR=63						
ASAR				PcP	**PcP**	**14 56 54.4**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=301,slow=2.9,SNR=3.0						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**36.35**	**125**	P	**P**	**14 54 30.1**	**+0.6**
INKA	**Innaminka**	**43.67**	**126**	P	**P**	**14 55 31.0**	**+0.8**
INKA				IAmb	IAmb	14 55 47.5	
	comp=Z,7.6nm,1.5s						
MANU	**Manus Island**	**45.56**	**88**	P	**P**	**14 55 45.0**	**-0.5**
STKA	**Stephens Creek**	**46.16**	**131**	P	**P**	**14 55 48.5**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=286,slow=2.6,SNR=5.0						
STKA				LR	LR	15 15 34.2	
	comp=Z,112nm,19.4s,baz=217,slow=37						
	comp=Z,1.5nm,0.5s						
KSRS	**Korea Array**	**48.32**	**28**	P	**P**	**14 56 05.1**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=226,slow=6.6,SNR=6.6						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**52.28**	**4**	P	**P**	**14 56 37.1**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=184,slow=9.7,SNR=4.9						
	comp=Z,2.3nm,0.5s						
SONM	**Songino Array**	**52.28**	**4**	P	**P**	**14 56 37.1**	**+0.6**
SONM				IAmb	IAmb	14 56 38.5	
	comp=Z,2.2nm,0.7s						
MKAR	**Makanch

*IDC **16** 14:54:27.5±0.8,32.°90N×91.°43E,h0km,mb3.6/12, mbtmp3.7/13,ML3.6/1,MS3.4/1,Error ellipse: s-maj=32.1km s-min=16.2km az=52.0*

ISC 16 14:54:32.8±1.0,33.°0N±0.°2×91.°5E±0.°2,h35km,n15, σ1s12/14,mb3.6/10,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**15.49**	**336**	Pn	**Pn**	**14 58 09.8**	**+1.1**
	baz=144,slow=13,SNR=1.3						
SONM	**Songino Array**	**18.66**	**33**	P	**P**	**14 58 46.6**	**-1.1**
	0.2nm,0.3s,baz=216,slow=13,SNR=2.4						
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**20.06**	**335**	P	**P**	**14 59 01.3**	**-1.6**
	0.5nm,0.5s,baz=149,slow=11,SNR=3.5						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**21.51**	**349**	P	**P**	**14 59 19.6**	**+1.1**
	0.8nm,0.5s,baz=169,slow=8.8,SNR=5.7						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	**25.13**	**329**	P	**P**	**14 59 56.1**	**+1.8**
	0.8nm,0.5s,baz=137,slow=9.7,SNR=4.0						
	0.8nm,0.5s						
KSRS	**Korea Array**	**30.00**	**71**	P	**P**	**15 00 38.3**	**+0.2**
	0.4nm,0.5s,baz=273,slow=9.8,SNR=1.9						
	0.4nm,0.5s						
AKTO	**Aktyubinsk**	**30.14**	**315**	P	**P**	**15 00 39.0**	**-0.2**
	1.1nm,0.5s,baz=118,slow=4.2,SNR=3.6						
	1.1nm,0.5s						
JNU	**Nakatsue**	**32.90**	**79**	LR	LR	15 14 27.8	
	comp=Z,61nm,18.9s,baz=36,slow=36						
ARCES	**ARCESS Array B**	**51.15**	**336**	P	**P**	**15 03 32.8**	**+0.9**
	0.6nm,0.6s,baz=104,slow=6.9,SNR=4.1						
	0.6nm,0.6s						
HFS	**Hagfors**	**56.09**	**324**	P	**P**	**15 04 07.0**	**-1.2**
	0.5nm,0.5s,baz=79,slow=7.8,SNR=5.1						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**57.16**	**325**	P	**P**	**15 04 14.6**	**-1.2**
	0.3nm,0.7s,baz=82,slow=6.9,SNR=1.3						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**66.67**	**136**	P	**P**	**15 05 19.9**	**-0.3**
	1.7nm,0.8s,baz=323,slow=6.5,SNR=14						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**69.34**	**139**	P	**P**	**15 05 37.2**	**+0.2**
	1.5nm,0.7s,baz=324,slow=6.3,SNR=34						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**72.53**	**22**	P	**P**	**15 05 56.1**	**+0.4**
	0.3nm,0.8s,baz=306,slow=5.2,SNR=4.3						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.79**	**281**	P	**P**	**15 06 54.2**	**+0.4**
	0.3nm,0.6s,baz=65,slow=3.5,SNR=4.2						
	0.3nm,0.6s						

TAP 16 15:22:29.4,23.°94N×120.°98E,h12km,ML3.0,8C-6D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WPL	**Puli Township**	**0.08**	**342**	⇑*iP*	Pg	15 22 32.4	+0.3
WPL				S	Sg	15 22 34.7	+0.6
SMLT	**Sun Moon Lake**	**0.09**	**236**	⇑*iP*	Pg	15 22 32.6	+0.3
SMLT				*i* S	Sg	15 22 35.1	+0.7
DPDB	**Guoxing**	**0.11**	**332**	⇑P	Pg	15 22 32.9	+0.3
DPDB				S	Sg	15 22 35.6	+0.8
TYC	**Yuchr**	**0.12**	**255**	⇑*iP*	Pg	15 22 32.8	+0.2
TYC				*i* S	Sg	15 22 35.2	+0.3
WUSB	**Renai**	**0.14**	**65**	⇑P	Pg	15 22 33.3	+0.4
WUSB				S	Sg	15 22 35.5	+0.1
WCS	**Beigang Elemen**	**0.14**	**331**	⇑P	Pg	15 22 33.2	+0.3
WCS				eS	Sg	15 22 35.9	+0.6
SSLB	**Suanglung**	**0.15**	**191**	⇓*iP*	Pg	15 22 33.1	0.0
SSLB				*i* S	Sg	15 22 35.4	-0.2
OWD	**Renai**	**0.18**	**84**	⇓*iP*	Pg	15 22 34.1	+0.5
OWD				*i* S	Sg	15 22 37.4	+0.9
VWDT	**VWDT**	**0.23**	**141**	⇓*iP*	Pb	15 22 35.0	-0.6
VWDT				*i* S	Sg	15 22 38.5	+0.8
WJS	**Zhushan**	**0.26**	**244**	*eP*	Pb	15 22 35.9	-0.1
WJS				eS	Sb	15 22 41.1	+0.6
WHYT	**Xinyi Township**	**0.27**	**207**	P	Pg	15 22 35.5	+0.5
WHYT				S	Sb	15 22 40.2	-0.5
WNT	**Mingjian**	**0.28**	**258**	P	Pb	15 22 36.4	0.0
WNT				S	Sb	15 22 41.6	+0.5
WHF	**Hehuan Shan**	**0.33**	**51**	⇑*iP*	Pb	15 22 37.1	-0.5
WHF				*i* S	Sg	15 22 41.8	+0.8
WHP	**Taichung City**	**0.34**	**354**	P	Pb	15 22 37.4	-0.2
WHP				S	Sb	15 22 42.5	-0.5
TCU	**Taichung**	**0.35**	**307**	*iP*	Pb	15 22 38.0	+0.4
TCU				*i* S	Sb	15 22 44.0	+1.8
TDCB	**Techi**	**0.35**	**27**	P	Pg	15 22 36.6	-0.1
TDCB				S	Sg	15 22 41.3	-0.2
TWT	**Tachien**	**0.36**	**29**	*iP*	Pg	15 22 36.7	-0.1
TWT				*i* S	Sg	15 22 41.3	-0.5
FUSS	**Fushou**	**0.39**	**37**	P	Pg	15 22 37.2	-0.1
FUSS				S	Sg	15 22 42.6	-0.1
LXIB	**Xiulin Townshi**	**0.40**	**78**	⇓P	Pg	15 22 37.8	+0.3
LXIB				*i* S	Sg	15 22 42.9	0.0
WCHH	**Zhanghua**	**0.41**	**290**	P	Pb	15 22 39.0	+0.3
WCHH				eS	Sb	15 22 46.4	+1.4
WCH1	**Changhua City**	**0.42**	**289**	P	Pb	15 22 39.2	+0.4
WCH1				*i* S	Sb	15 22 46.6	+1.5
WARBT	**Fenglin Townsh**	**0.43**	**120**	⇓P	Pg	15 22 38.2	+0.2
WARBT				*i* S	Sg	15 22 44.2	+0.6
CHN5	**Tsauling**	**0.44**	**220**	P	Pb	15 22 39.1	0.0
CHN5				eS	Sb	15 22 47.4	+1.7
ALS	**Alishan**	**0.45**	**201**	⇑*iP*	Pb	15 22 39.1	-0.4
ALS				*i* S	Sb	15 22 46.6	+0.2
TWQ1	**Liyutan**	**0.45**	**335**	⇓*iP*	Pb	15 22 39.8	+0.4
TWQ1				*i* S	Sb	15 22 47.7	+1.6
WDL	**Douliou City**	**0.46**	**242**	*eP*	Pb	15 22 39.9	+0.4
WDL				S	Sb	15 22 48.0	+1.7
ETM	**Tongmen**	**0.47**	**86**	*eP*	Pg	15 22 38.8	+0.2
ETM				eS	Sg	15 22 45.4	+0.5
WDLH	**Douliu**	**0.48**	**239**	*eP*	Pb	15 22 40.0	+0.3
WDLH				S	Sb	15 22 47.6	+0.9
WDJ	**Dajia District**	**0.52**	**323**	*eP*	Pb	15 22 41.3	+0.8
WDJ				eS	Sn	15 22 50.5	-0.9
EHY	**Hungye**	**0.53**	**144**	*iP*	Pg	15 22 39.9	+0.1
EHY				eS	Sb	15 22 47.6	-0.6
ETLH	**Xiulin Townshi**	**0.53**	**59**	*eP*	Pg	15 22 39.9	0.0
ETLH				S	Sg	15 22 47.1	+0.2
EHYH	**Wanrong**	**0.55**	**143**	*eP*	Pb	15 22 40.7	-0.3
EHYH				*i* S	Sb	15 22 48.4	-0.4
SHUL	**Shoufeng**	**0.55**	**105**	P	Pb	15 22 40.9	-0.1
SHUL				eS	Sb	15 22 49.1	+0.3
WRL	**Guolierlin Hig**	**0.56**	**267**	*eP*	Pg	15 22 40.3	0.0
TEYL	**Yanliau Villag**	**0.57**	**97**	*eP*	Pb	15 22 41.1	-0.2
HWA	**Hwalien**	**0.57**	**86**	*eP*	Pb	15 22 41.2	-0.1
HWA				*i* S	Sb	15 22 49.9	+0.5
RLNB	**Erlin**	**0.57**	**266**	*eP*	Pg	15 22 41.0	+0.3
RLNB				eS	Sb	15 22 50.3	+0.8
TWD	**Chiawan**	**0.58**	**75**	*iP*	Pg	15 22 40.9	+0.1
TWD				*i* S	Sg	15 22 48.8	+0.4
HGSD	**Ruisui**	**0.60**	**137**	*eP*	Pb	15 22 41.9	+0.1
HGSD				S	Sb	15 22 51.2	+1.0
WTK	**Tuku**	**0.60**	**246**	*eP*	Pb	15 22 41.7	-0.1
WTK				*i* S	Sn	15 22 51.8	-1.5
WCKO	**Fanlu**	**0.60**	**215**	*eP*	Pb	15 22 41.8	-0.2
WCKO				*i* S	Sb	15 22 50.8	+0.4
NACB	**Ninganchiao**	**0.61**	**67**	*iP*	Pg	15 22 41.3	0.0
NACB				*i* S	Sg	15 22 49.2	-0.1
NNSB	**Datong**	**0.61**	**36**	*eP*	Pg	15 22 44.0	-1.1
NNSB				*i* S	Sg	15 22 49.8	+0.2
YULB	**Yu-li**	**0.61**	**152**	*iP*	Pg	15 22 41.4	0.0
YULB				S	Sb	15 22 50.4	-0.2
NNS	**Nan Shan**	**0.62**	**35**	*eP*	Pg	15 22 41.2	-0.3
NNS				S	Sg	15 22 50.1	+0.4
ETL	**Fush Village**	**0.62**	**69**	*eP*	Pg	15 22 41.6	0.0
NMLH	**Miaoli**	**0.62**	**344**	*eP*	Pn	15 22 43.2	-0.9
NMLH				eS	Sb	15 22 52.3	+1.3
TWF1	**Yuli**	**0.65**	**154**	*eP*	Pg	15 22 42.2	+0.2
TWF1				S	Sb	15 22 51.7	0.0
EYUL	**Yuli**	**0.66**	**152**	*eP*	Pb	15 22 43.0	+0.1
CHY	**Chiayi**	**0.67**	**230**	*eP*	Pb	15 22 43.2	+0.1
CHY				eS	Sn	15 22 53.8	-1.3
CHN4	**Tsaushan**	**0.68**	**212**	*eP*	Pb	15 22 43.2	0.0
NSTT	**Nanjuang**	**0.69**	**1**	*eP*	Pb	15 22 43.6	+0.1
NSTT				eS	Sb	15 22 53.5	+0.6
NFF	**Wufeng Townshi**	**0.70**	**10**	*eP*	Pb	15 22 44.1	+0.4
NFF				S	Sn	15 22 55.1	-1.0
LIOB	**Emei**	**0.71**	**2**	*iP*	Pb	15 22 44.2	+0.5
LIOB				S	Sb	15 22 54.6	+1.2
TPUB	**Ta-pu**	**0.71**	**207**	*iP*	Pb	15 22 43.6	-0.2
TPUB				eS	Sb	15 22 54.0	+0.5
ELDTW	**Lidau**	**0.74**	**178**	*iP*	Pb	15 22 44.4	0.0
ECBN	**Changbin**	**0.75**	**145**	P	Pn	15 22 45.5	-0.3
WTP	**Ta-pu**	**0.77**	**206**	*eP*	Pg	15 22 44.4	+0.1
WTP				S	Sb	15 22 55.2	+0.1
LATG	**Datong**	**0.78**	**40**	P	Pg	15 22 44.0	-0.6
STYH	**Taoyuan**	**0.79**	**194**	*eP*	Pb	15 22 44.9	-0.1
FULB	**Fuli**	**0.79**	**159**	*eP*	Pn	15 22 45.8	-0.5
WSL	**Shuilin Townsh**	**0.81**	**240**	*eP*	Pg	15 22 45.0	-0.1
TWK	**Hsinying**	**0.81**	**214**	P	Pg	15 22 45.0	-0.1
EHD	**Haiduan**	**0.81**	**165**	*eP*	Pb	15 22 45.6	+0.2
NSK	**Sanguang**	**0.81**	**25**	*eP*	Pg	15 22 44.5	-0.7
YHNB	**Yeheng**	**0.81**	**26**	*eP*	Pg	15 22 45.1	-0.2
CHKH	**Chenggong**	**0.83**	**153**	*eP*	Pb	15 22 45.7	-0.1
ENA	**Nanau**	**0.85**	**54**	*eP*	Pg	15 22 44.2	-1.7
KSHI	**Guanxi Townshi**	**0.86**	**12**	*eP*	Pn	15 22 48.0	+0.7
ECS	**Chishang**	**0.86**	**165**	*eP*	Pb	15 22 46.6	+0.2
ICHU	**Yijhu**	**0.86**	**229**	*eP*	Pg	15 22 45.3	-0.8
EWUT	**Wuta**	**0.89**	**55**	*eP*	Pg	15 22 45.9	-0.7
CHKT	**Chengkung**	**0.90**	**157**	P	Pn	15 22 48.0	+0.1
SGST	**Jiashian**	**0.93**	**204**	*eP*	Pg	15 22 46.9	-0.5
NWLT	**Wulai**	**0.96**	**29**	*eP*	Pg	15 22 47.6	-0.4
NDS	**Dongshan**	**0.96**	**44**	*eP*	Pg	15 22 47.5	-0.6
SLGT	**Liugui**	**0.99**	**198**	*eP*	Pn	15 22 49.8	+0.7
FUSB	**Fushanzhiwuyua**	**0.99**	**34**	*eP*	Pg	15 22 48.6	0.0
TWE	**Neicheng**	**1.00**	**38**	P	Pn	15 22 49.6	+0.3
EDH	**Donghe**	**1.00**	**163**	*eP*	Pn	15 22 49.7	+0.4
LONT	**Longtian**	**1.03**	**173**	*eP*	Pn	15 22 49.7	0.0
TWC	**Suao**	**1.04**	**49**	P	Pb	15 22 48.8	-0.5
TWG	**Pinlang**	**1.11**	**176**	P	Pg	15 22 51.1	+0.3
TWGBT	**Beinan**	**1.12**	**175**	*eP*	Pg	15 22 51.0	+0.1
TSCK	**Chigu Township**	**1.14**	**227**	*eP*	Pb	15 22 50.7	-0.3
SSD	**Sandimen**	**1.23**	**195**	*eP*	Pb	15 22 52.6	0.0

IDC 16 15:22:44.2±5.0,8.°36S×119.°05E,h265km±66km,mb2.2/2, mbtmp3.1/4,Error ellipse: s-maj=155.1km s-min=17.7km az=47.0,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.62**	**147**	P	Pn	15 25 23.1	+0.4
	2.4nm,1.0s,baz=333,slow=14,SNR=2.0						
FITZ				S	S	15 27 22.1	-10
	0.9nm,0.5s,baz=26,slow=15,SNR=1.3						
WRA	**Warramunga Arr**	**18.76**	**129**	P	P	15 26 43.8	-0.4
	0.6nm,1.0s,baz=304,slow=12,SNR=4.8						
WRA				S	S	15 30 04.5	+1.0
	0.3nm,0.8s,baz=299,slow=21,SNR=1.5						
ASAR	**Alice Springs**	**20.84**	**139**	P	P	15 27 07.0	+0.8
	0.1nm,0.5s,baz=313,slow=10,SNR=5.8						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**63.91**	**333**	P	P	15 32 48.2	-0.8
	0.1nm,0.4s,baz=132,slow=6.5,SNR=1.5						
	0.1nm,0.4s						

*IDC **16** 15:28:00.3±1.3,9.°39S×126.°55E,h0km,mb3.6/4, mbtmp3.7/8,ML3.7/4,Error ellipse: s-maj=39.6km s-min=20.4km az=63.0*
*DJA **16** 15:28:06.6±0.6,9.°5S×8.°3×12.°6E±.°,h10km,M3.8/6,mB5.7/1, mb4.2/2,MLv3.5/6,Mw(mB)5.2/1*

ISC 16 15:28:05.3±1.0,9.°58S±0.°09×126.°48E±0.°10,h35km,n10, σ1s88/12,mb3.7/4,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.19**	**265**	P	**Pn**	**15 28 42.7**	**+3.3**
BATI	**Baumata**	**2.85**	**257**	Pn	**Pn**	**15 28 48.4**	**+0.1**
	7.9nm,0.3s,baz=90,slow=3.0,SNR=14						
BATI				Sn	**Sn**	**15 29 20.9**	**-0.6**
	5.7nm,0.3s,baz=57,slow=17,SNR=6.2						
	15nm,0.3s						
BATI	**Baumata**	**2.85**	**257**	P	**Pn**	**15 28 47.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**8.51**	**185**	Pn	**Pn**	**15 30 08.9**	**+2.8**
	1.0nm,0.3s,baz=14,slow=13,SNR=41						
FITZ				Sn	**Sn**	**15 31 38.5**	**-2.3**
	1.9nm,0.3s,baz=37,slow=10,SNR=9.6						
	3.0nm,0.4s						
WRA	**Warramunga Arr**	**12.79**	**145**	Pn	**Pn**	**15 31 04.9**	**+0.1**
	0.4nm,0.3s,baz=325,slow=13,SNR=19						
WRA				Sn	Sn	15 33 19.8	-6.3
	0.6nm,0.3s,baz=318,slow=25,SNR=7.5						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**15.70**	**154**	Pn	**Pn**	**15 31 44.6**	**+0.6**
	0.3nm,0.3s,baz=326,slow=10,SNR=18						
ASAR				Sn	Sn	15 34 30.3	-6.7
	0.2nm,0.3s,baz=326,slow=26,SNR=6.2						
	0.7nm,0.7s						
STKA	**Stephens Creek**	**26.24**	**150**	P	**P**	**15 33 37.9**	**+0.7**
	1.6nm,0.9s,baz=326,slow=11,SNR=3.5						
	1.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.92**	**316**	P	**P**	**15 35 25.9**	**-2.1**
	0.6nm,0.4s,baz=136,slow=10,SNR=2.7						
	0.6nm,0.4s						
SONM	**Songino Array**	**59.88**	**344**	P	**P**	**15 38 06.8**	**-0.8**
	0.6nm,0.5s,baz=163,slow=7.1,SNR=1.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**68.55**	**329**	P	**P**	**15 39 05.4**	**+0.9**
	0.1nm,0.5s,baz=123,slow=5.3,SNR=1.6						
	0.1nm,0.5s						

*TAP **16** 15:42:22.3,24.°83N×122.°97E,h121km,ML3.5,D*
*JMA **16** 15:42:22.0±0.2,25.°1N±2.°×122.°9E±0.°5,h134km±1km, MV2.5/16,NW OFF ISHIGAKIJIMA IS*

ISC 16 15:42:23.0±1.5,24.°75N±0.°05×122.°94E±0.°03,h125km±8km, n90,σ0s81/160,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.29**	**167**	P	**Pn**	**15 42 40.5**	**0.0**
YOJ				S	**Sn**	**15 42 52.6**	**-1.1**
YOJ	**Yonaguni jima**	**0.29**	**167**	*eP*	**Pn**	**15 42 40.6**	**0.0**
YOJ				eS	**Sn**	**15 42 54.5**	**+0.8**
JYNG	**Yonagunijimaku**	**0.29**	**179**	*eP*	**Pn**	**15 42 40.6**	**+0.1**
JYNG				eS	**Sn**	**15 42 54.6**	**+0.8**
EOS2	**EOS2**	**0.72**	**243**	P	**Pn**	**15 42 43.0**	**+0.1**
EOS2				S	**Sn**	**15 42 59.3**	**+1.4**
EOS3	**EOS3**	**0.73**	**231**	P	**Pn**	**15 42 43.3**	**+0.4**
EOS3				S	**Sn**	**15 42 59.7**	**+1.8**
IRIF	**Iriomote-Funau**	**0.83**	**120**	*eP*	**Pn**	**15 42 44.0**	**+0.1**
IRIF				eS	**Sn**	**15 43 00.1**	**+0.5**
EOS4	**EOS4**	**0.84**	**222**	P	**Pn**	**15 42 43.8**	**+0.2**
EOS4				S	**Sn**	**15 43 00.7**	**+1.5**
EGS		**0.92**	**276**	*iS*	**Sn**	**15 43 02.1**	**+1.0**
TWC	**Suao**	**1.00**	**262**	*iS*	**Sn**	**15 43 01.2**	**-1.2**
SXI1	**Grass Mountain**	**1.03**	**290**	*eP*	**Pn**	**15 42 45.4**	**-0.4**
SXI1				eS	**Sn**	**15 43 03.2**	**+0.1**
TIPB	**Shuangxi**	**1.04**	**283**	P	**Pn**	**15 42 45.7**	**-0.1**
TIPB				S	**Sn**	**15 43 02.4**	**-0.8**
HATJ	**Hateruma jima**	**1.05**	**131**	*eS*	**Sn**	**15 43 04.0**	**+0.8**
JKRS	**Kuro-shima**	**1.10**	**117**	*eS*	**Sn**	**15 43 04.6**	**+0.4**
EWUT	**Wuta**	**1.10**	**254**	P	**Pn**	**15 42 46.0**	**-0.4**
EWUT				eS	**Sn**	**15 43 03.9**	**-0.3**
NDS	**Dongshan**	**1.12**	**264**	*eP*	**Pn**	**15 42 47.0**	**+0.3**
NDS				eS	**Sn**	**15 43 03.4**	**-1.2**
ENA	**Nanau**	**1.14**	**254**	*eP*	**Pn**	**15 42 45.7**	**-1.1**
ENA				S	**Sn**	**15 43 03.6**	**-1.3**
TWE	**Neicheng**	**1.16**	**269**	*iP*	**Pn**	**15 42 47.0**	**0.0**
TWE				*i* S	**Sn**	**15 43 04.5**	**-0.7**
JIJ	**Ishigaki jima**	**1.16**	**109**	*eP*	**Pn**	**15 42 46.9**	**-0.1**
JIJ				eS	**Sn**	**15 43 04.7**	**-0.6**
EAHA	**Aohua**	**1.17**	**249**	*eS*	**Sn**	**15 43 05.7**	**+0.2**
PCYT	**Pengchaiyu**	**1.18**	**318**	P	**Pn**	**15 42 48.0**	**+0.7**
FUSB	**Fushanzhiwuyua**	**1.23**	**271**	*eP*	**Pn**	**15 42 47.5**	**-0.3**
FUSB				eS	**Sn**	**15 43 05.6**	**-1.1**
JISG	**Ishigakijimahi**	**1.26**	**97**	*eP*	**Pn**	**15 42 47.6**	**-0.4**
JISG				eS	**Sn**	**15 43 06.3**	**-0.7**
YM08	**YM08**	**1.30**	**290**	*eP*	**Pn**	**15 42 49.8**	**+1.3**
YM08				eS	**Sn**	**15 43 07.6**	**-0.4**
LATG	**Datong**	**1.30**	**261**	P	**Pn**	**15 42 48.9**	**+0.3**
LATG				S	**Sn**	**15 43 08.2**	**0.0**
YM01	**YM01**	**1.30**	**288**	P	**Pn**	**15 42 48.3**	**-0.3**
YM01				S	**Sn**	**15 43 07.6**	**-0.5**
NDT	**Datong Townshi**	**1.31**	**264**	*eP*	**Pn**	**15 42 49.1**	**+0.5**
NDT				*i* S	**Sn**	**15 43 08.5**	**+0.5**
NWLT	**Wulai**	**1.31**	**272**	*eP*	**Pn**	**15 42 49.1**	**+0.5**
NWLT				eS	**Sn**	**15 43 08.4**	**+0.3**
ZUZH	**Zhuzihu**	**1.33**	**288**	*eP*	**Pn**	**15 42 47.0**	**-1.9**
ZUZH				*i* S	**Sn**	**15 43 07.8**	**-0.8**
ETL	**Fush Village**	**1.34**	**244**	*eS*	**Sn**	**15 43 08.2**	**-0.5**
NACB	**Ninganchiao**	**1.35**	**245**	*eP*	**Pn**	**15 42 48.5**	**-0.6**
NACB				eS	**Sn**	**15 43 08.2**	**-0.7**
TWD	**Chiawan**	**1.39**	**242**	*iP*	**Pn**	**15 42 49.0**	**-0.6**
TWD				eS	**Sn**	**15 43 08.3**	**-1.4**
NTST	**Danshui**	**1.42**	**287**	*eP*	**Pn**	**15 42 48.6**	**-1.1**
NTST				eS	**Sn**	**15 43 09.8**	**-0.3**
YHNB	**Yeheng**	**1.43**	**267**	P	**Pn**	**15 42 49.9**	**-0.1**
YHNB				*i* S	**Sn**	**15 43 09.9**	**-0.6**
TWS1	**Kuangyinshan**	**1.43**	**285**	*eP*	**Pn**	**15 42 49.6**	**-0.3**
TWS1				eS	**Sn**	**15 43 12.0**	**+1.6**
ETLH	**Xiulin Townshi**	**1.43**	**248**	*eP*	**Pn**	**15 42 49.5**	**-0.6**
ETLH				eS	**Sn**	**15 43 09.8**	**-0.9**
HWA	**Hwalien**	**1.44**	**238**	P	**Pn**	**15 42 49.3**	**-0.7**
HWA				eS	**Sn**	**15 43 11.2**	**+0.6**
NSK	**Sanguang**	**1.44**	**267**	P	**Pn**	**15 42 50.0**	**-0.2**
NSK				*i* S	**Sn**	**15 43 10.0**	**-0.8**
NNSB	**Datong**	**1.45**	**258**	P	**Pn**	**15 42 50.0**	**-0.3**
NNSB				eS	**Sn**	**15 43 10.6**	**-0.5**
NNS	**Nan Shan**	**1.46**	**258**	*iP*	**Pn**	**15 42 50.4**	**0.0**
NNS				eS	**Sn**	**15 43 11.1**	**-0.1**
TEYL	**Yanliau Villag**	**1.50**	**235**	*eP*	**Pn**	**15 42 50.1**	**-0.7**
TEYL				eS	**Sn**	**15 43 11.4**	**-0.6**
ETM	**Tongmen**	**1.53**	**240**	*eP*	**Pn**	**15 42 50.5**	**-0.7**
ETM				eS	**Sn**	**15 43 11.3**	**-1.2**
LXIB	**Xiulin Townshi**	**1.57**	**243**	*eP*	**Pn**	**15 42 51.0**	**-0.7**
LXIB				eS	**Sn**	**15 43 12.4**	**-1.1**
SHUL	**Shoufeng**	**1.58**	**233**	*eP*	**Pn**	**15 42 51.5**	**-0.1**
SHUL				*i* S	**Sn**	**15 43 13.4**	**0.0**
KSHI	**Guanxi Townshi**	**1.60**	**271**	*iP*	**Pn**	**15 42 51.9**	**0.0**
KSHI				eS	**Sn**	**15 43 14.0**	**0.0**
JTJ	**Tarama**	**1.61**	**93**	*eP*	**Pn**	**15 42 51.9**	**-0.1**
JTJ				eS	**Sn**	**15 43 13.9**	**-0.1**
FUSS	**Fushou**	**1.62**	**252**	*eP*	**Pn**	**15 42 52.9**	**+0.4**
FUSS				S	**Sn**	**15 43 14.2**	**-0.6**
WHF	**Hehuan Shan**	**1.64**	**249**	*iP*	**Pn**	**15 42 52.7**	**-0.1**
WHF				S	**Sn**	**15 43 14.4**	**-1.1**
TEGC	**Jichi Village**	**1.64**	**231**	*eP*	**Pn**	**15 42 52.4**	**0.0**
TEGC				eS	**Sn**	**15 43 14.9**	**0.0**
NFF	**Wufeng Townshi**	**1.66**	**266**	*iP*	**Pn**	**15 42 52.5**	**-0.2**
NFF				*i* S	**Sn**	**15 43 13.9**	**-1.4**
TWT	**Tachien**	**1.68**	**253**	*eS*	**Sn**	**15 43 16.1**	**+0.2**
TDCB	**Techi**	**1.70**	**253**	*eP*	**Pn**	**15 42 54.4**	**+1.2**
TDCB				*i* S	**Sn**	**15 43 15.6**	**-0.6**
WARBT	**Fenglin Townsh**	**1.75**	**234**	P	**Pn**	**15 42 52.8**	**-0.9**
WARBT				*i* S	**Sn**	**15 43 16.0**	**-1.1**
LIOB	**Emei**	**1.75**	**267**	*eP*	**Pn**	**15 42 53.4**	**-0.3**
LIOB				S	**Sn**	**15 43 16.3**	**-0.9**
NSTT	**Nanjuang**	**1.77**	**267**	*iP*	**Pn**	**15 42 53.3**	**-0.5**
NSTT				*i* S	**Sn**	**15 43 16.3**	**-1.2**
OWD	**Renai**	**1.79**	**244**	*eP*	**Pn**	**15 42 54.6**	**+0.3**
OWD				eS	**Sn**	**15 43 17.1**	**-1.2**
WUSB	**Renai**	**1.82**	**246**	*eP*	**Pn**	**15 42 55.0**	**+0.3**
WUSB				eS	**Sn**	**15 43 18.4**	**-0.5**
HGSD	**Ruisui**	**1.87**	**228**	*eP*	**Pn**	**15 42 55.0**	**-0.1**
HGSD				eS	**Sn**	**15 43 19.6**	**+0.1**
WHP	**Taichung City**	**1.88**	**256**	*eP*	**Pn**	**15 42 55.8**	**+0.5**
WHP				S	**Sn**	**15 43 19.9**	**-0.1**
VWDT	**VWDT**	**1.92**	**239**	*eP*	**Pn**	**15 42 56.0**	**+0.3**
VWDT				*i* S	**Sn**	**15 43 20.5**	**-0.2**
EHYH	**Wanrong**	**1.92**	**230**	*eP*	**Pn**	**15 42 55.6**	**-0.2**
EHYH				eS	**Sn**	**15 43 20.1**	**-0.7**
EHY	**Hungye**	**1.93**	**230**	*eP*	**Pn**	**15 42 55.3**	**-0.5**
**ECB

MOMN	**Momotombo**	**1.28**	**1**	P		**Pn**	**16 03 29.5**	**-0.3**
MOMN				S		**Sn**	**16 03 45.6**	**-1.0**
MOM2	**El Cardon**	**1.31**	**4**	P		**Pn**	**16 03 29.9**	**-0.3**
MOM2				S		**Sn**	**16 03 46.5**	**-0.7**
MACN	**El Madrono**	**1.34**	**356**	P		**Pn**	**16 03 30.5**	**-0.1**
MACN				S		**Sn**	**16 03 48.0**	**-0.1**
CNGA	**Al SSO del Vol**	**1.37**	**355**	P		**Pn**	**16 03 30.8**	**-0.3**
CNGN	**Cerro Negro**	**1.38**	**355**	P		**Pn**	**16 03 30.6**	**-0.5**
CNGN				S		**Sn**	**16 03 48.9**	**0.0**
MOM3	**MOM3**	**1.38**	**2**	P		**Pn**	**16 03 30.9**	**-0.3**
MOM3				S		**Sn**	**16 03 48.9**	**-0.1**
JUD3	**Juan Diaz 3**	**1.39**	**133**	*eP*		**Pn**	**16 03 31.9**	**+0.5**
CLARA	**Aguas Claras**	**1.41**	**104**	*iP*		**Pn**	**16 03 32.1**	**+0.5**
CLARA				*eS*		**Sg**	**16 03 51.7**	**-0.7**
PLVR	**Palo Verde**	**1.43**	**122**	*eP*		**Pn**	**16 03 32.4**	**+0.6**
HORNC	**Hornillas**	**1.43**	**106**	*eP*		**Pn**	**16 03 32.1**	**+0.2**
ILCN	**San Idelfonso**	**1.45**	**355**	P		**Pn**	**16 03 31.7**	**-0.5**
CUI	**Cuipilapa**	**1.46**	**108**	*iP*		**Pn**	**16 03 32.0**	**-0.3**
CUI				*eS*		**Sb**	**16 03 52.3**	**+0.7**
PLRN	**Geotermica Pol**	**1.47**	**353**	P		**Pn**	**16 03 32.1**	**-0.2**
CRIN	**San Cristobal**	**1.64**	**343**	P		**Pn**	**16 03 32.8**	**-1.9**
CRIN				S		**Sn**	**16 03 56.4**	**+1.0**
COTE	**Lago Cote**	**1.71**	**108**	*eP*		**Pn**	**16 03 36.8**	**+1.0**
QUEB	**Quebradon, Cot**	**1.72**	**107**	*eP*		**Pn**	**16 03 36.8**	**+1.0**
JUNT	**Juntas**	**1.79**	**118**	*eP*		Pn	16 03 22.9	-14
TABAC	**Tabacon**	**1.88**	**109**	*eP*		**Pb**	**16 03 39.8**	**-0.7**
CASO	**Castillo**	**1.93**	**111**	*eP*		**Pb**	**16 03 40.3**	**-1.2**
ARE1	**Arenal 1**	**1.94**	**110**	*eP*		**Pb**	**16 03 41.1**	**-0.4**
VARE2	**V. Arenal**	**1.94**	**110**	*eP*		**Pn**	**16 03 39.4**	**+0.5**
LIMN	**Finca el Limon**	**1.94**	**6**	S		**Sn**	**16 04 02.5**	**-0.4**
CSGN	**Cosiguina Volc**	**2.08**	**333**	P		**Pn**	**16 03 42.3**	**+1.5**

*NEIC **16** 16:07:40.0±1.5,51°.5N±0°.08×176°.67W±0°.07,h54km±5km, mb3.7/59,ML4.0/16,ML3.6(AEIC),Error ellipse: s-maj=12.2km s-min=5.7km az=172.0*
*AEIC **16** 16:07:40.0±2.3,51°.53N±0°.05×176°.69W±0°.06,h37km±5km, Error ellipse: s-maj=7.5km s-min=5.3km az=188.0*
*IDC **16** 16:07:41.4±5.5,51°.59N×176°.87W,h62km±48km,mb3.4/10, mbtmp3.7/12,ML1.9/1,MS3.3/3,Error ellipse: s-maj=33.5km s-min=16.9km az=170.0*

ISC 16 16:07:39.4±1.2,**51°.5N**±0°.1×**176°.68W**±0°.04,**h48**km±9km, **n147,σ0.96/144,mb3.8/11,MS3.2/3,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**0.36**	**360**			**Pn**	**16 07 49.1**	**+0.1**
ADK						**Sn**	**16 07 55.9**	**+0.1**
ETKA	**Kagalaska Isla**	**0.38**	**26**			**Pn**	**16 07 49.3**	**+0.1**
ETKA						**Sn**	**16 07 56.4**	**+0.2**
KIMD	**Kanaga Island**	**0.42**	**305**			**Pn**	**16 07 49.8**	**+0.2**
KIMD						**Sn**	**16 07 57.1**	**+0.3**
KIWB	**Kanaga Island**	**0.44**	**319**			**Pn**	**16 07 50.2**	**+0.3**
KIWB						**Sn**	**16 07 57.9**	**+0.6**
KIWB					IAML		16 07 58.5	
	comp=E,11μm,0.4s							
KIRH	**Kanaga Island**	**0.46**	**326**			**Pn**	**16 07 50.6**	**+0.5**
KIRH						**Sn**	**16 07 58.6**	**+0.9**
ADAG	**Mount Adagdak**	**0.47**	**6**			**Pn**	**16 07 50.8**	**+0.7**
KIKV	**Kanaga Island**	**0.47**	**320**			**Pn**	**16 07 50.5**	**+0.3**
KIKV						**Sn**	**16 07 58.6**	**+0.7**
KINC	**Kanaga Island**	**0.50**	**326**			**Pn**	**16 07 51.0**	**+0.4**
KICM	**Kanaga Island**	**0.51**	**322**			**Pn**	**16 07 51.2**	**+0.5**
GSCK	**Great Sitkin C**	**0.59**	**33**			**Pn**	**16 07 52.4**	**+0.7**
GSTD	**Great Sitkin T**	**0.63**	**32**			**Sn**	**16 08 02.0**	**+0.5**
GSIG	**Igitkin Island**	**0.66**	**45**			**Pn**	**16 07 53.1**	**+0.5**
GSIG						**Sn**	**16 08 02.9**	**+0.8**
GSTR	**Great Sitkin T**	**0.69**	**34**			**Pn**	**16 07 53.8**	**+0.8**
GSTR					Sn	**Sn**	**16 08 03.2**	**+0.3**
GSTR					IAML		16 08 06.8	
	comp=N,10μm,0.3s							
GSTR					IAML		16 08 07.0	
	comp=E,9μm,0.4s							
TAPA	**Tanaga Point A**	**0.76**	**293**			**Pn**	**16 07 54.6**	**+0.6**
TAFL	**Tanaga Flats**	**0.79**	**288**			**Pn**	**16 07 54.9**	**+0.6**
TAFL						**Sn**	**16 08 06.3**	**+1.2**
TAFP	**Tanaga Falls P**	**0.90**	**296**			**Pn**	**16 07 56.3**	**+0.6**
TASE	**Tanaga Southea**	**0.90**	**291**			**Sn**	**16 08 09.2**	**+1.4**
GAKI	**Gareloi-Kavalg**	**1.33**	**272**			**Pn**	**16 08 02.3**	**+0.7**
GANO	**Gareloi North**	**1.35**	**284**			**Pn**	**16 08 02.8**	**+0.9**
GASW	**Gareloi Southw**	**1.38**	**282**			**Pn**	**16 08 03.0**	**+0.8**
ATKA	**Atka Island**	**1.69**	**65**			**Pn**	**16 08 07.1**	**+0.7**
ATKA					Sn	**Sn**	**16 08 26.6**	**-0.2**
ATKA					IAML		16 08 31.9	
	comp=N,1μm,0.6s							
KOKL	**Mount Kliuchef**	**1.73**	**61**			**Pn**	**16 08 08.3**	**+1.2**
KONW	**Korovin Northw**	**1.77**	**59**			**Pn**	**16 08 08.7**	**+1.2**
KONE	**Korovin Northe**	**1.81**	**60**			**Pn**	**16 08 09.8**	**+1.7**
CESW	**Semis' Southwe**	**2.37**	**281**			**Pn**	**16 08 16.7**	**+0.9**
AMKA	**Amchitka**	**2.52**	**268**			**Pn**	**16 08 18.6**	**+0.8**
AMKA					Sn	**Sn**	**16 08 47.6**	**+0.5**
AMKA					IAML		16 09 03.3	
	comp=N,263nm,0.5s							
LSPA	**Little Sitkin**	**2.98**	**280**			**Pn**	**16 08 25.3**	**+1.1**
LSNW	**Little Sitkin**	**3.02**	**280**			**Pn**	**16 08 25.7**	**+1.0**
SHEM	**Shemya Is, Ala**	**5.81**	**286**			**Pn**	**16 09 03.7**	**+0.8**
SMY	**Shemya**	**5.81**	**286**			**Pn**	**16 09 02.8**	**0.0**
UNV	**Unalaska Valle**	**6.61**	**65**	Pn		**Pn**	**16 09 14.2**	**+0.3**
SPIA	**Saint Paul Isl**	**6.80**	**31**	Pn		**Pn**	**16 09 16.1**	**-0.4**
LVA	**Lava Point**	**6.97**	**64**	Pn		**Pn**	**16 09 18.7**	**-0.1**
AKUT	**Akutan**	**7.11**	**64**	Pn		**Pn**	**16 09 19.4**	**-1.3**
SDPT	**Sand Point**	**10.40**	**62**	Pn		**Pn**	**16 10 05.0**	**-0.7**
CNBA	**Chernabura Isl**	**10.78**	**65**	Pn		**Pn**	**16 10 11.0**	**+0.1**
O14K	**Tigyukauivet M**	**11.68**	**42**	Pn		**Pn**	**16 10 22.3**	**-0.9**
N14K	**Kuskokwak Cree**	**11.91**	**39**	Pn		**Pn**	**16 10 26.2**	**0.0**
O15K	**Ungalikthiuk R**	**12.26**	**45**	Pn		**Pn**	**16 10 31.7**	**+0.6**
K13K	**Kusilvak Mount**	**12.32**	**27**	Pn		**Pn**	**16 10 33.5**	**+1.5**
N15K	**Kwethluk River**	**12.69**	**41**	Pn		**Pn**	**16 10 35.7**	**-1.3**
P16K	**Nushagak River**	**13.01**	**47**	Pn		**Pn**	**16 10 41.7**	**+0.4**
O16K	**Kokwok River B**	**13.23**	**45**	Pn		**Pn**	**16 10 43.3**	**-1.0**
K15K	**Wolf Creek Mou**	**13.56**	**31**	Pn		**Pn**	**16 10 48.3**	**-0.5**
M16K	**Timber Creek**	**13.65**	**39**	Pn		**Pn**	**16 10 49.5**	**-0.5**
L16K	**Owhat River**	**13.88**	**36**	Pn		**Pn**	**16 10 52.4**	**-0.8**
N17K	**Nushagak Hills**	**14.10**	**43**	Pn		**Pn**	**16 10 54.4**	**-1.7**
SII	**Sitkinak Islan**	**14.12**	**60**	Pn		**Pn**	**16 10 55.1**	**-1.4**
M17K	**Holitna River**	**14.47**	**39**	Pn		**Pn**	**16 10 59.5**	**-1.6**
J16K	**Anvik River**	**14.57**	**30**	Pn		**Pn**	**16 11 01.1**	**-1.4**
O18K	**Koktuh Hills**	**14.65**	**47**	Pn		**Pn**	**16 11 03.8**	**+0.3**
N18K	**Kilae Creek**	**14.73**	**43**	Pn		**Pn**	**16 11 04.0**	**-0.5**
OHAK	**Old Harbor**	**14.74**	**58**	Pn		**Pn**	**16 11 03.2**	**-1.4**
K17K	**Iditarod**	**14.95**	**34**	Pn		**Pn**	**16 11 07.8**	**+0.5**
Q19K	**Cape Douglas,**	**15.04**	**51**	Pn		**Pn**	**16 11 07.6**	**-0.9**
J17K	**VABM Dome**	**15.14**	**31**			**Pn**	**16 11 09.3**	**-0.6**
J17K					IAmb	IAmb	16 11 31.4	
	comp=E,5.5nm,1.0s							
L18K	**Granite Mounta**	**15.23**	**38**	Pn		**Pn**	**16 11 10.9**	**-0.1**
KDAK	**Kodiak Island**	**15.24**	**56**	P		**P**	**16 11 13.5**	**-1.8**
	comp=E,5.3nm,0.4s,baz=260,slow=8.3,SNR=12							
KDAK				S		**Sn**	**16 14 03.3**	**+4.7**
	comp=E,3.5nm,0.9s,baz=288,slow=19,SNR=1.8							
KDAK	**Kodiak Island**	**15.24**	**56**			**Pn**	**16 11 10.5**	**-0.7**
N19K	**Bonanza Creek**	**15.40**	**44**	Pn		**Pn**	**16 11 11.6**	**-1.7**
N19K				IAmb		IAmb	16 11 26.0	
	comp=E,5.3nm,1.1s							
PEA0B	**Petropavlovsk-**	**15.72**	**286**	Pn		**Pn**	**16 11 16.3**	**-1.2**
PETK	**Petropavlovsk-**	**15.72**	**286**	P		**Pn**	**16 11 17.2**	**-0.3**
	baz=93,slow=14,SNR=1.6							
	comp=Z,0.8nm,0.8s							
L19K	**White Mountain**	**15.92**	**39**			**Pn**	**16 11 19.6**	**-0.4**
L19K				IAmb		IAmb	16 11 29.2	
	comp=E,6.0nm,0.8s							
J18K	**Innoko River**	**15.98**	**34**			**Pn**	**16 11 19.9**	**-0.7**
J18K				IAmb		IAmb	16 11 31.1	
	comp=Z,2.5nm,0.7s							
H17K	**Granite Mounta**	**16.01**	**26**	Pn		**Pn**	**16 11 20.1**	**-0.9**
CNPM	**China Poot**	**16.40**	**51**	Pn		**Pn**	**16 11 24.9**	**-1.1**
H18K	**Honhosa River**	**16.61**	**28**	Pn		**Pn**	**16 11 28.2**	**-0.4**
J19K	**Poorman**	**16.69**	**33**	Pn		**Pn**	**16 11 28.0**	**-1.7**
K20K	**Telida**	**16.87**	**37**			**Pn**	**16 11 30.6**	**-1.2**
K20K				IAmb		IAmb	16 11 51.7	
	comp=Z,4.5nm,0.7s							
G18K	**Tagagawik**	**17.08**	**26**	Pn		**Pn**	**16 11 33.2**	**-1.2**
G18K				IAmb		IAmb	16 11 45.8	
	comp=Z,6.0nm,1.4s							
SKT	**Skwentna**	**17.19**	**43**			**Pn**	**16 11 34.2**	**-1.7**
SKT				IAmb		IAmb	16 11 42.3	
	comp=Z,6.1nm,0.7s							
SLKM	**Skilak Lake**	**17.20**	**48**	Pn		**Pn**	**16 11 34.3**	**-1.7**
SLKM				IAmb		IAmb	16 12 11.6	
	comp=Z,7.5nm,1.1s							
J20K	**Nowinta River**	**17.32**	**34**	Pn		**Pn**	**16 11 36.2**	**-1.2**
PPLA	**Purkeypile**	**17.35**	**40**	Pn		**Pn**	**16 11 36.4**	**-1.6**
PPLA				IAmb		IAmb	16 11 49.1	
	comp=Z,5.6nm,0.7s							
SEW	**Seward**	**17.44**	**50**	Pn		**Pn**	**16 11 36.9**	**-2.0**
H19K	**Roundabout Mou**	**17.44**	**29**			**Pn**	**16 11 38.6**	**-0.3**
H19K				IAmb		IAmb	16 12 01.4	
	comp=Z,6.8nm,1.4s							
CAST	**Castle Rocks**	**17.66**	**38**	P		**Pn**	**16 11 41.4**	**-0.2**
CAST				IAmb		IAmb	16 11 52.5	
	comp=Z,2.5nm,0.6s							
G19K	**Purcell Mounta**	**17.70**	**27**	P		**Pn**	**16 11 41.7**	**-0.3**
L22K	**Petersville**	**17.75**	**42**	P		**Pn**	**16 11 42.2**	**-0.6**
L22K				IAmb		IAmb	16 12 03.0	
	comp=Z,2.9nm,0.8s							
E18K	**Tukpahlearik C**	**17.82**	**20**	P		**Pn**	**16 11 43.0**	**-0.5**
F19K	**Shaleruckik Mo**	**18.02**	**24**	P		**Pn**	**16 11 45.6**	**-0.4**
KTH	**Kantishna Hill**	**18.18**	**39**			**P**	**16 11 47.5**	**-0.3**
KTH				IAmb		IAmb	16 11 52.3	
	comp=Z,5.2nm,0.7s							
PWL	**Port Wells**	**18.19**	**48**	P		**P**	**16 11 46.8**	**-1.2**
PWL				IAmb		IAmb	16 12 12.3	
	comp=Z,8.8nm,1.3s							
IMAR	**Indian Mountai**	**18.58**	**30**	P		**P**	**16 11 51.0**	**-1.1**
E19K	**Redstone River**	**18.64**	**24**	P		**P**	**16 11 51.6**	**-1.1**
I21K	**Tanana**	**18.66**	**33**	P		**P**	**16 11 51.5**	**-1.5**
I21K				IAmb		IAmb	16 11 57.3	
	comp=Z,5.7nm,1.3s							
H21K	**Melozitna Rive**	**18.67**	**32**	P		**P**	**16 11 51.9**	**-1.3**
F20K	**Avaraart Lake**	**18.73**	**26**	P		**Pn**	**16 11 53.9**	**-0.6**
C18K	**Utukok River**	**18.73**	**18**	P		**Pn**	**16 11 53.9**	**-0.7**
C18K				IAmb		IAmb	16 12 31.7	
	comp=Z,11nm,1.4s							
RND	**Reindeer**	**18.93**	**40**	P		**P**	**16 11 56.2**	**+0.1**
G21K	**Allakaket**	**19.00**	**29**	P		**P**	**16 11 56.7**	**0.0**
MLY	**Manley**	**19.02**	**35**	P		**P**	**16 11 56.6**	**-0.4**
D19K	**Kuna River**	**19.24**	**21**	P		**P**	**16 11 59.5**	**+0.1**
D19K				IAmb		IAmb	16 12 02.7	
	comp=Z,6.5nm,1.0s							
H22K	**Ishtalitna Cre**	**19.29**	**32**	P		**Pn**	**16 12 00.3**	**-1.0**
DHY	**Denali Highway**	**19.40**	**42**	P		**P**	**16 12 00.4**	**-0.9**
C19K	**Lookout Ridge**	**19.43**	**18**	P		**P**	**16 12 00.9**	**-0.6**
F21K	**Alatna River**	**19.48**	**27**	P		**P**	**16 12 02.2**	**+0.2**
F21K				IAmb		IAmb	16 12 20.3	
	comp=Z,3.8nm,1.4s							
I23K	**Minto, Yukon-K**	**19.57**	**35**	P		**P**	**16 12 02.3**	**-0.7**
I23K				IAmb		IAmb	16 12 20.7	
	comp=Z,6.2nm,1.2s							
WRH	**Wood River Hil**	**19.71**	**38**	P		**P**	**16 12 04.1**	**-0.5**
WRH				IAmb		IAmb	16 12 19.1	
	comp=Z,2.2nm,0.8s							
H23K	**Yukon River**	**19.87**	**34**	P		**Pn**	**16 12 06.9**	**-1.3**
H23K				IAmb		IAmb	16 12 20.4	
	comp=Z,3.1nm,1.2s							
CCB	**Clear Creek Bu**	**19.90**	**38**	P		**Pn**	**16 12 07.4**	**-1.2**
CCB				IAmb		IAmb	16 12 21.1	
	comp=Z,5.0nm,1.3s							
E21K	**Killik River**	**20.20**	**24**			Pn	16 12 10.9	-1.1
E21K				IAmb		IAmb	16 12 14.4	
	comp=Z,2.0nm,0.6s							
IL31		**20.31**	**38**	P		Pn	16 12 11.8	-1.5
IL31				IAmb		IAmb	16 12 46.7	
	comp=Z,2.5nm,0.9s							
ILAR	**Eielson Array**	**20.31**	**38**	P		Pn	16 12 13.4	0.0
	comp=Z,0.5nm,0.6s,baz=231,slow=9.2,SNR=9.0							
	comp=Z,0.5nm,0.6s							
ILAR	**Eielson Array**	**20.31**	**38**	P		**P**	**16 12 11.6**	**+0.5**
K24K	**Donnelly Dome**	**20.35**	**41**	P		**P**	**16 12 11.6**	**+0.1**
H24K	**Noodor Dome**	**20.46**	**35**	P		**P**	**16 12 12.2**	**-0.5**
H24K				IAmb		IAmb	16 12 26.6	
	comp=Z,2.3nm,0.9s							
COLD	**Coldfoot**	**20.46**	**30**	P		Pn	16 12 14.2	-1.0
COLD				IAmb		IAmb	16 12 20.4	
	comp=Z,2.6nm,0.8s							
B20K	**Meade River**	**20.66**	**19**	P		**P**	**16 12 13.6**	**-1.1**
RIDG	**Independent Ri**	**20.71**	**42**	P		**P**	**16 12 14.5**	**-0.9**
RIDG				IAmb		IAmb	16 12 30.2	
	comp=Z,3.4nm,0.7s							
J25K	**Salcha River,**	**20.83**	**39**	P		**P**	**16 12 16.5**	**-0.2**
J25K				IAmb		IAmb	16 12 30.4	
	comp=Z,1.8nm,0.7s							
B21K	**Ikpikpuk River**	**20.91**	**22**			**P**	**16 12 17.5**	**+0.1**
B21K				IAmb		IAmb	16 12 22.4	
	comp=Z,6.0nm,0.9s							
C23K	**Itkillik River**	**22.04**	**24**			**P**	**16 12 30.0**	**+0.5**
D25K	**Kavik River**	**22.86**	**27**	P		**P**	**16 12 38.2**	**-0.1**
D25K				IAmb		IAmb	16 12 43.4	
	comp=Z,1.5nm,0.6s							
YAK	**Yakutsk**	**30.32**	**311**	LR		LR	16 26 38.1	
	comp=Z,24nm,19.5s,baz=212,slow=38							
YKA	**Yellowknife A**	**34.17**	**47**	P		**P**	**16 14 19.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=284,slow=8.5,SNR=6.3							
YKA				PcP		**PcP**	**16 16 56.6**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=292,slow=2.2,SNR=4.5							
	comp=Z,0.3nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**34.25**	**208**	T		T	16 50 45.6	
	baz=18,slow=76,SNR=416							
H11N3	**WAKE ISLAND Hy**	**34.26**	**208**	T		T	16 50 49.9	
	baz=18,slow=76,SNR=342							
H11N1	**WAKE ISLAND Hy**	**34.27**	**208**	T		T	16 50 56.2	
	baz=18,slow=76,SNR=388							
USRK	**Ussuriysk Ar.**	**34.59**	**278**	P		**P**	**16 14 22.2**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=62,slow=9.0,SNR=3.2							
	comp=Z,1.0nm,0.8s							
H11S1	**WAKE ISLAND Hy**	**35.46**	**208**	T		T	16 52 24.9	
	baz=17,slow=76,SNR=294							
H11S2	**WAKE ISLAND Hy**	**35.48**	**208**	T		T	16 52 20.1	
	baz=17,slow=76,SNR=305							
H11S3	**WAKE ISLAND Hy**	**35.48**	**208**	T		T	16 52 15.4	
	baz=17,slow=76,SNR=202							
JHJ	**Hachijo jima 2**	**36.42**	**257**	LR		LR	16 29 47.1	
	comp=Z,101nm,18.7s,baz=104,slow=36							
LYMT	**Lyon Mountain**	**41.07**	**70**	P		**P**	**16 15 17.5**	**-0.9**
BCYI	**Bear Canyon**	**41.82**	**74**	P		**P**	**16 15 24.5**	**-0.1**
BCYI				IAmb		IAmb	16 15 38.4	
	comp=Z,2.6nm,1.2s							
PD31	**Pinedale Array**	**45.00**	**74**	P		**P**	**16 15 50.4**	**+0.2**
PDAR	**Pinedale Array**	**45.00**	**74**	P		**P**	**16 15 51.3**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=319,slow=2.9,SNR=9.7							
	comp=Z,0.5nm,0.5s							
PDAR	**Pinedale Array**	**45.00**	**74**	P		**P**	**16 15 51.1**	**+0.9**
RSSD	**Black Hills**	**47.48**	**69**	P		**P**	**16 16 09.6**	**0.0**
SFJD	**Kangerlussuaq**	**55.01**	**23**	LR		LR	16 42 12.0	
	comp=Z,22nm,19.4s,baz=62,slow=38							
TXAR	**Lajitas Array**	**57.32**	**83**	P		**P**	**16 17 23.3**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=303,slow=5.4,SNR=7.0							
	comp=Z,0.3nm,0.5s							
KURK	**Kurchatov**	**59.87**	**315**	P		**P**	**16 17 39.4**	**-0.4**
KURBB	**Kurchatov Arra**	**59.98**	**315**	P		**P**	**16 17 39.4**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=42,slow=6.4,SNR=4.1							
	comp=Z,0.5nm,0.5s							
BVAR	**Borovoye Array**	**61.63**	**321**	P		**P**	**16 17 51.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=36,slow=7.2,SNR=4.0							
	comp=Z,0.6nm,0.5s							
WRA	**Warramunga Arr**	**83.05**	**226**	P		**P**	**16 19 59.4**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=29,slow=5.4,SNR=2.2							
	comp=Z,0.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**85.60**	**234**	P		**P**	**16 20 13.5**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=34,slow=7.3,SNR=1.5							
	comp=Z,1.8nm,0.8s							
FITZ	**Fitzroy Crossi**	**85.60**	**234**	P		**P**	**16 20 12.7**	**+0.1**
ASAR	**Alice Springs**	**86.50**	**224**	P		**P**	**16 20 17.8**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=26,slow=6.5,SNR=4.2							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**86.50**	**224**	P		**P**	**16 20 17.1**	**+0.1**
H03N2	**Juan Fernandez**	**119.91**	**107**	T		T	18 38 02.2	
	baz=317,slow=77,SNR=105							
H03N1	**Juan Fernandez**	**119.93**	**107**	T		T	18 38 03.5	
	baz=317,slow=77,SNR=86							
H03N3	**Juan Fernandez**	**119.93**	**107**	T		T	18 38 02.8	
	baz=317,slow=77,SNR=105							
MAW	**Mawson**	**147.41**	**218**	PKPbc		**PKPdf**	**16 27 14.4**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=95,slow=3.0,SNR=4.3							
LBTB	**Lobatse**	**148.53**	**319**	PKPbc		**PKPbc**	**16 27 20.5**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=34,slow=3.3,SNR=4.8							
LBTB	**Lobatse**	**148.53**	**319**	PKPdf		**PKPdf**	**16 27 16.0**	**-1.2**
BOSA	**Boshof**	**151.83**	**316**	PKPbc		**PKPbc**	**16 27 28.2**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=21,slow=4.6,SNR=5.8							

*IDC **16** 16:08:27.6±0.7,6°.55S×129°.92E,h0km,mb3.9/11, mbtmp4.0/17,ML3.9/6,MS3.0/2,Error ellipse: s-maj=25.3km s-min=14.1km az=84.0*
*NEIC **16** 16:08:29.5±1.9,6°.57S±0°.06×129°.82E±0°.08,h10km±1km, mb4.4/18,Error ellipse: s-maj=14.2km s-min=10.0km az=114.0*

*DJA **16** 16:08:32.6±0.3,6°.3S±3°×13°.0E±°,h10km,M4.3/12,mB4.8/1, mb4.5/6,MLv4.3/12,Mw(mB)4.1/1*

ISC 16 16:08:28.9±0.5,**6°.60S**±0°.04×**129°.84E**±0°.06,**h10km,n58, σ2.901/65,mb4.2/17,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.99**	**133**	P		**Pg**	**16 09 08.7**	**+1.6**
BNDI	**Bandanaira**	**2.07**	**2**	P		**Pn**	**16 09 02.5**	**-1.2**
BNDI				S		**Sn**	**16 09 25.3**	**-4.2**
NLAI	**Namlea**	**4.32**	**321**	P		**Pn**	**16 09 36.8**	**+2.2**
FAKI	**Fak Fak**	**4.38**	**33**			**Pn**	**16 09 36.3**	**+0.9**
FAKI				Sn		**Sn**	**16 10 23.0**	**-3.6**
FAKI	**Fak Fak**	**4.38**	**33**	P		**Pn**	**16 09 36.5**	**+1.0**
SIJI	**Sorong**	**5.87**	**14**	Pn		**Pn**	**16 09 56.0**	**0.0**
	3.0nm,0.3s,baz=198,slow=16,SNR=14							
SIJI				Sn		**Sn**	**16 11 02.9**	**-0.6**
	3.3nm,0.3s,baz=252,slow=23,SNR=7.4							
SIJI				LR		LR	16 12 23.6	
	comp=Z,89nm,21.7s,baz=136,slow=41							
	5.3nm,0.3s							
SIJI	**Sorong**	**5.87**	**14**	P		**Pn**	**16 09 58.1**	**+2.1**
	877nm16nm,0.6s							
SANI	**Sanana**	**5.93**	**320**	P		**Pn**	**16 09 59.4**	**+2.5**
	0.2nm62nm,1.0s							
MTN	**Manton Dam**	**6.33**	**168**			**Pn**	**16 10 02.6**	**+0.3**
MTN				Sn		**Sn**	**16 11 17.5**	**+2.7**
SOEI	**Soe**	**6.34**	**240**	Pn		**Pn**	**16 10 02.7**	**+0.1**
BATI	**Baumata**	**7.08**	**239**	Pn		**Pn**	**16 10 14.2**	**+1.5**
	6.8nm,0.3s,baz=186,slow=6.5,SNR=2.5							
BATI				Sn		**Sn**	**16 11 33.4**	**+0.1**
	2.9nm,0.3s,baz=104,slow=22,SNR=1.4							
	19nm,0.4s							
MMRI	**Maumere**	**7.80**	**255**	Pn		**Pn**	**16 10 22.6**	**0.0**
BAKI	**Biak**	**8.24**	**50**	P		**Pn**	**16 10 33.3**	**+4.7**
KNRA	**Kununurra**	**9.08**	**187**			**Pn**	**16 10 41.9**	**+1.8**
KAPI	**Kappang**	**10.16**	**278**	Pn		**Pn**	**16 10 57.7**	**+2.8**
	1.9nm,0.3s,baz=101,slow=16,SNR=3.8							
KAPI				LR		LR	16 15 12.9	
	comp=Z,121nm,18.0s,baz=102,slow=40							
	6.6nm,0.4s							
KAPI	**Kappang**	**10.16**	**278**			**Pn**	**16 10 55.4**	**+0.5**
TOLI2	**Tolitoli**	**11.85**	**310**	Pn		**Pn**	**16 11 18.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**12.14**	**199**	Pn		**Pn**	**16 11 21.8**	**-0.1**
	0.3nm,0.3s,baz=27,slow=7.9,SNR=19							
FITZ				Sn		**Sn**	**16

GO04	**Tololo Observa**	**0.58**	**313**	*eP*		**Pn**	**16 13 07.9**	**-0.2**
GO04				*i* S		**Sn**	**16 13 21.0**	**-0.4**
GO04	**Tololo Observa**	**0.58**	**313**			**Pn**	**16 13 07.8**	**-0.3**
GO04					Sn	**Sn**	**16 13 20.9**	**-0.4**
CO01	**Juntas del Tor**	**0.62**	**17**	*eP*		Pn	16 13 02.8	-5.6
CO01				*eP*			16 13 07.8	
CO01				*eS*		**Sn**	**16 13 22.0**	**+0.1**
CO01				IAML			16 13 22.6	
	comp=Z,603nm,0.4s							
CO01	**Juntas del Tor**	**0.62**	**17**	*eP*		**Pn**	**16 13 08.5**	**+0.1**
CO01				*i* S		**Sn**	**16 13 21.6**	**-0.2**
CO01				IAML			16 13 22.5	
	comp=E,705nm,0.2s							
CO01	**Juntas del Tor**	**0.62**	**17**			**Pn**	**16 13 08.3**	**-0.1**
CO01					Sn	**Sn**	**16 13 21.9**	**+0.1**
AROD	**Rodeo**	**0.83**	**61**	*eP*		**Pn**	**16 13 10.6**	**+0.4**
AROD				*eS*		**Sn**	**16 13 26.0**	**+0.9**
CO02	**Combarbal**	**0.87**	**223**	*eP*		**Pn**	**16 13 10.5**	**+0.1**
CO02				*eS*		**Sn**	**16 13 26.7**	**+1.3**
CO02				IAML			16 13 27.2	
	comp=Z,2µm,0.5s							
CO02	**Combarbal**	**0.87**	**223**	*eP*		**Pn**	**16 13 10.3**	**-0.1**
CO02				*i* S		**Sn**	**16 13 26.0**	**+0.6**
CO02				IAML			16 13 26.8	
	comp=E,8µm,0.4s							
CO02	**Combarbal**	**0.87**	**223**			**Pn**	**16 13 10.2**	**-0.1**
CO02					Sn	**Sn**	**16 13 26.0**	**+0.6**
CO05	**La Serena**	**1.03**	**309**	*eP*		**Pn**	**16 13 11.9**	**0.0**
CO05				*i* S		**Sn**	**16 13 27.6**	**-0.6**
CO05				IAML			16 13 30.2	
	comp=N,2µm,0.3s							
CO05	**La Serena**	**1.03**	**309**			**Pn**	**16 13 11.3**	**-0.6**
CO05					Sn	**Sn**	**16 13 27.5**	**-0.6**
ACCO	**Cerro Coronel**	**1.07**	**91**	*eP*		**Pn**	**16 13 13.0**	**+0.4**
ACCO				IAML			16 13 31.2	
	comp=Z,876nm,0.9s							
ACDV	**Cuesta del Vie**	**1.10**	**69**	*eP*		**Pn**	**16 13 12.9**	**+0.1**
ACDV				*eS*		**Sn**	**16 13 29.5**	**-0.3**
ACDV				IAML			16 13 32.7	
	comp=Z,716nm,0.5s							
CO06	**Fray Jorge**	**1.15**	**265**			**Pn**	**16 13 12.8**	**-0.4**
CO06					Sn	**Sn**	**16 13 30.1**	**-0.3**
RTLS	**Leoncito**	**1.50**	**145**	*eP*		**Pn**	**16 13 18.6**	**+1.1**
RTLS				IAML			16 13 41.4	
	comp=Z,2µm,0.8s							
CO04	**Los Peladeros**	**1.57**	**201**	*eP*		**Pn**	**16 13 18.8**	**+0.4**
CO04				*i* S		**Sn**	**16 13 40.3**	**+0.7**
CO04	**Los Peladeros**	**1.57**	**201**			**Pn**	**16 13 18.3**	**-0.1**
CO04					Sn	**Sn**	**16 13 39.9**	**+0.3**
LCO	**Las Campanas**	**1.59**	**348**	*eP*		**Pn**	**16 13 18.7**	**+0.1**
LCO				*eS*		**Sn**	**16 13 40.3**	**+0.3**
LCO				IAML			16 13 41.1	
	comp=Z,2µm,0.5s							
LCO	**Las Campanas**	**1.59**	**348**	*eP*		**Pn**	**16 13 18.4**	**-0.1**
LCO				*i* S		**Sn**	**16 13 39.6**	**-0.4**
LCO	**Las Campanas**	**1.59**	**348**			**Pn**	**16 13 18.5**	**-0.1**
LCO					Sn	**Sn**	**16 13 39.8**	**-0.1**
ZON	**Zonda**	**1.70**	**125**	*eP*		**Pn**	**16 13 19.3**	**-0.4**
ZON				*eS*		**Sn**	**16 13 41.8**	**-0.2**
ZON				IAML			16 13 46.2	
	comp=Z,274nm,0.2s							
ZON	**Zonda**	**1.70**	**125**			**Pn**	**16 13 19.8**	**+0.1**
ZON					Sn	**Sn**	**16 13 41.3**	**-0.7**
AC05	**El Transito**	**1.73**	**1**	*eP*		**Pn**	**16 13 20.0**	**-0.1**
AC05				*eS*		**Sn**	**16 13 43.9**	**+1.1**
AC05				IAML			16 13 45.7	
	comp=Z,298nm,0.3s							
AC05	**El Transito**	**1.73**	**1**			**Pn**	**16 13 20.6**	**+0.4**
AC05					Sn	**Sn**	**16 13 42.1**	**-0.6**
RTLL	**Cerro Villicun**	**1.75**	**116**	*eP*		**Pn**	**16 13 20.3**	**+0.1**
RTLL				*eS*		**Sn**	**16 13 42.9**	**0.0**
RTLL				IAML			16 13 52.5	
	comp=Z,352nm,0.4s							
SJA	**San Juan**	**1.78**	**123**	*eP*		Pn	16 13 04.2	-16
SJA				*eS*		Sn	16 13 33.0	-11
SJA				IAML			16 13 49.6	
	comp=Z,319nm,0.3s							
CFA	**Coronel Fontan**	**2.05**	**121**	P		**Pn**	**16 13 24.2**	**+0.1**
	comp=Z,56nm,0.3s,baz=302,slow=15,SNR=281							
CFA				S		**Sn**	**16 13 49.3**	**-0.5**
	comp=Z,201nm,0.3s,baz=74,slow=17,SNR=72							
CFA	**Coronel Fontan**	**2.05**	**121**	*eP*		**Pn**	**16 13 24.2**	**+0.1**
CFA				*eS*		**Sn**	**16 13 49.9**	**+0.1**
CFA				IAML			16 13 50.5	
	comp=Z,444nm,0.2s							
VA03	**San Esteban**	**2.20**	**185**	*eP*		**Pn**	**16 13 26.3**	**+0.3**
VA03				*eS*		**Sn**	**16 13 56.1**	**+2.9**
VA03				IAML			16 14 03.2	
	comp=Z,296nm,0.3s							
VA03	**San Esteban**	**2.20**	**185**	*eP*		**Pn**	**16 13 26.5**	**+0.5**
VA03				*i* S		**Sn**	**16 13 54.6**	**+1.4**
VA03				IAML			16 13 58.8	
	comp=E,990nm,0.3s							
VA03	**San Esteban**	**2.20**	**185**			**Pn**	**16 13 26.4**	**+0.5**
VA03					Sn	**Sn**	**16 13 53.6**	**+0.5**
AC04	**Llanos de Chal**	**2.45**	**344**	*eP*		**Pn**	**16 13 29.3**	**+0.1**
AC04				*eS*		Sn	16 13 44.5	-14
AC04				IAML			16 14 10.8	
	comp=Z,255nm,0.8s							
AC04	**Llanos de Chal**	**2.45**	**344**			**Pn**	**16 13 29.0**	**-0.2**
ROCH	**El Roble**	**2.47**	**194**	*eP*		**Pn**	**16 13 30.3**	**+0.7**
ROCH				*i* S		**Sn**	**16 14 01.1**	**+1.4**
ARCO	**CERRO ARCO**	**2.55**	**153**	*eP*		**Pn**	**16 13 32.6**	**+2.0**
ARCO				*eS*		**Sn**	**16 14 04.1**	**+2.6**
ARCO				IAML			16 14 10.1	
	comp=Z,258nm,0.3s							
PEL	**Peldehue**	**2.58**	**187**	*eP*		**Pn**	**16 13 31.7**	**+0.7**
PEL				*eS*		**Sn**	**16 13 58.0**	**-4.1**
PEL				IAML			16 14 14.2	
	comp=Z,186nm,0.4s							
PEL	**Peldehue**	**2.58**	**187**			**Pn**	**16 13 31.1**	**+0.2**
PEL					Sn	**Sn**	**16 14 02.4**	**+0.3**
VCA	**Vinchina**	**2.59**	**46**	*eP*		**Pn**	**16 13 32.1**	**+1.0**
VCA				*eS*		**Sn**	**16 14 00.7**	**-1.7**
VCA				IAML			16 14 07.0	
	comp=Z,928nm,0.4s							
MT10	**Hacienda Santa**	**2.70**	**184**	*eP*		**Pn**	**16 13 33.5**	**+0.9**
MT10				*i* S		**Sn**	**16 14 06.0**	**+1.0**
MT10				IAML			16 14 18.7	
	comp=E,760nm,0.3s							
MT02	**Curacav**	**2.77**	**195**	*eP*		**Pn**	**16 13 33.0**	**-0.4**
MT02				*eS*		Sn	16 13 56.7	-10
MT02				IAML			16 14 16.2	
	comp=Z,160nm,0.4s							
MT02	**Curacav**	**2.77**	**195**	*eP*		**Pn**	**16 13 32.9**	**-0.5**
MT02				*i* S		**Sn**	**16 14 05.2**	**-1.3**
MT02				IAML			16 14 15.6	
	comp=E,234nm,0.3s							
MT02	**Curacav**	**2.77**	**195**			**Pn**	**16 13 32.6**	**-0.7**
AAGR	**Agrelo**	**2.81**	**154**	*eP*		**Pn**	**16 13 36.3**	**+2.4**
AAGR				*eS*		**Sn**	**16 14 12.5**	**+5.1**
AAGR				IAML			16 14 14.7	
	comp=Z,119nm,0.9s							
MT04	**Ro Olivares**	**2.83**	**177**	*eP*		**Pn**	**16 13 35.6**	**+1.3**
MT04				*eS*		**Sn**	**16 14 06.7**	**-1.5**
MT04				IAML			16 14 19.2	
	comp=Z,139nm,0.5s							
MT04	**Ro Olivares**	**2.83**	**177**	*eP*		**Pn**	**16 13 35.8**	**+1.5**
MT04				*i* S		**Sn**	**16 14 09.3**	**+1.2**
MT04				IAML			16 14 19.6	
	comp=E,278nm,0.3s							
MT05	**Renca**	**2.84**	**187**	*eP*		**Pn**	**16 13 35.0**	**+0.8**
MT05				*eS*		**Sn**	**16 14 00.7**	**-7.3**
MT05				*eS*			16 14 04.7	
MT05				IAML			16 14 19.1	
	comp=Z,193nm,0.5s							
MT05	**Renca**	**2.84**	**187**			**Pn**	**16 13 33.9**	**-0.3**
MT16	**CCHEN**	**2.85**	**184**			**Pn**	**16 13 34.2**	**-0.3**
MT08	**Bocatoma Ro**	**2.88**	**175**	*eP*		**Pn**	**16 13 36.6**	**+1.6**
MT08				*eS*		**Sn**	**16 14 03.1**	**-6.1**
MT08				IAML			16 14 29.9	
	comp=Z,99nm,0.5s							
MT08	**Bocatoma Ro**	**2.88**	**175**			**Pn**	**16 13 34.3**	**-0.7**
MT03	**Universidad Ad**	**2.92**	**183**	*eP*		**Pn**	**16 13 36.1**	**+0.7**
MT03				*eS*		**Sn**	**16 14 08.9**	**-1.1**
MT03				IAML			16 14 21.0	
	comp=Z,236nm,0.5s							
MT03	**Universidad Ad**	**2.92**	**183**	*eP*		**Pn**	**16 13 36.5**	**+1.1**
MT03				*i* S		**Sn**	**16 14 11.1**	**+1.0**
MT03				IAML			16 14 24.7	
	comp=E,580nm,0.3s							
MT03	**Universidad Ad**	**2.92**	**183**			**Pn**	**16 13 36.1**	**+0.7**
GO03	**Copiapo**	**2.97**	**1**	*eP*		**Pn**	**16 13 36.6**	**+0.6**
GO03				*eS*		Sn	16 14 00.7	-10
GO03				IAML			16 14 19.7	
	comp=Z,152nm,0.4s							
GO03	**Copiapo**	**2.97**	**1**			**Pn**	**16 13 35.8**	**-0.2**
ACLC	**CERRO LA CRUZ**	**3.13**	**69**	*eP*		**Pn**	**16 13 38.5**	**+0.2**
ACLC				IAML			16 14 16.5	
	comp=Z,360nm,0.3s							
MT12	**Pirque**	**3.16**	**184**	*eP*		**Pn**	**16 13 39.1**	**+0.5**
MT12				*i* S		**Sn**	**16 14 16.5**	**+0.8**
MT12				IAML			16 14 29.5	
	comp=E,554nm,0.3s							
ACAN	**Cantantal**	**3.16**	**123**	*eP*		**Pn**	**16 13 38.1**	**-0.4**
MT13	**San Alfonso**	**3.16**	**180**			**Pn**	**16 13 39.4**	**+0.8**
MT09	**Talagante**	**3.25**	**190**			**Pn**	**16 13 38.7**	**-1.1**
LMEL	**Las Melosas**	**3.27**	**178**	*eP*		**Pn**	**16 13 41.4**	**+1.3**
LMEL				*i* S		**Sn**	**16 14 19.6**	**+1.1**
LMEL				IAML			16 14 28.8	
	comp=E,226nm,0.6s							
AVIZ	**Vizcacheras**	**3.27**	**153**	*eP*		**Pn**	**16 13 41.9**	**+1.9**
AVIZ				*eS*		**Sn**	**16 14 12.5**	**-5.8**
VA05	**Santo Domingo**	**3.27**	**199**			**Pn**	**16 13 38.9**	**-1.0**
MT01	**Popeta**	**3.38**	**193**	*eP*		**Pn**	**16 13 40.9**	**-0.5**
MT01				*eS*		**Sn**	**16 14 16.4**	**-4.5**
MT01				IAML			16 14 32.9	
	comp=Z,171nm,0.2s							
MT01	**Popeta**	**3.38**	**193**	*eP*		**Pn**	**16 13 40.6**	**-0.7**
MT01				*i* S		**Sn**	**16 14 21.1**	**+0.3**
MT01	**Popeta**	**3.38**	**193**			**Pn**	**16 13 40.7**	**-0.7**
BO04	**La Punta**	**3.42**	**184**			**Pn**	**16 13 41.6**	**-0.4**
TINO	**Tinogasta**	**3.46**	**44**	*eP*		**Pn**	**16 13 43.0**	**+0.4**
TINO				*eS*		**Sn**	**16 14 25.1**	**+2.1**
TINO				IAML			16 14 27.9	
	comp=Z,201nm,0.8s							
AC02	**Maricunga**	**3.86**	**16**	*eP*		**Pn**	**16 13 49.1**	**+0.7**
AC02				*eS*		Sn	16 14 19.0	-14
AC02				IAML			16 14 43.6	
	comp=E,66nm,0.3s							
AC02	**Maricunga**	**3.86**	**16**			**Pn**	**16 13 48.2**	**-0.1**
BO01	**Tunca**	**3.87**	**190**	*eP*		**Pn**	**16 13 46.8**	**-1.1**
BO01				IAML			16 14 54.7	
	comp=Z,62nm,0.3s							
BO01	**Tunca**	**3.87**	**190**			**Pn**	**16 13 47.0**	**-0.9**
BO02	**Sierra Bellavi**	**4.23**	**185**			**Pn**	**16 13 49.4**	**-3.5**
MRA	**San Martin**	**4.33**	**116**	*eP*		**Pn**	**16 13 53.0**	**-1.3**
MRA				*eS*		**Sn**	**16 14 40.5**	**-3.4**
MRA				IAML			16 14 44.4	
	comp=Z,140nm,0.4s							
AC01	**Pan de Azucar**	**4.42**	**357**	*eP*		**Pn**	**16 13 54.6**	**-0.7**
AC01				*eS*		**Sn**	**16 14 44.7**	**-1.1**
AC01				IAML			16 15 04.0	
	comp=Z,54nm,0.5s							
GO05	**Hualane**	**4.63**	**197**			Pn	16 13 54.3	-3.9
TCA	**Tanti**	**4.97**	**100**	*eP*		Pn	16 13 56.1	-6.7
TCA				*eP*			16 14 01.8	
TCA				*eS*		**Sn**	**16 14 57.9**	**-1.3**
TCA				IAML			16 14 59.4	
	comp=Z,99nm,0.6s							
BI02	**San Fabin de**	**6.13**	**187**			**Pn**	**16 14 17.1**	**-1.4**
PB05	**IPOC Station P**	**7.69**	**1**	Pn		**Pn**	**16 14 36.6**	**-3.2**
PB06	**IPOC Station P**	**7.86**	**5**	Pn		**Pn**	**16 14 39.2**	**-2.9**
PB09	**IPOC Station P**	**8.79**	**6**	Pn		**Pn**	**16 14 53.1**	**-1.7**
TRQA	**Tornquist**	**10.15**	**140**	Pn		**Pn**	**16 15 10.7**	**-2.3**
CPUP	**Villa Florida**	**12.18**	**73**	P		**Pn**	**16 15 39.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=246,slow=15,SNR=3.8							
CPUP				S		**Sn**	**16 17 48.8**	**-5.3**
	comp=Z,1.4nm,0.6s,baz=238,slow=19,SNR=2.2							
LPAZ	**La Paz**	**14.36**	**8**	P		**Pn**	**16 16 10.4**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=183,slow=12,SNR=6.0							
LPAZ	**La Paz**	**14.36**	**8**	P		**Pn**	**16 16 10.6**	**+1.4**
SIV	**San Ignacio**	**16.80**	**32**	P		**Pn**	**16 16 39.3**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=192,slow=9.3,SNR=7.5							
MG03	**Isla Dawson**	**23.26**	**180**	P		**P**	**16 17 48.1**	**+0.1**
MG03				IAmb		IAmb	16 17 50.9	
	comp=Z,9.9nm,1.1s							
QSPA	**South Pole Qui**	**59.66**	**180**	P		**P**	**16 22 44.6**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=167,slow=1.2,SNR=11							
	comp=Z,1.3nm,0.6s							
QSPA	**South Pole Qui**	**59.66**	**180**	P		**P**	**16 22 43.0**	**+0.2**
QSPA				IAmb		IAmb	16 23 00.9	
	comp=Z,2.2nm,1.2s							
TXAR	**Lajitas Array**	**67.52**	**329**	P		**P**	**16 23 37.0**	**+2.1**
	comp=Z,0.1nm,0.4s,baz=120,slow=4.7,SNR=1.9							
	comp=Z,0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**149.34**	**40**	PKPbc		**PKiKP**	**16 32 27.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=299,slow=2.9,SNR=7.1							
ZALV	**Zalesovo Beam**	**150.54**	**30**	PKPbc		**PKiKP**	**16 32 30.2**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=323,slow=1.4,SNR=8.9							
MKAR	**Makanchi Array**	**153.36**	**45**	PKPbc		**PKiKP**	**16 32 36.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=315,slow=1.6,SNR=3.0							

*NOU **16** 16:20:38.0,37°.87S×176°.41E,h236km,mb4.0/9, North Island, New Zealand*
*WEL **16** 16:20:53.0±0.5,38°S±3°×17°6E±°, h127km±4km, M3.0/50, ML2.5/30, MLv3.0/50, Error ellipse: s-maj=4.1km s-min=3.1km az=155.3*

ISC 16 16:20:48.8±1.5,**38°.53S**±0°.04×**175°.94E**±0°.04,**h163**km±8km, **n117**,σ1§**46**/142,**North Island**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUTZ	**Kaahu Road**	**0.10**	**292**	P		**Pn**	**16 21 11.3**	**+0.8**
WPRZ	**Whakapapatarin**	**0.17**	**88**	P		**Pn**	**16 21 11.2**	**+0.6**
WATZ	**Wairara**	**0.24**	**222**	P		**Pn**	**16 21 11.6**	**+0.8**
HRRZ	**Handcock Road**	**0.30**	**63**	P		**Pn**	**16 21 11.6**	**+0.7**
ALRZ	**Allen Road**	**0.32**	**97**	P		**Pn**	**16 21 11.6**	**+0.7**
PRRZ	**Plateau Road**	**0.35**	**86**	P		**Pn**	**16 21 11.4**	**+0.4**
RATZ	**Rangitukua**	**0.36**	**202**	P		**Pn**	**16 21 11.9**	**+0.8**
TLZ	**Tolley Road**	**0.38**	**302**	P		**Pn**	**16 21 12.2**	**+1.1**
TLZ				S		**Sn**	**16 21 27.7**	**-0.5**
HATZ	**Hinemaiaia**	**0.38**	**162**	P		**Pn**	**16 21 11.9**	**+0.8**
HATZ				S		**Sn**	**16 21 26.1**	**-2.2**
UTU	**Utuhina**	**0.40**	**29**	P		**Pn**	**16 21 12.2**	**+1.0**
HLRZ	**Highlands Stat**	**0.42**	**50**	P		**Pn**	**16 21 12.8**	**+1.4**
MRHZ	**Matea Rd**	**0.48**	**130**	P		**Pn**	**16 21 12.2**	**+0.6**
RRRZ	**Republican Roa**	**0.49**	**67**	P		**Pn**	**16 21 12.2**	**+0.7**
RRRZ				S		**Sn**	**16 21 27.7**	**-1.2**
OMRZ	**Omania**	**0.54**	**39**	P		**Pn**	**16 21 12.6**	**+0.7**
KARZ	**Kaharoa**	**0.56**	**25**	P		**Pn**	**16 21 12.7**	**+0.8**
NTVZ	**North Tongarir**	**0.61**	**200**	P		**Pn**	**16 21 13.5**	**+1.2**
TMVZ	**Te Maari**	**0.62**	**198**	P		**Pn**	**16 21 13.5**	**+1.2**
TMVZ				S		**Sn**	**16 21 29.4**	**-1.0**
ETVZ	**East Tongariro**	**0.64**	**197**	P		**Pn**	**16 21 13.7**	**+1.3**
ETVZ				S		**Sn**	**16 21 29.6**	**-1.0**
WTVZ	**West Tongariro**	**0.65**	**205**	P		**Pn**	**16 21 13.9**	**+1.4**
OTVZ	**Oturere**	**0.67**	**199**	P		**Pn**	**16 21 13.9**	**+1.2**
OTVZ				S		**Sn**	**16 21 30.6**	**-0.5**
NGZ	**Ngauruhoe**	**0.70**	**202**	P		**Pn**	**16 21 14.3**	**+1.4**
COVZ	**Chateau Observ**	**0.74**	**205**	P		**Pn**	**16 21 14.2**	**+1.2**
COVZ				S		**Sn**	**16 21 30.7**	**-1.0**
BKZ	**Black Stump Fm**	**0.77**	**146**	P		**Pn**	**16 21 14.1**	**+1.0**
MTHZ	**Maungataniwha**	**0.77**	**115**	P		**Pn**	**16 21 14.3**	**+1.1**
MTHZ				S		**Sn**	**16 21 30.7**	**-1.1**
TUVZ	**Tukino**	**0.77**	**197**	P		**Pn**	**16 21 14.7**	**+1.4**
TUVZ				S		**Sn**	**16 21 31.1**	**-1.1**
FWVZ	**Far West T-bar**	**0.79**	**203**	P		**Pn**	**16 21 14.8**	**+1.3**
FWVZ				S		**Sn**	**16 21 31.7**	**-0.9**
MAVZ	**Matarangi**	**0.80**	**202**	P		**Pn**	**16 21 15.1**	**+1.4**
WHVZ	**Whangaehu Hut**	**0.80**	**200**	P		**Pn**	**16 21 14.7**	**+1.1**
RTZ	**Ruatahuna**	**0.82**	**97**	P		**Pn**	**16 21 14.3**	**+0.9**
RTZ				S		**Sn**	**16 21 30.7**	**-1.7**
TRVZ	**Turoa**	**0.83**	**202**	P		**Pn**	**16 21 15.3**	**+1.5**
TGRZ	**Tauranga**	**0.83**	**17**	P		**Pn**	**16 21 14.4**	**+0.9**
WNVZ	**Wahianoa**	**0.84**	**199**	P		**Pn**	**16 21 15.1**	**+1.3**
WNVZ				S		**Sn**	**16 21 32.3**	**-0.8**
HIZ	**Hauiti**	**0.85**	**271**	P		**Pn**	**16 21 15.0**	**+1.3**
HIZ	**Hauiti**	**0.85**	**271**	P		**Pn**	**16 21 14.9**	**+1.3**
HIZ				S		**Sn**	**16 21 32.2**	**-0.5**
TOZ	**Tahuroa Road**	**0.87**	**336**	P		**Pn**	**16 21 14.9**	**+1.1**
TOZ				S		**Sn**	**16 21 31.6**	**-1.3**
NMHZ	**Naumai**	**0.88**	**130**	P		**Pn**	**16 21 16.0**	**+2.1**
NMHZ				S		**Sn**	**16 21 34.4**	**+1.1**
MOVZ	**Moawhango**	**0.89**	**190**	P		**Pn**	**16 21 15.1**	**+1.1**
MOVZ				S		**Sn**	**16 21 31.4**	**-2.1**
PKVZ	**Pokaka**	**0.89**	**211**	P		**Pn**	**16 21 15.4**	**+1.4**
MTVZ	**Mangateitei**	**0.93**	**203**	P		**Pn**	**16 21 15.8**	**+1.5**
MTVZ				S		**Sn**	**16 21 33.8**	**-0.2**
URZ	**Urewera**	**0.95**	**74**	P		**Pn**	**16 21 09.8**	**-4.6**
URZ	**Urewera**	**0.95**	**74**	P		**Pn**	**16 21 15.0**	**+0.7**
URZ				S		**Sn**	**16 21 31.5**	**-2.5**
KWHZ	**Kaweka Forest**	**0.97**	**158**	P		**Pn**	**16 21 16.3**	**+1.7**
KWHZ				S		**Sn**	**16 21 34.3**	**-0.3**
RAHZ	**Arahi**	**0.97**	**114**	P		**Pn**	**16 21 16.4**	**+1.8**
RAHZ				S		**Sn**	**16 21 34.4**	**0.0**
MCHZ	**McNeill Hill**	**1.09**	**148**	P		**Pn**	**16 21 17.8**	**+2.4**
ARHZ	**Aropaoanui**	**1.10**	**132**	P		**Pn**	**16 21 17.6**	**+2.1**
VRZ	**Vera Road**	**1.10**	**237**	P		**Pn**	**16 21 17.4**	**+1.9**
SNGZ	**Shannon Statio**	**1.12**	**104**	P		**Pn**	**16 21 17.5**	**+1.7**
SNGZ				S		**Sn**	**16 21 35.9**	**-0.6**
WHHZ	**Waihua**	**1.15**	**119**	P		**Pn**	**16 21 18.0**	**+2.0**
RAGZ	**Rawiri**	**1.16**	**89**	P		**Pn**	**16 21 17.3**	**+1.1**
KRHZ	**Kereru**	**1.16**	**164**	P		**Pn**	**16 21 17.9**	**+1.7**
MWZ	**Matawai**	**1.26**	**82**	P		**Pn**	**16 21 18.7**	**+1.7**
MWZ				S		**Sn**	**16 21 36.7**	**-2.0**
PNHZ	**Pukenui**	**1.40**	**172**	P		**Pn**	**16 21 19.9**	**+1.5**
CKHZ	**Cape Kidnapper**	**1.43**	**142**	P		**Pn**	**16 21 20.8**	**+2.2**
RIGZ	**Rimuhau**	**1.44**	**98**	P		**Pn**	**16 21 20.5**	**+1.8**
WAZ	**Wanganui**	**1.44**	**211**	P		**Pn**	**16 21 20.7**	**+2.0**
KNZ	**Kokohu**	**1.44**	**111**	P		**Pn**	**16 21 20.5**	**+1.8**
KAHZ	**Kahuranaki**	**1.46**	**150**	P		**Pn**	**16 21 21.1**	**+2.2**
RUGZ	**Raukumara Rang**	**1.48**	**68**	P		**Pn**	**16 21 22.3**	**+3.1**
RUGZ				S		**Sn**	**16 21 40.2**	**-2.4**
TKGZ	**Te Karaka**	**1.50**	**87**	P		**Pn**	**16 21 21.4**	**+2.2**
LREZ	**Lake Rotokare**	**1.52**	**232**	P		**Pn**	**16 21 22.0**	**+2.5**
TSZ	**Takapari Road**	**1.53**	**180**	P		**Pn**	**16 21 19.4**	**-0.3**
WPHZ	**Waipukurau**	**1.58**	**166**	P		**Pn**	**16 21 21.9**	**+1.7**
PREZ	**Palmer Road**	**1.61**	**239**	P		**Pn**	**16 21 23.7**	**+3.2**
NEZ	**North Egmont**	**1.62**	**242**	P		**Pn**	**16 21 23.3**	**+2.7**
TWGZ	**Tauwhareparae**	**1.64**	**78**	P		**Pn**	**16 21 22.8**	**+2.0**
TWGZ				S		**Sn**	**16 21 44.4**	**-1.0**
HAZ	**Te Kaha**	**1.64**	**63**	P		**Pn**	**16 21 22.6**	**+1.9**
HAZ				S		**Sn**	**16 21 43.1**	**-2.2**
MHGZ	**Mahia Peninsul**	**1.66**	**113**	P		**Pn**	**16 21 23.0**	**+2.1**
PXZ	**Pawanui**	**1.66**	**155**	P		**Pn**	**16 21 22.9**	**+1.9**
ETAZ	**East Tamaki Re**	**1.77**	**333**	P		**Pn**	**16 21 23.7**	**+1.6**
CNGZ	**Carnagh Statio**	**1.78**	**89**	P		**Pn**	**16 21 24.5**	**+2.3**
DVHZ	**Dannevirke**	**1.78**	**175**	P		**Pn**	**16 21 23.6**	**+1.4**
NBEZ	**Newall Road No**	**1.78**	**245**	P		**Pn**	**16 21 24.9**	**+2.6**
AWAZ	**Awhitu Peninsu**	**1.79**	**324**	P		**Pn**	**16 21 24.1**	**+1.8**
PRHZ	**Porangahau**	**1.82**	**163**	P		**Pn**	**16 21 24.4**	**+1.8**
WIAZ	**Waiheke Island**	**1.85**	**339**	P		**Pn**	**16 21 24.7**	**+1.7**
POWZ	**Post Office Ro**	**1.87**	**184**	P		**Pn**	**16 21 24.6**	**+1.4**
PUZ	**Puketiti**	**1.88**	**77**	P		**Pn**	**16 21 23.2**	**-0.1**
PUZ				S		**Sn**	**16 21 48.7**	**-1.2**
WTAZ	**Waiatarua**	**1.93**	**325**	P		**Pn**	**16 21 26.0**	**+2.1**
MBAZ	**Motutapu North**	**1.94**	**334**	P		**Pn**	**16 21 25.8**	**+1.8**
ANWZ	**Angora Road**	**1.97**	**168**	P		**Pn**	**16 21 26.2**	**+1.8**
PRWZ	**Pori Road**	**2.02**	**179**	P		**Pn**	**16 21 26.7**	**+1.8**
MRZ	**Mangatainoka R**	**2.15**	**187**	P		**Pn**	**16 21 27.5**	**+1.1**
BFZ	**Birch Farm**	**2.17**	**174**	P		**Pn**	**16 21 28.0**	**+1.5**
BFZ	**Birch Farm**	**2.17**

mbtmp3.8/12,ML3.8/1,MS2.9/6,Error ellipse: s-maj=32.5km s-min=14.4km az=76.0

MAN ***16*** *16:33:25.0,3˚.50N×127˚.25E,h189km,MS4.2*

ISC 16 16:33:22.1±0.5,**3˚.32N**±0˚.04×**127˚.92E**±0˚.08,**h84**km,**n55,** σ2**03**/59,**mb3.9**/16,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.42**	**279**	P	**Pn**	**16 33 56.9**	**-2.7**
TNTI	**Ternate**	**2.59**	**192**		**Pn**	**16 33 58.4**	**-3.5**
TNTI				Sn	**Sn**	**16 34 32.2**	**-0.4**
TNTI	**Ternate**	**2.59**	**192**	P	**Pn**	**16 34 00.4**	**-1.5**
DDMP	**Don Marcelino,**	**3.54**	**322**	*e*P	**Pn**	**16 34 14.2**	**-0.6**
DDMP				*e*S	**Sn**	**16 34 56.3**	**+0.7**
DAV	**Davao City (W)**	**4.40**	**328**	LR	LR	16 35 29.0	
	comp=Z,52nm,21.7s,baz=163,slow=29						
DAV	**Davao City (W)**	**4.40**	**328**	Pn	**Pn**	**16 34 23.1**	**-3.4**
CDOP	**Cateel, Davao**	**4.68**	**342**	*i* P	**Pn**	**16 34 27.9**	**-2.4**
CDOP				*e*S	**Sn**	**16 35 16.6**	**-6.8**
BIPH	**Bislig**	**5.08**	**342**	*e*P	**Pn**	**16 34 37.0**	**+1.2**
BIPH				*e*S	**Sn**	**16 35 32.6**	**-0.5**
CTBH	**Cotabato--PC H**	**5.33**	**317**	*i* P	**Pn**	**16 34 37.2**	**-2.0**
SIJI	**Sorong**	**5.33**	**141**	P	**Pn**	**16 34 38.5**	**-0.7**
	3.6nm,0.3s,baz=112,slow=13,SNR=21						
SIJI				S	**Sn**	**16 35 37.0**	**-2.4**
	8.2nm,0.3s,baz=73,slow=20,SNR=11						
	7.9nm,0.3s						
SIJI	**Sorong**	**5.33**	**141**	P	**Pn**	**16 34 38.8**	**-0.5**
	0.1nm842nm17nm,0.5s						
BUKP	**Musuan**	**5.35**	**328**	*i* P	**Pn**	**16 34 42.1**	**+2.6**
BUKP				*i* S	**Sn**	**16 35 34.3**	**-5.6**
GTOI	**Gorontalo**	**5.58**	**242**	P	**Pn**	**16 34 41.9**	**-0.7**
	0.2nm52nm,0.6s						
SANI	**Sanana**	**5.67**	**200**	P	**Pn**	**16 34 41.4**	**-2.4**
CGP	**Cagayan de Oro**	**6.03**	**328**	*e*P	**Pn**	**16 34 51.8**	**+3.0**
CGP				*e*S	**Sn**	**16 35 55.5**	**-0.9**
LUWI	**Luwuk**	**6.73**	**230**	Pn	**Pn**	**16 34 55.6**	**-2.7**
TOLI2	**Tolitoli**	**7.46**	**253**		**Pn**	**16 35 05.3**	**-3.0**
FAKI	**Fak Fak**	**7.55**	**145**		**Pn**	**16 35 07.5**	**-2.1**
FAKI	**Fak Fak**	**7.55**	**145**	P	**Pn**	**16 35 09.3**	**-0.2**
	33nm,1.0s						
KDI	**Kendari**	**8.96**	**216**	P	**Pn**	**16 35 26.5**	**-2.2**
TGY	**Tagaytay City**	**12.74**	**328**	LR	LR	16 41 16.0	
	comp=Z,48nm,18.1s,baz=188,slow=37						
MTN	**Manton Dam**	**16.37**	**169**	Pn	**Pn**	**16 37 06.4**	**-0.5**
KNRA	**Kununurra**	**18.89**	**178**	P	**P**	**16 37 34.4**	**-1.6**
KNRA				IAmb	IAmb	16 38 02.6	
	comp=Z,13nm,1.2s						
GUMO	**Guam**	**19.61**	**58**	LR	LR	16 43 48.1	
	comp=Z,22nm,20.4s,baz=124,slow=32						
TPUB	**Ta-pu**	**21.08**	**341**	P	**P**	**16 37 58.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**21.40**	**186**	P	**P**	**16 38 04.0**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=36,slow=16,SNR=7.6						
	comp=Z,2.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.40**	**186**	P	**P**	**16 38 01.1**	**-2.0**
YHNB	**Yeheng**	**22.15**	**344**	P	**P**	**16 38 09.0**	**-2.2**
WB0	**Warramunga Arr**	**23.80**	**165**	P	**P**	**16 38 26.8**	**-0.6**
WB0				IAmb	IAmb	16 38 50.8	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**23.96**	**165**	P	**P**	**16 38 29.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=344,slow=11,SNR=8.3						
	comp=Z,0.7nm,0.5s						
WR8	**Warramunga Arr**	**24.01**	**165**	P	**P**	**16 38 28.4**	**-0.8**
WR8				IAmb	IAmb	16 38 42.7	
	comp=Z,7.2nm,1.3s						
AS31	**Alice Springs**	**27.44**	**168**	P	**P**	**16 38 59.9**	**-0.4**
ASAR	**Alice Springs**	**27.45**	**168**	P	**P**	**16 39 01.1**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=348,slow=7.4,SNR=11						
ASAR				PcP	**PcP**	**16 42 19.2**	**+2.0**
	comp=Z,0.4nm,1.0s,baz=6.0,slow=1.8,SNR=4.2						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**27.45**	**168**	P	**P**	**16 38 59.4**	**-0.8**
ASAR					**PcP**	**16 42 18.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**32.11**	**300**	P	**P**	**16 39 43.6**	**+2.0**
	comp=Z,1.2nm,1.0s,baz=115,slow=7.3,SNR=4.9						
	comp=Z,1.2nm,1.0s						
KSRS	**Korea Array**	**33.98**	**0**	P	**P**	**16 39 58.4**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=181,slow=10,SNR=7.1						
KSRS				LR	LR	16 53 25.1	
	comp=Z,33nm,20.2s,baz=205,slow=36						
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**34.40**	**15**	LR	LR	16 52 20.0	
	comp=Z,23nm,19.6s,baz=182,slow=33						
USRK	**Ussuriysk Ar.**	**40.87**	**4**	P	**P**	**16 40 55.6**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=184,slow=8.5,SNR=4.5						
	comp=Z,1.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**40.87**	**4**	P	**P**	**16 40 56.1**	**+0.3**
ASAJ	**Asahikawa**	**42.65**	**16**	LR	LR	17 00 41.9	
	comp=Z,29nm,18.6s,baz=206,slow=38						
JKA	**Kamikawa-asahi**	**42.65**	**16**	P	**P**	**16 41 11.7**	**+1.4**
JKA				IAmb	IAmb	16 41 27.6	
	comp=Z,7.2nm,1.1s						
PETK	**Petropavlovsk-**	**55.37**	**21**	P	**P**	**16 42 49.0**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=233,slow=8.7,SNR=4.5						
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**55.37**	**21**	P	**P**	**16 42 48.4**	**+1.1**
PDGK	**Podgornoye**	**58.49**	**320**	P	**P**	**16 43 10.3**	**+0.6**
MKAR	**Makanchi Array**	**58.57**	**325**	P	**P**	**16 43 11.9**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=118,slow=7.6,SNR=9.9						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**58.57**	**325**	P	**P**	**16 43 11.1**	**+1.0**
MAKZ	**Makanchi**	**58.76**	**325**	P	**P**	**16 43 12.6**	**+1.1**
KURBB	**Kurchatov Arra**	**62.73**	**327**	P	**P**	**16 43 39.5**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=124,slow=5.6,SNR=17						
	comp=Z,2.8nm,0.8s						
KURK	**Kurchatov**	**62.73**	**327**	P	**P**	**16 43 39.3**	**+1.0**
KK31	**Karatay Array**	**64.34**	**317**	P	**P**	**16 43 48.5**	**-0.6**
KK31				IAmb	IAmb	16 43 52.1	
	comp=Z,1.4nm,0.8s						
KKAR	**Karatay Array**	**64.34**	**317**	P	**P**	**16 43 48.3**	**-0.8**
BVAR	**Borovoye Array**	**68.31**	**327**	P	**P**	**16 44 15.6**	**+1.3**
	comp=Z,2.0nm,0.6s,baz=126,slow=7.5,SNR=8.1						
	comp=Z,2.0nm,0.6s						
D19K	**Kuna River**	**81.08**	**21**	P	**P**	**16 45 28.2**	**+0.5**
D19K				IAmb	IAmb	16 45 56.1	
	comp=Z,5.2nm,1.3s						
VNDA	**Vanda**	**82.87**	**173**	P	**P**	**16 45 39.0**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=314,slow=5.0,SNR=2.4						
	comp=Z,0.4nm,0.8s						
VNDA	**Vanda**	**82.87**	**173**	P	**P**	**16 45 38.5**	**+1.7**
VNDA				IAmb	IAmb	16 45 52.0	
	comp=Z,1.4nm,1.2s						

JMA ***16*** *16:33:24.1±0.1,37˚.1N±0˚.2×141˚.4E±0˚.6,h29km,MD4.3/39, MV4.1/39,E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

NIED ***16*** *16:33:24.1,37˚.05N×141˚.36E,h29km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-7.77; Mθθ1.73; Mφφ6.04; Mrθ0.12; Mθφ2.53; Mφr3.81; Fault plane solution: M₀8.39000×10¹⁴ NP1:φs33.00000°, δ33.00000°,λ-75.00000°. NP2:φs195.00000°,δ58.00000°, λ-99.00000°.*

NEIC ***16*** *16:33:26.0±2.0,37˚.00N±0˚.05×141˚.48E±0˚.08,h35km±2km, mb4.3/38 Error ellipse: s-maj=10.9km s-min=8.5km az=118.0*

MOS ***16*** *16:33:27.9±2.3,36˚.80N×141˚.09E,h38km,mb4.5/17,Error ellipse: s-maj=10.9km s-min=6.5km az=43.8*

IDC ***16*** *16:33:28.2±1.9,36˚.97N×141˚.35E,h48km±18km,mb3.6/19, mbtmp3.8/25,ML3.1/5,MS2.9/5,Error ellipse: s-maj=16.9km s-min=11.6km az=75.0*

ISC 16 16:33:25.2±0.6,**37.02N**±0.04×**141˚.44E**±0˚.06,**h35**km,**n153,** σ1**36**/89,**mb4.2**/48,**MS3.4**/4,**8C,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**279**	P	**Pn**	**16 33 33.4**	**-2.8**
ONAJ				A	A	16 33 33.4	
	comp=N,24nm,0.3s,comp=E,75nm,0.3s						
ONAJ				S	**Sn**	**16 33 40.0**	**-3.8**
JFK	**Kawauchi**	**0.57**	**308**	P	**Pn**	**16 33 34.2**	**-2.7**
JFK				A	A	16 33 34.2	
	comp=N,13nm,0.4s,comp=E,17nm,0.4s						
JFK				S	**Sn**	**16 33 41.3**	**-3.8**
JFFD	**Fukushimafurud**	**0.71**	**276**	*i* P	**Pn**	**16 33 36.5**	**-2.2**
JFFD				A	A	16 33 36.5	
	comp=N,11nm,0.8s,comp=E,8.0nm,0.7s						
JFFD				S	**Sn**	**16 33 45.0**	**-3.4**
JHO	**Hitachi**	**0.81**	**240**	*i* P	**Pn**	**16 33 38.1**	**-2.0**
JHO				S	**Sn**	**16 33 48.5**	**-2.4**
JMST	**Minamisoumatoc**	**0.83**	**328**	A	A	16 33 38.5	
	comp=N,12nm,0.4s,comp=E,12nm,0.3s						
JMM	**Marumori**	**0.99**	**329**	*i* P	**Pn**	**16 33 41.0**	**-1.5**
JMM				S	**Sn**	**16 33 53.2**	**-2.1**
JOTO	**OTAMA OYAMA**	**1.03**	**302**	*i* P	**Pn**	**16 33 42.2**	**-1.0**
JOTO				S	**Sn**	**16 33 54.7**	**-1.8**
JSB	**Shiboa**	**1.22**	**268**	A	A	16 33 44.5	
	comp=N,9.0nm,0.5s,comp=E,15nm,1.4s						
JYAR	**Yonezawaarcadi**	**1.36**	**311**	A	A	16 33 46.7	
	comp=N,27nm,0.5s,comp=E,16nm,0.9s						
JIO	**Ouri**	**1.43**	**357**	*i* P	**Pn**	**16 33 47.7**	**-0.9**
JIO				S	**Sn**	**16 34 05.5**	**-0.8**
JFY	**Yanaizu**	**1.44**	**286**	*i* P	**Pn**	**16 33 48.6**	**-0.2**
JOU	**Okura**	**1.48**	**336**	*i* P	**Pn**	**16 33 49.4**	**0.0**
JOU				S	**Sn**	**16 34 08.5**	**+1.1**
JOFO	**Osakifurukawao**	**1.64**	**345**	A	A	16 33 51.1	
	comp=N,19nm,1.2s,comp=E,23nm,1.0s						
JYA	**Atsumi**	**2.08**	**319**	A	A	16 33 57.4	
	comp=N,8.0nm,0.9s,comp=E,6.0nm,1.0s						
MJA0	**Matsu Arr-Jizo**	**2.61**	**260**	*e*P	**Pn**	**16 34 05.9**	**+1.0**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**2.64**	**261**	P	**Pn**	**16 34 05.9**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=87,slow=15,SNR=126						
MJAR				S	**Sn**	**16 34 38.2**	**+2.2**
	comp=Z,49nm,0.5s,baz=85,slow=18,SNR=3.4						
	comp=Z,15nm,0.4s						
MJAR	**Matsushiro Arr**	**2.64**	**261**		**Pn**	**16 34 06.1**	**+0.8**
MAJO	**Matsushiro**	**2.64**	**261**	P	**Pn**	**16 34 06.0**	**+0.7**
MAJO						16 34 36.1	
MAJO	**Matsushiro**	**2.64**	**261**		**Pn**	**16 34 06.0**	**+0.7**
MAJO				Sn	**Sn**	**16 34 36.1**	**0.0**
MJB9	**Matsu-Tunnel**	**2.64**	**261**		**Pn**	**16 34 06.5**	**+1.2**
MJB9				Sn	**Sn**	**16 34 38.2**	**+2.1**
JSG	**Sagara**	**3.53**	**229**	Pn	**Pn**	**16 34 17.4**	**-0.1**
JGF	**Kuroka**	**3.59**	**248**		**Pn**	**16 34 19.4**	**+1.0**
JGF				Sn	**Sn**	**16 34 50.0**	**+0.4**
JTM	**Tenmabayashi**	**3.77**	**356**		**Pn**	**16 34 20.9**	**0.0**
INU	**Inuyama**	**3.95**	**246**		**Pn**	**16 34 23.3**	**+0.1**
INU				Sn	**Sn**	**16 35 09.5**	**+1.2**
JHJ2	**Mitsune**	**4.12**	**199**	Pn	**Pn**	**16 34 25.9**	**+0.2**
JHJ	**Hachijo jima 2**	**4.12**	**200**	P	Pn	16 34 26.7	+1.0
	comp=Z,5.0nm,0.3s,baz=38,slow=12,SNR=1.5						
JHJ				S	**Sn**	**16 35 12.8**	**+0.2**
	comp=Z,38nm,0.3s,baz=93,slow=22,SNR=1.6						
	comp=Z,65nm,0.7s						
ERM	**Erimo**	**5.16**	**14**	Pn	**Pn**	**16 34 39.4**	**-0.6**
ERM				Sn	**Sn**	**16 35 39.4**	**+1.2**
ASAJ	**Asahikawa**	**7.14**	**7**	P	**Pn**	**16 35 05.9**	**-1.2**
JKA	**Kamikawa-asahi**	**7.14**	**7**		**Pn**	**16 35 05.9**	**-1.2**
JNU	**Nakatsue**	**9.49**	**249**	P	Pn	16 35 41.3	+1.9
	comp=Z,0.2nm,0.3s,baz=54,slow=15,SNR=4.4						
	comp=Z,5.2nm,1.0s						
JCJ	**Chichijima**	**9.91**	**176**	LR	LR	16 39 58.9	
	comp=Z,26nm,19.0s,baz=126,slow=40						
JCJ	**Chichijima**	**9.91**	**176**	Pn	**Pn**	**16 35 44.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**10.15**	**318**	P	Pn	16 35 50.0	+1.7
USA0B	**Ussuriysk Arra**	**10.15**	**318**		Pn	16 35 50.0	+1.7
USRK	**Ussuriysk Ar.**	**10.15**	**318**	P	Pn	16 35 52.1	+3.8
	comp=Z,0.1nm,0.3s,baz=131,slow=14,SNR=7.1						
USRK				LR	LR	16 39 14.3	
	comp=Z,78nm,21.3s,baz=160,slow=34						
	comp=Z,1.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**10.15**	**318**		**Pn**	**16 35 49.3**	**+1.0**
KSRS	**Korea Array**	**10.79**	**276**	P	Pn	16 35 59.5	+2.4
	comp=Z,0.4nm,0.3s,baz=89,slow=14,SNR=11						
KSRS				LR	LR	16 40 24.1	
	comp=Z,39nm,18.1s,baz=90,slow=39						
	comp=Z,1.1nm,0.8s						
KSAR	**Wonju Array Be**	**10.82**	**276**	P	**Pn**	**16 35 58.7**	**+1.1**
KSAR	**Wonju Array Be**	**10.82**	**276**	Pn	**Pn**	**16 35 58.6**	**+1.1**
KS19	**Wonju Array Si**	**10.83**	**277**	Pn	**Pn**	**16 35 58.5**	**+0.8**
INCN	**Inchon**	**11.81**	**277**	P	Pn	16 36 12.5	+1.3
INCN	**Inchon**	**11.81**	**277**	Pn	Pn	16 36 12.5	+1.3
ZEA	**Zeya**	**19.40**	**334**	*e*P	Pn	16 37 54.4	+5.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,100nm,12.0s						
PEA0B	**Petropavlovsk-**	**19.69**	**30**	P	**Pn**	**16 37 50.3**	**-2.5**
PEA0B				pmax	pmax		
	comp=Z,12nm,1.2s						
PEA0B	**Petropavlovsk-**	**19.69**	**30**	P	**Pn**	**16 37 50.3**	**-2.5**
PETK	**Petropavlovsk-**	**19.69**	**30**	P	**Pn**	**16 37 52.9**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=225,slow=12,SNR=5.3						
PETK	**Petropavlovsk-**	**19.69**	**30**	P	**Pn**	**16 37 51.0**	**-1.8**
XLT	**XiLinHaoTe**	**20.44**	**298**	*e*P	Pn	16 38 03.0	+1.2
XLT				pP	sP	16 38 12.3	-0.8
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,41nm,5.0s						
HHC	**Hu-ho-hao-te**	**23.50**	**289**	*e*P	**P**	**16 38 33.6**	**+1.7**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
YAK	**Yakutsk**	**26.09**	**347**	*ce*P	P	16 39 01.3	+6.1
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YAK	**Yakutsk**	**26.09**	**347**	P	**P**	**16 38 56.2**	**+1.0**
YAK				IAmb	IAmb	16 39 01.5	
	comp=Z,13nm,1.2s						
SEY	**Seymchan**	**26.80**	**11**	*ce*P	P	16 39 09.7	+8.0
SEY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ENH	**Enshi**	**27.35**	**265**	P	**P**	**16 39 08.6**	**+1.6**
ENH				IAmb	IAmb	16 39 41.8	
	comp=Z,13nm,1.0s						
ULN	**Ulaanbaatar**	**27.38**	**304**	*i* P	P	16 39 13.2	+5.9
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.38**	**304**	P	**P**	**16 39 07.7**	**+0.4**
HKPS	**Hong Kong Po S**	**27.78**	**246**	P	**P**	**16 39 09.0**	**-1.9**
SONM	**Songino Array**	**27.81**	**304**	P	**P**	**16 39 13.4**	**+2.3**
	comp=Z,1.7nm,0.6s,baz=105,slow=8.6,SNR=4.5						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	**27.81**	**304**		**P**	**16 39 10.2**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**28.12**	**121**	T	T	17 08 53.1	
	baz=314,slow=75,SNR=258						
H11N1	**WAKE ISLAND Hy**	**28.13**	**121**	T	T	17 08 44.8	
	baz=314,slow=75,SNR=424						
H11N3	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	17 08 45.6	
	baz=314,slow=75,SNR=362						
WAKE	**Wake Island**	**28.26**	**122**	P	**P**	**16 39 13.5**	**-1.7**
H11S1	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	17 09 38.7	
	baz=315,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	17 09 38.6	
	baz=315						
H11S2	**WAKE ISLAND Hy**	**28.85**	**123**	T	T	17 09 39.9	
	baz=315,slow=74						
TLY	**Talaya**	**30.36**	**311**	P	**P**	**16 39 32.7**	**-0.8**
BILL	**Bilibino**	**34.03**	**16**	*i* P	P	16 40 13.6	+8.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	**Jazzator, Alta**	**40.42**	**306**	*i* P	P	16 41 05.8	+5.8
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZAA0	**Zalesovo Array**	**41.94**	**312**	P	**P**	**16 41 12.2**	**-0.1**
ZAA0				IAmb	IAmb	16 41 19.6	
	comp=Z,4.9nm,0.7s						
ZALV	**Zalesovo Beam**	**41.94**	**312**	P	**P**	**16 41 12.8**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=92,slow=7.4,SNR=7.9						
	comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**41.94**	**312**	*e*P	P	16 41 16.7	+4.4
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
J17K	**VABM Dome**	**44.09**	**34**	P	P	16 41 31.0	+1.5
J17K				IAmb	IAmb	16 41 38.1	
	comp=Z,5.7nm,1.3s						
MK31	**Makanchi Array**	**44.15**	**302**	*ce*P	P	16 41 35.3	+5.0
MK31	**Makanchi Array**	**44.15**	**302**	P	**P**	**16 41 31.1**	**+0.8**
MK31				IAmb	IAmb	16 41 37.7	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**44.15**	**302**	P	P	16 41 31.7	+1.4
	comp=Z,0.7nm,0.7s,baz=92,slow=8.9,SNR=10.0						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.15**	**302**	P	P	16 41 31.8	+1.5
MKAR	**Makanchi Array**	**44.15**	**302**		P	16 41 31.8	+1.5
E18K	**Tukpahlearik C**	**44.19**	**28**	P	P	16 41 32.2	+1.9
C18K	**Utukok River**	**44.28**	**26**	P	P	16 41 32.8	+1.7
D19K	**Kuna River**	**45.34**	**27**	P	P	16 41 40.6	+1.1
D19K				IAmb	IAmb	16 41 52.5	
	comp=Z,6.1nm,1.1s						
KURK	**Kurchatov**	**45.96**	**308**	*ce*P	P	16 41 49.3	+4.8
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	**Kurchatov**	**45.96**	**308**		**P**	**16 41 45.2**	**+0.6**
B20K	**Meade River**	**46.00**	**25**	P	P	16 41 46.0	+1.5
KURBB	**Kurchatov Arra**	**46.03**	**308**	P	P	16 41 46.5	+1.4
	comp=Z,1.2nm,0.6s,baz=84,slow=8.2,SNR=11						
	comp=Z,1.2nm,0.6s						
OHAK	**Old Harbor**	**46.75**	**43**	P	P	16 41 51.1	+0.5
OHAK				IAmb	IAmb	16 42 01.4	
	comp=Z,8.4nm,1.3s						
PDGK	**Podgornoye**	**46.80**	**298**	P	P	16 41 52.9	+1.4
PDGK	**Podgornoye**	**46.80**	**298**	P	P	16 41 52.9	+1.4
KDAK	**Kodiak Island**	**47.09**	**42**	P	**P**	**16 41 53.7**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,15nm,1.3s						
KDAK	**Kodiak Island**	**47.09**	**42**	P	**P**	**16 41 53.7**	**+0.4**
TARG	**Taragay, Kyrgy**	**48.43**	**296**	P	P	16 42 05.6	+1.2
TARG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TARG	**Taragay, Kyrgy**	**48.43**	**296**		P	16 42 05.6	+1.2
TARG				IAmb	IAmb	16 42 14.2	
	comp=Z,3.6nm,1.0s						
KDJ	**Kajisay**	**48.76**	**297**	P	**P**	**16 42 07.4**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KDJ	**Kajisay**	**48.76**	**297**	P	**P**	**16 42 07.3**	**+0.7**
KDJ				IAmb	IAmb	16 42 36.1	
	comp=Z,2.3nm,0.6s						
SOEI	**Soe**	**49.24**	**203**	P	**P**	**16 42 09.6**	**-0.9**
ILAR	**Eielson Array**	**49.49**	**32**	P	P	16 42 14.1	+2.3
	comp=Z,1.4nm,0.7s,baz=269,slow=6.5,SNR=12						
	comp=Z,1.4nm,0.7s						
ILAR	**Eielson Array**	**49.49**	**32**	*e*P	P	16 42 19.6	+7.8
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**49.49**	**32**	P	P	16 42 12.9	+1.1
BOOM	**Boomskoye usch**	**49.54**	**298**	P	**P**	**16 42 13.0**	**+0.3**
BOOM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOOM	**Boomskoye usch**	**49.54**	**298**	P	**P**	**16 42 13.0**	**+0.3**
BOOM				IAmb	IAmb	16 42 48.7	
	comp=Z,2.1nm,0.8s						
D25K	**Kavik River**	**49.65**	**26**	P	P	16 42 14.6	+1.6
D25K				IAmb	IAmb	16 42 22.4	
	comp=Z,2.2nm,0.7s						
PBA	**Port Blair**	**50.37**	**253**	P	P	16 42 20.1	+1.1
AAK	**Ala-Archa**	**50.52**	**298**	LR	LR	17 03 17.3	
	comp=Z,51nm,18.3s,baz=173,slow=35						
BVAR	**Borovoye Array**	**50.60**	**312**	P	**P**	**16 42 21.1**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=88,slow=7.8,SNR=2.3						
BVAR				PcP	**PcP**	**16 43 39.6**	**+2.1**
	comp=Z,1.0nm,0.6s,baz=79,slow=4.3,SNR=4.4						
	comp=Z,0.5nm,0.6s						
BORK	**Borovoye**	**50.63**	**312**	P	**P**	**16 42 21.2**	**+0.6**
BORK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BORK	**Borovoye**	**50.63**	**312**	P	**P**	**16 42 21.2**	**+0.6**
BORK				IAmb	IAmb	16 42 27.6	
	comp=Z,3.8nm,1.3s						
I28M	**Miner Creek**	**52.37**	**31**		P	16 42 35.1	+1.6
I28M				IAmb	IAmb	16 42 38.7	
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**53.15**	**300**	P	**P**	**16 42 39.7**	**+0.2**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KK31	**Karatay Array**	**53.15**	**300**	P	**P**	**16 42 39.6**	**+0.2**
KK31				IAmb	IAmb	16 42 46.7	
	comp=Z,4.0nm,1.5s						
KKAR	**Karatay Array**	**53.15**	**300**	P	**P**	**16 42 39.8**	**+0.3**
KKAR	**Karatay Array**	**53.15**	**300**	P	**P**	**16 42 39.8**	**+0.3**
KNRA	**Kununurra**	**53.76**	**195**	P	**P**	**16 42 43.2**	**-0.9**
GSI	**Gunungsitoli**	**53.81**	**239**	P	**P**	**16 42 44.5**	**-0.2**
I30M	**Mount Dempster**	**53.88**	**31**		P	16 42 45.5	+0.9
H31M	**Peel River**	**54.59**	**30**		P	16 42 51.4	+1.7
H31M				IAmb	IAmb	16 42 54.0	
	comp=Z,3.5nm,0.8s						
CHGR	**Chuyangaron**	**55.69**	**295**	*i* P	P	16 43 04.7	+6.6
CHGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARTI	**Arti**	**56.49**	**319**	*c i* P	P	16 43 09.6	+6.2
ARTI						16 44 03.0	
ARTI						16 45 11.5	
ARTI			

comp=Z,2.0nm,1.0s
GERES GERESS Array B 82.73 328 P P 16 45 46.8 +1.4
comp=Z,0.2nm,0.5s,baz=45,slow=5.1,SNR=4.3
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 90.11 52 P P 16 46 25.0 +3.0
comp=Z,0.5nm,0.6s,baz=308,slow=2.3,SNR=7.5
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 90.11 52 P P 16 46 25.0 +3.1
TXAR Lajitas Array 90.11 52 P P 16 46 25.0 +3.1
LPAZ La Paz 146.68 60 PKPbc **PKiKP 16 53 06.8 -0.4**
comp=Z,1.6nm,0.7s,baz=330,slow=2.0,SNR=8.6
LPAZ La Paz 146.68 60 PKP2 **PKiKP 16 53 07.5 +0.3**
LPAZ La Paz 146.68 60 **PKiKP 16 53 07.5 +0.3**

UPP ***16*** *17:00:18.9±0.1, 67˚.06N×20˚.96E, h0km, ML2.0, Suspected explosion*
IDC ***16*** *17:00:19.3±1.0, 67˚.04N×21˚.24E, h0km, mbtmp2.6/4, ML2.0/4, Error ellipse: s-maj=16.3km s-min=8.1km az=109.0*
HEL ***16*** *17:00:19.6±0.3, 67˚.09N×20˚.90E, h0km, ML2.0, Explosion*
ISC 16 17:00:18.7±0.7, **67˚.07N**±0˚.02×**20˚.94E**±0˚.03, **h0km, n32,**
σ**1§13**/47**, Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.15**	**288**	P		**Pg**	**17 00 22.3**	**+0.7**
DUNU				S		**Sg**	**17 00 24.8**	**+1.2**
MASU	**Masugnsbyn**	**0.56**	**47**	P		**Pg**	**17 00 29.8**	**+0.3**
MASU				S		**Sg**	**17 00 37.7**	**+0.8**
ERTU	**Ertsjaerv**	**0.72**	**136**	P		**Pg**	**17 00 32.0**	**-0.5**
ERTU				S		**Sg**	**17 00 41.7**	**-0.1**
ERTU	**Ertsjaerv**	**0.72**	**136**	PG		**Pg**	**17 00 32.0**	**-0.5**
ERTU				SG		**Sg**	**17 00 42.6**	**+0.8**
KUA	**Kurravaara**	**0.91**	**346**	P		**Pg**	**17 00 36.1**	**-0.1**
HARU	**Harads**	**0.92**	**179**	P		**Pg**	**17 00 35.6**	**-0.7**
HARU				S		**Sg**	**17 00 47.8**	**-0.3**
RATU	**Laukkuluspa**	**0.92**	**326**	P		**Pg**	**17 00 36.1**	**-0.2**
SALU	**Saltoluokta**	**0.99**	**289**	*eP*		**Pg**	**17 00 37.6**	**-0.1**
SALU	**Saltoluokta**	**0.99**	**289**	P		**Pg**	**17 00 37.8**	**0.0**
LANU	**Lannavaara**	**1.06**	**22**	*eP*		**Pg**	**17 00 38.4**	**-0.6**
LANU	**Lannavaara**	**1.06**	**22**	P		**Pg**	**17 00 38.5**	**-0.5**
LANU	**Lannavaara**	**1.06**	**22**	PG		**Pg**	**17 00 38.4**	**-0.6**
LANU				SB		**Sg**	**17 00 52.8**	**+0.1**
NIKU	**Nikkaluokta**	**1.08**	**318**	P		**Pg**	**17 00 39.3**	**-0.2**
NIKU				S		**Sb**	**17 00 54.0**	**-1.0**
HEF	**Hetta**	**1.69**	**36**	PG		**Pn**	**17 00 49.4**	**-0.1**
	baz=220							
HEF				smax	smax		17 01 10.1	
	comp=Z,18nm,0.2s							
HEF				SN		**Sg**	**17 01 13.8**	**+0.7**
KTK1	**Kautokeino**	**2.13**	**23**	Pg		**Pb**	**17 00 57.4**	**-0.7**
I37NO	**I37NO**	**2.19**	**338**	I		I	17 14 11.6	
	comp=Z,0.1nm,0.4s,baz=156,slow=324,SNR=5.0							
BURU	**Burvik**	**2.51**	**176**	PN		**Pn**	**17 01 01.6**	**+0.9**
	baz=358							
BURU				SG		**Sb**	**17 01 37.2**	**+1.2**
OBF4	**Vikkela, Lumij**	**2.84**	**141**	PN		**Pn**	**17 01 06.0**	**+0.7**
	baz=325							
OBF4				smax	smax		17 01 43.5	
	comp=Z,3.2nm,0.2s							
OBF0	**Syolatti, Pyha**	**2.92**	**151**	PN		**Pn**	**17 01 07.8**	**+1.5**
OBF0				smax	smax		17 01 46.1	
	comp=Z,4.5nm,0.2s							
OBF8	**Ulkokalla**	**2.94**	**158**	PN		**Pn**	**17 01 07.7**	**+1.0**
OBF8				smax	smax		17 01 46.7	
	comp=Z,5.5nm,0.2s							
ARA0	**ARCESS Array S**	**3.00**	**32**	PN		**Pn**	**17 01 08.1**	**+0.6**
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn		**Pn**	**17 01 07.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=35							
ARCES				Sn		**Sn**	**17 01 44.5**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=211,slow=21,SNR=9.2							
	comp=Z,0.4nm,0.3s							
UMAU	**Umeaa**	**3.21**	**182**	PN		**Pn**	**17 01 10.9**	**+0.6**
UMAU				SB		**Sn**	**17 01 52.0**	**+2.8**
KU2	**Taivalkoski**	**3.24**	**112**	PN		**Pn**	**17 01 11.7**	**+0.9**
KEV	**Kevo**	**3.50**	**37**	PN		**Pn**	**17 01 15.1**	**+0.8**
KEV				SB		**Sb**	**17 02 04.3**	**-0.3**
KU6	**Riekki**	**3.73**	**102**	PN		**Pn**	**17 01 18.1**	**+0.6**
	baz=290							
KU6				SN		**Sn**	**17 02 04.8**	**+2.7**
KU1	**Kurvinen**	**3.79**	**110**	PN		**Pn**	**17 01 19.8**	**+1.4**
VAF	**Ylistaro**	**4.12**	**169**	PG		**Pb**	**17 01 31.9**	**0.0**
HEMU	**Hemsoen**	**4.59**	**197**	PN		**Pn**	**17 01 29.8**	**+0.6**
HEMU				SN		**Sn**	**17 02 22.6**	**-0.5**
FINES	**FINESS Array B**	**6.08**	**156**	Pn		**Pn**	**17 01 49.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=345,slow=13,SNR=8.1							
FINES				Sn		**Sn**	**17 02 56.9**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=341,slow=23,SNR=6.1							
FINES				Lg		Lg	17 03 29.8	
	comp=Z,0.4nm,0.3s,baz=338,slow=29,SNR=6.8							
	comp=Z,0.9nm,0.8s							
NOA	**NORSAR Array B**	**7.40**	**220**	Pn		**Pn**	**17 02 07.8**	**-0.1**
	baz=48,slow=15,SNR=3.9							
NOA				Lg		Lg	17 04 10.6	
	baz=80,slow=13,SNR=1.8							
	comp=Z,0.2nm,0.6s							
HFS	**Hagfors**	**7.67**	**208**	Pn		**Pn**	**17 02 10.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=5.7							
HFS				Sn		**Sn**	**17 03 35.5**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=28,slow=25,SNR=1.9							
HFS				Lg		Lg	17 04 14.9	
	comp=Z,0.1nm,0.3s,baz=26,slow=30,SNR=2.3							
	comp=Z,0.3nm,0.3s							

CNRM ***16*** *17:01:54.7, 36˚.45N×7˚.34W, h67km, ML3.6*
MDD ***16*** *17:01:55.1±0.4, 36˚.58N×7˚.33W, h18km±3km, mb_Lg3.6/73, Error ellipse: s-maj=2.6km s-min=1.8km az=42.0*
INMG ***16*** *17:01:56.7±2.0, 36˚.58N×7˚.33W, h23km±4km, ML3.2, Error ellipse: s-maj=2.8km s-min=2.6km az=41.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz*
SFS ***16*** *17:01:56.4, 36˚.58N×7˚.30W, h33km, mb4.5/5, ML3.7/24, ML4.1/25, MLv3.6/25*
IGIL ***16*** *17:01:56.6, 36˚.59N×7˚.31W, h25km, ML3.2*
ISC 16 17:01:54.6±1.0, **36˚.59N**±0˚.03×**7˚.28W**±0˚.02, **h35km, n136,**
σ**1§60**/258**, 16D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PTAV	**Tavira**	**0.62**	**331**	*eP*		**Pn**	**17 02 08.3**	**+1.4**
PTAV				*eS*		**Sn**	**17 02 16.5**	**+0.9**
PTAV				*i* IAML			17 02 16.9	
PTAV				*i* IAML			17 02 17.0	
PTAV				*i* IAML			17 02 17.4	
EXAYA	**Ayamonte**	**0.64**	**351**	Pg		**Pn**	**17 02 08.6**	**+1.4**
EXAYA				Sg		**Sn**	**17 02 15.9**	**-0.3**
ARNO	**Arenosillo**	**0.67**	**40**	P		**Pn**	**17 02 09.2**	**+1.6**
ARNO				S		**Sn**	**17 02 18.3**	**+1.3**
PFARO	**Faro**	**0.68**	**310**	*eP*		**Pn**	**17 02 09.0**	**+1.2**
PFARO				*eS*		**Sn**	**17 02 17.4**	**+0.3**
PFARO				*i* IAML			17 02 21.8	
PFARO				*i* IAML			17 02 22.1	
PFARO				*i* IAML			17 02 24.2	
PBDV	**Barranco-do-Ve**	**0.84**	**321**	P		**Pn**	**17 02 11.3**	**+1.3**
PBDV				S		**Sn**	**17 02 21.5**	**+0.4**
PBDV	**Barranco-do-Ve**	**0.84**	**321**	*||eP*		**Pn**	**17 02 11.3**	**+1.3**
PBDV				*eS*		**Sn**	**17 02 21.7**	**+0.6**
PBDV				*i* IAML			17 02 22.2	
PBDV				*i* IAML			17 02 22.4	
PBDV				*i* IAML			17 02 24.7	
SFS	**San Fernando**	**0.87**	**98**	P		**Pn**	**17 02 12.6**	**+2.2**
SFS				S		**Sn**	**17 02 23.0**	**+1.2**
PVAQ	**Vaqueiros**	**0.89**	**337**	*||eP*		**Pn**	**17 02 12.0**	**+1.4**
PVAQ				*eS*		**Sn**	**17 02 22.9**	**+0.6**
PVAQ				*i* IAML			17 02 23.3	
PVAQ				*i* IAML			17 02 23.6	
PVAQ				*i* IAML			17 02 23.9	
PVAQ	**Vaqueiros**	**0.89**	**337**	P		**Pn**	**17 02 11.7**	**+1.1**
EGRO	**El Granado**	**0.96**	**350**	P		**Pn**	**17 02 13.0**	**+1.4**
EGRO				S		**Sn**	**17 02 25.0**	**+0.9**
EGRO	**El Granado**	**0.96**	**350**	||Pn		**Pn**	**17 02 13.0**	**+1.4**
EGRO				Sn		**Sn**	**17 02 25.0**	**+0.9**
EGRO				*i* IVmb_Lg			17 02 29.6	
CNIL	**Conil**	**1.01**	**102**	P		**Pn**	**17 02 14.6**	**+2.4**
PPOR	**Portimao**	**1.15**	**299**	*eP*		**Pn**	**17 02 15.4**	**+1.2**
PPOR				*eS*		**Sn**	**17 02 29.1**	**+0.5**
PPOR				*i* IAML			17 02 37.0	
PPOR				*i* IAML			17 02 37.8	
ESPR	**Espera**	**1.17**	**76**	P		**Pn**	**17 02 16.0**	**+1.5**
ESPR				S		**Sn**	**17 02 30.3**	**+1.0**
ESPR	**Espera**	**1.17**	**76**	Pn		**Pn**	**17 02 16.0**	**+1.5**
ESPR				Sn		**Sn**	**17 02 30.6**	**+1.2**
ESPR				*i* IVmb_Lg			17 02 32.1	
PCVE	**Castro Verde**	**1.21**	**330**	P		**Pn**	**17 02 16.5**	**+1.4**
PCVE				S		**Sn**	**17 02 30.7**	**+0.5**
PCVE	**Castro Verde**	**1.21**	**330**	*eP*		**Pn**	**17 02 16.5**	**+1.4**
PCVE				*eS*		**Sn**	**17 02 31.0**	**+0.8**
PCVE				*i* IAML			17 02 31.3	
PCVE				*i* IAML			17 02 31.7	
PCVE				*i* IAML			17 02 32.1	
PLAGO	**Lagos**	**1.24**	**295**	*eP*		**Pn**	**17 02 16.6**	**+1.1**
PLAGO				*eS*		**Sn**	**17 02 32.4**	**+1.5**
PLAGO				*i* IAML			17 02 40.0	
PLAGO				*i* IAML			17 02 42.8	
EMIN	**Mina Concepcio**	**1.27**	**22**	P		**Pn**	**17 02 16.9**	**+1.0**
EMIN				S		**Sn**	**17 02 30.9**	**-0.9**
EMIN	**Mina Concepcio**	**1.27**	**22**	||Pn		**Pn**	**17 02 16.9**	**+1.0**
EMIN				Sn		**Sn**	**17 02 33.1**	**+1.3**
EMIN				*i* IVmb_Lg			17 02 38.2	
MORF	**Marmelete**	**1.31**	**303**	*eP*		**Pn**	**17 02 17.6**	**+1.0**
MORF				*eS*		**Sn**	**17 02 33.1**	**+0.2**
MORF				IAML			17 02 35.7	
	comp=N,331nm,0.1s							
MORF	**Marmelete**	**1.31**	**303**	*eP*		**Pn**	**17 02 17.6**	**+1.0**
MORF				*eS*		**Sn**	**17 02 33.7**	**+0.8**
MORF				*i* IAML			17 02 34.0	
MORF				*i* IAML			17 02 34.6	
MORF				*i* IAML			17 02 43.2	
EJIF	**Jimena Fronter**	**1.46**	**95**	Pn		**Pn**	**17 02 20.8**	**+2.3**
EJIF				Sn		**Sn**	**17 02 38.6**	**+2.1**
PTEO	**Sao Teotonio**	**1.50**	**310**	*||eP*		**Pn**	**17 02 20.7**	**+1.6**
PTEO				*eS*		**Sn**	**17 02 38.3**	**+0.8**
PTEO				*i* IAML			17 02 39.0	
PTEO				*i* IAML			17 02 39.4	
PTEO				*i* IAML			17 02 51.9	
PBEJ	**Beja**	**1.51**	**342**	*eP*		**Pn**	**17 02 20.5**	**+1.3**
PBEJ				*eS*		**Sn**	**17 02 38.0**	**+0.4**
PBEJ				*i* IAML			17 02 42.0	
PBEJ				*i* IAML			17 02 43.7	
PBEJ				*i* IAML			17 02 45.3	
PBAR	**Barrancos**	**1.60**	**7**	P		**Pn**	**17 02 21.7**	**+1.3**
PBAR				S		**Sn**	**17 02 40.7**	**+0.9**
PBAR	**Barrancos**	**1.60**	**7**	*||eP*		**Pn**	**17 02 21.7**	**+1.3**
PBAR				*eS*		**Sn**	**17 02 40.8**	**+1.0**
PBAR				*i* IAML			17 02 46.3	
PBAR				*i* IAML			17 02 46.5	
PBAR				*i* IAML			17 02 48.5	
PLOUS	**Minas do Lousa**	**1.71**	**328**	*||eP*		**Pn**	**17 02 23.3**	**+1.5**
PLOUS				*eS*		**Sn**	**17 02 42.9**	**+0.4**
PLOUS				*i* IAML			17 02 53.3	
PLOUS				*i* IAML			17 02 53.6	
PLOUS				*i* IAML			17 02 54.5	
SMIR	**Smir Dam**	**1.78**	**120**	P		**Pn**	**17 02 24.6**	**+1.7**
SMIR				S		**Sn**	**17 02 44.5**	**+0.2**
EMIJ	**Mijas**	**2.02**	**90**	P		**Pn**	**17 02 27.2**	**+1.0**
EMIJ				S		**Sn**	**17 02 49.9**	**-0.2**
EMIJ	**Mijas**	**2.02**	**90**	Pn		**Pn**	**17 02 27.4**	**+1.3**
EMIJ				Sn		**Sn**	**17 02 52.5**	**+2.4**
EMIJ				*i* IVmb_Lg			17 02 57.2	
EVO	**Evora**	**2.03**	**343**	P		**Pn**	**17 02 27.8**	**+1.5**
EVO				S		**Sn**	**17 02 50.4**	**0.0**
EVO	**Evora**	**2.03**	**343**	*||iP*		**Pn**	**17 02 27.8**	**+1.5**
EVO				*eS*		**Sn**	**17 02 49.9**	**-0.5**
EVO				*i* IAML			17 02 52.8	
EVO				*i* IAML			17 02 53.1	
ECAB	**El Cabril**	**2.10**	**44**	P		**Pn**	**17 02 28.0**	**+0.8**
ECAB				S		**Sn**	**17 02 50.3**	**-1.9**
ECAB	**El Cabril**	**2.10**	**44**	Pn		**Pn**	**17 02 28.1**	**+0.8**
ECAB				Sn		**Sn**	**17 02 50.9**	**-1.3**
ECAB				*i* IVmb_Lg			17 02 57.3	
MOE	**Montemor**	**2.11**	**336**	*||eP*		**Pn**	**17 02 29.1**	**+1.6**
MOE				*eS*		**Sn**	**17 02 53.4**	**+0.9**
MOE				*i* IAML			17 02 53.9	
MOE				*i* IAML			17 02 54.3	
MOE				*i* IAML			17 02 54.3	
CHEFC	**Chefchaouen**	**2.16**	**133**	P		**Pn**	**17 02 28.7**	**+0.6**
CHEFC				S		**Sn**	**17 02 53.4**	**-0.3**
EBAD	**Badajoz**	**2.17**	**5**	P		**Pn**	**17 02 29.4**	**+1.1**
EBAD				S		**Sn**	**17 02 55.1**	**+1.1**
EBAD	**Badajoz**	**2.17**	**5**	||Pn		**Pn**	**17 02 29.4**	**+1.1**
EBAD				Sn		**Sn**	**17 02 55.8**	**+1.7**
EBAD				*i* IVmb_Lg			17 03 06.5	
PESTR	**Estremoz**	**2.29**	**354**	P		**Pn**	**17 02 30.9**	**+1.0**
PESTR				S		**Sn**	**17 02 57.7**	**+0.8**
PESTR	**Estremoz**	**2.29**	**354**	*eP*		**Pn**	**17 02 31.0**	**+1.0**
PESTR				*eS*		**Sn**	**17 02 57.2**	**+0.3**
PESTR				*i* IAML			17 03 11.5	
PESTR				*i* IAML			17 03 11.6	
PESTR				*i* IAML			17 03 18.5	
PESTR	**Estremoz**	**2.29**	**354**	P		**Pn**	**17 02 30.9**	**+1.0**
PESTR				S		**Sn**	**17 03 00.7**	**+3.8**
EMAL	**Malaga-Limoner**	**2.29**	**85**	P		**Pn**	**17 02 31.8**	**+1.8**
EMAL				S		**Sn**	**17 02 57.3**	**+0.3**
PARRA	**Arraiolos**	**2.31**	**345**	*||eP*		**Pn**	**17 02 31.5**	**+1.4**
PARRA				*eS*		**Sn**	**17 02 57.6**	**+0.3**
PARRA				*i* IAML			17 02 58.3	
PARRA				*i* IAML			17 02 58.5	
PARRA				*i* IAML			17 02 59.1	
PMTG	**Montargil**	**2.59**	**343**	*||eP*		**Pn**	**17 02 35.4**	**+1.4**
PMTG				*eS*		**Sn**	**17 03 04.8**	**+0.6**
PMTG				*i* IAML			17 03 06.3	
PMTG				*i* IAML			17 03 16.4	
PMTG				*i* IAML			17 03 25.1	
EGOR	**Sierra Gorda,**	**2.59**	**77**	P		**Pn**	**17 02 36.4**	**+2.2**
EGOR				S		**Sn**	**17 03 05.7**	**+1.1**
EGOR	**Sierra Gorda,**	**2.59**	**77**	Pn		**Pn**	**17 02 36.5**	**+2.3**
EGOR				Sn		**Sn**	**17 03 07.1**	**+2.6**
EGOR				*i* IVmb_Lg			17 03 16.1	
LIS	**Lisbon**	**2.60**	**326**	*eP*		**Pn**	**17 02 35.3**	**+1.2**
RTC	**Rabat Centre**	**2.62**	**172**	P		**Pn**	**17 02 34.6**	**+0.2**
RTC				S		**Sn**	**17 03 03.6**	**-1.3**
EADA	**Adamuz**	**2.67**	**53**	P		**Pn**	**17 02 36.3**	**+1.1**
EADA				S		**Sn**	**17 03 04.8**	**-1.4**
EADA	**Adamuz**	**2.67**	**53**	Pn		**Pn**	**17 02 36.4**	**+1.3**
EADA				Sn		**Sn**	**17 03 07.1**	**+0.9**
EADA				*i* IVmb_Lg			17 03 09.1	
PMRV	**Marv??o**	**2.84**	**358**	*||eP*		**Pn**	**17 02 38.7**	**+1.2**
PMRV				*eS*		**Sn**	**17 03 10.6**	**+0.2**
PMRV				*i* IAML			17 03 11.1	
PMRV				*i* IAML			17 03 11.1	
PMRV				*i* IAML			17 03 30.2	
PMAFR	**Mafra**	**2.85**	**327**	P		**Pn**	**17 02 39.5**	**+1.9**
PMAFR				S		**Sn**	**17 03 10.0**	**-0.7**
PMAFR	**Mafra**	**2.85**	**327**	*eP*		**Pn**	**17 02 39.5**	**+1.9**
PMAFR				*eS*		**Sn**	**17 03 10.8**	**+0.1**
PMAFR				*i* IAML			17 03 12.2	
PMAFR				*i* IAML			17 03 12.5	
PMAFR				*i* IAML			17 03 12.6	
ELGU	**Los Guajares,**	**2.94**	**83**	P		**Pn**	**17 02 40.3**	**+1.4**
ELGU				S		**Sn**	**17 03 13.8**	**+0.7**
ELGU	**Los Guajares,**	**2.94**	**83**	Pn		**Pn**	**17 02 40.5**	**+1.5**
ELGU				Sn		**Sn**	**17 03 15.3**	**+2.1**
ELGU				*i* IVmb_Lg			17 03 22.5	
SICH	**Sidi Chahed**	**2.95**	**147**	P		**Pn**	**17 02 38.4**	**-0.6**
SICH				S		**Sn**	**17 03 11.9**	**-1.3**
PSARD	**Sardoal**	**3.09**	**347**	*||eP*		**Pn**	**17 02 42.4**	**+1.4**
PSARD				*eS*		**Sn**	**17 03 16.5**	**-0.1**
PSARD				*i* IAML			17 03 18.0	
PSARD				*i* IAML			17 03 18.4	
PSARD				*i* IAML			17 03 19.1	
EQTA	**Presa de Quent**	**3.13**	**77**	P		**Pn**	**17 02 44.3**	**+2.7**
EQTA				S		**Sn**	**17 03 18.5**	**+0.6**
EQUE	**Quentar**	**3.14**	**78**	Pn		**Pn**	**17 02 42.9**	**+1.3**
EQUE				Sn		**Sn**	**17 03 20.0**	**+2.1**
EQUE				*i* IVmb_Lg			17 03 26.5	
PSBE	**So Bento**	**3.16**	**338**	*||eP*		**Pn**	**17 02 43.7**	**+1.8**
PSBE				*eS*		**Sn**	**17 03 18.4**	**+0.1**
PSBE				*i* IAML			17 03 20.2	
PSBE				*i* IAML			17 03 21.1	
PSBE				*i* IAML			17 03 39.1	
PCBR	**Castelo Branco**	**3.25**	**357**	*||eP*		**Pn**	**17 02 44.4**	**+1.3**
PCBR				*eS*		**Sn**	**17 03 20.3**	**-0.3**
PCBR				*i* IAML			17 03 20.6	
PCBR				*i* IAML			17 03 20.6	
PCBR				*i* IAML			17 03 21.8	
AVE	**Averroes**	**3.28**	**182**	P		**Pn**	**17 02 45.2**	**+1.6**
AVE				S		**Sn**	**17 03 22.1**	**+0.7**
AVE	**Averroes**	**3.28**	**182**	P		**Pn**	**17 02 42.5**	**-1.1**
AVE				S		**Sn**	**17 03 18.1**	**-3.3**
E0802	**Ubeda,Jaen**	**3.42**	**64**	Sn		**Sn**	**17 03 24.4**	**-0.5**
AKLM	**AKL**	**3.47**	**126**	P		**Pn**	**17 02 46.7**	**+0.5**
AKLM				S		**Sn**	**17 03 22.4**	**-3.7**
LCRM	**LCR**	**3.51**	**145**	P		**Pn**	**17 02 46.8**	**0.0**
LCRM				S		**Sn**	**17 03 27.2**	**+0.1**
IFR	**Ifrane**	**3.53**	**149**	P		**Pn**	**17 02 47.4**	**+0.2**
IFR				S		**Sn**	**17 03 24.2**	**-3.6**
EBER	**Berja**	**3.54**	**84**	P		**Pn**	**17 02 49.3**	**+2.1**
EBER				S		**Sn**	**17 03 29.5**	**+1.6**
EBER	**Berja**	**3.54**	**84**	Pn		**Pn**	**17 02 49.3**	**+2.1**
EBER				Sn		**Sn**	**17 03 29.7**	**+1.8**
EBER				*i* IVmb_Lg			17 03 32.2	
EQES	**Quesada**	**3.57**	**69**	Pn		**Pn**	**17 02 48.8**	**+1.2**
EQES				Sn		**Sn**	**17 03 29.2**	**+0.6**
EQES				*i* IVmb_Lg			17 03 32.6	
PSIM	**Granatula de C**	**3.57**	**50**	Pn		**Pn**	**17 02 48.9**	**+1.3**
PSIM				Sn		**Sn**	**17 03 28.6**	**0.0**
PCAS	**Casmilo, Conde**	**3.59**	**345**	*eP*		**Pn**	**17 02 49.2**	**+1.4**
PCAS				*eS*		**Sn**	**17 03 28.7**	**-0.3**
PCAS				*i* IAML			17 03 52.5	
PCAS				*i* IAML			17 03 54.8	
PCAS				*i* IAML			17 03 58.5	
EPLA	**Plasencia**	**3.60**	**15**	Pn		**Pn**	**17 02 49.0**	**+1.0**
EPLA				*i* IVmb_Lg			17 03 28.7	
EPLA				Sn		**Sn**	**17 03 29.2**	**0.0**
PAB	**San Pablo**	**3.75**	**37**	Pn		**Pn**	**17 02 51.3**	**+1.2**
PAB				Sn		**Sn**	**17 03 29.3**	**-3.7**
PAB				*i* IVmb_Lg			17 03 32.0	
MTE	**Manteigas**	**3.81**	**357**	*eP*		**Pn**	**17 02 52.0**	**+1.1**
MTE				*eS*		**Sn**	**17 03 33.9**	**-0.6**
MTE				*i* IAML			17 04 07.2	
MTE				*i* IAML			17 04 15.0	
CZD	**Col de Zad**	**3.99**	**152**	P		**Pn**	**17 02 52.1**	**-1.6**
CZD				S		**Sn**	**17 03 37.9**	**-1.5**
ESDC	**Sonseca Array**	**4.04**	**39**	Pn		**Pn**	**17 02 55.2**	**+1.2**
ESDC				Sn		**Sn**	**17 03 38.8**	**-1.3**
ESDC				*i* IVmb_Lg			17 03 40.0	
ESBB	**Sonseca Array**	**4.04**	**39**	Pn		**Pn**	**17 02 55.4**	**+1.4**
ESBB				Sn		**Sn**	**17 03 39.5**	**-0.7**
ENIJ	**Nijar**	**4.09**	**83**	P		**Pn**	**17 02 55.2**	**+0.5**
ENIJ				S		**Sn**	**17 03 41.4**	**+0.1**
SRHM	**Skhour des Reh**	**4.14**	**187**	P		**Pn**	**17 02 57.0**	**+1.6**
PVIS	**Viseu**	**4.15**	**353**	*eP*		**Pn**	**17 02 56.7**	**+1.2**
PVIS				*eS*		**Sn**	**17 03 42.4**	**-0.4**
MD31	**MD31**	**4.25**	**150**	P		**Pn**	**17 02 55.8**	**-1.2**
MD31				S		**Sn**	**17 03 43.0**	**-2.4**
MDT	**Midelt**	**4.36**	**149**	P		**Pn**	**17 02 58.4**	**0.0**
MDT				S		**Sn**	**17 03 45.8**	**-2.2**
MVO	**Moncorvo**	**4.58**	**2**	*eP*		**Pn**	**17 03 02.6**	**+1.2**
MVO				*eS*		**Sn**	**17 03 50.1**	**-3.2**
MVO				*i* IAML			17 03 53.2	
MVO				*i* IAML			17 03 53.3	
MVO				*i* IAML			17 03 53.4	
EJUZ	**Juzbado, Salam**	**4.62**	**13**	Pn		**Pn**	**17 03 02.9**	**+0.9**
EJUZ				Sn		**Sn**	**17 03 52.5**	**-1.9**
EZAR	**Zarzadilla de**	**4.64**	**72**	Pn		**Pn**	**17 03 04.6**	**+2.4**
EZAR				Sn		**Sn**	**17 03 55.3**	**+0.4**
EZAR				*i* IVmb_Lg			17 03 58.2	
PTO	**Porto**	**4.66**	**348**	*eP*		**Pn**	**17 03 03.9**	**+1.4**
PTO				*eS*		**Sn**	**17 03 53.1**	**-2.2**
PVRL	**Vila Real**	**4.70**	**356**	*eP*		**Pn**	**17 03 04.0**	**+1.0**
PVRL				*eS*		**Sn**	**17 03 54.0**	**-2.2**
GUD	**Guadarrama**	**4.73**	**30**	Pn		**Pn**	**17 03 05.2**	**+1.6**
GUD				Sn		**Sn**	**17 03 56.0**	**-1.3**
GUD				*i* IVmb_Lg			17 03 57.5	
POLO	**Lamas de Olo**	**4.80**	**355**	*eP*		**Pn**	**17 03 05.4**	**+1.0**
POLO				*eS*		**Sn**	**17 03 56.7**	**-2.1**
POLO				*i* IAML			17 03 58.6	
POLO				*i* IAML			17 03 59.8	
POLO				*i* IAML			17 03 60.0	
UCM	**Universidad Co**	**4.88**	**39**	P		**Pn**	**17 03 07.2**	**+1.6**
UCM				S		**Sn**	**17 03 58.0**	**-2.8**
TISM	**Timmit**	**4.90**	**172**	P		**Pn**	**17 03 04.1**	**-1.7**
EMUR	**La Murta**	**4.98**	**74**	P		**Pn**	**17 03 08.9**	**+2.0**
EMUR				S		**Sn**	**17 04 01.4**	**-1.8**
EMUR	**La Murta**	**4.98**	**74**	Pn		**

EARI				*i* IVmb_Lg			17 04 49.1				
ALT04	**Santillana del**	**7.20**	**19**	Pn	**Pn**		**17 03 39.2**	**+1.8**			
ALT01	**Santillana del**	**7.20**	**19**	Pn	**Pn**		**17 03 38.6**	**+1.3**			
EIBI	**Ibiza**	**7.25**	**68**	Pn	**Pn**		**17 03 38.8**	**+0.8**			
EIBI				Sn	**Sn**		**17 04 55.4**	**-3.6**			
EIBI				*i* IVmb_Lg			17 04 57.8				
ELAN	**Lanestosa**	**7.26**	**23**	Pn	**Pn**		**17 03 39.5**	**+1.3**			
ELAN				Sn	**Sn**		**17 04 56.4**	**-3.0**			
ESAC	**San Caprasio**	**7.36**	**44**	Pn	**Pn**		**17 03 40.9**	**+1.3**			
ESAC				Sn	**Sn**		**17 05 00.0**	**-2.0**			
ESAC				*i* IVmb_Lg			17 05 13.8				
ERTA	**Horta de San J**	**7.37**	**51**	Pn	**Pn**		**17 03 41.5**	**+1.7**			
ERTA				Sn	**Sn**		**17 05 00.6**	**-1.5**			
ERTA				*i* IVmb_Lg			17 05 04.8				
EALK	**Alkurruntz**	**7.97**	**32**	Pn	**Pn**		**17 03 49.4**	**+1.4**			
EALK				Sn	**Sn**		**17 05 13.1**	**-3.8**			
EALK				*i* IVmb_Lg			17 05 13.4				
ECHI	**Chisagues Biel**	**8.37**	**41**	Pn	**Pn**		**17 03 54.7**	**+1.2**			
ECHI				Sn	**Sn**		**17 05 23.4**	**-3.4**			
ECHI				*i* IVmb_Lg			17 05 27.9				
TANT	**Tantan**	**8.81**	**203**	P	**Pn**		**17 03 57.9**	**-1.6**			
PMOZ	**Porto Moniz, M**	**8.99**	**248**	P	**Pn**		**17 04 02.4**	**+0.4**			

*SNET **16** 17:04:00.7±3.2, 12.°94N×87.°32W, h3km, ML3.7, Presumed earthquake*
*CATAC **16** 17:04:02.4±0.2, 13.°N±2.°×8.°7W±.°, h3km±1km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=3.9km s-min=1.6km az=29.9, confirmed*
ISC 16 17:04:01.9±1.0, **12.°95N**±0.°04×**87.°36W**±0.°02, **h7**km±9km, **n43**, σ0**§55**/69, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.20**	**278**	P	**Pg**	**17 04 06.3**	**+0.4**
CSGN				S	**Sg**	**17 04 09.2**	**+0.6**
CRIN	**San Cristobal**	**0.39**	**129**	P	**Pb**	**17 04 11.8**	**+0.6**
CRIN				S	**Sb**	**17 04 17.1**	**-0.3**
QUEN	**Al S del Volca**	**0.61**	**125**	P	**Pb**	**17 04 15.1**	**+0.2**
HERN	**Volcan Telica**	**0.62**	**123**	P	**Pb**	**17 04 15.3**	**+0.2**
HERN				S	**Sb**	**17 04 24.0**	**+0.1**
TEL3	**Telica 3**	**0.63**	**127**	P	**Pn**	**17 04 16.6**	**-0.7**
LCND	**La Caada**	**0.63**	**305**	P	**Pg**	**17 04 14.2**	**0.0**
LCND				S	**Sg**	**17 04 23.0**	**+0.7**
LCND	**La Caada**	**0.63**	**305**	*eP*	**Pg**	**17 04 13.9**	**-0.2**
LCND				*eP*	**Pg**	**17 04 14.1**	**0.0**
LCND				*eS*	**Sg**	**17 04 22.6**	**+0.3**
PLRN	**Geotermica Pol**	**0.68**	**122**	P	**Pb**	**17 04 16.2**	**+0.1**
PLRN				S	**Sb**	**17 04 25.3**	**-0.4**
INTP	**Intipuca**	**0.72**	**290**	*eP*	**Pg**	**17 04 15.4**	**-0.4**
INTP				*eS*	**Sg**	**17 04 25.4**	**+0.2**
ROCN	**Rota Cerro Neg**	**0.74**	**125**	P	**Pg**	**17 04 14.9**	**-1.3**
ROCN				S	**Sg**	**17 04 25.8**	**0.0**
ILCN	**San Idelfonso**	**0.74**	**120**	P	**Pb**	**17 04 17.3**	**+0.2**
ILCN				S	**Sb**	**17 04 27.8**	**+0.2**
CNGA	**Al SSO del Vol**	**0.79**	**125**	P	**Pb**	**17 04 17.9**	**0.0**
CNGA				S	**Sb**	**17 04 29.3**	**+0.6**
CNGN	**Cerro Negro**	**0.79**	**124**	P	**Pb**	**17 04 17.7**	**-0.2**
CNGN				S	**Sb**	**17 04 29.6**	**+0.8**
MACN	**El Madrono**	**0.82**	**126**	P	**Pb**	**17 04 18.4**	**-0.2**
MACN				S	**Sb**	**17 04 30.4**	**+0.5**
MOM3	**MOM3**	**0.93**	**118**	P	**Pb**	**17 04 20.4**	**0.0**
MOM3				S	**Sb**	**17 04 33.7**	**+0.8**
MOMN	**Momotombo**	**0.96**	**124**	P	**Pb**	**17 04 20.9**	**-0.1**
MOMN				S	**Sb**	**17 04 34.7**	**+0.8**
LIMN	**Finca el Limon**	**0.98**	**83**	P	**Pb**	**17 04 20.9**	**-0.3**
LIMN				S	**Sb**	**17 04 35.1**	**+0.7**
BLLM	**Bellamira**	**0.99**	**300**	*eP*	**Pg**	**17 04 20.1**	**-0.8**
MOM2	**El Cardon**	**0.99**	**121**	P	**Pb**	**17 04 21.6**	**+0.2**
MOM2				S	**Sn**	**17 04 36.1**	**-0.4**
VSM	**San Miguel**	**1.01**	**298**	*eP*	**Pg**	**17 04 20.6**	**-0.8**
RANC	**El Ranchito**	**1.02**	**298**	P	**Pg**	**17 04 21.1**	**-0.5**
RANC				S	**Sg**	**17 04 35.0**	**0.0**
COPN	**Copaltepe**	**1.07**	**135**	P	**Pb**	**17 04 22.3**	**-0.4**
PACA	**Pacayal**	**1.07**	**299**	P	**Pg**	**17 04 21.7**	**-0.8**
PACA				S	**Sb**	**17 04 37.3**	**+0.2**
PACA	**Pacayal**	**1.07**	**299**	*eP*	**Pg**	**17 04 21.4**	**-1.1**
OCON	**Estacion meteo**	**1.09**	**52**	S	**Sb**	**17 04 38.0**	**+0.2**
AMTN	**Mateare**	**1.15**	**128**	S	**Sn**	**17 04 40.9**	**+0.5**
SAPS	**Ciudad Sandino**	**1.21**	**130**	P	**Pn**	**17 04 25.6**	**+0.4**
SAPS				S	**Sn**	**17 04 42.1**	**+0.2**
TECA	**Tecapa**	**1.24**	**296**	*eP*	**Pg**	**17 04 24.4**	**-1.3**
APQ2	**Apoyeque**	**1.26**	**126**	P	**Pn**	**17 04 25.9**	**0.0**
APQ2				S	**Sn**	**17 04 43.3**	**+0.3**
RCFN	**Al S de San Ju**	**1.26**	**62**	P	Pg	17 03 36.0	-50
RCFN				S	Sg	17 03 52.8	-50
RCON	**San Juan de Ri**	**1.29**	**65**	P	**Pn**	**17 04 26.5**	**+0.1**
RCON				S	**Sn**	**17 04 44.5**	**+0.4**
RCVN	**Varillal2**	**1.30**	**61**	P	**Pg**	**17 04 26.4**	**-0.5**
RCVN				S	**Sn**	**17 04 44.4**	**+0.1**
RCPN	**Sur Rio San Ju**	**1.36**	**65**	P	**Pb**	**17 04 27.6**	**-0.2**
RCPN				S	**Sn**	**17 04 46.5**	**+0.7**
MATN	**Matagalpa**	**1.40**	**91**	P	**Pn**	**17 04 28.0**	**+0.1**
MATN				S	**Sn**	**17 04 47.3**	**+0.6**
MAS3	**Al N del Volca**	**1.48**	**128**	P	**Pb**	**17 04 29.3**	**-0.4**
MAS3				S	**Sg**	**17 04 49.7**	**+0.2**
COEG	**Centro de Oper**	**1.62**	**294**	*eP*	**Pn**	**17 04 30.7**	**-0.3**
COEG				*eS*	**Sn**	**17 04 52.5**	**+0.3**
PAVA	**Las Pavas**	**1.71**	**297**	P	**Pn**	**17 04 33.1**	**+0.9**
PAVA	**Las Pavas**	**1.71**	**297**	*eP*	**Pn**	**17 04 32.4**	**+0.2**
SJTE	**Alcalda de S**	**1.73**	**293**	*eP*	**Pn**	**17 04 32.0**	**-0.5**
LFRS	**El Faro**	**1.79**	**292**	*eP*	**Pn**	**17 04 32.8**	**-0.5**
BOQS	**Boqueron**	**2.02**	**293**	*eP*	**Pn**	**17 04 37.7**	**+1.1**
CEVE	**Cerro Verde**	**2.37**	**292**	*eP*	**Pb**	**17 04 45.0**	**-0.1**
ESQI	**Esquipulas**	**2.50**	**310**	*eP*	**Pb**	**17 04 45.9**	**-1.4**

*IDC **16** 17:09:35.9±1.1, 8.°37S×104.°30E, h0km, mb3.7/8, mbtmp3.7/9, ML3.9/1, MS3.5/1, Error ellipse: s-maj=33.4km s-min=19.5km az=52.0*
*NEIC **16** 17:09:37.0±1.9, 8.°20S±0.°04×104.°12E±0.°09, h10km±1km, mb4.1/8, Error ellipse: s-maj=15.7km s-min=6.5km az=255.0*
ISC 16 17:09:40.2±0.8, **8.°20S**±0.°10×**104.°22E**±0.°09, **h35**km, **n28**, σ1**§41**/25, **mb3.8**/10, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	**3.48**	**78**		**Pn**	**17 10 31.1**	**-0.9**
BBJI					**Sn**	**17 11 08.5**	**-3.5**
LEM	**Lembang**	**3.64**	**68**	Pn	**Pn**	**17 10 35.2**	**+0.9**
	10nm,0.3s,baz=312,slow=17,SNR=4.3						
LEM				Sn	**Sn**	**17 11 18.6**	**+2.5**
	11nm,0.3s,baz=204,slow=19,SNR=6.0 21nm,0.4s						
MNAI	**Manna**	**4.02**	**342**	Pn	**Pn**	**17 10 37.1**	**-2.3**
UGM	**Wanagama**	**6.25**	**88**	Pn	**Pn**	**17 11 10.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**9.83**	**92**	Pn	**Pn**	**17 11 59.8**	**+0.6**
GIRL	**Giralia**	**17.29**	**147**	Pn	**Pn**	**17 13 38.1**	**-0.8**
MBWA	**Marble Bar**	**19.75**	**132**	Pn	**Pn**	**17 14 09.8**	**+0.8**
MBWA				IAmb	IAmb	17 14 48.9	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**23.04**	**117**	P	**P**	**17 14 43.5**	**+0.9**
KNRA	**Kununurra**	**25.12**	**109**	P	**P**	**17 15 01.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**27.00**	**349**	P	**P**	**17 15 18.2**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=183,slow=9.0,SNR=8.1						
CMAR				LR	LR	17 26 23.1	
	comp=Z,94nm,18.2s,baz=215,slow=37						
WRA	**Warramunga Arr**	**31.40**	**115**	P	**P**	**17 15 57.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=286,slow=11,SNR=6.5 comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**31.40**	**115**	P	**P**	**17 15 56.9**	**-1.3**
H08S2	**Diego Garcia H**	**31.42**	**269**	T	T	17 50 15.0	
	baz=90,slow=74						
H08S3	**Diego Garcia H**	**31.43**	**269**	T	T	17 49 50.0	
	baz=90,slow=74						
H08S1	**Diego Carcia H**	**31.44**	**269**	T	T	17 50 29.3	
	baz=90						
ASAR	**Alice Springs**	**32.32**	**122**	P	**P**	**17 16 05.2**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=291,slow=8.1,SNR=5.2 comp=Z,0.6nm,0.9s						
STKA	**Stephens Creek**	**41.95**	**129**	P	**P**	**17 17 27.2**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=315,slow=10,SNR=2.7 comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**55.83**	**2**	P	**P**	**17 19 16.1**	**+1.9**
	comp=Z,0.6nm,0.4s,baz=184,slow=8.7,SNR=2.2 comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**55.83**	**2**	IAmb	IAmb	17 19 18.8	
	comp=Z,1.6nm,1.0s						
MKAR	**Makanchi Array**	**58.13**	**342**	P	P	17 19 34.2	+3.8
	comp=Z,0.3nm,0.4s,baz=149,slow=8.5,SNR=6.0						
MKAR	**Makanchi Array**	**58.13**	**342**	P	**P**	**17 19 30.4**	**0.0**
KURBB	**Kurchatov Arra**	**62.68**	**342**	P	**P**	**17 20 02.5**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=155,slow=6.1,SNR=2.6 comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**62.73**	**342**	P	**P**	**17 20 01.3**	**-0.4**
KURK				IAmb	IAmb	17 20 43.4	
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**64.05**	**347**	P	**P**	**17 20 11.4**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=156,slow=6.9,SNR=2.2 comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**64.05**	**347**	P	**P**	**17 20 09.9**	**-0.4**
QSPA	**South Pole Qui**	**81.80**	**180**	P	**P**	**17 21 56.7**	**+1.2**
	comp=Z,1.3nm,0.9s,baz=321,slow=4.7,SNR=3.5 comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**81.80**	**180**	P	**P**	**17 21 56.2**	**+0.7**
QSPA				IAmb	IAmb	17 22 31.3	
	comp=Z,2.8nm,1.2s						
TXAR	**Lajitas Array**	**146.42**	**48**	PKPbc	**PKPab**	**17 29 18.3**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=309,slow=2.9,SNR=3.7						

*JSN **16** 17:22:42.7±1.3, 19.°47N×77.°78W, h15km±999km, MD3.9, Presumed earthquake*
*SSNC **16** 17:22:42.5±0.9, 19.°52N×77.°79W, h12km±10km, MD3.1, ML2.5, MW2.9, Presumed earthquake*
ISC 16 17:22:39.7±2.1, **19.°50N**±0.°04×**77.°79W**±0.°07, **h16**km±14km, **n19**, σ0**§77**/33, **2C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**0.93**	**53**	*eP*	**Pn**	**17 22 58.6**	**+0.5**
LMGC				*eS*	**Sg**	**17 23 09.8**	**-0.1**
CVJ	**Coleyville**	**1.29**	**169**	‖ *iP*	**Pb**	**17 23 04.3**	**+0.5**
CVJ				*i* S	**Sn**	**17 23 19.9**	**-0.4**
MTDJ	**Mount Denham**	**1.29**	**169**	*eP*	**Pb**	**17 23 04.1**	**+0.3**
MTDJ				*eS*	**Sn**	**17 23 19.8**	**-0.5**
MTDJ				IAML		17 23 21.6	
	comp=Z,276nm,0.3s						
MTDJ				IAML		17 23 22.6	
	258nm,0.4s						
CHIV	**Chivirico**	**1.38**	**70**	*eP*	**Pb**	**17 23 05.0**	**-0.2**
CHIV				*eS*	**Sn**	**17 23 21.4**	**-0.9**
CHIV				IAML		17 23 24.3	
	comp=E,98nm,0.1s						
CHIV				IAML		17 23 24.5	
	comp=N,66nm,0.2s						
MCJ	**Malvern**	**1.57**	**176**	*i* P	**Pb**	**17 23 08.5**	**0.0**
CCCC	**Cccc**	**1.69**	**1**	*eP*	**Pn**	**17 23 09.0**	**+0.4**
CCCC				*eS*	**Sn**	**17 23 29.7**	**-0.2**
CCCC				IAML		17 23 41.7	
	comp=E,37nm,0.6s						
CCCC				IAML		17 23 43.4	
	comp=N,25nm,0.4s						
STH	**Stony Hill**	**1.70**	**147**	*i* P	**Pb**	**17 23 10.3**	**-0.3**
STH				*i* P	**Pb**	**17 23 10.3**	**-0.3**
STH				*i* S	**Sn**	**17 23 30.6**	**+0.5**
STH	**Stony Hill**	**1.70**	**147**	*eP*	**Pb**	**17 23 09.9**	**-0.7**
STH				*eS*	**Sn**	**17 23 29.8**	**-0.4**
GWJ	**Greenwich**	**1.74**	**144**	*i* P	**Pn**	**17 23 10.1**	**+0.6**
GWJ				*i* P	**Pb**	**17 23 10.7**	**-0.8**
MARVS	**Santiago de Cu**	**1.85**	**74**	*eP*	**Pn**	**17 23 11.7**	**+0.9**
MARVS				*eS*	**Sn**	**17 23 32.8**	**-1.1**
MARVS				IAML		17 23 39.1	
	comp=N,30nm,0.1s						
MARVS				IAML		17 23 39.6	
	comp=E,32nm,0.1s						
PCJ	**Portland Cotta**	**1.85**	**161**	‖ *iP*	**Pb**	**17 23 13.0**	**-0.3**
PCJ				‖ *iS*	**Sb**	**17 23 35.3**	**-0.9**
RCC	**Rio Carpintero**	**2.03**	**76**	*eP*	**Pn**	**17 23 14.4**	**+1.1**
RCC				*eS*	**Sn**	**17 23 37.6**	**-0.8**
PINC	**Pinares de May**	**2.12**	**62**	*eP*	**Pn**	**17 23 15.2**	**+0.7**
PINC				*eS*	**Sn**	**17 23 41.3**	**+0.7**
HLGC	**Holguin**	**2.13**	**49**	*eP*	**Pn**	**17 23 13.7**	**-1.0**
GTBY	**Guantanamo Bay**	**2.56**	**80**	*eP*	**Pn**	**17 23 20.7**	**+0.1**
GTBY				*eS*	**Sn**	**17 23 53.0**	**+1.6**
NMDO	**Nuevo Mundo**	**2.84**	**68**	*eP*	**Pn**	**17 23 25.8**	**+1.3**
QMBU	**Quimbuelo**	**2.89**	**76**	*eP*	**Pn**	**17 23 26.1**	**+1.0**
MOAC	**Moa**	**2.90**	**66**	*eP*	**Pn**	**17 23 25.6**	**+0.4**
MASC	**Masc**	**3.42**	**78**	*eP*	**Pn**	**17 23 33.4**	**+1.0**

*SNET **16** 17:44:17.2±2.2, 12.°89N×87.°36W, h7km, ML4.1, Presumed earthquake*
*CATAC **16** 17:44:18.1±0.1, 13.°N±2.°×8.°7W±.°, h1km, M4.1/30, MLv4.1/30, Error ellipse: s-maj=4.7km s-min=1.6km az=28.2, confirmed*
*IDC **16** 17:44:20.5±1.3, 13.°14N×87.°06W, h0km, mb3.7/4, mbtmp3.7/6, ML2.9/3, MS3.4/19, Error ellipse: s-maj=36.8km s-min=13.7km az=44.0*
ISC 16 17:44:19.4±1.4, **12.°99N**±0.°05×**87.°21W**±0.°04, **h3**km±10km, **n79**, σ1**§87**/72, **mb3.7**/4, **MS3.4**/16, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.33**	**152**	P	**Pg**	**17 44 27.1**	**+1.3**
CRIN				S	**Sg**	**17 44 32.0**	**+1.9**
CSGN	**Cosiguina Volc**	**0.34**	**267**	P	Pg	17 44 21.5	-4.6
CSGN				S	Sg	17 44 24.6	-6.1
QUEN	**Al S del Volca**	**0.53**	**139**	P	**Pg**	**17 44 30.3**	**+0.7**
QUEN				S	**Sg**	**17 44 35.3**	**-1.1**
HERN	**Volcan Telica**	**0.53**	**136**	P	**Pg**	**17 44 30.4**	**+0.8**
HERN				S	**Sg**	**17 44 35.6**	**-0.8**
TELN	**Telica**	**0.53**	**137**	P	**Pg**	**17 44 30.0**	**+0.4**
TELN				S	**Sg**	**17 44 35.9**	**-0.6**
HOYN	**Al Sur del Vol**	**0.54**	**137**	P	**Pg**	**17 44 30.9**	**+1.1**
HOYN				S	**Sg**	**17 44 35.9**	**-0.8**
TEL3	**Telica 3**	**0.55**	**140**	P	**Pg**	**17 44 31.9**	**+1.9**
PLRN	**Geotermica Pol**	**0.59**	**134**	P	**Pg**	**17 44 31.2**	**+0.5**
ILCN	**San Idelfonso**	**0.64**	**130**	P	**Pg**	**17 44 32.3**	**+0.5**
ILCN				S	**Sg**	**17 44 40.8**	**+0.6**
ROCN	**Rota Cerro Neg**	**0.65**	**136**	P	**Pg**	**17 44 29.9**	**-2.0**
ROCN				S	**Sg**	**17 44 39.1**	**-1.3**
AESN	**El Sauce Leon**	**0.66**	**99**	P	**Pb**	**17 44 32.5**	**-1.0**
CNGN	**Cerro Negro**	**0.69**	**135**	P	**Pg**	**17 44 32.9**	**+0.1**
CNGN				S	**Sg**	**17 44 39.8**	**-2.1**
CNGA	**Al SSO del Vol**	**0.70**	**135**	P	**Pg**	**17 44 33.2**	**+0.4**
MACN	**El Madrono**	**0.74**	**135**	P	**Pg**	**17 44 33.6**	**+0.1**
LCND	**La Caada**	**0.74**	**295**	P	Pg	17 44 29.3	-4.3
LCND	**La Caada**	**0.74**	**295**	*eP*	Pg	17 44 29.3	-4.3
LIMN	**Finca el Limon**	**0.82**	**85**	P	**Pn**	**17 44 36.0**	**-2.0**
LIMN				S	**Sn**	**17 44 48.6**	**-2.1**
MOM3	**MOM3**	**0.82**	**125**	P	**Pg**	**17 44 35.7**	**+0.4**
INTP	**Intipuca**	**0.85**	**284**	*eP*	Pg	17 44 30.6	-5.3
INTP				*eS*	Sg	17 44 40.7	-6.2
MOMN	**Momotombo**	**0.87**	**132**	P	**Pg**	**17 44 30.9**	**+0.7**
MOMN				S	**Sb**	**17 44 50.0**	**+0.7**
MOM2	**El Cardon**	**0.89**	**128**	P	**Pg**	**17 44 37.0**	**+0.4**
OCON	**Estacion meteo**	**0.95**	**48**	P	**Pn**	**17 44 38.5**	**-1.2**
COPN	**Copaltepe**	**1.00**	**143**	P	**Pg**	**17 44 37.7**	**-1.0**
AMTN	**Mateare**	**1.06**	**135**	P	**Pb**	**17 44 40.1**	**-0.4**
BLLM	**Bellamira**	**1.10**	**294**	*eP*	Pb	17 44 35.1	-6.1
APYN	**Apoyeque**	**1.12**	**132**	P	**Pb**	**17 44 40.6**	**-1.0**
APYN				S	**Sn**	**17 44 58.2**	**+0.1**
RCON	**San Juan de Ri**	**1.13**	**64**	P	**Pn**	**17 44 41.8**	**-0.6**
RANC	**El Ranchito**	**1.14**	**293**	P	Pn	17 44 36.2	-6.2
RANC	**El Ranchito**	**1.14**	**293**	*eP*	Pn	17 44 36.2	-6.3
RCVN	**Varillal2**	**1.15**	**59**	P	**Pn**	**17 44 41.4**	**-1.1**
PACA	**Pacayal**	**1.19**	**294**	P	Pn	17 44 37.1	-6.0
RCPN	**Sur Rio San Ju**	**1.21**	**64**	P	**Pn**	**17 44 42.8**	**-0.5**
TISN	**Laguna Tiscapa**	**1.24**	**133**	P	**Pn**	**17 44 42.3**	**-1.4**
MATN	**Matagalpa**	**1.25**	**93**	P	**Pn**	**17 44 43.5**	**-0.4**
MATN				S	**Sn**	**17 45 01.9**	**+0.6**
UNAN	**Cigeo UNAN**	**1.26**	**134**	P	**Pn**	**17 44 42.5**	**-1.5**
UNAN				S	**Sb**	**17 45 00.7**	**+0.1**
WILN	**Americas 2**	**1.29**	**130**	P	**Pn**	**17 44 43.2**	**-1.2**
WILN				S	**Sn**	**17 45 02.0**	**-0.1**
TECA	**Tecapa**	**1.36**	**292**	*eP*	Pn	17 44 39.5	-6.0
MAS3	**Al N del Volca**	**1.39**	**134**	P	**Pn**	**17 44 44.4**	**-1.3**
MAS3				S	**Sg**	**17 45 05.4**	**+1.2**
BOAB	**BOACO BROADBAN**	**1.59**	**110**	P	**Pn**	**17 44 47.8**	**-0.8**
BOAB				S	**Sg**	**17 45 12.4**	**+1.7**
TECO	**Alcaldia de Te**	**1.63**	**290**	*eP*	Pn	17 44 43.9	-5.1
COEG	**Centro de Oper**	**1.75**	**291**	P	**Pn**	**17 44 48.8**	**-1.9**
COEG				S	**Sn**	**17 45 09.3**	**-4.3**
P5NO	**Presa 5 de nov**	**1.81**	**303**	*eP*	Pn	17 44 47.4	-4.1
PAVA	**Las Pavas**	**1.83**	**293**	P	Pn	17 44 48.2	-3.7
PAVA	**Las Pavas**	**1.83**	**293**	*eP*	Pn	17 44 47.6	-4.4
SJTE	**Alcalda de S**	**1.86**	**290**	*eP*	**Pn**	**17 44 49.2**	**-3.1**
LBRS	**Las Brisas**	**1.94**	**293**	*eP*	Pn	17 44 49.4	-4.0
LOMA	**Loma Larga**	**2.02**	**289**	P	**Pn**	**17 44 51.5**	**-3.0**
LOMA				S	**Sn**	**17 45 17.1**	**-3.3**
LLGN	**La Laguna**	**2.05**	**305**	*eP*	**Pn**	**17 44 51.7**	**-3.3**
CONN	**Concepcion**	**2.10**	**132**	P	**Pn**	**17 44 55.6**	**+0.1**
PIC2	**El Picacho**	**2.13**	**291**	*eP*	**Pn**	**17 44 53.0**	**-3.1**
ACON	**Acoyapa**	**2.23**	**117**	P	**Pb**	**17 44 58.8**	**-1.6**
ACON				S	**Sb**	**17 45 27.8**	**-0.5**
JAYA	**Jayaque - finc**	**2.28**	**287**	P	Pn	17 44 54.7	-3.5
JAYA				S	**Sn**	**17 45 23.5**	**-3.4**
SARH	**Santa Rosa de**	**2.33**	**320**	P	**Pn**	**17 44 57.9**	**-0.8**
SARH				S	**Sn**	**17 45 25.1**	**-2.8**
ESQI	**Esquipulas**	**2.60**	**307**	*eP*	**Pn**	**17 45 00.5**	**-2.0**
NUBE	**Las Nubes**	**2.66**	**290**	P	**Pn**	**17 45 01.5**	**-1.9**
NUBE				S	**Sn**	**17 45 33.3**	**-3.0**
JTS	**Las Juntas de**	**3.48**	**140**	Pn	**Pn**	**17 45 15.9**	**+1.5**
	3.4nm,0.3s,baz=326,slow=11,SNR=5.2						
JTS				Sn	**Sn**	**17 45 59.4**	**+3.3**
	4.3nm,0.3s,baz=168,slow=22,SNR=1.1						
JTS				Lg	Lg	17 46 11.9	
	4.4nm,0.3s,baz=143,slow=17,SNR=5.0						
JTS				LR	LR	17 46 58.4	
	comp=Z,309nm,19.6s,baz=329,slow=45 7.9nm,0.3s						
APG	**El Apazote**	**3.74**	**303**	Pn	**Pn**	**17 45 20.1**	**+1.8**
	0.1nm,0.3s,baz=115,slow=14,SNR=9.7						
APG				Sn	**Sn**	**17 46 07.5**	**+4.5**
	0.1nm,0.3s,baz=68,slow=21,SNR=3.8						
APG				Lg	Lg	17 46 19.5	
	0.2nm,0.3s,baz=195,slow=13,SNR=5.1						
CMIG	**Matias Romero**	**8.46**	**300**	Pn	**Pn**	**17 46 24.9**	**+1.8**
	0.3nm,0.3s,baz=90,slow=20,SNR=4.2						
CMIG				Sn	**Sn**	**17 48 04.1**	**+5.0**
	0.4nm,0.3s,baz=43,slow=21,SNR=6.1 0.6nm,0.3s						
ROSC	**El Rosal**	**15.08**	**121**	LR	LR	17 55 20.0	
	comp=Z,106nm,19.5s,baz=7.1,slow=44						
SDV	**Santo Domingo**	**16.77**	**102**	LR	LR	17 56 08.0	
	comp=Z,93nm,18.7s,baz=76,slow=42						
ATAH	**Atahualpa**	**21.83**	**156**	LR	LR	17 57 05.1	
	comp=Z,89nm,21.2s,baz=345,slow=35						
TXAR	**Lajitas Array**	**22.32**	**319**	P	**P**	**17 49 20.2**	**+1.8**
	2.5nm,0.9s,baz=144,slow=11,SNR=9.0 2.5nm,0.9s						
TKL	**Tuckaleechee C**	**22.78**	**7**	P	**P**	**17 49 22.2**	**-0.9**
	1.0nm,0.3s,baz=174,slow=9.6,SNR=1.7 1.0nm,0.3s						
LPIG	**La Paz**	**24.49**	**300**	LR	LR	17 59 07.3	
	comp=Z,148nm,19.9s,baz=104,slow=36						
ANMO	**Albuquerque**	**27.95**	**325**	LR	LR	18 02 59.1	
	comp=Z,47nm,18.5s,baz=101,slow=40						
PFO	**Pinyon Flats O**	**33.62**	**313**	LR	LR	18 06 37.4	
	comp=Z,59nm,18.2s,baz=176,slow=40						
LPAZ	**La Paz**	**34.67**	**147**	LR	LR	18 06 14.5	
	comp=Z,55nm,19.8s,baz=358,slow=38						
MDP	**Montagnes des**	**34.99**	**100**	LR	LR	18 05 34.0	
	comp=Z,54nm,19.2s,baz=112,slow=36						
PDAR	**Pinedale Array**	**35.41**	**331**	LR	LR	18 08 57.6	
	comp=Z,26nm,19.8s,baz=114,slow=42						
NVAR	**Mina Array Bea**	**37.46**	**318**	LR	LR	18 09 29.2	
	comp=Z,66nm,19.0s,baz=162,slow=40						
YBH	**Yreka Blue Hor**	**42.09**	**320**	LR	LR	18 12 34.4	
	comp=Z,53nm,19.7s,baz=162,slow=40						
NEW	**Newport**	**43.05**	**331**	LR	LR	18 14 41.8	
	comp=Z,28nm,18.7s,baz=188,slow=42						
SCHQ	**Schefferville**	**44.69**	**17**	LR	LR	18 10 47.0	
	comp=Z,48nm,19.1s,baz=322,slow=36						
**BDFB

GOMA	Golmarmara-Man	1.02	71	Pg	Pb	18 09 46.0	+0.1	GVD	Gavdhos	4.12	211	P	Pn	18 10 31.3	+2.5
DDIM	Aydin, Didim	1.03	155	P	Pb	18 09 45.9	-0.3	GRG	Griva	4.18	309	P	Pn	18 10 31.2	+1.4
DDIM				S	Sg	18 10 00.6	+0.1	VAY	Valandovo	4.31	314	*i* Pn	Pn	18 10 33.1	+1.6
AYDB	Zeytinkoy-Aydi	1.05	115	Pg	Pb	18 09 46.6	+0.1	KKB	Krupnik	4.39	323	P	Pn	18 10 33.6	+1.0
ODEM	Odemis-İzmir	1.10	96	Pn	Pb	18 09 47.2	-0.2	PGB	Panagyurishte	4.54	336	*i* P	Pn	18 10 35.3	+0.6
DIDI	Didim-Aydin	1.10	156	Pn	Pn	18 09 46.8	-0.6	PLNA	Plana	4.78	330	P	Pn	18 10 39.6	+1.6
GPNR	Gulpinar-Canak	1.15	338	Pn	Pn	18 09 47.4	-0.6	KKUL	Konya-Kulu	4.93	79	P	Pn	18 10 42.2	+2.1
KOCA	Canakkale, Ayv	1.19	339	P	Pn	18 09 48.2	-0.3	VTS	Vitosha	4.97	329	*i* P	Pn	18 10 41.7	+1.0
KOCA				S	Sb	18 10 04.0	+0.1	PLVB	Pleven	5.23	343	⇑P	Pn	18 10 44.5	+0.4
AYDN	Tasoluk	1.19	127	P	Pn	18 09 48.5	-0.2	SRN	Sarande	5.41	288	P	Pn	18 10 50.3	+3.8
AYDN				S	Sb	18 10 03.6	-0.3	MPEP	Malo Peshtene	5.44	337	P	Pn	18 10 47.7	+0.7
AYDN	Tasoluk	1.19	127	P	Pn	18 09 48.4	-0.2	KEK	Kerkira	5.52	286	Pn	Pn	18 10 46.5	-1.7
GORD	Gordes-Manisa	1.28	66	Pn	Pn	18 09 49.5	-0.3	BR105	Keskin Array S	5.56	74	P	Pn	18 10 50.1	+1.4
NAZL	Nazilli-Aydin	1.34	108	Pn	Pn	18 09 50.4	-0.2		0.3nm571nm0.8s						
YKAV	Yalikavak-Bodr	1.35	159	Pn	Pn	18 09 49.9	-0.8	BR106	Keskin Array S	5.56	74	P	Pn	18 10 50.2	+1.4
EZNE	Ezine-Canakkal	1.39	350	Pn	Pn	18 09 50.9	-0.4		0.2nm559nm84nm0.8s						
BODT	Bodrum	1.42	159	Pn	Pn	18 09 51.3	-0.4	BR104	Keskin Array S	5.57	74	P	Pn	18 10 50.3	+1.4
BODT	Bodrum	1.42	159	P	Pn	18 09 52.0	+0.3		0.3nm545nm85nm0.8s						
BODT				S	Sg	18 10 11.9	-0.8	BR131	Keskin Array S	5.57	74	*c i* P	Pn	18 10 50.4	+1.4
KLNA	Kalymnos	1.45	171	P	Pn	18 09 51.0	-1.1	BR131	Keskin Array S	5.57	74		Pn	18 10 49.6	+0.7
EZN	Ezine	1.46	349	Pn	Pn	18 09 51.6	-0.7	BRTR	Keskin Array B	5.57	74	Pn	Pn	18 10 50.5	+1.6
EZN	Ezine	1.46	349	P	Pn	18 09 52.0	-0.3		1.5nm,0.3s,baz=252,slow=14,SNR=36						
EZN				S	Sn	18 10 10.9	0.0		11nm,0.5s						
MANT	Manisa	1.47	86		Pn	18 09 52.4	-0.3	BRTR	Keskin Array B	5.57	74		Pn	18 10 50.0	+1.0
TNSA	Tinos	1.47	235	P	Pn	18 09 51.4	-1.1	MANR	Mangalia	5.61	14	⇑P	Pn	18 10 49.1	-0.1
BODA	Bodrum-Mula	1.48	156	Pn	Pn	18 09 52.8	+0.3	ICOR	Ion Corvin	5.78	8	⇓P	Pn	18 10 52.4	+0.7
BOZC	Bozcaada	1.53	341	Pn	Pn	18 09 52.7	-0.6	SGRR	Singureni	5.85	355	⇓P	Pn	18 10 54.1	+1.5
BALY	Balya	1.53	28	P	Pn	18 09 53.1	-0.2	CIDE	Kastamonu/Cide	5.93	52	⇑P	Pn	18 10 54.8	+1.1
BALB	Balikesir	1.56	36	Pn	Pn	18 09 53.4	-0.2	TIRR	Tirgusor	6.20	12	⇓P	Pn	18 10 57.5	+0.1
BALB	Balikesir	1.56	36		Pn	18 09 53.2	-0.4	TIRR	Tirgusor	6.20	12	P	Pn	18 10 57.4	+0.1
KULA	Kula-Manisa	1.56	85	Pn	Pn	18 09 53.4	-0.3	TIRR	Tirgusor	6.20	12		Pn	18 10 57.3	-0.1
YENI	Yenice-Canakka	1.60	15	Pn	Pn	18 09 54.4	+0.1	TIRR	Tirgusor	6.20	12	P	Pn	18 10 56.8	-0.6
CANM	Can-anakkale	1.64	10	Pn	Pn	18 09 54.7	-0.1		0.4nm910nm58nm0.7s						
COMU	Canakkale	1.71	355	Pn	Pn	18 09 55.6	-0.2	TIRR	Tirgusor	6.20	12	P	Pn	18 10 57.6	+0.3
SKY	Skiros Island	1.74	287	P	Pn	18 09 56.4	+0.2	HUMR	Humele	6.26	349	P	Pn	18 10 58.6	+0.3
SKY				S	Sn	18 10 18.5	+0.6	SULR		6.29	357	⇑P	Pn	18 10 59.5	+0.9
SKY	Skiros Island	1.74	287	P	Pb	18 09 57.8	-0.5	CSS	Mathiatis	6.34	121		Pn	18 11 00.9	+1.5
EFSA	Agios Efstrati	1.75	311	P	Pn	18 09 56.5	+0.3	CSS	Mathiatis	6.34	121	P	Pn	18 11 04.0	+4.5
YER	Yerkesik	1.78	134	Pn	Pn	18 09 56.9	+0.2	CSS	Mathiatis	6.34	121	P	Pn	18 11 03.9	+4.5
YER	Yerkesik	1.78	134	P	Pn	18 09 57.0	+0.2	JURR	Jurilovca	6.58	14	⇓P	Pn	18 11 02.9	+0.3
YER				S	Sb	18 10 20.5	-0.5	TPGR	Topolog	6.59	11	⇓P	Pn	18 11 02.7	-0.1
DAT	Datca	1.80	157	Pn	Pn	18 09 56.9	-0.2	ISR	Istrita	6.72	359	⇓P	Pn	18 11 05.9	+1.2
DAT	Datca	1.80	157	P	Pn	18 09 57.1	0.0	ISR	Istrita	6.72	359	P	Pn	18 11 05.8	+1.2
DAT				S	Sb	18 10 20.9	-0.8	SRE	Strehaia	6.79	338	⇓P	Pn	18 11 05.7	+0.2
KARY	Karystos	1.81	259	P	Pn	18 09 57.5	+0.5	SRE	Strehaia	6.79	338	P	Pn	18 11 05.7	+0.2
KARY				S	Sb	18 10 21.1	-0.6	CFR	Carcaliu	6.87	9	⇑P	Pn	18 11 06.3	-0.2
KARY	Karystos	1.81	259	P	Pn	18 09 56.3	-0.8	CFR	Carcaliu	6.87	9	P	Pn	18 11 06.3	-0.2
GONE	Gonen-Balikesi	1.83	25	Pn	Pn	18 09 57.2	-0.1	PDG	Podgorica	6.96	308		Pn	18 11 08.0	+0.1
GADA	Gvkgeada	1.90	341	Pn	Pn	18 09 57.8	-0.5	PDG	Podgorica	6.96	308	*e* Pn	Pn	18 11 10.3	+2.5
GADA	Gvkgeada	1.90	341	P	Pn	18 09 57.9	-0.4	TLCR		6.97	12	⇑P	Pn	18 11 08.6	+0.5
GADA				S	Sn	18 10 22.2	+0.5	TLCR		6.97	12	P	Pn	18 11 08.5	+0.5
LIA	Limnos Island	1.91	323	P	Pn	18 09 58.3	-0.1	SJES	Sjenica	7.04	316	*e* Pn	Pn	18 11 10.3	+1.2
LIA				S	Sn	18 10 21.3	-0.6	MLR	Muntele Rosu	7.12	356	Pn	Pn	18 11 11.2	+1.1
LIA	Limnos Island	1.91	323	P	Pn	18 09 57.9	-0.5		2.3nm,0.3s,baz=194,slow=4.1,SNR=25						
SUSR	Susurluk-Balik	1.91	34	Pn	Pn	18 09 58.2	-0.3	MLR				Sn	Sn	18 12 29.5	-1.0
BIGA	Biga-Canakkale	1.92	11	Pn	Pn	18 09 58.4	-0.2		6.2nm,0.3s,baz=126,slow=13,SNR=4.2						
SMAA	Simav-Kutahya	1.93	68	Pn	Pn	18 09 59.5	+0.7		24nm,0.6s						
DST	Dursunbey	1.93	51	Pn	Pn	18 09 58.9	+0.1	MLR	Muntele Rosu	7.12	356	⇓P	Pn	18 11 11.0	+0.9
GELI	Tayfur-Gelibol	2.01	355	Pn	Pn	18 09 59.9	0.0	MLR	Muntele Rosu	7.12	356	P	Pn	18 11 11.6	+1.5
KYMI	Kymi, Euboea I	2.04	278	P	Pn	18 09 59.5	-0.8	ARR	Arges	7.14	348	⇓P	Pn	18 11 10.8	+0.4
KYMI				S	Sn	18 10 26.8	+1.6	ARR	Arges	7.14	348	P	Pn	18 11 10.6	+0.2
KYMI	Kymi, Euboea I	2.04	278	P	Pn	18 10 01.6	+1.3	VOIR		7.15	351	⇑P	Pn	18 11 10.7	+0.2
KRBG	Karabiga-Canak	2.06	13	Pn	Pn	18 10 00.2	-0.3	VOIR		7.15	351	P	Pn	18 11 10.7	+0.2
SHAP	Saphane-Kutahy	2.08	72	Pn	Pn	18 10 01.2	+0.3	VOIR		7.15	351	P	Pn	18 11 10.6	+0.1
EDC	Edincik	2.16	25	Pn	Pn	18 10 01.2	-0.7		0.2nm311nm24nm0.7s						
DION	Dionisos Attik	2.19	263	P	Pn	18 10 02.1	-0.3	VOIR		7.15	351	P	Pn	18 11 10.6	+0.1
THERA	Ancient Thera,	2.24	206	P	Pn	18 10 03.8	-1.4	GIUM	Giurgiulesti	7.18	9	⇓P	Pn	18 11 11.5	+0.7
BAND	Balkesir-Ban	2.25	29	⇓P	Pn	18 10 03.1	-0.1	NEGRR	Negrea	7.20	7	⇑P	Pn	18 11 11.4	+0.3
PTL	Penteli	2.25	262	P	Pn	18 10 03.8	+0.6	TATR	Tatarca	7.27	8	⇓P	Pn	18 11 12.2	+0.1
SMTH	Samothraki Isl	2.26	337	P	Pn	18 10 03.3	0.0	SCTR	Scanteiesti	7.34	7	⇑P	Pn	18 11 13.7	+0.6
SMTH				S	Sn	18 10 30.8	+0.1	LOT	Lotru	7.38	344	⇓P	Pn	18 11 13.8	+0.1
SMTH	Samothraki Isl	2.26	337	P	Pn	18 10 02.7	-0.6	LOT	Lotru	7.38	344	P	Pn	18 11 13.5	-0.2
KCTX	Karacabey (Bur	2.28	34	Pn	Pn	18 10 03.2	-0.3	MDVR	Moldovita	7.39	331	⇑P	Pn	18 11 14.3	+0.5
ERIK	Erikli-Kesan	2.28	357	Pn	Pn	18 10 03.6	0.0	HCY	Herceg Novi	7.45	306	*e* Pn	Pn	18 11 14.8	+0.3
MRMT	Marmara Adasi	2.32	17	Pn	Pn	18 10 04.8	+0.6	PLOR	Plostina	7.46	360	⇓P	Pn	18 11 16.2	+1.5
ATHU	Athens Univers	2.33	260	P	Pn	18 10 04.2	0.0	PLOR	Plostina	7.46	360	P	Pn	18 11 16.1	+1.5
RKY	Sarkoy-Tekirda	2.33	9	Pn	Pn	18 10 04.4	+0.2	COVR	Voineasa-Covas	7.46	357	⇑P	Pn	18 11 16.4	+1.7
CAVK	Edirne/Enez-Ca	2.33	350	⇓P	Pn	18 10 04.6	+0.3	VRI	Vrincioaia	7.47	0	⇑P	Pn	18 11 16.3	+1.4
VLY	Voula,Athens	2.34	258	P	Pn	18 10 04.7	+0.3	VRI	Vrincioaia	7.47	0	P	Pn	18 11 16.2	+1.4
NOAC	Athens-Thissio	2.38	261	P	Pb	18 10 07.2	-1.9	VRI	Vrincioaia	7.47	0	P	Pn	18 11 15.6	+0.7
ATH	Athens Observa	2.38	261	P	Pn	18 10 06.9	+2.0		0.2nm605nm58nm0.6s						
ENEZ	Enez	2.38	350	Pn	Pn	18 10 04.9	0.0	VRI	Vrincioaia	7.47	0	P	Pn	18 11 15.9	+1.0
ENEZ	Enez	2.38	350	P	Pn	18 10 05.4	+0.5	TNR	Turnu Rosu	7.47	347	⇓P	Pn	18 11 16.1	+1.2
ENEZ				S	Sn	18 10 34.4	+0.8	TNR	Turnu Rosu	7.47	347	P	Pn	18 11 16.1	+1.2
GAZK	Gazikoy-TEKIRD	2.41	12	Pn	Pn	18 10 05.2	+0.2	CY604	RAF Akrotiri,	7.50	120	Pn	Pn	18 11 14.7	-0.3
ARG	Arkhangelos	2.46	152	P	Pn	18 10 06.1	+0.1	VLDR	Vladesti	7.52	7	⇓P	Pn	18 11 16.5	+1.0
ARG	Arkhangelos	2.46	152		Pn	18 10 06.1	+0.1	VARL	Varlezi	7.55	6	⇓P	Pn	18 11 17.2	+1.2
ARG	Arkhangelos	2.46	152	P	Pn	18 10 06.4	+0.4	UPM	Unac-Piva	7.61	312	*e* Pn	Pn	18 11 21.0	+4.0
STFN	Stefani	2.48	266	P	Pn	18 10 06.5	+0.1	DOPR	Dopca	7.63	353	⇓P	Pn	18 11 18.1	+1.0
MHLO	Agia Marina, M	2.49	228	P	Pn	18 10 06.1	-0.3	BRY	Bratogost	7.66	309	*e* Pn	Pn	18 11 20.3	+2.7
MAGU	Magoula	2.52	264	P	Pn	18 10 08.3	+1.5	ANDN	Andirin	7.67	93	P	Pn	18 11 22.0	+4.2
ALN	Alexandroupoli	2.55	349	P	Pn	18 10 06.7	-0.6	TURR	Turia	7.67	357	⇓P	Pn	18 11 19.5	+1.8
ALN	Alexandroupoli	2.55	349		Pn	18 10 06.7	-0.6	TREB	Trebinje	7.68	307	*e* Pn	Pn	18 11 18.8	+1.1
ALN	Alexandroupoli	2.55	349	P	Pn	18 10 07.3	+0.1	GHRR		7.68	4	P	Pn	18 11 20.4	+2.6
VIL2	Platees	2.69	267	P	Pn	18 10 09.2	-0.1	OZUR		7.73	355	⇑P	Pn	18 11 19.9	+1.5
MET4	Agioi Theodoro	2.71	255	P	Pn	18 10 10.7	+1.2	BBLS	Lazi&#263i	7.75	317	*e* Pn	Pn	18 11 20.3	+1.5
PAIG	Paliouri	2.79	304	P	Pb	18 10 14.7	-1.6	KLINJ	Klinje	7.78	310	*e* Pn	Pn	18 11 19.2	0.0
NEO	Neokhori	2.85	290	P	Pn	18 10 12.6	+1.1	TIP	Timpagrande	7.79	279	⇑P	Pn	18 11 20.8	+1.4
KARP	Karpathos	2.86	172		Pn	18 10 11.1	-0.5	TIP	Timpagrande	7.79	279		Pn	18 11 18.8	-0.6
KARP	Karpathos	2.86	172	P	Pn	18 10 11.6	0.0	TIP	Timpagrande	7.79	279	P	Pn	18 11 20.7	+1.3
KARP	Karpathos	2.86	172	P	Pn	18 10 11.6	0.0		0.1nm16nm0.5s						
KARP	Karpathos	2.86	172	P	Pn	18 10 10.6	-1.0	TIP	Timpagrande	7.79	279	P	Pn	18 11 22.0	+2.6
RDO	Rodhopi	2.89	343		Pn	18 10 11.8	-0.1	MDB	Medias	7.93	348	⇑P	Pn	18 11 22.8	+1.6
RDO	Rodhopi	2.89	343	P	Pn	18 10 12.1	+0.2	MDB	Medias	7.93	348	P	Pn	18 11 22.7	+1.6
RDO	Rodhopi	2.89	343	P	Pn	18 10 12.1	+0.2	ONER	Baraj Valea Uz	7.94	359	⇑P	Pn	18 11 22.9	+1.5
XOR	Xorichti	2.90	291	P	Pn	18 10 12.1	0.0	MATE	Matera	8.04	289	⇑P	Pn	18 11 23.8	+1.2
XOR	Xorichti	2.90	291	P	Pn	18 10 11.9	-0.1	MATE	Matera	8.04	289	P	Pn	18 11 26.3	+3.7
LKR	Lokris	2.90	276	P	Pn	18 10 12.4	+0.3	SEV	Sevastopol'	8.08	38	*e* P	Pn	18 11 22.9	-0.2
LOUT	Loutraki	2.95	263	P	Pn	18 10 13.6	+0.8	SEV				*e* S	Sn	18 12 48.8	-5.1
LTK	Loutraki	2.95	264	P	Pn	18 10 13.8	+1.0	SEV				pmax	pmax		
YLV	Yalova	3.01	43	P	Pn	18 10 13.6	0.0		comp=E,1.0nm,0.5s						
ELL	Elmali	3.04	122	P	Pn	18 10 15.8	+1.7	SEV				smax	smax		
ELL	Elmali	3.04	122		Pn	18 10 15.8	+1.7		comp=N,3.0nm,0.3s						
ACOR	Acrocorinthos	3.05	262	P	Pn	18 10 15.1	+0.9	SEV				smax	smax		
AKAS	Kas	3.17	132		Pn	18 10 17.6	+1.6		comp=E,12nm,0.4s						
AKAS	Kas	3.17	132	P	Pn	18 10 18.3	+2.3	**SEV**	**Sevastopol'**	**8.08**	**38**	***e*P**	**Pn**	**18 11 22.9**	**-0.2**
AXAR	Agios Charalam	3.18	278	P	Pn	18 10 16.4	+0.5	SEV				pmax	pmax	18 11 33.1	
ZKR	Zakros	3.29	187	P	Pn	18 10 17.2	-0.3		comp=Z,1.0nm,0.5s						
ZKR	Zakros	3.29	187	P	Pn	18 10 17.0	-0.5	SEV				*e*S	Sn	18 12 48.8	-5.1
CTYL	Yalikoy Yolu	3.32	21	P	Pn	18 10 17.6	0.0	SEV				smax	smax	18 12 50.7	
KLYT	Kilyos	3.39	32	P	Pn	18 10 15.8	+0.1		comp=N,3.0nm,0.3s						
KDZ	Kurdzhali	3.40	343	P	Pn	18 10 19.1	+0.2	SEV				smax	smax	18 12 50.7	
IDI	Anoyia	3.42	205	Pn	Pn	18 10 18.1	-1.2		comp=E,12nm,0.4s						
	101nm,0.5s,baz=28,slow=12,SNR=149							TESR	Tescani	8.12	360	⇑P	Pn	18 11 24.4	+0.7
IDI				Sn	Sn	18 10 55.3	-4.0	TESR	Tescani	8.12	360	P	Pn	18 11 24.5	+0.8
	17nm,0.3s,baz=105,slow=2.1,SNR=4.5								comp=E,0.2nmcomp=E,512nmcomp=E,36nm,0.8s						
IDI				Lg	Lg	18 11 11.5		TESR	Tescani	8.12	360	P	Pn	18 11 24.6	+0.8
	27nm,0.3s,baz=305,slow=19,SNR=3.8							BZS	Buzias	8.14	334	P	Pn	18 11 23.7	-0.4
IDI	Anoyia	3.42	205	P	Pn	18 10 17.8	-1.5	TEKS	Tekeris	8.17	321	*e* Pn	Pn	18 11 24.1	-0.3
VLI	Veliai	3.42	242	P	Pn	18 10 18.5	-0.7	TARU	Tarkhankut	8.23	30	*e* P	Pn	18 11 25.0	-0.2
GUR	Goura	3.45	264	P	Pn	18 10 20.3	+0.5	TARU				pmax	pmax	18 11 31.0	
AGG	Agios Georgios	3.46	282	P	Pn	18 10 23.3	+3.5		comp=E,34nm,0.5s						
SOH	Sokhos	3.54	314	P	Pn	18 10 21.7	+0.8	TARU				*e*S	Sn	18 12 53.2	-4.4
CHAN	Chania	3.56	217	P	Pn	18 10 21.6	+0.4	TARU				smax	smax	18 12 56.7	
KALE	Kalithea	3.57	271	P	Pn	18 10 22.4	+1.0		comp=N,24nm,0.5s						
SILT	Sile	3.58	39	⇓P	Pn	18 10 21.5	+0.1	TARU				smax	smax	18 12 56.7	
KLV	Kalavryta, Ach	3.59	266	P	Pn	18 10 22.3	+0.7		comp=E,8.0nm,0.5s						
SRS	Serrai	3.62	320	P	Pn	18 10 22.3	+0.3	**YAL**	**Yalta**	**8.28**	**40**	***e*P**	**Pn**	**18 11 25.9**	**0.0**
RZN	Rozhen	3.62	336	P	Pn	18 10 22.5	+0.3	YAL				*e*S	Sn	18 12 54.9	-3.9
IMMV	Iera Moni Meta	3.64	217	P	Pn	18 10 20.5	-1.7	YAL				pmax	pmax		
IMMV	Iera Moni Meta	3.64	217	P	Pn	18 10 21.7	-0.6		comp=Z,10.0nm,0.3s						
LIT	Litokhoron	3.68	299	P	Pn	18 10 23.4	+0.6	YAL				smax	smax		
LIT	Litokhoron	3.68	299		Pn	18 10 23.4	+0.6		comp=N,3.0nm,0.3s						
LIT	Litokhoron	3.68	299	P	Pn	18 10 23.9	+1.1	YAL				smax	smax		
SIVA	Sivas	3.69	205	P	Pn	18 10 22.8	-0.1		comp=E,14nm,0.4s						
ANX	Ano Chora	3.74	275	P	Pn	18 10 24.8	+1.1	**YAL**	**Yalta**	**8.28**	**40**	***e*P**	**Pn**	**18 11 25.9**	**0.0**
DIM	Dimitrovgrad	3.75	347	*i* P	Pn	18 10 24.2	+0.5	YAL				pmax	pmax	18 11 26.9	
EFP	Efpalio	3.75	272	P	Pn	18 10 24.9	+1.1		comp=Z,10.0nm,0.3s						
THL	Klokotos Trika	3.82	289	P	Pn	18 10 25.4	+0.7	YAL				*e*S	Sn	18 12 54.9	-3.9
EVR	Evrytania	3.85	279	P	Pn	18 10 26.6	+1.3	YAL				smax	smax	18 12 57.9	
MMB	Musomishta	3.88	325	*i* P	Pn	18 10 26.4	+0.9		comp=N,3.0nm,0.3s						
ITM	Ithomi	3.96	254		Pn	18 10 27.8	+1.1	YAL				smax	smax	18 12 57.9	
ITM	Ithomi	3.96	254	P	Pn	18 10 30.7	+4.1		comp=E,14nm,0.4s						
ITM	Ithomi	3.96	254	P	Pn	18 10 27.8	+1.1	**CEL**	**Celeste**	**8.48**	**272**		**Pn**	**18 11 25.5**	**-3.3**
KNT	Kendrikon	4.02	315	P	Pn	18 10 28.7	+1.2	**CEL**	**Celeste**	**8.48**	**272**	P	**Pn**	**18 11 31.0**	**+2.2**
PLD	Plovdiv	4.03	339	P	Pn	18 10 27.6	-0.1		comp=E,18nm,0.7s						
SAHE	Sakarya_HENDEK	4.05	51	⇓P	Pn	18 10 27.8	-0.1	**CEL**	**Celeste**	**8.48**	**272**	P	**Pn**	**18 11 31.7**	**+2.8**
MDUB	Mudurnu	4.06	58		Pn	18 10 28.9	+0.7	**ALU**	**Alushta**	**8.54**	**40**	***e*P**	**Pn**	**18 11 28.6**	**-0.9**
JMB	Yambol	4.10	358	P	Pn	18 10 28.5	0.0	ALU				*e*S	Sn	18 13 01.8	-3.5
								ALU				pmax	pmax		
									comp=Z,13nm,0.4s						
								ALU				smax	smax		
									comp=N,12nm,0.3s						
								ALU				smax	smax		
									comp=E,2.0nm,0.4s						
								ALU	**Alushta**	**8.54**	**40**	***e*P**	**Pn**	**18 11 28.6**	**-0.9**
								ALU				pmax	pmax	18 11 29.9	
									comp=Z,13nm,0.4s						
								ALU				*e*S	Sn	18 13 01.8	-3.5
								ALU				smax	smax	18 13 08.7	
									comp=E,2.0nm,0.4s						
								ALU				smax	smax	18 13 08.8	
									comp=N,12nm,0.3s						
								BIZ	**Bicaz**	**8.55**	**357**	⇓P	**Pn**	**18 11 31.3**	**+1.6**
								SIM	**Simferopol'**	**8.59**	**38**	***e*P**	**Pn**	**18 11 30.0**	**-0.2**
								SIM				*e*		18 13 02.2	
								SIM				pmax	pmax		
									comp=Z,24nm,1.0s						
								SIM				smax	smax		
									comp=N,68nm,0.8s						
								SIM				MLR	MLR		
									comp=Z,180nm,16.0s						
								SIM	**Simferopol'**	**8.59**	**38**	***e*S**	**Sn**	**18 13 02.3**	**-4.3**
								SIM				smax	smax	18 13 03.1	
									comp=N,78nm,0.8s						
								SIM				smax	smax	18 13 03.2	
									comp=E,50nm,0.8s						
								CJR	**Cluj-Napoca**	**8.62**	**346**	⇑P	**Pn**	**18 11 31.7**	**+0.9**
								CJR	**Cluj-Napoca**	**8.62**	**346**	P	**Pn**	**18 11 31.6**	**+0.9**
								MARCO	Tramutola	8.64	286	P	Pn	18 11 36.0	+5.0
								MARR	Marisel-Cluj	8.69	344	⇓P	Pn	18 11 31.7	+0.1
								SIRR	Siria	8.71	336	⇓P	Pn	18 11 31.7	-0.1
								MMAI	Mount Meron Ar	8.89	124	Pn	Pn	18 11 33.4	-1.0
									comp=E,8.9nm,0.4s,baz=326,slow=13,SNR=27						
								MMAI				Sn	Sn	18 13 10.2	-3.9
									comp=E,2.4nm,0.3s,baz=274,slow=25,SNR=2.7						
								GEM	**Giv'at Ha'Em**	**8.94**	**123**	P	**Pn**	**18 11 37.9**	**+2.9**
									comp=E,0.2nm,0.7s						
								SUDU	**Sudak**	**8.99**	**41**	***e*P**	**Pn**	**18 11 36.0**	**+0.3**
								SUDU				*e*S	Sn	18 13 15.1	-1.3
								SUDU				pmax	pmax		
									comp=Z,19nm,0.6s						
								SUDU				smax	smax		
									comp=N,66nm,0.9s						
								SUDU				smax	smax		
									comp=E,3.0nm,0.3s						
								SUDU	**Sudak**	**8.99**	**41**	***e*P**	**Pn**	**18 11 36.0**	**+0.3**
								SUDU				pmax	pmax	18 11 41.7	
									comp=Z,19nm,0.6s						
								SUDU				*e*S	Sn	18 13 15.1	-1.3
								SUDU				smax	smax	18 13 18.2	
									comp=N,66nm,0.9s						
								SUDU				smax	smax	18 13 18.2	
									comp=E,3.0nm,0.3s						
								SGRT	**San Giovanni R**	**9.04**	**295**	Pn	**Pn**	**18 11 32.9**	**-3.5**
								ARPR	**Arapgir-MALATY**	**9.13**	**82**	P	Pn	18 11 43.5	+5.6
								BURAR	Bucovina Array	9.28	354	⇓P	**Pn**	**18 11 41.8**	**+2.0**
								BURAR	Bucovina Array	9.28	354	P	**Pn**	**18 11 41.8**	**+2.0**
								BURAR	Bucovina Array	9.28	354		**Pn**	**18 11 40.5**	**+0.7**
								SALP	**Salfit**	**9.39**	**130**	P	Pn	18 11 46.0	+4.8
								QRNJ	**Al-Qirein**	**9.44**	**127**	P	**Pn**	**18 11 42.7**	**+0.8**
								BLY	**Banja Luka**	**9.54**	**315**	⇑P	**Pn**	**18 11

ABTA Abfaltersbach 13.36 313 *e*Pn **Pn 18 12 39.5 +4.0**
comp=Z,4.4nm,0.6s
KRLC Kraliky 13.65 332 *e*P **P 18 12 48.5 +0.3**
KRLC MLR MLR
comp=Z,300nm,11.9s
KRLC Kraliky 13.65 332 *e*P **P 18 12 48.5 +0.3**
KRLC AMS AMS 18 18 50.0
comp=Z,300nm,11.9s
KRLC Kraliky 13.65 332 P **P 18 12 45.4 -2.8**
LESA Schwarzleotal 13.65 316 *i* Pn **Pn 18 12 43.7 +4.2**
comp=Z,1.7nm,0.8s
GERES GERESS Array B 14.04 322 Pn **Pn 18 12 44.5 -0.2**
baz=126,slow=9.9,SNR=4.3
comp=Z,0.4nm,0.8s
GERES GERESS Array B 14.04 322 P **P 18 12 53.9 +1.3**
DPC Dobruska-Polom 14.05 332 AMS AMS 18 18 50.0
comp=Z,300nm,13.2s
DPC Dobruska-Polom 14.05 332 P **Pn 18 12 47.8 +2.9**
KEST Kesra 14.10 264 Pn **P 18 12 51.7 -1.6**
comp=Z,0.3nm,0.3s,baz=44,slow=4.4,SNR=3.8
GNI Garni 14.10 77 LR LR 18 18 12.3
comp=Z,79nm,22.0s,baz=276,slow=38
GNI Garni 14.10 77 *i* P **Pn 18 12 47.0 +1.2**
WTTA Wattenberg 14.14 314 *e*P **P 18 12 51.5 -2.3**
comp=Z,2.4nm,0.5s
WTTA Wattenberg 14.14 314 P **P 18 12 51.6 -2.2**
WATA Walderalm 14.22 314 *i* P **P 18 12 52.1 -2.5**
comp=Z,2.2nm,0.5s
ZVC Zvikov 14.23 325 *e*P **P 18 12 55.5 +1.0**
ZVC AMS AMS 18 19 00.0
comp=Z,400nm,10.4s
OSTC Ostas 14.26 332 AMS AMS 18 19 10.0
comp=Z,300nm,10.4s
KHC Kasperske Hory 14.29 323 *e*P **P 18 12 55.2 -0.1**
KHC pmax pmax
comp=Z,3.0nm,0.6s
KHC MLR MLR
comp=Z,500nm,10.4s
KHC Kasperske Hory 14.29 323 *e*P **P 18 12 55.2 -0.1**
comp=Z,2.7nm,0.6s
KHC AMS AMS 18 19 00.0
comp=Z,500nm,10.4s
KHC Kasperske Hory 14.29 323 **P 18 12 56.1 +0.8**
UPC Upice 14.29 331 AMS AMS 18 19 10.0
comp=Z,300nm,13.5s
SQTA Sankt Quirin 14.36 313 *e*P **P 18 12 54.6 -1.6**
comp=Z,4.5nm,0.7s
MOTA Moosalm 14.49 313 *i* P **P 18 12 58.0 +0.4**
comp=Z,1.7nm,0.4s
FETA Feichten 14.54 311 *e*P **P 18 12 57.0 -1.2**
comp=Z,5.2nm,1.3s
FUORN Ofenpass-Fuorn 14.62 309 **Pn 18 12 53.8 +0.9**
RETA Reutte 14.76 313 *e*P **P 18 12 59.0 -1.6**
comp=Z,4.8nm,0.8s
DAVOX Davos/Dischmat 14.93 310 Pn **Pn 18 12 58.2 +1.2**
comp=Z,0.2nm,0.3s,baz=134,slow=8.6,SNR=6.4
DAVOX LR LR 18 18 42.6
comp=Z,109nm,19.0s,baz=108,slow=37
comp=Z,1.1nm,0.6s
DAVA Damuels 15.17 311 *e*P **P 18 13 06.4 +1.1**
comp=Z,8.6nm,0.8s
DAVA Damuels 15.17 311 P **P 18 13 06.2 +0.9**
GRB2 Grafenberg Arr 15.32 320 P **P 18 13 08.3 +1.6**
BRG Berggiesshubel 15.40 328 P **P 18 13 09.0 +1.4**
BRG Berggiesshubel 15.40 328 *e*P **P 18 13 08.9 +1.4**
BRG Amp 18 13 10.0
comp=Z,2.5nm,0.9s
BRG Berggiesshubel 15.40 328 P P 18 13 15.7 +8.2
BRG Amp 18 13 17.3
comp=Z,2.9nm,0.7s
GRB1 Grafenberg Arr 15.41 320 P **P 18 13 09.6 +1.9**
GRB4 Grafenberg Arr 15.50 320 P **P 18 13 10.5 +1.8**
VSR Storozhevoye 15.55 30 *e*P **Pn 18 13 03.8 -1.2**
VSR pmax pmax
comp=Z,11nm,1.2s
NKC Novy Kostel 15.59 324 P **Pn 18 13 06.9 +1.3**
TANN Tannenbergstha 15.71 325 P **P 18 13 12.8 +1.8**
GRA3 Grafenberg Arr 15.81 321 P **P 18 13 13.9 +1.7**
GRA1 Grafenberg Arr 15.81 321 P **P 18 13 14.3 +2.1**
GRFO Grafenberg 15.81 321 P **P 18 13 14.3 +2.1**
BNALP Bannalp 15.86 308 P **P 18 13 15.1 +2.2**
VORR Voronezh 15.93 29 *e*P **P 18 13 14.4 +1.0**
VORR pmax pmax
comp=Z,17nm,0.3s
CLL Collm 16.12 328 *i* P **P 18 13 16.0 +0.5**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 16.12 328 *e*P **Pn 18 13 10.0 -2.3**
CLL *i* sP **P 18 13 16.0 +0.5**
comp=Z,6.0nm,1.0s
CLL AMS AMS 18 18 00.0
comp=N,100nm,20.0s
CLL AMS AMS 18 18 00.0
comp=E,200nm,20.0s
MNK Minsk 16.14 3 *i* P **Pn 18 13 12.3 -0.3**
comp=E,17nm,0.8s
MNK *i* P **Pn 18 13 12.3 -0.3**
comp=N,13nm,1.0s
MNK *i* P **Pn 18 13 12.3 -0.3**
comp=Z,22nm,0.9s,baz=183
MNK *i* PP **pP 18 13 21.0 0.0**
MNK *i* PPP PPP 18 13 28.6
MNK *i* S **Sn 18 16 11.8 +0.9**
MNK *i* SS **S 18 16 26.0 +2.1**
MNK *i* SSS SSS 18 16 38.6
MNK *i* LR LR 18 18 30.5
MNK *i* LRM MLR 18 19 24.3
comp=N,117nm,15.3s
MNK *i* LRM MLR 18 19 48.4
comp=E,100nm,14.0s
MNK *i* LRM MLR 18 19 53.4
comp=Z,117nm,15.7s
MNK Minsk 16.14 3 *i* P **Pn 18 13 12.2 -0.3**
MNK *i* S **Sn 18 16 11.7 +0.9**
MNK pmax pmax
comp=N,13nm,1.0s
MNK pmax pmax
comp=E,17nm,0.8s
MNK pmax pmax
comp=Z,22nm,0.9s
MNK MLR MLR
comp=N,117nm,15.0s
MNK MLR MLR
comp=E,100nm,14.0s
MNK MLR MLR
comp=Z,117nm,16.0s
MOX Moxa 16.26 324 P **P 18 13 19.5 +2.4**
MAK Makhachkala 16.43 67 *e*P **Pn 18 13 14.6 -1.7**
MAK *e*S **Sn 18 16 17.3 -0.8**
MAK pmax pmax
comp=Z,127nm,1.1s
MAK MLR MLR
comp=Z,110nm,15.0s
NACGM Naroch 16.52 0 *e*P **P 18 13 18.9 -1.0**
comp=Z,14nm,1.2s,baz=180
LPSR Galich'ya Gora 16.57 27 *e*P **Pn 18 13 16.6 -1.4**
LPSR pmax pmax
comp=Z,10.0nm,0.5s
BFO Black Forest 16.60 313 P **Pn 18 13 18.5 0.0**
BFO pmax pmax
comp=Z,6.0nm,1.0s
BFO Black Forest 16.60 313 **Pn 18 13 18.5 0.0**
VRH Novokhopyorsk 16.63 35 *e*P **Pn 18 13 17.9 -0.9**
VRH pmax pmax
comp=Z,6.0nm,0.5s
PABE Paberze 17.22 355 P **Pn 18 13 24.4 -1.7**
OBN Obninsk 18.02 19 P **Pn 18 13 36.0 0.0**
comp=Z,1.1nm,0.3s,baz=192,slow=21,SNR=5.1
OBN LR LR 18 21 17.9
comp=Z,96nm,21.8s,baz=30,slow=40
comp=Z,7.5nm,0.4s
OBN Obninsk 18.02 19*ce*P **P 18 13 36.8 +0.4**
OBN *e*S **Sn 18 16 52.5 -3.8**
OBN pmax pmax
comp=Z,20nm,1.2s
OBN MLR MLR
comp=Z,188nm,14.0s
VSU Vasula 20.09 0*ce*P **P 18 13 58.7 -0.4**
VSU pmax pmax
comp=Z,11nm,0.8s
VSU Vasula 20.09 0 P **P 18 13 58.7 -0.4**
BELG Belogornoye 20.20 39 P **P 18 14 01.0 +0.6**
comp=Z,25nm,0.9s,baz=235,slow=11,SNR=12
comp=Z,25nm,0.9s
BELG Belogornoye 20.20 39*d i*P **P 18 14 01.5 +1.1**
BELG pmax pmax
comp=Z,8.0nm,1.1s
MTSE Matsula 20.42 356 P **P 18 14 03.3 +0.6**
RAYN Ar Rayn 21.85 127 P **P 18 14 19.9 +1.4**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 21.85 127 **P 18 14 19.9 +1.4**
RAYN Ar Rayn 21.85 127 P **P 18 14 21.4 +2.9**
FINES FINESS Array B 23.08 359 P **P 18 14 30.9 -0.2**
comp=Z,8.2nm,0.8s,baz=157,slow=11,SNR=21
FINES LR LR 18 24 51.7
comp=Z,53nm,21.1s,baz=173,slow=40
comp=Z,8.2nm,0.8s
FINES FINESS Array B 23.08 359 *i* P **P 18 14 32.4 +1.3**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 23.08 359 P **P 18 14 30.6 -0.5**
FIA1 FINESS Array S 23.08 359 P **P 18 14 31.9 +0.8**
HFS Hagfors 23.27 343 P **P 18 14 32.3 -0.8**
comp=Z,2.4nm,0.7s,baz=170,slow=9.9,SNR=7.6
HFS LR LR 18 23 46.4
comp=Z,51nm,18.1s,baz=160,slow=37
comp=Z,2.4nm,0.7s
ESDC Sonseca Array 23.79 283 P **P 18 14 38.8 +0.3**
comp=Z,2.6nm,0.7s,baz=74,slow=9.5,SNR=20
comp=Z,2.6nm,0.7s
ESDC Sonseca Array 23.79 283 **P 18 14 38.8 +0.3**
ESDC IAmb IAmb 18 14 41.3
comp=Z,18nm,1.5s
TAM Tamanrasset 23.87 235 P **P 18 14 42.9 +3.5**
KLMR Klimovskoe 23.89 16 *e*P **P 18 14 38.1 -0.9**
KLMR pmax pmax
comp=Z,17nm,0.8s
KONO Kongsberg 23.91 338*ce*P **P 18 14 39.4 +0.1**
KONO pmax pmax
comp=Z,10.0nm,1.3s
NC602 NORSAR Array S 24.31 342 P **P 18 14 42.4 -0.6**
NC602 IAmb IAmb 18 14 42.8
comp=Z,19nm,1.4s
NAO01 NORSAR Array S 24.56 341 IAmb IAmb
comp=Z,14nm,0.9s 18 14 46.3
NB2 NORSAR Subarra 24.65 342 P **P 18 14 45.6 -0.6**
comp=Z,8.0nm,1.0s,baz=146,slow=9.3
NOA NORSAR Array B 24.65 342 P **P 18 14 46.0 -0.2**
comp=Z,1.7nm,0.7s,baz=145,slow=9.3,SNR=6.3
NOA LR LR 18 26 43.1
comp=Z,80nm,18.4s,baz=145,slow=42
comp=Z,1.7nm,0.7s
NOA NORSAR Array B 24.65 342 P **P 18 14 46.0 -0.2**
KIRV Kirov 24.98 29*ce*P **P 18 14 47.8 -1.2**
AKTO Aktyubinsk 25.21 51 P **P 18 14 51.6 +0.3**
comp=Z,5.8nm,1.1s,baz=258,slow=12,SNR=7.0
AKTO LR LR 18 27 12.6
comp=Z,71nm,19.2s,baz=159,slow=42
comp=Z,5.8nm,1.1s
AB31 Akbulak array 26.14 55 P **P 18 14 59.6 -0.1**
EKA Eskdalemuir Ar 26.23 320 P **P 18 15 00.8 +0.4**
comp=Z,1.1nm,0.6s,baz=116,slow=11,SNR=9.8
comp=Z,1.1nm,0.6s
ARTI Arti 27.65 39 P **P 18 15 13.4 +0.2**
comp=Z,6.2nm,0.8s,baz=231,slow=6.5,SNR=8.0
ARTI LR LR 18 28 03.4
comp=Z,61nm,19.9s,baz=178,slow=40
comp=Z,6.2nm,0.8s
ARTI Arti 27.65 39*d i*P **P 18 15 12.5 -0.7**
ARTI 18 18 27.7
ARTI S **S 18 19 53.4 -0.6**
ARTI pmax pmax
comp=Z,6.0nm,0.9s
ARTI Arti 27.65 39 **P 18 15 12.8 -0.4**
ARTI IAmb IAmb 18 15 18.1
comp=Z,7.4nm,0.7s
ARCES ARCESS Array B 31.21 359 P **P 18 15 44.2 -0.5**
comp=Z,1.5nm,0.7s,baz=186,slow=9.8,SNR=7.1
comp=Z,1.5nm,0.7s
ARCES ARCESS Array B 31.21 359 IAmb IAmb 18 16 19.4
comp=Z,12nm,1.4s
BVAR Borovoye Array 33.28 50 P **P 18 16 03.7 +0.7**
comp=Z,0.8nm,0.6s,baz=280,slow=8.9,SNR=6.0
comp=Z,0.8nm,0.6s
TORD Torodi Ar. Bea 33.53 228 P **P 18 16 06.0 +0.5**
comp=Z,3.1nm,0.8s,baz=36,slow=9.4,SNR=14
comp=Z,3.1nm,0.8s
TORD Torodi Ar. Bea 33.53 228 IAmb IAmb 18 16 22.7
comp=Z,3.5nm,0.7s
GAR Garm 33.82 75 **P 18 16 07.5 -0.5**
AAK Ala-Archa 36.21 68*ce*P **P 18 16 29.4 +0.7**
AAK pmax pmax
comp=Z,3.0nm,1.1s
KSH2 Kashi 37.75 73 P **P 18 16 43.8 +2.0**
KSH2 pmax pmax
comp=Z,3.0nm,1.2s
KURBB Kurchatov Arra 38.19 54 P **P 18 16 45.4 +0.3**
comp=Z,1.7nm,0.5s,baz=281,slow=8.7,SNR=12
comp=Z,1.7nm,0.5s
KURK Kurchatov 38.24 54*ce*P **P 18 16 46.0 +0.4**
KURK pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 38.24 54 **P 18 16 45.2 -0.4**
BORG Borgarnes 38.36 329 LR LR 18 33 18.0
comp=Z,43nm,18.3s,baz=119,slow=37
MBAR Mbarara 38.98 174 LR LR 18 34 53.1
comp=Z,30nm,20.0s,baz=338,slow=39
SPITS Spitsbergen Ar 40.13 357 P **P 18 17 01.5 +0.4**
comp=Z,6.0nm,1.0s,baz=166,slow=8.5,SNR=5.1
comp=Z,6.0nm,1.0s
MK31 Makanchi Array 41.03 60*ce*P **P 18 17 08.9 0.0**
MKAR Makanchi Array 41.03 60 P **P 18 17 09.0 +0.1**
comp=Z,1.4nm,0.6s,baz=269,slow=8.2,SNR=17
MKAR LR LR 18 36 16.1
comp=Z,39nm,18.9s,baz=276,slow=39
comp=Z,1.4nm,0.6s
MKAR Makanchi Array 41.03 60 P **P 18 17 09.4 +0.5**
MKAR Makanchi Array 41.03 60 **P 18 17 09.3 +0.5**
ZALV Zalesovo Beam 41.92 49 P **P 18 17 15.9 -0.1**
comp=Z,1.8nm,0.7s,baz=268,slow=9.0,SNR=10.0
ZALV LR LR 18 37 48.0
comp=Z,45nm,18.3s,baz=70,slow=41
comp=Z,1.8nm,0.7s
ZALV Zalesovo Beam 41.92 49 *i* P **P 18 17 16.2 +0.2**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 41.92 49 P **P 18 17 15.7 -0.3**
DBIC Dimbokro 42.56 230 P **P 18 17 22.7 +1.1**
comp=Z,3.9nm,0.7s,baz=28,slow=7.8,SNR=5.1
comp=Z,3.9nm,0.7s
DGZ Jazzator, Alta 43.97 55 *i* P **P 18 17 33.5 +0.6**
DGZ pmax pmax
comp=Z,5.0nm,1.5s
NRIK Noril'sk 44.44 26 LR LR 18 37 05.9
comp=Z,30nm,20.0s,baz=291,slow=37
NRIK Noril'sk 44.44 26 *i* P **P 18 17 37.7 +1.5**
NRIK pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 57.72 21 LR LR 18 46 52.8
comp=Z,62nm,18.6s,baz=356,slow=39
TSUM Tsumeb 57.92 190 LR LR 18 44 25.0
comp=Z,65nm,18.2s,baz=148,slow=36
MORE Moreh 58.29 83 **P 18 19 21.5 +0.9**
MORE IAmb IAmb 18 19 23.4
comp=Z,4.2nm,0.7s
FRB Frobisher Bay 58.53 329 LR LR 18 46 55.0
comp=Z,28nm,18.1s,baz=49,slow=38
SCHQ Schefferville 61.54 319 P **P 18 19 42.2 -0.3**
comp=Z,5.4nm,0.6s,baz=60,slow=5.2,SNR=11
comp=Z,5.4nm,0.6s
SCHQ Schefferville 61.54 319 P **P 18 19 41.6 -0.9**
CMAR Chiang Mai Arr 65.04 86 P **P 18 20 06.5 +0.2**
comp=Z,2.1nm,0.7s,baz=304,slow=8.1,SNR=21
comp=Z,2.1nm,0.7s
CMAR Chiang Mai Arr 65.04 86 *i* P **P 18 20 06.8 +0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
HEH HeiHe 67.65 43 *e*P **P 18 20 23.0 +0.6**
HEH pmax pmax
comp=Z,7.0nm,0.8s
MA2 Magadan 72.05 26 LR LR 18 56 01.5
comp=Z,33nm,18.5s,baz=310,slow=39
E28M Babbage River 72.83 355 IAmb IAmb 18 20 55.6
comp=Z,3.5nm,0.9s
USRK Ussuriysk Ar. 73.71 46 P **P 18 20 59.4 -0.1**
comp=Z,2.8nm,0.7s,baz=313,slow=5.4,SNR=4.1
comp=Z,2.8nm,0.7s
G29M Pine Creek 74.37 354 **P 18 21 02.5 -0.5**
G29M IAmb IAmb 18 21 03.8
comp=Z,4.2nm,0.9s
E19K Redstone River 74.43 2 IAmb IAmb 18 21 05.1
comp=Z,4.9nm,0.8s
YKA Yellowknife Ar 74.75 342 P **P 18 21 05.0 -0.1**
comp=Z,1.2nm,0.7s,baz=28,slow=5.1,SNR=8.1
comp=Z,1.2nm,0.7s
F20K Avaraart Lake 74.87 1 IAmb IAmb 18 21 15.3
comp=Z,5.2nm,1.4s
F19K Shaleruckik Mo 75.05 2 IAmb IAmb 18 21 08.1
comp=Z,8.0nm,1.3s
H27K Steamboat Moun 75.31 355 **P 18 21 09.6 +1.1**
KSAR Wonju Array Be 75.35 54 P **P 18 21 08.2 -0.9**
KSAR Wonju Array Be 75.35 54 P **P 18 21 08.2 -0.9**
KSRS Korea Array 75.37 54 P **P 18 21 09.2 0.0**
comp=Z,4.0nm,1.0s,baz=306,slow=5.3,SNR=15
KSRS LR LR 18 58 55.8
comp=Z,42nm,18.5s,baz=215,slow=39
comp=Z,4.0nm,1.0s
G21K Allakaket 75.42 0 IAmb IAmb 18 21 11.0
comp=Z,4.5nm,0.9s
G19K Purcell Mounta 75.75 2 IAmb IAmb 18 21 12.9
comp=Z,5.5nm,1.2s
I30M Mount Dempster 75.87 353 **P 18 21 11.9 +0.1**
I30M IAmb IAmb 18 21 13.1
comp=Z,4.2nm,0.8s
G18K Tagagawik 75.96 2 IAmb IAmb 18 21 13.7
comp=Z,6.2nm,1.1s
H22K Ishtalitna Cre 76.04 359 IAmb IAmb 18 21 14.7
comp=Z,2.6nm,0.8s
H21K Melozitna Rive 76.28 360 IAmb IAmb 18 21 16.7
comp=Z,6.8nm,1.3s
ILAR Eielson Array 77.05 357 P **P 18 21 17.3 -1.0**
comp=Z,0.5nm,0.8s,baz=6.7,slow=5.7,SNR=4.7
comp=Z,0.5nm,0.8s
WRH Wood River Hil 77.39 358 IAmb IAmb 18 21 21.5
comp=Z,5.5nm,1.2s
K27K Chicken 77.53 355 IAmb IAmb 18 21 23.1
comp=Z,5.9nm,1.0s
J19K Poorman 77.94 1 **P 18 21 24.1 +0.8**
J19K IAmb IAmb 18 21 26.1
comp=Z,6.0nm,1.2s
J18K Innoko River 78.45 2 IAmb IAmb 18 21 28.3
comp=Z,8.1nm,1.4s
CAST Castle Rocks 78.53 359 IAmb IAmb 18 21 28.1
comp=Z,3.5nm,0.9s
K20K Telida 78.59 0 **P 18 21 27.7 +0.8**
K20K IAmb IAmb 18 21 28.9
comp=Z,4.8nm,1.3s
DHY Denali Highway 78.77 357 IAmb IAmb 18 21 29.5
comp=Z,4.6nm,1.1s
K17K Iditarod 79.16 2 IAmb IAmb 18 21 31.8
comp=Z,6.7nm,1.1s
PETK Petropavlovsk- 79.48 28 LR LR 18 58 59.3
comp=Z,34nm,18.1s,baz=303,slow=37
HYT Haines Junctio 80.29 352 IAmb IAmb 18 21 38.5
comp=Z,4.5nm,1.0s
N19K Bonanza Creek 81.14 1 **P 18 21 42.0 +1.1**
MJAR Matsushiro Arr 82.27 49 P **P 18 21 47.0 -0.2**
comp=Z,2.5nm,0.9s,baz=315,slow=3.9,SNR=9.1
comp=Z,2.5nm,0.9s
MJAR Matsushiro Arr 82.27 49 P **P 18 21 47.3 +0.1**
MJAR pmax pmax
comp=Z,7.0nm,1.5s
MJAR Matsushiro Arr 82.27 49 **P 18 21 47.2 +0.1**
MJAR IAmb IAmb 18 21 49.6
comp=Z,6.7nm,1.5s
TXAR Lajitas Array 98.21 318 P **P 18 23 02.0 -1.2**
comp=Z,0.3nm,0.7s,baz=18,slow=4.5,SNR=3.9
comp=Z,0.3nm,0.7s
TXAR Lajitas Array 98.21 318 P **P 18 23 02.0 -1.2**
TXAR Lajitas Array 98.21 318 P **P 18 23 02.0 -1.2**
WRA Warramunga Arr 115.71 96 PKP **PKPdf 18 28 06.9 -1.4**
comp=Z,0.4nm,0.7s,baz=301,slow=2.7,SNR=2.3
ASAR Alice Springs 117.40 99 PKP **PKPdf 18 28 10.0 -1.5**
comp=Z,0.7nm,0.8s,baz=319,slow=1.8,SNR=7.7
ASAR Alice Springs 117.40 99 PKIKP **PKPdf 18 28 10.0 -1.5**
QSPA South Pole Qui 128.24 180 PKP **PKPdf 18 28 30.0 -1.0**
comp=Z,1.7nm,1.0s,baz=239,slow=1.6,SNR=2.7

ANF ***16*** *18:29:16.0±0.2,58°.33N×133°.44W, h0km±2km, ML3.5/28, Error ellipse: s-maj=1.2km s-min=1.0km az=53.0*
NEIC ***16*** *18:29:16.4±1.7,58°.33N±0°.01×133°.47W±0°.03, h4km±6km, ML3.2/67,ML3.1(AEIC), Error ellipse: s-maj=2.3km s-min=1.6km az=88.0*
AEIC ***16*** *18:29:16.5±1.7,58°.33N±0°.02×133°.48W±0°.03, h5km±6km, Error ellipse: s-maj=2.4km s-min=2.0km az=164.0*
PGC ***16*** *18:29:17.1±0.0,58°.33N×133°.48W, h4km, ML3.5/28, 53km east of Juneau, Alaska, Usa Southeastern Alaska*
IDC ***16*** *18:29:18.2±2.1,58°.38N×133°.34W, h0km, mb2.4/1, mbtmp3.0/4, ML2.9/3, Error ellipse: s-maj=31.5km s-min=11.2km az=18.0*

ISC 16 18:29:17.0±0.7, 58°.36N±0°.02×133°.43W±0°.01, h10km, n156, σ1§60/193, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.51**	**261**			**Pg**	**18 29 25.8**	**-1.2**
JIS						**Sg**	**18 29 32.3**	**-1.3**
R32K	**Eaglecrest**	**0.58**	**262**			**Pg**	**18 29 27.1**	**-1.2**
R32K						**Sg**	**18 29 34.7**	**-1.2**
R32K	**Eaglecrest** baz=83,SNR=25	**0.58**	**262**	P		**Pg**	**18 29 26.9**	**-1.3**
R32K	baz=83			S		**Sg**	**18 29 34.5**	**-1.4**
BESE	**Bessie Mountai**	**0.78**	**287**	P		**Pg**	**18 29 30.9**	**-1.1**
BESE				S		**Sg**	**18 29 40.5**	**-1.7**
BESE	**Bessie Mountai**	**0.78**	**287**			**Pg**	**18 29 29.7**	**-2.3**
BESE	**Bessie Mountai**	**0.78**	**287**			**Sg**	**18 29 41.4**	**-0.8**
Q32M	**Nakina River**	**0.85**	**45**	P		**Pg**	**18 29 33.2**	**-0.2**
Q32M				S		**Sb**	**18 29 46.0**	**+0.4**
Q32M	**Nakina River**	**0.85**	**45**			**Pg**	**18 29 32.6**	**-0.8**
Q32M	**Nakina River**	**0.85**	**45**			**Sb**	**18 29 45.9**	**+0.3**
Q32M	**Nakina River** baz=226,SNR=94	**0.85**	**45**	P		**Pg**	**18 29 33.1**	**-0.4**
Q32M	baz=226			S		**Sb**	**18 29 46.5**	**+0.9**
S32K	**Killisnoo**	**1.08**	**215**			**Pg**	**18 29 36.1**	**-1.7**
S32K	**Killisnoo**	**1.08**	**215**			**Sg**	**18 29 50.6**	**-1.3**
S32K	**Killisnoo** baz=33,SNR=46	**1.08**	**215**	P		**Pg**	**18 29 36.2**	**-1.6**
S32K	baz=33			S		**Sb**	**18 29 50.9**	**-1.0**
R31K	**City Hall, Gus**	**1.22**	**273**			**Pn**	**18 29 38.7**	**-1.3**
R31K						**Sn**	**18 29 55.7**	**-0.8**
R31K	**City Hall, Gus** baz=93	**1.22**	**273**	S		**Sn**	**18 29 56.4**	**-0.2**
P32M	**Atlin**	**1.24**	**353**	P		**Pn**	**18 29 39.5**	**-1.0**
P32M				S		**Sb**	**18 29 55.6**	**-1.0**
P32M	**Atlin**	**1.24**	**353**			**Pn**	**18 29 39.1**	**-1.3**
P32M	**Atlin**	**1.24**	**353**			**Sn**	**18 29 58.1**	**+0.8**
P32M	**Atlin** baz=174,SNR=131	**1.24**	**353**	P		**Pn**	**18 29 39.6**	**-0.9**
P32M	baz=174			S		**Sn**	**18 29 57.5**	**+0.2**
S34M	**Telegraph Cree**	**1.30**	**109**	P		**Pn**	**18 29 40.5**	**-0.7**
S34M				S		**Sb**	**18 29 57.7**	**-0.5**
S34M	**Telegraph Cree**	**1.30**	**109**			**Pn**	**18 29 40.0**	**-1.2**
S34M	comp=N,432nm,0.9s			IAML			18 30 06.5	
S34M	**Telegraph Cree** baz=290,SNR=119	**1.30**	**109**	P		**Pn**	**18 29 40.2**	**-1.0**
S34M	baz=290			S		**Sg**	**18 29 58.7**	**0.0**
SKAG	**Skagway**	**1.48**	**319**			**Pn**	**18 29 43.1**	**-0.5**
SKAG	**Skagway** comp=E,311nm,0.7s	**1.48**	**319**	IAML			18 30 09.9	
SKAG	comp=N,238nm,0.9s			IAML			18 30 23.7	
SKAG	**Skagway** baz=139,SNR=55	**1.48**	**319**	P		**Pn**	**18 29 43.5**	**-0.2**
SKAG	baz=139			S		**Sg**	**18 30 04.3**	**-0.2**
S31K	**Pelican**	**1.54**	**256**			**Pn**	**18 29 43.0**	**-1.4**
S31K	**Pelican** baz=74,SNR=9.0	**1.54**	**256**	P		**Pn**	**18 29 43.6**	**-0.9**
S31K	baz=74			S		**Sg**	**18 30 04.9**	**-1.5**
T33K	**Petersburg**	**1.57**	**170**	S		**Sg**	**18 30 06.3**	**-1.1**
T33K	**Petersburg** baz=350	**1.57**	**170**	S		**Sg**	**18 30 06.3**	**-1.1**
R33M	**Jennings River**	**1.65**	**50**	Pn		**Pn**	**18 29 46.5**	**+0.4**
R33M				Sn		**Sg**	**18 30 09.2**	**-0.6**
R33M	**Jennings River**	**1.65**	**50**			**Pb**	**18 29 46.8**	**-0.6**
R33M	**Jennings River** comp=E,301nm,0.7s	**1.65**	**50**	IAML			18 30 13.4	
R33M				IAML			18 30 25.5	

	comp=N,301nm,0.8s								
R33M	**Jennings River**	**1.65**	**50**	P		**Pn**	**18 29 46.5**	**+0.4**	
	baz=232,SNR=101								
R33M				S		**Sg**	**18 30 09.6**	**-0.3**	
	baz=232								
SIT	**Sitka**	**1.66**	**219**			**Pn**	**18 29 44.5**	**-1.6**	
SIT	**Sitka**	**1.66**	**219**	IAML			18 30 15.2		
	comp=N,211nm,1.1s								
SIT	**Sitka**	**1.66**	**219**	P		**Pn**	**18 29 45.7**	**-0.3**	
	baz=37								
SIT				S		**Sb**	**18 30 08.1**	**-0.3**	
	baz=37								
DLBC	**Dease Lake**	**1.79**	**86**	Pg		**Pb**	**18 29 49.0**	**-0.9**	
	comp=N,5.1nm,0.3s,baz=242,slow=16,SNR=158								
DLBC				Lg		Lg	18 30 14.2		
	comp=N,25nm,0.3s,baz=31,slow=22,SNR=16								
DLBC	**Dease Lake**	**1.79**	**86**	Pn		**Pb**	**18 29 49.0**	**-0.9**	
DLBC				Sn		**Sb**	**18 30 12.8**	**+0.3**	
DLBC	**Dease Lake**	**1.79**	**86**	P		**Pb**	**18 29 48.7**	**-1.2**	
	baz=268								
DLBC				Sb		**Sg**	**18 30 15.0**	**+0.4**	
	baz=268								
PLBC	**Pleasant Camp**	**1.88**	**307**	Pn		**Pb**	**18 29 50.3**	**-1.0**	
PLBC				Sn		**Sb**	**18 30 13.5**	**-1.4**	
PLBC	**Pleasant Camp**	**1.88**	**307**			**Pb**	**18 29 49.9**	**-1.5**	
PLBC	**Pleasant Camp**	**1.88**	**307**	P		**Pb**	**18 29 49.9**	**-1.5**	
	baz=126,SNR=85								
PLBC				Sb		**Sg**	**18 30 16.4**	**-0.9**	
	baz=126								
P33M	**Teslin, Yukon**	**1.88**	**9**	Pn		**Pn**	**18 29 49.7**	**+0.4**	
P33M				Sn		**Sb**	**18 30 14.1**	**-1.0**	
P33M	**Teslin, Yukon**	**1.88**	**9**			**Pn**	**18 29 49.6**	**+0.3**	
P33M	**Teslin, Yukon**	**1.88**	**9**	IAML			18 30 31.6		
	comp=N,147nm,0.9s								
P33M	**Teslin, Yukon**	**1.88**	**9**	P		**Pn**	**18 29 49.7**	**+0.4**	
	baz=190,SNR=76								
P33M				S		**Sb**	**18 30 14.9**	**-0.2**	
	baz=190								
WRAK	**Wrangell Islan**	**2.03**	**163**	Sn		**Sn**	**18 30 16.5**	**-0.1**	
WRAK	**Wrangell Islan**	**2.03**	**163**			**Pn**	**18 29 51.1**	**-0.1**	
WRAK	**Wrangell Islan**	**2.03**	**163**	Pn		**Pn**	**18 29 51.0**	**-0.2**	
WRAK				IAML			18 30 35.8		
	comp=N,281nm,0.7s								
WRAK				IAML			18 30 37.5		
	comp=N,156nm,0.8s								
WRAK	**Wrangell Islan**	**2.03**	**163**	P		**Pn**	**18 29 51.0**	**-0.2**	
	baz=343								
WRAK				S		**Sb**	**18 30 18.2**	**-1.1**	
	baz=343								
T35M	**Bob Quinn**	**2.20**	**128**	Pn		**Pb**	**18 29 55.1**	**-1.7**	
T35M				Sg		**Sg**	**18 30 25.6**	**-2.0**	
T35M	**Bob Quinn**	**2.20**	**128**			**Pn**	**18 29 53.9**	**+0.3**	
T35M	**Bob Quinn**	**2.20**	**128**	IAML			18 30 30.6		
	comp=N,167nm,0.8s								
T35M				IAML			18 30 30.9		
	comp=E,251nm,0.8s								
T35M	**Bob Quinn**	**2.20**	**128**	P		**Pn**	**18 29 53.9**	**+0.3**	
	baz=309								
T35M				Sb		**Sg**	**18 30 25.6**	**-2.0**	
	baz=309								
U33K	**Whale Pass**	**2.26**	**176**			**Pn**	**18 29 54.0**	**-0.3**	
U33K				IAML			18 30 33.3		
	comp=E,152nm,1.2s								
U33K	**Whale Pass**	**2.26**	**176**	P		**Pn**	**18 29 53.8**	**-0.5**	
	baz=355								
U33K				Sb		**Sb**	**18 30 26.5**	**+0.8**	
	baz=355								
WHY	**Whitehorse**	**2.42**	**343**	Pn		**Pn**	**18 29 56.6**	**-0.1**	
WHY				Sn		**Sn**	**18 30 27.6**	**+1.2**	
WHY	**Whitehorse**	**2.42**	**343**			**Pn**	**18 29 56.9**	**+0.2**	
WHY	**Whitehorse**	**2.42**	**343**	IAML			18 30 42.9		
	comp=N,148nm,1.2s								
WHY	**Whitehorse**	**2.42**	**343**	P		**Pn**	**18 29 57.0**	**+0.2**	
	baz=162,SNR=21								
WHY				S		**Sn**	**18 30 28.2**	**+1.8**	
	baz=162								
P30M	**Million Dollar**	**2.53**	**316**	Pn		**Pn**	**18 29 59.5**	**+1.3**	
P30M				Sg		**Sg**	**18 30 36.5**	**-1.8**	
P30M	**Million Dollar**	**2.53**	**316**			**Pn**	**18 29 59.5**	**+1.3**	
P30M	**Million Dollar**	**2.53**	**316**	IAML			18 30 48.0		
	comp=N,157nm,1.1s								
P30M				IAML			18 30 53.0		
	comp=E,121nm,0.9s								
P30M	**Million Dollar**	**2.53**	**316**	P		**Pn**	**18 29 59.3**	**+1.1**	
	baz=134								
P30M				Sb		**Sg**	**18 30 35.6**	**-2.6**	
	baz=134								
P29M	**Windy Craggy**	**2.57**	**302**	Pn		**Pn**	**18 29 59.7**	**+1.0**	
P29M				Sg		**Sg**	**18 30 37.3**	**-2.1**	
P29M	**Windy Craggy**	**2.57**	**302**			**Pn**	**18 29 59.2**	**+0.6**	
P29M	**Windy Craggy**	**2.57**	**302**	IAML			18 31 06.6		
	comp=E,109nm,0.8s								
P29M	**Windy Craggy**	**2.57**	**302**	P		**Pn**	**18 29 59.1**	**+0.5**	
	baz=119,SNR=11								
P29M				Sb		**Sg**	**18 30 37.0**	**-2.4**	
	baz=119								
O30N	**Mendenhall**	**2.77**	**332**	Pn		**Pn**	**18 30 02.1**	**+0.6**	
O30N				Sg		**Sg**	**18 30 43.9**	**-2.0**	
O30N	**Mendenhall**	**2.77**	**332**			**Pn**	**18 30 02.1**	**+0.6**	
O30N	**Mendenhall**	**2.77**	**332**	IAML			18 30 57.1		
	comp=N,109nm,1.1s								
O30N	**Mendenhall**	**2.77**	**332**	P		**Pn**	**18 30 02.0**	**+0.6**	
	baz=150,SNR=24								
O30N				Sb		**Sg**	**18 30 43.7**	**-2.3**	
	baz=150								
N32M	**Quiet Lake**	**2.81**	**3**	Sn		**Sn**	**18 30 36.3**	**+0.5**	
N32M	**Quiet Lake**	**2.81**	**3**			**Pn**	**18 30 03.0**	**+1.1**	
CRAG	**Craig**	**2.90**	**177**			**Pn**	**18 30 03.4**	**+0.2**	
CRAG	**Craig**	**2.90**	**177**	IAML			18 30 52.2		
	comp=N,65nm,1.1s								
CRAG				IAML			18 30 58.7		
	comp=E,67nm,1.0s								
CRAG	**Craig**	**2.90**	**177**	S		**Sn**	**18 30 39.1**	**+1.0**	
	baz=356								
WTLY	**Watson Lake, Y**	**2.96**	**52**	Sg		**Sg**	**18 30 50.6**	**-1.3**	
WTLY	**Watson Lake, Y**	**2.96**	**52**			**Pn**	**18 30 04.7**	**+0.7**	
V35K	**Ketchikan**	**3.20**	**161**			**Pn**	**18 30 07.7**	**+0.5**	
V35K	**Ketchikan**	**3.20**	**161**	IAML			18 31 05.6		
	comp=E,48nm,0.8s								
V35K				IAML			18 31 14.9		
	comp=N,55nm,1.0s								
V35K	**Ketchikan**	**3.20**	**161**	Sg		**Sg**	**18 30 59.6**	**0.0**	
	baz=342								
HYT	**Haines Junctio**	**3.23**	**322**	Pn		**Pn**	**18 30 08.8**	**+1.0**	
HYT				Sg		**Sg**	**18 30 57.6**	**-2.9**	
HYT	**Haines Junctio**	**3.23**	**322**			**Pn**	**18 30 08.8**	**+1.0**	
HYT	**Haines Junctio**	**3.23**	**322**	IAML			18 31 02.6		
	comp=E,92nm,1.2s								
HYT				IAML			18 31 05.7		
	comp=N,94nm,1.1s								
HYT	**Haines Junctio**	**3.23**	**322**	P		**Pn**	**18 30 09.2**	**+1.4**	
	baz=139,SNR=9.2								
HYT				Sb		**Sg**	**18 30 57.4**	**-3.1**	
	baz=139								
YUK7	**Dusty Glacier**	**3.24**	**314**	Pn		**Pn**	**18 30 08.3**	**+0.2**	
YUK7				Sn		**Sn**	**18 30 47.3**	**+0.4**	
YUK7	**Dusty Glacier**	**3.24**	**314**			**Pn**	**18 30 08.6**	**+0.5**	
O29M	**Mount Kennedy**	**3.28**	**309**	Pn		**Pn**	**18 30 07.8**	**-0.7**	
O29M				Sn		**Sn**	**18 30 48.2**	**+0.6**	
O29M	**Mount Kennedy**	**3.28**	**309**	Pb		**Pb**	**18 30 14.9**	**-0.4**	
	baz=125								
O29M				Sb		**Sb**	**18 30 58.1**	**+2.8**	
	baz=125								
N31M	**Braeburn, Yuko**	**3.35**	**340**	Pn		**Pn**	**18 30 10.7**	**+1.3**	
YUK5	**Granite Creek**	**3.57**	**323**	Pn		**Pn**	**18 30 12.5**	**-0.1**	
YUK5				Sg		**Sg**	**18 31 08.0**	**-3.6**	
YUK5	**Granite Creek**	**3.57**	**323**			**Pn**	**18 30 13.5**	**+1.0**	
YUK6	**Outpost Mounta**	**3.60**	**318**	Pn		**Pn**	**18 30 14.1**	**+1.0**	
YUK6				Sg		**Sg**	**18 31 08.4**	**-4.2**	
YUK6	**Outpost Mounta**	**3.60**	**318**			**Pn**	**18 30 13.9**	**+0.9**	
YUK6	**Outpost Mounta**	**3.60**	**318**	Pg		**Pg**	**18 30 24.0**	**-1.9**	
	baz=134								
YUK6				Sb		**Sb**	**18 31 07.5**	**+2.8**	
	baz=134								
N30M	**Aishikik Lake**	**3.61**	**331**	Pn		**Pn**	**18 30 13.8**	**+0.7**	
N30M				Sg		**Sg**	**18 31 08.7**	**-4.3**	
N30M	**Aishikik Lake**	**3.61**	**331**			**Pn**	**18 30 14.1**	**+1.1**	
N30M	**Aishikik Lake**	**3.61**	**331**	IAML			18 31 16.7		
	comp=N,67nm,0.7s								
N30M				IAML			18 31 32.6		
	comp=E,64nm,0.8s								
N30M	**Aishikik Lake**	**3.61**	**331**	P		**Pn**	**18 30 14.1**	**+1.1**	
	baz=148,SNR=13								
N30M				Sb		**Sg**	**18 31 08.6**	**-4.3**	
	baz=148								
M31M	**Drury Creek, Y**	**3.88**	**353**	Pn		**Pn**	**18 30 17.2**	**+0.5**	
M31M	**Drury Creek, Y**	**3.88**	**353**	IAML			18 31 27.9		
	comp=E,55nm,1.0s								
M31M				IAML			18 31 47.5		
	comp=N,42nm,1.1s								
M31M	**Drury Creek, Y**	**3.88**	**353**	P		**Pn**	**18 30 18.2**	**+1.5**	
	baz=173,SNR=14								
M31M				Sb		**Sg**	**18 31 17.8**	**-3.8**	
	baz=173								
PINM	**Pinnacle**	**3.91**	**299**	Pb		**Pb**	**18 30 26.4**	**+0.3**	
	baz=114								
PINM				S		**Sn**	**18 31 03.1**	**0.0**	
	baz=114								
YUK4	**Talbot Arm**	**3.98**	**321**	Pn		**Pn**	**18 30 19.2**	**+0.9**	
YUK4				Sg		**Sg**	**18 31 21.1**	**-3.8**	
YUK4	**Talbot Arm**	**3.98**	**321**	Pb		**Pb**	**18 30 28.1**	**+0.7**	
	baz=138								
YUK4				Sb		**Sg**	**18 31 21.4**	**-3.4**	
	baz=138								
TGTN	**Hyland Airport**	**4.10**	**37**	Sg		**Sg**	**18 31 23.9**	**-4.6**	
TGTN	**Hyland Airport**	**4.10**	**37**	Sb		**Sg**	**18 31 25.1**	**-3.4**	
	baz=222								
O28M	**Mount Upton**	**4.20**	**308**	Pn		**Pn**	**18 30 21.0**	**-0.3**	
O28M				Sg		**Sb**	**18 31 25.9**	**+3.9**	
O28M	**Mount Upton**	**4.20**	**308**			**Pb**	**18 30 32.5**	**+1.4**	
O28M				IAML			18 31 53.1		
	comp=E,28nm,1.0s								
O28M	**Mount Upton**	**4.20**	**308**	Pb		**Pb**	**18 30 31.5**	**+0.4**	
	baz=123								
YUK8	**Steele Glacier**	**4.34**	**315**	Pn		**Pn**	**18 30 22.9**	**-0.3**	
YUK8	**Steele Glacier**	**4.34**	**315**	Pb		**Pb**	**18 30 34.0**	**+0.6**	
	baz=130								
MMPY	**Sheldon Lake,**	**4.41**	**13**	Pn		**Pn**	**18 30 24.4**	**+0.5**	
MMPY				Sg		**Sg**	**18 31 34.0**	**-4.2**	
MMPY	**Sheldon Lake,**	**4.41**	**13**			**Pn**	**18 30 25.8**	**+1.9**	
MMPY				IAML			18 31 50.1		
	comp=N,35nm,1.1s								
MMPY	**Sheldon Lake,**	**4.41**	**13**	P		**Pn**	**18 30 25.5**	**+1.6**	
	baz=195								
M30M	**Minto, Yukon**	**4.54**	**340**	IAML			18 31 51.1		
	comp=N,28nm,1.1s								
M30M	**Minto, Yukon**	**4.54**	**340**	P		**Pn**	**18 30 26.4**	**+0.6**	
	baz=158								
LOGN	**Logan Glacier**	**4.57**	**306**	IAML			18 31 58.3		
	comp=E,36nm,1.0s								
LOGN				IAML			18 32 08.0		
	comp=N,17nm,1.1s								
M29M	**Somme Creek**	**4.80**	**331**	Pn		**Pn**	**18 30 29.8**	**+0.5**	
M29M				Sg		**Sb**	**18 31 44.2**	**+5.4**	
M29M	**Somme Creek**	**4.80**	**331**	P		**Pn**	**18 30 30.1**	**+0.8**	
	baz=147								
GRNB	**Grenville Isla**	**4.92**	**155**	Pn		**Pn**	**18 30 30.2**	**-0.8**	
GRNB				Sn		**Sn**	**18 31 27.6**	**-0.3**	
BARN	**Barnard Glacie**	**4.97**	**306**			**Pb**	**18 30 47.6**	**+3.5**	
BARN				IAML			18 32 03.5		
	comp=E,13nm,1.2s								
YUK2	**White River**	**5.06**	**316**	Pn		**Pn**	**18 30 32.7**	**-0.2**	
NBC1	**NorthernBC 1**	**5.13**	**71**	Sn		**Sn**	**18 31 33.1**	**0.0**	
L29M	**L29M**	**5.29**	**336**	Pn		**Pn**	**18 30 35.9**	**-0.1**	
L29M				Sg		**Sg**	**18 32 02.0**	**-4.7**	
L29M	**L29M**	**5.29**	**336**			**Pn**	**18 30 36.3**	**+0.3**	
L29M	**L29M**	**5.29**	**336**	P		**Pn**	**18 30 36.5**	**+0.5**	
	baz=152								
TGL	**Tana Glacier**	**5.35**	**301**	IAML			18 32 05.2		
	comp=N,14nm,1.2s								
TGL				IAML			18 32 52.5		
	comp=E,11nm,1.1s								
MCARA	**McCarthy VSAT**	**5.70**	**306**			**Pb**	**18 31 00.7**	**+4.2**	
M27K	**Edge Creek, AK**	**5.80**	**317**			**Pn**	**18 30 42.7**	**-0.4**	
K29M	**Barlow Dome**	**5.85**	**342**	Pn		**Pn**	**18 30 43.9**	**+0.2**	
K29M	**Barlow Dome**	**5.85**	**342**			**Pn**	**18 30 43.0**	**-0.8**	
K29M	**Barlow Dome**	**5.85**	**342**	P		**Pn**	**18 30 44.2**	**+0.4**	
	baz=159,SNR=6.5								
L27K	**Beaver Creek,**	**6.26**	**322**	Pn		**Pn**	**18 30 48.9**	**-0.4**	
L27K	**Beaver Creek,**	**6.26**	**322**			**Pb**	**18 31 07.2**	**+1.2**	
J30M	**Hart River**	**6.39**	**349**	Pn		**Pn**	**18 30 50.7**	**-0.5**	
J30M	**Hart River**	**6.39**	**349**			**Pn**	**18 30 52.2**	**+1.1**	
J30M	**Hart River**	**6.39**	**349**	P		**Pn**	**18 30 52.3**	**+1.1**	
	baz=166,SNR=11								
I30M	**Mount Dempster**	**7.03**	**350**	Pn		**Pn**	**18 30 59.9**	**-0.1**	
I30M	**Mount Dempster**	**7.03**	**350**			**Pn**	**18 31 01.6**	**+1.7**	
I30M	**Mount Dempster**	**7.03**	**350**	P		**Pn**	**18 31 02.2**	**+2.3**	
	baz=168,SNR=38								
H31M	**Peel River**	**7.49**	**357**	Pn		**Pn**	**18 31 06.1**	**0.0**	
H31M	**Peel River**	**7.49**	**357**			**Pn**	**18 31 06.8**	**+0.7**	
H31M	**Peel River**	**7.49**	**357**	P		**Pn**	**18 31 07.4**	**+1.4**	
	baz=176,SNR=9.2								
H29M	**Whitestone**	**8.21**	**346**	Pn		**Pn**	**18 31 16.1**	**0.0**	
G31M	**Satah River**	**8.60**	**358**	Pn		**Pn**	**18 31 21.6**	**+0.3**	
G31M	**Satah River**	**8.60**	**358**	P		**Pn**	**18 31 22.6**	**+1.2**	
	baz=177								
G29M	**Pine Creek**	**8.84**	**348**	Pn		**Pn**	**18 31 24.5**	**-0.1**	
ILAR	**Eielson Array**	**9.07**	**321**	Pn		**Pn**	**18 31 30.2**	**+2.4**	
	baz=146,slow=10,SNR=4.4								
ILAR				Lg		Lg	18 34 00.4		
	comp=E,0.1nm,0.3s,baz=120,slow=26,SNR=7.7								
	comp=E,0.2nm,0.8s								
F30M	**Barrier River**	**9.35**	**354**	P		**Pn**	**18 31 32.9**	**+1.3**	
	baz=12,SNR=5.6								
L22K	**Petersville**	**9.52**	**303**	P		**Pn**	**18 31 35.0**	**+1.0**	
	baz=108								
INK	**Inuvik**	**9.99**	**360**	Pn		**Pn**	**18 31 40.8**	**+0.6**	
	comp=E,0.2nm,0.3s,baz=222,slow=16,SNR=6.6								
INK				Lg		Lg	18 34 24.9		
	baz=207,slow=15								
	comp=E,6.3nm,0.9s								
INK	**Inuvik**	**9.99**	**360**			**Pn**	**18 31 40.2**	**-0.1**	
YKA	**Yellowknife Ar**	**10.17**	**58**	Pn		**Pn**	**18 31 42.6**	**-0.2**	
	comp=E,0.1nm,0.3s,baz=250,slow=12,SNR=6.4								
YKA				Sn		Sn	18 33 25.9	-11	
	comp=E,0.1nm,0.3s,baz=229,slow=6.6,SNR=1.4								
YKA				Lg		Lg	18 34 34.4		
	comp=E,0.1nm,0.3s,baz=255,slow=29,SNR=4.1								
	comp=E,0.3nm,0.5s								
PDAR	**Pinedale Array**	**21.58**	**126**	P		**P**	**18 34 10.9**	**+4.1**	
	comp=E,0.1nm,0.4s,baz=334,slow=10.0,SNR=1.9								
	comp=E,0.1nm,0.4s								

*SOF **16** 18:41:55.5, 40˚.50N±0˚.08×20˚.6E±0˚.1, h10km±5km, MD3.2/4*
*TIR **16** 18:41:58.8, 40˚.53N×20˚.88E, h14km± 1km, Ml3.2/5*
*PDG **16** 18:41:59.4±0.4, 40˚.54N×20˚.84E, h11km, ML3.1/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*ATH **16** 18:41:59.0, 40˚.56N×20˚.75E, h7km±2km, ML3.1/15, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **16** 18:41:59.4, 40˚.5N±0˚.7×2˚1E±˚, h0km±1km, M3.0/11, MLh3.0/11*
*BEO **16** 18:41:59.7±0.3, 40˚.57N×20˚.96E, h0km, ML2.8/11*
*SKO **16** 18:42:00.5, 40˚.53N×20˚.78E, h15km, ML3.4*

ISC 16 18:41:59.4±0.9, 40˚.51N±0˚.01×20˚.82E±0˚.02, h6km±7km, n128, σ1§04/181, 10C-6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.11**	**346**	Pg		**Pg**	**Pg**	**18 42 01.7**	**-0.1**
KBN				Sg		**Sg**	**Sg**	**18 42 03.4**	**-0.2**
KBN				AML		AML	AML	18 42 04.5	
	157nm,0.3s								
KBN	**Korca**	**0.11**	**346**	P		**Pg**	**Pg**	**18 42 01.8**	**-0.1**
KBN				S		**Sg**	**Sg**	**18 42 03.7**	**+0.1**
PENT	**Pentalofos**	**0.40**	**143**	P		**Pg**	**Pg**	**18 42 07.4**	**+0.2**
PENT				S		**Sb**	**Sb**	**18 42 14.1**	**-1.2**
PENT	**Pentalofos**	**0.40**	**143**	P		**Pb**	**Pb**	**18 42 08.6**	**-0.3**
PENT				S		**Sb**	**Sb**	**18 42 15.1**	**-0.2**
OHR	**Ohrid**	**0.60**	**358**	*i* Pg		**Pg**	**Pg**	**18 42 10.7**	**-0.2**
OHR				*i* Sg		**Sb**	**Sb**	**18 42 21.0**	**-0.1**
OHR				*e*Lg		Lg	Lg	18 42 21.3	
	comp=N,923nm,0.4s								
OHR				*e*Lg		Lg	Lg	18 42 21.5	
	comp=E,2µm,0.5s								
KPRO	**Kipourio**	**0.69**	**143**	P		**Pg**	**Pg**	**18 42 12.8**	**0.0**
KPRO				S		**Sb**	**Sb**	**18 42 23.7**	**-0.1**
KPRO	**Kipourio**	**0.69**	**143**	P		**Pb**	**Pb**	**18 42 14.3**	**+0.3**
KPRO				S		**Sb**	**Sb**	**18 42 24.1**	**+0.3**
KZN	**Kozani**	**0.75**	**106**	P		**Pg**	**Pg**	**18 42 14.2**	**+0.4**
KZN				S		**Sb**	**Sb**	**18 42 25.3**	**-0.2**
KZN	**Kozani**	**0.75**	**106**	P		**Pb**	**Pb**	**18 42 14.9**	**0.0**
KZN				S		**Sn**	**Sn**	**18 42 26.6**	**-1.8**
MSVA	**Metsovo**	**0.79**	**160**	P		**Pg**	**Pg**	**18 42 15.2**	**+0.6**
MSVA				S		**Sb**	**Sb**	**18 42 26.7**	**0.0**
JAN	**Janina**	**0.86**	**179**	P		**Pg**	**Pg**	**18 42 15.3**	**-0.5**
JAN				S		**Sb**	**Sb**	**18 42 28.5**	**+0.1**
JAN	**Janina**	**0.86**	**179**	P		**Pg**	**Pg**	**18 42 16.3**	**+0.4**
JAN				S		**Sn**	**Sn**	**18 42 28.7**	**-2.1**
SRN	**Sarande**	**0.89**	**225**	Pg		**Pg**	**Pg**	**18 42 16.8**	**+0.3**
SRN				Sg		**Sn**	**Sn**	**18 42 30.9**	**-0.8**
SRN				AML		AML	AML	18 42 32.9	
	comp=E,1.1nm,0.4s								
SRN	**Sarande**	**0.89**	**225**	P		**Pg**	**Pg**	**18 42 16.6**	**+0.1**
SRN				S		**Sn**	**Sn**	**18 42 30.8**	**-0.8**
KTI	**Kastanea**	**0.99**	**97**	P		**Pb**	**Pb**	**18 42 18.5**	**-0.6**
PRMD	**Pramanda**	**1.00**	**168**	P		**Pb**	**Pb**	**18 42 18.5**	**-0.7**
PRMD				S		**Sn**	**Sn**	**18 42 34.1**	**-0.5**
PRMD	**Pramanda**	**1.00**	**168**	P		**Pn**	**Pn**	**18 42 19.4**	**-0.6**
PRMD				S		**Sn**	**Sn**	**18 42 32.9**	**-1.6**
VLO	**Vlora**	**1.01**	**268**	Pg		**Pn**	**Pn**	**18 42 19.9**	**-0.3**
VLO				Sg		**Sn**	**Sn**	**18 42 33.4**	**-1.3**
VLO				AML		AML	AML	18 42 41.6	
	comp=E,10nm,0.4s								
IGT	**Igoumenitsa**	**1.05**	**201**	Pg		**Pb**	**Pb**	**18 42 19.7**	**-0.2**
IGT				Sg		**Sn**	**Sn**	**18 42 34.2**	**-1.4**
IGT	**Igoumenitsa**	**1.05**	**201**	P		**Pg**	**Pg**	**18 42 19.9**	**+0.3**
IGT				S		**Sn**	**Sn**	**18 42 35.4**	**-0.2**
IGT	**Igoumenitsa**	**1.05**	**201**	*e*Pg		**Pb**	**Pb**	**18 42 19.1**	**-0.9**
IGT				*e*Sg		**Sn**	**Sn**	**18 42 36.8**	**+1.2**
IGT	**Igoumenitsa**	**1.05**	**201**	P		**Pg**	**Pg**	**18 42 19.8**	**+0.3**
IGT				S		**Sg**	**Sg**	**18 42 33.9**	**+0.7**
TIR	**Tirane**	**1.11**	**319**	Pg		**Pb**	**Pb**	**18 42 19.8**	**-1.1**
TIR				Sg		**Sn**	**Sn**	**18 42 37.0**	**0.0**
TIR				AML		AML	AML	18 42 43.0	
	comp=E,1.5nm,0.7s								
KEK	**Kerkira**	**1.12**	**225**	P		**Pb**	**Pb**	**18 42 20.6**	**-0.6**
KEK				S		**Sb**	**Sb**	**18 42 35.1**	**-0.9**
PHP	**Peshkopia**	**1.21**	**346**	Pg		**Pn**	**Pn**	**18 42 21.3**	**-1.6**
PHP				Sg		**Sb**	**Sb**	**18 42 37.7**	**-0.8**
PHP				AML		AML	AML	18 42 41.9	
	comp=E,2.0nm,0.5s								
TETR	**Tetrakomo, Epi**	**1.22**	**163**	P		**Pg**	**Pg**	**18 42 23.4**	**+0.7**
GRG	**Griva**	**1.28**	**69**	P		**Pn**	**Pn**	**18 42 23.1**	**-0.7**
GRG				S		**Sg**	**Sg**	**18 42 42.0**	**+1.6**
GRG	**Griva**	**1.28**	**69**	P		**Pn**	**Pn**	**18 42 22.8**	**-1.0**
GRG				S		**Sb**	**Sb**	**18 42 39.2**	**-1.4**
THL	**Klokotos Trika**	**1.32**	**136**	P		**Pb**	**Pb**	**18 42 24.2**	**-0.3**
LIT	**Litokhoron**	**1.34**	**107**	P		**Pb**	**Pb**	**18 42 25.2**	**+0.3**
LIT				S		**Sg**	**Sg**	**18 42 43.3**	**+0.8**
LIT	**Litokhoron**	**1.34**	**107**	P		**Pb**	**Pb**	**18 42 24.9**	**0.0**
TYRN	**Tyrnavos**	**1.34**	**126**	P		**Pg**	**Pg**	**18 42 25.3**	**+0.1**
VAY	**Valandovo**	**1.55**	**58**	*i* Pn		**Pn**	**Pn**	**18 42 28.1**	**+0.5**
AMPL	**Ampelaki**	**1.62**	**169**	P		**Pg**	**Pg**	**18 42 30.5**	**+0.1**
THE	**Thessaloniki**	**1.64**	**85**	P		**Pn**	**Pn**	**18 42 28.6**	**-0.1**
TSLK	**Tsoukalades, L**	**1.69**	**184**	P		**Pn**	**Pn**	**18 42 29.2**	**-0.3**
KNT	**Kendrikon**	**1.70**	**67**	P		**Pn**	**Pn**	**18 42 29.9**	**+0.3**
KNT				S		**Sb**	**Sb**	**18 42 52.7**	**-0.1**
KNT	**Kendrikon**	**1.70**	**67**	P		**Pn**	**Pn**	**18 42 29.6**	**0.0**
LKD2	**Lefkada island**	**1.73**	**184**	Pn		**Pb**	**Pb**	**18 42 32.0**	**+0.5**
LKD2				Sn		**Sg**	**Sg**	**18 42 57.6**	**+2.7**
LKD2	**Lefkada island**	**1.73**	**184**	P		**Pb**	**Pb**	**18 42 30.4**	**-1.1**
EVR	**Evrytania**	**1.77**	**154**	P		**Pb**	**Pb**	**18 42 31.4**	**-0.9**
SDA	**Shkodra**	**1.83**	**327**	Pg		**Pb**	**Pb**	**18 42 32.8**	**-0.5**
SDA				Sg		**Sg**	**Sg**	**18 42 58.3**	**0.0**
ULC	**Ulcinj**	**1.88**	**321**	*e*Pn		**Pn**	**Pn**	**18 42 32.4**	**+0.4**
ULC				*i* Sn		**Sn**	**Sn**	**18 42 58.2**

comp=E,1.2nm,0.5s
ABTA Abfaltersbach 8.67 319 *i* Pn **Pn 18 44 05.6 +0.3**
comp=E,2.0nm,0.6s
BIOA Bad Ischl, Aus 8.84 327 *e*Pn **Pn 18 44 08.2 +0.5**
comp=E,1.2nm,0.4s
LESA Schwarzleotal 9.06 322 *e*Pn **Pn 18 44 09.5 -1.3**
comp=E,1.0nm,0.5s
WTTA Wattenberg 9.46 319 *i* Pn **Pn 18 44 15.3 -0.9**
comp=E,1.5nm,0.4s
WATA Walderalm 9.54 319 *i* Pn **Pn 18 44 18.2 +0.9**
comp=E,4.0nm,0.5s
SQTA Sankt Quirin 9.65 317 *e*Pn **Pn 18 44 19.2 +0.4**
comp=E,1.0nm,0.4s
FETA Feichten 9.77 315 *e*Pn **Pn 18 44 20.9 +0.3**
comp=E,2.5nm,1.0s
MOTA Moosalm 9.78 317 *e*Pn **Pn 18 44 20.2 -0.5**
comp=E,1.8nm,0.6s
DAVA Damuels 10.40 314 *e*Pn **Pn 18 44 28.4 -0.7**
comp=E,2.8nm,0.8s

*ATH **16** 18:46:49.0, 40˚.58N×20˚.64E, h8^{km}×2^{km}, ML3.1/8, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*TIR **16** 18:46:51.8, 40˚.55N×20˚.83E, h14^{km}×1^{km}, Ml2.8/3*
*BEO **16** 18:46:51.7±0.6, 40˚.55N×20˚.96E, h1^{km}×7^{km}, ML2.6/10*
*PDG **16** 18:46:51.9±0.3, 40˚.52N×20˚.87E, h14^{km}, ML2.9/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*THE **16** 18:46:51.7, 40˚.5N±1˚.0×2˚1E±˚, h9^{km}±1^{km}, M2.9/11, ML/h2.9/11*
*SKO **16** 18:46:52.7, 40˚.50N×20˚.97E, h0^{km}, ML3.2*

ISC 16 18:46:51.3±1.0, 40˚.48N±0˚.02×20˚.86E±0˚.02, h4^{km}±9^{km}, n69, σ0ˢ87/110, 1C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.15**	**338**	Pg	**Pg**		**18 46 54.1**	**-0.3**
KBN				Sg	**Sg**		**18 46 56.2**	**-0.2**
KBN	**Korca**	**0.15**	**338**	P	**Pg**		**18 46 54.2**	**-0.2**
KBN				S	**Sg**		**18 46 56.3**	**-0.1**
PENT	**Pentalofos**	**0.36**	**144**	P	**Pb**		**18 46 59.9**	**-0.4**
PENT				S	**Sb**		**18 47 06.0**	**-0.2**
PENT	**Pentalofos**	**0.36**	**144**	P	**Pb**		**18 46 59.8**	**-0.4**
PENT				S	**Sb**		**18 47 07.0**	**+0.8**
LMS2	**Laimos Florina**	**0.41**	**31**	P	**Pg**		**18 46 58.8**	**-0.5**
LMS2				S	**Sg**		**18 47 04.4**	**-0.3**
OHR	**Ohrid**	**0.63**	**356**	*i* Pg	**Pg**		**18 47 03.9**	**+0.5**
OHR				*i* Sg	**Sg**		**18 47 12.7**	**+1.1**
OHR				*e*Lg	Lg		18 47 13.2	
	comp=N,556nm,0.6s							
OHR				*e*Lg	Lg		18 47 13.3	
	comp=E,1μm,0.6s							
KPRO	**Kipourio**	**0.65**	**144**	P	**Pb**		**18 47 05.2**	**-0.1**
KPRO				S	**Sn**		**18 47 16.7**	**-1.4**
KPRO	**Kipourio**	**0.65**	**144**	P	**Pb**		**18 47 05.0**	**-0.2**
KPRO				S	**Sn**		**18 47 16.7**	**-1.4**
KZN	**Kozani**	**0.72**	**104**	P	**Pb**		**18 47 06.5**	**+0.2**
KZN				S	**Sb**		**18 47 17.4**	**+0.8**
KZN	**Kozani**	**0.72**	**104**	P	**Pb**		**18 47 06.6**	**+0.2**
KZN				S	**Sn**		**18 47 18.8**	**-0.9**
JAN	**Janina**	**0.82**	**181**	P	**Pn**		**18 47 08.7**	**-1.0**
JAN				S	**Sn**		**18 47 22.2**	**-0.1**
SRN	**Sarande**	**0.89**	**228**	P	**Pb**		**18 47 09.1**	**-0.2**
SRN				Sg	**Sn**		**18 47 23.3**	**-0.6**
SRN	**Sarande**	**0.89**	**228**	P	**Pb**		**18 47 09.3**	**-0.1**
SRN				S	**Sn**		**18 47 22.8**	**-1.1**
KTI	**Kastanea**	**0.96**	**95**	P	**Pb**		**18 47 10.8**	**+0.2**
PRMD	**Pramanda**	**0.97**	**169**	P	**Pn**		**18 47 10.9**	**-0.8**
PRMD				S	**Sn**		**18 47 26.4**	**+0.5**
PRMD	**Pramanda**	**0.97**	**169**	P	**Pb**		**18 47 10.5**	**-0.1**
IGT	**Igoumenitsa**	**1.03**	**203**	P	**Pb**		**18 47 11.5**	**-0.2**
IGT				Sg	**Sn**		**18 47 28.9**	**+1.5**
IGT	**Igoumenitsa**	**1.03**	**203**	P	**Pn**		**18 47 12.1**	**-0.4**
IGT				S	**Sn**		**18 47 28.6**	**+1.2**
IGT	**Igoumenitsa**	**1.03**	**203**	*e*Pg	**Pn**		**18 47 11.8**	**-0.7**
IGT	**Igoumenitsa**	**1.03**	**203**	P	**Pg**		**18 47 10.1**	**-1.0**
VLO	**Vlora**	**1.04**	**270**	Pg	**Pg**		**18 47 11.7**	**+0.4**
VLO				Sg	**Sn**		**18 47 26.8**	**-0.8**
KEK	**Kerkira**	**1.12**	**227**	P	**Pb**		**18 47 12.5**	**-0.7**
KEK				S	**Sn**		**18 47 30.8**	**+1.2**
TIR	**Tirane**	**1.15**	**319**	Pg	**Pb**		**18 47 12.5**	**-1.1**
TIR				Sg	**Sb**		**18 47 28.6**	**-0.4**
TIR				AML	AML		18 47 36.2	
	comp=E,0.7nm,0.7s							
TETR	**Tetrakomo, Epi**	**1.18**	**164**	P	**Pb**		**18 47 13.6**	**-0.7**
PHP	**Peshkopia**	**1.24**	**345**	P	**Pn**		**18 47 13.1**	**-2.3**
PHP				Sg	**Sb**		**18 47 29.8**	**-1.9**
PHP				AML	AML		18 47 34.6	
	comp=E,0.7nm,0.4s							
GRG	**Griva**	**1.26**	**67**	P	**Pn**		**18 47 15.0**	**-0.7**
GRG				S	**Sb**		**18 47 32.3**	**+0.1**
GRG	**Griva**	**1.26**	**67**	P	**Pn**		**18 47 14.7**	**-1.0**
LIT	**Litokhoron**	**1.30**	**107**	P	**Pn**		**18 47 15.8**	**-0.4**
LIT				S	**Sg**		**18 47 34.4**	**+1.3**
LIT	**Litokhoron**	**1.30**	**107**	P	**Pg**		**18 47 16.7**	**+0.4**
TYRN	**Tyrnavos**	**1.30**	**126**	P	**Pg**		**18 47 17.1**	**+0.8**
VAY	**Valandovo**	**1.54**	**57**	*i* Pn	**Pb**		**18 47 20.6**	**+0.2**
THE	**Thessaloniki**	**1.61**	**84**	P	**Pg**		**18 47 22.8**	**+0.6**
THE				Sn	**Sg**		**18 47 44.8**	**+1.8**
KNT	**Kendrikon**	**1.69**	**66**	P	**Pn**		**18 47 20.9**	**-0.6**
SDA	**Shkodra**	**1.87**	**327**	Pg	**Pn**		**18 47 25.2**	**+1.1**
SDA				Sg	**Sb**		**18 47 50.9**	**+1.1**
SDA				AML	AML		18 47 59.5	
	comp=E,0.3nm,0.6s							
ULC	**Ulcinj**	**1.92**	**321**	*e*Pn	**Pn**		**18 47 25.1**	**+0.4**
ULC				*i* Sn	**Sb**		**18 47 50.9**	**-0.2**
DRME	**Dracevica, Mon**	**2.12**	**324**	*e*Pn	**Pn**		**18 47 27.9**	**+0.4**
DRME				*i* Sn	**Sn**		**18 47 55.8**	**+1.6**
SRS	**Serrai**	**2.17**	**72**	*e*Pg	**Pn**		**18 47 28.1**	**0.0**
SRS				*e*Sn	**Sn**		**18 47 53.9**	**-1.5**
PVY	**Plav**	**2.22**	**342**	*e*Pn	**Pn**		**18 47 29.1**	**+0.2**
PVY				*i* Sn	**Sn**		**18 47 57.9**	**+1.1**
PDG	**Podgorica**	**2.29**	**329**	*e*Pn	**Pn**		**18 47 30.2**	**+0.4**
PDG				*e*Sn	**Sn**		**18 47 58.4**	**0.0**
PDG	**Podgorica**	**2.29**	**329**	*e*Pn	**Pn**		**18 47 30.1**	**+0.3**
PDG				*i* Sn	**Sn**		**18 47 59.7**	**+1.3**
BUM	**Brajici-Budva**	**2.34**	**321**	∥ *i* Pn	**Pn**		**18 47 30.9**	**+0.3**
BUM				*i* Sn	**Sn**		**18 48 01.1**	**+1.3**
BOSS	**Bosilegrad**	**2.35**	**31**	*e*Pn	**Pn**		**18 47 30.0**	**-0.7**
BARS	**Barje**	**2.44**	**17**	*e*Pn	**Pn**		**18 47 31.3**	**-0.6**
BARS				*e*Sn	**Sn**		**18 48 01.1**	**-1.0**
IVA	**Berane**	**2.50**	**343**	*e*Pn	**Pn**		**18 47 32.9**	**+0.2**
IVA				*i* Sn	**Sn**		**18 48 04.7**	**+1.1**
CEME	**Cevo**	**2.53**	**325**	*e*Pn	**Pn**		**18 47 33.5**	**+0.4**
CEME				*i* Sn	**Sn**		**18 48 05.5**	**+1.1**
KOME	**Kolasin**	**2.57**	**337**	*e*Pn	**Pn**		**18 47 34.1**	**+0.3**
KOME				*i* Sn	**Sn**		**18 48 06.6**	**+1.1**
HCY	**Herceg Novi**	**2.65**	**319**	*e*Pn	**Pn**		**18 47 35.2**	**+0.5**
HCY				*e*Sn	**Sn**		**18 48 08.5**	**+1.2**
NKME	**Niksic**	**2.69**	**329**	*e*Pn	**Pn**		**18 47 35.8**	**+0.4**
NKME				*i* Sn	**Sn**		**18 48 09.5**	**+1.0**
SELS	**Selova**	**2.74**	**4**	*e*Pn	**Pn**		**18 47 36.1**	**+0.1**
VTS	**Vitosha**	**2.78**	**39**	*e*Pn	**Pn**		**18 47 36.6**	**-0.1**
VTS				*e*Sn	**Sn**		**18 48 08.2**	**-2.5**
SJES	**Sjenica**	**2.85**	**347**	*e*Pn	**Pn**		**18 47 37.5**	**-0.2**
BRY	**Bratogost**	**2.98**	**325**	*e*Pn	**Pn**		**18 47 39.6**	**+0.2**
BRY				*i* Sn	**Sn**		**18 48 16.4**	**+0.8**
PLE	**Pljevlja**	**3.05**	**339**	*e*Pn	**Pn**		**18 47 40.6**	**+0.2**
PLE				*i* Sn	**Sn**		**18 48 18.0**	**+0.7**
GOCS	**Kraljevo Serbi**	**3.08**	**0**	*e*Pn	**Pn**		**18 47 41.6**	**+0.9**
ZAPS	**Zavoj**	**3.09**	**25**	*e*Pn	**Pn**		**18 47 40.6**	**-0.2**
IVAS	**Ivanjica**	**3.14**	**351**	*e*Pn	**Pn**		**18 47 41.3**	**-0.2**
STON	**Ston**	**3.36**	**316**	*e*Pn	**Pn**		**18 47 44.1**	**-0.4**
GRUS	**Gruza**	**3.41**	**358**	*e*Pn	**Pn**		**18 47 45.0**	**-0.1**
BLKB	**Belogradchik**	**3.42**	**23**	*e*Pn	**Pn**		**18 47 45.6**	**+0.3**
ZAGS	**Zajecar**	**3.48**	**17**	*e*Pn	**Pn**		**18 47 45.3**	**-0.8**
ZAGS				*e*Sn	**Sn**		**18 48 25.6**	**-2.2**
DIVS	**Divibare**	**3.67**	**350**	*e*Pn	**Pn**		**18 47 49.7**	**+0.8**
SOKA	**Soboth**	**7.50**	**328**	*e*Pn	**Pn**		**18 48 40.3**	**-1.1**
	comp=E,1.5nm,0.6s							
ABTA	**Abfaltersbach**	**8.71**	**319**	*e*Pn	**Pn**		**18 48 59.1**	**+1.1**
	comp=E,1.7nm,0.7s							
WTTA	**Wattenberg**	**9.50**	**319**	*e*Pn	**Pn**		**18 49 08.8**	**-0.1**
	comp=E,1.2nm,0.5s							
WATA	**Walderalm**	**9.58**	**319**	*i* Pn	**Pn**		**18 49 10.5**	**+0.5**
	comp=E,2.6nm,0.5s							
SQTA	**Sankt Quirin**	**9.69**	**317**	*e*Pn	**Pn**		**18 49 11.9**	**+0.4**
	comp=E,1.8nm,0.6s							
FETA	**Feichten**	**9.82**	**315**	*e*Pn	**Pn**		**18 49 12.7**	**-0.6**
	comp=E,2.2nm,1.4s							
MOTA	**Moosalm**	**9.82**	**318**	*e*Pn	**Pn**		**18 49 12.6**	**-0.8**
	comp=E,2.1nm,0.7s							
RETA	**Reutte**	**10.09**	**317**	*e*Pn	**Pn**		**18 49 16.4**	**-0.6**
	comp=E,3.8nm,1.6s							

*NEIC **16** 18:54:04.9±1.3, 17˚.63S±0˚.09×175˚.04W±0˚.09, h233^{km}±6^{km}, mb4.3/86, Error ellipse: s-maj=13.9km s-min=11.8km az=209.0*
*IDC **16** 18:54:10.0±1.7, 17˚.73S×175˚.27W, h278^{km}±15^{km}, mb3.8/14, mbtmp4.4/16, Error ellipse: s-maj=13.7km s-min=9.7km az=117.0*
*NOU **16** 18:54:10.0, 17˚.60S×175˚.19W, h281^{km}, mb4.7/19, Tonga Islands*

ISC 16 18:54:06.4±0.4, 17˚.69S±0˚.07×174˚.98W±0˚.06, h256^{km}, n202, σ1ᵍ31/171, mb4.3/58, 16C-11D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.69**	**261**	P	**Pn**		**18 55 09.6**	**+2.6**
FUTU	**Fugatoga**	**4.52**	**318**	P	**Pn**		**18 55 19.3**	**+2.6**
FUTU	**Fugatoga**	**4.52**	**318**	Pn	**Pn**		**18 55 13.3**	**-3.4**
TAVE	**Taveuni**	**4.81**	**281**	P	**Pn**		**18 55 22.0**	**+1.8**
AFI	**Afiamalu**	**4.86**	**40**	P	**Pn**		**18 55 17.7**	**-3.1**
	78nm,0.3s,baz=230,slow=17,SNR=20							
AFI				S	S		18 56 11.9	-8.2
	223nm,0.5s,baz=266,slow=22,SNR=8.9							
AFI	**Afiamalu**	**4.86**	**40**		**Pn**		**18 55 17.4**	**-3.4**
AFI				Sn	S		18 56 10.0	-10
NIUE	**Niue**	**4.99**	**107**	Pn	**Pn**		**18 55 21.6**	**-0.7**
NIUE				Sn	**S**		**18 56 17.0**	**-5.8**
DGTI	**Dogotuki**	**5.24**	**284**	P	**Pn**		**18 55 27.0**	**+1.6**
MSVF	**Nonsavu**	**6.65**	**269**	P	**Pn**		**18 55 44.0**	**+1.1**
	41nm,0.7s,baz=282,slow=22,SNR=47							
MSVF	**Nonsavu**	**6.65**	**269**	P	**Pn**		**18 55 44.7**	**+1.8**
MSVF	**Nonsavu**	**6.65**	**269**		**Pn**		**18 55 43.1**	**+0.2**
RAR	**Rarotonga**	**14.76**	**106**	P	**Pn**		**18 57 25.1**	**+1.5**
	30nm,0.9s,baz=250,slow=9.7,SNR=4.4							
RAR	**Rarotonga**	**14.76**	**106**		**P**		18 57 19.9	-3.5
MARNC	**Mare, Loyalty**	**16.45**	**254**	P	**P**		**18 57 41.6**	**-0.3**
MARNC	**Mare, Loyalty**	**16.45**	**254**	S	**S**		**19 00 39.3**	**-1.6**
MARNC	**Mare, Loyalty**	**16.45**	**254**		**P**		**18 57 41.0**	**-0.9**
OUENC	**Ouen Island, N**	**17.72**	**252**	P	**P**		**18 57 55.1**	**-0.6**
DZM	**Mont Dzumac**	**18.01**	**253**	P	**P**		**18 57 57.4**	**-1.5**
	9.0nm,0.8s,baz=70,slow=21,SNR=6.3							
ONTNC	**Ouen Toro**	**18.04**	**252**	P	**P**		**18 57 58.3**	**-0.9**
URZ	**Urewera**	**21.64**	**197**	P	**P**		**18 58 36.7**	**+0.2**
	17nm,0.5s,baz=20,slow=9.8,SNR=24							
URZ				S	**S**		**19 02 16.0**	**-1.9**
	7.0nm,0.9s,baz=0.3,slow=20,SNR=1.3							
	17nm,0.5s							
URZ	**Urewera**	**21.64**	**197**	P	**P**		**18 58 38.3**	**+1.8**
TOZ	**Tahuroa Road**	**21.65**	**201**	P	**P**		**18 58 36.5**	**-0.1**
RTZ	**Ruatahuna**	**22.00**	**197**	P	**P**		**18 58 40.2**	**+0.2**
BFZ	**Birch Farm**	**24.14**	**196**	P	**P**		**18 59 00.7**	**+1.4**
QRZ	**Quartz Range**	**25.45**	**202**	P	**P**		**18 59 12.9**	**+1.8**
KHZ	**Kahutara**	**26.52**	**199**	P	**P**		**18 59 22.4**	**+1.7**
AUTOO	**Toowoomba Stat**	**31.97**	**246**	P	**P**		**19 00 09.0**	**+0.1**
EIDS	**Eidsvold**	**32.42**	**250**	P	**P**		**19 00 11.9**	**-0.9**
EIDS				IAmb	IAmb		19 00 40.3	
	comp=Z,21nm,1.4s							
ARMA	**Armidale**	**32.90**	**241**	P	**P**		**19 00 16.3**	**-0.8**
AULRC	**Lightning Ridg**	**35.77**	**244**	P	**P**		**19 00 41.4**	**-0.1**
CAN	**Canberra**	**36.46**	**234**	P	**P**		**19 00 46.3**	**-1.0**
CAN				IAmb	IAmb		19 00 47.7	
	comp=Z,16nm,0.9s							
CTAO	**Charters Tower**	**36.71**	**260**	P	**P**		**19 00 49.0**	**-0.6**
CTAO	**Charters Tower**	**36.71**	**260**		**P**		**19 00 48.0**	**-1.6**
CTAO				IAmb	IAmb		19 00 49.0	
	comp=Z,12nm,0.8s							
TOO	**Toolangi**	**39.87**	**232**		**P**		**19 01 14.8**	**-0.9**
TOO				IAmb	IAmb		19 01 15.9	
	comp=Z,7.7nm,0.8s							
STKA	**Stephens Creek**	**41.61**	**242**	P	**P**		**19 01 29.1**	**-0.7**
	comp=Z,37nm,1.0s,baz=87,slow=8.5,SNR=42							
	comp=Z,37nm,1.0s							
INKA	**Innaminka**	**41.86**	**248**		**P**		**19 01 32.1**	**+0.2**
INKA				IAmb	IAmb		19 01 33.0	
	comp=Z,18nm,0.8s							
AUMBR	**Murray Bridge**	**44.08**	**238**	P	**P**		**19 01 49.8**	**+0.3**
AUJCS	**Jamestown Cent**	**44.30**	**240**	P	**P**		**19 01 51.7**	**+0.3**
BBOO	**Buckleboo**	**46.38**	**241**		**P**		**19 02 06.6**	**-1.0**
BBOO				IAmb	IAmb		19 02 07.8	
	comp=Z,35nm,1.1s							
WR8	**Warramunga Arr**	**47.73**	**259**		**P**		**19 02 16.6**	**-1.7**
WR8				IAmb	IAmb		19 02 19.2	
	comp=Z,11nm,0.8s							
WB0	**Warramunga Arr**	**47.85**	**259**		**P**		**19 02 17.5**	**-1.7**
WB0				IAmb	IAmb		19 02 18.3	
	comp=Z,15nm,0.8s							
WRAB	**Tennant Creek**	**47.88**	**259**	P	**P**		**19 02 18.6**	**-0.7**
WRA	**Warramunga Arr**	**47.89**	**259**	P	**P**		**19 02 17.5**	**-1.9**
	comp=Z,10nm,0.8s,baz=93,slow=8.1,SNR=124							
WRA				PcP	**PcP**		**19 03 44.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=176,slow=25,SNR=3.0							
WRA				S	**S**		**19 08 52.3**	**-4.7**
	comp=Z,0.4nm,0.8s,baz=116,slow=14,SNR=2.1							
	comp=Z,10nm,0.8s							
WRA	**Warramunga Arr**	**47.89**	**259**		**P**		**19 02 16.7**	**-2.7**
AS31	**Alice Springs**	**47.99**	**254**	IAmb	IAmb		19 02 20.4	
	comp=Z,23nm,0.8s							
ASAR	**Alice Springs**	**48.00**	**254**	P	**P**		**19 02 19.2**	**-1.0**
	comp=Z,82nm,0.7s,baz=89,slow=8.3,SNR=834							
ASAR				PcP	**PcP**		**19 03 44.7**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=105,slow=3.6,SNR=4.1							
ASAR				S	**S**		**19 08 54.8**	**-3.8**
	comp=Z,0.4nm,0.8s,baz=99,slow=13,SNR=4.3							
AUALC	**St Philip's Co**	**48.01**	**254**	P	**P**		**19 02 19.7**	**-0.7**
MTN	**Manton Dam**	**52.08**	**267**	P	**P**		**19 02 49.2**	**-1.7**
KNRA	**Kununurra**	**53.76**	**263**	P	**P**		**19 03 02.5**	**-0.6**
KNRA				IAmb	IAmb		19 03 02.8	
	comp=Z,8.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**56.29**	**260**	P	**P**		**19 03 20.8**	**-0.3**
SOEI	**Soe**	**59.34**	**269**		**P**		**19 03 41.9**	**-0.6**
VNDA	**Vanda**	**60.96**	**186**	P	**P**		**19 03 53.9**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=5.5,slow=6.6,SNR=15							
	comp=Z,2.5nm,0.9s							
VNDA	**Vanda**	**60.96**	**186**		**P**		**19 03 53.6**	**+1.4**
MBWA	**Marble Bar**	**61.30**	**255**	P	**P**		**19 03 53.9**	**-1.5**
GIRL	**Giralia**	**66.09**	**253**	P	**P**		**19 04 26.4**	**-0.3**
MYLDM	**Lahad Datu**	**69.44**	**283**	P	**P**		**19 04 49.1**	**+1.5**
MJAR	**Matsushiro Arr**	**69.73**	**321**	P	**P**		**19 04 48.9**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=155,slow=6.6,SNR=15							
	comp=Z,3.0nm,0.8s							
MJAR	**Matsushiro Arr**	**69.73**	**321**	P	**P**		**19 04 48.7**	**-0.2**
MAJO	**Matsushiro**	**69.73**	**321**	P	**P**		**19 04 49.3**	**+0.3**
MAJO				IAmb	IAmb		19 04 58.7	
	comp=Z,6.2nm,1.1s							
UNV	**Unalaska Valle**	**71.61**	**5**	P	**P**		**19 04 59.3**	**-0.4**
QSPA	**South Pole Qui**	**72.37**	**180**	P	**P**		**19 05 05.7**	**+1.3**
	comp=Z,4.4nm,0.8s,baz=45,slow=2.9,SNR=11							
	comp=Z,4.4nm,0.8s							
QSPA	**South Pole Qui**	**72.37**	**180**		**P**		**19 05 05.4**	**+1.0**
QSPA				IAmb	IAmb		19 05 07.2	
	comp=Z,5.4nm,0.9s							
UGM	**Wanagama**	**72.92**	**267**	P	**P**		**19 05 08.2**	**-0.3**
PEA0B	**Petropavlovsk-**	**74.35**	**343**	P	**P**		**19 05 16.6**	**+0.7**
PEA0B				IAmb	IAmb		19 05 34.7	
	comp=Z,6.4nm,1.0s							
PETK	**Petropavlovsk-**	**74.35**	**343**	P	**P**		**19 05 16.6**	**+0.7**
	comp=Z,4.2nm,0.6s,baz=118,slow=7.3,SNR=14							
	comp=Z,4.2nm,0.6s							
PETK	**Petropavlovsk-**	**74.35**	**343**	P	**P**		**19 05 16.4**	**+0.5**
KSRS	**Korea Array**	**76.75**	**317**	P	**P**		**19 05 31.4**	**+1.7**
	comp=Z,3.6nm,0.9s,baz=134,slow=5.9,SNR=17							
	comp=Z,3.6nm,0.9s							
KSAR	**Wonju Array Be**	**76.77**	**317**	P	**P**		**19 05 26.8**	**-3.0**
NVAR	**Mina Array Bea**	**77.03**	**42**	P	**P**		**19 05 33.5**	**+1.8**
	comp=Z,1.5nm,0.8s,baz=227,slow=9.8,SNR=7.9							
	comp=Z,1.5nm,0.8s							
NVAR	**Mina Array Bea**	**77.03**	**42**	P	**P**		**19 05 32.7**	**+1.1**
GMN	**Gold Mountain**	**77.07**	**44**	P	**P**		**19 05 33.5**	**+1.6**
TPH	**Tonopah**	**77.53**	**43**	IAmb	IAmb		19 05 36.9	
	comp=Z,2.6nm,0.5s							
ILSW	**Iliamna Southw**	**79.40**	**11**	IAmb	IAmb		19 05 45.9	
	comp=Z,9.5nm,0.8s							
L18K	**Granite Mounta**	**80.95**	**9**	IAmb	IAmb		19 05 56.4	
	comp=Z,4.8nm,1.0s							
J16K	**Anvik River**	**81.49**	**7**	IAmb	IAmb		19 05 57.4	
	comp=Z,4.2nm,0.7s							
J18K	**Innoko River**	**82.14**	**8**	IAmb	IAmb		19 06 00.3	
	comp=Z,3.5nm,0.8s							
SRU	**San Rafael Swe**	**82.52**	**45**	IAmb	IAmb		19 06 03.6	
	comp=Z,3.0nm,0.7s							
TCUT	**Toone Canyon**	**82.94**	**43**	IAmb	IAmb		19 06 06.2	
	comp=Z,6.8nm,0.7s							

PV10	**Paradox Valley**	**83.17**	**46**	IAmb	IAmb		19 06 06.7	
	comp=Z,5.7nm,0.7s							
PV03	**Paradox Valley**	**83.25**	**46**	IAmb	IAmb		19 06 03.5	
	comp=Z,4.5nm,0.8s							
PV12	**Saucer Basin,**	**83.31**	**46**	IAmb	IAmb		19 06 07.4	
	comp=Z,9.8nm,0.8s							
RND	**Reindeer**	**83.36**	**12**	IAmb	IAmb		19 06 09.8	
	comp=Z,5.5nm,1.2s							
MCK	**McKinley**	**83.64**	**11**	IAmb	IAmb		19 06 09.4	
	comp=Z,8.2nm,1.2s							
G18K	**Tagagawik**	**84.23**	**7**	IAmb	IAmb		19 06 10.9	
	comp=Z,3.5nm,0.9s							
I21K	**Tanana**	**84.45**	**10**	IAmb	IAmb		19 06 11.9	
	comp=Z,4.9nm,1.1s							
RIDG	**Independent Ri**	**84.47**	**13**	IAmb	IAmb		19 06 11.6	
	comp=Z,4.8nm,1.0s							
WRH	**Wood River Hil**	**84.47**	**11**	IAmb	IAmb		19 06 12.4	
	comp=Z,7.2nm,1.0s							
MLY	**Manley**	**84.52**	**10**	IAmb	IAmb		19 06 11.6	
	comp=Z,4.1nm,1.1s							
HDA	**Harding Lake**	**84.64**	**12**	IAmb	IAmb		19 06 12.5	
	comp=Z,5.0nm,0.8s							
G19K	**Purcell Mounta**	**84.66**	**7**	IAmb	IAmb		19 06 13.4	
	comp=Z,4.8nm,0.9s							
CCB	**Clear Creek Bu**	**84.69**	**11**	IAmb	IAmb		19 06 12.2	
	comp=Z,6.2nm,0.6s							
IMAR	**Indian Mountai**	**84.94**	**9**	P	**P**		**19 06 13.6**	**+1.3**
PDAR	**Pinedale Array**	**84.97**	**42**	P	**P**		**19 06 14.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=197,slow=4.8,SNR=5.5							
	comp=Z,0.4nm,0.6s							
PDAR	**Pinedale Array**	**84.97**	**42**	P	**P**		**19 06 13.0**	**-0.3**
ILAR	**Eielson Array**	**84.97**	**12**	P	**P**		**19 06 12.8**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=226,slow=5.7,SNR=28							
	comp=Z,1.3nm,0.5s							
ILAR	**Eielson Array**	**84.97**	**12**	P	**P**		**19 06 12.1**	**-0.4**
J25K	**Salcha River,**	**85.13**	**12**	IAmb	IAmb		19 06 15.4	
	comp=Z,3.9nm,0.8s							
MAW	**Mawson**	**85.15**	**199**	P	**P**		**19 06 14.3**	**+0.8**
	comp=Z,3.6nm,0.7s,baz=140,slow=8.0,SNR=17							
	comp=Z,3.6nm,0.7s							
MAW	**Mawson**	**85.15**	**199**	P	**P**		**19 06 14.2**	**+0.7**
H03S2	**Juan Fernandez**	**85.20**	**124**	T	T		20 39 55.1	
	baz=249,slow=75,SNR=24							
H22K	**Ishtalitna Cre**	**85.21**	**9**	IAmb	IAmb		19 06 16.3	
	comp=Z,6.2nm,1.1s							
H03S1	**Juan Fernandez**	**85.21**	**124**	T	T		20 39 58.5	
	baz=249,slow=75,SNR=20							
H03S3	**Juan Fernandez**	**85.21**	**124**	T	T		20 39 59.6	
	baz=249,slow=75,SNR=28							
F19K	**Shaleruckik Mo**	**85.24**	**7**	IAmb	IAmb		19 06 15.9	
	comp=Z,3.3nm,0.8s							
G21K	**Allakaket**	**85.47**	**8**	IAmb	IAmb		19 06 17.4	
	comp=Z,3.4nm,0.8s							
L29M	**L29M**	**85.53**	**16**	IAmb	IAmb		19 06 18.1	
	comp=Z,3.0nm,0.8s

baz=11,slow=2.9
GERES **GERESS Array B 148.13 349** PKPbc **PKPbc** **19 13 22.9 +0.8**
comp=Z,2.3nm,0.8s,baz=29,slow=2.4,SNR=14
GERES **GERESS Array B 148.13 349** **PKPbc** **19 13 23.0 +1.0**
SIRR **Siria 148.34 338** ⇑P **PKiKP** **19 13 24.0 0.0**
CONA **Conrad Observa 148.56 346** *i* PKP **PKPbc** **19 13 24.1 +0.9**
comp=Z,2.4nm,0.6s
RONA **Rosalia, Austr 148.67 345** *e*PKP **PKiKP** **19 13 24.9 +0.2**
comp=Z,3.9nm,0.9s
MMAI **Mount Meron Ar 148.73 305** PKPbc **PKiKP** **19 13 25.7 +0.4**
comp=Z,2.2nm,0.6s,baz=49,slow=8.1,SNR=7.6
BZS **Buzias 148.91 337** ⇓P **PKPbc** **19 13 23.9 -0.1**
MOA **Molln 148.98 348** *e*PKP **PKiKP** **19 13 25.6 +0.3**
comp=Z,3.7nm,1.5s
HERR **Herculane 149.22 335** ⇑P **PKiKP** **19 13 25.6 -0.2**
BIOA **Bad Ischl, Aus 149.25 349** *e*PKP **PKPbc** **19 13 25.4 +0.6**
comp=Z,3.0nm,0.9s
ARSA **Arzberg 149.27 346** *e*PKP **PKPbc** **19 13 24.9 0.0**
comp=Z,1.8nm,0.7s
BFO **Black Forest 149.32 356** *e*PKPbc **PKiKP** **19 13 26.1 +0.1**
baz=11,slow=2.9
RJOB **Jochberg 149.36 350** *e*PKPbc **PKiKP** **19 13 26.4 +0.3**
baz=11,slow=2.9
PLVB **Pleven 149.48 331** ⇑P **PKiKP** **19 13 26.5 +0.1**
LESA **Schwarzleotal 149.68 350** *e*PKP **PKiKP** **19 13 27.2 +0.3**
comp=Z,1.3nm,0.5s
KBA **Koelnbreinsper 149.90 349** *e*PKP **PKPbc** **19 13 27.1 +0.5**
comp=Z,2.1nm,0.5s
RETA **Reutte 149.91 352** *e*PKP **PKiKP** **19 13 27.6 +0.3**
comp=Z,4.1nm,1.2s
WATA **Walderalm 149.94 351** *e*PKP **PKiKP** **19 13 28.1 +0.7**
comp=Z,3.2nm,0.5s
MOTA **Moosalm 150.00 352** *i* PKP **PKPbc** **19 13 27.0 +0.2**
comp=Z,3.8nm,0.8s
WTTA **Wattenberg 150.00 351** *i* PKP **PKiKP** **19 13 27.9 +0.3**
comp=Z,4.6nm,0.5s
SQTA **Sankt Quirin 150.11 352** *e*PKP **PKiKP** **19 13 28.4 +0.7**
comp=Z,2.9nm,1.0s
OBKA **Obir 150.19 347** *i* PKP **PKiKP** **19 13 28.5 +0.5**
comp=Z,2.6nm,0.7s
DAVA **Damuels 150.21 353** *e*PKP **PKiKP** **19 13 28.6 +0.6**
comp=Z,4.0nm,0.6s
ABTA **Abfaltersbach 150.37 350** *i* PKP **PKPbc** **19 13 27.9 +0.2**
comp=Z,5.0nm,0.7s
FETA **Feichten 150.37 352** *i* PKP **PKiKP** **19 13 29.0 +0.7**
comp=Z,3.7nm,0.7s

IDC ***16*** *18:57:26.1±0.9, 32°.88S×67°.76W, h0km, mb3.6/3, mbtmp3.6/7, ML3.6/4, Error ellipse: s-maj=24.5km s-min=12.7km az=81.0*
SJA ***16*** *18:57:27.1±0.7, 32°.86S×67°.82W, h8km, ML3.9, MW3.5*
ISC 16 18:57:27.4±1.2, 32°91S±0'.03×67°.83W±0'.03, h6km±8km, n47, σ1s71/79, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AVIZ	**Vizcacheras**	**0.80**	**226**	*e*P	**Pb**	**18 57 44.1**	**+0.2**
ACAN	**Cantantal**	**0.83**	**40**	*e*P	**Pg**	**18 57 44.6**	**+1.2**
ACAN				IAML		18 58 01.3	
	comp=Z,16μm,0.4s						
AAGR	**Agrelo**	**0.86**	**258**	*e*P	**Pg**	**18 57 44.3**	**+0.5**
ARCO	**CERRO ARCO**	**0.93**	**274**	*e*P	**Pg**	**18 57 45.3**	**0.0**
ARCO				IAML		18 58 09.6	
	comp=Z,2μm,0.2s						
CFA	**Coronel Fontan**	**1.35**	**345**	Pg	**Pn**	**18 57 51.8**	**-1.1**
	comp=Z,34nm,0.3s,baz=167,slow=18,SNR=314						
CFA				Lg	Lg	18 58 09.4	
	comp=Z,53nm,0.3s,baz=334,slow=7.6,SNR=39						
CFA	**Coronel Fontan**	**1.35**	**345**	*e*P	**Pn**	**18 57 51.5**	**-1.3**
CFA				*e*S	**Sg**	**18 58 10.6**	**-0.2**
CFA				IAML		18 58 14.7	
	comp=Z,739nm,0.2s						
SJA	**San Juan**	**1.52**	**336**	*e*P	**Pn**	**18 57 55.8**	**+0.7**
SJA				*e*S	**Sn**	**18 58 12.9**	**-2.4**
SJA				IAML		18 58 16.6	
	comp=Z,898nm,0.5s						
ZON	**Zonda**	**1.54**	**332**	*e*P	**Pn**	**18 57 55.5**	**-0.1**
ZON				*e*S	**Sn**	**18 58 15.7**	**-0.2**
ZON				IAML		18 58 16.3	
	comp=Z,805nm,0.3s						
RTLS	**Leoncito**	**1.67**	**311**	*e*P	**Pn**	**18 57 57.5**	**0.0**
RTLS				*e*S	**Sn**	**18 58 20.6**	**+1.3**
RTLS				IAML		18 58 22.5	
	comp=Z,4μm,0.4s						
RTLL	**Cerro Villicun**	**1.67**	**341**	*e*P	**Pn**	**18 57 57.5**	**+0.2**
RTLL				*e*S	**Sn**	**18 58 20.4**	**+1.3**
RTLL				IAML		18 58 22.1	
	comp=Z,1μm,0.3s						
MRA	**San Martin**	**1.85**	**75**	*e*P	**Pn**	**18 58 01.3**	**+1.5**
MRA				*e*S	**Sn**	**18 58 25.4**	**+1.9**
MRA				IAML		18 58 34.3	
	comp=Z,893nm,0.9s						
MT08	**Bocatoma Ro**	**1.91**	**253**	*e*P	**Pb**	**18 58 02.6**	**-0.2**
MT08				*e*S	**Sg**	**18 58 29.7**	**+0.9**
MT08				IAML		18 58 34.8	
	comp=Z,573nm,0.9s						
MT04	**Ro Olivares**	**2.00**	**255**	*e*P	**Pb**	**18 58 03.9**	**-0.4**
MT04				*e*S	**Sn**	**18 58 25.4**	**-2.1**
MT04				*e*S	**Sb**	**18 58 30.9**	**+1.3**
MT04				IAML		18 58 31.0	
	comp=Z,1μm,0.3s						
MT13	**San Alfonso**	**2.22**	**247**	*e*P	**Pn**	**18 58 01.9**	**-3.0**
MT13				*e*P	**Pb**	**18 58 07.1**	**-0.9**
MT13				*e*S	**Sb**	**18 58 37.6**	**+1.8**
MT13				IAML		18 58 38.2	
	comp=Z,807nm,0.3s						
VA03	**San Esteban**	**2.30**	**273**	*e*P	**Pn**	**18 58 07.6**	**+1.7**
VA03				*e*S	**Sb**	**18 58 39.5**	**+1.4**
VA03				IAML		18 58 40.5	
	comp=Z,2μm,0.5s						
MT03	**Universidad Ad**	**2.32**	**255**	*e*P	**Pb**	**18 58 09.1**	**-0.7**
MT03				*e*S	**Sg**	**18 58 41.6**	**-0.4**
MT03				IAML		18 58 43.7	
	comp=Z,408nm,0.3s						
PEL	**Peldehue**	**2.41**	**264**	*e*P	**Pb**	**18 58 10.5**	**-0.8**
PEL				*e*S	**Sg**	**18 58 43.7**	**-1.2**
PEL				IAML		18 58 44.1	
	comp=Z,346nm,0.3s						
MT05	**Renca**	**2.49**	**258**	*e*P	**Pb**	**18 58 12.1**	**-0.5**
MT05				IAML		18 58 47.9	
	comp=Z,313nm,0.3s						
ACCO	**Cerro Coronel**	**2.55**	**335**	*e*P	**Pn**	**18 58 11.3**	**+1.7**
ACCO				*e*S	**Sb**	**18 58 46.6**	**+1.1**
ACCO				IAML		18 58 48.5	
	comp=Z,447nm,0.8s						
MT02	**Curacav**	**2.80**	**262**	*e*P	**Pn**	**18 58 14.3**	**+1.5**
MT02				*e*S	**Sb**	**18 58 55.1**	**+2.7**
MT02				IAML		18 58 58.0	
	comp=Z,252nm,0.6s						
ACDV	**Cuesta del Vie**	**2.95**	**338**	*e*P	**Pn**	**18 58 17.2**	**+2.3**
ACDV				*e*S	**Sn**	**18 58 52.4**	**+1.6**
ACDV				IAML		18 58 58.1	
	comp=Z,284nm,0.8s						
MT01	**Popeta**	**3.02**	**251**	*e*P	**Pn**	**18 58 17.3**	**+1.5**
MT01				*e*S	**Sn**	**18 58 55.9**	**+3.6**
MT01				IAML		18 59 01.7	
	comp=Z,288nm,0.4s						
AROD	**Rodeo**	**3.08**	**332**	*e*P	**Pn**	**18 58 19.4**	**+2.5**
AROD				*e*S	**Sb**	**18 59 01.9**	**+1.1**
BO01	**Tunca**	**3.09**	**241**	*e*P	**Pb**	**18 58 23.2**	**+0.4**
BO01				*e*S	**Sb**	**18 58 59.9**	**-0.9**
BO02	**Sierra Bellavi**	**3.09**	**232**	*e*P	**Pn**	**18 58 19.6**	**+2.8**
BO02				*e*P	**Pb**	**18 58 20.1**	**-2.7**
BO02				*e*S	**Sg**	**18 59 06.2**	**-0.5**
BO02				IAML		18 59 07.6	
	comp=Z,136nm,0.2s						
EDS3	**Malargue**	**3.13**	**204**	*e*P	**Pn**	**18 58 19.4**	**+1.9**
EDS3				*e*S	**Sb**	**18 59 03.9**	**+1.7**
TCA	**Tanti**	**3.16**	**61**	*e*P	**Pn**	**18 58 19.4**	**+1.6**
TCA				*e*S	**Sg**	**18 59 09.1**	**+0.2**
TCA				IAML		18 59 14.2	
	comp=Z,515nm,0.5s						
CO02	**Combarbal**	**3.19**	**301**	*e*P	**Pn**	**18 58 20.1**	**+1.9**
CO02				*e*S	**Sn**	**18 58 59.9**	**+3.2**
CO02				IAML		18 59 06.8	
	comp=Z,852nm,0.3s						
CO03	**El Pedregal**	**3.19**	**310**	*e*P	**Pn**	**18 58 20.3**	**+2.0**
CO03				*e*S	**Sn**	**18 58 58.9**	**+2.1**
CO03				IAML		18 59 04.9	
	comp=Z,535nm,0.5s						
CO01	**Juntas del Tor**	**3.51**	**326**	*e*P	**Pn**	**18 58 25.4**	**+2.6**
CO01				*e*S	**Sn**	**18 59 08.9**	**+4.1**
CO01				IAML		18 59 15.2	
	comp=Z,148nm,0.9s						
ACLC	**CERRO LA CRUZ**	**3.56**	**12**	*e*P	**Pn**	**18 58 25.1**	**+1.8**
ACLC				IAML		18 59 25.4	
	comp=Z,248nm,0.4s						
GO04	**Tololo Observa**	**3.73**	**316**	*e*P	**Pn**	**18 58 27.1**	**+1.4**
GO04				*e*S	**Sb**	**18 59 16.9**	**-2.5**
GO04				IAML		18 59 28.4	
	comp=Z,542nm,0.2s						
VCA	**Vinchina**	**4.18**	**355**	*e*P	**Pn**	**18 58 33.8**	**+2.0**
VCA				IAML		18 59 43.1	
	comp=Z,274nm,0.2s						
AC05	**El Transito**	**4.58**	**332**	*e*P	**Pn**	**18 58 39.9**	**+2.6**
AC05				*e*S	**Sb**	**18 59 43.4**	**-0.3**
AC05				IAML		18 59 57.3	
	comp=Z,82nm,0.9s						
LCO	**Las Campanas**	**4.61**	**327**	*e*P	**Pn**	**18 58 39.5**	**+1.6**
LCO				*e*S	**Sb**	**18 59 43.4**	**-1.3**
LCO				IAML		18 59 52.5	
	comp=Z,274nm,0.8s						
TINO	**Tinogasta**	**4.84**	**3**	*e*P	**Pn**	**18 58 43.9**	**+3.0**
TINO				IAML		19 00 04.9	
	comp=Z,137nm,0.8s						
PLCA	**Paso Flores**	**8.10**	**195**	Pn	**Pn**	**18 59 27.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=100,slow=22,SNR=1.9						
PLCA				Pg	**Pg**	**19 00 00.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=355,slow=14,SNR=3.9						
PLCA				Lg	Lg	19 01 45.9	
	comp=Z,1.1nm,0.3s,baz=136,slow=12,SNR=8.0						
	comp=Z,1.3nm,1.0s						
CPUP	**Villa Florida**	**11.24**	**57**	Pn	**Pn**	**19 00 08.2**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=252,slow=20,SNR=6.9						
CPUP				Sn	**Sn**	**19 02 13.7**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=1.2						
CPUP				Lg	Lg	19 03 21.2	
	comp=Z,0.4nm,0.3s,baz=332,slow=14,SNR=3.3						
	comp=Z,1.3nm,0.4s						
LPAZ	**La Paz**	**16.56**	**359**	Pn	**Pn**	**19 01 20.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=165,slow=4.7,SNR=6.9						
	comp=Z,1.0nm,0.4s						
SIV	**San Ignacio**	**17.93**	**22**	P	**Pn**	**19 01 36.3**	**-1.1**
	baz=181,slow=11,SNR=6.3						
	comp=Z,1.2nm,0.6s						
SNAA	**Sanae**	**51.28**	**158**	P	**P**	**19 06 33.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=252,slow=6.4,SNR=1.8						
	comp=Z,0.4nm,0.3s						
TXAR	**Lajitas Array**	**70.62**	**327**	P	**P**	**19 08 43.1**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=145,slow=6.2,SNR=2.8						
	comp=Z,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**80.54**	**68**	P	**P**	**19 09 40.0**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=238,slow=6.5,SNR=2.5						
	comp=Z,0.6nm,1.0s						
WRA	**Warramunga Ar**	**123.33**	**205**	PKP	**PKPdf**	**19 16 23.9**	**-2.1**
	comp=Z,0.2nm,0.5s,baz=160,slow=1.8,SNR=5.0						
KURBB	**Kurchatov Arra**	**149.65**	**44**	PKPbc	**PKPbc**	**19 17 16.9**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=297,slow=3.2,SNR=12						
ZALV	**Zalesovo Beam**	**151.38**	**35**	PKPbc	**PKPbc**	**19 17 20.7**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=325,slow=3.4,SNR=12						
MKAR	**Makanchi Array**	**153.38**	**50**	PKPbc	**PKPbc**	**19 17 25.1**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=343,slow=3.8,SNR=4.4						

NEIC ***16*** *19:00:17.7±2.0, 8°.5N±0°.1×103°.5W±0°.2, h10km±2km, mb4.3/49, Error ellipse: s-maj=33.6km s-min=19.1km az=265.0*
IDC ***16*** *19:00:33.3±1.9, 10°.05N×104°.32W, h0km, mb3.6/5, mbtmp3.7/6, ML3.0/1, MS3.5/32, Error ellipse: s-maj=64.9km s-min=24.0km az=56.0*
ISC 16 19:00:18.9±1.3, 8°.6N±0°.1×103°.2W±0°.2, h10km, n89, σ1s97/52, mb4.3/27, MS3.5/29, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**10.01**	**26**	Pn	**Pn**	**19 02 43.3**	**+0.4**
MOIG	**Morelia**	**11.21**	**10**	Pn	**Pn**	**19 02 58.6**	**-1.0**
CMIG	**Matias Romero**	**11.71**	**43**	Pn	Pn	19 03 19.7	+14
	0.1nm,0.3s,baz=234,slow=10,SNR=4.7						
CMIG				LR	LR	19 06 39.9	
	comp=Z,344nm,20.4s,baz=188,slow=32						
	6.2nm,1.1s						
APG	**El Apazote**	**13.99**	**62**	LR	LR	19 08 38.7	
	comp=Z,6.5nm,21.0s,baz=158,slow=34						
ZAIG	**Zacatecas**	**14.13**	**2**		**Pn**	**19 03 38.8**	**-0.7**
LPIG	**La Paz**	**16.88**	**337**	LR	LR	19 08 29.1	
	comp=Z,324nm,19.0s,baz=175,slow=32						
JTS	**Las Juntas de**	**18.07**	**83**	LR	LR	19 10 23.1	
	comp=Z,114nm,20.5s,baz=270,slow=31						
HPIG		**18.42**	**353**	P	**P**	**19 04 32.1**	**-2.6**
HBVL	**Hebbronville**	**18.89**	**13**		**P**	**19 04 40.6**	**+1.0**
HBVL				IAmb	IAmb	19 04 48.6	
	comp=Z,44nm,1.3s						
833A	**Chaparral WMA,**	**19.97**	**10**	P	Pn	19 04 55.2	+2.1
833A				IAmb	IAmb	19 04 57.6	
	comp=Z,12nm,1.1s						
TXAR	**Lajitas Array**	**20.66**	**359**	LR	LR	19 11 56.5	
	comp=Z,78nm,21.0s,baz=178,slow=36						
TXAR	**Lajitas Array**	**20.66**	**359**		**P**	**19 04 58.4**	**-0.7**
TX31	**Lajitas Ar. Si**	**20.66**	**359**		**P**	**19 04 58.2**	**-0.8**
HNDO	**Hondo**	**21.17**	**9**	P	**P**	**19 05 05.7**	**+1.3**
HNDO				IAmb	IAmb	19 05 12.5	
	comp=Z,26nm,1.5s						
SAND	**Sanderson**	**21.30**	**3**	P	**P**	**19 05 00.9**	**-4.9**
ALPN	**Alpine**	**21.70**	**359**		**P**	**19 05 08.8**	**-1.4**
JCT	**Junction City**	**22.03**	**8**	P	**P**	**19 05 16.0**	**+2.3**
VHRN	**Van Horn**	**22.17**	**356**		**P**	**19 05 13.2**	**-2.2**
VHRN				IAmb	IAmb	19 05 18.5	
	comp=Z,15nm,1.4s						
OZNA	**Ozona**	**22.32**	**5**	P	**P**	**19 05 16.2**	**-0.7**
OZNA				IAmb	IAmb	19 05 21.5	
	comp=Z,9.7nm,1.2s						
HKT	**Hockley**	**22.36**	**17**	P	**P**	**19 05 14.2**	**-2.9**
HKT				IAmb	IAmb	19 05 26.8	
	comp=Z,14nm,1.4s						
MNHN	**Monahans**	**22.66**	**1**		**P**	**19 05 18.7**	**-1.8**
MNHN				IAmb	IAmb	19 05 26.3	
	comp=Z,13nm,1.2s						
435B	**Jarrell**	**22.71**	**13**	P	**P**	**19 05 20.3**	**-0.6**
TPB06	**Permian Basin**	**22.96**	**360**	P	**P**	**19 05 22.9**	**-0.7**
TPB06				IAmb	IAmb	19 05 29.4	
	comp=Z,5.5nm,0.6s						
MNTX	**Cornudas Mount**	**23.11**	**355**		**P**	**19 05 22.9**	**-2.1**
MNTX				IAmb	IAmb	19 05 29.6	
	comp=Z,9.4nm,1.2s						
TPB11	**China Draw**	**23.26**	**358**	P	**P**	**19 05 27.8**	**+1.0**
SGCY	**Sterling City**	**23.31**	**4**	P	**P**	**19 05 29.3**	**+2.1**
SGCY				IAmb	IAmb	19 05 32.2	
	comp=Z,9.8nm,1.0s						
229A	**Bryant Ranch,**	**23.32**	**3**	P	**P**	**19 05 25.2**	**-2.1**
229A				IAmb	IAmb	19 05 38.0	
	comp=Z,6.4nm,0.7s						
ODSA	**Odessa**	**23.44**	**1**	P	**P**	**19 05 29.8**	**+1.2**
GDL2	**Guadalupe Moun**	**23.54**	**357**	P	**P**	**19 05 29.4**	**-0.2**
ABTX	**Abilene, Hawle**	**24.16**	**7**	P	**P**	**19 05 36.5**	**+1.1**
ABTX				IAmb	IAmb	19 05 40.0	
	comp=Z,13nm,1.1s						
POST	**Post**	**24.43**	**3**	P	**P**	**19 05 38.9**	**+1.0**
POST				IAmb	IAmb	19 05 41.0	
	comp=Z,4.8nm,0.8s						
SN07	**Snyder 07**	**24.50**	**5**	P	**P**	**19 05 40.4**	**+1.9**
SN07				IAmb	IAmb	19 05 42.7	
	comp=Z,6.8nm,1.0s						
PLPT	**Palo Pinto**	**24.54**	**10**	P	**P**	**19 05 38.1**	**-0.8**
PLPT				IAmb	IAmb	19 05 45.7	
	comp=Z,5.2nm,0.6s						
APMT	**Aspermont**	**24.80**	**6**		**P**	**19 05 40.2**	**-1.0**
DKNS	**Dickens**	**25.06**	**4**	P	**P**	**19 05 42.5**	**-1.1**
MSTX	**Muleshoe**	**25.28**	**1**		**P**	**19 05 44.3**	**-1.3**
WTFS	**Witchita Falls**	**25.45**	**9**	P	**P**	**19 05 48.1**	**+1.0**
WTFS				IAmb	IAmb	19 05 59.4	
	comp=Z,8.0nm,0.8s						
Y22A	**Socorro**	**25.49**	**353**	P	**P**	**19 05 48.1**	**+0.5**
AMTX	**Amarillo**	**26.23**	**3**	P	**P**	**19 05 53.7**	**-0.5**
WMOK	**Wichita Mounta**	**26.36**	**8**	P	**P**	**19 05 55.1**	**-0.2**
ANMO	**Albuquerque**	**26.42**	**354**	LR	LR	19 15 50.8	
	comp=Z,58nm,18.1s,baz=173,slow=37						
PH02	**Texas Public H**	**26.72**	**2**	P	**P**	**19 06 00.6**	**+1.9**
PH02				IAmb	IAmb	19 06 05.6	
	comp=Z,8.7nm,0.8s						
PFO	**Pinyon Flats O**	**27.77**	**336**	LR	LR	19 14 21.0	
	comp=Z,109nm,21.7s,baz=114,slow=32						
T25A	**Trinidad**	**28.46**	**358**	P	**P**	**19 06 13.5**	**-0.9**
T25A				IAmb	IAmb	19 06 22.0	
	comp=Z,8.4nm,1.4s						
ROSC	**El Rosal**	**28.90**	**95**	LR	LR	19 15 55.5	
	comp=Z,136nm,20.7s,baz=240,slow=31						
ATAH	**Atahualpa**	**29.22**	**122**	LR	LR	19 16 45.5	
	comp=Z,357nm,19.4s,baz=301,slow=31						
GSC	**Goldstone, Bar**	**29.39**	**337**	P	**P**	**19 06 20.8**	**-1.7**
LCAR	**Lake Charles**	**29.49**	**20**	P	**P**	**19 06 22.9**	**-0.3**
Y49A	**Blount Mountai**	**29.53**	**29**	P	**P**	**19 06 23.3**	**-0.4**
Y49A				IAmb	IAmb	19 06 37.1	
	comp=Z,8.7nm,1.5s						
TPO	**Tropico Hills**	**29.60**	**334**	P	**P**	**19 06 21.5**	**-2.9**
TPO				IAmb	IAmb	19 06 47.0	
	comp=Z,10nm,1.5s						
QSM	**Queen of Sheba**	**29.99**	**337**	P	**P**	**19 06 25.2**	**-2.6**
QSM				IAmb	IAmb	19 06 32.9	
	comp=Z,6.2nm,1.2s						
PV16	**Nyswonger Mesa**	**30.06**	**351**	P	P	19 06 25.4	-3.2
PV16				IAmb	IAmb	19 06 38.2	
	comp=Z,7.0nm,1.3s						
MPMC	**Manual Prospec**	**30.32**	**337**	P	**P**	**19 06 28.1**	**-2.7**
SDV	**Santo Domingo**	**32.17**	**87**	LR	LR	19 19 17.8	
	comp=Z,83nm,18.2s,baz=258,slow=34						
TKL	**Tuckaleechee C**	**32.27**	**30**	LR	LR	19 23 01.0	
	comp=Z,41nm,18.9s,baz=228,slow=43						
NVAR	**Mina Array Bea**	**32.70**	**338**	LR	LR	19 17 18.8	
	comp=Z,100nm,21.6s,baz=180,slow=33						
KVN	**Kaiserville**	**33.17**	**339**	P	**P**	**19 06 52.9**	**-3.0**
WAKR	**Walker**	**33.21**	**336**	P	**P**	**19 06 55.5**	**-0.7**
WAKR				IAmb	IAmb	19 06 58.7	
	comp=Z,3.5nm,1.2s						
PDAR	**Pinedale Array**	**34.52**	**352**	P	**P**	**19 07 09.6**	**+1.9**
	comp=Z,0.1nm,0.4s,baz=155,slow=11,SNR=7.9						
PDAR				LR	LR	19 19 19.1	
	comp=Z,34nm,19.2s,baz=168,slow=34						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**34.52**	**352**	P	**P**	**19 07 05.0**	**-2.7**
SFIN	**Lafayette**	**34.77**	**22**	P	**P**	**19 07 08.9**	**-0.7**
FLWY	**Flagg Ranch**	**35.98**	**351**	P	**P**	**19 07 17.4**	**-2.8**
FLWY				IAmb	IAmb	19 07 19.8	
	comp=Z,5.3nm,1.1s						
YBH	**Yreka Blue Hor**	**37.27**	**336**	LR	LR	19 20 33.7	
	comp=Z,48nm,18.8s,baz=156,slow=34						
NEW	**Newport**	**41.28**	**346**	LR	LR	19 23 55.1	
	comp=Z,60nm,18.8s,baz=180,slow=35						
SADO	**Sadowa**	**41.65**	**26**	LR	LR	19 26 39.8	
	comp=Z,44nm,18.1s,baz=182,slow=38						
ULM	**Lac du Bonnet**	**41.99**	**7**	LR	LR	19 25 08.1	
	comp=Z,64nm,21.7s,baz=184,slow=36						
PB12	**IPOC Station P**	**42.19**	**130**	P	**P**	**19 08 10.5**	**-1.8**
LPAZ	**La Paz**	**42.59**	**125**	P	P	19 08 46.6	+30
	comp=Z,1.2nm,0.9s,baz=308,slow=9.1,SNR=3.9						
LPAZ				LR	LR	19 23 12.8	
	comp=Z,12nm,20.4s,baz=329,slow=31						
	comp=Z,1.2nm,0.9s						
PB06	**IPOC Station P**	**45.27**	**134**	P	**P**	**19 08 36.0**	**-1.2**
H03N2	**Juan Fernandez**	**47.72**	**152**	T	T	20 02 40.5	
	baz=329,slow=77,SNR=13						
H03N1	**Juan Fernandez**	**47.73**	**152**	T	T	20 02 41.7	
	baz=329,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**47.73**	**152**	T	T	20 02 45.4	
	baz=329,slow=77,SNR=14						
BBB	**Bella Bella**	**48.02**	**340**	LR	LR	19 26 41.7	
	comp=Z,2nm,18.8s,baz=174,slow=34						
SIV	**San Ignacio**	**48.31**	**120**	P	P	19 09 29.3	+28
	comp=Z,0.3nm,0.3s,baz=304,slow=11,SNR=1.6						
	comp=Z,0.3nm,0.3s						
MDP	**Montagnes des**	**50.27**	**90**	LR	LR	19 29 16.8	
	comp=Z,45nm,19.0s,baz=106,slow=34						
PPT	**Papeete**	**52.68**	**240**	LR	LR	19 25 26.4	
	comp=Z,31nm,21.8s,baz=153,slow=28						
DLBC	**Dease Lake**	**53.84**	**343**	LR	LR	19 29 54.3	
	comp=Z,33nm,18.5s,baz=246,slow=34						
SCHQ	**Schefferville**	**54.44**	**25**	LR	LR	19 32 41.7	
	comp=Z,44nm,19.5s,baz=268,slow=36						
YKA	**Yellowknife Ar**	**54.47**	**354**	P	**P**	**19 09 50.6**	**+4.3**
	comp=Z,1.6nm,1.1s,baz=164,slow=8.1,SNR=6.1						
YKA				LR	LR	19 32 28.6	
	comp=Z,45nm,18.8s,baz=316,slow=36						
	comp=Z,1.6nm,1.1s						
CPUP	**Villa Florida**	**56.44**	**129**	LR	LR	19 34 12.7	
	comp=Z,46nm,20.1s,baz=234,slow=35						
PLCA	**Paso Flores**	**57.54**	**151**	LR	LR	19 30 31.1	
	comp=Z,74nm,18.6s,baz=293,slow=30						
BDFB	**Brasilia**	**59.70**	**114**	LR	LR	19 35 31.5	
	comp=Z,77nm,19.7s,baz=234,slow=34						
FRB	**Frobisher Bay**	**60.37**	**17**	LR	LR	19 36 09.0	
	comp=Z,41nm,19.4s,baz=5.5,slow=36						
KDAK	**Kodiak Island**	**61.98**	**333**	LR	LR	19 31 56.4	
	comp=Z,34nm,19.1s,baz=184,slow=31						
ILAR	**Eielson Array**	**63.89**	**341**	P	**P**	**19 10 55.9**	**+4.3**
	comp=Z,0.4nm,0.7s,baz=148,slow=4.9,SNR=5.2						
	comp=Z,0.4nm,0.7s						
RES	**Resolute Bay**	**66.25**	**2**	LR	LR	19 39 46.0	
	comp=Z,58nm,18.8s,baz=355,slow=36						
SFJD	**Kangerlussuaq**	**68.14**	**20**	LR	LR	19 41 25.5	
	comp=Z,39nm,18.7s,baz=199,slow=36						
SHEM	**Shemya Is, Ala**	**78.83**	**322**	LR	LR	19 39 18.8	
	comp=Z,45nm,20.2s,baz=313,slow=30						
SPITS	**Spitsbergen Ar**	**87.46**	**10**	LR	LR	19 51 53.7	
	comp=Z,46nm,19.1s,baz=298,slow=36						

SJA ***16*** *19:21:23.6±0.7, 22°.99S×69°.29W, h87km±4km, ML3.8, MW3.8*
NEIC ***16*** *19:21:24.0±2.2, 23°.10S±0°.04×69°.34W±0°.07, h84km±6km, ML4.0(GUC), Error ellipse: s-maj=10.0km s-min=5.5km az=102.0*
GUC ***16*** *19:21:25.0±0.9, 23°.02S×69°.33W, h85km±5km, ML4.0*
ISC 16 19:21:26.1±1.2, 23°.05S±0°.03×69°.35W±0°.04, h67km±9km, n59, σ2s92/79, 6C-1D, Northern Chile

| Code | Station Name | Δ° | AZ

PB02				*e*S	**Sn**	**19 22 16.9**	**0.0**		
PB02				IAML		19 22 20.9			
	comp=E,3μm,0.1s								
PB02	**IPOC Station P**	**1.79**	**343**		**Pn**	**19 21 54.2**	**-0.9**		
PB14	**IPOC Station P**	**1.84**	**211**	*e*P	**Pn**	**19 21 56.3**	**+0.4**		
PB14				*e*S	**Sn**	**19 22 21.9**	**+3.4**		
PB14				IAML		19 22 25.9			
	comp=Z,468nm,0.4s								
PB14	**IPOC Station P**	**1.84**	**211**	*e*P	**Pn**	**19 21 56.3**	**+0.4**		
PB14				*e*S	**Sn**	**19 22 20.0**	**+1.5**		
PB14	**IPOC Station P**	**1.84**	**211**		**Pn**	**19 21 54.9**	**-1.0**		
TA02	**Huaiquique**	**2.86**	**345**	*e*P	**Pn**	**19 22 07.6**	**-1.8**		
TA02				*e*S	**Sn**	**19 22 41.0**	**-1.7**		
TA02				IAML		19 22 51.3			
	comp=Z,282nm,0.3s								
TA02	**Huaiquique**	**2.86**	**345**	*e*P	**Pn**	**19 22 07.3**	**-2.1**		
PB08	**IPOC Station P**	**2.90**	**4**	*e*P	**Pn**	**19 22 08.8**	**-1.4**		
PB08				*e*S	**Sn**	**19 22 50.0**	**+5.8**		
PB08				IAML		19 22 51.5			
	comp=Z,183nm,0.3s								
PB08	**IPOC Station P**	**2.90**	**4**	*e*P	**Pn**	**19 22 08.9**	**-1.4**		
PB08				*e*S	**Sn**	**19 22 45.8**	**+1.6**		
PB08				IAML		19 22 52.1			
	comp=N,293nm,0.3s								
PB08	**IPOC Station P**	**2.90**	**4**		**Pn**	**19 22 08.8**	**-1.4**		
SALTA		**2.99**	**114**	*e*P	Pn	19 21 56.9	-15		
SALTA				*e*P		19 21 57.7			
PB11	**IPOC Station P**	**3.28**	**355**	*e*P	**Pn**	**19 22 13.0**	**-2.3**		
PB11				*e*S	**Sn**	**19 22 59.5**	**+6.2**		
PB11				IAML		19 23 00.5			
	comp=Z,229nm,0.3s								
PB11	**IPOC Station P**	**3.28**	**355**	*e*P	**Pn**	**19 22 13.0**	**-2.3**		
PB11	**IPOC Station P**	**3.28**	**355**		**Pn**	**19 22 13.0**	**-2.3**		
AC01	**Pan de Azucar**	**3.29**	**200**	*e*P	**Pn**	**19 22 13.3**	**-1.9**		
AC01				*e*S	**Sn**	**19 22 54.1**	**+0.9**		
AC01				IAML		19 23 06.2			
	comp=Z,191nm,0.3s								
AC01	**Pan de Azucar**	**3.29**	**200**	*e*P	**Pn**	**19 22 13.4**	**-1.9**		
AC01	**Pan de Azucar**	**3.29**	**200**		**Pn**	**19 22 13.7**	**-1.6**		
GO01	**Chusmiza**	**3.37**	**2**	*e*P	**Pn**	**19 22 15.4**	**-1.3**		
GO01	**Chusmiza**	**3.37**	**2**	*e*P	**Pn**	**19 22 15.9**	**-0.8**		
GO01	**Chusmiza**	**3.37**	**2**		**Pn**	**19 22 15.2**	**-1.5**		
PSGCX	**Pisagua**	**3.51**	**348**	*e*P	**Pn**	**19 22 15.1**	**-3.2**		
PSGCX				*e*S	Sn	19 22 46.3	-12		
PSGCX				IAML		19 23 15.1			
	comp=Z,165nm,0.3s								
PSGCX	**Pisagua**	**3.51**	**348**	*e*P	**Pn**	**19 22 14.9**	**-3.5**		
PSGCX	**Pisagua**	**3.51**	**348**		**Pn**	**19 22 15.5**	**-2.9**		
AC02	**Maricunga**	**3.77**	**177**	*e*P	**Pn**	**19 22 22.1**	**-0.2**		
AC02				*e*S	Sn	19 23 21.0	+15		
AC02				IAML		19 23 26.3			
	comp=Z,447nm,0.8s								
AC02	**Maricunga**	**3.77**	**177**	*e*P	**Pn**	**19 22 22.5**	**+0.2**		
AC02	**Maricunga**	**3.77**	**177**		**Pn**	**19 22 22.2**	**-0.1**		
FSA	**Cafayete**	**4.32**	**136**	*e*P	**Pn**	**19 22 31.5**	**+2.0**		
PB12	**IPOC Station P**	**4.51**	**348**	*e*P	**Pn**	**19 22 28.3**	**-3.6**		
PB12				*e*S	**Sn**	**19 23 25.4**	**+2.2**		
PB12				IAML		19 23 35.3			
	comp=Z,121nm,0.7s								
PB12	**IPOC Station P**	**4.51**	**348**		**Pn**	**19 22 28.2**	**-3.8**		
GO03	**Copiapo**	**4.60**	**190**		**Pn**	**19 22 31.8**	**-1.3**		
PB16	**IPOC Station P**	**4.69**	**358**	*e*P	**Pn**	**19 22 34.4**	**-0.5**		
PB16				IAML		19 23 47.8			
	comp=Z,73nm,0.5s								
PB16	**IPOC Station P**	**4.69**	**358**		**Pn**	**19 22 33.0**	**-2.0**		
TINO	**Tinogasta**	**5.24**	**163**	*e*P	**Pn**	**19 22 42.0**	**0.0**		
AC04	**Llanos de Chal**	**5.37**	**197**	Pn	**Pn**	**19 22 39.3**	**-4.3**		
AC05	**El Transito**	**5.82**	**188**		**Pn**	**19 22 47.8**	**-2.2**		
LCO	**Las Campanas**	**6.06**	**191**		**Pn**	**19 22 51.6**	**-1.7**		
CO01	**Juntas del Tor**	**6.93**	**185**	Pn	**Pn**	**19 23 02.0**	**-3.3**		
GO04	**Tololo Observa**	**7.21**	**190**		**Pn**	**19 23 05.5**	**-3.6**		
CO03	**El Pedregal**	**7.85**	**188**	Pn	**Pn**	**19 23 13.8**	**-3.8**		
CO02	**Combarbal**	**8.26**	**190**	Pn	Pn	19 23 18.3	-4.9		

BGR ***16*** *20:02:14.4,30˚.15N×138˚.68E,h33km,mb5.2,Ms3.8*

NIED ***16*** *20:03:07.0,30˚.22N×137˚.00E,h536km,MW5.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.11; $M_{\theta\theta}$2.18; $M_{\phi\phi}$-2.29; $M_{r\theta}$2.48; $M_{\theta\phi}$4.93; $M_{r\phi}$0.13; Fault plane solution: $M_0$5.95000×10^{16} NP1:ϕ_s11.00000°, δ66.00000°, λ175.00000°. NP2:ϕ_s103.00000°, δ85.00000°, λ24.00000°.*

JMA ***16*** *20:03:07.0±0.2,30˚N±1˚×13˚7E±˚, h536km±3km, MD5.1/37, MW5.1/37, SHIKOKU BASIN*

MOS ***16*** *20:03:08.3±0.7,30˚.30N×136˚.74E, h502km, mb5.3/59, Error ellipse: s-maj=7.7km s-min=3.7km az=115.1*

BJI ***16*** *20:03:08.8,30˚.34N×136˚.73E, h508km, mB5.0/30, mb5.4/85*

GFZ ***16*** *20:03:09.9,30˚.30N×136˚.76E, h491km, Mw5.0/25, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.25; $M_{\theta\theta}$2.22; $M_{\phi\phi}$-1.97; $M_{r\theta}$1.99; $M_{\theta\phi}$3.79; $M_{r\phi}$0.61; Fault plane solution: $M_0$4.81031×10^{16} NP1: ϕ_s105.63481°, δ81.32561°, λ20.27637°. NP2:ϕ_s12.44565°, δ69.96557°, λ170.76215°. Principal axes: T 5.2113, Plg20.4194°, Azm330.5817°; N -0.9411, Plg68.0181°, Azm127.8418°; P -4.2702, Plg7.7933°, Azm237.6611°;*

GCMT ***16*** *20:03:09.5±0.5,30˚.24N±0˚.04×136˚.68E±0˚.05, h501km±4km, MW5.2/51, Moment Tensor Solution. s51,c60; Duration: 1†0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.37±.30; $M_{\theta\theta}$2.46±.45; $M_{\phi\phi}$-2.83±.52; $M_{r\theta}$3.61±.41; $M_{\theta\phi}$6.35±.39; $M_{r\phi}$-1.60±.44; Best double couple: $M_0$7.89300×10^{16} NP1:ϕ_s13.00000°, δ61.00000°, λ-178.00000°. NP2:ϕ_s281.00000°, δ88.00000°, λ-29.00000°. Principal axes: T 7.4080, Plg19.0000°, Azm331.0000°; N 0.9700, Plg61.0000°, Azm98.0000°; P -8.3790, Plg21.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***16*** *20:03:09.7±0.4,30˚.34N×136˚.74E, h507km±4km, mb4.6/47, mbtmp5.5/53 Error ellipse: s-maj=7.1km s-min=4.6km az=79.0*

NEIC ***16*** *20:03:09.4±1.4,30˚.32N±0˚.07×136˚.8E±0˚.1, h500km±3km, mb4.7/464, Mww5.1/10, Error ellipse: s-maj=12.9km s-min=9.2km az=71.0*

NEIC ***16*** *20:03:09.6,30˚.32N×136˚.78E, h502km*

GFZ ***16*** *20:03:09.6±0.2,30˚N±3˚×13˚7E±˚, h507km±4km, M4.9/22, mb5.3/22*

NEIC ***16*** *20:03:11.1,30˚.42N×136˚.89E, h490km, Moment Tensor Solution. Duration: 1†8 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.26; $M_{\theta\theta}$2.00; $M_{\phi\phi}$-1.73; $M_{r\theta}$2.17; $M_{\theta\phi}$4.92; $M_{r\phi}$-0.22; Fault plane solution: $M_0$5.70000×10^{16} NP1:ϕ_s10.21000°, δ67.53000°, λ-179.87000°. NP2:ϕ_s280.16000°, δ89.88000°, λ-22.47000°. Principal axes: T 5.8562, Plg16.0000°, Azm327.0000°; N -0.3273, Plg68.0000°, Azm100.0000°; P -5.5289, Plg16.0000°, Azm233.0000°:*

ISC 16 20:03:09.4±0.3,30˚.30N±0˚.03×136˚.78E±0˚.03, h508km±2km, h508km:pP-P,n1390,σ1†35/1389, mb4.9/478, 134C-56D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**3.31**	**0**	*i* P	**P**	**20 04 24.6**	**+2.0**
JTNC	**Tanabenakahech**	**3.65**	**345**	P	**P**	**20 04 26.4**	**+1.0**
JTNC				S	**S**	**20 05 28.3**	**+0.8**
JHJ	**Hachijo jima 2**	**3.80**	**42**	P	**P**	**20 04 25.9**	**-0.7**
	873nm,0.3s,baz=224,slow=9.3,SNR=174						
JHJ				S	**S**	**20 05 28.9**	**-0.8**
	285nm,0.3s,baz=73,slow=19,SNR=1.7						
JHJ2	**Mitsune**	**3.82**	**42**	P	**P**	**20 04 26.6**	**-0.2**
JHJ2	**Mitsune**	**3.82**	**42**	S	**S**	**20 05 29.7**	**-0.2**
JHJ2	**Mitsune**	**3.82**	**42**		**P**	**20 04 26.4**	**-0.3**
JHJ2	**Mitsune**	**3.82**	**42**	P	**P**	**20 04 26.8**	**0.0**
JHJ2	**Mitsune**	**3.82**	**42**	*i* P	**P**	**20 04 26.5**	**-0.2**
JIE	**Ise**	**4.08**	**359**	*i* P	**P**	**20 04 30.2**	**+1.4**
JIE				S	**S**	**20 05 35.3**	**+1.6**
JMN	**Monobe**	**4.21**	**325**	P	**P**	**20 04 31.5**	**+1.5**
JMN	**Monobe**	**4.21**	**325**		**P**	**20 04 31.5**	**+1.5**
JMN	**Monobe**	**4.21**	**325**	P	**P**	**20 04 31.9**	**+1.9**
JTO	**Tosashimizu**	**4.25**	**308**	*i* P	**P**	**20 04 31.8**	**+1.6**
JTO				S	**S**	**20 05 38.0**	**+1.7**
JAA	**Atsumi**	**4.33**	**4**	A	A	20 04 31.7	
	comp=N,8.0nm,2.1s,comp=E,11nm,2.6s						
JSG	**Sagara**	**4.52**	**15**	P	**P**	**20 04 34.0**	**+1.6**
JSG	**Sagara**	**4.52**	**15**	P	**P**	**20 04 32.7**	**+0.3**
JSG	**Sagara**	**4.52**	**15**	P	**P**	**20 04 34.0**	**+1.6**
UWA2	**Uwa jima 2**	**4.58**	**310**	A	A	20 04 34.8	
	comp=N,5.0nm,3.0s,comp=E,3.0nm,2.3s						
HMMJ	**Hamamatsu 2**	**4.61**	**10**	A	A	20 04 33.8	
	comp=N,3.0nm,2.7s,comp=E,4.0nm,4.3s						
JJS	**Sakaide**	**4.72**	**330**	A	A	20 04 35.8	
	comp=N,2.0nm,3.9s,comp=E,5.0nm,3.7s						
JMIK	**Miki**	**4.72**	**343**	A	A	20 04 35.5	
	comp=N,7.0nm,1.9s,comp=E,9.0nm,2.5s						
JEG	**Eigenji**	**4.83**	**356**	A	A	20 04 36.1	
	comp=N,7.0nm,3.0s,comp=E,6.0nm,2.2s						
JNKG	**Nichinankitago**	**4.83**	**288**	A	A	20 04 37.0	
	comp=N,5.0nm,4.3s,comp=E,6.0nm,2.5s						
JSKE	**Saikikamae**	**4.85**	**302**	A	A	20 04 37.2	
	comp=N,4.0nm,2.4s,comp=E,4.0nm,2.7s						
JNA	**Nagahama**	**4.89**	**313**	A	A	20 04 37.4	
	comp=N,3.0nm,2.5s,comp=E,2.0nm,3.5s						
JAO	**Obara**	**4.97**	**5**	A	A	20 04 37.0	
	comp=N,2.0nm,2.5s,comp=E,9.0nm,4.6s						
INU	**Inuyama**	**5.04**	**2**	P	**P**	**20 04 38.1**	**+1.1**
INU	**Inuyama**	**5.04**	**2**	P	**P**	**20 04 37.7**	**+0.7**
INU	**Inuyama**	**5.04**	**2**	P	**P**	**20 04 38.3**	**+1.4**
JNY	**Yasuok**	**5.13**	**10**	A	A	20 04 38.3	
	comp=N,3.0nm,1.6s,comp=E,6.0nm,2.9s						
JFM	**Mihama**	**5.26**	**353**	A	A	20 04 39.9	
	comp=N,4.0nm,2.3s,comp=E,5.0nm,2.4s						
JGF	**Kuroka**	**5.31**	**5**	P	**P**	**20 04 40.2**	**+0.8**
JGF	**Kuroka**	**5.31**	**5**	S	**S**	**20 05 54.0**	**+0.8**
JGF	**Kuroka**	**5.31**	**5**		**P**	**20 04 39.4**	**0.0**
JGF	**Kuroka**	**5.31**	**5**	P	**P**	**20 04 40.2**	**+0.8**
JOD2	**Odawara 2**	**5.32**	**21**	*i* P	**P**	**20 04 38.7**	**-0.8**
JOD2				*e*S	**S**	**20 05 51.7**	**-1.6**
JKY	**Yasaka**	**5.50**	**346**	A	A	20 04 42.3	
	comp=N,7.0nm,3.2s,comp=E,5.0nm,3.7s						
JKI	**Kunimi**	**5.53**	**308**	A	A	20 04 43.3	
	comp=N,6.0nm,3.1s,comp=E,2.0nm,3.4s						
JSU	**Suzuyama**	**5.56**	**284**	P	**P**	**20 04 43.3**	**+1.4**
JSU	**Suzuyama**	**5.56**	**284**		**P**	**20 04 42.1**	**+0.2**
JSU	**Suzuyama**	**5.56**	**284**	P	**P**	**20 04 43.4**	**+1.4**
BSO1	**Boso 1**	**5.61**	**38**	P	**P**	**20 04 39.4**	**-2.1**
BSO1				S	**S**	**20 05 52.5**	**-4.6**
CBIJ	**Chichi jima**	**5.72**	**123**	*i* P	**P**	**20 04 40.3**	**-3.1**
CBIJ				A	A	20 04 40.3	
	comp=N,9.0nm,1.3s,comp=E,12nm,0.8s						
CBIJ				S	**S**	**20 05 53.6**	**-6.7**
JCJ	**Chichijima**	**5.72**	**123**	P	**P**	**20 04 39.0**	**-4.4**
	comp=E,831nm,0.6s,baz=28,slow=9.9,SNR=83						
JCJ				S	**S**	**20 05 52.8**	**-7.5**
	comp=E,312nm,0.3s,baz=303,slow=16,SNR=4.7						
JCJ	**Chichijima**	**5.72**	**123**		**P**	**20 04 39.7**	**-3.7**
JCJ	**Chichijima**	**5.72**	**123**	P	**P**	**20 04 40.5**	**-3.0**
JNU	**Nakatsue**	**5.76**	**301**	P	**P**	**20 04 44.0**	**+0.3**
	comp=E,252nm,0.4s,baz=117,slow=9.7,SNR=468						
JNU				S	**S**	**20 06 00.1**	**-0.8**
	comp=E,170nm,1.1s,baz=56,slow=19,SNR=9.9						
JRY	**Ryogami san**	**5.97**	**17**	*i* P	**P**	**20 04 45.1**	**-0.5**
JRY				S	**S**	**20 06 02.5**	**-2.0**
JHH2	**Haha-jima-NKT2**	**5.99**	**126**	A	A	20 04 43.7	
	comp=N,11nm,0.5s,comp=E,15nm,0.4s						
JSJ	**Shimokoshiki**	**6.22**	**285**	P	**P**	**20 04 49.5**	**+1.4**
JSJ				S	**S**	**20 06 09.9**	**+1.0**
MJAR	**Matsushiro Arr**	**6.34**	**10**	P	**P**	**20 04 48.5**	**-0.7**
	comp=E,439nm,0.7s,baz=182,slow=9.6,SNR=1222						
MJAR				S	**S**	**20 06 07.2**	**-3.7**
	comp=E,132nm,0.9s,baz=175,slow=14,SNR=11						
MJAR				ScP	**ScP**	**20 13 26.6**	**+0.7**
	comp=E,2.9nm,0.8s,baz=173,slow=2.0,SNR=7.0						
MAJO	**Matsushiro**	**6.34**	**10**	P	**P**	**20 04 49.1**	**-0.1**
MAJO	**Matsushiro**	**6.34**	**10**	*d* iP	**P**	**20 04 48.4**	**-0.8**
MAJO	**Matsushiro**	**6.34**	**10**	P	**P**	**20 04 48.6**	**-0.6**
MAJO	**Matsushiro**	**6.34**	**10**	P	**P**	**20 04 48.9**	**-0.3**
MJB9	**Matsu-Tunnel**	**6.34**	**10**	P	**P**	**20 04 49.5**	**+0.3**
JMZ	**Minamidaito 2**	**6.63**	**229**	P	**P**	**20 04 52.6**	**+0.4**
JMZ	**Minamidaito 2**	**6.63**	**229**	P	**P**	**20 04 51.8**	**-0.5**
JMZ	**Minamidaito 2**	**6.63**	**229**	P	**P**	**20 04 54.0**	**+1.8**
JMZ	**Minamidaito 2**	**6.63**	**229**	P	**P**	**20 04 53.0**	**+0.7**
JOI	**OKI**	**6.67**	**335**	P	**P**	**20 04 53.2**	**+0.9**
JOI				S	**S**	**20 06 17.7**	**+1.0**
JAMN	**Amaminishikomi**	**6.95**	**255**	P	**P**	**20 04 56.4**	**+1.0**
JSB	**Shiboa**	**7.15**	**21**	A	A	20 04 56.9	
	comp=N,8.0nm,4.6s,comp=E,5.0nm,1.6s						
JTU	**Tsushima**	**7.53**	**306**	P	**P**	**20 05 01.9**	**+0.9**
JTU	**Tsushima**	**7.53**	**306**	P	**P**	**20 05 02.5**	**+1.5**
JTU	**Tsushima**	**7.53**	**306**	P	**P**	**20 05 02.2**	**+1.2**
JTU				S	**S**	**20 06 34.5**	**+2.0**
JFK	**Kawauchi**	**7.83**	**25**	A	A	20 05 03.5	
	comp=N,5.0nm,2.4s,comp=E,4.0nm,2.9s						
JOW	**Kunigami**	**8.24**	**247**	P	**P**	**20 05 09.7**	**+1.2**
JOW	**Kunigami**	**8.24**	**247**		**P**	**20 05 08.7**	**+0.2**
JOW	**Kunigami**	**8.24**	**247**	P	**P**	**20 05 09.8**	**+1.4**
JOW	**Kunigami**	**8.24**	**247**	P	**P**	**20 05 09.6**	**+1.2**
JYA	**Atsumi**	**8.62**	**16**	A	A	20 05 11.9	
	comp=N,7.0nm,4.0s,comp=E,7.0nm,4.4s						
JOU	**Okura**	**8.66**	**21**	A	A	20 05 12.1	
	comp=N,7.0nm,2.7s,comp=E,6.0nm,3.2s						
JMK	**Ichinoseki**	**9.37**	**22**	P	**P**	**20 05 19.1**	**-0.9**
JMK				S	**S**	**20 07 01.5**	**-5.9**
JKE	**Kume jima 2**	**9.65**	**248**	P	**P**	**20 05 23.5**	**+0.3**
TJN	**Taejon**	**9.93**	**310**	P	**P**	**20 05 26.1**	**+0.2**
TJN	**Taejon**	**9.93**	**310**	*i* P	**P**	**20 05 26.2**	**+0.3**
TJN				pmax	pmax		
	comp=Z,13nm,1.1s						
TJN	**Taejon**	**9.93**	**310**		**P**	**20 05 25.8**	**-0.1**
KSRS	**Korea Array**	**10.25**	**316**	P	**P**	**20 05 29.5**	**+0.3**
	comp=Z,90nm,0.6s,baz=130,slow=10,SNR=422						
KSRS				PcP	**PcP**	**20 10 46.6**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=127,slow=1.5,SNR=4.5						
KSRS				ScP	**ScP**	**20 13 30.5**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=126,slow=2.1,SNR=14						
KSAR	**Wonju Array Be**	**10.26**	**316**	P	**P**	**20 05 29.7**	**+0.3**
KSAR	**Wonju Array Be**	**10.26**	**316**	P	**P**	**20 05 29.7**	**+0.3**
KS19	**Wonju Array Si**	**10.31**	**317**	P	**P**	**20 05 29.5**	**-0.4**
JTM	**Tenmabayashi**	**11.03**	**17**	P	**P**	**20 05 37.7**	**+0.3**
JTM	**Tenmabayashi**	**11.03**	**17**	P	**P**	**20 05 37.1**	**-0.4**
JTM	**Tenmabayashi**	**11.03**	**17**	P	**P**	**20 05 37.8**	**+0.3**
INCN	**Inchon**	**11.06**	**313**	P	**P**	**20 05 38.1**	**+0.3**
INCN	**Inchon**	**11.06**	**313**	P	**P**	**20 05 37.4**	**-0.5**
INCN	**Inchon**	**11.06**	**313**	P	**P**	**20 05 37.4**	**-0.5**
INCN	**Inchon**	**11.06**	**313**	P	**P**	**20 05 37.8**	**-0.1**
JOGS	**Gusukube**	**11.50**	**244**	P	**P**	**20 05 43.7**	**+1.1**
JMJ	**Miyako jima 2**	**11.56**	**245**	P	**P**	**20 05 43.5**	**+0.2**
JOT	**Ohata**	**11.59**	**16**	P	**P**	**20 05 43.3**	**0.0**
JOT				*e*S	**S**	**20 07 46.8**	**-3.3**
JOSM	**Okushiri--Mats**	**11.96**	**10**	P	**P**	**20 05 47.3**	**+0.1**
JOSM				S	**S**	**20 07 55.5**	**-1.8**
ERM	**Erimo**	**12.77**	**22**	P	**P**	**20 05 56.5**	**+0.7**
ERM	**Erimo**	**12.77**	**22**	*ce*P	**P**	**20 05 55.8**	**0.0**
ERM				pmax	pmax		
	comp=Z,101nm,1.0s						
ERM	**Erimo**	**12.77**	**22**	P	**P**	**20 05 55.4**	**-0.4**
ERM	**Erimo**	**12.77**	**22**	P	**P**	**20 05 56.5**	**+0.7**
JEM	**Erimo**	**12.77**	**22**	P	**P**	**20 05 56.1**	**+0.3**
JNBK	**Urakawa-nobuka**	**12.88**	**20**	A	A	20 05 55.6	
	comp=N,7.0nm,3.1s,comp=E,13nm,2.0s						
JSHD	**Hidakashinhida**	**12.92**	**19**	A	A	20 05 56.0	
	comp=N,10.0nm,1.8s,comp=E,18nm,1.7s						
JIAM	**Iburiatsuma**	**12.97**	**17**	A	A	20 05 56.6	
	comp=N,13nm,1.3s,comp=E,14nm,1.4s						
PSTR	**Posyet**	**13.22**	**340**	*c* iP	**P**	**20 06 00.8**	**+0.2**
JBT2	**Biratori 2**	**13.23**	**18**	A	A	20 05 59.2	
	comp=N,3.0nm,4.3s,comp=E,4.0nm,3.3s						
JCH	**Churui**	**13.38**	**21**	P	**P**	**20 06 02.5**	**+0.3**
VLA	**Vladivostok**	**13.38**	**344**	*d* iP	**P**	**20 06 02.7**	**+0.5**
VLA				pmax	pmax		
	comp=Z,752nm,1.0s						
SSE	**Sheshan**	**13.44**	**277**	P	**P**	**20 06 02.3**	**-0.8**
SSE				S	**S**	**20 08 27.3**	**+1.0**
SSE				pmax	pmax		
	comp=Z,50nm,0.8s						
YOJ	**Yonaguni jima**	**13.54**	**248**	P	**P**	**20 06 03.3**	**-0.9**
YOJ	**Yonaguni jima**	**13.54**	**248**	S	**S**	**20 08 27.3**	**-1.0**
YOJ	**Yonaguni jima**	**13.54**	**248**	P	**P**	**20 06 03.3**	**-0.9**
YOJ	**Yonaguni jima**	**13.54**	**248**	P	**P**	**20 06 03.2**	**-0.9**
YOJ	**Yonaguni jima**	**13.54**	**248**	P	**P**	**20 06 03.5**	**-0.6**
YOJ	**Yonaguni jima**	**13.54**	**248**	P	**P**	**20 06 03.4**	**-0.9**
JAB	**Ashibetsu**	**13.88**	**17**	A	A	20 06 05.7	
	comp=N,5.0nm,4.0s,comp=E,7.0nm,4.5s						
USA0B	**Ussuriysk Arra**	**14.38**	**346**	P	**P**	**20 06 13.1**	**+0.3**
USA0B	**Ussuriysk Arra**	**14.38**	**346**	P	**P**	**20 06 13.1**	**+0.3**
USRK	**Ussuriysk Ar.**	**14.38**	**346**	P	**P**	**20 06 13.1**	**+0.3**
	comp=E,560nm,0.8s,baz=159,slow=9.9,SNR=544						
USRK	**Ussuriysk Ar.**	**14.38**	**346**	P	**P**	**20 06 13.0**	**+0.3**
JKA	**Kamikawa-asahi**	**14.54**	**17**	P	**P**	**20 06 14.6**	**+0.1**
TATO	**Taipei**	**14.55**	**252**	P	**P**	**20 06 14.6**	**-0.2**
TATO	**Taipei**	**14.55**	**252**	P	**P**	**20 06 13.8**	**-1.0**
YHNB	**Yeheng**	**14.77**	**251**	P	**P**	**20 06 16.3**	**-0.9**
YHNB	**Yeheng**	**14.77**	**251**	P	**P**	**20 06 15.8**	**-1.5**
JTKR	**Abashiri--Toko**	**14.77**	**21**	P	**P**	**20 06 17.7**	**+0.9**
NACB	**Ninganchiao**	**14.81**	**249**	S	**S**	**20 08 53.3**	**+0.5**
NACB	**Ninganchiao**	**14.81**	**249**	P	**P**	**20 06 15.1**	**-2.5**
NEM2	**Nemuro 2**	**14.87**	**26**	P	**P**	**20 06 18.1**	**+0.2**
JNSB	**Nemuroshibetsu**	**14.96**	**24**	A	A	20 06 16.1	
	comp=N,7.0nm,1.8s,comp=E,7.0nm,4.1s						
DL2	**Dalian**	**15.13**	**309**	P	**P**	**20 06 19.1**	**-1.5**
DL2				*es*P	sP	20 08 09.5	-15
DL2				S	**S**	**20 08 55.0**	**-3.4**
DL2				pmax	pmax		
	comp=E,180nm,0.8s						
DL2				pmax	pmax		
	comp=E,200nm,10.2s						
MDJ	**Mudanjiang**	**15.38**	**340**	P	**P**	**20 06 23.9**	**+0.8**
MDJ	**Mudanjiang**	**15.38**	**340**	S	**S**	**20 09 04.4**	**+1.4**
MDJ	**Mudanjiang**	**15.38**	**340**	P	**P**	**20 06 22.2**	**-0.9**
MDJ	**Mudanjiang**	**15.38**	**340**	P	**P**	**20 06 22.8**	**-0.3**
MDJ				S	**S**	**20 08 57.0**	**-6.0**
MDJ				pmax	pmax		
	comp=E,99nm,1.3s						
YULB	**Yu-li**	**15.43**	**247**	P	**P**	**20 06 22.8**	**-1.2**
YULB	**Yu-li**	**15.43**	**247**	S	**S**	**20 09 04.9**	**+0.4**
YULB	**Yu-li**	**15.43**	**247**	P	**P**	**20 06 22.6**	**-1.4**
NJ2	**Nanjing**	**15.44**	**281**	⇓P	**P**	**20 06 23.3**	**-0.7**
NJ2				S	**S**	**20 09 02.8**	**-1.8**
NJ2				ScP	**ScP**	**20 13 39.4**	**+1.2**
NJ2				ScS	**ScS**	**20 17 17.5**	**+0.5**
NJ2				pmax	pmax		
	comp=E,31nm,0.5s						
SSLB	**Suanglung**	**15.51**	**249**	P	**P**	**20 06 24.1**	**-0.8**
SSLB	**Suanglung**	**15.51**	**249**	S	**S**	**20 09 05.6**	**-0.6**
SSLB	**Suanglung**	**15.51**	**249**	P	**P**	**20 06 24.0**	**-1.0**
SNY	**Shenyang**	**15.67**	**321**	⇑P	**P**	**20 06 26.3**	**+0.1**
SNY				pP		20 06 28.9	
SNY				S	**S**	**20 09 07.4**	**-1.1**
SNY				pmax	pmax		
	comp=E,520nm,1.0s						
TWGBT	**Beinan**	**15.89**	**246**	P	**P**	**20 06 28.5**	**-0.3**
TWG	**Pinlang**	**15.89**	**246**	P	**P**	**20 06 27.6**	**-1.3**
TPUB	**Ta-pu**	**16.01**	**248**	P	**P**	**20 06 30.0**	**0.0**
TPUB	**Ta-pu**	**16.01**	**248**	S	**S**	**20 09 14.9**	**-0.4**
TPUB	**Ta-pu**	**16.01**	**248**	P	**P**	**20 06 29.3**	**-0.7**
CN2	**Changchun**	**16.21**	**329**	*e*P	**P**	**20 06 31.0**	**-0.8**
CN2				*es*P	sP	20 08 31.8	-4.8
CN2				*e*S	**S**	**20 09 12.4**	**-5.9**
CN2				pmax	pmax		
	comp=E,200nm,1.2s						
CN2				pmax	pmax		
	comp=E,700nm,3.0s						
QZH2	**Quanzhou**	**16.96**	**256**	P	**P**	**20 06 37.3**	**-2.5**
QZH2				S	**S**	**20 09 30.8**	**-1.2**
QZH2				pmax	pmax		
	comp=E,210nm,0.9s						
QZH2				pmax	pmax		
	comp=E,280nm,4.3s						
BNX	**BinXian**	**17.07**	**337**	⇑P	**P**	**20 06 40.3**	**-0.2**
BNX			

HIA Hailar 22.93 330 P **P** **20 07 34.7 +0.9**
HIA Hailar 22.93 330 P **P** **20 07 33.6 -0.2**
HIA Hailar 22.93 330 P **P** **20 07 33.6 -0.2**
HHC Hu-ho-hao-te 22.98 304⇑*i* P **P** **20 07 34.9 +0.4**
HHC S **S** **20 11 08.9 +0.6**
HHC pmax pmax
comp=E,84nm,1.3s
HHC pmax pmax
comp=E,140nm,7.6s
HILR Hailar Array B 23.15 331 P **P** **20 07 36.1 +0.4**
comp=E,169nm,0.7s,baz=138,slow=11,SNR=179
comp=E,169nm,0.7s
TSSP Tandag City 23.35 207 *e*P **P** **20 07 37.0 -0.9**
ENH Enshi 23.55 277 P **P** **20 07 40.0 +0.4**
TBP Tagbilaran 23.79 213 *i* P **P** **20 07 39.2 -2.6**
XAN Xi'an 23.84 286 ⇑P **P** **20 07 42.6 +0.4**
XAN S **S** **20 11 20.8 -1.2**
XAN ScP **ScP** **20 13 58.9 +0.9**
XAN pmax pmax
comp=E,75nm,0.9s
BTO2 Baotou 24.16 303 *e*P **P** **20 07 45.3 +0.3**
BTO2 S **S** **20 11 27.1 +0.1**
BTO2 pmax pmax
comp=E,80nm,1.2s
BTO2 pmax pmax
comp=E,480nm,7.7s
SNPH Sibulan 24.39 214 *e*P **P** **20 07 46.8 -0.4**
CDOP Cateel, Davao 24.41 205 *e*P **P** **20 07 46.2 -1.1**
ZEA Zeya 24.42 346 *e*P **P** **20 07 47.7 +0.7**
ZEA pmax pmax
comp=N,100nm,1.0s
ZEA pmax pmax
comp=Z,200nm,0.8s
ZEA pmax pmax
comp=E,40nm,0.5s
ZEA pmax pmax
comp=N,100nm,0.8s
ZEA pmax pmax
comp=Z,290nm,0.7s
ZEA MLR MLR
comp=Z,100nm,14.0s
CGP Cagayan de Oro 24.50 210 *e*P **P** **20 07 46.9 -1.3**
DAV Davao City (W) 25.39 207 P **P** **20 07 56.1 +0.1**
comp=Z,192nm,0.4s,baz=27,slow=11,SNR=6.1
comp=Z,192nm,0.4s
GYA Guiyang 26.73 269 ⇓P **P** **20 08 08.1 +0.2**
GYA sP sP 20 10 28.6 -3.2
GYA S **S** **20 12 05.5 -2.2**
GYA PcS **PcS** **20 14 59.6 +2.7**
GYA ScS **ScS** **20 17 57.4 -1.1**
GYA pmax pmax
comp=E,58nm,1.0s
GYA pmax pmax
comp=Z,200nm,4.1s
QIZ Qiongzhong 26.86 252 P **P** **20 08 10.6 +1.6**
QIZ S **S** **20 12 11.6 +2.1**
QIZ pmax pmax
comp=Z,50nm,1.0s
PEA0B Petropavlovsk- 27.43 28*ce*P **P** **20 08 14.4 +0.8**
PEA0B Petropavlovsk- 27.43 28 P **P** **20 08 13.8 +0.2**
PETK Petropavlovsk- 27.43 28 P **P** **20 08 14.5 +1.0**
comp=Z,9.8nm,0.8s,baz=234,slow=5.0,SNR=17
PETK PcP **PcP** **20 11 15.9 +0.1**
comp=Z,3.9nm,0.7s,baz=217,slow=6.2,SNR=3.3
PETK ScP **ScP** **20 14 07.7 -0.3**
comp=Z,9.9nm,0.9s,baz=201,slow=2.3,SNR=9.9
comp=Z,9.8nm,0.8s
PETK Petropavlovsk- 27.43 28 **ScP** **20 14 07.2 -0.8**
PETK Petropavlovsk- 27.43 28 P **P** **20 08 12.8 -0.8**
PET Petropavlovsk 27.76 29 P **P** **20 08 17.8 +1.4**
PET Petropavlovsk 27.76 29 *e*P **P** **20 08 17.9 +1.5**
PET *e*S **S** **20 12 23.2 +0.4**
PET pmax pmax
comp=Z,21nm,0.8s
PET MLR MLR
comp=Z,100nm,14.0s
PET MLR MLR
comp=Z,100nm,13.0s
LZH Lanzhou 28.07 291 P **P** **20 08 20.3 +0.7**
LZH S **S** **20 12 26.9 -1.6**
LZH ScS **ScS** **20 18 05.0 +0.5**
LZH pmax pmax
comp=Z,120nm,1.6s
LZDM Lanzhou Array 28.19 290 P **P** **20 08 21.1 +0.3**
comp=Z,72nm,0.7s,baz=90,slow=9.4,SNR=41
comp=Z,72nm,0.7s
CD2 Chengdu 28.37 280 P **P** **20 08 22.3 +0.1**
CD2 pmax pmax
comp=Z,90nm,0.5s
SGSI Sangihe 28.53 204 P **P** **20 08 23.3 -0.3**
comp=Z,489nm,1.0s
ULN Ulaanbaatar 28.73 316*ce*P **P** **20 08 25.9 +0.7**
ULN pmax pmax
comp=Z,149nm,1.3s
ULN Ulaanbaatar 28.73 316 P **P** **20 08 25.7 +0.5**
ULN Ulaanbaatar 28.73 316 P **P** **20 08 25.6 +0.4**
comp=Z,509nm,1.1s
ULN Ulaanbaatar 28.73 316 P **P** **20 08 26.2 +0.9**
SONM Songino Array 29.12 316 P **P** **20 08 29.1 +0.5**
comp=Z,23nm,0.6s,baz=129,slow=8.7,SNR=53
SONM PcP **PcP** **20 11 20.5 +0.2**
comp=Z,3.3nm,0.5s,baz=132,slow=2.5,SNR=4.6
SONM S **S** **20 12 45.2 +0.9**
comp=Z,1.0nm,0.6s,baz=101,slow=22,SNR=1.2
SONM ScP **ScP** **20 14 13.8 +0.2**
comp=Z,5.6nm,0.7s,baz=141,slow=4.1,SNR=9.0
comp=Z,23nm,0.6s
SONM Songino Array 29.12 316 P **P** **20 08 28.9 +0.4**
MYLDM Lahad Datu 30.35 218 P **P** **20 08 40.1 +0.6**
KMI2 Kunming 30.49 269 ⇓P **P** **20 08 41.4 +0.6**
KMI2 pP pP 20 10 10.8 +3.9
KMI2 S **S** **20 13 06.1 -0.1**
KMI2 pmax pmax
comp=Z,22nm,0.9s
TNTI Ternate 30.70 199 P **P** **20 08 43.1 +0.6**
TNTI Ternate 30.70 199 P **P** **20 08 42.1 -0.3**
TNTI Ternate 30.70 199 P **P** **20 08 42.6 +0.2**
comp=Z,1μmcomp=Z,94nm,1.0s
TNTI Ternate 30.70 199 P **P** **20 08 42.7 +0.2**
MA2 Magadan 30.77 14 P **P** **20 08 42.7 +0.3**
comp=Z,174nm,0.7s,baz=203,slow=8.4,SNR=62
MA2 ScP **ScP** **20 14 19.1 +0.5**
comp=Z,20nm,1.0s,baz=133,slow=8.5,SNR=5.3
comp=Z,174nm,0.7s
MA2 Magadan 30.77 14 P **P** **20 08 43.5 +1.0**
MA2 Magadan 30.77 14 P **P** **20 08 43.1 +0.6**
MA2 Magadan 30.77 14 P **P** **20 08 42.8 +0.3**
comp=Z,2μmcomp=Z,250nm,0.8s
MA2 Magadan 30.77 14 P **P** **20 08 43.3 +0.8**
MA2 PcP **PcP** **20 11 21.6 -2.7**
MA2 ScP **ScP** **20 14 19.9 +1.3**
SLVN Son La 30.82 261 P **P** **20 08 44.5 +0.9**
SLVN Son La 30.82 261 P **P** **20 08 43.9 +0.3**
PZH PanZhiHua 30.98 272 P **P** **20 08 45.1 +0.2**
PZH S **S** **20 13 10.8 -2.7**
PZH SS SS 20 15 56.3 -26
PZH pmax pmax
comp=Z,60nm,1.0s
SWI Sorong 31.43 191 P **P** **20 08 49.2 +0.5**
comp=Z,93nm,0.9s
SIJI Sorong 31.44 191 P **P** **20 08 49.2 +0.4**
comp=Z,63nm,0.8s,baz=17,slow=9.3,SNR=40
SIJI S **S** **20 13 19.9 -0.7**
comp=Z,6.6nm,1.0s,baz=286,slow=22,SNR=9.2
comp=Z,63nm,0.8s
SIJI Sorong 31.44 191 P **P** **20 08 49.0 +0.2**
GTA2 Gaotai 31.53 297 ⇑P **P** **20 08 49.9 +0.4**
GTA2 pP pP 20 10 21.6 +5.1
GTA2 PcP **PcP** **20 11 28.1 +1.1**
GTA2 S **S** **20 13 18.8 -3.0**
GTA2 ScP **ScP** **20 14 22.1 +0.2**
GTA2 ScS **ScS** **20 18 18.6 -2.6**
GTA2 pmax pmax
comp=Z,97nm,0.9s
BOD Bodaibo 31.70 337 *e*P **P** **20 08 50.2 -0.3**
BOD pmax pmax
comp=Z,68nm,0.9s
DLV Lat 31.95 241 P **P** **20 08 54.4 +1.0**
DLV Lat 31.95 241 P **P** **20 08 54.8 +1.4**
ZAK Zakamensk 32.07 318 *e*P **P** **20 08 53.7 -0.2**
ZAK pmax pmax
comp=Z,96nm,1.3s
YAK Yakutsk 32.08 354 P **P** **20 08 53.4 -0.2**
comp=Z,225nm,0.8s,baz=169,slow=2.8,SNR=115
YAK S **S** **20 13 26.4 -2.8**
comp=Z,16nm,0.8s,baz=240,slow=23,SNR=12
YAK ScP **ScP** **20 14 23.0 0.0**
comp=Z,26nm,0.8s,baz=319,slow=1.0,SNR=6.9
comp=Z,225nm,0.8s
YAK Yakutsk 32.08 354*c i* P **P** **20 08 53.2 -0.4**
YAK *e**PP **pP** **20 10 22.4 +1.8**
YAK *e* 20 11 26.4
YAK *e*S **S** **20 13 26.8 -2.4**
YAK *e**SS sS 20 16 18.6 +10
YAK pmax pmax
comp=Z,459nm,1.3s
YAK pmax pmax
comp=N,308nm,1.9s
YAK pmax pmax
comp=E,63nm,1.5s
YAK pmax pmax
comp=Z,138nm,4.7s
YAK pmax pmax
comp=N,96nm,2.4s
YAK pmax pmax
comp=E,74nm,3.7s
YAK smax smax
comp=E,240nm,2.6s
YAK smax smax
comp=N,217nm,2.3s
YAK Yakutsk 32.08 354 P **P** **20 08 53.3 -0.4**
YAK ScP **ScP** **20 14 23.0 0.0**
GTOI Gorontalo 32.27 206 P **P** **20 08 55.6 -0.3**
IRK Irkutsk 32.40 322 *e*P **P** **20 08 55.6 -0.9**
IRK pmax pmax
comp=Z,101nm,2.1s
TARAI Tarakan 32.40 218 P **P** **20 08 57.9 +0.8**
comp=Z,4μmcomp=Z,248nm,1.1s
TLY Talaya 32.46 321 P **P** **20 08 56.7 -0.4**
comp=Z,76nm,0.7s,baz=123,slow=8.1,SNR=42
comp=Z,76nm,0.7s
TLY Talaya 32.46 321*ce*P **P** **20 08 57.9 +0.8**
TLY pmax pmax
comp=Z,69nm,0.8s
TLY Talaya 32.46 321 P **P** **20 08 55.6 -1.5**
TLY Talaya 32.46 321 P **P** **20 08 58.0 +0.9**
TLY pP **pP** **20 10 26.5 +2.2**
TLY ScP **ScP** **20 14 25.3 +0.6**
TOLI2 Tolitoli 32.77 211 P **P** **20 09 00.1 0.0**
TOLI2 Tolitoli 32.77 211 P **P** **20 08 59.2 -1.0**
JAY Jayapura 32.84 173 P **P** **20 09 01.9 +1.0**
comp=Z,12nm,0.7s,baz=355,slow=8.4,SNR=4.5
comp=Z,12nm,0.7s
GENI Genyem 32.87 174 P **P** **20 09 01.1 +0.1**
GENI Genyem 32.87 174 P **P** **20 09 03.9 +2.9**
FAKI Fak Fak 33.31 188 P **P** **20 09 05.6 +0.8**
FAKI Fak Fak 33.31 188 P **P** **20 09 04.7 -0.1**
FAKI Fak Fak 33.31 188 P **P** **20 09 04.9 +0.1**
comp=Z,67nm,0.7s
FAKI Fak Fak 33.31 188 P **P** **20 09 04.9 +0.1**
MANU Manus Island 33.71 161 P **P** **20 09 08.1 0.0**
SANI Sanana 33.78 200 P **P** **20 09 08.1 -0.6**
SANI Sanana 33.78 200 P **P** **20 09 07.6 -1.1**
LUWI Luwuk 33.91 206 P **P** **20 09 10.2 +0.4**
LUWI Luwuk 33.91 206 P **P** **20 09 07.7 -2.0**
LUWI Luwuk 33.91 206 P **P** **20 09 08.3 -1.5**
comp=Z,2μmcomp=Z,170nm,1.2s
MOY Mondy 33.93 319 *e*P **P** **20 09 10.1 +0.4**
MOY pmax pmax
comp=Z,80nm,2.0s
SEY Seymchan 34.16 13 P **P** **20 09 11.9 +0.6**
comp=Z,48nm,0.8s,baz=204,slow=7.6,SNR=149
SEY S **S** **20 14 01.1 +0.3**
comp=Z,1.6nm,0.7s,baz=231,slow=22,SNR=3.5
SEY ScP **ScP** **20 14 30.3 -0.1**
comp=Z,6.2nm,0.7s,baz=203,slow=3.3,SNR=7.2
comp=Z,48nm,0.8s
TNCH TengChong 34.18 271 ⇓P **P** **20 09 13.1 +0.9**
TNCH pP pP 20 10 42.3 +2.3
TNCH PP **PP** **20 10 47.3 -6.3**
TNCH S **S** **20 14 03.5 +1.0**
TNCH pmax pmax
comp=Z,100nm,0.9s
TNCH pmax pmax
comp=Z,200nm,4.0s
APSI Ampana 34.22 208 P **P** **20 09 12.3 -0.1**
comp=Z,3μmcomp=Z,379nm,1.1s
NLAI Namlea 34.61 197 P **P** **20 09 19.4 +3.7**
PCI Palu 34.98 211 P **P** **20 09 18.5 -0.3**
comp=Z,2μmcomp=Z,219nm,1.1s
GOMU GeErMu 35.38 291 P **P** **20 09 22.8 +0.5**
GOMU PcP **PcP** **20 11 39.1 +0.7**
GOMU pmax pmax
comp=Z,150nm,0.9s
KNGR Kungurtug, Tuv 35.55 316*c i*P **P** **20 09 23.8 +0.5**
KNGR pmax pmax
comp=Z,40nm,0.8s
LKP Lekhapani 35.85 276 *i* x **P** **20 09 28.5 +2.5**
CHTO Chiang Mai 36.10 260 P **P** **20 09 29.1 +0.9**
CHTO Chiang Mai 36.10 260 P **P** **20 09 28.6 +0.4**
CHTO pmax pmax
comp=Z,109nm,0.9s
CHTO Chiang Mai 36.10 260 P **P** **20 09 28.6 +0.4**
CHTO Chiang Mai 36.10 260 P **P** **20 09 28.8 +0.6**
CHTO PcP **PcP** **20 11 42.0 +1.6**
CHTO sP **sP** **20 11 52.9 -0.5**
CMAR Chiang Mai Arr 36.26 260 P **P** **20 09 30.4 +0.9**
comp=Z,29nm,0.7s,baz=58,slow=6.4,SNR=249
CMAR PcP **PcP** **20 11 41.6 +0.7**
comp=Z,2.0nm,0.4s,baz=48,slow=2.3,SNR=6.4
CMAR ScP **ScP** **20 14 39.5 +0.6**
comp=Z,2.3nm,1.0s,baz=37,slow=3.2,SNR=5.2
comp=Z,29nm,0.7s
CMAR Chiang Mai Arr 36.26 260 **ScP** **20 14 40.9 +1.9**
CMAR Chiang Mai Arr 36.26 260 P **P** **20 09 30.1 +0.7**
BKB Balikpapan 36.66 215 P **P** **20 09 32.4 -0.4**
BKB Balikpapan 36.66 215 P **P** **20 09 32.7 -0.1**
RABL Rabaul 37.32 154 P **P** **20 09 37.6 -0.6**
RABL IAmb IAmb 20 09 38.7
comp=Z,30nm,0.6s
KOHI KOHIMA 37.79 274 *e*S **S** **20 14 55.6 -0.8**
KOHI *e*SCS **ScS** **20 18 48.8 -7.1**
MORE Moreh 38.07 271 IAmb IAmb 20 09 44.2
comp=Z,30nm,1.0s
IMP Imphal 38.19 272 *e*P **P** **20 09 44.9 -0.5**
TEZP TEZPUR 38.66 276 *e*P **P** **20 09 49.6 +0.6**
TEZP IAmb IAmb 20 09 50.5
comp=Z,24nm,0.6s
TEZP *i* x x 20 10 19.2
KAPI Kappang 38.72 208 P **P** **20 09 49.8 +0.3**
comp=Z,113nm,0.8s,baz=23,slow=3.9,SNR=48
KAPI S **S** **20 15 09.8 -0.2**
comp=Z,6.4nm,0.3s,baz=249,slow=17,SNR=4.6
comp=Z,113nm,0.8s
KAPI Kappang 38.72 208 P **P** **20 09 50.2 +0.6**
KAPI Kappang 38.72 208*d i*P **P** **20 09 50.1 +0.6**
KAPI pmax pmax
comp=Z,171nm,1.0s
KAPI Kappang 38.72 208 P **P** **20 09 49.4 -0.1**
KAPI Kappang 38.72 208 P **P** **20 09 50.2 +0.6**
KAPI ScP **ScP** **20 14 50.5 +2.3**
SHL Shillong 39.75 274 IAmb IAmb 20 09 59.9
comp=Z,28nm,1.2s
SHL Shillong 39.75 274 *ex* **PcP** **20 11 52.6 +0.5**
PMG Port Moresby 40.72 164 P **P** **20 10 05.4 -0.2**
comp=Z,2.9nm,0.3s,baz=356,slow=9.4,SNR=0.9
PMG Port Moresby 40.72 164 IAmb IAmb 20 10 34.8
comp=Z,38nm,1.1s
WMQ Urumqi 40.85 303 ⇑P **P** **20 10 07.4 +0.9**
WMQ PcP **PcP** **20 11 58.4 +3.2**
WMQ ScP **ScP** **20 14 56.9 +0.6**
WMQ S **S** **20 15 40.5 -0.3**
WMQ ScS **ScS** **20 19 11.4 -2.1**
WMQ pmax pmax
comp=Z,82nm,0.9s
WMQ pmax pmax
comp=Z,310nm,3.7s
MMRI Maumere 41.16 202 P **P** **20 10 09.7 +0.6**
MMRI Maumere 41.16 202 P **P** **20 10 08.8 -0.3**
DHUB DHUBRI 41.24 276 *ex* x 20 12 06.4
BILL Bilibino 41.56 16*ce*P **P** **20 10 12.8 +1.2**
BILL pmax pmax
comp=Z,194nm,0.9s
BILL Bilibino 41.56 16 P **P** **20 10 12.7 +1.0**
BILL Bilibino 41.56 16 P **P** **20 10 12.8 +1.2**
BILL PcP **PcP** **20 11 58.2 +1.2**
BILL ScP **ScP** **20 14 59.0 +0.5**
SOEI Soe 41.60 199 P **P** **20 10 13.1 +0.3**
SOEI Soe 41.60 199 P **P** **20 10 12.3 -0.5**
DGZ Jazzator, Alta 41.61 312*c i*P **P** **20 10 13.5 +0.9**
DGZ pmax pmax
comp=Z,155nm,1.0s
TIXI Tiksi 41.63 356 P **P** **20 10 12.0 -0.1**
comp=Z,101nm,0.6s,baz=160,slow=4.8,SNR=24
comp=Z,101nm,0.6s
TIXI Tiksi 41.63 356*ce*P **P** **20 10 12.1 0.0**
TIXI pmax pmax
comp=Z,80nm,0.9s
TIXI Tiksi 41.63 356 P **P** **20 10 12.0 0.0**
BATI Baumata 42.20 199 P **P** **20 10 13.7 -3.8**
comp=Z,324nm,0.7s,baz=19,slow=7.8,SNR=51
BATI S **S** **20 15 55.9 -4.8**
comp=Z,97nm,0.9s,baz=72,slow=21,SNR=20
KDU Kakadu 42.94 186 P **P** **20 10 23.1 0.0**
comp=Z,28nm,0.8s
PLAI Plampang 42.98 208 P **P** **20 10 23.9 +0.4**
ZSN Zaisan 43.05 309*c i*P **P** **20 10 24.5 +0.8**
ZSN *e*S **S** **20 16 14.1 +2.0**
ZSN pmax pmax
comp=Z,36nm,0.8s
ZSN Zaisan 43.05 309⇑*i* P **P** **20 10 24.5 +0.8**
comp=Z,36nm,0.8s
ZSN *e*S **S** **20 16 14.2 +2.0**
MTN Manton Dam 43.24 188 P **P** **20 10 25.2 -0.3**
comp=Z,70nm,1.1s
MTN Manton Dam 43.24 188 P **P** **20 10 25.0 -0.5**
MTN IAmb IAmb 20 10 26.1
comp=Z,45nm,0.8s
EVN Everest 43.42 280 P **P** **20 10 28.6 +0.9**
EVN IAmb IAmb 20 12 06.6
comp=Z,19nm,0.6s
ZALV Zalesovo Beam 43.95 318 P **P** **20 10 30.4 -0.2**
comp=Z,55nm,0.4s,baz=92,slow=7.8,SNR=328
ZALV PcP **PcP** **20 12 04.8 -0.6**
comp=Z,13nm,0.3s,baz=124,slow=3.5,SNR=12
ZALV ScP **ScP** **20 15 07.8 -0.7**
comp=Z,16nm,0.9s,baz=104,slow=4.7,SNR=12
ZALV S **S** **20 16 23.2 -1.5**
comp=Z,1.6nm,0.7s,baz=108,slow=8.0,SNR=2.1
comp=Z,55nm,0.4s
ZALV Zalesovo Beam 43.95 318 P **P** **20 10 30.2 -0.4**
JAGI Jajag, Banyuwa 44.25 213 P **P** **20 10 34.1 +0.6**
JAGI Jajag, Banyuwa 44.25 213 P **P** **20 10 31.8 -1.6**
MK31 Makanchi Array 44.77 307*ce*P **P** **20 10 37.4 +0.3**
MKAR Makanchi Array 44.77 307 P **P** **20 10 37.5 +0.3**
comp=Z,85nm,0.7s,baz=93,slow=9.6,SNR=922
MKAR PcP **PcP** **20 12 08.7 +0.2**
comp=Z,4.8nm,0.3s,baz=76,slow=4.5,SNR=12
MKAR ScP **ScP** **20 15 11.7 -0.4**
comp=Z,12nm,0.7s,baz=84,slow=5.4,SNR=12
MKAR S **S** **20 16 35.7 -1.0**
comp=Z,4.8nm,1.0s,baz=89,slow=20,SNR=5.1
comp=Z,85nm,0.7s
MKAR Makanchi Array 44.77 307 P **P** **20 10 37.6 +0.5**
SMRI Semarang 44.92 219 P **P** **20 10 39.3 +0.7**
MAKZ Makanchi 44.99 307 P **P** **20 10 39.3 +0.5**
MAKZ pmax pmax
comp=Z,265nm,1.6s
MAKZ Makanchi 44.99 307 P **P** **20 10 39.2 +0.5**
MAKZ Makanchi 44.99 307 P **P** **20 10 39.4 +0.7**
MAKZ PcP **PcP** **20 12 08.4 -0.9**
MAKZ ScP **ScP** **20 15 12.2 -0.8**
PMBI Palembang 45.01 228 P **P** **20 10 40.4 +1.1**
LHMI Lhok Sumawe 45.02 244 P **P** **20 10 40.3 +0.9**
PSI Prapat 45.05 240 P **P** **20 10 40.8 +1.0**
PSI Prapat 45.05 240 P **P** **20 10 39.9 +0.1**
PSI pmax pmax
comp=Z,56nm,0.9s
RPSI Rantau Prapat 45.12 240 P **P** **20 10 39.9 -0.3**
BKNI Bangkinang 45.18 235 P **P** **20 10 41.4 +0.7**
BOK Bokaro 45.48 275 *e*P **P** **20 10 44.9 +2.0**
UGM Wanagama 45.60 218 P **P** **20 10 44.1 +0.3**
UGM Wanagama 45.60 218 P **P** **20 10 43.4 -0.4**
KNRA Kununurra 46.36 191 P **P** **20 10 50.0 +0.5**
comp=Z,197nm,0.9s,baz=Z,0.0nm
KNRA Kununurra 46.36 191 P **P** **20 10 49.2 -0.3**
GAMB Gambell 46.46 29 P **P** **20 10 51.3 +1.6**
baz=249
SHLS Shalkode 46.85 302*c i*P **P** **20 10 51.3 -1.9**
SHLS pmax pmax
comp=Z,41nm,0.8s
SHLS Shalkode 46.85 302⇑*i* P **P** **20 10 51.3 -1.9**
comp=Z,41nm,0.8s
GSI Gunungsitoli 47.05 240 P **P** **20 10 55.6 +0.7**
UZB Uzynbulak 47.17 302*c i*P **P** **20 10 56.1 +0.4**
UZB pmax pmax
comp=Z,26nm,0.6s
UZB Uzynbulak 47.17 302⇑*i* P **P** **20 10 56.1 +0.4**
comp=Z,26nm,0.6s
KURK Kurchatov 47.34 313 P **P** **20 10 56.4 -0.2**
KURK 20 12 17.3
KURK pmax pmax
comp=Z,206nm,1.1s
KURK Kurchatov 47.34 313 **PcP** **20 12 17.3 -0.2**
KURK **ScP** **20 15 22.0 -0.8**
KURK Kurchatov 47.34 313 P **P** **20 10 56.4 -0.2**
KURK Kurchatov 47.34 313 P **P** **20 10 56.7 +0.1**
KURK PcP **PcP** **20 12 17.3 -0.2**
KURK ScP **ScP** **20 15 21.7 -1.2**
KPKS Kokpek 47.40 303 *e*P **P** **20 10 58.1 +0.8**
KPKS *e*S **S** **20 17 15.7 +2.1**
KPKS Kokpek 47.40 303 *e*P **P** **20 10 58.1 +0.8**
KPKS *e*S **S** **20 17 15.7 +2.1**
KURBB Kurchatov Arra 47.40 313 P **P** **20 10 57.1 +0.1**
comp=Z,110nm,0.5s,baz=92,slow=8.2,SNR=1447
KURBB PcP **PcP** **20 12 17.3 -0.4**
comp=Z,5.7nm,0.8s,baz=95,slow=3.9,SNR=2.5
KURBB ScP **ScP** **20 15 22.0 -1.0**
comp=Z,2.2nm,0.6s,baz=96,slow=4.2,SNR=4.6
KURBB S **S** **20 17 11.9 -1.3**
comp=Z,3.5nm,0.8s,baz=89,slow=12,SNR=12
comp=Z,110nm,0.5s
TDK Taldyqorghan 47.50 305*c i*P **P** **20 10 58.8 +0.9**
TDK pmax pmax
comp=Z,44nm,0.7s
TDK Taldyqorghan 47.50 305⇑*i* P **P** **20 10 58.8 +0.9**
comp=Z,44nm,0.7s
SATY Saty 47.63 302*c i*P **P** **20 10 59.7 +0.7**
SATY *e*S **S** **20 17 18.7 +1.8**
SATY Saty 47.63 302⇑*i* P **P** **20 10 59.7 +0.7**
SATY *e*S **S** **20 17 18.8 +1.8**
NRIK Noril'sk 47.95 339 P **P** **20 11 01.0 +0.2**
comp=Z,62nm,0.5s,baz=115,slow=8.5,SNR=60
NRIK ScP **ScP** **20 15 24.7 -0.3**
comp=Z,6.3nm,0.6s,baz=134,slow=4.2,SNR=4.5
comp=Z,62nm,0.5s
NRIK Noril'sk 47.95 339*c i*P **P** **20 11 01.0 +0.2**
NRIK pmax pmax
comp=Z,94nm,1.0s
NRIK Noril'sk 47.95 339 P **P** **20 11 00.8 0.0**
PTH Pithoragarh 48.58 284 *e*P **P** **20 11 07.4 +1.0**
TNA Tin City 48.60 27 IAmb IAmb 20 11 09.3
comp=Z,21nm,0.9s
TNA Tin City 48.60 27 P **P** **20 11 07.5 +1.8**
baz=251
MDOK Medeo 48.61 303 *e*P **P** **20 11 07.4 +1.0**
MDOK *e*S **S** **20 17 32.4 +1.9**
MDOK Medeo 48.61 303 *e*P **P** **20 11 07.5 +1.0**
MDOK *e*S **S** **20 17 32.5 +1.9**
KDJ Kajisay 48.62 301 IAmb IAmb 20 11 08.5
comp=Z,42nm,1.0s
TNSS Tian-Shan 48.70 302 *e*P **P** **20 11 08.1 +0.7**
TNSS Tian-Shan 48.70 302 *e*P **P** **20 11 08.1 +0.7**
MTSU Mount Surprise 48.70 170 P **P** **20 11 07.7 +0.6**
comp=Z,6.7nm,0.7s
JOSI Joshimath 48.86 286 *e*P **P** **20 11 09.8 +1.2**
K13K Kusilvak Mount 49.03 32 P **P** **20 11 10.8 +1.8**
baz=258,SNR=5.5
F14K Arctic Creek 49.20 28 P **P** **20 11 12.5 +2.2**
baz=253,SNR=12
ULHL Ulahol 49.30 301 P **P** **20 11 12.7 +1.0**
SNR=22
FITZ Fitzroy Crossi 49.30 194 P **P** **20 11 12.3 +0.7**
comp=Z,13nm,1.1s
FITZ Fitzroy Crossi 49.30 194 P **P** **20 11 12.0 +0.5**
comp=Z,29nm,0.6s,baz=14,slow=7.6,SNR=109
FITZ ScP **ScP** **20 15 31.5 0.0**
comp=Z,5.8nm,0.8s,baz=339,slow=3.5,SNR=4.0
comp=Z,29nm,0.6s
ANM Nome 49.34 29 IAmb IAmb 20 11 14.1
comp=Z,21nm,0.9s
ANM Nome 49.34 29 P **P** **20 11 13.2 +1.9**
baz=255
M13K Dall Lake 49.36 34 IAmb IAmb 20 11 17.6
comp=Z,19nm,0.9s

M13K	Dall Lake	49.36	34	P	P	20 11 13.5	+2.1
	baz=260						
TKM2	Tokmak 2	49.69	302	P	P	20 11 15.8	+1.3
	SNR=90						
KLP	Kalpa	49.70	287	eP	P	20 11 15.7	+0.8
J14K	Nanvaranak Lak	49.71	31	P	P	20 11 15.6	+1.7
	baz=258,SNR=6.7						
L14K	Kuka Creek	49.84	33	P	P	20 11 16.9	+1.9
	baz=260,SNR=8.7						
F15K	North Star Dit	49.94	27	IAmb	IAmb	20 11 18.6	
	comp=Z,41nm,1.0s						
F15K	North Star Dit	49.94	27	P	P	20 11 17.7	+2.0
	baz=255,SNR=22						
WRAB	Tennant Creek	50.00	183	P	P	20 11 17.5	+0.8
WRAB	Tennant Creek	50.00	183	deP	P	20 11 16.8	+0.1
WRAB				pmax	pmax		
	comp=Z,42nm,0.9s						
WRAB	Tennant Creek	50.00	183	P	P	20 11 16.6	-0.1
WRAB				IAmb	IAmb	20 11 17.8	
	comp=Z,70nm,1.2s						
G15K	Niukluk	50.01	28	P	P	20 11 17.8	+1.6
	baz=256,SNR=5.8						
WRA	Warramunga Arr	50.01	183	P	P	20 11 17.0	+0.2
	comp=Z,39nm,0.6s,baz=360,slow=7.8,SNR=229						
WRA				PcP	PcP	20 12 28.2	+0.6
	comp=Z,4.7nm,0.4s,baz=3.5,slow=3.9,SNR=4.9						
WRA				pP	pP	20 12 52.4	+0.4
	comp=Z,10.0nm,0.9s,baz=3.8,slow=8.5,SNR=3.8						
WRA				S	S	20 17 48.1	-1.5
	comp=Z,8.1nm,0.8s,baz=4.0,slow=13,SNR=8.9						
	comp=Z,39nm,0.6s						
WRA	Warramunga Arr	50.01	183	P	P	20 11 15.8	-1.0
M14K	Bethel	50.09	34	IAmb	IAmb	20 11 19.6	
	comp=Z,25nm,0.8s						
M14K	Bethel	50.09	34	P	P	20 11 18.6	+1.8
	baz=261,SNR=11						
N14K	Kuskokwak Cree	50.11	35	P	P	20 11 18.6	+1.6
	baz=262						
KBK	Karagaybulak	50.20	302	P	P	20 11 19.4	+1.2
	SNR=11						
O14K	Tigyukauivet M	50.24	36	P	P	20 11 19.4	+1.5
	baz=263						
KSH2	Kashi	50.24	298	P	P	20 11 20.1	+1.5
KSH2				S	S	20 17 52.0	-0.9
KSH2				pmax	pmax		
	comp=Z,56nm,0.8s						
CHMS	Chumysh	50.30	303	P	P	20 11 19.6	+0.8
	SNR=44						
SGDS	Sogindy	50.34	303	i P	P	20 11 19.7	+0.7
SGDS				eS	S	20 17 55.9	+2.1
C16K	Lisburne Hills	50.42	24	IAmb	IAmb	20 11 21.6	
	comp=Z,54nm,0.9s						
C16K	Lisburne Hills	50.42	24	P	P	20 11 20.2	+1.1
	baz=252						
USP	Ospenovka	50.45	303	P	P	20 11 20.5	+0.6
	SNR=10						
L15K	Ungalak Mounta	50.47	33	P	P	20 11 20.9	+1.3
	baz=261						
AAK	Ala-Archa	50.53	302	P	P	20 11 21.6	+0.9
	SNR=31						
AAK	Ala-Archa	50.53	302	i P	P	20 11 21.4	+0.7
	SNR=33						
AAK	Ala-Archa	50.53	302	ceP	P	20 11 21.3	+0.7
AAK				pmax	pmax		
	comp=Z,50nm,0.8s						
AAK	Ala-Archa	50.53	302	P	P	20 11 21.1	+0.5
AAK				IAmb	IAmb	20 11 22.3	
	comp=Z,43nm,0.8s						
AAK	Ala-Archa	50.53	302	P	P	20 11 21.4	+0.7
AAK				PcP	PcP	20 12 29.7	0.0
K15K	Wolf Creek Mou	50.54	32	P	P	20 11 22.0	+1.9
	baz=260,SNR=6.6						
UCH	Uchtor	50.57	302	P	P	20 11 22.6	+1.3
	SNR=74						
BTLS	Baital	50.58	305	eP	P	20 11 21.3	+0.6
BTLS				pmax	pmax		
	comp=Z,27nm,0.6s						
BTLS	Baital	50.58	305	eP	P	20 11 21.3	+0.6
	comp=Z,27nm,0.6s						
QIS	Mount Isa	50.64	177	P	P	20 11 21.7	+0.3
	comp=Z,40nm,0.8s						
H16K	Elim	50.67	29	P	P	20 11 22.3	+1.3
	baz=258,SNR=5.6						
M15K	Kasigluk River	50.71	34	P	P	20 11 22.6	+1.3
	baz=263,SNR=7.1						
G16K	Koyuk River	50.79	28	P	P	20 11 23.0	+1.1
	baz=257						
S14K	Fog Glacier	50.90	40	P	P	20 11 24.1	+1.1
	baz=267						
CTA	Charters Tower	50.92	169	P	P	20 11 24.1	+0.7
	comp=Z,8.1nm,1.1s						
CTA	Charters Tower	50.92	169	P	P	20 11 23.9	+0.4
	comp=Z,14nm,0.7s,baz=345,slow=7.2,SNR=23						
	comp=Z,14nm,0.7s						
CTAO	Charters Tower	50.92	169	P	P	20 11 24.3	+0.9
CTAO	Charters Tower	50.92	169	P	P	20 11 24.0	+0.6
CTAO				pmax	pmax		
	comp=Z,49nm,1.6s						
CTAO	Charters Tower	50.92	169	P	P	20 11 24.0	+0.6
CTAO				IAmb	IAmb	20 12 60.0	
	comp=Z,49nm,1.6s						
N15K	Kwethluk River	50.94	35	IAmb	IAmb	20 11 25.7	
	comp=Z,23nm,0.9s						
N15K	Kwethluk River	50.94	35	P	P	20 11 24.8	+1.7
	baz=264,SNR=12						
O15K	Ungalikthiuk R	50.97	36	P	P	20 11 24.7	+1.4
	baz=265,SNR=8.1						
EKS2	Erkin-Say	51.05	302	P	P	20 11 25.3	+0.9
	SNR=45						
D17K	Noatak River	51.07	25	P	P	20 11 25.9	+2.0
	baz=255,SNR=30						
TSSA	Tissa	51.09	289	eP	P	20 11 25.3	+0.4
TSSA				i x	S	20 18 02.2	-2.4
J16K	Anvik River	51.13	31	P	P	20 11 26.0	+1.7
	baz=260,SNR=10						
JHNI	Jhansi	51.17	280	eP	P	20 11 24.5	-0.9
JHNI				i x	x	20 11 31.4	
I17K	Unalakleet	51.19	30	IAmb	IAmb	20 11 27.7	
	comp=Z,26nm,1.0s						
I17K	Unalakleet	51.19	30	P	P	20 11 26.7	+1.9
	baz=260,SNR=13						
RDOG	Red Dog Mine	51.23	25	IAmb	IAmb	20 11 27.8	
	comp=Z,82nm,1.2s						
RDOG	Red Dog Mine	51.23	25	P	P	20 11 26.9	+1.8
	baz=254,SNR=7.9						
C17K	DeLong Mountai	51.25	24	P	P	20 11 27.1	+1.9
	baz=254,SNR=13						
E17K	Hotham Inlet	51.39	26	P	P	20 11 27.9	+1.7
	baz=256,SNR=13						
L16K	Owhat River	51.42	33	P	P	20 11 27.8	+1.3
	baz=263,SNR=8.9						
F17K	Baldwin Pennin	51.46	27	IAmb	IAmb	20 11 29.1	
	comp=Z,30nm,0.6s						
F17K	Baldwin Pennin	51.46	27	P	P	20 11 28.6	+1.9
	baz=257,SNR=12						
AYAN	Aya Nagar	51.48	284	ex	x	20 12 19.1	
G17K	Kiwalik Mounta	51.51	28	P	P	20 11 28.8	+1.7
	baz=259,SNR=14						
M16K	Timber Creek	51.59	34	P	P	20 11 29.3	+1.6
	baz=264,SNR=6.9						
N16K	Nishlik Lake	51.62	35	P	P	20 11 29.8	+1.7
	baz=264,SNR=20						
H17K	Granite Mounta	51.71	29	P	P	20 11 30.3	+1.7
	baz=260,SNR=14						
J17K	VABM Dome	51.83	31	P	P	20 11 31.4	+2.0
	baz=262,SNR=20						
O16K	Kokwok River B	51.89	36	P	P	20 11 31.5	+1.5
	baz=266,SNR=16						
P16K	Nushagak River	51.90	37	IAmb	IAmb	20 11 32.7	
	comp=Z,30nm,0.7s						
P16K	Nushagak River	51.90	37	P	P	20 11 31.8	+1.7
	baz=266						
E18K	Tukpahlearik C	51.93	26	P	P	20 11 32.0	+1.9
	baz=257,SNR=15						
C18K	Utukok River	52.00	24	IAmb	IAmb	20 11 33.1	
	comp=Z,33nm,0.8s						
C18K	Utukok River	52.00	24	P	P	20 11 32.4	+1.7
	baz=256,SNR=25						
L17K	Donlin	52.02	33	P	P	20 11 32.9	+2.0
	baz=264,SNR=16						
K17K	Iditarod	52.09	32	IAmb	IAmb	20 11 34.3	
	comp=Z,26nm,0.9s						
K17K	Iditarod	52.09	32	P	P	20 11 33.4	+2.0
	baz=263,SNR=22						
F18K	Selawik	52.12	27	P	P	20 11 33.2	+1.7
	baz=259,SNR=20						
JMU	Jammu	52.18	290	eP	P	20 11 33.5	+1.0
NGP	Nagpur	52.32	274	eP	P	20 11 34.4	+0.6
M17K	Holitna River	52.36	34	IAmb	IAmb	20 11 36.4	
	comp=Z,23nm,0.8s						
M17K	Holitna River	52.36	34	P	P	20 11 35.2	+1.9
	baz=265,SNR=16						
G18K	Tagagawik	52.39	28	IAmb	IAmb	20 11 35.9	
	comp=Z,28nm,0.9s						
G18K	Tagagawik	52.39	28	P	P	20 11 35.0	+1.5
	baz=260,SNR=34						
H18K	Honhosa River	52.39	29	P	P	20 11 35.0	+1.4
	baz=261,SNR=18						
O17K	Koliganek Bris	52.40	36	P	P	20 11 35.3	+1.6
	baz=266,SNR=7.1						
N17K	Nushagak Hills	52.41	35	P	P	20 11 35.9	+2.2
	baz=266,SNR=12						
A19K	Wainwright	52.44	22	P	P	20 11 36.1	+2.4
	baz=255						
BVAR	Borovoye Array	52.46	316	P	P	20 11 34.6	+0.4
	comp=Z,182nm,0.5s,baz=95,slow=8.0,SNR=685						
BVAR				PcP	PcP	20 12 36.8	+0.3
	comp=Z,19nm,0.6s,baz=99,slow=3.4,SNR=4.5						
BVAR				ScP	ScP	20 15 44.7	-0.2
	comp=Z,8.3nm,0.6s,baz=93,slow=5.9,SNR=6.4						
BVAR				S	S	20 18 21.1	-0.9
	comp=Z,11nm,0.8s,baz=91,slow=13,SNR=15						
	comp=Z,182nm,0.5s						
BORK	Borovoye	52.50	316	P	P	20 11 34.8	+0.3
BORK				pmax	pmax		
	comp=Z,166nm,0.6s						
BORK	Borovoye	52.50	316	P	P	20 11 34.8	+0.3
C19K	Lookout Ridge	52.67	24	IAmb	IAmb	20 11 38.5	
	comp=Z,58nm,0.8s						
C19K	Lookout Ridge	52.67	24	P	P	20 11 37.6	+2.1
	baz=257,SNR=45						
P17K	Kvichak River	52.71	36	IAmb	IAmb	20 11 39.0	
	comp=Z,23nm,0.8s						
P17K	Kvichak River	52.71	36	P	P	20 11 37.4	+1.6
	baz=268,SNR=6.5						
L18K	Granite Mounta	52.78	33	P	P	20 11 38.3	+2.0
	baz=265,SNR=19						
DZA	Taraz	52.80	303	eP	P	20 11 37.4	+0.5
DZA	Taraz	52.80	303	eP	P	20 11 37.5	+0.5
J18K	Innoko River	52.89	31	P	P	20 11 38.3	+1.2
	baz=264,SNR=8.4						
F19K	Shaleruckik Mo	52.90	27	P	P	20 11 38.1	+1.0
	baz=260,SNR=12						
BHPL	Bhopal	52.95	277	eP	P	20 11 38.3	0.0
BHPL				IAmb	IAmb	20 11 39.6	
	comp=Z,14nm,0.8s						
BHPL				ex	x	20 22 46.1	
GCSA	Galena City Sc	52.96	29	P	P	20 11 38.5	+0.9
	baz=263						
Q17K	Contact Creek	52.97	38	P	P	20 11 38.3	+0.4
	baz=269						
N18K	Kilae Creek	53.06	35	P	P	20 11 40.2	+1.8
	baz=267						
DRK	Karamyk	53.06	299	IAmb	IAmb	20 11 41.1	
	comp=Z,46nm,0.7s						
G19K	Purcell Mounta	53.06	28	P	P	20 11 39.5	+1.3
	baz=262,SNR=18						
D19K	Kuna River	53.07	25	IAmb	IAmb	20 11 40.8	
	comp=Z,37nm,0.7s						
D19K	Kuna River	53.07	25	P	P	20 11 39.9	+1.6
	baz=259,SNR=33						
CHIR	Chirikof Islan	53.10	41	P	P	20 11 40.4	+1.7
	baz=271						
M18K	Stony River	53.13	34	P	P	20 11 40.3	+1.4
	baz=266						
E19K	Redstone River	53.21	26	IAmb	IAmb	20 11 42.0	
	comp=Z,63nm,0.8s						
E19K	Redstone River	53.21	26	P	P	20 11 41.1	+1.8
	baz=261,SNR=90						
NIL	Nilore	53.24	291	P	P	20 11 40.1	0.0
NIL				pmax	pmax		
	comp=Z,70nm,0.7s						
NIL	Nilore	53.24	291	P	P	20 11 40.1	0.0
H19K	Roundabout Mou	53.24	29	IAmb	IAmb	20 11 42.2	
	comp=Z,21nm,0.7s						
H19K	Roundabout Mou	53.24	29	P	P	20 11 41.2	+1.7
	baz=263,SNR=30						
P18K	Big Mountain,	53.34	36	P	P	20 11 41.6	+1.3
	baz=268,SNR=12						
O18K	Koktuh Hills	53.36	36	IAmb	IAmb	20 11 44.3	
	comp=Z,18nm,0.7s						
O18K	Koktuh Hills	53.36	36	P	P	20 11 42.3	+1.8
	baz=268,SNR=12						
KKAR	Karatay Array	53.36	303	P	P	20 11 41.5	+0.7
KKAR	Karatay Array	53.36	303	P	P	20 11 41.5	+0.7
J19K	Poorman	53.42	30	P	P	20 11 42.4	+1.5
	baz=265,SNR=27						
Q18K	Katmai Hardscr	53.43	37	P	P	20 11 41.2	+0.1
	baz=269,SNR=7.4						
MANEM	Manem	53.55	296	IAmb	IAmb	20 11 45.0	
	comp=Z,156nm,0.7s						
L19K	White Mountain	53.64	33	P	P	20 11 44.0	+1.5
	baz=267,SNR=8.9						
D20K	Etivluk River	53.65	25	P	P	20 11 44.1	+1.7
	baz=260,SNR=124						
BTK	Batken	53.69	300	IAmb	IAmb	20 11 44.8	
	comp=Z,48nm,1.2s						
B20K	Meade River	53.70	23	IAmb	IAmb	20 11 45.4	
	comp=Z,62nm,0.8s						
B20K	Meade River	53.70	23	P	P	20 11 44.5	+1.8
	baz=259,SNR=23						
AS15	Alice Springs	53.70	183	P	P	20 11 43.7	+0.3
	comp=Z,46nm,0.7s						
MBWA	Marble Bar	53.73	200	P	P	20 11 43.9	+0.3
	comp=Z,123nm,0.8s						
MBWA	Marble Bar	53.73	200	P	P	20 11 43.7	+0.1
MBWA	Marble Bar	53.73	200	P	P	20 11 43.6	+0.1
MBWA	Marble Bar	53.73	200	P	P	20 11 43.8	+0.1
AS31	Alice Springs	53.73	183	P	P	20 11 44.0	+0.4
	comp=Z,24nm,0.6s,comp=Z,0.0nm						
AS31	Alice Springs	53.73	183	IAmb	IAmb	20 11 45.6	
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	53.73	183	P	P	20 11 44.0	+0.3
	comp=Z,29nm,0.8s,baz=14,slow=13,SNR=248						
ASAR				PcP	PcP	20 12 42.5	+0.8
	comp=Z,4.1nm,0.7s,baz=12,slow=5.0,SNR=4.4						
ASAR				ScP	ScP	20 15 51.6	+0.9
	comp=Z,1.9nm,0.8s,baz=355,slow=4.8,SNR=3.8						
ASAR				S	S	20 18 39.1	-0.3
	comp=Z,3.4nm,0.7s,baz=15,slow=21,SNR=13						
	comp=Z,29nm,0.8s						
F20K	Avaraart Lake	53.73	27	P	P	20 11 44.6	+1.6
	baz=262,SNR=26						
E20K	Nigu River	53.73	25	P	P	20 11 44.6	+1.6
	baz=261,SNR=51						
N19K	Bonanza Creek	53.75	35	P	P	20 11 45.0	+1.6
	baz=268,SNR=5.5						
AUALC	St Philip's Co	53.75	183	P	P	20 11 44.8	+1.0
O19K	Port Alsworth	53.81	35	P	P	20 11 45.3	+1.7
	baz=269						
BRLS	Borolday	53.86	303	eP	P	20 11 46.0	+1.6
BRLS	Borolday	53.86	303	eP	P	20 11 46.0	+1.6
IUG	Iuzhnay	53.88	302	eP	P	20 11 45.1	+0.5
IUG				pmax	pmax		
	comp=Z,105nm,0.7s						
IUG	Iuzhnay	53.88	302	eP	P	20 11 45.2	+0.6
	comp=Z,105nm,0.7s						
H20K	Anotleneega Mo	53.89	29	P	P	20 11 45.7	+1.6
	baz=264,SNR=33						
SII	Sitkinak Islan	53.89	40	P	P	20 11 45.9	+1.5
	baz=271						
I20K	Naaghedeneel	53.99	30	IAmb	IAmb	20 11 47.9	
	comp=Z,47nm,0.6s						
I20K	Naaghedeneel	53.99	30	P	P	20 11 47.0	+2.2
	baz=265,SNR=10						
K20K	Telida	54.07	31	IAmb	IAmb	20 11 48.5	
	comp=Z,32nm,0.7s						
K20K	Telida	54.07	31	P	P	20 11 47.5	+2.1
	baz=267,SNR=42						
J20K	Nowinta River	54.09	30	IAmb	IAmb	20 11 48.4	
	comp=Z,23nm,0.8s						
J20K	Nowinta River	54.09	30	P	P	20 11 47.5	+2.0
	baz=266,SNR=32						
A21K	Barrow	54.13	21	P	P	20 11 47.3	+1.6
	baz=258						
Q19K	Cape Douglas,	54.15	37	P	P	20 11 46.2	0.0
	baz=270						
CHM	Chimkent	54.16	303	eP	P	20 11 47.3	+0.8
CHM				pmax	pmax		
	comp=Z,69nm,0.6s						
CHM	Chimkent	54.16	303	eP	P	20 11 47.3	+0.8
	comp=Z,69nm,0.6s						
HYB	Hyderabad	54.26	270	eP	P	20 11 47.6	+0.1
HYB				eS	S	20 18 44.7	-2.1
OHAK	Old Harbor	54.36	39	P	P	20 11 48.2	+0.6
	baz=272						
C21K	Knifeblade Rid	54.37	24	P	P	20 11 49.1	+1.5
	baz=262						
IMAR	Indian Mountai	54.40	28	P	P	20 11 48.9	+1.1
M20K	Styx River	54.44	33	P	P	20 11 50.1	+1.9
	baz=268,SNR=7.1						
B21K	Ikpikpuk River	54.50	24	P	P	20 11 50.5	+2.1
	baz=262,SNR=73						
G21K	Allakaket	54.54	27	IAmb	IAmb	20 11 52.1	
	comp=Z,46nm,1.2s						
G21K	Allakaket	54.54	27	P	P	20 11 50.5	+1.8
	baz=265,SNR=46						
E21K	Killik River	54.57	25	IAmb	IAmb	20 11 51.3	
	comp=Z,54nm,0.8s						
E21K	Killik River	54.57	25	P	P	20 11 50.5	+1.5
	baz=263,SNR=83						
A22K	Sinclair Lake	54.60	22	P	P	20 11 51.0	+1.9
	baz=260						
F21K	Alatna River	54.62	27	P	P	20 11 50.6	+1.3
	baz=264,SNR=34						
KDAK	Kodiak Island	54.73	38	P	P	20 11 50.7	+0.6
KDAK				pmax	pmax		
	comp=Z,31nm,1.1s						
KDAK	Kodiak Island	54.73	38	P	P	20 11 50.7	+0.6
KDAK				IAmb	IAmb	20 11 52.3	
	comp=Z,31nm,1.1s						
KDAK	Kodiak Island	54.73	38	P	P	20 11 51.2	+1.1
	baz=272						
H21K	Melozitna Rive	54.76	29	IAmb	IAmb	20 11 53.3	
	comp=Z,63nm,1.2s						
H21K	Melozitna Rive	54.76	29	P	P	20 11 52.3	+2.0
	baz=266,SNR=65						
BKNR	BIKANER	54.85	285	ex	P	20 11 45.1	-6.4
SPCR	Spurr Chakacha	54.87	34	P	P	20 11 52.8	+1.6
	baz=270						
CHUM	Lake Minchumin	54.88	31	P	P	20 11 53.0	+1.9
	baz=268						
PPLA	Purkeypile	54.90	32	IAmb	IAmb	20 11 53.8	
	comp=Z,18nm,0.6s						
PPLA	Purkeypile	54.90	32	P	P	20 11 53.3	+1.8
	baz=269,SNR=15						
CAST	Castle Rocks	54.96	31	P	P	20 11 53.5	+1.7
	baz=268,SNR=27						
B22K	Teshekpuk Lake	55.01	23	IAmb	IAmb	20 11 54.5	
	comp=Z,48nm,0.8s						
B22K	Teshekpuk Lake	55.01	23	P	P	20 11 53.6	+1.6
	baz=262,SNR=14						
STLK	Strandline Lak	55.05	34	IAmb	IAmb	20 12 15.6	
	comp=Z,48nm,0.8s						
I21K	Tanana	55.08	29	IAmb	IAmb	20 11 55.7	
	comp=Z,52nm,1.4s						
I21K	Tanana	55.08	29	P	P	20 11 54.5	+2.0
	baz=267,SNR=35						
F22K	John River	55.15	26	P	P	20 11 55.0	+2.0
	baz=265,SNR=63						
SKT	Skwentna	55.19	33	P	P	20 11 54.1	+0.7
	baz=270,SNR=12						
CHGR	Chuyangaron	55.24	298	c i P	P	20 11 54.9	+0.6
CHGR				pmax	pmax		
	comp=Z,325nm,0.9s						
H22K	Ishtalitna Cre	55.36	28	IAmb	IAmb	20 11 57.8	
	comp=Z,56nm,1.1s						
H22K	Ishtalitna Cre	55.36	28	P	P	20 11 56.8	+2.3
	baz=267,SNR=87						
L22K	Petersville	55.55	32	IAmb	IAmb	20 11 57.6	
	comp=Z,24nm,0.5s						
L22K	Petersville	55.55	32	P	P	20 11 56.8	+0.8
	baz=270,SNR=23						
LATR	Latur	55.59	272	eP	P	20 11 57.2	+0.3
MLY	Manley	55.60	29	IAmb	IAmb	20 11 59.1	
	comp=Z,29nm,1.2s						
MLY	Manley	55.60	29	P	P	20 11 58.1	+1.9
	baz=268,SNR=40						
BRSE	Bradley Lake S	55.62	36	P	P	20 11 57.6	+1.2
	baz=272						
WRKA	Warakurna	55.62	189	P	P	20 11 56.1	-0.8
	comp=Z,36nm,1.1s						
TRF	Thorofare Moun	55.77	31	P	P	20 11 59.0	+1.4
	baz=270						
D23K	Nanushuk River	55.82	25	P	P	20 11 59.9	+2.2
	baz=266,SNR=87						
M22K	Willow	55.86	33	IAmb	IAmb	20 12 00.5	
	comp=Z,60nm,0.8s						
M22K	Willow	55.86	33	P	P	20 11 58.7	+0.7
	baz=271						
COLD	Coldfoot	55.89	27	P	P	20 11 60.0	+1.8
	baz=267,SNR=25						
C23K	Itkillik River	55.91	24	IAmb	IAmb	20 12 01.0	
	comp=Z,71nm,0.9s						
C23K	Itkillik River	55.91	24	P	P	20 12 00.1	+1.8
	baz=265,SNR=49						
G23K	Bananza Creek	55.94	27	IAmb	IAmb	20 12 01.5	
	comp=Z,54nm,0.9s						
G23K	Bananza Creek	55.94	27	P	P	20 12 00.5	+1.9
	baz=268,SNR=82						
RC01	Rabbit Creek A	56.07	34	P	P	20 11 59.9	+0.4
	baz=272,SNR=6.0						
H23K	Yukon River	56.11	28	IAmb	IAmb	20 12 03.6	
	comp=Z,37nm,0.9s						
H23K	Yukon River	56.11	28	P	P	20 12 01.9	+2.1
	baz=269						
BWN	Browne	56.13	30	IAmb	IAmb	20 12 07.0	
	comp=Z,23nm,0.7s						
E23K	Chandalar	56.16	26	IAmb	IAmb	20 12 03.7	
	comp=Z,64nm,1.0s						
E23K	Chandalar	56.16	26	P	P	20 12 02.1	+2.0
	baz=267,SNR=86						
I23K	Minto, Yukon-K	56.18	29	P	P	20 12 01.8	+1.6
	baz=270,SNR=17						
TOLK	Toolik Lake Re	56.20	25	P	P	20 12 02.0	+1.7
	baz=267,SNR=54						
SHAA	Shahritus	56.30	297	IAmb	IAmb	20 12 03.7	
	comp=Z,178nm,0.7s						
NEA2	Nenana	56.30	30	IAmb	IAmb	20 12 03.5	
	comp=Z,61nm,1.2s						
NEA2	Nenana	56.30	30	P	P	20 12 02.3	+1.2
	baz=270,SNR=32						
PMR	Palmer	56.34	34	P	P	20 12 02.4	+1.1
PMR	Palmer	56.34	34	IAmb	IAmb	20 12 02.9	
	comp=Z,31nm,1.1s						
PMR	Palmer	56.34	34	P	P	20 12 01.7	+0.4
	baz=272						
KBL	Kabul	56.37	293	P	P	20 12 02.5	+0.2
KBL				pmax	pmax		
	comp=Z,41nm,0.7s						
KBL	Kabul	56.37	293	P	P	20 12 02.5	+0.2
KBL				IAmb	IAmb	20 12 03.7	
	comp=Z,40nm,0.7s						
MCK	McKinley	56.37	31	IAmb	IAmb	20 12 04.1	
	comp=Z,34nm,0.8s						
MCK	McKinley	56.37	31	P	P	20 12 02.5	+1.0
	baz=271,SNR=21						
RND	Reindeer	56.42	31	IAmb	IAmb	20 12 03.5	
	comp=Z,31nm,0.7s						
GHO	Glory Hole Cre	56.43	33	IAmb	IAmb	20 12 04.9	
	comp=Z,24nm,1.0s						
D24K	Happy Valley	56.50	24	P	P	20 12 04.3	+2.0
	baz=267						
WAT1	Susitna Watana	56.57	32	P	P	20 12 03.3	+0.4
	baz=272						
E24K	Your Creek	56.58	26	IAmb	IAmb	20 12 05.9	
	comp=Z,26nm,0.8s						
E24K	Your Creek	56.58	26	P	P	20 12 05.0	+2.1
	baz=268,SNR=58						
KNK	Knik Glacier	56.67	34	IAmb	IAmb	20 12 05.5	
	comp

baz=271
WAT6 **Susitna Watana** 56.95 32 P P 20 12 06.6 +0.9
baz=273,SNR=20
G24K **Hadweenzic Riv** 56.96 27 IAmb IAmb 20 12 08.7
comp=Z,51nm,0.8s
G24K **Hadweenzic Riv** 56.96 27 P P 20 12 07.7 +2.2
baz=270,SNR=90
POKR **Poker Plat Res** 57.00 29 P P 20 12 07.0 +1.2
baz=271
M23K **Glacier View** 57.00 33 P P 20 12 06.7 +0.8
baz=273,SNR=11
QLP **Quilpie** 57.01 172 P P 20 12 06.6 +0.2
comp=Z,45nm,0.9s
EIDS **Eidsvold** 57.03 165 P P 20 12 07.2 +0.7
comp=Z,26nm,1.1s
DHY **Denali Highway** 57.09 32 P P 20 12 07.4 +0.7
baz=273,SNR=12
SALM **Salem** 57.18 264 *e*P P 20 12 09.1 +1.2
SCM **Sheep Creek Mo** 57.19 33 IAmb IAmb 20 12 09.4
comp=Z,41nm,0.8s
SCM **Sheep Creek Mo** 57.19 33 P P 20 12 08.4 +1.1
baz=274,SNR=16
JASL **Jaisalmer** 57.20 284 *e*P P 20 12 08.4 +0.6
HDA **Harding Lake** 57.23 30 IAmb IAmb 20 12 08.6
comp=Z,37nm,0.9s
HDA **Harding Lake** 57.23 30 P P 20 12 07.7 +0.3
baz=272,SNR=27
ILAR **Eielson Array** 57.24 30 P P 20 12 07.5 +0.1
comp=Z,8.6nm,0.8s,baz=277,slow=5.0,SNR=92
ILAR PcP **PcP** 20 12 54.5 -0.4
comp=Z,2.2nm,0.6s,baz=268,slow=5.2,SNR=4.4
ILAR pP **pP** 20 13 46.9 -0.6
comp=Z,2.4nm,0.8s,baz=284,slow=5.5,SNR=4.0
ILAR ScP **ScP** 20 16 04.8 -0.8
comp=Z,0.9nm,0.5s,baz=268,slow=4.4,SNR=6.9
ILAR S **S** 20 19 24.8 +0.8
comp=Z,0.3nm,0.7s,baz=278,slow=9.0,SNR=2.6
comp=Z,8.6nm,0.8s
ILAR **Eielson Array** 57.24 30 pP 20 13 47.5 0.0
ILAR **Eielson Array** 57.24 30 P P 20 12 07.3 -0.2
P23K **Montague Islan** 57.28 35 P P 20 12 09.1 +1.2
baz=275
GLI **Glacier Island** 57.37 34 P P 20 12 09.4 +1.0
baz=274
D25K **Kavik River** 57.37 24 IAmb IAmb 20 12 11.0
comp=Z,42nm,0.8s
D25K **Kavik River** 57.37 24 P P 20 12 10.1 +1.7
baz=270,SNR=79
G25K **Bearman Lake** 57.50 27 P P 20 12 11.6 +2.4
baz=272,SNR=63
F25K **Christian Rive** 57.66 26 IAmb IAmb 20 12 13.8
comp=Z,55nm,0.8s
F25K **Christian Rive** 57.66 26 P P 20 12 12.9 +2.5
baz=271,SNR=115
E25K **Arctic Village** 57.67 26 IAmb IAmb 20 12 13.7
comp=Z,45nm,0.8s
E25K **Arctic Village** 57.67 26 P P 20 12 12.8 +2.3
baz=271,SNR=75
M24K **Tolsona, Glenn** 57.71 33 IAmb IAmb 20 12 14.8
comp=Z,40nm,1.1s
M24K **Tolsona, Glenn** 57.71 33 P P 20 12 12.3 +1.5
baz=274,SNR=6.0
K24K **Donnelly Dome** 57.77 31 IAmb IAmb 20 12 13.3
comp=Z,30nm,0.7s
K24K **Donnelly Dome** 57.77 31 P P 20 12 11.7 +0.5
baz=274,SNR=15
SVE **Sverdlovsk** 57.78 321 *d i*P P 20 12 11.9 +0.6
SVE *e*S S 20 19 31.3 +0.3
SVE pmax pmax
comp=Z,76nm,0.7s
PRP **Porcupine Dome** 57.78 29 P P 20 12 11.5 +0.1
baz=273,SNR=29
FYU **Fort Yukon** 57.85 28 IAmb IAmb 20 12 15.7
comp=Z,66nm,1.3s
POO **Poona** 57.86 274 *e*P P 20 12 13.1 +0.6
KLU **Klutina** 57.88 34 P P 20 12 13.1 +1.1
baz=275,SNR=11
C26K **Camden Bay** 57.88 24 P P 20 12 14.2 +2.4
baz=271
J25K **Salcha River,** 57.90 30 P P 20 12 11.7 -0.4
baz=274,SNR=11
DIV **Divide** 57.99 34 IAmb IAmb 20 12 15.1
comp=Z,24nm,0.9s
EYAK **Cordova Ski Ar** 58.05 35 P P 20 12 14.5 +1.5
baz=276
HARP **HAARP** 58.16 32 P P 20 12 15.5 +1.7
baz=275,SNR=12
RIDG **Independent Ri** 58.19 31 IAmb IAmb 20 12 16.7
comp=Z,28nm,0.7s
RIDG **Independent Ri** 58.19 31 P P 20 12 14.7 +0.6
baz=275,SNR=31
F26K **Sheenjek River** 58.23 26 IAmb IAmb 20 12 17.7
comp=Z,66nm,0.8s
F26K **Sheenjek River** 58.23 26 P P 20 12 16.9 +2.6
baz=273,SNR=108
C27K **Jago River** 58.31 24 IAmb IAmb 20 12 17.6
comp=Z,36nm,0.8s
C27K **Jago River** 58.31 24 P P 20 12 16.7 +2.0
baz=272,SNR=47
G26K **Porcupine Rive** 58.41 27 IAmb IAmb 20 12 18.6
comp=Z,28nm,0.8s
G26K **Porcupine Rive** 58.41 27 P P 20 12 17.6 +2.3
baz=274,SNR=50
KOD **Kodaikanal** 58.46 263 *e*P P 20 12 17.4 +0.5
N25K **Chitina, Valde** 58.50 33 P P 20 12 17.7 +1.5
baz=276,SNR=10
SCRK **Sand Creek** 58.55 31 IAmb IAmb 20 12 18.3
comp=Z,37nm,0.8s
SCRK **Sand Creek** 58.55 31 P P 20 12 17.4 +0.9
baz=275,SNR=67
BMRM **Bremner River** 58.57 34 IAmb IAmb 20 12 19.0
comp=Z,48nm,1.0s
BMRM **Bremner River** 58.57 34 P P 20 12 18.1 +1.5
baz=276,SNR=18
MENT **Mentasta** 58.77 32 P P 20 12 20.1 +2.1
MENT **Mentasta** 58.77 32 IAmb IAmb 20 12 20.6
comp=Z,41nm,1.0s
KAIM **Kayak Island** 58.78 35 P P 20 12 19.6 +1.6
baz=277
GLB **Gilahina Butte** 58.90 33 IAmb IAmb 20 12 21.2
comp=Z,25nm,1.0s
L26K **Log Cabin Wild** 58.93 32 IAmb IAmb 20 12 21.6
comp=Z,25nm,0.6s
L26K **Log Cabin Wild** 58.93 32 P P 20 12 20.7 +1.7
baz=276,SNR=9.2
ARTI **Arti** 59.07 321 *c i*P P 20 12 20.1 +0.1
ARTI 20 13 00.1
ARTI *PP **pP** 20 14 00.4 -0.6
ARTI S **S** 20 19 48.6 +1.1
ARTI 20 21 14.0
ARTI SS **SS** 20 23 52.2 +0.2
ARTI pmax pmax
comp=Z,82nm,0.6s
ARTI **Arti** 59.07 321 P P 20 12 19.9 -0.1
ARTI **Arti** 59.07 321 P P 20 12 20.0 -0.1
ARTI PcP **PcP** 20 13 01.6 -0.7
ARTI ScP **ScP** 20 16 12.4 -1.4
BERG **Berg Lake** 59.08 35 IAmb IAmb 20 12 22.5
comp=Z,26nm,0.6s
E27K **Coleen River** 59.16 26 IAmb IAmb 20 12 23.5
comp=Z,28nm,0.8s
E27K **Coleen River** 59.16 26 P P 20 12 22.6 +2.1
baz=275,SNR=53
M26K **Nabesna, AK** 59.16 32 IAmb IAmb 20 12 23.1
comp=Z,55nm,1.4s
M26K **Nabesna, AK** 59.16 32 P P 20 12 22.1 +1.4
baz=277,SNR=27
MEEK **Meekatharra** 59.23 199 P P 20 12 21.4 -0.1
comp=Z,72nm,1.1s
G27K **Doyon Strip** 59.26 27 P P 20 12 23.1 +1.9
baz=276,SNR=19
MCARA **McCarthy VSAT** 59.28 33 IAmb IAmb 20 12 23.8
comp=Z,25nm,0.8s
MCARA **McCarthy VSAT** 59.28 33 P P 20 12 23.0 +1.6
baz=278,SNR=7.2
D27M **Malcolm River** 59.30 24 IAmb IAmb 20 12 23.9
comp=Z,20nm,0.6s
D27M **Malcolm River** 59.30 24 P P 20 12 23.4 +1.9
baz=275,SNR=11
CRQM **Cirque** 59.31 34 IAmb IAmb 20 12 24.1
comp=Z,32nm,1.2s
CRQE **Cirque** 59.33 34 P P 20 12 23.1 +1.2
baz=278,SNR=6.5
H27K **Steamboat Moun** 59.37 28 IAmb IAmb 20 12 25.0
comp=Z,31nm,0.9s
H27K **Steamboat Moun** 59.37 28 P P 20 12 24.0 +2.1
baz=276,SNR=59

K27K **Chicken** 59.38 30 IAmb IAmb 20 12 24.6
comp=Z,27nm,1.0s
I27K **Kandik River** 59.40 29 IAmb IAmb 20 12 24.7
comp=Z,30nm,0.7s
I27K **Kandik River** 59.40 29 P P 20 12 23.8 +1.6
baz=276,SNR=46
ABKAR **Akbulak array** 59.45 312 P P 20 12 22.9 +0.2
TGL **Tana Glacier** 59.46 34 IAmb IAmb 20 12 24.8
comp=Z,20nm,0.8s
L27K **Beaver Creek,** 59.61 31 IAmb IAmb 20 12 26.7
comp=Z,16nm,0.8s
L27K **Beaver Creek,** 59.61 31 P P 20 12 25.2 +1.6
baz=278,SNR=34
BCAR **Beaver Creek A** 59.63 31 P P 20 12 24.7 +1.0
M27K **Edge Creek, AK** 59.68 32 IAmb IAmb 20 12 26.6
comp=Z,37nm,1.2s
M27K **Edge Creek, AK** 59.68 32 P P 20 12 25.8 +1.5
baz=278,SNR=33
F28M **Old Crow** 59.86 26 IAmb IAmb 20 12 28.2
comp=Z,26nm,0.8s
F28M **Old Crow** 59.86 26 P P 20 12 27.3 +2.1
baz=277,SNR=56
E28M **Babbage River** 59.88 25 IAmb IAmb 20 12 27.8
comp=Z,19nm,0.7s
E28M **Babbage River** 59.88 25 P P 20 12 27.2 +2.0
baz=276,SNR=37
D28M **Stokes Point** 60.08 24 P P 20 12 28.4 +1.9
baz=277
I28M **Miner Creek** 60.11 29 P P 20 12 28.4 +1.4
I28M IAmb IAmb 20 12 29.7
comp=Z,45nm,0.8s
I28M **Miner Creek** 60.11 29 P P 20 12 28.8 +1.8
baz=278,SNR=79
BVCY **Beaver Creek** 60.15 32 P P 20 12 28.7 +1.5
baz=279
YUK3 **Moose Creek** 60.43 33 P P 20 12 30.6 +1.3
baz=280,SNR=28
E29M **Blow River** 60.50 25 P P 20 12 30.7 +1.4
E29M IAmb IAmb 20 12 32.2
comp=Z,25nm,1.1s
E29M **Blow River** 60.50 25 P P 20 12 31.1 +1.7
baz=278,SNR=28
DAWY **Dawson** 60.55 30 P P 20 12 30.6 +0.8
DAWY **Dawson** 60.55 30 P P 20 12 31.1 +1.3
baz=279,SNR=8.5
H29M **Whitestone** 60.64 28 IAmb IAmb 20 12 33.2
comp=Z,56nm,1.4s
H29M **Whitestone** 60.64 28 P P 20 12 32.3 +2.0
baz=279,SNR=32
G29M **Pine Creek** 60.67 27 P P 20 12 32.7 +2.2
baz=279,SNR=72
O28M **Mount Upton** 60.73 34 IAmb IAmb 20 12 34.3
comp=Z,22nm,0.9s
O28M **Mount Upton** 60.73 34 P P 20 12 33.0 +1.6
baz=280,SNR=17
PCA **Pinnacle** 60.82 35 IAmb IAmb 20 12 34.1
comp=Z,32nm,0.9s
PINM **Pinnacle** 60.83 35 P P 20 12 33.2 +1.4
baz=281,SNR=10
YUK8 **Steele Glacier** 60.84 33 P P 20 12 33.8 +1.7
baz=280,SNR=15
J29N **Klondike Camp** 60.99 30 P P 20 12 34.7 +1.9
baz=280,SNR=5.6
BRWY **Burwash Landin** 61.18 33 P P 20 12 35.9 +1.9
baz=281
M29M **Somme Creek** 61.24 32 IAmb IAmb 20 12 37.6
comp=Z,29nm,1.1s
M29M **Somme Creek** 61.24 32 P P 20 12 36.6 +2.1
baz=281,SNR=33
L29M **L29M** 61.27 31 IAmb IAmb 20 12 37.9
comp=Z,42nm,0.8s
L29M **L29M** 61.27 31 P P 20 12 36.7 +2.2
baz=281,SNR=51
EPYK **Eagle Plains** 61.27 27 P P 20 12 36.1 +1.6
baz=280,SNR=91
FORT **Forrest** 61.31 189 P P 20 12 35.7 +0.6
comp=Z,59nm,0.7s
FORT **Forrest** 61.31 189 P P 20 12 35.4 +0.3
FORT IAmb IAmb 20 12 36.6
comp=Z,40nm,0.7s
G30M **tAoh Zraii Nji** 61.36 27 IAmb IAmb 20 12 37.9
comp=Z,76nm,1.2s
G30M **tAoh Zraii Nji** 61.36 27 P P 20 12 36.3 +1.2
baz=280,SNR=63
YUK4 **Talbot Arm** 61.36 33 P P 20 12 37.2 +1.8
baz=281,SNR=13
K29M **Barlow Dome** 61.40 30 IAmb IAmb 20 12 38.2
comp=Z,30nm,0.8s
K29M **Barlow Dome** 61.40 30 P P 20 12 37.3 +1.8
baz=281,SNR=51
F30M **Barrier River** 61.41 26 P P 20 12 37.2 +1.8
baz=280,SNR=45
YUK6 **Outpost Mounta** 61.58 34 P P 20 12 38.8 +1.9
baz=282,SNR=11
O29M **Mount Kennedy** 61.61 34 IAmb IAmb 20 12 40.0
comp=Z,17nm,0.8s
O29M **Mount Kennedy** 61.61 34 P P 20 12 39.0 +2.1
baz=282,SNR=10
I30M **Mount Dempster** 61.62 29 IAmb IAmb 20 12 40.2
comp=Z,37nm,0.8s
I30M **Mount Dempster** 61.62 29 P P 20 12 38.5 +1.6
baz=281,SNR=81
J30M **Hart River** 61.77 29 IAmb IAmb 20 12 40.0
comp=Z,11nm,0.6s
J30M **Hart River** 61.77 29 P P 20 12 39.5 +1.6
baz=281,SNR=25
HRA **Herat** 61.77 295 P P 20 12 39.4 +0.8
HRA IAmb IAmb 20 12 40.6
comp=Z,42nm,0.8s
M30M **Minto, Yukon** 61.97 32 P P 20 12 40.7 +1.5
baz=282
STKA **Stephens Creek** 62.01 175 P P 20 12 40.5 +0.8
comp=Z,157nm,0.9s
STKA **Stephens Creek** 62.01 175 P P 20 12 40.2 +0.5
comp=Z,24nm,0.6s,baz=346,slow=6.5,SNR=74
STKA S **S** 20 20 25.5 +1.0
comp=Z,2.2nm,0.8s,baz=131,slow=20,SNR=5.7
comp=Z,24nm,0.6s
HYT **Haines Junctio** 62.01 34 IAmb IAmb 20 12 42.5
comp=Z,15nm,0.8s
HYT **Haines Junctio** 62.01 34 P P 20 12 41.7 +2.1
baz=282,SNR=16
N30M **Aishikik Lake** 62.07 33 P P 20 12 41.7 +1.8
baz=282,SNR=9.9
CMSA **Cobar Meteorol** 62.08 171 P P 20 12 41.6 +1.4
comp=Z,31nm,1.2s
INK **Inuvik** 62.11 25 IAmb IAmb 20 12 41.3
comp=Z,20nm,0.5s
INK **Inuvik** 62.11 25 P P 20 12 40.8 +0.9
baz=282,SNR=20
G31M **Satah River** 62.12 26 IAmb IAmb 20 12 41.8
comp=Z,31nm,1.0s
G31M **Satah River** 62.12 26 P P 20 12 40.9 +0.9
baz=282,SNR=19
P29M **Windy Craggy** 62.16 35 IAmb IAmb 20 12 43.5
comp=Z,23nm,0.8s
P29M **Windy Craggy** 62.16 35 P P 20 12 42.4 +1.9
baz=283,SNR=9.8
MORW **Morawa** 62.26 201 P P 20 12 41.6 +0.2
comp=Z,55nm,1.0s
H31M **Peel River** 62.33 28 P P 20 12 42.9 +1.4
baz=282,SNR=66
P30M **Million Dollar** 62.43 34 P P 20 12 43.8 +1.5
baz=283
N31M **Braeburn, Yuko** 62.68 33 IAmb IAmb 20 12 46.7
comp=Z,32nm,1.1s
N31M **Braeburn, Yuko** 62.68 33 P P 20 12 45.7 +1.9
baz=284,SNR=13
O30N **Mendenhall** 62.70 33 P P 20 12 45.7 +1.8
baz=284,SNR=5.1
BBOO **Buckleboo** 62.77 181 P P 20 12 45.3 +0.7
comp=Z,59nm,1.0s
BBOO **Buckleboo** 62.77 181 P P 20 12 44.9 +0.2
BBOO IAmb IAmb 20 12 46.2
comp=Z,36nm,0.7s
PLBC **Pleasant Camp** 62.88 35 P P 20 12 46.9 +1.8
baz=284,SNR=17
M31M **Drury Creek, Y** 63.15 32 IAmb IAmb 20 12 49.3
comp=Z,20nm,1.1s
M31M **Drury Creek, Y** 63.15 32 P P 20 12 48.3 +1.5
baz=284,SNR=14
AUJCS **Jamestown Cent** 63.18 178 P P 20 12 48.5 +1.2
WHY **Whitehorse** 63.31 33 IAmb IAmb 20 12 50.6
comp=Z,21nm,0.7s
WHY **Whitehorse** 63.31 33 P P 20 12 49.6 +1.7
baz=285,SNR=10
S31K **Pelican** 63.32 37 P P 20 12 49.5 +1.6
baz=285

KIRV **Kirov** 63.35 324 *c e*P P 20 12 48.4 +0.3
HTT **Hallett** 63.42 178 P P 20 12 49.9 +1.0
comp=Z,8.7nm,1.5s
R31K **City Hall, Gus** 63.46 36 P P 20 12 50.3 +1.6
baz=285
BLDU **Ballidu** 63.52 199 P P 20 12 49.6 +0.2
comp=Z,51nm,1.6s
A36M **Sachs Harbour** 63.91 20 P P 20 12 52.9 +1.5
baz=288,SNR=27
SIT **Sitka** 64.04 37 P P 20 12 53.8 +1.4
baz=286
R32K **Eaglecrest** 64.12 36 IAmb IAmb 20 12 55.9
comp=Z,12nm,1.0s
R32K **Eaglecrest** 64.12 36 P P 20 12 54.5 +1.5
baz=286
KLBR **Kellerberrin** 64.15 198 P P 20 12 53.5 0.0
comp=Z,110nm,0.9s
P32M **Atlin** 64.15 34 P P 20 12 54.8 +1.6
baz=286
JIS **Juneau Island** 64.19 36 P P 20 12 55.6 +2.2
S32K **Killisnoo** 64.31 37 P P 20 12 55.7 +1.5
baz=286
P33M **Teslin, Yukon** 64.41 34 P P 20 12 56.4 +1.5
baz=286
MMPY **Sheldon Lake,** 64.44 31 IAmb IAmb 20 12 57.9
comp=Z,20nm,1.2s
MMPY **Sheldon Lake,** 64.44 31 P P 20 12 56.9 +1.8
baz=287,SNR=17
AUMAR **Marden Senior** 64.87 178 P P 20 12 59.4 +1.4
Q32M **Nakina River** 65.05 35 P P 20 13 00.8 +1.7
baz=288
AUMBR **Murray Bridge** 65.13 178 P P 20 13 01.0 +1.4
C36M **Paulatuk** 65.13 23 P P 20 13 00.2 +1.1
baz=290,SNR=40
U33K **Whale Pass** 65.48 38 P P 20 13 03.4 +1.7
baz=288
R33M **Jennings River** 65.55 34 P P 20 13 03.9 +1.7
baz=288,SNR=5.7
NWAO **Narrogin (SRO)** 65.55 198 P P 20 13 03.0 +0.6
comp=Z,151nm,1.0s
NWAO **Narrogin (SRO)** 65.55 198 P P 20 13 03.1 +0.8
HOPEN **Hopen** 65.63 346 *e*P P 20 13 03.0 +0.8
HOPEN IAmb IAmb 20 13 03.8
comp=Z,84nm,1.0s
HOPEN **Hopen** 65.63 346 *e*P P 20 13 01.0 -1.3
CRAG **Craig** 65.68 39 P P 20 13 04.5 +1.6
baz=288
WRAK **Wrangell Islan** 65.79 38 P P 20 13 05.0 +1.4
baz=289
S34M **Telegraph Cree** 65.94 36 IAmb IAmb 20 13 07.4
comp=Z,11nm,0.9s
S34M **Telegraph Cree** 65.94 36 P P 20 13 06.3 +1.8
baz=289,SNR=5.2
TGTN **Hyland Airport** 66.12 31 P P 20 13 07.5 +1.8
baz=290,SNR=6.6
BELG **Belogornoye** 66.14 318 *c i*P P 20 13 05.8 0.0
BELG pmax pmax
comp=Z,43nm,0.9s
DLBC **Dease Lake** 66.32 35 P P 20 13 09.0 +2.0
baz=290,SNR=6.0
WTLY **Watson Lake, Y** 66.35 33 IAmb IAmb 20 13 09.7
comp=Z,11nm,0.8s
WTLY **Watson Lake, Y** 66.35 33 P P 20 13 08.8 +1.7
baz=290
SPA0 **Spitsbergen Ar** 66.36 349 *e*P P 20 13 07.3 +0.5
SPA0 IAmb IAmb 20 13 08.2
comp=Z,66nm,1.1s
SPA0 **Spitsbergen Ar** 66.36 349 *e*P P 20 13 07.1 +0.3
SPITS **Spitsbergen Ar** 66.36 349 P P 20 13 07.4 +0.5
comp=Z,23nm,0.6s,baz=72,slow=9.3,SNR=70
comp=Z,23nm,0.6s
V35K **Ketchikan** 66.54 39 P P 20 13 09.5 +1.2
baz=290
KBS **Kingsbay** 66.61 350 *c e*P P 20 13 09.2 +0.9
KBS pmax pmax
comp=Z,57nm,0.9s
KBS **Kingsbay** 66.61 350 *e*P P 20 13 09.2 +0.9
KBS IAmb IAmb 20 13 10.1
comp=Z,61nm,0.8s
KBS **Kingsbay** 66.61 350 P P 20 13 08.9 +0.6
KBS **Kingsbay** 66.61 350 P P 20 13 09.3 +1.0
KBS **Kingsbay** 66.61 350 *i*P P 20 13 07.6 -0.7
LVZ **Lovozero** 66.68 336 ⇑P P 20 13 08.8 -0.2
LVZ **Lovozero** 66.68 336 P P 20 13 08.5 -0.5
LVZ IAmb IAmb 20 13 09.7
comp=Z,27nm,0.7s
T35M **Bob Quinn** 66.70 37 IAmb IAmb 20 13 11.8
comp=Z,11nm,0.6s
T35M **Bob Quinn** 66.70 37 P P 20 13 11.4 +2.1
baz=290,SNR=5.3
ARPS **Mount Arapiles** 66.89 176 P P 20 13 11.4 +0.9
comp=Z,20nm,0.9s
HSPB **Hornsund (broa** 67.20 348 *e*P P 20 13 12.8 +0.8
APA **Apatity** 67.25 336 ⇓ *e*P P 20 13 10.0 -2.4
APA *e* 20 13 35.8
APA *e**PP **pP** 20 14 53.1 -3.3
APA *e* 20 15 48.2
APA *e*S **S** 20 21 21.5 -5.0
APA *e*SS **SS** 20 25 54.8 -3.0
APA pmax pmax
comp=Z,77nm,1.0s
APA MLR MLR
comp=Z,264nm,3.9s
KLMR **Klimovskoe** 67.40 328 *e*P P 20 13 11.7 -1.8
KLMR pmax pmax
comp=Z,115nm,1.3s
VADS **Vadso** 67.47 339 *e*P P 20 13 14.1 +0.4
VADS IAmb IAmb 20 13 15.0
comp=Z,62nm,0.7s
NOR **Nord** 67.50 356 *i*P P 20 13 12.4 -1.4
NOR IAmb IAmb 20 13 15.0
comp=Z,33nm,1.0s
WRGLY **Wrigley** 67.59 29 P P 20 13 16.3 +1.7
baz=293,SNR=9.9
LIRD **Liard River Hi** 67.88 33 P P 20 13 18.5 +2.0
baz=292,SNR=6.7
BJO1 **Bjornoya** 67.97 345 *e*P P 20 13 16.8 +0.1
BJO1 IAmb IAmb 20 13 17.3
comp=Z,52nm,1.0s
TOO **Toolangi** 68.01 173 P P 20 13 19.2 +1.7
TOO **Toolangi** 68.01 173 P P 20 13 19.0 +1.5
TOO pmax pmax
comp=Z,6.0nm,0.8s
TOO **Toolangi** 68.01 173 P P 20 13 19.0 +1.5
KEV **Kevo** 68.36 339 P P 20 13 19.5 +0.3
KEV pmax pmax
comp=Z,81nm,0.7s
KEV **Kevo** 68.36 339 P P 20 13 19.5 +0.3
KOTAN **Kotaneelee Air** 68.56 32 P P 20 13 22.2 +1.6
baz=294
JLN **Jalan Bani Buh** 68.68 284 P P 20 13 21.9 -0.1
WBK **Wadi Bani Khal** 68.86 284 P P 20 13 23.5 +0.4
SNR=21
WSAR **Wadi Sarin** 68.88 285 P P 20 13 20.4 -2.8
ARA0 **ARCESS Array S** 68.93 339 *e*P P 20 13 23.0 +0.4
ARA0 IAmb IAmb 20 13 23.8
comp=Z,100nm,0.9s
ARCES **ARCESS Array B** 68.93 339 P P 20 13 23.1 +0.5
comp=Z,58nm,0.5s,baz=60,slow=8.4,SNR=715
ARCES PP **PP** 20 16 02.5 -0.5
comp=Z,7.5nm,0.9s,baz=57,slow=4.7,SNR=3.9
comp=Z,58nm,0.5s
BIDO **Bidbid** 69.18 286 P P 20 13 21.1 -3.9
SMDO **Samad** 69.44 285 P P 20 13 24.1 -2.6
MAK **Makhachkala** 69.58 308 *e*P P 20 13 27.3 +0.3
MAK *e**PP **pP** 20 15 10.3 -1.3
MAK *e**SP **sP** 20 16 04.0 -0.4
MAK *e* 20 16 09.7
MAK *e*S **S** 20 21 55.2 +0.8
MAK *e*SS **SS** 20 26 34.8 +0.2
MAK pmax pmax
comp=Z,84nm,0.8s
JMDO **Jabal Madar** 69.69 285 P P 20 13 28.4 +0.3
BANOM **Banah** 69.69 289 P P 20 13 28.2 +0.2
BANOM **Banah** 69.69 289 P P 20 13 29.8 +1.8
SHME **Shamm** 69.77 289 *i*P P 20 13 29.8 +1.4
SNR=11
SHME **Shamm** 69.77 289 P P 20 13 29.6 +1.1
HOQ **Hoqain** 69.83 286 P P 20 13 24.8 -4.1
KTK1 **Kautokeino** 69.89 339 *e*P P 20 13 28.6 +0.2
KTK1 IAmb IAmb 20 13 29.4
comp=Z,94nm,1.3s
MDH **Madha** 69.95 288 P P 20 13 28.7 -0.9
VRH **Novokhopyorsk** 69.99 318 *c i*P P 20 13 29.0 -0.3
VRH pmax pmax
comp=Z,114nm,0.7s

MASF Masafi 70.03 288 P P 20 13 30.6 +0.5
MSFE Esma-Masafi 70.04 288 P P 20 13 31.4 +1.3
UOSS Minazif 70.18 288 P P 20 13 32.0 +1.1
UOSS Minazif 70.18 288 P P 20 13 31.1 +0.2
SOHO SOHO 70.25 287 *i* P P 20 13 32.1 +0.7
SNR=24
SOHO SOHO 70.25 287 P P 20 13 31.9 +0.6
BSY Bisya 70.28 285 P P 20 13 31.9 +0.3
HATD Hatta, Dubai 70.28 288 *i* P P 20 13 33.0 +1.4
SNR=6.3
HATD Hatta, Dubai 70.28 288 P P 20 13 32.2 +0.6
MOS Moscow 70.36 324 *e*P P 20 13 32.0 +0.6
MOS *e**PP **pP** 20 15 16.7 +0.5
MOS *e* 20 16 16.3
MOS *e*PPP PPP 20 18 04.4
MOS *e*S **S** 20 22 02.5 -0.3
MOS pmax pmax
comp=Z,118nm,0.9s
ASHO Ashiyiah 70.41 288 *i* P P 20 13 33.0 +0.7
SNR=6.5
ASHO Ashiyiah 70.41 288 P P 20 13 33.2 +0.9
SNR=15
JETT Jettan, Norway 70.43 340 *e*P P 20 13 32.1 +0.5
JETT IAmb IAmb 20 13 32.5
comp=Z,66nm,0.7s
ARQ Araqi 70.59 286 P P 20 13 34.4 +0.9
SNR=38
NAZ Nazwa, Dubai 70.60 288 P P 20 13 34.3 +0.8
FAQ Al Faqa, Dubai 70.76 288 *i* P P 20 13 35.1 +0.6
SNR=6.8
FAQ Al Faqa, Dubai 70.76 288 P P 20 13 34.8 +0.4
TRO Tromso 70.81 341 *e*P P 20 13 33.9 +0.1
TRO IAmb IAmb 20 13 34.6
comp=Z,69nm,0.9s
ALNE Al Ain 70.92 287 *i* P P 20 13 36.4 +1.0
SNR=25
ALNE Al Ain 70.92 287 P P 20 13 36.3 +0.9
LPSR Galich'ya Gora 70.99 320*c* *i*P P 20 13 35.4 +0.2
LPSR pmax pmax
comp=Z,170nm,0.8s
ASUD Al Ashush, Dub 71.03 288 *i* P P 20 13 37.0 +1.0
SNR=9.4
OBN Obninsk 71.17 323*c* *i*P P 20 13 36.2 0.0
OBN *e**PP **pP** 20 15 19.9 -1.4
OBN *e* 20 16 13.7
OBN *e*PPP PPP 20 18 12.7
OBN *i*S **S** 20 22 03.9 -8.1
OBN pmax pmax
comp=Z,109nm,0.9s
OBN Obninsk 71.17 323 P P 20 13 36.1 -0.1
OBN Obninsk 71.17 323 P P 20 13 36.3 +0.1
OBN sP **sP** 20 16 13.9 0.0
VORR Voronezh 71.23 319 *e*P P 20 13 36.8 +0.2
VORR pmax pmax
comp=Z,234nm,0.9s
AJN Ajban 71.34 288 P P 20 13 38.5 +0.7
VSR Storozhevoye 71.44 319*c* *i*P P 20 13 38.1 +0.2
VSR pmax pmax
comp=Z,112nm,0.5s
VORD Divnogorie 71.48 319 *e*P P 20 13 35.2 -2.9
VORD pmax pmax
comp=Z,70nm,0.9s
YKAW3 Yellowknife Wh 71.52 28 IAmb IAmb 20 13 39.8
comp=Z,55nm,1.4s
YKA Yellowknife Ar 71.55 28 P P 20 13 38.6 +0.3
comp=Z,21nm,0.6s,baz=302,slow=5.9,SNR=117
comp=Z,21nm,0.6s
YKA Yellowknife Ar 71.55 28 *i* P P 20 13 39.0 +0.7
YKA pmax pmax
comp=Z,21nm,0.6s
YKA Yellowknife Ar 71.55 28 P P 20 13 38.7 +0.4
GOF Gofitskoye 71.69 312*ce*P P 20 13 40.0 +0.5
NCK Nalchik 71.98 310 *e*P P 20 13 41.5 +0.3
NCK pmax pmax
comp=Z,34nm,0.8s
PUL Pulkovo 72.00 329*ce*P P 20 13 41.7 +0.7
PUL pmax pmax
comp=Z,93nm,1.0s
DAG Danmarks Havn 72.10 354 *i* P P 20 13 41.0 -0.3
DAG IAmb IAmb 20 13 42.6
comp=Z,44nm,0.9s
TULEG Thule 72.22 6 *i* P P 20 13 41.0 -1.0
TULEG IAmb IAmb 20 13 43.1
comp=Z,83nm,1.0s
KBZ Khabaz 72.34 311 P P 20 13 44.1 +0.8
comp=Z,147nm,0.8s,baz=92,slow=3.5,SNR=292
KBZ S S 20 22 26.4 +0.8
comp=Z,2.2nm,0.9s,baz=88,slow=20,SNR=12
comp=Z,147nm,0.8s
KIV Kislovodsk 72.38 311 ⇓P P 20 13 44.9 +1.3
KIV Kislovodsk 72.38 311 *i* P P 20 13 44.5 +0.9
SNR=43
KIV Kislovodsk 72.38 311 *e*P P 20 13 44.2 +0.5
KIV *e**PP **pP** 20 15 28.9 -0.1
KIV *e*S **S** 20 22 26.1 -0.2
KIV pmax pmax
comp=Z,143nm,1.1s
KIV Kislovodsk 72.38 311 P P 20 13 44.0 +0.4
NEEM North Greenlan 72.40 2 *i* P P 20 13 42.0 -1.4
NEEM IAmb IAmb 20 13 45.1
comp=Z,126nm,0.9s
SHA1 Shidzhatmaz 72.49 311*ce*P P 20 13 45.0 +0.5
GNI Garni 72.61 307 P P 20 13 46.0 +0.8
comp=Z,40nm,0.9s,baz=66,slow=6.0,SNR=20
comp=Z,40nm,0.9s
GNI Garni 72.61 307 P P 20 13 46.0 +0.8
GNI Garni 72.61 307 P P 20 13 45.8 +0.7
STEI Steigen 72.91 340 *e*P P 20 13 46.3 +0.2
STEI IAmb IAmb 20 13 47.0
comp=Z,93nm,1.0s
FINES FINESS Array B 72.94 332 P P 20 13 46.3 -0.1
comp=Z,48nm,0.4s,baz=68,slow=5.2,SNR=776
FINES PP **PP** 20 16 35.3 -1.7
comp=Z,8.9nm,0.9s,baz=90,slow=9.5,SNR=5.0
FINES S S 20 22 30.8 -0.9
comp=Z,1.4nm,0.7s,baz=35,slow=17,SNR=5.1
comp=Z,48nm,0.4s
FAUS Fauske 73.25 340 *e*P P 20 13 48.2 +0.1
FAUS IAmb IAmb 20 13 49.0
comp=Z,79nm,0.9s
MZR Muzera 73.26 287 *i* P P 20 13 49.5 +0.5
SNR=15
LOF Lofoten 73.27 341 *e*P P 20 13 47.8 -0.4
LOF IAmb IAmb 20 13 49.4
comp=Z,23nm,0.7s
BATM Batumi 74.06 309 ⇑P P 20 13 53.9 +0.7
BATM Batumi 74.06 309 ⇑P P 20 13 53.9 +0.7
NLWA Neilton Lookou 74.17 44 IAmb IAmb 20 13 57.0
comp=Z,14nm,0.8s
RAUS Rausandaksla 74.24 339 *e*P P 20 13 53.6 -0.1
RAUS IAmb IAmb 20 13 54.0
comp=Z,57nm,0.6s
VSU Vasula 74.26 329*ce*P P 20 13 53.2 -0.7
VSU pmax pmax
comp=Z,113nm,0.9s
VAGH Vaagaholmen 74.28 340 *e*P P 20 13 53.7 -0.2
VAGH IAmb IAmb 20 13 54.1
comp=Z,22nm,0.7s
MOR8 Moi Rana 74.29 339 *e*P P 20 13 52.9 -1.1
MOR8 IAmb IAmb 20 13 53.6
comp=Z,108nm,0.8s
VSLR Vesyoloye 74.33 311*c* *i*P P 20 13 55.1 +0.4
VSLR pmax pmax
comp=Z,154nm,0.9s
KONS Konsvik 74.48 340 *e*P P 20 13 54.0 -1.0
KONS IAmb IAmb 20 13 55.8
comp=Z,30nm,0.9s
SOC Sochi 74.48 312 *e*P P 20 13 55.1 -0.4
SOC *e**PP **pP** 20 15 41.7 +0.1
SOC *e**SP **sP** 20 16 35.3 +1.3
SOC *e* 20 16 52.6
SOC *e*PPP PPP 20 18 38.5
SOC *e*S **S** 20 22 48.6 -0.6
SOC *e*SS **SS** 20 27 51.3 +2.7
SOC *e*SSS SSS 20 31 17.9
SOC pmax pmax
comp=Z,94nm,0.7s
DBG Daneborg 74.55 354 *i* P P 20 13 53.2 -2.1
DBG IAmb IAmb 20 13 55.9
comp=Z,20nm,0.7s
STOK Stokkvaagen 74.62 340 *e*P P 20 13 55.6 -0.2
STOK IAmb IAmb 20 13 56.3
comp=Z,31nm,0.7s
LEIR Leirfjorden 74.74 339 *e*P P 20 13 56.3 -0.2
LEIR IAmb IAmb 20 13 57.2
comp=Z,52nm,0.9s
KULLO Kullorsuaq 74.98 4 *i* P P 20 13 57.2 -0.5
KULLO IAmb IAmb 20 13 59.0
comp=Z,80nm,0.9s
ANN Anapa 75.37 313*c* *i*P P 20 14 00.0 -0.5
ANN *e*S S 20 22 58.2 -0.6
ANN pmax pmax
comp=Z,122nm,0.8s
KOPT Kop Dagi 75.59 308 IAmb IAmb 20 14 04.6
comp=Z,43nm,1.2s
KTUT Trabzon 75.64 309 ⇓P P 20 14 02.6 +0.6
MNK Minsk 75.85 325 *i* P P 20 14 04.0 +1.1
comp=E,56nm,0.9s
MNK *i* P P 20 14 04.0 +1.1
comp=N,54nm,1.0s
MNK *i* P P 20 14 04.0 +1.1
comp=Z,167nm,0.8s,baz=57
MNK *i* pP **pP** 20 15 51.0 +1.3
MNK *i* PP **PP** 20 17 02.9 +1.4
MNK *i* PPP PPP 20 18 53.5
MNK *i* S **S** 20 23 06.4 +2.8
MNK *i* sS **sS** 20 26 17.8 +3.3
MNK *i* SS **SS** 20 28 13.3 +4.7
MNK *i* SSS SSS 20 31 41.7
MNK *i* LQ LQ 20 45 23.1
MNK *i* LR LR 20 49 02.6
MNK *i* LRM MLR 20 51 13.1
comp=E,32nm,15.0s
MNK *i* LRM MLR 20 51 17.6
comp=Z,42nm,14.8s
MNK *i* LRM MLR 20 51 25.3
comp=N,27nm,14.3s
MNK Minsk 75.85 325 *i* P P 20 14 04.0 +1.1
MNK *i* *PP **pP** 20 15 50.9 +1.3
MNK *i* 20 17 02.8
MNK *i* PPP PPP 20 18 53.4
MNK *i* S **S** 20 23 06.4 +2.8
MNK *i* SS **SS** 20 28 13.3 +4.7
MNK *i* SSS SSS 20 31 41.6
MNK pmax pmax
comp=Z,167nm,0.8s
MNK pmax pmax
comp=N,54nm,1.0s
MNK pmax pmax
comp=E,56nm,0.9s
MNK MLR MLR
comp=E,32nm,15.0s
MNK MLR MLR
comp=Z,42nm,15.0s
MNK MLR MLR
comp=N,27nm,14.0s
NSS Namsos 76.16 339 *e*P P 20 14 04.1 -0.3
NSS IAmb IAmb 20 14 04.9
comp=Z,49nm,0.8s
NACGM Naroch 76.17 326 *e*P P 20 14 05.3 +0.6
comp=E,45nm,1.1s
HOOD Mount Hood Mea 76.50 45 IAmb IAmb 20 14 12.8
comp=Z,17nm,0.8s
ILON Igloolik, Nuna 76.71 13 IAmb IAmb 20 14 08.7
comp=Z,39nm,1.0s
UPNV Upernavik 76.81 4 *i* P P 20 14 08.2 +0.3
UPNV IAmb IAmb 20 14 09.2
comp=Z,63nm,0.7s
EDM Edmonton 77.04 35 IAmb IAmb 20 14 11.6
comp=Z,18nm,0.9s
WAH2 Wahluke Slope 77.05 43 IAmb IAmb 20 14 12.0
comp=Z,17nm,0.6s
BLKN Baker Lake 77.06 21 IAmb IAmb 20 14 11.0
comp=Z,55nm,1.2s
AK03 Malin Array Si 77.19 322 P P 20 14 10.0 -0.4
AKASG Malin Array Be 77.20 322 P P 20 14 10.6 +0.1
comp=Z,36nm,0.4s,baz=53,slow=5.7,SNR=284
AKASG S S 20 23 16.6 -1.5
comp=Z,1.4nm,0.7s,baz=61,slow=10.0,SNR=7.2
comp=Z,36nm,0.4s
AKASG Malin Array Be 77.20 322 P P 20 14 10.4 -0.1
AKBB Malin Array Si 77.20 322*ce*P P 20 14 10.4 0.0
AKBB pmax pmax
comp=Z,81nm,0.9s
AKBB Malin Array Si 77.20 322 P P 20 14 10.1 -0.3
AK01 Malin Array Si 77.21 322 P P 20 14 10.0 -0.5
KIEV Kiev 77.21 322 ⇓P P 20 14 10.4 -0.1
KIEV Kiev 77.21 322 *i* P P 20 14 10.5 -0.1
SNR=82
KIEV Kiev 77.21 322 ⇓P P 20 14 10.4 -0.1
KIEV Kiev 77.21 322 P P 20 14 10.2 -0.3
KIEV Kiev 77.21 322 P P 20 14 10.0 -0.5
comp=Z,7µmcomp=Z,621nm,0.8s
KIEV Kiev 77.21 322 P P 20 14 10.5 -0.1
KIEV pP **pP** 20 15 58.3 +0.7
AK09 Malin Array Si 77.21 321 P P 20 14 10.0 -0.5
AK08 Malin Array Si 77.22 321 P P 20 14 10.1 -0.4
AK04 Malin Array Si 77.22 322 P P 20 14 10.1 -0.4
SUMG Summit 77.35 359 *i* P P 20 14 12.0 +0.6
SUMG IAmb IAmb 20 14 13.2
comp=Z,68nm,0.6s
SIM Simferopol' 77.36 315 *e*P P 20 14 11.9 +0.5
SIM pmax pmax
comp=Z,52nm,0.4s
ARPR Arapgir-MALATY 77.50 308 IAmb IAmb 20 14 14.8
comp=Z,47nm,0.8s
L04D Klamath Falls 77.62 48 IAmb IAmb 20 16 16.1
comp=Z,63nm,1.6s
PINE Pine Mountain 77.70 46 IAmb IAmb 20 14 16.6
comp=Z,20nm,0.8s
MI28 Mi28,Pidlybu 77.91 322 P P 20 14 13.4 -0.9
TOKA Tokat 78.15 310 IAmb IAmb 20 14 17.7
comp=Z,32nm,0.8s
K05A Summer Lake 78.27 47 IAmb IAmb 20 16 10.5
comp=Z,27nm,1.3s
SCO Scoresbysund 78.35 353 *i* P P 20 14 16.1 -0.2
SCO IAmb IAmb 20 14 18.4
comp=Z,55nm,0.9s
SUW Suwalki 78.41 326 *e*P P 20 14 16.7 -0.2
SUW *e*PP **PP** 20 17 22.0 -0.6
LUBAR Lubar, Ukraine 78.41 321 P P 20 14 16.6 -0.4
HFS Hagfors 78.56 335 P P 20 14 17.2 -0.4
comp=Z,93nm,0.6s,baz=49,slow=6.0,SNR=650
HFS PP **PP** 20 17 21.8 -1.9
comp=Z,6.0nm,0.8s,baz=78,slow=6.8,SNR=4.2
HFS S S 20 23 29.1 -3.0
comp=Z,5.1nm,0.9s,baz=56,slow=14,SNR=8.6
comp=Z,93nm,0.6s
RNPP9 Sopachiv 78.56 323 P P 20 14 17.3 -0.5
RNPP8 Varash 78.63 323 P P 20 14 17.7 -0.4
RNPP5 Staryi Chortor 78.67 323 P P 20 14 17.9 -0.5
NB2 NORSAR Subarra 78.83 336 P P 20 14 18.5 -0.6
comp=Z,40nm,0.5s,baz=48,slow=5.1
NB2 PP **PP** 20 17 24.5 -1.4
comp=Z,1.9nm,0.8s,baz=45,slow=7.9
NB2 NORSAR Subarra 78.83 336 P P 20 14 18.5 -0.6
NOA NORSAR Array B 78.83 336 P P 20 14 18.8 -0.4
comp=Z,59nm,0.7s,baz=46,slow=5.2,SNR=324
NOA PP **PP** 20 17 24.5 -1.4
comp=Z,3.2nm,0.8s,baz=45,slow=7.8,SNR=5.1
comp=Z,59nm,0.7s
DOMB Dombas 78.85 338 *e*P P 20 14 19.1 0.0
DOMB IAmb IAmb 20 14 19.8
comp=Z,54nm,0.8s
NC602 NORSAR Array S 78.93 336 *e*P P 20 14 18.8 -0.7
NC602 IAmb IAmb 20 14 19.7
comp=Z,52nm,1.2s
NC602 NORSAR Array S 78.93 336 IAmb IAmb 20 14 20.5
comp=Z,22nm,0.7s
BZK Bozkurt 78.94 312 ⇓P P 20 14 20.4 +0.4
BZK Bozkurt 78.94 312 P P 20 14 19.6 -0.4
comp=Z,798nmcomp=Z,82nm,0.7s
MOL Molde 78.95 339 *e*P P 20 14 19.9 +0.3
MOL IAmb IAmb 20 14 20.6
comp=Z,114nm,1.4s
NBO00 NORSAR Array S 78.99 336 IAmb IAmb 20 14 20.6
comp=Z,53nm,0.8s
SAATT Saattut 79.00 3 *i* P P 20 14 19.6 -0.1
SAATT IAmb IAmb 20 14 36.4
comp=Z,26nm,0.6s
SORM Soroca 79.07 320 ⇑P P 20 14 20.3 -0.2
SORM Soroca 79.07 320 ⇑P P 20 14 20.3 -0.2
SORM Soroca 79.07 320 P P 20 14 20.2 -0.3
comp=Z,1µmcomp=Z,80nm,0.9s
PURM Purcari 79.08 318 ⇑P P 20 14 20.9 +0.3
PURM Purcari 79.08 318 P P 20 14 20.2 -0.4
comp=Z,2µmcomp=Z,105nm,1.1s
NAO01 NORSAR Array S 79.08 336 IAmb IAmb 20 14 20.8
comp=Z,52nm,0.8s
GAZ Gaziantep 79.21 307 IAmb IAmb 20 14 23.5
comp=Z,40nm,0.8s
BNN Bunyan 79.31 309 IAmb IAmb 20 14 24.0
comp=Z,48nm,1.0s
AKN Aaknes 79.42 338 *e*P P 20 14 22.5 +0.4
AKN IAmb IAmb 20 14 23.2
comp=Z,60nm,0.8s
KIS Kishinev 79.43 319 P P 20 14 22.1 -0.4
comp=Z,55nm,0.7s
RAYN Ar Rayn 79.54 291 *i* P P 20 14 24.5 +0.9
SNR=26
RAYN Ar Rayn 79.54 291 ⇑P P 20 14 24.3 +0.7
RAYN Ar Rayn 79.54 291 P P 20 14 24.1 +0.6
RAYN IAmb IAmb 20 14 25.1
comp=Z,51nm,1.1s
CIDE Kastamonu/Cide 79.66 313 ⇑P P 20 14 24.2 +0.4
OSL Oslo 79.78 336 *e*P P 20 14 24.0 -0.1
OSL IAmb IAmb 20 14 24.6
comp=Z,84nm,0.9s
KMPD K-Podol'skiy 79.88 321 P P 20 14 24.2 -0.6
IASR Iasi 80.04 319 ⇑P P 20 14 26.4 +0.7
BEKR Beckworth 80.08 50 P P 20 14 26.2 -0.1
SKAR Skarslia 80.09 337 *e*P P 20 14 26.0 +0.3
SKAR IAmb IAmb 20 14 26.8
comp=Z,34nm,0.9s
VASR Vaslui 80.21 319 ⇓P P 20 14 26.7 +0.1
BR131 Keskin Array S 80.33 310*c* *i*P P 20 14 27.8 +0.2
BR131 Keskin Array S 80.33 310 IAmb IAmb 20 14 29.0
comp=Z,42nm,0.7s
BRTR Keskin Array B 80.33 310 P P 20 14 28.0 +0.4
comp=Z,27nm,0.6s,baz=62,slow=5.5,SNR=185
comp=Z,27nm,0.6s
BRTR Keskin Array B 80.33 310 *i* P P 20 14 28.0 +0.4
BRTR pmax pmax
comp=Z,28nm,0.6s
BRTR Keskin Array B 80.33 310 P P 20 14 27.9 +0.2
KONO Kongsberg 80.38 336 P P 20 14 26.8 -0.4
KONO pmax pmax
comp=Z,21nm,1.1s
KONO Kongsberg 80.38 336 *e*P P 20 14 27.1 -0.2
KONO Kongsberg 80.38 336 P P 20 14 26.8 -0.4
KONO IAmb IAmb 20 14 27.8
comp=Z,21nm,1.1s
TLCR 80.43 317 ⇓P P 20 14 28.4 +0.7
TLCR 80.43 317 ⇓P P 20 14 28.4 +0.7
HYA Hoyanger 80.43 338 *e*P P 20 14 27.6 +0.2
HYA IAmb IAmb 20 14 28.3
comp=Z,76nm,1.0s
KIRS Kirsehir-Merke 80.45 310 ⇑P P 20 14 28.6 +0.5
GDH Godhavn 80.46 4 *i* P P 20 14 27.0 -0.4
GDH IAmb IAmb 20 14 28.4
comp=Z,40nm,1.3s
FOO Floro 80.47 339 *e*P P 20 14 27.9 +0.3
FOO IAmb IAmb 20 14 28.4
comp=Z,27nm,0.7s
R9F13 Warsaw-Wawer 80.47 326 *e*P P 20 14 28.3 +0.5
VLDR Vladesti 80.49 318 ⇑P P 20 14 28.7 +0.6
BIR Birlad 80.52 318 ⇓P P 20 14 29.5 +1.3
VARL Varlezi 80.60 318 ⇓P P 20 14 29.3 +0.7
ILULI Ilulissat 80.61 3 IAmb IAmb 20 16 37.1
comp=Z,32nm,0.7s
ILULI Ilulissat 80.61 3 *i* P P 20 14 27.9 -0.4
ILULI IAmb IAmb 20 14 29.4
comp=Z,38nm,1.0s
JURR Jurilovca 80.62 317 ⇓P P 20 14 29.6 +0.8
SCTR Scanteiesti 80.64 318 ⇑P P 20 14 29.9 +1.0
PRAR RASCA 80.69 320 ⇓P P 20 14 29.4 +0.3
GHRR 80.76 318 ⇑P P 20 14 29.7 +0.2
GIRR Girov 80.77 319 ⇑P P 20 14 30.2 +0.6
NEGRR Negrea 80.78 318 ⇑P P 20 14 30.5 +0.9
CFR Carcaliu 80.83 317 ⇑P P 20 14 30.1 +0.2
CFR Carcaliu 80.83 317 ⇑P P 20 14 30.1 +0.2
IZVR Izvoarele 80.84 318 ⇓P P 20 14 30.7 +0.8
TPGR Topolog 80.84 317 ⇑P P 20 14 30.5 +0.6
SCHLR Schela 80.85 318 ⇓P P 20 14 29.5 -0.4
BEL Belsk 80.88 326 *e*P P 20 14 30.5 +0.6
COSR Cosmesti PH 80.93 318 ⇓P P 20 14 31.8 +1.4
TESR Tescani 80.94 319 ⇑P P 20 14 30.8 +0.4
BIZ Bicaz 81.00 320 ⇑P P 20 14 31.8 +1.0
PANC Panciu 81.02 318 ⇑P P 20 14 31.9 +1.1
TIRR Tirgusor 81.07 317 ⇓P P 20 14 31.0 -0.1
TIRR Tirgusor 81.07 317 ⇓P P 20 14 31.0 -0.1
TIRR Tirgusor 81.07 317 IAmb IAmb 20 14 32.0
comp=Z,18nm,0.8s
BURAR Bucovina Array 81.11 320 ⇑P P 20 14 32.3 +0.9
BURAR Bucovina Array 81.11 320 ⇑P P 20 14 32.3 +0.9
BURAR Bucovina Array 81.11 320 P P 20 14 31.8 +0.4
ODBI Odobesti 81.13 318 ⇑P P 20 14 33.5 +2.1
ONER Baraj Valea Uz 81.18 319 ⇑P P 20 14 32.7 +1.0
ODD1 Odda 81.22 337 *e*P P 20 14 31.4 -0.2
ODD1 IAmb IAmb 20 14 32.4
comp=Z,39nm,1.0s
TLBR Topalu 81.24 317 ⇑P P 20 14 32.8 +0.9
KWP Kalwaria Pacla 81.26 323 *e*P P 20 14 32.6 +0.6
VRI Vrincioaia 81.26 318 ⇑P P 20 14 33.0 +0.9
VRI Vrincioaia 81.26 318 ⇑P P 20 14 33.0 +0.9
ASK Askoy 81.26 338 *e*P P 20 14 32.1 +0.4
ASK IAmb IAmb 20 14 32.2
comp=Z,33nm,0.8s
BER Bergen 81.29 338 *e*P P 20 14 32.0 +0.1
BER IAmb IAmb 20 14 32.4
comp=Z,32nm,0.6s
PLOR Plostina 81.31 318 ⇑P P 20 14 33.1 +0.7
PLOR Plostina 81.31 318 ⇑P P 20 14 33.1 +0.7
MANR Mangalia 81.32 316 ⇑P P 20 14 32.7 +0.3
CVDA Cernavoda 81.36 317 ⇓P P 20 14 33.6 +1.0
SAHR Sahastru 81.36 318 ⇑P P 20 14 34.1 +1.4
GRER 81.39 318 ⇑P P 20 14 35.2 +2.4
SOEG Soedalen 81.40 356 *i* P P 20 14 31.5 -0.8
SOEG IAmb IAmb 20 14 34.1
comp=Z,52nm,1.1s
WAKR Walker 81.40 50 P P 20 14 34.0 +0.8
FFC Flin Flon 81.45 30 P P 20 14 33.2 +0.3
FFC pmax pmax
comp=Z,22nm,1.1s
FFC Flin Flon 81.45 30 P P 20 14 33.2 +0.3
FFC IAmb IAmb 20 14 34.3
comp=Z,22nm,1.1s
BSD Bornholm Skovb 81.46 330 *i* P P 20 14 30.9 -2.0
BSD IAmb IAmb 20 14 32.8
comp=Z,51nm,0.9s
SAHE Sakarya_HENDEK 81.54 312 ⇓P P 20 14 30.7 -2.9
TURR Turia 81.56 319 ⇑P P 20 14 35.2 +1.5
COVR Voineasa-Covas 81.57 319 ⇑P P 20 14 34.5 +0.7
ICOR Ion Corvin 81.62 316 ⇑P P 20 14 35.1 +1.2
BLS5 Blasjo 81.64 337 *e*P P 20 14 33.9 +0.1
BLS5 IAmb IAmb 20 14 34.7
comp=Z,41nm,1.0s
GKP Gorka Klasztor 81.65 328 *e*P P 20 14 33.9 0.0
PGOR Pogoanele 81.66 317 ⇑P P 20 14 35.7 +1.6
OZUR 81.67 319 ⇑P P 20 14 34.5 +0.2
PSN Preselentsi 81.69 316 *i* P P 20 14 35.2 +0.9
FCC Fort Churchill 81.72 24 IAmb IAmb 20 14 36.0
comp=Z,17nm,0.9s
BOSR Bodos 81.75 319 ⇑P P 20 14 35.9 +1.2
NEHR Nehoiu 81.76 318 ⇑P P 20 14 35.7 +1.0
HOMB Homborsund 81.77 335 *e*P P 20 14 33.9 -0.5
HOMB IAmb IAmb 20 14 35.8
comp=Z,24nm,1.1s
ISR Istrita 81.80 318 ⇓P P 20 14 36.2 +1.3
ISR Istrita 81.80 318 ⇓P P 20 14 36.2 +1.3
OVD Ostervraa, Den 81.83 334 *i* P P 20 14 33.0 -1.7
OVD IAmb IAmb 20 14 35.0
comp=Z,80nm,0.7s
DLMT Dillon 81.88 42 IAmb IAmb 20 14 37.8
comp=Z,23nm,0.8s
ARCR ARCALIA 81.89 320 ⇓P P 20 14 37.1 +1.8
EGMT Eagleton 81.90 38 IAmb IAmb 20 14 37.5
comp=Z,23nm,0.8s
KOLS Kolonicke sedl 81.90 323 *e*P P 20 14 35.7 +0.3
KOLS pmax pmax
comp=Z,17nm,0.5s
KOLS Kolonicke sedl 81.90 323 *e*P P 20 14 35.7 +0.3
MLR Muntele Rosu 81.93 318 P P 20 14 36.0 +0.4
comp=Z,19nm,0.5s,baz=56,slow=5.3,SNR=87
comp=Z,19nm,0.5s
MLR Muntele Rosu 81.93 318 ⇑P P 20 14 36.1 +0.4
MLR Muntele Rosu 81.93 318 IAmb IAmb 20 14 37.2
comp=Z,68nm,1.3s
ASF Jabal al Asfar 81.94 302 P P 20 14 36.1 +0.1
comp=Z,359nm,1.0s
DOPR Dopca 81.97 319 ⇑P P 20 14 37.3 +1.6
LEHL Lehliu 82.00 317 ⇑P P 20 14 37.3 +1.4
BMR Baia Mare 82.01 321 ⇑P P 20 14 37.0 +1.1
BMR Baia Mare 82.01 321 ⇑P P 20 14 37.0 +1.1

COP Copenhagen 82.10 332 *i* P **P** **20 14 34.4 -1.8**
COP IAmb IAmb 20 14 36.5
comp=Z,91nm,0.7s

TGMR Targu Mures 82.13 320 ⇓P **P** **20 14 38.5 +2.0**
STHS Stebnicka Huta 82.14 323 *eP* **P** **20 14 36.2 -0.4**
STHS pmax pmax
comp=Z,6.0nm,0.5s

STHS Stebnicka Huta 82.14 323 *eP* **P** **20 14 36.2 -0.4**
LHV Little Huntoon 82.15 50 IAmb IAmb 20 16 32.1
comp=Z,28nm,1.4s

NVAR Mina Array Bea 82.19 50 P **P** **20 14 38.1 +0.8**
comp=Z,3.9nm,0.5s,baz=293,slow=5.6,SNR=37
NVAR pP **pP** **20 16 27.6 +0.5**
comp=Z,4.1nm,0.9s,baz=282,slow=5.7,SNR=4.5
comp=Z,3.9nm,0.5s

KMY Karmoy 82.21 337 *eP* **P** **20 14 36.8 +0.1**
KMY IAmb IAmb 20 14 37.4
comp=Z,24nm,0.9s

SULR 82.22 318 ⇓P **P** **20 14 38.1 +1.1**
GEM Giv'at Ha'Em 82.31 304 P **P** **20 14 37.7 0.0**
OJC Ojcow 82.38 325 *eP* **P** **20 14 37.6 -0.1**
GOET G??ttrup 82.41 334 *i* P **P** **20 14 36.7 -0.9**
GOET IAmb IAmb 20 14 38.2
comp=Z,110nm,1.0s

NEF NEVSHA 82.42 316 *i* P **P** **20 14 39.4 +1.3**
MDB Medias 82.43 320 ⇓P **P** **20 14 40.0 +1.9**
MDB Medias 82.43 320 ⇓P **P** **20 14 40.0 +1.9**
LLD Lille Linde 82.44 332 *i* P **P** **20 14 37.2 -0.7**
VOIR 82.47 319 ⇓P **P** **20 14 39.0 +0.6**
VOIR 82.47 319 ⇓P **P** **20 14 39.0 +0.6**
HSUJ Al Zarqa 82.49 303 P **P** **20 14 38.4 -0.3**
comp=Z,1µmcomp=Z,48nm,1.1s
CJR Cluj-Napoca 82.53 320 ⇓P **P** **20 14 40.1 +1.5**
CJR Cluj-Napoca 82.53 320 ⇓P **P** **20 14 40.1 +1.5**
CY604 RAF Akrotiri, 82.54 305 P **P** **20 14 38.9 +0.4**
CY604 IAmb IAmb 20 14 39.5
comp=Z,24nm,0.7s

MMAI Mount Meron Ar 82.59 304 P **P** **20 14 40.2 +0.9**
comp=Z,23nm,0.8s,baz=61,slow=5.2,SNR=33
comp=Z,23nm,0.8s

MESR Meseseni 82.62 321 ⇓P **P** **20 14 35.5 -3.5**
NIE Niedzica 82.63 324 *eP* **P** **20 14 39.7 +0.6**
SGRR Singureni 82.64 317 ⇓P **P** **20 14 39.0 -0.2**
RAZG Razgrad 82.71 317 ⇑P **P** **20 14 39.9 +0.4**
ARR Arges 82.75 319 ⇓P **P** **20 14 41.4 +1.7**
TNR Turnu Rosu 82.78 319 ⇓P **P** **20 14 41.8 +1.9**
TNR Turnu Rosu 82.78 319 ⇓P **P** **20 14 41.8 +1.9**
MARR Marisel-Cluj 82.81 321 ⇑P **P** **20 14 40.6 +0.4**
QRNJ Al-Qirein 82.82 303 P **P** **20 14 40.1 -0.1**
comp=Z,61µmcomp=Z,8µm,0.7s
MUD Monsted U'grnd 82.85 334 *i* P **P** **20 14 37.8 -2.1**
MUD IAmb IAmb 20 14 40.0
comp=Z,40nm,0.9s

SFJD Kangerlussuaq 82.85 3 P **P** **20 14 40.0 +0.3**
SFJD pmax pmax
comp=Z,49nm,0.8s

SFJD Kangerlussuaq 82.85 3 P **P** **20 14 40.0 +0.3**
SFJD Kangerlussuaq 82.85 3 *i* P **P** **20 14 39.8 +0.1**
SFJD IAmb IAmb 20 14 40.7
comp=Z,46nm,0.8s

DRGR 82.97 321 ⇑P **P** **20 14 41.3 +0.5**
DRGR 82.97 321 ⇑P **P** **20 14 41.3 +0.5**
YHL Hebgen Lake 82.99 42 IAmb IAmb 20 14 44.1
comp=Z,18nm,1.0s

SWQJ Swaqa 83.03 302 P **P** **20 14 40.6 -0.9**
comp=Z,11nm,0.9s

CSS Mathiatis 83.04 306 P **P** **20 14 41.2 -0.2**
comp=Z,2µmcomp=Z,90nmcomp=Z,118nm,0.9s
HUMR Humele 83.04 318 ⇑P **P** **20 14 41.6 +0.5**
YHB Horse Butte 83.04 42 IAmb IAmb 20 14 44.3
comp=Z,23nm,0.8s

UJAP Al Uja 83.10 303 P **P** **20 14 41.5 -0.1**
comp=Z,37nm,1.2s

COPA Copaceanca 83.14 318 ⇓P **P** **20 14 41.6 0.0**
LOT Lotru 83.19 319 ⇑P **P** **20 14 42.3 +0.2**
LANS Liptovska Anna 83.22 324 *eP* **P** **20 14 43.4 +1.4**
LANS pmax pmax
comp=Z,26nm,2.3s

LANS Liptovska Anna 83.22 324 *eP* **P** **20 14 43.4 +1.4**
YMR Madison River 83.22 42 IAmb IAmb 20 14 45.4
comp=Z,21nm,0.7s

SALP Salfit 83.24 303 P **P** **20 14 42.2 -0.2**
comp=Z,96nm,1.0s

JMB Yambol 83.31 316 *i* P **P** **20 14 43.3 +0.7**
ZIMR 83.33 317 ⇑P **P** **20 14 42.7 +0.1**
ZIMR 83.33 317 ⇑P **P** **20 14 42.7 +0.1**
GHAJ Ghor Haditha 83.36 302 P **P** **20 14 42.8 -0.2**
comp=Z,70nm,1.1s

SSRD Sdr. Stenderup 83.37 333 *i* P **P** **20 14 40.9 -1.7**
SSRD IAmb IAmb 20 14 43.0
comp=Z,114nm,0.8s

YFT Old Faithful 83.43 42 IAmb IAmb 20 14 47.8
comp=Z,18nm,0.9s

STEB Steborice 83.56 325 *eP* **P** **20 14 44.0 +0.3**
YTIR Yattir 83.66 303 P **P** **20 14 44.3 -0.3**
comp=Z,51nm,0.8s

KSP Ksiaz 83.68 327 *eP* **P** **20 14 44.3 +0.1**
VLAD Vladila 83.69 318 ⇑P **P** **20 14 44.5 +0.1**
AMAZ Amatzia 83.72 303 P **P** **20 14 44.6 -0.2**
comp=Z,67nm,1.0s

FLWY Flagg Ranch 83.73 42 IAmb IAmb 20 14 48.4
comp=Z,20nm,0.8s

RUE Ruedersdorf 83.74 329 *eP* **P** **20 14 44.5 +0.1**
comp=Z,34nm,0.6s,baz=43,slow=4.8
PSZ Piszkesteto 83.78 323 ⇓P **P** **20 14 44.8 -0.1**
PSZ Piszkesteto 83.78 323 ⇓P **P** **20 14 44.8 -0.1**
PSZ Piszkesteto 83.78 323 IAmb IAmb 20 14 46.3
comp=Z,26nm,1.1s

MORC Moravsky Berou 83.78 325 ⇓P **P** **20 14 45.3 +0.5**
MORC Moravsky Berou 83.78 325 ⇓P **P** **20 14 45.3 +0.5**
MORC Moravsky Berou 83.78 325 IAmb IAmb 20 14 46.0
comp=Z,14nm,0.9s

MORC Moravsky Berou 83.78 325 *eP* **P** **20 14 44.3 -0.5**
MORC *eP* **PP** **20 18 03.7 -2.6**
GZR Gura Zlata 83.78 320 ⇑P **P** **20 14 44.8 -0.1**
HVU Hansel Valley 83.84 45 IAmb IAmb 20 14 48.2
comp=Z,17nm,0.7s

SIRR Siria 83.86 321 ⇑P **P** **20 14 45.5 +0.3**
MAUC Maruska 83.90 325 *eP* **P** **20 14 46.4 +1.0**
OSTC Ostas 83.91 326 *eP* **P** **20 14 45.8 +0.4**
OSTC Ostas 83.91 326 *eP* **P** **20 14 45.8 +0.4**
PLVB Pleven 83.93 317 ⇑P **P** **20 14 46.3 +0.7**
KRLC Kraliky 83.95 326 *eP* **P** **20 14 45.8 +0.1**
KRLC Kraliky 83.95 326 *eP* **P** **20 14 45.8 +0.1**
CHVC Chvalec 83.97 327 *eP* **P** **20 14 45.9 +0.2**
CHVC Chvalec 83.97 327 *eP* **P** **20 14 45.9 +0.2**
BSZH Besenyszg 83.97 322 ⇑P **P** **20 14 46.4 +0.7**
SRE Strehaia 83.98 319 ⇑P **P** **20 14 46.3 +0.4**
SRE Strehaia 83.98 319 ⇑P **P** **20 14 46.3 +0.4**
DPC Dobruska-Polom 84.00 326 *eP* **P** **20 14 46.2 +0.3**
DPC Dobruska-Polom 84.00 326 *eP* **P** **20 14 46.2 +0.3**
UPC Upice 84.04 327 *eP* **P** **20 14 46.1 +0.1**
UPC Upice 84.04 327 *eP* **P** **20 14 46.1 +0.1**
BSEG Bad Segeberg 84.21 331 *eP* **P** **20 14 46.4 -0.3**
comp=Z,16nm,0.9s,baz=43,slow=4.8
FURC Furnace Creek, 84.22 51 IAmb IAmb 20 16 42.5
comp=Z,20nm,1.2s

BAIL Bailesti 84.29 318 ⇓P **P** **20 14 47.9 +0.6**
BZS Buzias 84.29 320 ⇑P **P** **20 14 46.5 -0.8**
BZS Buzias 84.29 320 ⇑P **P** **20 14 46.5 -0.8**
HERR Herculane 84.30 319 ⇑P **P** **20 14 46.9 -0.5**
ANGG Ammassalik, Gr 84.30 358 *i* P **P** **20 14 45.0 -2.0**
JAVC Velka Javorina 84.31 325 *eP* **P** **20 14 48.2 +0.7**
JAVC *ePP* **PP** **20 18 09.3 -1.3**
PUNG Punghina 84.37 319 ⇑P **P** **20 14 48.5 +0.8**
VALD Valchedram 84.44 318 *i* P **P** **20 14 48.6 +0.5**
MPEP Malo Peshtene 84.46 318 *i* P **P** **20 14 48.4 +0.2**
GORT1 Trebel 84.46 330 *eP* **P** **20 14 47.9 -0.1**
comp=Z,26nm,1.1s,baz=43,slow=4.8
QSM Queen of Sheba 84.49 51 IAmb IAmb 20 16 43.9
comp=Z,16nm,1.1s

GWY Greenwater Val 84.50 51 IAmb IAmb 20 16 43.3
comp=Z,16nm,1.2s

VRAC Vranov 84.55 325 P **P** **20 14 48.8 +0.2**
comp=Z,15nm,0.9s,baz=53,slow=4.6,SNR=24
VRAC PP **PP** **20 18 11.1 -1.3**
comp=Z,3.0nm,0.7s,baz=75,slow=11,SNR=3.5
comp=Z,15nm,0.9s

VRAC Vranov 84.55 325 ⇑P **P** **20 14 48.9 +0.3**
VRAC Vranov 84.55 325 ⇑P **P** **20 14 48.9 +0.3**
VRAC Vranov 84.55 325 *eP* **P** **20 14 48.6 0.0**
VRAC *ePP* **PP** **20 18 08.6 -3.9**
LAO LASA Array 84.62 38 IAmb IAmb 20 14 51.3
comp=Z,24nm,1.2s

SMOL Smolenice 84.66 324 *eP* **P** **20 14 49.1 0.0**
SMOL pmax pmax
comp=Z,6.0nm,0.8s

SRO Srobarova 84.66 323 *eP* **P** **20 14 49.3 +0.2**
SRO pmax pmax
comp=Z,7.0nm,0.6s

SRO Srobarova 84.66 323 *eP* **P** **20 14 49.3 +0.2**
HWUT Hardware Ranch 84.68 44 IAmb IAmb 20 14 52.3
comp=Z,19nm,0.8s

RDO Rednopi 84.70 315 IAmb IAmb 20 14 50.9
comp=Z,14nm,0.9s

MDVR Moldovita 84.75 320 ⇑P **P** **20 14 49.5 -0.2**
BRG Berggiesshubel 84.76 328 *eP* **P** **20 14 49.3 -0.2**
comp=Z,21nm,0.9s,baz=43,slow=4.8
BRG Berggiesshubel 84.76 328 ⇑*i*P **P** **20 14 49.4 -0.2**
BRG Amp 20 14 50.5
comp=Z,21nm,0.9s

BRG PP **PP** **20 18 11.9 -2.2**
BRG Amp 20 18 17.6
comp=Z,14nm,1.5s

KRUC Moravsky 84.81 325 *eP* **P** **20 14 49.6 -0.3**
KRUC *ePP* **PP** **20 18 11.1 -3.5**
MODS Modra-Piesok 84.83 324 *eP* **P** **20 14 50.4 +0.4**
MODS pmax pmax
comp=Z,40nm,1.3s

MODS Modra-Piesok 84.83 324 *eP* **P** **20 14 50.4 +0.4**
CLL Collm 84.89 328 ⇑*i*P **P** **20 14 49.7 -0.5**
CLL *eS* **S** **20 24 34.0 -2.0**
CLL pmax pmax
comp=Z,41nm,1.0s

CLL Collm 84.89 328 IAmb IAmb 20 14 50.7
comp=Z,34nm,0.9s

CLL Collm 84.89 328 *eP* **P** **20 14 49.7 -0.5**
comp=Z,35nm,0.9s,baz=43,slow=4.8
CLL Collm 84.89 328 ⇑*i*P **P** **20 14 49.7 -0.5**
comp=Z,41nm,1.0s

CLL *ex* x 20 16 54.0
CLL *ePP* **PP** **20 18 17.0 +1.9**
CLL *eS* **S** **20 24 34.0 -2.0**
CLL *eSP* **SPn** **20 25 32.0 -2.3**
FLTG Flechtingen 84.96 330 *eP* **P** **20 14 49.6 -0.9**
comp=Z,20nm,0.9s,baz=43,slow=4.8
PRU Pruhonice 85.09 327 *eP* **P** **20 14 51.1 -0.1**
PRU Pruhonice 85.09 327 *eP* **P** **20 14 51.1 -0.1**
PDAR Pinedale Array 85.18 43 P **P** **20 14 52.7 +0.6**
comp=Z,7.2nm,0.9s,baz=321,slow=1.9,SNR=39
comp=Z,7.2nm,0.9s

PDAR Pinedale Array 85.18 43 P **P** **20 14 52.2 +0.1**
HSKC Hora Svate Kat 85.18 328 *eP* **P** **20 14 51.6 -0.1**
VTS Vitosha 85.20 317 *i* P **P** **20 14 52.3 +0.2**
ASSE Asse, Remlinge 85.35 330 *eP* **P** **20 14 51.5 -0.7**
comp=Z,16nm,1.4s,baz=43,slow=4.8
RETH Rethem/Aller, 85.47 331 *eP* **P** **20 14 52.3 -0.6**
comp=Z,7.2nm,1.0s,baz=43,slow=4.8
NEUB Neuenburg 85.52 329 *eP* **P** **20 14 52.8 -0.4**
comp=Z,23nm,0.9s,baz=43,slow=4.8
MORH Mrgy, Hungar 85.52 322 ⇑P **P** **20 14 53.1 -0.2**
MORH Mrgy, Hungar 85.52 322 ⇑*i*P **P** **20 14 52.8 -0.5**
MMB Musomishta 85.54 316 *i* P **P** **20 14 53.1 -0.5**
FRGS Fruska Gora 85.57 321 ⇑*i*P **P** **20 14 53.4 -0.2**
NUUK Nuuk 85.60 4 *i* P **P** **20 14 52.1 -1.2**
NUUK IAmb IAmb 20 14 54.4
comp=Z,29nm,0.9s

WINA Alland / Wiene 85.61 325 *i* P **P** **20 14 54.0 +0.3**
SNR=6.5

ZVC Zvikov 85.63 327 *eP* **P** **20 14 53.6 -0.2**
ZVC *ePP* **PP** **20 18 19.4 -1.6**
CLZ Clausthal 85.68 330 *eP* **P** **20 14 53.7 -0.3**
comp=Z,20nm,1.2s,baz=43,slow=4.8
KKB Krupnik 85.73 317 *i* P **P** **20 14 54.8 +0.3**
TANN Tannenbergstha 85.76 328 *eP* **P** **20 14 54.1 -0.4**
comp=Z,6.1nm,0.9s,baz=43,slow=4.8
RONA Rosalia, Austr 85.77 324 *i* P **P** **20 14 54.6 0.0**
comp=Z,9.7nm,1.1s,SNR=11

RONA *i* PP **PP** **20 18 20.5 -1.7**
comp=Z,3.6nm,1.0s

CONA Conrad Observa 85.83 325 *i* P **P** **20 14 55.1 +0.1**
comp=Z,5.6nm,0.6s,SNR=15

CONA *i* PP **PP** **20 18 20.5 -2.3**
comp=Z,5.9nm,1.1s

PLN Plauen 85.85 328 *eP* **P** **20 14 54.5 -0.4**
comp=Z,3.6nm,1.0s,baz=43,slow=4.8
NKC Novy Kostel 85.90 328 *eP* **P** **20 14 55.0 -0.1**
NKC Novy Kostel 85.90 328 *eP* **P** **20 14 55.0 -0.1**
MOX Moxa 85.99 329 *eP* **P** **20 14 55.0 -0.5**
comp=Z,9.8nm,1.1s,baz=43,slow=4.8

MOX *eL* L 20 57 40.9
comp=Z,32nm,18.8s

CKRC Cesky Krumlov 85.99 326 *eP* **P** **20 14 54.5 -1.1**
CKRC Cesky Krumlov 85.99 326 *eP* **P** **20 14 54.5 -1.1**
TEKS Tekeris 86.11 320 ⇑*i*P **P** **20 14 55.4 -0.8**
KHC Kasperske Hory 86.13 327 *eP* **P** **20 14 56.0 -0.3**
KHC *e* 20 18 24.6
KHC Kasperske Hory 86.13 327 *eP* **P** **20 14 56.0 -0.3**
KHC *ePP* **PP** **20 18 24.6 -0.5**
KHC Kasperske Hory 86.13 327 IAmb IAmb 20 14 57.0
comp=Z,38nm,1.6s

GEC2 GERESS Array S 86.27 326 *eP* **P** **20 14 56.4 -0.6**
comp=Z,8.7nm,0.9s,baz=43,slow=4.8
GERES GERESS Array B 86.27 326 P **P** **20 14 56.3 -0.7**
comp=Z,2.4nm,0.4s,baz=36,slow=4.4,SNR=34
GERES PP **PP** **20 18 23.9 -2.3**
comp=Z,2.7nm,0.9s,baz=42,slow=6.1,SNR=6.5
comp=Z,2.4nm,0.4s

ROTZ Rotzenmuhle 86.33 328 *eP* **P** **20 14 57.1 0.0**
comp=Z,2.6nm,0.9s,baz=43,slow=4.8
BEHE Becsehely 86.34 323 *eP* **P** **20 14 52.8 -4.4**
VAY Valandovo 86.38 316 *i* P **P** **20 14 57.2 -0.3**
MTPU Mount Pierson 86.39 48 IAmb IAmb 20 16 54.9
comp=Z,38nm,1.8s

IBBN Ibbenburen 86.45 331 *eP* **P** **20 14 56.9 -0.7**
comp=Z,25nm,1.1s,baz=43,slow=4.8
P17A Butcher Ranch, 86.45 46 IAmb IAmb 20 16 53.8
comp=Z,24nm,1.2s

WET Wettzell 86.45 327 *eP* **P** **20 14 57.4 -0.4**
comp=Z,5.1nm,0.9s,baz=43,slow=4.8
ARSA Arzberg 86.46 324 IAmb IAmb 20 14 58.6
comp=Z,14nm,1.0s

ARSA Arzberg 86.46 324 *i* P **P** **20 14 57.5 -0.3**
comp=Z,4.3nm,0.5s,SNR=9.2

ARSA *i* PP **PP** **20 18 25.6 -2.1**
comp=Z,3.0nm,1.0s

RDMU Red Mountain 86.51 44 IAmb IAmb 20 15 00.9
comp=Z,12nm,0.9s

KNB Kanab 86.58 49 IAmb IAmb 20 16 55.5
comp=Z,34nm,1.4s

BBLS Lazi&#263i 86.61 320 ⇑*i*P **P** **20 14 58.4 -0.3**
P18A Pressern Nutter 86.67 45 IAmb IAmb 20 16 55.2
comp=Z,30nm,1.5s

MOA Molln 86.68 325 *i* P **P** **20 14 58.5 -0.4**
comp=Z,4.5nm,0.7s,SNR=9.7

MOA *i* PP **PP** **20 18 26.6 -2.8**
comp=Z,5.7nm,1.2s

SJES Sjenica 86.68 319 ⇑*i*P **P** **20 14 58.7 -0.4**
SRU San Rafael Swe 86.80 46 IAmb IAmb 20 16 55.2
comp=Z,14nm,1.2s

GRA1 Grafenberg Arr 86.84 328 IAmb IAmb 20 15 00.6
comp=Z,18nm,0.8s

GRF Grafenberg Arr 86.84 328 *eP* **P** **20 14 59.4 -0.2**
comp=Z,18nm,0.8s,baz=43,slow=4.8

GRF *eL* L 20 56 43.2
comp=Z,38nm,20.3s

GRFO Grafenberg 86.84 328 P **P** **20 14 59.5 -0.1**
KASTN Kahler Asten 86.99 330 *eP* **P** **20 14 59.6 -0.6**
comp=Z,5.6nm,0.7s,baz=43,slow=4.8
K22A Casper 87.01 41 IAmb IAmb 20 16 56.1
comp=Z,11nm,0.7s

SESA Seetaler Alpe, 87.03 325 *i* P **P** **20 15 00.5 -0.2**
SNR=31

SOKA Soboth 87.09 324 *i* P **P** **20 15 00.3 -0.6**
comp=Z,28nm,0.9s,SNR=33

SOKA *ePP* **PP** **20 18 33.2 +0.4**
comp=Z,8.5nm,1.7s

BIOA Bad Ischl, Aus 87.09 325 *i* P **P** **20 15 00.5 -0.4**
comp=Z,7.9nm,0.7s,SNR=11

BIOA *ePP* **PP** **20 18 30.9 -1.9**
comp=Z,1.7nm,0.7s

KPL Plockton 87.13 341 *eP* **P** **20 15 00.8 +0.1**
KPL IAmb IAmb 20 15 02.2
comp=Z,33nm,0.7s

ULM Lac du Bonnet 87.25 31 P **P** **20 15 01.5 +0.1**
comp=Z,6.0nm,0.5s,baz=324,slow=5.1,SNR=11
comp=Z,6.0nm,0.5s

ULM Lac du Bonnet 87.25 31 IAmb IAmb 20 15 02.8
comp=Z,11nm,0.8s

BLY Banja Luka 87.26 322 ⇑P **P** **20 15 01.4 -0.2**
BLY Banja Luka 87.26 322 ⇑*i*P **P** **20 15 01.2 -0.4**
BUG Bochum--Univer 87.30 331 *eP* **P** **20 15 00.9 -0.7**
comp=Z,6.4nm,0.8s,baz=43,slow=4.8
UPM Unac-Piva 87.32 320 *eP* **P** **20 15 00.4 -1.8**
HMU Henry Mountain 87.37 47 IAmb IAmb 20 16 58.8
comp=Z,20nm,1.3s

RSSD Black Hills 87.45 39 P **P** **20 15 02.9 +0.1**
RSSD pmax pmax
comp=Z,10.0nm,0.8s

RSSD Black Hills 87.45 39 P **P** **20 15 02.9 +0.1**
RSSD IAmb IAmb 20 15 05.5
comp=Z,9.9nm,0.8s

CRES Cresnjevec Ost 87.45 323 *i* P **P** **20 15 01.8 -0.7**
OBKA Obir 87.45 324 *i* P **P** **20 15 01.7 -0.9**
comp=Z,9.9nm,0.7s,SNR=8.4

OBKA *i* PP **PP** **20 18 32.8 -2.9**
comp=Z,5.5nm,1.0s

RJOB Jochberg 87.47 326 *eP* **P** **20 15 02.5 -0.1**
comp=Z,17nm,0.9s,baz=43,slow=4.8
KLINJ Klinje 87.52 320 *eP* **P** **20 15 01.2 -1.8**
OHR Ohrid 87.56 317 *i* P **P** **20 15 03.0 -0.2**
O20A White River Ci 87.58 44 IAmb IAmb 20 15 05.6
comp=Z,11nm,0.9s

PDG Podgorica 87.62 319 ⇓P **P** **20 15 03.0 -0.3**
PDG Podgorica 87.62 319 IAmb IAmb 20 15 05.8
comp=Z,16nm,0.9s

PDG Podgorica 87.62 319 *eP* **P** **20 15 03.8 +0.5**
KBA Koelnbreinsper 87.66 325 *i* P **P** **20 15 02.6 -1.0**
comp=Z,8.1nm,0.7s

KBA *i* PP **PP** **20 18 34.1 -3.4**
comp=Z,8.8nm,1.2s

TNS Taunus Mts 87.70 330 *eP* **P** **20 15 03.0 -0.6**
comp=Z,4.1nm,0.9s,baz=43,slow=4.8
EAB Aberfoyle 87.72 339 *eP* **P** **20 15 03.3 -0.2**
EAB IAmb IAmb 20 15 07.2
comp=Z,10nm,0.9s

BRY Bratogost 87.72 320 *eP* **P** **20 15 02.0 -2.0**
LESA Schwarzleotal 87.75 326 *i* P **P** **20 15 03.3 -0.7**
comp=Z,18nm,0.6s,SNR=20

LESA *i* PP **PP** **20 18 36.3 -1.7**
comp=Z,7.6nm,1.4s

DRME Dracevica, Mon 87.81 319 ⇑*i*P **P** **20 15 03.5 -0.8**
MYKA Terra Mystica 87.82 325 *i* P **P** **20 15 03.1 -1.3**
comp=Z,13nm,0.7s,SNR=7.8

MYKA *ePP* **PP** **20 18 37.0 -1.6**
comp=Z,4.7nm,0.8s

FUR Furstenfeldbru 87.90 327 *eP* **P** **20 15 04.6 0.0**
comp=Z,77nm,1.2s,baz=43,slow=4.8
HAYD Hayden 87.92 43 IAmb IAmb 20 15 07.4
comp=Z,8.9nm,0.6s

TREB Trebinje 87.94 320 *eP* **P** **20 15 03.7 -1.2**
GBRS Gornja Briga 87.98 323 *i* P **P** **20 15 04.4 -0.6**
PRED Cave del Predi 87.99 325 IAmb IAmb 20 15 04.5
comp=Z,8.0nm,0.9s

HCY Herceg Novi 88.04 319 *eP* **P** **20 15 03.6 -1.7**
EKA Eskdalemuir Ar 88.06 338 P **P** **20 15 04.7 -0.5**
comp=Z,1.9nm,0.3s,baz=45,slow=4.7,SNR=35
EKA PP **PP** **20 18 38.9 -1.2**
comp=Z,5.9nm,0.8s,baz=38,slow=6.0,SNR=9.6
comp=Z,1.9nm,0.3s

EDMD Edmundbyers 88.09 338 *eP* **P** **20 15 04.1 -1.2**
ESK Eskdalemuir 88.09 338 *eP* **P** **20 15 04.7 -0.5**
ESK IAmb IAmb 20 15 06.5
comp=Z,6.9nm,0.9s

VOJS Vojsko 88.11 324 *i* P **P** **20 15 04.1 -1.6**
ABTA Abfaltersbach 88.30 325 *i* P **P** **20 15 04.9 -1.7**
comp=Z,19nm,0.7s,SNR=20

ABTA *ePP* **PP** **20 18 43.0 +0.6**
comp=Z,3.2nm,1.1s

PV05 Paradox Valley 88.32 46 IAmb IAmb 20 17 03.2
comp=Z,11nm,1.0s

WATA Walderalm 88.34 326 *i* P **P** **20 15 05.9 -0.9**
comp=Z,12nm,0.9s,SNR=9.3

WATA *i* PP **PP** **20 18 41.2 -1.6**
comp=Z,12nm,1.4s

PV03 Paradox Valley 88.36 46 IAmb IAmb 20 17 03.3
comp=Z,12nm,1.1s

WTTA Wattenberg 88.37 326 *i* P **P** **20 15 06.1 -0.9**
comp=Z,13nm,0.7s,SNR=13

WTTA *i* PP **PP** **20 18 40.1 -2.8**
comp=Z,12nm,1.0s

STU Stuttgart 88.42 328 *eP* **P** **20 15 06.7 -0.3**
comp=Z,61nm,0.9s,baz=43,slow=4.8
PV13 Radium Mtn., P 88.44 46 IAmb IAmb 20 17 03.6
comp=Z,14nm,1.1s

PV02 Paradox Valley 88.46 46 IAmb IAmb 20 17 03.8
comp=Z,22nm,1.2s

MOTA Moosalm 88.56 326 *i* P **P** **20 15 06.9 -1.0**
comp=Z,16nm,0.8s,SNR=13

MOTA *i* PP **PP** **20 18 42.2 -2.3**
comp=Z,7.2nm,1.2s

SQTA Sankt Quirin 88.60 326 *i* P **P** **20 15 07.2 -0.8**
comp=Z,15nm,0.7s,SNR=12

SQTA *i* PP **PP** **20 18 43.2 -1.5**
comp=Z,6.5nm,0.9s

PV01 Paradox Valley 88.61 46 IAmb IAmb 20 17 07.5
comp=Z,12nm,1.2s

RETA Reute 88.62 327 *i* P **P** **20 15 07.5 -0.6**
comp=Z,23nm,1.2s,SNR=11

RETA *ePP* **PP** **20 18 41.7 -3.2**
comp=Z,2.3nm,0.5s

AGMN Agassiz Nation 88.67 32 IAmb IAmb 20 15 09.4
comp=Z,11nm,1.1s

IVI Ivigtut 88.73 2 *i* P **P** **20 15 06.2 -1.9**
NRS Narsarsuaq 88.85 1 *i* P **P** **20 15 08.3 -0.3**
FETA Feichten 88.97 326 *i* P **P** **20 15 09.0 -0.8**
comp=Z,31nm,1.2s,SNR=19

FETA *ePP* **PP** **20 18 44.8 -3.0**
comp=Z,2.7nm,0.9s

BGES Gesves 89.00 331 *dP* **P** **20 15 08.9 -0.8**
comp=Z,5.3nm,1.0s

WLF Walferdange 89.10 330 IAmb IAmb 20 15 11.2
comp=Z,14nm,1.0s

WLF Walferdange 89.10 330 *dP* **P** **20 15 09.9 -0.2**
comp=Z,9.5nm,0.9s

WLF Walferdange 89.10 330 *eP* **P** **20 15 10.0 -0.1**
comp=Z,12nm,0.9s,baz=43,slow=4.8
BFO Black Forest 89.14 328 P **P** **20 15 09.5 -0.9**
BFO pmax pmax
comp=Z,23nm,0.9s

BFO Black Forest 89.14 328 P **P** **20 15 09.5 -0.9**
BFO IAmb IAmb 20 15 10.6
comp=Z,23nm,0.9s

BFO Black Forest 89.14 328 *eP* **P** **20 15 09.9 -0.5**
comp=Z,20nm,0.9s,baz=43,slow=4.8
DAVA Damuels 89.19 327 *i* P **P** **20 15 10.2 -0.6**
comp=Z,52nm,1.0s,SNR=19

DAVA *ePP* **PP** **20 18 50.4 +1.0**
comp=Z,9.3nm,1.4s

LBWR Ladybower, Pea 89.19 337 *eP* **P** **20 15 09.9 -0.5**
LBWR IAmb IAmb 20 15 11.9
comp=Z,33nm,0.8s

BMRD Maredsous 89.20 332 *dP* **P** **20 15 09.5 -1.0**
comp=Z,5.6nm,1.1s

CTI Castel Tesino 89.22 325 IAmb IAmb 20 15 10.3
comp=Z,14nm,0.7s

ISCO Idaho Springs 89.35 43 IAmb IAmb 20 15 14.5
comp=Z,8.0nm,0.8s

IOMK Kirk Michael 89.41 339 *eP* **P** **20 15 10.4 -1.0**
IOMK IAmb IAmb 20 15 11.9
comp=Z,6.0nm,0.9s

DOU Dourbes 89.43 331 *dP* **P** **20 15 10.2 -1.4**
DAVOX Davos/Dischmat 89.55 327 P **P** **20 15 12.1 -0.4**
comp=Z,30nm,0.8s,baz=29,slow=2.9,SNR=48
DAVOX PP **PP** **20 18 51.8 -0.5**
comp=Z,3.5nm,0.7s,baz=37,slow=7.0,SNR=6.1
comp=Z,30nm,0.8s

IDGL Inch Island, C 89.61 340 P **P** **20 15 11.7 -0.6**
ECH Echery 89.75 329 IAmb IAmb 20 15 13.5
comp=Z,20nm,1.2s

ECH Echery 89.75 329 P **P** **20 15 12.4 -0.8**
S22A 4UR Ranch, Cre 89.93 45 IAmb IAmb 20 15 17.4
comp=Z,6.2nm,0.9s

ELSH Elham, Standar 89.98 334 *eP* **P** **20 15 13.4 -0.7**
ELSH IAmb IAmb 20 15 14.2
comp=Z,38nm,0.5s

SGRT San Giovanni R 90.03 320 IAmb IAmb 20 15 18.7
comp=Z,16nm,0.8s

WME Myndd Eilian 90.05 338 *eP* **P** **20 15 13.9 -0.5**
FOEL Foel Wylfa 90.11 337 *eP* **P** **20 15 14.6 -0.1**
FOEL IAmb IAmb 20 15 15.4
comp=Z,30nm,0.6s

ILTH Belurgan, Co L 90.16 339 P **P** **20 15 14.5 -0.4**
WLF1 Llynfaes 90.17 338 *eP* **P** **20 15 14.5 -0.5**
WLF1 IAmb IAmb 20 15 15.2

	comp=Z,45nm,0.5s							
F33A	**5 Mile Ranch,** comp=Z,16nm,0.8s	**90.25**	**34**	IAmb	IAmb	20 15 17.4		
HLM1	**Long Mynd**	**90.31**	**337**	*e*P	**P**	**20 15 14.7**	**-1.0**
HLM1	comp=Z,8.2nm,0.5s			IAmb	IAmb	20 15 15.9		
NRCA	**Norcia** comp=Z,14nm,0.8s	**90.72**	**322**	IAmb	IAmb	20 15 18.7		
SDCO	**Great Sand Dun** comp=Z,5.5nm,0.8s	**90.74**	**45**	IAmb	IAmb	20 15 20.8		
ZCCA	**Zocca** comp=Z,20nm,1.2s	**90.76**	**324**	IAmb	IAmb	20 15 28.1		
MCH1	**Michaelchurch**	**90.79**	**336**	*e*P	**P**	**20 15 17.4**	**-0.4**
MCH1	comp=Z,34nm,0.6s			IAmb	IAmb	20 15 18.3		
DSB	**Dublin**	**90.84**	**339**	P	**P**	**20 15 17.5**	**-0.6**
MONM	**Monmouth**	**90.85**	**336**	*e*P	**P**	**20 15 17.6**	**-0.5**
MONM	comp=Z,28nm,0.7s			IAmb	IAmb	20 15 18.9		
INTR	**Introdacqua** comp=Z,10nm,0.9s	**90.87**	**321**	IAmb	IAmb	20 15 19.4		
AQU	**L'Aquila**	**90.90**	**322**	*e*P	**P**	**20 15 18.1**	**-0.6**
SENIN	**Lac Senin/Sane** comp=Z,12nm,1.2s	**91.07**	**328**	IAmb	IAmb	20 15 19.7		
ECSD	**EROS Data Cent** comp=Z,7.5nm,1.0s	**91.61**	**36**	IAmb	IAmb	20 15 23.4		
IWEX	**Carrickbyrne,**	**91.71**	**339**	P	**P**	**20 15 22.7**	**+0.6**
T25A	**Trinidad** comp=Z,5.7nm,0.9s	**91.79**	**44**	IAmb	IAmb	20 15 25.4		
TASM	**ASL Pad, Albuq** comp=Z,6.2nm,0.8s	**91.93**	**47**	IAmb	IAmb	20 15 26.8		
TASM	**ASL Pad, Albuq** comp=Z,5.9nm,0.8s	**91.93**	**47**	IAmb	IAmb	20 15 26.8		
ANMO	**Albuquerque**	**91.93**	**47**	*ce*P	**P**	**20 15 24.6**	**+0.8**
ANMO	comp=Z,5.0nm,0.9s			pmax	pmax			
SPMN	**Marine on St.** comp=Z,9.6nm,0.9s	**92.36**	**33**	IAmb	IAmb	20 15 26.7		
DYA	**Yadsworthy**	**92.41**	**336**	*e*P	**P**	**20 15 24.2**	**-1.2**
DYA	comp=Z,10nm,0.8s			IAmb	IAmb	20 15 25.4		
SCHQ	**Schefferville** comp=Z,10nm,0.8s,baz=18,slow=6.1,SNR=10.0	**92.81**	**13**	P	**P**	**20 15 27.1**	**-0.1**
SCHQ	**Schefferville** comp=Z,9.6nm,0.8s	**92.81**	**13**	IAmb	IAmb	20 15 28.1		
AMTX	**Amarillo** comp=Z,7.5nm,0.8s	**94.94**	**45**	IAmb	IAmb	20 15 39.5		
E46A	**Sault Ste Mari** comp=Z,13nm,1.1s	**95.12**	**27**	IAmb	IAmb	20 15 39.1		
TXAR	**Lajitas Array** comp=Z,0.9nm,0.6s,baz=283,slow=2.8,SNR=12	**97.34**	**50**	P	Pdif	20 15 48.9	+0.6	
TXAR	comp=Z,3.9nm,0.9s,baz=293,slow=3.8,SNR=8.3			pP	pP	20 17 41.7	+1.2	
TXAR	**Lajitas Array** comp=Z,0.9nm,0.6s	**97.34**	**50**	P	Pdif	20 15 48.7	+0.4	
ESDC	**Sonseca Array** comp=Z,0.8nm,0.9s,baz=7.1,slow=6.0,SNR=4.2	**101.40**	**330**	P	**Pdif**	**20 16 05.3**	**-0.7**	
ESDC	**Sonseca Array**	**101.40**	**330**		**Pdif**	**20 16 05.2**	**-0.8**	
MAW	**Mawson** comp=Z,4.8nm,0.9s,baz=59,slow=11,SNR=6.2	**111.83**	**203**	PP	**PP**	**20 21 37.8**	**-0.6**	
TORD	**Torodi Ar. Bea** comp=Z,3.1nm,0.6s,baz=19,slow=1.8,SNR=50	**118.89**	**308**	PKP	**PKPdf**	**20 21 00.0**	**-0.5**	
TORD	comp=Z,5.0nm,0.8s,baz=35,slow=7.4,SNR=11			PP	**PP**	**20 22 25.2**	**-2.3**	
TORD	comp=Z,1.7nm,0.9s,baz=228,slow=0.5,SNR=3.6			SKP	**SKPdf**	**20 23 47.3**	**-0.4**	
TORD	comp=Z,0.3nm,0.3s,baz=225,slow=3.1,SNR=6.3			PKKPbc	**PKKPbc**	**20 31 17.2**	**+0.7**	
LBTB	**Lobatse**	**119.64**	**257**	PKIKP	**PKiKP**	**20 21 02.4**	**+0.5**	
LBTB	**Lobatse**	**119.64**	**257**	PKPdf	**PKiKP**	**20 21 02.4**	**+0.5**	
QSPA	**South Pole Qui** comp=Z,1.2nm,0.4s,baz=356,slow=1.8,SNR=23	**120.06**	**180**	PKP	**PKPdf**	**20 21 01.0**	**-0.3**	
QSPA	comp=Z,4.0nm,0.9s,baz=228,slow=0.5,SNR=7.5			SKP	**SKPdf**	**20 23 48.6**	**+0.3**	
QSPA	comp=Z,0.9nm,0.4s,baz=23,slow=1.8,SNR=14			PKKPbc	**PKKPab**	**20 31 11.2**	**-1.4**	
BOSA	**Boshof** comp=Z,3.4nm,0.7s,baz=106,slow=1.8,SNR=12	**121.21**	**253**	PKP	**PKPdf**	**20 21 04.3**	**-0.4**	
BOSA	**Boshof**	**121.21**	**253**		**PKPdf**	**20 21 03.9**	**-0.9**	
DBIC	**Dimbokro** comp=Z,2.7nm,0.5s,baz=58,slow=3.4,SNR=4.8	**128.00**	**309**	PKP	**PKPdf**	**20 21 18.0**	**0.0**	
DBIC	**Dimbokro**	**128.00**	**309**		**PKPdf**	**20 21 17.1**	**-0.9**	
TROLL	**Troll, Antarti** comp=Z,502nm,0.6s	**131.66**	**197**	⇑SKPbc	**SKPab**	**20 24 02.7**	**+0.1**	
SDV	**Santo Domingo**	**132.97**	**38**		**PKPdf**	**20 21 26.5**	**-1.2**	
SDV	**Santo Domingo**	**132.97**	**38**	*e*P	**PKPdf**	**20 21 26.9**	**-0.8**	
SNAA	**Sanae** comp=Z,135nm,0.5s	**133.21**	**196**	⇑SKPbc	**SKPbc**	**20 24 07.3**	**+0.7**	
SNAA	**Sanae** comp=Z,0.6nm,0.4s,baz=146,slow=3.6,SNR=2.4	**133.21**	**196**	PKP	**PKPdf**	**20 21 26.8**	**+0.6**	
SNAA	comp=Z,8.0nm,0.8s,baz=156,slow=3.2,SNR=18			SKPbc	**SKPbc**	**20 24 06.9**	**+0.3**	
VNA2	**Neumayer--Watz** comp=Z,7.4nm,0.6s,baz=119,slow=3.1	**134.80**	**196**	⇑SKPbc	**SKPbc**	**20 24 12.5**	**+0.9**	
BOAV	**Boa Vista**	**143.53**	**30**		PKPab	20 21 44.8	-0.2	
MG03	**Isla Dawson**	**149.32**	**148**		**PKiKP**	**20 22 01.0**	**+0.1**	
LPAZ	**La Paz** comp=Z,1.0nm,0.7s,baz=303,slow=2.9,SNR=5.6	**153.28**	**64**	PKP	**PKPdf**	**20 22 04.3**	**+1.4**	
LPAZ	comp=Z,1.6nm,0.4s,baz=305,slow=2.2,SNR=14			PKPbc	**PKiKP**	**20 22 11.5**	**+0.4**	
BDFB	**Brasilia** comp=Z,5.7nm,0.4s,baz=347,slow=4.5,SNR=7.8	**164.76**	**18**	PKPab	**PKPab**	**20 23 14.7**	**+0.1**	

IDC ***16*** *20:04:00.5±1.3, 34˚.40N×26˚.12E, h0km, mb3.6/4, mbtmp3.4/8, ML2.9/3, MS3.2/2, Error ellipse: s-maj=25.2km s-min=14.2km az=34.0*

ISK ***16*** *20:04:03.3, 34˚.31N×25˚.96E, h8km, ML3.0/10*

THE ***16*** *20:04:04.5, 34˚.N±6˚×2˚.6E±˚, h0km±11km, M3.1/6, MLh3.1/6*

ISC 16 20:04:01.3±1.8, 34˚.24N±0˚.06×25˚.95E±0˚.04, h3km±11km, n29, σ1§45/39, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.90**	**14**	Pg		**Pb**	**20 04 19.6**	**-0.1**
ZKR				Sg		**Sb**	**20 04 31.8**	**-0.2**
ZKR	**Zakros**	**0.90**	**14**	P		**Pb**	**20 04 19.5**	**-0.1**
ZKR				S		**Sb**	**20 04 31.7**	**-0.4**
NPS	**Neapolis**	**1.05**	**345**	P		**Pg**	**20 04 21.2**	**-0.4**
NPS				S		**Sb**	**20 04 35.8**	**-0.8**
SIVA	**Sivas**	**1.22**	**310**	P		**Pg**	**20 04 24.8**	**+0.1**
SIVA				S		**Sg**	**20 04 40.7**	**+0.3**
IDI	**Anoyia** 1.7nm,0.3s,baz=135,slow=14,SNR=16	**1.36**	**320**	Pg		**Pg**	**20 04 26.7**	**-0.7**
IDI	17nm,0.3s,baz=335,slow=7.3,SNR=12			Lg		Lg	20 04 44.4	
IDI	**Anoyia**	**1.36**	**320**	Pn		**Pn**	**20 04 28.6**	**+1.3**
IDI				Sn		**Sn**	**20 04 46.9**	**+0.9**
IDI	**Anoyia**	**1.36**	**320**	P		**Pg**	**20 04 27.4**	**0.0**
IDI				S		**Sb**	**20 04 45.1**	**-0.3**
KARP	**Karpathos**	**1.64**	**37**	Pn		**Pb**	**20 04 32.3**	**0.0**
KARP				Sn		**Sn**	**20 04 53.5**	**+0.7**
KARP	**Karpathos**	**1.64**	**37**	P		**Pg**	**20 04 32.9**	**+0.1**
KARP				S		**Sn**	**20 04 56.0**	**+3.2**
GVD	**Gavdhos**	**1.65**	**292**	Pn		**Pn**	**20 04 33.1**	**+1.9**
GVD	**Gavdhos**	**1.65**	**292**	P		**Pn**	**20 04 32.9**	**+1.6**
GVD				S		**Sn**	**20 04 54.5**	**+1.5**
VAM	**Vamos**	**1.85**	**309**	P		**Pn**	**20 04 35.1**	**+1.1**
VAM				S		**Sn**	**20 04 58.2**	**+0.2**
IMMV	**Iera Moni Meta**	**2.02**	**307**	Pn		**Pn**	**20 04 38.1**	**+1.7**
KNDR	**Palaiochora Ch**	**2.15**	**298**	Pn		**Pn**	**20 04 40.2**	**+2.0**
THR5	**Thira Island,**	**2.23**	**347**	Pn		**Pn**	**20 04 40.6**	**+1.4**
DAT	**Datca**	**2.82**	**28**	Pn		**Pn**	**20 04 49.0**	**+1.6**
TURN	**Turunc**	**3.15**	**36**	Pn		**Pn**	**20 04 53.9**	**+2.1**
DALY	**Dalyan (Mula)**	**3.39**	**40**	Pn		**Pn**	**20 04 57.2**	**+2.1**
YER	**Yerkesik**	**3.46**	**33**	Pn		**Pn**	**20 04 58.2**	**+2.0**
MMAI	**Mount Meron Ar** 0.3nm,0.4s,baz=287,slow=15,SNR=1.9	**7.98**	**96**	Pn		**Pn**	**20 05 57.3**	**-1.0**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=216,slow=16,SNR=1.4	**8.23**	**46**	Pn		**Pn**	**20 05 59.3**	**-2.6**
BRTR	comp=Z,48nm,19.8s,baz=204,slow=47 0.2nm,0.4s			LR		LR	20 10 14.5	
EIL	**Elat** 0.5nm,0.3s,baz=302,slow=14,SNR=2.0	**8.90**	**118**	Pn		**Pn**	**20 06 10.8**	**-0.1**
EIL	0.3nm,0.3s,baz=18,slow=6.4,SNR=1.8 4.5nm,0.8s			Sn		**Sn**	**20 07 51.0**	**-0.7**
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=198,slow=11,SNR=1.6	**16.62**	**7**	Pn		**Pn**	**20 07 56.6**	**+1.4**
GERES	**GERESS Array B** baz=150,slow=14,SNR=1.4 0.1nm,0.4s	**17.20**	**332**	P		**Pn**	**20 08 01.0**	**-1.7**
ESDC	**Sonseca Array** 0.5nm,1.0s,baz=89,slow=8.6,SNR=2.0 0.5nm,1.0s	**24.45**	**292**	P		**P**	**20 09 20.0**	**-1.5**
FINES	**FINESS Array B** 1.2nm,0.9s,baz=179,slow=8.3,SNR=1.6 1.2nm,0.9s	**27.22**	**0**	P		**P**	**20 09 43.7**	**-2.5**
EKA	**Eskdalemuir Ar** 0.3nm,0.5s,baz=133,slow=9.4,SNR=1.9 0.3nm,0.5s	**29.16**	**325**	P		**P**	**20 10 02.7**	**-1.0**
TORD	**Torodi Ar. Bea** 1.3nm,0.7s,baz=36,slow=9.8,SNR=8.9 1.3nm,0.7s	**30.42**	**232**	P		**P**	**20 10 16.8**	**+1.7**
LZDM	**Lanzhou Array** comp=Z,59nm,22.0s,baz=320,slow=39	**61.96**	**64**	LR		LR	20 44 13.5	

IDC 16 20:12:25.3±4.1, 25˚.86N×138˚.71E, h0km, mb3.8/8, mbtmp3.8/9, ML4.3/1, Error ellipse: s-maj=90.3km s-min=80.0km az=178.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.** 1.0nm,0.3s,baz=157,slow=9.6,SNR=12 4.5s	**19.09**	**345**	P		Pn	20 16 49.9	-0.2
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=109,slow=6.2,SNR=2.2 0.5nm,0.3s	**48.41**	**320**	P		P	20 21 08.0	-1.0
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=91,slow=8.6,SNR=2.3 0.3nm,0.6s	**48.88**	**311**	P		P	20 21 13.6	+0.7
KURBB	**Kurchatov Arra** 0.6nm,0.5s,baz=92,slow=8.2,SNR=12 0.6nm,0.5s	**51.70**	**315**	P		P	20 21 33.8	-0.2
BVAR	**Borovoye Array** 1.0nm,0.5s,baz=92,slow=7.0,SNR=7.0 1.0nm,0.5s	**56.85**	**318**	P		P	20 22 11.5	-0.1
ARCES	**ARCESS Array B** 1.1nm,0.9s,baz=52,slow=7.9,SNR=4.7 1.1nm,0.9s	**73.66**	**340**	P		P	20 23 59.8	-0.6
FINES	**FINESS Array B** 1.1nm,0.9s,baz=64,slow=4.4,SNR=5.1 1.1nm,0.9s	**77.65**	**333**	P		P	20 24 23.1	-0.2
HFS	**Hagfors** 0.7nm,0.6s,baz=67,slow=4.8,SNR=4.6 0.7nm,0.6s	**83.29**	**336**	P		P	20 24 54.2	+0.6
NOA	**NORSAR Array B** 0.3nm,0.5s,baz=47,slow=4.6,SNR=1.9 0.3nm,0.5s	**83.56**	**337**	P		P	20 24 55.7	+0.5

NIED ***16*** *20:22:09.8, 36˚.29N×141˚.89E, h63km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.58; Mθθ0.86; Mϕϕ-4.44; Mrθ0.62; Mrϕ-4.78; Mθϕ6.80; Fault plane solution: Mo9.09000×10¹⁴ NP1: ϕs247.00000°, δ31.00000°, λ150.00000°. NP2: ϕs4.00000°, δ75.00000°, λ62.00000°.*

JMA ***16*** *20:22:09.8±0.3, 36˚.3N±0˚.6×14˚.2E±˚, h63km, MD4.0/39, MV3.8/39, FAR E OFF IBARAKI PREF*

NEIC ***16*** *20:22:11.5±1.4, 36˚.18N±0˚.05×141˚.96E±0˚.07, h38km±8km, mb4.2/10, Error ellipse: s-maj=10.6km s-min=4.7km az=46.0*

IDC ***16*** *20:22:13.2±2.2, 36˚.14N×141˚.80E, h49km±19km, mb3.6/17, mbtmp3.9/21, ML3.4/4, Error ellipse: s-maj=19.7km s-min=11.1km az=74.0*

ISC 16 20:22:09.8±0.7, 36˚.25N±0˚.05×141˚.94E±0˚.07, h23km, n73, σ0§95/63, mb4.1/20, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCAJ	**Choshiashikaji** comp=N,5.0nm,1.2s,comp=E,6.0nm,2.3s	**1.02**	**239**	A		A	20 22 28.3	
JHYU	**Hitachinakayam**	**1.09**	**275**	⇓*i*P		**Pn**	**20 22 28.7**	**-1.0**
JHYU				⇓S		**Sn**	**20 22 44.2**	**+0.2**
JHO	**Hitachi**	**1.16**	**289**	⇓*i*P		**Pn**	**20 22 29.1**	**-1.5**
JIHU	**Itakohorinouch**	**1.18**	**256**	P		**Pn**	**20 22 30.8**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.25**	**313**	⇓*i*P		**Pn**	**20 22 30.4**	**-1.5**
JFK	**Kawauchi**	**1.40**	**323**	P		**Pn**	**20 22 32.9**	**-1.1**
JSB	**Shiboa** comp=N,4.0nm,0.8s,comp=E,5.0nm,2.8s	**1.77**	**294**	A		A	20 22 38.1	
BSO1	**Boso 1**	**1.77**	**206**	P		**Pn**	**20 22 39.1**	**+0.5**
JOTO	**OTAMA OYAMA**	**1.83**	**316**	*i* P		**Pn**	**20 22 40.0**	**+0.1**
JOTO				*e*S		**Sn**	**20 23 01.0**	**-1.4**
BSO3	**Boso 3**	**1.85**	**219**	P		**Pn**	**20 22 40.4**	**+0.5**
JMM	**Marumori**	**1.85**	**331**	P		**Pn**	**20 22 39.5**	**-0.7**
JAG	**Ashikaga**	**2.01**	**276**	*i* P		**Pn**	**20 22 41.8**	**-0.6**
JFY	**Yanaizu**	**2.13**	**303**	P		**Pn**	**20 22 44.2**	**+0.3**
JOU	**Okura** comp=N,3.0nm,4.8s,comp=E,2.0nm,1.5s	**2.34**	**335**	A		A	20 22 46.1	
JRY	**Ryogami san**	**2.47**	**265**	P		**Pn**	**20 22 48.2**	**-0.5**
JOD2	**Odawara 2**	**2.52**	**248**	P		**Pn**	**20 22 49.6**	**+0.3**
MJAR	**Matsushiro Arr** comp=E,2.9nm,0.3s,baz=112,slow=9.1,SNR=157	**3.02**	**277**	P		**Pn**	**20 22 56.4**	**+0.1**
MJAR	comp=E,28nm,0.6s,baz=200,slow=18,SNR=6.9 comp=E,23nm,0.6s			S		**Sn**	**20 23 31.2**	**-0.5**
MJAR	**Matsushiro Arr**	**3.02**	**277**			**Pn**	**20 22 56.6**	**+0.3**
MAJO	**Matsushiro**	**3.02**	**277**			**Pn**	**20 22 57.0**	**+0.7**
MJB9	**Matsu-Tunnel**	**3.02**	**277**			**Pn**	**20 22 57.5**	**+1.2**
JHJ2	**Mitsune**	**3.58**	**210**	Pn		**Pn**	**20 23 03.1**	**-0.8**
JHJ	**Hachijo jima 2** comp=E,39nm,0.3s,baz=32,slow=15,SNR=13	**3.59**	**210**	P		**Pn**	**20 23 04.1**	**0.0**
JHJ	comp=E,114nm,0.3s,baz=78,slow=23,SNR=8.0 comp=E,72nm,0.3s			S		**Sn**	**20 23 43.6**	**-2.1**
JGF	**Kuroka**	**3.77**	**261**			**Pn**	**20 23 08.3**	**+1.7**
INU	**Inuyama**	**4.10**	**259**			**Pn**	**20 23 10.8**	**-0.2**
JTM	**Tenmabayashi**	**4.58**	**352**			**Pn**	**20 23 18.5**	**+0.9**
ERM	**Erimo**	**5.83**	**9**	Pn		**Pn**	**20 23 32.4**	**-2.4**
JKA	**Kamikawa-asahi**	**7.87**	**3**	Pn		**Pn**	**20 24 02.8**	**-0.1**
USRK	**Ussuriysk Ar.** comp=E,0.5nm,0.3s,baz=122,slow=11,SNR=7.0 comp=E,3.2nm,0.8s	**10.99**	**319**	P		**Pn**	**20 24 49.1**	**+3.7**
KSRS	**Korea Array** comp=E,0.1nm,0.3s,baz=95,slow=13,SNR=8.9 comp=E,1.9nm,0.9s	**11.29**	**280**	P		**Pn**	**20 24 51.8**	**+2.1**
PETK	**Petropavlovsk-** comp=E,0.8nm,0.7s,baz=237,slow=7.9,SNR=1.9 comp=E,0.8nm,0.7s	**20.16**	**28**	P		Pn	20 26 45.5	+1.1
PETK	**Petropavlovsk-**	**20.16**	**28**	P		Pn	20 26 44.6	+0.2
H11N2	**WAKE ISLAND Hy** baz=313,slow=74	**27.39**	**120**	T		T	20 56 41.0	
H11N1	**WAKE ISLAND Hy** baz=313,slow=74	**27.40**	**120**	T		T	20 56 40.6	
H11N3	**WAKE ISLAND Hy** baz=313	**27.41**	**120**	T		T	20 56 37.6	
H11S1	**WAKE ISLAND Hy** baz=315,slow=76	**28.08**	**122**	T		T	20 57 54.0	
H11S3	**WAKE ISLAND Hy** baz=315,slow=76	**28.08**	**122**	T		T	20 58 05.7	
H11S2	**WAKE ISLAND Hy** baz=315,slow=76	**28.10**	**122**	T		T	20 58 07.3	
SONM	**Songino Array** comp=E,3.8nm,0.8s,baz=102,slow=8.8,SNR=7.9 comp=E,3.8nm,0.8s	**28.57**	**305**	P		**P**	**20 28 04.2**	**+0.1**
SONM	**Songino Array**	**28.57**	**305**	P		**P**	**20 28 03.5**	**-0.6**
SONM	comp=Z,2.4nm,0.8s			IAmb		IAmb	20 28 06.6	
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=49,slow=7.3,SNR=4.9 comp=Z,0.5nm,0.3s	**41.71**	**257**	P		**P**	**20 29 56.6**	**-0.5**
ZAA0	**Zalesovo Array**	**42.75**	**313**	P		**P**	**20 30 04.9**	**-0.2**
ZALV	**Zalesovo Beam** comp=Z,0.9nm,0.5s,baz=98,slow=6.7,SNR=8.5 comp=Z,0.9nm,0.5s	**42.75**	**313**	P		**P**	**20 30 05.2**	**+0.1**
ZALV	**Zalesovo Beam**	**42.75**	**313**	P		**P**	**20 30 04.2**	**-0.9**
MKAR	**Makanchi Array** comp=Z,2.0nm,0.6s,baz=86,slow=9.7,SNR=21 comp=Z,2.0nm,0.6s	**44.89**	**303**	P		**P**	**20 30 22.7**	**+0.2**
MKAR	**Makanchi Array**	**44.89**	**303**			**P**	**20 30 22.0**	**-0.5**
MAKZ	**Makanchi** comp=Z,3.5nm,0.8s	**45.10**	**303**	P		**P**	**20 30 24.1**	**-0.1**
MAKZ						IAmb	IAmb	20 30 27.3
KURK	**Kurchatov**	**46.75**	**309**	P		**P**	**20 30 36.5**	**-0.5**
KURK	comp=Z,3.8nm,0.8s					IAmb	IAmb	20 30 49.1
KURBB	**Kurchatov Arra** comp=Z,2.4nm,0.7s,baz=85,slow=8.2,SNR=25 comp=Z,2.4nm,0.7s	**46.82**	**309**	P		**P**	**20 30 37.2**	**-0.4**
TARG	**Taragay, Kyrgy** comp=Z,2.7nm,0.8s	**49.13**	**297**	IAmb		IAmb	20 31 08.9	
ILAR	**Eielson Array** comp=Z,0.4nm,0.7s,baz=275,slow=7.2,SNR=5.7 comp=Z,0.4nm,0.7s	**49.93**	**32**	P		**P**	**20 31 02.2**	**+0.9**
ILAR	**Eielson Array**	**49.93**	**32**	P		**P**	**20 31 01.7**	**+0.3**
BVAR	**Borovoye Array** comp=Z,0.8nm,0.6s,baz=75,slow=6.3,SNR=4.7 comp=Z,0.8nm,0.6s	**51.41**	**313**	P		**P**	**20 31 13.0**	**+0.3**
WRA	**Warramunga Arr** comp=Z,0.5nm,0.6s,baz=6.6,slow=7.5,SNR=9.6 comp=Z,0.5nm,0.6s	**56.35**	**189**	P		**P**	**20 31 48.5**	**-0.6**
WRA	**Warramunga Arr**	**56.35**	**189**	P		**P**	**20 31 47.3**	**-1.7**
ARTI	**Arti** comp=Z,1.2nm,0.4s,baz=73,slow=7.2,SNR=3.6 comp=Z,1.2nm,0.4s	**57.33**	**319**	P		**P**	**20 31 56.0**	**+0.3**
ARTI	**Arti**	**57.33**	**319**	P		**P**	**20 31 55.7**	**0.0**
AB31	**Akbulak array** comp=Z,1.9nm,1.1s	**58.77**	**311**	IAmb		IAmb	20 32 13.4	
AKTO	**Aktyubinsk** comp=Z,1.5nm,0.8s,baz=82,slow=8.8,SNR=4.1 comp=Z,1.5nm,0.8s	**59.51**	**312**	P		**P**	**20 32 10.9**	**-0.1**
ASAR	**Alice Springs** comp=Z,0.4nm,0.7s,baz=8.0,slow=7.8,SNR=3.2 comp=Z,0.4nm,0.7s	**60.07**	**188**	P		**P**	**20 32 14.9**	**-0.2**
ASAR	**Alice Springs**	**60.07**	**188**	P		**P**	**20 32 14.4**	**-0.7**
FINES	**FINESS Array B** comp=Z,1.8nm,0.8s,baz=53,slow=6.3,SNR=6.2 comp=Z,1.8nm,0.8s	**69.70**	**333**	P		**P**	**20 33 17.5**	**+0.2**
FINES	**FINESS Array B**	**69.70**	**333**	P		**P**	**20 33 17.4**	**+0.1**
NB2	**NORSAR Subarra** comp=Z,0.4nm,0.6s,baz=39,slow=5.9	**75.07**	**338**	P		**P**	**20 33 49.9**	**+0.5**
NOA	**NORSAR Array B** comp=Z,1.2nm,0.8s,baz=39,slow=5.6,SNR=5.0 comp=Z,1.2nm,0.8s	**75.07**	**338**	P		**P**	**20 33 48.8**	**-0.6**
AKASG	**Malin Array Be** comp=Z,1.7nm,0.6s,baz=46,slow=6.1,SNR=9.1 comp=Z,1.7nm,0.6s	**75.17**	**323**	P		**P**	**20 33 49.8**	**-0.3**
AKASG	**Malin Array Be** comp=Z,2.9nm,1.2s	**75.17**	**323**	IAmb		IAmb	20 34 27.4	
AKBB	**Malin Array Si**	**75.17**	**323**	P		**P**	**20 33 50.0**	**-0.1**
BRTR	**Keskin Array B** comp=Z,0.7nm,0.8s,baz=38,slow=6.3,SNR=3.9 comp=Z,0.7nm,0.8s	**79.69**	**312**	P		**P**	**20 34 16.9**	**+1.1**
BRTR	**Keskin Array B**	**79.69**	**312**	P		**P**	**20 34 15.9**	**+0.1**
GERES	**GERESS Array B** comp=Z,0.3nm,0.6s,baz=34,slow=5.0,SNR=4.1 comp=Z,0.3nm,0.6s	**83.60**	**329**	P		**P**	**20 34 36.3**	**0.0**
GERES	**GERESS Array B**	**83.60**	**329**	P		**P**	**20 34 35.8**	**-0.4**
LPAZ	**La Paz** comp=Z,1.0nm,0.9s,baz=338,slow=3.4,SNR=3.8	**146.71**	**61**	PKPbc		**PKPbc**	**20 41 51.2**	**+0.2**
LPAZ	**La Paz**	**146.71**	**61**			**PKPbc**	**20 41 51.0**	**+0.1**

IDC ***16*** *20:26:15.7±0.7, 36˚.22N×141˚.94E, h0km, mb4.0/21, mbtmp4.1/25, ML3.8/4, MS3.4/8, Error ellipse: s-maj=18.4km s-min=14.4km az=86.0*

MOS ***16*** *20:26:17.2±1.1, 36˚.31N×142˚.26E, h30km, mb4.5/15, Error ellipse: s-maj=10.7km s-min=6.4km az=109.3*

NIED ***16*** *20:26:19.8, 36˚.31N×141˚.85E, h62km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.54; Mθθ-0.16; Mϕϕ-0.38; Mrθ0.24; Mθϕ-0.37; Mrϕ0.80; Fault plane solution: Mo1.03000×10¹⁵ NP1: ϕs237.00000°, δ21.00000°, λ125.00000°. NP2: ϕs20.00000°, δ73.00000°, λ78.00000°.*

NEIC ***16*** *20:26:19.8±0.9, 36˚.19N±0˚.06×141˚.99E±0˚.08, h29km±6km, mb4.4/14 Error ellipse: s-maj=10.9km s-min=7.6km az=131.0*

JMA ***16*** *20:26:19.8±0.3, 36˚.3N±0˚.6×14˚.2E±˚, h62km, MD4.2/40, MV4.1/40, FAR E OFF IBARAKI PREF*

ISC 16 20:26:18.2±0.5, 36˚.20N±0˚.05×142˚.15E±0˚.07, h23km, n114, σ1§80/106, mb4.3/36, MS3.7/5, 7C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCAJ	**Choshiashikaji** comp=N,8.0nm,1.8s,comp=E,10.0nm,1.6s	**1.15**	**246**	A		A	20 26 38.0	
JHYU	**Hitachinakayam**	**1.27**	**277**	⇓*i*P		**Pn**	**20 26 38.2**	**-2.4**
JIHU	**Itakohorinouch**	**1.34**	**260**	P		**Pn**	**20 26 40.3**	**-1.2**
JIHU	comp=N,13nm,1.0s,comp=E,24nm,3.0s			A		A	20 26 40.3	
JHO	**Hitachi**	**1.34**	**288**	⇓*i*P		**Pn**	**20 26 38.7**	**-2.8**
ONAJ	**Iwakimizuishiy**	**1.41**	**310**	⇓*i*P		**Pn**	**20 26 40.0**	**-2.6**
JFK	**Kawauchi**	**1.55**	**319**	*i* P		**Pn**	**20 26 42.4**	**-2.1**
BSO1	**Boso 1**	**1.82**	**212**	P		**Pn**	**20 26 48.7**	**+1.1**
BSO3	**Boso 3**	**1.93**	**224**	⇓P		**Pn**	**20 26 50.0**	**+0.6**
JSB	**Shiboa** comp=N,4.0nm,2.5s,comp=E,7.0nm,3.1s	**1.96**	**294**	A		A	20 26 47.5	
JMM	**Marumori**	**1.99**	**327**	*i* P		**Pn**	**20 26 49.0**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.99**	**313**	*i* P		**Pn**	**20 26 49.6**	**-0.9**
JAG	**Ashikaga**	**2.19**	**277**	*i* P		**Pn**	**20 26 51.2**	**-2.0**
JFY	**Yanaizu**	**2.31**	**302**	P		**Pn**	**20 26 53.7**	**-1.1**
JYAR	**Yonezawaarcadi** comp=N,6.0nm,1.1s,comp=E,7.0nm,1.2s	**2.35**	**317**	A		A	20 26 53.3	
JKT	**Katashina**	**2.47**	**284**	*i* P		**Pn**	**20 26 55.0**	**-1.3**
JOU	**Okura** comp=N,4.0nm,4.8s,comp=E,3.0nm,0.7s	**2.47**	**332**	A		A	20 26 55.6	
**J

YAK eSS SnSn 20 37 41.4 +0.6
YAK eSSS SSS 20 37 56.3
YAK e 20 42 51.7
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.8s
YAK pmax pmax
comp=Z,83nm,5.1s
YAK pmax pmax
comp=N,45nm,5.6s
YAK pmax pmax
comp=E,32nm,3.8s
YAK smax smax
comp=N,47nm,3.5s
YAK smax smax
comp=E,55nm,4.1s
H11N2 WAKE ISLAND Hy 27.21 120 T T 21 00 49.7
baz=313,slow=75,SNR=26
H11N1 WAKE ISLAND Hy 27.22 120 T T 21 00 53.0
baz=313,slow=75,SNR=26
H11N3 WAKE ISLAND Hy 27.23 120 T T 21 00 52.9
baz=313,slow=75,SNR=25
H11S1 WAKE ISLAND Hy 27.91 123 T T 21 01 43.0
baz=314
H11S3 WAKE ISLAND Hy 27.91 123 T T 21 01 43.7
baz=314,slow=74
H11S2 WAKE ISLAND Hy 27.92 123 T T 21 01 46.2
baz=314,slow=74
ULN Ulaanbaatar 28.32 305 *ce*P **P 20 32 10.3 +0.1**
ULN pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 28.75 305 P **P 20 32 15.3 +1.3**
comp=Z,5.6nm,0.8s,baz=104,slow=10.0,SNR=12
comp=Z,5.6nm,0.8s
SONM Songino Array 28.75 305 IAmb IAmb 20 32 16.2
comp=Z,4.0nm,0.8s
GTA2 Gaotai 33.42 289 *e*P **P 20 32 55.4 +0.2**
GTA2 pP pP 20 32 58.8 -2.5
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 34.66 16 *i* P **P 20 33 10.2 +4.7**
BILL pmax pmax
comp=Z,3.0nm,1.0s
KNGR Kungurtug, Tuv 34.92 309 *i* P **P 20 33 07.3 -0.9**
KNGR pmax pmax
comp=Z,4.0nm,1.0s
TIXI Tiksi 36.19 353 LR LR 20 50 47.5
comp=Z,29nm,19.0s,baz=288,slow=41
DGZ Jazzator, Alta 41.37 307 *i* P **P 20 34 01.7 -0.8**
DGZ pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 41.87 257 P **P 20 34 06.9 +0.2**
comp=Z,0.6nm,0.4s,baz=51,slow=5.9,SNR=8.1
comp=Z,0.6nm,0.4s
CMAR Chiang Mai Arr 41.87 257 *ce*P **P 20 34 07.0 +0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
ZAA0 Zalesovo Array 42.92 313 **P 20 34 13.9 -0.9**
ZALV Zalesovo Beam 42.92 313 P **P 20 34 14.6 -0.2**
comp=Z,2.7nm,0.7s,baz=96,slow=6.6,SNR=13
ZALV PcP **PcP 20 36 05.6 +0.4**
comp=Z,0.8nm,0.5s,baz=80,slow=3.2,SNR=3.0
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 42.92 313 **P 20 34 14.4 -0.5**
MK31 Makanchi Array 45.07 303 *ce*P **P 20 34 32.2 -0.1**
MKAR Makanchi Array 45.07 303 P **P 20 34 32.1 -0.2**
comp=Z,2.7nm,0.6s,baz=87,slow=10.0,SNR=24
MKAR PcP **PcP 20 36 13.5 +0.8**
comp=Z,0.5nm,0.8s,baz=101,slow=4.7,SNR=2.4
comp=Z,2.7nm,0.6s
MKAR Makanchi Array 45.07 303 **P 20 34 31.1 -1.1**
MAKZ Makanchi 45.28 303 P **P 20 34 32.7 -1.2**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 45.28 303 **P 20 34 32.7 -1.2**
MAKZ IAmb IAmb 20 34 36.9
comp=Z,4.3nm,0.8s
KURK Kurchatov 46.92 309 P **P 20 34 47.0 +0.3**
KURK Kurchatov 46.92 309 **P 20 34 45.6 -1.1**
KURK IAmb IAmb 20 34 58.7
comp=Z,5.8nm,0.8s
KURBB Kurchatov Arra 46.99 309 P **P 20 34 47.0 -0.2**
comp=Z,3.2nm,0.6s,baz=84,slow=8.1,SNR=32
comp=Z,3.2nm,0.6s
TARG Taragay, Kyrgy 49.31 297 IAmb IAmb 20 35 18.5
comp=Z,3.4nm,0.7s
ILAR Eielson Array 49.88 32 P **P 20 35 11.6 +2.2**
comp=Z,0.6nm,0.7s,baz=264,slow=6.3,SNR=8.1
comp=Z,0.6nm,0.7s
ILAR Eielson Array 49.88 32 P **P 20 35 10.8 +1.5**
AAK Ala-Archa 51.41 299 LR LR 20 58 25.3
comp=Z,122nm,18.1s,baz=106,slow=38
BVAR Borovoye Array 51.58 313 P **P 20 35 22.4 +0.1**
comp=Z,1.3nm,0.6s,baz=79,slow=7.7,SNR=7.5
comp=Z,1.3nm,0.6s
ARSB Arslanbob 52.88 298 IAmb IAmb 20 35 34.5
comp=Z,6.9nm,1.3s
WRA Warramunga Arr 56.32 189 P **P 20 35 58.1 +0.9**
comp=Z,0.6nm,0.4s,baz=6.7,slow=7.5,SNR=15
comp=Z,0.6nm,0.4s
CHGR Chuyangaron 56.56 296 *i* P **P 20 35 58.9 -0.2**
CHGR pmax pmax
comp=Z,16nm,0.9s
ARTI Arti 57.49 319 P **P 20 36 05.2 0.0**
comp=Z,1.9nm,0.4s,baz=66,slow=10.0,SNR=6.0
comp=Z,1.9nm,0.4s
ARTI Arti 57.49 319 *ce*P **P 20 36 06.1 +0.9**
ARTI pmax pmax
comp=Z,3.0nm,1.0s
ARTI Arti 57.49 319 **P 20 36 05.0 -0.2**
SHAA Shahritus 57.74 295 IAmb IAmb 20 36 09.1
comp=Z,13nm,0.7s
AB31 Akbulak array 58.93 311 IAmb IAmb 20 36 16.2
comp=Z,1.9nm,0.7s
ABKAR Akbulak array 58.93 311 **P 20 36 14.7 -0.7**
AKTO Aktyubinsk 59.68 313 P **P 20 36 20.3 -0.3**
comp=Z,2.5nm,0.9s,baz=98,slow=7.9,SNR=5.0
comp=Z,2.5nm,0.9s
ASAR Alice Springs 60.05 189 P **P 20 36 23.9 +0.6**
comp=Z,0.5nm,0.8s,baz=358,slow=6.1,SNR=5.8
comp=Z,0.5nm,0.8s
ASAR Alice Springs 60.05 189 P **P 20 36 23.0 -0.3**
ARCES ARCESS Array B 64.99 340 P **P 20 36 55.9 +0.1**
comp=Z,1.6nm,0.8s,baz=57,slow=8.8,SNR=5.8
ARCES LR LR 21 07 30.0
comp=Z,38nm,19.0s,baz=77,slow=38
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 64.99 340 P **P 20 36 55.8 0.0**
ARCES IAmb IAmb 20 37 13.1
comp=Z,4.8nm,1.2s
OBN Obninsk 69.12 324 *i* P **P 20 37 22.7 +0.5**
OBN pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 69.83 333 P **P 20 37 26.9 +0.4**
comp=Z,2.0nm,0.8s,baz=44,slow=8.5,SNR=7.8
comp=Z,2.0nm,0.8s
FINES FINESS Array B 69.83 333 *ce*P **P 20 37 28.0 +1.5**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 69.83 333 P **P 20 37 26.8 +0.3**
KBZ Khabaz 71.90 311 P **P 20 37 38.2 -1.2**
comp=Z,1.7nm,0.8s,baz=63,slow=2.3,SNR=4.1
comp=Z,1.7nm,0.8s
KIV Kislovodsk 71.90 311 *e*P **P 20 37 40.0 +0.4**
KIV pmax pmax
comp=Z,3.0nm,1.0s
HFS Hagfors 75.09 336 P **P 20 37 58.7 +0.8**
comp=Z,1.1nm,0.7s,baz=20,slow=4.6,SNR=3.0
comp=Z,1.1nm,0.7s
NB2 NORSAR Subarra 75.18 338 P **P 20 37 59.8 +1.3**
comp=Z,0.7nm,0.6s,baz=40,slow=6.2
NOA NORSAR Array B 75.18 338 P **P 20 37 59.3 +0.8**
comp=Z,1.9nm,0.8s,baz=39,slow=5.8,SNR=7.0
comp=Z,1.9nm,0.8s
AKASG Malin Array Be 75.32 323 P **P 20 37 59.9 +0.5**
comp=Z,1.8nm,0.5s,baz=48,slow=5.9,SNR=14
AKASG LR LR 21 14 02.3
comp=Z,46nm,18.1s,baz=26,slow=38
comp=Z,1.8nm,0.5s
AKASG Malin Array Be 75.32 323 P **P 20 37 59.4 +0.1**
AKASG IAmb IAmb 20 38 29.9
comp=Z,3.6nm,1.2s
AKBB Malin Array Si 75.32 323 *ce*P **P 20 37 59.9 +0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.9s

BURAR Bucovina Array 79.33 322 **P 20 38 22.2 +0.1**
BRTR Keskin Array B 79.85 312 P **P 20 38 25.8 +0.7**
comp=Z,0.9nm,0.8s,baz=53,slow=6.1,SNR=4.5
comp=Z,0.9nm,0.8s
BRTR Keskin Array B 79.85 312 *ce*P **P 20 38 26.5 +1.4**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 79.85 312 P **P 20 38 25.1 0.0**
MLR Muntele Rosu 80.41 320 LR LR 21 15 45.6
comp=Z,35nm,19.4s,baz=52,slow=37
GERES GERESS Array B 83.73 329 P **P 20 38 45.7 +0.3**
comp=Z,0.5nm,0.6s,baz=32,slow=5.2,SNR=5.4
comp=Z,0.5nm,0.6s
GERES GERESS Array B 83.73 329 P **P 20 38 45.3 0.0**
TXAR Lajitas Array 90.15 53 P **P 20 39 19.5 +2.6**
comp=Z,0.3nm,0.8s,baz=272,slow=2.2,SNR=3.8
comp=Z,0.3nm,0.8s
TXAR Lajitas Array 90.15 53 P **P 20 39 18.3 +1.3**
LPAZ La Paz 146.58 62 PKPbc **PKiKP 20 46 00.9 -0.9**
comp=Z,0.9nm,0.5s,baz=316,slow=2.0,SNR=6.2
LPAZ La Paz 146.58 62 PKP2 **PKiKP 20 46 01.0 -0.9**

*KRSC **16** 20:33:50.7±1.0,53°.11N×160°.49E, h49km±10km, Ml4.2*
*MOS **16** 20:33:52.6±0.9,53°.14N×160°.32E, h52km, mb4.1/5, Error ellipse: s-maj=7.6km s-min=5.0km az=75.9*
*NEIC **16** 20:33:56.5±1.9,53°.4N±0°.1×159°.87E±0°.07, h65km±8km, mb4.6/16, Error ellipse: s-maj=21.3km s-min=4.4km az=166.0*
*IDC **16** 20:33:58.0±2.3,53°.37N×159°.87E, h87km±16km, mb3.5/14, mbtmp3.8/14, MS2.6/1, Error ellipse: s-maj=25.9km s-min=18.2km az=103.0*

ISC 16 20:33:53.3±0.7, 53°.16N±0°.04×160°.35E±0°.04, h47km±6km, n124, σ1s31/138, mb3.9/24, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.20**	**254**	P	**Pn**	**20 34 01.5**	**+0.2**
SPN				S	**Sn**	**20 34 06.9**	**0.0**
SPN	**Mys Shipunski**	**0.20**	**254**	*i* P	**Pn**	**20 34 01.6**	**+0.2**
SPN				*e*S	**Sn**	**20 34 06.9**	**0.0**
NLC	**Nalytchevo**	**0.60**	**272**	PN	**Pn**	**20 34 05.2**	**-0.4**
NLC				S	**Sn**	**20 34 13.7**	**-0.8**
NLC	**Nalytchevo**	**0.60**	**272**	*i* P	**Pn**	**20 34 05.2**	**-0.4**
NLC				*e*S	**Sn**	**20 34 13.8**	**-0.8**
SDLR	**Sedlovina**	**0.89**	**278**	PN	**Pn**	**20 34 09.5**	**-0.1**
SDLR	**Sedlovina**	**0.89**	**278**	*e*P	**Pn**	**20 34 09.5**	**-0.1**
UGLR	**Uglovaya**	**0.92**	**274**	PN	**Pn**	**20 34 10.1**	**+0.2**
UGLR	**Uglovaya**	**0.92**	**274**	*e*P	**Pn**	**20 34 10.1**	**+0.2**
SMAR	**Somma**	**0.94**	**277**	PN	**Pn**	**20 34 10.0**	**-0.3**
SMAR	**Somma**	**0.94**	**277**	*e*P	**Pn**	**20 34 10.1**	**-0.3**
DALK	**Dalny**	**0.97**	**263**	PN	**Pn**	**20 34 09.9**	**-0.6**
DALK				S	**Sn**	**20 34 23.0**	**-0.1**
DALK	**Dalny**	**0.97**	**263**	*e*P	**Pn**	**20 34 10.0**	**-0.6**
DALK				*e*S	**Sn**	**20 34 23.0**	**-0.1**
KRER	**Koryakskii**	**0.97**	**279**	PN	**Pn**	**20 34 10.8**	**+0.1**
KRER	**Koryakskii**	**0.97**	**279**	*e*P	**Pn**	**20 34 10.9**	**+0.1**
AVH	**Avacha**	**0.97**	**277**	PN	**Pn**	**20 34 10.8**	**+0.2**
AVH	**Avacha**	**0.97**	**277**	*e*P	**Pn**	**20 34 10.9**	**+0.2**
KII	**Karymskiy**	**1.03**	**329**	PN	**Pn**	**20 34 11.3**	**-0.1**
KII	**Karymskiy**	**1.03**	**329**	*e*P	**Pn**	**20 34 11.3**	**-0.1**
PET	**Petropavlovsk**	**1.03**	**263**	*e*PN	**Pn**	**20 34 10.9**	**-0.5**
PET				*e*S	**Sn**	**20 34 25.6**	**+1.0**
PET				pmax	pmax		
	comp=Z,214nm,0.6s						
PET				smax	smax		
	comp=N,808nm,0.4s						
PET				smax	smax		
	comp=E,1μm,0.6s						
PET	**Petropavlovsk**	**1.03**	**263**		**Pn**	**20 34 10.7**	**-0.6**
PET	**Petropavlovsk**	**1.03**	**263**	*e*P	**Pn**	**20 34 10.8**	**-0.5**
KOK	**Koryaka**	**1.04**	**278**	PN	**Pn**	**20 34 11.5**	**0.0**
KOK	**Koryaka**	**1.04**	**278**	*e*P	**Pn**	**20 34 11.6**	**0.0**
KRX	**Arik**	**1.04**	**282**	PN	**Pn**	**20 34 11.3**	**-0.3**
KRX	**Arik**	**1.04**	**282**	*e*P	**Pn**	**20 34 11.4**	**-0.3**
INSR	**Institute**	**1.05**	**266**	PN	**Pn**	**20 34 11.1**	**-0.5**
INSR	**Institute**	**1.05**	**266**	*e*P	**Pn**	**20 34 11.2**	**-0.5**
RUS	**Russkaya**	**1.33**	**238**	PN	**Pn**	**20 34 15.0**	**-0.4**
RUS				S	**Sn**	**20 34 31.2**	**-0.7**
RUS	**Russkaya**	**1.33**	**238**	*e*P	**Pn**	**20 34 15.1**	**-0.4**
RUS				*e*S	**Sn**	**20 34 31.2**	**-0.7**
KRMR	**Karymshinskiy**	**1.38**	**257**	PN	**Pn**	**20 34 15.8**	**-0.3**
KRMR				S	**Sn**	**20 34 32.7**	**-0.5**
KRMR	**Karymshinskiy**	**1.38**	**257**	*i* P	**Pn**	**20 34 15.9**	**-0.3**
KRMR				*e*S	**Sn**	**20 34 32.7**	**-0.5**
MTVR	**Mutnovka**	**1.48**	**244**	PN	**Pn**	**20 34 17.7**	**+0.2**
MTVR				S	**Sn**	**20 34 35.9**	**+0.2**
MTVR	**Mutnovka**	**1.48**	**244**	*e*P	**Pn**	**20 34 17.8**	**+0.2**
MTVR				*e*S	**Sn**	**20 34 36.0**	**+0.2**
GRL	**Gorelyy**	**1.51**	**247**	PN	**Pn**	**20 34 18.4**	**+0.5**
GRL	**Gorelyy**	**1.51**	**247**	*e*P	**Pn**	**20 34 18.5**	**+0.5**
GNL	**Ganaly**	**1.54**	**291**	PN	**Pn**	**20 34 18.8**	**+0.4**
GNL	**Ganaly**	**1.54**	**291**	*e*P	**Pn**	**20 34 18.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**1.60**	**269**	PN	**Pn**	**20 34 19.7**	**+0.6**
PEA0B				S	**Sn**	**20 34 40.4**	**+1.9**
PEA0B	**Petropavlovsk-**	**1.60**	**269**		**Pn**	**20 34 19.4**	**+0.3**
PEA0B				Sn	**Sn**	**20 34 37.3**	**-1.3**
PETK	**Petropavlovsk-**	**1.60**	**269**	P	**Pn**	**20 34 19.7**	**+0.6**
	comp=E,347nm,0.5s,baz=85,slow=22,SNR=403						
PETK				S	**Sn**	**20 34 39.4**	**+0.8**
	comp=E,148nm,0.6s,baz=90,slow=16,SNR=12						
PETK				LR	LR	20 35 08.2	
	comp=E,139nm,19.1s,baz=114,slow=53						
MKZ	**Mys Kozlova**	**1.62**	**30**	PN	**Pn**	**20 34 18.9**	**-0.5**
MKZ	**Mys Kozlova**	**1.62**	**30**	*e*P	**Pn**	**20 34 19.0**	**-0.5**
ASAK	**Asacha**	**1.68**	**243**	PN	**Pn**	**20 34 20.9**	**+0.7**
ASAK	**Asacha**	**1.68**	**243**	*e*P	**Pn**	**20 34 21.0**	**+0.7**
KDTR	**Khodutka, Kamc**	**1.94**	**227**	PN	**Pn**	**20 34 23.9**	**+0.2**
KDTR				S	**Sn**	**20 34 47.5**	**+0.7**
KDTR	**Khodutka, Kamc**	**1.94**	**227**	*e*P	**Pn**	**20 34 24.0**	**+0.2**
KDTR				*e*S	**Sn**	**20 34 47.6**	**+0.7**
APC	**Apacha**	**1.94**	**264**	PN	**Pn**	**20 34 25.0**	**+1.3**
APC				S	**Sn**	**20 34 50.0**	**+3.1**
APC	**Apacha**	**1.94**	**264**	*e*P	**Pn**	**20 34 25.0**	**+1.3**
APC				*e*S	**Sn**	**20 34 50.1**	**+3.1**
TUMD	**Tumrok D**	**2.05**	**1**	PN	**Pn**	**20 34 26.0**	**+0.7**
TUMD				S	**Sn**	**20 34 49.7**	**+0.1**
TUMD	**Tumrok D**	**2.05**	**1**	*e*P	**Pn**	**20 34 26.0**	**+0.7**
TUMD				*e*S	**Sn**	**20 34 49.8**	**+0.1**
TUMR	**Tumrok**	**2.13**	**357**	PN	**Pn**	**20 34 27.9**	**+1.4**
TUMR	**Tumrok**	**2.13**	**357**	*e*P	**Pn**	**20 34 28.0**	**+1.4**
MIPR	**Malaya Ipel'ka**	**2.36**	**249**	PN	**Pn**	**20 34 31.1**	**+1.6**
MIPR	**Malaya Ipel'ka**	**2.36**	**249**	*e*P	**Pn**	**20 34 31.2**	**+1.6**
KMNR	**Kamenistaya**	**2.61**	**359**	PN	**Pn**	**20 34 34.8**	**+1.8**
KMNR	**Kamenistaya**	**2.61**	**359**	*e*P	**Pn**	**20 34 34.8**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**2.80**	**4**	PN	**Pn**	**20 34 37.5**	**+1.9**
BZGR	**Bezymyannyi-Gr**	**2.80**	**4**	*e*P	**Pn**	**20 34 37.6**	**+1.9**
KPT	**Kopyto**	**2.82**	**359**	PN	**Pn**	**20 34 37.4**	**+1.6**
KPT	**Kopyto**	**2.82**	**359**	*e*P	**Pn**	**20 34 37.5**	**+1.6**
ZLN	**Zelenaya**	**2.88**	**5**	PN	**Pn**	**20 34 38.8**	**+2.1**
ZLN	**Zelenaya**	**2.88**	**5**	*e*P	**Pn**	**20 34 38.9**	**+2.1**
KOZ	**Kozyrevsk**	**2.92**	**355**	PN	**Pn**	**20 34 38.7**	**+1.5**
KOZ	**Kozyrevsk**	**2.92**	**355**	*e*P	**Pn**	**20 34 38.8**	**+1.5**
SRDR	**Sredinnyy**	**3.19**	**354**	PN	**Pn**	**20 34 42.0**	**+1.1**
SRDR	**Sredinnyy**	**3.19**	**354**	*e*P	**Pn**	**20 34 42.0**	**+1.1**
KBTR	**Krutoberegovo**	**3.38**	**24**	PN	**Pn**	**20 34 45.3**	**+1.9**
KBTR	**Krutoberegovo**	**3.38**	**24**	*e*P	**Pn**	**20 34 45.4**	**+1.9**
SMKR	**Semkarok**	**3.49**	**10**	PN	**Pn**	**20 34 46.9**	**+1.8**
SMKR	**Semkarok**	**3.49**	**10**	*e*P	**Pn**	**20 34 46.9**	**+1.8**
SKR	**Severo-Kuril's**	**3.61**	**228**	PN	**Pn**	**20 34 48.3**	**+1.8**
SKR	**Severo-Kuril's**	**3.61**	**228**	*e*P	**Pn**	**20 34 48.4**	**+1.8**
BKI	**Bering**	**3.89**	**56**	PN	**Pn**	**20 34 50.7**	**+0.3**
BKI	**Bering**	**3.89**	**56**	*e*P	**Pn**	**20 34 50.7**	**+0.3**
BKI				*e*S	**Sn**	**20 35 31.7**	**-3.1**
SHEM	**Shemya Is, Ala**	**8.32**	**87**	LR	LR	20 39 12.2	
	comp=E,44nm,21.1s,baz=18,slow=36						
JKA	**Kamikawa-asahi**	**14.78**	**239**	Pn	**Pn**	**20 37 20.2**	**+1.0**
ASAJ	**Asahikawa**	**14.78**	**239**	P	**Pn**	**20 37 20.2**	**+1.0**
BILL	**Bilibino**	**15.20**	**9**	*i* P	**Pn**	**20 37 26.0**	**+1.5**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ERM	**Erimo**	**16.04**	**233**	*i* P	**Pn**	**20 37 34.0**	**-1.4**
YAK	**Yakutsk**	**18.51**	**311**	*i* P	**P**	**20 38 05.4**	**0.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJA0	**Matsu Arr-Jizo**	**22.69**	**232**	*e*P	**P**	**20 38 51.4**	**+0.6**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**22.71**	**232**	P	**P**	**20 38 52.5**	**+1.6**
MJB9				IAmb	IAmb	20 38 52.8	
	comp=Z,8.0nm,0.6s						
MAJO	**Matsushiro**	**22.71**	**232**	P	**P**	**20 38 51.5**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAJO	**Matsushiro**	**22.71**	**232**	P	**P**	**20 38 51.5**	**+0.6**
MAJO				IAmb	IAmb	20 38 51.8	
	comp=Z,8.3nm,0.6s						
MJAR	**Matsushiro Arr**	**22.71**	**232**	P	**P**	**20 38 51.1**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=15,slow=12,SNR=15						
	comp=Z,2.7nm,0.6s						
MJAR	**Matsushiro Arr**	**22.71**	**232**	P	**P**	**20 38 51.2**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
C19K	**Lookout Ridge**	**24.42**	**34**	P	**P**	**20 39 08.9**	**+1.9**
KSRS	**Korea Array**	**27.38**	**248**	P	**P**	**20 39 33.7**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=36,slow=9.4,SNR=2.3						
	comp=Z,0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**33.75**	**169**	T	T	21 16 25.6	
	baz=352,slow=76,SNR=33						
H11N3	**WAKE ISLAND Hy**	**33.76**	**169**	T	T	21 16 26.7	
	baz=352,slow=76,SNR=27						
H11N1	**WAKE ISLAND Hy**	**33.76**	**169**	T	T	21 16 25.5	
	baz=352,slow=76,SNR=34						
H11S1	**WAKE ISLAND Hy**	**34.93**	**169**	T	T	21 17 49.3	
	baz=352,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**34.94**	**169**	T	T	21 17 53.1	
	baz=352,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**34.95**	**169**	T	T	21 17 55.6	
	baz=352,slow=76,SNR=5.1						
KURK	**Kurchatov**	**47.83**	**302**	P	**P**	**20 42 24.0**	**-1.9**
KURK	**Kurchatov**	**47.83**	**302**		**P**	**20 42 23.3**	**-2.6**
KURK				IAmb	IAmb	20 42 27.0	
	comp=Z,2.5nm,0.5s						
KURBB	**Kurchatov Arra**	**47.93**	**302**	P	**P**	**20 42 24.0**	**-2.7**
	comp=Z,1.2nm,0.5s,baz=59,slow=7.5,SNR=17						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**48.27**	**296**	P	**P**	**20 42 26.7**	**-2.7**
	comp=Z,0.5nm,0.5s,baz=55,slow=7.0,SNR=8.1						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**48.27**	**296**	*e*P	**P**	**20 42 29.3**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.27**	**296**	P	**P**	**20 42 26.3**	**-3.0**
BVAR	**Borovoye Array**	**50.47**	**308**	P	**P**	**20 42 43.3**	**-2.7**
	comp=Z,1.2nm,0.5s,baz=58,slow=6.8,SNR=8.2						
	comp=Z,1.2nm,0.5s						
ARTI	**Arti**	**53.55**	**317**	*i* P	**P**	**20 43 08.3**	**-0.6**
ARTI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FINES	**FINESS Array B**	**60.12**	**337**	P	**P**	**20 43 52.9**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=21,slow=8.1,SNR=5.1						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**60.12**	**337**	*e*P	**P**	**20 43 55.3**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**60.12**	**337**	P	**P**	**20 43 52.1**	**-3.2**
DPP	**Dos Picos Cty**	**60.20**	**74**	P	**P**	**20 43 57.1**	**+0.8**
PV14	**Lion Creek, Pa**	**60.77**	**64**	P	**P**	**20 44 02.5**	**+2.1**
PV18	**Skein Mesa, Pa**	**60.92**	**64**	P	**P**	**20 44 04.3**	**+2.9**
PV18				IAmb	IAmb	20 44 06.8	
	comp=Z,6.4nm,0.6s						
PV05	**Paradox Valley**	**60.94**	**65**	IAmb	IAmb	20 44 01.6	
	comp=Z,4.9nm,0.7s						
PV03	**Paradox Valley**	**60.95**	**64**	P	**P**	**20 44 03.6**	**+2.0**
PV03				IAmb	IAmb	20 44 31.0	
	comp=Z,2.8nm,0.9s						
PV13	**Radium Mtn., P**	**61.03**	**64**	IAmb	IAmb	20 44 08.4	
	comp=Z,4.9nm,0.6s						
PV02	**Paradox Valley**	**61.04**	**64**	P	**P**	**20 44 04.3**	**+2.1**
PV02				IAmb	IAmb	20 44 08.6	
	comp=Z,5.5nm,0.6s						
NOA	**NORSAR Array B**	**63.52**	**344**	P	**P**	**20 44 15.8**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=16,slow=8.4,SNR=1.3						
	comp=Z,0.3nm,0.7s						
HFS	**Hagfors**	**63.94**	**342**	P	**P**	**20 44 19.4**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=20,slow=4.7,SNR=5.6						
	comp=Z,0.5nm,0.5s						
KBZ	**Khabaz**	**69.59**	**317**	*i* P	**P**	**20 44 55.8**	**-1.4**
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TXAR	**Lajitas Array**	**70.47**	**67**	P	**P**	**20 45 04.6**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=294,slow=4.8,SNR=3.9						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**70.47**	**67**	P	**P**	**20 45 04.8**	**+1.9**
TXAR	**Lajitas Array**	**70.47**	**67**	P	**P**	**20 45 04.6**	**+1.9**
EKA	**Eskdalemuir Ar**	**71.02**	**350**	P	**P**	**20 45 04.6**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=18,slow=5.1,SNR=11						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**76.20**	**205**	P	**P**	**20 45 36.4**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=17,slow=5.9,SNR=2.6						
	comp=Z,0.6nm,1.0s						
ASAR	**Alice Springs**	**79.88**	**205**	P	**P**	**20 45 57.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=16,slow=5.4,SNR=7.6						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**79.88**	**205**	P	**P**	**20 45 57.5**	**+0.7**
MMAI	**Mount Meron Ar**	**81.77**	**316**	P	**P**	**20 46 06.7**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=44,slow=18,SNR=1.3						
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**86.55**	**348**	P	**P**	**20 46 30.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=14,slow=4.6,SNR=4.4						
	comp=Z,0.5nm,0.7s						

*IDC **16** 20:48:41.1±2.6,27°.92S×135°.58E, h0km, mbtmp3.2/4, ML3.1/4, Error ellipse: s-maj=38.9km s-min=16.4km az=55.0*
*AUST **16** 20:48:43.8±0.3,28°.5±2°.×13°.6E±°, h10km, ML2.5/9, Error ellipse: s-maj=6.9km s-min=4.5km az=80.7*

ISC 16 20:48:44.2±0.9, 27°.90S±0°.05×135°.63E±0°.06, h25km±7km, n17, σ1s51/27, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OOD	**Oodnadatta**	**0.12**	**29**	P	**Pb**	**20 48 49.0**	**+0.1**
OOD				S	**Sb**	**20 48 51.6**	**-0.5**
MULG	**Mulgathing**	**2.75**	**210**	P	**Pn**	**20 49 28.7**	**+2.0**
MULG				S	**Sn**	**20 50 01.8**	**+2.7**
LCRK	**Leigh Creek**	**3.41**	**139**	P	**Pn**	**20 49 37.6**	**+1.8**
LCRK				S	**Sn**	**20 50 16.8**	**+1.4**
AS19	**Alice Springs**	**4.43**	**340**	P	**Pn**	**20 49 52.2**	**+2.2**
AS09	**Alice Springs**	**4.45**	**340**	P	**Pn**	**20 49 52.3**	**+2.2**
ASAR	**Alice Springs**	**4.49**	**339**	Pn	**Pn**	**20 49 51.7**	**+1.0**
	0.3nm,0.3s,baz=160,slow=14,SNR=15						
ASAR				Sn	**Sn**	**20 50 43.0**	**+0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**21.45**	**87**	LR	LR	21 00 25.9	
	comp=Z,37nm,20.6s,baz=316,slow=31						
ASAR	**Alice Springs**	**50.00**	**256**	P	P	20 58 24.9	+0.3
	1.5nm,0.8s,baz=87,slow=8.0,SNR=14						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**50.14**	**260**	P	P	20 58 25.1	-0.7
	0.8nm,0.8s,baz=102,slow=8.0,SNR=16						
	0.8nm,0.8s						
KSRS	**Korea Array**	**80.38**	**316**	P	P	21 01 41.9	+0.2
	1.1nm,0.8s,baz=125,slow=6.6,SNR=5.8						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**86.82**	**11**	P	P	21 02 13.5	-0.6
	0.5nm,0.7s,baz=225,slow=5.9,SNR=6.2						
	0.5nm,0.7s						
BRTR	**Keskin Array B**	**150.52**	**317**	PKPbc	PKiKP	21 09 22.9	-0.2
	0.2nm,0.3s,baz=56,slow=3.1,SNR=3.6						

CNRM ***16*** *20:53:56.9,28˚.88N×16˚.46W,h10km,ML4.1*
MDD ***16*** *20:53:56.7±0.2,28˚.42N×16˚.85W,h27km±4km, mb_Lg4.0/37,Error ellipse: s-maj=3.4km s-min=1.7km az=179.0*
INMG ***16*** *20:53:57.9±1.1,28˚.44N×16˚.86W,h3km±3km,ML3.3,Error ellipse: s-maj=1.6km s-min=1.0km az=15.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canary Islands, Spain Region*

ISC 16 20:53:53.5±0.9,28˚.52N±0˚.03×16˚.84W±0˚.02,h33km±2km, n56,σ1§30/111,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBOL	**Buenavista del**	**0.20**	**179**	P	**Pb**	**20 54 00.7**	**+0.3**
CBOL				S	**Sn**	**20 54 03.5**	**+1.8**
CBOL				*i* lVmb_Lg		20 54 04.0	
CDOS	**Garachico, Isl**	**0.24**	**159**	P	**Pb**	**20 54 01.9**	**+1.1**
CDOS				S	**Sb**	**20 54 05.6**	**-0.1**
CDOS				*i* lVmb_Lg		20 54 05.9	
CNOR	**Icod de los Vi**	**0.26**	**143**	P	**Pb**	**20 54 02.3**	**+1.3**
CNOR				S	**Sb**	**20 54 06.2**	**+0.2**
CREA	**Los Realejos,**	**0.28**	**126**	P	**Pb**	**20 54 02.8**	**+1.6**
CREA				S	**Sb**	**20 54 07.2**	**+0.9**
CREA				*i* lVmb_Lg		20 54 07.8	
GUIA	**Guia de Isora,**	**0.29**	**159**	P	**Pb**	**20 54 02.2**	**+0.9**
GUIA				S	**Sn**	**20 54 06.0**	**+0.1**
GUIA				*i* lVmb_Lg		20 54 06.4	
CFOR	**Fortaleza, Los**	**0.29**	**133**	P	**Pb**	**20 54 02.9**	**+1.4**
CFOR				S	**Sb**	**20 54 07.4**	**+0.5**
CFOR				*i* lVmb_Lg		20 54 07.7	
CPVI	**La Orotava (Te**	**0.30**	**149**	P	**Pb**	**20 54 02.7**	**+1.0**
CPVI				S	**Sb**	**20 54 07.1**	**-0.1**
CCHO	**La Orotava (Te**	**0.32**	**154**	P	**Pn**	**20 54 02.5**	**+0.5**
CCHO				S	**Sn**	**20 54 06.7**	**-0.5**
CCHO				*i* lVmb_Lg		20 54 07.0	
CRAJ	**Montana Rajada**	**0.33**	**140**	P	**Pn**	**20 54 03.0**	**+0.9**
CRAJ				S	**Sb**	**20 54 08.7**	**+1.0**
CRAJ				*i* lVmb_Lg		20 54 09.1	
CDIE	**La Orotava (Te**	**0.34**	**134**	P	**Pn**	**20 54 03.1**	**+0.9**
CDIE				S	**Sn**	**20 54 07.3**	**-0.2**
CCAN	**Las Canadas**	**0.35**	**145**	P	**Pn**	**20 54 03.0**	**+0.4**
CCAN				*i* lVmb_Lg		20 54 07.7	
CCAN				S	**Sn**	**20 54 08.1**	**0.0**
CADE	**Adeje, Tenerif**	**0.36**	**167**	P	**Pn**	**20 54 02.6**	**0.0**
CADE				S	**Sn**	**20 54 06.7**	**-1.6**
CADE				*i* lVmb_Lg		20 54 07.0	
CLAJ	**Vilaflor (Tene**	**0.39**	**159**	P	**Pn**	**20 54 03.0**	**0.0**
CLAJ				S	**Sb**	**20 54 07.6**	**-1.2**
CLAJ				*i* lVmb_Lg		20 54 08.1	
MACI	**Morro de la Ar**	**0.39**	**133**	P	**Pn**	**20 54 03.8**	**+0.7**
MACI				S	**Sb**	**20 54 08.8**	**-0.3**
MACI				*i* lVmb_Lg		20 54 09.2	
CGUI	**Guimar, Teneri**	**0.40**	**119**	P	**Pn**	**20 54 04.0**	**+1.0**
CGUI				S	**Sn**	**20 54 09.2**	**-0.1**
CGUI				*i* lVmb_Lg		20 54 09.5	
EBAJ	**Bajamar**	**0.43**	**87**	P	**Pn**	**20 54 05.4**	**+1.9**
EBAJ				S	**Sn**	**20 54 11.1**	**+1.0**
EBAJ				*i* lVmb_Lg		20 54 11.9	
CTFS	**San Miguel de**	**0.47**	**157**	P	**Pn**	**20 54 04.2**	**+0.2**
CTFS				S	**Sb**	**20 54 09.5**	**-1.1**
CTFS				*i* lVmb_Lg		20 54 10.2	
CGRA	**Granadilla de**	**0.49**	**147**	P	**Pn**	**20 54 05.3**	**+1.1**
CGRA				S	**Sn**	**20 54 11.4**	**-0.2**
CGRA				*i* lVmb_Lg		20 54 12.0	
CPUN	**Puntallana, La**	**0.84**	**285**	P	**Pb**	**20 54 10.7**	**+1.0**
CPUN				S	**Sb**	**20 54 20.7**	**0.0**
CPUN				*i* lVmb_Lg		20 54 23.0	
CBRE	**Brena Baja,La**	**0.85**	**278**	P	**Pb**	**20 54 10.7**	**+0.8**
CBRE				S	**Sb**	**20 54 21.5**	**+0.5**
CBRE				*i* lVmb_Lg		20 54 22.7	
EHIG	**Higuera**	**0.85**	**273**	P	**Pb**	**20 54 10.8**	**+0.8**
EHIG				S	**Sb**	**20 54 21.5**	**+0.2**
EHIG				*i* lVmb_Lg		20 54 24.1	
CVIE	**Villa de Mazo,**	**0.87**	**275**	P	**Pb**	**20 54 11.1**	**+0.8**
CVIE				S	**Sb**	**20 54 21.7**	**-0.1**
CTEN	**Fuencaliente,**	**0.88**	**268**	P	**Pb**	**20 54 11.0**	**+0.5**
CTEN				S	**Sb**	**20 54 21.8**	**-0.2**
CTEN				*i* lVmb_Lg		20 54 22.4	
CENR	**El Paso, La Pa**	**0.90**	**277**	P	**Pb**	**20 54 11.3**	**+0.6**
CENR				S	**Sb**	**20 54 22.3**	**-0.2**
CENR				*i* lVmb_Lg		20 54 23.4	
CJED	**Jedey, El Paso**	**0.91**	**274**	P	**Pb**	**20 54 11.5**	**+0.5**
CJED				S	**Sn**	**20 54 22.1**	**0.0**
CJED				*i* lVmb_Lg		20 54 23.2	
CMIR	**El Paso, La Pa**	**0.92**	**281**	P	**Pb**	**20 54 11.2**	**+0.1**
CMIR				S	**Sn**	**20 54 21.9**	**-0.5**
CMIR				*i* lVmb_Lg		20 54 22.9	
CROM	**Garafia, La Pa**	**0.95**	**285**	P	**Pb**	**20 54 12.0**	**+0.3**
CROM				S	**Sn**	**20 54 23.3**	**-0.1**
CROM				*i* lVmb_Lg		20 54 23.8	
TBT	**Taburiente**	**0.96**	**280**	P	**Pb**	**20 54 11.6**	**-0.1**
TBT				S	**Sn**	**20 54 22.5**	**-0.7**
TBT				*i* lVmb_Lg		20 54 23.4	
CGOR	**Puntagorda, La**	**1.05**	**285**	P	**Pb**	**20 54 13.5**	**+0.2**
CGOR				S	**Sn**	**20 54 25.5**	**0.0**
CGOR				*i* lVmb_Lg		20 54 26.9	
GGC	**Guia, Gran Can**	**1.13**	**110**	P	**Pb**	**20 54 14.0**	**-0.6**
GGC				S	**Sn**	**20 54 26.4**	**-1.0**
GGC				*i* lVmb_Lg		20 54 27.9	
CTIG	**El Hierro**	**1.20**	**233**	P	**Pn**	**20 54 14.4**	**+0.4**
CTIG				S	**Sn**	**20 54 27.1**	**-2.1**
CTIG				*i* lVmb_Lg		20 54 29.1	
EOSO	**Osorio**	**1.22**	**111**	P	**Pb**	**20 54 15.1**	**-1.0**
EOSO				S	**Sn**	**20 54 28.9**	**-0.7**
EOSO	**Osorio**	**1.22**	**111**	P	**Pn**	**20 54 15.1**	**-1.0**
EOSO				S	**Sn**	**20 54 29.9**	**+0.3**
CLUM	**San Bartolome**	**1.26**	**123**	P	**Pb**	**20 54 16.2**	**-0.6**
CLUM				S	**Sn**	**20 54 29.9**	**-0.6**
CLUM				*i* lVmb_Lg		20 54 31.0	
CCUM	**Cumbre, El Hie**	**1.30**	**234**	P	**Pn**	**20 54 15.9**	**+0.5**
CCUM				S	**Sn**	**20 54 29.6**	**-2.2**
CCUM				*i* lVmb_Lg		20 54 30.5	
CMCL	**Mercadel, El H**	**1.32**	**233**	P	**Pn**	**20 54 16.3**	**+0.6**
CMCL				S	**Sn**	**20 54 30.5**	**-1.7**
CMCL				*i* lVmb_Lg		20 54 31.5	
CTAN	**El Hierro**	**1.32**	**235**	P	**Pn**	**20 54 16.1**	**+0.6**
CTAN				S	**Sn**	**20 54 29.8**	**-2.2**
CTAN				*i* lVmb_Lg		20 54 31.4	
CNAO	**La Restinga, E**	**1.34**	**230**	P	**Pn**	**20 54 16.4**	**+0.5**
CNAO				S	**Sn**	**20 54 30.5**	**-2.0**
CNAO				*i* lVmb_Lg		20 54 31.3	
CTAC	**Tacoron (Front**	**1.34**	**232**	P	**Pn**	**20 54 16.4**	**+0.4**
CTAC				S	**Sn**	**20 54 30.5**	**-2.1**
CTAC				*i* lVmb_Lg		20 54 31.5	
CTAD	**Las Tabladas,**	**1.34**	**236**	P	**Pn**	**20 54 16.4**	**+0.5**
CTAD				S	**Sn**	**20 54 30.5**	**-2.1**
CTAD				*i* lVmb_Lg		20 54 32.2	
CJUL	**El Julan, El H**	**1.35**	**235**	P	**Pn**	**20 54 16.5**	**+0.3**
CJUL				S	**Sn**	**20 54 31.4**	**-1.7**
CJUL				*i* lVmb_Lg		20 54 33.8	
CCAL	**Punta Orchilla**	**1.41**	**236**	P	**Pn**	**20 54 17.4**	**+0.5**
CCAL				S	**Sn**	**20 54 32.7**	**-1.5**
CCAL				*i* lVmb_Lg		20 54 34.3	
CTIM	**Tinajo, Isla d**	**2.75**	**79**	P	**Pn**	**20 54 37.7**	**+2.4**
CTIM				S	**Sn**	**20 55 07.8**	**+0.3**
CBLAA	**Tinajo**	**2.80**	**79**	P	**Pn**	**20 54 37.7**	**+1.8**
CBLAA				S	**Sn**	**20 55 08.4**	**-0.2**
EFAM	**Famara**	**2.96**	**77**	P	**Pn**	**20 54 40.0**	**+1.8**
EFAM				S	**Sn**	**20 55 11.4**	**-1.2**
CDLV	**Cueva Verdes**	**3.04**	**77**	P	**Pn**	**20 54 41.5**	**+2.2**
CDLV				S	**Sn**	**20 55 14.3**	**-0.3**
PMAR	**Madeira**	**4.19**	**359**	*e*P	**Pn**	**20 54 56.9**	**+1.6**
PMAR				*e*S	**Sn**	**20 55 41.5**	**-1.7**
PMAR				*i* IAML		20 55 43.6	
PMAR				*i* IAML		20 55 44.5	
PMAR				*i* IAML		20 55 48.8	
PMAR	**Madeira**	**4.19**	**359**	P	**Pn**	**20 54 56.0**	**+0.7**
PMAR				S	**Sn**	**20 55 43.1**	**-0.1**
PMOZ	**Porto Moniz, M**	**4.30**	**356**	*e*P	**Pn**	**20 55 00.6**	**+3.9**
PMOZ				*e*S	**Sn**	**20 55 44.7**	**-1.1**
PMOZ				*i* IAML		20 55 49.1	
PMOZ				*i* IAML		20 55 51.6	
PMOZ				*i* IAML		20 55 51.9	
PMOZ	**Porto Moniz, M**	**4.30**	**356**	P	**Pn**	**20 54 58.0**	**+1.3**
PMOZ				S	**Sn**	**20 55 45.0**	**-0.9**
PMPST	**Porto Santo, M**	**4.57**	**5**	*e*S	**Sn**	**20 55 51.5**	**-0.7**
PMPST				*i* IAML		20 55 54.5	
PMPST				*i* IAML		20 55 55.1	
PMPST				*i* IAML		20 55 59.3	
TANT	**Tantan**	**4.93**	**90**	P	**Pn**	**20 55 07.4**	**+2.0**
TANT				S	**Sn**	**20 56 00.5**	**-0.7**
OUK	**Oukaimeden**	**8.24**	**69**	P	**Pn**	**20 55 51.4**	**+0.4**
OUK				S	**Sn**	**20 57 19.6**	**-3.4**
TIO	**Tiouine**	**8.66**	**72**	P	**Pn**	**20 55 58.1**	**+1.5**
TIO				S	**Sn**	**20 57 31.8**	**-1.5**
ZGR	**Zagora**	**9.92**	**78**	P	**Pn**	**20 56 14.5**	**+0.7**
ZGR				S	**Sn**	**20 58 02.2**	**-1.9**
ZHG	**ZHG**	**10.03**	**58**	P	**Pn**	**20 56 13.4**	**-2.0**
ZHG				S	**Sn**	**20 58 01.2**	**-5.6**

IDC ***16*** *21:21:49.5±1.8,1˚.63N×96˚.17E,h0km,mb3.7/7, mbtmp3.7/8,ML3.7/1,MS3.3/3,Error ellipse: s-maj=83.2km s-min=21.9km az=55.0*
DJA ***16*** *21:21:55.5±0.6,2˚.N±5˚×97˚.7E±˚,h36km±12km,M3.7/14, MLv3.7/14*

ISC 16 21:21:55.3±1.1,2˚.0N±0˚.1×96˚.6E±0˚.2,h28km,n28, σ1§07/13,mb3.9/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.52**	**329**	P	**Pb**	**21 22 07.1**	**+1.2**
GSI	**Gunungsitoli**	**1.18**	**124**	P	**Pn**	**21 22 15.9**	**0.0**
TPTI		**1.41**	**24**	P	**Pn**	**21 22 17.9**	**-1.2**
LHMI	**Lhok Sumawe**	**3.26**	**6**	P	**Pn**	**21 22 44.2**	**-0.4**
BSI	**Banda Aceh**	**3.74**	**340**	P	**Pn**	**21 22 50.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.55**	**8**	Pn	**Pn**	**21 25 47.2**	**+1.7**
	0.1nm,0.3s,baz=196,slow=12,SNR=14						
	1.3nm,0.8s						
PALK	**Pallekele**	**16.69**	**289**	LR	LR	21 29 53.4	
	comp=Z,48nm,21.8s,baz=132,slow=30						
H08S2	**Diego Garcia H**	**25.87**	**248**	T	T	21 54 12.7	
	baz=69,slow=75,SNR=124						
H08S3	**Diego Garcia H**	**25.87**	**248**	T	T	21 54 16.5	
	baz=69,slow=75,SNR=153						
H08S1	**Diego Garcia H**	**25.89**	**248**	T	T	21 54 17.7	
	baz=69,slow=75,SNR=144						
H01W3	**Cape Leeuwin H**	**40.18**	**157**	T	T	22 12 07.9	
	baz=333,slow=76,SNR=8.1						
H01W2	**Cape Leeuwin H**	**40.19**	**157**	T	T	22 12 08.9	
	baz=333,slow=76,SNR=8.0						
H01W1	**Cape Leeuwin H**	**40.20**	**157**	T	T	22 12 13.0	
	baz=333,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	**42.95**	**122**	P	**P**	**21 29 52.1**	**-0.1**
	0.4nm,0.9s,baz=300,slow=9.4,SNR=5.1						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**44.34**	**127**	P	**P**	**21 30 02.8**	**-0.6**
	0.3nm,0.9s,baz=302,slow=8.1,SNR=2.0						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**46.36**	**346**	P	**P**	**21 30 19.6**	**+0.6**
	1.1nm,0.7s,baz=166,slow=7.0,SNR=10						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**50.84**	**345**	P	**P**	**21 30 53.8**	**+0.5**
	0.4nm,0.7s,baz=164,slow=6.9,SNR=5.6						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**52.71**	**351**	P	**P**	**21 31 07.3**	**+0.1**
	1.1nm,0.7s,baz=164,slow=5.9,SNR=6.0						
	1.1nm,0.7s						
ASAJ	**Asahikawa**	**58.42**	**37**	LR	LR	21 58 24.6	
	comp=Z,27nm,18.4s,baz=272,slow=37						
H04N2	**CROZET ISLANDS**	**62.07**	**214**	T	T	22 39 36.2	
	baz=53,slow=75						
H04N1	**CROZET ISLANDS**	**62.08**	**214**	T	T	22 39 36.8	
	baz=53,slow=75						
H04N3	**CROZET ISLANDS**	**62.09**	**214**	T	T	22 39 35.4	
	baz=53,slow=75						
H04S1	**CROZET ISLANDS**	**62.42**	**213**	T	T	22 40 01.8	
	baz=53,slow=75						
H04S3	**CROZET ISLANDS**	**62.43**	**213**	T	T	22 40 02.7	
	baz=53,slow=75						
H04S2	**CROZET ISLANDS**	**62.44**	**213**	T	T	22 40 02.9	
	baz=53,slow=75						
YAK	**Yakutsk**	**64.86**	**17**	LR	LR	22 03 00.1	
	comp=Z,48nm,18.2s,baz=194,slow=38						
FINES	**FINESS Array B**	**79.04**	**333**	P	**P**	**21 33 56.2**	**-0.5**
	1.0nm,0.7s,baz=103,slow=6.1,SNR=3.8						
	1.0nm,0.7s						
HFS	**Hagfors**	**84.76**	**330**	P	**P**	**21 34 25.0**	**-1.7**
	0.6nm,0.4s,baz=66,slow=5.0,SNR=4.0						
	0.6nm,0.4s						

IDC ***16*** *21:24:54.5±2.1,15˚.68S×72˚.14W,h119km±19km,mb3.5/3, mbtmp4.0/5,Error ellipse: s-maj=32.6km s-min=17.1km az=26.0*
NEIC ***16*** *21:24:54.2±1.9,16˚.02S±0˚.06×72˚.46W±0˚.06,h100km±8km, mb4.2/7,Error ellipse: s-maj=10.5km s-min=6.7km az=137.0*

ISC 16 21:24:52.4±0.7,15˚.89S±0˚.07×72˚.41W±0˚.07,h103km,n37, σ1§53/42,mb4.1/5,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.16**	**142**		**Pn**	**21 25 42.0**	**+1.6**
AP01				Sn	**Sn**	**21 26 17.6**	**+0.2**
PB18	**Visviri**	**3.28**	**121**		**Pn**	**21 25 45.7**	**+3.3**
PB12	**IPOC Station P**	**3.36**	**144**		**Pn**	**21 25 43.9**	**+0.8**
PB12				Sn	**Sn**	**21 26 20.9**	**-1.5**
PB16	**IPOC Station P**	**3.69**	**132**		**Pn**	**21 25 50.1**	**+2.0**
PB16				Sn	**Sn**	**21 26 30.4**	**-0.6**
LPAZ	**La Paz**	**4.13**	**96**	P	**Pn**	**21 25 54.5**	**+0.5**
	18nm,0.5s,baz=277,slow=8.0,SNR=86						
LPAZ				S	**Sn**	**21 26 39.0**	**-2.6**
	12nm,0.6s,baz=248,slow=5.1,SNR=7.4						
LPAZ	**La Paz**	**4.13**	**96**		**Pn**	**21 25 55.9**	**+1.9**
LPAZ				Sn	**Sn**	**21 26 42.6**	**+0.9**
PSGCX	**Pisagua**	**4.28**	**150**		**Pn**	**21 25 56.1**	**+0.5**
PSGCX				Sn	**Sn**	**21 26 42.5**	**-2.1**
PB11	**IPOC Station P**	**4.66**	**146**		**Pn**	**21 26 00.7**	**0.0**
GO01	**Chusmiza**	**4.85**	**141**		**Pn**	**21 26 04.9**	**+1.3**
PB08	**IPOC Station P**	**5.24**	**144**		**Pn**	**21 26 08.9**	**0.0**
NNA	**Nana**	**5.79**	**311**	P	**Pn**	**21 26 18.5**	**+2.5**
	40nm,0.3s,baz=133,slow=13,SNR=15						
NNA				S	**Sn**	**21 27 19.4**	**-1.8**
	15nm,0.3s,baz=221,slow=21,SNR=2.2						
NNA	**Nana**	**5.79**	**311**		**Pn**	**21 26 18.2**	**+2.2**
PB02	**IPOC Station P**	**5.90**	**157**		**Pn**	**21 26 17.6**	**+0.1**
PB07	**IPOC Station P**	**6.28**	**158**		**Pn**	**21 26 22.3**	**-0.4**
PB09	**IPOC Station P**	**6.60**	**153**		**Pn**	**21 26 27.7**	**+0.7**
PB03	**IPOC Station P**	**6.62**	**158**		**Pn**	**21 26 27.4**	**+0.1**
PB05	**IPOC Station P**	**7.23**	**164**		**Pn**	**21 26 35.5**	**-0.2**
PB06	**IPOC Station P**	**7.29**	**159**		**Pn**	**21 26 35.8**	**-0.6**
PB14	**IPOC Station P**	**8.89**	**168**		**Pn**	**21 26 57.4**	**-1.0**
AC01	**Pan de Azucar**	**10.35**	**171**	Pn	**Pn**	**21 27 16.8**	**-1.0**
SIV	**San Ignacio**	**10.91**	**122**	P	**Pn**	**21 27 21.2**	**-4.3**
	40nm,0.4s,baz=252,slow=14,SNR=4.8						
AC02	**Maricunga**	**11.31**	**165**		**Pn**	**21 27 30.6**	**-0.8**
BI02	**San Fabin de**	**20.72**	**177**	P	**P**	**21 29 24.5**	**-0.1**
ITAB	**Concordia**	**21.95**	**124**	P	**P**	**21 29 37.4**	**-0.4**
ITAB				IAmb	IAmb	21 30 06.2	
	comp=Z,27nm,1.5s						
CPSB	**Cacapava Do Su**	**22.60**	**133**	P	**P**	**21 29 46.9**	**+2.4**
TRQA	**Tornquist**	**23.92**	**159**	P	**P**	**21 29 57.6**	**+0.7**
TRQA				IAmb	IAmb	21 30 13.6	
	comp=Z,12nm,1.5s						
SNAA	**Sanae**	**68.63**	**161**	P	**P**	**21 35 45.0**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=260,slow=9.6,SNR=5.2						
	comp=Z,1.1nm,0.7s						
SNAA	**Sanae**	**68.63**	**161**	P	**P**	**21 35 44.7**	**+0.5**
SNAA				IAmb	IAmb	21 36 08.4	
	comp=Z,4.1nm,1.4s						
QSPA	**South Pole Qui**	**74.27**	**180**	P	**P**	**21 36 19.8**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=40,slow=1.9,SNR=5.4						
	comp=Z,1.0nm,0.7s						
QSPA	**South Pole Qui**	**74.27**	**180**	IAmb	IAmb	21 36 21.3	
	comp=Z,6.4nm,1.5s						
TORD	**Torodi Ar. Bea**	**78.74**	**73**	P	**P**	**21 36 42.0**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=266,slow=4.7,SNR=4.2						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.74**	**73**	IAmb	IAmb	21 37 06.2	
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**135.74**	**217**	PKP	**PKPdf**	**21 44 02.6**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=137,slow=2.0,SNR=5.7						
ZALV	**Zalesovo Beam**	**138.07**	**20**	PKP	**PKPdf**	**21 44 04.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=266,slow=3.8,SNR=2.4						
MJAR	**Matsushiro Arr**	**145.91**	**313**	PKPbc	**PKPdf**	**21 44 19.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=110,slow=1.8,SNR=4.5						
SONM	**Songino Array**	**148.13**	**2**	PKPbc	**PKPbc**	**21 44 26.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=296,slow=2.2,SNR=7.9						
KSRS	**Korea Array**	**151.99**	**324**	PKPbc	**PKPbc**	**21 44 35.7**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=11,slow=2.3,SNR=5.9						

CNRM ***16*** *21:26:10.9,36˚.45N×7˚.29W,h17km*
SFS ***16*** *21:26:15.5,36˚.60N×7˚.28W,h32km,ML2.6/13,ML2.9/13, MLv2.6/13*
IGIL ***16*** *21:26:16.5,36˚.63N×7˚.33W,h20km,ML2.0*
INMG ***16*** *21:26:16.3±1.4,36˚.68N×7˚.24W,h16km±3km,ML1.9,Error ellipse: s-maj=4.8km s-min=2.0km az=46.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
MDD ***16*** *21:26:17.0±0.7,36˚.75N×7˚.16W,h18km±3km,mb_Lg2.5/20, Error ellipse: s-maj=6.0km s-min=2.8km az=31.0*

ISC 16 21:26:13.5±1.3,36˚.57N±0˚.03×7˚.25W±0˚.03,h34km±3km, n63,σ1§46/119,2D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXAYA	**Ayamonte**	**0.66**	**349**	Pg	**Pn**	**21 26 27.6**	**+1.1**
EXAYA				Sg	**Sb**	**21 26 34.1**	**-1.7**
ARNO	**Arenosillo**	**0.67**	**38**	P	**Pn**	**21 26 27.6**	**+1.0**
ARNO				S	**Sn**	**21 26 37.7**	**+1.7**
PBDV	**Barranco-do-Ve**	**0.87**	**321**	P	**Pn**	**21 26 29.8**	**+0.4**
PBDV				S	**Sb**	**21 26 40.6**	**-0.9**
PBDV	**Barranco-do-Ve**	**0.87**	**321**	*e*P	**Pn**	**21 26 30.6**	**+1.2**
PBDV				*e*S	**Sb**	**21 26 40.9**	**-0.7**
PBDV				*i* IAML		21 26 41.6	
PBDV				*i* IAML		21 26 42.1	
PBDV				*i* IAML		21 26 43.5	
PVAQ	**Vaqueiros**	**0.91**	**336**	*i*P	**Pb**	**21 26 31.3**	**+0.3**
PVAQ				*e*S	**Sn**	**21 26 42.2**	**+0.2**
PVAQ				*i* IAML		21 26 42.9	
PVAQ				*i* IAML		21 26 42.9	
PVAQ				*i* IAML		21 26 43.1	
PVAQ	**Vaqueiros**	**0.91**	**336**	P	**Pn**	**21 26 30.0**	**0.0**
PVAQ				S	**Sb**	**21 26 44.0**	**+1.2**
EGRO	**El Granado**	**0.98**	**349**	P	**Pn**	**21 26 32.1**	**+1.1**
EGRO				S	**Sn**	**21 26 43.7**	**+0.1**
EGRO	**El Granado**	**0.98**	**349**	Pg	**Pb**	**21 26 32.2**	**+0.1**
EGRO				Sg	**Sn**	**21 26 44.0**	**+0.3**
EGRO				*i* lVmb_Lg		21 26 45.1	
ESPR	**Espera**	**1.16**	**75**	P	**Pn**	**21 26 34.8**	**+1.5**
ESPR				S	**Sb**	**21 26 50.2**	**+0.5**
ESPR	**Espera**	**1.16**	**75**	Pg	**Pb**	**21 26 35.5**	**+0.5**
ESPR				Sg	**Sb**	**21 26 50.2**	**+0.5**
ESPR				*i* lVmb_Lg		21 26 50.8	
PCVE	**Castro Verde**	**1.23**	**329**	P	**Pn**	**21 26 35.7**	**+1.3**
PCVE				S	**Sn**	**21 26 49.6**	**-0.3**
PCVE	**Castro Verde**	**1.23**	**329**	*e*P	**Pn**	**21 26 35.8**	**+1.3**
PCVE				*e*S	**Sn**	**21 26 50.1**	**+0.1**
PCVE				*i* IAML		21 26 50.4	
PCVE				*i* IAML		21 26 50.6	
PCVE				*i* IAML		21 26 50.7	
EMIN	**Mina Concepcio**	**1.28**	**21**	P	**Pn**	**21 26 36.6**	**+1.5**
EMIN				S	**Sn**	**21 26 50.6**	**-0.4**
EMIN	**Mina Concepcio**	**1.28**	**21**	Pg	**Pn**	**21 26 36.1**	**+1.0**
EMIN				Sg	**Sn**	**21 26 50.6**	**-0.4**
EMIN				*i* lVmb_Lg		21 26 54.9	
MORF	**Marmelete**	**1.34**	**303**	*e*P	**Pn**	**21 26 37.4**	**+1.4**
MORF				*e*S	**Sn**	**21 26 52.7**	**0.0**
MORF				IAML		21 26 53.6	
	comp=E,21nm,0.2s						
PTEO	**Sao Teotonio**	**1.53**	**310**	*e*P	**Pn**	**21 26 40.0**	**+1.5**
PTEO				*e*S	**Sn**	**21 26 57.5**	**+0.3**
PTEO				*i* IAML		21 26 58.0	
PTEO				*i* IAML		21 26 58.4	
PTEO				*i* IAML		21 26 58.5	
PBEJ	**Beja**	**1.53**	**341**	*e*S	**S

ZHG				S	Sn	21 27 38.3	+0.8	
PSBE	**So Bento**	**3.18**	**338**	*e*P	Pn	21 27 03.1	+1.9	
AVE	**Averroes**	**3.27**	**182**	S	Sn	21 27 41.6	+1.5	
PCBR	**Castelo Branco**	**3.27**	**357**	*e*P	Pn	21 27 03.8	+1.4	
PCBR				S	Sn	21 27 39.8	-0.3	
PCBR				*i* IAML		21 27 40.5		
PCBR				*i* IAML		21 27 40.6		
PCBR				*i* IAML		21 27 40.7		
IFR	**Ifrane**	**3.51**	**150**	P	Pn	21 27 05.8	-0.1	
IFR				S	Sn	21 27 44.3	-2.0	
EQES	**Quesada**	**3.55**	**69**	Pn	Pn	21 27 08.0	+1.6	
EQES				Sn	Sn	21 27 47.8	+0.5	
EQES				*i* IVmb_Lg		21 28 34.0		
PSIM	**Granatula de C**	**3.56**	**50**	Pn	Pn	21 27 08.2	+1.7	
PSIM				Sn	Sn	21 27 45.2	-2.3	
EPLA	**Plasencia**	**3.61**	**14**	Pn	Pn	21 27 09.0	+1.9	
EPLA				Sn	Sn	21 27 47.2	-1.3	
PAB	**San Pablo**	**3.75**	**37**	Pn	Pn	21 27 10.8	+1.7	
PAB				Sn	Sn	21 27 48.7	-3.4	
PAB				*i* IVmb_Lg		21 27 50.2		
MTE	**Manteigas**	**3.83**	**357**	*e*P	Pn	21 27 11.9	+1.8	
ESDC	**Sonseca Array**	**4.04**	**39**	Pn	Pn	21 27 14.3	+1.3	
ESDC				Sn	Sn	21 27 55.1	-4.0	
ESDC				*i* IVmb_Lg		21 27 58.9		
ESBB	**Sonseca Array**	**4.04**	**39**	Pn	Pn	21 27 14.0	+1.0	
ESBB				Sn	Sn	21 27 56.7	-2.5	
MD31	**MD31**	**4.22**	**150**	P	Pn	21 27 14.0	-1.6	
MD31				S	Sn	21 28 02.8	-1.1	
MDT	**Midelt**	**4.33**	**149**	P	Pn	21 27 15.4	-1.7	
MDT				S	Sn	21 28 04.7	-1.8	
EZAR	**Zarzadilla de**	**4.62**	**72**	Pn	Pn	21 27 23.5	+2.5	
EZAR				Sn	Sn	21 28 11.8	-1.7	
EZAR				*i* IVmb_Lg		21 28 21.0		
POLO	**Lamas de Olo**	**4.81**	**355**	*e*P	Pn	21 27 25.3	+1.6	
UCM	**Universidad Co**	**4.88**	**39**	P	Pn	21 27 25.9	+1.3	
UCM				S	Sn	21 28 17.7	-2.2	
ETOB	**Tobarra**	**4.97**	**64**	Pn	Pn	21 27 27.1	+1.2	
ETOB				Sn	Sn	21 28 20.8	-1.5	
ETOB				*i* IVmb_Lg		21 28 22.2		
ECAL	**Calabor**	**5.38**	**4**	P	Pn	21 27 32.2	+0.7	
ECAL				S	Sn	21 28 29.7	-2.5	
ECAL	**Calabor**	**5.38**	**4**	Pn	Pn	21 27 33.4	+2.0	
ECAL				Sn	Sn	21 28 29.5	-2.7	
ECAL				*i* IVmb_Lg		21 28 33.0		
ETOR	**Torete**	**5.87**	**42**	Pn	Pn	21 27 39.3	+1.0	
ETOR				*i* IVmb_Lg		21 28 30.6		
ETOR				Sn	Sn	21 28 39.8	-4.6	

IDC 16 21:30:07.1±5.5,**7.66S**×**129.29E**,**h181**km±58km,**mb2.8**/1,
mbtmp3.5/5,**Error ellipse: s-maj=53.4km s-min=22.0km az=49.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.11**	**245**	P	Pn	21 31 36.0	+0.5
	16nm,0.4s,baz=60,slow=3.5,SNR=6.1						
BATI				S	Sn	21 32 45.3	0.0
	11nm,0.7s,baz=234,slow=18,SNR=1.6						
FITZ	**Fitzroy Crossi**	**10.97**	**199**	P	Pn	21 32 40.2	+1.0
	2.3nm,0.9s,baz=28,slow=8.5,SNR=27						
FITZ				S	Sn	21 34 40.2	-1.0
	3.0nm,0.5s,baz=258,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**13.16**	**159**	P	Pn	21 33 06.3	-1.0
	0.4nm,0.3s,baz=340,slow=13,SNR=28						
WRA				S	Sn	21 35 25.6	-8.1
	0.6nm,0.7s,baz=335,slow=22,SNR=4.8						
ASAR	**Alice Springs**	**16.52**	**165**	P	Pn	21 33 49.6	+0.9
	0.4nm,0.6s,baz=343,slow=13,SNR=8.4						
ASAR				S	S	21 36 50.4	-0.8
	0.2nm,0.5s,baz=355,slow=25,SNR=4.5						
MKAR	**Makanchi Array**	**68.39**	**327**	P	P	21 40 48.9	-0.3
	0.1nm,0.5s,baz=140,slow=7.5,SNR=1.6						
	0.1nm,0.5s						

*IDC **16** 21:44:20.2*±*1.1,3.89S*×*101.61E,h0km,mb4.0/13,*
mbtmp4.0/13,Error ellipse: s-maj=49.0km s-min=15.8km az=53.0
*NEIC **16** 21:44:27.7*±*1.2,3.7S*±*0.2*×*101.7E*±*0.2,h47km*±*10km,*
mb4.4/7,Error ellipse: s-maj=38.1km s-min=10.0km az=219.0
*DJA **16** 21:44:29.0*±*0.7,4.4S*±*4.4*×*10.2E*±*,h26km*±*5km,M4.1/26,*
mB6.4/1,mb4.1/4,MLv4.2/26,Mw(mB)6.1/1
ISC 16 21:44:27.7±0.7,**3.78S**±0.08×**101.85E**±0.06,**h50**km,**n45,**
σ1§**14**/36,**mb4.2**/18,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.76**	**80**	P	Pn	21 44 43.3	+1.0
KSI				S	Sn	21 44 53.6	+0.7
MNAI	**Manna**	**1.25**	**117**		Pn	21 44 50.1	+1.4
MNAI	**Manna**	**1.25**	**117**	P	Pn	21 44 50.0	+1.2
PPSI	**Pulau Pagai**	**2.09**	**299**	P	Pn	21 45 02.1	+1.8
JMBI	**JAMBI**	**2.79**	**40**	P	Pn	21 45 09.5	-0.4
PPI	**Padang Panjang**	**3.61**	**336**	P	Pn	21 45 24.2	+3.1
DSRI	**Dabo**	**4.27**	**40**	P	Pn	21 45 32.2	+2.0
TPI	**Tanjungpandan**	**5.89**	**80**	P	Pn	21 45 53.5	+1.1
	0.1nm14nm,1.4s						
GSI	**Gunungsitoli**	**6.61**	**320**	Pn	Pn	21 46 00.5	-1.9
GSI	**Gunungsitoli**	**6.61**	**320**	P	Pn	21 46 03.8	+1.4
	28nm,0.6s						
CMAR	**Chiang Mai Arr**	**22.28**	**353**	P	P	21 49 21.9	+1.0
	0.7nm,0.5s,baz=182,slow=8.7,SNR=5.2						
	0.7nm,0.5s						
H08S2	**Diego Garcia H**	**29.45**	**261**	T	T	22 20 33.5	
	baz=84,slow=75,SNR=12						
H08S3	**Diego Garcia H**	**29.46**	**261**	T	T	22 20 34.0	
	baz=84,slow=75,SNR=14						
H08S1	**Diego Carcia H**	**29.47**	**261**	T	T	22 20 34.8	
	baz=84,slow=75,SNR=11						
WRA	**Warramunga Arr**	**35.51**	**120**	P	P	21 51 20.1	0.0
	0.3nm,0.3s,baz=302,slow=8.9,SNR=11						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**36.72**	**126**	P	P	21 51 30.6	+0.2
	0.5nm,0.4s,baz=299,slow=8.0,SNR=7.1						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**46.60**	**132**	P	P	21 52 51.6	+0.6
	1.6nm,0.6s,baz=313,slow=3.7,SNR=6.1						
	1.6nm,0.6s						
SONM	**Songino Array**	**51.56**	**4**	P	P	21 53 29.5	+0.7
	1.9nm,0.6s,baz=181,slow=9.8,SNR=8.3						
	1.9nm,0.6s						
BOOM	**Boomskoye usch**	**51.70**	**336**	P	P	21 53 28.7	-1.4
BOOM				IAmb	IAmb	21 53 42.1	
	comp=Z,4.0nm,1.3s						
ARSB	**Arslanbob**	**52.04**	**333**	P	P	21 53 32.2	-0.4
ARSB				IAmb	IAmb	21 53 34.0	
	comp=Z,2.8nm,1.0s						
MKAR	**Makanchi Array**	**53.24**	**343**	P	P	21 53 41.1	-0.1
	comp=Z,1.6nm,0.5s,baz=152,slow=9.0,SNR=27						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**53.24**	**343**	P	P	21 53 40.9	-0.3
USA0B	**Ussuriysk Arra**	**54.89**	**26**	P	P	21 53 52.0	-1.2
USRK	**Ussuriysk Ar.**	**54.89**	**26**	P	P	21 53 53.1	-0.1
	comp=Z,5.3nm,0.6s,baz=216,slow=4.9,SNR=6.8						
	comp=Z,5.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**54.89**	**26**	P	P	21 53 53.0	-0.2
KURBB	**Kurchatov Arra**	**57.78**	**343**	P	P	21 54 13.3	-0.4
	comp=Z,0.9nm,0.7s,baz=157,slow=7.0,SNR=10.0						
	comp=Z,0.9nm,0.7s						
KURK	**Kurchatov**	**57.84**	**343**		P	21 54 13.6	-0.5
KURK				IAmb	IAmb	21 54 14.3	
	comp=Z,1.4nm,0.6s						
ZAA0	**Zalesovo Array**	**59.26**	**348**		P	21 54 23.4	-0.5
ZAA0				IAmb	IAmb	21 54 24.1	
	comp=Z,3.6nm,0.5s						
ZALV	**Zalesovo Beam**	**59.26**	**348**	P	P	21 54 23.3	-0.6
	comp=Z,4.6nm,0.5s,baz=168,slow=5.7,SNR=22						
	comp=Z,4.6nm,0.5s						
H04N2	**CROZET ISLANDS**	**60.49**	**218**	T	T	22 59 21.9	
	baz=62,slow=75						
H04N1	**CROZET ISLANDS**	**60.51**	**218**	T	T	22 59 23.0	
	baz=62,slow=75						
H04N3	**CROZET ISLANDS**	**60.51**	**218**	T	T	22 59 22.7	
	baz=62,slow=75						
H04S1	**CROZET ISLANDS**	**60.75**	**217**	T	T	22 59 39.8	
	baz=61						
H04S3	**CROZET ISLANDS**	**60.77**	**217**	T	T	22 59 37.6	
	baz=61						
H04S2	**CROZET ISLANDS**	**60.77**	**217**	T	T	22 59 40.7	
	baz=61						
BVAR	**Borovoye Array**	**62.49**	**339**	P	P	21 54 44.6	-1.3
	comp=Z,0.7nm,0.3s,baz=124,slow=7.4,SNR=6.4						
	comp=Z,0.7nm,0.3s						
BORK	**Borovoye**	**62.53**	**339**	P	P	21 54 45.0	-1.1
AB31	**Akbulak array**	**64.08**	**331**	P	P	21 54 56.1	-0.3
AB31				IAmb	IAmb	21 54 57.0	
	comp=Z,6.6nm,1.5s						
ABKAR	**Akbulak array**	**64.08**	**331**	P	P	21 54 55.8	-0.7
BRTR	**Keskin Array B**	**75.88**	**312**	P	P	21 56 09.1	-0.2
	comp=Z,0.6nm,0.5s,baz=139,slow=6.8,SNR=5.0						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**75.88**	**312**	P	P	21 56 07.9	-1.4
FINES	**FINESS Array B**	**86.54**	**332**	P	P	21 57 04.0	-1.1
	comp=Z,0.9nm,0.9s,baz=106,slow=4.9,SNR=5.4						
	comp=Z,0.9nm,0.9s						
FINES	**FINESS Array B**	**86.54**	**332**	P	P	21 57 04.4	-0.8
ARCES	**ARCESS Array B**	**88.77**	**340**	P	P	21 57 15.4	-0.3
	comp=Z,0.7nm,0.7s,baz=99,slow=6.3,SNR=4.4						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**144.91**	**41**	PKPbc	PKPbc	22 03 59.7	+0.3
	comp=Z,0.8nm,0.5s,baz=278,slow=0.8,SNR=19						

*ISK **16** 21:59:13.8,36.63N*×*27.90E,h81km*±*1km,ML2.6/14*
*ATH **16** 21:59:15.0,36.61N*×*27.89E,h76km*±*2km,ML2.9/3,*
Latitude uncertainty: 2 km; Longitude uncertainty: 1 km
*AFAD **16** 21:59:16.8,36.72N*×*28.12E,h7km*±*3km,ML2.1*
*THE **16** 21:59:16.3,37°N*±*12'*×*2°8E*±*1°1,h60km*±*12km,MLh2.7/3*
ISC 16 21:59:14.9±1.3,**36.61N**±0.03×**27.90E**±0.03,**h75**km±7km,
n46, σ0§**45**/71,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.29**	**296**	Pg	Pn	21 59 26.7	-0.1
RDI1	**Rhodes Town Ha**	**0.30**	**120**	P	Pn	21 59 26.9	+0.2
RDI1				S	Sn	21 59 35.8	+0.5
RODB	**Rodos**	**0.30**	**121**	P	Pn	21 59 26.3	-0.4
RODB				S	Sn	21 59 35.7	+0.3
TURN	**Turunc**	**0.33**	**58**	Pg	Pn	21 59 26.6	-0.3
TURN				Sg	Sn	21 59 35.5	-0.1
TURN	**Turunc**	**0.33**	**58**	P	Pn	21 59 26.6	-0.3
TURN				S	Sn	21 59 35.6	-0.1
YAZI	**Mula-Dat§a-**	**0.37**	**282**	P	Pn	21 59 27.2	0.0
YAZI				IAML		21 59 36.0	
	comp=N,273nm,0.3s						
YAZI				IAML		21 59 36.0	
	comp=E,297nm,0.4s						
YAZI				S	Sn	21 59 36.0	-0.1
ARG	**Arkhangelos**	**0.43**	**155**	Pg	Pn	21 59 27.9	+0.2
ARG	**Arkhangelos**	**0.43**	**155**	P	Pn	21 59 27.8	+0.2
ARG				S	Sn	21 59 35.5	-1.5
BDRM	**Kayabasi**	**0.59**	**322**	P	Pn	21 59 29.0	-0.1
BDRM				IAML		21 59 39.0	
	comp=N,118nm,0.3s						
BDRM				IAML		21 59 39.0	
	comp=E,117nm,0.7s						
BDRM				S	Sn	21 59 39.2	-0.3
YER	**Yerkesik**	**0.61**	**30**	Pg	Pn	21 59 29.4	0.0
YER	**Yerkesik**	**0.61**	**30**	P	Pn	21 59 29.6	+0.2
YER				S	Sn	21 59 40.5	+0.4
DALY	**Dalyan (Mula)**	**0.64**	**70**	Pg	Pn	21 59 29.8	+0.2
DALY				Sg	Sn	21 59 40.9	+0.5
DALY	**Dalyan (Mula)**	**0.64**	**70**	P	Pn	21 59 30.0	+0.4
DALY				S	Sn	21 59 40.6	+0.1
BODT	**Bodrum**	**0.66**	**314**	Pg	Pn	21 59 29.9	+0.1
BODT				Sg	Sn	21 59 41.2	+0.4
BODT	**Bodrum**	**0.66**	**314**	P	Pn	21 59 30.4	+0.6
BODT				S	Sn	21 59 40.9	+0.1
YKAV	**Yalikavak-Bodr**	**0.72**	**316**	Pg	Pn	21 59 30.2	-0.2
MULA	**Mugla, Merkez-**	**0.73**	**27**	P	Pn	21 59 31.2	+0.5
MULA				S	Sn	21 59 43.6	+1.2
KLNA	**Kalymnos**	**0.82**	**296**	P	Pn	21 59 31.4	-0.1
KLNA				S	Sn	21 59 43.6	-0.4
SABU	**Mula-Dalaman**	**0.89**	**75**	P	Pn	21 59 32.5	+0.1
SABU				S	Sn	21 59 45.5	+0.2
IZZE	**Mula-Seydike**	**1.08**	**99**	P	Pn	21 59 34.0	-0.7
IZZE				S	Sn	21 59 48.5	-1.0
IZZE				IAML		21 59 49.0	
	comp=N,155nm,0.4s						
IZZE				IAML		21 59 51.0	
	comp=E,106nm,0.2s						
CAME	**Cameli-Denizli**	**1.18**	**73**	Pn	Pn	21 59 35.9	-0.1
TAVA	**DENIZLI_Tavas**	**1.18**	**43**	P	Pn	21 59 35.5	-0.6
TAVA				S	Sn	21 59 51.5	-0.4
TAVA				IAML		21 59 54.0	
	comp=N,43nm,0.1s						
TAVA				IAML		21 59 55.0	
	comp=E,31nm,0.1s						
KARP	**Karpathos**	**1.21**	**210**	Pn	Pn	21 59 36.5	+0.1
KARP	**Karpathos**	**1.21**	**210**	P	Pn	21 59 36.6	+0.2
KARP				S	Sn	21 59 52.2	-0.3
KARP	**Karpathos**	**1.21**	**210**	P	Pn	21 59 36.5	+0.1
KARP				S	Sn	21 59 52.5	0.0
GCAM	**G?zelcaml?**	**1.22**	**334**	Pn	Pn	21 59 36.1	-0.3
ESEN	**Aydn-Nazilli**	**1.24**	**17**	P	Pn	21 59 36.9	+0.2
ESEN				IAML		21 59 52.0	
	comp=E,23nm,0.6s						
ESEN				S	Sn	21 59 52.2	-0.9
ESEN				IAML		21 59 53.0	
	comp=N,26nm,0.2s						
CAEL	**Denizli, Camel**	**1.25**	**65**	P	Pn	21 59 37.0	0.0
CAEL				S	Sn	21 59 54.3	+0.7
CAEL				IAML		21 59 56.0	
	comp=N,53nm,0.2s						
CAEL				IAML		21 59 58.0	
	comp=E,113nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.34**	**360**	Pn	Pn	21 59 37.6	-0.5
DNIZ	**Denizli-Tavas-**	**1.37**	**41**	P	Pn	21 59 38.0	-0.4
DNIZ				S	Sn	21 59 55.6	-0.5
DNIZ				IAML		21 59 59.0	
	comp=E,90nm,0.2s						
DNIZ				IAML		22 00 05.0	
	comp=N,64nm,0.6s						
KNIK	**Mula-Seydike**	**1.37**	**79**	P	Pn	21 59 38.5	0.0
KNIK				S	Sn	21 59 56.4	+0.3
KNIK				IAML		21 59 57.0	
	comp=N,72nm,0.8s						
KNIK				IAML		21 59 59.0	
	comp=E,38nm,0.5s						
NAZL	**Nazilli-Aydin**	**1.39**	**13**	Pn	Pn	21 59 38.6	-0.1
APMY	**Acipayam-Deniz**	**1.42**	**52**	Pn	Pn	21 59 38.6	-0.5
AKAS	**Kas**	**1.43**	**105**	Pn	Pn	21 59 39.4	+0.2
GOLH	**Golhisar**	**1.47**	**64**	P	Pn	21 59 40.2	+0.3
GOLH				IAML		21 59 59.0	
	comp=N,44nm,0.4s						
GOLH				IAML		21 59 59.0	
	comp=E,28nm,0.4s						
GOLH				S	Sn	21 59 59.2	+0.6
ELL	**Elmali**	**1.62**	**84**	Pn	Pn	21 59 41.9	+0.1
ELL	**Elmali**	**1.62**	**84**	P	Pn	21 59 41.9	+0.1
ELL				S	Sn	22 00 02.6	+0.5
THERA	**Ancient Thera,**	**1.97**	**264**	P	Pn	21 59 46.5	+0.3
ZKR	**Zakros**	**2.02**	**223**	P	Pn	21 59 47.3	+0.4
THR3	**Thira Island,**	**2.02**	**265**	P	Pn	21 59 47.5	+0.6
SNT5	**Nea Kammeni, S**	**2.03**	**265**	P	Pn	21 59 47.7	+0.7
STIA	**Sitia Lasithi**	**2.03**	**227**	P	Pn	21 59 47.3	+0.2
THR6	**Thira Island,**	**2.03**	**264**	P	Pn	21 59 47.7	+0.6
NPS	**Neapolis**	**2.29**	**235**	P	Pn	21 59 50.2	-0.4
IDI	**Anoyia**	**2.77**	**243**	P	Pn	21 59 56.6	-0.6
SIVA	**Sivas**	**2.97**	**239**	P	Pn	22 00 00.1	+0.3

*IDC **16** 22:02:24.4*±*2.6,15.64S*×*178.55W,h422km*±*23km,mb3.1/4,*
mbtmp3.9/5,Error ellipse: s-maj=35.7km s-min=31.2km az=131.0
ISC 16 22:02:22.3±1.3,**15.5S**±0.3×**178.4W**±0.3,**h400**km,**n6,**
σ1§**77**/6,**mb3.5**/4,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.08**	**236**	P	Pn	22 03 36.9	+1.8
	18nm,0.4s,baz=45,slow=8.6,SNR=38						
WRA	**Warramunga Arr**	**45.13**	**257**	P	P	22 09 59.3	-2.0
	0.2nm,0.3s,baz=94,slow=7.8,SNR=2.1						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**45.50**	**252**	P	P	22 10 03.4	-0.8
	1.5nm,0.3s,baz=84,slow=8.7,SNR=32						
	1.5nm,0.3s						
QSPA	**South Pole Qui**	**74.57**	**180**	P	P	22 13 17.7	-0.8
	1.7nm,0.9s,baz=21,slow=3.4,SNR=6.9						
	1.7nm,0.9s						
ILAR	**Eielson Array**	**83.53**	**13**	P	P	22 14 06.3	+0.2
	0.4nm,0.6s,baz=217,slow=5.3,SNR=4.1						
	0.4nm,0.6s						
GERES	**GERESS Array B**	**145.27**	**346**	PKPbc	PKPdf	22 21 14.3	+1.1
	0.3nm,0.5s,baz=31,slow=2.3,SNR=2.8						

*ISK **16** 22:14:43.4,38.40N*×*26.68E,h17km,ML3.0/18*
*AFAD **16** 22:14:43.7,38.38N*×*26.67E,h7km*±*1km,ML3.0*
*ATH **16** 22:14:43.5,38.39N*×*26.69E,h14km*±*1km,ML2.8/7,*
Latitude uncertainty: 0 km; Longitude uncertainty: 1 km
*THE **16** 22:14:44.2,38°N*±*2'*×*2°7E*±*,h11km*±*2km,M2.6/8,*
MLh2.6/8
ISC 16 22:14:43.7±0.8,**38.39N**±0.02×**26.68E**±0.02,**h16**km±6km,
n59, σ0§**40**/83,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEYE	**Izmir, Urla-Ze**	**0.21**	**223**	P	Pg	22 14 48.4	-0.1
ZEYE				IAML		22 14 52.0	
	comp=N,10μm,0.3s						
ZEYE				S	Sg	22 14 52.2	+0.5
ZEYE				IAML		22 14 53.0	
	comp=E,5μm,0.3s						
KRBN	**Karaburun**	**0.23**	**334**	Pg	Pg	22 14 48.8	-0.1
KRBN				Sg	Sb	22 14 52.9	-0.5
BLCB	**Balcova**	**0.28**	**91**	Pg	Pg	22 14 49.8	0.0
BLCB	**Balcova**	**0.28**	**91**	P	Pg	22 14 49.8	0.0
BLCB				S	Sg	22 14 53.9	-0.1
BAGT	**Foa**	**0.30**	**27**	P	Pg	22 14 50.0	0.0
BAGT				IAML		22 14 54.0	
	comp=E,1μm,0.3s						
BAGT				S	Sb	22 14 54.8	-0.5
FOCM	**Foa**	**0.32**	**7**	Pg	Pg	22 14 49.9	-0.6
KARB	**zmir-Karabur**	**0.34**	**322**	P	Pg	22 14 50.6	-0.3
KARB				S	Sg	22 14 56.0	+0.2
KARB				IAML		22 14 56.0	
	comp=N,2μm,0.3s						
KARB				IAML		22 14 56.0	
	comp=E,4μm,0.2s						
GMLD	**Gumuldur**	**0.36**	**150**	Pg	Pg	22 14 51.1	-0.1
GMLD				Sg	Sg	22 14 56.6	+0.3
DGB	**zmir**	**0.37**	**155**	P	Pg	22 14 51.2	-0.1
DGB				IAML		22 14 56.0	
	comp=E,560nm,0.7s						
DGB				S	Sg	22 14 56.7	+0.1
DGB				IAML		22 14 57.0	
	comp=N,1μm,0.5s						
EAG2	**Marmaro, Chios**	**0.47**	**289**	P	Pg	22 14 53.1	-0.1
EAG2				S	Sg	22 14 59.4	-0.3
CHOS	**Chios island**	**0.49**	**270**	Pg	Pg	22 14 53.8	+0.2
CHOS	**Chios island**	**0.49**	**270**	P	Pb	22 14 54.0	0.0
CHOS				S	Sb	22 15 00.9	-0.2
CHOS	**Chios island**	**0.49**	**270**	P	Pg	22 14 53.8	+0.2
CHOS				S	Sg	22 15 00.1	-0.1
KRL1	**Karlovasi Samo**	**0.59**	**178**	P	Pg	22 14 54.9	-0.6
KRL1				S	Sg	22 15 03.1	-0.3
CAMT	**Merkez**	**0.61**	**54**	P	Pg	22 14 55.6	-0.2
CAMT				S	Sb	22 15 04.6	+0.2
CAMT				IAML		22 15 07.0	
	comp=N,835nm,0.4s						
CAMT				IAML		22 15 12.0	
	comp=E,586nm,0.6s						
DUVT	**Torbali**	**0.63**	**106**	P	Pb	22 14 56.2	-0.1
DUVT				S	Sb	22 15 04.9	0.0
DUVT				IAML		22 15 07.0	
	comp=E,485nm,0.3s						
ZEDA	**zmir-Bergama**	**0.65**	**28**	P	Pg	22 14 56.0	-0.5
ZEDA				S	Sb	22 15 06.3	+0.6
ZEDA				IAML		22 15 09.0	
	comp=N,1μm,0.3s						
ZEDA				IAML		22 15 09.0	
	comp=E,1μm,0.7s						
DKL	**Dikili**	**0.70**	**14**	Pg	Pb	22 14 57.4	-0.2
DKL	**Dikili**	**0.70**	**14**	P	Pg	22 14 56.9	-0.6
DKL				S	Sg	22 15 06.6	-0.2
KUSD	**Kusadasi-Aydin**	**0.71**	**138**	Pg	Pb	22 14 57.9	+0.1
GCAM	**G?zelcaml?**	**0.82**	**148**	Pg	Pg	22 14 59.5	-0.1
PRK	**Paraskevi**	**0.91**	**340**	P	Pb	22 15 01.2	0.0
PRK				S	Sg	22 15 13.8	+0.4
PRK	**Paraskevi**	**0.91**	**340**	P	Pb	22 15 00.7	-0.5
PRK				S	Sg	22 15 13.3	-0.1
AYVA	**Ayvalik**	**0.92**	**0**	P	Pb	22 15 00.8	-0.5
AYVA				S	Sn	22 15 14.7	-0.1
AYVA				IAML		22 15 15.0	
	comp=E,748nm,0.6s						
AYVA				IAML		22 15 16.0	
	comp=N,687nm,0.7s						
SOMA	**Soma-Manisa**	**1.01**	**41**	Pg	Pg	22 15 03.2	-0.2
SOMA				Sg	Sn	22 15 17.8	+0.5
GOMA	**Golmarmara-Man**	**1.02**	**72**	Pg	Pg	22 15 03.2	-0.2
AYDB	**Zeytinkoy-Aydi**	**1.05**	**115**	Pg	Pg	22 15 03.9	-0.2
ODEM	**Odemis-Izmir**	**1.10**	**96**	Pn	Pn	22 15 04.6	0.0
GPNR	**Gulpinar-Canak**	**1.15**	**338**	Pn	Pb	22 15 05.2	0.0
BUHA	**Balikesir, Bur**	**1.15**	**15**	P	Pn	22 15 05.5	+0.3
BUHA				S	Sg	22 15 21.0	0.0
BUHA				IAML		22 15 23.0	
	comp=N,423nm,0.3s						
BUHA				IAML		22 15 23.0	
	comp=E,619nm,0.4s						
GORD	**Gordes-Manisa**	**1.28**	**66**	Pn	Pn	22 15 07.2	+0.2
NAZL	**Nazilli-Aydin**	**1.34**	**108**	Pn	Pb	22 15 08.3	-0.2
EZNE	**Ezine-Canakkal**	**1.39**	**350**	Pn	Pn	22 15 08.6	+0.2
BODT	**Bodrum**	**1.42**	**159**	Pn	Pb	22 15 09.5	-0.3
BODT	**Bodrum**	**1.42**	**159**	P	Pn	22 15 09.1	+0.2
BODT				S	Sb	22 15 28.3	+0.6
EZN	**Ezine**	**1.46**	**349**	Pn	Pn	22 15 09.8	+0

comp=N,9µm,0.5s
MIDY IAML 22 34 37.0
comp=E,9µm,0.8s
SANL SANLIURFA_Merk 2.09 319 P **Pn 22 34 03.9 -1.3**
SANL S **Sn 22 34 31.0 -0.3**
SANL IAML 22 34 36.0
comp=N,2µm,1.0s
SANL IAML 22 34 36.0
comp=E,2µm,0.6s
SURC SANLIURFA_SURC 2.12 308 P **Pn 22 34 03.8 -1.7**
SURC S **Sn 22 34 30.6 -1.4**
SURC IAML 22 34 37.0
comp=N,10µm,0.5s
SURC IAML 22 34 37.0
comp=E,1µm,0.7s
BTMN Batman 2.34 11 P **Pn 22 34 09.1 +0.5**
BTMN IAML 22 34 47.0
comp=N,3µm,0.6s
BTMN IAML 22 34 48.0
comp=E,3µm,0.6s
SIRN Sırnak 2.35 36 P **Pn 22 34 09.4 +0.7**
SIRN S **Sb 22 34 40.0 -1.5**
SIRN IAML 22 34 46.0
comp=N,8µm,0.5s
SIRN IAML 22 34 47.0
comp=E,7µm,0.6s
DIYA Diyarbakir 2.37 349 P **Pn 22 34 08.0 -1.1**
DIYA S **Sn 22 34 39.5 +1.3**
DIYA IAML 22 34 47.0
comp=E,5µm,0.8s
DIYA IAML 22 34 48.0
comp=N,3µm,0.3s
URFA Urfa 2.38 321 Pn **Pn 22 34 07.5 -1.7**
URFA Sn **Sn 22 34 38.3 -0.3**
DYBB Diyarbakir 2.40 349 Pn **Pn 22 34 08.7 -0.7**
HANM anlurfa/Hi 2.46 324 P **Pn 22 34 08.7 -1.6**
HANM S **Sn 22 34 41.0 +0.6**
HANM IAML 22 34 48.0
comp=E,3µm,0.4s
HANM IAML 22 34 49.0
comp=N,5µm,0.5s
SVAN Silvan-Diyarba 2.58 9 Pn **Pn 22 34 11.8 -0.1**
CUKT Cukurca 2.87 54 Pn **Pn 22 34 16.8 +0.9**
CUKT Sn **Sb 22 34 53.7 -2.8**
SVRC Sivrice-ELAZID 2.99 339 Pn **Pn 22 34 16.9 -0.8**
MDYL Doganyol-Malat 3.02 334 Pn **Pn 22 34 17.8 -0.2**
ESIJ Sivrice-Elazig 3.06 339 Pn **Pn 22 34 18.3 -0.2**
HAKT HAKKARI 3.11 50 P **Pn 22 34 20.2 +0.8**
GURO Guroymak-BITLI 3.14 19 Pn **Pn 22 34 20.1 +0.5**
GURO Guroymak-BITLI 3.14 19 **Pn 22 34 19.4 -0.3**
GAZ Gaziantep 3.22 300 Pn **Pn 22 34 19.1 -1.7**
GAZ Gaziantep 3.22 300 **Pn 22 34 17.7 -3.1**
AKDM Akdamar-Van 3.28 33 Pn **Pn 22 34 22.7 +1.0**
GEVA Gevas 3.31 34 **Pn 22 34 23.2 +1.2**
KHMN Narli-Kahraman 3.37 303 Pn **Pn 22 34 21.1 -1.7**
BNGB Bingl 3.39 360 Pn **Pn 22 34 23.2 +0.1**
KMRS Kahramanmaras 3.60 303 Pn **Pn 22 34 24.6 -1.4**
TAHT Tahtakopru-Hat 3.74 283 Pn **Pn 22 34 25.4 -2.4**
BEIL Beino 3.85 255 *e*P **Pn 22 34 28.4 -0.9**
BEIL *e*S **Sn 22 35 09.4 -5.2**
ARPR Arapgir-MALATY 3.97 332 Pn **Pn 22 34 30.9 -0.2**
ARPR Arapgir-MALATY 3.97 332 **Pn 22 34 29.9 -1.2**
ARPR Arapgir-MALATY 3.97 332 P **Pn 22 34 30.2 -0.8**
ERCV ERCIS-VAN 4.01 31 Pn **Pn 22 34 32.9 +1.2**
ANDN Andirin 4.03 301 P **Pn 22 34 29.0 -2.8**
WELAS Turaif 4.09 202 P **Pn 22 34 32.4 -0.2**
HWQ Hawqa 4.12 253 *e*P **Pn 22 34 33.0 -0.2**
HWQ *e*S **Sn 22 35 16.8 -4.6**
ZAHL Zahle 4.33 248 *e*P **Pn 22 34 35.5 -0.5**
KOZT Kozan 4.35 297 Pn **Pn 22 34 34.6 -1.6**
KOPT Kop Dagi 4.42 358 **Pn 22 34 37.8 +0.4**
SARI SarD1z-Kayseri 4.43 311 Pn **Pn 22 34 36.4 -1.0**
BHL Bhannes 4.48 249 *e*P **Pn 22 34 37.8 -0.4**
RCY Rachaya 4.53 244 *e*P **Pn 22 34 39.2 +0.4**
RCY *e*S **Sn 22 35 25.1 -6.4**
QRWL Qaraoun 4.62 245 *e*P **Pn 22 34 39.7 -0.3**
DQRL Deir Qamar 4.63 247 *e*P **Pn 22 34 39.8 -0.3**
ASF Jabal al Asfar 4.65 224 Pn **Pn 22 34 40.0 -0.5**
6.1nm,0.3s,baz=31,slow=7.8,SNR=66
ASF Pg **Pb 22 34 53.2 +1.4**
15nm,0.3s,baz=49,slow=6.2,SNR=8.6
ASF Sn **Sn 22 35 31.6 -2.9**
25nm,0.3s,baz=1.5,slow=19,SNR=3.7
ASF Lg Lg 22 35 51.3
62nm,0.3s,baz=8.1,slow=14,SNR=4.6
34nm,0.8s
ASF Jabal al Asfar 4.65 224 P **Pn 22 34 40.0 -0.5**
ASF Jabal al Asfar 4.65 224 P **Pn 22 34 40.0 -0.5**
SHBL Chebaa 4.67 243 *e*P **Pn 22 34 40.3 -0.4**
KELT Kelkit 4.69 346 P **Pn 22 34 40.9 -0.1**
NATI Neve Ativ 4.72 242 P **Pn 22 34 41.3 +0.1**
NATI S **Sn 22 35 36.7 +0.8**
GEM Giv'at Ha'Em 4.79 242 P **Pn 22 34 42.6 +0.3**
GEM Giv'at Ha'Em 4.79 242 P **Pn 22 34 42.0 -0.3**
GEM S **Sn 22 35 38.4 +0.5**
KSHT Keshet 4.81 239 P **Pn 22 34 42.5 -0.1**
KSHT S **Sn 22 35 39.2 +0.7**
QREAT Al Qurrayyat 4.85 214 P **Pn 22 34 43.0 -0.2**
QREAT S Sn 22 35 28.3 -11
KNHM Kefar Nahum 5.03 239 P **Pn 22 34 45.4 -0.1**
ZEFT Zefat 5.04 240 P **Pn 22 34 46.5 +0.7**
BNN Bunyan 5.05 311 Pn **Pn 22 34 45.4 -0.6**
BNN Bunyan 5.05 311 **Pn 22 34 44.9 -1.1**
MMA0B Mount Meron ar 5.08 241 P **Pn 22 34 46.2 -0.1**
MMA0B S **Sn 22 35 46.6 +1.4**
MMAI Mount Meron Ar 5.08 241 Pn **Pn 22 34 46.5 +0.1**
21nm,0.3s,baz=58,slow=16,SNR=124
MMAI Pg **Pb 22 35 00.5 +1.4**
32nm,0.3s,baz=54,slow=20,SNR=4.9
MMAI Lg Lg 22 36 05.8
122nm,0.3s,baz=58,slow=31,SNR=9.5
MMAI LR LR 22 37 04.0
comp=Z,346nm,20.1s,baz=32,slow=42
HSUJ Al Zarqa 5.12 228 P **Pn 22 34 46.6 -0.2**
CY604 RAF Akrotiri, 5.23 258 Pn **Pn 22 34 47.3 -0.7**
DIGO Kars 5.25 23 P **Pn 22 34 52.1 +3.3**
QRNJ Al-Qirein 5.36 234 P **Pn 22 34 50.4 +0.4**
MMLI Mount Malkishu 5.40 236 P **Pn 22 34 51.2 +0.6**
MMLI Mount Malkishu 5.40 236 P **Pn 22 34 50.8 +0.2**
MMLI S **Sn 22 35 56.2 +3.4**
WSKAK WSKAK 5.42 195 P **Pn 22 34 50.3 -0.6**
RGMN Argaman 5.50 233 P **Pn 22 34 52.1 +0.1**
GNI Garni 5.56 34 Pn **Pn 22 34 54.3 +1.3**
1.1nm,0.3s,baz=266,slow=2.7,SNR=14
GNI Pg **Pb 22 35 04.9 -2.3**
3.2nm,0.3s,baz=1.2,slow=17,SNR=10
GNI Lg Lg 22 36 21.7
1.8nm,0.3s,baz=28,slow=12,SNR=3.4
GNI LR LR 22 36 45.2
comp=Z,69nm,19.5s,baz=224,slow=36
20nm,0.9s
GNI Garni 5.56 34 P **Pn 22 34 55.4 +2.5**
GNI Garni 5.56 34 **Pn 22 34 54.6 +1.7**
GNI Garni 5.56 34 P **Pn 22 34 54.4 +1.5**
0.7nm673nm75nm,1.0s
GNI Garni 5.56 34 P **Pn 22 34 56.0 +3.1**
OFRI `Ofer 5.59 240 P **Pn 22 34 53.8 +0.5**
OFRI S **Sn 22 35 58.4 +0.8**
UJAP Al Uja 5.67 232 P **Pn 22 34 55.9 +1.6**
UJAP Al Uja 5.67 232 P **Pn 22 34 55.8 +1.4**
YITV Yitav 5.71 232 P **Pn 22 34 55.8 +1.0**
SLTI Sal'it 5.77 236 P **Pn 22 34 55.5 -0.2**
SLTI S **Sn 22 36 03.1 +1.1**
TOKA Tokat 5.78 326 **Pn 22 34 55.3 -0.6**
ALMO Almog 5.79 230 P **Pn 22 34 56.5 +0.6**
SWQJ Swaqa 5.82 223 P **Pn 22 34 54.3 -2.2**
1.8nm483nm39nm,0.8s
MZS Mizpe Shalem 5.97 229 P **Pn 22 34 58.8 +0.3**
CSS Mathiatis 6.06 266 **Pn 22 34 57.6 -2.1**
CSS Mathiatis 6.06 266 P **Pn 22 34 58.6 -1.1**
GHAJ Ghor Haditha 6.06 227 **Pn 22 34 58.3 -1.3**
GHAJ Ghor Haditha 6.06 227 P **Pn 22 34 59.5 -0.2**
7.4nm4µm249nm,0.6s
GHAJ Ghor Haditha 6.06 227 P **Pn 22 34 59.3 -0.4**
GHAJ Ghor Haditha 6.06 227 P **Pn 22 34 59.1 -0.6**
GHAJ S **Sn 22 36 12.6 +3.5**
EPOS Posof 6.11 14 P **Pn 22 35 02.7 +2.3**
MSBI Mazada 6.18 228 P **Pn 22 35 01.4 +0.2**
MSBI S **Sn 22 36 14.2 +2.3**
AMAZ Amatzia 6.30 232 P **Pn 22 35 03.7 +0.7**
AMAZ S **Sn 22 36 16.2 +1.1**
JOFS JOFS 6.41 197 P **Pn 22 35 04.0 -0.6**
HSNJ Maan 6.79 220 P **Pn 22 35 10.2 +0.4**

14nm7µm207nm,0.6s
BR131 Keskin Array S 6.95 308 *i* P **Pn 22 35 11.5 -0.6**
BR131 Keskin Array S 6.95 308 **Pn 22 35 11.0 -1.0**
BRTR Keskin Array B 6.95 308 Pn **Pn 22 35 12.4 +0.3**
0.3nm,0.3s,baz=135,slow=18,SNR=8.7
BRTR Pg **Pb 22 35 33.4 +2.4**
0.9nm,0.3s,baz=132,slow=17,SNR=9.5
BRTR Lg Lg 22 37 08.4
baz=122,slow=27
BRTR LR LR 22 38 23.2
comp=Z,196nm,20.0s,baz=116,slow=42
0.7nm,0.5s
BRTR Keskin Array B 6.95 308 Pn **Pn 22 35 11.7 -0.4**
RMNI Mount Ramon 7.05 227 P **Pn 22 35 13.0 -0.3**
KZIT Kziot 7.05 230 P **Pn 22 35 15.2 +1.9**
KZIT Kziot 7.05 230 P **Pn 22 35 14.8 +1.5**
KZIT Kziot 7.05 230 P **Pn 22 35 13.9 +0.5**
KZIT S **Sn 22 36 35.2 +1.7**
HRFI Mount Harif 7.31 222 P **Pn 22 35 18.7 +1.8**
HRFI Mount Harif 7.31 222 P **Pn 22 35 16.7 -0.1**
HRFI S **Sn 22 36 43.6 +3.7**
SRFHA Rafha 7.33 152 P **Pn 22 35 18.3 +1.1**
SRFHA S **Sn 22 36 37.0 -3.4**
NTAIM NTAIM 7.56 192 P **Pn 22 35 19.6 -0.7**
EIL Elat 7.64 221 Pn **Pn 22 35 21.9 +0.5**
0.9nm,0.3s,baz=19,slow=7.3,SNR=9.6
EIL Pg **Pb 22 35 46.4 +3.8**
2.7nm,0.3s,baz=75,slow=11,SNR=5.6
EIL Lg Lg 22 37 29.4
15nm,0.3s,baz=103,slow=21,SNR=13
6.8nm,0.5s
EIL Elat 7.64 221 P **Pn 22 35 26.1 +4.7**
EIL Elat 7.64 221 P **Pn 22 35 21.6 +0.2**
EIL S **Sn 22 36 49.6 +1.5**
VSLR Vesyoloye 7.87 356 *i* P **Pn 22 35 25.1 +0.6**
HQLS 7.88 219 P **Pn 22 35 24.3 -0.4**
JMOS Jabal al Moall 7.96 218 P **Pn 22 35 25.4 -0.4**
SOC Sochi 8.01 355 *e*P **Pn 22 35 26.2 -0.3**
SOC *e* 22 36 58.1
SOC MLR MLR
comp=Z,159nm,12.0s
HAQS Haql 8.15 218 P **Pn 22 35 27.6 -0.9**
NCK Nalchik 8.20 15 *i* P **Pn 22 35 30.3 +1.2**
BZK Bozkurt 8.23 323 Pn **Pn 22 35 29.0 -0.3**
SHA1 Shidzhatmaz 8.27 10 *i* P **Pn 22 35 31.4 +1.2**
KBZ Khabaz 8.30 11 Pn **Pn 22 35 31.1 +0.8**
comp=Z,0.3nm,0.3s,baz=181,slow=10,SNR=7.7
KBZ LR LR 22 39 08.9
comp=Z,334nm,20.0s,baz=204,slow=41
comp=Z,1.5nm,0.5s
KBZ Khabaz 8.30 11 *i* P **Pn 22 35 31.8 +1.5**
KIV Kislovodsk 8.49 10 P **Pn 22 35 35.8 +2.7**
KIV Kislovodsk 8.49 10 *e*P **Pn 22 35 33.7 +0.6**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,89nm,12.0s
KIV Kislovodsk 8.49 10 **Pn 22 35 33.9 +0.8**
KIV Kislovodsk 8.49 10 P **Pn 22 35 34.8 +1.7**
comp=Z,9.9nm,1.2s
KIV Kislovodsk 8.49 10 P Pn 22 35 37.8 +4.7
KVAR Kislovodsk Arr 8.49 10 Pn **Pn 22 35 33.6 +0.5**
baz=253,slow=20
comp=Z,2.5nm,0.6s
MAK Makhachkala 9.05 34 *c i* P **Pn 22 35 39.5 -1.1**
MAK *e*S **Sn 22 37 23.1 +0.6**
MAK pmax pmax
comp=Z,80nm,1.0s
MAK MLR MLR
comp=Z,297nm,8.0s
RAYN Ar Rayn 12.73 160 P **Pn 22 36 29.2 -2.0**
RAYN Ar Rayn 12.73 160 P **Pn 22 36 28.0 -3.3**
RAYN Ar Rayn 12.73 160 **Pn 22 36 28.0 -3.3**
IDI Anoyia 12.90 273 Pn **Pn 22 36 32.0 -1.4**
comp=Z,4.7nm,0.7s,baz=92,slow=16,SNR=1.8
IDI Sn **Sn 22 38 57.6 +0.5**
comp=Z,0.1nm,0.3s,baz=8.7,slow=13,SNR=1.8
IDI Anoyia 12.90 273 Pn **Pn 22 36 31.2 -2.2**
PURM Purcari 13.62 327 P **Pn 22 36 42.1 -1.1**
comp=Z,8.4nm,1.2s
MLR Muntele Rosu 14.93 316 LR LR 22 43 57.1
comp=Z,223nm,18.1s,baz=139,slow=42
AGG Agios Georgios 15.01 289 P **Pn 22 37 03.9 +1.7**
KNT Kendrikon 15.02 297 P **Pn 22 37 02.4 +0.1**
VORD Divnogorie 15.40 357 *e*P **Pn 22 37 07.1 -0.1**
VORD pmax pmax
comp=Z,9.0nm,0.8s
VRH Novokhopyorsk 15.62 2 *e*P **Pn 22 37 11.7 +1.6**
VRH pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 15.65 356 *e*P **Pn 22 37 09.0 -1.6**
VSR pmax pmax
comp=Z,5.0nm,0.8s
VORR Voronezh 16.11 357 *e*P **Pn 22 37 14.9 -1.5**
VORR pmax pmax
comp=Z,14nm,0.5s
LOT Lotru 16.17 313 P **P 22 37 22.0 +1.3**
SHME Shamm 16.31 121 P **Pn 22 37 16.1 -3.0**
BANOM Banah 16.50 121 P **Pn 22 37 18.9 -2.7**
AJN Ajban 16.53 128 P **Pn 22 37 20.5 -1.4**
BUR08 Bucovina Ar. S 16.67 321 **Pn 22 37 21.9 -1.9**
NAZ Nazwa, Dubai 16.68 125 P **Pn 22 37 22.0 -1.8**
KMPD K-Podol'skiy 16.68 325 P **Pn 22 37 23.6 -0.2**
ASUD Al Ashush, Dub 16.70 127 P **Pn 22 37 22.2 -2.0**
MSFE Esma-Masafi 16.76 123 P **Pn 22 37 22.5 -2.5**
MZR Muzera 16.76 135 P **Pn 22 37 22.8 -2.2**
MDH Madha 16.90 123 P **Pn 22 37 23.7 -3.0**
PHP Peshkopia 16.94 297 P **P 22 37 28.5 -0.6**
LPSR Galich'ya Gora 17.05 356 *e*P **Pn 22 37 24.3 -4.0**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
UOSS Minazif 17.07 124 P **Pn 22 37 25.8 -3.0**
UOSS Minazif 17.07 124 **Pn 22 37 26.9 -1.9**
UOSS IAmb IAmb 22 37 38.9
comp=Z,31nm,0.9s
UOSS Minazif 17.07 124 P **Pn 22 37 27.0 -1.8**
HATD Hatta, Dubai 17.10 125 P **Pn 22 37 26.1 -3.1**
AK07 Malin Array Si 17.11 334 P **Pn 22 37 28.6 -0.6**
AK10 Malin Array Si 17.14 335 P **Pn 22 37 28.7 -0.8**
AK09 Malin Array Si 17.14 335 P **Pn 22 37 28.4 -1.1**
AK06 Malin Array Si 17.14 334 P **Pn 22 37 28.5 -1.1**
ASHO Ashiyiah 17.14 125 P **Pn 22 37 26.7 -3.1**
ASHO S Sn 22 40 26.7 -14
LUBAR Lubar, Ukraine 17.14 331 P **Pn 22 37 29.3 -0.3**
AK08 Malin Array Si 17.16 335 P **Pn 22 37 28.7 -1.1**
AK05 Malin Array Si 17.17 335 P **Pn 22 37 28.8 -1.1**
AK02 Malin Array Si 17.20 335 P **Pn 22 37 29.2 -1.1**
AKASG Malin Array Be 17.23 335 P **Pn 22 37 29.2 -1.4**
comp=Z,0.4nm,0.3s,baz=147,slow=13,SNR=6.3
AKASG LR LR 22 44 40.7
comp=Z,73nm,19.0s,baz=153,slow=39
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 17.23 335 *i* P **Pn 22 37 30.8 +0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 17.23 335 *i* P **Pn 22 37 29.4 -1.2**
AKBB Malin Array Si 17.23 335 Pn **Pn 22 37 28.0 -2.6**
AKBB Malin Array Si 17.23 335 P **Pn 22 37 29.3 -1.3**
ALNE Al Ain 17.38 127 P **Pn 22 37 30.6 -2.1**
BELG Belogornoye 17.50 14 P **Pn 22 37 32.5 -1.4**
comp=Z,0.5nm,0.3s,baz=18,slow=5.5,SNR=7.9
BELG LR LR 22 45 54.3
comp=Z,110nm,20.3s,baz=128,slow=43
comp=Z,18nm,0.9s
BELG Belogornoye 17.50 14 *i* P **P 22 37 34.9 -0.2**
BELG pmax pmax
comp=Z,5.0nm,1.3s
MI29 MI29, Kamyanyy 17.50 332 P **P 22 37 34.8 -0.4**
comp=Z,104nm,0.9s
DRGR 17.52 315 P **P 22 37 37.3 +1.8**
HRA Herat 17.70 88 P **P 22 37 37.3 -0.3**
SOHO SOHO 17.84 126 P **Pn 22 37 36.1 -2.3**
RNPP8 Varash 19.01 330 P **P 22 37 50.8 -1.0**
RNPP9 Sopachiv 19.05 331 P **P 22 37 51.3 -0.9**
TIP Timpagrande 19.34 288 P **P 22 37 53.0 -2.6**
TIP IAmb IAmb 22 37 58.8
comp=Z,11nm,1.2s
TIP Timpagrande 19.34 288 P **P 22 37 53.8 -1.8**
comp=Z,6.2nm,1.0s
TIP Timpagrande 19.34 288 P **P 22 37 55.0 -0.7**
AKTO Aktyubinsk 19.43 35 P **P 22 37 56.0 -0.4**
comp=Z,0.2nm,0.3s,baz=235,slow=9.1,SNR=16
comp=Z,5.4nm,0.9s
AKTO Aktyubinsk 19.43 35 P **P 22 37 56.0 -0.4**

AB31 Akbulak array 19.62 40 P **P 22 37 57.7 -0.8**
ABKAR Akbulak array 19.62 40 P **P 22 37 57.9 -0.6**
MORH Mrgy, Hungar 19.70 309 P **Pn 22 38 02.6 +1.8**
OBN Obninsk 19.73 353 P **P 22 37 59.8 +0.2**
comp=Z,1.9nm,0.3s,baz=76,slow=16,SNR=3.6
OBN LR LR 22 46 55.7
comp=Z,60nm,19.9s,baz=241,slow=41
comp=Z,6.1nm,0.4s
OBN Obninsk 19.73 353 *ce*P **P 22 37 59.8 +0.2**
OBN pmax pmax
comp=Z,10.0nm,0.8s
OBN MLR MLR
comp=Z,55nm,14.0s
OBN Obninsk 19.73 353 P **P 22 37 58.6 -1.0**
OBN Obninsk 19.73 353 P **P 22 37 59.2 -0.3**
comp=Z,13nm,1.0s
CEL Celeste 19.99 285 P **P 22 38 00.3 -2.5**
CEL IAmb IAmb 22 38 12.3
comp=Z,13nm,0.9s
CEL Celeste 19.99 285 P Pn 22 38 04.7 +0.2
BLY Banja Luka 20.10 304 P **P 22 38 02.1 -1.7**
BLY Banja Luka 20.10 304 P **P 22 38 04.2 +0.4**
SGRT San Giovanni R 20.39 295 P **P 22 38 05.5 -1.6**
SGRT IAmb IAmb 22 38 41.9
comp=Z,9.1nm,0.8s
LANS Liptovska Anna 20.63 318 *e*P **P 22 38 09.3 -0.3**
LANS Liptovska Anna 20.63 318 *e*PN **P 22 38 09.3 -0.3**
MPLH Magyarpolny 20.79 311 P **P 22 38 11.3 +0.1**
comp=Z,9.5nm,1.3s
MNK Minsk 20.90 339 *i* P **P 22 38 11.7 -0.6**
comp=E,6.0nm,0.9s
MNK *i* P **P 22 38 11.7 -0.6**
comp=N,11nm,0.9s
MNK *i* P **P 22 38 11.7 -0.6**
comp=Z,8.0nm,0.8s,baz=150
MNK *i* PP **PnPn 22 38 30.2 -0.6**
MNK *i* PPP PPP 22 38 38.0
MNK *i* S **S 22 42 05.7 +0.5**
MNK *i* SS **SnSn 22 42 27.5 +2.0**
MNK *i* SSS SSS 22 42 44.3
MNK *i* LQ LQ 22 44 33.1
MNK *i* LR LR 22 46 08.6
MNK *i* LRM MLR 22 48 27.2
comp=Z,76nm,15.9s
MNK *i* LRM MLR 22 48 29.1
comp=N,70nm,15.8s
MNK *i* LRM MLR 22 48 42.4
comp=E,63nm,17.8s
MNK Minsk 20.90 339 *i* P **P 22 38 11.7 -0.6**
MNK *i* PPP PPP 22 38 38.0
MNK *i* S **S 22 42 05.6 +0.5**
MNK *i* SS **SnSn 22 42 27.5 +2.0**
MNK *i* SSS SSS 22 42 44.3
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK pmax pmax
comp=Z,8.0nm,0.8s
MNK pmax pmax
comp=N,11nm,0.9s
MNK MLR MLR
comp=Z,76nm,16.0s
MNK MLR MLR
comp=N,70nm,16.0s
MNK MLR MLR
comp=E,63nm,18.0s
OJC Ojcow 21.06 320 P **P 22 38 13.3 -0.9**
OJC Ojcow 21.06 320 P **P 22 38 13.3 -0.9**
VAE Valguarnera 21.19 283 P **P 22 38 17.3 +1.7**
comp=E,4.6nm,0.4s,baz=232,slow=4.9,SNR=3.3
comp=E,4.6nm,0.4s
MODS Modra-Piesok 21.49 314 *e*P **P 22 38 20.7 +1.9**
MODS Modra-Piesok 21.49 314 *e*PN **P 22 38 20.7 +1.9**
NACGM Naroch 21.57 338 *e*P **P 22 38 19.2 -0.3**
comp=Z,11nm,1.0s,baz=148
RONA Rosalia, Austr 21.78 311 *e*P **P 22 38 23.3 +1.4**
comp=Z,4.1nm,0.9s
INTR Introdacqua 21.79 295 P **P 22 38 21.1 -1.1**
INTR IAmb IAmb 22 38 43.3
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 22.03 317 P **P 22 38 21.6 -3.0**
MORC pmax pmax
comp=Z,2.0nm,0.9s
MORC Moravsky Berou 22.03 317 P **P 22 38 21.6 -3.0**
MORC Moravsky Berou 22.03 317 *e*P **P 22 38 27.4 +2.8**
ARSA Arzberg 22.08 310 P **P 22 38 23.8 -1.3**
ARSA Arzberg 22.08 310 *e*pP **P 22 38 27.3 +2.2**
comp=Z,2.1nm,0.9s
SHAA Shahritus 22.08 77 **P 22 38 25.9 +0.6**
SHAA IAmb IAmb 22 38 41.9
comp=Z,18nm,0.8s
SUW Suwalki 22.11 332 P **P 22 38 24.2 -1.1**
SUW Suwalki 22.11 332 P **P 22 38 24.2 -1.1**
CONA Conrad Observa 22.14 311 *i* pP **P 22 38 28.2 +2.3**
comp=Z,4.9nm,1.1s
SOKA Soboth 22.18 308 *i* P **P 22 38 27.2 +0.9**
comp=Z,1.8nm,0.7s
KRUC Moravsky 22.33 315 *e*P **P 22 38 28.5 +0.8**
VRAC Vranov 22.33 315 LR LR 22 48 03.1
comp=Z,104nm,19.6s,baz=120,slow=39
VRAC Vranov 22.33 315 *e*P **P 22 38 27.0 -0.8**
OBKA Obir 22.43 307 *i* pP **P 22 38 30.0 +1.0**
comp=Z,3.7nm,1.3s
OBKA Obir 22.43 307 P **P 22 38 29.0 0.0**
NRCA Norcia 22.50 297 P **P 22 38 25.6 -4.1**
NRCA IAmb IAmb 22 38 54.5
comp=Z,4.3nm,0.8s
FDMO Fiordimonte 22.55 298 P **P 22 38 26.7 -3.5**
FDMO IAmb IAmb 22 38 53.6
comp=Z,6.5nm,0.8s
CESX Cesi 22.85 296 P **P 22 38 31.4 -2.0**
CESX IAmb IAmb 22 38 59.4
comp=Z,4.9nm,0.8s
CHGR Chuyangaron 22.86 74 *i* P **P 22 38 35.8 +2.2**
CHGR pmax pmax
comp=Z,32nm,1.0s
CHGR Chuyangaron 22.86 74 P **P 22 38 34.8 +1.2**
SABO M.te Sabotino 22.89 305 P **P 22 38 32.2 -1.6**
SABO IAmb IAmb 22 39 15.0
comp=Z,4.7nm,1.0s
MURB Monte Urbino 23.00 298 P **P 22 38 34.6 -0.3**
MURB IAmb IAmb 22 38 55.9
comp=Z,10nm,1.0s
DPC Dobruska-Polom 23.00 317 P **P 22 38 34.1 -0.8**
comp=Z,2.5nm,0.9s
PRED Cave del Predi 23.05 306 P **P 22 38 34.1 -1.4**
PRED IAmb IAmb 22 38 57.8
comp=Z,4.5nm,0.8s
MYKA Terra Mystica 23.06 307 *ep*P **P 22 38 36.8 +1.2**
comp=Z,3.7nm,1.0s
MOA Molln 23.09 310 *i* pP **P 22 38 36.8 +0.9**
comp=Z,9.2nm,1.1s
MOA Molln 23.09 310 P **P 22 38 36.2 +0.3**
ACOM Acomizza, Ital 23.12 307 P **P 22 38 35.8 -0.5**
KBL Kabul 23.19 84 P **P 22 38 38.0 +0.8**
KBL pmax pmax
comp=Z,10.0nm,1.3s
KBL Kabul 23.19 84 **P 22 38 38.0 +0.8**
KBL IAmb IAmb 22 38 40.5
comp=Z,10nm,1.2s
KSP Ksiaz 23.27 318 P **P 22 38 37.0 -0.6**
comp=Z,3.6nm,1.2s
KBA Koelnbreinsper 23.40 308 *e*P **P 22 38 38.6 -0.6**
comp=Z,8.6nm,1.1s
BIOA Bad Ischl, Aus 23.43 309 *ep*P **P 22 38 39.7 +0.4**
comp=Z,1.6nm,0.5s
STAL STALIGIAL 23.56 305 P **P 22 38 38.4 -2.2**
KIRV Kirov 23.71 11 LR LR 22 48 39.0
comp=Z,118nm,21.8s,baz=212,slow=38
KIRV Kirov 23.71 11 *ce*P **P 22 38 40.5 -1.3**
GAR Garm 23.75 73 **P 22 38 43.2 +0.5**
GAR Garm 23.75 73 P **P 22 38 44.6 +1.9**
GEC2 GERESS Array S 23.83 312 P **P 22 38 41.9 -1.3**
GEC2 IAmb IAmb 22 38 50.8
comp=Z,3.1nm,0.7s
GERES GERESS Array B 23.83 312 P **P 22 38 42.8 -0.4**
comp=Z,2.0nm,0.6s,baz=117,slow=8.4,SNR=19
GERES LR LR 22 48 58.3
comp=Z,86nm,18.8s,baz=118,slow=39
comp=Z,2.0nm,0.6s
GERES GERESS Array B 23.83 312 P **P 22 38 41.7 -1.6**
ABTA Abfaltersbach 23.84 307 *i* P **P 22 38 42.6 -0.7**
comp=Z,3.0nm,1.5s
LESA Schwarzleotal 23.95 308 *i* P **P 22 38 43.3 -1.0**
comp=Z,3.0nm,0.9s
ARTI Arti 24.02 25 LR LR 22 50 24.6

comp=Z,60nm,18.3s,baz=232,slow=42
ARTI Arti 24.02 25 *c i* P P **22 38 45.8 +1.0**
ARTI 22 39 13.2
ARTI S S **22 43 05.2 +3.6**
ARTI SS SnSn **22 43 42.8 +0.9**
ARTI pmax pmax
comp=Z,4.0nm,0.7s
ARTI Arti 24.02 25 P P **22 38 46.2 +1.4**
ARTI IAmb IAmb 22 39 19.6
comp=Z,5.6nm,0.6s
KHC Kasperske Hory 24.02 313 *ce* P P **22 38 43.8 -1.2**
KHC pmax pmax
comp=Z,5.0nm,2.1s
KHC Kasperske Hory 24.02 313 P P **22 38 42.6 -2.4**
KHC Kasperske Hory 24.02 313 P P **22 38 44.0 -1.0**
comp=Z,2.8nm,0.8s
TEOL Teolo 24.03 303 P P **22 38 42.8 -2.3**
CGRP Cima Grappa 24.07 304 P P **22 38 45.0 -0.7**
BTK Batken 24.14 70 P P **22 38 46.7 +0.4**
BTK pmax pmax
comp=Z,6.0nm,0.9s
BTK Batken 24.14 70 P **22 38 46.7 +0.4**
BTK IAmb IAmb 22 38 49.9
comp=Z,6.3nm,0.9s
KK31 Karatay Array 24.15 63 P P **22 38 46.6 +0.3**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 24.15 63 P **22 38 46.6 +0.3**
KK31 IAmb IAmb 22 39 07.5
comp=Z,5.2nm,0.8s
KKAR Karatay Array 24.15 63 P P **22 38 46.8 +0.5**
KKAR Karatay Array 24.15 63 P **22 38 46.8 +0.5**
CTI Castel Tesino 24.21 304 P P **22 38 44.8 -2.1**
CTI pmax pmax
comp=Z,6.0nm,0.9s
CTI Castel Tesino 24.21 304 P P **22 38 44.8 -2.1**
CTI IAmb IAmb 22 38 57.3
comp=Z,5.5nm,0.9s
WTTA Wattenberg 24.57 307 *ep* P P **22 38 51.7 +1.5**
comp=Z,6.2nm,1.3s
WTTA Wattenberg 24.57 307 P P **22 38 51.1 +0.9**
WATA Walderalm 24.63 307 *e* P P **22 38 49.5 -1.2**
comp=Z,3.7nm,0.9s
VSU Vasula 24.68 342 *i* P P **22 38 51.1 +0.3**
VSU pmax pmax
comp=Z,5.0nm,1.0s
SQTA Sankt Quirin 24.83 307 *e* P P **22 38 52.5 0.0**
comp=Z,3.9nm,0.9s
MANEM Manem 24.91 76 P **22 38 53.8 +0.4**
MANEM IAmb IAmb 22 38 57.2
comp=Z,20nm,0.8s
MOTA Moosalm 24.94 307 *e* P P **22 38 53.3 -0.2**
comp=Z,8.0nm,1.1s
FETA Feichten 25.09 306 *i* P P **22 38 54.5 -0.3**
comp=Z,2.6nm,0.9s
SVE Sverdlovsk 25.14 26 *e* P P **22 38 56.1 +1.0**
RETA Reutte 25.20 307 *e* P P **22 38 56.0 +0.2**
comp=Z,1.5nm,0.5s
TANN Tannenbergstha 25.21 315 P P **22 38 56.8 +1.0**
KLMR Klimovskoe 25.29 359 *e* P P **22 38 55.5 -0.8**
KLMR pmax pmax
comp=Z,36nm,1.5s
CLL Collm 25.30 317 *i* P P **22 38 55.8 -0.8**
CLL *e* S S **22 43 28.0 +5.6**
CLL pmax pmax
comp=Z,7.0nm,1.6s
CLL Collm 25.30 317 P P **22 38 55.9 -0.7**
comp=Z,3.5nm,1.1s
CLL Collm 25.30 317 *i* P P **22 38 55.8 -0.8**
comp=Z,7.0nm,1.6s
CLL *i* x x 22 39 22.4
CLL *e* PPP PPP 22 39 35.0
CLL *e* S S **22 43 28.0 +5.6**
CLL *e* SSS SSS 22 44 30.0
KEST Kesra 25.42 280 P P **22 38 56.5 -1.5**
comp=Z,1.7nm,0.9s,baz=299,slow=4.3,SNR=4.7
comp=Z,1.7nm,0.9s
KEST Kesra 25.42 280 IAmb IAmb 22 39 22.6
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 25.59 305 P P **22 38 58.9 -0.6**
comp=Z,1.1nm,0.7s,baz=324,slow=18,SNR=2.0
DAVOX LR LR 22 50 48.9
comp=Z,73nm,18.5s,baz=92,slow=41
comp=Z,1.1nm,0.7s
DAVA Damuels 25.72 307 *e* P P **22 38 59.8 -0.8**
comp=Z,4.9nm,0.6s
ARSB Arslanbob 25.82 67 IAmb IAmb 22 39 11.6
comp=Z,10nm,1.1s
AAK Ala-Archa 27.02 65 LR LR 22 52 14.2
comp=Z,67nm,19.4s,baz=268,slow=42
AAK Ala-Archa 27.02 65 *ce* P P **22 39 13.8 +1.4**
AAK pmax pmax
comp=Z,4.0nm,1.7s
BVAR Borovoye Array 27.19 41 P P **22 39 13.6 0.0**
comp=Z,0.5nm,0.4s,baz=198,slow=14,SNR=5.0
comp=Z,0.5nm,0.4s
FINES FINESS Array B 27.49 345 P P **22 39 16.7 +0.5**
comp=Z,0.7nm,0.6s,baz=142,slow=9.6,SNR=5.8
FINES LR LR 22 51 17.9
comp=Z,56nm,19.6s,baz=156,slow=39
comp=Z,0.7nm,0.6s
FINES FINESS Array B 27.49 345 *i* P P **22 39 18.0 +1.8**
FINES pmax pmax
comp=Z,1.0nm,0.7s
KSH2 Kashi 27.83 72 P P **22 39 21.3 +1.6**
KSH2 sP sP 22 39 28.0 +3.9
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
BOOM Boomskoye usch 28.08 65 P P **22 39 22.7 +0.8**
BOOM pmax pmax
comp=Z,3.0nm,1.0s
BOOM Boomskoye usch 28.08 65 P P **22 39 22.7 +0.8**
BOOM IAmb IAmb 22 39 40.7
comp=Z,3.3nm,1.0s
NRN Naryn 28.10 67 P P **22 39 21.5 -0.8**
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 28.10 67 P **22 39 21.5 -0.8**
NRN IAmb IAmb 22 39 24.4
comp=Z,6.0nm,1.0s
TARG Taragay, Kyrgy 29.45 67 P P **22 39 34.4 0.0**
TARG pmax pmax
comp=Z,4.0nm,1.1s
TARG Taragay, Kyrgy 29.45 67 P **22 39 34.4 0.0**
TARG IAmb IAmb 22 39 36.9
comp=Z,4.2nm,1.1s
HFS Hagfors 30.11 333 P P **22 39 40.1 +0.7**
comp=Z,0.9nm,0.5s,baz=134,slow=8.5,SNR=8.8
HFS LR LR 22 54 02.7
comp=Z,80nm,19.0s,baz=143,slow=41
comp=Z,0.9nm,0.5s
WUS Wushi 30.52 68 P P **22 39 44.6 +1.0**
PDGK Podgornoye 30.71 64 P P **22 39 45.6 +0.4**
PDGK Podgornoye 30.71 64 P **22 39 45.6 +0.4**
KURBB Kurchatov Arra 31.05 49 P P **22 39 48.6 +0.7**
comp=Z,1.4nm,0.9s,baz=264,slow=9.3,SNR=12
comp=Z,1.4nm,0.9s
KURK Kurchatov 31.13 49 *ce* P P **22 39 50.0 +1.4**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK Kurchatov 31.13 49 P P **22 39 49.1 +0.5**
KURK IAmb IAmb 22 39 55.3
comp=Z,1.6nm,0.7s
KONO Kongsberg 31.40 330 *i* P P **22 39 51.5 +0.6**
KONO pmax pmax
comp=Z,6.0nm,1.1s
KONO Kongsberg 31.40 330 P P **22 39 51.1 +0.3**
NOA NORSAR Array B 31.62 333 LR LR 22 55 18.6
comp=Z,49nm,19.8s,baz=150,slow=41
NC303 NORSAR Array S 31.69 333 P P **22 39 53.3 -0.2**
MAKZ Makanchi 32.66 57 P P **22 40 02.4 +0.2**
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 32.66 57 P **22 40 02.4 +0.2**
MK31 Makanchi Array 32.88 57 *ce* P P **22 40 04.8 +0.7**
MKAR Makanchi Array 32.88 57 P P **22 40 05.0 +0.9**
comp=Z,2.8nm,0.6s,baz=260,slow=8.4,SNR=24
MKAR LR LR 22 55 46.3
comp=Z,54nm,18.5s,baz=254,slow=41
comp=Z,2.8nm,0.6s
MKAR Makanchi Array 32.88 57 P P **22 40 03.9 -0.2**
ARCES ARCESS Array B 35.01 351 P P **22 40 23.6 +1.3**
comp=Z,0.7nm,0.6s,baz=161,slow=7.7,SNR=7.2
ARCES LR LR 22 58 10.0
comp=Z,38nm,18.2s,baz=208,slow=42
comp=Z,0.7nm,0.6s

ESDC Sonseca Array 35.33 290 P P **22 40 25.5 0.0**
comp=Z,0.6nm,0.6s,baz=85,slow=8.2,SNR=6.1
ESDC LR LR 22 56 14.5
comp=Z,38nm,18.1s,baz=98,slow=39
comp=Z,0.6nm,0.6s
ESDC Sonseca Array 35.33 290 P P **22 40 24.5 -1.0**
ZALV Zalesovo Beam 35.59 45 P P **22 40 27.4 0.0**
comp=Z,0.5nm,0.4s,baz=251,slow=4.5,SNR=3.7
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 35.59 45 *i* P P **22 40 31.8 +4.4**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 35.59 45 P P **22 40 27.1 -0.4**
EKA Eskdalemuir Ar 35.77 317 P P **22 40 28.6 -0.4**
comp=Z,0.8nm,0.6s,baz=109,slow=8.4,SNR=4.5
comp=Z,0.8nm,0.6s
DGZ Jazzator, Alta 36.54 53 *i* P P **22 40 36.6 +0.7**
DGZ pmax pmax
comp=Z,5.0nm,1.1s
WMQ Urumqi 36.66 62 *e* P P **22 40 39.6 +2.7**
WMQ pP sP 22 40 42.4 +1.1
WMQ pmax pmax
comp=Z,9.0nm,0.7s
KMBO Kilima Mbogo 36.67 186 LR LR 22 55 46.3
comp=Z,101nm,18.1s,baz=333,slow=36
MBAR Mbarara 37.19 197 LR LR 22 55 37.2
comp=Z,129nm,19.6s,baz=26,slow=36
TORD Torodi Ar. Bea 41.59 247 P P **22 41 17.7 -0.6**
comp=Z,1.2nm,0.7s,baz=34,slow=5.8,SNR=8.7
comp=Z,1.2nm,0.7s
TORD Torodi Ar. Bea 41.59 247 IAmb IAmb 22 41 24.8
comp=Z,2.9nm,0.9s
KNGR Kungurtug, Tuv 43.05 51 *i* P P **22 41 31.6 +1.7**
KNGR pmax pmax
comp=Z,6.0nm,1.1s
BORG Borgarnes 46.57 329 LR LR 23 01 54.0
comp=Z,36nm,20.0s,baz=134,slow=37
SONM Songino Array 49.14 54 P P **22 42 17.9 -0.1**
comp=Z,0.4nm,0.5s,baz=275,slow=7.2,SNR=2.5
SONM LR LR 23 06 47.6
comp=Z,45nm,21.2s,baz=242,slow=41
comp=Z,0.4nm,0.5s
ULN Ulaanbaatar 49.57 54 *ce* P P **22 42 21.8 +0.5**
ULN pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 49.57 54 P P **22 42 20.9 -0.4**
ULN IAmb IAmb 22 42 23.4
comp=Z,4.5nm,1.1s
LZH Lanzhou 50.35 70 *e* P P **22 42 29.4 +2.0**
LZH sP sP 22 42 39.6 +7.7
LZH pmax pmax
comp=Z,10.0nm,1.3s
LSZ Lusaka 51.97 195 LR LR 23 03 42.5
comp=Z,89nm,20.1s,baz=64,slow=35
CMAR Chiang Mai Arr 53.88 92 P P **22 42 52.5 -1.2**
comp=Z,0.6nm,0.3s,baz=308,slow=7.8,SNR=5.3
CMAR LR LR 23 09 51.5
comp=Z,35nm,19.1s,baz=200,slow=40
comp=Z,0.6nm,0.3s
HHC Hu-ho-hao-te 54.53 62 *e* P P **22 43 00.3 +2.0**
HHC pmax pmax
comp=Z,9.0nm,0.6s
TIXI Tiksi 56.09 22 LR LR 23 10 51.4
comp=Z,52nm,18.1s,baz=272,slow=40
IVI Ivigtut 59.02 326 P P **22 43 29.7 +0.1**
LBTB Lobatse 61.95 196 LR LR 23 10 29.8
comp=Z,105nm,19.7s,baz=56,slow=36
BOSA Boshof 65.51 195 LR LR 23 15 56.4
comp=Z,96nm,18.6s,baz=46,slow=39
KS19 Wonju Array Si 67.46 59 P P **22 44 26.5 +0.5**
KSAR Wonju Array Be 67.50 59 P P **22 44 26.1 -0.2**
KSAR Wonju Array Be 67.50 59 P P **22 44 26.1 -0.2**
KSRS Korea Array 67.52 59 P P **22 44 24.7 -1.8**
comp=Z,1.1nm,0.8s,baz=280,slow=5.4,SNR=6.0
comp=Z,1.1nm,0.8s
MA2 Magadan 69.11 31 LR LR 23 20 22.4
comp=Z,35nm,18.2s,baz=283,slow=41
MJAR Matsushiro Arr 75.06 56 LR LR 23 21 26.3
comp=Z,42nm,19.1s,baz=256,slow=38
PETK Petropavlovsk- 76.16 34 LR LR 23 21 49.4
comp=Z,27nm,19.8s,baz=306,slow=38
ILAR Eielson Array 79.79 3 P P **22 45 38.1 +0.1**
comp=Z,0.4nm,0.9s,baz=335,slow=4.0,SNR=4.1
comp=Z,0.4nm,0.9s
SHEM Shemya Is, Ala 83.14 26 LR LR 23 27 30.4
comp=Z,27nm,19.2s,baz=354,slow=39
SJG San Juan 92.61 294 LR LR 23 28 03.2
comp=Z,22nm,19.0s,baz=94,slow=35

IDC ***16*** *22:43:38.3±0.9,27.20N×140.24E,h503km±11km, mb3.2/18,mbtmp4.1/22,Error ellipse: s-maj=14.7km s-min=9.8km az=81.0*
JMA ***16*** *22:43:41.0±0.2,28.2N×142.1E±,h495km,MV4.2/29,W OFF OGASAWARA*

ISC 16 22:43:38.4±0.6, 27.25N±0.07×140.19E±0.09, h500km, n173,σ1.3/37/183, mb3.5/18, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CBIJ	**Chichi jima**	**1.78**	**94**	P	**P**	**22 44 43.4**	**+1.0**
CBIJ				*e*S	**S**	**22 45 33.7**	**-0.8**
JCJ	**Chichijima**	**1.78**	**94**	P	**P**	**22 44 42.2**	**-0.3**
	181nm,0.2s,baz=275,slow=23,SNR=101						
JCJ				S	**S**	**22 45 30.8**	**-3.7**
	247nm,0.3s,baz=311,slow=23,SNR=10						
JHH2	**Haha-jima-NKT2**	**1.88**	**109**	P	**P**	**22 44 44.4**	**+1.5**
JHH2				*e*S	**S**	**22 45 35.0**	**-0.3**
JHJ	**Hachijo jima 2**	**5.86**	**357**	P	**P**	**22 45 13.8**	**+0.5**
	176nm,0.8s,baz=270,slow=20,SNR=2.5						
JHJ				S	**S**	**22 46 27.7**	**-3.2**
	95nm,0.7s,baz=85,slow=11,SNR=1.9						
BSO1	**Boso 1**	**7.41**	**5**	*e*P	**P**	**22 45 29.9**	**+1.9**
BSO3	**Boso 3**	**7.54**	**2**	*e*P	**P**	**22 45 31.0**	**+1.5**
BSO4	**Boso 4**	**7.72**	**1**	P	**P**	**22 45 33.5**	**+1.8**
JIE	**Ise**	**7.72**	**338**	*e*P	**P**	**22 45 34.8**	**+3.0**
JOD2	**Odawara 2**	**8.05**	**354**	*e*P	**P**	**22 45 36.6**	**+1.5**
JHU2	**Hanno**	**8.60**	**355**	P	**P**	**22 45 41.8**	**+0.9**
JHU2				*e*S	**S**	**22 47 18.6**	**-2.9**
MJAR	**Matsushiro Arr**	**9.42**	**350**	P	**P**	**22 45 49.3**	**-0.2**
	2.3nm,0.3s,baz=164,slow=9.4,SNR=16						
MJAR				S	**S**	**22 47 31.6**	**-5.7**
	1.1nm,0.4s,baz=296,slow=32,SNR=1.7						
KSRS	**Korea Array**	**14.51**	**318**	P	**P**	**22 46 43.9**	**+0.6**
	1.4nm,0.8s,baz=147,slow=8.5,SNR=14						
KSRS				S	**S**	**22 49 16.3**	**+0.5**
	2.6nm,1.0s,baz=146,slow=16,SNR=8.3						
USRK	**Ussuriysk Ar.**	**18.16**	**341**	P	**P**	**22 47 21.7**	**+1.7**
	5.2nm,0.7s,baz=169,slow=11,SNR=13						
PETK	**Petropavlovsk-**	**28.93**	**22**	P	**P**	**22 48 55.9**	**-0.2**
	1.2nm,0.6s,baz=226,slow=5.8,SNR=2.4						
	1.2nm,0.6s						
LZDM	**Laoshou Array**	**32.12**	**295**	P	**P**	**22 49 24.3**	**0.0**
	1.4nm,0.3s,baz=95,slow=12,SNR=2.1						
	1.4nm,0.3s						
SONM	**Songino Array**	**33.38**	**317**	P	**P**	**22 49 34.8**	**+0.2**
	0.3nm,0.3s,baz=115,slow=5.6,SNR=2.5						
	0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.86**	**266**	P	**P**	**22 50 20.1**	**-0.1**
	0.8nm,0.3s,baz=64,slow=8.0,SNR=9.8						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**47.25**	**188**	P	**P**	**22 51 25.2**	**-0.6**
	1.8nm,0.3s,baz=5.7,slow=7.6,SNR=34						
WRA				PcP	**PcP**	**22 52 47.0**	**-0.3**
	0.4nm,0.4s,baz=4.7,slow=4.0,SNR=2.3						
	1.8nm,0.3s						
ZALV	**Zalesovo Beam**	**48.21**	**319**	P	**P**	**22 51 31.9**	**-0.7**
	0.7nm,0.4s,baz=109,slow=8.6,SNR=4.0						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**49.01**	**310**	P	**P**	**22 51 39.0**	**+0.3**
	0.5nm,0.5s,baz=89,slow=11,SNR=7.6						
MKAR				PcP	**PcP**	**22 52 52.9**	**-0.6**
	0.3nm,0.5s,baz=91,slow=6.3,SNR=2.9						
MKAR				ScP	**ScP**	**22 55 58.8**	**-1.7**
	0.2nm,0.4s,baz=97,slow=4.4,SNR=2.8						
	0.5nm,0.5s						
K13K	**Kusilvak Mount**	**50.07**	**30**	P	**P**	**22 51 47.8**	**+1.5**
	baz=252						
L14K	**Kuka Creek**	**50.81**	**31**	P	**P**	**22 51 53.4**	**+1.8**
	baz=254						
N14K	**Kuskokwak Cree**	**50.93**	**33**	P	**P**	**22 51 53.8**	**+1.2**
	baz=256						
ASAR	**Alice Springs**	**50.98**	**187**	P	**P**	**22 51 52.8**	**-0.7**
	0.7nm,0.3s,baz=358,slow=4.7,SNR=19						
	0.7nm,0.3s						
O14K	**Tigyukauivet M**	**51.00**	**34**	P	**P**	**22 51 54.1**	**+1.1**
	baz=257						

M14K Bethel 51.00 32 P P **22 51 54.6 +1.6**
baz=256
F15K North Star Dit 51.32 26 P P **22 51 57.0 +1.7**
baz=250
L15K Ungalak Mounta 51.45 31 P P **22 51 57.8 +1.5**
baz=255
K15K Wolf Creek Mou 51.58 30 P P **22 51 59.4 +2.1**
baz=255
M15K Kasigluk River 51.59 33 P P **22 51 58.4 +1.0**
baz=257
KURBB Kurchatov Arra 51.66 314 P P **22 51 58.5 +0.4**
1.4nm,0.5s,baz=91,slow=7.9,SNR=26
1.4nm,0.5s
O15K Ungalikthiuk R 51.71 35 P P **22 51 59.5 +1.3**
baz=259
N15K Kwethluk River 51.77 33 P P **22 51 59.9 +1.2**
baz=258
H16K Elim 51.93 28 P P **22 52 01.2 +1.4**
baz=253
CHGN Chignik 52.00 38 P P **22 52 01.2 +0.9**
baz=262
J16K Anvik River 52.25 29 P P **22 52 03.1 +1.0**
baz=255
I17K Unalakleet 52.37 29 P P **22 52 04.1 +1.2**
baz=255
L16K Owhat River 52.39 32 P P **22 52 03.9 +0.8**
baz=257
N16K Nishlik Lake 52.47 33 P P **22 52 05.1 +1.3**
baz=259
M16K Timber Creek 52.49 32 P P **22 52 05.0 +1.1**
baz=258
D17K Noatak River 52.60 24 P P **22 52 05.9 +1.4**
baz=250
P16K Nushagak River 52.61 35 P P **22 52 05.8 +1.1**
baz=260
O16K Kokwok River B 52.65 34 P P **22 52 06.1 +1.1**
baz=260
G17K Kiwalik Mounta 52.83 27 P P **22 52 07.3 +1.1**
baz=254
C17K DeLong Mountai 52.85 23 P P **22 52 07.4 +1.0**
baz=249
J17K VABM Dome 52.94 29 P P **22 52 08.9 +1.8**
baz=257
H17K Granite Mounta 52.97 27 P P **22 52 08.5 +1.2**
baz=255
L17K Donlin 53.02 31 P P **22 52 09.6 +2.0**
baz=258,SNR=5.6
K17K Iditarod 53.14 30 P P **22 52 10.3 +1.8**
baz=258,SNR=7.9
O17K Koliganek Bris 53.18 34 P P **22 52 09.9 +1.1**
baz=261
N17K Nushagak Hills 53.25 33 P P **22 52 10.6 +1.2**
baz=260
R17L Mt. Peulik Vol 53.28 37 P P **22 52 11.0 +1.4**
baz=263
M17K Holitna River 53.28 32 P P **22 52 11.1 +1.6**
baz=260
E18K Tukpahlearik C 53.41 24 P P **22 52 11.7 +1.3**
baz=252
P17K Kvichak River 53.43 35 P P **22 52 11.7 +1.1**
baz=262
C18K Utukok River 53.59 23 P P **22 52 12.6 +0.9**
baz=251
H18K Honhosa River 53.66 27 P P **22 52 12.9 +0.7**
baz=256
G18K Tagagawik 53.73 27 P P **22 52 12.9 +0.2**
baz=255
L18K Granite Mounta 53.78 31 P P **22 52 14.3 +1.3**
baz=260
N18K Kilae Creek 53.91 33 P P **22 52 14.8 +0.7**
baz=261
M18K Stony River 54.06 32 P P **22 52 16.4 +1.4**
baz=261
P18K Big Mountain, 54.07 35 P P **22 52 16.2 +1.0**
baz=263
Q18K Katmai Hardscr 54.10 36 P P **22 52 16.2 +0.7**
baz=264
O18K Koktuh Hills 54.14 34 P P **22 52 16.8 +1.2**
baz=262
C19K Lookout Ridge 54.29 23 P P **22 52 17.8 +1.2**
baz=252
F19K Shaleruckik Mo 54.31 25 P P **22 52 17.6 +0.9**
baz=256
H19K Roundabout Mou 54.53 27 P P **22 52 19.6 +1.3**
baz=258
J19K Poorman 54.57 29 P P **22 52 19.8 +1.1**
baz=260
N19K Bonanza Creek 54.61 33 P P **22 52 20.5 +1.4**
baz=263
L19K White Mountain 54.62 31 P P **22 52 20.3 +1.2**
baz=261
D19K Kuna River 54.62 23 P P **22 52 20.2 +1.3**
baz=254
E19K Redstone River 54.67 25 P P **22 52 20.4 +1.2**
baz=254
M19K Big River Lodg 54.80 32 P P **22 52 21.4 +1.1**
baz=262
F20K Avaraart Lake 55.15 25 P P **22 52 23.6 +1.0**
baz=258
K20K Telida 55.15 30 P P **22 52 24.5 +1.8**
baz=261
H20K Anotleneega Mo 55.16 27 P P **22 52 24.2 +1.4**
baz=259
D20K Etivluk River 55.21 23 P P **22 52 24.3 +1.3**
baz=256,SNR=11
J20K Nowinta River 55.24 29 P P **22 52 25.2 +1.9**
baz=261,SNR=7.0
E20K Nigu River 55.25 24 P P **22 52 24.6 +1.2**
baz=256
G21K Allakaket 55.90 26 P P **22 52 29.7 +1.8**
baz=260
PPLA Purkeypile 55.94 31 P P **22 52 30.1 +1.7**
baz=263
C21K Kniefblade Rid 55.96 23 P P **22 52 29.3 +1.1**
baz=257
F21K Alatna River 56.04 25 P P **22 52 29.9 +1.1**
baz=260
H21K Meloztna Rive 56.04 27 P P **22 52 30.2 +1.3**
baz=261
CAST Castle Rocks 56.05 30 P P **22 52 30.1 +1.1**
baz=263,SNR=5.1
E21K Killik River 56.09 24 P P **22 52 29.9 +0.7**
baz=258
B21K Ikpikpuk River 56.13 23 P P **22 52 30.7 +1.4**
baz=257
SKT Skwentna 56.15 32 P P **22 52 30.3 +0.6**
baz=265
I21K Tanana 56.31 28 P P **22 52 32.3 +1.6**
baz=262
L22K Petersville 56.55 31 P P **22 52 32.8 +0.3**
baz=265
F22K John River 56.59 25 P P **22 52 34.2 +1.6**
baz=261
H22K Ishtalitna Cre 56.66 27 P P **22 52 34.5 +1.4**
baz=262
BVAR Borovoye Array 56.73 317 P P **22 52 34.4 +0.5**
3.0nm,0.4s,baz=94,slow=7.2,SNR=25
3.0nm,0.4s
G22K Bettles 56.75 26 P P **22 52 35.1 +1.4**
baz=262
MLY Manley 56.82 28 P P **22 52 35.3 +1.0**
baz=264
E22K Anaktuvuk Pass 56.83 25 P P **22 52 36.0 +1.7**
baz=261
TRF Thorofare Moun 56.85 30 P P **22 52 35.6 +0.9**
baz=265
COLD Coldfoot 57.30 26 P P **22 52 38.9 +1.4**
baz=263
G23K Bananza Creek 57.30 26 P P **22 52 39.3 +1.7**
baz=263,SNR=5.1
D23K Nanushuk River 57.37 24 P P **22 52 39.8 +1.8**
baz=261,SNR=7.9
H23K Yukon River 57.40 27 P P **22 52 39.8 +1.6**
baz=264
I23K Minto, Yukon-K 57.41 28 P P **22 52 39.7 +1.5**
baz=265
MCK McKinley 57.48 30 P P **22 52 39.9 +1.0**
baz=266
C23K Itkillik River 57.53 23 P P **22 52 40.3 +1.3**
baz=261
E23K Chandalar 57.63 25 P P **22 52 41.2 +1.3**
baz=263,SNR=5.7
TOLK Toolik Lake Re 57.72 24 P P **22 52 41.6 +1.2**
baz=263
M23K Glacier View 57.94 32 P P **22 52 42.9 +0.9**
baz=268
WAT6 Susitna Watana 57.96 31 P P **22 52 42.4 +0.1**
baz=268
E24K Your Creek 58.05 25 P P **22 52 44.3 +1.6**

baz=264,SNR=9.6
D24K Happy Valley 58.06 24 P P 22 52 44.5 +1.9
baz=263
H24K Noodor Dome 58.08 27 P P 22 52 44.1 +1.1
baz=266
DHY Denali Highway 58.14 31 P P 22 52 44.4 +0.9
baz=268
F24K Squaw Lake 58.22 25 P P 22 52 45.4 +1.6
baz=265,SNR=11
G24K Hadweenzic Riv 58.31 26 P P 22 52 46.0 +1.6
baz=266
HDA Harding Lake 58.39 29 P P 22 52 45.0 0.0
baz=267
ILAR Eielson Array 58.43 29 P P 22 52 44.6 -0.6
0.7nm,0.4s,baz=253,slow=5.6,SNR=11
0.7nm,0.4s
STKA Stephens Creek 58.81 179 P P 22 52 47.5 -0.7
2.0nm,0.6s,baz=356,slow=8.2,SNR=3.8
2.0nm,0.6s
G25K Bearman Lake 58.86 26 P P 22 52 49.8 +1.7
baz=267
EYAK Cordova Ski Ar 58.89 34 P P 22 52 49.3 +1.0
baz=270
D25K Kavik River 58.95 23 P P 22 52 50.0 +1.3
baz=265,SNR=14
J25K Salcha River, 59.08 29 P P 22 52 50.7 +1.0
baz=269
F25K Christian Rive 59.09 25 P P 22 52 51.6 +1.9
baz=267,SNR=5.3
E25K Arctic Village 59.15 25 P P 22 52 51.9 +1.8
baz=267,SNR=7.8
RIDG Independent Ri 59.30 30 P P 22 52 51.3 +0.1
baz=270
BMRM Bremner River 59.44 33 P P 22 52 53.1 +1.0
baz=271
F26K Sheenjek River 59.66 25 P P 22 52 55.0 +1.5
baz=268,SNR=9.7
SCRK Sand Creek 59.68 30 P P 22 52 54.1 +0.3
baz=270,SNR=7.0
G26K Porcupine Rive 59.78 26 P P 22 52 55.8 +1.6
baz=269
C27K Jago River 59.90 23 P P 22 52 56.8 +1.7
baz=268
L26K Log Cabin Wild 59.98 31 P P 22 52 56.8 +1.1
baz=271
MCARA McCarthy VSAT 60.19 33 P P 22 52 58.0 +1.0
baz=272
G27K Doyon Strip 60.62 26 P P 22 53 00.9 +1.0
baz=271
E27K Coleen River 60.64 25 P P 22 53 01.8 +1.8
baz=270
I27K Kandik River 60.66 28 P P 22 53 01.2 +0.9
baz=272
L27K Beaver Creek, 60.67 31 P P 22 53 01.0 +0.7
baz=273
M27K Edge Creek, AK 60.68 32 P P 22 53 01.8 +1.3
baz=273
H27K Steamboat Moun 60.69 27 P P 22 53 01.8 +1.4
baz=271
F28M Old Crow 61.30 25 P P 22 53 05.8 +1.4
baz=272,SNR=6.7
I28M Miner Creek 61.37 28 P P 22 53 06.0 +1.0
baz=273,SNR=6.4
YUK3 Moose Creek 61.39 32 P P 22 53 06.7 +1.4
baz=274
E28M Babbage River 61.39 24 P P 22 53 06.3 +1.4
baz=272,SNR=6.5
O28M Mount Upton 61.61 33 P P 22 53 07.6 +0.8
baz=275
YUK8 Steele Glacier 61.77 33 P P 22 53 08.9 +1.1
baz=275
H29M Whitestone 61.97 27 P P 22 53 10.0 +1.3
baz=274
E29M Blow River 62.01 25 P P 22 53 10.1 +1.2
baz=274
G29M Pine Creek 62.05 26 P P 22 53 10.9 +1.6
baz=274,SNR=7.5
BRWY Burwash Landin 62.11 33 P P 22 53 11.4 +1.6
baz=276
M29M Somme Creek 62.26 31 P P 22 53 12.2 +1.4
baz=276
YUK4 Talbot Arm 62.30 33 P P 22 53 12.6 +1.4
baz=276
L29M L29M 62.34 31 P P 22 53 12.6 +1.3
baz=276
O29M Mount Kennedy 62.45 34 P P 22 53 13.5 +1.4
baz=277
YUK6 Outpost Mounta 62.48 33 P P 22 53 13.1 +0.7
baz=277
K29M Barlow Dome 62.54 30 P P 22 53 13.0 +0.4
baz=276
EPYK Eagle Plains 62.62 27 P P 22 53 14.1 +1.1
baz=276
G30M tAoh Zraii Nji 62.76 26 P P 22 53 14.4 +0.5
baz=276
F30M Barrier River 62.86 25 P P 22 53 15.8 +1.4
baz=276,SNR=6.4
I30M Mount Dempster 62.88 28 P P 22 53 15.3 +0.5
baz=276
HYT Haines Junctio 62.91 33 P P 22 53 16.7 +1.7
baz=277
J30M Hart River 62.97 29 P P 22 53 16.7 +1.3
baz=277
M30M Minto, Yukon 63.02 31 P P 22 53 16.7 +1.0
baz=277
N30M Aishikik Lake 63.02 32 P P 22 53 16.9 +1.1
baz=278
P30M Million Dollar 63.28 34 P P 22 53 18.6 +1.2
baz=278
G31M Satah River 63.52 26 P P 22 53 19.5 +0.8
baz=278
H31M Peel River 63.65 27 P P 22 53 21.1 +1.5
baz=278
PLBC Pleasant Camp 63.68 34 P P 22 53 20.8 +1.0
baz=279
M31M Drury Creek, Y 64.18 31 P P 22 53 23.8 +0.8
baz=280
A36M Sachs Harbour 65.75 20 P P 22 53 34.1 +1.4
baz=284
ARCES ARCESS Array B 72.81 340 P P 22 54 15.6 +0.4
0.6nm,0.7s,baz=76,slow=6.0,SNR=3.7
0.6nm,0.7s
YKA Yellowknife Ar 72.85 28 P P 22 54 15.5 0.0
1.7nm,0.6s,baz=298,slow=6.2,SNR=9.1
1.7nm,0.6s
KBZ Khabaz 76.60 312 P P 22 54 37.0 0.0
1.2nm,0.5s,baz=97,slow=3.1,SNR=4.3
1.2nm,0.5s
FINES FINESS Array B 77.02 333 P P 22 54 38.8 -0.1
0.6nm,0.3s,baz=63,slow=4.9,SNR=23
0.6nm,0.3s
AKASG Malin Array Be 81.44 323 P P 22 55 02.1 -0.5
0.3nm,0.4s,baz=55,slow=5.7,SNR=2.4
0.3nm,0.4s
NVAR Mina Array Bea 81.81 51 P P 22 55 05.6 +0.5
0.4nm,0.5s,baz=310,slow=7.0,SNR=2.2
0.4nm,0.5s

GRAL 16 22:52:03.5±0.4, 35°.98N×40°.56E, h49km±999km, MD4.1, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEIL	**Beino**	**3.86**	**249**	*eP*	Pn	22 52 58.9	-1.4
BEIL				*eS*	Sn	22 53 40.4	-4.0
HWQ	**Hawqa**	**4.14**	**247**	*eP*	Pn	22 53 03.3	-1.1
HWQ				*eS*	Sn	22 53 47.1	-4.5
ZAHL	**Zahle**	**4.38**	**242**	*eP*	Pn	22 53 06.4	-1.3
BHL	**Bhannes**	**4.53**	**244**	*eP*	Pn	22 53 08.2	-1.4
RCY	**Rachaya**	**4.61**	**239**	*eP*	Pn	22 53 09.5	-1.3
RCY				*eS*	Sn	22 53 58.2	-5.0
DQRL	**Deir Qamar**	**4.69**	**242**	*eP*	Pn	22 53 10.4	-1.4
QRWL	**Qaraoun**	**4.69**	**240**	*eP*	Pn	22 53 10.4	-1.4
SHBL	**Chebaa**	**4.76**	**238**	*eP*	Pn	22 53 11.2	-1.6
ASF	**Jabal al Asfar**	**4.87**	**220**	P	Pn	22 53 10.7	-3.5
GEM	**Giv'at Ha'Em**	**4.89**	**237**	P	Pn	22 53 12.7	-1.8
QRNJ	**Al-Qirein** 47nm23μm2μm,0.6s	**5.50**	**230**	P	Pn	22 53 21.7	-1.2
SALP	**Salfit** 0.4nm20nm,1.2s	**5.92**	**230**	P	Pn	22 53 27.4	-1.3
GHAJ	**Ghor Haditha**	**6.25**	**223**	P	Pn	22 53 29.6	-3.6
KZIT	**Kziot**	**7.22**	**227**	P	Pn	22 53 46.2	-0.3

*NOU **16** 22:59:15.3, 20°.41S×177°.70W, h558km, mb4.6/15, Fiji Islands Region*

*NEIC **16** 22:59:16.4±2.1, 20°.8S±0°.1×178°.15W±0°.09, h453km±6km, mb4.5/355, Error ellipse: s-maj=18.5km s-min=10.2km az=153.0*

*IDC **16** 22:59:20.3±1.5, 20°.87S×178°.40W, h496km±14km, mb3.6/15, mbtmp4.5/17, Error ellipse: s-maj=17.3km s-min=12.7km az=130.0*

ISC 16 22:59:19.6±0.3, 20°.94S±0°.06×178°.21W±0°.06, h495km, n830, σ0°93/814, mb4.5/185, 37C-50D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.75**	**348**	P	P	**23 00 27.9**	**-0.7**
MSVF	**Nonsavu**	**4.76**	**311**	P	P	**23 00 44.1**	**-0.1**
	60nm,0.5s,baz=134,slow=6.9,SNR=122						
MSVF				S	S	23 01 36.6	-17
	14nm,0.7s,baz=189,slow=23,SNR=1.3						
MSVF	**Nonsavu**	**4.76**	**311**	P	P	**23 00 44.2**	**-0.1**
MSVF	**Nonsavu**	**4.76**	**311**	P	P	**23 00 42.5**	**-1.9**
NIUE	**Niue**	**8.00**	**78**	P	P	**23 01 13.2**	**-2.7**
NIUE					S	**23 02 50.4**	**-0.9**
NIUE	**Niue**	**8.00**	**78**	P	P	**23 01 14.0**	**-1.9**
NIUE				S	S	**23 02 51.3**	**0.0**
GLKZ	**Green Lake**	**8.29**	**178**	S	S	**23 02 50.7**	**-6.0**
AFI	**Afiamalu**	**9.30**	**42**	P	P	**23 01 25.3**	**-4.4**
	74nm,0.7s,baz=70,slow=3.9,SNR=7.5						
AFI				S	S	23 03 06.7	-10
	23nm,0.5s,baz=276,slow=23,SNR=1.2						
AFI	**Afiamalu**	**9.30**	**42**	P	P	**23 01 25.2**	**-4.5**
MARNC	**Mare, Loyalty**	**12.85**	**265**	P	P	**23 02 07.1**	**-0.1**
MARNC	**Mare, Loyalty**	**12.85**	**265**	P	P	**23 02 06.8**	**-0.4**
YATNC	**Mamie plateau,**	**13.92**	**263**	P	P	**23 02 19.2**	**+0.7**
OUENC	**Ouen Island, N**	**13.98**	**261**	P	P	**23 02 21.1**	**+1.9**
OUENC	**Ouen Island, N**	**13.98**	**261**	P	P	**23 02 19.8**	**+0.7**
DZM	**Mont Dzumac**	**14.33**	**263**	P	P	**23 02 22.5**	**-0.5**
	42nm,0.8s,baz=82,slow=16,SNR=15						
NOUC	**Port Laguerre**	**14.46**	**263**	P	P	**23 02 23.9**	**-0.4**
WCZ	**Waipu Caves**	**16.31**	**202**	P	P	**23 02 44.1**	**+0.6**
KOUNC	**Koumac, New Ca**	**16.38**	**268**	P	P	**23 02 43.0**	**-1.5**
HAZ	**Te Kaha**	**17.12**	**191**	P	P	**23 02 52.0**	**+0.3**
RUGZ	**Raukumara Rang**	**17.34**	**191**	P	P	**23 02 54.1**	**+0.1**
RUGZ				S	S	**23 05 53.2**	**+3.7**
PUZ	**Puketiti**	**17.35**	**189**	P	P	**23 02 54.9**	**+0.9**
PUZ				S	S	**23 05 57.6**	**+8.1**
TOZ	**Tahuroa Road**	**17.60**	**197**	P	P	**23 02 56.9**	**+0.5**
TOZ	**Tahuroa Road**	**17.60**	**197**	P	P	**23 02 57.0**	**+0.7**
MWZ	**Matawai**	**17.73**	**191**	P	P	**23 02 57.3**	**-0.3**
MWZ				S	S	**23 06 03.2**	**+7.5**
URZ	**Urewera**	**17.73**	**192**	P	P	**23 02 55.3**	**-2.2**
	24nm,0.6s,baz=294,slow=2.9,SNR=17						
URZ				S	S	**23 05 48.7**	**-6.9**
	30nm,1.2s,baz=164,slow=8.0,SNR=2.4						
URZ	**Urewera**	**17.73**	**192**	P	P	**23 02 55.5**	**-2.0**
URZ	**Urewera**	**17.73**	**192**	S	S	**23 05 56.9**	**+1.3**
URZ	**Urewera**	**17.73**	**192**	P	P	**23 02 55.4**	**-2.2**
URZ				S	S	23 06 06.8	+11
SNGZ	**Shannon Statio**	**18.20**	**191**	P	P	**23 03 02.0**	**+0.1**
SNGZ				S	S	23 06 16.9	+14
RAHZ	**Arahi**	**18.37**	**192**	P	P	**23 03 01.7**	**-1.8**
HIZ	**Hauiti**	**18.51**	**197**	P	P	**23 03 05.3**	**+0.6**
ETVZ	**East Tongariro**	**18.88**	**195**	P	P	**23 03 06.6**	**-1.6**
OTVZ	**Oturere**	**18.92**	**195**	P	P	**23 03 07.1**	**-1.5**
VRZ	**Vera Road**	**19.11**	**197**	P	P	**23 03 10.2**	**0.0**
BFZ	**Birch Farm**	**20.24**	**192**	P	P	**23 03 17.9**	**-2.6**
BFZ	**Birch Farm**	**20.24**	**192**	S	S	**23 06 34.9**	**-1.4**
BFZ	**Birch Farm**	**20.24**	**192**	P	P	**23 03 18.9**	**-1.6**
SNZO	**South Karori**	**21.18**	**195**	P	P	**23 03 28.3**	**-0.7**
QRZ	**Quartz Range**	**21.34**	**200**	P	P	**23 03 29.7**	**-0.7**
QRZ	**Quartz Range**	**21.34**	**200**	P	P	**23 03 30.1**	**-0.3**
NNZ	**Nelson**	**21.44**	**198**	P	P	**23 03 30.2**	**-1.2**
THZ	**Tophouse**	**22.08**	**198**	P	P	**23 03 36.2**	**-1.0**
THZ	**Tophouse**	**22.08**	**198**	P	P	**23 03 36.2**	**-1.0**
DSZ	**Denniston Nort**	**22.40**	**200**	P	P	**23 03 39.1**	**-0.9**
KHZ	**Kahutara**	**22.52**	**196**	P	P	**23 03 38.7**	**-2.3**
KHZ	**Kahutara**	**22.52**	**196**	P	P	**23 03 40.2**	**-0.8**
KHZ	**Kahutara**	**22.52**	**196**	P	P	**23 03 39.5**	**-1.5**
GVZ	**Greta Valley S**	**23.16**	**197**	P	P	**23 03 46.4**	**-0.5**
LTZ	**Lake Taylor**	**23.20**	**198**	P	P	**23 03 44.3**	**-2.9**
OXZ	**Oxford**	**23.77**	**198**	P	P	**23 03 51.9**	**-0.3**
WVZ	**Waitaha Valley**	**23.94**	**200**	P	P	**23 03 52.3**	**-1.4**
MQZ	**McQueen's Vall**	**23.95**	**196**	P	P	**23 03 52.8**	**-1.0**
JCZ	**Jackson Bay**	**25.48**	**202**	P	P	**23 04 04.3**	**-3.2**
JCZ	**Jackson Bay**	**25.48**	**202**	P	P	**23 04 06.0**	**-1.6**
MLZ	**Mavora Lakes**	**26.84**	**202**	P	P	**23 04 18.8**	**-0.7**
WHZ	**Wether Hill Ro**	**27.36**	**201**	P	P	**23 04 24.8**	**+0.8**
EIDS	**Eidsvold**	**28.55**	**255**	P	P	**23 04 33.9**	**-0.8**
EIDS				IAmb	IAmb	23 04 49.5	
	comp=Z,19nm,1.4s						
ARMA	**Armidale**	**28.71**	**245**	P	P	**23 04 35.4**	**-0.8**
ARMA				IAmb	IAmb	23 05 08.7	
	comp=Z,35nm,1.4s						
XMAS	**Kiritimati**	**30.58**	**44**	P	P	**23 04 52.3**	**-0.1**
CTA	**Charters Tower**	**33.26**	**265**	P	P	**23 05 13.6**	**-1.8**
	comp=Z,3.7nm,0.6s,baz=149,slow=11,SNR=5.3						
	comp=Z,3.7nm,0.6s						
TOO	**Toolangi**	**35.49**	**234**		P	**23 05 33.7**	**-0.1**
COEN	**Coen**	**37.42**	**274**	P	P	**23 05 48.2**	**-1.9**
STKA	**Stephens Creek**	**37.43**	**245**	P	P	**23 05 48.5**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=73,slow=11,SNR=4.7						
STKA				PcP	PcP	**23 07 56.3**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=133,slow=4.4,SNR=3.7						
	comp=Z,2.7nm,0.8s						
BBOO	**Buckleboo**	**42.18**	**244**	P	P	**23 06 28.9**	**+0.6**
BBOO				IAmb	IAmb	23 06 48.5	
	comp=Z,16nm,1.2s						
WR8	**Warramunga Arr**	**44.20**	**263**	P	P	**23 06 43.5**	**-0.8**
ASAR	**Alice Springs**	**44.23**	**257**	P	P	**23 06 43.7**	**-0.8**
	comp=Z,5.9nm,0.8s,baz=85,slow=8.6,SNR=43						
ASAR				PcP	PcP	**23 08 19.1**	**+0.6**
	comp=Z,5.0nm,0.6s,baz=105,slow=3.7,SNR=27						
ASAR				ScS	ScS	23 15 48.8	+0.8
	comp=Z,0.6nm,0.8s,baz=110,slow=6.7,SNR=4.7						
	comp=Z,5.9nm,0.8s						
WB0	**Warramunga Arr**	**44.33**	**263**	P	P	**23 06 44.2**	**-1.0**
WB2	**Warramunga Arr**	**44.34**	**263**	P	P	**23 06 44.1**	**-1.2**
WRA	**Warramunga Arr**	**44.35**	**263**	P	P	**23 06 44.4**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=95,slow=8.1,SNR=31						
WRA				PcP	PcP	**23 08 19.7**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=99,slow=3.5,SNR=6.3						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**44.35**	**263**	P	P	**23 06 44.2**	**-1.2**
VNDA	**Vanda**	**57.46**	**185**	P	P	**23 08 21.6**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=355,slow=7.6,SNR=5.5						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**57.46**	**185**	IAmb	IAmb	23 08 24.1	
	comp=Z,2.7nm,1.2s						
QSPA	**South Pole Qui**	**69.14**	**180**	P	P	**23 09 36.9**	**+1.5**
	comp=Z,2.0nm,0.7s,baz=77,slow=0.8,SNR=7.4						
	comp=Z,2.0nm,0.7s						
QSPA	**South Pole Qui**	**69.14**	**180**	P	P	**23 09 36.9**	**+1.5**
MJAR	**Matsushiro Arr**	**70.44**	**324**	P	P	**23 09 43.3**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=154,slow=6.0,SNR=6.3						
	comp=Z,2.2nm,0.6s						
MJAR	**Matsushiro Arr**	**70.44**	**324**	IAmb	IAmb	23 09 44.1	
	comp=Z,2.5nm,0.8s						
ADK	**Adak**	**72.52**	**1**	P	P	**23 09 55.2**	**0.0**
UNV	**Unalaska Valle**	**75.15**	**7**	P	P	**23 10 09.8**	**-0.4**
	baz=191						
PETK	**Petropavlovsk-**	**76.64**	**345**	P	P	**23 10 18.9**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=125,slow=7.0,SNR=9.4						
	comp=Z,2.9nm,0.6s						
KSRS	**Korea Array**	**77.08**	**319**	P	P	**23 10 21.9**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=134,slow=6.0,SNR=7.7						
	comp=Z,1.5nm,0.7s						
CNBA	**Chernabura Isl**	**77.12**	**11**	P	P	**23 10 20.4**	**-0.7**
CHNA	**Chernabura Isl**	**77.13**	**11**	P	P	**23 10 20.9**	**-0.2**
	baz=198						
SDPT	**Sand Point**	**77.47**	**10**	P	P	**23 10 22.9**	**-0.1**
SDPT	**Sand Point**	**77.47**	**10**	P	P	**23 10 22.9**	**-0.1**
	baz=197						
SPIA	**Saint Paul Isl**	**78.10**	**4**	P	P	**23 10 27.1**	**+0.8**
	baz=188						
S14K	**Fog Glacier**	**78.52**	**10**	P	P	**23 10 29.1**	**+0.3**
	baz=198,SNR=5.0						
VNFG	**Fog Glacier, M**	**78.52**	**10**	P	P	**23 10 29.5**	**+0.8**
MHC	**Mount Hamilton**	**78.70**	**43**	P	P	**23 10 31.8**	**+1.6**
MHC				IAmb	IAmb	23 10 33.1	
	comp=Z,8.2nm,0.8s						
CHGN	**Chignik**	**78.73**	**11**		P	**23 10 29.3**	**-0.4**
CHIR	**Chirikof Islan**	**78.82**	**13**	P	P	**23 10 30.8**	**+0.6**
CHIR	**Chirikof Islan**	**78.82**	**13**	P	P	**23 10 30.8**	**+0.6**
	baz=201						
CBX	**Cerro Bola**	**79.15**	**49**	P	P	**23 10 33.0**	**+0.2**
CBX				IAmb	IAmb	23 10 40.7	
	comp=Z,15nm,1.1s						
MWC	**Mount Wilson**	**79.24**	**47**	P	P	**23 10 33.4**	**+0.1**
MWC				IAmb	IAmb	23 10 35.1	
	comp=Z,7.5nm,0.8s						
DPP	**Dos Picos Cty**	**79.33**	**49**	P	P	**23 10 34.4**	**+0.8**
DPP				IAmb	IAmb	23 10 35.9	
	comp=Z,8.2nm,0.8s						
VES	**Vestal, Richgr**	**79.47**	**45**	P	P	**23 10 35.0**	**+0.8**
VES				IAmb	IAmb	23 10 37.2	
	comp=Z,33nm,1.5s						
ESJX	**Sierra Juarez**	**79.49**	**50**	P	P	**23 10 35.6**	**+1.0**
ESJX				IAmb	IAmb	23 11 12.2	
	comp=Z,7.9nm,0.5s						
TPO	**Tropico Hills**	**79.50**	**46**	P	P	**23 10 35.2**	**+0.8**
TPO				IAmb	IAmb	23 10 37.1	
	comp=Z,10nm,0.9s						
BFSC	**Mount Baldy Ra**	**79.52**	**47**	P	P	**23 10 35.9**	**+1.2**
KHMM	**Horse Mountain**	**79.61**	**39**	P	P	**23 10 35.6**	**+0.6**
O02D	**Mt. Diablo Mer**	**79.73**	**40**		P	**23 10 36.7**	**+1.1**
O02D				IAmb	IAmb	23 10 38.9	
	comp=Z,14nm,0.8s						
SUTB	**Sutter Butte**	**79.76**	**41**	P	P	**23 10 35.5**	**-0.2**
SUTB				IAmb	IAmb	23 10 38.9	
	comp=Z,5.5nm,0.5s						
ISA	**Isabella, Lake**	**79.78**	**46**	P	P	**23 10 37.3**	**+1.3**
SII	**Sitkinak Islan**	**79.81**	**13**		P	**23 10 35.5**	**0.0**
SII	**Sitkinak Islan**	**79.81**	**13**	P	P	**23 10 36.2**	**+0.7**
	baz=203,SNR=5.5						
BORC	**Borrego Spring**	**79.85**	**49**	P	P	**23 10 36.7**	**+0.4**
BORC				IAmb	IAmb	23 10 38.9	
	comp=Z,9.9nm,1.1s						
CMB	**Columbia Colle**	**79.91**	**43**		P	**23 10 37.7**	**+1.2**
PFO	**Pinyon Flats O**	**80.00**	**48**	P	P	**23 10 37.1**	**-0.1**
PMD	**Palm Desert**	**80.08**	**48**	P	P	**23 10 37.7**	**+0.2**
AFDM	**Forest Hills D**	**80.09**	**42**	P	P	**23 10 37.1**	**-0.4**
ORV	**Oroville**	**80.13**	**41**	P	P	**23 10 38.4**	**+0.8**
ORV				IAmb	IAmb	23 10 40.0	
	comp=Z,7.2nm,0.8s						
LRMC	**Laurel Mtn Rad**	**80.20**	**46**	P	P	**23 10 38.9**	**+0.6**
R17L	**Mt. Peulik Vol**	**80.37**	**12**	P	P	**23 10 39.0**	**+0.6**
	baz=201,SNR=24						
O03E	**Paynes Creek**	**80.40**	**40**		P	**23 10 39.8**	**+0.7**
O03E				IAmb	IAmb	23 10 42.4	
	comp=Z,13nm,1.0s						
CCCA	**Chr Cany lake**	**80.44**	**46**	P	P	**23 10 41.3**	**+1.9**
M02C	**Callahan**	**80.45**	**39**	P	P	**23 10 40.6**	**+1.2**
M02C				IAmb	IAmb	23 10 42.6	
	comp=Z,11nm,0.8s						
CWC	**Cottonwood Cre**	**80.48**	**45**	P	P	**23 10 40.7**	**+1.0**
MDPB	**Devils Postpil**	**80.51**	**44**		P	**23 10 41.4**	**+1.4**
BELC	**Belle Mtn. Jos**	**80.54**	**48**	P	P	**23 10 40.6**	**+0.5**
OHAK	**Old Harbor**	**80.61**	**13**	P	P	**23 10 39.8**	**+0.2**
OHAK				IAmb	IAmb	23 10 41.2	
	comp=Z,34nm,1.4s						
OHAK	**Old Harbor**	**80.61**	**13**	P	P	**23 10 40.3**	**+0.7**
	baz=204,SNR=5.7						
MPMC	**Manual Prospec**	**80.66**	**46**		P	**23 10 40.8**	**+0.1**
GSC	**Goldstone, Bar**	**80.70**	**47**	P	P	**23 10 40.4**	**-0.4**
BC3	**Big Chuckawall**	**80.73**	**49**	P	P	**23 10 41.7**	**+0.7**
YBH	**Yreka Blue Hor**	**80.75**	**39**		P	**23 10 42.4**	**+1.5**
YBH				IAmb	IAmb	23 10 43.9	
	comp=Z,11nm,0.8s						
WAKR	**Walker**	**80.79**	**43**		P	**23 10 42.3**	**+1.0**
WAKR				IAmb	IAmb	23 10 44.2	
	comp=Z,16nm,1.2s						
M03C	**McCloud**	**80.81**	**39**		P	**23 10 42.1**	**+0.8**
M03C				IAmb	IAmb	23 10 43.9	
	comp=Z,23nm,0.9s						
GLA	**Glamis**	**80.85**	**50**	P	P	**23 10 41.6**	**0.0**
GLA				IAmb	IAmb	23 10 44.8	
	comp=Z,13nm,1.1s						
BEKR	**Beckworth**	**81.02**	**41**		P	**23 10 43.3**	**+0.8**
QSM	**Queen of Sheba**	**81.02**	**46**	P	P	**23 10 43.1**	**+0.8**
PNTR	**Pine Nut**	**81.03**	**42**	P	P	**23 10 43.7**	**+1.1**
PNTR				IAmb	IAmb	23 10 45.3	
	comp=Z,17nm,0.9s						
Q17K	**Contact Creek**	**81.05**	**12**	P	P	**23 10 42.3**	**+0.2**
	baz=201						
PIX	**Pinacate**	**81.06**	**51**	P	P	**23 10 43.0**	**+0.4**
PIX				IAmb	IAmb	23 10 45.1	
	comp=Z,14nm,1.0s						
DSP	**Deep Springs**	**81.08**	**44**	P	P	**23 10 43.8**	**+1.3**
DSP				IAmb	IAmb	23 10 45.5	
	comp=Z,9.7nm,1.3s						
O14K	**Tigyukauivet M**	**81.10**	**9**		P	**23 10 42.3**	**+0.2**
O14K				IAmb	IAmb	23 10 43.0	
	comp=Z,8.5nm,0.8s						
O14K	**Tigyukauivet M**	**81.10**	**9**	P	P	**23 10 42.4**	**+0.2**
	baz=196						
ACHA	**Angle Creek He**	**81.11**	**12**	P	P	**23 10 42.2**	**-0.2**
ACHA				IAmb	IAmb	23 10 43.5	
	comp=Z,6.3nm,0.7s						
IRM	**Iron Mountain**	**81.22**	**48**		P	**23 10 44.5**	**+1.1**
LHV	**Little Huntoon**	**81.24**	**43**	P	P	**23 10 44.4**	**+1.0**
LHV				IAmb	IAmb	23 10 46.4	
	comp=Z,11nm,1.1s						
O15K	**Ungalikthiuk R**	**81.24**	**9**		P	**23 10 42.9**	**0.0**
O15K				IAmb	IAmb	23 10 45.2	
	comp=Z,9.0nm,0.9s						
O15K	**Ungalikthiuk R**	**81.24**	**9**	P	P	**23 10 42.9**	**0.0**
	baz=197,SNR=6.7						
GWY	**Greenwater Val**	**81.28**	**46**	P	P	**23 10 43.9**	**0.0**
KDAK	**Kodiak Island**	**81.28**	**14**		P	**23 10 43.7**	**+0.6**
KDAK				IAmb	IAmb	23 10 45.7	
	comp=Z,14nm,0.9s						
KDAK	**Kodiak Island**	**81.28**	**14**	P	P	**23 10 43.8**	**+0.6**
	baz=204						
L04D	**Klamath Falls**	**81.29**	**38**		P	**23 10 45.5**	**+1.7**
L04D				IAmb	IAmb	23 10 46.4	
	comp=Z,21nm,0.9s						
Q16K	**King Salmon**	**81.30**	**11**	P	P	**23 10 43.8**	**+0.6**
	baz=200						
P16K	**Nushagak River**	**81.40**	**10**	P	P	**23 10 43.8**	**+0.1**
P16K	**Nushagak River**	**81.40**	**10**	P	P	**23 10 44.0**	**+0.3**
	baz=199,SNR=11						
BLYC	**Blythe**	**81.44**	**49**	P	P	**23 10 45.8**	**+1.3**
113A	**Mohawk Valley,**	**81.46**	**50**		P	**23 10 45.1**	**+0.4**
NVAR	**Mina Array Bea**	**81.47**	**43**	P	P	**23 10 46.5**	**+1.6**
	comp=Z,4.1nm,0.8s,baz=224,slow=9.4,SNR=9.1						
	comp=Z,4.1nm,0.8s						
NVAR	**Mina Array Bea**	**81.47**	**43**	P	P	**23 10 45.9**	**+1.0**
GMN	**Gold Mountain**	**81.51**	**45**	P	P	**23 10 45.9**	**+0.8**
PAHR	**Pah Rah Range**	**81.53**	**42**		P	**23 10 45.5**	**+0.4**
PAHR				IAmb	IAmb	23 10 47.5	
	comp=Z,7.7nm,1.0s						
NV11	**Mina Array Sit**	**81.57**	**43**	P	P	**23 10 45.7**	**+0.4**
Q18K	**Katmai Hardscr**	**81.58**	**12**	P	P	**23 10 45.1**	**+0.3**
	baz=202,SNR=46						
WCT	**Wildcat Mounta**	**81.65**	**46**	P	P	**23 10 46.6**	**+1.0**
MTPC	**Mountain Pass**	**81.65**	**47**	P	P	**23 10 47.0**	**+1.2**
HSIG		**81.66**	**55**	P	P	**23 10 46.7**	**+1.0**
HSIG				IAmb	IAmb	23 10 48.1	
	comp=Z,7.0nm,0.9s						
N14K	**Kuskokwak Cree**	**81.69**	**8**		P	**23 10 45.9**	**+0.7**
N14K	**Kuskokwak Cree**	**81.69**	**8**	P	P	**23 10 46.2**	**+1.1**
	baz=196,SNR=23						
P17K	**Kvichak River**	**81.82**	**11**	P	P	**23 10 45.6**	**-0

O17K **Koliganek Bris** 82.25 11 P P 23 10 48.2 +0.1
baz=200,SNR=12
K05A **Summer Lake** 82.42 39 P 23 10 50.8 +1.1
K05A IAmb IAmb 23 10 52.5
comp=Z,20nm,0.9s
M14K **Bethel** 82.45 8 P 23 10 49.8 +0.7
M14K **Bethel** 82.45 8 P P 23 10 50.2 +1.2
baz=195,SNR=10
J05D **Fort Rock, OR** 82.57 38 P P 23 10 51.2 +1.0
M15K **Kasigluk River** 82.57 9 P P 23 10 50.8 +1.2
baz=196,SNR=33
W13A **Hualapai Mount** 82.60 48 P P 23 10 50.8 0.0
Y14A **Wickenburg** 82.61 50 P 23 10 51.4 +0.8
Y14A IAmb IAmb 23 10 53.3
comp=Z,8.1nm,1.1s
N16K **Nishlik Lake** 82.64 10 P P 23 10 51.4 +1.3
baz=198,SNR=26
O18K **Koktuh Hills** 82.67 11 P 23 10 50.1 0.0
O18K **Koktuh Hills** 82.67 11 P P 23 10 50.7 +0.5
baz=202,SNR=21
S11A **Rachel** 82.70 45 P P 23 10 51.5 +0.4
S11A IAmb IAmb 23 10 53.3
comp=Z,13nm,0.9s
WIFE **Three Sisters-** 82.71 37 P 23 10 51.8 +0.8
WIFE IAmb IAmb 23 10 53.7
comp=Z,13nm,0.8s
P19K **Oil Pt** 82.86 12 P P 23 10 51.5 +0.3
baz=203
H04A **Detroit Lake** 82.89 37 P 23 10 52.2 +0.5
H04A IAmb IAmb 23 10 53.9
comp=Z,12nm,0.9s
L14K **Kuka Creek** 82.94 7 P 23 10 52.6 +1.1
L14K **Kuka Creek** 82.94 7 P P 23 10 52.5 +1.0
baz=195,SNR=12
N17K **Nushagak Hills** 82.95 10 P 23 10 51.7 +0.1
N17K IAmb IAmb 23 10 53.0
comp=Z,7.2nm,0.9s
N17K **Nushagak Hills** 82.95 10 P P 23 10 52.0 +0.5
baz=200,SNR=5.7
PRN **Pahroc Range** 83.03 46 P 23 10 53.5 +0.8
PRN IAmb IAmb 23 10 55.6
comp=Z,11nm,1.0s
PINE **Pine Mountain** 83.05 38 P 23 10 53.6 +0.9
G04A **Mulino** 83.06 36 P P 23 10 53.2 +0.7
M16K **Timber Creek** 83.14 9 P 23 10 53.6 +1.1
M16K **Timber Creek** 83.14 9 P P 23 10 54.2 +1.7
baz=198,SNR=27
O19K **Port Alsworth** 83.15 12 P P 23 10 52.9 +0.4
baz=202
CNPM **China Poot** 83.17 13 P 23 10 53.3 +0.6
ILSW **Iliamna Southw** 83.19 12 P P 23 10 53.1 +0.2
K13K **Kusilvak Mount** 83.29 6 P P 23 10 53.6 +0.3
K13K IAmb IAmb 23 10 55.5
comp=Z,17nm,0.8s
K13K **Kusilvak Mount** 83.29 6 P P 23 10 54.5 +1.3
baz=193,SNR=10
BMN **Battle Mountai** 83.30 42 P 23 10 54.5 +0.5
BMN IAmb IAmb 23 10 56.4
comp=Z,8.6nm,1.0s
N18K **Kilae Creek** 83.31 11 P 23 10 53.4 0.0
N18K IAmb IAmb 23 10 54.1
comp=Z,6.0nm,0.7s
N18K **Kilae Creek** 83.31 11 P P 23 10 53.6 +0.2
baz=201,SNR=6.5
E03A **Lebam** 83.32 35 P 23 10 54.5 +0.8
O20K **Slope Mountain** 83.38 13 P P 23 10 54.0 +0.1
baz=204
TUC **Tucson** 83.40 52 P 23 10 55.0 +0.4
TUC IAmb IAmb 23 10 58.0
comp=Z,7.0nm,1.0s
L15K **Ungalak Mounta** 83.41 8 P P 23 10 54.6 +0.7
baz=196,SNR=19
BRLK **Bradley Lake** 83.46 14 P P 23 10 53.9 -0.3
BRSE **Bradley Lake S** 83.47 14 P P 23 10 54.8 +0.6
baz=206
WVOR **Wild Horse Val** 83.59 40 P P 23 10 56.0 +0.6
WVOR IAmb IAmb 23 10 58.0
comp=Z,8.6nm,1.1s
RED **Redoubt Volcan** 83.66 12 P P 23 10 54.9 -0.4
N19K **Bonanza Creek** 83.69 11 P 23 10 55.1 -0.4
N19K IAmb IAmb 23 10 56.1
comp=Z,17nm,0.9s
N19K **Bonanza Creek** 83.69 11 P P 23 10 55.2 -0.2
baz=202,SNR=12
NLWA **Neilton Lookou** 83.70 34 P P 23 10 55.8 +0.1
NLWA IAmb IAmb 23 10 58.6
comp=Z,13nm,1.1s
L16K **Owhat River** 83.72 9 P 23 10 56.3 +0.9
L16K IAmb IAmb 23 10 57.7
comp=Z,16nm,1.1s
L16K **Owhat River** 83.72 9 P P 23 10 56.4 +1.0
baz=198,SNR=10
M17K **Holitna River** 83.73 10 P 23 10 56.2 +0.7
M17K **Holitna River** 83.73 10 P P 23 10 57.1 +1.6
baz=199,SNR=19
X16A **Lo Mia Camp, P** 83.97 50 P 23 10 58.3 +0.7
X16A IAmb IAmb 23 11 00.6
comp=Z,6.5nm,1.1s
K15K **Wolf Creek Mou** 84.00 8 P 23 10 58.0 +1.2
K15K **Wolf Creek Mou** 84.00 8 P P 23 10 58.1 +1.4
baz=196,SNR=16
LCMT **Little Creek M** 84.05 47 P P 23 10 58.4 +0.6
I07A **Izee** 84.05 38 P 23 10 58.3 +0.7
I07A IAmb IAmb 23 11 00.4
comp=Z,8.6nm,0.9s
319A **Douglas** 84.06 53 P P 23 10 58.6 +0.6
319A IAmb IAmb 23 11 01.3
comp=Z,13nm,1.0s
SEW **Seward** 84.08 14 P P 23 10 57.4 +0.2
M18K **Stony River** 84.09 11 P P 23 10 57.9 +0.7
baz=201,SNR=9.7
J14K **Nanvaranak Lak** 84.21 7 P P 23 10 58.7 +1.0
J14K IAmb IAmb 23 10 59.6
comp=Z,5.7nm,0.9s
J14K **Nanvaranak Lak** 84.21 7 P P 23 10 58.5 +0.8
baz=194
J08A **Circle Bar Ran** 84.22 39 P P 23 10 59.3 +0.8
J08A IAmb IAmb 23 11 01.2
comp=Z,9.4nm,1.2s
CCUT **Cedar City** 84.25 46 P 23 10 59.4 +0.5
SLKM **Skilak Lake** 84.27 13 P P 23 10 58.3 +0.1
L17K **Donlin** 84.30 9 P P 23 10 59.8 +1.6
baz=199,SNR=8.6
KNB **Kanab** 84.33 47 P P 23 10 59.0 -0.3
GNW **Green Mountain** 84.36 34 P P 23 10 59.3 +0.5
GNW IAmb IAmb 23 11 01.4
comp=Z,9.0nm,0.9s
LON **Longmire** 84.39 35 P P 23 10 59.3 +0.2
U15A **North Rim** 84.40 48 P 23 11 00.2 +0.4
U15A IAmb IAmb 23 11 02.6
comp=Z,9.1nm,0.9s
PSUT **Pine Spring** 84.44 45 P 23 11 00.1 +0.3
SPCR **Spurr Chakacha** 84.49 12 P P 23 10 59.1 -0.3
baz=204
SPU **Mount Spurr** 84.50 12 P P 23 10 58.8 -0.6
SPU IAmb IAmb 23 10 59.8
comp=Z,9.4nm,0.8s
D05A **Enumclaw** 84.56 35 P P 23 11 00.3 +0.4
GAMB **Gambell** 84.58 3 P P 23 11 00.3 +0.8
GAMB IAmb IAmb 23 11 01.7
comp=Z,14nm,0.9s
GAMB **Gambell** 84.58 3 P P 23 11 00.6 +1.1
baz=186
L18K **Granite Mounta** 84.63 10 P 23 11 00.6 +0.7
L18K IAmb IAmb 23 11 02.1
comp=Z,14nm,0.8s
L18K **Granite Mounta** 84.63 10 P P 23 11 00.8 +0.9
baz=200,SNR=16
M19K **Big River Lodg** 84.72 11 P P 23 11 00.4 +0.1
M19K IAmb IAmb 23 11 01.4
comp=Z,13nm,0.6s
M19K **Big River Lodg** 84.72 11 P P 23 11 00.6 +0.2
baz=202
ELK **Elko** 84.73 43 P P 23 11 01.7 +0.5
DUN6 **Lazy B Ranch** 84.77 52 P P 23 11 02.2 +0.8
STLK **Strandline Lak** 84.84 12 P P 23 11 00.1 -0.9
STLK IAmb IAmb 23 11 01.2
comp=Z,12nm,0.7s
K17K **Iditarod** 84.85 9 P 23 11 02.2 +1.3
K17K IAmb IAmb 23 11 03.0
comp=Z,6.0nm,0.9s
K17K **Iditarod** 84.85 9 P P 23 11 02.0 +1.1
baz=199
L19K **White Mountain** 84.90 11 P P 23 11 01.7 +0.4
L19K IAmb IAmb 23 11 03.0
comp=Z,18nm,1.0s
L19K **White Mountain** 84.90 11 P P 23 11 01.9 +0.6
baz=202,SNR=15
RC01 **Rabbit Creek A** 84.90 13 P 23 11 01.7 +0.4
RC01 **Rabbit Creek A** 84.90 13 P P 23 11 01.6 +0.4
baz=206
PKCU **Pink Cliffs** 84.91 47 P P 23 11 02.5 +0.3
PKCU IAmb IAmb 23 11 14.0
comp=Z,9.7nm,0.8s
M20K **Styx River** 84.94 12 P P 23 11 00.9 -0.6
M20K IAmb IAmb 23 11 02.1
comp=Z,10nm,1.4s
M20K **Styx River** 84.94 12 P P 23 11 01.6 +0.1
baz=203
PWL **Port Wells** 85.01 14 P P 23 11 01.5 -0.3
PWL **Port Wells** 85.01 14 P P 23 11 01.8 0.0
baz=208
J16K **Anvik River** 85.08 8 P 23 11 02.6 +0.6
J16K IAmb IAmb 23 11 04.9
comp=Z,7.2nm,0.7s
J16K **Anvik River** 85.08 8 P P 23 11 03.0 +1.0
baz=196,SNR=9.8
G08A **Pilot Rock** 85.08 38 P 23 11 02.4 -0.3
G08A IAmb IAmb 23 11 05.2
comp=Z,8.7nm,1.0s
X18A **Snowflake** 85.10 50 P P 23 11 03.3 +0.2
MXC **Moxie City** 85.10 36 P P 23 11 02.4 -0.2
MXC IAmb IAmb 23 11 05.1
comp=Z,8.6nm,1.2s
KAIM **Kayak Island** 85.16 16 P P 23 11 03.0 +0.5
KAIM **Kayak Island** 85.16 16 P P 23 11 03.4 +0.9
baz=211
MTPU **Mount Pierson** 85.30 46 P 23 11 03.2 -1.0
LTY **Liberty** 85.31 35 P P 23 11 03.1 -0.6
LTY IAmb IAmb 23 11 13.4
comp=Z,12nm,1.4s
GLI **Glacier Island** 85.32 15 P P 23 11 03.4 +0.2
baz=209
SKT **Skwentna** 85.33 12 P P 23 11 02.5 -0.9
SKT **Skwentna** 85.33 12 P P 23 11 03.2 -0.2
baz=205
EYAK **Cordova Ski Ar** 85.36 15 P P 23 11 03.6 +0.2
baz=210
J17K **VABM Dome** 85.39 9 P 23 11 04.0 +0.4
J17K IAmb IAmb 23 11 06.2
comp=Z,11nm,1.2s
J17K **VABM Dome** 85.39 9 P P 23 11 04.6 +1.0
baz=198,SNR=6.5
HAWA **Hanford** 85.41 36 P 23 11 04.4 +0.3
HAWA IAmb IAmb 23 11 06.8
comp=Z,14nm,1.1s
M22K **Willow** 85.42 13 P P 23 11 03.5 -0.1
M22K **Willow** 85.42 13 P P 23 11 03.9 +0.3
baz=206
KNK **Knik Glacier** 85.47 14 P P 23 11 03.7 -0.4
KNK **Knik Glacier** 85.47 14 P P 23 11 04.5 +0.4
baz=208
PMR **Palmer** 85.48 13 P P 23 11 03.3 -0.7
PMR **Palmer** 85.48 13 P P 23 11 04.3 +0.3
baz=207
GHO **Glory Hole Cre** 85.69 13 P P 23 11 05.3 +0.2
121A **Cookes Peak, D** 85.73 53 P P 23 11 06.9 +0.7
E08A **Dider Farm, El** 85.73 36 P P 23 11 06.7 +1.1
E08A IAmb IAmb 23 11 08.1
comp=Z,11nm,1.0s
BERG **Berg Lake** 85.75 16 P P 23 11 05.6 +0.2
BMO **Blue Mountains** 85.78 39 P P 23 11 06.6 +0.6
J18K **Innoko River** 85.80 9 P P 23 11 06.0 +0.5
J18K IAmb IAmb 23 11 07.3
comp=Z,15nm,1.2s
J18K **Innoko River** 85.80 9 P P 23 11 06.2 +0.6
baz=200,SNR=13
ANM **Nome** 85.80 6 P P 23 11 06.9 +1.4
ANM IAmb IAmb 23 11 08.5
comp=Z,15nm,1.1s
ANM **Nome** 85.80 6 P P 23 11 06.7 +1.2
baz=192
LNOR **Lincton Mounta** 85.80 37 P P 23 11 06.1 0.0
MFID **Camas Ranch** 85.84 40 P P 23 11 06.7 +0.4
SML **Sawmill** 85.85 14 P P 23 11 06.4 +0.5
SML IAmb IAmb 23 11 20.5
comp=Z,8.3nm,0.9s
SML **Sawmill** 85.85 14 P P 23 11 06.0 +0.1
baz=208
DIV **Divide** 85.85 15 P P 23 11 06.4 +0.4
EPH **Ephrata** 85.95 36 P 23 11 07.2 +0.5
EPH IAmb IAmb 23 11 09.0
comp=Z,9.4nm,1.0s
M23K **Glacier View** 85.97 14 P P 23 11 06.6 +0.2
baz=208
L22K **Petersville** 85.98 12 P P 23 11 06.0 -0.5
L22K IAmb IAmb 23 11 07.1
comp=Z,18nm,0.9s
L22K **Petersville** 85.98 12 P P 23 11 06.1 -0.4
baz=206,SNR=15
DUG **Dugway, Tooele** 86.00 44 P P 23 11 08.4 +1.1
BMRM **Bremner River** 86.00 16 P P 23 11 07.1 +0.5
BMRM **Bremner River** 86.00 16 P P 23 11 07.2 +0.5
baz=211,SNR=5.9
PPLA **Purkeypile** 86.04 12 P P 23 11 06.8 -0.1
PPLA **Purkeypile** 86.04 12 P P 23 11 06.3 -0.6
baz=204
SCM **Sheep Creek Mo** 86.10 14 P P 23 11 07.6 +0.4
SCM **Sheep Creek Mo** 86.10 14 P P 23 11 07.6 +0.4
baz=209,SNR=15
K20K **Telida** 86.13 11 P 23 11 07.3 +0.2
K20K IAmb IAmb 23 11 08.7
comp=Z,23nm,1.3s
K20K **Telida** 86.13 11 P P 23 11 07.5 +0.4
baz=202,SNR=15
KLU **Klutina** 86.13 15 P P 23 11 07.5 +0.2
KLU IAmb IAmb 23 11 08.7
comp=Z,11nm,1.0s
KLU **Klutina** 86.13 15 P P 23 11 07.7 +0.5
baz=210,SNR=5.7
D08A **Wollman Farm,** 86.15 36 P 23 11 08.4 +0.8
D08A IAmb IAmb 23 11 10.1
comp=Z,9.1nm,0.9s
H16K **Elim** 86.19 7 P P 23 11 07.9 +0.5
baz=195
ELIB **Princess Elisa** 86.19 187 dP P 23 11 07.8 +0.2
comp=Z,1.6nm,0.9s
CRQM **Cirque** 86.20 16 P P 23 11 08.4 +0.6
CRQM IAmb IAmb 23 11 09.4
comp=Z,17nm,1.1s
CRQE **Cirque** 86.21 16 P P 23 11 08.0 +0.2
baz=213
HMU **Henry Mountain** 86.23 47 P P 23 11 08.0 -0.6
E09A **Wood Farm, Sta** 86.26 37 P P 23 11 09.0 +0.9
E09A IAmb IAmb 23 11 10.9
comp=Z,14nm,1.2s
TGL **Tana Glacier** 86.28 17 P P 23 11 07.8 -0.3
TGL IAmb IAmb 23 11 09.8
comp=Z,18nm,1.0s
G15K **Niukluk** 86.35 6 P P 23 11 08.6 +0.5
baz=193,SNR=6.1
Q16A **Castle Valley** 86.43 46 P P 23 11 09.9 +0.5
PCA **Pinnacle** 86.45 18 P P 23 11 09.5 +0.7
PCA IAmb IAmb 23 11 10.5
comp=Z,14nm,1.0s
PINM **Pinnacle** 86.45 18 P P 23 11 08.8 0.0
baz=215
F10A **Beach Ranch, E** 86.46 38 P 23 11 09.6 +0.4
J19K **Poorman** 86.47 10 P 23 11 09.4 +0.7
J19K **Poorman** 86.47 10 P P 23 11 09.2 +0.5
baz=201,SNR=7.2
CAST **Castle Rocks** 86.54 11 P P 23 11 08.4 -0.7
CAST **Castle Rocks** 86.54 11 P P 23 11 08.2 -0.9
baz=204,SNR=30
N25K **Chitina, Valde** 86.55 15 P P 23 11 10.1 +0.8
baz=211,SNR=17
GRNC **Granite Creek** 86.55 17 P P 23 11 09.2 -0.2
GRNC IAmb IAmb 23 11 11.2
comp=Z,14nm,1.0s
TNA **Tin City** 86.58 4 P P 23 11 09.3 +0.1
TNA IAmb IAmb 23 11 10.7
comp=Z,12nm,0.9s
TNA **Tin City** 86.58 4 P P 23 11 09.7 +0.6
baz=190
TMUT **Trail Mountain** 86.60 46 P P 23 11 09.9 -0.4
TMUT IAmb IAmb 23 11 13.2
comp=Z,7.4nm,1.2s
M24K **Tolsona, Glenn** 86.61 14 P P 23 11 09.6 +0.1
M24K **Tolsona, Glenn** 86.61 14 P P 23 11 10.3 +0.8
baz=210
GLB **Gilahina Butte** 86.61 16 P 23 11 09.6 +0.1
GLB IAmb IAmb 23 11 10.6
comp=Z,11nm,0.6s
F14K **Arctic Creek** 86.61 5 P P 23 11 10.0 +0.7
baz=191
WAT6 **Susitna Watana** 86.67 14 P P 23 11 10.2 +0.3
baz=208,SNR=18
PLID **Pearl Lake** 86.67 39 P 23 11 11.4 +0.9
B08A **Colville Reser** 86.70 35 P P 23 11 10.0 -0.3
B08A IAmb IAmb 23 11 12.0
comp=Z,8.7nm,0.8s
WAT1 **Susitna Watana** 86.71 13 P P 23 11 09.9 0.0
baz=208
H17K **Granite Mounta** 86.75 8 P 23 11 10.1 0.0
H17K **Granite Mounta** 86.75 8 P P 23 11 10.3 +0.3
baz=197,SNR=5.2
LLLB **Lillooet** 86.76 32 P P 23 11 11.4 +0.9
LLLB IAmb IAmb 23 11 12.7
comp=Z,8.4nm,0.8s
MCARA **McCarthy VSAT** 86.76 16 P P 23 11 10.6 +0.4
MCARA IAmb IAmb 23 11 12.0
comp=Z,11nm,0.9s
MCARA **McCarthy VSAT** 86.76 16 P P 23 11 10.9 +0.7
baz=213
HLID **Hailey** 86.78 41 P 23 11 11.0 0.0
LOGN **Logan Glacier** 86.84 17 P P 23 11 11.4 +0.7
LOGN IAmb IAmb 23 11 12.1
comp=Z,10nm,0.7s
BARN **Barnard Glacie** 86.85 17 P P 23 11 10.9 0.0
J20K **Nowinta River** 86.88 10 P P 23 11 10.8 +0.1
J20K IAmb IAmb 23 11 11.6
comp=Z,4.3nm,0.7s
J20K **Nowinta River** 86.88 10 P P 23 11 11.2 +0.6
baz=202,SNR=7.3
KTH **Kantishna Hill** 86.88 12 P 23 11 09.8 -0.9
KTH IAmb IAmb 23 11 11.1
comp=Z,17nm,1.0s
G16K **Koyuk River** 86.91 7 P P 23 11 11.5 +0.8
baz=195
TLIG **Tlapa** 86.91 70 P P 23 11 12.4 +0.3
TLIG IAmb IAmb 23 11 22.9
comp=Z,16nm,1.4s
TRF **Thorofare Moun** 86.91 12 P 23 11 10.5 -0.5
TRF **Thorofare Moun** 86.91 12 P P 23 11 10.9 -0.2
baz=206,SNR=24
CHUM **Lake Minchumin** 86.92 11 P P 23 11 10.6 -0.2
baz=204
C09A **Chrisman Ranch** 86.94 36 P P 23 11 12.2 +0.8
C09A IAmb IAmb 23 11 13.5
comp=Z,8.4nm,0.6s
SRU **San Rafael Swe** 86.96 46 P P 23 11 12.4 +0.5
GCSA **Galena City Sc** 86.98 9 P P 23 11 12.0 +0.9
baz=200
O28M **Mount Upton** 87.02 18 P P 23 11 12.2 +0.4
O28M IAmb IAmb 23 11 13.6
comp=Z,14nm,0.8s
O28M **Mount Upton** 87.02 18 P P 23 11 12.7 +0.9
baz=215,SNR=8.9
VHRN **Van Horn** 87.06 56 P 23 11 13.5 +1.0
VHRN IAmb IAmb 23 11 15.3
comp=Z,5.5nm,0.9s
HARP **HAARP** 87.10 15 P P 23 11 12.2 +0.4
baz=211
O29M **Mount Kennedy** 87.11 19 P P 23 11 12.2 +0.2
O29M IAmb IAmb 23 11 32.5
comp=Z,5.7nm,0.7s
H18K **Honhosa River** 87.16 8 P P 23 11 12.1 +0.2
baz=198
MNTX **Cornudas Mount** 87.16 55 P 23 11 13.0 +0.2
MNTX IAmb IAmb 23 11 15.5
comp=Z,5.8nm,0.9s
RND **Reindeer** 87.16 13 P P 23 11 12.1 0.0
DHY **Denali Highway** 87.18 14 P P 23 11 12.2 -0.1
DHY IAmb IAmb 23 11 23.6
comp=Z,5.4nm,0.9s
DHY **Denali Highway** 87.18 14 P P 23 11 12.6 +0.3
baz=209,SNR=9.7
G17K **Kiwalik Mounta** 87.20 7 P P 23 11 12.4 +0.3
baz=196
TCUT **Toone Canyon** 87.39 44 P P 23 11 14.4 +0.5
TCUT IAmb IAmb 23 11 17.4
comp=Z,4.4nm,0.7s
I20K **Naaghedeneel** 87.40 10 P P 23 11 13.3 +0.3
I20K IAmb IAmb 23 11 14.8
comp=Z,13nm,0.9s
PV05 **Paradox Valley** 87.42 48 P P 23 11 14.5 +0.3
MCK **McKinley** 87.44 13 P 23 11 13.4 +0.1
MCK **McKinley** 87.44 13 P P 23 11 13.4 +0.1
baz=207,SNR=11
TX31 **Lajitas Ar. Si** 87.45 57 P 23 11 14.5 +0.2
TX31 IAmb IAmb 23 11 17.3
comp=Z,8.1nm,1.2s
TXAR **Lajitas Array** 87.45 57 P P 23 11 16.4 +2.1
comp=Z,3.1nm,0.9s,baz=214,slow=6.0,SNR=24
comp=Z,3.1nm,0.9s
TXAR **Lajitas Array** 87.45 57 P 23 11 15.1 +0.8
BSUT **Blindstream Ca** 87.52 45 P P 23 11 14.5 -0.2
HWUT **Hardware Ranch** 87.54 44 P P 23 11 15.2 +0.6
YUK8 **Steele Glacier** 87.56 17 P P 23 11 15.5 +1.2
baz=216,SNR=16
M26K **Nabesna, AK** 87.63 16 P P 23 11 14.7 +0.4
M26K IAmb IAmb 23 11 16.1
comp=Z,13nm,1.0s
M26K **Nabesna, AK** 87.63 16 P P 23 11 15.3 +1.0
baz=213,SNR=9.0
PV23 **Carpenter Ridg** 87.67 47 P P 23 11 15.0 -0.3
PV23 IAmb IAmb 23 11 17.3
comp=Z,7.3nm,0.9s
YUK6 **Outpost Mounta** 87.69 18 P P 23 11 15.8 +1.0
baz=217,SNR=6.5
PV21 **Cone Mtn., Par** 87.75 47 P P 23 11 15.7 0.0
YUK3 **Moose Creek** 87.77 17 P P 23 11 16.3 +1.1
baz=215,SNR=33
H19K **Roundabout Mou** 87.78 9 P 23 11 14.6 -0.2
H19K IAmb IAmb 23 11 16.5
comp=Z,11nm,0.8s
H19K **Roundabout Mou** 87.78 9 P P 23 11 15.5 +0.7
baz=200,SNR=11
BCYI **Bear Canyon** 87.80 41 P P 23 11 15.8 +0.1
PV01 **Paradox Valley** 87.82 48 P P 23 11 15.9 -0.1
TPB28 87.82 55 P P 23 11 16.6 +0.6
TPB28 IAmb IAmb 23 11 18.8
comp=Z,3.2nm,1.1s
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 16.5 +0.5
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 15.7 -0.3
TASM IAmb IAmb 23 11 18.4
comp=Z,3.0nm,0.9s
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 16.0 -0.1
TASM IAmb IAmb 23 11 18.4
comp=Z,3.2nm,1.0s
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 16.0 -0.1
TASM IAmb IAmb 23 11 18.4
comp=Z,3.1nm,1.0s
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 16.3 +0.2
TASM IAmb IAmb 23 11 18.4
comp=Z,3.9nm,1.0s
TASM **ASL Pad, Albuq** 87.82 51 P P 23 11 16.0 -0.1
TASM IAmb IAmb 23 11 18.4
comp=Z,3.4nm,1.1s
ABQ **Albuquerque** 87.82 51 P P 23 11 15.8 -0.3
ANMO **Albuquerque** 87.83 51 P 23 11 16.1 +0.1
ANMO **Albuquerque** 87.83 51 P P 23 11 15.8 -0.3
ANMO IAmb IAmb 23 11 18.4
comp=Z,3.1nm,0.9s
G18K **Tagagawik** 87.83 8 P 23 11 14.8 -0.2
G18K IAmb IAmb 23 11 16.1
comp=Z,7.5nm,1.1s
G18K **Tagagawik** 87.83 8 P P 23 11 15.1 0.0
baz=198,SNR=6.2
NEW **Newport** 87.84 36 P P 23 11 15.6 0.0
BRWY **Burwash Landin** 87.84 18 P P 23 11 16.7 +1.4
baz=216
HYT **Haines Junctio** 87.85 19 P 23 11 16.0 +0.6
HYT IAmb IAmb 23 11 17.5
comp=Z,7.5nm,0.8s
HYT **Haines Junctio** 87.85 19 P P 23 11 16.6 +1.2
baz=218,SNR=8.2
PV22 **Blue Mesa, Par** 87.86 47 P P 23 11 17.0 +0.9
M27K **Edge Creek, AK** 87.88 16 P P 23 11 15.9 +0.4
M27K **Edge Creek, AK** 87.88 16 P P 23 11 16.8 +1.2
baz=214,SNR=20
MENT **Mentasta** 87.91 15 P P 23 11 15.4 -0.1
MENT IAmb IAmb 23 11 17.4
comp=Z,7.2nm,0.7s
ALPN **Alpine** 87.92 56 P 23 11 17.2 +0.7
ALPN IAmb IAmb 23 11 19.1
comp=Z,7.3nm,1.1s

H20K Anotleneega Mo 87.98 10 P P 23 11 16.7 +0.9
baz=202,SNR=22
AIS Amsterdam Isla 88.00 230 P P 23 11 18.3 +1.6
F17K Baldwin Pennin 88.05 7 P P 23 11 16.7 +0.7
baz=196
L26K Log Cabin Wild 88.07 15 P P 23 11 16.9 +0.5
L26K IAmb IAmb 23 11 18.1
comp=Z,12nm,1.1s
L26K Log Cabin Wild 88.07 15 P P 23 11 17.1 +0.8
baz=212
GDL2 Guadalupe Moun 88.16 55 P P 23 11 18.3 +0.8
VNA2 Neumayer--Watz 88.16 1177 P P 23 11 17.0 +0.2
comp=Z,1.5nm,0.5s,baz=180,slow=4.2
I21K Tanana 88.17 11 P P 23 11 17.1 +0.4
I21K Tanana 88.17 11 P P 23 11 17.0 +0.4
baz=204,SNR=26
K24K Donnelly Dome 88.17 14 P P 23 11 17.2 +0.4
K24K Donnelly Dome 88.17 14 P P 23 11 17.5 +0.7
baz=210,SNR=12
NEA2 Nenana 88.18 12 P P 23 11 16.3 -0.4
NEA2 IAmb IAmb 23 11 17.4
comp=Z,8.8nm,0.6s
NEA2 Nenana 88.18 12 P P 23 11 16.1 -0.6
baz=207,SNR=13
BVCY Beaver Creek 88.19 16 P P 23 11 18.0 +1.1
baz=214,SNR=14
MLY Manley 88.26 11 P 23 11 16.6 -0.6
MLY Manley 88.26 11 P P 23 11 16.8 -0.4
baz=206,SNR=35
G19K Purcell Mounta 88.27 8 P 23 11 17.6 +0.4
G19K IAmb IAmb 23 11 18.7
comp=Z,11nm,0.8s
G19K Purcell Mounta 88.27 8 P P 23 11 17.8 +0.6
baz=200,SNR=14
TPB11 China Draw 88.29 55 P P 23 11 18.5 +0.4
TPB11 IAmb IAmb 23 11 20.2
comp=Z,5.4nm,0.6s
RIDG Independent Ri 88.33 14 IAmb IAmb 23 11 19.0
comp=Z,18nm,1.1s
RIDG Independent Ri 88.33 14 P P 23 11 18.0 +0.5
baz=211,SNR=9.6
F18K Selawik 88.38 7 P P 23 11 18.3 +0.7
baz=197
MCMT McKenzie Canyo 88.41 40 P P 23 11 19.8 +1.2
AHID Auburn Hatcher 88.42 43 P P 23 11 19.0 +0.3
HDA Harding Lake 88.45 13 P P 23 11 18.1 +0.1
baz=209,SNR=24
H21K Melozitna Rive 88.47 10 IAmb IAmb 23 11 19.6
comp=Z,9.4nm,0.7s
H21K Melozitna Rive 88.47 10 P P 23 11 18.7 +0.6
baz=204,SNR=23
N30M Aishikik Lake 88.47 18 IAmb IAmb 23 11 40.2
comp=Z,6.5nm,0.8s
N30M Aishikik Lake 88.47 18 P P 23 11 19.1 +0.8
baz=218,SNR=6.3
L27K Beaver Creek, 88.48 16 P 23 11 18.5 +0.2
L27K IAmb IAmb 23 11 19.9
comp=Z,6.5nm,0.8s
L27K Beaver Creek, 88.48 16 P P 23 11 19.0 +0.7
baz=214,SNR=10
BCAR Beaver Creek A 88.49 16 P 23 11 18.8 +0.5
E17K Hotham Inlet 88.60 6 P P 23 11 19.3 +0.7
baz=195
IMAR Indian Mountai 88.62 10 P P 23 11 19.1 +0.3
I23K Minto, Yukon-K 88.62 12 IAmb IAmb 23 11 19.5
comp=Z,8.2nm,0.6s
I23K Minto, Yukon-K 88.62 12 P P 23 11 18.4 -0.4
baz=207,SNR=13
COLA College 88.67 12 P P 23 11 19.0 +0.1
baz=208
SCRK Sand Creek 88.73 14 P 23 11 19.9 +0.4
SCRK IAmb IAmb 23 11 22.2
comp=Z,6.8nm,0.7s
SCRK Sand Creek 88.73 14 P P 23 11 20.0 +0.5
baz=212,SNR=16
IL31 88.78 13 IAmb IAmb 23 11 19.8
comp=Z,9.0nm,0.6s
ILAR Eielson Array 88.78 13 P P 23 11 19.3 -0.2
comp=Z,7.9nm,0.6s,baz=216,slow=5.4,SNR=102
comp=Z,7.9nm,0.6s
ILAR Eielson Array 88.78 13 P P 23 11 19.7 +0.1
MSO Missoula 88.83 38 P P 23 11 20.4 +0.1
F19K Shaleruckik Mo 88.83 8 P 23 11 19.7 0.0
F19K IAmb IAmb 23 11 21.0
comp=Z,9.7nm,0.8s
F19K Shaleruckik Mo 88.83 8 P P 23 11 20.1 +0.4
baz=199,SNR=17
DLMT Dillon 88.84 40 P 23 11 21.1 +0.6
DLMT IAmb IAmb 23 11 23.0
comp=Z,6.3nm,0.9s
S22A 4UR Ranch, Cre 88.85 49 P 23 11 20.4 -0.5
M29M Somme Creek 88.86 17 P P 23 11 20.8 +0.7
M29M Somme Creek 88.86 17 P P 23 11 21.2 +1.0
baz=217,SNR=31
N31M Braeburn, Yuko 88.89 19 P P 23 11 20.3 +0.2
FXWY Fox Creek 88.91 42 P P 23 11 21.3 +0.3
H22K Ishtalitna Cre 88.93 11 P P 23 11 20.8 +0.6
baz=205,SNR=37
SAND Sanderson 88.93 57 P P 23 11 21.4 +0.2
J25K Salcha River, 88.97 14 IAmb IAmb 23 11 21.7
comp=Z,10nm,0.7s
J25K Salcha River, 88.97 14 P P 23 11 20.9 +0.4
baz=210,SNR=20
POKR Poker Plat Res 88.97 13 P P 23 11 20.1 -0.3
baz=208
MNHN Monahans 89.02 56 P P 23 11 22.7 +1.2
MNHN IAmb IAmb 23 11 22.9
comp=Z,5.9nm,1.1s
E18K Tukpahlearik C 89.06 7 P 23 11 21.0 +0.2
E18K IAmb IAmb 23 11 22.3
comp=Z,10nm,0.9s
E18K Tukpahlearik C 89.06 7 P P 23 11 21.3 +0.6
baz=196,SNR=7.3
D17K Noatak River 89.08 6 P P 23 11 21.7 +0.8
baz=194
G21K Allakaket 89.15 10 P 23 11 21.3 0.0
G21K Allakaket 89.15 10 P P 23 11 21.8 +0.6
baz=203,SNR=24
LOHW Long Hollow 89.17 42 P 23 11 22.5 +0.3
H23K Yukon River 89.19 11 P P 23 11 21.8 +0.4
H23K IAmb IAmb 23 11 22.5
comp=Z,3.9nm,0.8s
H23K Yukon River 89.19 11 P P 23 11 22.1 +0.6
baz=207
K27K Chicken 89.23 15 P P 23 11 22.9 +1.3
K27K IAmb IAmb 23 11 23.8
comp=Z,11nm,0.8s
F20K Avaraart Lake 89.31 9 P 23 11 22.1 +0.2
F20K IAmb IAmb 23 11 23.5
comp=Z,9.4nm,0.8s
F20K Avaraart Lake 89.31 9 P P 23 11 22.6 +0.7
baz=201,SNR=15
FLWY Flagg Ranch 89.34 42 P P 23 11 23.4 +0.5
FLWY IAmb IAmb 23 11 25.7
comp=Z,9.2nm,1.0s
BW06 Boulder Array 89.41 43 P P 23 11 22.8 -0.5
BW06 IAmb IAmb 23 11 25.0
comp=Z,5.0nm,1.0s
PD31 Pinedale Array 89.41 43 P 23 11 23.4 +0.1
PD31 IAmb IAmb 23 11 25.0
comp=Z,4.7nm,0.9s
PDAR Pinedale Array 89.41 43 P P 23 11 23.9 +0.5
comp=Z,3.3nm,0.8s,baz=214,slow=3.2,SNR=25
comp=Z,3.3nm,0.8s
PDAR Pinedale Array 89.41 43 P P 23 11 23.6 +0.3
YHL Hebgen Lake 89.43 41 P P 23 11 24.5 +1.1
YHL IAmb IAmb 23 11 26.6
comp=Z,15nm,1.1s
M30M Minto, Yukon 89.44 18 P P 23 11 23.2 +0.5
M30M Minto, Yukon 89.44 18 P P 23 11 23.6 +0.8
baz=218
N32M Quiet Lake 89.47 20 P P 23 11 22.9 0.0
L29M L29M 89.49 17 P 23 11 23.6 +0.6
L29M L29M 89.49 17 P P 23 11 24.3 +1.4
baz=217,SNR=35
E19K Redstone River 89.50 8 P P 23 11 22.9 0.0
E19K Redstone River 89.50 8 P P 23 11 23.6 +0.7
baz=200,SNR=28
ODSA Odessa 89.51 55 P P 23 11 24.8 +0.9
ODSA IAmb IAmb 23 11 25.9
comp=Z,5.4nm,0.9s
H24K Noodor Dome 89.52 12 P P 23 11 22.8 -0.2
H24K Noodor Dome 89.52 12 P P 23 11 22.1 -0.9
baz=208
BOZ Bozeman (W) 89.54 40 P P 23 11 24.4 +0.6
BOZ IAmb IAmb 23 11 26.3
comp=Z,6.1nm,0.9s
H17A Grant Village 89.58 42 P P 23 11 24.4 +0.3
H17A IAmb IAmb 23 11 27.5
comp=Z,7.2nm,0.9s
YHH Holmes Hill 89.61 41 P P 23 11 26.3 +2.0
PRP Porcupine Dome 89.72 13 P P 23 11 23.7 -0.3
PRP IAmb IAmb 23 11 25.8
comp=Z,19nm,1.4s
PRP Porcupine Dome 89.72 13 P P 23 11 24.0 0.0
baz=210,SNR=8.4
SDCO Great Sand Dun 89.78 49 P P 23 11 25.7 +0.4
F21K Alatna River 89.80 9 P 23 11 23.7 -0.6
F21K IAmb IAmb 23 11 25.5
comp=Z,4.8nm,0.8s
F21K Alatna River 89.80 9 P P 23 11 24.7 +0.4
baz=203,SNR=8.8
G22K Bettles 89.84 10 P P 23 11 25.2 +0.8
baz=205
HAYD Hayden 89.84 46 P P 23 11 24.9 -0.5
HAYD IAmb IAmb 23 12 08.8
comp=Z,3.5nm,0.6s
M31M Drury Creek, Y 89.86 19 P P 23 11 25.0 +0.3
M31M IAmb IAmb 23 11 26.0
comp=Z,4.9nm,0.8s
M31M Drury Creek, Y 89.86 19 P P 23 11 25.3 +0.6
baz=220
G23K Bananza Creek 89.90 11 P 23 11 24.9 +0.2
G23K IAmb IAmb 23 11 26.4
comp=Z,8.0nm,1.1s
G23K Bananza Creek 89.90 11 P P 23 11 25.3 +0.5
baz=206,SNR=10
DAWY Dawson 89.93 16 P P 23 11 25.2 +0.3
DAWY Dawson 89.93 16 P P 23 11 25.8 +0.9
baz=216,SNR=6.8
CMAR Chiang Mai Arr 90.08 290 P P 23 11 27.1 +0.4
comp=Z,1.4nm,0.3s,baz=111,slow=2.7,SNR=8.2
comp=Z,1.4nm,0.3s
CMAR Chiang Mai Arr 90.08 290 P P 23 11 27.5 +0.8
C18K Ututok River 90.18 6 P P 23 11 26.3 +0.2
baz=196
K29M Barlow Dome 90.24 17 P 23 11 27.1 +0.5
K29M Barlow Dome 90.24 17 P P 23 11 27.8 +1.3
baz=218,SNR=18
F22K John River 90.27 10 P P 23 11 27.2 +0.8
baz=204,SNR=11
COLD Coldfoot 90.34 11 P P 23 11 27.5 +0.8
COLD IAmb IAmb 23 11 28.7
comp=Z,9.3nm,0.8s
COLD Coldfoot 90.34 11 P P 23 11 27.7 +1.0
baz=206,SNR=12
G24K Hadweenzic Riv 90.36 12 IAmb IAmb 23 11 27.8
comp=Z,4.2nm,1.1s
G24K Hadweenzic Riv 90.36 12 P P 23 11 26.8 -0.1
baz=208
D19K Kuna River 90.37 7 P P 23 11 27.0 +0.1
D19K Kuna River 90.37 7 P P 23 11 27.4 +0.5
baz=199,SNR=10
E20K Nigu River 90.39 8 P P 23 11 27.8 +0.8
baz=200,SNR=28
I27K Kandik River 90.65 14 P P 23 11 28.8 +0.6
I27K IAmb IAmb 23 11 30.4
comp=Z,7.3nm,1.1s
I27K Kandik River 90.65 14 P P 23 11 28.9 +0.6
baz=214,SNR=10
G25K Bearman Lake 90.68 12 P P 23 11 28.5 +0.2
baz=210
D20K Etivluk River 90.76 8 P 23 11 29.1 +0.4
D20K Etivluk River 90.76 8 P P 23 11 29.3 +0.6
baz=200,SNR=8.5
C19K Lookout Ridge 90.79 7 P 23 11 29.6 +0.7
C19K Lookout Ridge 90.79 7 P P 23 11 29.5 +0.7
baz=197,SNR=7.3
E21K Killik River 90.86 9 P P 23 11 29.6 +0.4
E21K IAmb IAmb 23 11 30.4
comp=Z,9.0nm,1.1s
E21K Killik River 90.86 9 P P 23 11 29.4 +0.2
baz=202
E22K Anaktuvuk Pass 90.90 10 P P 23 11 29.8 +0.4
E22K IAmb IAmb 23 11 30.9
comp=Z,13nm,1.1s
E22K Anaktuvuk Pass 90.90 10 P P 23 11 30.0 +0.6
baz=204
I28M Miner Creek 90.92 15 P 23 11 30.1 +0.5
I28M IAmb IAmb 23 11 30.9
comp=Z,8.1nm,0.7s
I28M Miner Creek 90.92 15 P P 23 11 30.0 +0.5
baz=215,SNR=13
F24K Squaw Lake 91.01 11 P 23 11 30.8 +0.9
F24K IAmb IAmb 23 11 31.6
comp=Z,9.4nm,1.3s
F24K Squaw Lake 91.01 11 P P 23 11 30.7 +0.9
baz=208,SNR=8.4
HNDO Hondo 91.01 59 P P 23 11 31.3 +0.5
HNDO IAmb IAmb 23 11 33.1
comp=Z,4.9nm,0.9s
MMPY Sheldon Lake, 91.14 20 P 23 11 31.5 +0.9
MMPY IAmb IAmb 23 11 33.5
comp=Z,4.9nm,0.8s
MMPY Sheldon Lake, 91.14 20 P P 23 11 31.8 +1.2
baz=223,SNR=7.9
J30M Hart River 91.14 17 P 23 11 31.2 +0.6
J30M IAmb IAmb 23 11 32.4
comp=Z,4.8nm,1.0s
J30M Hart River 91.14 17 P P 23 11 31.4 +0.8
baz=219,SNR=5.5
E23K Chandalar 91.19 10 IAmb IAmb 23 11 32.4
comp=Z,5.8nm,0.9s
E23K Chandalar 91.19 10 P P 23 11 31.4 +0.6
baz=206,SNR=5.7
H27K Steamboat Moun 91.20 14 IAmb IAmb 23 11 32.7
comp=Z,6.1nm,0.9s
H27K Steamboat Moun 91.20 14 P P 23 11 31.5 +0.8
baz=214,SNR=11
G26K Porcupine Rive 91.31 13 P P 23 11 31.6 +0.4
G26K IAmb IAmb 23 11 33.9
comp=Z,9.4nm,0.8s
G26K Porcupine Rive 91.31 13 P P 23 11 32.1 +0.9
baz=212,SNR=16
E24K Your Creek 91.39 11 P P 23 11 32.3 +0.6
E24K Your Creek 91.39 11 P P 23 11 32.3 +0.6
baz=208,SNR=5.6
C21K Knifeblade Rid 91.42 8 P P 23 11 32.6 +0.9
baz=202,SNR=11
F25K Christian Rive 91.49 12 P P 23 11 32.5 +0.3
F25K Christian Rive 91.49 12 P P 23 11 33.0 +0.8
baz=210
I30M Mount Dempster 91.64 16 P 23 11 33.0 0.0
I30M IAmb IAmb 23 11 34.4
comp=Z,8.6nm,0.9s
I30M Mount Dempster 91.64 16 P P 23 11 33.5 +0.5
baz=218,SNR=14
G27K Doyon Strip 91.65 14 IAmb IAmb 23 11 34.5
comp=Z,5.7nm,1.5s
G27K Doyon Strip 91.65 14 P P 23 11 33.3 +0.5
baz=214
TOLK Toolik Lake Re 91.72 10 P P 23 11 33.7 +0.6
baz=207
D23K Nanushuk River 91.83 10 P 23 11 34.5 +0.9
D23K IAmb IAmb 23 11 35.6
comp=Z,11nm,1.1s
D23K Nanushuk River 91.83 10 P P 23 11 34.5 +0.9
baz=206,SNR=9.2
B21K Ikpikpuk River 91.87 8 P P 23 11 34.4 +0.7
baz=202
F26K Sheenjek River 91.87 12 P P 23 11 34.8 +0.9
F26K IAmb IAmb 23 11 35.5
comp=Z,3.1nm,1.0s
F26K Sheenjek River 91.87 12 P P 23 11 34.8 +0.9
baz=212
B20K Meade River 91.92 7 P P 23 11 34.6 +0.7
baz=200
H29M Whitestone 91.93 15 P P 23 11 34.8 +0.7
baz=217,SNR=14
E25K Arctic Village 91.97 12 IAmb IAmb 23 11 36.0
comp=Z,5.4nm,1.3s
E25K Arctic Village 91.97 12 P P 23 11 35.2 +1.0
baz=210
D24K Happy Valley 92.30 10 P P 23 11 36.5 +0.7
baz=207
EPYK Eagle Plains 92.45 16 P P 23 11 35.5 -1.1
EPYK IAmb IAmb 23 11 37.9
comp=Z,6.8nm,0.8s
EPYK Eagle Plains 92.45 16 P P 23 11 37.1 +0.6
baz=218,SNR=6.7
G29M Pine Creek 92.57 15 IAmb IAmb 23 11 37.9
comp=Z,11nm,1.3s
G29M Pine Creek 92.57 15 P P 23 11 37.5 +0.5
baz=217,SNR=5.9
C23K Itkillik River 92.63 9 P P 23 11 37.9 +0.7
baz=206,SNR=5.2
F28M Old Crow 92.71 14 P P 23 11 38.4 +0.7
baz=215,SNR=5.1
E27K Coleen River 92.81 13 P P 23 11 38.9 +0.7
baz=214
D25K Kavik River 92.86 11 P P 23 11 38.5 +0.1
baz=210
G30M tAoh Zraii Nji 93.06 15 P P 23 11 39.5 +0.2
baz=219,SNR=11
G31M Satah River 93.50 16 P 23 11 40.9 -0.3
G31M Satah River 93.50 16 P P 23 11 41.5 +0.3
baz=220,SNR=6.9
E28M Babbage River 93.59 13 P 23 11 42.2 +0.5
E28M IAmb IAmb 23 11 43.2
comp=Z,5.3nm,0.7s
E28M Babbage River 93.59 13 P P 23 11 42.3 +0.5
baz=216,SNR=7.9
C27K Jago River 93.61 11 P P 23 11 41.2 -0.5
C27K IAmb IAmb 23 11 43.2
comp=Z,3.5nm,0.8s
C27K Jago River 93.61 11 P P 23 11 42.3 +0.6
baz=212
F30M Barrier River 93.66 15 P P 23 11 42.1 +0.2
F30M IAmb IAmb 23 11 44.8
comp=Z,4.2nm,0.8s
F30M Barrier River 93.66 15 P P 23 11 42.0 0.0
baz=213
E29M Blow River 93.78 14 P 23 11 42.0 -0.5
E29M IAmb IAmb 23 12 12.4
comp=Z,5.3nm,1.5s
E29M Blow River 93.78 14 P P 23 11 42.7 +0.2
baz=217
F31M Tsiigehtchic 94.03 16 P P 23 11 43.8 +0.2
F31M Tsiigehtchic 94.03 16 P P 23 11 44.1 +0.4
baz=221
INK Inuvik 94.74 15 P 23 11 46.5 -0.3
INK IAmb IAmb 23 11 47.8
comp=Z,6.0nm,1.1s
INK Inuvik 94.74 15 P P 23 11 47.0 +0.1
baz=221
YKA Yellowknife Ar 96.99 25 P P 23 11 57.5 +0.3
comp=Z,0.9nm,0.8s,baz=240,slow=4.6,SNR=5.3
comp=Z,0.9nm,0.8s
ZALV Zalesovo Beam 110.71 321 PKiKP PKiKP 23 16 54.1 -1.2
comp=Z,1.5nm,0.5s,baz=186,slow=0.5,SNR=12
MKAR Makanchi Array 111.36 313 PKiKP PKiKP 23 16 56.0 -0.9
comp=Z,1.2nm,0.5s,baz=166,slow=0.9,SNR=20
MKAR PKKPbc PKKPbc 23 27 54.0 -0.6
comp=Z,0.5nm,0.9s,baz=314,slow=3.1,SNR=4.3
KURBB Kurchatov Arra 114.23 317 PKiKP PKPdf 23 17 01.2 -0.9
comp=Z,2.0nm,0.6s,baz=94,slow=1.8,SNR=19
BVAR Borovoye Array 119.29 320 PKP PKPdf 23 17 11.4 -0.4
comp=Z,7.3nm,0.4s,baz=114,slow=1.9,SNR=63
KBS Kingsbay 121.76 358 eP PKiKP 23 17 16.5 +0.4
KBS IAmb IAmb 23 17 16.7
comp=Z,7.5nm,1.1s
SPA0 Spitsbergen Ar 122.29 356 eP PKiKP 23 17 17.1 -0.1
SPITS Spitsbergen Ar 122.29 356 PKP PKPdf 23 17 16.6 -0.4
comp=Z,8.8nm,0.7s,baz=71,slow=5.4,SNR=9.8
ARTI Arti 125.56 325 PKPdf 23 17 23.6 -0.2
AB31 Akbulak array 126.27 316 PKPdf PKPdf 23 17 25.5 +0.1
ABKAR Akbulak array 126.27 316 PKPdf PKiKP 23 17 25.9 0.0
VADS Vadso 128.12 348 eP PKPdf 23 17 28.5 +0.2
KEV Kevo 128.86 349 PKPdf PKPdf 23 17 30.0 +0.3
ARA0 ARCESS Array S 129.31 349 eP PKPdf 23 17 30.6 0.0
ARA0 IAmb IAmb 23 17 31.5
comp=Z,5.4nm,0.6s
ARCES ARCESS Array B 129.31 349 PKP PKPdf 23 17 30.5 -0.1
comp=Z,3.3nm,0.4s,baz=18,slow=1.1,SNR=48
KTK1 Kautokeino 130.15 350 eP PKPdf 23 17 31.7 -0.5
KTK1 IAmb IAmb 23 17 32.6
comp=Z,3.4nm,0.6s
TRO Tromso 130.20 352 eP PKPdf 23 17 32.0 -0.2
TRO IAmb IAmb 23 17 32.8
comp=Z,4.9nm,0.6s
STEI Steigen 132.26 353 eP PKiKP 23 17 36.9 -0.4
STEI IAmb IAmb 23 17 37.9
comp=Z,7.0nm,0.8s
VAGH Vaagaholmen 133.63 354 eP PKPdf 23 17 38.5 -0.2
STOK Stokkvaagen 134.04 354 eP PKPdf 23 17 39.5 0.0
STOK IAmb IAmb 23 17 42.8
comp=Z,13nm,1.2s
LEIR Leirfjorden 134.24 354 eP PKiKP 23 17 40.9 -0.5
LEIR IAmb IAmb 23 17 42.5
comp=Z,8.1nm,1.3s
NSS Namsos 135.90 354 eP PKPdf 23 17 43.8 +0.7
FINES FINESS Array B 136.13 343 PKhKP PKPpre 23 17 32.0
comp=Z,0.7nm,0.6s,baz=51,slow=3.1,SNR=8.2
FINES PKP PKPdf 23 17 42.7 -0.8
comp=Z,2.8nm,0.6s,baz=42,slow=1.8,SNR=11
FINES SKP SKPbc 23 20 31.7 +2.9
comp=Z,2.2nm,0.8s,baz=46,slow=4.0,SNR=7.5
FINES FINESS Array B 136.13 343 PKPdf PKPdf 23 17 43.2 -0.4
NB2 NORSAR Subarra 139.39 353 PKP PKPpre 23 17 41.7
comp=Z,0.6nm,0.4s,baz=17,slow=2.6
NOA NORSAR Array B 139.39 353 PKhKP PKPpre 23 17 39.8
comp=Z,1.3nm,0.7s,baz=21,slow=3.9,SNR=7.9
NOA PKP PKPdf 23 17 49.8 +0.2
comp=Z,1.1nm,0.5s,baz=13,slow=4.1,SNR=7.3
HFS Hagfors 139.94 351 PKhKP PKPpre 23 17 42.9
comp=Z,3.2nm,0.3s,baz=56,slow=3.7,SNR=47
KONO Kongsberg 140.93 354 eP PKPpre 23 17 47.3
GURO Guroymak-BITLI 141.26 306 PKPpre PKPpre 23 17 48.9
GURO PKPdf sPdif 23 17 55.0 +0.3
STRU Stroemstad 141.34 352 i P PKPpre 23 17 47.5
TJOU Tjoern 142.26 351 i P PKPpre 23 17 49.9
HOMB Homborsund 142.39 354 eP PKPpre 23 17 51.9
HOMB Homborsund 142.39 354 i P PKPpre 23 17 51.0
ONAU Onsala 142.83 351 i P PKPpre 23 17 52.0
LODK Lodwar 143.00 246 PKPpre 23 17 56.3
FABU Falkenberg 143.09 350 i P PKPab 23 17 53.8 +0.1
OVD Ostervraa, Den 143.14 352 i P PKPab 23 17 53.5 -0.4
BLEU Blekinge 143.17 347 i P PKPab 23 17 52.6 -1.4
SUW Suwalki 143.18 339 PKPpre PKPpre 23 17 50.9
SUW PKPdf PKPbc 23 17 54.7 +0.1
MCD Coleburn Disti 143.21 5 eP PKPab 23 17 53.6 -0.5
KPL Plockton 143.23 7 eP PKPab 23 17 53.0 -1.2
AK03 Malin Array Si 143.28 331 PKP PKPab 23 17 54.2 -0.5
AKASG Malin Array Be 143.30 331 PKP PKPab 23 17 54.3 -0.4
comp=Z,9.1nm,0.4s,baz=44,slow=4.3,SNR=92
AKASG Malin Array Be 143.30 331 PKPab 23 17 54.4 -0.3
KIEV Kiev 143.31 331 ⇓P PKPab 23 17 54.2 -0.6
DEL Delary 143.40 349 i P PKPab 23 17 54.0 -0.9
ARPR Arapgir-MALATY 143.86 308 PKPdf PKPdf 23 17 59.5 +1.1
BJUU Bjuv 143.92 349 i P PKPbc 23 17 55.4 -1.4
DRUM Mains of Drumt 143.93 4 eP PKPbc 23 17 56.3 -0.6
MUD Monsted U'grnd 144.11 353 i P PKPbc 23 17 57.0 -0.4
LUNU Lund 144.27 349 i P PKPbc 23 17 57.1 -0.9
INVG Invergeldie, C 144.29 6 eP PKPbc 23 17 57.8 -0.3
LAWE Loch Awe, Argy 144.32 7 eP PKPbc 23 17 57.7 -0.4
BSD Bornholm Skovb 144.47 347 i P PKPbc 23 17 58.6 0.0
EAB Aberfoyle 144.50 6 eP PKPbc 23 17 58.4 -0.3
TOKA Tokat 144.75 311 PKPbc PKPab 23 18 01.3 +0.6
CLGH Cloghs, Cushen 145.39 8 eP PKPbc 23 18 01.9 +0.4
EKA Eskdalemuir Ar 145.45 5 PKPbc PKPdf 23 18 00.6 +0.2
comp=Z,8.7nm,0.7s,baz=334,slow=2.6,SNR=30
SORM Soroca 145.47 328 ⇓P PKPbc 23 18 01.8 -0.1
NEWG New Galloway 145.57 6 eP PKPbc 23 18 01.3 -0.6
PURM Purcari 145.73 325 ⇓P PKPbc 23 18 03.3 +0.6
EDMD Edmundbyers 146.04 4 eP PKPbc 23 18 02.8 -0.5
BSEG Bad Segeberg 146.42 351 ePKPbc PKPbc 23 18 05.0 +0.7
baz=19,slow=2.4
HLG Helgoland 146.48 354 ePKPbc PKPbc 23 18 05.4 +0.9
baz=19,slow=2.4
GDLE Glaisdale, N Y 146.51 3 eP PKPbc 23 18 04.3 -0.3
VASR Vaslui 146.76 327 ⇑P PKPbc 23 18 06.3 +0.7
HPK Haverah Park 146.93 4 eP PKPbc 23 18 05.8 +0.1
BR131 Keskin Array S 146.99 312 PKPbc 23 18 06.6 0.0
BRTR Keskin Array B 146.99 312 PKPbc PKPbc 23 18 06.5 0.0
comp=Z,4.9nm,0.6s,baz=130,slow=4.1,SNR=35
BRTR Keskin Array B 146.99 312 PKPbc 23 18 06.0 -0.6
KIRS Kirsehir-Merke 147.04 311 ⇓P PKPbc 23 18 06.8 +0.1
VLDR Vladesti 147.13 325 ⇑P PKPbc 23 18 07.2 +0.6
TLCR 147.15 324 ⇓P PKPbc 23 18 07.0 +0.4
GORT1 Trebel 147.17 349 ePKPbc PKPbc 23 18 07.0 +0.6
baz=19,slow=2.4
GIRR Girov 147.19 328 ⇑P PKPbc 23 18 07.2 +0.5
VARL Varlezi 147.22 325 ⇑P PKPbc 23 18 07.4 +0.6
SCTR Scanteiesti 147.28 325 ⇓P PKPbc 23 18 07.6 +0.7
BUR08 Bucovina Ar. S 147.33 330 PKPbc PKiKP 23 18 08.4 -0.5
GHRR 147.34 326 ⇑P PKiKP 23 18 08.2 -0.7
BURAR Bucovina Array 147.34 330 ⇑P PKPbc 23 18 07.7 +0.5

WLF1	Llynfaes	147.35	7	eP		PKPbc	23 18 06.3	-0.6
JURR	Jurilovca	147.37	323	⇓P		PKPbc	23 18 07.4	+0.2
BIZ	Bicaz	147.40	328	⇓P		PKPbc	23 18 08.1	+0.8
TESR	Tescani	147.43	327	⇓P		PKPbc	23 18 07.7	+0.4
NEGRR	Negrea	147.44	325	⇓P		PKPbc	23 18 07.9	+0.5
LBWR	Ladybower, Pea	147.48	4	eP		PKPbc	23 18 06.8	-0.4
OJC	Ojcow	147.49	338		PKPbc	PKiKP	23 18 08.7	-0.4
CFR	Carcaliu	147.53	324	⇑P		PKPbc	23 18 07.8	+0.2
TPGR	Topolog	147.57	324	⇓P		PKPbc	23 18 08.4	+0.6
KOLS	Kolonicke sedl	147.62	334	ePKP		PKiKP	23 18 08.8	-0.6
KOLS				e			23 18 12.1	
ONER	Baraj Valea Uz	147.68	327	⇓P		PKiKP	23 18 09.3	-0.3
RETH	Rethem/Aller, baz=19,slow=2.4	147.72	351	ePKPbc		PKPbc	23 18 08.5	+0.7
ODBI	Odobesti	147.72	326	⇑P		PKPbc	23 18 08.4	+0.3
FLTG	Flechtingen baz=19,slow=2.4	147.82	349	ePKPbc		PKPbc	23 18 08.5	+0.4
TIRR	Tirgusor	147.82	323	⇓P		PKPbc	23 18 08.6	+0.2
VRI	Vrincioaia	147.82	326	⇓P		PKPbc	23 18 08.1	-0.3
MMAI	Mount Meron Ar comp=Z,7.7nm,0.5s,baz=54,slow=6.6,SNR=44	147.86	299		PKPbc	PKiKP	23 18 10.0	-0.4
FOEL	Foel Wylfa	147.87	6	eP		PKPbc	23 18 08.0	-0.3
PLOR	Plostina	147.87	326	⇓P		PKPbc	23 18 08.2	-0.4
SAHR	Sahastru	147.94	326	⇓P		PKPbc	23 18 09.1	+0.3
TLBR	Topalu	147.97	323	⇑P		PKiKP	23 18 09.6	-0.6
TURR	Turia	148.06	327	⇑P		PKiKP	23 18 09.8	-0.6
BMR	Baia Mare	148.08	332	⇑P		PKiKP	23 18 08.4	-0.6
ASSE	Assee, Remlinge baz=19,slow=2.4	148.11	350	ePKPbc		PKPbc	23 18 09.4	+0.6
COVR	Voineasa-Covas	148.11	327	⇓P		PKPbc	23 18 09.3	+0.2
MANR	Mangalia	148.11	322	⇓P		PKiKP	23 18 10.0	-0.5
OZUR		148.15	328	⇑P		PKPbc	23 18 09.7	+0.5
BOSR	Bodos	148.22	328	⇓P		PKiKP	23 18 10.4	-0.4
CY604	RAF Akrotiri,	148.24	302			PKPbc	23 18 07.6	-1.8
WACR	West Acre	148.25	1	eP		PKPbc	23 18 08.7	-0.5
HLM1	Long Mynd	148.27	5	eP		PKPbc	23 18 08.4	-0.9
MDUB	Mudurnu	148.31	315		PKPbc	PKiKP	23 18 10.7	-0.5
OSTC	Ostas	148.33	342	ePKP		PKiKP	23 18 10.9	+0.1
NEHR	Nehoiu	148.34	326	⇑P		PKPbc	23 18 10.1	+0.3
IBBN	Ibbenburen baz=19,slow=2.4	148.35	353	ePKPbc		PKiKP	23 18 10.1	-0.6
SAHE	Sakarya_HENDEK	148.35	315	⇑P		PKPbc	23 18 09.9	-0.1
ICOR	Ion Corvin	148.38	323	⇓P		PKPbc	23 18 09.7	-0.2
STEB	Steborice	148.41	340	⇑ePKP		PKPbc	23 18 09.0	-0.7
ISR	Istrita	148.42	326	⇑P		PKPbc	23 18 10.5	+0.5
UPC	Upice	148.43	343	⇑ePKP		PKiKP	23 18 10.5	-0.5
DOPR	Dopca	148.43	328	⇓P		PKiKP	23 18 11.0	-0.1
CLZ	Clausthal baz=19,slow=2.4	148.44	350	ePKPbc		PKiKP	23 18 10.5	-0.4
CLL	Collm	148.44	347	ePKPdf		PKPdf	23 18 06.0	+0.5
CLL	comp=Z,29nm,0.7s			⇓iPKPbc		PKPbc	23 18 10.3	+0.6
CLL	comp=Z,14nm,0.9s			i PKPab		PKPab	23 18 14.6	-0.3
CLL				e(SKPdf)			23 20 52.0	
DPC	Dobruska-Polom	148.48	342	⇑ePKP		PKiKP	23 18 11.1	0.0
MLR	Muntele Rosu	148.48	327	⇓P		PKPbc	23 18 10.5	+0.3
MLR	Muntele Rosu	148.48	327		PKPbc	PKPbc	23 18 10.5	+0.3
LANS	Liptovska Anna	148.51	338	ePKP		PKiKP	23 18 12.0	+0.8
LANS				e			23 18 16.7	
KRLC	Kraliky	148.59	341	⇑ePKP		PKiKP	23 18 11.1	-0.3
MORC	Moravsky Berou	148.62	340	⇑P		PKPbc	23 18 10.8	+0.5
MORC	Moravsky Berou	148.62	340			PKPbc	23 18 11.0	-0.4
MORC	Moravsky Berou	148.62	340	ePKP		PKPbc	23 18 10.9	+0.5
BRG	Berggiesshubel baz=19,slow=2.4	148.63	345	ePKPbc		PKiKP	23 18 10.9	-0.4
CJR	Cluj-Napoca	148.75	330	⇑P		PKiKP	23 18 11.3	-0.5
MCH1	Michaelchurch	148.77	6	eP		PKPbc	23 18 10.0	-0.6
NEUB	Neuenburg baz=19,slow=2.4	148.79	348	ePKPbc		PKiKP	23 18 11.3	-0.4
MDB	Medias	148.81	329	⇓P		PKiKP	23 18 11.6	-0.3
MONM	Monmouth	148.95	6	eP		PKPbc	23 18 10.2	-0.8
VOIR		148.97	327	⇓P		PKPbc	23 18 11.6	+0.2
CSS	Mathiatis	148.98	304		PKPbc	PKPbc	23 18 12.0	+0.4
LTVH	Ltavrtes, Hu	148.99	333	⇓P		PKiKP	23 18 12.7	+0.5
MARR	Marisel-Cluj	149.00	331	⇑P		PKPbc	23 18 11.5	0.0
DRGR		149.10	331	⇓P		PKPbc	23 18 11.8	+0.2
TNR	Turnu Rosu	149.21	328	⇓P		PKiKP	23 18 12.4	-0.3
ARR	Arges	149.23	328	⇑P		PKiKP	23 18 13.0	+0.2
PRU	Pruhonice	149.30	344	⇑ePKP		PKiKP	23 18 12.5	-0.2
VRAC	Vranov	149.33	341	⇑P		PKiKP	23 18 12.9	0.0
VRAC	Vranov	149.33	341	ePKP		PKPbc	23 18 12.4	+0.4
KASTN	Kahler Asten baz=19,slow=2.4	149.35	352	ePKPbc		PKiKP	23 18 12.6	-0.2
MOX	Moxa baz=19,slow=2.4	149.36	348	ePKPbc		PKiKP	23 18 12.6	-0.2
PSZ	Piszkesteto	149.38	336			PKiKP	23 18 12.8	-0.3
PSZ					PKPab	PKPab	23 18 20.1	+1.1
JAVC	Velka Javorina	149.38	339	ePKP		PKiKP	23 18 13.8	+0.8
PLN	Plauen baz=19,slow=2.4	149.40	347	ePKPbc		PKiKP	23 18 12.8	-0.2
TANN	Tannenbergstha baz=19,slow=2.4	149.40	347	ePKPbc		PKiKP	23 18 12.9	-0.1
RAZG	Razgrad	149.45	323	⇑P		PKPbc	23 18 12.3	-0.2
KRUC	Moravsky	149.61	341	ePKP		PKiKP	23 18 13.1	-0.3
TREC	Trest	149.67	342	⇑ePKP		PKiKP	23 18 13.4	-0.2
BSZH	Besenyszg	149.74	335	⇓P		PKiKP	23 18 13.8	+0.1
ZVC	Zvikov	149.89	344	⇑ePKP		PKiKP	23 18 13.8	-0.2
ZVC				ePKPAB		PKPab	23 18 22.4	+1.4
MODS	Modra-Piesok	149.93	339	ePKP		PKiKP	23 18 14.8	+0.7
MODS				e			23 18 22.7	
SIRR	Siria	149.97	332	⇑P		PKiKP	23 18 14.1	-0.2
ZIMR		150.02	324	⇓P		PKiKP	23 18 14.1	-0.3
ROTZ	Rotzenmuhle baz=19,slow=2.4	150.06	346	ePKPbc		PKiKP	23 18 14.3	0.0
GZR	Gura Zlata	150.12	330	⇑P		PKPbc	23 18 13.8	-0.3
UCC	Uccle	150.13	357			PKiKP	23 18 14.6	+0.2
UCC	Uccle	150.13	357	dPKP		PKiKP	23 18 14.3	-0.1
MEM	Membach	150.20	355	dPKiKP		PKiKP	23 18 14.6	0.0
BSTI	Sart Tilman	150.26	355	dPKP		PKiKP	23 18 14.9	+0.2
CCA1	Carmenellis	150.28	9	eP		PKPbc	23 18 13.0	-1.2
TNS	Taunus Mts baz=19,slow=2.4	150.30	351	ePKPbc		PKiKP	23 18 14.9	0.0
VLAD	Vladila	150.30	326	⇓P		PKiKP	23 18 15.3	+0.3
KHC	Kasperske Hory	150.33	344	ePKPDF		PKPdf	23 18 10.0	+1.3
KHC				⇑ePKP		PKiKP	23 18 15.3	+0.3
KHC				ePKPAB		PKPab	23 18 24.3	+1.4
KHC	Kasperske Hory	150.33	344			PKiKP	23 18 15.1	+0.2
KHC					PKPab	PKPab	23 18 24.2	+1.3
GRA1	Grafenberg Arr	150.34	348		PKPbc	PKiKP	23 18 15.0	+0.1
GRA1					PKPab	PKPab	23 18 23.9	+1.1
GRF	Grafenberg Arr baz=19,slow=2.4	150.34	348	ePKPbc		PKiKP	23 18 15.2	+0.2
CKRC	Cesky Krumlov	150.43	343	⇑ePKP		PKiKP	23 18 15.3	+0.1
BCLA	Clavier	150.45	355	dPKP		PKPab	23 18 23.3	+0.1
SRE	Strehaia	150.45	328	⇑P		PKiKP	23 18 15.4	+0.1
BHOU	Houvegnez	150.46	355	dPKiKP		PKiKP	23 18 15.3	+0.2
BHOU				dPKP		PKPab	23 18 22.5	-0.8
BZS	Buzias	150.49	331	⇓P		PKPbc	23 18 15.0	+0.1
WET	Wettzell baz=19,slow=2.4	150.49	345	ePKPbc		PKiKP	23 18 15.4	+0.1
BGES	Gesves	150.50	356	dPKP		PKiKP	23 18 15.0	-0.2
WINA	Alland / Wiene SNR=7.5	150.55	340	i PKiKP		PKiKP	23 18 15.8	+0.4
GEC2	GERESS Array S	150.56	344		PKPbc	PKPbc	23 18 15.2	+0.2
GEC2	GERESS Array S baz=19,slow=2.4	150.56	344	ePKPbc		PKiKP	23 18 15.5	-0.1
GERES	GERESS Array B comp=Z,0.4nm,0.6s,baz=48,slow=2.0,SNR=4.5	150.56	344		PKP	PKPdf	23 18 06.8	-2.3
GERES					PKPbc	PKiKP	23 18 15.4	-0.2
GERES	comp=Z,8.6nm,0.8s,baz=15,slow=1.9,SNR=61 GERESS Array B	150.56	344		PKPbc	PKiKP	23 18 15.5	-0.1
BMRD	Maredsous	150.60	356	dPKPdf		PKiKP	23 18 09.5	+0.5
BMRD				dPKP		PKiKP	23 18 15.4	0.0
BMRD				dPKPab		PKPab	23 18 23.9	0.0
PLVB	Pleven	150.60	325	⇓P		PKiKP	23 18 15.5	-0.2
HERR	Herculane	150.67	329	⇓P		PKiKP	23 18 15.4	+0.1
RCHB	Rochefort	150.71	355	dPKP		PKPbc	23 18 14.9	-0.2
CONA	Conrad Observa comp=Z,12nm,0.6s,SNR=12	150.78	340	i PKiKP		PKiKP	23 18 16.1	+0.1
DOU	Dourbes	150.82	356	dPKP		PKiKP	23 18 15.8	0.0
BAIL	Bailesti	150.84	327	⇑P		PKPbc	23 18 13.5	-2.2
RONA	Rosalia, Austr comp=Z,16nm,0.5s,SNR=12	150.84	340	i PKiKP		PKiKP	23 18 16.2	+0.1
BANR	Banloc	150.88	331	⇓P		PKiKP	23 18 16.6	+0.5
ELL	Elmali	150.91	309		PKPbc	PKiKP	23 18 16.7	0.0
BALB	Balikesir	150.93	316		PKPbc	PKiKP	23 18 16.5	+0.1
MANT	Manisa	151.06	313			PKiKP	23 18 17.1	0.0
MDVR	Moldovita	151.08	330	⇓P		PKPbc	23 18 16.2	-0.1
WLF	Walferdange	151.12	354			PKiKP	23 18 17.3	+0.7
WLF	Walferdange	151.12	354	dPKiKP		PKiKP	23 18 17.1	+0.5
WLF	Walferdange	151.12	354	ePKPbc		PKiKP	23 18 17.2	+0.7
	baz=19,slow=2.4							
MORH	Mrgy, Hungar	151.26	335	⇑P		PKPbc	23 18 16.6	0.0
MOA	Molln comp=Z,4.8nm,0.5s,SNR=5.3	151.32	342	i PKiKP		PKPbc	23 18 16.8	0.0
AKAS	Kas	151.34	308		PKPbc	PKPbc	23 18 17.4	+0.1
ARSA	Arzberg	151.48	340		PKPdf	PKPdf	23 18 11.3	+0.9
ARSA					PKPab	PKPab	23 18 29.4	+1.6
ARSA	Arzberg comp=Z,2.2nm,0.6s	151.48	340	ePKiKP		PKPbc	23 18 16.9	-0.2
RDO	Rodhopi	151.53	320		PKPbc	PKPbc	23 18 17.3	-0.1
BIOA	Bad Ischl, Aus comp=Z,7.7nm,0.9s	151.64	343	i PKP		PKPbc	23 18 17.1	-0.4
FUR	Furstenfeldbru baz=19,slow=2.4	151.78	347	ePKPbc		PKiKP	23 18 18.2	+0.2
RJOB	Jochberg baz=19,slow=2.4	151.82	344	ePKPbc		PKPbc	23 18 17.9	0.0
SESA	Seetaler Alpe, SNR=14	151.90	341	i PKiKP		PKPbc	23 18 18.2	-0.1
LESA	Schwarzleotal comp=Z,7.4nm,0.8s	152.14	344	ePKiKP		PKiKP	23 18 18.8	-0.1
SOKA	Soboth comp=Z,5.8nm,0.9s,SNR=5.0	152.15	340	i PKiKP		PKPbc	23 18 18.3	-0.4
BFO	Black Forest	152.17	351		PKPdf	PKPdf	23 18 11.4	0.0
BFO					PKPbc	PKiKP	23 18 18.8	+0.1
BFO					PKPab	PKPab	23 18 30.7	+0.2
KBA	Koelnbreinsper comp=Z,5.1nm,0.6s	152.28	343	ePKiKP		PKPbc	23 18 18.8	-0.3
OBKA	Obir comp=Z,2.7nm,0.6s	152.45	341	i PKP		PKPbc	23 18 18.8	-0.5
WATA	Walderalm comp=Z,5.5nm,0.5s	152.49	346	ePKiKP		PKPbc	23 18 19.3	-0.2
RETA	Reutte comp=Z,2.7nm,0.6s	152.53	347	i PKiKP		PKPbc	23 18 19.5	0.0
WTTA	Wattenberg comp=Z,5.6nm,0.4s,SNR=6.9	152.55	345	i PKiKP		PKPbc	23 18 19.7	0.0
MOTA	Moosalm comp=Z,5.9nm,0.7s	152.59	346	i PKiKP		PKPbc	23 18 19.6	-0.2
MYKA	Terra Mystica comp=Z,5.4nm,0.6s	152.61	342	i PKP		PKPbc	23 18 19.0	-0.7
SQTA	Sank Quirin comp=Z,7.0nm,0.7s	152.69	346	i PKiKP		PKPbc	23 18 19.9	0.0
ABTA	Abfaltersbach comp=Z,11nm,0.6s,SNR=9.6	152.81	344	i PKP		PKPbc	23 18 19.7	-0.5
DAVA	Damuels comp=Z,2.7nm,0.6s	152.91	348	ePKiKP		PKPbc	23 18 20.4	0.0
FETA	Feichten comp=Z,6.0nm,0.7s	152.98	346	i PKiKP		PKiKP	23 18 20.7	+0.1
SENIN	Lac Senin/Sane	154.24	351		PKPdf	PKPdf	23 18 15.8	+1.1
SENIN					PKPab	PKPab	23 18 40.2	+0.5
ESDC	Sonseca Array comp=Z,3.8nm,1.0s,baz=340,slow=4.5,SNR=13	160.68	14		PKPab	PKPab	23 19 07.9	+0.3
ESDC	Sonseca Array	160.68	14		PKPab	PKPab	23 19 08.4	+0.8
TORD	Torodi Ar. Bea comp=Z,1.4nm,0.8s,baz=246,slow=2.8,SNR=6.9	172.25	179		PKP	PKPdf	23 18 30.0	-2.0
TORD					PKPab	PKPab	23 19 59.1	0.0
	comp=Z,0.2nm,0.4s,baz=174,slow=3.9,SNR=1.6							

*ANF **16** 23:10:28.3±0.2,58°.36N×133°.47W,h6km±1km, ML2.5/16, Error ellipse: s-maj=1.4km s-min=1.1km az=46.0*

PGC 16 23:10:30.6±0.3,58°.40N×133°.42W,h9km,ML2.6/12, 58km east of Juneau, Alaska, Usa Southeastern Alaska,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
R32K	Eaglecrest baz=78	0.59	259	P		Pg	23 10 39.3	-2.8
R32K				S		Sg	23 10 46.8	-3.0
BESE	Bessie Mountai	0.78	284	P		Pg	23 10 43.8	-1.7
BESE				S		Sg	23 10 53.6	-2.0
Q32M	Nakina River	0.83	46	P		Pg	23 10 45.7	-0.8
Q32M				S		Sb	23 10 58.1	-0.4
Q32M	Nakina River baz=229	0.83	46	P		Pg	23 10 45.6	-0.9
Q32M				S		Sg	23 10 57.0	-0.2
S32K	Killisnoo baz=31	1.11	214	P		Pg	23 10 48.8	-3.1
S32K				S		Sg	23 11 03.5	-2.9
P32M	Atlin	1.21	353	P		Pb	23 10 51.9	-1.8
P32M				S		Sb	23 11 09.1	-0.3
P32M	Atlin baz=176	1.21	353	P		Pb	23 10 51.8	-1.8
P32M				S		Sb	23 11 09.0	-0.3
R31K	City Hall, Gus	1.22	272	S		Sb	23 11 09.0	-0.6
S34M	Telegraph Cree	1.31	111	S		Sb	23 11 11.1	-1.1
S34M	Telegraph Cree baz=291	1.31	111	P		Pn	23 10 53.0	-2.0
SKAG	Skagway baz=139	1.46	318	S		Sn	23 11 15.2	-1.0
S31K	Pelican baz=73	1.55	255	P		Pn	23 10 55.8	-2.5
S31K				S		Sn	23 11 16.4	-2.2
R33M	Jennings River	1.62	51	Pn		Pn	23 10 59.0	-0.4
R33M				Sn		Sn	23 11 20.1	-0.4
R33M	Jennings River baz=234,SNR=40	1.62	51	Pb		Pn	23 10 59.5	0.0
R33M				Sb		Sb	23 11 21.4	+0.1
SIT	Sitka baz=35	1.69	218	S		Sn	23 11 19.4	-2.5
DLBC	Dease Lake	1.79	87	Pn		Pn	23 11 01.7	0.0
DLBC				Sn		Sn	23 11 23.6	-0.9
DLBC	Dease Lake baz=270,SNR=42	1.79	87	Pb		Pn	23 11 02.1	+0.4
DLBC				Sb		Sb	23 11 26.8	+0.8
P33M	Teslin, Yukon	1.85	9	Pn		Pn	23 11 02.0	-0.5
P33M				Sn		Sn	23 11 26.1	0.0
P33M	Teslin, Yukon baz=192,SNR=16	1.85	9	Pb		Pn	23 11 02.8	+0.3
P33M				S		Sn	23 11 25.9	-0.2
PLBC	Pleasant Camp baz=192	1.86	306	Pn		Pn	23 11 03.2	+0.6
PLBC				Sn		Sn	23 11 25.9	-0.3
PLBC	Pleasant Camp baz=125	1.86	306	Pb		Pn	23 11 02.5	-0.1
PLBC				Sg		Sb	23 11 29.0	+1.0
WRAK	Wrangell Islan	2.07	163	Sn		Sn	23 11 30.2	-1.0
WRAK	Wrangell Islan baz=342	2.07	163	P		Pn	23 11 03.4	-2.0
WRAK				Sb		Sb	23 11 33.1	-0.8
T35M	Bob Quinn	2.22	128	Sn		Sn	23 11 34.5	-0.6
T35M	Bob Quinn baz=310	2.22	128	Sb		Sb	23 11 38.6	+0.2
U33K	Whale Pass baz=354	2.29	176	P		Pn	23 11 06.1	-2.5
WHY	Whitehorse	2.39	343	Pn		Pn	23 11 09.6	-0.4
WHY				Sn		Sn	23 11 38.6	-0.9
WHY	Whitehorse baz=163	2.39	343	P		Pn	23 11 08.2	-1.8
WHY				S		Sn	23 11 39.0	-0.4
P30M	Million Dollar	2.51	315	Pn		Pn	23 11 10.6	-1.0
P30M				Sn		Sn	23 11 41.2	-1.1
P30M	Million Dollar baz=134	2.51	315	Pb		Pn	23 11 13.2	+1.7
P30M				Sb		Sb	23 11 46.5	-0.3
P29M	Windy Craggy	2.55	301	Pn		Pn	23 11 11.2	-0.9
P29M				Sn		Sn	23 11 42.4	-1.0
P29M	Windy Craggy baz=118	2.55	301	Sb		Sb	23 11 48.5	+0.5
O30N	Mendenhall	2.74	331	Pn		Pn	23 11 14.8	0.0
O30N				Sg		Sb	23 11 56.0	+2.5
O30N	Mendenhall baz=151,SNR=19	2.74	331	P		Pn	23 11 14.6	-0.2
O30N				S		Sn	23 11 48.1	+0.1
HYT	Haines Junctio	3.20	321	Sg		Sb	23 12 09.4	+2.7
HYT	Haines Junctio baz=139	3.20	321	Sb		Sb	23 12 08.4	+1.7
N31M	Braeburn, Yuko	3.32	340	Pn		Pn	23 11 21.4	-1.3
N31M				Sg		Sb	23 12 12.8	+2.7
N31M	Braeburn, Yuko baz=219,SNR=6.6	3.32	340	P		Pn	23 11 21.2	-1.5
YUK6	Outpost Mounta	3.58	318	Sn		Sn	23 12 07.9	-1.0
N30M	Aishikik Lake	3.58	331	Sg		Sb	23 12 20.8	+3.0

*IDC **16** 23:25:29.4±1.3,32°.97N×75°.24E,h0km,mb3.5/7, mbtmp3.6/10,ML3.2/3,MS3.2/5, Error ellipse: s-maj=30.8km s-min=20.4km az=65.0*

*GFZ **16** 23:25:33.8±1.8,33°.N±15°×7°.6E±°,h10km,M4.2/11, mb4.2/11, Error ellipse: s-maj=33.5km s-min=8.0km az=163.4,confirmed*

*NDI **16** 23:25:36.3±2.2,32°.99N×75°.90E,h4km±6km,ML3.8, MW3.5,Presumed earthquake*

*NNC **16** 23:25:48.2±4.3,33°.93N×75°.69E,h0km,mb4.1,mpv3.7, Error ellipse: s-maj=34.4km s-min=33.0km az=169.0*

ISC 16 23:25:36.0±1.0,32°.96N±0°.04×75°.88E±0°.03,h25km±8km, n42,σ2s78/46,mb3.4/5,MS3.1/4,7C-3D,Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSSA	Tissa	0.26	118	ePg		Pb	23 25 41.5	-1.1
TSSA				eSg		Sb	23 25 45.6	-1.6
TSSA	comp=N,20μm,0.2s			IAML			23 25 46.6	
TSSA	comp=E,16μm,0.1s			IAML			23 25 46.7	
TSSA	comp=E,19μm,0.2s			IAML			23 25 52.4	
JMU	Jammu	0.90	259	ePg		Pb	23 25 53.9	+0.9
JMU				i Sg		Sn	23 26 06.6	+1.2
JMU	comp=E,737nm,0.6s			IAML			23 26 07.3	
JMU	comp=N,413nm,0.2s			IAML			23 26 07.5	
TLWR	Talawar	1.00	176	eP		Pb	23 25 56.0	+1.2
TLWR				eS		Sn	23 26 12.1	+4.1
ALCI	Alchi Leh	1.66	41	ePg		Pb	23 26 08.9	+2.7
ALCI				i Sg		Sb	23 26 29.6	+2.8
NIL	Nilore	2.30	288	P		Pb	23 26 16.1	-0.8
NIL				S		Sb	23 26 46.2	+1.2
KLP	Kalpa	2.46	125	eP		Pb	23 26 18.8	-1.0
KLP				eS		Sb	23 26 48.8	-1.1
KLP	comp=E,1μm,0.5s			IAML			23 26 56.8	
KLP	comp=E,636nm,0.3s			IAML			23 27 03.0	
UTK	UTTARKASHI	3.12	135	eP		Pn	23 26 26.8	+3.0
UTK				eS		Sn	23 27 03.8	+3.5
UTK	comp=E,863nm,0.2s			IAML			23 27 07.2	
UTK	comp=N,679nm,0.3s			IAML			23 27 07.7	
JOSI	Joshimath	3.95	126	eP		Pn	23 26 38.2	+2.9
JOSI				eS		Sn	23 27 22.0	+1.1
JOSI	comp=E,257nm,0.2s			IAML			23 27 26.3	
JOSI	comp=N,294nm,0.3s			IAML			23 27 26.4	
PTH	Pithoragarh	5.00	131	eP		Pn	23 26 52.1	+2.4
PTH				eS		Sn	23 27 46.0	-0.9
PTH	comp=E,76nm,0.2s			IAML			23 27 51.7	
PTH	comp=N,55nm,0.2s			IAML			23 27 51.8	
LGTI	Lohaghat	5.06	133	ex		x	23 27 01.1	
LGTI				eS		Sn	23 27 48.5	+0.1
LGTI	comp=N,79nm,0.4s			IAML			23 27 50.0	
LGTI	comp=E,82nm,0.4s			IAML			23 27 51.4	
KBL	Kabul	5.91	287	P		Pn	23 27 03.6	+1.4
DRK	Karamyk	7.29	334	P		Pn	23 27 26.0	+4.7
ASAI	AK-SAÝ(Kyrgyzs	7.96	4	P		Pn	23 27 32.7	+2.2
BTK	Batken	8.17	332	P		Pn	23 27 35.5	+2.4
WUS	Wushi	8.64	17	P		Pn	23 27 42.1	+2.4
TARG	Taragay, Kyrgy	8.89	9	P		Pn	23 27 47.1	+3.8
KDJ	Kajisay	9.21	6	P		Pn	23 27 50.8	+3.2
ARK	Arkit	9.36	342	P		Pn	23 27 54.9	+5.5
BOOM	Boomskoye usch	9.51	0	P		Pn	23 27 54.7	+3.0
PRZ	Przheval'sk	9.71	11	P		Pn	23 27 57.9	+3.5
AAK	Ala-Archa comp=E,0.3nm,0.3s,baz=166,slow=10,SNR=3.9	9.72	354	Pn		Pn	23 27 50.6	-3.8
AAK	comp=E,0.4nm,0.3s,baz=270,slow=6.9,SNR=1.3			Sn		Sn	23 29 34.6	-8.4
AAK	comp=E,1.0nm,0.3s Ala-Archa comp=E,3.9nm,1.1s	9.72	354	⇑Pn		Pn	23 27 58.1	+3.6
AAK	comp=E,1.6nm,0.7s			⇑Sn		Sn	23 29 36.4	-6.6
BHPL	Bhopal comp=N,13nm,1.0s	9.78	172	IAML			23 30 46.8	
BHPL	comp=E,45nm,0.8s			IAML			23 30 46.9	
ANVS	Anan'yevo	9.91	8	P		Pn	23 28 00.4	+3.3
PDGK	Podgornoye comp=E,6.8nm,1.1s	10.73	14	⇑Pn		Pn	23 28 10.3	+2.0
PDGK	comp=E,7.7nm,1.0s			⇓Sn		Sn	23 30 04.1	-3.6
KK31	Karatay Array comp=E,5.0nm,0.8s,baz=46,slow=56,SNR=8.7	10.97	339	⇑Pn		Pn	23 28 11.3	-0.2
KK31	comp=E,14nm,1.1s,baz=154,slow=23,SNR=12			⇑Sn		Sn	23 30 08.6	-4.7
BOK	Bokaro	12.68	134	eS		Sn	23 30 48.7	-6.6
BOK	comp=N,139nm,0.3s			IAML			23 30 50.3	
BOK	comp=E,77nm,0.3s			IAML			23 30 50.4	
MAKZ	Makanchi comp=E,5.7nm,1.2s	14.59	17	⇑Pn		P	23 29 04.2	-3.0
MAKZ	comp=E,0.9nm,0.8s			⇓Sn		Sn	23 31 34.9	-6.9
MAKZ	Makanchi	14.

HNR	Honiara	6.05	285	LR	LR	23 38 00.4	
	comp=Z,9.0nm,18.1s,baz=174,slow=42						
KOUNC	Koumac, New Ca	9.54	189	Pn	Pn	23 36 20.5	+0.6
DZM	Mont Dzumac	10.94	177	Pn	Pn	23 36 38.9	-0.3
	0.9nm,0.3s,baz=331,slow=19,SNR=5.5						
DZM				Sn	Sn	23 38 36.8	-3.4
	baz=201,slow=8.1						
	3.3nm,0.5s						
ONTNC	Ouen Toro	11.18	177	Pn	Pn	23 36 43.0	+0.6
OUENC	Ouen Island, N	11.31	175	Pn	Pn	23 36 43.1	-1.1
EIDS	Eidsvold	19.94	223		Pn	23 38 34.8	+0.2
EIDS				IAmb	IAmb	23 38 36.1	
	comp=Z,13nm,0.8s						
CTA	Charters Tower	20.88	242	P	P	23 38 43.7	+1.0
	comp=Z,2.8nm,0.7s,baz=58,slow=9.9,SNR=2.0						
	comp=Z,2.8nm,0.7s						
CTAO	Charters Tower	20.88	242	P	P	23 38 43.5	+0.9
CTAO				IAmb	IAmb	23 39 15.4	
	comp=Z,14nm,1.5s						
ARMA	Armidale	23.35	212	P	P	23 39 09.6	+1.1
ARMA				IAmb	IAmb	23 39 53.7	
	comp=Z,22nm,1.4s						
INKA	Innaminka	28.81	231	P	P	23 39 58.3	+0.5
H11S2	WAKE ISLAND Hy	29.40	2	T	T	00 10 19.6	
	baz=181,slow=76						
H11S3	WAKE ISLAND Hy	29.40	2	T	T	00 10 20.4	
	baz=181,slow=76						
H11S1	WAKE ISLAND Hy	29.41	2	T	T	00 10 21.0	
	baz=181,slow=76						
H11N1	WAKE ISLAND Hy	30.62	2	T	T	00 11 52.7	
	baz=182,slow=76						
H11N3	WAKE ISLAND Hy	30.62	2	T	T	00 11 53.0	
	baz=182,slow=76						
H11N2	WAKE ISLAND Hy	30.64	2	T	T	00 11 54.1	
	baz=182,slow=76						
NNZ	Nelson	30.74	169	P	P	23 40 15.9	+1.2
WR8	Warramunga Arr	31.43	250	P	P	23 40 20.6	-0.5
WR8				IAmb	IAmb	23 40 22.0	
	comp=Z,5.8nm,1.1s						
WB0	Warramunga Arr	31.49	250	P	P	23 40 21.5	-0.1
WRA	Warramunga Arr	31.58	250	P	P	23 40 21.5	-0.9
	comp=Z,4.7nm,0.9s,baz=80,slow=9.2,SNR=21						
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	31.58	250	P	P	23 40 21.7	-0.7
TOO	Toolangi	32.10	211	P	P	23 40 27.8	+1.0
TOO				IAmb	IAmb	23 41 09.5	
	comp=Z,5.5nm,1.4s						
GVZ	Greta Valley S	32.37	170	P	P	23 40 31.0	+1.9
ASAR	Alice Springs	32.88	243	P	P	23 40 33.2	-0.5
	comp=Z,1.3nm,0.6s,baz=66,slow=10,SNR=12						
	comp=Z,1.3nm,0.6s						
BBOO	Buckleboo	34.88	227	P	P	23 40 51.2	+0.1
FITZ	Fitzroy Crossi	39.48	255	P	P	23 41 29.6	-0.6
	comp=Z,9.6nm,0.7s,baz=93,slow=5.7,SNR=21						
	comp=Z,9.6nm,0.7s						
FITZ	Fitzroy Crossi	39.48	255	P	P	23 41 30.0	-0.1
MBWA	Marble Bar	45.29	251	P	P	23 42 16.1	-1.3
M16K	Timber Creek	77.06	17	P	P	23 45 52.4	+0.8
M16K				IAmb	IAmb	23 45 57.1	
	comp=Z,3.6nm,1.1s						
M17K	Holitna River	77.81	17	P	P	23 45 53.8	-2.0
ULN	Ulaanbaatar	78.40	324	P	P	23 45 58.1	-1.4
ULN				IAmb	IAmb	23 46 00.4	
	comp=Z,2.3nm,1.2s						
K17K	Iditarod	78.63	16	P	P	23 45 57.5	-2.8
K17K				IAmb	IAmb	23 46 36.8	
	comp=Z,8.8nm,1.5s						
L18K	Granite Mounta	78.67	17	P	P	23 45 59.6	-1.0
L18K				IAmb	IAmb	23 46 08.5	
	comp=Z,2.6nm,1.2s						
QSPA	South Pole Qui	78.92	180	P	P	23 46 03.0	+0.8
QSPA				IAmb	IAmb	23 46 30.4	
	comp=Z,2.1nm,1.1s						
H17K	Granite Mounta	80.04	14	P	P	23 46 06.1	-1.8
H17K				IAmb	IAmb	23 46 23.2	
	comp=Z,4.1nm,1.4s						
CAST	Castle Rocks	80.95	18	P	P	23 46 12.6	-0.3
ILAR	Eielson Array	83.51	18	P	P	23 46 24.5	-1.7
	comp=Z,0.7nm,0.8s,baz=225,slow=6.5,SNR=7.5						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	85.96	50	P	P	23 46 41.0	+1.6
	comp=Z,0.7nm,0.7s,baz=225,slow=8.2,SNR=4.4						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	93.62	317	P	P	23 47 15.4	+0.3
	comp=Z,0.4nm,0.8s,baz=104,slow=4.6,SNR=2.9						
	comp=Z,0.4nm,0.8s						

IDC ***16*** *23:34:19.0±0.9, 13°.50N×119°.86E, h0km, mb3.8/7, mbtmp3.8/7, MS3.2/3, Error ellipse: s-maj=23.1km s-min=18.4km az=69.0*
MAN ***16*** *23:34:23.0, 13°.59N×120°.07E, h19km, MS2.9*
ISC 16 23:34:21.6±1.0, 13°.5N±0°.1×119°.99E±0°.07, h16km, n14, σ1s17/12, mb3.7/7, MS3.2/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.93	92	eP	Pb	23 34 39.7	+0.2
PGP				eS	Sb	23 34 52.1	+0.5
TGY	Tagaytay City	1.07	58	Pg	Pb	23 34 42.3	+0.4
	144nm,0.3s,baz=227,slow=19,SNR=19						
TGY				Lg	Lg	23 34 54.5	
	129nm,0.3s,baz=133,slow=17,SNR=3.0						
LQP	Lukban	1.60	69	eP	Pn	23 34 50.2	+0.8
LQP				eS	Sn	23 35 08.0	-2.0
GQP	Guinayangan	2.41	81	eP	Pn	23 34 52.9	-7.5
KSRS	Korea Array	24.84	15	LR	LR	23 50 10.2	
	comp=Z,33nm,18.5s,baz=205,slow=38						
SONM	Songino Array	36.02	344	P	P	23 41 23.9	+1.7
	0.5nm,0.6s,baz=151,slow=9.9,SNR=1.5						
	0.5nm,0.6s						
WRA	Warramunga Arr	36.14	157	P	P	23 41 23.0	-0.3
	2.3nm,0.7s,baz=336,slow=9.4,SNR=17						
	2.3nm,0.7s						
ASAR	Alice Springs	39.40	160	P	P	23 41 51.2	+0.3
	1.5nm,0.7s,baz=341,slow=7.4,SNR=13						
	1.5nm,0.7s						
TLY	Talaya	40.26	344	LR	LR	23 59 37.4	
	comp=Z,54nm,19.0s,baz=172,slow=38						
MKAR	Makanchi Array	45.76	324	P	P	23 42 42.0	-0.4
	0.5nm,0.9s,baz=120,slow=8.5,SNR=2.8						
	0.5nm,0.9s						
PETK	Petropavlovsk-	49.50	29	LR	LR	00 03 34.3	
	comp=Z,25nm,21.7s,baz=280,slow=35						
BVAR	Borovoye Array	55.52	326	P	P	23 43 55.1	-0.8
	0.8nm,0.6s,baz=121,slow=7.6,SNR=2.8						
	0.8nm,0.6s						
ARCES	ARCESS Array B	78.99	339	P	P	23 46 22.6	-1.8
	0.4nm,0.5s,baz=76,slow=5.1,SNR=4.0						
	0.4nm,0.5s						
FINES	FINESS Array B	80.09	331	P	P	23 46 31.0	+0.6
	0.7nm,0.8s,baz=65,slow=4.7,SNR=1.6						
	0.7nm,0.8s						

SNET ***16*** *23:44:49.8±1.8, 12°.90N×87°.38W, h5km, ML3.3, Presumed earthquake*
CATAC ***16*** *23:44:50.6±0.3, 13°.N±2°×8°.7W±°, h4km±1km, M3.5/18, MLv3.5/18, Error ellipse: s-maj=4.7km s-min=2.3km az=27.9, confirmed*
ISC 16 23:44:50.3±0.9, 12°.92N±0°.04×87°.38W±0°.02, h10km±9km, n27, σ0s61/45, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.18	289	P	Pg	23 44 54.5	+0.2
CSGN				S	Sg	23 44 57.5	+0.5
CRIN	San Cristobal	0.39	123	P	Pb	23 45 00.0	+0.7
CRIN				S	Sb	23 45 05.7	+0.3
QUEN	Al S del Volca	0.61	122	P	Pg	23 45 01.4	-0.8
QUEN				S	Sg	23 45 10.5	+0.3
TEL3	Telica 3	0.63	123	P	Pn	23 45 05.2	-0.1
LCND	La Caada	0.63	308	P	Pg	23 45 02.6	+0.1
LCND	La Caada	0.63	308	eP	Pg	23 45 02.4	-0.1
INTP	Intipuca	0.71	293	eP	Pg	23 45 03.7	-0.4
INTP				eS	Sg	23 45 13.6	+0.2
ROCN	Rota Cerro Neg	0.74	122	P	Pg	23 45 02.7	-1.9
ROCN				S	Sg	23 45 13.7	-0.5
ILCN	San Idelfonso	0.75	117	P	Pb	23 45 05.5	+0.1
ILCN				S	Sb	23 45 16.0	+0.4
CNGN	Cerro Negro	0.79	122	P	Pb	23 45 06.1	0.0
CNGN				S	Sb	23 45 17.0	+0.2
CNGA	Al SSO del Vol	0.79	122	P	Pb	23 45 06.2	+0.1
MACN	El Madrono	0.82	123	P	Pb	23 45 06.7	0.0
MACN				S	Sb	23 45 18.3	+0.4
MOM3	MOM3	0.94	115	P	Pb	23 45 08.9	+0.3
MOM3				S	Sb	23 45 22.0	+0.9
MOMN	Momotombo	0.96	121	P	Pb	23 45 09.2	0.0
MOMN				S	Sb	23 45 22.9	+0.9
MOM2	El Cardon	1.00	118	P	Pb	23 45 09.8	+0.2
MOM2				S	Sn	23 45 24.9	+0.5
COPN	Copaltepe	1.06	133	P	Pg	23 45 10.5	-0.3
PACA	Pacayal	1.07	301	P	Pg	23 45 10.2	-0.7
PACA				S	Sg	23 45 25.1	+0.3
PACA	Pacayal	1.07	301	eP	Pg	23 45 10.0	-0.9
OCON	Estacion meteo	1.13	51	P	Pg	23 45 11.5	-0.6
OCON				S	Sg	23 45 26.7	-0.1
TECA	Tecapa	1.23	298	eP	Pg	23 45 12.6	-1.4
RCFN	Al S de San Ju	1.29	62	P	Pg	23 45 14.6	-0.6
RCFN				S	Sg	23 45 32.0	0.0
RCON	San Juan de Ri	1.32	65	P	Pn	23 45 14.8	-0.2
RCON				S	Sb	23 45 33.3	+0.9
RCVN	Varillal2	1.33	60	P	Pn	23 45 14.9	-0.2
RCVN				S	Sg	23 45 33.2	-0.1
RCPN	Sur Rio San Ju	1.39	64	P	Pn	23 45 16.2	+0.3
MATN	Matagalpa	1.42	89	P	Pn	23 45 16.8	+0.6
MATN				S	Sb	23 45 35.6	+0.4
SJTE	Alcalda de S	1.73	294	eP	Pn	23 45 20.4	0.0
SJTE				eS	Sb	23 45 44.6	+0.7
SBLS	San Blas	2.37	293	eP	Pb	23 45 31.9	-1.2

ANF ***17*** *00:20:24.9±0.1, 58°.37N×133°.47W, h6km±1km, ML2.6/16, Error ellipse: s-maj=0.9km s-min=0.7km az=177.0*
AEIC ***17*** *00:20:25.5±1.6, 58°.36N±0°.02×133°.49W±0°.03, h1km±7km, Error ellipse: s-maj=2.3km s-min=2.0km az=215.0*
NEIC 17 00:20:25.1±0.8, 58°.37N±0°.02×133°.45W±0°.02, h5km±2km, ML2.8/42, ML2.2(AEIC), Error ellipse: s-maj=3.1km s-min=3.0km az=190.0, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIS	Juneau Island	0.50	260		Pg	00 20 34.5	-0.2
JIS					Sg	00 20 41.0	-0.2
R32K	Eaglecrest	0.57	261	Pg	Pg	00 20 35.9	-0.2
R32K				Sg	Sg	00 20 43.5	0.0
R32K	Eaglecrest	0.57	261	P	Pg	00 20 35.6	-0.4
	baz=81						
R32K				S	Sg	00 20 43.3	-0.2
	baz=81						
BESE	Bessie Mountai	0.77	287	Pg	Pg	00 20 39.7	-0.1
BESE				Sg	Sg	00 20 49.8	0.0
Q32M	Nakina River	0.86	46	Pg	Pg	00 20 41.7	+0.2
Q32M	Nakina River	0.86	46	P	Pg	00 20 41.7	+0.2
	baz=226,SNR=31						
Q32M				S	Sb	00 20 53.7	-0.7
	baz=226						
S32K	Killisnoo	1.08	214	Pg	Pg	00 20 45.7	-0.1
S32K				Sg	Sb	00 21 00.8	+0.1
S32K				IAML		00 21 03.7	
	comp=E,98nm,0.6s						
S32K				IAML		00 21 03.9	
	comp=N,77nm,0.5s						
S32K	Killisnoo	1.08	214	P	Pg	00 20 45.2	-0.6
	baz=34,SNR=9.2						
S32K				S	Sb	00 21 00.6	-0.1
	baz=34						
R31K	City Hall, Gus	1.21	273	S	Sb	00 21 04.3	0.0
	baz=92						
P32M	Atlin	1.23	354	Pg	Pg	00 20 48.4	-0.3
P32M				Sg	Sn	00 21 06.4	+0.3
P32M	Atlin	1.23	354	P	Pg	00 20 48.4	-0.3
	baz=173,SNR=32						
P32M				S	Sb	00 21 05.4	+0.3
	baz=173						
S34M	Telegraph Cree	1.31	109		Pn	00 20 49.6	-0.4
S34M				Sg	Sb	00 21 07.3	+0.1
S34M				IAML		00 21 13.4	
	comp=E,160nm,0.8s						
S34M				IAML		00 21 13.6	
	comp=N,110nm,0.9s						
S34M	Telegraph Cree	1.31	109	P	Pn	00 20 49.5	-0.5
	baz=291,SNR=28						
S34M				S	Sn	00 21 08.2	+0.3
	baz=291						
SKAG	Skagway	1.47	319	Pn	Pn	00 20 51.9	-0.3
SKAG				IAML		00 21 17.2	
	comp=E,80nm,0.7s						
SKAG	Skagway	1.47	319	S	Sg	00 21 12.0	-0.1
	baz=138						
S31K	Pelican	1.53	256	Pn	Pn	00 20 52.7	-0.3
S31K				IAML		00 21 17.4	
	comp=E,44nm,1.0s						
S31K				IAML		00 21 20.9	
	comp=N,39nm,1.1s						
S31K	Pelican	1.53	256	Pb	Pn	00 20 53.3	+0.3
	baz=74						
S31K				S	Sn	00 21 13.2	-0.1
	baz=74						
R33M	Jennings River	1.65	50	Pn	Pn	00 20 55.0	+0.2
R33M				IAML		00 21 21.0	
	comp=N,70nm,0.8s						
R33M				IAML		00 21 47.4	
	comp=E,63nm,1.1s						
R33M	Jennings River	1.65	50	Pb	Pb	00 20 55.9	-0.1
	baz=232,SNR=49						
R33M				Sb	Sg	00 21 18.9	+0.9
	baz=232						
SIT	Sitka	1.66	218	Pn	Pn	00 20 54.9	+0.2
SIT				IAML		00 21 22.6	
	comp=E,57nm,0.8s						
SIT				IAML		00 21 23.6	
	comp=N,66nm,1.0s						
SIT	Sitka	1.66	218	Pb	Pb	00 20 55.4	-0.6
	baz=37						
SIT				S	Sb	00 21 16.8	-0.3
	baz=37						
DLBC	Dease Lake	1.80	86		Pb	00 20 59.0	+0.4
DLBC	Dease Lake	1.80	86	Pb	Pb	00 20 58.6	0.0
	baz=269,SNR=27						
DLBC				Sb	Sg	00 21 22.8	-0.1
	baz=269						
PLBC	Pleasant Camp	1.87	307	Pb	Pb	00 20 59.5	-0.2
	baz=125,SNR=12						
PLBC				Sb	Sg	00 21 24.5	-0.5
	baz=125						
P33M	Teslin, Yukon	1.88	10	Pn	Pn	00 20 58.4	+0.4
P33M				IAML		00 21 28.6	
	comp=N,25nm,0.8s						
P33M	Teslin, Yukon	1.88	10	Pb	Pb	00 20 59.8	-0.1
	baz=190,SNR=17						
P33M				Sb	Sg	00 21 24.6	-0.7
	baz=190						
WRAK	Wrangell Islan	2.04	163	Pn	Pn	00 21 00.0	0.0
WRAK				IAML		00 21 53.4	
	comp=N,63nm,0.9s						
WRAK				IAML		00 22 17.7	
	comp=N,97nm,0.8s						
WRAK	Wrangell Islan	2.04	163	Sb	Sg	00 21 30.3	-0.3
	baz=344						
T35M	Bob Quinn	2.21	128	Pn	Pn	00 21 02.6	+0.2
T35M	Bob Quinn	2.21	128	Pb	Pb	00 21 05.0	-0.5
	baz=310,SNR=7.3						
U33K	Whale Pass	2.27	175	Pn	Pn	00 21 02.7	-0.4
U33K				IAML		00 22 27.4	
	comp=N,54nm,0.7s						
U33K	Whale Pass	2.27	175	Pb	Pb	00 21 06.7	+0.4
	baz=356						
WHY	Whitehorse	2.41	343	Pn	Pn	00 21 06.2	+1.0
WHY				IAML		00 22 32.3	
	comp=E,131nm,0.9s						
WHY				IAML		00 22 36.6	
	comp=N,90nm,0.8s						
WHY	Whitehorse	2.41	343	Pb	Pb	00 21 08.1	-0.9
	baz=162						
P30M	Million Dollar	2.52	316	Pb	Pb	00 21 10.1	-0.7
	baz=133						
O30N	Mendenhall	2.76	332	Pn	Pn	00 21 11.0	+1.0
O30N				IAML		00 22 53.5	
	comp=N,77nm,1.0s						
O30N	Mendenhall	2.76	332	P	Pn	00 21 10.2	+0.3
	baz=150						
O29M	Mount Kennedy	3.27	309	Pn	Pn	00 21 17.5	+0.5
O29M				IAML		00 23 09.1	
	comp=N,60nm,0.9s						
N31M	Braeburn, Yuko	3.34	340	Pn	Pn	00 21 19.2	+1.2
N30M	Aishikik Lake	3.60	331	Pn	Pn	00 21 23.0	+1.5
M31M	Drury Creek, Y	3.88	353	Pn	Pn	00 21 25.9	+0.6
MMPY	Sheldon Lake,	4.40	13	Pn	Pn	00 21 31.9	-0.6
L29M	L29M	5.28	336	Pn	Pn	00 21 45.6	+1.0
J30M	Hart River	6.38	349	Pn	Pn	00 22 00.6	+0.8
I30M	Mount Dempster	7.02	350	Pn	Pn	00 22 10.7	+2.2
K27K	Chicken	7.04	327	Pn	Pn	00 22 10.9	+2.3
H31M	Peel River	7.48	357	Pn	Pn	00 22 15.7	+1.0
G31M	Satah River	8.60	358	Pn	Pn	00 22 31.5	+1.6
G29M	Pine Creek	8.83	348	Pn	Pn	00 22 34.6	+1.5

ISK ***17*** *00:21:08.8, 38°.41N×26°.71E, h10km, ML2.6/11*
AFAD ***17*** *00:21:09.1, 38°.38N×26°.68E, h7km±1km, ML2.2*
ISC 17 00:21:09.3±0.9, 38°.40N±0°.02×26°.71E±0°.03, h12km±8km, n21, σ0s37/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEYE	Izmir, Urla-Ze	0.23	225	P	Pg	00 21 13.9	-0.2
ZEYE				S	Sg	00 21 17.7	+0.4
KRBN	Karaburun	0.23	329	Pg	Pg	00 21 13.9	-0.3
KRBN				Sg	Sg	00 21 17.9	+0.4
BLCB	Balcova	0.27	93	Pg	Pg	00 21 14.7	-0.1
BAGT	Foa	0.28	24	P	Pg	00 21 15.4	+0.2
BAGT				IAML		00 21 20.0	
	comp=E,492nm,0.5s						
BAGT				S	Sb	00 21 20.2	-0.7
FOCM	Foa	0.32	4	Pg	Pg	00 21 15.2	-0.5
FOCM				Sg	Sg	00 21 20.1	+0.1
KARB	zmir-Karabur	0.35	319	P	Pg	00 21 16.1	-0.3
KARB				S	Sg	00 21 21.7	+0.6
KARB				IAML		00 21 22.0	
	comp=N,376nm,0.1s						
DGB	zmir	0.37	158	P	Pg	00 21 16.6	-0.2
DGB				S	Sg	00 21 21.8	+0.1
CHOS	Chios island	0.51	269	Pg	Pg	00 21 19.2	-0.1
CAMT	Merkez	0.59	53	P	Pg	00 21 21.0	+0.2
CAMT				S	Sb	00 21 29.7	-0.2
CAMT				IAML		00 21 30.0	
	comp=E,123nm,0.3s						
CAMT				IAML		00 21 31.0	
	comp=N,168nm,0.4s						
DUVT	Torbali	0.61	107	P	Pb	00 21 21.5	-0.4
DUVT				S	Sb	00 21 30.4	-0.1
DUVT				IAML		00 21 33.0	
	comp=E,130nm,0.3s						
ZEDA	zmir-Bergama	0.64	27	P	Pg	00 21 21.5	-0.3
ZEDA				S	Sb	00 21 30.9	-0.3
ZEDA				IAML		00 21 35.0	
	comp=N,211nm,0.3s						
ZEDA				IAML		00 21 35.0	
	comp=E,197nm,0.4s						
DKL	Dikili	0.69	13	Pg	Pg	00 21 22.6	-0.1
KUSD	Kusadasi-Aydin	0.70	139	Pg	Pb	00 21 23.1	-0.4
KUSD				Sg	Sb	00 21 33.3	+0.1
GCAM	G?zelcami?	0.81	149	Pg	Pg	00 21 24.7	-0.3
GCAM	G?zelcami?	0.81	149	P	Pg	00 21 24.8	-0.1
GCAM				S	Sb	00 21 36.1	-0.1
GCAM				IAML		00 21 38.0	
	comp=N,94nm,0.3s						
GCAM				IAML		00 21 39.0	
	comp=E,71nm,0.3s						
SOMA	Soma-Manisa	1.00	40	Pg	Pg	00 21 28.3	-0.2
AYDB	Zeytinkoy-Aydi	1.04	115	Pg	Pb	00 21 29.2	0.0
ODEM	Odemis-Izmir	1.08	96	Pn	Pg	00 21 29.9	-0.3
GORD	Gordes-Manisa	1.26	66	Pn	Pg	00 21 32.5	-0.3
GORD				Sn	Sn	00 21 50.7	+1.0
EZN	Ezine	1.46	348	Pn	Pn	00 21 35.7	+0.3
BOZC	Bozcaada	1.53	341	Pn	Pn	00 21 36.5	+0.1

IDC ***17*** *00:56:27.9±1.1, 11°.62N×94°.87E, h0km, mb3.5/9, mbtmp3.6/10, ML4.2/1, MS3.3/3, Error ellipse: s-maj=39.8km s-min=19.8km az=56.0*
BKK ***17*** *00:56:37.0±1.3, 12°.N±10°×9°.6E±1°.9, h21km±30km, M4.1/6, Mjma3.7/6, ML4.2/6, MLv4.1/6*
ISC 17 00:56:31.6±1.0, 11°.6N±0°.1×95°.1E±0°.1, h24km, n14, σ1s19/14, mb3.6/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RNTT	Ranong	4.02	124	P	Pn	00 57 32.3	+0.6
RNTT				S	Sn	00 58 15.5	-2.5
PKDT	Phuket	4.91	139	P	Pn	00 57 45.3	+1.2
PKDT				S	Sn	00 58 39.1	-1.1
CMAR	Chiang Mai Arr	7.73	28	Pn	Pn	00 58 23.1	+0.4
	0.9nm,0.3s,baz=206,slow=13,SNR=5.8						
CMAR				LR	LR	01 01 13.3	
	comp=Z,87nm,21.0s,baz=215,slow=36						
	1.8nm,0.3s						
AAK	Ala-Archa	35.70	334	LR	LR	01 20 27.7	
	comp=Z,63nm,18.2s,baz=153,slow=40						
MKAR	Makanchi Array	36.67	345	P	P	01 03 36.9	+0.4
	0.4nm,0.8s,baz=149,slow=6.7,SNR=4.0						
	0.4nm,0.8s						
SONM	Songino Array	37.30	13	P	P	01 03 42.1	+0.1
	0.7nm,0.9s,baz=182,slow=8.9,SNR=4.0						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	41.17	344	P	P	01 04 13.3	-0.7
	0.1nm,0.5s,baz=162,slow=6.8,SNR=6.1						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	42.98	351	P	P	01 04 29.1	+0.3
	0.4nm,0.3s,baz=188,slow=8.7,SNR=4.0						
	0.4nm,0.3s						
WRA	Warramunga Arr	49.78	129	P	P	01 05 23.9	+1.2
	0.7nm,1.0s,baz=304,slow=7.3,SNR=2.8						
	0.7nm,1.0s						
ASAR	Alice Springs	51.70	133	P	P	01 05 38.2	+1.0
	0.5nm,0.7s,baz=311,slow=6.7,SNR=9.9						
	0.5nm,0.7s						
BRTR	Keskin Array B	60.74	309	P	P	01 06 40.8	-1.0
	0.4nm,0.7s,baz=142,slow=7.2,SNR=12						
	0.4nm,0.7s						
FINES	FINESS Array B	69.85	331	P	P	01 07 40.3	+0.2
	1.1nm,1.0s,baz=72,slow=6.2,SNR=8.1						
	1.1nm,1.0s						
MATP	Matopo	72.81	244	LR	LR	01 34 47.7	
	comp=Z,52nm,21.9s,baz=58,slow=32						
HFS	Hagfors	75.70	329	P	P	01 08 13.7	-1.2
	0.7nm,0.6s,baz=88,slow=10,SNR=6.9						
	0.7nm,0.6s						

IDC ***17*** *01:08:17.7±0.9, 5°.53S×154°.45E, h118km±7km, mb3.7/11, mbtmp4.1/13, MS3.0/3, Error ellipse: s-maj=20.3km s-min=14.6km az=84.0*
NEIC ***17*** *01:08:19.0±1.7, 5°.5S±0°.1×154°.47E±0°.07, h126km±8km, mb4.4/10, Error ellipse: s-maj=15.1km s-min=10.9km az=179.0*
ISC 17 01:08:18.0±0.6, 5°.52S±0°.07×154°.48E±0°.09, h118km, n34, σ0s96/31, mb4.0/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.65	300		Pn	01 09 00.7	+1.0
PMG	Port Moresby	8.22	242	P	Pn	01 10 14.7	+0.3
	24nm,0.6s,baz=47,slow=8.4,SNR=3.3						
PMG				S	Sn	01 11 45.5	-0.2
	67nm,0.5s,baz=351,slow=17,SNR=8.7						
PMG				LR	LR	01 13 20.0	
	com

LTZ	Lake Taylor	40.32	160	P	P	01 15 44.1	+0.2
JOW	Kunigami	40.96	323	LR	LR	01 31 29.6	
	comp=Z,59nm,20.6s,baz=140,slow=34						
KSRS	Korea Array	49.40	332	P	P	01 16 55.6	-0.2
	comp=Z,0.5nm,0.4s,baz=156,slow=10,SNR=1.9						
	comp=Z,0.5nm,0.4s						
PEA0B	Petropavlovsk-	58.47	2	P	P	01 17 59.9	-1.5
PEA0B				IAmb	IAmb	01 18 36.5	
	comp=Z,10nm,1.2s						
PETK	Petropavlovsk-	58.47	2	P	P	01 17 58.8	-2.6
CMAR	Chiang Mai Arr	59.69	295	P	P	01 18 10.4	-0.1
	comp=Z,0.9nm,0.3s,baz=116,slow=5.0,SNR=6.7						
	comp=Z,0.9nm,0.3s						
GTA2	Gaotai	67.39	317	*eP*	P	01 19 02.6	+1.6
GTA2				pP	PcP	01 19 07.3	-20
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	67.82	327	P	P	01 19 03.7	+0.2
	comp=Z,0.9nm,0.9s,baz=130,slow=5.8,SNR=3.0						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	72.06	178	P	P	01 19 28.6	-0.2
	comp=Z,1.8nm,0.8s,baz=350,slow=5.7,SNR=12						
	comp=Z,1.8nm,0.8s						
VNDA	Vanda	72.06	178	P	P	01 19 28.6	-0.2
VNDA				IAmb	IAmb	01 19 30.1	
	comp=Z,2.8nm,0.9s						
OHAK	Old Harbor	75.44	26	P	P	01 19 49.9	+1.2
OHAK				IAmb	IAmb	01 19 50.6	
	comp=Z,3.8nm,0.9s						
IMAR	Indian Mountai	80.51	19	P	P	01 20 17.8	+1.2
MKAR	Makanchi Array	81.96	319	P	P	01 20 24.7	-0.1
	comp=Z,0.7nm,0.7s,baz=93,slow=6.1,SNR=6.7						
MKAR				pP	pP	01 20 55.1	+1.1
	comp=Z,0.7nm,0.7s,baz=106,slow=6.9,SNR=5.1						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	82.20	22	P	P	01 20 24.9	-0.7
	comp=Z,0.4nm,0.6s,baz=250,slow=5.0,SNR=5.1						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	84.45	180	P	P	01 20 37.1	-0.1
	comp=Z,6.0nm,0.7s,baz=319,slow=1.2,SNR=30						
QSPA				pP	pP	01 21 07.5	+0.1
	comp=Z,2.4nm,0.7s,baz=35,slow=3.0,SNR=3.8						
	comp=Z,6.0nm,0.7s						
QSPA	South Pole Qui	84.45	180	P	P	01 20 37.2	-0.1
QSPA				IAmb	IAmb	01 20 38.1	
	comp=Z,8.2nm,0.8s						
KURBB	Kurchatov Arra	85.39	322	P	P	01 20 41.5	-0.6
	comp=Z,0.2nm,0.5s,baz=103,slow=4.7,SNR=4.4						
KURBB				pP	pP	01 21 11.4	-0.1
	comp=Z,0.5nm,0.8s,baz=108,slow=3.7,SNR=4.7						
	comp=Z,0.2nm,0.5s						
MAW	Mawson	85.55	203	P	P	01 20 42.0	-0.6
	comp=Z,2.9nm,0.8s,baz=111,slow=7.2,SNR=4.6						
	comp=Z,2.9nm,0.8s						
MAW	Mawson	85.55	203	IAmb	IAmb	01 20 43.4	
	comp=Z,1.0nm,1.2s						
TORD	Torodi Ar. Bea	152.11	288	pPKPbc	pPKPbc	01 28 31.1	-0.7
	comp=Z,0.5nm,0.6s,baz=28,slow=2.9,SNR=2.8						

IDC ***17*** *01:14:02.1±2.7,33°.20S×177°.84W, h0km, mb3.9/1, mbtmp3.9/2, ML3.5/1, Error ellipse: s-maj=88.3km s-min=34.6km az=125.0*
WEL ***17*** *01:14:04.4±0.6,33°.5S±10°×17°.9W±2°.3, h12km, M4.5/7, ML4.6/8, MLv4.5/7, Error ellipse: s-maj=32.7km s-min=4.0km az=111.2*

ISC 17 01:14:03.9±1.1,**32°.8S**±0°.1×**178°.9W**±0°.2,**h10**km,**n20,** σ2**§08**/32,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.59	14	P	Pn	01 14 59.3	-0.3
GLKZ				S	Sn	01 15 42.6	+0.6
WMGZ	Waiomatatini S	5.50	203	P	Pn	01 15 26.0	+0.2
WMGZ				S	Sn	01 16 30.6	+1.5
PKGZ	Pakihiroa	5.66	205	P	Pn	01 15 28.4	+0.4
PKGZ				S	Sn	01 16 35.2	+2.1
HAZ	Te Kaha	5.67	208	P	Pn	01 15 29.9	+1.7
HAZ				S	Sn	01 16 38.3	+5.0
RUGZ	Raukumara Rang	5.89	207	P	Pn	01 15 31.5	+0.2
RUGZ				S	Sn	01 16 41.3	+2.3
TWGZ	Tauwhareparae	5.97	204	S	Sn	01 16 42.6	+1.8
CNGZ	Carnagh Statio	6.17	202	P	Pn	01 15 33.9	-1.2
CNGZ				S	Sn	01 16 46.4	+0.7
TKGZ	Te Karaka	6.25	204	S	Sn	01 16 47.4	-0.2
MWZ	Matawai	6.27	207	P	Pn	01 15 36.9	-0.4
MWZ				S	Sn	01 16 49.2	+0.9
URZ	Urewera	6.38	210	Pn	Pn	01 15 39.6	+1.8
	0.9nm,0.3s,baz=266,slow=6.8,SNR=9.9						
URZ				Sn	Sn	01 16 53.6	+2.9
	7.6nm,0.3s,baz=282,slow=21,SNR=14						
	8.0nm,0.7s						
URZ	Urewera	6.38	210	P	Pn	01 15 39.2	+1.4
URZ				S	Sn	01 16 52.1	+1.5
ABAZ	Army Bay	6.43	232	P	Pn	01 15 37.8	-0.8
RTZ	Ruatahuna	6.73	209	P	Pn	01 15 43.4	+0.5
RTZ				S	Sn	01 17 00.8	+1.2
BFZ	Birch Farm	8.81	205	P	Pn	01 15 59.1	-1.8
BFZ				S	Sn	01 17 46.9	-3.7
MRZ	Mangatainoka R	9.04	208	P	Pn	01 16 12.9	-1.5
MRZ				S	Sn	01 17 52.1	-4.1
HOWZ	Holdsworth Sta	9.27	207	P	Pn	01 16 16.8	-0.8
KIW	Kapiti Island	9.48	210	P	Pn	01 16 19.5	-0.9
KIW				S	Sn	01 18 02.4	-4.7
ASAR	Alice Springs	42.28	270	P	P	01 22 04.6	+6.8
	1.1nm,0.7s,baz=113,slow=7.7,SNR=10						
	1.1nm,0.7s						
KBZ	Khabaz	145.73	301	PKPbc	PKiKP	01 33 46.3	-0.2
	2.1nm,0.9s,baz=136,slow=5.7,SNR=4.3						
FINES	FINESS Array B	147.07	338	PKPbc	PKPbc	01 33 46.6	+0.4
	1.6nm,0.8s,baz=26,slow=4.4,SNR=10.0						

IDC ***17*** *01:34:03.5±1.3,34°.4N×25°.91E, h0km, mb3.4/5, mbtmp3.4/8, ML3.0/3, Error ellipse: s-maj=25.5km s-min=17.8km az=15.0*
ATH ***17*** *01:34:04.0,34°.33N×25°.89E, h9km±4km, ML3.1/6, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
ISK ***17*** *01:34:04.0,34°.33N×25°.91E, h13km, ML2.9/9*
THE ***17*** *01:34:07.3,34°.N×27°.×2°.6E±2°.0, h8km±25km, M3.0/7, MLh3.0/7*

ISC 17 01:34:04.5±1.7,**34°.38N**±0°.06×**25°.88E**±0°.04,**h8**km±11km, **n43,** σ0**§69**/55,**mb3.3**/4,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.78	21	Pg	Pb	01 34 20.3	0.0
ZKR				Sg	Sn	01 34 32.4	-1.3
ZKR	Zakros	0.78	21	P	Pb	01 34 20.4	0.0
ZKR	Zakros	0.78	21	P	Pb	01 34 20.3	0.0
ZKR				S	Sb	01 34 31.5	+0.5
AGNA	Agios Nikolaos	0.82	351	P	Pb	01 34 21.0	+0.1
AGNA				S	Sb	01 34 31.9	-0.2
STIA	Sitia Lasithi	0.83	12	P	Pb	01 34 21.3	0.0
STIA				S	Sb	01 34 32.9	+0.3
SIT2	Siteia	0.84	13	P	Pb	01 34 21.1	-0.3
SIT2				S	Sn	01 34 33.5	-1.7
NPS	Neapolis	0.91	346	P	Pb	01 34 22.4	-0.1
NPS				S	Sg	01 34 33.6	-0.2
NPS	Neapolis	0.91	346	P	Pn	01 34 22.6	-0.9
NPS				S	Sb	01 34 34.7	+0.1
SIVA	Sivas	1.09	306	P	Pg	01 34 25.2	-0.2
SIVA	Sivas	1.09	306	P	Pb	01 34 25.3	-0.2
SIVA				S	Sn	01 34 40.6	-0.6
IACM	Heraklion	1.14	324	P	Pn	01 34 27.0	+0.3
IDI	Anoyia	1.22	318	Pn	Pg	01 34 28.3	+0.4
	2.9nm,0.3s,baz=301,slow=16,SNR=21						
IDI				Sn	Sn	01 34 47.1	+2.6
	18nm,0.3s,baz=143,slow=23,SNR=14						
IDI	Anoyia	1.22	318	Pn	Pg	01 34 28.3	+0.4
IDI				Sn	Sn	01 34 45.4	+0.9
IDI	Anoyia	1.22	318	P	Pg	01 34 28.3	+0.4
IDI	Anoyia	1.22	318	P	Pg	01 34 28.1	+0.2
IDI				S	Sn	01 34 44.9	+0.4
GVD	Gavdhos	1.55	288	Pn	Pn	01 34 32.4	+0.1
GVD	Gavdhos	1.55	288	P	Pb	01 34 33.0	-0.4
GVD	Gavdhos	1.55	288	P	Pb	01 34 32.8	-0.6
GVD				S	Sb	01 34 53.1	-0.1
VAM	Vamos	1.72	307	P	Pb	01 34 35.9	-0.5
VAM	Vamos	1.72	307	P	Pn	01 34 35.1	+0.4
IMMV	Iera Moni Meta	1.90	305	Pn	Pn	01 34 37.7	+0.6
IMMV	Iera Moni Meta	1.90	305	P	Pn	01 34 37.6	+0.4
IMMV	Iera Moni Meta	1.90	305	P	Pn	01 34 37.4	+0.3
THERA	Ancient Thera,	2.01	351	P	Pn	01 34 38.4	-0.3
THR6	Thira Island,	2.01	349	P	Pn	01 34 39.1	+0.4
KNDR	Palaiochora Ch	2.04	295	Pn	Pn	01 34 39.7	+0.6
KNDR	Palaiochora Ch	2.04	295	P	Pn	01 34 38.9	-0.2
THR8	Santorini-Mono	2.05	351	P	Pn	01 34 39.1	-0.1
SNT5	Nea Kammeni, S	2.06	349	P	Pn	01 34 39.3	0.0
THR3	Thira Island,	2.06	349	P	Pn	01 34 39.2	-0.2
THR5	Thira Island,	2.08	348	P	Pn	01 34 39.9	+0.3
DAT	Datca	2.72	30	Pn	Pn	01 34 49.5	+1.0
TURN	Turunc	3.07	38	Pn	Pn	01 34 53.9	+0.7
DALY	Dalyan (Mula)	3.32	42	Pn	Pn	01 34 57.6	+1.0
YER	Yerkesik	3.37	35	Pn	Pn	01 34 57.8	+0.4
EIL	Elat	9.02	119	Pn	Pn	01 36 13.8	-1.1
	0.3nm,0.3s,baz=21,slow=16,SNR=1.2						
	3.6nm,1.0s						
KBZ	Khabaz	16.15	50	Pn	P	01 37 55.0	-0.1
	0.1nm,0.3s,baz=242,slow=12,SNR=5.7						
	0.9nm,0.8s						
GERES	GERESS Array B	17.05	332	P	P	01 38 04.7	-0.3
	baz=150,slow=14,SNR=4.1						
	0.1nm,0.3s						
ESDC	Sonseca Array	24.34	291	P	P	01 39 22.9	+0.1
	0.7nm,0.9s,baz=87,slow=11,SNR=5.5						
	0.7nm,0.9s						
FINES	FINESS Array B	27.08	0	P	P	01 39 45.7	-1.5
	1.1nm,1.0s,baz=177,slow=9.5,SNR=4.0						
	1.1nm,1.0s						
TORD	Torodi Ar. Bea	30.46	232	P	P	01 40 18.4	+0.7
	0.4nm,0.7s,baz=28,slow=9.7,SNR=4.1						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	41.15	50	P	P	01 41 49.5	+0.5
	0.2nm,0.5s,baz=278,slow=9.2,SNR=5.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	43.71	56	P	P	01 42 10.7	+0.7
	0.3nm,0.6s,baz=280,slow=6.3,SNR=7.1						
	0.3nm,0.6s						

NIED ***17*** *01:37:32.9,36°.31N×141°.86E, h69km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.00; Mθθ-0.12; Mϕϕ-0.88; Mrθ0.65; Mθϕ-1.96; Mϕr2.78; Fault plane solution: M₀3.52000×10¹⁴ NP1: ϕs261.00000°, δ30.00000°, λ158.00000°. NP2: ϕs10.00000°, δ79.00000°, λ62.00000°.*
JMA ***17*** *01:37:32.9±0.3,36°.3N±0°.6×14°.2E±°, h69km, MV3.6/30, FAR E OFF IBARAKI PREF*
IDC ***17*** *01:37:35.2±4.0,36°.06N×141°.98E, h51km±36km, mb3.5/7, mbtmp3.7/10, ML3.4/3, MS2.8/5, Error ellipse: s-maj=30.9km s-min=14.9km az=66.0*

ISC 17 01:37:32.3±1.0,**36°.18N**±0°.06×**141°.99E**±0°.08,**h23**km,**n28,** σ1**§34**/24,**mb3.8**/7,**MS3.3**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	1.14	278	P	Pn	01 37 51.8	-1.1
JHYU				*eS*	Sn	01 38 06.0	-1.8
JIHU	Itakohorinouch	1.20	260	*eP*	Pb	01 37 53.8	-0.6
JIHU				*eS*	Sb	01 38 09.8	+0.3
JHO	Hitachi	1.22	291	P	Pn	01 37 52.1	-1.9
ONAJ	Iwakimizuishiy	1.32	314	P	Pn	01 37 53.4	-2.1
JFK	Kawauchi	1.48	323	*eP*	Pn	01 37 55.9	-1.7
BSO1	Boso 1	1.73	209	*eP*	Pb	01 38 02.1	-1.1
BSO3	Boso 3	1.83	222	P	Pb	01 38 03.5	-1.4
JOTO	OTAMA OYAMA	1.91	317	P	Pn	01 38 03.0	-0.4
JMM	Marumori	1.93	331	P	Pn	01 38 03.3	-0.5
JAG	Ashikaga	2.06	277	*i* P	Pn	01 38 04.7	-0.8
MJAR	Matsushiro Arr	3.07	278	P	Pn	01 38 19.9	+0.5
	1.5nm,0.3s,baz=105,slow=9.3,SNR=46						
MJAR				S	Sn	01 38 57.1	+1.7
	7.7nm,0.4s,baz=79,slow=16,SNR=6.0						
MJAR				LR	LR	01 39 24.9	
	comp=Z,40nm,20.6s,baz=186,slow=36						
	5.9nm,0.3s						
JHJ	Hachijo jima 2	3.56	211	P	Pn	01 38 26.2	+0.2
	19nm,0.3s,baz=170,slow=24,SNR=9.6						
JHJ				S	Sn	01 39 06.5	-0.9
	132nm,0.3s,baz=71,slow=23,SNR=11						
	39nm,0.3s						
KSRS	Korea Array	11.35	281	P	Pn	01 40 16.4	+3.4
	0.3nm,0.3s,baz=88,slow=13,SNR=2.1						
KSRS				LR	LR	01 44 27.5	
	comp=Z,34nm,20.1s,baz=100,slow=36						
	0.7nm,0.5s						
PETK	Petropavlovsk-	20.20	28	LR	LR	01 51 42.3	
	comp=Z,20nm,18.5s,baz=193,slow=42						
H11N2	WAKE ISLAND Hy	27.32	120	T	T	02 12 03.8	
	baz=313,slow=74,SNR=19						
H11N1	WAKE ISLAND Hy	27.33	120	T	T	02 12 03.7	
	baz=313,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	27.34	120	T	T	02 12 45.6	
	baz=313,SNR=13						
H11S1	WAKE ISLAND Hy	28.01	122	T	T	02 13 31.7	
	baz=314,slow=74						
H11S3	WAKE ISLAND Hy	28.02	122	T	T	02 13 11.3	
	baz=314						
H11S2	WAKE ISLAND Hy	28.03	122	T	T	02 13 48.1	
	baz=314,slow=74						
SONM	Songino Array	28.64	305	P	P	01 43 28.0	+0.8
	1.8nm,0.8s,baz=105,slow=9.8,SNR=9.7						
	1.8nm,0.8s						
CMAR	Chiang Mai Arr	41.74	257	LR	LR	02 05 43.6	
	comp=Z,38nm,18.3s,baz=195,slow=40						
ZALV	Zalesovo Beam	42.83	313	P	P	01 45 28.4	+0.2
	0.5nm,0.4s,baz=97,slow=12,SNR=4.0						
	0.5nm,0.4s						
MKAR	Makanchi Array	44.96	303	P	P	01 45 45.2	-0.3
	0.8nm,0.6s,baz=91,slow=9.7,SNR=7.4						
MKAR				LR	LR	02 04 24.2	
	comp=Z,33nm,18.5s,baz=196,slow=36						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	46.89	309	P	P	01 46 00.7	0.0
	1.5nm,0.7s,baz=84,slow=8.1,SNR=13						
	1.5nm,0.7s						
ILAR	Eielson Array	49.97	32	P	P	01 46 24.6	+0.4
	0.2nm,0.7s,baz=277,slow=6.4,SNR=2.2						
	0.2nm,0.7s						
BVAR	Borovoye Array	51.48	313	P	P	01 46 35.0	-0.8
	0.4nm,0.5s,baz=72,slow=4.7,SNR=1.9						
	0.4nm,0.5s						
FINES	FINESS Array B	69.78	333	P	P	01 48 40.7	+0.4
	1.2nm,0.9s,baz=28,slow=8.6,SNR=4.1						
	1.2nm,0.9s						

WEL 17 02:05:53.8±0.8,**33°S**±4°×**17°8W**±1°.1,**h12**km,**M4.7**/10, **mB5.0**/3,**ML4.6**/11,**MLv4.7**/10,**Mw(mB)4.3**/3,**Error ellipse: s-maj=14.5km s-min=3.4km az=109.3,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.22	356	P	Pn	02 06 58.7	+0.7
GLKZ				S	Sn	02 07 44.9	-2.4
RIZ	Raoul Island	4.24	356	S	Sn	02 07 45.7	-2.1
WMGZ	Waiomatatini S	5.40	216	P	Pn	02 07 16.5	+2.2
WMGZ				S	Sn	02 08 17.6	+1.3
PKGZ	Pakihiroa	5.61	218	P	Pn	02 07 19.2	+2.2
PKGZ				S	Sn	02 08 22.2	+0.8
PUZ	Puketiti	5.68	215	S	Sn	02 08 21.1	-2.1
HAZ	Te Kaha	5.68	220	P	Pn	02 07 21.3	+3.2
HAZ				S	Sn	02 08 25.3	+2.2
RUGZ	Raukumara Rang	5.89	219	P	Pn	02 07 23.6	+2.5
RUGZ				S	Sn	02 08 28.9	+0.3
TWGZ	Tauwhareparae	5.90	216	S	Sn	02 08 30.0	+1.4
CNGZ	Carnagh Statio	6.03	213	P	Pn	02 07 24.5	+1.6
CNGZ				S	Sn	02 08 33.8	+2.0
TKGZ	Te Karaka	6.17	216	S	Sn	02 08 34.4	-0.7
MWZ	Matawai	6.25	218	P	Pn	02 07 27.7	+1.9
MWZ				S	Sn	02 08 36.4	-0.8
URZ	Urewera	6.41	221	P	Pn	02 07 29.3	+1.3
URZ				S	Sn	02 08 40.4	-0.8
RIGZ	Rimuhau	6.42	215	P	Pn	02 07 28.9	+0.7
RIGZ				S	Sn	02 08 41.3	-0.1
RAGZ	Rawiri	6.42	218	S	Sn	02 08 41.9	+0.2
PRGZ	Paritu Road	6.54	213	S	Sn	02 08 41.4	-3.0
SNGZ	Shannon Statio	6.68	216	P	Pn	02 07 31.9	+0.1
SNGZ				S	Sn	02 08 48.2	+0.3
KNZ	Kokohu	6.71	213	P	Pn	02 07 33.1	+0.9
KNZ				S	Sn	02 08 46.9	-1.7
MUGZ	Murupara	6.75	221	S	Sn	02 08 47.7	-1.9
RAHZ	Arahi	6.91	217	P	Pn	02 07 36.8	+1.8
RAHZ				S	Sn	02 08 53.2	-0.4
MTHZ	Maungataniwha	6.99	218	P	Pn	02 07 37.9	+1.9
MTHZ				S	Sn	02 08 55.6	+0.1
WAZ	Wanganui	8.64	222	S	Sn	02 09 34.7	-1.3

MOS ***17*** *02:50:21.2±1.0,7°.83S×147°.76E, h78km, mb7.0/53, MS6.8/25, Error ellipse: s-maj=7.1km s-min=4.8km az=106.0 Broadband fault plane solution: P waves. NP1:ϕs53.00000°, δ25.00000°, λ-14.00000°. NP2: ϕs156.00000°, δ84.00000°, λ-114.00000°. Principal axes: T Plg35.0000°, Azm266.0000°; N Plg24.0000°, Azm158.0000°; P Plg46.0000°, Azm41.0000°;*
BJI ***17*** *02:50:22.0,7°.82S×147°.68E, h90km, mB7.0/78, mb6.6/93, Ms6.9/92, Ms7 6.6/88*
NEIC ***17*** *02:50:22.2±2.2,7°.84S±0°.06×147°.77E±0°.07, h73km±1km, mb6.8/556, Mwb7.0/138, Mww7.0/33, Error ellipse: s-maj=11.6km s-min=9.3km az=116.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.42; Mθθ-2.40; Mϕϕ 1.98; Mrθ-1.33; Mθϕ 0.89; Mϕr3.23; Fault plane solution: M₀4.23000×10¹⁹ NP1:ϕs62.54000°, δ34.90000°, λ5.98000°. NP2:ϕs327.62000°, δ86.58000°, λ124.76000°. Principal axes: T 4.5215, Plg38.0000°, Azm269.0000°; N -0.6556, Plg35.0000°, Azm145.0000°; P -3.8659, Plg33.0000°, Azm29.0000°;*
ISC-PP ***17*** *02:50:22.7,7°.84S×147°.77E, h64km±3km, Mwppsm7.4, Moment Tensor Solution. s45 Moment tensor: Scale 10²⁰Nm; Mrr0.26±.12; Mθθ0.16±.15; Mϕϕ-0.39±.18; Mrθ-0.35±.14; Mθϕ0.51±.13; Mϕr-0.01±.11; Fault plane solution: M₀1.41000×10²⁰ NP1:ϕs212.50000°, δ23.10000°, λ151.20000°. NP2:ϕs329.30000°, δ79.10000°, λ69.50000°.*
PTWC ***17*** *02:50:23,7°.80S×147°.70E, h85km, Mwp7.1/4*
IDC ***17*** *02:50:23.9±1.0,7°.96S×147°.74E, h92km±7km, mb6.3/31, mbtmp6.6/33, MS6.5/50, Error ellipse: s-maj=9.4km s-min=7.1km az=87.0*
IPGP ***17*** *02:50:23.0,7°.85S×147°.76E, h77km, Mw7.1, Fault plane solution: NP1:ϕs70.00000°, δ32.00000°, λ14.00000°. NP2:ϕs328.00000°, δ83.00000°, λ122.00000°.*
NEIC ***17*** *02:50:23.4,7°.85S×147°.76E, h86km*
NEIC ***17*** *02:50:23.2,7°.85S×147°.77E, h81km*
GFZ ***17*** *02:50:23.9±0.4,8°S±2°×14°8E±°, h86km±3km, M7.1/133, mB7.3/132, mb6.7/133, Mw(mB)7.3/132, MwMwp6.9/127, Mwp6.7/127, Error ellipse: s-maj=3.8km s-min=3.3km az=48.5, confirmed*
GFZ ***17*** *02:50:23.5,7°.90S×147°.72E, h83km, Mw7.0/164, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.14; Mθθ-2.16; Mϕϕ2.03; Mrθ-1.72; Mθϕ0.75; Mϕr3.23; Fault plane solution: M₀4.28684×10¹⁹ NP1: ϕs327.12128°, δ89.22799°, λ121.33553°. NP2: ϕs58.38901°, δ31.34407°, λ1.48426°. Principal axes: T 4.4802, Plg37.8385°, Azm264.8725°; N -0.4172, Plg31.3324°, Azm146.6513°; P -4.0630, Plg36.4687°, Azm29.9100°;*
DJA ***17*** *02:50:25.3±0.3,8°S±2°×14°8E±°, h96km±2km, M7.3/219, mB7.5/217, mb7.0/219, MLv7.3/4, Mw7.0/26, Mw(mB)7.6/217, MwMwp7.0/210, Mwp6.8/210*
GCMT ***17*** *02:50:27.2±0.1,7°.84S×147°.74E, h72km, MW7.1/177, Moment Tensor Solution. s177,c467; s173,c785; Duration: 8s5 Moment tensor: Scale 10¹⁹Nm; Mrr-0.74±.02; Mθθ-2.35±.01; Mϕϕ3.09±.01; Mrθ-1.95±.02; Mθϕ0.70±.01; Mϕr4.05±.03; Best double couple: M₀5.29700×10¹⁹ NP1:ϕs52.00000°, δ30.00000°, λ-10.00000°. NP2:ϕs151.00000°, δ85.00000°, λ-120.00000°. Principal axes: T 5.6820, Plg33.0000°, Azm266.0000°; N -0.7680, Plg30.0000°, Azm154.0000°; P -4.9130, Plg42.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*
NEIC ***17*** *02:50:35.8,7°.75S×147°.45E, h100km, Moment Tensor Solution. Duration: 16s2 Moment tensor: Scale 10¹⁹Nm; Mrr0.79; Mθθ-2.04; Mϕϕ1.25; Mrθ-1.42; Mθϕ0.68; Mϕr2.65; Fault plane solution: M₀3.56000×10¹⁹ NP1:ϕs64.98000°, δ31.42000°, λ13.73000°. NP2:ϕs323.21000°, δ82.89000°, λ120.68000°. Principal axes: T 3.7147, Plg44.0000°, Azm263.0000°; N -0.3400, Plg30.0000°, Azm139.0000°; P -3.3747, Plg31.0000°, Azm28.0000°;*

ISC 17 02:50:22.8±0.2,**7°.95S**±0°.02×**147°.75E**±0°.02,**h85**km±1km, **h85**km:**pP-P, n2440,** σ1**§70**/2885,**mb6.7**/456,**204C-120D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	1.56	202	P	Pn	02 50 50.8	+1.7
	baz=72,slow=19						
PMG				LR	LR	02 51 43.7	
	comp=Z,214μm,19.5s,baz=59,slow=52						
PMG	Port Moresby	1.56	202	P	Pn	02 50 52.5	+3.4
PMG	Port Moresby	1.56	202	S	Sn	02 51 13.5	+4.5
PMG	Port Moresby	1.56	202	P	Pn	02 50 50.9	+1.8
PMG	Port Moresby	1.56	202		Pn	02 50 50.6	+1.5
PMG	Port Moresby	1.56	202	P	Pn	02 50 50.0	+0.9
PMG	Port Moresby	1.56	202	⇑P	Pn	02 50 50.9	+1.8
PMG	Port Moresby	1.56	202	P	Pn	02 50 53.4	+4.3
PMG	Port Moresby	1.56	202	P	Pn	02 50 51.0	+1.9
BULU	Kimbe	3.50	47	P	Pn	02 51 19.5	+4.5
BULU	Kimbe	3.50	47	S	Sn	02 51 58.5	+3.0
I40PG	Keravat	5.58	50	P	Pn	02 51 43.0	-0.3
	baz=207,slow=15,SNR=1.2						
I40PG				S	Sn	02 52 50.5	+4.3
	baz=159,slow=19						
RABL	Rabaul	5.77	50	Pn	Pn	02 51 44.1	-1.8
RABL	Rabaul	5.77	50	P	Pn	02 51 44.7	-1.2
RABL	Rabaul	5.77	50	⇑P	Pn	02 51 44.4	-1.5
MANU	Manus Island	5.88	356	Pn	Pn	02 51 46.3	-1.1
MANU	Manus Island	5.88	356	P	Pn	02 51 47.1	-0.3
MMPI	Merauke	7.30	265	P	Pn	02 52 09.2	+2.4
	161nm432μm45μm,0.8s						
COEN	Coen

ALEG Aligegeo Malai 12.84 94 P Pn 02 53 23.9 +1.8
SRPI Serui, Papua 12.95 297 P Pn 02 53 20.3 -3.3
614µm86µm2µm,0.9s
BAKI Biak 13.40 299 P Pn 02 53 28.4 -1.1
658µm95µm3µm,0.9s
HURO Huro Makira 14.20 101 P Pn 02 53 40.7 +0.8
4µm,1.1s
KMPI Kaimana, Papua 14.60 286 P Pn 02 53 43.2 -2.0
706µm296µm8µm,1.8s
QIS Mount Isa 14.80 211 P Pn 02 53 49.4 +1.6
MWPI Manokwari, Pap 15.33 296 P Pn 02 53 53.7 -0.8
FAKI Fak Fak 16.21 287 P P 02 54 06.5 -0.7
6µm,2.3s
FAKI Fak Fak 16.21 287 Pn Pn 02 54 02.5 -3.1
FAKI Fak Fak 16.21 287 ⇑P Pn 02 54 02.0 -3.6
FAKI Fak Fak 16.21 287 P Pn 02 54 02.9 -2.7
821µm259µm6µm,2.3s
FAKI Fak Fak 16.21 287 P Pn 02 54 05.0 -0.6
SAUI Saumlaki 16.29 269 P P 02 54 10.1 +2.1
SAUI Saumlaki 16.29 269 Pn Pn 02 54 04.6 -1.9
SAUI Saumlaki 16.29 269 ⇑P Pn 02 54 04.7 -1.9
SAUI Saumlaki 16.29 269 P Pn 02 54 06.3 -0.2
MTN Manton Dam 17.04 252 Pn Pn 02 54 13.7 -2.1
EIDS Eidsvold 17.61 170 P Pn 02 54 23.1 +0.3
EIDS Eidsvold 17.61 170 ⇑P Pn 02 54 24.4 +1.7
EIDS Eidsvold 17.61 170 P Pn 02 54 24.7 +2.0
WRAB Tennant Creek 17.61 226 P Pn 02 54 23.0 +0.2
3µm,0.6s
WRAB Tennant Creek 17.61 226 *c* iP Pn 02 54 23.0 +0.2
WRAB MLR MLR
comp=Z,550µm,13.0s
WRAB Tennant Creek 17.61 226 P P 02 54 21.9 -0.7
WRAB Tennant Creek 17.61 226 P Pn 02 54 23.2 +0.4
I07AU WARRAMUNGA INF 17.63 226 I I 04 22 50.0
baz=41,slow=315,SNR=1.6
SIJI Sorong 17.86 292 P P 02 54 24.4 -1.0
comp=Z,930nm,0.8s,baz=102,slow=8.9,SNR=56
SIJI LR LR 03 03 04.3
comp=Z,235µm,18.6s,baz=102,slow=43
SIJI Sorong 17.86 292 P P 02 54 23.7 -1.7
SWI Sorong 17.87 292 P P 02 54 24.8 -0.7
comp=Z,209µmcomp=Z,4µm,1.2s
BNDI Bandanaira 18.06 280 P Pn 02 54 30.2 +2.0
BNDI Bandanaira 18.06 280 S S 02 57 51.2 +1.6
BNDI Bandanaira 18.06 280 ⇑P P 02 54 24.2 -3.4
BNDI Bandanaira 18.06 280 P P 02 54 25.6 -1.9
comp=Z,383µmcomp=Z,14µm,1.3s
PATS Pohnpei 18.08 36 P Pn 02 54 28.4 0.0
comp=Z,6µm,1.2s
PATS Pohnpei 18.08 36 P P 02 54 25.3 -2.4
PATS Pohnpei 18.08 36 P P 02 54 27.0 -0.7
RMQ Roma 18.46 177 P Pn 02 54 34.9 +1.9
QLP Quilpie 18.83 190 ⇑P Pn 02 54 38.0 +0.7
QLP Quilpie 18.83 190 P Pn 02 54 38.4 +1.1
MSAI Masohi 19.27 283 P Pn 02 54 42.7 0.0
comp=Z,193µmcomp=Z,5µm,0.8s
AUBSH Beerwah State 19.45 166 P Pn 02 54 44.4 -0.2
AAI Ambon 19.90 281 P Pn 02 54 49.0 -1.1
comp=Z,158µmcomp=Z,5µm,0.8s
AUTOO Toowoomba Stat 19.90 169 P P 02 54 48.6 +1.0
KNRA Kununurra 20.09 246 P P 02 54 48.6 -1.1
KNRA IAmb IAmb 02 55 01.7
comp=Z,5µm,1.2s
KOUNC Koumac, New Ca 20.32 130 P P 02 54 53.1 +1.0
comp=Z,2µm,1.6s
KOUNC Koumac, New Ca 20.32 130 P P 02 54 51.5 -0.7
KOUNC Koumac, New Ca 20.32 130 ⇓P P 02 54 52.5 +0.4
AS31 Alice Springs 20.50 219 P P 02 54 55.0 +0.9
ASAR Alice Springs 20.55 219 P P 02 54 55.3 +1.2
comp=Z,3µm,0.8s,baz=56,slow=9.2,SNR=1169
ASAR S S 02 58 38.9 -0.1
comp=Z,763nm,1.1s,baz=35,slow=23,SNR=4.6
ASAR LR LR 03 03 04.7
comp=Z,376µm,21.9s,baz=40,slow=37
comp=Z,3µm,0.8s
ASAR Alice Springs 20.50 219 P P 02 54 54.8 +0.7
INKA Innaminka 20.77 198 P P 02 54 57.6 +0.7
NLAI Namlea 21.07 282 P P 02 55 00.8 +0.5
comp=Z,166µmcomp=Z,2µm,0.8s
AULRC Lightning Ridg 21.37 179 P P 02 55 04.3 +1.0
GUMO Guam 21.59 352 P P 02 55 03.7 -2.1
comp=Z,2µm,0.6s,baz=175,slow=9.1,SNR=46
GUMO S S 02 58 59.6 -0.8
comp=Z,512nm,1.1s,baz=270,slow=24,SNR=60
GUMO LR LR 03 02 30.3
comp=Z,107µm,21.9s,baz=174,slow=34
GUMO Guam 21.59 352 P P 02 55 06.2 +0.5
comp=Z,2µm,1.2s
GUMO Guam 21.59 352 P P 02 55 03.5 -2.2
GUMO IAmb IAmb 02 55 13.0
comp=Z,5µm,1.1s
GUMO Guam 21.59 352 ⇓P P 02 55 04.5 -1.2
GUMO Guam 21.59 352 P P 02 55 05.3 -0.5
TNTI Ternate 22.09 292 P P 02 55 13.0 +1.8
comp=Z,3µm,1.4s
TNTI Ternate 22.09 292 P P 02 55 09.3 -1.8
TNTI IAmb IAmb 02 55 17.9
comp=Z,3µm,1.0s
TNTI Ternate 22.09 292 ⇑P P 02 55 09.3 -1.8
TNTI Ternate 22.09 292 P P 02 55 09.4 -1.8
TNTI Ternate 22.09 292 P P 02 55 12.7 +1.5
DVP Devils Point 22.15 118 P P 02 55 11.3 -0.5
comp=Z,12µm,0.8s
GAMI Galela, Maluku 22.15 295 P P 02 55 11.0 -0.9
comp=Z,238µmcomp=Z,5µm,1.7s
RTV Rentapao 22.38 118 P P 02 55 14.4 +0.1
comp=Z,8µm,1.2s
SANI Sanana 22.44 284 P P 02 55 15.4 +0.4
comp=Z,7µm,1.2s
SANI Sanana 22.44 284 P P 02 55 12.4 -2.6
SANI Sanana 22.44 284 ⇑P P 02 55 11.1 -3.9
SANI Sanana 22.44 284 P P 02 55 12.0 -3.0
comp=Z,599µmcomp=Z,201µmcomp=Z,7µm,1.2s
SANI Sanana 22.44 284 P P 02 55 13.4 -1.6
ARMA Armidale 22.65 171 P P 02 55 16.5 -0.5
ARMA Armidale 22.65 171 ⇑P P 02 55 17.1 0.0
ARMA Armidale 22.65 171 P P 02 55 17.4 +0.3
NOUC Port Laguerre 22.75 130 P P 02 55 19.0 +1.0
comp=Z,1µm,1.4s
DZM Mont Dzumac 22.84 130 LR LR 03 03 54.1
comp=Z,242µm,18.5s,baz=320,slow=36
ONTNC Ouen Toro 22.98 130 P P 02 55 19.9 -0.5
comp=Z,1µm,1.8s
ONTNC Ouen Toro 22.98 130 P P 02 55 19.4 -1.0
ONTNC Ouen Toro 22.98 130 ⇓P P 02 55 18.7 -1.7
DPSS Saipan 23.12 355 P P 02 55 19.2 -2.6
YATNC Mamie plateau, 23.17 129 P P 02 55 22.0 -0.2
comp=Z,2µm,1.4s
AUPHS Peel High Scho 23.22 173 P P 02 55 23.5 +0.9
SOEI Soe 23.27 264 P P 02 55 24.6 +1.3
SOEI Soe 23.27 264 P P 02 55 21.7 -1.6
SOEI Soe 23.27 264 P P 02 55 24.1 +0.8
SOEI IAmb IAmb 02 55 37.1
comp=Z,5µm,1.0s
SOEI Soe 23.27 264 ⇑P P 02 55 20.2 -3.1
SOEI Soe 23.27 264 P P 02 55 21.7 -1.6
comp=Z,287µmcomp=Z,7µm,0.9s
SOEI Soe 23.27 264 P P 02 55 24.4 +1.1
OUENC Ouen Island, N 23.34 130 P P 02 55 23.3 -0.4
comp=Z,926nm,2.0s
OUENC Ouen Island, N 23.34 130 P P 02 55 21.9 -1.8
CMSA Cobar Meteorol 23.55 184 P P 02 55 26.2 +0.6
MARNC Mare, Loyalty 23.75 127 P P 02 55 27.6 +0.2
comp=Z,3µm,1.2s
MARNC Mare, Loyalty 23.75 127 P P 02 55 26.2 -1.2
MARNC IAmb IAmb 02 55 30.2
comp=Z,3µm,1.0s
MARNC Mare, Loyalty 23.75 127 ⇓P P 02 55 26.5 -0.9
FITZ Fitzroy Crossi 23.75 243 P P 02 55 26.8 -0.7
comp=Z,921nm,0.3s,baz=62,slow=8.7,SNR=552
FITZ LR LR 03 05 39.7
comp=Z,592µm,19.6s,baz=64,slow=39
comp=Z,921nm,0.3s
FITZ Fitzroy Crossi 23.75 243 P P 02 55 26.2 -1.4
FITZ Fitzroy Crossi 23.75 243 P P 02 55 26.2 -1.4
BATI Baumata 23.88 263 P P 02 55 28.3 -0.5
comp=Z,4µm,0.7s,baz=126,slow=4.6,SNR=69
BATI LR LR 03 06 12.2
comp=Z,716µm,21.5s,baz=98,slow=40
comp=Z,4µm,0.7s
BATI Baumata 23.88 263 P P 02 55 24.7 -4.1
comp=Z,351µmcomp=Z,11µm,1.4s
AUDCS Dubbo College 24.17 178 P P 02 55 32.0 +0.8
STKA Stephens Creek 24.49 193 P P 02 55 34.6 +0.6
comp=Z,1µm,0.6s,baz=359,slow=8.1,SNR=509
comp=Z,1µm,0.6s
STKA Stephens Creek 24.49 193 P P 02 55 34.9 +0.9
MNI Manado 24.68 291 P P 02 55 34.7 -1.3
SGSI Sangihe 25.00 297 P P 02 55 39.1 +0.2
BBSI Bau Bau 25.12 274 P P 02 55 41.7 +1.7
comp=Z,241µmcomp=Z,4µm,1.7s
MMRI Maumere 25.25 267 P P 02 55 41.8 +0.6
comp=Z,18µm,0.7s
MMRI Maumere 25.25 267 P P 02 55 39.6 -1.5
MMRI Maumere 25.25 267 ⇑P P 02 55 39.0 -2.2
MMRI Maumere 25.25 267 P P 02 55 39.0 -2.2
MMRI Maumere 25.25 267 P P 02 55 40.3 -0.9
KDI Kendari 25.30 278 P P 02 55 40.7 -0.9
AUKHS Kincumber High 25.61 173 P P 02 55 45.8 +1.6
LHI Lord Howe Isla 25.72 157 P P 02 55 47.0 +1.9
LHI Lord Howe Isla 25.72 157 ⇑P P 02 55 47.5 +2.3
LUWI Luwuk 25.81 284 P P 02 55 47.3 +1.0
comp=Z,13µm,1.1s
LUWI Luwuk 25.81 284 P P 02 55 46.3 0.0
LUWI S S 03 00 11.7 +2.0
LUWI Luwuk 25.81 284 ⇑P P 02 55 45.7 -0.5
LUWI Luwuk 25.81 284 P P 02 55 46.7 +0.4
comp=Z,552µmcomp=Z,223µmcomp=Z,13µm,1.1s
DDMP Don Marcelino, 26.04 302 eP P 02 55 45.7 -2.6
DDMP eS S 03 00 12.5 -0.8
GTOI Gorontalo 26.09 288 P P 02 55 50.0 +1.2
comp=Z,393µmcomp=Z,121µmcomp=Z,5µm,0.7s
KKSI Kolaka, Sulawe 26.21 277 P P 02 55 51.2 +1.3
comp=Z,506µmcomp=Z,101µmcomp=Z,3µm,1.3s
CDOP Cateel, Davao 26.37 306 eP P 02 55 50.0 -1.2
CDOP eS S 03 00 17.2 -1.4
AUJCS Jamestown Cent 26.51 197 P P 02 55 53.4 +1.0
HTT Hallett 26.64 197 ⇑P P 02 55 54.1 +0.5
DAV Davao City (W) 26.67 303 P P 02 55 55.4 +1.5
DAV Davao City (W) 26.67 303 P P 02 55 55.5 +1.5
DAV P P 02 55 55.5 +1.5
DAV S S 03 00 25.3 +2.0
DAV S S 03 00 25.3 +2.0
DAV Davao City (W) 26.67 303 P P 02 55 52.7 -1.3
DAV IAmb IAmb 02 56 26.4
comp=Z,3µm,0.8s
DAV Davao City (W) 26.67 303 ⇑P P 02 55 53.1 -0.9
DAV Davao City (W) 26.67 303 P P 02 55 55.9 +1.9
comp=Z,362µmcomp=Z,132µmcomp=Z,4µm,0.8s
DAV Davao City (W) 26.67 303 P P 02 55 53.2 -0.8
DAV S S 03 00 25.1 +1.8
DAV Davao City (W) 26.67 303 P P 02 55 55.8 +1.9
DAV Davao City (W) 26.67 303 P P 02 55 53.0 -0.9
BIPH Bislig 26.67 306 eP P 02 55 53.0 -0.9
BIPH eS pP 02 56 14.9 +1.4
TARA Tarawa 26.76 71 P P 02 55 53.8 -1.0
TARA Tarawa 26.76 71 ⇓P P 02 55 53.9 -0.8
TARA Tarawa 26.76 71 P P 02 55 54.0 -0.8
BASI Baing, Sumba 26.92 263 P P 02 55 57.3 +1.1
comp=Z,491µmcomp=Z,185µmcomp=Z,12µm,0.8s
APSI Ampana 26.93 284 P P 02 55 57.1 +0.8
comp=Z,243µmcomp=Z,85µmcomp=Z,6µm,1.2s
BBOO Buckleboo 27.01 202 P P 02 55 57.1 +0.3
KCP Kidapawan 27.04 303 eP P 02 55 56.9 -0.5
WSI Waingapu 27.17 264 P P 02 55 58.2 -0.3
AUDAR Daramalan Coll 27.20 178 P P 02 55 59.6 +1.0
AUMTS Mt Stromlo 27.27 178 P P 02 56 00.0 +0.8
CAN Canberra 27.27 178 P P 02 55 59.8 +0.6
comp=Z,1µm,0.9s
CAN Canberra 27.27 178 ⇑P P 02 56 00.1 +0.9
CAN Canberra 27.27 178 P P 02 56 00.4 +1.2
AUMHS Melrose High S 27.31 178 P P 02 56 00.4 +0.9
AUUHS Ulladulla High 27.39 175 P P 02 56 01.5 +1.3
BUKP Musuan 27.54 304 eP P 02 56 01.7 -0.2
BUKP eS S 03 00 43.5 +6.3
LBFI Labuhan Bajo, 27.57 267 P P 02 55 59.7 -2.4
BUTP Butuan 27.72 307 eP P 02 56 03.5 +0.1
BUTP eS S 03 00 39.0 -0.8
KAPI Kappang 27.96 274 P P 02 56 05.5 -0.1
comp=Z,1µm,0.8s,baz=88,slow=5.5,SNR=114
KAPI LR LR 03 10 17.4
comp=Z,38µm,18.4s,baz=102,slow=43
comp=Z,1µm,0.8s
KAPI Kappang 27.96 274 P P 02 56 06.4 +0.8
KAPI Kappang 27.96 274 P P 02 56 06.7 +1.1
KAPI P P 02 56 06.7 +1.1
KAPI S S 03 00 45.6 +1.8
KAPI S S 03 00 45.6 +1.8
KAPI Kappang 27.96 274 P P 02 56 05.0 -0.6
KAPI IAmb IAmb 02 56 12.9
comp=Z,3µm,0.9s
KAPI Kappang 27.96 274 ⇑P P 02 56 05.0 -0.6
KAPI Kappang 27.96 274 P P 02 56 05.9 +0.3
comp=Z,219µmcomp=Z,41µmcomp=Z,2µm,1.0s
KAPI Kappang 27.96 274 P P 02 56 05.5 -0.1
KAPI S S 03 00 46.0 +2.3
KAPI Kappang 27.96 274 P P 02 56 05.7 +0.1
AUMAR Marden Senior 28.09 196 P P 02 56 07.4 +1.0
AUMBR Murray Bridge 28.15 195 P P 02 56 07.9 +1.0
AUMAG Moama Anglican 28.15 185 P P 02 56 08.5 +1.5
AUSMG Snowy Mountain 28.35 179 P P 02 56 10.1 +1.2
TOLI2 Tolitoli 28.35 287 P P 02 56 09.3 +0.2
comp=Z,2µm,1.0s
TOLI2 Tolitoli 28.35 287 P P 02 56 06.8 -2.2
TOLI2 IAmb IAmb 02 56 13.2
comp=Z,2µm,1.0s
TOLI2 Tolitoli 28.35 287 P P 02 56 07.7 -1.4
AUCAS Cummins Area S 28.43 201 P P 02 56 10.3 +0.8
PCI Palu 28.67 283 P P 02 56 13.9 +2.0
comp=Z,404µmcomp=Z,107µmcomp=Z,7µm,1.0s
PAGZ Pagadian 28.92 302 eP P 02 56 14.2 +0.2
PAGZ eS S 03 01 00.4 +1.7
MILA Mila 29.00 178 P P 02 56 16.7 +2.1
MILA Mila 29.00 178 ⇓P P 02 56 15.6 +1.0
PMSI Majene 29.02 277 P P 02 56 16.0 +1.0
comp=Z,431µmcomp=Z,70µmcomp=Z,1µm,1.4s
MSLP Maasin 29.02 308 eP P 02 56 13.9 -1.0
MSLP eS S 03 00 59.2 -1.0
MMSI Mamuju 29.17 279 P P 02 56 17.0 +0.6
comp=Z,395µmcomp=Z,56µmcomp=Z,1µm,1.5s
FORT Forrest 29.23 216 P P 02 56 16.6 0.0
FORT IAmb IAmb 02 56 21.1
comp=Z,1µm,0.6s
LSIP Lazi, Siquijor 29.41 305 eP P 02 56 18.2 -0.2
LSIP eS S 03 01 00.3 -6.1
TBP Tagbilaran 29.55 306 *i* P P 02 56 19.7 +0.1
TBP *i* S S 03 01 10.5 +2.0
TOO Toolangi 29.56 184 P P 02 56 20.0 +0.5
TOO pmax pmax
comp=Z,304nm,1.0s
TOO Toolangi 29.56 184 P P 02 56 20.0 +0.5
TOO Toolangi 29.56 184 ⇑P P 02 56 20.6 +1.1
PLAI Plampang 29.66 266 P P 02 56 20.7 +0.1
comp=Z,10µm,0.8s
PLAI Plampang 29.66 266 P P 02 56 19.3 -1.3
PLAI Plampang 29.66 266 P P 02 56 19.5 -1.1
LLP Lapu-Lapu 29.83 307 eP P 02 56 21.0 -1.1
LLP eS S 03 00 49.5 -23
AUSSC Sale College, 30.02 181 P P 02 56 24.9 +1.4
MBWA Marble Bar 30.06 241 P P 02 56 24.5 +0.4
comp=Z,1µm,1.7s
MBWA Marble Bar 30.06 241 P P 02 56 24.8 +0.7
MBWA P P 02 56 24.8 +0.7
MBWA Marble Bar 30.06 241 P P 02 56 23.5 -0.6
MBWA IAmb IAmb 02 56 29.6
comp=Z,2µm,0.9s
MBWA Marble Bar 30.06 241 ⇑P P 02 56 24.1 0.0
MBWA Marble Bar 30.06 241 P P 02 56 22.8 -1.3
MBWA S S 03 01 18.3 +1.8
MBWA Marble Bar 30.06 241 P P 02 56 24.3 +0.2
MBWA Marble Bar 30.06 241 P P 02 56 25.2 +1.1
MBWA x x 02 56 38.5
MGBR Mount Gambier 30.35 191 IAmb IAmb 02 56 33.5
comp=Z,2µm,1.3s
AUHPC Hawkesdale P12 30.42 188 P P 02 56 28.7 +1.6
TWSI Taliwang, Sumb 30.54 266 P P 02 56 26.7 -1.8
comp=Z,290µmcomp=Z,49µmcomp=Z,2µm,0.7s
MSVF Nonsavu 31.06 111 LR LR 03 07 18.7
comp=Z,235µm,21.1s,baz=284,slow=33
MSVF Nonsavu 31.06 111 P P 02 56 33.1 0.0
MSVF Nonsavu 31.06 111 ⇓P P 02 56 33.4 +0.3
MSVF Nonsavu 31.06 111 P P 02 56 33.8 +0.7
FUNA Funafuti 31.13 93 P P 02 56 33.0 -0.7
FUNA Funafuti 31.13 93 ⇑P P 02 56 32.9 -0.7
MMPH Masbate 31.34 310 *i* P P 02 56 36.4 +1.0
BKB Balikpapan 31.44 281 P P 02 56 37.7 +1.3
comp=Z,5µm,0.9s
BKB Balikpapan 31.44 281 ⇑P P 02 56 37.5 +1.1
BKB Balikpapan 31.44 281 P P 02 56 38.7 +2.3
comp=Z,452µmcomp=Z,96µmcomp=Z,5µm,0.9s
BKB Balikpapan 31.44 281 P P 02 56 38.4 +2.0
PVCP Virac 31.73 312 eP P 02 56 38.6 -0.2
PVCP eS S 03 01 38.0 -4.7
KHKI Kahang-Kahang 31.81 267 P P 02 56 39.0 -0.6
comp=Z,259µmcomp=Z,40µmcomp=Z,4µm,0.9s
MYLDM Lahad Datu 31.96 293 P P 02 56 41.9 +1.1
MYLDM Lahad Datu 31.96 293 IAmb IAmb 02 56 57.7
comp=Z,2µm,1.0s
MYLDM Lahad Datu 31.96 293 ⇑P P 02 56 41.9 +1.1
MYLDM Lahad Datu 31.96 293 P P 02 56 42.0 +1.1
comp=Z,105µmcomp=Z,2µm,1.0s
MYLDM Lahad Datu 31.96 293 P P 02 56 42.2 +1.3
TARAI Tarakan 32.12 289 P P 02 56 44.6 +2.3
comp=Z,313µmcomp=Z,87µmcomp=Z,944nm,1.2s
IBAJ Ibajay, Aklan 32.13 307 eP P 02 56 44.2 +1.8
H11S3 WAKE ISLAND Hy 32.25 35 P P 02 56 42.0 -1.2
H11S2 WAKE ISLAND Hy 32.25 35 P P 02 56 41.7 -1.5
SNR=8.8
IGBI Denpasar 32.26 266 P P 02 56 42.7 -0.8
H11S1 WAKE ISLAND Hy 32.27 35 P P 02 56 42.7 -0.6
DGTI Dogotuki 32.32 108 P P 02 56 43.6 -0.5
comp=Z,818nm,1.1s
AUQP San Andres 32.66 310 eP P 02 56 47.6 +0.7
AUQP eS S 03 02 05.9 +8.7
TAVE Taveuni 32.74 109 P P 02 56 48.7 +1.0
comp=Z,366nm,0.9s
WAKE Wake Island 32.86 34 P P 02 56 48.0 -0.6
JAGI Jajag, Banyuwa 33.25 267 P P 02 56 51.6 -0.6
comp=Z,14µm,0.7s
JAGI Jajag, Banyuwa 33.25 267 ⇑P P 02 56 49.8 -2.4
JAGI Jajag, Banyuwa 33.25 267 P P 02 56 49.9 -2.3
JAGI Jajag, Banyuwa 33.25 267 P P 02 56 50.2 -2.0
MEEK Meekatharra 33.31 233 P P 02 56 53.3 +0.7
H11N1 WAKE ISLAND Hy 33.33 34 P P 02 56 52.1 -0.5
H11N3 WAKE ISLAND Hy 33.35 34 P P 02 56 52.1 -0.6
baz=225,slow=74,SNR=5.8
H11N2 WAKE ISLAND Hy 33.35 34 P P 02 56 52.2 -0.5
baz=49,slow=74,SNR=5.7
FUTU Fugatoga 34.05 104 P P 02 57 00.1 +0.9
comp=Z,2µm,1.5s
FUTU Fugatoga 34.05 104 P P 02 56 58.0 -1.2
FUTU Fugatoga 34.05 104 P P 02 56 59.9 +0.7
FUTU Fugatoga 34.05 104 P P 02 56 59.3 +0.1
FUTU x x 02 57 14.5
LKBA Tubou, Lakemba 34.08 111 P P 02 56 59.3 0.0
comp=Z,16nm,1.3s
MOO Moorlands 34.36 181 P P 02 57 03.1 +1.6
MOO Moorlands 34.36 181 P P 02 57 03.2 +1.8
KKM Kota Kinabalu 34.38 293 P P 02 57 02.4 +0.2
comp=Z,3µm,1.1s
KKM Kota Kinabalu 34.38 293 ⇑P P 02 57 01.0 -1.1
KKM Kota Kinabalu 34.38 293 P P 02 57 01.6 -0.6
TAU Tasmania Unive 34.82 181 P P 02 57 06.8 +1.4
TAU Tasmania Unive 34.82 181 P P 02 57 06.1 +0.7
TAU IAmb IAmb 02 57 19.1
comp=Z,983nm,1.1s
TAU Tasmania Unive 34.82 181 ⇑P P 02 57 06.6 +1.1
TAU Tasmania Unive 34.82 181 P P 02 57 07.4 +2.0
AUTAR Taroona High S 34.85 180 P P 02 57 06.9 +1.2
CBIJ Chichi jima 35.25 351 P P 02 57 06.2 -3.1
JCJ Chichijima 35.25 351 P P 02 57 09.8 +0.5
comp=Z,5µm,1.0s
JCJ Chichijima 35.25 351 P P 02 57 06.5 -2.7
JCJ Chichijima 35.25 351 ⇓P P 02 57 07.8 -1.4
JCJ Chichijima 35.25 351 P P 02 57 09.0 -0.3
PALP Palanan 35.28 315 eP P 02 57 10.9 +1.2
SNJI Sawahan-Nganju 35.64 268 P P 02 57 12.9 -0.2
comp=Z,210µmcomp=Z,69µmcomp=Z,3µm,0.8s
SMPP San Manuel, Pa 35.93 312 eP P 02 57 14.7 -0.6
SMPP eS S 03 02 49.1 +1.4
OUZ Omahuta 36.03 143 P P 02 57 18.8 +2.9
OUZ Omahuta 36.03 143 ⇓P P 02 57 19.0 +3.1
SGCP Gonzaga 36.34 316 eP P 02 57 18.3 -0.5
MORW Morawa 36.47 231 ⇑P P 02 57 20.4 +0.5
MORW Morawa 36.47 231 P P 02 57 20.5 +0.7
KLBR Kellerberrin 36.51 226 P P 02 57 20.3 +0.2
BOLP Bolinao 36.65 311 eP P 02 57 19.4 -2.0
BOLP eS S 03 02 55.3 -3.2
BLDU Ballidu 36.74 228 P P 02 57 22.5 +0.4
UGM Wanagama 36.86 267 P P 02 57 23.6 +0.3
comp=Z,5µm,0.8s
UGM Wanagama 36.86 267 P P 02 57 23.4 +0.1
comp=Z,243µmcomp=Z,127µmcomp=Z,5µm,0.8s
UGM Wanagama 36.86 267 P P 02 57 23.6 +0.3
WCZ Waipu Caves 36.96 143 P P 02 57 26.3 +2.5
PACPP Pamplona Cagay 36.97 315 eP P 02 57 22.8 -1.3
PACPP eS S 03 03 03.8 +0.4
SMRI Semarang 36.99 269 P P 02 57 25.0 +0.6
comp=Z,8µm,0.8s
SMRI Semarang 36.99 269 ⇑P P 02 57 24.3 -0.1
SMRI Semarang 36.99 269 P P 02 57 24.6 +0.2
SZP Santa 37.00 313 P P 02 57 24.2 -0.2
YOGI Yogyakarta 37.09 268 P P 02 57 26.3 +1.1
JMZ Minamidaito 2 37.21 335 P P 02 57 26.6 +0.6
comp=Z,2µm,0.9s
JMZ Minamidaito 2 37.21 335 ⇓P P 02 57 26.9 +0.9
JMZ Minamidaito 2 37.21 335 P P 02 57 27.6 +1.5
JMZ Minamidaito 2 37.21 335 eP P 02 57 26.1 +0.1
NWAO Narrogin (SRO) 37.62 224 P P 02 57 29.6 +0.1
comp=Z,1µm,1.0s,baz=52,slow=7.3,SNR=145
NWAO PP PP 02 58 55.0 -1.9
comp=Z,318nm,0.7s,baz=64,slow=9.7,SNR=9.2
NWAO LR LR 03 13 59.9
comp=Z,222µm,18.1s,baz=50,slow=38
comp=Z,1µm,1.0s
NWAO Narrogin (SRO) 37.62 224 P P 02 57 29.6 +0.1
comp=Z,1µm,1.1s
NWAO Narrogin (SRO) 37.62 224 P P 02 57 30.2 +0.7
NWAO P P 02 57 30.2 +0.7
NWAO S S 03 03 15.7 +2.5
NWAO S S 03 03 15.7 +2.5
NWAO Narrogin (SRO) 37.62 224 P P 02 57 29.3 -0.2
NWAO IAmb IAmb 02 57 33.3
comp=Z,1µm,0.9s
NWAO Narrogin (SRO) 37.62 224 P P 02 57 30.4 +0.8
NWAO PcP PcP 02 59 47.8 +2.2
AUALB St Joseph's Co 38.39 221 P P 02 57 37.7 +1.8
comp=Z,2µm,1.3s
KSM Kuching 38.49 282 P P 02 57 38.0 +1.0
KSM Kuching 38.49 282 P P 02 57 38.9 +1.9
RIZ Raoul Island 38.59 128 P P 02 57 37.1 -0.5
RAO Raoul Island 38.60 128 P P 02 57 37.8 +0.1
comp=Z,4µm,0.9s
RAO Raoul Island 38.60 128 P P 02 57 37.4 -0.3
RAO Raoul Island 38.60 128 P P 02 57 38.2 +0.5
GLKZ Green Lake 38.60 128 P P 02 57 37.3 -0.4
AUHAR St Anne's Scho 38.65 225 P P 02 57 39.2 +1.1
comp=Z,1µm,1.1s
TOZ Tahuroa Road 38.86 144 P P 02 57 43.5 +3.8
HIZ Hauiti 39.02 145 P P 02 57 42.4 +1.2
HIZ Hauiti 39.02 145 P P 02 57 44.9 +3.8
HIZ Hauiti 39.02 145 P P 02 57 44.4 +3.3
JMJ Miyako jima 2 39.24 327 P P 02 57 44.2 +1.2
comp=Z,7µm,0.8s
TLZ Tolley Road 39.28 145 P P 02 57 47.4 +4.0
JOW Kunigami 39.40 332 LR LR 03 12 29.0
comp=Z,87µm,21.5s,baz=142,slow=34
JOW Kunigami 39.40 332 P P 02 57 44.8 +0.4
comp=Z,2µm,1.1s
JOW Kunigami 39.40 332 ⇓P P 02 57 45.2 +0.9
JOW Kunigami 39.40 332 P P 02 57 45.5 +1.2
JOW Kunigami 39.40 332 P P 02 57 45.3 +0.9
VRZ Vera Road 39.40 146 P P 02 57 48.9 +4.7
QRZ Quartz Range 39.47 150 P P 02 57 46.1 +1.2
QRZ Quartz Range 39.47 150 P P 02 57 47.8 +2.9
BBJI Bungbulang 39.73 268 P P 02 57 47.1 -0.3
comp=Z,4µm,0.7s
BBJI Bungbulang 39.73 268 P P 02 57 46.3 -1.1
comp=Z,119µmcomp=Z,80µmcomp=Z,4µm,0.8s
BBJI Bungbulang 39.73 268 P P 02 57 46.8 -0.7
WIZ White Island 39.73 142 P P 02 57 54.3 +7.3
LEM Lembang 39.80 269 P P 02 57 47.5 -0.6
comp=Z,4µm,0.7s,baz=61,slow=7.7,SNR=134
LEM LR LR 03 17 01.1
comp=Z,132µm,21.9s,baz=102,slow=40
comp=Z,4µm,0.7s
DSZ Denniston Nort 39.83 152 P P 02 57 50.7 +2.9
TKNZ Takaka Hill 39.84 150 P P 02 57 49.2 +1.2
NGZ Ngauruhoe 39.90 146 P P 02 57 50.4 +1.8
TMVZ Te Maari 39.92 145 P P 02 57 53.1 +4.3
OTVZ Oturere 39.93 145 P P 02 57 52.2 +3.3

FWVZ **Far West T-bar** 39.93 146 P P 02 57 53.8 +4.8
ETVZ **East Tongariro** 39.94 145 P P 02 57 52.5 +3.6
MAVZ **Matarangi** 39.94 146 P P 02 57 55.1 +5.9
TRVZ **Turoa** 39.96 146 P P 02 57 55.1 +5.9
WAZ **Wanganui** 39.97 147 P P 02 57 53.9 +4.9
WHVZ **Whangaehu Hut** 39.97 146 P P 02 57 52.6 +3.3
WNVZ **Wahianoa** 40.01 146 P P 02 57 53.1 +3.6
AFI **Afiamalu** 40.14 102 LR LR 03 11 43.8
comp=Z,134µm,21.2s,baz=272,slow=32
AFI **Afiamalu** 40.14 102 P P 02 57 50.6 -0.2
AFI pmax pmax
comp=Z,1µm,1.1s
AFI **Afiamalu** 40.14 102 P P 02 57 50.6 -0.2
AFI IAmb IAmb 02 58 17.5
comp=Z,1µm,1.1s
AFI **Afiamalu** 40.14 102 P P 02 57 51.4 +0.6
URZ **Urewera** 40.16 143 LR LR 03 12 52.9
comp=Z,77µm,20.4s,baz=314,slow=34
URZ **Urewera** 40.16 143 P P 02 57 51.6 +1.1
comp=Z,184nm,1.6s
URZ **Urewera** 40.16 143 P P 02 57 51.7 +1.2
URZ **Urewera** 40.16 143 ⇑P P 02 57 50.8 +0.2
URZ **Urewera** 40.16 143 P P 02 57 53.4 +2.8
JAM **Amami Oshima** 40.17 335 P P 02 57 51.7 +1.0
NNZ **Nelson** 40.19 150 P P 02 57 54.3 +3.5
TWGBT **Beinan** 40.20 320 P P 02 57 50.2 -0.9
comp=Z,940nm,0.6s
TWG **Pinlang** 40.21 320 P P 02 57 49.5 -1.7
TWG IAmb IAmb 02 58 01.3
comp=Z,695nm,0.6s
TWG **Pinlang** 40.21 320 P P 02 57 50.8 -0.4
TPI **Tanjungpandan** 40.23 275 P P 02 57 52.3 +0.8
comp=Z,262µmcomp=Z,116µmcomp=Z,5µm,0.8s
HAZ **Te Kaha** 40.23 142 P P 02 57 53.4 +2.2
YOJ **Yonaguni jima** 40.25 324 P P 02 57 52.6 +1.2
comp=Z,2µm,1.3s
YOJ **Yonaguni jima** 40.25 324 P P 02 57 53.8 +2.3
YOJ **Yonaguni jima** 40.25 324 P P 02 57 53.8 +2.3
RTZ **Ruatahuna** 40.31 144 P P 02 57 53.2 +1.2
FOZ **Fox Glacier** 40.37 155 P P 02 57 55.4 +3.2
THZ **Tophouse** 40.37 151 IAmb IAmb 02 58 01.7
comp=Z,685nm,0.7s
THZ **Tophouse** 40.37 151 P P 02 57 53.9 +1.6
WVZ **Waitaha Valley** 40.39 154 P P 02 57 56.3 +3.9
JCZ **Jackson Bay** 40.40 156 P P 02 57 53.5 +0.9
JCZ **Jackson Bay** 40.40 156 P P 02 57 55.0 +2.5
BKZ **Black Stump Fm** 40.40 145 P P 02 57 53.9 +1.2
comp=Z,192nm,1.7s
BKZ **Black Stump Fm** 40.40 145 P P 02 57 53.9 +1.2
BKZ **Black Stump Fm** 40.40 145 P P 02 57 55.0 +2.4
INZ **Inchbonnie** 40.43 153 P P 02 57 53.8 +1.1
MWZ **Matawai** 40.45 143 P P 02 57 54.9 +1.8
YULB **Yu-li** 40.48 321 P P 02 57 53.9 +0.4
comp=Z,946nm,1.1s
YULB **Yu-li** 40.48 321 IAmb IAmb 02 58 05.8
comp=Z,642nm,0.7s
YULB **Yu-li** 40.48 321 P P 02 57 54.1 +0.6
MSZ **Milford Sound** 40.57 158 P P 02 57 57.3 +3.4
TSZ **Takapari Road** 40.71 146 P P 02 57 55.7 +0.5
PUZ **Puketitti** 40.72 142 P P 02 57 56.9 +1.6
TPUB **Ta-pu** 40.84 320 P P 02 57 56.4 0.0
comp=Z,3µm,0.8s
TPUB **Ta-pu** 40.84 320 P P 02 57 56.8 +0.4
TPUB **Ta-pu** 40.84 320 P P 02 57 56.1 -0.3
H01W1 **Cape Leeuwin H** 40.84 224 P P 02 57 58.4 +2.3
baz=75,slow=6.3,SNR=66
H01W3 **Cape Leeuwin H** 40.85 224 P P 02 57 58.2 +2.1
baz=75,slow=6.3,SNR=62
LTZ **Lake Taylor** 40.85 152 P P 02 57 56.3 0.0
LTZ IAmb IAmb 02 58 27.4
comp=Z,1µm,1.5s
LTZ **Lake Taylor** 40.85 152 P P 02 57 58.0 +1.7
H01W2 **Cape Leeuwin H** 40.86 224 P P 02 57 58.6 +2.5
baz=75,slow=6.3,SNR=50
NACB **Ninganchiao** 40.88 322 P P 02 57 57.8 +1.1
comp=Z,3µm,1.7s
NACB **Ninganchiao** 40.88 322 P P 02 57 57.3 +0.7
MRZ **Mangatainoka R** 40.93 147 IAmb IAmb 02 58 09.1
comp=Z,2µm,1.4s
MRZ **Mangatainoka R** 40.93 147 P P 02 57 57.6 +0.7
SNZO **South Karori** 40.93 149 P P 02 57 57.4 +0.5
comp=Z,534nm,1.3s
SNZO **South Karori** 40.93 149 P P 02 57 57.0 +0.1
SNZO **South Karori** 40.93 149 ⇓P P 02 57 56.3 -0.6
SNZO **South Karori** 40.93 149 P P 02 57 57.5 +0.7
SNZO S S 03 04 00.3 -2.2
SNZO **South Karori** 40.93 149 P P 02 57 58.2 +1.3
DCZ **Deep Cove** 40.97 159 P P 02 58 00.8 +3.7
KNZ **Kokohu** 40.99 144 P P 02 57 57.8 +0.4
SSLB **Suanglung** 40.99 321 P P 02 57 58.5 +0.9
comp=Z,1µm,1.0s
SSLB **Suanglung** 40.99 321 IAmb IAmb 02 58 02.8
comp=Z,778nm,0.7s
SSLB **Suanglung** 40.99 321 P P 02 57 58.0 +0.4
RPZ **Rata Peaks** 41.04 154 LR LR 03 12 23.2
comp=Z,18µm,21.9s,baz=318,slow=32
RPZ **Rata Peaks** 41.04 154 P P 02 57 59.2 +1.4
comp=Z,668nm,1.7s
RPZ **Rata Peaks** 41.04 154 P P 02 57 58.4 +0.5
RPZ **Rata Peaks** 41.04 154 P P 02 57 59.4 +1.6
WKZ **Wanaka** 41.12 157 P P 02 58 01.3 +2.9
OXZ **Oxford** 41.17 153 P P 02 58 00.1 +1.2
KHZ **Kahutara** 41.17 151 P P 02 57 58.7 -0.1
comp=Z,600nm,1.6s
KHZ **Kahutara** 41.17 151 IAmb IAmb 02 58 32.4
comp=Z,2µm,1.6s
KHZ **Kahutara** 41.17 151 P P 02 57 59.1 +0.3
KHZ **Kahutara** 41.17 151 ⇑P P 02 57 58.8 -0.1
KHZ **Kahutara** 41.17 151 P P 02 57 59.3 +0.5
PXZ **Pawanui** 41.20 145 P P 02 58 01.0 +1.9
LBZ **Lake Benmore** 41.22 155 P P 02 57 59.9 +0.7
MLZ **Mavora Lakes** 41.23 158 P P 02 58 01.4 +2.1
BFZ **Birch Farm** 41.30 147 P P 02 57 59.8 -0.2
comp=Z,794nm,1.6s
BFZ **Birch Farm** 41.30 147 IAmb IAmb 02 58 30.6
comp=Z,3µm,1.5s
BFZ **Birch Farm** 41.30 147 P P 02 57 59.9 -0.1
BFZ **Birch Farm** 41.30 147 P P 02 58 00.7 +0.7
GVZ **Greta Valley S** 41.35 152 IAmb IAmb 02 58 15.6
comp=Z,758nm,0.8s
GVZ **Greta Valley S** 41.35 152 P P 02 58 01.8 +1.5
YHNB **Yeheng** 41.38 322 P P 02 58 02.3 +1.4
comp=Z,3µm,1.4s
YHNB **Yeheng** 41.38 322 P P 02 58 02.2 +1.3
YHNB **Yeheng** 41.38 322 P P 02 58 01.8 +1.0
PYZ **Puysegur Point** 41.41 160 P P 02 58 02.7 +1.9
comp=Z,869nm,1.3s
PYZ **Puysegur Point** 41.41 160 P P 02 58 01.8 +1.0
PYZ **Puysegur Point** 41.41 160 P P 02 58 03.9 +3.1
JHJ2 **Mitsune** 41.52 350 P P 02 58 01.8 0.0
comp=Z,6µm,1.2s
JHJ2 **Mitsune** 41.52 350 ⇑P P 02 58 00.9 -0.8
JHJ2 **Mitsune** 41.52 350 P P 02 58 01.3 -0.5
JHJ2 **Mitsune** 41.52 350 P P 02 58 01.6 -0.2
JHJ **Hachijo jima 2** 41.54 350 LR LR 03 14 53.9
comp=Z,49µm,18.4s,baz=173,slow=35
TATO **Taipei** 41.54 323 P P 02 58 02.8 +0.8
comp=Z,6µm,1.8s
TATO **Taipei** 41.54 323 P P 02 58 03.4 +1.4
TATO S S 03 04 13.9 +2.1
TATO **Taipei** 41.54 323 P P 02 58 03.3 +1.3
TMZ **Timaru** 41.56 155 P P 02 58 02.4 +0.4
XMI **Christmas Isla** 41.57 263 ⇑P P 02 58 02.1 -0.4
EAZ **Earnscleugh** 41.57 157 P P 02 58 03.4 +1.4
WHZ **Wether Hill Ro** 41.62 159 P P 02 58 05.3 +2.8
MQZ **McQueen's Vall** 41.74 153 IAmb IAmb 02 58 15.7
comp=Z,1µm,1.6s
MQZ **McQueen's Vall** 41.74 153 P P 02 58 04.7 +1.2
PPBI **Pangkal Pinang** 41.82 276 P P 02 58 06.8 +2.2
MNZS **Menzies Bay Ba** 41.84 152 P P 02 58 07.2 +2.9
ODZ **Otahua Downs** 41.95 156 P P 02 58 06.3 +1.2
comp=Z,140nm,1.0s
ODZ **Otahua Downs** 41.95 156 P P 02 58 06.6 +1.5
ODZ **Otahua Downs** 41.95 156 ⇑P P 02 58 05.8 +0.6
ODZ **Otahua Downs** 41.95 156 P P 02 58 06.1 +1.0
TUZ **Tuapeka** 42.30 157 P P 02 58 09.6 +1.6
APZ **The Paps** 42.44 159 P P 02 58 10.0 +0.8
NIUE **Niue** 42.51 110 IAmb IAmb 02 58 13.9
comp=Z,2µm,1.0s
JSU **Suzuyama** 42.58 338 IAmb IAmb 02 58 13.0
comp=Z,3µm,1.3s
JSU **Suzuyama** 42.58 338 ⇓P P 02 58 10.7 +0.3
JSU **Suzuyama** 42.58 338 P P 02 58 10.9 +0.5
JSU **Suzuyama** 42.58 338 P P 02 58 10.8 +0.3
SYZ **Scrubby Hill** 42.60 158 P P 02 58 11.5 +1.1
comp=Z,258nm,1.2s
SYZ **Scrubby Hill** 42.60 158 P P 02 58 12.7 +2.3
HHSZ **Highcliff Hill** 42.62 156 P P 02 58 12.9 +2.3
PMBI **Palembang** 43.05 274 P P 02 58 16.3 +1.7
PMBI **Palembang** 43.05 274 P P 02 58 15.6 +1.1
PMBI **Palembang** 43.05 274 P P 02 58 17.2 +2.6
comp=Z,266µmcomp=Z,113µmcomp=Z,5µm,1.1s
PMBI **Palembang** 43.05 274 P P 02 58 16.6 +2.1
KNMB **Chin-men Tao** 43.10 319 P P 02 58 15.5 +0.7
QZH2 **Quanzhou** 43.31 320 ⇑*i*P P 02 58 17.3 +0.9
QZH2 pP pP 02 58 35.4 -1.4
QZH2 S S 03 04 38.8 +1.0
QZH2 SS SS 03 07 49.3 -5.3
QZH2 ScS ScS 03 08 08.1 -0.3
QZH2 pmax pmax
comp=Z,1µm,1.1s
QZH2 pmax pmax
comp=Z,35µm,8.2s
QZH2 L L
comp=Z,57µm,19.6s
QZH2 L L
comp=Z,80µm,18.9s
JSG **Sagara** 43.35 348 P P 02 58 17.3 +0.8
comp=Z,3µm,1.8s
JSG **Sagara** 43.35 348 ⇓P P 02 58 16.8 +0.2
JSG **Sagara** 43.35 348 P P 02 58 17.6 +1.1
JSG **Sagara** 43.35 348 P P 02 58 17.3 +0.8
JIE **Ise** 43.39 347 P P 02 58 16.2 -0.7
JMN **Monobe** 43.49 343 P P 02 58 18.3 +0.5
comp=Z,2µm,1.3s
JMN **Monobe** 43.49 343 ⇓P P 02 58 17.9 +0.2
JMN **Monobe** 43.49 343 P P 02 58 18.2 +0.5
JMN **Monobe** 43.49 343 P P 02 58 18.0 +0.2
JOD2 **Odawara 2** 43.75 350 P P 02 58 18.9 -0.9
DLV **Lat** 43.75 296 P P 02 58 20.6 +0.2
comp=Z,1µm,1.1s
DLV **Lat** 43.75 296 P P 02 58 19.5 -0.9
DLV IAmb IAmb 02 58 26.3
comp=Z,1µm,1.0s
DLV **Lat** 43.75 296 ⇑P P 02 58 20.4 0.0
DLV **Lat** 43.75 296 P P 02 58 20.6 +0.2
JNU **Nakatsue** 43.88 339 LR LR 03 14 00.1
comp=Z,52µm,21.9s,baz=150,slow=32
JNU **Nakatsue** 43.88 339 P P 02 58 20.9 0.0
INU **Inuyama** 44.24 347 P P 02 58 23.9 +0.1
comp=Z,1µm,1.4s
INU **Inuyama** 44.24 347 IAmb IAmb 02 58 26.8
comp=Z,2µm,1.4s
INU **Inuyama** 44.24 347 ⇓P P 02 58 23.7 -0.1
INU **Inuyama** 44.24 347 P P 02 58 23.8 +0.1
INU **Inuyama** 44.24 347 P P 02 58 23.4 -0.3
INU x x 02 58 42.7
INU x2 02 58 49.9
JFU **Fukue jima 2** 44.25 337 *e*P P 02 58 24.1 +0.2
JMBI **JAMBI** 44.37 276 P P 02 58 27.7 +2.6
JGF **Kuroka** 44.41 348 P P 02 58 24.8 -0.3
comp=Z,1µm,1.3s
JGF **Kuroka** 44.41 348 IAmb IAmb 02 58 51.8
comp=Z,1µm,1.1s
JGF **Kuroka** 44.41 348 ⇓P P 02 58 24.6 -0.5
JGF **Kuroka** 44.41 348 P P 02 58 25.0 -0.1
JGF **Kuroka** 44.41 348 P P 02 58 24.7 -0.5
JYT **Yasato** 44.51 351 P P 02 58 25.7 -0.2
JRY **Ryogami san** 44.52 350 P P 02 58 25.9 -0.1
JAD **Aida** 44.55 344 P P 02 58 26.4 +0.2
JWT **Wachi** 44.55 346 P P 02 58 26.0 -0.2
HKC **Hong Kong Obse** 44.56 313 ⇑P P 02 58 29.0 +2.5
HKPS **Hong Kong Po S** 44.57 313 P P 02 58 27.8 +1.1
HKPS **Hong Kong Po S** 44.57 313 P P 02 58 27.7 +1.1
HKPS IAmb IAmb 02 58 34.0
comp=Z,2µm,1.1s
HKPS **Hong Kong Po S** 44.57 313 P P 02 58 28.7 +2.1
MNAI **Manna** 44.66 272 P P 02 58 28.4 +0.9
comp=Z,3µm,0.7s
MNAI **Manna** 44.66 272 P P 02 58 26.3 -1.2
MNAI **Manna** 44.66 272 ⇑P P 02 58 26.0 -1.4
MNAI **Manna** 44.66 272 P P 02 58 27.8 +0.3
comp=Z,212µmcomp=Z,101µmcomp=Z,3µm,0.7s
MNAI **Manna** 44.66 272 P P 02 58 27.3 -0.1
MYKOM **Kota Tinggi** 44.83 281 P P 02 58 29.9 +1.1
comp=Z,2µm,1.5s
MYKOM **Kota Tinggi** 44.83 281 IAmb IAmb 02 58 34.9
comp=Z,2µm,1.0s
MYKOM **Kota Tinggi** 44.83 281 ⇑P P 02 58 29.5 +0.7
MYKOM **Kota Tinggi** 44.83 281 P P 02 58 29.7 +0.9
MCO **Taipa Grande** 44.90 312 P P 02 58 31.0 +1.8
JGN **Niukaw** 45.02 348 P P 02 58 29.7 -0.3
KSI **Kapahiang** 45.10 273 P P 02 58 29.8 -1.3
comp=Z,197µmcomp=Z,72µmcomp=Z,3µm,0.8s
MJAR **Matsushiro Arr** 45.15 349 P P 02 58 30.4 -0.6
comp=Z,2µm,1.1s,baz=174,slow=7.6,SNR=486
MJAR PKPPKP **P'P'df** 03 30 06.1 +1.4
comp=Z,2.4nm,0.4s,baz=273,slow=1.8,SNR=4.2
comp=Z,2µm,1.1s
MJAR **Matsushiro Arr** 45.15 349 P P 02 58 29.7 -1.3
MJAR IAmb IAmb 02 58 36.5
comp=Z,2µm,1.1s
MAJO **Matsushiro** 45.16 349 P P 02 58 30.5 -0.5
comp=Z,3µm,1.3s
MAJO **Matsushiro** 45.16 349 *d i*P P 02 58 29.6 -1.4
MAJO pmax pmax
comp=Z,4µm,1.4s
MAJO **Matsushiro** 45.16 349 P P 02 58 29.5 -1.5
MAJO **Matsushiro** 45.16 349 ⇓P P 02 58 30.7 -0.3
MAJO **Matsushiro** 45.16 349 P P 02 58 30.2 -0.8
MAJO S S 03 05 03.1 -1.3
MAJO **Matsushiro** 45.16 349 P P 02 58 30.9 -0.1
MAT **Matsushiro** 45.16 349 P P 02 58 30.6 -0.4
EGSI **Enggano, Bengk** 45.22 270 P P 02 58 31.5 -0.4
JTU **Tsushima** 45.67 339 P P 02 58 35.0 -0.1
comp=Z,869nm,1.3s
JTU **Tsushima** 45.67 339 ⇑P P 02 58 35.5 +0.5
JTU **Tsushima** 45.67 339 P P 02 58 35.9 +0.8
JTU **Tsushima** 45.67 339 *e*P P 02 58 35.2 +0.1
GZH2 **Guangzhou** 45.78 314 P P 02 58 38.1 +1.9
GZH2 PP PP 03 00 22.8 -2.3
GZH2 S S 03 05 17.4 +3.7
GZH2 pmax pmax
comp=Z,3µm,1.1s
GZH2 pmax pmax
comp=Z,54µm,8.0s
GZH2 L L
comp=Z,31µm,16.8s
GZH2 L L
comp=Z,35µm,16.5s
GZH2 L L
comp=Z,52µm,20.6s
QIZ **Qiongzhong** 45.98 306 P P 02 58 40.1 +2.3
QIZ S S 03 05 15.6 -1.2
QIZ pmax pmax
comp=Z,2µm,1.5s
QIZ pmax pmax
comp=Z,40µm,11.5s
QIZ L L
comp=Z,71µm,21.1s
QIZ L L
comp=Z,31µm,19.6s
QIZ L L
comp=Z,57µm,24.1s
JMM **Marumori** 46.04 352 P P 02 58 38.1 +0.2
SSE **Sheshan** 46.41 328 P P 02 58 42.0 +1.0
SSE S S 03 05 22.8 +0.2
SSE pmax pmax
comp=Z,470nm,1.1s
SSE pmax pmax
comp=Z,3µm,3.0s
SSE L L
comp=Z,6µm,18.5s
JYA **Atsumi** 46.90 351 P P 02 58 45.6 +0.9
BKNI **Bangkinang** 47.28 278 P P 02 58 48.6 +0.6
comp=Z,4µm,1.0s
BKNI **Bangkinang** 47.28 278 P P 02 58 48.3 +0.2
BKNI S S 03 05 37.2 +1.8
BKNI **Bangkinang** 47.28 278 P P 02 58 48.0 -0.1
BKNI **Bangkinang** 47.28 278 ⇑P P 02 58 48.5 +0.4
BKNI **Bangkinang** 47.28 278 P P 02 58 48.7 +0.6
comp=Z,257µmcomp=Z,83µmcomp=Z,4µm,1.0s
BKNI **Bangkinang** 47.28 278 P P 02 58 48.7 +0.6
MCQ **Macquarie Isla** 47.28 171 P P 02 58 48.1 +0.7
MCQ **Macquarie Isla** 47.28 171 P P 02 58 48.1 +0.7
CTZ **Chatham Island** 47.30 145 P P 02 58 48.6 +0.9
comp=Z,505nm,1.0s
CTZ **Chatham Island** 47.30 145 P P 02 58 49.0 +1.3
PPI **Padang Panjang** 47.76 277 P P 02 58 51.0 -0.8
comp=Z,223µmcomp=Z,77µmcomp=Z,2µm,1.6s
PPSI **Pulau Pagai** 47.78 273 P P 02 58 52.9 +1.0
comp=Z,127µmcomp=Z,5µm,0.7s
TJN **Taejon** 48.07 338 P P 02 58 54.1 +0.3
comp=Z,3µm,0.7s
TJN **Taejon** 48.07 338 *i* P P 02 58 53.2 -0.6
NJ2 **Nanjing** 48.41 327 ⇑*i*P P 02 58 57.9 +1.5
NJ2 S S 03 05 53.9 +3.1
NJ2 pmax pmax
comp=Z,2µm,1.1s
NJ2 pmax pmax
comp=Z,49µm,3.9s
KULM **Kulim** 48.78 284 P P 02 58 59.6 -0.1
comp=Z,3µm,1.2s
KULM **Kulim** 48.78 284 ⇑P P 02 59 00.1 +0.4
KULM **Kulim** 48.78 284 P P 02 59 00.3 +0.6
KSRS **Korea Array** 48.83 339 P P 02 59 00.0 +0.5
comp=Z,1µm,1.0s,baz=156,slow=7.9,SNR=560
KSRS LR LR 03 18 53.2
comp=Z,52µm,21.7s,baz=165,slow=35
KSRS PKPPKP **P'P'df** 03 30 01.1 +0.8
comp=Z,8.6nm,1.1s,baz=336,slow=2.3,SNR=4.2
comp=Z,1µm,1.0s
KSAR **Wonju Array Be** 48.83 339 P P 02 58 59.9 +0.3
KSAR **Wonju Array Be** 48.83 339 P P 02 58 59.9 +0.3
JOHN **Johnston Islan** 48.86 60 P P 02 59 00.6 +0.5
comp=Z,915nm,1.8s
JOHN **Johnston Islan** 48.86 60 P P 02 58 59.7 -0.5
JOHN **Johnston Islan** 48.86 60 ⇓P P 02 59 00.1 0.0
JOHN **Johnston Islan** 48.86 60 P P 02 59 00.5 +0.3
JTM **Tenmabayashi** 48.88 353 P P 02 58 59.8 -0.1
comp=Z,2µm,1.4s
JTM **Tenmabayashi** 48.88 353 ⇓P P 02 59 00.0 +0.1
JTM **Tenmabayashi** 48.88 353 P P 02 59 00.3 +0.4
JTM **Tenmabayashi** 48.88 353 *i* P P 02 59 00.1 +0.2
SISI **Saibi** 48.91 275 P P 02 58 59.9 -0.7
comp=Z,220µmcomp=Z,67µmcomp=Z,1µm,0.7s
GULI **GuiLin** 49.15 313 ⇑*i*P P 02 59 02.4 +0.2
GULI PP PP 03 00 52.9 -3.9
GULI S S 03 06 05.1 +3.7
GULI pmax pmax
comp=Z,1µm,1.1s
GULI pmax pmax
comp=Z,32µm,12.0s
GULI L L
comp=Z,80µm,22.2s
GULI L L
comp=Z,35µm,19.0s
GULI L L
comp=Z,40µm,19.8s
CNSH **ChangSha** 49.21 318 P P 02 59 03.6 +1.0
CNSH S S 03 06 02.8 +0.6
CNSH pmax pmax
comp=Z,1µm,1.1s
CNSH L L
comp=Z,26µm,22.0s
CNSH L L
comp=Z,49µm,20.6s
CNSH L L
comp=Z,49µm,30.2s
MIDW **Midway** 49.28 42 P P 02 59 03.5 +0.4
comp=Z,4µm,1.6s
MIDW **Midway** 49.28 42 P P 02 59 02.2 -0.9
MIDW **Midway** 49.28 42 ⇑P P 02 59 03.0 -0.1
MIDW **Midway** 49.28 42 P P 02 59 03.3 +0.2
MIDW **Midway** 49.28 42 P P 02 59 02.7 -0.4
MIDW x x 02 59 21.9
INCN **Inchon** 49.32 338 P P 02 59 04.0 +0.6
comp=Z,1µm,1.3s
INCN **Inchon** 49.32 338 P P 02 59 04.0 +0.6
INCN S S 03 06 05.6 +2.1
INCN **Inchon** 49.32 338 P P 02 59 03.3 0.0
INCN IAmb IAmb 02 59 06.3
comp=Z,1µm,1.1s
INCN **Inchon** 49.32 338 ⇓P P 02 59 03.7 +0.3
INCN **Inchon** 49.32 338 P P 02 59 04.3 +0.9
JOT **Ohata** 49.47 353 P P 02 59 04.4 0.0
PSI **Prapat** 49.85 280 P P 02 59 07.4 -0.6
comp=Z,2µm,1.7s
PSI **Prapat** 49.85 280 P P 02 59 07.6 -0.4
comp=Z,227µmcomp=Z,93µmcomp=Z,2µm,1.7s
ERM **Erimo** 49.90 356 P P 02 59 08.3 +0.7
comp=Z,1µm,2.4s
ERM **Erimo** 49.90 356 *de*P P 02 59 08.1 +0.5
ERM pmax pmax
comp=Z,2µm,2.1s
ERM MLR MLR
comp=Z,114µm,21.0s
ERM **Erimo** 49.90 356 P P 02 59 08.1 +0.5
ERM IAmb IAmb 02 59 11.9
comp=Z,960nm,1.2s
ERM **Erimo** 49.90 356 ⇓P P 02 59 08.3 +0.7
ERM **Erimo** 49.90 356 P P 02 59 08.1 +0.5
ERM S S 03 06 12.1 +0.8
ERM **Erimo** 49.90 356 P P 02 59 08.6 +1.0
JEM **Erimo** 49.90 356 P P 02 59 08.2 +0.6
comp=Z,713nm,2.5s
JEM **Erimo** 49.90 356 P P 02 59 08.3 +0.6
WHN **Wuhan** 49.91 322 ⇑P P 02 59 09.3 +1.4
WHN sP sP 02 59 38.3 -0.2
WHN S S 03 06 15.3 +3.4
WHN pmax pmax
comp=Z,8µm,1.5s
WHN pmax pmax
comp=Z,72µm,10.8s
WHN L L
comp=Z,105µm,20.8s
HJU **Haeju** 50.16 337 P P 02 59 10.0 +0.3
HJU S S 03 06 14.9 -0.2
HJU AmB
comp=Z,23µm,2.8s
COCO **West Island** 50.25 261 P P 02 59 13.1 +2.4
COCO P P 02 59 13.1 +2.4
COCO **West Island** 50.25 261 P P 02 59 11.9 +1.2
COCO **West Island** 50.25 261 ⇑P P 02 59 12.8 +2.0
COCO **West Island** 50.25 261 P P 02 59 13.2 +2.4
comp=Z,123µmcomp=Z,47µmcomp=Z,2µm,1.0s
COCO **West Island** 50.25 261 P P 02 59 12.9 +2.1
JSH **Shimam** 50.84 353 P P 02 59 15.1 +0.4
GSI **Gunungsitoli** 50.86 278 P P 02 59 15.4 -0.1
comp=Z,6µm,0.9s
GSI **Gunungsitoli** 50.86 278 ⇑P P 02 59 15.1 -0.4
GSI **Gunungsitoli** 50.86 278 P P 02 59 15.1 -0.4
comp=Z,232µmcomp=Z,93µmcomp=Z,6µm,0.9s
GSI **Gunungsitoli** 50.86 278 P P 02 59 15.3 -0.2
JEW **Eniwo** 50.87 354 P P 02 59 15.5 +0.5
PYAG **Pyongyang** 51.03 338 P P 02 59 15.4 -0.8
PYAG pP pP 02 59 39.3 +2.1
PYAG S S 03 06 26.4 -0.7
PYAG AmB
comp=Z,7µm,2.9s
PYAG AMS AMS
comp=Z,88µm,32.1s
HHU **Hamhung** 51.18 340 P P 02 59 17.7 +0.4
HHU S S 03 06 29.2 +0.1
HHU AmB
comp=Z,9µm,2.6s
HHU AMS AMS
comp=Z,78µm,27.6s
YUK **Yuzh-Kuril'sk** 51.77 358 *e*P P 02 59 21.3 -0.3
YUK *i* 03 01 19.2
YUK *i* S S 03 06 37.8 +0.7
YUK *i* 03 09 04.0
YUK pmax pmax
comp=N,653nm,1.3s
YUK pmax pmax
comp=Z,2µm,1.3s
YUK pmax pmax
comp=E,426nm,1.1s
YUK pmax pmax
comp=Z,4µm,1.8s
JMP **Maruseppu** 51.87 356 P P 02 59 22.9 +0.6
SLVN **Son La** 51.95 305 P P 02 59 24.6 +1.1
comp=Z,1µm,1.3s
SLVN **Son La** 51.95 305 IAmb IAmb 02 59 28.0
comp=Z,1µm,1.2s
ASAJ **Asahikawa** 52.03 355 LR LR 03 18 07.4
comp=Z,16µm,20.3s,baz=188,slow=32
ASAJ **Asahikawa** 52.03 355 P P 02 59 25.0 +1.4
JKA **Kamikawa-asahi** 52.03 355 P P 02 59 24.6 +1.0
RAR **Rarotonga** 52.25 111 P P 02 59 25.2 -0.5
comp=Z,160nm,0.9s,baz=222,slow=7.4,SNR=15
RAR LR LR 03 17 58.7

comp=Z,47µm,21.7s,baz=280,slow=32
comp=Z,160nm,0.9s
RAR Rarotonga 52.25 111 P **P** **02 59 25.9 +0.3**
comp=Z,202nm,2.1s
RAR Rarotonga 52.25 111 P **P** **02 59 26.1 +0.4**
RAR IAmb IAmb 02 59 30.6
comp=Z,788nm,1.4s
RAR Rarotonga 52.25 111 P **P** **02 59 25.6 0.0**
RAR Rarotonga 52.25 111 P **P** **02 59 26.5 +0.9**
SNSI Sinabang, Aceh 52.31 279 P **P** **02 59 26.8 +0.6**
comp=Z,246µmcomp=Z,5µm,0.8s
LHMI Lhok Sumawe 52.33 283 P **P** **02 59 26.6 +0.2**
comp=Z,2µm,1.1s
LHMI Lhok Sumawe 52.33 283 ⇑P **P** **02 59 26.8 +0.5**
LHMI Lhok Sumawe 52.33 283 P **P** **02 59 26.9 +0.5**
comp=Z,262µmcomp=Z,2µm,1.1s
LHMI Lhok Sumawe 52.33 283 P **P** **02 59 27.0 +0.6**
SUJ Sinuiju 52.42 338 P **P** **02 59 27.9 +1.4**
SUJ AmB
comp=Z,9µm,1.8s
SUJ AMS AMS
comp=Z,47µm,24.6s
TIA Tai'an 52.52 329 P **P** **02 59 27.0 -0.4**
TIA PcS **PcS** **03 04 35.5 +0.2**
TIA S **S** **03 06 41.9 -5.8**
TIA SS **SS** **03 10 18.1 -9.1**
TIA pmax pmax
comp=Z,560nm,1.0s
TIA pmax pmax
comp=Z,11µm,4.0s
TIA L L
comp=Z,71µm,19.9s
TIA L L
comp=Z,96µm,18.5s
TIA L L
comp=Z,66µm,20.9s
GYA Guiyang 52.52 312 P **P** **02 59 29.3 +1.6**
GYA S **S** **03 06 50.9 +2.5**
GYA pmax pmax
comp=Z,1µm,1.3s
GYA L L
comp=Z,126µm,14.8s
GYA L L
comp=Z,96µm,14.4s
DL2 Dalian 52.56 334 P **P** **02 59 28.0 +0.4**
DL2 sP **sP** **02 59 55.3 -2.8**
DL2 PcS **PcS** **03 04 35.5 +0.2**
DL2 S **S** **03 06 48.9 +0.8**
DL2 ScS **ScS** **03 09 08.9 -0.4**
DL2 pmax pmax
comp=Z,800nm,1.2s
DL2 pmax pmax
comp=Z,10µm,4.4s
DL2 L L
comp=Z,82µm,28.1s
DL2 L L
comp=Z,78µm,26.0s
DL2 L L
comp=Z,76µm,23.3s
PSTR Posyet 52.68 344 *d i*P **P** **02 59 29.0 +0.6**
VLA Vladivostok 52.84 345 *c i*P **P** **02 59 30.5 +1.0**
VLA pmax pmax
comp=Z,3µm,1.6s
VLA MLR MLR
comp=Z,107µm,26.0s
ENH Enshi 52.85 318 P **P** **02 59 31.8 +1.9**
ENH Enshi 52.85 318 P **P** **02 59 31.3 +1.4**
ENH x x 02 59 47.6
KUR Kuril'sk 52.94 0 *d i*P **P** **02 59 31.1 +0.9**
KUR pmax pmax
comp=Z,5µm,1.3s
JWK2 Keihoku 53.28 355 P **P** **02 59 33.8 +1.0**
USA0B Ussuriysk Arra 53.83 346 *d i*P **P** **02 59 37.1 +0.3**
USA0B Ussuriysk Arra 53.83 346 IAmb IAmb 02 59 39.9
comp=Z,884nm,1.1s
USRK Ussuriysk Ar. 53.83 346 P **P** **02 59 37.5 +0.7**
comp=Z,345nm,0.8s,baz=168,slow=8.4,SNR=264
USRK LR LR 03 21 08.3
comp=Z,22µm,21.4s,baz=155,slow=34
USRK PKPPKP 03 29 55.2
comp=Z,2.8nm,0.7s,baz=302,slow=1.8,SNR=6.0
comp=Z,345nm,0.8s
USRK Ussuriysk Ar. 53.83 346 P **P** **02 59 37.1 +0.3**
LYN LuoYang 53.85 324 ⇑P **P** **02 59 37.5 +0.3**
LYN pP pP 02 59 57.3 -1.1
LYN sP sP 03 00 04.6 -3.4
LYN S **S** **03 07 05.3 -0.6**
LYN pmax pmax
comp=Z,1µm,1.1s
LYN pmax pmax
comp=Z,9µm,3.7s
LYN L L
comp=Z,49µm,18.1s
LYN L L
comp=Z,25µm,18.3s
LYN L L
comp=Z,87µm,18.2s
SNY Shenyang 54.26 338 ⇓P **P** **02 59 40.3 +0.3**
SNY sP **sP** **03 00 14.3 +3.7**
SNY S **S** **03 07 12.3 +1.2**
SNY pmax pmax
comp=Z,520nm,1.6s
SNY pmax pmax
comp=Z,9µm,4.2s
SNY L L
comp=Z,56µm,21.6s
SNY L L
comp=Z,78µm,23.5s
SNY L L
comp=Z,72µm,21.1s
HNS HongShan 54.68 328 ⇑P **P** **02 59 43.4 +0.3**
HNS sP **sP** **03 00 13.4 -0.4**
HNS S **S** **03 07 17.3 +0.5**
HNS pmax pmax
comp=Z,890nm,1.1s
HNS pmax pmax
comp=Z,15µm,5.3s
HNS L L
comp=Z,59µm,19.8s
HNS L L
comp=Z,71µm,20.8s
HNS L L
comp=Z,32µm,20.7s
KMI2 Kunming 54.78 308 ⇑P **P** **02 59 46.3 +1.9**
KMI2 sP sP 03 00 17.8 +2.4
KMI2 S **S** **03 07 22.8 +3.7**
KMI2 SS **SS** **03 11 00.1 -3.6**
KMI2 pmax pmax
comp=Z,2µm,1.2s
KMI2 pmax pmax
comp=Z,32µm,6.8s
KMI2 L L
comp=Z,21µm,22.3s
KMI2 L L
comp=Z,31µm,20.6s
KMI2 L L
comp=Z,66µm,26.0s
CM31 Chiang Mai Arr 54.83 299 P **P** **02 59 46.5 +1.9**
SNR=541
CM31 P **P** **02 59 46.5 +1.9**
SNR=541
CM31 S **S** **03 07 21.3 +1.8**
CM31 S **S** **03 07 21.3 +1.8**
CM31 Chiang Mai Arr 54.83 299 IAmb IAmb 02 59 49.0
comp=Z,1µm,0.9s
CMAR Chiang Mai Arr 54.83 299 P **P** **02 59 46.3 +1.7**
comp=Z,524nm,0.7s,baz=122,slow=5.3,SNR=430
CMAR PKPPKP **P'P'df** **03 29 54.1 -0.5**
comp=Z,4.7nm,0.6s,baz=287,slow=3.6,SNR=6.2
CMAR P4KPbc 03 37 08.2
comp=Z,8.1nm,0.9s,baz=122,slow=2.6,SNR=24
comp=Z,524nm,0.7s
CMAR Chiang Mai Arr 54.83 299 P **P** **02 59 45.2 +0.7**
MDJ Mudanjiang 54.83 344 IAmb IAmb 02 59 47.0
comp=Z,704nm,1.1s
MDJ Mudanjiang 54.83 344 P **P** **02 59 44.8 +0.7**
MDJ S **S** **03 07 20.0 +1.3**
MDJ pmax pmax
comp=Z,730nm,1.4s
MDJ pmax pmax
comp=Z,13µm,3.5s
MDJ L L
comp=Z,50µm,19.8s
MDJ L L
comp=Z,28µm,20.0s
MDJ L L
comp=Z,174µm,24.4s
MDJ Mudanjiang 54.83 344 P **P** **02 59 44.7 +0.7**
YSS Yuzhno-Sakhali 54.84 356 *de*P **P** **02 59 44.3 +0.2**
YSS pmax pmax
comp=Z,2µm,2.0s
YSS MLR MLR
comp=Z,59µm,22.0s
YSS Yuzhno-Sakhali 54.84 356 P **P** **02 59 43.9 -0.2**
YSS Yuzhno-Sakhali 54.84 356 ⇓P **P** **02 59 44.4 +0.3**
YSS Yuzhno-Sakhali 54.84 356 P **P** **02 59 44.6 +0.5**
YSS Yuzhno-Sakhali 54.84 356 P **P** **02 59 44.3 +0.2**
YSS PcP **PcP** **03 00 44.6 -0.7**
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.2 +0.6**
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.4 +0.8**
CHTO pmax pmax
comp=Z,2µm,1.4s
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.9 +1.3**
CHTO P **P** **02 59 46.9 +1.3**
CHTO S **S** **03 07 23.8 +2.3**
CHTO S **S** **03 07 23.8 +2.3**
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.4 +0.8**
CHTO IAmb IAmb 02 59 49.0
comp=Z,2µm,1.4s
CHTO Chiang Mai 54.97 300 ⇑P **P** **02 59 46.9 +1.3**
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.5 +0.8**
comp=Z,180µmcomp=Z,48µmcomp=Z,1µm,1.2s
CHTO Chiang Mai 54.97 300 P **P** **02 59 46.6 +0.9**
CHTO S **S** **03 07 25.6 +4.1**
CHTO Chiang Mai 54.97 300 P **P** **02 59 47.1 +1.4**
CN2 Changchun 55.33 340 P **P** **02 59 47.5 -0.2**
CN2 PcP **PcP** **03 00 47.3 0.0**
CN2 ScP **ScP** **03 04 38.8 +0.2**
CN2 S **S** **03 07 23.3 -2.1**
CN2 ScS **ScS** **03 09 26.8 -2.0**
CN2 pmax pmax
comp=Z,170nm,1.7s
CN2 pmax pmax
comp=Z,8µm,5.0s
XMAS Kiritimati 55.56 82 P **P** **02 59 50.2 +0.3**
comp=Z,492nm,1.3s
XMAS Kiritimati 55.56 82 P **P** **02 59 49.5 -0.4**
XMAS IAmb IAmb 03 00 28.0
comp=Z,2µm,1.4s
XMAS Kiritimati 55.56 82 ⇓P **P** **02 59 50.1 +0.3**
XMAS Kiritimati 55.56 82 P **P** **02 59 50.4 +0.5**
XAN Xi'an 55.65 321 ⇑P **P** **02 59 50.5 +0.2**
XAN pP pP 03 00 08.3 -3.3
XAN sP sP 03 00 19.8 -1.3
XAN S **S** **03 07 31.0 +0.9**
XAN pmax pmax
comp=Z,2µm,1.1s
XAN pmax pmax
comp=Z,22µm,8.6s
XAN L L
comp=Z,35µm,20.6s
XAN L L
comp=Z,30µm,22.0s
XAN L L
comp=Z,46µm,23.8s
BJI2 Beijing 55.94 331 P **P** **02 59 52.5 +0.4**
BJI2 PcP **PcP** **03 00 49.4 -0.4**
BJI2 S **S** **03 07 31.4 -2.3**
BJI2 SS **SS** **03 11 19.3 -1.8**
BJI2 pmax pmax
comp=Z,180nm,1.0s
BJI2 pmax pmax
comp=Z,5µm,3.9s
BJI2 L L
comp=Z,31µm,21.6s
BJI2 L L
comp=Z,31µm,18.8s
BJI2 L L
comp=Z,30µm,21.6s
BJT Baijiatuau 55.94 331 IAmb IAmb 02 59 58.8
comp=Z,2µm,1.8s
BJT Baijiatuau 55.94 331 P **P** **02 59 52.6 +0.5**
BJT Baijiatuau 55.94 331 P **P** **02 59 52.8 +0.7**
BJT PcP **PcP** **03 00 49.6 -0.1**
TIY Taiyuan 56.13 326 P **P** **02 59 54.4 +0.8**
TIY pP **pP** **03 00 17.5 +2.6**
TIY S **S** **03 07 36.0 -0.4**
TIY pmax pmax
comp=Z,360nm,1.1s
TIY pmax pmax
comp=Z,11µm,3.9s
TIY L L
comp=Z,23µm,16.5s
TIY L L
comp=Z,36µm,18.6s
TIY L L
comp=Z,48µm,19.2s
PZH PanZhiHua 56.25 309 P **P** **02 59 56.9 +2.1**
PZH S **S** **03 07 41.0 +2.5**
PZH sS **sS** **03 08 15.5 -0.4**
PZH SS **SS** **03 11 20.8 -5.8**
PZH pmax pmax
comp=Z,500nm,1.8s
PZH pmax pmax
comp=Z,28µm,11.4s
PZH L L
comp=Z,18µm,18.4s
PZH L L
comp=Z,20µm,23.3s
PZH L L
comp=Z,27µm,24.3s
BNX BinXian 56.47 343 ⇓P **P** **02 59 55.4 -0.4**
BNX PcP **PcP** **03 00 52.3 +0.6**
BNX PP **PP** **03 02 04.3 +1.8**
BNX S **S** **03 07 40.4 -0.1**
BNX sS **sS** **03 08 14.8 -1.4**
BNX SS **SS** **03 11 29.8 +0.6**
BNX pmax pmax
comp=Z,790nm,1.2s
BNX pmax pmax
comp=Z,14µm,4.6s
BNX L L
comp=Z,16µm,16.3s
BNX L L
comp=Z,23µm,14.1s
BNX L L
comp=Z,94µm,36.9s
UGL Uglegorsk 57.00 356 ⇓ *i*P **P** **03 00 00.1 +0.6**
UGL pmax pmax
comp=Z,19µm,6.8s
UGL pmax pmax
comp=Z,1µm,1.4s
CD2 Chengdu 57.16 315 ⇑ *i*P **P** **03 00 02.0 +0.9**
CD2 pP pP 03 00 22.6 +0.2
CD2 S **S** **03 07 52.3 +2.1**
CD2 sS sS 03 08 27.9 +1.1
CD2 SS **SS** **03 11 40.1 -0.6**
CD2 pmax pmax
comp=Z,3µm,0.6s
CD2 pmax pmax
comp=Z,3µm,5.8s
CD2 L L
comp=Z,121µm,22.7s
CD2 L L
comp=Z,123µm,22.2s
CD2 L L
comp=Z,50µm,17.8s
NPW Naypyitaw 57.78 299 P **P** **03 00 07.5 +2.0**
TNCH TengChong 58.06 306 ⇑P **P** **03 00 09.0 +1.4**
TNCH pP pP 03 00 33.8 +4.6
TNCH PcP **PcP** **03 01 00.4 +1.7**
TNCH S **S** **03 08 03.0 +0.5**
TNCH ScS **ScS** **03 09 47.4 -2.5**
TNCH SS **SS** **03 11 53.8 -1.5**
TNCH pmax pmax
comp=Z,2µm,1.2s
TNCH pmax pmax
comp=Z,33µm,5.7s
PBA Port Blair 58.06 289 P **P** **03 00 08.0 +0.4**
SNR=19
PBA Port Blair 58.06 289 ⇑P **P** **03 00 07.3 -0.2**
PBA Port Blair 58.06 289 P **P** **03 00 07.5 -0.1**
PBA Port Blair 58.06 289 *eP* **P** **03 00 07.4 -0.2**
PBA IAmb IAmb 03 00 13.5
comp=Z,906nm,1.3s
DGPR DIGLIPUR 58.34 291 ⇑ *i*x x 02 58 36.2
TYV Tymovskoe 58.74 356 *eP* **P** **03 00 12.6 +1.0**
TYV *e*S **S** **03 08 14.1 +4.2**
TYV pmax pmax
comp=Z,16µm,6.6s
TYV pmax pmax
comp=Z,845nm,1.2s
TYV smax smax
comp=N,57µm,9.0s
TYV smax smax
comp=E,83µm,9.0s
TYV smax smax
comp=N,128nm,3.1s
SKR Severo-Kuril's 58.84 6 *d i*P **P** **03 00 12.8 +0.5**
SKR *e*S **S** **03 08 13.6 +2.4**
SKR pmax pmax
comp=Z,24µm,7.7s
SKR pmax pmax
comp=Z,2µm,1.0s
SKR smax smax
comp=N,49µm,11.7s
SKR smax smax
comp=E,135µm,12.7s
SKR MLR MLR
comp=Z,16µm,16.0s
HHC Hu-ho-hao-te 58.87 328 ⇑ *i*P **P** **03 00 13.9 +1.0**
HHC S **S** **03 08 14.8 +2.5**
HHC ScS **ScS** **03 09 54.3 -0.8**
HHC pmax pmax
comp=Z,350nm,1.0s
HHC pmax pmax
comp=Z,11µm,9.9s
HHC L L
comp=Z,17µm,17.7s
HHC L L
comp=Z,38µm,21.4s
HHC L L
comp=Z,58µm,23.2s
XLT XiLinHaoTe 59.04 334 *eP* **P** **03 00 14.4 +0.4**
XLT PP **PP** **03 02 28.9 +3.4**
XLT S **S** **03 08 14.1 -0.2**
XLT ScS **ScS** **03 09 50.1 -6.0**
XLT pmax pmax
comp=Z,300nm,1.3s
XLT pmax pmax
comp=Z,7µm,3.7s
GRNR Gornyy 59.30 352 ⇓ *i*P **P** **03 00 16.4 +0.9**
GRNR pmax pmax
comp=N,90nm,1.4s
GRNR pmax pmax
comp=Z,190nm,1.4s
KEKH Kekaha 59.47 59 P **P** **03 00 17.5 +0.3**
KEKH Kekaha 59.47 59 P **P** **03 00 18.6 +1.3**
BTO2 Baotou 59.68 327 *eP* **P** **03 00 19.6 +1.1**
BTO2 pP **pP** **03 00 39.4 -0.6**
BTO2 sP **sP** **03 00 48.5 -1.0**
BTO2 PP **PP** **03 02 32.6 +1.3**
BTO2 S **S** **03 08 25.0 +2.2**
BTO2 pmax pmax
comp=Z,1µm,1.0s
BTO2 pmax pmax
comp=Z,34µm,10.7s
BTO2 L L
comp=Z,61µm,17.9s
BTO2 L L
comp=Z,64µm,21.4s
BTO2 L L
comp=Z,103µm,20.8s
LZH Lanzhou 60.16 320 P **P** **03 00 23.5 +1.5**
LZH pP pP 03 00 44.0 +0.5
LZH sP sP 03 00 51.1 -1.9
LZH S **S** **03 08 31.4 +2.1**
LZH SS **SS** **03 12 26.3 -1.6**
LZH pmax pmax
comp=Z,3µm,1.7s
LZH pmax pmax
comp=Z,30µm,4.7s
LZH L L
comp=Z,37µm,16.2s
LZH L L
comp=Z,30µm,17.8s
LZH L L
comp=Z,61µm,17.5s
LZDM Lanzhou Array 60.18 319 P **P** **03 00 23.4 +1.1**
comp=Z,835nm,1.0s,baz=124,slow=7.4,SNR=218
LZDM LR LR 03 26 01.6
comp=Z,25µm,20.9s,baz=100,slow=36
LZDM PKPPKP 03 29 48.6
comp=Z,3.0nm,0.4s,baz=236,slow=6.9,SNR=4.5
comp=Z,835nm,1.0s
HEH HeiHe 60.60 345 *eP* **P** **03 00 24.1 -0.3**
HEH S **S** **03 08 34.8 +0.9**
HEH pmax pmax
comp=Z,370nm,1.2s
HEH pmax pmax
comp=Z,14µm,5.0s
HON Honolulu 60.67 60 IAmb IAmb 03 00 57.3
comp=Z,1µm,1.1s
KIP Kipapa 60.70 60 P **P** **03 00 26.1 +0.5**
comp=Z,227nm,1.2s
KIP Kipapa 60.70 60 P **P** **03 00 25.5 -0.2**
KIP pmax pmax
comp=Z,4µm,2.0s
KIP Kipapa 60.70 60 P **P** **03 00 25.5 -0.2**
MORE Moreh 61.15 303 P **P** **03 00 28.4 -0.3**
LKP Lekhapani 61.25 307 *ex* x 03 00 02.8
LKP *i* x x 03 08 17.1
PEA0B Petropavlovsk- 61.41 7 *deP* **P** **03 00 30.3 +0.5**
PETK Petropavlovsk- 61.41 7 P **P** **03 00 30.3 +0.5**
comp=Z,984nm,0.8s,baz=170,slow=6.3,SNR=402
PETK LR LR 03 21 39.8
comp=Z,53µm,21.5s,baz=199,slow=30
PETK PKPPKP **P'P'df** **03 29 46.0 +4.7**
comp=Z,39nm,0.9s,baz=58,slow=3.8,SNR=13
comp=Z,984nm,0.8s
PET Petropavlovsk 61.44 7 *eP* **P** **03 00 30.3 +0.3**
PET *e*S **S** **03 08 47.9 +3.4**
PET pmax pmax
comp=Z,20µm,7.0s
PET pmax pmax
comp=Z,1µm,1.0s
PET pmax pmax
comp=Z,15µm,11.7s
PET Petropavlovsk 61.44 7 P **P** **03 00 29.6 -0.4**
PET Petropavlovsk 61.44 7 ⇑P **P** **03 00 30.3 +0.3**
PET Petropavlovsk 61.44 7 P **P** **03 00 30.3 +0.3**
comp=Z,23µmcomp=Z,1µm,1.1s
PET Petropavlovsk 61.44 7 P **P** **03 00 30.5 +0.5**
PET Petropavlovsk 61.44 7 P **P** **03 00 30.3 +0.3**
PAE Paea 61.64 106 *eP* **P** **03 00 32.3 +0.2**
comp=Z,528nm,1.2s
PAE *ep*P **pP** **03 00 53.8 +0.1**
comp=Z,1µm,1.3s
PAE *e*LR LR 03 18 58.2
comp=Z,139µm,25.6s
PPT Papeete 61.65 106 P **P** **03 00 33.0 +0.8**
comp=Z,142nm,0.7s,baz=290,slow=6.8,SNR=17
PPT LR LR 03 22 14.4
comp=Z,30µm,20.5s,baz=265,slow=31
PPT PKPPKP **P'P'df** **03 29 47.5 +2.2**
comp=Z,74nm,0.9s,baz=72,slow=11,SNR=4.4
comp=Z,142nm,0.7s
PPT2 Papeete2 61.65 106 *eP* **P** **03 00 32.6 +0.3**
comp=Z,426nm,1.5s
PPT2 *ep*P **pP** **03 00 52.8 -1.0**
comp=Z,776nm,1.4s
PPT2 *e*PP **PP** **03 02 47.3 -1.6**
comp=Z,22µm,26.8s
PPT2 *e*S **S** **03 08 50.5 +1.9**
comp=Z,58µm,25.2s
PPT2 *e*SS **SS** **03 12 50.0 -1.5**
comp=Z,34µm,33.0s
PPT2 *e*LQ LQ 03 16 22.7
comp=Z,448µm,35.5s
PPT2 *e*LR LR 03 18 54.1
comp=Z,241µm,27.2s
PPT2 *e*LR LR 03 18 56.2
comp=Z,179µm,30.0s
PPTF Pamatai, Papee 61.66 106 P **P** **03 00 33.1 +0.8**
comp=Z,586nm,2.8s
PPTF Pamatai, Papee 61.66 106 P **P** **03 00 32.4 +0.1**
PPTF IAmb IAmb 03 01 11.6
comp=Z,906nm,1.2s
PPTF Pamatai, Papee 61.66 106 ⇑P **P** **03 00 33.4 +1.0**
PPTF Pamatai, Papee 61.66 106 P **P** **03 00 35.5 +3.2**
IMP Imphal 61.69 304 ⇑ *i*P **P** **03 00 32.5 +0.1**
IMP *i* x x 03 08 53.7
TIAR Tiarei 61.87 106 *eP* **P** **03 00 34.5 +0.8**
comp=Z,3µm,0.9s
TIAR *ep*P **pP** **03 00 58.8 +3.5**
comp=Z,3µm,0.9s

TIAR eLR LR 03 19 04.4
comp=Z,211μm,25.4s
KHLU Kahalu`u 61.87 63 IAmb IAmb 03 00 38.0
comp=Z,925nm,1.0s
KHLU Kahalu`u 61.87 63 P P **03 00 34.0 +0.3**
KHLH Kahului Airpor 61.87 61 P P **03 00 35.2 +1.6**
KOHI KOHIMA 61.94 305 eP P **03 00 34.4 +0.2**
KOHI i x x 03 08 55.7
TVO Taravao 61.96 106 eP P **03 00 34.5 +0.2**
comp=Z,464nm,0.9s
TVO epP **pP** **03 00 59.6 +3.7**
comp=Z,2μm,1.3s
TVO eLR LR 03 19 08.0
comp=Z,102μm,25.7s
HLK Haleakala 61.98 62 P P **03 00 35.1 +0.5**
HIA Hailar 62.03 340 P P **03 00 34.8 +0.7**
MWH Mokuaweoweo 62.09 63 IAmb IAmb 03 00 41.2
comp=Z,1μm,1.4s
MLOA Mauna Loa Obse 62.13 63 IAmb IAmb 03 00 41.5
comp=Z,2μm,1.4s
MLOA Mauna Loa Obse 62.13 63 P P **03 00 37.1 +1.2**
POHA Pohakuloa 62.24 63 P P **03 00 36.3 -0.1**
POHA Pohakuloa 62.24 63 P P **03 00 35.7 -0.7**
POHA Pohakuloa 62.24 63 ⇓P P **03 00 36.4 -0.1**
POHA Pohakuloa 62.24 63 P P **03 00 36.8 +0.4**
HILR Hailar Array B 62.27 340 P P **03 00 36.3 +0.6**
comp=Z,226nm,0.7s,baz=141,slow=7.4,SNR=157
HILR LR LR 03 27 35.2
comp=Z,22μm,18.8s,baz=105,slow=36
HILR PKP2bc 03 29 43.0
comp=Z,16nm,1.1s,baz=135,slow=0.6,SNR=6.0
comp=Z,226nm,0.7s
HLP Hilina Pali 62.28 63 IAmb IAmb 03 00 49.8
comp=Z,1μm,1.2s
MLH Mauna Loa 62.28 63 IAmb IAmb 03 00 42.5
comp=Z,2μm,1.6s
HATHI Halema'uma'u T 62.37 63 IAmb IAmb 03 01 16.1
comp=Z,979nm,1.4s
JOKA Jonika Flow 62.60 63 P P **03 00 37.8 -0.7**
JOKA IAmb IAmb 03 00 43.1
comp=Z,667nm,1.3s
SILR SILCHAR 62.62 303 eP P **03 00 40.6 +2.1**
BRDH Bariadhala 62.77 300 P P **03 00 40.8 +1.2**
comp=Z,677nm,0.6s,baz=78,slow=7.9,SNR=53
comp=Z,677nm,0.6s
PMOR Pomariorio Ree 63.29 103 eP P **03 00 43.7 +0.6**
comp=Z,1μm,1.1s
PMOR epP **pP** **03 01 04.2 -0.6**
comp=Z,2μm,1.2s
PMOR eLR LR 03 19 42.4
comp=Z,127μm,27.5s
TEZP TEZPUR 63.38 305 eP P **03 00 44.1 +0.6**
TEZP IAmb IAmb 03 00 46.4
comp=Z,2μm,1.3s
TEZP i x x 03 09 09.9
VAH Vaihoa 63.54 103 eP P **03 00 45.2 +0.4**
comp=Z,570nm,1.2s
VAH epP **pP** **03 01 05.2 -1.3**
comp=Z,648nm,1.1s
VAH eLR LR 03 19 48.4
comp=Z,156μm,27.2s
CASY Casey 63.59 196 P P **03 00 44.2 0.0**
CASY IAmb IAmb 03 00 48.0
comp=Z,634nm,0.9s
CASY Casey 63.59 196 ⇑P P **03 00 44.5 +0.3**
CASY Casey 63.59 196 P P **03 00 44.8 +0.6**
SHL Shillong 63.70 303 P P **03 00 46.3 +0.4**
SHL pmax pmax
comp=E,6μm,1.2s
SHL Shillong 63.70 303 P P **03 00 47.0 +1.1**
SNR=1202
SHL Shillong 63.70 303 P P **03 00 46.3 +0.4**
SHL Shillong 63.70 303 eP P **03 00 47.1 +1.2**
SHL IAmb IAmb 03 00 50.3
comp=Z,3μm,1.0s
SHL i x x 03 09 14.0
ZEA Zeya 63.85 347 eP P **03 00 47.2 +1.1**
ZEA e 03 01 15.4
ZEA eS S **03 09 17.1 +2.4**
ZEA 03 16 19.9
ZEA pmax pmax
comp=E,1μm,4.1s
ZEA pmax pmax
comp=N,3μm,2.4s
ZEA pmax pmax
comp=Z,9μm,3.8s
ZEA pmax pmax
comp=E,210nm,0.6s
ZEA pmax pmax
comp=N,670nm,0.9s
ZEA pmax pmax
comp=Z,2μm,1.3s
ZEA smax smax
comp=N,22μm,7.7s
GUWA GUWAHATI 64.11 304 ⇑i P **03 00 49.0 +0.6**
GUWA i x x 03 09 11.8
SHEM Shemya Is, Ala 64.49 17 LR LR 03 23 39.8
comp=N,31μm,21.5s,baz=209,slow=31
SMY Shemya 64.49 17 P P **03 00 49.8 -0.4**
SMY Shemya 64.49 17 ⇓P P **03 00 49.5 -0.7**
GTA2 Gaotai 64.78 321 ⇑P P **03 00 54.0 +1.3**
GTA2 pP pP 03 01 17.3 +2.9
GTA2 PP **PP** **03 03 15.0 -1.3**
GTA2 S S **03 09 29.3 +2.2**
GTA2 sS sS 03 10 06.0 +1.7
GTA2 SS **SS** **03 13 35.8 -4.2**
GTA2 pmax pmax
comp=N,1μm,1.4s
GTA2 pmax pmax
comp=N,23μm,11.7s
GTA2 L L
comp=N,28μm,19.6s
GTA2 L L
comp=N,17μm,23.0s
GTA2 L L
comp=N,35μm,23.1s
AMKA Amchitka 65.04 21 IAmb IAmb 03 00 59.5
comp=Z,1μm,1.0s
DHUB DHUBRI 65.44 303 ⇑i P **03 00 57.8 +0.8**
DHUB IAmb IAmb 03 01 00.0
comp=Z,1μm,1.1s
DHUB i x x 03 09 33.4
LSA Lhasa 66.00 307 IAmb IAmb 03 01 05.4
comp=Z,2μm,1.0s
LSA Lhasa 66.00 307 P P **03 01 03.0 +1.8**
LSA Lhasa 66.00 307 P P **03 01 03.1 +2.0**
LSA pP **PcP** **03 01 27.8 -3.4**
ULN Ulaanbaatar 66.16 331 deP P **03 01 02.5 +1.1**
ULN pmax pmax
comp=Z,1μm,1.6s
ULN Ulaanbaatar 66.16 331 P P **03 01 02.5 +1.1**
ULN S S **03 09 46.5 +2.9**
ULN Ulaanbaatar 66.16 331 P P **03 01 02.3 +0.8**
ULN IAmb IAmb 03 01 04.8
comp=Z,1μm,1.4s
ULN Ulaanbaatar 66.16 331 ⇑P P **03 01 02.4 +1.0**
ULN Ulaanbaatar 66.16 331 P P **03 01 02.1 +0.7**
comp=Z,123μmcomp=Z,69μmcomp=Z,3μm,1.8s
ULN Ulaanbaatar 66.16 331 P P **03 01 02.6 +1.1**
GOMU GeErMu 66.29 315 P P **03 01 04.3 +1.6**
GOMU S S **03 09 49.3 +3.3**
GOMU pmax pmax
comp=Z,750nm,1.1s
GOMU L L
comp=Z,11μm,17.7s
GOMU L L
comp=Z,11μm,17.9s
SONM Songino Array 66.46 331 P P **03 01 03.9 +0.6**
comp=Z,423nm,1.1s,baz=148,slow=4.9,SNR=481
SONM LR LR 03 27 50.8
comp=Z,18μm,21.3s,baz=136,slow=34
SONM PKPPKP 03 29 36.9
comp=Z,55nm,1.1s,baz=259,slow=2.9,SNR=9.7
comp=Z,423nm,1.1s
SONM Songino Array 66.46 331 P P **03 01 03.2 0.0**
SONM IAmb IAmb 03 01 07.2
comp=Z,1μm,1.3s
ADK Adak 66.95 23 P P **03 01 06.8 +0.7**
ADK Adak 66.95 23 P P **03 01 05.7 -0.4**
ADK Adak 66.95 23 ⇓P P **03 01 06.5 +0.4**
ADK Adak 66.95 23 P P **03 01 06.8 +0.7**
SHBG Sahibganj 67.12 302 ⇑i P **03 01 08.9 +1.1**
SHBG IAmb IAmb 03 01 11.5
comp=Z,2μm,1.2s
MA2 Magadan 67.35 2 LR LR 03 26 50.6
comp=Z,32μm,21.8s,baz=196,slow=32
MA2 Magadan 67.35 2 P P **03 01 08.9 +0.4**
MA2 Magadan 67.35 2 deP P **03 01 08.4 -0.1**
MA2 pmax pmax
comp=Z,2μm,1.1s
MA2 MLR MLR
comp=Z,97μm,25.0s
MA2 Magadan 67.35 2 P P **03 01 08.3 -0.1**
MA2 IAmb IAmb 03 01 13.7
comp=Z,2μm,1.0s
MA2 Magadan 67.35 2 ⇓P P **03 01 08.6 +0.1**
MA2 Magadan 67.35 2 P P **03 01 09.0 +0.4**
comp=Z,30μmcomp=Z,2μm,1.5s
MA2 Magadan 67.35 2 P P **03 01 08.8 +0.4**
BOK Bokaro 68.11 299 eP P **03 01 15.4 +1.4**
BOK IAmb IAmb 03 01 19.0
comp=Z,619nm,1.1s
ATKA Atka Island 68.18 24 P P **03 01 13.8 0.0**
HALK Hakmana 68.32 280 ⇑P P **03 01 16.4 +0.9**
HALK Hakmana 68.32 280 P P **03 01 16.6 +1.0**
VIS Vishakhapatnam 68.52 293 eP P **03 01 17.7 +1.0**
VIS i x x 03 10 12.6
PALK Pallekele 68.53 281 P P **03 01 17.9 +1.0**
comp=Z,702nm,0.9s,baz=94,slow=5.9,SNR=83
PALK S S **03 10 15.7 +2.7**
comp=Z,13nm,1.1s,baz=253,slow=23,SNR=6.9
PALK LR LR 03 33 24.3
comp=Z,33μm,21.4s,baz=110,slow=38
comp=Z,702nm,0.9s
PALK Pallekele 68.53 281 i P P **03 01 17.3 +0.4**
SNR=148
PALK Pallekele 68.53 281 P P **03 01 17.8 +0.9**
PALK P P **03 01 17.8 +0.9**
PALK Pallekele 68.53 281 P P **03 01 17.8 +0.9**
PALK IAmb IAmb 03 01 20.6
comp=Z,1μm,1.1s
PALK Pallekele 68.53 281 P P **03 01 17.8 +0.9**
PALK Pallekele 68.53 281 P P **03 01 17.6 +0.7**
PALK S S **03 10 15.4 +2.3**
PALK Pallekele 68.53 281 P P **03 01 18.1 +1.2**
PALK Pallekele 68.53 281 P P **03 01 18.2 +1.2**
PALK pP sP **03 01 45.3 -3.5**
EVN Everest 68.80 304 IAmb IAmb 03 01 22.8
comp=Z,2μm,1.4s
EVN Everest 68.80 304 P P **03 01 20.2 +1.2**
RAGD RAYAGADA 68.84 294 ⇑i P **03 01 19.3 +0.6**
MALK Mahakanadarawa 68.91 282 P P **03 01 20.2 +1.0**
MALK Mahakanadarawa 68.91 282 P P **03 01 20.6 +1.4**
AIS Amsterdam Isla 69.52 233 P P **03 01 23.2 +0.7**
AIS IAmb IAmb 03 01 27.8
comp=Z,1μm,0.9s
AIS Amsterdam Isla 69.52 233 ⇓P P **03 01 24.9 +2.3**
AIS Amsterdam Isla 69.52 233 P P **03 01 25.1 +2.5**
STMR SITAMARHI 69.64 302 eP P **03 01 25.6 +2.2**
ZAK Zakamensk 69.69 331 eP P **03 01 23.5 +0.1**
ZAK pmax pmax
comp=Z,2μm,1.8s
VNDA Vanda 69.94 177 P P **03 01 24.8 +0.4**
comp=Z,442nm,1.0s,baz=331,slow=6.8,SNR=342
VNDA S S **03 10 28.6 +1.2**
comp=Z,13nm,1.1s,baz=72,slow=22,SNR=12
VNDA PKPPKP **P'P'df** 03 29 28.0 -0.7
comp=Z,6.4nm,1.1s,baz=179,slow=3.9,SNR=9.8
VNDA LR LR 03 30 07.4
comp=Z,29μm,18.0s,baz=344,slow=34
comp=Z,442nm,1.0s
VNDA Vanda 69.94 177 P P **03 01 24.8 +0.4**
VNDA Vanda 69.94 177 P P **03 01 25.5 +1.2**
VNDA PcP **pP** **03 01 48.9 +2.5**
MDRS Chennai 70.21 287 eP P **03 01 27.8 +0.7**
MDRS IAmb IAmb 03 01 30.2
comp=Z,2μm,1.8s
TLY Talaya 70.41 333 P P **03 01 28.9 +1.2**
comp=Z,133nm,1.0s,baz=140,slow=6.1,SNR=130
TLY PKPPKP **P'P'df** 03 29 27.3 +0.2
comp=Z,20nm,1.1s,baz=193,slow=5.6,SNR=5.6
TLY LR LR 03 35 37.7
comp=Z,13μm,18.4s,baz=132,slow=38
comp=Z,133nm,1.0s
TLY Talaya 70.41 333 P P **03 01 28.4 +0.8**
TLY S S **03 10 34.2 +0.6**
TLY Talaya 70.41 333 P P **03 01 28.2 +0.5**
TLY IAmb IAmb 03 01 33.3
comp=Z,1μm,1.6s
TLY Talaya 70.41 333 P P **03 01 29.1 +1.4**
IRK Irkutsk 70.51 333 eP P **03 01 28.3 0.0**
IRK eS S **03 10 31.2 -3.6**
IRK pmax pmax
comp=Z,2μm,3.5s
SBA Scott Base 70.57 176 P P **03 01 29.5 +1.3**
SBA pmax pmax
comp=Z,539nm,1.1s
SBA Scott Base 70.57 176 P P **03 01 29.5 +1.3**
VJD Vijayawada 70.67 291 ⇑i x x 03 01 36.5
BOD Bodaibo 71.05 342 ⇑i P **03 01 31.2 -0.2**
BOD pmax pmax
comp=Z,2μm,1.6s
VAR Varanasi 71.08 300 eP P **03 01 31.3 -1.0**
YAK Yakutsk 71.17 351 P P **03 01 32.1 +0.1**
comp=Z,430nm,0.6s,baz=150,slow=0.3,SNR=94
YAK PKPPKP **P'P'df** 03 29 23.9 -1.1
comp=Z,15nm,0.4s,baz=275,slow=1.0,SNR=4.9
YAK LR LR 03 30 57.5
comp=Z,26μm,21.7s,baz=160,slow=34
comp=Z,430nm,0.6s
YAK Yakutsk 71.17 351 eP P **03 01 32.2 +0.2**
YAK e 03 01 48.3
YAK e*PP **pP** **03 01 55.5 +1.6**
YAK e 03 04 10.2
YAK ePPP PPP 03 05 53.8
YAK eS S **03 10 41.9 0.0**
YAK e*SS sS **03 11 22.6 +3.9**
YAK e 03 11 27.7
YAK eSS SS **03 15 17.1 -0.4**
YAK pmax pmax
comp=Z,1μm,1.7s
YAK pmax pmax
comp=N,741nm,1.7s
YAK pmax pmax
comp=E,212nm,1.6s
YAK pmax pmax
comp=Z,10μm,10.5s
YAK pmax pmax
comp=N,940nm,3.3s
YAK pmax pmax
comp=E,722nm,2.3s
YAK smax smax
comp=E,108μm,9.0s
YAK smax smax
comp=N,27μm,9.1s
YAK Yakutsk 71.17 351 P P **03 01 31.6 -0.4**
YAK Yakutsk 71.17 351 P P **03 01 32.6 +0.6**
TAOE Nuku Hiva Isla 71.23 97 P P **03 01 33.7 +0.2**
TAOE Nuku Hiva Isla 71.23 97 eP P **03 01 33.8 +0.2**
comp=N,621nm,1.0s
TAOE epP **PcP** **03 01 51.6 -1.5**
comp=N,1μm,1.2s
TAOE eS S **03 10 43.8 -0.9**
comp=N,44μm,29.3s
TAOE eSS SS **03 15 18.2 -2.2**
comp=N,24μm,33.3s
TAOE eLQ LQ 03 20 26.7
comp=N,65μm,30.0s
TAOE eLR LR 03 23 00.7
comp=N,103μm,36.5s
TAOE Nuku Hiva Isla 71.23 97 P P **03 01 34.1 +0.6**
TAOE Nuku Hiva Isla 71.23 97 P P **03 01 34.4 +0.8**
MOY Mondy 71.63 331 eP P **03 01 36.4 +1.2**
MOY pmax pmax
comp=Z,3μm,2.2s
SALM Salem 71.89 285 eP P **03 01 38.8 +1.4**
KOD Kodaikanal 72.26 283 ⇑i P **03 01 41.0 +1.1**
UNV Unalaska Valle 72.61 26 P P **03 01 40.6 -0.2**
UNV Unalaska Valle 72.61 26 P P **03 01 40.7 -0.1**
baz=228
UNV S S **03 11 01.2 +2.4**
baz=228
KNGR Kungurtug, Tuv 72.67 329 ci P **03 01 42.7 +1.3**
KNGR pmax pmax
comp=Z,1μm,1.5s
HYB Hyderabad 72.84 291 eP P **03 01 43.2 +0.2**
HYB IAmb IAmb 03 01 46.4
comp=Z,2μm,1.3s
HYB Hyderabad 72.84 291 eP P **03 01 42.5 -0.5**
HYB ePP **PP** **03 04 24.7 -1.5**
HYB eS S **03 11 03.3 +0.4**
AKUT Akutan 73.13 26 P P **03 01 44.0 +0.2**
NGP Nagpur 73.35 295 ⇑i P **03 01 45.9 0.0**
NGP IAmb IAmb 03 01 49.5
comp=Z,1μm,1.2s
LKN LUCKNOW 73.36 301 eP P **03 01 46.6 +0.8**
LKN IAmb IAmb 03 01 49.2
comp=Z,2μm,0.6s
SPIA Saint Paul Isl 73.41 22 P P **03 01 45.8 +0.4**
SPIA Saint Paul Isl 73.41 22 P P **03 01 45.1 -0.3**
baz=224
SPIA S **SKiKP** **03 11 12.0 +3.7**
baz=224
H08S2 Diego Garcia H 74.45 264 P P **03 01 53.7 +1.6**
baz=46,slow=5.4,SNR=62
H08S3 Diego Garcia H 74.46 264 P P **03 01 53.8 +1.6**
baz=46,slow=5.4,SNR=87
H08S1 Diego Carcia H 74.47 264 P P **03 01 53.7 +1.4**
baz=46,slow=5.4,SNR=57
DGAR Diego Garcia 74.51 265 ceP P **03 01 54.2 +1.4**
DGAR pmax pmax
comp=Z,5μm,1.3s
DGAR MLR MLR
comp=Z,28μm,19.0s
DGAR Diego Garcia 74.51 265 P P **03 01 54.5 +1.7**
DGAR Diego Garcia 74.51 265 P P **03 01 53.6 +0.8**
DGAR Diego Garcia 74.51 265 P P **03 01 54.9 +2.1**
WMQ Urumqi 74.74 319 ⇑P P **03 01 55.8 +2.1**
WMQ sP sP 03 02 25.1 -0.1
WMQ S S **03 11 24.3 +0.8**
WMQ pmax pmax
comp=Z,220nm,1.3s
WMQ pmax pmax
comp=Z,20μm,3.8s
WMQ L L
comp=Z,21μm,18.7s
WMQ L L
comp=Z,14μm,17.7s
WMQ L L
comp=Z,24μm,24.1s
PTH Pithoragarh 74.81 303 ⇑i P **03 01 54.4 0.0**
LATR Latur 74.94 291 eP P **03 01 54.4 -0.9**
KAAM Kaadhehdhoo 74.97 273 P P **03 01 57.1 +1.6**
SNR=15
KAAM Kaadhehdhoo 74.97 273 P P **03 01 56.7 +1.2**
KAAM IAmb IAmb 03 02 00.8
comp=Z,2μm,1.2s
KAAM Kaadhehdhoo 74.97 273 P P **03 01 57.3 +1.8**
comp=Z,90μmcomp=Z,1μm,1.1s
KAAM Kaadhehdhoo 74.97 273 P P **03 01 57.9 +2.4**
MNGI Mangalore 75.29 286 eP P **03 01 58.5 +1.2**
BHPL Bhopal 75.35 296 ⇑i P **03 01 58.2 +0.6**
BHPL IAmb IAmb 03 01 59.9
comp=Z,716nm,1.0s
BHPL i x x 03 04 31.9
BHPL ex x 03 11 21.8
BHPL eS S **03 11 30.9 0.0**
HMDM Hanimaadhoo 75.77 279 P P **03 02 02.0 +1.9**
SNR=18
HMDM Hanimaadhoo 75.77 279 P P **03 01 59.7 -0.4**
HMDM Hanimaadhoo 75.77 279 P P **03 02 02.6 +2.5**
comp=Z,135μmcomp=Z,61μmcomp=Z,3μm,1.3s
HMDM Hanimaadhoo 75.77 279 P P **03 02 02.7 +2.6**
TKRD Thakurdwara 75.79 303 eP P **03 01 59.4 -0.4**
PAF Port-aux-Franc 75.89 221 IAmb IAmb 03 02 03.9
comp=Z,905nm,1.2s
PAF Port-aux-Franc 75.89 221 P P **03 02 01.2 +1.2**
SDPT Sand Point 76.28 28 P P **03 02 01.9 -0.1**
SDPT Sand Point 76.28 28 IAmb IAmb 03 02 07.4
comp=Z,1μm,0.9s
SDPT Sand Point 76.28 28 P P **03 02 01.8 -0.2**
baz=233,SNR=87
SDPT S S **03 11 41.6 +1.9**
baz=233
UGON Onchagaon 76.33 302 eP P **03 02 01.9 -1.1**
CNBA Chernabura Isl 76.37 28 IAmb IAmb 03 02 07.3
comp=Z,3μm,1.6s
CHNA Chernabura Isl 76.38 28 P P **03 02 02.5 -0.1**
CHNA Chernabura Isl 76.38 28 P P **03 02 02.5 -0.1**
baz=234,SNR=74
CHNA S S **03 11 43.3 +2.5**
baz=234
UTK UTTARKASHI 76.61 304 eP P **03 02 05.9 +1.3**
GOA Goa 76.82 288 eP P **03 02 07.2 +1.3**
GOA i x x 03 11 49.2
KAD Karad 76.87 290 ⇑i P **03 02 06.6 +0.4**
BILL Bilibino 76.94 7 deP P **03 02 05.7 +0.2**
BILL pmax pmax
comp=Z,525nm,1.3s
BILL Bilibino 76.94 7 P P **03 02 05.2 -0.3**
BILL IAmb IAmb 03 02 10.9
comp=Z,954nm,1.2s
BILL Bilibino 76.94 7 P P **03 02 06.2 +0.7**
BILL pP **sP** **03 02 33.6 -3.0**
LDR Lodi Road 77.00 302 eP P **03 02 06.8 +0.1**
KLP Kalpa 77.01 305 eP P **03 02 07.6 +0.5**
KLP i x x 03 04 57.6
KLP ex x 03 11 49.3
NDI New Delhi 77.03 302 ⇑i P **03 02 06.5 -0.4**
NDI IAmb IAmb 03 02 09.8
comp=Z,820nm,0.9s
SONA Sohna 77.03 301 eP P **03 02 06.4 -0.5**
NPLP NPLP New Delhi 77.05 302 eP P **03 02 06.9 -0.2**
NRLA Narela 77.16 302 eP P **03 02 07.7 +0.1**
M11K Mekoryuk 77.16 22 IAmb IAmb 03 02 12.9
comp=Z,2μm,1.9s
M11K Mekoryuk 77.16 22 P P **03 02 07.9 +1.0**
baz=227,SNR=18
M11K S S **03 11 53.9 +4.8**
baz=227
S14K Fog Glacier 77.25 27 P P **03 02 07.6 -0.1**
baz=234,SNR=137
S14K S S **03 11 54.0 +3.4**
baz=234
POO Poona 77.45 291 eP P **03 02 09.3 -0.2**
POO i x x 03 04 49.8
KUDL Kundal 77.49 301 ⇑i P **03 02 09.3 -0.1**
KUDL IAmb IAmb 03 02 12.7
comp=Z,1μm,1.2s
DGZ Jazzator, Alta 77.64 325 ci P **03 02 10.3 +0.2**
DGZ pmax pmax
comp=Z,309nm,1.0s
DGZ MLR MLR
comp=Z,40μm,23.0s
KKR Kurukshetra 77.72 303 ⇑i P **03 02 12.0 +1.3**
KKR IAmb IAmb 03 02 16.7
comp=Z,2μm,1.1s
CHGN Chignik 77.78 27 IAmb IAmb 03 02 15.8
comp=Z,854nm,1.0s
CHGN Chignik 77.78 27 P P **03 02 10.2 -0.3**
baz=235,SNR=162
CHGN S S **03 11 56.9 +0.9**
baz=235
GAMB Gambell 77.80 17 P P **03 02 10.8 +0.5**
baz=221,SNR=98
GAMB S S **03 11 59.4 +3.5**
baz=221
ZSN Zaisan 78.14 322 ci P **03 02 13.6 +1.0**
ZSN eS S **03 12 01.8 +1.5**
ZSN pmax pmax
comp=Z,2μm,2.7s
ZSN Zaisan 78.14 322 ⇑i P **03 02 13.7 +1.0**
comp=Z,2μm,2.7s
ZSN eS S **03 12 01.8 +1.5**
M13K Dall Lake 78.24 22 IAmb IAmb 03 02 42.4
comp=Z,2μm,1.0s
M13K Dall Lake 78.24 22 P P **03 02 13.8 +0.9**
baz=230,SNR=246
M13K S S **03 12 04.8 +4.1**
baz=230
O14K Tigyukauivet M 78.32 24 IAmb IAmb 03 02 42.2
comp=Z,839nm,0.9s
O14K Tigyukauivet M 78.32 24 P P **03 02 13.9 +0.6**
baz=232,SNR=331
O14K S S **03 12 05.3 +3.6**
baz=232
N14K Kuskokwak Cree 78.57 23 P P **03 02 14.8 +0.1**
baz=231,SNR=161
N14K S S **03 12 07.8 +3.5**
baz=231
K13K Kusilvak Mount 78.77 21 IAmb IAmb 03 02 21.6
comp=Z,2μm,1.8s
K13K Kusilvak Mount 78.77 21 P P **03 02 16.6 +0.8**
baz=228,SNR=231
K13K S S **03 12 10.4 +4.1**

baz=228
CHIR Chirikof Islan 78.81 29 P **P** **03 02 16.9 +0.8**
CHIR Chirikof Islan 78.81 29 IAmb IAmb 03 02 21.1
comp=Z,3µm,1.6s
CHIR Chirikof Islan 78.81 29 P **P** **03 02 16.4 +0.2**
baz=238,SNR=22
CHIR S **S** **03 12 09.1 +2.0**
baz=238
O15K Ungalikthiuk R 78.86 25 IAmb IAmb 03 02 22.8
comp=Z,1µm,1.2s
O15K Ungalikthiuk R 78.86 25 P **P** **03 02 16.7 +0.3**
baz=233,SNR=428
O15K S **S** **03 12 09.8 +2.3**
baz=233
UDPR Udaipur 78.97 297 *e*P **P** **03 02 18.1 +0.3**
M14K Bethel 78.98 23 P **P** **03 02 17.6 +0.6**
baz=231,SNR=377
M14K S **S** **03 12 13.1 +4.5**
baz=231
L14K Kuka Creek 79.09 22 IAmb IAmb 03 02 46.6
comp=Z,1µm,0.9s
L14K Kuka Creek 79.09 22 P **P** **03 02 18.3 +0.8**
baz=230,SNR=446
L14K S **S** **03 12 13.3 +3.5**
baz=230
TSSA Tissa 79.10 306 *e*P **P** **03 02 18.6 0.0**
N15K Kwethluk River 79.35 24 P **P** **03 02 19.7 +0.7**
baz=233,SNR=319
N15K S **S** **03 12 15.5 +2.8**
baz=233
WUS Wushi 79.43 314 IAmb IAmb 03 02 23.6
comp=Z,1µm,1.0s
WUS Wushi 79.43 314 P **P** **03 02 21.2 +1.2**
M15K Kasigluk River 79.44 23 P **P** **03 02 19.8 +0.3**
baz=232,SNR=279
M15K S **S** **03 12 16.4 +2.8**
baz=232
R17L Mt. Peulik Vol 79.46 27 P **P** **03 02 19.8 +0.1**
baz=236,SNR=380
R17L S **S** **03 12 16.1 +2.1**
baz=236
MK31 Makanchi Array 79.46 321 *i* P **P** **03 02 20.4 +0.4**
MK31 pmax pmax
comp=Z,2µm,1.7s
MKAR Makanchi Array 79.46 321 P **P** **03 02 20.6 +0.6**
comp=Z,387nm,0.8s,baz=101,slow=6.3,SNR=748
MKAR PKKPbc **PKKPbc** **03 21 09.4 -1.4**
comp=Z,3.0nm,0.6s,baz=274,slow=1.6,SNR=15
MKAR PKP2ab 03 29 01.4
comp=Z,1.9nm,0.8s,baz=354,slow=2.4,SNR=6.2
MKAR PKPPKP **P'P'df** **03 29 10.8 -1.1**
comp=Z,3.7nm,1.0s,baz=305,slow=1.8,SNR=4.4
comp=Z,387nm,0.8s
MKAR Makanchi Array 79.46 321 *i* P **P** **03 02 20.6 +0.6**
MKAR pmax pmax
comp=Z,393nm,0.8s
P16K Nushagak River 79.54 25 IAmb IAmb 03 02 24.4
comp=Z,902nm,1.0s
P16K Nushagak River 79.54 25 P **P** **03 02 19.7 -0.4**
baz=235,SNR=61
P16K S **S** **03 12 15.7 +1.1**
baz=235
MAKZ Makanchi 79.67 320 P **P** **03 02 21.6 +0.5**
MAKZ Makanchi 79.67 320 P **P** **03 02 21.7 +0.7**
J14K Nanvaranak Lak 79.69 21 IAmb IAmb 03 02 50.3
comp=Z,1µm,1.2s
J14K Nanvaranak Lak 79.69 21 P **P** **03 02 21.6 +0.9**
baz=229,SNR=322
J14K S **S** **03 12 20.8 +4.7**
baz=229
L15K Ungalak Mounta 79.75 22 P **P** **03 02 21.3 +0.2**
baz=231,SNR=226
L15K S **S** **03 12 19.6 +2.8**
baz=231
O16K Kokwok River B 79.82 25 IAmb IAmb 03 02 26.3
comp=Z,4µm,1.9s
O16K Kokwok River B 79.82 25 P **P** **03 02 21.6 0.0**
baz=235,SNR=388
O16K S **S** **03 12 19.6 +1.9**
baz=235
SII Sitkinak Islan 79.89 29 P **P** **03 02 22.3 +0.2**
SII Sitkinak Islan 79.89 29 P **P** **03 02 22.2 +0.2**
baz=239,SNR=54
SII S **S** **03 12 20.7 +2.2**
baz=239
Q16K King Salmon 79.91 26 P **P** **03 02 21.1 -0.9**
baz=236,SNR=50
Q16K S **S** **03 12 18.5 0.0**
baz=236
SHLS Shalkode 79.95 316*c* *i*P **P** **03 02 21.8 -1.0**
SHLS *e*S **S** **03 12 17.7 -2.2**
SHLS pmax pmax
comp=Z,907nm,1.2s
SHLS Shalkode 79.95 316⇑ *i*P **P** **03 02 21.9 -1.0**
comp=Z,907nm,1.2s
SHLS *e*S **S** **03 12 17.8 -2.2**
Q17K Contact Creek 80.02 27 P **P** **03 02 22.4 -0.4**
baz=237
Q17K S **S** **03 12 19.5 -0.6**
baz=237
N16K Nishlik Lake 80.06 24 P **P** **03 02 23.9 +0.9**
baz=234,SNR=349
N16K S **S** **03 12 23.6 +3.3**
baz=234
K15K Wolf Creek Mou 80.12 22 IAmb IAmb 03 02 52.4
comp=Z,965nm,1.1s
K15K Wolf Creek Mou 80.12 22 P **P** **03 02 23.8 +0.7**
baz=231,SNR=365
K15K S **S** **03 12 23.9 +3.2**
baz=231
SRGN SRI GANGA NAGA 80.16 302 *e*P **P** **03 02 23.9 -0.1**
TNA Tin City 80.22 17 P **P** **03 02 23.9 +0.3**
baz=225,SNR=52
TNA S **S** **03 12 22.9 +1.3**
baz=225
UZB Uzynbulak 80.25 316*c* *i*P **P** **03 02 25.1 +0.7**
UZB *e*S **S** **03 12 23.9 +0.8**
UZB pmax pmax
comp=Z,2µm,1.9s
UZB Uzynbulak 80.25 316⇑ *i*P **P** **03 02 25.1 +0.7**
comp=Z,2µm,1.9s
UZB *e*S **S** **03 12 23.9 +0.8**
P17K Kvichak River 80.29 26 P **P** **03 02 23.2 -0.9**
baz=236,SNR=75
P17K S **S** **03 12 21.3 -1.2**
baz=236
ANM Nome 80.30 19 P **P** **03 02 24.7 +0.7**
baz=227,SNR=64
ANM S **S** **03 12 25.3 +2.7**
baz=227
M16K Timber Creek 80.31 23 IAmb IAmb 03 02 54.2
comp=Z,814nm,0.9s
M16K Timber Creek 80.31 23 P **P** **03 02 24.9 +0.7**
baz=234,SNR=413
M16K S **S** **03 12 26.1 +3.3**
baz=234
O17K Koliganek Bris 80.34 25 P **P** **03 02 24.8 +0.4**
baz=236,SNR=707
O17K S **S** **03 12 23.9 +0.8**
baz=236
TIXI Tiksi 80.41 354 LR LR 03 37 41.9
comp=Z,21µm,21.9s,baz=179,slow=35
TIXI Tiksi 80.41 354*c**e*P **P** **03 02 23.3 -1.2**
TIXI pmax pmax
comp=Z,484nm,1.1s
TIXI MLR MLR
comp=Z,32µm,21.0s
TIXI Tiksi 80.41 354 P **P** **03 02 22.8 -1.7**
PRZ Przheval'sk 80.44 315 P **P** **03 02 27.6 +2.0**
SRNI Srinagar 80.52 306 *e*P **P** **03 02 27.4 +1.2**
SRNI *i* x x 03 12 21.8
L16K Owhat River 80.53 23 IAmb IAmb 03 02 30.5
comp=Z,3µm,1.9s
L16K Owhat River 80.53 23 P **P** **03 02 25.8 +0.5**
baz=233,SNR=338
L16K S **S** **03 12 26.4 +1.5**
baz=233
KPKS Kokpek 80.59 316 *e*P **P** **03 02 27.0 +0.8**
KPKS *e*S **S** **03 12 27.6 +1.0**
KPKS Kokpek 80.59 316 *e*P **P** **03 02 27.0 +0.8**
KPKS *e*S **S** **03 12 27.7 +1.0**
TARG Taragay, Kyrgy 80.61 315 IAmb IAmb 03 02 41.1
comp=Z,2µm,1.4s
TARG Taragay, Kyrgy 80.61 315 P **P** **03 02 28.0 +1.2**
Q18K Katmai Hardscr 80.62 26 P **P** **03 02 25.5 -0.5**
baz=238,SNR=653
Q18K S **S** **03 12 25.7 -0.5**
baz=238
F14K Arctic Creek 80.64 18 P **P** **03 02 26.4 +0.6**
baz=226,SNR=107
F14K S **S** **03 12 29.3 +3.4**
baz=226
SATY Saty 80.64 316*c* *i*P **P** **03 02 27.2 +0.7**
SATY *e*S **S** **03 12 28.1 +0.9**
SATY pmax pmax
comp=Z,2µm,1.9s
SATY Saty 80.64 316⇑ *i*P **P** **03 02 27.3 +0.7**
comp=Z,2µm,1.9s
SATY *e*S **S** **03 12 28.1 +0.9**
OHAK Old Harbor 80.65 28 P **P** **03 02 26.3 +0.2**
OHAK Old Harbor 80.65 28 IAmb IAmb 03 02 30.7
comp=Z,2µm,2.0s
OHAK Old Harbor 80.65 28 P **P** **03 02 26.3 +0.2**
baz=239,SNR=88
OHAK S **S** **03 12 27.8 +1.5**
baz=239
N17K Nushagak Hills 80.73 24 P **P** **03 02 27.4 +0.9**
baz=235,SNR=333
N17K S **S** **03 12 31.0 +3.8**
baz=235
MAW Mawson 80.75 203 P **P** **03 02 26.8 +0.3**
comp=Z,469nm,1.0s,baz=80,slow=6.2,SNR=193
MAW S **S** **03 12 26.3 -0.9**
comp=Z,46nm,1.4s,baz=274,slow=19,SNR=5.0
MAW PKKPbc **PKKPbc** **03 21 06.1 -1.9**
comp=Z,8.6nm,0.9s,baz=283,slow=7.1,SNR=6.5
MAW PKP2bc P'P'df 03 28 54.0 -16
comp=Z,3.0nm,0.9s,baz=222,slow=4.0,SNR=4.6
MAW LR LR 03 36 52.6
comp=Z,38µm,20.9s,baz=82,slow=34
comp=Z,469nm,1.0s
MAW Mawson 80.75 203 P **P** **03 02 26.8 +0.3**
MAW Mawson 80.75 203 P **P** **03 02 27.0 +0.6**
P18K Big Mountain, 80.92 26 P **P** **03 02 26.6 -1.0**
baz=237,SNR=152
P18K S **S** **03 12 28.5 -0.8**
baz=237
G15K Niukluk 81.02 19 P **P** **03 02 28.2 +0.4**
baz=228
G15K S **S** **03 12 32.5 +2.6**
baz=228
ZALV Zalesovo Beam 81.05 328 P **P** **03 02 27.6 -0.6**
comp=Z,103nm,0.4s,baz=112,slow=5.9,SNR=70
ZALV PKKPbc **PKKPbc** **03 21 05.6 -2.0**
comp=Z,9.5nm,0.8s,baz=298,slow=3.2,SNR=11
ZALV PKP2bc 03 28 53.1
comp=Z,3.8nm,0.9s,baz=300,slow=3.2,SNR=7.1
ZALV PKPPKP 03 29 06.2
comp=Z,6.3nm,0.9s,baz=270,slow=3.0,SNR=8.0
ZALV LR LR 03 41 07.2
comp=Z,16µm,18.1s,baz=119,slow=38
comp=Z,103nm,0.4s
ZALV Zalesovo Beam 81.05 328 *i* P **P** **03 02 27.6 -0.6**
ZALV pmax pmax
comp=Z,105nm,0.4s
J16K Anvik River 81.07 21 P **P** **03 02 29.1 +0.8**
baz=232,SNR=282
J16K S **S** **03 12 35.1 +4.5**
baz=232
M17K Holitna River 81.13 23 IAmb IAmb 03 02 34.5
comp=Z,1µm,1.3s
M17K Holitna River 81.13 23 P **P** **03 02 29.6 +1.0**
baz=235,SNR=445
M17K S **S** **03 12 35.8 +4.5**
baz=235
KDJ Kajisay 81.18 315 P **P** **03 02 30.6 +1.1**
O18K Koktuh Hills 81.18 25 P **P** **03 02 28.4 -0.5**
baz=237,SNR=124
O18K S **S** **03 12 32.2 +0.3**
baz=237
L17K Donlin 81.23 23 P **P** **03 02 29.9 +0.9**
baz=234,SNR=286
L17K S **S** **03 12 36.3 +4.0**
baz=234
KDAK Kodiak Island 81.26 28 PKKPbc PKKPbc 03 21 04.8 -2.4
comp=Z,6.2nm,0.7s,baz=15,slow=2.8,SNR=8.8
KDAK PKPPKP 03 29 07.9
comp=Z,30nm,1.3s,baz=116,slow=5.2,SNR=5.2
KDAK LR LR 03 33 52.3
comp=Z,15µm,21.9s,baz=240,slow=32
KDAK Kodiak Island 81.26 28 P **P** **03 02 29.2 0.0**
KDAK IAmb IAmb 03 02 34.1
comp=Z,2µm,1.7s
KDAK Kodiak Island 81.26 28 P **P** **03 02 29.5 +0.2**
baz=240
KDAK S **S** **03 12 34.9 +2.2**
baz=240
KDAK Kodiak Island 81.26 28 P **P** **03 02 29.5 +0.2**
F15K North Star Dit 81.31 18 P **P** **03 02 29.8 +0.5**
baz=228,SNR=123
F15K S **S** **03 12 35.9 +3.0**
baz=228
TDK Taldyqorghan 81.31 318*c* *i*P **P** **03 02 30.7 +0.8**
TDK *e*S **S** **03 12 34.9 +1.1**
TDK MLR MLR
comp=Z,16µm,22.0s
TDK Taldyqorghan 81.31 318⇑ *i*P **P** **03 02 30.8 +0.8**
TDK *e*S **S** **03 12 35.0 +1.1**
TDK LR LR 03 40 30.8
comp=Z,16µm,21.8s
N18K Kilae Creek 81.35 24 P **P** **03 02 30.5 +0.8**
baz=236,SNR=370
N18K S **S** **03 12 36.1 +2.5**
baz=236
H16K Elim 81.37 19 P **P** **03 02 30.0 +0.3**
baz=230,SNR=141
H16K S **S** **03 12 37.8 +4.2**
baz=230
KSH2 Kashi 81.41 312 P **P** **03 02 31.5 +0.7**
KSH2 sP sP 03 03 03.3 +0.7
KSH2 PP **PP** **03 05 37.8 -0.2**
KSH2 S **S** **03 12 33.1 -2.4**
KSH2 SS **SS** **03 17 48.8 -4.9**
KSH2 pmax pmax
comp=Z,660nm,1.3s
KSH2 pmax pmax
comp=Z,17µm,11.7s
KSH2 L L
comp=Z,20µm,21.3s
KSH2 L L
comp=Z,18µm,22.3s
KSH2 L L
comp=Z,40µm,24.7s
I17K Unalakleet 81.41 21 P **P** **03 02 30.8 +0.8**
baz=232,SNR=157
I17K S **SKSac** **03 12 38.8 -2.6**
baz=232
K17K Iditarod 81.57 22 IAmb IAmb 03 03 00.2
comp=Z,744nm,0.9s
K17K Iditarod 81.57 22 P **P** **03 02 31.5 +0.7**
baz=234,SNR=382
K17K S **S** **03 12 39.2 +3.5**
baz=234
MDOK Medeo 81.61 316 *e*P **P** **03 02 32.4 +0.7**
MDOK *e*S **S** **03 12 38.0 +0.7**
MDOK Medeo 81.61 316 *e*P **P** **03 02 32.4 +0.7**
MDOK *e*S **S** **03 12 38.1 +0.7**
MDOK LR LR 03 40 40.8
TNSS Tian-Shan 81.64 316 *e*P **P** **03 02 32.5 +0.4**
TNSS Tian-Shan 81.64 316 *e*P **P** **03 02 32.6 +0.4**
NIL Nilore 81.66 306 P **P** **03 02 32.6 +0.6**
NIL Nilore 81.66 306 P **P** **03 02 32.8 +0.7**
J17K VABM Dome 81.69 21 P **P** **03 02 32.2 +0.8**
baz=233,SNR=279
J17K S **S** **03 12 40.6 +3.7**
baz=233
AAA Alma-Ata 81.72 316 *e*P **P** **03 02 32.9 +0.8**
AAA pmax pmax
comp=Z,1µm,1.1s
AAA Alma-Ata 81.72 316 *e*P **P** **03 02 32.9 +0.8**
comp=Z,1µm,1.1s
AAA LR LR 03 40 44.1
comp=Z,35µm,20.0s
O19K Port Alsworth 81.74 25 IAmb IAmb 03 02 35.9
comp=Z,2µm,1.9s
O19K Port Alsworth 81.74 25 P **P** **03 02 31.3 -0.5**
baz=238,SNR=50
O19K S **S** **03 12 37.0 -0.5**
baz=238
G16K Koyuk River 81.82 19 IAmb IAmb 03 02 37.4
comp=Z,3µm,1.9s
G16K Koyuk River 81.82 19 P **P** **03 02 32.5 +0.5**
baz=230,SNR=250
G16K S **SKSac** **03 12 41.7 -2.4**
baz=230
M18K Stony River 81.82 24 P **P** **03 02 33.0 +0.8**
baz=236,SNR=700
M18K S **SKSac** **03 12 42.1 -2.3**
baz=236
ULHL Ulahol 81.88 315 P **P** **03 02 34.1 +0.9**
SNR=460
L18K Granite Mounta 81.89 23 IAmb IAmb 03 03 02.8
comp=Z,614nm,0.9s
L18K Granite Mounta 81.89 23 P **P** **03 02 33.2 +0.7**
baz=236,SNR=430
L18K S **SKSac** **03 12 42.9 -2.0**
baz=236
P19K Oil Pt 81.92 26 P **P** **03 02 32.5 -0.3**
baz=239
P19K S **S** **03 12 39.1 -0.5**
baz=239
N19K Bonanza Creek 82.00 25 IAmb IAmb 03 02 38.1
comp=Z,2µm,1.7s
N19K Bonanza Creek 82.00 25 P **P** **03 02 33.5 +0.2**
baz=238,SNR=293
N19K S **S** **03 12 41.9 +1.4**
baz=238
QSPA South Pole Qui 82.03 180 P **P** **03 02 33.7 +0.3**
comp=Z,2µm,0.9s,baz=314,slow=0.5,SNR=656
QSPA S **S** **03 12 39.5 -1.3**
comp=Z,17nm,1.1s,baz=235,slow=22,SNR=8.3
QSPA PKKPbc **PKKPbc** **03 21 01.9 -4.0**
comp=Z,18nm,1.0s,baz=236,slow=1.2,SNR=8.2
QSPA PKPPKP **P'P'df** **03 29 06.4 -1.1**
comp=Z,3.5nm,1.0s,baz=249,slow=6.6,SNR=4.1
QSPA LR LR 03 38 47.5
comp=Z,39µm,18.8s,baz=6.5,slow=35
comp=Z,2µm,0.9s
QSPA South Pole Qui 82.03 180 P **P** **03 02 33.8 +0.3**
QSPA South Pole Qui 82.03 180 P **P** **03 02 34.0 +0.5**
QSPA South Pole Qui 82.03 180 P **P** **03 02 34.0 +0.5**
QSPA pP **pP** **03 02 59.1 +2.9**
ROCAM Rodrigues Isla 82.09 251 IAmb IAmb 03 02 39.7
comp=Z,2µm,1.1s
ILSW Iliamna Southw 82.13 26 IAmb IAmb 03 02 37.7
comp=Z,2µm,1.4s
BOOM Boomskoye usch 82.17 315 IAmb IAmb 03 02 38.1
comp=Z,1µm,0.9s
BOOM Boomskoye usch 82.17 315 P **P** **03 02 35.7 +1.0**
BHUJ Bhuj 82.30 295⇑ *i*P **P** **03 02 36.8 +1.3**
BHUJ IAmb IAmb 03 02 42.0
comp=Z,635nm,0.8s
H17K Granite Mounta 82.33 20 IAmb IAmb 03 02 40.1
comp=Z,2µm,1.7s
H17K Granite Mounta 82.33 20 P **P** **03 02 35.2 +0.4**
baz=232,SNR=392
H17K S **SKSac** **03 12 46.7 -1.0**
baz=232
O20K Slope Mountain 82.41 26 P **P** **03 02 34.6 -0.8**
baz=240,SNR=55
O20K S **S** **03 12 44.0 -0.7**
baz=240
G17K Kiwalik Mounta 82.44 19 P **P** **03 02 35.9 +0.6**
baz=232,SNR=339
G17K S **SKSac** **03 12 48.4 0.0**
baz=232
RED Redoubt Volcan 82.52 26 IAmb IAmb 03 02 39.6
comp=Z,2µm,1.9s
TKM2 Tokmak 2 82.54 315 P **P** **03 02 37.2 +0.6**
SNR=678
L19K White Mountain 82.59 23 IAmb IAmb 03 03 06.1
comp=Z,959nm,0.9s
L19K White Mountain 82.59 23 P **P** **03 02 36.7 +0.5**
baz=237,SNR=745
L19K S **SKSac** **03 12 49.5 0.0**
baz=237
J18K Innoko River 82.59 22 P **P** **03 02 36.4 +0.2**
baz=235,SNR=267
J18K S **S** **03 12 48.4 +2.1**
baz=235
HOM Homer 82.62 26 P **P** **03 02 36.7 +0.3**
baz=240,SNR=38
HOM S **S** **03 12 47.8 +1.1**
baz=240
F17K Baldwin Pennin 82.84 18 P **P** **03 02 37.7 +0.3**
baz=231,SNR=65
F17K S **SKSac** **03 12 51.4 +0.5**
baz=231
C16K Lisburne Hills 82.85 16 IAmb IAmb 03 02 42.4
comp=Z,2µm,1.9s
C16K Lisburne Hills 82.85 16 P **P** **03 02 37.5 +0.1**
baz=227
C16K S **SKSac** **03 12 50.8 -0.2**
baz=227
KBK Karagaybulak 82.92 315 P **P** **03 02 39.2 +0.7**
SNR=134
H18K Honhosa River 82.99 20 P **P** **03 02 38.1 -0.1**
baz=234,SNR=142
H18K S **SKSac** **03 12 51.8 -0.2**
baz=234
BRSE Bradley Lake S 83.06 27 P **P** **03 02 38.5 -0.2**
baz=241,SNR=55
BRSE S **S** **03 12 52.0 +0.8**
baz=241
E17K Hotham Inlet 83.07 18 P **P** **03 02 39.1 +0.6**
baz=230,SNR=159
E17K S **SKSac** **03 12 54.2 +1.8**
baz=230
UCH Uchtor 83.09 314 P **P** **03 02 40.7 +0.9**
SNR=743
D17K Noatak River 83.10 17 P **P** **03 02 39.2 +0.5**
baz=229,SNR=209
D17K S **SKSac** **03 12 54.4 +1.8**
baz=229
M20K Styx River 83.12 24 IAmb IAmb 03 02 44.0
comp=Z,3µm,1.8s
M20K Styx River 83.12 24 P **P** **03 02 39.3 +0.2**
baz=239
M20K S **SKSac** **03 12 53.4 +0.2**
baz=239
SPCR Spurr Chakacha 83.15 25 P **P** **03 02 38.1 -1.1**
baz=240,SNR=24
SPCR S **S** **03 12 51.0 -1.1**
baz=240
CHMS Chumysh 83.16 315 P **P** **03 02 40.0 +0.4**
SNR=358
FRU1 Bishkek 83.18 315 IAmb IAmb 03 02 45.6
comp=Z,2µm,1.3s
KURK Kurchatov 83.20 323 P **P** **03 02 40.0 +0.4**
KURK S **S** **03 12 51.2 -1.7**
KURK Kurchatov 83.20 323 P **P** **03 02 40.5 +0.9**
KURK S **S** **03 12 50.6 -2.4**
KURK Kurchatov 83.20 323 P **P** **03 02 39.9 +0.4**
KURK Kurchatov 83.20 323 P **P** **03 02 40.1 +0.4**
KURBB Kurchatov Arra 83.22 323 P **P** **03 02 40.0 +0.3**
comp=Z,419nm,1.1s,baz=116,slow=4.1,SNR=795
KURBB S **S** **03 12 51.1 -2.0**
comp=Z,5.1nm,1.0s,baz=119,slow=8.6,SNR=5.3
KURBB PKKPbc **PKKPbc** **03 21 00.7 -1.6**
comp=Z,8.9nm,0.9s,baz=299,slow=3.0,SNR=16
KURBB PKPPKP **P'P'df** **03 29 02.5 -2.3**
comp=Z,4.7nm,1.0s,baz=283,slow=3.3,SNR=6.7
comp=Z,419nm,1.1s
AAK Ala-Archa 83.23 315 *i* P **P** **03 02 41.0 +0.8**
SNR=560
AAK Ala-Archa 83.23 315 P **P** **03 02 41.0 +0.8**
AAK Ala-Archa 83.23 315 P **P** **03 02 40.8 +0.6**
AAK IAmb IAmb 03 02 44.8
comp=Z,841nm,0.9s
AAK Ala-Archa 83.23 315 P **P** **03 02 40.9 +0.8**
AAK S **SKSac** **03 12 56.1 +1.2**
AAK Ala-Archa 83.23 315 P **P** **03 02 41.1 +0.8**
GCSA Galena City Sc 83.26 21 P **P** **03 02 39.7 +0.1**
baz=235,SNR=124
GCSA S **SKSac** **03 12 55.2 +1.5**
baz=235
J19K Poorman 83.29 22 IAmb IAmb 03 02 45.0
comp=Z,2µm,1.7s
J19K Poorman 83.29 22 P **P** **03 02 40.1 +0.3**
baz=236,SNR=495
J19K S **SKSac** **03 12 56.5 +2.4**
baz=236
G18K Tagagawik 83.33 19 P **P** **03 02 39.9 -0.1**
baz=233,SNR=516
G18K S **SKSac** **03 12 55.8 +1.5**
baz=233
SGDS Sogindy 83.38 315⇑ *i*P **P** **03 02 41.7 +0.9**
comp=Z,1µm,2.3s
CAPN Captain Cook N 83.38 26 P **P** **03 02 40.8 +0.5**
baz=241
RDOG Red Dog Mine 83.38 17 IAmb IAmb 03 03 09.3
comp=Z,738nm,1.0s

RDOG **Red Dog Mine** 83.38 17 P P 03 02 40.5 +0.3
baz=229,SNR=85
USP **Ospenovka** 83.41 315 P P 03 02 41.5 +0.6
SNR=779
F18K **Selawik** 83.44 19 P P 03 02 40.4 0.0
baz=232,SNR=73
K20K **Telida** 83.53 23 IAmb IAmb 03 03 11.0
comp=Z,651nm,0.9s
K20K **Telida** 83.53 23 P P 03 02 41.4 +0.3
baz=238,SNR=482
C17K **DeLong Mountai** 83.58 16 P P 03 02 41.6 +0.4
baz=229,SNR=113
E18K **Tukpahlearik C** 83.65 18 P P 03 02 42.0 +0.4
baz=231,SNR=126
EKS2 **Erkin-Say** 83.74 315 P P 03 02 43.7 +1.0
SNR=1217
SEW **Seward** 83.81 27 IAmb IAmb 03 02 47.9
comp=Z,1µm,1.1s
SEW **Seward** 83.81 27 P P 03 02 42.5 0.0
baz=242,SNR=121
SKT **Skwentna** 83.82 24 P P 03 02 40.8 -1.7
baz=240,SNR=151
OHH **Osh** 83.86 312 P P 03 02 42.5 -0.8
H19K **Roundabout Mou** 83.86 20 IAmb IAmb 03 03 12.1
comp=Z,905nm,0.9s
H19K **Roundabout Mou** 83.86 20 P P 03 02 42.9 +0.3
baz=236,SNR=734
O22K **Cooper Landing** 83.86 26 IAmb IAmb 03 03 15.7
comp=Z,1µm,0.9s
O22K **Cooper Landing** 83.86 26 P P 03 02 42.6 -0.1
baz=242,SNR=18
MANEM **Manem** 83.90 309 IAmb IAmb 03 02 48.0
comp=Z,4µm,1.9s
J20K **Nowinta River** 83.93 22 P P 03 02 43.5 +0.4
baz=238,SNR=665
G19K **Purcell Mounta** 84.00 20 IAmb IAmb 03 03 13.4
comp=Z,741nm,0.9s
G19K **Purcell Mounta** 84.00 20 P P 03 02 43.8 +0.4
baz=235,SNR=685
PPLA **Purkeypile** 84.02 24 P P 03 02 43.0 -0.7
baz=240,SNR=247
RC01 **Rabbit Creek A** 84.14 26 P P 03 02 43.7 -0.5
baz=242,SNR=108
I20K **Naaghedeneel** 84.15 21 P P 03 02 44.7 +0.6
baz=237,SNR=119
F19K **Shaleruckik Mo** 84.18 19 P P 03 02 44.0 -0.2
baz=234,SNR=281
BTLS **Baital** 84.25 317 *e*P P 03 02 46.0 +0.9
BTLS *e*S SKSac 03 13 01.0 -0.1
BTLS pmax pmax
comp=Z,2µm,2.3s
BTLS **Baital** 84.25 317 *e*P P 03 02 46.1 +0.9
comp=Z,2µm,2.3s
BTLS *e*S SKSac 03 13 01.1 -0.1
C18K **Utukok River** 84.25 17 P P 03 02 44.6 -0.1
baz=231,SNR=121
M22K **Willow** 84.30 25 IAmb IAmb 03 03 20.6
comp=Z,1µm,0.9s
M22K **Willow** 84.30 25 P P 03 02 43.9 -1.0
baz=242,SNR=84
CAST **Castle Rocks** 84.32 23 IAmb IAmb 03 03 14.3
comp=Z,689nm,0.9s
CAST **Castle Rocks** 84.32 23 P P 03 02 44.4 -0.7
baz=240,SNR=483
H20K **Anotlenegea Mo** 84.38 21 P P 03 02 45.5 +0.2
baz=237,SNR=541
L22K **Petersville** 84.40 24 IAmb IAmb 03 03 13.6
comp=Z,540nm,0.9s
L22K **Petersville** 84.40 24 P P 03 02 44.2 -1.3
baz=241,SNR=264
CHUM **Lake Minchumin** 84.47 23 P P 03 02 45.8 0.0
baz=239,SNR=534
CUT **Chulitna** 84.55 24 IAmb IAmb 03 03 15.0
comp=Z,892nm,0.9s
CUT **Chulitna** 84.55 24 P P 03 02 45.1 -1.1
baz=241,SNR=79
PMR **Palmer** 84.64 25 P P 03 02 45.9 -0.7
PMR **Palmer** 84.64 25 P P 03 02 46.1 -0.5
baz=242,SNR=252
PWL **Port Wells** 84.65 26 IAmb IAmb 03 03 16.5
comp=Z,1µm,1.0s
PWL **Port Wells** 84.65 26 P P 03 02 46.6 -0.2
baz=243,SNR=132
PWL S S 03 13 09.2 +2.2
baz=243
P23K **Montague Islan** 84.68 27 IAmb IAmb 03 02 51.7
comp=Z,3µm,1.8s
P23K **Montague Islan** 84.68 27 P P 03 02 47.0 +0.1
baz=244,SNR=49
P23K S S 03 13 10.5 +3.2
baz=244
E19K **Redstone River** 84.71 18 IAmb IAmb 03 03 17.4
comp=Z,1µm,0.8s
E19K **Redstone River** 84.71 18 P P 03 02 47.5 +0.5
baz=235,SNR=406
E19K S S 03 13 09.2 +1.7
baz=235
ARK **Arkit** 84.80 313 P P 03 02 48.8 +0.6
GHO **Glory Hole Cre** 84.81 25 IAmb IAmb 03 03 24.2
comp=Z,720nm,1.0s
KNK **Knik Glacier** 84.84 26 IAmb IAmb 03 02 52.3
comp=Z,2µm,1.4s
KNK **Knik Glacier** 84.84 26 P P 03 02 47.7 -0.1
baz=243,SNR=64
KNK S S 03 13 11.0 +2.0
baz=243
Q23K **Middleton Isla** 84.92 28 P P 03 02 48.3 +0.2
baz=245
Q23K S S 03 13 12.5 +2.9
baz=245
F20K **Avaraart Lake** 84.96 19 P P 03 02 48.8 +0.6
baz=236
F20K S S 03 13 13.1 +3.3
baz=236
C19K **Lookout Ridge** 85.00 17 IAmb IAmb 03 03 17.8
comp=Z,623nm,0.9s
C19K **Lookout Ridge** 85.00 17 P P 03 02 49.0 +0.6
baz=232,SNR=197
C19K S S 03 13 11.7 +1.5
baz=232
TRF **Thorofare Moun** 85.04 23 P P 03 02 47.7 -1.2
baz=241,SNR=191
TRF S S 03 13 10.0 -1.1
baz=241
IMAR **Indian Mountai** 85.04 21 P P 03 02 48.3 -0.3
D19K **Kuna River** 85.05 17 P P 03 02 48.8 +0.1
baz=234,SNR=186
D19K S S 03 13 12.0 +1.2
baz=234
SML **Sawmill** 85.08 25 IAmb IAmb 03 02 54.3
comp=Z,1µm,1.0s
SML **Sawmill** 85.08 25 P P 03 02 48.7 -0.3
baz=243,SNR=289
SML S S 03 13 12.5 +1.2
baz=243
BTK **Batken** 85.19 311 IAmb IAmb 03 02 54.0
comp=Z,686nm,1.0s
BTK **Batken** 85.19 311 P P 03 02 50.2 +0.2
GLI **Glacier Island** 85.20 26 P P 03 02 49.3 -0.2
baz=244,SNR=50
GLI S S 03 13 13.9 +1.4
baz=244
H21K **Melozitna Rive** 85.20 21 IAmb IAmb 03 02 54.5
comp=Z,2µm,2.0s
H21K **Melozitna Rive** 85.20 21 P P 03 02 49.7 +0.3
baz=239,SNR=364
H21K S S 03 13 15.5 +3.1
baz=239
I21K **Tanana** 85.25 22 P P 03 02 50.0 +0.3
baz=240,SNR=300
I21K S S 03 13 14.5 +1.8
baz=240
KBL **Kabul** 85.26 306 P P 03 02 50.1 -0.6
KBL pmax pmax
comp=Z,231nm,1.0s
KBL **Kabul** 85.26 306 P P 03 02 50.1 -0.6
SNR=182
KBL **Kabul** 85.26 306 P P 03 02 50.1 -0.6
KBL **Kabul** 85.26 306 P P 03 02 50.8 +0.1
A19K **Wainwright** 85.28 15 P P 03 02 50.3 +0.6
baz=231,SNR=17
A19K S S 03 13 13.9 +1.1
baz=231
GAR **Garm** 85.30 310 P P 03 02 50.8 0.0
M23K **Glacier View** 85.33 25 P P 03 02 49.7 -0.4
baz=244,SNR=81
M23K S S 03 13 15.3 +1.6
baz=244

G21K **Allakaket** 85.41 20 P P 03 02 50.4 0.0
baz=238,SNR=311
G21K S S 03 13 15.7 +1.4
baz=238
WAT1 **Susitna Watana** 85.45 24 P P 03 02 50.1 -0.7
baz=243
WAT1 S S 03 13 14.3 -0.6
baz=243
E20K **Nigu River** 85.50 18 P P 03 02 51.3 +0.4
baz=236,SNR=230
E20K S S 03 13 16.9 +1.6
baz=236
SCM **Sheep Creek Mo** 85.51 26 IAmb IAmb 03 03 27.7
comp=Z,692nm,0.9s
SCM **Sheep Creek Mo** 85.51 26 P P 03 02 51.0 -0.1
baz=244,SNR=211
SCM S S 03 13 17.4 +1.7
baz=244
DZA **Taraz** 85.54 314 *e*P P 03 02 52.4 +0.8
DZA pmax pmax
comp=Z,1µm,1.4s
DZA **Taraz** 85.54 314 *e*P P 03 02 52.5 +0.8
comp=Z,1µm,1.4s
D20K **Etivluk River** 85.63 18 P P 03 02 51.5 0.0
baz=235,SNR=124
D20K S S 03 13 17.6 +1.1
baz=235
MLY **Manley** 85.64 22 P P 03 02 51.5 -0.2
baz=241,SNR=594
MLY S S 03 13 16.8 +0.1
baz=241
EYAK **Cordova Ski Ar** 85.66 27 P P 03 02 52.1 +0.3
EYAK **Cordova Ski Ar** 85.66 27 IAmb IAmb 03 02 56.7
comp=Z,2µm,2.0s
EYAK **Cordova Ski Ar** 85.66 27 P P 03 02 51.7 -0.1
baz=246,SNR=36
EYAK S S 03 13 18.8 +1.9
baz=246
WAT6 **Susitna Watana** 85.67 25 P P 03 02 51.5 -0.5
baz=244,SNR=167
WAT6 S S 03 13 18.1 +0.8
baz=244
MCK **McKinley** 85.71 23 IAmb IAmb 03 03 21.0
comp=Z,1µm,0.9s
MCK **McKinley** 85.71 23 P P 03 02 50.9 -1.1
baz=243,SNR=311
MCK S S 03 13 15.2 -2.2
baz=243
F21K **Alatna River** 85.79 20 P P 03 02 52.2 -0.2
baz=238,SNR=220
F21K S S 03 13 19.1 +1.0
baz=238
H22K **Ishtalitna Cre** 85.83 21 P P 03 02 52.8 +0.2
baz=240,SNR=337
H22K S S 03 13 20.9 +2.3
baz=240
DIV **Divide** 85.89 26 IAmb IAmb 03 02 57.9
comp=Z,3µm,1.8s
KLU **Klutina** 85.97 26 IAmb IAmb 03 02 58.3
comp=Z,822nm,1.0s
KLU **Klutina** 85.97 26 P P 03 02 53.6 +0.1
baz=245,SNR=351
KLU S S 03 13 21.9 +1.7
baz=245
KAIM **Kayak Island** 86.02 28 P P 03 02 54.0 +0.4
baz=247,SNR=62
KAIM S S 03 13 23.3 +2.8
baz=247
DHY **Denali Highway** 86.04 24 IAmb IAmb 03 03 31.2
comp=Z,559nm,1.0s
DHY **Denali Highway** 86.04 24 P P 03 02 53.5 -0.3
baz=244,SNR=361
DHY S S 03 13 20.3 -0.6
baz=244
NEA2 **Nenana** 86.06 23 P P 03 02 52.5 -1.2
baz=242,SNR=192
NEA2 S S 03 13 19.6 -1.1
baz=242
CHGR **Chuyangaron** 86.10 310 *c i*P P 03 02 54.5 -0.1
CHGR pmax pmax
comp=Z,2µm,1.0s
M24K **Tolsona, Glenn** 86.12 26 P P 03 02 54.3 +0.2
baz=245,SNR=151
M24K S S 03 13 24.2 +2.6
baz=245
KK31 **Karatay Array** 86.17 314 P P 03 02 54.6 -0.2
KK31 pmax pmax
comp=Z,1µm,1.2s
KK31 **Karatay Array** 86.17 314 P P 03 02 54.6 -0.2
KK31 IAmb IAmb 03 02 57.3
comp=Z,1µm,1.2s
KKAR **Karatay Array** 86.17 314 P P 03 02 54.5 -0.3
KKAR **Karatay Array** 86.17 314 P P 03 02 54.5 -0.3
I23K **Minto, Yukon-K** 86.20 22 P P 03 02 53.6 -0.7
baz=242,SNR=160
I23K S S 03 13 22.7 +0.6
baz=242
B20K **Meade River** 86.22 16 P P 03 02 54.6 +0.3
baz=234
B20K S S 03 13 22.8 +0.7
baz=234
IUG **Iuzhnay** 86.28 313 *e*P P 03 02 56.1 +0.7
IUG pmax pmax
comp=Z,802nm,1.2s
IUG **Iuzhnay** 86.28 313 *e*P P 03 02 56.1 +0.7
comp=Z,802nm,1.2s
E21K **Killik River** 86.28 18 P P 03 02 55.0 +0.3
baz=238
E21K S S 03 13 23.1 +0.2
baz=238
G22K **Bettles** 86.30 20 P P 03 02 54.9 +0.1
baz=240
G22K S S 03 13 24.7 +1.7
baz=240
BMRM **Bremner River** 86.34 27 IAmb IAmb 03 03 00.1
comp=Z,2µm,1.5s
BMRM **Bremner River** 86.34 27 P P 03 02 55.3 0.0
baz=247,SNR=135
BMRM S S 03 13 25.3 +1.5
baz=247
F22K **John River** 86.37 20 P P 03 02 55.5 +0.3
baz=239
F22K S S 03 13 25.8 +2.1
baz=239
WRH **Wood River Hil** 86.38 23 IAmb IAmb 03 02 58.9
comp=Z,2µm,1.9s
C21K **Knifeblade Rid** 86.43 18 P P 03 02 55.9 +0.4
baz=237,SNR=122
C21K S S 03 13 25.7 +1.5
baz=237
H23K **Yukon River** 86.46 22 P P 03 02 55.8 +0.1
baz=242
H23K S S 03 13 25.5 +0.8
baz=242
BERG **Berg Lake** 86.53 28 IAmb IAmb 03 03 02.3
comp=Z,2µm,1.4s
N25K **Chitina, Valde** 86.60 26 P P 03 02 56.7 +0.2
baz=247,SNR=212
N25K S S 03 13 26.5 +0.2
baz=247
CHM **Chimkent** 86.63 313 *e*P P 03 02 57.8 +0.8
CHM pmax pmax
comp=Z,1µm,1.2s
CHM **Chimkent** 86.63 313 *e*P P 03 02 57.9 +0.8
comp=Z,1µm,1.2s
CHM LR LR 03 43 40.2
comp=Z,6µm,18.4s
BRLS **Boroldaу** 86.63 314 *c i*P P 03 02 58.1 +1.0
BRLS pmax pmax
comp=Z,806nm,2.3s
BRLS **Boroldaу** 86.63 314 *i*P P 03 02 58.1 +1.0
comp=Z,806nm,2.3s
COLA **College** 86.65 23 P P 03 02 54.9 -1.7
COLA IAmb IAmb 03 03 32.8
comp=Z,416nm,0.8s
COLA **College** 86.65 23 P P 03 02 54.6 -1.9
COLA **College** 86.65 23 P P 03 02 55.4 -1.1
baz=244
COLA S S 03 13 24.8 -1.6
baz=244
COLA **College** 86.65 23 P P 03 02 55.1 -1.5
COLA **College** 86.65 23 P P 03 02 54.8 -1.7
COLA x2 pP 03 03 16.0 -2.9
COLA pP pwP 03 03 22.7 +3.8
SHAA **Shahritus** 86.65 308 IAmb IAmb 03 03 01.3
comp=Z,3µm,1.5s
HARP **HAARP** 86.68 25 IAmb IAmb 03 04 07.2
comp=Z,710nm,1.2s

HARP **HAARP** 86.68 25 P P 03 02 56.8 0.0
baz=246,SNR=56
HARP S S 03 13 28.8 +1.9
baz=246
G23K **Bananza Creek** 86.71 21 IAmb IAmb 03 03 27.2
comp=Z,405nm,0.8s
G23K **Bananza Creek** 86.71 21 P P 03 02 57.0 +0.1
baz=241,SNR=263
G23K S S 03 13 29.8 +2.7
baz=241
B21K **Ikpikpuk River** 86.73 17 P P 03 02 57.1 +0.2
baz=237,SNR=61
B21K S S 03 13 28.0 +0.9
baz=237
HDA **Harding Lake** 86.79 23 P P 03 02 55.9 -1.4
baz=244,SNR=196
HDA S S 03 13 25.5 -2.4
baz=244
E22K **Anaktuvuk Pass** 86.81 19 P P 03 02 57.5 +0.1
baz=240
E22K S S 03 13 29.5 +1.4
baz=240
COLD **Coldfoot** 86.90 20 P P 03 02 58.0 +0.2
baz=241,SNR=258
COLD S S 03 13 31.0 +2.3
baz=241
POKR **Poker Plat Res** 86.92 23 P P 03 02 56.2 -1.7
baz=244
POKR S S 03 13 27.3 -1.8
baz=244
CRQE **Cirque** 86.94 27 P P 03 02 58.4 +0.2
baz=248,SNR=99
CRQE S S 03 13 31.6 +1.9
baz=248
IL31 **86.97 23** IAmb IAmb 03 03 26.7
comp=Z,407nm,0.8s
ILAR **Eielson Array** 86.97 23 P P 03 02 56.2 -2.0
comp=Z,108nm,0.8s,baz=250,slow=4.9,SNR=489
ILAR PKKPbc PKKPbc 03 20 51.4 -2.7
comp=Z,16nm,1.1s,baz=12,slow=0.9,SNR=18
ILAR PKPPKP P'P'df 03 28 56.4 -0.7
comp=Z,4.0nm,0.9s,baz=52,slow=1.8,SNR=7.9
ILAR LR LR 03 37 47.3
comp=Z,16µm,21.8s,baz=236,slow=33
K24K **Donnelly Dome** 87.00 24 P P 03 02 58.2 -0.2
baz=245,SNR=56
K24K S S 03 13 30.0 0.0
baz=245
H24K **Noodor Dome** 87.07 22 P P 03 02 58.4 -0.3
baz=243,SNR=126
H24K S S 03 13 30.3 -0.3
baz=243
A21K **Barrow** 87.13 15 P P 03 02 58.6 -0.1
baz=235
A21K S S 03 13 31.4 +0.6
baz=235
MCARA **McCarthy VSAT** 87.21 27 P P 03 02 59.5 +0.1
baz=248,SNR=81
MCARA S S 03 13 33.7 +1.7
baz=248
NRIK **Noril'sk** 87.35 342 P P 03 02 59.3 -0.6
comp=Z,122nm,0.5s,baz=120,slow=3.9,SNR=89
NRIK S SKSac 03 13 18.6 -0.9
comp=Z,12nm,1.1s,baz=18,slow=23,SNR=6.2
NRIK LR LR 03 42 22.3
comp=Z,18µm,19.7s,baz=124,slow=36
comp=Z,122nm,0.5s
RIDG **Independent Ri** 87.35 24 P P 03 02 59.7 -0.4
baz=246,SNR=408
RIDG S S 03 13 33.6 +0.2
baz=246
A22K **Sinclair Lake** 87.39 16 P P 03 02 59.9 -0.1
baz=236
A22K S S 03 13 34.2 +0.9
baz=236
B22K **Teshekpuk Lake** 87.47 17 P P 03 03 00.3 0.0
baz=238,SNR=49
B22K S S 03 13 34.9 +0.9
baz=238
E23K **Chandalar** 87.49 20 P P 03 03 00.9 +0.2
baz=242,SNR=254
E23K S S 03 13 37.4 +2.7
baz=242
J25K **Salcha River,** 87.50 23 P P 03 03 00.2 -0.6
baz=246,SNR=597
J25K S S 03 13 34.3 -0.5
baz=246
MENT **Mentasta** 87.50 25 P P 03 03 00.9 +0.1
GRNC **Granite Creek** 87.55 28 IAmb IAmb 03 03 07.4
comp=Z,566nm,1.2s
D23K **Nanushuk River** 87.59 19 P P 03 03 01.9 +0.9
baz=241
D23K S S 03 13 38.6 +3.2
baz=241
G24K **Hadweenzic Riv** 87.60 21 IAmb IAmb 03 03 31.1
comp=Z,441nm,0.9s
G24K **Hadweenzic Riv** 87.60 21 P P 03 03 01.1 -0.1
baz=244,SNR=309
G24K S S 03 13 37.5 +1.9
baz=244
M26K **Nabesna, AK** 87.61 26 P P 03 03 01.2 -0.1
baz=248,SNR=92
M26K S S 03 13 37.5 +1.6
baz=248
L26K **Log Cabin Wild** 87.69 25 P P 03 03 01.9 +0.2
baz=248,SNR=37
L26K S S 03 13 37.9 +1.3
baz=248
TOLK **Toolik Lake Re** 87.78 19 P P 03 03 02.3 +0.2
baz=242,SNR=140
TOLK S S 03 13 39.1 +1.8
baz=242
SCRK **Sand Creek** 87.80 24 P P 03 03 01.8 -0.5
baz=247,SNR=302
SCRK S S 03 13 39.2 +1.4
baz=247
PRP **Porcupine Dome** 87.81 23 P P 03 03 00.0 -2.3
baz=246,SNR=52
PRP S S 03 13 36.6 -1.4
baz=246
F24K **Squaw Lake** 87.83 20 P P 03 03 02.8 +0.5
baz=243,SNR=456
F24K S S 03 13 40.5 +2.7
baz=243
E24K **Your Creek** 87.88 20 P P 03 03 02.6 +0.1
baz=243
E24K S S 03 13 41.1 +2.8
baz=243
LOGN **Logan Glacier** 87.92 28 IAmb IAmb 03 03 07.4
comp=Z,459nm,1.0s
PCA **Pinnacle** 88.03 28 IAmb IAmb 03 03 09.5
comp=Z,836nm,1.2s
PINM **Pinnacle** 88.03 28 P P 03 03 03.7 +0.3
baz=250,SNR=91
PINM S S 03 13 42.9 +2.9
baz=250
C23K **Itkillik River** 88.04 18 IAmb IAmb 03 03 45.0
comp=Z,836nm,1.0s
C23K **Itkillik River** 88.04 18 P P 03 03 03.6 +0.5
baz=241
C23K S S 03 13 41.9 +2.3
baz=241
M27K **Edge Creek, AK** 88.08 26 P P 03 03 04.2 +0.5
baz=249,SNR=613
M27K S S 03 13 42.8 +2.2
baz=249
G25K **Bearman Lake** 88.12 21 P P 03 03 03.8 +0.2
baz=245,SNR=270
G25K S S 03 13 43.0 +2.6
baz=245
H04S1 **CROZET ISLANDS** 88.23 223 P P 03 03 06.4 +1.9
baz=3.3,slow=75,SNR=6.9
H04S2 **CROZET ISLANDS** 88.25 223 P P 03 03 06.9 +2.5
baz=3.3,slow=75,SNR=5.2
H04S3 **CROZET ISLANDS** 88.25 223 P P 03 03 06.0 +1.5
baz=3.3,slow=75,SNR=4.1
D24K **Happy Valley** 88.26 19 P P 03 03 04.8 +0.6
baz=242
D24K S S 03 13 44.5 +2.7
baz=242
O28M **Mount Upton** 88.28 28 P P 03 03 05.3 +0.4
baz=250,SNR=140
O28M S S 03 13 46.5 +3.6
baz=250
CRZF **Crozet Islands** 88.34 223 P P 03 03 05.3 +0.2
CRZF IAmb IAmb 03 03 09.2
comp=Z,315nm,0.8s
CRZF **Crozet Islands** 88.34 223 P P 03 03 05.9 +0.7

L27K **Beaver Creek,** **88.35** **25** P **P** **03 03 05.0 +0.2**
baz=249,SNR=453
L27K S **S** **03 13 45.2 +2.3**
baz=249
BCAR **Beaver Creek A** **88.37** **25** P **P** **03 03 04.9 0.0**
H04N2 **CROZET ISLANDS** **88.42** **224** P **P** **03 03 07.4 +2.1**
baz=108,slow=5.1,SNR=4.8
H04N3 **CROZET ISLANDS** **88.43** **224** P **P** **03 03 07.8 +2.5**
baz=108,slow=5.1,SNR=5.5
H04N1 **CROZET ISLANDS** **88.44** **224** P **P** **03 03 07.2 +1.8**
baz=108,slow=5.1,SNR=7.0
YUK3 **Moose Creek** **88.50** **27** P **P** **03 03 06.0 +0.2**
baz=250,SNR=214
YUK3 S **S** **03 13 47.9 +3.1**
baz=250
BVCY **Beaver Creek** **88.54** **26** P **P** **03 03 06.2 +0.4**
baz=250,SNR=100
BVCY S **S** **03 13 48.4 +3.7**
baz=250
K27K **Chicken** **88.60** **24** IAmb IAmb 03 03 11.5
comp=Z,2µm,1.7s
F25K **Christian Rive** **88.63** **21** P **P** **03 03 06.7 +0.6**
baz=245,SNR=185
F25K S **S** **03 13 49.3 +3.8**
baz=245
YUK8 **Steele Glacier** **88.65** **27** P **P** **03 03 07.2 +0.6**
baz=251,SNR=187
YUK8 S **S** **03 13 50.1 +3.8**
baz=251
BVAR **Borovoye Array** **88.77** **324** P **P** **03 03 06.2 -0.8**
comp=Z,151nm,0.7s,baz=110,slow=4.8,SNR=305
BVAR S **SKSac** **03 13 28.0 -0.7**
comp=Z,22nm,1.1s,baz=180,slow=1.5,SNR=6.5
BVAR PKKPbc **PKKPbc** **03 20 47.6 -1.5**
comp=Z,5.6nm,0.8s,baz=285,slow=3.7,SNR=5.8
BVAR PKPPKP **P'P'df** **03 28 54.3 -0.2**
comp=Z,3.5nm,0.9s,baz=290,slow=4.4,SNR=5.1
comp=Z,151nm,0.7s
BORK **Borovoye** **88.82** **324** P **P** **03 03 06.4 -0.8**
BORK pmax pmax
comp=Z,266nm,1.2s
BORK **Borovoye** **88.82** **324** P **P** **03 03 06.4 -0.8**
E25K **Arctic Village** **88.88** **20** IAmb IAmb 03 03 44.9
comp=Z,1µm,1.9s
E25K **Arctic Village** **88.88** **20** P **P** **03 03 07.7 +0.5**
baz=246,SNR=139
E25K S **S** **03 13 50.8 +3.1**
baz=246
O29M **Mount Kennedy** **88.89** **29** P **P** **03 03 08.2 +0.7**
baz=252,SNR=223
O29M S **S** **03 13 51.2 +3.0**
baz=252
BRWY **Burwash Landin** **89.01** **27** P **P** **03 03 08.8 +0.8**
baz=252,SNR=66
BRWY S **S** **03 13 52.9 +3.7**
baz=252
RER **Riviere de l'E** **89.02** **249** P **P** **03 03 10.8 +1.8**
SYO **Syowa Base** **89.03** **200** ⇑ *i* P **P** **03 03 07.5 -0.4**
SYO **Syowa Base** **89.03** **200** ⇓ *i* P P 03 03 13.0 +5.1
G26K **Porcupine Rive** **89.04** **21** IAmb IAmb 03 03 45.5
comp=Z,461nm,0.8s
G26K **Porcupine Rive** **89.04** **21** P **P** **03 03 08.6 +0.8**
baz=247
G26K S **S** **03 13 51.1 +2.1**
baz=247
P29M **Windy Craggy** **89.08** **29** IAmb IAmb 03 03 45.7
comp=Z,384nm,0.9s
P29M **Windy Craggy** **89.08** **29** P **P** **03 03 09.0 +0.7**
baz=253,SNR=116
P29M S **S** **03 13 53.7 +3.7**
baz=253
D25K **Kavik River** **89.12** **19** P **P** **03 03 08.3 0.0**
baz=245,SNR=204
D25K S **S** **03 13 50.4 +0.4**
baz=245
YUK4 **Talbot Arm** **89.18** **28** P **P** **03 03 09.8 +0.8**
baz=252,SNR=104
YUK4 S **S** **03 13 54.8 +3.7**
baz=252
YUK6 **Outpost Mounta** **89.18** **28** P **P** **03 03 09.5 +0.4**
baz=252,SNR=109
YUK6 S **S** **03 13 54.5 +3.3**
baz=252
F26K **Sheenjek River** **89.20** **21** IAmb IAmb 03 03 14.3
comp=Z,2µm,1.8s
F26K **Sheenjek River** **89.20** **21** P **P** **03 03 09.4 +0.7**
baz=247,SNR=281
F26K S **S** **03 13 53.4 +2.7**
baz=247
I27K **Kandik River** **89.35** **23** P **P** **03 03 09.6 +0.1**
baz=249,SNR=549
I27K S **S** **03 13 53.4 +1.1**
baz=249
S31K **Pelican** **89.35** **31** IAmb IAmb 03 03 14.9
comp=Z,1µm,1.6s
S31K **Pelican** **89.35** **31** P **P** **03 03 10.1 +0.5**
baz=254,SNR=70
S31K S **S** **03 13 56.8 +4.5**
baz=254
HYT **Haines Junctio** **89.55** **28** IAmb IAmb 03 03 16.2
comp=Z,1µm,1.2s
HYT **Haines Junctio** **89.55** **28** P **P** **03 03 11.3 +0.6**
baz=253,SNR=277
HYT S **S** **03 13 57.4 +2.9**
baz=253
SIT **Sitka** **89.58** **32** P **P** **03 03 11.4 +0.8**
SIT **Sitka** **89.58** **32** P **P** **03 03 11.3 +0.6**
baz=255,SNR=18
SIT S **S** **03 13 59.1 +4.6**
baz=255
P30M **Million Dollar** **89.60** **29** P **P** **03 03 11.4 +0.6**
baz=253
P30M S **S** **03 13 58.4 +3.6**
baz=253
M29M **Somme Creek** **89.60** **27** P **P** **03 03 11.2 +0.4**
baz=252,SNR=194
M29M S **S** **03 13 58.0 +3.2**
baz=252
H27K **Steamboat Moun** **89.61** **22** IAmb IAmb 03 03 16.0
comp=Z,2µm,1.7s
H27K **Steamboat Moun** **89.61** **22** P **P** **03 03 11.1 +0.5**
baz=249,SNR=436
H27K S **S** **03 13 57.3 +2.7**
baz=249
PLBC **Pleasant Camp** **89.70** **30** P **P** **03 03 11.6 +0.4**
baz=254,SNR=82
PLBC S **S** **03 13 58.8 +3.3**
baz=254
DAWY **Dawson** **89.72** **25** IAmb IAmb 03 03 41.2
comp=Z,415nm,1.1s
DAWY **Dawson** **89.72** **25** P **P** **03 03 11.5 +0.2**
baz=251,SNR=344
DAWY S **S** **03 13 58.2 +2.5**
baz=251
R31K **City Hall, Gus** **89.73** **31** P **P** **03 03 11.5 +0.2**
baz=254
R31K S **S** **03 13 59.4 +3.6**
baz=254
G27K **Doyon Strip** **89.76** **22** P **P** **03 03 11.8 +0.4**
baz=249,SNR=204
G27K S **S** **03 13 59.5 +3.5**
baz=249
C26K **Camden Bay** **89.84** **19** P **P** **03 03 12.4 +0.8**
baz=246
C26K S **S** **03 13 59.9 +3.5**
baz=246
N30M **Aishikik Lake** **89.93** **28** IAmb IAmb 03 03 18.9
comp=Z,1µm,1.9s
N30M **Aishikik Lake** **89.93** **28** P **P** **03 03 12.7 +0.4**
baz=253,SNR=92
N30M S **S** **03 14 01.4 +3.7**
baz=253
I28M **Miner Creek** **89.95** **23** P **P** **03 03 12.5 +0.1**
baz=251,SNR=250
I28M S **S** **03 14 00.8 +2.9**
baz=251
L29M **L29M** **89.95** **26** P **P** **03 03 12.9 +0.5**
baz=252,SNR=220
L29M S **S** **03 14 01.2 +3.3**
baz=252
S32K **Killisnoo** **90.08** **32** IAmb IAmb 03 03 18.4
comp=Z,970nm,1.9s
S32K **Killisnoo** **90.08** **32** P **P** **03 03 13.4 +0.5**
baz=255,SNR=37
S32K S **S** **03 14 04.1 +5.0**
baz=255
C27K **Jago River** **90.10** **19** IAmb IAmb 03 03 43.1
comp=Z,464nm,1.0s
C27K **Jago River** **90.10** **19** P **P** **03 03 13.4 +0.6**
baz=247,SNR=58
C27K S **S** **03 14 01.5 +2.5**
baz=247
O30N **Mendenhall** **90.20** **28** P **P** **03 03 14.0 +0.5**
baz=254,SNR=101
O30N S **S** **03 14 03.8 +3.6**
baz=254
SKAG **Skagway** **90.21** **30** P **P** **03 03 14.4 +0.9**
SKAG **Skagway** **90.21** **30** IAmb IAmb 03 03 42.4
comp=Z,838nm,1.8s
SKAG **Skagway** **90.21** **30** P **P** **03 03 14.0 +0.4**
baz=255,SNR=28
SKAG S **S** **03 14 04.3 +4.0**
baz=255
DIB **Dawson Inlet,** **90.23** **36** IAmb IAmb 03 03 19.1
comp=Z,2µm,1.9s
H02S2 **DAWSON INLET T** **90.23** **36** P **P** **03 03 14.1 +0.3**
SNR=75
H02S1 **DAWSON INLET T** **90.23** **36** P **P** **03 03 14.1 +0.3**
SNR=68
E27K **Coleen River** **90.28** **21** P **P** **03 03 14.0 +0.2**
baz=249,SNR=220
E27K S **S** **03 14 02.3 +1.6**
baz=249
R32K **Eaglecrest** **90.31** **31** P **P** **03 03 14.5 +0.4**
baz=256,SNR=32
R32K S **S** **03 14 05.5 +4.2**
baz=256
J29N **Klondike Camp** **90.33** **25** P **P** **03 03 14.5 +0.4**
baz=252,SNR=14
J29N S **S** **03 14 04.8 +3.5**
baz=252
CRAG **Craig** **90.38** **34** P **P** **03 03 15.3 +0.9**
CRAG **Craig** **90.38** **34** P **P** **03 03 15.0 +0.6**
baz=257,SNR=11
CRAG S **S** **03 14 06.2 +4.3**
baz=257
M30M **Minto, Yukon** **90.38** **27** P **P** **03 03 14.4 0.0**
baz=254
M30M S **S** **03 14 04.7 +2.8**
baz=254
JIS **Juneau Island** **90.38** **31** P **P** **03 03 14.6 +0.3**
K29M **Barlow Dome** **90.44** **25** P **P** **03 03 15.0 +0.3**
baz=253,SNR=460
K29M S **S** **03 14 04.6 +2.1**
baz=253
MOBC **Moresby Island** **90.52** **36** IAmb IAmb 03 03 19.6
comp=Z,852nm,1.7s
U33K **Whale Pass** **90.53** **33** IAmb IAmb 03 03 19.6
comp=Z,531nm,1.6s
U33K **Whale Pass** **90.53** **33** P **P** **03 03 15.7 +0.6**
baz=257,SNR=19
U33K S **S** **03 14 07.7 +4.4**
baz=257
N31M **Braeburn, Yuko** **90.54** **28** IAmb IAmb 03 03 21.8
comp=Z,412nm,1.1s
N31M **Braeburn, Yuko** **90.54** **28** P **P** **03 03 15.4 +0.2**
baz=254,SNR=130
N31M S **S** **03 14 07.3 +4.0**
baz=254
F28M **Old Crow** **90.69** **21** P **P** **03 03 15.7 0.0**
baz=251,SNR=102
F28M S **S** **03 14 07.3 +2.8**
baz=251
WHY **Whitehorse** **90.74** **29** IAmb IAmb 03 03 58.0
comp=Z,466nm,1.2s
WHY **Whitehorse** **90.74** **29** P **P** **03 03 16.1 0.0**
baz=255,SNR=95
WHY S **S** **03 14 08.3 +2.9**
baz=255
HRA **Herat** **90.74** **304** IAmb IAmb 03 03 20.6
comp=Z,903nm,1.4s
T33K **Petersburg** **90.78** **33** P **P** **03 03 16.3 +0.1**
baz=257
T33K S **S** **03 14 10.0 +4.5**
baz=257
HG4B **Hotspring** **90.80** **37** IAmb IAmb 03 03 21.8
comp=Z,1µm,2.0s
H29M **Whitestone** **90.81** **23** P **P** **03 03 16.0 -0.3**
baz=252,SNR=42
H29M S **S** **03 14 08.2 +2.6**
baz=252
D27M **Malcolm River** **90.87** **20** P **P** **03 03 16.7 +0.2**
baz=250
D27M S **S** **03 14 07.7 +1.6**
baz=250
WRAK **Wrangell Islan** **91.02** **33** IAmb IAmb 03 03 22.5
comp=Z,322nm,1.1s
WRAK **Wrangell Islan** **91.02** **33** P **P** **03 03 17.6 +0.3**
baz=257,SNR=48
WRAK S **S** **03 14 11.1 +3.4**
baz=257
P32M **Atlin** **91.04** **30** P **P** **03 03 17.6 +0.1**
baz=256,SNR=59
P32M S **S** **03 14 12.0 +4.0**
baz=256
E28M **Babbage River** **91.14** **21** IAmb IAmb 03 03 22.9
comp=Z,777nm,1.9s
E28M **Babbage River** **91.14** **21** P **P** **03 03 17.9 +0.2**
baz=251,SNR=107
E28M S **S** **03 14 10.1 +1.6**
baz=251
J30M **Hart River** **91.14** **25** P **P** **03 03 18.2 +0.2**
baz=254,SNR=151
J30M S **S** **03 14 09.8 +0.8**
baz=254
G29M **Pine Creek** **91.15** **22** P **P** **03 03 17.7 -0.2**
baz=252,SNR=96
G29M S **S** **03 14 09.8 +1.1**
baz=252
V35K **Ketchikan** **91.19** **34** IAmb IAmb 03 03 23.1
comp=Z,504nm,1.2s
V35K **Ketchikan** **91.19** **34** P **P** **03 03 18.6 +0.4**
baz=258,SNR=58
V35K S **S** **03 14 13.0 +3.7**
baz=258
I30M **Mount Dempster** **91.30** **24** P **P** **03 03 18.5 -0.3**
baz=254,SNR=116
I30M S **S** **03 14 11.3 +0.9**
baz=254
M31M **Drury Creek, Y** **91.36** **27** P **P** **03 03 18.5 -0.4**
baz=256,SNR=55
M31M S **S** **03 14 12.3 +1.5**
baz=256
JLN **Jalan Bani Buh** **91.42** **292** P **P** **03 03 19.7 -0.4**
SNR=42
EPYK **Eagle Plains** **91.49** **23** IAmb IAmb 03 03 51.0
comp=Z,813nm,1.4s
EPYK **Eagle Plains** **91.49** **23** P **P** **03 03 19.1 -0.3**
baz=254,SNR=161
EPYK S **S** **03 14 10.6 -1.2**
baz=254
MSEY **Mahe Island** **91.60** **265** *i* P **P** **03 03 21.8 +0.7**
SNR=12
MSEY **Mahe Island** **91.60** **265** P **P** **03 03 21.3 +0.2**
MSEY **Mahe Island** **91.60** **265** P **P** **03 03 21.3 +0.2**
MSEY IAmb IAmb 03 03 25.3
comp=Z,490nm,1.2s
MSEY **Mahe Island** **91.60** **265** P **P** **03 03 22.3 +1.2**
Q32M **Nakina River** **91.62** **31** IAmb IAmb 03 04 02.7
comp=Z,670nm,1.9s
Q32M **Nakina River** **91.62** **31** P **P** **03 03 20.1 -0.3**
baz=257,SNR=31
Q32M S **S** **03 14 17.3 +3.7**
baz=257
P33M **Teslin, Yukon** **91.63** **29** P **P** **03 03 19.7 -0.6**
baz=257,SNR=48
P33M S **S** **03 14 15.8 +2.5**
baz=257
D28M **Stokes Point** **91.64** **20** P **P** **03 03 19.9 -0.1**
baz=252
D28M S **S** **03 14 14.4 +1.5**
baz=252
E29M **Blow River** **91.64** **21** IAmb IAmb 03 03 56.9
comp=Z,475nm,1.8s
E29M **Blow River** **91.64** **21** P **P** **03 03 19.4 -0.6**
baz=253,SNR=56
E29M S **S** **03 14 14.0 +1.0**
baz=253
N32M **Quiet Lake** **91.72** **28** IAmb IAmb 03 04 02.4
comp=Z,436nm,1.3s
N32M **Quiet Lake** **91.72** **28** P **P** **03 03 20.7 +0.1**
baz=257
N32M S **S** **03 14 16.6 +2.6**
baz=257
RUBB **Prince Rupert** **91.76** **35** IAmb IAmb 03 03 26.1
comp=Z,850nm,1.6s
G30M **tAoh Zraii Nji** **91.85** **22** IAmb IAmb 03 03 52.9
comp=Z,440nm,1.2s
G30M **tAoh Zraii Nji** **91.85** **22** P **P** **03 03 20.3 -0.8**
baz=254,SNR=115
G30M S **S** **03 14 14.9 -0.1**
baz=254
WBK **Wadi Bani Khal** **91.89** **292** P **P** **03 03 23.1 +0.8**
SNR=51
S34M **Telegraph Cree** **91.98** **32** P **P** **03 03 22.4 +0.6**
baz=258,SNR=81
S34M S **S** **03 14 19.4 +2.9**
baz=258
F30M **Barrier River** **92.19** **22** IAmb IAmb 03 03 54.7
comp=Z,245nm,1.0s
F30M **Barrier River** **92.19** **22** P **P** **03 03 21.9 -0.6**
baz=254,SNR=83
F30M S **S** **03 14 18.4 +0.5**
baz=254
U35K **Hyder** **92.19** **34** P **P** **03 03 22.7 -0.1**
baz=259
U35K S **S** **03 14 21.5 +3.2**
baz=259
T35M **Bob Quinn** **92.27** **33** P **P** **03 03 23.6 +0.4**
baz=259,SNR=57
T35M S **S** **03 14 24.2 +5.0**
baz=259
H31M **Peel River** **92.28** **24** P **P** **03 03 22.7 -0.4**
baz=256,SNR=133
H31M S **S** **03 14 19.6 +0.7**
baz=256
WSAR **Wadi Sarin** **92.28** **293** LR LR 03 52 01.5
comp=Z,36nm,19.0s,baz=123,slow=40
WSAR **Wadi Sarin** **92.28** **293** P **P** **03 03 24.8 +0.8**
SNR=61
R33M **Jennings River** **92.37** **30** P **P** **03 03 24.1 +0.3**
baz=258,SNR=60
R33M S **S** **03 14 23.5 +3.3**
baz=258
HOLB **Holberg** **92.37** **39** IAmb IAmb 03 03 28.9
comp=Z,1µm,1.8s
ELIB **Princess Elisa** **92.52** **195** *d* P **P** **03 03 24.4 +0.1**
comp=Z,386nm,0.9s
ELIB *d* SKS **SKSac** **03 13 47.9 -2.1**
G31M **Satah River** **92.58** **23** IAmb IAmb 03 04 07.4
comp=Z,206nm,0.9s
G31M **Satah River** **92.58** **23** P **P** **03 03 23.8 -0.6**
baz=256,SNR=142
G31M S **S** **03 14 20.6 -0.8**
baz=256
MHTO **MHTO** **92.60** **291** P **P** **03 03 25.4 -0.1**
SNR=78
BBB **Bella Bella** **92.64** **38** LR LR 03 42 00.6
comp=Z,23µm,18.7s,baz=266,slow=33
BBB **Bella Bella** **92.64** **38** IAmb IAmb 03 03 30.0
comp=Z,949nm,1.9s
BBB **Bella Bella** **92.64** **38** P **P** **03 03 25.9 +1.0**
JMDO **Jabal Madar** **92.65** **292** P **P** **03 03 25.8 0.0**
SNR=19
DLBC **Dease Lake** **92.66** **31** PKKPbc PKKPbc 03 20 37.2 -2.4
comp=Z,6.3nm,1.1s,baz=76,slow=3.5,SNR=3.2
DLBC PKKPab PKKPbc 03 21 14.7 +35
comp=Z,21nm,1.1s,baz=39,slow=4.2,SNR=5.8
DLBC PKPPKP **P'P'df** **03 28 44.0 -3.0**
comp=Z,9.2nm,1.3s,baz=139,slow=3.7,SNR=3.8
DLBC LR LR 03 37 04.0
comp=Z,23µm,21.6s,baz=244,slow=30
DLBC **Dease Lake** **92.66** **31** P **P** **03 03 25.4 +0.3**
baz=259,SNR=80
DLBC S **S** **03 14 23.8 +1.2**
baz=259
BIDO **Bidbid** **92.78** **293** P **P** **03 03 26.8 +0.5**
SNR=61
SMDO **Samad** **92.79** **293** P **P** **03 03 26.5 +0.1**
SNR=28
DQM **DQM** **92.86** **290** P **P** **03 03 28.0 +1.3**
SNR=21
MMPY **Sheldon Lake,** **92.87** **27** P **P** **03 03 25.8 -0.1**
baz=258,SNR=90
MMPY S **S** **03 14 25.5 +1.2**
baz=258
F31M **Tsiigehtchic** **92.90** **22** P **P** **03 03 25.1 -0.7**
baz=256,SNR=32
F31M S **S** **03 14 22.4 -1.8**
baz=256
INK **Inuvik** **93.19** **21** PKKPbc PKKPbc 03 20 35.2 -3.1
comp=Z,23nm,0.8s,baz=136,slow=1.9,SNR=19
INK PKPPKP **P'P'df** **03 28 41.1 -4.2**
comp=Z,23nm,1.1s,baz=104,slow=4.0,SNR=9.6
INK LR LR 03 41 51.6
comp=Z,16µm,21.6s,baz=244,slow=33
INK **Inuvik** **93.19** **21** P **P** **03 03 26.2 -0.9**
baz=257,SNR=43
INK S **S** **03 14 26.2 -0.5**
baz=257
BSY **Bisya** **93.53** **292** P **P** **03 03 29.4 -0.4**
SNR=19
HOQ **Hoqain** **93.53** **293** P **P** **03 03 29.6 -0.2**
SNR=65
WTLY **Watson Lake, Y** **93.58** **30** P **P** **03 03 29.3 +0.1**
baz=260,SNR=42
KCPM **Cahto Peak** **94.00** **51** IAmb IAmb 03 03 38.0
comp=Z,881nm,1.5s
CBB **Campbell River** **94.03** **40** IAmb IAmb 03 03 36.5
comp=Z,603nm,1.5s
FARB **Farallon Islan** **94.21** **53** IAmb IAmb 03 03 37.5
comp=Z,605nm,1.7s
ARQ **Araqi** **94.22** **293** P **P** **03 03 32.9 -0.1**
SNR=40
K02D **Willamette Mer** **94.29** **48** IAmb IAmb 03 03 38.0
comp=Z,631nm,1.2s
C03A **Quillayute Air** **94.29** **42** IAmb IAmb 03 03 39.2
comp=Z,588nm,1.5s
L02F **Cave Junction** **94.30** **48** IAmb IAmb 03 03 38.1
comp=Z,414nm,1.3s
SOHO **SOHO** **94.30** **294** *i* P **P** **03 03 33.0 -0.3**
SNR=61
SOHO **SOHO** **94.30** **294** P **P** **03 03 32.8 -0.4**
HOPS **Hopland Field** **94.31** **51** IAmb IAmb 03 03 38.3
comp=Z,752nm,1.6s
MCCM **Marconi Confer** **94.36** **52** IAmb IAmb 03 03 38.2
comp=Z,964nm,1.9s
SHAO **Shalim** **94.42** **287** P **P** **03 03 35.2 +1.2**
AB31 **Akbulak array** **94.53** **319** *i* P **P** **03 03 32.4 -1.3**
AB31 **Akbulak array** **94.53** **319** P **P** **03 03 32.2 -1.5**
AB31 IAmb IAmb 03 03 34.6
comp=Z,269nm,0.8s
ABKAR **Akbulak array** **94.53** **319** P **P** **03 03 32.2 -1.5**
I03D **Drain, OR** **94.64** **47** IAmb IAmb 03 03 39.3
comp=Z,479nm,1.1s
MDH **Madha** **94.65** **295** *i* P **P** **03 03 33.9 -0.9**
SNR=13
MDH **Madha** **94.65** **295** P **P** **03 03 35.2 +0.3**
SNR=5.5
CLRS **Cowichan Lake** **94.69** **42** IAmb IAmb 03 03 40.1
comp=Z,366nm,1.4s
UOSS **Minazif** **94.69** **294** *i* P **P** **03 03 34.5 -0.6**
SNR=12
UOSS **Minazif** **94.69** **294** P **P** **03 03 34.2 -0.9**
UOSS **Minazif** **94.69** **294** P **P** **03 03 34.8 -0.3**
UOSS **Minazif** **94.69** **294** P **P** **03 03 34.4 -0.7**
UOSS **Minazif** **94.69** **294** P **P** **03 03 35.0 -0.1**
NLWA **Neilton Lookou** **94.70** **43** IAmb IAmb 03 03 39.8
comp=Z,308nm,1.3s
BANOM **Banah** **94.72** **295** *i* P **P** **03 03 35.6 +0.4**
SNR=9.8
BANOM **Banah** **94.72** **295** P **P** **03 03 35.8 +0.6**
WISH **Wishkah** **94.73** **43** IAmb IAmb 03 03 40.1
comp=Z,343nm,1.3s
HATD **Hatta, Dubai** **94.74** **294** *i* P **P** **03 03 35.2 -0.1**
SNR=25
HATD **Hatta, Dubai** **94.74** **294** P **P** **03 03 35.3 -0.1**
SNR=15
COR **Corvallis** **94.77** **46** P **P** **03 03 35.3 +0.3**
COR IAmb IAmb 03 03 40.3
comp=Z,784nm,1.6s
COR **Corvallis** **94.77** **46** P **P** **03 03 37.0 +2.0**
MSFE **Esma-Masafi** **94.78** **295** *i* P **P** **03 03 35.7 +0.2**
SNR=38
JRSC **Jasper Ridge** **94.78** **53** IAmb IAmb 03 03 40.3
comp=Z,495nm,1.6s
MASF **Masafi** **94.78** **295** P **P** **03 03 35.6 +0.1**
SNR=22
ASHO **Ashiyiah** **94.80** **294** *i* P **P** **03 03 36.0 +0.4**
SNR=24
ASHO **Ashiyiah** **94.80** **294** P **P** **03 03 35.2 -0.4**
SNR=16
E03A **Lebam** **94.81** **44** IAmb IAmb 03 03 39.9
comp=Z,377nm,1.1s

LIRD	**Liard River Hi**	**94.83**	**31**	P	**P**	**03 03 34.5**	**-0.4**
	baz=263,SNR=24						
G03D	**McMinnville, O**	**94.87**	**45**	IAmb	IAmb	03 03 40.5	
	comp=Z,414nm,1.2s						
SHME	**Shamm**	**94.87**	**296**	*i* P	**P**	**03 03 35.9**	**+0.1**
	SNR=27						
SHME	**Shamm**	**94.87**	**296**	P	**P**	**03 03 36.8**	**+1.0**
	SNR=14						
YBH	**Yreka Blue Hor**	**94.89**	**49**	PKKPbc	PKKPbc	03 20 31.1	-1.9
	comp=Z,5.2nm,0.8s,baz=67,slow=4.7,SNR=5.6						
YBH				PKKPab	PKKPbc	03 21 05.0	+32
	comp=Z,9.3nm,0.9s,baz=134,slow=4.1,SNR=5.3						
YBH				LR	LR	03 38 54.7	
	comp=Z,34µm,21.5s,baz=278,slow=31						
YBH	**Yreka Blue Hor**	**94.89**	**49**	IAmb	IAmb	03 03 41.1	
	comp=Z,748nm,1.4s						
BUCK	**Buck Mountain**	**94.95**	**46**	IAmb	IAmb	03 03 41.2	
	comp=Z,695nm,1.3s						
ALNE	**Al Ain**	**95.00**	**293**	*i* P	**P**	**03 03 36.4**	**-0.2**
	SNR=48						
ALNE	**Al Ain**	**95.00**	**293**	P	**P**	**03 03 37.1**	**+0.6**
	SNR=44						
SVE	**Sverdlovsk**	**95.01**	**327**	*de*P	**P**	**03 03 35.1**	**-0.7**
SVE				*e*		03 07 22.2	
SVE				*e*S	**SKSac**	**03 14 01.0**	**-2.6**
SVE				pmax	pmax		
	comp=Z,536nm,1.8s						
B04A	**Port Angeles**	**95.02**	**42**	IAmb	IAmb	03 03 41.2	
	comp=Z,344nm,1.3s						
DMTO	**DMTO**	**95.03**	**287**	P	**P**	**03 03 37.1**	**+0.4**
BBOR	**Butler Butte**	**95.04**	**48**	IAmb	IAmb	03 03 41.4	
	comp=Z,596nm,1.4s						
PGC	**Sidney**	**95.11**	**42**	IAmb	IAmb	03 03 41.2	
	comp=Z,426nm,1.4s						
H04D	**Lebanon**	**95.17**	**46**	IAmb	IAmb	03 03 41.9	
	comp=Z,502nm,1.2s						
NAZ	**Nazwa, Dubai**	**95.19**	**294**	*i* P	**P**	**03 03 36.9**	**-0.4**
	SNR=31						
NAZ	**Nazwa, Dubai**	**95.19**	**294**	P	**P**	**03 03 37.2**	**-0.1**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**95.22**	**294**	*i* P	**P**	**03 03 37.2**	**-0.4**
	SNR=32						
FAQ	**Al Faqa, Dubai**	**95.22**	**294**	P	**P**	**03 03 37.1**	**-0.4**
	SNR=18						
UMQ	**Umm Al-Quwin**	**95.25**	**295**	*i* P	**P**	**03 03 38.4**	**+0.9**
	SNR=6.0						
UMQ	**Umm Al-Quwin**	**95.25**	**295**	P	**P**	**03 03 38.8**	**+1.3**
MHC	**Mount Hamilton**	**95.25**	**53**	IAmb	IAmb	03 03 42.9	
	comp=Z,543nm,1.4s						
I04A	**Tendick Farm,**	**95.33**	**47**	IAmb	IAmb	03 03 43.0	
	comp=Z,882nm,1.7s						
SUTB	**Sutter Butte**	**95.33**	**51**	IAmb	IAmb	03 03 43.3	
	comp=Z,547nm,1.4s						
SAO	**San Andreas Ge**	**95.34**	**54**	IAmb	IAmb	03 03 43.2	
	comp=Z,373nm,1.4s						
UMZA	**Um Al Zommoal**	**95.39**	**292**	P	**P**	**03 03 38.3**	**0.0**
GNW	**Green Mountain**	**95.42**	**43**	IAmb	IAmb	03 03 42.8	
	comp=Z,249nm,1.2s						
G04A	**Mulino**	**95.42**	**45**	IAmb	IAmb	03 03 42.7	
	comp=Z,492nm,1.2s						
ASUD	**Al Ashush, Dub**	**95.45**	**294**	*i* P	**P**	**03 03 38.9**	**+0.4**
	SNR=30						
ASUD	**Al Ashush, Dub**	**95.45**	**294**	P	**P**	**03 03 38.8**	**+0.2**
	SNR=19						
H04A	**Detroit Lake**	**95.58**	**46**	IAmb	IAmb	03 03 43.1	
	comp=Z,421nm,1.3s						
ORV	**Oroville**	**95.58**	**51**	IAmb	IAmb	03 03 44.6	
	comp=Z,584nm,1.6s						
RBK	**Rabkut**	**95.71**	**287**	P	**P**	**03 03 39.5**	**-0.4**
	SNR=9.1						
AJN	**Ajban**	**95.75**	**294**	*i* P	**P**	**03 03 39.8**	**-0.1**
	SNR=5.4						
AJN	**Ajban**	**95.75**	**294**	P	**P**	**03 03 40.3**	**+0.4**
	SNR=9.3						
WIFE	**Three Sisters-**	**95.78**	**46**	IAmb	IAmb	03 03 44.7	
	comp=Z,429nm,1.2s						
AKTO	**Aktyubinsk**	**95.89**	**320**	LR	LR	03 49 45.5	
	comp=Z,13µm,18.6s,baz=89,slow=37						
KOTAN	**Kotaneelee Air**	**95.94**	**30**	P	**P**	**03 03 39.6**	**-0.3**
	baz=264,SNR=20						
D05A	**Enumclaw**	**95.95**	**43**	IAmb	IAmb	03 03 46.4	
	comp=Z,608nm,1.4s						
HOOD	**Mount Hood Mea**	**96.01**	**45**	IAmb	IAmb	03 03 45.5	
	comp=Z,475nm,1.3s						
A05A	**Maple Falls**	**96.05**	**41**	IAmb	IAmb	03 03 45.2	
	comp=Z,368nm,1.5s						
NVL	**N'lazarevskaya**	**96.09**	**193**	*e*P	**P**	**03 03 38.3**	**-2.2**
NVL				*e**PP	**pP**	**03 03 58.9**	**-4.6**
NVL				*e*		03 07 38.4	
NVL				*e*PPP	PPP	03 09 50.2	
NVL				*e*S	**SKSac**	**03 14 09.3**	**+0.3**
NVL				*e*SP	**SP**	**03 16 09.1**	**-1.7**
NVL				pmax	pmax		
	comp=Z,132nm,0.8s						
NVL				MLR	MLR		
	comp=Z,37µm,14.0s						
I05D	**Terrebonne, OR**	**96.15**	**46**	IAmb	IAmb	03 03 46.1	
	comp=Z,502nm,1.3s						
WHFO	**Wadi Hawf**	**96.16**	**287**	P	**P**	**03 03 41.0**	**-1.0**
	SNR=7.2						
ARTI	**Arti**	**96.20**	**326**	LR	LR	03 50 18.9	
	comp=Z,11µm,18.9s,baz=97,slow=37						
ARTI	**Arti**	**96.20**	**326**	*d* iP	**P**	**03 03 39.7**	**-1.5**
ARTI				*PP	**pP**	**03 04 01.1**	**-3.1**
ARTI						03 07 33.3	
ARTI				S	**SKSac**	**03 14 08.5**	**-1.5**
ARTI				SP	**SP**	**03 16 09.0**	**-3.9**
ARTI				pmax	pmax		
	comp=Z,284nm,1.3s						
ARTI	**Arti**	**96.20**	**326**	P	**P**	**03 03 39.6**	**-1.7**
ARTI				IAmb	IAmb	03 03 43.1	
	comp=Z,309nm,1.3s						
CMB	**Columbia Colle**	**96.30**	**53**	IAmb	IAmb	03 03 48.1	
	comp=Z,370nm,1.5s						
LLLB	**Lillooet**	**96.32**	**40**	IAmb	IAmb	03 03 46.8	
	comp=Z,489nm,1.6s						
FOMA	**Nahampoana Res**	**96.33**	**244**	x	**SP**	**03 16 18.5**	**+2.8**
FOMA	**Nahampoana Res**	**96.33**	**244**	P	**P**	**03 03 43.2**	**+0.7**
PINE	**Pine Mountain**	**96.39**	**47**	IAmb	IAmb	03 03 47.7	
	comp=Z,625nm,1.3s						
BEKR	**Beckworth**	**96.48**	**51**	IAmb	IAmb	03 03 49.0	
	comp=Z,541nm,1.6s						
WRGLY	**Wrigley**	**96.49**	**27**	P	**P**	**03 03 42.1**	**-0.2**
	baz=265,SNR=19						
A36M	**Sachs Harbour**	**96.58**	**18**	IAmb	IAmb	03 04 22.6	
	comp=Z,173nm,0.8s						
A36M	**Sachs Harbour**	**96.58**	**18**	P	**P**	**03 03 41.5**	**-1.0**
	baz=265						
MZWR	**Madinat Zayed**	**96.67**	**293**	P	**P**	**03 03 44.0**	**-0.1**
G06A	**Carlson Farm,**	**96.72**	**45**	IAmb	IAmb	03 03 48.5	
	comp=Z,458nm,1.9s						
C36M	**Paulatuk**	**96.74**	**21**	IAmb	IAmb	03 07 38.1	
	comp=Z,342nm,1.8s						
C36M	**Paulatuk**	**96.74**	**21**	P	**P**	**03 03 41.9**	**-1.4**
	baz=266						
LTY	**Liberty**	**96.85**	**43**	IAmb	IAmb	03 03 48.9	
	comp=Z,393nm,1.5s						
MZR	**Muzera**	**96.97**	**292**	*i* P	**P**	**03 03 45.3**	**-0.2**
	SNR=85						
MZR	**Muzera**	**96.97**	**292**	P	**P**	**03 03 45.5**	**+0.1**
	SNR=44						
PNTR	**Pine Nut**	**97.01**	**52**	IAmb	IAmb	03 03 52.0	
	comp=Z,579nm,1.5s						
TROLL	**Troll, Antarti**	**97.02**	**190**	⇑P	**P**	**03 03 44.6**	**-0.3**
	comp=Z,12µm,0.7s						
TROLL				⇓SKSac	**SKSac**	**03 14 14.7**	**+0.5**
	comp=N,970nm,1.4s						
TROLL				⇑PKKPbc	**PKKPbc**	**03 20 24.0**	**-4.0**
	comp=Z,886nm,0.9s						
MXC	**Moxie City**	**97.06**	**44**	IAmb	IAmb	03 03 50.1	
	comp=Z,240nm,1.3s						
WAKR	**Walker**	**97.09**	**52**	IAmb	IAmb	03 04 31.6	
	comp=Z,420nm,1.8s						
VOI	**Vohitsoka**	**97.11**	**247**	P	**P**	**03 03 45.6**	**-0.7**
	SNR=7.5						
VOI	**Vohitsoka**	**97.11**	**247**	IAmb	IAmb	03 03 51.0	
	comp=Z,293nm,1.5s						
VOI	**Vohitsoka**	**97.11**	**247**	x	**SP**	**03 16 21.4**	**-3.1**
VOI	**Vohitsoka**	**97.11**	**247**	P	Pdif	03 03 46.5	+0.1
F07A	**Phinny Hill Vi**	**97.26**	**45**	IAmb	IAmb	03 03 51.2	
	comp=Z,458nm,1.6s						
ABPO	**Ambohimpanom**	**97.27**	**250**	P	**P**	**03 03 46.9**	**-0.2**
ABPO	**Ambohimpanom**	**97.27**	**250**	x	**SP**	**03 16 25.8**	**-0.7**
ABPO	**Ambohimpanom**	**97.27**	**250**	P	**P**	**03 03 47.0**	**-0.2**
MDPB	**Devils Postpil**	**97.30**	**53**	IAmb	IAmb	03 03 53.2	
	comp=Z,519nm,1.7s						
OSI	**Osito Audit: C**	**97.36**	**56**	IAmb	IAmb	03 03 52.9	
	comp=Z,538nm,1.6s						
E07A	**Sunnyside**	**97.36**	**44**	IAmb	IAmb	03 03 51.6	
	comp=Z,305nm,1.1s						
OPO	**Ambohidratompo**	**97.39**	**250**	PP	**PP**	**03 07 39.7**	**-5.9**
	comp=Z,38nm,0.8s,baz=91,slow=3.2,SNR=6.1						
I07A	**Izee**	**97.44**	**47**	IAmb	IAmb	03 03 52.2	
	comp=Z,444nm,1.4s						
HAWA	**Hanford**	**97.57**	**44**	IAmb	IAmb	03 03 52.6	
	comp=Z,307nm,1.1s						
WAH2	**Wahluke Slope**	**97.57**	**44**	IAmb	IAmb	03 03 52.4	
	comp=Z,334nm,1.2s						
EPH	**Ephrata**	**97.58**	**43**	IAmb	IAmb	03 03 52.3	
	comp=Z,562nm,1.2s						
GHWR	**Ruwais**	**97.61**	**293**	P	Pdif	03 03 48.8	+0.4
ISA	**Isabella, Lake**	**97.64**	**55**	IAmb	IAmb	03 03 53.5	
	comp=Z,365nm,1.4s						
JRN	**Qarnain Island**	**97.72**	**294**	P	**P**	**03 03 48.5**	**-0.3**
RPN	**Rapa Nui**	**97.76**	**119**	LR	LR	03 43 58.3	
	comp=Z,13µm,18.0s,baz=266,slow=33						
PASC	**Pasadena Art C**	**97.77**	**57**	IAmb	IAmb	03 03 54.3	
	comp=Z,811nm,1.8s						
TPO	**Tropico Hills**	**97.78**	**56**	IAmb	IAmb	03 04 18.6	
	comp=Z,665nm,1.7s						
LHV	**Little Huntoon**	**97.80**	**52**	IAmb	IAmb	03 03 55.5	
	comp=Z,437nm,1.4s						
B08A	**Colville Reser**	**97.82**	**42**	IAmb	IAmb	03 03 53.2	
	comp=Z,506nm,1.6s						
MWC	**Mount Wilson**	**97.87**	**57**	IAmb	IAmb	03 03 55.0	
	comp=Z,700nm,1.5s						
E08A	**Dider Farm, El**	**97.90**	**44**	IAmb	IAmb	03 03 54.1	
	comp=Z,454nm,1.3s						
G08A	**Pilot Rock**	**97.90**	**45**	IAmb	IAmb	03 03 54.0	
	comp=Z,360nm,1.3s						
YPT	**Yellepit**	**97.94**	**45**	IAmb	IAmb	03 03 54.3	
	comp=Z,535nm,1.3s						
NVAR	**Mina Array Bea**	**97.97**	**52**	P	Pdif	03 03 50.4	+0.4
	comp=Z,31nm,0.7s,baz=256,slow=6.4,SNR=110						
NVAR				PP	**PP**	**03 07 45.1**	**-4.6**
	comp=Z,16nm,0.9s,baz=249,slow=7.9,SNR=3.5						
NVAR				PKKPbc	**PKKPbc**	**03 20 19.9**	**-4.8**
	comp=Z,4.9nm,0.9s,baz=88,slow=2.6,SNR=4.1						
NVAR				PKKPab	PKKPab	03 20 52.6	
	comp=Z,11nm,0.9s,baz=90,slow=5.2,SNR=7.7						
NVAR				PKPPKP		03 28 36.0	
	comp=Z,1.6nm,0.9s,baz=79,slow=2.2,SNR=3.8						
NVAR				LR	LR	03 40 34.3	
	comp=Z,54µm,21.9s,baz=264,slow=31						
	comp=Z,31nm,0.7s						
NVAR	**Mina Array Bea**	**97.97**	**52**	P	Pdif	03 03 50.2	+0.2
WVOR	**Wild Horse Val**	**97.97**	**48**	IAmb	IAmb	03 03 54.7	
	comp=Z,782nm,1.9s						
WVOR	**Wild Horse Val**	**97.97**	**48**	P	Pdif	03 03 49.9	+0.1
CWC	**Cottonwood Cre**	**98.01**	**54**	IAmb	IAmb	03 03 55.4	
	comp=Z,826nm,1.9s						
D08A	**Wollman Farm,**	**98.03**	**44**	IAmb	IAmb	03 03 54.5	
	comp=Z,317nm,1.3s						
DSP	**Deep Springs**	**98.16**	**53**	IAmb	IAmb	03 03 56.2	
	comp=Z,322nm,1.3s						
SNAA	**Sanae**	**98.20**	**189**	⇑P	**P**	**03 03 49.6**	**-0.5**
	comp=Z,5µm,1.0s						
SNAA				⇓SKSac	**SKSac**	**03 14 18.3**	**-1.7**
	comp=N,265nm,1.2s						
SNAA				⇑PKKPbc	**PKKPbc**	**03 20 21.1**	**-3.6**
	comp=Z,351nm,0.8s						
SNAA	**Sanae**	**98.20**	**189**	P	**P**	**03 03 49.6**	**-0.5**
	comp=Z,232nm,1.0s,baz=133,slow=4.0,SNR=115						
SNAA				PP	**PP**	**03 07 44.9**	**-5.0**
	comp=Z,205nm,1.3s,baz=139,slow=9.5,SNR=4.2						
SNAA				PKKPbc	**PKKPbc**	**03 20 20.7**	**-4.0**
	comp=Z,17nm,0.9s,baz=296,slow=1.9,SNR=14						
SNAA				PKPPKP		03 28 34.6	
	comp=Z,2.3nm,1.0s,baz=338,slow=3.6,SNR=4.5						
SNAA				LR	LR	03 47 44.8	
	comp=Z,75µm,19.2s,baz=150,slow=35						
	comp=Z,232nm,1.0s						
SNAA	**Sanae**	**98.20**	**189**	IAmb	IAmb	03 03 53.0	
	comp=Z,254nm,1.0s						
SNAA	**Sanae**	**98.20**	**189**	P	**P**	**03 03 49.8**	**-0.3**
BFSC	**Mount Baldy Ra**	**98.20**	**57**	IAmb	IAmb	03 04 20.8	
	comp=Z,269nm,1.5s						
LRMC	**Laurel Mtn Rad**	**98.27**	**55**	IAmb	IAmb	03 03 56.9	
	comp=Z,711nm,1.5s						
MPMC	**Manual Prospec**	**98.47**	**55**	IAmb	IAmb	03 03 57.7	
	comp=Z,385nm,1.4s						
E09A	**Wood Farm, Sta**	**98.53**	**44**	IAmb	IAmb	03 03 56.8	
	comp=Z,443nm,1.1s						
SLWR	**Sila**	**98.70**	**293**	P	Pdif	03 03 53.7	+0.5
Q09A	**Carvers**	**98.87**	**52**	IAmb	IAmb	03 04 00.5	
	comp=Z,206nm,1.0s						
QSM	**Queen of Sheba**	**98.96**	**55**	IAmb	IAmb	03 03 59.6	
	comp=Z,563nm,1.6s						
GSC	**Goldstone, Bar**	**98.97**	**56**	IAmb	IAmb	03 03 59.9	
	comp=Z,272nm,1.5s						
FURC	**Furnace Creek,**	**99.00**	**54**	IAmb	IAmb	03 04 00.8	
	comp=Z,606nm,1.6s						
DNR	**Dunn Ranch,Anz**	**99.01**	**57**	IAmb	IAmb	03 03 59.6	
	comp=Z,150nm,0.8s						
BMO	**Blue Mountains**	**99.05**	**46**	IAmb	IAmb	03 03 59.0	
	comp=Z,293nm,1.2s						
GWY	**Greenwater Val**	**99.14**	**55**	IAmb	IAmb	03 04 01.5	
	comp=Z,289nm,1.5s						
F10A	**Beach Ranch, E**	**99.15**	**45**	IAmb	IAmb	03 03 59.3	
	comp=Z,219nm,1.0s						
PFO	**Pinyon Flats O**	**99.16**	**57**	LR	LR	03 42 33.0	
	comp=Z,32µm,20.1s,baz=266,slow=32						
PFO	**Pinyon Flats O**	**99.16**	**57**	P	**Pdif**	**03 03 55.9**	**+0.6**
PFO				pmax	pmax		
	comp=Z,132nm,0.9s						
PFO	**Pinyon Flats O**	**99.16**	**57**	P	**Pdif**	**03 03 55.9**	**+0.6**
WCT	**Wildcat Mounta**	**99.20**	**54**	IAmb	IAmb	03 04 00.7	
	comp=Z,245nm,1.2s						
NEW	**Newport**	**99.29**	**42**	PKKPab		03 20 45.0	
	comp=Z,9.9nm,0.7s,baz=95,slow=7.5,SNR=9.6						
NEW				LR	LR	03 43 08.0	
	comp=Z,18µm,21.1s,baz=270,slow=32						
NEW	**Newport**	**99.29**	**42**	IAmb	IAmb	03 03 60.0	
	comp=Z,389nm,1.3s						
NEW	**Newport**	**99.29**	**42**	P	**Pdif**	**03 03 55.3**	**-0.1**
TPNV	**Topopah Spring**	**99.51**	**54**	IAmb	IAmb	03 04 02.3	
	comp=Z,320nm,1.4s						
VNA2	**Neumayer--Watz**	**99.54**	**188**	⇑Pdiff	**Pdif**	**03 03 55.5**	**-0.5**
	comp=Z,148nm,0.8s,baz=156,slow=4.3						
VNA2				⇓SKSac	**SKSac**	**03 14 26.2**	**-0.4**
	comp=N,22nm,1.3s,slow=3.7						
VNA2				⇑PKKPbc	**PKKPbc**	**03 20 15.8**	**-5.0**
	comp=Z,9.1nm,0.6s,slow=3.8						
VNA2	**Neumayer--Watz**	**99.54**	**188**	P	**Pdif**	**03 03 55.7**	**-0.3**
VNA1	**Neumayer--Stat**	**99.91**	**188**	⇑Pdiff	**Pdif**	**03 03 57.3**	**-0.3**
	comp=Z,136nm,0.9s						
VNA1				⇑PKKPbc	**PKKPbc**	**03 20 18.6**	**-1.2**
	comp=Z,16nm,0.9s						
ELK	**Elko**	**100.44**	**50**	PKKPab		03 20 42.0	
	comp=Z,18nm,1.0s,baz=78,slow=4.4,SNR=8.8						
YKA	**Yellowknife Ar**	**100.54**	**28**	P	**Pdif**	**03 03 59.8**	**-0.8**
	comp=Z,25nm,1.1s,baz=275,slow=4.6,SNR=76						
YKA				PP	**PP**	**03 08 00.6**	**-7.7**
	comp=Z,12nm,0.8s,baz=270,slow=7.2,SNR=5.7						
YKA				PKKPbc	**PKKPbc**	**03 20 14.2**	**-3.8**
	comp=Z,2.0nm,0.8s,baz=95,slow=2.5,SNR=4.4						
YKA				PKKPab	PKKPab	03 20 39.5	
	comp=Z,8.1nm,0.8s,baz=91,slow=3.1,SNR=7.2						
YKA	**Yellowknife Ar**	**100.54**	**28**		**Pdif**	**03 03 59.6**	**-0.9**
YKAW1	**Yellowknife Wh**	**100.60**	**28**		**Pdif**	**03 04 00.2**	**-0.6**
KIRV	**Kirov**	**101.08**	**328**	*i* P	**Pdif**	**03 04 01.8**	**-1.2**
BELG	**Belogornoye**	**102.43**	**322**	*c i* P	**Pdif**	**03 04 08.1**	**-1.0**
BELG				pmax	pmax		
	comp=Z,72nm,1.5s						
MAK	**Makhachkala**	**102.86**	**312**	*i* P	**Pdif**	**03 04 05.8**	**-5.5**
MAK				*i*		03 08 30.9	
MAK				*e*		03 14 43.4	
MAK				*e*SS	SS	03 22 57.3	-3.5
MAK				*e*SSS	SSS	03 26 59.4	
MAK				pmax	pmax		
	comp=Z,309nm,1.6s						
MAK				MLR	MLR		
	comp=N,13µm,15.0s						
RAYN	**Ar Rayn**	**104.32**	**292**	*i* P	**Pdif**	**03 04 18.7**	**+0.4**
	SNR=68						
PDAR	**Pinedale Array**	**104.67**	**48**	Pdiff	**Pdif**	**03 04 19.1**	**-0.7**
	comp=N,54nm,1.0s,baz=257,slow=2.6,SNR=96						
PDAR				PP	**PKiKP**	**03 08 32.8**	**-2.3**
	comp=N,10nm,0.9s,baz=252,slow=3.5,SNR=3.5						
PDAR				PKKPbc	**PKKPbc**	**03 20 03.8**	**-1.6**
	comp=N,6.1nm,0.7s,baz=105,slow=5.4,SNR=8.6						
RES	**Resolute Bay**	**104.68**	**14**	PKKPbc	PKKPbc	03 20 06.2	+0.1
	comp=N,17nm,0.8s,baz=145,slow=4.7,SNR=5.1						
GNI	**Garni**	**105.02**	**309**	P	**Pdif**	**03 04 20.9**	**-0.3**
GNI	**Garni**	**105.02**	**309**	*c i* P	**Pdif**	**03 04 20.1**	**-1.1**
	comp=Z,34nm,1.3s			pmax	pmax		
HOPEN	**Hopen**	**105.03**	**348**	*e*Pdif	**Pdif**	**03 04 20.5**	**+0.3**
HOPEN				IVmB_BB		03 04 22.8	
	comp=Z,1µm,3.2s						
HOPEN				*e*PP	**PP**	**03 08 41.2**	**-0.2**
HOPEN				*e*SKSac	**SKSac**	**03 14 53.3**	**+1.2**
HOPEN				*e*SKSdf	**SKSdf**	**03 15 39.2**	**+1.0**
HOPEN				*e*SS	**SS**	**03 23 32.3**	**+3.6**
HOPEN				IVMs_BB	IVMs_BB	03 49 47.0	
	comp=Z,5µm,17.8s						
ADZR	**Andozero**	**105.61**	**334**	*c i* P	**Pdif**	**03 04 21.9**	**-1.1**
ADZR				*e*		03 08 43.1	
ADZR						03 14 52.3	
ADZR				S	**Sdif**	**03 16 06.1**	**-6.0**
ADZR				SP	SP	03 17 52.9	+0.3
ADZR				pmax	pmax		
	comp=Z,120nm,1.6s						
SPA0	**Spitsbergen Ar**	**105.63**	**351**	*e*Pdif	**Pdif**	**03 04 23.4**	**+0.5**
SPA0				IVmB		03 04 26.0	
	comp=Z,733nm,1.8s						
SPA0				*e*PP	**PP**	**03 08 46.0**	**+0.1**
SPA0				*e*SKSac	**SKSac**	**03 14 55.1**	**+0.2**
SPA0				*e*SKSdf	**SKSdf**	**03 15 41.2**	**-1.0**
SPA0				*i*		03 16 10.7	
SPA0				*e*SP	SP	03 17 53.2	+0.8
SPA0				*e*		03 18 49.4	
SPA0				*e*SS	**SKKPbc**	**03 23 39.2**	**-0.2**
SPA0				IVMs_BB	IVMs_BB	03 46 48.5	
	comp=Z,7µm,23.2s						
SPITS	**Spitsbergen Ar**	**105.63**	**351**	Pdiff	**Pdif**	**03 04 21.4**	**-1.5**
	comp=Z,11nm,0.9s,baz=133,slow=7.0,SNR=8.7						
SPITS				PKKPbc	**PKKPbc**	**03 20 03.1**	**-0.1**
	comp=Z,9.6nm,0.7s,baz=180,slow=1.4,SNR=8.3						
KLMR	**Klimovskoe**	**105.75**	**331**	*e*P	**Pdif**	**03 04 21.8**	**-1.9**
KLMR				*e*		03 08 45.4	
KLMR				SP	SP	03 17 52.1	-2.2
KLMR				PS	PS	03 18 03.7	-1.8
KLMR				pmax	pmax		
	comp=Z,356nm,1.6s						
KBS	**Kingsbay**	**105.79**	**352**	*e*Pdif	**Pdif**	**03 04 24.1**	**+0.5**
KBS				*e*PP	**PP**	**03 08 47.8**	**+0.8**
KBS				*e*SKSac	**SKSac**	**03 14 56.1**	**+0.7**
KBS				*e*SKSdf	**SKSdf**	**03 15 40.7**	**+1.1**
KBS				*i*		03 16 07.3	
KBS				*e*SP	SP	03 17 55.9	+1.9
KBS				*e*		03 18 53.3	
KBS				*e*SS	**SS**	**03 23 40.8**	**+1.8**
KBS				IVMs_BB	IVMs_BB	03 43 16.3	
	comp=Z,9µm,30.9s						
GOF	**Gofitskoye**	**105.97**	**315**	*c i* P	**Pdif**	**03 04 24.5**	**-0.6**
KBZ	**Khabaz**	**106.18**	**313**	Pdiff	**Pdif**	**03 04 24.1**	**-2.0**
	comp=Z,6.6nm,0.8s,baz=80,slow=2.8,SNR=22						
KBZ				PP	**PP**	**03 08 49.7**	**-1.2**
	comp=Z,56nm,0.9s,baz=117,slow=5.6,SNR=6.6						
KBZ				PKKPbc	**PKKPbc**	**03 20 00.1**	**-0.3**
	comp=Z,5.6nm,0.9s,baz=259,slow=6.7,SNR=3.6						
VRH	**Novokhopyorsk**	**106.19**	**321**	*e*P	**Pdif**	**03 04 23.1**	**-2.8**
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV	**Kislovodsk**	**106.31**	**313**	⇑P	**Pdif**	**03 04 27.4**	**+0.6**
KIV	**Kislovodsk**	**106.31**	**313**	*i* P	**Pdif**	**03 04 25.8**	**-0.9**
KIV				*e*		03 08 50.4	
KIV				*e*		03 14 59.1	
KIV				*e*PS	PS	03 18 11.4	-0.8
KIV				*e*SS	SS	03 23 46.6	-1.7
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV	**Kislovodsk**	**106.31**	**313**	P	**Pdif**	**03 04 25.9**	**-0.9**
APA	**Apatity**	**106.47**	**339**	⇓*i* P	**Pdif**	**03 04 24.4**	**-2.4**
APA				*i*		03 08 51.4	
APA				*i* SS	SS	03 23 44.7	-4.0
APA				pmax	pmax		
	comp=Z,20nm,1.2s						
VADS	**Vadso**	**106.87**	**342**	*e*Pdif	**Pdif**	**03 04 28.8**	**+0.3**
VADS				IVmB_BB		03 04 30.8	
	comp=Z,1µm,2.4s						
VADS				*e*PP	**PP**	**03 08 55.0**	**-0.1**
VADS				*e*SKSac	**SKSac**	**03 15 00.9**	**+0.4**
VADS				*i*		03 16 17.5	
VADS				*e*SP	SP	03 18 07.1	+1.8
VADS				*e*SS	**SS**	**03 23 53.9**	**0.0**
VADS				IVMs_BB	IVMs_BB	03 49 32.6	
	comp=Z,11µm,30.2s						
BJO1	**Bjornoya**	**107.40**	**347**	*e*Pdif	**Pdif**	**03 04 31.1**	**+0.3**
BJO1				*e*PP	**PP**	**03 08 59.0**	**+0.2**
BJO1				*e*SKSac	**SKSac**	**03 15 03.6**	**+0.9**
BJO1				*e*SKSdf	**SKSdf**	**03 15 44.8**	**+2.0**
BJO1				*i*		03 16 18.9	
BJO1				*e*SP	SP	03 18 11.1	+0.6
BJO1				*e*		03 19 12.2	
BJO1				*e*SS	**SS**	**03 24 02.0**	**+1.0**
BJO1				IVMs_BB	IVMs_BB	03 53 06.3	
	comp=Z,8µm,22.1s						
LABN	**Labinsk**	**107.65**	**314**	*i* P	**Pdif**	**03 04 31.6**	**-1.0**
LABN				*e*		03 09 01.3	
LABN				*e*		03 15 05.

KTK1 **Kautokeino** 109.29 342 *e*Pdif **Pdif** 03 04 38.1 -1.2
KTK1 IVmB_BB 03 04 41.6
comp=Z,920nm,2.0s
KTK1 *e*PP **PP** 03 09 13.1 +0.4
KTK1 *e*SKSac **SKSac** 03 15 10.8 -0.2
KTK1 *i* 03 16 40.5
KTK1 *e*SP **SP** 03 18 31.4 +1.5
KTK1 *e*SS **SS** 03 24 28.2 +1.6
KTK1 IVMs_BB IVMs_BB 03 51 51.1
comp=Z,9µm,21.3s
NEEM North Greenlan 109.83 4 *i* P **PKiKP** 03 08 42.7 -1.1
JETT Jettan, Norway 109.86 343 *e*Pdif **Pdif** 03 04 42.1 +0.2
JETT IVmB_BB 03 04 44.5
comp=Z,1µm,2.6s
JETT *e*PP **PP** 03 09 17.2 +0.3
JETT *e*SKSac **SKSac** 03 15 13.8 +0.4
JETT *i* 03 16 45.8
JETT *e*SP SP 03 18 36.9 +1.3
JETT *e*SS **SS** 03 24 34.6 +0.3
JETT IVMs_BB IVMs_BB 03 53 50.7
comp=Z,13µm,25.1s
ANN Anapa 109.95 315 *i* P **Pdif** 03 04 40.9 -1.9
ANN *e* 03 09 17.8
ANN *e* 03 15 12.3
ANN *e*PS **SP** 03 18 35.7 -2.2
ANN *e*SS **SS** 03 24 35.2 -1.8
ANN pmax pmax
comp=Z,39nm,1.0s
ANN MLR MLR
comp=E,18µm,25.0s
ANN MLR MLR
comp=N,17µm,20.0s
ANN MLR MLR
comp=Z,18µm,21.0s
TXAR Lajitas Array 110.04 62 Pdiff **Pdif** 03 04 44.7 +1.0
comp=Z,5.0nm,1.0s,baz=250,slow=3.6,SNR=18
TXAR PKiKP **PKiKP** 03 08 47.0 +1.7
comp=Z,9.8nm,1.0s,baz=239,slow=1.8,SNR=7.3
TXAR PKKPbc **PKKPbc** 03 19 51.1 +3.1
comp=Z,8.6nm,0.8s,baz=116,slow=5.8,SNR=12
TRO Tromso 110.25 343 *e*Pdif **Pdif** 03 04 43.8 +0.3
TRO IVmB_BB 03 04 45.8
comp=Z,1µm,2.1s
TRO *e*PP **PP** 03 09 19.8 +0.2
TRO *e*SKSac **SKSac** 03 15 15.0 +0.1
TRO *i* 03 16 49.1
TRO *e*SP SP 03 18 41.4 +2.2
TRO *e*SS **SS** 03 24 41.1 +1.7
TRO IVMs_BB IVMs_BB 03 52 57.1
comp=Z,10µm,23.7s
PILG Pilgrimsrest, 110.56 240 *e*P **PKiKP** 03 08 47.3 +0.8
DAG Danmarks Havn 110.82 357 *i* P **PKiKP** 03 08 45.4 +0.1
GRHM Grahamstown, E 110.91 230 *e*P **PKiKP** 03 08 46.6 -0.2
FINES FINESS Array B 111.74 334 Pdiff **Pdif** 03 04 49.1 -1.2
comp=Z,7.0nm,0.6s,baz=72,slow=6.2,SNR=41
FINES PKiKP **PKiKP** 03 08 46.8 -0.5
comp=Z,30nm,0.8s,baz=96,slow=3.8,SNR=15
FINES PKKPbc **PKKPbc** 03 19 41.3 -2.1
comp=Z,12nm,1.0s,baz=171,slow=2.6,SNR=7.7
ASF Jabal al Asfar 111.82 301 Pdiff **Pdif** 03 04 51.5 -0.1
comp=Z,3.3nm,0.5s,baz=111,slow=22,SNR=10
ASF PKiKP **PKiKP** 03 08 50.6 +2.1
comp=Z,24nm,1.0s,baz=114,slow=1.0,SNR=7.9
KULLO Kullorsuaq 111.88 7 *i* P **PKiKP** 03 08 46.7 -0.6
SIM Simferopol' 112.25 315 *i* P **Pdif** 03 04 52.4 -0.6
SIM *e* 03 09 36.0
SIM *e*PS **SP** 03 19 00.0 +0.9
SIM *e*PPS PPS 03 20 07.0
SIM pmax pmax
comp=Z,29nm,0.7s
SIM pmax pmax
comp=Z,500nm,9.3s
SIM pmax pmax
comp=Z,7µm,12.6s
STEI Steigen 112.34 342 *e*Pdif **Pdif** 03 04 53.1 +0.3
STEI IVmB_BB 03 04 55.5
comp=Z,1µm,2.5s
STEI *e*PP **PP** 03 09 34.0 -0.5
STEI *e*SKSac **SKSac** 03 15 24.1 +0.7
STEI *i* 03 17 04.9
STEI *e*SP SP 03 18 59.3 +0.9
STEI *e*SS **SS** 03 25 08.2 +1.0
STEI IVMs_BB IVMs_BB 03 51 55.6
comp=Z,9µm,25.6s
FAUS Fauske 112.66 342 *e*Pdif **Pdif** 03 04 54.6 +0.3
FAUS IVmB_BB 03 04 56.7
comp=Z,460nm,1.8s
FAUS *e*PP **PP** 03 09 36.8 -0.1
FAUS *e*SKSac **SKSac** 03 15 23.8 -0.9
FAUS *i* 03 17 03.0
FAUS *e*SP **SP** 03 19 01.3 -0.1
FAUS *e*SS **SS** 03 25 13.3 +1.8
FAUS IVMs_BB IVMs_BB 03 53 41.2
comp=Z,10µm,25.6s
LOF Lofoten 112.71 343 *e*Pdif **Pdif** 03 04 54.7 +0.2
LOF IVmB_BB 03 04 57.0
comp=Z,914nm,2.2s
LOF *e*PP **PP** 03 09 37.6 +0.4
LOF *e*SKSac **SKSac** 03 15 24.7 -0.2
LOF *i* 03 16 30.6
LOF *e* 03 17 06.0
LOF *e*SP SP 03 19 01.8 0.0
LOF *e*SS **SS** 03 25 14.0 +1.9
LOF IVMs_BB IVMs_BB 03 48 51.3
comp=Z,7µm,24.6s
HRAO HartRAO 112.78 238 *e*P **PKiKP** 03 08 50.8 +0.2
WDLM Western Deep L 112.81 237 *e*P **PKiKP** 03 08 49.6 -1.1
ULM Lac du Bonnet 112.82 39 Pdiff **Pdif** 03 04 56.2 +0.7
comp=Z,1.6nm,0.9s,baz=287,slow=4.1,SNR=4.6
ULM PKiKP **PKiKP** 03 08 51.5 +1.8
comp=Z,20nm,0.9s,baz=306,slow=2.1,SNR=11
ULM PKKPbc **PKKPbc** 03 19 38.5 -0.9
comp=Z,14nm,0.9s,baz=134,slow=1.8,SNR=6.7
MMAI Mount Meron Ar 113.01 302 Pdiff **Pdif** 03 04 57.5 +0.7
comp=Z,6.7nm,0.9s,baz=173,slow=28,SNR=5.1
MMAI PKiKP **PKiKP** 03 08 50.8 0.0
comp=Z,16nm,0.8s,baz=351,slow=4.7,SNR=9.2
MMAI PKKPbc **PKKPbc** 03 19 40.1 +1.8
comp=Z,1.9nm,0.5s,baz=211,slow=4.7,SNR=5.1
DBG Daneborg 113.32 356 *i* P **PKiKP** 03 08 50.4 +0.4
ROOI Rooidraai Farm 113.39 230 *e*P **PKiKP** 03 08 51.8 +0.2
LEPH Lephalale, Lim 113.42 240 *e*P **PKiKP** 03 08 52.6 +0.8
KIRS Kirsehir-Merke 113.43 309 ⇓P **Pdif** 03 04 58.7 +0.1
KIRS Kirsehir-Merke 113.43 309 ⇑P **PKiKP** 03 08 51.7 +0.3
MNK Minsk 113.53 327 *i* P **Pdif** 03 04 58.8 +0.3
comp=E,5.0nm,0.8s
MNK *i* P **Pdif** 03 04 58.8 +0.3
comp=N,13nm,0.9s
MNK *i* P **Pdif** 03 04 58.8 +0.3
comp=Z,40nm,1.0s,baz=70
MNK *i* pP **pPdif** 03 05 20.5 -1.0
MNK *i* sP **sPdif** 03 05 32.2 +1.6
MNK *i* PP **PP** 03 09 44.1 +0.5
MNK *i* PPP PPP 03 12 08.1
MNK *i* SKP **SKPdf** 03 12 19.5 +0.5
MNK *i* PKS 03 12 28.2
MNK *i* SKS SKSdf 03 16 11.0 +16
MNK *i* PS **PS** 03 19 27.8 +6.8
MNK *i* SS **SS** 03 25 26.3 +2.5
MNK *i* SSS SSS 03 29 11.4
MNK *i* LRM MLR 03 55 44.3
comp=N,19µm,19.6s
MNK *i* LRM MLR 03 56 00.4
comp=Z,17µm,20.0s
MNK Minsk 113.53 327 *i* P **Pdif** 03 04 58.7 +0.3
MNK *i* 03 09 44.0
MNK *i* PPP PPP 03 12 08.0
MNK *i* SS SS 03 25 26.3 +2.4
MNK pmax pmax
comp=E,5.0nm,0.8s
MNK pmax pmax
comp=N,13nm,0.9s
MNK pmax pmax
comp=Z,40nm,1.0s
MNK MLR MLR
comp=N,19µm,20.0s
MNK MLR MLR
comp=Z,17µm,20.0s
MNK MLR MLR
comp=E,20µm,21.0s
BR131 Keskin Array S 113.55 310 P **PKiKP** 03 08 51.4 -0.3
SNR=6.3
BRTR Keskin Array B 113.55 310 Pdiff **Pdif** 03 04 57.8 -1.4
comp=E,3.5nm,0.8s,baz=103,slow=3.6,SNR=17
BRTR PKiKP **PKiKP** 03 08 51.8 +0.1
comp=E,18nm,0.9s,baz=60,slow=0.4,SNR=12
BRTR PKKPbc **PKKPbc** 03 19 36.2 -0.6
comp=E,7.9nm,1.0s,baz=204,slow=2.7,SNR=6.3
UPNV Upernavik 113.63 8 *i* P **PKiKP** 03 08 51.4 +0.8
RAUS Rausandaksla 113.64 342 *e*Pdif **Pdif** 03 04 58.6 -0.1
RAUS *e*PP **PP** 03 09 44.0 +0.1
RAUS *e*SKSac **SKSac** 03 15 29.1 +0.4
RAUS *i* 03 16 34.3
RAUS *e* 03 17 13.3
RAUS *e*SP **SP** 03 19 11.2 +0.8
RAUS *e*SS **SS** 03 25 26.2 +1.7
RAUS *i* 03 29 28.3
MOR8 Moi Rana 113.68 341 *e*Pdif **Pdif** 03 04 58.3 -0.6
MOR8 IVmB_BB 03 05 05.1
comp=Z,531nm,3.6s
MOR8 *e*PP **PP** 03 09 43.4 -0.8
MOR8 *i* 03 17 11.9
MOR8 *e*SP SP 03 19 08.5 -2.3
MOR8 *e*SS **SS** 03 25 25.3 +0.3
MOR8 IVMs_BB IVMs_BB 03 55 25.8
comp=Z,8µm,17.8s
CIDE Kastamonu/Cide 113.68 312 ⇑P **PKiKP** 03 08 51.4 -0.2
EIL Elat 113.68 299 Pdiff **Pdif** 03 04 58.3 -1.4
comp=Z,2.7nm,0.5s,baz=129,slow=24,SNR=2.3
EIL PKiKP **PKiKP** 03 08 51.9 -0.1
comp=Z,45nm,0.9s,baz=320,slow=2.9,SNR=11
VAGH Vaagaholmen 113.69 342 *e*Pdif **Pdif** 03 04 58.8 -0.1
VAGH *e*PP **PP** 03 09 44.5 +0.3
VAGH *e*SKSac **SKSac** 03 15 29.4 +0.6
VAGH *i* 03 16 38.5
VAGH *e* 03 17 13.8
VAGH *e*SP SP 03 19 12.3 +1.5
VAGH *e*SS **SS** 03 25 26.0 +1.0
VAGH *i* 03 29 16.0
BOSA Boshof 113.72 234 Pdiff **Pdif** 03 05 03.6 +3.4
comp=Z,4.4nm,0.8s,baz=141,slow=3.4,SNR=9.3
BOSA PKiKP **PKiKP** 03 08 53.0 +0.7
comp=Z,37nm,1.1s,baz=116,slow=3.2,SNR=3.9
BOSA PKKPbc **PKKPbc** 03 19 36.8 +0.9
comp=Z,8.6nm,0.9s,baz=269,slow=3.1,SNR=9.1
BOSA Boshof 113.72 234 *i* P **PKiKP** 03 08 53.5 +1.2
BOSA Boshof 113.72 234 *e*P **PKiKP** 03 08 51.9 -0.4
BOSA Boshof 113.72 234 P **Pdif** 03 04 59.7 -0.5
BOSA Boshof 113.72 234 PP **PP** 03 09 45.3 -0.4
BOSA x x 03 19 04.9
KONS Konsvik 113.89 342 *e*Pdif **Pdif** 03 04 59.8 0.0
KONS *e*PKPdf **PKiKP** 03 08 51.9 +0.6
KONS *e*PP **PP** 03 09 45.1 -0.5
KONS *e*SKSac **SKSac** 03 15 29.6 0.0
KONS *i* 03 16 36.3
KONS *i* 03 17 15.6
KONS *e*SP **SP** 03 19 13.5 +0.9
KONS *e*SS **SS** 03 25 29.3 +1.6
KONS *e* 03 29 29.3
BLWY Bulawayo 113.96 244 *i* P **PKiKP** 03 08 53.5 +0.5
MATP Matopo 113.97 244 PKiKP **PKiKP** 03 08 52.2 -0.8
comp=Z,65nm,0.7s,baz=139,slow=1.9,SNR=20
MATP PKKPbc **PKKPbc** 03 19 36.0 +1.2
comp=Z,25nm,1.1s,baz=303,slow=6.6,SNR=5.9
MATP Matopo 113.97 244 *i* P **PKiKP** 03 08 52.3 -0.7
NACGM Naroch 113.98 327 ⇑*i*Pdif **Pdif** 03 04 59.8 -0.7
comp=Z,31nm,1.0s,baz=68
AKASG Malin Array Be 114.00 322 Pdiff **Pdif** 03 05 00.5 -0.2
comp=Z,2.5nm,0.9s,baz=60,slow=4.1,SNR=13
AKASG PKiKP **PKiKP** 03 08 52.1 +0.2
comp=Z,19nm,0.6s,baz=68,slow=2.2,SNR=20
AKASG PKKPbc **PKKPbc** 03 19 34.7 -0.7
comp=Z,7.3nm,0.7s,baz=264,slow=4.1,SNR=14
KIEV Kiev 114.02 322 ⇑P **PKiKP** 03 08 52.1 +0.1
KIEV Kiev 114.02 322 ⇑PKiKP **PKiKP** 03 08 52.1 +0.1
STOK Stokkvaagen 114.02 342 *e*Pdif **Pdif** 03 05 00.4 0.0
STOK *e*PKPdf **PKiKP** 03 08 51.9 +0.3
STOK *e*PP **PP** 03 09 47.0 +0.4
STOK *e*SKSac **SKSac** 03 15 30.8 +0.6
STOK *e* 03 17 15.0
STOK *e*SP SP 03 19 15.3 +1.5
STOK *e*SS **SS** 03 25 31.1 +1.6
STOK *e* 03 29 32.0
LEIR Leirfjorden 114.13 341 *e*Pdif **Pdif** 03 05 00.9 0.0
LEIR *e*PKPdf PKPdf 03 08 51.2 -0.5
LEIR *e*PP **PP** 03 09 47.6 +0.3
LEIR *e*SKSac **SKSac** 03 15 31.0 +0.4
LEIR *i* 03 16 35.4
LEIR *e* 03 17 17.0
LEIR *e*SP SP 03 19 16.6 +1.7
LEIR *e*SS **SS** 03 25 33.0 +2.0
LEIR *e* 03 29 31.1
BRAK Brakfontein 114.21 230 *e*P PKPdf 03 08 52.7 -0.4
GRAN Grantham 114.51 229 *e*P **PKiKP** 03 08 54.8 +1.1
PURM Purcari 114.78 318 ⇑P PKPdf 03 08 54.2 +0.7
LBTB Lobatse 114.86 238 PKP **PKiKP** 03 08 54.2 -0.4
comp=Z,106nm,1.1s,baz=114,slow=3.9,SNR=17
LBTB PKKPbc **PKKPbc** 03 19 31.8 -0.1
comp=Z,11nm,0.9s,baz=289,slow=4.4,SNR=9.0
LBTB Lobatse 114.86 238 *i* P PKPdf 03 08 55.8 +1.2
LBTB Lobatse 114.86 238 *e*P **PKiKP** 03 08 53.6 -1.0
LBTB Lobatse 114.86 238 P **PKiKP** 03 08 54.2 -0.4
LBTB PP **PP** 03 09 52.4 -1.4
NUUG Nuugaatsiaq 115.15 7 *i* P **PKPdf** 03 08 54.5 +0.9
JNW Jan Mayen West 115.23 352 *e*PP **PP** 03 09 55.6 +0.8
JNW *i* 03 16 44.6
JNW *e*SP SP 03 19 26.2 +1.6
JNW *e*SS **SS** 03 25 45.3 +0.4
MATJ Matjiesfontein 115.23 228 *e*P **PKiKP** 03 08 54.6 -0.5
JNE Jan Mayen East 115.24 352 *e*PP **PP** 03 09 55.6 +0.6
JNE *e*SP SP 03 19 26.4 +1.6
JNE *e*SS **SS** 03 25 48.1 +3.0
FRAZ Fraserburg 115.26 229 *e*P **PKPdf** 03 08 56.4 +1.2
JMIC Jan Mayen 115.28 352 *e*PP **PP** 03 09 50.7 -4.5
JMIC *i* 03 16 50.0
JMIC *e*SP SP 03 19 26.4 +1.3
JMIC *e*SS **SS** 03 25 48.1 +2.5
SORM Soroca 115.32 320 ⇓P **Pdif** 03 05 06.9 +0.3
SORM Soroca 115.32 320 ⇑P **PKPdf** 03 08 54.8 +0.2
SORM Soroca 115.32 320 ⇑PKiKP **PKPdf** 03 08 54.8 +0.2
SUMG Summit 115.32 2 PKP **PKiKP** 03 08 54.4 0.0
SUMG Summit 115.32 2 *i* P **PKPdf** 03 08 55.1 +0.6
JMI Jan Mayen 115.36 352 *e*PP **PP** 03 09 58.0 +2.2
JMI *e*SP SP 03 19 27.4 +1.6
JMI *e*SS **SS** 03 25 48.1 +1.4
SAHE Sakarya_HENDEK 115.43 311 ⇑P **PKPdf** 03 08 55.6 +0.6
SUR Sutherland 115.49 229 PKP **PKPdf** 03 08 56.5 +0.8
comp=Z,101nm,1.2s,baz=162,slow=3.1,SNR=11
SUR PKKPbc **PKKPbc** 03 19 30.5 +0.5
comp=Z,23nm,1.1s,baz=234,slow=3.0,SNR=3.9
SUR Sutherland 115.49 229 *e*P **PKiKP** 03 08 55.5 -0.2
SUR Sutherland 115.49 229 PP **PP** 03 09 57.8 -0.2
NSS Namsos 115.52 340 *e*Pdif **Pdif** 03 05 07.4 +0.3
NSS *e*PP **PP** 03 09 58.0 +0.9
NSS *i* 03 17 29.2
NSS *e*SP SP 03 19 28.1 +0.5
NSS *e*SS **SS** 03 25 51.8 +2.6
NIAQ Niaqornat 115.78 8 *i* P **PKPdf** 03 08 55.8 +1.0
LSZ Lusaka 115.82 249 PKP **PKiKP** 03 08 57.8 +1.1
comp=Z,123nm,0.6s,baz=111,slow=1.1,SNR=34
LSZ PKKPbc **PKKPbc** 03 19 27.7 -0.6
comp=Z,14nm,0.9s,baz=310,slow=2.8,SNR=9.1
LSZ Lusaka 115.82 249 P **PKiKP** 03 08 57.4 +0.7
LSZ Lusaka 115.82 249 *i* P **PKiKP** 03 08 57.6 +0.9
LSZ Lusaka 115.82 249 *e*P **PKiKP** 03 08 57.2 +0.5
LSZ Lusaka 115.82 249 P **PKiKP** 03 08 57.1 +0.5
LSZ PP **PP** 03 09 59.6 -1.4
TLCR 115.85 317 ⇓P **PKiKP** 03 08 56.3 +0.6
TLCR 115.85 317 ⇓PKiKP **PKiKP** 03 08 56.3 +0.6
COYC Coyhaique 115.88 150 **PKPdf** 03 08 56.3 +0.5
JURR Jurilovca 115.92 316 ⇓P **PKiKP** 03 08 56.8 +1.0
SAATT Saattut 116.02 7 *i* P **PKPdf** 03 08 55.9 +0.6
CER Ceres 116.12 227 *e*P **PKiKP** 03 08 57.2 +0.5
VLDR Vladesti 116.16 317 ⇑P **PKiKP** 03 08 56.7 +0.4
TPGR Topolog 116.21 316 ⇑P **Pdif** 03 05 11.6 +1.0
TPGR Topolog 116.21 316 ⇓P **PKiKP** 03 08 57.3 +0.9
TATR Tatarca 116.25 317 ⇑P **PKiKP** 03 08 57.7 +1.3
SILT Sile 116.26 312 ⇑P **PKiKP** 03 08 56.9 +0.3
EFOR EFORIE 116.27 315 ⇑P **PKiKP** 03 08 57.7 +1.2
SUW Suwalki 116.27 327 *e*PKP **PKPdf** 03 08 55.7 -0.5
SUW *e*PP **PP** 03 10 02.5 -0.2
SUW *e*SKS **Sdif** 03 17 41.0 -0.5
SUW *e*SS **SS** 03 25 59.8 +0.1
SUW *e*L L 03 54 21.2
comp=Z,54µm,28.6s
SCTR Scanteiesti 116.27 317 ⇓P **PKiKP** 03 08 57.2 +0.7
VARL Varlezi 116.30 318 ⇓P **PKiKP** 03 08 58.1 +1.6
CFR Carcaliu 116.31 317 ⇑P **Pdif** 03 05 14.1 +3.0
CFR Carcaliu 116.31 317 ⇓P **PKiKP** 03 08 57.7 +1.1
TSMN Mangalia Port- 116.37 315 ⇓P **PKiKP** 03 08 57.7 +0.9
MANR Mangalia 116.37 315 ⇑P **PKiKP** 03 08 57.1 +0.4
NEGRR Negrea 116.39 317 ⇓P **PKiKP** 03 08 58.0 +1.3
PRTV Porterville,We 116.42 227 *e*P **PKiKP** 03 08 58.0 +0.7
SCHL Schela 116.43 317 ⇑P **PKiKP** 03 08 58.2 +1.4
SCHLR Schela 116.44 317 ⇓P **PKiKP** 03 08 58.0 +1.1
TUDR 116.51 317 ⇓P **PKiKP** 03 08 59.1 +2.2
TLBR Topalu 116.55 316 ⇑P **PKPdf** 03 08 57.0 -0.1
GHRR 116.55 318 ⇑P **PKiKP** 03 08 58.0 +0.9
CVDA Cernavoda 116.61 316 ⇓P **PKiKP** 03 08 59.0 +1.8
MBAR Mbarara 116.64 265 P **PKiKP** 03 08 58.5 +0.2
MBAR Mbarara 116.64 265 *e*P **PKiKP** 03 08 59.4 +1.0
MBAR Mbarara 116.64 265 P **PKPdf** 03 08 57.9 -0.5
MBAR PP **PP** 03 10 02.0 -5.1
MBAR x x 03 19 36.7
SAQQ Saqqaq 116.73 7 *i* P **PKPdf** 03 08 56.4 -0.2
PSN Preselentsi 116.73 315 P **Pdif** 03 05 12.4 -0.6
PSN Preselentsi 116.73 315 P **PKiKP** 03 08 58.0 +0.5
PANC Panciu 116.78 318 ⇓P **PKiKP** 03 08 57.7 +0.2
ICOR Ion Corvin 116.83 316 ⇑P **PKiKP** 03 08 59.3 +1.6
ODBI Odobesti 116.87 318 ⇑P **PKiKP** 03 08 59.1 +1.5
TESR Tescani 116.92 318 ⇑P **Pdif** 03 05 15.1 +1.3
TESR Tescani 116.92 318 ⇓P **PKiKP** 03 08 58.6 +0.8
PRAR RASCA 116.92 319 ⇑P **PKiKP** 03 08 59.0 +1.2
VRI Vrincioaia 117.06 318 ⇑P **Pdif** 03 05 16.2 +1.7
VRI Vrincioaia 117.06 318 ⇑P **PKiKP** 03 08 58.6 +0.5
VRI Vrincioaia 117.06 318 ⇑PKiKP **PKiKP** 03 08 58.6 +0.5
PLOR Plostina 117.12 318 ⇓P **Pdif** 03 05 16.4 +1.6
PLOR Plostina 117.12 318 ⇑P **PKiKP** 03 08 59.0 +0.8
SAHR Sahastru 117.13 318 ⇑P **PKiKP** 03 08 59.4 +1.1
BIZ Bicaz 117.14 319 ⇓P **Pdif** 03 05 15.9 +1.2
BIZ Bicaz 117.14 319 ⇑P **PKiKP** 03 08 58.7 +0.6
ONER Baraj Valea Uz 117.14 318 ⇓P **Pdif** 03 05 16.4 +1.6
ONER Baraj Valea Uz 117.14 318 ⇓P **PKiKP** 03 08 59.3 +1.1
SCO Scoresbysund 117.19 356 *i* P **PKiKP** 03 08 57.9 +0.3
GDH Godhavn 117.21 8 *i* P **PKiKP** 03 08 57.7 +0.1
PRD Provadia 117.37 315 P **Pdif** 03 05 15.9 +0.1
ISR Istrita 117.41 317 ⇓P **PKiKP** 03 08 60.0 +1.2
ISR Istrita 117.41 317 ⇓PKiKP **PKiKP** 03 09 00.0 +1.2
LEHL Lehliu 117.41 316 ⇑P **PKiKP** 03 08 58.9 +0.2
COVR Voineasa-Covas 117.42 318 ⇑P **PKiKP** 03 08 59.7 +0.9
TURR Turia 117.47 318 ⇓P **Pdif** 03 05 19.1 +2.8
NEHR Nehoiu 117.48 317 ⇓P **PKPdf** 03 08 57.8 -1.1
BURAR Bucovina Array 117.49 320 ⇓P **Pdif** 03 05 17.9 +1.5
BURAR Bucovina Array 117.49 320 ⇓P **PKiKP** 03 09 01.1 +2.1
BURAR Bucovina Array 117.49 320 ⇓PKiKP **PKiKP** 03 09 01.1 +2.1
BURAR Bucovina Array 117.49 320 **PKPdf** 03 08 59.1 +0.2
ILULI Ilulissat 117.58 7 *i* P **PKPdf** 03 08 57.6 -0.7
BAND Balkesir-Ban 117.58 311 ⇓P **PKPdf** 03 08 58.9 -0.3
HFS Hagfors 117.62 336 PKP **PKPdf** 03 08 58.4 -0.3
comp=Z,17nm,0.7s,baz=108,slow=4.8,SNR=11
HFS PKKPbc **PKKPbc** 03 19 22.3 -0.8
comp=Z,21nm,0.8s,baz=195,slow=2.9,SNR=19
MLR Muntele Rosu 117.70 318 PKP **PKPdf** 03 08 59.2 -0.3
comp=Z,88nm,1.0s,baz=255,slow=2.3,SNR=15
MLR PKKPbc **PKKPbc** 03 19 21.8 -0.8
comp=Z,5.8nm,0.7s,baz=254,slow=3.6,SNR=4.4
MLR Muntele Rosu 117.70 318 ⇑P **PKPdf** 03 08 58.6 -0.9
MLR Muntele Rosu 117.70 318 ⇑P **PKKPbc** 03 19 22.2 -0.4
BOSR Bodos 117.70 318 ⇑P **PKiKP** 03 09 00.7 +1.3
SULR 117.74 317 ⇓P **PKiKP** 03 09 00.4 +1.1
CKGRV CKGRV 117.77 241 P **PKiKP** 03 09 01.7 +1.4
CKGRV PP **PP** 03 10 13.3 -1.0
CKGRV x x 03 19 41.0
RAZG Razgrad 117.89 315 ⇑P **PKPdf** 03 08 59.4 -0.4
HOPE Hope Point 117.90 177 PKiKP **PKPdf** 03 08 59.3 -0.1
HOPE Hope Point 117.90 177 **PKPdf** 03 08 59.3 -0.1
DOPR Dopca 117.92 318 ⇑P **PKiKP** 03 09 00.8 +1.1
NB2 NORSAR Subarra118.03 338 P **Pdif** 03 05 17.4 -1.0
comp=Z,72nm,2.5s,baz=48,slow=5.1
NB2 PKPdf **PKPdf** 03 08 58.6 -0.9
comp=Z,122nm,1.1s,baz=50,slow=2.0
NB2 PKKP **PKKPbc** 03 19 21.2 -0.6
comp=Z,5.4nm,0.8s,baz=226,slow=4.4
NB2 NORSAR Subarra118.03 338 PKPdf **PKPdf** 03 08 58.6 -0.9
NOA NORSAR Array B 118.03 338 PKP **PKPdf** 03 08 58.8 -0.7
comp=Z,25nm,0.8s,baz=54,slow=1.9,SNR=33
NOA PKKPbc **PKKPbc** 03 19 21.1 -0.7
comp=Z,19nm,1.1s,baz=229,slow=4.0,SNR=16
NC602 NORSAR Array S 118.10 337 *e*Pdif **Pdif** 03 05 18.7 0.0
NC602 *e*PKPdf **PKiKP** 03 09 00.2 +0.6
NC602 *e*PP **PP** 03 10 15.6 +0.4
NC602 *e*SKSac **SKSac** 03 15 46.4 +0.7
NC602 *i* 03 17 49.0
NC602 *e*SP SP 03 19 53.4 +2.3
NC602 *e*SS **SS** 03 26 24.2 +1.3
R9F13 Warsaw-Wawer 118.14 326 *e*PKPdf **PKiKP** 03 09 00.8 +0.9
R9F13 *e*pPKP **pPKPdf** 03 09 23.7 0.0
R9F13 *e*PP **PP** 03 10 17.8 +2.0
R9F13 *e*SKS **SKSac** 03 15 44.6 -1.5
DOMB Dombas 118.15 339 *e*Pdif **Pdif** 03 05 18.3 -0.6
DOMB *e*PKPdf **PKiKP** 03 08 59.8 0.0
DOMB *e*PP **PP** 03 10 13.9 -1.6
DOMB *e*SKSac **SKSac** 03 15 45.9 0.0
DOMB *i* 03 17 55.1
DOMB *e*SP **SP** 03 19 51.9 +0.3
DOMB *e*SS **SS** 03 26 24.9 +1.3
KWP Kalwaria Pacla 118.30 323 *e*PKP **PKPdf** 03 08 59.9 -0.4
KWP *e*PP **PP** 03 10 12.8 -4.3
KWP *e*SKS **Sdif** 03 17 59.5 +0.8
KWP *e*SS **SS** 03 26 17.7 -8.8
KWP *e*L L 03 55 24.1
comp=Z,45µm,30.2s
MOL Molde 118.31 340 *e*Pdif **Pdif** 03 05 19.2 -0.3
MOL *e*PKPdf **PKiKP** 03 09 00.3 +0.4
MOL *e*PP **PP** 03 10 16.2 -0.3
MOL *e*SKSac **SKSac** 03 15 44.9 -1.4
MOL *i* 03 17 51.2
MOL *e*SP **SP** 03 19 54.2 +1.4
MOL *e*SS **SS** 03 26 27.6 +2.2
VOIR 118.31 318 ⇑P **PKiKP** 03 09 01.5 +0.9
VOIR 118.31 318 ⇑PKiKP **PKiKP** 03 09 01.5 +0.9
BEL Belsk 118.51 326 *e*PKP **PKPdf** 03 09 00.4 -0.2
BEL *e*PP **PP** 03 10 19.9 +1.5
BEL *e*SKS **Sdif** 03 17 59.9 -0.4
BEL *e*SS **SS** 03 26 27.4 -1.4
BEL *e*L L 03 55 50.0
comp=Z,50µm,27.6s
MDB Medias 118.52 319 ⇓P **PKiKP** 03 09 02.5 +1.6
MDB Medias 118.52 319 ⇓PKiKP **PKiKP** 03 09 02.5 +1.6
BMR Baia Mare 118.56 321 ⇑P **PKiKP** 03 09 02.2 +1.3
BMR Baia Mare 118.56 321 ⇑PKiKP **PKiKP** 03 09 02.2 +1.3
COPA Copaceanca 118.61 316 ⇓P **PKiKP** 03 09 01.2 +0.1
ARR Arges 118.61 318 ⇑P **PKiKP** 03 09 01.6 +0.4
HUMR Humele 118.65 317 ⇑P **PKPdf** 03 08 59.9 -1.2
ZIMR 118.65 316 ⇑P **PKiKP** 03 09 01.1 -0.1
ZIMR 118.65 316 ⇑PKiKP **PKiKP** 03 09 01.1 -0.1
TNR Turnu Rosu 118.76 318 ⇑P **PKiKP** 03 09 02.8 +1.4
TNR Turnu Rosu 118.76 318 ⇑PKiKP **PKiKP** 03 09 02.8 +1.4
AKN Aaknes 118.76 340 *e*Pdif **Pdif** 03 05 21.5 -0.1
AKN *e*PP **PP** 03 10 19.9 +0.2
AKN *e*SKSac **SKSac** 03 15 48.3 +0.2
AKN *i* 03 17 55.9
AKN *e*SP SP 03 19 58.4 +1.4
AKN *e*SS **SS** 03 26 33.3 +1.9
CJR Cluj-Napoca 118.83 319 ⇑P **PKiKP** 03 09 01.6 +0.1
CJR Cluj-Napoca 118.83 319 ⇑PKiKP **PKiKP** 03 09 01.6 +0.1
KOLS Kolonicke sedl 118.84 322 *e*PKiKP **PKiKP** 03 09 02.0 +0.6
KOLS Kolonicke sedl 118.84 322 *e*PKP **PKiKP** 03 09 02.0 +0.6
BLEU Blekinge 118.88 332 *i* P **PKiKP** 03 09 01.3 +0.1
OSL Oslo 118.92 337 *e*PKPdf **PKiKP** 03 09 02.1 +0.9
OSL *e*PP **PP** 03 10 20.8 0.0
OSL *e*SKSac **SKSac** 03 15 47.3 -1.2
OSL *i* 03 17 55.2
OSL *e*SP **SP** 03 19 57.9 -0.6
OSL *e*SS **SS** 03 26 35.4 +1.9
CAVK Edirne/Enez-Ca 118.92 312 ⇓P **PKiKP** 03 09 02.5 +0.7
MESR Meseseni 119.09 320 ⇓P **PKPdf** 03 08 58.3 -3.6
CCM Cathedral Cave 119.16 51 PKiKP **PKPdf** 03 09 01.1 -1.2
CCM Cathedral Cave 119.16 51 **PKPdf** 03 09 01.1 -1.2
MARR Marisel-Cluj 119.16 320 ⇓P **Pdif** 03 05 25.2 +1.4
MARR Marisel-Cluj 119.16 320 ⇓P **PKiKP** 03 09 02.3 +0.1
LOT Lotru 119.16 318 ⇑P **PKiKP** 03 09 02.9 +0.6
CEI Carei 119.20 321 ⇑P **PKiKP** 03 09 03.7 +1.6
CEI Carei 119.20 321 ⇑PKiKP **PKiKP** 03 09 03.7 +1.6
PRK Paraskevi 119.22 311 P **PKPdf** 03 09 00.8 -1.5
PLVB Pleven 119.25 316 ⇑P **PKPdf** 03 09 01.2 -1.1

GADA	**Gvkgeada**	**119.25**	**312**	P	**PKPdf**	**03 09 00.7**	**-1.7**
RDO	**Rodhopi**	**119.26**	**313**	P	**PKPdf**	**03 09 00.7**	**-1.7**
STHS	**Stebnicka Huta**	**119.27**	**323**	*e*PKIKP	**PKiKP**	**03 09 02.9**	**+0.6**
STHS				*e*		03 10 30.1	
STHS	**Stebnicka Huta**	**119.27**	**323**	*e*PKP	**PKiKP**	**03 09 02.9**	**+0.6**
STHS				*e*PP	**PP**	**03 10 30.1**	**+6.4**
KDZ	**Kurdzhali**	**119.27**	**313**	P	**PKPdf**	**03 09 00.8**	**-1.6**
STRU	**Stroemstad**	**119.31**	**336**	*i* P	**PKiKP**	**03 09 02.0**	**0.0**
SKAR	**Skarslia**	**119.34**	**338**	*e*Pdif	**Pdif**	**03 05 23.2**	**-1.1**
SKAR				*e*PP	**PP**	**03 10 23.7**	**-0.1**
SKAR				*e*SKSac	**SKSac**	**03 15 49.6**	**-0.6**
SKAR				*i*		03 18 02.9	
SKAR				*e*SP	**SP**	**03 20 02.4**	**+0.1**
SKAR				*e*SS	**SS**	**03 26 40.6**	**+1.6**
KARP	**Karpathos**	**119.37**	**306**	P	**PKiKP**	**03 09 03.1**	**+0.2**
DRGR		**119.38**	**320**	⇓P	**Pdif**	**03 05 26.2**	**+1.4**
DRGR		**119.38**	**320**	⇑P	**PKiKP**	**03 09 02.7**	**+0.1**
DRGR		**119.38**	**320**	⇑PKIKP	**PKiKP**	**03 09 02.7**	**+0.1**
SMTH	**Samothraki Isl**	**119.45**	**312**	P	**PKPdf**	**03 09 01.1**	**-1.7**
CRAR	**CRAIOVA**	**119.52**	**317**	⇑P	**PKiKP**	**03 09 03.2**	**+0.4**
CRAR	**CRAIOVA**	**119.52**	**317**	⇑PKIKP	**PKiKP**	**03 09 03.2**	**+0.4**
KONO	**Kongsberg**	**119.54**	**337**	PKIKP	**PKPdf**	**03 09 02.0**	**-0.4**
KONO	**Kongsberg**	**119.54**	**337**	*e*Pdif	**Pdif**	**03 05 25.0**	**-0.1**
KONO				*e*PP	**PP**	**03 10 25.4**	**+0.3**
KONO				*i*		03 18 03.4	
KONO				*e*SP	SP	03 20 04.2	+0.1
KONO				*e*SS	**SS**	**03 26 43.5**	**+2.0**
KONO	**Kongsberg**	**119.54**	**337**		**PKPdf**	**03 09 02.0**	**-0.4**
DEV	**Deva**	**119.58**	**319**	⇓P	**PKiKP**	**03 09 03.4**	**+0.5**
DEV	**Deva**	**119.58**	**319**	⇓PKIKP	**PKiKP**	**03 09 03.4**	**+0.5**
CHOS	**Chios island**	**119.60**	**310**	P	**PKPdf**	**03 09 01.6**	**-1.7**
LTVH	**Ltavrtes, Hu**	**119.67**	**321**	⇑P	**PKiKP**	**03 09 04.9**	**+1.8**
RZN	**Rozhen**	**119.68**	**314**	P	**PKPdf**	**03 09 04.0**	**-0.5**
RZN	**Rozhen**	**119.68**	**314**	P	**PKPdf**	**03 09 01.8**	**-1.7**
DEL	**Delary**	**119.69**	**333**	*i* P	**PKPdf**	**03 09 02.7**	**0.0**
SFJD	**Kangerlussuaq**	**119.72**	**8**	PKIKP	**PKPdf**	**03 09 01.9**	**-0.6**
SFJD	**Kangerlussuaq**	**119.72**	**8**		**PKPdf**	**03 09 01.9**	**-0.6**
SFJD	**Kangerlussuaq**	**119.72**	**8**	*i* P	**PKPdf**	**03 09 02.4**	**-0.1**
TJOU	**Tjoern**	**119.75**	**335**	*i* P	**PKPdf**	**03 09 02.7**	**-0.1**
HYA	**Hoyanger**	**119.75**	**340**	*e*Pdif	**Pdif**	**03 05 26.0**	**0.0**
HYA				*e*PP	**PP**	**03 10 26.9**	**+0.5**
HYA				*i*		03 18 06.8	
HYA				*e*SP	SP	03 20 08.3	+2.4
HYA				*e*SS	**SS**	**03 26 46.3**	**+2.3**
GKP	**Gorka Klasztor**	**119.76**	**328**	*e*PKP	**PKiKP**	**03 09 03.4**	**+0.4**
GKP				*e*PP	**PP**	**03 10 27.4**	**+0.6**
GKP				*e*SKS	**Sdif**	**03 18 11.9**	**+1.2**
GKP				*e*SS	**SS**	**03 26 47.5**	**+2.8**
GKP				*e*L	L	03 52 18.7	
	comp=Z,52µm,31.9s						
OJC	**Ojcow**	**119.77**	**324**	*e*PKP	**PKPdf**	**03 09 01.1**	**-2.0**
OJC				*e*PP	**PP**	**03 10 27.1**	**-0.1**
OJC				*e*SKS	**Sdif**	**03 18 10.3**	**-0.7**
OJC				*e*SS	**SS**	**03 26 44.5**	**-0.8**
OJC				*e*L	L	03 56 13.5	
	comp=Z,31µm,27.6s						
SRE	**Strehaia**	**119.80**	**317**	⇑P	**PKiKP**	**03 09 03.9**	**+0.4**
SRE	**Strehaia**	**119.80**	**317**	⇑PKIKP	**PKiKP**	**03 09 03.9**	**+0.4**
SOEG	**Soedalen**	**119.82**	**360**	*i* P	**PKPdf**	**03 09 02.6**	**-0.1**
NIE	**Niedzica**	**119.83**	**323**	*e*PKP	**PKPdf**	**03 09 01.1**	**-2.2**
NIE				*e*PP	PP	03 10 19.0	-8.6
NIE				*e*SKS	**Sdif**	**03 18 12.9**	**+1.4**
NIE				*e*SS	**SKKSdf**	**03 26 48.9**	**-2.8**
NIE				*e*L	L	03 56 29.7	
	comp=Z,17µm,28.8s						
FOO	**Floro**	**119.83**	**340**	*e*PP	**PP**	**03 10 28.2**	**+1.3**
FOO				*i*		03 18 05.1	
FOO				*e*SP	SP	03 20 07.6	+1.1
FOO				*e*SS	**SS**	**03 26 46.5**	**+1.6**
GZR	**Gura Zlata**	**119.83**	**318**	⇑P	**PKiKP**	**03 09 04.5**	**+0.9**
BORR	**Bors**	**119.85**	**320**	⇑P	**PKiKP**	**03 09 04.8**	**+1.4**
LIA	**Limnos Island**	**119.86**	**312**	P	**PKPdf**	**03 09 02.2**	**-1.4**
MPEP	**Malo Peshtene**	**119.87**	**316**	P	**Pdif**	**03 05 26.5**	**-0.5**
MPEP	**Malo Peshtene**	**119.87**	**316**	P	**PKiKP**	**03 09 03.6**	**0.0**
FABU	**Falkenberg**	**119.90**	**334**	*i* P	**PKPdf**	**03 09 02.5**	**-0.6**
BAIL	**Bailesti**	**119.92**	**317**	⇑P	**PKiKP**	**03 09 04.9**	**+1.3**
BSD	**Bornholm Skovb**	**119.96**	**331**	*i* P	**PKiKP**	**03 09 04.0**	**+0.7**
VALD	**Valchedram**	**119.97**	**316**	*e*P	**Pdif**	**03 05 31.1**	**+3.7**
THAS	**Thassos island**	**120.01**	**313**	P	**PKPdf**	**03 09 02.4**	**-1.4**
ONAU	**Onsala**	**120.01**	**334**	*i* P	**PKiKP**	**03 09 03.6**	**+0.2**
KAVA	**Kavala**	**120.04**	**313**	P	**PKPdf**	**03 09 02.5**	**-1.4**
PLCA	**Paso Flores**	**120.09**	**147**	PKP	**PKiKP**	**03 09 04.2**	**-0.1**
	comp=Z,50nm,0.9s,baz=215,slow=3.3,SNR=42						
PLCA				PKKPbc	**PKKPbc**	**03 19 14.3**	**+0.5**
	comp=Z,22nm,0.9s,baz=28,slow=5.9,SNR=21						
PLCA				PKKP	**PKKPdf**	**03 19 47.9**	**+2.5**
	comp=Z,20nm,0.9s,baz=23,slow=5.2,SNR=5.0						
PLCA	**Paso Flores**	**120.09**	**147**	PKP	**PKiKP**	**03 09 04.5**	**+0.2**
PLCA	**Paso Flores**	**120.09**	**147**	*e*P	**PKPdf**	**03 09 01.1**	**-3.1**
KECS	**Kecovo**	**120.10**	**322**	*e*PKIKP	**PKiKP**	**03 09 04.7**	**+0.8**
KECS				*e*		03 10 36.0	
KECS	**Kecovo**	**120.10**	**322**	*e*PKP	**PKiKP**	**03 09 04.7**	**+0.8**
KECS				*e*PP	**PP**	**03 10 36.0**	**+6.5**
PUNG	**Punghina**	**120.12**	**317**	⇑P	**PKiKP**	**03 09 04.5**	**+0.5**
ZKR	**Zakros**	**120.22**	**306**	P	**PKPdf**	**03 09 02.9**	**-1.6**
SIRR	**Siria**	**120.24**	**320**	⇑P	**PKiKP**	**03 09 04.4**	**+0.1**
HERR	**Herculane**	**120.25**	**318**	⇑P	**PKPdf**	**03 09 04.1**	**-0.1**
BJUU	**Bjuv**	**120.30**	**333**	*i* P	**PKiKP**	**03 09 04.0**	**0.0**
SUE	**Sulen**	**120.32**	**340**	*e*Pdif	**Pdif**	**03 05 28.4**	**-0.1**
SUE				*e*PP	**PP**	**03 10 30.7**	**+0.4**
SUE				*e*SKSac	**SKSac**	**03 15 53.8**	**+0.4**
SUE				*i*		03 18 08.9	
SUE				*e*SP	**SP**	**03 20 11.4**	**+0.6**
SUE				*e*SS	**SS**	**03 26 52.7**	**+1.5**
LUNU	**Lund**	**120.36**	**332**	*i* P	**PKPdf**	**03 09 03.6**	**-0.5**
NVR	**Nevrokopi**	**120.41**	**314**	P	**PKPdf**	**03 09 03.2**	**-1.5**
MMB	**Musomishta**	**120.43**	**314**	P	**Pdif**	**03 05 29.0**	**-0.6**
MMB	**Musomishta**	**120.43**	**314**	P	**PKPdf**	**03 09 03.9**	**-0.8**
MMB	**Musomishta**	**120.43**	**314**	P	**PKPdf**	**03 09 03.3**	**-1.5**
LANS	**Liptovska Anna**	**120.43**	**323**	*e*P	**Pdif**	**03 05 33.1**	**+3.7**
LANS				*e*		03 09 05.3	
LANS				*e*		03 10 38.2	
LANS	**Liptovska Anna**	**120.43**	**323**	*e*PDIFF	**Pdif**	**03 05 33.1**	**+3.7**
LANS	**Liptovska Anna**	**120.43**	**323**	*e*PKP	**PKiKP**	**03 09 05.3**	**+0.7**
LANS				*e*PP	**PP**	**03 10 38.2**	**+6.4**
VTS	**Vitosha**	**120.46**	**315**	P	**Pdif**	**03 05 29.9**	**+0.1**
VTS	**Vitosha**	**120.46**	**315**	P	**PKPdf**	**03 09 04.6**	**-0.3**
VTS	**Vitosha**	**120.46**	**315**	P	**PKPdf**	**03 09 03.3**	**-1.6**
ODD1	**Odda**	**120.48**	**338**	*e*Pdif	**Pdif**	**03 05 29.2**	**-0.1**
ODD1				*e*PKPdf	**PKiKP**	**03 09 04.4**	**+0.1**
ODD1				*e*PP	**PP**	**03 10 31.3**	**-0.3**
ODD1				*e*SKSac	**SKSac**	**03 15 54.2**	**0.0**
ODD1				*i*		03 18 12.3	
ODD1				*e*SP	SP	03 20 13.1	+0.6
ODD1				*e*SS	**SS**	**03 26 55.8**	**+2.2**
BZS	**Buzias**	**120.52**	**319**	⇑P	**PKiKP**	**03 09 04.8**	**0.0**
BZS	**Buzias**	**120.52**	**319**	⇑PKIKP	**PKiKP**	**03 09 04.8**	**0.0**
THR8	**Santorini-Mono**	**120.52**	**308**	P	**PKPdf**	**03 09 03.4**	**-1.5**
THERA	**Ancient Thera,**	**120.53**	**308**	P	**PKPdf**	**03 09 03.5**	**-1.6**
THR2	**Thira island,**	**120.54**	**308**	P	**PKPdf**	**03 09 03.5**	**-1.5**
THR3	**Thira Island,**	**120.58**	**308**	P	**PKPdf**	**03 09 03.6**	**-1.5**
ASK	**Askoy**	**120.58**	**340**	*e*Pdif	**Pdif**	**03 05 29.2**	**-0.4**
ASK				*e*PKPdf	**PKiKP**	**03 09 04.4**	**0.0**
ASK				*e*SKSac	**SKSac**	**03 15 54.4**	**0.0**
ASK				*i*		03 18 12.8	
ASK				*e*SP	**SP**	**03 20 14.6**	**+1.3**
ASK				*e*SS	**SS**	**03 26 57.1**	**+2.5**
SNT5	**Nea Kammeni, S**	**120.58**	**308**	P	**PKPdf**	**03 09 03.6**	**-1.5**
THR6	**Thira Island,**	**120.59**	**308**	P	**PKPdf**	**03 09 03.6**	**-1.5**
BER	**Bergen**	**120.61**	**339**	*e*Pdif	**Pdif**	**03 05 29.5**	**-0.3**
BER				*e*PKPdf	**PKiKP**	**03 09 04.5**	**0.0**
BER				*e*SKSac	**SKSac**	**03 15 54.6**	**+0.2**
BER				*i*		03 18 14.5	
BER				*e*SP	**SP**	**03 20 15.1**	**+1.6**
BER				*e*SS	**SS**	**03 26 57.1**	**+2.1**
SAP3	**Santorini-Thir**	**120.61**	**308**	P	**PKPdf**	**03 09 03.6**	**-1.5**
THR5	**Thira Island,**	**120.62**	**308**	P	**PKPdf**	**03 09 03.6**	**-1.5**
OUR	**Ouranopolis**	**120.62**	**312**	P	**PKPdf**	**03 09 03.6**	**-1.4**
NPS	**Neapolis**	**120.67**	**306**	P	**PKPdf**	**03 09 03.7**	**-1.6**
SRS	**Serrai**	**120.67**	**313**	P	**PKPdf**	**03 09 03.7**	**-1.4**
PSZ	**Piszkesteto**	**120.70**	**322**	⇓P	**PKiKP**	**03 09 05.5**	**+0.3**
PSZ	**Piszkesteto**	**120.70**	**322**	⇓PKIKP	**PKiKP**	**03 09 05.5**	**+0.3**
COP	**Copenhagen**	**120.80**	**332**	*i* P	**PKiKP**	**03 09 05.8**	**+0.8**
AMBH	**Ambrzfalva**	**120.81**	**320**	⇓P	**PKiKP**	**03 09 06.2**	**+0.9**
HOMB	**Homborsund**	**120.87**	**336**	*e*Pdif	**Pdif**	**03 05 31.0**	**-0.1**
HOMB				*e*PKPdf	**PKiKP**	**03 09 05.5**	**+0.4**
HOMB				*e*PP	**PP**	**03 10 34.5**	**+0.3**
HOMB				*e*SKSac	**SKSac**	**03 15 55.5**	**0.0**
HOMB				*i*		03 18 12.3	
HOMB				*e*SP	**SP**	**03 20 16.7**	**+0.7**
HOMB				*e*SS	**SS**	**03 27 00.4**	**+1.8**
HOMB	**Homborsund**	**120.87**	**336**	*i* P	**PKiKP**	**03 09 05.2**	**+0.1**
BLS5	**Blasjo**	**120.88**	**338**	*e*Pdif	**Pdif**	**03 05 30.8**	**-0.3**
BLS5				*e*PKPdf	**PKiKP**	**03 09 05.0**	**-0.1**
BLS5				*e*PP	**PP**	**03 10 34.6**	**+0.3**
BLS5				*e*SKSac	**SKSac**	**03 15 55.4**	**-0.1**
BLS5				*i*		03 18 14.8	
BLS5				*e*SP	SP	03 20 16.9	+0.8
BLS5				*e*SS	**SS**	**03 27 00.9**	**+2.2**
OKC	**Ostrava-Krasne**	**120.90**	**324**	*e*P	**Pdif**	**03 05 32.9**	**+1.5**
OKC				*e*		03 09 06.6	
OKC	**Ostrava-Krasne**	**120.90**	**324**	*e*PDIFF	**Pdif**	**03 05 32.9**	**+1.5**
OKC				*e*PKP	**PKiKP**	**03 09 06.6**	**+1.2**
OKC				*e*SDIF	**Sdif**	**03 18 19.9**	**-0.4**
OKC				AMS	AMS	03 57 30.0	
	comp=Z,27µm,28.1s						
BANR	**Banloc**	**120.92**	**319**	⇑P	**PKiKP**	**03 09 06.0**	**+0.4**
KARY	**Karystos**	**120.92**	**310**	P	**PKPdf**	**03 09 04.2**	**-1.5**
SOH	**Sokhos**	**120.94**	**313**	P	**PKPdf**	**03 09 04.2**	**-1.5**
PAIG	**Paliouri**	**120.96**	**312**	P	**PKPdf**	**03 09 04.3**	**-1.4**
PLG	**Polygyros**	**121.00**	**313**	P	**PKPdf**	**03 09 04.4**	**-1.5**
KYMI	**Kymi, Euboea I**	**121.01**	**310**	P	**PKPdf**	**03 09 04.4**	**-1.5**
AOS	**Alonnisos**	**121.03**	**311**	P	**PKPdf**	**03 09 04.5**	**-1.4**
STEB	**Steborice**	**121.07**	**325**	*e*PKP	**PKiKP**	**03 09 06.0**	**+0.2**
LLD	**Lille Linde**	**121.11**	**332**	*i* P	**PKiKP**	**03 09 05.8**	**+0.2**
KNT	**Kendrikon**	**121.16**	**314**	P	**PKPdf**	**03 09 04.7**	**-1.4**
IDI	**Anoyia**	**121.24**	**307**	PKP	**PKiKP**	**03 09 06.9**	**+0.3**
	comp=Z,108nm,0.8s,baz=111,slow=7.7,SNR=33						
IDI	**Anoyia**	**121.24**	**307**	PKP	**PKPdf**	**03 09 06.1**	**-0.4**
IDI	**Anoyia**	**121.24**	**307**	P	**PKiKP**	**03 09 06.8**	**+0.2**
MORC	**Moravsky Berou**	**121.27**	**325**	⇑P	**PKiKP**	**03 09 06.6**	**+0.4**
MORC	**Moravsky Berou**	**121.27**	**325**	⇑PKIKP	**PKiKP**	**03 09 06.6**	**+0.4**
MORC	**Moravsky Berou**	**121.27**	**325**	*e*PDIFF	**Pdif**	**03 05 33.5**	**+0.4**
MORC	**Moravsky Berou**	**121.27**	**325**	*e*PKP	**PKiKP**	**03 09 06.4**	**+0.2**
MORC				*e*PP	**PP**	**03 10 40.7**	**+3.2**
MORC				*e*SDIFF	**Sdif**	**03 18 24.2**	**+0.6**
MORC				*e*SS	**SS**	**03 27 01.8**	**-2.8**
MORC				*e*		03 31 13.5	
THE	**Thessaloniki**	**121.28**	**313**	P	**PKPdf**	**03 09 05.0**	**-1.3**
MHLO	**Agia Marina, M**	**121.29**	**308**	P	**PKPdf**	**03 09 05.8**	**-0.7**
DION	**Dionisos Attik**	**121.29**	**310**	P	**PKPdf**	**03 09 05.0**	**-1.4**
MAUC	**Maruska**	**121.30**	**324**	*e*PDIFF	**Pdif**	**03 05 35.0**	**+1.8**
MAUC				*e*SDIF	**Sdif**	**03 18 28.0**	**+4.2**
VAY	**Valandovo**	**121.34**	**314**	*i* P	**PKPdf**	**03 09 05.1**	**-1.3**
PTL	**Penteli**	**121.35**	**310**	P	**PKPdf**	**03 09 05.3**	**-1.3**
SIVA	**Sivas**	**121.37**	**306**	P	**PKiKP**	**03 09 07.0**	**+0.3**
ATHU	**Athens Univers**	**121.43**	**310**	P	**PKPdf**	**03 09 05.1**	**-1.6**
VLY	**Voula,Athens**	**121.46**	**310**	P	**PKPdf**	**03 09 05.1**	**-1.6**
KSP	**Ksiaz**	**121.47**	**326**	*e*PKP	**PKPdf**	**03 09 03.4**	**-2.9**
KSP				*e*PP	**PP**	**03 10 38.7**	**0.0**
KSP				*e*SKS	**Sdif**	**03 18 26.5**	**+1.4**
KSP				*e*SS	**SS**	**03 27 11.3**	**+4.4**
KSP				*e*L	L	03 54 33.9	
	comp=Z,43µm,30.8s						
KMY	**Karmoy**	**121.47**	**338**	*e*Pdif	**Pdif**	**03 05 33.8**	**+0.1**
KMY				*e*PKPdf	**PKiKP**	**03 09 06.3**	**+0.1**
KMY				*e*PP	**PP**	**03 10 38.2**	**-0.1**
KMY				*e*SKSac	**SKSac**	**03 15 57.5**	**+0.1**
KMY				*i*		03 18 18.7	
KMY				*e*SP	SP	03 20 22.6	+1.3
KMY				*e*SS	**SS**	**03 27 07.1**	**+1.0**
NEO	**Neokhori**	**121.48**	**311**	P	**PKPdf**	**03 09 05.2**	**-1.6**
ATH	**Athens Observa**	**121.48**	**310**	P	**PKPdf**	**03 09 05.2**	**-1.6**
XOR	**Xorichti**	**121.49**	**312**	P	**PKPdf**	**03 09 05.2**	**-1.6**
STFN	**Stefani**	**121.56**	**310**	P	**PKPdf**	**03 09 05.3**	**-1.7**
KRLC	**Kraliky**	**121.56**	**325**	*e*P	**Pdif**	**03 05 35.3**	**+0.9**
KRLC				*e*		03 09 06.4	
KRLC				MLR	MLR		
	comp=Z,33µm,23.0s						
KRLC	**Kraliky**	**121.56**	**325**	*e*PDIFF	**Pdif**	**03 05 35.3**	**+0.9**
KRLC				*e*PKP	**PKPdf**	**03 09 06.4**	**-0.2**
KRLC				AMS	AMS	03 57 40.0	
	comp=Z,33µm,23.0s						
GRG	**Griva**	**121.58**	**314**	P	**PKPdf**	**03 09 06.2**	**-0.7**
MAGU	**Magoula**	**121.61**	**310**	P	**PKPdf**	**03 09 04.7**	**-2.3**
JAVC	**Velka Javorina**	**121.62**	**324**	*e*PDIFF	**Pdif**	**03 05 36.4**	**+1.7**
JAVC	**Velka Javorina**	**121.62**	**324**	*e*PKP	**PKiKP**	**03 09 07.9**	**+0.9**
JAVC				*e*PP	**PP**	**03 10 43.8**	**+3.9**
JAVC				*e*SDIFF	**Sdif**	**03 18 31.0**	**+4.4**
JAVC				*e*SS	SS	03 27 20.4	+11
JAVC				*e*		03 30 40.7	
OSTC	**Ostas**	**121.65**	**326**	*e*P	**Pdif**	**03 05 34.7**	**0.0**
OSTC				*e*		03 09 08.0	
OSTC				MLR	MLR		
	comp=Z,39µm,25.3s						
OSTC	**Ostas**	**121.65**	**326**	*e*PDIFF	**Pdif**	**03 05 34.7**	**0.0**
OSTC				*e*PKP	**PKiKP**	**03 09 08.0**	**+1.1**
OSTC				*e*SDIF	**Sdif**	**03 18 27.3**	**+0.6**
OSTC				AMS	AMS	03 57 50.0	
	comp=Z,39µm,25.3s						
DPC	**Dobruska-Polom**	**121.69**	**326**	*e*P	**Pdif**	**03 05 36.4**	**+1.4**
DPC				*e*		03 09 07.2	
DPC				MLR	MLR		
	comp=Z,37µm,24.0s						
DPC	**Dobruska-Polom**	**121.69**	**326**	*e*PDIFF	**Pdif**	**03 05 36.4**	**+1.4**
DPC				*e*PKP	**PKiKP**	**03 09 07.2**	**+0.2**
DPC				*e*SDIF	**Sdif**	**03 18 28.7**	**+1.6**
DPC				AMS	AMS	03 58 00.0	
	comp=Z,37µm,24.0s						
SRO	**Srobarova**	**121.70**	**322**	*e*P	**Pdif**	**03 05 35.6**	**+0.6**
SRO				*e*		03 09 07.3	
SRO	**Srobarova**	**121.70**	**322**	*e*PDIFF	**Pdif**	**03 05 35.6**	**+0.6**
SRO	**Srobarova**	**121.70**	**322**	*e*PKP	**PKiKP**	**03 09 07.3**	**+0.3**
CHVC	**Chvalec**	**121.72**	**326**	*e*P	**Pdif**	**03 05 36.9**	**+1.8**
CHVC	**Chvalec**	**121.72**	**326**	*e*PDIFF	**Pdif**	**03 05 36.9**	**+1.8**
CHVC				*e*SDIF	**Sdif**	**03 18 22.0**	**-5.3**
CHVC				AMS	AMS	03 57 40.0	
	comp=Z,40µm,29.1s						
VILL	**Villia**	**121.74**	**310**	P	**PKPdf**	**03 09 06.0**	**-1.3**
VAM	**Vamos**	**121.76**	**307**	P	**PKiKP**	**03 09 08.4**	**+0.8**
MUD	**Monsted U'grnd**	**121.78**	**334**	*i* P	**PKiKP**	**03 09 07.5**	**+0.6**
LIT	**Litokhoron**	**121.78**	**313**	P	**PKPdf**	**03 09 05.6**	**-1.8**
UPC	**Upice**	**121.79**	**326**	*e*P	**Pdif**	**03 05 37.2**	**+1.9**
UPC	**Upice**	**121.79**	**326**	*e*PDIFF	**Pdif**	**03 05 37.2**	**+1.9**
UPC				*e*PKP	**PKiKP**	**03 09 08.0**	**+0.8**
UPC				AMS	AMS	03 58 00.0	
	comp=Z,42µm,28.4s						
ATAL	**Atalanti**	**121.81**	**311**	P	**PKPdf**	**03 09 05.8**	**-1.6**
LKR	**Lokris**	**121.84**	**311**	P	**PKPdf**	**03 09 05.9**	**-1.5**
FRGS	**Fruska Gora**	**121.87**	**319**	*i* P	**PKPdf**	**03 09 06.1**	**-1.2**
IMMV	**Iera Moni Meta**	**121.92**	**307**	P	**PKPdf**	**03 09 07.7**	**0.0**
SMOL	**Smolenice**	**121.92**	**323**	*e*P	**Pdif**	**03 05 36.5**	**+0.5**
SMOL				*e*		03 09 07.9	
SMOL				*e*		03 10 44.0	
SMOL				*e*SS	SS	03 27 12.2	-0.7
RUE	**Ruedersdorf**	**121.96**	**329**	*e*PKPdf	**PKiKP**	**03 09 07.6**	**+0.2**
	baz=56,slow=2.0						
KTI	**Kastanea**	**121.96**	**313**	P	**PKPdf**	**03 09 07.5**	**-0.3**
GVD	**Gavdhos**	**121.98**	**306**	P	**PKPdf**	**03 09 07.6**	**-0.3**
LTK	**Loutraki**	**122.04**	**310**	P	**PKPdf**	**03 09 06.1**	**-1.7**
VRAC	**Vranov**	**122.04**	**324**	PKP	**PKiKP**	**03 09 07.8**	**+0.1**
	comp=Z,79nm,1.2s,baz=78,slow=1.8,SNR=28						
VRAC				PKKPbc	**PKKPab**	**03 19 05.4**	**+0.2**
	comp=Z,9.4nm,0.8s,baz=253,slow=4.1,SNR=6.8						
VRAC	**Vranov**	**122.04**	**324**	⇑P	**PKiKP**	**03 09 08.0**	**+0.3**
VRAC	**Vranov**	**122.04**	**324**	⇑PKIKP	**PKiKP**	**03 09 08.0**	**+0.3**
VRAC	**Vranov**	**122.04**	**324**	*e*PDIFF	**Pdif**	**03 05 37.3**	**+0.8**
VRAC	**Vranov**	**122.04**	**324**	*e*PKP	**PKiKP**	**03 09 07.6**	**-0.1**
VRAC				*e*PP	**PP**	**03 10 45.3**	**+2.7**
VRAC				*e*SDIFF	**Sdif**	**03 18 29.5**	**-0.5**
VRAC				*e*SS	**SS**	**03 27 22.7**	**+8.4**
VRAC				*e*		03 31 02.6	
MODS	**Modra-Piesok**	**122.08**	**323**	*e*P	**Pdif**	**03 05 37.9**	**+1.2**
MODS				*e*		03 09 08.2	
MODS				*e*		03 10 46.6	
MODS				*e*SS	SS	03 27 17.6	+2.7
MODS	**Modra-Piesok**	**122.08**	**323**	*e*PDIFF	**Pdif**	**03 05 37.9**	**+1.2**
MODS	**Modra-Piesok**	**122.08**	**323**	*e*PKP	**PKiKP**	**03 09 08.2**	**+0.4**
MODS				*e*PP	**PP**	**03 10 46.6**	**+3.7**
MODS				*e*SDIFF	**Sdif**	**03 18 26.6**	**-3.7**
MODS				*e*SS	**SS**	**03 27 17.6**	**+2.7**
TYRN	**Tyrnavos**	**122.09**	**312**	P	**PKPdf**	**03 09 06.2**	**-1.7**
NUUK	**Nuuk**	**122.17**	**10**	*i* P	**PKiKP**	**03 09 07.4**	**0.0**
MORH	**Mrgy, Hungar**	**122.19**	**320**	⇑P	**PKPdf**	**03 09 07.9**	**0.0**
MORH	**Mrgy, Hungar**	**122.19**	**320**	⇑P	**PKPdf**	**03 09 07.1**	**-0.8**
SSRD	**Sdr. Stenderup**	**122.19**	**333**	*i* P	**PKiKP**	**03 09 08.0**	**+0.2**
AGG	**Agios Georgios**	**122.23**	**311**	P	**PKPdf**	**03 09 07.0**	**-1.2**
KZN	**Kozani**	**122.24**	**313**	P	**PKPdf**	**03 09 07.1**	**-1.2**
KNDR	**Palaiochora Ch**	**122.26**	**307**	P	**PKPdf**	**03 09 08.2**	**-0.1**
KRUC	**Moravsky**	**122.27**	**324**	*e*PDIFF	**Pdif**	**03 05 38.3**	**+0.8**
KRUC	**Moravsky**	**122.27**	**324**	*e*PKP	**PKiKP**	**03 09 08.1**	**0.0**
KRUC				*e*PP	**PP**	**03 10 46.8**	**+2.6**
KRUC				*e*SDIFF	**Sdif**	**03 18 32.7**	**+0.8**
KRUC				*e*SS	**SS**	**03 27 22.7**	**+5.5**
KRUC				*e*		03 30 46.1	
THL	**Klokotos Trika**	**122.30**	**312**	P	**PKPdf**	**03 09 06.9**	**-1.4**
ANGG	**Ammassalik, Gr**	**122.30**	**3**	*i* P	**PKPdf**	**03 09 06.5**	**-1.0**
ANKY	**Antikythira Is**	**122.36**	**308**	P	**PKiKP**	**03 09 08.8**	**+0.1**
VLI	**Veliai**	**122.42**	**309**	P	**PKPdf**	**03 09 08.0**	**-0.6**
KTHA	**Kythira Island**	**122.44**	**308**	P	**PKiKP**	**03 09 08.9**	**0.0**
SJES	**Sjenica**	**122.48**	**317**	⇑P	**PKPdf**	**03 09 07.7**	**-1.0**
KALE	**Kalithea**	**122.56**	**311**	P	**PKPdf**	**03 09 08.3**	**-0.7**
SERG	**Sergoula**	**122.61**	**311**	P	**PKPdf**	**03 09 08.4**	**-0.6**
BBLS	**Lazi&#263i**	**122.64**	**318**	⇑P	**PKPdf**	**03 09 08.7**	**-0.2**
EVR	**Evrytania**	**122.65**	**311**	P	**PKPdf**	**03 09 08.4**	**-0.7**
KLV	**Kalavryta, Ach**	**122.65**	**310**	P	**PKPdf**	**03 09 08.4**	**-0.7**
ANX	**Ano Chora**	**122.66**	**311**	P	**PKiKP**	**03 09 09.4**	**+0.1**
VLX	**Vlachokerasia**	**122.67**	**309**	P	**PKPdf**	**03 09 08.8**	**-0.4**
OHR	**Ohrid**	**122.67**	**314**	*i* P	**PKPdf**	**03 09 09.1**	**0.0**
EFP	**Efpalio**	**122.72**	**311**	P	**PKiKP**	**03 09 09.4**	**+0.1**
PHP	**Peshkopia**	**122.73**	**315**	P	**PKPdf**	**03 09 08.3**	**-0.8**
BRG	**Berggiessh

RTZL **Ratzakli, Kefa** 123.68 311 P PKPdf 03 09 10.4 -0.5
NEUB **Neuenburg** 123.70 328 *e*PKPdf PKiKP 03 09 10.9 0.0
baz=56,slow=2.0
FSK **Fiskardo** 123.72 311 P PKPdf 03 09 10.5 -0.5
ASSE **Asse, Remlinge** 123.73 330 *e*PKPdf PKiKP 03 09 11.0 +0.2
baz=56,slow=2.0
BLY **Banja Luka** 123.73 319 ⇑P PKiKP 03 09 12.1 +0.9
BLY **Banja Luka** 123.73 319 ⇑*i*P PKPdf 03 09 10.8 -0.1
LTHK **Lithakia** 123.74 310 P PKPdf 03 09 10.6 -0.5
TANN **Tannenbergstha** 123.77 327 *e*PKPdf PKiKP 03 09 11.1 -0.1
baz=56,slow=2.0
TREB **Trebinje** 123.79 317 *e*P PKPdf 03 09 10.2 -0.9
HLG **Helgoland** 123.80 333 *e*PKPdf PKiKP 03 09 11.5 +0.5
baz=56,slow=2.0
HCY **Herceg Novi** 123.80 316 *e*P PKPdf 03 09 10.2 -0.9
ORTH **Orthonies,Zaky** 123.81 311 P PKPdf 03 09 10.7 -0.6
KHC **Kasperske Hory** 123.84 325 *e*P Pdif 03 05 45.7 +1.1
KHC *e* 03 09 11.0
KHC **Kasperske Hory** 123.84 325 *e*PDIFF Pdif 03 05 45.7 +1.1
KHC *e*PKP PKPdf 03 09 11.0 0.0
KHC *e*PP PP 03 10 49.4 -5.4
KHC *e*SDIF Sdif 03 18 46.2 +1.1
KHC AMS AMS 03 58 10.0
comp=Z,45µm,28.6s
NKC **Novy Kostel** 123.88 327 *e*P Pdif 03 05 45.9 +1.2
NKC *e* 03 09 11.3
NKC MLR MLR
comp=Z,28µm,22.1s
NKC **Novy Kostel** 123.88 327 *e*PDIFF Pdif 03 05 45.9 +1.2
NKC *e*PKP PKiKP 03 09 11.3 0.0
NKC AMS AMS 04 04 10.0
comp=Z,28µm,22.1s
PLN **Plauen** 123.90 327 *e*PKPdf PKiKP 03 09 11.3 0.0
baz=56,slow=2.0
GEC2 **GERESS Array S** 123.92 325 *e*PKPdf PKPdf 03 09 11.4 +0.1
baz=56,slow=2.0
GEC2 *e*L L 04 03 50.8
comp=Z,14µm,21.9s
GERES **GERESS Array B** 123.92 325 PKP PKPdf 03 09 11.1 -0.2
comp=Z,10.0nm,0.7s,baz=116,slow=3.1,SNR=4.1
GERES PKKPbc PKKPbc 03 18 59.5 +0.2
comp=Z,12nm,1.1s,baz=217,slow=3.0,SNR=14
TSUM **Tsumeb** 123.97 241 *i*P PKiKP 03 09 13.1 +0.5
TSUM **Tsumeb** 123.97 241 *e*P PKiKP 03 09 13.3 +0.8
TSUM **Tsumeb** 123.97 241 P PKiKP 03 09 13.2 +0.6
TSUM PP PP 03 10 52.1 -4.6
TSUM x SP 03 20 40.3 -5.8
RETH **Rethem/Aller,** 124.01 331 *e*PKPdf PKiKP 03 09 11.7 +0.3
baz=56,slow=2.0
CLZ **Clausthal** 124.05 330 *e*PKPdf PKiKP 03 09 12.0 +0.4
baz=56,slow=2.0
MOX **Moxa** 124.10 328 *e*PKPdf PKPdf 03 09 11.5 +0.1
baz=56,slow=2.0
MOX *e*L L 04 08 57.8
comp=Z,25µm,20.2s
MOA **Molln** 124.10 324 *i* PKP PKPdf 03 09 11.1 -0.4
comp=Z,62nm,1.4s,SNR=20
MOA *i* PKKP PKKPbc 03 18 58.2 -0.2
comp=Z,25nm,1.1s
MOA *e*SKKP SKKPbc 03 22 40.1 -1.7
comp=Z,35nm,1.3s
SOKA **Soboth** 124.21 322 *i* PKP PKPdf 03 09 11.5 -0.4
comp=Z,184nm,1.1s,SNR=57
SOKA *i* PKKP PKKPbc 03 18 58.4 +0.4
comp=Z,16nm,1.0s,SNR=5.5
SOKA *e*SKKP SKKPbc 03 22 40.1 -1.3
comp=Z,14nm,1.2s
WET **Wettzell** 124.23 326 *e*PKPdf PKiKP 03 09 12.2 +0.1
baz=56,slow=2.0
WET *e*L L 04 04 34.4
comp=Z,25µm,21.3s
ROTZ **Rotzenmuhle** 124.26 327 *e*PKPdf PKiKP 03 09 11.9 -0.1
baz=56,slow=2.0
SESA **Seetaler Alpe,** 124.28 323 *i* PKP PKPdf 03 09 11.6 -0.5
SNR=44
GTTG **Gottingen** 124.43 329 *e*PKPdf PKiKP 03 09 12.5 +0.1
baz=56,slow=2.0
BIOA **Bad Ischl, Aus** 124.55 324 *i* PKP PKPdf 03 09 11.7 -0.8
comp=Z,146nm,1.6s,SNR=34
BIOA *e*PKKP PKKPbc 03 18 56.9 +0.2
comp=Z,12nm,1.2s
BIOA *e*SKKP SKKPbc 03 22 38.7 -1.6
comp=Z,20nm,1.2s
OBKA **Obir** 124.59 322 *i* PKP PKPdf 03 09 12.1 -0.5
comp=Z,118nm,1.2s,SNR=34
OBKA *i* PKKP PKKPbc 03 18 57.5 +1.0
comp=Z,33nm,1.1s,SNR=9.4
OBKA *e*SKKP SKKPbc 03 22 39.3 -0.9
comp=Z,28nm,1.6s
LJU **Ljubljana** 124.82 322 *e*Pdiff Pdif 03 05 48.8 -0.1
LJU *e*PKPdf PKPdf 03 09 13.1 +0.1
LJU *e*pPKPdf pPKPdf 03 09 36.2 -0.7
LJU *e* 03 10 54.4
LJU *e*PP PP 03 11 03.0 +1.6
LJU *e* 03 13 47.5
LJU *e*Sdiff Sdif 03 18 52.9 -0.4
LJU *e*PKKPab PKKPbc 03 18 56.2 +0.7
LJU *e* 03 26 48.5
LJU *e*SS SS 03 27 38.7 -11
UBBA **Unterbreizbach** 124.84 329 *e*PKPdf PKiKP 03 09 13.0 -0.1
baz=56,slow=2.0
GRF **Grafenberg Arr** 124.84 327 *e*PKPdf PKiKP 03 09 13.2 0.0
baz=56,slow=2.0
GRF *e*L L 04 05 23.8
comp=Z,20µm,21.3s
RJOB **Jochberg** 125.01 324 *e*PKPdf PKPdf 03 09 13.1 -0.3
baz=56,slow=2.0
KBA **Koelnbreinsper** 125.03 323 *i* PKP PKPdf 03 09 12.5 -1.1
comp=Z,101nm,1.2s,SNR=27
KBA *i* PKKP PKKPbc 03 18 55.0 +0.1
comp=Z,34nm,1.4s
KBA *e*SKKP SKKPbc 03 22 37.1 -1.7
comp=Z,14nm,1.0s
CEY **Cerknica** 125.03 322 *i* Pdiff Pdif 03 05 50.5 +0.7
CEY *i* PKPdf PKPdf 03 09 13.3 -0.1
CEY *i* pPKPdf pPKPdf 03 09 36.1 -1.1
CEY *i* 03 11 03.3
CEY *e*PP PP 03 11 06.1 +3.3
CEY *e*Sdiff Sdif 03 18 56.9 +1.8
IBBN **Ibbenburen** 125.05 331 *e*PKPdf PKiKP 03 09 13.7 +0.2
baz=56,slow=2.0
MYKA **Terra Mystica** 125.07 323 *i* PKP PKPdf 03 09 12.7 -0.8
comp=Z,52nm,0.9s,SNR=21
MYKA *e*PKKP PKKPbc 03 18 55.3 +0.7
comp=Z,24nm,0.9s
MYKA *e*SKKP 03 22 29.4
comp=Z,28nm,1.6s
LESA **Schwarzleotal** 125.24 324 *i* PKP PKPdf 03 09 13.2 -0.6
comp=Z,200nm,0.9s,SNR=41
LESA *i* PKKP PKKPbc 03 18 54.7 +0.7
comp=Z,17nm,0.9s,SNR=4.7
KASTN **Kahler Asten** 125.41 330 *e*PKPdf PKiKP 03 09 14.5 +0.2
baz=56,slow=2.0
IVI **Ivigtut** 125.55 9 *i* P PKPdf 03 09 13.4 -0.4
MCD **Coleburn Disti** 125.62 341 *e*P PKPdf 03 09 13.1 -1.0
MCD IAMs_20 IAMs_20 04 08 52.4
comp=Z,28µm,20.4s
FUR **Furstenfeldbru** 125.65 325 *e*PKPdf PKiKP 03 09 14.8 -0.1
baz=56,slow=2.0
FUR *e*L L 04 06 01.6
comp=Z,22µm,22.0s
ABTA **Abfaltersbach** 125.69 323 *i* PKP PKPdf 03 09 14.0 -0.7
comp=Z,166nm,1.1s,SNR=53
ABTA *i* Sdiff Sdif 03 18 52.6 -8.1
comp=Z,20nm,1.1s
ABTA *e*SKKP SKKPbc 03 22 33.6 -2.8
comp=Z,11nm,0.8s
SCHQ **Schefferville** 125.73 24 PKP PKPdf 03 09 13.9 -0.6
comp=Z,46nm,1.0s,baz=13,slow=3.8,SNR=20
SCHQ PP PP 03 11 01.0 -6.0
comp=Z,30nm,0.9s,baz=316,slow=9.1,SNR=4.6
SCHQ PKKPbc PKKPbc 03 18 52.3 0.0
comp=Z,10.0nm,0.7s,baz=86,slow=2.1,SNR=8.6
MATE **Matera** 125.73 315 ⇓P PKiKP 03 09 15.3 +0.1
LINV **Loch Inver, As** 125.75 343 *e*P PKPdf 03 09 13.6 -0.7
LINV IAMs_20 IAMs_20 04 01 07.0
comp=Z,32µm,26.8s
BUG **Bochum--Univer** 125.83 331 *e*PKPdf PKiKP 03 09 15.1 0.0
baz=56,slow=2.0
DRUM **Mains of Drumt** 125.91 340 *e*P PKPdf 03 09 12.4 -2.3
DRUM IAMs_20 IAMs_20 03 57 52.8
comp=Z,33µm,29.9s
WATA **Walderalm** 125.92 324 *i* PKP PKPdf 03 09 14.9 -0.3
comp=Z,334nm,1.3s,SNR=58
WATA *e*Sdiff Sdif 03 18 52.6 -10
comp=Z,21nm,1.5s
WATA *e*SKKP SKKPbc 03 22 35.9 +0.2
comp=Z,51nm,1.3s
WTTA **Wattenberg** 125.93 324 *i* PKP PKPdf 03 09 15.1 -0.2
comp=Z,568nm,1.3s,SNR=66
WTTA *e*Sdiff Sdif 03 18 52.9 -10
comp=Z,21nm,1.0s
WTTA *e*SKKP SKKPbc 03 22 37.6 +1.8
comp=Z,53nm,1.6s
TNS **Taunus Mts** 125.99 329 *e*PKPdf PKiKP 03 09 15.6 0.0
baz=56,slow=2.0
TNS *e*L L 04 07 00.3
comp=Z,22µm,21.2s
NRS **Narsarsuaq** 126.00 8 *i* P PKPdf 03 09 14.0 -0.7
MOTA **Moosalm** 126.19 325 *i* PKP PKPdf 03 09 15.4 -0.3
comp=Z,279nm,0.9s,SNR=44
MOTA *e*Sdiff Sdif 03 18 51.7 -13
comp=Z,10nm,0.9s
MOTA *e*SKKP SKKPbc 03 22 33.2 -1.7
comp=Z,42nm,2.2s
SQTA **Sankt Quirin** 126.20 324 *i* PKP PKPdf 03 09 15.6 -0.1
comp=Z,173nm,1.0s,SNR=48
SQTA *e*Sdiff Sdif 03 18 51.0 -14
comp=Z,9.5nm,0.7s
SQTA *i* SKKP SKKPbc 03 22 34.6 -0.2
comp=Z,40nm,1.7s
TIP **Timpagrande** 126.26 313 ⇑P PKiKP 03 09 16.6 +0.1
RETA **Reutte** 126.31 325 *i* PKP PKPdf 03 09 15.6 -0.3
comp=Z,137nm,1.4s,SNR=34
RETA *e*Sdiff Sdif 03 18 58.4 -7.4
comp=Z,16nm,1.2s
RETA *e*SKKP SKKPbc 03 22 29.9 -4.4
comp=Z,28nm,1.4s
STU **Stuttgart** 126.45 327 *e*PKPdf PKiKP 03 09 16.4 -0.1
baz=56,slow=2.0
TRQA **Tornquist** 126.49 151 PKP PKPdf 03 09 15.9 -0.6
KPL **Plockton** 126.56 342 *e*P PKPdf 03 09 15.3 -0.6
KPL IAMs_20 IAMs_20 04 01 42.2
comp=Z,24µm,21.1s
FETA **Feichten** 126.58 324 *i* PKP PKPdf 03 09 16.7 +0.2
comp=Z,162nm,1.1s,SNR=30
FETA *e*Sdiff Sdif 03 19 01.2 -7.1
comp=Z,9.8nm,0.9s
FETA *e*SKKP SKKPbc 03 22 33.8 +0.3
comp=Z,28nm,1.3s
MGAN **Managua** 126.74 81 PKP PKPdf 03 09 17.3 -0.2
comp=Z,11µmcomp=Z,241nm,0.9s
INVG **Invergeldie, C** 126.81 341 *e*P PKPdf 03 09 16.3 -0.1
INVG IAMs_20 IAMs_20 03 52 14.6
comp=Z,26µm,35.4s
DAVA **Damuels** 126.92 325 *i* PKP PKPdf 03 09 17.3 +0.1
comp=Z,249nm,1.0s,SNR=35
DAVA *e*Sdiff Sdif 03 19 07.2 -3.9
comp=Z,17nm,1.1s
DAVA *e*SKKP SKKPbc 03 22 26.1 -6.3
comp=Z,47nm,1.4s
EDI **Edinburgh** 126.93 340 *e*P PKPdf 03 09 16.2 -0.5
EDI IAMs_20 IAMs_20 03 58 22.3
comp=Z,37µm,27.7s
MEM **Membach** 126.97 330 *d*PKPdf PKPdf 03 09 16.8 -0.1
MEM *d*PP PP 03 11 14.6 -0.8
BEBN **Eben Emael** 127.01 331 *d*PKPdf PKPdf 03 09 16.5 -0.4
BEBN *dp*PKPdf pPKPdf 03 09 39.0 -1.9
EAB **Aberfoyle** 127.10 341 *e*P PKPdf 03 09 16.3 -0.7
BHOU **Houvegnez** 127.14 330 *d*PKPdf PKiKP 03 09 17.9 +0.1
BHOU *dp*PKP pPKPdf 03 09 40.4 -0.7
BFO **Black Forest** 127.18 327 *e*PKPdf PKPdf 03 09 17.4 -0.1
baz=56,slow=2.0
BFO *e*L L 04 09 31.3
comp=Z,19µm,20.0s
DAVOX **Davos/Dischmat** 127.20 325 PKhKP PKPpre 03 09 07.5
comp=Z,5.8nm,0.6s,baz=70,slow=5.7,SNR=4.7
DAVOX PKP PKiKP 03 09 17.1 -0.6
comp=Z,141nm,0.8s,baz=140,slow=1.2,SNR=50
BSTI **Sart Tilman** 127.20 331 *d*PKPdf PKiKP 03 09 17.8 -0.1
GDLE **Glaisdale, N Y** 127.26 337 *e*P PKPdf 03 09 16.8 -0.6
AQU **L'Aquila** 127.26 318 PKP PKPdf 03 09 16.8 -1.0
AQU **L'Aquila** 127.26 318 ⇑*i*P PKPdf 03 09 17.2 -0.6
EDMD **Edmundbyers** 127.37 338 *e*P PKPdf 03 09 17.3 -0.2
EDMD IAMs_20 IAMs_20 04 02 37.7
comp=Z,21µm,21.4s
LAWE **Loch Awe, Argy** 127.38 342 *e*P PKPdf 03 09 15.7 -1.8
LAWE IAMs_20 IAMs_20 03 58 44.7
comp=Z,20µm,25.5s
EKA **Eskdalemuir Ar** 127.39 340 PKhKP PKPpre 03 09 05.2
comp=Z,1.6nm,0.5s,baz=28,slow=2.0,SNR=9.7
EKA PKP PKPdf 03 09 16.9 -0.6
comp=Z,68nm,0.8s,baz=21,slow=2.4,SNR=17
EKA PKKPbc PKKPbc 03 18 44.9
comp=Z,2.1nm,0.7s,baz=228,slow=2.8,SNR=4.5
EKA **Eskdalemuir Ar** 127.39 340 PKiKP PKPdf 03 09 17.0 -0.6
ESK **Eskdalemuir** 127.42 340 *e*P PKPdf 03 09 17.1 -0.5
ESK IAMs_20 IAMs_20 04 00 36.9
comp=Z,25µm,24.8s
BCLA **Clavier** 127.44 331 *d*PKPdf PKPdf 03 09 16.3 -1.5
BCLA *d*PP PP 03 11 15.8 -2.7
WLF **Walferdange** 127.50 329 PKP PKiKP 03 09 18.3 -0.2
WLF **Walferdange** 127.50 329 *d*PKP PKiKP 03 09 18.6 +0.1
WLF *dp*PKP pPKPdf 03 09 41.3 -0.5
WLF *d*PP PP 03 11 18.8 -0.1
WLF **Walferdange** 127.50 329 *e*PKPdf PKiKP 03 09 18.9 +0.4
baz=56,slow=2.0
BGES **Gesves** 127.57 331 *d*PKPdf PKPdf 03 09 17.3 -0.8
BGES *dp*PKPdf pPKPdf 03 09 40.5 -1.5
UCC **Uccle** 127.64 331 *d*PKPdf PKPdf 03 09 18.3 +0.2
UCC *dp*PKP pPKPdf 03 09 40.9 -1.1
RCHB **Rochefort** 127.65 330 *d*PKPdf PKPdf 03 09 18.3 +0.1
CFA **Coronel Fontan** 127.75 141 PKP PKPdf 03 09 18.6 -0.5
comp=Z,62nm,0.6s,baz=243,slow=2.2,SNR=84
BMRD **Maredsous** 127.78 331 *d*PKPdf PKiKP 03 09 18.9 -0.2
BMRD *dp*PKP pPKPdf 03 09 41.4 -0.9
BMRD *d*PP PP 03 11 20.6 -0.1
LMK **Market Rasen** 127.80 336 *e*P PKPdf 03 09 18.1 -0.3
LMK IAMs_20 IAMs_20 04 04 57.5
comp=Z,25µm,23.4s
HPK **Haverah Park** 127.92 338 *e*P PKPdf 03 09 18.1 -0.5
NEWG **New Galloway** 127.94 340 *e*P PKPdf 03 09 17.9 -0.7
NEWG IAMs_20 IAMs_20 03 58 49.1
comp=Z,29µm,28.5s
WACR **West Acre** 127.95 335 *e*P PKiKP 03 09 19.4 +0.2
WACR IAMs_20 IAMs_20 03 57 34.0
comp=Z,31µm,27.1s
KESW **Keswick, Cumbr** 127.97 339 *e*P PKPdf 03 09 18.6 -0.1
KESW IAMs_20 IAMs_20 03 59 12.5
comp=Z,28µm,24.9s
DOU **Dourbes** 128.00 331 *d*PKPdf PKiKP 03 09 19.4 0.0
DOU *d*PP PP 03 11 20.1 -2.0
ELMS **Elmsett, Ipswi** 128.26 334 *e*P PKPdf 03 09 19.5 +0.2
ELMS IAMs_20 IAMs_20 03 57 29.3
comp=Z,41µm,29.7s
GAL1 **Galloway** 128.30 340 *e*P PKPdf 03 09 18.9 -0.4
GAL1 IAMs_20 IAMs_20 03 53 19.2
comp=Z,38µm,43.1s
LBWR **Ladybower, Pea** 128.38 337 *e*P PKPdf 03 09 19.0 -0.5
CLGH **Cloghs, Cushen** 128.59 341 *e*P PKPdf 03 09 19.6 -0.3
CLGH IAMs_20 IAMs_20 04 01 35.0
comp=Z,26µm,24.0s
VAE **Valguarnera** 128.61 312 PKP PKiKP 03 09 21.9 +0.7
comp=Z,43nm,1.0s,baz=0.0,slow=5.1,SNR=6.4
CWF **Charnwood Fore** 128.73 336 *e*P PKPdf 03 09 19.6 -0.6
IOMK **Kirk Michael** 128.74 340 *e*P PKPdf 03 09 19.8 -0.4
IOMK IAMs_20 IAMs_20 03 58 45.3
comp=Z,14µm,31.0s
HDC **Heredia** 128.78 84 *e*P PKPpre 03 09 17.3
STNC **Stoke** 128.81 337 *e*P PKPdf 03 09 20.3 0.0
STNC IAMs_20 IAMs_20 03 54 56.3
comp=Z,20µm,30.1s
ELSH **Elham, Standar** 128.88 334 *e*P PKPdf 03 09 20.3 -0.2
ELSH IAMs_20 IAMs_20 04 00 02.4
comp=Z,34µm,22.8s
IDGL **Inch Island, C** 129.03 342 PKPdf PKPdf 03 09 20.9 +0.2
IDGL PKP PKiKP 03 09 21.7 +0.3
SOR **Soroa** 129.14 67 *e*P PKPdf 03 09 22.0 +0.2
FOEL **Foel Wylfa** 129.34 338 *e*P PKPdf 03 09 20.0 -1.4
FOEL IAMs_20 IAMs_20 04 06 44.7
comp=Z,29µm,23.8s
HMNX **Herstmonceux** 129.43 334 *e*P PKiKP 03 09 22.0 -0.3
HMNX IAMs_20 IAMs_20 03 58 02.5
comp=Z,50µm,35.9s
WLF1 **Llynfaes** 129.47 339 *e*P PKPdf 03 09 20.7 -0.8
WLF1 IAMs_20 IAMs_20 04 06 05.7
comp=Z,55µm,23.1s
HLM1 **Long Mynd** 129.51 337 *e*P PKPdf 03 09 21.2 -0.5
DWPF **Disney Wildern** 129.52 60 *e*P PKPdf 03 09 22.3 -0.1
ILTH **Belurgan, Co L** 129.53 340 PKPdf PKPdf 03 09 21.9 +0.3
ILTH PKP PKiKP 03 09 22.1 -0.3
ILTH **Belurgan, Co L** 129.53 340 *e*P PKPdf 03 09 21.0 -0.7
STRD **Stroud** 129.80 336 *e*P PKPdf 03 09 22.4 +0.2
SWN1 **Swindon** 129.85 336 *e*P PKPdf 03 09 22.4 0.0
MCH1 **Michaelchurch** 129.96 337 *e*P PKPdf 03 09 22.2 -0.3
MONM **Monmouth** 130.01 337 *e*P PKPdf 03 09 22.2 -0.4
DSB **Dublin** 130.20 340 PKP PKPdf 03 09 22.2 -0.7
DSB **Dublin** 130.20 340 PKP PKiKP 03 09 23.8 0.0
DSB PKPdf 03 09 23.1 +0.1
CAMR **Camarioca** 130.59 66 *e*P PKPdf 03 09 23.6 -1.0
RSBS **Rosebush, Pemb** 130.66 338 *e*P PKPdf 03 09 23.4 -0.5
PB14 **IPOC Station P** 130.69 132 PKP PKPdf 03 09 25.4 +0.1
IGLA **Glengowla, Co** 131.02 342 PKP PKPdf 03 09 25.8 +1.3
IGLA PKPdf PKiKP 03 09 25.1 -0.3
IWEX **Carrickbyrne,** 131.05 340 PKP PKPdf 03 09 25.4 -0.1
IWEX PKPdf PKPdf 03 09 25.0 +0.4
FSCY **Frank Sound, G** 131.28 71 *e*P PKPdf 03 09 24.6 -1.4
GMAL **Guarumal, Vera** 131.50 87 PKP PKiKP 03 09 27.3 -0.3
comp=Z,3µmcomp=Z,196nm,1.6s
DYA **Yadsworthy** 131.55 336 *e*P PKPdf 03 09 23.9 -1.8
JSA **Saint Aubin** 131.76 334 *e*P PKPdf 03 09 24.6 -1.5
JSA IAMs_20 IAMs_20 03 59 25.0
comp=Z,37µm,32.2s
MGV **Manicaragua** 132.01 67 *e*P PKPdf 03 09 27.4 +0.1
CCA1 **Carnmenellis** 132.26 337 *e*P PKPdf 03 09 27.1 +0.2
CCA1 IAMs_20 IAMs_20 04 01 36.1
comp=Z,24µm,28.8s
M65A **Busby, Falmout** 132.33 39 PKPdf PKPdf 03 09 26.9 -0.5
baz=304
PNME **Penonome** 132.44 86 PKP PKPdf 03 09 28.8 +0.4
AZU **Azuero** 132.46 87 PKP PKPdf 03 09 28.8 +0.4
comp=Z,3µmcomp=Z,116nm,1.3s
VAL **Valentia** 132.56 342 PKP PKiKP 03 09 28.5 -0.1
VAL **Valentia** 132.56 342 PKP PKPdf 03 09 29.9 +2.4
VAL PKPdf PKiKP 03 09 29.1 +0.5
BCIP **Isla Barro Col** 132.96 85 PKP PKiKP 03 09 30.0 -0.5
comp=Z,5µmcomp=Z,194nm,1.7s
KEST **Kesra** 133.04 312 PKhKP PKPpre 03 09 17.9
comp=Z,4.5nm,0.7s,baz=38,slow=3.2,SNR=7.1
KEST PKP PKiKP 03 09 30.1 -0.1
comp=Z,74nm,0.9s,baz=317,slow=2.1,SNR=6.8
KEST PP PP 03 11 57.3 +1.7
comp=Z,154nm,1.2s,baz=20,slow=3.9,SNR=10
KEST **Kesra** 133.04 312 P PKiKP 03 09 30.1 -0.1
SNR=13
OTAV **Otavalo** 133.33 97 PKP PKPdf 03 09 29.8 -0.8
OTAV **Otavalo** 133.33 97 *e*P PKPpre 03 09 25.8
EJON **La Jonquera** 133.78 324 PKP PKPdf 03 09 30.8 +0.6
CMAH **Djebel Manchou** 134.02 314 P PKiKP 03 09 33.1 +0.9
CCCC **Cccc** 134.20 68 *e*P PKPdf 03 09 30.7 -0.8
PB08 **IPOC Station P** 134.21 128 PKP PKiKP 03 09 33.3 -0.1
CAEH **'Ain El Ouahch** 134.35 315 P PKiKP 03 09 33.3 +0.6
MAHO **Mahon** 134.44 320 PKP PKPdf 03 09 30.8 -0.6
CKFL **Kef-Lekhel** 134.62 315 P PKPdf 03 09 31.3 -0.7
MTDJ **Mount Denham** 134.84 72 *e*P PKPdf 03 09 33.2 +0.3
CASM **Ain Smara** 134.85 314 P PKiKP 03 09 34.5 +0.7
CTEI **Djebel Teioual** 135.01 314 P PKiKP 03 09 35.7 +1.4
DFRA **Djebel Bou Afi** 135.15 315 P PKiKP 03 09 36.5 +2.0
ETOS **Mallorca** 135.43 321 PKP PKPdf 03 09 33.3 0.0
JAMC **Jamundi, Valle** 135.56 94 PKP PKPpre 03 09 26.7
comp=Z,4µmcomp=Z,141nm,2.0s
CHIV **Chivirico** 135.65 70 *e*P PKPpre 03 09 28.9
HLGC **Holguin** 135.82 68 *e*P PKPpre 03 09 27.1
CKTS **El Kantara** 135.92 314 P PKPpre 03 09 22.7
PLMC **San Jos del P** 136.16 91 PKP PKPpre 03 09 29.4
comp=Z,3µmcomp=Z,97nm,1.1s
RCC **Rio Carpintero** 136.31 69 *e*P PKPdf 03 09 34.5 -1.0
FLOC **Florencia** 136.32 96 PKP PKPpre 03 09 24.6
comp=Z,3µmcomp=Z,138nm,1.1s
CZSB **Cruzeiro do Su** 136.77 110 PKP PKPpre 03 09 25.6
comp=Z,24µmcomp=Z,6µmcomp=Z,247nm,1.1s
GTBY **Guantanamo Bay** 136.86 69 *e*P PKPpre 03 09 28.4
NMDO **Nuevo Mundo** 136.87 68 *e*P PKPdf 03 09 35.5 -1.0
MOAC **Moa** 136.87 68 *e*P PKPdf 03 09 35.7 -0.7
PTLC **Puerto Leguiza** 136.90 98 PKP PKPpre 03 09 29.2
comp=Z,6µmcomp=Z,405nm,1.1s
QMBU **Quimbuelo** 137.09 69 *e*P PKPdf 03 09 36.2 -0.7
LPAZ **La Paz** 137.10 124 PKhKP PKPpre 03 09 26.2
comp=Z,7.1nm,0.5s,baz=30,slow=3.6,SNR=17
LPAZ PKP PKiKP 03 09 39.1 -0.6
comp=Z,60nm,0.8s,baz=219,slow=3.5,SNR=11
GUY2C **Guyana, Caldas** 137.10 91 PKP PKPpre 03 09 29.0
comp=Z,34µmcomp=Z,5µmcomp=Z,358nm,1.0s
PRAC **Prado** 137.40 93 PKP PKPpre 03 09 28.1
comp=Z,31µmcomp=Z,4µmcomp=Z,247nm,1.3s
SJCC **San Jacinto, C** 137.57 84 PKP PKiKP 03 09 39.6 -0.4
comp=Z,37µmcomp=Z,5µmcomp=Z,242nm,1.2s
MASC **Masc** 137.63 69 *e*P PKPdf 03 09 35.0 -2.9
ROSC **El Rosal** 138.10 92 PKhKP PKPpre 03 09 31.2
comp=Z,46nm,0.5s,baz=74,slow=3.3,SNR=14
ROSC PKP PKiKP 03 09 41.2 -0.3
comp=Z,55nm,0.5s,baz=150,slow=8.1,SNR=9.9
ROSC **El Rosal** 138.10 92 PKP PKPpre 03 09 33.9
comp=Z,4µmcomp=Z,156nm,0.9s
CPUP **Villa Florida** 138.12 145 PKhKP PKPpre 03 09 28.1
comp=Z,22nm,1.0s,baz=201,slow=2.3,SNR=12
CPUP PKP PKiKP 03 09 40.0 -0.7
comp=Z,83nm,1.1s,baz=229,slow=3.2,SNR=9.7
MACC **Macarena, Meta** 138.19 96 PKP PKPpre 03 09 28.0
comp=Z,35µmcomp=Z,3µmcomp=Z,279nm,1.0s
CVER **Cruz Verde, Cu** 138.30 92 PKP PKPpre 03 09 34.8
SPBC **San Pablo de B** 138.43 90 PKP PKPpre 03 09 33.7
comp=Z,41µmcomp=Z,4µmcomp=Z,284nm,1.2s
ARGC **Ariguani, Magd** 138.49 84 PKP PKPdf 03 09 39.4 -0.2
comp=Z,42µmcomp=Z,5µmcomp=Z,154nm,1.0s
VILC **Villavicencio,** 138.63 93 PKP PKPpre 03 09 33.1
CART **Cartagena** 139.12 321 PKP PKPdf 03 09 37.6 -2.5
OCAC **Ocana** 139.36 87 PKP PKPpre 03 09 37.1
comp=Z,50µmcomp=Z,6µmcomp=Z,530nm,1.0s
PBRG **Braganca** 139.43 330 *e*PKPdf PKPpre 03 09 33.9
RUSC **La Rusia** 139.43 90 PKP PKPpre 03 09 34.4
comp=Z,47µmcomp=Z,5µmcomp=Z,270nm,1.5s
ESDC **Sonseca Array** 139.51 326 PKhKP PKPpre 03 09 30.5
comp=Z,7.1nm,0.8s,baz=23,slow=2.9,SNR=38
ESDC PKP PKPdf 03 09 41.7 +0.8
comp=Z,18nm,0.9s,baz=18,slow=2.3,SNR=12
ESDC PP PP 03 12 36.8 +1.3
comp=Z,27nm,1.3s,baz=46,slow=5.1,SNR=4.1
ESDC PKKP PKKPdf 03 19 09.7 +1.4
comp=Z,2.3nm,0.7s,baz=270,slow=2.0,SNR=5.6
PAMC **Pamplona, Colo** 139.92 88 PKP PKPpre 03 09 36.2
PGAV **Gavieira, Arco** 140.04 332 *e*PP PP 03 12 42.6 +3.9
PGAV *e*SS SS 03 30 52.5 -1.3
PGAV *e*SS SS 03 30 54.4 +0.5
PGAV *e*LQ LQ 03 51 16.2
PGAV *e*LR LR 03 58 57.8
PGAV *i* IAMs_20 IAMs_20 04 16 55.6
comp=Z,12µm,18.0s
MVO **Moncorvo** 140.05 330 *e*PKPdf PKPpre 03 09 34.5
MVO *e*PP PP 03 12 43.0 +4.2
MVO *e*SS SS 03 30 54.5 +0.4
MVO *e*LQ LQ 03 51 26.1
MVO *e*LR LR 03 59 02.4
MVO *i* IAMs_20 IAMs_20 04 13 13.4
comp=Z,18µm,20.0s
PCAB **Cabril** 140.12 331 *e*PKPdf PKPpre 03 09 35.5
GRTK **Grand Turk** 140.19 66 *e*P PKPpre 03 09 32.9
POLO **Lamas de Olo** 140.27 331 *e*PKPdf PKPpre 03 09 36.2
PVRL **Vila Real** 140.31 331 *e*PKPdf PKPpre 03 09 37.0
SDDR **Presa de Saban** 140.58 70 *e*P PKPpre 03 09 31.4
URIC **Uribia, Colomb** 140.69 81 PKP PKPpre 03 09 38.7
PVIS **Viseu** 140.82 330 *e*PKPdf PKPPre 03 09 37.5
PTO **Porto** 140.84 331 *e*PKPdf PKPpre 03 09 37.3
MTE **Manteigas** 140.88 330 *e*PKPdf PKPpre 03 09 37.8
MTE *e*PP PP 03 12 45.4 +1.6
MTE *e*SS SS 03 31 03.0 -0.8
MTE *e*SS SS 03 31 17.1 +13
MTE *e*LQ LQ 03 51 40.6
MTE *e*LR LR 03 59 11.2
MTE *i* IAMs_20 IAMs_20 04 19 01.7
comp=Z,19µm,20.0s
PCBR **Castelo Branco** 141.27 329 *e*PKPdf PKPpre 03 09 38.0
PMRV **Marv??o** 141.53 328 *e*PKPdf PKPpre 03 09 38.6
PMRV *e*PP PP 03 12 56.7 +8.9
PMRV *e*SS SS 03 31 14.9 +3.6
PMRV *e*LQ LQ 03 51 52.3
PMRV *e*LR LR 03 59 28.4
PCAS **Casmilo, Conde** 141.62 330 *e*PKPdf PKPpre 03 09 37.6
EMAL **Malaga-Limoner** 141.75 323 PKP PKPpre 03 09 37.3
PSARD **Sardoal** 141.80 329 *e*PKPdf PKPpre 03 09 39.5
SDV **Santo Domingo** 142.03 86 PKhKP PKPpre 03 09 40.7
comp=Z,356nm,1.0s,baz=259,slow=2.4,SNR=52
SDV **Santo Domingo** 142.03 86 *e*P PKPpre 03 09 40.0
PESTR **Estremoz** 142.05 328 *e*PKPdf PKPpre 03 09 40.1

PESTR	Estremoz	142.05	328		PKPpre	03 09 40.5		
AMBA	Amambai (Brazi	142.09	145	*e*P	PKPpre	03 09 39.6		
PSBE	So Bento	142.18	330	*e*PKPdf	PKPpre	03 09 40.7		
PTGB	Pitanga	142.22	150	*e*P	PKPpre	03 09 41.0		
PMTG	Montargil	142.23	329	*e*PKPdf	PKPpre	03 09 40.4		
PBAR	Barrancos	142.26	327	*e*PKPdf	PKPpre	03 09 41.1		
PARRA	Arraiolos	142.33	328	*e*PKPdf	PKPpre	03 09 41.0		
BBSD	Serra de San D	142.46	132	*e*P	PKPpre	03 09 41.2		
EVO	Evora	142.52	328	PKP	PKPpre	03 09 41.3		
EVO	Evora	142.52	328	*e*PKPdf	PKPpre	03 09 41.9		
MOE	Montemor	142.71	328	*e*PKPdf	PKPpre	03 09 42.6		
PBEJ	Beja	142.82	327	*e*PKPdf	PKPpre	03 09 43.2		
SIV	San Ignacio	142.85	130	PKhKP	PKPpre	03 09 43.1		
	comp=Z,82nm,0.8s,baz=230,slow=2.8,SNR=121							
PMAFR	Mafra	142.85	330	*e*PKPdf	PKPpre	03 09 43.0		
LIS	Lisbon	142.97	329	*e*PKPdf	PKPpre	03 09 43.4		
LIS				*e*SS	SS	03 31 26.7	-1.1	
LIS				IAMs_20	IAMs_20	04 03 36.9		
	comp=N,66μm,21.8s							
LIS	Lisbon	142.97	329	*e*PKPdf	PKPPre	03 09 43.6		
CNIL	Conil	142.98	324	PKP	PKPPre	03 09 44.2		
SFS	San Fernando	143.00	324	PKP	PKPPre	03 09 43.4		
PLOUS	Minas do Lousa	143.11	328	*e*PKPdf	PKPbc	03 09 44.3	0.0	
PVAQ	Vaqueiros	143.19	326	*e*PKPdf	PKPbc	03 09 44.6	0.0	
PVAQ				*e*PP	PP	**03 12 58.9**	**+1.0**	
PVAQ				*e*SS	SS	03 31 36.0	+5.3	
PVAQ				*e*SS	SS	**03 31 36.6**	**+6.0**	
PVAQ				*e*LR	LR	03 59 36.7		
PVAQ				*i* IAMs_20	IAMs_20	04 16 19.6		
	comp=N,15μm,20.0s							
PCVE	Castro Verde	143.20	327	*e*PKPdf	PKPbc	03 09 44.9	+0.3	
PBDV	Barranco-do-Ve	143.43	327	*e*PKPdf	PKPbc	03 09 45.7	+0.4	
TRCB	Terra Rica	143.51	147	PKP	PKPbc	03 09 45.6	-0.3	
TRCB	Terra Rica	143.51	147	*e*P	PKPab	03 09 44.8	-0.2	
AQDB	Aquidauana	143.54	141	PKP	PKPbc	03 09 45.6	-0.5	
AQDB	Aquidauana	143.54	141	*e*P	PKPab	03 09 44.5	-0.6	
PTEO	Sao Teotonio	143.63	328	*e*PKPdf	PKPbc	03 09 46.2	+0.4	
MORF	Marmelete	143.77	327	*e*PKPdf	PKPab	03 09 45.1	-0.5	
MORF				*e*SS	SS	03 31 36.1	-1.2	
MORF				IAMs_20	IAMs_20	04 03 43.7		
	comp=E,48μm,20.1s							
MORF	Marmelete	143.77	327	*e*PKIKP	PKPab	03 09 45.1	-0.5	
MORF				*e*SS	SS	03 31 36.1	-1.2	
LDASE	Londrina, Braz	143.80	150	*e*P	PKPab	03 09 45.1	-1.0	
PFVI	Vila Bisbo	143.99	327	*e*PKPdf	PKPbc	03 09 47.4	+0.5	
IFR	Ifrane	144.29	319	PKP	**PKPab**	**03 09 47.9**	**0.0**	
MD01	Midelt array s	144.45	318		PKPbc	03 09 48.7	0.0	
FRTB	Fartura	144.59	152	PKP	PKPbc	03 09 49.2	-0.1	
FRTB	Fartura	144.59	152	*e*P	**PKPab**	**03 09 46.2**	**-2.9**	
SHEL	Horse Pasture	144.60	228	PKIKP	**PKPdf**	**03 09 50.2**	**-0.4**	
SHEL	Horse Pasture	144.60	228		**PKPdf**	**03 09 50.2**	**-0.4**	
PTLB	Pontes e Lacer	144.65	131	PKP	**PKPab**	**03 09 49.3**	**0.0**	
PTLB	Pontes e Lacer	144.65	131	*e*P	**PKPab**	**03 09 46.4**	**-3.0**	
PET01	Itanhaem-SP	144.76	156	PKP	PKPbc	03 09 49.7	0.0	
VILB	Vilhena	145.33	127		**PKPbc**	**03 09 51.6**	**-0.2**	
VILB	Vilhena	145.33	127	PKP	**PKPbc**	**03 09 51.6**	**-0.2**	
VILB	Vilhena	145.33	127	*e*P	**PKPbc**	**03 09 47.1**	**-4.6**	
SJG	San Juan	145.53	70	PKPbc	**PKPdf**	**03 09 50.8**	**-1.2**	
	comp=E,2μm,1.0s,baz=322,slow=2.6,SNR=86							
SJG	San Juan	145.53	70	*e*P	**PKPdf**	**03 09 47.5**	**-4.5**	
AVE	Averroes	145.88	321	PKP	**PKPbc**	**03 09 53.1**	**+0.1**	
VABB	Valinhos	146.04	155	PKP	**PKPbc**	**03 09 53.8**	**0.0**	
VAO	Valinhos	146.04	155	*e*P	**PKPdf**	**03 09 49.2**	**-3.7**	
PP1B	Ponte de Pedra	146.17	139	PKP	**PKPbc**	**03 09 54.6**	**+0.3**	
PP1B	Ponte de Pedra	146.17	139	*e*P	**PKPdf**	**03 09 49.1**	**-4.1**	
TOA0	Torodi Ar. Sit	146.25	282	P	**PKPbc**	**03 09 54.5**	**0.0**	
	SNR=54							
TORD	Torodi Ar. Bea	146.25	282	PKPbc	**PKPab**	**03 09 55.2**	**-0.2**	
	comp=E,822nm,0.9s,baz=48,slow=0.7,SNR=290							
TORD	Torodi Ar. Bea	146.25	282		**PKPdf**	**03 09 53.0**	**-0.4**	
RCLB	Rio Claro- Sao	146.31	154	PKP	**PKPab**	**03 09 55.1**	**-0.4**	
RCLB	Rio Claro- Sao	146.31	154	*e*P	**PKPdf**	**03 09 49.4**	**-4.0**	
C2SB	Chapadao do Su	146.58	143	PKP	**PKPbc**	**03 09 55.7**	**+0.3**	
C2SB	Chapadao do Su	146.58	143	*e*P	**PKPdf**	**03 09 49.8**	**-4.1**	
SALV	Santo Antonio	146.83	136	PKP	**PKPbc**	**03 09 55.2**	**-1.0**	
SALV	Santo Antonio	146.83	136	*e*P	**PKPdf**	**03 09 50.0**	**-4.4**	
BB19B	Bebedouro	147.03	151	PKP	**PKPdf**	**03 09 55.6**	**+1.0**	
BB19B	Bebedouro	147.03	151	*e*P	**PKPdf**	**03 09 50.0**	**-4.7**	
TIO	Tiouine	147.32	318	PKP	**PKPdf**	**03 09 55.0**	**0.0**	
ACRG	Accra	148.10	268		**PKPdf**	**03 09 56.8**	**+0.3**	
SABA	Saba	148.34	69	*e*P	PKPdf	03 09 48.4	-8.4	
SMRT	St. Maarten	148.39	68	*e*P	**PKPdf**	**03 09 56.0**	**-0.8**	
DUB01	Friburgo-RJ	148.55	162	PKP	**PKPdf**	**03 09 58.4**	**+1.3**	
DUB01	Friburgo-RJ	148.55	162	*e*P	**PKPdf**	**03 09 52.7**	**-4.4**	
SIM2	UHE Simplicio	148.57	161	PKP	**PKPdf**	**03 09 58.2**	**+1.1**	
SEUS	St. Eustatius	148.61	69	*e*P	**PKPdf**	**03 09 57.7**	**+0.5**	
CANS	Sao Roque de M	148.68	154	PKP	**PKPdf**	**03 09 58.8**	**+1.3**	
CANS	Sao Roque de M	148.68	154	*e*P	**PKPdf**	**03 09 53.2**	**-4.2**	
H07S1	FLORES T-PHASE	148.69	358	PKPbc	**PKPbc**	**03 10 01.1**	**+0.5**	
	SNR=60							
BSCB	Bom Sucesso	148.71	157	PKP	**PKPdf**	**03 09 57.8**	**+0.3**	
BSCB	Bom Sucesso	148.71	157	*e*P	**PKPdf**	**03 09 53.4**	**-4.0**	
PSCRZ	Santa Cruz da	148.76	354	*e*PKP	**PKiKP**	**03 10 01.7**	**-0.5**	
PGRA	Graciosa	148.82	354	*e*PKP	**PKPbc**	**03 10 01.2**	**+0.3**	
SRBC	Serra Branca	148.82	354	*e*PKP	**PKPbc**	**03 10 01.5**	**+0.5**	
SKI	Saint Kitts	148.87	70	*e*P	**PKPdf**	**03 09 56.5**	**-1.2**	
PAGU	Agualva, Azore	148.98	352	*e*PKP	**PKPbc**	**03 10 00.8**	**-0.5**	
PSBA	Serra de Santa	149.00	353	*e*PKP	**PKiKP**	**03 10 02.1**	**-0.6**	
CAM01	Campos-RJ	149.00	163	PKP	**PKPdf**	**03 09 58.0**	**+0.3**	
CAM01	Campos-RJ	149.00	163	*e*P	**PKPdf**	**03 09 53.1**	**-4.6**	
PSCM	Serra do Cume	149.04	352	*e*PKP	**PKPbc**	**03 10 01.7**	**+0.2**	
ADH	Angra Heroismo	149.10	352	*e*PKP	**PKPbc**	**03 10 01.5**	**-0.1**	
ROSA	Rosais	149.15	354	*e*PKP	**PKPbc**	**03 10 01.7**	**-0.1**	
PMAN	Manadas	149.22	354	*e*PKP	**PKPbc**	**03 10 02.1**	**+0.1**	
ITU3	Corumbazu	149.26	148	PKP	**PKPdf**	**03 09 58.7**	**+0.3**	
PCED	Cedros	149.29	355	*e*PKP	**PKPbc**	**03 10 02.5**	**+0.4**	
CALA	Caldeira	149.34	355	*e*PKP	**PKPbc**	**03 10 02.7**	**+0.4**	
HOR	Horta	149.38	354	*e*PKP	**PKPbc**	**03 10 01.7**	**-0.7**	
PICO	Pico	149.39	354	*e*PKP	**PKPbc**	**03 10 02.3**	**-0.2**	
PPNO	Prainha do Nor	149.40	354	*e*PKP	**PKPbc**	**03 10 02.1**	**-0.4**	
PCAN	Candelaria	149.43	354	*e*PKP	**PKPbc**	**03 10 01.7**	**-0.8**	
ARAG	Aragualana, MT	149.54	141	*e*P	**PKPdf**	**03 09 54.0**	**-4.8**	
MACA	Manacapuru-AM	149.57	110	PKP	**PKPdf**	**03 09 58.8**	**-0.1**	
MACA	Manacapuru-AM	149.57	110	*e*P	**PKPdf**	**03 09 53.6**	**-5.3**	
BART	Pico Bartolome	149.62	349	*e*PKP	**PKPbc**	**03 10 01.7**	**-1.4**	
PCALD	Caldeiras da R	149.66	349	*e*PKP	**PKPbc**	**03 10 02.9**	**-0.2**	
PGRON	Lagoa das Cont	149.67	349	*e*PKP	**PKPbc**	**03 10 02.9**	**-0.2**	
ANWB	Willy Bob	149.67	69	P	**PKPbc**	**03 10 01.6**	**-2.0**	
ANWB	Willy Bob	149.67	69	*e*P	**PKPdf**	**03 10 00.5**	**+1.6**	
ANWB				x	x	03 20 15.9		
PSET	Sete Cidades	149.68	350	*e*PKP	**PKPbc**	**03 10 02.7**	**-0.4**	
CMLA	Cha da Macela	149.70	349	*e*PKP	**PKPbc**	**03 10 02.9**	**-0.3**	
POVGA	Lagoa	149.73	349	*e*PKP	**PKPbc**	**03 10 02.1**	**-1.1**	
PDA	Ponta Delgada	149.74	350	*e*PKP	**PKPbc**	**03 10 01.7**	**-1.6**	
IPMB	Ipameri, GO	149.80	149	PKP	**PKPdf**	**03 09 59.5**	**+0.3**	
IPMB	Ipameri, GO	149.80	149	*e*P	**PKPdf**	**03 09 55.0**	**-4.2**	
DHSZ	Broadband at M	150.02	71	*e*P	**PKPdf**	**03 10 01.0**	**+1.5**	
DHSZ				x	x	03 20 19.1		
CLDB	Colider	150.02	128	PKP	**PKPdf**	**03 09 60.0**	**+0.4**	
CLDB	Colider	150.02	128	*e*P	**PKPdf**	**03 09 55.4**	**-4.2**	
MMLZ	Guadeloupe Bro	150.16	72	*e*P	**PKPdf**	**03 10 01.0**	**+1.3**	
MMLZ				x	x	03 20 19.1		
PMNB	Patos De Minas	150.19	152	PKP	**PKPdf**	**03 10 01.0**	**+1.1**	
PMNB	Patos De Minas	150.19	152	*e*P	**PKPdf**	**03 09 55.7**	**-4.2**	
TBG	Guadaloupe-3	150.22	72	*e*P	**PKPdf**	**03 09 59.7**	**-0.1**	
PSMN	Pico do Norte,	150.35	348	*e*PKP	**PKPdf**	**03 10 01.7**	**+2.2**	
ALF01	Guarapari-ES	150.41	164	PKP	**PKPdf**	**03 10 00.4**	**+0.4**	
ALF01	Guarapari-ES	150.41	164	*e*P	**PKPdf**	**03 09 56.4**	**-3.6**	
DSLB	Salisbury	150.51	73	*e*P	**PKPdf**	**03 10 01.5**	**+1.2**	
DSLB				x	x	03 20 25.6		
DWS	Wesley	150.59	72	*e*P	**PKPdf**	**03 10 02.5**	**+2.2**	
DSDZ	La Diserade, G	150.66	71	*e*P	**PKPdf**	**03 09 59.5**	**-1.0**	
DSDZ				x	x	03 20 25.6		
H05N1	Guadeloupe/Mar	150.67	71	PKPbc	**PKPdf**	**03 10 02.5**	**+2.0**	
	SNR=19							
GRFF	Grenada Fort F	150.69	80	*e*P	**PKPdf**	**03 10 01.9**	**+1.3**	
GRGR	Grenville	150.76	79	PKP	**PKPdf**	**03 10 00.2**	**-0.5**	
GRGR	Grenville	150.76	79	*e*P	**PKPdf**	**03 09 56.2**	**-4.6**	
GRSS	Sisters	150.79	79	*e*P	**PKPdf**	**03 09 59.6**	**-1.1**	
SVN	Savane Anatole	150.86	74	*e*P	**PKPdf**	**03 10 00.3**	**-0.6**	
GCMP	Grenada, Carri	150.95	79	*e*P	**PKPdf**	**03 09 59.6**	**-1.3**	
BIM	Bigot	151.01	74	*e*P	**PKPdf**	**03 10 01.9**	**+0.8**	
TPP	Pointe-a-Pierr	151.08	83	*e*P	**PKPdf**	**03 10 02.9**	**+1.7**	
TRN	Trinidad (W)	151.12	82	*e*P	**PKPdf**	**03 10 01.0**	**-0.2**	
SLBI	Saint Lucia, B	151.19	75	*e*P	**PKPdf**	**03 09 60.0**	**-1.3**	
H05S1	Guadeloupe/Mar	151.25	75	PKPbc	**PKPbc**	**03 10 06.8**	**-0.6**	
	SNR=116							
SLAC	Saint Lucia, A	151.28	76	*e*P	**PKPdf**	**03 10 02.5**	**+1.0**	
BOAV	Boa Vista	151.32	100		**PKPdf**	**03 10 01.7**	**+0.1**	
BOAV	Boa Vista	151.32	100	PKP	**PKPdf**	**03 10 01.7**	**+0.1**	
BOAV	Boa Vista	151.32	100	*e*P	**PKPdf**	**03 09 57.3**	**-4.4**	
PMOZ	Porto Moniz, M	151.58	333	*e*PP	**PP**	**03 13 46.8**	**-0.2**	
PMOZ				*e*SS	SS	03 33 04.8	-0.2	
PMOZ				*e*SS	**SS**	**03 33 07.1**	**+2.1**	
PMOZ				*i* IAMs_20	IAMs_20	04 35 30.1		
	comp=E,21μm,20.0s							
DIAM	Diamantina, MG	151.59	157	PKP	**PKPdf**	**03 10 03.3**	**+1.2**	
DIAM	Diamantina, MG	151.59	157	*e*P	**PKPdf**	**03 09 57.4**	**-4.7**	
RIB01	Linhares ES	151.75	164	PKP	**PKPdf**	**03 10 02.9**	**+0.8**	
RIB01	Linhares ES	151.75	164	*e*P	**PKPdf**	**03 09 58.5**	**-3.7**	
BDFB	Brasília	151.84	146	PKP	**PKPdf**	**03 10 03.5**	**+1.0**	
	comp=E,142nm,1.1s,baz=13,slow=0.3,SNR=58							
BDFB				PKPbc	**PKiKP**	**03 10 10.3**	**+1.0**	
	comp=E,650nm,0.9s,baz=16,slow=0.4,SNR=67							
BSFB	Barra de Sao F	152.07	162	PKP	**PKPdf**	**03 10 02.6**	**0.0**	
BSFB	Barra de Sao F	152.07	162	*e*P	**PKPdf**	**03 09 58.8**	**-3.9**	
SJMB	Sao Joao De Ma	152.09	162	PKP	**PKPdf**	**03 10 03.0**	**+0.4**	
SJMB	Sao Joao De Ma	152.09	162	*e*P	**PKPdf**	**03 09 59.0**	**-3.7**	
JQT1	Jequitai-MG	152.26	155	PKP	**PKPdf**	**03 10 03.5**	**+0.5**	
SNDB	Serra Nova Dou	152.61	136	PKP	**PKPdf**	**03 10 03.9**	**+0.4**	
SNDB	Serra Nova Dou	152.61	136	*e*P	**PKPdf**	**03 09 59.5**	**-4.1**	
DBIC	Dimbokro	152.80	269	PKP	**PKPdf**	**03 10 04.2**	**+0.4**	
	comp=E,104nm,1.2s,baz=66,slow=1.4,SNR=21							
DBIC				PKPbc	**PKiKP**	**03 10 11.8**	**+0.6**	
	comp=E,762nm,0.9s,baz=109,slow=2.8,SNR=68							
DBIC	Dimbokro	152.80	269	PKP	**PKPdf**	**03 10 04.2**	**+0.4**	
MC01	Montes Claros	152.91	155	PKP	**PKPdf**	**03 10 04.5**	**+0.6**	
ARCA	Araŭai, MG	153.56	159	PKP	**PKPdf**	**03 10 05.5**	**+0.6**	
ARCA	Araŭai, MG	153.56	159	*e*P	**PKPdf**	**03 10 01.0**	**-3.8**	
ITTB	Itaituba	153.57	117	PKP	**PKPdf**	**03 10 05.0**	**0.0**	
ITTB	Itaituba	153.57	117	*e*P	**PKPdf**	**03 10 00.5**	**-4.4**	
CAN3	Cana Brava	153.71	143	PKP	**PKPdf**	**03 10 05.8**	**+0.7**	
JANB	Januaria	154.21	152	PKP	**PKPdf**	**03 10 05.6**	**-0.2**	
JANB	Januaria	154.21	152	*e*P	**PKPdf**	**03 10 01.5**	**-4.3**	
GUA01	Guaratinga, BA	154.50	163	PKP	**PKPdf**	**03 10 06.4**	**+0.2**	
GUA01	Guaratinga, BA	154.50	163	*e*P	**PKPdf**	**03 10 02.1**	**-4.0**	
NTVB	Natividade	155.16	142	PKP	**PKPdf**	**03 10 06.5**	**-0.6**	
CMC01	Camacan, BA	155.75	163	PKP	**PKPdf**	**03 10 07.3**	**-0.5**	
CMC01	Camacan, BA	155.75	163	*e*P	**PKPdf**	**03 10 04.0**	**-3.9**	
LAJE	UHE Lajeado	156.06	138	PKP	**PKPdf**	**03 10 09.0**	**+0.6**	
NBIT	Itapeh - BA	156.18	163	PKP	**PKPdf**	**03 10 08.4**	**0.0**	
NBIT	Itapeh - BA	156.18	163	*e*P	**PKPdf**	**03 10 04.7**	**-3.8**	
SDBA	SAO DESIDERIO	156.19	148	PKP	**PKPdf**	**03 10 08.7**	**+0.2**	
SDBA	SAO DESIDERIO	156.19	148	*e*P	**PKPdf**	**03 10 04.7**	**-3.9**	
ATM1	UHE Belo Monte	157.16	119	PKP	**PKPdf**	**03 10 10.1**	**+0.3**	
SMTB	Santa Maria do	157.37	137	PKP	**PKPdf**	**03 10 10.6**	**+0.5**	
SMTB	Santa Maria do	157.37	137	*e*P	**PKPdf**	**03 10 05.2**	**-4.9**	
PRPB	Parauapebas	157.56	128	PKP	**PKPdf**	**03 10 10.6**	**+0.3**	
PRPB	Parauapebas	157.56	128	*e*P	**PKPdf**	**03 10 06.0**	**-4.4**	
BMO1	UHE Belo Monte	157.64	119	PKP	**PKPdf**	**03 10 10.4**	**0.0**	
PAL01	Palmeiras do T	158.95	133	PKP	**PKPdf**	**03 10 12.4**	**+0.4**	
MDP	Montagnes des	159.55	97	PKP	**PKPdf**	**03 10 13.2**	**+0.5**	
	comp=E,98nm,1.1s,baz=358,slow=1.6,SNR=18							
NBPN	Ponto Novo - B	159.72	157	PKP	**PKPdf**	**03 10 13.0**	**+0.1**	
NBPN	Ponto Novo - B	159.72	157	*e*P	**PKPdf**	**03 10 08.8**	**-4.0**	
NBLA	Lagarto - SE	160.39	164	PKP	**PKPdf**	**03 10 14.3**	**+0.7**	
NBBC	Barra do Corda	161.34	135	PKP	**PKPdf**	**03 10 14.7**	**0.0**	
NBAN	Anadia - AL	162.04	167	PKP	**PKPdf**	**03 10 14.5**	**-0.8**	
NBTA	Tacaratu-PE	162.08	161	PKP	**PKPdf**	**03 10 15.6**	**+0.2**	
NBTA	Tacaratu-PE	162.08	161	*e*P	**PKPdf**	**03 10 12.9**	**-2.5**	
NBMA	Muriti-CE	163.46	157	PKP	**PKPdf**	**03 10 17.1**	**+0.3**	
NBMA	Muriti-CE	163.46	157	*e*P	**PKPdf**	**03 10 12.8**	**-4.0**	
NBPS	Pedro II - PI	164.69	143	PKP	**PKPdf**	**03 10 17.0**	**-1.0**	
NBPS	Pedro II - PI	164.69	143	*e*P	**PKPdf**	**03 10 14.3**	**-3.7**	
NBPB	Pedra_Branca-C	164.73	151	PKP	**PKPdf**	**03 10 17.7**	**-0.2**	
NBPV	Pedro Velho	165.41	168	PKP	**PKPdf**	**03 10 19.2**	**+0.7**	
NBPV	Pedro Velho	165.41	168	*e*P	**PKPdf**	**03 10 14.8**	**-3.7**	
NBPA	Parau_RN	165.55	160	PKP	**PKPdf**	**03 10 18.6**	**0.0**	
RCBR	Riachuelo	165.84	165	PKP	**PKPdf**	**03 10 19.0**	**+0.1**	
RCBR	Riachuelo	165.84	165	*e*P	**PKPdf**	**03 10 15.0**	**-3.9**	
SBBR	Sobral	165.90	145	PKP	**PKPdf**	**03 10 18.1**	**-0.8**	
NBMO	Morrinhos-CE	166.38	145	PKP	**PKPdf**	**03 10 19.1**	**-0.2**	
NBMO	Morrinhos-CE	166.38	145	*e*P	**PKPdf**	**03 10 15.6**	**-3.7**	

LDG **17** *02:50:51.3±0.7, 46°.24N×13°.95E, h7km, Ml4.0/19, Error ellipse: s-maj=11.9km s-min=9.9km az=98.0*

BNS **17** *02:50:53.1±0.3, 46°.09N×14°.32E, h10km, ML4.2*

IDC **17** *02:50:56.4±0.9, 46°.23N×13°.68E, h0km, mb3.4/5, mbtmp3.6/16, ML3.4/8, MS2.8/4, Error ellipse: s-maj=11.6km s-min=11.2km az=125.0*

MCSM **17** *02:50:57.8±1.0, 46°.N±.9°×1°.4E±°, h10km±6km, mb4.2, mB4.0, MLv4.5, Mw(mB)3.0*

NEIC **17** *02:50:57.8±1.8, 46°.30N±0°.03×13°.58E±0°.05, h11km±5km, mb4.0/1, ML4.3/27(VIE), Error ellipse: s-maj=5.7km s-min=4.5km az=50.0*

LJU **17** *02:50:57.1, 46°.32N×13°.54E, h15km, ML3.9*

VIE **17** *02:50:57.2±0.2, 46°.32N×13°.54E, h15km, mb3.8/26, ml4.3/27, Error ellipse: s-maj=1.5km s-min=1.0km az=58.0 3 km SSW of Bovec*

ROM **17** *02:50:57.2±0.1, 46°.319N±0°.004×13°.575E±0°.004, h11km, ML4.2/358, Mw3.8, Error ellipse: s-maj=0.4km s-min=0.1km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.68; Mθθ=6.57; Mφφ=5.89; Mrθ=1.75; Mθφ 1.35; Mrφ=0.45; Fault plane solution: M=6.60064×10^14 NP1=φs=231.00000°, δ=86.00000°, λ=-14.00000°. NP2=φs=322.00000°, δ=76.00000°, λ=-176.00000°.*

GFZ **17** *02:50:58.8, 46°.32N×13°.52E, h10km, Mw3.8/63, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=1.96; Mθθ=5.65; Mφφ=7.60; Mrθ=0.62; Mθφ=1.64; Mrφ=0.58; Fault plane solution: M=7.08271×10^14 NP1: φs=142.03010°, δ=81.70895°, λ=-177.10947°. NP2: φs=51.61294°, δ=87.13971°, λ=-8.30147°. Principal axes: T 7.8463, Plg3.8234°, Azm97.0849°; N -1.9253, Plg81.2229°, Azm212.7325°; P -5.9210, Plg7.8888°, Azm6.5543°;*

GFZ **17** *02:50:58.8±0.1, 46°.N±2°×1°.4E±°, h10km, M4.2/27, mb4.6/27*

BEO **17** *02:50:58.2±0.6, 46°.35N×13°.59E, h8km±2km, ML4.1/14*

BGR **17** *02:50:60.0±0.3, 46°.37N×13°.55E, h10km, ML4.0/18, Error ellipse: s-maj=4.4km s-min=3.3km az=177.0*

PRU **17** *02:50:59.6, 46°.38N×13°.63E, h10km, M4.0*

DNK **17** *02:52:07.5±0.3, 51°.46N×14°.30E, h15km, Presumed earthquake*

ISC 17 02:50:58.0±0.6, 46°.30N±0°.01×13°.522E±0°.010, h16km±3km, n664, σ1=48/862, mb3.4/4, 64C-82D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ROBS	Robic	0.06	189	↓*i*	Pg	Pg	02 51 00.3	-0.7
ROBS				*i*	Sg	Sg	02 51 02.2	-0.8
ROBS				IAML			02 51 03.8	
	comp=Z,22μm,0.1s							
PRED	Cave del Predi	0.15	12	↓*e*	Pg	Pg	02 51 01.1	-1.0
PRED				*e*	Sg	Sg	02 51 03.6	-1.1
PRED	Cave del Predi	0.15	12			Pg	02 51 01.0	-1.0
PRED				Sg		Sg	02 51 03.6	-1.1
PRED	Cave del Predi	0.15	12	↓P		Pg	02 51 01.0	-1.0
PRED				S		Sg	02 51 03.5	-1.3
DRE	Drenchia	0.15	146	↑*e*	Pg	Pg	02 51 01.6	-0.5
DRE				*e*	Sg	Sg	02 51 04.7	-0.2
DRE	Drenchia	0.15	146	↑P		Pg	02 51 01.6	-0.5
DRE				S		Sg	02 51 04.6	-0.2
PTCC	Patocco-Chiusa	0.16	312	↓P		Pg	02 51 01.4	-0.8
PTCC				S		Sg	02 51 04.3	-0.7
PTCC				AML		AML		
PTCC				AML		AML		
PTCC				AML		AML		
PTCC				AML		AML		
CADS	Cadrg	0.17	115	↑*i*	Pg	Pg	02 51 01.6	-0.7
CADS				*i*	Sg	Sg	02 51 04.8	-0.4
CADS				IAML			02 51 06.0	
	comp=Z,21μm,0.1s							
VINO	Villanova	0.17	256	*e*	Pg	Pg	02 51 01.7	-0.7
VINO				*e*	Sg	Sg	02 51 05.4	+0.1
LSR	Lussari	0.18	1	↓*e*	Pg	Pg	02 51 01.6	-0.9
LSR				*e*	Sg	Sg	02 51 04.9	-0.8
COLI	Coloredo	0.19	211	↓*e*	Pg	Pg	02 51 02.5	-0.1
COLI				*e*	Sg	Sb	02 51 06.3	-0.2
BAD	Bernadia	0.20	252	↑*e*	Pg	Pg	02 51 02.1	-0.7
BAD				*e*	Sg	Sg	02 51 06.4	+0.3
BAD	Bernadia	0.20	252	↑P		Pg	02 51 02.2	-0.7
BAD				S		Sg	02 51 06.4	+0.3
ACOM	Acomizza, Ital	0.25	359	↓*e*	Pg	Pg	02 51 02.6	-1.0
ACOM				*e*	Sg	Sg	02 51 06.8	-0.8
ACOM	Acomizza, Ital	0.25	359	↓P		Pg	02 51 02.7	-1.0
ACOM				S		Sg	02 51 06.7	-0.8
ACOM				AML		AML		
	comp=N,85700μm,0.7s							
ACOM				AML		AML		
	comp=N,81000μm,0.7s							
ACOM				AML		AML		
ACOM				AML		AML		
ACOM	Acomizza, Ital	0.25	359	P		Pg	02 51 02.7	-1.0
BUA	Buia	0.29	254	*e*	Pg	Pg	02 51 03.7	-0.4
BUA				*e*	Sg	Sg	02 51 08.1	-0.3
BOO	Bordano	0.29	274	*e*	Pg	Pg	02 51 03.6	-0.6
BOO				*e*	Sg	Sg	02 51 08.6	+0.1
BOO	Bordano	0.29	274	↑P		Pg	02 51 03.3	-1.0
BOO				S		Sg	02 51 08.5	-0.1
SABO	M.te Sabotino	0.32	170	↓*e*	Pg	Pg	02 51 04.6	-0.2
SABO				*e*	Sg	Sg	02 51 09.9	+0.4
SABO	M.te Sabotino	0.32	170			Pg	02 51 04.5	-0.3
SABO				Sg		Sb	02 51 10.2	-0.1
SABO	M.te Sabotino	0.32	170	↓P		Pg	02 51 04.6	-0.2
SABO				S		Sb	02 51 10.3	-0.1
SABO				AML		AML		
SABO				AML		AML		
SABO				AML		AML		
SABO				AML		AML		
GORS	Gorjuse	0.33	87	↑*i*	Pg	Pg	02 51 04.0	-0.9
GORS				*i*	Sg	Sg	02 51 09.3	-0.3
GORS				IAML			02 51 10.3	
	comp=Z,4μm,0.1s							
MYK

KBA **Koelnbreinsper** 0.79 351 Pg 02 51 12.5 -0.9
KBA Sg 02 51 22.6 -1.3
KBA **Koelnbreinsper** 0.79 351 *e*Pg Pg 02 51 12.6 -0.7
SNR=257
KBA *e*Sg Sg 02 51 23.7 -0.2
SNR=3.8
KBA **Koelnbreinsper** 0.79 351 *e*Pg Pg 02 51 12.5 -0.9
comp=N,159nm,0.4s,SNR=215
KBA *e*Sg Sg 02 51 22.6 -1.3
comp=N,376nm,0.2s
KBA **Koelnbreinsper** 0.79 351 P Pg 02 51 12.7 -0.7
CAE **Caneva** 0.81 249 P Pb 02 51 12.9 -0.7
CAE S Sg 02 51 24.7 +0.3
SKDS **Skadanscina** 0.83 155 ⇓*i*Pg Pb 02 51 12.4 -1.6
SKDS *i* Sg Sg 02 51 25.0 0.0
SKDS IAML 02 51 26.4
comp=Z,1µm,0.2s
SKDS **Skadanscina** 0.83 155 *e*Pg Pb 02 51 12.6 -1.4
SKDS *e*Sg Sg 02 51 25.0 0.0
ABTA **Abfaltersbach** 0.83 303 Pb 02 51 12.7 -1.3
ABTA Sg 02 51 25.1 0.0
ABTA **Abfaltersbach** 0.83 303 *e*Pg Pb 02 51 12.7 -1.3
comp=Z,499nm,0.6s,SNR=665
ABTA *e*Sg Sg 02 51 25.1 0.0
comp=Z,1µm,0.2s
VNDS **Vrh nad Dolski** 0.84 103 ⇑*i*Pg Pb 02 51 13.4 -0.8
VNDS *i* Sg Sg 02 51 25.7 +0.3
VNDS IAML 02 51 28.5
comp=Z,5µm,0.3s
CEY **Cerknica** 0.84 131 ⇑*i*Pg Pb 02 51 12.6 -1.7
CEY *e*Sg Sb 02 51 25.3 0.0
CEY IAML 02 51 27.8
comp=Z,2µm,0.2s
CEY **Cerknica** 0.84 131 *e*Pg Pb 02 51 12.7 -1.5
CEY *e*Sg Sg 02 51 25.7 +0.2
PNAL **Ponte nelle Va** 0.86 262 P Pb 02 51 13.1 -1.4
FRE8 **Fregona** 0.86 251 P Pb 02 51 13.9 -0.6
FRE8 S Sg 02 51 26.5 +0.5
FREG **Fregona** 0.89 252 P Pb 02 51 14.7 -0.3
FREG AML AML
comp=E,41850µm,0.5s
FREG AML AML
comp=N,39400µm,0.3s
FREG AML AML
comp=E,40300µm,0.5s
FREG AML AML
comp=N,22300µm,0.3s
KNDS **Knezji Dol** 0.98 142 *i* Pg Pb 02 51 15.0 -1.5
KNDS *e*Sg Sg 02 51 29.5 -0.2
KNDS IAML 02 51 34.4
comp=Z,2µm,0.2s
AGOR **Agordo** 1.02 270 P Pb 02 51 17.2 -0.1
VARN **Col Varnada, M** 1.03 253 P Pb 02 51 16.9 -0.6
VARN S Sn 02 51 32.3 +0.4
VARN AML AML
comp=N,28500µm,0.3s
VARN AML AML
comp=N,28700µm,0.3s
VARN AML AML
comp=E,43900µm,0.5s
VARN AML AML
comp=E,44250µm,0.5s
VISS **Visnje** 1.04 118 ⇑*i*Pg Pb 02 51 16.6 -1.0
VISS *e*Sg Sb 02 51 30.9 -0.1
VISS IAML 02 51 35.2
comp=Z,3µm,0.4s
ZAVS **Zavodnje** 1.05 82 ⇑*i*Pg Pb 02 51 16.4 -1.3
ZAVS *e*Sg Sb 02 51 30.4 -0.8
ZAVS IAML 02 51 34.6
comp=Z,2µm,0.2s
PDKS **Podkum** 1.05 103 ⇑*i*Pg Pb 02 51 17.2 -0.6
PDKS *e*Sg Sb 02 51 31.7 +0.4
PDKS IAML 02 51 35.3
comp=Z,2µm,0.2s
SESA **Seetaler Alpe,** 1.09 41 *i* Pg Pb 02 51 17.9 -0.6
SNR=2391
SESA *i* Sg Sb 02 51 31.4 -1.1
CRND **Cornuda** 1.11 246 P Pg 02 51 19.6 +0.2
SOKA **Soboth** 1.11 70 Pb 02 51 17.6 -1.2
SOKA Sb 02 51 32.0 -1.0
SOKA **Soboth** 1.11 70 *e*Pg Pb 02 51 17.6 -1.2
comp=Z,393nm,0.2s,SNR=1264
SOKA *e*Sg Sb 02 51 32.0 -1.0
comp=Z,2µm,0.5s
PERS **Pernice** 1.15 72 ⇑*i*Pg Pn 02 51 18.2 -1.3
PERS *e*Sg Sb 02 51 33.3 -1.0
GBRS **Gornja Briga** 1.18 130 *i* Pg Pn 02 51 19.4 -0.5
GBRS *e*Sg Sn 02 51 35.8 +0.2
GBRS IAML 02 51 40.5
comp=Z,1µm,0.2s
RIY **Rijeka** 1.18 145 *e*Pg Pg 02 51 21.0 +0.2
RIY Sg Sg 02 51 36.4 +0.2
RIY **Rijeka** 1.18 145 *e*Pg Pn 02 51 19.6 -0.2
RIY *e*Sg Sg 02 51 36.6 +0.4
VENL **Venezia Lido** 1.19 223 ⇓P Pg 02 51 21.1 +0.1
VENL S Sg 02 51 39.3 +2.8
ASOL **Asolo** 1.23 247 P Pb 02 51 21.3 +0.4
ASOL S Sg 02 51 39.9 +2.1
LESA **Schwarzleotal** 1.27 333 Pb 02 51 21.4 -0.1
LESA Sb 02 51 37.2 -0.3
LESA **Schwarzleotal** 1.27 333 *e*Pg Pb 02 51 21.4 -0.1
comp=Z,147nm,0.4s,SNR=712
LESA *e*Sg Sb 02 51 37.2 -0.3
comp=Z,4µm,0.6s
CGRP **Cima Grappa** 1.27 251 P Pn 02 51 21.2 0.0
CGRP S Sg 02 51 39.7 +0.7
CGRP AML AML
comp=N,17350µm,0.6s
CGRP AML AML
comp=N,17350µm,0.6s
CGRP AML AML
comp=N,17350µm,1.4s
CGRP AML AML
comp=N,17350µm,1.4s
CGRP AML AML
comp=E,19500µm,0.5s
CGRP AML AML
comp=E,19500µm,0.5s
CGRP **Cima Grappa** 1.27 251 P Pn 02 51 21.2 0.0
LEGS **Legarje** 1.30 105 ⇑*i*Pg Pn 02 51 21.4 0.0
LEGS *e*Sg Sn 02 51 38.9 +0.5
BRES **Bressanone** 1.30 289 P Pn 02 51 21.6 -0.1
BRES AML AML
comp=E,5650µm,1.3s
BRES AML AML
comp=N,5120µm,0.5s
BRES AML AML
comp=E,5650µm,0.7s
CTI **Castel Tesino** 1.32 260 Pn 02 51 21.3 -0.6
CTI Sg 02 51 40.3 -0.5
CTI **Castel Tesino** 1.32 260 P Pb 02 51 22.7 +0.2
CTI S Sg 02 51 40.5 -0.3
CTI **Castel Tesino** 1.32 260 P Pb 02 51 22.4 0.0
CTI S Sg 02 51 40.7 -0.1
CTI AML AML
comp=E,13100µm,1.2s
CTI AML AML
comp=N,14350µm,0.5s
CTI AML AML
comp=E,13100µm,0.8s
ZIAN **Ziano** 1.36 270 P Pb 02 51 22.8 -0.3
ZIAN AML AML
comp=N,7145µm,0.6s
ZIAN AML AML
comp=E,9345µm,0.6s
ZIAN AML AML
comp=N,9590µm,0.6s
ZIAN AML AML
comp=N,9590µm,1.4s
ZIAN AML AML
comp=E,9345µm,1.4s
ZIAN AML AML
comp=E,7060µm,0.6s
DOBS **Dobrina** 1.36 96 ⇑*i*Pg Pn 02 51 22.1 -0.2
DOBS IAML 02 51 46.7
comp=Z,737nm,0.2s
GROS **Grobnik** 1.38 83 ⇑*i*Pg Pn 02 51 22.2 -0.4
GROS IAML 02 51 45.0
comp=Z,928nm,0.3s
CESS **Cesta pri Krsk** 1.39 103 ⇑*i*Pg Pn 02 51 22.8 +0.2
CESS *e*Sg Sb 02 51 41.6 +0.6
CESS IAML 02 51 45.9
comp=Z,1µm,0.2s
BIOA **Bad Ischl, Aus** 1.40 3 Pb 02 51 23.4 -0.2
BIOA Sg 02 51 44.0 +1.0
BIOA **Bad Ischl, Aus** 1.40 3 *e*Pg Pb 02 51 23.4 -0.2
comp=Z,835nm,0.5s,SNR=936
BIOA *e*Sg Sg 02 51 44.0 +1.0
comp=Z,3µm,0.6s
BRJN **Brijuni** 1.40 173 ⇓P Pb 02 51 23.5 -0.2
CRES **Cresnjevec Ost** 1.43 109 ⇑*i*Pg Pn 02 51 23.4 +0.2
CRES Sg Sb 02 51 42.4 +0.3
CRES IAML 02 51 46.2
comp=Z,758nm,0.2s
BOJS **Bojanci** 1.45 123 ⇑*i*Pg Pn 02 51 23.7 +0.2
BOJS *e*Sg Sb 02 51 43.1 +0.5
BOJS IAML 02 51 46.6
comp=Z,2µm,0.4s
BOJS **Bojanci** 1.45 123 *e*Pg Pb 02 51 24.0 -0.5
BOJS *e*Sg Sb 02 51 43.1 +0.5
BOJS **Bojanci** 1.45 123 ⇑P Pb 02 51 24.0 -0.5
BOJS AML AML
comp=E,21350µm,1.3s
BOJS AML AML
comp=E,21350µm,0.7s
BOJS AML AML
comp=N,20550µm,0.5s
GOLS **Golise** 1.49 100 ⇑*i*Pg Pn 02 51 24.1 +0.1
GOLS *e*Sg Sg 02 51 45.9 -0.1
GOLS IAML 02 51 51.1
comp=Z,1µm,0.2s
KOSI **Kohlern** 1.49 277 P Pb 02 51 25.1 -0.2
KOSI AML AML
comp=N,15700µm,0.5s
KOSI AML AML
comp=N,15700µm,1.5s
KOSI AML AML
comp=E,7370µm,0.4s
OZLJ **Ozalj** 1.52 116 *e*Pn Pn 02 51 24.7 +0.3
OZLJ Sg Sb 02 51 44.4 -0.3
RJOB **Jochberg** 1.52 341 *e*Pn Pb 02 51 25.9 +0.1
SNR=54
RJOB *e*Sg Sg 02 51 47.6 +0.5
SNR=3.3
GCIS **Gornji Cirnik** 1.53 106 ⇑*i*Pg Pn 02 51 24.6 0.0
GCIS *e*Sg Sg 02 51 47.0 -0.2
GCIS IAML 02 51 50.9
comp=Z,1µm,0.4s
BOSI **Bolzano** 1.54 278 P Pb 02 51 25.4 -0.6
BOSI AML AML
comp=N,25450µm,0.4s
BOSI AML AML
comp=E,17450µm,0.7s
PANI **Panarotta** 1.54 261 P Pb 02 51 25.8 -0.4
PANI AML AML
comp=N,11870µm,0.4s
PANI AML AML
comp=E,7250µm,0.3s
ABSI **Aberstueckl** 1.58 287 P Pb 02 51 26.8 0.0
ROSI **Rosskopf** 1.58 294 ⇑P Pb 02 51 26.5 -0.5
ROSI AML AML
comp=E,8310µm,0.4s
ROSI AML AML
comp=N,7370µm,0.7s
ROSI AML AML
comp=E,8310µm,1.6s
APPI **Appiano** 1.60 277 ⇑P Pb 02 51 27.2 +0.1
APPI AML AML
comp=N,9725µm,0.4s
APPI AML AML
comp=E,8260µm,0.4s
TEOL **Teolo** 1.60 235 Pn 02 51 26.0 +0.5
TEOL Sn Sb 02 51 47.5 +0.5
TEOL **Teolo** 1.60 235 ⇓P Pn 02 51 26.3 +0.8
TEOL AML AML
comp=N,42950µm,0.9s
TEOL AML AML
comp=E,68600µm,0.5s
WTTA **Wattenberg** 1.62 307 Pb 02 51 27.2 -0.3
WTTA Sg 02 51 49.3 -0.8
WTTA **Wattenberg** 1.62 307 ⇑P Pb 02 51 27.2 -0.3
WTTA AML AML
comp=N,6690µm,0.7s
WTTA AML AML
comp=E,6770µm,0.5s
WTTA **Wattenberg** 1.62 307 *e*Pn Pb 02 51 27.7 +0.2
SNR=152
WTTA *e*Sg Sg 02 51 49.6 -0.5
SNR=4.1
WTTA **Wattenberg** 1.62 307 *e*Pg Pb 02 51 27.2 -0.3
comp=E,88nm,0.3s,SNR=466
WTTA *e*Sg Sg 02 51 49.3 -0.8
comp=E,3µm,0.5s
WTTA **Wattenberg** 1.62 307 P Pb 02 51 27.4 -0.1
MOA **Molln** 1.63 18 Pb 02 51 27.7 0.0
MOA Sg 02 51 51.0 +0.5
MOA **Molln** 1.63 18 *e*Pg Pb 02 51 27.6 0.0
MOA **Molln** 1.63 18 *e*Pn Pb 02 51 27.8 +0.1
SNR=37
MOA *e*Pg Pg 02 51 29.3 0.0
SNR=733
MOA **Molln** 1.63 18 *e*Pg Pb 02 51 27.7 0.0
comp=E,380nm,0.4s,SNR=442
MOA *e*Sg Sg 02 51 51.0 +0.5
comp=E,649nm,0.5s
MOA **Molln** 1.63 18 P Pb 02 51 27.8 0.0
ZOVE **Zovencedo** 1.65 240 P Pn 02 51 26.8 +0.5
ZOVE AML AML
comp=N,13200µm,1.1s
ZOVE AML AML
comp=E,10860µm,0.7s
ZOVE AML AML
comp=E,10305µm,0.8s
ZOVE AML AML
comp=N,13550µm,1.1s
ARSA **Arzberg** 1.67 55 Pn 02 51 27.2 +0.6
ARSA Sb 02 51 49.7 +0.5
ARSA **Arzberg** 1.67 55 *e*Pg Pn 02 51 27.2 +0.6
ARSA *e*Sg Sb 02 51 49.2 0.0
ARSA **Arzberg** 1.67 55 P Pn 02 51 27.2 +0.6
ARSA AML AML
comp=E,2925µm,1.0s
ARSA AML AML
comp=N,2205µm,1.2s
ARSA AML AML
comp=N,2205µm,0.8s
ARSA **Arzberg** 1.67 55 *e*Pn Pb 02 51 28.4 +0.1
SNR=163
ARSA *e*Sg Sb 02 51 50.1 +0.9
SNR=4.7
ARSA **Arzberg** 1.67 55 *e*Pg Pn 02 51 27.2 +0.6
comp=N,235nm,0.2s,SNR=332
ARSA *e*Sg Sb 02 51 49.7 +0.5
comp=N,632nm,0.4s
ARSA **Arzberg** 1.67 55 P Pn 02 51 27.3 +0.7
DOSS **Dosso del Somm** 1.68 256 P Pn 02 51 27.4 +0.7
DOSS S Sb 02 51 50.6 +1.2
DOSS **Dosso del Somm** 1.68 256 P Pn 02 51 27.5 +0.8
WATA **Walderalm** 1.69 309 Pb 02 51 28.6 -0.1
WATA Sg 02 51 51.6 -0.9
WATA **Walderalm** 1.69 309 *e*Pg Pb 02 51 28.6 -0.1
comp=N,222nm,0.3s,SNR=361
WATA *e*Sg Sg 02 51 51.6 -0.9
comp=N,1µm,0.6s
OZOL **Ozolo** 1.71 274 ⇑P Pb 02 51 28.7 -0.4
OZOL AML AML
comp=E,19050µm,0.5s
OZOL AML AML
comp=N,15600µm,0.7s
OZOL AML AML
comp=N,15400µm,0.6s
OZOL AML AML
comp=E,21050µm,0.5s
MARN **Marana (Italy)** 1.74 249 P Pn 02 51 28.1 +0.6
PTJ **Puntijarka** 1.75 102 *i* Pn Pn 02 51 28.1 +0.4
LOBO **Lobor** 1.77 94 *i* Pn Pn 02 51 27.6 -0.3
ZAG **Zagreb** 1.78 104 *e*Pn Pn 02 51 28.9 +0.9
ZAG **Zagreb** 1.78 104 P Pn 02 51 28.0 0.0
ZAG AML AML
comp=E,7025µm,1.2s
ZAG AML AML
comp=N,10705µm,0.6s
ZAG AML AML
comp=E,7025µm,0.8s
RABC **Rab** 1.78 150 *i* Pn Pb 02 51 29.8 -0.4
RABC Sn Sb 02 51 53.0 +0.6
GAGG **Gaggia** 1.79 264 P Pn 02 51 29.3 +1.0
GAGG **Gaggia** 1.79 264 ⇑P Pn 02 51 29.3 +1.0
GAGG AML AML
comp=E,6440µm,1.0s
GAGG AML AML
comp=N,6630µm,1.0s
GAGG AML AML
comp=E,7595µm,0.6s
GAGG AML AML
comp=N,6630µm,1.0s
GAGG AML AML
comp=N,7350µm,0.6s
TREG **Tregnago** 1.82 246 P Pn 02 51 29.4 +0.8
TREG AML AML
comp=E,22600µm,0.4s
TREG AML AML
comp=N,19900µm,0.4s
LUSI **Trento, Gardas** 1.82 260 ⇑P Pn 02 51 29.5 +0.8
LUSI AML AML
comp=N,10215µm,0.4s
LUSI AML AML
comp=E,7120µm,0.4s
SQTA **Sankt Quirin** 1.84 301 Pb 02 51 31.0 -0.2
SQTA Sg 02 51 58.0 +0.8
SQTA **Sankt Quirin** 1.84 301 *e*Pn Pb 02 51 31.4 +0.2
SNR=227
SQTA *e*Sg Sg 02 51 57.8 +0.7
SNR=1.6
SQTA **Sankt Quirin** 1.84 301 *e*Pg Pb 02 51 31.0 -0.2
comp=E,491nm,0.4s,SNR=510
SQTA *e*Sg Sg 02 51 58.0 +0.8
comp=E,841nm,0.5s
VARA **Varagna** 1.89 256 ⇑P Pn 02 51 30.4 +0.7
VARA AML AML
comp=E,8870µm,0.8s
VARA AML AML
comp=N,8810µm,0.3s
VARA AML AML
comp=E,8870µm,1.2s
VARA AML AML
comp=E,10325µm,0.6s
VARA AML AML
comp=N,10015µm,0.6s
KOGS **Kog** 1.90 85 ⇑*i*Pn Pn 02 51 29.4 -0.2
KOGS *i* Pg Pb 02 51 31.3 -0.8
KOGS Sg Sg 02 51 58.9 0.0
KOGS IAML 02 52 06.1
comp=Z,526nm,0.2s
OPPE **Oppeano** 1.92 240 P Pb 02 51 31.9 -0.6
OPPE AML AML
comp=E,23900µm,1.2s
OPPE AML AML
comp=N,17050µm,0.9s
OPPE AML AML
comp=E,23900µm,0.8s
OPPE AML AML
comp=N,17050µm,1.1s
MBAL **Monte Baldo -** 1.95 253 P Pn 02 51 31.4 +0.9
MBAL AML AML
comp=E,4375µm,1.5s
MBAL AML AML
comp=N,5605µm,0.5s
MBAL AML AML
comp=E,4375µm,0.5s
MBAL AML AML
comp=N,5605µm,1.5s
MBAL AML AML
comp=N,4180µm,0.9s
MBAL AML AML
comp=E,5470µm,0.8s
CARE **Lago del Cares** 1.96 275 P Pn 02 51 31.6 +0.8
CARE AML AML
comp=E,1690µm,0.7s
CARE AML AML
comp=N,2455µm,1.3s
CARE AML AML
comp=E,1865µm,0.6s
CARE AML AML
comp=N,2665µm,1.3s
CARE AML AML
comp=E,1865µm,1.4s
CARE AML AML
comp=N,2455µm,0.7s
CARE AML AML
comp=E,1690µm,1.3s
CARE AML AML
comp=N,2665µm,0.7s
MOTA **Moosalm** 1.96 303 Pb 02 51 33.1 -0.3
MOTA Sg 02 52 00.3 -0.8
MOTA **Moosalm** 1.96 303 *e*Pn Pb 02 51 33.4 0.0
SNR=131
MOTA *e*Sg Sg 02 52 00.9 -0.2
SNR=3.8
MOTA **Moosalm** 1.96 303 *e*Pn Pb 02 51 33.1 -0.3
comp=N,300nm,0.5s,SNR=379
MOTA *e*Sg Sg 02 52 00.3 -0.8
comp=N,1µm,0.8s
FERS **Ferrara-Casagl** 1.97 226 P Pn 02 51 31.2 +0.6
BALD **Monte Baldo** 1.98 253 P Pn 02 51 31.7 +0.7
BALD **Monte Baldo** 1.98 253 P Pn 02 51 31.3 +0.3
SERM **Sermide** 2.02 231 P Pn 02 51 32.6 +1.2
SERM AML AML
comp=E,6835µm,0.4s
SERM AML AML
comp=E,11565µm,0.6s
SERM AML AML
comp=N,10550µm,0.5s
SERM AML AML
comp=E,11565µm,1.4s
SERM AML AML
comp=N,10550µm,1.5s
SERM AML AML
comp=N,6280µm,0.5s
RONC **Roncone** 2.04 262 ⇑P Pn 02 51 32.8 +1.0
RONC AML AML
comp=E,7005µm,0.9s
RONC AML AML
comp=N,13400µm,0.6s
RONC AML AML
comp=E,7005µm,1.1s
RONC AML AML
comp=N,7210µm,1.0s
RONC AML AML
comp=E,12550µm,0.6s
KALN **Kalnik** 2.04 94 *e*Pn Pn 02 51 31.5 -0.2
PLIT **Plitvice** 2.05 133 *i* Pn Pn 02 51 33.2 +1.4
FETA **Feichten** 2.05 292 Pb 02 51 34.1 -0.8
FETA Sg 02 52 02.8 -1.3
FETA **Feichten** 2.05 292 *e*Pn Pb 02 51 34.1 -0.8
comp=E,166nm,0.5s,SNR=279
FETA *e*Sg Sg 02 52 02.8 -1.3
comp=E,1µm,1.0s
ZEN8 **San Zeno di Mo** 2.06 252 P Pb 02 51 33.6 -1.2
MOSI **Grossmontoni** 2.08 280 P Pn 02 51 33.7 +1.3
MOSI AML AML
comp=N,9635µm,0.9s
MOSI AML AML
comp=E,7020µm,0.7s
MAGA **Magasa** 2.08 256 ⇑P Pn 02 51 33.1 +0.8
MAGA AML AML
comp=E,26700µm,0.5s
MAGA AML AML
comp=N,11650µm,0.4s
MABI **Malga Bissina** 2.10 264 P Pn 02 51 33.9 +1.2
MABI AML AML
comp=N,2180µm,0.6s
MABI AML AML
comp=E,2155µm,0.5s
BAG8 **Bagolino** 2.18 258 P Pb 02 51 35.6 -1.4
BRMO **Bormio** 2.19 276 P Pn 02 51 35.1 +1.3
BRMO **Bormio** 2.19 276 P Pn 02 51 35.1 +1.3
BRMO AML AML
comp=E,1495µm,1.3s
BRMO AML AML
comp=N,1735µm,0.8s
BRMO AML AML
comp=N,1735µm,1.2s
BRMO AML AML
comp=E,1495µm,0.7s
FIU **Minerbio Fiu** 2.19 221 P Pn 02 51 34.6 +1.0
FIU AML AML
comp=N,11250µm,0.6s
FIU AML AML
comp=E,10140µm,0.7s
SALO **Salr** 2.20 253 Pn 02 51 34.7 +0.9
SALO **Salr** 2.20 253 P Pn 02 51 34.9 +1.1
SALO AML AML
comp=N,7920µm,0.7s
SALO AML AML
comp=E,6105µm,1.3s

SALO AML AML
comp=N,7680µm,0.7s
SALO AML AML
comp=N,7920µm,1.3s
SALO AML AML
comp=E,6110µm,1.3s
SALO AML AML
comp=N,7680µm,1.3s
VOBA Vobarno 2.21 254 P Pn 02 51 35.4 +1.6
SBPO S.Benedetto Po 2.21 237 P Pn 02 51 34.8 +0.9
MNTV Mantova 2.23 240 P Pb 02 51 36.8 -1.1
RETA Reutte 2.23 303 Pb 02 51 36.8 -1.2
RETA **Sg 02 52 09.6 -0.2**
RETA Reutte 2.23 303 *e*Pn **Pb 02 51 36.8 -1.2**
SNR=94
RETA *e*Pg **Pg 02 51 40.3 -0.5**
SNR=9.0
RETA *e*Sg **Sg 02 52 09.4 -0.4**
SNR=2.7
RETA Reutte 2.23 303 *i* Pn **Pb 02 51 36.8 -1.2**
comp=N,327nm,0.4s,SNR=365
RETA *i* Sg **Sg 02 52 09.6 -0.2**
comp=N,756nm,0.8s
BEHE Becsehely 2.26 84 Pn 02 51 34.2 -0.3
BEHE Becsehely 2.26 84 ⇑ *i* Pn **Pn 02 51 34.3 -0.3**
BEHE Becsehely 2.26 84 P **Pn 02 51 35.5 +0.9**
BRSN Barisano 2.26 207 P **Pn 02 51 35.5 +1.0**
BRSN AML AML
comp=E,6200µm,0.7s
BRSN AML AML
comp=E,6020µm,0.7s
BRSN AML AML
comp=N,8325µm,0.9s
BRSN AML AML
comp=E,6200µm,1.3s
BRSN AML AML
comp=E,6020µm,1.3s
BRSN AML AML
comp=N,8240µm,1.0s
FUORN Ofenpass-Fuorn 2.27 279 Pn 02 51 35.9 +0.8
FUORN Ofenpass-Fuorn 2.27 279 P **Pn 02 51 35.9 +0.8**
FUORN AML AML
comp=N,1780µm,1.5s
FUORN AML AML
comp=N,1780µm,0.5s
FUORN AML AML
comp=E,1180µm,0.7s
FUORN Ofenpass-Fuorn 2.27 279 P **Pn 02 51 36.8 +1.8**
CAVE Cavezzo 2.28 232 P **Pn 02 51 35.2 +0.4**
VIRC Vir 2.28 151 *i* Pn **Pn 02 51 35.9 +1.1**
VIRC Sn **Sn 02 52 04.3 +1.8**
BLLA Bellaria 2.28 199 P **Pn 02 51 35.3 +0.5**
CONA Conrad Observa 2.28 44 *e*Pn **Pn 02 51 35.7 +0.7**
comp=E,33nm,0.5s,SNR=162
CONA *e*Pg **Pg 02 51 40.9 -0.8**
comp=E,86nm,0.4s
CONA *e*Sg **Sg 02 52 11.0 -0.4**
comp=E,1µm,1.0s
RAVA Ravarino 2.29 228 P **Pn 02 51 35.9 +0.9**
RAVA AML AML
comp=N,27350µm,0.6s
RAVA AML AML
comp=E,17950µm,0.5s
IMOL Imola, Italy 2.31 214 P **Pn 02 51 36.1 +0.8**
IMOL AML AML
comp=E,4345µm,0.8s
IMOL AML AML
comp=N,4025µm,0.5s
MOSL Moslavina 2.36 106 *i* Pn **Pn 02 51 35.8 -0.2**
RONA Rosalia, Austr 2.36 53 Pn 02 51 36.7 +0.6
RONA **Pg 02 51 41.7 -1.5**
RONA **Sg 02 52 12.7 -1.1**
RONA Rosalia, Austr 2.36 53 *e*Pn **Pn 02 51 36.7 +0.6**
comp=N,12nm,0.2s,SNR=151
RONA *e*Pg **Pg 02 51 41.7 -1.5**
comp=N,692nm,0.7s
RONA *e*Sg **Sg 02 52 12.7 -1.1**
comp=N,546nm,0.5s
UDBI Udbina 2.37 137 *e*Pn **Pn 02 51 37.8 +1.5**
CNCS Concesio 2.41 254 P **Pn 02 51 37.5 +0.9**
PESA Pesaro 2.41 192 ⇓P **Pn 02 51 37.4 +0.8**
PESA AML AML
comp=E,2920µm,1.0s
PESA AML AML
comp=N,3495µm,0.8s
PESA AML AML
comp=E,2920µm,1.0s
MTRZ Monterenzio 2.41 218 P **Pb 02 51 38.9 -2.0**
FUR Furstenfeldbru 2.41 321 *e*Pn **Pn 02 51 38.7 +1.9**
SNR=6.6
FUR *e*Pg **Pg 02 51 43.3 -0.9**
SNR=9.9
FUR *e*Sg **Sg 02 52 15.4 -0.1**
SNR=5.0
FUR Furstenfeldbru 2.41 321 P **Pn 02 51 38.7 +1.9**
ZONE Zone 2.43 259 ⇑P **Pn 02 51 38.0 +0.9**
ZONE AML AML
comp=N,822µm,0.5s
ZONE AML AML
comp=E,2680µm,0.3s
ZONE AML AML
comp=N,3235µm,0.5s
ZONE AML AML
comp=N,3235µm,1.5s
ZONE AML AML
comp=E,669µm,0.3s
ZONE AML AML
comp=N,822µm,1.5s
RSM Repubblica di 2.49 198 P **Pn 02 51 38.4 +0.6**
SOP Sopron 2.50 55 P **Pn 02 51 38.8 +0.9**
WINA Alland / Wiene 2.51 43 *e*Pn **Pn 02 51 38.9 +0.9**
comp=N,13nm,0.2s,SNR=129
WINA *e*Pg **Pg 02 51 44.7 -1.4**
comp=N,203nm,0.4s
WINA *e*Sg **Sg 02 52 18.4 -0.2**
comp=N,2µm,1.0s
GEC2 GERESS Array S 2.55 3 Pn 02 51 39.8 +1.0
GEC2 GERESS Array S 2.55 3 *e*Pn **Pn 02 51 40.0 +1.2**
SNR=46
GEC2 *e*Pg **Pb 02 51 44.9 +1.6**
SNR=12
GEC2 *e*Sg **Sg 02 52 19.0 -1.0**
SNR=2.4
GERES GERESS Array B 2.55 3 Pn **Pn 02 51 39.7 +1.0**
comp=N,1.4nm,0.3s,baz=174,slow=13,SNR=195
GERES Lg Lg 02 52 19.9
comp=N,18nm,0.3s,baz=178,slow=28,SNR=6.6
comp=N,62nm,0.4s
DUGI Dugi Otok 2.55 154 *e*Pn **Pn 02 51 39.5 +0.8**
DAVOX Davos/Dischmat 2.56 282 Pn **Pb 02 51 41.3 -2.3**
comp=N,37nm,0.3s,baz=111,slow=11,SNR=299
DAVOX Lg Lg 02 52 21.5
comp=N,62nm,0.3s,baz=299,slow=17,SNR=10.0
DAVOX LR LR 02 53 00.2
comp=N,192nm,18.1s,baz=55,slow=46
comp=N,211nm,0.7s
DAVOX Davos/Dischmat 2.56 282 P **Pb 02 51 41.3 -2.3**
DAVOX AML AML
comp=N,5195µm,0.6s
DAVOX AML AML
comp=E,4535µm,0.5s
LMD Lutirano 2.57 211 ⇓P **Pn 02 51 39.0 +0.1**
LMD AML AML
comp=E,1435µm,1.3s
LMD AML AML
comp=E,1435µm,0.7s
LMD AML AML
comp=N,1455µm,0.3s
CRTC Cartoceto 2.57 190 ⇓P **Pn 02 51 39.7 +0.8**
CRTC AML AML
comp=E,3130µm,0.4s
CRTC AML AML
comp=N,4805µm,0.6s
VISG Visignano 2.57 216 ⇓P **Pn 02 51 39.4 +0.4**
VISG AML AML
comp=E,1370µm,0.7s
VISG AML AML
comp=N,1260µm,1.3s
VISG AML AML
comp=N,1260µm,0.7s
BRIS BRISIGHELLA 2.58 214 ⇓P **Pn 02 51 37.4 -1.5**
BRIS AML AML
comp=E,3320µm,0.7s
BRIS AML AML
comp=N,2505µm,0.7s
BRIS AML AML
comp=E,3320µm,1.3s
BRIS AML AML
comp=N,2505µm,1.3s
CKRC Cesky Krumlov 2.58 12 *e*PN **Pn 02 51 39.7 +0.7**
CKRC *e*PG **Pb 02 51 45.0 +1.2**
CKRC *e*SG **Sb 02 52 18.0 +2.8**
comp=N,663nm,0.7s
CKRC AMS AMS 02 52 30.0
comp=N,800nm,7.9s
SENI Senigallia 2.60 185 ⇓P **Pn 02 51 40.4 +1.1**
SENI AML AML
comp=E,5365µm,1.5s
SENI AML AML
comp=N,5225µm,1.3s
SENI AML AML
comp=N,1705µm,0.7s
SENI AML AML
comp=E,5365µm,0.5s
SENI AML AML
comp=N,5225µm,0.7s
SENI AML AML
comp=E,1955µm,0.7s
CPGN Carpegna, Ital 2.64 199 P **Pn 02 51 40.6 +0.7**
CPGN AML AML
comp=N,1260µm,0.7s
CPGN AML AML
comp=N,1725µm,1.1s
CPGN AML AML
comp=N,1725µm,0.9s
CPGN AML AML
comp=E,1365µm,0.7s
CPGN AML AML
comp=E,1960µm,0.6s
ZCCA Zocca 2.65 224 Pn 02 51 41.6 +1.5
ZCCA Zocca 2.65 224 P **Pn 02 51 41.5 +1.5**
SFI Santa Sofia 2.67 207 P **Pn 02 51 40.5 +0.2**
SFI AML AML
comp=E,1480µm,0.5s
SFI AML AML
comp=N,1563µm,0.6s
SFI AML AML
comp=E,1475µm,0.5s
SFI AML AML
comp=N,1510µm,0.6s
SFI AML AML
comp=E,1475µm,1.5s
SFI AML AML
comp=N,1563µm,1.4s
SFI AML AML
comp=N,1510µm,1.4s
SFI AML AML
comp=E,1480µm,1.5s
DAVA Damuels 2.69 293 Pn 02 51 42.9 +2.3
DAVA **Sg 02 52 23.9 -0.5**
DAVA Damuels 2.69 293 *e*Pn **Pn 02 51 43.1 +2.4**
SNR=33
DAVA *e*Pg **Pg 02 51 48.8 -0.7**
SNR=6.0
DAVA Damuels 2.69 293 *e*Pn **Pn 02 51 42.9 +2.3**
comp=E,83nm,0.3s,SNR=127
DAVA *e*Sg **Sg 02 52 23.9 -0.5**
comp=E,767nm,0.5s
DAVA Damuels 2.69 293 P **Pn 02 51 43.0 +2.3**
COR1 Corinaldo 2.69 188 ⇓P **Pn 02 51 41.9 +1.3**
COR1 AML AML
comp=E,3735µm,0.6s
COR1 AML AML
comp=N,3360µm,1.0s
COR1 AML AML
comp=E,2045µm,0.6s
COR1 AML AML
comp=E,2045µm,1.4s
COR1 AML AML
comp=E,3735µm,1.4s
COR1 AML AML
comp=N,2680µm,1.0s
PE3 Peglio 2.70 196 ⇓P **Pn 02 51 41.4 +0.6**
PE3 AML AML
comp=N,6995µm,0.5s
PE3 AML AML
comp=E,5770µm,0.5s
MDI Monti di Nese 2.71 260 P **Pn 02 51 41.5 +0.6**
MDI AML AML
comp=E,2217µm,1.3s
MDI AML AML
comp=E,2125µm,1.3s
MDI AML AML
comp=N,2485µm,0.5s
MDI AML AML
comp=E,2217µm,0.7s
MDI AML AML
comp=N,2260µm,0.6s
MDI AML AML
comp=E,2125µm,0.7s
SEI Scarperia 2.72 215 ⇑P **Pn 02 51 41.8 +0.9**
SEI AML AML
comp=N,3925µm,0.7s
SEI AML AML
comp=E,3700µm,0.5s
SEI AML AML
comp=N,3925µm,1.3s
FNVD Fontana Vidola 2.72 219 P **Pn 02 51 41.5 +0.4**
FNVD AML AML
comp=E,2655µm,0.8s
FNVD AML AML
comp=N,1685µm,0.9s
FNVD AML AML
comp=E,2655µm,1.2s
MPAG Monte Paganucc 2.72 192 ⇓P **Pn 02 51 41.3 +0.2**
MPAG AML AML
comp=N,1229µm,0.5s
MPAG AML AML
comp=N,1255µm,0.7s
MPAG AML AML
comp=N,1229µm,1.5s
MPAG AML AML
comp=E,1340µm,1.0s
MPAG AML AML
comp=E,1325µm,1.0s
PRMA PARMA 2.73 237 Pn 02 51 40.6 -0.4
PRMA PARMA 2.73 237 P **Pn 02 51 42.8 +1.8**
AOI Ancona 2.75 179 ⇓P **Pn 02 51 42.1 +0.7**
AOI AML AML
comp=E,1335µm,0.8s
AOI AML AML
comp=N,1255µm,0.5s
NARO Abbazia di Nar 2.77 194 ⇓P **Pn 02 51 41.9 +0.2**
NARO AML AML
comp=E,877µm,0.6s
NARO AML AML
comp=N,886µm,1.0s
ASQU Asqua 2.79 207 P **Pn 02 51 42.2 +0.3**
ASQU AML AML
comp=N,1225µm,0.5s
ASQU AML AML
comp=E,1255µm,0.6s
PARC Parchiule 2.80 199 P **Pn 02 51 42.1 0.0**
PARC AML AML
comp=E,1225µm,0.6s
PARC AML AML
comp=N,1059µm,0.6s
PARC AML AML
comp=E,1225µm,1.4s
ARVD Arcevia 2.83 189 ⇓P **Pn 02 51 43.1 +0.6**
ARVD AML AML
comp=E,940µm,0.8s
ARVD AML AML
comp=N,668µm,0.6s
KHC Kasperske Hory 2.83 1 *e*PN **Pn 02 51 43.6 +1.0**
KHC *e*PG **Pb 02 51 49.7 +1.5**
KHC *e*SG **Sg 02 52 26.8 -2.2**
comp=N,392nm,0.5s
KHC AMS AMS 02 52 40.0
comp=N,800nm,10.6s
KHC Kasperske Hory 2.83 1 Pn 02 51 43.6 +1.0
KHC Kasperske Hory 2.83 1 P **Pn 02 51 43.7 +1.1**
NEVI Neviano degli 2.83 234 P **Pn 02 51 43.9 +1.4**
FRON Frontone 2.84 192 ⇓P **Pn 02 51 43.0 +0.4**
FRON AML AML
comp=E,1860µm,0.6s
FRON AML AML
comp=N,1265µm,0.5s
RUFI Rufina 2.84 211 P **Pn 02 51 43.3 +0.7**
APEC Apecchio 2.85 196 ⇓P **Pn 02 51 43.3 +0.5**
APEC AML AML
comp=E,2935µm,0.9s
APEC AML AML
comp=E,2365µm,0.9s
APEC AML AML
comp=N,1685µm,1.6s
APEC AML AML
comp=E,2365µm,1.1s
APEC AML AML
comp=N,1685µm,0.4s
APEC AML AML
comp=N,1770µm,0.5s
PIEI Pieia 2.85 195 ⇓P **Pn 02 51 42.9 +0.2**
PIEI AML AML
comp=E,1335µm,0.3s
PIEI AML AML
comp=N,942µm,0.4s
WET Wettzell 2.88 352 *e*Pn **Pn 02 51 44.1 +0.9**
SNR=62
WET *e*Pg **Pg 02 51 51.4 -1.7**
SNR=3.4
WET *e*Sn **Sn 02 52 18.4 +0.9**
WET *e*Sg **Sg 02 52 28.4 -2.0**
SNR=2.6
WET Wettzell 2.88 352 P **Pn 02 51 44.1 +0.9**
MORI Morici 2.88 147 *i* Pn **Pn 02 51 44.8 +1.6**
TUE Stuetta 2.90 275 Pn 02 51 44.5 +1.0
TUE Stuetta 2.90 275 P **Pn 02 51 44.8 +1.3**
TUE AML AML
comp=E,621µm,0.7s
TUE AML AML
comp=N,568µm,0.8s
TUE AML AML
comp=E,596µm,0.7s
TUE AML AML
comp=N,568µm,1.2s
TUE AML AML
comp=E,621µm,1.3s
TUE AML AML
comp=N,558µm,1.0s
TUE Stuetta 2.90 275 P **Pn 02 51 44.3 +0.8**
TUE Stuetta 2.90 275 P **Pn 02 51 45.7 +2.1**
MPLH Magyarpolny 2.90 71 P **Pn 02 51 44.3 +0.9**
MPLH Magyarpolny 2.90 71 P **Pn 02 51 43.4 0.0**
SSP9 Sansepolcro 2.90 200 P **Pn 02 51 44.6 +1.2**
SSP9 AML AML
comp=E,1018µm,1.1s
SSP9 AML AML
comp=N,1054µm,0.8s
CRE Caprese Michel 2.90 203 ⇓P **Pn 02 51 44.5 +0.9**
CRE AML AML
comp=E,1065µm,1.5s
CRE AML AML
comp=N,1265µm,0.5s
GRC3 Grafenberg Arr 2.91 334 P **Pn 02 51 44.4 +0.8**
MPPT Montemurlo 2.91 217 P **Pn 02 51 44.6 +1.0**
MPPT AML AML
comp=N,1720µm,0.8s
MPPT AML AML
comp=N,1720µm,1.2s
MPPT AML AML
comp=E,1090µm,1.0s
ATBU Serra di Buran 2.91 194 ⇓P **Pn 02 51 44.1 +0.5**
SSFR Montelago di S 2.91 191 ⇓P **Pn 02 51 44.0 +0.4**
SSFR AML AML
comp=E,1400µm,1.5s
SSFR AML AML
comp=N,2165µm,0.6s
SSFR AML AML
comp=E,1365µm,1.3s
SSFR AML AML
comp=N,1800µm,0.5s
SSFR AML AML
comp=E,1400µm,0.5s
SSFR AML AML
comp=N,2165µm,1.4s
SSFR AML AML
comp=N,1800µm,1.5s
SSFR AML AML
comp=E,1365µm,0.7s
ATPC Poggio Castell 2.92 195 P **Pn 02 51 44.0 +0.3**
PP3 Marolino 2.92 179 P **Pn 02 51 44.4 +0.7**
BADI Badiali 2.93 198 ⇓P **Pn 02 51 44.4 +0.5**
BADI AML AML
comp=N,1260µm,1.4s
BADI AML AML
comp=E,1240µm,0.8s
BADI AML AML
comp=N,1260µm,0.6s
CING Cingoli 2.93 185 ⇓P **Pn 02 51 44.4 +0.4**
ATSC Scheggia e Pas 2.94 192 P **Pn 02 51 44.2 +0.2**
PCN Piacenza 2.95 246 P **Pn 02 51 46.2 +2.1**
PCN AML AML
comp=N,2865µm,0.7s
PCN AML AML
comp=E,2545µm,0.6s
PCN AML AML
comp=N,3005µm,0.7s
PCN AML AML
comp=N,3005µm,1.3s
PCN AML AML
comp=N,2865µm,1.3s
PCN AML AML
comp=E,2655µm,0.6s
PLONS Plons/SG 2.95 286 P **Pn 02 51 46.2 +2.1**
PLONS AML AML
comp=E,527µm,0.9s
PLONS AML AML
comp=N,748µm,0.8s
PLONS Plons/SG 2.95 286 *e*Pn **Pn 02 51 46.6 +2.4**
SNR=26
GRC2 Grafenberg Arr 2.95 331 P **Pn 02 51 45.0 +0.8**
ATPI Pietralunga - 2.96 196 ⇓P **Pn 02 51 44.7 +0.5**
ATPI AML AML
comp=N,1100µm,1.3s
ATPI AML AML
comp=N,984µm,1.3s
ATPI AML AML
comp=N,1100µm,0.7s
ATPI AML AML
comp=E,1955µm,0.6s
ATPI AML AML
comp=E,1910µm,0.6s
ATPI AML AML
comp=N,984µm,0.7s
POPM Popiglio 2.98 222 ⇓P **Pn 02 51 45.4 +0.8**
POPM AML AML
comp=E,1110µm,0.9s
POPM AML AML
comp=N,1032µm,0.9s
EL6 Elcito 2.98 186 P **Pn 02 51 45.1 +0.5**
EL6 AML AML
comp=E,1735µm,0.7s
EL6 AML AML
comp=N,1920µm,1.3s
EL6 AML AML
comp=N,1920µm,0.7s
ATMC Monte Cedrone 3.00 199 ⇓P **Pn 02 51 45.6 +0.6**
BLY Banja Luka 3.00 120 Pn 02 51 44.6 -0.3
BLY Banja Luka 3.00 120 *e*Pn **Pn 02 51 44.6 -0.3**
BLY Banja Luka 3.00 120 P **Pn 02 51 45.2 +0.3**
BLY Banja Luka 3.00 120 ⇑ *i* Pn **Pn 02 51 44.8 -0.1**
BLY Banja Luka 3.00 120 P **Pn 02 51 47.2 +2.4**
ATFO Monte Foce - G 3.01 193 ⇓P **Pn 02 51 45.4 +0.4**
ATFO AML AML
comp=E,2405µm,0.8s
ATFO AML AML
comp=N,1750µm,1.0s
GRC1 Grafenberg Arr 3.02 334 P **Pn 02 51 45.8 +0.7**
ATVO AVT- Monte Val 3.02 196 ⇓P **Pn 02 51 45.7 +0.6**
ATVO AML AML
comp=E,1113µm,0.7s
ATVO AML AML
comp=N,1425µm,1.4s
ATVO AML AML
comp=N,1425µm,0.6s
ZIRJ Zirje 3.04 150 *i* Pn **Pn 02 51 46.7 +1.3**
BDI Bagni Di Lucca 3.05 224 P **Pn 02 51 46.4 +0.9**
BDI AML AML
comp=E,1335µm,0.7s
BDI AML AML
comp=E,1295µm,0.9s
BDI AML AML
comp=N,1430µm,0.5s
BDI AML AML
comp=N,1460µm,0.5s
BDI AML AML
comp=E,1335µm,1.3s
KIJV Kijevo 3.07 137 *e*Pn **Pn 02 51 47.0 +1.2**

SNTG	**Esanatoglia**	**3.07**	**188**	⇓P	**Pn**	**02 51 46.4**	**+0.6**
SNTG				AML	AML		
	comp=E,1210µm,0.5s						
SNTG				AML	AML		
	comp=N,1090µm,0.7s						
SNTG				AML	AML		
	comp=E,1225µm,0.5s						
SNTG				AML	AML		
	comp=N,1105µm,0.7s						
GRB5	**Grafenberg Arr**	**3.08**	**337**	P	**Pn**	**02 51 46.6**	**+0.7**
ATLO	**AVT- Montelove**	**3.09**	**195**	P	**Pn**	**02 51 46.5**	**+0.5**
ATMI	**Monte Miggiano**	**3.10**	**197**	⇓P	**Pn**	**02 51 47.1**	**+1.0**
ATMI				AML	AML		
	comp=E,1605µm,1.0s						
ATMI				AML	AML		
	comp=N,2445µm,0.6s						
GRC4	**Grafenberg Arr**	**3.10**	**335**	P	**Pn**	**02 51 46.8**	**+0.6**
MURB	**Monte Urbino**	**3.12**	**194**		**Pn**	**02 51 46.8**	**+0.3**
MURB	**Monte Urbino**	**3.12**	**194**	P	**Pn**	**02 51 47.2**	**+0.7**
MURB				AML	AML		
	comp=E,2400µm,0.3s						
MURB				AML	AML		
	comp=N,2085µm,0.4s						
MURB				AML	AML		
	comp=E,2460µm,0.8s						
MURB				AML	AML		
	comp=N,2305µm,1.1s						
MURB				AML	AML		
	comp=N,2305µm,0.9s						
MURB				AML	AML		
	comp=E,2460µm,1.2s						
MURB				AML	AML		
	comp=E,2400µm,1.7s						
ATVA	**AVT- Monte Val**	**3.15**	**197**	P	**Pn**	**02 51 47.8**	**+0.9**
MNTP	**Montappone**	**3.16**	**181**	P	**Pn**	**02 51 47.5**	**+0.5**
ZVC	**Zvikov**	**3.17**	**8**	*e*PN	**Pn**	**02 51 48.3**	**+1.1**
ATCC	**AVT- Casa Cast**	**3.18**	**192**	⇓P	**Pn**	**02 51 47.9**	**+0.6**
ATCC				AML	AML		
	comp=N,1260µm,0.9s						
ATCC				AML	AML		
	comp=E,2785µm,0.6s						
SAP2	**Sant'Angelo in**	**3.20**	**182**	P	**Pn**	**02 51 48.2**	**+0.6**
SAP2				AML	AML		
	comp=E,960µm,1.2s						
SAP2				AML	AML		
	comp=E,960µm,0.8s						
SAP2				AML	AML		
	comp=N,8735µm,0.4s						
MML1	**Montelago di S**	**3.21**	**187**	⇓P	**Pn**	**02 51 48.1**	**+0.3**
CSP1	**Cessapalombo**	**3.21**	**184**	P	**Pn**	**02 51 48.0**	**+0.1**
GRB2	**Grafenberg Arr**	**3.23**	**338**	P	**Pn**	**02 51 48.8**	**+0.9**
MNTT	**Montottone**	**3.24**	**179**	⇓P	**Pn**	**02 51 48.9**	**+0.8**
MNTT				AML	AML		
	comp=E,2400µm,0.4s						
MNTT				AML	AML		
	comp=N,2830µm,0.4s						
MNTT				AML	AML		
	comp=N,2830µm,1.6s						
GUMA	**Gualdo di Mace**	**3.24**	**182**		**Pn**	**02 51 48.4**	**+0.3**
GUMA	**Gualdo di Mace**	**3.24**	**182**	⇓P	**Pn**	**02 51 48.5**	**+0.4**
GUMA				AML	AML		
	comp=E,3255µm,0.6s						
GUMA				AML	AML		
	comp=N,2480µm,1.6s						
GUMA				AML	AML		
	comp=E,3425µm,0.5s						
GUMA				AML	AML		
	comp=N,2480µm,0.4s						
GUMA				AML	AML		
	comp=N,2405µm,0.6s						
GRB3	**Grafenberg Arr**	**3.26**	**340**	P	**Pn**	**02 51 49.5**	**+1.2**
FDMO	**Fiordimonte**	**3.28**	**186**		**Pn**	**02 51 48.8**	**+0.1**
FDMO	**Fiordimonte**	**3.28**	**186**	⇓P	**Pn**	**02 51 48.9**	**+0.3**
FDMO				AML	AML		
	comp=E,678µm,1.5s						
FDMO				AML	AML		
	comp=E,678µm,0.5s						
FDMO				AML	AML		
	comp=N,608µm,0.6s						
MODS	**Modra-Piesok**	**3.29**	**50**	P	**Pn**	**02 51 49.6**	**+0.8**
MODS	**Modra-Piesok**	**3.29**	**50**	*e*PN	**Pn**	**02 51 49.3**	**+0.5**
MODS				*e*PG	**Pg**	**02 51 59.2**	**-1.8**
MODS				*e*SG	**Sg**	**02 52 40.9**	**-2.7**
MODS				*e*		03 19 06.5	
MF5	**Montefalcone A**	**3.31**	**181**	⇓P	**Pn**	**02 51 49.4**	**+0.3**
MF5				AML	AML		
	comp=E,1240µm,1.6s						
MF5				AML	AML		
	comp=N,1910µm,0.5s						
MF5				AML	AML		
	comp=N,1910µm,1.5s						
MF5				AML	AML		
	comp=E,1240µm,0.4s						
ASSB	**Assisi San Ben**	**3.31**	**191**	⇓P	**Pn**	**02 51 49.6**	**+0.4**
ASSB				AML	AML		
	comp=E,1130µm,1.1s						
ASSB				AML	AML		
	comp=N,898µm,0.6s						
ASSB				AML	AML		
	comp=E,1130µm,0.9s						
CESI	**CESI - Serrava**	**3.32**	**188**	⇓P	**Pn**	**02 51 49.6**	**+0.3**
CESI				AML	AML		
	comp=N,922µm,1.1s						
CESI				AML	AML		
	comp=E,986µm,0.8s						
PII	**Pisa**	**3.34**	**221**	⇓P	**Pn**	**02 51 49.6**	**+0.2**
PII				AML	AML		
	comp=E,1312µm,0.8s						
PII				AML	AML		
	comp=N,1135µm,0.4s						
PII				AML	AML		
	comp=N,1135µm,1.6s						
PII				AML	AML		
	comp=E,1312µm,1.2s						
GRB1	**Grafenberg Arr**	**3.34**	**339**	P	**Pn**	**02 51 50.3**	**+0.8**
OFFI	**Offida**	**3.37**	**178**	⇓P	**Pn**	**02 51 50.8**	**+0.9**
OFFI				AML	AML		
	comp=N,2655µm,0.7s						
OFFI				AML	AML		
	comp=E,2800µm,0.6s						
FUSIO	**Fusio**	**3.37**	**274**	P	**Pn**	**02 51 52.0**	**+2.1**
FUSIO				AML	AML		
	comp=E,538µm,1.5s						
FUSIO				AML	AML		
	comp=N,494µm,0.9s						
FUSIO				AML	AML		
	comp=E,538µm,0.5s						
FUSIO				AML	AML		
	comp=N,494µm,1.1s						
KRUC	**Moravsky**	**3.38**	**34**	*e*PN	**Pn**	**02 51 49.8**	**-0.2**
KRUC				*e*SG	**Sb**	**02 52 41.5**	**+3.3**
KRUC	**Moravsky**	**3.38**	**34**	P	**Pn**	**02 51 51.7**	**+1.7**
MC2	**Monte Cornacci**	**3.39**	**184**	P	**Pn**	**02 51 50.5**	**+0.1**
MMO1	**Montemonaco**	**3.40**	**182**	⇓P	**Pn**	**02 51 50.3**	**-0.1**
GRB4	**Grafenberg Arr**	**3.44**	**338**	P	**Pn**	**02 51 51.6**	**+0.8**
PLMA	**Palmaria, Port**	**3.44**	**230**	P	**Pn**	**02 51 51.8**	**+1.0**
PLMA				AML	AML		
	comp=N,1006µm,1.3s						
PLMA				AML	AML		
	comp=N,1006µm,0.7s						
PLMA				AML	AML		
	comp=E,952µm,0.7s						
NRCA	**Norcia**	**3.48**	**185**		**Pn**	**02 51 51.8**	**+0.3**
NRCA	**Norcia**	**3.48**	**185**	⇓P	**Pn**	**02 51 51.7**	**+0.3**
NRCA				AML	AML		
	comp=E,674µm,1.1s						
NRCA				AML	AML		
	comp=E,712µm,1.0s						
NRCA				AML	AML		
	comp=N,652µm,0.4s						
NRCA				AML	AML		
	comp=N,640µm,0.4s						
NRCA				AML	AML		
	comp=E,712µm,1.0s						
NRCA				AML	AML		
	comp=E,674µm,0.9s						
MGAB	**Montegabbione**	**3.53**	**197**	⇓P	**Pn**	**02 51 52.0**	**-0.1**
MGAB				AML	AML		
	comp=E,862µm,0.6s						
MGAB				AML	AML		
	comp=E,908µm,0.6s						
MGAB				AML	AML		
	comp=N,920µm,1.6s						
MGAB				AML	AML		
	comp=N,972µm,0.6s						
MGAB				AML	AML		
	comp=N,920µm,0.4s						
MGAB				AML	AML		
	comp=E,908µm,1.4s						
MGAB				AML	AML		
	comp=E,862µm,1.4s						
MTRA	**Matera**	**3.54**	**181**	P	**Pn**	**02 51 52.4**	**+0.1**
MORH	**Mrgy, Hungar**	**3.55**	**90**	⇑P	**Pn**	**02 51 51.3**	**-1.1**
MORH	**Mrgy, Hungar**	**3.55**	**90**	⇑*i* Pn	**Pn**	**02 51 51.1**	**-1.3**
MORH	**Mrgy, Hungar**	**3.55**	**90**	P	**Pn**	**02 51 51.3**	**-1.1**
MOMA	**Monte Martano**	**3.56**	**191**	P	**Pn**	**02 51 52.5**	**-0.1**
MOMA				AML	AML		
	comp=N,986µm,1.4s						
MOMA				AML	AML		
	comp=N,504µm,0.5s						
MOMA				AML	AML		
	comp=N,986µm,0.6s						
MOMA				AML	AML		
	comp=E,590µm,0.4s						
MOMA				AML	AML		
	comp=E,594µm,0.4s						
BNALP	**Bannalp**	**3.56**	**281**	P	**Pn**	**02 51 54.7**	**+2.1**
BNALP				AML	AML		
	comp=N,469µm,0.6s						
BNALP				AML	AML		
	comp=E,469µm,0.7s						
BNALP	**Bannalp**	**3.56**	**281**	P	**Pn**	**02 51 55.0**	**+2.4**
DOB	**Doboj**	**3.58**	**114**	*e*Pn	**Pn**	**02 51 52.4**	**-0.3**
ROTZ	**Rotzenmuhle**	**3.58**	**346**	*e*Pn	**Pn**	**02 51 53.0**	**+0.3**
	SNR=33						
ROTZ				*e*Pg	**Pg**	**02 52 04.7**	**-1.8**
	SNR=3.2						
ROTZ				*e*Sg	**Sg**	**02 52 51.0**	**-1.8**
	SNR=6.5						
SRO	**Srobarova**	**3.61**	**63**	*e*PN	**Pn**	**02 51 53.8**	**+0.7**
SRO				*e*PG	**Pg**	**02 52 05.2**	**-1.9**
SRO				*e*SG	**Sg**	**02 52 54.1**	**+0.3**
GAVE	**Gavelli**	**3.63**	**187**	⇓P	**Pn**	**02 51 54.1**	**+0.5**
GAVE				AML	AML		
	comp=N,328µm,1.3s						
GAVE				AML	AML		
	comp=N,1205µm,0.4s						
GAVE				AML	AML		
	comp=E,856µm,0.4s						
GAVE				AML	AML		
	comp=E,837µm,0.3s						
GAVE				AML	AML		
	comp=N,328µm,0.7s						
SACS	**San Casciano d**	**3.64**	**199**	P	**Pn**	**02 51 53.9**	**+0.3**
VRAC	**Vranov**	**3.65**	**33**	Pn	**Pn**	**02 51 54.2**	**+0.4**
	comp=N,1.7nm,0.3s,baz=225,slow=15,SNR=10						
VRAC				Lg	Lg	02 52 51.1	
	comp=N,22nm,0.3s,baz=125,slow=23,SNR=12						
VRAC				LR	LR	02 53 41.1	
	comp=N,78nm,21.0s,baz=187,slow=45						
	comp=N,6.5nm,0.5s						
VRAC	**Vranov**	**3.65**	**33**	*e*PN	**Pn**	**02 51 54.0**	**+0.2**
VRAC				*e*SG	**Sg**	**02 52 51.3**	**-3.9**
VRAC	**Vranov**	**3.65**	**33**	P	**Pn**	**02 51 57.0**	**+3.2**
SMA1	**SAN MARTINO**	**3.67**	**182**	⇓P	**Pn**	**02 51 54.1**	**-0.1**
SMA1				AML	AML		
	comp=E,873µm,0.6s						
SMA1				AML	AML		
	comp=N,1040µm,0.6s						
SMA1				AML	AML		
	comp=E,873µm,1.4s						
TERO	**Teramo**	**3.68**	**179**	P	**Pn**	**02 51 54.0**	**-0.2**
RM25	**Mosicchio (Ama**	**3.68**	**183**	P	**Pn**	**02 51 54.0**	**-0.2**
LNSS	**Leonessa**	**3.71**	**186**	⇓P	**Pn**	**02 51 55.2**	**+0.5**
LNSS				AML	AML		
	comp=E,626µm,0.6s						
LNSS				AML	AML		
	comp=N,950µm,0.3s						
LNSS				AML	AML		
	comp=N,950µm,1.7s						
LNSS				AML	AML		
	comp=E,626µm,1.4s						
GRFO	**Grafenberg**	**3.73**	**336**		**Pn**	**02 51 55.6**	**+0.8**
GRFO	**Grafenberg**	**3.73**	**336**	P	**Pn**	**02 51 55.8**	**+1.0**
GRA1	**Grafenberg Arr**	**3.73**	**336**		**Pn**	**02 51 55.4**	**+0.5**
GRA1	**Grafenberg Arr**	**3.73**	**336**	P	**Pn**	**02 51 55.8**	**+1.0**
GRF	**Grafenberg Arr**	**3.73**	**336**	*e*Pn	**Pn**	**02 51 55.7**	**+0.9**
	SNR=12						
GRF				*e*Pg	**Pg**	**02 52 09.0**	**-0.4**
	SNR=5.6						
GRF				*e*Sg	**Sg**	**02 52 58.1**	**+0.5**
	SNR=3.4						
SLE	**Schleitheim**	**3.74**	**295**	*e*Pn	**Pn**	**02 51 55.9**	**+1.0**
	SNR=36						
SLE	**Schleitheim**	**3.74**	**295**	P	**Pn**	**02 51 56.1**	**+1.2**
CESX	**Cesi**	**3.75**	**191**		**Pn**	**02 51 55.2**	**+0.1**
CESX	**Cesi**	**3.75**	**191**	P	**Pn**	**02 51 55.0**	**-0.1**
CESX				AML	AML		
	comp=E,735µm,0.6s						
CESX				AML	AML		
	comp=N,700µm,0.5s						
CESX				AML	AML		
	comp=N,700µm,1.5s						
PRU	**Pruhonice**	**3.75**	**10**	*e*PN	**Pn**	**02 51 55.9**	**+0.7**
PRU				*e*PG	**Pb**	**02 52 05.9**	**+2.1**
PRU				*e*SG	**Sg**	**02 52 56.5**	**-2.0**
	comp=N,211nm,0.6s						
PRU				AMS	AMS	02 53 20.0	
	comp=N,600nm,8.7s						
PRU	**Pruhonice**	**3.75**	**10**	P	**Pn**	**02 51 55.8**	**+0.6**
ARRO	**Arrone**	**3.76**	**189**	⇓P	**Pn**	**02 51 55.6**	**+0.4**
ARRO				AML	AML		
	comp=N,338µm,0.7s						
ARRO				AML	AML		
	comp=N,338µm,1.3s						
ARRO				AML	AML		
	comp=E,366µm,1.1s						
CAMP	**Campotosto**	**3.76**	**181**	⇓P	**Pn**	**02 51 55.2**	**-0.2**
CAMP				AML	AML		
	comp=E,346µm,0.4s						
CAMP				AML	AML		
	comp=N,438µm,0.6s						
CAMP				AML	AML		
	comp=N,438µm,1.4s						
GRA3	**Grafenberg Arr**	**3.77**	**338**	P	**Pn**	**02 51 55.6**	**+0.2**
RM33	**Pellescritta (**	**3.80**	**183**	⇓P	**Pn**	**02 51 56.0**	**+0.2**
RM33				AML	AML		
	comp=E,598µm,0.5s						
RM33				AML	AML		
	comp=E,598µm,1.5s						
RM33				AML	AML		
	comp=N,636µm,0.6s						
JAVC	**Velka Javorina**	**3.80**	**46**	*e*PN	**Pn**	**02 51 57.6**	**+1.8**
JAVC	**Velka Javorina**	**3.80**	**46**	P	**Pn**	**02 51 58.6**	**+2.7**
RICI	**Ricice**	**3.80**	**136**	*i* Pn	**Pn**	**02 51 57.9**	**+2.1**
STU	**Stuttgart**	**3.83**	**312**		**Pn**	**02 51 57.4**	**+1.2**
STU	**Stuttgart**	**3.83**	**312**	*e*Pn	**Pn**	**02 51 57.2**	**+1.0**
	SNR=8.5						
STU				*e*Pg	**Pg**	**02 52 10.7**	**-0.6**
	SNR=2.3						
STU	**Stuttgart**	**3.83**	**312**	P	**Pn**	**02 51 57.5**	**+1.2**
GIGS	**Gran Sasso**	**3.85**	**179**	P	**Pn**	**02 51 56.2**	**-0.3**
LATE	**Laterza**	**3.88**	**199**	P	**Pn**	**02 51 56.7**	**-0.3**
SULZ	**Cheisacher**	**3.91**	**290**	*e*Pn	**Pn**	**02 51 58.7**	**+1.4**
	SNR=12						
SULZ				*e*Pg	**Pg**	**02 52 10.9**	**-1.8**
	SNR=2.9						
MAKA	**Makarska**	**3.91**	**139**	*i* Pn	**Pn**	**02 51 59.0**	**+1.8**
VCEL	**Villa Celiera**	**3.91**	**177**	⇓P	**Pn**	**02 51 57.6**	**+0.2**
VCEL				AML	AML		
	comp=E,475µm,1.6s						
VCEL				AML	AML		
	comp=N,567µm,0.7s						
VCEL				AML	AML		
	comp=E,475µm,0.4s						
VCEL				AML	AML		
	comp=N,567µm,1.3s						
PCP	**Piancastagn**	**3.92**	**245**	P	**Pn**	**02 51 58.6**	**+1.1**
PCP				AML	AML		
	comp=N,673µm,1.2s						
PCP				AML	AML		
	comp=N,673µm,0.8s						
PCP				AML	AML		
	comp=E,588µm,0.6s						
AQU	**L'Aquila**	**3.95**	**181**	*e*Pn	**Pn**	**02 51 57.4**	**-0.4**
AQU	**L'Aquila**	**3.95**	**181**	P	**Pn**	**02 51 58.2**	**+0.3**
BUD	**Budapest**	**3.95**	**71**	P	**Pn**	**02 52 00.0**	**+2.1**
CASP	**Castiglione de**	**3.99**	**209**		**Pn**	**02 51 57.6**	**-0.8**
CASP	**Castiglione de**	**3.99**	**209**	P	**Pn**	**02 51 57.9**	**-0.5**
CASP				AML	AML		
	comp=N,200µm,0.6s						
CASP				AML	AML		
	comp=N,200µm,1.4s						
CASP				AML	AML		
	comp=E,200µm,0.3s						
NKC	**Novy Kostel**	**4.00**	**350**	*e*PN	**Pn**	**02 51 59.7**	**+1.1**
NKC				*e*PG	**Pb**	**02 52 11.2**	**+3.2**
NKC				*e*SG	**Sg**	**02 53 04.7**	**-1.7**
	comp=E,322nm,0.7s						
NKC				AMS	AMS	02 53 30.0	
	comp=E,600nm,11.7s						
NKC	**Novy Kostel**	**4.00**	**350**	P	**Pn**	**02 51 59.4**	**+0.8**
FAGN	**Fagnano**	**4.03**	**179**	P	**Pn**	**02 51 59.0**	**-0.1**
FAGN				AML	AML		
	comp=N,734µm,0.5s						
FAGN				AML	AML		
	comp=N,734µm,1.5s						
FAGN				AML	AML		
	comp=E,993µm,0.5s						
BFO	**Black Forest**	**4.07**	**302**		**Pn**	**02 52 00.6**	**+1.0**
BFO	**Black Forest**	**4.07**	**302**	*e*Pn	**Pn**	**02 52 00.6**	**+1.0**
	SNR=71						
BFO				*e*Pg	**Pg**	**02 52 13.8**	**-2.2**
	SNR=1.6						
BFO				*e*Sg	**Sg**	**02 53 09.2**	**+0.4**
	SNR=3.5						
T0110	**Collepietro**	**4.08**	**177**	⇓P	**Pn**	**02 51 59.7**	**0.0**
T0110				AML	AML		
	comp=N,635µm,0.5s						
T0110				AML	AML		
	comp=E,675µm,0.5s						
MONC	**Moncucco Torin**	**4.11**	**255**	P	**Pn**	**02 52 01.8**	**+1.8**
MONC				AML	AML		
	comp=E,1059µm,0.6s						
MONC				AML	AML		
	comp=N,1058µm,0.5s						
MONC				AML	AML		
	comp=N,1058µm,1.5s						
SRES	**S.Oreste - Sor**	**4.13**	**191**	P	**Pn**	**02 51 59.9**	**-0.4**
SRES				AML	AML		
	comp=N,174µm,0.4s						
SRES				AML	AML		
	comp=E,207µm,0.8s						
BALST	**Balsthal**	**4.13**	**287**	*e*Pn	**Pn**	**02 52 01.5**	**+1.1**
	SNR=35						
QLNO	**Quiliano**	**4.15**	**243**	P	**Pn**	**02 52 01.6**	**+0.9**
QLNO				AML	AML		
	comp=N,458µm,0.7s						
QLNO				AML	AML		
	comp=E,505µm,0.6s						
TANN	**Tannenbergstha**	**4.18**	**351**	*e*Pn	**Pn**	**02 52 01.4**	**+0.4**
	SNR=52						
TANN				*e*Pg	**Pg**	**02 52 16.3**	**-1.6**
	SNR=2.5						
TANN	**Tannenbergstha**	**4.18**	**351**	P	**Pn**	**02 52 02.2**	**+1.1**
MAUC	**Maruska**	**4.22**	**42**	*e*PN	**Pn**	**02 52 03.1**	**+1.5**
DIX	**Grande Dixence**	**4.25**	**269**	P	**Pn**	**02 52 04.6**	**+2.4**
DIX				AML	AML		
	comp=N,882µm,0.8s						
DIX				AML	AML		
	comp=E,821µm,0.8s						
RICC	**Richard**	**4.26**	**5**	*e*PN	**Pn**	**02 52 02.7**	**+0.5**
LSTV	**Lastovo**	**4.27**	**144**	*i* Pn	**Pn**	**02 52 03.4**	**+1.1**
PTQR	**Pietraquaria**	**4.28**	**181**	P	**Pn**	**02 52 03.2**	**+0.8**
PTQR				AML	AML		
	comp=E,134µm,0.9s						
PTQR				AML	AML		
	comp=E,134µm,1.1s						
PTQR				AML	AML		
	comp=N,121µm,0.6s						
CANO	**Canova, Maglio**	**4.28**	**243**	P	**Pn**	**02 52 02.7**	**+0.3**
CANO				AML	AML		
	comp=E,2365µm,1.2s						
CANO				AML	AML		
	comp=N,1225µm,1.1s						
CANO				AML	AML		
	comp=E,2365µm,0.8s						
PLN	**Plauen**	**4.29**	**348**	*e*Pn	**Pn**	**02 52 03.2**	**+0.8**
	SNR=17						
PLN				*e*Pg	**Pg**	**02 52 18.9**	**-1.1**
	SNR=2.4						
INTR	**Introdacqua**	**4.30**	**176**	P	**Pn**	**02 52 02.0**	**-0.7**
INTR				AML	AML		
	comp=E,344µm,1.2s						
INTR				AML	AML		
	comp=E,328µm,1.0s						
INTR				AML	AML		
	comp=N,468µm,0.5s						
INTR				AML	AML		
	comp=N,467µm,1.4s						
INTR				AML	AML		
	comp=E,328µm,1.0s						
INTR				AML	AML		
	comp=E,344µm,0.8s						
HSKC	**Hora Svate Kat**	**4.31**	**359**	*e*PN	**Pn**	**02 52 03.3**	**+0.5**
HSKC				*e*SG	**Sg**	**02 53 14.6**	**-1.7**
	comp=E,283nm,0.8s						
HSKC				AMS	AMS	02 53 40.0	
	comp=E,700nm,9.4s						
HSKC	**Hora Svate Kat**	**4.31**	**359**	P	**Pn**	**02 52 03.5**	**+0.6**
MTCE	**Montecelio**	**4.31**	**188**	P	**Pn**	**02 52 02.1**	**-0.8**
MTCE				AML	AML		
	comp=E,208µm,0.8s						
MTCE				AML	AML		
	comp=N,124µm,1.0s						
MTCE				AML	AML		
	comp=N,124µm,1.0s						
MTCE				AML	AML		
	comp=E,208µm,1.2s						
KRLC	**Kraliky**	**4.36**	**29**	*e*PN	**Pn**	**02 52 04.1**	**+0.5**
KRLC				*e*PG	**Pb**	**02 52 16.8**	**+2.6**
KRLC				*e*SG	**Sg**	**02 53 15.7**	**-2.2**
	comp=E,229nm,0.7s						
KRLC	**Kraliky**	**4.36**	**29**	P	**Pn**	**02 52 05.0**	**+1.5**
MORC	**Moravsky Berou**	**4.40**	**36**		**Pn**	**02 52 05.2**	**+1.1**
MORC	**Moravsky Berou**	**4.40**	**36**	*e*PN	**Pn**	**02 52 03.6**	**-0.5**
MORC				*e*SG	**Sg**	**02 53 15.7**	**-3.5**
MORC	**Moravsky Berou**	**4.40**	**36**	P	**Pn**	**02 52 06.5**	**+2.4**
TREM	**Isole Tremiti**	**4.41**	**160**	P	**Pn**	**02 52 03.9**	**-0.3**
TREM				AML	AML		
	comp=N,598µm,1.0s						
TREM				AML	AML		
	comp=N,592µm,0.6s						
TREM				AML	AML		
	comp=E,789µm,0.8s						
TREM				AML	AML		
	comp=E,728µm,0.8s						
VVLD	**Villa Vallelon**	**4.43**	**179**	P	**Pn**	**02 52 04.9**	**+0.4**
RORO	**Rocca Rossa**	**4.43**	**242**	P	**Pn**	**02 52 04.5**	**0.0**
BOURR	**Bourrignon**	**4.45**	**287**	P	**Pn**	**02 52 06.0**	**+1.2**
DPC	**Dobruska-Polom**	**4.46**	**24**	*e*PN	**Pn**	**02 52 04.6**	**-0.3**
DPC				*e*SG	**Sg**	**02 53 17.8**	**-3.4**
	comp=E,241nm,0.7s						
DPC				AMS	AMS	02 53 40.0	
	comp=E,500nm,7.2s						
DPC	**Dobruska-Polom**	**4.46**	**24**	P	**Pn**	**02 52 05.3**	**+0.4**
RCAV	**Rocca di Cave**	**4.47**	**186**	P	**Pn**	**02 52 04.7**	**-0.3**
UPC	**Upice**	**4.53**	**21**	*e*PN	**Pn**	**02 52 05.8**	**0.0**
UPC	**Upice**	**4.53**	**21**	P	**Pn**	**02 52 08.0**	**+2.2**
MOX	**Moxa**	**4.53**	**344**	*e*Pn	**Pn**	**02 52 06.2**	**+0.3**
	SNR=62						
MOX				*e*Pg	**Pg**	**02 52 23.2**	**-1.5**
	SNR=1.2						
MOX	**Moxa**	**4.53**	**344**	P	**Pn**	**02 52 06.3**	**+0.5**
MRGE	**Morge**	**4.53**	**266**	P	**Pn**	**02 52 08.3**	**+2.3**
MRGE				AML	AML		
	comp=N,419µm,1.0s						
MRGE				AML	AML		
	comp=E,301µm,1.1s						
MRGE				AML	AML		
	comp=N,419µm,1.0s						
STON	**Ston**	**4.54**	**137**	*e*Pn	**Pn**	**02 52 07.2**	**+1.3**
STON	**Ston**	**4.54**	**137**	*e*Pn	**Pn**	**02 52 07.3**	**+1.3**
STON				*e*Sn	**Sn**	**02 52 59.5**	**+1.1**
STON	**Ston**	**4.54**	**137**	P	**Pn**	**02 52 07.3**	**+1.3**
FRGS	**Fruska Gora**	**4.55**	**102**	*e*Pn	**Pn**	**02 52 05.3**	**-0.8**
FRGS	**Fruska Gora**	**4.55**	**102**	⇑*i* Pn	**Pn**	**02 52 05.5**	**-0.6**
TEKS	**Tekeris**	**4.58**	**110**	*e*Pn	**Pn**	**02 52 06.2**	**-0.3**
TEKS	**Tekeris**	**4.58**	**110**	⇑*i* Pn	**Pn**	**02 52 06.0**	**-0.5**
POFI	**Posta Fibreno**	**4.58**	**178**	P	**Pn**	**02 52 06.5**	**-0.1**
BRG	**Berggiesshubel**	**4.59**	**3**	*e*Pn	**Pn**	**02 52 06.7**	**+0.1**
	SNR=11						
BRG				*e*Pg	**Pg**	**02 52 22.6**	**-3.1**
	SNR=2.8						
BRG	**Berggiesshubel**	**4.59**	**3**	P	**Pn**	**02 52 06.8**	**+0.2**
BRG	**Berggiesshubel**	**4.59**	**3**	Pn	**Pn**	**02 52 06.7**	**+0.1**
BRG				Pg	**Pg**	**02 52 22.6**	**-3.1**
BRG				Sn	**Sn**	**02 53 00.8**	**+1.3**

BRG r 02 53 09.4
BRG Berggiesshubel 4.59 3 Sg **Sg** **02 53 21.5 -3.6**
BRG Amp 02 53 35.5
comp=Z,173nm,0.6s
TRIV Trivento 4.59 170 P **Pn** **02 52 06.4 -0.3**
BLANC P.ta Helbronne 4.61 267 P **Pn** **02 52 10.3 +3.0**
BLANC AML AML
comp=N,344µm,1.3s
BLANC AML AML
comp=E,321µm,1.0s
CHVC Chvalec 4.61 21 *e*PN **Pn** **02 52 06.8 -0.2**
RNI2 Rionero Sannit 4.62 174 P **Pn** **02 52 07.2 +0.1**
OSTC Ostas 4.62 22 *e*PN **Pn** **02 52 06.9 -0.2**
PSZ Piszkesteto 4.64 67 ⇑P **Pn** **02 52 08.7 +1.2**
PSZ Piszkesteto 4.64 67 **Pn** **02 52 08.1 +0.6**
PSZ Piszkesteto 4.64 67 P **Pn** **02 52 08.5 +1.1**
IMI Imperia 4.64 241 P **Pn** **02 52 07.9 +0.4**
IMI AML AML
comp=N,690µm,1.0s
IMI AML AML
comp=E,313µm,0.5s
MIDA Miranda 4.69 173 P **Pn** **02 52 07.3 -0.7**
MIDA AML AML
comp=N,175µm,1.2s
MIDA AML AML
comp=N,175µm,0.8s
MIDA AML AML
comp=E,159µm,0.5s
OKC Ostrava-Krasne 4.71 40 *e*PN **Pn** **02 52 10.0 +1.8**
OKC Ostrava-Krasne 4.71 40 P **Pn** **02 52 12.9 +4.7**
MELA Melanico ??? S 4.74 165 P **Pn** **02 52 08.5 -0.1**
MELA AML AML
comp=N,664µm,0.6s
MELA AML AML
comp=E,586µm,0.7s
MELA AML AML
comp=N,630µm,1.4s
MELA AML AML
comp=E,586µm,1.3s
MELA AML AML
comp=E,626µm,0.5s
MELA AML AML
comp=N,630µm,0.6s
ECH Echery 4.74 296 **Pn** **02 52 09.2 +0.5**
ECH Echery 4.74 296 P **Pn** **02 52 09.4 +0.8**
BSZH Besenyszg 4.74 75 ⇓P **Pb** **02 52 23.1 +2.6**
CDF Champ du Feu 4.74 299 *e*P **Pn** **02 52 09.5 +0.7**
CIGN Sant'Elia a Pi 4.75 167 P **Pn** **02 52 08.4 -0.4**
APRC Apricena 4.77 161 P **Pn** **02 52 08.5 -0.7**
KLINJ Klinje 4.78 129 *e*Pn **Pn** **02 52 11.8 +2.5**
LPG La Plagne 4.79 263 *e*P **Pn** **02 52 11.2 +1.5**
LPG *e*Sn **Sn** **02 53 04.2 -0.8**
comp=N,193nm,0.9s
LPL La Plagne 4.80 263 *e*P **Pn** **02 52 11.0 +1.2**
LPL *e*Sn **Sn** **02 52 59.8 -5.4**
comp=N,90nm,0.6s
HINF Hinteralfeld 4.80 291 *e*P **Pn** **02 52 10.2 +0.6**
HINF *e*Sn **Sn** **02 53 02.5 -2.4**
comp=N,209nm,0.9s
SAOF Saorge 4.81 243 P **Pn** **02 52 10.2 +0.4**
SAOF AML AML
comp=E,372µm,0.8s
SAOF AML AML
comp=N,272µm,1.0s
BSSO Busso 4.81 170 P **Pn** **02 52 10.1 +0.3**
BSSO AML AML
comp=E,227µm,0.6s
BSSO AML AML
comp=N,172µm,0.4s
BSSO AML AML
comp=E,210µm,0.6s
BSSO AML AML
comp=N,168µm,0.8s
OT13 Castello Viest 4.81 156 P **Pn** **02 52 09.3 -0.3**
SGRT San Giovanni R 4.82 160 **Pn** **02 52 09.1 -0.8**
SGRT San Giovanni R 4.82 160 ⇓P **Pn** **02 52 09.1 -0.8**
SGRT AML AML
comp=N,268µm,0.8s
SGRT AML AML
comp=E,274µm,0.6s
BBLS Lazi&#263i 4.82 118 *e*Pn **Pn** **02 52 10.8 +0.9**
BBLS *e*Sn **Sn** **02 53 05.5 0.0**
BBLS Lazi&#263i 4.82 118 ⇑*i*Pn **Pn** **02 52 10.9 +1.0**
OT03 San Marco in L 4.84 161 P **Pn** **02 52 09.3 -0.8**
OT06 Rignano Gargan 4.85 161 P **Pn** **02 52 09.4 -0.8**
OT05 Madonna di Cri 4.88 161 ⇓P **Pn** **02 52 09.5 -1.1**
GATE Gambatesa 4.89 168 P **Pn** **02 52 10.9 +0.1**
MSAG Monte S. Angel 4.90 159 P **Pn** **02 52 09.9 -1.0**
VAGA Valle Agricola 4.91 174 P **Pn** **02 52 11.2 +0.1**
VAGA AML AML
comp=E,141µm,0.9s
VAGA AML AML
comp=N,206µm,0.8s
VAGA AML AML
comp=E,141µm,1.1s
LANS Liptovska Anna 4.92 52 *e*PN **Pn** **02 52 12.5 +1.3**
LANS *e*PG **Pg** **02 52 29.0 -3.2**
UPM Unac-Piva 4.93 127 *e*Pn **Pn** **02 52 12.5 +1.0**
BRY Bratogost 4.94 132 ⇑*i*Pn **Pn** **02 52 13.7 +2.2**
SBF Sospel 4.95 243 *e*P **Pn** **02 52 12.5 +0.8**
SBF *e*Sn **Sn** **02 53 00.7 -7.9**
comp=E,68nm,0.3s
PGF Pioggiola 4.96 222 *e*Sn **Sn** **02 53 04.6 -4.1**
comp=E,50nm,0.5s
OT11 Lucera (FG) It 4.96 164 P **Pn** **02 52 11.7 +0.1**
OT11 AML AML
comp=E,316µm,0.7s
OT11 AML AML
comp=E,316µm,1.3s
OT11 AML AML
comp=N,438µm,0.5s
TREB Trebinje 4.97 134 *e*Pn **Pn** **02 52 13.2 +1.3**
TREB Trebinje 4.97 134 *e*Pn **Pn** **02 52 12.9 +1.0**
AMBH Ambrzfalva 4.99 87 ⇑P **Pg** **02 52 33.4 -0.1**
MBDF Montbardon 5.00 254 *e*P **Pn** **02 52 12.3 -0.1**
MBDF *e*Sn **Sn** **02 53 05.8 -4.1**
comp=N,131nm,0.6s
GIMEL St. Georges / 5.02 275 P **Pn** **02 52 14.1 +1.4**
CLL Collm 5.03 356 **Pn** **02 52 13.0 +0.4**
CLL Collm 5.03 356 *e*Pn **Pn** **02 52 13.2 +0.7**
SNR=55
CLL Collm 5.03 356 *e*Pn **Pn** **02 52 13.0 +0.4**
CLL *ex* x 02 52 20.0
CLL *e*Pg **Pg** **02 52 32.0 -2.1**
CLL *e*Sn Sn 02 52 56.0 -14
CLL *ex* x 02 53 18.0
CLL *ex* x 02 53 33.0
CLL *e*Sg **Sg** **02 53 36.0 -3.1**
comp=E,460nm,1.2s
CLL *e*Sglp 02 54 00.0
comp=N,400nm,11.7s
CLL *e*Sglp 02 54 00.0
comp=E,200nm,19.8s
CLL *e*Sglp 02 54 00.0
comp=Z,200nm,14.0s
NEUB Neuenburg 5.05 347 *e*Pn **Pn** **02 52 14.1 +1.2**
SNR=9.1
NEUB Neuenburg 5.05 347 P **Pn** **02 52 13.9 +1.1**
DIVS Divibare 5.07 113 *e*Pn **Pn** **02 52 13.6 +0.2**
UBBA Unterbreizbach 5.09 334 *e*Pn **Pn** **02 52 15.2 +1.8**
SNR=6.5
UBBA Unterbreizbach 5.09 334 P **Pn** **02 52 15.6 +2.2**
CABF La Chapelle 5.15 276 *e*P **Pn** **02 52 15.2 +0.8**
CABF *e*Sn **Sn** **02 53 12.9 -0.6**
comp=Z,19nm,0.2s
PSB1 Pescosannita 5.16 169 P **Pn** **02 52 14.4 -0.1**
AVAS Avala Beograd 5.17 106 *e*Pn **Pn** **02 52 14.2 -0.4**
VITU Vitulano (BN) 5.18 171 P **Pn** **02 52 14.9 +0.2**
HAU Haudompre 5.18 292 *e*P **Pn** **02 52 15.4 +0.6**
TNS Taunus Mts 5.18 321 *e*Pn **Pn** **02 52 16.1 +1.2**
SNR=31
TNS Taunus Mts 5.18 321 P **Pn** **02 52 16.2 +1.3**
KECS Kecovo 5.21 63 *e*PN **Pn** **02 52 15.8 +0.7**
KECS *e*PG **Pg** **02 52 35.8 -1.9**
HCY Herceg Novi 5.25 135 *e*Pn **Pn** **02 52 16.4 +0.7**
TRUS Trudelj 5.28 111 *e*Pn **Pn** **02 52 16.4 +0.2**
PAOL Paolisi 5.32 171 **Pn** **02 52 16.8 0.0**
WIMM Wimmelburg 5.39 346 P **Pn** **02 52 18.6 +1.0**
NAST IGS Nastaetten 5.43 318 *e*Pn **Pn** **02 52 20.1 +1.9**
IVAS Ivanjica 5.44 118 *e*Pn **Pn** **02 52 18.7 +0.4**
SJES Sjenica 5.50 121 *e*Pn **Pn** **02 52 20.4 +1.1**
SJES Sjenica 5.50 121 *e*Pn **Pn** **02 52 18.9 -0.4**
NIE Niedzica 5.53 53 P **Pn** **02 52 20.2 +0.7**
comp=Z,0.1nmcomp=Z,138nmcomp=Z,9.4nm,0.9s

ORIF Oris-en-Rattie 5.54 258 *e*P **Pn** **02 52 21.9 +2.2**
ORIF *e*Sn **Sn** **02 53 14.6 -8.5**
comp=Z,128nm,0.8s
VRSS Vrsac 5.59 99 *e*Pn **Pn** **02 52 19.7 -0.7**
ABAH Abaujker 5.62 66 P **Pn** **02 52 22.4 +1.7**
GRUS Gruza 5.63 113 *e*Pn **Pn** **02 52 21.9 +0.9**
PALZ Palazzo San Ge 5.64 161 P **Pn** **02 52 20.8 -0.3**
PDG Podgorica 5.64 131 ⇓P **Pn** **02 52 23.6 +2.5**
PDG Podgorica 5.64 131 **Pn** **02 52 22.0 +0.9**
PDG Podgorica 5.64 131 *e*Pn **Pn** **02 52 22.9 +1.8**
PDG Podgorica 5.64 131 ⇑*i*Pn **Pn** **02 52 23.1 +2.0**
PDG Podgorica 5.64 131 P **Pn** **02 52 23.4 +2.3**
KOE Koeppel 5.65 319 *e*Pn **Pn** **02 52 23.1 +1.9**
KOE *e*Sn **Sn** **02 53 31.8 +6.1**
comp=Z,111nm,0.8s
BGG Burgeitz 5.69 316 *e*Pn **Pn** **02 52 23.6 +1.9**
BZS Buzias 5.69 94 ⇓P **Pg** **02 52 42.8 -4.0**
BZS Buzias 5.69 94 *e*Pn **Pn** **02 52 20.7 -1.0**
BZS Buzias 5.69 94 P **Pn** **02 52 22.7 +1.0**
OJC Ojcow 5.74 45 Pn **Pn** **02 52 23.6 +1.1**
OJC Ojcow 5.74 45 P **Pn** **02 52 23.0 +0.6**
comp=Z,0.2nmcomp=Z,15nm,0.6s
OJC Ojcow 5.74 45 P **Pn** **02 52 24.0 +1.6**
GTTG Gottingen 5.75 337 P **Pn** **02 52 24.4 +1.8**
PAGF Fort de Pagny 5.75 296 *e*P **Pn** **02 52 24.1 +1.5**
PAGF *e*Sn **Sn** **02 53 26.8 -1.4**
comp=Z,38nm,0.5s
DRME Dracevica, Mon 5.78 133 *e*Pn **Pn** **02 52 24.7 +1.7**
LMR La Mourre 5.80 242 *e*P **Pn** **02 52 23.5 +0.2**
LMR *e*Sn **Sn** **02 53 20.9 -8.6**
comp=Z,77nm,0.8s
AMUR Altamura 5.84 156 P **Pn** **02 52 22.7 -1.1**
GOCS Kraljevo Serbi 5.89 115 *e*Pn **Pn** **02 52 25.0 +0.4**
MDVR Moldovita 5.95 102 ⇓P **Pn** **02 52 25.4 0.0**
MDVR Moldovita 5.95 102 *e*Pn **Pn** **02 52 24.6 -0.8**
KASTN Kahler Asten 5.96 327 *e*Pn **Pn** **02 52 26.8 +1.4**
SNR=21
WLF Walferdange 5.98 307 **Pn** **02 52 27.1 +1.3**
WLF Walferdange 5.98 307 *d*P **Pn** **02 52 28.2 +2.4**
WLF Walferdange 5.98 307 *e*Pn **Pn** **02 52 28.5 +2.8**
SNR=9.4
WLF Walferdange 5.98 307 P **Pn** **02 52 28.6 +2.9**
KUBS Kucevo 6.05 105 *e*Pn **Pn** **02 52 25.4 -1.3**
STHS Stebnicka Huta 6.06 56 *e*PN **Pn** **02 52 28.6 +1.8**
HILG Hillesheim 6.07 314 *e*Pn **Pn** **02 52 29.0 +2.1**
HILG *e*Sn **Sn** **02 53 42.3 +6.4**
comp=Z,87nm,0.8s
NOCI Noci 6.08 154 P **Pn** **02 52 26.2 -0.9**
SMRF Simiane la Rot 6.08 250 *e*P **Pn** **02 52 28.6 +1.4**
SMRF *e*Sn **Sn** **02 53 35.2 -1.2**
comp=Z,27nm,0.5s
MATE Matera 6.10 157 ⇑P **Pn** **02 52 26.1 -1.3**
MATE Matera 6.10 157 P **Pn** **02 52 26.8 -0.6**
SAVF Savonnieres en 6.15 295 *e*P **Pn** **02 52 29.1 +1.1**
MEZF Maizieres J'vi 6.16 294 *e*P **Pn** **02 52 29.8 +1.7**
STB Steinbach 6.18 316 *e*Pn **Pn** **02 52 30.4 +1.9**
SELS Selova 6.22 117 *e*Pn **Pn** **02 52 30.0 +0.9**
HOBG Hohbusch 6.23 321 *e*Pn **Pn** **02 52 31.3 +2.2**
BNS Bensberg 6.28 320 *e*Sn **Sn** **02 53 46.5 +5.3**
comp=Z,90nm,0.6s
DRGR 6.36 82 P **Pn** **02 52 35.4 +4.4**
SSB Saint Sauveur 6.36 264 **Pn** **02 52 30.6 -0.4**
SSB Saint Sauveur 6.36 264 P **Pn** **02 52 31.2 +0.2**
VIVF Saint-Julien-l 6.38 260 *e*P **Pn** **02 52 31.5 +0.3**
BORS2 Bor- Borsko je 6.40 107 *e*Pn **Pn** **02 52 30.4 -1.1**
HERR Herculane 6.40 100 ⇑P **Pn** **02 52 31.5 0.0**
BHOU Houvegnez 6.45 312 *d*P **Pn** **02 52 34.1 +2.0**
KLL Kalltalsperre 6.47 315 *e*Pn **Pn** **02 52 34.4 +1.9**
KLL *e*Sn **Sn** **02 53 51.5 +5.6**
KOLS Kolonicke sedl 6.48 63 P **Pn** **02 52 33.7 +1.2**
KOLS Kolonicke sedl 6.48 63 *e*PN **Pn** **02 52 33.5 +1.0**
KOLS *e* 03 19 19.5
DREG Dreilaegerbach 6.52 315 *e*Pn **Pn** **02 52 35.4 +2.3**
DREG *e*Sn **Sn** **02 53 52.7 +5.6**
comp=Z,28nm,0.8s
GZR Gura Zlata 6.53 95 *e*Pn **Pn** **02 52 32.2 -1.1**
BUG Bochum--Univer 6.59 324 P **Pn** **02 52 36.4 +2.3**
MEM Membach 6.60 314 *d*P **Pn** **02 52 35.9 +1.7**
MEM Membach 6.60 314 P **Pn** **02 52 36.6 +2.4**
ZAGS Zajecar 6.65 109 *e*Pn **Pn** **02 52 35.3 +0.4**
SMF Signal de Mont 6.70 276 *e*P **Pn** **02 52 35.8 +0.2**
SMF *e*Sn **Sn** **02 53 49.4 -2.1**
comp=Z,34nm,0.4s
LOR Lormes 6.71 282 *e*P **Pn** **02 52 36.1 +0.4**
LOR *e*Sn **Sn** **02 53 48.8 -2.9**
comp=Z,31nm,0.5s
HGN Heimansgroeve 6.73 314 P **Pn** **02 52 38.8 +2.8**
RCHB Rochefort 6.75 308 *d*P **Pn** **02 52 38.8 +2.5**
RCHB *d*S **Sn** **02 53 53.3 +0.5**
RCHB Rochefort 6.75 308 P **Pn** **02 52 38.9 +2.6**
PHP Peshkopia 6.79 130 P **Pn** **02 52 39.7 +2.7**
BSTI Sart Tilman 6.81 312 *d*P **Pn** **02 52 39.9 +2.8**
BCLA Clavier 6.85 310 *d*P **Pn** **02 52 40.3 +2.6**
BCLA *d*S **Sn** **02 53 56.6 +1.4**
BARS Barje 6.87 117 *e*Pn **Pn** **02 52 38.3 +0.3**
SSF Saint Saulge 6.93 280 *e*P **Pn** **02 52 38.9 +0.1**
SSF *e*Sn **Sn** **02 53 48.9 -8.4**
comp=Z,11nm,0.5s
GIVF Givet 6.95 306 *e*P **Pn** **02 52 41.5 +2.5**
BGES Gesves 6.95 309 *d*P **Pn** **02 52 41.7 +2.7**
BGES *d*S **Sn** **02 53 55.0 -2.6**
RETH Rethem/Aller, 6.99 339 P **Pn** **02 52 42.0 +2.4**
KWP Kalwaria Pacla 7.01 58 P **Pn** **02 52 40.8 +0.9**
comp=Z,0.1nmcomp=Z,22nm,0.7s
AVF Avril sur Loir 7.03 278 *e*P **Pn** **02 52 40.2 +0.1**
DOU Dourbes 7.07 306 *d*P **Pn** **02 52 43.3 +2.6**
DOU *d*S **Sn** **02 53 57.0 -3.7**
BMRD Maredsous 7.08 308 *d*P **Pn** **02 52 43.5 +2.8**
IBBN Ibbenburen 7.09 330 *e*Pn **Pn** **02 52 42.6 +1.6**
SNR=6.4
IBBN Ibbenburen 7.09 330 P **Pn** **02 52 42.9 +1.9**
ZAPS Zavoj 7.15 112 *e*Pn **Pn** **02 52 42.1 +0.2**
LASF Ste Croix 7.18 255 *e*P **Pn** **02 52 42.2 -0.1**
LASF *e*Sn **Sn** **02 53 58.0 -5.5**
comp=Z,43nm,0.6s
WTSB Winterswijk 7.18 325 P **Pn** **02 52 44.7 +2.5**
LOT Lotru 7.21 93 ⇓P **Pn** **02 52 44.4 +1.7**
BAIF Baives 7.27 305 *e*P **Pn** **02 52 46.0 +2.5**
BGF Bois d'Agland 7.38 276 *e*P **Pn** **02 52 45.7 +0.7**
BGF *e*Sn **Sn** **02 53 59.9 -8.5**
comp=Z,26nm,0.3s
OHR Ohrid 7.39 132 *i* Pn **Pn** **02 52 47.8 +2.6**
VSL Villasalto 7.45 206 Pn **Pn** **02 52 46.7 +0.8**
BOSS Bosilegrad 7.46 117 *e*Pn **Pn** **02 52 46.5 +0.5**
TIP Timpagrande 7.50 160 **Pn** **02 52 46.8 +0.1**
HYF Humbligny 7.54 281 *e*P **Pn** **02 52 48.3 +1.2**
UCC Uccle 7.56 310 Pn **Pn** **02 52 48.4 +1.0**
UCC Uccle 7.56 310 *d*P **Pn** **02 52 48.2 +0.8**
KBN Korca 7.75 134 P Pn 02 52 56.3 +6.1
ARR Arges 7.82 93 ⇑P Pn 02 52 55.9 +4.9
ARR Arges 7.82 93 P **Pn** **02 52 55.8 +4.8**
TCF Toulx Ste Croi 7.84 274 *e*P **Pn** **02 52 51.5 +0.3**
TCF *e*Sn **Sn** **02 54 14.7 -4.9**
comp=Z,10nm,0.4s
CLF Chambon-Foret 7.87 287 **Pn** **02 52 52.2 +0.6**
CLF Chambon-Foret 7.87 287 P **Pn** **02 52 53.3 +1.7**
KEK Kerkira 8.03 143 Pn **Pn** **02 52 52.8 -1.0**
VOIR 8.09 92 ⇑P **Pn** **02 52 57.0 +2.2**
VOIR 8.09 92 P **Pn** **02 52 55.5 +0.7**
comp=Z,4.4nm,0.8s
VOIR 8.09 92 P **Pn** **02 52 55.8 +1.0**
BUR08 Bucovina Ar. S 8.10 76 Pn **Pn** **02 52 55.0 0.0**
BURAR Bucovina Array 8.11 76 Pn **Pn** **02 52 56.0 +1.0**
CAF Calviac 8.15 264 *e*P **Pn** **02 52 55.9 +0.3**
CAF *e*Sn Sn 02 54 17.8 -10
comp=Z,3.7nm,0.3s
VAY Valandovo 8.22 124 *e*Pn **Pn** **02 52 59.3 +2.9**
CEL Celeste 8.22 167 Pn **Pn** **02 52 56.4 -0.2**
GRG Griva 8.36 127 P **Pn** **02 52 59.5 +1.0**
RJF Les Rejaudoux 8.45 268 *e*P **Pn** **02 53 00.7 +1.1**
RJF *e*Sn Sn 02 54 25.3 -9.3
KNT Kendrikon 8.51 124 P **Pn** **02 53 02.6 +2.1**
MTLF Montolieu 8.56 254 *e*P **Pn** **02 53 02.2 +1.0**
MTLF *e*Sn Sn 02 54 27.5 -10
comp=Z,17nm,0.7s
MLR Muntele Rosu 8.71 91 Pn **Pn** **02 53 03.6 +0.4**
comp=Z,0.3nm,0.3s,baz=296,slow=20,SNR=3.6
comp=Z,0.9nm,0.4s
MLR Muntele Rosu 8.71 91 Pn **Pn** **02 53 04.1 +0.9**
MLR Muntele Rosu 8.71 91 P **Pn** **02 53 04.0 +0.8**
BSD Bornholm Skovb 8.87 5 *i* P **Pn** **02 53 04.3 -1.0**
LFF La Frestale 9.06 266 *e*P **Pn** **02 53 09.9 +1.9**

LDF La Druitiere 9.53 289 *e*P **Pn** **02 53 14.2 -0.2**
RNPP5 Staryi Chortor 9.54 54 P **Pn** **02 53 14.8 +0.4**
FLN La Foliniere 9.79 290 *e*P **Pn** **02 53 18.2 +0.3**
BJUU Bjuv 9.79 358 *i* P **Pn** **02 53 18.1 +0.2**
EPF Esparros 9.94 256 *e*P **Pn** **02 53 24.2 +4.1**
GRR Gorron 9.98 287 *e*P **Pn** **02 53 21.2 +0.6**
RDO Rodhopi 10.11 116 Pn **Pn** **02 53 23.2 +0.9**
BLEU Blekinge 10.12 7 *i* P **Pn** **02 53 21.6 -0.8**
DEL Delary 10.19 1 *i* P **Pn** **02 53 23.1 -0.3**
KIS Kishinev 10.54 81 P **Pn** **02 53 28.2 -0.1**
ALN Alexandroupoli 10.56 116 Pn **Pn** **02 53 28.9 +0.4**
ETSF Etsaut 10.60 256 *e*P **Pn** **02 53 32.8 +3.6**
SJPF Ste Jean 10.97 258 *e*P **Pn** **02 53 36.1 +2.0**
KEST Kesra 11.02 198 Pn **Pn** **02 53 35.0 +0.2**
comp=Z,0.3nm,0.3s,baz=4.6,slow=6.1,SNR=7.4
KEST LR LR 02 57 53.2
comp=Z,74nm,19.9s,baz=6.0,slow=38
comp=Z,2.0nm,0.9s
ITM Ithomi 11.06 143 Pn **Pn** **02 53 36.0 +0.6**
SGMF Saint Gilles 11.10 286 *e*P **Pn** **02 53 34.9 -1.0**
AK04 Malin Array Si 11.28 61 P **Pn** **02 53 38.3 0.0**
AKASG Malin Array Be 11.31 61 Pn **Pn** **02 53 38.0 -0.7**
comp=Z,0.1nm,0.3s,baz=254,slow=13,SNR=4.1
AKASG LR LR 02 58 42.5
comp=Z,46nm,18.9s,baz=195,slow=42
comp=Z,0.3nm,0.4s
PABE Paberze 11.32 32 Pn **Pn** **02 53 39.4 +0.6**
QUIF Quistinic 11.49 284 *e*P **Pn** **02 53 39.7 -1.5**
CWF Charnwood Fore 11.58 309 P **Pn** **02 53 45.8 +3.4**
ROSF Rostrenen 11.58 286 *e*P **Pn** **02 53 42.2 -0.3**
NACGM Naroch 12.03 39 *e*P P 02 53 55.4 -6.1
comp=Z,5.0nm,0.9s,baz=230
EKA Eskdalemuir Ar 13.86 317 Pn **Pn** **02 54 13.9 +0.4**
comp=Z,1.1nm,0.5s,baz=124,slow=13,SNR=9.0
HFS Hagfors 13.86 0 Pn **Pn** **02 54 14.6 +1.1**
comp=Z,1.2nm,0.9s,baz=192,slow=13,SNR=1.8
ESK Eskdalemuir 13.87 317 Pn **Pn** **02 54 15.1 +1.5**
IDI Anoyia 13.95 138 Pn **Pn** **02 54 13.8 -1.1**
comp=Z,8.4nm,1.0s,baz=344,slow=19,SNR=2.3
IDI Anoyia 13.95 138 Pn **Pn** **02 54 15.7 +0.8**
ESDC Sonseca Array 14.39 249 Pn **Pn** **02 54 21.9 +0.9**
comp=Z,0.1nm,0.3s,baz=55,slow=12,SNR=12
comp=Z,0.3nm,0.6s
NAO01 NORSAR Array S 14.65 355 Pn **Pn** **02 54 25.8 +1.5**
PAB San Pablo 14.71 249 Pn **Pn** **02 54 24.8 -0.6**
FINES FINESS Array B 16.83 21 Pn **Pn** **02 54 52.4 -0.2**
comp=Z,0.2nm,0.3s,baz=206,slow=9.4,SNR=8.3
comp=Z,1.0nm,0.5s
FINES FINESS Array B 16.83 21 Pn **Pn** **02 54 50.4 -2.2**
FIA1 FINESS Array S 16.83 21 Pn **Pn** **02 54 50.9 -1.8**
FIA1 IAmb IAmb 02 55 13.0
comp=Z,13nm,0.9s
KBZ Khabaz 20.87 86 P **P** **02 55 39.0 -0.1**
comp=Z,1.6nm,0.8s,baz=270,slow=9.1,SNR=3.6
comp=Z,1.6nm,0.8s
MMAI Mount Meron Ar 21.36 121 P **P** **02 55 44.2 -0.3**
comp=Z,1.1nm,0.6s,baz=307,slow=14,SNR=1.7
comp=Z,1.1nm,0.6s
ARCES ARCESS Array B 24.06 10 P **P** **02 56 14.2 +2.2**
comp=Z,0.4nm,0.5s,baz=188,slow=9.6,SNR=6.6
comp=Z,0.4nm,0.5s
TORD Torodi Ar. Bea 34.52 201 P **P** **02 57 45.4 0.0**
comp=Z,0.9nm,0.9s,baz=29,slow=11,SNR=3.8
comp=Z,0.9nm,0.9s
HHC Hu-ho-hao-te 66.67 55 *e*P **P** **03 01 47.5 -0.4**
HHC pmax pmax
comp=Z,20nm,0.7s
TXAR Lajitas Array 85.72 309 P **P** **03 03 38.4 +2.1**
comp=Z,0.1nm,0.6s,baz=35,slow=7.0,SNR=3.8
comp=Z,0.1nm,0.6s

SDD ***17*** *03:25:36.9±2.5, 19°.89N×71°.89W, h1*$^{km}_{\pm}$*26, MD3.0, ML2.4, MW2.6, Presumed earthquake*
SSNC ***17*** *03:25:37.9±1.5, 19°.98N×71°.57W, h5*$^{km}_{\pm}$*12, MD2.8, Presumed earthquake*
OSPL ***17*** *03:25:37.3±1.2, 19°.95N×71°.94W, h0*$^{km}_{\pm}$*6, ML2.6, Presumed earthquake*

ISC 17 03:25:35.9±1.1, 19°.98N±0°.03×71°.85W±0°.04, h14$^{km}_{\pm}$**7, n16, σ0°93/27, 4C-5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCDR	**Montecristi**	**0.20**	**115**	⇓*i*P	**Pg**	**03 25 40.6**	**+0.2**
MCDR				IAML		03 25 43.3	
	comp=N,3µm,0.2s						
MCDR				⇓*i*Sg	**Sg**	**03 25 43.3**	**-0.2**
LODA1	**ITESIL, Dajabo**	**0.45**	**162**	*i* P	**Pb**	**03 25 45.8**	**+0.2**
LODA1				*e*S	**Sb**	**03 25 51.7**	**-0.5**
LODA1				IAML		03 25 53.1	
	comp=Z,512nm,1.0s						
LOPP1	**Punta Rusia, P**	**0.62**	**101**	*i* P	**Pn**	**03 25 50.4**	**+0.1**
LOPP1				*e*S	**Sn**	**03 25 59.7**	**-0.5**
LOPP1				IAML		03 26 03.9	
	comp=Z,74nm,1.5s						
MADR	**Mao Valverde**	**0.81**	**120**	⇓*i*P	**Pb**	**03 25 52.2**	**+0.3**
MADR				⇑*i*Sg	**Sg**	**03 26 01.8**	**-0.6**
MADR				IAML		03 26 13.9	
	comp=N,101nm,1.9s						
SDDR	**Presa de Saban**	**1.12**	**152**	*i* P	**Pb**	**03 25 57.1**	**0.0**
SDDR				*e*S	**Sg**	**03 26 12.1**	**-0.2**
SDDR				IAML		03 26 14.0	
	comp=Z,797nm,0.4s						
SDDR	**Presa de Saban**	**1.12**	**152**	*e*P	**Pb**	**03 25 56.5**	**-0.6**
SDDR				*e*S	**Sb**	**03 26 09.6**	**-2.0**
SC01	**Santiago de lo**	**1.19**	**117**	⇓*i*P	**Pg**	**03 25 59.0**	**+0.1**
SC01				⇑*i*S	**Sn**	**03 26 15.2**	**+1.0**
SC01				IAML		03 26 20.3	
	comp=N,44nm,0.2s						
SC01	**Santiago de lo**	**1.19**	**117**	*i* P	**Pg**	**03 25 59.5**	**+0.6**
SC01				*e*S	**Sn**	**03 26 16.6**	**+2.4**
LONE3	**El Aguacate, B**	**1.42**	**165**	*i* P	**Pb**	**03 26 02.4**	**+0.2**
LONE3				*e*S	**Sg**	**03 26 21.5**	**0.0**
LONE3				IAML		03 26 22.5	
	comp=Z,27nm,2.3s						
LODU1	**El Espartillar**	**1.66**	**168**	*i* P	**Pb**	**03 26 06.1**	**-0.1**
LODU1				IAML		03 26 30.4	
	comp=Z,54nm,5.0s						
GRTK	**Grand Turk**	**1.67**	**24**	*i* P	**Pb**	**03 26 06.3**	**-0.1**
GRTK				*e*S	**Sb**	**03 26 28.4**	**+1.2**
GRTK				IAML		03 26 29.0	
	comp=Z,119nm,1.6s						
GRTK	**Grand Turk**	**1.67**	**24**	*e*S	**Sn**	**03 26 24.3**	**-1.6**
BANI	**BANI**	**2.12**	**138**	⇑*i*P	**Pn**	**03 26 11.8**	**+0.8**
BANI				⇓*i*Sg	**Sb**	**03 26 40.5**	**+0.2**
BANI				IAML		03 26 44.2	
	comp=N,39nm,1.2s						
MASC	**Masc**	**2.25**	**275**	*e*P	**Pb**	**03 26 16.6**	**+0.4**
MASC				*e*S	**Sg**	**03 26 47.9**	**-0.3**
HATOM	**Hato Mayor del**	**2.61**	**116**	IAML		03 26 59.3	
	comp=N,6.1nm,0.2s						
HIDR	**Higuey Centro**	**3.27**	**114**	⇑*i*P	**Pn**	**03 26 25.3**	**-1.4**

IDC 17 03:59:58.1±5.7, 17°.81S×177°.68W, h426$^{km}_{\pm}$**30, mb3.5/3, mbtmp4.2/4, Error ellipse: s-maj=100.2km s-min=66.3km az=134.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.07**	**270**	P	P	04 01 12.4	0.0
	8.9nm,0.4s,baz=98,slow=20,SNR=9.8						
STKA	**Stephens Creek**	**39.29**	**241**	P	P	04 06 49.1	+0.6
	2.2nm,0.5s,baz=78,slow=9.0,SNR=5.1						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**45.33**	**259**	P	P	04 07 36.1	-0.6
	0.9nm,0.5s,baz=95,slow=6.8,SNR=26						
WRA				PcP	PcP	04 09 07.5	-0.4
	0.2nm,0.3s,baz=91,slow=3.2,SNR=1.9						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**45.49**	**254**	P	P	04 07 37.8	-0.1
	7.6nm,0.6s,baz=89,slow=8.3,SNR=88						
ASAR				PcP	PcP	04 09 08.1	-0.3
	0.3nm,0.6s,baz=98,slow=3.6,SNR=2.2						
	7.6nm,0.6s						

HEL 17 04:00:50.7±0.9, 69°.27N×30°.72E, h0^{km}**, Explosion, Norway-Murmansk border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**1.18**	**229**	PN	Pn	04 01 14.4	0.0
KEV	**Kevo**	**1.40**	**292**	PG	Pn	04 01 16.0	-1.4
	baz=106						

KEV				SG	Sg	04 01 33.9	-1.6
ARA0	**ARCESS Array S**	**1.86**	**281**	PG	Pn	04 01 24.4	+0.6
KTK1	**Kautokeino**	**2.69**	**268**	PN	Pn	04 01 33.5	-1.7
KLF	**Kolari**	**3.24**	**234**	PG	Pb	04 01 49.8	+0.8
RANF	**Ranua**	**3.60**	**207**	SG	Sb	04 02 41.5	+2.3
TRO	**Tromso**	**4.17**	**281**	PB	Pb	04 02 00.7	-4.2

HEL 17 04:01:01.8±0.4, 67°80N×20°39E, h0km, ML1.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.66**	**67**	PG	Pg	04 01 12.1	-2.3
LANU				SG	Sg	04 01 23.7	+0.9
HEF	**Hetta**	**1.37**	**62**	PG	Pg	04 01 26.2	-1.8
	baz=244						
HEF				smax	smax	04 01 43.0	
	comp=Z,1.3nm,0.2s						
HEF				SN	Sb	04 01 46.4	+0.1
ERTU	**Ertsjaerv**	**1.44**	**150**	PN	Pn	04 01 28.4	-0.6
	baz=336						
ERTU				SN	Sn	04 01 49.3	+0.7
KLF	**Kolari**	**1.49**	**111**	PN	Pn	04 01 29.4	-0.4
KLF				smax	smax	04 01 46.4	
	comp=Z,1.2nm,0.2s						
KTK1	**Kautokeino**	**1.61**	**40**	PG	Pn	04 01 30.5	-1.0
KTK1				SN	Sg	04 01 54.5	+1.1
TRO	**Tromso**	**1.92**	**345**	PG	Pn	04 01 36.1	+0.5
TOF	**Tornio**	**2.32**	**136**	PG	Pb	04 01 43.0	-1.4
TOF				smax	smax	04 02 10.5	
	comp=Z,1.2nm,0.2s						
TOF				SG	Sb	04 02 14.1	+0.5
RNF	**Rovaniemi**	**2.50**	**116**	PB	Pn	04 01 44.7	+1.1
RNF				SN	Sb	04 02 19.2	+0.5
RNF	**Rovaniemi**	**2.50**	**116**	PG	Pn	04 01 44.7	+1.1
RNF				SG	Sb	04 02 19.2	+0.5
ARA0	**ARCESS Array S**	**2.56**	**45**	PG	Pb	04 01 47.9	-0.6
ARA0				SG	Sb	04 02 19.8	-0.6
RAJF	**Raja-Jooseppi**	**3.04**	**73**	SG	Sb	04 02 35.7	+1.3
KEV	**Kevo**	**3.11**	**48**	SB	Sn	04 02 31.7	+2.0

*BNS **17** 04:24:39.9±0.6, 51°.50N×16°.56E, h10km, ML3.4*
*IPEC **17** 04:24:40.6±0.2, 51°.52N×16°.16E, h1km, ML3.2/8, Error ellipse: s-maj=1.9km s-min=1.2km az=68.0*
*MCSM **17** 04:24:40.9±1.4, 51°.4°×1°.6E±°, h6km±9km, mb3.6, MLv3.7*
*DNK **17** 04:24:41.0±1.6, 51°.63N×16°.05E, h0km±35km, ML2.5, Presumed earthquake*
*BGR **17** 04:24:41.7±0.2, 51°.47N×16°.13E, h1km, ML3.3/23, Error ellipse: s-maj=3.3km s-min=1.1km az=24.0*
*IDC **17** 04:24:41.3±0.7, 51°.48N×15°.97E, h0km, mb3.6/3, mbtmp3.5/10, ML2.9/6, Error ellipse: s-maj=10.7km s-min=7.5km az=103.0*
*GFZ **17** 04:24:41.6±0.3, 52°N±3°×1°.6E±°, h10km, M3.8/18, mb4.0/6*
*UPP **17** 04:24:44.6±3.1, 51°.78N×15°.67E, h0km, ML2.9, Presumed earthquake*

ISC 17 04:24:39.5±0.5, 51°.57N±0°.02×16°.18E±0°.02, h0km, n186, σ1°19/302, mb3.6/3, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg	**Pg**	**04 24 54.0**	**+0.5**
KSP				*e*Sg	**Sg**	**04 25 03.0**	**0.0**
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg	**Pg**	**04 24 54.1**	**+0.5**
KSP				*e*Sg	**Sg**	**04 25 03.4**	**+0.4**
	SNR=4.8						
KSP	**Ksiaz**	**0.73**	**174**	P	**Pg**	**04 24 54.0**	**+0.5**
KSP				S	**Sg**	**04 25 03.3**	**+0.3**
CHVC	**Chvalec**	**0.99**	**185**	*e*PG	**Pg**	**04 24 58.8**	**+0.4**
CHVC				*e*SG	**Sg**	**04 25 10.9**	**-0.3**
	comp=Z,293nm,0.5s						
OSTC	**Ostas**	**1.02**	**179**	*e*PG	**Pb**	**04 24 59.5**	**-0.5**
OSTC				*e*SG	**Sg**	**04 25 12.2**	**+0.1**
	comp=Z,199nm,0.3s						
UPC	**Upice**	**1.07**	**186**	*e*PG	**Pg**	**04 25 00.2**	**+0.2**
UPC				*e*SG	**Sg**	**04 25 13.4**	**-0.5**
	comp=Z,398nm,0.3s						
UPC	**Upice**	**1.07**	**186**	P	**Pg**	**04 25 00.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG	**Pg**	**04 25 02.8**	**-0.2**
DPC				*e*SG	**Sg**	**04 25 17.9**	**-1.0**
	comp=Z,285nm,0.8s						
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*Pg	**Pg**	**04 25 02.9**	**-0.1**
DPC				*e*Sg	**Sg**	**04 25 17.8**	**-1.1**
	SNR=2.2						
DPC	**Dobruska-Polom**	**1.23**	**176**	P	**Pg**	**04 25 02.9**	**-0.1**
DPC				S	**Sg**	**04 25 17.4**	**-1.5**
DPC	**Dobruska-Polom**	**1.23**	**176**	P	**Pg**	**04 25 02.9**	**-0.1**
PIVO	**Bartosovice**	**1.41**	**170**	*e*Pg	**Pg**	**04 25 05.9**	**-0.6**
	baz=350						
PIVO				*e*Sg	**Sg**	**04 25 22.6**	**-2.1**
	274nm,0.4s,baz=350						
KRLC	**Kraliky**	**1.55**	**165**	*e*SG	**Sg**	**04 25 27.2**	**-2.0**
	comp=Z,191nm,0.4s						
KRLC	**Kraliky**	**1.55**	**165**	P	**Pn**	**04 25 08.3**	**0.0**
BRG	**Berggiesshubel**	**1.57**	**244**	*e*Pn	**Pn**	**04 25 07.9**	**-0.8**
	SNR=5.2						
BRG				*e*Pg	**Pg**	**04 25 10.0**	**+0.4**
BRG				*e*Sg	**Sb**	**04 25 29.8**	**0.0**
	SNR=3.0						
BRG	**Berggiesshubel**	**1.57**	**244**	P	**Pn**	**04 25 08.2**	**-0.5**
BRG	**Berggiesshubel**	**1.57**	**244**	Pn	**Pn**	**04 25 08.1**	**-0.5**
BRG				Pg	**Pb**	**04 25 09.6**	**+0.1**
BRG				Sg	**Sg**	**04 25 30.1**	**+0.1**
BRG				Amp		04 25 32.6	
	comp=Z,211nm,0.4s						
RICC	**Richard**	**1.67**	**233**	*e*PG	**Pn**	**04 25 10.4**	**+0.4**
RICC				*e*SG	**Sg**	**04 25 32.9**	**-0.2**
	comp=Z,256nm,0.3s						
ANAC	**Anensky vrch**	**1.68**	**153**	*e*Pn	**Pn**	**04 25 10.1**	**-0.1**
	baz=332						
ANAC				*e*Sg	**Sn**	**04 25 31.8**	**-0.7**
	comp=Z,141nm,0.5s,baz=332						
RUE	**Ruedersdorf**	**1.74**	**302**	*e*Pg	**Pg**	**04 25 14.7**	**+1.8**
RUE				*e*Sg	**Sg**	**04 25 36.2**	**+0.9**
RUE	**Ruedersdorf**	**1.74**	**302**	P	**Pn**	**04 25 11.6**	**+0.7**
RYBC	**Ceska Rybna**	**1.77**	**182**	*e*Pn	**Pn**	**04 25 11.1**	**-0.3**
	baz=2.0						
RYBC				*e*Sg	**Sn**	**04 25 33.8**	**-0.7**
	comp=Z,129nm,0.3s,baz=2.0						
FBE	**Freiberg**	**1.89**	**251**	*e*Pg	**Pb**	**04 25 14.5**	**-0.4**
FBE				*e*Sg	**Sg**	**04 25 40.4**	**+0.2**
PRU	**Pruhonice**	**1.90**	**214**	*e*PN	**Pn**	**04 25 12.8**	**-0.3**
PRU				*e*PG	**Pb**	**04 25 14.8**	**-0.2**
PRU				*e*SG	**Sg**	**04 25 41.2**	**+0.8**
	comp=Z,184nm,0.6s						
PRU	**Pruhonice**	**1.90**	**214**	*e*Pn	**Pn**	**04 25 12.5**	**-0.6**
	SNR=3.6						
PRU				*e*Pg	**Pb**	**04 25 14.6**	**-0.3**
PRU	**Pruhonice**	**1.90**	**214**	P	**Pn**	**04 25 12.8**	**-0.3**
STEB	**Steborice**	**1.93**	**148**	*e*PG	**Pg**	**04 25 16.4**	**0.0**
STEB				*e*SG	**Sg**	**04 25 40.8**	**-0.6**
	comp=Z,280nm,0.4s						
RAC	**Raciborz**	**1.96**	**139**	*e*PG	**Pg**	**04 25 17.4**	**+0.3**
RAC				*e*SG	**Sg**	**04 25 44.1**	**+1.6**
HSKC	**Hora Svate Kat**	**1.98**	**242**	*e*PG	**Pb**	**04 25 16.5**	**0.0**
HSKC				*e*SG	**Sb**	**04 25 41.7**	**-0.1**
	comp=Z,165nm,0.3s						
HSKC	**Hora Svate Kat**	**1.98**	**242**	P	**Pn**	**04 25 14.9**	**+0.5**
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**04 25 14.5**	**-0.1**
	SNR=46						
MORC				*e*Sg	**Sb**	**04 25 42.2**	**+0.1**
	SNR=3.8						
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**04 25 14.5**	**-0.1**
	baz=334						
MORC				*e*Sg	**Sb**	**04 25 41.7**	**-0.4**
	comp=Z,162nm,0.6s,baz=334						
MORC	**Moravsky Berou**	**2.00**	**154**	P	**Pn**	**04 25 14.6**	**+0.1**
CLL	**Collm**	**2.01**	**264**	*e*Pn	**Pn**	**04 25 14.4**	**-0.2**
	SNR=12						
CLL				*e*Sg	**Sg**	**04 25 43.5**	**-0.4**
	SNR=2.5						
CLL	**Collm**	**2.01**	**264**	P	**Pn**	**04 25 14.1**	**-0.6**
CLL	**Collm**	**2.01**	**264**	*e*Pn	**Pn**	**04 25 14.0**	**-0.6**
CLL				*e*Pg	**Pg**	**04 25 18.0**	**+0.1**
CLL				*i* x	x	04 25 20.6	
CLL				*i* Sg	**Sg**	**04 25 43.5**	**-0.4**
	comp=Z,141nm,0.7s						
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*PG	**Pg**	**04 25 20.2**	**-0.3**
OKC				*e*SG	**Sb**	**04 25 46.6**	**+0.4**
	comp=Z,76nm,0.5s						
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*Pn	**Pn**	**04 25 16.2**	**-0.3**
	SNR=4.2						
OKC				*e*Pg	**Pg**	**04 25 20.5**	**0.0**
OKC				*e*Sg	**Sb**	**04 25 46.6**	**+0.4**
	SNR=4.3						
OKC	**Ostrava-Krasne**	**2.14**	**143**	P	**Pg**	**04 25 20.6**	**0.0**
LNIZ	**Loecknitz**	**2.27**	**329**	*e*Pn	**Pn**	**04 25 18.5**	**+0.3**
LNIZ				*e*Sn	**Sn**	**04 25 47.2**	**+0.3**
LNIZ	**Loecknitz**	**2.27**	**329**	P	**Pn**	**04 25 18.8**	**+0.5**
VRAC	**Vranov**	**2.28**	**173**	Pn	**Pn**	**04 25 19.5**	**+1.0**
	comp=Z,9.1nm,0.3s,baz=338,slow=14,SNR=33						
VRAC				Lg	Lg	04 25 50.8	
	comp=Z,21nm,0.3s,baz=258,slow=22,SNR=12						
	comp=Z,27nm,0.3s						
VRAC	**Vranov**	**2.28**	**173**	*e*Pn	**Pn**	**04 25 18.6**	**+0.2**
	SNR=1.9						
VRAC				*e*Sg	**Sb**	**04 25 50.8**	**+0.5**
	SNR=4.9						
VRAC	**Vranov**	**2.28**	**173**	*e*Pn	**Pn**	**04 25 18.3**	**-0.1**
	baz=353						
VRAC				*e*Sg	**Sb**	**04 25 50.1**	**-0.2**
	comp=Z,116nm,0.6s,baz=353						
VRAC	**Vranov**	**2.28**	**173**	*e*PN	**Pn**	**04 25 18.4**	**0.0**
VRAC				*e*SG	**Sb**	**04 25 50.2**	**-0.1**
VRAC	**Vranov**	**2.28**	**173**	P	**Pn**	**04 25 19.5**	**+1.0**
ZVC	**Zvikov**	**2.48**	**211**	*e*PN	**Pn**	**04 25 21.1**	**-0.1**
ZVC				*e*PG	**Pb**	**04 25 26.0**	**+1.0**
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn	**Pn**	**04 25 22.2**	**+0.6**
	SNR=3.5						
KRUC				*e*Pg	**Pb**	**04 25 26.2**	**+0.7**
KRUC				*e*Sg	**Sg**	**04 25 58.7**	**-1.6**
	SNR=5.0						
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn	**Pn**	**04 25 21.5**	**-0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**04 25 57.3**	**+0.2**
	comp=Z,129nm,0.7s,baz=357						
KRUC	**Moravsky**	**2.52**	**177**	P	**Pn**	**04 25 22.3**	**+0.6**
STAC	**Stalkov**	**2.61**	**193**	*e*Pn	**Pn**	**04 25 22.7**	**-0.2**
	baz=12						
STAC				*e*Sg	**Sb**	**04 26 00.1**	**+0.4**
	comp=Z,113nm,0.5s,baz=12						
TANN	**Tannenbergstha**	**2.62**	**245**	*e*Pn	**Pn**	**04 25 23.2**	**+0.1**
	SNR=9.9						
TANN				*e*Pg	**Pg**	**04 25 29.7**	**0.0**
TANN				*e*Sg	**Sb**	**04 26 01.8**	**+1.7**
	SNR=4.0						
TANN	**Tannenbergstha**	**2.62**	**245**	P	**Pn**	**04 25 23.5**	**+0.4**
OJC	**Ojcow**	**2.66**	**119**	*e*Pn	**Pn**	**04 25 22.5**	**-1.1**
OJC				*e*Pg	**Pg**	**04 25 30.9**	**+0.4**
OJC				*e*Sg	**Sg**	**04 26 05.8**	**+0.9**
OJC	**Ojcow**	**2.66**	**119**	*e*Pn	**Pn**	**04 25 22.7**	**-0.9**
	SNR=4.1						
OJC				*e*Pg	**Pg**	**04 25 31.1**	**+0.6**
OJC				*e*Sg	**Sg**	**04 26 05.9**	**+0.9**
	SNR=3.2						
OJC	**Ojcow**	**2.66**	**119**	P	**Pn**	**04 25 24.6**	**+0.9**
NKC	**Novy Kostel**	**2.72**	**242**	*e*PN	**Pn**	**04 25 24.8**	**+0.4**
NKC				*e*PG	**Pg**	**04 25 31.6**	**+0.1**
NKC				*e*SG	**Sg**	**04 26 06.8**	**+0.1**
	comp=Z,150nm,0.3s						
NKC	**Novy Kostel**	**2.72**	**242**	*e*Pn	**Pn**	**04 25 24.6**	**+0.2**
	SNR=7.0						
NKC				*e*Pg	**Pg**	**04 25 32.0**	**+0.5**
NKC				*e*Sg	**Sg**	**04 26 07.1**	**+0.4**
	SNR=2.7						
NKC	**Novy Kostel**	**2.72**	**242**	P	**Pn**	**04 25 24.8**	**+0.4**
PLN	**Plauen**	**2.76**	**248**	*e*Pn	**Pn**	**04 25 25.1**	**+0.1**
	SNR=3.7						
PLN				*e*Pg	**Pg**	**04 25 32.6**	**+0.2**
PLN				*e*Sg	**Sg**	**04 26 08.6**	**+0.3**
	SNR=4.6						
NEUB	**Neuenburg**	**2.78**	**264**	*e*Pg	**Pg**	**04 25 32.9**	**+0.1**
NEUB				*e*Sg	**Sg**	**04 26 09.6**	**+0.7**
	SNR=3.9						
JAVC	**Velka Javorina**	**2.88**	**160**	*e*Pn	**Pn**	**04 25 28.0**	**+1.2**
	SNR=3.3						
JAVC	**Velka Javorina**	**2.88**	**160**	*e*Pn	**Pn**	**04 25 26.5**	**-0.2**
	baz=340						
JAVC	**Velka Javorina**	**2.88**	**160**	P	**Pb**	**04 25 29.3**	**-2.4**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**04 25 27.7**	**-0.1**
KHC				*e*PG	**Pb**	**04 25 34.0**	**+0.9**
KHC				*e*SN	**Sn**	**04 26 03.2**	**-0.8**
KHC				*e*SG	**Sg**	**04 26 13.3**	**-1.2**
	comp=Z,63nm,0.4s						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*Pg	**Pb**	**04 25 34.0**	**+0.9**
KHC				*e*Sg	**Sg**	**04 26 12.1**	**-2.4**
	SNR=2.2						
KHC	**Kasperske Hory**	**2.96**	**215**	P	**Pn**	**04 25 27.6**	**-0.2**
KHC	**Kasperske Hory**	**2.96**	**215**	P	**Pn**	**04 25 27.4**	**-0.3**
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN	**Pn**	**04 25 29.1**	**+0.7**
CKRC				*e*PG	**Pb**	**04 25 35.2**	**+1.3**
CKRC				*e*SG	**Sb**	**04 26 12.6**	**+1.5**
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*Pn	**Pn**	**04 25 28.9**	**+0.5**
	SNR=5.6						
CKRC				*e*Pg	**Pb**	**04 25 35.3**	**+1.4**
CKRC				*e*Sg	**Sg**	**04 26 13.6**	**-2.4**
	SNR=4.6						
MOX	**Moxa**	**3.02**	**254**	*e*Pn	**Pn**	**04 25 28.9**	**+0.2**
	SNR=3.4						
MOX				*e*Pg	**Pg**	**04 25 36.9**	**-0.6**
MOX				*e*Sg	**Sg**	**04 26 16.3**	**-0.3**
	SNR=4.4						
ROTZ	**Rotzenmuhle**	**3.11**	**236**	*e*Pn	**Pn**	**04 25 30.0**	**+0.2**
	SNR=12						
ROTZ				*e*Sg	**Sb**	**04 26 16.4**	**+2.4**
	SNR=3.4						
FLTG	**Flechtingen**	**3.15**	**286**	*e*Sg	**Sg**	**04 26 21.0**	**+0.3**
	SNR=2.6						
GEC2	**GERESS Array S**	**3.16**	**211**	*e*Pn	**Pn**	**04 25 30.5**	**-0.1**
	SNR=16						
GEC2				*e*Pg	**Pb**	**04 25 37.7**	**+1.2**
GEC2				*e*Sg	**Sg**	**04 26 18.5**	**-2.5**
	SNR=2.4						
GERES	**GERESS Array B**	**3.16**	**211**	Pn	**Pn**	**04 25 30.4**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=32,slow=12,SNR=103						
GERES				Lg	Lg	04 26 17.5	
	comp=Z,2.1nm,0.3s,baz=32,slow=27,SNR=9.5						
	comp=Z,9.3nm,0.4s						
LANS	**Liptovska Anna**	**3.21**	**138**	*e*PN	**Pn**	**04 25 32.2**	**+1.0**
LANS				*e*PG	**Pg**	**04 25 41.4**	**+0.4**
LANS				*e*SG	**Sg**	**04 26 21.9**	**-0.7**
WET	**Wettzell**	**3.22**	**222**	*e*Pn	**Pn**	**04 25 31.2**	**-0.1**
	SNR=14						
WET				*e*Sg	**Sg**	**04 26 20.9**	**-2.0**
	SNR=1.9						
WET	**Wettzell**	**3.22**	**222**	P	**Pn**	**04 25 31.4**	**0.0**
MODS	**Modra-Piesok**	**3.28**	**167**	P	**Pn**	**04 25 34.6**	**+2.5**
MODS	**Modra-Piesok**	**3.28**	**167**	*e*PN	**Pn**	**04 25 33.1**	**+0.9**
MODS				*e*PG	**Pg**	**04 26 42.0**	**-0.3**
MODS				*e*SG	**Sg**	**04 26 24.2**	**-0.6**
GORT1	**Trebel**	**3.31**	**297**	*e*Pn	**Pn**	**04 25 34.0**	**+1.5**
	SNR=5.3						
NIE	**Niedzica**	**3.40**	**128**	*e*Pn	**Pn**	**04 25 34.8**	**+0.9**
NIE				*e*Pg	**Pg**	**04 25 44.7**	**0.0**
NIE				*e*Sg	**Sg**	**04 26 28.8**	**0.0**
NIE	**Niedzica**	**3.40**	**128**	*e*Pg	**Pg**	**04 25 44.5**	**-0.1**
NIE				*e*Sg	**Sg**	**04 26 29.1**	**+0.3**
	SNR=3.3						
ASSE	**Asse, Remlinge**	**3.46**	**281**	*e*Sg	**Sg**	**04 26 30.8**	**+0.2**
	SNR=1.9						
WINA	**Aland / Wiene**	**3.47**	**181**	*i* Pn	**Pn**	**04 25 35.2**	**+0.4**
	SNR=6.7						
WINA				Pn	Pb	04 25 36.0	-5.8
	SNR=15						
GRB3	**Grafenberg Arr**	**3.58**	**233**	P	**Pn**	**04 25 37.4**	**+1.2**
GRA3	**Grafenberg Arr**	**3.58**	**242**	P	**Pn**	**04 25 37.1**	**+0.8**
GRB1	**Grafenberg Arr**	**3.62**	**235**	P	**Pn**	**04 25 37.5**	**+0.7**
GRB4	**Grafenberg Arr**	**3.62**	**236**	P	**Pn**	**04 25 38.2**	**+1.3**
CLZ	**Clausthal**	**3.62**	**277**	*e*Pn	**Pn**	**04 25 38.1**	**+1.2**
	SNR=6.6						
CLZ				*e*Sg	**Sg**	**04 26 36.0**	**+0.1**
	SNR=2.6						
CLZ	**Clausthal**	**3.62**	**277**	P	**Pn**	**04 25 38.3**	**+1.4**
BSD	**Bornholm Skovb**	**3.63**	**348**	*i* P	**Pn**	**04 25 37.0**	**+0.1**
BSD				*i* S	**Sn**	**04 26 19.3**	**-1.1**
BSD				IAML		04 26 26.9	
	comp=Z,5.6nm,0.4s						
CONA	**Conrad Observa**	**3.65**	**183**	*i* Pn	**Pn**	**04 25 38.0**	**+0.7**
	comp=Z,3.0nm,0.3s,SNR=9.2						
CONA				*e*Sn	**Sn**	**04 26 21.4**	**+0.2**
	comp=Z,30nm,0.5s						
GRA1	**Grafenberg Arr**	**3.67**	**241**	P	**Pn**	**04 25 38.3**	**+0.7**
GRF	**Grafenberg Arr**	**3.67**	**241**	*e*Pn	**Pn**	**04 25 38.2**	**+0.6**
	SNR=5.7						
GRF				*e*Sg	**Sg**	**04 26 35.5**	**-2.0**
	SNR=3.8						
GRFO	**Grafenberg**	**3.68**	**241**	P	**Pn**	**04 25 38.3**	**+0.7**
GRB2	**Grafenberg Arr**	**3.69**	**233**	P	**Pn**	**04 25 38.9**	**+1.1**
GRB5	**Grafenberg Arr**	**3.79**	**231**	P	**Pn**	**04 25 39.3**	**+0.1**
RONA	**Rosalia, Austr**	**3.88**	**179**	*e*Pn	**Pn**	**04 25 40.8**	**+0.4**
	comp=Z,2.2nm,0.3s						
RONA				*e*Sn	**Sn**	**04 26 28.9**	**+2.3**
	comp=Z,15nm,0.4s						
GRC4	**Grafenberg Arr**	**3.88**	**232**	P	**Pn**	**04 25 41.4**	**+1.0**
STHS	**Stebnicka Huta**	**3.89**	**122**	*e*PN	**Pn**	**04 25 40.7**	**+0.2**
STHS				*e*PG	**Pg**	**04 25 54.1**	**+0.1**
STHS				*e*SG	**Sg**	**04 26 45.6**	**+1.3**
MOA	**Molln**	**3.93**	**199**	*i* Pn	**Pn**	**04 25 41.4**	**+0.3**
	comp=Z,9.7nm,0.3s,SNR=17						
MOA				*e*Sn	**Sn**	**04 26 29.1**	**+1.3**
	comp=Z,59nm,0.4s						
MOA	**Molln**	**3.93**	**199**	P	**Pn**	**04 25 41.7**	**+0.6**
GRC1	**Grafenberg Arr**	**3.94**	**231**	P	**Pn**	**04 25 40.9**	**-0.4**
UBBA	**Unterbreizbach**	**3.96**	**261**	*e*Pn	**Pn**	**04 25 41.7**	**+0.4**
	SNR=2.5						
UBBA	**Unterbreizbach**	**3.96**	**261**	P	**Pn**	**04 25 42.4**	**+1.0**
GRC3	**Grafenberg Arr**	**3.99**	**229**	P	**Pn**	**04 25 41.3**	**-0.5**
GRC2	**Grafenberg Arr**	**4.10**	**231**	P	**Pn**	**04 25 44.2**	**+0.8**
KECS	**Kecovo**	**4.16**	**136**	*e*PN	**Pn**	**04 25 44.2**	**0.0**
KECS				*e*PG	**Pg**	**04 26 01.1**	**+2.0**
KECS				*e*SG	**Sg**	**04 26 53.1**	**+0.2**
BIOA	**Bad Ischl, Aus**	**4.22**	**204**	*i* Pn	**Pn**	**04 25 45.5**	**+0.4**
	comp=Z,15nm,0.3s,SNR=8.3						
BIOA				*e*Sn	**Sn**	**04 26 35.2**	**+0.1**
	comp=Z,43nm,0.4s						
BSEG	**Bad Segeberg**	**4.28**	**306**	P	**Pn**	**04 25 46.7**	**+0.9**
ARSA	**Arzberg**	**4.35**	**186**	*i* Pn	**Pn**	**04 25 49.0**	**+2.2**
	comp=Z,4.7nm,0.3s,SNR=5.6						
ARSA				*e*Sn	**Sn**	**04 26 40.9**	**+2.8**
	comp=Z,28nm,0.8s						
ARSA	**Arzberg**	**4.35**	**186**	P	**Pn**	**04 25 49.9**	**+3.0**
RETH	**Rethem/Aller,**	**4.36**	**288**	*e*Pn	**Pn**	**04 25 47.9**	**+1.0**
	SNR=2.5						
PSZ	**Piszkesteto**	**4.38**	**145**	P	**Pn**	**04 25 48.5**	**+1.2**
LUNU	**Lund**	**4.38**	**339**	*i* P	**Pn**	**04 25 47.4**	**+0.2**
LUNU				*i* S	**Sn**	**04 26 36.3**	**-2.6**
RJOB	**Jochberg**	**4.42**	**211**	*e*Pn	**Pn**	**04 25 48.7**	**+0.8**
	SNR=5.8						
MPLH	**Magyarpolny**	**4.50**	**168**	P	**Pn**	**04 25 48.8**	**0.0**
MPLH	**Magyarpolny**	**4.50**	**168**	P	**Pn**	**04 25 49.5**	**+0.6**
SESA	**Seetaler Alpe,**	**4.59**	**194**	*i* Pn	**Pn**	**04 25 51.2**	**+0.9**
	SNR=18						
KOLS	**Kolonicke sedl**	**4.72**	**122**	P	**Pn**	**04 25 53.1**	**+1.2**
KOLS	**Kolonicke sedl**	**4.72**	**122**	*e*PN	**Pn**	**04 25 52.4**	**+0.5**
KOLS				*e*PG	**Pg**	**04 26 11.5**	**+1.6**
KOLS				*e*SG	**Sg**	**04 27 10.0**	**-1.0**
LESA	**Schwarzleotal**	**4.74**	**210**	*i* Pn	**Pn**	**04 25 52.5**	**+0.2**
	comp=Z,3.3nm,0.3s,SNR=8.6						
LESA				*e*Sn	**Sn**	**04 26 48.5**	**+0.6**
	comp=Z,16nm,0.5s						
BLEU	**Blekinge**	**4.75**	**358**	P	**Pn**	**04 25 53.3**	**+1.1**
	baz=173						
BLEU				S	**Sn**	**04 26 46.0**	**-2.0**
BLEU	**Blekinge**	**4.75**	**358**	*i* P	**Pn**	**04 25 53.0**	**+0.7**
BLEU				P	Pb	04 25 53.3	-10
	baz=173						
BLEU				S	**Sn**	**04 26 46.0**	**-2.0**
BLEU				*i* S	Sb	04 26 46.0	-15
KBA	**Koelnbreinsper**	**4.86**	**203**	*i* Pn	**Pn**	**04 25 54.8**	**+0.7**
	comp=Z,8.2nm,0.4s						
KBA				*e*Sn	**Sn**	**04 26 54.0**	**+2.8**
	comp=Z,17nm,0.5s						
KASTN	**Kahler Asten**	**4.88**	**269**	*e*Pn	**Pn**	**04 25 54.2**	**+0.1**
	SNR=2.9						
BJUU	**Bjuv**	**4.88**	**339**	*i* P	**Pn**	**04 25 54.2**	**+0.1**
BJUU				*i* S	**Sn**	**04 26 48.0**	**-3.3**
SOKA	**Soboth**	**4.96**	**189**	*e*Pn	**Pn**	**04 25 56.9**	**+1.6**
	comp=Z,1.3nm,0.2s						
SOKA				*e*Sn	**Sn**	**04 26 51.8**	**-1.5**
	comp=Z,7.9nm,0.5s						
TNS	**Taunus Mts**	**5.08**	**258**	P	**Pn**	**04 25 57.4**	**+0.5**
DEL	**Delary**	**5.09**	**345**	P	**Pn**	**04 25 57.2**	**+0.2**
DEL				S	**Sn**	**04 26 53.6**	**-2.8**
DEL	**Delary**	**5.09**	**345**	*i* P	**Pn**	**04 25 57.2**	**+0.2**
DEL				P	Pb	04 25 57.2	-12
DEL				S	**Sn**	**04 26 53.6**	**-2.8**
DEL				*i* S	Sb	04 26 53.7	-17
OBKA	**Obir**	**5

STRU	**Stroemstad**	**8.00**	**341**	*i* P		**Pn**	04 26 36.4	-0.5		
HOMB	**Homborsund**	**8.03**	**330**	*i* S		**Sn**	04 28 00.6	-8.1		
AK19	**Malin Array Si**	**8.12**	**91**	P		**Pn**	04 26 38.5	0.0		
AK21	**Malin Array Si**	**8.13**	**91**	P		**Pn**	04 26 38.7	+0.1		
AK22	**Malin Array Si**	**8.15**	**91**	P		**Pn**	04 26 39.3	+0.4		
AK18	**Malin Array Si**	**8.15**	**91**	P		**Pn**	04 26 40.0	+1.0		
KIEV	**Kiev**	**8.24**	**91**	P		**Pn**	04 26 40.3	0.0		
AKASG	**Malin Array Be**	**8.25**	**91**	Pn		**Pn**	04 26 39.9	-0.5		
	comp=Z,2.9nm,0.6s,baz=282,slow=12,SNR=12									
AKASG				Sn		**Sn**	**04 28 11.5**	**-2.8**		
	comp=Z,1.3nm,0.3s,baz=267,slow=24,SNR=4.9									
AKASG				Lg	Lg		04 29 10.9			
	comp=Z,0.2nm,0.3s,baz=283,slow=26,SNR=4.3									
HFS	**Hagfors**	**8.70**	**352**	Pn		**Pn**	**04 26 46.9**	**+0.5**		
	comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=5.4									
HFS				Lg	Lg		04 29 18.7			
	comp=Z,0.1nm,0.3s,baz=172,slow=30,SNR=1.6									
	comp=Z,0.7nm,0.5s									
NOA	**NORSAR Array B**	**9.88**	**346**	Pn		**Pn**	**04 27 01.9**	**-0.8**		
	baz=159,slow=13,SNR=1.4									
	comp=Z,0.4nm,0.8s									
FINES	**FINESS Array B**	**11.29**	**25**	Pn		**Pn**	**04 27 21.4**	**-0.5**		
	comp=Z,0.3nm,0.3s,baz=210,slow=10,SNR=12									
	comp=Z,1.5nm,0.6s									
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn		**Pn**	**04 27 30.2**	**-3.1**		
	baz=101,slow=14									
ARCES	**ARCESS Array B**	**18.55**	**10**	P		**P**	**04 28 55.2**	**-2.3**		
	comp=Z,0.5nm,0.4s,baz=187,slow=9.4,SNR=11									
ANDN	**Andirin**	**19.96**	**127**	P		**P**	**04 29 12.2**	**-1.0**		
BVAR	**Borovoye Array**	**32.52**	**66**	P		**P**	**04 31 13.8**	**+2.0**		
	comp=Z,0.8nm,0.5s,baz=273,slow=10,SNR=4.2									
	comp=Z,0.8nm,0.5s									
YKA	**Yellowknife Ar**	**59.82**	**336**	P		**P**	**04 34 47.5**	**+1.4**		
	comp=Z,0.3nm,0.6s,baz=33,slow=6.7,SNR=7.6									
	comp=Z,0.3nm,0.6s									
PDAR	**Pinedale Array**	**74.92**	**322**	P		**P**	**04 36 24.6**	**+2.3**		
	comp=Z,0.2nm,0.5s,baz=59,slow=4.8,SNR=3.7									
	comp=Z,0.2nm,0.5s									

*IDC **17** 04:26:01.7±2.7,23°.10S×179°.53E, h531km±28km, mb3.5/11, mbtmp4.4/12, Error ellipse: s-maj=19.7km s-min=16.6km az=33.0*
*NEIC **17** 04:26:03.8±1.7, 23°.32S±0°.10×179°.5E±0°.1, h547km±9km, mb4.3/18, Error ellipse: s-maj=20.9km s-min=6.1km az=48.0*

ISC 17 04:26:03.5±0.6, 23°.25S±0°.10×179°.5E±0°.1, h550km, n47, σ1°.02/46, mb4.0/21, 3C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**10.74**	**277**	P	**P**	**04 28 29.6**	**+0.6**
URZ	**Urewera**	**15.10**	**187**	P	**P**	**04 29 13.5**	**-0.3**
	16nm,0.9s,baz=254,slow=5.0,SNR=6.3						
URZ				S	**S**	**04 31 47.2**	**-3.1**
	13nm,0.8s,baz=61,slow=23,SNR=6.9						
RTZ	**Ruatahuna**	**15.46**	**187**	P	**P**	**04 29 16.2**	**-1.3**
MSWZ	**Moikau Station**	**18.46**	**190**	P	**P**	**04 29 44.3**	**-1.0**
ARMA	**Armidale**	**25.81**	**248**	P	**P**	**04 30 53.8**	**+2.3**
EIDS	**Eidsvold**	**25.95**	**260**	P	**P**	**04 30 52.6**	**0.0**
EIDS				IAmb	IAmb	04 30 58.0	
	comp=Z,27nm,1.5s						
CTAO	**Charters Tower**	**31.00**	**269**	P	**P**	**04 31 37.1**	**+0.4**
PMG	**Port Moresby**	**33.83**	**289**	P	**P**	**04 32 00.4**	**-0.3**
	comp=Z,29nm,0.8s,baz=228,slow=6.6,SNR=4.2						
	comp=Z,29nm,0.8s						
STKA	**Stephens Creek**	**34.53**	**247**	P	**P**	**04 32 07.0**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=94,slow=13,SNR=4.6						
	comp=Z,1.0nm,0.4s						
BBOO	**Buckleboo**	**39.26**	**246**	P	**P**	**04 32 45.4**	**+0.2**
AS31	**Alice Springs**	**41.67**	**260**	P	**P**	**04 33 04.3**	**-0.2**
ASAR	**Alice Springs**	**41.67**	**260**	P	**P**	**04 33 04.8**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=91,slow=8.0,SNR=34						
ASAR				ScP	**ScP**	**04 37 48.9**	**+2.4**
	comp=Z,0.9nm,0.8s,baz=125,slow=4.7,SNR=5.2						
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**41.67**	**260**	P	**P**	**04 33 04.5**	**0.0**
WR8	**Warramunga Arr**	**41.83**	**266**	P	**P**	**04 33 05.4**	**-0.4**
WR8				IAmb	IAmb	04 33 05.6	
	comp=Z,3.6nm,0.8s						
WRA	**Warramunga Arr**	**41.98**	**266**	P	**P**	**04 33 06.5**	**-0.5**
	comp=Z,4.3nm,0.6s,baz=90,slow=5.8,SNR=68						
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**41.98**	**266**	P	**P**	**04 33 06.3**	**-0.7**
FORT	**Forrest**	**46.09**	**249**	P	**P**	**04 33 37.7**	**-0.9**
FORT				IAmb	IAmb	04 33 56.8	
	comp=Z,8.9nm,0.9s						
KNRA	**Kununurra**	**48.21**	**269**	P	**P**	**04 33 54.6**	**-0.1**
KNRA				IAmb	IAmb	04 34 16.9	
	comp=Z,22nm,1.2s						
FITZ	**Fitzroy Crossi**	**50.40**	**265**	P	**P**	**04 34 11.2**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=103,slow=11,SNR=3.7						
	comp=Z,3.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.40**	**265**	P	**P**	**04 34 10.8**	**-0.1**
SIJI	**Sorong**	**51.78**	**288**	P	**P**	**04 34 19.6**	**-1.2**
	comp=Z,11nm,0.8s,baz=114,slow=8.3,SNR=5.3						
	comp=Z,11nm,0.8s						
SBA	**Scott Base**	**55.00**	**183**	P	**P**	**04 34 44.8**	**+2.2**
CASY	**Casey**	**60.49**	**206**	P	**P**	**04 35 19.8**	**-0.2**
CASY				IAmb	IAmb	04 35 20.6	
	comp=Z,6.4nm,0.9s						
TOLI2	**Tolitoli**	**61.95**	**285**	P	**P**	**04 35 29.9**	**-0.6**
TOLI2				IAmb	IAmb	04 35 30.2	
	comp=Z,4.7nm,1.0s						
QSPA	**South Pole Qui**	**66.83**	**180**	P	**P**	**04 36 02.0**	**+1.3**
	comp=Z,11nm,1.0s,baz=52,slow=0.8,SNR=38						
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**66.83**	**180**	P	**P**	**04 36 02.1**	**+1.4**
QSPA				IAmb	IAmb	04 36 02.9	
	comp=Z,11nm,0.9s						
BELA	**Belgrano 2**	**77.14**	**173**	P	P	04 36 54.9	-5.2
BELA				IAmb	IAmb	04 36 57.5	
	comp=Z,18nm,1.0s						
ELIB	**Princess Elisa**	**83.64**	**187**	*d*P	**P**	**04 37 33.8**	**-0.4**
	comp=Z,1.7nm,1.0s						
NVAR	**Mina Array Bea**	**84.62**	**44**	P	**P**	**04 37 39.0**	**-0.6**
	comp=Z,1.3nm,1.1s,baz=214,slow=7.6,SNR=4.6						
	comp=Z,1.3nm,1.1s						
TROLL	**Troll, Antarti**	**84.97**	**181**	⇑P	**P**	**04 37 40.3**	**-0.4**
	comp=Z,62nm,0.4s						
SNAA	**Sanae**	**85.32**	**179**	⇑P	**P**	**04 37 41.6**	**-0.7**
	comp=Z,16nm,0.4s						
SNAA	**Sanae**	**85.32**	**179**	P	**P**	**04 37 41.4**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=199,slow=12,SNR=6.5						
	comp=Z,0.8nm,0.5s						
SNAA	**Sanae**	**85.32**	**179**	P	**P**	**04 37 41.5**	**-0.7**
SNAA				IAmb	IAmb	04 38 21.0	
	comp=Z,5.7nm,1.5s						
VNA2	**Neumayer--Watz**	**85.96**	**178**	⇑P	**P**	**04 37 44.9**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=181,slow=4.5						
TXAR	**Lajitas Array**	**90.50**	**58**	P	**P**	**04 38 07.6**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=216,slow=6.2,SNR=8.7						
	comp=Z,0.9nm,0.9s						
TXAR	**Lajitas Array**	**90.50**	**58**	P	**P**	**04 38 07.7**	**+0.5**
BSUT	**Blindstream Ca**	**90.66**	**46**	P	**P**	**04 38 08.3**	**+0.2**
BSUT				IAmb	IAmb	04 38 09.0	
	comp=Z,3.8nm,0.9s						
PDAR	**Pinedale Array**	**92.56**	**44**	P	**P**	**04 38 15.4**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=227,slow=3.7,SNR=4.7						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**92.56**	**44**	P	**P**	**04 38 15.9**	**-0.7**
HFS	**Hagfors**	**141.82**	**349**	PKhKP	PKPpre	04 44 27.1	
	comp=Z,0.9nm,0.5s,baz=64,slow=3.4,SNR=8.3						
AKASG	**Malin Array Be**	**144.17**	**327**	PKP	PKPbc	04 44 35.2	-1.1
	comp=Z,1.1nm,0.4s,baz=46,slow=4.1,SNR=8.2						
BRTR	**Keskin Array B**	**146.81**	**308**	PKPbc	**PKPbc**	**04 44 44.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=115,slow=5.5,SNR=2.6						
MMAI	**Mount Meron Ar**	**147.00**	**295**	PKPbc	**PKPbc**	**04 44 44.6**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=20,slow=4.6,SNR=2.2						
CLL	**Collm**	**150.10**	**345**	⇓*i*PKPbc	**PKPbc**	**04 44 51.8**	**-0.3**
	comp=Z,6.0nm,0.7s						
GERES	**GERESS Array B**	**152.08**	**340**	PKPbc	**PKPbc**	**04 44 55.1**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=1.7,SNR=4.4						
MD01	**Midelt array s**	**169.71**	**20**	PKPab	**PKPab**	**04 46 26.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**169.74**	**192**	PKPab	**PKPab**	**04 46 27.3**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=177,slow=3.9,SNR=6.2						

KRSC 17 04:35:08.6±2.0, 48°.54N×156°.40E, h17km±28km, MI4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.94**	**5**	*e*P	Pb	04 35 57.6	-2.9
PAU				*e*S	Sn	04 36 32.7	+3.4
KDTR	**Khodutka, Kamc**	**3.44**	**18**	*e*P	Pn	04 36 05.0	+3.6
KDTR				*e*S	Sb	04 36 46.5	-4.1
ASAK	**Asacha**	**3.96**	**13**	*e*P	Pn	04 36 13.0	+4.4
MTVR	**Mutnovka**	**4.11**	**15**	*e*P	Pn	04 36 14.8	+4.1
MTVR				*e*S	Sn	04 37 03.7	+5.4
RUS	**Russkaya**	**4.12**	**18**	*e*P	Pn	04 36 14.3	+3.6
GRL	**Gorelyy**	**4.16**	**14**	*e*P	Pn	04 36 15.8	+4.5
GRL				*e*S	Sb	04 37 05.5	-5.7
APC	**Apacha**	**4.42**	**6**	*e*P	Pn	04 36 18.7	+4.0
UGLR	**Uglovaya**	**4.92**	**17**	*e*P	Pn	04 36 26.6	+4.8
KOK	**Koryaka**	**4.96**	**16**	*e*P	Pn	04 36 27.6	+5.3
SMAR	**Somma**	**4.97**	**17**	*e*P	Pn	04 36 26.1	+3.6
SDLR	**Sedlovina**	**5.00**	**17**	*e*P	Pn	04 36 27.0	+4.2
KRX	**Arik**	**5.03**	**16**	*e*P	Pn	04 36 28.3	+5.0
SPN	**Mys Shipunski**	**5.11**	**25**	*e*P	Pn	04 36 29.7	+5.5
SPN				*e*S	Sn	04 37 29.5	+6.8
GNL	**Ganaly**	**5.25**	**10**	*e*P	Pn	04 36 31.3	+5.0
MKZ	**Mys Kozlova**	**6.88**	**27**	*e*P	Pn	04 36 52.1	+3.7

*RSPR **17** 04:37:11.8, 18°.00N×64°.93W, h10km±31km, MD3.5/16*
*NEIC **17** 04:37:11.8±1.9, 18°.01N±0°.09×65°.10W±0°.03, h10km±1km, ML3.0/39, Md3.5/16(RSPR), Error ellipse: s-maj=14.4km s-min=4.9km az=5.0*
*OSPL **17** 04:37:12.3±2.5, 17°.94N×65°.05W, h0km±28km, ML3.5, Presumed earthquake*

ISC 17 04:37:09.2±1.3, 18°.1N±0°.1×65°.02W±0°.04, h1km±11km, n48, σ0°.78/58, 10C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**0.79**	**274**		**Pb**	**04 37 25.4**	**-0.4**
HUMP				Sg	**Sg**	**04 37 34.4**	**-0.3**
HUMP				IAML		04 37 37.7	
	444nm,0.2s						
HUMP	**Col San Antoni**	**0.79**	**274**	⇑*i*P	**Pb**	**04 37 25.5**	**-0.4**
PDPR	**Patillas Dam,**	**0.96**	**266**		**Pg**	**04 37 27.9**	**+0.3**
PDPR				Sg	**Sg**	**04 37 39.5**	**-0.6**
PDPR				IAML		04 37 43.3	
	298nm,0.2s						
PDPR	**Patillas Dam,**	**0.96**	**266**	⇑*i*P	**Pg**	**04 37 28.3**	**+0.7**
IGPR	**InterUniversit**	**1.04**	**264**		**Pg**	**04 37 29.4**	**+0.1**
IGPR					**Sg**	**04 37 43.8**	**+1.1**
IGPR	**InterUniversit**	**1.04**	**264**	⇑*e*P	**Pg**	**04 37 29.4**	**+0.1**
SJG	**San Juan**	**1.08**	**272**		**Pg**	**04 37 29.9**	**0.0**
SJG				Sg	**Sg**	**04 37 42.7**	**-1.1**
SJG	**San Juan**	**1.08**	**272**	IAML		04 37 47.3	
	343nm,0.5s						
SJG				IAML		04 37 47.7	
	345nm,0.3s						
SJG	**San Juan**	**1.08**	**272**	*i* P	**Pg**	**04 37 30.1**	**+0.2**
SJG				IAML		04 37 47.2	
	comp=Z,3μm,0.3s						
SJG	**San Juan**	**1.08**	**272**	⇑*e*P	**Pg**	**04 37 30.2**	**+0.3**
ECPR	**Experimental S**	**1.30**	**281**		**Pg**	**04 37 34.1**	**0.0**
ECPR				Sg	**Sg**	**04 37 50.5**	**-0.5**
ECPR				IAML		04 37 56.2	
	comp=Z,475nm,0.2s						
ECPR	**Experimental S**	**1.30**	**281**	⇑*i*P	**Pg**	**04 37 34.1**	**0.0**
CELP	**Cerrillos**	**1.48**	**270**		**Pn**	**04 37 36.8**	**-0.3**
CELP					**Sn**	**04 37 56.1**	**-1.0**
CELP	**Cerrillos**	**1.48**	**270**	⇑*e*P	**Pn**	**04 37 36.9**	**-0.2**
EMPR	**Esperanza - Ma**	**1.49**	**286**		**Pg**	**04 37 37.8**	**0.0**
EMPR					**Sb**	**04 37 57.1**	**0.0**
EMPR	**Esperanza - Ma**	**1.49**	**286**	⇓*e*P	**Pg**	**04 37 37.8**	**0.0**
EMPR				*e*S	**Sb**	**04 37 57.1**	**0.0**
OBIP	**Obispado Ponce**	**1.51**	**269**		**Pn**	**04 37 37.1**	**-0.3**
OBIP				Sg	**Sn**	**04 37 57.7**	**-0.1**
OBIP	**Obispado Ponce**	**1.51**	**269**	*i* P	**Pb**	**04 37 37.7**	**-0.4**
OBIP				*e*S	**Sb**	**04 37 58.1**	**+0.3**
OBIP				IAML		04 38 01.9	
	comp=Z,258nm,0.2s						
OBIP	**Obispado Ponce**	**1.51**	**269**	⇓*e*P	**Pn**	**04 37 37.3**	**-0.2**
OBIP				*e*S	**Sn**	**04 37 57.5**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.63**	**276**		**Pb**	**04 37 39.5**	**-0.6**
UUPR	**Utuado, UPR, P**	**1.63**	**276**		**Sn**	**04 37 59.0**	**-1.7**
UUPR	**Utuado, UPR, P**	**1.63**	**276**	IAML		04 38 04.3	
	comp=Z,1μm,0.4s						
UUPR				IAML		04 38 07.9	
	comp=Z,1μm,0.4s						
UUPR	**Utuado, UPR, P**	**1.63**	**276**	⇑*e*P	**Pb**	**04 37 39.5**	**-0.6**
AOPR	**Arecibo Observ**	**1.67**	**279**		**Pb**	**04 37 40.2**	**-0.6**
AOPR	**Arecibo Observ**	**1.67**	**279**		**Sn**	**04 38 01.0**	**-0.8**
AOPR	**Arecibo Observ**	**1.67**	**279**	IAML		04 38 05.4	
	comp=Z,420nm,0.4s						
AOPR				IAML		04 38 07.0	
	comp=Z,689nm,0.3s						
AOPR	**Arecibo Observ**	**1.67**	**279**	⇑*e*P	**Pb**	**04 37 40.4**	**-0.5**
SABA	**Saba**	**1.75**	**105**	Pn	**Pg**	**04 37 43.0**	**+0.1**
SABA				IAML		04 38 31.5	
	comp=N,134nm,0.6s						
SMRT	**St. Maarten**	**1.85**	**91**	Pn	**Pg**	**04 37 44.6**	**-0.2**
SMRT				IAML		04 38 16.3	
	comp=N,104nm,0.2s						
SMRT				IAML		04 38 23.4	
	comp=E,126nm,0.2s						
MLPR	**Magueyes Islan**	**1.93**	**267**	Pn	**Pn**	**04 37 44.1**	**+0.9**
MLPR	**Magueyes Islan**	**1.93**	**267**	⇑*e*P	**Pn**	**04 37 43.9**	**+0.7**
LSP	**Las Mesas**	**1.97**	**273**		**Pn**	**04 37 43.8**	**0.0**
LSP					**Sn**	**04 38 09.0**	**-0.2**
LSP	**Las Mesas**	**1.97**	**273**	⇑*e*P	**Pn**	**04 37 43.8**	**0.0**
LSP				*e*S	**Sn**	**04 38 09.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.99**	**268**		**Pn**	**04 37 44.6**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.99**	**268**		**Sn**	**04 38 08.9**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.99**	**268**	IAML		04 38 17.4	
	comp=E,85nm,0.6s						
CRPR				IAML		04 38 21.7	
	comp=E,61nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.99**	**268**	⇑*e*P	**Pn**	**04 37 44.2**	**+0.2**
AGPR	**Aguadilla, PR**	**2.02**	**281**		**Pn**	**04 37 45.0**	**+0.4**
AGPR	**Aguadilla, PR**	**2.02**	**281**		**Sn**	**04 38 10.1**	**-0.5**
AGPR	**Aguadilla, PR**	**2.02**	**281**	IAML		04 38 21.2	
	comp=E,103nm,1.0s						
AGPR				IAML		04 38 21.3	
	comp=E,101nm,0.4s						
AGPR	**Aguadilla, PR**	**2.02**	**281**	⇓*e*P	**Pn**	**04 37 45.5**	**+0.9**
PRSN	**Puerto Rico Se**	**2.02**	**274**		**Pb**	**04 37 46.0**	**-0.9**
PRSN	**Puerto Rico Se**	**2.02**	**274**	⇑*e*P	**Pb**	**04 37 47.3**	**+0.4**
IDE	**Isla Desecheo**	**2.35**	**278**		**Pn**	**04 37 50.4**	**+1.3**
IDE					**Sn**	**04 38 18.7**	**0.0**
IDE	**Isla Desecheo**	**2.35**	**278**	⇑*e*P	**Pn**	**04 37 50.4**	**+1.3**
IDE				*e*S	**Sn**	**04 38 18.7**	**0.0**
PCDR	**Punta Cana, DR**	**3.22**	**278**	Pn	**Pn**	**04 38 03.4**	**+2.3**
PCDR				IAML		04 39 42.7	
	comp=E,55nm,2.0s						
PCDR	**Punta Cana, DR**	**3.22**	**278**	*i* P	**Pn**	**04 38 03.6**	**+2.6**
DR12	**Loma Pena Alta**	**4.20**	**280**	Pn	**Pn**	**04 38 15.9**	**+1.4**

*MOS **17** 04:49:32.8±1.0, 37°.58N×141°.71E, h42km, mb4.6/18, Error ellipse: s-maj=8.0km s-min=6.0km az=95.3*
*NEIC **17** 04:49:35.0±1.9, 37°.52N±0°.06×141°.79E±0°.09, h48km±7km, mb4.5/81, Error ellipse: s-maj=11.2km s-min=8.2km az=115.0*
*GFZ **17** 04:49:35.1±0.3, 38°.6N±3°.3×14°.2E±°, h56km, M4.7/18, mb4.7/18*
*JMA **17** 04:49:35.1±0.1, 37°.6N±0°.2×141°.6E±0°.6, h46km±1km, MD4.6/39, MV5.0/39, E OFF FUKUSHIMA PREF*
JMA Felt III J1 at E OFF FUKUSHIMA PREF .
*IDC **17** 04:49:37.4±1.7, 37°.47N×141°.55E, h70km±16km, mb3.9/27, mbtmp4.2/33, Error ellipse: s-maj=12.3km s-min=10.8km az=76.0*

ISC 17 04:49:34.6±0.6, 37°.55N±0°.04×141°.75E±0°.05, h45km±5km, n417, σ1°.89/396, mb4.4/81, 4C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMST	**Minamisoumatoc**	**0.71**	**285**	*i* P	**Pn**	**04 49 47.4**	**-0.9**
JMST				A	A	04 49 47.4	
	comp=N,45nm,0.3s,comp=E,38nm,0.3s						
JMST				S	**Sn**	**04 49 56.1**	**-2.1**
JFK	**Kawauchi**	**0.72**	**256**	*i* P	**Pn**	**04 49 47.7**	**-0.8**
JFK				A	A	04 49 47.7	
	comp=N,22nm,0.3s,comp=E,58nm,0.3s						
JFK				S	**Sn**	**04 49 56.5**	**-2.0**
JIKH	**Ishinomakikobu**	**0.80**	**344**	*i* P	**Pn**	**04 49 49.5**	**0.0**
JIKH				A	A	04 49 49.5	
	comp=N,19nm,0.7s,comp=E,46nm,0.2s						
JIKH				S	**Sn**	**04 49 59.4**	**-0.9**
JMM	**Marumori**	**0.82**	**293**	*i* P	**Pn**	**04 49 49.2**	**-0.7**
JMM				A	A	04 49 49.2	
	comp=N,37nm,1.0s,comp=E,82nm,2.3s						
JMM				S	**Sn**	**04 49 59.2**	**-1.7**
ONAJ	**Iwakimizuishiy**	**0.88**	**240**	*i* P	**Pn**	**04 49 50.0**	**-0.7**
ONAJ				A	A	04 49 50.0	
	comp=N,101nm,0.3s,comp=E,102nm,0.3s						
ONAJ				S	**Sn**	**04 50 00.5**	**-1.9**
JIO	**Ouri**	**0.96**	**341**	*i* P	**Pn**	**04 49 51.8**	**0.0**
JIO				S	**Sn**	**04 50 03.2**	**-1.0**
JFFD	**Fukushimafurud**	**1.05**	**245**	A	A	04 49 52.5	
	comp=N,36nm,0.3s,comp=E,44nm,0.5s						
JOTO	**OTAMA OYAMA**	**1.13**	**271**	*i* P	**Pn**	**04 49 53.9**	**-0.1**
JOTO				A	A	04 49 53.9	
	comp=N,86nm,0.5s,comp=E,96nm,1.0s						
JOTO				S	**Sn**	**04 50 07.5**	**-0.9**
JOU	**Okura**	**1.19**	**314**	*i* P	**Pn**	**04 49 54.5**	**-0.4**
JOU				A	A	04 49 54.5	
	comp=N,22nm,0.8s,comp=E,16nm,0.6s						
JOU				S	**Sn**	**04 50 08.6**	**-1.2**
JOFO	**Osakifurukawao**	**1.25**	**328**	A	A	04 49 55.5	
	comp=N,33nm,0.6s,comp=E,31nm,2.6s						
JYAR	**Yonezawaarcadi**	**1.33**	**287**	A	A	04 49 56.2	
	comp=N,41nm,0.4s,comp=E,45nm,1.2s						
JMK	**Ichinoseki**	**1.47**	**344**	*i* P	**Pn**	**04 49 59.1**	**+0.5**
JMK				S	**Sn**	**04 50 16.5**	**-0.1**
JYS	**Shirataka**	**1.50**	**297**	*i* P	**Pn**	**04 49 58.7**	**-0.3**
JYS				A	A	04 49 58.7	
	comp=N,17nm,0.4s,comp=E,21nm,0.5s						
JYS				S	**Sn**	**04 50 16.9**	**-0.4**
JHYU	**Hitachinakayam**	**1.52**	**218**	A	A	04 49 59.8	
	comp=E,6.0nm,3.8s						
JSB	**Shiboa**	**1.57**	**249**	A	A	04 49 60.0	
	comp=N,19nm,2.2s,comp=E,14nm,0.9s						
JYK	**Kaneyama**	**1.75**	**322**	*i* P	**Pn**	**04 50 02.7**	**+0.2**
JYK				A	A	04 50 02.7	
	comp=N,3.0nm,3.1s,comp=E,3.0nm,5.9s						
JYK				*e*S	**Sn**	**04 50 23.0**	**-0.7**
JYT	**Yasato**	**1.81**	**224**	A	A	04 50 03.9	
	comp=N,14nm,0.4s,comp=E,13nm,0.4s						
JYA	**Atsumi**	**1.92**	**304**	A	A	04 50 04.9	
	comp=N,6.0nm,0.9s,comp=E,8.0nm,0.4s						
JCAJ	**Choshiashikaji**	**1.96**	**202**	A	A	04 50 06.5	
	comp=N,6.0nm,1.9s,comp=E,6.0nm,0.9s						
JRG	**Rokugo**	**2.04**	**335**	A	A	04 50 07.2	
	comp=N,7.0nm,0.5s,comp=E,6.0nm,1.8s						
JKEN	**Kujiedanarisaw**	**2.66**	**359**	A	A	04 50 16.5	
	comp=N,14nm,0.6s,comp=E,10.0nm,0.4s						
MJAR	**Matsushiro Arr**	**3.01**	**252**	P	**Pn**	**04 50 20.5**	**+0.7**
	comp=E,41nm,0.3s,baz=80,slow=15,SNR=116						
MJAR				S	**Sn**	**04 50 55.0**	**+0.4**
	comp=E,66nm,0.5s,baz=78,slow=12,SNR=7.7						
MJAR	**Matsushiro Arr**	**3.01**	**252**		**Pn**	**04 50 20.1**	**+0.4**
MAJO	**Matsushiro**	**3.01**	**252**	P	**Pn**	**04 50 21.0**	**+1.2**
MAJO	**Matsushiro**	**3.01**	**252**	S	**Sn**	**04 50 58.8**	**+4.2**
MAJO	**Matsushiro**	**3.01**	**252**	P	**Pn**	**04 50 20.5**	**+0.7**
MAJO	**Matsushiro**	**3.01**	**252**		**Pn**	**04 50 20.5**	**+0.7**
MAJO	**Matsushiro**	**3.01**	**252**	P	**Pn**	**04 50 21.1**	**+1.2**
MJB9	**Matsu-Tunnel**	**3.01**	**252**		**Pn**	**04 50 21.4**	**+1.6**
JTM	**Tenmabayashi**	**3.28**	**351**	P	**Pn**	**04 50 25.6**	**+2.1**
JTM	**Tenmabayashi**	**3.28**	**351**	S	**Sn**	**04 51 03.4**	**+2.2**
JTM	**Tenmabayashi**	**3.28**	**351**		**Pn**	**04 50 24.9**	**+1.4**
JTM	**Tenmabayashi**	**3.28**	**351**	P	**Pn**	**04 50 25.1**	**+1.6**
JGF	**Kuroka**	**4.03**	**243**	P	**Pn**	**04 50 36.2**	**+2.3**
JGF	**Kuroka**	**4.03**	**243**	S	**Sn**	**04 51 23.6**	**+3.7**
JGF	**Kuroka**	**4.03**	**243**		**Pn**	**04 50 35.7**	**+1.8**
JGF	**Kuroka**	**4.03**	**243**	P	**Pn**	**04 50 36.5**	**+2.6**
JSG	**Sagara**	**4.07**	**226**	P	**Pn**	**04 50 36.0**	**+1.7**
JSG	**Sagara**

YULB Yu-li 22.51 237 P P 04 54 29.1 -1.4
YULB IAmb IAmb 04 54 50.1
comp=Z,41nm,1.5s
TPUB Ta-pu 23.02 238 P P 04 54 31.8 -4.1
TPUB IAmb IAmb 04 54 32.8
comp=Z,20nm,0.8s
HHC Hu-ho-hao-te 23.57 287 eP P 04 54 42.5 +1.3
HHC pmax pmax
comp=Z,15nm,0.7s
LYN LuoYang 23.82 272 P P 04 54 42.0 -1.4
LYN pmax pmax
comp=Z,31nm,0.6s
YAK Yakutsk 25.63 347 i P P 04 54 59.8 +0.2
YAK pmax pmax
comp=Z,15nm,0.9s
XAN Xi'an 26.78 272 P P 04 55 08.6 -1.8
XAN pmax pmax
comp=Z,8.0nm,0.6s
ULN Ulaanbaatar 27.30 303 ceP P 04 55 15.6 +0.6
ULN pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 27.30 303 P P 04 55 14.7 -0.3
ULN IAmb IAmb 04 55 19.6
comp=Z,12nm,1.4s
ULN Ulaanbaatar 27.30 303 P P 04 55 15.5 +0.6
ENH Enshi 27.65 264 P P 04 55 17.3 -0.9
SONM Songino Array 27.73 303 P P 04 55 18.3 -0.5
comp=Z,1.7nm,0.4s,baz=106,slow=9.5,SNR=6.8
comp=Z,1.7nm,0.4s
SONM Songino Array 27.73 303 P P 04 55 18.1 -0.7
H11N2 WAKE ISLAND Hy 28.18 122 T T 05 25 45.1
baz=316,slow=75,SNR=929
H11N1 WAKE ISLAND Hy 28.19 122 T T 05 25 44.5
baz=316,slow=75,SNR=1532
H11N3 WAKE ISLAND Hy 28.20 122 T T 05 25 47.0
baz=316,slow=75,SNR=1266
H11S1 WAKE ISLAND Hy 28.92 124 T T 05 26 41.1
baz=317,slow=76,SNR=586
H11S3 WAKE ISLAND Hy 28.92 124 T T 05 26 40.7
baz=317,slow=76,SNR=1058
H11S2 WAKE ISLAND Hy 28.93 124 T T 05 26 40.5
baz=317,slow=76,SNR=566
LZH Lanzhou 30.25 279 eP P 04 55 44.3 +2.9
LZH pP sP 04 55 57.3 -1.4
LZH pmax pmax
comp=Z,20nm,1.5s
LZDM Lanzhou Array 30.40 279 P P 04 55 42.0 -0.9
comp=Z,1.8nm,0.3s,baz=122,slow=10,SNR=4.0
comp=Z,1.8nm,0.3s
PATS Pohnpei 34.08 150 P P 04 56 13.7 -1.2
PZH PanZhiHua 35.42 264 P P 04 56 25.4 -1.2
GOMU GeErMu 37.27 283 P P 04 56 41.1 -1.4
GOMU pP pP 04 56 44.3 -10
GOMU pmax pmax
comp=Z,12nm,0.7s
MYLDM Lahad Datu 38.58 219 P P 04 56 53.4 +0.2
TNA Tin City 40.28 30 P P 04 57 09.2 +2.4
baz=251
DGZ Jazzator, Alta 40.31 305 i P P 04 57 07.3 -0.3
DGZ pmax pmax
comp=Z,14nm,0.9s
WMQ Urumqi 40.85 296 eP P 04 57 15.6 +3.6
WMQ PcP PcP 04 59 14.9 +2.8
WMQ pmax pmax
comp=Z,11nm,1.1s
F14K Arctic Creek 40.88 30 P P 04 57 12.3 +0.5
baz=253
L14K Kuka Creek 41.55 37 P P 04 57 20.2 +2.8
baz=261
F15K North Star Dit 41.62 30 P P 04 57 20.5 +2.6
baz=254
CHTO Chiang Mai 41.68 255 P P 04 57 18.8 -0.2
G15K Niukluk 41.68 31 P P 04 57 21.3 +2.8
baz=256
ZALV Zalesovo Beam 41.77 312 P P 04 57 18.4 -0.9
comp=Z,2.1nm,0.6s,baz=84,slow=6.6,SNR=8.2
comp=Z,2.1nm,0.6s
ZALV Zalesovo Beam 41.77 312 i P P 04 57 22.5 +3.2
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 41.77 312 P P 04 57 17.9 -1.5
M14K Bethel 41.82 38 P P 04 57 21.6 +2.0
baz=263
N14K Kuskokwak Cree 41.86 39 P P 04 57 21.7 +1.8
baz=264
CMAR Chiang Mai Arr 41.89 255 P P 04 57 20.0 -0.7
comp=Z,2.4nm,0.3s,baz=64,slow=8.2,SNR=1.8
comp=Z,2.4nm,0.3s
CMAR Chiang Mai Arr 41.89 255 P P 04 57 20.0 -0.7
O14K Tigyukauivet M 42.00 40 P P 04 57 23.1 +1.9
baz=265
SANI Sanana 42.02 204 P P 04 57 22.0 +0.2
K15K Wolf Creek Mou 42.24 36 P P 04 57 24.7 +1.7
baz=261
SDPT Sand Point 42.25 46 P P 04 57 24.9 +1.7
baz=270
H16K Elim 42.35 32 P P 04 57 25.6 +1.7
baz=258
M15K Kasigluk River 42.43 38 P P 04 57 26.8 +2.2
baz=264
N15K Kwethluk River 42.68 39 P P 04 57 28.5 +1.9
baz=265
O15K Ungalikthiuk R 42.73 40 P P 04 57 29.5 +2.4
baz=266
D17K Noatak River 42.76 27 P P 04 57 29.2 +2.0
baz=254,SNR=6.6
I17K Unalakleet 42.87 33 P P 04 57 30.4 +2.3
baz=260
C17K DeLong Mountai 42.95 26 P P 04 57 30.8 +2.0
baz=253
E17K Hotham Inlet 43.07 29 P P 04 57 32.0 +2.3
baz=256
L16K Owhat River 43.13 37 P P 04 57 32.7 +2.5
baz=264
F17K Baldwin Pennin 43.14 30 P P 04 57 32.8 +2.6
baz=257
G17K Kiwalik Mounta 43.18 31 P P 04 57 32.9 +2.2
baz=259
M16K Timber Creek 43.31 38 P P 04 57 33.9 +2.2
baz=265
N16K Nishlik Lake 43.36 38 P P 04 57 34.6 +2.5
baz=266,SNR=5.7
H17K Granite Mounta 43.39 32 P P 04 57 34.4 +2.1
baz=260
J17K VABM Dome 43.51 34 P P 04 57 35.6 +2.3
baz=262
E18K Tukpahlearik C 43.61 28 P P 04 57 36.3 +2.3
baz=257
O16K Kokwok River B 43.64 40 P P 04 57 36.8 +2.4
baz=267
P16K Nushagak River 43.67 41 P P 04 57 37.1 +2.4
baz=268
SHL Shillong 43.68 269 P P 04 57 34.8 -0.6
SHL pmax pmax
comp=Z,9.0nm,0.6s
SHL Shillong 43.68 269 P 04 57 34.8 -0.6
SHL IAmb IAmb 04 57 41.0
comp=Z,8.8nm,0.6s
C18K Utukok River 43.70 26 P 04 57 35.2 +0.3
C18K Utukok River 43.70 26 P P 04 57 36.8 +1.9
baz=255,SNR=6.8
L17K Donlin 43.73 36 P P 04 57 37.5 +2.4
baz=264
K17K Iditarod 43.78 35 P 04 57 35.6 +0.1
K17K IAmb IAmb 04 57 39.0
comp=Z,7.7nm,0.9s
K17K Iditarod 43.78 35 P P 04 57 38.4 +2.9
baz=264,SNR=5.2
F18K Selawik 43.80 30 P P 04 57 37.7 +2.2
baz=258
G18K Tagagawik 44.07 31 P P 04 57 39.8 +2.0
baz=260,SNR=5.4
H18K Honhosa River 44.07 32 P P 04 57 39.2 +1.4
baz=261
M17K Holitna River 44.07 37 P P 04 57 40.0 +2.1
baz=266
MK31 Makanchi Array 44.08 302 ceP P 04 57 38.1 0.0
MKAR Makanchi Array 44.08 302 P P 04 57 37.3 -0.9
comp=Z,4.5nm,0.8s,baz=87,slow=9.9,SNR=25
comp=Z,4.5nm,0.8s
MKAR Makanchi Array 44.08 302 i P P 04 57 37.7 -0.4
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 44.08 302 P P 04 57 37.6 -0.6
N17K Nushagak Hills 44.14 38 P P 04 57 41.1 +2.7
baz=267
O17K Koliganek Bris 44.16 40 P P 04 57 40.7 +2.1
baz=268
A19K Wainwright 44.17 24 P P 04 57 41.0 +2.6
baz=253
MAKZ Makanchi 44.29 302 P P 04 57 39.3 -0.5
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 44.29 302 P 04 57 39.3 -0.5
MAKZ IAmb IAmb 04 57 43.7
comp=Z,5.6nm,0.8s
MAKZ Makanchi 44.29 302 P P 04 57 40.2 +0.4
Q16K King Salmon 44.36 41 P P 04 57 42.3 +2.1
baz=270
C19K Lookout Ridge 44.38 26 P P 04 57 42.5 +2.3
baz=256,SNR=5.5
P17K Kvichak River 44.48 40 P P 04 57 43.7 +2.7
baz=269
L18K Granite Mounta 44.48 36 P P 04 57 43.3 +2.1
baz=266
R17L Mt. Peulik Vol 44.52 43 P P 04 57 43.3 +1.8
baz=271
J18K Innoko River 44.58 34 P P 04 57 43.7 +1.9
baz=265
F19K Shaleruckik Mo 44.58 29 P P 04 57 42.5 +0.7
F19K Shaleruckik Mo 44.58 29 P P 04 57 43.5 +1.7
baz=260
G19K Purcell Mounta 44.74 30 P P 04 57 44.2 +1.1
baz=262
D19K Kuna River 44.76 27 P P 04 57 45.5 +2.2
baz=258,SNR=9.1
Q17K Contact Creek 44.76 42 P P 04 57 44.7 +1.1
baz=271
N18K Kilae Creek 44.79 38 P P 04 57 45.4 +1.8
baz=268
M18K Stony River 44.85 37 P P 04 57 46.2 +2.1
baz=267
E19K Redstone River 44.90 29 P P 04 57 46.8 +2.4
baz=260,SNR=7.5
H19K Roundabout Mou 44.92 31 P P 04 57 45.2 +0.7
H19K IAmb IAmb 04 57 47.6
comp=Z,6.7nm,0.9s
H19K Roundabout Mou 44.92 31 P P 04 57 46.7 +2.2
baz=263,SNR=8.4
P18K Big Mountain, 45.10 40 P P 04 57 48.4 +2.3
baz=270
J19K Poorman 45.11 34 P P 04 57 48.2 +2.1
baz=265,SNR=6.4
O18K Koktuh Hills 45.11 39 P P 04 57 49.0 +2.9
baz=270
L19K White Mountain 45.34 36 P P 04 57 47.9 0.0
L19K White Mountain 45.34 36 P P 04 57 50.6 +2.6
baz=268
D20K Etivluk River 45.35 27 P P 04 57 50.5 +2.6
baz=260,SNR=6.2
F20K Avaraart Lake 45.41 29 P P 04 57 49.8 +1.4
baz=262
B20K Meade River 45.41 25 P P 04 57 50.4 +2.0
baz=258
E20K Nigu River 45.42 28 P P 04 57 50.7 +2.1
baz=260
N19K Bonanza Creek 45.48 38 P P 04 57 50.9 +1.7
baz=269
H20K Anotleneega Mo 45.56 31 P P 04 57 52.1 +2.4
baz=264
K20K Telida 45.75 35 P P 04 57 53.3 +2.1
baz=267
J20K Nowinta River 45.77 33 P P 04 57 51.1 -0.1
J20K IAmb IAmb 04 57 54.5
comp=Z,4.1nm,1.0s
J20K Nowinta River 45.77 33 P P 04 57 53.4 +2.1
baz=266,SNR=5.0
KURK Kurchatov 45.83 308 P P 04 57 51.8 -0.1
KURK Kurchatov 45.83 308 P 04 57 51.3 -0.6
KURK Kurchatov 45.83 308 P P 04 57 51.3 -0.6
KURBB Kurchatov Arra 45.90 308 P P 04 57 51.8 -0.7
comp=Z,13nm,0.6s,baz=81,slow=7.9,SNR=40
comp=Z,13nm,0.6s
C21K Knifeblade Rid 46.08 26 P P 04 57 56.0 +2.4
baz=261,SNR=6.1
IMAR Indian Mountai 46.08 31 P P 04 57 53.8 +0.1
OHAK Old Harbor 46.20 43 P P 04 57 56.2 +1.5
baz=274
B21K Ikpikpuk River 46.21 26 P P 04 57 56.6 +2.0
baz=261
G21K Allakaket 46.22 30 P P 04 57 56.7 +1.9
baz=265
E21K Kilik River 46.26 27 P P 04 57 57.0 +1.9
baz=262
F21K Alatna River 46.30 29 P P 04 57 57.3 +1.9
baz=264
A22K Sinclair Lake 46.34 24 P P 04 57 58.7 +3.1
baz=259
H21K Melozitna River 46.44 31 P P 04 57 58.4 +1.8
baz=266
KDAK Kodiak Island 46.54 42 P P 04 57 57.7 +0.3
KDAK pmax pmax
comp=Z,14nm,0.8s
KDAK Kodiak Island 46.54 42 P 04 57 57.7 +0.3
KDAK Kodiak Island 46.54 42 P P 04 57 58.6 +1.2
baz=274
PPLA Purkeypile 46.59 35 P P 04 58 00.2 +2.2
baz=269
EVN Everest 46.61 275 P P 04 57 58.6 -0.6
EVN Everest 46.61 275 P P 04 57 58.5 -0.6
CAST Castle Rocks 46.65 34 IAmb IAmb 04 58 01.4
comp=Z,3.5nm,0.8s
CAST Castle Rocks 46.65 34 P P 04 58 00.6 +2.4
baz=269,SNR=5.8
B22K Teshekpuk Lake 46.73 25 P P 04 58 01.2 +2.5
baz=261
F22K John River 46.83 29 P P 04 58 02.0 +2.4
baz=265
E22K Anaktuvuk Pass 47.03 28 IAmb IAmb 04 58 04.1
comp=Z,8.0nm,0.8s
E22K Anaktuvuk Pass 47.03 28 P P 04 58 03.2 +2.1
baz=265
H22K Ishtalitna Cre 47.04 31 P P 04 58 04.2 +2.9
baz=267,SNR=5.1
G22K Bettles 47.05 30 P P 04 58 03.4 +2.2
baz=266
KTH Kantishna Hill 47.17 34 IAmb IAmb 04 58 05.4
comp=Z,6.2nm,0.9s
L22K Petersville 47.25 36 IAmb IAmb 04 58 05.1
comp=Z,6.5nm,0.7s
L22K Petersville 47.25 36 P P 04 58 04.5 +1.5
baz=271,SNR=6.5
MLY Manley 47.27 32 IAmb IAmb 04 58 06.1
comp=Z,4.8nm,1.2s
MLY Manley 47.27 32 P P 04 58 05.4 +2.3
baz=269,SNR=5.6
TRF Thorofare Moun 47.46 34 P P 04 58 06.6 +1.9
baz=270
D23K Nanushuk River 47.52 27 P P 04 58 06.8 +1.9
baz=265
COLD Coldfoot 47.58 29 P P 04 58 08.0 +2.6
baz=267
M22K Willow 47.58 37 P P 04 58 07.3 +1.9
baz=272
C23K Itkillik River 47.62 26 P P 04 58 08.2 +2.5
baz=264,SNR=6.6
G23K Bananza Creek 47.62 30 IAmb IAmb 04 58 08.5
comp=Z,3.6nm,1.1s
G23K Bananza Creek 47.62 30 P P 04 58 08.0 +2.2
baz=268,SNR=5.2
H23K Yukon River 47.79 31 IAmb IAmb 04 58 10.6
comp=Z,5.5nm,1.0s
H23K Yukon River 47.79 31 P P 04 58 09.4 +2.3
baz=269
E23K Chandalar 47.84 28 P P 04 58 10.1 +2.5
baz=267,SNR=9.3
I23K Minto, Yukon-K 47.86 32 IAmb IAmb 04 58 10.9
comp=Z,4.5nm,1.1s
I23K Minto, Yukon-K 47.86 32 P P 04 58 10.0 +2.4
baz=270
TOLK Toolik Lake Re 47.89 27 P P 04 58 10.0 +2.1
baz=266
NEA2 Nenana 47.98 33 P P 04 58 10.4 +1.8
baz=270
PMR Palmer 48.05 37 P P 04 58 10.1 +1.0
baz=273
MCK McKinley 48.06 34 IAmb IAmb 04 58 11.4
comp=Z,4.2nm,0.7s
MCK McKinley 48.06 34 P P 04 58 10.7 +1.5
baz=271
D24K Happy Valley 48.20 27 P P 04 58 12.3 +2.1
baz=267
WAT1 Susitna Watana 48.26 35 P P 04 58 12.0 +1.2
baz=273
E24K Your Creek 48.27 28 IAmb IAmb 04 58 14.1
comp=Z,5.7nm,0.8s
E24K Your Creek 48.27 28 P P 04 58 12.8 +2.0
baz=268
KNK Knik Glacier 48.39 37 P P 04 58 13.5 +1.8
baz=274
TARG Taragay, Kyrgy 48.42 296 P P 04 58 11.2 -1.6
TARG pmax pmax
comp=Z,5.0nm,0.7s
TARG Taragay, Kyrgy 48.42 296 P P 04 58 11.2 -1.6
TARG IAmb IAmb 04 58 17.9
comp=Z,4.8nm,0.7s
TARG Taragay, Kyrgy 48.42 296 P P 04 58 13.3 +0.6
SML Sawmill 48.42 37 P P 04 58 13.5 +1.4
baz=274
H24K Noodor Dome 48.48 31 P P 04 58 14.2 +1.7
baz=270
F24K Squaw Lake 48.48 29 P P 04 58 14.7 +2.3
baz=269
G24K Hadweenzic Riv 48.63 30 P P 04 58 16.4 +2.8
baz=270,SNR=6.9
WAT6 Susitna Watana 48.65 36 P P 04 58 15.2 +1.3
baz=274
POKR Poker Plat Res 48.67 32 P P 04 58 15.7 +1.8
baz=272
M23K Glacier View 48.71 37 P P 04 58 15.4 +1.2
baz=274
KDJ Kajisay 48.74 297 P P 04 58 15.3 +0.3
KDJ pmax pmax
comp=Z,3.0nm,0.6s
KDJ Kajisay 48.74 297 P P 04 58 15.3 +0.3
KDJ IAmb IAmb 04 58 18.8
comp=Z,2.7nm,0.6s
DHY Denali Highway 48.79 35 P P 04 58 16.0 +1.0
baz=273
SCM Sheep Creek Mo 48.90 37 P P 04 58 16.8 +1.1
baz=274
HDA Harding Lake 48.91 33 P P 04 58 15.5 -0.2
HDA IAmb IAmb 04 58 17.4
comp=Z,5.2nm,0.8s
HDA Harding Lake 48.91 33 P P 04 58 17.2 +1.5
baz=273
ILAR Eielson Array 48.92 33 P P 04 58 16.8 +1.0
comp=Z,3.8nm,0.7s,baz=269,slow=6.5,SNR=54
comp=Z,3.8nm,0.7s
ILAR Eielson Array 48.92 33 P P 04 58 15.3 -0.5
P23K Montague Islan 49.03 39 P P 04 58 18.7 +2.0
baz=276
D25K Kavik River 49.07 27 P P 04 58 18.5 +1.5
baz=269
G25K Bearman Lake 49.18 30 P P 04 58 19.8 +2.1
baz=271
F25K Christian Rive 49.34 29 P P 04 58 21.8 +2.8
baz=271,SNR=5.9
E25K Arctic Village 49.36 28 P P 04 58 21.5 +2.3
baz=271
M24K Tolsona, Glenn 49.41 36 P P 04 58 21.9 +2.2
baz=275
K24K Donnelly Dome 49.46 34 P P 04 58 21.2 +1.3
baz=274
PRP Porcupine Dome 49.46 32 P P 04 58 20.6 +0.5
PRP IAmb IAmb 04 58 22.7
comp=Z,4.0nm,0.8s
PRP Porcupine Dome 49.46 32 P P 04 58 21.8 +1.8
baz=273,SNR=6.4
BOOM Boomskoye usch 49.51 297 P P 04 58 19.5 -1.4
BOOM pmax pmax
comp=Z,3.0nm,0.6s
BOOM Boomskoye usch 49.51 297 P P 04 58 19.5 -1.4
BOOM IAmb IAmb 04 58 23.4
comp=Z,3.2nm,0.6s
BOOM Boomskoye usch 49.51 297 P P 04 58 21.2 +0.3
KLU Klutina 49.59 37 P P 04 58 22.7 +1.6
baz=276
HARP HAARP 49.86 36 P P 04 58 25.0 +2.0
baz=276
RIDG Independent Ri 49.87 34 P P 04 58 25.1 +1.9
baz=275
F26K Sheenjek River 49.91 29 P P 04 58 26.4 +3.0
baz=272,SNR=9.8
C27K Jago River 50.01 26 P P 04 58 26.1 +2.1
baz=271
G26K Porcupine Rive 50.09 30 P P 04 58 27.2 +2.6
baz=273
N25K Chitina, Valde 50.21 37 P P 04 58 27.1 +1.3
baz=277
SCRK Sand Creek 50.23 34 P P 04 58 26.2 +0.3
SCRK IAmb IAmb 04 58 28.0
comp=Z,5.0nm,0.9s
SCRK Sand Creek 50.23 34 P P 04 58 27.5 +1.6
baz=276,SNR=7.8
BMRM Bremner River 50.29 37 P P 04 58 28.3 +2.0
baz=278
BVAR Borovoye Array 50.43 312 P P 04 58 27.1 -0.3
comp=Z,2.1nm,0.5s,baz=72,slow=8.3,SNR=6.7
comp=Z,2.1nm,0.5s
KAIM Kayak Island 50.53 39 P P 04 58 29.7 +1.7
baz=278
L26K Log Cabin Wild 50.62 35 P P 04 58 31.4 +2.6
baz=277,SNR=5.8
E27K Coleen River 50.84 28 P P 04 58 32.9 +2.5
baz=274
M26K Nabesna, AK 50.86 35 P P 04 58 33.0 +2.4
baz=278
KSH2 Kashi 50.87 293 P P 04 58 36.8 +5.7
KSH2 pP sP 04 58 51.4 +2.5
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
G27K Doyon Strip 50.94 30 P P 04 58 33.6 +2.5
baz=275
MCARA McCarthy VSAT 50.99 37 P P 04 58 33.2 +1.7
baz=278
D27M Malcolm River 51.00 27 P P 04 58 33.0 +1.4
baz=274
H27K Steamboat Moun 51.04 30 P P 04 58 34.6 +2.7
baz=276,SNR=6.6
CRQE Cirque 51.05 38 P P 04 58 34.5 +2.3
baz=279
K27K Chicken 51.06 33 IAmb IAmb 04 58 34.9
comp=Z,4.4nm,1.0s
I27K Kandik River 51.07 31 P P 04 58 33.8 +1.7
baz=276
L27K Beaver Creek, 51.30 35 IAmb IAmb 04 58 37.1
comp=Z,7.2nm,1.1s
L27K Beaver Creek, 51.30 35 P P 04 58 36.3 +2.4
baz=278,SNR=7.8
BCAR Beaver Creek A 51.32 35 P P 04 58 34.1 0.0
M27K Edge Creek, AK 51.38 35 P P 04 58 36.7 +2.0
baz=279
F28M Old Crow 51.55 29 P P 04 58 37.6 +2.0
baz=276
E28M Babbage River 51.57 27 P P 04 58 38.1 +2.3
baz=276
I28M Miner Creek 51.79 31 P P 04 58 39.9 +2.3
baz=278,SNR=8.8
BVCY Beaver Creek 51.84 35 P P 04 58 39.6 +1.6
baz=279
ARSB Arslanbob 51.98 297 IAmb IAmb 04 58 44.4
comp=Z,4.0nm,0.7s
YUK3 Moose Creek 52.14 36 P P 04 58 41.7 +1.4
baz=280
E29M Blow River 52.19 28 IAmb IAmb 04 58 43.8
comp=Z,4.8nm,0.8s
E29M Blow River 52.19 28 P P 04 58 42.7 +2.3
baz=277
DAWY Dawson 52.23 33 P P 04 58 42.9 +2.1
baz=279
H29M Whitestone 52.31 30 P P 04 58 43.6 +2.2
baz=279
G29M Pine Creek 52.35 29 P P 04 58 44.5 +2.8
baz=278,SNR=5.2
ARK Arkit 52.54 298 P P 04 58 43.8 +0.3
M29M Somme Creek 52.93 35 IAmb IAmb 04 58 49.6
comp=Z,4.5nm,0.9s
M29M Somme Creek 52.93 35 P P 04 58 49.0 +2.9
baz=281,SNR=7.1
EPYK Eagle Plains 52.95 30 P P 04 58 48.5 +2.4
baz=280,SNR=11
L29M L29M 52.95 34 P P 04 58 49.1 +3.0
baz=281,SNR=11
G30M tAoh Zraii Nji 53.04 29 P P 04 58 48.6 +1.9
baz=280
K29M Barlow Dome 53.08 33 P P 04 58 49.7 +2.5
baz=281,SNR=7.9
F30M Barrier River 53.10 28 P P 04 58 50.0 +2.9
baz=280,SNR=6.5
KKAR Karatay Array 53.10 300 P P 04 58 46.3 -1.2
KKAR Karatay Array 53.10 300 P P 04 58 46.3 -1.2
YUK6 Outpost Mounta 53.29 37 P P 04 58 51.9 +2.9

baz=283
I30M Mount Dempster 53.30 31 P P 04 58 49.5 +0.8
I30M Mount Dempster 53.30 31 P P 04 58 51.0 +2.3
baz=281,SNR=32
O29M Mount Kennedy 53.33 38 P P 04 58 52.2 +3.1
baz=283
J30M Hart River 53.44 32 P P 04 58 52.1 +2.3
baz=282,SNR=5.3
M30M Minto, Yukon 53.66 35 P P 04 58 54.3 +2.9
baz=283
HYT Haines Junctio 53.73 37 P P 04 58 55.3 +3.3
baz=283,SNR=7.7
N30M Aishikik Lake 53.78 36 P P 04 58 54.9 +2.6
baz=283
G31M Satah River 53.80 29 P P 04 58 54.0 +1.7
baz=282
INK Inuvik 53.81 27 P P 04 58 53.8 +1.5
comp=Z,2.4nm,0.5s,baz=288,slow=8.6,SNR=9.9
comp=Z,2.4nm,0.5s
INK Inuvik 53.81 27 IAmb IAmb 04 58 54.6
comp=Z,6.8nm,1.2s
INK Inuvik 53.81 27 P P 04 58 54.0 +1.8
baz=281
P29M Windy Craggy 53.90 38 P P 04 58 55.8 +2.6
baz=284
F31M Tsiigehtchic 53.90 28 P P 04 58 54.7 +1.7
baz=282
H31M Peel River 54.01 30 P P 04 58 56.1 +2.3
baz=282,SNR=14
P30M Million Dollar 54.16 38 P P 04 58 57.4 +2.3
baz=284
N31M Braeburn, Yuko 54.38 36 P P 04 58 59.0 +2.4
baz=284
O30N Mendenhall 54.41 37 P P 04 58 59.5 +2.6
baz=284
PLBC Pleasant Camp 54.62 38 P P 04 59 01.0 +2.7
baz=285
M31M Drury Creek, Y 54.84 35 IAmb IAmb 04 59 03.0
comp=Z,4.0nm,0.9s
M31M Drury Creek, Y 54.84 35 P P 04 59 02.3 +2.4
baz=285
WHY Whitehorse 55.02 37 P P 04 59 03.3 +2.0
baz=286
CHGR Chuyangaron 55.69 295 *i* P **P 04 59 06.1 -0.4**
CHGR pmax pmax
comp=Z,13nm,0.8s
S32K Killisnoo 56.09 40 P P 04 59 11.5 +2.7
baz=288
MMPY Sheldon Lake, 56.12 34 P P 04 59 11.8 +2.6
baz=287
P33M Teslin, Yukon 56.12 37 P P 04 59 12.1 +2.8
baz=287
ARTI Arti 56.26 318 *d i* P **P 04 59 09.9 -0.3**
ARTI 05 00 03.6
ARTI 05 01 14.0
ARTI S **S 05 06 56.7 +0.1**
ARTI SS **SS 05 10 37.6 -5.5**
ARTI pmax pmax
comp=Z,5.0nm,0.6s
ARTI Arti 56.26 318 P **P 04 59 08.8 -1.4**
Q32M Nakina River 56.78 38 P P 04 59 16.3 +2.2
baz=289
SHAA Shahritus 56.88 294 P P 04 59 14.0 -1.0
SHAA IAmb IAmb 04 59 19.9
comp=Z,15nm,0.6s
R33M Jennings River 57.27 37 P P 04 59 20.4 +3.0
baz=289
WR8 Warramunga Arr 57.60 188 P P 04 59 19.2 -0.7
WRA Warramunga Arr 57.60 188 P P 04 59 19.7 -0.3
comp=Z,2.2nm,0.7s,baz=7.1,slow=7.3,SNR=16
comp=Z,2.2nm,0.7s
WRA Warramunga Arr 57.60 188 P P 04 59 19.1 -0.9
WRA pmax pmax
comp=Z,1.0nm,1.5s
WRA Warramunga Arr 57.60 188 P P 04 59 19.1 -0.9
S34M Telegraph Cree 57.69 39 P P 04 59 22.1 +1.8
baz=290
AB31 Akbulak array 57.82 310 P P 04 59 20.1 -1.1
AB31 IAmb IAmb 04 59 23.1
comp=Z,2.6nm,0.7s
ABKAR Akbulak array 57.82 310 P P 04 59 20.6 -0.7
DLBC Dease Lake 58.06 38 P P 04 59 24.9 +2.0
comp=Z,1.3nm,0.5s,baz=274,slow=6.8,SNR=3.8
comp=Z,1.3nm,0.5s
DLBC Dease Lake 58.06 38 P P 04 59 25.2 +2.2
baz=291
T35M Bob Quinn 58.47 40 P P 04 59 27.8 +2.0
baz=291
AS31 Alice Springs 61.33 188 P P 04 59 45.5 -0.2
ASAR Alice Springs 61.33 188 P P 04 59 45.1 -0.5
comp=Z,1.7nm,0.8s,baz=13,slow=5.6,SNR=14
comp=Z,1.7nm,0.8s
ASAR Alice Springs 61.33 188 P P 04 59 44.9 -0.8
YKA Yellowknife Ar 63.23 30 P P 04 59 58.7 +0.7
comp=Z,1.3nm,0.7s,baz=304,slow=6.5,SNR=18
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 63.61 339 P P 05 00 00.7 +0.3
comp=Z,0.4nm,0.6s,baz=58,slow=6.4,SNR=5.0
comp=Z,0.4nm,0.6s
OBN Obninsk 67.85 323 ||*e*P **P 05 00 28.9 +1.1**
OBN *e**PP **pP 05 00 40.0 -0.8**
OBN *e**SP **sP 05 00 48.2 +2.3**
OBN *e* 05 00 55.1
OBN *e*PPP PPP 05 04 30.2
OBN 05 10 18.0
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,995nm,17.0s
FINES FINESS Array B 68.49 332 P P 05 00 31.3 -0.5
comp=Z,1.2nm,0.3s,baz=31,slow=9.1,SNR=19
comp=Z,1.2nm,0.3s
STKA Stephens Creek 69.06 180 P P 05 00 35.7 +0.1
comp=Z,1.1nm,0.4s,baz=350,slow=6.1,SNR=2.9
comp=Z,1.1nm,0.4s
PINE Pine Mountain 69.80 50 P 05 00 42.2 +1.6
PINE IAmb IAmb 05 00 43.9
comp=Z,6.2nm,0.9s
KBZ Khabaz 70.77 311 P P 05 00 44.9 -1.2
comp=Z,1.4nm,0.8s,baz=45,slow=1.4,SNR=2.3
comp=Z,1.4nm,0.8s
KBZ Khabaz 70.77 311 *i* P **P 05 00 46.0 -0.1**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KIV Kislovodsk 70.78 311 *e*P **P 05 00 46.5 +0.2**
KIV pmax pmax
comp=Z,5.0nm,1.0s
J08A Circle Bar Ran 71.54 49 IAmb IAmb 05 00 54.0
comp=Z,7.8nm,1.3s
EGMT Eagleton 73.71 42 IAmb IAmb 05 01 06.1
comp=Z,8.1nm,1.1s
HFS Hagfors 73.73 336 P P 05 01 03.1 -0.4
comp=Z,1.1nm,0.3s,baz=31,slow=6.1,SNR=19
comp=Z,1.1nm,0.3s
NB2 NORSAR Subarra 73.82 337 P P 05 01 03.8 -0.3
comp=Z,3.1nm,0.9s,baz=37,slow=6.2
NOA NORSAR Array B 73.82 337 P P 05 01 03.9 -0.2
comp=Z,2.0nm,0.8s,baz=40,slow=5.9,SNR=6.6
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 74.06 322 P P 05 01 05.1 -0.5
comp=Z,0.9nm,0.4s,baz=47,slow=6.0,SNR=12
comp=Z,0.9nm,0.4s
BOZ Bozeman (W) 74.19 44 IAmb IAmb 05 01 09.2
comp=Z,3.3nm,0.8s
KVN Kaiserville 74.23 53 P P 05 01 08.6 +1.5
KVN pmax pmax
comp=Z,3.0nm,1.2s
KVN Kaiserville 74.23 53 P 05 01 08.6 +1.5
NVAR Mina Array Bea 74.47 53 P P 05 01 10.5 +1.9
comp=Z,1.5nm,0.8s,baz=292,slow=6.1,SNR=12
comp=Z,1.5nm,0.8s
ELK Elko 75.01 50 P P 05 01 13.8 +2.2
comp=Z,0.6nm,0.5s,baz=303,slow=3.9,SNR=3.4
comp=Z,0.6nm,0.5s
TPNV Topopah Spring 76.66 54 IAmb IAmb 05 01 23.6
comp=Z,4.4nm,1.2s
DUG Dugway, Tooele 76.82 49 P P 05 01 23.1 +1.3
DUG pmax pmax
comp=Z,2.0nm,0.7s
DUG Dugway, Tooele 76.82 49 P 05 01 23.1 +1.3
DUG IAmb IAmb 05 01 24.3
comp=Z,2.3nm,0.7s
QSM Queen of Sheba 76.84 55 IAmb IAmb 05 01 24.4
comp=Z,7.0nm,1.3s
PDAR Pinedale Array 77.12 46 P P 05 01 24.7 +1.1
comp=Z,1.0nm,0.7s,baz=269,slow=2.1,SNR=14
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 78.71 312 P P 05 01 33.7 +1.3
comp=Z,0.3nm,0.4s,baz=78,slow=8.0,SNR=1.9
comp=Z,0.3nm,0.4s
HMU Henry Mountain 79.49 50 IAmb IAmb 05 01 58.3
comp=Z,3.9nm,0.9s
GERES GERESS Array B 82.42 328 P P 05 01 51.0 -1.0
comp=Z,0.4nm,0.4s,baz=358,slow=7.3,SNR=3.3
comp=Z,0.4nm,0.4s
GERES GERESS Array B 82.42 328 P P 05 01 51.0 -1.0
ANMO Albuquerque 84.05 50 P P 05 02 02.3 +1.4
comp=Z,1.9nm,0.9s,baz=306,slow=3.9,SNR=7.2
comp=Z,1.9nm,0.9s
ANMO Albuquerque 84.05 50 P P 05 02 00.5 -0.3
ANMO Albuquerque 84.05 50 P P 05 01 58.8 -2.0
WMOK Wichita Mounta 88.73 46 P P 05 02 22.2 -1.3
TXAR Lajitas Array 89.60 53 P P 05 02 29.1 +1.3
comp=Z,1.3nm,0.5s,baz=302,slow=2.9,SNR=30
comp=Z,1.3nm,0.5s
H03N2 Juan Fernandez 146.81 95 T T 07 53 53.8
baz=292,slow=76,SNR=24
H03N3 Juan Fernandez 146.82 95 T T 07 53 52.2
baz=292,slow=76,SNR=25
H03N1 Juan Fernandez 146.82 95 T T 07 53 57.2
baz=292,slow=76,SNR=24

ASRS ***17*** *05:00:11.0±0.5, 54.62°N×83.70°E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 17 05:00:13.7±2.3, 54.60°N×83.78°E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=18.1km s-min=11.0km az=169.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**136**	I	I	05 05 20.0	
	0.1nm,1.0s,baz=316,slow=318,SNR=17						
ZALV	**Zalesovo Beam**	**0.89**	**136**	Pg	Pg	05 00 30.3	-0.4
	3.0nm,0.3s,baz=325,slow=18,SNR=18						
ZALV				Lg	Lg	05 00 43.6	
	9.0nm,0.3s,baz=318,slow=29,SNR=28						
KURBB	**Kurchatov Arra**	**5.10**	**221**	Pn	Pn	05 01 31.0	-0.3
	0.1nm,0.3s,baz=42,slow=13,SNR=4.2						
KURBB				Lg	Lg	05 02 55.8	
	0.1nm,0.3s,baz=42,slow=32,SNR=5.8						
	0.3nm,0.2s						
MKAR	**Makanchi Array**	**7.87**	**187**	Pn	Pn	05 02 10.1	+0.7
	0.1nm,0.3s,baz=2.1,slow=12,SNR=2.2						
MKAR				Lg	Lg	05 04 23.9	
	baz=19,slow=27,SNR=2.5						
	0.2nm,0.4s						

BJI ***17*** *05:01:10.4, 11.26°N×95.01°E, h27km, mB5.2/3, mb4.7/53, Ms4.7/7, Ms7 4.7/7*
IDC ***17*** *05:01:11.2±0.6, 11.68°N×94.95°E, h0km, mb4.3/25, mbtmp4.3/26, ML4.1/1, MS4.8/2, Error ellipse: s-maj=18.6km s-min=13.8km az=49.0*
NEIC ***17*** *05:01:13.4±0.9, 11.70°N±0.07°×95.01°E±0.07, h10km±1km, mb4.8/52, Error ellipse: s-maj=12.7km s-min=10.7km az=212.0*
DJA ***17*** *05:01:14.4±0.5, 12°N±4°×9°5E±°, h10km, M5.2/16, mb5.0/16, mB5.8/6, MLv5.2/12, Mw(mB)5.4/6*
GFZ ***17*** *05:01:14.1±0.2, 12°N±4°×9°5E±°, h10km, M4.7/22, mb4.7/22*
BKK ***17*** *05:01:14.0±1.3, 12°N±3°×9°5E±°, h4km±13km, M4.7/9, mB5.0/2, mb4.8/4, Mjma4.6/9, ML4.8/9, MLv4.7/9, Mw(mB)4.3/2*
BGR ***17*** *05:01:16.3, 11.28°N×94.64E, h33km, mb4.6, Ms5.1*
NDI ***17*** *05:01:19.2±3.0, 11.82°N×94.93E, h35km±7km, mb4.5, ML4.1, MW4.5, Presumed earthquake*
ISC 17 05:01:15.1±0.4, 11.70N±0.06×95.06E±0.05, h24km, n394, σ0s91/385, mb4.7/99, MS4.8/3, 1C-3D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.27**	**269**	Pn	**Pn**	**05 01 51.4**	**+0.4**
PBA	**Port Blair**	**2.27**	**269**	P	**Pn**	**05 01 51.8**	**+0.8**
PBA	**Port Blair**	**2.27**	**269**	*e*P	**Pn**	**05 01 51.8**	**+0.8**
PBA				*e*S	**Sn**	**05 02 18.5**	**+0.3**
PBA				IAML		05 02 35.7	
	2μm,0.2s						
PBA				IAML		05 02 38.1	
	comp=E,2μm,0.7s						
RNTT	**Ranong**	**4.07**	**124**	P	**Pn**	**05 02 14.9**	**-1.0**
KHLT	**Khaolaem Dam**	**4.62**	**48**	P	**Pn**	**05 02 22.3**	**-1.1**
PKDT	**Phuket**	**4.97**	**139**	P	**Pn**	**05 02 27.9**	**-0.4**
BSI	**Banda Aceh**	**6.16**	**178**	P	**Pn**	**05 02 48.1**	**+3.4**
	comp=E,73nm,0.8s						
LHMI	**Lhok Sumawe**	**6.69**	**164**	Pn	**Pn**	**05 02 51.9**	**0.0**
LHMI	**Lhok Sumawe**	**6.69**	**164**	P	**Pn**	**05 02 53.8**	**+1.9**
	comp=E,1.0nmcomp=E,118nm,0.6s						
CM31	**Chiang Mai Arr**	**7.70**	**29**	Pn	**Pn**	**05 03 05.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**7.70**	**29**	Pn	**Pn**	**05 03 06.1**	**+0.3**
	comp=E,0.8nm,0.3s,baz=215,slow=14,SNR=32						
	comp=E,8.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**7.70**	**29**	Pn	**Pn**	**05 03 05.1**	**-0.6**
CHTO	**Chiang Mai**	**8.01**	**27**	Pn	**Pn**	**05 03 09.8**	**-0.3**
CHTO	**Chiang Mai**	**8.01**	**27**	P	**Pn**	**05 03 09.7**	**-0.3**
CHTO	**Chiang Mai**	**8.01**	**27**	P	**Pn**	**05 03 10.6**	**+0.5**
NPW	**Naypyitaw**	**8.10**	**7**	P	**Pn**	**05 03 12.9**	**+1.6**
KULM	**Kulim**	**8.43**	**139**	Pn	**Pn**	**05 03 14.4**	**-1.4**
KULM	**Kulim**	**8.43**	**139**	P	**Pn**	**05 03 14.6**	**-1.2**
KULM	**Kulim**	**8.43**	**139**	P	**Pn**	**05 03 14.8**	**-1.0**
RPSI	**Rantau Prapat**	**9.73**	**156**		**Pn**	**05 03 32.6**	**-1.0**
VIS	**Vishakhapatnam**	**12.82**	**299**	*e*P	**Pn**	**05 04 15.9**	**-0.1**
VIS				*e*S	Sn	05 06 25.0	-13
MYKOM	**Kota Tinggi**	**13.15**	**138**		**Pn**	**05 04 20.0**	**-0.5**
TNCH	**TengChong**	**13.66**	**13**	*e*P	**Pn**	**05 04 28.4**	**+0.8**
TNCH				pmax	pmax		
	comp=E,58nm,0.4s						
SHL	**Shillong**	**14.12**	**348**	*ex*	x	05 04 28.7	
SHL				*e*P	**Pn**	**05 04 35.1**	**+1.3**
SHL				IAmb	IAmb	05 04 38.1	
	comp=N,6.9nm,0.5s						
BOK	**Bokaro**	**14.86**	**325**	*e*P	**Pn**	**05 04 45.5**	**+1.7**
BOK				IAmb	IAmb	05 04 58.2	
	comp=E,16nm,1.0s						
BOK				*e*S	**Sn**	**05 07 25.3**	**-2.4**
TEZP	**TEZPUR**	**14.99**	**352**	*e*P	**P**	**05 04 47.8**	**-2.9**
KMI2	**Kunming**	**15.23**	**27**	P	**P**	**05 04 53.0**	**-0.7**
KMI2				sP	pP	05 04 56.8	-2.6
KMI2				pmax	pmax		
	comp=Z,38nm,1.2s						
DSRI	**Dabo**	**15.36**	**141**	P	**P**	**05 04 52.4**	**-2.5**
QIZ	**Qiongzhong**	**16.01**	**61**	P	**P**	**05 05 01.8**	**-0.3**
QIZ				S	**Sn**	**05 07 58.6**	**+2.9**
QIZ				pmax	pmax		
	comp=Z,20nm,2.1s						
QIZ				L	L		
	comp=Z,1μm,13.3s						
QIZ				L	L		
	comp=Z,950nm,18.0s						
QIZ				L	L		
	comp=Z,1μm,25.1s						
PZH	**PanZhiHua**	**16.02**	**22**	P	**P**	**05 05 01.6**	**-0.7**
PZH				pmax	pmax		
	comp=Z,30nm,1.2s						
HYB	**Hyderabad**	**16.95**	**292**	*e*P	**Pn**	**05 05 09.7**	**-1.1**
HYB				*e*S	**S**	**05 08 29.0**	**+0.6**
EVN	**Everest**	**17.93**	**336**		**P**	**05 05 23.3**	**-0.6**
EVN	**Everest**	**17.93**	**336**	P	**P**	**05 05 25.1**	**+1.1**
NGP	**Nagpur**	**18.00**	**304**	*e*P	**P**	**05 05 24.8**	**+0.7**
NGP				IAmb	IAmb	05 05 34.1	
	comp=Z,14nm,0.9s						
GYA	**Guiyang**	**18.31**	**35**	P	**P**	**05 05 28.8**	**+1.1**
GYA				pmax	pmax		
	comp=E,67nm,1.0s						
ALBI	**Allahabad**	**18.45**	**319**	*e*P	**Pn**	**05 05 28.8**	**-0.4**
BNDA	**BANDA**	**19.54**	**317**	*ex*	x	05 05 33.6	
BHPL	**Bhopal**	**20.34**	**307**	*e*P	Pn	05 05 51.5	-0.4
BHPL				IAmb	IAmb	05 06 00.2	
	comp=Z,54nm,1.4s						
BHPL				*i* pP	pwP	05 06 01.2	+1.8
BHPL				*i* sP	sP	05 06 03.3	+4.9
FRKB	**FARRUKHABAD**	**21.34**	**319**	*ex*	x	05 05 27.1	
LGTI	**Lohaghat**	**22.46**	**324**	*e*P	**P**	**05 06 13.8**	**+0.9**
CNSH	**ChangSha**	**23.43**	**43**	P	**P**	**05 06 22.1**	**-0.5**
CNSH				pmax	pmax		
	comp=Z,20nm,1.4s						
NPLP	**NPLP New Delhi**	**23.73**	**318**	*e*P	**P**	**05 06 26.6**	**+1.1**
NDI	**New Delhi**	**23.73**	**318**	*e*P	**P**	**05 06 26.2**	**+0.6**
NDI				*i* x	x	05 06 33.5	

KUDL Kundal 23.87 316 *e*P **P 05 06 27.0 +0.2**
KUDL *i* x x 05 06 35.1
KUDL *ex* x 05 06 58.0
MYLDM Lahad Datu 24.07 104 P **P 05 06 28.8 0.0**
MYLDM IAmb IAmb 05 06 39.5
comp=Z,50nm,1.5s
MYLDM Lahad Datu 24.07 104 P P 05 06 32.0 +3.2
SMRI Semarang 24.10 140 P P 05 06 29.1 0.0
GOMU GeErMu 24.40 360 P P 05 06 32.1 +0.1
GOMU pmax pmax
comp=Z,10.0nm,0.5s
KLP Kalpa 25.11 324 *ex* x 05 06 49.8
LZDM Lanzhou Array 25.39 17 P P 05 06 41.2 +0.3
comp=Z,2.2nm,0.3s,baz=210,slow=12,SNR=9.0
comp=Z,2.2nm,0.3s
LZH Lanzhou 25.55 17 *e*P **P 05 06 42.9 +0.6**
LZH sP pwP 05 06 52.8 +0.4
LZH pmax pmax
comp=Z,41nm,1.7s
XAN Xi'an 25.59 27 P P 05 06 41.5 -1.0
XAN pmax pmax
comp=Z,24nm,1.1s
HNLY HANLEY 25.66 327 *ex* x 05 06 43.6
WHN Wuhan 25.92 41 P P 05 06 46.1 +0.7
LYN LuoYang 27.73 32 P P 05 07 02.3 +0.5
LYN sP pwP 05 07 11.3 -0.6
LYN pmax pmax
comp=Z,41nm,1.0s
GTA2 Gaotai 27.99 8 P P 05 07 05.1 +0.9
GTA2 pP pP 05 07 08.6 -1.9
GTA2 pmax pmax
comp=Z,18nm,1.1s
H08S3 Diego Garcia H 29.54 231 T T 05 38 03.9
baz=48,SNR=4.0
H08S2 Diego Garcia H 29.54 230 T T 05 38 05.9
baz=48
H08S1 Diego Garcia H 29.56 230 T T 05 38 07.0
baz=48
NIL Nilore 29.58 321 P P 05 07 17.4 -0.8
NIL IAmb IAmb 05 07 41.5
comp=Z,14nm,1.1s
KAPI Kappang 29.65 123 LR LR 05 22 03.4
comp=Z,2μm,18.6s,baz=219,slow=42
NJ2 Nanjing 29.84 44 *e*P **P 05 07 21.3 +0.7**
NJ2 pmax pmax
comp=Z,18nm,0.5s
HNS HongShan 31.08 31 ||P **P 05 07 32.3 +0.9**
HNS pmax pmax
comp=Z,20nm,0.8s
KSH2 Kashi 32.36 331 P P 05 07 42.4 -0.5
KSH2 pP pP 05 07 49.9 +0.6
KSH2 pmax pmax
comp=Z,8.0nm,0.8s
HHC Hu-ho-hao-te 32.47 24 ||*i*P **P 05 07 44.6 +0.8**
HHC pmax pmax
comp=Z,23nm,1.2s
WMQ Urumqi 32.63 350 *e*P **P 05 07 46.9 +1.8**
KBL Kabul 32.82 318 P P 05 07 46.0 -1.1
MANEM Manem 33.19 325 P P 05 07 50.1 -0.2
MANEM IAmb IAmb 05 08 12.8
comp=Z,33nm,1.3s
TARG Taragay, Kyrgy 33.51 336 P P 05 07 53.0 -0.2
TARG IAmb IAmb 05 07 55.2
comp=Z,11nm,0.8s
TARG Taragay, Kyrgy 33.51 336 P P 05 07 54.0 +0.8
BJI2 Beijing 33.83 30 P P 05 07 56.8 +1.3
BJI2 pmax pmax
comp=Z,6.0nm,1.0s
PRZ Przheval'sk 33.93 338 P P 05 07 58.6 +2.0
KDJ Kajisay 34.10 336 P P 05 07 57.7 -0.4
KDJ IAmb IAmb 05 08 07.5
comp=Z,13nm,1.0s
KDJ Kajisay 34.10 336 P P 05 07 59.1 +1.0
SHLS Shalkode 34.14 339 *e*P **P 05 07 58.0 -0.3**
comp=Z,13nm,1.1s
PDGK Podgornoye 34.28 340 P P 05 07 59.0 -0.6
UZB Uzynbulak 34.28 339 *e*P **P 05 08 00.5 +0.8**
comp=Z,10nm,1.3s
SATY Saty 34.43 338 *e*P **P 05 08 01.6 +0.8**
comp=Z,7.0nm,0.9s
BOOM Boomskoye usch 34.91 335 P P 05 08 04.4 -0.6
TNSS Tian-Shan 34.96 337 *e*P **P 05 08 06.1 +0.4**
GAR Garm 34.97 325 P P 05 08 05.1 -0.5
GAR IAmb IAmb 05 08 05.9
comp=Z,14nm,1.0s
GAR Garm 34.97 325 P P 05 08 05.1 -0.5
MDOK Medeo 35.03 337 *e*P **P 05 08 06.9 +0.8**
AAA Alma-Ata 35.12 337 *e*P **P 05 08 07.6 +0.9**
SHAA Shahritus 35.29 321 P P 05 08 06.7 -1.6
SHAA IAmb IAmb 05 08 21.1
comp=Z,13nm,0.8s
ARSB Arslanbob 35.30 331 P P 05 08 08.1 -0.3
ARSB IAmb IAmb 05 08 09.6
comp=Z,11nm,1.0s
AAK Ala-Archa 35.64 334 P P 05 08 11.2 -0.2
AAK Ala-Archa 35.64 334 P P 05 08 12.7 +1.3
DL2 Dalian 35.95 36 P P 05 08 13.4 -0.4
DL2 pmax pmax
comp=Z,40nm,1.0s
TDK Taldyqorghan 36.12 340 *e*P **P 05 08 16.3 +1.0**
ARK Arkit 36.15 330 P P 05 08 16.0 +0.3
MKAR Makanchi Array 36.61 345 P P 05 08 19.5 +0.1
comp=Z,3.5nm,0.9s,baz=159,slow=7.8,SNR=18
comp=Z,3.5nm,0.9s
MKAR Makanchi Array 36.61 345 P P 05 08 19.3 -0.2
ZSN Zaisan 36.66 348 *e*P **P 05 08 20.8 +1.0**
MAKZ Makanchi 36.70 345 P P 05 08 20.1 -0.1
XLT XiLinHaoTe 36.86 26 *e*P **P 05 08 22.5 +0.8**
XLT sP sP 05 08 30.0 -0.6
XLT PP **PnPn 05 09 48.8 +2.8**
XLT pmax pmax
comp=Z,28nm,1.0s
SONM Songino Array 37.26 13 P P 05 08 25.5 +0.4
comp=Z,9.6nm,1.0s,baz=198,slow=9.4,SNR=40
comp=Z,9.6nm,1.0s
SONM Songino Array 37.26 13 P P 05 08 25.1 +0.1
SONM IAmb IAmb 05 08 26.9
comp=Z,18nm,1.2s
DZA Taraz 37.29 331 *e*P **P 05 08 26.2 +0.9**
ULN Ulaanbaatar 37.43 13 P P 05 08 26.0 -0.5
ULN Ulaanbaatar 37.43 13 P P 05 08 27.0 +0.4
CHM Chimkent 37.72 329 *e*P **P 05 08 30.0 +1.1**
BTLS Baital 37.78 335 *e*P **P 05 08 30.5 +1.1**
KKAR Karatay Array 37.84 330 P P 05 08 29.2 -0.8
KS19 Wonju Array Si 39.03 43 P P 05 08 37.8 -2.2
KS19 IAmb IAmb 05 08 49.5
comp=Z,37nm,1.8s
KSRS Korea Array 39.04 43 P P 05 08 39.7 -0.3
comp=Z,1.8nm,0.6s,baz=240,slow=10,SNR=8.6
comp=Z,1.8nm,0.6s
KURBB Kurchatov Arra 41.11 344 P P 05 08 57.0 -0.1
comp=Z,3.8nm,0.9s,baz=162,slow=7.6,SNR=22
comp=Z,3.8nm,0.9s
KURK Kurchatov 41.17 344 P P 05 08 57.2 -0.3
KURK Kurchatov 41.17 344 P P 05 08 57.6 +0.1
CN2 Changchun 41.35 34 P P 05 08 59.9 +0.8
CN2 S **S 05 15 13.8 +1.5**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 L L
comp=Z,3μm,22.0s
CN2 L L
comp=Z,2μm,22.0s
CN2 L L
comp=Z,3μm,26.0s
HILR Hailar Array B 42.91 24 P P 05 09 12.4 +0.6
comp=Z,4.8nm,0.8s,baz=171,slow=10,SNR=4.0
comp=Z,4.8nm,0.8s
ZAA0 Zalesovo Array 42.93 351 P P 05 09 11.0 -0.8
ZALV Zalesovo Beam 42.93 351 P P 05 09 11.6 -0.2
comp=Z,3.1nm,0.9s,baz=168,slow=9.1,SNR=9.0
comp=Z,3.1nm,0.9s
ZALV Zalesovo Beam 42.93 351 P P 05 09 11.0 -0.8
BNX BinXian 43.67 33 ||P **P 05 09 17.8 -0.2**
BNX pmax pmax
comp=Z,17nm,1.0s
USA0B Ussuriysk Arra 45.33 37 P P 05 09 30.8 -0.4
USA0B IAmb IAmb 05 09 46.3
comp=Z,6.2nm,0.8s
USRK Ussuriysk Ar. 45.33 37 P P 05 09 31.6 +0.4
comp=Z,2.9nm,0.9s,baz=237,slow=5.2,SNR=6.2
comp=Z,2.9nm,0.9s
BVAR Borovoye Array 45.72 339 P P 05 09 33.8 -0.3
comp=Z,2.3nm,0.8s,baz=134,slow=8.4,SNR=8.2
BVAR PcP **PcP 05 11 11.9 +0.1**

comp=Z,1.8nm,0.7s,baz=140,slow=5.6,SNR=2.6
comp=Z,2.3nm,0.8s
BORK Borovoye 45.76 339 P **P** **05 09 34.2 -0.3**
BORK IAmb IAmb 05 10 03.2
comp=Z,9.1nm,1.2s
MAJO Matsushiro 45.98 50 P **P** **05 09 37.0 +0.4**
MJAR Matsushiro Arr 45.98 50 P **P** **05 09 37.3 +0.8**
comp=Z,0.9nm,0.3s,baz=256,slow=11,SNR=6.6
MJAR PcP **PcP** **05 11 13.8 +0.7**
comp=Z,0.9nm,0.2s,baz=250,slow=3.7,SNR=4.9
comp=Z,0.9nm,0.3s
MJAR Matsushiro Arr 45.98 50 P **P** **05 09 36.6 +0.1**
MJAR IAmb IAmb 05 11 22.4
comp=Z,20nm,1.9s
JYT Yasato 47.38 51 P **P** **05 09 46.7 -0.7**
AB31 Akbulak array 47.38 329 P **P** **05 09 46.9 -0.4**
WB0 Warramunga Arr 49.78 129 P **P** **05 10 06.7 +0.6**
WB0 IAmb IAmb 05 10 16.3
comp=Z,12nm,1.1s
WRA Warramunga Arr 49.84 129 P **P** **05 10 07.1 +0.5**
comp=Z,3.5nm,0.8s,baz=306,slow=8.4,SNR=23
comp=Z,3.5nm,0.8s
WR8 Warramunga Arr 49.97 129 P **P** **05 10 07.9 +0.3**
WR8 IAmb IAmb 05 10 17.1
comp=Z,8.6nm,0.8s
AS31 Alice Springs 51.75 133 P **P** **05 10 20.7 -0.3**
ASAR Alice Springs 51.75 133 P **P** **05 10 21.7 +0.7**
comp=Z,2.7nm,0.8s,baz=314,slow=7.3,SNR=23
comp=Z,2.7nm,0.8s
ASAR Alice Springs 51.75 133 P **P** **05 10 21.2 +0.2**
GNI Garni 52.50 312 LR LR 05 34 42.7
comp=Z,775nm,18.8s,baz=250,slow=38
GNI Garni 52.50 312 P **P** **05 10 25.7 -0.8**
GNI Garni 52.50 312 P **P** **05 10 26.4 -0.1**
comp=Z,22nm,1.1s
GNI Garni 52.50 312 P **P** **05 10 27.7 +1.2**
ARTI Arti 52.82 335 P **P** **05 10 28.0 -0.4**
ARTI IAmb IAmb 05 10 29.0
comp=Z,11nm,0.8s
KBZ Khabaz 54.95 316 P **P** **05 10 44.1 0.0**
comp=Z,1.6nm,0.7s,baz=181,slow=1.8,SNR=4.3
comp=Z,1.6nm,0.7s
KIV Kislovodsk 55.16 316 P **P** **05 10 45.6 -0.3**
KIV Kislovodsk 55.16 316 P **P** **05 10 45.9 0.0**
comp=Z,17nm,1.0s
KIV Kislovodsk 55.16 316 P **P** **05 10 46.7 +0.8**
ARPR Arapgir-MALATY 56.99 309 P **P** **05 10 59.7 +0.6**
BR131 Keskin Array S 60.68 309 P **P** **05 11 23.4 -1.4**
BR131 IAmb IAmb 05 11 31.9
comp=Z,6.7nm,0.8s
BRTR Keskin Array B 60.68 309 P **P** **05 11 23.5 -1.3**
comp=Z,3.1nm,0.8s,baz=118,slow=7.0,SNR=18
comp=Z,3.1nm,0.8s
BRTR Keskin Array B 60.68 309 P **P** **05 11 23.2 -1.5**
BR105 Keskin Array S 60.70 309 P **P** **05 11 23.5 -1.4**
comp=Z,57nmcomp=Z,7.0nm,0.8s
BR106 Keskin Array S 60.70 309 P **P** **05 11 23.6 -1.3**
comp=Z,54nmcomp=Z,6.8nm,0.8s
STKA Stephens Creek 62.14 136 P **P** **05 11 34.4 -0.1**
comp=Z,3.3nm,0.8s,baz=256,slow=2.6,SNR=4.8
comp=Z,3.3nm,0.8s
MA2 Magadan 62.99 28 P **P** **05 11 39.0 -0.7**
comp=Z,8.6nm,0.4s,baz=239,slow=7.4,SNR=7.0
comp=Z,8.6nm,0.4s
MA2 Magadan 62.99 28 P **P** **05 11 39.9 +0.2**
comp=Z,31nm,0.9s
AKASG Malin Array Be 65.77 320 P **P** **05 11 56.8 -1.2**
comp=Z,0.8nm,0.5s,baz=92,slow=5.1,SNR=5.3
comp=Z,0.8nm,0.5s
AKBB Malin Array Si 65.77 320 P **P** **05 11 55.9 -2.1**
KIEV Kiev 65.77 320 P **P** **05 11 55.5 -2.6**
comp=Z,14nm,0.9s
SORM Soroca 65.86 318 P **P** **05 11 57.7 -1.0**
comp=Z,9.6nm,0.8s
LUBAR Lubar, Ukraine 66.54 319 P **P** **05 12 02.1 -1.0**
VRI Vrincioaia 66.62 315 P **P** **05 12 03.7 0.0**
comp=Z,11nm,1.0s
VRI Vrincioaia 66.62 315 P **P** **05 12 04.1 +0.4**
MLR Muntele Rosu 67.12 314 P **P** **05 12 06.7 -0.3**
MLR IAmb IAmb 05 12 08.5
comp=Z,7.7nm,1.0s
MLR Muntele Rosu 67.12 314 P **P** **05 12 06.9 -0.1**
comp=Z,9.4nm,1.1s
MLR Muntele Rosu 67.12 314 P **P** **05 12 07.4 +0.4**
KMPD K-Podol'skiy 67.17 318 P **P** **05 12 07.8 +0.7**
BURAR Bucovina Array 67.87 317 P **P** **05 12 11.1 -0.6**
BUR08 Bucovina Ar. S 67.88 317 P **P** **05 12 11.8 0.0**
RNPP9 Sopachiv 67.96 321 P **P** **05 12 11.0 -1.0**
PABE Paberze 69.74 325 P **P** **05 12 22.7 -0.3**
PABE Paberze 69.74 325 P **P** **05 12 23.0 0.0**
FINES FINESS Array B 69.79 331 P **P** **05 12 23.3 +0.1**
comp=Z,3.9nm,0.8s,baz=111,slow=9.2,SNR=14
comp=Z,3.9nm,0.8s
FINES FINESS Array B 69.79 331 P **P** **05 12 23.0 -0.2**
SUW Suwalki 69.97 323 P **P** **05 12 23.6 -0.8**
OJC Ojcow 71.67 319 P **P** **05 12 33.9 -1.0**
ARCES ARCESS Array B 72.01 340 P **P** **05 12 37.0 +0.5**
comp=Z,1.3nm,0.8s,baz=67,slow=4.1,SNR=4.0
comp=Z,1.3nm,0.8s
MORH Mrgy, Hungar 72.26 315 P **P** **05 12 37.7 -0.8**
comp=Z,4.3nm,1.9s
MPLH Magyarpolny 73.04 316 P **P** **05 12 42.5 -0.6**
comp=Z,20nm,1.3s
MORC Moravsky Berou 73.10 319 P **P** **05 12 43.1 -0.5**
MORC IAmb IAmb 05 12 52.4
comp=Z,9.7nm,1.1s
MORC Moravsky Berou 73.10 319 P **P** **05 12 44.1 +0.6**
KSP Ksiaz 73.93 320 P **P** **05 12 48.4 +0.1**
CONA Conrad Observa 74.18 317 *eP* **P** **05 12 49.8 -0.2**
comp=Z,3.9nm,1.0s
SOKA Soboth 74.76 315 *eP* **P** **05 12 53.2 -0.1**
comp=Z,8.0nm,1.2s
OBKA Obir 75.09 315 *eP* **P** **05 12 55.5 +0.2**
comp=Z,3.1nm,0.8s
MOA Molln 75.26 317 *eP* **P** **05 12 56.3 +0.2**
comp=Z,4.5nm,1.0s
MOA Molln 75.26 317 P **P** **05 12 56.1 0.0**
BRG Berggiesshubel 75.42 320 *eP* **P** **05 12 57.3 +0.3**
comp=Z,7.7nm,1.1s,baz=88,slow=5.6
BRG Berggiesshubel 75.42 320 *eP* **P** **05 12 57.1 +0.2**
BRG Amp 05 12 58.3
comp=Z,7.6nm,1.1s
BRG Berggiesshubel 75.42 320 P P 05 13 05.2 +8.2
BRG Amp 05 13 05.6
comp=Z,6.6nm,1.0s
BRG ⇓*e*Pif 05 54 21.6
BRG Amp 05 54 22.2
comp=Z,3.3nm,0.9s
GEC2 GERESS Array S 75.61 318 *eP* **P** **05 12 58.2 0.0**
comp=Z,5.8nm,0.8s,baz=88,slow=5.6
GERES GERESS Array B 75.61 318 P **P** **05 12 58.0 -0.2**
comp=Z,94nm,0.4s,baz=5.6,slow=24,SNR=1651
HFS Hagfors 75.64 329 P **P** **05 12 57.8 -0.2**
comp=Z,3.0nm,0.8s,baz=55,slow=6.0,SNR=6.5
comp=Z,3.0nm,0.8s
KBA Koelnbreinsper 75.90 316 *eP* **P** **05 12 59.5 -0.5**
comp=Z,2.8nm,0.6s
CLL Collm 76.01 320 *eP* **P** **05 12 59.9 -0.3**
comp=Z,5.0nm,1.0s,baz=88,slow=5.6
CLL Collm 76.01 320 *i* P **P** **05 13 00.0 -0.3**
comp=Z,7.0nm,1.2s
CLL *i* (sP) **sP** **05 13 08.0 -1.5**
SPITS Spitsbergen Ar 76.31 348 P **P** **05 13 01.3 -0.2**
comp=Z,4.3nm,0.7s,baz=111,slow=7.9,SNR=6.1
comp=Z,4.3nm,0.7s
LESA Schwarzleotal 76.34 316 *eP* **P** **05 13 01.2 -1.2**
comp=Z,1.9nm,0.7s
STAL STALIGIAL 76.37 315 P **P** **05 13 01.9 -0.6**
STAL IAmb IAmb 05 13 02.8
comp=Z,11nm,1.0s
TANN Tannenbergstha 76.37 319 *eP* **P** **05 13 02.7 +0.3**
comp=Z,2.0nm,0.8s,baz=88,slow=5.6
ABTA Abfaltersbach 76.49 315 *i* P **P** **05 13 02.7 -0.5**
comp=Z,4.2nm,0.9s
ROTZ Rotzenmuhle 76.56 319 *eP* **P** **05 13 03.9 +0.4**
comp=Z,2.0nm,1.3s,baz=88,slow=5.6
PLN Plauen 76.57 319 *eP* **P** **05 13 03.4 -0.1**
comp=Z,1.1nm,0.7s,baz=88,slow=5.6
NB2 NORSAR Subarra 76.87 330 P **P** **05 13 04.9 -0.2**
comp=Z,5.9nm,1.1s,baz=92,slow=5.6
NOA NORSAR Array B 76.87 330 P **P** **05 13 04.7 -0.4**
comp=Z,1.5nm,0.9s,baz=89,slow=6.2,SNR=3.8
comp=Z,1.5nm,0.9s
MOX Moxa 76.91 320 *eL* L 05 44 21.6
comp=Z,706nm,20.9s
WTTA Wattenberg 77.06 316 *eP* **P** **05 13 06.8 +0.2**
comp=Z,1.1nm,0.5s
WATA Walderalm 77.10 316 *eP* **P** **05 13 05.4 -1.4**
comp=Z,4.3nm,0.5s
CTI Castel Tesino 77.12 315 P **P** **05 13 05.8 -1.1**
CTI IAmb IAmb 05 13 07.5
comp=Z,5.7nm,0.8s
GRF Grafenberg Arr 77.20 319 *eL* L 05 47 22.9
comp=Z,1µm,18.5s
MOTA Moosalm 77.42 316 *eP* **P** **05 13 06.6 -1.9**
comp=Z,3.8nm,0.7s
BSEG Bad Segeberg 77.55 323 *eP* **P** **05 13 09.4 +0.5**
comp=Z,5.6nm,0.9s,baz=88,slow=5.6
CLZ Clausthal 77.63 321 *eP* **P** **05 13 09.6 +0.1**
comp=Z,7.4nm,0.8s,baz=88,slow=5.6
CLZ Clausthal 77.63 321 P **P** **05 13 09.9 +0.5**
RETA Reutte 77.64 316 *eP* **P** **05 13 08.7 -0.9**
comp=Z,5.8nm,0.8s
FETA Feichten 77.69 316 *eP* **P** **05 13 08.4 -1.8**
comp=Z,2.0nm,0.5s
GTTG Gottingen 77.90 320 *eP* **P** **05 13 11.3 +0.4**
comp=Z,9.8nm,0.8s,baz=88,slow=5.6
SALO Salr 77.94 314 P **P** **05 13 10.8 -0.5**
RETH Rethem/Aller, 78.19 322 *eP* **P** **05 13 12.9 +0.5**
comp=Z,13nm,1.7s,baz=88,slow=5.6
DAVA Damuels 78.25 316 *eP* **P** **05 13 12.4 -0.8**
comp=Z,6.2nm,1.2s
KASTN Kahler Asten 78.89 320 *eP* **P** **05 13 16.6 +0.2**
comp=Z,4.9nm,1.1s,baz=88,slow=5.6
IBBN Ibbenburen 79.20 321 *eP* **P** **05 13 18.2 +0.1**
comp=Z,16nm,1.2s,baz=88,slow=5.6
BNALP Bannalp 79.28 316 P **P** **05 13 19.2 +0.3**
F14K Arctic Creek 83.01 25 P **P** **05 13 38.5 +0.4**
baz=283
F15K North Star Dit 83.63 24 P **P** **05 13 42.0 +0.7**
baz=284
D17K Noatak River 83.72 22 P **P** **05 13 42.3 +0.5**
baz=285
G15K Niukluk 84.06 25 P **P** **05 13 43.7 +0.3**
baz=285
C18K Utukok River 84.14 21 P **P** **05 13 44.7 +0.8**
baz=287
E17K Hotham Inlet 84.36 23 P **P** **05 13 45.7 +0.7**
baz=287
C19K Lookout Ridge 84.55 20 P **P** **05 13 46.6 +0.5**
baz=288
K13K Kusilvak Mount 84.57 28 P **P** **05 13 46.3 +0.2**
baz=285
G16K Koyuk River 84.64 24 P **P** **05 13 47.2 +0.8**
baz=286
E18K Tukpahlearik C 84.72 22 P P **05 13 47.8 +1.0**
E18K IAmb IAmb 05 13 56.9
comp=Z,7.0nm,0.9s
E18K Tukpahlearik C 84.72 22 P **P** **05 13 47.4 +0.6**
baz=288
H16K Elim 84.89 25 P **P** **05 13 48.4 +0.7**
baz=286
B20K Meade River 85.05 19 P **P** **05 13 49.5 +1.1**
baz=291
D19K Kuna River 85.26 21 P **P** **05 13 50.5 +0.9**
D19K Kuna River 85.26 21 P **P** **05 13 50.5 +0.9**
baz=290,SNR=6.9
G17K Kiwalik Mounta 85.28 24 P **P** **05 13 50.6 +0.9**
baz=288
F18K Selawik 85.33 23 P **P** **05 13 50.3 +0.5**
baz=289
L14K Kuka Creek 85.63 28 P **P** **05 13 52.1 +0.7**
baz=286
D20K Etivluk River 85.70 20 P **P** **05 13 52.5 +0.7**
D20K Etivluk River 85.70 20 P **P** **05 13 52.6 +0.9**
baz=291,SNR=8.9
H17K Granite Mounta 85.76 24 P **P** **05 13 52.9 +0.9**
baz=288
I17K Unalakleet 85.76 25 P **P** **05 13 52.6 +0.6**
baz=288
K15K Wolf Creek Mou 85.88 27 P **P** **05 13 53.0 +0.3**
baz=287
E19K Redstone River 85.93 22 P P **05 13 53.5 +0.6**
E19K IAmb IAmb 05 14 02.6
comp=Z,8.2nm,0.9s
E19K Redstone River 85.93 22 P **P** **05 13 53.7 +0.8**
baz=291,SNR=7.5
G18K Tagagawik 85.94 23 P **P** **05 13 53.6 +0.6**
baz=290
F19K Shaleruckik Mo 85.95 22 P **P** **05 13 53.8 +0.8**
baz=290
J16K Anvik River 85.99 26 P P **05 13 54.1 +0.9**
J16K IAmb IAmb 05 13 54.7
comp=Z,7.0nm,1.0s
J16K Anvik River 85.99 26 P **P** **05 13 54.1 +0.9**
baz=288,SNR=5.8
E20K Nigu River 86.01 21 P **P** **05 13 54.2 +0.9**
baz=292,SNR=6.5
B21K Ikpikpuk River 86.02 19 P **P** **05 13 54.3 +1.1**
baz=293
L15K Ungalak Mounta 86.08 28 P **P** **05 13 54.3 +0.6**
baz=287
B22K Teshekpuk Lake 86.11 18 P **P** **05 13 54.5 +0.8**
baz=294
M14K Bethel 86.14 29 P **P** **05 13 54.3 +0.3**
baz=287
C21K Knifeblade Rid 86.14 20 P **P** **05 13 54.5 +0.5**
baz=293
H18K Honhosa River 86.31 24 P **P** **05 13 55.6 +0.8**
baz=290
G19K Purcell Mounta 86.45 23 P **P** **05 13 56.0 +0.5**
baz=291,SNR=6.8
J17K VABM Dome 86.60 26 P **P** **05 13 56.7 +0.4**
J17K VABM Dome 86.60 26 P **P** **05 13 56.6 +0.4**
baz=289
F20K Avaraart Lake 86.63 22 P **P** **05 13 57.4 +1.1**
baz=292
E21K Killik River 86.70 20 P **P** **05 13 57.7 +1.1**
baz=294
M15K Kasigluk River 86.75 29 P **P** **05 13 58.1 +1.0**
baz=288
H19K Roundabout Mou 86.92 23 P **P** **05 13 59.1 +1.3**
baz=292,SNR=7.8
L16K Owhat River 86.98 27 P **P** **05 13 59.3 +1.2**
baz=289
K17K Iditarod 87.17 26 P **P** **05 13 59.4 +0.4**
baz=290
C23K Itkillik River 87.19 18 P **P** **05 13 59.6 +0.6**
baz=297
N15K Kwethluk River 87.20 29 P **P** **05 14 00.1 +0.9**
baz=289
F21K Alatna River 87.36 21 P **P** **05 14 00.6 +0.7**
baz=294
L17K Donlin 87.37 27 P **P** **05 14 00.7 +0.7**
baz=290
M16K Timber Creek 87.45 28 P **P** **05 14 01.1 +0.7**
baz=290
H20K Anotleneega Mo 87.54 23 P **P** **05 14 01.9 +1.1**
baz=293,SNR=7.1
E22K Anaktuvuk Pass 87.56 20 P **P** **05 14 01.5 +0.7**
baz=296
D23K Nanushuk River 87.56 19 P **P** **05 14 01.6 +0.7**
baz=297
J18K Innoko River 87.57 25 P **P** **05 14 01.7 +0.7**
baz=291
O15K Ungalikthiuk R 87.64 30 P **P** **05 14 02.1 +0.8**
baz=289
G21K Allakaket 87.65 22 P **P** **05 14 01.5 +0.2**
G21K Allakaket 87.65 22 P **P** **05 14 02.0 +0.7**
baz=294,SNR=13
F22K John River 87.70 21 P **P** **05 14 02.6 +1.0**
baz=295
N16K Nishlik Lake 87.72 28 P **P** **05 14 02.7 +1.0**
baz=290
IMAR Indian Mountai 87.78 22 P **P** **05 14 02.7 +0.8**
J19K Poorman 87.83 25 P **P** **05 14 03.1 +0.9**
J19K IAmb IAmb 05 14 12.4
comp=Z,7.2nm,1.1s
J19K Poorman 87.83 25 P **P** **05 14 03.7 +1.5**
baz=292,SNR=5.7
I20K Naaghedeneel 87.97 24 P **P** **05 14 04.7 +1.9**
baz=293
M17K Holitna River 88.01 27 P **P** **05 14 04.3 +1.2**
baz=291
L18K Granite Mounta 88.04 26 P **P** **05 14 04.5 +1.2**
baz=292
D24K Happy Valley 88.07 19 P **P** **05 14 04.5 +1.3**
baz=298
TOLK Toolik Lake Re 88.07 19 P **P** **05 14 04.2 +0.9**
baz=298
G22K Bettles 88.19 21 P **P** **05 14 04.7 +0.8**
baz=296
H21K Melozitna Rive 88.27 23 P **P** **05 14 05.5 +1.3**
baz=295,SNR=15
E23K Chandalar 88.33 20 P **P** **05 14 05.2 +0.6**
baz=298
O16K Kokwok River B 88.34 29 P **P** **05 14 05.7 +1.0**
baz=290
J20K Nowinta River 88.35 24 P **P** **05 14 06.2 +1.6**
baz=294,SNR=6.9
N17K Nushagak Hills 88.44 28 P **P** **05 14 06.4 +1.3**
baz=291
H22K Ishtalina Cre 88.69 22 P **P** **05 14 07.7 +1.4**
baz=296,SNR=13
E24K Your Creek 88.69 20 P **P** **05 14 07.1 +0.8**
baz=299
K20K Telida 88.72 25 P **P** **05 14 07.6 +1.2**
baz=294,SNR=6.4
D25K Kavik River 88.75 18 P **P** **05 14 07.5 +1.0**
baz=301
I21K Tanana 88.78 23 P **P** **05 14 07.8 +1.1**
baz=296,SNR=8.2
G23K Bananza Creek 88.81 21 P **P** **05 14 07.7 +0.8**
baz=297
L19K White Mountain 88.85 26 P **P** **05 14 07.7 +0.6**
baz=293
C26K Camden Bay 88.87 17 P **P** **05 14 07.9 +1.0**
baz=302
N18K Kilae Creek 88.97 28 P **P** **05 14 08.5 +0.8**
baz=292
F24K Squaw Lake 89.17 20 P **P** **05 14 09.4 +1.0**
baz=299
P17K Kvichak River 89.27 29 P **P** **05 14 09.9 +0.9**
baz=292
MLY Manley 89.32 23 P **P** **05 14 10.6 +1.3**
baz=297,SNR=7.8
H23K Yukon River 89.40 22 P **P** **05 14 10.7 +1.1**
baz=298
ESDC Sonseca Array 89.45 310 P **P** **05 14 10.4 0.0**
comp=Z,0.6nm,0.6s,baz=63,slow=5.9,SNR=5.8
comp=Z,0.6nm,0.6s
CAST Castle Rocks 89.50 24 P **P** **05 14 11.1 +1.0**
baz=296,SNR=11
O18K Koktuh Hills 89.60 28 P **P** **05 14 11.6 +0.9**
baz=293
E25K Arctic Village 89.62 19 P **P** **05 14 11.8 +1.2**
baz=302
PPLA Purkeypile 89.69 25 P **P** **05 14 12.1 +1.0**
baz=296
G24K Hadweenzic Riv 89.71 21 P **P** **05 14 12.1 +1.1**
baz=300
M20K Styx River 89.72 26 P **P** **05 14 12.1 +0.8**
baz=295
I23K Minto, Yukon-K 89.78 22 P **P** **05 14 12.5 +1.1**
baz=298,SNR=6.1
F25K Christian Rive 89.87 20 P **P** **05 14 13.0 +1.1**
baz=301
Q17K Contact Creek 89.89 30 P **P** **05 14 12.3 +0.2**
baz=292
H24K Noodor Dome 90.00 22 P **P** **05 14 13.4 +1.0**
baz=299
G25K Bearman Lake 90.15 20 P **P** **05 14 14.2 +1.2**
baz=301
NEA2 Nenana 90.16 23 P P **05 14 13.6 +0.4**
NEA2 IAmb IAmb 05 14 15.3
comp=Z,4.2nm,0.9s
NEA2 Nenana 90.16 23 P **P** **05 14 13.8 +0.7**
baz=298,SNR=5.3
Q18K Katmai Hardscr 90.17 29 P **P** **05 14 14.1 +0.6**
baz=293
TRF Thorofare Moun 90.21 24 P **P** **05 14 14.5 +0.8**
baz=297
F26K Sheenjek River 90.30 19 P **P** **05 14 14.8 +1.0**
baz=303
SKT Skwentna 90.36 26 P **P** **05 14 14.3 +0.1**
SKT Skwentna 90.36 26 P **P** **05 14 14.9 +0.8**
baz=296
D27M Malcolm River 90.40 17 P **P** **05 14 14.9 +0.7**
baz=306
L22K Petersville 90.44 25 P **P** **05 14 15.3 +0.7**
baz=297
TORD Torodi Ar. Bea 90.60 283 P **P** **05 14 15.6 -0.6**
comp=Z,1.4nm,1.0s,baz=69,slow=6.0,SNR=5.6
comp=Z,1.4nm,1.0s
MCK McKinley 90.62 24 P **P** **05 14 16.1 +0.7**
baz=298,SNR=5.9
G26K Porcupine Rive 90.83 20 P **P** **05 14 17.0 +0.9**
baz=303
E27K Coleen River 90.83 18 P **P** **05 14 17.0 +0.8**
baz=305
ILAR Eielson Array 90.89 22 P P **05 14 15.5 -1.0**
comp=Z,0.9nm,0.7s,baz=295,slow=4.5,SNR=9.2
comp=Z,0.9nm,0.7s
PRP Porcupine Dome 91.00 21 P **P** **05 14 18.4 +1.2**
baz=302,SNR=6.0
HDA Harding Lake 91.05 23 P **P** **05 14 17.4 +0.1**
baz=300
M22K Willow 91.06 26 P **P** **05 14 17.9 +0.6**
baz=297
E28M Babbage River 91.20 17 P **P** **05 14 19.1 +1.2**
baz=307
J25K Salcha River, 91.53 22 P **P** **05 14 19.7 +0.1**
baz=302
DHY Denali Highway 91.55 24 P **P** **05 14 19.7 -0.1**
baz=300
PMR Palmer 91.55 26 P **P** **05 14 19.7 +0.1**
PMR Palmer 91.55 26 P **P** **05 14 20.2 +0.6**
baz=298
OHAK Old Harbor 91.58 30 P **P** **05 14 20.5 +0.7**
baz=294
G27K Doyon Strip 91.60 19 P **P** **05 14 20.5 +0.6**
baz=305
WAT6 Susitna Watana 91.65 24 P **P** **05 14 20.9 +0.6**
baz=299
F28M Old Crow 91.69 18 P **P** **05 14 21.0 +0.8**
baz=307
KDAK Kodiak Island 91.69 30 P **P** **05 14 21.1 +0.8**
baz=295
BRSE Bradley Lake S 91.70 28 P **P** **05 14 21.1 +0.7**
baz=297
SML Sawmill 91.78 25 P **P** **05 14 21.5 +0.7**
baz=299
K24K Donnelly Dome 91.80 23 P **P** **05 14 21.5 +0.7**
baz=301
E29M Blow River 91.81 17 P **P** **05 14 21.4 +0.7**
baz=309
O22K Cooper Landing 91.82 27 P **P** **05 14 21.7 +0.8**
baz=298
KNK Knik Glacier 91.92 26 P **P** **05 14 22.2 +0.8**
baz=299
H27K Steamboat Moun 91.98 20 P **P** **05 14 23.0 +1.4**
baz=305,SNR=8.8
M23K Glacier View 92.04 25 P **P** **05 14 22.7 +0.7**
baz=299
RIDG Independent Ri 92.19 23 P **P** **05 14 23.0 +0.3**
baz=302
PWL Port Wells 92.24 26 P **P** **05 14 24.0 +1.1**
baz=299
I27K Kandik River 92.31 20 P **P** **05 14 24.3 +1.1**
baz=305,SNR=6.6
SCRK Sand Creek 92.38 22 P **P** **05 14 24.1 +0.5**
baz=303,SNR=6.4
G29M Pine Creek 92.69 18 P **P** **05 14 25.4 +0.5**
baz=308
F30M Barrier River 92.92 17 P **P** **05 14 26.9 +1.0**
baz=311
KLU Klutina 92.94 25 P **P** **05 14 27.0 +0.8**
baz=301
I28M Miner Creek 92.97 20 P **P** **05 14 27.2 +0.9**
baz=307,SNR=5.6
H29M Whitestone 93.01 19 P **P** **05 14 27.3 +1.0**
baz=308
INK Inuvik 93.09 16 P **P** **05 14 27.3 +0.7**
baz=313
G30M tAoh Zraii Nji 93.20 18 P **P** **05 14 27.8 +0.6**
baz=310
N25K Chitina, Valde 93.42 24 P **P** **05 14 29.3 +0.9**
baz=302
EPYK Eagle Plains 93.44 18 P **P** **05 14 28.8 +0.4**
baz=310
F31M Tsiigehtchic 93.62 17 P **P** **05 14 29.7 +0.7**
baz=312
M26K Nabesna, AK 93.62 23 P **P** **05 14 30.5 +1.2**
baz=304
L27K Beaver Creek, 93.69 22 P **P** **05 14 30.7 +1.1**
baz=305
BMRM Bremner River 93.76 25 P **P** **05 14 30.5 +0.6**
baz=302
G31M Satah River 93.82 17 P **P** **05 14 30.4 +0.4**
baz=312
DAWY Dawson 93.99 21 P **P** **05 14 30.9 0.0**
DAWY IAmb IAmb 05 14 32.4
comp=Z,4.7nm,1.0s

DAWY	**Dawson**	**93.99**	**21**	P	**P**	**05 14 31.6**	**+0.7**
	baz=307,SNR=5.6							
M27K	**Edge Creek, AK**	**94.08**	**23**	P	**P**	**05 14 32.3**	**+0.8**
	baz=305							
MCARA	**McCarthy VSAT**	**94.17**	**24**	P	**P**	**05 14 33.0**	**+1.2**
	baz=304							
I30M	**Mount Dempster**	**94.28**	**19**	P	**P**	**05 14 33.0**	**+0.6**
	baz=310,SNR=7.6							
BVCY	**Beaver Creek**	**94.43**	**23**	P	**P**	**05 14 34.0**	**+1.1**
	baz=306							
H31M	**Peel River**	**94.54**	**18**	P	**P**	**05 14 34.0**	**+0.6**
	baz=312,SNR=5.7							
J30M	**Hart River**	**94.72**	**20**	P	**P**	**05 14 35.0**	**+0.6**
	baz=310							
K29M	**Barlow Dome**	**94.78**	**21**	P	**P**	**05 14 35.2**	**+0.6**
	baz=309							
L29M	**L29M**	**95.02**	**21**	P	**P**	**05 14 36.6**	**+0.9**
	baz=308							
M29M	**Somme Creek**	**95.31**	**22**	P	**P**	**05 14 37.9**	**+0.8**
	baz=308							
YUK8	**Steele Glacier**	**95.52**	**23**	P	**P**	**05 14 38.6**	**+0.4**
	baz=306							
BRWY	**Burwash Landin**	**95.75**	**23**	P	**P**	**05 14 39.6**	**+0.5**
	baz=307							
M30M	**Minto, Yukon**	**95.83**	**21**	P	**P**	**05 14 39.9**	**+0.5**
	baz=309							
YUK6	**Outpost Mounta**	**96.27**	**23**	P	**P**	**05 14 42.5**	**+0.8**
	baz=308							
N30M	**Aishikik Lake**	**96.43**	**22**	P	**P**	**05 14 43.2**	**+1.0**
	baz=309							
HYT	**Haines Junctio**	**96.67**	**23**	P	**P**	**05 14 44.2**	**+0.8**
	baz=309							
N31M	**Braeburn, Yuko**	**96.90**	**22**	P	**P**	**05 14 45.0**	**+0.7**
	baz=310							
M31M	**Drury Creek, Y**	**96.93**	**21**	P	**P**	**05 14 45.1**	**+0.7**
	baz=312							
O30N	**Mendenhall**	**97.25**	**23**	P	Pdif	05 14 46.5	+0.6
	baz=310							
MMPY	**Sheldon Lake,**	**97.71**	**20**	P	Pdif	05 14 48.4	+0.5
	baz=314							
WHY	**Whitehorse**	**97.77**	**22**	P	Pdif	05 14 48.4	0.0
	baz=311							
PLBC	**Pleasant Camp**	**97.98**	**24**	P	Pdif	05 14 49.7	+0.5
	baz=309							
P33M	**Teslin, Yukon**	**98.83**	**22**	P	Pdif	05 14 53.1	0.0
	baz=313							
YKA	**Yellowknife Ar**	**102.52**	**14**	PP	**PP**	**05 19 19.8**	**-1.8**
	comp=Z,0.9nm,1.0s,baz=329,slow=7.6,SNR=5.9							
NVAR	**Mina Array Bea**	**121.19**	**30**	PKP	**PKiKP**	**05 20 07.7**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=320,slow=1.4,SNR=10							
PDAR	**Pinedale Array**	**121.30**	**21**	PKP	**PKiKP**	**05 20 06.5**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=115,slow=2.1,SNR=4.3							
CPUP	**Villa Florida**	**150.20**	**237**	PKPbc	**PKiKP**	**05 21 05.0**	**-0.7**
	comp=Z,4.1nm,1.0s,baz=108,slow=3.2,SNR=4.4							

*GFZ **17** 05:04:02.1±0.5, 17°S±4°×7°2W±°, h123km, M4.4/13, mb4.4/13*
*NEIC **17** 05:04:02.6±1.3, 16°.73S±0°.08×71°.9W±0°.1, h108km±9km, mb4.3/11, Error ellipse: s-maj=14.7km s-min=10.9km az=66.0*
*IDC **17** 05:04:06.4±1.5, 16°.32S×71°.59W, h132km±12km, mb3.6/11, mbtmp4.1/14, Error ellipse: s-maj=21.3km s-min=10.6km az=27.0*

ISC 17 05:04:02.0±0.5, **16°.64S**±0°.06×**71°.76W**±0°.07, **h100**km, **n87,** σ1^{s}**71**/81, **mb3.9**/13, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**2.19**	**142**		**Pn**	**05 04 38.3**	**+1.3**
AP01				Sn	**Sn**	05 05 05.5	+1.6
AP01	**Chacalluta**	**2.19**	**142**	P	**Pn**	**05 04 39.0**	**+2.0**
PB18	**Visviri**	**2.37**	**114**		**Pn**	**05 04 43.6**	**+3.6**
PB18	**Visviri**	**2.37**	**114**	P	Pn	05 04 44.4	+4.4
PB12	**IPOC Station P**	**2.39**	**145**		**Pn**	**05 04 40.7**	**+0.9**
PB12				Sn	**Sn**	**05 05 08.1**	**-0.7**
PB12	**IPOC Station P**	**2.39**	**145**	P	**Pn**	**05 04 41.0**	**+1.2**
PB16	**IPOC Station P**	**2.73**	**129**	Pn	**Pn**	**05 04 46.9**	**+2.2**
PB16	**IPOC Station P**	**2.73**	**129**	P	**Pn**	**05 04 47.2**	**+2.5**
PSGCX	**Pisagua**	**3.33**	**152**		**Pn**	**05 04 52.6**	**+0.4**
PSGCX	**Pisagua**	**3.33**	**152**	P	**Pn**	**05 04 52.9**	**+0.6**
LPAZ	**La Paz**	**3.50**	**85**	P	**Pn**	**05 04 58.0**	**+3.1**
	96nm,0.8s,baz=312,slow=6.7,SNR=484							
LPAZ				S	**Sn**	**05 05 38.5**	**+2.6**
	35nm,0.5s,baz=256,slow=4.9,SNR=5.3							
LPAZ	**La Paz**	**3.50**	**85**		**Pn**	**05 04 57.8**	**+2.8**
LPAZ	**La Paz**	**3.50**	**85**	P	**Pn**	**05 04 58.5**	**+3.5**
PB11	**IPOC Station P**	**3.69**	**148**		**Pn**	**05 04 57.2**	**0.0**
PB11	**IPOC Station P**	**3.69**	**148**	P	**Pn**	**05 04 57.9**	**+0.6**
GO01	**Chusmiza**	**3.88**	**141**		**Pn**	**05 05 00.9**	**+1.0**
GO01	**Chusmiza**	**3.88**	**141**	P	**Pn**	**05 05 01.8**	**+1.8**
TA02	**Huaiquique**	**3.93**	**157**	P	**Pn**	**05 05 01.1**	**+0.8**
PB08	**IPOC Station P**	**4.27**	**145**		**Pn**	**05 05 06.0**	**+0.8**
PB08	**IPOC Station P**	**4.27**	**145**	P	**Pn**	**05 05 06.6**	**+1.3**
PB02	**IPOC Station P**	**4.98**	**160**		**Pn**	**05 05 14.6**	**0.0**
PB02	**IPOC Station P**	**4.98**	**160**	P	**Pn**	**05 05 14.9**	**+0.3**
PB07	**IPOC Station P**	**5.36**	**161**		**Pn**	**05 05 19.6**	**-0.2**
PB07	**IPOC Station P**	**5.36**	**161**	P	**Pn**	**05 05 20.0**	**+0.2**
PB09	**IPOC Station P**	**5.66**	**156**		**Pn**	**05 05 23.8**	**0.0**
PB09	**IPOC Station P**	**5.66**	**156**	P	**Pn**	**05 05 24.8**	**+1.0**
PB03	**IPOC Station P**	**5.71**	**161**		**Pn**	**05 05 24.2**	**-0.2**
PB03	**IPOC Station P**	**5.71**	**161**	P	**Pn**	**05 05 24.6**	**+0.1**
PB05	**IPOC Station P**	**6.35**	**167**		**Pn**	**05 05 32.1**	**-1.2**
PB05	**IPOC Station P**	**6.35**	**167**	P	**Pn**	**05 05 32.7**	**-0.6**
PB06	**IPOC Station P**	**6.38**	**162**		**Pn**	**05 05 32.4**	**-1.2**
PB06	**IPOC Station P**	**6.38**	**162**	P	**Pn**	**05 05 32.9**	**-0.7**
NNA	**Nana**	**6.76**	**313**	P	**Pn**	**05 05 40.8**	**+2.1**
	32nm,0.3s,baz=156,slow=11,SNR=21							
NNA				S	**Sn**	**05 06 57.5**	**+3.3**
	54nm,0.5s,baz=238,slow=14,SNR=4.2							
NNA	**Nana**	**6.76**	**313**		**Pn**	**05 05 40.1**	**+1.4**
NNA	**Nana**	**6.76**	**313**	P	**Pn**	**05 05 37.2**	**-1.5**
AF01	**San Pedro de A**	**7.13**	**152**		**Pn**	**05 05 44.0**	**0.0**
PB14	**IPOC Station P**	**8.05**	**171**		**Pn**	**05 05 54.7**	**-1.7**
PB14	**IPOC Station P**	**8.05**	**171**	P	**Pn**	**05 05 54.8**	**-1.7**
AC01	**Pan de Azucar**	**9.53**	**174**	Pn	**Pn**	**05 06 14.9**	**-1.3**
AC01	**Pan de Azucar**	**9.53**	**174**	P	**Pn**	**05 06 14.2**	**-2.1**
SIV	**San Ignacio**	**10.28**	**88**	P	**Pn**	**05 06 24.6**	**-2.0**
	3.2nm,0.4s,baz=282,slow=12,SNR=20							
AC02	**Maricunga**	**10.44**	**167**		**Pn**	**05 06 28.7**	**-0.4**
AC02	**Maricunga**	**10.44**	**167**	P	**Pn**	**05 06 28.5**	**-0.7**
ATAH	**Atahualpa**	**11.46**	**325**	P	**Pn**	**05 06 45.0**	**+2.1**
	5.0nm,0.6s,baz=158,slow=11,SNR=3.5							
VILB	**Vilhena**	**11.76**	**73**		**Pn**	**05 06 45.0**	**-1.6**
AC05	**El Transito**	**12.22**	**174**	Pn	**Pn**	**05 06 50.0**	**-2.7**
AC05	**El Transito**	**12.22**	**174**	P	**Pn**	**05 06 50.4**	**-2.3**
CO01	**Juntas del Tor**	**13.37**	**174**	P	**Pn**	**05 07 04.8**	**-3.1**
GO04	**Tololo Observa**	**13.50**	**176**	Pn	**Pn**	**05 07 08.7**	**-1.0**
GO04	**Tololo Observa**	**13.50**	**176**	P	**Pn**	**05 07 06.7**	**-3.0**
CO02	**Combarbal**	**14.52**	**177**	Pn	**Pn**	**05 07 22.6**	**-0.1**
CO02	**Combarbal**	**14.52**	**177**	P	**Pn**	**05 07 21.7**	**-1.0**
CFA	**Coronel Fontan**	**15.24**	**169**	P	**P**	**05 07 34.8**	**+0.3**
	2.6nm,0.6s,baz=339,slow=14,SNR=9.0							
CO04	**Los Peladeros**	**15.36**	**177**	P	**Pn**	**05 07 30.2**	**-3.3**
MT08	**Bocatoma Ro**	**16.81**	**175**		**Pn**	**05 07 49.6**	**-1.9**
MT01	**Popeta**	**17.16**	**179**	Pn	**P**	**05 07 56.6**	**+1.0**
MT01				IAmb	IAmb	05 08 26.0	
	comp=Z,13nm,1.2s							
MACA	**Manacapuru-AM**	**17.26**	**40**	P	**P**	**05 07 54.8**	**-2.0**
H03N1	**Juan Fernandez**	**17.93**	**200**	T	T	05 26 23.4	
	baz=22,slow=73,SNR=234							
H03N2	**Juan Fernandez**	**17.94**	**200**	T	T	05 26 19.4	
	baz=22,slow=73,SNR=258							
H03N3	**Juan Fernandez**	**17.95**	**200**	T	T	05 26 22.8	
	baz=22,slow=73,SNR=271							
ITAB	**Concordia**	**21.01**	**123**	P	**P**	**05 08 38.7**	**+1.1**
ITAB				IAmb	IAmb	05 09 23.4	
	comp=Z,4.8nm,0.8s							
BOAV	**Boa Vista**	**21.93**	**31**	P	**P**	**05 08 46.2**	**-1.2**
BDFB	**Brasilia**	**22.83**	**91**	P	**P**	**05 08 55.7**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=252,slow=14,SNR=3.6							
	comp=Z,1.1nm,0.4s							
PLCA	**Paso Flores**	**24.03**	**178**	P	**P**	**05 09 12.7**	**+4.9**
	comp=Z,1.3nm,0.7s,baz=2.8,slow=7.7,SNR=3.0							
	comp=Z,1.3nm,0.7s							
MIAR	**Mount Ida**	**54.97**	**338**	P	**P**	**05 13 21.6**	**-1.3**
MIAR				IAmb	IAmb	05 13 22.8	
	comp=Z,2.9nm,0.8s							
TXAR	**Lajitas Array**	**55.12**	**326**	P	**P**	**05 13 23.9**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=147,slow=13,SNR=2.6							
	comp=Z,0.4nm,0.9s							
Q56A	**Snyder Ridge,**	**55.82**	**353**	P	**P**	**05 13 28.5**	**-0.4**
Q56A				IAmb	IAmb	05 13 30.4	
	comp=Z,4.8nm,0.8s							

SNAA	**Sanae**	**67.73**	**161**	P	**P**	**05 14 50.5**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=279,slow=8.8,SNR=2.2							
	comp=Z,0.5nm,0.5s							
SNAA	**Sanae**	**67.73**	**161**	P	**P**	**05 14 49.9**	**+1.4**
SNAA				IAmb	IAmb	05 14 58.0	
	comp=Z,8.5nm,1.5s							
ULM	**Lac du Bonnet**	**69.91**	**344**	P	**P**	**05 15 00.9**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=97,slow=4.7,SNR=4.2							
	comp=Z,2.0nm,0.6s							
NVAR	**Mina Array Bea**	**70.02**	**323**	P	**P**	**05 15 03.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=101,slow=4.6,SNR=3.7							
	comp=Z,0.5nm,0.8s							
DBIC	**Dimbokro**	**70.08**	**76**	P	**P**	**05 15 02.9**	**-1.0**
	comp=Z,3.3nm,0.5s,baz=262,slow=7.5,SNR=5.6							
	comp=Z,3.3nm,0.5s							
QSPA	**South Pole Qui**	**73.53**	**180**	P	**P**	**05 15 26.2**	**+2.4**
	comp=Z,1.4nm,1.1s,baz=154,slow=2.8,SNR=1.7							
	comp=Z,1.4nm,1.1s							
QSPA	**South Pole Qui**	**73.53**	**180**	P	**P**	**05 15 24.8**	**+1.0**
QSPA				IAmb	IAmb	05 15 33.0	
	comp=Z,5.5nm,1.4s							
TORD	**Torodi Ar. Bea**	**78.36**	**72**	P	**P**	**05 15 51.0**	**-1.0**
	comp=Z,2.6nm,0.4s,baz=258,slow=4.6,SNR=36							
	comp=Z,2.6nm,0.4s							
ESDC	**Sonseca Array**	**84.34**	**46**	P	**P**	**05 16 22.6**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=258,slow=6.2,SNR=7.8							
	comp=Z,1.4nm,0.8s							
YKA	**Yellowknife Ar**	**85.74**	**342**	P	**P**	**05 16 29.1**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=138,slow=5.0,SNR=44							
	comp=Z,1.3nm,0.5s							
H11N3	**WAKE ISLAND Hyd**	**24.41**	**283**	T	T	07 40 02.2		
	baz=99							
H11N2	**WAKE ISLAND Hyd**	**24.42**	**283**	T	T	07 40 03.5		
	baz=99							
H11N1	**WAKE ISLAND Hyd**	**24.42**	**283**	T	T	07 40 02.6		
	baz=99							
H11S2	**WAKE ISLAND Hyd**	**24.44**	**281**	T	T	07 40 04.3		
	baz=99,slow=74,SNR=12							
H11S1	**WAKE ISLAND Hyd**	**24.45**	**281**	T	T	07 40 02.3		
	baz=99,slow=74,SNR=8.1							
H11S3	**WAKE ISLAND Hyd**	**24.46**	**281**	T	T	07 40 03.0		
	baz=99,slow=74,SNR=8.8							
ZALV	**Zalesovo Beam**	**138.54**	**21**	PKP	**PKPdf**	**05 23 15.2**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=273,slow=0.6,SNR=6.6							
HILR	**Hailar Array B**	**145.86**	**347**	PKPbc	**PKPbc**	**05 23 29.3**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=338,slow=1.7,SNR=5.4							
MJAR	**Matsushiro Arr**	**146.88**	**313**	PKPbc	**PKPbc**	**05 23 32.9**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=117,slow=1.0,SNR=5.9							
SONM	**Songino Array**	**148.85**	**2**	PKPbc	**PKiKP**	**05 23 38.6**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=300,slow=1.9,SNR=6.3							

*IDC **17** 05:15:49.6±1.2, 36°.95N×135°.00E, h376km±17km, mb2.5/3, mbtmp3.4/7, Error ellipse: s-maj=36.4km s-min=21.3km az=173.0*
*JMA **17** 05:15:49.0±0.2, 37°.0N±1°.0×135°.0E±0°.8, h374km±1km, MV3.0/36, SEA OF JAPAN*

ISC 17 05:15:49.3±0.9, **36°.97N**±0°.10×**135°.00E**±0°.07, **h372**km, **n17,** σ0^{s}**45**/20, **mb2.7**/3, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**1.28**	**122**	*eP*	**Pn**	**05 16 38.9**	**+0.3**
JKY	**Yasaka**	**1.34**	**176**	P	**Pn**	**05 16 39.1**	**+0.1**
JKY				S	**S**	**05 17 18.7**	**-0.2**
JKSM	**Kasumi**	**1.41**	**191**	P	**Pn**	**05 16 39.3**	**0.0**
JOI	**OKI**	**1.56**	**245**	P	**Pn**	**05 16 40.3**	**+0.3**
JWT	**Wachi**	**1.71**	**169**	P	**Pn**	**05 16 41.5**	**+0.5**
JWT				*eS*	**S**	**05 17 22.5**	**0.0**
JSZ	**Suzu**	**1.95**	**75**	*eP*	**Pn**	**05 16 42.7**	**+0.5**
JYTA	**Yamagatataniai**	**1.96**	**134**	P	**Pn**	**05 16 43.0**	**+0.5**
JYTA				S	**S**	**05 17 24.7**	**-0.5**
JNG	**Nsakai**	**2.56**	**102**	*eP*	**Pn**	**05 16 47.5**	**+0.7**
MAT	**Matsushiro**	**2.61**	**98**	*eP*	**Pn**	**05 16 47.4**	**+0.2**
MJAR	**Matsushiro Arr**	**2.61**	**98**	P	**Pn**	**05 16 47.8**	**+0.7**
	30nm,0.7s,baz=281,slow=9.6,SNR=85							
JGT2	**ShimaneMisato**	**2.77**	**227**	P	**Pn**	**05 16 48.8**	**+0.3**
JNU	**Nakatsue**	**5.11**	**223**	P	**Pn**	**05 17 11.8**	**+0.5**
	3.8nm,0.4s,baz=27,slow=9.0,SNR=4.9							
KSRS	**Korea Array**	**5.67**	**277**	P	**Pn**	**05 17 17.9**	**+0.8**
	23nm,0.8s,baz=96,slow=12,SNR=96							
USRK	**Ussuriysk Ar.**	**7.58**	**343**	P	**P**	**05 17 39.4**	**-0.3**
	2.8nm,0.6s,baz=156,slow=10,SNR=5.2							
MKAR	**Makanchi Array**	**39.78**	**301**	P	**P**	**05 22 47.4**	**-0.2**
	0.1nm,0.4s,baz=99,slow=8.9,SNR=1.9							
	0.1nm,0.4s							
ILAR	**Eielson Array**	**52.29**	**32**	P	**P**	**05 24 23.8**	**+0.2**
	0.3nm,0.6s,baz=277,slow=8.4,SNR=6.2							
	0.3nm,0.6s							
YKA	**Yellowknife Ar**	**66.38**	**28**	P	**P**	**05 25 58.8**	**-0.2**
	0.1nm,0.7s,baz=305,slow=6.9,SNR=4.7							
	0.1nm,0.7s							

*JMA **17** 05:16:59.8±0.1, 36°.8N±0°.5×138°.9E±0°.7, h149km±1km, MV3.4/37, NW GUNMA PREF*
*IDC **17** 05:16:59.5±0.8, 36°.82N×138°.86E, h148km±6km, mb3.3/8, mbtmp3.8/10, Error ellipse: s-maj=25.2km s-min=12.0km az=73.0*

ISC 17 05:16:59.7±0.7, **36°.81N**±0°.05×**138°.88E**±0°.06, **h149**km±5km, **n24,** σ0^{s}**62**/36, **mb3.5**/8, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKT	**Katashina**	**0.30**	**98**	*i* P	**Pn**	**05 17 20.5**	**+0.3**
JKT				S	**Sn**	**05 17 35.6**	**-0.2**
JGK	**Kuni**	**0.32**	**218**	P	**Pn**	**05 17 20.6**	**+0.3**
JUON	**Uonuma**	**0.42**	**19**	*i* P	**Pn**	**05 17 20.6**	**+0.1**
JUON				S	**Sn**	**05 17 36.5**	**0.0**
JAG	**Ashikaga**	**0.60**	**130**	*i* P	**Pn**	**05 17 21.6**	**+0.1**
JAG				S	**Sn**	**05 17 37.9**	**-0.1**
MJAR	**Matsushiro Arr**	**0.60**	**244**	P	**Pn**	**05 17 21.6**	**+0.1**
	265nm,0.3s,baz=56,slow=5.6,SNR=336							
MJAR				S	**Sn**	**05 17 38.5**	**+0.4**
	32nm,0.5s,baz=221,slow=25,SNR=3.6							
MAT	**Matsushiro**	**0.61**	**244**	*i* P	**Pn**	**05 17 21.7**	**+0.1**
MAT				S	**Sn**	**05 17 38.4**	**+0.2**
JRY	**Ryogami san**	**0.79**	**179**	*i* P	**Pn**	**05 17 23.0**	**+0.2**
JRY				*eS*	**Sn**	**05 17 39.2**	**-1.2**
JGN	**Sasagawa**	**1.06**	**19**	P	**Pn**	**05 17 24.9**	**0.0**
JYN	**Shimob**	**1.34**	**192**	*i* P	**Pn**	**05 17 27.7**	**+0.1**
JYN				S	**Sn**	**05 17 50.2**	**+1.2**
JSZ	**Suzu**	**1.37**	**298**	*i* P	**Pn**	**05 17 27.9**	**+0.1**
JSZ				S	**Sn**	**05 17 49.3**	**0.0**
JOTO	**OTAMA OYAMA**	**1.38**	**57**	P	**Pn**	**05 17 28.6**	**+0.7**
JOTO				*eS*	**Sn**	**05 17 51.0**	**+1.4**
JOD2	**Odawara 2**	**1.55**	**174**	P	**Pn**	**05 17 29.7**	**-0.1**
JOD2				*eS*	**Sn**	**05 17 52.2**	**-0.6**
JAW	**Awa shima**	**1.67**	**10**	P	**Pn**	**05 17 31.1**	**+0.2**
JYTA	**Yamagatataniai**	**2.12**	**236**	P	**Pn**	**05 17 36.9**	**+0.7**
JYTA				*eS*	**Sn**	**05 18 05.7**	**+1.5**
JHJ	**Hachijo jima 2**	**3.76**	**168**	P	**Pn**	**05 17 56.9**	**+0.2**
	118nm,0.3s,baz=27,slow=5.7,SNR=19							
JHJ				S	**Sn**	**05 18 41.6**	**+0.6**
	61nm,0.4s,baz=81,slow=22,SNR=1.3							
USRK	**Ussuriysk Ar.**	**9.05**	**327**	P	**Pn**	**05 19 06.0**	**-1.0**
	1.7nm,0.7s,baz=104,slow=12,SNR=2.0							
MKAR	**Makanchi Array**	**42.52**	**302**	P	**P**	**05 24 40.5**	**+0.3**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.8							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**44.54**	**308**	P	**P**	**05 24 56.4**	**+0.2**
	0.9nm,0.4s,baz=82,slow=8.1,SNR=4.5							
	0.9nm,0.4s							
ILAR	**Eielson Array**	**50.77**	**32**	P	**P**	**05 25 44.2**	**+0.2**
	0.5nm,0.8s,baz=265,slow=6.0,SNR=4.4							
	0.5nm,0.8s							
WRA	**Warramunga Arr**	**56.61**	**185**	P	**P**	**05 26 26.9**	**-0.1**
	1.8nm,0.6s,baz=360,slow=7.4,SNR=12							
	1.8nm,0.6s							
ASAR	**Alice Springs**	**60.33**	**185**	P	**P**	**05 26 52.8**	**0.0**
	0.3nm,0.4s,baz=18,slow=13,SNR=6.0							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**68.05**	**331**	P	**P**	**05 27 41.4**	**-1.2**
	1.3nm,0.8s,baz=51,slow=6.4,SNR=3.2							
	1.3nm,0.8s							
NVAR	**Mina Array Bea**	**76.73**	**52**	P	**P**	**05 28 34.7**	**-0.1**
	0.5nm,0.7s,baz=309,slow=4.7,SNR=4.4							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**91.85**	**51**	P	**P**	**05 29 51.5**	**+0.4**
	0.2nm,0.5s,baz=291,slow=3.7,SNR=5.3							
	0.2nm,0.5s							

*SOME **17** 05:26:35.9, 44°.27N×81°.58E, h20km*
*NNC **17** 05:26:38.1±1.2, 44°.26N×81°.43E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=9.5km s-min=7.3km az=127.0, Suspected Mining explosion.*

ISC 17 05:26:32.6±1.4, **44°.24N**±0°.05×**81°.71E**±0°.07, **h0**km, **n16,** σ1^{s}**21**/28, **3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.38**	**274**	P	**Pg**	**05 26 59.7**	**+0.5**
	3.7nm,0.1s							
DJR				S	**Sg**	**05 27 16.7**	**-0.4**
	2.0nm,0.4s							
DJR	**Jarkent**	**1.38**	**274**	*eP*	**Pg**	**05 26 59.6**	**+0.5**
	3.7nm,0.1s							
DJR				*eS*	**Sg**	**05 27 16.7**	**-0.4**
	2.5nm,0.4s							
KNOS	**Konyrlen**	**1.82**	**275**	P	**Pg**	**05 27 07.9**	**+0.3**
	3.6nm,0.2s							
KNOS				S	**Sb**	**05 27 31.1**	**+0.7**
	17nm,0.3s							
PDGK	**Podgornoye**	**1.85**	**241**	⇑P	**Pg**	**05 27 08.8**	**+0.7**
	1.6nm,0.4s							
PDGK				⇑S	**Sg**	**05 27 33.1**	**+1.1**
	28nm,0.8s							
SHLS	**Shalkode**	**1.96**	**237**	P	**Pn**	**05 27 06.8**	**-0.5**
	1.6nm,0.1s							
SHLS				S	**Sn**	**05 27 29.2**	**-3.4**
	12nm,0.3s							
SHLS	**Shalkode**	**1.96**	**237**	*eP*	**Pn**	**05 27 06.8**	**-0.5**
	1.5nm,0.1s							
SHLS				*eS*	**Sn**	**05 27 29.2**	**-3.4**
	12nm,0.6s							
KAPS	**Kapalarasan**	**1.98**	**303**	*eP*	**Pb**	**05 27 10.3**	**+0.8**
	2.2nm,0.1s							
KAPS				*eS*	**Sb**	**05 27 34.9**	**+0.2**
	17nm,0.2s							
UZB	**Uzynbulak**	**2.24**	**242**	Pg	**Pb**	**05 27 14.9**	**+0.9**
	3.1nm,0.3s							
UZB				Lg	Lg	05 27 43.1		
	6.5nm,0.9s							
UZB	**Uzynbulak**	**2.24**	**242**	*eP*	**Pb**	**05 27 14.9**	**+0.9**
	2.8nm,0.2s							
UZB				*eS*	**Sb**	**05 27 43.1**	**+0.8**
	6.5nm,0.9s							
KPKS	**Kokpek**	**2.32**	**252**	Pg	**Pb**	**05 27 16.4**	**+1.0**
	0.1nm,0.0s							
KPKS				Lg	Lg	05 27 45.5		
	26nm,1.0s							
KPKS	**Kokpek**	**2.32**	**252**	*eP*	**Pb**	**05 27 16.4**	**+1.0**
	0.3nm,0.2s							
KPKS				*eS*	**Sb**	**05 27 45.5**	**+0.8**
	26nm,1.0s							
BLB	**Baldybastay**	**2.33**	**268**	Pg	**Pb**	**05 27 16.2**	**+0.6**
	13nm,0.2s							
BLB				Lg	Lg	05 27 45.3		
	7.2nm,0.5s							
MK31	**Makanchi Array**	**2.58**	**9**	⇑Pn	**Pg**	**05 27 22.3**	**+0.2**
	baz=199,slow=12,SNR=12							
MK31				⇓Sn	**Sg**	**05 27 56.0**	**+0.4**
	3.0nm,0.7s,baz=179,slow=29,SNR=4.1							
SATY	**Saty**	**2.67**	**245**	Pg	**Pb**	**05 27 22.4**	**+1.0**
	1.4nm,0.1s							
SATY				Lg	Lg	05 27 56.0		
	8.5nm,0.3s							
SATY	**Saty**	**2.67**	**245**	*eP*	**Pb**	**05 27 22.4**	**+1.0**
	1.4nm,0.1s							
SATY				*eS*	**Sb**	**05 27 56.0**	**+1.1**
	8.5nm,0.3s							
ARXS	**Arharly**	**2.79**	**271**	*eP*	**Pb**	**05 27 24.2**	**+0.8**
	3.2nm,0.2s							
ARXS				*eS*	**Sb**	**05 27 58.8**	**+0.6**
	5.8nm,0.4s							

IDC 17 05:27:32.6±12.0, **50°.21S×112°.24E, h0**km, **mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=625.7km s-min=27.3km az=110.0, Southeast Indian Ridge**

| Code | Station Name | Δ° | AZ° | Phase |

XAN pmax pmax
comp=Z,18nm,1.1s
XAN L L
comp=Z,2µm,17.9s
XAN L L
comp=Z,2µm,19.2s
XAN L L
comp=Z,3µm,22.7s
HNLY HANLEY 25.56 327 *e*P P **05 42 46.4 -0.6**
HNLY IAmb IAmb 05 42 48.4
comp=Z,4.6nm,0.7s
HNLY *i* x x 05 42 54.8
WHN Wuhan 25.83 41 P P **05 42 49.8 +1.0**
LYN LuoYang 27.64 32 P P **05 43 06.0 +0.9**
LYN pmax pmax
comp=Z,18nm,0.8s
GTA2 Gaotai 27.88 8 *e*P P **05 43 08.8 +1.5**
GTA2 sP pwP 05 43 16.5 -0.2
GTA2 pmax pmax
comp=Z,9.0nm,1.1s
NJ2 Nanjing 29.76 44 *e*P P **05 43 23.9 -0.1**
NJ2 pmax pmax
comp=Z,23nm,0.5s
HNS HongShan 30.98 31 ⇑P P **05 43 36.1 +1.4**
HNS pmax pmax
comp=Z,15nm,0.8s
KSH2 Kashi 32.26 331 P P **05 43 45.8 -0.4**
KSH2 pP pP 05 43 49.8 -1.9
KSH2 sP sP 05 43 53.5 -0.8
KSH2 pmax pmax
comp=Z,7.0nm,0.6s
HHC Hu-ho-hao-te 32.37 24 *e*P P **05 43 49.4 +2.4**
HHC pmax pmax
comp=Z,12nm,0.7s
WMQ Urumqi 32.52 350 *e*P P **05 43 51.0 +2.7**
WMQ sP pwP 05 43 57.9 +0.2
WMQ pmax pmax
comp=Z,8.0nm,0.9s
ASAI AK-SAY(Kyrgyzs 33.26 334 P P **05 43 55.2 +0.1**
TARG Taragay, Kyrgy 33.41 336 P **05 43 55.7 -0.8**
TARG IAmb IAmb 05 44 06.3
comp=Z,8.2nm,0.8s
TARG Taragay, Kyrgy 33.41 336 P P **05 43 58.2 +1.8**
KDJ Kajisay 33.99 336 P P **05 44 00.3 -1.0**
KDJ IAmb IAmb 05 44 10.9
comp=Z,4.4nm,0.8s
KDJ Kajisay 33.99 336 P P **05 44 02.6 +1.3**
PDGK Podgornoye 34.17 340 P P **05 44 01.5 -1.3**
ANVS Anan'yevo 34.36 337 P P **05 44 05.4 +0.9**
BOOM Boomskoye usch 34.80 335 P P **05 44 07.2 -1.0**
BOOM Boomskoye usch 34.80 335 P P **05 44 08.5 +0.2**
BOOM pP **sP 05 44 16.1 -0.4**
GAR Garm 34.88 325 P P **05 44 08.4 -0.5**
ARSB Arslanbob 35.20 331 P P **05 44 12.4 +0.7**
ARSB IAmb IAmb 05 44 20.5
comp=Z,4.0nm,0.6s
CHGR Chuyangaron 35.30 324 P P **05 44 11.6 -1.0**
CHGR pP **pP 05 44 19.4 +1.1**
BTK Batken 35.35 327 P P **05 44 13.5 +0.5**
ARK Arkit 36.05 330 P P **05 44 19.8 +0.8**
MKAR Makanchi Array 36.50 345 P P **05 44 22.7 +0.1**
comp=Z,1.7nm,0.8s,baz=155,slow=9.1,SNR=9.0
comp=Z,1.7nm,0.8s
XLT XiLinHaoTe 36.76 26 *e*P P **05 44 26.0 +1.0**
XLT pP pP 05 44 30.3 -0.2
XLT pmax pmax
comp=Z,13nm,0.8s
SONM Songino Array 37.15 13 P P **05 44 29.1 +0.9**
comp=Z,5.4nm,1.0s,baz=199,slow=9.4,SNR=16
comp=Z,5.4nm,1.0s
SONM Songino Array 37.15 13 P **05 44 27.9 -0.4**
ULN Ulaanbaatar 37.32 13 P P **05 44 30.6 +0.8**
KKAR Karatay Array 37.74 330 P P **05 44 33.0 -0.3**
TJN Taejon 38.01 44 P P **05 44 34.8 -0.8**
KSRS Korea Array 38.96 43 P P **05 44 43.7 +0.2**
comp=Z,0.8nm,0.5s,baz=232,slow=9.2,SNR=5.9
comp=Z,0.8nm,0.5s
TLY Talaya 40.37 8 P P **05 44 56.6 +1.5**
KURBB Kurchatov Arra 41.00 344 P P **05 45 00.5 +0.2**
comp=Z,1.8nm,0.7s,baz=160,slow=7.9,SNR=10
comp=Z,1.8nm,0.7s
KURK Kurchatov 41.06 344 P P **05 45 00.5 -0.3**
KURK Kurchatov 41.06 344 P P **05 45 01.3 +0.5**
CN2 Changchun 41.26 34 P P **05 45 03.0 +0.5**
CN2 pmax pmax
comp=Z,20nm,0.8s
HILR Hailar Array B 42.81 24 P P **05 45 15.9 +0.8**
comp=Z,1.1nm,0.4s,baz=235,slow=5.1,SNR=3.7
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 42.81 351 P P **05 45 15.4 +0.4**
comp=Z,1.0nm,0.6s,baz=161,slow=9.4,SNR=4.3
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 42.81 351 P **05 45 15.0 -0.1**
BNX BinXian 43.58 33 ⇑P P **05 45 21.8 +0.4**
BNX pmax pmax
comp=Z,9.0nm,0.7s
BVAR Borovoye Array 45.61 339 P P **05 45 37.7 +0.2**
comp=Z,1.1nm,0.6s,baz=134,slow=6.4,SNR=3.8
comp=Z,1.1nm,0.6s
BORK Borovoye 45.65 339 P P **05 45 37.5 -0.3**
BORK IAmb IAmb 05 45 47.0
comp=Z,9.5nm,1.4s
AB31 Akbulak array 47.28 329 P **05 45 50.5 -0.1**
ABKAR Akbulak array 47.28 329 P P **05 45 50.5 -0.1**
WRA Warramunga Arr 49.91 129 P P **05 46 10.7 -0.6**
comp=Z,2.0nm,0.8s,baz=306,slow=8.4,SNR=14
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 49.91 129 P P **05 46 11.1 -0.3**
WR8 Warramunga Arr 50.04 129 P P **05 46 11.6 -0.8**
WR8 IAmb IAmb 05 46 25.3
comp=Z,4.9nm,0.8s
ASAR Alice Springs 51.83 133 P P **05 46 25.5 -0.3**
comp=Z,1.3nm,0.7s,baz=307,slow=7.1,SNR=13
comp=Z,1.3nm,0.7s
GNI Garni 52.42 312 P P **05 46 31.1 +0.9**
GNI IAmb IAmb 05 46 40.4
comp=Z,12nm,0.8s
ARTI Arti 52.71 335 P P **05 46 31.5 -0.3**
KBZ Khabaz 54.86 316 P P **05 46 47.3 -0.4**
comp=Z,0.6nm,0.6s,baz=97,slow=8.1,SNR=1.3
comp=Z,0.6nm,0.6s
BRTR Keskin Array B 60.61 309 P P **05 47 27.1 -1.3**
comp=Z,1.5nm,0.8s,baz=123,slow=8.9,SNR=8.5
comp=Z,1.5nm,0.8s
STKA Stephens Creek 62.22 136 P P **05 47 38.8 -0.5**
comp=Z,1.7nm,0.7s,baz=307,slow=10,SNR=3.2
comp=Z,1.7nm,0.7s
VRI Vrincioaia 66.54 315 P P **05 48 07.0 -0.3**
BURAR Bucovina Array 67.78 317 P P **05 48 15.1 -0.2**
FINES FINESS Array B 69.69 331 P P **05 48 26.7 -0.1**
comp=Z,1.5nm,0.7s,baz=138,slow=6.6,SNR=7.1
comp=Z,1.5nm,0.7s
OJC Ojcow 71.58 319 P P **05 48 38.2 -0.4**
ARCES ARCESS Array B 71.90 340 P P **05 48 40.6 +0.5**
comp=Z,0.7nm,0.8s,baz=80,slow=6.7,SNR=3.9
comp=Z,0.7nm,0.8s
GERES GERESS Array B 75.53 318 P P **05 49 01.9 0.0**
comp=Z,2.0nm,0.7s,baz=86,slow=4.3,SNR=14
comp=Z,2.0nm,0.7s
GERES GERESS Array B 75.53 318 P P **05 49 01.8 -0.2**
HFS Hagfors 75.54 329 P P **05 49 01.9 +0.3**
comp=Z,1.2nm,0.7s,baz=111,slow=8.4,SNR=7.5
comp=Z,1.2nm,0.7s
SPITS Spitsbergen Ar 76.19 348 P P **05 49 05.2 +0.1**
comp=Z,2.4nm,0.7s,baz=128,slow=9.6,SNR=4.1
comp=Z,2.4nm,0.7s
NB2 NORSAR Subarra 76.77 330 P P 05 49 16.1 +7.4
comp=Z,1.0nm,0.7s,baz=91,slow=5.9
CLZ Clausthal 77.54 321 P P **05 49 13.5 +0.4**
DAVA Damuels 78.17 316 P P **05 49 16.3 -0.6**
BNALP Bannalp 79.19 316 P P **05 49 22.3 -0.3**
E19K Redstone River 85.83 22 P P **05 49 56.9 +0.3**
E19K IAmb IAmb 05 49 57.5
comp=Z,3.2nm,0.9s
G21K Allakaket 87.54 22 P P **05 50 05.3 +0.3**
G21K IAmb IAmb 05 50 06.3
comp=Z,5.3nm,0.8s
H21K Melozitna Rive 88.16 23 P P **05 50 09.0 +1.0**
H21K IAmb IAmb 05 50 10.0
comp=Z,9.7nm,1.2s
H22K Ishtalitna Cre 88.59 22 P P **05 50 11.1 +1.1**
H22K IAmb IAmb 05 50 12.2
comp=Z,5.4nm,1.0s
ESDC Sonseca Array 89.38 310 P P **05 50 14.4 +0.1**
comp=Z,0.2nm,0.6s,baz=63,slow=6.3,SNR=5.1
comp=Z,0.2nm,0.6s

ILAR Eielson Array 90.78 22 P P **05 50 19.7 -0.5**
comp=Z,0.4nm,0.7s,baz=310,slow=4.9,SNR=5.1
comp=Z,0.4nm,0.7s

IDC ***17*** *05:40:25.9±0.3,20.°18S×69.°93W,h0km,mb5.7/22, mbtmp5.7/25,MLA.8/3,MS5.1/46,Error ellipse: s-maj=15.1km s-min=10.5km az=82.0*
VAO ***17*** *05:40:30.6±0.3,20.°30S×70.°00W,h36km±1km,mb5.9, Presumed earthquake*
PRE ***17*** *05:40:33.3±1.8,20.°71S×68.°49W,h5km,Presumed earthquake*
CATAC ***17*** *05:40:34.5±0.7,20.°S±4.°×7.°0W±.°,h79km±9km,M6.1/12, mb6.0/12,mB6.3/12,MLv6.2/1,Mw(mB)6.0/12, MwMwp5.5/1,Mwp5.7/1,Error ellipse: s-maj=19.5km s-min=6.2km az=76.8,confirmed*
SJA ***17*** *05:40:34.1±0.7,20.°25S×70.°14W,h80km±5km,ML5.7, MW5.8*
BJI ***17*** *05:40:35.1,19.°90S×70.°70W,h71km,mB6.0/22,Ms5.7/49, Ms7 5.6/48*
MOS ***17*** *05:40:35.3±1.0,20.°04S×69.°98W,h74km,mb6.3/26, MS5.3/5,Error ellipse: s-maj=10.3km s-min=7.6km az=106.5*
GFZ ***17*** *05:40:35.9±0.1,20.°S±1.°×7.°0W±.°,h73km±2km,M6.0/51, mb5.9/51*
GFZ ***17*** *05:40:35.7,20.°26S×69.°98W,h81km,Mw5.9/53,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-5.85; Mθθ-1.99; Mθθ7.84; Mre1.11; Mθθ0.98; Mθr-5.41; Fault plane solution: M0 9.01618×10¹⁷ NP1: φs203.55517°,δ28.48202°,λ-61.89511°. NP2: φs352.27232°,δ65.12424°,λ-104.33718°. Principal axes: T 9.7463, Plg18.9097°, Azm92.9386°; N -1.7032, Plg12.9825°, Azm358.4088°; P -8.0431, Plg66.7759°, Azm235.9102°;*
GUC ***17*** *05:40:36.8±0.8,20.°24S×70.°08W,h76km±4km,ML5.7*
NEIC ***17*** *05:40:36.3±2.4,20.°24S±0.°03×70.°13W±0.°05,h74km±1km, mb6.2/172,Mwr5.9/34,Mww5.9/15,Mww5.9(GUC),Error ellipse: s-maj=7.2km s-min=4.5km az=87.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.58; Mθθ-0.06; Mθθ0.65; Mre0.14; Mθθ0.19; Mθr-0.76; Fault plane solution: M0 1.01000×10¹⁸ NP1: φs355.05000°,δ71.11000°,λ-105.15000°. NP2: φs214.96000°,δ24.04000°,λ-52.62000°. Principal axes: T 1.0207, Plg25.0000°, Azm97.0000°; N -0.0281, Plg14.0000°, Azm0.0000°; P -0.9926, Plg61.0000°, Azm243.0000°;*
NEIC ***17*** *05:40:36.3,20.°24S×70.°12W,h73km*
NEIC ***17*** *05:40:36.1,20.°25S×70.°15W,h76km*
GCMT ***17*** *05:40:39.2±0.2,20.°25S±0.°01×70.°11W±0.°02,h76km±2km, MW6.0/146,Moment Tensor Solution. s66,c76; s146,c269; Duration: 2s5 Moment tensor: Scale 10¹⁸ Nm; Mrr-0.77±.04; Mθθ-0.13±.03; Mθθ0.89±.03; Mre0.17±.02; Mθθ0.24±.02; Mθr-0.92±.02; Best double couple: M0 1.27900×10¹⁸ NP1:φ213.00000°,δ25.00000°, λ-55.00000°. NP2:φ355.00000°,δ70.00000°, λ-105.00000°. Principal axes: T 1.3220, Plg23.0000°, Azm97.0000°; N -0.0870, Plg14.0000°, Azm0.0000°; P -1.2360, Plg62.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***17*** *05:40:39.7,20.°24S×70.°12W,h70km,Moment Tensor Solution. Duration: 4s5 Moment tensor: Scale 10¹⁷Nm; Mrr-6.03; Mθθ-0.54; Mθθ6.56; Mre1.37; Mθθ0.47; Mθr-4.65; Fault plane solution: M0 7.98000×10¹⁷ NP1: φs197.00000°,δ28.38000°,λ-67.03000°. NP2: φs351.28000°,δ64.05000°,λ-101.90000°. Principal axes: T 8.0979, Plg18.0000°, Azm90.0000°; N -0.2484, Plg11.0000°, Azm357.0000°; P -7.8495, Plg69.0000°, Azm238.0000°;*
ISC 17 05:40:35.3±0.2,20.°25S±0.°02×70.°01W±0.°03,h73km±1km, h73km:pP-P,n1598,σ1s73/1757,mb6.0/233,51C-100D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.11**	**261**	*e*P		**Pn**	**05 40 46.4**	**+0.4**
TA02				*e*S		Sn	05 41 04.7	+11
TA02				IAML			05 41 16.5	
	comp=Z,201µm,2.1s							
TA02	**Huaiquique**	**0.11**	**261**	*e*P		**Pn**	**05 40 47.2**	**+1.3**
TA02	**Huaiquique**	**0.11**	**261**	P		**Pn**	**05 40 47.2**	**+1.3**
PB11	**IPOC Station P**	**0.59**	**35**	*e*P		**Pn**	**05 40 50.2**	**+0.7**
PB11				IAML			05 41 11.0	
	comp=Z,214µm,0.8s							
PB11	**IPOC Station P**	**0.59**	**35**	*e*P		**Pn**	**05 40 51.0**	**+1.5**
PB11				*i* S		**Sn**	**05 41 02.1**	**+2.2**
PB11				IAML			05 41 03.0	
	comp=N,687µm,0.7s							
PB11	**IPOC Station P**	**0.59**	**35**			**Pn**	**05 40 51.0**	**+1.5**
PB11					Sn	**Sn**	**05 41 02.1**	**+2.2**
PB11	**IPOC Station P**	**0.59**	**35**	P		**Pn**	**05 40 50.9**	**+1.5**
PSGCX	**Pisagua**	**0.66**	**351**	*e*P		**Pn**	**05 40 50.2**	**+0.1**
PSGCX				IAML			05 41 04.0	
	comp=Z,192µm,0.5s							
PSGCX	**Pisagua**	**0.66**	**351**	*e*P		**Pn**	**05 40 51.1**	**+0.9**
PSGCX				*e*S		**Sn**	**05 41 01.7**	**+0.7**
PSGCX	**Pisagua**	**0.66**	**351**			**Pn**	**05 40 51.1**	**+0.9**
PSGCX					Sn	**Sn**	**05 41 01.7**	**+0.7**
PSGCX	**Pisagua**	**0.66**	**351**	P		**Pn**	**05 40 50.4**	**+0.2**
PB08	**IPOC Station P**	**0.82**	**82**	P		Pn	05 41 08.0	+16
PB08	**IPOC Station P**	**0.82**	**82**	*e*P		**Pn**	**05 40 53.6**	**+1.5**
PB08				IAML			05 41 10.1	
	comp=Z,101µm,0.4s							
PB08	**IPOC Station P**	**0.82**	**82**	*e*P		**Pn**	**05 40 54.5**	**+2.4**
PB08				*e*S		**Sn**	**05 41 08.0**	**+3.4**
PB08				IAML			05 41 09.0	
	comp=N,313µm,0.1s							
PB08	**IPOC Station P**	**0.82**	**82**			**Pn**	**05 40 54.6**	**+2.4**
PB08					Sn	**Sn**	**05 41 07.8**	**+3.2**
PB08	**IPOC Station P**	**0.82**	**82**	P		**Pn**	**05 40 54.1**	**+2.0**
GO01	**Chusmiza**	**0.97**	**53**	*e*P		**Pn**	**05 40 56.1**	**+2.1**
GO01				*e*S		**Sn**	**05 41 11.4**	**+3.5**
GO01				IAML			05 41 14.1	
	comp=Z,469µm,0.7s							
GO01	**Chusmiza**	**0.97**	**53**	*e*P		**Pn**	**05 40 56.1**	**+2.1**
GO01				*e*S		**Sn**	**05 41 11.1**	**+3.2**
GO01				IAML			05 41 11.9	
	comp=E,309µm,0.4s							
GO01	**Chusmiza**	**0.97**	**53**			**Pn**	**05 40 56.0**	**+2.0**
GO01					Sn	**Sn**	**05 41 11.1**	**+3.2**
GO01	**Chusmiza**	**0.97**	**53**	P		**Pn**	**05 40 56.0**	**+2.0**
PB02	**IPOC Station P**	**1.07**	**174**	*e*P		**Pn**	**05 40 55.6**	**+0.6**
PB02				IAML			05 41 14.9	
	comp=Z,305µm,0.5s							
PB02	**IPOC Station P**	**1.07**	**174**	*e*P		**Pn**	**05 40 56.5**	**+1.6**
PB02				*e*S		**Sn**	**05 41 11.4**	**+1.9**
PB02				IAML			05 41 16.0	
	comp=E,296µm,0.3s							
PB02	**IPOC Station P**	**1.07**	**174**			**Pn**	**05 40 56.0**	**+1.0**
PB02					Sn	**Sn**	**05 41 11.4**	**+1.9**
PB02	**IPOC Station P**	**1.07**	**174**	P		**Pn**	**05 40 56.4**	**+1.4**
PX02	**IPOC Station P**	**1.29**	**352**	*e*P		**Pn**	**05 40 57.5**	**-0.3**
PB07	**IPOC Station P**	**1.47**	**175**	*e*P		**Pn**	**05 41 00.6**	**+0.4**
PB07				*e*S		**Sn**	**05 41 20.9**	**+2.0**
PB07				IAML			05 41 23.2	
	comp=Z,75µm,0.3s							
PB07	**IPOC Station P**	**1.47**	**175**	*e*P		**Pn**	**05 41 01.6**	**+1.4**
PB07				*e*S		**Sn**	**05 41 20.1**	**+1.2**
PB07				IAML			05 41 23.4	
	comp=E,102µm,0.3s							
PB07	**IPOC Station P**	**1.47**	**175**			**Pn**	**05 41 01.2**	**+1.0**
PB07					Sn	**Sn**	**05 41 19.7**	**+0.8**
PB07	**IPOC Station P**	**1.47**	**175**	P		**Pn**	**05 41 01.4**	**+1.3**
PB12	**IPOC Station P**	**1.66**	**350**	*e*P		**Pn**	**05 41 02.5**	**-0.1**
PB12				IAML			05 41 25.4	
	comp=Z,139µm,1.0s							
PB12	**IPOC Station P**	**1.66**	**350**	*e*P		**Pn**	**05 41 03.4**	**+0.8**
PB12	**IPOC Station P**	**1.66**	**350**			**Pn**	**05 41 03.0**	**+0.5**
PB12					Sn	**Sn**	**05 41 22.7**	**-0.5**
PB12	**IPOC Station P**	**1.66**	**350**	P		**Pn**	**05 41 03.4**	**+0.8**
PB09	**IPOC Station P**	**1.70**	**155**	*e*P		**Pn**	**05 41 05.1**	**+2.0**
PB09				*e*S		**Sn**	**05 41 27.8**	**+3.6**
PB09				IAML			05 41 30.6	
	comp=Z,96µm,0.7s							
PB09	**IPOC Station P**	**1.70**	**155**	*e*P		**Pn**	**05 41 05.2**	**+2.0**
PB09				*e*S		**Sn**	**05 41 27.3**	**+3.0**
PB09				IAML			05 41 30.3	
	comp=N,98µm,0.5s							
PB09	**IPOC Station P**	**1.70**	**155**			**Pn**	**05 41 05.2**	**+2.0**
PB09	**IPOC Station P**	**1.70**	**155**	P		**Pn**	**05 41 05.2**	**+2.0**
PB03	**IPOC Station P**	**1.80**	**172**	*e*P		**Pn**	**05 41 05.4**	**+0.9**
PB03				*e*S		**Sn**	**05 41 28.5**	**+1.8**
PB03				IAML			05 41 34.0	
	comp=Z,68µm,0.3s							
PB03	**IPOC Station P**	**1.80**	**172**	⇑*e*P		**Pn**	**05 41 05.7**	**+1.1**
PB03	**IPOC Station P**	**1.80**	**172**			**Pn**	**05 41 05.5**	**+0.9**
PB03	**IPOC Station P**	**1.80**	**172**	P		**Pn**	**05 41 05.8**	**+1.2**
AP01	**Chacalluta**	**1.90**	**351**	*e*P		**Pn**	**05 41 06.0**	**+0.4**
AP01				*e*S		**Sn**	**05 41 24.8**	**-3.9**
AP01	**Chacalluta**	**1.90**	**351**	*e*P		**Pn**	**05 41 06.7**	**+1.1**
AP01				*e*S		**Sn**	**05 41 28.9**	**+0.1**
AP01	**Chacalluta**	**1.90**	**351**			**Pn**	**05 41 06.8**	**+1.1**
AP01	**Chacalluta**	**1.90**	**351**	P		**Pn**	**05 41 06.7**	**+1.1**
PB16	**IPOC Station P**	**1.97**	**14**	*e*P		**Pn**	**05 41 08.6**	**+1.5**
PB16				*e*S		**Sn**	**05 41 28.5**	**-2.7**
PB16				IAML			05 41 34.4	
	comp=Z,111µm,1.3s							
PB16	**IPOC Station P**	**1.97**	**14**	*e*P		**Pn**	**05 41 09.0**	**+1.9**
PB16				IAML			05 41 36.9	
	comp=E,48µm,0.3s							
PB16	**IPOC Station P**	**1.97**	**14**			**Pn**	**05 41 08.7**	**+1.6**
PB16	**IPOC Station P**	**1.97**	**14**	P		**Pn**	**05 41 09.0**	**+1.9**
PB06	**IPOC Station P**	**2.48**	**170**	*e*P		**Pn**	**05 41 14.1**	**+0.5**
PB06				*e*S		**Sn**	**05 41 43.8**	**+0.9**
PB06				IAML			05 41 47.5	
	comp=Z,22µm,1.2s							
PB06	**IPOC Station P**	**2.48**	**170**	*e*P		**Pn**	**05 41 14.3**	**+0.7**
PB06				IAML			05 41 45.3	
	comp=E,37µm,0.3s							
PB06	**IPOC Station P**	**2.48**	**170**			**Pn**	**05 41 13.9**	**+0.3**
PB06	**IPOC Station P**	**2.48**	**170**	P		**Pn**	**05 41 14.3**	**+0.7**
PB05	**IPOC Station P**	**2.59**	**184**	*e*P		**Pn**	**05 41 14.8**	**-0.4**
PB05				IAML			05 41 48.2	
	comp=Z,17µm,1.8s							
PB05	**IPOC Station P**	**2.59**	**184**	⇑*e*P		**Pn**	**05 41 14.9**	**-0.3**
PB05	**IPOC Station P**	**2.59**	**184**			**Pn**	**05 41 15.1**	**-0.1**
PB05	**IPOC Station P**	**2.59**	**184**	P		**Pn**	**05 41 15.2**	**0.0**
PB18	**Visviri**	**2.70**	**11**	⇓*e*P		**Pn**	**05 41 21.2**	**+4.3**
PB18				IAML			05 42 15.2	
	comp=E,51µm,0.6s							
PB18	**Visviri**	**2.70**	**11**			**Pn**	**05 41 20.6**	**+3.6**
PB18	**Visviri**	**2.70**	**11**	P		**Pn**	**05 41 21.3**	**+4.3**
AF01	**San Pedro de A**	**3.18**	**148**	*e*P		**Pn**	**05 41 25.5**	**+2.2**
AF01				*e*S		**Sn**	**05 41 52.5**	**-7.8**
AF01				IAML			05 42 32.5	
	comp=Z,38µm,1.1s							
AF01	**San Pedro de A**	**3.18**	**148**	⇑*e*P		**Pn**	**05 41 26.2**	**+2.9**
AF01	**San Pedro de A**	**3.18**	**148**			**Pn**	**05 41 25.8**	**+2.5**
I08BO	**LAS PENAS INFR**	**4.28**	**21**	Pn		**Pn**	**05 41 42.2**	**+3.7**
I08BO	baz=217,slow=19			I		I	06 04 00.0	
	baz=186,slow=332,SNR=2.3							
LPAZ	**La Paz**	**4.33**	**25**	Pn		**Pn**	**05 41 42.9**	**+3.6**
	comp=Z,35nm,0.3s,baz=198,slow=10.0,SNR=667							
LPAZ	**La Paz**	**4.33**	**25**	P		**Pn**	**05 41 42.7**	**+3.4**
LPAZ	**La Paz**	**4.33**	**25**	*e*P		**Pn**	**05 41 43.0**	**+3.7**
LPAZ				IAML			05 43 06.7	
	comp=Z,4µm,2.4s							
LPAZ	**La Paz**	**4.33**	**25**			**Pn**	**05 41 42.7**	**+3.4**
LPAZ	**La Paz**	**4.33**	**25**	⇓P		**Pn**	**05 41 43.0**	**+3.7**
LPAZ	**La Paz**	**4.33**	**25**	*e*P		**Pn**	**05 41 34.9**	**-4.4**
LPAZ	**La Paz**	**4.33**	**25**	P		**Pn**	**05 41 43.2**	**+3.9**
PB14	**IPOC Station P**	**4.37**	**185**	P		**Pn**	**05 41 38.2**	**-1.3**
PB14				*S*		**Sn**	**05 42 26.3**	**-3.0**
PB14	**IPOC Station P**	**4.37**	**185**	*e*P		**Pn**	**05 41 38.1**	**-1.4**
PB14				*e*S		**Sn**	**05 42 27.5**	**-1.8**
PB14				IAML			05 43 00.9	
	comp=Z,4µm,0.7s							
PB14	**IPOC Station P**	**4.37**	**185**			**Pn**	**05 41 38.1**	**-1.4**
YJA	**Yavi**	**4.61**	**115**	*e*P		**Pn**	**05 41 47.3**	**+4.3**
YJA	**Yavi**	**4.61**	**115**	⇑*e*P		**Pn**	**05 41 47.0**	**+4.0**
SALTA		**5.22**	**140**	P		**Pn**	**05 41 53.8**	**+2.5**
AC01	**Pan de Azucar**	**5.89**	**185**	P		**Pn**	**05 41 57.2**	**-2.8**
AC01				S		**Sn**	**05 43 01.8**	**-4.4**
AC01	**Pan de Azucar**	**5.89**	**185**			**Pn**	**05 41 57.9**	**-2.2**
AC01	**Pan de Azucar**	**5.89**	**185**	P		**Pn**	**05 41 57.9**	**-2.2**
AC02	**Maricunga**	**6.60**	**173**			**Pn**	**05 42 09.3**	**-0.8**
AC02	**Maricunga**	**6.60**	**173**	P		**Pn**	**05 42 10.1**	**-0.1**
GO03	**Copiapo**	**7.31**	**182**			**Pn**	**05 42 17.2**	**-2.2**
GO03	**Copiapo**	**7.31**	**182**	⇑P		**Pn**	**05 42 16.8**	**-2.6**
GO03	**Copiapo**	**7.31**	**182**	P		**Pn**	**05 42 17.0**	**-2.5**
AC04	**Llanos de Chal**	**7.97**	**187**			**Pn**	**05 42 23.8**	**-4.7**
AC04	**Llanos de Chal**	**7.97**	**187**	P		**Pn**	**05 42 24.3**	**-4.2**
AC05	**El Transito**	**8.55**	**182**	Pn		**Pn**	**05 42 33.8**	**-2.6**
AC05	**El Transito**	**8.55**	**182**	P		**Pn**	**05 42 33.6**	**-2.9**
LCO	**Las Campanas**	**8.74**	**184**	P		**Pn**	**05 42 36.1**	**-3.1**
LCO	**Las Campanas**	**8.74**	**184**	P		**Pn**	**05 42 36.7**	**-2.5**
LCO				S		**Sn**	**05 44 10.0**	**-6.4**
LCO	**Las Campanas**	**8.74**	**184**			**Pn**	**05 42 36.1**	**-3.1**
BBSD	**Serra de San D**	**9.42**	**73**	*e*P		**Pn**	**05 42 44.0**	**-4.3**
SIV	**San Ignacio**	**9.50**	**65**	Pn		**Pn**	**05 42 48.5**	**-0.9**
	comp=Z,4.7nm,0.3s,baz=252,slow=10,SNR=1826							
SIV					Sn	**Sn**	**05 44 33.4**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=304,slow=18,SNR=1.5							
CO01	**Juntas del Tor**	**9.68**	**180**	Pn		**Pn**	**05 42 49.4**	**-2.6**
CO01	**Juntas del Tor**	**9.68**	**180**	P		**Pn**	**05 42 50.5**	**-1.6**
CO05	**La Serena**	**9.69**	**186**			**Pn**	**05 42 48.0**	**-3.9**
GO04	**Tololo Observa**	**9.90**	**184**			**Pn**	**05 42 51.1**	**-4.0**
GO04	**Tololo Observa**	**9.90**	**184**	P		**Pn**	**05 42 51.1**	**-4.0**
NNA	**Nana**	**10.51**	**320**	Pn		**Pn**	**05 43 00.1**	**-3.2**
	comp=Z,24nm,0.3s,baz=161,slow=13,SNR=124							
NNA					Sn	**Sn**	**05 44 52.0**	**-7.4**
	comp=Z,243nm,0.3s,baz=218,slow=17,SNR=8.1							
NNA				LR		LR	05 47 15.4	
	comp=Z,12µm,19.0s,baz=160,slow=39							
	comp=Z,405nm,0.8s							
NNA	**Nana**	**10.51**	**320**	*ce*P		**Pn**	**05 43 01.9**	**-1.4**
NNA				pmax		pmax		
	comp=Z,975nm,1.0s							
NNA	**Nana**	**10.51**	**320**	P		**Pn**	**05 43 02.3**	**-1.0**
NNA	**Nana**	**10.51**	**320**			**Pn**	**05 43 01.2**	**-2.0**
NNA	**Nana**	**10.51**	**320**	⇑P		**Pn**	**05 43 00.1**	**-3.2**
NNA	**Nana**	**10.51**	**320**	P		**Pn**	**05 43 02.3**	**-1.0**
CO02	**Combarbal**	**10.94**	**184**	P		**Pn**	**05 43 04.9**	**-4.2**
ZON	**Zonda**	**11.31**	**174**	P		**Pn**	**05 43 14.8**	**+0.8**
PTLB	**Pontes e Lacer**	**11.40**	**67**	*e*P		**Pn**	**05 43 10.8**	**-4.5**
CFA	**Coronel Fontan**	**11.42**	**172**	Pn		**Pn**	**05 43 12.0**	**-3.5**
	comp=Z,10.0nm,0.3s,baz=7.2,slow=14,SNR=156							
CFA					Sn	**Sn**	**05 45 13.1**	**-8.2**
	comp=Z,7.9nm,0.3s,baz=168,slow=20,SNR=4.3							
CFA					LR	LR	05 48 51.5	
	comp=Z,2µm,18.2s,baz=340,slow=44							
	comp=Z,30nm,0.3s							
COIM	**Forte Coimbra**	**11.49**	**90**	*e*P		**Pn**	**05 43 12.9**	**-3.7**
MURT	**Porto Murtinho**	**11.68**	**99**	*e*P		**Pn**	**05 43 15.0**	**-4.0**
CO04

BO04 La Punta 13.69 182 Pn 05 43 46.1 -0.2
BO01 Tunca 14.12 184 Pn 05 43 51.7 -0.1
BO01 Tunca 14.12 184 P Pn 05 43 52.9 +1.1
AMBA Amambai (Brazi 14.23 103 *e*P Pn 05 43 49.4 -3.8
SALV Santo Antonio 14.29 75 *e*P Pn 05 43 50.4 -3.6
BO03 Pichilemu 14.29 187 P Pn 05 43 54.4 +0.4
BO02 Sierra Bellavi 14.50 183 Pn 05 43 56.6 -0.2
BO02 Sierra Bellavi 14.50 183 ⇑P Pn 05 43 55.9 -0.9
BO02 Sierra Bellavi 14.50 183 P Pn 05 43 57.6 +0.8
PP1B Ponte de Pedra 14.56 82 *e*P Pn 05 43 54.4 -3.2
GO05 Hualane 14.80 186 Pn 05 44 00.2 -0.4
GO05 Hualane 14.80 186 P Pn 05 44 01.3 +0.7
H03N1 Juan Fernandez 15.34 209 Pn Pn 05 44 07.3 +0.1
baz=108,slow=14
H03N1 Sn Sn 05 46 54.1 -2.1
H03N1 T T 05 59 29.6
baz=34,slow=72,SNR=252
H03N2 Juan Fernandez 15.35 209 Pn Pn 05 44 07.6 +0.3
baz=108,slow=14
H03N2 Sn Sn 05 46 53.3 -3.0
H03N2 T T 05 59 20.8
baz=34,slow=72,SNR=114
H03N3 Juan Fernandez 15.36 209 Pn Pn 05 44 07.3 -0.2
baz=108,slow=14
H03N3 Sn Sn 05 46 53.0 -3.6
H03N3 T T 05 59 22.2
baz=34,slow=72,SNR=115
ATAH Atahualpa 15.36 327 Pn Pn 05 44 05.9 -2.4
comp=Z,0.8nm,0.3s,baz=125,slow=11,SNR=21
ATAH Sn Sn 05 46 59.3 +1.3
comp=Z,3.2nm,0.3s,baz=37,slow=20,SNR=1.3
comp=Z,46nm,0.9s
VA04 Juan Fernndez 15.47 209 P Pn 05 44 08.6 -0.5
VA04 Juan Fernndez 15.47 209 ⇓P Pn 05 44 09.2 +0.1
VA04 Juan Fernndez 15.47 209 P Pn 05 44 09.4 +0.2
ML02 Panimavida 15.50 184 P Pn 05 44 09.3 -0.2
ML02 Panimavida 15.50 184 P Pn 05 44 09.7 +0.1
PSAL Palomas, Salto 15.52 136 *e*P Pn 05 44 05.6 -4.3
H03S3 Juan Fernandez 15.66 208 Pn Pn 05 44 10.7 -0.6
baz=21,slow=20
H03S3 Sn Sn 05 46 57.6 -6.3
H03S3 T T 05 59 40.4
baz=38,slow=73,SNR=32
H03S1 Juan Fernandez 15.67 208 Pn Pn 05 44 10.9 -0.6
baz=21,slow=20
H03S1 Sn Sn 05 46 57.5 -6.7
H03S1 T T 05 59 36.8
baz=38,slow=73,SNR=31
H03S2 Juan Fernandez 15.68 209 Pn Pn 05 44 11.3 -0.2
baz=21,slow=20
H03S2 Sn Sn 05 46 57.9 -6.4
H03S2 T T 05 59 51.7
baz=38,slow=73,SNR=34
C2SB Chapadao do Su 16.26 88 *e*P Pn 05 44 16.2 -3.0
C2SB epP P 05 44 23.4 +2.3
C2SB Chapadao do Su 16.26 88 P Pn 05 44 19.4 +0.2
TRCB Terra Rica 16.37 102 *e*P Pn 05 44 17.3 -3.4
TRCB Terra Rica 16.37 102 P Pn 05 44 19.8 -0.8
BI02 San Fabin de 16.39 184 P Pn 05 44 21.6 +0.8
CLDB Colider 16.56 58 *e*P Pn 05 44 20.4 -2.6
PTGB Pitanga 17.17 108 *e*P Pn 05 44 28.4 -2.2
ANCO Parque Anchore 17.58 145 *e*P Pn 05 44 32.4 -3.0
ITAB Concordia 17.78 116 P P 05 44 37.7 0.0
ITAB Concordia 17.78 116 *e*P P 05 44 35.3 -2.5
ITAB Concordia 17.78 116 P P 05 44 37.7 0.0
LDASE Londrina, Braz 17.82 104 *e*P P 05 44 36.0 -2.3
ARAG Araguaiana, MT 17.89 78 *e*P P 05 44 37.8 -1.3
ARAG epP Pn 05 44 45.0 +5.6
CPSB Cacapava Do Su 18.05 127 P P 05 44 39.8 -1.0
CPSB Cacapava Do Su 18.05 127 *e*P P 05 44 38.8 -2.0
CPSB Cacapava Do Su 18.05 127 P P 05 44 39.5 -1.3
MCRA Macar, Loja 18.52 327 P Pn 05 44 46.6 -0.4
comp=Z,12µmcomp=Z,616nm,1.1s
TRQA Tornquist 19.06 160 P P 05 44 52.3 +0.5
TRQA Tornquist 19.06 160 P P 05 44 52.3 +0.5
FRTB Fartura 19.24 103 *e*P P 05 44 52.2 -1.6
FRTB Fartura 19.24 103 P P 05 44 53.1 -0.7
MACA Manacapuru-AM 19.27 29 *e*P P 05 44 52.7 -1.5
MACA epP Pn 05 45 02.0 +6.1
GO06 Curarrehue 19.31 183 P P 05 44 55.2 +0.7
GO06 Curarrehue 19.31 183 ⇓P Pn 05 44 56.0 -0.2
GO06 Curarrehue 19.31 183 P Pn 05 44 56.2 0.0
SNDB Serra Nova Dou 19.76 68 *e*P P 05 44 57.8 -1.8
SNDB epP Pn 05 45 06.7 +5.0
LR04 Corral 19.78 188 P P 05 44 59.0 -0.5
BB19B Bebedouro 20.12 96 *e*P P 05 45 01.5 -2.0
PLCA Paso Flores 20.42 181 P P 05 45 07.3 +0.8
comp=Z,91nm,0.8s,baz=1.4,slow=12,SNR=131
PLCA S S 05 48 53.5 +2.3
comp=Z,12nm,1.0s,baz=318,slow=14,SNR=1.5
PLCA PcP PcP 05 49 17.3 +1.0
comp=Z,33nm,1.0s,baz=30,slow=1.3,SNR=3.2
comp=Z,91nm,0.8s
PLCA Paso Flores 20.42 181 P P 05 45 07.0 +0.4
PLCA IAmb IAmb 05 45 09.8
comp=Z,2µm,1.9s
PLCA Paso Flores 20.42 181 ⇓P Pn 05 45 07.9 -1.4
PLCA Paso Flores 20.42 181 *e*P P 05 45 05.3 -1.3
PLCA Paso Flores 20.42 181 P Pn 05 45 08.3 -1.0
CHSH Refugio Sur-Vo 20.55 334 P Pn 05 45 11.8 +0.2
IPMB Ipameri, GO 20.72 87 *e*P P 05 45 08.2 -1.8
PIAT Ana Tenorio 20.77 336 P Pn 05 45 12.8 -1.1
comp=Z,8µmcomp=Z,422nm,0.8s
PTLC Puerto Leguiza 20.83 346 P P 05 45 07.3 -3.8
comp=Z,11µmcomp=Z,1µm,1.0s
VCES Cotopaxi 21.00 336 P Pn 05 45 17.9 +1.2
ITTB Itaituba 21.04 43 *e*P P 05 45 12.0 -1.4
RCLB Rio Claro- Sao 21.05 100 *e*P P 05 45 11.6 -1.9
SLOR San Lorenzo - 21.10 336 P P 05 45 20.0 +5.5
SLOR S Sn 05 49 13.0 -3.3
ANTS Antisana-Sarah 21.19 337 P P 05 45 16.6 +0.9
SPB Sao Paulo 21.21 103 P P 05 45 13.6 -1.5
SPB Sao Paulo 21.21 103 P P 05 45 15.9 +0.8
SPB IAmb IAmb 05 45 20.0
comp=Z,2µm,1.4s
SPB Sao Paulo 21.21 103 ⇑P P 05 45 12.9 -2.1
SPB Sao Paulo 21.21 103 *e*P P 05 45 13.0 -2.1
SPB Sao Paulo 21.21 103 P P 05 45 15.9 +0.8
PPLP Puerto Lpez 21.36 329 P P 05 45 17.9 +1.1
PET01 Itanhaem-SP 21.42 105 *e*P P 05 45 14.7 -2.6
BDFB Brasilia 21.42 81 P P 05 45 16.4 -1.2
comp=Z,164nm,0.8s,baz=252,slow=13,SNR=116
BDFB S S 05 49 07.2 -4.3
comp=Z,35nm,0.9s,baz=27,slow=7.0,SNR=1.7
BDFB LR LR 05 55 09.2
comp=Z,30µm,18.8s,baz=254,slow=41
comp=Z,164nm,0.8s
BDFB Brasilia 21.42 81 P P 05 45 16.7 -0.8
BDFB pmax pmax
comp=Z,3µm,1.5s
BDFB Brasilia 21.42 81 P P 05 45 16.7 -0.8
BDFB IAmb IAmb 05 45 23.6
comp=Z,3µm,1.5s
CASC Dorado de Casc 21.50 340 P P 05 45 19.7 +1.4
comp=Z,19µmcomp=Z,2µm,1.1s
VAO Valinhos 21.60 101 P P 05 45 18.4 -0.9
VAO Valinhos 21.60 101 *e*P P 05 45 17.1 -2.2
PULU Pululahua 21.80 337 P P 05 45 22.0 +0.2
IMBA Imbabura, San 21.92 338 P P 05 45 24.1 +0.9
OTAV Otavalo 21.98 337 P P 05 45 24.5 +0.7
OTAV pmax pmax
comp=Z,1µm,1.9s
OTAV Otavalo 21.98 337 P P 05 45 24.5 +0.7
OTAV IAmb IAmb 05 45 48.3
comp=Z,1µm,1.9s
OTAV Otavalo 21.98 337 P P 05 45 25.1 +1.2
comp=Z,11µmcomp=Z,342nm,1.4s
OTAV Otavalo 21.98 337 ⇓P P 05 45 24.8 +1.0
OTAV Otavalo 21.98 337 *e*P P 05 45 22.7 -1.1
OTAV Otavalo 21.98 337 P P 05 45 25.0 +1.2
CUSE Cuicocha Este 22.02 337 P P 05 45 26.5 +2.2
comp=Z,12µmcomp=Z,325nm,1.0s
PAC1 Pacto, Paraso 22.13 336 P P 05 45 26.1 +0.9
comp=Z,11µmcomp=Z,557nm,1.4s
CANS Sao Roque de M 22.16 94 *e*P P 05 45 22.6 -2.8
TULM Tulcn-Chalpat 22.19 339 P P 05 45 28.1 +2.0
comp=Z,14µmcomp=Z,970nm,1.1s
PMNB Patos De Minas 22.30 90 ⇑P P 05 45 24.3 -2.7
PMNB Patos De Minas 22.30 90 *e*P P 05 45 23.5 -3.5
PMNB epP pP 05 45 33.4 -9.5
PMNB Patos De Minas 22.30 90 P P 05 45 26.6 -0.4
FLOC Florencia 22.39 345 P P 05 45 26.8 -1.1
FLOC Florencia 22.39 345 P P 05 45 28.6 +0.7
comp=Z,22µmcomp=Z,1µm,1.2s
CMBC Cumbal 22.41 339 P P 05 45 30.4 +1.9
MACC Macarena, Meta 22.57 350 P P 05 45 26.8 -3.0
comp=Z,2µmcomp=Z,207nm,1.0s
LL07 Hotel Espejo d 22.70 187 P P 05 45 30.5 -0.4
LL07 IAmb IAmb 05 45 34.0
comp=Z,1µm,1.1s
CRUC La Cruz 22.73 342 P P 05 45 35.2 +3.4
LL02 Futaleuf 22.92 183 P P 05 45 32.5 -0.7
LL02 Futaleuf 22.92 183 P P 05 45 33.0 -0.2
GARC Garzon, Huila 22.94 346 P P 05 45 32.9 -0.9
comp=Z,10µmcomp=Z,664nm,0.9s
BBAC Balboa, Cauca 23.25 341 P P 05 45 37.7 +1.0
comp=Z,18µmcomp=Z,2µm,0.9s
BETC Betania 23.41 346 P P 05 45 39.9 +1.8
POPC Popayan, Colom 23.57 343 P P 05 45 40.7 +0.9
comp=Z,11µmcomp=Z,485nm,0.9s
BSCB Bom Sucesso 23.63 96 *e*P P 05 45 38.3 -1.8
BSCB Bom Sucesso 23.63 96 P P 05 45 39.4 -0.7
PRPB Parauapebas 24.09 57 *e*P P 05 45 42.6 -1.6
JAMC Jamundi, Valle 24.22 344 P P 05 45 46.2 +0.6
comp=Z,12µmcomp=Z,346nm,1.7s
PRAC Prado 24.29 348 P P 05 45 46.0 -0.1
PRAC Prado 24.29 348 P P 05 45 45.7 -0.3
comp=Z,11µmcomp=Z,999nm,1.2s
BOAV Boa Vista 24.36 24 P P 05 45 46.4 -0.1
BOAV IAmb IAmb 05 45 50.0
comp=Z,600nm,0.9s
BOAV Boa Vista 24.36 24 P P 05 45 46.5 -0.1
comp=Z,9µmcomp=Z,756nm,1.0s
BOAV Boa Vista 24.36 24 *e*P P 05 45 46.1 -0.5
SMTB Santa Maria do 24.45 66 *e*P P 05 45 46.6 -0.9
SMTB epP pP 05 45 56.4 -8.7
GR1C Gorgona, Isla 24.46 340 P P 05 45 47.8 +0.3
VILC Villavicencio, 24.48 351 P P 05 45 48.2 +0.4
DIAM Diamantina, MG 24.93 90 *e*P P 05 45 50.9 -1.1
CVER Cruz Verde, Cu 24.94 350 P P 05 45 53.3 +0.9
comp=Z,7µmcomp=Z,528nm,1.3s
CHIC Chingaza 25.00 351 P P 05 45 52.3 -0.6
comp=Z,5µmcomp=Z,330nm,1.3s
JANB Januaria 25.02 82 *e*P P 05 45 51.3 -1.4
ARMEC Armenia, Quind 25.27 347 P P 05 45 56.4 +1.3
comp=Z,3µm,0.9s
ROSC El Rosal 25.29 350 P P 05 45 55.8 +0.3
comp=Z,356nm,0.9s,baz=170,slow=4.9,SNR=143
ROSC S S 05 50 19.0 +2.4
comp=Z,20nm,0.9s,baz=300,slow=20,SNR=1.3
comp=Z,356nm,0.9s
ROSC El Rosal 25.29 350 P P 05 45 56.6 +1.1
ROSC pmax pmax
comp=Z,439nm,1.0s
ROSC El Rosal 25.29 350 P P 05 45 56.6 +1.1
ROSC El Rosal 25.29 350 P P 05 45 57.1 +1.6
comp=Z,6µmcomp=Z,516nm,1.3s
SDBA SAO DESIDERIO 25.30 76 *e*P P 05 45 53.6 -1.7
COYC Coyhaique 25.31 183 P P 05 45 55.2 +0.3
COYC Coyhaique 25.31 183 P P 05 45 55.6 +0.7
PLMC San Jos del P 25.75 345 P P 05 45 59.6 +0.3
comp=Z,8µmcomp=Z,904nm,1.0s
GUY2C Guyana, Caldas 25.86 348 P P 05 46 01.4 +0.7
comp=Z,8µmcomp=Z,844nm,0.9s
SPBC San Pablo de B 26.05 351 P P 05 46 01.6 -0.4
comp=Z,6µmcomp=Z,465nm,1.6s
PIZC Pizarro, Choco 26.08 343 P P 05 46 03.8 +1.6
comp=Z,8µmcomp=Z,1µm,1.3s
RUSC La Rusia 26.16 353 P P 05 46 03.4 -0.1
RUSC La Rusia 26.16 353 P P 05 46 04.0 +0.6
comp=Z,12µmcomp=Z,1µm,1.4s
CAM01 Campos-RJ 26.50 98 *e*P P 05 46 04.7 -1.3
CBOC Ciudad Bolivar 26.61 347 P P 05 46 07.0 -0.2
comp=Z,6µmcomp=Z,586nm,1.1s
ARCA Araçuai, MG 26.80 87 *e*P P 05 46 07.7 -1.0
BARC Barichara 26.86 353 P P 05 46 08.1 -1.4
comp=Z,8µmcomp=Z,676nm,1.3s
PTBC PUERTO BERRIO, 26.98 350 P P 05 46 08.4 -1.9
comp=Z,5µmcomp=Z,584nm,1.1s
AY03 Cochrane 27.02 184 P P 05 46 11.2 +0.8
SJMB Sao Joao De Ma 27.21 92 *e*P P 05 46 11.4 -1.0
SOLC Bahia Solano 27.30 344 P P 05 46 14.1 +0.9
BRJC Barrancabermej 27.30 352 P P 05 46 11.2 -2.0
comp=Z,6µmcomp=Z,494nm,1.3s
ALF01 Guarapari-ES 27.43 96 *e*P P 05 46 13.6 -0.8
BSFB Barra de Sao F 27.51 92 *e*P P 05 46 14.1 -1.0
BSFB Barra de Sao F 27.51 92 P P 05 46 14.4 -0.7
PAMC Pamplona, Colo 27.55 354 P P 05 46 14.8 -1.1
RIB01 Linhares ES 27.87 93 *e*P P 05 46 16.6 -1.8
GO08 Villa O'Higgin 28.22 184 P P 05 46 22.9 +1.8
GO08 Villa O'Higgin 28.22 184 P P 05 46 23.4 +2.3
PTAC Punta Ardita, 28.29 344 P P 05 46 23.4 +1.4
comp=Z,5µmcomp=Z,402nm,1.2s
UREC San Jos de Ur 28.35 348 P P 05 46 21.3 -1.3
comp=Z,5µmcomp=Z,373nm,1.4s
OCAC Ocana 28.50 353 P P 05 46 21.3 -2.7
comp=Z,2µmcomp=Z,186nm,0.8s
APAC Apartado, Choc 28.71 346 P P 05 46 27.4 +1.6
comp=Z,9µmcomp=Z,1µm,1.1s
GUA01 Guaratinga, BA 28.87 88 *e*P P 05 46 26.8 -0.4
SDV Santo Domingo 28.96 359 LR LR 05 59 24.0
comp=Z,7µm,19.1s,baz=184,slow=39
SDV Santo Domingo 28.96 359 P P 05 46 27.0 -1.2
SDV Santo Domingo 28.96 359 *e*P P 05 46 27.3 -0.9
CMC01 Camacan, BA 29.41 85 *e*P P 05 46 30.8 -1.3
LCBC Los crdobas, 29.59 347 P P 05 46 35.1 +1.5
comp=Z,12µmcomp=Z,1µm,0.9s
NBIT Itapeh - BA 29.60 85 *e*P P 05 46 33.0 -0.7
AZU Azuero 29.64 339 P P 05 46 35.0 +1.0
comp=Z,3µmcomp=Z,114nm,1.1s
GMAL Guarumal, Vera 29.95 337 P P 05 46 38.8 +2.1
comp=Z,202nm,1.2s
NBPN Ponto Novo - B 30.16 76 *e*P P 05 46 37.5 -1.2
ARGC Ariguani, Magd 30.21 352 P P 05 46 36.7 -2.3
comp=Z,5µmcomp=Z,731nm,0.8s
SJCC San Jacinto, C 30.39 350 P P 05 46 39.9 -0.8
comp=Z,11µmcomp=Z,1µm,1.1s
MDP Montagnes des 30.44 36 LR LR 05 59 38.3
comp=Z,12µm,20.2s,baz=211,slow=38
MPGF Montagnes des 30.44 36 ⇑P P 05 46 41.2 +0.2
MPGF Montagnes des 30.44 36 P P 05 46 41.3 +0.2
MPGF pP pP 05 46 59.2 +0.4
MPGF PcP PcP 05 49 41.0 +1.8
BCIP Isla Barro Col 30.79 341 P P 05 46 44.5 +0.4
BCIP pmax pmax
comp=Z,194nm,0.8s
BCIP Isla Barro Col 30.79 341 P P 05 46 44.5 +0.4
BCIP Isla Barro Col 30.79 341 P P 05 46 45.3 +1.1
comp=Z,5µmcomp=Z,337nm,0.9s
BCIP Isla Barro Col 30.79 341 ⇓P P 05 46 45.8 +1.6
BCIP Isla Barro Col 30.79 341 P P 05 46 46.1 +1.9
PIRO Carate, Puerto 31.35 334 P P 05 46 49.9 +0.8
PIRO IAmb IAmb 05 46 52.6
comp=Z,325nm,1.2s
MG05 Puerto Natales 31.42 183 P P 05 46 49.9 +0.6
MG05 Puerto Natales 31.42 183 P P 05 46 50.7 +1.4
BRU2 Volcan 31.44 335 P P 05 46 51.6 +1.5
BRU2 IAmb IAmb 05 46 53.7
comp=Z,676nm,1.4s
BRU2 Volcan 31.44 335 P P 05 46 52.3 +2.2
URIC Uribia, Colomb 31.81 356 P P 05 46 49.1 -4.0
comp=Z,2µmcomp=Z,108nm,1.4s
NBPS Pedro II - PI 31.96 64 *e*P P 05 46 53.7 -1.0
MG02 Cerro Sombrero 32.47 179 P P 05 46 59.7 +1.1
MG02 IAmb IAmb 05 47 02.4
comp=Z,678nm,1.1s
MG02 Cerro Sombrero 32.47 179 ⇑P P 05 47 00.1 +1.5
MG02 Cerro Sombrero 32.47 179 P P 05 47 00.3 +1.7
PIEC Cerro El Cedra 32.70 334 *e*P P 05 47 03.7 +2.4
EFI East Falkland 32.73 166 *ce*P P 05 47 01.7 +0.9
EFI pmax pmax
comp=Z,67nm,1.3s
EFI East Falkland 32.73 166 P P 05 47 01.3 +0.5
EFI East Falkland 32.73 166 ⇑P P 05 47 02.0 +1.2
EFI East Falkland 32.73 166 P P 05 47 02.3 +1.5
NBTA Tacaratu-PE 32.76 75 *e*P P 05 46 59.9 -1.7
RAZU San Marcos de 32.77 334 *e*P P 05 47 04.4 +2.7
PITB Pirrs, San 32.77 334 *e*P P 05 47 04.3 +2.6
PICV PH. Pirrs 32.81 334 *e*P P 05 47 04.6 +2.7
ABE2 San Pablo 32.82 334 *e*P P 05 47 04.5 +2.2
GO10 Punta Arenas 32.85 181 P P 05 47 03.5 +1.6
GO10 Punta Arenas 32.85 181 ⇓P P 05 47 04.2 +2.3
GO10 Punta Arenas 32.85 181 P P 05 47 04.3 +2.4
NBMA Muriti-CE 32.86 71 *e*P P 05 47 01.0 -1.5
VINA Juan Vinas 32.87 334 *e*P P 05 47 05.3 +2.7
VTCV VTCV, Calle Va 32.94 335 *e*P P 05 47 05.8 +2.5
RESJ San Isidro (Tu 32.95 335 *e*P P 05 47 05.9 +2.7
ABRB Las Abras (San 32.95 335 *e*P P 05 47 06.3 +2.9
LCOCO El Coco 32.96 335 *e*P P 05 47 06.0 +2.8
CVTQ Turrialba Volc 32.97 335 *e*P P 05 47 06.5 +2.7
CVTR Volcan Turrial 32.98 335 *e*P P 05 47 06.7 +2.8
RVLA Villa Bonita 33.00 335 *e*P P 05 47 06.4 +2.9
LUJA Lujan 33.03 334 *e*P P 05 47 06.7 +2.8
SJS Escuela Geolog 33.03 334 *e*P P 05 47 07.2 +3.2
LUPE Guadalupe 33.04 334 *e*P P 05 47 06.9 +2.8
CORON Coronado 33.04 334 *e*P P 05 47 07.4 +3.3
PURI Puriscal 33.05 334 *e*P P 05 47 06.7 +2.5
CVIMO Finca Echandi 33.06 334 *e*P P 05 47 11.7 +7.3
SANTA Santa Ana 33.08 334 *e*P P 05 47 07.3 +2.9
HDC Heredia 33.11 334 P P 05 47 06.2 +1.6
HDC Heredia 33.11 334 ⇓P P 05 47 07.5 +2.8
HDC Heredia 33.11 334 *e*P P 05 47 07.2 +2.5
HDC Heredia 33.11 334 *e*P P 05 47 04.5 -0.2
HDC Heredia 33.11 334 P P 05 47 07.6 +2.9
GRFF Grenada Fort F 33.12 15 *e*P P 05 47 02.0 -2.5
PILE Guapiles 33.17 335 *e*P P 05 47 08.1 +3.0
OROT Orotina 33.20 333 *e*P P 05 47 07.4 +2.1
VBV1 V. Barva 33.21 334 *e*P P 05 47 08.3 +2.6
GRGR Grenville 33.22 15 P P 05 47 05.1 -0.3
GRGR IAmb IAmb 05 47 32.9
comp=Z,339nm,1.0s
GRGR Grenville 33.22 15 P P 05 47 04.7 -0.7
comp=Z,5µmcomp=Z,352nm,1.0s
GRGR Grenville 33.22 15 *e*P P 05 47 04.7 -0.7
GRGR Grenville 33.22 15 ⇑P P 05 47 05.3 +0.1
GRGR Grenville 33.22 15 P P 05 47 05.7 +0.3
PALD Palmares 33.29 333 *e*P P 05 47 09.3 +3.1
ARZA Esparza 33.34 333 *e*P P 05 47 09.1 +2.6
RAMO San Ramon 33.34 333 *e*P P 05 47 09.5 +2.8
GRSS Sisters 33.39 15 *e*P P 05 47 06.9 0.0
ARTO Ro Cuarto 33.46 334 *e*P P 05 47 10.2 +2.6
TRT2 Tortugero 33.46 335 *e*P P 05 47 10.0 +2.4
QUEU Ciudad Quesada 33.53 334 *e*P P 05 47 11.7 +3.4
MG03 Isla Dawson 33.54 180 P P 05 47 08.5 +0.7
MG03 IAmb IAmb 05 47 10.8
comp=Z,353nm,1.2s
NYURE Nandayure 33.59 332 *e*P P 05 47 10.8 +2.1
GCMP Grenada, Carri 33.61 15 *e*P P 05 47 09.2 +0.3
JUNT Juntas 33.72 333 *e*P P 05 47 12.6 +2.8
NBMO Morrinhos-CE 33.72 64 *e*P P 05 47 08.6 -1.3
JTS Las Juntas de 33.73 333 *d i*P P 05 47 11.8 +1.9
comp=Z,5µm,21.6s,baz=157,slow=36
JTS Las Juntas de 33.73 333 *d i*P P 05 47 11.8 +1.9
JTS pmax pmax
comp=Z,129nm,1.0s
JTS Las Juntas de 33.73 333 P P 05 47 11.5 +1.6
JTS Las Juntas de 33.73 333 P P 05 47 11.5 +1.6
JTS Las Juntas de 33.73 333 ⇓P P 05 47 12.1 +2.2
JTS Las Juntas de 33.73 333 P P 05 47 12.3 +2.4
JTS Las Juntas de 33.73 333 P P 05 47 12.1 +2.2
JTS pP pP 05 47 28.9 +1.6
JTS PcP PcP 05 49 48.5 +0.3
CASO Castillo 33.76 333 *e*P P 05 47 13.4 +3.2
VACR Volcan Arenal 33.77 333 *e*P P 05 47 13.1 +2.8
ARE1 Arenal 1 33.78 333 *e*P P 05 47 13.2 +2.8
VARE2 V. Arenal 33.78 333 *e*P P 05 47 13.2 +2.8
CEDE Laguna Cedeo 33.79 333 *e*P P 05 47 13.2 +2.7
JUD3 Juan Diaz 3 33.87 332 P P 05 47 13.1 +1.9
JUD3 Juan Diaz 3 33.87 332 *e*P P 05 47 13.0 +1.8
CNAS Canas 33.91 333 *e*P P 05 47 15.1 +3.6
QUEB Quebradon, Cot 34.00 333 *e*P P 05 47 14.8 +2.5
BAGA Bagaces 34.07 333 *e*P P 05 47 15.7 +2.8
CUI Cuipilapa 34.14 333 *e*P P 05 47 16.0 +2.5
HORNC Hornillas 34.20 333 *e*P P 05 47 16.4 +2.4
MESS Mesas 34.23 333 *e*P P 05 47 16.5 +2.2
ALIBA Liberia Airpor 34.25 332 *e*P P 05 47 17.5 +3.1
CLARA Aguas Claras 34.26 333 *e*P P 05 47 17.0 +2.5
LCHIL Los Chiles 34.29 334 *e*P P 05 47 16.6 +1.9
UPAL Upala 34.29 333 *e*P P 05 47 17.1 +2.3
GPS2 Hotel Rincn d 34.31 333 *e*P P 05 47 17.4 +2.4
VRLE La Escondida, 34.35 333 *e*P P 05 47 17.6 +2.2
LAPC Finca la Perla 34.36 332 *e*P P 05 47 17.3 +1.9
BUAI Buenos Aires 34.41 333 *e*P P 05 47 18.2 +2.4
USHA Ushuaia 34.54 178 LR LR 06 03 33.6
comp=Z,2µm,19.2s,baz=342,slow=40
LCRUZ La Cruz 34.72 332 *e*P P 05 47 19.9 +1.4
CARN Rivas 34.77 333 P P 05 47 19.6 +0.7
BLUN Bluefields 34.80 336 P P 05 47 20.5 +1.4
RNCC Cayo Roncador, 35.05 343 P P 05 47 21.7 +0.5
comp=Z,17µmcomp=Z,2µm,1.1s
SLAC Saint Lucia, A 35.10 16 *e*P P 05 47 20.8 -1.0
ESPN Las Esperanzas 35.17 335 P P 05 47 20.9 -1.5
SLCP Castries, St. 35.19 15 *e*P P 05 47 22.3 -0.1
SLBI Saint Lucia, B 35.20 15 *e*P P 05 47 20.6 -1.9
ACON Acoyapa 35.32 334 *e*P P 05 47 25.1 +1.4
MPOM Morne Pois Mar 35.64 15 P P 05 47 24.8 -1.5
MPOM IAmb IAmb 05 47 42.8
comp=Z,483nm,1.1s
BIM Bigot 35.65 15 *e*P P 05 47 23.1 -3.4
BIM Bigot 35.65 15 P P 05 47 25.3 -1.2
SERC Banco Serrana, 35.80 343 P P 05 47 28.3 +0.6
comp=Z,11µmcomp=Z,834nm,1.2s
FDFM Morne la Roset 35.84 15 P P 05 47 26.3 -1.8
FDFM IAmb IAmb 05 48 01.4
comp=Z,226nm,1.0s
CXM Morne La Croix 35.91 15 P P 05 47 27.0 -1.9
CXM IAmb IAmb 05 47 46.3
comp=Z,167nm,0.7s
MGAN Managua 35.94 332 P P 05 47 29.3 +0.4
MGAN Managua 35.94 332 P P 05 47 30.1 +1.2
comp=Z,11µmcomp=Z,681nm,1.5s
MGAN Managua 35.94 332 P P 05 47 30.1 +1.2
SVN Savane Anatole 35.94 15 *e*P P 05 47 31.4 +2.4
BOAB BOACO BROADBAN 35.96 333 P P 05 47 29.4 +0.3
BOAB IAmb IAmb 05 47 34.3
comp=Z,313nm,1.1s
BOAB BOACO BROADBAN 35.96 333 ⇓P P 05 47 29.8 +0.7
BOAB BOACO BROADBAN 35.96 333 P P 05 47 30.0 +0.9
RCBR Riachuelo 36.09 71 P P 05 47 30.2 -0.2
RCBR pmax pmax
comp=Z,2µm,1.9s
RCBR Riachuelo 36.09 71 P P 05 47 30.2 -0.2
RCBR Riachuelo 36.09 71 ⇑P P 05 47 30.6 +0.2
RCBR Riachuelo 36.09 71 *e*P P 05 47 29.5 -0.8
RCBR Riachuelo 36.09 71 P P 05 47 30.9 +0.5
RCBR Riachuelo 36.09 71 P P 05 47 30.5 +0.2
RCBR pP pP 05 47 48.6 +0.3
RCBR ScP ScP 05 53 36.0 +0.8
NBPV Pedro Velho 36.38 73 *e*P P 05 47 31.7 -1.1
CNGN Cerro Negro 36.45 332 P P 05 47 33.6 +0.2
comp=Z,33µmcomp=Z,2µm,1.4s
CNGN Cerro Negro 36.45 332 P P 05 47 33.9 +0.5
DSLB Salisbury 36.46 14 *e*P P 05 47 28.4 -5.0
BILN Bliwi Airport 36.53 338 P P 05 47 34.1 +0.1
RPN Rapa Nui 36.54 252 LR LR 05 59 30.6
comp=Z,4µm,18.0s,baz=91,slow=31
RPN Rapa Nui 36.54 252 P P 05 47 35.5 +1.4
RPN pmax pmax
comp=Z,561nm,1.1s
RPN Rapa Nui 36.54 252 P P 05 47 35.5 +1.4
RPN IAmb IAmb 05 47 37.2
comp=Z,561nm,1.1s
RPN Rapa Nui 36.54 252 ⇑P P 05 47 35.9 +1.8
RPN Rapa Nui 36.54 252 P P 05 47 36.1 +2.1
DWS Wesley 36.61 14 *e*P P 05 47 42.6 +8.0
VA02 Isla de Pascua 36.63 251 P P 05 47 34.9 +0.1
VA02 Isla de Pascua 36.63 251 ⇓P P 05 47 36.4 +1.6
VA02 Isla de Pascua 36.63 251 P P 05 47 36.5 +1.7
SIUN Universidad Ur 36.74 336 P P 05 47 36.1 +0.3
CRIN San Cristobal 36.79 331 P P 05 47 37.3 +1.1
MMLZ Guadeloupe Bro 36.99 13 *e*P P 05 47 28.4 -9.4
DHSZ Broadband at M 37.19 13 *e*P P 05 47 31.3 -8.2
DSDZ La Diserade, G 37.38 14 *e*P P 05 47 35.4 -5.8
INTP Intipuca 37.68 330 *e*P P 05 47 44.1 +0.4
LCND La Caada 37.70 331 *e*P P 05 47 44.6 +0.7
LCY Lacayo 37.99 330 *e*P P 05 47 47.0 +0.5
RANC El Ranchito 38.00 330 *e*P P 05 47 47.4 +0.8
SKI Saint Kitts 38.03 11 *e*P P 05 47 44.0 -2.7
MLPR Magueyes Islan 38.10 5 P P 05 47 45.6 -1.6
MLPR IAmb IAmb 05 48 05.2
comp=Z,522nm,1.1s
CRPR Cabo Rojo, PR 38.13 4 P P 05 47 45.7 -1.7
CRPR IAmb IAmb 05 48 05.5
comp=Z,564nm,1.2s
SEUS St. Eustatius 38.14 11 *e*P P 05 47 43.4 -4.1
TECA Tecapa 38.15 330 *e*P P 05 47 48.8 +0.9
OBIP Obispado Ponce 38.20 5 P P 05 47 46.4 -1.7
SABA Saba 38.22 10 P P 05 47 46.6 -1.6

SABA IAmb IAmb 05 47 47.4
comp=Z,173nm,0.7s
SABA Saba 38.22 10 *e*P **P** **05 47 44.3 -3.9**
SABA Saba 38.22 10 P **P** **05 47 46.6 -1.6**
PDPR Patillas Dam, 38.23 6 P **P** **05 47 46.5 -1.8**
PDPR IAmb IAmb 05 47 47.7
comp=Z,280nm,0.7s
CELP Cerrillos 38.24 5 P **P** **05 47 46.9 -1.5**
CELP IAmb IAmb 05 47 49.7
comp=Z,587nm,1.2s
SJG San Juan 38.31 6 P **P** **05 47 47.2 -1.8**
SJG pmax pmax
comp=Z,283nm,0.9s
SJG San Juan 38.31 6 P **P** **05 47 47.2 -1.8**
SJG IAmb IAmb 05 47 48.4
comp=Z,283nm,0.9s
SJG San Juan 38.31 6 P **P** **05 47 46.5 -2.5**
comp=Z,4µmcomp=Z,380nm,1.0s
SJG San Juan 38.31 6 *e*P **P** **05 47 45.8 -3.2**
SJG San Juan 38.31 6 ⇓P **P** **05 47 47.2 -1.8**
SJG San Juan 38.31 6 P **P** **05 47 47.4 -1.6**
BANI BANI 38.41 359 P **P** **05 47 48.8 -1.1**
COEG Centro de Oper 38.44 330 *e*P **P** **05 47 51.2 +1.0**
SJTE Alcalda de S 38.49 329 *e*P **P** **05 47 51.4 +0.7**
ECPR Experimental S 38.50 6 P **P** **05 47 48.6 -1.9**
ECPR IAmb IAmb 05 47 49.9
comp=Z,329nm,0.6s
ANWB Willy Bob 38.54 13 P P 05 47 44.1 -6.8
comp=Z,3µmcomp=Z,193nm,0.7s
ANWB Willy Bob 38.54 13 *e*P P 05 47 43.0 -7.9
ANWB Willy Bob 38.54 13 ⇓P **P** **05 47 47.4 -3.5**
PAVA Las Pavas 38.54 330 *e*P **P** **05 47 52.1 +1.0**
PCDR Punta Cana, DR 38.56 2 P **P** **05 47 50.2 -0.8**
LOMA Loma Larga 38.60 329 *e*P **P** **05 47 52.6 +1.0**
SMRT St. Maarten 38.67 11 P **P** **05 47 49.4 -2.6**
SMRT IAmb IAmb 05 47 50.1
comp=Z,197nm,0.6s
SMRT St. Maarten 38.67 11 *e*P **P** **05 47 47.2 -4.8**
SMRT St. Maarten 38.67 11 P **P** **05 47 49.3 -2.7**
P5NO Presa 5 de nov 38.70 330 *e*P **P** **05 47 53.5 +1.2**
MTDJ Mount Denham 38.95 349 P **P** **05 47 54.7 +0.3**
MTDJ Mount Denham 38.95 349 P **P** **05 47 54.3 -0.1**
comp=Z,9µmcomp=Z,932nm,1.3s
MTDJ Mount Denham 38.95 349 ⇓P **P** **05 47 54.9 +0.4**
MTDJ Mount Denham 38.95 349 P **P** **05 47 55.1 +0.7**
CEVE Cerro Verde 38.97 329 *e*P **P** **05 47 56.1 +1.3**
SDDR Presa de Saban 39.01 358 P **P** **05 47 53.5 -1.4**
SDDR Presa de Saban 39.01 358 P **P** **05 47 53.7 -1.2**
comp=Z,2µmcomp=Z,136nm,1.2s
RTR El Retiro 39.04 329 *e*P **P** **05 47 57.2 +1.9**
MTO3 Montecristo 39.34 330 P **P** **05 47 58.0 +0.1**
MTO3 IAmb IAmb 05 48 00.5
comp=Z,482nm,1.0s
SC01 Santiago de lo 39.44 359 P **P** **05 47 57.6 -0.8**
ESQI Esquipulas 39.47 330 P **P** **05 48 00.3 +1.5**
ESQI IAmb IAmb 05 48 01.9
comp=Z,657nm,1.0s
GTBY Guantanamo Bay 40.24 353 P **P** **05 48 03.6 -1.4**
comp=Z,4µmcomp=Z,272nm,1.2s
MASC Masc 40.39 354 P **P** **05 48 06.7 +0.5**
APG El Apazote 40.39 329 LR LR 06 04 24.5
comp=Z,131nm,18.6s,baz=266,slow=36
CHIV Chivirico 40.47 351 P **P** **05 48 05.6 -1.3**
RTAL Retalhuleu 40.60 327 *e*P **P** **05 48 08.3 +0.2**
HUEH Huehuetenango 41.18 328 P **P** **05 48 14.3 +1.2**
HUEH IAmb IAmb 05 48 15.6
comp=Z,545nm,1.0s
GRTK Grand Turk 41.52 358 P **P** **05 48 14.0 -1.5**
comp=Z,8µmcomp=Z,518nm,1.6s
GRTK Grand Turk 41.52 358 P **P** **05 48 14.8 -0.8**
TEIG Tepich 44.02 335 P **P** **05 48 35.6 -0.2**
TEIG IAmb IAmb 05 48 37.3
comp=Z,472nm,1.1s
TEIG Tepich 44.02 335 P **P** **05 48 35.6 -0.2**
TEIG Tepich 44.02 335 ⇑P **P** **05 48 35.8 0.0**
TEIG Tepich 44.02 335 P **P** **05 48 36.1 +0.3**
TEIG Tepich 44.02 335 P **P** **05 48 35.5 -0.3**
TEIG sP **sP** **05 49 01.8 -0.3**
TEIG ScP **ScP** **05 54 07.3 +1.6**
CMIG Matias Romero 44.42 325 LR LR 06 05 56.1
comp=Z,1µm,21.9s,baz=147,slow=34
CAMR Camarioca 44.45 345 P **P** **05 48 40.0 +0.8**
SOR Soroa 44.62 343 P **P** **05 48 41.3 +0.7**
PMSA Palmer Station 44.67 176 P **P** **05 48 42.8 +2.3**
PMSA Palmer Station 44.67 176 *e*P **P** **05 48 40.6 +0.1**
TLIG Tlapa 46.88 321 ⇓P **P** **05 49 00.1 +1.5**
SMAI San Martin Ant 47.90 179 P **P** **05 49 06.8 +1.0**
UNM Universidad Na 48.62 322 P **P** **05 49 14.7 +2.5**
DWPF Disney Wildern 49.33 347 ⇑P **P** **05 49 17.5 +0.3**
DWPF Disney Wildern 49.33 347 P **P** **05 49 17.2 0.0**
MOIG Morelia 50.07 320 P **P** **05 49 23.8 +0.5**
MOIG Morelia 50.07 320 ⇑P **P** **05 49 24.7 +1.4**
BBSR BB Station 52.57 6 ⇓P **P** **05 49 40.6 -0.8**
BBSR BB Station 52.57 6 P **P** **05 49 40.4 -1.0**
BBSR pP **pP** **05 49 58.5 -1.9**
ZAIG Zacatecas 53.27 322 P **P** **05 49 48.2 +1.1**
ZAIG Zacatecas 53.27 322 ⇓P **P** **05 49 48.6 +1.5**
BRAL Brewton 53.68 342 P **P** **05 49 49.4 -0.2**
CSU Charleston Sou 53.80 350 P **P** **05 49 50.8 +0.3**
NHSC New Hope 53.94 349 P **P** **05 49 51.9 +0.4**
NHSC New Hope 53.94 349 ⇓P **P** **05 49 52.2 +0.8**
154A Montrose 54.04 346 P **P** **05 49 52.0 -0.2**
250A Grady 54.22 343 P **P** **05 49 52.5 -1.0**
152A Waverly Hall 54.47 345 P **P** **05 49 54.4 -1.0**
152A IAmb IAmb 05 49 56.0
comp=Z,367nm,1.0s
Y60A Bolivia 54.52 352 P **P** **05 49 55.8 +0.1**
HBVL Hebbronville 54.62 328 P **P** **05 49 57.0 +0.4**
HBVL IAmb IAmb 05 49 58.5
comp=Z,353nm,0.9s
346A Big Creek Wild 54.63 340 P **P** **05 49 56.0 -0.6**
Y58A Scranton 54.64 350 P **P** **05 49 56.5 0.0**
KVTX Kingsville 54.65 329 P **P** **05 49 57.2 +0.5**
KVTX Kingsville 54.65 329 ⇓P **P** **05 49 58.1 +1.5**
Y57A Sumter 54.87 349 P **P** **05 49 58.2 +0.1**
GOGA Godfrey 54.89 346 P **P** **05 49 57.6 -0.7**
GOGA pmax pmax
comp=Z,314nm,1.3s
GOGA Godfrey 54.89 346 P **P** **05 49 57.6 -0.7**
GOGA IAmb IAmb 05 49 59.1
comp=Z,314nm,1.2s
GOGA Godfrey 54.89 346 ⇑P **P** **05 49 57.6 -0.7**
H10N3 ASCENSION HYDR 55.01 85 P **P** **05 50 00.8 +1.4**
baz=255,slow=6.2,SNR=7.2
H10N2 ASCENSION HYDR 55.03 85 P **P** **05 50 00.6 +1.1**
baz=255,slow=6.2,SNR=8.9
H10N1 ASCENSION HYDR 55.03 85 P **P** **05 50 00.8 +1.3**
baz=255,slow=6.2,SNR=12
ASCN Ascension 55.12 86 P **P** **05 50 00.6 +0.1**
X58A Rowland 55.22 351 P **P** **05 50 00.9 +0.2**
PTCN Pitcairn Islan 55.27 253 P **P** **05 50 04.0 +2.6**
JSC Jenkinsville 55.28 349 P **P** **05 50 00.8 -0.3**
JSC pmax pmax
comp=Z,391nm,1.0s
JSC Jenkinsville 55.28 349 P **P** **05 50 00.8 -0.3**
JSC IAmb IAmb 05 50 02.5
comp=Z,391nm,1.0s
441A DeRidder 55.39 336 P **P** **05 50 03.1 +1.1**
LRAL Lakeview Retre 55.42 343 P **P** **05 50 01.1 -1.1**
LRAL IAmb IAmb 05 50 02.0
comp=Z,181nm,0.9s
LRAL Lakeview Retre 55.42 343 ⇓P **P** **05 50 01.1 -1.1**
HODGE Hodges 55.42 348 P **P** **05 50 01.8 -0.4**
HODGE IAmb IAmb 05 50 03.4
comp=Z,286nm,1.1s
Y52A Lilburn 55.46 346 P **P** **05 50 01.4 -1.1**
Y52A IAmb IAmb 05 50 03.0
comp=Z,314nm,1.2s
BIRD Birdtown, Kers 55.49 350 P **P** **05 50 02.7 +0.1**
HKT Hockley 55.76 333 *d*/P **P** **05 50 05.1 +0.5**
HKT pmax pmax
comp=Z,384nm,1.1s
HKT Hockley 55.76 333 ⇑P **P** **05 50 05.2 +0.6**
FPAL Fort Paine 56.47 345 P **P** **05 50 08.5 -1.3**
FPAL IAmb IAmb 05 50 10.1
comp=Z,181nm,1.1s
NATX Nacogdoches 56.86 335 ⇓P **P** **05 50 13.3 +0.9**
HNDO Hondo 56.97 329 P **P** **05 50 13.3 0.0**
TKL Tuckaleechee C 57.11 347 LR LR 06 15 59.1
comp=Z,1µm,21.4s,baz=166,slow=37
TKL Tuckaleechee C 57.11 347 ⇓P **P** **05 50 13.4 -0.8**
SACV Santiago Islan 57.49 56 P **P** **05 50 16.5 -0.7**
SACV IAmb IAmb 05 50 23.9
comp=Z,107nm,0.9s
SACV Santiago Islan 57.49 56 ⇑P **P** **05 50 16.7 -0.6**
OXF Oxford 57.50 341 ⇓P **P** **05 50 15.4 -1.6**
CCAR Cane Creek 57.72 339 P **P** **05 50 18.3 -0.2**
TZTN Tazewell 57.92 347 ⇑P **P** **05 50 18.8 -1.0**
BLA Blacksburg 57.99 350 ⇓P **P** **05 50 20.8 +0.4**
JCT Junction City 58.01 330 ⇑P **P** **05 50 19.5 -1.2**
HPIG 58.26 322 ⇓P **P** **05 50 23.2 +0.5**
SLBS Sierra La Lagu 58.49 316 P **P** **05 50 25.0 +0.8**
SLBS Sierra La Lagu 58.49 316 ⇓P **P** **05 50 25.7 +1.5**
SLBS Sierra La Lagu 58.49 316 P **P** **05 50 25.9 +1.7**
SLBS pP **pP** **05 50 46.0 +3.2**
CBN Corbin Frederi 58.56 353 ⇓P **P** **05 50 24.6 +0.4**
WVT Waverly 58.56 343 ⇓P **P** **05 50 22.8 -1.5**
HBAR Harrisburg 58.85 340 P **P** **05 50 25.8 -0.5**
HBAR IAmb IAmb 05 50 27.8
comp=Z,475nm,1.2s
MIAR Mount Ida 58.92 337 ⇓P **P** **05 50 26.6 -0.3**
TXAR Lajitas Array 59.02 326 P **P** **05 50 27.8 0.0**
comp=Z,87nm,1.0s,baz=143,slow=7.4,SNR=431
TXAR S **S** **05 58 28.6 -0.5**
comp=Z,0.8nm,0.9s,baz=132,slow=12,SNR=1.8
TXAR LR LR 06 14 26.6
comp=Z,1µm,20.7s,baz=142,slow=35
TXAR PKPPKP **P'P'df** **06 20 01.3 +2.2**
comp=Z,1.5nm,1.1s,baz=211,slow=0.7,SNR=5.6
TXAR Lajitas Array 59.02 326 P **P** **05 50 27.4 -0.4**
LPIG La Paz 59.02 316 LR LR 06 10 38.9
comp=Z,187nm,21.5s,baz=144,slow=31
LCAR Lake Charles 59.48 340 P **P** **05 50 29.9 -0.8**
LCAR IAmb IAmb 05 50 31.0
comp=Z,269nm,0.9s
WCI Wyandotte Cave 60.15 345 ⇓P **P** **05 50 34.1 -1.2**
MCWV Mont Chateau 60.30 351 ⇓P **P** **05 50 36.8 +0.6**
T42A Van Buren 60.35 341 P **P** **05 50 35.0 -1.6**
T42A IAmb IAmb 05 50 36.6
comp=Z,208nm,0.9s
T42A PcP **PcP** **05 51 19.9 -1.1**
W35A Tecumseh 60.72 335 P **P** **05 50 38.3 -0.9**
SHEL Horse Pasture 60.91 97 P **P** **05 50 42.6 +1.6**
SHEL pmax pmax
comp=Z,135nm,0.9s
SHEL Horse Pasture 60.91 97 P **P** **05 50 42.6 +1.6**
SHEL IAmb IAmb 05 51 03.3
comp=Z,134nm,0.8s
FVM French Village 61.02 342 P **P** **05 50 40.6 -0.6**
FVM PcP **PcP** **05 51 24.0 +0.3**
P48A Milroy 61.12 346 P **P** **05 50 40.7 -1.1**
P48A PcP **PcP** **05 51 24.0 -0.1**
WMOK Wichita Mounta 61.14 333 P **P** **05 50 40.9 -1.2**
WMOK IAmb IAmb 05 50 43.0
comp=Z,736nm,2.0s
WMOK PcP **PcP** **05 51 24.6 +0.3**
WMOK Wichita Mounta 61.14 333 ⇓P **P** **05 50 41.1 -1.0**
CCM Cathedral Cave 61.34 341 ⇓P **P** **05 50 42.4 -0.9**
CCM Cathedral Cave 61.34 341 P **P** **05 50 42.1 -1.2**
CCM pP **pP** **05 51 01.1 -1.3**
CCM PcP **PcP** **05 51 25.6 +0.6**
ACSO Alum Creek Sta 61.37 349 ⇑P **P** **05 50 42.9 -0.7**
M65A Busby, Falmout 61.50 359 P **P** **05 50 44.5 +0.2**
baz=180
MNTX Cornudas Mount 61.79 326 ⇓P **P** **05 50 45.9 -0.6**
VNA1 Neumayer--Stat 61.80 161 ⇓P **P** **05 50 47.9 +1.9**
comp=Z,54nm,1.1s
VNA2 Neumayer--Watz 62.16 161 ⇓P **P** **05 50 49.9 +1.4**
comp=Z,28nm,0.8s,baz=288,slow=6.4
VNA2 ⇑pP **pP** **05 51 08.7 +0.8**
comp=Z,46nm,0.8s,baz=292,slow=8.2
VNA2 ⇑S **S** **05 59 11.2 +3.2**
comp=N,2.7nm,1.4s,baz=280
MSTX Muleshoe 62.30 329 P **P** **05 50 49.1 -0.9**
MSTX PcP **PcP** **05 51 29.8 +0.6**
BINY Binghamton 62.38 355 ⇓P **P** **05 50 50.9 +0.7**
HRV Adam Dziewonsk 62.46 359 P **P** **05 50 51.4 +0.7**
HRV pmax pmax
comp=Z,513nm,1.0s
HRV Adam Dziewonsk 62.46 359 P **P** **05 50 51.4 +0.7**
HRV Adam Dziewonsk 62.46 359 ⇓P **P** **05 50 51.4 +0.7**
SRIG Santa Rosalia 62.52 318 ⇓P **P** **05 50 52.7 +1.2**
AMTX Amarillo 62.54 331 ⇑P **P** **05 50 51.0 -0.6**
ERPA Erie 62.74 352 ⇓P **P** **05 50 52.6 0.0**
PH02 Texas Public H 63.09 331 P **P** **05 50 54.7 -0.5**
PH02 PcP **PcP** **05 51 33.0 +0.7**
PH02 IAmb IAmb 05 51 34.5
comp=Z,180nm,0.9s
HDIL Hopedale 63.10 344 ⇑P **P** **05 50 53.6 -1.5**
SNAA Sanae 63.79 161 ⇓P **P** **05 51 00.7 +1.3**
comp=Z,849nm,0.9s
SNAA ⇑pP **pP** **05 51 19.3 +0.4**
comp=Z,1µm,0.8s
SNAA ⇑S **S** **05 59 30.0 +1.6**
comp=N,41nm,1.3s
SNAA Sanae 63.79 161 ⇑PKPdf 06 19 56.9
comp=Z,289nm,1.2s
SNAA Sanae 63.79 161 P **P** **05 51 00.6 +1.2**
comp=Z,96nm,1.2s,baz=278,slow=7.0,SNR=90
SNAA S **S** **05 59 27.8 -0.7**
comp=Z,0.5nm,0.7s,baz=270,slow=11,SNR=1.0
SNAA LR LR 06 19 42.0
comp=Z,468nm,19.1s,baz=248,slow=37
SNAA PKP2bc **P'P'bc** **06 19 55.4 -6.1**
comp=Z,22nm,1.2s,baz=50,slow=2.1,SNR=17
comp=Z,96nm,1.2s
SNAA Sanae 63.79 161 *de*P **P** **05 51 00.7 +1.3**
SNAA pmax pmax
comp=Z,95nm,1.2s
SNAA Sanae 63.79 161 P **P** **05 51 00.1 +0.7**
SNAA Sanae 63.79 161 ⇑P **P** **05 51 00.4 +1.0**
KSU1 Kansas State U 64.08 337 ⇓P **P** **05 51 00.8 -0.8**
LBNH Lisbon 64.20 358 ⇓P **P** **05 51 03.1 +0.9**
L42A Oliver, Polo 64.56 344 P **P** **05 51 03.7 -0.9**
L42A IAmb IAmb 05 51 04.1
comp=Z,184nm,0.8s
J47A Sunmer 64.63 348 P **P** **05 51 04.4 -0.7**
EMMW East Machias 64.69 2 P **P** **05 51 05.6 +0.3**
LONY Lake Ozonia 64.69 356 ⇓P **P** **05 51 05.9 +0.5**
ANMO Albuquerque 64.90 327 LR LR 06 18 51.2
comp=Z,740nm,21.9s,baz=150,slow=36
ANMO Albuquerque 64.90 327 *de*P **P** **05 51 07.7 +0.5**
ANMO pmax pmax
comp=Z,143nm,1.0s
ANMO Albuquerque 64.90 327 ⇓P **P** **05 51 07.8 +0.5**
TASM ASL Pad, Albuq 64.90 327 P **P** **05 51 07.5 +0.3**
TASM IAmb IAmb 05 51 10.6
comp=Z,241nm,1.1s
CBKS Cedar Bluff 65.03 335 ⇓P **P** **05 51 08.0 +0.2**
PKME Peaks-Kenny Pk 65.20 1 ⇓P **P** **05 51 09.3 +0.6**
TUC Tucson 65.22 322 ⇓P **P** **05 51 10.1 +0.9**
TUC Tucson 65.22 322 P **P** **05 51 10.0 +0.8**
TUC sP **sP** **05 51 37.1 +0.6**
SADO Sadowa 65.24 353 LR LR 06 20 45.9
comp=Z,2µm,22.0s,baz=184,slow=37
SCIA State Center 65.47 341 ⇓P **P** **05 51 10.0 -0.5**
TROLL Troll, Antarti 65.51 161 ⇓P **P** **05 51 12.2 +1.6**
comp=Z,1µm,0.7s
TROLL ⇑pP **pP** **05 51 31.4 +1.2**
comp=Z,2µm,0.8s
TROLL ⇓S **S** **05 59 52.7 +2.9**
comp=N,69nm,1.1s
GAC Glen Almond 65.83 356 ⇑P **P** **05 51 13.5 +0.8**
SDCO Great Sand Dun 66.65 330 ⇓P **P** **05 51 19.4 +0.8**
MVCO Mesa Verde 67.69 328 ⇓P **P** **05 51 25.9 +0.8**
OGNE Ogallala 67.77 334 ⇓P **P** **05 51 25.6 +0.2**
WUAZ Wupatki 67.92 324 ⇓P **P** **05 51 28.0 +1.5**
ECSD EROS Data Cent 68.19 340 ⇓P **P** **05 51 27.2 -0.6**
NVL N'lazarevskaya 68.36 159 *e*P **P** **05 51 26.6 -1.9**
NVL *e**PP **pP** **05 51 48.6 +0.4**
NVL *e*PPP PPP 05 55 38.7
NVL *e*S **S** **06 00 17.6 -6.2**
NVL *e*SSS SSS 06 07 59.5
NVL pmax pmax
comp=Z,112nm,0.9s
ISCO Idaho Springs 68.36 331 P **P** **05 51 29.8 +0.5**
ISCO pmax pmax
comp=Z,405nm,1.3s
ISCO Idaho Springs 68.36 331 P **P** **05 51 29.8 +0.5**
ISCO IAmb IAmb 05 51 31.5
comp=Z,405nm,1.3s
ISCO Idaho Springs 68.36 331 ⇓P **P** **05 51 29.9 +0.6**
TAOE Nuku Hiva Isla 68.41 268 P **P** **05 51 31.9 +1.9**
TAOE Nuku Hiva Isla 68.41 268 *e*P **P** **05 51 29.7 -0.3**
comp=Z,640nm,1.2s
TAOE *e*LR LR 06 12 00.4
comp=Z,5µm,33.2s
TAOE *e*T T 07 05 56.1
comp=Z,144nm,0.2s
TAOE Nuku Hiva Isla 68.41 268 P **P** **05 51 30.0 +0.1**
TAOE IAmb IAmb 05 51 32.8
comp=Z,350nm,1.2s
CCX Cicese 68.43 318 P **P** **05 51 30.8 +1.3**
CCX IAmb IAmb 05 51 32.5
comp=Z,343nm,1.1s
DBIC Dimbokro 69.38 74 P **P** **05 51 35.4 -0.5**
comp=Z,51nm,0.8s,baz=245,slow=5.7,SNR=33
DBIC S **S** **06 00 33.5 -4.1**
comp=Z,3.7nm,0.9s,baz=137,slow=23,SNR=6.2
DBIC PKP2bc **P'P'bc** **06 19 37.8 -7.2**
comp=Z,20nm,1.2s,baz=72,slow=4.7,SNR=7.0
DBIC LR LR 06 20 35.2
comp=Z,5µm,20.2s,baz=246,slow=35
comp=Z,51nm,0.8s
DBIC Dimbokro 69.38 74 ⇑P **P** **05 51 35.3 -0.5**
PFO Pinyon Flats O 69.49 320 LR LR 06 19 44.9
comp=Z,848nm,20.0s,baz=184,slow=34
PFO Pinyon Flats O 69.49 320 *d*/P **P** **05 51 37.9 +1.6**
PFO pmax pmax
comp=Z,430nm,1.0s
PFO Pinyon Flats O 69.49 320 P **P** **05 51 37.6 +1.3**
PFO PcP **PcP** **05 51 60.0 +0.9**
QSPA South Pole Qui 69.93 180 P **P** **05 51 39.8 +1.2**
comp=Z,202nm,1.1s,baz=157,slow=1.7,SNR=256
QSPA S **S** **06 00 45.0 +2.3**
comp=Z,1.5nm,0.9s,baz=0.6,slow=22,SNR=13
QSPA PKP2bc **P'P'bc** **06 19 38.7 -4.9**
comp=Z,16nm,1.0s,baz=294,slow=2.5,SNR=18
comp=Z,202nm,1.1s
DRLN Deer Lake 70.09 9 P **P** **05 51 39.2 -0.2**
DRLN IAmb IAmb 05 51 40.5
comp=Z,159nm,0.8s
DRLN Deer Lake 70.09 9 ⇓P **P** **05 51 39.2 -0.2**
CALA Caldeira 70.18 33 *e*P **PcP** **05 51 59.7 -2.1**
CALA *i* IAmb IAmb 05 52 02.4
comp=Z,271nm,1.3s
PCAN Candelaria 70.21 34 *e*P **PcP** **05 51 57.7 -4.1**
PCAN *i* IAmb IAmb 05 52 06.7
comp=Z,152nm,1.9s
PCED Cedros 70.22 33 *e*P **PcP** **05 51 59.6 -2.2**
PCED *i* IAmb IAmb 05 52 02.8
comp=Z,186nm,1.4s
PICO Pico 70.27 34 *e*P **PcP** **05 52 00.4 -1.7**
PICO *i* IAmb IAmb 05 52 03.2
comp=Z,106nm,1.7s
PPNO Prainha do Nor 70.33 34 *e*P **PcP** **05 52 02.1 -0.3**
PPNO *i* IAmb IAmb 05 52 03.6
comp=Z,305nm,1.5s
CCUT Cedar City 70.50 325 P **P** **05 51 44.1 +1.6**
CCUT IAmb IAmb 05 51 46.1
comp=Z,532nm,1.1s
ROSA Rosais 70.52 34 *e*P **PcP** **05 52 01.9 -1.2**
ROSA *i* IAmb IAmb 05 52 03.5
comp=Z,158nm,1.5s
ROSA Rosais 70.52 34 ⇓P **P** **05 51 43.0 +0.7**
PMAN Manadas 70.54 34 *e*P **PcP** **05 52 02.1 -1.1**
PMAN *i* IAmb IAmb 05 52 04.8
comp=Z,197nm,1.1s
EYMN Ely 70.57 345 ⇓P **P** **05 51 41.4 -1.0**
MACI Morro de la Ar 70.69 49 P **P** **05 51 44.3 +0.5**
MACI IAmb IAmb 05 52 06.2
comp=Z,369nm,1.2s
SRBC Serra Branca 70.86 33 *e*P **PcP** **05 52 02.3 -2.3**
SRBC *i* IAmb IAmb 05 52 07.1
comp=Z,835nm,1.2s
MWC Mount Wilson 70.88 319 P **P** **05 51 45.4 +0.6**
MWC pmax pmax
comp=Z,543nm,1.2s
MWC Mount Wilson 70.88 319 P **P** **05 51 45.4 +0.6**
MWC IAmb IAmb 05 51 47.8
comp=Z,543nm,1.1s
PGRA Graciosa 70.89 33 *e*P **PcP** **05 52 02.3 -2.4**
PGRA *i* IAmb IAmb 05 52 06.8
comp=Z,429nm,1.0s
PASC Pasadena Art C 70.93 319 P **P** **05 51 46.0 +1.2**
PASC IAmb IAmb 05 51 47.9
comp=Z,607nm,1.1s
PSMN Pico do Norte, 70.99 37 *e*P **PcP** **05 52 02.9 -2.3**
PSMN *i* IAmb IAmb 05 52 07.0
comp=Z,248nm,1.1s
ADH Angra Heroismo 71.00 34 *e*P **PcP** **05 52 01.7 -3.4**
ADH *i* IAmb IAmb 05 52 04.5
comp=Z,135nm,1.5s
PSBA Serra de Santa 71.04 34 *e*P **PcP** **05 52 03.2 -2.1**
PSBA *i* IAmb IAmb 05 52 07.6
comp=Z,345nm,1.0s
PSCM Serra do Cume 71.10 34 *e*P **PcP** **05 52 03.6 -2.0**
PSCM *i* IAmb IAmb 05 52 08.0
comp=Z,134nm,1.0s
PAGU Agualva, Azore 71.11 34 *e*P **PcP** **05 52 03.9 -1.7**
PAGU *i* IAmb IAmb 05 52 08.6
comp=Z,285nm,1.6s
PDA Ponta Delgada 71.19 36 *e*P **PcP** **05 52 02.3 -3.7**
PDA *i* IAmb IAmb 05 52 08.5
comp=Z,473nm,1.5s
PSET Sete Cidades 71.21 36 *e*P **PcP** **05 52 04.0 -2.1**
PSET *i* IAmb IAmb 05 52 07.7
comp=Z,3µm,1.4s
RSSD Black Hills 71.23 335 P **P** **05 51 47.1 +0.3**
EOSO Osorio 71.27 49 P **P** **05 51 51.2 +4.1**
CMLA Cha da Macela 71.28 36 *e*P **PcP** **05 52 05.3 -1.1**
CMLA *i* IAmb IAmb 05 52 09.1
comp=Z,260nm,2.0s
CMLA Cha da Macela 71.28 36 P **P** **05 51 48.0 +1.1**
CMLA pmax pmax
comp=Z,221nm,1.1s
CMLA Cha da Macela 71.28 36 P **P** **05 51 48.0 +1.1**
CMLA IAmb IAmb 05 52 07.9
comp=Z,220nm,1.1s
QSM Queen of Sheba 71.36 321 P **P** **05 51 48.3 +0.9**
QSM IAmb IAmb 05 51 50.2
comp=Z,389nm,1.0s
PGRON Lagoa das Cont 71.36 36 *e*P **PcP** **05 52 05.3 -1.5**
PGRON *i* IAmb IAmb 05 52 09.6
comp=Z,242nm,1.4s
BART Pico Bartolome 71.48 36 *e*P **PcP** **05 52 06.9 -0.4**
BART *i* IAmb IAmb 05 52 10.3
comp=Z,467nm,1.6s
TPNV Topopah Spring 71.68 322 ⇓P **P** **05 51 51.4 +1.8**
FURC Furnace Creek, 71.70 322 P **P** **05 51 50.7 +1.3**
ELIB Princess Elisa 71.95 161 *d*P **P** **05 51 52.3 +1.6**
DUG Dugway, Tooele 72.15 327 ⇓P **P** **05 51 53.9 +1.6**
BW06 Boulder Array 72.52 331 ⇓P **P** **05 51 54.6 +0.1**
PDAR Pinedale Array 72.52 331 P **P** **05 51 54.5 0.0**
comp=Z,54nm,0.9s,baz=148,slow=6.8,SNR=255
PDAR S **S** **06 01 12.8 -0.6**
comp=Z,0.6nm,1.0s,baz=103,slow=13,SNR=1.4
PDAR PKP2bc 06 19 33.5
comp=Z,0.5nm,0.8s,baz=270,slow=1.5,SNR=4.5
PDAR LR LR 06 24 40.1
comp=Z,719nm,21.8s,baz=158,slow=37
comp=Z,54nm,0.9s
HWUT Hardware Ranch 72.58 329 ⇓P **P** **05 51 55.4 +0.5**
AHID Auburn Hatcher 73.24 330 ⇓P **P** **05 51 59.4 +0.6**
VAH Vaihoa 73.48 260 *e*P **P** **05 52 00.5 0.0**
comp=Z,706nm,1.2s
VAH *e*LR LR 06 14 25.0
comp=Z,12µm,26.9s
PMOR Pomariorio Ree 73.80 260 *e*P **P** **05 52 02.9 +0.5**
comp=Z,721nm,1.2s
PMOR *e*LR LR 06 14 33.1
comp=Z,7µm,24.2s
ELK Elko 73.82 326 LR LR 06 23 51.4
comp=Z,1µm,21.1s,baz=176,slow=35
ELK Elko 73.82 326 ⇓P **P** **05 52 03.1 +0.9**
ULM Lac du Bonnet 73.83 343 P **P** **05 52 00.9 -0.8**
comp=Z,170nm,0.9s,baz=148,slow=6.2,SNR=222
ULM LR LR 06 30 06.0
comp=Z,415nm,18.0s,baz=167,slow=40
comp=Z,170nm,0.9s
NVAR Mina Array Bea 73.88 322 P **P** **05 52 04.0 +1.3**
comp=Z,136nm,0.9s,baz=148,slow=6.4,SNR=653
NVAR S **S** **06 01 31.2 +2.3**
comp=Z,0.1nm,0.6s,baz=226,slow=24,SNR=1.3
comp=Z,136nm,0.9s
NVAR Mina Array Bea 73.88 322 P **P** **05 52 03.7 +1.1**
LAO LASA Array 74.22 335 ⇓P **P** **05 52 04.8 +0.5**
RLMT Red Lodge 74.23 332 ⇓P **P** **05 52 05.5 +0.9**
TVO Taravao 74.25 257 *e*P **P** **05 52 06.4 +1.3**
comp=Z,1µm,1.4s
TVO *e*T T 07 13 10.2
comp=Z,9.3nm,0.3s

LKWY Lake 74.30 331 ⇓P **P** **05 52 07.0 +2.0**
TIAR Tiarei 74.39 257 *e*P **P** **05 52 06.9 +1.0**
comp=Z,505nm,0.9s
TIAR *e*T T 07 13 13.2
comp=Z,130nm,0.2s
PAE Paea 74.58 257 *e*P **P** **05 52 07.3 +0.4**
comp=Z,1μm,1.2s
PAE *e*LR LR 06 14 57.6
comp=Z,4μm,25.2s
PPTF Pamatai, Papee 74.59 257 P **P** **05 52 09.7 +2.6**
PPTF Pamatai, Papee 74.59 257 ⇑P **P** **05 52 09.7 +2.6**
PPT2 Papeete2 74.60 257 *e*P **P** **05 52 08.9 +1.8**
comp=Z,572nm,1.3s
PPT2 *e*S **SKiKP** **06 01 27.1 +0.7**
comp=Z,3μm,24.8s
PPT2 *e*LQ LQ 06 11 50.1
comp=Z,2μm,27.0s
PPT2 *e*LR LR 06 14 53.9
comp=Z,8μm,27.8s
PPT2 *e*LR LR 06 15 05.7
comp=Z,6μm,31.0s
PPT Papeete 74.60 257 P **P** **05 52 08.3 +1.2**
comp=Z,398nm,1.1s,baz=120,slow=6.6,SNR=18
PPT LR LR 06 16 47.9
comp=Z,855nm,18.3s,baz=118,slow=29
comp=Z,398nm,1.1s
SAO San Andreas Ge 74.63 319 ⇑P **P** **05 52 07.8 +1.0**
SCHQ Schefferville 74.83 2 P **P** **05 52 07.6 +0.1**
comp=Z,178nm,0.9s,baz=178,slow=5.1,SNR=152
SCHQ S **S** **06 01 34.5 -3.9**
comp=Z,3.3nm,0.9s,baz=260,slow=16,SNR=1.7
SCHQ LR LR 06 25 23.7
comp=Z,450nm,20.0s,baz=201,slow=36
comp=Z,178nm,0.9s
HLID Hailey 75.44 328 ⇑P **P** **05 52 11.4 -0.1**
BOZ Bozeman (W) 75.65 331 ⇓P **P** **05 52 13.3 +0.7**
AFDM Forest Hills D 75.77 321 P **P** **05 52 14.0 +0.7**
AFDM IAmb IAmb 05 52 15.7
comp=Z,334nm,1.1s
BEKR Beckworth 76.03 322 P **P** **05 52 15.9 +0.9**
BEKR IAmb IAmb 05 52 17.8
comp=Z,381nm,1.2s
EGMT Eagleton 76.73 334 ⇓P **P** **05 52 18.9 +0.3**
WVOR Wild Horse Val 76.81 325 ⇓P **P** **05 52 19.8 +0.5**
SBA Scott Base 76.86 190 P **P** **05 52 21.3 +2.4**
SBA PcP **PcP** **05 52 31.6 +1.8**
MSO Missoula 77.64 331 P **P** **05 52 24.5 +0.8**
MSO IAmb IAmb 05 52 26.7
comp=Z,423nm,1.4s
BMO Blue Mountains 77.81 328 P **P** **05 52 25.5 +0.7**
BMO pmax pmax
comp=Z,353nm,1.2s
BMO Blue Mountains 77.81 328 P **P** **05 52 25.5 +0.7**
BMO IAmb IAmb 05 52 27.1
comp=Z,352nm,1.1s
VNDA Vanda 77.89 190 P **P** **05 52 26.5 +1.9**
comp=Z,40nm,1.0s,baz=130,slow=5.1,SNR=119
VNDA S **S** **06 02 17.4 +5.8**
comp=Z,1.3nm,1.2s,baz=191,slow=5.2,SNR=2.1
VNDA PKKP **PKKPdf** **06 11 09.3 -4.3**
comp=Z,0.9nm,0.7s,baz=332,slow=5.9,SNR=4.5
comp=Z,40nm,1.0s
VNDA Vanda 77.89 190 P **P** **05 52 26.4 +1.7**
TOA0 Torodi Ar. Sit 77.92 71 P **P** **05 52 26.1 +0.3**
SNR=6.8
TORD Torodi Ar. Bea 77.92 71 P **P** **05 52 25.1 -0.7**
comp=Z,93nm,0.8s,baz=251,slow=4.5,SNR=214
TORD S **S** **06 02 08.4 -5.4**
comp=Z,6.0nm,1.2s,baz=273,slow=7.7,SNR=6.4
TORD PKKPbc **PKKPbc** **06 11 26.6 +0.4**
comp=Z,1.5nm,0.8s,baz=66,slow=3.2,SNR=6.2
TORD PKP2bc 06 19 19.7
comp=Z,1.6nm,1.1s,baz=62,slow=1.7,SNR=3.7
TORD LR LR 06 26 10.4
comp=Z,6μm,18.7s,baz=238,slow=35
comp=Z,93nm,0.8s
TORD Torodi Ar. Bea 77.92 71 P **P** **05 52 25.0 -0.9**
SYO Syowa Base 78.03 160 ⇓*i*P P **05 52 27.0 +1.5**
SYO Syowa Base 78.03 160 ⇓*i*P P 05 52 31.2 +5.7
PRTV Porterville,We 78.51 121 *e*P **P** **05 52 29.1 +0.1**
YBH Yreka Blue Hor 78.60 323 LR LR 06 26 06.3
comp=Z,693nm,21.1s,baz=153,slow=35
TIO Tiouine 78.85 51 P **P** **05 52 32.1 +1.3**
LNOR Lincton Mounta 79.02 328 P **P** **05 52 31.3 0.0**
MATJ Matjiesfontein 79.65 122 *e*P **P** **05 52 35.7 +0.5**
WIN Windhoek 79.92 110 P **P** **05 52 38.0 +1.0**
WIN pmax pmax
comp=Z,64nm,1.0s
WIN Windhoek 79.92 110 P **P** **05 52 38.0 +1.0**
WIN Windhoek 79.92 110 P **P** **05 52 38.2 +1.2**
WIN pP **pP** **05 52 58.0 +0.9**
WIN sP **sP** **05 53 06.8 +1.6**
AVE Averroes 79.99 49 P **P** **05 52 38.2 +1.4**
AVE Averroes 79.99 49 P **P** **05 52 38.3 +1.5**
AVE IAmb IAmb 05 52 59.1
comp=Z,921nm,1.7s
SUR Sutherland 80.10 121 LR LR 06 25 03.4
comp=Z,1μm,21.5s,baz=210,slow=33
SUR Sutherland 80.10 121 P **P** **05 52 39.7 +1.8**
SUR Sutherland 80.10 121 P **P** **05 52 37.3 -0.5**
SUR Sutherland 80.10 121 *e*P **P** **05 52 39.3 +1.5**
SUR Sutherland 80.10 121 P **P** **05 52 39.7 +1.8**
NEW Newport 80.16 330 LR LR 06 30 30.7
comp=Z,813nm,20.2s,baz=154,slow=38
E07A Sunnyside 80.28 328 P **P** **05 52 39.0 +0.9**
E07A IAmb IAmb 05 52 41.0
comp=Z,501nm,1.3s
HOOD Mount Hood Mea 80.37 326 P **P** **05 52 39.8 +1.0**
HOOD IAmb IAmb 05 52 41.5
comp=Z,720nm,1.3s
MXC Moxie City 80.52 327 P **P** **05 52 40.6 +1.3**
MXC IAmb IAmb 05 52 42.3
comp=Z,356nm,1.2s
MERW Merweville 80.58 121 *e*P **P** **05 52 40.3 0.0**
FRAZ Fraserburg 80.72 121 *e*P **P** **05 52 42.7 +1.6**
RTC Rabat Centre 80.75 49 P **P** **05 52 41.7 +0.9**
COR Corvallis 80.77 325 P **P** **05 52 41.6 +0.9**
COR pmax pmax
comp=Z,804nm,1.0s
COR Corvallis 80.77 325 P **P** **05 52 41.6 +0.9**
COR Corvallis 80.77 325 P **P** **05 52 42.4 +1.7**
GRAN Grantham 81.22 121 *e*P **P** **05 52 45.1 +1.4**
MORF Marmelete 81.31 45 *e*P **P** **05 52 45.4 +1.5**
MORF *e*S **S** **06 02 50.9 +2.1**
MORF IAMs_20 IAMs_20 06 22 38.1
comp=E,4μm,27.2s
PTEO Sao Teotonio 81.39 45 *e*P **P** **05 52 46.0 +1.8**
PTEO *e*tx tx 05 52 56.3
PTEO *e*pP **pP** **05 53 04.8 +0.5**
PTEO *i*Amb IAmb 05 53 08.4
comp=E,276nm,1.8s
TSUM Tsumeb 81.39 107 LR LR 06 25 16.1
comp=E,2μm,22.0s,baz=316,slow=33
TSUM Tsumeb 81.39 107 P **P** **05 52 46.2 +1.4**
TSUM pP **pP** **05 53 06.3 +1.3**
TSUM sP **sP** **05 53 14.8 +1.7**
IFR Ifrane 81.73 50 P **P** **05 52 46.9 +0.5**
MDT Midelt 81.75 51 LR LR 06 29 40.8
comp=E,1μm,19.1s,baz=257,slow=36
PBDV Barranco-do-Ve 81.75 45 P **P** **05 52 46.9 +0.7**
PBDV Barranco-do-Ve 81.75 45 *e*P **P** **05 52 47.2 +1.1**
PBDV *e*tx tx 05 52 57.2
PBDV *e*pP **pP** **05 53 06.8 +0.5**
PBDV *i*Amb IAmb 05 53 26.0
comp=E,126nm,1.8s
LIS Lisbon 81.76 44 *e*S **S** **06 02 55.4 +2.1**
LIS IAMs_20 IAMs_20 06 22 59.0
comp=Z,5μm,34.1s
LIS Lisbon 81.76 44 *e*pP **pP** **05 53 06.7 +0.3**
LIS *i*Amb IAmb 05 53 11.2
comp=Z,184nm,1.7s
PMAFR Mafra 81.81 43 P **P** **05 52 49.4 +3.0**
PMAFR Mafra 81.81 43 *e*P **P** **05 52 46.9 +0.5**
PMAFR *e*tx tx 05 53 00.2
PMAFR *e*pP **pP** **05 53 07.0 +0.4**
PMAFR *i*Amb IAmb 05 53 33.3
comp=Z,152nm,2.0s
PLOUS Minas do Lousa 81.86 45 *e*P **P** **05 52 47.6 +1.0**
PLOUS *e*tx tx 05 53 00.0
PLOUS *e*pP **pP** **05 53 07.1 +0.3**
PLOUS *i*Amb IAmb 05 53 09.7
comp=Z,112nm,1.9s
PCVE Castro Verde 81.89 45 P **P** **05 52 47.7 +0.9**
PCVE Castro Verde 81.89 45 *e*P **P** **05 52 48.0 +1.2**
PCVE *e*tx tx 05 53 00.1
PCVE *e*pP **pP** **05 53 07.7 +0.6**
PCVE *i*Amb IAmb 05 53 24.0
comp=Z,86nm,1.5s
BRAK Brakfontein 81.97 121 *e*P **P** **05 52 46.4 -1.2**
PVAQ Vaqueiros 81.98 45 *e*P **P** **05 52 48.7 +1.4**
PVAQ *e*tx tx 05 53 00.9
PVAQ *e*pP **pP** **05 53 08.3 +0.8**
PVAQ *i*Amb IAmb 05 53 31.5
comp=Z,122nm,2.1s
PVAQ *e*S **S** **06 02 56.4 +0.7**
MOE Montemor 82.18 44 *e*P **P** **05 52 49.5 +1.2**
MOE *e*tx tx 05 53 02.3
MOE *e*pP **pP** **05 53 08.9 +0.3**
MOE *i*Amb IAmb 05 53 10.3
comp=Z,124nm,1.8s
EGRO El Granado 82.21 45 P **P** **05 52 48.7 +0.2**
PBEJ Beja 82.22 45 *e*P **P** **05 52 49.8 +1.3**
PBEJ *e*tx tx 05 53 02.3
PBEJ *i*Amb IAmb 05 53 13.9
comp=Z,89nm,1.7s
ROOI Rooidraai Farm 82.26 122 *e*P **P** **05 52 49.6 +0.5**
EVO Evora 82.40 44 P **P** **05 52 50.0 +0.5**
EVO Evora 82.40 44 *e*P **P** **05 52 50.4 +1.0**
EVO *e*tx tx 05 53 02.8
EVO *e*pP **pP** **05 53 09.7 0.0**
EVO *i*Amb IAmb 05 53 13.4
comp=Z,103nm,1.8s
PSBE So Bento 82.44 43 *e*tx tx 05 53 03.2
PSBE *e*pP pP 05 53 10.5 +0.6
PSBE *i*Amb IAmb 05 53 12.9
comp=Z,182nm,1.9s
SFS San Fernando 82.51 47 P **P** **05 52 54.8 +4.8**
PARRA Arraiolos 82.54 44 *e*P **P** **05 52 51.2 +1.0**
PARRA *e*tx tx 05 53 04.1
PARRA *e*pP **pP** **05 53 10.7 +0.2**
PARRA *i*Amb IAmb 05 53 16.3
comp=Z,112nm,1.7s
CNIL Conil 82.56 47 P **P** **05 52 54.0 +3.6**
PMTG Montargil 82.56 44 *e*P **P** **05 52 51.3 +1.1**
PMTG *e*tx tx 05 53 04.0
PMTG *e*pP **pP** **05 53 10.6 0.0**
PMTG *i*Amb IAmb 05 53 13.2
comp=Z,160nm,1.8s
RAR Rarotonga 82.68 250 LR LR 06 22 34.3
comp=Z,767nm,19.1s,baz=136,slow=30
RAR Rarotonga 82.68 250 P **P** **05 52 52.6 +1.2**
RAR Rarotonga 82.68 250 P **P** **05 52 51.1 -0.3**
RAR pmax pmax
comp=Z,208nm,1.2s
RAR Rarotonga 82.68 250 P **P** **05 52 51.0 -0.3**
PBAR Barrancos 82.85 45 P **P** **05 52 52.4 +0.6**
PBAR Barrancos 82.85 45 *e*P **P** **05 52 52.7 +0.9**
PBAR *e*tx tx 05 53 04.8
PBAR *e*pP **pP** **05 53 12.1 +0.1**
PBAR *i*Amb IAmb 05 53 13.8
comp=Z,73nm,1.3s
PESTR Estremoz 82.86 44 P **P** **05 52 54.4 +2.5**
PESTR Estremoz 82.86 44 *e*P **P** **05 52 54.0 +2.1**
PESTR *e*tx tx 05 53 04.8
PESTR *e*pP **pP** **05 53 12.7 +0.5**
PESTR *i*Amb IAmb 05 53 16.0
comp=Z,78nm,2.2s
EMIN Mina Concepcio 82.88 46 P **P** **05 52 52.4 +0.4**
NLWA Neilton Lookou 82.89 326 P **P** **05 52 52.9 +1.0**
NLWA IAmb IAmb 05 52 54.4
comp=Z,274nm,1.1s
PSARD Sardoal 82.89 43 *e*P **P** **05 52 53.1 +1.1**
PSARD *e*tx tx 05 53 05.5
PSARD *e*pP **pP** **05 53 12.2 -0.1**
PSARD *i*Amb IAmb 05 53 15.5
comp=Z,158nm,2.2s
PCAS Casmilo, Conde 82.93 43 *e*P **P** **05 52 53.0 +0.9**
PCAS *e*tx tx 05 53 05.6
PCAS *e*pP **pP** **05 53 12.7 +0.2**
PCAS *i*Amb IAmb 05 53 18.5
comp=Z,108nm,2.7s
ESPR Espera 82.96 47 P **P** **05 52 52.4 0.0**
IVI Ivigtut 83.06 10 *i*P **P** **05 52 53.2 +0.9**
IVI IAmb IAmb 05 52 54.1
comp=Z,240nm,1.1s
PMRV Marv??o 83.30 44 *e*tx tx 05 53 04.8
PMRV *e*pP pP 05 53 13.5 -0.9
PMRV *i*Amb IAmb 05 53 33.3
comp=Z,56nm,2.0s
PMRV *e*S **S** **06 03 09.5 +0.5**
PCBR Castelo Branco 83.47 43 *e*P **P** **05 52 55.7 +0.8**
PCBR *e*tx tx 05 53 06.3
PCBR *e*pP **pP** **05 53 14.7 -0.5**
PCBR *i*Amb IAmb 05 53 18.5
comp=Z,99nm,2.7s
PTO Porto 83.47 42 *e*P **P** **05 52 55.5 +0.6**
PTO *e*tx tx 05 53 08.4
PTO *e*pP **pP** **05 53 15.1 0.0**
PTO *i*Amb IAmb 05 53 18.5
comp=Z,220nm,2.0s
PGC Sidney 83.49 328 P **P** **05 52 55.2 +0.4**
PGC IAmb IAmb 05 52 57.1
comp=Z,337nm,1.0s
NRS Narsarsuaq 83.51 12 *i*P **P** **05 52 54.7 +0.1**
NRS IAmb IAmb 05 52 56.0
comp=Z,65nm,0.8s
PVIS Viseu 83.68 43 *e*P **P** **05 52 57.5 +1.4**
PVIS *e*tx tx 05 53 09.6
PVIS *e*pP **pP** **05 53 16.0 -0.4**
MTE Manteigas 83.73 43 *e*P **P** **05 52 56.5 +0.1**
MTE *e*tx tx 05 53 09.3
MTE *e*pP **pP** **05 53 16.4 -0.3**
FRB Frobisher Bay 83.73 1 P **P** **05 52 55.3 -0.3**
comp=Z,90nm,0.9s,baz=185,slow=7.5,SNR=18
FRB S **SKSac** **06 03 07.8 -3.7**
comp=Z,3.1nm,0.7s,baz=197,slow=17,SNR=0.9
FRB LR LR 06 33 57.8
comp=Z,189nm,18.4s,baz=236,slow=38
comp=Z,90nm,0.9s
CLRS Cowichan Lake 83.94 327 P **P** **05 52 57.5 +0.3**
PVRL Vila Real 84.10 42 *e*P **P** **05 52 58.6 +0.4**
PVRL *e*tx tx 05 53 12.4
PVRL *e*pP **pP** **05 53 18.1 -0.4**
PVRL *i*Amb IAmb 05 53 21.7
comp=Z,195nm,2.2s
POLO Lamas de Olo 84.10 42 *e*P **P** **05 52 58.5 +0.2**
POLO *e*tx tx 05 53 12.0
POLO *e*pP **pP** **05 53 18.4 -0.2**
POLO *i*Amb IAmb 05 53 22.1
comp=Z,75nm,2.7s
PGAV Gavieira, Arco 84.13 41 *e*P **P** **05 52 59.2 +0.8**
PGAV *e*tx tx 05 53 11.4
PGAV *e*pP **pP** **05 53 18.1 -0.6**
PGAV *i*Amb IAmb 05 53 21.9
comp=Z,187nm,2.0s
PGAV *e*S **SKSac** **06 03 12.6 -2.8**
PCAB Cabril 84.14 42 *e*P **P** **05 52 59.0 +0.6**
PCAB *e*tx tx 05 53 11.2
PCAB *e*pP **pP** **05 53 18.9 +0.2**
PCAB *i*Amb IAmb 05 53 21.5
comp=Z,178nm,2.7s
GRHM Grahamstown, E 84.24 123 P **P** **05 53 00.3 +1.1**
GRHM Grahamstown, E 84.24 123 *e*P **P** **05 52 59.1 -0.2**
MVO Moncorvo 84.47 43 *e*P **P** **05 53 00.6 +0.5**
MVO *e*tx tx 05 53 13.2
MVO *e*pP **pP** **05 53 20.4 -0.1**
MVO *i*Amb IAmb 05 53 23.8
comp=Z,216nm,2.2s
MVO *e*S **S** **06 03 20.1 -0.8**
BOSA Boshof 84.94 118 P **P** **05 53 03.3 +0.3**
comp=Z,18nm,0.9s,baz=256,slow=5.4,SNR=16
BOSA S **SKSac** **06 03 19.7 -1.9**
comp=Z,2.7nm,1.1s,baz=135,slow=7.1,SNR=2.5
BOSA PKKPbc **PKKPbc** **06 11 10.7 +0.5**
comp=Z,3.3nm,0.7s,baz=95,slow=1.6,SNR=6.1
BOSA LR LR 06 27 49.9
comp=Z,2μm,20.3s,baz=220,slow=34
comp=Z,18nm,0.9s
BOSA Boshof 84.94 118 *e*P **P** **05 53 04.0 +0.9**
BOSA Boshof 84.94 118 P **P** **05 53 03.6 +0.6**
BOSA pP **pP** **05 53 23.8 +0.5**
PBRG Braganca 85.00 42 *e*P **P** **05 53 03.0 +0.3**
PBRG *e*tx tx 05 53 15.9
PBRG *e*pP **pP** **05 53 22.9 -0.2**
PBRG *i*Amb IAmb 05 53 26.4
comp=Z,181nm,2.5s
TAM Tamanrasset 85.19 64 P **P** **05 53 05.3 +1.1**
TAM pP **pP** **05 53 24.9 +0.3**
CBB Campbell River 85.34 328 P **P** **05 53 04.6 +0.5**
CBB IAmb IAmb 05 53 06.2
comp=Z,344nm,1.0s
NUUK Nuuk 85.35 8 *i*P **P** **05 53 04.8 +1.0**
NUUK IAmb IAmb 05 53 05.8
comp=Z,352nm,1.1s
PAB San Pablo 85.36 45 P **P** **05 53 05.1 +0.4**
PAB pmax pmax
comp=Z,199nm,1.5s
PAB San Pablo 85.36 45 P **P** **05 53 05.1 +0.4**
ESDC Sonseca Array 85.68 45 P **P** **05 53 06.8 +0.6**
comp=Z,8.6nm,0.8s,baz=248,slow=4.5,SNR=43
ESDC S **SKSac** **06 03 28.3 +3.0**
comp=Z,0.2nm,0.4s,baz=253,slow=21,SNR=1.4
ESDC PKKPbc **PKKPbc** **06 11 08.7 -1.1**
comp=Z,1.8nm,1.0s,baz=49,slow=3.2,SNR=7.5
ESDC LR LR 06 27 59.4
comp=Z,2μm,21.7s,baz=228,slow=33
comp=Z,8.6nm,0.8s
MAW Mawson 85.81 164 P **P** **05 53 07.8 +1.4**
MAW Mawson 85.81 164 P **P** **05 53 07.2 +0.9**
comp=Z,92nm,1.2s,baz=224,slow=6.1,SNR=60
MAW S **S** **06 03 31.9 -1.4**
comp=Z,1.6nm,0.9s,baz=308,slow=19,SNR=2.2
MAW PKKPbc **PKKPbc** **06 11 07.0 -2.2**
comp=Z,4.9nm,0.8s,baz=333,slow=2.3,SNR=7.9
MAW LR LR 06 30 18.9
comp=Z,628nm,21.8s,baz=168,slow=35
comp=Z,92nm,1.2s
MAW Mawson 85.81 164 P **P** **05 53 07.4 +1.0**
CKGRV CKGRV 86.15 111 P **P** **05 53 10.2 +1.1**
CKGRV pP **pP** **05 53 30.3 +0.9**
CKGRV sP **sP** **05 53 39.1 +1.6**
LBTB Lobatse 86.48 115 LR LR 06 27 12.3
comp=Z,1μm,21.2s,baz=220,slow=32
LBTB Lobatse 86.48 115 *e*P **P** **05 53 10.4 -0.3**
LBTB Lobatse 86.48 115 P **P** **05 53 11.4 +0.7**
LBTB pP **pP** **05 53 31.6 +0.6**
WDLM Western Deep L 87.52 117 *e*P **P** **05 53 14.9 -0.9**
CTZ Chatham Island 87.56 224 P **P** **05 53 18.1 +2.7**
HRAO HartRAO 87.93 117 *e*P **P** **05 53 20.3 +2.5**
BBB Bella Bella 88.03 328 LR LR 06 35 17.8
comp=Z,498nm,19.6s,baz=170,slow=37
SFJD Kangerlussuaq 88.19 8 P **P** **05 53 17.5 -0.1**
comp=Z,43nm,0.9s,baz=209,slow=4.1,SNR=17
SFJD LR LR 06 31 35.9
comp=Z,493nm,21.8s,baz=208,slow=35
comp=Z,43nm,0.9s
SFJD Kangerlussuaq 88.19 8 P **P** **05 53 17.6 0.0**
SFJD pmax pmax
comp=Z,61nm,1.0s
SFJD Kangerlussuaq 88.19 8 P **P** **05 53 17.6 0.0**
SFJD Kangerlussuaq 88.19 8 *i*P **P** **05 53 17.3 -0.3**
SFJD IAmb IAmb 05 53 18.0
comp=Z,73nm,1.1s
XMAS Kiritimati 88.29 273 P **P** **05 53 21.6 +2.2**
XMAS Kiritimati 88.29 273 P **P** **05 53 21.2 +1.9**
XMAS pP **pP** **05 53 41.3 +1.8**
VAL Valentia 88.72 32 P **P** **05 53 19.7 -0.7**
LEPH Lephalale, Lim 88.76 115 *e*P **P** **05 53 22.3 +0.7**
ANGG Ammassalik, Gr 89.08 13 *i*P **P** **05 53 22.4 +0.6**
ANGG IAmb IAmb 05 53 23.2
comp=Z,207nm,1.0s
YKA Yellowknife Ar 89.67 341 P **P** **05 53 24.6 -0.1**
comp=Z,362nm,0.9s,baz=138,slow=4.8,SNR=1774
YKA S S 06 03 57.0 -13
comp=Z,1.0nm,1.1s,baz=297,slow=12,SNR=3.6
YKA PKKP **PKKPdf** **06 10 57.7 +0.9**
comp=Z,1.1nm,1.1s,baz=302,slow=2.4,SNR=4.7
YKA LR LR 06 36 00.5
comp=Z,719nm,21.1s,baz=202,slow=37
IGLA Glengowla, Co 90.01 31 P **P** **05 53 26.1 -0.3**
IGLA Glengowla, Co 90.01 31 *e*P **P** **05 53 25.4 -1.0**
IGLA IAmb IAmb 05 53 27.2
comp=Z,22nm,0.8s
ILULI Ilulissat 90.25 7 *i*P **P** **05 53 27.2 0.0**
ILULI IAmb IAmb 05 53 28.5
comp=Z,243nm,1.3s
RUBB Prince Rupert 90.34 329 P **P** **05 53 28.5 +0.5**
RUBB IAmb IAmb 05 53 29.8
comp=Z,340nm,1.6s
MATP Matopo 90.63 112 LR LR 06 31 42.2
comp=Z,2μm,18.9s,baz=219,slow=34
IWEX Carrickbyrne, 90.73 33 P **P** **05 53 30.2 +0.4**
PILG Pilgrimsrest, 90.82 117 *e*P **P** **05 53 32.5 +1.2**
U35K Hyder 91.16 331 P **P** **05 53 31.4 -0.3**
baz=126
KOTAN Kotaneelee Air 91.26 336 P **P** **05 53 32.6 +0.5**
baz=131
DSB Dublin 91.40 33 P **P** **05 53 32.2 -0.8**
DSB Dublin 91.40 33 P **P** **05 53 32.7 -0.3**
TEMBE Tembe Elephant 91.42 119 *e*P **P** **05 53 36.5 +2.7**
NIAQ Niaqornat 91.52 5 *i*P **P** **05 53 33.7 +0.7**
NIAQ IAmb IAmb 05 53 35.3
comp=Z,234nm,1.1s
V35K Ketchikan 91.56 330 P **P** **05 53 33.8 +0.2**
baz=124,SNR=10
RSBS Rosebush, Pemb 91.56 34 *e*P **P** **05 53 32.1 -1.7**
RSBS IAmb IAmb 05 53 34.0
comp=Z,12nm,0.7s
LIRD Liard River Hi 91.59 335 P **P** **05 53 33.8 +0.1**
baz=129
SAATT Saattut 91.73 6 *i*P **P** **05 53 34.5 +0.5**
SAATT IAmb IAmb 05 53 35.6
comp=Z,141nm,1.0s
IDGL Inch Island, C 91.85 31 P **P** **05 53 34.8 -0.1**
ILTH Belurgan, Co L 91.85 32 P **P** **05 53 34.6 -0.4**
ILTH Belurgan, Co L 91.85 32 *e*P **P** **05 53 34.0 -1.0**
ILTH IAmb IAmb 05 53 35.8
comp=Z,22nm,0.8s
T35M Bob Quinn 91.88 332 P **P** **05 53 35.8 +0.7**
baz=126,SNR=20
MOPA Mopani 91.95 116 *e*P **P** **05 53 38.2 +1.9**
STCH Steam Cracks 92.18 290 P **P** **05 53 36.6 -0.9**
PWH Poliokeawe Pal 92.23 290 P **P** **05 53 36.8 -0.8**
LSZ Lusaka 92.25 107 LR LR 06 33 46.1
comp=Z,2μm,18.6s,baz=230,slow=35
LSZ Lusaka 92.25 107 *e*P **P** **05 53 40.1 +2.1**
NUUG Nuugaatsiaq 92.28 5 *i*P **P** **05 53 37.4 +0.8**
NUUG IAmb IAmb 05 53 38.6
comp=Z,166nm,1.1s
BYL Byron's Ledge 92.31 290 P **P** **05 53 38.5 +0.4**
BYL IAmb IAmb 05 53 39.9
comp=Z,161nm,1.0s
CRAG Craig 92.35 329 P **P** **05 53 37.6 +0.3**
CRAG Craig 92.35 329 P **P** **05 53 36.9 -0.4**
baz=123
MCH1 Michaelchurch 92.51 35 *e*P **P** **05 53 37.3 -0.8**
MCH1 IAmb IAmb 05 53 38.3
comp=Z,7.9nm,0.7s
WRAK Wrangell Islan 92.51 330 P **P** **05 53 38.0 0.0**
baz=124,SNR=9.7
MONM Monmouth 92.53 35 *e*P **P** **05 53 37.1 -1.1**
MONM IAmb IAmb 05 53 38.7
comp=Z,14nm,0.8s
BORG Borgarnes 92.58 19 P **P** **05 53 39.3 +1.2**
comp=Z,68nm,0.7s,baz=185,slow=2.2,SNR=20
comp=Z,68nm,0.7s
DLBC Dease Lake 92.63 333 P **P** **05 53 39.0 +0.4**
baz=126,SNR=58
POHA Pohakuloa 92.67 290 P **P** **05 53 40.7 +0.8**
U33K Whale Pass 92.70 330 P **P** **05 53 39.2 +0.3**
U33K IAmb IAmb 05 53 40.3
comp=Z,124nm,1.2s
U33K Whale Pass 92.70 330 P **P** **05 53 38.7 -0.1**
baz=123,SNR=9.5
S34M Telegraph Cree 92.80 332 P **P** **05 53 39.5 +0.1**
S34M IAmb IAmb 05 53 41.3
comp=Z,108nm,1.1s
S34M Telegraph Cree 92.80 332 P **P** **05 53 40.0 +0.7**
baz=125,SNR=25
HLM1 Long Mynd 92.83 34 *e*P **P** **05 53 38.3 -1.3**
HLM1 IAmb IAmb 05 53 39.7
comp=Z,8.4nm,0.7s
FOEL Foel Wylfa 92.85 34 *e*P **P** **05 53 38.2 -1.5**
FOEL IAmb IAmb 05 53 39.8
comp=Z,9.0nm,0.8s
IOMK Kirk Michael 92.85 32 *e*P **P** **05 53 38.4 -1.3**
IOMK IAmb IAmb 05 53 40.2
comp=Z,14nm,0.7s
T33K Petersburg 93.01 331 P **P** **05 53 40.4 +0.2**
baz=123
WRGLY Wrigley 93.07 339 P **P** **05 53 40.5 +0.1**
baz=131
GAL1 Galloway 93.10 32 *e*P **P** **05 53 39.7 -1.0**

GAL1 lAmb lAmb 05 53 41.1
comp=Z,26nm,0.6s
WTLY Watson Lake, Y 93.10 335 P **P** **05 53 41.2 +0.5**
baz=127
UPNV Upernavik 93.27 4 *i* P **P** **05 53 41.7 +0.6**
UPNV lAmb lAmb 05 53 42.6
comp=Z,171nm,1.2s
KEST Kesra 93.38 53 P **P** **05 53 42.9 +0.2**
comp=Z,7.1nm,0.9s,baz=286,slow=7.8,SNR=4.9
KEST LR LR 06 35 33.2
comp=Z,3µm,21.0s,baz=254,slow=36
comp=Z,7.1nm,0.9s
KEST Kesra 93.38 53 P **P** **05 53 42.6 -0.1**
NEWG New Galloway 93.46 32 *e*P **P** **05 53 41.2 -1.2**
NEWG lAmb lAmb 05 53 43.2
comp=Z,19nm,0.9s
R33M Jennings River 93.58 333 P **P** **05 53 43.5 +0.4**
baz=125
KESW Keswick, Cumbr 93.76 32 *e*P **P** **05 53 43.3 -0.5**
KESW lAmb lAmb 05 53 45.3
comp=Z,31nm,0.9s
Q32M Nakina River 93.89 333 P **P** **05 53 44.9 +0.3**
baz=124,SNR=18
KPL Plockton 93.95 29 *e*P **P** **05 53 43.4 -1.2**
KPL lAmb lAmb 05 53 44.8
comp=Z,14nm,0.7s
EKA Eskdalemuir Ar 94.10 32 P **P** **05 53 44.7 -0.7**
comp=Z,8.6nm,0.8s,baz=244,slow=5.8,SNR=20
EKA PKKPbc **PKKPdf** **06 10 48.5 0.0**
comp=Z,1.6nm,0.8s,baz=54,slow=4.7,SNR=5.4
comp=Z,8.6nm,0.8s
S32K Killisnoo 94.11 331 P **P** **05 53 45.7 +0.4**
S32K Killisnoo 94.11 331 P **P** **05 53 45.5 +0.2**
baz=122,SNR=6.7
INVG Invergeldie, C 94.23 31 *e*P **P** **05 53 44.5 -1.4**
INVG lAmb lAmb 05 53 46.2
comp=Z,7.4nm,0.7s
SIT Sitka 94.24 330 P **P** **05 53 45.4 -0.5**
baz=121
BKZ Black Stump Fm 94.27 226 P **P** **05 53 49.7 +2.9**
MQZ McQueen's Vall 94.34 220 P **P** **05 53 47.8 +0.9**
MQZ lAmb lAmb 05 53 50.5
comp=Z,125nm,1.3s
JIS Juneau Island 94.45 331 P **P** **05 53 47.2 +0.4**
EDMD Edmundbyers 94.45 33 *e*P **P** **05 53 46.7 -0.3**
EDMD lAmb lAmb 05 53 47.9
comp=Z,17nm,0.9s
R32K Eaglecrest 94.51 331 P **P** **05 53 48.0 +0.8**
R32K lAmb lAmb 05 53 48.9
comp=Z,53nm,0.9s
R32K Eaglecrest 94.51 331 P **P** **05 53 47.9 +0.8**
baz=122,SNR=21
P33M Teslin, Yukon 94.81 334 P **P** **05 53 49.0 +0.3**
baz=123
VSL Villasalto 94.83 50 P **P** **05 53 49.4 +0.2**
P32M Atlin 94.86 333 P **P** **05 53 49.1 +0.3**
baz=122,SNR=18
RAO Raoul Island 94.87 237 LR LR 06 25 35.0
comp=Z,1µm,21.5s,baz=119,slow=28
OXZ Oxford 94.92 220 P **P** **05 53 50.7 +1.0**
OXZ lAmb lAmb 05 53 53.3
comp=Z,169nm,1.5s
KULLO Kullorsuaq 94.97 3 *i* P **P** **05 53 48.9 0.0**
KULLO lAmb lAmb 05 53 50.1
comp=Z,75nm,1.0s
SUMG Summit 95.00 9 P **P** **05 53 50.1 +0.4**
SUMG Summit 95.00 9 P **P** **05 53 49.9 +0.3**
SUMG pmax pmax
comp=Z,217nm,1.5s
SUMG Summit 95.00 9 P **P** **05 53 49.9 +0.3**
SUMG lAmb lAmb 05 53 51.7
comp=Z,217nm,1.5s
SUMG Summit 95.00 9 *i* P **P** **05 53 50.0 +0.4**
SUMG lAmb lAmb 05 53 51.4
comp=Z,213nm,1.5s
LTZ Lake Taylor 95.08 221 P **P** **05 53 52.1 +1.7**
LTZ lAmb lAmb 05 53 54.2
comp=Z,178nm,1.1s
S31K Pelican 95.12 331 P **P** **05 53 50.0 0.0**
baz=120,SNR=5.6
KIP Kipapa 95.42 291 *c*eP **P** **05 53 51.9 -0.3**
KIP pmax pmax
comp=Z,38nm,1.2s
N32M Quiet Lake 95.43 334 P **P** **05 53 51.7 +0.3**
baz=123
SKAG Skagway 95.49 332 P **P** **05 53 52.0 +0.4**
baz=121
MMPY Sheldon Lake, 95.53 336 P **P** **05 53 52.0 +0.2**
baz=124
DOU Dourbes 95.90 39 *d*P **P** **05 53 53.1 -0.6**
WHY Whitehorse 95.92 333 P **P** **05 53 53.6 -0.1**
baz=121,SNR=8.6
PLBC Pleasant Camp 95.94 332 P **P** **05 53 54.2 +0.6**
baz=120,SNR=22
SENIN Lac Senin/Sane 96.05 43 P **P** **05 53 57.6 +2.7**
BMRD Maredsous 96.08 38 *d*P **P** **05 53 54.4 -0.2**
comp=Z,11nm,0.9s
RCHB Rochefort 96.29 39 *d*P **P** **05 53 54.5 -1.0**
BGES Gesves 96.31 38 *d*P **P** **05 53 55.3 -0.2**
comp=Z,9.0nm,0.9s
JCZ Jackson Bay 96.43 218 P **P** **05 53 58.9 +2.3**
O30N Mendenhall 96.48 333 P **P** **05 53 56.3 0.0**
baz=120,SNR=11
M31M Drury Creek, Y 96.52 335 P **P** **05 53 56.2 -0.1**
baz=122
P30M Million Dollar 96.53 332 P **P** **05 53 56.4 -0.1**
baz=120
TULEG Thule 96.58 0 *i* P **P** **05 53 56.6 +0.4**
TULEG lAmb lAmb 05 53 57.5
comp=Z,111nm,1.2s
P29M Windy Craggy 96.64 332 P **P** **05 53 56.5 -0.4**
baz=119,SNR=14
WLF Walferdange 96.64 39 P **P** **05 53 55.9 -1.2**
WLF Walferdange 96.64 39 *d*P **P** **05 53 57.6 +0.5**
comp=Z,22nm,1.0s
WLF Walferdange 96.64 39 *e*Pdiff **P** **05 53 57.8 +0.7**
baz=254,slow=4.5
ECH Echery 96.69 41 P **P** **05 53 56.4 -1.0**
ECH pmax pmax
comp=Z,20nm,1.1s
ECH Echery 96.69 41 P **P** **05 53 56.4 -1.0**
N31M Braeburn, Yuko 96.72 334 P **P** **05 53 57.4 +0.2**
baz=121,SNR=9.9
BHOU Houvegnez 96.83 39 *d*P **P** **05 53 57.9 -0.1**
comp=Z,9.7nm,0.9s
MEM Membach 96.94 39 *d*P **P** **05 53 57.6 -0.8**
comp=Z,7.7nm,1.0s
HYT Haines Junctio 97.11 333 P **P** **05 53 59.1 -0.1**
baz=119,SNR=9.5
N30M Aishikik Lake 97.25 334 P Pdif 05 53 59.9 +0.1
baz=120
C36M Paulatuk 97.25 343 P **P** **05 53 57.9 -1.5**
baz=130
O29M Mount Kennedy 97.33 332 P **P** **05 53 59.7 -0.5**
baz=118,SNR=5.0
TUE Stuetta 97.41 43 P **P** **05 54 00.9 0.0**
YUK6 Outpost Mounta 97.54 333 P **P** **05 54 00.9 -0.3**
baz=118,SNR=9.9
M30M Minto, Yukon 97.68 335 P **P** **05 54 01.0 -0.5**
baz=120
ZCCA Zocca 97.72 46 P Pdif 05 54 02.8 +0.6
ZCCA lAmb lAmb 05 54 18.3
comp=Z,36nm,0.7s
VAE Valguarnera 97.81 53 LR LR 06 40 14.7
comp=Z,2µm,19.1s,baz=302,slow=37
YUK4 Talbot Arm 97.85 333 P **P** **05 54 02.6 0.0**
baz=118
DAVOX Davos/Dischmat 97.86 43 LR LR 06 34 33.3
comp=Z,1µm,22.0s,baz=234,slow=33
SALO Salr 97.86 44 P **P** **05 54 02.5 -0.3**
SALO lAmb lAmb 05 54 18.5
comp=Z,34nm,0.7s
PINM Pinnacle 97.97 332 P **P** **05 54 02.6 -0.3**
baz=117,SNR=7.8
BUG Bochum--Univer 97.99 38 *e*Pdiff Pdif 05 54 03.8 +0.6
baz=254,slow=4.5
BRWY Burwash Landin 98.03 333 P **P** **05 54 03.0 -0.2**
baz=118
DAVA Damuels 98.04 43 *i* Pdiff Pdif 05 54 06.7 +3.0
comp=Z,15nm,1.0s
DAVA *e*PP **PP** **05 57 58.8 -5.0**
comp=Z,16nm,1.6s
FUORN Ofenpass-Fuorn 98.05 43 P **P** **05 54 03.2 -0.7**
NEEM North Greenlan 98.14 4 *i* P Pdif 05 54 03.9 +0.2
TNS Taunus Mts 98.23 39 *e*Pdiff **P** **05 54 04.1 -0.2**
baz=254,slow=4.5
O28M Mount Upton 98.25 332 P **P** **05 54 04.2 -0.3**
baz=117,SNR=9.1
M29M Somme Creek 98.29 334 P **P** **05 54 04.3 -0.1**
baz=118,SNR=7.7
YUK8 Steele Glacier 98.30 333 P **P** **05 54 04.4 -0.2**
baz=117,SNR=6.8
H31M Peel River 98.39 338 P **P** **05 54 04.3 -0.3**
H31M lAmb lAmb 05 54 05.6
comp=Z,47nm,0.9s
H31M Peel River 98.39 338 P **P** **05 54 04.2 -0.5**
baz=121,SNR=30
MURB Monte Urbino 98.39 47 P **P** **05 54 04.2 -1.1**
L29M L29M 98.47 335 P **P** **05 54 05.0 -0.1**
baz=118,SNR=13
J30M Hart River 98.49 336 P Pdif 05 54 05.5 +0.2
baz=120,SNR=15
FETA Feichten 98.49 43 *i* Pdiff Pdif 05 54 06.8 +1.1
comp=Z,23nm,1.3s
FETA *e*PP **PP** **05 58 06.2 -1.1**
comp=Z,18nm,1.3s
KASTN Kahler Asten 98.57 39 *e*Pdiff **P** **05 54 05.7 -0.2**
baz=254,slow=4.5
K29M Barlow Dome 98.58 336 P **P** **05 54 05.5 -0.2**
baz=119,SNR=16
IBBN Ibbenburen 98.60 37 *e*Pdiff **P** **05 54 05.0 -0.8**
baz=254,slow=4.5
LOGN Logan Glacier 98.63 332 P **P** **05 54 05.8 -0.3**
NRCA Norcia 98.66 48 P **P** **05 54 05.7 -0.7**
RETA Reutte 98.67 43 *i* Pdiff Pdif 05 54 08.5 +2.1
comp=Z,6.7nm,0.7s
RETA *e*PP **PP** **05 58 01.8 -6.8**
comp=Z,26nm,1.5s
YUK3 Moose Creek 98.82 333 P **P** **05 54 06.7 -0.2**
baz=117,SNR=14
I30M Mount Dempster 98.83 337 P **P** **05 54 06.6 -0.1**
baz=120,SNR=50
MOTA Moosalm 98.84 43 *i* Pdiff Pdif 05 54 09.0 +1.7
comp=Z,25nm,1.2s
MOTA *e*PP **PP** **05 58 02.7 -7.2**
comp=Z,21nm,1.6s
SQTA Sankt Quirin 98.87 43 *i* Pdiff Pdif 05 54 07.7 +0.4
comp=Z,31nm,0.7s
SQTA *e*PP **PP** **05 58 05.1 -5.0**
comp=Z,22nm,1.4s
INTR Introdacqua 98.94 49 P **P** **05 54 06.8 -1.0**
G31M Satah River 98.94 339 P **P** **05 54 06.5 -0.5**
baz=121,SNR=24
F31M Tsiigehtchic 99.04 339 P **Pdif** **05 54 07.2 -0.3**
baz=122,SNR=32
WATA Walderalm 99.14 43 *i* Pdiff **Pdif** **05 54 09.3 +0.7**
comp=Z,32nm,1.2s
WATA *e*PP **PP** **05 58 04.7 -7.5**
comp=Z,4.8nm,0.8s
J29N Klondike Camp 99.14 336 P **Pdif** **05 54 08.2 +0.1**
baz=118
WTTA Wattenberg 99.16 43 *i* Pdiff **Pdif** **05 54 09.3 +0.6**
comp=Z,37nm,0.8s
WTTA *e*PP **PP** **05 58 04.9 -7.4**
comp=Z,9.4nm,1.2s
A36M Sachs Harbour 99.23 345 P **Pdif** **05 54 07.7 -0.6**
baz=129
BVCY Beaver Creek 99.27 334 P **Pdif** **05 54 08.5 -0.2**
baz=116
DAWY Dawson 99.42 335 P **Pdif** **05 54 08.5 -0.8**
baz=117,SNR=7.1
INK Inuvik 99.42 340 LR LR 06 42 04.0
comp=Z,1µm,22.0s,baz=118,slow=37
INK Inuvik 99.42 340 P **Pdif** **05 54 08.8 -0.4**
baz=122,SNR=46
EPYK Eagle Plains 99.51 338 P **Pdif** **05 54 09.2 -0.5**
baz=119,SNR=12
CRQE Cirque 99.53 332 P **Pdif** **05 54 09.5 -0.5**
baz=114,SNR=7.2
ABTA Abfaltersbach 99.55 44 *i* Pdiff **Pdif** **05 54 10.8 +0.5**
comp=Z,23nm,1.0s,SNR=5.1
ABTA *e*PP **PP** **05 58 12.5 -2.7**
comp=Z,16nm,1.3s
G30M tAoh Zraii Nji 99.64 339 P **Pdif** **05 54 09.4 -0.8**
baz=120,SNR=5.3
RETH Rethem/Aller, 99.67 37 *e*Pdiff **Pdif** **05 54 10.6 0.0**
baz=254,slow=4.5
M27K Edge Creek, AK 99.68 333 P **Pdif** **05 54 10.2 -0.5**
baz=115,SNR=16
GRF Grafenberg Arr 99.72 41 *e*L L 06 35 19.5
comp=Z,1µm,21.2s
MCARA McCarthy VSAT 99.76 332 P **Pdif** **05 54 10.5 -0.3**
baz=114,SNR=13
KAIM Kayak Island 99.80 331 P **Pdif** **05 54 11.0 0.0**
baz=114
F30M Barrier River 99.80 339 P **Pdif** **05 54 10.6 -0.3**
baz=120,SNR=26
LESA Schwarzleotal 99.88 43 *i* Pdiff **Pdif** **05 54 12.9 +1.1**
comp=Z,24nm,0.8s,SNR=10
LESA *e*PP **PP** **05 58 18.2 +0.5**
comp=Z,18nm,1.4s
MBAR Mbarara 99.88 94 LR LR 06 37 04.0
comp=Z,3µm,20.5s,baz=248,slow=34
CLZ Clausthal 99.94 38 *e*Pdiff **Pdif** **05 54 12.3 +0.4**
baz=254,slow=4.5
L27K Beaver Creek, 99.95 334 P **Pdif** **05 54 11.3 -0.4**
baz=115,SNR=11
H29M Whitestone 100.03 337 P **Pdif** **05 54 11.5 -0.4**
baz=118,SNR=18
M26K Nabesna, AK 100.17 333 P **Pdif** **05 54 11.5 -1.2**
baz=114,SNR=7.6
CADS Cadrg 100.18 45 *e*Pdiff **Pdif** **05 54 16.1 +3.0**
CADS *i* pPdiff **pPdif** **05 54 28.6 -5.0**
CADS *e*PP **PP** **05 58 17.2 -2.8**
CADS *i* SKSac **SKSac** **06 04 46.4 +1.0**
CADS *e*SP SP 06 07 08.8 -2.6
KBA Koelnbreinsper 100.19 44 *i* Pdiff **Pdif** **05 54 14.6 +1.2**
comp=Z,15nm,0.6s,SNR=5.3
KBA *e*PP **PP** **05 58 14.1 -6.2**
comp=Z,20nm,1.4s
ASSE Asse, Remlinge 100.21 38 *e*Pdiff **Pdif** **05 54 14.0 +1.0**
baz=254,slow=4.5
G29M Pine Creek 100.23 338 P **Pdif** **05 54 12.4 -0.5**
baz=118,SNR=16
MYKA Terra Mystica 100.25 44 *i* Pdiff **Pdif** **05 54 14.7 +1.3**
comp=Z,26nm,0.7s,SNR=7.7
MYKA *e*PP **PP** **05 58 17.4 -3.1**
comp=Z,28nm,1.2s
I28M Miner Creek 100.25 336 P **Pdif** **05 54 12.5 -0.6**
baz=116,SNR=18
MOX Moxa 100.27 40 *e*Pdiff **Pdif** **05 54 13.6 +0.3**
baz=254,slow=4.5
MOX *e*L L 06 35 37.7
comp=Z,2µm,21.2s
BMRM Bremner River 100.29 331 P **Pdif** **05 54 12.5 -0.8**
baz=113
N25K Chitina, Valde 100.54 332 P **Pdif** **05 54 14.0 -0.4**
baz=113
PLN Plauen 100.55 40 *e*Pdiff **Pdif** **05 54 15.5 +0.9**
baz=254,slow=4.5
L26K Log Cabin Wild 100.57 334 P **Pdif** **05 54 13.8 -0.7**
baz=114,SNR=11
BIOA Bad Ischl, Aus 100.58 43 *i* Pdiff **Pdif** **05 54 16.9 +2.0**
comp=Z,19nm,1.2s
BIOA *e*PP **PP** **05 58 22.5 -0.5**
comp=Z,3.7nm,0.5s
NKC Novy Kostel 100.64 40 AMS AMS 06 35 40.0
comp=Z,1µm,20.4s
LJU Ljubljana 100.64 45 *i* pPdiff **pPdif** **05 54 30.8 -4.9**
LJU *e*PP **PP** **05 58 21.2 -2.2**
LJU *e*SKSac **SKSac** **06 04 48.7 +1.1**
EYAK Cordova Ski Ar 100.65 331 P **Pdif** **05 54 14.0 -0.8**
baz=112
MENT Mentasta 100.69 333 P **Pdif** **05 54 14.2 -0.8**
TANN Tannenbergstha 100.71 40 *e*Pdiff **Pdif** **05 54 16.0 +0.6**
baz=254,slow=4.5
OBKA Obir 100.80 44 *i* Pdiff **Pdif** **05 54 16.8 +0.8**
comp=Z,27nm,0.7s,SNR=10.0
OBKA *e*PP **PP** **05 58 22.0 -2.8**
comp=Z,24nm,1.4s
E29M Blow River 100.88 340 P **Pdif** **05 54 15.3 -0.4**
baz=118,SNR=31
I27K Kandik River 100.95 336 P **Pdif** **05 54 15.7 -0.4**
baz=115,SNR=14
GERES GERESS Array B 100.98 42 P **Pdif** **05 54 16.6 -0.1**
comp=Z,0.7nm,0.6s,baz=250,slow=5.0,SNR=4.5
GERES PKKPbc **PKKPbc** **06 10 26.9 -3.0**
comp=Z,1.5nm,0.7s,baz=135,slow=0.9,SNR=8.9
KHC Kasperske Hory 100.99 42 *i* P **Pdif** **05 54 16.3 -0.4**
KHC pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 100.99 42 *e*pP pP 05 54 32.1 -5.2
KHC *e*SKS **SKSac** **06 04 50.7 +1.5**
KHC AMS AMS 06 37 30.0
comp=Z,1µm,23.1s
SESA Seetaler Alpe, 101.00 44 *i* Pdiff **Pdif** **05 54 18.2 +1.3**
SNR=9.7
MOA Molln 101.03 43 *i* Pdiff **Pdif** **05 54 18.3 +1.4**
comp=Z,10nm,0.9s
MOA *e*PP **PP** **05 58 19.9 -6.5**
comp=Z,17nm,1.3s
KLU Klutina 101.08 332 P **Pdif** **05 54 16.3 -0.6**
baz=112,SNR=16
HARP HAARP 101.09 333 P **Pdif** **05 54 15.8 -0.9**
baz=112
SOKA Soboth 101.17 44 *i* Pdiff **Pdif** **05 54 17.6 0.0**
comp=Z,14nm,1.3s,SNR=6.1
SOKA *e*PP **PP** **05 58 27.4 -0.1**
comp=Z,17nm,1.4s
H27K Steamboat Moun 101.18 337 P **Pdif** **05 54 16.1 -1.1**
baz=115,SNR=14
F28M Old Crow 101.19 338 P **Pdif** **05 54 16.3 -0.7**
baz=116,SNR=12
P23K Montague Islan 101.21 330 P **Pdif** **05 54 16.0 -1.3**
baz=111
PERS Pernice 101.21 44 *i* pPdiff pPdif 05 54 33.1 -5.2
SCRK Sand Creek 101.21 334 P **Pdif** **05 54 16.8 -0.6**
baz=113,SNR=18
CLL Collm 101.32 39 *i* P **Pdif** **05 54 18.1 +0.1**
CLL *e* 05 58 27.0
CLL pmax pmax
comp=Z,14nm,1.5s
CLL Collm 101.32 39 *e*Pdiff **Pdif** **05 54 18.6 +0.6**
baz=254,slow=4.5
CLL Collm 101.32 39 *i* Pdif **Pdif** **05 54 18.1 +0.1**
comp=Z,14nm,1.5s
CLL *i* x x 05 54 33.4
CLL *ex* x 05 57 58.0
CLL *e*PP **PP** **05 58 27.0 -1.4**
CLL *i* PPmax 05 58 41.4
comp=Z,52nm,1.7s
CLL *e*SKSac **SKSac** **06 04 48.0 -2.6**
CLL *e*Sdif SKKSac 06 05 48.0 +21
CLL *e*PS PS 06 07 36.3 +3.2
CLL *e*PPS PPS 06 08 24.0
CLL *ex* x 06 09 30.0
CLL *ex* x 06 10 12.0
CLL *e*PKKPbc **PKKPbc** **06 10 28.0 -0.9**
CLL *i* pPKKPbc 06 10 51.7
comp=Z,26nm,1.7s
CLL *e*SS **SS** **06 12 54.0 0.0**
CLL *e*SSSS 06 20 06.0
CKRC Cesky Krumlov 101.35 42 *e*pP pP 05 54 34.0 -5.0
CKRC *e*SKS **SKSac** **06 04 53.0 +2.0**
CKRC AMS AMS 06 36 40.0
comp=Z,1µm,22.2s
HSKC Hora Svate Kat 101.36 40 *e*SKS **SKSac** **06 04 54.6 +3.7**
HSKC AMS AMS 06 35 30.0
comp=Z,1µm,21.5s
GLI Glacier Island 101.39 331 P **Pdif** **05 54 16.6 -1.5**
baz=111
M24K Tolsona, Glenn 101.42 332 P **Pdif** **05 54 18.1 -0.2**
baz=112,SNR=11
ZVC Zvikov 101.47 42 *e*pP pP 05 54 34.7 -4.8
ZVC *e*SKS **SKSac** **06 04 54.7 +3.3**
ZVC AMS AMS 06 35 30.0
comp=Z,1µm,26.5s
G27K Doyon Strip 101.47 337 P **Pdif** **05 54 17.5 -0.9**
baz=115,SNR=9.6
RIDG Independent Ri 101.47 334 P **Pdif** **05 54 18.0 -0.4**
baz=112,SNR=14
E28M Babbage River 101.51 339 P **Pdif** **05 54 17.4 -1.1**
baz=116,SNR=7.3
DAG Danmarks Havn 101.53 11 *i* P **Pdif** **05 54 18.1 -0.3**
D28M Stokes Point 101.58 340 P **Pdif** **05 54 18.7 -0.1**
baz=117
ARSA Arzberg 101.66 44 *i* Pdiff **Pdif** **05 54 20.9 +1.2**
comp=Z,6.2nm,0.7s
ARSA *e*PP **PP** **05 58 26.1 -5.1**
comp=Z,4.4nm,0.8s
RICC Richard 101.74 40 AMS AMS 06 37 10.0
comp=Z,1µm,22.0s
BRG Berggiesshubel 101.75 40 SP SP 06 07 28.0 +0.1
BRG PKKP 06 10 25.8
BRG Amp 06 10 27.7
comp=Z,6.1nm,1.0s
BRG Berggiesshubel 101.75 40 SS SS 06 12 59.0 -1.0
SCM Sheep Creek Mo 101.83 332 P **Pdif** **05 54 19.2 -0.9**
baz=111,SNR=5.3
PRU Pruhonice 101.85 41 *e*pP pP 05 54 36.5 -4.7
PRU *e*SKS **SKSac** **06 04 53.7 +0.5**
PRU AMS AMS 06 42 40.0
comp=Z,1µm,18.4s
K24K Donnelly Dome 101.88 334 P **Pdif** **05 54 19.7 -0.6**
baz=112
PWL Port Wells 101.95 331 P **Pdif** **05 54 20.1 -0.5**
baz=110
M23K Glacier View 102.00 332 P **Pdif** **05 54 20.2 -0.6**
baz=110
J25K Salcha River, 102.02 335 P **Pdif** **05 54 20.5 -0.4**
baz=112,SNR=24
E27K Coleen River 102.02 339 P **Pdif** **05 54 20.6 -0.2**
baz=114,SNR=5.6
CONA Conrad Observa 102.08 43 *i* Pdiff **Pdif** **05 54 23.6 +2.0**
comp=Z,7.3nm,0.9s
CONA *e*PP **PP** **05 58 28.5 -5.9**
comp=Z,11nm,1.7s
KNK Knik Glacier 102.19 331 P **Pdif** **05 54 21.0 -0.7**
baz=110
SEW Seward 102.22 330 P **Pdif** **05 54 20.8 -1.0**
baz=109
D27M Malcolm River 102.25 340 P **Pdif** **05 54 21.9 0.0**
baz=115
SML Sawmill 102.27 332 P **Pdif** **05 54 21.3 -0.8**
baz=110
WAT6 Susitna Watana 102.28 332 P **Pdif** **05 54 21.3 -0.9**
baz=110,SNR=21
DHY Denali Highway 102.29 333 P **Pdif** **05 54 21.5 -0.8**
baz=110,SNR=7.9
RONA Rosalia, Austr 102.29 44 *i* Pdiff **Pdif** **05 54 24.3 +1.8**
comp=Z,6.9nm,0.8s
RONA *e*PP **PP** **05 58 34.2 -1.7**
comp=Z,15nm,1.3s
G26K Porcupine Rive 102.30 337 P **Pdif** **05 54 21.7 -0.3**
baz=113
PRP Porcupine Dome 102.41 336 P **Pdif** **05 54 22.3 -0.4**
baz=112,SNR=25
PMR Palmer 102.56 331 P **Pdif** **05 54 22.6 -0.6**
PMR Palmer 102.56 331 P **Pdif** **05 54 22.8 -0.4**
baz=109
HDA Harding Lake 102.58 334 P **Pdif** **05 54 22.4 -0.9**
baz=110,SNR=8.8
RC01 Rabbit Creek A 102.67 331 P **Pdif** **05 54 23.0 -0.8**
baz=109
ILAR Eielson Array 102.68 335 P **Pdif** **05 54 22.7 -1.1**
comp=Z,3.6nm,0.9s,baz=148,slow=4.0,SNR=27
ILAR PP PP 05 58 28.3 -10
comp=Z,5.8nm,1.0s,baz=110,slow=7.0,SNR=6.7
ILAR PKKPbc **PKKPbc** **06 10 22.1 -3.2**
comp=Z,1.7nm,1.0s,baz=290,slow=4.7,SNR=5.8
F26K Sheenjek River 102.71 338 P **Pdif** **05 54 24.1 +0.2**
baz=112,SNR=7.9
WAT1 Susitna Watana 102.71 333 P **Pdif** **05 54 22.9 -1.1**
baz=110
BRSE Bradley Lake S 102.72 329 P **Pdif** **05 54 23.3 -0.7**
baz=106
UPC Upice 102.90 41 AMS AMS 06 42 20.0
comp=Z,900nm,21.0s
CHVC Chvalec 102.95 41 AMS AMS 06 42 40.0
comp=Z,800nm,20.2s
POKR Poker Plat Res 103.02 335 P **Pdif** **05 54 25.1 -0.2**
baz=110
KDAK Kodiak Island 103.03 327 *i* P **Pdif** **05 54 25.0 -0.4**
KDAK pmax pmax
comp=Z,22nm,1.3s
KDAK Kodiak Island 103.03 327 P **Pdif** **05 54 24.7 -0.7**
baz=107
OSTC Ostas 103.04 41 *e*SKS **SKSac** **06 05 01.3 +2.4**
OSTC AMS AMS 06 42 30.0
comp=Z,700nm,19.2s
M22K Willow 103.06 331 P **Pdif** **05 54 25.1 -0.4**
baz=108
G25K Bearman Lake 103.08 337 P **Pdif** **05 54 25.9 +0.5**
baz=111,SNR=18
COLA College 103.10 335 P **Pdif** **05 54 25.1 -0.5**
COLA College 103.10 335 P **Pdif** **05 54 25.0 -0.5**
baz=110
MCK McKinley 103.17 333 P **Pdif** **05 54 25.5 -0.5**
baz=109,SNR=5.4
F25K Christian Rive 103.21 338 P **Pdif** **05 54 26.5 +0.4**
baz=111,SNR=8.2
OHAK Old Harbor 103.23 326 P **Pdif** **05 54 26.4 +0.1**

OHAK	Old Harbor	103.23	326	P		Pdif	05 54 25.7	-0.6	
	baz=107,SNR=6.4								
KRLC	Kraliky	103.26	41	*e*pP		Pdif	05 54 42.8	+16	
KRLC				AMS		AMS	06 37 10.0		
	comp=Z,1μm,19.9s								
C27K	Jago River	103.30	340	P		Pdif	05 54 26.7	+0.3	
	baz=112								
CUT	Chulitna	103.33	332	P		Pdif	05 54 26.0	-0.6	
	baz=108								
NB2	NORSAR Subarra	103.35	30	P		Pdif	05 54 27.6	+0.7	
	comp=Z,57nm,2.0s,baz=254,slow=4.1								
NB2				PP		PKiKP	05 59 00.2	+15	
	comp=Z,60nm,0.8s,baz=252,slow=7.9								
NB2				PKKP		PKKPbc	06 10 20.5	-2.8	
	comp=Z,1.5nm,0.8s,baz=77,slow=4.0								
NB2	NORSAR Subarra	103.35	30	PP		PKiKP	05 59 00.2	+15	
NOA	NORSAR Array B	103.35	30	Pdiff		Pdif	05 54 27.3	+0.5	
	comp=Z,3.4nm,1.1s,baz=253,slow=4.4,SNR=3.3								
NOA				PKKPbc		PKKPbc	06 10 21.1	-2.2	
	comp=Z,3.2nm,0.9s,baz=311,slow=17,SNR=6.5								
E25K	Arctic Village	103.37	338	P		Pdif	05 54 27.2	+0.4	
	baz=111,SNR=6.1								
H24K	Noodor Dome	103.44	336	P		Pdif	05 54 26.9	-0.2	
	baz=109,SNR=22								
NEA2	Nenana	103.51	334	P		Pdif	05 54 26.7	-0.7	
	baz=109,SNR=22								
SII	Sitkinak Islan	103.52	325	P		Pdif	05 54 26.9	-0.7	
	baz=106								
G24K	Hadweenzic Riv	103.57	336	P		Pdif	05 54 27.7	+0.1	
	baz=110,SNR=24								
L22K	Petersville	103.59	332	P		Pdif	05 54 27.2	-0.7	
	baz=108,SNR=9.6								
TRF	Thorofare Moun	103.66	333	P		Pdif	05 54 27.6	-0.7	
	baz=108,SNR=9.2								
O20K	Slope Mountain	103.72	329	P		Pdif	05 54 28.2	-0.4	
	baz=107								
MAUC	Maruska	103.73	42	*e*pP		Pdif	05 54 46.0	+17	
SKT	Skwentna	103.76	331	P		Pdif	05 54 27.9	-0.8	
	baz=107,SNR=21								
C26K	Camden Bay	103.80	340	P		Pdif	05 54 28.2	-0.4	
	baz=111								
I23K	Minto, Yukon-K	103.80	335	P		Pdif	05 54 28.2	-0.5	
	baz=108,SNR=9.0								
SPCR	Spurr Chakacha	103.85	330	P		Pdif	05 54 28.4	-0.7	
	baz=107								
P19K	Oil Pt	103.89	329	P		Pdif	05 54 29.0	-0.3	
	baz=106								
F24K	Squaw Lake	103.99	337	P		Pdif	05 54 29.8	+0.3	
	baz=109,SNR=8.2								
OKC	Ostrava-Krasne	104.05	42	*e*SKS		SKSac	06 05 04.5	+1.0	
OKC				AMS		AMS	06 38 20.0		
	comp=Z,800nm,18.2s								
D25K	Kavik River	104.07	339	P		Pdif	05 54 29.5	-0.4	
	baz=110								
H23K	Yukon River	104.08	335	P		Pdif	05 54 29.2	-0.8	
	baz=108								
HFS	Hagfors	104.27	31	Pdiff		Pdif	05 54 31.9	+1.0	
	comp=Z,2.4nm,0.9s,baz=256,slow=4.3,SNR=2.6								
HFS				PP		PKiKP	05 58 46.6	-0.6	
	comp=Z,7.3nm,1.1s,baz=249,slow=11,SNR=6.8								
HFS				PKKPbc		PKKPbc	06 10 18.6	-1.9	
	comp=Z,4.0nm,0.8s,baz=174,slow=4.3,SNR=6.7								
MLY	Manley	104.32	334	P		Pdif	05 54 30.4	-0.7	
	baz=107,SNR=10								
PPLA	Purkeypile	104.32	332	P		Pdif	05 54 30.8	-0.5	
	baz=106,SNR=9.2								
E24K	Your Creek	104.39	338	P		Pdif	05 54 31.4	0.0	
	baz=108								
CAST	Castle Rocks	104.42	333	P		Pdif	05 54 30.6	-0.9	
	baz=106,SNR=28								
M20K	Styx River	104.46	331	P		Pdif	05 54 30.7	-1.1	
	baz=106								
Q18K	Katmai Hardscr	104.51	327	P		Pdif	05 54 31.3	-0.8	
	baz=105,SNR=7.2								
G23K	Bananza Creek	104.53	336	P		Pdif	05 54 32.2	+0.2	
	baz=107,SNR=14								
O19K	Port Alsworth	104.57	329	P		Pdif	05 54 32.6	+0.4	
	baz=105								
CHUM	Lake Minchumin	104.65	333	P		Pdif	05 54 31.8	-0.7	
	baz=106								
COLD	Coldfoot	104.75	337	P		Pdif	05 54 33.4	+0.5	
	baz=107								
E23K	Chandalar	104.79	338	P		Pdif	05 54 33.2	+0.1	
	baz=107								
P18K	Big Mountain,	104.81	328	P		Pdif	05 54 31.9	-1.5	
	baz=105								
N19K	Bonanza Creek	104.81	330	P		Pdif	05 54 32.3	-1.1	
	baz=105								
H22K	Ishtalitna Cre	104.82	335	P		Pdif	05 54 32.5	-0.8	
	baz=106								
D24K	Happy Valley	104.84	339	P		Pdif	05 54 32.7	-0.6	
	baz=108								
Q17K	Contact Creek	104.86	327	P		Pdif	05 54 33.3	-0.4	
	baz=104,SNR=12								
I21K	Tanana	104.87	334	P		Pdif	05 54 32.3	-1.1	
	baz=106								
O18K	Koktuh Hills	104.91	329	P		Pdif	05 54 32.7	-1.1	
	baz=105								
TOLK	Toolik Lake Re	104.94	338	P		Pdif	05 54 33.2	-0.6	
	baz=107								
R17L	Mt. Peulik Vol	104.94	326	P		Pdif	05 54 33.5	-0.5	
	baz=104,SNR=5.4								
G22K	Bettles	105.16	336	P		Pdif	05 54 34.5	-0.2	
	baz=106								
K20K	Telida	105.27	332	P		Pdif	05 54 33.9	-1.4	
	baz=105,SNR=10								
L19K	White Mountain	105.33	331	P		Pdif	05 54 34.0	-1.6	
	baz=104,SNR=6.0								
H21K	Melozitna Rive	105.33	335	P		Pdif	05 54 34.2	-1.3	
	baz=105,SNR=6.5								
Q16K	King Salmon	105.35	327	P		Pdif	05 54 34.8	-0.9	
	baz=104								
P17K	Kvichak River	105.36	328	P		Pdif	05 54 35.3	-0.5	
	baz=104								
VOI	Vohitsoka	105.40	121	P		PKiKP	05 58 40.6	-10	
D23K	Nanushuk River	105.42	338	P		Pdif	05 54 35.7	-0.2	
	baz=106								
N18K	Kilae Creek	105.44	329	P		Pdif	05 54 35.0	-1.2	
	baz=104,SNR=5.9								
J20K	Nowinta River	105.50	333	P		Pdif	05 54 35.0	-1.3	
	baz=104								
F22K	John River	105.57	337	P		Pdif	05 54 36.1	-0.4	
	baz=105								
E22K	Anaktuvuk Pass	105.60	337	P		Pdif	05 54 36.4	-0.3	
	baz=105								
LODK	Lodwar	105.60	92	P		PKiKP	05 58 51.6	+0.5	
M18K	Stony River	105.61	330	P		Pdif	05 54 35.5	-1.3	
	baz=104								
C23K	Itkillik River	105.64	339	P		Pdif	05 54 36.9	+0.1	
	baz=106								
CHGN	Chignik	105.73	325	P		Pdif	05 54 37.0	-0.5	
	baz=103								
I20K	Naaghedeneel	105.80	334	P		Pdif	05 54 36.1	-1.4	
	baz=104								
G21K	Allakaket	105.82	336	P		Pdif	05 54 37.2	-0.5	
	baz=104,SNR=11								
O17K	Koliganek Bris	105.82	328	P		Pdif	05 54 37.1	-0.7	
	baz=103,SNR=5.8								
F21K	Alatna River	105.98	336	P		Pdif	05 54 38.4	-0.1	
	baz=104								
N17K	Nushagak Hills	106.03	329	P		Pdif	05 54 38.1	-0.6	
	baz=103								
CHNA	Chernabura Isl	106.06	323	P		Pdif	05 54 38.8	-0.1	
	baz=102								
J19K	Poorman	106.09	333	P		Pdif	05 54 38.2	-0.7	
	baz=103								
P16K	Nushagak River	106.11	327	P		Pdif	05 54 38.8	-0.3	
	baz=102								
H20K	Anotleneega Mo	106.12	334	P		Pdif	05 54 38.7	-0.4	
	baz=103,SNR=11								
L18K	Granite Mounta	106.17	331	P		Pdif	05 54 38.6	-0.7	
	baz=103								
O16K	Kokwok River B	106.28	328	P		Pdif	05 54 39.8	0.0	
	baz=102								
M17K	Holitna River	106.34	330	P		Pdif	05 54 39.9	-0.2	
	baz=102,SNR=5.1								
S14K	Fog Glacier	106.35	324	P		Pdif	05 54 39.8	-0.6	
	baz=102								
J18K	Innoko River	106.45	332	P		Pdif	05 54 40.9	+0.3	
	baz=102,SNR=9.5								
E21K	Killik River	106.45	337	P		Pdif	05 54 40.6	+0.1	
	baz=103								
SDPT	Sand Point	106.67	323	P		Pdif	05 54 41.1	-0.6	
	baz=102								
B22K	Teshekpuk Lake	106.70	339	P		Pdif	05 54 41.6	+0.2	
	baz=103								
H19K	Roundabout Mou	106.77	334	P		Pdif	05 54 41.7	-0.1	
	baz=102,SNR=11								
GCSA	Galena City Sc	106.79	333	P		Pdif	05 54 42.1	+0.1	
	baz=102								
N16K	Nishlik Lake	106.79	329	P		Pdif	05 54 41.6	-0.5	
	baz=102								
F20K	Avaraart Lake	106.80	336	P		Pdif	05 54 41.7	-0.3	
	baz=102								
L17K	Donlin	106.89	331	P		Pdif	05 54 42.2	-0.3	
	baz=101,SNR=5.1								
C21K	Knifeblade Rid	106.90	338	P		Pdif	05 54 42.4	0.0	
	baz=102								
B21K	Ikpikpuk River	106.94	339	P		Pdif	05 54 42.6	+0.1	
	baz=102								
M16K	Timber Creek	106.99	329	P		Pdif	05 54 42.9	0.0	
	baz=101								
K17K	Iditarod	107.01	331	P		Pdif	05 54 43.0	0.0	
	baz=101,SNR=6.3								
O15K	Ungalikthiuk R	107.06	327	P		Pdif	05 54 43.8	+0.5	
	baz=101								
G19K	Purcell Mounta	107.15	335	P		Pdif	05 54 43.6	0.0	
	baz=101,SNR=6.2								
E20K	Nigu River	107.22	337	P		Pdif	05 54 44.1	+0.2	
	baz=101,SNR=5.0								
A22K	Sinclair Lake	107.34	340	P		Pdif	05 54 44.7	+0.3	
	baz=102								
L16K	Owhat River	107.36	330	P		Pdif	05 54 44.6	+0.1	
	baz=100								
N15K	Kwethluk River	107.38	328	P		Pdif	05 54 45.1	+0.3	
	baz=100								
E19K	Redstone River	107.45	336	P		Pdif	05 54 44.3	-0.7	
	baz=101,SNR=5.6								
D20K	Etivluk River	107.46	338	P		Pdif	05 54 44.9	-0.1	
	baz=101								
J17K	VABM Dome	107.48	332	P		Pdif	05 54 45.9	+0.8	
	baz=100								
H18K	Honhosa River	107.48	334	P		Pdif	05 54 45.7	+0.6	
	baz=100,SNR=7.7								
F19K	Shaleruckik Mo	107.55	336	P		Pdif	05 54 45.0	-0.3	
	baz=100,SNR=6.0								
G18K	Tagagawik	107.73	334	P		Pdif	05 54 46.5	+0.3	
	baz=100,SNR=11								
M15K	Kasigluk River	107.76	329	P		Pdif	05 54 46.9	+0.5	
	baz=100								
O14K	Tigyukauivet M	107.80	327	P		Pdif	05 54 46.4	-0.3	
	baz=100								
B20K	Meade River	107.88	339	P		Pdif	05 54 46.5	-0.2	
	baz=100								
A21K	Barrow	107.93	340	P		Pdif	05 54 47.3	+0.4	
	baz=100								
D19K	Kuna River	107.96	337	P		Pdif	05 54 47.4	+0.1	
	baz=100								
H17K	Granite Mounta	108.10	333	P		Pdif	05 54 48.6	+0.7	
	baz=99								
N14K	Kuskokwak Cree	108.12	328	P		Pdif	05 54 48.3	+0.3	
	baz=99								
J16K	Anvik River	108.14	332	P		Pdif	05 54 48.5	+0.5	
	baz=99								
F18K	Selawik	108.25	335	P		Pdif	05 54 48.3	-0.1	
	baz=99,SNR=6.2								
I17K	Unalakleet	108.27	332	P		Pdif	05 54 49.1	+0.5	
	baz=99								
L15K	Ungalak Mounta	108.30	330	P		Pdif	05 54 49.5	+0.7	
	baz=99								
M14K	Bethel	108.39	329	P		Pdif	05 54 49.5	+0.4	
	baz=99								
K15K	Wolf Creek Mou	108.41	330	P		Pdif	05 54 49.4	+0.1	
	baz=98								
G17K	Kiwalik Mounta	108.49	334	P		Pdif	05 54 49.9	+0.3	
	baz=98								
C19K	Lookout Ridge	108.58	338	P		Pdif	05 54 51.2	+1.2	
	baz=98								
E18K	Tukpahlearik C	108.73	336	P		Pdif	05 54 50.1	-0.5	
	baz=98								
L14K	Kuka Creek	108.82	329	P		Pdif	05 54 50.9	-0.2	
	baz=98								
F17K	Baldwin Pennin	108.86	335	P		Pdif	05 54 51.3	+0.1	
	baz=97								
M13K	Dall Lake	109.02	328	P		Pdif	05 54 52.2	+0.3	
	baz=98								
H16K	Elim	109.04	333	P		Pdif	05 54 51.7	-0.3	
	baz=97								
C18K	Utukok River	109.11	337	P		Pdif	05 54 52.1	-0.2	
	baz=97								
E17K	Hotham Inlet	109.16	336	P		Pdif	05 54 52.7	+0.2	
	baz=97								
G16K	Koyuk River	109.18	334	P		Pdif	05 54 52.7	+0.1	
	baz=97								
A19K	Wainwright	109.23	339	P		Pdif	05 54 53.3	+0.5	
	baz=96								
J14K	Nanvaranak Lak	109.40	331	P		Pdif	05 54 54.0	+0.4	
	baz=97								
D17K	Noatak River	109.71	336	P		Pdif	05 54 55.3	+0.3	
	baz=95								
C17K	DeLong Mountai	109.81	337	P		Pdif	05 54 54.8	-0.7	
	baz=95								
K13K	Kusilvak Mount	109.82	330	P		Pdif	05 54 55.4	-0.1	
	baz=96								
G15K	Niukluk	109.85	333	P		Pdif	05 54 55.6	+0.1	
	baz=95								
UNV	Unalaska Valle	109.88	321	P		Pdif	05 54 57.6	+1.7	
	baz=95								
F15K	North Star Dit	110.16	334	P		Pdif	05 54 57.7	+0.6	
	baz=95								
ANM	Nome	110.38	333	P		Pdif	05 54 58.5	+0.5	
	baz=94								
FINES	FINESS Array B	110.47	31	PP		PP	05 59 34.2	-1.3	
	comp=Z,4.0nm,1.0s,baz=286,slow=6.9,SNR=4.7								
FINES				PKKPbc		PKKPbc	06 09 59.7	-1.2	
	comp=Z,4.2nm,0.9s,baz=108,slow=6.2,SNR=11								
VSU	Vasula	110.53	34	*c* iPKiKP		PKiKP	05 58 58.6	-0.3	
VSU				pmax		pmax			
	comp=Z,31nm,2.5s								
ARCES	ARCESS Array B	110.73	22	PP		PP	05 59 32.8	-4.3	
	comp=Z,3.8nm,1.0s,baz=269,slow=7.6,SNR=3.9								
ARCES				PKKPbc		PKKPbc	06 09 58.3	-2.0	
	comp=Z,6.3nm,1.0s,baz=103,slow=3.6,SNR=11								
MNK	Minsk	110.78	38	*i* P		Pdif	05 54 59.6	-0.4	
	comp=E,16nm,0.9s								
MNK				*i* P		Pdif	05 54 59.6	-0.4	
	comp=N,19nm,0.9s								
MNK				*i* P		Pdif	05 54 59.6	-0.4	
	comp=Z,5.0nm,0.8s,baz=264								
MNK				*i* pP		pPdif	05 55 21.3	+0.8	
MNK				*i* sP		sPdif	05 55 42.2	+14	
MNK				*i* PP		PP	05 59 37.3	-0.6	
MNK				*i* SKP			06 01 41.0		
MNK				*i* PPP		PPP	06 01 57.7		
MNK				*i* PKS		PKSdf	06 02 36.1	+0.2	
MNK				*i* SKS		SKSdf	06 05 54.1	-11	
MNK				*i* SS		SS	06 15 02.5	-0.1	
MNK				*i* SSS		SSS	06 19 11.1		
MNK				*i* LRM		MLR	06 46 47.0		
	comp=N,429nm,18.0s								
MNK	Minsk	110.78	38	*i* P		Pdif	05 54 59.5	-0.4	
MNK				*i*			05 59 37.3		
MNK				*i* PPP		PPP	06 01 57.7		
MNK				*i* SS		SS	06 15 02.4	-0.2	
MNK				*i* SSS		SSS	06 19 11.0		
MNK				pmax		pmax			
	comp=E,16nm,0.9s								
MNK				pmax		pmax			
	comp=N,19nm,0.9s								
MNK				pmax		pmax			
	comp=Z,5.0nm,0.8s								
MNK				MLR		MLR			
	comp=N,429nm,18.0s								
AKASG	Malin Array Be	111.19	42	PKiKP		PKiKP	05 58 59.9	-0.5	
	comp=N,2.2nm,0.6s,baz=265,slow=2.8,SNR=8.4								
AKASG				PP		PP	05 59 36.6	-4.3	
	comp=N,1.4nm,0.6s,baz=262,slow=5.7,SNR=6.7								
AKASG				PKKPbc		PKKPbc	06 09 57.7	-0.5	
	comp=N,2.9nm,0.8s,baz=69,slow=3.5,SNR=9.8								
AKBB	Malin Array Si	111.19	42	*c* iPKiKP		PKiKP	05 58 59.7	-0.7	
BR131	Keskin Array S	112.95	54	*i* PKiKP		PKiKP	05 59 03.6	-0.7	
BR131	Keskin Array S	112.95	54	P		PKiKP	05 59 05.0	+0.7	
	SNR=5.8								
BRTR	Keskin Array B	112.95	54	PKiKP		PKiKP	05 59 04.4	+0.1	
	comp=N,5.0nm,0.8s,baz=197,slow=3.8,SNR=20								
BRTR				PP		PP	05 59 50.8	-3.3	
	comp=N,5.4nm,1.0s,baz=237,slow=4.3,SNR=6.2								
BRTR				PKKPbc		PKKPbc	06 09 52.0	-0.2	
	comp=N,0.4nm,0.3s,baz=67,slow=4.8,SNR=2.1								
OBN	Obninsk	115.82	38	*d* iPKiKP		PKiKP	05 59 09.2	+0.1	
OBN				*i*			05 59 30.9		
OBN							06 02 46.0		
OBN				*i* SS		SS	06 16 04.5	-4.6	
OBN				SSS		SSS	06 20 21.0		
OBN				pmax		pmax			
	comp=Z,39nm,1.0s								
OBN				MLR		MLR			
	comp=Z,895nm,20.0s								
ANN	Anapa	116.24	49	*i* PKiKP		PKPdf	05 59 10.0	-0.2	
ANN				*e*			05 59 31.7		
ANN				*e*			06 00 13.4		
ANN				*e*			06 05 53.7		
ANN				*e*SP		SP	06 09 47.2	-3.3	
ANN				pmax		pmax			
	comp=Z,34nm,1.4s								
ANN				MLR		MLR			
	comp=Z,617nm,21.0s								
MOS	Moscow	116.41	37	*i* PKiKP		PKiKP	05 59 10.7	+0.5	
MOS				*e*			05 59 33.4		
MOS				*e*			06 05 48.6		
KLMR	Klimovskoe	116.98	31	*e*PKiKP		PKPdf	05 59 09.2	-2.0	
KLMR				pmax		pmax			
	comp=Z,69nm,1.3s								
KLMR				MLR		MLR			
	comp=Z,936nm,19.0s								
LPSR	Galich'ya Gora	117.30	40	*e*PKiKP		PKiKP	05 59 12.6	+0.6	
LPSR				pmax		pmax			
	comp=Z,50nm,1.0s								
VSR	Storozhevoye	117.49	42	*e*PKiKP		PKPdf	05 59 12.4	0.0	
VSR				pmax		pmax			
	comp=Z,27nm,1.1s								
VORR	Voronezh	117.50	42	PKiKP		PKiKP	05 59 12.9	+0.4	
VORR				pmax		pmax			
	comp=Z,37nm,1.1s								
VORD	Divnogorie	117.57	42	*e*PKiKP		PKPdf	05 59 10.2	-2.4	
VORD				pmax		pmax			
	comp=Z,10.0nm,1.0s								
SOC	Sochi	117.82	51	*i* PKiKP		PKPdf	05 59 13.0	-0.3	
SOC				*e*			06 00 27.8		
SOC				*e*PPP		PPP	06 03 02.9		
SOC				pmax		pmax			
	comp=Z,26nm,0.8s								
VSLR	Vesyoloye	118.05	51	*i* PKiKP		PKPdf	05 59 13.4	-0.4	
ERBR	Yeremizino-Bor	118.42	48	*i* PKiKP		PKPdf	05 59 14.3	-0.1	
ERBR				*e*			05 59 37.0		
ERBR				*e*			06 00 32.1		
ERBR				*e*			06 06 01.8		
ERBR				pmax		pmax			
	comp=Z,44nm,1.1s								
ERBR				MLR		MLR			
	comp=Z,1μm,21.0s								
LABN	Labinsk	118.58	49	*i* PKiKP		PKPdf	05 59 14.6	-0.2	
LABN				*e*			05 59 36.7		
LABN				*e*			06 00 31.6		
LABN				*e*			06 06 02.3		
LABN				pmax		pmax			
	comp=Z,29nm,0.7s								
VRH	Novokhopyorsk	119.09	42	*e*PKiKP		PKiKP	05 59 15.9	+0.3	
VRH				pmax		pmax			
	comp=Z,33nm,1.1s								
SHA1	Shidzhatmaz	119.96	51	*i* PKiKP		PKPdf	05 59 17.0	-0.8	
STKA	Stephens Creek	119.96	211	PKP		PKiKP	05 59 18.1	+0.1	
	comp=Z,12nm,0.9s,baz=101,slow=1.8,SNR=17								
STKA				PP		PP	06 00 39.7	-2.1	
	comp=Z,18nm,1.2s,baz=133,slow=7.7,SNR=6.5								
STKA				PKKPbc		PKKPbc	06 09 26.4	-1.0	
	comp=Z,2.7nm,0.6s,baz=315,slow=6.0,SNR=6.0								
KIV	Kislovodsk	119.98	50	PKPdf		PKPdf	05 59 17.4	-0.2	
KIV	Kislovodsk	119.98	50	*i* PKiKP		PKPdf	05 59 17.1	-0.5	
KIV				*e*			06 00 43.1		
KIV				*e*			06 06 06.8		
KIV				*e*PS		PS	06 10 33.3	-0.5	
KIV				*e*SS		SS	06 17 03.5	-0.4	
KIV				pmax		pmax			
	comp=Z,31nm,1.1s								
KIV	Kislovodsk	119.98	50	P		PKiKP	05 59 18.4	+0.7	
KBZ	Khabaz	120.13	51	PKP		PKiKP	05 59 18.3	+0.5	
	comp=Z,33nm,0.9s,baz=229,slow=2.6,SNR=59								
KBZ				PKKPbc		PKKPbc	06 09 27.4	+0.7	
	comp=Z,3.1nm,0.9s,baz=132,slow=5.9,SNR=7.8								
RAYN	Ar Rayn	120.52	74	*i* PKiKP		PKiKP	05 59 19.9	+0.6	
	SNR=10								
RAYN	Ar Rayn	120.52	74	P		PKiKP	05 59 19.8	+0.5	
BILL	Bilibino	120.99	339	*c* iPKiKP		PKiKP	05 59 18.8	0.0	
BILL				pmax		pmax			
	comp=Z,46nm,1.7s								
GNI	Garni	121.49	55	PKPdf		PKiKP	05 59 21.2	+0.3	
GNI	Garni	121.49	55	*i* PKiKP		PKPdf	05 59 19.9	-0.9	
GNI	Garni	121.49	55	P		PKiKP	05 59 21.6	+0.7	
KIRV	Kirov	122.33	33	*c* iPKiKP		PKPdf	05 59 21.5	0.0	
BELG	Belogornoye	122.61	40	*i* PKiKP		PKPdf	05 59 22.0	-0.2	
TATA	Tatamba Isabel	123.34	245	P		PKiKP	05 59 25.6	+0.5	
TATA	Tatamba Isabel	123.34	245	P		PKiKP	05 59 25.0	-0.1	
MAK	Makhachkala	123.51	51	*i* P		Pdif	05 56 01.2	+4.3	
MAK				*i*			05 59 26.0		
MAK				*e*			05 59 46.1		
MAK				*e*			06 01 14.4		
MAK				*e*PPP		PPP	06 03 53.4		
MAK				*e*			06 06 18.2		
MAK				*e*PS		PS	06 11 03.7	-1.3	
MAK				*e*SS		SS	06 17 47.5	-1.3	
MAK				*e*SSS		SSS	06 22 18.3		
MAK				pmax		pmax			
	comp=Z,35nm,0.3s								
AUALB	St Joseph's Co	124.54	188	P		PKiKP	05 59 28.8	+1.8	
AUALB	St Joseph's Co	124.54	188	P		PKiKP	05 59 27.7	+0.7	
SLWR	Sila	126.20	75	P		PKiKP	05 59 30.4	0.0	
SLWR	Sila	126.20	75	P		PKiKP	05 59 30.4	0.0	
CTA	Charters Tower	126.44	224	PKP		PKiKP	05 59 31.1	0.0	
	comp=Z,35nm,1.0s,baz=179,slow=1.7,SNR=23								
CTA				PP		PP	06 01 24.9	-1.1	
	comp=Z,9.1nm,0.9s,baz=126,slow=6.0,SNR=7.6								
CTAO	Charters Tower	126.44	224	P		PKiKP	05 59 31.2	0.0	
CTAO	Charters Tower	126.44	224	P		PKiKP	05 59 31.1	0.0	
NWAO	Narrogin (SRO)	126.67	188	PKP		PKiKP	05 59 31.1	-0.2	
	comp=Z,60

SNR=6.0
NAZ Nazwa, Dubai 129.90 74 *i* PKPdf **PKiKP 05 59 37.5 -0.3**
SNR=6.2
NAZ Nazwa, Dubai 129.90 74 P **PKiKP 05 59 37.6 -0.3**
NAZ Nazwa, Dubai 129.90 74 P **PKiKP 05 59 38.1 +0.2**
UMQ Umm Al-Quwin 129.96 73 P **PKiKP 05 59 38.3 +0.3**
UMQ Umm Al-Quwin 129.96 73 P **PKiKP 05 59 38.1 +0.2**
ASHO Ashiyiah 130.23 74 *i* PKPdf **PKPdf 05 59 37.3 -0.5**
SNR=6.1
ASHO Ashiyiah 130.23 74 P **PKPdf 05 59 38.1 +0.3**
ASHO Ashiyiah 130.23 74 P **PKPdf 05 59 38.1 +0.3**
HATD Hatta, Dubai 130.31 74 *i* PKPdf **PKPdf 05 59 37.9 0.0**
SNR=7.8
HATD Hatta, Dubai 130.31 74 P **PKiKP 05 59 38.9 +0.2**
HATD Hatta, Dubai 130.31 74 P **PKiKP 05 59 38.7 0.0**
UOSS Minazif 130.39 74 *i* PKPdf **PKPdf 05 59 38.0 0.0**
SNR=6.8
UOSS Minazif 130.39 74 P **PKPdf 05 59 38.2 +0.2**
UOSS Minazif 130.39 74 P **PKPdf 05 59 38.2 +0.2**
MSFE Esma-Masafi 130.39 74 *i* PKPdf **PKPdf 05 59 37.9 -0.1**
SNR=7.2
MASF Masafi 130.39 73 P **PKiKP 05 59 38.7 -0.1**
MASF Masafi 130.39 73 P **PKiKP 05 59 38.9 0.0**
SHME Shamm 130.44 73 *i* PKiKP **PKiKP 05 59 39.3 +0.4**
SNR=7.1
SHME Shamm 130.44 73 P **PKiKP 05 59 38.8 -0.1**
SHME Shamm 130.44 73 P **PKiKP 05 59 38.8 -0.1**
PET Petropavlovsk 130.45 323 P **PKiKP 05 59 39.1 +1.0**
PET Petropavlovsk 130.45 323 P **PKiKP 05 59 38.0 -0.1**
PET Petropavlovsk 130.45 323*c* *i* PKIKP **PKiKP 05 59 37.9 -0.1**
PET pmax pmax
comp=Z,52nm,1.3s
ARQ Araqi 130.49 76 P **PKiKP 05 59 39.1 0.0**
ARQ Araqi 130.49 76 P **PKiKP 05 59 39.1 0.0**
AUALC St Philip's Co 130.50 209 P **PKPdf 05 59 38.4 +0.1**
AUALC St Philip's Co 130.50 209 P **PKPdf 05 59 38.5 +0.1**
MDH Madha 130.51 74 P **PKiKP 05 59 39.5 +0.4**
MDH Madha 130.51 74 P **PKiKP 05 59 39.0 -0.1**
ASAR Alice Springs 130.51 209 PKhKP PKPpre 05 59 23.6
comp=Z,2.0nm,0.9s,baz=146,slow=3.2,SNR=5.3
ASAR PKP **PKPdf 05 59 38.3 -0.1**
comp=Z,49nm,1.0s,baz=146,slow=2.3,SNR=102
ASAR PP **PP 06 01 50.3 -1.9**
comp=Z,16nm,1.2s,baz=144,slow=6.4,SNR=8.5
BANOM Banah 130.57 73 P **PKiKP 05 59 39.2 0.0**
SOHO SOHO 130.60 75 *i* PKPdf **PKPdf 05 59 38.7 +0.3**
SNR=18
SOHO SOHO 130.60 75 P **PKPdf 05 59 38.5 +0.1**
SOHO SOHO 130.60 75 P **PKPdf 05 59 38.3 -0.1**
DQM DQM 130.92 81 P **PKiKP 05 59 39.7 -0.3**
DQM DQM 130.92 81 P **PKPdf 05 59 39.4 +0.3**
AB31 Akbulak array 130.92 42 *i* PKIKP **PKiKP 05 59 39.6 +0.4**
PEA0B Petropavlovsk- 130.95 324*c* *i* PKIKP **PKPdf 05 59 37.9 -0.3**
PETK Petropavlovsk- 130.95 324 PKhKP PKPpre 05 59 22.5
comp=Z,4.4nm,0.9s,baz=48,slow=2.2,SNR=6.9
PETK PKP **PKiKP 05 59 39.1 0.0**
comp=Z,57nm,0.9s,baz=88,slow=4.7,SNR=54
PETK PP **PP 06 01 51.8 -3.7**
comp=Z,12nm,1.0s,baz=68,slow=12,SNR=5.3
BSY Bisya 131.03 77 P **PKiKP 05 59 39.8 -0.4**
SNR=5.7
BSY Bisya 131.03 77 P **PKPdf 05 59 39.5 +0.2**
SNR=5.7
MA2 Magadan 131.15 334 P **PKiKP 05 59 39.5 +0.2**
MA2 Magadan 131.15 334 P **PKiKP 05 59 39.2 -0.1**
MA2 Magadan 131.15 334*c* *i* PKIKP **PKiKP 05 59 39.1 -0.2**
MA2 pmax pmax
comp=Z,128nm,2.5s
HOQ Hoqain 131.24 76 P **PKPdf 05 59 39.5 -0.2**
HOQ Hoqain 131.24 76 P **PKPdf 05 59 39.5 -0.2**
PATS Pohnpei 131.34 261 P **PKiKP 05 59 42.6 +1.5**
PATS Pohnpei 131.34 261 P **PKiKP 05 59 41.7 +0.6**
MHTO MHTO 131.49 80 P **PKPdf 05 59 40.3 +0.2**
SNR=5.2
MHTO MHTO 131.49 80 P **PKPdf 05 59 40.3 +0.2**
SNR=5.2
JMDO Jabal Madar 131.81 78 P **PKPdf 05 59 40.6 -0.1**
JMDO Jabal Madar 131.81 78 P **PKPdf 05 59 40.7 -0.1**
SMDO Samad 131.85 77 P **PKPdf 05 59 41.4 +0.5**
SNR=12
SMDO Samad 131.85 77 P **PKPdf 05 59 41.2 +0.3**
SNR=12
BIDO Bidbid 131.98 76 P **PKPdf 05 59 41.5 +0.5**
BIDO Bidbid 131.98 76 P **PKiKP 05 59 41.9 -0.2**
WSAR Wadi Sarin 132.40 77 P **PKPdf 05 59 42.2 +0.3**
WSAR Wadi Sarin 132.40 77 P **PKiKP 05 59 42.8 -0.2**
WBK Wadi Bani Khal 132.64 78 P **PKPdf 05 59 42.8 +0.4**
SNR=6.3
WBK Wadi Bani Khal 132.64 78 P **PKPdf 05 59 42.7 +0.4**
SNR=6.3
SKR Severo-Kuril's 132.80 321*c* *i* PKIKP **PKiKP 05 59 43.1 +0.2**
JLN Jalan Bani Buh 132.99 78 P **PKiKP 05 59 43.8 -0.4**
SNR=5.6
JLN Jalan Bani Buh 132.99 78 P **PKPdf 05 59 43.1 +0.1**
SNR=5.6
PMG Port Moresby 133.03 235 PKP **PKPdf 05 59 43.7 +0.4**
comp=Z,71nm,1.1s,baz=70,slow=4.4,SNR=9.1
PMG Port Moresby 133.03 235 P **PKiKP 05 59 45.6 +1.1**
WRA Warramunga Arr 133.47 212 PKhKP PKPpre 05 59 31.1
comp=Z,1.8nm,0.8s,baz=111,slow=1.8,SNR=13
WRA PKP **PKPdf 05 59 44.1 +0.1**
comp=Z,41nm,0.9s,baz=154,slow=1.7,SNR=60
WRA PP **PP 06 02 08.9 -2.4**
comp=Z,6.5nm,1.2s,baz=148,slow=5.4,SNR=9.3
WRA SKPbc **SKPbc 06 03 05.2 -1.0**
comp=Z,8.3nm,1.0s,baz=158,slow=3.0,SNR=5.4
WRAB Tennant Creek 133.48 212 P **PKPdf 05 59 44.3 +0.2**
WRAB Tennant Creek 133.48 212 P **PKPdf 05 59 44.4 +0.3**
WRAB Tennant Creek 133.48 212*c* *i* PKIKP **PKPdf 05 59 44.4 +0.3**
WRAB pmax pmax
comp=Z,167nm,1.7s
BVAR Borovoye Array 135.34 33 PKP **PKPdf 05 59 46.8 +0.3**
comp=Z,22nm,0.8s,baz=283,slow=2.6,SNR=64
YAK Yakutsk 136.07 347 PKP **PKPdf 05 59 47.9 +0.4**
comp=Z,66nm,0.8s,baz=3.2,slow=2.6,SNR=4.8
YAK Yakutsk 136.07 347 *e*PKIKP **PKPdf 05 59 47.5 0.0**
YAK *e* 06 00 08.5
YAK pmax pmax
comp=Z,66nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,160nm,1.8s
YAK pmax pmax
comp=N,73nm,1.8s
YAK pmax pmax
comp=E,40nm,1.9s
MBWA Marble Bar 137.75 194 P **PKPdf 05 59 52.1 +0.1**
MBWA Marble Bar 137.75 194 P **PKPdf 05 59 52.4 +0.4**
MBWA Marble Bar 137.75 194 P **PKPdf 05 59 52.3 +0.4**
MBWA Marble Bar 137.75 194 P **PKPpre** 05 59 41.9
FITZ Fitzroy Crossi 138.91 203 PKhKP PKPpre 05 59 43.2
comp=E,18nm,1.1s,baz=209,slow=4.1,SNR=9.7
FITZ PKP **PKPdf 05 59 54.1 0.0**
comp=E,49nm,1.0s,baz=227,slow=2.4,SNR=7.2
BRLS Borolday 139.49 47 *e*PKIKP **PKPdf 05 59 55.2 +0.7**
BRLS Borolday 139.49 47 *e*PKP **PKPdf 05 59 55.2 +0.7**
CHM Chimkent 139.58 48 *e*PKIKP **PKPdf 05 59 55.3 +0.7**
CHM Chimkent 139.58 48 *e*PKP **PKPdf 05 59 55.4 +0.7**
KK31 Karatay Array 139.92 46 *i* PKIKP **PKPdf 05 59 55.4 +0.1**
IUG Iuzhnay 139.93 48 *e*PKIKP **PKPdf 05 59 55.9 +0.5**
IUG Iuzhnay 139.93 48 *e*PKP **PKPdf 05 59 56.0 +0.5**
TYV Tymovskoe 140.09 328 *e*PKIKP **PKPdf 05 59 56.4 +1.1**
TYV pmax pmax
comp=Z,46nm,1.5s
TYV pmax pmax
comp=Z,600nm,3.8s
CHGR Chuyangaron 140.38 53 *i* PKIKP **PKPdf 05 59 55.2 -1.1**
DZA Taraz 140.55 46 *e*PKIKP **PKPdf 05 59 57.0 +0.6**
DZA Taraz 140.55 46 *e*PKP **PKPdf 05 59 57.0 +0.6**
KURK Kurchatov 140.83 32 *i* PKIKP **PKPdf 05 59 56.0 -0.6**
KURK Kurchatov 140.83 32 P **PKPdf 05 59 52.0 -4.6**
KURBB Kurchatov Arra 140.85 32 PKhKP PKPpre 05 59 50.4
comp=Z,4.0nm,0.6s,baz=304,slow=2.9,SNR=12
KURBB PP **PP 06 02 55.2 -2.2**
comp=Z,4.7nm,1.0s,baz=348,slow=4.1,SNR=4.6
KURBB Kurchatov Arra 140.85 32 PKIKP **PKPdf 05 59 54.5 -2.1**
KBL Kabul 141.23 60 P **PKPdf 05 59 59.2 +1.1**
SNR=6.5
ZALV Zalesovo Beam 141.25 24 PKhKP PKPpre 05 59 51.0
comp=Z,9.8nm,0.8s,baz=311,slow=4.7,SNR=36
ZALV PKP **PKPdf 05 59 58.3 +1.1**
comp=Z,24nm,0.9s,baz=304,slow=3.0,SNR=5.5
ZALV SKPbc **SKPbc 06 03 25.5 -2.4**
comp=Z,21nm,1.0s,baz=318,slow=1.9,SNR=5.3
BTLS Baital 141.41 42 *e*PKIKP **PKPdf 05 59 58.5 +0.7**
BTLS Baital 141.41 42 *e*PKP **PKPdf 05 59 58.6 +0.7**
YSS Yuzhno-Sakhali 142.33 323 P **PKPdf 05 59 58.8 -0.6**
YSS Yuzhno-Sakhali 142.33 323 P **PKPdf 06 00 00.6 +1.2**
YSS Yuzhno-Sakhali 142.33 323 *e*PKHKP PKPpre 05 59 54.8
YSS *e* 06 03 05.6
YSS pmax pmax
comp=Z,60nm,0.9s
BOD Bodaibo 142.37 356 *e*PKHKP PKPpre 05 59 53.3
BOD pmax pmax
comp=Z,118nm,1.6s
SGDS Sogindy 142.51 44 *e*PKP **PKPdf 06 00 00.6 +0.6**
AAK Ala-Archa 142.78 45 PKPdf **PKPdf 05 59 59.9 -0.7**
AAK Ala-Archa 142.78 45 PKIKP **PKPdf 05 59 59.4 -1.2**
AAK Ala-Archa 142.78 45 P **PKPdf 06 00 00.4 -0.2**
GRNR Gornyy 143.10 332 ⇓ *i* PKIKP PKPbc 05 59 58.1 +0.4
GRNR pmax pmax
comp=Z,50nm,1.1s
ZEA Zeya 144.04 343 *e*PKIKP PKPbc 06 00 00.5 +0.2
ZEA pmax pmax
comp=Z,900nm,2.3s
ZEA pmax pmax
comp=Z,130nm,1.4s
AAA Alma-Ata 144.10 43 *e*PKIKP **PKPdf 06 00 03.3 +0.5**
AAA Alma-Ata 144.10 43 *e*PKP **PKPdf 06 00 03.4 +0.5**
TNSS Tian-Shan 144.20 43 *e*PKIKP **PKPdf 06 00 03.4 0.0**
TNSS Tian-Shan 144.20 43 *e*PKP **PKPdf 06 00 03.5 0.0**
MDOK Medeo 144.21 43 *e*PKIKP **PKPdf 06 00 03.3 +0.2**
MDOK Medeo 144.21 43 *e*PKP **PKPdf 06 00 03.4 +0.2**
NRN Naryn 144.32 46 PKIKP **PKPdf 06 00 03.0 -0.5**
NRN Naryn 144.32 46 **PKPdf 06 00 03.0 -0.5**
JEM Erimo 144.60 315 P **PKPdf 06 00 03.9 +0.4**
JEM Erimo 144.60 315 P **PKPdf 06 00 03.5 0.0**
ERM Erimo 144.60 315 P **PKPdf 06 00 04.0 +0.5**
ERM Erimo 144.60 315 P **PKPdf 06 00 03.3 -0.2**
NIL Nilore 144.83 60 P **PKPdf 06 00 04.0 -0.3**
KSH2 Kashi 144.95 50 PKPbc **PKPdf 06 00 05.4 +0.9**
KSH2 pPKP pPKPdf 06 00 25.8 +0.1
KSH2 sPKP sPKPdf 06 00 34.3 +0.7
KSH2 PPMZ
comp=Z,1μm,14.8s
KSH2 L L
comp=Z,560nm,22.3s
KSH2 L L
comp=Z,500nm,21.6s
KSH2 L L
comp=Z,1μm,24.4s
SAUI Saumlaki 144.97 219 P **PKiKP 06 00 07.2 -1.7**
SAUI Saumlaki 144.97 219 P **PKPdf 06 00 06.8 +1.7**
MAKZ Makanchi 145.03 34 PKIKP **PKPab 06 00 03.8 0.0**
MAKZ Makanchi 145.03 34 **PKPab 06 00 03.8 0.0**
SATY Saty 145.12 42 *e*PKIKP **PKPdf 06 00 05.0 +0.4**
SATY Saty 145.12 42 *e*PKP **PKPdf 06 00 05.0 +0.4**
MK31 Makanchi Array 145.21 34 *i* PKIKP **PKPdf 06 00 04.8 +0.3**
MKAR Makanchi Array 145.21 34 PKPbc **PKPdf 06 00 04.7 +0.1**
comp=Z,111nm,0.7s,baz=324,slow=4.3,SNR=706
UZB Uzynbulak 145.46 42 *e*PKIKP **PKPab 06 00 05.6 0.0**
UZB Uzynbulak 145.46 42 *e*PKP **PKPab 06 00 05.7 0.0**
DGZ Jazzator, Alta 145.56 26*d* *i* PKP2 **PKPdf 06 00 04.2 -1.0**
DPSS Saipan 145.58 268 **PKPdf 06 00 05.2 -0.8**
PDGK Podgornoye 145.66 41 PKP2 **PKPbc 06 00 05.9 -0.1**
BKNR BIKĀNER 145.72 70 *e*P **PKPab 06 00 06.8 -0.1**
BKNR *i* x x 06 00 24.4
SHLS Shalkode 145.73 41 *e*PKP2 **PKPab 06 00 06.5 -0.1**
SHLS Shalkode 145.73 41 *e*PKP **PKPab 06 00 06.6 -0.1**
POO Poona 145.91 87 *e*P **PKPab 06 00 08.0 +0.1**
POO *i* pP pPKPbc 06 00 28.4 +0.1
KAD Karad 146.02 89 *e*P **PKPbc 06 00 07.6 -0.1**
KAD *i* x x 06 00 28.9
GUMO Guam 146.03 264 PKPbc **PKPbc 06 00 07.4 -0.3**
comp=Z,3μm,1.1s,baz=179,slow=4.2,SNR=44
GUMO Guam 146.03 264 P **PKPbc 06 00 07.4 -0.3**
GUMO Guam 146.03 264 P **PKPdf 06 00 07.1 +0.3**
ZSN Zaisan 146.07 31 *e*PKP2 **PKPbc 06 00 06.7 -0.2**
ZSN Zaisan 146.07 31 *e*PKP **PKPbc 06 00 06.7 -0.2**
UDPR Udaipur 146.25 76 *e*P **PKPbc 06 00 08.3 +0.1**
JMU Jammu 146.32 61 *e*P **PKPab 06 00 08.8 -0.2**
JMU *i* pP pPKPab 06 00 29.6 -0.3
JTM Tenmabayashi 146.56 315 P **PKPbc 06 00 08.7 +0.1**
JTM Tenmabayashi 146.56 315 P **PKPdf 06 00 07.7 +0.7**
JTM Tenmabayashi 146.56 315 **PKPdf 06 00 07.4 +0.5**
BATI Baumata 146.87 205 PKPbc **PKPdf 06 00 08.5 +0.2**
comp=Z,356nm,0.9s,baz=137,slow=1.7,SNR=27
HEH HeiHe 147.03 339 PKPbc **PKPdf 06 00 07.3 -0.1**
AJM Ajmer 147.03 72 *e*P **PKPdf 06 00 08.2 -0.1**
SOEI Soe 147.03 207 P **PKPbc 06 00 11.3 +0.5**
SOEI Soe 147.03 207 P **PKPbc 06 00 09.8 -1.0**
SOEI Soe 147.03 207 PKP **PKPdf 06 00 08.5 -0.2**
KOD Kodaikanal 147.14 103 *e*P **PKPbc 06 00 11.0 -0.4**
KOD *i* pP **pPKPab 06 00 33.4 -0.5**
TSSA Tissa 147.38 60 *e*P **PKPbc 06 00 12.0 +0.6**
TLWR Talawar 147.43 62 *e*P **PKPbc 06 00 11.7 +0.3**
DHRM DHARAMSHALA 147.65 61 *e*P **PKPdf 06 00 10.4 +1.0**
DHRM *i* x x 06 00 15.7
IRK Irkutsk 147.76 7 *e*PKIKP **PKPdf 06 00 09.0 +0.4**
IRK pmax pmax
comp=Z,506nm,2.2s
ALCI Alchi Leh 147.85 58 *e*P **PKiKP 06 00 13.8 -0.9**
MOY Mondy 147.87 11 *e*PKIKP **PKPbc 06 00 10.6 -1.4**
MOY pmax pmax
comp=Z,427nm,2.3s
BHK Bhakra 147.90 63 *ex* x 06 00 08.6
BHK *i* x x 06 00 32.0
TLY Talaya 148.24 8 PKPbc **PKPbc 06 00 12.9 +0.1**
comp=Z,40nm,0.8s,baz=258,slow=0.9,SNR=53
TLY Talaya 148.24 8 P **PKPbc 06 00 11.3 -1.6**
FAKI Fak Fak 148.26 226 P **PKPdf 06 00 12.2 +1.6**
FAKI Fak Fak 148.26 226 P **PKPdf 06 00 11.9 +1.3**
CGRH CHANDIGARH 148.37 64 *ex* x 06 00 34.6
KUDL Kundal 148.53 69 *e*P **PKPdf 06 00 11.9 +1.3**
BNDI Bandanaira 148.55 221 P **PKPbc 06 00 13.4 -1.4**
PALK Pallekele 148.84 110 *i* PKiKP **PKiKP 06 00 16.8 -0.1**
SNR=7.2
PALK Pallekele 148.84 110 P **PKPdf 06 00 11.0 -0.6**
MMRI Maumere 148.86 204 P **PKPdf 06 00 12.6 +1.0**
MMRI Maumere 148.86 204 P **PKPbc 06 00 14.2 -1.3**
AYAN Aya Nagar 149.04 68 *e*P **PKPdf 06 00 12.4 +0.9**
NDI New Delhi 149.09 68 *e*P **PKPdf 06 00 12.6 +1.1**
MALK Mahakanadarawa 149.20 108 PKP **PKPdf 06 00 12.5 +0.4**
BISR Bishrakh 149.30 68 *e*P **PKiKP 06 00 16.8 -0.5**
KLP Kalpa 149.43 62 *e*P **PKPdf 06 00 14.0 +1.6**
ZAK Zakamensk 149.47 8 *e*PKHKP PKPpre 06 00 12.3
ZAK pmax pmax
comp=Z,249nm,1.5s
BHPL Bhopal 149.64 78 *e*P **PKPdf 06 00 13.3 +0.7**
BHPL *i* x x 06 00 39.2
HNLY HANLEY 149.69 59 *ex* x 06 00 35.9
HNLY *i* x x 06 00 36.4
HILR Hailar Array B 149.74 347 PKP **PKPdf 06 00 12.5 +0.6**
comp=Z,80nm,0.9s,baz=111,slow=3.3,SNR=32
HILR PKPbc **PKiKP 06 00 17.5 -0.2**
comp=Z,290nm,0.8s,baz=34,slow=2.2,SNR=77
HILR PP **PP 06 03 48.4 -1.4**
comp=Z,33nm,0.9s,baz=29,slow=3.3,SNR=6.3
UTK UTTARKASHI 149.77 63 *e*P **PKPdf 06 00 13.5 +0.8**
JCJ Chichijima 149.79 289 PKPbc **PKPbc 06 00 16.1 -1.4**
comp=Z,738nm,1.0s,baz=221,slow=2.3,SNR=17
USRK Ussuriysk Ar. 149.91 327 PKP **PKPdf 06 00 13.2 +0.9**
comp=Z,92nm,1.1s,baz=297,slow=1.3,SNR=38
USRK PKPbc **PKiKP 06 00 17.8 -0.3**
comp=Z,366nm,0.9s,baz=37,slow=2.0,SNR=138
AGRA Agra 149.92 70 *ex* x 06 00 39.5
HIA Hailar 150.02 347 P **PKPdf 06 00 13.1 +0.7**
HIA Hailar 150.02 347 P **PKPdf 06 00 13.3 +0.9**
WMQ Urumqi 150.03 33 PKPbc **PKPdf 06 00 13.6 +1.0**
WMQ pPKP pPKPdf 06 00 35.3 +1.4
WMQ sPKP sPKPdf 06 00 40.0 -1.8
WMQ PPMZ
comp=Z,760nm,11.9s
WMQ L L
comp=Z,680nm,20.3s
WMQ L L
comp=Z,930nm,21.9s
WMQ L L
comp=Z,1μm,24.3s
PLAI Plampang 150.10 196 P **PKPdf 06 00 16.0 +2.4**
HYB Hyderabad 150.14 90 *e*P **PKPdf 06 00 13.9 +0.4**
HYB *i* x x 06 00 19.2
HYB Hyderabad 150.14 90 *e*PKPdf **PKPdf 06 00 12.7 -0.9**
SIJI Sorong 150.41 227 PKP **PKPdf 06 00 14.7 +0.6**
comp=Z,169nm,1.1s,baz=131,slow=1.1,SNR=18
SIJI PKPbc **PKiKP 06 00 19.9 -0.3**
comp=Z,263nm,0.8s,baz=50,slow=2.0,SNR=110
SIJI PP **PP 06 03 54.0 -0.7**
comp=Z,3.4nm,0.3s,baz=181,slow=7.4,SNR=4.2
MJAR Matsushiro Arr 150.49 309 PKP **PKPdf 06 00 14.1 +0.5**
comp=Z,168nm,0.9s,baz=78,slow=0.9,SNR=41
MJAR PKPbc **PKiKP 06 00 19.5 -0.2**
comp=Z,167nm,0.9s,baz=83,slow=1.7,SNR=94
MAJO Matsushiro 150.49 309 P **PKPdf 06 00 14.3 +0.8**
MAJO Matsushiro 150.49 309 P **PKPdf 06 00 16.0 +2.5**
JHJ Hachijo jima 2 150.56 302 PKPbc **PKPbc 06 00 19.2 +0.1**
comp=Z,662nm,0.8s,baz=195,slow=2.0,SNR=13
MDRS Chennai 150.66 99 *e*P **PKPdf 06 00 14.9 +0.6**
MDJ Mudanjiang 150.76 331 PKPbc **PKPdf 06 00 14.0 +0.4**
MDJ SS SS 06 23 08.0 -2.7
MDJ L L
comp=Z,280nm,16.2s
MDJ L L
comp=Z,380nm,15.7s
BNX BinXian 150.81 335 ⇓ PKPbc **PKPdf 06 00 13.4 -0.3**
BNX PP **PP 06 03 55.8 -0.4**
BNX PPMZ
comp=Z,920nm,5.8s
BNX L L
comp=Z,370nm,24.9s
BNX L L
comp=Z,240nm,19.5s
BNX L L
comp=Z,840nm,32.4s
JAGI Jajag, Banyuwa 151.16 189 P **PKPdf 06 00 15.7 +0.5**
LGTI Lohaghat 151.44 65 *e*P **PKPdf 06 00 17.3 +1.8**
PTH Pithoragarh 151.50 65 *e*P **PKPdf 06 00 16.6 +1.1**
INU Inuyama 151.87 308 P **PKPdf 06 00 17.1 +1.5**
UGM Wanagama 152.01 181 P **PKPdf 06 00 17.8 +1.3**
SONM Songino Array 152.33 5 PKP **PKPdf 06 00 17.1 +1.0**
comp=Z,38nm,1.0s,baz=284,slow=0.5,SNR=101
SONM PKPbc **PKiKP 06 00 23.5 +0.3**
comp=Z,76nm,0.8s,baz=319,slow=1.4,SNR=52
SONM PKPab **PKPab 06 00 33.7 +0.6**
comp=Z,50nm,0.8s,baz=49,slow=4.5,SNR=4.4
SONM Songino Array 152.33 5 **PKPdf 06 00 16.4 +0.3**
ULN Ulaanbaatar 152.35 4 P **PKPdf 06 00 17.7 +1.5**
ULN Ulaanbaatar 152.35 4 P PKPdf 06 00 06.5 -10
BBJI Bungbulang 152.36 175 P **PKPdf 06 00 18.7 +1.6**
BBJI Bungbulang 152.36 175 P **PKPdf 06 00 17.9 +0.8**
SANI Sanana 152.84 217 P **PKPdf 06 00 18.6 +0.9**
SANI Sanana 152.84 217 P **PKPdf 06 00 18.8 +1.1**
SANI Sanana 152.84 217 PKP **PKPdf 06 00 18.2 +0.4**
SMRI Semarang 152.87 181 P **PKPdf 06 00 18.4 +0.6**
LEM Lembang 152.99 175 PKP **PKPdf 06 00 18.8 +0.6**
comp=Z,59nm,0.9s,baz=91,slow=1.4,SNR=12
LEM PKPbc **PKiKP 06 00 26.3 +0.7**
comp=Z,194nm,0.9s,baz=61,slow=2.4,SNR=17
KAPI Kappang 153.12 202 PKP **PKPdf 06 00 18.7 +0.5**
comp=Z,8.1nm,0.2s,baz=175,slow=2.3,SNR=8.5
KAPI PKPbc **PKiKP 06 00 26.6 +0.9**
comp=Z,128nm,0.9s,baz=198,slow=2.6,SNR=30
KAPI PKPab **pPKPdf 06 00 38.4 -0.9**
comp=Z,316nm,1.0s,baz=178,slow=3.2,SNR=29
KAPI Kappang 153.12 202 P **PKPdf 06 00 19.6 +1.5**
KAPI Kappang 153.12 202 P **PKPdf 06 00 19.4 +1.3**
CN2 Changchun 153.20 335 PKPbc **PKPdf 06 00 16.3 -1.0**
CN2 PP **PP 06 04 07.3 -2.5**
CN2 L L
comp=Z,500nm,21.0s
CN2 L L
comp=Z,400nm,21.0s
CN2 L L
comp=Z,400nm,20.0s
TNTI Ternate 154.23 223 PKPdf **PKPdf 06 00 19.1 -0.7**
JMN Monobe 154.91 307 P **PKPdf 06 00 22.7 +2.6**
JMN Monobe 154.91 307 P **PKPdf 06 00 21.0 +0.9**
JMN Monobe 154.91 307 PKPdf **PKPdf 06 00 20.9 +0.8**
HHU Hamhung 155.29 326 PKPbc **PKPdf 06 00 20.2 -0.1**
HHU PP **PP 06 04 25.8 +4.0**
HHU AMS AMS
comp=Z,377nm,11.7s
LUWI Luwuk 155.41 212 P **PKPdf 06 00 23.1 +1.8**
LUWI Luwuk 155.41 212 P **PKPdf 06 00 22.7 +1.4**
LUWI Luwuk 155.41 212 PKP **PKPdf 06 00 21.6 +0.2**
XLT XiLinHaoTe 155.88 349 *e*PKP **PKPdf 06 00 21.9 +0.7**
XLT PP **PP 06 04 24.8 +0.2**
XLT SS SS 06 24 01.9 -4.1
SUJ Sinuiju 156.64 331 PKPbc **PKPdf 06 00 22.1 0.0**
KSRS Korea Array 156.82 321 PKP **PKPdf 06 00 23.2 +0.8**
comp=Z,48nm,1.0s,baz=55,slow=0.9,SNR=74
KSRS PKPbc **pPKPdf 06 00 33.5 -10**
comp=Z,30nm,1.0s,baz=33,slow=0.7,SNR=11
KSRS PKPab **PKPab 06 00 53.2 +0.8**
comp=Z,45nm,0.8s,baz=52,slow=3.7,SNR=18
KSRS PP **PP 06 04 33.3 +2.8**
comp=Z,10nm,1.1s,baz=36,slow=5.3,SNR=6.7
BOK Bokaro 157.39 77 *i* x x 06 00 57.7
TJN Taejon 157.87 320 P **PKPdf 06 00 25.3 +1.5**
TJN Taejon 157.87 320 P **PKPdf 06 00 24.4 +0.6**
TOLI2 Tolitoli 158.24 210 P **PKPdf 06 00 25.3 +0.3**
TOLI2 Tolitoli 158.24 210 P **PKPdf 06 00 25.2 +0.3**
DL2 Dalian 158.87 334 PKP **PKPdf 06 00 25.3 +0.4**
DL2 pPKP **pPKPdf 06 00 46.4 +0.2**
DL2 PKPab **PKPab 06 01 00.8 -0.3**
DL2 PP **PP 06 04 39.9 -1.3**
DL2 PPMZ
comp=Z,870nm,4.9s
DL2 L L
comp=Z,520nm,22.1s
DL2 L L
comp=Z,320nm,22.7s
DL2 L L
comp=Z,880nm,27.2s
GTA2 Gaotai 158.91 22 PKP **PKPdf 06 00 25.8 +0.6**
GTA2 pPKP pPKPdf 06 00 45.4 -1.1
GTA2 PP **PP 06 04 46.3 +4.7**
GTA2 SS SS 06 24 41.6 +2.7
GTA2 PPMZ
comp=Z,560nm,11.0s
GTA2 L L
comp=Z,430nm,24.5s
GTA2 L L
comp=Z,560nm,23.0s
GTA2 L L
comp=Z,1μm,24.7s
GOMU GeErMu 159.28 37 PKP **PKPdf 06 00 26.3 +0.3**
HHC Hu-ho-hao-te 159.43 357 ⇓ *i* PKP **PKPdf 06 00 27.0 +1.3**
HHC PP **PP 06 04 44.0 0.0**
HHC SS SS 06 24 43.0 -0.7
HHC L L
comp=Z,410nm,18.5s
HHC L L
comp=Z,350nm,19.4s
HHC L L
comp=Z,650nm,21.0s
PSI Prapat 159.57 147 P **PKPdf 06 00 26.6 -0.1**
BTO2 Baotou 159.57 0 *e*PKP **PKPdf 06 00 26.1 +0.2**
BTO2 pPKP **pPKPdf 06 00 48.0 +0.9**
BTO2 PKPab **PKPab 06 01 04.8 +0.5**
BTO2 PP **PP 06 04 46.8 +2.0**
BTO2 SS SS 06 24 48.3 +3.0
BTO2 L L
comp=Z,1μm,21.6s
BTO2 L L
comp=Z,950nm,18.3s
BTO2 L L
comp=Z,4μm,22.0s
BJI2 Beijing 159.60 346 PKP **PKPdf 06 00 26.4 +0.6**
DAV Davao City (W) 159.99 231 PKPab **PKPab 06 01 08.9 +2.2**
comp=Z,98nm,0.3s,baz=102,slow=4.8,SNR=6.0
MYKOM Kota Tinggi 160.70 161 P **PKPdf 06 00 28.2 +0.4**
MYKOM Kota Tinggi 160.70 161 P **PKPdf 06 00 28.1 +0.3**
PBA Port Blair 161.36 115 P **PKPdf 06 00 29.2 +0.8**
JOW Kunigami 162.01 295 P **PKPdf 06 00 30.5 +1.7**
DGPR DIGLIPUR 162.22 111 *ex* x 06 00 05.1
HNS HongShan 162.43 347 ⇓ PKP **PKPdf 06 00 29.9 +1.1**
HNS PKPab **PKPab 06 01 17.0 +0.4**
HNS PP **PP 06 04 59.3 -0.7**
HNS SS SS 06 25 13.8 -1.2
HNS L L
comp=Z,440nm,22.5s
HNS L L
comp=Z,630nm,23.0s
HNS L L
comp=Z,720nm,22.6s
TIY Taiyuan 162.47 354 *e*PKP **PKPdf 06 00 30.1 +1.1**
SHL Shillong 162.51 69 P **PKPdf 06 00 29.5 0.0**

KULM	**Kulim**	**162.58**	**147**	P	**PKPdf**	**06 00 30.6**	**+0.9**
KULM	**Kulim**	**162.58**	**147**	P	**PKPdf**	**06 00 30.1**	**+0.4**
MYLDM	**Lahad Datu**	**162.88**	**210**	P	**PKPdf**	**06 00 32.3**	**+2.3**
MYLDM	**Lahad Datu**	**162.88**	**210**	P	**PKPdf**	**06 00 31.5**	**+1.5**
TIA	**Tai'an**	**162.91**	**340**	PKP	**PKPdf**	**06 00 30.3**	**+0.9**
TIA				pPKP	**pPKPdf**	**06 00 51.3**	**+0.6**
LZH	**Lanzhou**	**163.33**	**18** ⇓	PKP	**PKPdf**	**06 00 31.5**	**+1.5**
LZH				pPKP	pPKPdf	06 00 52.8	+1.5
LZH				PKPab	**PKPab**	**06 01 21.5**	**+0.6**
LZH				SS	SS	06 25 22.0	-3.0
LZH				L	L		
	comp=Z,840nm,17.5s						
LZH				L	L		
	comp=Z,690nm,18.4s						
LZH				L	L		
	comp=Z,1μm,18.4s						
LZDM	**Lanzhou Array**	**163.41**	**18**	PKP	**PKPdf**	**06 00 32.1**	**+1.8**
	comp=Z,4.2nm,0.5s,baz=0.0,slow=3.4,SNR=16						
LZDM				PKPab	**PKPab**	**06 01 22.2**	**+0.8**
	comp=Z,22nm,0.7s,baz=325,slow=2.3,SNR=12						
KKM	**Kota Kinabalu**	**164.63**	**204**	P	**PKPdf**	**06 00 32.7**	**+0.9**
KKM	**Kota Kinabalu**	**164.63**	**204**	P	**PKPdf**	**06 00 32.6**	**+0.8**
LYN	**LuoYang**	**165.59**	**352** ⇓	PKP	**PKPdf**	**06 00 32.3**	**+0.5**
LYN				PKPab	**PKPab**	**06 01 30.0**	**-0.6**
LYN				PP	**PP**	**06 05 15.5**	**-1.1**
LYN				SS	SS	06 25 41.1	-6.3
LYN				L	L		
	comp=Z,960nm,23.7s						
LYN				L	L		
	comp=Z,710nm,20.6s						
LYN				L	L		
	comp=Z,2μm,24.5s						
NJ2	**Nanjing**	**165.81**	**328** ⇓	PKP	**PKPdf**	**06 00 32.4**	**+0.3**
NJ2				PKPab	**PKPab**	**06 01 30.8**	**-0.9**
NJ2				PP	**PP**	**06 05 18.0**	**-0.3**
NJ2				PPMZ			
	comp=Z,4μm,11.7s						
XAN	**Xi'an**	**166.23**	**4**	PKP	**PKPdf**	**06 00 33.3**	**+0.8**
XAN				pPKP	pPKPdf	06 00 54.8	+1.1
XAN				SS	SS	06 25 55.4	+1.3
XAN				L	L		
	comp=Z,840nm,20.6s						
XAN				L	L		
	comp=Z,290nm,20.6s						
XAN				L	L		
	comp=Z,840nm,20.6s						
TGY	**Tagaytay City**	**167.88**	**241**	PKPab	**PKPab**	**06 01 43.8**	**+2.3**
	comp=Z,213nm,0.3s,baz=186,slow=4.2,SNR=10						
CD2	**Chengdu**	**168.00**	**27**	PKP	**PKPdf**	**06 00 34.0**	**+0.2**
TNCH	**TengChong**	**168.40**	**64**	PKP	**PKPdf**	**06 00 35.1**	**+0.6**
TNCH				pPKP	pPKPdf	06 00 55.9	+0.1
TNCH				PP	**PP**	**06 05 36.1**	**+3.0**
TNCH				SKKS		06 12 16.3	
TNCH				PPMZ			
	comp=Z,580nm,3.5s						
TNCH				L	L		
	comp=Z,2μm,18.9s						
TNCH				L	L		
	comp=Z,2μm,17.5s						
TNCH				L	L		
	comp=Z,1μm,21.3s						
WHN	**Wuhan**	**169.02**	**340** ⇓	PKP	**PKPdf**	**06 00 34.9**	**+0.5**
WHN				pPKP	**pPKPdf**	**06 00 56.5**	**+0.8**
WHN				PKPab	**PKPab**	**06 01 45.3**	**-0.6**
WHN				PP	**PP**	**06 05 33.3**	**-1.1**
WHN				SS	SS	06 26 16.8	-5.6
WHN				L	L		
	comp=Z,4μm,25.6s						
SSLB	**Suanglung**	**169.24**	**291**	P	**PKPdf**	**06 00 36.0**	**+1.2**
SSLB	**Suanglung**	**169.24**	**291**	P	**PKPdf**	**06 00 35.8**	**+1.0**
CM31	**Chiang Mai Arr**	**169.42**	**98**	P	**PKPdf**	**06 00 35.7**	**+0.7**
SNR=15							
CMAR	**Chiang Mai Arr**	**169.42**	**98**	PKP	**PKPdf**	**06 00 35.4**	**+0.4**
	comp=Z,14nm,0.9s,baz=272,slow=1.8,SNR=73						
CMAR				PKPab	**PKPab**	**06 01 49.2**	**+0.9**
	comp=Z,4.4nm,0.8s,baz=273,slow=5.1,SNR=4.9						
CMAR				PP	**PP**	**06 05 39.9**	**+1.4**
	comp=Z,1.3nm,0.2s,baz=290,slow=5.8,SNR=4.2						
CHTO	**Chiang Mai**	**169.49**	**96**	P	**PKPdf**	**06 00 35.1**	**0.0**
CHTO	**Chiang Mai**	**169.49**	**96**	P	**PKPdf**	**06 00 35.3**	**+0.2**
CHTO	**Chiang Mai**	**169.49**	**96**	P	**PKPdf**	**06 00 35.5**	**+0.5**
TPUB	**Ta-pu**	**169.66**	**289**	P	**PKPdf**	**06 00 37.6**	**+2.5**
TPUB	**Ta-pu**	**169.66**	**289**	P	**PKPdf**	**06 00 36.1**	**+1.0**
PZH	**PanZhiHua**	**170.20**	**49**	PKP	**PKPdf**	**06 00 35.4**	**-0.1**
PZH				pPKP	**pPKPdf**	**06 00 56.6**	**-0.2**
PZH				PP	**PP**	**06 05 47.6**	**+6.0**
PZH				SS	SS	06 26 35.3	-1.1
PZH				PPMZ			
	comp=Z,630nm,9.2s						
PZH				L	L		
	comp=Z,440nm,21.0s						
PZH				L	L		
	comp=Z,500nm,20.6s						
PZH				L	L		
	comp=Z,810nm,24.7s						
QZH2	**Quanzhou**	**170.77**	**302**	*i* PKP	**PKPdf**	**06 00 36.6**	**+1.0**
QZH2				PP	**PP**	**06 05 43.8**	**-0.8**
QZH2				L	L		
	comp=Z,550nm,21.6s						
QZH2				L	L		
	comp=Z,710nm,24.4s						
QZH2				L	L		
	comp=Z,2μm,30.9s						
CNSH	**ChangSha**	**171.66**	**342**	PKP	**PKPdf**	**06 00 36.1**	**+0.1**
KMI2	**Kunming**	**171.73**	**53** ⇓	PKP	**PKPdf**	**06 00 36.9**	**+0.5**
KMI2				pPKP	pPKPdf	06 00 57.5	-0.3
KMI2				PP	**PP**	**06 05 53.1**	**+3.7**
KMI2				SKKS		06 12 28.6	
KMI2				L	L		
	comp=Z,750nm,26.8s						
KMI2				L	L		
	comp=Z,430nm,26.2s						
KMI2				L	L		
	comp=Z,2μm,30.6s						
GYA	**Guiyang**	**173.11**	**26**	PKP	**PKPdf**	**06 00 36.8**	**0.0**
GULI	**GuiLin**	**174.97**	**356**	PKP	**PKPdf**	**06 00 36.4**	**-0.9**
GULI				pPKP	**pPKPdf**	**06 00 57.8**	**-0.9**
GULI				PKPab	**PKPab**	**06 02 10.1**	**-2.2**
GULI				L	L		
	comp=Z,550nm,25.1s						
GULI				L	L		
	comp=Z,440nm,21.8s						
GULI				L	L		
	comp=Z,1μm,23.3s						
QIZ	**Qiongzhong**	**178.78**	**174**	PKP	**PKPdf**	**06 00 38.3**	**+0.1**
QIZ				PP	**PP**	**06 06 22.1**	**+0.7**
QIZ				SS	SS	06 27 55.5	-0.6
QIZ				PPMZ			
	comp=Z,1μm,6.3s						
QIZ				L	L		
	comp=Z,510nm,28.8s						
QIZ				L	L		
	comp=Z,340nm,18.5s						
QIZ				L	L		
	comp=Z,1μm,23.3s						

IDC ***17*** *05:40:58.4±1.1, 49°.86S×110°.74E, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=49.2km s-min=18.9km az=106.0*

ISC 17 05:41:01.9±1.1, 49°.9S±0°.2×110°.7E±0°.3, h22km, n10, σ0s65/7, mb4.0/6, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.17**	**11**	T		T		06 00 07.1	
	baz=188,slow=74,SNR=142								
H01W1	**Cape Leeuwin H**	**15.18**	**11**	T		T		06 00 09.6	
	baz=188,slow=74,SNR=159								
H01W3	**Cape Leeuwin H**	**15.19**	**11**	T		T		06 00 10.2	
	baz=188,slow=74,SNR=158								
ASAR	**Alice Springs**	**31.82**	**43**	P		**P**		**05 47 24.7**	**-0.3**
	1.3nm,0.6s,baz=209,slow=7.9,SNR=16								
	1.3nm,0.6s								
VNDA	**Vanda**	**33.64**	**162**	P		**P**		**05 47 40.3**	**0.0**
	0.7nm,0.7s,baz=286,slow=7.6,SNR=4.6								
	0.7nm,0.7s								
WRA	**Warramunga Arr**	**35.29**	**41**	P		**P**		**05 47 54.7**	**-0.4**
	1.8nm,0.6s,baz=204,slow=10,SNR=16								
	1.8nm,0.6s								
QSPA	**South Pole Qui**	**40.26**	**180**	P		**P**		**05 48 37.1**	**+0.3**
	1.7nm,0.6s,baz=342,slow=1.9,SNR=10.0								
	1.7nm,0.6s								
SNAA	**Sanae**	**50.10**	**202**	P		**P**		**05 49 54.1**	**-0.6**
	1.8nm,0.9s,baz=143,slow=5.9,SNR=4.8								
	1.8nm,0.9s								
CMAR	**Chiang Mai Arr**	**68.82**	**348**	P		**P**		**05 52 04.6**	**+0.2**
	0.9nm,0.3s,baz=194,slow=4.8,SNR=5.1								
	0.9nm,0.3s								
TXAR	**Lajitas Array**	**146.91**	**115**	PKPbc		**PKPdf**		**06 00 41.5**	**+1.0**
	1.2nm,0.9s,baz=204,slow=8.1,SNR=4.0								

PRE ***17*** *05:45:30.2±1.0, 26°.43S×27°.58E, h2km, ML2.2, Presumed earthquake*
BUL ***17*** *05:45:30.3±0.3, 26°.49S×27°.87E, h15km±3km, MD3.2, Presumed earthquake*
BGSI ***17*** *05:45:33.0±1.1, 23°.81S×26°.85E, h431km±16km, ML2.4, Presumed earthquake*

ISC 17 05:45:30.1±1.1, 26°.39S±0°.04×27°.59E±0°.04, h13km±7km, n22, σ2s34/43, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.15**	**259**	*e*P		**Pg**		**05 45 33.4**	**-0.6**
WDLM				*e*S		**Sg**		**05 45 36.0**	**-0.8**
WDLM				IAML				05 45 40.7	
	comp=Z,325nm,0.4s								
HRAO	**HartRAO**	**0.51**	**10**	*e*P		**Pg**		**05 45 40.9**	**+0.8**
HRAO				*e*S		**Sb**		**05 45 49.0**	**+0.6**
HRAO				IAML				05 45 49.8	
	comp=Z,88nm,0.2s								
LBTB	**Lobatse**	**2.26**	**307**	*i* P		**Pb**		**05 46 10.7**	**-0.3**
LBTB				*i* S		**Sb**		**05 46 40.1**	**+1.2**
LBTB	**Lobatse**	**2.26**	**307**	*e*P		**Pb**		**05 46 09.8**	**-1.2**
LBTB				*e*S		**Sb**		**05 46 37.6**	**-1.3**
LBTB				IAML				05 46 42.7	
	comp=Z,52nm,0.2s								
LEPH	**Lephalale, Lim**	**2.53**	**4**	*e*P		**Pn**		**05 46 13.6**	**+2.5**
LEPH				*e*S		**Sn**		**05 46 45.0**	**+3.2**
LEPH				IAML				05 46 51.3	
	comp=Z,15nm,0.5s								
BOSA	**Boshof**	**3.03**	**223**	*i* P		**Pn**		**05 46 19.0**	**+1.0**
BOSA				*i* S		**Sn**		**05 46 54.7**	**+0.5**
BOSA	**Boshof**	**3.03**	**223**	*e*P		**Pn**		**05 46 20.3**	**+2.3**
BOSA				*e*S		**Sn**		**05 46 55.5**	**+1.3**
BOSA				IAML				05 47 09.3	
	comp=Z,8.1nm,0.2s								
PILG	**Pilgrimsrest,**	**3.17**	**63**	*e*P		**Pn**		**05 46 22.3**	**+2.4**
PILG				*e*S		**Sn**		**05 47 00.1**	**+2.4**
PILG				IAML				05 47 14.8	
	comp=Z,22nm,0.6s								
LPHEP	**Lephephe**	**3.40**	**332**	*i* P		**Pn**		**05 46 26.2**	**+3.2**
LPHEP				*i* S		**Sn**		**05 47 07.2**	**+3.9**
LPHEP				IAML				05 47 23.6	
	comp=E,11nm,0.2s								
SKOMA	**Sekoma**	**3.80**	**299**	*i* P		**Pb**		**05 46 37.5**	**+0.4**
SKOMA				*i* S		**Sb**		**05 47 23.8**	**+0.7**
SKOMA				IAML				05 47 34.9	
	comp=E,16nm,0.2s								
KDWAN	**Kaudwane**	**4.01**	**318**	*i* P		**Pn**		**05 46 32.1**	**+0.7**
KDWAN				*i* S		**Sn**		**05 47 15.6**	**-2.8**
KDWAN				IAML				05 47 41.8	
	comp=E,22nm,0.3s								
PMBG	**Pietermaritzbu**	**4.04**	**141**	*e*P		**Pn**		**05 46 33.9**	**+2.1**
PMBG				*e*S		**Sn**		**05 47 20.7**	**+1.8**
PMBG				IAML				05 47 38.1	
	comp=Z,11nm,0.7s								
MOPA	**Mopani**	**4.49**	**51**	*i* P		**Pn**		**05 46 35.7**	**-2.2**
MOPA				*i* S		**Sn**		**05 47 23.2**	**-6.7**
MOPA	**Mopani**	**4.49**	**51**	*e*P		**Pn**		**05 46 40.5**	**+2.6**
MOPA				*e*S		**Sn**		**05 47 31.8**	**+1.8**
MOPA				IAML				05 48 05.9	
	comp=Z,11nm,0.5s								
MATP	**Matopo**	**6.00**	**8**	*i* P		**Pn**		**05 46 58.9**	**+0.1**
MATP				*i* S		**Sn**		**05 48 03.5**	**-3.9**
BLWY	**Bulawayo**	**6.29**	**9**	*i* P		**Pn**		**05 47 02.5**	**-0.3**
BRAK	**Brakfontein**	**6.76**	**216**	*e*P		**Pn**		**05 47 11.2**	**+2.1**
BRAK				*e*S		**Sn**		**05 48 24.1**	**-1.9**
BRAK				IAML				05 49 05.2	
	comp=Z,2.3nm,0.4s								
ROOI	**Rooidraai Farm**	**7.03**	**209**	*e*P		**Pn**		**05 47 15.4**	**+2.6**
ROOI				*e*S		**Sn**		**05 48 31.1**	**-1.5**
ROOI				IAML				05 48 33.0	
	comp=Z,1.7nm,0.7s								
GRAN	**Grantham**	**7.55**	**217**	*e*P		**Pn**		**05 47 21.8**	**+1.8**
GRAN				*e*S		**Sn**		**05 48 43.2**	**-2.3**
GRAN				IAML				05 49 00.1	
	comp=Z,1.4nm,0.4s								
FRAZ	**Fraserburg**	**7.72**	**223**	*e*P		**Pn**		**05 47 24.1**	**+1.7**
FRAZ				*e*S		**Sn**		**05 48 47.5**	**-2.3**
FRAZ				IAML				05 48 50.3	
	comp=Z,1.3nm,0.3s								
MERW	**Merweville**	**8.19**	**219**	*e*P		**Pn**		**05 47 30.3**	**+1.5**
MERW				*e*S		**Sn**		**05 48 59.0**	**-2.2**
MERW				IAML				05 49 17.0	
	comp=Z,2.2nm,0.5s								
SUR	**Sutherland**	**8.40**	**223**	*e*P		**Pn**		**05 47 34.0**	**+2.3**
SUR				*e*S		**Sn**		**05 49 04.1**	**-2.5**
SUR				IAML				05 49 20.4	
	comp=Z,1.9nm,0.6s								

IDC ***17*** *05:59:16.2±0.9, 2°.48S×139°.07E, h0km, mb4.1/6, mbtmp4.1/7, ML4.0/1, MS4.6/2, Error ellipse: s-maj=23.1km s-min=21.4km az=35.0*

ISC 17 05:59:21.6±0.9, 2°.6S±0°.1×139°.08E±0°.10, h37km, n11, σ0s79/10, mb4.1/6, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.63**	**88**	Pn		**Pn**		**05 59 47.1**	**-0.6**
	33nm,0.3s,baz=267,slow=7.8,SNR=59								
JAY				Sn		**Sn**		**06 00 08.2**	**+0.8**
	24nm,0.3s,baz=93,slow=23,SNR=5.9								
JAY	**Jayapura**	**1.63**	**88**	PKHKP		**Pn**		**05 59 47.1**	**-0.6**
WRA	**Warramunga Arr**	**17.88**	**195**	P		**Pn**		**06 03 26.5**	**-1.0**
	0.5nm,0.3s,baz=18,slow=12,SNR=12								
	2.8nm,0.6s								
ASAR	**Alice Springs**	**21.56**	**193**	P		**P**		**06 04 08.1**	**+0.1**
	2.1nm,0.6s,baz=19,slow=11,SNR=11								
	2.1nm,0.6s								
RPZ	**Rata Peaks**	**49.83**	**150**	LR		LR		06 28 04.6	
	comp=Z,349nm,20.2s,baz=66,slow=35								
MKAR	**Makanchi Array**	**69.90**	**322**	P		**P**		**06 10 29.2**	**+0.3**
	1.6nm,0.7s,baz=108,slow=7.7,SNR=6.8								
	1.6nm,0.7s								
ZALV	**Zalesovo Beam**	**72.00**	**330**	P		**P**		**06 10 41.1**	**-0.3**
	1.2nm,0.6s,baz=108,slow=4.7,SNR=1.9								
	1.2nm,0.6s								
BVAR	**Borovoye Array**	**79.41**	**325**	P		**P**		**06 11 23.9**	**0.0**
	1.9nm,0.6s,baz=116,slow=6.8,SNR=3.5								
	1.9nm,0.6s								
ILAR	**Eielson Array**	**85.55**	**24**	P		**P**		**06 11 55.1**	**-0.5**
	1.3nm,1.0s,baz=247,slow=4.6,SNR=5.0								
	1.3nm,1.0s								
ARTI	**Arti**	**86.97**	**327**	LR		LR		06 51 55.7	
	comp=Z,562nm,22.0s,baz=292,slow=36								
QSPA	**South Pole Qui**	**87.38**	**180**	P		**P**		**06 12 06.0**	**+1.2**
	0.7nm,0.6s,baz=84,slow=1.7,SNR=1.7								
	0.7nm,0.6s								

BGR ***17*** *06:10:39.7, 45°.51N×147°.73E, h33km, mb5.8, mB_BB6.0, Ms4.6*
BJI ***17*** *06:10:42.5, 44°.74N×147°.76E, h122km, mB5.2/17, mb5.4/55*
MOS ***17*** *06:10:44.9±1.1, 44°.79N×147°.55E, h136km, mb5.3/46, Error ellipse: s-maj=6.0km s-min=4.1km az=112.9*
MOS Felt (III-IV) at Gornyy, Yuzhno-Kuril'sk; (III) at Goryachiy Plyazh, Golovnino, Malokuril'skoe.
GFZ ***17*** *06:10:45.0±0.6, 45°.N±4°.×14°.8E±°, h131km±4km, M5.2/25, mb5.3/25*
NIED ***17*** *06:10:46.7, 44°.44N×147°.66E, h146km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr 1.04; Mθθ 0.60; Mϕϕ -1.64; Mrθ 1.82; Mϕϕ -1.01; Mϕr 2.43; Fault plane solution: M0 3.44000×10^16 NP1: ϕs 169.00000°, δ 18.00000°, λ 42.00000°. NP2: ϕs 39.00000°, δ 78.00000°, λ 104.00000°.*
IDC ***17*** *06:10:46.3±0.4, 44°.86N×147°.46E, h133km±3km, mb4.7/35, mbtmp5.1/42, MS4.4/4 Error ellipse: s-maj=9.2km s-min=7.9km az=156.0*
JMA ***17*** *06:10:46.7±0.3, 44°.N±1°.×14°.8E±°, h146km±4km, MD4.9/39, MV5.3/39, NEAR ETOROFU ISLAND*
JMA Felt II J1 at NEAR ETOROFU ISLAND .
SKHL ***17*** *06:10:46.0±0.7, 44°.60N×147°.70E, h138km±6km, mb5.6/6, msh6.7/7*
NEIC ***17*** *06:10:47.1±1.5, 44°.84N±0°.08×147°.5E±0°.1, h134km±7km, mb5.0/62, Error ellipse: s-maj=13.2km s-min=10.8km az=137.0*

ISC 17 06:10:46.0±0.3, 44°.70N±0°.03×147°.59E±0°.03, h135km±2km, h135km:pP-P, n988, σ1s24/1068, mb5.2/250, 78C-53D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.57**	**20**	*e*PN		**Pn**		**06 11 06.8**	**+0.9**
KUR				*i* S		**Sn**		**06 11 21.8**	**+0.7**
KUR	**Kuril'sk**	**0.57**	**20**	*i* P		**Pn**		**06 11 07.0**	**+1.1**
KUR				AMB		AMB		06 11 07.7	
	15μm,0.3s								
KUR				*i* S		**Sn**		**06 11 22.3**	**+1.2**
KUR				A		A		06 11 24.8	
	48μm,0.2s								
KUR				A		A		06 11 24.8	
	26μm,0.2s								
SHO	**Shikotan**	**0.99**	**214**	*e*P		Pn		06 11 22.2	+13
SHO				AMB		AMB		06 11 23.1	
	29μm,0.3s								
SHO				*e*S		Sn		06 11 38.4	+12
SHO				A		A		06 11 39.6	
	130μm,0.5s								
SHO				A		A		06 11 39.6	
	117μm,0.5s								
YUK	**Yuzh-Kuril'sk**	**1.41**	**243**	*d i*PN		**Pn**		**06 11 14.4**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**1.41**	**243**	*i* P		**Pn**		**06 11 14.4**	**+1.1**
YUK				AMB		AMB		06 11 14.9	
	2μm,0.4s								
YUK				AMB		AMB		06 11 14.9	
	34μm,0.4s								
YUK				*i* S		**Sn**		**06 11 35.0**	**+0.8**
YUK				A		A		06 11 36.2	
	43μm,0.5s								
YUK				A		A		06 11 36.2	
	61μm,0.5s								
RUSJ	**Misakicho**	**1.78**	**251** ⇓	*i*PN		**Pn**		**06 11 18.8**	**+1.2**
RUSJ				*i* S		**Sn**		**06 11 43.6**	**+1.9**
NEM2	**Nemuro 2**	**1.89**	**226**	*e*P		**Pn**		**06 11 18.6**	**-0.2**
NEM2				A		A		06 11 18.6	
	comp=N,17nm,2.0s,comp=E,27nm,3.6s								
NEM2				S		**Sn**		**06 11 42.1**	**-1.7**
NMR	**Nemuro--Hokkai**	**1.89**	**226** ⇓	*i*PN		**Pn**		**06 11 18.6**	**-0.2**
NMR				*i* S		**Sn**		**06 11 41.9**	**-2.1**
NMR	**Nemuro--Hokkai**	**1.89**	**226**	*i* P		**Pn**		**06 11 18.6**	**-0.2**
NMR				*i* S		**Sn**		**06 11 41.8**	**-2.2**
JRA	**Rausu**	**1.93**	**248**	P		**Pn**		**06 11 20.3**	**+1.0**
JRA				A		A		06 11 20.3	
	comp=N,36nm,3.2s,comp=E,24nm,3.1s								
JRA				S		**Sn**		**06 11 46.0**	**+1.2**
JNSB	**Nemuroshibetsu**	**2.08**	**245**	*i* P		**Pn**		**06 11 22.4**	**+1.3**
JNSB				A		A		06 11 22.4	
	comp=N,80nm,3.5s,comp=E,57nm,2.8s								
JNSB				*e*S		**Sn**		**06 11 50.0**	**+2.0**
JNK	**Nakash**	**2.35**	**243**	P		**Pn**		**06 11 25.4**	**+1.0**
JNK				A		A		06 11 25.4	
	comp=N,23nm,4.0s,comp=E,9.0nm,3.8s								
JNK				S		**Sn**		**06 11 54.8**	**+0.8**
JKHN	**Kushirohamanak**	**2.39**	**228**	*i* P		**Pn**		**06 11 25.0**	**+0.1**
JKHN				A		A		06 11 25.0	
	comp=N,23nm,3.0s,comp=E,20nm,1.8s								
JKHN				S		**Sn**		**06 11 53.4**	**-1.5**
AKK	**Akkeshi**	**2.60**	**231**	*e*P		**Pn**		**06 11 27.5**	**-0.1**
JAK	**Akkeshi**	**2.70**	**232**	*i* P		**Pn**		**06 11 28.9**	**0.0**
JAK				A		A		06 11 28.9	
	comp=N,23nm,1.7s,comp=E,23nm,1.4s								
JAK				S		**Sn**		**06 12 00.6**	**-1.3**
JTKR	**Abashiri--Toko**	**2.74**	**256**	*i* P		**Pn**		**06 11 30.6**	**+1.2**
JTKR				A		A		06 11 30.6	
	comp=N,11nm,2.2s,comp=E,5.0nm,2.8s								
JTKR				S		**Sn**		**06 12 03.8**	**+0.9**
JAR	**Ashorobuto**	**3.10**	**244**	*i* P		**Pn**		**06 11 35.3**	**+1.4**
JAR				A		A		06 11 35.3	
	comp=N,19nm,1.4s,comp=E,10.0nm,0.9s								
JAR				S		**Sn**		**06 12 12.8**	**+1.8**
JMP	**Maruseppu**	**3.12**	**259**	A		A		06 11 35.9	
	comp=N,12nm,2.6s,comp=E,7.0nm,2.0s								
JOB	**Onbets**	**3.26**	**238**	A		A		06 11 36.6	
	comp=N,11nm,4.3s,comp=E,13nm,2.4s								
JSE	**Soyaes**	**3.57**	**276**	P		**Pn**		**06 11 41.9**	**+1.7**
JSE				S		**Sn**		**06 12 23.6**	**+1.5**
JKK2	**Kamakawa 2**	**3.58**	**258**	*i* P		**Pn**		**06 11 41.9**	**+1.7**
JKK2				S		**Sn**		**06 12 24.9**	**+2.7**
JKA	**Kamikawa-asahi**	**3.63**	**263**			**Pn**		**06 11 42.3**	**+1.5**
JKA	**Kamikawa-asahi**	**3.63**	**263**	P		**Pn**		**06 11 43.0**	**+2.2**
JKA	**Kamikawa-asahi**	**3.63**	**263**	*e*P		**Pn**		**06 11 42.3**	**+1.5**
ASAJ	**Asahikawa**	**3.63**	**263**	LR		LR		06 12 44.9	
	comp=E,2μm,18.7s,baz=184,slow=33								
ASAJ	**Asahikawa**	**3.63**	**263**	PN		**Pn**		**06 11 42.3**	**+1.4**
JCH	**Churui**	**3.71**	**237**	*i* P		**Pn**		**06 11 42.1**	**+0.2**
JCH				A		A		06 11 42.1	
	comp=N,8.0nm,0.7s,comp=E,4.0nm,2.9s								
JCH				S		**Sn**		**06 12 24.0**	**-1.3**
KRS4	**Mayak Korsakov**	**3.87**	**301**	*e*P		**Pn**		**06 11 46.1**	**+2.1**
JTHR	**Tokachihiroo**	**3.94**	**234**	A		A		06 11 45.3	
	comp=N,5.0nm,2.9s,comp=E,6.0nm,1.1s								
JAB	**Ashibetsu**	**4.05**	**255**	A		A		06 11 47.9	
	comp=N,11nm,3.2s,comp=E,7.0nm,3.9s								
YSS	**Yuzhno-Sakhali**	**4.07**	**305**	*ke*PN		**Pn**		**06 11 47.5**	**+0.9**
YSS				*e*S		**Sn**		**06 12 34.6**	**+0.9**
YSS				pmax		pmax			
	comp=Z,340nm,0.6s								
YSS				pmax		pmax			
	comp=Z,1μm,2.7s								
YSS				pmax		pmax			
	comp=N,900nm,3.9s								
YSS				pmax		pmax			
	comp=E,1μm,2.4s								
YSS				smax		smax			
	comp=N,480nm,1.0s								
YSS				smax		smax			
	comp=E,1μm,1.1s								
YSS				smax		smax			
	comp=N,4μm,2.5s								
YSS				smax		smax			
	comp=E,6μm,3.0s								
YSS				MLR		MLR			
	comp=Z,2μm,16.0s								
YSS				MLR		MLR			

UGL pmax pmax
comp=Z,200nm,1.1s
UGL Uglegorsk 5.79 321 *e*P **Pn 06 12 12.1 +2.5**
UGL AMB AMB 06 12 13.0
comp=Z,700nm,2.4s
UGL AMB AMB 06 12 13.3
comp=Z,190nm,0.3s
UGL *e*S **Sn 06 13 14.0 -0.9**
UGL A A 06 13 24.4
comp=Z,13µm,3.5s
UGL A A 06 13 24.4
comp=Z,10µm,3.5s
UGL A A 06 13 26.6
comp=Z,860nm,0.5s
UGL A A 06 13 26.6
comp=Z,540nm,0.5s
JOT Ohata 5.83 238 P **Pn 06 12 08.8 -1.4**
JTM Tenmabayashi 6.19 233 **Pn 06 12 13.2 -1.9**
JTM Tenmabayashi 6.19 233 P **Pn 06 12 14.0 -1.0**
JANG Nango 6.23 228 *i* P **Pn 06 12 13.0 -2.6**
TYV Tymovskoe 7.01 333 *e*PN **Pn 06 12 27.2 +1.3**
TYV *e*S **Sn 06 13 47.8 +3.7**
TYV pmax pmax
comp=Z,500nm,3.5s
TYV pmax pmax
comp=Z,163nm,1.0s
TYV smax smax
comp=N,61nm,1.3s
TYV smax smax
comp=E,138nm,1.3s
TYV smax smax
comp=N,700nm,4.8s
TYV smax smax
comp=E,4µm,4.8s
TYV Tymovskoe 7.01 333 *e*P **Pn 06 12 26.7 +0.8**
TYV AMB AMB 06 12 27.8
comp=E,540nm,3.5s
TYV AMB AMB 06 12 27.8
comp=E,90nm,0.9s
TYV *e*S **Sn 06 13 45.2 +1.1**
TYV A A 06 13 50.7
comp=E,60nm,0.9s
TYV A A 06 13 50.7
comp=E,70nm,0.9s
TYV A A 06 13 59.9
comp=E,2µm,4.2s
TYV A A 06 13 59.9
comp=E,3µm,4.2s
JOM Ohasama 7.01 224 A A 06 12 25.8
comp=N,3.0nm,1.5s,comp=E,4.0nm,1.4s
SKR Severo-Kuril's 8.30 41 *e*PN **Pn 06 12 41.0 -2.2**
SKR *e*S **Sn 06 14 12.5 -2.7**
SKR pmax pmax
comp=Z,300nm,4.3s
SKR pmax pmax
comp=Z,427nm,0.6s
SKR MLR MLR
comp=Z,300nm,13.0s
SKR Severo-Kuril's 8.30 41 *e*P **Pn 06 12 42.7 -0.5**
SKR AMB AMB 06 12 45.0
comp=Z,300nm,2.0s
SKR AMB AMB 06 12 45.2
comp=Z,320nm,0.3s
SKR *e*S **Sn 06 14 12.5 -2.7**
SKR A A 06 14 17.9
comp=Z,160nm,0.6s
SKR A A 06 14 17.9
comp=Z,140nm,0.6s
SKR A A 06 14 19.4
comp=Z,160nm,2.2s
SKR A A 06 14 19.4
comp=Z,190nm,2.2s
PAU Pauzhetka 9.16 39 *e*P **Pn 06 12 53.7 -1.0**
PAU *e*S **Sn 06 14 31.3 -4.7**
OKH Okha 9.37 343 *de*PN **Pn 06 12 55.3 -2.2**
OKH *e*S **Sn 06 14 43.1 +2.0**
OKH pmax pmax
comp=Z,500nm,13.6s
OKH smax smax
comp=N,400nm,9.7s
OKH MLR MLR
comp=E,500nm,10.0s
OKH MLR MLR
comp=N,600nm,15.0s
OKH MLR MLR
comp=Z,500nm,17.0s
OKH Okha 9.37 343 *e*P **Pn 06 12 54.1 -3.4**
OKH *e*S **Sn 06 14 42.0 +0.9**
GRNR Gornyy 9.67 313 ⇓ *i* PN **Pn 06 13 03.0 +1.4**
GRNR pmax pmax
comp=E,30nm,1.2s
GRNR pmax pmax
comp=N,20nm,0.7s
GRNR pmax pmax
comp=Z,40nm,1.2s
GRNR Gornyy 9.67 313 *e*P **Pn 06 13 03.0 +1.4**
PEA0B Petropavlovsk- 10.72 35 *ce*PN **Pn 06 13 14.5 -1.1**
PEA0B Petropavlovsk- 10.72 35 **Pn 06 13 14.4 -1.2**
PETK Petropavlovsk- 10.72 35 P **Pn 06 13 13.9 -1.7**
comp=Z,32nm,0.6s,baz=200,slow=9.8,SNR=50
PETK Petropavlovsk- 10.72 35 PN **Pn 06 13 14.2 -1.4**
PETK Petropavlovsk- 10.72 35 **Pn 06 13 14.2 -1.4**
MJB9 Matsu-Tunnel 10.82 224 **Pn 06 13 16.2 -1.0**
MAJO Matsushiro 10.82 224 *d* PN **Pn 06 13 15.3 -1.9**
MAJO Matsushiro 10.82 224 **Pn 06 13 15.2 -1.9**
MAJO Matsushiro 10.82 224 P **Pn 06 13 15.9 -1.3**
MJAR Matsushiro Arr 10.82 224 P **Pn 06 13 15.7 -1.5**
comp=Z,26nm,0.7s,baz=28,slow=13,SNR=65
MJAR S **Sn 06 15 12.1 -4.4**
comp=Z,4.9nm,0.7s,baz=17,slow=23,SNR=2.0
MJAR Matsushiro Arr 10.82 224 PN **Pn 06 13 15.1 -2.0**
MJAR Matsushiro Arr 10.82 224 **Pn 06 13 15.1 -2.0**
PET Petropavlovsk 11.06 37 *e*P **Pn 06 13 18.8 -1.2**
USA0B Ussuriysk Arra 11.17 273 PN **Pn 06 13 21.7 +0.1**
USA0B Ussuriysk Arra 11.17 273 **Pn 06 13 21.7 +0.1**
USRK Ussuriysk Ar. 11.17 273 P **Pn 06 13 21.9 +0.2**
comp=Z,34nm,0.8s,baz=83,slow=13,SNR=27
JGF Kuroka 11.99 224 **Pn 06 13 31.6 -0.9**
JGF Kuroka 11.99 224 P **Pn 06 13 31.4 -1.0**
INU Inuyama 12.35 225 **Pn 06 13 36.4 -0.8**
INU Inuyama 12.35 225 P **Pn 06 13 36.1 -1.1**
JHJ Hachijo jima 2 13.05 210 P **Pn 06 13 46.0 -0.3**
comp=Z,54nm,0.3s,baz=45,slow=16,SNR=6.2
JHJ S **Sn 06 16 02.0 -8.4**
comp=Z,120nm,0.4s,baz=103,slow=22,SNR=9.0
BNX BinXian 14.27 281 ⇓ P **Pn 06 14 01.1 -0.6**
BNX S **Sn 06 16 34.9 -4.6**
BNX pmax pmax
comp=Z,55nm,0.7s
BNX pmax pmax
comp=Z,260nm,6.2s
BNX L L
comp=Z,430nm,13.6s
BNX L L
comp=Z,440nm,10.8s
BNX L L
comp=Z,630nm,14.1s
HEH HeiHe 14.72 299 *e*P **Pn 06 14 06.8 -0.5**
HEH S **Sn 06 16 47.1 -3.0**
HEH pmax pmax
comp=Z,72nm,0.7s
HEH pmax pmax
comp=Z,690nm,5.5s
MA2 Magadan 15.03 6 P **Pn 06 14 09.2 -1.9**
comp=Z,38nm,1.0s,baz=208,slow=11,SNR=14
MA2 Magadan 15.03 6 *ce*P **Pn 06 14 10.1 -1.0**
MA2 pmax pmax
comp=Z,79nm,1.3s
MA2 Magadan 15.03 6 **Pn 06 14 09.8 -1.3**
MA2 Magadan 15.03 6 P **Pn 06 14 10.4 -0.7**
comp=Z,2µmcomp=Z,107nm,1.6s
MA2 Magadan 15.03 6 P **Pn 06 14 10.2 -0.9**
MA2 Magadan 15.03 6 *e*P **Pn 06 14 10.1 -1.0**
JMN Monobe 15.24 229 Pn **Pn 06 14 14.2 +0.2**
CN2 Changchun 15.89 275 P **Pn 06 14 20.8 -1.2**
CN2 pmax pmax
comp=Z,80nm,0.6s
ZEA Zeya 16.03 312 *e*P **Pn 06 14 23.5 0.0**
ZEA pmax pmax
comp=Z,400nm,3.6s
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.7s

ZEA Zeya 16.03 312 *e*P **Pn 06 14 23.5 0.0**
KSRS Korea Array 16.48 251 P **Pn 06 14 29.1 -0.1**
comp=Z,13nm,0.7s,baz=61,slow=11,SNR=30
KSRS PcP **PcP 06 19 13.8 +1.5**
comp=Z,2.3nm,0.7s,baz=226,slow=0.0,SNR=7.9
KS19 Wonju Array Si 16.49 251 **Pn 06 14 28.8 -0.6**
KSAR Wonju Array Be 16.51 251 P **Pn 06 14 29.1 -0.5**
KSAR Wonju Array Be 16.51 251 P **Pn 06 14 29.1 -0.5**
KSAR Wonju Array Be 16.51 251 *e*P **Pn 06 14 29.1 -0.5**
INCN Inchon 17.34 253 P **Pn 06 14 39.4 -0.2**
INCN Inchon 17.34 253 P **Pn 06 14 39.4 -0.2**
INCN Inchon 17.34 253 *e*P **Pn 06 14 39.4 -0.2**
TJN Taejon 17.45 249 *i* P **Pn 06 14 41.4 +0.5**
TJN pmax pmax
comp=Z,1.0nm,1.0s
SHEM Shemya Is, Ala 19.16 56 P **Pn 06 15 00.3 -0.7**
comp=Z,250nm,0.7s,baz=342,slow=1.7,SNR=36
SMY Shemya 19.16 56 P **P 06 14 58.9 +0.2**
SMY Shemya 19.16 56 **P 06 14 58.9 +0.2**
HILR Hailar Array B 19.50 294 P **P 06 15 00.2 -2.2**
comp=Z,31nm,0.5s,baz=96,slow=12,SNR=27
DL2 Dalian 20.16 262 P **P 06 15 10.3 +0.7**
DL2 sP **sP 06 15 48.8 -1.3**
DL2 S **S 06 18 45.4 -3.0**
DL2 pmax pmax
comp=Z,80nm,0.8s
YAK Yakutsk 20.26 335 P **P 06 15 08.1 -2.3**
comp=Z,577nm,0.6s,baz=133,slow=3.5,SNR=82
comp=Z,577nm,0.6s
YAK Yakutsk 20.26 335 **P 06 15 07.5 -3.0**
YAK Yakutsk 20.26 335 P **P 06 15 07.8 -2.7**
XLT XiLinHaoTe 22.50 279 *e*P **P 06 15 32.9 -1.3**
XLT pP pP 06 15 54.0 -4.6
XLT sP sP 06 16 09.3 -5.7
XLT S **S 06 19 28.1 -3.0**
XLT SS **SnSn 06 20 18.8 +3.2**
XLT pmax pmax
comp=Z,69nm,0.7s
BJI2 Beijing 23.60 270 P **P 06 15 44.8 +0.4**
BJI2 sP **sP 06 16 27.8 +1.1**
BJI2 S **S 06 19 46.5 -2.2**
BJI2 pmax pmax
comp=Z,21nm,0.9s
BJI2 pmax pmax
comp=Z,140nm,3.5s
JOW Kunigami 23.64 228 **P 06 15 45.7 +0.9**
JOW IAmb IAmb 06 15 47.2
comp=Z,56nm,1.0s
BOD Bodaibo 24.48 314 *e*P **P 06 15 48.8 -3.4**
BOD pmax pmax
comp=Z,70nm,0.8s
TIA Tai'an 24.57 260 P **P 06 15 53.8 +0.5**
TIA pmax pmax
comp=Z,130nm,0.8s
TIA pmax pmax
comp=Z,880nm,11.8s
BILL Bilibino 25.36 16 *ce*P **P 06 15 58.6 -1.4**
BILL pmax pmax
comp=Z,8.0nm,0.9s
NJ2 Nanjing 25.68 250 *e*P **P 06 16 07.0 +3.7**
NJ2 pP **pP 06 16 34.4 +2.4**
NJ2 sP **sP 06 16 49.1 +1.6**
NJ2 pmax pmax
comp=Z,100nm,0.9s
HNS HongShan 25.72 265 ⇑ P **P 06 16 04.4 +0.8**
HNS pmax pmax
comp=Z,76nm,1.2s
BTO2 Baotou 27.82 275 *e*P **P 06 16 23.5 +0.9**
BTO2 pP **pP 06 16 47.3 -3.3**
BTO2 S **S 06 20 59.6 +3.9**
BTO2 pmax pmax
comp=Z,36nm,0.7s
BTO2 pmax pmax
comp=Z,950nm,9.8s
BTO2 L L
comp=Z,950nm,11.6s
BTO2 L L
comp=Z,700nm,12.4s
BTO2 L L
comp=Z,780nm,9.8s
ULN Ulaanbaatar 27.97 291 P **P 06 16 24.2 +0.4**
ULN Ulaanbaatar 27.97 291 P **P 06 16 24.4 +0.6**
ULN Ulaanbaatar 27.97 291 P **P 06 16 22.9 -0.9**
ULN Ulaanbaatar 27.97 291 P **P 06 16 23.6 -0.3**
ULN Ulaanbaatar 27.97 291 *e*P **P 06 16 24.2 +0.4**
SONM Songino Array 28.41 291 P **P 06 16 27.9 +0.1**
comp=Z,21nm,0.5s,baz=83,slow=8.1,SNR=43
comp=Z,21nm,0.5s
SONM Songino Array 28.41 291 **P 06 16 27.0 -0.8**
SONM IAmb IAmb 06 16 30.7
comp=Z,25nm,0.6s
TIXI Tiksi 28.50 348 *ce*P **P 06 16 25.0 -3.0**
TIXI pmax pmax
comp=Z,22nm,0.9s
LYN LuoYang 28.69 262 P **P 06 16 31.1 +0.9**
LYN pmax pmax
comp=Z,45nm,0.6s
SPIA Saint Paul Isl 28.86 49 P **P 06 16 31.7 +0.3**
baz=263
H11N2 WAKE ISLAND Hy 29.62 141 T T 06 47 48.8
baz=333,slow=75,SNR=1077
H11N1 WAKE ISLAND Hy 29.64 141 T T 06 47 47.4
baz=333,slow=75,SNR=829
H11N3 WAKE ISLAND Hy 29.64 141 T T 06 48 03.4
baz=333,slow=75,SNR=1182
WHN Wuhan 29.65 253 P **P 06 16 39.0 +0.3**
TLY Talaya 29.75 299 P **P 06 16 38.6 -0.7**
comp=Z,7.8nm,0.7s,baz=91,slow=8.7,SNR=13
comp=Z,7.8nm,0.7s
TLY Talaya 29.75 299 *ce*P **P 06 16 38.9 -0.5**
TLY pmax pmax
comp=Z,31nm,1.7s
TLY Talaya 29.75 299 P **P 06 16 40.5 +1.2**
TLY Talaya 29.75 299 P **P 06 16 37.9 -1.4**
TLY Talaya 29.75 299 P **P 06 16 38.8 -0.6**
TLY Talaya 29.75 299 *e*P **P 06 16 38.9 -0.5**
GAMB Gambell 29.75 36 P **P 06 16 39.3 +0.1**
baz=250
ZAK Zakamensk 30.09 297 *e*P **P 06 16 40.3 -2.3**
ZAK pmax pmax
comp=Z,23nm,1.4s
H11S1 WAKE ISLAND Hy 30.61 142 T T 06 49 07.3
baz=333,slow=76,SNR=753
H11S3 WAKE ISLAND Hy 30.62 142 T T 06 49 08.2
baz=333,slow=76,SNR=882
H11S2 WAKE ISLAND Hy 30.63 142 T T 06 49 08.6
baz=333,slow=76,SNR=898
TPUB Ta-pu 30.67 235 P **P 06 16 48.6 +0.9**
TPUB Ta-pu 30.67 235 P **P 06 16 49.2 +1.4**
UNV Unalaska Valle 30.82 56 P **P 06 16 49.9 +1.1**
baz=272
MOY Mondy 31.39 300 *e*P **P 06 16 53.0 -1.0**
MOY pmax pmax
comp=Z,30nm,1.8s
MOY Mondy 31.39 300 *e*P **P 06 16 53.0 -1.0**
M11K Mekoryuk 31.40 43 P **P 06 16 54.2 +0.5**
baz=261
XAN Xi'an 31.47 264 P **P 06 16 55.0 +0.3**
XAN pmax pmax
comp=Z,34nm,0.8s
TNA Tin City 31.88 33 **P 06 16 57.6 -0.3**
TNA Tin City 31.88 33 P **P 06 16 58.5 +0.6**
baz=251,SNR=9.2
K13K Kusilvak Mount 32.39 41 P **P 06 17 03.3 +1.0**
K13K IAmb IAmb 06 17 04.6
comp=Z,24nm,1.1s
K13K Kusilvak Mount 32.39 41 P **P 06 17 03.4 +1.0**
baz=260,SNR=9.2
F14K Arctic Creek 32.49 34 P **P 06 17 04.1 +0.9**
baz=253,SNR=13
ANM Nome 32.63 36 P **P 06 17 04.9 +0.4**
ANM pmax pmax
comp=Z,31nm,1.0s
ANM Nome 32.63 36 **P 06 17 04.9 +0.4**
ANM IAmb IAmb 06 17 07.6
comp=Z,31nm,1.0s
ANM Nome 32.63 36 P **P 06 17 05.5 +1.1**
baz=256
M13K Dall Lake 32.81 44 **P 06 17 06.5 +0.5**
M13K IAmb IAmb 06 17 08.9
comp=Z,30nm,0.8s
M13K Dall Lake 32.81 44 P **P 06 17 07.0 +1.0**
baz=264
J14K Nanvaranak Lak 33.04 39 P **P 06 17 08.5 +0.5**
J14K IAmb IAmb 06 17 10.1
comp=Z,28nm,1.2s
J14K Nanvaranak Lak 33.04 39 P **P 06 17 08.7 +0.7**
baz=260,SNR=9.2
F15K North Star Dit 33.23 34 P **P 06 17 10.5 +0.9**
baz=255,SNR=5.9
L14K Kuka Creek 33.24 42 P **P 06 17 11.2 +1.5**
baz=263,SNR=15
G15K Niukluk 33.29 35 P **P 06 17 11.2 +1.0**
baz=256,SNR=18
M14K Bethel 33.52 43 P **P 06 17 13.7 +1.5**
M14K IAmb IAmb 06 17 14.7
comp=Z,30nm,0.7s
M14K Bethel 33.52 43 P **P 06 17 13.9 +1.7**
baz=265,SNR=17
N14K Kuskokwak Cree 33.59 45 P **P 06 17 14.1 +1.3**
N14K IAmb IAmb 06 17 16.0
comp=Z,44nm,1.1s
N14K Kuskokwak Cree 33.59 45 P **P 06 17 14.2 +1.3**
baz=266,SNR=10
KNGR Kungurtug, Tuv 33.71 298 *i* P **P 06 17 13.4 -0.7**
KNGR pmax pmax
comp=Z,11nm,1.1s
C16K Lisburne Hills 33.75 29 P **P 06 17 13.3 -0.8**
baz=250,SNR=5.4
O14K Tigyukauivet M 33.77 46 P **P 06 17 15.6 +1.2**
baz=268,SNR=12
L15K Ungalak Mounta 33.84 42 P **P 06 17 16.0 +1.0**
baz=264,SNR=6.8
K15K Wolf Creek Mou 33.90 41 P **P 06 17 16.9 +1.4**
baz=263,SNR=7.5
H16K Elim 33.97 36 P **P 06 17 16.8 +0.7**
baz=259,SNR=20
LZH Lanzhou 34.07 271 ⇑ P **P 06 17 19.0 +1.5**
LZH pP pP 06 17 46.8 +0.4
LZH pmax pmax
comp=Z,180nm,1.3s
G16K Koyuk River 34.07 35 P **P 06 17 17.4 +0.5**
baz=258,SNR=6.3
M15K Kasigluk River 34.14 43 P **P 06 17 18.8 +1.2**
baz=266,SNR=23
LZDM Lanzhou Array 34.24 271 P **P 06 17 20.2 +1.0**
comp=Z,66nm,0.8s,baz=117,slow=2.3,SNR=40
LZDM PcP **PcP 06 19 53.6 +1.0**
comp=Z,1.9nm,0.3s,baz=198,slow=0.9,SNR=3.9
comp=Z,66nm,0.8s
SDPT Sand Point 34.25 53 P **P 06 17 19.9 +1.3**
baz=274
D17K Noatak River 34.38 31 P **P 06 17 19.6 0.0**
baz=254,SNR=24
N15K Kwethluk River 34.41 44 P **P 06 17 21.0 +1.1**
N15K Kwethluk River 34.41 44 P **P 06 17 21.4 +1.5**
baz=268,SNR=31
J16K Anvik River 34.45 39 P **P 06 17 21.3 +1.0**
baz=262,SNR=7.0
I17K Unalakleet 34.50 38 P **P 06 17 21.6 +1.1**
baz=262,SNR=16
O15K Ungalikthiuk R 34.51 46 P **P 06 17 21.7 +0.9**
O15K Ungalikthiuk R 34.51 46 P **P 06 17 22.1 +1.3**
baz=269,SNR=23
RDOG Red Dog Mine 34.55 30 P **P 06 17 20.6 -0.4**
baz=253
C17K DeLong Mountai 34.58 30 P **P 06 17 21.1 -0.2**
baz=252,SNR=12
E17K Hotham Inlet 34.68 32 P **P 06 17 22.6 +0.4**
baz=256,SNR=26
F17K Baldwin Pennin 34.75 33 P **P 06 17 23.4 +0.7**
baz=257,SNR=17
G17K Kiwalik Mounta 34.79 35 P **P 06 17 24.2 +1.1**
baz=259,SNR=50
CHNA Chernabura Isl 34.80 54 P **P 06 17 24.0 +0.7**
baz=276
L16K Owhat River 34.80 42 P **P 06 17 24.4 +1.1**
baz=266,SNR=23
H17K Granite Mounta 35.00 36 P **P 06 17 26.2 +1.2**
baz=261,SNR=28
M16K Timber Creek 35.01 43 P **P 06 17 26.0 +1.0**
M16K IAmb IAmb 06 17 27.4
comp=Z,34nm,0.7s
M16K Timber Creek 35.01 43 P **P 06 17 26.3 +1.3**
baz=267,SNR=30
N16K Nishlik Lake 35.08 44 P **P 06 17 27.2 +1.5**
baz=268,SNR=48
J17K VABM Dome 35.15 39 P **P 06 17 27.6 +1.4**
baz=264,SNR=25
E18K Tukpahlearik C 35.22 32 P **P 06 17 27.1 +0.3**
baz=257,SNR=22
C18K Utukok River 35.32 30 P **P 06 17 27.3 -0.4**
baz=254,SNR=23
CHGN Chignik 35.34 51 P **P 06 17 28.1 +0.1**
baz=274
L17K Donlin 35.39 41 P **P 06 17 29.9 +1.6**
baz=266,SNR=21
O16K Kokwok River B 35.40 45 P **P 06 17 29.6 +1.2**
baz=270,SNR=15
F18K Selawik 35.41 33 P **P 06 17 29.3 +0.9**
baz=259,SNR=27
K17K Iditarod 35.43 40 P **P 06 17 30.2 +1.6**
baz=266,SNR=23
P16K Nushagak River 35.45 46 P **P 06 17 30.6 +1.7**
baz=271
GTA2 Gaotai 35.47 279 ⇑ P **P 06 17 30.8 +1.4**
GTA2 PcP **PcP 06 19 58.0 +2.1**
GTA2 pmax pmax
comp=Z,140nm,0.8s
G18K Tagagawik 35.68 35 P **P 06 17 31.5 +0.8**
G18K Tagagawik 35.68 35 P **P 06 17 31.5 +0.8**
baz=261,SNR=87
H18K Honhosa River 35.68 36 P **P 06 17 31.8 +1.0**
baz=262,SNR=44
M17K Holitna River 35.76 42 P **P 06 17 33.2 +1.7**
baz=268,SNR=45
N17K Nushagak Hills 35.86 44 P **P 06 17 34.0 +1.6**
baz=270,SNR=22
O17K Koliganek Bris 35.91 45 P **P 06 17 34.3 +1.6**
baz=271,SNR=31
C19K Lookout Ridge 36.01 29 P **P 06 17 33.3 -0.3**
baz=255,SNR=20
L18K Granite Mounta 36.15 41 P **P 06 17 36.5 +1.8**
baz=268
Q16K King Salmon 36.16 47 P **P 06 17 36.2 +1.4**
baz=273,SNR=6.6
F19K Shaleruckik Mo 36.19 33 P **P 06 17 35.1 +0.1**
baz=260,SNR=65
J18K Innoko River 36.21 39 P **P 06 17 36.1 +0.8**
baz=266,SNR=23
P17K Kvichak River 36.25 46 P **P 06 17 37.1 +1.4**
baz=272,SNR=7.0
GCSA Galena City Sc 36.26 37 P **P 06 17 35.8 +0.2**
baz=264,SNR=10
G19K Purcell Mounta 36.35 34 P **P 06 17 36.6 +0.2**
baz=262,SNR=53
R17L Mt. Peulik Vol 36.37 49 P **P 06 17 36.9 +0.2**
baz=274,SNR=12
D19K Kuna River 36.38 30 P **P 06 17 36.5 -0.2**
baz=258,SNR=78
N18K Kilae Creek 36.50 44 P **P 06 17 39.7 +1.9**
baz=270,SNR=26
E19K Redstone River 36.50 32 P **P 06 17 38.3 +0.5**
baz=260,SNR=117
H19K Roundabout Mou 36.53 35 P **P 06 17 38.9 +0.9**
H19K Roundabout Mou 36.53 35 P **P 06 17 38.9 +0.9**
baz=263,SNR=116
M18K Stony River 36.54 42 P **P 06 17 39.9 +1.8**
baz=270,SNR=21
Q17K Contact Creek 36.58 48 P **P 06 17 39.2 +0.6**
baz=274,SNR=28
J19K Poorman 36.73 38 P **P 06 17 40.6 +0.8**
baz=266,SNR=46
O18K Koktuh Hills 36.86 45 P **P 06 17 42.4 +1.5**
baz=272,SNR=7.6
P18K Big Mtain, 36.86 46 P **P 06 17 42.2 +1.3**
baz=273,SNR=9.4
CHIR Chirikof Islan 36.95 52 P **P 06 17 42.0 +0.4**
baz=277
D20K Etivluk River 36.97 30 P **P 06 17 41.7 0.0**
baz=259,SNR=82
L19K White Mountain 37.01 41 P **P 06 17 42.8 +0.7**
L19K White Mountain 37.01 41 P **P 06 17 43.3 +1.2**
baz=269,SNR=7.8
F20K Avaraart Lake 37.02 33 P **P 06 17 42.4 +0.3**
baz=262
Q18K Katmai Hardscr 37.02 47 P **P 06 17 43.0 +0.7**
baz=274,SNR=15
E20K Nigu River 37.04 31 P **P 06 17 42.5 +0.2**
baz=260,SNR=95
B20K Meade River 37.06 28 P **P 06 17 41.8 -0.5**
baz=257
H20K Anotleneega Mo 37.17 36 P **P 06 17 44.2 +0.8**

baz=265,SNR=55
N19K **Bonanza Creek** 37.19 43 P P 06 17 45.2 +1.5
baz=272,SNR=20
I20K **Naaghedeneel** 37.29 37 P P 06 17 45.6 +1.2
baz=266,SNR=11
O19K **Port Alsworth** 37.29 44 P P 06 17 45.7 +1.3
baz=272
J20K **Nowinta River** 37.39 38 P P 06 17 46.6 +1.3
J20K IAmb IAmb 06 17 47.6
comp=Z,30nm,0.8s
J20K **Nowinta River** 37.39 38 P P 06 17 46.4 +1.1
baz=267,SNR=30
K20K **Telida** 37.39 39 P P 06 17 46.6 +1.3
baz=269,SNR=14
SII **Sitkinak Islan** 37.66 50 P P 06 17 47.9 +0.3
baz=277
C21K **Knifeblade Rid** 37.70 30 P P 06 17 48.1 +0.3
baz=260,SNR=43
M20K **Styx River** 37.82 42 P P 06 17 50.7 +1.7
baz=271
G21K **Allakaket** 37.83 34 P P 06 17 49.7 +0.8
baz=265,SNR=120
B21K **Ikpikpuk River** 37.84 29 P P 06 17 49.1 +0.1
baz=260
P19K **Oil Pt** 37.87 45 P P 06 17 50.0 +0.6
baz=274
E21K **Killik River** 37.88 31 P P 06 17 49.1 -0.3
baz=262
F21K **Alatna River** 37.91 33 P P 06 17 50.0 +0.4
baz=264
H21K **Melozitna Rive** 38.05 35 P P 06 17 51.6 +0.8
baz=267,SNR=56
OHAK **Old Harbor** 38.06 49 P P 06 17 51.2 +0.2
baz=277,SNR=12
O20K **Slope Mountain** 38.14 45 P P 06 17 51.7 0.0
baz=274
CHUM **Lake Minchumin** 38.19 38 P P 06 17 53.6 +1.7
baz=270
PPLA **Purkeypile** 38.24 40 P P 06 17 54.3 +1.7
baz=271,SNR=11
SPCR **Spurr Chakacha** 38.28 43 P P 06 17 54.6 +1.7
baz=273,SNR=6.6
CAST **Castle Rocks** 38.29 39 P P 06 17 54.4 +1.5
baz=270
I21K **Tanana** 38.37 36 P P 06 17 54.7 +1.2
baz=268,SNR=36
B22K **Teshekpuk Lake** 38.37 28 P P 06 17 53.0 -0.4
baz=260
KDAK **Kodiak Island** 38.38 48*d i* P P 06 17 53.5 -0.1
KDAK pmax pmax
comp=Z,74nm,0.9s
KDAK **Kodiak Island** 38.38 48 P P 06 17 53.8 +0.2
baz=277
KDAK **Kodiak Island** 38.38 48 P P 06 17 54.0 +0.4
KDAK **Kodiak Island** 38.38 48 P P 06 17 53.3 -0.2
KDAK pP pP 06 18 23.5 +0.2
KDAK x x 06 18 26.6
KDAK PcP PcP 06 20 04.6 +0.4
F22K **John River** 38.44 32 P P 06 17 54.7 +0.7
baz=265
SKT **Skwentna** 38.57 41 P P 06 17 56.1 +0.9
baz=273,SNR=6.9
NRIK **Noril'sk** 38.58 330 P P 06 17 53.0 -2.1
comp=Z,8.8nm,0.5s,baz=95,slow=8.8,SNR=18
comp=Z,8.8nm,0.5s
E22K **Anaktuvuk Pass** 38.64 32 P P 06 17 56.0 +0.3
baz=264
H22K **Ishtalitna Cre** 38.65 35 P P 06 17 56.6 +0.8
H22K IAmb IAmb 06 17 58.2
comp=Z,63nm,1.1s
H22K **Ishtalitna Cre** 38.65 35 P P 06 17 56.9 +1.1
baz=268,SNR=54
G22K **Bettles** 38.65 33 P P 06 17 56.1 +0.3
baz=266
MLY **Manley** 38.89 37 P P 06 17 59.0 +1.2
baz=269,SNR=34
L22K **Petersville** 38.91 41 P P 06 17 58.2 +0.1
L22K IAmb IAmb 06 17 59.7
comp=Z,63nm,1.5s
L22K **Petersville** 38.91 41 P P 06 17 58.7 +0.6
baz=272,SNR=20
TRF **Thorofare Moun** 39.10 39 P P 06 18 00.7 +1.0
baz=272,SNR=12
BRSE **Bradley Lake S** 39.12 45 P P 06 18 01.0 +1.2
baz=276
D23K **Nanushuk River** 39.13 30 P P 06 18 00.2 +0.4
baz=265,SNR=29
COLD **Coldfoot** 39.18 33 P P 06 18 00.7 +0.5
baz=267
G23K **Bananza Creek** 39.23 34 P P 06 18 01.3 +0.6
baz=268,SNR=82
C23K **Itkillik River** 39.25 29 P P 06 18 00.5 -0.2
baz=264,SNR=28
M22K **Willow** 39.25 42 P P 06 18 01.3 +0.5
baz=274
H23K **Yukon River** 39.40 35 P P 06 18 03.5 +1.5
baz=270
E23K **Chandalar** 39.45 32 P P 06 18 03.0 +0.4
baz=267,SNR=81
I23K **Minto, Yukon-K** 39.47 36 P P 06 18 03.8 +1.2
baz=270,SNR=36
RC01 **Rabbit Creek A** 39.49 43 P P 06 18 03.4 +0.6
baz=275
TOLK **Toolik Lake Re** 39.51 31 P P 06 18 03.2 +0.2
baz=266,SNR=28
O22K **Cooper Landing** 39.55 44 P P 06 18 03.5 +0.2
baz=276
NEA2 **Nenana** 39.60 37 P P 06 18 04.7 +1.0
baz=272,SNR=25
MCK **McKinley** 39.69 39 P P 06 18 04.9 +0.4
baz=273,SNR=15
SEW **Seward** 39.72 44 P P 06 18 04.9 +0.1
baz=277
PMR **Palmer** 39.74 42 P P 06 18 04.9 +0.1
baz=275,SNR=16
D24K **Happy Valley** 39.82 30 P P 06 18 05.4 0.0
baz=266
E24K **Your Creek** 39.88 32 P P 06 18 06.7 +0.7
baz=268
WAT1 **Susitna Watana** 39.91 40 P P 06 18 06.4 +0.1
baz=274
KNK **Knik Glacier** 40.07 42 P P 06 18 08.4 +0.7
baz=276,SNR=11
H24K **Noodor Dome** 40.09 35 P P 06 18 09.2 +1.4
baz=271,SNR=61
F24K **Squaw Lake** 40.09 33 P P 06 18 08.2 +0.5
baz=269,SNR=43
SML **Sawmill** 40.10 42 P P 06 18 08.7 +0.8
baz=276,SNR=48
COLA **College** 40.12 37 P P 06 18 08.9 +1.0
COLA **College** 40.12 37 P P 06 18 09.0 +1.1
baz=272
COLA **College** 40.12 37 P P 06 18 09.0 +1.1
COLA **College** 40.12 37 P P 06 18 08.9 +1.0
COLA pP pP 06 18 38.6 +0.7
PWL **Port Wells** 40.19 43 P P 06 18 08.9 +0.3
baz=277
DGZ **Jazzator, Alta** 40.23 299 *eP* P 06 18 09.4 +0.1
DGZ pmax pmax
comp=Z,9.0nm,0.9s
G24K **Hadweenzic Riv** 40.24 34 P P 06 18 10.2 +1.2
baz=270,SNR=113
POKR **Poker Plat Res** 40.29 36 P P 06 18 10.8 +1.4
baz=272
WAT6 **Susitna Watana** 40.30 40 P P 06 18 10.1 +0.3
baz=275,SNR=23
M23K **Glacier View** 40.38 42 P P 06 18 10.7 +0.5
baz=276,SNR=9.6
DHY **Denali Highway** 40.43 40 P P 06 18 11.3 +0.5
baz=275,SNR=22
GOMU **GeErMu** 40.44 277 P P 06 18 10.8 -0.6
GOMU pmax pmax
comp=Z,58nm,0.7s
HDA **Harding Lake** 40.53 37 P P 06 18 11.5 +0.1
baz=274,SNR=15
ILAR **Eielson Array** 40.54 37 P P 06 18 11.6 +0.1
comp=Z,20nm,0.9s,baz=266,slow=6.1,SNR=90
ILAR pP pP 06 18 42.1 +0.8
comp=Z,4.0nm,0.7s,baz=282,slow=8.2,SNR=2.2
ILAR ScP ScP 06 23 46.5 -1.2
comp=Z,1.1nm,0.8s,baz=283,slow=3.7,SNR=5.9
comp=Z,20nm,0.9s
SCM **Sheep Creek Mo** 40.57 41 P P 06 18 12.7 +0.9
baz=276,SNR=13
ZAA0 **Zalesovo Array** 40.69 306 P P 06 18 11.3 -1.5
ZALV **Zalesovo Beam** 40.69 306 P P 06 18 10.9 -1.9
comp=Z,15nm,0.6s,baz=73,slow=6.0,SNR=34
ZALV PcP PcP 06 20 11.5 -0.1
comp=Z,10.0nm,0.5s,baz=76,slow=3.5,SNR=11
comp=Z,15nm,0.6s
ZALV **Zalesovo Beam** 40.69 306 P P 06 18 12.3 -0.5
D25K **Kavik River** 40.70 30 P P 06 18 12.5 -0.2
baz=268
P23K **Montague Islan** 40.76 44 P P 06 18 14.3 +1.0
baz=278
G25K **Beaman Lake** 40.79 34 P P 06 18 14.5 +1.1
baz=272,SNR=28
GLI **Glacier Island** 40.79 43 P P 06 18 13.7 +0.2
baz=278
PZH **PanZhiHua** 40.86 259 P P 06 18 15.0 +0.3
F25K **Christian Rive** 40.95 33 P P 06 18 15.8 +1.0
baz=271,SNR=51
E25K **Arctic Village** 40.97 32 P P 06 18 15.9 +0.9
baz=270,SNR=33
PRP **Porcupine Dome** 41.07 36 P P 06 18 16.9 +1.0
baz=274,SNR=71
M24K **Tolsona, Glenn** 41.08 41 P P 06 18 17.5 +1.5
baz=277,SNR=14
K24K **Donnelly Dome** 41.09 38 P P 06 18 16.3 +0.3
baz=275,SNR=15
J25K **Salcha River,** 41.20 37 P P 06 18 18.3 +1.4
baz=275,SNR=9.2
C26K **Camden Bay** 41.23 29 P P 06 18 17.4 +0.4
baz=269
KLU **Klutina** 41.27 42 P P 06 18 18.7 +1.1
baz=278,SNR=28
EYAK **Cordova Ski Ar** 41.49 43 P P 06 18 20.4 +1.1
baz=279
RIDG **Independent Ri** 41.51 38 P P 06 18 19.4 0.0
RIDG IAmb IAmb 06 18 20.8
comp=Z,19nm,0.8s
RIDG **Independent Ri** 41.51 38 P P 06 18 19.6 +0.2
baz=276,SNR=14
HARP **HAARP** 41.52 40 P P 06 18 20.8 +1.3
baz=277,SNR=17
F26K **Sheenjek River** 41.52 32 P P 06 18 20.6 +1.1
baz=272,SNR=87
C27K **Jago River** 41.64 29 P P 06 18 20.8 +0.4
baz=270,SNR=26
G26K **Porcupine Rive** 41.69 33 P P 06 18 22.3 +1.5
baz=273
SCRK **Sand Creek** 41.86 38 P P 06 18 22.4 0.0
baz=277,SNR=38
N25K **Chitina, Valde** 41.89 42 P P 06 18 24.0 +1.5
baz=279,SNR=9.9
BMRM **Bremner River** 41.98 42 P P 06 18 24.7 +1.3
baz=279,SNR=16
WMQ **Urumqi** 42.05 291 ⇑P P 06 18 25.3 +1.2
WMQ pmax pmax
comp=Z,66nm,0.9s
WMQ pmax pmax
comp=Z,200nm,3.7s
WMQ **Urumqi** 42.05 291 P P 06 18 25.0 +0.9
WMQ x x 06 19 06.1
KAIM **Kayak Island** 42.25 44 P P 06 18 27.3 +1.9
baz=281
L26K **Log Cabin Wild** 42.26 39 P P 06 18 27.4 +1.8
baz=278,SNR=33
E27K **Coleen River** 42.46 32 P P 06 18 27.9 +0.8
baz=274,SNR=27
M26K **Nabesna, AK** 42.51 40 P P 06 18 29.5 +1.8
baz=279,SNR=83
G27K **Doyon Strip** 42.54 34 P P 06 18 29.2 +1.4
baz=276,SNR=51
ZSN **Zaisan** 42.56 297 *eP* P 06 18 28.6 +0.5
ZSN pmax pmax
comp=Z,12nm,0.6s
ZSN **Zaisan** 42.56 297 *eP* P 06 18 28.6 +0.5
comp=Z,12nm,0.6s
D27M **Malcolm River** 42.62 30 P P 06 18 28.7 +0.3
baz=273
H27K **Steamboat Moun** 42.65 34 P P 06 18 30.4 +1.7
baz=276,SNR=69
MCARA **McCarthy VSAT** 42.67 42 P P 06 18 30.6 +1.8
baz=280,SNR=12
I27K **Kandik River** 42.68 35 P P 06 18 30.2 +1.3
baz=277,SNR=20
CRQE **Cirque** 42.75 43 P P 06 18 31.1 +1.5
baz=281,SNR=27
SLVN **Son La** 42.75 252 P 06 18 30.4 +0.4
L27K **Beaver Creek,** 42.94 39 P P 06 18 32.8 +1.8
baz=279,SNR=74
BCAR **Beaver Creek A** 42.96 39 P P 06 18 32.4 +1.2
M27K **Edge Creek, AK** 43.03 40 P P 06 18 32.9 +1.0
M27K IAmb IAmb 06 18 34.7
comp=Z,53nm,0.9s
M27K **Edge Creek, AK** 43.03 40 P P 06 18 33.7 +1.8
baz=280,SNR=61
F28M **Old Crow** 43.16 32 P P 06 18 33.9 +1.2
baz=276,SNR=61
E28M **Babbage River** 43.18 31 P P 06 18 33.7 +0.8
baz=275,SNR=25
I28M **Mir Creek** 43.40 35 P P 06 18 36.0 +1.3
baz=278,SNR=73
D28M **Stokes Point** 43.41 30 P P 06 18 34.8 +0.3
baz=275
BVCY **Beaver Creek** 43.49 40 P P 06 18 37.0 +1.6
baz=281,SNR=52
YUK3 **Moose Creek** 43.80 41 P P 06 18 39.4 +1.3
baz=282,SNR=29
E29M **Blow River** 43.81 31 P P 06 18 38.9 +1.0
baz=277,SNR=56
DAWY **Dawson** 43.85 37 P P 06 18 39.0 +0.7
baz=280,SNR=14
H29M **Whitestone** 43.92 34 P P 06 18 40.3 +1.5
baz=279,SNR=40
G29M **Pine Creek** 43.96 33 P P 06 18 40.8 +1.7
baz=278,SNR=74
O28M **Mount Upton** 44.14 42 P P 06 18 42.0 +1.1
baz=283,SNR=12
YUK8 **Steele Glacier** 44.23 41 P P 06 18 42.6 +1.0
baz=283,SNR=9.4
PINM **Pinnacle** 44.26 43 P P 06 18 42.7 +1.1
baz=284,SNR=6.1
MK31 **Makanchi Array** 44.43 297 *i* P P 06 18 43.1 -0.1
MKAR **Makanchi Array** 44.43 297 P P 06 18 42.9 -0.3
comp=Z,72nm,0.6s,baz=78,slow=8.3,SNR=286
MKAR PcP PcP 06 20 24.6 +0.2
comp=Z,5.6nm,0.7s,baz=66,slow=4.0,SNR=3.8
MKAR ScP ScP 06 24 03.1 -0.6
comp=Z,0.8nm,0.6s,baz=33,slow=3.4,SNR=2.3
comp=Z,72nm,0.6s
MKAR **Makanchi Array** 44.43 297 *ce* P P 06 18 42.9 -0.3
MKAR pmax pmax
comp=Z,70nm,0.6s
EPYK **Eagle Plains** 44.55 34 P P 06 18 45.1 +1.2
baz=280,SNR=87
M29M **Somme Creek** 44.58 40 P P 06 18 45.9 +1.7
baz=283,SNR=17
L29M **L29M** 44.59 39 P P 06 18 46.2 +2.0
baz=282,SNR=38
MAKZ **Makanchi** 44.63 297 P P 06 18 44.6 -0.1
MAKZ pmax pmax
comp=Z,91nm,0.7s
MAKZ **Makanchi** 44.63 297 P 06 18 44.6 -0.1
G30M **tAoh Zraii Nji** 44.65 33 P P 06 18 45.6 +1.0
baz=280,SNR=44
K29M **Barlow Dome** 44.70 37 P P 06 18 46.7 +1.5
baz=282,SNR=26
F30M **Barrier River** 44.71 32 P P 06 18 46.5 +1.5
baz=280,SNR=126
YUK4 **Talbot Arm** 44.74 41 P P 06 18 47.2 +1.6
baz=284
I30M **Mount Dempster** 44.91 35 P P 06 18 48.0 +1.2
baz=282,SNR=134
YUK6 **Outpost Mounta** 44.97 42 P P 06 18 49.0 +1.5
baz=284
O29M **Mount Kennedy** 45.03 43 P P 06 18 49.4 +1.6
baz=285
J30M **Hart River** 45.06 36 P P 06 18 49.3 +1.3
baz=282,SNR=30
KURK **Kurchatov** 45.27 303 P P 06 18 49.4 -0.3
KURK 06 20 27.2
KURK **Kurchatov** 45.27 303 P P 06 18 48.8 -0.9
KURK **Kurchatov** 45.27 303 P P 06 18 48.6 -1.0
KURK **Kurchatov** 45.27 303 *eP* P 06 18 49.4 -0.3
KURK **Kurchatov** 45.27 303 P P 06 18 48.2 -1.4
KURK PcP PcP 06 20 27.3 +0.2
M30M **Minto, Yukon** 45.30 39 P P 06 18 51.8 +1.9
baz=284
KURBB **Kurchatov Arra** 45.36 303 P P 06 18 49.4 -0.9
comp=Z,29nm,0.5s,baz=73,slow=8.9,SNR=117
KURBB PcP PcP 06 20 27.1 -0.3
comp=Z,6.0nm,0.7s,baz=72,slow=3.6,SNR=4.8
comp=Z,29nm,0.5s
KURBB **Kurchatov Arra** 45.36 303 P P 06 18 49.2 -1.1
HYT **Haines Junctio** 45.41 42 P P 06 18 53.3 +2.5
baz=285,SNR=70
G31M **Satah River** 45.41 33 P P 06 18 51.2 +0.7
baz=282,SNR=49
INK **Inuvik** 45.42 31 P P 06 18 51.2 +0.6
baz=281,SNR=53
INK **Inuvik** 45.42 31 P P 06 18 51.2 +0.6
N30M **Aishikik Lake** 45.44 41 P P 06 18 52.3 +1.3
baz=285
JOHN **Johnston Islan** 45.46 114 P P 06 18 52.9 +1.3
F31M **Tsiigehtchic** 45.51 32 P P 06 18 52.0 +0.7
baz=282,SNR=72
P29M **Windy Craggy** 45.61 43 P P 06 18 54.7 +2.4
baz=286,SNR=26
H31M **Peel River** 45.62 34 P P 06 18 53.3 +1.1
baz=283,SNR=64
P30M **Million Dollar** 45.85 42 P P 06 18 56.5 +2.3
baz=286
N31M **Braeburn, Yuko** 46.04 40 P P 06 18 57.9 +2.2
baz=286,SNR=16
O30N **Mendenhall** 46.09 41 P P 06 18 57.3 +1.2
O30N **Mendenhall** 46.09 41 P P 06 18 58.0 +2.0
baz=286,SNR=9.4
PLBC **Pleasant Camp** 46.33 43 P P 06 18 59.9 +2.1
baz=287,SNR=9.1
M31M **Drury Creek, Y** 46.48 39 P P 06 19 00.9 +1.9
baz=286,SNR=19
WHY **Whitehorse** 46.69 41 P P 06 19 02.7 +1.9
baz=287,SNR=10
S31K **Pelican** 46.85 45 P P 06 19 03.9 +2.0
baz=289
MYLDM **Lahad Datu** 46.88 222 P P 06 19 04.0 +1.3
BESE **Bessie Mountai** 47.34 44 P P 06 19 06.1 +0.3
BESE IAmb IAmb 06 19 08.9
comp=Z,49nm,1.7s
A36M **Sachs Harbour** 47.38 25 P P 06 19 06.8 +1.0
baz=285
N32M **Quiet Lake** 47.38 40 P P 06 19 07.4 +1.3
baz=288
P32M **Atlin** 47.57 43 P P 06 19 09.5 +1.9
baz=289
SIT **Sitka** 47.61 46 P P 06 19 09.5 +1.8
baz=290
R32K **Eaglecrest** 47.61 44 P P 06 19 09.9 +2.0
baz=290,SNR=6.6
TDK **Taldyqorghan** 47.64 296 *c i* P P 06 19 08.8 +0.6
TDK **Taldyqorghan** 47.64 296 ⇑*i* P P 06 19 08.9 +0.6
PDGK **Podgornoye** 47.67 294 P P 06 19 08.7 0.0
PDGK **Podgornoye** 47.67 294 P 06 19 08.7 0.0
MMPY **Sheldon Lake,** 47.75 38 P 06 19 10.8 +1.8
MMPY **Sheldon Lake,** 47.75 38 P P 06 19 10.7 +1.8
baz=288,SNR=6.5
SHLS **Shalkode** 47.77 293 *c i* P P 06 19 07.7 -1.7
SHLS pmax pmax
comp=Z,17nm,0.6s
SHLS **Shalkode** 47.77 293 ⇑*i* P P 06 19 07.8 -1.7
comp=Z,18nm,0.6s
P33M **Teslin, Yukon** 47.80 42 P P 06 19 11.3 +1.9
baz=289,SNR=25
S32K **Killisnoo** 47.85 45 P P 06 19 11.7 +2.1
baz=290
CHTO **Chiang Mai** 47.85 254 P P 06 19 10.5 +0.3
CHTO pmax pmax
comp=Z,21nm,0.8s
CHTO **Chiang Mai** 47.85 254 P P 06 19 11.5 +1.3
CHTO **Chiang Mai** 47.85 254 P P 06 19 10.5 +0.3
CHTO IAmb IAmb 06 19 12.3
comp=Z,21nm,0.8s
CHTO **Chiang Mai** 47.85 254 P P 06 19 11.4 +1.2
UZB **Uzynbulak** 48.06 294 *c i* P P 06 19 12.0 +0.3
UZB pmax pmax
comp=Z,23nm,0.7s
UZB **Uzynbulak** 48.06 294 ⇑*i* P P 06 19 12.1 +0.3
comp=Z,23nm,0.7s
CMAR **Chiang Mai Arr** 48.10 253 P P 06 19 13.0 +0.9
comp=Z,7.7nm,0.8s,baz=40,slow=7.3,SNR=43
CMAR pP pP 06 19 43.8 +0.9
comp=Z,1.1nm,0.4s,baz=31,slow=7.4,SNR=1.6
CMAR PcP PcP 06 20 37.7 0.0
comp=Z,1.4nm,0.2s,baz=19,slow=1.3,SNR=6.3
comp=Z,7.7nm,0.8s
CMAR **Chiang Mai Arr** 48.10 253 P 06 19 12.8 +0.6
SHL **Shillong** 48.41 266 P P 06 19 14.5 -0.1
SHL pmax pmax
comp=Z,39nm,0.8s
SHL **Shillong** 48.41 266 P P 06 19 15.4 +0.8
SHL **Shillong** 48.41 266 P 06 19 14.5 -0.1
SHL IAmb IAmb 06 19 15.8
comp=Z,39nm,0.8s
SHL **Shillong** 48.41 266 *eP* P 06 19 14.7 +0.1
Q32M **Nakina River** 48.48 43 P P 06 19 16.9 +2.1
baz=290
C36M **Paulatuk** 48.49 28 P P 06 19 14.4 0.0
baz=288,SNR=11
SATY **Saty** 48.50 294 *c i* P P 06 19 15.3 +0.3
SATY pmax pmax
comp=Z,15nm,0.6s
SATY **Saty** 48.50 294 ⇑*i* P P 06 19 15.3 +0.3
comp=Z,15nm,0.6s
WUS **Wushi** 48.83 291 P P 06 19 18.6 +0.9
R33M **Jennings River** 48.96 42 P P 06 19 20.4 +2.1
baz=291,SNR=10
U33K **Whale Pass** 49.08 47 P P 06 19 21.5 +2.4
baz=292
NPW **Naypyitaw** 49.13 257 P P 06 19 21.3 +1.3
BVAR **Borovoye Array** 49.15 309 P P 06 19 18.5 -1.2
comp=Z,9.6nm,0.5s,baz=82,slow=10.0,SNR=34
BVAR PcP PcP 06 20 41.0 +0.1
comp=Z,7.2nm,0.7s,baz=66,slow=3.7,SNR=5.3
comp=Z,9.6nm,0.5s
BORK **Borovoye** 49.18 309 P P 06 19 19.1 -0.9
BORK pmax pmax
comp=Z,18nm,0.6s
BORK **Borovoye** 49.18 309 P 06 19 19.1 -0.9
BORK IAmb IAmb 06 19 22.6
comp=Z,18nm,0.6s
CRAG **Craig** 49.33 48 P P 06 19 22.8 +1.8
baz=293
MDOK **Medeo** 49.34 295 *eP* P 06 19 21.9 +0.5
MDOK **Medeo** 49.34 295 *eP* P 06 19 21.9 +0.5
AAA **Alma-Ata** 49.40 295 *eP* P 06 19 22.3 +0.5
AAA **Alma-Ata** 49.40 295 *eP* P 06 19 22.3 +0.5
AAA **Alma-Ata** 49.40 295 *eP* P 06 19 22.3 +0.5
S34M **Telegraph Cree** 49.42 44 P P 06 19 23.8 +2.2
baz=292
TNSS **Tian-Shan** 49.46 294 *eP* P 06 19 22.7 0.0
TNSS **Tian-Shan** 49.46 294 *eP* P 06 19 22.8 0.0
TARG **Taragay, Kyrgy** 49.52 293 P P 06 19 24.3 +1.1
WTLY **Watson Lake, Y** 49.72 41 P P 06 19 25.3 +1.3
WTLY IAmb IAmb 06 19 26.7
comp=Z,32nm,1.4s
DLBC **Dease Lake** 49.77 43 P P 06 19 26.8 +2.5
baz=292,SNR=8.4
T35M **Bob Quinn** 50.22 45 P P 06 19 30.9 +3.2
baz=293,SNR=10
ULHL **Ulahol** 50.29 294 P P 06 19 29.8 +1.0
SNR=24
BTLS **Baital** 50.39 298 *eP* P 06 19 29.5 +0.4
BTLS pmax pmax
comp=Z,15nm,1.0s
BTLS **Baital** 50.39 298 *eP* P 06 19 29.6 +0.4
comp=Z,15nm,1.0s
TKM2 **Tokmak 2** 50.39 295 P P 06 19 30.4 +1.0
SNR=94
EVN **Everest** 50.59 272 P P 06 19 32.9 +1.2
ASAI **AK-SAY(Kyrgyzs** 50.75 292 P P 06 19 33.7 +1.3
SGDS **Sogindy** 50.76 296 ⇑*i* P P 06 19 32.6 +0.5
comp=Z,26nm,0.8s
WRGLY **Wrigley** 50.88 36 P P 06 19 34.1 +1.5
WRGLY IAmb IAmb 06 19 35.7
comp=Z,84nm,1.7s
WRGLY **Wrigley** 50.88 36 P P 06 19 34.2 +1.7
baz=293
CHMS **Chumysh** 50.90 295 P P 06 19 33.8 +0.7
SNR=7.3
USP **Ospenovka** 50.93 296 P P 06 19 34.2 +0.9
SNR=109
KBK **Karagaybulak** 50.94 295 P P 06 19 34.6 +1.1
SNR=44
AAK **Ala-Archa** 51.24 295 P P 06 19 36.5 +0.8
comp=Z,39nm,0.6s,baz=101,slow=5.3,SNR=65
comp=Z,39nm,0.6s
AAK **Ala-Archa** 51.24 295 P P 06 19 36.5 +0.8
SNR=34
AAK **Ala-Archa** 51.24 295 *i* P P 06 19 36.4 +0.6

SNR=12
AAK Ala-Archa 51.24 295 P P 06 19 36.4 +0.6
AAK Ala-Archa 51.24 295 P P 06 19 36.6 +0.8
AAK Ala-Archa 51.24 295 P P 06 19 36.5 +0.8
AAK pP **pwP 06 20 08.3 -0.8**
AAK PcP **PcP 06 20 49.5 +0.5**
LIRD Liard River Hi 51.26 41 P P 06 19 37.6 +2.1
baz=294
UCH Uchtor 51.43 295 P P 06 19 38.2 +0.7
SNR=28
EKS2 Erkin-Say 51.69 295 P P 06 19 39.9 +0.8
SNR=22
KOTAN Kotaneelee Air 51.90 39 P P 06 19 42.0 +1.8
baz=295
KSH2 Kashi 52.28 291 P P 06 19 44.8 +1.3
KSH2 pmax pmax
comp=Z,53nm,1.1s
SVE Sverdlovsk 52.67 316*d* iP P **06 19 44.9 -1.1**
SVE pmax pmax
comp=Z,144nm,0.8s
DZA Taraz 53.14 297 *e*P P **06 19 50.2 +0.6**
DZA pmax pmax
comp=Z,13nm,0.5s
DZA Taraz 53.14 297 *e*P P **06 19 50.3 +0.6**
comp=Z,13nm,0.5s
KK31 Karatay Array 53.56 297 P P 06 19 52.4 -0.3
KKAR Karatay Array 53.56 297 P P 06 19 52.8 +0.1
KKAR Karatay Array 53.56 297 P 06 19 52.8 +0.1
NOR Nord 53.67 357 *i* P P **06 19 50.0 -2.9**
NOR IAmb IAmb 06 19 52.2
comp=Z,6.8nm,0.9s
HOPEN Hopen 53.76 346 IAmb IAmb 06 19 51.4
comp=Z,42nm,1.1s
HOPEN *e*P P **06 19 51.4 -2.2**
BOK Bokaro 53.78 269 *e*P P **06 19 55.1 +0.6**
BOK IAmb IAmb 06 19 57.0
comp=Z,17nm,0.4s
BOK *i* pP **PcP 06 21 00.3 +1.5**
KBS Kingsbay 53.90 350 *e*P P **06 19 52.5 -2.2**
KBS IAmb IAmb 06 19 53.1
comp=Z,30nm,1.0s
SPA0 Spitsbergen Ar 53.91 349 *e*P P **06 19 52.4 -2.4**
SPA0 IAmb IAmb 06 19 53.6
comp=Z,33nm,1.3s
SPITS Spitsbergen Ar 53.91 349 P P 06 19 52.1 -2.7
comp=Z,3.8nm,0.6s,baz=54,slow=7.5,SNR=16
SPITS PcP **PcP 06 20 58.2 -0.2**
comp=Z,0.8nm,0.3s,baz=96,slow=4.3,SNR=5.6
comp=Z,3.8nm,0.6s
RES Resolute Bay 53.97 17 P P 06 19 54.0 -1.1
ARTI Arti 53.98 317 P P 06 19 54.0 -1.5
comp=Z,95nm,0.5s,baz=65,slow=4.0,SNR=134
comp=Z,95nm,0.5s
ARTI Arti 53.98 317*c* iP P **06 19 54.0 -1.5**
ARTI *PP **pP 06 20 26.3 +0.1**
ARTI 06 20 58.2
ARTI S **S 06 27 18.4 -2.1**
ARTI SS **SS 06 30 59.9 -3.1**
ARTI pmax pmax
comp=Z,162nm,1.1s
ARTI Arti 53.98 317 P 06 19 54.1 -1.4
ARTI Arti 53.98 317 P P 06 19 53.9 -1.7
ARTI pP **pP 06 20 27.1 +0.9**
ARTI PcP **PcP 06 21 00.1 +1.2**
BRLS Borolday 54.02 298*c iP* **P 06 19 58.1 +2.1**
BRLS pmax pmax
comp=Z,13nm,1.2s
BRLS Borolday 54.02 298⇑ *iP* **P 06 19 58.2 +2.1**
comp=Z,13nm,1.2s
PTH Pithoragarh 54.33 278 *e*P P **06 19 59.2 +0.5**
PTH IAmb IAmb 06 20 00.6
comp=Z,31nm,0.7s
IUG Iuzhnay 54.35 297*c iP* **P 06 19 59.0 +0.5**
IUG Iuzhnay 54.35 297⇑ *iP* **P 06 19 59.0 +0.5**
LGTI Lohaghat 54.52 278 *e*P P **06 20 00.9 +0.8**
CHM Chimkent 54.53 297 *e*P P **06 20 00.2 +0.5**
CHM pmax pmax
comp=Z,20nm,0.6s
CHM Chimkent 54.53 297 *e*P P **06 20 00.3 +0.5**
comp=Z,20nm,0.6s
KLP Kalpa 54.58 281 *e*P P **06 20 01.4 +0.8**
YKA Yellowknife Ar 54.84 34 P P 06 20 02.1 +0.5
comp=Z,26nm,1.0s,baz=304,slow=7.1,SNR=117
YKA ScP **ScP 06 24 47.9 +0.1**
comp=Z,0.5nm,0.7s,baz=298,slow=4.5,SNR=3.9
comp=Z,26nm,1.0s
YKAW1 Yellowknife Wh 54.89 34 P 06 20 02.5 +0.5
YKAW1 IAmb IAmb 06 20 04.2
comp=Z,37nm,1.1s
UTK UTTARKASHI 54.90 280 *e*P P **06 20 03.6 +1.0**
HNR Honiara 55.02 165 LR LR 06 42 25.8
comp=Z,13nm,20.4s,baz=216,slow=34
TSSA Tissa 55.29 284 *e*P P **06 20 06.0 +0.5**
TSSA IAmb IAmb 06 20 09.3
comp=Z,101nm,0.8s
DHRM DHARAMSHALA 55.52 283 *e*P P **06 20 07.1 -0.1**
DHRM IAmb IAmb 06 20 10.6
comp=Z,65nm,0.5s
DHRM *ex* x 06 27 42.4
GAR Garm 55.83 293 P P 06 20 09.7 +0.5
BJO1 Bjornoya 56.25 345 *e*P P **06 20 09.5 -2.0**
BJO1 IAmb IAmb 06 20 09.9
comp=Z,209nm,1.6s
KULM Kulim 56.70 241 P P 06 20 09.7 -5.8
AB31 Akbulak array 56.72 308 P P 06 20 14.1 -1.1
ABKAR Akbulak array 56.72 308 P P 06 20 14.8 -0.5
CHGR Chuyangaron 56.77 294*c iP* **P 06 20 16.2 +0.3**
CHGR pmax pmax
comp=Z,238nm,0.9s
CHGR Chuyangaron 56.77 294 P P 06 20 16.0 +0.2
NIL Nilore 56.83 286 P P 06 20 17.5 +1.2
NIL Nilore 56.83 286 P P 06 20 17.4 +1.2
NDI New Delhi 56.97 279 *e*P P **06 20 17.7 +0.4**
NDI IAmb IAmb 06 20 18.2
comp=Z,67nm,0.8s
NPLP NPLP New Delhi 57.03 279 *e*P P **06 20 17.7 0.0**
KIRV Kirov 57.05 322 LR LR 06 47 52.2
comp=Z,791nm,21.8s,baz=293,slow=39
KIRV Kirov 57.05 322*ce*P P **06 20 15.7 -1.6**
LVZ Lovozero 57.07 335 *i* P P **06 20 16.0 -1.5**
LVZ pmax pmax
comp=Z,34nm,0.8s
VADS Vadso 57.09 339 *e*P P **06 20 15.9 -1.6**
VADS IAmb IAmb 06 20 16.4
comp=Z,184nm,1.5s
AKTO Aktyubinsk 57.16 310 P P 06 20 17.4 -1.0
comp=Z,10.0nm,0.6s,baz=55,slow=5.2,SNR=27
comp=Z,10.0nm,0.6s
SONA Sohna 57.34 279 *e*P P **06 20 20.3 +0.4**
SONA *i* x x 06 20 21.5
NEEM North Greenlan 57.58 5 *i* P P **06 20 19.1 -2.1**
NEEM IAmb IAmb 06 20 20.1
comp=Z,24nm,0.8s
LLLB Lillooet 57.58 49 P 06 20 22.2 +0.8
LLLB IAmb IAmb 06 20 23.3
comp=Z,12nm,0.8s
KUDL Kundal 57.80 279 *e*P P **06 20 23.2 +0.1**
KUDL IAmb IAmb 06 20 25.1
comp=Z,28nm,1.0s
KUDL *i* x x 06 21 00.3
KEV Kevo 57.94 339 P P **06 20 21.5 -1.9**
KEV PcP **PcP 06 21 14.0 -0.1**
SHAA Shahritus 58.06 293 P P **06 20 25.4 +0.5**
SHAA IAmb IAmb 06 20 27.6
comp=Z,144nm,0.7s
NLWA Neilton Lookou 58.22 53 P P **06 20 27.6 +1.8**
NLWA IAmb IAmb 06 20 28.3
comp=Z,19nm,0.8s
ARA0 ARCESS Array S 58.47 340 *e*P P **06 20 25.4 -1.7**
ARA0 IAmb IAmb 06 20 26.7
comp=Z,70nm,1.3s
ARCES ARCESS Array B 58.47 340 P P 06 20 25.7 -1.5
comp=Z,14nm,0.4s,baz=46,slow=8.3,SNR=220
comp=Z,14nm,0.4s
DAG Danmarks Havn 58.49 356 P P 06 20 24.9 -2.4
DAG Danmarks Havn 58.49 356 *i* P P **06 20 24.8 -2.4**
DAG IAmb IAmb 06 20 25.7
comp=Z,35nm,1.3s
KBL Kabul 59.17 290 P P 06 20 32.3 -0.5
SNR=18
KBL P P **06 20 32.5 -0.3**
SNR=21
MTN Manton Dam 59.19 199 P P 06 20 34.1 +1.4
comp=Z,18nm,1.2s
KTK1 Kautokeino 59.41 340 *e*P P **06 20 32.0 -1.7**
KTK1 IAmb IAmb 06 20 32.7
comp=Z,53nm,0.6s
VIS Vishakhapatnam 59.52 265 *e*P P **06 20 36.1 +0.9**
JETT Jettan, Norway 59.68 341 *e*P P **06 20 34.4 -1.1**
JETT IAmb IAmb 06 20 34.6
comp=Z,190nm,1.3s
SGF Sodankyl 59.69 337 P P 06 20 34.1 -1.5
KLMR Klimovskoe 59.81 327 *e*P P **06 20 33.3 -3.2**
KLMR pmax pmax
comp=Z,91nm,1.5s
KULLO Kullorsuaq 59.85 7 *i* P P **06 20 34.5 -2.1**
KULLO IAmb IAmb 06 20 36.3
comp=Z,56nm,1.2s
TRO Tromso 59.96 342 *e*P P **06 20 35.8 -1.5**
TRO IAmb IAmb 06 20 36.3
comp=Z,56nm,0.6s
BHPL Bhopal 60.16 274 *e*P P **06 20 39.1 -0.4**
BHPL IAmb IAmb 06 20 41.0
comp=Z,32nm,0.8s
NGP Nagpur 60.32 271 *e*P P **06 20 40.6 0.0**
EDM Edmonton 60.49 43 P P **06 20 41.7 +0.4**
EDM pmax pmax
comp=Z,43nm,0.8s
EDM Edmonton 60.49 43 P 06 20 41.7 +0.4
HOOD Mount Hood Mea 60.65 54 P P 06 20 44.0 +1.4
H04A Detroit Lake 60.71 55 P P **06 20 43.6 +0.7**
H04A IAmb IAmb 06 21 22.3
comp=Z,19nm,1.1s
DBG Daneborg 61.00 356 *i* P P **06 20 42.6 -1.7**
DBG IAmb IAmb 06 20 43.4
comp=Z,8.4nm,1.0s
HAWA Hanford 61.24 52 P 06 20 47.5 +1.1
HAWA IAmb IAmb 06 20 48.6
comp=Z,11nm,0.8s
BELG Belogornoye 61.43 317 LR LR 06 50 39.1
comp=Z,1µm,20.8s,baz=307,slow=39
BELG Belogornoye 61.43 317*c iP* **P 06 20 46.6 -0.9**
BELG pmax pmax
comp=Z,6.0nm,0.8s
BELG MLR MLR
comp=Z,232nm,22.0s
UPNV Upernavik 61.66 8 *i* P P **06 20 47.0 -1.8**
UPNV IAmb IAmb 06 20 48.3
comp=Z,23nm,0.6s
UDPR Udaipur 61.95 278 *e*P P **06 20 52.0 +0.4**
STEI Steigen 62.13 342 *e*P P **06 20 50.0 -2.1**
STEI IAmb IAmb 06 20 51.4
comp=Z,29nm,1.2s
LNOR Lincton Mounta 62.24 52 P P 06 20 54.9 +1.7
LOF Lofoten 62.34 342 *e*P P **06 20 51.8 -1.7**
LOF IAmb IAmb 06 20 53.5
comp=Z,17nm,0.6s
FAUS Fauske 62.56 341 *e*P P **06 20 53.3 -1.6**
FAUS IAmb IAmb 06 20 54.1
comp=Z,52nm,0.6s
SUMG Summit 62.95 2 *i* P P **06 20 56.8 -1.1**
SUMG IAmb IAmb 06 20 59.1
comp=Z,31nm,0.7s
HYB Hyderabad 63.12 268 *e*P P **06 20 59.3 -0.1**
HYB IAmb IAmb 06 21 03.8
comp=Z,10nm,0.9s
HYB *i* x x 06 21 25.0
HYB Hyderabad 63.12 268 *e*P P **06 20 59.9 +0.5**
HYB *e*S S **06 29 20.6 +0.7**
VAGH Vaagaholmen 63.56 341 *e*P P **06 20 59.8 -1.6**
RAUS Rausandaksla 63.62 341 *e*P P **06 21 00.5 -1.4**
RAUS IAmb IAmb 06 21 01.0
comp=Z,78nm,1.4s
MOR8 Moi Rana 63.75 341 *e*P P **06 20 60.0 -2.8**
MOR8 IAmb IAmb 06 21 00.7
comp=Z,83nm,0.6s
KONS Konsvik 63.78 341 *e*P P **06 21 01.4 -1.5**
NIAQ Niaqornat 63.80 8 *i* P P **06 21 02.0 -1.0**
NIAQ IAmb IAmb 06 21 03.3
comp=Z,18nm,1.0s
MOS Moscow 63.87 324 *e*P P **06 21 02.6 -1.1**
MOS *e* 06 21 52.0
MOS pmax pmax
comp=Z,33nm,0.6s
PUL Pulkovo 63.94 330*ce*P P **06 21 03.4 -0.7**
PUL pmax pmax
comp=Z,101nm,0.9s
STOK Stokkvaagen 63.94 341 *e*P P **06 21 02.5 -1.5**
STOK IAmb IAmb 06 21 03.6
comp=Z,18nm,0.8s
SAATT Saattut 63.97 7 *i* P P **06 21 02.9 -1.2**
SAATT IAmb IAmb 06 21 04.2
comp=Z,69nm,1.1s
LEIR Leirfjorden 64.11 341 *e*P P **06 21 03.6 -1.4**
LEIR IAmb IAmb 06 21 04.5
comp=Z,14nm,0.5s
FINES FINESS Array B 64.18 333 P P **06 21 04.2 -1.4**
comp=Z,99nm,0.6s,baz=41,slow=7.6,SNR=536
comp=Z,99nm,0.6s
OBN Obninsk 64.74 324*de*P P **06 21 07.1 -2.3**
OBN *e* 06 21 42.9
OBN *SP **sP 06 21 58.0 +2.7**
OBN *SS sS 06 30 11.0 -22
OBN *e*SS **SS 06 33 54.4 +3.1**
OBN pmax pmax
comp=Z,26nm,0.8s
OBN MLR MLR
comp=Z,798nm,18.0s
OBN Obninsk 64.74 324 *e*P P **06 21 07.1 -2.3**
FFC Flin Flon 64.75 37 P P **06 21 10.1 +0.6**
MDRS Chennai 64.84 263 *e*P P **06 21 11.3 +0.7**
VRH Novokhopyorsk 65.03 318 *e*P P **06 21 10.4 -0.9**
VRH pmax pmax
comp=Z,88nm,1.5s
LPSR Galich'ya Gora 65.40 321 *e*P P **06 21 12.9 -0.8**
LPSR pmax pmax
comp=Z,93nm,1.6s
WR8 Warramunga Arr 65.44 194 P P 06 21 14.2 0.0
WR8 IAmb IAmb 06 21 15.7
comp=Z,13nm,0.9s
WRAB Tennant Creek 65.44 194 *i* P P **06 21 13.9 -0.4**
WRAB pmax pmax
comp=Z,16nm,1.0s
WRA Warramunga Arr 65.46 194 P P 06 21 14.6 +0.2
comp=Z,15nm,1.0s,baz=9.2,slow=6.8,SNR=76
WRA pP **pP 06 21 46.1 -0.8**
comp=Z,2.9nm,0.8s,baz=11,slow=6.2,SNR=3.0
comp=Z,15nm,1.0s
WRA Warramunga Arr 65.46 194 P P 06 21 14.4 +0.1
BHUJ Bhuj 65.66 279 *e*P P **06 21 17.6 +1.8**
DLMT Dillon 65.70 50 P P 06 21 16.6 +0.6
DLMT IAmb IAmb 06 21 18.7
comp=Z,18nm,0.9s
VORR Voronezh 65.90 320 *e*P P **06 21 16.6 -0.3**
VORR pmax pmax
comp=Z,68nm,1.5s
VSU Vasula 66.17 330*ce*P P **06 21 16.3 -2.2**
VSU pmax pmax
comp=Z,115nm,1.3s
VSR Storozhevoye 66.22 319 *e*P P **06 21 18.6 -0.4**
VSR pmax pmax
comp=Z,110nm,1.6s
VORD Divnogorie 66.33 319 *e*P P **06 21 16.3 -3.4**
VORD pmax pmax
comp=Z,60nm,1.0s
NVAR Mina Array Bea 66.81 58 P P 06 21 24.5 +1.3
comp=Z,7.5nm,0.6s,baz=296,slow=7.0,SNR=72
NVAR pP **pP 06 21 55.4 -0.5**
comp=Z,6.4nm,0.7s,baz=308,slow=7.1,SNR=7.2
comp=Z,7.5nm,0.6s
PALK Pallekele 68.54 259 P P 06 21 34.7 +0.5
PALK Pallekele 68.54 259 P P 06 21 34.9 +0.7
MNK Minsk 68.70 327 *i* P P **06 21 34.3 -0.2**
comp=E,30nm,0.7s
MNK *i* P P **06 21 34.3 -0.2**
comp=N,18nm,0.9s
MNK *i* P P **06 21 34.3 -0.2**
comp=Z,67nm,0.8s,baz=41
MNK *i* pP **PcP 06 22 00.1 +1.8**
MNK *i* sP **pwP 06 22 12.6 +2.5**
MNK *i* PP **PP 06 24 06.7 -0.6**
MNK *i* PPP PPP 06 26 09.9
MNK *i* S **S 06 30 26.9 +0.4**
MNK *i* sS **SKiKP 06 31 13.1 +0.4**
MNK *i* PS PnS 06 31 30.5 +20
MNK *i* SS **SS 06 35 01.9 +9.3**
MNK *i* SSS SSS 06 37 59.6
MNK *i* LQ LQ 06 46 21.6
MNK *i* LR LR 06 48 55.4
MNK *i* LRM MLR 06 53 47.7
comp=N,397nm,19.2s
MNK *i* LRM MLR 06 54 26.9
comp=E,368nm,19.5s
MNK Minsk 68.70 327 *i* P P **06 21 34.3 -0.2**
MNK *i* 06 21 58.5
MNK *i* *SP **pwP 06 22 12.5 +2.5**
MNK *i* 06 24 06.6
MNK *i* S **S 06 30 26.8 +0.4**
MNK *i* *SS **SKiKP 06 31 13.0 +0.4**
MNK *i* SSS SSS 06 37 59.6
MNK pmax pmax
comp=N,18nm,0.9s
MNK pmax pmax
comp=Z,67nm,0.8s
MNK pmax pmax
comp=E,30nm,0.7s
MNK MLR MLR
comp=Z,592nm,19.0s
MNK MLR MLR
comp=N,397nm,19.0s
MNK MLR MLR
comp=E,368nm,20.0s
NB2 NORSAR Subarra 68.83 339 P P 06 21 34.0 -1.3
comp=Z,53nm,0.9s,baz=30,slow=6.5
NB2 NORSAR Subarra 68.83 339 P P 06 21 34.0 -1.3
NOA NORSAR Array B 68.83 339 P P 06 21 34.1 -1.1
comp=Z,17nm,0.6s,baz=32,slow=6.7,SNR=107
comp=Z,17nm,0.6s
HFS Hagfors 68.94 337 P P 06 21 35.1 -0.8
comp=Z,28nm,0.4s,baz=35,slow=5.4,SNR=222
comp=Z,28nm,0.4s
NC602 NORSAR Array S 69.01 339 *e*P **P 06 21 34.9 -1.5**
NC602 IAmb IAmb 06 21 35.8
comp=Z,24nm,0.9s
NORES NORESS Array B 69.01 339 *e*P **P 06 21 34.8 -1.5**
PDAR Pinedale Array 69.06 50 P P 06 21 38.1 +0.9
comp=Z,5.2nm,0.6s,baz=270,slow=1.6,SNR=72
PDAR pP **pP 06 22 10.9 +0.8**
comp=Z,2.8nm,0.6s,baz=297,slow=1.9,SNR=3.7
comp=Z,5.2nm,0.6s
AS15 Alice Springs 69.14 193 P P 06 21 39.3 +1.7
comp=Z,4.2nm,0.8s
AS17 Alice Springs 69.16 193 P P 06 21 38.9 +1.2
comp=Z,6.1nm,0.9s
ASAR Alice Springs 69.17 193 P P 06 21 38.8 +1.1
comp=Z,3.8nm,0.8s,baz=12,slow=5.6,SNR=30
ASAR pP **pP 06 22 11.3 +0.7**
comp=Z,1.1nm,0.7s,baz=14,slow=6.4,SNR=2.0
comp=Z,3.8nm,0.8s
ASAR Alice Springs 69.17 193 P P 06 21 38.6 +0.8
AS09 Alice Springs 69.20 193 P P 06 21 39.4 +1.5
comp=Z,6.5nm,1.0s
ERBR Yeremizino-Bor 69.32 314 *e*P **P 06 21 37.5 -1.0**
ERBR pmax pmax
comp=Z,304nm,0.7s
KIV Kislovodsk 69.37 312 ⇓P P 06 21 40.1 +1.1
KIV Kislovodsk 69.37 312 *i* P **P 06 21 40.2 +1.3**
SNR=37
KIV Kislovodsk 69.37 312 ⇓P P 06 21 40.1 +1.1
KIV Kislovodsk 69.37 312 P P 06 21 40.1 +1.1
KIV Kislovodsk 69.37 312 P P 06 21 39.9 +0.9
comp=Z,3µmcomp=Z,353nm,0.8s
KIV Kislovodsk 69.37 312 *e*P **P 06 21 40.1 +1.1**
KIV Kislovodsk 69.37 312 P P 06 21 40.1 +1.1
KBZ Khabaz 69.41 311*ce*P **P 06 21 40.0 +1.0**
KBZ pmax pmax
comp=Z,118nm,0.9s
KBZ Khabaz 69.41 311 *e*P **P 06 21 40.0 +1.0**
NLU North Lily Min 69.51 54 P P 06 21 40.3 +0.2
OSL Oslo 69.90 338 *e*P **P 06 21 41.4 -0.4**
OSL IAmb IAmb 06 21 42.0
comp=Z,49nm,1.1s
LABN Labinsk 69.93 313 *e*P **P 06 21 41.3 -1.0**
LABN pmax pmax
comp=Z,238nm,1.0s
HYA Hoyanger 69.95 341 *e*P **P 06 21 42.2 +0.2**
HYA IAmb IAmb 06 21 44.5
comp=Z,44nm,1.1s
MBWA Marble Bar 70.31 208 P P 06 21 45.8 +1.1
SUE Sulen 70.37 342 *e*P **P 06 21 45.3 +0.7**
NUUK Nuuk 70.40 9 *i* P **P 06 21 45.0 +0.2**
NUUK IAmb IAmb 06 21 46.0
comp=Z,20nm,0.8s
KONO Kongsberg 70.44 339 ⇑P P 06 21 45.2 +0.1
ULM Lac du Bonnet 70.55 38 P P 06 21 46.0 +0.1
comp=Z,5.7nm,0.5s,baz=309,slow=5.8,SNR=17
ULM pP **pP 06 22 18.6 -0.4**
comp=Z,4.3nm,0.6s,baz=334,slow=7.6,SNR=3.7
comp=Z,5.7nm,0.5s
STRU Stroemstad 70.56 338 *i* P **P 06 21 45.5 -0.2**
ASK Askoy 70.78 341 *e*P **P 06 21 47.4 +0.3**
ASK IAmb IAmb 06 21 47.6
comp=Z,41nm,0.8s
GNI Garni 70.82 308 P P 06 21 49.9 +2.0
GNI Garni 70.82 308*c iP* **P 06 21 49.7 +1.8**
GNI pmax pmax
comp=Z,121nm,1.4s
GNI Garni 70.82 308 P P 06 21 48.8 +0.9
comp=Z,965nmcomp=Z,55nm,1.2s
BER Bergen 70.84 341 IAmb IAmb 06 21 47.8
comp=Z,48nm,1.0s
BER *e*P **P 06 21 47.9 +0.5**
SUW Suwalki 70.85 329 *e*P **P 06 21 46.9 -0.7**
ODD1 Odda 70.95 340 *e*P **P 06 21 48.6 +0.4**
ODD1 IAmb IAmb 06 21 48.8
comp=Z,60nm,1.3s
AK03 Malin Array Si 70.99 324 P P 06 21 47.6 -0.9
AKASG Malin Array Be 71.00 324 P P 06 21 48.1 -0.6
comp=Z,45nm,0.5s,baz=38,slow=6.2,SNR=183
comp=Z,45nm,0.5s
AKASG Malin Array Be 71.00 324 P P 06 21 48.0 -0.7
AKBB Malin Array Si 71.00 324*ce*P **P 06 21 47.9 -0.7**
AKBB pmax pmax
comp=Z,130nm,1.1s
AKBB Malin Array Si 71.00 324 P P 06 21 47.7 -0.9
KIEV Kiev 71.02 324 ⇓P P 06 21 48.4 -0.3
KIEV Kiev 71.02 324 *i* P **P 06 21 47.1 -1.6**
SNR=18
KIEV Kiev 71.02 324 ⇓P P 06 21 48.4 -0.3
KIEV Kiev 71.02 324 P P 06 21 48.0 -0.7
SOC Sochi 71.19 313 *e*P **P 06 21 49.2 -0.7**
SOC *e*PP **pP 06 22 23.5 +1.3**
SOC *e*S **S 06 30 59.3 +3.5**
SOC *e*SS **SS 06 35 33.4 +2.1**
SOC *i* SSS SSS 06 38 46.4
SOC pmax pmax
comp=Z,40nm,0.6s
TJOU Tjoern 71.29 337 *i* P **P 06 21 49.5 -0.7**
BLS5 Blasjo 71.42 340 *e*P **P 06 21 51.6 +0.5**
BLS5 IAmb IAmb 06 21 55.2
comp=Z,39nm,1.2s
MI28 Mi28,Pidlybu 71.48 325 P P 06 21 50.1 -1.4
ANN Anapa 71.50 315 *e*P **P 06 21 51.1 -0.6**
ANN *e*PP **pwP 06 22 27.1 +0.1**
ANN *e*S **S 06 30 58.7 -0.6**
ANN pmax pmax
comp=Z,76nm,0.9s
BATM Batumi 71.51 310 ⇑P P 06 21 52.6 +0.7
BATM Batumi 71.51 310 P P 06 21 52.6 +0.7
BLEU Blekinge 71.51 334 *i* P **P 06 21 50.2 -1.3**
WRKA Warakurna 71.61 198 P P 06 21 52.7 +0.2
comp=Z,7.4nm,2.8s
ONAU Onsala 71.75 337 *i* P **P 06 21 51.9 -1.1**
FABU Falkenberg 71.86 336 *i* P **P 06 21 52.5 -1.1**
HOMB Homborsund 71.92 339 *e*P **P 06 21 54.7 +0.7**
DEL Delary 71.97 335 *i* P **P 06 21 53.5 -0.8**
DEL IAmb IAmb 06 21 54.0
comp=Z,4.6nm,0.5s
LUBAR Lubar, Ukraine 72.21 324 P P 06 21 55.1 -0.8
BJUU Bjuv 72.56 335 *i* P **P 06 21 57.9 +0.1**
BSD Bornholm Skovb 72.78 334 *i* P **P 06 21 58.6 -0.6**
BSD IAmb IAmb 06 21 59.6
comp=Z,46nm,0.6s
GOET G??ttrup 72.81 338 *i* P **P 06 21 59.6 +0.3**
GOET IAmb IAmb 06 22 00.2
comp=Z,85nm,0.9s
SIM Simferopol' 73.03 317 *e*P **P 06 22 01.5 +0.6**
SIM pmax pmax
comp=Z,100nm,0.7s
COP Copenhagen 73.06 335 *i* P **P 06 22 00.6 -0.2**
COP IAmb IAmb 06 22 01.3
comp=Z,320nm,1.2s
BANOM Banah 73.13 290 P P 06 22 02.1 +0.4
SHME Shamm 73.15 290 P P 06 22 01.9 +0.1
SHME Shamm 73.15 290 P P 06 22 01.8 -0.1

SORM Soroca 73.32 322 ⇓P **P 06 22 02.3 -0.1**
SORM Soroca 73.32 322 ⇓P **P 06 22 02.3 -0.1**
SORM Soroca 73.32 322 P **P 06 22 02.0 -0.4**
comp=Z,185nm,1.1s
WSAR Wadi Sarin 73.33 286 LR LR 06 56 10.6
comp=Z,7.4nm,21.7s,baz=256,slow=37
WSAR Wadi Sarin 73.33 286 P **P 06 22 03.4 +0.5**
MUD Monsted U'grnd 73.33 337 *i* P **P 06 22 02.2 -0.1**
MUD IAmb IAmb 06 22 03.0
comp=Z,20nm,0.7s
LLD Lille Linde 73.43 335 *i* P **P 06 22 03.1 +0.2**
LLD IAmb IAmb 06 22 03.4
comp=Z,126nm,1.1s
BEL Belsk 73.47 329 *e*P **P 06 22 04.2 +0.9**
BIDO Bidbid 73.48 287 P **P 06 22 04.7 +0.9**
WBK Wadi Bani Khal 73.51 286 P **P 06 22 04.8 +0.7**
JLN Jalan Bani Buh 73.52 285 P **P 06 22 04.6 +0.6**
MDH Madha 73.54 289 P **P 06 22 04.4 +0.2**
GKP Gorka Klasztor 73.56 331 *e*P **P 06 22 04.1 +0.4**
MASF Masafi 73.59 289 P **P 06 22 04.6 +0.1**
MSFE Esma-Masafi 73.59 289 P **P 06 22 04.4 -0.1**
X16A Lo Mia Camp, P 73.61 58 P **P 06 22 05.9 +1.3**
IVI Ivigtut 73.68 8 *i* P **P 06 22 04.0 -0.3**
IVI IAmb IAmb 06 22 05.4
comp=Z,37nm,1.2s
UOSS Minazif 73.84 289 P **P 06 22 06.1 +0.1**
UOSS Minazif 73.84 289 P **P 06 22 06.2 +0.3**
SMDO Samad 73.85 286 P **P 06 22 06.6 +0.5**
HATD Hatta, Dubai 73.97 289 *i* P **P 06 22 06.7 0.0**
SNR=6.6
HATD Hatta, Dubai 73.97 289 P **P 06 22 07.0 +0.3**
SNR=6.6
HOQ Hoqain 74.00 287 P **P 06 22 07.3 +0.4**
SSRD Sdr. Stenderup 74.05 337 *i* P **P 06 22 06.4 -0.1**
SSRD IAmb IAmb 06 22 08.6
comp=Z,79nm,0.4s
ASHO Ashiyiah 74.11 289 P **P 06 22 07.2 -0.3**
ASHO Ashiyiah 74.11 289 P **P 06 22 07.6 0.0**
SNR=5.4
SOHO SOHO 74.16 288 *i* P **P 06 22 07.8 0.0**
SNR=8.2
SOHO SOHO 74.16 288 P **P 06 22 08.0 +0.2**
NAZ Nazwa, Dubai 74.18 289 P **P 06 22 08.0 +0.2**
NAZ Nazwa, Dubai 74.18 289 P **P 06 22 08.1 +0.2**
EYMN Ely 74.18 37 P **P 06 22 07.7 +0.2**
EYMN IAmb IAmb 06 22 08.6
comp=Z,22nm,1.1s
JMDO Jabal Madar 74.27 286 P **P 06 22 09.0 +0.6**
SNR=7.2
FAQ Al Faqa, Dubai 74.39 289 P **P 06 22 09.2 +0.1**
KWP Kalwaria Pacla 74.50 326 *e*P **P 06 22 10.4 +1.1**
BSY Bisya 74.64 287 P **P 06 22 10.9 +0.3**
SNR=8.2
ASUD Al Ashush, Dub 74.64 289 P **P 06 22 11.0 +0.5**
ASUD Al Ashush, Dub 74.64 289 P **P 06 22 11.0 +0.5**
ARQ Araqi 74.70 288 P **P 06 22 11.4 +0.5**
VASR Vaslui 74.70 322 ⇓P **P 06 22 11.4 +0.8**
ALNE Al Ain 74.74 289 *i* P **P 06 22 11.7 +0.5**
SNR=9.6
ALNE Al Ain 74.74 289 P **P 06 22 11.7 +0.5**
SNR=9.6
PRAR RASCA 74.83 323 ⇓P **P 06 22 11.4 +0.1**
GIRR Girov 75.03 323 ⇑P **P 06 22 12.8 +0.4**
BURAR Bucovina Array 75.06 324 ⇓P **P 06 22 12.6 -0.1**
BURAR Bucovina Array 75.06 324 P **P 06 22 12.8 +0.1**
BIR Birlad 75.06 322 ⇓P **P 06 22 13.0 +0.4**
BIR Birlad 75.06 322 ⇓P **P 06 22 13.0 +0.4**
OJC Ojcow 75.14 328 *e*P **P 06 22 13.4 +0.4**
VLDR Vladesti 75.19 321 ⇓P **P 06 22 13.9 +0.6**
BSEG Bad Segeberg 75.20 335 *e*P **P 06 22 13.4 +0.2**
comp=Z,56nm,1.2s,baz=30,slow=5.6
BIZ Bicaz 75.21 323 ⇑P **P 06 22 13.9 +0.5**
MCD Coleburn Disti 75.22 344 *e*P **P 06 22 12.9 -0.4**
MCD IAmb IAmb 06 22 14.5
comp=Z,14nm,0.6s
KOLS Kolonicke sedl 75.22 326 *e*P **P 06 22 13.8 +0.3**
KOLS pmax pmax
comp=Z,121nm,1.5s
KOLS Kolonicke sedl 75.22 326 *e*P **P 06 22 13.8 +0.3**
STHS Stebnicka Huta 75.24 327 *e*P **P 06 22 13.3 -0.3**
STHS pmax pmax
comp=Z,114nm,1.4s
STHS Stebnicka Huta 75.24 327 *e*P **P 06 22 13.3 -0.3**
BZK Bozkurt 75.28 315 ⇑P **P 06 22 14.8 +0.9**
MHTO MHTO 75.29 285 P **P 06 22 15.3 +1.1**
SNR=13
TESR Tescani 75.31 322 ⇑P **P 06 22 14.2 +0.2**
TESR Tescani 75.31 322 P **P 06 22 14.2 +0.2**
GHRR 75.32 322 ⇑P **P 06 22 15.0 +0.9**
TLCR 75.36 320 ⇑P **P 06 22 14.6 +0.3**
TLCR 75.36 320 P **P 06 22 14.6 +0.3**
RUE Ruedersdorf 75.37 333 *e*P **P 06 22 14.4 +0.3**
comp=Z,320nm,1.5s,baz=30,slow=5.6
ONER Baraj Valea Uz 75.55 322 ⇑P **P 06 22 16.0 +0.5**
NIE Niedzica 75.60 328 *e*P **P 06 22 16.8 +1.1**
JURR Jurilovca 75.65 320 ⇑P **P 06 22 16.2 +0.2**
CFR Carcaliu 75.67 321 ⇑P **P 06 22 16.4 +0.3**
CFR Carcaliu 75.67 321 ⇑P **P 06 22 16.4 +0.3**
HLG Helgoland 75.68 337 *e*P **P 06 22 16.1 +0.2**
comp=Z,227nm,1.6s,baz=30,slow=5.6
ODBI Odobesti 75.71 322 ⇑P **P 06 22 17.2 +0.9**
GORT1 Trebel 75.71 334 *e*P **P 06 22 16.6 +0.4**
comp=Z,194nm,1.3s,baz=30,slow=5.6
VRI Vrincioaia 75.77 322 ⇓P **P 06 22 17.2 +0.5**
VRI Vrincioaia 75.77 322 P **P 06 22 17.4 +0.7**
TPGR Topolog 75.79 320 ⇓P **P 06 22 17.0 +0.2**
PLOR Plostina 75.82 322 ⇓P **P 06 22 16.9 -0.1**
PLOR Plostina 75.82 322 ⇓P **P 06 22 16.9 -0.1**
ARCR ARCALIA 75.84 324 ⇑P **P 06 22 17.6 +0.6**
CMSA Cobar Meteorol 75.89 182 P **P 06 22 17.1 -0.2**
comp=Z,14nm,1.1s
KPL Plockton 75.90 345 *e*P **P 06 22 16.5 -0.6**
KPL IAmb IAmb 06 22 17.9
comp=Z,41nm,0.6s
KSP Ksiaz 75.90 331 *e*P **P 06 22 17.6 +0.3**
TURR Turia 75.94 322 ⇑P **P 06 22 18.5 +0.8**
OZUR 76.00 322 ⇓P **P 06 22 18.4 +0.3**
COVR Voineasa-Covas 76.02 322 ⇓P **P 06 22 18.8 +0.7**
GRER 76.04 321 ⇑P **P 06 22 20.4 +2.2**
BOSR Bodos 76.08 323 ⇑P **P 06 22 19.4 +1.0**
JRN Qarnain Island 76.09 291 P **P 06 22 18.3 -0.4**
TIRR Tirgusor 76.10 320 ⇑P **P 06 22 18.4 -0.1**
TIRR Tirgusor 76.10 320 P **P 06 22 18.9 +0.4**
STEB Steborice 76.12 329 *e*P **P 06 22 19.2 +0.6**
LANS Liptovska Anna 76.14 328 *e*P **P 06 22 19.9 +1.2**
LANS pmax pmax
comp=Z,112nm,1.6s
LANS Liptovska Anna 76.14 328 *e*P **P 06 22 19.9 +1.2**
OSTC Ostas 76.16 330 *e*P **P 06 22 19.4 +0.6**
OSTC Ostas 76.16 330 *e*P **P 06 22 19.4 +0.6**
ANMO Albuquerque 76.19 54 *ce*P **P 06 22 20.6 +1.1**
CHVC Chvalec 76.19 331 *e*P **P 06 22 19.6 +0.6**
CHVC Chvalec 76.19 331 *e*P **P 06 22 19.6 +0.6**
UPC Upice 76.28 331 *e*P **P 06 22 20.0 +0.5**
UPC Upice 76.28 331 *e*P **P 06 22 20.0 +0.5**
DOPR Dopca 76.28 323 ⇑P **P 06 22 20.1 +0.5**
KECS Kecovo 76.29 327 *e*P **P 06 22 20.1 +0.5**
KECS pmax pmax
comp=Z,36nm,0.9s
KECS Kecovo 76.29 327 *e*P **P 06 22 20.1 +0.5**
DQM DQM 76.30 284 P **P 06 22 20.1 0.0**
DPC Dobruska-Polom 76.30 330 *e*P **P 06 22 20.3 +0.7**
DPC Dobruska-Polom 76.30 330 *e*P **P 06 22 20.3 +0.7**
NEHR Nehoiu 76.30 322 ⇓P **P 06 22 20.1 +0.4**
FLTG Flechtingen 76.31 334 *e*P **P 06 22 19.2 -0.3**
comp=Z,227nm,1.5s,baz=30,slow=5.6
MORC Moravsky Berou 76.34 329 ⇓P **P 06 22 20.2 +0.4**
MORC Moravsky Berou 76.34 329 P **P 06 22 20.3 +0.4**
MORC Moravsky Berou 76.34 329 *e*P **P 06 22 20.0 +0.1**
KRLC Kraliky 76.36 330 *e*P **P 06 22 20.4 +0.4**
KRLC Kraliky 76.36 330 *e*P **P 06 22 20.4 +0.4**
STKA Stephens Creek 76.41 185 P **P 06 22 21.2 +1.0**
comp=Z,5.4nm,0.9s,baz=15,slow=4.7,SNR=6.0
comp=Z,5.4nm,0.9s
MLR Muntele Rosu 76.41 322 ⇓P **P 06 22 20.6 +0.2**
MLR Muntele Rosu 76.41 322 P **P 06 22 20.6 +0.2**
ISR Istrita 76.43 321 ⇓P **P 06 22 21.1 +0.6**
ISR Istrita 76.43 321 P **P 06 22 21.5 +1.0**
INVG Invergeldie, C 76.46 344 *e*P **P 06 22 19.8 -0.6**
INVG IAmb IAmb 06 22 21.1
comp=Z,9.7nm,0.8s
RETH Rethem/Aller, 76.52 335 *e*P **P 06 22 20.9 +0.2**
comp=Z,175nm,1.4s,baz=30,slow=5.6

MAUC Maruska 76.57 329 *e*P **P 06 22 21.8 +0.6**
CLL Collm 76.62 333 ⇑*i*P **P 06 22 21.1 -0.2**
CLL pmax pmax
comp=Z,115nm,1.0s
CLL Collm 76.62 333 *e*P **P 06 22 21.2 -0.1**
comp=Z,109nm,1.0s,baz=30,slow=5.6
CLL Collm 76.62 333 ⇑*i*P **P 06 22 21.1 -0.2**
comp=Z,115nm,1.0s
CLL *ex* x 06 22 36.0
CLL *ex* x 06 22 50.0
CLL *e*PP **PP 06 25 13.0 -1.6**
SCHQ Schefferville 76.62 20 P **P 06 22 21.3 0.0**
comp=Z,3.4nm,0.5s,baz=347,slow=6.5,SNR=14
comp=Z,3.4nm,0.5s
ICOR Ion Corvin 76.64 320 ⇑P **P 06 22 22.2 +0.6**
ASSE Asse, Remlinge 76.65 334 *e*P **P 06 22 21.6 +0.1**
comp=Z,106nm,1.4s,baz=30,slow=5.6
BRG Berggiesshubel 76.68 332 *e*P **P 06 22 21.7 0.0**
comp=Z,80nm,1.4s,baz=30,slow=5.6
BRG Berggiesshubel 76.68 332 ⇑*i*P **P 06 22 21.5 -0.2**
BRG Amp 06 22 22.5
comp=Z,80nm,1.4s
BRG pP pP 06 22 46.2 -8.3
BRG Amp 06 22 47.2
comp=Z,17nm,1.3s
BRG PP **PP 06 25 13.1 -2.1**
BRG Amp 06 25 14.5
comp=Z,5.0nm,1.0s
MARR Marisel-Cluj 76.68 324 ⇓P **P 06 22 22.0 0.0**
GHWR Ruwais 76.74 290 P **P 06 22 22.7 +0.2**
DRGR 76.76 325 ⇑P **P 06 22 22.7 +0.3**
DRGR 76.76 325 P **P 06 22 23.0 +0.7**
G40A Rib Lake 76.83 38 P **P 06 22 23.0 +0.3**
VOIR 76.84 322 ⇑P **P 06 22 23.6 +0.8**
VOIR 76.84 322 ⇑P **P 06 22 23.6 +0.8**
LAWE Loch Awe, Argy 76.87 345 *e*P **P 06 22 22.1 -0.5**
LAWE IAmb IAmb 06 22 23.3
comp=Z,18nm,0.7s
SAKB Bahrain 76.91 293 P **P 06 22 23.3 -0.1**
PSZ Piszkesteto 76.98 327 ⇑P **P 06 22 23.3 -0.2**
PSZ Piszkesteto 76.98 327 ⇑P **P 06 22 23.3 -0.2**
MZR Muzera 76.98 289 *i* P **P 06 22 23.8 -0.1**
SNR=12
MZR Muzera 76.98 289 P **P 06 22 24.1 +0.2**
CLZ Clausthal 77.00 334 *e*P **P 06 22 24.0 +0.5**
comp=Z,340nm,1.6s,baz=30,slow=5.6
JAVC Velka Javorina 77.05 329 *e*P **P 06 22 25.3 +1.4**
VRAC Vranov 77.07 330 ⇓P **P 06 22 24.3 +0.3**
VRAC Vranov 77.07 330 P **P 06 22 24.7 +0.7**
VRAC Vranov 77.07 330 *e*P **P 06 22 24.5 +0.5**
HSKC Hora Svate Kat 77.08 332 *e*P **P 06 22 24.4 +0.4**
ARR Arges 77.08 323 ⇑P **P 06 22 25.8 +1.7**
NEUB Neuenburg 77.10 333 *e*P **P 06 22 24.2 +0.1**
comp=Z,157nm,1.2s,baz=30,slow=5.6
BR131 Keskin Array S 77.12 314 *c*P **P 06 22 24.9 +0.4**
BR131 Keskin Array S 77.12 314 P **P 06 22 25.2 +0.7**
SNR=9.9
BRTR Keskin Array B 77.12 314 P **P 06 22 24.9 +0.3**
comp=Z,10nm,0.7s,baz=78,slow=3.6,SNR=45
comp=Z,10nm,0.7s
BRTR Keskin Array B 77.12 314 *i* P **P 06 22 25.1 +0.5**
BRTR pmax pmax
comp=Z,11nm,0.7s
BRTR Keskin Array B 77.12 314 P **P 06 22 24.8 +0.2**
PGBU Glenifferbraes 77.12 344 *e*P **P 06 22 23.9 -0.1**
PGBU IAmb IAmb 06 22 25.0
comp=Z,68nm,1.0s
PRU Pruhonice 77.22 331 *e*P **P 06 22 25.2 +0.4**
PRU Pruhonice 77.22 331 *e*P **P 06 22 25.2 +0.4**
EKA Eskdalemuir Ar 77.31 343 P **P 06 22 25.0 -0.1**
comp=Z,18nm,0.7s,baz=24,slow=5.2,SNR=55
comp=Z,18nm,0.7s
ESK Eskdalemuir 77.33 343 *e*P **P 06 22 25.0 -0.3**
ESK IAmb IAmb 06 22 26.0
comp=Z,18nm,0.7s
KRUC Moravsky 77.35 330 *e*P **P 06 22 25.9 +0.4**
IBBN Ibbenburen 77.37 336 *e*P **P 06 22 25.6 +0.1**
comp=Z,81nm,1.0s,baz=30,slow=5.6
GTTG Gottingen 77.38 334 *e*P **P 06 22 25.9 +0.3**
comp=Z,133nm,1.3s,baz=30,slow=5.6
KIRS Kirsehir-Merke 77.42 313 ⇓P **P 06 22 26.9 +0.7**
SMOL Smolenice 77.43 329 *e*P **P 06 22 26.9 +1.0**
SMOL pmax pmax
comp=Z,57nm,1.4s
EDMD Edmundbyers 77.53 343 *e*P **P 06 22 25.8 -0.5**
EDMD IAmb IAmb 06 22 26.9
comp=Z,8.4nm,0.8s
TANN Tannenbergstha 77.56 332 *e*P **P 06 22 26.7 0.0**
comp=Z,111nm,1.8s,baz=30,slow=5.6
MODS Modra-Piesok 77.60 329 *e*P **P 06 22 27.9 +1.0**
MODS pmax pmax
comp=Z,211nm,1.4s
MODS Modra-Piesok 77.60 329 *e*P **P 06 22 27.9 +1.0**
PLN Plauen 77.60 333 *e*P **P 06 22 27.1 +0.2**
comp=Z,42nm,1.6s,baz=30,slow=5.6
SIRR Siria 77.61 325 ⇓P **P 06 22 26.7 -0.4**
MOX Moxa 77.64 333 *e*P **P 06 22 27.2 +0.1**
comp=Z,79nm,1.3s,baz=30,slow=5.6
MOX *e*L L 07 03 05.4
comp=Z,350nm,20.9s
SRO Srobarova 77.67 328 *e*P **P 06 22 28.8 +1.5**
SRO pmax pmax
comp=Z,137nm,1.4s
SRO Srobarova 77.67 328 *e*P **P 06 22 28.8 +1.5**
NKC Novy Kostel 77.72 332 *e*P **P 06 22 27.6 0.0**
NKC Novy Kostel 77.72 332 *e*P **P 06 22 27.6 0.0**
NEWG New Galloway 77.72 344 *e*P **P 06 22 27.1 -0.3**
NEWG IAmb IAmb 06 22 29.2
comp=Z,10nm,0.8s
ZVC Zvikov 77.81 331 *e*P **P 06 22 28.4 +0.4**
GZR Gura Zlata 77.85 324 ⇑P **P 06 22 28.3 -0.1**
GZR Gura Zlata 77.85 324 ⇑P **P 06 22 28.3 -0.1**
KESW Keswick, Cumbr 77.99 343 *e*P **P 06 22 28.9 0.0**
KESW IAmb IAmb 06 22 31.6
comp=Z,30nm,1.0s
UBBA Unterbreizbach 78.00 334 *e*P **P 06 22 29.0 0.0**
comp=Z,64nm,1.3s,baz=30,slow=5.6
GAL1 Galloway 78.06 344 *e*P **P 06 22 28.8 -0.4**
GAL1 IAmb IAmb 06 22 29.9
comp=Z,23nm,0.7s
KASTN Kahler Asten 78.15 335 *e*P **P 06 22 30.1 +0.2**
comp=Z,91nm,1.3s,baz=30,slow=5.6
BZS Buzias 78.16 325 ⇑P **P 06 22 30.0 0.0**
BZS Buzias 78.16 325 ⇑P **P 06 22 30.0 0.0**
ROTZ Rotzenmuhle 78.20 332 *e*P **P 06 22 30.6 +0.4**
comp=Z,19nm,1.3s,baz=30,slow=5.6
HPK Haverah Park 78.27 342 *e*P **P 06 22 30.6 +0.2**
HPK IAmb IAmb 06 22 31.6
comp=Z,53nm,0.6s
WINA Alland / Wiene 78.27 329 *i* P **P 06 22 31.4 +0.8**
SNR=27
BUG Bochum--Univer 78.28 336 *e*P **P 06 22 30.6 +0.1**
comp=Z,136nm,1.4s,baz=30,slow=5.6
KHC Kasperske Hory 78.28 331 *e*P **P 06 22 31.2 +0.5**
KHC Kasperske Hory 78.28 331 *e*P **P 06 22 31.2 +0.5**
CKRC Cesky Krumlov 78.30 331 *e*P **P 06 22 31.6 +0.8**
CKRC Cesky Krumlov 78.30 331 *e*P **P 06 22 31.6 +0.8**
IDGL Inch Island, C 78.38 346 P **P 06 22 31.1 +0.1**
HERR Herculane 78.41 324 ⇑P **P 06 22 31.1 -0.4**
GEC2 GERESS Array S 78.49 331 *e*P **P 06 22 32.0 +0.1**
comp=Z,52nm,1.3s,baz=30,slow=5.6
GERES GERESS Array B 78.49 331 P **P 06 22 31.9 0.0**
comp=Z,5.4nm,0.4s,baz=41,slow=4.3,SNR=57
comp=Z,5.4nm,0.4s
CONA Conrad Observa 78.49 329 *i* P **P 06 22 32.6 +0.6**
comp=Z,82nm,1.4s,SNR=35
WET Wettzell 78.51 332 *e*P **P 06 22 32.6 +0.6**
comp=Z,123nm,1.3s,baz=30,slow=5.6
RONA Rosalia, Austr 78.53 329 *i* P **P 06 22 32.8 +0.8**
comp=Z,63nm,1.4s,SNR=30
GRF Grafenberg Arr 78.59 333 *e*P **P 06 22 32.9 +0.5**
comp=Z,202nm,1.3s,baz=30,slow=5.6
GRF *e*L L 07 02 37.3
comp=Z,293nm,21.1s
GRFO Grafenberg 78.59 333 P **P 06 22 33.1 +0.7**
GRFO PcP **PcP 06 22 40.1 -0.8**
PLVB Pleven 78.65 321 ⇑P **P 06 22 33.1 +0.3**
MDVR Moldovita 78.79 324 ⇑P **P 06 22 33.2 -0.4**
LBWR Ladybower, Pea 78.81 342 *e*P **P 06 22 33.6 +0.2**
LBWR IAmb IAmb 06 22 34.5
comp=Z,49nm,0.8s
MORH Mrgy, Hungar 78.86 327 ⇑P **P 06 22 33.6 -0.3**
TNS Taunus Mts 79.00 335 *e*P **P 06 22 34.8 +0.1**
comp=Z,108nm,1.4s,baz=30,slow=5.6
MOA Molln 79.14 330 *i* P **P 06 22 35.6 +0.2**

comp=Z,26nm,1.4s,SNR=13
ILTH Belurgan, Co L 79.16 345 P **P 06 22 34.7 -0.6**
ARSA Arzberg 79.19 329 *i* P **P 06 22 36.0 +0.4**
comp=Z,32nm,1.3s,SNR=14
BEBN Eben Emael 79.31 337 *d*P **P 06 22 36.2 0.0**
ELMS Elmsett, Ipswi 79.38 340 *e*P **P 06 22 36.9 +0.3**
ELMS IAmb IAmb 06 22 37.8
comp=Z,73nm,0.7s
MEM Membach 79.38 336 *d*P **P 06 22 36.5 -0.1**
comp=Z,34nm,1.2s
BAND Balkesir-Ban 79.41 317 ⇑P **P 06 22 37.2 +0.2**
BIOA Bad Ischl, Aus 79.49 330 *i* P **P 06 22 37.5 +0.2**
comp=Z,66nm,1.4s,SNR=20
BSTI Sart Tilman 79.53 336 *d*P **P 06 22 37.7 +0.3**
KOGS Kog 79.59 328 *i* P **P 06 22 37.5 -0.3**
DMTO DMTO 79.59 285 P **P 06 22 38.5 +0.2**
FOEL Foel Wylfa 79.61 343 *e*P **P 06 22 38.0 +0.2**
FOEL IAmb IAmb 06 22 39.0
comp=Z,32nm,1.0s
BHOU Houvegnez 79.61 336 *d*P **P 06 22 38.0 +0.1**
SESA Seetaler Alpe, 79.65 329 *i* P **P 06 22 38.9 +0.5**
SNR=37
UCC Uccle 79.68 337 *d*P **P 06 22 37.8 -0.4**
RJOB Jochberg 79.75 331 *e*P **P 06 22 39.4 +0.6**
comp=Z,40nm,1.3s,baz=30,slow=5.6
BCLA Clavier 79.75 337 *d*P **P 06 22 38.5 -0.1**
BGES Gesves 79.85 337 *d*P **P 06 22 38.8 -0.3**
SOKA Soboth 79.85 329 *i* P **P 06 22 39.5 +0.1**
comp=Z,53nm,1.2s,SNR=35
PERS Pernice 79.86 329 *i* P **P 06 22 39.4 +0.1**
HLM1 Long Mynd 79.88 342 *e*P **P 06 22 39.3 0.0**
HLM1 IAmb IAmb 06 22 40.9
comp=Z,13nm,0.7s
FUR Furstenfeldbru 79.90 332 *e*P **P 06 22 40.0 +0.5**
comp=Z,135nm,1.3s,baz=30,slow=5.6
DSB Dublin 79.91 344 P **P 06 22 39.4 0.0**
BMRD Maredsous 80.01 337 *d*P **P 06 22 39.8 -0.2**
comp=Z,30nm,1.2s
RCHB Rochefort 80.01 336 *d*P **P 06 22 39.7 -0.3**
comp=Z,23nm,1.2s
STU Stuttgart 80.05 334 *e*P **P 06 22 40.4 +0.1**
comp=Z,386nm,1.6s,baz=30,slow=5.6
LESA Schwarzleotal 80.06 331 *i* P **P 06 22 40.9 +0.4**
comp=Z,83nm,1.4s,SNR=35
KBA Koelnbreinsper 80.12 330 *i* P **P 06 22 41.3 +0.4**
comp=Z,70nm,1.3s,SNR=33
OBKA Obir 80.17 329 *i* P **P 06 22 40.8 -0.3**
comp=Z,30nm,1.3s,SNR=10.0
WLF Walferdange 80.19 336 *d*P **P 06 22 41.4 +0.4**
WLF Walferdange 80.19 336 *e*P **P 06 22 41.2 +0.2**
comp=Z,81nm,1.5s,baz=30,slow=5.6
ELSH Elham, Standar 80.21 339 *e*P **P 06 22 41.3 +0.3**
ELSH IAmb IAmb 06 22 42.6
comp=Z,55nm,0.7s
DOU Dourbes 80.25 337 *d*P **P 06 22 40.8 -0.5**
RBK Rabkut 80.25 285 P **P 06 22 42.1 +0.2**
WHFO Wadi Hawf 80.27 285 P **P 06 22 42.0 0.0**
SNR=6.0
IGLA Glengowla, Co 80.29 346 P **P 06 22 41.9 +0.5**
MCH1 Michaelchurch 80.40 342 *e*P **P 06 22 42.1 0.0**
MCH1 IAmb IAmb 06 22 43.1
comp=Z,19nm,0.7s
MYKA Terra Mystica 80.40 330 *i* P **P 06 22 41.7 -0.6**
comp=Z,32nm,1.5s,SNR=14
MONM Monmouth 80.50 342 *e*P **P 06 22 42.7 +0.1**
MONM IAmb IAmb 06 22 44.2
comp=Z,32nm,1.0s
WATA Walderalm 80.51 331 *i* P **P 06 22 43.1 +0.2**
comp=Z,93nm,1.4s,SNR=11
WTTA Wattenberg 80.56 331 *i* P **P 06 22 43.6 +0.3**
comp=Z,48nm,0.6s,SNR=25
RETA Reutte 80.66 332 *i* P **P 06 22 43.8 +0.1**
comp=Z,62nm,1.3s,SNR=17
MOTA Moosalm 80.67 332 *i* P **P 06 22 43.9 +0.1**
comp=Z,86nm,1.0s,SNR=31
ABTA Abfaltersbach 80.70 331 *i* P **P 06 22 43.2 -0.7**
comp=Z,23nm,1.3s,SNR=5.8
BFO Black Forest 80.71 334 *e*P **P 06 22 43.7 -0.1**
comp=Z,95nm,1.5s,baz=30,slow=5.6
SQTA Sankt Quirin 80.74 332 *i* P **P 06 22 44.3 +0.2**
comp=Z,54nm,1.0s,SNR=20
BOJS Bojanci 80.76 328 *i* P **P 06 22 43.9 -0.3**
IWEX Carrickbyrne, 80.82 344 P **P 06 22 44.5 +0.2**
FETA Feichten 81.07 332 *i* P **P 06 22 46.0 +0.1**
comp=Z,34nm,1.5s,SNR=14
DAVA Damuels 81.13 332 *i* P **P 06 22 46.2 0.0**
comp=Z,47nm,1.0s,SNR=15
MMAI Mount Meron Ar 81.15 308 P **P 06 22 47.6 +1.1**
comp=Z,23nm,0.7s,baz=26,slow=11,SNR=23
comp=Z,23nm,0.7s
ECH Echery 81.17 334 P **P 06 22 46.2 -0.1**
VAY Valandovo 81.21 321 *i* P **P 06 22 47.1 +0.5**
RAR Rarotonga 81.27 131 LR LR 06 57 41.8
comp=Z,191nm,18.6s,baz=300,slow=35
PDG Podgorica 81.74 324 ⇑P **P 06 22 49.1 -0.2**
VAL Valentia 81.86 346 P **P 06 22 50.0 +0.3**
TXAR Lajitas Array 81.86 57 P **P 06 22 51.3 +1.0**
comp=Z,4.1nm,0.6s,baz=301,slow=4.0,SNR=46
TXAR pP **pP 06 23 24.0 -0.2**
comp=Z,13nm,0.6s,baz=301,slow=3.8,SNR=15
comp=Z,4.1nm,0.6s
TXAR Lajitas Array 81.86 57 P **P 06 22 51.4 +1.1**
RAYN Ar Rayn 81.89 295 *i* P **P 06 22 51.1 +0.6**
SNR=9.3
RAYN Ar Rayn 81.89 295 ⇑P **P 06 22 50.6 +0.1**
RAYN Ar Rayn 81.89 295 P **P 06 22 50.9 +0.4**
DYA Yadsworthy 82.07 342 *e*P **P 06 22 50.5 -0.4**
DYA IAmb IAmb 06 22 52.4
comp=Z,16nm,0.8s
OHR Ohrid 82.16 322 *i* P **P 06 22 51.8 +0.1**
SENIN Lac Senin/Sane 82.78 334 P **P 06 22 54.8 -0.1**
T42A Van Buren 82.89 44 P **P 06 22 55.7 +0.2**
T42A IAmb IAmb 06 22 56.9
comp=Z,33nm,1.7s
D62A Allapoint, All 83.07 24 P **P 06 22 56.3 +0.1**
S44A Carbondale 83.26 42 P **P 06 22 58.1 +0.8**
S44A IAmb IAmb 06 22 58.9
comp=Z,23nm,1.0s
MATE Matera 84.28 325 ⇓P **P 06 23 02.0 -0.4**
WVT Waverly 85.19 42 P **P 06 23 07.5 +0.4**
WVT pP **pP 06 23 41.7 +0.5**
TIP Timpagrande 85.49 324 ⇓P **P 06 23 08.0 -0.7**
KEST Kesra 91.45 327 P **P 06 23 36.3 -0.7**
comp=Z,5.3nm,0.7s,baz=30,slow=4.1,SNR=5.9
comp=Z,5.3nm,0.7s
KEST Kesra 91.45 327 P **P 06 23 36.8 -0.1**
ESDC Sonseca Array 92.19 338 P **P 06 23 39.7 -0.6**
comp=Z,1.9nm,0.7s,baz=15,slow=4.3,SNR=12
comp=Z,1.9nm,0.7s
TORD Torodi Ar. Bea 114.64 323 PKP **PKiKP 06 29 09.9 -0.6**
comp=Z,0.9nm,0.4s,baz=26,slow=2.2,SNR=9.3
OTAV Otavalo 119.48 56 *e*P **PKiKP 06 29 25.8 +5.3**
VNDA Vanda 122.26 176 PKP **PKiKP 06 29 23.6 +0.2**
comp=Z,2.4nm,0.7s,baz=321,slow=3.9,SNR=15
DBIC Dimbokro 123.18 327 PP **PP 06 31 03.0 -4.6**
comp=Z,6.3nm,0.7s,baz=30,slow=8.8,SNR=5.9
BOSA Boshof 132.02 269 PKP **PKiKP 06 29 44.2 -0.4**
comp=Z,2.8nm,0.9s,baz=314,slow=1.4,SNR=3.8
BOSA SKPbc **SKPbc 06 32 57.1 0.0**
comp=Z,6.1nm,1.0s,baz=59,slow=2.0,SNR=5.9
QSPA South Pole Qui 134.43 180 PKP **PKiKP 06 29 47.7 -0.5**
comp=Z,3.3nm,0.7s,baz=274,slow=1.6,SNR=12
QSPA SKPbc **SKPbc 06 33 04.1 +0.2**
comp=Z,1.9nm,0.6s,baz=266,slow=1.1,SNR=8.0
LPAZ La Paz 138.71 58 PKP **PKPdf 06 29 57.8 +0.8**
comp=Z,1.1nm,0.8s,baz=351,slow=3.0,SNR=5.1
VILB Vilhena 140.46 46 *e*P **PKiKP 06 30 04.2 +2.1**
ELIB Princess Elisa 142.29 205 *d*PKPdf **PKPdf 06 29 55.4 -5.8**
H03N2 Juan Fernandez 142.63 89 T T 09 09 18.2
baz=304,slow=77,SNR=41
H03N3 Juan Fernandez 142.65 89 T T 09 09 19.1
baz=304,slow=77,SNR=36
H03N1 Juan Fernandez 142.65 89 T T 09 08 54.4
baz=304,slow=77,SNR=41
SALV Santo Antonio 145.21 42 *e*P **PKiKP 06 30 12.3 +0.6**
NBPN Ponto Novo - B 145.61 14 *e*P **PKiKP 06 30 12.2 -0.4**
NVL N'lazarevskaya 146.17 205 *e*PKP2 **PKPbc 06 30 09.4 +0.4**
NVL pmax pmax
comp=Z,19nm,0.7s
TROLL Troll, Antarti 147.99 200 ⇑PKPdf **PKPbc 06 30 15.0 +0.8**
comp=Z,818nm,0.6s
BDFB Brasilia 148.17 29 PKPbc **PKPbc 06 30 16.2 -0.1**
comp=Z,4.3nm,0.7s,baz=221,slow=2.5,SNR=6.7
BDFB pPKPbc **pPKPbc 06 30 51.3 -0.6**
comp=Z,5.6nm,0.7s,baz=293,slow=4.9,SNR=3.5
MURT Porto Murtinho 149.04 50 *e*P **PKiKP 06 30 19.1 -0.3**

SNAA Sanae 149.45 198 ⇑PKPdf **PKPbc 06 30 18.1 +0.3**
comp=Z,134nm,0.6s
SNAA Sanae 149.45 198 PKPbc **PKPbc 06 30 18.1 +0.3**
comp=Z,6.2nm,0.8s,baz=169,slow=3.2,SNR=22
VNA2 Neumayer--Watz 150.99 197 ⇑PKPdf **PKiKP 06 30 22.0 +0.1**
comp=Z,41nm,0.7s,baz=139,slow=1.6
VNA1 Neumayer--Stat 151.38 197 ⇑PKPdf **PKiKP 06 30 23.0 +0.3**
comp=Z,18nm,0.9s
PLCA Paso Flores 151.87 95 PKPbc **PKiKP 06 30 25.1 +0.3**
comp=Z,4.8nm,0.8s,baz=250,slow=3.9,SNR=7.5
PLCA pPKPbc **pPKPbc 06 31 00.9 +0.6**
comp=Z,3.7nm,0.9s,baz=304,slow=3.6,SNR=3.1
CPUP Villa Florida 152.83 56 PKPbc **PKiKP 06 30 27.1 0.0**
comp=Z,1.0nm,0.6s,baz=356,slow=2.7,SNR=4.3

PRU 17 06:24:48.5, 50.29N×18.97E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.54**	**97**	*e*Pg	Pg	06 24 58.1	-0.7
OJC				*e*Sg	Sg	06 25 05.3	-0.4
STEB	**Steborice**	**0.85**	**246**	*e*PG	Pg	06 25 04.3	-0.5
STEB				*e*SG	Sg	06 25 15.9	+0.2
	comp=Z,12nm,0.4s						
MORC	**Moravsky Berou**	**1.05**	**241**	*e*PG	Pg	06 25 08.9	+0.2
MORC				*e*SG	Sg	06 25 21.0	-1.3
MAUC	**Maruska**	**1.19**	**219**	*e*PG	Pg	06 25 10.3	-0.9
MAUC				*e*SG	Sg	06 25 26.6	+0.1
	comp=Z,16nm,0.7s						
LANS	**Liptovska Anna**	**1.19**	**164**	*e*SG	Sn	06 25 28.5	-0.7
NIE	**Niedzica**	**1.23**	**135**	*e*Pg	Pg	06 25 11.8	-0.1
NIE				*e*Sg	Sb	06 25 28.4	-0.5
KRLC	**Kraliky**	**1.42**	**262**	*e*PG	Pn	06 25 14.0	-1.7
KRLC				*e*SG	Sg	06 25 33.3	-0.9
	comp=Z,3.6nm,0.3s						
KRLC	**Kraliky**	**1.42**	**262**	*e*	Pn	06 25 14.0	-1.7
DPC	**Dobruska-Polom**	**1.70**	**273**	*e*PG	Pn	06 25 18.6	-0.8
DPC				*e*SG	Sg	06 25 42.8	-0.2
	comp=Z,3.8nm,0.4s						
DPC	**Dobruska-Polom**	**1.70**	**273**	*e*	Pn	06 25 18.6	-0.8

*NOU **17** 06:48:01.7, 38.54S×175.39E, h199km, MLv3.7/6, North Island, New Zealand*
*WEL **17** 06:48:07.5±1.8, 39.3°S±12.1°×17.6E±11.1°, h150km±16km, M2.0/7, ML1.9/3, MLv2.0/7, Error ellipse: s-maj=16.0km s-min=13.4km az=151.7*
ISC 17 06:48:03.7±1.4, 38.74S±0.08×175.55E±0.08, h186km±9km, n34, σ0.96/36, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITZ	**Rihia Road**	**0.34**	**135**	P	**Pn**	**06 48 29.5**	**+0.9**
NTVZ	**North Tongarir**	**0.38**	**164**	P	**Pn**	**06 48 29.9**	**+1.0**
WTVZ	**West Tongariro**	**0.38**	**175**	P	**Pn**	**06 48 29.8**	**+0.9**
TMVZ	**Te Maari**	**0.40**	**162**	P	**Pn**	**06 48 30.1**	**+1.2**
TLZ	**Tolley Road**	**0.41**	**359**	P	**Pn**	**06 48 29.1**	**+0.1**
ETVZ	**East Tongariro**	**0.42**	**162**	P	**Pn**	**06 48 30.0**	**+1.0**
OTVZ	**Oturere**	**0.44**	**168**	P	**Pn**	**06 48 30.2**	**+1.1**
NGZ	**Ngauruhoe**	**0.44**	**174**	P	**Pn**	**06 48 30.1**	**+1.0**
COVZ	**Chateau Observ**	**0.46**	**180**	P	**Pn**	**06 48 29.9**	**+0.8**
FWVZ	**Far West T-bar**	**0.52**	**179**	P	**Pn**	**06 48 30.5**	**+1.0**
MAVZ	**Matarangi**	**0.53**	**179**	P	**Pn**	**06 48 30.7**	**+1.0**
TUVZ	**Tukino**	**0.54**	**171**	P	**Pn**	**06 48 30.6**	**+1.1**
WHVZ	**Whangaehu Hut**	**0.55**	**177**	P	**Pn**	**06 48 30.6**	**+1.0**
TRVZ	**Turoa**	**0.56**	**180**	P	**Pn**	**06 48 30.7**	**+1.0**
PKVZ	**Pokaka**	**0.57**	**196**	P	**Pn**	**06 48 30.5**	**+0.9**
HIZ	**Hauiti**	**0.58**	**292**	P	**Pn**	**06 48 29.8**	**+0.3**
HIZ	**Hauiti**	**0.58**	**292**	S	**Sn**	**06 48 50.7**	**+1.3**
HIZ	**Hauiti**	**0.58**	**292**	P	**Pn**	**06 48 29.8**	**+0.3**
WNVZ	**Wahianoa**	**0.59**	**176**	P	**Pn**	**06 48 30.8**	**+1.1**
ALRZ	**Allen Road**	**0.65**	**75**	P	**Pn**	**06 48 30.2**	**+0.3**
MTVZ	**Mangateitei**	**0.65**	**185**	P	**Pn**	**06 48 30.9**	**+1.0**
MRHZ	**Matea Rd**	**0.69**	**99**	P	**Pn**	**06 48 30.2**	**+0.1**
MOVZ	**Moawhango**	**0.69**	**167**	P	**Pn**	**06 48 30.9**	**+0.8**
VRZ	**Vera Road**	**0.73**	**237**	P	**Pn**	**06 48 31.0**	**+0.8**
BHHZ	**Black Hill Sta**	**0.85**	**152**	P	**Pn**	**06 48 31.9**	**+0.9**
BHHZ				S	**Sn**	**06 48 50.8**	**-1.5**
BKZ	**Black Stump Fm**	**0.85**	**121**	P	**Pn**	**06 48 31.8**	**+0.7**
BKZ				S	**Sn**	**06 48 50.8**	**-1.4**
TOZ	**Tahuroa Road**	**1.00**	**358**	P	**Pn**	**06 48 32.2**	**+0.2**
MTHZ	**Maungataniwha**	**1.02**	**97**	P	**Pn**	**06 48 33.0**	**+0.8**
WAZ	**Wanganui**	**1.11**	**203**	P	**Pn**	**06 48 34.2**	**+1.4**
RTZ	**Ruatahuna**	**1.13**	**84**	P	**Pn**	**06 48 33.4**	**+0.4**
URZ	**Urewera**	**1.32**	**69**	P	**Pn**	**06 48 34.2**	**-0.3**
QRZ	**Quartz Range**	**3.12**	**227**	P	**Pn**	**06 48 52.7**	**-1.3**
KHZ	**Kahutara**	**3.98**	**202**	P	**Pn**	**06 49 05.3**	**+0.7**
ODZ	**Otahua Downs**	**7.29**	**209**	P	**Pn**	**06 49 47.0**	**-0.4**

*ASRS **17** 06:55:01.0±0.9, 54.14N×86.46E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 17 06:55:02.2±2.9, 54.17N×86.55E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=24.0km s-min=14.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**259**	I	I	07 01 20.0	
	baz=81,slow=307,SNR=0.9						
ZALV	**Zalesovo Beam**	**1.05**	**259**	Pg	Pg	06 55 21.6	-0.7
	0.9nm,0.3s,baz=77,slow=17,SNR=7.5						
ZALV				Lg	Lg	06 55 37.1	
	1.3nm,0.3s,baz=73,slow=31,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.06**	**237**	Pn	Pn	06 56 33.6	+0.6
	0.1nm,0.3s,baz=52,slow=13,SNR=3.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.87**	**202**	Pn	Pn	06 56 59.0	+1.2
	0.2nm,0.3s,baz=24,slow=14,SNR=7.8						
	0.2nm,0.3s						

*IDC **17** 07:06:44.0±2.8, 3.49S×135.67E, h0km, mb3.7/2, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=73.3km s-min=26.9km az=75.0*
*DJA **17** 07:06:48.8±0.3, 3.52°×13.6E±°, h10km, M4.0/10, mB6.9/1, MLv4.0/10, Mw(mB)6.8/1*
ISC 17 07:06:45.1±1.0, 3.72S±0.06×135.68E±0.08, h22km, n9, σ3.36/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.92**	**17**	P	**Pn**	**07 07 17.3**	**+0.8**
SRPI				S	**Sn**	**07 07 35.9**	**-4.1**
BAKI	**Biak**	**2.55**	**10**	P	**Pn**	**07 07 26.2**	**+1.1**
BAKI				S	**Sn**	**07 07 53.4**	**-2.1**
FAKI	**Fak Fak**	**3.52**	**283**	P	**Pn**	**07 07 39.8**	**+1.4**
FAKI				S	**Sn**	**07 08 17.9**	**-1.5**
SIJI	**Sorong**	**5.24**	**303**	Pn	**Pn**	**07 08 02.7**	**+0.5**
	3.3nm,0.3s,baz=118,slow=17,SNR=16						
	9.9nm,0.3s						
SIJI	**Sorong**	**5.24**	**303**	P	**Pn**	**07 08 02.5**	**+0.3**
WRA	**Warramunga Arr**	**16.18**	**185**	Pn	**Pn**	**07 10 33.7**	**+2.5**
	0.2nm,0.3s,baz=35,slow=12,SNR=11						
WRA				Sn	**Sn**	**07 13 25.4**	**-4.7**
	0.1nm,0.3s,baz=2.0,slow=24,SNR=3.1						
	0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.34**	**214**	P	**Pn**	**07 10 48.4**	**+2.5**
	0.2nm,0.3s,baz=35,slow=12,SNR=1.3						
FITZ				S	**Sn**	**07 13 51.5**	**-7.0**
	0.9nm,0.4s,baz=121,slow=1.5,SNR=1.7						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**19.90**	**185**	P	**Pn**	**07 11 21.6**	**+4.5**
	3.3nm,0.7s,baz=8.7,slow=11,SNR=41						
ASAR				S	**S**	**07 14 56.8**	**-1.6**
	0.3nm,0.7s,baz=2.8,slow=27,SNR=1.4						
	3.3nm,0.7s						
MKAR	**Makanchi Array**	**68.77**	**324**	P	**P**	**07 17 48.6**	**+1.1**
	0.3nm,0.5s,baz=116,slow=7.6,SNR=3.6						
	0.3nm,0.5s						

*IDC **17** 07:40:23.8±3.1, 53.54N×87.18E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=29.9km s-min=17.5km az=67.0*
ASRS 17 07:40:19.0±1.1, 53.59N×87.11E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.41**	**286**	I	I	07 49 28.7	
	baz=103,slow=312,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.41**	**286**	Pg	Pb	07 40 50.0	+3.9
	0.4nm,0.3s,baz=108,slow=11,SNR=8.0						
ZALV				Lg	Lg	07 41 10.7	
	0.7nm,0.3s,baz=110,slow=28,SNR=5.0						
KURBB	**Kurchatov Arra**	**6.06**	**244**	Pn	Pn	07 41 54.8	+5.0
	baz=62,slow=14,SNR=2.4						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.47**	**206**	Pn	Pn	07 42 15.5	+6.2
	0.1nm,0.3s,baz=25,slow=14,SNR=2.0						
	0.1nm,0.3s						

*TAP **17** 07:52:56.6, 24.72N×122.47E, h14km, ML3.0, C*
*JMA **17** 07:52:57.4±0.1, 25.1°×122.5E±0.5, h36km±2km, MV2.4/10, NW OFF ISHIGAKIJIMA IS*
ISC 17 07:52:57.1±1.0, 24.71N±0.03×122.47E±0.02, h24km±10km, n54, σ0.53/90, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.36**	**218**	*i* P	**Pb**	**07 53 04.6**	**-0.3**
EOS2				*i* S	**Sb**	**07 53 10.9**	**+0.7**
EOS3	**EOS3**	**0.44**	**199**	*i* P	**Pb**	**07 53 06.3**	**+0.1**
EOS3				*i* S	**Sn**	**07 53 13.5**	**-1.5**
JYNG	**Yonagunijimaku**	**0.50**	**120**	*e*P	**Pb**	**07 53 07.4**	**+0.1**
JYNG				*e*S	**Sb**	**07 53 14.5**	**+0.3**
EGS		**0.51**	**286**	*i* P	**Pb**	**07 53 07.2**	**-0.3**
EGS				*i* S	**Sb**	**07 53 14.7**	**+0.2**
TWB1	**Santiao Chiao**	**0.53**	**304**	*i* P	**Pb**	**07 53 07.5**	**-0.3**
TWB1				*e*S	**Sb**	**07 53 15.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.55**	**116**	P	**Pb**	**07 53 08.2**	**+0.1**
YOJ	**Yonaguni jima**	**0.55**	**116**	*i* P	**Pb**	**07 53 08.1**	**0.0**
YOJ				*i* S	**Sb**	**07 53 16.2**	**+0.7**
YOJ	**Yonaguni jima**	**0.55**	**116**	*e*P	**Pb**	**07 53 08.0**	**0.0**
YOJ				*e*S	**Sb**	**07 53 15.3**	**-0.2**
TWC	**Suao**	**0.58**	**261**	*e*P	**Pb**	**07 53 07.6**	**-1.0**
TWC				S	**Sb**	**07 53 17.0**	**+0.6**
ESAO	**Su ao**	**0.59**	**257**	*e*P	**Pn**	**07 53 09.3**	**-0.7**
EOS4	**EOS4**	**0.60**	**194**	*i* P	**Pn**	**07 53 09.0**	**-0.8**
EOS4				S	**Sn**	**07 53 18.6**	**0.0**
TIPB	**Shuangxi**	**0.65**	**294**	P	**Pb**	**07 53 09.6**	**-0.2**
TIPB				S	**Sb**	**07 53 19.2**	**+0.8**
SXI1	**Grass Mountain**	**0.67**	**306**	P	**Pb**	**07 53 09.6**	**-0.6**
EWUT	**Wuta**	**0.68**	**248**	P	**Pb**	**07 53 10.1**	**-0.3**
EWUT				S	**Sn**	**07 53 20.2**	**-1.0**
NDS	**Dongshan**	**0.69**	**264**	*e*P	**Pb**	**07 53 10.5**	**0.0**
NDS				*e*S	**Sn**	**07 53 20.6**	**-0.8**
ENA	**Nanau**	**0.72**	**248**	*e*P	**Pb**	**07 53 09.9**	**-1.2**
ENA				*e*S	**Sb**	**07 53 20.0**	**-0.6**
NWF	**Wu-fen Shan**	**0.73**	**300**	*e*P	**Pb**	**07 53 11.3**	**+0.1**
NWF				*e*S	**Sb**	**07 53 21.1**	**+0.3**
WFSB	**Wu-fen Shan**	**0.73**	**300**	*e*P	**Pb**	**07 53 11.2**	**+0.1**
WFSB				*e*S	**Sb**	**07 53 21.3**	**+0.6**
TWE	**Neicheng**	**0.73**	**271**	P	**Pb**	**07 53 11.3**	**+0.1**
TWE				S	**Sn**	**07 53 22.2**	**-0.3**
EAHA	**Aohua**	**0.77**	**241**	*e*P	**Pn**	**07 53 12.1**	**-0.3**
EAHA				*e*S	**Sn**	**07 53 22.5**	**-0.8**
TNOU	**National Taiwa**	**0.78**	**305**	*e*P	**Pb**	**07 53 12.2**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.81**	**274**	*e*P	**Pn**	**07 53 12.9**	**-0.2**
FUSB				*e*S	**Sb**	**07 53 23.0**	**-0.1**
TWA	**Mucha**	**0.85**	**289**	*e*P	**Pb**	**07 53 13.1**	**-0.2**
TWA				*e*S	**Sn**	**07 53 25.2**	**-0.3**
LATG	**Datong**	**0.88**	**259**	P	**Pb**	**07 53 13.7**	**-0.1**
LATG				S	**Sn**	**07 53 26.1**	**-0.1**
NDT	**Datong Townshi**	**0.88**	**263**	P	**Pb**	**07 53 13.8**	**0.0**
NDT				*e*S	**Sn**	**07 53 26.2**	**+0.1**
NWLT	**Wulai**	**0.89**	**275**	*e*P	**Pb**	**07 53 13.7**	**-0.2**
NWLT				*e*S	**Sn**	**07 53 26.0**	**-0.2**
YM01	**YM01**	**0.93**	**298**	*e*P	**Pb**	**07 53 14.9**	**+0.3**
YM01				*e*S	**Sn**	**07 53 27.3**	**-0.1**
TATO	**Taipei**	**0.94**	**287**	P	**Pb**	**07 53 13.9**	**-0.9**
TATO	**Taipei**	**0.94**	**287**	S	**Sb**	**07 53 26.2**	**-0.5**
YM08	**YM08**	**0.94**	**301**	*e*P	**Pb**	**07 53 14.8**	**+0.1**
YM08				*e*S	**Sb**	**07 53 27.0**	**+0.3**
ZUZH	**Zhuzihu**	**0.96**	**299**	*e*P	**Pb**	**07 53 15.3**	**+0.2**
ZUZH				*e*S	**Sn**	**07 53 28.4**	**+0.3**
NACB	**Ninganchiao**	**0.96**	**237**	P	**Pn**	**07 53 14.7**	**-0.4**
NACB	**Ninganchiao**	**0.96**	**237**	S	**Sn**	**07 53 27.6**	**-0.4**
NACB	**Ninganchiao**	**0.96**	**237**	*e*P	**Pb**	**07 53 15.0**	**-0.1**
NACB				*e*S	**Sn**	**07 53 28.6**	**+0.5**
TWY	**Chenhua**	**0.98**	**306**	P	**Pn**	**07 53 15.2**	**-0.1**
TWY				S	**Sn**	**07 53 28.5**	**+0.1**
PCYT	**Pengchaiyu**	**0.99**	**338**	*e*P	**Pb**	**07 53 15.9**	**+0.3**
YHNB	**Yeheng**	**1.00**	**268**	P	**Pn**	**07 53 15.6**	**-0.1**
YHNB	**Yeheng**	**1.00**	**268**	S	**Sb**	**07 53 28.8**	**+0.2**
YHNB	**Yeheng**	**1.00**	**268**	*e*P	**Pb**	**07 53 15.9**	**+0.1**
YHNB				*e*S	**Sn**	**07 53 29.8**	**+0.7**
NSK	**Sanguang**	**1.02**	**269**	P	**Pb**	**07 53 29.2**	**+0.2**
NSK				*e*S	**Sb**	**07 53 29.2**	**+0.2**
NNSB	**Datong**	**1.03**	**255**	P	**Pb**	**07 53 16.4**	**0.0**
NNSB				*e*S	**Sn**	**07 53 30.8**	**+0.8**
NNSH	**Datong**	**1.03**	**255**	*e*P	**Pn**	**07 53 16.1**	**-0.1**
NNSH				*e*S	**Sn**	**07 53 30.0**	**0.0**
ETLH	**Xiulin Townshi**	**1.03**	**241**	*e*P	**Pb**	**07 53 16.4**	**+0.1**
ETLH				*e*S	**Sn**	**07 53 30.3**	**+0.4**
NNS	**Nan Shan**	**1.04**	**255**	*e*P	**Pb**	**07 53 16.5**	**0.0**
NNS				*e*S	**Sn**	**07 53 30.9**	**+0.8**
LXIB	**Xiulin Townshi**	**1.18**	**235**	*e*P	**Pb**	**07 53 18.8**	**-0.1**
LXIB				*e*S	**Sb**	**07 53 35.0**	**+1.1**
FUSS	**Fushou**	**1.21**	**248**	*e*P	**Pb**	**07 53 19.8**	**+0.3**
FUSS				*e*S	**Sb**	**07 53 35.7**	**+0.9**
WHF	**Hehuan Shan**	**1.23**	**243**	*e*P	**Pb**	**07 53 20.3**	**+0.3**
WHF				*e*S	**Sb**	**07 53 36.3**	**+0.6**
TWT	**Tachien**	**1.27**	**249**	*e*P	**Pb**	**07 53 20.8**	**+0.4**
TDCB	**Techi**	**1.28**	**250**	*e*P	**Pb**	**07 53 20.2**	**-0.4**
WARBT	**Fenglin Townsh**	**1.40**	**226**	*e*P	**Pn**	**07 53 21.2**	**0.0**
JKRS	**Kuro-shima**	**1.48**	**108**	*e*S	**Sn**	**07 53 40.7**	**0.0**
JIJ	**Ishigaki jima**	**1.56**	**102**	*e*S	**Sn**	**07 53 42.6**	**-0.2**
SSLB	**Suanglung**	**1.66**	**237**	P	**Pb**	**07 53 27.9**	**+0.8**
SSLB	**Suanglung**	**1.66**	**237**	S	**Sb**	**07 53 49.6**	**+2.0**

*HEL **17** 08:02:36.4±0.1, 63.67N×25.22E, h0km, ML1.3, Explosion*
*IDC **17** 08:02:36.2±1.2, 63.67N×25.69E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=39.2km s-min=9.8km az=88.0*
ISC 17 08:02:35.3±0.8, 63.67N±0.02×25.25E±0.02, h0km, n34, σ1.04/47, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUF	**Merijarvi**	**0.74**	**342**	PG	**Pg**	**08 02 49.8**	**+0.4**
	baz=166						
OUF				SG	**Sg**	**08 02 59.3**	**+0.3**
OUF				*s*max	*s*max	08 02 59.5	
	comp=Z,2.3nm,0.2s						
OBF0	**Syolatti, Pyha**	**0.95**	**332**	PB	**Pb**	**08 02 54.1**	**-0.4**
OBF0				*s*max	*s*max	08 03 05.2	
	comp=Z,2.6nm,0.2s						
OBF0				SB	**Sg**	**08 03 05.9**	**+0.3**
SUF	**Sumiainen**	**1.03**	**156**	*e*P	**Pb**	**08 02 56.1**	**+0.1**
SUF	**Sumiainen**	**1.03**	**156**	PB	**Pb**	**08 02 56.1**	**+0.1**
SUF				*s*max	*s*max	08 03 08.3	
	comp=Z,1.2nm,0.2s						
OBF8	**Ulkokalla**	**1.04**	**311**	PG	**Pg**	**08 02 55.4**	**+0.2**
OBF8				*s*max	*s*max	08 03 07.8	
	comp=Z,2.8nm,0.2s						
OBF8				SG	**Sb**	**08 03 09.6**	**-0.6**
OBF4	**Vikkela, Lumij**	**1.15**	**357**	PG	**Pb**	**08 02 57.8**	**-0.3**
OBF4				*s*max	*s*max	08 03 11.4	
	comp=Z,3.3nm,0.2s						
OBF4				SB	**Sb**	**08 03 13.2**	**-0.3**
NIF	**Nilsia**	**1.18**	**103**	PG	**Pb**	**08 02 58.3**	**-0.2**
NIF				*s*max	*s*max	08 03 12.7	
	comp=Z,1.1nm,0.2s						
VAF	**Ylistaro**	**1.32**	**243**	*e*P	**Pg**	**08 02 59.8**	**-0.7**
VAF	**Ylistaro**	**1.32**	**243**	PG	**Pg**	**08 03 00.6**	**0.0**
VAF				*s*max	*s*max	08 03 15.8	
	comp=Z,2.8nm,0.2s						
VAF				SG	**Sg**	**08 03 16.8**	**-0.8**
KEF	**Keuruu**	**1.52**	**187**	*e*P	**Pb**	**08 03 03.9**	**-0.4**
KEF	**Keuruu**	**1.52**	**187**	PG	**Pn**	**08 03 03.8**	**+0.1**
	baz=5.0						
KEF				*s*max	*s*max	08 03 21.8	
	comp=Z,2.7nm,0.2s						
KEF				SG	**Sg**	**08 03 23.4**	**-0.6**
KAF	**Kangasniemi**	**1.63**	**162**	PG	**Pb**	**08 03 06.0**	**-0.2**
	baz=339						
KAF				*s*max	*s*max	08 03 25.4	
	comp=Z,2.6nm,0.2s						
KAF				SG	**Sg**	**08 03 27.6**	**-0.1**

BURU Burvik 1.93 300 PG **Pb 08 03 11.0 -0.3**
BURU SG **Sb 08 03 35.7 -0.3**
UMAU Umeaa 2.04 278 PG **Pb 08 03 12.4 -0.8**
UMAU SG **Sb 08 03 38.3 -0.8**
RMF Romuvaara 2.14 73 PG **Pb 08 03 14.8 -0.1**
RMF *s*max *s*max 08 03 40.1
comp=Z,1.5nm,0.2s
RMF SG **Sg 08 03 43.3 -0.6**
FIA0 FINESS Array S 2.27 170 PB **Pb 08 03 16.0 -1.0**
baz=353
FIA0 *s*max *s*max 08 03 43.5
comp=Z,3.9nm,0.2s
FIA0 SG **Sb 08 03 45.6 +0.1**
FINES FINESS Array B 2.27 170 Pn **Pb 08 03 16.3 -0.7**
comp=Z,1.2nm,0.3s,baz=357,slow=14,SNR=43
FINES Sn **Sb 08 03 46.0 +0.5**
comp=Z,2.6nm,0.3s,baz=355,slow=25,SNR=29
comp=Z,4.7nm,0.4s
KPF Kankaanpaa 2.35 220 *s*max *s*max 08 03 45.6
comp=Z,2.0nm,0.2s
KPF SG **Sb 08 03 48.0 0.0**
KU2 Taivalkoski 2.42 31 PG **Pb 08 03 19.4 -0.2**
TOF Tornio 2.46 351 *s*max *s*max 08 03 48.7
comp=Z,0.7nm,0.2s
TOF SG **Sb 08 03 51.0 +0.1**
KU1 Kurvinen 2.66 42 SG **Sb 08 03 58.1 +1.3**
RUF Ruokolahti 2.83 141 *s*max *s*max 08 03 59.8
comp=Z,0.9nm,0.2s
RUF SG **Sb 08 04 02.6 +0.9**
JOF Joensuu 2.84 103 *e*P **Pb 08 03 26.3 -0.5**
JOF Joensuu 2.84 103 SB **Sb 08 04 00.8 -1.2**
KU6 Riekki 3.09 38 SB **Sb 08 04 06.8 -2.3**
KU6 *s*max *s*max 08 04 07.3
comp=Z,0.7nm,0.2s
RAF Rauma 3.11 213 *s*max *s*max 08 04 07.6
comp=Z,0.6nm,0.2s
RAF SG **Sb 08 04 11.5 +1.7**
ERTU Ertsjaerv 3.17 337 SG **Sb 08 04 13.0 +1.3**
NUR Nurmijarvi 3.18 185 SG **Sb 08 04 13.3 +1.4**
VJF Virojoki 3.32 160 SG **Sb 08 04 15.8 -0.1**
HEMU Hemsoen 3.42 256 SB **Sb 08 04 18.7 0.0**
AAL Aland 4.29 218 SG **Sb 08 04 47.8 +4.0**
VRF Varrio 4.47 22 PG **Pb 08 03 56.4 +1.8**
VRF SN **Sb 08 04 37.6 +0.6**
ARCES ARCESS Array B 5.89 1 Pn **Pn 08 04 04.6 +0.8**
comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=1.4
ARCES Sn **Sn 08 05 09.9 -2.1**
comp=Z,0.1nm,0.3s,baz=175,slow=24,SNR=5.3
ARCES Lg Lg 08 05 35.7
comp=Z,0.1nm,0.3s,baz=180,slow=26,SNR=6.1
comp=Z,0.2nm,0.4s
I37NO I37NO 6.05 337 I I 08 38 33.7
baz=152,slow=315,SNR=6.1

*IDC **17** 08:04:39.9±2.1, 11.53N×95.61E, h0km, mb3.6/5, mbtmp3.6/6, ML4.0/1, Error ellipse: s-maj=76.9km s-min=22.4km az=68.0*
*BKK **17** 08:04:44.5±2.0, 12.6N±6.1×95.6E±°, h16km±19km, M4.0/6, Mjma3.7/6, ML4.3/6, MLv4.1/6*
ISC 17 08:04:45.5±1.6, 11.7N±0.1×95.6E±0.2, h35km, n8, σ1.04/8, mb3.6/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNTT	**Ranong**	**3.60**	**128**	P	**Pn**	**08 05 39.8**	**+1.0**
KHLT	**Khaolaem Dam**	**4.26**	**42**	P	**Pn**	**08 05 48.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**7.49**	**25**	Pn	**Pn**	**08 06 31.4**	**-0.8**
	0.6nm,0.3s,baz=213,slow=15,SNR=4.6						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**36.80**	**345**	P	**P**	**08 11 49.8**	**-0.2**
	0.5nm,0.7s,baz=152,slow=7.9,SNR=4.2						
	0.5nm,0.7s						
SONM	**Songino Array**	**37.19**	**12**	P	**P**	**08 11 54.1**	**+0.8**
	1.3nm,0.8s,baz=189,slow=8.5,SNR=5.2						
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**43.06**	**351**	P	**P**	**08 12 42.5**	**+0.8**
	0.6nm,0.4s,baz=164,slow=6.0,SNR=3.7						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**49.38**	**129**	P	**P**	**08 13 30.8**	**-1.2**
	0.5nm,0.8s,baz=301,slow=7.6,SNR=3.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**51.32**	**133**	P	**P**	**08 13 45.7**	**-0.9**
	0.4nm,0.8s,baz=312,slow=6.3,SNR=5.6						
	0.4nm,0.8s						

*BGR **17** 08:12:27.5, 35.21N×5.88E, h33km, mb4.3, Ms3.8*
*NAO **17** 08:12:28.6, 34.78N×6.22E, h10km, MB5.1*
*IDC **17** 08:12:43.6±0.5, 36.63N×6.30E, h0km, mb4.1/24, mbtmp4.1/31, ML4.3/6, MS4.1/64, Error ellipse: s-maj=15.0km s-min=12.1km az=157.0*
*CRAAG **17** 08:12:43.4, 36.54N×6.36E, MlI4.5, Algrie 09km NE Sidi-Merouane*
*MOS **17** 08:12:43.5±1.1, 36.62N×6.27E, h10km, mb4.7/27, MS4.0/12, Error ellipse: s-maj=9.1km s-min=4.5km az=63.6*
*NEIC **17** 08:12:44.1±1.5, 36.46N±0.06×6.24E±0.03, h10km±1km, mb4.6/38, Error ellipse: s-maj=11.4km s-min=3.1km az=199.0*
*GFZ **17** 08:12:45.9±0.3, 36.3°×6.3°, h10km, M4.3/54, mb4.3/54*
*CNRM **17** 08:13:12.5, 36.22N×6.92E, h74km*
ISC 17 08:12:45.0±0.6, 36.54N±0.03×6.33E±0.03, h12km±3km, n424, σ1.65/384, mb4.5/68, MS4.1/64, 13C-15D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBHR	**Beni Haroun da**

CORI Orista 6.36 330 Pn 08 14 17.0 -1.5
RAFF Raffo Rosso 6.47 82 Pn 08 14 21.2 +1.1
VAE Valguarnera 6.53 79 Pn **Pn** 08 14 20.4 -0.5
35nm,0.7s,baz=46,slow=3.7,SNR=5.6
CEST Esterri de Car 7.21 329 Pn 08 14 30.4 +0.1
RUSF Rustrel 7.42 355 P **Pn 08 14 33.9 +0.8**
JBK JBK 7.59 256 P Pn 08 14 35.1 -0.5
JBK S Sn 08 15 39.6 -22
ISO Isola 7.65 4 P **Pn 08 14 37.2 +0.9**
FIGM Figuig 7.67 237 P **Pn 08 14 36.9 +0.3**
FIGM S Sn 08 15 46.2 -17
CEL Celeste 7.80 74 Pn 08 14 38.3 -0.1
AQU L'Aquila 7.97 41 P **Pn 08 14 42.2 +1.5**
AQU L'Aquila 7.97 41 Pn **Pn 08 14 42.2 +1.5**
INTR Introdacqua 8.02 45 Pn 08 14 43.1 +1.7
NRCA Norcia 8.17 38 Pn 08 14 43.8 +0.3
MURB Monte Urbino 8.23 33 Pn 08 14 46.4 +2.2
FDMO Fiordimonte 8.31 37 Pn **Pn 08 14 48.8 +3.4**
MARCO Tramutola 8.33 60 P **Pn 08 14 46.8 +1.2**
ATE Arette 8.48 323 P **Pn 08 14 48.8 +1.2**
AKLM AKL 8.55 259 P **Pn 08 14 49.4 +0.7**
AKLM S Sn 08 16 02.1 -23
ZCCA Zocca 8.56 23 Pn **Pn 08 14 51.6 +2.8**
TIP Timpagrande 8.66 69 P **Pn 08 14 53.6 +3.5**
ESDC Sonseca Array 8.70 294 Pn **Pn 08 14 51.0 +0.3**
2.4nm,0.3s,baz=100,slow=14,SNR=41
ESDC Sn **Sn 08 16 28.1 -0.5**
baz=109,slow=24
ESDC LR LR 08 18 01.4
comp=Z,1µm,18.9s,baz=106,slow=37
7.8nm,0.6s
SSB Saint Sauveur 8.83 352 P **Pn 08 14 51.2 -1.3**
SSB Saint Sauveur 8.83 352 Pn 08 14 51.2 -1.3
SSB Saint Sauveur 8.83 352 P **Pn 08 14 50.8 -1.7**
PAB San Pablo 8.94 293 P **Pn 08 14 54.4 +0.4**
PAB San Pablo 8.94 293 Pn 08 14 54.4 +0.4
PAB San Pablo 8.94 293 P **Pn 08 14 56.8 +2.7**
MATE Matera 9.10 60 P **Pn 08 14 54.9 -1.1**
SMIR Smir Dam 9.52 268 P **Pn 08 15 00.9 -0.9**
SMIR S Sn 08 16 27.0 -22
MDT Midelt 9.74 251 Pn **Pn 08 15 05.0 0.0**
0.5nm,0.3s,baz=86,slow=6.3,SNR=12
MDT LR LR 08 19 23.6
comp=Z,4µm,18.3s,baz=60,slow=41
2.7nm,0.4s
MDT Midelt 9.74 251 P **Pn 08 15 03.8 -1.2**
MDT S Sn 08 16 31.4 -23
MD01 Midelt array s 9.84 251 Pn **Pn 08 15 03.5 -2.9**
MD31 MD31 9.84 251 Pn 08 15 04.6 -1.7
MD31 MD31 9.84 251 P **Pn 08 15 05.2 -1.1**
MD31 S Sn 08 16 32.2 -25
SENIN Lac Senin/Sane 9.84 4 Pn **Pn 08 15 07.5 +1.0**
TUE Stuetta 10.18 12 Pn 08 15 13.0 +2.0
TUE Stuetta 10.18 12 P **Pn 08 15 13.4 +2.4**
2µm118nm,1.4s
CTI Castel Tesino 10.30 21 P **Pn 08 15 14.4 +1.7**
CTI Castel Tesino 10.30 21 Pn 08 15 14.4 +1.7
FUORN Ofenpass-Fuorn 10.49 15 Pn **Pn 08 15 17.8 +2.5**
DAVOX Davos/Dischmat 10.57 13 Pn **Pn 08 15 16.4 0.0**
1.2nm,0.3s,baz=215,slow=22,SNR=6.0
DAVOX Sn **Sn 08 17 11.4 -3.3**
0.7nm,0.3s,baz=331,slow=19,SNR=1.3
DAVOX LR LR 08 19 47.5
comp=Z,910nm,18.1s,baz=228,slow=40
1.3nm,0.3s
PBAR Barrancos 10.77 283 *e*P **Pn 08 15 19.0 +0.1**
PBAR *i* IAmb IAmb 08 15 29.0
29nm,2.0s
FETA Feichten 10.97 16 *i* Pn **Pn 08 15 25.2 +3.4**
12nm,1.0s
DAVA Damuels 11.06 13 *i* Pn **Pn 08 15 25.8 +2.8**
25nm,1.3s
ABTA Abfaltersbach 11.19 22 *i* Pn Pn 08 15 29.5 +4.7
12nm,1.1s
PMRV Marv??o 11.21 289 *e*LR LR 08 18 23.7
PMRV *i* IAMs_20 IAMs_20 08 19 58.0
1µm,16.0s
SQTA Sankt Quirin 11.27 17 *e*Pn Pn 08 15 30.6 +4.7
21nm,1.0s
PVAQ Vaqueiros 11.27 279 *e*P **Pn 08 15 26.1 +0.3**
PVAQ *e*LR LR 08 18 25.2
PVAQ *i* IAMs_20 IAMs_20 08 20 09.9
651nm,16.0s
PVAQ Vaqueiros 11.27 279 Pn **Pn 08 15 24.0 -1.8**
PVAQ Vaqueiros 11.27 279 P **Pn 08 15 24.7 -1.1**
PVAQ S Sn 08 17 09.5 -22
PCBR Castelo Branco 11.35 291 *e*P **Pn 08 15 29.7 +2.7**
PCBR *i* IAmb IAmb 08 15 36.0
60nm,1.7s
MOTA Moosalm 11.36 17 *e*Pn **Pn 08 15 30.0 +2.8**
17nm,1.0s
MVO Moncorvo 11.39 298 *e*P **Pn 08 15 28.2 +0.6**
MVO *i* IAmb IAmb 08 15 47.3
50nm,1.5s
MVO *e*LR LR 08 18 30.7
MVO *i* IAMs_20 IAMs_20 08 20 10.7
1µm,16.0s
PBEJ Beja 11.41 282 *e*P **Pn 08 15 28.3 +0.5**
PBEJ *i* IAmb IAmb 08 15 42.4
30nm,1.9s
WTTA Wattenberg 11.42 19 *e*Pn Pn 08 15 34.4 +6.4
21nm,0.9s
WTTA Wattenberg 11.42 19 P **Pn 08 15 32.5 +4.5**
RETA Reutte 11.42 15 *i* Pn Pn 08 15 32.9 +5.0
22nm,1.4s
PBRG Braganca 11.42 301 *e*P **Pn 08 15 29.5 +1.5**
PBRG *i* IAmb IAmb 08 15 34.6
63nm,1.1s
PBDV Barranco-do-Ve 11.44 278 *e*P **Pn 08 15 29.2 +1.0**
MYKA Terra Mystica 11.46 26 *e*Pn **Pn 08 15 28.7 +0.2**
6.4nm,0.9s
WATA Walderalm 11.47 18 *i* Pn Pn 08 15 33.6 +5.0
6.1nm,0.8s
ECAL Calabor 11.47 302 P **Pn 08 15 30.7 +2.0**
PCVE Castro Verde 11.53 280 *e*P **Pn 08 15 30.1 +0.7**
MTE Manteigas 11.54 294 *e*LR LR 08 18 27.2
MTE *i* IAMs_20 IAMs_20 08 20 09.7
1µm,18.0s
MTE Manteigas 11.54 294 P **Pn 08 15 33.4 +3.9**
PDG Podgorica 11.58 56 Pn **Pn 08 15 30.7 +0.6**
PDG Podgorica 11.58 56 P **Pn 08 15 31.3 +1.2**
BLY Banja Luka 11.62 42 Pn **Pn 08 15 31.5 +0.9**
ECH Echery 11.68 3 P **Pn 08 15 31.2 -0.3**
ECH Echery 11.68 3 Pn 08 15 31.2 -0.3
ECH Echery 11.68 3 P **Pn 08 15 29.4 -2.1**
OBKA Obir 11.70 29 *i* Pn **Pn 08 15 34.8 +3.0**
13nm,1.4s
KBA Koelnbreinsper 11.75 24 *e*Pn **Pn 08 15 35.6 +3.0**
20nm,1.2s
KBA Koelnbreinsper 11.75 24 P **Pn 08 15 36.3 +3.8**
PMTG Montargil 11.79 287 *e*P **Pn 08 15 33.2 +0.3**
PMTG *i* IAmb IAmb 08 15 56.3
35nm,1.5s
PLOUS Minas do Lousa 11.85 282 *e*P **Pn 08 15 35.1 +1.4**
PLOUS *i* IAmb IAmb 08 15 39.0
30nm,1.3s
LESA Schwarzleotal 11.85 21 *i* Pn **Pn 08 15 36.8 +3.0**
3.4nm,0.6s
ZGR Zagora 11.87 241 P **Pn 08 15 33.5 -0.6**
ZGR S Sn 08 17 25.8 -21
PVIS Viseu 11.88 295 *e*P **Pn 08 15 35.5 +1.3**
SOKA Soboth 12.03 30 *i* Pn **Pn 08 15 38.7 +2.4**
7.6nm,1.3s
PCAS Casmilo, Conde 12.17 291 *e*P **Pn 08 15 40.7 +2.6**
FUR Furstenfeldbru 12.18 16 *e*L L 08 19 54.3
960nm,21.3s
OUZM OUZ 12.26 246 P **Pn 08 15 39.7 +0.2**
OUZM S Sn 08 17 37.2 -19
BIOA Bad Ischl, Aus 12.38 24 *e*Pn **Pn 08 15 43.7 +2.7**
5.3nm,0.8s
ITM Ithomi 12.51 82 Pn **Pn 08 15 41.9 -1.0**
ITM Ithomi 12.51 82 P **Pn 08 15 43.0 +0.2**
PGAV Gavieira, Arco 12.54 300 *e*P **Pn 08 15 45.4 +2.1**
PGAV *e*LR LR 08 19 38.1
PGAV *i* IAMs_20 IAMs_20 08 21 04.5
1µm,16.0s
TIO Tiouine 12.62 248 P **Pn 08 15 47.4 +2.9**
ARSA Arzberg 12.69 30 Pn **Pn 08 15 45.6 +0.3**
ARSA Arzberg 12.69 30 *i* Pn **Pn 08 15 48.0 +2.7**
8.4nm,1.1s
MOA Molln 12.73 25 *e*Pn Pn 08 15 51.6 +5.8
26nm,1.5s
AGG Agios Georgios 12.90 74 P **Pn 08 15 50.4 +2.3**
WLF Walferdange 13.12 359 *d*P **Pn 08 15 53.0 +2.0**

WLF *d*PP **PnPn 08 15 58.4 -0.5**
GRB5 Grafenberg Arr 13.16 16 P **Pn 08 15 53.6 +2.0**
LIT Litokhoron 13.18 69 P **Pn 08 15 52.0 +0.1**
LIT Litokhoron 13.18 69 Pn 08 15 52.0 +0.1
LIT Litokhoron 13.18 69 P **Pn 08 15 53.2 +1.3**
GRG Griva 13.29 66 P **Pn 08 15 53.7 +0.2**
MORH Mrgy, Hungar 13.36 40 P **Pn 08 15 54.8 +0.5**
RONA Rosalia, Austr 13.37 30 *e*Pn **Pn 08 15 57.4 +3.0**
4.3nm,1.1s
CONA Conrad Observa 13.38 29 *i* Pn **Pn 08 15 57.3 +2.6**
14nm,1.2s
GRB3 Grafenberg Arr 13.40 16 P **Pn 08 15 58.1 +3.1**
GEC2 GERESS Array S 13.43 21 *e*P **P 08 16 04.1 -0.7**
14nm,1.1s,baz=197,slow=13
GEC2 *e*L L 08 21 07.9
1µm,18.2s
GERES GERESS Array B 13.43 21 Pn **Pn 08 15 55.7 +0.3**
0.1nm,0.3s,baz=204,slow=13,SNR=11
GERES LR LR 08 21 18.1
comp=Z,1µm,18.7s,baz=212,slow=38
WET Wettzell 13.47 19 *e*L L 08 20 46.2
667nm,18.2s
WET Wettzell 13.47 19 P **Pn 08 15 56.6 +0.8**
CKRC Cesky Krumlov 13.59 23 AMS AMS 08 22 00.0
comp=Z,1µm,13.9s
DOU Dourbes 13.61 355 *d*P **Pn 08 15 56.2 -1.5**
comp=Z,26nm,1.1s
GRF Grafenberg Arr 13.62 14 *e*P **P 08 16 02.7 -4.1**
baz=197,slow=13
GRF *e*L L 08 22 02.6
comp=Z,659nm,18.1s
RCHB Rochefort 13.63 357 *d*P **Pn 08 15 58.7 +0.7**
RCHB Rochefort 13.63 357 P **Pn 08 15 58.8 +0.7**
KHC Kasperske Hory 13.65 21 *e*P **Pn 08 15 59.8 +1.5**
KHC MLR MLR
comp=Z,2µm,12.5s
KHC Kasperske Hory 13.65 21 *e*P **Pn 08 15 59.8 +1.5**
KHC *ex* x 08 16 03.0
KHC AMS AMS 08 22 30.0
comp=Z,2µm,12.5s
KHC Kasperske Hory 13.65 21 Pn 08 15 58.4 0.0
KHC Kasperske Hory 13.65 21 P **Pn 08 16 00.5 +2.2**
comp=Z,17nm,1.0s
KHC Kasperske Hory 13.65 21 P **Pn 08 15 60.0 +1.6**
KNT Kendrikon 13.71 65 P **Pn 08 15 59.5 +0.3**
TAM Tamanrasset 13.72 183 P **Pn 08 15 56.3 -3.2**
TAM Tamanrasset 13.72 183 Pn 08 15 56.3 -3.2
TAM Tamanrasset 13.72 183 P **Pn 08 15 56.9 -2.6**
TNS Taunus Mts 13.76 6 *e*L L 08 20 24.9
comp=Z,877nm,21.5s
BMRD Maredsous 13.80 356 *d*P **Pn 08 16 00.8 +0.5**
comp=Z,18nm,1.0s
BGES Gesves 13.87 357 *d*P **Pn 08 16 02.4 +1.1**
ROTZ Rotzenmuhle 13.89 16 *e*P **Pn 08 16 03.5 +2.0**
comp=Z,2.7nm,1.3s,baz=197,slow=13
BCLA Clavier 13.89 357 *d*P **Pn 08 16 01.7 +0.1**
comp=Z,11nm,1.4s
SOH Sokhos 13.97 67 P **Pn 08 16 03.9 +1.2**
MEM Membach 14.06 359 *d*P **Pn 08 16 03.7 -0.3**
MEM Membach 14.06 359 P **Pn 08 16 04.4 +0.5**
ZVC Zvikov 14.10 21 *e*P Pn 08 15 59.2 -5.3
ZVC AMS AMS 08 22 30.0
comp=Z,1µm,12.6s
HGN Heimansgroeve 14.22 359 P **Pn 08 16 07.2 +1.1**
MODS Modra-Piesok 14.30 31 *e*P **P 08 16 17.1 +2.7**
MODS Modra-Piesok 14.30 31 *e*P **P 08 16 17.1 +2.7**
UCC Uccle 14.32 355 P **Pn 08 16 06.1 -1.4**
UCC Uccle 14.32 355 Pn **Pn 08 16 06.0 -1.4**
NKC Novy Kostel 14.38 16 AMS AMS 08 25 00.0
comp=Z,900nm,9.9s
KRUC Moravsky 14.51 27 *e*P **P 08 16 18.3 +1.6**
UBBA Unterbreizbach 14.51 9 *e*P **Pn 08 16 11.4 +1.4**
comp=Z,33nm,1.4s,baz=197,slow=13
TANN Tannenbergstha 14.56 16 *e*P **P 08 16 14.0 -3.3**
comp=Z,14nm,1.3s,baz=197,slow=13
PLN Plauen 14.56 15 *e*P **P 08 16 15.3 -1.9**
comp=Z,11nm,2.0s,baz=197,slow=13
MOX Moxa 14.60 13 *e*P **Pn 08 16 12.2 +0.8**
comp=Z,32nm,1.6s,baz=197,slow=13
MOX *e*L L 08 21 06.0
comp=Z,338nm,19.3s
MOX Moxa 14.60 13 P **Pn 08 16 12.5 +1.2**
BZS Buzias 14.65 47 P **Pn 08 16 14.8 +2.9**
PRU Pruhonice 14.70 21 AMS AMS 08 22 50.0
comp=Z,1µm,13.9s
VRAC Vranov 14.79 27 Pn **P 08 16 20.7 +0.9**
comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=8.8
VRAC LR LR 08 22 02.4
comp=Z,777nm,18.4s,baz=211,slow=38
VRAC Vranov 14.79 27 *e*P **P 08 16 21.6 +1.8**
JAVC Velka Javorina 14.85 30 *e*P **P 08 16 20.7 +0.2**
JAVC Velka Javorina 14.85 30 P **P 08 16 20.0 -0.6**
HSKC Hora Svate Kat 14.96 18 AMS AMS 08 23 00.0
comp=Z,2µm,13.4s
HSKC Hora Svate Kat 14.96 18 P **P 08 16 20.7 -1.0**
RICC Richard 15.07 19 AMS AMS 08 22 30.0
comp=Z,2µm,16.0s
IDI Anoyia 15.09 89 Pn **P 08 16 21.4 -2.0**
baz=315,slow=14
IDI LR LR 08 23 10.4
comp=Z,338nm,21.6s,baz=272,slow=42
IDI Anoyia 15.09 89 Pn **Pn 08 16 18.0 -0.1**
PSZ Piszkesteto 15.14 37 P **Pn 08 16 19.4 +0.7**
PSZ pmax pmax
comp=Z,21nm,1.2s
PSZ Piszkesteto 15.14 37 Pn **Pn 08 16 19.4 +0.7**
PSZ Piszkesteto 15.14 37 P **P 08 16 25.0 +1.1**
BRG Berggiesshubel 15.33 19 *e*P **P 08 16 23.9 -2.0**
comp=Z,36nm,2.0s,baz=197,slow=13
BRG Berggiesshubel 15.33 19 P **P 08 16 25.1 -0.7**
BRG Berggiesshubel 15.33 19 *e*P **P 08 16 25.3 -0.6**
BRG Amp 08 16 27.1
comp=Z,4.4nm,0.9s
BRG PP **sP 08 16 34.0 +3.1**
BRG Amp 08 16 37.7
comp=Z,9.1nm,1.1s
BRG Berggiesshubel 15.33 19 S **S 08 19 32.0 +4.8**
KRLC Kraliky 15.50 26 AMS AMS 08 22 50.0
comp=Z,1µm,14.0s
KRLC Kraliky 15.50 26 P **P 08 16 29.8 +2.1**
CLL Collm 15.51 16 *e*P **P 08 16 29.0 +1.2**
CLL MLR MLR
comp=Z,600nm,19.7s
CLL Collm 15.51 16 *e*P **Pn 08 16 25.5 +2.0**
baz=197,slow=13
CLL *e*L L 08 22 03.7
comp=Z,640nm,19.7s
CLL Collm 15.51 16 *e*(sP) **P 08 16 29.0 +1.2**
CLL *ex* x 08 16 48.0
CLL *ex* x 08 16 51.0
CLL *e*S **S 08 19 31.0 +0.1**
CLL AMS AMS 08 22 00.0
comp=Z,600nm,19.7s
CLL AMS AMS 08 25 00.0
MORC Moravsky Berou 15.53 28 P **Pn 08 16 24.5 +0.8**
MORC pmax pmax
comp=Z,22nm,1.2s
MORC Moravsky Berou 15.53 28 Pn **Pn 08 16 24.5 +0.8**
MORC Moravsky Berou 15.53 28 *e*P **P 08 16 28.7 +0.7**
MORC Moravsky Berou 15.53 28 P **P 08 16 28.8 +0.7**
DPC Dobruska-Polom 15.57 24 AMS AMS 08 22 50.0
comp=Z,1µm,15.5s
DPC Dobruska-Polom 15.57 24 P **P 08 16 26.4 -2.2**
comp=Z,7.6nm,1.2s
DPC Dobruska-Polom 15.57 24 P **P 08 16 27.4 -1.2**
UPC Upice 15.61 24 AMS AMS 08 22 50.0
comp=Z,2µm,15.1s
RDO Rodhopi 15.65 67 P **Pn 08 16 25.5 +0.2**
CHVC Chvalec 15.69 23 AMS AMS 08 23 10.0
comp=Z,1µm,14.5s
OSTC Ostas 15.71 24 AMS AMS 08 23 00.0
comp=Z,1µm,14.6s
CHOS Chios island 15.77 77 P **P 08 16 30.4 -0.4**
IBBN Ibbenburen 15.80 3 *e*P **P 08 16 29.8 -1.1**
comp=Z,7.4nm,0.7s,baz=197,slow=13
OKC Ostrava-Krasne 15.81 29 AMS AMS 08 24 10.0
comp=Z,900nm,12.7s
LOT Lotru 15.87 51 P **P 08 16 30.8 -1.1**
ASSE Asse, Remlinge 15.89 10 *e*P **P 08 16 30.9 -1.0**
comp=Z,34nm,1.4s,baz=197,slow=13
ASSE Asse, Remlinge 15.89 10 P **P 08 16 32.6 +0.7**
ALN Alexandroupoli 15.98 68 P **Pn 08 16 30.3 +0.7**
ALN pmax pmax
comp=Z,17nm,1.2s
ALN Alexandroupoli 15.98 68 Pn **Pn 08 16 30.3 +0.7**

ALN Alexandroupoli 15.98 68 P **P 08 16 31.9 -1.2**
EZN Ezine 16.06 72 P **Pn 08 16 31.6 +1.0**
comp=Z,7.7nm,0.5s
ABAH Abaujker 16.07 38 P **P 08 16 36.0 +2.1**
FLTG Flechtingen 16.16 11 *e*P **P 08 16 35.2 +0.2**
comp=Z,71nm,1.8s,baz=197,slow=13
RETH Rethem/Aller, 16.34 7 *e*P **P 08 16 35.9 -1.0**
comp=Z,118nm,1.9s,baz=197,slow=13
RETH Rethem/Aller, 16.34 7 P **P 08 16 39.1 +2.2**
VOIR 16.66 52 P **Pn 08 16 38.8 +0.4**
VOIR 16.66 52 P **Pn 08 16 38.1 -0.3**
OJC Ojcow 16.78 31 P **Pn 08 16 39.8 +0.1**
OJC Ojcow 16.78 31 Pn **Pn 08 16 39.8 +0.1**
OJC Ojcow 16.78 31 P **P 08 16 44.6 +2.8**
GORT1 Trebel 16.82 10 *e*P **P 08 16 43.6 +1.4**
comp=Z,52nm,1.4s,baz=197,slow=13
STHS Stebnicka Huta 16.83 35 *e*P **P 08 16 45.1 +2.6**
STHS Stebnicka Huta 16.83 35 *e*P **P 08 16 45.1 +2.6**
BALY Balya 17.05 73 P **P 08 16 44.7 -0.3**
AYDN Tasoluk 17.23 80 P **P 08 16 48.7 +1.7**
MLR Muntele Rosu 17.26 53 P **P 08 16 47.3 -0.1**
comp=Z,0.1nm,0.3s,baz=294,slow=3.4,SNR=14
MLR LR LR 08 23 06.2
comp=Z,739nm,20.5s,baz=260,slow=36
comp=Z,20nm,1.2s
MLR Muntele Rosu 17.26 53 Pn 08 16 46.4 +0.5
MLR IAmb IAmb 08 17 04.0
comp=Z,45nm,1.3s
MLR Muntele Rosu 17.26 53 P **P 08 16 47.8 +0.4**
comp=Z,365nmcomp=Z,26nm,1.3s
MLR Muntele Rosu 17.26 53 P **P 08 16 49.1 +1.8**
ISR Istrita 17.50 54 P **P 08 16 50.4 +0.5**
comp=Z,2µmcomp=Z,48nm,1.9s
BSEG Bad Segeberg 17.61 8 *e*P **P 08 16 51.4 +0.4**
comp=Z,38nm,1.5s,baz=197,slow=13
BSEG *e*L L 08 24 45.7
comp=Z,322nm,18.0s
BSEG Bad Segeberg 17.61 8 P **P 08 16 53.3 +2.3**
FOEL Foel Wylfa 17.67 341 P **Pn 08 16 47.8 -3.0**
KWP Kalwaria Pacla 17.68 37 P **P 08 16 54.5 +2.7**
MANT Manisa 17.74 77 Pn 08 16 51.6 -0.3
LBWR Ladybower, Pea 17.78 344 P **P 08 16 52.7 -0.2**
BURAR Bucovina Array 17.81 46 P 08 16 53.1 -0.4
BUR08 Bucovina Ar. S 17.82 46 P **P 08 16 54.0 +0.5**
VRI Vrincioaia 17.91 52 P **P 08 16 56.2 +1.7**
TESR Tescani 18.14 50 P **P 08 16 58.9 +2.0**
comp=Z,9.9nm,0.9s
GHRR 18.43 52 P **Pn 08 17 02.4 +2.3**
TIRR Tirgusor 18.52 58 P **Pn 08 17 02.1 +0.7**
TIRR pmax pmax
comp=Z,17nm,1.1s
TIRR Tirgusor 18.52 58 P **Pn 08 17 02.1 +0.7**
TIRR Tirgusor 18.52 58 P **Pn 08 17 03.1 +1.8**
comp=Z,332nmcomp=Z,21nm,1.7s
TIRR Tirgusor 18.52 58 P **Pn 08 17 02.6 +1.3**
KMPD K-Podol'skiy 19.02 45 P **Pn 08 17 07.6 +0.3**
PMAR Madeira 19.49 266 *e*P **Pn 08 17 12.8 -0.5**
PMAR *i* IAmb IAmb 08 17 38.0
comp=Z,118nm,1.7s
MDUB Mudurnu 19.83 71 P **P 08 17 15.5 -0.2**
MDUB IAmb IAmb 08 17 23.8
comp=Z,27nm,0.8s
EKA Eskdalemuir Ar 19.89 344 P **P 08 17 16.2 +0.2**
baz=159,slow=12
EKA LR LR 08 24 45.4
comp=Z,411nm,19.0s,baz=180,slow=36
comp=Z,9.2nm,0.9s
SORM Soroca 19.90 48 P **P 08 17 16.7 +0.5**
RNPP5 Staryi Chortor 20.26 37 P **P 08 17 20.4 +0.3**
RNPP8 Varash 20.31 37 P Pn 08 17 21.7 -1.0
LUBAR Lubar, Ukraine 20.46 42 P Pn 08 17 23.8 -0.7
MACI Morro de la Ar 20.95 253 P **P 08 17 25.9 -2.1**
SUW Suwalki 21.02 28 P **P 08 17 28.8 +0.5**
SUW Suwalki 21.02 28 P **P 08 17 28.8 +0.5**
KKUL Konya-Kulu 21.13 75 P **P 08 17 32.5 +2.7**
BR105 Keskin Array S 21.67 73 P **P 08 17 36.7 +1.1**
comp=Z,97nmcomp=Z,9.7nm,0.9s
BR106 Keskin Array S 21.67 73 P **P 08 17 36.7 +1.1**
AKASG Malin Array Be 21.67 42 P **P 08 17 34.1 -1.3**
comp=Z,4.6nm,0.7s,baz=242,slow=11,SNR=9.2
AKASG LR LR 08 26 47.2
comp=Z,350nm,18.1s,baz=243,slow=39
comp=Z,4.6nm,0.7s
AKASG Malin Array Be 21.67 42 *ce*P **P 08 17 37.9 +2.5**
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKBB Malin Array Si 21.67 42 P **P 08 17 35.6 +0.3**
AKBB pmax pmax
comp=Z,27nm,1.1s
AKBB Malin Array Si 21.67 42 P **P 08 17 35.6 +0.3**
AKBB IAmb IAmb 08 17 42.4
comp=Z,27nm,1.1s
BR131 Keskin Array S 21.68 73 *de*P **P 08 17 37.6 +1.9**
BR131 Keskin Array S 21.68 73 P **P 08 17 36.3 +0.6**
BR131 IAmb IAmb 08 17 52.9
comp=Z,35nm,1.5s
BRTR Keskin Array B 21.68 73 P **P 08 17 37.3 +1.5**
comp=Z,7.2nm,1.1s,baz=265,slow=9.5,SNR=17
BRTR LR LR 08 26 44.6
comp=Z,143nm,18.8s,baz=268,slow=39
comp=Z,7.2nm,1.1s
BRTR Keskin Array B 21.68 73 *ce*P **P 08 17 38.0 +2.2**
BRTR pmax pmax
comp=Z,8.0nm,1.1s
BRTR Keskin Array B 21.68 73 P **P 08 17 36.3 +0.6**
PABE Paberze 22.46 27 P **P 08 17 43.3 -0.4**
SIM Simferopol' 22.58 60 P **P** 08 17 53.9 +8.7
SIM *e*S **S 08 21 54.0 +1.6**
SIM pmax pmax
comp=Z,4.0nm,0.4s
SIM smax smax
comp=E,120nm,7.0s
SIM MLR MLR
comp=Z,300nm,12.0s
NACGM Naroch 23.11 31 *e*P **P 08 17 50.3 -0.3**
KONO Kongsberg 23.22 4 *e*P **P 08 17 51.4 -0.2**
KONO pmax pmax
comp=Z,22nm,1.4s
MNK Minsk 23.30 33 *i* P **P 08 17 52.4 -0.1**
comp=E,15nm,0.8s
MNK *i* P **P 08 17 52.4 -0.1**
comp=N,9.0nm,0.8s
MNK *i* P **P 08 17 52.4 -0.1**
comp=Z,7.0nm,0.8s,baz=229
MNK *i* PP sP 08 18 18.1 +20
MNK *i* PPP PPP 08 18 26.0
MNK *i* S **S 08 22 05.7 +1.0**
MNK *i* SS **SnSn 08 22 40.9 +1.8**
MNK *i* LQ LQ 08 25 03.6
MNK *i* LR LR 08 26 45.8
MNK *i* LRM MLR 08 27 50.2
comp=N,212nm,13.3s
MNK *i* LRM MLR 08 28 11.7
comp=Z,391nm,16.7s
MNK *i* LRM MLR 08 28 15.5
comp=E,330nm,15.0s
MNK Minsk 23.30 33 *i* P **P 08 17 52.4 -0.1**
MNK *i* PPP PPP 08 18 26.0
MNK *i* S **S 08 22 05.7 +1.0**
MNK *i* SS **SnSn 08 22 40.8 +1.8**
MNK pmax pmax
comp=E,15nm,0.8s
MNK pmax pmax
comp=N,9.0nm,0.8s
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK MLR MLR
comp=N,212nm,13.0s
MNK MLR MLR
comp=Z,391nm,17.0s
MNK MLR MLR
comp=E,330nm,15.0s
BNN Bunyan 23.43 75 P **P 08 17 52.8 -1.3**
BNN IAmb IAmb 08 18 05.8
comp=Z,13nm,1.1s
TORD Torodi Ar. Bea 23.66 191 P **P 08 17 54.6 -1.8**
comp=Z,30nm,1.1s,baz=4.2,slow=9.2,SNR=27
TORD Torodi Ar. Bea 23.66 191 P **P 08 17 53.8 -2.6**
TORD IAmb IAmb 08 17 59.0
comp=Z,25nm,1.2s
TOKA Tokat 23.86 72 P **P 08 17 58.2 0.0**
TOKA IAmb IAmb 08 18 16.2
comp=Z,16nm,0.9s
HFS Hagfors 24.08 9 P **P 08 18 00.3 +0.3**
comp=Z,4.0nm,0.9s,baz=165,slow=7.7,SNR=4.1

HFS LR LR 08 28 06.7
comp=Z,460nm,18.1s,baz=200,slow=38
comp=Z,4.0nm,0.9s
NC602 NORSAR Array S 24.44 6 P P 08 18 03.1 -0.2
NC602 IAmb IAmb 08 18 15.7
comp=Z,27nm,1.2s
NB2 NORSAR Subarra 24.71 6 P P 08 18 05.1 -0.8
comp=Z,61nm,2.0s,baz=189,slow=9.3
NB2 NORSAR Subarra 24.71 6 P P 08 18 05.1 -0.8
NOA NORSAR Array B 24.71 6 P P 08 18 05.2 -0.6
comp=Z,2.9nm,0.8s,baz=191,slow=9.3,SNR=8.8
NOA LR LR 08 27 46.7
comp=Z,306nm,19.2s,baz=195,slow=37
comp=Z,2.9nm,0.8s
ANN Anapa 24.88 61 *e*P **P 08 18 08.7 +1.3**
ANN *e**PP **sP 08 18 12.0 -0.7**
ANN *e*S **S 08 22 32.0 +1.9**
ANN pmax pmax
comp=Z,29nm,1.2s
ANN MLR MLR
comp=N,359nm,15.0s
ANN MLR MLR
comp=Z,305nm,13.0s
ANN MLR MLR
comp=E,172nm,14.0s
EIL Elat 24.88 98 LR LR 08 30 11.4
comp=E,370nm,18.9s,baz=270,slow=42
ARPR Arapgir-MALATY 25.34 74 P P 08 18 11.6 -0.3
VSU Vasula 25.70 25*de*P **P 08 18 15.3 +0.6**
VSU pmax pmax
comp=Z,27nm,1.3s
SOC Sochi 26.38 64 *e*P **P 08 18 23.1 +2.1**
SOC *e* 08 19 03.1
SOC *e*PPP PPP 08 19 11.2
SOC *e*S **S 08 22 58.8 +4.8**
SOC *e*SS **SnSn 08 23 56.7 +2.4**
SOC pmax pmax
comp=Z,36nm,1.2s
SOC MLR MLR
comp=Z,193nm,21.0s
VSLR Vesyoloye 26.60 64⇓*e*P **P 08 18 24.3 +1.2**
VSLR pmax pmax
comp=Z,17nm,0.9s
KOPT Kop Dagi 26.95 72 P P 08 18 26.2 -0.4
ERBR Yeremizino-Bor 27.14 60 *e*P **P 08 18 30.9 +3.0**
ERBR pmax pmax
comp=Z,36nm,1.1s
ERBR MLR MLR
comp=Z,251nm,13.0s
LABN Labinsk 27.18 62 *e*P **P 08 18 27.8 -0.5**
LABN pmax pmax
comp=Z,45nm,0.6s
OBN Obninsk 27.75 38 LR LR 08 29 35.1
comp=Z,396nm,19.2s,baz=196,slow=36
OBN Obninsk 27.75 38⇑*e*P **P 08 18 34.7 +1.4**
OBN *e* 08 18 38.2
OBN PPP PPP 08 19 27.0
OBN S **S 08 23 22.0 +6.6**
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,355nm,17.0s
OBN Obninsk 27.75 38 P **P 08 18 34.1 +0.8**
FINES FINESS Array B 27.86 20 P **P 08 18 33.6 -0.5**
comp=Z,1.1nm,0.7s,baz=159,slow=5.9,SNR=4.6
FINES PcP **PcP 08 21 49.7 0.0**
comp=Z,2.5nm,0.8s,baz=191,slow=1.9,SNR=3.7
FINES LR LR 08 30 29.1
comp=Z,489nm,18.6s,baz=212,slow=38
comp=Z,1.1nm,0.7s
FINES FINESS Array B 27.86 20 P **P 08 18 33.2 -0.9**
KIV Kislovodsk 28.54 64 *e*P **P 08 18 39.9 -0.7**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,77nm,15.0s
MOS Moscow 28.59 38 *e*P P 08 18 49.9 +9.2
MOS *e* 08 19 46.8
KBZ Khabaz 28.69 64 P **P 08 18 42.5 +0.8**
comp=Z,1.3nm,0.8s,baz=276,slow=3.6,SNR=4.6
KBZ LR LR 08 33 06.3
comp=Z,146nm,18.4s,baz=299,slow=43
comp=Z,1.3nm,0.8s
DBIC Dimbokro 31.44 202 P **P 08 19 06.9 +0.6**
comp=Z,5.8nm,0.8s,baz=19,slow=12,SNR=4.3
DBIC LR LR 08 32 59.8
comp=Z,381nm,20.7s,baz=22,slow=39
comp=Z,5.8nm,0.8s
MAK Makhachkala 32.05 66 *e*P **P 08 19 08.7 -2.8**
MAK *e*S **S 08 24 19.4 -3.8**
MAK pmax pmax
comp=Z,46nm,0.5s
MAK MLR MLR
comp=Z,281nm,13.0s
KLMR Klimovskoe 32.13 30 *e*P **P 08 19 11.2 -0.7**
KLMR *e* 08 20 18.6
KLMR S **S 08 24 26.3 +2.4**
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR MLR MLR
comp=Z,349nm,15.0s
BORG Borgarnes 32.70 338 LR LR 08 32 32.7
comp=Z,212nm,18.1s,baz=114,slow=36
BELG Belogornoye 32.94 48⇑*e*P **P 08 19 19.2 +0.1**
BELG pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 34.67 12 P **P 08 19 33.0 -1.0**
comp=Z,1.3nm,0.7s,baz=201,slow=9.8,SNR=8.0
ARCES PcP **PcP 08 22 07.5 -0.3**
comp=Z,1.0nm,0.7s,baz=225,slow=3.3,SNR=4.0
ARCES LR LR 08 34 08.2
comp=Z,206nm,18.7s,baz=248,slow=37
comp=Z,1.3nm,0.7s
JMIC Jan Mayen 35.39 352 LR LR 08 33 18.9
comp=Z,150nm,21.5s,baz=88,slow=35
KIRV Kirov 35.60 38 LR LR 08 34 29.1
comp=Z,180nm,19.6s,baz=251,slow=37
KIRV Kirov 35.60 38⇑*e*P **P 08 19 41.6 -0.5**
ARTI Arti 39.82 43*c i*P **P 08 20 17.1 -0.7**
ARTI 08 22 26.7
ARTI S **S 08 26 19.8 -2.0**
ARTI SS **SS 08 29 05.6 -12**
ARTI pmax pmax
comp=Z,6.0nm,0.9s
ARTI MLR MLR
comp=Z,280nm,15.0s
AB31 Akbulak array 40.46 54 P **P 08 20 22.1 -1.1**
SPITS Spitsbergen Ar 41.96 3 LR LR 08 39 33.9
comp=Z,137nm,18.2s,baz=163,slow=38
SUMG Summit 42.48 342 P **P 08 20 39.4 -0.6**
SUMG pmax pmax
comp=Z,11nm,1.2s
SUMG Summit 42.48 342 P **P 08 20 39.4 -0.6**
SUMG IAmb IAmb 08 20 44.8
comp=Z,11nm,1.2s
UOSS Minazif 43.96 91 P **P 08 20 51.4 -0.7**
UOSS IAmb IAmb 08 21 31.6
comp=Z,15nm,1.1s
SFJD Kangerlussuaq 44.13 332 LR LR 08 37 02.5
comp=Z,332nm,21.9s,baz=108,slow=33
DRLN Deer Lake 47.12 307 P **P 08 21 15.8 -0.9**
FRB Frobisher Bay 51.36 327 LR LR 08 42 02.6
comp=Z,482nm,18.2s,baz=94,slow=34
AAK Ala-Archa 51.60 61 LR LR 08 46 48.0
comp=Z,131nm,21.1s,baz=289,slow=40
AAK Ala-Archa 51.60 61⇓*e*P **P 08 21 51.5 +0.1**
AAK pmax pmax
comp=Z,2.0nm,0.9s
SCHQ Schefferville 51.80 315 P **P 08 21 51.6 -0.8**
comp=Z,4.4nm,0.8s,baz=47,slow=11,SNR=5.7
SCHQ LR LR 08 40 18.4
comp=Z,134nm,21.3s,baz=70,slow=32
comp=Z,4.4nm,0.8s
KURBB Kurchatov Arra 52.13 50 P **P 08 21 54.8 -0.1**
comp=Z,0.9nm,0.4s,baz=288,slow=8.5,SNR=6.9
comp=Z,0.9nm,0.4s
KURK Kurchatov 52.17 50*de*P **P 08 21 55.0 -0.2**
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 52.17 50 P **P 08 21 55.0 -0.2**
KURK IAmb IAmb 08 22 07.8
comp=Z,10nm,1.1s
NIL Nilore 53.82 72 P **P 08 22 07.3 -0.4**
NIL pmax pmax
comp=Z,11nm,1.1s
NIL Nilore 53.82 72 P **P 08 22 07.3 -0.4**

TARG Taragay, Kyrgy 54.22 61 P **P 08 22 11.3 +0.3**
TARG pmax pmax
comp=Z,4.0nm,0.9s
TARG Taragay, Kyrgy 54.22 61 P **P 08 22 11.3 +0.3**
TARG IAmb IAmb 08 22 16.0
comp=Z,4.0nm,0.9s
PDGK Podgornoye 54.86 59 P **P 08 22 15.1 -0.2**
PDGK Podgornoye 54.86 59 P **P 08 22 15.1 -0.2**
ZAA0 Zalesovo Array 55.03 45 P **P 08 22 15.5 -0.7**
ZAA0 IAmb IAmb 08 22 32.4
comp=Z,6.2nm,1.2s
ZALV Zalesovo Beam 55.03 45 P **P 08 22 16.2 0.0**
comp=Z,1.7nm,0.6s,baz=262,slow=8.3,SNR=9.8
ZALV LR LR 08 45 38.3
comp=Z,80nm,21.8s,baz=270,slow=36
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 55.03 45 P **P 08 22 15.4 -0.8**
LSZ Lusaka 55.52 154 LR LR 08 49 06.1
comp=Z,796nm,19.1s,baz=336,slow=39
MK31 Makanchi Array 55.60 54*de*P **P 08 22 20.0 -0.5**
MKAR Makanchi Array 55.60 54 P **P 08 22 20.1 -0.3**
comp=Z,3.4nm,0.7s,baz=289,slow=5.7,SNR=21
MKAR LR LR 08 50 43.0
comp=Z,116nm,19.0s,baz=302,slow=41
comp=Z,3.4nm,0.7s
MKAR Makanchi Array 55.60 54 P **P 08 22 19.9 -0.5**
DGZ Jazzator, Alta 57.88 49⇑*e*P **P 08 22 36.4 -0.3**
DGZ pmax pmax
comp=Z,2.0nm,1.2s
RES Resolute Bay 58.01 342 LR LR 08 46 11.9
comp=Z,131nm,20.8s,baz=88,slow=35
WMQ Urumqi 60.23 56 *e*P **P 08 22 54.3 +1.3**
WMQ pmax pmax
comp=Z,7.0nm,1.3s
MATP Matopo 60.41 156 LR LR 08 52 18.3
comp=Z,543nm,18.6s,baz=343,slow=39
SADO Sadowa 62.52 307 LR LR 08 48 01.2
comp=Z,129nm,19.9s,baz=36,slow=34
KNGR Kungurtug, Tuv 63.50 45⇑*e*P **P 08 23 15.9 +0.9**
KNGR pmax pmax
comp=Z,2.0nm,1.0s
LBTB Lobatse 63.87 161 LR LR 08 52 24.8
comp=Z,236nm,20.8s,baz=346,slow=37
LBTB Lobatse 63.87 161 P **P 08 23 17.7 +0.2**
LBTB pmax pmax
comp=Z,7.0nm,1.1s
LBTB Lobatse 63.87 161 P **P 08 23 17.7 +0.2**
TIXI Tiksi 64.84 17 LR LR 08 55 42.7
comp=Z,137nm,18.9s,baz=340,slow=40
TIXI Tiksi 64.84 17⇑*e*P **P 08 23 24.7 +1.4**
TIXI pmax pmax
comp=Z,25nm,1.1s
SJG San Juan 65.56 275 LR LR 08 47 51.6
comp=Z,47nm,21.6s,baz=82,slow=32
TLY Talaya 66.42 42 LR LR 08 53 53.4
comp=Z,194nm,18.3s,baz=302,slow=37
TLY Talaya 66.42 42⇑*e*P **P 08 23 34.5 +0.7**
TLY pmax pmax
comp=Z,6.0nm,1.0s
ZAK Zakamensk 66.86 44 *e*P **P 08 23 37.5 +0.7**
ZAK pmax pmax
comp=Z,7.0nm,1.7s
BOSA Boshof 67.21 162 P **P 08 23 41.3 +2.2**
comp=Z,2.6nm,0.8s,baz=26,slow=9.7,SNR=4.7
BOSA LR LR 08 53 18.9
comp=Z,300nm,18.4s,baz=9.0,slow=36
comp=Z,2.6nm,0.8s
ULM Lac du Bonnet 69.81 318 P **P 08 23 55.9 +0.8**
comp=Z,2.1nm,0.7s,baz=70,slow=9.0,SNR=5.0
ULM LR LR 08 52 26.4
comp=Z,120nm,18.0s,baz=50,slow=34
comp=Z,2.1nm,0.7s
ULM Lac du Bonnet 69.81 318⇑*e*P **P 08 23 56.4 +1.3**
ULM Lac du Bonnet 69.81 318 P **P 08 23 54.4 -0.7**
ULM IAmb IAmb 08 24 17.1
comp=Z,6.8nm,1.0s
SUR Sutherland 69.89 167 LR LR 08 53 57.5
comp=Z,252nm,18.8s,baz=349,slow=35
SONM Songino Array 69.92 45 P **P 08 23 55.9 -0.1**
comp=Z,2.1nm,0.9s,baz=308,slow=5.5,SNR=8.9
SONM LR LR 08 57 35.2
comp=Z,117nm,18.2s,baz=294,slow=38
comp=Z,2.1nm,0.9s
SONM Songino Array 69.92 45 P **P 08 23 55.8 -0.3**
SONM IAmb IAmb 08 24 09.1
comp=Z,10nm,1.5s
TKL Tuckaleechee C 69.95 300 LR LR 08 52 35.5
comp=Z,76nm,20.2s,baz=55,slow=34
ULN Ulaanbaatar 70.28 45⇑*e*P **P 08 24 00.4 +2.1**
ULN pmax pmax
comp=Z,6.0nm,1.8s
YKAW3 Yellowknife Wh 70.51 335 P **P 08 24 00.3 +1.1**
YKAW3 IAmb IAmb 08 24 05.6
comp=Z,3.0nm,0.8s
YKAW1 Yellowknife Wh 70.53 335 P **P 08 23 58.5 -0.8**
YKAW1 IAmb IAmb 08 24 02.1
comp=Z,4.6nm,1.1s
YKA Yellowknife Ar 70.56 335 P **P 08 23 59.0 -0.5**
comp=Z,1.1nm,0.6s,baz=52,slow=5.7,SNR=24
YKA LR LR 08 52 53.5
comp=Z,195nm,20.9s,baz=45,slow=34
comp=Z,1.1nm,0.6s
YKA Yellowknife Ar 70.56 335 *i* P **P 08 23 59.0 -0.5**
YKA pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 71.25 345 LR LR 08 56 43.8
comp=Z,107nm,18.1s,baz=40,slow=37
YAK Yakutsk 71.69 25 LR LR 08 58 53.3
comp=Z,144nm,18.3s,baz=310,slow=39
F31M Tsiigehtchic 72.02 345 P **P 08 24 08.0 -0.3**
BDFB Brasilia 72.94 235 P **P 08 24 15.0 +0.4**
comp=Z,4.5nm,0.8s,baz=69,slow=8.0,SNR=5.8
BDFB LR LR 08 54 45.4
comp=Z,195nm,19.1s,baz=55,slow=35
comp=Z,4.5nm,0.8s
BDFB Brasilia 72.94 235 P **P 08 24 15.0 +0.4**
ECSD EROS Data Cent 73.88 313 P **P 08 24 19.1 -0.7**
H29M Whitestone 74.02 346 P **P 08 24 20.0 -0.1**
H29M IAmb IAmb 08 24 31.8
comp=Z,8.2nm,1.2s
DAWY Dawson 76.12 345 P **P 08 24 31.7 -0.7**
DAWY IAmb IAmb 08 24 39.4
comp=Z,4.2nm,1.0s
ILAR Eielson Array 76.85 349 P **P 08 24 38.0 +1.6**
comp=Z,1.0nm,1.1s,baz=20,slow=5.0,SNR=6.4
comp=Z,1.0nm,1.1s
HHC Hu-ho-hao-te 76.95 49 *e*P **P 08 24 36.9 -0.7**
HHC pmax pmax
comp=Z,9.0nm,0.6s
DLBC Dease Lake 78.60 338 LR LR 09 00 06.2
comp=Z,118nm,18.9s,baz=19,slow=36
PZH PanZhiHua 78.75 65 P **P 08 24 50.1 +2.3**
MA2 Magadan 79.81 18 LR LR 09 07 27.0
comp=Z,77nm,18.3s,baz=318,slow=41
KMI2 Kunming 80.27 66 P **P 08 24 56.5 +0.2**
KMI2 pmax pmax
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 81.27 74 P **P 08 25 02.5 +1.0**
comp=Z,1.1nm,0.4s,baz=304,slow=7.7,SNR=11
CMAR LR LR 09 09 27.7
comp=Z,58nm,18.7s,baz=180,slow=42
comp=Z,1.1nm,0.4s
CMAR Chiang Mai Arr 81.27 74 *i* P **P 08 25 04.8 +3.4**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
NEW Newport 81.70 326 LR LR 09 00 02.0
comp=Z,208nm,18.9s,baz=44,slow=35
PDAR Pinedale Array 81.83 318 P **P 08 25 03.7 -0.6**
comp=Z,0.3nm,0.7s,baz=46,slow=4.5,SNR=6.1
PDAR LR LR 08 59 18.8
comp=Z,56nm,21.3s,baz=42,slow=34
comp=Z,0.3nm,0.7s
BNX BinXian 82.41 37 ⇓P **P 08 25 09.4 +2.4**
BNX pmax pmax
comp=Z,7.0nm,0.9s
BBB Bella Bella 83.11 334 LR LR 09 02 02.3
comp=Z,114nm,18.5s,baz=42,slow=36
KDAK Kodiak Island 84.37 349 LR LR 09 04 24.6
comp=Z,104nm,21.9s,baz=41,slow=37
JTS Las Juntas de 84.98 279 LR LR 08 57 18.8
comp=Z,61nm,20.5s,baz=44,slow=32
ELK Elko 86.27 320 LR LR 09 02 23.4
comp=Z,106nm,18.1s,baz=18,slow=35
CPUP Villa Florida 86.61 234 P **P 08 25 29.0 +0.7**
comp=Z,5.6nm,1.1s,baz=117,slow=4.5,SNR=4.7
comp=Z,5.6nm,1.1s
CPUP Villa Florida 86.61 234 P **P 08 25 29.0 +0.7**

NJ2 Nanjing 87.07 52 *e*P **P 08 25 29.3 -1.4**
NJ2 pmax pmax
comp=Z,13nm,0.5s
TXAR Lajitas Array 87.22 305 P **P 08 25 32.8 +1.2**
comp=Z,0.2nm,0.7s,baz=69,slow=4.1,SNR=4.8
TXAR LR LR 09 03 49.6
comp=Z,150nm,18.1s,baz=50,slow=35
comp=Z,0.2nm,0.7s
PETK Petropavlovsk- 87.32 17 LR LR 09 12 22.5
comp=Z,24nm,19.4s,baz=328,slow=41
LPAZ La Paz 87.60 248 P **P 08 25 35.0 +0.9**
comp=Z,0.8nm,0.9s,baz=14,slow=4.2,SNR=2.4
LPAZ LR LR 09 01 39.1
comp=Z,107nm,21.5s,baz=70,slow=34
comp=Z,0.8nm,0.9s
LPAZ La Paz 87.60 248 P **P 08 25 35.0 +0.9**
YBH Yreka Blue Hor 89.23 324 LR LR 09 04 36.1
comp=Z,80nm,19.6s,baz=32,slow=35
NVAR Mina Array Bea 89.57 320 P **P 08 25 43.3 +0.5**
comp=Z,0.2nm,0.6s,baz=39,slow=3.5,SNR=1.6
comp=Z,0.2nm,0.6s
ATAH Atahualpa 89.98 261 LR LR 09 03 56.6
comp=Z,120nm,21.1s,baz=64,slow=34
ASAJ Asahikawa 90.45 30 LR LR 09 11 19.4
comp=Z,143nm,18.4s,baz=352,slow=39
NNA Nana 91.64 256 LR LR 09 05 25.1
comp=Z,52nm,21.0s,baz=273,slow=34
MJAR Matsushiro Arr 94.67 37 LR LR 09 12 28.8
comp=Z,127nm,18.0s,baz=330,slow=38
CFA Coronel Fontan 97.26 236 LR LR 09 10 19.6
comp=Z,76nm,19.3s,baz=352,slow=36
WRA Warramunga Arr 131.88 85 PKP **PKPdf 08 31 58.8 +0.2**
comp=Z,0.8nm,0.9s,baz=330,slow=1.9,SNR=5.5
ASAR Alice Springs 133.38 89 PKP **PKPdf 08 32 01.1 -0.2**
comp=Z,0.9nm,0.9s,baz=335,slow=2.7,SNR=7.4

NNC 17 08:34:16.3±8.1, 37°97N×71°51E, h0km, mb3.8, mpv3.5, 3C-2D, Error ellipse: s-maj=80.1km s-min=45.1km az=149.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.18**	**352**	P		Pn	08 35 37.2	+2.1
	5.3nm,0.3s,baz=172,slow=12,SNR=45							
KK31				⇓S		Sn	08 36 38.4	+2.8
	3.9nm,0.5s,baz=173,slow=22,SNR=6.6							
AAK	**Ala-Archa**	**5.19**	**25**	⇑P		Pn	08 35 36.0	+0.7
	1.7nm,0.5s							
AAK				⇑S		Sn	08 36 35.9	-0.1
	2.5nm,0.5s							
AB31	**Akbulak array**	**14.03**	**327**	⇑P		Pn	08 37 32.7	-3.5
	0.3nm,0.4s,baz=140,slow=11,SNR=15							
AKTO	**Aktyubinsk**	**15.74**	**327**	⇓P		Pn	08 37 55.5	-3.7
	0.9nm,0.5s							

RSNC 17 08:50:01.1±1.0, 12°N±11°×7°0W±1°8, h9km±24km, M2.7, mb3.7, mB4.6, ML2.6, Mw(mB)3.8, MwMwp5.2, Mwp5.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
URIC	**Uribia, Colomb**	**2.07**	**271**	P		Pn	08 50 34.0	-2.0
URIC				S		Sb	08 51 03.9	-0.8
OCAC	**Ocana**	**4.81**	**225**	P		Pn	08 51 13.7	-0.3
OCAC				S		Sn	08 52 12.3	+2.3
PAMC	**Pamplona, Colo**	**5.13**	**213**	P		Pn	08 51 18.8	+0.2
	7.2nm,0.5s							
PAMC				S		Sn	08 52 18.2	-0.1
	7.2nm,0.5s							
SJCC	**San Jacinto, C**	**5.50**	**252**	P		Pn	08 51 22.9	-0.4
	6.7nm,1.9s							
SJCC				S		Sn	08 52 28.9	+2.1
	6.7nm,1.9s							
BARC	**Barichara**	**6.01**	**213**	P		Pn	08 51 31.2	+0.6
	4.0nm,0.6s							
BARC				S		Sn	08 52 42.1	+2.4
	4.0nm,0.6s							
RUSC	**La Rusia**	**6.56**	**209**	P		Pn	08 51 38.6	+0.3
	4.3nm,0.7s							
PTBC	**PUERTO BERRIO,**	**6.82**	**222**	P		Pn	08 51 40.4	-1.0
	13μm2.9nm,0.7s							
PTBC				S		Sn	08 52 57.7	-1.6
	13μm2.9nm,0.7s							
SPBC	**San Pablo de B**	**7.28**	**215**	P		Pn	08 51 47.8	-0.1
SPBC				S		Sn	08 53 10.2	-0.6
GUY2C	**Guyana, Caldas**	**8.40**	**221**	P		Pn	08 52 04.2	+0.7
	293nm3.3nm,0.8s							

IDC ***17*** *08:51:04.2±1.1, 36°.40N×6°.23E, h0km, mb3.4/6, mbtmp3.4/10, ML3.3/4, MS3.1/1, Error ellipse: s-maj=24.5km s-min=19.4km az=170.0*
CRAAG ***17*** *08:51:04.8, 36°.53N×6°.36E, Ml2.7, Algrie 09km NE Sidi-Merouane*
MDD ***17*** *08:51:14.9±0.7, 36°.97N×6°.00E, h60km, Mb4.2/19, Error ellipse: s-maj=6.6km s-min=4.5km az=137.0*

ISC 17 08:51:05.7±1.0, 36°.54N±0°.04×6°.24E±0°.03, h12km±7km, n46, σ2852/51, mb3.5/5, 11C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CBHR	**Beni Haroun da**	**0.04**	**37**	P		**Pg**	**08 51 07.2**	**-0.7**
CBOS	**Bilal Ibnou Ra**	**0.26**	**13**	P		**Pg**	**08 51 10.9**	**-0.3**
DFRA	**Djebel Bou Aff**	**0.29**	**272**	P		**Pn**	**08 51 15.0**	**-1.0**
COAT	**Oued Athmania**	**0.30**	**174**	P		**Pb**	**08 51 11.7**	**-1.4**
CASM	**Ain Smara**	**0.34**	**144**	P		**Pg**	**08 51 11.4**	**-1.1**
CKFL	**Kef-Lekhel**	**0.41**	**109**	P		**Pg**	**08 51 12.4**	**-1.4**
CTEI	**Djebel Teioual**	**0.49**	**164**	P		**Pb**	**08 51 15.1**	**-1.2**
CSGS	**Sigus**	**0.55**	**137**	P		**Pb**	**08 51 16.7**	**-0.7**
CBST	**Bordj Sabath**	**0.70**	**100**	P		**Pb**	**08 51 18.5**	**-1.4**
CJSR	**Ain Djasser**	**0.71**	**200**	P		**Pn**	**08 51 21.2**	**-0.5**
CKHR	**Kef el Ahmar**	**0.79**	**229**	P		**Pn**	**08 51 22.8**	**+0.1**
CMAH	**Djebel Manchou**	**0.95**	**84**	P		**Pb**	**08 51 22.8**	**-1.4**
CTGD	**Timgad**	**1.03**	**167**	P		**Pn**	**08 51 26.3**	**+0.3**
CTCHA	**Tamokra**	**1.29**	**266**	P		**Pb**	**08 51 29.8**	**0.0**
CRHA	**Rehia**	**1.37**	**124**	P		**Pb**	**08 51 30.7**	**-0.6**
ATKJ	**Tikjda**	**1.71**	**268**	P		**Pb**	**08 51 35.8**	**-1.4**
ABSD	**Ouled Sidi Bra**	**1.99**	**237**	P		**Pb**	**08 51 41.1**	**-0.7**
KEST	**Kesra**	**2.64**	**107**	Pn		**Pn**	**08 51 48.1**	**0.0**
	13nm,0.3s,baz=301,slow=3.1,SNR=49							
KEST				Sn		**Sn**	**08 52 21.8**	**+1.7**
	3.2nm,0.3s,baz=118,slow=8.4,SNR=3.6							
	128nm,0.6s							
VSL	**Villasalto**	**3.86**	**39**	P		**Pn**	**08 52 03.7**	**-1.1**
VSL				S		**Sn**	**08 52 44.4**	**-5.7**
ETOS	**Mallorca**	**4.21**	**321**	P		**Pn**	**08 52 09.1**	**-0.6**
ETOS				⇑*i*Vmb_VC			08 52 15.6	
	421nm,SNR=2.6							
ETOS				S		**Sn**	**08 52 52.2**	**-6.6**
EIBI	**Ibiza**	**4.61**	**304**	P		**Pn**	**08 52 16.9**	**+1.7**
EIBI				⇑*i*Vmb_VC			08 52 22.7	
	636nm,SNR=4.4							
EIBI				S		**Sn**	**08 53 06.3**	**-2.4**
EBEN2	**Beniarda presa**	**5.54**	**295**	P		**Pn**	**08 52 31.3**	**+3.3**
EBEN2				⇑*i*Vmb_VC			08 52 37.1	
	568nm,SNR=3.1							
AFON	**Font Roja**	**5.79**	**294**	P		Pn	08 52 37.4	+5.9
EMUR	**La Murta**	**6.12**	**285**	P		**Pn**	**08 52 39.1**	**+3.2**
EMUR				⇑*i*Vmb_VC			08 52 45.4	
	235nm,SNR=2.6							
EVIV	**Cofrentes, Val**	**6.43**	**297**	P		**Pn**	**08 52 42.8**	**+2.6**
EVIV				S		**Sn**	**08 53 49.5**	**-4.0**
ECHE	**Chera**	**6.46**	**300**	P		**Pn**	**08 52 43.3**	**+2.7**
ECHE				⇑*i*Vmb_VC			08 52 47.5	
	235nm,SNR=1.9							
ECHE				S		**Sn**	**08 53 50.6**	**-3.6**
EZAR	**Zarzadilla de**	**6.47**	**284**	P		**Pn**	**08 52 42.7**	**+1.8**
EZAR				⇑*i*Vmb_VC			08 52 46.2	
	315nm,SNR=2.1							
EMOS	**Mosqueruela**	**6.51**	**308**	P		**Pn**	**08 52 42.8**	**+1.3**
EMOS				⇑*i*Vmb_VC			08 52 52.6	
	483nm,SNR=4.4							
EMOS				S		**Sn**	**08 53 49.5**	**-6.2**
ETOB	**Tobarra**	**6.54**	**291**	P		**Pn**	**08 52 45.3**	**+3.6**
ETOB				⇑*i*Vmb_VC			08 52 54.2	
	168nm,SNR=1.8							
ESAC	**San Caprasio**	**7.35**	**317**	P		**Pn**	**08 52 53.9**	**+1.0**
EQES	**Quesada**	**7.54**	**282**	P		**Pn**	**08 52 58.6**	**+3.0**
EQUE	**Quentar**	**7.79**	**278**	P		**Pn**	**08 53 01.0**	**+2.0**
EQUE				⇑*i*Vmb_VC			08 53 10.7	
	125nm,SNR=2.0							
ESDC	**Sonseca Array**	**8.63**	**294**	Pn		**Pn**	**08 53 12.6**	**+2.1**
	0.3nm,0.3s,baz=99,slow=14,SNR=10							

0.7nm,0.4s
ESDC **Sonseca Array** **8.63** **294** P **Pn** **08 53 14.3** **+3.8**
ESDC ⇑*i*IVmb_VC 08 53 23.6
105nm,SNR=2.0
PAB **San Pablo** **8.88** **293** P **Pn** **08 53 16.9** **+3.0**
EALK **Alkurruntz** **8.94** **321** P **Pn** **08 53 17.3** **+2.6**
EALK ⇑*i*IVmb_VC 08 53 18.8
137nm,SNR=1.8
GUD **Guadarrama** **9.11** **300** P **Pn** **08 53 20.6** **+3.4**
MDT **Midelt** **9.68** **251** Pn **Pn** **08 53 25.1** **+0.3**
0.1nm,0.3s,baz=90,slow=9.1,SNR=1.8
0.5nm,0.4s
GERES **GERESS Array B** **13.46** **22** Pn **Pn** **08 54 18.8** **+2.3**
baz=211,slow=15,SNR=1.3
0.2nm,0.3s
AKASG **Malin Array Be** **21.73** **42** P **P** **08 55 58.1** **+1.4**
0.6nm,0.5s,baz=244,slow=10,SNR=1.1
0.6nm,0.5s
BRTR **Keskin Array B** **21.75** **73** P **P** **08 55 58.1** **+0.9**
0.6nm,0.5s,baz=262,slow=13,SNR=2.3
0.6nm,0.5s
TORD **Torodi Ar. Bea** **23.64** **191** P **P** **08 56 15.9** **-1.0**
0.7nm,0.5s,baz=3.1,slow=10,SNR=5.0
0.7nm,0.5s
HFS **Hagfors** **24.10** **9** LR LR 09 05 09.0
comp=Z,43nm,19.9s,baz=292,slow=35
KURBB **Kurchatov Arra** **52.19** **50** P **P** **09 00 17.7** **+1.6**
0.2nm,0.3s,baz=310,slow=7.2,SNR=1.6
0.2nm,0.3s
MKAR **Makanchi Array** **55.66** **54** P **P** **09 00 41.9** **+0.3**
0.4nm,0.5s,baz=289,slow=4.9,SNR=4.7
0.4nm,0.5s
YKA **Yellowknife Ar** **70.54** **335** P **P** **09 02 20.3** **+0.2**
0.2nm,0.5s,baz=51,slow=5.8,SNR=5.6
0.2nm,0.5s

HEL 17 09:00:05.8±0.1, 67°69'N×26°95'E, h0km, ML1.4, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**0.94**	**32**	PG	Pg	09 00 22.8	-1.1
RAJF				SG	Sg	09 00 31.9	-4.2
VRF	**Varrio**	**1.01**	**85**	PG	Pg	09 00 24.2	-1.0
VRF				SG	Sg	09 00 36.8	-1.5
VRF				smax	smax	09 00 36.9	
	comp=Z,2.6nm,0.2s						
RNF	**Rovaniemi**	**1.14**	**199**	PB	Pg	09 00 27.1	-0.5
RNF				SG	Sg	09 00 41.0	-1.3
KLF	**Kolari**	**1.24**	**250**	PG	Pg	09 00 26.9	-2.6
KLF				smax	smax	09 00 43.4	
	comp=Z,8.1nm,0.2s						
HEF	**Hetta**	**1.44**	**302**	*e*P	Pn	09 00 32.0	-1.0
HEF	**Hetta**	**1.44**	**302**	PG	Pn	09 00 31.8	-1.2
	baz=117						
HEF				smax	smax	09 00 48.8	
	comp=Z,3.5nm,0.2s						
OLKF	**Oulanka, Finla**	**1.67**	**144**	PN	Pn	09 00 36.1	-0.2
OLKF				smax	smax	09 00 55.8	
	comp=Z,2.1nm,0.2s						
OLKF				SN	Sb	09 00 58.9	-0.1
RANF	**Ranua**	**1.68**	**182**	PN	Pn	09 00 36.0	-0.4
	baz=7.0						
RANF				SN	Sn	09 00 58.1	-0.5
KTK1	**Kautokeino**	**1.92**	**316**	PG	Pn	09 00 40.1	+0.4
KTK1				SG	Sn	09 01 05.1	+0.6
TOF	**Tornio**	**1.92**	**214**	PG	Pn	09 00 40.1	+0.4
	baz=36						
TOF				smax	smax	09 01 02.8	
	comp=Z,2.6nm,0.2s						
TOF				SG	Sn	09 01 04.8	+0.4
ARA0	**ARCESS Array S**	**1.93**	**345**	*e*P	Pn	09 00 40.0	+0.1
ARA0	**ARCESS Array S**	**1.93**	**345**	PG	Pn	09 00 40.1	+0.3
	baz=161						
ARA0				SG	Sn	09 01 05.2	+0.3
KU6	**Riekki**	**2.03**	**144**	PG	Pn	09 00 42.1	+0.9
	baz=323						
KU6				smax	smax	09 01 06.2	
	comp=Z,1.3nm,0.2s						
KU2	**Taivalkoski**	**2.05**	**165**	PG	Pn	09 00 42.5	+1.1
	baz=350						
KU2				SG	Sb	09 01 10.1	+0.3
KEV	**Kevo**	**2.08**	**1**	*e*P	Pn	09 00 43.0	+1.2
KU1	**Kurvinen**	**2.37**	**153**	PG	Pn	09 00 47.4	+1.6
OUL	**Oulu**	**2.65**	**190**	SG	Sb	09 01 26.8	-0.1
OUF	**Merijarvi**	**3.45**	**196**	PN	Pn	09 01 01.5	+0.8
	baz=18						
RMF	**Romuvaara**	**3.69**	**159**	PN	Pn	09 01 05.0	+1.0

UPP 17 09:00:16.3±0.3, 67°42N×23°36E, h0km, ML1.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.53**	**275**	P	Pg	09 00 26.3	0.0
MASU				S	Sg	09 00 33.5	+0.3
LANU	**Lannavaara**	**0.82**	**321**	*e*P	Pg	09 00 31.7	-0.3
LANU	**Lannavaara**	**0.82**	**321**	P	Pg	09 00 31.7	-0.3
LANU				S	Sg	09 00 42.8	+0.2
ERTU	**Ertsjaerv**	**0.98**	**209**	P	Pg	09 00 34.6	-0.4
ERTU				S	Sg	09 00 47.9	+0.1
DUNU	**Dundret**	**1.12**	**256**	P	Pg	09 00 37.4	-0.4
KUA	**Kurravaara**	**1.27**	**296**	P	Pg	09 00 40.1	-0.6
KUA				S	Sg	09 00 57.1	-0.1
RATU	**Laukkuluspa**	**1.50**	**288**	P	Pn	09 00 43.9	-0.5
KALU	**Kalix**	**1.56**	**180**	P	Pn	09 00 45.2	0.0
HARU	**Harads**	**1.57**	**218**	P	Pn	09 00 45.0	-0.4
NIKU	**Nikkaluokta**	**1.72**	**287**	P	Pn	09 00 47.6	+0.2

BER ***17*** *09:00:32.5±0.3, 69°23N×26°30E, h0km, Suspected explosion*
UPP 17 09:00:39.0±0.3, 67°37N×23°39E, h0km, ML1.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.55**	**280**	P	Pg	09 00 49.4	0.0
	baz=140						
MASU				S	Sg	09 00 56.6	+0.1
LANU	**Lannavaara**	**0.87**	**323**	P	Pg	09 00 55.2	-0.4
LANU				S	Sg	09 01 06.9	+0.1
ERTU	**Ertsjaerv**	**0.94**	**211**	P	Pg	09 00 56.7	-0.4
HEF	**Hetta**	**1.05**	**5**	*e*S	Sg	09 01 11.8	-0.9
DUNU	**Dundret**	**1.13**	**259**	P	Pg	09 00 59.9	-0.6
KUA	**Kurravaara**	**1.31**	**298**	P	Pg	09 01 03.3	-0.7
KALU	**Kalix**	**1.51**	**181**	P	Pn	09 01 06.9	-0.4
HARU	**Harads**	**1.54**	**220**	P	Pn	09 01 07.4	-0.3

IDC ***17*** *09:05:16.9±3.4, 53°58N×87°99E, h0km, mbtmp3.2/2, ML2.6/2, Error ellipse: s-maj=34.8km s-min=18.6km az=86.0*
ASRS 17 09:05:12.0±1.1, 53°66N×87°99E, h0km, M3.0(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.90**	**280**	I	I	09 17 10.0	
	0.1nm,0.8s,baz=98,slow=315,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.90**	**280**	Pn	Pg	09 05 50.3	+1.9
	1.2nm,0.3s,baz=99,slow=14,SNR=22						
ZALV				Sn	Sg	09 06 16.7	+3.8
	2.3nm,0.3s,baz=100,slow=25,SNR=24						
KURBB	**Kurchatov Arra**	**6.57**	**246**	Pn	Pn	09 06 54.9	+5.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.0						
KURBB				Lg	Lg	09 08 43.8	
	0.1nm,0.3s,baz=64,slow=30,SNR=10						
	1.4nm,0.2s						
MKAR	**Makanchi Array**	**7.78**	**210**	Pn	Pn	09 07 11.8	+5.3
	0.1nm,0.3s,baz=24,slow=11,SNR=3.6						
MKAR				Sn	Sn	09 08 38.1	+2.8
	0.1nm,0.3s,baz=26,slow=26,SNR=4.3						
MKAR				Lg	Lg	09 09 20.7	
	0.1nm,0.3s,baz=28,slow=30,SNR=7.2						
	0.3nm,0.5s						

IDC ***17*** *09:06:03.9±1.0, 36°11S×63°37W, h0km, mb3.6/4, mbtmp3.7/7, ML3.9/3, Error ellipse: s-maj=28.8km s-min=20.5km az=99.0*
SJA ***17*** *09:06:04.6±0.8, 36°04S×63°50W, h28km±5km, ML4.1, MW4.1*
NEIC ***17*** *09:06:06.1±1.8, 36°05S±0°06×63°35W±0°10, h10km±1km, mb4.5/11, Error ellipse: s-maj=13.8km s-min=9.6km az=243.0*
ISC 17 09:06:05.5±0.5, 36°08S±0°04×63°39W±0°06, h10km, n60, σ1s41°67, mb4.3/6, Southern Argentina

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRQA	**Tornquist**	**2.27**	**151**	*e*P	**Pn**	**09 06 44.2**	**+1.1**
TRQA				*e*Pg	**Pb**	**09 06 47.9**	**+1.3**
TRQA				*e*S	**Sn**	**09 07 13.0**	**+1.8**
TRQA	**Tornquist**	**2.27**	**151**		**Pn**	**09 06 43.8**	**+0.7**
MRA	**San Martin**	**4.13**	**331**	*i* P	**Pn**	**09 07 07.7**	**-0.9**
MRA				*e*Pg	**Pb**	**09 07 19.0**	**+0.7**
MRA				IAML		09 08 15.8	
	comp=Z,185nm,0.6s						
TCA	**Tanti**	**4.83**	**348**	*i* P	**Pn**	**09 07 19.1**	**+0.7**
TCA				IAML		09 08 51.4	
	comp=Z,93nm,0.6s						
EDS3	**Malargue**	**4.89**	**272**	*e*P	**Pn**	**09 07 19.1**	**-0.1**
ACAN	**Cantantal**	**4.93**	**319**	*e*P	**Pn**	**09 07 19.8**	**+0.1**
ACAN				IAML		09 08 45.2	
	comp=Z,409nm,0.6s						
CFA	**Coronel Fontan**	**6.01**	**316**	Pn	**Pn**	**09 07 34.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=144,slow=9.6,SNR=18						
CFA				Pg	**Pb**	**09 07 55.0**	**+4.6**
	comp=Z,2.6nm,0.3s,baz=137,slow=16,SNR=8.4						
CFA				Lg	Lg	09 09 09.6	
	comp=Z,3.5nm,0.3s,baz=57,slow=20,SNR=8.4						
	comp=Z,1.7nm,0.4s						
CFA	**Coronel Fontan**	**6.01**	**316**	*i* P	**Pn**	**09 07 34.8**	**+0.2**
CFA				IAML		09 09 22.7	
	comp=Z,44nm,0.6s						
MT08	**Bocatoma Ro**	**6.06**	**294**	*i* P	**Pn**	**09 07 34.6**	**-0.7**
MT08				IAML		09 09 20.4	
	comp=Z,92nm,0.9s						
MT08	**Bocatoma Ro**	**6.06**	**294**		**Pn**	**09 07 35.0**	**-0.3**
MT13	**San Alfonso**	**6.13**	**290**		**Pn**	**09 07 36.3**	**+0.1**
BO02	**Sierra Bellavi**	**6.17**	**280**		**Pn**	**09 07 36.5**	**-0.3**
BO04	**La Punta**	**6.28**	**287**	Pn	**Pn**	**09 07 38.6**	**+0.4**
ZON	**Zonda**	**6.31**	**314**		**Pn**	**09 07 39.1**	**+0.4**
BI02	**San Fabin de**	**6.39**	**262**	Pn	**Pn**	**09 07 39.5**	**-0.3**
MT03	**Universidad Ad**	**6.40**	**292**	Pn	**Pn**	**09 07 39.9**	**0.0**
MT16	**CCHEN**	**6.44**	**292**		**Pn**	**09 07 41.3**	**+0.8**
ML02	**Panimavida**	**6.52**	**270**	Pn	**Pn**	**09 07 42.5**	**+1.0**
MT05	**Renca**	**6.62**	**292**	Pn	**Pn**	**09 07 44.5**	**+1.6**
PEL	**Peldehue**	**6.69**	**294**		**Pn**	**09 07 45.6**	**+1.8**
VA03	**San Esteban**	**6.78**	**297**		**Pn**	**09 07 46.6**	**+1.5**
MT01	**Popeta**	**6.82**	**287**	Pn	**Pn**	**09 07 45.7**	**+0.1**
GO06	**Curarrehue**	**7.29**	**239**	Pn	**Pn**	**09 07 51.2**	**-1.0**
PLCA	**Paso Flores**	**7.29**	**228**	Pn	**Pn**	**09 07 50.2**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=69,slow=7.6,SNR=15						
PLCA				Sn	**Sn**	**09 09 08.7**	**-6.3**
	comp=Z,1.3nm,0.3s,baz=49,slow=21,SNR=3.1						
PLCA				Lg	Lg	09 09 50.2	
	comp=Z,3.8nm,0.3s,baz=1.5,slow=7.3,SNR=3.9						
	comp=Z,2.3nm,0.5s						
PLCA	**Paso Flores**	**7.29**	**228**		**Pn**	**09 07 52.0**	**-0.1**
CO04	**Los Peladeros**	**7.47**	**300**	Pn	**Pn**	**09 07 55.3**	**+0.5**
LR05	**Currie**	**7.95**	**236**	Pn	**Pn**	**09 08 00.4**	**-0.7**
CO02	**Combarbal**	**7.99**	**305**	Pn	**Pn**	**09 08 01.7**	**-0.1**
CO03	**El Pedregal**	**8.03**	**309**	Pn	**Pn**	**09 08 02.6**	**+0.4**
CO01	**Juntas del Tor**	**8.29**	**315**	Pn	**Pn**	**09 08 06.4**	**+0.4**
GO04	**Tololo Observa**	**8.56**	**311**	Pn	**Pn**	**09 08 10.1**	**+0.4**
CO06	**Fray Jorge**	**8.75**	**306**	Pn	**Pn**	**09 08 13.7**	**+1.6**
CPSB	**Cacapava Do Su**	**10.07**	**59**	Pn	**Pn**	**09 08 29.4**	**-0.7**
AC04	**Llanos de Chal**	**10.20**	**318**	Pn	**Pn**	**09 08 32.5**	**+0.6**
AC02	**Maricunga**	**10.43**	**330**	Pn	**Pn**	**09 08 36.2**	**+0.6**
CPUP	**Villa Florida**	**11.01**	**30**	Pn	**Pn**	**09 08 41.6**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=216,slow=12,SNR=19						
CPUP				Sn	**Sn**	**09 10 41.9**	**-4.4**
	comp=Z,0.5nm,0.3s,baz=62,slow=20,SNR=3.2						
CPUP				Lg	Lg	09 11 54.0	
	comp=Z,0.5nm,0.3s,baz=316,slow=19,SNR=3.8						
	comp=Z,3.8nm,0.5s						
CPUP	**Villa Florida**	**11.01**	**30**		**Pn**	**09 08 41.9**	**-1.1**
PB14	**IPOC Station P**	**12.92**	**330**	Pn	**Pn**	**09 09 11.5**	**+2.1**
SIV	**San Ignacio**	**20.11**	**6**	P	**P**	**09 10 39.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=194,slow=11,SNR=5.7						
	comp=Z,0.8nm,0.5s						
LPAZ	**La Paz**	**20.16**	**347**	P	**P**	**09 10 40.7**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=189,slow=9.7,SNR=13						
	comp=Z,1.8nm,0.4s						
LPAZ	**La Paz**	**20.16**	**347**	P	**P**	**09 10 41.5**	**+0.9**
ESPZ	**Base Esperanza**	**27.63**	**174**	P	**P**	**09 11 53.5**	**+0.6**
BELA	**Belgrano 2**	**43.68**	**172**	P	**P**	**09 14 10.9**	**+0.9**
BELA				IAmb	IAmb	09 14 17.7	
	comp=Z,5.2nm,1.5s						
SNAA	**Sanae**	**46.98**	**158**	P	**P**	**09 14 37.5**	**+1.2**
SNAA				IAmb	IAmb	09 14 48.6	
	comp=Z,4.4nm,1.5s						
BOAB	**BOACO BROADBAND**	**92.65**	**332**	P	**P**	**09 15 20.5**	**+0.6**
BOAB				IAmb	IAmb	09 15 46.7	
	comp=Z,26nm,1.1s						
QSPA	**South Pole Qui**	**54.17**	**180**	P	**P**	**09 15 30.6**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=116,slow=9.4,SNR=2.5						
	comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	**54.17**	**180**	P	**P**	**09 15 30.7**	**0.0**
QSPA				PcP	**PcP**	**09 16 33.8**	**-1.4**
GRTK	**Grand Turk**	**57.74**	**351**	P	**P**	**09 15 55.8**	**-0.8**
TEIG	**Tepich**	**60.75**	**333**	P	**P**	**09 16 16.8**	**-0.7**
ZAIG	**Zacatecas**	**69.27**	**321**	P	**P**	**09 17 13.0**	**-0.2**
ZAIG				IAmb	IAmb	09 17 31.0	
	comp=Z,4.3nm,1.3s						
TORD	**Torodi Ar. Bea**	**78.47**	**64**	P	**P**	**09 18 06.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=218,slow=5.2,SNR=2.6						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.47**	**64**	P	**P**	**09 18 06.3**	**-0.6**
TORD				IAmb	IAmb	09 18 31.3	
	comp=Z,2.4nm,0.7s						
PETK	**Petropavlovsk-**	**146.71**	**314**	PKPbc	**PKPdf**	**09 25 46.6**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=31,slow=3.4,SNR=1.9						
PETK	**Petropavlovsk-**	**146.71**	**314**	PKPdf	**PKPdf**	**09 25 45.9**	**+0.6**
AAK	**Ala-Archa**	**147.04**	**65**	PKPdf	**PKPdf**	**09 25 46.1**	**-0.3**
MA2	**Magadan**	**147.76**	**328**	PKPdf	**PKPdf**	**09 25 47.6**	**+0.8**
KURBB	**Kurchatov Arra**	**149.11**	**50**	PKPbc	**PKPbc**	**09 25 53.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=301,slow=3.0,SNR=4.5						
KURK	**Kurchatov**	**149.14**	**50**		**PKPbc**	**09 25 53.8**	**+0.3**
ZALV	**Zalesovo Beam**	**151.63**	**41**	PKPbc	**PKPbc**	**09 25 59.1**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=358,slow=4.5,SNR=3.8						
MKAR	**Makanchi Array**	**152.34**	**57**	PKPbc	**PKPbc**	**09 26 01.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=282,slow=1.1,SNR=4.2						

ASRS ***17*** *09:16:53.0±2.1, 53°76N×91°07E, h0km, M3.2(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 17 09:17:02.8±3.2, 53°53N×90°50E, h0km, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=27.0km s-min=22.2km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.40**	**279**	I	I	09 38 30.0	
	0.1nm,0.9s,baz=91,slow=310,SNR=24						
ZALV	**Zalesovo Beam**	**3.40**	**279**	Pn	Pn	09 17 57.0	0.0
	2.0nm,0.3s,baz=99,slow=14,SNR=10						
ZALV				Lg	Lg	09 18 50.7	
	4.4nm,0.3s,baz=98,slow=32,SNR=9.4						
	3.7nm,0.3s						
KURBB	**Kurchatov Arra**	**7.93**	**253**	Pn	Pn	09 18 59.0	-0.1
	0.2nm,0.3s,baz=65,slow=14,SNR=8.0						
KURBB				Sn	Sn	09 20 28.2	-1.3
	0.1nm,0.3s,baz=70,slow=25,SNR=10						
KURBB				Lg	Lg	09 21 13.1	
	0.1nm,0.3s,baz=66,slow=30,SNR=8.7						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**8.55**	**221**	Pn	Pn	09 19 08.6	+0.8
	0.3nm,0.3s,baz=39,slow=13,SNR=9.8						
MKAR				Sn	Sn	09 20 43.9	-1.1
	baz=34,slow=21						
MKAR				Lg	Lg	09 21 34.6	
	baz=36,slow=28						
	0.6nm,0.4s						
SONM	**Songino Array**	**11.57**	**113**	Lg	Lg	09 22 54.9	
	0.2nm,0.3s,baz=303,slow=30,SNR=8.3						

IDC ***17*** *09:29:44.2±3.2, 53°56N×87°93E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=28.5km s-min=18.4km az=88.0*
ASRS 17 09:29:41.0±1.1, 53°60N×87°88E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**282**	I	I	09 41 30.0	
	0.2nm,0.9s,baz=99,slow=314,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.85**	**282**	Pn	Pg	09 30 17.6	+1.1
	1.7nm,0.3s,baz=101,slow=17,SNR=16						
ZALV				Sn	Sg	09 30 44.0	+3.5
	2.5nm,0.3s,baz=99,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	09 31 21.8	+4.2
	0.1nm,0.3s,baz=62,slow=14,SNR=3.5						
KURBB				Sn	Sn	09 32 34.6	+2.4
	baz=68,slow=24						
KURBB				Lg	Lg	09 33 10.2	
	baz=60,slow=32,SNR=6.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.70**	**210**	Pn	Pn	09 31 38.2	+4.0
	0.1nm,0.3s,baz=31,slow=14,SNR=2.4						
MKAR				Sn	Sn	09 33 05.2	+3.1
	0.1nm,0.3s,baz=27,slow=16,SNR=2.1						
MKAR				Lg	Lg	09 33 46.0	
	0.1nm,0.3s,baz=25,slow=31,SNR=4.4						
	0.1nm,0.3s						

IDC ***17*** *09:45:26.4±2.8, 54°35N×87°37E, h0km, mbtmp3.5/2, ML3.2/2, Error ellipse: s-maj=22.9km s-min=17.0km az=46.0*
ASRS 17 09:45:27.0±0.7, 54°33N×86°91E, h0km, M3.1(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**254**	I	I	09 53 20.0	
	baz=75,slow=311,SNR=11						
ZALV	**Zalesovo Beam**	**1.29**	**254**	Pg	Pn	09 45 52.8	+0.6
	9.8nm,0.3s,baz=72,slow=18,SNR=62						
ZALV				Lg	Lg	09 46 17.0	
	6.6nm,0.3s,baz=74,slow=27,SNR=8.5						
KURBB	**Kurchatov Arra**	**6.32**	**237**	Pn	Pn	09 47 04.6	+3.3
	0.3nm,0.3s,baz=55,slow=14,SNR=20						
KURBB				Sn	Sn	09 48 18.8	+4.6
	0.1nm,0.3s,baz=50,slow=20,SNR=2.7						
KURBB				Lg	Lg	09 48 52.1	
	0.1nm,0.3s,baz=63,slow=34,SNR=5.1						
	3.1nm,0.5s						
MKAR	**Makanchi Array**	**8.10**	**203**	Pn	Pn	09 47 28.2	+2.5
	0.5nm,0.3s,baz=26,slow=14,SNR=18						
MKAR				Sn	Sn	09 48 59.7	+1.8
	0.3nm,0.3s,baz=28,slow=28,SNR=5.0						
MKAR				Lg	Lg	09 49 48.6	
	0.1nm,0.3s,baz=23,slow=31,SNR=6.3						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**9.89**	**269**	Pn	Pn	09 47 55.3	+4.9
	0.1nm,0.3s,baz=69,slow=14,SNR=4.0						

IDC ***17*** *09:49:40.7±1.3, 36°48N×6°30E, h0km, mb3.3/3, mbtmp3.4/6, ML3.3/3, MS3.2/1, Error ellipse: s-maj=28.2km s-min=26.1km az=63.0*
CRAAG ***17*** *09:49:41.4, 36°54N×6°37E, Ml3.4, Algrie 10km NE Sidi-Merouane*
ISC 17 09:49:41.9±1.1, 36°50N±0°06×6°31E±0°06, h10km±8km, n18, σ0s62°17, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBHR	**Beni Haroun da**	**0.07**	**332**	P	**Pg**	**09 49 44.2**	**0.0**
COAT	**Oued Athmania**	**0.27**	**185**	P	**Pb**	**09 49 48.8**	**-0.2**
CASM	**Ain Smara**	**0.28**	**149**	P	**Pb**	**09 49 48.3**	**-0.9**
CBOS	**Bilal Ibnou Ra**	**0.29**	**1**	P	**Pg**	**09 49 47.3**	**-0.5**
CTEI	**Djebel Teioual**	**0.45**	**170**	P	**Pb**	**09 49 52.0**	**0.0**
CSGS	**Sigus**	**0.49**	**139**	P	**Pb**	**09 49 53.0**	**+0.3**
CBST	**Bordj Sabath**	**0.64**	**98**	P	**Pb**	**09 49 55.0**	**-0.3**
CJSR	**Ain Djasser**	**0.70**	**205**	P	**Pn**	**09 49 57.9**	**-0.2**
CTGD	**Timgad**	**0.99**	**169**	P	**Pn**	**09 50 02.7**	**+0.7**
CRHA	**Rehia**	**1.30**	**124**	P	**Pn**	**09 50 06.7**	**+0.4**
CTCHA	**Tamokra**	**1.34**	**267**	P	**Pg**	**09 50 06.9**	**-0.8**
KEST	**Kesra**	**2.57**	**107**	Pn	**Pn**	**09 50 24.6**	**+0.8**
	20nm,0.3s,baz=258,slow=3.5,SNR=50						
	60nm,0.4s						
ESDC	**Sonseca Array**	**8.70**	**294**	Pn	**Pn**	**09 51 49.2**	**+1.4**
	0.4nm,0.3s,baz=105,slow=14,SNR=10						
	1.1nm,0.4s						
GERES	**GERESS Array B**	**13.47**	**21**	Pn	**Pn**	**09 52 52.9**	**-0.3**
	baz=203,slow=12,SNR=0.8						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.62**	**191**	P	**P**	**09 54 53.2**	**-0.1**
	1.2nm,0.9s,baz=8.3,slow=10,SNR=5.6						
	1.2nm,0.9s						
ARCES	**ARCESS Array B**	**34.71**	**12**	LR	LR	10 11 12.7	
	comp=Z,33nm,18.3s,baz=104,slow=37						
MKAR	**Makanchi Array**	**55.63**	**54**	P	**P**	**09 59 18.0**	**0.0**
	0.2nm,0.5s,baz=298,slow=5.9,SNR=1.9						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**70.59**	**335**	P	**P**	**10 00 57.0**	**0.0**
	0.2nm,0.5s,baz=54,slow=5.8,SNR=5.5						
	0.2nm,0.5s						

IDC 17 09:53:15.9±3.4, 31°80S×177°07W, h0km, mb3.4/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=83.5km s-min=49.0km az=126.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.02**	**215**	Pn	Pn	09 55 13.3	-0.3
	0.6nm,0.3s,baz=179,slow=17,SNR=1.4						
URZ				Sn	Sn	09 56 41.7	-3.3
	3.6nm,0.3s,baz=117,slow=24,SNR=10						
	8.0nm,0.8s						
ASAR	**Alice Springs**	**43.85**	**268**	P	P	10 01 24.2	+0.2
	0.2nm,0.5s,baz=112,slow=7.8,SNR=5.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.96**	**273**	P	P	10 01 32.7	-0.3
	0.3nm,0.4s,baz=114,slow=8.2,SNR=10						
	0.3nm,0.4s						
FINES	**FINESS Array B

BAKI Biak 8.41 111 P Pn 09 59 42.1 +3.2
SAUI Saumlaki 10.20 163 Pn Pn 10 00 03.6 +0.3
KAPI Kappang 10.87 231 P Pn 10 00 14.9 +2.6
13nm,0.5s,baz=97,slow=3.0,SNR=4.7
KAPI Kappang 10.87 231 Pn Pn 10 00 12.9 +0.5
BKB Balikpapan 11.75 255 Pn Pn 10 00 24.3 0.0
MMRI Maumere 11.99 210 Pn Pn 10 00 26.5 -1.0
MTN Manton Dam 14.85 169 Pn 10 01 04.8 +0.1
KNRA Kununurra 17.39 178 P 10 01 36.5 +0.4
FITZ Fitzroy Crossi 19.96 187 P P 10 02 03.6 -0.5
2.7nm,0.6s,baz=18,slow=7.7,SNR=11
2.7nm,0.6s
FITZ Fitzroy Crossi 19.96 187 P P 10 02 04.1 0.0
WB0 Warramunga Arr 22.28 165 P 10 02 29.1 +0.1
WB0 IAmb IAmb 10 02 31.1
comp=Z,31nm,1.0s
WRAB Tennant Creek 22.43 165 P P 10 02 30.6 0.0
WRAB IAmb IAmb 10 02 32.7
comp=Z,13nm,0.7s
WRA Warramunga Arr 22.44 165 P P 10 02 30.3 -0.3
comp=Z,10nm,0.5s,baz=343,slow=11,SNR=64
WRA S **S 10 06 28.3 -1.9**
comp=Z,0.7nm,1.0s,baz=347,slow=18,SNR=3.3
WRA ScP **ScP 10 09 48.2 -2.3**
comp=Z,0.5nm,0.8s,baz=337,slow=3.1,SNR=2.9
comp=Z,10nm,0.5s
WRA Warramunga Arr 22.44 165 P 10 02 29.7 -0.9
WR8 Warramunga Arr 22.49 164 P 10 02 31.1 -0.1
WR8 IAmb IAmb 10 02 33.3
comp=Z,10nm,0.8s
TPUB Ta-pu 22.60 342 P P 10 02 30.9 -1.3
TPUB IAmb IAmb 10 02 56.7
comp=Z,17nm,1.0s
SSLB Suanglung 22.95 343 P P 10 02 35.7 0.0
SSLB IAmb IAmb 10 02 37.2
comp=Z,13nm,0.8s
YHNB Yeheng 23.67 344 P P 10 02 42.5 +0.1
YHNB IAmb IAmb 10 02 57.3
comp=Z,13nm,0.9s
MBWA Marble Bar 24.31 200 P P 10 02 47.8 -0.3
MBWA IAmb IAmb 10 02 48.1
comp=Z,14nm,0.7s
AS31 Alice Springs 25.92 168 P 10 03 03.0 +0.2
ASAR Alice Springs 25.92 168 P P 10 03 03.0 +0.1
comp=Z,2.3nm,0.6s,baz=349,slow=7.4,SNR=58
ASAR ScP **ScP 10 09 58.2 -1.8**
comp=Z,0.6nm,1.0s,baz=359,slow=2.6,SNR=4.4
comp=Z,2.3nm,0.6s
ASAR Alice Springs 25.92 168 P 10 03 03.1 +0.3
GIRL Giralia 27.89 209 P P 10 03 20.8 +0.4
NJ2 Nanjing 31.35 345 eP P 10 03 53.1 +2.2
NJ2 pmax pmax
comp=Z,32nm,0.7s
MORW Morawa 32.86 200 P P 10 04 03.9 -0.4
MORW IAmb IAmb 10 04 13.5
comp=Z,15nm,1.1s
CMAR Chiang Mai Arr 33.15 302 P P 10 04 07.9 +1.0
comp=Z,0.7nm,0.3s,baz=109,slow=6.7,SNR=4.9
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 33.15 302 P P 10 04 07.3 +0.4
KMI2 Kunming 33.80 315 P P 10 04 14.3 +1.5
KMI2 pmax pmax
comp=Z,14nm,0.9s
BBOO Buckleboo 35.23 169 P P 10 04 25.1 +0.4
BBOO IAmb IAmb 10 04 30.9
comp=Z,3.0nm,0.8s
KSRS Korea Array 35.46 360 P P 10 04 26.1 -0.5
comp=Z,1.6nm,0.7s,baz=176,slow=9.4,SNR=10
comp=Z,1.6nm,0.7s
MJAR Matsushiro Arr 35.76 14 P P 10 04 26.7 -2.5
comp=Z,1.6nm,0.5s,baz=185,slow=9.4,SNR=8.0
comp=Z,1.6nm,0.5s
MJAR Matsushiro Arr 35.76 14 P P 10 04 27.5 -1.7
MJAR IAmb IAmb 10 04 30.1
comp=Z,4.9nm,1.2s
STKA Stephens Creek 35.83 160 P P 10 04 29.5 -0.3
comp=Z,5.4nm,0.4s,baz=344,slow=7.1,SNR=15
comp=Z,5.4nm,0.4s
NWAO Narrogin (SRO) 36.09 196 P P 10 04 31.4 -0.6
comp=Z,16nm,1.1s,baz=72,slow=9.6,SNR=3.9
comp=Z,16nm,1.1s
NWAO Narrogin (SRO) 36.09 196 P P 10 04 31.7 -0.4
XAN Xi'an 36.80 333 P P 10 04 38.1 0.0
XAN pmax pmax
comp=Z,16nm,1.0s
BJI2 Beijing 39.58 345 P P 10 05 00.9 -0.4
BJI2 pmax pmax
comp=Z,4.0nm,0.6s
BJT Baijiatuau 39.58 345 P P 10 05 00.8 -0.4
BJT IAmb IAmb 10 05 01.6
comp=Z,17nm,1.3s
LZH Lanzhou 40.91 329 eP P 10 05 13.3 +0.8
LZH pP pP 10 05 36.9 +1.5
LZH pmax pmax
comp=Z,21nm,1.2s
LZH LR LR
comp=N,180nm,18.2s
LZH LR LR
comp=E,300nm,20.5s
LZH LR LR
comp=Z,420nm,21.3s
HHC Hu-ho-hao-te 41.68 341 eP P 10 05 20.5 +1.8
HHC pmax pmax
comp=Z,8.0nm,0.6s
SHL Shillong 42.23 307 P 10 05 23.8 +0.3
GTA2 Gaotai 45.59 329 eP P 10 05 51.0 +0.9
GTA2 pP pP 10 06 08.3 -5.3
GTA2 pmax pmax
comp=Z,6.0nm,0.9s
GTA2 LR LR
comp=N,270nm,13.4s
GTA2 LR LR
comp=E,230nm,15.5s
GTA2 LR LR
comp=Z,320nm,18.2s
ULN Ulaanbaatar 49.40 341 P P 10 06 19.5 0.0
SONM Songino Array 49.59 341 P P 10 06 20.8 -0.1
comp=Z,5.7nm,0.7s,baz=153,slow=8.7,SNR=19
comp=Z,5.7nm,0.7s
SONM Songino Array 49.59 341 P 10 06 21.0 +0.1
SONM IAmb IAmb 10 06 21.8
comp=Z,5.0nm,0.8s
WMQ Urumqi 55.15 325 eP P 10 07 02.9 +0.9
WMQ pmax pmax
comp=Z,12nm,0.9s
PETK Petropavlovsk- 56.64 21 P P 10 07 11.4 -1.0
comp=Z,1.0nm,0.6s,baz=224,slow=7.7,SNR=2.3
comp=Z,1.0nm,0.6s
PETK Petropavlovsk- 56.64 21 P P 10 07 11.9 -0.5
ZSN Zaisan 58.92 327 eP P 10 07 28.0 -0.6
SHLS Shalkode 59.77 320 eP P 10 07 31.9 -2.7
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 59.98 325 P P 10 07 35.7 -0.1
comp=Z,14nm,0.4s,baz=116,slow=8.2,SNR=153
comp=Z,14nm,0.4s
MKAR Makanchi Array 59.98 325 P 10 07 36.1 +0.3
UZB Uzynbulak 60.05 320 eP P 10 07 35.7 -0.8
comp=Z,4.0nm,0.5s
MAKZ Makanchi 60.16 325 P P 10 07 37.3 +0.2
SATY Saty 60.40 320 eP P 10 07 38.2 -0.8
comp=Z,4.1nm,0.7s
KPKS Kokpek 60.42 320 eP P 10 07 38.2 -0.8
KDJ Kajisay 60.77 318 P P 10 07 41.9 +0.3
KDJ IAmb IAmb 10 07 42.6
comp=Z,5.1nm,0.6s
MDOK Medeo 61.33 319 eP P 10 07 44.4 -0.8
TNSS Tian-Shan 61.34 319 eP P 10 07 44.6 -1.0
AAA Alma-Ata 61.44 319 eP P 10 07 45.2 -0.7
ZAA0 Zalesovo Array 62.97 333 P P 10 07 54.8 -1.0
ZALV Zalesovo Beam 62.97 333 P P 10 07 54.3 -1.4
comp=Z,1.7nm,0.4s,baz=134,slow=7.2,SNR=5.6
comp=Z,1.7nm,0.4s
ZALV Zalesovo Beam 62.97 333 P P 10 07 54.5 -1.2
SGDS Sogindy 63.04 319 eP P 10 07 55.9 -0.7
KURBB Kurchatov Arra 64.15 327 P P 10 08 03.0 -0.6
comp=Z,17nm,0.7s,baz=126,slow=6.0,SNR=92
comp=Z,17nm,0.7s
KURK Kurchatov 64.16 327 P 10 08 03.4 -0.2
IUG Iuzhnay 65.63 316 eP P 10 08 12.8 -0.8
comp=Z,3.8nm,0.7s
KK31 Karatay Array 65.65 317 P P 10 08 13.6 +0.1
KK31 IAmb IAmb 10 08 13.9
comp=Z,4.3nm,0.8s
KKAR Karatay Array 65.65 317 P P 10 08 13.5 0.0
BRLS Borolday 66.09 317 eP P 10 08 15.8 -0.5
CASY Casey 69.12 188 P P 10 08 35.4 +0.6
CASY IAmb IAmb 10 09 01.4
comp=Z,4.8nm,1.1s
BVAR Borovoye Array 69.74 327 P P 10 08 38.3 -0.7
comp=Z,4.2nm,0.6s,baz=133,slow=8.3,SNR=10
comp=Z,4.2nm,0.6s
BORK Borovoye 69.78 327 P P 10 08 38.9 -0.4
BORK IAmb IAmb 10 08 39.3
comp=Z,6.1nm,0.6s
NRIK Noril'sk 72.64 346 P P 10 08 55.4 -0.8
comp=Z,3.9nm,0.6s,baz=116,slow=2.6,SNR=5.2
comp=Z,3.9nm,0.6s
NRIK Noril'sk 72.64 346 P P 10 08 55.8 -0.3
NRIK IAmb IAmb 10 08 56.2
comp=Z,4.2nm,0.6s
AB31 Akbulak array 74.58 321 P P 10 09 07.4 -0.5
ABKAR Akbulak array 74.58 321 P P 10 09 07.3 -0.6
SDPT Sand Point 77.93 34 P P 10 09 26.2 -0.5
O15K Ungalikthiuk R 79.24 30 P P 10 09 33.7 -0.2
K15K Wolf Creek Mou 79.28 27 P P 10 09 34.8 +0.7
L16K Owhat River 80.06 27 P P 10 09 38.5 +0.3
ILAR Eielson Array 86.17 25 P P 10 10 08.3 -1.3
comp=Z,0.1nm,0.5s,baz=240,slow=4.7,SNR=4.7
comp=Z,0.1nm,0.5s

*IDC **17** 10:00:59.4±0.8, 35°.50N×69°.82E, h0km, mb3.7/12, mbtmp3.8/17, ML3.6/5, MS3.2/6, Error ellipse: s-maj=19.3km s-min=15.8km az=118.0*
ISC 17 10:01:09.9±0.7, 35°.74N±0°.07×69°.87E±0°.07, h87km, n36, σ2§17/36, mb3.5/10, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**5.06**	**124**	*eP*	**Pn**	**10 02 21.8**	**-1.5**
JMU				*eS*	**Sn**	**10 03 21.5**	**+1.1**
JMU				IAML		10 03 56.2	
	comp=N,229nm,0.5s						
JMU				IAML		10 03 56.4	
	comp=E,243nm,0.0s						
TSSA	**Tissa**	**5.95**	**117**	*eP*	**Pn**	**10 02 31.6**	**-4.0**
TSSA				*eS*	**Sn**	**10 03 44.0**	**+1.5**
DHRM	**DHARAMSHALA**	**6.38**	**121**	*eP*	**Pn**	**10 02 37.1**	**-4.3**
DHRM				*eS*	**Sn**	**10 03 53.9**	**+1.1**
DHRM				IAML		10 03 58.2	
	comp=E,145nm,0.5s						
DHRM				IAML		10 03 59.6	
	comp=E,98nm,0.3s						
BHK	**Bhakra**	**6.95**	**127**	IAML		10 04 56.8	
	comp=N,137nm,0.8s						
BHK				IAML		10 04 59.4	
	comp=E,85nm,0.8s						
UCH	**Uchtor**	**7.42**	**28**	P	**Pn**	**10 02 55.0**	**-0.9**
	SNR=24						
AAK	**Ala-Archa**	**7.77**	**26**	Pn	**Pn**	**10 02 59.3**	**-1.0**
	comp=E,4.2nm,0.3s,baz=204,slow=5.3,SNR=15						
AAK				Sn	**Sn**	**10 04 28.4**	**+1.6**
	comp=E,1.9nm,0.3s,baz=156,slow=22,SNR=2.1						
	comp=E,11nm,0.4s						
AAK	**Ala-Archa**	**7.77**	**26**	P	**Pn**	**10 02 59.6**	**-0.7**
	SNR=13						
HNLY	**HANLEY**	**8.10**	**109**	*eP*	**Pn**	**10 03 05.0**	**-0.1**
HNLY				*eS*	**Sn**	**10 04 35.4**	**+0.1**
KLP	**Kalpa**	**8.15**	**119**	*eS*	**Sn**	**10 04 35.8**	**-0.6**
CHMS	**Chumysh**	**8.18**	**26**	P	**Pn**	**10 03 04.6**	**-1.2**
	SNR=6.6						
USP	**Ospenovka**	**8.33**	**24**	P	**Pn**	**10 03 06.6**	**-1.2**
	SNR=10						
TKM2	**Tokmak 2**	**8.44**	**30**	P	**Pn**	**10 03 08.4**	**-1.0**
	SNR=15						
UTK	**UTTARKASHI**	**8.75**	**122**	*eP*	**Pn**	**10 03 12.2**	**-1.5**
KUDL	**Kundal**	**9.43**	**142**	*ex*	x	10 04 56.6	
AJM	**Ajmer**	**10.14**	**155**	*ex*	x	10 05 15.7	
PTH	**Pithoragarh**	**10.65**	**122**	*eP*	**Pn**	**10 03 36.9**	**-2.8**
MKAR	**Makanchi Array**	**14.45**	**36**	Pn	**Pn**	**10 04 26.8**	**-3.1**
	comp=E,0.1nm,0.3s,baz=228,slow=16,SNR=4.3						
	comp=E,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**16.15**	**20**	Pn	**Pn**	**10 04 46.7**	**-4.7**
	comp=E,0.1nm,0.3s,baz=211,slow=12,SNR=6.1						
	comp=E,0.5nm,0.4s						
AKTO	**Aktyubinsk**	**17.02**	**333**	P	**Pn**	**10 04 59.5**	**-2.7**
	comp=E,0.3nm,0.3s,baz=146,slow=16,SNR=4.0						
AKTO				S	**Sn**	**10 08 05.9**	**-5.0**
	comp=E,0.8nm,0.4s,baz=142,slow=19,SNR=1.5						
AKTO				LR	LR	10 13 07.9	
	comp=E,22nm,19.4s,baz=78,slow=42						
	comp=E,0.9nm,0.3s						
BVAR	**Borovoye Array**	**17.29**	**1**	P	**Pn**	**10 05 04.4**	**-1.1**
	comp=E,0.2nm,0.3s,baz=171,slow=8.0,SNR=10						
	comp=E,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**20.99**	**25**	P	**P**	**10 05 46.2**	**+0.3**
	comp=E,8.0nm,0.5s,baz=221,slow=8.7,SNR=22						
	comp=E,8.0nm,0.5s						
KBZ	**Khabaz**	**22.15**	**299**	P	**P**	**10 05 59.2**	**+0.8**
	comp=E,1.3nm,0.7s,baz=106,slow=15,SNR=5.5						
	comp=E,1.3nm,0.7s						
BRTR	**Keskin Array B**	**28.80**	**289**	P	**P**	**10 07 00.7**	**+1.0**
	comp=E,0.6nm,0.8s,baz=59,slow=7.5,SNR=3.7						
	comp=E,0.6nm,0.8s						
SONM	**Songino Array**	**29.53**	**54**	LR	LR	10 20 29.4	
	comp=E,88nm,19.3s,baz=16,slow=39						
MLR	**Muntele Rosu**	**34.36**	**300**	LR	LR	10 24 00.6	
	comp=E,45nm,21.4s,baz=147,slow=40						
FINES	**FINESS Array B**	**37.61**	**327**	P	**P**	**10 08 17.4**	**+1.6**
	comp=E,0.9nm,0.8s,baz=129,slow=11,SNR=2.1						
	comp=E,0.9nm,0.8s						
HFS	**Hagfors**	**43.11**	**323**	P	**P**	**10 09 02.5**	**+1.4**
	comp=E,0.9nm,0.5s,baz=120,slow=10,SNR=2.0						
HFS				LR	LR	10 30 36.1	
	comp=E,31nm,21.0s,baz=116,slow=41						
	comp=E,0.9nm,0.5s						
NOA	**NORSAR Array B**	**44.44**	**324**	P	**P**	**10 09 12.6**	**+0.7**
	comp=E,0.3nm,0.4s,baz=97,slow=8.1,SNR=3.5						
NOA				LR	LR	10 29 15.0	
	comp=E,26nm,18.4s,baz=100,slow=38						
	comp=E,0.3nm,0.4s						
JHJ	**Hachijo jima 2**	**56.59**	**71**	LR	LR	10 37 55.3	
	comp=E,64nm,18.5s,baz=90,slow=39						
TORD	**Torodi Ar. Bea**	**64.78**	**268**	P	**P**	**10 11 38.1**	**-1.4**
	comp=E,0.8nm,0.4s,baz=51,slow=5.9,SNR=10						
	comp=E,0.8nm,0.4s						
ILAR	**Eielson Array**	**75.76**	**15**	P	**P**	**10 12 48.6**	**+2.8**
	comp=E,0.3nm,0.7s,baz=323,slow=6.8,SNR=2.5						
	comp=E,0.3nm,0.7s						
BOSA	**Boshof**	**76.57**	**219**	P	**P**	**10 12 50.1**	**-0.7**
	comp=E,1.4nm,0.6s,baz=36,slow=5.9,SNR=4.4						
	comp=E,1.4nm,0.6s						
YKA	**Yellowknife Ar**	**82.05**	**2**	P	**P**	**10 13 22.8**	**+2.7**
	comp=E,0.2nm,0.6s,baz=353,slow=5.4,SNR=4.5						
	comp=E,0.2nm,0.6s						
WRA	**Warramunga Arr**	**82.38**	**121**	P	**P**	**10 13 22.9**	**+0.4**
	comp=E,0.4nm,0.6s,baz=326,slow=5.0,SNR=10						
	comp=E,0.4nm,0.6s						
ASAR	**Alice Springs**	**84.58**	**124**	P	**P**	**10 13 34.3**	**+0.6**
	comp=E,0.5nm,0.7s,baz=317,slow=5.3,SNR=7.2						
	comp=E,0.5nm,0.7s						
QSPA	**South Pole Qui**	**125.53**	**180**	PKP	**PKiKP**	**10 20 02.7**	**+2.3**
	comp=E,1.0nm,0.8s,baz=269,slow=3.2,SNR=3.5						

*PTWC **17** 10:05:15, 19°.20N×155°.40W, h34km, MI3.5/36*
*NEIC **17** 10:05:16.6±0.7, 19°.25N±0°.05×155°.41W±0°.05, h35km±2km, ML3.9/42, ML3.7/41(HVO), Error ellipse: s-maj=9.0km s-min=7.0km az=140.0*
*HVO **17** 10:05:17.8±0.8, 19°.22N±0°.05×155°.40W±0°.04, h31km±7km, Error ellipse: s-maj=6.8km s-min=5.2km az=178.0*
ISC 17 10:05:16.2±1.0, 19°.23N±0°.04×155°.42W±0°.02, h33km±2km, n86, σ0§63/111, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.02**	**65**		**Pb**	**10 05 22.9**	**+1.2**
HTC	**Hot Caves**	**0.02**	**65**	P	**Pb**	**10 05 22.9**	**+1.2**
PPL	**Puu Pili**	**0.09**	**213**		**Pb**	**10 05 22.8**	**+0.9**
WOH	**Wood Valley**	**0.09**	**285**		**Pb**	**10 05 23.0**	**+1.0**
WOH	**Wood Valley**	**0.09**	**285**	P	**Pb**	**10 05 22.0**	**0.0**
DES	**Desert**	**0.11**	**13**		**Pb**	**10 05 22.9**	**+0.7**
DES					**Sb**	**10 05 26.8**	**+0.5**
DES	**Desert**	**0.11**	**13**	P	**Pb**	**10 05 22.9**	**+0.7**
HLP	**Hilina Pali**	**0.12**	**57**		**Pb**	**10 05 23.2**	**+1.0**
HLP	**Hilina Pali**	**0.12**	**57**	P	**Pb**	**10 05 23.2**	**+1.0**
KNH	**Kipuka Nene**	**0.16**	**48**		**Pb**	**10 05 23.2**	**+0.7**
KNH	**Kipuka Nene**	**0.16**	**48**	P	**Pb**	**10 05 23.2**	**+0.7**
CPK	**Cone Peak**	**0.18**	**26**		**Pb**	**10 05 23.5**	**+0.7**
CPK	**Cone Peak**	**0.18**	**26**	P	**Pb**	**10 05 23.5**	**+0.7**
PWH	**Poliokeawe Pal**	**0.19**	**73**		**Pb**	**10 05 23.7**	**+1.0**
PWH	**Poliokeawe Pal**	**0.19**	**73**	P	**Pb**	**10 05 23.7**	**+1.0**
KHU	**Kahuku**	**0.19**	**275**		**Pb**	**10 05 23.7**	**+0.7**
KHU					**Sb**	**10 05 28.0**	**+0.4**
KHU	**Kahuku**	**0.19**	**275**	P	**Pb**	**10 05 23.7**	**+0.7**
HPO	**Honuapo**	**0.19**	**223**		**Pb**	**10 05 23.5**	**+0.8**
HPO					**Sb**	**10 05 27.9**	**+0.8**
HPO	**Honuapo**	**0.19**	**223**	P	**Pb**	**10 05 23.5**	**+0.8**
SDHHI	**Sand Hill**	**0.20**	**36**		**Pb**	**10 05 23.6**	**+0.7**
SDHHI					**Sb**	**10 05 27.9**	**+0.4**
SDHHI	**Sand Hill**	**0.20**	**36**	P	**Pb**	**10 05 23.6**	**+0.7**
AHA	**Ahua**	**0.20**	**45**		**Pb**	**10 05 23.6**	**+0.7**
AHA					**Sb**	**10 05 27.9**	**+0.3**
AHA	**Ahua**	**0.20**	**45**		**Pb**	**10 05 23.8**	**+0.8**
AHA					**Sb**	**10 05 28.2**	**+0.6**
AHA	**Ahua**	**0.20**	**45**	P	**Pb**	**10 05 23.5**	**+0.5**
OUT	**Outlet**	**0.20**	**38**		**Pb**	**10 05 23.6**	**+0.6**
OUT	**Outlet**	**0.20**	**38**	P	**Pb**	**10 05 23.6**	**+0.6**
WRMHI	**West Rim**	**0.21**	**32**		**Pb**	**10 05 23.6**	**+0.6**
WRMHI					**Sb**	**10 05 28.3**	**+0.6**
WRMHI	**West Rim**	**0.21**	**32**	P	**Pb**	**10 05 23.6**	**+0.6**
RIM	**Rim**	**0.21**	**39**		**Pb**	**10 05 23.7**	**+0.6**
RIM					**Sb**	**10 05 28.0**	**+0.2**
RIM	**Rim**	**0.21**	**39**	P	**Pb**	**10 05 23.7**	**+0.6**
KKO	**Keanakako'i**	**0.22**	**40**		**Pb**	**10 05 23.8**	**+0.6**
KKO					**Sb**	**10 05 28.1**	**+0.3**
KKO	**Keanakako'i**	**0.22**	**40**	P	**Pb**	**10 05 23.8**	**+0.6**
UWE	**Uwekahuna**	**0.22**	**31**		**Pb**	**10 05 23.8**	**+0.6**
UWE	**Uwekahuna**	**0.22**	**31**	P	**Pb**	**10 05 23.8**	**+0.6**
OBL	**Observatory Le**	**0.22**	**33**		**Pb**	**10 05 23.8**	**+0.6**
OBL					**Sb**	**10 05 28.2**	**+0.2**
OBL	**Observatory Le**	**0.22**	**33**	P	**Pb**	**10 05 23.8**	**+0.6**
TRH	**Trail**	**0.22**	**326**		**Pb**	**10 05 24.3**	**+0.8**
BYL	**Byron's Ledge**	**0.23**	**39**		**Pb**	**10 05 23.8**	**+0.5**
BYL				IAML		10 05 30.5	
	comp=E,11μm,0.4s						
BYL				IAML		10 05 33.4	
	comp=N,13μm,0.6s						
BYL	**Byron's Ledge**	**0.23**	**39**	P	**Pb**	**10 05 23.8**	**+0.5**
UWB	**Uwekahuna Bluf**	**0.23**	**34**		**Pb**	**10 05 23.7**	**+0.4**
UWB					**Sb**	**10 05 27.9**	**-0.2**
UWB	**Uwekahuna Bluf**	**0.23**	**34**	P	**Pb**	**10 05 23.7**	**+0.4**
PUH	**Pauahi**	**0.24**	**53**		**Pb**	**10 05 23.8**	**+0.5**
PUH				IAML		10 05 28.8	
	comp=N,17μm,0.7s						
PUH	**Pauahi**	**0.24**	**53**	P	**Pb**	**10 05 23.8**	**+0.5**
SBLHI	**Steaming Bluff**	**0.24**	**35**		**Pb**	**10 05 23.8**	**+0.4**
SBLHI					**Sb**	**10 05 28.2**	**-0.1**
SBLHI	**Steaming Bluff**	**0.24**	**35**	P	**Pb**	**10 05 23.8**	**+0.4**
HATHI	**Halema'uma'u T**	**0.24**	**37**		**Pb**	**10 05 23.9**	**+0.5**
HATHI					**Sb**	**10 05 28.4**	**+0.1**
HATHI				IAML		10 05 28.7	
	comp=E,14μm,0.6s						
HATHI				IAML		10 05 37.6	
	comp=N,9μm,0.7s						
ESR	**Escape Road**	**0.24**	**43**		**Pb**	**10 05 23.9**	**+0.5**
ESR					**Sb**	**10 05 28.5**	**+0.1**
ESR	**Escape Road**	**0.24**	**43**	P	**Pb**	**10 05 23.9**	**+0.5**
MLH	**Mauna Loa**	**0.26**	**6**		**Pb**	**10 05 24.6**	**+0.8**
MLH				IAML		10 05 35.3	
	comp=E,12μm,0.4s						
MLH				IAML		10 05 35.6	
	comp=N,13μm,0.4s						
RSD	**Rainshed**	**0.27**	**29**		**Pb**	**10 05 24.1**	**+0.4**
RCO	**Red Cone**	**0.27**	**311**		**Pn**	**10 05 24.3**	**+0.6**
DAH	**Dandelion**	**0.27**	**298**		**Pn**	**10 05 24.4**	**+0.6**
KAE	**Kaena**	**0.27**	**77**		**Pb**	**10 05 24.6**	**+0.9**
KNHH	**Kane Nui o Ham**	**0.28**	**57**		**Pb**	**10 05 24.3**	**+0.5**
SWH	**Southwest Rift**	**0.29**	**321**		**Pn**	**10 05 24.6**	**+0.4**
WIH	**Wilkes Camp**	**0.29**	**326**		**Pn**	**10 05 24.7**	**+0.5**
WIH					**Sb**	**10 05 30.4**	**+0.5**
PLL	**Puu Ulaula**	**0.30**	**352**		**Pn**	**10 05 24.9**	**+0.4**
MWH	**Mokuaweoweo**	**0.31**	**326**		**Pn**	**10 05 25.0**	**+0.3**
MWH					**Sn**	**10 05 30.6**	**+1.0**
MWH				IAML		10 05 30.8	
	comp=E,16μm,0.5s						
MWH				IAML		10 05 37.5	
	comp=N,11μm,0.5s						
STCH	**Steam Cracks**	**0.31**	**60**		**Pn**	**10 05 24.6**	**+0.1**
STCH				IAML		10 05 30.4	
	comp=N,13μm,0.5s						
NPOC	**North of Pu'u**	**0.33**	**61**		**Pb**	**10 05 24.8**	**+0.3**
NPOC					**Sn**	**10 05 29.9**	**-0.2**
JCUZ	**Jacuzzi**	**0.33**	**63**		**Pb**	**10 05 24.8**	**+0.3**
JCUZ					**Sn**	**10 05 29.8**	**-0.3**
OVEH	**Oceanview Est**	**0.34**	**257**		**Pb**	**10 05 24.9**	**+0.3**
MLOA	**Mauna Loa Obse**	**0.34**	**333**		**Pb**	**10 05 25.4**	**+0.5**
MLOA					**Sn**	**10 05 30.8**	**+0.3**
MLOA				IAML		10 05 31.1	
	comp=E,6μm,0.7s						
SPT	**South Point**	**0.34**	**225**		**Pb**	**10 05 24.8**	**+0.3**
SPT					**Sn**	**10 05 30.0**	**-0.5**
SPT				IAML		10 05 30.1	
	comp=N,7μm,0.4s						
SPT				IAML		10 05 30.2	
	comp=E,7μm,0.4s						
KLCH	**Kalalua Cone**	**0.37**	**62**		**Pb**	**10 05 25.1**	**+0.1**
KLCH					**Sn**	**10 05 30.7**	**-0.6**
HMH	**Humu'ula Sheep**	**0.38**	**350**		**Pn**	**10 05 26.0**	**+0.4**
HMH					**Sn**	**10 05 32.1**	**+0.5**
HMH				IAML		10 05 33.0	
	comp=N,6μm,0.7s						
ALEP	**Alea Permanent**	**0.38**	**325**		**Pb**	**10 05 25.5**	**+0.2**
ALEP					**Sn**	**10 05 31.3**	**-0.4**
KUH	**Kaapuna**	**0.43**	**275**		**Pb**	**10 05 26.0**	**+0.2**
JOKA	**Jonika Flow**	**0.44**	**62**		**Pb**	**10 05 25.9**	**0.0**
JOKA				IAML		10 05 32.4	
	comp=E,8μm,0.4s						
JOKA				IAML		10 05 32.9	
	comp=N,10μm,0.6s						
PKL	**Puu Kaliu**	**0.52**	**64**		**Pb**	**10 05 27.0**	**-0.1**
PKL					**Sb**	**10 05 33.8**	**-0.9**
POHA	**Pohakuloa**	**0.54**	**348**		**Sb**	**10 05 35.0**	**-0.4**
POHA	**Pohakuloa**	**0.54**	**348**	Pn	**Pn**	**10 05 27.6**	**-0.2**
POHA				IAML		10 05 35.2	
	comp=N,3μm,0.7s						
POHA				IAML		10 05 46.9	
	comp=N,2μm,0.6s						
CPH	**Captain Cook**	**0.54**	**298**		**Pn**	**10 05 27.2**	**-0.3**
CPH					**Sb**	**10 05 34.1**	**-1.1**
HPU	**Hale Pohaku**	**0.55**	**356**		**Pn**	**10 05 27.9**	**-0.2**
KHLU	**Kahalu`u**	**0.58**	**309**		**Pn**	**10 05 28.0**	**-0.2**
KHLU					**Sn**	**10 05 35.5**	**-1.1**
KHLU				IAML		10 05 35.6	
	comp=E,4μm,0.5s						
KHLU				IAML		10 05 45.0	
	comp=N,5μm,0.7s						
KKU	**Keanakolu**	**0.66**	**6**	Pn	**Pn**	**10 05 29.5**	**+0.1**
KKH	**Kailua Kona**	**0.71**	**307**		**Pn**	**10 05 29.5**	**-0.4**
KOH	**Kohala**	**0.96**	**339**		**Pn**	**10 05 32.7**	**-0.8**
MHA	**Mahukona**	**1.06**	**334**		**Pn**	**10 05 34.4**	**-0.3**
HLK	**Haleakala**	**1.71**	**333**		**Pn**	**10 05 43.1**	**-0.8**
KHLH	**Kahului Airpor**	**1.91**	**330**		**Pn**	**10 05 46.4**	**0.0**
WMR	**Waimanalo Ridg**	**2.98**	**315**		**Pn**	**10 05 60.0**	**-1.1**
HON	**Honolulu**	**3.20**	**311**		**Pn**	**10 06 03.2**	**-1.0**
KIP	**Kipapa**	**3.27**	**312**		**Pn**	**10 06 04.0**	**-1.1**
KIP	**Kipapa**	**3.27**	**312**	IAML		10 06 43.2	
	comp=N,172nm,0.6s						
KIP		

APA0	**Apatity Array**	**0.49**	**264**	P	**Pg**	10 08 55.0	**-0.9**		
APA0				S	**Sg**	**10 09 02.3**	**+0.1**		
KVDA	**Kovda**	**1.11**	**210**	P	**Pg**	10 09 07.3	**-0.6**		
KVDA				S	**Sg**	**10 09 23.0**	**+0.8**		
TERR	**Teriberka**	**1.58**	**11**	P	**Pn**	10 09 14.9	**-0.9**		
TERR				S	**Sn**	**10 09 35.8**	**-1.1**		
VRF	**Varrio**	**1.78**	**275**	PG	**Pn**	**10 09 18.3**	**-0.2**		
VRF				smax	smax	10 09 39.0			
	comp=Z,8.6nm,0.2s								
VRF				SN	**Sn**	**10 09 41.4**	**-0.4**		
OLKF	**Oulanka, Finla**	**2.34**	**237**	PN	**Pn**	**10 09 27.5**	**+1.3**		
OLKF				smax	smax	10 09 56.6			
	comp=Z,2.6nm,0.2s								
OLKF				SG	**Sb**	**10 09 59.7**	**+0.8**		
RAJF	**Raja-Jooseppi**	**2.38**	**293**	PG	**Pn**	**10 09 27.4**	**+0.6**		
RAJF				SG	**Sb**	**10 09 58.0**	**-2.2**		
KU1	**Kurvinen**	**2.82**	**224**	PN	**Pn**	**10 09 34.0**	**+1.1**		
VADS	**Vadso**	**3.04**	**327**	*eP*	**Pn**	**10 09 35.7**	**-0.1**		
VADS				*eS*	**Sn**	**10 10 12.3**	**-0.7**		
VADS	**Vadso**	**3.04**	**327**	P	**Pn**	10 09 35.6	**-0.3**		
VADS				S	**Sn**	**10 10 12.7**	**-0.2**		
KU2	**Taivalkoski**	**3.10**	**234**	PB	**Pb**	**10 09 39.8**	**-2.7**		
KEV	**Kevo**	**3.38**	**312**	*eP*	**Pn**	**10 09 40.8**	**+0.3**		
KEV				*eS*	**Sn**	**10 10 21.5**	**+0.2**		
RANF	**Ranua**	**3.38**	**244**	PB	**Pb**	**10 09 45.6**	**-1.7**		
	baz=55								
RANF				SG	**Sb**	**10 10 29.3**	**+0.3**		
RNF	**Rovaniemi**	**3.39**	**256**	PN	**Pn**	**10 09 40.6**	**0.0**		
RNF				SN	**Sn**	**10 10 22.6**	**+1.2**		
ARA0	**ARCESS Array S**	**3.72**	**304**	*eP*	**Pn**	**10 09 45.3**	**+0.1**		
ARA0				*eS*	**Sn**	**10 10 29.8**	**+0.1**		
ARA0	**ARCESS Array S**	**3.72**	**304**	PN	**Pn**	**10 09 45.3**	**+0.1**		
ARCES	**ARCESS Array B**	**3.72**	**304**	Pn	**Pn**	**10 09 44.5**	**-0.7**		
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=18								
ARCES				Pg	**Pb**	**10 09 53.1**	**0.0**		
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=9.9								
ARCES				Sn	**Sn**	**10 10 28.7**	**-1.0**		
	comp=Z,0.4nm,0.3s,baz=117,slow=26,SNR=7.1								
ARCES				Lg	Lg	10 10 38.8			
	comp=Z,0.9nm,0.3s,baz=114,slow=32,SNR=15								
	comp=Z,0.5nm,0.3s								
ARCES	**ARCESS Array B**	**3.72**	**304**	P	**Pn**	**10 09 45.0**	**-0.3**		
ARCES				S	**Sn**	**10 10 27.0**	**-2.7**		
RMF	**Romuvaara**	**3.88**	**209**	PN	**Pn**	**10 09 48.3**	**+0.8**		
	baz=21								
RMF				SN	**Sn**	**10 10 34.1**	**+0.4**		
KLF	**Kolari**	**3.99**	**269**	PG	**Pb**	**10 09 57.9**	**+0.2**		
HEF	**Hetta**	**4.05**	**286**	*eP*	**Pn**	**10 09 49.5**	**-0.3**		
HEF				*eS*	**Sn**	**10 10 37.8**	**-0.1**		
KTK1	**Kautokeino**	**4.31**	**293**	*eP*	**Pn**	**10 09 56.4**	**+3.1**		
KTK1	**Kautokeino**	**4.31**	**293**	PG	**Pb**	**10 10 38.2**	**+0.1**		
KTK1				SG	**Sb**	**10 10 57.8**	**+2.3**		
LANU	**Lannavaara**	**4.66**	**280**	*eP*	**Pn**	**10 09 57.1**	**-1.0**		
LANU	**Lannavaara**	**4.66**	**280**	PN	**Pn**	**10 09 57.8**	**-0.3**		
LANU				SG	**Sb**	**10 11 09.5**	**+3.9**		
I37NO	**I37NO**	**5.96**	**291**	I	I	10 44 20.0			
	baz=96,slow=316,SNR=1.8								
FINES	**FINESS Array B**	**7.16**	**213**	Pn	**Pn**	**10 10 32.6**	**+0.2**		
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=1.5								
FINES				Pg	Pb	10 10 44.7	-6.9		
	comp=Z,0.1nm,0.3s,baz=72,slow=6.2,SNR=4.9								
FINES				Lg	Lg	10 12 24.3			
	comp=Z,0.1nm,0.3s,baz=20,slow=21,SNR=3.2								
	comp=Z,0.2nm,0.3s								

*IDC **17** 10:16:49.3±1.1,35˚.39N×26˚.75E,h0km,mb3.5/6, mbtmp3.5/11,ML3.2/5,MS3.6/1,Error ellipse: s-maj=24.4km s-min=14.3km az=171.0*
*THE **17** 10:16:51.6,36˚.N±3˚×2˚.7E±˚,h3km±5km,M3.4/12, MLh3.4/12*
*ATH **17** 10:16:51.4,35˚.55N×26˚.71E,h10km±3km,ML3.5/18, Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*
*ISK **17** 10:16:51.1,35˚.48N×26˚.73E,h4km,ML3.3/18*
*AFAD **17** 10:16:51.2,35˚.29N×26˚.75E,h7km±4km,ML3.2*

ISC 17 10:16:51.5±0.9,35˚.46N±0˚.03×26˚.73E±0˚.02,h15km±6km, n97,σ1°§47/123,mb3.4/5,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.36**	**76**	Pg	**Pg**		**10 16 58.8**	**-0.1**
KARP				Sg	**Sg**		**10 17 04.2**	**+0.2**
KARP	**Karpathos**	**0.36**	**76**	P	**Pg**		**10 16 58.6**	**-0.3**
KARP				S	**Sg**		**10 17 03.8**	**-0.2**
KARP	**Karpathos**	**0.36**	**76**	P	**Pg**		**10 16 58.8**	**-0.1**
KARP				S	**Sg**		**10 17 04.0**	**-0.1**
ZKR	**Zakros**	**0.54**	**230**	Pg	**Pg**		**10 17 02.5**	**+0.3**
ZKR				Sg	**Sb**		**10 17 11.1**	**+0.8**
ZKR	**Zakros**	**0.54**	**230**	P	**Pg**		**10 17 02.6**	**+0.3**
ZKR	**Zakros**	**0.54**	**230**	P	**Pg**		**10 17 02.3**	**+0.1**
ZKR				S	**Sb**		**10 17 10.7**	**+0.4**
SIT2	**Siteia**	**0.57**	**243**	P	**Pb**		**10 17 03.3**	**+0.2**
SIT2				S	**Sg**		**10 17 10.9**	**+0.7**
NPS	**Neapolis**	**0.93**	**258**	P	**Pg**		**10 17 09.6**	**0.0**
NPS				S	**Sb**		**10 17 23.3**	**+1.8**
NPS	**Neapolis**	**0.93**	**258**	P	**Pg**		**10 17 09.1**	**-0.5**
NPS				S	**Sg**		**10 17 22.2**	**+0.4**
YAZI	**Mula-Dat§a-**	**1.35**	**26**	P	**Pn**		**10 17 14.1**	**-1.7**
YAZI				S	**Sn**		**10 17 37.0**	**+3.6**
THERA	**Ancient Thera,**	**1.36**	**312**	P	**Pn**		**10 17 15.3**	**-0.6**
THERA	**Ancient Thera,**	**1.36**	**312**	P	**Pn**		**10 17 15.0**	**-0.8**
THERA				S	**Sg**		**10 17 32.6**	**-2.8**
ARG	**Arkhangelos**	**1.36**	**56**	Pn	**Pg**		**10 17 17.1**	**-0.6**
ARG	**Arkhangelos**	**1.36**	**56**	P	**Pn**		**10 17 16.7**	**+0.8**
ARG				S	**Sg**		**10 17 34.3**	**-1.2**
ARG	**Arkhangelos**	**1.36**	**56**	P	**Pn**		**10 17 16.2**	**+0.3**
ARG				S	**Sg**		**10 17 34.0**	**-1.5**
IACM	**Heraklion**	**1.36**	**264**	P	**Pn**		**10 17 16.3**	**+0.5**
IACM	**Heraklion**	**1.36**	**264**	P	**Pb**		**10 17 17.3**	**+0.7**
IACM				S	**Sg**		**10 17 35.0**	**-0.4**
THR8	**Santorini-Mono**	**1.38**	**313**	P	**Pn**		**10 17 15.6**	**-0.6**
THR8	**Santorini-Mono**	**1.38**	**313**	P	**Pn**		**10 17 15.5**	**-0.6**
THR6	**Thira Island,**	**1.40**	**310**	P	**Pn**		**10 17 16.3**	**-0.1**
THR6	**Thira Island,**	**1.40**	**310**	P	**Pn**		**10 17 16.0**	**-0.4**
SNT5	**Nea Kammeni, S**	**1.43**	**311**	P	**Pn**		**10 17 17.4**	**+0.6**
THR3	**Thira Island,**	**1.43**	**312**	P	**Pn**		**10 17 16.2**	**-0.6**
THR2	**Thira island,**	**1.44**	**314**	P	**Pn**		**10 17 16.6**	**-0.3**
DAT	**Datca**	**1.44**	**28**	Pn	**Pn**		**10 17 17.9**	**+0.8**
DAT	**Datca**	**1.44**	**28**	P	**Pn**		**10 17 16.9**	**-0.1**
THR5	**Thira Island,**	**1.47**	**311**	P	**Pn**		**10 17 16.3**	**-1.1**
SAP3	**Santorini-Thir**	**1.48**	**311**	P	**Pn**		**10 17 16.4**	**-1.2**
IDI	**Anoyia**	**1.51**	**264**	Pn	**Pn**		**10 17 19.0**	**+1.0**
	18nm,0.3s,baz=100,slow=9.4,SNR=62							
IDI				Sn	**Sn**		**10 17 38.9**	**+1.4**
	125nm,0.3s,baz=155,slow=22,SNR=42							
IDI	**Anoyia**	**1.51**	**264**	Pn	**Pn**		**10 17 19.2**	**+1.2**
IDI	**Anoyia**	**1.51**	**264**	P	**Pn**		**10 17 19.2**	**+1.2**
IDI	**Anoyia**	**1.51**	**264**	P	**Pn**		**10 17 17.7**	**-0.3**
SIVA	**Sivas**	**1.63**	**255**	P	**Pb**		**10 17 21.5**	**+0.3**
SIVA	**Sivas**	**1.63**	**255**	P	**Pb**		**10 17 21.9**	**+0.7**
BODT	**Bodrum**	**1.66**	**16**	Pn	**Pn**		**10 17 21.4**	**+1.3**
BODT	**Bodrum**	**1.66**	**16**	P	**Pn**		**10 17 20.3**	**+0.3**
BDRM	**Kayabasi**	**1.70**	**20**	P	**Pg**		**10 17 24.0**	**-0.1**
BDRM				S	**Sg**		**10 17 48.7**	**+2.4**
TURN	**Turunc**	**1.80**	**43**	Pn	**Pn**		**10 17 23.3**	**+1.5**
TURN	**Turunc**	**1.80**	**43**	P	**Pn**		**10 17 22.0**	**+0.2**
TURN				S	**Sn**		**10 17 45.6**	**+1.3**
DALY	**Dalyan (Mula)**	**2.06**	**49**	Pn	**Pn**		**10 17 27.0**	**+1.5**
DALY	**Dalyan (Mula)**	**2.06**	**49**	P	**Pn**		**10 17 27.3**	**+1.8**
DALY				S	**Sb**		**10 17 55.0**	**+1.0**
VAM	**Vamos**	**2.06**	**269**	P	**Pn**		**10 17 26.4**	**+0.9**
YER	**Yerkesik**	**2.09**	**37**	Pn	**Pn**		**10 17 26.7**	**+0.7**
YER	**Yerkesik**	**2.09**	**37**	P	**Pn**		**10 17 26.6**	**+0.7**
IMMV	**Iera Moni Meta**	**2.24**	**271**	Pn	**Pn**		**10 17 30.0**	**+2.0**
IMMV	**Iera Moni Meta**	**2.24**	**271**	P	**Pn**		**10 17 29.1**	**+1.1**
IMMV	**Iera Moni Meta**	**2.24**	**271**	P	**Pn**		**10 17 28.1**	**+0.1**
MHLO	**Agia Marina, M**	**2.25**	**304**	P	**Pn**		**10 17 28.5**	**+0.4**
IZZE	**Mula-Seydike**	**2.25**	**64**	P	**Pb**		**10 17 30.6**	**-1.1**
IZZE				S	**Sn**		**10 17 57.6**	**+2.1**
IZZE				IAML			10 18 18.0	
	comp=N,222nm,0.5s							
GVD	**Gavdhos**	**2.25**	**255**	Pn	**Pn**		**10 17 30.9**	**+2.8**
GVD	**Gavdhos**	**2.25**	**255**	P	**Pn**		**10 17 30.0**	**+1.9**
SABU	**Mula-Dalaman**	**2.27**	**53**	P	**Pn**		**10 17 30.3**	**+1.9**
SABU				S	**Sb**		**10 17 59.3**	**-0.6**
GCAM	**G?zelcaml?**	**2.27**	**10**	Pn	**Pn**		**10 17 30.4**	**+2.0**
AYDN	**Tasoluk**	**2.38**	**23**	P	**Pb**		**10 17 33.8**	**-0.3**
AKAS	**Kas**	**2.46**	**71**	Pn	**Pn**		**10 17 33.2**	**+2.1**
AKAS	**Kas**	**2.46**	**71**	P	**Pn**		**10 17 32.1**	**+1.0**
AKAS				S	**Sn**		**10 18 04.2**	**+3.2**
AKAS				IAML			10 18 14.0	
	comp=E,86nm,0.6s							
CAME	**Cameli-Denizli**	**2.55**	**54**	Pn	**Pn**		**10 17 34.5**	**+2.1**
AYDB	**Zeytinkoy-Aydi**	**2.65**	**20**	Pn	**Pn**		**10 17 36.0**	**+2.3**
TAVA	**DENIZLI_Tavas**	**2.66**	**41**	P	**Pn**		**10 17 36.7**	**+2.8**
TAVA				S	**Sb**		**10 18 10.5**	**-0.9**
ESEN	**Aydn-Nazilli**	**2.67**	**29**	P	**Pn**		**10 17 35.0**	**+1.1**
ESEN				S	**Sn**		**10 18 09.0**	**+3.0**
KNIK	**Mula-Seydike**	**2.68**	**58**	P	**Pn**		**10 17 37.1**	**+2.9**
NAZL	**Nazilli-Aydin**	**2.79**	**26**	Pn	**Pn**		**10 17 37.9**	**+2.3**
ANKY	**Antikythira Is**	**2.82**	**279**	P	**Pn**		**10 17 37.3**	**+1.4**
ANKY	**Antikythira Is**	**2.82**	**279**	P	**Pn**		**10 17 35.3**	**-0.6**
DNIZ	**Denizli-Tavas-**	**2.85**	**40**	P	**Pn**		**10 17 37.9**	**+1.4**
ELL	**Elmali**	**2.88**	**63**	Pn	**Pn**		**10 17 39.4**	**+2.5**
APMY	**Acipayam-Deniz**	**2.88**	**45**	Pn	**Pn**		**10 17 39.5**	**+2.6**
GOLH	**Golhisar**	**2.89**	**51**	P	**Pn**		**10 17 39.4**	**+2.3**
GOLH				S	**Sb**		**10 18 17.8**	**-0.2**
CHOS	**Chios island**	**2.97**	**350**	P	**Pn**		**10 17 37.5**	**-0.6**
KIRA	**zmir-Kiraz**	**3.04**	**26**	P	**Pn**		**10 17 40.6**	**+1.5**
AKUM	**Antalya-Kumluc**	**3.06**	**73**	P	**Pn**		**10 17 41.5**	**+2.3**
KTHA	**Kythira Island**	**3.08**	**286**	P	**Pn**		**10 17 40.0**	**+0.4**
KTHA	**Kythira Island**	**3.08**	**286**	P	**Pn**		**10 17 39.4**	**-0.2**
VLI	**Veliai**	**3.32**	**293**	P	**Pn**		**10 17 42.8**	**+0.1**
VLI	**Veliai**	**3.32**	**293**	P	**Pn**		**10 17 42.7**	**-0.1**
DION	**Dionisos Attik**	**3.44**	**320**	P	**Pn**		**10 17 45.2**	**+0.7**
MET2	**Kameni Chora,**	**3.48**	**309**	P	**Pn**		**10 17 45.1**	**+0.1**
MET3	**Ano Fanari,Met**	**3.52**	**308**	P	**Pn**		**10 17 46.0**	**+0.4**
PASA	**Karahalli, USA**	**3.63**	**37**	P	**Pn**		**10 17 49.9**	**+2.7**
PASA				S	**Sn**		**10 18 30.9**	**+1.2**
VIL2	**Platees**	**3.90**	**316**	P	**Pn**		**10 17 50.3**	**-0.6**
KLV	**Kalavryta, Ach**	**4.49**	**306**	P	**Pn**		**10 18 00.6**	**+1.7**
AKMS	**Akamas**	**4.61**	**94**	P	**Pn**		**10 18 01.3**	**+0.7**
DRO	**Drossia**	**4.74**	**303**	P	**Pn**		**10 18 04.1**	**+1.8**
ALFC	**Alefka**	**4.81**	**92**	P	**Pn**		**10 18 04.0**	**+0.7**
ANX	**Ano Chora**	**4.95**	**311**	P	**Pn**		**10 18 05.8**	**+0.4**
BRTR	**Keskin Array B**	**6.94**	**50**	Pn	**Pn**		**10 18 35.8**	**+3.1**
	0.1nm,0.3s,baz=231,slow=12,SNR=4.6							
	0.7nm,0.6s							
MMAI	**Mount Meron Ar**	**7.59**	**106**	Pn	**Pn**		**10 18 41.1**	**-0.4**
	1.1nm,0.3s,baz=283,slow=13,SNR=2.0							
MMAI				Sn	**Sn**		**10 20 07.4**	**+0.1**
	1.7nm,0.3s,baz=358,slow=34,SNR=2.1							
	0.5nm,0.3s							
EIL	**Elat**	**9.03**	**127**	Pn	**Pn**		**10 19 00.3**	**-0.9**
	0.3nm,0.3s,baz=19,slow=18,SNR=2.4							
EIL				Sn	**Sn**		**10 20 36.6**	**-6.0**
	1.3nm,0.3s,baz=36,slow=20,SNR=5.3							
	4.6nm,0.7s							
ASF	**Jabal al Asfar**	**9.07**	**108**	Sn	**Sn**		**10 20 41.8**	**-2.1**
	0.2nm,0.3s,baz=295,slow=22,SNR=2.4							
AKASG	**Malin Array Be**	**15.34**	**6**	Pn	**Pn**		**10 20 25.7**	**-1.5**
	0.8nm,0.3s,baz=198,slow=12,SNR=2.9							
	0.2nm,0.4s							
GERES	**GERESS Array B**	**16.46**	**328**	Pn	**P**		**10 20 44.6**	**+0.1**
	baz=146,slow=13,SNR=4.3							
	0.7nm,0.7s							
ESDC	**Sonseca Array**	**24.62**	**289**	P	**P**		**10 22 11.9**	**+0.6**
	0.4nm,0.6s,baz=85,slow=10,SNR=4.3							
	0.4nm,0.6s							
FINES	**FINESS Array B**	**26.00**	**359**	P	**P**		**10 22 23.2**	**-0.2**
	0.7nm,0.7s,baz=169,slow=8.2,SNR=3.5							
	0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.67**	**232**	P	**P**		**10 23 13.0**	**-1.3**
	0.4nm,0.6s,baz=30,slow=8.8,SNR=2.3							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**39.93**	**51**	P	**P**		**10 24 25.1**	**+0.3**
	0.5nm,0.6s,baz=277,slow=8.9,SNR=4.1							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**42.54**	**57**	P	**P**		**10 24 46.8**	**+0.4**
	0.3nm,0.5s,baz=265,slow=8.4,SNR=5.1							
MKAR				LR	LR		10 43 54.0	
	comp=Z,67nm,18.8s,baz=194,slow=38							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**43.87**	**46**	P	**P**		**10 24 57.7**	**+0.8**
	0.9nm,0.6s,baz=282,slow=8.7,SNR=4.2							
	0.9nm,0.6s							

*IDC **17** 10:26:37.3±0.7,23˚.19N×93˚.44E,h0km,mb3.9/16, mbtmp3.9/18,ML4.3/2,MS3.5/7,Error ellipse: s-maj=19.8km s-min=14.5km az=51.0*
*NEIC **17** 10:26:38.9±0.8,23˚.12N±0˚.03×93˚.38E±0˚.05,h10km±1km, mb4.4/38,Error ellipse: s-maj=8.3km s-min=5.0km az=247.0*
*GFZ **17** 10:26:41.0±0.4,23˚.N±5˚×9˚.3E±˚,h10km,M4.4/9,mb4.4/9, confirmed*
*NDI **17** 10:26:40.8±2.6,23˚.23N×93˚.44E,h10km,ML3.7,MW4.0, Presumed earthquake*

ISC 17 10:26:38.8±0.4,23˚.15N±0˚.04×93˚.36E±0˚.04,h10km,n101, σ1°§20/103,mb4.2/37,MS3.4/6,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.38**	**38**			**Pg**	**10 27 05.5**	**+0.3**
BRDH	**Bariadhala**	**1.66**	**254**	Pn		**Pb**	**10 27 08.8**	**-0.5**
	104nm,0.3s,baz=71,slow=14,SNR=24							
BRDH				Sn		**Sg**	**10 27 32.8**	**+0.7**
	289nm,0.3s,baz=237,slow=19,SNR=15							
SILR	**SILCHAR**	**1.70**	**343**	*eP*		**Pn**	**10 27 08.8**	**+0.3**
SILR				*eS*		**Sn**	**10 27 31.4**	**+1.1**
SILR				IAML			10 27 46.2	
	comp=N,2μm,0.7s							
SILR				IAML			10 27 49.2	
	comp=E,2μm,0.5s							
IMP	**Imphal**	**1.75**	**18**	*eP*		**Pb**	**10 27 11.4**	**+0.3**
IMP				IAML			10 27 51.5	
	comp=N,234nm,0.8s							
IMP				IAML			10 27 51.8	
	comp=E,297nm,1.4s							
BELO	**BELONIA**	**1.77**	**273**	*eP*		**Pg**	**10 27 13.1**	**+0.5**
BELO				*eS*		**Sg**	**10 27 36.7**	**+1.1**
BELO				IAML			10 27 50.9	
	comp=E,45μm,0.8s							
KOHI	**KOHIMA**	**2.64**	**15**	*eP*		**Pn**	**10 27 23.3**	**+1.6**
KOHI				*eS*		**Sn**	**10 27 54.9**	**+1.0**
KOHI				IAML			10 27 58.8	
	comp=E,279nm,0.9s							
KOHI				IAML			10 28 00.6	
	comp=N,449nm,1.3s							
SHL	**Shillong**	**2.76**	**331**			**Pn**	**10 27 22.4**	**-0.8**
SHL	**Shillong**	**2.76**	**331**	*eP*		**Pn**	**10 27 24.6**	**+1.4**
SHL				*ex*		x	10 27 52.9	
SHL				IAML			10 28 01.9	
	comp=E,158nm,0.3s							
SHL				IAML			10 28 05.0	
	comp=N,246nm,1.5s							
GUWA	**GUWAHATI**	**3.39**	**334**	*eP*		**Pn**	**10 27 34.1**	**+2.4**
GUWA				*eS*		**Sn**	**10 28 12.2**	**+0.3**
TEZP	**TEZPUR**	**3.49**	**352**	*eP*		**Pn**	**10 27 32.4**	**-0.7**
TEZP				*eS*		**Sn**	**10 28 12.4**	**-2.0**
NPW	**Naypyitaw**	**4.24**	**142**	P		**Pn**	**10 27 47.4**	**+4.0**
CHIO	**Chiang Mai**	**6.77**	**129**	P		**Pn**	**10 28 21.9**	**+3.6**
BOK	**Bokaro**	**6.90**	**277**	*eP*		**Pn**	**10 28 20.4**	**+0.5**
BOK				*eS*		**Sn**	**10 29 36.5**	**-2.0**
CMAR	**Chiang Mai Arr**	**7.00**	**131**	Pn		**Pn**	**10 28 22.4**	**+0.9**
	comp=N,1.4nm,0.3s,baz=307,slow=14,SNR=33							
CMAR				LR		LR	10 31 45.2	
	comp=N,160nm,18.1s,baz=210,slow=44							
	comp=N,2.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**7.00**	**131**			**Pn**	**10 28 20.6**	**-0.8**
CRAI	**Chiangrai**	**7.14**	**113**	Pn		**Pn**	**10 28 22.5**	**-0.8**
EVN	**Everest**	**7.60**	**310**			**Pn**	**10 28 30.6**	**+0.3**
EVN	**Everest**	**7.60**	**310**	P		**Pn**	**10 28 30.1**	**-0.1**
PZH	**PanZhiHua**	**8.31**	**65**	P		Pn	10 28 47.1	+7.6
PZH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
KMI2	**Kunming**	**8.80**	**75**	Pn		Pn	10 28 51.3	+5.0
KMI2				LR		LR		
	comp=N,490nm,15.5s							
KMI2				LR		LR		
	comp=E,300nm,9.1s							
KMI2				LR		LR		
	comp=Z,250nm,10.8s							
RAGD	**RAYAGADA**	**10.02**	**249**	*eP*		**Pn**	**10 29 04.5**	**+1.6**
RAGD				*eS*		**Sn**	**10 30 52.7**	**-2.8**
NGP	**Nagpur**	**13.41**	**264**	*eP*		**Pn**	**10 29 51.9**	**+2.6**
NGP				*eS*		Sn	10 32 09.4	-9.0
PTH	**Pithoragarh**	**13.42**	**301**	*eP*		**Pn**	**10 29 49.8**	**+0.4**
PTH				*eS*		Sn	10 32 10.1	-8.7
LZDM	**Lanzhou Array**	**15.59**	**33**	Pn		**Pn**	**10 30 16.3**	**-2.6**
	baz=232,slow=11							
LZDM				LR		LR	10 37 39.2	
	comp=Z,294nm,21.3s,baz=100,slow=43							
	comp=Z,1.6nm,0.3s							

NIL	**Nilore**	**20.52**	**305**			**P**	**10 31 17.1**	**-0.1**	
NIL				IAmb		IAmb	10 31 17.8		
	comp=Z,15nm,1.0s								
NIL	**Nilore**	**20.52**	**305**	P		**P**	**10 31 17.1**	**-0.1**	
RPSI	**Rantau Prapat**	**21.04**	**164**	P		**P**	**10 31 22.4**	**-0.6**	
WMQ	**Urumqi**	**21.14**	**349**	*eP*		**P**	**10 31 27.1**	**+3.2**	
WMQ				pmax		pmax			
	comp=Z,9.0nm,0.9s								
WMQ				LR		LR			
	comp=Z,57nm,22.9s								
WUS	**Wushi**	**21.56**	**330**	P		**P**	**10 31 27.9**	**-0.7**	
WUS				IAmb		IAmb	10 31 36.4		
	comp=Z,12nm,1.0s								
KSH2	**Kashi**	**21.98**	**321**	P		**P**	**10 31 37.0**	**+3.9**	
KSH2				sP		sP	10 31 45.8	+8.0	
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
TARG	**Taragay, Kyrgy**	**22.64**	**329**			**P**	**10 31 40.6**	**+0.2**	
TARG				IAmb		IAmb	10 31 50.2		
	comp=Z,9.0nm,1.1s								
TARG	**Taragay, Kyrgy**	**22.64**	**329**	P		**P**	**10 31 42.7**	**+2.3**	
ASAI	**AK-SAY(Kyrgyzs**	**22.68**	**325**	P		**P**	**10 31 41.3**	**+0.5**	
PDGK	**Podgornoye**	**23.17**	**334**			**P**	**10 31 45.7**	**+0.1**	
KDJ	**Kajisay**	**23.25**	**328**	P		**P**	**10 31 47.0**	**+0.5**	
KDJ	**Kajisay**	**23.25**	**328**	P		**P**	**10 31 50.2**	**+3.8**	
HHC	**Hu-ho-hao-te**	**23.36**	**37**	*eP*		**P**	**10 31 47.3**	**-0.2**	
HHC				pmax		pmax			
	comp=Z,12nm,0.8s								
MANEM	**Manem**	**23.50**	**313**			**P**	**10 31 48.8**	**-0.4**	
MANEM				IAmb		IAmb	10 31 55.6		
	comp=Z,27nm,0.9s								
MYKOM	**Kota Tinggi**	**23.55**	**153**	P		**P**	**10 31 48.9**	**-0.5**	
MYKOM				IAmb		IAmb	10 32 32.3		
	comp=Z,15nm,1.5s								
BOOM	**Boomskoye usch**	**24.12**	**327**	P		**P**	**10 31 55.2**	**+0.2**	
BOOM				IAmb		IAmb	10 32 22.5		
	comp=Z,8.1nm,1.1s								
AAK	**Ala-Archa**	**24.97**	**326**	P		**P**	**10 32 02.7**	**+0.1**	
	comp=Z,1.3nm,0.2s,baz=208,slow=12,SNR=1.5								
AAK				LR		LR	10 44 11.5		
	comp=Z,60nm,19.2s,baz=165,slow=42								
	comp=Z,1.3nm,0.2s								
AAK	**Ala-Archa**	**24.97**	**326**	P		**P**	**10 32 01.9**	**-0.7**	
GAR	**Garm**	**25.18**	**314**	P		**P**	**10 32 04.3**	**-0.2**	
GAR				IAmb		IAmb	10 32 16.9		
	comp=Z,12nm,0.9s								
GAR	**Garm**	**25.18**	**314**	P		**P**	**10 32 04.3**	**-0.2**	
MKAR	**Makanchi Array**	**25.22**	**342**	P		**P**	**10 32 04.5**	**-0.2**	
	comp=Z,3.5nm,0.7s,baz=156,slow=9.3,SNR=17								
	comp=Z,3.5nm,0.7s								
MAKZ	**Makanchi**	**25.32**	**342**			**P**	**10 32 05.5**	**-0.2**	
MAKZ				IAmb		IAmb	10 32 11.1		
	comp=Z,6.0nm,1.0s								
MAKZ	**Makanchi**	**25.32**	**342**	P		**P**	**10 32 05.7**	**+0.1**	
BTK	**Batken**	**25.44**	**317**			**P**	**10 32 06.3**	**-0.5**	
BTK

comp=Z,0.3nm,0.9s,baz=345,slow=3.1,SNR=3.5

IDC ***17*** *10:31:09.2±3.3,35°.55N×81°.90E, h0km, mb3.4/3, mbtmp3.5/6, ML3.0/3, Error ellipse: s-maj=60.3km s-min=31.6km az=48.0*

ISC 17 10:31:11.5±2.4, 35°.7N±0°.2×81°.9E±0°.4, h10km, n7, σ1s01/7, mb3.5/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**9.00**	**323**	Pg	Pg	10 33 55.6	-8.2
	0.6nm,0.3s,baz=210,slow=16,SNR=4.0						
AAK				Lg	Lg	10 35 58.2	
	0.2nm,0.3s,baz=207,slow=14,SNR=1.4						
MKAR	**Makanchi Array**	**11.12**	**2**	Pn	**Pn**	**10 33 52.1**	**+1.6**
	1.0nm,0.3s,baz=187,slow=13,SNR=16						
MKAR				Sn	**Sn**	**10 35 54.1**	**-0.7**
	0.1nm,0.3s,baz=182,slow=25,SNR=4.8						
	2.2nm,0.6s						
KURBB	**Kurchatov Arra**	**15.13**	**352**	Pn	**Pn**	**10 34 45.1**	**-0.2**
	baz=175,slow=12,SNR=6.7						
	1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**18.39**	**6**	P	**Pn**	**10 35 25.5**	**-1.0**
	0.1nm,0.3s,baz=185,slow=13,SNR=4.0						
	0.9nm,0.7s						
SONM	**Songino Array**	**21.87**	**49**	P	**P**	**10 36 04.5**	**0.0**
	0.4nm,0.4s,baz=253,slow=9.8,SNR=2.5						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**72.88**	**20**	P	**P**	**10 42 40.4**	**+0.1**
	0.4nm,0.9s,baz=332,slow=6.6,SNR=2.8						
	0.4nm,0.9s						
YKA	**Yellowknife Ar**	**81.28**	**8**	P	**P**	**10 43 27.2**	**-0.3**
	0.4nm,0.9s,baz=357,slow=4.9,SNR=3.8						
	0.4nm,0.9s						

IDC ***17*** *10:35:34.3±0.7, 17°.29S×167°.76E, h0km, mb4.3/15, mbtmp4.2/17, ML4.2/2, MS3.5/9, Error ellipse: s-maj=22.5km s-min=17.4km az=136.0*
NOU ***17*** *10:35:36.8, 17°.38S×167°.80E, h15km, MLv5.2/17, Vanuatu Islands*
NEIC ***17*** *10:35:36.8±1.5, 17°.39S±0°.10×167°.82E±0°.09, h10km±1km, mb4.6/22, Error ellipse: s-maj=17.4km s-min=13.8km az=148.0*

ISC 17 10:35:36.0±0.4, 17°.37S±0°.06×167°.77E±0°.05, h10km, n90, σ0s86/85, mb4.5/20, MS3.4/6, 2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.53**	**132**	P	**Pb**	**10 35 48.4**	**+0.9**
DVP	**Devils Point**	**0.53**	**132**	S	**Sb**	**10 35 57.2**	**+2.0**
RTV	**Rentapao**	**0.75**	**124**	P	**Pb**	**10 35 51.8**	**+0.6**
RTV	**Rentapao**	**0.75**	**124**	S	**Sn**	**10 36 02.7**	**-1.5**
MARNC	**Mare, Loyalty**	**4.10**	**177**	P	**Pn**	**10 36 38.2**	**-0.5**
MARNC	**Mare, Loyalty**	**4.10**	**177**		**Pn**	**10 36 38.3**	**-0.5**
KOUNC	**Koumac, New Ca**	**4.57**	**226**	P	**Pn**	**10 36 45.8**	**+0.5**
KOUNC	**Koumac, New Ca**	**4.57**	**226**		**Pn**	**10 36 45.4**	**+0.2**
DZM	**Mont Dzumac**	**4.84**	**195**	Pn	**Pn**	**10 36 49.2**	**+0.1**
	6.7nm,0.3s,baz=70,slow=9.1,SNR=48						
DZM				Sn	**Sn**	**10 37 41.7**	**-3.6**
	12nm,0.3s,baz=323,slow=20,SNR=7.4						
DZM				LR	LR	10 38 40.5	
	comp=Z,401nm,18.3s,slow=38						
	26nm,0.5s						
ONTNC	**Ouen Toro**	**5.07**	**194**		**Pn**	**10 36 52.9**	**+0.8**
OUENC	**Ouen Island, N**	**5.10**	**190**		**Pn**	**10 36 53.4**	**+0.9**
HURO	**Huro Hakira**	**8.92**	**320**	P	**Pn**	**10 37 45.8**	**+0.8**
MSVF	**Nonsavu**	**9.81**	**94**	Pn	**Pn**	**10 37 58.2**	**+0.8**
	0.1nm,0.3s,baz=275,slow=14,SNR=5.8						
MSVF				LR	LR	10 41 03.8	
	comp=Z,786nm,18.7s,baz=286,slow=34						
	1.5nm,0.5s						
MSVF	**Nonsavu**	**9.81**	**94**		**Pn**	**10 37 56.8**	**-0.5**
FUTU	**Fugatoga**	**13.91**	**79**	Pn	**Pn**	**10 38 51.1**	**-2.3**
AFI	**Afiamalu**	**19.99**	**83**	LR	LR	10 46 01.8	
	comp=Z,164nm,21.0s,baz=356,slow=31						
CTA	**Charters Tower**	**20.56**	**259**	P	**P**	**10 40 15.8**	**+0.8**
	11nm,0.9s,baz=75,slow=11,SNR=8.6						
CTA				LR	LR	10 47 48.3	
	comp=Z,249nm,18.1s,baz=114,slow=36						
	11nm,0.9s						
CTAO	**Charters Tower**	**20.56**	**259**	P	**P**	**10 40 16.4**	**+1.3**
CTAO				IAmb	IAmb	10 40 21.8	
	comp=Z,18nm,1.1s						
CAN	**Canberra**	**24.47**	**219**	P	**P**	**10 40 55.2**	**-0.2**
CAN				IAmb	IAmb	10 40 58.4	
	comp=Z,20nm,1.0s						
INKA	**Innaminka**	**26.95**	**243**	P	**P**	**10 41 17.3**	**-0.6**
STKA	**Stephens Creek**	**27.74**	**234**	P	**P**	**10 41 25.0**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=58,slow=9.0,SNR=8.5						
STKA				LR	LR	10 50 28.7	
	comp=Z,135nm,19.6s,baz=204,slow=32						
	comp=Z,4.0nm,0.7s						
RAR	**Rarotonga**	**30.84**	**102**	LR	LR	10 51 34.7	
	comp=Z,54nm,20.9s,baz=295,slow=31						
WB0	**Warramunga Arr**	**31.70**	**260**	P	**P**	**10 41 59.5**	**-0.8**
WB0				IAmb	IAmb	10 42 15.6	
	comp=Z,5.2nm,1.0s						
WRA	**Warramunga Arr**	**31.75**	**260**	P	**P**	**10 41 59.6**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=81,slow=6.0,SNR=35						
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**31.75**	**260**	P	**P**	**10 41 59.9**	**-0.7**
AS31	**Alice Springs**	**32.28**	**253**	P	**P**	**10 42 04.9**	**-0.4**
ASAR	**Alice Springs**	**32.28**	**253**	P	**P**	**10 42 04.5**	**-0.7**
	comp=Z,5.2nm,0.8s,baz=79,slow=8.8,SNR=67						
ASAR				LR	LR	10 54 53.3	
	comp=Z,202nm,18.0s,baz=38,slow=36						
	comp=Z,5.2nm,0.8s						
ASAR	**Alice Springs**	**32.28**	**253**	P	**P**	**10 42 04.2**	**-1.1**
BBOO	**Buckleboo**	**32.42**	**236**		**P**	**10 42 06.6**	**+0.3**
BBOO				IAmb	IAmb	10 42 38.1	
	comp=Z,27nm,1.4s						
KNRA	**Kununurra**	**37.39**	**267**	P	**P**	**10 42 48.9**	**-0.5**
KNRA				IAmb	IAmb	10 42 49.5	
	comp=Z,13nm,0.8s						
GUMO	**Guam**	**38.18**	**322**	LR	LR	11 00 39.2	
	comp=Z,37nm,18.3s,baz=124,slow=40						
FITZ	**Fitzroy Crossi**	**40.07**	**262**	P	**P**	**10 43 11.7**	**-0.2**
	comp=Z,15nm,0.8s,baz=107,slow=6.8,SNR=28						
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.07**	**262**	P	**P**	**10 43 12.1**	**+0.2**
MBWA	**Marble Bar**	**45.38**	**257**	P	**P**	**10 43 55.3**	**+0.3**
MORW	**Morawa**	**48.61**	**246**	P	**P**	**10 44 20.2**	**0.0**
JCJ	**Chichijima**	**50.70**	**330**	LR	LR	11 04 31.0	
	comp=Z,15nm,21.2s,baz=116,slow=34						
JMN	**Monobe**	**60.22**	**328**	P	**P**	**10 45 45.1**	**+0.5**
JMN				PcP	**PcP**	**10 46 30.1**	**+0.1**
MJAR	**Matsushiro Arr**	**60.46**	**333**	P	**P**	**10 45 44.5**	**-1.5**
	comp=Z,3.8nm,1.0s,baz=169,slow=7.7,SNR=6.5						
	comp=Z,3.8nm,1.0s						
MJAR	**Matsushiro Arr**	**60.46**	**333**	P	**P**	**10 45 45.7**	**-0.4**
MJAR				IAmb	IAmb	10 45 55.5	
	comp=Z,4.0nm,1.1s						
PETK	**Petropavlovsk-**	**70.72**	**354**	P	**P**	**10 46 50.9**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=160,slow=5.7,SNR=3.0						
	comp=Z,1.1nm,0.7s						
PETK	**Petropavlovsk-**	**70.72**	**354**	P	**P**	**10 46 52.3**	**+0.2**
QSPA	**South Pole Qui**	**72.67**	**180**	P	**P**	**10 47 04.4**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=12,slow=2.6,SNR=7.5						
	comp=Z,3.1nm,0.9s						
QSPA	**South Pole Qui**	**72.67**	**180**	P	**P**	**10 47 04.8**	**+0.8**
QSPA				IAmb	IAmb	10 47 15.1	
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**10 47 27.2**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=122,slow=5.5,SNR=1.8						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**10 47 26.5**	**-0.1**
BELA	**Belgrano 2**	**84.07**	**175**	P	**P**	**10 48 06.6**	**0.0**
SONM	**Songino Array**	**84.90**	**324**	P	**P**	**10 48 11.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=134,slow=5.2,SNR=10						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**84.90**	**324**	P	**P**	**10 48 12.1**	**+0.8**
SONM				IAmb	IAmb	10 48 12.7	
	comp=Z,3.7nm,1.1s						
NVAR	**Mina Array Bea**	**88.62**	**49**	P	**P**	**10 48 29.3**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=254,slow=6.6,SNR=3.2						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**88.62**	**49**	P	**P**	**10 48 29.9**	**0.0**
G04A	**Mulino**	**88.64**	**42**	P	**P**	**10 48 29.8**	**+0.4**
QSM	**Queen of Sheba**	**88.72**	**52**	P	**P**	**10 48 29.3**	**-0.8**
QSM				IAmb	IAmb	10 48 32.7	
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**88.88**	**18**	P	**P**	**10 48 28.2**	**-1.9**
	comp=Z,0.2nm,0.7s,baz=234,slow=6.2,SNR=2.4						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**88.88**	**18**	P	**P**	**10 48 31.0**	**+0.9**
D19K	**Kuna River**	**89.10**	**12**	P	**P**	**10 48 31.7**	**+0.5**
D19K				IAmb	IAmb	10 48 46.2	
	comp=Z,5.8nm,1.2s						
TROLL	**Troll, Antarti**	**90.28**	**185**	⇓P	**P**	**10 48 37.6**	**+0.6**
	comp=Z,86nm,0.7s						
G08A	**Pilot Rock**	**90.92**	**43**	P	**P**	**10 48 40.6**	**+0.3**
G08A				IAmb	IAmb	10 48 42.1	
	comp=Z,3.4nm,1.1s						
SNAA	**Sanae**	**90.95**	**183**	⇓P	**P**	**10 48 40.2**	**+0.2**
	comp=Z,24nm,0.7s						
SNAA	**Sanae**	**90.95**	**183**	P	**P**	**10 48 40.1**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=223,slow=9.2,SNR=5.0						
	comp=Z,0.8nm,0.5s						
SNAA	**Sanae**	**90.95**	**183**	P	**P**	**10 48 40.5**	**+0.5**
SNAA				IAmb	IAmb	10 48 57.1	
	comp=Z,4.8nm,1.2s						
VNA2	**Neumayer--Watz**	**91.87**	**182**	P	**P**	**10 48 45.7**	**+1.5**
	comp=Z,2.5nm,0.7s,baz=168,slow=4.9						
MKAR	**Makanchi Array**	**99.43**	**316**	P	**Pdif**	**10 49 19.9**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=96,slow=5.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**99.43**	**316**	P	**Pdif**	**10 49 18.3**	**-0.7**
ZALV	**Zalesovo Beam**	**99.79**	**323**	P	**Pdif**	**10 49 20.6**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=109,slow=3.5,SNR=2.5						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**99.79**	**323**		**Pdif**	**10 49 20.4**	**+0.1**
SPITS	**Spitsbergen Ar**	**117.59**	**354**	PKP	**PKPdf**	**10 54 20.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=46,slow=10,SNR=2.2						
ARCES	**ARCESS Array B**	**122.91**	**345**	PKP	**PKPdf**	**10 54 31.2**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=60,slow=2.2,SNR=7.6						
ARCES	**ARCESS Array B**	**122.91**	**345**		**PKPdf**	**10 54 31.8**	**-0.2**
FINES	**FINESS Array B**	**128.34**	**338**	PKP	**PKPdf**	**10 54 42.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=65,slow=4.7,SNR=4.5						
FINES	**FINESS Array B**	**128.34**	**338**		**PKPdf**	**10 54 42.3**	**-0.1**
NOA	**NORSAR Array B**	**133.28**	**345**	PKP	**PKPdf**	**10 54 51.5**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=35,slow=2.9,SNR=2.0						
GERES	**GERESS Array B**	**142.19**	**332**	PKP	**PKPdf**	**10 55 08.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=318,slow=1.8,SNR=6.0						
GERES	**GERESS Array B**	**142.19**	**332**	PKPdf	**PKPdf**	**10 55 09.5**	**+0.7**
LESA	**Schwarzleotal**	**143.70**	**331**	*e*PKP	PKPbc	10 55 09.7	+0.8
	comp=Z,2.0nm,0.3s						
PRED	**Cave del Predi**	**143.99**	**329**	PKPdf	**PKPdf**	**10 55 12.1**	**0.0**
UCC	**Uccle**	**144.11**	**342**	PKPdf	PKPbc	10 55 11.5	+1.5
ABTA	**Abfaltersbach**	**144.28**	**330**	*i* PKP	**PKPab**	**10 55 10.5**	**+0.1**
	comp=Z,2.3nm,0.6s						
WTTA	**Wattenberg**	**144.30**	**332**	*i* PKP	**PKPab**	**10 55 11.2**	**+0.7**
	comp=Z,4.4nm,0.6s						
MOTA	**Mosalm**	**144.47**	**332**	*i* PKP	PKPbc	10 55 12.4	+0.9
	comp=Z,2.7nm,0.6s						
WLF	**Walferdange**	**144.53**	**339**	PKPdf	**PKPab**	**10 55 12.0**	**+0.8**
FETA	**Feichten**	**144.89**	**332**	*i* PKP	**PKPab**	**10 55 13.6**	**+0.9**
	comp=Z,9.0nm,0.8s						
DAVA	**Damuels**	**145.05**	**333**	*i* PKP	**PKPbc**	**10 55 14.1**	**+0.8**
	comp=Z,2.6nm,0.3s						
ECH	**Echery**	**145.39**	**337**	PKPbc	**PKPbc**	**10 55 14.0**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**145.40**	**332**	PKPbc	**PKPdf**	**10 55 15.5**	**+0.8**
DAVOX	**Davos/Dischmat**	**145.44**	**333**	PKPbc	**PKPbc**	**10 55 15.1**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=24,slow=6.8,SNR=16						
SGRT	**San Giovanni R**	**145.88**	**321**	PKPdf	**PKPdf**	**10 55 15.1**	**-0.4**
SALO	**Salr**	**146.04**	**331**	PKPdf	**PKPdf**	**10 55 15.1**	**-0.4**
NRCA	**Norcia**	**146.71**	**325**	PKPdf	**PKPdf**	**10 55 16.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**165.93**	**255**	PKP	**PKPdf**	**10 55 41.6**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=141,slow=2.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**165.93**	**255**		**PKPdf**	**10 55 41.4**	**-0.9**

IDC ***17*** *10:43:03.4±4.3, 36°.23N×70°.81E, h154km±37km, mb3.6/11, mbtmp4.1/16, Error ellipse: s-maj=29.4km s-min=15.3km az=31.0*
NNC ***17*** *10:43:12.3±2.3, 36°.87N×70°.83E, h192km±28km, mb3.1, mpv4.4, Error ellipse: s-maj=22.8km s-min=13.9km az=23.0*

ISC 17 10:43:08.0±1.0, 36°.55N±0°.09×70°.9E±0°.1, h188km, n35, σ1s24/39, mb3.9/9, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.34**	**25**	P	**Pn**	**10 44 40.9**	**+1.0**
	SNR=119						
MRKS	**Merke**	**6.45**	**16**	Pg	**Pn**	**10 44 41.7**	**+0.7**
	90nm,0.5s						
MRKS				Lg	Lg	10 45 50.3	
	26nm,0.8s						
EKS2	**Erkin-Say**	**6.51**	**19**	P	**Pn**	**10 44 42.8**	**+1.0**
	SNR=34						
KK31	**Karatay Array**	**6.55**	**358**	P	**Pn**	**10 44 42.7**	**+0.5**
	7.1nm,0.3s,baz=191,slow=13,SNR=96						
KK31				⇑S	**Sn**	**10 45 53.2**	**-3.5**
	10.0nm,0.3s,baz=185,slow=23,SNR=8.3						
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**10 44 45.2**	**+1.0**
	20nm,0.4s,baz=205,slow=6.9,SNR=25						
AAK				S	**Sn**	**10 45 58.9**	**-1.5**
	11nm,0.7s,baz=133,slow=19,SNR=6.8						
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**10 44 45.4**	**+1.1**
	SNR=20						
AAK	**Ala-Archa**	**6.70**	**24**	⇓P	**Pn**	**10 44 45.1**	**+0.9**
	3.9nm,0.4s						
AAK				⇓S	**Sn**	**10 45 59.1**	**-1.3**
	5.3nm,0.6s						
KBK	**Karagaybulak**	**6.87**	**26**	P	**Pn**	**10 44 47.9**	**+1.4**
	SNR=11						
CHMS	**Chumysh**	**7.11**	**24**	P	**Pn**	**10 44 50.6**	**+1.1**
	SNR=6.5						
USP	**Ospenovka**	**7.27**	**22**	P	**Pn**	**10 44 52.4**	**+0.7**
	SNR=11						
TKM2	**Tokmak 2**	**7.34**	**28**	P	**Pn**	**10 44 53.5**	**+0.8**
	SNR=68						
SGDS	**Sogindy**	**7.48**	**22**	P	**Pn**	**10 44 54.3**	**-0.1**
KST	**Kastek**	**7.58**	**30**	P	**Pn**	**10 44 56.8**	**+1.0**
MTBS	**Maitube**	**7.85**	**31**	P	**Pn**	**10 45 00.5**	**+1.3**
TNSS	**Tian-Shan**	**8.00**	**34**	P	**Pn**	**10 45 02.1**	**+0.6**
MK31	**Makanchi Array**	**13.32**	**36**	⇑P	**Pn**	**10 46 10.1**	**+0.3**
	1.6nm,0.7s,baz=219,slow=9.6,SNR=15						
MKAR	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**10 46 09.3**	**-0.4**
	1.6nm,0.6s,baz=227,slow=14,SNR=15						
AB31	**Akbulak array**	**14.98**	**331**	⇓P	**Pn**	**10 46 32.1**	**+1.8**
	1.9nm,0.5s,baz=139,slow=12,SNR=28						
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**Pn**	**10 46 31.0**	**-0.9**
	0.8nm,0.5s,baz=201,slow=11,SNR=8.1						
BVA0	**Borovoye Array**	**16.48**	**359**	P	**P**	**10 46 49.6**	**+1.9**
	0.2nm,0.5s,baz=172,slow=7.7,SNR=7.7						
BVAR	**Borovoye Array**	**16.48**	**359**	P	**P**	**10 46 48.2**	**+0.5**
	2.7nm,0.5s,baz=169,slow=11,SNR=12						
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**P**	**10 46 50.6**	**+0.7**
	5.8nm,0.4s,baz=148,slow=9.5,SNR=23						
AKTO				S	**S**	**10 49 52.0**	**-2.2**
	1.0nm,0.5s,baz=169,slow=16,SNR=2.1						
AKTO	**Aktyubinsk**	**16.68**	**330**	⇓P	**P**	**10 46 50.0**	**+0.1**
	7.7nm,0.8s						
ZALV	**Zalesovo Beam**	**19.92**	**25**	P	**P**	**10 47 25.2**	**+0.2**
	2.9nm,0.5s,baz=220,slow=11,SNR=17						
	2.9nm,0.5s						
ARTI	**Arti**	**21.55**	**341**	P	**P**	**10 47 42.4**	**+0.1**
	1.4nm,0.3s,baz=199,slow=5.3,SNR=4.8						
	1.4nm,0.3s						
AKASG	**Malin Array Be**	**32.82**	**309**	P	**P**	**10 49 23.8**	**+0.3**
	1.8nm,0.6s,baz=83,slow=6.9,SNR=7.0						
	1.8nm,0.6s						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**10 50 03.3**	**+1.2**
	1.0nm,0.3s,baz=118,slow=11,SNR=19						
	1.0nm,0.3s						
ARCES	**ARCESS Array B**	**41.05**	**338**	P	**P**	**10 50 33.8**	**+1.3**
	2.7nm,0.6s,baz=115,slow=8.3,SNR=15						
	2.7nm,0.6s						
HFS	**Hagfors**	**42.95**	**322**	P	**P**	**10 50 48.9**	**+0.9**
	2.5nm,0.6s,baz=90,slow=11,SNR=11						
	2.5nm,0.6s						
NB2	**NORSAR Subarra**	**44.27**	**323**	P	**P**	**10 50 59.0**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**10 50 59.0**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=98,slow=7.7,SNR=7.1						
	comp=Z,1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.60**	**269**	P	**P**	**10 53 29.9**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=51,slow=5.5,SNR=8.0						
	comp=Z,0.6nm,0.5s						
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**10 55 03.2**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=351,slow=5.4,SNR=25						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**82.12**	**122**	P	**P**	**10 55 06.5**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=323,slow=4.9,SNR=15						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**84.38**	**125**	P	**P**	**10 55 18.0**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=311,slow=4.9,SNR=16						
	comp=Z,0.5nm,0.5s						

IDC ***17*** *10:45:12.8±1.3, 36°.46N×6°.39E, h0km, mb3.3/5, mbtmp3.4/8, ML3.5/3, MS2.7/1, Error ellipse: s-maj=24.7km s-min=22.3km az=7.0*

ISC 17 10:45:14.8±1.1, 36°.55N±0°.04×6°.38E±0°.05, h10km±8km, n20, σ0s89/20, mb3.3/4, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBHR	**Beni Haroun da**	**0.08**	**278**	P	**Pg**	**10 45 16.8**	**-0.5**
CBOS	**Bilal Ibnou Ra**	**0.24**	**349**	P	**Pg**	**10 45 20.2**	**+0.3**
CASM	**Ain Smara**	**0.31**	**162**	P	**Pg**	**10 45 21.1**	**+0.1**
COAT	**Oued Athmania**	**0.33**	**193**	P	**Pg**	**10 45 21.4**	**0.0**
CTEI	**Djebel Teioual**	**0.49**	**177**	P	**Pg**	**10 45 24.5**	**+0.1**
CSGS	**Sigus**	**0.50**	**147**	P	**Pb**	**10 45 25.6**	**-0.2**
CBST	**Bordj Sabath**	**0.60**	**104**	P	**Pb**	**10 45 27.7**	**+0.2**
CJSR	**Ain Djasser**	**0.77**	**207**	P	**Pg**	**10 45 30.6**	**+0.9**
CTGD	**Timgad**	**1.03**	**173**	P	**Pn**	**10 45 36.0**	**+0.6**
CRHA	**Rehia**	**1.29**	**127**	P	**Pn**	**10 45 39.7**	**+0.7**
CTCHA	**Tamokra**	**1.40**	**265**	P	**Pn**	**10 45 41.0**	**+0.6**
KEST	**Kesra**	**2.54**	**108**	Pn	**Pn**	**10 45 56.9**	**+0.7**
	26nm,0.3s,baz=293,slow=5.7,SNR=70						
KEST				Sn	**Sn**	**10 46 27.1**	**-0.1**
	4.2nm,0.3s,baz=10.0,slow=17,SNR=5.6						
	67nm,0.4s						
ESDC	**Sonseca Array**	**8.72**	**294**	Pn	**Pn**	**10 47 22.4**	**+1.3**
	0.3nm,0.3s,baz=101,slow=14,SNR=8.3						
	0.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.55**	**13**	LR	LR	10 51 41.9	
	comp=Z,38nm,18.2s,baz=76,slow=37						
GERES	**GERESS Array B**	**13.40**	**21**	Pn	**Pn**	**10 48 26.0**	**+0.9**
	baz=206,slow=13,SNR=1.3						
	0.2nm,0.3s						
AKASG	**Malin Array Be**	**21.64**	**42**	P	**P**	**10 50 03.9**	**-1.2**
	0.2nm,0.3s,baz=248,slow=9.8,SNR=1.3						
	0.2nm,0.3s						
BRTR	**Keskin Array B**	**21.64**	**73**	P	**P**	**10 50 03.7**	**-1.8**
	0.5nm,0.6s,baz=256,slow=12,SNR=1.6						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**23.68**	**191**	P	**P**	**10 50 25.1**	**-1.6**
	1.2nm,0.7s,baz=4.4,slow=11,SNR=6.4						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**55.56**	**54**	P	**P**	**10 54 50.4**	**0.0**
	0.7nm,0.6s,baz=283,slow=6.7,SNR=6.3						
	0.7nm,0.6s						
YKA	**Yellowknife Ar**	**70.56**	**335**	P	**P**	**10 56 29.4**	**-0.3**
	0.4nm,1.0s,baz=51,slow=5.7,SNR=2.4						
	0.4nm,1.0s						

TEH 17 10:57:33.8, 30°.56N×57°.34E, h8km±16km, ML3.7, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRM1	**Kerman Provinc**	**0.09**	**227**	Pg	Pg	10 57 36.5	+0.4
KRM1				Sg	Sg	10 57 38.2	+0.4
CHMN	**Cheshme madani**	**0.72**	**166**	Pg	Pg	10 57 48.0	+0.3
CHMN				Sg	Sg	10 57 57.9	+0.9
KRBR	**Kerman**	**0.77**	**221**	Pg	Pb	10 57 49.8	+0.2
KHGB	**Koh Gabri**	**0.77**	**256**	Pg	Pg	10 57 48.5	-0.2
ZRDN	**Zarand Kerman**	**0.81**	**300**	Pg	Pg	10 57 49.5	+0.2
NGRK	**Negar Kerman**	**1.06**	**210**	Pg	Pb	10 57 54.4	-0.2
KBAM	**BAM**	**1.72**	**146**	Pg	Pb	10 58 06.0	+0.3
IBAF	**Bafgh**	**1.84**	**304**	Pn	Pb	10 58 07.8	0.0
BSRN	**Basiran**	**2.07**	**47**	Pn	Pb	10 58 11.4	-0.3
IKOO	**Kooshah**	**2.34**	**37**	Pn	Pn	10 58 14.4	+1.6
NHDN	**Nehbandan**	**2.47**	**70**	Pn	Pn	10 58 16.1	+1.6
IMEH	**Mehriz**	**2.49**	**290**	Pn	Pn	10 58 16.8	+1.9
TPRV	**Parvad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**16.86**	**55**	Pn	**Pn**	**11 10 42.7**	**+0.1**
	baz=257,slow=13						
EKA				LR	LR	11 16 04.1	
	comp=Z,539nm,18.1s,baz=206,slow=33						
	3.4nm,0.9s						
EDMD	**Edmundbyers**	**17.40**	**57**	P	**P**	**11 10 50.5**	**-0.3**
ESDC	**Sonseca Array**	**18.95**	**107**	P	**P**	**11 11 06.5**	**-1.5**
	0.3nm,0.3s,baz=295,slow=13,SNR=6.1						
ESDC				LR	LR	11 17 01.7	
	comp=Z,252nm,19.4s,baz=291,slow=32						
	0.6nm,0.9s						
ESDC	**Sonseca Array**	**18.95**	**107**	P	**P**	**11 11 08.2**	**+0.2**
CLF	**Chambon-Foret**	**19.99**	**79**	P	**P**	**11 11 17.9**	**-1.3**
CLF	**Chambon-Foret**	**19.99**	**79**	P	**Pn**	**11 11 21.6**	**+0.7**
UCC	**Uccle**	**20.97**	**70**		**P**	**11 11 29.5**	**-0.3**
UCC	**Uccle**	**20.97**	**70**	*d*P	**P**	**11 11 30.0**	**+0.2**
UCC	**Uccle**	**20.97**	**70**	P	**P**	**11 11 30.2**	**+0.4**
CEST	**Esterri de Car**	**20.98**	**94**		**P**	**11 11 30.0**	**-0.2**
DOU	**Dourbes**	**21.19**	**72**	*d*P	**P**	**11 11 32.5**	**+0.3**
	comp=Z,7.8nm,1.2s						
BMRD	**Maredsous**	**21.28**	**71**	*d*P	**P**	**11 11 33.1**	**0.0**
BMRD				*d*PP	**PnPn**	**11 11 52.7**	**+0.1**
RCHB	**Rochefort**	**21.59**	**72**	*d*P	**P**	**11 11 37.1**	**+0.7**
RCHB				*d*PP	**PnPn**	**11 11 56.9**	**+0.1**
RCHB	**Rochefort**	**21.59**	**72**	P	**P**	**11 11 37.3**	**+0.8**
BCLA	**Clavier**	**21.60**	**71**	*d*P	**P**	**11 11 36.0**	**-0.6**
	comp=Z,7.8nm,1.4s						
BCLA				*d*PP	**PnPn**	**11 11 54.1**	**-2.9**
HGN	**Heimansgroeve**	**21.97**	**70**	P	**P**	**11 11 41.1**	**+0.6**
MEM	**Membach**	**22.03**	**70**	*d*P	**P**	**11 11 41.1**	**-0.2**
MEM	**Membach**	**22.03**	**70**	P	**P**	**11 11 41.3**	**0.0**
BTNL	**Ternell**	**22.11**	**70**	*d*P	**P**	**11 11 43.3**	**+1.1**
BTNL				*d*PP	**PnPn**	**11 12 02.9**	**-1.1**
SSB	**Saint Sauveur**	**22.21**	**85**	P	**P**	**11 11 43.3**	**+0.1**
SSB	**Saint Sauveur**	**22.21**	**85**	P	**P**	**11 11 45.2**	**+2.0**
SFJD	**Kangerlussuaq**	**22.48**	**336**	LR	LR	11 18 36.2	
	comp=Z,194nm,20.4s,baz=128,slow=32						
BUG	**Bochum--Univer**	**22.74**	**68**	P	**P**	**11 11 49.7**	**+0.9**
MD31	**MD31**	**22.93**	**123**	P	**P**	**11 11 50.7**	**-0.3**
TIO	**Tiouine**	**23.07**	**130**	P	**P**	**11 11 52.7**	**+0.2**
ECH	**Echery**	**23.16**	**76**		**P**	**11 11 52.2**	**-1.1**
ECH				IAmb	IAmb	11 11 55.3	
	comp=Z,55nm,2.0s						
ECH	**Echery**	**23.16**	**76**	P	**P**	**11 11 53.6**	**+0.3**
SENIN	**Lac Senin/Sane**	**23.72**	**81**		**P**	**11 11 59.1**	**+0.1**
RETH	**Rethem/Aller,**	**23.94**	**65**	P	**P**	**11 12 01.1**	**+0.3**
CLZ	**Clausthal**	**24.63**	**67**	P	**P**	**11 12 06.9**	**-0.3**
JMIC	**Jan Mayen**	**24.84**	**15**	LR	LR	11 19 46.6	
	comp=Z,170nm,18.1s,baz=196,slow=31						
TUE	**Stuetta**	**25.05**	**79**		**P**	**11 12 12.5**	**+1.3**
TUE				IAmb	IAmb	11 12 15.7	
	comp=Z,35nm,1.5s						
TUE	**Stuetta**	**25.05**	**79**	P	**P**	**11 12 12.0**	**+0.8**
	comp=Z,59nm,1.8s						
TUE	**Stuetta**	**25.05**	**79**	P	**P**	**11 12 11.3**	**+0.1**
SCHQ	**Schefferville**	**25.12**	**301**	P	**P**	**11 12 10.4**	**-1.2**
	comp=Z,11nm,1.2s,baz=84,slow=9.5,SNR=6.8						
SCHQ				LR	LR	11 20 12.9	
	comp=Z,194nm,19.6s,baz=80,slow=32						
	comp=Z,11nm,1.2s						
SCHQ	**Schefferville**	**25.12**	**301**	P	**P**	**11 12 10.8**	**-0.8**
DAVA	**Damuels**	**25.17**	**77**	*i* P	**P**	**11 12 14.0**	**+1.7**
	comp=Z,19nm,1.5s						
DAVA	**Damuels**	**25.17**	**77**	P	**P**	**11 12 11.7**	**-0.6**
SUMG	**Summit**	**25.20**	**352**		**P**	**11 12 12.2**	**-0.4**
SUMG	**Summit**	**25.20**	**352**	P	**P**	**11 12 12.8**	**+0.2**
DAVOX	**Davos/Dischmat**	**25.31**	**79**	LR	LR	11 21 18.2	
	comp=Z,273nm,20.7s,baz=259,slow=34						
GRA3	**Grafenberg Arr**	**25.53**	**71**	P	**P**	**11 12 17.0**	**+1.7**
NOA	**NORSAR Array B**	**25.67**	**45**	P	**P**	**11 12 15.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=258,slow=9.9,SNR=3.7						
NOA				LR	LR	11 21 10.2	
	comp=Z,118nm,20.1s,baz=260,slow=34						
	comp=Z,0.6nm,0.8s						
RETA	**Reutte**	**25.69**	**77**	*i* P	**P**	**11 12 19.0**	**+2.0**
	comp=Z,8.9nm,1.4s						
BATG	**Bathurst New B**	**25.71**	**283**	P	**P**	**11 12 17.0**	**0.0**
FETA	**Feichten**	**25.80**	**78**	*e*pP	pP	11 12 20.8	+0.6
	comp=Z,5.2nm,0.7s						
MOTA	**Moosalm**	**25.95**	**77**	*i* pP	pP	11 12 22.3	+0.7
	comp=Z,11nm,1.1s						
SQTA	**Sankt Quirin**	**26.06**	**77**	*e*pP	pP	11 12 23.1	+0.6
	comp=Z,6.5nm,0.8s						
NKC	**Novy Kostel**	**26.16**	**70**	AMS	AMS	11 22 40.0	
	comp=Z,200nm,13.1s						
WATA	**Walderalm**	**26.27**	**77**	*e*pP	pP	11 12 23.8	-0.7
	comp=Z,4.9nm,0.6s						
WTTA	**Wattenberg**	**26.32**	**77**	*i* P	**P**	**11 12 23.5**	**+0.7**
	comp=Z,18nm,1.5s						
CLL	**Collm**	**26.33**	**67**	P	**P**	**11 12 22.9**	**+0.4**
CLL	**Collm**	**26.33**	**67**	*e*P	**P**	**11 12 22.0**	**-0.5**
CLL				*e*PPP	PPP	11 13 11.0	
CLL				AMS	AMS	11 21 00.0	
	comp=Z,200nm,20.8s						
HFS	**Hagfors**	**26.70**	**47**	LR	LR	11 21 33.4	
	comp=Z,108nm,21.9s,baz=268,slow=33						
LESA	**Schwarzleotal**	**26.96**	**76**	*i* P	**P**	**11 12 32.8**	**+4.4**
	comp=Z,15nm,1.6s						
BRG	**Berggiesshubel**	**26.98**	**68**	*e*P	**P**	**11 12 29.3**	**+0.8**
BRG				Amp		11 12 33.4	
	comp=Z,7.3nm,1.2s						
KHC	**Kasperske Hory**	**27.11**	**72**	AMS	AMS	11 23 20.0	
	comp=Z,400nm,16.4s						
KHC	**Kasperske Hory**	**27.11**	**72**	P	**P**	**11 12 29.8**	**+0.2**
	comp=Z,3.7nm,1.5s						
FRB	**Frobisher Bay**	**27.24**	**321**	LR	LR	11 21 08.9	
	comp=Z,92nm,18.6s,baz=339,slow=32						
GERES	**GERESS Array B**	**27.25**	**72**	P	**P**	**11 12 31.1**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=275,slow=7.9,SNR=8.4						
	comp=Z,1.1nm,0.7s						
GERES	**GERESS Array B**	**27.25**	**72**	P	**P**	**11 12 30.2**	**-0.8**
ZVC	**Zvikov**	**27.43**	**71**	AMS	AMS	11 23 00.0	
	comp=Z,400nm,20.6s						
KBA	**Koelnbreinsper**	**27.50**	**76**	*e*P	**P**	**11 12 37.3**	**+4.0**
	comp=Z,2.8nm,0.7s						
CKRC	**Cesky Krumlov**	**27.65**	**72**	AMS	AMS	11 23 30.0	
	comp=Z,400nm,14.4s						
MYKA	**Terra Mystica**	**27.82**	**77**	*e*pP	pP	11 12 37.8	-0.5
	comp=Z,9.6nm,1.4s						
UPC	**Upice**	**28.34**	**68**	AMS	AMS	11 24 00.0	
	comp=Z,200nm,14.8s						
CHVC	**Chvalec**	**28.35**	**68**	AMS	AMS	11 24 00.0	
	comp=Z,200nm,13.4s						
OBKA	**Obir**	**28.46**	**77**	*e*pP	pP	11 12 45.5	+1.4
	comp=Z,12nm,1.4s						
OSTC	**Ostas**	**28.46**	**68**	AMS	AMS	11 24 10.0	
	comp=Z,200nm,17.4s						
DPC	**Dobruska-Polom**	**28.57**	**69**	AMS	AMS	11 24 10.0	
	comp=Z,200nm,14.9s						
ARSA	**Arzberg**	**28.86**	**75**	*i* pP	pP	11 12 46.6	-1.0
	comp=Z,4.9nm,1.1s						
VRAC	**Vranov**	**28.98**	**71**	LR	LR	11 24 15.4	
	comp=Z,252nm,18.5s,baz=283,slow=36						
RONA	**Rosalia, Austr**	**29.23**	**74**	*i* pP	pP	11 12 51.4	+0.6
	comp=Z,2.2nm,0.7s						
KEST	**Kesra**	**29.87**	**100**	P	**P**	**11 12 55.8**	**+1.4**
	comp=Z,7.7nm,1.0s,baz=27,slow=2.3,SNR=4.4						
KEST				LR	LR	11 23 07.7	
	comp=Z,185nm,21.0s,baz=49,slow=33						
	comp=Z,7.7nm,1.0s						
KEST	**Kesra**	**29.87**	**100**	P	**P**	**11 12 54.1**	**-0.3**
KEST				IAmb	IAmb	11 12 57.9	
	comp=Z,34nm,1.6s						
OJC	**Ojcow**	**30.77**	**68**	P	**P**	**11 13 02.6**	**+0.4**
	comp=Z,4.4nm,1.4s						
PSZ	**Piszkesteto**	**31.48**	**72**	P	**P**	**11 13 07.9**	**-0.5**
PSZ				IAmb	IAmb	11 13 11.0	
	comp=Z,31nm,1.6s						
PSZ	**Piszkesteto**	**31.48**	**72**	P	**P**	**11 13 09.7**	**+1.2**
TRQ	**Mont Tremblant**	**31.59**	**285**	P	**P**	**11 13 09.1**	**-0.3**
VAE	**Valguarnera**	**32.28**	**93**	LR	LR	11 25 09.0	
	comp=Z,122nm,19.8s,baz=342,slow=34						
FINES	**FINESS Array B**	**32.84**	**46**	P	**P**	**11 13 21.4**	**+1.3**
	comp=Z,2.6nm,1.0s,baz=242,slow=4.1,SNR=4.0						
FINES				LR	LR	11 25 51.1	
	comp=Z,144nm,19.8s,baz=261,slow=35						
	comp=Z,2.6nm,1.0s						
FINES	**FINESS Array B**	**32.84**	**46**	P	**P**	**11 13 20.1**	**-0.1**
ARCES	**ARCESS Array B**	**33.42**	**31**	P	**P**	**11 13 25.3**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=252,slow=12,SNR=9.8						
ARCES				LR	LR	11 24 28.9	
	comp=Z,99nm,19.9s,baz=288,slow=32						
	comp=Z,5.0nm,0.9s						
NACGM	**Naroch**	**33.90**	**57**	*e*P	**P**	**11 13 30.0**	**+0.5**
RNPP1	**Kostyukhnivka**	**34.13**	**64**	P	**P**	**11 13 29.8**	**-1.8**
RNPP8	**Varash**	**34.19**	**64**	P	**P**	**11 13 31.5**	**-0.6**
RNPP9	**Sopachiv**	**34.19**	**64**	P	**P**	**11 13 31.1**	**-1.0**
RNPP5	**Staryi Chortor**	**34.24**	**64**	P	**P**	**11 13 32.4**	**-0.1**
PHP	**Peshkopia**	**34.24**	**82**	P	**P**	**11 13 34.2**	**+1.4**
SPITS	**Spitsbergen Ar**	**34.52**	**15**	P	**P**	**11 13 34.2**	**-0.4**
	comp=Z,7.3nm,1.1s,baz=233,slow=9.2,SNR=3.7						
	comp=Z,7.3nm,1.1s						
MNK	**Minsk**	**34.61**	**58**	*i* P	**P**	**11 13 35.1**	**-0.5**
	comp=E,18nm,0.7s,baz=283						
MNK				*i* P	**P**	**11 13 35.1**	**-0.5**
	comp=N,6.0nm,0.8s						
MNK				*i* P	**P**	**11 13 35.1**	**-0.5**
	comp=Z,6.0nm,0.7s						
MNK				*i* PP	**PnPn**	**11 14 50.3**	**-0.6**
MNK				*i* PPP	PPP	11 15 02.2	
MNK				*i* S	**S**	**11 19 04.6**	**0.0**
MNK				*i* SS	SnSn	11 20 57.1	-19
MNK				*i* SSS	SSS	11 21 32.8	
MNK				*i* LQ	LQ	11 24 34.6	
MNK				*i* LR	LR	11 26 38.5	
MNK				*i* LRM	MLR	11 28 30.7	
	comp=Z,81nm,12.6s						
MNK				*i* LRM	MLR	11 28 36.9	
	comp=N,119nm,16.3s						
MNK				*i* LRM	MLR	11 28 44.5	
	comp=E,116nm,16.8s						
BUR08	**Bucovina Ar. S**	**34.94**	**70**	P	**P**	**11 13 37.8**	**-0.9**
BUR08				IAmb	IAmb	11 13 41.7	
	comp=Z,27nm,1.6s						
BURAR	**Bucovina Array**	**34.96**	**70**		**P**	**11 13 38.5**	**-0.5**
SADO	**Sadowa**	**35.12**	**284**	LR	LR	11 26 51.5	
	comp=Z,209nm,21.6s,baz=136,slow=34						
KMPD	**K-Podol'skiy**	**35.42**	**68**	P	**P**	**11 13 43.7**	**+1.0**
LUBAR	**Lubar, Ukraine**	**35.77**	**66**	P	**P**	**11 13 45.9**	**+0.2**
GRG	**Griva**	**35.89**	**82**	P	**P**	**11 13 48.6**	**+1.7**
MLR	**Muntele Rosu**	**36.23**	**73**	LR	LR	11 28 59.3	
	comp=Z,192nm,19.7s,baz=302,slow=37						
MLR	**Muntele Rosu**	**36.23**	**73**	P	**P**	**11 13 49.5**	**-0.4**
	comp=Z,5.7nm,2.0s						
KIEV	**Kiev**	**36.41**	**64**	P	**P**	**11 13 50.4**	**-0.7**
	comp=Z,28nm,1.6s						
KIEV	**Kiev**	**36.41**	**64**	P	**P**	**11 13 51.0**	**-0.1**
AKASG	**Malin Array Be**	**36.41**	**64**	P	**P**	**11 13 51.4**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=286,slow=8.4,SNR=15						
AKASG				LR	LR	11 28 35.2	
	comp=Z,276nm,21.2s,baz=278,slow=36						
	comp=Z,0.3nm,0.2s						
AKBB	**Malin Array Si**	**36.41**	**64**	P	**P**	**11 13 50.8**	**-0.4**
VRI	**Vrincioaia**	**36.58**	**72**	P	**P**	**11 13 52.8**	**+0.1**
	comp=Z,7.1nm,2.2s						
SORM	**Soroca**	**36.75**	**68**	P	**P**	**11 13 53.1**	**-1.0**
	comp=Z,7.7nm,1.3s						
RES	**Respute Bay**	**38.48**	**337**	LR	LR	11 27 48.8	
	comp=Z,64nm,20.7s,baz=35,slow=33						
BLKN	**Baker Lake**	**39.24**	**320**	P	**P**	**11 14 15.1**	**+0.2**
OBN	**Obninsk**	**39.31**	**55**	LR	LR	11 30 13.9	
	comp=Z,184nm,20.1s,baz=204,slow=36						
YLV	**Yalova**	**40.70**	**79**	P	**P**	**11 14 27.7**	**+0.3**
	comp=Z,7.3nm,1.6s						
EYMN	**Ely**	**41.63**	**295**		**P**	**11 14 34.5**	**-0.4**
EYMN	**Ely**	**41.63**	**295**	P	**P**	**11 14 34.8**	**-0.1**
H05N1	**Guadeloupe/Mar**	**41.77**	**232**	T	T	11 58 42.2	
	SNR=13						
TORD	**Torodi Ar. Bea**	**42.43**	**135**	P	**P**	**11 14 40.5**	**-1.2**
	comp=Z,3.1nm,1.0s,baz=322,slow=7.1,SNR=12						
	comp=Z,3.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**42.43**	**135**	P	**P**	**11 14 41.2**	**-0.5**
TKL	**Tuckaleechee C**	**42.69**	**275**	LR	LR	11 32 55.4	
	comp=Z,135nm,18.2s,baz=58,slow=37						
SJG	**San Juan**	**43.17**	**240**	LR	LR	11 29 05.7	
	comp=Z,84nm,21.6s,baz=62,slow=31						
H05S1	**Guadeloupe/Mar**	**43.23**	**231**	T	T	12 00 29.4	
	SNR=5.1						
ULM	**Lac du Bonnet**	**43.29**	**300**	P	**P**	**11 14 46.7**	**-1.7**
	comp=Z,5.4nm,0.9s,baz=46,slow=7.6,SNR=9.7						
ULM				LR	LR	11 31 10.6	
	comp=Z,107nm,18.5s,baz=44,slow=34						
	comp=Z,5.4nm,0.9s						
SPMN	**Marine on St.**	**43.65**	**292**	IAmb	IAmb	11 14 52.5	
	comp=Z,22nm,1.4s						
BRTR	**Keskin Array B**	**43.94**	**77**	P	**P**	**11 14 54.4**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=281,slow=3.3,SNR=3.7						
BRTR				PcP	**PcP**	**11 16 40.0**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=318,slow=1.9,SNR=3.0						
BRTR				LR	LR	11 33 35.3	
	comp=Z,100nm,20.5s,baz=268,slow=37						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**43.94**	**77**	P	**P**	**11 14 53.7**	**-0.2**
BR104	**Keskin Array S**	**43.95**	**77**	P	**P**	**11 14 54.4**	**+0.4**
	comp=Z,2.2nm,0.9s						
AGMN	**Agassiz Nation**	**44.12**	**297**	P	**P**	**11 14 55.6**	**+0.5**
N41A	**Harden Midland**	**44.64**	**285**	IAmb	IAmb	11 15 00.4	
	comp=Z,11nm,0.8s						
KIRV	**Kirov**	**44.83**	**46**	LR	LR	11 33 44.6	
	comp=Z,113nm,18.6s,baz=303,slow=36						
FFC	**Flin Flon**	**44.89**	**308**	P	**P**	**11 15 01.0**	**-0.1**
FFC	**Flin Flon**	**44.89**	**308**	P	**P**	**11 15 01.3**	**+0.2**
DBIC	**Dimbokro**	**45.49**	**147**	LR	LR	11 32 06.9	
	comp=Z,100nm,20.6s,baz=320,slow=34						
CCM	**Cathedral Cave**	**46.32**	**282**	P	**P**	**11 15 12.5**	**-0.1**
BELG	**Belogorsk**	**46.41**	**55**	LR	LR	11 33 54.9	
	comp=Z,194nm,21.8s,baz=290,slow=35						
ECSD	**EROS Data Cent**	**46.76**	**292**	IAmb	IAmb	11 15 17.4	
	comp=Z,14nm,1.1s						
ECSD	**EROS Data Cent**	**46.76**	**292**	P	**P**	**11 15 16.4**	**+0.4**
A36M	**Sachs Harbour**	**47.47**	**335**	P	**P**	**11 15 21.5**	**+0.3**
	baz=65						
MDP	**Montagnes des**	**47.74**	**215**	LR	LR	11 30 17.1	
	comp=Z,132nm,20.5s,baz=46,slow=30						
YKA	**Yellowknife Ar**	**47.75**	**321**	P	**P**	**11 15 23.2**	**-0.3**
	comp=Z,2.7nm,1.1s,baz=66,slow=7.8,SNR=11						
	comp=Z,2.7nm,1.1s						
YKA	**Yellowknife Ar**	**47.75**	**321**	P	**P**	**11 15 23.7**	**+0.2**
KBZ	**Khabaz**	**47.78**	**67**	LR	LR	11 37 40.6	
	comp=Z,86nm,18.0s,baz=288,slow=39						
MIAR	**Mount Ida**	**49.87**	**280**	P	**P**	**11 15 41.0**	**+0.8**
MIAR				PcP	**PcP**	**11 17 00.7**	**+0.1**
MIAR	**Mount Ida**	**49.87**	**280**	P	**P**	**11 15 40.5**	**+0.3**
ARTI	**Arti**	**50.14**	**46**	LR	LR	11 36 12.0	
	comp=Z,146nm,20.3s,baz=290,slow=35						
ARTI	**Arti**	**50.14**	**46**		**P**	**11 15 42.3**	**+0.3**
ARTI				IAmb	IAmb	11 15 46.4	
	comp=Z,18nm,1.2s						
GNI	**Garni**	**50.87**	**70**	LR	LR	11 39 56.8	
	comp=Z,69nm,18.1s,baz=296,slow=39						
R32A	**Long Quarter,**	**50.97**	**287**	IAmb	IAmb	11 15 48.3	
	comp=Z,14nm,0.9s						
WRGLY	**Wrigley**	**51.00**	**325**	P	**P**	**11 15 48.4**	**+0.1**
	baz=59						
INK	**Inuvik**	**51.76**	**333**	LR	LR	11 36 34.1	
	comp=Z,107nm,18.6s,baz=77,slow=35						
INK	**Inuvik**	**51.76**	**333**	P	**P**	**11 15 53.6**	**-0.3**
	baz=55,SNR=8.1						
F31M	**Tsiigehtchic**	**52.33**	**332**	P	**P**	**11 15 58.0**	**-0.1**
	baz=55,SNR=22						
EGMT	**Eagleton**	**52.35**	**303**		**P**	**11 15 58.4**	**-0.3**
EGMT				IAmb	IAmb	11 15 60.0	
	comp=Z,23nm,1.1s						
D28M	**Stokes Point**	**52.69**	**335**	P	**P**	**11 16 00.2**	**-0.5**
	baz=52						
G31M	**Satah River**	**52.80**	**332**	IAmb	IAmb	11 16 02.5	
	comp=Z,23nm,1.2s						
G31M	**Satah River**	**52.80**	**332**	P	**P**	**11 16 01.3**	**-0.3**
	baz=54,SNR=11						
F30M	**Barrier River**	**52.87**	**333**	IAmb	IAmb	11 16 03.4	
	comp=Z,19nm,1.1s						
F30M	**Barrier River**	**52.87**	**333**	P	**P**	**11 16 02.4**	**+0.2**
	baz=53,SNR=8.9						
KOTAN	**Kotaneelee Air**	**52.88**	**321**	P	**P**	**11 16 02.6**	**+0.2**
	baz=57						
E29M	**Blow River**	**53.02**	**334**	P	**P**	**11 16 03.5**	**+0.2**
	baz=52						
AKTO	**Aktyubinsk**	**53.03**	**53**	LR	LR	11 38 30.8	
	comp=Z,67nm,21.3s,baz=158,slow=36						
SDV	**Santo Domingo**	**53.14**	**237**	LR	LR	11 37 31.9	
	comp=Z,52nm,18.7s,baz=74,slow=35						
D27M	**Malcolm River**	**53.36**	**336**	P	**P**	**11 16 06.1**	**+0.3**
	baz=50						
E28M	**Babbage River**	**53.36**	**335**	P	**P**	**11 16 05.9**	**+0.1**
	baz=51						
G30M	**tAoh Zraii Nji**	**53.38**	**332**	IAmb	IAmb	11 16 22.2	
	comp=Z,28nm,1.8s						
G30M	**tAoh Zraii Nji**	**53.38**	**332**	P	**P**	**11 16 06.2**	**+0.2**
	baz=52						
BOAV	**Boa Vista**	**53.48**	**222**	P	**P**	**11 16 07.4**	**+0.1**
H31M	**Peel River**	**53.49**	**331**	IAmb	IAmb	11 16 08.3	
	comp=Z,20nm,1.5s						
H31M	**Peel River**	**53.49**	**331**	P	**P**	**11 16 07.0**	**+0.2**
	baz=53,SNR=5.7						
RLMT	**Red Lodge**	**53.67**	**300**	IAmb	IAmb	11 16 10.1	
	comp=Z,18nm,1.4s						
C27K	**Jago River**	**53.84**	**337**	P	**P**	**11 16 09.4**	**+0.1**
	baz=48						
EPYK	**Eagle Plains**	**53.91**	**332**	IAmb	IAmb	11 16 11.9	
	comp=Z,25nm,1.2s						
EPYK	**Eagle Plains**	**53.91**	**332**	P	**P**	**11 16 10.3**	**+0.4**
	baz=52,SNR=8.1						
C26K	**Camden Bay**	**53.96**	**338**	P	**P**	**11 16 10.2**	**+0.1**
	baz=48						
G29M	**Pine Creek**	**53.98**	**333**	IAmb	IAmb	11 16 11.5	
	comp=Z,18nm,1.1s						
G29M	**Pine Creek**	**53.98**	**333**	P	**P**	**11 16 10.4**	**0.0**
	baz=51,SNR=9.3						
F28M	**Old Crow**	**54.09**	**334**	IAmb	IAmb	11 16 12.0	
	comp=Z,12nm,1.1s						
F28M	**Old Crow**	**54.09**	**334**	P	**P**	**11 16 11.1**	**-0.1**
	baz=50,SNR=8.3						
YNE	**Yellowstone No**	**54.17**	**300**	IAmb	IAmb	11 16 13.3	
	comp=Z,10nm,0.8s						
E27K	**Coleen River**	**54.22**	**335**	IAmb	IAmb	11 16 13.4	
	comp=Z,16nm,1.2s						
E27K	**Coleen River**	**54.22**	**335**	P	**P**	**11 16 12.5**	**+0.4**
	baz=49,SNR=5.2						
MMPY	**Sheldon Lake,**	**54.31**	**326**	IAmb	IAmb	11 16 15.2	
	comp=Z,14nm,1.4s						
MMPY	**Sheldon Lake,**	**54.31**	**326**	P	**P**	**11 16 13.4**	**+0.5**
	baz=54,SNR=5.1						
YMP	**Mirror Lake Pl**	**54.41**	**300**	IAmb	IAmb	11 16 15.4	
	comp=Z,20nm,1.1s						
I30M	**Mount Dempster**	**54.52**	**331**	IAmb	IAmb	11 16 15.7	
	comp=Z,13nm,1.3s						
I30M	**Mount Dempster**	**54.52**	**331**	P	**P**	**11 16 14.7**	**+0.2**
	baz=51,SNR=9.5						
H29M	**Whitestone**	**54.53**	**332**	IAmb	IAmb	11 16 15.5	
	comp=Z,14nm,1.2s						
H29M	**Whitestone**	**54.53**	**332**	P	**P**	**11 16 14.4**	**0.0**
	baz=50,SNR=8.6						
ISCO	**Idaho Springs**	**54.53**	**292**	IAmb	IAmb	11 16 16.8	
	comp=Z,12nm,1.2s						
ISCO	**Idaho Springs**	**54.53**	**292**	P	**P**	**11 16 16.1**	**+1.0**
ABKAR	**Akbulak array**	**54.73**	**53**	P	**P**	**11 16 16.3**	**+0.3**
D25K	**Kavik River**	**54.74**	**338**	IAmb	IAmb	11 16 17.7	
	comp=Z,14nm,1.1s						
D25K	**Kavik River**	**54.74**	**338**	P	**P**	**11 16 16.0**	**+0.1**
	baz=46,SNR=8.0						
BOZ	**Bozeman (W)**	**54.77**	**301**	IAmb	IAmb	11 16 17.6	
	comp=Z,12nm,1.1s						
WTLY	**Watson Lake, Y**	**54.85**	**323**	IAmb	IAmb	11 16 18.7	
	comp=Z,20nm,1.2s						
WTLY	**Watson Lake, Y**	**54.85**	**323**	P	**P**	**11 16 17.4**	**+0.7**
	baz=54,SNR=6.1						
J30M	**Hart River**	**54.91**	**330**	IAmb	IAmb	11 16 19.1	
	comp=Z,15nm,1.4s						
J30M	**Hart River**	**54.91**	**330**	P	**P**	**11 16 17.9**	**+0.7**
	baz=51,SNR=7.5						
G27K	**Doyon Strip**	**55.15**	**334**	IAmb	IAmb	11 16 20.2	
	comp=Z,12nm,1.2s						
G27K	**Doyon Strip**	**55.15**	**334**	P	**P**	**11 16 19.0**	**+0.1**
	baz=48,SNR=15						
LDM	**Libby Dam**	**55.19**	**306**	IAmb	IAmb	11 16 21.1	
	comp=Z,20nm,1.4s						
PDAR	**Pinedale Array**	**55.20**	**297**	P	**P**	**11 16 18.8**	**-1.1**
	comp=Z,6.7nm,1.0s,baz=61,slow=7.0,SNR=35						
PDAR				LR	LR	11 38 16.6	
	comp=Z,44nm,19.0s,baz=40,slow=34						
	comp=Z,6.7nm,1.0s						
PDAR	**Pinedale Array**	**55.20**	**297**		**P**	**11 16 19.1**	**-0.7**
PDAR				PcP	**PcP**	**11 17 19.3**	**-1.5**
F26K	**Sheenjek River**	**55.27**	**335**	P	**P**	**11 16 20.1**	**+0.4**
	baz=47						
E25K	**Arctic Village**	**55.36**	**336**	IAmb	IAmb	11 16 22.1	
	comp=Z,14nm,1.2s						
E25K	**Arctic Village**	**55.36**	**336**	P	**P**	**

N31M **Braeburn, Yuko** 56.69 327 P P 11 16 30.4 +0.4
baz=50
H10N2 **ASCENSION HYDR** 56.74 164 T T 12 17 24.8
baz=350,slow=75,SNR=27
H10N3 **ASCENSION HYDR** 56.75 164 T T 12 17 25.0
baz=350,slow=75,SNR=28
H10N1 **ASCENSION HYDR** 56.76 164 T T 12 17 26.2
baz=350,slow=75,SNR=26
B20K **Meade River** 56.77 341 P P 11 16 30.7 +0.3
baz=38
WHY **Whitehorse** 56.89 326 P P 11 16 31.9 +0.4
WHY **Whitehorse** 56.89 326 P P 11 16 32.2 +0.8
baz=50
G24K **Hadweenzic Riv** 56.89 336 P P 11 16 31.9 +0.6
G24K IAmb IAmb 11 16 33.6
comp=Z,14nm,1.1s
G24K **Hadweenzic Riv** 56.89 336 P P 11 16 32.5 +1.2
baz=44,SNR=11
C21K **Knifeblade Rid** 56.91 340 P P 11 16 32.5 +1.1
baz=40,SNR=7.9
Q32M **Nakina River** 56.95 323 P P 11 16 32.8 +0.8
baz=51
M29M **Somme Creek** 57.02 329 IAmb IAmb 11 16 34.7
comp=Z,18nm,1.5s
M29M **Somme Creek** 57.02 329 P P 11 16 33.5 +1.1
baz=48,SNR=7.3
HWUT **Hardware Ranch** 57.09 297 IAmb IAmb 11 16 34.1
comp=Z,14nm,1.1s
HWUT **Hardware Ranch** 57.09 297 P P 11 16 33.0 -0.3
OZNA **Ozona** 57.10 281 IAmb IAmb 11 16 34.2
comp=Z,19nm,1.5s
P32M **Atlin** 57.13 324 P P 11 16 33.6 +0.5
baz=50
S34M **Telegraph Cree** 57.15 322 P P 11 16 34.0 +0.8
baz=51
PRP **Porcupine Dome** 57.18 334 IAmb IAmb 11 16 35.6
comp=Z,13nm,1.4s
PRP **Porcupine Dome** 57.18 334 P P 11 16 34.3 +0.8
baz=45,SNR=5.6
N30M **Aishikik Lake** 57.18 327 P P 11 16 34.3 +0.8
baz=49
COLD **Coldfoot** 57.24 337 P P 11 16 34.3 +0.6
baz=42,SNR=7.8
PV22 **Blue Mesa, Par** 57.27 293 IAmb IAmb 11 16 36.2
comp=Z,18nm,1.1s
E21K **Killik River** 57.27 339 P P 11 16 34.6 +0.6
baz=40
O30N **Mendenhall** 57.27 326 IAmb IAmb 11 16 35.9
comp=Z,13nm,1.2s
O30N **Mendenhall** 57.27 326 P P 11 16 34.8 +0.7
baz=49,SNR=7.6
TCUT **Toone Canyon** 57.29 297 IAmb IAmb 11 18 29.9
comp=Z,12nm,0.9s
PV21 **Cone Mtn., Par** 57.37 293 IAmb IAmb 11 16 36.9
comp=Z,18nm,1.2s
B08A **Colville Reser** 57.41 308 IAmb IAmb 11 16 35.7
comp=Z,12nm,1.1s
A19K **Wainwright** 57.41 343 P P 11 16 35.7 +0.8
baz=35
PV02 **Paradox Valley** 57.44 293 IAmb IAmb 11 16 38.4
comp=Z,20nm,1.2s
P18A **Preston Nutter** 57.49 295 IAmb IAmb 11 16 38.3
comp=Z,22nm,1.1s
PV13 **Radium Mtn., P** 57.52 293 IAmb IAmb 11 16 38.9
comp=Z,14nm,1.2s
F22K **John River** 57.54 338 P P 11 16 36.5 +0.7
baz=41
PLID **Pearl Lake** 57.56 303 IAmb IAmb 11 16 37.3
comp=Z,12nm,1.2s
G23K **Bananza Creek** 57.58 337 IAmb IAmb 11 16 39.2
comp=Z,23nm,1.4s
G23K **Bananza Creek** 57.58 337 P P 11 16 37.1 +0.9
baz=42,SNR=13
HLID **Hailey** 57.58 301 P P 11 16 37.6 +0.9
H24K **Noodor Dome** 57.63 335 IAmb IAmb 11 16 38.6
comp=Z,12nm,1.2s
H24K **Noodor Dome** 57.63 335 P P 11 16 37.3 +0.7
baz=43,SNR=12
D20K **Etivluk River** 57.67 340 P P 11 16 37.2 +0.4
baz=38
BCAR **Beaver Creek A** 57.73 331 P P 11 16 37.6 +0.2
PV05 **Paradox Valley** 57.74 293 IAmb IAmb 11 16 39.5
comp=Z,25nm,1.3s
L27K **Beaver Creek,** 57.74 331 P P 11 16 38.5 +1.1
baz=46,SNR=5.5
BORK **Borovoye** 57.75 45 P P 11 16 38.1 +0.6
HYT **Haines Junctio** 57.76 327 P P 11 16 38.3 +0.6
baz=48,SNR=5.4
J25K **Salcha River,** 57.78 333 IAmb IAmb 11 16 39.4
comp=Z,18nm,1.2s
J25K **Salcha River,** 57.78 333 P P 11 16 38.1 +0.4
baz=45,SNR=11
BVAR **Borovoye Array** 57.80 45 P P 11 16 38.5 +0.6
comp=Z,4.7nm,1.0s,baz=301,slow=6.1,SNR=9.4
comp=Z,4.7nm,1.0s
SPUT **South Promonto** 57.80 298 IAmb IAmb 11 16 39.1
comp=Z,18nm,1.3s
SCRK **Sand Creek** 57.80 332 IAmb IAmb 11 16 39.9
comp=Z,17nm,1.2s
SCRK **Sand Creek** 57.80 332 P P 11 16 38.8 +0.9
baz=45,SNR=19
H10S3 **ASCENSION HYDR** 57.81 165 T T 12 18 42.9
baz=350,slow=74,SNR=91
G22K **Bettles** 57.81 337 P P 11 16 38.1 +0.3
baz=41
H10S2 **ASCENSION HYDR** 57.82 165 T T 12 18 45.0
baz=230,slow=74,SNR=112
YUK4 **Talbot Arm** 57.82 328 P P 11 16 38.2 0.0
baz=48
BVCY **Beaver Creek** 57.87 330 P P 11 16 39.2 +0.9
baz=47
P17A **Butcher Ranch,** 57.89 295 IAmb IAmb 11 16 41.0
comp=Z,24nm,1.3s
MVCO **Mesa Verde** 57.90 292 IAmb IAmb 11 16 41.3
comp=Z,17nm,1.1s
MVCO **Mesa Verde** 57.90 292 P P 11 16 40.1 +0.9
E20K **Nigu River** 57.93 340 P P 11 16 39.3 +0.6
baz=38,SNR=12
BRWY **Burwash Landin** 57.94 328 P P 11 16 40.0 +1.1
baz=48
SRU **San Rafael Swe** 57.98 294 IAmb IAmb 11 16 40.7
comp=Z,12nm,1.2s
YUK6 **Outpost Mounta** 57.99 327 P P 11 16 40.3 +0.9
baz=48
C19K **Lookout Ridge** 58.01 342 P P 11 16 40.4 +1.2
baz=36,SNR=6.3
P30M **Million Dollar** 58.02 326 P P 11 16 40.5 +1.1
baz=48
ANMO **Albuquerque** 58.02 288 LR LR 11 40 40.7
comp=Z,74nm,18.0s,baz=50,slow=35
ANMO **Albuquerque** 58.02 288 P P 11 16 40.8 +0.8
ANMO **Albuquerque** 58.02 288 P P 11 16 41.0 +1.0
POKR **Poker Plat Res** 58.03 334 P P 11 16 40.3 +1.0
baz=43
F21K **Alatna River** 58.09 338 IAmb IAmb 11 16 42.3
comp=Z,21nm,1.2s
F21K **Alatna River** 58.09 338 P P 11 16 40.6 +0.8
baz=40,SNR=15
H23K **Yukon River** 58.10 336 P P 11 16 41.0 +1.1
baz=42
IL31 **Eielson Array** 58.12 334 IAmb IAmb 11 16 41.6
comp=Z,14nm,1.3s
ILAR **Eielson Array** 58.12 334 P P 11 16 40.3 +0.3
comp=Z,5.0nm,1.1s,baz=38,slow=4.8,SNR=41
ILAR LR LR 11 40 24.0
comp=Z,59nm,18.6s,baz=80,slow=35
comp=Z,5.0nm,1.1s
YUK3 **Moose Creek** 58.17 329 P P 11 16 41.5 +0.9
baz=47
D19K **Kuna River** 58.18 341 P P 11 16 40.6 +0.3
baz=37
PLBC **Pleasant Camp** 58.24 325 P P 11 16 42.0 +1.1
baz=48
RIDG **Independent Ri** 58.24 332 IAmb IAmb 11 16 43.1
comp=Z,10nm,1.1s
RIDG **Independent Ri** 58.24 332 P P 11 16 41.9 +1.1
baz=45
M27K **Edge Creek, AK** 58.25 330 IAmb IAmb 11 16 43.1
comp=Z,14nm,1.4s
M27K **Edge Creek, AK** 58.25 330 P P 11 16 42.0 +0.9
baz=46,SNR=6.8
YUK8 **Steele Glacier** 58.26 328 P P 11 16 42.0 +0.7
baz=47
L26K **Log Cabin Wild** 58.27 331 IAmb IAmb 11 16 43.0
comp=Z,19nm,1.4s
L26K **Log Cabin Wild** 58.27 331 P P 11 16 42.3 +1.2
baz=45,SNR=6.8
TMUT **Trail Mountain** 58.28 295 IAmb IAmb 11 16 44.1
comp=Z,18nm,1.2s
COLA **College** 58.33 334 P P 11 16 42.2 +0.8
baz=43
COLA **College** 58.33 334 P P 11 16 41.7 +0.4
LNOR **Lincton Mounta** 58.36 305 IAmb IAmb 11 16 43.1
comp=Z,10nm,1.2s
SAND **Sanderson** 58.38 281 IAmb IAmb 11 16 42.8
comp=Z,13nm,1.4s
HDA **Harding Lake** 58.40 334 IAmb IAmb 11 16 43.5
comp=Z,16nm,1.2s
HDA **Harding Lake** 58.40 334 P P 11 16 42.5 +0.5
baz=44,SNR=10
NLU **North Lily Min** 58.40 296 IAmb IAmb 11 16 44.0
comp=Z,11nm,1.2s
MENT **Mentasta** 58.45 331 IAmb IAmb 11 16 44.3
comp=Z,12nm,1.0s
CCB **Clear Creek Bu** 58.48 334 IAmb IAmb 11 16 44.8
comp=Z,17nm,1.5s
K24K **Donnelly Dome** 58.48 333 P P 11 16 43.8 +1.2
baz=44,SNR=11
MFID **Camas Ranch** 58.48 301 IAmb IAmb 11 17 00.2
comp=Z,18nm,1.9s
O29M **Mount Kennedy** 58.50 327 P P 11 16 43.7 +0.8
baz=47
ROSC **El Rosal** 58.53 238 LR LR 11 37 57.1
comp=Z,101nm,21.5s,baz=40,slow=32
H22K **Ishtalitna Cre** 58.55 336 IAmb IAmb 11 16 45.7
comp=Z,10nm,1.2s
H22K **Ishtalitna Cre** 58.55 336 P P 11 16 44.0 +1.0
baz=41,SNR=10
I23K **Minto, Yukon-K** 58.56 335 P P 11 16 44.1 +1.1
baz=42,SNR=21
M26K **Nabesna, AK** 58.59 330 P P 11 16 44.3 +0.9
baz=45
G21K **Allakaket** 58.64 338 P P 11 16 44.0 +0.4
baz=40
P29M **Windy Craggy** 58.64 326 IAmb IAmb 11 16 45.2
comp=Z,23nm,1.7s
P29M **Windy Craggy** 58.64 326 P P 11 16 44.7 +0.9
baz=48
DUG **Dugway, Tooele** 58.70 297 IAmb IAmb 11 16 46.6
comp=Z,19nm,1.2s
DUG **Dugway, Tooele** 58.70 297 P P 11 16 44.9 +0.3
C18K **Utukok River** 58.72 342 P P 11 16 43.8 -0.3
baz=35
O28M **Mount Upton** 58.76 328 IAmb IAmb 11 16 46.8
comp=Z,8.9nm,1.1s
O28M **Mount Upton** 58.76 328 P P 11 16 45.6 +0.7
baz=46,SNR=6.0
F20K **Avaraart Lake** 58.77 339 IAmb IAmb 11 16 46.4
comp=Z,17nm,1.2s
F20K **Avaraart Lake** 58.77 339 P P 11 16 44.9 +0.4
baz=38,SNR=13
LTY **Liberty** 58.80 307 IAmb IAmb 11 16 45.8
comp=Z,21nm,1.3s
E19K **Redstone River** 58.81 340 P P 11 16 45.0 +0.3
baz=37
TPB28 **Tetlin** 58.84 284 IAmb IAmb 11 16 47.5
comp=Z,14nm,1.3s
S32K **Killisnoo** 58.85 323 P P 11 16 46.3 +1.2
baz=49
NEA2 **Nenana** 58.89 335 P P 11 16 45.8 +0.5
baz=42,SNR=12
Y22A **Sorrento** 58.99 288 IAmb IAmb 11 16 49.3
comp=Z,15nm,1.0s
PAX **Paxson** 58.99 332 P P 11 16 46.8 +0.6
baz=44
V35K **Ketchikan** 59.01 320 P P 11 16 46.8 +0.5
baz=50
MXC **Moxie City** 59.02 307 IAmb IAmb 11 16 47.1
comp=Z,13nm,1.3s
MLY **Manley** 59.03 335 IAmb IAmb 11 16 48.8
comp=Z,13nm,1.2s
MLY **Manley** 59.03 335 P P 11 16 46.9 +0.5
baz=41,SNR=15
BARN **Barnard Glacie** 59.08 329 IAmb IAmb 11 16 48.7
comp=Z,17nm,1.3s
IMAR **Indian Mountai** 59.11 337 P P 11 16 47.5 +0.7
H21K **Melozitna Rive** 59.12 337 IAmb IAmb 11 16 48.9
comp=Z,13nm,1.2s
H21K **Melozitna Rive** 59.12 337 P P 11 16 47.8 +0.9
baz=40,SNR=11
U33K **Whale Pass** 59.14 321 P P 11 16 47.6 +0.5
baz=49
S31K **Pelican** 59.19 324 P P 11 16 47.7 +0.3
baz=48
PINM **Pinnacle** 59.25 327 P P 11 16 48.3 +0.3
baz=46
I21K **Tanana** 59.26 336 IAmb IAmb 11 16 50.4
comp=Z,15nm,1.2s
I21K **Tanana** 59.26 336 P P 11 16 48.9 +1.0
baz=40,SNR=10
C17K **DeLong Mountai** 59.27 342 P P 11 16 48.5 +0.6
baz=33
HARP **HAARP** 59.30 331 P P 11 16 48.7 +0.5
baz=44
MCARA **McCarthy VSAT** 59.32 330 P P 11 16 48.9 +0.5
baz=45
SIT **Sitka** 59.43 323 P P 11 16 49.8 +0.7
baz=48
F19K **Shaleruckik Mo** 59.44 339 IAmb IAmb 11 16 51.1
comp=Z,14nm,1.1s
F19K **Shaleruckik Mo** 59.44 339 P P 11 16 49.4 +0.4
baz=37,SNR=15
MCK **McKinley** 59.49 334 IAmb IAmb 11 16 51.1
comp=Z,18nm,1.2s
MCK **McKinley** 59.49 334 P P 11 16 49.9 +0.3
baz=42,SNR=6.0
DHY **Denali Highway** 59.51 333 IAmb IAmb 11 16 51.6
comp=Z,19nm,1.2s
DHY **Denali Highway** 59.51 333 P P 11 16 50.4 +0.6
baz=43,SNR=7.2
RDOG **Red Dog Mine** 59.57 342 P P 11 16 50.8 +0.8
baz=33
E18K **Tukpahlearik C** 59.60 341 IAmb IAmb 11 16 52.0
comp=Z,15nm,1.1s
E18K **Tukpahlearik C** 59.60 341 P P 11 16 51.0 +0.8
baz=35,SNR=5.8
N25K **Chitina, Valde** 59.69 330 P P 11 16 51.8 +0.7
baz=44
H20K **Anotleneega Mo** 59.79 337 P P 11 16 52.4 +0.8
baz=38,SNR=28
CRQE **Cirque** 59.79 329 P P 11 16 52.4 +0.6
baz=45
ELK **Elko** 59.80 299 LR LR 11 40 35.5
comp=Z,68nm,18.6s,baz=35,slow=34
ELK **Elko** 59.80 299 IAmb IAmb 11 16 54.1
comp=Z,10nm,1.2s
TXAR **Lajitas Array** 59.81 281 P P 11 16 51.4 -1.0
comp=Z,1.7nm,0.8s,baz=64,slow=7.3,SNR=20
TXAR LR LR 11 42 31.1
comp=Z,136nm,18.6s,baz=36,slow=36
comp=Z,1.7nm,0.8s
TXAR **Lajitas Array** 59.81 281 P P 11 16 51.5 -0.8
TXAR PcP PcP 11 17 38.9 -0.1
G19K **Purcell Mounta** 59.83 339 IAmb IAmb 11 16 53.9
comp=Z,19nm,1.5s
G19K **Purcell Mounta** 59.83 339 P P 11 16 52.9 +1.1
baz=37
M24K **Tolsona, Glenn** 59.84 331 P P 11 16 52.6 +0.6
baz=43
C16K **Lisburne Hills** 59.87 343 P P 11 16 53.0 +1.0
baz=32
D17K **Noatak River** 59.90 342 P P 11 16 52.9 +0.6
baz=33
WAT6 **Susitna Watana** 59.99 332 P P 11 16 53.7 +0.6
baz=42,SNR=5.5
W18A **Petrified Fore** 59.99 290 IAmb IAmb 11 16 54.9
comp=Z,9.8nm,1.3s
J08A **Circle Bar Ran** 60.03 303 IAmb IAmb 11 16 55.6
comp=Z,9.9nm,1.0s
WAT1 **Susitna Watana** 60.05 333 P P 11 16 53.8 +0.4
baz=42
F18K **Selawik** 60.06 340 P P 11 16 54.2 +0.8
baz=35,SNR=5.9
TRF **Thorofare Moun** 60.10 334 P P 11 16 54.0 +0.1
baz=41,SNR=10
E17K **Hotham Inlet** 60.15 341 P P 11 16 54.6 +0.6
baz=34,SNR=6.3
BMRM **Bremner River** 60.16 330 P P 11 16 54.5 +0.3
baz=44
H19K **Roundabout Mou** 60.16 338 IAmb IAmb 11 16 56.1
comp=Z,15nm,1.1s
H19K **Roundabout Mou** 60.16 338 P P 11 16 54.9 +0.9
baz=37,SNR=9.8
KLU **Klutina** 60.21 331 IAmb IAmb 11 17 03.6
comp=Z,13nm,1.2s
KLU **Klutina** 60.21 331 P P 11 16 54.9 +0.3
baz=43
I20K **Naaghedeneel** 60.23 337 P P 11 16 55.8 +1.2
baz=38,SNR=9.7
CHUM **Lake Minchumin** 60.35 335 P P 11 16 55.9 +0.5
baz=40,SNR=6.7
PSUT **Pine Spring** 60.37 296 IAmb IAmb 11 16 57.9
comp=Z,9.2nm,1.1s
G18K **Tagagawik** 60.41 339 IAmb IAmb 11 16 57.9
comp=Z,17nm,1.2s
G18K **Tagagawik** 60.41 339 P P 11 16 56.3 +0.5
baz=36
121A **Cookes Peak, D** 60.41 287 IAmb IAmb 11 16 58.4
comp=Z,19nm,1.2s
SCM **Sheep Creek Mo** 60.41 332 P P 11 16 55.7 -0.3
baz=42
X18A **Snowflake** 60.51 290 IAmb IAmb 11 16 58.7
comp=Z,11nm,1.2s
F17K **Baldwin Pennin** 60.56 340 P P 11 16 57.3 +0.6
baz=34
M23K **Glacier View** 60.57 332 P P 11 16 57.3 +0.4
baz=42
J20K **Nowinta River** 60.63 336 IAmb IAmb 11 16 58.8
comp=Z,23nm,1.6s
J20K **Nowinta River** 60.63 336 P P 11 16 57.7 +0.4
baz=38,SNR=6.0
CAST **Castle Rocks** 60.65 335 IAmb IAmb 11 16 58.3
comp=Z,18nm,1.3s
CAST **Castle Rocks** 60.65 335 P P 11 16 57.3 -0.1
baz=40,SNR=12
CCUT **Cedar City** 60.70 295 IAmb IAmb 11 17 00.9
comp=Z,12nm,1.1s
JTS **Las Juntas de** 60.72 252 LR LR 11 38 45.1
comp=Z,43nm,20.9s,baz=44,slow=32
SML **Sawmill** 60.75 332 P P 11 16 58.6 +0.3
baz=42
U15A **North Rim** 60.76 293 IAmb IAmb 11 16 60.0
comp=Z,9.7nm,1.2s
EYAK **Cordova Ski Ar** 60.85 330 P P 11 16 58.9 +0.1
baz=43
KAIM **Kayak Island** 60.85 329 P P 11 16 58.9 +0.1
baz=43
CUT **Chulitna** 60.90 333 P P 11 16 59.3 +0.2
baz=40
GCSA **Galena City Sc** 60.90 338 P P 11 16 59.7 +0.6
baz=37
H18K **Honhosa River** 60.94 338 P P 11 17 00.6 +1.1
baz=36,SNR=12
L22K **Petersville** 60.95 334 IAmb IAmb 11 17 00.5
comp=Z,12nm,1.2s
L22K **Petersville** 60.95 334 P P 11 17 00.3 +0.7
baz=40,SNR=5.8
KNK **Knik Glacier** 61.09 332 P P 11 17 01.2 +0.7
baz=41
PINE **Pine Mountain** 61.13 304 IAmb IAmb 11 17 03.1
comp=Z,13nm,1.1s
PMR **Palmer** 61.16 332 P P 11 17 01.4 +0.5
baz=41,SNR=5.7
BMN **Battle Mountai** 61.17 299 IAmb IAmb 11 17 03.2
comp=Z,12nm,1.3s
J19K **Poorman** 61.17 337 IAmb IAmb 11 17 02.5
comp=Z,12nm,1.2s
J19K **Poorman** 61.17 337 P P 11 17 01.5 +0.5
baz=37,SNR=10.0
G17K **Kiwalik Mounta** 61.20 340 P P 11 17 01.7 +0.5
baz=34
K20K **Telida** 61.26 336 IAmb IAmb 11 17 03.7
comp=Z,13nm,1.2s
K20K **Telida** 61.26 336 P P 11 17 02.2 +0.6
baz=38,SNR=9.7
M22K **Willow** 61.35 333 P P 11 17 02.9 +0.7
baz=40
PWL **Port Wells** 61.47 331 P P 11 17 03.5 +0.5
baz=41
H17K **Granite Mounta** 61.50 339 P P 11 17 04.2 +1.0
baz=34,SNR=9.4
X16A **Lo Mia Camp, P** 61.52 291 IAmb IAmb 11 17 06.4
comp=Z,11nm,1.2s
SKT **Skwentna** 61.60 334 P P 11 17 04.1 +0.1
baz=39,SNR=13
G16K **Koyuk River** 61.69 340 P P 11 17 05.5 +1.1
baz=33,SNR=9.4
PRN **Pahroc Range** 61.82 296 IAmb IAmb 11 17 08.6
comp=Z,17nm,1.4s
J18K **Innoko River** 61.89 337 IAmb IAmb 11 17 07.4
comp=Z,8.3nm,1.1s
J18K **Innoko River** 61.89 337 P P 11 17 06.4 +0.5
baz=36,SNR=8.8
F15K **North Star Dit** 61.93 341 P P 11 17 06.0 -0.1
baz=31
STLK **Strandline Lak** 62.07 333 IAmb IAmb 11 17 25.8
comp=Z,9.2nm,1.2s
M20K **Styx River** 62.15 334 P P 11 17 07.2 -0.5
baz=38
CMIG **Matias Romero** 62.27 265 LR LR 11 41 32.7
comp=Z,110nm,21.6s,baz=26,slow=34
H16K **Elim** 62.30 340 P P 11 17 09.4 +0.8
baz=33
SPU **Mount Spurr** 62.38 333 IAmb IAmb 11 17 10.1
comp=Z,11nm,1.1s
SEW **Seward** 62.40 331 P P 11 17 10.3 +1.0
baz=40
G15K **Niukluk** 62.41 341 P P 11 17 10.4 +1.1
baz=32,SNR=7.4
L19K **White Mountain** 62.41 335 P P 11 17 09.9 +0.5
baz=37
SPCR **Spurr Chakacha** 62.41 333 P P 11 17 09.3 -0.2
baz=39
TUC **Tucson** 62.48 289 P P 11 17 10.9 +0.5
F14K **Arctic Creek** 62.49 342 P P 11 17 09.1 -0.7
baz=30
M19K **Big River Lodg** 62.50 335 P P 11 17 09.3 -0.7
baz=37
I17K **Unalakleet** 62.56 339 IAmb IAmb 11 17 12.3
comp=Z,7.6nm,1.1s
I17K **Unalakleet** 62.56 339 P P 11 17 11.2 +0.9
baz=34
J17K **VABM Dome** 62.56 338 IAmb IAmb 11 17 12.3
comp=Z,14nm,1.2s
J17K **VABM Dome** 62.56 338 P P 11 17 11.1 +0.7
baz=35,SNR=7.7
W13A **Hualapai Mount** 62.60 293 IAmb IAmb 11 17 13.8
comp=Z,7.0nm,1.1s
TNA **Tin City** 62.74 343 P P 11 17 12.2 +0.8
baz=29
Y14A **Wickenburg** 62.81 291 IAmb IAmb 11 17 14.4
comp=Z,8.2nm,1.3s
TPNV **Topopah Spring** 62.84 296 IAmb IAmb 11 17 30.2
comp=Z,11nm,1.4s
L18K **Granite Mounta** 62.89 336 P P 11 17 13.5 +1.0
L18K IAmb IAmb 11 17 14.3
comp=Z,14nm,1.2s
L18K **Granite Mounta** 62.89 336 P P 11 17 13.0 +0.5
baz=36,SNR=7.5
PAHR **Pah Rah Range** 62.90 300 IAmb IAmb 11 17 14.8
comp=Z,7.7nm,1.2s
K17K **Iditarod** 62.92 337 P P 11 17 13.2 +0.4
K17K IAmb IAmb 11 17 14.4
comp=Z,11nm,1.2s
K17K **Iditarod** 62.92 337 P P 11 17 13.4 +0.6
baz=35
J16K **Anvik River** 63.04 338 IAmb IAmb 11 17 16.3
comp=Z,15nm,1.2s
J16K **Anvik River** 63.04 338 P P 11 17 14.3 +0.7
baz=34,SNR=7.5
BRSE **Bradley Lake S** 63.09 332 P P 11 17 14.2 +0.2
baz=39
NVAR **Mina Array Bea** 63.10 298 LR LR 11 43 09.2
comp=Z,65nm,19.3s,baz=18,slow=35
KURK **Kurchatov** 63.16 43 P P 11 17 14.7 +0.2
KURK **Kurchatov** 63.16 43 P P 11 17 14.9 +0.4
WCT **Wildcat Mounta** 63.17 296 IAmb IAmb 11 17 16.1
comp=Z,8.3nm,1.3s
KURBB **Kurchatov Arra** 63.19 43 P P 11 17 14.8 +0.1
comp=Z,1.2nm,0.2s,baz=316,slow=7.2,SNR=15
comp=Z,1.2nm,0.2s
GMN **Gold Mountain** 63.22 297 IAmb IAmb 11 17 17.4
comp=Z,8.8nm,1.2s
M18K **Stony River** 63.24 335 P P 11 17 15.2 +0.3
baz=36
N19K **Bonanza Creek** 63.40 334 P P 11 17 16.0 -0.1
N19K IAmb IAmb 11 17 16.8
comp=Z,16nm,1.3s
N19K **Bonanza Creek** 63.40 334 P P 11 17 16.0 -0.1
baz=37
O20K **Slope Mountain** 63.42 333 P P 11 17 16.3 +0.2
baz=38
HOM **Homer** 63.45 332 P P 11 17 16.7 +0.4
baz=38

YBH	Yreka Blue Hor	63.47	304	LR	LR	11 42 22.0	
	comp=Z,41nm,20.0s,baz=26,slow=34						
MPK	Martis Peak	63.55	300	IAmb	IAmb	11 17 20.0	
	comp=Z,14nm,1.3s						
ZALV	Zalesovo Beam	63.58	38	P	P	11 17 17.4	+0.2
	comp=Z,0.3nm,0.3s,baz=317,slow=5.9,SNR=3.9						
ZALV				LR	LR	11 46 00.6	
	comp=Z,81nm,18.4s,baz=277,slow=37						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	63.58	38	P	P	11 17 17.6	+0.3
CLDB	Colider	63.66	211	P	P	11 17 18.9	+0.7
M17K	Holitna River	63.77	336	P	P	11 17 19.0	+0.6
	baz=35						
BLYC	Blythe	63.89	292	IAmb	IAmb	11 17 21.5	
	comp=Z,17nm,1.4s						
N18K	Kilae Creek	63.92	334	P	P	11 17 20.1	+0.7
	baz=36						
P19K	Oil Pt	63.95	333	P	P	11 17 20.4	+0.7
	baz=38						
IRM	Iron Mountain	64.00	293	IAmb	IAmb	11 17 22.9	
	comp=Z,12nm,1.3s						
113A	Mohawk Valley,	64.06	291	IAmb	IAmb	11 17 23.0	
	comp=Z,14nm,1.4s						
L16K	Owhat River	64.07	337	IAmb	IAmb	11 17 22.6	
	comp=Z,10nm,1.2s						
L16K	Owhat River	64.07	337	P	P	11 17 21.2	+0.9
	baz=34						
K15K	Wolf Creek Mou	64.11	338	P	P	11 17 21.4	+0.8
	baz=33,SNR=5.4						
J14K	Nanvaranak Lak	64.22	339	P	P	11 17 21.4	+0.2
	baz=31						
O18K	Koktuh Hills	64.39	334	P	P	11 17 23.1	+0.6
	baz=36						
N17K	Nushagak Hills	64.42	335	IAmb	IAmb	11 17 24.6	
	comp=Z,14nm,1.1s						
N17K	Nushagak Hills	64.42	335	P	P	11 17 23.4	+0.8
	baz=35,SNR=8.6						
M16K	Timber Creek	64.50	336	P	P	11 17 23.9	+0.7
	baz=34						
BC3	Big Chuckawall	64.53	293	IAmb	IAmb	11 17 25.7	
	comp=Z,9.2nm,1.2s						
L15K	Ungalak Mounta	64.62	338	P	P	11 17 25.0	+1.1
	baz=32,SNR=6.0						
BELC	Belle Mtn. Jos	64.63	293	IAmb	IAmb	11 17 26.8	
	comp=Z,14nm,1.3s						
P18K	Big Mountain,	64.77	333	P	P	11 17 25.4	+0.3
	baz=36						
N16K	Nishlik Lake	64.90	336	P	P	11 17 26.8	+0.9
	baz=34						
O17K	Koliganek Bris	65.01	334	P	P	11 17 27.1	+0.6
	baz=35						
ISA	Isabella, Lake	65.04	296	IAmb	IAmb	11 17 29.5	
	comp=Z,18nm,1.4s						
GAMB	Gambell	65.08	343	P	P	11 17 27.3	+0.5
	baz=26						
PMD	Palm Desert	65.11	293	IAmb	IAmb	11 17 30.0	
	comp=Z,7.2nm,1.1s						
PFO	Pinyon Flats O	65.18	293	LR	LR	11 46 04.1	
	comp=Z,67nm,19.0s,baz=30,slow=36						
PFO	Pinyon Flats O	65.18	293	P	P	11 17 28.5	+0.3
PFO				IAmb	IAmb	11 17 30.1	
	comp=Z,14nm,1.4s						
K13K	Kusilvak Mount	65.18	339	P	P	11 17 28.6	+1.0
	baz=30						
L14K	Kuka Creek	65.21	338	P	P	11 17 28.9	+1.1
	baz=32,SNR=8.0						
KDAK	Kodiak Island	65.23	331	P	P	11 17 29.1	+1.2
	baz=37						
M15K	Kasigluk River	65.24	337	P	P	11 17 29.0	+1.0
	baz=33						
P17K	Kvichak River	65.29	334	P	P	11 17 29.4	+1.1
	baz=35						
DNR	Dunn Ranch,Anz	65.31	293	IAmb	IAmb	11 17 31.9	
	comp=Z,11nm,1.0s						
O16K	Kokwok River B	65.44	335	IAmb	IAmb	11 17 31.0	
	comp=Z,11nm,1.1s						
O16K	Kokwok River B	65.44	335	P	P	11 17 30.0	+0.6
	baz=34,SNR=5.4						
BFSC	Mount Baldy Ra	65.50	294	IAmb	IAmb	11 17 32.4	
	comp=Z,8.7nm,1.2s						
N15K	Kwethluk River	65.52	336	P	P	11 17 30.7	+0.9
	baz=33						
M14K	Bethel	65.53	337	P	P	11 17 30.9	+1.1
	baz=32,SNR=9.6						
MWC	Mount Wilson	65.75	295	IAmb	IAmb	11 17 34.0	
	comp=Z,16nm,1.4s						
ELS	Elsinore Mount	65.75	294	IAmb	IAmb	11 17 34.0	
	comp=Z,19nm,1.6s						
Q16K	King Salmon	65.78	334	P	P	11 17 32.0	+0.6
	baz=35						
BDFB	Brasilia	65.85	202	P	P	11 17 31.9	-0.6
	comp=Z,1.9nm,0.5s,baz=23,slow=14,SNR=3.3						
BDFB				LR	LR	11 40 46.4	
	comp=Z,103nm,20.6s,baz=335,slow=31						
	comp=Z,1.9nm,0.5s						
P16K	Nushagak River	65.88	334	P	P	11 17 32.6	+0.4
	baz=34						
Q17K	Contact Creek	65.89	333	P	P	11 17 32.5	+0.1
	baz=35						
OHAK	Old Harbor	65.91	331	P	P	11 17 32.6	+0.3
	baz=37						
BAR	Barrett	65.94	293	IAmb	IAmb	11 17 35.4	
	comp=Z,12nm,1.2s						
PMPB	Monarch Peak	66.06	298	P	P	11 17 34.2	+0.4
PKD	Bear Valley Ra	66.09	298	IAmb	IAmb	11 17 36.1	
	comp=Z,22nm,1.7s						
N14K	Kuskokwak Cree	66.16	337	P	P	11 17 34.8	+0.9
	baz=32						
M13K	Dall Lake	66.17	338	P	P	11 17 34.5	+0.5
	baz=31						
O15K	Ungalikthiuk R	66.28	335	P	P	11 17 35.4	+0.6
	baz=33						
R17L	Mt. Peulik Vol	66.55	333	P	P	11 17 37.0	+0.5
	baz=35						
O14K	Tigyukauivet M	66.62	336	P	P	11 17 37.6	+0.8
	baz=32						
AAK	Ala-Archa	66.74	52	LR	LR	11 47 11.2	
	comp=Z,77nm,19.8s,baz=312,slow=36						
SII	Sitkinak Islan	66.74	331	P	P	11 17 37.8	0.0
	baz=36						
M11K	Mekoryuk	66.91	339	P	P	11 17 38.9	+0.2
	baz=29						
MKAR	Makanchi Array	67.66	44	P	P	11 17 43.0	-0.8
	comp=Z,1.2nm,0.5s,baz=298,slow=9.3,SNR=11						
MKAR				LR	LR	11 47 04.1	
	comp=Z,93nm,18.8s,baz=313,slow=36						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	67.66	44		P	11 17 43.8	0.0
LPIG	La Paz	67.70	282	LR	LR	11 47 30.3	
	comp=Z,43nm,18.2s,baz=24,slow=36						
SLBS	Sierra La Lagu	67.75	281	P	P	11 17 44.1	-0.7
SLBS	Sierra La Lagu	67.75	281	P	P	11 17 44.3	-0.5
CHIR	Chirikof Islan	67.81	331	P	P	11 17 45.2	+0.8
	baz=35						
CHGN	Chignik	68.28	333	P	P	11 17 47.4	-0.1
	baz=33						
PTLB	Pontes e Lacer	69.08	213		P	11 17 53.8	+1.0
PTLB				IAmb	IAmb	11 17 54.4	
	comp=Z,15nm,1.4s						
TARG	Taragay, Kyrgy	69.11	51	P	P	11 17 54.0	+0.5
TARG	Taragay, Kyrgy	69.11	51	P	P	11 17 55.7	+2.2
SDPT	Sand Point	69.72	333	P	P	11 17 56.4	+0.1
	baz=32						
KSH2	Kashi	69.78	54	P	P	11 17 59.8	+2.5
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ATAH	Atahualpa	70.66	234	LR	LR	11 46 17.0	
	comp=Z,102nm,21.8s,baz=28,slow=34						
WMQ	Urumqi	72.41	43	eP	P	11 18 14.6	+1.6
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
UNV	Unalaska Valle	72.76	336	P	P	11 18 15.6	+0.8
	baz=28						
MA2	Magadan	72.83	1	LR	LR	11 49 20.0	
	comp=Z,22nm,18.6s,baz=224,slow=35						
LPAZ	La Paz	73.44	221	P	P	11 18 18.7	-1.3
	comp=Z,1.8nm,1.1s,baz=4.3,slow=7.3,SNR=4.0						
LPAZ				LR	LR	11 46 51.9	
	comp=Z,72nm,20.6s,baz=38,slow=33						
	comp=Z,1.8nm,1.1s						
PB16	IPOC Station P	75.85	221	P	P	11 18 33.3	-0.6
PB16				IAmb	IAmb	11 18 35.4	
	comp=Z,13nm,1.2s						
PB16	IPOC Station P	75.85	221	P	P	11 18 34.1	+0.2
SONM	Songino Array	76.59	30	P	P	11 18 37.0	-0.4
	comp=Z,0.6nm,0.3s,baz=318,slow=6.4,SNR=6.2						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	76.59	30	P	P	11 18 36.5	-0.9
CPUP	Villa Florida	78.59	207	LR	LR	11 51 07.7	
	comp=Z,37nm,18.2s,baz=73,slow=34						
PETK	Petropavlovsk-	79.22	357	P	P	11 18 52.4	+0.7
	comp=Z,3.5nm,1.1s,baz=14,slow=6.4,SNR=4.4						
	comp=Z,3.5nm,1.1s						
PETK	Petropavlovsk-	79.22	357	P	P	11 18 51.8	+0.1
SALTA		79.79	215	P	P	11 18 56.4	+0.8
GTA2	Gaotai	81.23	38	eP	P	11 19 03.1	+0.2
GTA2				pP	sP	11 19 07.1	+1.0
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AC01	Pan de Azucar	83.22	218	P	P	11 19 13.2	+0.1
AC02	Maricunga	83.23	217	P	P	11 19 15.4	+1.7
BNX	BinXian	84.18	17	⇑P	P	11 19 18.3	+0.3
BNX				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GO03	Copiapo	84.35	217	P	P	11 19 19.8	+0.8
HHC	Hu-ho-hao-te	84.49	30	eP	P	11 19 19.3	-0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
LZH	Lanzhou	85.81	37	eP	P	11 19 27.0	+0.4
LZH				pP	pwP	11 19 33.9	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
BOSA	Boshof	89.79	135	LR	LR	11 58 14.7	
	comp=Z,48nm,20.4s,baz=24,slow=34						
SUR	Sutherland	91.00	141	LR	LR	11 57 25.1	
	comp=Z,54nm,18.8s,baz=92,slow=33						
KSRS	Korea Array	92.24	19	P	P	11 19 56.0	-0.8
	comp=Z,0.5nm,0.6s,baz=339,slow=6.7,SNR=5.0						
	comp=Z,0.5nm,0.6s						
PZH	PanZhiHua	93.10	44	P	P	11 20 00.9	-0.2
NJ2	Nanjing	94.90	28	eP	P	11 20 06.3	-2.8
PLCA	Paso Flores	96.12	211	LR	LR	12 02 35.6	
	comp=Z,47nm,18.6s,baz=52,slow=35						
CMAR	Chiang Mai Arr	98.50	50	LR	LR	12 07 02.1	
	comp=Z,29nm,18.8s,baz=310,slow=37						
WRA	Warramunga Arr	148.50	34	PKPbc	PKPbc	11 26 32.7	-1.1
	comp=Z,1.8nm,1.0s,baz=329,slow=2.9,SNR=5.9						
VNDA	Vanda	150.08	184	PKPbc	PKiKP	11 26 36.5	-0.4
	comp=Z,4.1nm,1.1s,baz=254,slow=3.2,SNR=12						
ASAR	Alice Springs	151.69	38	PKPbc	PKPbc	11 26 40.8	-0.7
	comp=Z,0.8nm,0.6s,baz=341,slow=1.7,SNR=9.1						

*SNET **17** 11:07:04.7±3.5, 11°.55N×86°.27W, h83km, ML3.7, Presumed earthquake*
*UCR **17** 11:07:07.2±0.7, 11°.52N×86°.31W, h70km±9km, MW3.6, Presumed earthquake*
*CATAC **17** 11:07:07.0±0.4, 12°N±3°×8°6W±°, h59km±4km, M3.7/26, MLv3.7/26, Error ellipse: s-maj=8.9km s-min=3.7km az=44.2, confirmed*

ISC 17 11:07:06.8±1.3, **11°.55N**±0°.05×**86°.36W**±0°.05, **h82**km±9km, **n79**, σ0**970**/103, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASN	Masaya	0.48	26	P	Pn	11 07 20.3	-0.3
MASN				S	Sn	11 07 31.0	+0.2
MAS3	Al N del Volca	0.51	21	P	Pn	11 07 20.4	-0.5
MAS3				S	Sn	11 07 31.1	-0.1
UNAN	Cigeo UNAN	0.56	9	P	Pn	11 07 21.3	0.0
UNAN				S	Sn	11 07 32.6	+0.5
TISN	Laguna Tiscapa	0.59	9	P	Pn	11 07 21.4	-0.2
MGAN	Managua	0.60	11	P	Pn	11 07 21.6	-0.1
MGAN				S	Sn	11 07 33.1	+0.4
WILN	Americas 2	0.63	16	P	Pn	11 07 21.7	-0.2
WILN				S	Sn	11 07 33.6	+0.5
APQ2	Apoyeque	0.64	3	P	Pn	11 07 21.5	-0.6
APQ2				S	Sn	11 07 33.2	-0.2
COPN	Copaltepe	0.66	340	P	Pn	11 07 22.2	-0.1
COPN	Copaltepe	0.66	340	eP	Pn	11 07 22.1	-0.1
JAPN	Al SSO del Vol	0.67	92	P	Pn	11 07 22.2	-0.1
JAPN	Al SSO del Vol	0.67	92	eP	Pn	11 07 22.2	-0.1
APYN	Apoyeque	0.68	1	P	Pn	11 07 23.1	+0.7
APYN				S	Sn	11 07 34.9	+0.9
AMTN	Mateare	0.68	355	P	Pn	11 07 22.9	+0.5
AMTN				S	Sn	11 07 34.3	+0.2
MORN	Al O del Volca	0.70	90	P	Pn	11 07 22.2	-0.5
MORN				S	Sn	11 07 34.9	+0.5
CONN	Concepcion	0.72	89	P	Pn	11 07 22.4	-0.5
CONN				S	Sn	11 07 34.3	-0.6
LCRUZ	La Cruz	0.86	123	eP	Pn	11 07 24.1	-0.2
LCRUZ				eS	Sn	11 07 37.3	-0.1
MOMN	Momotombo	0.87	349	P	Pn	11 07 24.5	+0.1
MOMN				S	Sn	11 07 38.1	+0.4
MOM2	El Cardon	0.89	352	P	Pn	11 07 24.7	0.0
MOM2				S	Sn	11 07 38.4	+0.5
CARN	Rivas	0.90	114	P	Pn	11 07 24.3	-0.5
CARN				S	Sn	11 07 37.4	-0.9
CARN	Rivas	0.90	114	eP	Pn	11 07 24.4	-0.4
MACN	El Madrono	0.96	342	P	Pn	11 07 25.8	+0.3
MACN				S	Sn	11 07 39.3	-0.2
MOMN	MOM3	0.97	351	P	Pn	11 07 25.5	-0.1
CNGA	Al SSO del Vol	0.99	341	P	Pn	11 07 25.9	0.0
CNGN	Cerro Negro	1.00	341	P	Pn	11 07 26.0	0.0
ROCN	Rota Cerro Neg	1.03	339	P	Pn	11 07 23.0	-3.3
ILCN	San Idelfonso	1.07	342	P	Pn	11 07 26.7	-0.1
PLRN	Geotermica Pol	1.10	339	P	Pn	11 07 27.3	+0.1
BOAB	BOACO BROADBAN	1.12	37	P	Pn	11 07 27.2	-0.2
QUEN	Al S del Volca	1.14	335	P	Pn	11 07 26.5	-1.2
LAPC	Finca la Perla	1.20	130	eP	Pn	11 07 27.9	-0.5
BUAI	Buenos Aires	1.21	123	eP	Pn	11 07 28.3	-0.3
ACON	Acoyapa	1.24	70	P	Pn	11 07 28.6	-0.2
ACON				S	Sn	11 07 45.2	-0.2
ACON	Acoyapa	1.24	70	eP	Pn	11 07 28.8	-0.1
VRLE	La Escondida,	1.24	128	eP	Pn	11 07 28.3	-0.7
ALIBA	Liberia Airpor	1.25	140	eP	Pn	11 07 29.1	+0.2
GPS3	Bodega del ICE	1.26	129	eP	Pn	11 07 29.9	+0.7
ERIA	Liberia	1.29	135	eP	Pn	11 07 30.3	+0.9
CRIN	San Cristobal	1.32	330	P	Pn	11 07 30.3	+0.3
CRIN				S	Sn	11 07 47.0	-0.5
DELF	Filadelfia	1.35	144	eP	Pn	11 07 30.6	+0.3
CLARA	Aguas Claras	1.39	123	eP	Pn	11 07 30.6	-0.3
MESS	Mesas	1.40	125	eP	Pn	11 07 30.7	-0.3
HORNC	Hornillas	1.43	125	eP	Pn	11 07 31.0	-0.3
MATN	Matagalpa	1.44	17	P	Pn	11 07 31.6	+0.1
MATN				S	Sn	11 07 50.5	+0.5
CUI	Cuipilapa	1.48	127	eP	Pn	11 07 31.6	-0.4
UPAL	Upala	1.48	116	eP	Pn	11 07 30.8	-1.1
BAGA	Bagaces	1.49	133	eP	Pn	11 07 31.7	-0.3
SACU	Santa Cruz	1.49	149	eP	Pn	11 07 32.0	0.0
PLVR	Palo Verde	1.56	140	eP	Pn	11 07 32.9	-0.1
JUD3	Juan Diaz 3	1.60	149	eP	Pn	11 07 33.3	-0.2
TENO	El Achiote	1.60	122	eP	Pn	11 07 33.0	-0.6
LCHIL	Los Chiles	1.70	107	eP	Pn	11 07 33.7	-1.0
QUEB	Quebradon, Cot	1.71	122	eP	Pn	11 07 34.5	-0.5
COTE	Lago Cote	1.72	124	eP	Pn	11 07 34.8	-0.3
TILA	Tilaran	1.74	128	eP	Pn	11 07 35.0	-0.4
JTS	Las Juntas de	1.87	132	eP	Pn	11 07 36.3	-0.7
JUNT	Juntas	1.87	132	eP	Pn	11 07 36.3	-0.7
TABAC	Tabacon	1.89	124	eP	Pn	11 07 37.7	+0.4
NYURE	Nandayure	1.89	145	eP	Pn	11 07 37.0	-0.3
CEDE	Laguna Cedeo	1.94	123	eP	Pn	11 07 38.0	0.0
ARE1	Arenal 1	1.94	124	eP	Pn	11 07 38.0	-0.1
VARE2	V. Arenal	1.94	124	eP	Pn	11 07 37.9	-0.2
CASO	Castillo	1.95	125	eP	Pn	11 07 38.2	+0.1
VACR	Volcan Arenal	1.97	123	eP	Pn	11 07 38.0	-0.3
LAFE	Finca La Fe, P	2.25	140	eP	Pn	11 07 41.6	-0.4
INTP	Intipuca	2.33	315	eP	Pn	11 07 43.4	+0.3
INTP				eS	Sn	11 08 09.8	-1.1
TRB2	Turrubares	2.49	131	eP	Pn	11 07 45.3	0.0
LCY	Lacayo	2.65	315	eP	Pn	11 07 48.7	+1.2
RANC	El Ranchito	2.65	315	eP	Pn	11 07 48.1	+0.5
RANC				eS	Sn	11 08 18.9	0.0
PACA	Pacayal	2.70	315	eP	Pn	11 07 48.9	+0.7
PACA				eS	Sn	11 08 20.2	+0.1
TRT2	Tortugero	2.76	111	eP	Pn	11 07 48.0	-0.9
TECA	Tecapa	2.84	313	eP	Pn	11 07 51.2	+1.0
PICV	PH. Pirrs	2.87	132	eP	Pn	11 07 50.5	+0.1
PIEC	Cerro El Cedra	3.04	129	eP	Pn	11 07 53.3	+0.2
COEG	Centro de Oper	3.20	310	eP	Pn	11 07 55.8	+0.9
COEG				eS	Sn	11 08 30.5	-1.7
P5NO	Presa 5 de nov	3.36	316	eP	Pn	11 07 57.4	+0.3
P5NO				eS	Sn	11 08 35.1	-0.9
EDPE	Pejibaye, P	3.63	131	eP	Pn	11 08 01.8	+1.1
FIMO	Fila Mora	3.91	130	eP	Pn	11 08 06.4	+1.8
NUBE	Las Nubes	4.07	305	eP	Pn	11 08 07.4	+0.6
NUBE				eS	Sn	11 08 51.0	-2.4
PIRO	Carate, Puerto	4.32	136	eP	Pn	11 08 11.5	+1.4

*CATAC **17** 11:13:15.5±0.8, 13°N±4°×9°0W±°, h21km±5km, M3.1/11, MLv3.1/11, Error ellipse: s-maj=8.9km s-min=5.4km az=26.8, confirmed*
*GCG **17** 11:13:17.4±0.7, 13°.30N×90°.01W, h31km±8km, MD3.7, ML3.8, Presumed earthquake*
*SNET **17** 11:13:17.1±0.8, 13°.24N×89°.96W, h32km, ML3.1, Presumed earthquake*

ISC 17 11:13:15.4±2.9, **13°.2N**±0°.1×**90°.0W**±0°.1, **h21**km±6km, **n27**, σ1**901**/42, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.69	359	P	Pb	11 13 29.1	+0.3
FAME				S	Sn	11 13 38.9	-1.2
JAYA	Jayaque - finc	0.74	47	P	Pb	11 13 30.2	+0.5
JAYA				S	Sn	11 13 40.6	-1.0
JAYA	Jayaque - finc	0.74	47	*i* P	Pb	11 13 30.0	+0.3
JAYA				*i* S	Sb	11 13 39.2	-0.2
JAYA				IAML		11 13 40.9	
	comp=E,4μm,0.3s						
JAYA	Jayaque - finc	0.74	47	eP	Pb	11 13 29.9	+0.2
JAYA				eS	Sb	11 13 39.6	+0.2
LALI	Alcalda de L	0.74	63	P	Pb	11 13 29.9	+0.2
LALI				S	Sb	11 13 36.5	-2.9
CEVE	Cerro Verde	0.77	29	P	Pn	11 13 41.5	+10
CEVE	Cerro Verde	0.77	29	eP	Pb	11 13 30.3	+0.1
CEVE				eS	Sn	11 13 41.4	-1.0
NUBE	Las Nubes	0.78	16	P	Pb	11 13 30.6	+0.2
NUBE	Las Nubes	0.78	16	*i* P	Pb	11 13 30.5	+0.2
NUBE				*i* S	Sb	11 13 40.5	-0.1
NUBE				*i* S	Sb	11 13 41.0	+0.5
NUBE	Las Nubes	0.78	16	eP	Pb	11 13 30.5	+0.2
NUBE				eS	Sb	11 13 41.1	+0.5
SBLS	San Blas	0.78	28	eP	Pb	11 13 30.7	+0.2
SBLS				eS	Sn	11 13 41.7	-1.0
LOAL	Lomas de Alarc	0.87	15	P	Pn	11 13 32.5	-0.1
LOAL				S	Sn	11 13 45.1	+0.4
PMON	Piamonte	0.87	50	P	Pn	11 13 32.3	-0.3
PMON				S	Sn	11 13 44.4	-0.4
SLOZ	Alcaldia de Sa	0.90	14	P	Pn	11 13 32.5	-0.5
SLOZ				S	Sn	11 13 46.1	+0.8
SLOZ	Alcaldia de Sa	0.90	14	eP	Pn	11 13 32.4	-0.5
PANCS	Alcalda de	0.92	60	P	Pb	11 13 32.4	-0.4
PANCS				S	Sb	11 13 44.3	-0.4
UEES	Universidad Ev	0.93	53	P	Pn	11 13 36.7	+3.2
UEES				S	Sn	11 13 45.9	-0.4
SEMO	Seminario San	0.94	54	P	Pn	11 13 38.7	+5.1
LOMA	Loma Larga	0.95	59	P	Pb	11 13 32.9	-0.4
LOMA				S	Sn	11 13 46.4	-0.3
PAVA	Las Pavas	1.18	62	P	Pb	11 13 37.9	+0.6
PAVA				S	Sn	11 13 52.7	+0.3
COEG	Centro de Oper	1.19	67	P	Pn	11 13 36.7	-0.3
COEG	Centro de Oper	1.19	67	eP	Pn	11 13 36.4	-0.6
TECO	Alcaldia de Te	1.25	72	P	Pn	11 13 38.1	+0.3
TECO				S	Sn	11 13 52.9	-1.1
MTO3	Montecristo	1.39	27	*i* P	Pn	11 13 39.9	+0.1
LLGN	La Laguna	1.44	46	P	Pn	11 13 31.7	-8.8
LLGN				S	Sn	11 13 42.0	-17
P5NO	Presa 5 de nov	1.47	55	P	Pb	11 13 45.1	+3.1
P5NO				S	Sn	11 13 59.7	+0.3
PACA	Pacayal	1.67	79	P	Pn	11 13 31.4	-12
PACA				S	Sn	11 13 43.8	-21

*NNC **17** 11:16:22.9±1.7, 44°.29N×81°.63E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=15.5km s-min=9.1km az=120.0, Suspected Mining explosion.*
*SOME **17** 11:16:23.6, 44°.33N×81°.52E, h5km*

ISC 17 11:16:20.7±1.6, **44°.26N**±0°.06×**81°.74E**±0°.08, **h0**km, **n15**, σ1**967**/25, **3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.29	231	P	Pb	11 16 47.3	+1.2
KTMS	1.8nm,0.1s			S	Sb	11 17 04.3	+1.1
	5.0nm,0.3s						
KTMS	Ketmen	1.29	231	eP	Pb	11 16 47.2	+1.2
KTMS	1.8nm,0.2s			eS	Sg	11 17 04.0	+1.8
	5.0nm,0.2s						
KNOS	Konyrlen	1.84	274	P	Pg	11 16 55.9	-0.1
KNOS	1.4nm,0.2s			S	Sb	11 17 19.2	+0.3
	19nm,0.5s						
PDGK	Podgornoye	1.88	241	⇑Pn	Pn	11 16 53.6	-0.6
PDGK	2.0nm,0.5s			⇑Lg	Lg	11 17 21.3	
	32nm,0.6s						
KAPS	Kapalarasan	1.98	302	eP	Pg	11 16 58.2	-0.5
KAPS	2.6nm,0.1s			eS	Sb	11 17 23.0	+0.1
	59nm,0.3s						
SHLS	Shalkode	1.99	237	P	Pn	11 16 54.8	-0.9
SHLS	4.4nm,0.2s			S	Sn	11 17 17.5	-3.8
	20nm,0.7s						
SHLS	Shalkode	1.99	237	eP	Pn	11 16 54.8	-0.9
SHLS	4.4nm,0.2s			eS	Sn	11 17 17.5	-3.8
	22nm,0.4s						
UZB	Uzynbulak	2.27	241	eP	Pb	11 17 03.4	+0.9
UZB	3.3nm,0.4s			eS	Sb	11 17 31.8	+0.7
	8.8nm,0.4s						
KPKS	Kokpek	2.35	251	Pg	Pb	11 17 04.4	+0.5
KPKS	0.1nm,0.2s			Lg	Lg	11 17 34.2	
	43nm,0.5s						
KPKS	Kokpek	2.35	251	eP	Pg	11 17 05.3	-0.4
KPKS	0.1nm,0.1s			eS	Sb	11 17 35.1	+1.5
	43nm,0.5s						
BLB	Baldybastay	2.35	267	Pg	Pb	11 17 04.4	+0.3
BLB	4.1n

RAGZ				S	Sn	11 26 35.9	+2.0	
RIGZ	**Rimuhau**	**3.34**	**194**	P	Pn	11 25 56.5	-0.5	
RIGZ				S	Sn	11 26 35.9	-0.8	
MUGZ	**Murupara**	**3.42**	**208**	P	Pn	11 25 57.8	-0.3	
RTZ	**Ruatahuna**	**3.47**	**205**	P	Pn	11 25 58.2	-0.7	
PRGZ	**Paritu Road**	**3.53**	**192**	P	Pn	11 25 59.0	-0.6	
PRGZ				S	Sn	11 26 40.2	-1.0	
KNZ	**Kokohu**	**3.66**	**194**	P	Pn	11 25 59.9	-1.5	
ALRZ	**Allen Road**	**3.67**	**212**	P	Pn	11 26 02.0	+0.4	
RAHZ	**Arahi**	**3.71**	**202**	P	Pn	11 26 01.2	-1.0	
RAHZ				S	Sn	11 26 45.6	-0.2	
MTHZ	**Maungataniwha**	**3.73**	**205**	P	Pn	11 26 02.0	-0.4	
MTHZ				S	Sn	11 26 47.7	+1.4	
MHGZ	**Mahia Peninsul**	**3.75**	**191**	P	Pn	11 26 02.0	-0.6	
MRHZ	**Matea Rd**	**3.87**	**209**	P	Pn	11 26 03.4	-0.9	
NMHZ	**Naumai**	**3.96**	**203**	P	Pn	11 26 04.8	-0.9	
NMHZ				S	Sn	11 26 52.7	+0.6	
BKZ	**Black Stump Fm**	**4.13**	**206**	P	Pn	11 26 06.3	-1.6	
HIZ	**Hauiti**	**4.40**	**225**	P	Pn	11 26 13.5	+2.0	
BFZ	**Birch Farm**	**5.59**	**201**	P	Pn	11 26 23.8	-4.1	
KHZ	**Kahutara**	**8.06**	**209**	P	Pn	11 26 57.3	-4.6	

IDC 17 11:35:07.0±8.9, 6°14.8′S×150°27.0′E, h72km±65km, mb3.1/3, mbtmp3.6/4, ML1.8/1, Error ellipse: s-maj=75.7km s-min=59.9km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.78**	**227**	P	Pn	11 36 17.2	+0.7
	2.8nm,0.3s,baz=61,slow=13,SNR=7.5						
PMG				S	Sn	11 37 10.6	-0.1
	10nm,0.8s,baz=0.0,slow=20,SNR=1.3						
	6.4nm,0.3s						
WRA	**Warramunga Arr**	**21.00**	**228**	P	P	11 39 45.4	+0.6
	1.3nm,0.6s,baz=51,slow=11,SNR=15						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**23.77**	**221**	P	P	11 40 13.8	+0.6
	0.2nm,0.4s,baz=57,slow=9.1,SNR=16						
	0.2nm,0.4s						
QSPA	**South Pole Qui**	**83.83**	**180**	P	P	11 47 27.8	-0.8
	0.4nm,0.7s,baz=34,slow=11,SNR=1.4						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.68**	**285**	PKPbc	PKPbc	11 54 46.2	-1.0
	0.4nm,0.5s,baz=59,slow=3.5,SNR=1.8						

*ANF **17** 11:57:33.4±0.2, 58°.31N×133°.49W, h1km±1km, ML3.7/31, Error ellipse: s-maj=1.1km s-min=0.9km az=74.0*
*AEIC **17** 11:57:33.7±1.1, 58°.36N±0°.01×133°.47W±0°.03, h3km±6km, Error ellipse: s-maj=2.4km s-min=1.5km az=58.0*
*NEIC **17** 11:57:33.5±1.0, 58°.35N±0°.02×133°.47W±0°.04, h5km±2km, ML3.3/66, ML3.0(AEIC), Error ellipse: s-maj=3.8km s-min=3.0km az=309.0*
*PGC **17** 11:57:34.8±0.0, 58°.35N×133°.47W, h6km, ML3.5/32, ML3.3(NEIC), 55km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 17 11:57:33.3±0.7, 58°.37N±0°.02×133°.45W±0°.01, h10km, n159, σ1°82/228, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.50**	**260**	P	**Pg**	**11 57 42.6**	**-0.4**
JIS	**Juneau Island**	**0.50**	**260**	S	**Sg**	**11 57 49.4**	**-0.2**
JIS	**Juneau Island**	**0.50**	**260**		**Pg**	**11 57 42.6**	**-0.4**
JIS					**Sg**	**11 57 49.5**	**0.0**
R32K	**Eaglecrest**	**0.57**	**261**		**Pg**	**11 57 44.2**	**-0.2**
R32K				Sg	**Sg**	**11 57 51.6**	**-0.3**
R32K	**Eaglecrest**	**0.57**	**261**	P	**Pg**	**11 57 44.2**	**-0.2**
	baz=81,SNR=67						
R32K				S	**Sg**	**11 57 51.6**	**-0.3**
	baz=81						
BESE	**Bessie Mountai**	**0.77**	**287**	P	**Pg**	**11 57 47.8**	**-0.3**
BESE				S	**Sg**	**11 57 58.4**	**+0.3**
BESE	**Bessie Mountai**	**0.77**	**287**		**Pg**	**11 57 47.8**	**-0.3**
Q32M	**Nakina River**	**0.86**	**46**	P	**Pb**	**11 57 50.0**	**-0.4**
Q32M				S	**Sb**	**11 58 02.4**	**+0.4**
Q32M	**Nakina River**	**0.86**	**46**		**Pb**	**11 57 50.2**	**-0.2**
Q32M	**Nakina River**	**0.86**	**46**	P	**Pb**	**11 57 50.4**	**0.0**
	baz=226,SNR=152						
Q32M				S	**Sn**	**11 58 03.2**	**-1.1**
	baz=226						
S32K	**Killisnoo**	**1.08**	**214**	Pg	**Pg**	**11 57 53.7**	**-0.4**
S32K				Sg	**Sb**	**11 58 08.2**	**-0.1**
S32K	**Killisnoo**	**1.08**	**214**	P	**Pg**	**11 57 53.4**	**-0.7**
	baz=33,SNR=44						
S32K				S	**Sg**	**11 58 07.5**	**-0.6**
	baz=33						
R31K	**City Hall, Gus**	**1.21**	**273**	P	**Pn**	**11 57 55.7**	**-0.5**
R31K				S	**Sn**	**11 58 12.3**	**-0.3**
R31K	**City Hall, Gus**	**1.21**	**273**		**Pb**	**11 57 56.1**	**0.0**
R31K					**Sg**	**11 58 11.8**	**-0.2**
R31K	**City Hall, Gus**	**1.21**	**273**	P	**Pn**	**11 57 55.8**	**-0.3**
	baz=92,SNR=33						
R31K				S	**Sn**	**11 58 13.0**	**+0.5**
	baz=92						
P32M	**Atlin**	**1.23**	**354**	P	**Pb**	**11 57 56.6**	**0.0**
P32M				S	**Sn**	**11 58 14.2**	**+0.8**
P32M	**Atlin**	**1.23**	**354**		**Pg**	**11 57 56.9**	**-0.1**
P32M				Sg	**Sn**	**11 58 14.0**	**+0.7**
P32M	**Atlin**	**1.23**	**354**	P	**Pb**	**11 57 56.7**	**0.0**
	baz=174,SNR=157						
P32M				S	**Sn**	**11 58 14.7**	**+1.4**
	baz=174						
S34M	**Telegraph Cree**	**1.31**	**109**	P	**Pn**	**11 57 57.2**	**-0.5**
S34M				S	**Sg**	**11 58 15.4**	**-0.1**
S34M	**Telegraph Cree**	**1.31**	**109**		**Pb**	**11 57 57.8**	**-0.3**
S34M				Sn	**Sn**	**11 58 15.0**	**-0.3**
S34M				IAML		11 58 21.8	
	comp=N,564nm,1.1s						
S34M	**Telegraph Cree**	**1.31**	**109**	P	**Pb**	**11 57 57.5**	**-0.5**
	baz=291,SNR=117						
S34M				S	**Sg**	**11 58 15.9**	**+0.4**
	baz=291						
SKAG	**Skagway**	**1.46**	**319**	P	**Pb**	**11 58 00.6**	**0.0**
SKAG	**Skagway**	**1.46**	**319**	S	**Sg**	**11 58 20.2**	**-0.2**
SKAG	**Skagway**	**1.46**	**319**		**Pb**	**11 58 00.7**	**0.0**
SKAG				IAML		11 58 25.9	
	comp=N,304nm,0.7s						
SKAG				IAML		11 58 29.4	
	comp=E,363nm,1.0s						
SKAG	**Skagway**	**1.46**	**319**	P	**Pb**	**11 58 00.4**	**-0.2**
	baz=138,SNR=57						
SKAG				S	**Sg**	**11 58 21.4**	**+1.1**
	baz=138						
S31K	**Pelican**	**1.53**	**256**		**Pn**	**11 58 00.9**	**+0.3**
S31K	**Pelican**	**1.53**	**256**	P	**Pn**	**11 58 00.6**	**0.0**
	baz=74,SNR=20						
S31K				S	**Sb**	**11 58 21.0**	**0.0**
	baz=74						
T33K	**Petersburg**	**1.58**	**170**	Pn	**Pb**	**11 58 02.1**	**-0.5**
T33K				Sn	**Sb**	**11 58 22.6**	**0.0**
T33K	**Petersburg**	**1.58**	**170**		**Pn**	**11 58 01.5**	**+0.1**
T33K	**Petersburg**	**1.58**	**170**	P	**Pb**	**11 58 01.7**	**-0.9**
	baz=350,SNR=18						
T33K				S	**Sg**	**11 58 23.2**	**-0.9**
	baz=350						
R33M	**Jennings River**	**1.65**	**50**	Pn	**Pb**	**11 58 04.0**	**+0.1**
R33M				Sn	**Sg**	**11 58 25.9**	**-0.4**
R33M	**Jennings River**	**1.65**	**50**		**Pb**	**11 58 04.0**	**+0.1**
R33M	**Jennings River**	**1.65**	**50**	IAML		11 58 29.0	
	comp=N,439nm,0.9s						
R33M				IAML		11 58 31.8	
	comp=E,346nm,0.7s						
R33M	**Jennings River**	**1.65**	**50**	P	**Pb**	**11 58 03.8**	**-0.1**
	baz=232,SNR=136						
R33M				S	**Sg**	**11 58 26.7**	**+0.3**
	baz=232						
SIT	**Sitka**	**1.66**	**218**	P	**Pn**	**11 58 02.6**	**+0.2**
SIT	**Sitka**	**1.66**	**218**	S	**Sg**	**11 58 25.5**	**-1.0**
SIT	**Sitka**	**1.66**	**218**		**Pn**	**11 58 02.8**	**+0.4**
SIT				IAML		11 58 32.3	
	comp=N,278nm,1.0s						
SIT	**Sitka**	**1.66**	**218**	P	**Pn**	**11 58 02.5**	**+0.2**
	baz=37,SNR=12						
SIT				S	**Sb**	**11 58 24.9**	**+0.2**
	baz=37						
DLBC	**Dease Lake**	**1.81**	**86**	Pn	**Pb**	**11 58 05.3**	**-1.2**
DLBC				Sn	**Sb**	**11 58 29.8**	**+0.6**
DLBC	**Dease Lake**	**1.81**	**86**		**Pb**	**11 58 05.9**	**-0.5**
DLBC	**Dease Lake**	**1.81**	**86**	P	**Pb**	**11 58 05.6**	**-0.9**
	baz=269,SNR=174						
DLBC				Sb	**Sg**	**11 58 32.0**	**+0.7**
	baz=269						
PLBC	**Pleasant Camp**	**1.86**	**307**	Pn	**Pb**	**11 58 07.6**	**+0.2**
PLBC				Sn	**Sb**	**11 58 31.2**	**+0.4**
PLBC	**Pleasant Camp**	**1.86**	**307**		**Pb**	**11 58 07.4**	**0.0**
PLBC	**Pleasant Camp**	**1.86**	**307**	P	**Pb**	**11 58 07.2**	**-0.2**
	baz=125,SNR=182						
PLBC				S	**Sb**	**11 58 31.7**	**+1.0**
	baz=125						
P33M	**Teslin, Yukon**	**1.88**	**10**	Pn	**Pb**	**11 58 06.9**	**-0.8**
P33M				Sn	**Sb**	**11 58 31.4**	**+0.2**
P33M	**Teslin, Yukon**	**1.88**	**10**		**Pb**	**11 58 07.3**	**-0.4**
P33M				IAML		11 58 35.3	
	comp=N,181nm,0.8s						
P33M	**Teslin, Yukon**	**1.88**	**10**	P	**Pb**	**11 58 07.2**	**-0.5**
	baz=190,SNR=100						
P33M				S	**Sg**	**11 58 32.9**	**-0.7**
	baz=190						
WRAK	**Wrangell Islan**	**2.04**	**162**	Pn	**Pn**	**11 58 08.3**	**+0.5**
WRAK				Sn	**Sn**	**11 58 33.8**	**+0.5**
WRAK	**Wrangell Islan**	**2.04**	**162**		**Pn**	**11 58 08.2**	**+0.5**
WRAK	**Wrangell Islan**	**2.04**	**162**	IAML		11 58 39.5	
	comp=N,188nm,0.8s						
WRAK				IAML		11 58 43.3	
	comp=N,291nm,0.6s						
WRAK	**Wrangell Islan**	**2.04**	**162**	P	**Pn**	**11 58 08.2**	**+0.5**
	baz=343						
WRAK				S	**Sb**	**11 58 34.7**	**-1.3**
	baz=343						
T35M	**Bob Quinn**	**2.21**	**128**	Pn	**Pn**	**11 58 10.6**	**+0.5**
T35M				Sn	**Sn**	**11 58 38.5**	**+1.0**
T35M	**Bob Quinn**	**2.21**	**128**		**Pb**	**11 58 11.7**	**-1.7**
T35M				IAML		11 58 47.7	
	comp=N,259nm,0.8s						
T35M	**Bob Quinn**	**2.21**	**128**	P	**Pn**	**11 58 11.1**	**+1.0**
	baz=310,SNR=56						
T35M				Sb	**Sg**	**11 58 43.3**	**-1.1**
	baz=310						
U33K	**Whale Pass**	**2.27**	**175**		**Pn**	**11 58 11.1**	**+0.4**
U33K				IAML		11 58 50.3	
	comp=E,238nm,1.2s						
U33K	**Whale Pass**	**2.27**	**175**	P	**Pn**	**11 58 10.9**	**+0.1**
	baz=355						
U33K				S	**Sb**	**11 58 40.3**	**-2.0**
	baz=355						
WHY	**Whitehorse**	**2.41**	**343**	Pn	**Pn**	**11 58 14.1**	**+1.2**
WHY				Sn	**Sb**	**11 58 44.5**	**-2.1**
WHY	**Whitehorse**	**2.41**	**343**		**Pn**	**11 58 14.4**	**+1.5**
WHY				IAML		11 58 52.1	
	comp=E,220nm,0.5s						
WHY				IAML		11 59 01.3	
	comp=N,167nm,1.1s						
WHY	**Whitehorse**	**2.41**	**343**	P	**Pn**	**11 58 14.1**	**+1.2**
	baz=162,SNR=22						
WHY				S	**Sb**	**11 58 45.9**	**-0.7**
	baz=162						
P30M	**Million Dollar**	**2.52**	**316**	Pn	**Pn**	**11 58 15.4**	**+1.2**
P30M				Sn	**Sb**	**11 58 47.5**	**-2.1**
P30M	**Million Dollar**	**2.52**	**316**	P	**Pn**	**11 58 15.8**	**+1.5**
	baz=133,SNR=81						
P30M				S	**Sb**	**11 58 48.3**	**-1.3**
	baz=133						
P29M	**Windy Craggy**	**2.55**	**302**	Pn	**Pn**	**11 58 16.2**	**+1.5**
P29M				Sn	**Sb**	**11 58 48.3**	**-2.3**
P29M	**Windy Craggy**	**2.55**	**302**		**Pn**	**11 58 15.7**	**+0.9**
P29M				IAML		11 59 01.3	
	comp=E,132nm,0.8s						
P29M	**Windy Craggy**	**2.55**	**302**	P	**Pn**	**11 58 16.0**	**+1.2**
	baz=118,SNR=35						
P29M				Sb	**Sg**	**11 58 53.7**	**-1.6**
	baz=118						
O30N	**Mendenhall**	**2.76**	**332**	Pn	**Pn**	**11 58 19.2**	**+1.6**
O30N				Sn	**Sn**	**11 58 53.0**	**+2.0**
O30N	**Mendenhall**	**2.76**	**332**		**Pn**	**11 58 19.4**	**+1.8**
O30N				IAML		11 59 14.2	
	comp=N,128nm,1.0s						
O30N	**Mendenhall**	**2.76**	**332**	P	**Pn**	**11 58 19.2**	**+1.6**
	baz=150,SNR=38						
O30N				Sb	**Sg**	**11 59 01.0**	**-0.8**
	baz=150						
N32M	**Quiet Lake**	**2.80**	**4**	Pn	**Pn**	**11 58 19.9**	**+1.8**
N32M				Sn	**Sn**	**11 58 54.2**	**+2.3**
N32M	**Quiet Lake**	**2.80**	**4**	P	**Pn**	**11 58 20.1**	**+2.0**
	baz=184						
N32M				Sg	**Sg**	**11 59 08.0**	**+4.9**
	baz=184						
CRAG	**Craig**	**2.91**	**176**	P	**Pn**	**11 58 20.3**	**+0.6**
CRAG	**Craig**	**2.91**	**176**	Pn	**Pn**	**11 58 20.3**	**+0.6**
CRAG				IAML		11 59 09.8	
	comp=N,90nm,1.0s						
CRAG				IAML		11 59 15.8	
	comp=E,85nm,0.9s						
CRAG	**Craig**	**2.91**	**176**	P	**Pn**	**11 58 20.2**	**+0.6**
	baz=356						
CRAG				Sg	**Sg**	**11 59 07.3**	**+0.5**
	baz=356						
WTLY	**Watson Lake, Y**	**2.96**	**52**	Pn	**Pn**	**11 58 21.6**	**+1.2**
WTLY				Sg	**Sg**	**11 59 07.3**	**-1.1**
WTLY	**Watson Lake, Y**	**2.96**	**52**	Sb	**Sg**	**11 59 06.9**	**-1.5**
	baz=236						
U35K	**Hyder**	**3.09**	**141**	Sb	**Sg**	**11 59 09.2**	**-3.2**
	baz=324						
HYT	**Haines Junctio**	**3.21**	**322**	Pn	**Pn**	**11 58 24.9**	**+1.0**
HYT				Sg	**Sg**	**11 59 14.6**	**-1.8**
HYT	**Haines Junctio**	**3.21**	**322**		**Pn**	**11 58 26.4**	**+2.5**
HYT				IAML		11 59 23.5	
	comp=N,96nm,1.2s						
HYT				IAML		11 59 26.1	
	comp=E,104nm,1.1s						
HYT	**Haines Junctio**	**3.21**	**322**	P	**Pn**	**11 58 26.0**	**+2.1**
	baz=139,SNR=15						
HYT				Sb	**Sg**	**11 59 14.5**	**-1.8**
	baz=139						
V35K	**Ketchikan**	**3.21**	**161**	Pn	**Pn**	**11 58 25.0**	**+1.2**
V35K				IAML		11 59 23.2	
	comp=E,68nm,0.8s						
V35K				IAML		11 59 26.0	
	comp=N,65nm,1.0s						
V35K	**Ketchikan**	**3.21**	**161**	P	**Pn**	**11 58 24.3**	**+0.6**
	baz=342						
V35K				S	**Sn**	**11 59 03.2**	**+1.1**
	baz=342						
YUK7	**Dusty Glacier**	**3.23**	**314**	Sn	**Sn**	**11 59 04.5**	**+1.7**
O29M	**Mount Kennedy**	**3.26**	**309**	Pn	**Pn**	**11 58 25.8**	**+1.2**
O29M				Sg	**Sg**	**11 59 16.0**	**-2.0**
O29M	**Mount Kennedy**	**3.26**	**309**	IAML		11 59 21.9	
	comp=E,111nm,0.8s						
O29M				IAML		11 59 25.5	
	comp=N,106nm,0.8s						
O29M	**Mount Kennedy**	**3.26**	**309**	Pb	**Pb**	**11 58 32.0**	**+0.7**
	baz=124,SNR=50						
O29M				Sb	**Sg**	**11 59 15.0**	**-2.9**
	baz=124						
N31M	**Braeburn, Yuko**	**3.34**	**340**	Pn	**Pn**	**11 58 27.3**	**+1.8**
N31M				Sg	**Sg**	**11 59 18.8**	**-1.6**
N31M	**Braeburn, Yuko**	**3.34**	**340**	P	**Pn**	**11 58 27.1**	**+1.5**
	baz=159,SNR=24						
N31M				S	**Sn**	**11 59 09.1**	**+3.8**
	baz=159						
YUK5	**Granite Creek**	**3.56**	**323**	Pn	**Pn**	**11 58 29.6**	**+0.9**
YUK5				Sg	**Sg**	**11 59 24.9**	**-2.5**
YUK6	**Outpost Mounta**	**3.59**	**318**	Pn	**Pn**	**11 58 30.0**	**+0.9**
YUK6	**Outpost Mounta**	**3.59**	**318**	Pb	**Pb**	**11 58 37.7**	**+0.8**
	baz=134,SNR=9.2						
YUK6				S	**Sn**	**11 59 14.9**	**+3.2**
	baz=134						
N30M	**Aishikik Lake**	**3.60**	**331**	Pn	**Pn**	**11 58 30.5**	**+1.4**
N30M				Sg	**Sg**	**11 59 25.9**	**-2.9**
N30M	**Aishikik Lake**	**3.60**	**331**	IAML		11 59 33.9	
	comp=N,76nm,0.7s						
N30M				IAML		11 59 40.1	
	comp=E,85nm,1.4s						
N30M	**Aishikik Lake**	**3.60**	**331**	P	**Pn**	**11 58 31.1**	**+1.9**
	baz=148,SNR=22						
N30M				Sb	**Sg**	**11 59 25.2**	**-3.5**
	baz=148						
M31M	**Drury Creek, Y**	**3.87**	**353**	Pn	**Pn**	**11 58 34.5**	**+1.6**
M31M	**Drury Creek, Y**	**3.87**	**353**		**Pn**	**11 58 35.8**	**+2.9**
M31M				IAML		11 59 45.0	
	comp=E,66nm,1.1s						
M31M				IAML		11 59 51.7	
	comp=N,47nm,1.0s						
M31M	**Drury Creek, Y**	**3.87**	**353**	P	**Pn**	**11 58 35.3**	**+2.4**
	baz=173,SNR=31						
M31M				Sb	**Sg**	**11 59 35.5**	**-2.0**
	baz=173						
PINM	**Pinnacle**	**3.90**	**299**	P	**Pn**	**11 58 34.9**	**+1.6**
	baz=114						
PINM				Sb	**Sg**	**11 59 34.2**	**-4.2**
	baz=114						
PCA	**Pinnacle**	**3.90**	**299**	Pn	**Pn**	**11 58 34.4**	**+1.1**
PCA				Sg	**Sg**	**11 59 34.1**	**-4.3**
PCA	**Pinnacle**	**3.90**	**299**	IAML		11 59 44.0	
	comp=N,69nm,1.2s						
LIRD	**Liard River Hi**	**3.96**	**72**	Sg	**Sg**	**11 59 36.7**	**-3.6**
LIRD	**Liard River Hi**	**3.96**	**72**	Sb	**Sg**	**11 59 37.9**	**-2.3**
	baz=258						
YUK4	**Talbot Arm**	**3.97**	**321**	Pn	**Pn**	**11 58 36.7**	**+2.3**
YUK4				Sg	**Sg**	**11 59 38.6**	**-2.1**
YUK4	**Talbot Arm**	**3.97**	**321**	Pb	**Pb**	**11 58 44.9**	**+1.4**
	baz=138,SNR=11						
BRWY	**Burwash Landin**	**4.12**	**319**	Pn	**Pn**	**11 58 38.0**	**+1.7**
O28M	**Mount Upton**	**4.19**	**308**	Pn	**Pn**	**11 58 38.8**	**+1.3**
O28M				Sg	**Sg**	**11 59 43.8**	**-3.9**
O28M	**Mount Upton**	**4.19**	**308**	IAML		11 59 56.5	
	comp=E,44nm,1.0s						
O28M	**Mount Upton**	**4.19**	**308**	Pb	**Pb**	**11 58 47.9**	**+0.7**
	baz=122,SNR=14						
YUK8	**Steele Glacier**	**4.32**	**315**	Pn	**Pn**	**11 58 40.0**	**+0.7**
YUK8				Sg	**Sg**	**11 59 47.8**	**-4.2**
YUK8	**Steele Glacier**	**4.32**	**315**	Pb	**Pb**	**11 58 50.0**	**+0.6**
	baz=130,SNR=9.4						
MMPY	**Sheldon Lake,**	**4.40**	**13**	Pn	**Pn**	**11 58 42.0**	**+1.8**
MMPY	**Sheldon Lake,**	**4.40**	**13**	Pn	**Pn**	**11 58 42.5**	**+2.4**
MMPY	**Sheldon Lake,**	**4.40**	**13**	P	**Pn**	**11 58 42.6**	**+2.5**
	baz=195,SNR=5.7						
RUBB	**Prince Rupert**	**4.43**	**155**	Pn	**Pn**	**11 58 40.8**	**+0.4**
RUBB				Sg	**Sb**	**11 59 49.1**	**+4.7**
M30M	**Minto, Yukon**	**4.53**	**340**	Pn	**Pn**	**11 58 43.4**	**+1.5**
M30M				Sg	**Sg**	**11 59 54.5**	**-4.1**
M30M	**Minto, Yukon**	**4.53**	**340**	P	**Pn**	**11 58 43.3**	**+1.4**
	baz=157,SNR=11						
LOGN	**Logan Glacier**	**4.56**	**306**	Sg	**Sg**	**11 59 56.6**	**-2.9**
LOGN	**Logan Glacier**	**4.56**	**306**	IAML		12 00 09.6	
	comp=N,21nm,0.8s						
LOGN				IAML		12 00 15.4	
	comp=E,29nm,1.0s						
M29M	**Somme Creek**	**4.78**	**331**	Pn	**Pn**	**11 58 46.8**	**+1.4**
M29M				Sg	**Sg**	**12 00 03.2**	**-3.4**
M29M	**Somme Creek**	**4.78**	**331**	P	**Pn**	**11 58 47.3**	**+1.9**
	baz=147,SNR=11						
YUK3	**Moose Creek**	**4.90**	**317**	Pn	**Pn**	**11 58 47.9**	**+0.8**
YUK3				Sg	**Sg**	**12 00 07.5**	**-2.9**
GRNB	**Grenville Isla**	**4.94**	**155**	Pn	**Pn**	**11 58 47.8**	**+0.3**
GRNB				Sg	**Sg**	**12 00 06.8**	**-4.9**
BARN	**Barnard Glacie**	**4.95**	**306**	IAML		12 00 22.8	
	comp=E,16nm,1.2s						
YUK2	**White River**	**5.04**	**316**	Pn	**Pn**	**11 58 50.2**	**+1.2**
YUK2				Sg	**Sg**	**12 00 11.1**	**-4.0**
NBC1	**NorthernBC 1**	**5.14**	**71**	Pn	**Pn**	**11 58 51.1**	**+0.8**
NBC1				Sg	**Sg**	**12 00 14.2**	**-4.0**
DIB	**Dawson Inlet,**	**5.21**	**174**	Pn	**Pn**	**11 58 52.0**	**+0.9**
DIB	**Dawson Inlet,**	**5.21**	**174**	Pn	**Pn**	**11 58 52.8**	**+1.6**
L29M	**L29M**	**5.28**	**336**	Pn	**Pn**	**11 58 53.5**	**+1.3**
L29M				Sg	**Sg**	**12 00 18.6**	**-3.9**
L29M	**L29M**	**5.28**	**336**		**Pn**	**11 58 54.0**	**+1.8**
L29M	**L29M**	**5.28**	**336**	P	**Pn**	**11 58 53.8**	**+1.6**
	baz=152						
TGL	**Tana Glacier**	**5.33**	**301**	IAML		12 00 33.3	
	comp=N,18nm,1.0s						
TGL				IAML		12 01 14.4	
	comp=E,13nm,1.1s						
GRIB	**Gribbell Islan**	**5.60**	**152**	Pn	**Pn**	**11 58 57.1**	**+0.6**
GRIB				Sg	**Sg**	**12 00 28.8**	**-4.0**
M27K	**Edge Creek, AK**	**5.78**	**317**	Pn	**Pn**	**11 59 00.9**	**+1.7**
K29M	**Barlow Dome**	**5.83**	**342**	Pn	**Pn**	**11 59 01.0**	**+1.1**
K29M				Sg	**Sg**	**12 00 37.1**	**-3.3**
K29M	**Barlow Dome**	**5.83**	**342**	P	**Pn**	**11 59 01.3**	**+1.4**
	baz=159,SNR=8.9						
JEDB	**Jedway, Haida**	**6.22**	**167**	Pn	**Pn**	**11 59 04.9**	**-0.2**
L27K	**Beaver Creek,**	**6.25**	**322**	Pn	**Pn**	**11 59 06.8**	**+1.4**
J30M	**Hart River**	**6.38**	**349**	Pn	**Pn**	**11 59 08.7**	**+1.4**
J30M				Sg	**Sg**	**12 00 53.0**	**-4.8**
J30M	**Hart River**	**6.38**	**349**	P	**Pn**	**11 59 09.5**	**+2.2**
	baz=166,SNR=15						
DAWY	**Dawson**	**6.39**	**336**	Pn	**Pn**	**11 59 08.6**	**+1.1**
DAWY				Sg	**Sg**	**12 00 54.6**	**-3.6**
I30M	**Mount Dempster**	**7.01**	**350**	Pn	**Pn**	**11 59 17.1**	**+1.0**
I30M	**Mount Dempster**	**7.01**	**350**	P	**Pn**	**11 59 18.2**	**+2.2**
	baz=167,SNR=46						
H31M	**Peel River**	**7.47**	**357**	Pn	**Pn**	**11 59 24.1**	**+1.8**
H31M				Sg	**Sg**	**12 01 26.6**	**-6.3**
H31M	**Peel River**	**7.47**	**357**	P	**Pn**	**11 59 24.5**	**+2.2**
	baz=176,SNR=12						
I28M	**Miner Creek**	**7.73**	**339**	Pn	**Pn**	**11 59 27.5**	**+1.6**
I28M				Sg	**Sg**	**12 01 35.2**	**-5.8**
EPYK	**Eagle Plains**	**8.17**	**351**	Pn	**Pn**	**11 59 32.7**	**+0.8**
EPYK	**Eagle Plains**	**8.17**	**351**	P	**Pn**	**11 59 34.2**	**+2.3**
	baz=168,SNR=16						
H29M	**Whitestone**	**8.20**	**346**	Pn	**Pn**	**11 59 33.5**	**+1.3**
G31M	**Satah River**	**8.59**	**358**	Pn	**Pn**	**11 59 38.4**	**+0.8**
G31M	**Satah River**	**8.59**	**358**	P	**Pn**	**11 59 39.6**	**+2.1**
	baz=177,SNR=13						
H27K	**Steamboat Moun**	**8.73**	**338**	Pn	**Pn**	**11 59 40.6**	**+1.1**
G29M	**Pine Creek**	**8.82**	**348**	Pn	**Pn**	**11 59 42.1**	**+1.4**
F31M	**Tsiigehtchic**	**9.11**	**359**	Pn	**Pn**	**11 59 45.7**	**+1.1**
G27K	**Doyon Strip**	**9.27**	**339**	Pn	**Pn**	**11 59 47.7**	**+0.9**
F30M	**Barrier River**	**9.34**	**354**	Pn	**Pn**	**11 59 48.3**	**+0

MRKS	**Merke**	**3.83**	**40**	*e*P		**Pb**	**12 05 34.2**	**-3.5**
	2.1nm,0.3s							
MRKS				*e*S		**Sn**	**12 06 16.5**	**+2.1**
	7.7nm,0.5s							
TMD	**Tamdy-Bulak**	**4.40**	**297**	S		**Sg**	**12 06 48.8**	**-2.6**

*KOLA **17** 12:09:39.8, 67°.63N×33°.80E, h0km, ML1.6, Error ellipse: s-maj=4.1km s-min=1.3km az=150.0, Khibiny, mines Rasvumchorr, Central*
HEL 17 12:09:39.9±1.2, 67°.62N×33°.66E, h0km, ML1.3, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.11**	**241**	P	Pg	12 09 42.8	+0.8
APA				S	Sg	12 09 45.4	+2.0
APA0	**Apatity Array**	**0.26**	**267**	P	Pg	12 09 45.0	+0.2
APA0				S	Sg	12 09 49.0	+1.0
LVZ	**Lovozero**	**0.47**	**53**	P	Pg	12 09 47.5	-1.4
LVZ				S	Sg	12 09 53.2	-1.7
VRF	**Varrio**	**1.55**	**277**	PG	Pn	12 10 08.4	-0.3
	baz=96						
VRF				smax	smax	12 10 26.3	
	comp=Z,2.6nm,0.2s						
VRF				SN	Sn	12 10 29.0	-0.6
TERR	**Teriberka**	**1.68**	**18**	P	Pn	12 10 08.8	-1.6
TERR				S	Sn	12 10 30.1	-2.4
KU6	**Riekki**	**2.19**	**225**	PG	Pb	12 10 19.4	-0.9
	baz=50						
KU6				smax	smax	12 10 44.7	
	comp=Z,1.2nm,0.2s						
KU6				SG	Sg	12 10 49.5	-0.6
VADS	**Vadso**	**2.95**	**330**	S	Sn	12 11 04.3	+0.2
KEV	**Kevo**	**3.24**	**314**	PN	Pn	12 10 32.5	+0.6
KEV				SG	Sb	12 11 18.5	+0.5
ARCES	**ARCESS Array B**	**3.55**	**306**	P	Pn	12 10 35.7	-0.5
ARCES				S	Sn	12 11 18.0	-0.9
RMF	**Romuvaara**	**3.74**	**206**	PN	Pn	12 10 39.0	+0.2
	baz=29						
HEF	**Hetta**	**3.84**	**286**	SB	Sb	12 11 31.3	-4.2
TOF	**Tornio**	**4.00**	**252**	SB	Sb	12 11 37.2	-2.7

*BER **17** 12:10:32.5±1.6, 67°.97N×34°.05E, h0km, Suspected explosion*
*KOLA **17** 12:10:36.0±0.6, 68°.11N±0°.01×32°.97E±0°.05, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **17** 12:10:39.3±3.2, 68°.16N×32°.38E, h0km, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=41.4km s-min=13.6km az=57.0*
ISC 17 12:10:35.3±0.8, 68°.10N±0°.03×33°.12E±0°.05, h0km, n15, σ1s38/25, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.50**	**186**	P	**Pg**	**12 10 44.9**	**+0.1**
APA0				S	**Sg**	**12 10 52.3**	**+1.0**
APA	**Apatity**	**0.55**	**169**	P	**Pg**	**12 10 46.1**	**+0.4**
APA				S	**Sg**	**12 10 53.7**	**+0.9**
LVZ	**Lovozero**	**0.61**	**109**	P	**Pb**	**12 10 48.0**	**-0.8**
LVZ				S	**Sb**	**12 10 58.2**	**+0.3**
TERR	**Teriberka**	**1.32**	**32**	P	**Pg**	**12 11 00.4**	**-0.2**
TERR				S	**Sb**	**12 11 18.0**	**-0.4**
KVDA	**Kovda**	**1.42**	**184**	P	**Pn**	**12 11 01.5**	**-0.7**
KVDA				*S*	**Sn**	**12 11 21.5**	**-0.2**
VADS	**Vadso**	**2.44**	**328**	*e*P	**Pn**	**12 11 16.4**	**+0.1**
VADS				*e*S	**Sn**	**12 11 47.4**	**+0.7**
VADS	**Vadso**	**2.44**	**328**	P	**Pn**	**12 11 16.3**	**+0.1**
VADS				S	**Sn**	**12 11 47.3**	**+0.7**
KEV	**Kevo**	**2.76**	**310**	*e*P	**Pn**	**12 11 21.2**	**+0.4**
KEV				*e*S	**Sn**	**12 11 56.1**	**+1.4**
ARA0	**ARCESS Array S**	**3.12**	**301**	*e*P	**Pn**	**12 11 26.6**	**+0.9**
ARA0				*e*S	**Sn**	**12 12 06.8**	**+3.3**
ARCES	**ARCESS Array B**	**3.12**	**301**	Pn	**Pn**	**12 11 26.1**	**+0.4**
	0.2nm,0.3s,baz=119,slow=15,SNR=6.2						
ARCES				Sn	**Sn**	**12 12 00.9**	**-2.6**
	0.3nm,0.3s,baz=114,slow=24,SNR=3.9						
ARCES				Lg	Lg	12 12 08.9	
	0.8nm,0.3s,baz=107,slow=35,SNR=5.6						
	0.4nm,0.3s						
ARCES	**ARCESS Array B**	**3.12**	**301**	P	**Pn**	**12 11 26.5**	**+0.8**
ARCES				S	**Sn**	**12 12 02.9**	**-0.7**
KTK1	**Kautokeino**	**3.74**	**289**	*e*P	**Pn**	**12 11 33.6**	**-0.7**
I37NO	**I37NO**	**5.41**	**287**	I	I	12 41 20.0	
	0.1nm,1.0s,baz=94,slow=314,SNR=11						
FAUS	**Fauske**	**6.81**	**272**	S	**Sn**	**12 13 30.6**	**-3.7**
FINES	**FINESS Array B**	**7.33**	**208**	Pn	**Pn**	**12 12 24.4**	**+1.1**
	0.1nm,0.3s,baz=32,slow=13,SNR=1.0						
FINES				Lg	Lg	12 14 19.7	
	0.1nm,0.3s,baz=17,slow=25,SNR=4.0						
	0.2nm,0.5s						

*AFAD **17** 12:14:33.9, 34°.89N×26°.99E, h6km±3km, ML2.6*
*IDC **17** 12:14:34.9±1.8, 34°.47N×27°.50E, h0km, mb3.4/3, mbtmp3.4/3, MS3.4/1, Error ellipse: s-maj=85.2km s-min=32.4km az=143.0*
*ISK **17** 12:14:37.5, 35°.02N×27°.17E, h5km, ML2.8/11*
*ATH **17** 12:14:39.6, 35°.04N×27°.19E, h12km±3km, ML2.9/11, Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
ISC 17 12:14:37.3±1.5, 34°.97N±0°.05×27°.18E±0°.03, h6km±10km, n42, σ1s25/54, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.58**	**358**	Pg	**Pg**	**12 14 48.4**	**-0.1**
KARP				Sg	**Sb**	**12 14 57.4**	**-1.0**
KARP	**Karpathos**	**0.58**	**358**	P	**Pg**	**12 14 47.7**	**-0.8**
KARP				S	**Sg**	**12 14 55.4**	**-0.6**
KARP	**Karpathos**	**0.58**	**358**	P	**Pb**	**12 14 49.6**	**-0.3**
KARP				S	**Sb**	**12 14 57.1**	**-1.2**
ZKR	**Zakros**	**0.81**	**281**	Pg	**Pb**	**12 14 53.5**	**-0.2**
ZKR	**Zakros**	**0.81**	**281**	P	**Pn**	**12 14 55.1**	**-0.1**
ZKR	**Zakros**	**0.81**	**281**	P	**Pn**	**12 14 55.1**	**-0.1**
AGNA	**Agios Nikolaos**	**1.22**	**281**	P	**Pn**	**12 15 01.6**	**+0.8**
NPS	**Neapolis**	**1.32**	**283**	P	**Pn**	**12 15 01.4**	**-0.8**
NPS				S	**Sg**	**12 15 18.5**	**-1.3**
NPS	**Neapolis**	**1.32**	**283**	P	**Pg**	**12 15 03.8**	**+1.1**
NPS				S	**Sn**	**12 15 21.0**	**+0.8**
ARG	**Arkhangelos**	**1.46**	**31**	Pn	**Pg**	**12 15 05.8**	**+0.4**
ARG				Sn	**Sg**	**12 15 26.7**	**+2.3**
ARG	**Arkhangelos**	**1.46**	**31**	P	**Pg**	**12 15 05.5**	**+0.1**
ARG				S	**Sg**	**12 15 23.3**	**-1.0**
YAZI	**Mula-Dat§a-**	**1.72**	**7**	P	**Pb**	**12 15 09.1**	**-0.3**
YAZI				S	**Sg**	**12 15 33.3**	**+0.6**
YAZI				IAML		12 15 36.0	
	comp=N,40nm,0.7s						
YAZI				IAML		12 15 38.0	
	comp=E,44nm,0.9s						
DAT	**Datca**	**1.79**	**10**	Pn	**Pb**	**12 15 10.1**	**-0.4**
DAT	**Datca**	**1.79**	**10**	P	**Pg**	**12 15 12.8**	**+1.3**
DAT				S	**Sg**	**12 15 34.9**	**+0.1**
DAT				IAML		12 15 47.0	
	comp=N,46nm,0.6s						
DAT				IAML		12 15 49.0	
	comp=E,46nm,0.7s						
IDI	**Anoyia**	**1.91**	**280**	Pn	**Pb**	**12 15 12.1**	**-0.4**
IDI	**Anoyia**	**1.91**	**280**	P	**Pb**	**12 15 12.3**	**-0.2**
SIVA	**Sivas**	**1.95**	**272**	P	**Pb**	**12 15 13.1**	**-0.1**
THERA	**Ancient Thera,**	**1.97**	**316**	P	**Pn**	**12 15 11.3**	**+0.1**
TURN	**Turunc**	**2.00**	**25**	Pn	**Pb**	**12 15 13.6**	**-0.5**
TURN	**Turunc**	**2.00**	**25**	P	**Pb**	**12 15 12.2**	**-0.9**
TURN				S	**Sg**	**12 15 42.5**	**+0.9**
TURN				IAML		12 15 50.0	
	comp=N,48nm,1.0s						
TURN				IAML		12 15 50.0	
	comp=E,48nm,0.7s						
BODT	**Bodrum**	**2.09**	**3**	Pn	**Pb**	**12 15 14.6**	**-1.1**
DALY	**Dalyan (Mula)**	**2.20**	**32**	Pn	**Pb**	**12 15 16.6**	**-0.8**
DALY	**Dalyan (Mula)**	**2.20**	**32**	P	**Pn**	**12 15 15.3**	**+1.0**
DALY				IAML		12 15 55.0	
	comp=N,23nm,0.6s						
DALY				IAML		12 16 09.0	
	comp=E,34nm,0.8s						
IZZE	**Mula-Seydike**	**2.22**	**48**	P	**Pb**	**12 15 15.9**	**-1.9**
IZZE				S	**Sg**	**12 15 46.9**	**-1.6**
IZZE				IAML		12 16 01.0	
	comp=N,51nm,0.6s						
IZZE				IAML		12 16 17.0	
	comp=E,23nm,1.3s						
YER	**Yerkesik**	**2.34**	**22**	Pn	**Pb**	**12 15 18.2**	**-1.7**
AKAS	**Kas**	**2.34**	**57**	Pn	**Pb**	**12 15 18.3**	**-1.7**
SABU	**Mula-Dalaman**	**2.35**	**38**	P	**Pb**	**12 15 17.9**	**-2.2**
SABU				S	**Sg**	**12 15 55.1**	**+2.3**
SABU				IAML		12 16 04.0	
	comp=E,35nm,1.9s						
SABU				IAML		12 16 06.0	
	comp=N,40nm,0.7s						
GVD	**Gavdhos**	**2.55**	**268**	P	**Pn**	**12 15 21.1**	**+2.0**
CAME	**Cameli-Denizli**	**2.62**	**40**	Pn	**Pn**	**12 15 21.4**	**+1.2**
IMMV	**Iera Moni Meta**	**2.67**	**282**	P	**Pn**	**12 15 23.0**	**+2.2**
TAVA	**DENIZLI_Tavas**	**2.86**	**29**	P	**Pn**	**12 15 25.4**	**+1.9**
TAVA				S	**Sb**	**12 16 04.8**	**+0.7**
TAVA				IAML		12 16 12.0	
	comp=E,27nm,0.7s						
TAVA				IAML		12 16 21.0	
	comp=N,29nm,0.9s						
GOLH	**Golhisar**	**2.97**	**40**	P	**Pn**	**12 15 26.5**	**+1.4**
GOLH				S	**Sb**	**12 16 08.0**	**+0.7**
GOLH				IAML		12 16 19.0	
	comp=N,31nm,0.8s						
GOLH				IAML		12 16 33.0	
	comp=E,20nm,0.7s						
ANKY	**Antikythira Is**	**3.29**	**287**	P	**Pn**	**12 15 30.6**	**+1.2**
VLI	**Veliai**	**3.87**	**298**	P	**Pn**	**12 15 38.1**	**+0.8**
AKMS	**Akamas**	**4.23**	**88**	P	**Pn**	**12 15 43.8**	**+1.5**
ALFC	**Alefka**	**4.45**	**86**	P	**Pn**	**12 15 46.8**	**+1.5**
KLV	**Kalavryta, Ach**	**5.08**	**309**	P	**Pn**	**12 15 54.9**	**+0.8**
MMAI	**Mount Meron Ar**	**7.10**	**104**	Sn	Sn	12 17 30.8	-12
	0.8nm,0.3s,baz=280,slow=24,SNR=1.5						
TORD	**Torodi Ar. Bea**	**31.67**	**233**	P	**P**	**12 20 59.3**	**-2.3**
	0.3nm,0.6s,baz=37,slow=9.2,SNR=3.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**42.50**	**57**	P	**P**	**12 22 32.2**	**-1.1**
	0.5nm,0.7s,baz=267,slow=9.5,SNR=4.4						
	0.5nm,0.7s						
NRIK	**Noril'sk**	**47.35**	**25**	LR	LR	12 44 40.6	
	comp=Z,38nm,18.4s,baz=177,slow=38						
YKA	**Yellowknife Ar**	**78.13**	**343**	P	**P**	**12 26 38.6**	**+1.8**
	0.2nm,0.7s,baz=31,slow=5.7,SNR=1.4						
	0.2nm,0.7s						

*ISN **17** 12:28:01.4±0.8, 34°.65N×46°.39E, h9km, ML3.1, Presumed earthquake*
*TEH **17** 12:28:01.4, 34°.64N×46°.40E, h9km±19km, ML2.9, Presumed earthquake*
ISC 17 12:28:01.6±1.0, 34°.66N±0°.04×46°.39E±0°.05, h9km±7km, n12, σ0s67/14, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.04**	**355**	Pg	**Pg**	**12 28 03.4**	**-0.3**
IDHR				Sg	**Sg**	**12 28 05.8**	**+0.5**
IGHG	**Ghaleghazi**	**0.36**	**156**	Pg	**Pg**	**12 28 09.1**	**+0.3**
KCHF	**Cheshme Sefid,**	**0.66**	**125**	Pg	**Pg**	**12 28 14.1**	**-0.3**
SNJK	**Sanadaj _Korde**	**0.96**	**36**	Pg	**Pg**	**12 28 19.7**	**-0.4**
SNQR	**Sonqor, Kerman**	**1.04**	**78**	Pg	**Pg**	**12 28 21.5**	**-0.1**
ILBA	**Ilam Banvizeh**	**1.04**	**188**	Pg	**Pg**	**12 28 20.7**	**-0.9**
IBZA	**Bozab**	**1.23**	**98**	Pg	**Pn**	**12 28 25.3**	**+0.1**
IALM	**Almabolaq**	**1.48**	**82**	Pg	**Pg**	**12 28 29.8**	**-0.1**
BHD	**Baghdad**	**2.17**	**231**	*i* P	**Pn**	**12 28 38.9**	**+1.1**
BHD				*i* S	**Sb**	**12 29 07.6**	**-0.3**
	baz=50						
BHD				IAML		12 29 10.6	
	comp=E,160nm,0.5s						
BDRS	**Dareh Seyedi**	**2.18**	**108**	Pn	**Pb**	**12 28 40.6**	**-0.7**
MAHB	**Mahabad**	**2.18**	**345**	Pn	**Pb**	**12 28 40.8**	**-0.5**
HAGD	**Aghdareh**	**2.27**	**85**	Pn	**Pn**	**12 28 40.4**	**+1.0**

*JMA **17** 12:37:58.7±0.7, 31°.N±5°.×13°.8E±°, h524km, MV3.6/46, SHIKOKU BASIN*
*IDC **17** 12:38:01.1±0.8, 30°.63N×137°.83E, h486km±10km, mb3.0/11, mbtmp3.9/17, Error ellipse: s-maj=22.9km s-min=11.0km az=76.0*
ISC 17 12:38:00.6±0.8, 30°.64N±0°.08×138°.08E±0°.09, h500km, n36, σ1s70/44, mb3.5/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.86**	**30**	P	**P**	**12 39 10.7**	**+0.1**
	25nm,0.3s,baz=65,slow=17,SNR=1.5						
JHJ				S	**S**	**12 40 08.9**	**+1.3**
	44nm,0.4s,baz=40,slow=15,SNR=2.0						
JTNC	**Tanabenakahech**	**3.79**	**327**	P	**P**	**12 39 17.7**	**+0.4**
JKN2	**Miekihoku**	**3.90**	**337**	P	**P**	**12 39 19.1**	**+1.0**
JIE	**Ise**	**3.91**	**343**	*e*P	**P**	**12 39 19.6**	**+1.4**
JWY	**Kouya**	**4.14**	**330**	P	**P**	**12 39 21.0**	**+0.9**
BSO1	**Boso 1**	**4.69**	**31**	P	**P**	**12 39 25.8**	**+1.7**
JMN	**Monobe**	**4.71**	**312**	P	**P**	**12 39 25.2**	**+0.2**
JNY	**Yasuok**	**4.71**	**358**	P	**P**	**12 39 27.0**	**+2.0**
JTO	**Tosashimizu**	**5.01**	**298**	*e*P	**P**	**12 39 27.0**	**-0.6**
JCJ	**Chichijima**	**5.04**	**133**	P	**P**	**12 39 27.4**	**-0.7**
	22nm,0.5s,baz=288,slow=20,SNR=1.4						
JCJ				S	**S**	**12 40 36.2**	**-3.1**
	54nm,0.4s,baz=287,slow=22,SNR=6.7						
JWT	**Wachi**	**5.14**	**335**	P	**P**	**12 39 29.5**	**+0.8**
JAD	**Aida**	**5.40**	**323**	P	**P**	**12 39 31.7**	**+0.5**
JRY	**Ryogami san**	**5.40**	**7**	P	**P**	**12 39 32.5**	**+1.3**
JGN	**Niukaw**	**5.60**	**354**	P	**P**	**12 39 34.6**	**+1.5**
JYT	**Yasato**	**5.84**	**17**	P	**P**	**12 39 36.2**	**+0.9**
JYT				*e*S	**S**	**12 40 47.6**	**-5.2**
JAG	**Ashikaga**	**5.88**	**11**	P	**P**	**12 39 35.9**	**+0.3**
JAG				*e*S	**S**	**12 40 49.6**	**-3.8**
MJAR	**Matsushiro Arr**	**5.88**	**1**	P	**P**	**12 39 36.0**	**+0.3**
	6.4nm,0.6s,baz=179,slow=10,SNR=17						
MJAR				S	**S**	**12 40 50.9**	**-2.6**
	0.8nm,0.5s,baz=191,slow=25,SNR=1.0						
MAT	**Matsushiro**	**5.89**	**1**	P	**P**	**12 39 36.2**	**+0.5**
JHO	**Hitachi**	**6.30**	**19**	*e*P	**P**	**12 39 40.8**	**+1.1**
JHO				*e*S	**S**	**12 40 58.1**	**-2.8**
JNU	**Nakatsue**	**6.60**	**294**	P	**P**	**12 39 42.1**	**-0.7**
	7.3nm,0.4s,baz=110,slow=1.5,SNR=15						
JNU	**Nakatsue**	**6.60**	**294**	*e*P	**P**	**12 39 42.3**	**-0.5**
JFK	**Kawauchi**	**7.10**	**18**	P	**P**	**12 39 49.1**	**+1.4**
JFK				*e*S	**S**	**12 41 13.0**	**-2.4**
JMM	**Marumori**	**7.55**	**17**	*e*P	**P**	**12 39 54.1**	**+1.9**
JMM				*e*S	**S**	**12 41 22.2**	**-1.6**
KSRS	**Korea Array**	**10.82**	**312**	P	**P**	**12 40 25.1**	**-1.4**
	0.9nm,0.6s,baz=124,slow=10,SNR=5.0						
USRK	**Ussuriysk Ar.**	**14.37**	**342**	P	**P**	**12 41 05.0**	**+1.0**
	6.6nm,0.7s,baz=183,slow=10,SNR=8.9						
HILR	**Hailar Array B**	**23.41**	**329**	P	**P**	**12 42 29.8**	**0.0**
	1.3nm,0.4s,baz=183,slow=20,SNR=2.4						
	1.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**37.43**	**260**	P	**P**	**12 44 29.5**	**-1.3**
	0.5nm,0.3s,baz=32,slow=9.3,SNR=4.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**45.46**	**307**	P	**P**	**12 45 34.3**	**+0.1**
	0.3nm,0.3s,baz=81,slow=10,SNR=7.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**48.00**	**312**	P	**P**	**12 45 53.6**	**+0.3**
	1.2nm,0.5s,baz=92,slow=7.8,SNR=13						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**50.42**	**185**	P	**P**	**12 46 12.9**	**+1.3**
	0.5nm,0.4s,baz=5.4,slow=7.9,SNR=12						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**53.00**	**316**	P	**P**	**12 46 30.7**	**+0.8**
	0.7nm,0.4s,baz=110,slow=8.3,SNR=4.3						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**54.15**	**185**	P	**P**	**12 46 39.8**	**+1.4**
	0.1nm,0.3s,baz=23,slow=12,SNR=11						
	0.1nm,0.3s						
ARCES	**ARCESS Array B**	**69.00**	**340**	P	**P**	**12 48 16.9**	**+1.9**
	0.7nm,0.5s,baz=64,slow=8.5,SNR=9.8						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**73.17**	**332**	P	**P**	**12 48 40.8**	**+1.2**
	0.8nm,0.4s,baz=79,slow=5.2,SNR=13						
	0.8nm,0.4s						
HFS	**Hagfors**	**78.73**	**335**	P	**P**	**12 49 11.7**	**+1.3**
	1.0nm,0.4s,baz=124,slow=4.3,SNR=8.8						
	1.0nm,0.4s						
NOA	**NORSAR Array B**	**78.97**	**337**	P	**P**	**12 49 12.4**	**+0.6**
	0.7nm,0.7s,baz=48,slow=4.9,SNR=2.4						
	0.7nm,0.7s						

*IDC **17** 12:47:59.3±1.2, 36°.41N×6°.32E, h0km, mb3.4/7, mbtmp3.4/10, ML3.4/3, MS2.8/3, Error ellipse: s-maj=24.7km s-min=22.1km az=0.0*
*CRAAG **17** 12:48:00.2, 36°.53N×6°.34E, Ml3.6, Algrie 07km NE Sidi-Merouane*
*CNRM **17** 12:48:18.6, 36°.51N×4°.80E, h22km*
ISC 17 12:48:01.4±0.7, 36°.52N±0°.04×6°.33E±0°.04, h9km, n35, σ0s98/33, mb3.6/6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAT	**Oued Athmania**	**0.28**	**188**	P	**Pg**	**12 48 07.3**	**+0.2**
CASM	**Ain Smara**	**0.29**	**154**	P	**Pg**	**12 48 08.5**	**+1.4**
CKFL	**Kef-Lekhel**	**0.33**	**110**	P	**Pg**	**12 48 09.5**	**+1.5**
DFRA	**Djebel Bou Aff**	**0.37**	**274**	P	**Pg**	**12 48 10.1**	**+1.4**
CTEI	**Djebel Teioual**	**0.46**	**172**	P	**Pb**	**12 48 12.1**	**+0.4**
CSGS	**Sigus**	**0.49**	**141**	P	**Pg**	**12 48 11.8**	**+0.9**
CAEH	**'Ain El Ouahch**	**0.49**	**58**	P	**Pg**	**12 48 12.1**	**+1.2**
CBST	**Bordj Sabath**	**0.63**	**100**	P	**Pg**	**12 48 13.7**	**+0.2**
CJSR	**Ain Djasser**	**0.72**	**206**	P	**Pg**	**12 48 16.1**	**+0.8**
CMAH	**Djebel Manchou**	**0.88**	**83**	P	**Pg**	**12 48 19.9**	**+1.6**
CRHA	**Rehia**	**1.30**	**125**	P	**Pn**	**12 48 25.6**	**-0.2**
CTCHA	**Tamokra**	**1.36**	**267**	P	**Pn**	**12 48 25.7**	**-0.8**
CKTS	**El Kantara**	**1.39**	**202**	P	**Pg**	**12 48 29.6**	**+1.6**
AKET	**Djebel Ketaf**	**2.04**	**257**	P	**Pn**	**12 48 36.0**	**0.0**
CNGR	**Negrine**	**2.25**	**154**	P	**Pn**	**12 48 40.5**	**+1.7**
KEST	**Kesra**	**2.56**	**107**	Pn	**Pn**	**12 48 43.4**	**+0.2**
	23nm,0.3s,baz=277,slow=2.6,SNR=52						
KEST				Sn	**Sn**	**12 49 15.1**	**+0.6**
	5.2nm,0.3s,baz=14,slow=15,SNR=3.5						
	113nm,0.6s						
CART	**Cartagena**	**5.96**	**282**	P	**Pn**	**12 49 28.9**	**-0.9**
CART				S	Sn	12 50 24.2	-14
JBK	**JBK**	**7.58**	**256**	P	**Pn**	**12 49 51.6**	**-0.6**
JBK				S	Sn	12 51 07.0	-11
FIGM	**Figuig**	**7.65**	**237**	P	**Pn**	**12 49 53.7**	**+0.6**
FIGM				S	Sn	12 51 11.2	-8.9
PALE	**Palemas**	**8.44**	**264**	P	**Pn**	**12 50 02.6**	**-1.2**
PALE				S	Sn	12 51 24.1	-15
AKLM	**AKL**	**8.55**	**259**	P	**Pn**	**12 50 06.6**	**+1.2**
AKLM				S	Sn	12 51 29.9	-12
ESDC	**Sonseca Array**	**8.71**	**294**	Pn	**Pn**	**12 50 08.1**	**+0.6**
	0.4nm,0.3s,baz=99,slow=14,SNR=15						
	0.9nm,0.4s						
MDT	**Midelt**	**9.74**	**251**	LR	LR	12 54 39.5	
	comp=Z,128nm,18.3s,baz=58,slow=41						
MDT	**Midelt**	**9.74**	**251**	P	**Pn**	**12 50 21.3**	**-0.4**
MDT				S	Sn	12 51 58.1	-13
MD31	**MD31**	**9.83**	**251**	P	**Pn**	**12 50 22.8**	**-0.2**
MD31				S	Sn	12 52 01.8	-12
GERES	**GERESS Array B**	**13.45**	**21**	Pn	**Pn**	**12 51 12.8**	**+0.4**
	baz=206,slow=13,SNR=1.7						
	0.2nm,0.4s						
MLR	**Muntele Rosu**	**17.27**	**53**	LR	LR	12 58 25.2	
	comp=Z,38nm,21.4s,baz=182,slow=36						
BRTR	**Keskin Array B**	**21.69**	**73**	P	**P**	**12 52 52.2**	**-0.4**
	0.5nm,0.5s,baz=263,slow=10,SNR=4.0						
	0.5nm,0.5s						
AKASG	**Malin Array Be**	**21.69**	**42**	P	**P**	**12 52 52.0**	**-0.4**
	0.2nm,0.3s,baz=245,slow=11,SNR=2.0						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.64**	**191**	P	**P**	**12 53 11.0**	**-2.0**
	0.8nm,0.6s,baz=3.2,slow=9.6,SNR=5.4						
	0.8nm,0.6s						
NOA	**NORSAR Array B**	**24.74**	**6**	LR	LR	13 03 04.7	
	comp=Z,7.6nm,18.5s,baz=85,slow=36						
KURBB	**Kurchatov Arra**	**52.15**	**50**	P	**P**	**12 57 11.7**	**-0.2**
	0.2nm,0.2s,baz=287,slow=8.4,SNR=1.2						
	0.2nm,0.2s						
ZALV	**Zalesovo Beam**	**55.04**	**45**	P	**P**	**12 57 32.6**	**-0.5**
	0.3nm,0.5s,baz=322,slow=5.9,SNR=1.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**55.61**	**54**	P	**P**	**12 57 36.3**	**-1.1**
	0.5nm,0.7s,baz=291,slow=6.4,SNR=5.5						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**70.58**	**335**	P	**P**	**12 59 16.5**	**0.0**
	0.3nm,0.6s,baz=54,slow=5.7,SNR=2.4						
	0.3nm,0.6s						

*NNC **17** 13:13:28.8±1.6, 50°.03N×78°.76E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=42.9km s-min=5.7km az=70.0, Suspected Mining explosion.*
*SOME **17** 13:13:28.3, 49°.75N×78°.85E, h30km*
ISC 17 13:13:26.9±1.1, 50°.15N±0°.05×78°.67E±0°.07, h0km, n6, σ2s75/12, 5C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.48**	**349**	⇑P	**Pn**	**13 13 40.4**	**-0.6**
	14nm,0.5s						
KURBB				⇑S	**Sn**	**13 13 50.0**	**+7.7**
	115nm,0.7s						
KURK	**Kurchatov**	**0.57**	**357**	⇓P	**Pn**	**13 13 41.7**	**-0.5**
	2.4nm,0.6s						
KURK				⇑S	**Sn**	**13 13 52.2**	**-0.1**
	25nm,1.1s						
SEM	**Semipalatinsk**	**1.05**	**75**	*e*P	**Pn**	**13 13 49.0**	**0.0**
	1.9nm,0.1s						
SEM				*e*S	**Sn**	**13 14 04.0**	**-0.4**
	7.4nm,0.2s						
MK31	**Makanchi Array**	**4.13**	**143**	Pn	**Pn**	**13 14 32.8**	**+1.6**
	baz=323,slow=10,SNR=11						
MK31				⇑Pg	**Pb**	**13 14 41.8**	**+1.4**
	0.6nm,0.5s,baz=333,slow=16,SNR=12						
MK31				⇑Lg	Lg	13 15 34.1	
	4.3nm,0.5

BANI				⇑*i*S		**Sn**	**13 18 02.5**	**+1.0**
BANI				IAML			13 18 04.3	
	comp=N,6μm,0.2s							
SC01	**Santiago de lo**	**1.07**	**29**	P		**Pn**	**13 17 52.1**	**+0.5**
SC01	**Santiago de lo**	**1.07**	**29**	⇓*i*P		**Pn**	**13 17 52.0**	**+0.5**
SC01				⇑*i*S		**Sn**	**13 18 07.9**	**+1.8**
SC01				IAML			13 18 13.7	
	comp=N,2μm,0.6s							
SC01	**Santiago de lo**	**1.07**	**29**	⇓*i*P		**Pn**	**13 17 52.1**	**+0.5**
LOSC1	**San Cristbal**	**1.12**	**94**	*i* P		**Pn**	**13 17 52.5**	**+0.3**
LOSC1				IAML			13 18 12.5	
	comp=Z,4μm,0.6s							
LODA1	**ITESIL, Dajabo**	**1.12**	**339**	P		**Pg**	**13 17 51.7**	**-1.3**
LODA1				S		**Sg**	**13 18 05.8**	**-2.0**
LODA1	**ITESIL, Dajabo**	**1.12**	**339**	⇑*i*P		**Pg**	**13 17 51.6**	**-1.3**
LODA1				⇑*i*S		**Sg**	**13 18 06.3**	**-1.5**
LODA1				IAML			13 18 08.1	
	comp=N,10μm,0.2s							
LODA1	**ITESIL, Dajabo**	**1.12**	**339**	*i* P		**Pg**	**13 17 51.7**	**-1.3**
LODA1				*e*S		**Sg**	**13 18 06.4**	**-1.4**
LODA1				IAML			13 18 07.4	
	comp=Z,3μm,0.2s							
LGNH	**Logne**	**1.25**	**271**	P		**Pn**	**13 17 52.5**	**-1.5**
SFDR	**San Fco. de Ma**	**1.27**	**51**	P		**Pg**	**13 17 55.1**	**-0.6**
SDD	**Santo Domingo**	**1.30**	**91**	⇑*i*P		**Pg**	**13 17 55.2**	**-1.2**
SDD				⇑*i*S		**Sn**	**13 18 13.2**	**+1.5**
SDD				IAML			13 18 15.0	
	comp=N,835nm,0.5s							
SDD	**Santo Domingo**	**1.30**	**91**	⇑*i*P		**Pg**	**13 17 55.2**	**-1.2**
SDD				*e*S		**Sn**	**13 18 13.1**	**+1.4**
SDD				IAML			13 18 15.9	
	comp=Z,3μm,0.5s							
LOPP1	**Punta Rusia, P**	**1.36**	**3**	⇓*i*P		**Pg**	**13 17 56.6**	**-0.9**
LOPP1				*e*S		**Sg**	**13 18 16.3**	**+1.0**
LOPP1				IAML			13 18 19.3	
	comp=Z,2μm,0.5s							
SODR	**Sosua Marina B**	**1.43**	**28**	⇑*i*P		**Pg**	**13 17 58.8**	**+0.1**
SODR				IAML			13 18 22.5	
	comp=N,2μm,0.7s							
LUDR	**Luperon**	**1.43**	**13**	⇑*i*P		**Pg**	**13 17 58.0**	**-0.9**
LUDR				⇑*i*S		**Sg**	**13 18 17.1**	**-0.5**
LUDR				IAML			13 18 24.1	
	comp=E,6μm,0.3s							
MCDR	**Montecristi**	**1.44**	**346**	P		**Pb**	**13 17 57.3**	**-0.4**
MCDR	**Montecristi**	**1.44**	**346**	⇑*i*P		**Pn**	**13 17 56.7**	**+0.1**
MCDR				⇑*i*S		**Sb**	**13 18 15.8**	**0.0**
MCDR				IAML			13 18 19.7	
	comp=N,815nm,0.1s							
CADR	**Cabrera**	**1.73**	**47**	⇑*i*P		**Pg**	**13 18 03.8**	**-0.8**
CADR				IAML			13 18 30.2	
	comp=N,2μm,0.7s							
HATOM	**Hato Mayor del**	**1.83**	**80**	⇑*i*P		**Pb**	**13 18 03.1**	**-1.2**
HATOM				⇑*i*S		**Sg**	**13 18 28.3**	**-1.9**
HATOM				IAML			13 18 31.2	
	comp=N,594nm,0.5s							
SMDR	**Samana, DR**	**2.14**	**68**	P		**Pb**	**13 18 09.5**	**-0.1**
SMDR	**Samana, DR**	**2.14**	**68**	⇑*i*P		**Pb**	**13 18 09.0**	**-0.5**
SMDR				IAML			13 18 53.2	
	comp=N,502nm,0.7s							
HIDR	**Higuey Centro**	**2.44**	**87**	⇑*i*P		**Pb**	**13 18 13.2**	**-1.5**
HIDR				IAML			13 18 46.4	
	comp=N,767nm,0.7s							
GRTK	**Grand Turk**	**3.01**	**3**	⇑*i*P		**Pn**	**13 18 19.6**	**+1.4**
GRTK				⇑*i*S		**Sn**	**13 18 54.6**	**+0.7**
GRTK				IAML			13 18 56.9	
	comp=N,171nm,0.4s							
GRTK	**Grand Turk**	**3.01**	**3**	*i* P		**Pn**	**13 18 19.3**	**+1.1**
GRTK				IAML			13 18 58.8	
	comp=Z,96nm,1.1s							
GRTK	**Grand Turk**	**3.01**	**3**	*i* P		**Pn**	**13 18 19.5**	**+1.3**
GRTK				*i* S		**Sn**	**13 18 56.0**	**+2.0**
MASC	**Masc**	**3.25**	**302**	*i* P		**Pn**	**13 18 22.1**	**+0.6**
MASC	**Masc**	**3.25**	**302**	*i* P		**Pn**	**13 18 21.7**	**+0.2**
MASC				*e*S		**Sn**	**13 19 00.7**	**+0.9**
QMBU	**Quimbuelo**	**3.74**	**298**	P		**Pn**	**13 18 27.5**	**-0.8**
QMBU	**Quimbuelo**	**3.74**	**298**	*i* P		**Pn**	**13 18 27.1**	**-1.2**
GTBY	**Guantanamo Bay**	**3.89**	**292**	*i* P		**Pn**	**13 18 30.4**	**+0.1**
GTBY	**Guantanamo Bay**	**3.89**	**292**	*i* P		**Pn**	**13 18 30.0**	**-0.3**
NMDO	**Nuevo Mundo**	**4.05**	**301**	*i* P		**Pn**	**13 18 33.1**	**+0.6**
MOAC	**Moa**	**4.08**	**303**	*i* P		**Pn**	**13 18 34.6**	**+1.6**
RCC	**Rio Carpintero**	**4.43**	**290**	*i* P		**Pn**	**13 18 36.8**	**-0.9**
CHIV	**Chivirico**	**5.07**	**288**	*i* P		**Pn**	**13 18 49.2**	**+2.7**
LMGC	**Las Mercedes**	**5.63**	**287**	*i* P		**Pn**	**13 18 53.4**	**-0.8**
CCCC	**Cccc**	**6.67**	**295**	*i* P		Pn	13 19 04.6	-3.9
CCCC				*i* S		Sn	13 20 16.1	-8.1

IDC 17 13:27:14.7±9.7, 49°.90S×110°.86E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=462.6km s-min=26.8km az=111.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.18**	**10**	T	T	13 46 24.4	
	baz=188,slow=74,SNR=38						
H01W1	**Cape Leeuwin H**	**15.19**	**10**	T	T	13 46 26.8	
	baz=188,slow=74,SNR=36						
H01W3	**Cape Leeuwin H**	**15.20**	**10**	T	T	13 46 27.0	
	baz=188,slow=74,SNR=30						
ASAR	**Alice Springs**	**31.78**	**43**	P	P	13 33 40.8	0.0
	0.6nm,0.7s,baz=210,slow=8.3,SNR=12						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**35.25**	**40**	P	P	13 34 10.7	-0.3
	1.3nm,0.8s,baz=203,slow=10,SNR=8.5						
	1.3nm,0.8s						
QSPA	**South Pole Qui**	**40.23**	**180**	P	P	13 34 52.4	-0.3
	1.2nm,0.8s,baz=304,slow=7.3,SNR=5.2						
	1.2nm,0.8s						
H08S2	**Diego Garcia H**	**52.89**	**310**	T	T	14 33 41.6	
	baz=157						
H08S1	**Diego Carcia H**	**52.90**	**309**	T	T	14 33 43.2	
	baz=157						
H08S3	**Diego Garcia H**	**52.91**	**310**	T	T	14 33 34.1	
	baz=157,SNR=4.3						
TXAR	**Lajitas Array**	**146.82**	**115**	PKPbc	PKPbc	13 46 58.3	-0.4
	0.6nm,0.8s,baz=241,slow=4.9,SNR=5.8						

*IDC **17** 13:29:01.9±0.5, 11°.81N×95°.24E, h0km, mb4.2/33, mbtmp4.2/35, ML4.0/2, MS4.4/28, Error ellipse: s-maj=15.1km s-min=11.5km az=69.0*
*BJI **17** 13:29:02.5, 11°.60N×94°.96E, h18km, mB5.1/51, mb4.7/69, Ms5.1/71, Ms7 4.9/67*
*NEIC **17** 13:29:04.6, 11°.84N×94°.96E, h10km*
*NEIC **17** 13:29:04.6±1.4, 11°.84N±0°.07×94°.98E±0°.05, h10km±1km, mb4.9/99, Mww5.1/11, Error ellipse: s-maj=13.1km s-min=8.0km az=201.0*
*NDI **17** 13:29:06.5±3.1, 11°.70N×94°.78E, h8km±38km, mb4.8, ML4.2, MW4.8, Presumed earthquake*
*BGR **17** 13:29:06.0, 10°.76N×94°.44E, h33km, mb4.8, Ms4.7*
*GFZ **17** 13:29:06.3±0.2, 12°N±3°×9°5E±°, h10km, M4.9/23, mb4.9/23*
*BKK **17** 13:29:07.0±0.9, 12°N±3°×9°5E±°, h20km±9km, M4.3/14, mB4.4/8, mb4.4/8, Mjma4.5/14, ML4.9/11, MLv4.6/14, Mw(mB)3.6/8*
*GCMT **17** 13:29:07.6±0.2, 11°.75N±0°.01×95°.06E±0°.01, h12km, MW5.2/117, Moment Tensor Solution. s36,c47; s117,c205; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.59±.16; Mθθ 1.67±.14; Mϕϕ 0.92±.16; Mrθ 2.20±.42; Mθϕ 6.16±.10; Mϕr-0.86±.42; Best double couple: Mo 6.87200×10^16 NP1:ϕs 6.00000°, δ64.00000°, λ-161.00000°. NP2:ϕs 267.00000°, δ73.00000°, λ-27.00000°. Principal axes: T 7.5710, Plg6.0000°, Azm318.0000°; N -1.3980, Plg58.0000°, Azm57.0000°; P -6.1740, Plg31.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **17** 13:29:07.9±1.2, 12°N±2°×9°5E±°, h10km±9km, M5.3/55, mb4.9/55, mB5.8/18, MLv5.3/13, Mw(mB)5.4/18*
*NEIC **17** 13:29:11.1, 11°.64N×94°.86E, h12km, Moment Tensor Solution. Duration: 1ᵻ8 Moment tensor: Scale 10^16 Nm; Mrr-1.75; Mθθ 0.47; Mϕϕ 1.28; Mrθ-0.31; Mθϕ 5.27; Mϕr-1.16; Fault plane solution: Mo 5.63000×10^16 NP1: ϕs 267.83000°, δ76.15000°, λ-3.15000°. NP2:ϕs 358.59000°, δ86.94000°, λ-166.13000°. Principal axes: T 6.2970, Plg8.0000°, Azm132.0000°; N -1.7675, Plg76.0000°, Azm11.0000°; P -4.5295, Plg12.0000°, Azm224.0000°;*
ISC 17 13:29:04.3±0.3, 11°.75N±0°.04×94°.92E±0°.04, h10km, n573,

σ1ᵻ50/542, mb4.8/148, MS4.6/48, 2C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.13**	**268**		**Pn**	**13 29 41.5**	**+1.6**
PBA	**Port Blair**	**2.13**	**268**	P	**Pn**	**13 29 41.8**	**+1.8**
PBA	**Port Blair**	**2.13**	**268**	*e*P	**Pn**	**13 29 39.3**	**-0.6**
PBA				*e*S	**Sn**	**13 30 05.6**	**-0.9**
PBA				IAML		13 30 25.2	
	comp=E,3μm,0.9s						
PBA				IAML		13 30 25.3	
	comp=E,2μm,0.6s						
RNTT	**Ranong**	**4.21**	**124**	P	**Pn**	**13 30 04.5**	**-4.1**
KHLT	**Khaolaem Dam**	**4.68**	**49**	P	**Pn**	**13 30 12.4**	**-2.7**
PKDT	**Phuket**	**5.11**	**138**	P	**Pn**	**13 30 17.4**	**-3.5**
UTHA	**Uthaitani**	**5.80**	**49**	P	**Pn**	**13 30 28.3**	**-2.2**
	comp=E,465nmcomp=E,46nm,0.8s						
BSI	**Banda Aceh**	**6.23**	**177**	P	Pn	13 30 43.8	+7.4
	comp=E,72nm,1.0s						
LHMI	**Lhok Sumawe**	**6.79**	**163**	P	**Pn**	**13 30 48.6**	**+4.6**
	comp=E,1.0nmcomp=E,90nm,1.0s						
LHMI	**Lhok Sumawe**	**6.79**	**163**	P	**Pn**	**13 30 48.5**	**+4.6**
CM13	**Chiang Mai Arr**	**7.67**	**30**	P	**Pn**	**13 30 55.5**	**-0.6**
	comp=E,0.1nmcomp=E,15nm,0.9s						
CM05	**Chiang Mai Arr**	**7.67**	**30**	P	**Pn**	**13 30 56.4**	**+0.3**
CM04	**Chiang Mai Arr**	**7.68**	**30**	P	**Pn**	**13 30 55.6**	**-0.8**
	comp=E,0.1nmcomp=E,0.2nmcomp=E,149nmcomp=E,18nm,0.8s						
CM01	**Chiang Mai Arr**	**7.69**	**30**	P	**Pn**	**13 30 56.0**	**-0.5**
	comp=E,0.1nmcomp=E,0.3nmcomp=E,172nmcomp=E,22nm,0.8s						
CM31	**Chiang Mai Arr**	**7.72**	**30**	Pn	**Pn**	**13 30 55.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**7.72**	**30**	Pn	**Pn**	**13 30 54.5**	**-2.3**
	comp=E,1.2nm,0.3s,baz=216,slow=15,SNR=45						
CMAR				Sn	Sn	13 32 12.1	-12
	comp=E,0.3nm,0.3s,baz=226,slow=16,SNR=5.4						
CMAR				LR	LR	13 34 08.7	
	comp=E,2μm,20.0s,baz=215,slow=41 comp=E,7.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.72**	**30**		**Pn**	**13 30 55.7**	**-1.1**
CM09	**Chiang Mai Arr**	**7.73**	**30**	P	**Pn**	**13 30 56.7**	**-0.3**
CHTO	**Chiang Mai**	**8.02**	**28**		**Pn**	**13 31 00.3**	**-0.7**
CHTO	**Chiang Mai**	**8.02**	**28**	P	**Pn**	**13 31 00.9**	**-0.1**
CHTO	**Chiang Mai**	**8.02**	**28**	P	**Pn**	**13 31 01.0**	**0.0**
NPW	**Naypyitaw**	**8.07**	**8**	P	**Pn**	**13 31 04.0**	**+2.5**
TPTI		**8.73**	**165**	P	Pn	13 31 17.7	+7.0
	comp=E,74nm,1.0s						
PSI	**Prapat**	**9.74**	**156**	P	Pn	13 31 29.6	+4.9
	comp=E,42nm,1.2s						
RPSI	**Rantau Prapat**	**9.84**	**156**		**Pn**	**13 31 29.9**	**+4.0**
GSI	**Gunungsitoli**	**10.71**	**166**	P	Pn	13 31 45.1	+7.2
	comp=E,5μmcomp=E,36nm,1.6s						
BRDH	**Bariadhala**	**11.30**	**344**	Pn	**Pn**	**13 31 45.2**	**-0.7**
	comp=E,39nm,0.3s,baz=271,slow=20,SNR=1.6						
BRDH				LR	LR	13 37 43.5	
	comp=E,3μm,19.7s,baz=162,slow=46						
BWNR	**Bhubaneshwar**	**12.16**	**315**	*e*P	**Pn**	**13 31 58.5**	**+0.9**
BWNR				*ex*	x	13 34 04.9	
BWNR				Lg	Lg	13 35 20.5	
VIS	**Vishakhapatnam**	**12.68**	**299**	*e*P	**Pn**	**13 32 05.8**	**+1.0**
VIS				*ex*	x	13 34 17.0	
SLVN	**Son La**	**12.84**	**41**	Pn	**Pn**	**13 32 08.4**	**+1.4**
BKNI	**Bangkinang**	**12.88**	**151**	P	Pn	13 32 14.4	+6.9
IMP	**Imphal**	**13.04**	**356**	*e*P	**Pn**	**13 32 11.9**	**+2.1**
MYKOM	**Kota Tinggi**	**13.29**	**138**	P	**P**	**13 32 20.8**	**-2.2**
	comp=E,46nm,1.4s						
MYKOM	**Kota Tinggi**	**13.29**	**138**	P	**P**	**13 32 20.8**	**-2.2**
PPI	**Padang Panjang**	**13.30**	**155**	P	**Pn**	**13 32 20.1**	**-3.0**
RAGD	**RAYAGADA**	**13.32**	**305**	*e*P	**Pn**	**13 32 14.9**	**+1.3**
TNCH	**TengChong**	**13.64**	**14**	P	**Pn**	**13 32 19.4**	**+1.3**
TNCH				PP	**P**	**13 32 29.6**	**+2.6**
TNCH				S	**Sn**	**13 34 52.3**	**+2.5**
TNCH				pmax	pmax		
	comp=E,28nm,1.5s						
TNCH				pmax	pmax		
	comp=E,690nm,5.3s						
TNCH				L	L		
	comp=E,2μm,17.8s						
TNCH				L	L		
	comp=E,4μm,16.6s						
TNCH				L	L		
	comp=E,4μm,12.9s						
KOHI	**KOHIMA**	**13.91**	**357**	*ex*	x	13 32 18.1	
SHL	**Shillong**	**14.04**	**349**		**Pn**	**13 32 21.6**	**-1.9**
SHL	**Shillong**	**14.04**	**349**	*ex*	x	13 32 22.0	
SHL				IAmb	IAmb	13 32 30.6	
	comp=Z,26nm,1.2s						
PALK	**Pallekele**	**14.71**	**254**	Pn	**P**	**13 32 37.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=218,slow=21,SNR=2.0						
PALK				Sn	**Sn**	**13 35 09.9**	**-6.0**
	comp=Z,0.7nm,0.3s,baz=85,slow=11,SNR=2.1						
PALK				LR	LR	13 37 57.0	
	comp=Z,335nm,21.7s,baz=71,slow=36 comp=Z,5.7nm,1.0s						
PALK	**Pallekele**	**14.71**	**254**		**Pn**	**13 32 33.6**	**+1.0**
BOK	**Bokaro**	**14.73**	**326**	*e*P	**Pn**	**13 32 33.5**	**+0.6**
BOK				IAmb	IAmb	13 32 42.0	
	comp=Z,23nm,0.7s						
TEZP	**TEZPUR**	**14.92**	**353**	*e*P	**Pn**	**13 32 37.1**	**+1.7**
SHBG	**Sahibganj**	**15.07**	**334**	*ex*	x	13 32 44.8	
KMI2	**Kunming**	**15.25**	**28**	⇓P	**P**	**13 32 41.8**	**-3.1**
KMI2				pP	pP	13 32 44.1	-2.9
KMI2				PP	**pwP**	**13 32 54.1**	**+3.5**
KMI2				S	**Sn**	**13 35 33.8**	**+4.7**
KMI2				pmax	pmax		
	comp=Z,30nm,1.4s						
KMI2				pmax	pmax		
	comp=Z,790nm,10.8s						
KMI2				L	L		
	comp=Z,3μm,16.8s						
KMI2				L	L		
	comp=Z,2μm,16.8s						
KMI2				L	L		
	comp=Z,4μm,13.6s						
DSRI	**Dabo**	**15.48**	**141**	P	**Pn**	**13 32 44.4**	**+1.5**
	comp=Z,37nm,1.1s						
JMBI	**JAMBI**	**15.88**	**146**	P	**P**	**13 32 54.4**	**+2.6**
PZH	**PanZhiHua**	**16.02**	**23**	P	**Pn**	**13 32 50.3**	**+0.4**
PZH				S	**Sn**	**13 35 50.9**	**+3.1**
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				pmax	pmax		
	comp=Z,720nm,8.2s						
PZH				L	L		
	comp=Z,3μm,12.4s						
PZH				L	L		
	comp=Z,2μm,11.8s						
PZH				L	L		
	comp=Z,3μm,11.8s						
QIZ	**Qiongzhong**	**16.10**	**61**	P	**Pn**	**13 32 50.3**	**-0.6**
QIZ				S	**Sn**	**13 35 50.3**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,490nm,9.6s						
QIZ				L	L		
	comp=Z,3μm,8.9s						
QIZ				L	L		
	comp=Z,4μm,12.2s						
QIZ				L	L		
	comp=Z,2μm,12.4s						
HYB	**Hyderabad**	**16.80**	**291**	*e*P	**Pn**	**13 33 00.4**	**+0.4**
HYB				*e*S	**Sn**	**13 36 07.9**	**+1.1**
KSI	**Kapahiang**	**17.10**	**153**	P	**P**	**13 33 10.2**	**+4.8**
	comp=Z,7μmcomp=Z,51nm,1.2s						
PPBI	**Pangkal Pinang**	**17.76**	**140**	P	**P**	**13 33 18.0**	**+5.3**
EVN	**Everest**	**17.82**	**336**	P	**Pn**	**13 33 12.8**	**-0.4**
EVN	**Everest**	**17.82**	**336**	P	**P**	**13 33 15.3**	**+1.5**
ALBI	**Allahabad**	**18.32**	**319**	*e*P	**P**	**13 33 20.1**	**+1.4**
ALBI				IAmb	IAmb	13 33 28.6	
	comp=Z,49nm,1.0s						
GYA	**Guiyang**	**18.34**	**35**	P	**P**	**13 33 20.1**	**+1.0**
GYA				S	**Sn**	**13 36 37.9**	**-6.2**
GYA				pmax	pmax		
	comp=Z,73nm,1.0s						
EGSI	**Enggano, Bengk**	**18.50**	**156**	P	**Pn**	**13 33 27.5**	**+6.5**
	comp=Z,138nm,1.4s						
TPI	**Tanjungpandan**	**19.19**	**138**	P	**Pn**	**13 33 33.0**	**+3.7**
	comp=Z,34nm,0.8s						
BHPL	**Bhopal**	**20.19**	**307**	*e*P	Pn	13 33 41.7	+0.4
BHPL				IAmb	IAmb	13 33 44.0	
	comp=Z,110nm,1.9s						
CD2	**Chengdu**	**20.75**	**22**	P	**P**	**13 33 44.5**	**-0.8**
CD2				S	**S**	**13 37 37.3**	**+0.2**
CD2				pmax	pmax		
	comp=Z,130nm,0.7s						
CD2				pmax	pmax		
	comp=Z,590nm,4.9s						
CD2				L	L		
	comp=Z,2μm,11.2s						
CD2				L	L		
	comp=Z,5μm,11.6s						
CD2				L	L		
	comp=Z,4μm,12.2s						
GUNA	**GUNA**	**21.03**	**310**	*e*P	**P**	**13 33 50.9**	**+2.5**
GUNA				IAmb	IAmb	13 33 54.4	
	comp=Z,31nm,0.8s						
GZH2	**Guangzhou**	**21.39**	**54**	P	**P**	**13 33 54.9**	**+2.7**
GZH2				L	L		
	comp=Z,3μm,12.2s						
GZH2				L	L		
	comp=Z,2μm,10.6s						
GZH2				L	L		
	comp=Z,2μm,14.0s						
KKM	**Kota Kinabalu**	**21.78**	**103**	P	**P**	**13 33 56.4**	**-0.3**
KKM				IAmb	IAmb	13 34 04.1	
	comp=Z,57nm,1.1s						
KKM	**Kota Kinabalu**	**21.78**	**103**	P	**P**	**13 34 01.4**	**+4.7**
	comp=Z,52nm,1.1s						
KKM	**Kota Kinabalu**	**21.78**	**103**	P	**P**	**13 34 01.6**	**+4.9**
LEM	**Lembang**	**22.37**	**145**	P	**P**	**13 33 59.7**	**-3.3**
	comp=Z,10nm,0.3s,baz=331,slow=22,SNR=1.8						
LEM				LR	LR	13 44 26.0	
	comp=Z,2μm,18.4s,baz=301,slow=42 comp=Z,10nm,0.3s						
LEM	**Lembang**	**22.37**	**145**	P	**P**	**13 34 08.8**	**+5.8**
	comp=Z,41nm,1.5s						
PTH	**Pithoragarh**	**22.41**	**325**	*e*P	**P**	**13 34 05.0**	**+1.6**
PTH				IAmb	IAmb	13 34 13.2	
	comp=Z,29nm,0.5s						
CNSH	**ChangSha**	**23.48**	**43**	P	**P**	**13 34 10.6**	**-3.7**
CNSH				S	**S**	**13 38 20.8**	**-7.2**
CNSH				pmax	pmax		
	comp=Z,22nm,1.3s						
CNSH				L	L		
	comp=Z,2μm,13.8s						
CNSH				L	L		
	comp=Z,2μm,15.7s						
CNSH				L	L		
	comp=Z,1μm,16.5s						
NDI	**New Delhi**	**23.60**	**318**	*e*P	**P**	**13 34 17.9**	**+2.4**
NDI				IAmb	IAmb	13 34 21.4	
	comp=Z,29nm,0.4s						
NDI				*i* x	x	13 38 39.0	
KUDL	**Kundal**	**23.73**	**316**	*e*P	**P**	**13 34 18.6**	**+1.8**
KUDL				IAmb	IAmb	13 34 21.7	
	comp=Z,8.8nm,0.7s						
GOMU	**GeErMu**	**24.34**	**360**	P	**P**	**13 34 23.1**	**+0.3**
GOMU				pP	sP	13 34 26.3	+0.4
GOMU				sP	pwP	13 34 28.4	-0.4
GOMU				S	**S**	**13 38 44.1**	**+1.8**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				L	L		
	comp=Z,690nm,12.4s						
GOMU				L	L		
	comp=Z,550nm,11.8s						
KLP	**Kalpa**	**24.98**	**325**	*e*P	**P**	**13 34 32.1**	**+3.5**
KLP				IAmb	IAmb	13 34 41.8	
	comp=Z,121nm,0.2s						
LZDM	**Lanzhou Array**	**25.37**	**17**	P	**P**	**13 34 29.6**	**-2.5**
	comp=Z,1.7nm,0.4s,baz=211,slow=10,SNR=9.5						
LZDM				LR	LR	13 45 31.1	
	comp=Z,783nm,19.4s,baz=225,slow=39 comp=Z,1.7nm,0.4s						
TGY	**Tagaytay City**	**25.46**	**82**	LR	LR	13 43 51.9	
	comp=Z,905nm,18.1s,baz=270,slow=35						
LZH	**Lanzhou**	**25.54**	**17**	*e*P	**P**	**13 34 34.1**	**+0.7**
LZH				sP	pwP	13 34 43.4	+4.0
LZH				S	**S**	**13 38 58.8**	**-2.4**
LZH				pmax	pmax		
	comp=Z,40nm,1.7s						
LZH				pmax	pmax		
	comp=Z,310nm,4.3s						
LZH				L	L		
	comp=Z,2μm,16.2s						
LZH				L	L		
	comp=Z,4μm,15.9s						
LZH				L	L		
	comp=Z,3μm,14.9s						
XAN	**Xi'an**	**25.60**	**28**	P	**P**	**13 34 33.3**	**-0.6**
XAN				sP	pwP	13 34 40.8	+1.0
XAN				S	**S**	**13 39 00.4**	**-1.7**
XAN				pmax	pmax		
	comp=Z,39nm,0.9s						
XAN				pmax	pmax		
	comp=Z,320nm,11.0s						
XAN				L	L		
	comp=Z,2μm,12.4s						
XAN				L	L		
	comp=Z,3μm,15.8s						
XAN				L	L		
	comp=Z,3μm,12.4s						
SNJI	**Sawahan-Nganju**	**25.64**	**138**	P	**P**	**13 34 38.1**	**+3.6**
	comp=Z,70nm,1.1s						
WHN	**Wuhan**	**25.96**	**41**	⇑P	**P**	**13 34 37.1**	**0.0**
WHN				pP	**pwP**	**13 34 41.5**	**-1.5**
WHN				pmax	pmax		
	comp=Z,960nm,8.1s						
WHN				L	L		
	comp=Z,4μm,11.9s						
WHN				L	L		
	comp=Z,3μm,10.8s						
WHN				L	L		
	comp=Z,9μm,13.6s						
QZH2	**Quanzhou**	**25.97**	**56**	P	**P**	**13 34 39.8**	**+2.5**
QZH2				S	**S**	**13 39 10.8**	**+2.9**
QZH2				L	L		
	comp=Z,2μm,14.8s						
QZH2				L	L		
	comp=Z,3μm,16.1s						
QZH2				L	L		
	comp=Z,2μm,14.8s						
DHRM	**DHARAMSHALA**	**26.64**	**323**	*e*P	**P**	**13 34 43.3**	**-0.2**
DHRM				IAmb	IAmb	13 34 47.7	
	comp=Z,9.8nm,0.6s						
LYN	**LuoYang**	**27.75**	**32**	P	**P**	**13 34 53.4**	**+0.1**
LYN				sP	pwP	13 35 02.1	+2.9
LYN				pmax	pmax		
	comp=Z,32nm,1.5s						
LYN				pmax	pmax		
	comp=Z,330nm,5.9s						
LYN				L	L		
	comp=Z,4μm,13.4s						
LYN				L	L		
	comp=Z,3μm,14.9s						
LYN				L	L		
	comp=Z,6μm,13.5s						
MMSI	**Mamuju**	**27.84**	**120**	P	**P**	**13 34 56.3**	**+2.1**
	comp=Z,28nm,1.0s						
GTA2	**Gaotai**	**27.95**	**8**	P	**P**	**13 34 56.6**	**+1.5**
GTA2				sP	pwP	13 35 02.8	+1.7
GTA2				S	**S**	**13 39 41.1**	**+1.9**
GTA2				SS	**SnSn**	**13 41 03.5**	**+10**
GTA2				pmax	pmax		
	comp=Z,23nm,1.6s						

LUWI **Luwuk** 30.45 113 P P 13 35 20.9 +3.4
comp=Z,5µmcomp=Z,56nm,1.2s
LUWI **Luwuk** 30.45 113 P P 13 35 18.6 +1.2
SSE **Sheshan** 30.98 48 P P 13 35 21.6 -0.3
SSE S S 13 40 28.6 +1.9
SSE pmax pmax
comp=Z,5.0nm,0.6s
SSE pmax pmax
comp=Z,92nm,4.6s
SSE L L
comp=Z,1µm,14.8s
SSE L L
comp=Z,630nm,14.1s
HNS **HongShan** 31.10 31 ⇑P P 13 35 23.3 +0.4
HNS S S 13 40 28.0 -0.4
HNS pmax pmax
comp=Z,24nm,0.8s
HNS L L
comp=Z,2µm,13.9s
HNS L L
comp=Z,2µm,15.2s
BTO2 **Baotou** 31.74 22 eP P 13 35 28.8 +0.1
BTO2 sP **pwP** 13 35 35.8 +1.2
BTO2 PP **PnPn** 13 36 34.3 +1.5
BTO2 S S 13 40 39.1 +0.4
BTO2 pmax pmax
comp=Z,36nm,0.6s
BTO2 pmax pmax
comp=Z,220nm,5.6s
BTO2 L L
comp=Z,2µm,17.7s
BTO2 L L
comp=Z,4µm,14.0s
BTO2 L L
comp=Z,2µm,12.2s
KSH2 **Kashi** 32.25 331 P P 13 35 33.4 +0.2
KSH2 pP pwP 13 35 39.9 +1.6
KSH2 pmax pmax
comp=Z,7.0nm,0.9s
KSH2 L L
comp=Z,750nm,22.7s
KSH2 L L
comp=Z,840nm,22.7s
KSH2 L L
comp=Z,2µm,22.0s
WUS **Wushi** 32.41 338 P P 13 35 32.1 -2.5
WUS IAmb IAmb 13 35 44.5
comp=Z,26nm,1.2s
HHC **Hu-ho-hao-te** 32.47 24 eP P 13 35 36.4 +1.3
HHC S S 13 40 51.3 +1.2
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,87nm,6.7s
HHC L L
comp=Z,2µm,12.8s
HHC L L
comp=Z,1µm,11.7s
HHC L L
comp=Z,2µm,13.0s
WMQ **Urumqi** 32.56 350 eP P 13 35 37.6 +1.9
WMQ S S 13 40 50.4 -0.8
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,140nm,4.9s
WMQ L L
comp=Z,520nm,17.9s
WMQ L L
comp=Z,730nm,20.3s
WMQ L L
comp=Z,690nm,24.0s
MANEM **Manem** 33.06 325 P P 13 35 38.2 -2.3
MANEM IAmb IAmb 13 35 50.1
comp=Z,24nm,1.0s
TARG **Taragay, Kyrgy** 33.41 336 P P 13 35 42.7 -0.9
TARG IAmb IAmb 13 35 54.6
comp=Z,27nm,1.1s
TARG **Taragay, Kyrgy** 33.41 336 P P 13 35 44.4 +0.8
PRZ **Przheval'sk** 33.83 338 P P 13 35 50.0 +3.0
BJI2 **Beijing** 33.84 30 P P 13 35 48.1 +1.2
BJI2 S S 13 41 12.4 +1.3
BJI2 pmax pmax
comp=Z,4.0nm,0.8s
BJI2 pmax pmax
comp=Z,75nm,3.5s
BJI2 L L
comp=Z,440nm,10.9s
BJI2 L L
comp=Z,580nm,13.5s
BJI2 L L
comp=Z,730nm,12.2s
KDJ **Kajisay** 33.99 336 P P 13 35 46.9 -1.5
KDJ IAmb IAmb 13 35 59.4
comp=Z,21nm,1.2s
KDJ **Kajisay** 33.99 336 P P 13 35 50.5 +2.1
SHLS **Shalkode** 34.04 340 eP P 13 35 48.7 -0.1
comp=Z,16nm,1.1s
PDGK **Podgornoye** 34.18 340 P P 13 35 47.5 -2.5
UZB **Uzynbulak** 34.18 339 eP P 13 35 51.2 +1.1
comp=Z,13nm,1.5s
SATY **Saty** 34.33 338 eP P 13 35 52.5 +1.2
comp=Z,13nm,1.0s
KPKS **Kokpek** 34.58 339 eP P 13 35 54.6 +1.1
JOW **Kunigami** 34.74 60 LR LR 13 51 48.5
comp=Z,465nm,18.1s,baz=194,slow=40
GAR **Garm** 34.85 325 P P 13 35 55.5 -0.3
GAR **Garm** 34.85 325 P P 13 35 56.5 +0.7
TNSS **Tian-Shan** 34.85 337 eP P 13 35 57.1 +1.0
MDOK **Medeo** 34.92 337 eP P 13 35 57.6 +1.2
AAA **Alma-Ata** 35.01 337 eP P 13 35 58.5 +1.3
ARSB **Arslanbob** 35.18 331 P P 13 35 57.9 -0.8
ARSB IAmb IAmb 13 36 08.3
comp=Z,19nm,1.2s
CHGR **Chuyangaron** 35.27 324 P P 13 35 58.7 -0.8
AAK **Ala-Archa** 35.53 334 LR LR 13 52 14.7
comp=Z,2µm,21.9s,baz=103,slow=39
AAK **Ala-Archa** 35.53 334 P P 13 36 03.7 +2.0
BATI **Baumata** 35.95 126 LR LR 13 52 28.1
comp=Z,966nm,18.5s,baz=302,slow=39
DL2 **Dalian** 35.99 37 P P 13 36 06.5 +1.0
DL2 S S 13 41 46.4 +2.2
DL2 pmax pmax
comp=Z,32nm,0.8s
DL2 pmax pmax
comp=Z,290nm,3.9s
DL2 L L
comp=Z,2µm,12.9s
DL2 L L
comp=Z,1µm,14.5s
DL2 L L
comp=Z,2µm,13.5s
MKAR **Makanchi Array** 36.52 345 P P 13 36 10.1 +0.1
comp=Z,0.8nm,0.3s,baz=155,slow=8.8,SNR=13
MKAR LR LR 13 55 38.4
comp=Z,274nm,19.0s,baz=156,slow=44
comp=Z,0.8nm,0.3s
MKAR **Makanchi Array** 36.52 345 P P 13 36 08.8 -1.2
ZSN **Zaisan** 36.57 349 eP P 13 36 11.6 +1.2
MAKZ **Makanchi** 36.61 345 P P 13 36 09.2 -1.6
XLT **XiLinHaoTe** 36.87 26 eP P 13 36 12.1 -0.9
XLT pP sP 13 36 16.8 +0.6
XLT PP **PP** 13 37 39.3 +2.3
XLT S S 13 41 56.5 -1.2
XLT pmax pmax
comp=Z,32nm,1.1s
XLT pmax pmax
comp=Z,82nm,5.2s
XLT L L
comp=Z,150nm,12.8s
XLT L L
comp=Z,1µm,10.6s
XLT L L
comp=Z,2µm,13.2s
DZA **Taraz** 37.17 331 eP P 13 36 16.9 +1.3
comp=Z,7.6nm,0.7s
SONM **Songino Array** 37.23 13 P P 13 36 15.0 -1.2
comp=Z,8.4nm,0.9s,baz=198,slow=8.7,SNR=40
SONM LR LR 13 53 09.1
comp=Z,955nm,20.2s,baz=196,slow=39
comp=Z,8.4nm,0.9s
SONM **Songino Array** 37.23 13 P P 13 36 15.0 -1.2
SONM IAmb IAmb 13 36 17.9
comp=Z,22nm,1.2s
IUG **Iuzhnay** 37.25 329 eP P 13 36 17.6 +1.3
comp=Z,19nm,1.3s

ULN **Ulaanbaatar** 37.41 13 P P 13 36 18.1 +0.4
comp=Z,44nm,1.3s
ULN **Ulaanbaatar** 37.41 13 P P 13 36 18.2 +0.5
CHM **Chimkent** 37.60 329 eP P 13 36 20.5 +1.4
comp=Z,9.4nm,0.5s
BTLS **Baital** 37.68 336 eP P 13 36 21.1 +1.3
KK31 **Karatay Array** 37.73 330 P P 13 36 19.5 -0.8
KKAR **Karatay Array** 37.73 330 P P 13 36 20.0 -0.3
TJN **Taejon** 38.14 45 P P 13 36 22.4 -1.4
KSAR **Wonju Array Be** 39.06 43 P P 13 36 30.5 -1.1
KS19 **Wonju Array Si** 39.08 43 P P 13 36 30.8 -0.9
KSRS **Korea Array** 39.09 43 P P 13 36 28.5 -3.3
comp=Z,2.0nm,0.5s,baz=233,slow=8.9,SNR=12
KSRS LR LR 13 53 25.9
comp=Z,856nm,18.3s,baz=235,slow=38
comp=Z,2.0nm,0.5s
JNU **Nakatsue** 39.17 51 LR LR 13 53 33.5
comp=Z,491nm,19.3s,baz=234,slow=38
TLY **Talaya** 40.44 8 P P 13 36 42.2 -0.7
comp=Z,2.7nm,0.2s,baz=191,slow=9.4,SNR=7.1
TLY LR LR 13 55 12.6
comp=Z,477nm,19.1s,baz=187,slow=39
comp=Z,2.7nm,0.2s
TLY **Talaya** 40.44 8 P P 13 36 42.8 -0.1
KURBB **Kurchatov Arra** 41.02 344 P P 13 36 47.0 -0.6
comp=Z,3.6nm,0.9s,baz=161,slow=7.6,SNR=26
KURBB LR LR 13 57 49.3
comp=Z,710nm,18.6s,baz=164,slow=42
comp=Z,3.6nm,0.9s
KURK **Kurchatov** 41.08 344 P P 13 36 48.0 -0.1
KURK **Kurchatov** 41.08 344 P P 13 36 49.1 +1.1
CN2 **Changchun** 41.38 34 P P 13 36 49.8 -0.9
CN2 PP **PP** 13 38 27.0 +0.8
CN2 S S 13 43 03.4 -2.0
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 L L
comp=Z,1µm,15.0s
CN2 L L
comp=Z,1µm,15.0s
CN2 L L
comp=Z,800nm,14.0s
FITZ **Fitzroy Crossi** 42.42 134 LR LR 13 55 16.1
comp=Z,679nm,21.8s,baz=305,slow=37
HIA **Hailar** 42.68 24 P P 13 37 00.8 -0.5
HIA IAmb IAmb 13 37 02.5
comp=Z,20nm,1.0s
ZAA0 **Zalesovo Array** 42.85 351 P P 13 37 01.4 -1.1
ZALV **Zalesovo Beam** 42.85 351 P P 13 37 01.4 -1.1
comp=Z,1.7nm,0.7s,baz=178,slow=9.1,SNR=7.7
ZALV LR LR 13 59 03.8
comp=Z,243nm,19.4s,baz=159,slow=42
comp=Z,1.7nm,0.7s
ZALV **Zalesovo Beam** 42.85 351 P P 13 37 01.2 -1.3
HILR **Hailar Array B** 42.91 24 P P 13 37 01.4 -1.8
comp=Z,2.0nm,0.5s,baz=184,slow=14,SNR=1.6
HILR LR LR 13 55 41.4
comp=Z,510nm,18.8s,baz=130,slow=37
comp=Z,2.0nm,0.5s
BNX **BinXian** 43.70 33 ⇓P P 13 37 09.0 -0.5
BNX pP **sP** 13 37 12.3 -0.4
BNX PP **PP** 13 38 49.8 -1.4
BNX S S 13 43 42.3 +2.7
BNX sS **sS** 13 43 48.0 +4.5
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,91nm,4.1s
BNX L L
comp=Z,760nm,13.6s
BNX L L
comp=Z,760nm,14.6s
BNX L L
comp=Z,1µm,14.4s
USRK **Ussuriysk Ar.** 45.36 38 P P 13 37 19.5 -3.3
comp=Z,1.4nm,0.8s,baz=231,slow=11,SNR=1.3
USRK LR LR 13 58 20.8
comp=Z,516nm,19.5s,baz=226,slow=39
comp=Z,1.4nm,0.8s
BVAR **Borovoye Array** 45.62 339 P P 13 37 24.5 -0.2
comp=Z,1.4nm,0.5s,baz=147,slow=8.3,SNR=8.2
comp=Z,1.4nm,0.5s
BORK **Borovoye** 45.66 339 P P 13 37 24.7 -0.3
MJAR **Matsushiro Arr** 46.05 50 P P 13 37 23.8 -4.7
comp=Z,0.5nm,0.5s,baz=255,slow=9.6,SNR=2.2
MJAR LR LR 13 58 54.0
comp=Z,631nm,18.6s,baz=248,slow=39
comp=Z,0.5nm,0.5s
MJAR **Matsushiro Arr** 46.05 50 P P 13 37 25.6 -2.8
JHJ **Hachijo jima 2** 46.17 55 LR LR 13 57 45.6
comp=Z,321nm,19.7s,baz=100,slow=38
HEH **HeiHe** 46.73 28 eP P 13 37 33.0 -0.5
HEH pP **sP** 13 37 36.0 -0.7
HEH PP **PP** 13 39 20.3 -3.1
HEH S S 13 44 21.6 -1.7
HEH pmax pmax
comp=Z,13nm,1.0s
HEH pmax pmax
comp=Z,140nm,6.5s
HEH L L
comp=Z,930nm,18.9s
HEH L L
comp=Z,1µm,20.2s
HEH L L
comp=Z,2µm,15.0s
JCJ **Chichijima** 46.83 64 LR LR 13 58 03.5
comp=Z,112nm,18.1s,baz=247,slow=37
AB31 **Akbulak array** 47.26 329 P P 13 37 36.3 -1.3
ABKAR **Akbulak array** 47.26 329 P P 13 37 35.8 -1.9
NWAO **Narrogin (SRO)** 49.27 155 LR LR 14 00 54.6
comp=Z,279nm,18.0s,baz=306,slow=39
WRA **Warramunga Arr** 49.98 129 P P 13 37 56.9 -2.2
comp=Z,3.9nm,0.9s,baz=306,slow=8.5,SNR=18
comp=Z,3.9nm,0.9s
WRA **Warramunga Arr** 49.98 129 P P 13 37 57.1 -1.9
WRAB **Tennant Creek** 49.98 129 P P 13 37 59.2 +0.1
WR8 **Warramunga Arr** 50.11 129 P P 13 37 58.5 -1.5
WR8 IAmb IAmb 13 38 08.0
comp=Z,20nm,0.8s
AS31 **Alice Springs** 51.89 133 P P 13 38 12.4 -1.0
ASAR **Alice Springs** 51.89 133 P P 13 38 11.0 -2.4
comp=Z,3.2nm,0.9s,baz=308,slow=7.0,SNR=21
ASAR LR LR 14 01 01.8
comp=Z,526nm,21.9s,baz=281,slow=37
comp=Z,3.2nm,0.9s
ASAR **Alice Springs** 51.89 133 P P 13 38 12.6 -0.8
ASAJ **Asahikawa** 52.03 42 LR LR 14 00 51.5
comp=Z,492nm,19.0s,baz=242,slow=37
GNI **Garni** 52.36 312 P P 13 38 18.5 +1.7
comp=Z,6.7nm,0.5s,baz=154,slow=8.6,SNR=3.5
comp=Z,6.7nm,0.5s
GNI **Garni** 52.36 312 P P 13 38 15.4 -1.5
GNI **Garni** 52.36 312 P P 13 38 17.0 +0.1
comp=Z,31nm,1.4s
ARTI **Arti** 52.71 335 LR LR 14 03 24.9
comp=Z,352nm,20.9s,baz=138,slow=39
KBZ **Khabar** 54.81 316 P P 13 38 34.0 -0.5
comp=Z,1.8nm,0.9s,baz=268,slow=18,SNR=4.7
comp=Z,1.8nm,0.9s
KVAR **Kislovodsk Arr** 55.02 316 P P 13 38 37.0 +0.7
comp=Z,1.8nm,0.5s,baz=150,slow=8.1,SNR=1.5
comp=Z,1.8nm,0.5s
KIV **Kislovodsk** 55.03 316 P P 13 38 36.9 +0.6
comp=Z,17nm,0.9s
KIV **Kislovodsk** 55.03 316 P P 13 38 37.9 +1.6
YAK **Yakutsk** 56.10 19 LR LR 14 04 09.2
comp=Z,503nm,18.8s,baz=216,slow=38
YAK **Yakutsk** 56.10 19 P P 13 38 40.2 -3.3
ARPR **Arapgir-MALATY** 56.85 309 P P 13 38 50.4 +0.9
INKA **Innaminka** 59.26 132 P P 13 39 06.1 -0.2
INKA IAmb IAmb 13 39 15.7
comp=Z,7.3nm,0.9s
BR104 **Keskin Array S** 60.54 309 P P 13 39 14.8 -0.4
comp=Z,49nmcomp=Z,5.7nm,0.7s
BRTR **Keskin Array B** 60.54 309 P P 13 39 14.6 -0.6
comp=Z,2.0nm,0.7s,baz=134,slow=7.4,SNR=9.1
comp=Z,2.0nm,0.7s
BRTR **Keskin Array B** 60.54 309 P P 13 39 14.1 -1.1
BR105 **Keskin Array S** 60.56 309 P P 13 39 15.0 -0.3
comp=Z,47nmcomp=Z,6.4nm,0.8s
BR106 **Keskin Array S** 60.56 309 P P 13 39 15.0 -0.3
comp=Z,43nmcomp=Z,5.1nm,0.8s
STKA **Stephens Creek** 62.27 136 P P 13 39 24.2 -2.6
comp=Z,2.2nm,0.8s,baz=320,slow=6.5,SNR=5.6
comp=Z,2.2nm,0.8s

STKA **Stephens Creek** 62.27 136 P P 13 39 27.3 +0.5
OBN **Obninsk** 62.55 327 P P 13 39 27.9 -0.3
comp=Z,14nm,0.4s,baz=160,slow=1.5,SNR=5.1
OBN **Obninsk** 62.55 327 P P 13 39 27.5 -0.8
MA2 **Magadan** 63.00 28 P P 13 39 30.5 -0.7
comp=Z,22nm,1.1s
YLV **Yalova** 63.90 309 P P 13 39 36.8 -0.8
CMSA **Cobar Meteorol** 64.95 133 P P 13 39 45.0 +0.5
AK09 **Malin Array Si** 65.58 320 P P 13 39 48.1 -0.2
AK10 **Malin Array Si** 65.60 320 P P 13 39 47.9 -0.5
AKASG **Malin Array Be** 65.64 320 P P 13 39 48.1 -0.5
comp=Z,0.2nm,0.2s,baz=90,slow=4.6,SNR=6.9
comp=Z,0.2nm,0.2s
AKASG **Malin Array Be** 65.64 320 P P 13 39 48.4 -0.3
AKBB **Malin Array Si** 65.64 320 P P 13 39 48.0 -0.6
KIEV **Kiev** 65.64 320 P P 13 39 47.8 -0.9
comp=Z,21nm,0.8s
SORM **Soroca** 65.72 318 P P 13 39 48.5 -0.7
LUBAR **Lubar, Ukraine** 66.41 319 P P 13 39 51.8 -1.9
VRI **Vrincioaia** 66.48 315 P P 13 39 54.1 -0.1
comp=Z,11nm,1.1s
VRI **Vrincioaia** 66.48 315 P P 13 39 55.2 +1.0
MI28 **Mi28,Pidlybu** 66.65 321 P P 13 39 53.9 -1.2
MLR **Muntele Rosu** 66.98 314 P P 13 39 57.5 -0.1
comp=Z,11nm,1.2s
KMPD **K-Podol'skiy** 67.04 318 P P 13 39 55.8 -1.8
RNPP5 **Staryi Chortor** 67.81 321 P P 13 39 59.8 -2.7
RNPP8 **Varash** 67.84 321 P P 13 40 01.1 -1.6
DRGR 69.35 316 P P 13 40 11.9 -0.5
H04N2 **CROZET ISLANDS** 69.43 210 T T 14 57 26.6
baz=49
H04N1 **CROZET ISLANDS** 69.44 211 T T 14 57 26.6
baz=49
H04N3 **CROZET ISLANDS** 69.45 210 T T 14 57 26.6
baz=49
KWP **Kalwaria Pacla** 69.61 319 eP P 13 40 15.8 +1.9
FIA1 **FINESS Array S** 69.67 331 P P 13 40 12.9 -1.0
FINES **FINESS Array B** 69.67 331 P P 13 40 13.2 -0.8
comp=Z,3.4nm,0.8s,baz=102,slow=8.2,SNR=9.7
comp=Z,3.4nm,0.8s
FINES **FINESS Array B** 69.67 331 P 13 40 13.7 -0.2
SUW **Suwalki** 69.85 323 eP P 13 40 14.9 -0.2
NIE **Niedzica** 71.16 318 eP P 13 40 25.7 +2.4
NIE **Niedzica** 71.16 318 P P 13 40 23.7 +0.4
comp=Z,3.3nm,1.7s
OJC **Ojcow** 71.54 319 eP P 13 40 26.0 +0.4
OJC **Ojcow** 71.54 319 P P 13 40 25.7 +0.1
comp=Z,7.3nm,1.0s
ARCES **ARCESS Array B** 71.91 340 P P 13 40 27.3 -0.1
comp=Z,1.1nm,0.8s,baz=85,slow=5.2,SNR=4.2
comp=Z,1.1nm,0.8s
MORH **Mrgy, Hungar** 72.12 315 P P 13 40 28.5 -0.6
comp=Z,3.5nm,1.0s
BILL **Bilibino** 72.22 22 P P 13 40 28.8 -0.5
BILL IAmb IAmb 13 40 29.8
comp=Z,9.7nm,1.0s
JAVC **Velka Javorina** 72.86 318 eP P 13 40 34.9 +1.3
MPLH **Magyarpolny** 72.90 316 P P 13 40 33.8 0.0
comp=Z,22nm,1.3s
MORC **Moravsky Berou** 72.97 319 eP P 13 40 34.5 +0.3
MODS **Modra-Piesok** 73.11 317 eP P 13 40 35.6 +0.6
VRAC **Vranov** 73.58 318 eP P 13 40 38.0 +0.3
KRUC **Moravsky** 73.70 318 eP P 13 40 38.7 +0.2
KSP **Ksiaz** 73.80 320 eP P 13 40 38.5 -0.5
KSP **Ksiaz** 73.80 320 P P 13 40 38.7 -0.3
comp=Z,6.5nm,1.3s
CEL **Celeste** 74.24 307 P P 13 40 41.9 0.0
comp=Z,12nm,1.4s
BRG **Berggiesshubel** 75.29 320 eP P 13 40 48.6 +1.0
comp=Z,9.7nm,1.2s,baz=88,slow=5.6
BRG **Berggiesshubel** 75.29 320 eP P 13 40 48.6 +1.0
BRG Amp 13 40 49.4
comp=Z,9.8nm,1.2s
BRG **Berggiesshubel** 75.29 320 P P 13 40 55.6 +8.0
BRG Amp 13 40 57.5
comp=Z,7.6nm,1.1s
GEC2 **GERESS Array S** 75.48 318 eP P 13 40 49.6 +0.6
comp=Z,5.7nm,0.9s,baz=88,slow=5.6
GERES **GERESS Array B** 75.48 318 P P 13 40 48.2 -0.7
comp=Z,2.3nm,0.7s,baz=97,slow=4.6,SNR=17
comp=Z,2.3nm,0.7s
HFS **Hagfors** 75.52 329 P P 13 40 49.2 +0.4
comp=Z,2.6nm,0.9s,baz=158,slow=4.7,SNR=4.5
comp=Z,2.6nm,0.9s
CLL **Collm** 75.88 320 eP P 13 40 51.4 +0.4
comp=Z,17nm,1.6s,baz=88,slow=5.6
CLL **Collm** 75.88 320 P P 13 40 50.8 -0.2
CLL **Collm** 75.88 320 eP P 13 40 51.0 0.0
comp=Z,7.0nm,1.1s
CLL ex x 13 40 59.0
WET **Wettzell** 76.01 318 eP P 13 40 52.4 +0.5
comp=Z,11nm,1.6s,baz=88,slow=5.6
SPITS **Spitsbergen Ar** 76.22 348 P P 13 40 51.6 -0.9
comp=Z,3.7nm,0.7s,baz=131,slow=11,SNR=5.8
comp=Z,3.7nm,0.7s
TANN **Tannenbergstha** 76.24 319 eP P 13 40 53.8 +0.6
comp=Z,12nm,1.7s,baz=88,slow=5.6
ROTZ **Rotzenmuhle** 76.43 319 eP P 13 40 55.4 +1.2
comp=Z,2.9nm,1.3s,baz=88,slow=5.6
NB2 **NORSAR Subarra** 76.76 330 P P 13 40 55.6 -0.3
comp=Z,13nm,1.4s,baz=89,slow=5.9
NOA **NORSAR Array B** 76.76 330 P P 13 40 55.9 +0.1
comp=Z,1.0nm,0.8s,baz=89,slow=5.7,SNR=4.8
comp=Z,1.0nm,0.8s
MOX **Moxa** 76.77 319 eP P 13 40 56.7 +0.5
comp=Z,12nm,1.6s,baz=88,slow=5.6
MOX eL L 14 16 32.3
comp=Z,358nm,19.3s
GORT1 **Trebel** 76.87 322 eP P 13 40 57.4 +0.9
comp=Z,61nm,1.8s,baz=88,slow=5.6
GRF **Grafenberg Arr** 77.07 319 eL L 14 16 32.0
comp=Z,465nm,21.7s
ASSE **Asse, Remlinge** 77.30 321 eP P 13 40 59.4 +0.5
comp=Z,14nm,1.6s,baz=88,slow=5.6
BSEG **Bad Segeberg** 77.42 323 eP P 13 41 01.1 +1.4
comp=Z,7.3nm,1.0s,baz=88,slow=5.6
CLZ **Clausthal** 77.50 321 eP P 13 41 00.8 +0.6
comp=Z,6.6nm,0.9s,baz=88,slow=5.6
RETH **Rethem/Aller,** 78.06 322 eP P 13 41 04.1 +0.8
comp=Z,20nm,1.5s,baz=88,slow=5.6
BOSA **Boshof** 78.30 237 P P 13 41 07.0 +1.8
comp=Z,3.4nm,1.1s,baz=76,slow=6.5,SNR=4.3
comp=Z,3.4nm,1.1s
BOSA **Boshof** 78.30 237 P P 13 41 06.2 +1.0
TUE **Stuetta** 78.55 315 P P 13 41 06.0 -0.4
comp=Z,30nm,0.8s
KASTN **Kahler Asten** 78.76 320 eP P 13 41 07.8 +0.6
comp=Z,6.2nm,1.2s,baz=88,slow=5.6
BFO **Black Forest** 79.07 317 eP P 13 41 09.1 +0.1
comp=Z,3.1nm,0.9s,baz=88,slow=5.6
IBBN **Ibbenburen** 79.07 321 eP P 13 41 09.8 +1.0
comp=Z,20nm,1.2s,baz=88,slow=5.6
BUG **Bochum--Univer** 79.45 320 eP P 13 41 11.8 +0.9
comp=Z,17nm,1.2s,baz=88,slow=5.6
WLF **Walferdange** 80.35 319 eP P 13 41 17.0 +1.1
comp=Z,61nm,2.1s,baz=88,slow=5.6
TNA **Tin City** 82.34 25 P P 13 41 26.5 +0.4
baz=281
MAW **Mawson** 82.46 192 P P 13 41 27.0 +0.5
comp=Z,2.7nm,1.1s,baz=62,slow=9.9,SNR=3.1
comp=Z,2.7nm,1.1s
MAW **Mawson** 82.46 192 P P 13 41 27.5 +1.0
C16K **Lisburne Hills** 82.75 22 P P 13 41 28.2 +0.1
baz=283
SPIA **Saint Paul Isl** 82.83 33 P P 13 41 28.6 -0.2
baz=280
F14K **Arctic Creek** 83.01 25 P P 13 41 29.8 +0.2
baz=283
SUR **Sutherland** 83.16 235 P P 13 41 32.3 +1.1
comp=Z,5.2nm,0.8s,baz=113,slow=3.2,SNR=8.0
comp=Z,5.2nm,0.8s
SUR **Sutherland** 83.16 235 P P 13 41 30.1 -1.1
C17K **DeLong Mountai** 83.48 21 P P 13 41 31.3 -0.7
baz=285
ANM **Nome** 83.61 25 P P 13 41 32.8 0.0
baz=284
F15K **North Star Dit** 83.63 24 P P 13 41 33.2 +0.4
baz=284
RDOG **Red Dog Mine** 83.69 22 P P 13 41 33.0 -0.1
baz=286
A19K **Wainwright** 83.71 19 P P 13 41 32.4 -0.7
baz=287
D17K **Noatak River** 83.72 22 P P 13 41 33.2 0.0
baz=286
G15K **Niukluk** 84.06 25 P P 13 41 34.5 -0.5
baz=285
C18K **Utukok River** 84.13 21 P P 13 41 35.7 +0.3

	baz=287							
M11K	**Mekoryuk** baz=284	84.23	30	P	P	13 41 36.0	+0.2	
E17K	**Hotham Inlet** baz=287	84.36	23	P	P	13 41 36.7	+0.2	
C19K	**Lookout Ridge** baz=289	84.55	20	P	P	13 41 37.5	+0.1	
K13K	**Kusilvak Mount** baz=285	84.58	28	P	P	13 41 37.5	-0.1	
G16K	**Koyuk River** baz=286	84.64	24	P	P	13 41 38.1	+0.2	
E18K	**Tukpahlearik C** baz=288	84.71	22	P	P	13 41 38.3	0.0	
A21K	**Barrow** baz=291	84.74	18	P	P	13 41 38.6	+0.3	
F17K	**Baldwin Pennin** baz=287	84.77	23	P	P	13 41 38.7	+0.1	
J14K	**Nanvaranak Lak** baz=286	84.86	27	P	P	13 41 39.2	+0.2	
H16K	**Elim** baz=287	84.90	25	P	P	13 41 39.2	0.0	
EKA	**Eskdalemuir Ar** comp=Z,0.4nm,0.5s,baz=98,slow=4.3,SNR=3.9 comp=Z,0.4nm,0.5s	84.98	325	P	P	13 41 40.1	+0.3	
B20K	**Meade River** baz=291	85.04	19	P	P	13 41 40.1	+0.2	
D19K	**Kuna River** baz=290	85.25	21	P	P	13 41 40.9	-0.1	
G17K	**Kiwalik Mounta** baz=288	85.29	24	P	P	13 41 40.7	-0.5	
F18K	**Selawik** baz=289	85.33	23	P	P	13 41 40.7	-0.7	
M13K	**Dall Lake** baz=286	85.59	29	P	P	13 41 41.8	-0.9	
UNV	**Unalaska Valle** baz=284	85.61	36	P	P	13 41 43.4	+0.4	
L14K	**Kuka Creek** baz=286	85.64	28	P	P	13 41 43.1	+0.1	
D20K	**Etivluk River** baz=291	85.69	20	P	P	13 41 42.5	-0.7	
H17K	**Granite Mounta** baz=289	85.76	24	P	P	13 41 43.2	-0.3	
I17K	**Unalakleet** baz=288	85.77	25	P	P	13 41 43.3	-0.3	
K15K	**Wolf Creek Mou** baz=287	85.89	27	P	P	13 41 43.5	-0.8	
E19K	**Redstone River** comp=Z,11nm,1.1s	85.93	22	IAmb	IAmb	13 42 10.6		
E19K	**Redstone River** baz=291	85.93	22	P	P	13 41 43.1	-1.3	
G18K	**Tagagawik** baz=290	85.94	23	P	P	13 41 43.6	-0.8	
F19K	**Shaleruckik Mo** comp=Z,15nm,1.5s	85.95	22	IAmb	IAmb	13 41 45.5		
F19K	**Shaleruckik Mo** baz=290	85.95	22	P	P	13 41 43.1	-1.3	
J16K	**Anvik River** comp=Z,20nm,1.4s	85.99	26	IAmb	IAmb	13 41 46.3		
J16K	**Anvik River** baz=288,SNR=5.3	85.99	26	P	P	13 41 44.4	-0.4	
E20K	**Nigu River** baz=292	86.01	21	P	P	13 41 44.9	0.0	
B21K	**Ikpikpuk River** baz=293	86.01	19	P	P	13 41 45.1	+0.4	
L15K	**Ungalak Mounta** baz=288	86.09	28	P	P	13 41 44.9	-0.4	
B22K	**Teshekpuk Lake** baz=294	86.10	18	P	P	13 41 44.9	-0.2	
C21K	**Knifeblade Rid** baz=293	86.14	20	P	P	13 41 44.5	-0.9	
M14K	**Bethel** baz=287	86.15	29	P	P	13 41 45.0	-0.6	
H18K	**Honhosa River** baz=290	86.31	24	P	P	13 41 45.9	-0.4	
G19K	**Purcell Mounta** comp=Z,12nm,1.2s	86.45	23	IAmb	IAmb	13 41 48.5		
G19K	**Purcell Mounta** baz=291,SNR=5.9	86.45	23	P	P	13 41 46.6	-0.3	
N14K	**Kuskokwak Cree** baz=288	86.53	29	P	P	13 41 47.3	-0.1	
J17K	**VABM Dome** comp=Z,7.6nm,1.2s	86.61	26	IAmb	IAmb	13 42 16.5		
J17K	**VABM Dome** baz=290	86.61	26	P	P	13 41 47.4	-0.4	
F20K	**Avaraart Lake** comp=Z,8.8nm,0.9s	86.62	22	IAmb	IAmb	13 41 49.1		
F20K	**Avaraart Lake** baz=292	86.62	22	P	P	13 41 47.6	-0.2	
E21K	**Killik River** comp=Z,12nm,1.1s	86.69	20	IAmb	IAmb	13 41 49.4		
E21K	**Killik River** baz=294	86.69	20	P	P	13 41 47.5	-0.6	
M15K	**Kasigluk River** baz=288	86.77	29	P	P	13 41 48.2	-0.4	
H19K	**Roundabout Mou** comp=Z,17nm,1.4s	86.92	23	IAmb	IAmb	13 41 51.1		
H19K	**Roundabout Mou** baz=292,SNR=7.6	86.92	23	P	P	13 41 49.1	-0.1	
O14K	**Tigyukauivet M** baz=288	86.94	30	P	P	13 41 49.0	-0.4	
L16K	**Owhat River** baz=289	87.00	27	P	P	13 41 49.8	+0.1	
GCSA	**Galena City Sc** baz=291	87.04	24	P	P	13 41 49.8	0.0	
K17K	**Iditarod** comp=Z,19nm,1.4s	87.17	26	IAmb	IAmb	13 42 01.2		
K17K	**Iditarod** baz=290	87.17	26	P	P	13 41 49.5	-1.1	
C23K	**Itkillik River** baz=297	87.18	18	P	P	13 41 50.8	+0.4	
N15K	**Kwethluk River** baz=289	87.21	29	P	P	13 41 50.2	-0.6	
F21K	**Alatna River** comp=Z,7.8nm,1.1s	87.36	21	IAmb	IAmb	13 41 52.6		
F21K	**Alatna River** baz=294,SNR=5.1	87.36	21	P	P	13 41 51.3	-0.1	
L17K	**Donlin** baz=290	87.38	27	P	P	13 41 50.9	-0.6	
M16K	**Timber Creek** baz=290	87.46	28	P	P	13 41 51.8	-0.2	
H20K	**Anotleneega Mo** baz=293,SNR=7.7	87.54	23	P	P	13 41 52.3	0.0	
D23K	**Nanushuk River** baz=297	87.56	19	P	P	13 41 52.0	-0.2	
J18K	**Innoko River** baz=292	87.58	25	P	P	13 41 52.2	-0.3	
G21K	**Aliakaket** baz=294	87.64	22	P	P	13 41 52.2	-0.6	
O15K	**Ungalikthiuk R** baz=289	87.66	30	P	P	13 41 52.3	-0.7	
F22K	**John River** baz=296	87.70	21	P	P	13 41 52.4	-0.6	
N16K	**Nishlik Lake** baz=290	87.73	28	P	P	13 41 53.0	-0.3	
IMAR	**Indian Mountai**	87.77	22	P	P	13 41 52.5	-0.9	
J19K	**Poorman** comp=Z,9.2nm,1.3s	87.83	25	IAmb	IAmb	13 41 55.5		
J19K	**Poorman** baz=293,SNR=5.4	87.83	25	P	P	13 41 53.4	-0.3	
I20K	**Naaghedeneel** baz=294	87.97	24	P	P	13 41 54.0	-0.3	
M17K	**Holitna River** baz=291	88.02	27	P	P	13 41 54.3	-0.3	
L18K	**Granite Mounta** baz=292	88.05	26	P	P	13 41 54.7	-0.1	
D24K	**Happy Valley** baz=299	88.06	19	P	P	13 41 54.5	-0.2	
TOLK	**Toolik Lake Re** baz=298	88.06	19	P	P	13 41 54.5	-0.3	
G22K	**Bettles** baz=296	88.19	21	P	P	13 41 55.0	-0.4	
H21K	**Melozitna Rive** baz=295,SNR=18	88.26	23	P	P	13 41 55.7	-0.1	
E23K	**Chandalar** baz=298	88.32	20	P	P	13 41 55.7	-0.4	
J20K	**Nowinta River** comp=Z,13nm,1.4s	88.36	24	IAmb	IAmb	13 41 59.1		
J20K	**Nowinta River** baz=294,SNR=5.5	88.36	24	P	P	13 41 56.0	-0.2	
O16K	**Kokwok River B** baz=291	88.36	29	P	P	13 41 56.2	-0.1	
N17K	**Nushagak Hills** baz=291	88.45	28	P	P	13 41 56.8	+0.1	
COLD	**Coldfoot** baz=297	88.51	21	P	P	13 41 57.1	+0.3	
SDPT	**Sand Point** baz=289	88.56	34	P	P	13 41 56.8	-0.4	
P16K	**Nushagak River** baz=291	88.60	30	P	P	13 41 57.0	-0.4	
E24K	**Your Creek** baz=299	88.69	20	P	P	13 41 57.4	-0.4	
H22K	**Ishtalitna Cre** comp=Z,10nm,1.0s	88.69	22	IAmb	IAmb	13 41 59.9		
H22K	**Ishtalitna Cre** baz=296,SNR=12	88.69	22	P	P	13 41 58.7	+0.9	
M18K	**Stony River** baz=292	88.70	27	P	P	13 41 57.7	-0.2	
K20K	**Telida** comp=Z,12nm,1.4s	88.72	25	IAmb	IAmb	13 42 12.7		
K20K	**Telida** baz=294	88.72	25	P	P	13 41 57.9	-0.1	
D25K	**Kavik River** baz=301	88.73	18	P	P	13 41 57.8	-0.1	
S14K	**Fog Glacier** baz=289	88.75	33	P	P	13 41 57.9	-0.4	
O17K	**Koliganek Bris** baz=291	88.77	29	P	P	13 41 58.1	-0.1	
I21K	**Tanana** baz=296,SNR=12	88.78	23	P	P	13 41 58.1	-0.1	
G23K	**Bananza Creek** comp=Z,11nm,1.4s	88.81	21	IAmb	IAmb	13 42 01.1		
G23K	**Bananza Creek** baz=298	88.81	21	P	P	13 41 58.2	-0.1	
C26K	**Camden Bay** baz=302	88.86	17	P	P	13 41 57.5	-0.9	
L19K	**White Mountain** baz=293	88.86	26	P	P	13 41 58.3	-0.3	
N18K	**Kilae Creek** baz=292	88.98	28	P	P	13 41 59.4	+0.2	
F24K	**Squaw Lake** baz=300	89.16	20	P	P	13 41 59.8	-0.2	
M19K	**Big River Lodg** baz=294	89.17	26	P	P	13 41 59.7	-0.4	
CHUM	**Lake Minchumin** baz=296,SNR=5.4	89.21	24	P	P	13 41 59.9	-0.3	
CHNA	**Chernabura Isl** baz=289	89.21	34	P	P	13 42 00.7	+0.3	
P17K	**Kvichak River** baz=292	89.29	29	P	P	13 42 00.9	+0.3	
ESDC	**Sonseca Array** comp=Z,0.9nm,0.9s,baz=111,slow=5.0,SNR=4.6 comp=Z,0.9nm,0.9s	89.31	310	P	P	13 42 00.8	-0.5	
ESDC	**Sonseca Array**	89.31	310	P	P	13 42 00.7	-0.6	
ESDC				IAmb	IAmb	13 42 10.2		
	comp=Z,11nm,1.4s							
MLY	**Manley** comp=Z,6.5nm,1.0s	89.32	23	IAmb	IAmb	13 42 02.4		
MLY	**Manley** baz=297,SNR=7.4	89.32	23	P	P	13 42 00.9	+0.1	
CHGN	**Chignik** baz=290	89.34	32	P	P	13 42 01.0	+0.1	
C27K	**Jago River** baz=293	89.37	17	P	P	13 42 01.0	+0.2	
Q16K	**King Salmon** baz=292	89.38	30	P	P	13 42 00.3	-0.8	
H23K	**Yukon River** comp=Z,10nm,1.2s	89.39	22	IAmb	IAmb	13 42 03.1		
H23K	**Yukon River** baz=298	89.39	22	P	P	13 42 01.3	+0.2	
CAST	**Castle Rocks** baz=296,SNR=14	89.51	24	P	P	13 42 01.8	+0.1	
N19K	**Bonanza Creek** baz=294	89.57	27	P	P	13 42 01.7	-0.3	
E25K	**Arctic Village** baz=302	89.61	19	P	P	13 42 01.0	-1.0	
O18K	**Koktuh Hills** baz=293	89.62	28	P	P	13 42 01.4	-0.8	
PPLA	**Purkeypile** baz=296	89.69	25	P	P	13 42 02.5	-0.2	
G24K	**Hadweenzic Riv** baz=300	89.70	21	P	P	13 42 02.6	+0.1	
M20K	**Styx River** baz=295	89.72	26	P	P	13 42 02.6	-0.1	
I23K	**Minto, Yukon-K** comp=Z,7.2nm,1.2s	89.78	22	IAmb	IAmb	13 42 04.6		
I23K	**Minto, Yukon-K** baz=298,SNR=5.5	89.78	22	P	P	13 42 03.1	+0.3	
P18K	**Big Mountain,** baz=293	89.79	29	P	P	13 42 03.2	+0.1	
F25K	**Christian Rive** baz=302,SNR=5.1	89.86	20	P	P	13 42 03.6	+0.3	
O19K	**Port Alsworth** baz=294	89.89	28	P	P	13 42 03.4	0.0	
Q17K	**Contact Creek** baz=292	89.91	30	P	P	13 42 03.2	-0.5	
R17L	**Mt. Peulik Vol** baz=292	89.91	31	P	P	13 42 03.0	-0.6	
H24K	**Noodor Dome** baz=300	89.99	21	P	P	13 42 03.8	-0.1	
G25K	**Bearman Lake** baz=301	90.14	20	P	P	13 42 04.4	-0.1	
NEA2	**Nenana** baz=298	90.16	23	P	P	13 42 04.2	-0.5	
Q18K	**Katmai Hardscr** baz=293	90.19	29	P	P	13 42 04.1	-0.9	
TRF	**Thorofare Moun** comp=Z,9.9nm,1.2s	90.22	24	IAmb	IAmb	13 42 31.7		
TRF	**Thorofare Moun** baz=297	90.22	24	P	P	13 42 04.7	-0.5	
F26K	**Sheenjek River** comp=Z,7.1nm,1.2s	90.29	19	IAmb	IAmb	13 42 16.0		
F26K	**Sheenjek River** baz=303	90.29	19	P	P	13 42 05.4	+0.2	
SKT	**Skwentna** baz=296	90.37	26	P	P	13 42 05.4	-0.3	
D27M	**Malcolm River** baz=306	90.39	17	P	P	13 42 05.5	-0.2	
SPCR	**Spurr Chakacha** baz=296	90.42	26	P	P	13 42 05.6	-0.4	
L22K	**Petersville** comp=Z,5.4nm,0.9s	90.44	25	IAmb	IAmb	13 42 15.6		
L22K	**Petersville** baz=297	90.44	25	P	P	13 42 05.8	-0.2	
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.9s,baz=72,slow=2.0,SNR=4.5 comp=Z,0.8nm,0.9s	90.45	283	P	P	13 42 07.1	+0.1	
COLA	**College** baz=300	90.48	22	P	P	13 42 05.8	-0.3	
POKR	**Poker Plat Res** baz=300	90.51	22	P	P	13 42 05.7	-0.5	
ILSW	**Iliamna Southw** comp=Z,7.0nm,0.7s	90.52	28	IAmb	IAmb	13 42 05.5		
P19K	**Oil Pt** baz=295	90.61	28	P	P	13 42 06.1	-0.7	
MCK	**McKinley**	90.62	24		P	13 42 06.2	-0.6	
MCK				IAmb	IAmb	13 42 08.5		
	comp=Z,12nm,1.2s							
MCK	**McKinley** baz=299	90.62	24	P	P	13 42 05.8	-1.0	
CUT	**Chulitna** baz=297	90.70	25	P	P	13 42 06.5	-0.7	
O20K	**Slope Mountain** baz=295	90.71	28	P	P	13 42 06.7	-0.7	
E27K	**Coleen River** baz=305	90.81	18	P	P	13 42 06.7	-0.9	
G26K	**Porcupine Rive** comp=Z,10nm,1.1s	90.82	20	IAmb	IAmb	13 42 18.6		
G26K	**Porcupine Rive** baz=303,SNR=6.3	90.82	20	P	P	13 42 06.7	-0.9	
ILAR	**Eielson Array** comp=Z,0.7nm,0.7s,baz=311,slow=4.9,SNR=7.6 comp=Z,0.7nm,0.7s	90.89	22	P	P	13 42 05.0	-3.0	
ILAR	**Eielson Array**	90.89	22	P	P	13 42 06.0	-2.0	
D28M	**Stokes Point** baz=308	90.97	17	P	P	13 42 08.0	-0.2	
CHIR	**Chirikof Islan** baz=293	90.98	32	P	P	13 42 08.1	-0.5	
PRP	**Porcupine Dome** comp=Z,8.6nm,1.2s	90.99	21	IAmb	IAmb	13 42 10.2		
PRP	**Porcupine Dome** baz=302,SNR=6.5	90.99	21	P	P	13 42 08.0	-0.7	
HDA	**Harding Lake** baz=300	91.05	23	P	P	13 42 08.7	0.0	
M22K	**Willow** baz=298	91.07	26	P	P	13 42 08.6	-0.2	
CAPN	**Captain Cook N** baz=297	91.07	27	P	P	13 42 08.8	-0.1	
E28M	**Babbage River** baz=307	91.18	17	P	P	13 42 09.2	-0.1	
WAT1	**Susitna Watana** baz=299	91.20	24	P	P	13 42 09.4	-0.2	
HOM	**Homer** baz=296	91.34	28	P	P	13 42 10.1	-0.1	
SII	**Sitkinak Islan** baz=294	91.42	31	P	P	13 42 10.4	-0.3	
J25K	**Salcha River,** baz=302	91.53	22	P	P	13 42 10.6	-0.5	
RC01	**Rabbit Creek A** baz=298	91.54	26	P	P	13 42 10.7	-0.4	
DHY	**Denali Highway** baz=300	91.55	24	P	P	13 42 10.8	-0.5	
PMR	**Palmer** baz=298	91.56	25	P	P	13 42 11.0	-0.1	
G27K	**Doyon Strip** baz=305	91.59	19	P	P	13 42 11.3	0.0	
OHAK	**Old Harbor** baz=295	91.60	30	P	P	13 42 11.0	-0.4	
WAT6	**Susitna Watana** baz=300	91.65	24	P	P	13 42 11.0	-0.8	
F28M	**Old Crow** baz=307	91.68	18	P	P	13 42 11.2	-0.4	
KDAK	**Kodiak Island** baz=295	91.71	30	P	P	13 42 11.3	-0.6	
BRSE	**Bradley Lake S** baz=297	91.71	27	P	P	13 42 11.0	-1.0	
SML	**Sawmill** baz=299	91.79	25	P	P	13 42 12.2	-0.1	
E29M	**Blow River** baz=309	91.79	17	P	P	13 42 12.1	-0.1	
K24K	**Donnelly Dome** baz=301	91.80	23	P	P	13 42 12.0	-0.3	
O22K	**Cooper Landing** baz=298	91.83	27	P	P	13 42 12.7	+0.3	
KNK	**Knik Glacier** baz=299	91.93	25	P	P	13 42 13.1	+0.2	
H27K	**Steamboat Moun** comp=Z,5.0nm,1.0s	91.97	20	IAmb	IAmb	13 42 14.8		
H27K	**Steamboat Moun** baz=305,SNR=6.2	91.97	20	P	P	13 42 12.8	-0.3	
M23K	**Glacier View** baz=300	92.05	25	P	P	13 42 13.3	-0.2	
SEW	**Seward** baz=298	92.12	27	P	P	13 42 13.5	-0.3	
RIDG	**Independent Ri** baz=302	92.18	23	P	P	13 42 13.9	-0.3	
SCM	**Sheep Creek Mo** baz=300	92.19	25	P	P	13 42 13.6	-0.6	
PWL	**Port Wells** baz=299	92.25	26	P	P	13 42 14.3	-0.1	
I27K	**Kandik River** comp=Z,9.3nm,1.2s	92.31	20	IAmb	IAmb	13 42 16.7		
I27K	**Kandik River** baz=305,SNR=5.9	92.31	20	P	P	13 42 14.1	-0.5	
A36M	**Sachs Harbour** baz=321	92.32	12	P	P	13 42 14.1	-0.3	
PAX	**Paxson** baz=302	92.35	23	P	P	13 42 14.8	-0.2	
SCRK	**Sand Creek** comp=Z,4.1nm,1.0s	92.38	22	IAmb	IAmb	13 42 16.3		
SCRK	**Sand Creek** baz=303	92.38	22	P	P	13 42 14.3	-0.8	
M24K	**Tolsona, Glenn** baz=301	92.52	24	P	P	13 42 15.3	-0.4	
G29M	**Pine Creek** comp=Z,9.8nm,1.3s	92.68	18	IAmb	IAmb	13 42 17.5		
G29M	**Pine Creek** baz=309	92.68	18	P	P	13 42 16.2	-0.1	
HARP	**HAARP** baz=302	92.78	24	P	P	13 42 16.1	-0.7	
F30M	**Barrier River** baz=311	92.90	17	P	P	13 42 17.4	+0.1	
KLU	**Klutina** baz=301	92.94	25	P	P	13 42 17.6	-0.2	
I28M	**Miner Creek** baz=307	92.96	20	P	P	13 42 17.9	+0.1	
H29M	**Whitestone** baz=308	93.00	19	P	P	13 42 17.8	0.0	
K27K	**Chicken** comp=Z,7.2nm,1.2s	93.05	22	IAmb	IAmb	13 42 20.1		
INK	**Inuvik** comp=Z,5.8nm,1.1s	93.08	16	IAmb	IAmb	13 42 28.0		
INK	**Inuvik** baz=313	93.08	16	P	P	13 42 17.9	-0.1	
P23K	**Montague Islan** baz=300	93.08	26	P	P	13 42 18.4	+0.2	
L26K	**Log Cabin Wild** baz=304	93.14	23	P	P	13 42 18.6	0.0	
G30M	**tAoh Zraii Nji** comp=Z,7.7nm,1.2s	93.19	18	IAmb	IAmb	13 42 36.1		
G30M	**tAoh Zraii Nji** baz=310	93.19	18	P	P	13 42 18.5	-0.1	
N25K	**Chitina, Valde** baz=302	93.42	24	P	P	13 42 19.7	-0.3	
EPYK	**Eagle Plains** comp=Z,5.2nm,0.9s	93.43	18	IAmb	IAmb	13 42 20.4		
EPYK	**Eagle Plains** baz=310	93.43	18	P	P	13 42 19.9	+0.1	
EYAK	**Cordova Ski Ar** baz=301	93.50	26	P	P	13 42 19.8	-0.3	
F31M	**Tsiigehtchic** baz=313	93.61	17	P	P	13 42 20.3	-0.2	
M26K	**Nabesna, AK** comp=Z,8.4nm,1.4s	93.62	23	IAmb	IAmb	13 42 31.7		
M26K	**Nabesna, AK** baz=304	93.62	23	P	P	13 42 20.3	-0.5	
L27K	**Beaver Creek,** baz=305	93.69	22	P	P	13 42 21.2	+0.1	
BMRM	**Bremner River** baz=302	93.76	25	P	P	13 42 21.3	-0.2	
G31M	**Satah River** comp=Z,5.8nm,1.2s	93.80	17	IAmb	IAmb	13 42 22.1		
G31M	**Satah River** baz=312	93.80	17	P	P	13 42 21.3	-0.1	
DAWY	**Dawson** comp=Z,6.0nm,1.1s	93.98	21	IAmb	IAmb	13 42 32.6		
DAWY	**Dawson** baz=307	93.98	21	P	P	13 42 22.4	0.0	
M27K	**Edge Creek, AK** baz=305	94.08	23	P	P	13 42 22.8	-0.2	
J29N	**Klondike Camp** baz=308	94.15	20	P	P	13 42 23.1	-0.1	
MCARA	**McCarthy VSAT** baz=304	94.18	24	P	P	13 42 23.4	+0.1	
I30M	**Mount Dempster** comp=Z,4.5nm,1.0s	94.27	19	IAmb	IAmb	13 42 24.8		
I30M	**Mount Dempster** baz=310	94.27	19	P	P	13 42 23.2	-0.6	
KAIM	**Kayak Island** baz=302	94.40	26	P	P	13 42 23.8	-0.5	
CRQE	**Cirque** baz=304	94.50	25	P	P	13 42 24.5	-0.4	
H31M	**Peel River** comp=Z,9.3nm,1.2s	94.53	18	IAmb	IAmb	13 42 25.9		
H31M	**Peel River** baz=312	94.53	18	P	P	13 42 24.5	-0.3	
C36M	**Paulatuk** baz=322	94.64	13	P	P	13 42 25.0	-0.1	
J30M	**Hart River** baz=310	94.71	20	P	P	13 42 25.2	-0.6	
K29M	**Barlow Dome** baz=309	94.77	21	P	P	13 42 25.8	-0.3	
YUK3	**Moose Creek** baz=306	94.96	23	P	P	13 42 26.7	-0.5	
L29M	**L29M** comp=Z,4.8nm,1.1s	95.02	21	IAmb	IAmb	13 42 29.0		
L29M	**L29M** baz=308	95.02	21	P	P	13 42 26.6	-0.6	
M29M	**Somme Creek** baz=308	95.31	22	P	P	13 42 28.1	-0.5	
YUK8	**Steele Glacier** baz=307	95.52	23	P	P	13 42 29.1	-0.7	
O28M	**Mount Upton** baz=306	95.66	24	P	P	13 42 30.1	-0.4	
BRWY	**Burwash Landin** baz=307	95.75	23	P	P	13 42 30.2	-0.3	
M30M	**Minto, Yukon** baz=310	95.83	21	P	P	13 42 30.8	0.0	
YUK4	**Talbot Arm** baz=308	95.91	23	P	P	13 42 31.5	0.0	
PINM	**Pinnacle** baz=306	96.03	24	P	P	13 42 31.8	-0.1	
YUK6	**Outpost Mounta** baz=308	96.27	23	P	P	13 42 32.8	-0.4	
N30M	**Aishikik Lake** baz=309	96.43	22	P	P	13 42 33.5	-0.1	
O29M	**Mount Kennedy** baz=308	96.58	24	P	P	13 42 34.1	-0.4	
HYT	**Haines Junctio** baz=309	96.67	23	P	P	13 42 34.5	-0.3	
N31M	**Braeburn, Yuko** baz=310	96.90	22	P	P	13 42 35.7	-0.1	
M31M	**Drury Creek, Y** baz=312	96.92	21	P	P	13 42 35.8	-0.1	
O30N	**Mendenhall** baz=310	97.24	23	P	Pdif	13 42 37.4	0.0	

P30M	**Million Dollar**	**97.33**	**23**	P		**P**	**13 42 37.3**	**-0.4**
	baz=309							
P29M	**Windy Craggy**	**97.33**	**24**	P		**P**	**13 42 37.3**	**-0.4**
	baz=308							
MMPY	**Sheldon Lake,**	**97.70**	**20**	P		**P**	**13 42 39.1**	**-0.3**
	baz=315							
WHY	**Whitehorse**	**97.77**	**22**	P		**P**	**13 42 39.0**	**-0.8**
	baz=311							
PLBC	**Pleasant Camp**	**97.98**	**24**	P		**P**	**13 42 40.4**	**-0.2**
	baz=310							
N32M	**Quiet Lake**	**98.09**	**21**	P		**P**	**13 42 40.9**	**-0.2**
	baz=313							
SKAG	**Skagway**	**98.38**	**23**	P		**P**	**13 42 42.0**	**-0.4**
	baz=311							
P33M	**Teslin, Yukon**	**98.83**	**22**	P		**P**	**13 42 43.7**	**-0.9**
	baz=313							
P32M	**Atlin**	**98.92**	**23**	P		**P**	**13 42 44.6**	**-0.2**
	baz=312							
S31K	**Pelican**	**98.99**	**25**	P		**P**	**13 42 44.6**	**-0.5**
	baz=310							
R32K	**Eaglecrest**	**99.48**	**24**	P		**Pdif**	**13 42 46.8**	**-0.5**
	baz=311							
WRGLY	**Wrigley**	**99.63**	**17**	P		**Pdif**	**13 42 47.0**	**-0.9**
	baz=322							
Q32M	**Nakina River**	**99.89**	**23**	P		**Pdif**	**13 42 48.7**	**-0.8**
	baz=313							
SIT	**Sitka**	**99.94**	**25**	P		**Pdif**	**13 42 49.0**	**-0.4**
	baz=310							
S32K	**Killisnoo**	**99.99**	**25**	P		**Pdif**	**13 42 49.1**	**-0.4**
	baz=311							
R33M	**Jennings River**	**100.07**	**22**	P		**Pdif**	**13 42 49.4**	**-0.8**
	baz=314							
WTLY	**Watson Lake, Y**	**100.33**	**21**	P		**Pdif**	**13 42 50.5**	**-0.7**
	baz=317							
S34M	**Telegraph Cree**	**101.05**	**23**	P		**Pdif**	**13 42 53.9**	**-0.4**
	baz=314							
DLBC	**Dease Lake**	**101.10**	**22**	P		**Pdif**	**13 42 54.0**	**-0.6**
	baz=315							
U33K	**Whale Pass**	**101.48**	**25**	P		**Pdif**	**13 42 55.7**	**-0.6**
	baz=312							
WRAK	**Wrangell Islan**	**101.60**	**25**	P		**Pdif**	**13 42 56.4**	**-0.4**
	baz=313							
CRAG	**Craig**	**101.92**	**26**	P		**Pdif**	**13 42 57.5**	**-0.7**
	baz=312							
T35M	**Bob Quinn**	**102.04**	**23**	P		**Pdif**	**13 42 58.1**	**-0.7**
	baz=315							
YKA	**Yellowknife Ar**	**102.50**	**14**	PP		**PP**	**13 47 10.2**	**-2.5**
	comp=Z,0.8nm,1.0s,baz=330,slow=7.6,SNR=4.8							
V35K	**Ketchikan**	**102.65**	**25**	P		**Pdif**	**13 43 00.8**	**-0.6**
	baz=313							
PPT2	**Papeete2**	**117.58**	**104**	*e*LR		LR	14 23 31.8	
	comp=Z,177nm,29.8s							
PPT2				*e*LR		LR	14 23 37.2	
	comp=Z,232nm,28.0s							
NVAR	**Mina Array Bea**	**121.21**	**30**	PKP		**PKPdf**	**13 47 57.7**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=252,slow=1.0,SNR=7.2							
PDAR	**Pinedale Array**	**121.29**	**21**	PKP		**PKPdf**	**13 47 57.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=48,slow=2.2,SNR=5.2							
TXAR	**Lajitas Array**	**135.39**	**23**	PKP		**PKPdf**	**13 48 23.0**	**-2.4**
	comp=Z,0.2nm,0.7s,baz=332,slow=2.9,SNR=1.7							
SOR	**Soroa**	**145.61**	**357**	PKPdf		**PKPbc**	**13 48 42.6**	**-1.3**
SDDR	**Presa de Saban**	**146.57**	**336**	PKPdf		**PKPdf**	**13 48 44.3**	**-1.3**
PLCA	**Paso Flores**	**148.42**	**201**	PKPbc		**PKPbc**	**13 48 50.9**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=126,slow=4.1,SNR=3.1							
CPUP	**Villa Florida**	**150.12**	**237**	PKPbc		**PKPbc**	**13 48 57.1**	**+0.9**
	comp=Z,6.2nm,1.0s,baz=154,slow=2.5,SNR=7.1							
LPAZ	**La Paz**	**162.95**	**253**	PKPab		**PKPab**	**13 49 57.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=239,slow=4.3,SNR=1.7							

*IDC **17** 13:30:56.9±1.2,61°.15N×27°.74W,h0km,mb3.6/5, mbtmp3.5/7,ML3.1/2,MS3.2/7, Error ellipse: s-maj=43.5km s-min=21.5km az=19.0*

ISC 17 13:30:58.3±1.1,61°.2N±0°.2×27°.7W±0°.1,h10km,n13, σ1§05/7,mb3.5/4,MS3.3/3,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**4.62**	**36**	LR	LR	13 33 36.0	
	comp=Z,202nm,19.5s,baz=260,slow=34						
SFJD	**Kangerlussuaq**	**11.56**	**310**	LR	LR	13 37 08.9	
	comp=Z,56nm,21.1s,baz=104,slow=32						
EKA	**Eskdalemuir Ar**	**14.11**	**103**	Pn	**Pn**	**13 34 17.4**	**-0.6**
	baz=302,slow=17						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**18.62**	**73**	P	**P**	**13 35 14.7**	**-0.9**
	baz=284,slow=13,SNR=3.4						
NOA				LR	LR	13 41 20.1	
	comp=Z,31nm,19.2s,baz=260,slow=33						
	0.5nm,0.7s						
FRB	**Frobisher Bay**	**18.84**	**296**	LR	LR	13 41 39.8	
	comp=Z,52nm,18.4s,baz=11,slow=34						
SADO	**Sadowa**	**34.00**	**265**	LR	LR	13 49 58.0	
	comp=Z,38nm,20.2s,baz=212,slow=34						
YKA	**Yellowknife Ar**	**38.12**	**311**	P	**P**	**13 38 17.1**	**+0.1**
	0.6nm,0.7s,baz=50,slow=9.0,SNR=6.6						
	0.6nm,0.7s						
BRTR	**Keskin Array B**	**42.59**	**91**	P	**P**	**13 38 56.1**	**+1.7**
	0.5nm,0.4s,baz=319,slow=6.3,SNR=2.9						
	0.5nm,0.4s						
PDAR	**Pinedale Array**	**50.05**	**288**	P	**P**	**13 39 52.7**	**-0.4**
	0.3nm,0.6s,baz=49,slow=6.5,SNR=5.2						
	0.3nm,0.6s						
EIL	**Elat**	**51.34**	**98**	LR	LR	14 04 35.4	
	comp=Z,238nm,21.2s,baz=126,slow=39						
TORD	**Torodi Ar. Bea**	**52.46**	**143**	P	**P**	**13 40 10.9**	**-0.2**
	0.5nm,0.6s,baz=338,slow=7.5,SNR=4.5						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**53.99**	**49**	P	**P**	**13 40 21.9**	**0.0**
	0.4nm,0.7s,baz=316,slow=8.1,SNR=2.9						
	0.4nm,0.7s						
ANMO	**Albuquerque**	**54.81**	**280**	LR	LR	14 01 19.9	
	comp=Z,25nm,20.6s,baz=76,slow=33						

*IDC **17** 13:33:01.8±1.1,11°.66N×95°.00E,h0km,mb3.7/12, mbtmp3.7/12,Error ellipse: s-maj=37.5km s-min=19.8km az=55.0*

ISC 17 13:33:05.5±1.2,11°.7N±0°.2×95°.1E±0°.2,h24km,n15, σ1§06/12,mb3.7/12,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**25.40**	**17**	P	**P**	**13 38 32.6**	**+1.1**
	1.8nm,0.4s,baz=172,slow=11,SNR=2.0						
	1.8nm,0.4s						
H08S3	**Diego Garcia H**	**29.53**	**231**	T	T	14 09 41.0	
	baz=47						
H08S2	**Diego Garcia H**	**29.54**	**230**	T	T	14 09 42.2	
	baz=47						
H08S1	**Diego Garcia H**	**29.55**	**231**	T	T	14 09 44.4	
	baz=47						
MKAR	**Makanchi Array**	**36.63**	**345**	P	**P**	**13 40 10.7**	**+0.6**
	0.2nm,0.3s,baz=167,slow=9.8,SNR=2.1						
	0.2nm,0.3s						
SONM	**Songino Array**	**37.27**	**13**	P	**P**	**13 40 16.2**	**+0.6**
	0.4nm,0.3s,baz=199,slow=8.6,SNR=4.5						
	0.4nm,0.3s						
KSRS	**Korea Array**	**39.05**	**43**	P	**P**	**13 40 29.1**	**-1.5**
	0.3nm,0.3s,baz=248,slow=16,SNR=2.4						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**41.13**	**344**	P	**P**	**13 40 47.7**	**+0.1**
	0.4nm,0.7s,baz=161,slow=6.5,SNR=2.0						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**42.94**	**351**	P	**P**	**13 41 02.8**	**+0.4**
	0.3nm,0.3s,baz=180,slow=7.2,SNR=1.5						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**45.73**	**339**	P	**P**	**13 41 22.8**	**-2.0**
	0.3nm,0.3s,baz=55,slow=20,SNR=1.4						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**49.83**	**129**	P	**P**	**13 41 57.0**	**+0.1**
	1.4nm,0.8s,baz=305,slow=8.5,SNR=5.6						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**51.74**	**133**	P	**P**	**13 42 11.8**	**+0.5**
	0.9nm,0.7s,baz=313,slow=6.7,SNR=5.5						
	0.9nm,0.7s						
BRTR	**Keskin Array B**	**60.70**	**309**	P	**P**	**13 43 14.3**	**-1.0**
	0.4nm,0.4s,baz=111,slow=6.8,SNR=3.7						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**69.80**	**331**	P	**P**	**13 44 14.0**	**+0.3**
	1.0nm,0.7s,baz=142,slow=7.0,SNR=2.3						
	1.0nm,0.7s						
GERES	**GERESS Array B**	**75.62**	**318**	P	**P**	**13 44 49.6**	**+0.8**
	0.3nm,0.7s,baz=87,slow=4.7,SNR=4.3						
	0.3nm,0.7s						

*NOU **17** 13:41:02.9,20°.53S×177°.72W,h513km,mb4.1/11,Fiji Islands Region*
*NEIC **17** 13:41:03.9±0.9,20°.1S±0°.1×178°.0W±0°.1,h547km±7km, mb4.3/64,Error ellipse: s-maj=23.4km s-min=11.8km az=139.0*
*IDC **17** 13:41:05.5±1.5,20°.10S×178°.11W,h560km±16km, mb3.3/12,mbtmp4.2/14,Error ellipse: s-maj=16.0km s-min=11.8km az=146.0*

ISC 17 13:41:05.5±0.5,20°.18S±0°.09×178°.08W±0°.10,h569km, n103,σ1§15/83,mb4.2/45,3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**3.86**	**333**	P	**P**	**13 42 25.3**	**-2.5**
DGTI	**Dogotuki**	**4.38**	**331**	P	**P**	**13 42 28.9**	**-2.7**
MSVF	**Nonsavu**	**4.40**	**303**	P	**P**	**13 42 30.6**	**-1.2**
	104nm,0.7s,baz=225,slow=15,SNR=95						
MSVF	**Nonsavu**	**4.40**	**303**	P	**P**	**13 42 30.1**	**-1.7**
MSVF	**Nonsavu**	**4.40**	**303**	P	**P**	**13 42 30.2**	**-1.7**
FUTU	**Fugatoga**	**5.83**	**360**	P	**P**	**13 42 41.5**	**-2.2**
AFI	**Afiamalu**	**8.66**	**45**	P	P	13 43 03.1	-7.4
	14nm,0.7s,baz=300,slow=21,SNR=1.8						
AFI				S	S	13 44 40.7	-12
	33nm,0.6s,baz=54,slow=16,SNR=7.4						
AFI	**Afiamalu**	**8.66**	**45**	P	P	13 43 03.7	-6.8
MARNC	**Mare, Loyalty**	**13.06**	**262**	P	**P**	**13 43 54.8**	**-0.1**
MARNC	**Mare, Loyalty**	**13.06**	**262**	P	**P**	**13 43 53.9**	**-1.1**
DZM	**Mont Dzumac**	**14.57**	**260**	P	**P**	**13 44 09.1**	**-1.3**
	4.6nm,0.8s,baz=221,slow=3.4,SNR=3.2						
URZ	**Urewera**	**18.50**	**192**	P	**P**	**13 44 44.0**	**-2.8**
	7.7nm,0.3s,baz=272,slow=2.6,SNR=16						
URZ	**Urewera**	**18.50**	**192**	P	**P**	**13 44 44.1**	**-2.7**
BKZ	**Black Stump Fm**	**19.50**	**193**	P	**P**	**13 44 53.5**	**-2.4**
BFZ	**Birch Farm**	**21.01**	**192**	P	**P**	**13 45 07.0**	**-2.5**
QRZ	**Quartz Range**	**22.09**	**199**	P	**P**	**13 45 18.8**	**-0.4**
KHZ	**Kahutara**	**23.28**	**196**	P	**P**	**13 45 27.4**	**-2.3**
WR8	**Warramunga Arr**	**44.42**	**262**	P	**P**	**13 48 26.7**	**-0.1**
WR8				IAmb	IAmb	13 48 32.4	
	comp=Z,9.3nm,1.4s						
ASAR	**Alice Springs**	**44.52**	**256**	P	**P**	**13 48 28.1**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=86,slow=8.6,SNR=58						
ASAR				PcP	**PcP**	**13 49 59.4**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=104,slow=4.0,SNR=9.1						
ASAR				S	**S**	**13 54 21.6**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=95,slow=14,SNR=1.8						
	comp=Z,3.6nm,0.8s						
WRAB	**Tennant Creek**	**44.57**	**262**	P	**P**	**13 48 28.0**	**+0.2**
WRA	**Warramunga Arr**	**44.58**	**262**	P	**P**	**13 48 27.8**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=97,slow=7.7,SNR=88						
WRA				PcP	**PcP**	**13 49 59.5**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=101,slow=5.6,SNR=1.8						
WRA				S	**S**	**13 54 24.6**	**+1.5**
	comp=Z,0.9nm,1.1s,baz=95,slow=14,SNR=3.8						
	comp=Z,1.4nm,0.3s						
VNDA	**Vanda**	**58.23**	**185**	P	**P**	**13 50 06.8**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=346,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**58.23**	**185**	P	**P**	**13 50 06.3**	**+1.0**
QSPA	**South Pole Qui**	**69.89**	**180**	P	**P**	**13 51 20.8**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=339,slow=1.1,SNR=20						
	comp=Z,3.9nm,0.8s						
QSPA	**South Pole Qui**	**69.89**	**180**	P	**P**	**13 51 20.9**	**+1.2**
MJAR	**Matsushiro Arr**	**69.91**	**324**	P	**P**	**13 51 20.0**	**0.0**
	comp=Z,2.1nm,0.6s,baz=162,slow=7.2,SNR=5.8						
	comp=Z,2.1nm,0.6s						
JKA	**Kamikawa-asahi**	**73.41**	**332**	P	**P**	**13 51 41.6**	**+1.4**
UNV	**Unalaska Valle**	**74.39**	**7**	P	**P**	**13 51 45.0**	**-0.5**
LVA	**Lava Point**	**74.75**	**7**	P	**P**	**13 51 47.1**	**-0.4**
PEA0B	**Petropavlovsk-**	**75.94**	**345**	P	**P**	**13 51 54.3**	**+0.1**
PEA0B				IAmb	IAmb	13 52 18.1	
	comp=Z,9.2nm,1.1s						
PETK	**Petropavlovsk-**	**75.94**	**345**	P	**P**	**13 51 54.7**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=120,slow=5.8,SNR=18						
	comp=Z,3.7nm,0.6s						
PETK	**Petropavlovsk-**	**75.94**	**345**	P	**P**	**13 51 54.6**	**+0.4**
KSRS	**Korea Array**	**76.60**	**319**	P	**P**	**13 51 59.5**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=128,slow=6.4,SNR=4.5						
	0.6nm,0.6nm,0.7s						
SDPT	**Sand Point**	**76.70**	**10**	P	**P**	**13 51 58.1**	**-0.1**
BELA	**Belgrano 2**	**79.89**	**173**	P	**P**	**13 52 15.2**	**+0.1**
DSP	**Deep Springs**	**80.46**	**44**	P	**P**	**13 52 18.8**	**+0.2**
NVAR	**Mina Array Bea**	**80.84**	**43**	P	**P**	**13 52 21.2**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=224,slow=9.0,SNR=10						
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array Bea**	**80.84**	**43**	P	**P**	**13 52 20.8**	**-0.1**
NV11	**Mina Array Sit**	**80.94**	**43**	P	**P**	**13 52 21.1**	**-0.2**
P17K	**Kvichak River**	**81.06**	**11**	P	**P**	**13 52 21.3**	**+0.1**
KVN	**Kaiserville**	**81.32**	**43**		**P**	**13 52 22.8**	**-0.6**
N15K	**Kwethluk River**	**81.39**	**9**	P	**P**	**13 52 23.8**	**+0.8**
N15K				IAmb	IAmb	13 52 25.8	
	comp=Z,6.2nm,0.9s						
M16K	**Timber Creek**	**82.37**	**9**		**P**	**13 52 28.5**	**+0.6**
PINE	**Pine Mountain**	**82.37**	**38**		**P**	**13 52 28.5**	**-0.1**
PINE				IAmb	IAmb	13 52 31.1	
	comp=Z,6.2nm,0.8s						
O19K	**Port Alsworth**	**82.39**	**12**	P	**P**	**13 52 28.4**	**+0.4**
PRN	**Pahroc Range**	**82.42**	**46**	P	**P**	**13 52 27.8**	**-1.2**
WVOR	**Wild Horse Val**	**82.93**	**40**	P	**P**	**13 52 30.9**	**-0.4**
M17K	**Holitna River**	**82.97**	**10**	P	**P**	**13 52 30.9**	**+0.1**
M17K				IAmb	IAmb	13 52 33.9	
	comp=Z,8.9nm,1.1s						
K15K	**Wolf Creek Mou**	**83.24**	**8**		**P**	**13 52 33.2**	**+1.0**
K15K				IAmb	IAmb	13 52 34.7	
	comp=Z,16nm,1.2s						
LON	**Longmire**	**83.70**	**35**	IAmb	IAmb	13 52 37.2	
	comp=Z,8.7nm,1.1s						
L18K	**Granite Mounta**	**83.86**	**10**	P	**P**	**13 52 36.4**	**+1.1**
L18K				IAmb	IAmb	13 52 37.3	
	comp=Z,5.1nm,0.8s						
M19K	**Big River Lodg**	**83.96**	**11**	P	**P**	**13 52 36.2**	**+0.4**
CAST	**Castle Rocks**	**85.78**	**11**	IAmb	IAmb	13 52 44.5	
	comp=Z,3.8nm,0.7s						
TRF	**Thorfare Moun**	**86.15**	**12**	IAmb	IAmb	13 52 47.5	
	comp=Z,7.2nm,0.9s						
MCK	**McKinley**	**86.67**	**13**	IAmb	IAmb	13 52 49.8	
	comp=Z,7.9nm,1.2s						
TXAR	**Lajitas Array**	**86.94**	**57**	P	**P**	**13 52 51.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=217,slow=6.9,SNR=9.9						
	comp=Z,0.7nm,0.7s						
M27K	**Edge Creek, AK**	**87.12**	**16**	IAmb	IAmb	13 52 53.1	
	comp=Z,7.5nm,1.1s						
I21K	**Tanana**	**87.41**	**11**	IAmb	IAmb	13 52 53.3	
	comp=Z,3.9nm,0.7s						
NEA2	**Nenana**	**87.41**	**12**	IAmb	IAmb	13 52 54.6	
	comp=Z,4.3nm,1.2s						
MLY	**Manley**	**87.49**	**11**		**P**	**13 52 52.6**	**-0.1**
MLY				IAmb	IAmb	13 52 52.9	
	comp=Z,3.7nm,0.6s						
WRH	**Wood River Hil**	**87.50**	**13**	IAmb	IAmb	13 52 53.5	
	comp=Z,6.2nm,0.8s						
H21K	**Melozitna Rive**	**87.70**	**10**	IAmb	IAmb	13 52 55.0	
	comp=Z,2.5nm,0.7s						
CCB	**Clear Creek Bu**	**87.72**	**13**		**P**	**13 52 53.4**	**-0.3**
BCAR	**Beaver Creek A**	**87.73**	**16**	P	**P**	**13 52 54.7**	**+0.8**
IMAR	**Indian Mountai**	**87.85**	**10**	P	**P**	**13 52 54.7**	**+0.4**
COLA	**College**	**87.91**	**12**	P	**P**	**13 52 54.5**	**0.0**
IL31		**88.02**	**13**	IAmb	IAmb	13 52 56.5	
	comp=Z,6.7nm,1.4s						
ILAR	**Eielson Array**	**88.02**	**13**	P	**P**	**13 52 54.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=218,slow=5.3,SNR=23						
	comp=Z,2.5nm,0.8s						
TROLL	**Troll, Antarti**	**88.05**	**180**	⇓P	**P**	**13 52 55.6**	**+0.1**
	comp=Z,47nm,0.7s						
M29M	**Somme Creek**	**88.11**	**17**	IAmb	IAmb	13 52 57.5	
	comp=Z,3.3nm,0.7s						
H22K	**Ishtalitna Cre**	**88.16**	**11**		**P**	**13 52 55.8**	**0.0**
J25K	**Salcha River,**	**88.20**	**13**	IAmb	IAmb	13 52 57.0	
	comp=Z,2.5nm,0.7s						
G21K	**Allakaket**	**88.38**	**10**	P	**P**	**13 52 57.0**	**+0.2**
G21K				IAmb	IAmb	13 52 58.1	
	comp=Z,4.0nm,0.8s						
K27K	**Chicken**	**88.47**	**15**	IAmb	IAmb	13 52 59.7	
	comp=Z,4.2nm,1.0s						
F20K	**Avaraart Lake**	**88.55**	**9**	IAmb	IAmb	13 52 58.9	
	comp=Z,2.5nm,0.8s						
E19K	**Redstone River**	**88.73**	**8**	IAmb	IAmb	13 52 59.9	
	comp=Z,4.5nm,0.8s						
PDAR	**Pinedale Array**	**88.78**	**43**	P	**P**	**13 53 00.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=197,slow=3.2,SNR=10						
	comp=Z,0.9nm,0.6s						
PDAR	**Pinedale Array**	**88.78**	**43**	P	**P**	**13 52 59.0**	**-0.5**
YHL	**Hebgen Lake**	**88.78**	**41**	IAmb	IAmb	13 53 02.2	
	comp=Z,3.0nm,0.8s						
BOZ	**Bozeman (W)**	**88.89**	**40**	IAmb	IAmb	13 53 02.0	
	comp=Z,2.1nm,0.8s						
VNA2	**Neumayer--Watz**	**88.91**	**177**	⇓P	**P**	**13 52 59.6**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=187,slow=4.1						
DAWY	**Dawson**	**89.17**	**16**	IAmb	IAmb	13 53 02.1	
	comp=Z,3.8nm,0.8s						
K29M	**Barlow Dome**	**89.48**	**17**		**P**	**13 53 03.2**	**+1.1**
K29M				IAmb	IAmb	13 53 04.0	
	comp=Z,3.8nm,0.8s						
COLD	**Coldfoot**	**89.57**	**10**	IAmb	IAmb	13 53 04.1	
	comp=Z,2.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.94**	**290**	P	**P**	**13 53 06.1**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=107,slow=2.6,SNR=11						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**89.94**	**290**	P	**P**	**13 53 06.7**	**+1.6**
I28M	**Miner Creek**	**90.16**	**15**	IAmb	IAmb	13 53 06.3	
	comp=Z,2.2nm,0.7s						
I30M	**Mount Dempster**	**90.88**	**16**	IAmb	IAmb	13 53 09.8	
	comp=Z,3.4nm,0.9s						
G30M	**tAoh Zraii Nji**	**92.30**	**15**	IAmb	IAmb	13 53 16.4	
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**110.92**	**314**	PKiKP	**PKiKP**	**13 58 34.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=20,slow=0.6,SNR=6.3						
KURBB	**Kurchatov Arra**	**113.76**	**317**	PKiKP	**PKiKP**	**13 58 39.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=100,slow=1.6,SNR=5.5						
BVAR	**Borovoye Array**	**118.79**	**320**	PKP	**PKiKP**	**13 58 49.4**	**0.0**
	comp=Z,0.9nm,0.3s,baz=132,slow=4.3,SNR=3.0						
ARCES	**ARCESS Array B**	**128.59**	**350**	PKP	**PKPdf**	**13 59 06.6**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=27,slow=1.4,SNR=6.4						
FINES	**FINESS Array B**	**135.44**	**344**	PKP	**PKiKP**	**13 59 21.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=46,slow=5.0,SNR=4.3						
HFS	**Hagfors**	**139.21**	**351**	PKhKP	PKPpre	13 59 19.9	
	comp=Z,1.3nm,0.7s,baz=54,slow=2.6,SNR=4.5						
AKASG	**Malin Array Be**	**142.70**	**331**	PKhKP	PKPpre	13 59 31.4	
	comp=Z,3.2nm,0.5s,baz=45,slow=4.3,SNR=16						
LODK	**Lodwar**	**143.40**	**247**	PKPdf	**PKPdf**	**13 59 36.0**	**-0.7**
ARPR	**Arapgir-MALATY**	**143.48**	**309**	PKPdf	**PKPdf**	**13 59 37.0**	**+0.8**
EKA	**Eskdalemuir Ar**	**144.69**	**5**	PKP	**PKPab**	**13 59 38.3**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=343,slow=2.6,SNR=6.8						
BRTR	**Keskin Array B**	**146.57**	**313**	PKPbc	**PKPbc**	**13 59 44.4**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=143,slow=6.4,SNR=6.0						
MMAI	**Mount Meron Ar**	**147.59**	**300**	PKPbc	**PKiKP**	**13 59 48.1**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=45,slow=9.5,SNR=4.2						
CLL	**Collm**	**147.73**	**347**	⇓*i*PKPbc	**PKiKP**	**13 59 47.5**	**-0.4**
	comp=Z,9.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	**13 59 51.5**	**+0.6**
	comp=Z,5.0nm,0.6s						
CLL				*e*pPKPab	**pPKPdf**	**14 01 52.0**	**-3.4**
GERES	**GERESS Array B**	**149.87**	**344**	PKPbc	**PKiKP**	**13 59 52.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=338,slow=1.1,SNR=9.0						

*IDC **17** 13:47:25.5±0.6,22°.68S×12°.82W,h0km,mb4.0/15, mbtmp4.0/15,MS3.8/1,Error ellipse: s-maj=21.7km s-min=15.9km az=113.0*
*NEIC **17** 13:47:26.6±1.4,22°.7S±0°.1×12°.7W±0°.1,h10km±1km, mb4.5/19,Error ellipse: s-maj=22.0km s-min=19.7km az=359.0*

ISC 17 13:47:26.6±0.5,22°.67S±0°.09×12°.81W±0°.10,h10km,n44, σ0§96/39,mb4.3/22,4D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**13.75**	**352**	T	T	14 04 57.5	
	baz=46,slow=74,SNR=522						
H10S3	**ASCENSION HYDR**	**13.76**	**352**	T	T	14 04 53.6	
	baz=174,slow=74,SNR=429						
H10N1	**ASCENSION HYDR**	**14.83**	**354**	T	T	14 06 15.8	
	baz=180,slow=70						
H10N3	**ASCENSION HYDR**	**14.83**	**353**	T	T	14 06 13.8	
	baz=180,slow=70						
H10N2	**ASCENSION HYDR**	**14.85**	**354**	T	T	14 06 16.3	
	baz=180,slow=70						
RCBR	**Riachuelo**	**27.87**	**303**	P	**P**	**13 53 16.4**	**-0.4**
DBIC	**Dimbokro**	**30.18**	**16**	P	**P**	**13 53 37.6**	**+0.4**
	1.9nm,0.5s,baz=330,slow=10,SNR=1.7						
	1.9nm,0.5s						
BDFB	**Brasilia**	**33.92**	**276**	P	**P**	**13 54 09.1**	**-1.1**
	3.4nm,0.5s,baz=101,slow=10.0,SNR=3.8						
BDFB				LR	LR	14 05 28.9	
	comp=Z,186nm,21.6s,baz=148,slow=32					

IDC 17 13:49:23.2±418.0, 59°21N×54°56E, h0km, Error ellipse: s-maj=173.4km s-min=139.9km az=59.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**9.04**	**166**	I	I	14 43 30.0	
	baz=348,slow=316,SNR=0.9						
I43RU	**DUBNA INFRASON**	**9.54**	**262**	I	I	14 45 20.0	
	baz=67,slow=320,SNR=0.8						
I37NO	**I37NO**	**18.21**	**318**	I	I	15 40 00.0	
	baz=104,slow=322,SNR=0.7						

MEX 17 13:55:03.0±0.3, 14°.04N×92°.14W, h8km±64km, MD4.0
GCG 17 13:55:05.1±1.1, 14°.19N×91°.72W, h40km±19km, MD4.0, ML4.1, Presumed earthquake

ISC 17 13:55:01.1±2.2, 14°.12N±0°.09×91°.93W±0°.05, h15km±11km, n19, σ1s32/26, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.46**	**29**	*eP*	**Pn**	**13 55 14.2**	**+1.0**
RTAL				*i* S	**Sn**	**13 55 23.4**	**+2.1**
STG5	**El Palmar, Qui**	**0.63**	**63**	*i* P	**Pn**	**13 55 15.7**	**+0.1**
STG8	**El Palmar, Qui**	**0.65**	**59**	*i* P	**Pn**	**13 55 16.7**	**+0.7**
STG8				IAML		13 55 27.7	
	comp=N,27μm,0.2s						
THIG		**0.85**	**337**	*eP*	**Pb**	**13 55 17.2**	**-0.5**
THIG				*eS*	**Sn**	**13 55 30.5**	**-0.3**
CHUJ	**Union Juarez**	**0.99**	**350**	*eP*	**Pb**	**13 55 20.3**	**+0.1**
CHUJ				*eS*	**Sn**	**13 55 33.9**	**-0.7**
PATR	**El Naranjo**	**1.04**	**343**	*eP*	**Pb**	**13 55 20.8**	**-0.2**
PATR				*eS*	**Sg**	**13 55 34.4**	**-0.5**
PAVE	**Pavencul**	**1.10**	**347**	*eP*	**Pb**	**13 55 22.0**	**0.0**
PAVE				*eS*	**Sg**	**13 55 36.3**	**-0.5**
HUEH	**Huehuetenango**	**1.26**	**19**	*e*	**Pg**	**13 55 25.6**	**+0.1**
HUEH				*e*		13 55 42.0	
HUEH	**Huehuetenango**	**1.26**	**19**	*i* P	**Pg**	**13 55 25.6**	**+0.1**
FG8	**Yepocapa, Chim**	**1.33**	**84**	*i* P	Pn	13 55 20.2	-5.1
FG8				*i* S	Sn	13 55 32.4	-10
FG16	**Alotenango, Sa**	**1.38**	**83**	*i* P	Pn	13 55 21.3	-4.8
FG16				*i* S	Sn	13 55 34.3	-10
PCG5	**San Vicente Pa**	**1.50**	**86**	*i* P	Pn	13 55 23.9	-3.8
PCG5				IAML		13 55 41.3	
	comp=N,9μm,0.5s						
APG	**El Apazote**	**1.67**	**58**	*i* P	**Pn**	**13 55 30.4**	**+0.4**
JAYA	**Jayaque - finc**	**2.45**	**101**	*i* P	**Pn**	**13 55 40.2**	**-0.5**
TGIG		**2.89**	**337**	*eP*	**Pn**	**13 55 47.0**	**+0.3**
TGIG				*eS*	**Sn**	**13 56 21.5**	**+0.3**
CMIG	**Matias Romero**	**4.11**	**316**	*eP*	**Pn**	**13 56 03.9**	**+0.5**
CMIG				*eS*	**Sn**	**13 56 48.5**	**-2.7**
NEUV	**Arroyo Zacate**	**5.17**	**314**	*eP*	**Pn**	**13 56 17.6**	**-0.4**
NEUV				*eS*	**Sn**	**13 57 14.8**	**-2.6**
YOIG	**Yosondua**	**6.06**	**297**	*eP*	**Pn**	**13 56 33.2**	**+2.7**
YOIG				*eS*	**Sn**	**13 57 39.6**	**-0.3**
TXIG	**Tlaxiaco**	**6.43**	**300**	*eP*	**Pn**	**13 56 38.5**	**+2.8**
TXIG				*eS*	**Sn**	**13 57 48.0**	**-1.0**

SJA 17 13:55:24.0±0.8, 30°.76S×71°.51W, h25km±2km, ML3.3, MW3.5
GUC 17 13:55:26.1±0.8, 30°.82S×71°.42W, h49km±3km, ML3.5

ISC 17 13:55:28.2±1.3, 30°.78S±0°.02×71°.48W±0°.05, h35km, n51, σ1s86/74, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.59**	**136**	*eP*	**Pn**	**13 55 36.7**	**-3.6**
CO02				*eS*	**Sn**	**13 55 46.1**	**-2.7**
CO02				IAML		13 55 47.2	
	comp=Z,3μm,0.1s						
CO02	**Combarbal**	**0.59**	**136**	⇓*iP*	**Pn**	**13 55 37.7**	**-2.6**
CO02				*eS*	**Sn**	**13 55 45.9**	**-2.8**
CO03	**El Pedregal**	**0.69**	**95**	*eP*	**Pn**	**13 55 38.1**	**-3.4**
CO03				*eS*	**Sn**	**13 55 48.3**	**-2.7**
CO03				IAML		13 55 49.0	
	comp=Z,1μm,0.2s						
CO03	**El Pedregal**	**0.69**	**95**	⇓*iP*	**Pn**	**13 55 38.9**	**-2.6**
CO03				*eS*	**Sn**	**13 55 48.1**	**-2.9**
CO03				IAML		13 55 48.6	
	comp=E,2μm,0.2s						
GO04	**Tololo Observa**	**0.84**	**44**	*eP*	**Pn**	**13 55 41.3**	**-2.5**
GO04				*eS*	**Sn**	**13 55 53.7**	**-1.4**
GO04				IAML		13 55 55.2	
	comp=Z,3μm,0.2s						
GO04	**Tololo Observa**	**0.84**	**44**	*eP*	**Pn**	**13 55 42.0**	**-1.8**
GO04				*eS*	**Sn**	**13 55 54.0**	**-1.1**
GO04				IAML		13 55 55.0	
	comp=N,6μm,0.5s						
CO05	**La Serena**	**0.88**	**14**	*eP*	**Pn**	**13 55 43.0**	**-1.1**
CO05				*eS*	**Sn**	**13 55 55.2**	**-0.5**
CO04	**Los Peladeros**	**1.33**	**161**	*eP*	**Pn**	**13 55 48.2**	**-2.4**
CO04				*eS*	**Sn**	**13 56 05.1**	**-2.2**
CO04				IAML		13 56 06.7	
	comp=N,4μm,0.2s						
CO01	**Juntas del Tor**	**1.44**	**57**	*eP*	**Pn**	**13 55 51.1**	**-1.0**
CO01				*eS*	**Sn**	**13 56 09.6**	**-0.3**
CO01				IAML		13 56 10.2	
	comp=Z,250nm,0.1s						
CO01	**Juntas del Tor**	**1.44**	**57**	⇓*iP*	**Pn**	**13 55 51.0**	**-1.0**
CO01				*eS*	**Sn**	**13 56 09.2**	**-0.7**
CO01				IAML		13 56 10.1	
	comp=N,472nm,0.2s						
AROD	**Rodeo**	**1.84**	**71**	*eP*	**Pn**	**13 55 58.1**	**+0.5**
AROD				*eS*	**Sn**	**13 56 21.8**	**+2.0**
LCO	**Las Campanas**	**1.89**	**21**	*eP*	**Pn**	**13 55 56.7**	**-1.5**
LCO				*eS*	**Sn**	**13 56 21.1**	**+0.2**
LCO				IAML		13 56 24.2	
	comp=Z,295nm,0.3s						
LCO	**Las Campanas**	**1.89**	**21**	*eP*	**Pn**	**13 55 57.0**	**-1.2**
ACCO	**Cerro Coronel**	**2.09**	**85**	*eP*	**Pn**	**13 56 01.6**	**+0.5**
ACCO				IAML		13 56 14.4	
	comp=Z,132nm,0.6s						
ACCO				*eS*	Sn	13 56 14.4	-12
ACDV	**Cuesta del Vie**	**2.13**	**74**	*eP*	**Pn**	**13 56 02.6**	**+1.2**
ACDV				*eS*	Sn	13 56 15.4	-11
ACDV				IAML		13 56 15.6	
	comp=Z,116nm,0.5s						
RTLS	**Leoncito**	**2.13**	**119**	*eP*	**Pn**	**13 56 01.9**	**+0.3**
RTLS				*eS*	Sn	13 56 15.3	-12
RTLS				IAML		13 56 15.4	
	comp=Z,425nm,0.2s						
VA03	**San Esteban**	**2.13**	**158**	*eP*	**Pn**	**13 55 59.9**	**-1.5**
VA03				*eS*	**Sn**	**13 56 28.0**	**+1.3**
VA03				IAML		13 56 31.1	
	comp=Z,268nm,0.2s						
VA03	**San Esteban**	**2.13**	**158**	*eP*	**Pn**	**13 55 60.0**	**-1.5**
VA03				IAML		13 56 30.3	
ROCH	**El Roble**	**2.22**	**170**	*eP*	**Pn**	**13 56 00.9**	**-1.9**
ROCH				IAML		13 56 33.4	
	comp=N,254nm,0.2s						
PEL	**Peldehue**	**2.45**	**164**	*eP*	**Pn**	**13 56 04.8**	**-0.9**
PEL				*eS*	Sn	13 56 18.2	-16
PEL				IAML		13 56 44.8	
	comp=Z,102nm,0.8s						
MT02	**Curacav**	**2.49**	**173**	*eP*	**Pn**	**13 56 04.1**	**-2.1**
MT02				*eS*	**Sn**	**13 56 38.1**	**+2.7**
MT02				IAML		13 56 44.8	
	comp=Z,83nm,0.5s						
MT02	**Curacav**	**2.49**	**173**	*eP*	**Pn**	**13 56 03.9**	**-2.4**
MT02				IAML		13 56 39.2	
	comp=E,137nm,0.2s						
ZON	**Zonda**	**2.52**	**108**	*eP*	**Pn**	**13 56 06.5**	**-0.3**
ZON				IAML		13 56 58.2	
	comp=Z,79nm,0.5s						
AC04	**Llanos de Chal**	**2.59**	**8**	*eP*	**Pn**	**13 56 06.5**	**-1.1**
AC04				IAML		13 56 47.9	
	comp=Z,92nm,0.3s						
AC04	**Llanos de Chal**	**2.59**	**8**	*eP*	**Pn**	**13 56 07.0**	**-0.6**
AC04				IAML		13 56 52.1	
	comp=E,124nm,0.5s						
MT10	**Hacienda Santa**	**2.61**	**162**	*eP*	**Pn**	**13 56 06.8**	**-1.3**
MT10				IAML		13 56 44.3	
	comp=E,406nm,0.4s						
SJA	**San Juan**	**2.61**	**107**	*eP*	**Pn**	**13 56 08.6**	**+0.6**
SJA				IAML		13 57 01.6	
	comp=Z,92nm,0.3s						
RTLL	**Cerro Villicun**	**2.64**	**103**	*eP*	**Pn**	**13 56 08.1**	**-0.2**
RTLL				*eS*	**Sn**	**13 56 42.0**	**+2.8**
RTLL				IAML		13 57 01.8	
	comp=Z,135nm,0.4s						
MT05	**Renca**	**2.68**	**167**	*eP*	**Pn**	**13 56 08.8**	**-0.1**
MT05				*eS*	**Sn**	**13 56 44.8**	**+4.5**
MT05				IAML		13 56 47.5	
	comp=Z,105nm,0.2s						
MT05	**Renca**	**2.68**	**167**	*eP*	**Pn**	**13 56 07.2**	**-1.7**
MT05				IAML		13 56 50.5	
	comp=E,405nm,0.3s						
MT03	**Universidad Ad**	**2.83**	**163**	*eP*	**Pn**	**13 56 10.5**	**-0.5**
MT03				*eS*	**Sn**	**13 56 44.8**	**+0.9**
MT03				IAML		13 56 57.8	
	comp=Z,147nm,0.1s						
MT04	**Ro Olivares**	**2.86**	**157**	*eP*	**Pn**	**13 56 11.6**	**+0.1**
MT04				*eS*	**Sn**	**13 56 48.0**	**+3.3**
MT04				IAML		13 56 53.0	
	comp=Z,74nm,0.6s						
MT04	**Ro Olivares**	**2.86**	**157**	*eP*	**Pn**	**13 56 11.3**	**-0.2**
MT04				IAML		13 56 52.6	
	comp=N,115nm,0.2s						
CFA	**Coronel Fontan**	**2.90**	**107**	*eP*	**Pn**	**13 56 11.3**	**-0.6**
CFA				IAML		13 56 54.9	
	comp=Z,95nm,0.2s						
MT08	**Bocatoma Ro**	**2.93**	**155**	*eP*	**Pn**	**13 56 13.0**	**+0.4**
MT08				*eS*	**Sn**	**13 56 50.3**	**+3.6**
MT08				IAML		13 56 56.1	
	comp=Z,52nm,0.5s						
ARCO	**CERRO ARCO**	**2.99**	**134**	*eP*	**Pn**	**13 56 14.6**	**+1.3**
ARCO				*eS*	Sn	13 56 58.1	+10
ARCO				IAML		13 56 59.6	
	comp=Z,91nm,0.6s						
MT09	**Talagante**	**3.02**	**172**	*eP*	**Pn**	**13 56 12.0**	**-1.6**
MT09				IAML		13 56 57.8	
	comp=N,149nm,0.2s						
MT01	**Popeta**	**3.08**	**176**	*eP*	**Pn**	**13 56 12.4**	**-2.0**
MT01				*eS*	**Sn**	**13 56 51.8**	**+1.8**
MT01				IAML		13 57 04.6	
	comp=Z,71nm,0.6s						
MT13	**San Alfonso**	**3.12**	**161**	*eP*	**Pn**	**13 56 14.9**	**-0.2**
MT13				*eS*	**Sn**	**13 56 53.0**	**+1.7**
MT13				IAML		13 57 02.4	
	comp=Z,66nm,0.5s						
AAGR	**Agrelo**	**3.22**	**136**	*eP*	**Pn**	**13 56 18.3**	**+1.9**
AAGR				IAML		13 57 05.4	
	comp=Z,55nm,0.6s						
GO03	**Copiapo**	**3.36**	**19**	*eP*	**Pn**	**13 56 18.4**	**+0.2**
GO03				*eS*	Sn	13 57 11.4	+14
GO03				IAML		13 57 16.2	
	comp=Z,72nm,0.6s						
AVFE	**Valle Fertil**	**3.47**	**89**	*eP*	**Pn**	**13 56 19.3**	**-0.5**
AVFE				IAML		13 57 10.9	
	comp=Z,69nm,0.6s						
VCA	**Vinchina**	**3.50**	**55**	*eP*	**Pn**	**13 56 21.6**	**+1.3**
VCA				*eS*	Sn	13 57 12.1	+11
VCA				IAML		13 57 19.1	
	comp=Z,102nm,0.3s						
BO01	**Tunca**	**3.62**	**175**	*eP*	**Pn**	**13 56 21.4**	**-0.3**
ACAN	**Cantantal**	**3.96**	**113**	*eP*	**Pn**	**13 56 25.7**	**-0.7**
ACAN				IAML		13 57 26.7	
	comp=Z,163nm,0.5s						
BO02	**Sierra Bellavi**	**4.04**	**172**	*eP*	**Pn**	**13 56 27.0**	**-0.7**
BO02				IAML		13 57 38.0	
	comp=Z,39nm,0.2s						
ACLC	**CERRO LA CRUZ**	**4.15**	**72**	*eP*	**Pn**	**13 56 29.3**	**0.0**
ACLC				*eS*	**Sn**	**13 57 20.3**	**+3.7**
ACLC				IAML		13 57 25.7	
	comp=Z,79nm,0.4s						
TINO	**Tinogasta**	**4.36**	**53**	*eP*	**Pn**	**13 56 32.5**	**+0.4**
TINO				IAML		13 57 36.8	
	comp=Z,36nm,0.5s						
TINO				*eS*	Sn	13 57 36.9	+15
AC02	**Maricunga**	**4.44**	**28**	*eP*	**Pn**	**13 56 33.6**	**+0.1**
AC02				*eS*	**Sn**	**13 57 26.9**	**+2.6**
AC02				IAML		13 57 38.0	
	comp=Z,21nm,0.9s						
AC01	**Pan de Azucar**	**4.68**	**10**	*eP*	**Pn**	**13 56 35.1**	**-1.3**
AC01				*eS*	Sn	13 57 41.7	+12
AC01				IAML		13 57 52.4	
	comp=Z,28nm,0.7s						
MRA	**San Martin**	**5.18**	**110**	*eP*	**Pn**	**13 56 40.9**	**-2.5**
MRA				IAML		13 57 47.9	
	comp=Z,28nm,0.6s						

IDC 17 14:01:33.6±1.9, 14°.62S×172°.98E, h600km±21km, mb3.1/6, mbtmp4.1/8, Error ellipse: s-maj=26.6km s-min=19.4km az=2.0
NOU 17 14:01:35.9, 15°.03S×172°.95E, h600km, mb4.3/25, Vanuatu Islands Region

ISC 17 14:01:34.6±0.8, 14°.9S±0°.1×173°.0E±0°.1, h600km, n61, σ0s98/62, mb3.8/7, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**5.28**	**236**	P	**P**	**14 03 10.3**	**+0.6**
DVP	**Devils Point**	**5.44**	**238**	P	**P**	**14 03 11.8**	**+0.8**
MSVF	**Nonsavu**	**5.61**	**121**	P	**P**	**14 03 12.9**	**+0.4**
	4.1nm,0.7s,baz=294,slow=14,SNR=4.9						
MARNC	**Mare, Loyalty**	**8.11**	**215**	P	**P**	**14 03 33.2**	**-1.7**
YATNC	**Mamie plateau,**	**9.21**	**218**	P	**P**	**14 03 45.4**	**-0.2**
DZM	**Mont Dzumac**	**9.49**	**220**	P	**P**	**14 03 49.2**	**+0.8**
	28nm,0.7s,baz=240,slow=6.8,SNR=33						
OUENC	**Ouen Island, N**	**9.52**	**217**	P	**P**	**14 03 49.5**	**+0.9**
NOUC	**Port Laguerre**	**9.61**	**221**	P	**P**	**14 03 49.9**	**+0.5**
ONTNC	**Ouen Toro**	**9.66**	**219**	P	**P**	**14 03 50.8**	**+0.8**
TOZ	**Tahuroa Road**	**22.88**	**175**	P	**P**	**14 05 55.3**	**+1.4**
HAZ	**Te Kaha**	**23.19**	**170**	P	**P**	**14 05 55.6**	**-1.1**
URZ	**Urewera**	**23.58**	**172**	P	**P**	**14 05 59.7**	**-0.4**
URZ	**Urewera**	**23.58**	**172**	P	**P**	**14 05 59.2**	**-1.0**
MWZ	**Matawai**	**23.71**	**171**	P	**P**	**14 06 01.0**	**-0.4**
MRHZ	**Matea Rd**	**24.06**	**173**	P	**P**	**14 06 04.5**	**0.0**
RAHZ	**Arahi**	**24.22**	**172**	P	**P**	**14 06 04.7**	**-1.2**
OTVZ	**Oturere**	**24.32**	**175**	P	**P**	**14 06 07.9**	**+1.0**
NMHZ	**Naumai**	**24.37**	**173**	P	**P**	**14 06 06.7**	**-0.5**
FWVZ	**Far West T-bar**	**24.40**	**175**	P	**P**	**14 06 08.8**	**+1.2**
BKZ	**Black Stump Fm**	**24.40**	**173**	P	**P**	**14 06 06.4**	**-1.0**
PKVZ	**Pokaka**	**24.42**	**176**	P	**P**	**14 06 09.0**	**+1.4**
TUVZ	**Tukino**	**24.42**	**175**	P	**P**	**14 06 08.6**	**+0.9**
WHVZ	**Whangaehu Hut**	**24.43**	**175**	P	**P**	**14 06 09.0**	**+1.1**
WNVZ	**Wahianoa**	**24.47**	**175**	P	**P**	**14 06 09.2**	**+0.9**
MOVZ	**Moawhango**	**24.57**	**175**	P	**P**	**14 06 08.8**	**-0.1**
MCHZ	**McNeill Hill**	**24.70**	**173**	P	**P**	**14 06 09.2**	**-0.8**
WAZ	**Wanganui**	**24.85**	**176**	P	**P**	**14 06 12.4**	**+1.0**
KRHZ	**Kereru**	**24.86**	**174**	P	**P**	**14 06 10.4**	**-1.1**
KAHZ	**Kahuranaki**	**25.06**	**173**	P	**P**	**14 06 12.3**	**-1.0**
PNHZ	**Pukenui**	**25.11**	**174**	P	**P**	**14 06 12.6**	**-1.1**
PXZ	**Pawanui**	**25.30**	**173**	P	**P**	**14 06 14.1**	**-1.2**
MRZ	**Mangatainoka R**	**25.80**	**176**	P	**P**	**14 06 19.0**	**-0.6**
QRZ	**Quartz Range**	**25.87**	**181**	P	**P**	**14 06 21.4**	**+1.1**
QRZ	**Quartz Range**	**25.87**	**181**	P	**P**	**14 06 21.6**	**+1.3**
BFZ	**Birch Farm**	**25.87**	**174**	P	**P**	**14 06 18.9**	**-1.5**
BFZ	**Birch Farm**	**25.87**	**174**	P	**P**	**14 06 18.8**	**-1.6**
CTAO	**Charters Tower**	**26.03**	**255**	P	**P**	**14 06 22.3**	**+0.2**
NNZ	**Nelson**	**26.26**	**179**	P	**P**	**14 06 24.3**	**+0.6**
SNZO	**South Karori**	**26.39**	**177**	P	**P**	**14 06 23.9**	**-0.9**
THZ	**Tophouse**	**26.80**	**180**	P	**P**	**14 06 28.9**	**+0.3**
DSZ	**Denniston Nort**	**26.80**	**182**	P	**P**	**14 06 29.3**	**+0.8**
KHZ	**Kahutara**	**27.46**	**179**	P	**P**	**14 06 33.2**	**-0.9**
KHZ	**Kahutara**	**27.46**	**179**	P	**P**	**14 06 32.8**	**-1.3**
INZ	**Inchbonnie**	**27.79**	**182**	P	**P**	**14 06 37.1**	**0.0**
LTZ	**Lake Taylor**	**27.83**	**181**	P	**P**	**14 06 36.7**	**-0.8**
GVZ	**Greta Valley S**	**28.00**	**180**	P	**P**	**14 06 37.7**	**-1.2**
WVZ	**Waitaha Valley**	**28.18**	**184**	P	**P**	**14 06 40.8**	**+0.4**
OXZ	**Oxford**	**28.38**	**181**	P	**P**	**14 06 42.6**	**+0.4**
MQZ	**McQueen's Vall**	**28.74**	**181**	P	**P**	**14 06 44.7**	**-0.6**
JCZ	**Jackson Bay**	**29.33**	**186**	P	**P**	**14 06 51.0**	**+0.5**
ODZ	**Otahua Downs**	**30.15**	**183**	P	**P**	**14 06 57.7**	**+0.3**
STKA	**Stephens Creek**	**33.28**	**234**	P	**P**	**14 07 24.5**	**+0.4**
	1.2nm,0.4s,baz=56,slow=8.4,SNR=7.9						
	1.2nm,0.4s						
WRAB	**Tennant Creek**	**37.18**	**257**	P	**P**	**14 07 55.5**	**-1.1**
WRA	**Warramunga Arr**	**37.19**	**257**	P	**P**	**14 07 55.4**	**-1.3**
	1.2nm,0.5s,baz=89,slow=8.8,SNR=19						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**37.84**	**251**	P	**P**	**14 08 01.4**	**-0.6**
	2.3nm,0.4s,baz=77,slow=9.4,SNR=132			PcP	**PcP**		
ASAR				PcP		**14 10 01.6**	**-0.6**
	0.5nm,0.8s,baz=71,slow=3.8,SNR=4.2						
	2.3nm,0.4s						
VNDA	**Vanda**	**62.92**	**183**	P	**P**	**14 11 03.6**	**+0.6**
	0.7nm,0.6s,baz=8.0,slow=4.5,SNR=6.3						
	0.7nm,0.6s						
QSPA	**South Pole Qui**	**75.16**	**180**	P	**P**	**14 12 16.6**	**+0.1**
	2.3nm,0.8s,baz=358,slow=1.0,SNR=15						
	2.3nm,0.8s						

SIT Sitka 83.44 26 P P 14 13 02.1 +2.3
ILAR Eielson Array 85.03 16 P P 14 13 05.4 -2.1
0.4nm,0.6s,baz=237,slow=5.0,SNR=7.8
0.4nm,0.6s
TROLL Troll, Antarti 93.10 183 ⇓P P 14 13 44.8 -0.5
comp=Z,40nm,0.5s
VNA2 Neumayer--Watz 94.42 180 ⇓P P 14 13 51.2 +0.1
comp=Z,0.6nm,0.5s,baz=164,slow=2.7

IDC 17 14:03:37.8±0.4, 11°.78N×95°.11E, h0km, mb4.3/33, mbtmp4.3/34, ML4.8/2, MS5.5/51, Error ellipse: s-maj=14.8km s-min=11.6km az=72.0
NEIC 17 14:03:40.4±1.7, 11°.85N±0°.07×94°.94E±0°.05, h10km±1km, mb5.9/149, Ms_20 6.1/700, Mwb6.1/127, Mww6.1/53, Error ellipse: s-maj=12.0km s-min=7.3km az=162.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.06; Mθθ=0.26; Mϕϕ=-0.20; Mrθ=-0.07; Mϕr=1.46; Mθr=-0.17; Fault plane solution: M₀1.49000×10¹⁸ NP1: ϕs274.55000°, δ83.48000°, λ1.73000°. NP2:ϕs184.35000°, δ88.28000°, λ173.48000°. Principal axes: T 1.5291, Plg6.0000°, Azm139.0000°; N -0.0736, Plg83.0000°, Azm350.0000°; P -1.4555, Plg3.0000°, Azm230.0000°;
ISC-PP 17 14:03:40, 11°.85N×94°.94E, h9km, Mwppsm6.0, Moment Tensor Solution. s50 Moment tensor: Scale 10¹⁸Nm; Mrr=0.46±.12; Mθθ=0.12±.17; Mϕϕ0.18±.15; Mrθ=0.02±.14; Mϕϕ-0.43±.15; Mϕr0.42±.15; Fault plane solution: M₀1.24000×10¹⁸ NP1:ϕs6.20000°, δ71.50000°, λ236.90000°. NP2:ϕs250.20000°, δ37.40000°, λ-31.60000°.
BKK 17 14:03:41.7±0.2, 12°N±1°×9°5E±°, h10km, M5.8/27, mb5.8/27, MLv5.8/22
NEIC 17 14:03:42.5, 11°.99N×94°.90E, h10km
IPGP 17 14:03:42.0, 11°.98N×94°.89E, h6km, Mw6.1, Fault plane solution: NP1:ϕs271.00000°, δ67.00000°, λ-17.00000°. NP2:ϕs8.00000°, δ74.00000°, λ-156.00000°.
GFZ 17 14:03:42.5±0.1, 12°N±2°×9°5E±°, h10km, M5.6/102, mB5.9/85, mb5.4/102, Mw(mB)5.5/85, confirmed
NEIC 17 14:03:42.4, 11°.98N×94°.91E, h10km
PTWC 17 14:03:44, 11°.60N×94°.70E, h10km, Mwp6.3/18, ANDAMAN ISLANDS, INDIA REGION
BJI 17 14:03:44.0, 12°.10N×95°.06E, h10km, mB5.7/66, mb4.9/72, Ms6.4/87, Ms7 6.3/83
GFZ 17 14:03:45.0, 11°.97N×95°.08E, h20km, Mw6.1/72, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.58; Mθθ0.50; Mϕϕ0.08; Mrθ-0.79; Mϕr1.45; Mθr-0.62; Fault plane solution: M₀1.84407×10¹⁸ NP1: ϕs273.80938°, δ83.17455°, λ22.03999°. NP2: ϕs181.05483°, δ68.12430°, λ172.64212°. Principal axes: T 2.1250, Plg20.3345°, Azm139.4630°; N -0.9444, Plg66.9777°, Azm290.1696°; P -1.1806, Plg10.3364°, Azm45.5873°;
DJA 17 14:03:45.3±0.1, 12°N±2°×9°5E±°, h10km, M5.6/139, mB6.0/97, mb5.3/139, MLv5.8/12, Mw(mB)5.6/97, MwMwp5.7/84, Mwp5.8/84
GCMT 17 14:03:47.4±0.1, 11°.94N×95°.04E, h12km, MW6.1/165, Moment Tensor Solution. s155,c350; s165,c620; Duration: 2s8 Moment tensor: Scale 10¹⁸Nm; Mrr-0.50±.01; Mθθ0.50±.01; Mϕϕ0.00±.01; Mrθ0.62±.02; Mθθ1.69±.01; Mϕr0.16±.02; Best double couple: M₀1.81500×10¹⁸ NP1:ϕs4.00000°, δ69.00000°, λ-177.00000°. NP2:ϕs273.00000°, δ87.00000°, λ-21.00000°. Principal axes: T 2.0870, Plg13.0000°, Azm320.0000°; N -0.5440, Plg69.0000°, Azm85.0000°; P -1.5420, Plg17.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
BGR 17 14:03:50.3, 12°.16N×94°.65E, h33km, mb5.8, Ms5.9
NDI 17 14:03:51.1±3.8, 12°.08N×94°.39E, h10km, mb5.8, ms5.7, MW5.9, Presumed earthquake
NEIC 17 14:03:55.8, 11°.89N×94°.80E, h12km, Moment Tensor Solution. Duration: 6s1 Moment tensor: Scale 10¹⁸Nm; Mrr-0.54; Mθθ0.42; Mϕϕ0.12; Mrθ0.11; Mθϕ1.65; Mθr-1.07; Fault plane solution: M₀2.03000×10¹⁸ NP1: ϕs268.79000°, δ55.29000°, λ-14.64000°. NP2:ϕs7.25000°, δ78.01000°, λ-144.40000°. Principal axes: T 2.0921, Plg15.0000°, Azm134.0000°; N -0.1343, Plg53.0000°, Azm23.0000°; P -1.9578, Plg33.0000°, Azm234.0000°;

ISC 17 14:03:41.6±0.2, 11°.76N±0°.03×95°.06E±0°.03, h8km, n1467, σ2s81/1125, mb5.6/241, MS6.1/437, 39C-37D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.27**	**268**	P	**Pg**	**14 04 24.4**	**-0.7**
PBA	**Port Blair**	**2.27**	**268**		**Pn**	**14 04 17.5**	**-1.9**
PBA	**Port Blair**	**2.27**	**268**	⇑P	**Pn**	**14 04 17.5**	**-1.9**
PBA	**Port Blair**	**2.27**	**268**	P	**Pn**	**14 04 17.6**	**-1.7**
PBA	**Port Blair**	**2.27**	**268**	*eP*	**Pn**	**14 04 17.6**	**-1.7**
PBA				*eS*	**Sn**	**14 04 43.7**	**-3.8**
RNTT	**Ranong**	**4.11**	**125**	P	**Pn**	**14 04 41.1**	**-3.6**
KHLT	**Khaolaem Dam**	**4.58**	**48**	P	**Pn**	**14 04 48.4**	**-2.8**
KHLT				S	**Sn**	**14 05 42.4**	**-2.2**
PKDT	**Phuket**	**5.02**	**140**	P	**Pn**	**14 04 54.9**	**-2.3**
UTHA	**Uthaitani**	**5.70**	**48**	P	**Pn**	**14 05 03.7**	**-2.9**
BSI	**Banda Aceh**	**6.23**	**178**	P	Pn	14 05 19.9	+6.0
	62μm9μm334nm,1.8s						
LHMI	**Lhok Sumawe**	**6.75**	**164**	Pn	**Pn**	**14 05 21.2**	**+0.2**
LHMI	**Lhok Sumawe**	**6.75**	**164**	P	Pn	14 05 27.2	+6.1
	2.4nm8μm300nm,1.1s						
MHMT	**Maesarieng**	**6.96**	**23**	P	**Pn**	**14

BWNR ex x 14 09 41.5
BWNR Lg Lg 14 09 47.4
MORE Moreh 12.43 357 Pn Pn 14 06 34.0 -4.9
SLVN Son La 12.75 41 **Pn** **14 06 42.8 -0.6**
VIS Vishakhapatnam 12.79 299 *i* x x 14 09 43.0
VIS IAMs_20 IAMs_20 14 11 02.4
comp=Z,82µm,21.4s
BKNI Bangkinang 12.82 152 P Pn 14 06 49.1 +4.8
comp=Z,47µmcomp=Z,6µmcomp=Z,408nm,1.4s
BKNI Bangkinang 12.82 152 P **Pn** **14 06 44.5 +0.3**
DLV Lat 13.15 88 P **Pn** **14 06 50.2 +1.3**
MYKOM Kota Tinggi 13.20 138 P **Pn** **14 06 48.1 -1.3**
MYKOM Kota Tinggi 13.20 138 ⇓P **Pn** **14 06 53.5 +4.0**
MYKOM Kota Tinggi 13.20 138 P **P** **14 06 55.2 -4.3**
comp=Z,3µmcomp=Z,156nm,1.3s
PPI Padang Panjang 13.24 156 P **P** **14 06 58.7 -1.4**
comp=Z,3µmcomp=Z,79nm,1.3s
RAGD RAYAGADA 13.42 305 *e*P **Pn** **14 06 50.7 -1.8**
RAGD Lg Lg 14 10 22.8
RAGD IAMs_20 IAMs_20 14 11 06.8
comp=Z,84µm,25.5s
BTDF Bukit Timah Da 13.47 139 P **P** **14 06 58.5 -4.1**
comp=Z,254nm,1.1s
TNCH TengChong 13.60 13 ⇓P **Pn** **14 06 55.4 +0.3**
TNCH PP **P** **14 07 06.3 +2.1**
TNCH S **Sn** **14 09 25.8 -0.8**
TNCH SS **SnSn** **14 09 42.8 +3.4**
TNCH pmax pmax
comp=Z,550nm,1.9s
TNCH pmax pmax
comp=Z,7µm,5.6s
TNCH L L
comp=Z,60µm,17.3s
TNCH L L
comp=Z,102µm,17.2s
TNCH L L
comp=Z,190µm,14.5s
SHL Shillong 14.06 348 P **Pn** **14 06 58.0 -3.3**
SNR=57
SHL Shillong 14.06 348 Pn **Pn** **14 06 57.0 -4.3**
SHL Shillong 14.06 348 *e*P **Pn** **14 07 00.6 -0.7**
SHL IAMs_20 IAMs_20 14 13 10.0
comp=Z,58µm,23.4s
SDSI Sungai Dareh 14.11 153 P **Pn** **14 07 02.1 +0.2**
MDRS Chennai 14.52 277 *e*P **Pn** **14 07 07.9 +0.3**
MDRS IAMs_20 IAMs_20 14 12 49.5
comp=Z,32µm,15.6s
JHSG JHARSUGUGA 14.68 314 *e*P **Pn** **14 07 10.5 +0.9**
BOK Bokaro 14.81 325 *e*P **Pn** **14 07 12.2 +0.8**
BOK *i* x x 14 10 56.8
BOK IAMs_20 IAMs_20 14 12 30.1
comp=Z,91µm,19.5s
PALK Pallekele 14.84 254 Pn **Pn** **14 07 13.8 +1.8**
comp=Z,1.0nm,0.3s,baz=53,slow=13,SNR=4.4
PALK Sn **Sn** **14 09 50.3 -6.4**
comp=Z,1.6nm,0.3s,baz=21,slow=5.1,SNR=1.6
PALK LR LR 14 12 42.0
comp=Z,15µm,20.4s,baz=71,slow=36
PALK Pallekele 14.84 254 *i* P **P** **14 07 21.3 +3.4**
SNR=6.9
PALK Pallekele 14.84 254 P **P** **14 07 20.6 +2.8**
PALK Pallekele 14.84 254 P **P** **14 07 19.7 +1.9**
PALK Pallekele 14.84 254 P P 14 07 25.8 +8.0
PALK Pallekele 14.84 254 P **Pn** **14 07 11.8 -0.1**
SHBG Sahibganj 15.13 333 *ex* x 14 07 14.0
KMI2 Kunming 15.18 28 ⇓P **Pn** **14 07 17.3 +0.7**
KMI2 pmax pmax
comp=Z,180nm,1.4s
KMI2 pmax pmax
comp=Z,3µm,9.5s
KMI2 L L
comp=Z,92µm,18.7s
KMI2 L L
comp=Z,58µm,15.1s
KMI2 L L
comp=Z,124µm,15.7s
PPSI Pulau Pagai 15.24 161 P **Pn** **14 07 17.1 -0.2**
HALK Hakmana 15.27 250 ⇑P P 14 07 31.8 +9.1
HALK Hakmana 15.27 250 P **Pn** **14 07 18.5 +0.8**
COBR COOCHBEHAR 15.39 341 *e*P **Pn** **14 07 20.1 +0.9**
DSRI Dabo 15.40 141 P **P** **14 07 25.7 +1.6**
comp=Z,4µmcomp=Z,139nm,1.3s
DSRI Dabo 15.40 141 P **Pn** **14 07 18.3 -1.2**
JMUI Jamui 15.54 329 *ex* **Pn** **14 07 16.4 -4.7**
JMBI JAMBI 15.81 147 P **P** **14 07 30.0 +1.5**
JPG JALPAIGURI 15.88 339 *e*P **P** **14 07 29.3 0.0**
PZH PanZhiHua 15.96 22 P **Pn** **14 07 28.4 +1.7**
PZH S **Sn** **14 10 28.4 +4.4**
PZH pmax pmax
comp=Z,260nm,1.8s
PZH pmax pmax
comp=Z,3µm,8.6s
PZH L L
comp=Z,89µm,12.8s
PZH L L
comp=Z,72µm,18.4s
PZH L L
comp=Z,105µm,12.9s
GAYA Gaya 15.97 326 *ex* **Pn** **14 07 23.7 -3.0**
GAYA x x 14 11 20.5
QIZ Qiongzhong 15.98 61 P **Pn** **14 07 28.4 +1.5**
QIZ Qiongzhong 15.98 61 P **Pn** **14 07 25.0 -1.9**
QIZ S **Sn** **14 10 28.5 +4.2**
QIZ pmax pmax
comp=Z,3µm,7.7s
QIZ L L
comp=Z,47µm,9.0s
QIZ L L
comp=Z,50µm,10.6s
QIZ L L
comp=Z,70µm,11.2s
BLSP Bilaspur 16.03 312 *e*P **Pn** **14 07 27.5 0.0**
BLSP IAMs_20 IAMs_20 14 12 50.0
comp=Z,74µm,24.2s
HYB Hyderabad 16.93 291 *e*P **Pn** **14 07 38.3 -0.8**
HYB *i* x x 14 11 56.3
HYB IAMs_20 IAMs_20 14 13 29.4
comp=Z,49µm,27.3s
HYB Hyderabad 16.93 291 *e*P **Pn** **14 07 35.5 -3.6**
HYB *e*S **S** **14 10 53.4 -4.5**
KSI Kapahiang 17.05 153 P **P** **14 07 47.4 +5.0**
comp=Z,37µmcomp=Z,8µmcomp=Z,124nm,1.1s
KOD Kodaikanal 17.33 267 *e*P **Pn** **14 07 44.7 +0.3**
PMBI Palembang 17.50 146 P **P** **14 07 52.3 +5.0**
STMR SITAMARHI 17.53 330 *e*P **P** **14 07 46.9 -0.7**
STMR *ex* x 14 11 13.4
PPBI Pangkal Pinang 17.68 141 P **P** **14 07 54.2 +4.9**
EVN Everest 17.87 336 P **Pn** **14 07 49.0 -2.2**
EVN Everest 17.87 336 ⇑P **Pn** **14 07 49.4 -1.9**
EVN Everest 17.87 336 P **Pn** **14 07 49.9 -1.4**
NGP Nagpur 17.96 303 *e*P **Pn** **14 07 51.5 -0.4**
NGP x x 14 12 25.2
LSA Lhasa 18.22 349 *i* P **Pn** **14 07 54.8 -0.6**
SNR=86
LSA Lhasa 18.22 349 P **Pn** **14 07 53.4 -2.0**
LSA P **Pn** **14 07 53.4 -2.0**
LSA Lhasa 18.22 349 **Pn** **14 07 52.3 -3.1**
GYA Guiyang 18.26 35 P **Pn** **14 07 54.6 -1.0**
GYA S **Sn** **14 11 21.3 +1.6**
GYA pmax pmax
comp=Z,63nm,0.8s
GYA L L
comp=Z,12µm,15.0s
GYA L L
comp=Z,13µm,16.1s
ALBI Allahabad 18.40 319 *ex* **P** **14 07 54.0 -3.2**
ALBI x **PcP** **14 12 28.9 +0.6**
ALBI IAMs_20 IAMs_20 14 14 27.6
comp=Z,54µm,26.3s
EGSI Enggano, Bengk 18.45 157 P **Pn** **14 08 03.2 +5.3**
comp=Z,24µmcomp=Z,364nm,1.2s
TPI Tanjungpandan 19.10 138 P **Pn** **14 08 09.3 +3.5**
comp=Z,30µmcomp=Z,4µmcomp=Z,139nm,1.9s
BNDA BANDA 19.49 316 *e*P **Pn** **14 08 11.1 +0.7**
BNDA Lg Lg 14 13 30.0
GULI GuiLin 19.77 45 P **P** **14 08 09.3 -2.9**
GULI S **Sn** **14 11 57.6 +1.5**
GULI pmax pmax
comp=Z,250nm,1.3s
GULI LR LR
comp=N,93µm,11.9s
GULI LR LR
comp=E,68µm,11.4s
GULI LR LR

comp=Z,58µm,16.2s
LKN LUCKNOW 20.02 320 *e*P Pn 14 08 17.1 +0.5
BRCI Bahraich 20.16 323 *e*P Pn 14 08 18.8 +0.5
BRCI *ex* x 14 12 12.9
BHPL Bhopal 20.30 307 *e*P Pn 14 08 20.9 +0.9
BHPL IAmb IAmb 14 08 29.6
comp=Z,1µm,1.6s
BHPL *e*S **S** **14 12 04.5 -1.5**
BHPL *i* x x 14 13 50.8
BHPL IAMs_20 IAMs_20 14 15 07.8
comp=Z,61µm,27.3s
MCO Taipa Grande 20.46 57 P Pn 14 08 26.0 +4.1
JHNI Jhansi 20.66 314 *e*P Pn 14 08 24.1 -0.2
CD2 Chengdu 20.69 22 P **P** **14 08 20.1 -2.2**
CD2 S **S** **14 12 11.0 -2.7**
CD2 pmax pmax
comp=Z,180nm,0.8s
CD2 pmax pmax
comp=Z,5µm,5.5s
CD2 L L
comp=Z,73µm,10.2s
CD2 L L
comp=Z,160µm,10.8s
CD2 L L
comp=Z,104µm,12.6s
KAD Karad 20.94 288 *e*P **P** **14 08 23.5 -1.5**
HKPS Hong Kong Po S 21.01 58 P **P** **14 08 25.4 -0.4**
GUNA GUNA 21.13 310 *e*P **P** **14 08 26.4 -0.7**
GUNA *e*S **S** **14 12 19.1 -3.4**
GZH2 Guangzhou 21.27 54 P **P** **14 08 26.8 -1.7**
GZH2 S **S** **14 12 27.1 +1.9**
GZH2 L L
comp=Z,60µm,13.6s
GZH2 L L
comp=Z,34µm,13.6s
GZH2 L L
comp=Z,63µm,13.3s
POO Poona 21.54 291 *e*P **P** **14 08 33.7 +2.2**
POO *i* x x 14 14 05.3
POO IAMs_20 IAMs_20 14 15 39.9
comp=Z,36µm,27.3s
KKM Kota Kinabalu 21.65 103 P **P** **14 08 37.6 +4.7**
KKM Kota Kinabalu 21.65 103 ⇓P **P** **14 08 37.4 +4.5**
KKM Kota Kinabalu 21.65 103 P **P** **14 08 37.5 +4.7**
comp=Z,16µmcomp=Z,4µmcomp=Z,344nm,1.1s
HMDM Hanimaadhoo 22.14 259 P **P** **14 08 41.5 +3.5**
comp=Z,267nm,1.6s
AGRA Agra 22.25 316 *ex* **PcP** **14 12 36.7 +1.3**
LEM Lembang 22.30 145 LR LR 14 18 29.7
comp=Z,14µm,20.9s,baz=308,slow=40
LEM Lembang 22.30 145 P **P** **14 08 46.4 +6.6**
comp=Z,19µmcomp=Z,5µmcomp=Z,133nm,1.6s
LGTI Lohaghat 22.41 324 *e*P **P** **14 08 45.7 +4.7**
LGTI *e*S **S** **14 12 45.0 -2.6**
PTH Pithoragarh 22.49 324 *ex* **P** **14 08 40.9 -0.9**
PTH *e*S **S** **14 12 47.6 -1.3**
ENH Enshi 22.78 34 P **P** **14 08 41.9 -2.7**
ENH IAmb IAmb 14 09 04.5
comp=Z,443nm,1.2s
ENH IAMs_20 IAMs_20 14 18 25.7
comp=Z,81µm,22.0s
BBJI Bungbulang 22.84 146 P P 14 08 53.7 +8.3
comp=Z,9µmcomp=Z,60nm,1.0s
BBJI Bungbulang 22.84 146 P **P** **14 08 50.1 +4.6**
TKRD Thakurdwara 22.97 321 *e*P **P** **14 08 49.5 +2.9**
TKRD *e*S **S** **14 12 58.8 +1.5**
CNSH ChangSha 23.38 43 P **P** **14 08 50.3 -0.6**
CNSH S **S** **14 13 02.1 -2.1**
CNSH pmax pmax
comp=Z,20nm,1.1s
CNSH L L
comp=Z,46µm,11.9s
CNSH L L
comp=Z,52µm,13.2s
CNSH L L
comp=Z,50µm,15.1s
BISR Bishrakh 23.47 318 *ex* **P** **14 08 50.6 -1.1**
BISR *e*S **S** **14 13 06.7 +1.2**
SONA Sohna 23.50 317 *ex* **S** **14 13 09.7 +3.5**
JMIU JAMIA UNIVERSI 23.56 318 *ex* **P** **14 08 50.4 -2.3**
JMIU *ex* x 14 13 08.8
JOSI Joshimath 23.59 325 *e*P **P** **14 08 56.7 +3.6**
JOSI *e*S **S** **14 13 10.3 +2.4**
NPLP NPLP New Delhi 23.69 318 *e*P **P** **14 08 56.0 +2.1**
NDI New Delhi 23.69 318 *e*P **P** **14 08 55.9 +2.0**
NDI *e*S **S** **14 13 12.8 +3.6**
TARAI Tarakan 23.82 109 P **P** **14 08 59.7 +4.4**
COCO West Island 23.86 176 P P 14 09 03.2 +7.6
comp=Z,287nm,1.0s
UDPR Udaipur 23.91 305 *e*P **P** **14 08 56.9 +0.8**
JHJR Jhajjar 24.02 317 *e*P **P** **14 09 00.9 +3.8**
GNR GANAUR 24.12 318 *e*P **P** **14 08 59.2 +1.2**
AJM Ajmer 24.14 310 *e*P **P** **14 09 00.4 +2.1**
AJM IAmb IAmb 14 09 11.1
comp=Z,852nm,1.6s
AJM *e*S **S** **14 13 15.1 -1.4**
AJM IAMs_20 IAMs_20 14 17 13.8
comp=Z,47µm,27.0s
SMRI Semarang 24.15 140 P **P** **14 09 04.2 +5.8**
comp=Z,22µmcomp=Z,685nm,2.4s
GOMU GeErMu 24.33 360 P **P** **14 09 01.3 +1.0**
GOMU S **S** **14 13 18.9 -1.1**
GOMU pmax pmax
comp=Z,46nm,1.9s
GOMU L L
comp=Z,27µm,12.9s
GOMU L L
comp=Z,17µm,12.0s
GOMU L L
comp=Z,945µm,12.2s
UTK UTTARKASHI 24.35 323 *e*P **P** **14 09 01.6 +1.3**
UTK *e*S **S** **14 13 20.2 +0.3**
KAAM Kaadhehdhoo 24.59 244 P P 14 09 11.9 +9.4
comp=Z,191nm,2.5s
KKR Kurukshetra 24.80 320 *e*P **P** **14 09 07.9 +3.7**
UGM Wanagama 24.87 141 P **P** **14 09 11.5 +6.5**
comp=Z,13µmcomp=Z,8µmcomp=Z,525nm,2.2s
UGM Wanagama 24.87 141 P **P** **14 09 07.9 +2.9**
KLP Kalpa 25.06 324 *e*P **P** **14 09 11.1 +4.3**
KLP IAmb IAmb 14 09 18.8
comp=Z,289nm,0.8s
KLP *e*S **S** **14 13 30.5 -1.3**
LZDM Lanzhou Array 25.33 17 P **P** **14 09 06.4 -2.9**
comp=Z,16nm,0.7s,baz=202,slow=11,SNR=15
comp=Z,16nm,0.7s
TGY Tagaytay City 25.33 82 LR LR 14 19 30.0
comp=Z,12µm,18.0s,baz=276,slow=38
KNMB Chin-men Tao 25.47 57 IAMs_20 IAMs_20 14 20 11.7
comp=Z,48µm,18.0s
LZH Lanzhou 25.49 17 P **P** **14 09 08.8 -1.8**
LZH sP pwP 14 09 17.4 +1.4
LZH S **S** **14 13 35.6 -2.6**
LZH SS **SnSn** **14 14 36.4 +5.5**
LZH pmax pmax
comp=Z,36nm,1.6s
LZH pmax pmax
comp=Z,850nm,4.9s
LZH L L
comp=Z,92µm,15.2s
LZH L L
comp=Z,106µm,16.2s
LZH L L
comp=Z,111µm,14.3s
XAN Xi'an 25.54 27 ⇓P **P** **14 09 07.3 -3.6**
XAN PP **PnPn** **14 09 47.1 +0.6**
XAN S **S** **14 13 32.1 -6.7**
XAN sS pS 14 13 39.5 -1.0
XAN pmax pmax
comp=Z,11nm,0.8s
XAN pmax pmax
comp=Z,2µm,7.9s
XAN L L
comp=Z,36µm,11.7s
XAN L L
comp=Z,134µm,13.1s
XAN L L
comp=Z,96µm,12.4s
SNJI Sawahan-Nganju 25.55 139 P **P** **14 09 15.0 +3.7**
comp=Z,16µmcomp=Z,5µmcomp=Z,326nm,1.7s
QZH2 Quanzhou 25.85 56 P **P** **14 09 13.0 -0.8**
QZH2 S **S** **14 13 41.0 -2.9**
QZH2 pmax pmax
comp=Z,160nm,1.0s
QZH2 pmax pmax
comp=Z,770nm,6.8s
QZH2 L L
comp=Z,29µm,14.8s
QZH2 L L
comp=Z,50µm,17.5s
QZH2 L L
comp=Z,60µm,14.4s
WHN Wuhan 25.87 41 P **P** **14 09 11.8 -2.1**
WHN sP **pwP** **14 09 19.6 +0.4**
WHN S **S** **14 13 49.3 +5.3**
WHN L L
comp=Z,165µm,12.1s
WHN L L
comp=Z,117µm,12.1s
WHN L L
comp=Z,284µm,13.2s
DHRM DHARAMSHALA 26.71 323 *e*P **P** **14 09 25.2 +3.4**
DHRM IAmb IAmb 14 09 29.4
comp=Z,72nm,0.6s
DHRM IAMs_20 IAMs_20 14 20 10.6
comp=Z,35µm,23.4s
BHUJ Bhuj 26.74 299 IAMs_20 IAMs_20 14 18 13.8
comp=Z,35µm,27.3s
TPUB Ta-pu 26.90 61 IAMs_20 IAMs_20 14 20 05.2
comp=Z,46µm,20.0s
TPUB Ta-pu 26.90 61 P **P** **14 09 25.4 +2.0**
TWG Pinlang 27.12 63 IAMs_20 IAMs_20 14 21 54.3
comp=Z,55µm,18.0s
TWG Pinlang 27.12 63 P P 14 09 41.4 +16
TWG Pinlang 27.12 63 P **P** **14 09 25.2 0.0**
TSSA Tissa 27.22 323 *e*P **P** **14 09 29.3 +3.0**
SSLB Suanglung 27.35 61 P P 14 09 42.1 +15
SSLB Suanglung 27.35 61 P **P** **14 09 25.6 -1.8**
YULB Yu-li 27.51 62 IAMs_20 IAMs_20 14 20 35.3
comp=Z,65µm,20.0s
YULB Yu-li 27.51 62 P **P** **14 09 28.5 -0.3**
TOLI2 Tolitoli 27.63 111 P **P** **14 09 31.4 +1.4**
PCI Palu 27.65 115 P **P** **14 09 32.9 +2.8**
comp=Z,11µmcomp=Z,36nm,1.6s
JAGI Jajag, Banyuwa 27.65 136 P **P** **14 09 35.1 +5.0**
comp=Z,10µmcomp=Z,64nm,1.4s
LYN LuoYang 27.68 32 ⇑P P 14 09 39.9 +10
LYN S **S** **14 14 17.8 +5.3**
LYN sS sS 14 14 29.1 +14
LYN pmax pmax
comp=Z,150nm,1.8s
LYN pmax pmax
comp=Z,2µm,4.3s
LYN LR LR
comp=N,134µm,12.0s
LYN LR LR
comp=E,105µm,13.8s
LYN LR LR
comp=Z,231µm,13.6s
MMSI Mamuju 27.72 120 P **P** **14 09 33.0 +2.2**
comp=Z,11µmcomp=Z,2µmcomp=Z,107nm,1.3s
GTA2 Gaotai 27.93 8 P **P** **14 09 30.8 -1.7**
GTA2 pP sP 14 09 35.5 +0.8
GTA2 PP **PnPn** **14 10 20.8 +1.6**
GTA2 S **S** **14 14 13.8 -2.8**
GTA2 pmax pmax
comp=Z,8.0nm,1.0s
GTA2 pmax pmax
comp=Z,1µm,11.0s
GTA2 L L
comp=Z,19µm,15.1s
GTA2 L L
comp=Z,32µm,13.7s
GTA2 L L
comp=Z,29µm,16.1s
JMU Jammu 27.97 322 *e*P **P** **14 09 36.8 +4.0**
JMU IAmb IAmb 14 09 45.7
comp=Z,129nm,0.2s
YHNB Yeheng 28.04 59 P **P** **14 09 33.2 -0.3**
NACB Ninganchiao 28.04 60 IAMs_20 IAMs_20 14 21 02.2
comp=Z,36µm,20.0s
KHKI Kahang-Kahang 28.59 133 P **P** **14 09 41.6 +3.1**
comp=Z,87nm,1.9s
NIL Nilore 29.53 321 P **P** **14 09 47.5 +0.8**
NIL P **P** **14 09 47.5 +0.8**
NIL Nilore 29.53 321 ⇑P **P** **14 09 50.3 +3.6**
NIL Nilore 29.53 321 P **P** **14 09 47.6 +0.9**
H08S3 Diego Garcia H 29.58 230 T T 14 40 28.2
baz=49,slow=76,SNR=6.9
H08S2 Diego Garcia H 29.58 230 T T 14 40 42.5
baz=49,slow=76,SNR=6.2
H08S1 Diego Carcia H 29.60 230 T T 14 40 47.7
baz=49,slow=76,SNR=5.4
KAPI Kappang 29.68 123 LR LR 14 22 27.1
comp=Z,7µm,21.3s,baz=300,slow=38
KAPI Kappang 29.68 123 P **P** **14 09 50.5 +2.3**
KAPI Kappang 29.68 123 P **P** **14 09 51.4 +3.2**
KAPI Kappang 29.68 123 P **P** **14 09 50.8 +2.6**
KAPI Kappang 29.68 123 P **P** **14 09 51.0 +2.8**
NJ2 Nanjing 29.80 44 *e*P **P** **14 09 48.9 -0.1**
NJ2 sP **pwP** **14 09 57.8 +3.4**
NJ2 S **S** **14 14 47.0 +1.1**
NJ2 pmax pmax
comp=Z,27nm,0.6s
NJ2 pmax pmax
comp=Z,1µm,4.1s
NJ2 L L
comp=Z,136µm,12.6s
NJ2 L L
comp=Z,97µm,13.1s
NJ2 L L
comp=Z,86µm,9.9s
GTOI Gorontalo 29.87 110 P **P** **14 09 50.1 +0.3**
comp=Z,1µmcomp=Z,70nm,1.1s
TIY Taiyuan 30.17 28 *e*P **P** **14 09 51.8 -0.6**
TIY S **S** **14 14 53.0 +1.2**
TIY pmax pmax
comp=Z,390nm,5.3s
TIY L L
comp=Z,80µm,12.0s
TIY L L
comp=Z,80µm,13.1s
TIY L L
comp=Z,94µm,12.9s
LUWI Luwuk 30.33 113 P **P** **14 09 52.3 -1.6**
LUWI IAmb IAmb 14 10 52.3
comp=Z,269nm,1.2s
LUWI Luwuk 30.33 113 ⇑P **P** **14 09 55.5 +1.5**
LUWI Luwuk 30.33 113 P **P** **14 09 55.6 +1.7**
LUWI Luwuk 30.33 113 P **P** **14 09 55.6 +1.7**
DAV Davao City (W) 30.46 96 LR LR 14 24 37.8
comp=Z,8µm,18.7s,baz=296,slow=41
DAV Davao City (W) 30.46 96 P **P** **14 09 54.0 -1.1**
SSE Sheshan 30.88 47 P **P** **14 09 59.6 +1.0**
SSE S **S** **14 15 03.6 +0.7**
SSE SS **ScP** **14 16 41.4 +2.7**
SSE pmax pmax
comp=Z,9.0nm,0.8s
SSE pmax pmax
comp=Z,240nm,3.7s
HNS HongShan 31.03 31 ⇓P **P** **14 09 58.0 -1.8**
HNS S **S** **14 15 04.5 -0.5**
HNS pmax pmax
comp=Z,35nm,0.8s
HNS L L
comp=Z,44µm,12.2s
HNS L L
comp=Z,71µm,14.5s
HNS L L
comp=Z,86µm,14.5s
SGSI Sangihe 31.22 102 P **P** **14 10 06.3 +4.5**
TIA Tai'an 31.45 36 P **P** **14 10 01.1 -2.6**
TIA S **S** **14 15 10.8 -1.0**
TIA PcS **PcS** **14 16 40.1 -1.2**
TIA pmax pmax
comp=Z,7.0nm,0.7s
TIA pmax pmax
comp=Z,400nm,6.3s
TIA L L
comp=Z,33µm,18.4s
TIA L L
comp=Z,44µm,11.4s
TIA L L
comp=Z,51µm,14.6s
KDI Kendari 31.55 118 P **P** **14 10 07.9 +3.2**
comp=Z,8µmcomp=Z,2µmcomp=Z,37nm,1.4s
BTO2 Baotou 31.68 22 *e*P **P** **14 10 03.0 -2.8**
BTO2 PP **PnPn** **14 11 08.8 -0.8**
BTO2 S **S** **14 15 09.6 -6.0**
BTO2 pmax pmax
comp=Z,21nm,0.8s

BTO2 pmax pmax
comp=Z,2µm,7.5s
BTO2 L L
comp=Z,68µm,17.8s
BTO2 L L
comp=Z,111µm,14.7s
BTO2 L L
comp=Z,48µm,18.2s
LBFI Labuhan Bajo, 31.85 128 P P 14 10 12.3 +5.0
KSH2 Kashi 32.31 331 P **P** **14 10 08.3 -3.0**
KSH2 pP pwP 14 10 15.3 -1.5
KSH2 S **S** **14 15 27.1 +1.7**
KSH2 pmax pmax
comp=Z,31nm,0.8s
KSH2 pmax pmax
comp=Z,770nm,6.5s
KSH2 LR LR
comp=N,22µm,24.0s
KSH2 LR LR
comp=E,28µm,22.0s
KSH2 LR LR
comp=Z,50µm,23.5s
HHC Hu-ho-hao-te 32.41 24⇑ *i*P **P** **14 10 14.4 +2.2**
HHC sP pwP 14 10 22.0 +4.4
HHC S **S** **14 15 28.5 +1.6**
HHC sS sS 14 15 36.1 +6.6
HHC pmax pmax
comp=Z,14nm,1.3s
HHC pmax pmax
comp=Z,650nm,7.6s
HHC L L
comp=Z,54µm,13.9s
HHC L L
comp=Z,45µm,11.7s
HHC L L
comp=Z,48µm,13.4s
WUS Wushi 32.46 337 P **P** **14 10 09.8 -2.7**
WUS IAmb IAmb 14 10 25.6
comp=Z,137nm,1.2s
WMQ Urumqi 32.57 350 *e*P **P** **14 10 16.8 +3.3**
WMQ S **S** **14 15 28.3 -0.9**
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,380nm,4.1s
WMQ L L
comp=Z,18µm,18.1s
WMQ L L
comp=Z,17µm,18.1s
WMQ L L
comp=Z,23µm,24.2s
KBL Kabul 32.78 318 P **P** **14 10 16.3 +0.8**
SNR=20
KBL P **P** **14 10 16.3 +0.8**
SNR=20
KBL P **P** **14 10 16.3 +0.8**
SNR=20
KBL Kabul 32.78 318 P **P** **14 10 12.5 -3.1**
TARG Taragay, Kyrgy 33.46 336 P **P** **14 10 19.7 -1.9**
TARG IAmb IAmb 14 10 49.7
comp=Z,85nm,0.9s
TARG Taragay, Kyrgy 33.46 336 P **P** **14 10 20.4 -1.2**
SANI Sanana 33.67 112 P **P** **14 10 27.1 +3.8**
SANI Sanana 33.67 112 P **P** **14 10 23.1 -0.2**
BJT Baijiatuau 33.77 30 P **P** **14 10 21.3 -2.6**
BJT Baijiatuau 33.77 30 IAMs_20 IAMs_20 14 26 36.1
comp=Z,25µm,18.0s
BJI2 Beijing 33.77 30 P **P** **14 10 22.6 -1.3**
BJI2 S **S** **14 15 47.3 -0.5**
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJI2 pmax pmax
comp=Z,380nm,6.3s
BJI2 L L
comp=Z,11µm,11.8s
BJI2 L L
comp=Z,17µm,14.0s
BJI2 L L
comp=Z,20µm,13.5s
TNTI Ternate 33.87 106 P **P** **14 10 28.4 +3.3**
comp=Z,27nm,0.9s
TNTI Ternate 33.87 106 P **P** **14 10 26.1 +1.0**
PRZ Przheval'sk 33.87 338 P **P** **14 10 23.1 -1.9**
PRZ Przheval'sk 33.87 338 P **P** **14 10 24.5 -0.5**
KDJ Kajisay 34.04 336 P **P** **14 10 24.3 -2.2**
KDJ Kajisay 34.04 336 P **P** **14 10 24.7 -1.7**
SHLS Shalkode 34.08 339 *e*P **P** **14 10 25.0 -1.7**
comp=Z,147nm,1.4s
SHLS *e*S **S** **14 15 50.4 -2.4**
PDGK Podgornoye 34.22 340 P **P** **14 10 25.5 -2.4**
UZB Uzynbulak 34.23 339 *e*P **P** **14 10 27.4 -0.6**
comp=Z,206nm,2.3s
UZB *e*S **S** **14 15 54.7 -0.4**
SATY Saty 34.37 338 *e*P **P** **14 10 28.8 -0.5**
comp=Z,223nm,2.2s
SATY *e*S **S** **14 15 57.1 -0.1**
DRK Karamyk 34.46 327 P **P** **14 10 32.0 +1.8**
JOW Kunigami 34.62 60 LR LR 14 27 18.0
comp=Z,14µm,18.3s,baz=234,slow=41
KPKS Kokpek 34.62 339 *e*P **P** **14 10 30.8 -0.5**
KPKS *e*S **S** **14 16 00.6 -0.5**
BOOM Boomskoye usch 34.85 335 P **P** **14 10 35.6 +2.2**
TNSS Tian-Shan 34.90 337 *e*P **P** **14 10 33.5 -0.6**
GAR Garm 34.92 325 P **P** **14 10 30.9 -3.1**
GAR IAmb IAmb 14 10 53.7
comp=Z,114nm,1.0s
GAR Garm 34.92 325 P **P** **14 10 35.0 +1.0**
MDOK Medeo 34.97 337 *e*P **P** **14 10 34.1 -0.3**
MDOK *e*S **S** **14 16 06.2 -0.3**
MDOK LR LR 14 26 10.1
AAA Alma-Ata 35.06 337 *e*P **P** **14 10 34.9 -0.2**
comp=Z,184nm,1.5s
AAA LR LR 14 26 11.8
comp=Z,19µm,17.3s
ARSB Arslanbob 35.24 331 P **P** **14 10 34.5 -2.3**
CHGR Chuyangaron 35.34 324 P **P** **14 10 33.6 -4.0**
BTK Batken 35.40 327 P **P** **14 10 39.9 +1.8**
JLN Jalan Bani Buh 35.54 292 P **P** **14 10 39.8 +0.4**
JLN P **P** **14 10 39.8 +0.4**
AAK Ala-Archa 35.59 334 *i*P **P** **14 10 38.2 -1.5**
SNR=28
AAK Ala-Archa 35.59 334 P **P** **14 10 39.8 +0.1**
AAK P **P** **14 10 39.8 +0.1**
AAK P **P** **14 10 39.8 +0.1**
AAK Ala-Archa 35.59 334 IAMs_20 IAMs_20 14 26 42.0
comp=Z,49µm,21.0s
AAK Ala-Archa 35.59 334⇑P **P** **14 10 40.3 +0.6**
AAK Ala-Archa 35.59 334 P **P** **14 10 40.7 +0.9**
AAK S **S** **14 16 17.2 +1.2**
AAK Ala-Archa 35.59 334 P **P** **14 10 42.0 +2.3**
DL2 Dalian 35.90 37 P **P** **14 10 43.3 +1.0**
DL2 S **S** **14 16 19.8 -0.8**
DL2 pmax pmax
comp=Z,170nm,1.2s
DL2 pmax pmax
comp=Z,1µm,4.7s
DL2 L L
comp=Z,44µm,11.9s
DL2 L L
comp=Z,22µm,10.7s
DL2 L L
comp=Z,50µm,13.8s
WBK Wadi Bani Khal 36.03 292 P **P** **14 10 46.4 +2.7**
SNR=7.2
WBK P **P** **14 10 46.4 +2.7**
SNR=7.2
WBK P **P** **14 10 46.4 +2.7**
SNR=7.2
SOEI Soe 36.05 125 P **P** **14 10 48.0 +4.0**
comp=Z,2µmcomp=Z,150nm,1.3s
SOEI Soe 36.05 125 P **P** **14 10 39.9 -4.2**
TDK Taldyqorghan 36.07 340 *e*P **P** **14 10 43.4 -0.3**
TDK LR LR 14 26 51.3
comp=Z,13µm,17.6s
ARK Arkit 36.10 330 P **P** **14 10 46.0 +1.9**
WSAR Wadi Sarin 36.46 293 LR LR 14 25 12.4
comp=Z,87nm,21.7s,baz=122,slow=36
WSAR Wadi Sarin 36.46 293 P **P** **14 10 50.0 +2.6**
SNR=6.8
MKAR Makanchi Array 36.55 345 P **P** **14 10 45.5 -2.3**
comp=Z,2.4nm,0.6s,baz=163,slow=8.3,SNR=11
comp=Z,2.4nm,0.6s
MKAR Makanchi Array 36.55 345 P **P** **14 10 43.2 -4.6**
ZSN Zaisan 36.59 348 *e*P **P** **14 10 47.7 -0.4**
comp=Z,150nm,2.6s
ZSN *e*S **S** **14 16 31.1 0.0**
MAKZ Makanchi 36.64 345 P **P** **14 10 45.0 -3.6**
MAKZ Makanchi 36.64 345⇑P **P** **14 10 46.2 -2.4**
MAKZ Makanchi 36.64 345 P **P** **14 10 46.1 -2.5**
MHTO MHTO 36.67 289 P **P** **14 10 52.1 +3.0**
MHTO P **P** **14 10 52.1 +3.0**
JMDO Jabal Madar 36.77 292 P **P** **14 10 53.0 +3.0**
SNR=9.8
JMDO P **P** **14 10 53.0 +3.0**
SNR=9.8
JMDO P **P** **14 10 53.0 +3.0**
SNR=9.8
XLT XiLinHaoTe 36.80 26 *e*P **P** **14 10 48.0 -2.1**
XLT pP sP 14 10 52.3 0.0
XLT sP pwP 14 10 55.5 0.0
XLT PP **PnPn** **14 12 12.0 -1.8**
XLT PcP **PcP** **14 13 16.3 +4.1**
XLT SS SS 14 18 56.8 -19
XLT pmax pmax
comp=Z,33nm,0.9s
XLT pmax pmax
comp=Z,260nm,6.1s
XLT L L
comp=Z,4µm,14.0s
XLT L L
comp=Z,32µm,14.0s
XLT L L
comp=Z,63µm,12.8s
SMDO Samad 36.95 293 P **P** **14 10 54.2 +2.5**
SNR=11
SMDO P **P** **14 10 54.2 +2.5**
SNR=11
BIDO Bidbid 36.97 294 P **P** **14 10 54.4 +2.7**
SNR=11
BIDO P **P** **14 10 54.4 +2.7**
SNR=11
BIDO P **P** **14 10 54.4 +2.7**
SNR=11
SONM Songino Array 37.20 13 P **P** **14 10 51.1 -2.3**
comp=Z,6.1nm,0.8s,baz=194,slow=8.3,SNR=23
comp=Z,6.1nm,0.8s
SONM Songino Array 37.20 13 P **P** **14 10 51.6 -1.8**
DZA Taraz 37.23 331 *e*P **P** **14 10 53.4 -0.2**
IUG Iuzhnay 37.32 329 *e*P **P** **14 10 54.2 -0.3**
comp=Z,322nm,2.7s
ULN Ulaanbaatar 37.37 13 P **P** **14 10 52.6 -2.3**
ULN Ulaanbaatar 37.37 13 IAMs_20 IAMs_20 14 28 10.7
comp=Z,46µm,21.0s
ULN Ulaanbaatar 37.37 13⇑P **P** **14 10 55.7 +0.7**
ULN Ulaanbaatar 37.37 13 P **P** **14 10 55.2 +0.3**
ULN Ulaanbaatar 37.37 13 P **P** **14 10 52.8 -2.2**
BSY Bisya 37.66 292 P **P** **14 11 00.3 +2.7**
SNR=15
BSY P **P** **14 11 00.3 +2.7**
SNR=15
CHM Chimkent 37.66 329 *e*P **P** **14 10 57.0 -0.3**
CHM LR LR 14 28 01.8
comp=Z,7µm,16.7s
HOQ Hoqain 37.72 293 P **P** **14 11 00.7 +2.6**
SNR=12
HOQ P **P** **14 11 00.7 +2.6**
SNR=12
BTLS Baital 37.73 335 *e*P **P** **14 10 57.6 -0.2**
KKAR Karatay Array 37.79 330 P **P** **14 10 55.5 -2.9**
HJU Haeju 37.88 41 P **P** **14 10 56.4 -2.8**
HJU AmB
comp=Z,668nm,2.1s
HJU AMS AMS
comp=Z,56µm,16.1s
BRLS Boroldday 38.06 330 *e*P **P** **14 10 59.5 -1.2**
JSU Suzuyama 38.08 53 P **P** **14 11 00.7 -0.4**
SIJI Sorong 38.09 107 LR LR 14 29 27.6
comp=Z,2µm,20.2s,baz=286,slow=41
INCN Inchon 38.15 42 IAMs_20 IAMs_20 14 28 21.2
comp=Z,43µm,20.0s
INCN Inchon 38.15 42 P **P** **14 11 00.0 -1.5**
SUJ Sinuiju 38.37 37 P **P** **14 11 01.2 -2.0**
ARQ Araqi 38.38 293 P **P** **14 11 06.5 +2.9**
ARQ P **P** **14 11 06.5 +2.9**
PYAG Pyongyang 38.49 40 P **P** **14 11 02.0 -2.3**
PYAG S **S** **14 16 55.5 -4.6**
PYAG AmB
comp=Z,977nm,5.0s
PYAG AMS AMS
comp=Z,21µm,12.5s
SOHO SOHO 38.53 294 *i*P P 14 11 09.4 +4.6
SNR=12
SOHO SOHO 38.53 294 P **P** **14 11 07.4 +2.6**
SOHO P **P** **14 11 07.4 +2.6**
SNY Shenyang 38.96 35⇑P **P** **14 11 07.8 -0.4**
SNY S **S** **14 17 06.1 -0.9**
SNY pmax pmax
comp=Z,31nm,1.7s
SNY pmax pmax
comp=Z,410nm,5.9s
SNY L L
comp=Z,23µm,15.0s
SNY L L
comp=Z,31µm,14.0s
SNY L L
comp=Z,40µm,12.9s
KSAR Wonju Array Be 38.96 43 P **P** **14 11 07.8 -0.5**
MDH Madha 38.98 296 P **P** **14 11 11.2 +2.5**
MDH P **P** **14 11 11.2 +2.5**
MDH P **P** **14 11 11.2 +2.5**
UOSS Minazif 38.99 295 *i*P **P** **14 11 11.4 +2.7**
SNR=7.5
UOSS Minazif 38.99 295 P **P** **14 11 11.2 +2.5**
UOSS P **P** **14 11 11.2 +2.5**
UOSS Minazif 38.99 295 P P 14 11 16.7 +8.0
UOSS Minazif 38.99 295 P **P** **14 11 10.0 +1.3**
KSRS Korea Array 39.00 43 P **P** **14 11 05.4 -3.1**
comp=Z,3.2nm,0.8s,baz=243,slow=9.3,SNR=13
comp=Z,3.2nm,0.8s
HATD Hatta, Dubai 39.03 295 *i*P **P** **14 11 10.5 +1.4**
SNR=11
HATD Hatta, Dubai 39.03 295 P **P** **14 11 11.7 +2.6**
SNR=16
ASHO Ashiyiah 39.06 295 *i*P **P** **14 11 12.9 +3.5**
SNR=6
ASHO Ashiyiah 39.06 295 P **P** **14 11 11.8 +2.4**
SNR=11
ASHO P **P** **14 11 11.8 +2.4**
SNR=11
MASF Masafi 39.12 296 P **P** **14 11 12.1 +2.2**
MASF P **P** **14 11 12.1 +2.2**
ALNE Al Ain 39.21 294 *i*P **P** **14 11 14.1 +3.5**
SNR=6.2
ALNE Al Ain 39.21 294 P **P** **14 11 13.3 +2.7**
SNR=14
SHME Shamm 39.30 297 P **P** **14 11 14.2 +3.0**
SHME P **P** **14 11 14.2 +3.0**
NAZ Nazwa, Dubai 39.48 295 P **P** **14 11 15.3 +2.5**
NAZ Nazwa, Dubai 39.48 295 P **P** **14 11 15.3 +2.5**
SNR=5.9
NAZ P **P** **14 11 15.3 +2.5**
SNR=5.9
FAQ Al Faqa, Dubai 39.49 295 P **P** **14 11 16.4 +3.5**
FAQ Al Faqa, Dubai 39.49 295 P **P** **14 11 15.7 +2.8**
SNR=8.7
UMZA Um Al Zommool 39.51 291 P **P** **14 11 15.6 +2.5**
UMZA P **P** **14 11 15.6 +2.5**
UMZA P **P** **14 11 15.6 +2.5**
ASUD Al Ashush, Dub 39.70 294 *i*P **P** **14 11 16.3 +1.7**
SNR=7.5
ASUD Al Ashush, Dub 39.70 294 P **P** **14 11 16.9 +2.3**
SNR=10
ASUD P **P** **14 11 16.9 +2.3**
SNR=10
FAKI Fak Fak 39.75 109 P **P** **14 11 14.8 -0.4**
FAKI Fak Fak 39.75 109 P **P** **14 11 17.1 +1.9**
comp=Z,1µmcomp=Z,69nm,1.1s
FAKI Fak Fak 39.75 109 P **P** **14 11 13.8 -1.3**
RBK Rabkut 39.88 283 P **P** **14 11 20.1 +3.8**
AJN Ajban 39.99 294 *i*P **P** **14 11 20.5 +3.4**
SNR=9.9
AJN Ajban 39.99 294 P **P** **14 11 19.5 +2.4**
SNR=12
HHU Hamhung 40.12 40 P **P** **14 11 14.8 -3.0**
HHU S **S** **14 17 20.0 -4.4**
HHU AmB
comp=Z,1µm,1.4s
HHU AMS AMS
comp=Z,23µm,10.2s
WHFO Wadi Hawf 40.31 284 P **P** **14 11 22.3 +2.5**
WHFO P **P** **14 11 22.3 +2.5**
TLY Talaya 40.42 8 P **P** **14 11 19.3 -1.0**
TLY Talaya 40.42 8 P **P** **14 11 22.3 +2.1**
MBWA Marble Bar 40.72 143 P **P** **14 11 25.2 +2.2**
MBWA Marble Bar 40.72 143 P **P** 14 11 31.1 +8.0
MBWA Marble Bar 40.72 143 P **P** **14 11 21.0 -2.1**
MBWA IAmb IAmb 14 11 35.9
comp=Z,207nm,1.6s
MBWA Marble Bar 40.72 143⇓P P 14 11 33.8 +11
MBWA Marble Bar 40.72 143 P **P** **14 11 23.7 +0.6**
MZWR Madinat Zayed 40.84 293 P **P** **14 11 26.7 +2.5**
MZWR P **P** **14 11 26.7 +2.5**
MZWR P **P** **14 11 26.7 +2.5**
KURBB Kurchatov Arra 41.05 344 P **P** **14 11 23.0 -2.4**
comp=Z,3.1nm,0.7s,baz=159,slow=7.6,SNR=21
comp=Z,3.1nm,0.7s
MZR Muzera 41.09 292 P **P** **14 11 29.6 +3.4**
MZR Muzera 41.09 292 P **P** **14 11 28.7 +2.5**
SNR=9.5
MZR P **P** **14 11 28.7 +2.5**
SNR=9.5
KURK Kurchatov 41.11 344 P **P** **14 11 25.5 -0.4**
KURK P **P** **14 11 25.5 -0.4**
KURK P **P** **14 11 25.5 -0.4**
KURK Kurchatov 41.11 344 P **P** **14 11 22.4 -3.5**
KURK Kurchatov 41.11 344 P **P** **14 11 27.4 +1.5**
CN2 Changchun 41.30 34 P **P** **14 11 25.5 -2.1**
CN2 PP **PP** **14 13 06.6 +3.7**
CN2 S **S** **14 17 39.1 -2.9**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 pmax pmax
comp=Z,500nm,4.0s
CN2 L L
comp=Z,31µm,14.0s
CN2 L L
comp=Z,30µm,14.0s
CN2 L L
comp=Z,31µm,14.0s
JMN Monobe 41.60 52 P **P** **14 11 28.2 -2.1**
JMN IAmb IAmb 14 11 46.4
comp=Z,294nm,1.6s
JMN Monobe 41.60 52 P **P** **14 11 31.2 +0.9**
GHWR Ruwais 41.78 293 P **P** **14 11 34.6 +2.8**
GHWR P **P** **14 11 34.6 +2.8**
GHWR P **P** **14 11 34.6 +2.8**
FITZ Fitzroy Crossi 42.33 134 P **P** **14 11 36.7 +0.4**
comp=Z,5.5nm,2.3s
FITZ Fitzroy Crossi 42.33 134 LR LR 14 29 07.6
comp=Z,5µm,21.3s,baz=312,slow=36
FITZ Fitzroy Crossi 42.33 134 P **P** **14 11 32.6 -3.7**
HIA Hailar 42.62 24 P **P** **14 11 34.9 -3.4**
HIA Hailar 42.62 24 IAMs_20 IAMs_20 14 32 11.7
comp=Z,25µm,20.0s
HILR Hailar Array B 42.85 24 P **P** **14 11 37.4 -2.9**
comp=Z,7.2nm,0.8s,baz=213,slow=7.9,SNR=5.4
comp=Z,7.2nm,0.8s
ZALV Zalesovo Beam 42.86 351 P **P** **14 11 37.3 -2.9**
comp=Z,2.7nm,0.6s,baz=177,slow=8.9,SNR=13
ZALV LR LR 14 33 40.3
comp=Z,7µm,18.0s,baz=169,slow=42
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 42.86 351 P **P** **14 11 37.2 -3.0**
SLWR Sila 42.87 293 P **P** **14 11 43.0 +2.3**
SLWR P **P** **14 11 43.0 +2.3**
KNRA Kununurra 43.08 129 P **P** **14 11 41.7 -0.8**
comp=Z,34nm,1.4s
MTN Manton Dam 43.35 123 P **P** **14 11 45.2 +0.5**
comp=Z,11nm,1.9s
BNX BinXian 43.62 33⇑P P 14 11 51.8 +5.3
BNX pP pwP 14 11 54.8 +2.9
BNX PP **PcP** **14 13 35.5 +1.6**
BNX S **S** **14 18 22.9 +6.7**
BNX sS sS 14 18 28.9 +10
BNX pmax pmax
comp=Z,120nm,1.2s
BNX pmax pmax
comp=Z,730nm,5.2s
BNX L L
comp=Z,42µm,13.0s
BNX L L
comp=Z,25µm,14.6s
BNX L L
comp=Z,49µm,13.1s
MDJ Mudanjiang 44.12 36 IAMs_20 IAMs_20 14 33 39.7
comp=Z,20µm,19.0s
MDJ Mudanjiang 44.12 36 P **P** **14 11 52.0 +1.5**
MDJ pmax pmax
comp=Z,12nm,1.1s
MDJ pmax pmax
comp=Z,510nm,5.9s
MDJ L L
comp=Z,16µm,14.1s
MDJ L L
comp=Z,21µm,14.2s
MDJ L L
comp=Z,44µm,12.9s
KDU Kakadu 44.37 122 P **P** **14 11 52.7 -0.1**
comp=Z,7.4nm,1.3s
MEEK Meekatharra 44.51 149 P **P** **14 11 54.0 +0.1**
comp=Z,129nm,1.1s
MEEK Meekatharra 44.51 149 P **P** **14 11 54.6 +0.8**
INU Inuyama 44.61 51 IAMs_20 IAMs_20 14 32 52.9
comp=Z,15µm,18.0s
INU Inuyama 44.61 51 P **P** **14 11 55.9 +1.3**
JGF Kuroka 44.96 51 P **P** **14 11 59.7 +2.3**
USRK Ussuriysk Ar. 45.28 37 P **P** **14 11 57.4 -2.3**
comp=Z,5.8nm,1.0s,baz=233,slow=9.4,SNR=5.0
comp=Z,5.8nm,1.0s
USRK Ussuriysk Ar. 45.28 37 P **P** **14 11 58.6 -1.2**
MORW Morawa 45.37 154 P **P** **14 12 02.3 +1.7**
comp=Z,45nm,1.5s
BVAR Borovoye Array 45.66 339 P **P** **14 11 59.9 -2.8**
comp=Z,1.6nm,0.6s,baz=134,slow=6.4,SNR=6.7
comp=Z,1.6nm,0.6s
BORK Borovoye 45.70 339 P **P** **14 12 00.5 -2.5**
BORK IAMs_20 IAMs_20 14 34 18.7
comp=Z,17µm,21.0s
MAJO Matsushiro 45.94 50 P **P** **14 12 04.4 -0.8**
MJAR Matsushiro Arr 45.94 50 P **P** **14 12 02.8 -2.3**
comp=Z,2.3nm,0.7s,baz=256,slow=9.9,SNR=7.1
comp=Z,2.3nm,0.7s
MJAR Matsushiro Arr 45.94 50 P **P** **14 12 04.6 -0.6**
MJAR IAmb IAmb 14 12 21.3
comp=Z,115nm,1.6s
JHJ Hachijo jima 2 46.05 55 LR LR 14 32 25.6
comp=Z,9µm,19.1s,baz=264,slow=38
HEH HeiHe 46.66 28 *e*P **P** **14 12 07.3 -3.3**
HEH PP **PP** **14 13 56.0 -4.3**
HEH S **S** **14 18 58.0 -2.1**
HEH HeiHe 46.66 28 SS SS 14 22 28.1 +1.8
HEH pmax pmax
comp=Z,33nm,1.0s
HEH pmax pmax
comp=Z,730nm,6.6s
HEH LR LR
comp=N,24µm,21.6s
HEH LR LR
comp=E,36µm,20.0s
HEH LR LR
comp=Z,53µm,15.2s
JCJ Chichijima 46.71 64 LR LR 14 31 07.4
comp=Z,5µm,21.6s,baz=260,slow=35
BLDU Ballidu 46.99 154 P **P** **14 12 17.3 +3.9**
comp=Z,74nm,2.3s
BLDU Ballidu 46.99 154 P **P** **14 12 15.4 +2.0**
AB31 Akbulak array 47.33 329 IAmb IAmb 14 12 41.4
comp=Z,131nm,1.4s
ABKAR Akbulak array 47.33 329 P **P** **14 12 12.8 -3.0**
JAY Jayapura 47.54 104 P P 14 12 23.4 +5.4
KLBR Kellerberrin 48.29 154 P **P** **14 12 23.8 +0.4**
RAYN Ar Rayn 48.43 291 P **P** **14 12 24.7 -0.2**
RAYN Ar Rayn 48.43 291 P **P** **14 12 27.2 +2.3**
RAYN Ar Rayn 48.43 291 P **P** **14 12 20.8 -4.1**
RAYN Ar Rayn 48.43 291 IAMs_20 IAMs_20 14 34 04.6
comp=Z,16µm,20.0s
RAYN Ar Rayn 48.43 291⇓P P 14 12 30.3 +5.5
GUMO Guam 48.57 82 LR LR 14 30 49.2
comp=Z,4µm,21.6s,baz=282,slow=34
WRKA Warakurna 48.87 139 P **P** **14 12 24.7 -3.4**
NWAO Narrogin (SRO) 49.22 155 P **P** **14 12 34.8 +4.2**
comp=Z,154nm,2.4s
NWAO Narrogin (SRO) 49.22 155 LR LR 14 33 10.5
comp=Z,3µm,21.8s,baz=326,slow=36
NWAO Narrogin (SRO) 49.22 155 P P 14 12 39.7 +9.1

H01W3 **Cape Leeuwin H** 49.79 159 T T 15 07 37.8
baz=329,slow=76,SNR=5.9
H01W2 **Cape Leeuwin H** 49.80 159 T T 15 07 38.4
baz=329,slow=76,SNR=5.8
H01W1 **Cape Leeuwin H** 49.81 159 T T 15 07 45.8
baz=329,slow=76,SNR=5.2
WB0 Warramunga Arr 49.82 129 P P 14 12 32.8 -2.6
WB9 Warramunga Arr 49.82 129 P P 14 12 32.4 -3.0
WR1 Warramunga Arr 49.88 129 P P 14 12 32.6 -3.3
WRA Warramunga Arr 49.88 129 P P 14 12 32.8 -3.0
comp=Z,4.7nm,0.9s,baz=306,slow=8.6,SNR=33
WRA LR LR 14 34 34.5
comp=Z,4µm,20.2s,baz=304,slow=37
comp=Z,4.7nm,0.9s
WRA Warramunga Arr 49.88 129 P P 14 12 33.6 -2.2
WRAB Tennant Creek 49.88 129 P P 14 12 36.2 +0.3
WB2 Warramunga Arr 49.89 129 P P 14 12 32.4 -3.6
WR8 Warramunga Arr 50.01 129 P P 14 12 32.8 -4.0
WR8 IAmb IAmb 14 12 54.8
comp=Z,81nm,1.1s
ATD Arta Tunnel 51.07 275 LR LR 14 31 44.9
comp=Z,199nm,20.1s,baz=82,slow=33
ERM Erimo 51.51 45 IAMs_20 IAMs_20 14 38 41.4
comp=Z,21µm,18.0s
ERM Erimo 51.51 45 P P 14 12 50.2 +2.3
AS15 Alice Springs 51.78 133 P P 14 12 46.8 -3.4
ASAR Alice Springs 51.80 133 P P 14 12 47.2 -3.0
comp=Z,3.1nm,0.8s,baz=313,slow=6.7,SNR=42
ASAR LR LR 14 37 10.5
comp=Z,4µm,21.0s,baz=296,slow=39
comp=Z,3.1nm,0.8s
ASAR Alice Springs 51.80 133 P P 14 12 49.9 -0.4
AS31 Alice Springs 51.80 133 P P 14 12 47.1 -3.2
AS31 Alice Springs 51.80 133 P P 14 12 47.3 -3.0
AS17 Alice Springs 51.86 133 P P 14 12 47.8 -3.0
JKA Kamikawa-asahi 51.93 42 P P 14 12 48.3 -2.7
GNI Garni 52.45 312 P P 14 12 54.8 -0.4
GNI Garni 52.45 312 P P 14 12 56.2 +1.0
GNI P P 14 12 56.2 +1.0
GNI Garni 52.45 312 ⇓P P 14 13 02.4 +7.2
GNI Garni 52.45 312 P P 14 12 55.5 +0.3
GNI Garni 52.45 312 P P 14 12 54.5 -0.7
HAKT HAKKARI 52.48 309 P P 14 12 52.8 -2.7
ARTI Arti 52.76 335 LR LR 14 39 41.8
comp=Z,8µm,18.2s,baz=334,slow=41
ARTI Arti 52.76 335 P P 14 12 54.0 -2.9
ARTI Arti 52.76 335 ⇑P P 14 12 54.2 -2.7
FORT Forrest 52.86 144 P P 14 13 00.3 +2.2
comp=Z,30nm,1.4s
YSS Yuzhno-Sakhali 53.20 39 P P 14 12 59.0 -1.3
YSS IAmb IAmb 14 13 15.7
comp=Z,148nm,1.3s
YSS Yuzhno-Sakhali 53.20 39 P P 14 12 59.5 -0.8
DIGO Kars 53.53 312 P P 14 13 04.4 +1.1
QIS Mount Isa 54.32 126 P P 14 13 09.8 +0.9
comp=Z,50nm,1.6s
QIS Mount Isa 54.32 126 P P 14 13 11.3 +2.4
EPOS Posof 54.32 313 P P 14 13 11.5 +2.6
KBZ Khabaz 54.90 316 P P 14 13 11.2 -1.6
comp=Z,1.5nm,0.5s,baz=110,slow=4.3,SNR=5.5
comp=Z,1.5nm,0.5s
BATM Batumi 55.09 313 ⇑P P 14 13 16.3 +2.0
KVAR Kislovodsk Arr 55.11 316 LR LR 14 40 01.9
comp=Z,7µm,21.2s,baz=249,slow=40
KIV Kislovodsk 55.12 316 ⇓P P 14 13 16.2 +1.7
KIV Kislovodsk 55.12 316 *i* P P 14 13 13.7 -0.9
SNR=18
KIV Kislovodsk 55.12 316 P P 14 13 15.5 +1.0
KIV P P 14 13 15.5 +1.0
KIV P P 14 13 15.5 +1.0
KIV Kislovodsk 55.12 316 P P 14 13 11.9 -2.7
KIV IAmb IAmb 14 13 44.6
comp=Z,118nm,1.0s
KIV IAMs_20 IAMs_20 14 40 50.9
comp=Z,13µm,21.0s
KIV Kislovodsk 55.12 316 ⇓P P 14 13 20.0 +5.4
KIV Kislovodsk 55.12 316 P P 14 13 16.1 +1.6
KIV S S 14 21 00.6 +2.8
KIV Kislovodsk 55.12 316 P P 14 13 12.7 -1.8
comp=Z,1µmcomp=Z,102nm,1.1s
KIV Kislovodsk 55.12 316 P P 14 13 16.4 +1.8
YAK Yakutsk 56.05 19 IAMs_20 IAMs_20 14 39 35.2
comp=Z,23µm,20.0s
YAK Yakutsk 56.05 19 P P 14 13 17.7 -3.0
KELT Kelkit 56.50 311 P P 14 13 26.4 +1.7
ASF Jabal al Asfar 56.95 301 LR LR 14 41 39.8
comp=Z,5µm,18.3s,baz=28,slow=40
ARPR Arapgir-MALATY 56.95 309 P P 14 13 25.2 -2.6
ARPR IAmb IAmb 14 13 56.1
comp=Z,163nm,1.2s
ARPR IAMs_20 IAMs_20 14 40 44.6
comp=Z,11µm,21.0s
ARPR Arapgir-MALATY 56.95 309 P P 14 13 29.3 +1.5
NRIK Noril'sk 57.73 357 P P 14 13 30.1 -2.5
comp=Z,3.5nm,0.8s,baz=137,slow=4.7,SNR=4.4
NRIK LR LR 14 42 10.5
comp=Z,8µm,20.2s,baz=174,slow=40
comp=Z,3.5nm,0.8s
MSBI Mazada 58.16 300 P P 14 13 33.9 -2.3
MMLI Mount Malkishu 58.22 301 P P 14 13 36.6 -0.1
MMAI Mount Meron Ar 58.30 302 P P 14 13 36.5 -0.8
comp=Z,0.3nm,0.3s,baz=30,slow=33,SNR=1.9
comp=Z,0.3nm,0.3s
HRFI Mount Harif 58.32 298 P P 14 13 38.9 +1.5
EIL Elat 58.36 298 LR LR 14 42 41.7
comp=Z,8µm,19.4s,baz=104,slow=40
EIL Elat 58.36 298 P P 14 13 36.4 -1.3
BNN Bunyan 58.81 308 P P 14 13 37.9 -3.0
KRVT Keravat (AS076 58.86 102 LR LR 14 38 20.1
comp=Z,293nm,20.5s,baz=227,slow=35
INKA Innaminka 59.17 132 P P 14 13 42.3 -1.0
CTA Charters Tower 59.49 122 P P 14 13 45.8 +0.1
comp=Z,12nm,1.5s
CTA Charters Tower 59.49 122 LR LR 14 40 39.9
comp=Z,2µm,22.0s,baz=289,slow=37
CTAO Charters Tower 59.49 122 P P 14 13 43.4 -2.3
CTAO Charters Tower 59.49 122 ⇑P P 14 13 48.5 +2.9
CTAO Charters Tower 59.49 122 P P 14 13 48.3 +2.6
LODK Lodwar 59.65 267 P P 14 13 51.1 +4.1
SNR=5.8
CSS Mathiatis 60.23 304 P P 14 13 47.8 -2.8
comp=Z,777nmcomp=Z,39nm,1.3s
KIRS Kirsehir-Merke 60.34 308 ⇓P P **14 13 48.0 -3.3**
BR104 Keskin Array S 60.64 309 P P 14 13 49.3 -4.2
BR131 Keskin Array S 60.64 309 P P 14 13 48.7 -4.8
BRTR Keskin Array B 60.64 309 P P 14 13 49.5 -4.0
comp=Z,7.2nm,0.7s,baz=123,slow=8.0,SNR=24
BRTR LR LR 14 43 42.9
comp=Z,7µm,20.6s,baz=104,slow=40
comp=Z,7.2nm,0.7s
BRTR Keskin Array B 60.64 309 P P 14 13 48.5 -5.0
BR105 Keskin Array S 60.66 309 P P 14 13 51.0 -2.6
comp=Z,250nmcomp=Z,37nm,0.8s
BR106 Keskin Array S 60.66 309 P P 14 13 49.5 -4.1
BZK Bozkurt 60.76 312 ⇑P P 14 13 56.1 +2.0
BZK Bozkurt 60.76 312 ⇑P P 14 14 01.0 +7.0
BZK Bozkurt 60.76 312 P P 14 13 53.2 -0.9
comp=Z,2µmcomp=Z,139nm,0.9s
KKUL Konya-Kulu 61.11 308 P P 14 13 57.1 +0.5
QLP Quilpie 61.11 129 P P 14 13 57.0 +0.4
comp=Z,130nm,1.6s
QLP Quilpie 61.11 129 ⇓P P **14 13 59.9 +3.2**
QLP Quilpie 61.11 129 P P 14 13 57.3 +0.7
HTT Hallett 61.36 139 P P 14 13 58.4 +0.2
comp=Z,27nm,1.7s
HTT Hallett 61.36 139 ⇑P P **14 14 01.5 +3.3**
STKA Stephens Creek 62.18 136 P P 14 14 01.1 -2.7
STKA Stephens Creek 62.18 136 P P 14 14 00.6 -3.2
comp=Z,2.9nm,0.7s,baz=311,slow=9.3,SNR=8.0
STKA LR LR 14 44 22.6
comp=Z,3µm,19.1s,baz=296,slow=39
comp=Z,2.9nm,0.7s
STKA Stephens Creek 62.18 136 P P 14 14 06.2 +2.4
OBN Obninsk 62.62 327 LR LR 14 45 34.5
comp=Z,6µm,18.2s,baz=104,slow=40
OBN Obninsk 62.62 327 P P 14 14 04.8 -1.5
OBN Obninsk 62.62 327 P P 14 14 05.9 -0.4
comp=Z,3µmcomp=Z,76nm,1.2s
MA2 Magadan 62.93 28 P P 14 14 05.7 -2.7
MA2 IAmb IAmb 14 14 23.1
comp=Z,134nm,1.1s
MA2 IAMs_20 IAMs_20 14 45 28.3
comp=Z,15µm,20.0s
MA2 Magadan 62.93 28 ⇑P P **14 14 06.8 -1.5**
MA2 Magadan 62.93 28 P P 14 14 06.8 -1.5
comp=Z,2µmcomp=Z,141nm,1.2s
MA2 Magadan 62.93 28 P P 14 14 07.2 -1.1
TIXI Tiksi 63.27 11 IAMs_20 IAMs_20 14 45 14.9
comp=Z,14µm,21.0s
YLV Yalova 64.00 309 P P 14 14 14.3 -1.6
comp=Z,992nmcomp=Z,44nm,1.2s
KLYT Kilyos 64.33 310 P P 14 14 17.5 -0.4
comp=Z,59nm,0.8s
PEA0B Petropavlovsk- 64.35 36 P P 14 14 14.4 -3.5
PETK Petropavlovsk- 64.35 36 P P 14 14 14.0 -3.8
comp=Z,1.3nm,0.8s,baz=215,slow=7.0,SNR=4.0
comp=Z,1.3nm,0.8s
PETK Petropavlovsk- 64.35 36 P P 14 14 15.1 -2.7
CMSA Cobar Meteorol 64.85 133 P P 14 14 19.4 -2.1
CMSA Cobar Meteorol 64.85 133 P P 14 14 18.0 -3.4
AYDN Tasoluk 64.87 306 P P 14 14 23.4 +1.8
PET Petropavlovsk 64.89 37 P P 14 14 18.8 -2.5
PET IAMs_20 IAMs_20 14 46 54.1
comp=Z,13µm,18.0s
PET Petropavlovsk 64.89 37 P P 14 14 22.2 +0.9
PET Petropavlovsk 64.89 37 P P 14 14 22.4 +1.1
CTYL Yalikoy Yolu 64.92 310 P P 14 14 17.9 -3.9
BAL3X Bal3x, Balta 64.95 318 P P 14 14 16.6 -5.2
MBAR Mbarara 65.02 264 LR LR 14 41 05.6
comp=Z,4µm,19.9s,baz=68,slow=34
BALB Balikesir 65.04 308 P P 14 14 19.4 -3.2
BALB IAmb IAmb 14 14 40.1
comp=Z,92nm,1.4s
TIRR Tirgusor 65.20 314 ⇓P P 14 14 32.0 +8.5
TIRR Tirgusor 65.20 314 P P 14 14 22.8 -0.8
comp=Z,871nmcomp=Z,24nm,0.9s
TPGR Topolog 65.26 314 ⇑P P **14 14 24.6 +0.7**
PSN Preselentsi 65.29 313 P P 14 14 32.8 +8.6
ARPS Mount Arapiles 65.31 140 P P 14 14 28.9 +4.6
CFR Carcaliu 65.50 314 ⇓P P **14 14 26.0 +0.6**
AKASG Malin Array Be 65.72 320 P P 14 14 24.9 -1.8
comp=Z,1.9nm,0.7s,baz=89,slow=4.9,SNR=8.7
comp=Z,1.9nm,0.7s
AKBB Malin Array Si 65.72 320 P P 14 14 24.7 -2.1
KIEV Kiev 65.73 320 *i* P P **14 14 22.6 -4.2**
SNR=9.6
KIEV Kiev 65.73 320 P P 14 14 27.7 +0.9
KIEV Kiev 65.73 320 IAMs_20 IAMs_20 14 46 10.2
comp=Z,10µm,21.0s
KIEV Kiev 65.73 320 P P 14 14 25.0 -1.8
comp=Z,4µmcomp=Z,97nm,1.0s
SORM Soroca 65.81 318 ⇑P P **14 14 27.8 +0.4**
SORM Soroca 65.81 318 P P 14 14 26.4 -1.0
comp=Z,41nm,1.0s
EIDS Eidsvold 65.87 125 P P 14 14 28.5 +0.3
comp=Z,27nm,1.7s
EIDS Eidsvold 65.87 125 P P 14 14 25.9 -2.3
PETR Petresti 66.21 315 ⇑P P **14 14 30.5 +0.5**
JMIB Yambol 66.33 311 P P 14 14 40.1 +9.2
LUBAR Lubar, Ukraine 66.50 319 P P 14 14 29.7 -2.1
MI29 MI29, Kamyanyy 66.53 320 P P 14 14 29.6 -2.4
comp=Z,412nm,1.3s
VRI Vrincioaia 66.57 315 ⇑P P **14 14 34.1 +1.7**
VRI Vrincioaia 66.57 315 P P 14 14 31.6 -0.8
comp=Z,1µmcomp=Z,74nm,1.4s
VRI Vrincioaia 66.57 315 P P 14 14 33.8 +1.4
PLOR Plostina 66.63 315 ⇑P P **14 14 30.7 -2.1**
TESR Tescani 66.71 316 ⇑P P 14 14 42.6 +9.3
TESR Tescani 66.71 316 P P 14 14 31.2 -2.1
comp=Z,1µmcomp=Z,55nm,1.6s
MI28 MI28,Pidlybu 66.73 321 P P 14 14 30.9 -2.4
ONER Baraj Valea Uz 66.86 315 ⇓P P 14 14 43.6 +9.3
MLR Muntele Rosu 67.07 314 ⇓P P **14 14 35.6 -0.2**
MLR Muntele Rosu 67.07 314 IAmb IAmb 14 14 54.9
comp=Z,94nm,1.2s
MLR IAMs_20 IAMs_20 14 47 17.3
comp=Z,15µm,22.0s
MLR Muntele Rosu 67.07 314 P P 14 14 34.5 -1.3
comp=Z,1µmcomp=Z,71nm,1.3s
MLR Muntele Rosu 67.07 314 P P 14 14 37.0 +1.3
KMPD K-Podol'skiy 67.12 318 P P 14 14 33.7 -2.1
BIZ Bicaz 67.14 316 ⇑P P **14 14 38.2 +2.2**
IDI Anoyia 67.15 303 LR LR 14 49 46.4
comp=Z,2µm,20.1s,baz=83,slow=41
DOPR Dopca 67.52 315 ⇓P P **14 14 39.9 +1.5**
VOIR 67.69 314 ⇓P P 14 14 45.9 +6.3
VOIR 67.69 314 P P 14 14 40.2 +0.6
PLVB Pleven 67.81 312 ⇓P P 14 14 48.6 +8.3
BURAR Bucovina Array 67.82 317 ⇓P P **14 14 42.0 +1.6**
BURAR Bucovina Array 67.82 317 P P 14 14 36.9 -3.5
BUR08 Bucovina Ar. S 67.84 317 P P 14 14 37.3 -3.2
HNR Honiara 67.85 105 LR LR 14 47 13.1
comp=Z,23nm,19.7s,baz=12,slow=39
RNPP5 Staryi Chortor 67.89 321 P P 14 14 40.7 +0.1
IMMV Iera Moni Meta 67.90 304 P P 14 14 43.6 +2.6
RNPP9 Sopachiv 67.91 321 P P 14 14 41.5 -0.2
RNPP8 Varash 67.92 321 P P 14 14 39.9 -0.9
TOO Toolangi 68.12 139 P P 14 14 44.3 +2.0
comp=Z,18nm,1.6s
TOO Toolangi 68.12 139 P P 14 14 41.7 -0.6
TOO Toolangi 68.12 139 ⇑P P 14 14 50.3 +8.0
LVZ Lovozero 68.26 339 IAMs_20 IAMs_20 14 48 01.0
comp=Z,11µm,20.0s
PAIG Paliouri 68.29 308 P P 14 14 42.6 -0.7
MMB Musomishta 68.32 310 P P 14 14 51.6 +8.0
MPEP Malo Peshtene 68.45 312 P P 14 14 52.4 +8.1
LOT Lotru 68.59 314 ⇑P P **14 14 45.7 +0.4**
LOT Lotru 68.59 314 P P 14 14 45.7 +0.4
KKB Krupnik 68.80 310 P P 14 14 55.0 +8.4
BMR Baia Mare 68.99 317 P P 14 14 50.8 +3.3
MARR Marisel-Cluj 69.15 316 ⇑P P **14 14 50.1 +1.4**
CAN Canberra 69.22 135 P P 14 14 48.2 -1.0
comp=Z,51nm,1.6s
CAN Canberra 69.22 135 P P 14 14 48.9 -0.3
CAN IAmb IAmb 14 15 14.8
comp=Z,206nm,1.8s
GZR Gura Zlata 69.28 314 ⇑P P **14 14 51.9 +2.3**
GRG Griva 69.31 309 P P 14 14 49.9 +0.1
DRGR 69.44 316 ⇑P P **14 14 51.4 +0.9**
DRGR 69.44 316 P P 14 14 51.7 +1.2
HERR Herculane 69.50 314 ⇓P P **14 14 48.9 -1.9**
H04N2 CROZET ISLANDS 69.50 211 T T 15 31 31.7
baz=48,slow=76,SNR=5.7
H04N1 CROZET ISLANDS 69.51 211 T T 15 31 28.8
baz=48,slow=76,SNR=8.0
H04N3 CROZET ISLANDS 69.52 211 T T 15 31 41.4
baz=48,slow=76,SNR=7.1
PABE Paberze 69.69 325 P P 14 14 53.3 +1.6
KWP Kalwaria Pacla 69.70 319 *eP* P 14 15 00.2 +8.2
KWP *eL* L 14 53 26.8
FIA1 FINESS Array S 69.73 331 P P 14 14 48.9 -3.0
FINES FINESS Array B 69.73 331 P P 14 14 49.1 -2.8
comp=Z,2.3nm,0.6s,baz=106,slow=6.7,SNR=15
comp=Z,2.3nm,0.6s
UZHM Uzhgorod 69.88 318 P P 14 14 56.9 +3.9
H04S1 CROZET ISLANDS 69.92 210 T T 15 32 26.7
baz=47
SUW Suwalki 69.92 323 *eP* P 14 15 01.9 +8.7
SUW *eS* **S 14 23 56.0 -7.4**
SUW *eL* L 14 52 29.4
SUW Suwalki 69.92 323 IAMs_20 IAMs_20 14 49 51.4
comp=Z,12µm,21.0s
H04S3 CROZET ISLANDS 69.93 210 T T 15 32 27.9
baz=47
H04S2 CROZET ISLANDS 69.94 210 T T 15 32 27.3
baz=47
MDVR Moldovita 70.00 313 ⇓P P **14 14 58.5 +4.5**
BZS Buzias 70.11 314 P P 14 14 52.9 -1.7
SIRR Siria 70.12 315 ⇑P P **14 14 56.7 +2.1**
OHR Ohrid 70.52 310 *i* P P 14 14 46.9 -10
VADS Vadso 70.84 341 *eP* P 14 15 05.7 +7.1
VADS IVmB_BB 14 15 09.4
comp=Z,791nm,2.9s
VADS *eS* **S 14 24 18.8 +5.1**
VADS *eSS* **SS 14 28 53.1 +7.4**
VADS IVMs_BB IVMs_BB 14 49 41.6
comp=Z,4µm,21.9s
R9F13 Warsaw-Wawer 70.94 321 *eP* P 14 15 10.0 +11
BEL Belsk 71.12 321 *eP* P 14 15 10.4 +10
BEL *eS* **S 14 24 23.8 +6.3**
BEL *eL* L 14 53 57.9
NIE Niedzica 71.25 318 *eP* P 14 15 08.8 +7.3
NIE *eS* **S 14 24 15.8 -3.3**
NIE *eL* L 14 52 55.1
LSZ Lusaka 71.44 249 LR LR 14 43 28.8
comp=Z,4µm,19.8s,baz=74,slow=33
KEV Kevo 71.50 340 ⇑P P 14 15 08.4 +5.8
KEV Kevo 71.50 340 P P 14 15 03.5 +1.0
KEV S S **14 24 21.2 0.0**
KEV Kevo 71.50 340 P P 14 15 04.1 +1.6
OJC Ojcow 71.62 319 *eP* P 14 15 10.3 +6.6
OJC *eS* **S 14 24 26.8 +3.4**
OJC *eL* L 14 53 36.8
OJC Ojcow 71.62 319 P P 14 15 00.9 -2.7
PDG Podgorica 71.70 311 P P 14 15 06.8 +2.5
ARA0 ARCESS Array S 71.95 340 *eP* P 14 15 12.5 +7.2
ARA0 IVmB_BB 14 15 20.6
comp=Z,1µm,3.9s
ARA0 *eS* **S 14 24 32.2 +5.8**
ARA0 *eSS* **SS 14 29 09.0 +6.3**
ARA0 IVMs_BB IVMs_BB 14 50 01.6
comp=Z,6µm,20.0s
ARCES ARCESS Array B 71.95 340 P P 14 15 02.8 -2.4
comp=Z,0.9nm,0.5s,baz=73,slow=4.2,SNR=4.0
comp=Z,0.9nm,0.5s
BILL Bilibino 72.17 22 IAMs_20 IAMs_20 14 48 39.5
comp=Z,13µm,19.0s
MORH Mrgy, Hungar 72.21 315 ⇑P P **14 15 08.3 +1.0**
MORH Mrgy, Hungar 72.21 315 P P 14 15 07.7 +0.4
KTK1 Kautokeino 72.60 339 *eP* P 14 15 15.8 +6.7
KTK1 IVmB_BB 14 15 24.2
comp=Z,881nm,3.8s
KTK1 *eS* **S 14 24 37.1 +3.1**
KTK1 *eSS* **SS 14 29 18.1 +5.3**
KTK1 IVMs_BB IVMs_BB 14 49 06.3
comp=Z,6µm,22.1s
POGA Pongola 72.65 236 P P 14 15 10.1 0.0
OKC Ostrava-Krasne 72.67 319 *eS* **S 14 24 32.6 -2.8**
OKC AMS AMS 14 53 20.0
comp=Z,5µm,20.9s
MATP Matopo 72.83 244 LR LR 14 43 34.6
comp=Z,1µm,21.8s,baz=68,slow=33
STEB Steborice 72.91 319 *eP* **P 14 15 12.7 +1.3**
JAVC Velka Javorina 72.94 318 *eP* **P 14 15 09.2 -2.5**
JAVC Velka Javorina 72.94 318 *eP* P 14 15 21.3 +10
JAVC *eS* **S 14 24 37.7 -1.0**
MPLH Magyarpolny 72.99 316 P P 14 15 11.8 -0.1
comp=Z,3µmcomp=Z,156nm,1.5s
MPLH Magyarpolny 72.99 316 P P 14 15 13.6 +1.7
MORC Moravsky Berou 73.06 319 ⇑P P **14 15 09.5 -2.8**
MORC Moravsky Berou 73.06 319 IAmb IAmb 14 15 30.1
comp=Z,123nm,1.4s
MORC Moravsky Berou 73.06 319 *eP* **P 14 15 08.9 -3.4**
MORC Moravsky Berou 73.06 319 *eP* P 14 15 20.9 +8.6
MORC *eS* **S 14 24 36.7 -3.2**
MORC Moravsky Berou 73.06 319 P P 14 15 13.8 +1.5
MODS Modra-Piesok 73.19 317 P P 14 15 13.8 +0.7
MODS Modra-Piesok 73.19 317 *eP* P 14 15 21.7 +8.6
BLY Banja Luka 73.22 313 P P 14 15 12.8 -0.5
KRLC Kraliky 73.56 319 *eP* **P 14 15 17.4 +2.2**
KRLC AMS AMS 14 51 10.0
comp=Z,7µm,22.1s
KRLC Kraliky 73.56 319 P P 14 15 16.8 +1.6
MATE Matera 73.63 309 P P 14 15 15.1 -0.7
TIP Timpagrande 73.63 308 P P 14 15 16.0 +0.1
VRAC Vranov 73.66 318 LR LR 14 52 38.4
comp=Z,3µm,19.6s,baz=92,slow=40
VRAC Vranov 73.66 318 *eP* P 14 15 22.4 +6.6
VRAC *eS* **SKiKP 14 24 45.1 -1.3**
JETT Jettan, Norway 73.70 339 *eP* P 14 15 22.9 +7.2
JETT IVmB_BB 14 15 36.6
comp=Z,1µm,7.1s
JETT *eS* **S 14 24 52.1 +5.6**
JETT *eSS* **SS 14 29 35.9 +6.4**
JETT IVMs_BB IVMs_BB 14 49 39.2
comp=Z,6µm,24.2s
KRUC Moravsky 73.79 318 *eP* P 14 15 23.1 +6.5
KRUC *eS* **SKiKP 14 24 45.1 -1.5**
RONA Rosalia, Austr 73.84 316 *i* P **P 14 15 14.7 -2.2**
comp=Z,16nm,1.2s
DPC Dobruska-Polom 73.86 319 *eP* P 14 15 22.1 +5.1
DPC *eS* **SKiKP 14 24 38.9 -7.8**
DPC AMS AMS 14 51 40.0
comp=Z,8µm,22.7s
DPC Dobruska-Polom 73.86 319 P P 14 15 18.9 +1.9
KOGS Kog 73.87 315 *eP* P 14 15 24.4 +7.3
KOGS *eS* **SKiKP 14 24 43.6 -3.2**
KSP Ksiaz 73.88 320 *eP* P 14 15 26.8 +10
KSP *eS* **S 14 24 48.3 -0.8**
KSP *eL* L 14 53 37.4
KSP Ksiaz 73.88 320 P P 14 15 17.4 +0.3
OSTC Ostas 73.93 319 AMS AMS 14 51 40.0
comp=Z,10µm,21.8s
WINA Alland / Wiene 74.00 317 *i* pP **P 14 15 17.6 -0.2**
SNR=9.6
HOPEN Hopen 74.02 347 *eP* P 14 15 25.4 +8.0
HOPEN IVmB_BB 14 15 40.3
comp=Z,955nm,3.7s
HOPEN *eS* **S 14 24 56.4 +6.6**
HOPEN *eSS* **SS 14 29 41.0 +7.0**
HOPEN IVMs_BB IVMs_BB 14 53 40.1
comp=Z,6µm,18.5s
CHVC Chvalec 74.03 319 *eP* **P 14 15 20.7 +2.7**
CHVC AMS AMS 14 51 50.0
comp=Z,10µm,22.2s
UPC Upice 74.06 319 *eP* **P 14 15 19.5 +1.4**
UPC *eS* **SKiKP 14 24 45.7 -1.3**
UPC AMS AMS 14 51 40.0
comp=Z,10µm,21.2s
UPC Upice 74.06 319 P P 14 15 18.6 +0.5
SHEM Shemya Is, Ala 74.10 38 LR LR 14 46 34.6
comp=Z,3µm,21.9s,baz=278,slow=35
CONA Conrad Observa 74.14 317 *i* P **P 14 15 17.8 -0.9**
comp=Z,52nm,1.8s
TRO Tromso 74.22 339 *eP* P 14 15 26.1 +7.5
TRO IVmB_BB 14 15 33.6
comp=Z,974nm,3.5s
TRO *eS* **S 14 24 58.9 +6.7**
TRO *eSS* **SS 14 29 43.0 +5.7**
TRO IVMs_BB IVMs_BB 14 50 31.1
comp=Z,6µm,24.0s
CEL Celeste 74.35 307 P P 14 15 21.8 +1.6
ARSA Arzberg 74.37 316 *i* P **P 14 15 19.0 -1.1**
comp=Z,46nm,1.6s,SNR=8.4
ARSA Arzberg 74.37 316 P P 14 15 18.2 -1.8
SOKA Soboth 74.71 315 *i* P **P 14 15 21.5 -0.7**
comp=Z,72nm,1.6s,SNR=7.9
BSD Bornholm Skovb 74.81 324 *i* P **P 14 15 26.6 +4.3**
BSD IAmb IAmb 14 15 34.6
comp=Z,23nm,0.7s
PRU Pruhonice 75.00 319 *eP* **P 14 15 26.1 +2.5**
PRU *eS* **SKiKP 14 24 54.8 +6.4**
PRU AMS AMS 14 52 30.0
comp=Z,7µm,21.2s
BJO1 Bjornoya 75.02 344 *eP* P 14 15 30.7 +7.5
BJO1 *eS* **S 14 25 06.9 +5.9**
BJO1 IVMs_BB IVMs_BB 14 54 49.4
comp=Z,4µm,23.0s
SESA Seetaler Alpe, 75.02 316 *i* pP pP 14 15 25.3 -0.4
SNR=6.5
OBKA Obir 75.05 315 *eP* **P 14 15 22.3 -1.7**
comp=Z,29nm,1.3s
LJU Ljubljana 75.08 315 *eP* P 14 15 31.3 +7.1
LJU *eS* **S 14 24 56.9 -5.8**
CKRC Cesky Krumlov 75.17 318 *eP* **P 14 15 26.1 +1.5**
CKRC *eS* **S 14 25 02.2 -1.4**
CKRC AMS AMS 14 54 00.0
comp=Z,8µm,20.6s
MOA Molln 75.21 317 *i* P **P 14 15 23.1 -1.8**
comp=Z,18nm,1.2s
MOA Molln 75.21 317 P P 14 15 26.1 +1.2
ZVC Zvikov 75.23 318 AMS AMS 14 52 20.0
comp=Z,7µm,22.5s
RICC Richard 75.28 319 *eP* P 14 15 30.0 +4.8
RICC AMS AMS 14 52 30.0
comp=Z,10µm,22.3s
FAUS Fauske 75.28 337 *eP* P 14 15 32.1 +7.3
FAUS IVmB_BB 14 15 44.9
comp=Z,1µm,2.3s
FAUS *eS* **S 14 25 09.9 +5.7**
FAUS *eSS* **SS 14 30 00.9 +7.4**
FAUS IVMs_BB IVMs_BB 14 50 43.8
comp=Z,4µm,18.6s
STEI Steigen 75.35 337 *eP* P 14 15 32.4 +7.2
STEI IVmB_BB 14 15 40.7
comp=Z,1µm,2.8s
STEI *eS* **S 14 25 10.5 +5.6**
STEI *eSS* **SS 14 30 00.3 +5.8**
STEI IVMs_BB IVMs_BB 14 50 25.3
comp=Z,6µm,23.2s
BRG Berggiesshubel 75.37 320 *eP* **P 14 15 27.2 +1.5**
comp=Z,313nm,2.5s,baz=87,slow=5.7
BRG Berggiesshubel 75.37 320 P P **14 15 23.3 -2.4**

BRG Berggiesshubel 75.37 320 *e*P **P** **14 15 23.2 -2.5**
BRG Amp 14 15 23.9
comp=Z,2.6nm,0.8s
BRG Berggiesshubel 75.37 320 P **P** **14 15 27.5 +1.8**
BRG Amp 14 15 28.4
comp=Z,8.3nm,1.0s
BRG Berggiesshubel 75.37 320 P P 14 15 30.7 +5.0
BRG Amp 14 15 31.6
comp=Z,7.5nm,0.9s
BRG Berggiesshubel 75.37 320 P P 14 15 34.9 +9.2
BRG Amp 14 15 43.6
comp=Z,42nm,1.1s
BRG Berggiesshubel 75.37 320 PP PP 14 18 03.0 -11
BRG Amp 14 18 17.8
comp=Z,5.5nm,1.1s
BRG Berggiesshubel 75.37 320 S **S** **14 25 06.0 +0.2**
BRG Berggiesshubel 75.37 320 SS SS 14 30 04.0 +8.3
DEL Delary 75.42 325 *i* P P 14 15 30.7 +4.9
RUE Ruedersdorf 75.46 321 *e*P **P** **14 15 27.7 +1.6**
comp=Z,94nm,0.9s,baz=87,slow=5.7
MOR8 Moi Rana 75.53 336 *e*P P 14 15 32.5 +6.1
MOR8 IVmB_BB 14 15 36.3
comp=Z,1µm,2.8s
MOR8 *e*S **S** **14 25 12.0 +5.0**
MOR8 *e*SS **SS** **14 30 01.7 +4.4**
MOR8 IVMs_BB IVMs_BB 14 55 07.1
comp=Z,4µm,14.9s
VAE Valguarnera 75.56 306 LR LR 14 52 18.8
comp=Z,1µm,20.7s,baz=73,slow=39
GEC2 GERESS Array S 75.57 318 *e*P **P** **14 15 28.1 +1.1**
comp=Z,392nm,2.5s,baz=87,slow=5.7
GEC2 *e*L L 14 54 39.4
comp=Z,7µm,21.3s
GERES GERESS Array B 75.57 318 P **P** **14 15 24.2 -2.8**
comp=Z,3.8nm,0.8s,baz=86,slow=5.6,SNR=21
GERES LR LR 14 54 50.2
comp=Z,5µm,19.4s,baz=94,slow=41
comp=Z,3.8nm,0.8s
HFS Hagfors 75.59 329 P **P** **14 15 24.0 -2.7**
comp=Z,2.4nm,0.7s,baz=134,slow=4.3,SNR=7.1
comp=Z,2.4nm,0.7s
BIOA Bad Ischl, Aus 75.64 316 *i* P **P** **14 15 25.8 -1.5**
comp=Z,39nm,1.8s
KHC Kasperske Hory 75.64 318 *e*P **P** **14 15 24.5 -2.9**
KHC *ex* x 14 15 30.1
KHC *e*S **S** **14 25 04.9 -4.0**
KHC AMS AMS 14 55 10.0
comp=Z,4µm,20.8s
LUNU Lund 75.65 325 *i* P P 14 15 32.0 +4.8
MYKA Terra Mystica 75.67 315 *e*P **P** **14 15 25.9 -1.7**
comp=Z,46nm,1.7s
HSKC Hora Svate Kat 75.70 319 *e*S **S** **14 25 01.7 -7.8**
HSKC AMS AMS 14 52 50.0
comp=Z,13µm,21.9s
HSKC Hora Svate Kat 75.70 319 P **P** **14 15 28.8 +1.2**
RAUS Rausandaksla 75.71 336 *e*P P 14 15 33.0 +5.7
RAUS IVmB 14 15 59.5
comp=Z,1µm,3.1s
RAUS *e*S **S** **14 25 13.3 +4.4**
RAUS *e*SS **SS** **14 30 06.7 +6.7**
RAUS IVMs_BB IVMs_BB 14 55 07.9
comp=Z,4µm,14.7s
RGN Rugen 75.72 323 IAMs_20 IAMs_20 14 54 21.7
comp=Z,9µm,20.0s
KBA Koelnbreinsper 75.86 316 *i* P **P** **14 15 28.3 -0.5**
comp=Z,29nm,1.6s
KBA Koelnbreinsper 75.86 316 P **P** **14 15 29.7 +0.9**
BJUU Bjuv 75.89 325 *i* P **P** **14 15 33.0 +4.5**
CLL Collm 75.96 320 IAMs_20 IAMs_20 14 53 48.1
comp=Z,10µm,22.0s
CLL Collm 75.96 320 *e*P **P** **14 15 30.4 +1.3**
comp=Z,244nm,2.4s,baz=87,slow=5.7
CLL *e*L L 14 53 47.7
comp=Z,10µm,21.8s
LOF Lofoten 76.00 338 *e*P P 14 15 35.8 +6.9
LOF *e*S **S** **14 25 19.4 +7.3**
LOF *e*SS **SS** **14 30 11.8 +7.4**
LOF IVMs_BB IVMs_BB 14 52 09.4
comp=Z,6µm,17.7s
VAGH Vaagaholmen 76.03 336 *e*P P 14 15 35.9 +6.7
VAGH IVmB_BB 14 15 40.1
comp=Z,1µm,3.3s
VAGH *e*S **S** **14 25 18.6 +6.1**
VAGH *e*SS **SS** **14 30 11.8 +6.9**
VAGH IVMs_BB IVMs_BB 14 51 44.4
comp=Z,4µm,21.6s
FABU Falkenberg 76.06 326 *i* P **P** **14 15 34.0 +4.5**
LEIR Leirfjorden 76.06 335 *e*P P 14 15 36.9 +7.5
LEIR IVmB_BB 14 15 45.1
comp=Z,1µm,2.4s
LEIR *e*S **S** **14 25 18.2 +5.4**
LEIR *e*SS **SS** **14 30 11.3 +5.9**
LEIR *i* 14 33 50.2
LEIR IVMs_BB IVMs_BB 14 55 33.3
comp=Z,4µm,16.3s
KONS Konsvik 76.08 336 *e*P P 14 15 36.5 +7.1
KONS IVmB_BB 14 15 40.6
comp=Z,892nm,2.8s
KONS *e*S **S** **14 25 18.2 +5.3**
KONS *e*SS **SS** **14 30 13.1 +7.5**
KONS IVMs_BB IVMs_BB 14 51 20.0
comp=Z,4µm,26.0s
WET Wettzell 76.10 318 *e*P **P** **14 15 31.0 +1.1**
comp=Z,182nm,2.4s,baz=87,slow=5.7
WET *e*L L 14 53 56.2
comp=Z,4µm,21.3s
WET Wettzell 76.10 318 P **P** **14 15 31.1 +1.2**
STOK Stokkvaagen 76.11 336 *e*P P 14 15 36.7 +7.1
STOK IVmB_BB 14 15 38.8
comp=Z,1µm,3.4s
STOK *e*S **S** **14 25 20.4 +7.0**
STOK *e*SS **SS** **14 30 12.3 +6.2**
STOK IVMs_BB IVMs_BB 14 55 26.8
comp=Z,4µm,17.6s
RJOB Jochberg 76.21 316 *e*P **P** **14 15 31.3 +0.6**
comp=Z,152nm,2.4s,baz=87,slow=5.7
SPB2 Spitsbergen Ar 76.24 348 IAmb IAmb 14 16 05.9
comp=Z,71nm,1.1s
SPA0 Spitsbergen Ar 76.25 348 *e*P P 14 15 35.2 +4.9
SPA0 IVmB_BB 14 15 45.0
comp=Z,902nm,5.2s
SPA0 *e*S **S** **14 25 21.2 +6.6**
SPA0 *e*SS **SS** **14 30 14.3 +6.5**
SPA0 IVMs_BB IVMs_BB 14 56 08.1
comp=Z,4µm,18.4s
SPITS Spitsbergen Ar 76.25 348 P **P** **14 15 27.3 -2.9**
comp=Z,2.1nm,0.5s,baz=113,slow=10,SNR=9.3
comp=Z,2.1nm,0.5s
HSPB Hornsund (broa 76.26 347 *e*P P 14 15 35.9 +5.6
HSPB *e*S **S** **14 25 15.0 +0.3**
HSPB *e*L L 14 53 19.4
LESA Schwarzleotal 76.30 316 *ep*P **P** **14 15 31.4 +0.2**
comp=Z,54nm,1.6s
TANN Tannenbergstha 76.33 319 *e*P **P** **14 15 32.5 +1.2**
comp=Z,184nm,2.4s,baz=87,slow=5.7
TANN Tannenbergstha 76.33 319 P **P** **14 15 30.9 -0.4**
NKC Novy Kostel 76.34 319 AMS AMS 14 53 30.0
comp=Z,11µm,19.5s
LLD Lille Linde 76.35 324 *i* P P 14 15 37.4 +6.2
LLD IAmb IAmb 14 15 44.4
comp=Z,65nm,0.9s
ABTA Abfaltersbach 76.44 315 *e*P **P** **14 15 31.2 -0.9**
comp=Z,18nm,1.3s
ONAU Onsala 76.49 326 *i* P P 14 15 36.9 +4.9
NSS Namsos 76.49 334 *e*P P 14 15 38.6 +6.8
NSS IVmB_BB 14 15 46.2
comp=Z,1µm,4.3s
NSS IVMs_BB IVMs_BB 14 54 54.0
comp=Z,3µm,14.2s
ROTZ Rotzenmuhle 76.51 319 *e*P **P** **14 15 34.0 +1.7**
comp=Z,12nm,1.3s,baz=87,slow=5.7
PLN Plauen 76.52 319 *e*P **P** **14 15 33.6 +1.3**
comp=Z,116nm,2.7s,baz=87,slow=5.7
TJOU Tjoern 76.64 327 *i* P **P** **14 15 37.2 +4.5**
NC602 NORSAR Array S 76.66 330 *e*P P 14 15 40.0 +7.2
NC602 IVmB_BB 14 15 48.0
comp=Z,860nm,2.6s
NC602 *e*S **S** **14 25 25.1 +5.4**
NC602 *e*SS **SS** **14 30 21.5 +6.8**
NC602 IVMs_BB IVMs_BB 14 55 29.4
comp=Z,4µm,17.8s
NB2 NORSAR Subarra 76.82 330 P **P** **14 15 37.7 +3.9**
comp=Z,192nm,2.0s,baz=92,slow=5.3
NB2 NORSAR Subarra 76.82 330 P **P** **14 15 37.7 +3.9**
NOA NORSAR Array B 76.82 330 P **P** **14 15 31.0 -2.8**
comp=Z,1.9nm,1.1s,baz=90,slow=5.7,SNR=10
comp=Z,1.9nm,1.1s
MOX Moxa 76.86 319 *e*P **P** **14 15 35.3 +1.1**
comp=Z,347nm,2.8s,baz=87,slow=5.7
MOX *e*L L 14 53 56.8
comp=Z,9µm,21.7s
MOX Moxa 76.86 319 P **P** **14 15 35.6 +1.3**
STRU Stroemstad 76.86 328 *i* P P 14 15 39.8 +5.8
WIMM Wimmelburg 76.89 320 P **P** **14 15 35.0 +0.7**
LBTB Lobatse 76.90 241 LR LR 14 45 16.8
comp=Z,2µm,20.9s,baz=61,slow=32
LBTB Lobatse 76.90 241 P **P** **14 15 37.8 +2.8**
GORT1 Trebel 76.95 322 *e*P **P** **14 15 36.2 +1.6**
comp=Z,404nm,2.2s,baz=87,slow=5.7
NAO01 NORSAR Array S 76.98 330 P **P** **14 15 34.3 -0.4**
WTTA Wattenberg 77.01 316 *e*P **P** **14 15 34.2 -1.2**
comp=Z,15nm,0.8s
WTTA Wattenberg 77.01 316 P **P** **14 15 34.9 -0.5**
FLTG Flechtingen 77.02 321 *e*P **P** **14 15 35.7 +0.7**
comp=Z,286nm,2.5s,baz=87,slow=5.7
WATA Walderalm 77.05 316 *i* P **P** **14 15 34.4 -1.1**
comp=Z,16nm,0.9s
OSL Oslo 77.08 329 *e*P P 14 15 42.0 +6.8
OSL IVmB_BB 14 15 46.1
comp=Z,1µm,2.6s
OSL *e*S **S** **14 25 30.9 +6.8**
OSL IVMs_BB IVMs_BB 14 53 08.1
comp=Z,5µm,19.0s
GRA1 Grafenberg Arr 77.16 319 IAMs_20 IAMs_20 14 54 00.8
GRF Grafenberg Arr 77.16 319 *e*P **P** **14 15 37.6 +1.6**
comp=Z,492nm,2.7s,baz=87,slow=5.7
GRF *e*L L 14 54 23.6
comp=Z,8µm,21.8s
GRFO Grafenberg 77.16 319 IAMs_20 IAMs_20 14 53 49.9
comp=Z,10µm,22.0s
FUR Furstenfeldbru 77.20 317 *e*P **P** **14 15 38.6 +2.4**
comp=Z,464nm,2.6s,baz=87,slow=5.7
FUR *e*L L 14 57 35.0
comp=Z,4µm,21.7s
KBS Kingsbay 77.21 349 *e*P P 14 15 43.1 +7.4
KBS IVmB_BB 14 15 48.6
comp=Z,483nm,2.9s
KBS *e*S **S** **14 25 32.2 +7.2**
KBS *e*SS **SS** **14 30 29.3 +7.0**
KBS IVMs_BB IVMs_BB 15 01 56.8
comp=Z,4µm,15.7s
KBS Kingsbay 77.21 349 IAMs_20 IAMs_20 14 54 39.8
comp=Z,11µm,21.0s
KBS Kingsbay 77.21 349 *i* P P 14 15 41.1 +5.5
SQTA Sankt Quirin 77.31 316 *i* pP pP 14 15 38.0 -0.6
comp=Z,27nm,1.4s
MOTA Moosalm 77.37 316 *i* pP **P** **14 15 37.4 0.0**
comp=Z,37nm,1.2s
ASSE Asse, Remlinge 77.38 321 *e*P **P** **14 15 38.1 +1.1**
comp=Z,310nm,2.4s,baz=87,slow=5.7
ASSE Asse, Remlinge 77.38 321 P **P** **14 15 38.4 +1.4**
BSEG Bad Segeberg 77.50 323 *e*P **P** **14 15 39.5 +1.8**
comp=Z,33nm,0.9s,baz=87,slow=5.7
BSEG *e*L L 14 55 40.4
comp=Z,7µm,20.6s
BSEG Bad Segeberg 77.50 323 P **P** **14 15 39.7 +2.0**
CLZ Clausthal 77.58 321 *e*P **P** **14 15 39.7 +1.4**
comp=Z,42nm,0.9s,baz=87,slow=5.7
CLZ Clausthal 77.58 321 P **P** **14 15 40.2 +2.0**
RETA Reutte 77.59 316 *i* pP pP 14 15 39.2 -1.0
comp=Z,27nm,1.0s,SNR=9.3
DZM Mont Dzumac 77.63 116 LR LR 14 51 36.6
comp=Z,983nm,21.9s,slow=37
FETA Feichten 77.65 316 *ep*P **P** **14 15 38.8 -0.2**
comp=Z,11nm,1.0s
KONO Kongsberg 77.65 329 *e*P P 14 15 45.3 +6.8
KONO IVmB_BB 14 15 49.2
comp=Z,1µm,2.7s
KONO *e*S **S** **14 25 35.7 +5.3**
KONO *e*SS **SS** **14 30 36.3 +6.6**
KONO IVMs_BB IVMs_BB 14 54 49.1
comp=Z,4µm,15.3s
KONO Kongsberg 77.65 329 IAMs_20 IAMs_20 14 54 48.6
comp=Z,11µm,20.0s
DOMB Dombas 77.83 331 *e*sP sP 14 15 51.1 +9.3
DOMB IVmB_BB 14 16 25.1
comp=Z,1µm,4.9s
DOMB *e*S **S** **14 25 37.0 +4.7**
DOMB *e*SS **SS** **14 30 36.7 +4.4**
DOMB IVMs_BB IVMs_BB 14 51 38.7
comp=Z,5µm,26.1s
GTTG Gottingen 77.85 320 *e*P **P** **14 15 40.7 +0.9**
comp=Z,51nm,0.9s,baz=87,slow=5.7
UBBA Unterbreizbach 77.87 320 *e*P **P** **14 15 40.8 +1.1**
comp=Z,204nm,2.4s,baz=87,slow=5.7
UBBA Unterbreizbach 77.87 320 P **P** **14 15 39.2 -0.6**
MUD Monsted U'grnd 78.03 326 *i* P P 14 15 46.0 +5.5
MUD IAmb IAmb 14 15 54.4
comp=Z,50nm,1.0s
DAVA Damuels 78.21 316 *i* pP pP 14 15 42.7 -1.0
comp=Z,22nm,0.8s
DAVA Damuels 78.21 316 P **P** **14 15 43.2 +1.2**
DAVOX Davos/Dischmat 78.25 316 LR LR 14 55 49.6
comp=Z,3µm,19.4s,baz=70,slow=40
SKAR Skarslia 78.25 330 *e*P P 14 15 48.7 +6.8
SKAR IVmB_BB 14 15 57.0
comp=Z,1µm,4.5s
SKAR *e*S **S** **14 25 43.1 +6.1**
SKAR *e*SS **SS** **14 30 44.3 +5.5**
SKAR IVMs_BB IVMs_BB 14 56 35.5
comp=Z,5µm,14.6s
HOMB Homborsund 78.28 327 *e*P P 14 15 48.7 +6.7
HOMB *e*S **S** **14 25 42.4 +5.2**
HOMB *e*SS **SS** **14 30 44.7 +5.5**
HOMB IVMs_BB IVMs_BB 14 53 21.3
comp=Z,3µm,24.5s
HOMB Homborsund 78.28 327 *i* P P 14 15 49.0 +7.0
BOSA Boshof 78.41 237 P **P** **14 15 41.0 -2.4**
comp=Z,7.5nm,1.2s,baz=58,slow=2.6,SNR=4.7
BOSA LR LR 14 45 17.9
comp=Z,2µm,20.9s,baz=60,slow=32
comp=Z,7.5nm,1.2s
BOSA Boshof 78.41 237 P **P** **14 15 46.1 +2.7**
MOL Molde 78.51 332 *ep*P pP 14 15 53.6 +8.8
MOL IVmB_BB 14 15 54.6
comp=Z,1µm,7.3s
MOL *e*S **S** **14 25 44.9 +5.4**
MOL *e*SS **SS** **14 30 47.8 +5.4**
MOL IVMs_BB IVMs_BB 14 53 27.0
comp=Z,7µm,21.4s
TUE Stuetta 78.64 315 IAmb IAmb 14 16 01.8
comp=Z,202nm,1.9s
CASY Casey 78.66 174 P **P** **14 15 43.7 0.0**
CASY Casey 78.66 174 ⇑P **P** **14 15 46.5 +2.8**
AKN Aaknes 78.79 331 *ep*P pP 14 15 55.0 +8.6
AKN IVmB_BB 14 15 56.6
comp=Z,1µm,4.2s
AKN *e*S **S** **14 25 47.7 +5.1**
AKN IVMs_BB IVMs_BB 14 53 45.9
comp=Z,5µm,23.8s
KASTN Kahler Asten 78.84 320 *e*P **P** **14 15 47.0 +1.7**
comp=Z,253nm,2.5s,baz=87,slow=5.7
TNS Taunus Mts 78.91 319 *e*P **P** **14 15 47.1 +1.4**
comp=Z,301nm,2.8s,baz=87,slow=5.7
TNS *e*L L 14 55 49.2
comp=Z,8µm,21.3s
ODD1 Odda 79.14 329 *e*P P 14 15 53.8 +7.1
ODD1 *e*S **S** **14 25 51.6 +5.1**
ODD1 *e*SS **SS** **14 30 57.9 +5.8**
ODD1 IVMs_BB IVMs_BB 14 54 00.7
comp=Z,5µm,21.1s
IBBN Ibbenburen 79.15 321 P **P** **14 15 49.0 +2.1**
BFO Black Forest 79.16 317 *e*P **P** **14 15 48.3 +1.2**
comp=Z,121nm,2.3s,baz=87,slow=5.7
BFO *e*L L 14 57 18.1
comp=Z,5µm,22.0s
BNALP Bannalp 79.23 316 P **P** **14 15 44.9 -2.8**
HYA Hoyanger 79.25 330 IVmB_BB 14 15 57.4
comp=Z,827nm,2.5s
HYA *ep*P pP 14 15 57.8 +8.9
HYA *e*S **S** **14 25 53.5 +6.0**
HYA *e*SS **SS** **14 30 57.9 +4.3**
HYA IVMs_BB IVMs_BB 14 52 07.8
comp=Z,5µm,22.2s
BLS5 Blasjo 79.27 329 *e*P P 14 15 54.4 +7.0
BLS5 IVmB_BB 14 16 25.3
comp=Z,1µm,3.4s
BLS5 *e*S **S** **14 25 52.5 +4.7**
BLS5 IVMs_BB IVMs_BB 14 55 57.1
comp=Z,4µm,19.0s
BUG Bochum--Univer 79.54 321 *e*P **P** **14 15 50.7 +1.7**
comp=Z,46nm,1.0s,baz=87,slow=5.7
BER Bergen 79.74 330 *e*sP sP 14 16 01.7 +9.5
BER IVmB_BB 14 16 17.2
comp=Z,1µm,3.0s
BER *e*S **S** **14 25 58.6 +5.9**
BER *e*SS **SS** **14 31 06.5 +5.6**
BER IVMs_BB IVMs_BB 14 54 16.2
comp=Z,5µm,23.3s
FOO Floro 79.76 331 *ep*P pP 14 16 00.2 +8.5
FOO IVmB_BB 14 16 01.4
comp=Z,1µm,2.6s
FOO *e*S **S** **14 25 58.9 +6.1**
FOO *e*SS **SS** **14 31 07.2 +6.0**
FOO IVMs_BB IVMs_BB 14 52 47.3
comp=Z,4µm,22.8s
KEST Kesra 79.78 304 P **P** **14 15 49.2 -1.6**
comp=Z,1.9nm,0.4s,baz=58,slow=3.5,SNR=9.7
KEST LR LR 14 56 13.1
comp=Z,3µm,20.4s,baz=78,slow=40
comp=Z,1.9nm,0.4s
KEST Kesra 79.78 304 P **P** **14 15 52.4 +1.6**
SNR=7.1
ASK Askoy 79.80 330 *e*P P 14 15 57.0 +6.8
ASK IVmB_BB 14 16 13.0
comp=Z,2µm,3.6s
ASK *e*S **S** **14 25 58.1 +4.8**
ASK *e*SS **SS** **14 31 08.5 +6.7**
ASK IVMs_BB IVMs_BB 14 54 19.4
comp=Z,5µm,20.4s
KMY Karmoy 79.90 328 *e*P P 14 15 58.3 +7.5
KMY IVmB_BB 14 16 04.2
comp=Z,1µm,3.0s
KMY *e*S **S** **14 25 59.3 +4.9**
KMY *e*SS **SS** **14 31 10.6 +7.2**
KMY IVMs_BB IVMs_BB 14 56 16.8
comp=Z,4µm,15.9s
SUE Sulen 79.95 330 *e*P P 14 15 58.0 +7.0
SUE IVmB_BB 14 16 24.4
comp=Z,938nm,3.5s
SUE *e*S **S** **14 26 00.9 +6.0**
SUE *e*SS **SS** **14 31 09.6 +5.6**
SUE IVMs_BB IVMs_BB 14 52 27.9
comp=Z,5µm,23.6s
BTNL Ternell 80.34 320 *dx* **PcP** **14 16 06.0 +5.5**
MEM Membach 80.42 320 *dP* **P** **14 15 52.2 -1.6**
MEM *dx* **PcP** **14 16 06.6 +5.8**
WLF Walferdange 80.44 319 IAMs_20 IAMs_20 14 56 17.7
comp=Z,8µm,20.0s
WLF Walferdange 80.44 319 *dx* **PcP** **14 16 01.6 +0.6**
BHOU Houvegnez 80.45 319 *dP* **P** **14 15 53.4 -0.7**
BSTI Sart Tilman 80.70 320 *dP* **P** **14 15 53.8 -1.5**
BCLA Clavier 80.89 320 *dP* **P** **14 15 53.5 -2.8**
comp=Z,14nm,1.2s
BCLA *d*PP **PP** **14 18 58.4 -2.1**
RCHB Rochefort 80.97 319 *dx* **PcP** **14 16 04.6 +1.4**
GAMB Gambell 80.98 27 IAMs_20 IAMs_20 14 55 23.1
comp=Z,11µm,18.0s
GAMB Gambell 80.98 27 P **P** **14 15 55.9 -0.6**
baz=278
BGES Gesves 81.03 320 *d*PcP **PcP** **14 16 01.5 -2.0**
BMRD Maredsous 81.24 320 *dP* **P** **14 15 59.4 +1.2**
comp=Z,14nm,1.1s
DOU Dourbes 81.38 319 *dP* **P** **14 15 55.9 -3.1**
comp=Z,12nm,1.2s
UCC Uccle 81.43 320 *dx* **PcP** **14 16 08.7 +3.5**
NOR Nord 81.55 352 *i* P **P** **14 16 03.1 +3.8**
NOR IAmb IAmb 14 16 11.3
comp=Z,62nm,1.5s
TSUM Tsumeb 82.27 249 LR LR 14 50 58.3
comp=Z,3µm,18.8s,baz=56,slow=34
TNA Tin City 82.28 25 IAMs_20 IAMs_20 14 56 04.2
comp=Z,10µm,18.0s
TNA Tin City 82.28 25 P **P** **14 16 02.5 -0.8**
baz=282
MAW Mawson 82.50 192 P **P** **14 16 03.4 -0.9**
comp=Z,1.7nm,0.8s,baz=79,slow=6.8,SNR=12
comp=Z,1.7nm,0.8s
C16K Lisburne Hills 82.70 22 P **P** **14 16 04.9 -0.6**
baz=284
SPIA Saint Paul Isl 82.75 33 P **P** **14 16 05.1 -0.9**
baz=281
F14K Arctic Creek 82.95 25 P **P** **14 16 06.0 -0.9**
baz=283
JNE Jan Mayen East 83.27 341 *e*P P 14 16 15.9 +7.5
JNE *e*SKSac **SKSac** **14 26 36.4 +5.7**
JNE *e*SS **SS** **14 31 58.6 +5.6**
SUR Sutherland 83.28 235 LR LR 14 48 47.4
comp=Z,2µm,20.8s,baz=61,slow=32
SUR Sutherland 83.28 235 P P 14 16 14.8 +5.4
SUR Sutherland 83.28 235 P **P** **14 16 07.0 -2.5**
SUR IAmb IAmb 14 16 22.9
comp=Z,156nm,1.9s
JNW Jan Mayen West 83.30 341 *e*P P 14 16 15.3 +6.8
JNW *e*S **S** **14 26 35.9 +6.6**
JNW *e*SS **SS** **14 31 58.9 +5.5**
JMIC Jan Mayen 83.34 341 LR LR 14 57 36.4
comp=Z,5µm,20.9s,baz=78,slow=39
JMIC Jan Mayen 83.34 341 *e*P P 14 16 16.0 +7.2
JMIC *e*SKSac **SKSac** **14 26 36.9 +5.7**
JMIC *e*SS **SS** **14 31 59.7 +5.7**
JMI Jan Mayen 83.42 341 *e*S **S** **14 26 35.0 +4.5**
JMI *e*SS **SS** **14 32 02.4 +7.1**
C17K DeLong Mountai 83.42 21 P **P** **14 16 08.6 -0.7**
baz=285
ANM Nome 83.55 25 IAMs_20 IAMs_20 14 58 45.9
comp=Z,10µm,18.0s
ANM Nome 83.55 25 P **P** **14 16 09.1 -0.9**
baz=284
F15K North Star Dit 83.57 24 P **P** **14 16 09.1 -1.0**
baz=284
RDOG Red Dog Mine 83.63 22 P **P** **14 16 09.0 -1.4**
baz=286
A19K Wainwright 83.66 19 P **P** **14 16 09.7 -0.8**
baz=287
D17K Noatak River 83.67 22 P **P** **14 16 10.1 -0.4**
baz=286
DAG Danmarks Havn 83.89 348 *i* P **P** **14 16 13.1 +1.5**
DAG IAmb IAmb 14 16 22.1
comp=Z,22nm,1.4s
G15K Niukluk 84.00 25 P **P** **14 16 11.9 -0.4**
baz=285
C18K Utukok River 84.08 21 IAmb IAmb 14 16 28.9
comp=Z,86nm,1.3s
C18K Utukok River 84.08 21 P **P** **14 16 11.5 -1.2**
baz=287
M11K Mekoryuk 84.16 30 IAMs_20 IAMs_20 14 56 15.6
comp=Z,8µm,21.0s
M11K Mekoryuk 84.16 30 P **P** **14 16 12.3 -0.8**
baz=284
EDA Edea 84.26 273 IAMs_20 IAMs_20 14 51 20.1
comp=Z,7µm,22.0s
E17K Hotham Inlet 84.30 23 P **P** **14 16 13.5 -0.3**
baz=287
C19K Lookout Ridge 84.49 20 P **P** **14 16 13.9 -0.9**
baz=289
K13K Kusilvak Mount 84.51 28 IAMs_20 IAMs_20 14 55 26.6
comp=Z,11µm,21.0s
K13K Kusilvak Mount 84.51 28 P **P** **14 16 14.3 -0.6**
baz=285
G16K Koyuk River 84.58 24 IAMs_20 IAMs_20 14 58 45.9
comp=Z,10µm,20.0s
G16K Koyuk River 84.58 24 P **P** **14 16 14.3 -0.9**
baz=286
E18K Tukpahlearik C 84.66 22 P **P** **14 16 14.7 -0.9**
baz=288
A21K Barrow 84.69 18 P **P** **14 16 14.8 -0.9**
baz=291
F17K Baldwin Pennin 84.71 23 P **P** **14 16 14.6 -1.2**
baz=287
J14K Nanvaranak Lak 84.79 27 IAMs_20 IAMs_20 14 57 30.0
comp=Z,9µm,21.0s
J14K Nanvaranak Lak 84.79 27 P **P** **14 16 15.7 -0.6**
baz=286
H16K Elim 84.84 25 P **P** **14 16 15.8 -0.8**
baz=287
B20K Meade River 84.99 19 P **P** **14 16 16.1 -1.1**
baz=291
EKA Eskdalemuir Ar 85.05 325 P **P** **14 16 16.0 -1.8**
comp=Z,0.8nm,0.6s,baz=95,slow=4.8,SNR=8.3
comp=Z,0.8nm,0.6s
TAM Tamanrasset 85.10 292 IAMs_20 IAMs_20 14 55 25.8
comp=Z,9µm,21.0s
TAM Tamanrasset 85.10 292 P **P** **14 16 21.7 +2.8**
D19K Kuna River 85.20 21 IAmb IAmb 14 16 34.6
comp=Z,152nm,1.4s

D19K	**Kuna River** baz=290	85.20	21	P	P	14 16 16.9	-1.5	
G17K	**Kiwalik Mounta** baz=288	85.23	24	P	P	14 16 18.1	-0.4	
F18K	**Selawik** baz=289	85.27	23	P	P	14 16 18.3	-0.3	
A22K	**Sinclair Lake** baz=293	85.31	18	P	P	14 16 18.4	-0.4	
M13K	**Dall Lake** comp=Z,7µm,20.0s	85.52	29	IAMs_20	IAMs_20	14 54 04.5		
UNV	**Unalaska Valle** baz=284	85.53	36	P	P	14 16 18.6	-1.6	
L14K	**Kuka Creek** comp=Z,9µm,18.0s	85.58	28	IAMs_20	IAMs_20	14 59 42.9		
L14K	**Kuka Creek** baz=287	85.58	28	P	P	14 16 19.3	-1.0	
D20K	**Etivluk River** baz=291	85.64	20	P	P	14 16 18.7	-1.8	
H17K	**Granite Mounta** comp=Z,145nm,1.6s	85.70	24	IAmb	IAmb	14 16 37.1		
H17K	**Granite Mounta** baz=289	85.70	24	P	P	14 16 19.7	-1.2	
I17K	**Unalakleet** comp=Z,7µm,19.0s	85.70	25	IAMs_20	IAMs_20	14 58 05.8		
I17K	**Unalakleet** baz=288	85.70	25	P	P	14 16 19.7	-1.1	
K15K	**Wolf Creek Mou** comp=Z,9µm,20.0s	85.82	27	IAMs_20	IAMs_20	14 58 04.3		
K15K	**Wolf Creek Mou** baz=288	85.82	27	P	P	14 16 20.5	-1.0	
E19K	**Redstone River** comp=Z,216nm,1.8s	85.87	22	IAmb	IAmb	14 16 44.9		
E19K	**Redstone River** baz=291	85.87	22	P	P	14 16 19.5	-2.2	
G18K	**Tagagawik** baz=290	85.88	23	P	P	14 16 20.7	-1.1	
F19K	**Shaleruckik Mo** comp=Z,141nm,1.6s	85.89	22	IAmb	IAmb	14 16 37.6		
F19K	comp=Z,11µm,21.0s			IAMs_20	IAMs_20	14 57 24.4		
F19K	**Shaleruckik Mo** baz=290	85.89	22	P	P	14 16 20.5	-1.3	
J16K	**Anvik River** comp=Z,145nm,1.4s	85.93	26	IAmb	IAmb	14 16 37.5		
J16K	comp=Z,6µm,20.0s			IAMs_20	IAMs_20	15 00 12.9		
J16K	**Anvik River** baz=288	85.93	26	P	P	14 16 19.8	-2.2	
E20K	**Nigu River** baz=292	85.95	21	P	P	14 16 20.1	-2.1	
B21K	**Ikpikpuk River** comp=Z,123nm,1.4s	85.96	19	IAmb	IAmb	14 16 38.5		
B21K	**Ikpikpuk River** baz=293	85.96	19	P	P	14 16 21.0	-1.1	
L15K	**Ungalak Mounta** baz=288	86.03	28	P	P	14 16 20.5	-2.0	
B22K	**Teshekpuk Lake** comp=Z,6µm,21.0s	86.05	18	IAMs_20	IAMs_20	14 56 56.9		
B22K	**Teshekpuk Lake** baz=294	86.05	18	P	P	14 16 20.5	-2.0	
M14K	**Bethel** comp=Z,7µm,22.0s	86.08	29	IAMs_20	IAMs_20	14 55 49.3		
M14K	**Bethel** baz=287	86.08	29	P	P	14 16 21.3	-1.5	
C21K	**Knifeblade Rid** baz=293	86.08	20	P	P	14 16 20.8	-1.9	
H18K	**Honhosa River** comp=Z,6µm,20.0s	86.25	24	IAMs_20	IAMs_20	14 57 14.0		
H18K	**Honhosa River** baz=290	86.25	24	P	P	14 16 21.8	-1.8	
G19K	**Purcell Mounta** comp=Z,171nm,1.6s	86.40	23	IAmb	IAmb	14 16 40.5		
G19K	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	14 57 00.8		
G19K	**Purcell Mounta** baz=291	86.40	23	P	P	14 16 22.6	-1.7	
N14K	**Kuskokwak Cree** comp=Z,7µm,21.0s	86.46	29	IAMs_20	IAMs_20	14 58 26.4		
N14K	**Kuskokwak Cree** baz=288	86.46	29	P	P	14 16 23.2	-1.5	
J17K	**VABM Dome** comp=Z,216nm,1.8s	86.55	26	IAmb	IAmb	14 16 40.5		
J17K	comp=Z,7µm,20.0s			IAMs_20	IAMs_20	14 58 33.1		
J17K	**VABM Dome** baz=290	86.55	26	P	P	14 16 23.4	-1.7	
F20K	**Avaraart Lake** baz=292	86.57	22	P	P	14 16 22.7	-2.4	
E21K	**Killik River** baz=294	86.64	20	P	P	14 16 23.0	-2.5	
M15K	**Kasigluk River** baz=288	86.69	29	P	P	14 16 23.6	-2.3	
O14K	**Tigyukauivet M** comp=Z,6µm,19.0s	86.86	30	IAMs_20	IAMs_20	14 56 50.2		
O14K	**Tigyukauivet M** baz=288	86.86	30	P	P	14 16 24.9	-1.8	
H19K	**Roundabout Mou** comp=Z,8µm,20.0s	86.87	23	IAMs_20	IAMs_20	15 00 21.2		
H19K	**Roundabout Mou** baz=292	86.87	23	P	P	14 16 24.0	-2.5	
L16K	**Owhat River** comp=Z,102nm,1.8s	86.93	27	IAmb	IAmb	14 16 42.2		
L16K	comp=Z,7µm,19.0s			IAMs_20	IAMs_20	14 58 39.5		
L16K	**Owhat River** baz=289	86.93	27	P	P	14 16 25.1	-1.8	
GCSA	**Galena City Sc** baz=292	86.98	24	P	P	14 16 25.1	-2.1	
K17K	**Iditarod** comp=Z,8µm,19.0s	87.11	26	IAMs_20	IAMs_20	15 00 51.1		
K17K	**Iditarod** baz=290	87.11	26	P	P	14 16 25.3	-2.5	
C23K	**Itkillik River** baz=297	87.13	18	P	P	14 16 25.6	-2.2	
N15K	**Kwethluk River** comp=Z,75nm,1.3s	87.14	29	IAmb	IAmb	14 16 43.2		
N15K	comp=Z,11µm,22.0s			IAMs_20	IAMs_20	14 56 22.4		
N15K	**Kwethluk River** baz=289	87.14	29	P	P	14 16 25.1	-3.0	
F21K	**Alatna River** comp=Z,116nm,1.4s	87.31	21	IAmb	IAmb	14 16 46.0		
F21K	**Alatna River** baz=294	87.31	21	P	P	14 16 26.1	-2.6	
L17K	**Donlin** baz=290	87.31	27	P	P	14 16 26.8	-2.0	
M16K	**Timber Creek** comp=Z,9µm,21.0s	87.39	28	IAMs_20	IAMs_20	14 59 28.8		
M16K	**Timber Creek** baz=290	87.39	28	P	P	14 16 27.3	-2.0	
DSB	**Dublin** comp=Z,6µm,20.0s	87.41	324	IAMs_20	IAMs_20	15 01 33.8		
H20K	**Anotleneega Mo** baz=293	87.48	23	P	P	14 16 27.5	-2.1	
D23K	**Nanushuk River** baz=297	87.50	19	P	P	14 16 27.1	-2.5	
J18K	**Innoko River** comp=Z,68nm,1.3s	87.52	25	IAmb	IAmb	14 16 47.4		
J18K	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	14 59 12.7		
J18K	**Innoko River** baz=292	87.52	25	P	P	14 16 27.2	-2.6	
G21K	**Allakaket** comp=Z,11µm,21.0s	87.59	22	IAMs_20	IAMs_20	14 58 19.1		
G21K	**Allakaket** baz=294	87.59	22	P	P	14 16 27.4	-2.7	
O15K	**Ungalikthiuk R** comp=Z,123nm,2.0s	87.59	30	IAmb	IAmb	14 16 45.0		
O15K	**Ungalikthiuk R** baz=289	87.59	30	P	P	14 16 28.3	-2.0	
SCO	**Scoresbysund** comp=Z,7µm,21.0s	87.64	343	IAMs_20	IAMs_20	14 57 43.1		
F22K	**John River** baz=296	87.64	21	P	P	14 16 28.0	-2.4	
N16K	**Nishlik Lake** baz=290	87.66	28	P	P	14 16 28.5	-2.1	
IMAR	**Indian Mountai**	87.72	22	P	P	14 16 28.3	-2.4	
J19K	**Poorman** comp=Z,99nm,1.5s	87.77	25	IAmb	IAmb	14 16 46.6		
J19K	comp=Z,10µm,19.0s			IAMs_20	IAMs_20	14 59 19.3		
J19K	**Poorman** baz=293	87.77	25	P	P	14 16 28.4	-2.6	
I20K	**Naaghedeneel** comp=Z,8µm,19.0s	87.92	24	IAMs_20	IAMs_20	15 00 46.0		
I20K	**Naaghedeneel** baz=294	87.92	24	P	P	14 16 29.8	-1.9	
M17K	**Holitna River** comp=Z,8µm,18.0s	87.95	27	IAMs_20	IAMs_20	15 02 23.5		
M17K	**Holitna River** baz=291	87.95	27	P	P	14 16 30.1	-1.8	
L18K	**Granite Mounta** comp=Z,7µm,20.0s	87.99	26	IAMs_20	IAMs_20	14 59 33.3		
L18K	**Granite Mounta** baz=292	87.99	26	P	P	14 16 29.1	-2.9	
D24K	**Happy Valley** baz=299	88.01	19	P	P	14 16 29.6	-2.4	
TOLK	**Toolik Lake Re** baz=298	88.01	19	P	P	14 16 29.5	-2.6	
G22K	**Bettles** baz=296	88.14	21	P	P	14 16 29.7	-2.9	
RPZ	**Rata Peaks** comp=Z,823nm,20.4s,baz=276,slow=37	88.15	135	LR	LR	14 57 51.1		
H21K	**Melozitna Rive** baz=295,SNR=9.4	88.21	23	P	P	14 16 31.4	-1.7	
E23K	**Chandalar** comp=Z,140nm,1.8s	88.27	20	IAmb	IAmb	14 16 49.0		
E23K	**Chandalar** baz=298	88.27	20	P	P	14 16 31.5	-2.0	
O16K	**Kokwok River B** comp=Z,6µm,19.0s	88.28	29	IAMs_20	IAMs_20	15 01 31.6		
O16K	**Kokwok River B** baz=291	88.28	29	P	P	14 16 32.3	-1.2	
J20K	**Nowinta River** baz=294,SNR=12	88.30	24	P	P	14 16 31.5	-2.0	
N17K	**Nushagak Hills** comp=Z,8µm,18.0s	88.38	28	IAMs_20	IAMs_20	15 01 31.0		
N17K	**Nushagak Hills** baz=291	88.38	28	P	P	14 16 32.4	-1.5	
COLD	**Coldfoot** baz=297	88.46	21	P	P	14 16 32.5	-1.7	
SDPT	**Sand Point** baz=289	88.48	34	P	P	14 16 32.1	-2.4	
P16K	**Nushagak River** comp=Z,6µm,21.0s	88.53	30	IAMs_20	IAMs_20	14 56 21.2		
P16K	**Nushagak River** baz=291	88.53	30	P	P	14 16 32.4	-2.3	
E24K	**Your Creek** comp=Z,102nm,1.6s	88.64	20	IAmb	IAmb	14 16 53.8		
E24K	**Your Creek** baz=299	88.64	20	P	P	14 16 32.6	-2.5	
H22K	**Ishtalitna Cre** comp=Z,7µm,20.0s	88.64	22	IAMs_20	IAMs_20	14 57 59.8		
H22K	**Ishtalitna Cre** baz=296,SNR=12	88.64	22	P	P	14 16 33.6	-1.5	
M18K	**Stony River** baz=292	88.64	27	P	P	14 16 33.1	-2.0	
K20K	**Telida** baz=294	88.66	25	P	P	14 16 32.8	-2.4	
S14K	**Fog Glacier** baz=290	88.67	33	P	P	14 16 33.9	-1.6	
VNFG	**Fog Glacier, M** comp=Z,6µm,18.0s	88.67	33	IAMs_20	IAMs_20	15 00 57.5		
D25K	**Kavik River** comp=Z,9µm,19.0s	88.69	18	IAMs_20	IAMs_20	15 01 31.6		
D25K	**Kavik River** baz=301	88.69	18	P	P	14 16 33.6	-1.7	
O17K	**Koliganek Bris** baz=292	88.69	29	P	P	14 16 33.2	-2.2	
LTZ	**Lake Taylor** comp=Z,6µm,22.0s	88.71	134	IAMs_20	IAMs_20	14 56 29.3		
I21K	**Tanana** comp=Z,8µm,22.0s	88.72	23	IAMs_20	IAMs_20	14 56 25.2		
I21K	**Tanana** baz=296,SNR=10.0	88.72	23	P	P	14 16 33.8	-1.7	
G23K	**Bananza Creek** baz=298	88.75	21	P	P	14 16 33.8	-1.9	
L19K	**White Mountain** comp=Z,9µm,20.0s	88.80	26	IAMs_20	IAMs_20	14 57 37.7		
L19K	**White Mountain** baz=293	88.80	26	P	P	14 16 33.4	-2.5	
C26K	**Camden Bay** baz=302	88.81	17	P	P	14 16 34.1	-1.7	
N18K	**Kilae Creek** comp=Z,9µm,21.0s	88.92	28	IAMs_20	IAMs_20	15 00 03.1		
N18K	**Kilae Creek** baz=292	88.92	28	P	P	14 16 34.4	-2.2	
F24K	**Squaw Lake** comp=Z,74nm,1.7s	89.11	20	IAmb	IAmb	14 16 50.6		
F24K	**Squaw Lake** baz=300	89.11	20	P	P	14 16 34.8	-2.5	
M19K	**Big River Lodg** comp=Z,7µm,20.0s	89.11	26	IAMs_20	IAMs_20	14 57 46.9		
CHNA	**Chernabura Isl** baz=290	89.13	34	P	P	14 16 35.5	-2.0	
CNBA	**Chernabura Isl** comp=Z,7µm,22.0s	89.14	34	IAMs_20	IAMs_20	14 59 49.9		
CHUM	**Lake Minchumin** baz=296	89.15	24	P	P	14 16 35.6	-1.9	
P17K	**Kvichak River** comp=Z,7µm,19.0s	89.22	29	IAMs_20	IAMs_20	15 02 10.3		
P17K	**Kvichak River** baz=292	89.22	29	P	P	14 16 36.0	-1.9	
MLY	**Manley** comp=Z,154nm,1.6s	89.26	23	IAmb	IAmb	14 16 54.6		
MLY	comp=Z,8µm,19.0s			IAMs_20	IAMs_20	15 00 33.4		
MLY	**Manley** baz=297	89.26	23	P	P	14 16 36.2	-1.9	
CHGN	**Chignik** baz=290	89.27	32	P	P	14 16 36.2	-1.9	
C27K	**Jago River** comp=Z,7µm,21.0s	89.32	17	IAMs_20	IAMs_20	14 59 56.3		
C27K	**Jago River** baz=303	89.32	17	P	P	14 16 36.5	-1.8	
H23K	**Yukon River** comp=Z,153nm,1.6s	89.34	22	IAmb	IAmb	14 16 54.4		
H23K	comp=Z,8µm,20.0s			IAMs_20	IAMs_20	14 59 32.4		
H23K	**Yukon River** baz=298	89.34	22	P	P	14 16 36.1	-2.3	
SYO	**Syowa Base**	89.36	197	*e*P	P	14 16 42.2	+4.0	
SYO	**Syowa Base**	89.36	197	*i*P	P	14 16 46.0	+7.8	
ESDC	**Sonseca Array** comp=Z,0.6nm,0.7s,baz=52,slow=4.6,SNR=5.7	89.41	310	P	P	14 16 36.7	-2.6	
ESDC	comp=Z,2.0nm,1.1s,baz=70,slow=8.5,SNR=4.4			PP	PP	14 20 08.1	-2.0	
ESDC	comp=Z,1µm,18.7s,baz=54,slow=40 comp=Z,0.6nm,0.7s			LR	LR	15 03 43.0		
CAST	**Castle Rocks** comp=Z,9µm,19.0s	89.44	24	IAMs_20	IAMs_20	15 00 38.6		
CAST	**Castle Rocks** baz=296,SNR=35	89.44	24	P	P	14 16 37.5	-1.5	
N19K	**Bonanza Creek** comp=Z,7µm,18.0s	89.50	27	IAMs_20	IAMs_20	15 04 16.5		
N19K	**Bonanza Creek** baz=294	89.50	27	P	P	14 16 37.1	-2.3	
O18K	**Koktuh Hills** comp=Z,6µm,20.0s	89.55	28	IAMs_20	IAMs_20	15 00 25.9		
O18K	**Koktuh Hills** baz=293	89.55	28	P	P	14 16 37.2	-2.3	
E25K	**Arctic Village** baz=302	89.56	19	P	P	14 16 36.8	-2.6	
PPLA	**Purkypile** baz=296	89.63	25	P	P	14 16 37.4	-2.6	
G24K	**Hadweenzic Riv** comp=Z,162nm,1.9s	89.65	21	IAmb	IAmb	14 16 55.6		
G24K	**Hadweenzic Riv** baz=300	89.65	21	P	P	14 16 37.4	-2.5	
M20K	**Styx River** comp=Z,9µm,19.0s	89.66	26	IAMs_20	IAMs_20	14 58 03.5		
M20K	**Styx River** baz=295	89.66	26	P	P	14 16 37.8	-2.3	
P18K	**Big Mountain,** baz=293	89.72	29	P	P	14 16 37.7	-2.7	
I23K	**Minto, Yukon-K** comp=Z,64nm,1.2s	89.72	22	IAmb	IAmb	14 16 55.9		
I23K	comp=Z,9µm,21.0s			IAMs_20	IAMs_20	15 00 56.7		
I23K	**Minto, Yukon-K** baz=298	89.72	22	P	P	14 16 37.2	-3.0	
F25K	**Christian Rive** comp=Z,142nm,1.8s	89.81	20	IAmb	IAmb	14 16 56.9		
F25K	**Christian Rive** baz=302	89.81	20	P	P	14 16 38.2	-2.4	
O19K	**Port Alsworth** comp=Z,6µm,18.0s	89.82	28	IAMs_20	IAMs_20	15 04 16.1		
O19K	**Port Alsworth** baz=294	89.82	28	P	P	14 16 38.3	-2.5	
Q17K	**Contact Creek** baz=292	89.83	30	P	P	14 16 38.7	-2.3	
R17L	**Mt. Peulik Vol** baz=292	89.84	31	P	P	14 16 38.6	-2.3	
KTH	**Kantishna Hill** comp=Z,9µm,20.0s	89.85	24	IAMs_20	IAMs_20	15 00 53.3		
H24K	**Noodor Dome** comp=Z,89nm,1.5s	89.94	22	IAmb	IAmb	14 16 57.9		
H24K	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	14 59 53.1		
H24K	**Noodor Dome** baz=300	89.94	22	P	P	14 16 39.3	-1.9	
G25K	**Bearman Lake** baz=301	90.09	20	P	P	14 16 38.4	-3.4	
NEA2	**Nenana** comp=Z,166nm,1.8s	90.10	23	IAmb	IAmb	14 16 57.0		
NEA2	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	15 01 09.6		
NEA2	**Nenana** baz=298	90.10	23	P	P	14 16 38.4	-3.6	
Q18K	**Katmai Hardscr** baz=293	90.11	29	P	P	14 16 39.8	-2.5	
BWN	**Browne** comp=Z,8µm,22.0s	90.14	23	IAMs_20	IAMs_20	15 00 18.5		
TRF	**Thorofare Moun** comp=Z,167nm,1.9s	90.15	24	IAmb	IAmb	14 16 59.7		
TRF	comp=Z,9µm,21.0s			IAMs_20	IAMs_20	15 01 12.3		
TRF	**Thorofare Moun** baz=297	90.15	24	P	P	14 16 39.8	-2.6	
BORG	**Borgarnes** comp=Z,9µm,22.0s	90.22	337	IAMs_20	IAMs_20	14 58 44.4		
F26K	**Sheenjek River** comp=Z,74nm,1.4s	90.24	19	IAmb	IAmb	14 16 59.2		
F26K	**Sheenjek River** baz=303	90.24	19	P	P	14 16 40.0	-2.6	
SKT	**Skwentna** comp=Z,10µm,21.0s	90.30	26	IAMs_20	IAMs_20	15 00 54.4		
SKT	**Skwentna** baz=296,SNR=12	90.30	26	P	P	14 16 39.4	-3.6	
D27M	**Malcolm River** comp=Z,143nm,1.7s	90.34	17	IAmb	IAmb	14 16 59.6		
D27M	comp=Z,10µm,22.0s			IAMs_20	IAMs_20	14 57 31.2		
D27M	**Malcolm River** baz=306	90.34	17	P	P	14 16 40.3	-2.8	
SPCR	**Spurr Chakacha** baz=296	90.35	27	P	P	14 16 42.1	-1.2	
L22K	**Petersville** comp=Z,8µm,18.0s	90.38	25	IAMs_20	IAMs_20	15 01 03.3		
L22K	**Petersville** baz=297,SNR=7.6	90.38	25	P	P	14 16 41.3	-2.0	
COLA	**College** comp=Z,8µm,18.0s	90.42	22	IAMs_20	IAMs_20	15 03 37.9		
COLA	**College**	90.42	22	P	P	14 16 44.3	+0.9	
COLA	**College** baz=300	90.42	22	P	P	14 16 42.0	-1.4	
POKR	**Poker Plat Res** baz=300	90.45	22	P	P	14 16 41.7	-1.9	
FYU	**Fort Yukon**	90.49	20	P	P	14 16 41.1	-2.6	
WRH	**Wood River Hil** comp=Z,7µm,18.0s	90.53	23	IAMs_20	IAMs_20	15 01 23.9		
P19K	**Oil Pt** baz=295	90.55	28	P	P	14 16 42.1	-2.1	
CCB	**Clear Creek Bu** comp=Z,6µm,18.0s	90.55	23	IAMs_20	IAMs_20	15 01 24.5		
MCK	**McKinley** comp=Z,7µm,20.0s	90.56	24	IAMs_20	IAMs_20	15 02 02.9		
MCK	**McKinley** baz=299	90.56	24	P	P	14 16 42.0	-2.1	
SUMG	**Summit** comp=Z,9µm,21.0s	90.58	347	IAMs_20	IAMs_20	15 02 05.0		
SUMG	**Summit**	90.58	347	P	P	14 16 44.9	+0.4	
TORD	**Torodi Ar. Bea** comp=Z,2.2nm,1.1s,baz=94,slow=3.8,SNR=3.7	90.58	283	P	P	14 16 42.4	-2.8	
TORD	comp=Z,5.7nm,1.1s,baz=80,slow=4.7,SNR=4.4			PP	PP	14 20 19.7	-0.4	
TORD	comp=Z,2µm,18.3s,baz=63,slow=37 comp=Z,2.2nm,1.1s			LR	LR	14 59 42.9		
TORD	**Torodi Ar. Bea**	90.58	283	P	P	14 16 41.7	-3.5	
CUT	**Chulitna** comp=Z,9µm,19.0s	90.64	25	IAMs_20	IAMs_20	15 01 21.3		
CUT	**Chulitna** baz=297	90.64	25	P	P	14 16 42.3	-2.2	
O20K	**Slope Mountain** baz=295	90.64	28	P	P	14 16 42.4	-2.3	
RND	**Reindeer** comp=Z,9µm,18.0s	90.75	24	IAMs_20	IAMs_20	15 01 29.8		
E27K	**Colen River** baz=305	90.77	18	P	P	14 16 42.5	-2.5	
G26K	**Porcupine Rive** comp=Z,11µm,22.0s	90.77	20	IAMs_20	IAMs_20	15 00 43.8		
G26K	**Porcupine Rive** baz=303,SNR=7.3	90.77	20	P	P	14 16 42.9	-2.1	
IL31	comp=Z,70nm,1.6s	90.83	22	IAmb	IAmb	14 17 00.4		
ILAR	**Eielson Array** comp=Z,1.1nm,0.7s,baz=300,slow=4.4,SNR=12	90.83	22	P	P	14 16 41.4	-4.0	
ILAR	comp=Z,2.6nm,1.1s,baz=300,slow=7.1,SNR=4.1			PP	PP	14 20 18.3	-2.2	
ILAR	comp=Z,0.2nm,0.6s,baz=119,slow=1.1,SNR=2.5 comp=Z,1.1nm,0.7s			PKKP	PKKPdf	14 34 05.7	-2.8	
ILAR	**Eielson Array**	90.83	22	P	P	14 16 42.5	-2.8	
PBRG	**Braganca**	90.87	313	*e*tx	tx	14 16 55.8		
PBRG	comp=Z,68nm,2.2s			*i* IAmb	IAmb	14 17 02.5		
CHIR	**Chirikof Islan** baz=293	90.90	32	P	P	14 16 43.1	-2.7	
D28M	**Stokes Point** baz=308	90.92	17	P	P	14 16 43.3	-2.3	
PRP	**Porcupine Dome** baz=302	90.94	21	P	P	14 16 43.0	-3.0	
HDA	**Harding Lake** comp=Z,6µm,20.0s	90.99	23	IAMs_20	IAMs_20	15 03 30.1		
HDA	**Harding Lake** baz=300	90.99	23	P	P	14 16 43.5	-2.6	
CAPN	**Captain Cook N** baz=297	91.00	27	P	P	14 16 44.4	-1.8	
M22K	**Willow** comp=Z,7µm,20.0s	91.00	26	IAMs_20	IAMs_20	15 01 24.9		
M22K	**Willow** baz=298,SNR=6.9	91.00	26	P	P	14 16 43.2	-3.0	
URZ	**Urewera** comp=Z,2µm,18.3s,baz=274,slow=39	91.05	129	LR	LR	15 02 30.7		
E28M	**Babbage River** comp=Z,9µm,18.0s	91.14	17	IAMs_20	IAMs_20	15 04 35.3		
E28M	**Babbage River** baz=307	91.14	17	P	P	14 16 44.8	-2.0	
WAT1	**Susitna Watana** baz=299	91.14	24	P	P	14 16 44.7	-2.2	
MVO	**Moncorvo**	91.26	312	*e*tx	tx	14 16 56.4		
MVO				*e*LR	LR	14 48 28.1		
MVO	comp=Z,3µm,22.0s			*i* IAMs_20	IAMs_20	15 02 44.6		
HOM	**Homer** comp=Z,6µm,21.0s	91.27	28	IAMs_20	IAMs_20	14 58 43.3		
HOM	**Homer** baz=296	91.27	28	P	P	14 16 45.4	-2.1	
SII	**Sitkinak Islan** comp=Z,6µm,19.0s	91.35	31	IAMs_20	IAMs_20	15 02 06.0		
SII	**Sitkinak Islan** baz=294	91.35	31	P	P	14 16 46.0	-2.0	
J25K	**Salcha River,** comp=Z,9µm,21.0s	91.47	22	IAMs_20	IAMs_20	15 00 48.7		
J25K	**Salcha River,** baz=302	91.47	22	P	P	14 16 46.1	-2.4	
RC01	**Rabbit Creek A** comp=Z,8µm,20.0s	91.47	26	IAMs_20	IAMs_20	15 01 54.4		
RC01	**Rabbit Creek A** baz=298	91.47	26	P	P	14 16 46.3	-2.1	
DHY	**Denali Highway** comp=Z,7µm,20.0s	91.49	24	IAMs_20	IAMs_20	15 00 29.6		
DHY	**Denali Highway** baz=300	91.49	24	P	P	14 16 46.3	-2.3	
PMR	**Palmer** comp=Z,115nm,1.4s	91.50	26	IAmb	IAmb	14 17 21.8		
PMR	**Palmer** baz=298	91.50	26	P	P	14 16 46.4	-2.1	
GHO	**Glory Hole Cre** comp=Z,9µm,20.0s	91.50	25	IAMs_20	IAMs_20	15 00 21.9		
CNPM	**China Poot** comp=Z,6µm,20.0s	91.52	28	IAMs_20	IAMs_20	15 03 12.9		
OHAK	**Old Harbor** baz=295	91.53	30	P	P	14 16 47.2	-1.5	
SLKM	**Skilak Lake** comp=Z,9µm,20.0s	91.53	27	IAMs_20	IAMs_20	15 01 40.0		
G27K	**Doyon Strip** baz=305	91.54	19	P	P	14 16 46.5	-2.2	
BRLK	**Bradley Lake** comp=Z,6µm,19.0s	91.57	28	IAMs_20	IAMs_20	15 05 15.2		
WAT6	**Susitna Watana** baz=300	91.59	24	P	P	14 16 47.1	-2.0	

F28M Old Crow 91.63 18 IAmb IAmb 14 17 22.7
comp=Z,52nm,1.5s
F28M Old Crow 91.63 18 P **P** **14 16 47.2 -1.9**
baz=307
KDAK Kodiak Island 91.64 30 IAMs_20 IAMs_20 14 59 09.4
comp=Z,7µm,21.0s
KDAK Kodiak Island 91.64 30 P **P** **14 16 47.0 -2.2**
baz=295
BRSE Bradley Lake S 91.65 28 P **P** **14 16 47.1 -2.1**
baz=297
MDT Midelt 91.67 304 LR LR 15 03 14.3
comp=Z,3µm,19.3s,baz=85,slow=39
SML Sawmill 91.73 25 IAMs_20 IAMs_20 15 01 13.0
comp=Z,9µm,21.0s
SML Sawmill 91.73 25 P **P** **14 16 47.2 -2.4**
baz=299,SNR=7.0
K24K Donnelly Dome 91.74 23 IAMs_20 IAMs_20 14 59 47.0
comp=Z,6µm,19.0s
K24K Donnelly Dome 91.74 23 P **P** **14 16 47.3 -2.3**
baz=301
E29M Blow River 91.75 17 IAmb IAmb 14 17 08.7
comp=Z,52nm,1.1s
E29M IAMs_20 IAMs_20 15 05 04.4
comp=Z,10µm,19.0s
E29M Blow River 91.75 17 P **P** **14 16 47.5 -2.1**
baz=309
POLO Lamas de Olo 91.75 313 *i* IAmb IAmb 14 17 08.1
comp=Z,40nm,1.5s
O22K Cooper Landing 91.76 27 IAMs_20 IAMs_20 15 01 56.1
comp=Z,10µm,20.0s
O22K Cooper Landing 91.76 27 P **P** **14 16 47.2 -2.5**
baz=298
PCAB Cabril 91.82 313 *e*tx tx 14 16 59.1
MTE Manteigas 91.86 312 *e*tx tx 14 16 59.4
MTE *i* IAmb IAmb 14 17 13.0
comp=Z,101nm,1.8s
MTE *e*S **S** **14 27 43.9 -8.8**
MTE *e*LR LR 14 49 35.7
MTE *i* IAMs_20 IAMs_20 15 07 21.9
comp=Z,3µm,18.0s
KNK Knik Glacier 91.86 26 IAMs_20 IAMs_20 15 00 33.7
comp=Z,8µm,21.0s
KNK Knik Glacier 91.86 26 P **P** **14 16 47.6 -2.6**
baz=299
PGAV Gavieira, Arco 91.92 313 *e*tx tx 14 17 00.3
PGAV *e*LR LR 14 46 57.4
PGAV *i* IAMs_20 IAMs_20 15 04 24.1
comp=Z,2µm,22.0s
H27K Steamboat Moun 91.92 20 IAmb IAmb 14 17 06.9
comp=Z,79nm,1.6s
H27K Steamboat Moun 91.92 20 P **P** **14 16 48.2 -2.3**
baz=305,SNR=5.2
PCBR Castelo Branco 91.97 311 *e*tx tx 14 17 01.0
PCBR *i* IAmb IAmb 14 17 09.8
comp=Z,74nm,1.4s
PVIS Viseu 92.02 312 *e*tx tx 14 17 01.0
PMRV Marv??o 92.03 311 *e*tx tx 14 17 01.2
PMRV *i* IAmb IAmb 14 17 13.2
comp=Z,58nm,1.6s
SEW Seward 92.06 27 IAMs_20 IAMs_20 15 02 05.0
comp=Z,8µm,20.0s
SEW Seward 92.06 27 P **P** **14 16 48.8 -2.3**
baz=298
PBAR Barrancos 92.12 310 *e*tx tx 14 17 01.9
PBAR *i* IAmb IAmb 14 17 10.7
comp=Z,89nm,1.4s
RIDG Independent Ri 92.13 23 IAmb IAmb 14 17 07.1
comp=Z,104nm,1.6s
RIDG IAMs_20 IAMs_20 15 00 07.2
comp=Z,7µm,19.0s
RIDG Independent Ri 92.13 23 P **P** **14 16 49.1 -2.4**
baz=302
SCM Sheep Creek Mo 92.13 25 IAMs_20 IAMs_20 15 02 07.6
comp=Z,6µm,18.0s
SCM Sheep Creek Mo 92.13 25 P **P** **14 16 49.1 -2.5**
baz=300
PWL Port Wells 92.18 26 IAMs_20 IAMs_20 15 00 07.3
comp=Z,9µm,22.0s
PWL Port Wells 92.18 26 P **P** **14 16 49.5 -2.3**
baz=299
I27K Kandik River 92.25 20 P **P** **14 16 50.2 -1.8**
baz=305
A36M Sachs Harbour 92.29 12 IAMs_20 IAMs_20 15 03 53.9
comp=Z,7µm,21.0s
A36M Sachs Harbour 92.29 12 P **P** **14 16 50.2 -1.8**
baz=321
PAX Paxson 92.29 23 IAMs_20 IAMs_20 15 02 19.7
comp=Z,7µm,20.0s
PAX Paxson 92.29 23 P **P** **14 16 50.1 -2.2**
baz=302
SCRK Sand Creek 92.32 22 IAmb IAmb 14 17 07.6
comp=Z,125nm,1.8s
SCRK IAMs_20 IAMs_20 14 58 37.2
comp=Z,9µm,22.0s
SCRK Sand Creek 92.32 22 P **P** **14 16 50.1 -2.4**
baz=303
M24K Tolsona, Glenn 92.46 24 IAMs_20 IAMs_20 15 03 58.3
comp=Z,8µm,18.0s
M24K Tolsona, Glenn 92.46 24 P **P** **14 16 50.7 -2.4**
baz=301
PSARD Sardoal 92.55 311 *e*tx tx 14 17 03.0
G29M Pine Creek 92.63 18 P **P** **14 16 51.2 -2.5**
baz=309
PARRA Arraiolos 92.69 310 *e*tx tx 14 17 04.2
PARRA *i* IAmb IAmb 14 17 17.3
comp=Z,61nm,1.9s
GLI Glacier Island 92.70 26 IAMs_20 IAMs_20 15 03 49.9
comp=Z,8µm,18.0s
GLI Glacier Island 92.70 26 P **P** **14 16 51.8 -2.3**
baz=300
HARP HAARP 92.72 24 IAMs_20 IAMs_20 15 02 34.0
comp=Z,7µm,19.0s
HARP HAARP 92.72 24 P **P** **14 16 51.8 -2.3**
baz=302
PMTG Montargil 92.75 311 *i* IAmb IAmb 14 17 10.3
comp=Z,43nm,1.8s
EVO Evora 92.75 310 *e*tx tx 14 17 04.5
PBEJ Beja 92.79 310 *e*tx tx 14 17 04.9
F30M Barrier River 92.86 17 IAmb IAmb 14 17 19.1
comp=Z,108nm,1.6s
F30M IAMs_20 IAMs_20 15 05 26.7
comp=Z,8µm,18.0s
F30M Barrier River 92.86 17 P **P** **14 16 52.3 -2.4**
baz=311
PVAQ Vaqueiros 92.86 309 *e*tx tx 14 17 05.2
PVAQ *i* IAmb IAmb 14 17 16.4
comp=Z,75nm,2.0s
PVAQ *e*S **S** **14 27 56.2 -5.4**
PVAQ *e*LQ LQ 14 43 23.3
PVAQ *e*LR LR 14 49 21.1
PVAQ *i* IAMs_20 IAMs_20 15 08 42.3
comp=Z,2µm,20.0s
KLU Klutina 92.88 25 IAMs_20 IAMs_20 15 02 59.5
comp=Z,8µm,19.0s
KLU Klutina 92.88 25 P **P** **14 16 52.6 -2.4**
baz=301
I28M Miner Creek 92.91 20 P **P** **14 16 52.6 -2.5**
baz=307
H29M Whitestone 92.95 19 IAmb IAmb 14 17 11.0
comp=Z,70nm,1.4s
H29M Whitestone 92.95 19 P **P** **14 16 52.8 -2.4**
baz=308
K27K Chicken 92.99 22 IAmb IAmb 14 17 12.3
comp=Z,96nm,1.5s
K27K IAMs_20 IAMs_20 15 04 05.9
comp=Z,8µm,20.0s
MOE Montemor 93.01 310 *e*tx tx 14 17 06.0
P23K Montague Islan 93.01 27 IAMs_20 IAMs_20 15 02 53.1
comp=Z,9µm,20.0s
P23K Montague Islan 93.01 27 P **P** **14 16 53.5 -2.0**
baz=300
FID Port Fidalgo 93.03 26 IAMs_20 IAMs_20 15 02 50.5
comp=Z,10µm,20.0s
INK Inuvik 93.03 16 P **P** **14 16 53.3 -2.1**
baz=313
PBDV Barranco-do-Ve 93.07 309 *i* IAmb IAmb 14 17 18.9
comp=Z,94nm,1.7s
L26K Log Cabin Wild 93.08 23 IAmb IAmb 14 17 11.9
comp=Z,90nm,1.4s
L26K IAMs_20 IAMs_20 15 04 24.5
comp=Z,9µm,19.0s
L26K Log Cabin Wild 93.08 23 P **P** **14 16 53.7 -2.1**
baz=304
RAO Raoul Island 93.10 119 LR LR 15 00 01.2
comp=Z,950nm,21.3s,baz=282,slow=36
DIV Divide 93.13 25 IAMs_20 IAMs_20 15 01 14.1
comp=Z,7µm,20.0s

G30M tAoh Zraii Nji 93.14 18 P **P** **14 16 54.1 -2.0**
baz=310
HIN Hinchinbrook I 93.20 26 IAMs_20 IAMs_20 15 04 15.0
comp=Z,8µm,18.0s
N25K Chitina, Valde 93.36 24 P **P** **14 16 55.3 -2.0**
baz=302
EPYK Eagle Plains 93.38 18 P **P** **14 16 55.1 -2.1**
baz=310
EYAK Cordova Ski Ar 93.44 26 P **P** **14 16 55.1 -2.4**
baz=301
RES Resolute Bay 93.50 3 LR LR 15 03 21.0
comp=Z,4µm,20.9s,baz=342,slow=38
F31M Tsiigehtchic 93.56 17 IAmb IAmb 14 17 13.6
comp=Z,82nm,1.4s
F31M IAMs_20 IAMs_20 15 04 21.2
comp=Z,5µm,21.0s
F31M Tsiigehtchic 93.56 17 P **P** **14 16 55.8 -2.1**
baz=313
M26K Nabesna, AK 93.56 23 IAmb IAmb 14 17 14.0
comp=Z,59nm,1.3s
M26K IAMs_20 IAMs_20 15 03 11.3
comp=Z,9µm,19.0s
M26K Nabesna, AK 93.56 23 P **P** **14 16 56.0 -2.1**
baz=304,SNR=9.0
L27K Beaver Creek, 93.64 22 IAmb IAmb 14 17 14.5
comp=Z,52nm,1.4s
L27K Beaver Creek, 93.64 22 P **P** **14 16 56.2 -2.2**
baz=305
BCAR Beaver Creek A 93.65 22 P **P** **14 16 56.9 -1.6**
BMRM Bremner River 93.70 25 IAmb IAmb 14 17 15.3
comp=Z,102nm,1.6s
BMRM IAMs_20 IAMs_20 14 56 47.1
comp=Z,7µm,20.0s
BMRM Bremner River 93.70 25 P **P** **14 16 56.5 -2.3**
baz=302
G31M Satah River 93.76 17 IAmb IAmb 14 17 14.2
comp=Z,118nm,1.6s
G31M IAMs_20 IAMs_20 15 06 19.5
comp=Z,9µm,19.0s
G31M Satah River 93.76 17 P **P** **14 16 56.8 -2.0**
baz=312
Q23K Middleton Isla 93.76 27 P **P** **14 16 57.2 -1.8**
baz=301
MID Middleton Isla 93.76 27 IAMs_20 IAMs_20 14 58 06.0
comp=Z,7µm,18.0s
GLB Gilahina Butte 93.77 24 IAMs_20 IAMs_20 15 03 17.8
comp=Z,6µm,20.0s
AVE Averroes 93.81 305 IAMs_20 IAMs_20 15 03 05.5
comp=Z,5µm,21.0s
DAWY Dawson 93.93 21 IAmb IAmb 14 17 15.7
comp=Z,80nm,1.4s
DAWY Dawson 93.93 21 P **P** **14 16 57.5 -2.2**
baz=307
M27K Edge Creek, AK 94.02 23 P **P** **14 16 58.2 -2.1**
baz=305,SNR=6.7
VRDI Verde Repeater 94.03 24 IAMs_20 IAMs_20 15 03 26.8
comp=Z,6µm,20.0s
J29N Klondike Camp 94.10 20 P **P** **14 16 58.5 -2.1**
baz=308
MCARA McCarthy VSAT 94.12 24 IAMs_20 IAMs_20 15 07 41.0
comp=Z,6µm,19.0s
MCARA McCarthy VSAT 94.12 24 P **P** **14 16 58.1 -2.5**
baz=304
I30M Mount Dempster 94.22 19 IAmb IAmb 14 17 16.9
comp=Z,95nm,1.6s
I30M Mount Dempster 94.22 19 P **P** **14 16 58.3 -2.9**
baz=310
KAIM Kayak Island 94.33 26 P **P** **14 16 58.5 -3.1**
baz=302
BVCY Beaver Creek 94.37 23 P **P** **14 16 59.0 -2.8**
baz=306
BERG Berg Lake 94.39 25 IAMs_20 IAMs_20 14 57 10.3
comp=Z,9µm,22.0s
CRQM Cirque 94.42 25 IAMs_20 IAMs_20 15 01 57.6
comp=Z,7µm,20.0s
CRQE Cirque 94.44 25 P **P** **14 16 59.4 -2.9**
baz=304
H31M Peel River 94.48 18 IAMs_20 IAMs_20 15 05 50.8
comp=Z,9µm,18.0s
H31M Peel River 94.48 18 P **P** **14 16 59.2 -3.0**
baz=312
TGL Tana Glacier 94.55 25 IAMs_20 IAMs_20 15 01 51.5
comp=Z,6µm,20.0s
C36M Paulatuk 94.60 13 IAMs_20 IAMs_20 15 07 28.2
comp=Z,7µm,19.0s
C36M Paulatuk 94.60 13 P **P** **14 16 59.7 -2.9**
baz=322
J30M Hart River 94.66 20 IAmb IAmb 14 17 19.5
comp=Z,90nm,1.9s
J30M Hart River 94.66 20 P **P** **14 16 59.9 -3.3**
baz=310
K29M Barlow Dome 94.72 21 IAmb IAmb 14 17 19.9
comp=Z,71nm,1.5s
K29M IAMs_20 IAMs_20 15 05 11.4
comp=Z,10µm,20.0s
K29M Barlow Dome 94.72 21 P **P** **14 17 00.7 -2.8**
baz=309
BARN Barnard Glacie 94.85 24 IAMs_20 IAMs_20 15 04 04.3
comp=Z,7µm,21.0s
YUK3 Moose Creek 94.90 23 P **P** **14 17 01.5 -3.0**
baz=306
L29M L29M 94.96 21 IAmb IAmb 14 17 21.2
comp=Z,109nm,1.6s
L29M L29M 94.96 21 P **P** **14 17 01.8 -2.7**
baz=308
GRNC Granite Creek 95.00 24 IAMs_20 IAMs_20 15 03 26.3
comp=Z,6µm,20.0s
LOGN Logan Glacier 95.24 24 IAMs_20 IAMs_20 15 05 39.8
comp=Z,6µm,19.0s
ANGG Ammassalik, Gr 95.25 342 IAMs_20 IAMs_20 15 06 18.3
comp=Z,8µm,22.0s
M29M Somme Creek 95.25 22 IAmb IAmb 14 17 24.2
comp=Z,50nm,1.6s
M29M IAMs_20 IAMs_20 15 05 04.7
comp=Z,9µm,21.0s
M29M Somme Creek 95.25 22 P **P** **14 17 03.1 -2.8**
baz=308
YUK8 Steele Glacier 95.46 23 P **P** **14 17 04.1 -3.0**
baz=307
O28M Mount Upton 95.60 24 P **P** **14 17 05.0 -2.8**
baz=306
M30M Minto, Yukon 95.78 21 IAmb IAmb 14 17 24.7
comp=Z,64nm,1.7s
M30M IAMs_20 IAMs_20 15 07 12.4
comp=Z,8µm,20.0s
M30M Minto, Yukon 95.78 21 P **P** **14 17 05.9 -2.3**
baz=310
AFI Afiamlu 95.79 103 LR LR 14 58 16.9
comp=Z,467nm,20.0s,baz=285,slow=34
ILULI Ilulissat 95.81 348 IAMs_20 IAMs_20 15 05 09.2
comp=Z,10µm,22.0s
YUK4 Talbot Arm 95.86 23 P **P** **14 17 06.0 -2.8**
baz=308
PCA Pinnacle 95.97 24 IAMs_20 IAMs_20 15 09 06.1
comp=Z,7µm,19.0s
PINM Pinnacle 95.97 24 P **P** **14 17 06.3 -2.9**
baz=306
YUK6 Outpost Mounta 96.21 23 P **P** **14 17 07.4 -3.1**
baz=308
N30M Aishikik Lake 96.37 22 IAMs_20 IAMs_20 15 06 11.4
comp=Z,7µm,20.0s
N30M Aishikik Lake 96.37 22 P **P** **14 17 08.3 -2.7**
baz=309
O29M Mount Kennedy 96.52 24 P **P** **14 17 08.8 -3.0**
baz=308
VNDA Vanda 96.53 168 P **P** **14 17 09.1 -2.1**
comp=Z,0.5nm,0.8s,baz=257,slow=5.7,SNR=3.6
VNDA LR LR 14 59 09.3
comp=Z,844nm,18.4s,baz=311,slow=34
comp=Z,0.5nm,0.8s
HYT Haines Junctio 96.61 23 P **P** **14 17 08.6 -3.6**
baz=309
N31M Braeburn, Yuko 96.84 22 P **P** **14 17 10.4 -2.7**
baz=310
M31M Drury Creek, Y 96.87 21 IAMs_20 IAMs_20 15 04 54.3
comp=Z,7µm,21.0s
M31M Drury Creek, Y 96.87 21 P **P** **14 17 09.9 -3.3**
baz=312
O30N Mendenhall 97.19 23 IAMs_20 IAMs_20 15 08 03.9
comp=Z,6µm,20.0s
O30N Mendenhall 97.19 23 P **P** **14 17 10.9 -3.7**
baz=310
P29M Windy Craggy 97.27 24 IAMs_20 IAMs_20 15 07 02.3
comp=Z,8µm,19.0s
P29M Windy Craggy 97.27 24 P **P** **14 17 11.8 -3.3**
baz=308
P30M Million Dollar 97.27 23 P **P** **14 17 11.2 -3.9**
baz=309

SFJD Kangerlussuaq 97.57 347 LR LR 15 06 38.7
comp=Z,4µm,21.2s,baz=28,slow=39
SFJD Kangerlussuaq 97.57 347 IAMs_20 IAMs_20 15 05 10.5
comp=Z,6µm,22.0s
SBA Scott Base 97.63 168 P **P** **14 17 14.8 -1.3**
SBA IAmb IAmb 14 17 41.4
comp=Z,47nm,2.0s
MMPY Sheldon Lake, 97.65 20 P **P** **14 17 14.1 -2.7**
baz=315
WHY Whitehorse 97.71 22 P **P** **14 17 14.4 -2.7**
baz=311
PLBC Pleasant Camp 97.92 24 P **P** **14 17 14.8 -3.1**
baz=310
N32M Quiet Lake 98.04 21 IAMs_20 IAMs_20 15 05 41.3
comp=Z,7µm,21.0s
N32M Quiet Lake 98.04 21 P **P** **14 17 15.5 -3.0**
baz=313
SKAG Skagway 98.33 23 P **P** **14 17 15.7 -4.0**
baz=311
P33M Teslin, Yukon 98.78 22 IAMs_20 IAMs_20 15 05 15.8
comp=Z,9µm,22.0s
P33M Teslin, Yukon 98.78 22 P **P** **14 17 18.9 -3.0**
baz=313
P32M Atlin 98.86 23 IAMs_20 IAMs_20 15 06 55.2
comp=Z,8µm,18.0s
P32M Atlin 98.86 23 P **P** **14 17 19.7 -2.5**
baz=312
S31K Pelican 98.92 25 IAMs_20 IAMs_20 15 05 29.3
comp=Z,5µm,20.0s
S31K Pelican 98.92 25 P **P** **14 17 19.4 -3.0**
baz=310
BESE Bessie Mountai 99.08 24 IAMs_20 IAMs_20 15 05 03.3
comp=Z,8µm,20.0s
R32K Eaglecrest 99.42 24 IAMs_20 IAMs_20 15 05 13.2
comp=Z,9µm,21.0s
R32K Eaglecrest 99.42 24 P **Pdif** **14 17 21.6 -3.1**
baz=311
WRGLY Wrigley 99.58 17 P **Pdif** **14 17 22.0 -3.3**
baz=322
Q32M Nakina River 99.83 23 IAMs_20 IAMs_20 15 09 53.9
comp=Z,7µm,19.0s
Q32M Nakina River 99.83 23 P **Pdif** **14 17 23.3 -3.5**
baz=313
SIT Sitka 99.88 25 P **Pdif** **14 17 23.5 -3.2**
baz=310
S32K Killisnoo 99.92 25 IAMs_20 IAMs_20 15 07 06.6
comp=Z,7µm,20.0s
S32K Killisnoo 99.92 25 P **Pdif** **14 17 23.7 -3.2**
baz=311
R33M Jennings River 100.02 22 IAMs_20 IAMs_20 15 07 29.7
comp=Z,6µm,18.0s
R33M Jennings River 100.02 22 P **Pdif** **14 17 24.3 -3.2**
baz=315
NRS Narsarsuaq 100.90 342 IAMs_20 IAMs_20 15 04 17.8
comp=Z,7µm,22.0s
S34M Telegraph Cree 100.99 23 IAMs_20 IAMs_20 15 06 17.6
comp=Z,7µm,20.0s
DLBC Dease Lake 101.04 22 P **Pdif** **14 17 28.8 -3.2**
baz=315
U33K Whale Pass 101.42 25 IAMs_20 IAMs_20 15 01 06.3
comp=Z,7µm,22.0s
U33K Whale Pass 101.42 25 P **Pdif** **14 17 30.6 -3.0**
baz=312
WRAK Wrangell Islan 101.54 25 IAMs_20 IAMs_20 15 06 05.3
comp=Z,7µm,21.0s
WRAK Wrangell Islan 101.54 25 P **Pdif** **14 17 31.4 -2.7**
baz=313
IVI Ivigtut 101.69 343 IAMs_20 IAMs_20 15 05 52.6
comp=Z,9µm,22.0s
PMOZ Porto Moniz, M 101.71 307 *e*LR LR 14 53 15.4
PMOZ *i* IAMs_20 IAMs_20 15 08 17.5
comp=Z,2µm,20.0s
KOTAN Kotaneelee Air 101.83 19 P **Pdif** **14 17 32.4 -2.9**
baz=321
CRAG Craig 101.85 26 P **Pdif** **14 17 32.9 -2.6**
baz=312
T35M Bob Quinn 101.98 23 IAMs_20 IAMs_20 15 04 35.9
comp=Z,6µm,20.0s
T35M Bob Quinn 101.98 23 P **Pdif** **14 17 33.2 -2.9**
baz=315
YKA Yellowknife Ar 102.46 14 P **Pdif** **14 17 35.2 -2.9**
comp=Z,1.3nm,0.9s,baz=332,slow=4.8,SNR=3.5
YKA PP **PP** **14 21 46.5 -3.5**
comp=Z,1.7nm,1.1s,baz=335,slow=6.7,SNR=4.3
YKA PKKP **PKKPdf** **14 33 47.0 -0.5**
comp=Z,0.3nm,0.8s,baz=149,slow=2.5,SNR=1.9
V35K Ketchikan 102.58 25 IAMs_20 IAMs_20 15 01 52.0
comp=Z,6µm,21.0s
V35K Ketchikan 102.58 25 P **Pdif** **14 17 35.2 -3.5**
baz=313
U35K Hyder 102.82 24 IAMs_20 IAMs_20 15 02 14.2
comp=Z,7µm,22.0s
U35K Hyder 102.82 24 P **Pdif** **14 17 37.1 -2.7**
baz=315
NLWA Neilton Lookou 111.66 27 IAMs_20 IAMs_20 15 10 28.5
comp=Z,5µm,21.0s
FFC Flin Flon 112.22 11 IAMs_20 IAMs_20 15 16 17.8
comp=Z,6µm,21.0s
NEW Newport 113.78 23 IAMs_20 IAMs_20 15 15 04.7
comp=Z,7µm,20.0s
HAWA Hanford 114.32 26 IAMs_20 IAMs_20 15 13 29.6
comp=Z,5µm,21.0s
JCC Jacoby Creek, 116.43 32 IAMs_20 IAMs_20 15 17 00.6
comp=Z,3µm,18.0s
BMO Blue Mountains 116.49 25 IAMs_20 IAMs_20 15 21 52.9
comp=Z,3µm,20.0s
EGMT Eagleton 116.53 18 IAMs_20 IAMs_20 15 19 24.7
comp=Z,6µm,19.0s
KHMM Horse Mountain 116.54 32 IAMs_20 IAMs_20 15 16 05.6
comp=Z,4µm,20.0s
M02C Callahan 116.61 31 IAMs_20 IAMs_20 15 18 01.3
comp=Z,4µm,21.0s
PLID Pearl Lake 116.83 24 IAMs_20 IAMs_20 15 14 12.8
comp=Z,5µm,22.0s
KHBM Hayfork Bally 116.96 32 IAMs_20 IAMs_20 15 16 27.7
comp=Z,4µm,20.0s
PPT2 Papeete2 117.45 104 *e*PP **PP** **14 23 38.1 -2.6**
comp=Z,338nm,38.5s
PPT2 *e*S 14 29 59.9
comp=Z,907nm,31.0s
PPT2 *e*SS **SS** **14 39 49.4 -3.3**
comp=Z,2µm,31.5s
PPT2 *e*LQ LQ 14 53 14.5
comp=Z,5µm,42.5s
PPT2 *e*LR LR 14 58 01.7
comp=Z,2µm,24.0s
PPT2 *e*LR LR 14 58 08.0
comp=Z,3µm,23.8s
KCPM Cahto Peak 117.48 33 IAMs_20 IAMs_20 15 19 05.6
comp=Z,3µm,20.0s
ULM Lac du Bonnet 117.52 8 PKKPab PKKPab 14 32 54.2 -1.8
comp=Z,0.9nm,0.3s,baz=150,slow=6.1,SNR=3.4
O02D Mt. Diablo Mer 117.54 32 IAMs_20 IAMs_20 15 16 57.0
comp=Z,4µm,22.0s
DGMT Dagmar 117.65 14 IAMs_20 IAMs_20 15 17 18.6
comp=Z,6µm,21.0s
WVOR Wild Horse Val 117.84 28 IAMs_20 IAMs_20 15 13 39.2
comp=Z,4µm,22.0s
DLMT Dillon 117.90 22 IAMs_20 IAMs_20 15 13 04.6
comp=Z,7µm,22.0s
BOZ Bozeman (W) 118.04 21 IAMs_20 IAMs_20 15 21 50.2
comp=Z,6µm,20.0s
HOPS Hopland Field 118.26 33 IAMs_20 IAMs_20 15 19 40.2
comp=Z,4µm,20.0s
HLID Hailey 118.73 24 IAMs_20 IAMs_20 15 12 27.0
comp=Z,6µm,22.0s
LAO LASA Array 118.77 17 IAMs_20 IAMs_20 15 18 16.8
comp=Z,6µm,22.0s
MDND Maddock 119.24 11 IAMs_20 IAMs_20 15 16 30.5
comp=Z,6µm,22.0s
RLMT Red Lodge 119.26 20 IAMs_20 IAMs_20 15 13 06.2
comp=Z,6µm,22.0s
AGMN Agassiz Nation 119.43 8 IAMs_20 IAMs_20 15 20 02.1
comp=Z,5µm,20.0s
FLWY Flagg Ranch 119.69 21 IAMs_20 IAMs_20 15 21 15.8
comp=Z,4µm,20.0s
FXWY Fox Creek 119.96 22 IAMs_20 IAMs_20 15 21 15.0
comp=Z,5µm,20.0s
LOHW Long Hollow 120.13 21 IAMs_20 IAMs_20 15 14 27.5
comp=Z,5µm,22.0s
SNOW Snow King Moun 120.21 22 IAMs_20 IAMs_20 15 21 12.7
comp=Z,5µm,20.0s
CMB Columbia Colle 120.38 32 IAMs_20 IAMs_20 15 18 36.2
comp=Z,4µm,20.0s
AHID Auburn Hatcher 120.69 22 IAMs_20 IAMs_20 15 21 09.4
comp=Z,5µm,21.0s
F64A Sherman 120.73 347 IAMs_20 IAMs_20 15 16 56.0
comp=Z,6µm,22.0s

NVAR	**Mina Array Bea**	**121.14**	**30**	PKP	**PKPdf**	**14 22 33.9**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=318,slow=2.3,SNR=6.3						
NVAR				PKKPab	**PKKPab**	**14 32 39.5**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=122,slow=3.4,SNR=5.6						
G65A	**Princeton**	**121.17**	**346**	IAMs_20	IAMs_20	15 16 08.7	
	comp=Z,4µm,21.0s						
BW06	**Boulder Array**	**121.24**	**21**	IAMs_20	IAMs_20	15 22 59.8	
	comp=Z,5µm,20.0s						
PDAR	**Pinedale Array**	**121.24**	**21**	PKP	**PKPdf**	**14 22 32.7**	**-3.2**
	comp=Z,0.3nm,0.6s,baz=222,slow=2.0,SNR=3.6						
PDAR				PKKPbc	**PKKPbc**	**14 32 38.0**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=143,slow=3.7,SNR=5.7						
PKME	**Peaks-Kenny Pk**	**121.50**	**347**	IAMs_20	IAMs_20	15 23 18.6	
	comp=Z,5µm,20.0s						
HWUT	**Hardware Ranch**	**121.51**	**23**	IAMs_20	IAMs_20	15 20 30.3	
	comp=Z,5µm,21.0s						
E38A	**The Farm, Brul**	**121.60**	**5**	IAMs_20	IAMs_20	15 21 31.2	
	comp=Z,6µm,20.0s						
EMMW	**East Machias**	**121.61**	**345**	IAMs_20	IAMs_20	15 23 37.3	
	comp=Z,4µm,19.0s						
DUG	**Dugway, Tooele**	**122.20**	**25**	IAMs_20	IAMs_20	15 26 38.1	
	comp=Z,3µm,20.0s						
TIN	**Tinemaha, Big**	**122.24**	**31**	IAMs_20	IAMs_20	15 19 38.2	
	comp=Z,4µm,22.0s						
WVL	**Waterville**	**122.25**	**347**	IAMs_20	IAMs_20	15 17 34.4	
	comp=Z,4µm,21.0s						
K22A	**Casper**	**122.35**	**19**	IAMs_20	IAMs_20	15 22 40.0	
	comp=Z,4µm,19.0s						
H62A	**Milan**	**122.55**	**348**	IAMs_20	IAMs_20	15 19 03.3	
	comp=Z,6µm,21.0s						
CWC	**Cottonwood Cre**	**122.79**	**32**	IAMs_20	IAMs_20	15 20 34.8	
	comp=Z,4µm,21.0s						
I63A	**Otisfield**	**122.94**	**348**	IAMs_20	IAMs_20	15 26 16.5	
	comp=Z,4µm,19.0s						
LBNH	**Lisbon**	**123.02**	**349**	IAMs_20	IAMs_20	15 18 33.8	
	comp=Z,5µm,21.0s						
I62A	**Tamworth**	**123.26**	**348**	IAMs_20	IAMs_20	15 19 24.1	
	comp=Z,6µm,22.0s						
TPNV	**Topopah Spring**	**123.31**	**30**	IAMs_20	IAMs_20	15 20 51.2	
	comp=Z,4µm,20.0s						
FURC	**Furnace Creek,**	**123.38**	**31**	IAMs_20	IAMs_20	15 25 43.4	
	comp=Z,4µm,19.0s						
MPMC	**Manual Prospec**	**123.38**	**31**	IAMs_20	IAMs_20	15 20 12.6	
	comp=Z,3µm,21.0s						
HNH	**Hanover**	**123.61**	**349**	IAMs_20	IAMs_20	15 24 47.2	
	comp=Z,6µm,20.0s						
LRMC	**Laurel Mtn Rad**	**123.73**	**32**	IAMs_20	IAMs_20	15 21 04.9	
	comp=Z,3µm,20.0s						
H43A	**Windswept, Lux**	**123.98**	**2**	IAMs_20	IAMs_20	15 22 01.9	
	comp=Z,6µm,22.0s						
O20A	**White River Ci**	**124.03**	**21**	IAMs_20	IAMs_20	15 25 54.6	
	comp=Z,5µm,21.0s						
J59A	**Piesco**	**124.22**	**351**	IAMs_20	IAMs_20	15 20 26.5	
	comp=Z,5µm,21.0s						
J57A	**Williamstown**	**124.49**	**352**	IAMs_20	IAMs_20	15 22 48.7	
	comp=Z,5µm,22.0s						
I42A	**Draeger Farm,**	**124.50**	**3**	IAMs_20	IAMs_20	15 23 37.8	
	comp=Z,6µm,20.0s						
I49A	**Point Hope**	**124.54**	**358**	IAMs_20	IAMs_20	15 21 03.3	
	comp=Z,6µm,22.0s						
K62A	**Royalston**	**124.60**	**349**	IAMs_20	IAMs_20	15 25 36.5	
	comp=Z,5µm,20.0s						
HRV	**Adam Dziewonsk**	**124.62**	**348**	IAMs_20	IAMs_20	15 21 27.0	
	comp=Z,6µm,22.0s						
WES	**Weston**	**124.69**	**348**	IAMs_20	IAMs_20	15 24 20.8	
	comp=Z,5µm,21.0s						
BFSC	**Mount Baldy Ra**	**124.69**	**33**	IAMs_20	IAMs_20	15 18 20.6	
	comp=Z,4µm,22.0s						
BCX	**Boston College**	**124.70**	**348**	IAMs_20	IAMs_20	15 20 28.3	
	comp=Z,6µm,22.0s						
L64A	**Middleborough**	**125.02**	**347**	IAMs_20	IAMs_20	15 28 18.5	
	comp=Z,5µm,18.0s						
ISCO	**Idaho Springs**	**125.22**	**19**	IAMs_20	IAMs_20	15 16 41.0	
	comp=Z,6µm,22.0s						
K57A	**Scipio Center**	**125.23**	**352**	IAMs_20	IAMs_20	15 23 10.1	
	comp=Z,6µm,22.0s						
M65A	**Busby, Falmout**	**125.33**	**347**	IAMs_20	IAMs_20	15 28 38.8	
	comp=Z,4µm,19.0s						
L59A	**Walton**	**125.55**	**351**	IAMs_20	IAMs_20	15 21 06.7	
	comp=Z,6µm,22.0s						
TAOE	**Nuku Hiva Isla**	**125.68**	**93**	*e*PP	**PP**	**14 24 34.2**	**-2.7**
	comp=Z,175nm,25.2s						
TAOE				*e*S	**SKSdf**	**14 30 03.6**	**+5.9**
	comp=Z,258nm,25.6s						
TAOE				*e*SS	**SS**	**14 41 44.6**	**+6.5**
	comp=Z,2µm,30.9s						
TAOE				*e*LQ	LQ	14 56 16.5	
	comp=Z,5µm,38.8s						
TAOE				*e*LR	LR	15 01 56.2	
	comp=Z,2µm,26.1s						
BINY	**Binghamton**	**125.68**	**352**	IAMs_20	IAMs_20	15 20 09.1	
	comp=Z,6µm,21.0s						
M63A	**Gales Ferry**	**125.78**	**348**	IAMs_20	IAMs_20	15 24 42.7	
	comp=Z,5µm,21.0s						
PFO	**Pinyon Flats O**	**125.81**	**33**	IAMs_20	IAMs_20	15 17 00.1	
	comp=Z,3µm,22.0s						
SCIA	**State Center**	**126.06**	**8**	IAMs_20	IAMs_20	15 23 35.5	
	comp=Z,6µm,22.0s						
IRM	**Iron Mountain**	**126.06**	**31**	IAMs_20	IAMs_20	15 22 30.4	
	comp=Z,4µm,22.0s						
AAM	**Ann Arbor**	**126.19**	**359**	IAMs_20	IAMs_20	15 29 04.2	
	comp=Z,5µm,19.0s						
WSPT	**Westport, CT**	**126.25**	**349**	IAMs_20	IAMs_20	15 23 49.2	
	comp=Z,4µm,22.0s						
L42A	**Oliver, Polo**	**126.33**	**4**	IAMs_20	IAMs_20	15 26 41.2	
	comp=Z,6µm,21.0s						
MVCO	**Mesa Verde**	**126.50**	**23**	IAMs_20	IAMs_20	15 29 28.7	
	comp=Z,4µm,20.0s						
N62A	**Caumsett State**	**126.51**	**349**	IAMs_20	IAMs_20	15 24 07.1	
	comp=Z,6µm,21.0s						
PAL	**Palisades**	**126.52**	**350**	IAMs_20	IAMs_20	15 27 08.2	
	comp=Z,4µm,20.0s						
S22A	**4UR Ranch, Cre**	**126.65**	**22**	IAMs_20	IAMs_20	15 27 13.1	
	comp=Z,5µm,19.0s						
M57A	**Sunshine Farm,**	**126.68**	**353**	IAMs_20	IAMs_20	15 23 56.5	
	comp=Z,5µm,21.0s						
GLA	**Glamis**	**127.10**	**32**	IAMs_20	IAMs_20	15 22 52.0	
	comp=Z,3µm,20.0s						
N58A	**Sunbury**	**127.12**	**352**	IAMs_20	IAMs_20	15 20 53.1	
	comp=Z,6µm,21.0s						
SDCO	**Great Sand Dun**	**127.12**	**20**	IAMs_20	IAMs_20	15 30 40.3	
	comp=Z,5µm,20.0s						
N38A	**Joes South For**	**127.15**	**8**	IAMs_20	IAMs_20	15 20 23.5	
	comp=Z,6µm,22.0s						
N53A	**Lisbon**	**127.56**	**356**	IAMs_20	IAMs_20	15 21 48.3	
	comp=Z,6µm,22.0s						
HDIL	**Hopedale**	**127.80**	**4**	IAMs_20	IAMs_20	15 28 07.0	
	comp=Z,4µm,19.0s						
P61A	**Hammonton**	**127.97**	**350**	IAMs_20	IAMs_20	15 29 49.6	
	comp=Z,5µm,18.0s						
SFIN	**Lafayette**	**128.09**	**2**	IAMs_20	IAMs_20	15 28 55.6	
	comp=Z,5µm,20.0s						
O54A	**Avella**	**128.15**	**356**	IAMs_20	IAMs_20	15 24 27.8	
	comp=Z,6µm,22.0s						
ACSO	**Alum Creek Sta**	**128.24**	**358**	IAMs_20	IAMs_20	15 26 04.4	
	comp=Z,6µm,21.0s						
O48B	**Farmland**	**128.25**	**0**	IAMs_20	IAMs_20	15 26 31.7	
	comp=Z,6µm,20.0s						
P57A	**Homestead Farm**	**128.62**	**353**	IAMs_20	IAMs_20	15 21 55.8	
	comp=Z,5µm,22.0s						
P46A	**Rosedale**	**128.84**	**2**	IAMs_20	IAMs_20	15 26 31.6	
	comp=Z,5µm,20.0s						
ALQ	**Albuquerque**	**129.27**	**23**	IAMs_20	IAMs_20	15 30 50.8	
	comp=Z,6µm,22.0s						
R61A	**Willards**	**129.37**	**350**	IAMs_20	IAMs_20	15 25 02.7	
	comp=Z,4µm,20.0s						
Q51A	**Peebles**	**129.46**	**358**	IAMs_20	IAMs_20	15 27 55.5	
	comp=Z,6µm,20.0s						
Q44A	**Meyer Farm, Va**	**129.46**	**4**	IAMs_20	IAMs_20	15 25 35.0	
	comp=Z,5µm,20.0s						
Q52A	**Bidwell**	**129.48**	**357**	IAMs_20	IAMs_20	15 26 06.1	
	comp=Z,5µm,20.0s						
TUC	**Tucson**	**129.69**	**29**	IAMs_20	IAMs_20	15 32 19.9	
	comp=Z,4µm,20.0s						
CBN	**Corbin Frederi**	**129.80**	**352**	IAMs_20	IAMs_20	15 23 05.0	
	comp=Z,6µm,21.0s						
S61A	**Accomac**	**130.06**	**350**	IAMs_20	IAMs_20	15 32 38.0	
	comp=Z,5µm,19.0s						
R58B	**Mineral**	**130.10**	**353**	IAMs_20	IAMs_20	15 26 57.0	
	comp=Z,5µm,19.0s						
S54A	**Dingess, Beckl**	**130.59**	**356**	IAMs_20	IAMs_20	15 25 54.3	
	comp=Z,5µm,21.0s						
NBPV	**Pedro Velho**	**130.73**	**272**	PKP	**PKiKP**	**14 23 01.0**	**+5.7**
T59A	**Double "B" Far**	**131.03**	**352**	IAMs_20	IAMs_20	15 28 19.8	
	comp=Z,4µm,20.0s						
T45A	**Paducah**	**131.36**	**4**	IAMs_20	IAMs_20	15 22 26.4	
	comp=Z,4µm,20.0s						
MSTX	**Muleshoe**	**131.46**	**20**	IAMs_20	IAMs_20	15 30 08.3	
	comp=Z,5µm,19.0s						
T47A	**Sharon Grove**	**131.47**	**2**	IAMs_20	IAMs_20	15 28 29.2	
	comp=Z,4µm,19.0s						
TUL3	**Leonard**	**131.49**	**12**	IAMs_20	IAMs_20	15 24 53.8	
	comp=Z,6µm,20.0s						
U54A	**Nelsons Funny**	**131.89**	**357**	IAMs_20	IAMs_20	15 29 22.8	
	comp=Z,6µm,21.0s						
WMOK	**Wichita Mounta**	**131.93**	**15**	IAMs_20	IAMs_20	15 27 04.9	
	comp=Z,5µm,22.0s						
U56A	**King**	**131.96**	**355**	IAMs_20	IAMs_20	15 29 20.3	
	comp=Z,5µm,21.0s						
EPT	**El Paso**	**132.04**	**25**	IAMs_20	IAMs_20	15 30 43.4	
	comp=Z,3µm,20.0s						
V61A	**Roper**	**132.05**	**351**	IAMs_20	IAMs_20	15 29 50.7	
	comp=Z,3µm,18.0s						
V58A	**Windy Hill, Pi**	**132.39**	**354**	IAMs_20	IAMs_20	15 26 22.6	
	comp=Z,5µm,21.0s						
MNTX	**Cornudas Mount**	**132.56**	**24**	IAMs_20	IAMs_20	15 28 36.9	
	comp=Z,3µm,20.0s						
V48A	**Smith Brothers**	**132.73**	**2**	IAMs_20	IAMs_20	15 23 19.4	
	comp=Z,5µm,21.0s						
W50A	**Signal Mountai**	**133.30**	**0**	IAMs_20	IAMs_20	15 29 11.3	
	comp=Z,5µm,20.0s						
W52A	**Murphy**	**133.40**	**359**	IAMs_20	IAMs_20	15 31 04.8	
	comp=Z,5µm,18.0s						
X58A	**Rowland**	**133.63**	**354**	IAMs_20	IAMs_20	15 25 21.7	
	comp=Z,6µm,22.0s						
X51A	**Calhoun**	**133.93**	**360**	IAMs_20	IAMs_20	15 30 19.1	
	comp=Z,5µm,20.0s						
Y60A	**Bolivia**	**134.04**	**352**	IAMs_20	IAMs_20	15 33 34.4	
	comp=Z,4µm,19.0s						
Y57A	**Sumter**	**134.27**	**355**	IAMs_20	IAMs_20	15 29 47.6	
	comp=Z,4µm,20.0s						
Y58A	**Scranton**	**134.31**	**354**	IAMs_20	IAMs_20	15 25 50.6	
	comp=Z,5µm,21.0s						
Y49A	**Blount Mountai**	**134.62**	**2**	IAMs_20	IAMs_20	15 30 58.4	
	comp=Z,5µm,20.0s						
NBMO	**Morrinhos-CE**	**134.76**	**277**	PKP	**PKiKP**	**14 23 03.6**	**+0.1**
NHSC	**New Hope**	**135.16**	**354**	IAMs_20	IAMs_20	15 31 24.9	
	comp=Z,5µm,20.0s						
TXAR	**Lajitas Array**	**135.33**	**23**	PKP	**PKPdf**	**14 23 01.1**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=75,slow=0.8,SNR=5.3						
TXAR				PP	**PP**	**14 25 35.7**	**-1.8**
	comp=Z,1.1nm,1.1s,baz=4.6,slow=5.7,SNR=2.6						
LRAL	**Lakeview Retre**	**135.41**	**2**	IAMs_20	IAMs_20	15 28 22.4	
	comp=Z,5µm,20.0s						
257A	**Skidaway Islan**	**136.35**	**355**	IAMs_20	IAMs_20	15 32 38.7	
	comp=Z,5µm,19.0s						
SLBS	**Sierra La Lagu**	**137.12**	**35**	IAMs_20	IAMs_20	15 37 34.0	
	comp=Z,5µm,20.0s						
456A	**Hilliard**	**137.67**	**356**	IAMs_20	IAMs_20	15 27 50.8	
	comp=Z,4µm,20.0s						
KVTX	**Kingsville**	**138.96**	**18**	IAMs_20	IAMs_20	15 36 36.4	
	comp=Z,5µm,21.0s						
DWPF	**Disney Wildern**	**140.22**	**355**	IAMs_20	IAMs_20	15 26 21.3	
	comp=Z,5µm,22.0s						
060A	**Indiantown**	**141.18**	**353**	IAMs_20	IAMs_20	15 31 05.7	
	comp=Z,3µm,20.0s						
SMRT	**St. Maarten**	**143.35**	**324**	IAMs_20	IAMs_20	15 26 59.5	
	comp=Z,4µm,22.0s						
GDSD	**La Dsirade Is**	**143.45**	**319**	IAMs_20	IAMs_20	15 27 22.7	
	comp=Z,4µm,22.0s						
NTVB	**Natividade**	**143.53**	**266**	PKP	**PKiKP**	**14 23 21.3**	**-0.1**
SABA	**Saba**	**143.78**	**323**	IAMs_20	IAMs_20	15 30 41.1	
	comp=Z,3µm,22.0s						
MAGL	**Barre de l'ile**	**143.86**	**319**	IAMs_20	IAMs_20	15 28 31.5	
	comp=Z,3µm,22.0s						
BB19B	**Bebedouro**	**143.94**	**250**	*e*P	**PKiKP**	**14 23 21.6**	**-0.5**
BDFB	**Brasilia**	**143.94**	**260**	PKP	PKPab	14 23 15.7	-0.3
	comp=Z,6.4nm,0.9s,baz=175,slow=10.0,SNR=4.0						
CBE	**Ff, Capester**	**143.98**	**320**	IAMs_20	IAMs_20	15 28 10.7	
	comp=Z,4µm,22.0s						
IPMB	**Ipameri, GO**	**144.01**	**256**	*e*P	**PKiKP**	**14 23 21.3**	**-1.0**
GRTK	**Grand Turk**	**144.26**	**338**	IAMs_20	IAMs_20	15 39 29.5	
	comp=Z,3µm,19.0s						
SVN	**Savane Anatole**	**144.60**	**318**	IAMs_20	IAMs_20	15 29 01.2	
	comp=Z,3µm,22.0s						
FDFM	**Morne la Roset**	**144.67**	**318**	IAMs_20	IAMs_20	15 29 04.2	
	comp=Z,3µm,22.0s						
BBGH	**Gun Hill**	**144.70**	**314**	IAMs_20	IAMs_20	15 39 05.4	
	comp=Z,3µm,19.0s						
BIM	**Bigot**	**144.77**	**317**	IAMs_20	IAMs_20	15 29 08.8	
	comp=Z,2µm,21.0s						
PRPB	**Paraapebas**	**144.88**	**276**	PKP	**PKiKP**	**14 23 25.2**	**+1.0**
PRPB	**Paraapebas**	**144.88**	**276**	*e*P	**PKiKP**	**14 23 22.5**	**-1.7**
SJG	**San Juan**	**145.00**	**328**	IAMs_20	IAMs_20	15 28 52.9	
	comp=Z,3µm,21.0s						
CPSB	**Cacapava Do Su**	**145.42**	**233**	PKP	**PKiKP**	**14 23 26.4**	**+1.5**
CPSB	**Cacapava Do Su**	**145.42**	**233**	*e*P	**PKPab**	**14 23 22.6**	**+1.6**
ITAB	**Concordia**	**145.59**	**239**	*e*P	**PKiKP**	**14 23 23.8**	**-1.5**
LDASE	**Londrina, Braz**	**145.83**	**246**	*e*P	**PKiKP**	**14 23 24.6**	**-1.3**
BMO1	**UHE Belo Monte**	**146.03**	**282**	PKP	**PKPab**	**14 23 24.1**	**+0.4**
UNM	**Universidad Na**	**146.07**	**25**	IAMs_20	IAMs_20	15 37 09.1	
	comp=Z,4µm,22.0s						
PTGB	**Pitanga**	**146.32**	**243**	*e*P	**PKPab**	**14 23 24.7**	**+0.1**
ATM1	**UHE Belo Monte**	**146.52**	**282**	PKP	**PKiKP**	**14 23 27.4**	**-0.2**
SDDR	**Presa de Saban**	**146.62**	**336**	IAMs_20	IAMs_20	15 32 03.0	
	comp=Z,3µm,22.0s						
TRQA	**Tornquist**	**146.73**	**214**	PKP	**PKiKP**	**14 23 27.3**	**0.0**
GTBY	**Guantanamo Bay**	**147.06**	**343**	IAMs_20	IAMs_20	15 40 47.3	
	comp=Z,3µm,20.0s						
SNDB	**Serra Nova Dou**	**147.08**	**266**	*e*P	**PKPdf**	**14 23 23.3**	**-0.8**
TRCB	**Terra Rica**	**147.33**	**246**	*e*P	**PKPab**	**14 23 27.6**	**-0.9**
ARAG	**Araguaiana, MT**	**147.60**	**259**	*e*P	**PKPdf**	**14 23 26.0**	**+1.1**
TEIG	**Tepich**	**148.05**	**6**	IAMs_20	IAMs_20	15 39 28.5	
	comp=Z,4µm,21.0s						
PSAL	**Palomas, Salto**	**148.25**	**228**	*e*P	**PKPbc**	**14 23 27.9**	**-1.0**
PLCA	**Paso Flores**	**148.48**	**201**	PKPbc	**PKPdf**	**14 23 26.6**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=210,slow=5.9,SNR=4.0						
MTDJ	**Mount Denham**	**149.32**	**346**	IAMs_20	IAMs_20	15 36 07.2	
	comp=Z,3µm,21.0s						
AMBA	**Amambai (Brazi**	**149.39**	**245**	*e*P	**PKPdf**	**14 23 28.6**	**+0.8**
ITTB	**Itaituba**	**150.18**	**282**	*e*P	**PKPbc**	**14 23 31.7**	**-2.6**
CPUP	**Villa Florida**	**150.23**	**237**	PKPbc	**PKPbc**	**14 23 31.7**	**-2.3**
	comp=Z,22nm,1.1s,baz=87,slow=5.2,SNR=7.8						
PP1B	**Ponte de Pedra**	**150.37**	**255**	*e*P	**PKPbc**	**14 23 32.5**	**-2.1**
NPGB	**Novo Progresso**	**150.45**	**276**	PKP	**PKiKP**	**14 23 36.1**	**+0.4**
NPGB	**Novo Progresso**	**150.45**	**276**	*e*P	**PKPdf**	**14 23 30.6**	**+0.9**
SALV	**Santo Antonio**	**151.31**	**258**	*e*P	**PKPbc**	**14 23 34.3**	**-2.6**
CLDB	**Colider**	**151.41**	**269**	PKP	**PKPbc**	**14 23 34.5**	**-2.7**
CLDB	**Colider**	**151.41**	**269**	*e*P	**PKPbc**	**14 23 34.0**	**-3.2**
BOAV	**Boa Vista**	**151.94**	**299**	PKP	**PKPbc**	**14 23 35.9**	**-2.6**
BOAV	**Boa Vista**	**151.94**	**299**	*e*P	**PKPbc**	**14 23 35.1**	**-3.3**
MURT	**Porto Murtinho**	**152.07**	**246**	*e*P	**PKPdf**	**14 23 34.5**	**+2.7**
COIM	**Forte Coimbra**	**152.68**	**249**	*e*P	**PKPdf**	**14 23 34.3**	**+1.6**
TGUH	**Tegucigalpa,Un**	**154.25**	**5**	IAMs_20	IAMs_20	15 46 11.4	
	comp=Z,2µm,19.0s						
PTLB	**Pontes e Lacer**	**154.66**	**259**	*e*P	**PKPdf**	**14 23 37.1**	**+1.4**
CFA	**Coronel Fontan**	**154.94**	**215**	PKPbc	**PKPbc**	**14 23 41.2**	**-3.3**
	comp=Z,1.0nm,0.5s,baz=313,slow=5.8,SNR=4.1						
SDV	**Santo Domingo**	**155.04**	**325**	*e*P	**PKPdf**	**14 23 38.1**	**+1.6**
BBSD	**Serra de San D**	**155.84**	**254**	*e*P	**PKPdf**	**14 23 39.6**	**+2.3**
JTS	**Las Juntas de**	**158.09**	**0**	IAMs_20	IAMs_20	15 42 37.2	
	comp=Z,2µm,21.0s						
HDC	**Heredia**	**158.37**	**358**	IAMs_20	IAMs_20	15 38 29.2	
	comp=Z,2µm,22.0s						
BCIP	**Isla Barro Col**	**158.60**	**346**	IAMs_20	IAMs_20	15 45 02.1	
	comp=Z,2µm,21.0s						
LPAZ	**La Paz**	**163.08**	**253**	PKP	**PKPdf**	**14 23 43.3**	**-3.1**
	comp=Z,4.1nm,1.2s,baz=349,slow=2.1,SNR=7.7						
LPAZ				PKPab	**PKPab**	**14 24 34.3**	**-2.0**
	comp=Z,6.6nm,1.0s,baz=40,slow=3.6,SNR=5.1						

*TEH **17** 14:15:55.3, 36˚16N×53˚92E, h5km, ML3.8, Presumed earthquake*
*IDC **17** 14:16:00.6±4.1, 36˚49N×54˚10E, h0km, mb3.5/4, mbtmp3.5/6, ML3.0/2, Error ellipse: s-maj=70.4km s-min=19.7km az=9.0*
ISC 17 14:15:56.9±0.8, 36.15N±0.04×53.89E±0.03, h10km, n36, σ2$13/38, mb3.5/3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGLO	**Ghaloghah**	**0.35**	**352**	Pg	**Pg**	**14 16 02.1**	**-1.9**
ISHM	**Shahmirzad**	**0.59**	**235**	Pg	**Pb**	**14 16 08.5**	**-1.1**
ISHM				Sg	**Sb**	**14 16 18.1**	**-0.1**
IANJ	**Anjilo**	**0.69**	**178**	Pg	**Pb**	**14 16 09.7**	**-1.4**
IANJ				Sg	**Sb**	**14 16 19.5**	**-1.2**
IALA	**Alasht**	**0.88**	**266**	Pg	**Pg**	**14 16 12.9**	**-0.9**
IALA				Sg	**Sn**	**14 16 27.0**	**-1.5**
IFIR	**Firoozkooh**	**1.05**	**241**	Pg	**Pn**	**14 16 16.5**	**-1.5**
ILAS	**Lasjerd**	**1.08**	**225**	Pg	**Pn**	**14 16 17.2**	**-1.1**
IPRN	**Peran**	**1.26**	**275**	Pg	**Pb**	**14 16 19.7**	**-1.1**
IDMV	**Damavand**	**1.61**	**250**	Pg	**Pb**	**14 16 26.1**	**-0.8**
IMND	**Minoodasht**	**1.65**	**47**	Pg	**Pb**	**14 16 25.1**	**-2.3**
TEHA	**Amirabad Tehra**	**2.07**	**259**	Pn	**Pb**	**14 16 33.8**	**-0.9**
ISFB	**Sefidab**	**2.25**	**217**	Pn	**Pb**	**14 16 35.9**	**-1.8**
MRVT	**Maraveh tapeh**	**2.32**	**49**	Pn	**Pb**	**14 16 36.4**	**-2.4**
KRSH	**Karshahi**	**2.61**	**214**	Pn	**Pb**	**14 16 40.9**	**-3.1**
TAPT	**Tabas- Tapeh t**	**2.95**	**114**	Pn	**Pn**	**14 16 44.8**	**+0.8**
ANAR	**Anarak**	**2.96**	**183**	Pn	**Pb**	**14 16 45.6**	**-4.2**
SBZV	**Sabzevar**	**3.02**	**84**	Pn	**Pb**	**14 16 46.3**	**-4.6**
TNSJ	**Nastanj**	**3.12**	**134**	Pn	**Pn**	**14 16 47.6**	**+1.2**
GIDE	**GILAN DEYLAMAN**	**3.29**	**285**	Pn	**Pb**	**14 16 50.9**	**-4.7**
ISFR	**Sfrayin**	**3.43**	**74**	Pn	**Pn**	**14 16 51.9**	**+1.2**
IZEF	**Zefreh**	**3.50**	**202**	Pn	**Pn**	**14 16 53.0**	**+1.4**
TKDS	**Koohdasht(Taba**	**3.67**	**133**	Pn	**Pn**	**14 16 54.9**	**+1.0**
TPRV	**Parvadeh(Tabas**	**3.88**	**143**	Pn	**Pn**	**14 16 58.6**	**+1.9**
ICHK	**Chekchek**	**3.92**	**174**	Pn	**Pn**	**14 16 58.7**	**+1.3**
IAKL	**Akhelmad**	**3.95**	**82**	Pn	**Pn**	**14 16 59.2**	**+1.2**
IEMG	**Emamgholi**	**4.03**	**70**	Pn	**Pn**	**14 16 59.9**	**+1.0**
IPAY	**Payeh**	**4.14**	**84**	Pn	**Pn**	**14 17 01.7**	**+1.3**
IBAF	**Bafgh**	**4.76**	**162**	Pn	**Pn**	**14 17 10.5**	**+1.6**
AFRZ	**Afriz**	**5.02**	**121**	Pn	**Pn**	**14 17 14.1**	**+1.6**
IMYA	**Miami**	**5.03**	**86**	Pn	**Pn**	**14 17 13.9**	**+1.4**
TBJM	**Torbat-e-JAM**	**5.32**	**98**	Pn	**Pn**	**14 17 17.6**	**+1.1**
KBZ	**Khabaz**	**11.32**	**315**	Pn	Pn	14 18 44.6	+5.9
	0.1nm,0.3s,baz=62,slow=22,SNR=1.6						
KBZ					Sn	**Sn**	**14 20 47.1**	**+1.9**
	0.2nm,0.3s,baz=160,slow=21,SNR=1.9						
	0.9nm,0.5s						
BRTR	**Keskin Array B**	**16.36**	**289**	Pn	**P**	**14 19 54.3**	**+4.5**
	0.1nm,0.3s,baz=90,slow=12,SNR=2.2						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**20.47**	**29**	P	Pn	14 20 35.7	-1.1
	3.0nm,0.6s,baz=208,slow=9.7,SNR=8.6						
	3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**22.88**	**43**	P	**P**	**14 21 01.6**	**+1.2**
	0.4nm,0.6s,baz=242,slow=11,SNR=2.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**23.67**	**55**	P	**P**	**14 21 10.4**	**+1.9**
	1.4nm,0.7s,baz=254,slow=10,SNR=8.9						
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**27.86**	**41**	P	**P**	**14 21 48.4**	**+1.9**
	0.5nm,0.6s,baz=239,slow=10.0,SNR=2.3						
	0.5nm,0.6s						

*IDC **17** 14:21:21.2±0.8, 11˚75N×94˚61E, h0km, mb3.7/14, mbtmp3.7/15, ML3.4/1, Error ellipse: s-maj=26.2km s-min=15.9km az=58.0*
*BKK **17** 14:21:24.6±0.8, 12

H03N2 Juan Fernandez 80.63 124 T T 16 06 01.6
baz=244
H03N1 Juan Fernandez 80.64 124 T T 16 05 57.2
baz=244
FINES FINESS Array B 147.13 337 PKPbc **PKPbc 14 44 28.0 -1.6**
0.6nm,0.4s,baz=29,slow=3.2,SNR=7.8

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*RSNC **17** 14:28:34.6±0.0, 7.˚N±1.˚×7.˚3W±.˚, h148km±2km, M2.3, ML2.1*
*FUNV **17** 14:28:36.5, 7.˚17N×73.˚16W, h6km, MW2.6, Presumed earthquake*
ISC 17 14:28:34.0±1.7, **6.˚85N**±0.˚05×**73.˚10W**±0.˚05, **h148**km±10km, **n18**, σ1°**10**/33, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**198**	P	**Pn**	**14 28 54.6**	**+0.1**
BARC				S	**Sn**	**14 29 09.7**	**-0.5**
PAMC	**Pamplona, Colo**	**0.63**	**39**	P	**Pn**	**14 28 57.2**	**+0.7**
PAMC				S	**Sn**	**14 29 14.1**	**+0.6**
BRJC	**Barrancabermej**	**0.65**	**281**	P	**Pn**	**14 28 56.2**	**+0.2**
BRJC				S	**Sn**	**14 29 13.2**	**+0.5**
RUSC	**La Rusia**	**0.95**	**179**	P	**Pn**	**14 28 59.1**	**+0.3**
RUSC				S	**Sn**	**14 29 17.4**	**-0.2**
RUSC	**La Rusia**	**0.95**	**179**	*e*P	**Pn**	**14 28 59.0**	**+0.3**
RUSC				*e*S	**Sn**	**14 29 16.8**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P	**Pn**	**14 29 01.5**	**-0.7**
PTBC				S	**Sn**	**14 29 22.9**	**-0.8**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**14 29 02.9**	**+0.3**
OCAC				S	**Sn**	**14 29 24.5**	**+0.1**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**14 29 03.8**	**-0.1**
SPBC				S	**Sn**	**14 29 25.7**	**-1.0**
NORC	**Norcasia**	**2.17**	**234**	P	**Pn**	**14 29 11.2**	**+0.1**
NORC				S	**Sn**	**14 29 38.8**	**-0.8**
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**14 29 15.2**	**+1.8**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**14 29 16.7**	**+1.3**
HELC				S	**Sn**	**14 29 47.1**	**-0.1**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**14 29 18.5**	**+3.1**
HELC				*e*S	**Sn**	**14 29 48.4**	**+1.2**
URIC	**San Jos de Ur**	**2.57**	**291**	P	**Pn**	**14 29 14.7**	**-1.3**
UREC				S	**Sn**	**14 29 45.4**	**-2.9**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	P	**Pn**	**14 29 19.6**	**+0.8**
GUY2C				S	**Sn**	**14 29 54.1**	**+0.7**
PTGC	**Puerto Gaitan,**	**2.80**	**160**	P	**Pn**	**14 29 17.8**	**-1.0**
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**	**14 29 24.2**	**+0.5**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**14 29 29.3**	**+0.4**
PRAC				S	**Sn**	**14 30 10.4**	**-1.0**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**14 29 29.5**	**+0.2**
ORTC				S	**Sn**	**14 30 12.2**	**0.0**

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*IDC **17** 14:29:31.8±1.9, 11.˚67N×95.˚24E, h0km, mb3.5/5, mbtmp3.4/6, Error ellipse: s-maj=74.5km s-min=23.2km az=63.0*
ISC 17 14:29:33.2±1.8, **11.˚7N**±0.˚2×**95.˚2E**±0.˚3, **h10**km, **n6**, σ**0°15**/6, **mb3.4**/5, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.64**	**28**	Pn	**Pn**	**14 31 24.6**	**0.0**
	0.4nm,0.4s,baz=216,slow=14,SNR=4.3						
MKAR	**Makanchi Array**	**36.68**	**345**	P	**P**	**14 36 40.3**	**+0.1**
	0.9nm,0.9s,baz=158,slow=9.0,SNR=5.5						
	0.9nm,0.9s						
KURBB	**Kurchatov Arra**	**41.18**	**344**	P	**P**	**14 37 17.6**	**-0.2**
	0.5nm,0.8s,baz=173,slow=7.3,SNR=3.6						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**42.98**	**351**	P	**P**	**14 37 32.5**	**+0.1**
	0.5nm,0.6s,baz=156,slow=9.4,SNR=2.4						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**49.69**	**129**	P	**P**	**14 38 25.8**	**+0.1**
	0.4nm,0.9s,baz=310,slow=8.5,SNR=2.8						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**51.62**	**133**	P	**P**	**14 38 40.2**	**-0.1**
	0.5nm,1.1s,baz=312,slow=7.1,SNR=1.8						
	0.5nm,1.1s						

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*IDC **17** 14:31:56.2±1.5, 12.˚76N×96.˚63E, h0km, mb3.4/7, mbtmp3.4/7, Error ellipse: s-maj=74.9km s-min=21.5km az=59.0*
ISC 17 14:31:57.9±1.5, **12.˚8N**±0.˚3×**96.˚6E**±0.˚4, **h10**km, **n7**, σ**0°72**/6, **mb3.5**/7, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**35.91**	**11**	P	**P**	**14 38 58.6**	**0.0**
	0.3nm,0.4s,baz=183,slow=2.9,SNR=2.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**36.02**	**343**	P	**P**	**14 38 58.6**	**-0.8**
	0.1nm,0.3s,baz=156,slow=7.3,SNR=1.3						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**40.56**	**342**	P	P	14 39 36.1	-1.4
	0.1nm,0.4s,baz=157,slow=7.8,SNR=4.3						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**42.15**	**350**	P	**P**	**14 39 50.8**	**+0.3**
	0.3nm,0.3s,baz=149,slow=6.7,SNR=1.7						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**49.31**	**131**	P	**P**	**14 40 48.1**	**+0.5**
	0.4nm,0.8s,baz=302,slow=7.5,SNR=2.3						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**51.36**	**135**	P	**P**	**14 41 02.5**	**-0.6**
	0.3nm,0.6s,baz=318,slow=7.3,SNR=6.2						
	0.3nm,0.6s						
GERES	**GERESS Array B**	**75.89**	**317**	P	**P**	**14 43 45.3**	**+0.4**
	0.6nm,0.8s,baz=95,slow=5.9,SNR=4.2						
	0.6nm,0.8s						

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*IDC **17** 14:35:33.2±1.1, 11.˚55N×95.˚19E, h0km, mb3.6/12, mbtmp3.5/13, Error ellipse: s-maj=37.8km s-min=19.7km az=59.0*
ISC 17 14:35:34.9±1.1, **11.˚6N**±0.˚2×**95.˚2E**±0.˚2, **h10**km, **n13**, σ**0°61**/13, **mb3.4**/12, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.71**	**27**	Pn	**Pn**	**14 37 26.8**	**-0.7**
	0.4nm,0.4s,baz=209,slow=13,SNR=1.8						
LZDM	**Lanzhou Array**	**25.45**	**16**	P	**P**	**14 41 04.2**	**+0.8**
	1.3nm,0.4s,baz=198,slow=9.1,SNR=1.6						
	1.3nm,0.4s						
MKAR	**Makanchi Array**	**36.77**	**345**	P	**P**	**14 42 42.6**	**-0.1**
	0.3nm,0.6s,baz=172,slow=9.4,SNR=5.4						
	0.3nm,0.6s						
SONM	**Songino Array**	**37.33**	**12**	P	**P**	**14 42 48.5**	**+0.9**
	0.3nm,0.4s,baz=205,slow=6.0,SNR=3.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**41.27**	**344**	P	**P**	**14 43 19.5**	**-0.8**
	0.4nm,0.7s,baz=161,slow=7.6,SNR=4.9						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**43.07**	**351**	P	**P**	**14 43 34.3**	**-0.6**
	0.4nm,0.5s,baz=164,slow=7.6,SNR=3.7						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**45.89**	**339**	P	**P**	**14 43 57.3**	**-0.2**
	0.5nm,0.6s,baz=157,slow=8.0,SNR=4.2						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**49.62**	**129**	P	**P**	**14 44 27.1**	**+0.1**
	1.1nm,1.2s,baz=308,slow=8.4,SNR=2.1						
	1.1nm,1.2s						
ASAR	**Alice Springs**	**51.54**	**133**	P	**P**	**14 44 41.1**	**-0.3**
	0.3nm,0.8s,baz=310,slow=6.5,SNR=8.7						
	0.3nm,0.8s						
BRTR	**Keskin Array B**	**60.90**	**309**	P	**P**	**14 45 47.7**	**-0.5**
	0.5nm,0.6s,baz=136,slow=7.0,SNR=3.0						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**69.98**	**331**	P	**P**	**14 46 46.8**	**+0.4**
	1.6nm,0.9s,baz=131,slow=5.7,SNR=1.0						
	1.6nm,0.9s						
GERES	**GERESS Array B**	**75.82**	**318**	P	**P**	**14 47 22.0**	**+0.4**
	0.1nm,0.3s,baz=90,slow=2.0,SNR=3.9						
	0.1nm,0.3s						
NOA	**NORSAR Array B**	**77.06**	**330**	P	**P**	**14 47 28.3**	**+0.1**
	0.2nm,0.6s,baz=96,slow=5.5,SNR=1.1						
	0.2nm,0.6s						

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*BKK **17** 14:43:13.7±0.5, 12.˚N±3.˚×9.˚5E±.˚, h13km, M4.5/13, mB4.3/3, mb4.3/6, Mjma4.7/13, ML4.8/12, MLv4.6/11, Mw(mB)3.4/3*
*IDC **17** 14:43:14.4±0.7, 11.˚99N×95.˚09E, h0km, mb4.1/35, mbtmp4.1/37, ML3.6/2, MS4.2/4, Error ellipse: s-maj=17.6km s-min=13.5km az=132.0*
*MOS **17** 14:43:15.4±1.3, 11.˚85N×94.˚89E, h11km, mb5.1/53, Error ellipse: s-maj=9.7km s-min=4.5km az=105.8*
*GCMT **17** 14:43:16.3±0.5, 11.˚77N±0.˚03×95.˚03E±0.˚03, h12km±3km, MW5.0/69, Moment Tensor Solution. s2,c2; s69,c103; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.53±.23; Mθθ=0.68±.20; Mφφ=-0.15±.23; Mrθ=2.69±1.00; Mrφ=2.98±.20; Mθφ=0.08±.53; Best double couple: Mw=4.04500×10^16^ NP1:ϕs=5.00000°, δ=47.00000°, λ=-174.00000°. NP2: ϕs=271.00000°, δ=86.00000°, λ=-43.00000°. Principal axes: T 4.2650, Plg25.0000°, Azm326.0000°; N -0.4380, Plg47.0000°, Azm86.0000°; P -3.8260, Plg32.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NDI **17** 14:43:16.4±4.0, 11.˚75N×95.˚13E, h23km±51km, mb4.9, MW4.6, Presumed earthquake*
*BJI **17** 14:43:16.5, 11.˚63N×94.˚83E, h20km, mb4.6/56, Ms5.0/5, Ms7 4.9/6*
*NEIC **17** 14:43:17.2±1.9, 11.˚85N±0.˚07×94.˚83E±0.˚08, h10km±1km, mb5.0/64, Mww5.0/10, Error ellipse: s-maj=12.6km s-min=11.3km az=95.0*
*DJA **17** 14:43:20.7±0.2, 12.˚N±3.˚×9.˚5E±.˚, h10km, M5.0/19, mb4.6/19, mB6.3/4, MLv4.9/4, Mw(mB)6.0/4*
*GFZ **17** 14:43:21.4±0.2, 12.˚N±4.˚×9.˚5E±.˚, h10km, M5.3/49, mb4.8/49*
*BGR **17** 14:43:29.7, 12.˚07N×93.˚93E, h33km, mb5.0, Ms4.9*
ISC 17 14:43:19.0±0.4, **11.˚78N**±0.˚05×**94.˚78E**±0.˚04, **h21**km, **n385**, σ**2°56**/334, **mb4.9**/161, **MS4.6**/6, **13C-13**, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.99**	**267**		**Pn**	**14 43 51.3**	**-0.2**
PBA	**Port Blair**	**1.99**	**267**	*e*P	**Pn**	**14 43 51.9**	**+0.4**
PBA				*e*S	**Sb**	**14 44 20.8**	**+1.8**
RNTT	**Ranong**	**4.34**	**123**	P	Pn	14 44 15.0	-8.8
RNTT				S	Sn	14 45 03.5	-10
RNTT				Sg	**Sb**	**14 45 25.6**	**-1.0**
KHLT	**Khaolaem Dam**	**4.78**	**51**	P	Pn	14 44 22.2	-7.5
UTHA	**Uthaitani**	**5.89**	**50**	P	Pn	14 44 37.6	-7.5
	227nm27nm,0.9s						
CM31	**Chiang Mai Arr**	**7.77**	**31**		**Pn**	**14 45 08.8**	**-2.1**
CMAR	**Chiang Mai Arr**	**7.77**	**31**	Pn	Pn	14 45 05.4	-5.5
	0.3nm,0.3s,baz=218,slow=15,SNR=12						
CMAR				Sn	**Sn**	**14 46 31.8**	**-6.4**
	0.2nm,0.3s,baz=218,slow=20,SNR=4.2						
CMAR				Lg	Lg	14 47 09.8	
	0.2nm,0.3s,baz=210,slow=23,SNR=5.2						
CMAR				LR	LR	14 48 24.3	
	comp=Z,1μm,18.5s,baz=200,slow=42						
	1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**7.77**	**31**	*i* P	**Pn**	**14 45 11.1**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**7.77**	**31**		**Pn**	**14 45 09.6**	**-1.3**
NPW	**Naypyitaw**	**8.06**	**9**	P	**Pn**	**14 45 12.8**	**-2.1**
CHTO	**Chiang Mai**	**8.07**	**29**	P	**Pn**	**14 45 13.0**	**-2.0**
CHTO	**Chiang Mai**	**8.07**	**29**		**Pn**	**14 45 13.0**	**-2.0**
CHTO	**Chiang Mai**	**8.07**	**29**	P	**Pn**	**14 45 18.0**	**+3.0**
CHTO	**Chiang Mai**	**8.07**	**29**	P	**Pn**	**14 45 16.3**	**+1.3**
LAMP	**Lampang**	**8.18**	**34**	P	**Pn**	**14 45 12.1**	**-4.5**
KULM	**Kulim**	**8.68**	**137**	Pn	**Pn**	**14 45 22.2**	**-1.2**
PSI	**Prapat**	**9.82**	**155**	P	**Pn**	**14 45 41.1**	**+1.9**
	comp=Z,26nm,1.3s						
BWNR	**Bhubaneshwar**	**12.04**	**316**	*e*P	**Pn**	**14 46 08.0**	**-1.5**
MORE	**Moreh**	**12.40**	**358**		**Pn**	**14 46 12.8**	**-1.6**
VIS	**Vishakhapatnam**	**12.55**	**299**	*e*P	**Pn**	**14 46 17.3**	**+0.9**
VIS				*e*S	**Sn**	**14 48 27.7**	**-7.9**
IMP	**Imphal**	**13.01**	**357**	*e*P	**Pn**	**14 46 19.1**	**-3.6**
IMP				IAmb	IAmb	14 46 24.8	
	comp=Z,38nm,0.9s						
RAGD	**RAYAGADA**	**13.19**	**306**	*e*P	**Pn**	**14 46 24.5**	**-0.7**
RAGD				IAmb	IAmb	14 46 27.9	
	comp=Z,29nm,1.2s						
TNCH	**TengChong**	**13.65**	**15**	*e*P	**Pn**	**14 46 32.8**	**+1.2**
TNCH				pmax	pmax		
	comp=Z,35nm,0.7s						
KOHI	**KOHIMA**	**13.88**	**357**	*e*P	**Pn**	**14 46 30.4**	**-4.4**
SHL	**Shillong**	**13.99**	**349**	P	**Pn**	**14 46 33.9**	**-2.3**
SHL	**Shillong**	**13.99**	**349**		**Pn**	**14 46 33.9**	**-2.3**
SHL	**Shillong**	**13.99**	**349**	*e*P	**Pn**	**14 46 34.1**	**-2.2**
PALK	**Pallekele**	**14.58**	**253**	Pn	**P**	**14 46 47.5**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=1.4						
PALK				Sn	**Sn**	**14 49 19.8**	**-5.6**
	comp=Z,0.4nm,0.3s,baz=358,slow=13,SNR=1.8						
	comp=Z,5.8nm,0.9s						
BOK	**Bokaro**	**14.64**	**326**	*e*P	**Pn**	**14 46 45.8**	**+0.9**
BOK				*ex*	x	14 49 21.3	
SHBG	**Sahibganj**	**14.99**	**334**	*e*P	**Pn**	**14 46 50.2**	**+0.4**
SHBG				IAmb	IAmb	14 46 50.7	
	comp=Z,31nm,0.6s						
KMI2	**Kunming**	**15.29**	**28**	P	**P**	**14 46 57.3**	**-1.3**
KMI2				pmax	pmax		
	comp=Z,29nm,1.4s						
BLSP	**Bilaspur**	**15.82**	**312**	*e*P	**P**	**14 47 02.2**	**-2.1**
PZH	**PanZhiHua**	**16.05**	**23**	P	**Pn**	**14 47 03.1**	**-0.6**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
QIZ	**Qiongzhong**	**16.21**	**62**	Pn	**Pn**	**14 47 04.7**	**-0.9**
QIZ	**Qiongzhong**	**16.21**	**62**	P	**P**	**14 47 09.9**	**+1.3**
QIZ				S	**Sn**	**14 50 06.4**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,47nm,1.2s						
QIZ	comp=Z,2μm,9.6s			L	L		
QIZ	comp=Z,2μm,10.3s			L	L		
QIZ	comp=Z,2μm,9.6s			L	L		
HYB	**Hyderabad**	**16.67**	**292**	*e*P	**Pn**	**14 47 11.2**	**-0.3**
HYB				*e*S	**S**	**14 50 27.6**	**+0.5**
KOD	**Kodaikanal**	**17.06**	**267**	*e*P	**P**	**14 47 17.6**	**-0.8**
KOD				IAmb	IAmb	14 47 25.8	
	comp=Z,12nm,0.8s						
KOD				*i* x	x	14 47 27.5	
NGP	**Nagpur**	**17.72**	**304**	*e*P	**P**	**14 47 27.4**	**+2.0**
NGP				IAmb	IAmb	14 47 33.1	
	comp=Z,64nm,1.0s						
EVN	**Everest**	**17.74**	**336**	P	**Pn**	**14 47 23.9**	**-1.5**
EVN				IAmb	IAmb	14 47 33.9	
	comp=Z,123nm,1.1s						
EVN	**Everest**	**17.74**	**336**	P	**P**	**14 47 25.8**	**-0.4**
MNAI	**Manna**	**17.98**	**153**	P	**Pn**	**14 47 25.5**	**-2.3**
LSA	**Lhasa**	**18.15**	**350**	P	**Pn**	**14 47 28.1**	**-2.2**
LSA				pmax	pmax		
	comp=Z,54nm,0.9s						
LSA	**Lhasa**	**18.15**	**350**		**Pn**	**14 47 28.1**	**-2.2**
BHPL	**Bhopal**	**20.07**	**307**	*e*P	**P**	**14 47 51.6**	**+0.5**
BHPL				IAmb	IAmb	14 48 02.1	
	comp=Z,31nm,0.8s						
CD2	**Chengdu**	**20.78**	**22**	P	**P**	**14 47 54.3**	**-4.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
KKM	**Kota Kinabalu**	**21.92**	**103**	P	**P**	**14 48 16.9**	**+5.6**
	comp=Z,38nm,1.4s						
KKM	**Kota Kinabalu**	**21.92**	**103**	P	**P**	**14 48 14.8**	**+3.4**
LGTI	**Lohaghat**	**22.24**	**324**	*e*P	**P**	**14 48 15.4**	**+0.7**
PTH	**Pithoragarh**	**22.32**	**325**	*e*P	**P**	**14 48 12.9**	**-2.6**
PTH				IAmb	IAmb	14 48 21.0	
	comp=Z,44nm,0.9s						
NPLP	**NPLP New Delhi**	**23.49**	**318**	*e*P	**P**	**14 48 29.8**	**+2.3**
NPLP				IAmb	IAmb	14 48 37.9	
	comp=Z,93nm,1.6s						
NDI	**New Delhi**	**23.49**	**318**	*e*P	**P**	**14 48 25.0**	**-2.5**
NDI				IAmb	IAmb	14 48 33.2	
	comp=Z,38nm,0.8s						
GOMU	**GeErMu**	**24.32**	**0**	P	**P**	**14 48 35.8**	**+0.2**
GOMU				sP	pP	14 48 41.4	-0.3
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KLP	**Kalpa**	**24.89**	**325**	*ex*	**P**	**14 48 43.3**	**+2.5**
KLP				IAmb	IAmb	14 48 52.2	
	comp=Z,119nm,0.9s						
LZDM	**Lanzhou Array**	**25.39**	**17**	P	**P**	**14 48 41.0**	**-4.3**
	comp=Z,1.0nm,0.3s,baz=209,slow=11,SNR=6.1						
	comp=Z,1.0nm,0.3s						
LZH	**Lanzhou**	**25.55**	**17**	*e*P	**P**	**14 48 46.0**	**-0.6**
LZH				pP	pP	14 48 51.3	-1.4
LZH				sP	sP	14 48 54.3	-0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.8s						
XAN	**Xi'an**	**25.65**	**28**	P	**P**	**14 48 43.0**	**-4.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
WHN	**Wuhan**	**26.04**	**41**	P	**P**	**14 48 51.8**	**+1.0**
LYN	**LuoYang**	**27.81**	**33**	P	**P**	**14 49 08.5**	**+1.7**
LYN				pmax	pmax		
	comp=Z,36nm,1.3s						
NIL	**Nilore**	**29.34**	**321**	P	**P**	**14 49 18.4**	**-2.1**
NIL				pmax	pmax		
	comp=Z,27nm,1.2s						
NIL	**Nilore**	**29.34**	**321**		**P**	**14 49 18.4**	**-2.1**
NIL				IAmb	IAmb	14 49 39.6	
	comp=Z,27nm,1.2s						
NIL	**Nilore**	**29.34**	**321**	P	**P**	**14 49 24.5**	**+4.0**
H08S3	**Diego Garcia H**	**29.38**	**230**	T	T	15 20 22.8	
	baz=49						
H08S2	**Diego Garcia B**	**29.38**	**230**	T	T	15 20 28.6	
	baz=49						
H08S1	**Diego Garcia H**	**29.40**	**230**	T	T	15 20 26.4	
	baz=49						
NJ2	**Nanjing**	**29.97**	**44**	*e*P	**P**	**14 49 26.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
HNS	**HongShan**	**31.16**	**32**	⇓P	**P**	**14 49 38.8**	**+2.4**
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
BTO2	**Baotou**	**31.77**	**22**	*e*P	**P**	**14 49 43.5**	**+1.5**
BTO2				S	**S**	**14 54 54.9**	**+3.8**
BTO2				pmax	pmax		
	comp=Z,25nm,0.7s						
BTO2	comp=Z,2μm,10.9s			L	L		
BTO2	comp=Z,3μm,14.8s			L	L		
BTO2	comp=Z,3μm,13.0s			L	L		
KSH2	**Kashi**	**32.16**	**331**	P	**P**	**14 49 48.6**	**+3.2**
KSH2				pmax	pmax		
	comp=Z,15nm,1.1s						
WUS	**Wushi**	**32.34**	**338**	P	**P**	**14 49 43.8**	**-3.1**
HHC	**Hu-ho-hao-te**	**32.51**	**24**⇑	*i*P	**P**	**14 49 51.1**	**+2.7**
HHC				pmax	pmax		
	comp=Z,23nm,1.4s						
WMQ	**Urumqi**	**32.51**	**350**	*e*P	**P**	**14 49 48.3**	**0.0**
WMQ				pP	pP	14 49 53.4	-1.0
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KBL	**Kabul**	**32.58**	**318**	P	**P**	**14 49 53.6**	**+4.4**
TARG	**Taragay, Kyrgy**	**33.33**	**337**	P	**P**	**14 49 53.6**	**-2.3**
TARG				pmax	pmax		
	comp=Z,67nm,1.3s						
TARG	**Taragay, Kyrgy**	**33.33**	**337**	P	**P**	**14 49 53.6**	**-2.3**
TARG	**Taragay, Kyrgy**	**33.33**	**337**	P	**P**	**14 49 54.5**	**-1.4**
PRZ	**Przheval'sk**	**33.76**	**338**	P	**P**	**14 49 58.6**	**-0.8**
PRZ				pmax	pmax		
	comp=Z,82nm,1.2s						
PRZ	**Przheval'sk**	**33.76**	**338**	P	**P**	**14 49 58.6**	**-0.8**
BJI2	**Beijing**	**33.90**	**30**	P	**P**	**14 50 02.8**	**+2.4**
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KDJ	**Kajisay**	**33.92**	**336**	P	**P**	**14 49 59.4**	**-1.4**
KDJ				pmax	pmax		
	comp=Z,58nm,1.3s						
KDJ	**Kajisay**	**33.92**	**336**		**P**	**14 49 59.4**	**-1.4**
KDJ	**Kajisay**	**33.92**	**336**	P	**P**	**14 49 59.2**	**-1.6**
SHLS	**Shalkode**	**33.97**	**340**	*e*P	**P**	**14 50 00.6**	**-0.6**
SHLS				pmax	pmax		
	comp=Z,24nm,1.2s						
SHLS	**Shalkode**	**33.97**	**340**	*e*P	**P**	**14 50 00.6**	**-0.6**
	comp=Z,24nm,1.2s						
UZB	**Uzynbulak**	**34.11**	**339**	*e*P	**P**	**14 50 03.0**	**+0.6**
UZB				pmax	pmax		
	comp=Z,17nm,1.2s						
UZB	**Uzynbulak**	**34.11**	**339**	*e*P	**P**	**14 50 03.0**	**+0.6**
	comp=Z,17nm,1.2s						
PDGK	**Podgornoye**	**34.11**	**340**	P	**P**	**14 50 00.9**	**-1.5**
PDGK	**Podgornoye**	**34.11**	**340**		**P**	**14 50 00.9**	**-1.5**
SATY	**Saty**	**34.25**	**338**	*e*P	**P**	**14 50 04.3**	**+0.7**
SATY				pmax	pmax		
	comp=Z,24nm,1.2s						
SATY	**Saty**	**34.25**	**338**	*e*P	**P**	**14 50 04.3**	**+0.7**
	comp=Z,24nm,1.2s						
KPKS	**Kokpek**	**34.51**	**339**	*e*P	**P**	**14 50 06.3**	**+0.5**
KPKS	**Kokpek**	**34.51**	**339**	*e*P	**P**	**14 50 06.3**	**+0.5**
GAR	**Garm**	**34.75**	**326**	P	**P**	**14 50 07.4**	**-0.6**
TNSS	**Tian-Shan**	**34.78**	**337**	*e*P	**P**	**14 50 08.8**	**+0.3**
TNSS	**Tian-Shan**	**34.78**	**337**	*e*P	**P**	**14 50 08.9**	**+0.4**
MDOK	**Medeo**	**34.85**	**337**	*e*P	**P**	**14 50 09.3**	**+0.5**
MDOK	**Medeo**	**34.85**	**337**	*e*P	**P**	**14 50 09.4**	**+0.5**
AAA	**Alma-Ata**	**34.94**	**337**	*e*P	**P**	**14 50 10.2**	**+0.8**
AAA				pmax	pmax		
	comp=Z,55nm,1.4s						
AAA	**Alma-Ata**	**34.94**	**337**	*e*P	**P**	**14 50 10.3**	**+0.8**
	comp=Z,55nm,1.4s						
ARSB	**Arslanbob**	**35.09**	**331**	P	**P**	**14 50 11.5**	**+0.5**
ARSB				pmax	pmax		
	comp=Z,38nm,1.2s						
ARSB	**Arslanbob**	**35.09**	**331**	P	**P**	**14 50 11.5**	**+0.5**
ARSB				IAmb	IAmb	14 50 16.7	
	comp=Z,38nm,1.2s						
CHGR	**Chuyangaron**	**35.17**	**324**⇑	*e*P	**P**	**14 50 10.8**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,44nm,0.9s						
BTK	**Batken**	**35.23**	**327**	P	**P**	**14 50 12.0**	**-0.1**
BTK				pmax	pmax		
	comp=Z,34nm,1.2s						
BTK	**Batken**	**35.23**	**327**		**P**	**14 50 12.0**	**-0.1**
BTK				IAmb	IAmb	14 50 18.6	
	comp=Z,34nm,1.2s						
BTK	**Batken**	**35.23**	**327**	P	**P**	**14 50 14.2**	**+2.1**
AAK	**Ala-Archa**	**35.45**	**334**	P	**P**	**14 50 14.4**	**+0.4**
AAK				pmax	pmax		
	comp=Z,44nm,1.5s						
AAK	**Ala-Archa**	**35.45**	**334**		**P**	**14 50 14.4**	**+0.4**
AAK				IAmb	IAmb	14 50 20.4	
	comp=Z,44nm,1.4s						
AAK	**Ala-Archa**	**35.45**	**334**	P	P	14 50

CHM pmax pmax
comp=Z,7.0nm,0.3s
CHM Chimkent 37.51 329 *e*P **P 14 50 32.4 +0.9**
comp=Z,7.2nm,0.3s
KKAR Karatay Array 37.64 330 P **P 14 50 30.4 -2.1**
KKAR Karatay Array 37.64 330 P **P 14 50 30.4 -2.1**
BRLS Borolday 37.91 330 *e*P **P 14 50 34.8 0.0**
BRLS Borolday 37.91 330 *e*P **P 14 50 34.8 0.0**
DGZ Jazzator, Alta 38.30 352⇑ *e*P **P 14 50 34.9 -3.2**
DGZ pmax pmax
comp=Z,7.0nm,0.9s
KNGR Kungurtug, Tuv 38.78 3⇑ *e*P **P 14 50 41.4 -0.7**
KNGR pmax pmax
comp=Z,18nm,1.3s
ZAK Zakamensk 39.12 9 *e*P **P 14 50 43.3 -1.7**
ZAK pmax pmax
comp=Z,11nm,1.8s
KSAR Wonju Array Be 39.14 44 P **P 14 50 45.3 +0.1**
KSAR Wonju Array Be 39.14 44 P **P 14 50 45.3 +0.1**
KSRS Korea Array 39.17 44 P P 14 50 40.0 -5.4
comp=Z,1.1nm,1.0s,baz=247,slow=9.3,SNR=8.2
KSRS LR LR 15 07 12.4
comp=Z,543nm,19.6s,baz=345,slow=37
comp=Z,1.1nm,1.0s
TLY Talaya 40.44 9 P **P 14 50 51.6 -4.2**
comp=Z,1.8nm,0.5s,baz=184,slow=11,SNR=6.5
comp=Z,1.8nm,0.5s
TLY Talaya 40.44 9 P **P 14 50 53.2 -2.7**
KURBB Kurchatov Arra 40.96 344 P **P 14 50 57.9 -2.2**
comp=Z,1.3nm,0.9s,baz=159,slow=7.6,SNR=8.0
comp=Z,1.3nm,0.9s
KURK Kurchatov 41.02 344 *de*P **P 14 51 00.4 -0.2**
KURK pmax pmax
comp=Z,26nm,1.3s
KURK Kurchatov 41.02 344 **P 14 51 00.1 -0.5**
KURK IAmb IAmb 14 51 07.8
comp=Z,35nm,1.3s
KURK Kurchatov 41.02 344 P **P 14 51 04.6 +4.0**
CN2 Changchun 41.44 34 P **P 14 50 59.8 -4.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
FITZ Fitzroy Crossi 42.53 134 LR LR 15 08 06.9
comp=Z,211nm,21.5s,baz=326,slow=35
HIA Hailar 42.72 24⇓ *e*P **P 14 51 11.3 -3.2**
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 42.72 24 **P 14 51 11.2 -3.4**
ZALV Zalesovo Beam 42.81 351 P **P 14 51 12.4 -2.7**
comp=Z,0.8nm,0.7s,baz=176,slow=7.9,SNR=17
comp=Z,0.8nm,0.7s
ZALV Zalesovo Beam 42.81 351 *i* P **P 14 51 16.5 +1.4**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 42.81 351 **P 14 51 14.1 -1.0**
HILR Hailar Array B 42.95 24 P **P 14 51 12.3 -4.2**
comp=Z,0.8nm,0.4s,baz=194,slow=11,SNR=5.8
comp=Z,0.8nm,0.4s
BNX BinXian 43.76 33 ⇑P **P 14 51 23.8 +0.8**
BNX pmax pmax
comp=Z,15nm,1.2s
MDJ Mudanjiang 44.27 36 P **P 14 51 29.0 +1.9**
MDJ pmax pmax
comp=Z,5.0nm,0.8s
BVAR Borovoye Array 45.55 340 P **P 14 51 35.5 -1.6**
comp=Z,4.4nm,1.1s,baz=138,slow=6.9,SNR=24
comp=Z,4.4nm,1.1s
BORK Borovoye 45.59 340 P **P 14 51 37.1 -0.4**
BORK pmax pmax
comp=Z,14nm,1.0s
BORK Borovoye 45.59 340 **P 14 51 37.1 -0.4**
BORK IAmb IAmb 14 51 42.5
comp=Z,14nm,1.0s
MJAR Matsushiro Arr 46.14 50 P **P 14 51 38.8 -3.4**
comp=Z,0.6nm,0.6s,baz=271,slow=6.5,SNR=1.4
comp=Z,0.6nm,0.6s
MJAR Matsushiro Arr 46.14 50 P **P 14 51 40.5 -1.7**
MJAR pmax pmax
comp=Z,9.0nm,1.5s
MJAR Matsushiro Arr 46.14 50 P **P 14 51 40.5 -1.7**
HEH HeiHe 46.78 28 *e*P **P 14 51 48.3 +1.4**
HEH pmax pmax
comp=Z,9.0nm,1.3s
JCJ Chichijima 46.95 64 LR LR 15 10 34.1
comp=Z,378nm,19.8s,baz=340,slow=35
AB31 Akbulak array 47.17 329 IAmb IAmb 14 51 55.5
comp=Z,34nm,1.6s
ABKAR Akbulak array 47.17 329 P **P 14 51 46.9 -3.0**
RAYN Ar Rayn 48.17 291 P **P 14 52 01.0 +2.8**
AKTO Aktyubinsk 48.88 329 P **P 14 52 01.8 -1.4**
comp=Z,1.4nm,0.7s,baz=112,slow=2.7,SNR=10
comp=Z,1.4nm,0.7s
ZEA Zeya 49.17 25 *e*P **P 14 52 03.3 -2.0**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
WRA Warramunga Arr 50.10 129 P **P 14 52 10.1 -2.8**
comp=Z,3.3nm,1.0s,baz=307,slow=8.2,SNR=7.8
comp=Z,3.3nm,1.0s
WRA Warramunga Arr 50.10 129 P **P 14 52 14.8 +1.9**
WRA pmax pmax
comp=Z,2.0nm,2.0s
WRA Warramunga Arr 50.10 129 **P 14 52 14.8 +1.9**
WRAB Tennant Creek 50.10 129⇑ *e*P **P 14 52 13.6 +0.7**
WRAB pmax pmax
comp=Z,8.0nm,1.3s
ASAR Alice Springs 52.01 133 P P 14 52 21.7 -5.6
comp=Z,1.0nm,0.7s,baz=312,slow=7.1,SNR=12
ASAR Alice Springs 52.01 133 P **P 14 52 24.5 -2.7**
ASAR Alice Springs 52.01 133 P **P 14 52 24.5 -2.7**
SVE Sverdlovsk 52.05 337 *e*P **P 14 52 28.4 +1.4**
SVE pmax pmax
comp=Z,61nm,1.3s
GNI Garni 52.24 312 P **P 14 52 27.7 -1.3**
comp=Z,4.3nm,0.3s,baz=146,slow=3.4,SNR=8.9
comp=Z,4.3nm,0.3s
GNI Garni 52.24 312 *de*P **P 14 52 27.5 -1.5**
GNI pmax pmax
comp=Z,49nm,1.3s
GNI Garni 52.24 312 P **P 14 52 26.8 -2.1**
GNI Garni 52.24 312 P P 14 52 35.4 +6.4
comp=Z,58nm,1.2s
GNI Garni 52.24 312 P P 14 52 35.2 +6.3
ARTI Arti 52.63 335 P **P 14 52 28.7 -2.6**
comp=Z,2.2nm,0.6s,baz=168,slow=7.8,SNR=6.0
comp=Z,2.2nm,0.6s
ARTI Arti 52.63 335 *d* iP **P 14 52 34.7 +3.3**
ARTI 14 53 39.2
ARTI 14 54 26.0
ARTI S **S 15 00 04.4 +6.9**
ARTI SS **SS 15 03 36.1 +0.2**
ARTI pmax pmax
comp=Z,39nm,1.3s
ARTI Arti 52.63 335 P **P 14 52 29.4 -2.0**
ARTI IAmb IAmb 14 52 36.3
comp=Z,35nm,1.2s
YSS Yuzhno-Sakhali 53.36 39 *e*P **P 14 52 36.8 -0.1**
YSS pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 54.70 316 P **P 14 52 45.2 -1.5**
comp=Z,0.4nm,0.3s,baz=86,slow=6.7,SNR=7.1
comp=Z,0.4nm,0.3s
KBZ Khabaz 54.70 316⇑ *e*P **P 14 52 48.1 +1.4**
KBZ pmax pmax
comp=Z,5.0nm,1.2s
SHA1 Shidzhatmaz 54.86 316⇑ *e*P **P 14 52 47.0 -1.2**
KVAR Kislovodsk Arr 54.91 316 P **P 14 52 48.1 -0.3**
comp=Z,1.2nm,0.4s,baz=112,slow=21,SNR=1.1
comp=Z,1.2nm,0.4s
KIV Kislovodsk 54.92 316 *e*P **P 14 52 46.6 -1.8**
KIV pmax pmax
comp=Z,20nm,1.0s
KIV Kislovodsk 54.92 316 P P 14 52 53.3 +4.9
YAK Yakutsk 56.12 19 P **P 14 52 54.3 -2.3**
comp=Z,18nm,0.7s,baz=148,slow=1.7,SNR=12
comp=Z,18nm,0.7s
YAK Yakutsk 56.12 19 *e*P **P 14 52 58.4 +1.8**
YAK *e**PP **sP 14 53 06.0 +1.0**
YAK *e* 14 53 57.3
YAK *e* 14 55 03.1
YAK *e*PPP PPP 14 56 16.2
YAK *e*S **S 15 00 47.6 +3.3**
YAK *e* 15 02 48.3
YAK *e*SS **SS 15 04 35.1 +4.4**
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=N,17nm,1.4s
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=Z,2μm,12.5s
YAK pmax pmax
comp=N,1μm,11.9s
YAK pmax pmax
comp=E,1μm,12.9s
YAK smax smax
comp=N,2μm,17.5s
YAK smax smax
comp=E,2μm,15.8s
YAK Yakutsk 56.12 19 P **P 14 52 58.2 +1.6**
LABN Labinsk 56.47 316 *e*P **P 14 53 00.7 +1.2**
LABN pmax pmax
comp=Z,40nm,0.7s
ARPR Arapgir-MALATY 56.73 309 P P 14 53 06.5 +5.0
SOC Sochi 56.85 315 *e*P **P 14 53 04.4 +2.2**
SOC *e* 14 55 11.1
SOC *e*S **S 15 01 00.1 +5.5**
SOC pmax pmax
comp=Z,23nm,1.2s
SOC MLR MLR
comp=Z,642nm,15.0s
ERBR Yeremizino-Bor 56.97 317 *e*P **P 14 53 04.3 +1.3**
ERBR pmax pmax
comp=Z,10.0nm,0.6s
KIRV Kirov 57.78 334⇓ *e*P **P 14 53 06.9 -1.5**
VRH Novokhopyorsk 58.14 324 P **P 14 53 13.6 +2.5**
VRH pmax pmax
comp=Z,11nm,0.9s
ANN Anapa 58.76 315 *e*P **P 14 53 12.1 -3.4**
ANN pmax pmax
comp=Z,33nm,0.8s
VSR Storozhevoye 59.63 323 P **P 14 53 23.4 +1.9**
VSR pmax pmax
comp=Z,8.0nm,1.2s
VORR Voronezh 59.77 324 P **P 14 53 24.1 +1.7**
VORR pmax pmax
comp=Z,12nm,0.8s
LPSR Galich'ya Gora 60.27 324 P **P 14 53 27.9 +2.1**
LPSR pmax pmax
comp=Z,12nm,1.0s
BR131 Keskin Array S 60.42 309 P **P 14 53 26.7 -0.6**
BR131 pmax pmax
comp=Z,9.0nm,1.0s
BR131 Keskin Array S 60.42 309 **P 14 53 26.7 -0.6**
BR131 IAmb IAmb 14 53 43.4
comp=Z,9.4nm,1.0s
BRTR Keskin Array B 60.42 309 P **P 14 53 26.7 -0.6**
comp=Z,3.9nm,0.6s,baz=120,slow=7.2,SNR=18
comp=Z,3.9nm,0.6s
BRTR Keskin Array B 60.42 309 P **P 14 53 28.1 +0.8**
BRTR Keskin Array B 60.42 309 **P 14 53 28.1 +0.8**
MOS Moscow 62.12 327 *e*P P 14 53 42.9 +4.6
MOS pmax pmax
comp=Z,26nm,0.6s
OBN Obninsk 62.46 327⇑ *e*P **P 14 53 40.4 -0.2**
OBN *i* *SP **pP 14 53 44.9 -1.9**
OBN 14 54 21.0
OBN *i* S **S 15 02 03.6 -2.9**
OBN SSS SSS 15 08 54.0
OBN pmax pmax
comp=Z,27nm,1.2s
OBN MLR MLR
comp=Z,831nm,17.0s
MA2 Magadan 63.05 28 P **P 14 53 41.0 -3.4**
comp=Z,5.0nm,0.9s,baz=236,slow=12,SNR=6.1
comp=Z,5.0nm,0.9s
MA2 Magadan 63.05 28 P **P 14 53 43.9 -0.6**
MA2 pmax pmax
comp=Z,16nm,0.9s
MA2 Magadan 63.05 28 P **P 14 53 43.9 -0.6**
KLMR Klimovskoe 63.26 333 *e*P **P 14 53 44.6 -1.2**
KLMR pmax pmax
comp=Z,39nm,1.2s
TIXI Tiksi 63.31 11 P **P 14 53 42.8 -3.2**
comp=Z,17nm,0.9s,baz=184,slow=1.8,SNR=3.2
comp=Z,17nm,0.9s
TIXI Tiksi 63.31 11 P **P 14 53 45.3 -0.6**
TIXI pmax pmax
comp=Z,37nm,1.2s
TIXI Tiksi 63.31 11 P **P 14 53 45.3 -0.6**
SEY Seymchan 65.15 25 P **P 14 53 57.5 -0.6**
comp=Z,7.0nm,1.2s,baz=240,slow=13,SNR=3.9
SEY Seymchan 65.15 25⇑ *e*P **P 14 53 59.1 +0.9**
SEY pmax pmax
comp=Z,7.0nm,1.3s
AKASG Malin Array Be 65.53 321 P **P 14 53 59.7 -1.2**
comp=Z,0.2nm,0.2s,baz=88,slow=5.0,SNR=10
comp=Z,0.2nm,0.2s
AKASG Malin Array Be 65.53 321 P **P 14 53 59.5 -1.4**
AKASG pmax pmax
comp=Z,7.0nm,1.3s
AKASG Malin Array Be 65.53 321 P **P 14 53 59.5 -1.4**
AKBB Malin Array Si 65.53 321⇓ *e*P **P 14 53 59.5 -1.4**
KIEV Kiev 65.54 320 P **P 14 54 01.3 +0.3**
VRI Vrincioaia 66.37 315 P P 14 54 10.9 +4.5
MLR Muntele Rosu 66.87 314 P **P 14 54 14.1 +4.4**
MNK Minsk 67.12 324 *i* P **P 14 54 14.9 +4.0**
MNK comp=E,5.0nm,0.6s *i* P **P 14 54 14.9 +4.0**
MNK comp=N,14nm,0.7s *i* P **P 14 54 14.9 +4.0**
MNK comp=Z,16nm,0.7s,baz=102 *i* PcP **PcP 14 54 42.8 +3.7**
MNK *i* PP **PP 14 56 42.7 +3.9**
MNK *i* PPP PPP 14 58 19.0
MNK *i* S **S 15 03 06.0 +2.0**
MNK *i* SS SS 15 07 02.0 -21
MNK *i* SSS SSS 15 11 07.4
MNK Minsk 67.12 324 *i* P **P 14 54 14.9 +4.0**
MNK *i* 14 54 42.7
MNK *i* 14 56 42.7
MNK *i* PPP PPP 14 58 19.0
MNK *i* S **S 15 03 05.9 +2.0**
MNK pmax pmax
comp=Z,16nm,0.7s
MNK pmax pmax
comp=N,14nm,0.7s
MNK pmax pmax
comp=E,5.0nm,0.6s
BURAR Bucovina Array 67.62 317 **P 14 54 16.8 +2.3**
VSU Vasula 68.59 328⇑ *e*P **P 14 54 20.6 +0.4**
VSU pmax pmax
comp=Z,25nm,1.1s
VSU Vasula 68.59 328 P **P 14 54 23.0 +2.9**
ARBE Arbavere 69.19 329 P **P 14 54 27.1 +3.2**
DRGR 69.24 316 P **P 14 54 28.7 +4.2**
PABE Paberze 69.52 325 P **P 14 54 25.8 -0.2**
PABE Paberze 69.52 325 P **P 14 54 29.7 +3.7**
FINES FINESS Array B 69.59 331 P **P 14 54 25.0 -1.3**
comp=Z,3.1nm,0.9s,baz=114,slow=2.3,SNR=9.7
comp=Z,3.1nm,0.9s
FINES FINESS Array B 69.59 331 *i* P **P 14 54 27.7 +1.4**
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 69.59 331 P **P 14 54 27.0 +0.7**
MTSE Matsula 70.14 328 P **P 14 54 33.7 +4.0**
OUL Oulu 70.54 335 P P 14 54 36.6 +4.6
SGF Sodankyl 70.91 338 P P 14 54 39.1 +4.9
PSZ Piszkesteto 71.23 317 P **P 14 54 40.6 +3.9**
OJC Ojcow 71.43 319 P **P 14 54 40.4 +2.6**
OJC Ojcow 71.43 319 P **P 14 54 40.4 +2.6**
ARCES ARCESS Array B 71.84 340 P **P 14 54 39.6 -0.3**
comp=Z,3.1nm,0.7s,baz=110,slow=5.1,SNR=5.1
comp=Z,1.2nm,0.7s
MORH Mrgy, Hungar 72.01 315 P **P 14 54 45.1 +3.8**
BILL Bilibino 72.25 22⇑ *e*P **P 14 54 40.5 -1.9**
BILL pmax pmax
comp=Z,12nm,1.0s
JAVC Velka Javorina 72.75 318 *e*P P 14 54 50.4 +4.6
MPLH Magyarpolny 72.79 316 P **P 14 54 50.2 +4.2**
MORC Moravsky Berou 72.86 319 *e*P **P 14 54 50.4 +4.0**
MORC Moravsky Berou 72.86 319 P P 14 54 50.9 +4.5
MODS Modra-Piesok 73.00 317 *e*P **P 14 54 50.6 +3.4**
MODS Modra-Piesok 73.00 317 *e*P **P 14 54 50.6 +3.4**
KRLC Kraliky 73.36 319 P P 14 54 53.8 +4.4
KRUC Moravsky 73.59 318 *e*P **P 14 54 54.5 +3.8**
RONA Rosalia, Austr 73.64 316 *i* pP pP 14 54 55.1 -2.4
comp=Z,4.3nm,0.8s
DPC Dobruska-Polom 73.66 319 P P 14 54 55.9 +4.7
UPC Upice 73.87 319 P **P 14 54 56.7 +4.4**
CONA Conrad Observa 73.94 317 *i* pP pP 14 54 57.1 -2.2
comp=Z,3.0nm,0.9s
ARSA Arzberg 74.17 316 *i* pP pP 14 54 58.3 -2.2
comp=Z,4.5nm,0.9s
SOKA Soboth 74.51 315 *i* pP pP 14 55 00.8 -1.8
comp=Z,1.1nm,1.2s,SNR=5.6
PRU Pruhonice 74.81 319 P **P 14 55 02.0 +4.3**
SESA Seetaler Alpe, 74.82 316 *i* pP pP 14 55 02.6 -2.0
SNR=5.0
OBKA Obir 74.84 315 *i* pP pP 14 55 02.3 -2.3
comp=Z,12nm,1.1s
BRG Berggiesshubel 75.18 320 *e*P **P 14 55 04.3 +4.3**
comp=Z,20nm,1.4s,baz=88,slow=5.7
BRG Berggiesshubel 75.18 320 P P 14 55 04.4 +4.4
BRG Berggiesshubel 75.18 320 *e*P **P 14 55 04.2 +4.3**
BRG Amp 14 55 05.7
comp=Z,13nm,1.1s
RUE Ruedersdorf 75.28 321 *e*P **P 14 55 04.7 +4.3**
comp=Z,48nm,1.2s,baz=88,slow=5.7
GEC2 GERESS Array S 75.37 318 *e*P **P 14 55 05.1 +3.9**
comp=Z,12nm,1.1s,baz=88,slow=5.7
GERES GERESS Array B 75.37 318 P **P 14 55 00.3 -0.8**
comp=Z,3.4nm,0.8s,baz=94,slow=4.3,SNR=23
comp=Z,3.4nm,0.8s
GERES GERESS Array B 75.37 318 P **P 14 55 00.5 -0.7**
GERES GERESS Array B 75.37 318 P **P 14 55 00.5 -0.7**
HFS Hagfors 75.43 329 P **P 14 54 59.5 -1.6**
comp=Z,2.0nm,0.7s,baz=112,slow=6.6,SNR=12
comp=Z,2.0nm,0.7s
BIOA Bad Ischl, Aus 75.44 316 *e*pP pP 14 55 04.8 -3.2
comp=Z,2.8nm,0.5s
KHC Kasperske Hory 75.44 318⇑ *e*P **P 14 55 02.0 +0.5**
KHC pmax pmax
comp=Z,2.0nm,0.8s
KHC Kasperske Hory 75.44 318 P **P 14 55 05.6 +4.1**
MYKA Terra Mystica 75.47 315 *i* pP **P 14 55 04.3 +2.5**
comp=Z,5.5nm,1.1s
HSKC Hora Svate Kat 75.51 319 P P 14 55 06.5 +4.6
KBA Koelnbreinsper 75.66 316 *e*pP pP 14 55 07.2 -2.2
comp=Z,1.1nm,1.2s
CLL Collm 75.77 320 *i* P **P 14 55 07.0 +3.8**
CLL pmax pmax
comp=Z,20nm,1.4s
CLL Collm 75.77 320 *e*P **P 14 55 07.1 +3.8**
comp=Z,18nm,1.3s,baz=88,slow=5.7
CLL Collm 75.77 320 *i* P **P 14 55 07.0 +3.8**
comp=Z,20nm,1.4s
WET Wettzell 75.90 318 P **P 14 55 08.3 +4.2**
RJOB Jochberg 76.00 316 *e*P **P 14 55 08.3 +3.5**
comp=Z,5.6nm,1.2s,baz=88,slow=5.7
LESA Schwarzleotal 76.10 316 *i* pP pP 14 55 08.5 -3.3
comp=Z,5.5nm,1.4s,SNR=5.3
TANN Tannenbergstha 76.14 319 *e*P **P 14 55 09.3 +3.8**
comp=Z,14nm,1.4s,baz=88,slow=5.7
TANN Tannenbergstha 76.14 319 P **P 14 55 09.5 +4.1**
SPITS Spitsbergen Ar 76.17 348 P **P 14 55 03.8 -1.3**
comp=Z,0.8nm,0.4s,baz=107,slow=11,SNR=6.6
comp=Z,0.8nm,0.4s
ABTA Abfaltersbach 76.24 315 *e*pP **P 14 55 09.1 +2.9**
comp=Z,5.6nm,1.2s
ROTZ Rotzenmuhle 76.32 319 *e*P P 14 55 10.9 +4.5
comp=Z,5.1nm,1.3s,baz=88,slow=5.7
PLN Plauen 76.33 319 *e*P **P 14 55 10.4 +3.9**
comp=Z,5.5nm,1.5s,baz=88,slow=5.7
NEUB Neuenburg 76.54 320 *e*P **P 14 55 11.7 +4.0**
comp=Z,20nm,1.1s,baz=88,slow=5.7
GRB3 Grafenberg Arr 76.60 318 P P 14 55 13.3 +5.2
MOX Moxa 76.67 319 *e*P **P 14 55 12.6 +4.2**
comp=Z,16nm,1.3s,baz=88,slow=5.7
MOX *e*L L 15 30 16.2
comp=Z,746nm,20.8s
MOX Moxa 76.67 319 P **P 14 55 12.6 +4.2**
NB2 NORSAR Subarra 76.67 330 P **P 14 55 08.5 +0.2**
comp=Z,25nm,1.4s,baz=89,slow=5.6
NB2 NORSAR Subarra 76.67 330 P **P 14 55 08.5 +0.2**
NOA NORSAR Array B 76.67 330 P **P 14 55 07.1 -1.1**
comp=Z,3.7nm,1.1s,baz=91,slow=5.5,SNR=6.6
comp=Z,3.7nm,1.1s
WIMM Wimmelburg 76.70 320 P **P 14 55 12.6 +4.0**
GORT1 Trebel 76.77 322 *e*P **P 14 55 13.2 +4.4**
comp=Z,43nm,1.3s,baz=88,slow=5.7
WTTA Wattenberg 76.81 316 *e*pP pP 14 55 12.9 -3.0
comp=Z,6.1nm,0.8s
FLTG Flechtingen 76.84 321 *e*P **P 14 55 12.7 +3.4**
comp=Z,16nm,1.5s,baz=88,slow=5.7
WATA Walderalm 76.85 316 *e*pP pP 14 55 12.9 -3.2
comp=Z,12nm,1.9s
GRF Grafenberg Arr 76.96 319 *e*P P 14 55 14.7 +4.6
comp=Z,22nm,1.5s,baz=88,slow=5.7
GRF *e*L L 15 31 03.9
comp=Z,445nm,21.0s
SQTA Sankt Quirin 77.11 316 *e*pP pP 14 55 14.3 -3.2
comp=Z,4.9nm,1.1s
MOTA Moosalm 77.17 316 *i* pP pP 14 55 14.7 -3.2
comp=Z,12nm,1.3s
ASSE Asse, Remlinge 77.19 321 *e*P **P 14 55 15.2 +3.9**
comp=Z,20nm,1.3s,baz=88,slow=5.7
ASSE Asse, Remlinge 77.19 321 P **P 14 55 15.4 +4.1**
BSEG Bad Segeberg 77.32 323 *e*P P 14 55 16.8 +4.9
comp=Z,20nm,1.2s,baz=88,slow=5.7
BSEG Bad Segeberg 77.32 323 P **P 14 55 16.4 +4.4**
CLZ Clausthal 77.39 321 *e*P **P 14 55 16.7 +4.2**
comp=Z,22nm,1.2s,baz=88,slow=5.7
CLZ Clausthal 77.39 321 P **P 14 55 16.9 +4.4**
RETA Reutte 77.39 316 *i* pP pP 14 55 16.1 -3.0
comp=Z,17nm,1.3s
FETA Feichten 77.44 316 *i* pP pP 14 55 16.0 -3.5
comp=Z,11nm,1.3s,SNR=6.2
GTTG Gottingen 77.66 320 *e*P **P 14 55 18.2 +4.3**
comp=Z,28nm,1.3s,baz=88,slow=5.7
GTTG Gottingen 77.66 320 P **P 14 55 18.4 +4.4**
RETH Rethem/Aller, 77.96 322 *e*P **P 14 55 19.8 +4.3**
comp=Z,24nm,1.4s,baz=88,slow=5.7
RETH Rethem/Aller, 77.96 322 P P 14 55 20.1 +4.5
DAVA Damuels 78.00 316 *i* pP pP 14 55 19.7 -3.0
comp=Z,19nm,1.4s
DAVA Damuels 78.00 316 P **P 14 55 19.8 +3.6**
BOSA Boshof 78.19 237 P **P 14 55 19.4 +1.9**
comp=Z,2.5nm,0.7s,baz=117,slow=6.2,SNR=4.3
comp=Z,2.5nm,0.7s
BOSA Boshof 78.19 237 P **P 14 55 16.3 -1.2**
BOSA pmax pmax
comp=Z,11nm,1.2s
BOSA Boshof 78.19 237 P **P 14 55 16.3 -1.2**
TUE Stuetta 78.43 315 P **P 14 55 22.4 +3.8**
KASTN Kahler Asten 78.65 320 *e*P **P 14 55 23.6 +4.1**
comp=Z,12nm,1.2s,baz=88,slow=5.7
TNS Taunus Mts 78.72 319 *e*P **P 14 55 23.9 +4.0**
comp=Z,14nm,1.3s,baz=88,slow=5.7
IBBN Ibbenburen 78.97 321 *e*P **P 14 55 25.5 +4.3**
comp=Z,39nm,1.1s,baz=88,slow=5.7
IBBN Ibbenburen 78.97 321 P P 14 55 25.7 +4.6
BNALP Bannalp 79.03 316 P **P 14 55 26.0 +4.2**
BUG Bochum--Univer 79.35 320 *e*P **P 14 55 27.6 +4.4**
comp=Z,21nm,1.0s,baz=88,slow=5.7
BUG Bochum--Univer 79.35 320 P **P 14 55 27.6 +4.4**
KEST Kesra 79.55 304 P **P 14 55 24.4 -0.4**
comp=Z,2.8nm,0.8s,baz=76,slow=8.3,SNR=2.1
comp=Z,2.8nm,0.8s
KEST Kesra 79.55 304 IAmb IAmb 14 55 39.5
comp=Z,12nm,0.9s
WLF Walferdange 80.25 319 *d*P P 14 55 33.2 +5.0
WLF Walferdange 80.25 319 *e*P P 14 55 33.2 +5.0
comp=Z,51nm,1.7s,baz=88,slow=5.7
WLF Walferdange 80.25 319 P P 14 55 33.5 +5.4
BCLA Clavier 80.70 320 *d*P **P 14 55 33.7 +3.1**
comp=Z,4.2nm,1.2s
BGES Gesves 80.84 320 *d*P **P 14 55 34.9 +3.6**
BMRD Maredsous 81.05 320 *d*P **P 14 55 36.1 +3.7**
TSUM Tsumeb 82.02 249 P **P 14 55 39.1 +0.7**
comp=Z,0.5nm,0.2s,baz=265,slow=22,SNR=1.1
comp=Z,0.5nm,0.2s
MAW Mawson 82.46 192 P **P 14 55 39.8 +0.5**
comp=Z,0.3nm,0.4s,baz=73,slow=22,SNR=0.7
comp=Z,0.3nm,0.4s
MAW Mawson 82.46 192 P **P 14 55 40.2 +0.9**
MAW pmax pmax
comp=Z,3.0nm,1.7s
MAW Mawson 82.46 192 P **P 14 55 40.2 +0.9**
TAM Tamanrasset 84.84 292 P P 14 55 58.4 +5.5
EKA Eskdalemuir Ar 84.88 325 P **P 14 55 52.1 -0.1**
comp=Z,3.8nm,1.0s,baz=78,slow=5.5,SNR=7.2
comp=Z,3.8nm,1.0s
D19K Kuna River 85.28 21 IAmb IAmb 14 55 59.1
comp=Z,19nm,1.2s
J16K Anvik River 86.03 26 IAmb IAmb 14 56 01.0
comp=Z,9.8nm,1.1s
G19K Purcell Mounta 86.49 23 IAmb IAmb 14 56 05.0
comp=Z,10nm,1.1s

F20K	**Avaraart Lake**	**86.66**	**22**	IAmb	IAmb	14 56 05.7	
	comp=Z,7.5nm,0.9s						
E21K	**Killik River**	**86.72**	**20**	IAmb	IAmb	14 56 06.1	
	comp=Z,22nm,1.2s						
J18K	**Innoko River**	**87.62**	**25**	IAmb	IAmb	14 56 09.8	
	comp=Z,20nm,1.8s						
G21K	**Allakaket**	**87.68**	**22**	IAmb	IAmb	14 56 10.7	
	comp=Z,15nm,1.1s						
IMAR	**Indian Mountai**	**87.81**	**22**	P	**P**	**14 56 03.7**	**-2.7**
J19K	**Poorman**	**87.87**	**25**	IAmb	IAmb	14 56 26.7	
	comp=Z,7.0nm,1.2s						
J20K	**Nowinta River**	**88.39**	**24**	IAmb	IAmb	14 56 14.2	
	comp=Z,8.7nm,1.2s						
H22K	**Ishtalitna Cre**	**88.72**	**22**		**P**	**14 56 10.0**	**-0.7**
K20K	**Telida**	**88.76**	**25**	IAmb	IAmb	14 56 16.7	
	comp=Z,13nm,1.3s						
I21K	**Tanana**	**88.81**	**23**	IAmb	IAmb	14 56 23.3	
	comp=Z,13nm,1.2s						
ESDC	**Sonseca Array**	**89.19**	**310**	P	**P**	**14 56 12.5**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=41,slow=4.2,SNR=7.1						
	comp=Z,1.4nm,1.0s						
ESDC	**Sonseca Array**	**89.19**	**310**	P	**P**	**14 56 12.5**	**-1.1**
MLY	**Manley**	**89.35**	**23**	IAmb	IAmb	14 56 19.0	
	comp=Z,7.2nm,1.0s						
CAST	**Castle Rocks**	**89.54**	**24**	IAmb	IAmb	14 56 19.9	
	comp=Z,15nm,1.1s						
TORD	**Torodi Ar. Bea**	**90.31**	**283**	P	**P**	**14 56 19.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=82,slow=3.7,SNR=5.4						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**90.31**	**283**	P	**P**	**14 56 16.6**	**-2.6**
SKT	**Skwentna**	**90.41**	**26**	IAmb	IAmb	14 56 23.1	
	comp=Z,21nm,1.3s						
G26K	**Porcupine Rive**	**90.84**	**20**	IAmb	IAmb	14 56 26.3	
	comp=Z,7.0nm,1.1s						
ILAR	**Eielson Array**	**90.92**	**22**	P	**P**	**14 56 17.7**	**-3.3**
	comp=Z,0.3nm,0.8s,baz=296,slow=3.3,SNR=4.1						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**90.92**	**22**	P	**P**	**14 56 19.5**	**-1.5**
ILAR	**Eielson Array**	**90.92**	**22**	P	**P**	**14 56 19.5**	**-1.5**
H27K	**Steamboat Moun**	**92.00**	**20**	IAmb	IAmb	14 56 31.4	
	comp=Z,6.9nm,1.2s						
SCRK	**Sand Creek**	**92.41**	**22**	IAmb	IAmb	14 56 32.4	
	comp=Z,15nm,1.8s						
G29M	**Pine Creek**	**92.70**	**18**	IAmb	IAmb	14 56 32.8	
	comp=Z,14nm,1.6s						
INK	**Inuvik**	**93.09**	**16**	P	**P**	**14 56 34.9**	**+4.0**
BCAR	**Beaver Creek A**	**93.74**	**22**	P	**P**	**14 56 35.3**	**+1.2**
I30M	**Mount Dempster**	**94.30**	**19**	IAmb	IAmb	14 56 40.8	
	comp=Z,15nm,1.6s						
H31M	**Peel River**	**94.55**	**18**		**P**	**14 56 38.4**	**+0.6**
H31M				IAmb	IAmb	14 56 41.9	
	comp=Z,15nm,1.4s						
YKA	**Yellowknife Ar**	**102.51**	**13**	PP	**PP**	**15 01 22.7**	**-3.0**
	comp=Z,2.0nm,1.1s,baz=335,slow=7.4,SNR=8.2						
CPUP	**Villa Florida**	**150.01**	**237**	PKPbc	**PKPbc**	**15 03 08.8**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=155,slow=4.7,SNR=3.5						

IDC 17 14:48:00.8±329.0, 57.76N×28.80E, h0km, Error ellipse: s-maj=135.2km s-min=111.0km az=99.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.69**	**99**	I	I	15 18 51.7	
	0.1nm,0.6s,baz=279,slow=306,SNR=1.8						
I37NO	**I37NO**	**12.21**	**343**	I	I	15 54 51.1	
	baz=149,slow=320,SNR=3.6						
I26DE	**FREYUNG INFRAS**	**12.66**	**232**	I	I	16 07 40.0	
	baz=37,slow=326,SNR=0.5						

*GCG **17** 15:01:42.7±2.0, 14.81N×90.98W, h1km±16km, MD4.5, ML4.1, MW3.5, Presumed earthquake*
*CATAC **17** 15:01:44.6±0.3, 15°N±3°×91W±°, h3km±2km, M3.8/7, MLv3.8/7, Error ellipse: s-maj=7.1km s-min=3.4km az=23.8, confirmed*

ISC 17 15:01:44.0±1.1, 14.85N±0.05×90.95W±0.03, h15km±10km, n22, σ1§80/27, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCG4	**OSOP**	**0.48**	**124**	*i* P	**Pg**	**15 01 52.9**	**-0.7**
GCG4				IAML		15 02 01.2	
	comp=E,7μm,0.4s						
APG	**El Apazote**	**0.49**	**72**	*i* P	**Pg**	**15 01 53.5**	**-0.3**
STG8	**El Palmar, Qui**	**0.56**	**224**	*i* P	**Pb**	**15 01 55.4**	**-0.3**
STG5	**El Palmar, Qui**	**0.59**	**221**	*i* P	**Pb**	**15 01 55.7**	**-0.5**
STG5				*i* S	**Sb**	**15 02 03.8**	**-0.6**
FG8	**Yepocapa, Chim**	**0.70**	**148**	*i* P	Pg	15 01 51.4	-6.3
HUEH	**Huehuetenango**	**0.71**	**311**	P	**Pg**	**15 01 57.7**	**-0.2**
HUEH				S	**Sb**	**15 02 08.2**	**+0.3**
HUEH	**Huehuetenango**	**0.71**	**311**	*i* P	**Pg**	**15 01 57.4**	**-0.5**
FG16	**Alotenango, Sa**	**0.71**	**144**	*i* P	Pg	15 01 52	-6.8
RTAL	**Retalhuleu**	**0.80**	**246**	P	**Pb**	**15 01 59.6**	**0.0**
RTAL				S	**Sb**	**15 02 10.4**	**+0.3**
AVCB	**Coban**	**0.80**	**40**	IAML		15 02 21.9	
	comp=N,16μm,0.3s						
PCG5	**San Vicente Pa**	**0.84**	**139**	*i* P	Pg	15 01 54.7	-5.6
PCG5				*i* S	Sg	15 02 00.7	-11
PCG5				IAML		15 02 04.3	
	comp=N,8μm,0.4s						
FAME	**Alcaldia de Sa**	**1.35**	**138**	P	**Pg**	**15 02 08.5**	**-1.5**
FAME				S	**Sb**	**15 02 27.7**	**+1.6**
LOAL	**Lomas de Alarc**	**1.41**	**127**	P	**Pn**	**15 02 10.6**	**+1.3**
NUBE	**Las Nubes**	**1.47**	**130**	P	**Pn**	**15 02 11.0**	**+0.9**
NUBE				S	**Sn**	**15 02 32.8**	**+3.5**
ZAFR2	**Estanzuela, Za**	**1.57**	**100**	*i* P	**Pn**	**15 02 08.7**	**-2.7**
ZAFR2				*i* S	**Sn**	**15 02 25.4**	**-5.9**
ESQI	**Esquipulas**	**1.58**	**100**	P	**Pn**	**15 02 12.8**	**+1.2**
ESQI				S	**Sg**	**15 02 36.3**	**+1.3**
MTO3	**Montecristo**	**1.60**	**106**	P	**Pn**	**15 02 12.9**	**+0.9**
MTO3				S	**Sg**	**15 02 35.8**	**+0.1**
MTO3	**Montecristo**	**1.60**	**106**	*i* P	**Pn**	**15 02 12.9**	**+0.9**
JAYA	**Jayaque - finc**	**1.88**	**129**	P	**Pb**	**15 02 18.2**	**0.0**
JAYA				S	**Sg**	**15 02 44.9**	**+0.3**
SARH	**Santa Rosa de**	**2.12**	**92**	P	**Pn**	**15 02 20.8**	**+1.9**
SARH				S	**Sg**	**15 02 52.4**	**+0.3**
SARH	**Santa Rosa de**	**2.12**	**92**	*i* P	**Pn**	**15 02 20.3**	**+1.4**
PETF	**Flores**	**2.30**	**27**	IAML		15 03 01.8	
	comp=N,2μm,0.8s						

*IDC **17** 15:16:54.0±5.3, 38.18N×75.52E, h105km±39km, mb3.3/6, mbtmp3.6/10, Error ellipse: s-maj=41.8km s-min=36.8km az=172.0*

ISC 17 15:16:54.0±1.5, 38.2N±0.1×75.4E±0.1, h100km, n17, σ1§69/20, mb3.5/5, 5C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**4.11**	**351**	P	**Pn**	**15 17 56.9**	**+1.9**
	SNR=31						
ULHL	**Ulahol**	**4.12**	**9**	P	**Pn**	**15 17 56.5**	**+1.6**
	SNR=29						
AAK	**Ala-Archa**	**4.51**	**352**	P	**Pn**	**15 18 02.1**	**+1.9**
	6.4nm,0.4s,baz=163,slow=4.9,SNR=11						
AAK				S	**Sn**	**15 18 51.8**	**+0.2**
	7.4nm,0.5s,baz=162,slow=19,SNR=6.4						
AAK	**Ala-Archa**	**4.51**	**352**	P	**Pn**	**15 18 02.4**	**+2.2**
	SNR=6.0						
AAK	**Ala-Archa**	**4.51**	**352**	⇑Pn	**Pn**	**15 18 01.9**	**+1.6**
	2.6nm,0.5s						
AAK				⇑Sn	**Sn**	**15 18 50.9**	**-0.8**
	5.9nm,0.6s						
AAK				⇑Lg	Lg	15 19 11.3	
	6.8nm,0.7s						
EKS2	**Erkin-Say**	**4.65**	**345**	P	**Pn**	**15 18 05.0**	**+3.0**
	SNR=6.3						
TKM2	**Tokmak 2**	**4.75**	**2**	P	**Pn**	**15 18 05.4**	**+2.0**
	SNR=28						
KK31	**Karatay Array**	**6.17**	**325**	⇑Pn	**Pn**	**15 18 24.0**	**+1.5**
	0.9nm,0.3s,baz=142,slow=12,SNR=17						
KK31				⇑Sn	**Sn**	**15 19 28.5**	**-3.1**
	1.4nm,0.2s,baz=157,slow=29,SNR=9.2						
MKAR	**Makanchi Array**	**10.00**	**28**	P	**Pn**	**15 19 14.1**	**-0.6**
	1.2nm,0.6s,baz=198,slow=14,SNR=13						
KURBB	**Kurchatov Arra**	**12.65**	**9**	P	**Pn**	**15 19 47.9**	**-2.2**
	0.4nm,0.7s,baz=193,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	**17.05**	**19**	P	**Pn**	**15 20 45.6**	**-0.4**
	0.8nm,0.4s,baz=208,slow=13,SNR=4.7						
FINES	**FINESS Array B**	**38.13**	**324**	P	**P**	**15 24 03.4**	**+0.5**
	0.4nm,0.6s,baz=124,slow=10,SNR=1.6						
	0.4nm,0.6s						
ARCES	**ARCESS Array B**	**41.00**	**336**	P	**P**	**15 24 26.9**	**+0.3**
	0.5nm,0.5s,baz=104,slow=8.9,SNR=6.5						
	0.5nm,0.5s						
HFS	**Hagfors**	**43.96**	**321**	P	**P**	**15 24 50.9**	**+0.1**
	0.9nm,0.6s,baz=67,slow=11,SNR=1.6						
	0.9nm,0.6s						
NOA	**NORSAR Array B**	**45.19**	**322**	P	**P**	**15 25 00.6**	**0.0**
	0.3nm,0.5s,baz=106,slow=7.2,SNR=1.9						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**69.23**	**271**	P	**P**	**15 27 49.9**	**-0.5**
	0.5nm,0.4s,baz=50,slow=5.8,SNR=5.6						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**79.36**	**5**	P	**P**	**15 28 47.6**	**-0.7**
	0.3nm,0.5s,baz=352,slow=5.4,SNR=4.4						
	0.3nm,0.5s						

IDC 17 15:18:04.3±4.9, 17.68S×178.32W, h606km±23km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=129.3km s-min=82.3km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.46**	**269**	P	P	15 19 26.8	0.0
	7.2nm,0.7s,baz=69,slow=8.6,SNR=8.5						
STKA	**Stephens Creek**	**38.81**	**241**	P	P	15 24 38.8	-0.1
	2.0nm,0.8s,baz=117,slow=11,SNR=2.9						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**44.76**	**259**	P	P	15 25 25.6	-0.1
	0.6nm,0.5s,baz=95,slow=7.2,SNR=34						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**44.94**	**254**	P	P	15 25 27.0	0.0
	1.6nm,0.4s,baz=90,slow=8.4,SNR=68						
ASAR				PcP	PcP	15 26 54.8	-0.3
	0.2nm,0.6s,baz=91,slow=3.6,SNR=1.3						
	1.6nm,0.4s						

*IDC **17** 15:22:23.1±1.9, 12.29N×94.86E, h0km, mb3.4/5, mbtmp3.3/6, ML3.3/1, Error ellipse: s-maj=69.7km s-min=23.6km az=63.0*

ISC 17 15:22:26.1±1.7, 12.3N±0.2×94.9E±0.3, h19km, n6, σ0§43/6, mb3.5/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.24**	**32**	Pn	**Pn**	**15 24 11.1**	**+0.1**
	0.1nm,0.3s,baz=205,slow=14,SNR=6.9						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**35.97**	**345**	P	**P**	**15 29 26.1**	**+0.4**
	0.1nm,0.5s,baz=154,slow=8.0,SNR=4.8						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**40.47**	**344**	P	**P**	**15 30 03.4**	**-0.1**
	0.3nm,0.3s,baz=160,slow=6.9,SNR=1.7						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**42.29**	**351**	P	**P**	**15 30 17.8**	**-0.6**
	0.3nm,0.2s,baz=159,slow=6.2,SNR=1.6						
	0.3nm,0.2s						
WRA	**Warramunga Arr**	**50.35**	**129**	P	**P**	**15 31 22.2**	**0.0**
	0.5nm,1.0s,baz=308,slow=7.7,SNR=1.1						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**52.29**	**133**	P	**P**	**15 31 36.8**	**+0.1**
	0.3nm,0.9s,baz=308,slow=7.6,SNR=2.0						
	0.3nm,0.9s						

*THE **17** 15:40:04.5, 39°N±1°×21.3°E±0.7°, h24km±1km, M3.4/20, MLh3.4/20*
*ATH **17** 15:40:04.6, 38.70N×21.25E, h6km±1km, ML3.3/60, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*IDC **17** 15:40:08.6±2.0, 38.69N×21.11E, h60km±24km, mb3.2/7, mbtmp3.5/12, ML3.2/4, Error ellipse: s-maj=24.5km s-min=14.0km az=62.0*

ISC 17 15:40:04.6±0.9, 38.66N±0.02×21.26E±0.01, h19km±6km, n128, σ1§08/167, mb3.6/6, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AST1	**Astakos**	**0.18**	**228**	P	**Pb**	**15 40 10.4**	**+1.9**
AST1				S	**Sg**	**15 40 15.2**	**+2.5**
PVO	**Paravola**	**0.21**	**102**	P	**Pb**	**15 40 10.0**	**+0.6**
PVO	**Paravola**	**0.21**	**102**	P	**Pb**	**15 40 09.9**	**+0.6**
AMPL	**Ampelaki**	**0.26**	**352**	P	**Pg**	**15 40 09.9**	**-0.8**
AMPL	**Ampelaki**	**0.26**	**352**	P	**Pg**	**15 40 09.7**	**-1.0**
PLEV	**Plevrona-Mesol**	**0.27**	**155**	P	**Pb**	**15 40 11.4**	**+0.6**
PLEV				S	**Sb**	**15 40 17.1**	**+2.2**
PLEV	**Plevrona-Mesol**	**0.27**	**155**	P	**Pb**	**15 40 11.2**	**+0.4**
PLEV				S	**Sb**	**15 40 16.3**	**+1.3**
NYDR	**Nydri-Lefkada**	**0.44**	**277**	P	**Pb**	**15 40 13.8**	**-0.1**
NYDR				S	**Sb**	**15 40 21.3**	**+1.2**
AGRP	**Agrapidokambos**	**0.45**	**126**	P	**Pb**	**15 40 13.6**	**-0.3**
AGRP				S	**Sb**	**15 40 21.0**	**+0.7**
AXS	**Araxos**	**0.47**	**169**	P	**Pn**	**15 40 14.8**	**-1.5**
AXS				S	**Sb**	**15 40 22.5**	**+1.5**
EVGI	**Lefkada island**	**0.48**	**265**	P	**Pb**	**15 40 14.6**	**-0.2**
EVGI				S	**Sb**	**15 40 22.9**	**+1.9**
EVGI	**Lefkada island**	**0.48**	**265**	P	**Pb**	**15 40 14.6**	**+0.2**
LKD2	**Lefkada island**	**0.49**	**285**	P	**Pb**	**15 40 14.6**	**0.0**
LKD2				S	**Sb**	**15 40 23.0**	**+1.5**
LKD2	**Lefkada island**	**0.49**	**285**	P	**Pb**	**15 40 14.6**	**0.0**
LKD2				S	**Sb**	**15 40 21.1**	**-0.3**
EVR	**Evrytania**	**0.50**	**59**	P	**Pg**	**15 40 14.0**	**-0.8**
EVR				S	**Sb**	**15 40 21.8**	**0.0**
TSLK	**Tsoukalades, L**	**0.50**	**289**	P	**Pb**	**15 40 14.9**	**+0.1**
TSLK	**Tsoukalades, L**	**0.50**	**289**	P	**Pb**	**15 40 14.9**	**+0.1**
ANX	**Ano Chora**	**0.52**	**97**	P	**Pb**	**15 40 14.8**	**-0.3**
ANX				S	**Sb**	**15 40 22.8**	**+0.5**
DRAG	**Dragano-Lefkad**	**0.54**	**273**	P	**Pb**	**15 40 15.3**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.54**	**273**	P	**Pb**	**15 40 14.8**	**-0.6**
DRAG				S	**Sb**	**15 40 22.5**	**-0.2**
ARTB	**Arta**	**0.54**	**336**	P	**Pb**	**15 40 15.0**	**-0.4**
ARTB				S	**Sg**	**15 40 21.7**	**-1.2**
PATC	**Patra C**	**0.55**	**135**	P	**Pn**	**15 40 16.3**	**-1.2**
PATC				S	**Sb**	**15 40 24.1**	**+1.0**
RIOA	**Rio**	**0.55**	**131**	P	**Pb**	**15 40 16.0**	**+0.4**
RIOA				S	**Sn**	**15 40 24.5**	**-1.6**
EFP	**Efpalio**	**0.56**	**115**	P	**Pb**	**15 40 15.5**	**-0.2**
EFP				S	**Sb**	**15 40 24.1**	**+0.8**
EFP	**Efpalio**	**0.56**	**115**	P	**Pb**	**15 40 15.5**	**-0.2**
EFP				S	**Sb**	**15 40 24.0**	**+0.8**
PATG	**Patra B**	**0.56**	**139**	P	**Pn**	**15 40 17.1**	**-0.5**
PATG				S	**Sn**	**15 40 25.2**	**-1.0**
UPR	**University Cam**	**0.56**	**132**	P	**Pb**	**15 40 16.1**	**+0.4**
UPR				S	**Sb**	**15 40 24.4**	**+1.1**
FSK	**Fiskardo**	**0.58**	**250**	P	**Pb**	**15 40 16.0**	**-0.1**
FSK				S	**Sn**	**15 40 26.2**	**-0.7**
FSK	**Fiskardo**	**0.58**	**250**	P	**Pb**	**15 40 16.4**	**+0.2**
FSK				S	**Sb**	**15 40 23.9**	**0.0**
MG00	**Magoula, Dorid**	**0.59**	**114**	P	**Pb**	**15 40 16.4**	**+0.2**
MG00				S	**Sb**	**15 40 24.7**	**+0.6**
VSK1	**VASILIKIADES**	**0.60**	**245**	P	**Pb**	**15 40 16.5**	**0.0**
RLS	**Riolos of Patr**	**0.62**	**165**	P	**Pn**	**15 40 17.4**	**-1.0**
RLS	**Riolos of Patr**	**0.62**	**165**	P	**Pn**	**15 40 17.4**	**-1.0**
RLS				S	**Sn**	**15 40 26.8**	**-1.0**
SMHA	**Samh**	**0.63**	**230**	P	**Pb**	**15 40 16.3**	**-0.7**
SERG	**Sergoula**	**0.67**	**111**	P	**Pg**	**15 40 16.8**	**-1.1**
TETR	**Tetrakomo, Epi**	**0.68**	**1**	P	**Pg**	**15 40 16.7**	**-1.5**
TETR	**Tetrakomo, Epi**	**0.68**	**1**	P	**Pg**	**15 40 16.9**	**-1.3**
TETR				S	**Sg**	**15 40 26.6**	**-0.7**
RTZL	**Ratzakli, Kefa**	**0.70**	**214**	P	**Pb**	**15 40 18.2**	**+0.1**
RTZL	**Ratzakli, Kefa**	**0.70**	**214**	P	**Pn**	**15 40 18.4**	**-1.1**
RTZL				S	**Sb**	**15 40 28.3**	**+0.9**
VLS	**Valsamata**	**0.72**	**228**	P	**Pb**	**15 40 18.3**	**-0.1**
VLS	**Valsamata**	**0.72**	**228**	P	**Pb**	**15 40 18.3**	**-0.1**
VLS				S	**Sn**	**15 40 29.0**	**-1.2**
KALE	**Kalithea**	**0.74**	**111**	P	**Pb**	**15 40 18.3**	**-0.6**
KALE	**Kalithea**	**0.74**	**111**	P	**Pb**	**15 40 19.0**	**+0.1**
KALE				S	**Sn**	**15 40 29.8**	**-1.1**
AGEO	**AgiosGiorgios,**	**0.74**	**122**	P	**Pn**	**15 40 19.2**	**-0.9**
AGEO				S	**Sn**	**15 40 30.7**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.76**	**62**	P	**Pb**	**15 40 19.1**	**-0.2**
MAKR				S	**Sb**	**15 40 29.9**	**+0.5**
CLEM	**Kyllini,Ilia,G**	**0.78**	**188**	P	**Pn**	**15 40 20.3**	**-0.3**
CLEM				S	**Sn**	**15 40 31.3**	**-0.3**
KFL1	**Kefalonia,Entr**	**0.78**	**231**	P	**Pb**	**15 40 19.3**	**-0.2**
KFL1				S	**Sn**	**15 40 30.8**	**-0.8**
PSARO	**Psaromita, Dor**	**0.79**	**114**	P	**Pn**	**15 40 19.7**	**-1.0**
PSARO				S	**Sn**	**15 40 31.8**	**-0.1**
DRO	**Drossia**	**0.79**	**153**	P	**Pn**	**15 40 19.9**	**-0.8**
DRO	**Drossia**	**0.79**	**153**	P	**Pn**	**15 40 19.9**	**-0.8**
DRO				S	**Sn**	**15 40 32.6**	**+0.5**
TEME	**Temeni, Aigial**	**0.80**	**122**	P	**Pn**	**15 40 20.3**	**-0.5**
TEME				S	**Sn**	**15 40 32.8**	**+0.6**
DMLN	**Damoulianata-K**	**0.82**	**239**	P	**Pg**	**15 40 19.3**	**-1.3**
DMLN				S	**Sb**	**15 40 31.4**	**+0.6**
PRMD	**Pramanda**	**0.88**	**352**	P	**Pg**	**15 40 20.2**	**-1.0**
AGG	**Agios Georgios**	**0.91**	**66**	P	**Pb**	**15 40 21.4**	**-0.4**
AGG	**Agios Georgios**	**0.91**	**66**	P	**Pn**	**15 40 21.9**	**-0.5**
KYPS	**Kipseli, Zakin**	**0.91**	**202**	P	**Pn**	**15 40 22.5**	**+0.1**
PRGA	**Parga**	**0.92**	**313**	P	**Pg**	**15 40 21.4**	**-1.0**
ORTH	**Orthonies,Zaky**	**0.92**	**209**	P	**Pn**	**15 40 21.9**	**-0.7**
ORTH	**Orthonies,Zaky**	**0.92**	**209**	P	**Pn**	**15 40 22.2**	**-0.4**
KLV	**Kalavryta, Ach**	**0.93**	**131**	P	**Pb**	**15 40 21.8**	**-0.4**
LTHK	**Lithakia**	**1.01**	**200**	P	**Pn**	**15 40 23.6**	**-0.1**
LTHK	**Lithakia**	**1.01**	**200**	P	**Pn**	**15 40 23.9**	**+0.2**
LTHK				S	**Sn**	**15 40 38.6**	**+1.3**
JAN	**Janina**	**1.04**	**342**	P	**Pb**	**15 40 24.0**	**-0.1**
THL	**Klokotos Trika**	**1.07**	**33**	P	**Pb**	**15 40 23.9**	**-0.7**
THL	**Klokotos Trika**	**1.07**	**33**	P	**Pb**	**15 40 24.1**	**-0.5**
THL				S	**Sn**	**15 40 39.7**	**+0.6**
AXAR	**Agios Charalam**	**1.10**	**84**	P	**Pb**	**15 40 24.2**	**-0.8**
AXAR	**Agios Charalam**	**1.10**	**84**	P	**Pn**	**15 40 26.0**	**+1.0**
MSVA	**Metsovo**	**1.11**	**357**	P	**Pb**	**15 40 25.2**	**-0.1**
IGT	**Igoumenitsa**	**1.13**	**321**	P	**Pb**	**15 40 24.9**	**-0.7**
IGT	**Igoumenitsa**	**1.13**	**321**	P	**Pg**	**15 40 25.6**	**-1.0**
ZARO	**Zacharo**	**1.21**	**165**	P	**Pg**	**15 40 27.8**	**-0.3**
ZARO				S	**Sn**	**15 40 45.2**	**+2.8**
THAL	**Thalero**	**1.27**	**119**	P	**Pg**	**15 40 28.5**	**-0.6**
TYRN	**Tyrnavos**	**1.29**	**35**	P	**Pn**	**15 40 27.6**	**0.0**
TYRN	**Tyrnavos**	**1.29**	**35**	P	**Pn**	**15 40 27.8**	**+0.2**
TYRN				S	**Sn**	**15 40 45.0**	**+0.7**
KPRO	**Kipourio**	**1.29**	**3**	P	**Pg**	**15 40 28.6**	**-1.0**
GINA	**Giannouli**	**1.33**	**41**	P	**Pb**	**15 40 28.9**	**-0.1**
KIAA	**Kiato**	**1.34**	**118**	P	**Pg**	**15 40 29.8**	**-0.6**
LKR	**Lokris**	**1.36**	**90**	P	**Pg**	**15 40 30.1**	**-0.8**
ATAL	**Atalanti**	**1.38**	**88**	P	**Pg**	**15 40 30.2**	**-1.1**
ACOR	**Acrocorinthos**	**1.48**	**121**	P	**Pg**	**15 40 31.9**	**-1.3**
LTK	**Loutraki**	**1.48**	**115**	P	**Pg**	**15 40 32.3**	**-1.0**
LOUT	**Loutraki**	**1.51**	**116**	P	**Pg**	**15 40 32.4**	**-1.3**
KEK	**Kerkira**	**1.55**	**313**	P	**Pb**	**15 40 31.9**	**-0.8**
ITM	**Ithomi**	**1.57**	**160**	P	**Pg**	**15 40 33.6**	**-1.3**
VALY	**Valyra**	**1.60**	**159**	P	**Pg**	**15 40 34.2**	**-1.2**
VIL2	**Platees**	**1.64**	**105**	P	**Pg**	**15 40 35.3**	**-0.9**
NEO	**Neokhori**	**1.66**	**67**	P	**Pb**	**15 40 34.4**	**-0.1**
XOR	**Xorichti**	**1.66**	**64**	P	**Pb**	**15 40 34.5**	**-0.1**
KZN	**Kozani**	**1.69**	**13**	P	**Pb**	**15 40 34.7**	**-0.4**
LIT	**Litokhoron**	**1.72**	**33**	P	**Pb**	**15 40 35.0**	**-0.7**
STFN	**Stefani**	**1.86**	**104**	P	**Pb**	**15 40 37.7**	**-0.3**
MAGU	**Magoula**	**1.86**	**108**	P	**Pb**	**15 40 37.9**	**-0.1**
MET2	**Kameni Chora,**	**1.94**	**122**	P	**Pb**	**15 40 39.0**	**-0.3**
MET4	**Agioi Theodoro**	**1.98**	**121**	P	**Pb**	**15 40 39.9**	**-0.1**
MET1	**Methana Town,**	**1.99**	**122**	P	**Pb**	**15 40 39.4**	**-0.9**
ATH	**Athens Observa**	**2.05**	**109**	P	**Pb**	**15 40 40.3**	**-0.9**
NOAC	**Athens-Thissio**	**2.05**	**109**	P	**Pb**	**15 40 40.0**	**-1.2**
AOS2	**Alonissos-2**	**2.07**	**76**	P	**Pb**	**15 40 40.0**	**-1.6**
ATHU	**Athens Univers**	**2.10**	**109**	P	**Pb**	**15 40 41.1**	**-1.0**
PTL	**Penteli**	**2.14**	**106**	P	**Pb**	**15 40 41.7**	**-1.0**
VLY	**Voula,Athens**	**2.15**	**111**	P	**Pb**	**15 40 41.9**	**-1.1**
DION	**Dionisos Attik**	**2.18**	**105**	P	**Pb**	**15 40 42.3**	**-1.2**
KYMI	**Kymi, Euboea I**	**2.22**	**90**	P	**Pb**	**15 40 42.8**	**-1.4**
VLI	**Veliai**	**2.35**	**145**	P	**Pb**	**15 40 45.1**	**-1.2**
THE	**Thessaloniki**	**2.37**	**33**	P	**Pn**	**15 40 44.2**	**+1.8**
PLG	**Polygyros**	**2.40**	**44**	P	**Pn**	**15 40 43.9**	**+0.9**
GRG	**Griva**	**2.45**	**21**	P	**Pn**	**15 40 45.2**	**+1.6**
OHR	**Ohrid**	**2.47**	**352**	*i* Pn	**Pb**	**15 40 47.5**	**-0.9**
KARY	**Karystos**	**2.58**	**103**	P	**Pb**	**15 40 47.7**	**-2.4**
OUR	**Ouranopolis**	**2.69**	**51**	P	**Pn**	**15 40 48.3**	**+1.5**
SOH	**Sokhos**	**2.69**	**36**	P	**Pn**	**15 40

IDC 17 15:49:44.4±2.3,2°80N×127°21E,h0km,mb3.2/3, mbtmp3.2/3,MS4.0/1,Error ellipse: s-maj=169.9km s-min=28.0km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.66**	**163**	P	P	15 54 57.6	-0.1
	0.7nm,0.6s,baz=343,slow=11,SNR=11 0.7nm,0.6s						
ASAR	**Alice Springs**	**27.10**	**166**	P	P	15 55 29.3	+0.1
	0.2nm,0.6s,baz=348,slow=8.2,SNR=6.7 0.2nm,0.6s						
PALK	**Pallekele**	**46.52**	**277**	LR	LR	16 17 26.9	
	comp=Z,179nm,21.5s,baz=43,slow=36						
MKAR	**Makanchi Array**	**58.59**	**325**	P	P	15 59 43.1	0.0
	0.1nm,0.4s,baz=140,slow=7.5,SNR=1.8 0.1nm,0.4s						

IDC 17 15:57:06.8±1.4,23°15S×66°17W,h189km±14km,mb3.4/4, mbtmp3.9/10,Error ellipse: s-maj=19.3km s-min=11.6km az=90.0
SJA 17 15:57:08.2±0.7,23°01S×66°55W,h244km±6km,ML3.9, MW3.9
VAO 17 15:57:09.3±1.1,22°94S×66°43W,h221km±10km,mb4.1, Presumed earthquake
NEIC 17 15:57:09.6±2.4,23°04S±0°06×66°65W±0°10,h248km±9km, mb4.5/4,Error ellipse: s-maj=14.3km s-min=7.0km az=115.0

ISC 17 15:57:08.2±0.6,23°03S±0°04×66°53W±0°05,h231km±6km, n77,σ2s02/91,mb3.7/6,3C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.05**	**100**	*eP*	**Pn**	**15 57 44.0**	**+2.0**
HJA				*eS*	S	**15 58 10.6**	**+2.2**
SALTA		**1.21**	**172**	*eP*	**Pn**	**15 57 45.0**	**+1.8**
SALTA				*eS*	S	15 57 58.0	-13
YJA	**Yavi**	**1.26**	**48**	*eP*	**Pn**	**15 57 45.5**	**+2.0**
YJA				*eS*	**S**	**15 58 06.8**	**-4.3**
AF01	**San Pedro de A**	**1.52**	**272**		**Pn**	**15 57 48.1**	**+2.8**
SLA	**San Lorenzo**	**1.93**	**151**	*eP*	**Pn**	**15 57 52.1**	**+3.4**
SLA				*eS*	**S**	**15 58 17.3**	**-3.1**
PB09	**IPOC Station P**	**2.79**	**295**	*eP*	**Pn**	**15 57 57.5**	**0.0**
PB09				*eS*	**S**	**15 58 37.9**	**+1.9**
PB09				IAML		15 58 38.6	
	comp=Z,169nm,0.8s						
PB09	**IPOC Station P**	**2.79**	**295**		**Pn**	**15 57 59.3**	**+1.9**
PB09				Sn	**S**	**15 58 36.4**	**+0.4**
PB06	**IPOC Station P**	**2.82**	**276**	*eP*	**Pn**	**15 57 59.0**	**+1.3**
PB06				*eS*	**S**	**15 58 35.4**	**-1.2**
PB06				IAML		15 58 37.2	
	comp=Z,134nm,0.6s						
PB06	**IPOC Station P**	**2.82**	**276**		**Pn**	**15 57 58.1**	**+0.4**
FSA	**Cafayete**	**3.11**	**171**	*eP*	**Pn**	**15 58 02.4**	**+1.4**
FSA				*eS*	**S**	**15 58 42.8**	**+0.3**
PB03	**IPOC Station P**	**3.13**	**287**		**Pn**	**15 58 02.4**	**+1.1**
PB07	**IPOC Station P**	**3.36**	**292**		**Pn**	**15 58 05.0**	**+1.1**
PB05	**IPOC Station P**	**3.39**	**272**		**Pn**	**15 58 05.0**	**+0.9**
PB02	**IPOC Station P**	**3.55**	**298**	*eP*	**Pn**	**15 58 06.5**	**+0.5**
PB02				*eS*	**S**	**15 58 50.4**	**-1.1**
PB02				IAML		15 58 53.9	
	comp=Z,248nm,0.3s						
PB02	**IPOC Station P**	**3.55**	**298**		**Pn**	**15 58 07.0**	**+1.0**
PB08	**IPOC Station P**	**3.77**	**319**	*eP*	**Pn**	**15 58 10.5**	**+1.6**
PB08				*eS*	**S**	**15 58 58.5**	**+1.9**
PB08				IAML		15 58 59.8	
	comp=Z,135nm,0.7s						
PB08	**IPOC Station P**	**3.77**	**319**		**Pn**	**15 58 10.9**	**+2.1**
PB14	**IPOC Station P**	**3.89**	**245**		**Pn**	**15 58 10.7**	**+0.6**
GO01	**Chusmiza**	**4.16**	**323**	*eP*	**Pn**	**15 58 15.3**	**+1.6**
GO01				*eS*	**S**	**15 59 07.5**	**+2.2**
GO01				IAML		15 59 09.8	
	comp=Z,59nm,0.1s						
GO01	**Chusmiza**	**4.16**	**323**		**Pn**	**15 58 15.3**	**+1.6**
PB11	**IPOC Station P**	**4.36**	**318**	*eP*	**Pn**	**15 58 16.3**	**+0.4**
PB11				*eS*	**S**	**15 59 08.1**	**-1.1**
PB11				IAML		15 59 09.9	
	comp=Z,77nm,0.5s						
PB11	**IPOC Station P**	**4.36**	**318**		**Pn**	**15 58 16.2**	**+0.4**
AC02	**Maricunga**	**4.47**	**211**	*eP*	**Pn**	**15 58 17.9**	**+0.6**
AC02				*eS*	S	15 59 03.0	-9.0
AC02				IAML		15 59 03.0	
	comp=Z,100nm,0.3s						
AC02	**Maricunga**	**4.47**	**211**		**Pn**	**15 58 18.3**	**+1.0**
PSGCX	**Pisagua**	**4.78**	**315**	*eP*	**Pn**	**15 58 20.8**	**-0.1**
PSGCX				*eS*	**S**	**15 59 16.6**	**-1.8**
PSGCX				IAML		15 59 18.6	
	comp=Z,73nm,0.6s						
PSGCX	**Pisagua**	**4.78**	**315**		**Pn**	**15 58 20.4**	**-0.4**
AC01	**Pan de Azucar**	**4.83**	**229**	*eP*	**Pn**	**15 58 20.8**	**-0.5**
AC01				*eS*	**S**	**15 59 16.1**	**-3.3**
AC01				IAML		15 59 16.4	
	comp=Z,40nm,1.1s						
TINO	**Tinogasta**	**5.10**	**190**	*eP*	**Pn**	**15 58 20.8**	**-4.0**
TINO				*eP*		15 58 26.3	
TINO				*eS*	**S**	**15 59 29.9**	**+4.3**
PB16	**IPOC Station P**	**5.43**	**329**		**Pn**	**15 58 30.7**	**+1.2**
PB12	**IPOC Station P**	**5.65**	**320**		**Pn**	**15 58 31.1**	**-0.6**
GO03	**Copiapo**	**5.65**	**216**		**Pn**	**15 58 31.1**	**-0.5**
AC04	**Llanos de Chal**	**6.59**	**218**		**Pn**	**15 58 42.2**	**-1.1**
LPAZ	**La Paz**	**6.87**	**347**	P	**Pn**	**15 58 50.1**	**+2.4**
	comp=Z,4.4nm,0.4s,baz=164,slow=5.4,SNR=34						
LPAZ				S	**S**	**16 00 05.7**	**-1.3**
	comp=Z,15nm,0.9s,baz=60,slow=20,SNR=14						
LPAZ	**La Paz**	**6.87**	**347**		**Pn**	**15 58 49.7**	**+2.0**
LPAZ	**La Paz**	**6.87**	**347**	*eP*	**Pn**	**15 58 48.0**	**+0.3**
LPAZ				*eS*	**S**	**16 00 05.4**	**-1.6**
CO01	**Juntas del Tor**	**7.62**	**204**	Pn	**Pn**	**15 58 57.5**	**+0.7**
BBSD	**Serra de San D**	**8.04**	**45**	*eP*	**Pn**	**15 59 01.6**	**-0.5**
CFA	**Coronel Fontan**	**8.68**	**190**	P	**Pn**	**15 59 09.3**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=9.1,slow=13,SNR=8.0						
CFA				S	**S**	**16 00 40.9**	**-7.3**
	comp=Z,3.8nm,0.3s,baz=131,slow=20,SNR=11						
SIV	**San Ignacio**	**8.69**	**37**	P	**Pn**	**15 59 09.5**	**-0.8**
	comp=Z,24nm,0.5s,baz=216,slow=13,SNR=81						
COIM	**Forte Coimbra**	**8.71**	**71**	*eP*	**Pn**	**15 59 09.1**	**-1.5**
CO06	**Fray Jorge**	**8.88**	**210**	Pn	**Pn**	**15 59 11.8**	**-0.8**
CPUP	**Villa Florida**	**8.99**	**113**	P	Pn	15 59 09.0	-5.1
	comp=Z,0.5nm,0.4s,baz=294,slow=12,SNR=3.7						
PTLB	**Pontes e Lacer**	**10.27**	**44**		**Pn**	**15 59 30.2**	**-0.3**
PTLB	**Pontes e Lacer**	**10.27**	**44**	*eP*	**Pn**	**15 59 30.3**	**-0.3**
VA03	**San Esteban**	**10.33**	**199**		**Pn**	**15 59 32.3**	**+1.1**
VILB	**Vilhena**	**11.69**	**32**	*eP*	**Pn**	**15 59 48.4**	**0.0**
SALV	**Santo Antonio**	**12.43**	**57**	*eP*	**Pn**	**15 59 57.9**	**+0.1**
ITAB	**Concordia**	**13.70**	**111**		**P**	**16 00 15.2**	**+0.5**
CPSB	**Cacapava Do Su**	**13.81**	**125**		**P**	**16 00 15.4**	**-0.5**
CPSB	**Cacapava Do Su**	**13.81**	**125**	*eP*	**P**	**16 00 15.5**	**-0.5**
TRQA	**Tornquist**	**15.48**	**166**	P	**P**	**16 00 34.6**	**+0.2**
TRQA				IAmb	IAmb	16 00 37.1	
	comp=Z,5.2nm,0.8s						
ARAG	**Araguaiana, MT**	**15.67**	**65**	*eP*	**Pn**	**16 00 38.1**	**+0.7**
CLDB	**Colider**	**15.85**	**42**	*eP*	**Pn**	**16 00 39.4**	**-0.1**
IPMB	**Ipameri, GO**	**17.88**	**77**	*eP*	**P**	**16 01 01.2**	**+0.4**
PLCA	**Paso Flores**	**17.98**	**190**	P	**P**	**16 01 02.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=19,slow=15,SNR=5.1						
VAO	**Valinhos**	**18.01**	**94**	P	**P**	**16 01 03.2**	**+1.0**
VAO	**Valinhos**	**18.01**	**94**	*eP*	**P**	**16 01 03.4**	**+1.1**
CANS	**Sao Roque de M**	**18.92**	**86**	*eP*	**P**	**16 01 13.2**	**+1.2**
BDFB	**Brasilia**	**18.94**	**70**	P	**P**	**16 01 11.8**	**-0.6**
	comp=Z,6.1nm,0.8s,baz=241,slow=13,SNR=7.7						
ITTB	**Itaituba**	**21.29**	**31**	*eP*	**P**	**16 01 36.3**	**-0.7**
JANB	**Januaria**	**22.43**	**73**	*eP*	**P**	**16 01 48.1**	**+0.1**
VNA1	**Neumayer--Stat**	**58.12**	**160**	⇑P	**P**	**16 06 40.7**	**+3.6**
	comp=Z,2.3nm,0.7s						
VNA2	**Neumayer--Watz**	**58.49**	**161**	⇑P	**P**	**16 06 42.3**	**+2.6**
	comp=Z,1.5nm,0.7s,baz=287,slow=8.2						
SNAA	**Sanae**	**60.12**	**161**	P	**P**	**16 06 52.8**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=348,slow=4.2,SNR=3.9 comp=Z,1.1nm,0.6s						
TROLL	**Troll, Antarti**	**61.84**	**161**	⇑P	**P**	**16 07 05.1**	**+2.6**
	comp=Z,72nm,0.5s						
TXAR	**Lajitas Array**	**63.15**	**324**	P	P	16 07 17.6	+5.8
	comp=Z,0.2nm,0.5s,baz=122,slow=2.8,SNR=7.9 comp=Z,0.2nm,0.5s						
PH02	**Texas Public H**	**67.09**	**329**	P	**P**	**16 07 33.8**	**-3.2**
PH02				IAmb	IAmb	16 07 34.2	
	comp=Z,24nm,0.7s						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**16 07 40.1**	**+2.9**
	comp=Z,1.1nm,0.7s,baz=198,slow=1.3,SNR=10 comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**16 07 39.7**	**+2.5**
TORD	**Torodi Ar. Bea**	**75.82**	**69**	P	**P**	**16 08 29.6**	**+0.3**
	comp=Z,2.9nm,1.1s,baz=257,slow=5.9,SNR=11 comp=Z,2.9nm,1.1s						
WRA	**Warramunga Arr**	**132.69**	**207**	PKP	**PKiKP**	**16 15 58.3**	**+0.9**
	comp=Z,0.7nm,1.2s,baz=154,slow=1.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**142.34**	**28**	PKP	**PKiKP**	**16 16 16.8**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=320,slow=3.8,SNR=2.8						
MKAR	**Makanchi Array**	**145.50**	**39**	PKPbc	**PKPab**	**16 16 21.6**	**+1.8**
	comp=Z,1.5nm,0.6s,baz=315,slow=3.1,SNR=16						
HHC	**Hu-ho-hao-te**	**162.16**	**5**	*eP*	PKPdf	16 16 34.5	-7.6
CMAR	**Chiang Mai Arr**	**165.67**	**106**	PKPab	**PKPab**	**16 17 47.5**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=227,slow=3.8,SNR=4.6						
PZH	**PanZhiHua**	**168.80**	**70**	PKP	**PKPdf**	**16 16 41.3**	**-6.8**
NJ2	**Nanjing**	**169.82**	**333**	*eP*	**PKPdf**	**16 16 45.1**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						

JMA 17 15:57:29.8±0.2,35°2N±0°8×139°5E±0°8,h119km±1km, MV3.5/40,SAGAMI BAY REGION
JMA Felt I J1 at SAGAMI BAY REGION .
IDC 17 15:57:30.1±0.9,35°14N×139°36E,h122km±6km,mb3.4/8, mbtmp3.7/11,Error ellipse: s-maj=24.5km s-min=6.1km az=68.0

ISC 17 15:57:29.9±0.8,35°18N±0°05×139°43E±0°06,h122km±5km, n34,σ0s78/36,mb3.7/8,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYO	**Yokosk**	**0.20**	**77**	*i* P	**Pn**	**15 57 46.8**	**+0.1**
JYO				*eS*	**Sn**	**15 57 59.7**	**+0.3**
JOD2	**Odawara 2**	**0.29**	**287**	*i* P	**Pn**	**15 57 46.7**	**-0.3**
JOD2				S	**Sn**	**15 57 59.5**	**-0.5**
JIM2	**Oshima 3**	**0.46**	**180**	P	**Pn**	**15 57 47.1**	**-0.8**
JIM2				S	**Sn**	**15 58 00.4**	**-1.0**
JIZS	**Izushimoda**	**0.65**	**225**	P	**Pn**	**15 57 49.1**	**+0.1**
JIZS				S	**Sn**	**15 58 03.5**	**+0.1**
JYN	**Shimob**	**0.79**	**294**	P	**Pn**	**15 57 50.4**	**+0.1**
JYN				*eS*	**Sn**	**15 58 06.5**	**+0.8**
JRY	**Ryogami san**	**0.94**	**333**	*i* P	**Pn**	**15 57 52.0**	**+0.4**
JRY				S	**Sn**	**15 58 08.3**	**+0.3**
BSO3	**Boso 3**	**0.96**	**113**	*i* P	**Pn**	**15 57 51.7**	**+0.3**
SHZ3	**Shizuoka 3**	**1.01**	**264**	*i* P	**Pn**	**15 57 52.6**	**+0.4**
JAG	**Ashikaga**	**1.24**	**1**	*i* P	**Pn**	**15 57 54.5**	**0.0**
JAG				S	**Sn**	**15 58 12.9**	**-0.4**
BSO1	**Boso 1**	**1.37**	**112**	P	**Pn**	**15 57 55.3**	**-0.1**
MJAR	**Matsushiro Arr**	**1.69**	**324**	P	**Pn**	**15 57 59.6**	**0.0**
	108nm,0.3s,baz=161,slow=11,SNR=558						
MJAR				S	**Sn**	**15 58 21.6**	**-0.7**
	25nm,0.4s,baz=151,slow=18,SNR=5.0						
MAT	**Matsushiro**	**1.69**	**324**	*i* P	**Pn**	**15 57 59.9**	**+0.3**
MAT				S	**Sn**	**15 58 22.5**	**+0.2**
JHJ	**Hachijo jima 2**	**2.08**	**172**	P	**Pn**	**15 58 04.7**	**+0.3**
	140nm,0.3s,baz=334,slow=21,SNR=37						
JHJ				S	**Sn**	**15 58 31.0**	**+0.2**
	147nm,0.3s,baz=64,slow=22,SNR=15						
JNU	**Nakatsue**	**7.38**	**256**	P	**Pn**	**15 59 15.8**	**+0.7**
	2.5nm,0.6s,baz=84,slow=9.2,SNR=2.0						
JNU				S	**Sn**	**16 00 34.8**	**-2.5**
	3.4nm,0.8s,baz=37,slow=20,SNR=1.8						
JCJ	**Chichijima**	**8.39**	**163**	P	Pn	15 59 20.0	-8.7
	45nm,0.6s,baz=285,slow=20,SNR=1.8						
JCJ				S	Sn	16 00 50.1	-12
	21nm,0.3s,baz=287,slow=19,SNR=1.7						
ASAJ	**Asahikawa**	**9.25**	**14**	P	**Pn**	**15 59 38.1**	**-2.0**
	1.6nm,0.5s,baz=207,slow=11,SNR=5.4						
ASAJ				S	Sn	16 01 12.4	-10
	1.7nm,0.8s,baz=126,slow=19,SNR=1.1						
KSRS	**Korea Array**	**9.56**	**287**	P	**Pn**	**15 59 46.2**	**+1.8**
	0.3nm,0.6s,baz=108,slow=16,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**28.70**	**115**	T	T	16 33 01.0	
	baz=308,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**28.70**	**115**	T	T	16 33 01.6	
	baz=308,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.71**	**115**	T	T	16 33 02.3	
	baz=308,slow=75,SNR=30						
H11S3	**WAKE ISLAND Hy**	**29.32**	**117**	T	T	16 33 48.3	
	baz=310,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**29.32**	**117**	T	T	16 33 49.3	
	baz=310,slow=76,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**29.33**	**117**	T	T	16 33 49.6	
	baz=310,slow=76,SNR=9.3						
ZALV	**Zalesovo Beam**	**42.01**	**314**	P	**P**	**16 05 09.2**	**+0.3**
	1.5nm,0.6s,baz=102,slow=6.6,SNR=7.1						
ZALV				PcP	**PcP**	**16 07 01.7**	**0.0**
	0.5nm,0.4s,baz=45,slow=2.2,SNR=2.2 1.5nm,0.6s						
MKAR	**Makanchi Array**	**43.77**	**303**	P	**P**	**16 05 23.7**	**+0.4**
	0.5nm,0.5s,baz=88,slow=10,SNR=8.6 0.5nm,0.5s						
BVAR	**Borovoye Array**	**50.65**	**313**	P	**P**	**16 06 16.3**	**-0.1**
	0.6nm,0.4s,baz=101,slow=6.3,SNR=5.0 0.6nm,0.4s						
WRA	**Warramunga Arr**	**55.03**	**186**	P	**P**	**16 06 48.2**	**-0.6**
	0.4nm,0.3s,baz=2.4,slow=7.3,SNR=7.2 0.4nm,0.3s						
ASAR	**Alice Springs**	**58.76**	**186**	P	**P**	**16 07 14.8**	**-0.3**
	0.3nm,0.8s,baz=354,slow=7.6,SNR=7.6 0.3nm,0.8s						
ARCES	**ARCESS Array B**	**65.16**	**339**	P	**P**	**16 07 57.9**	**+0.5**
	1.4nm,0.8s,baz=50,slow=8.1,SNR=4.1 1.4nm,0.8s						
FINES	**FINESS Array B**	**69.70**	**332**	P	**P**	**16 08 26.2**	**+0.2**
	0.5nm,0.4s,baz=62,slow=5.3,SNR=10 0.5nm,0.4s						
AKASG	**Malin Array Be**	**74.77**	**322**	P	**P**	**16 08 56.4**	**0.0**
	0.4nm,0.4s,baz=52,slow=6.0,SNR=1.8 0.4nm,0.4s						
H03N2	**Juan Fernandez**	**148.39**	**98**	T	T	19 05 00.7	
	baz=277,slow=74,SNR=137						
H03N3	**Juan Fernandez**	**148.40**	**98**	T	T	19 05 00.3	
	baz=277,slow=74,SNR=163						
H03N1	**Juan Fernandez**	**148.41**	**98**	T	T	19 05 00.1	
	baz=277,slow=74,SNR=186						

BJI 17 16:14:18.3,19°92N×148°05E,h16km,mB4.7/8,mb4.6/32, Ms4.6/2,Ms7 4.3/2
IDC 17 16:14:20.4±0.6,20°00N×147°64E,h0km,mb4.2/23, mbtmp4.2/27,ML4.2/4,Error ellipse: s-maj=18.3km s-min=12.6km az=84.0
NEIC 17 16:14:22.4±1.5,19°99N±0°07×147°6E±0°1,h10km±1km, mb4.6/34,Error ellipse: s-maj=18.6km s-min=11.6km az=88.0
JMA 17 16:14:30.9±0.4,21°N±3°×14°7E±°,h0km,MV5.3/18, MARIANA ISLANDS REGION

ISC 17 16:14:24.3±2.9,20°01N±0°05×147°56E±0°07,h26km±21km, n95,σ1s38/101,mb4.5/47,2C,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**5.04**	**200**	Pn	**Pn**	**16 15 40.0**	**+1.9**
DPSS				Sn	**Sn**	**16 16 35.5**	**-0.1**
GUMO	**Guam**	**6.89**	**202**	Pn	**Pn**	**16 16 04.3**	**+0.7**
	12nm,0.3s,baz=356,slow=19,SNR=11						
GUMO				Sn	**Sn**	**16 17 19.2**	**-2.0**
	39nm,0.3s,baz=18,slow=20,SNR=6.6 26nm,0.3s						
GUMO	**Guam**	**6.89**	**202**	Pn	**Pn**	**16 16 05.0**	**+1.4**
JHH2	**Haha-jima-NKT2**	**8.24**	**324**	*eP*	**Pn**	**16 16 23.0**	**+0.8**
JHH2				*eS*	**Sn**	**16 17 47.9**	**-6.5**
CBIJ	**Chichi jima**	**8.60**	**326**	*eP*	**Pn**	**16 16 27.4**	**+0.3**
CBIJ				*eS*	Sn	16 17 56.1	-7.2
JCJ	**Chichijima**	**8.60**	**326**	Pn	**Pn**	**16 16 26.1**	**-1.0**
	14nm,0.3s,baz=88,slow=22,SNR=2.4						
JCJ				Sn	**Sn**	**16 17 56.8**	**-6.5**
	16nm,0.3s,baz=108,slow=23,SNR=6.2 30nm,0.3s						
JCJ	**Chichijima**	**8.60**	**326**	Pn	**Pn**	**16 16 27.8**	**+0.7**
PATS	**Pohnpei**	**16.75**	**140**	Pn	**Pn**	**16 18 14.8**	**-2.4**
PATS				IAmb	IAmb	16 18 15.7	
	comp=Z,107nm,1.3s						
JHU2	**Hanno**	**17.37**	**337**	*eP*	**Pn**	**16 18 24.6**	**-0.2**
JAG	**Ashikaga**	**17.83**	**338**	*eP*	**Pn**	**16 18 30.7**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**18.12**	**92**	T	T	16 36 44.8	
	baz=280,slow=75,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**18.14**	**92**	T	T	16 36 46.4	
	baz=280,slow=75,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**18.14**	**92**	T	T	16 36 48.8	
	baz=280,slow=75,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**18.19**	**88**	P	**Pn**	**16 18 32.2**	**-2.7**
	baz=261,slow=14,SNR=9.0						
H11N1				T	T	16 37 16.8	
	baz=274,slow=75,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**18.19**	**88**	P	**Pn**	**16 18 33.1**	**-1.9**
	baz=261,slow=14,SNR=8.2						
H11N2				T	T	16 37 15.1	
	baz=274,slow=75,SNR=2.7						
H11N3	**WAKE ISLAND Hy**	**18.21**	**88**	P	**Pn**	**16 18 34.0**	**-1.1**
	baz=261,slow=14,SNR=5.5						
H11N3				T	T	16 37 18.5	
	baz=274,slow=75,SNR=4.7						
JFK	**Kawauchi**	**18.25**	**343**	*eS*	Sn	16 21 41.5	-17
MJAR	**Matsushiro Arr**	**18.39**	**336**	P	**P**	**16 18 37.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=132,slow=13,SNR=6.7 comp=Z,1.3nm,0.5s						
MJAR	**Matsushiro Arr**	**18.39**	**336**		**Pn**	**16 18 38.7**	**+1.2**
MAJO	**Matsushiro**	**18.39**	**336**	P	**Pn**	**16 18 41.0**	**+3.5**
JSU	**Suzuyama**	**19.16**	**310**		**Pn**	**16 18 47.4**	**+0.5**
JSU				IAmb	IAmb	16 18 48.4	
	comp=Z,12nm,0.7s						
JSJ	**Shimokoshiki**	**19.79**	**309**	*eP*	**Pn**	**16 18 54.4**	**+0.1**
JNU	**Nakatsue**	**19.79**	**315**	P	**Pn**	**16 18 54.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=138,slow=0.9,SNR=7.6 comp=Z,5.6nm,0.8s						
KSRS	**Korea Array**	**24.38**	**320**	P	**P**	**16 19 41.3**	**+0.9**
	comp=Z,4.2nm,0.8s,baz=139,slow=9.2,SNR=25 comp=Z,4.2nm,0.8s						
JKA	**Kamikawa-asahi**	**24.39**	**351**	P	**P**	**16 19 39.9**	**-0.5**
JKA				IAmb	IAmb	16 19 54.7	
	comp=Z,19nm,1.1s						
RABL	**Rabaul**	**24.48**	**169**	P	**P**	**16 19 40.6**	**-0.8**
RABL				IAmb	IAmb	16 19 47.1	
	comp=Z,17nm,0.5s						
USRK	**Ussuriysk Ar.**	**27.39**	**335**	P	**P**	**16 20 08.4**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=141,slow=8.1,SNR=7.8 comp=Z,1.4nm,0.6s						
NJ2	**Nanjing**	**28.35**	**301**	*eP*	**P**	**16 20 16.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
TOLI2	**Tolitoli**	**32.23**	**238**	P	**P**	**16 20 49.7**	**-1.0**
TOLI2				IAmb	IAmb	16 20 56.1	
	comp=Z,8.0nm,0.9s						
HNS	**HongShan**	**33.40**	**308**	⇑P	P	16 21 05.8	+5.1
PETK	**Petropavlovsk-**	**33.95**	**11**	P	**P**	**16 21 06.4**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=187,slow=7.0 comp=Z,1.3nm,0.8s						
XLT	**XiLinHaoTe**	**35.43**	**319**	*eP*	**P**	**16 21 17.6**	**-0.8**
XLT				sP	pwP	16 21 30.4	-1.9
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,70nm,7.2s						
MTN	**Manton Dam**	**36.43**	**208**	P	**P**	**16 21 26.0**	**-1.1**
HILR	**Hailar Array B**	**36.88**	**330**	P	**P**	**16 21 31.4**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=123,slow=10,SNR=2.1 comp=Z,1.5nm,0.5s						
HHC	**Hu-ho-hao-te**	**36.98**	**312**	*eP*	**P**	**16 21 34.1**	**+2.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KNRA	**Kununurra**	**39.99**	**209**	P	**P**	**16 21 56.6**	**-0.4**
LZDM	**Lanzhou Array**	**41.50**	**302**	P	**P**	**16 22 09.9**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=132,slow=6.2,SNR=4.8 comp=Z,3.1nm,0.5s						
WB0	**Warramunga Arr**	**41.59**	**199**	P	**P**	**16 22 10.0**	**-0.2**
WB0				IAmb	IAmb	16 22 14.0	
	comp=Z,11nm,1.4s						
WR8	**Warramunga Arr**	**41.73**	**199**	P	**P**	**16 22 10.9**	**-0.5**
WR8				IAmb	IAmb	16 22 15.4	
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**41.77**	**199**	P	**P**	**16 22 11.4**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=22,slow=8.8,SNR=38						
WRA				PcP	**PcP**	**16 24 08.2**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=18,slow=3.5,SNR=6.9 comp=Z,4.3nm,0.8s						
WRA	**Warramunga Arr**	**41.77**	**199**	P	**P**	**16 22 11.1**	**-0.6**
WRA				PcP	**PcP**	**16 24 08.4**	**+0.7**
PZH	**PanZhiHua**	**42.41**	**288**	P	**P**	**16 22 18.3**	**+1.2**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
SONM	**Songino Array**	**43.25**	**320**	P	**P**	**16 22 24.6**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=134,slow=9.9,SNR=13						
SONM				PcP	**PcP**	**16 24 12.9**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=142,slow=5.2,SNR=3.5 comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**43.25**	**320**	P	**P**	**16 22 25.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**43.55**	**211**	P	**P**	**16 22 26.2**	**+0.1**
GTA2	**Gaotai**	**45.23**	**306**	*eP*	**P**	**16 22 40.6**	**+1.0**
GTA2				pP	pP	16 22 43.9	-1.7
GTA2				pmax	pmax	

KSH2	**Kashi**	**63.90**	**305**	P	**P**		**16 24 56.6**	**+1.4**
KSH2				pmax	pmax				
	comp=Z,4.0nm,1.1s								
BVAR	**Borovoye Array**	**66.59**	**320**	P	**P**		**16 25 13.0**	**+0.7**
	comp=Z,24nm,0.5s,baz=88,slow=7.3,SNR=133								
BORK	**Borovoye**	**66.63**	**320**		**P**		**16 25 13.0**	**+0.5**
KK31	**Karatay Array**	**67.29**	**309**		**P**		**16 25 17.8**	**+0.9**
KKAR	**Karatay Array**	**67.29**	**309**		**P**		**16 25 17.7**	**+0.8**
ARTI	**Arti**	**73.12**	**324**	P	**P**		**16 25 52.3**	**0.0**
AB31	**Akbulak array**	**73.58**	**317**		**P**		**16 25 55.2**	**0.0**
ABKAR	**Akbulak array**	**73.58**	**317**		**P**		**16 25 55.2**	**+0.1**
YKA	**Yellowknife Ar**	**76.01**	**28**	P	**P**		**16 26 09.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=291,slow=5.5,SNR=13								
	comp=Z,1.4nm,0.5s								
SPITS	**Spitsbergen Ar**	**78.16**	**351**	P	**P**		**16 26 21.2**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=35,slow=5.3,SNR=2.0								
	comp=Z,3.0nm,0.9s								
NVAR	**Mina Array Bea**	**80.95**	**52**	P	**P**		**16 26 37.6**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=288,slow=4.4,SNR=5.7								
	comp=Z,1.1nm,0.8s								
ARCES	**ARCESS Array B**	**81.78**	**342**	P	**P**		**16 26 40.3**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=88,slow=3.8,SNR=4.8								
	comp=Z,1.2nm,0.6s								
ARCES	**ARCESS Array B**	**81.78**	**342**	P	**P**		**16 26 39.9**	**-0.6**
ARCES				IAmb	IAmb		16 26 59.7		
	comp=Z,7.0nm,1.3s								
PDAR	**Pinedale Array**	**85.66**	**46**	P	**P**		**16 27 01.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=236,slow=2.9,SNR=5.6								
	comp=Z,0.4nm,0.5s								
PDAR	**Pinedale Array**	**85.66**	**46**	P	**P**		**16 27 00.6**	**-0.6**
FINES	**FINESS Array B**	**86.42**	**336**	P	**P**		**16 27 03.3**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=66,slow=3.9,SNR=19								
	comp=Z,1.7nm,0.6s								
FINES	**FINESS Array B**	**86.42**	**336**	P	**P**		**16 27 02.7**	**-1.5**
HFS	**Hagfors**	**91.81**	**339**	P	**P**		**16 27 28.3**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=54,slow=7.9,SNR=1.3								
	comp=Z,0.7nm,0.6s								
BRTR	**Keskin Array B**	**94.44**	**315**	P	**P**		**16 27 42.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=45,slow=4.5,SNR=1.8								
	comp=Z,0.4nm,0.6s								
VNA2	**Neumayer--Watz**	**126.97**	**190**	⇑PKPdf	**PKiKP**		**16 33 25.8**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=141,slow=1.9								
TORD	**Torodi Ar. Bea**	**132.94**	**312**	PKP	**PKPdf**		**16 33 37.0**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=25,slow=1.6,SNR=2.8								
LPAZ	**La Paz**	**145.93**	**90**	PKPbc	**PKPab**		**16 34 04.3**	**+0.7**
	comp=Z,3.1nm,0.5s,baz=318,slow=2.3,SNR=32								
LPAZ	**La Paz**	**145.93**	**90**		**PKPab**		**16 34 03.8**	**+0.2**

*BJI **17** 16:33:51.7,23˚.25N×93˚.23E, h12km, mB5.0/35, mb4.6/69, ML5.2/2, Ms5.2/83, Ms7 5.0/78*

*IDC **17** 16:33:51.2±0.5,23˚.23N×93˚.44E, h0km, mb4.5/31, mbtmp4.5/33, ML4.4/2, MS4.5/76, Error ellipse: s-maj=11.5km s-min=9.5km az=173.0*

*MOS **17** 16:33:51.3±1.2,23˚.12N×93˚.38E, h11km, mb5.1/61, MS4.6/22, Error ellipse: s-maj=7.1km s-min=3.5km az=117.7*

*NDI **17** 16:33:52.4±8.8,23˚.08N×93˚.38E, h10km, mb4.9, ML4.2, MW4.9, Presumed earthquake*

*NEIC **17** 16:33:53.5±1.8,23˚.12N±0˚.04×93˚.31E±0˚.06, h10km±1km, mb5.0/205, Mww5.1/10, Error ellipse: s-maj=11.0km s-min=6.2km az=240.0*

*GCMT **17** 16:33:53.5±0.2,23˚.12N±0˚.01×93˚.27E±0˚.01, h24km±1km, MW5.2/121, Moment Tensor Solution. s30,c33; s121,c205; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.72±.28; Mθθ2.76±.20; Mϕϕ-2.04±.19; Mrθ2.84±.31; Mθϕ6.19±.17; Mϕr0.62±.27; Best double couple: M=7.18000×10^16 NP1:ϕ=9.00000°, δ69.00000°, λ176.00000°. NP2:ϕ=101.00000°, δ86.00000°, λ21.00000°. Principal axes: T 7.8550, Plg18.0000°, Azm327.0000°; N -1.3550, Plg69.0000°, Azm111.0000°; P -6.5050, Plg12.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **17** 16:33:54.1,21˚.47N×92˚.64E, h33km, mb4.8, Ms4.7*

*GFZ **17** 16:33:54.5±0.2,23˚N±3˚×9˚3E±˚, h10km, M4.9/22, mb5.1/22*

*BKK **17** 16:33:55.0±3.4,23˚N±4˚×9˚3E±˚, h19km±32km, M4.6/20, mB5.0/15, mb4.9/17, Mjma4.9/20, ML5.3/12, MLv5.1/16, Mw(mB)4.3/15, MwMwp3.3/4, Mwp4.0/4*

ISC 17 16:33:54.4±0.6, 23˚.14N±0˚.03×93˚.29E±0˚.03, h15km±3km, n886, σ1§58/827, mb4.9/264, MS4.7/134, 35C-22D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.43**	**40**			**Pn**	**16 34 19.9**	**+0.1**
BRDH	**Bariadhala**	**1.58**	**253**		Pg	**Pb**	**16 34 23.0**	**-0.4**
	474nm,0.3s,baz=74,slow=12,SNR=287							
BRDH					Lg	Lg	16 34 47.6	
	2μm,0.3s,baz=255,slow=19,SNR=23							
SILR	**SILCHAR**	**1.69**	**345**	*eP*		**Pn**	**16 34 22.9**	**-0.5**
BELO	**BELONIA**	**1.70**	**274**	*eP*		Pg	16 34 33.0	+6.0
BELO				*eS*		**Sg**	**16 34 55.8**	**+6.8**
IMP	**Imphal**	**1.79**	**20**	*eP*		**Pn**	**16 34 25.0**	**+0.3**
IMP				*ex*		**Sn**	**16 34 44.4**	**-2.8**
IMP					IAML		16 35 08.3	
	comp=E,3μm,0.9s							
IMP					IAML		16 35 18.1	
	comp=E,3μm,1.9s							
KOHI	**KOHIMA**	**2.67**	**16**	*eP*		**Pn**	**16 34 37.2**	**+0.2**
KOHI				*ex*		**Sn**	**16 35 03.9**	**-5.4**
KOHI					IAML		16 35 41.9	
	comp=N,5μm,0.7s							
KOHI					IAML		16 35 47.3	
	comp=E,7μm,5.1s							
SHL	**Shillong**	**2.73**	**332**	P		**Pn**	**16 34 36.7**	**-1.2**
SHL	**Shillong**	**2.73**	**332**			**Pn**	**16 34 36.7**	**-1.2**
SHL	**Shillong**	**2.73**	**332**	*eP*		**Pn**	**16 34 36.1**	**-1.7**
SHL				*eS*		**Sn**	**16 35 09.0**	**-1.7**
SHL					IAML		16 35 18.4	
	comp=N,842nm,0.7s							
SHL					IAML		16 35 19.7	
	comp=E,1μm,0.0s							
GUWA	**GUWAHATI**	**3.37**	**335**	*eP*		**Pn**	**16 34 45.3**	**-1.1**
GUWA				*eS*		**Sn**	**16 35 24.8**	**-1.3**
GUWA					IAML		16 35 54.9	
	comp=E,557nm,0.0s							
GUWA					IAML		16 36 01.5	
	comp=E,426nm,0.9s							
TEZP	**TEZPUR**	**3.49**	**353**	*eP*		**Pn**	**16 34 46.5**	**-1.6**
TEZP				*eS*		**Sn**	**16 35 27.1**	**-2.0**
DHUB	**DHUBRI**	**4.14**	**314**	*eP*		**Pn**	**16 34 56.9**	**-0.3**
NPW	**Naypyitaw**	**4.27**	**141**	P		**Pn**	**16 34 59.8**	**+0.9**
LKP	**Lekhapani**	**4.77**	**29**	*eS*		**Sn**	**16 35 58.1**	**-2.7**
LKP					IAML		16 36 33.7	
	comp=N,1μm,0.7s							
LKP					IAML		16 36 43.5	
	comp=E,1μm,3.6s							
TNCH	**TengChong**	**5.14**	**68**	Pn		**Pn**	**16 35 12.0**	**+1.0**
TNCH				Sg		**Sg**	**16 36 35.6**	**-3.8**
TNCH				SMN				
	comp=E,900nm,2.3s							
TNCH				SME				
	comp=E,1μm,2.2s							
TNCH					L	L		
	comp=E,9μm,5.6s							
TNCH					L	L		
	comp=E,11μm,7.4s							
TNCH					L	L		
	comp=E,10μm,9.1s							
JPG	**JALPAIGURI**	**5.36**	**310**	*eP*		**Pn**	**16 35 14.8**	**+0.9**
JPG				*eS*		**Sn**	**16 36 13.0**	**-2.2**
SHBG	**Sahibganj**	**5.57**	**293**	*eP*		**Pn**	**16 35 16.7**	**0.0**
SHBG				*ex*		**Sn**	**16 36 22.4**	**+2.1**
CMAI	**Chiengmai2**	**6.24**	**120**	P		**Pn**	**16 35 26.2**	**+0.1**
MHMT	**Maesarieng**	**6.58**	**138**	P		**Pn**	**16 35 33.8**	**+3.1**
JMUI	**Jamui**	**6.69**	**287**	*eP*		**Pn**	**16 35 32.6**	**+0.5**
JMUI				*eS*		**Sn**	**16 36 45.2**	**-2.9**
LSA	**Lhasa**	**6.80**	**344**	P		**Pn**	**16 35 35.6**	**+1.5**
LSA	**Lhasa**	**6.80**	**344**			**Pn**	**16 35 35.6**	**+1.5**
CHTO	**Chiang Mai**	**6.82**	**128**	P		**Pn**	**16 35 34.8**	**+0.9**
	comp=E,0.6nmcomp=E,0.8nmcomp=E,6.6nmcomp=E,1μm							
	comp=E,68nm,0.9s							
CHTO	**Chiang Mai**	**6.82**	**128**	P		**Pn**	**16 35 33.5**	**-0.4**
CHTO	**Chiang Mai**	**6.82**	**128**			**Pn**	**16 35 33.5**	**-0.4**
CHTO	**Chiang Mai**	**6.82**	**128**	P		**Pn**	**16 35 37.0**	**+3.1**
	comp=E,0.8nmcomp=E,68nm,0.9s							
CHTO	**Chiang Mai**	**6.82**	**128**	P		**Pn**	**16 35 33.8**	**-0.2**
BOK	**Bokaro**	**6.83**	**277**	*eP*		**Pn**	**16 35 34.5**	**+0.5**
BOK				*eS*		**Sn**	**16 36 47.8**	**-3.6**
BOK				IAML			16 36 55.5	
	comp=N,609nm,0.8s							
CM13	**Chiang Mai Arr**	**7.05**	**131**	P		**Pn**	**16 35 38.0**	**+0.9**
	comp=N,0.3nmcomp=N,0.5nmcomp=N,38nmcomp=N,684nm							
	comp=N,77nm,0.9s							
CMAR	**Chiang Mai Arr**	**7.05**	**130**	Pn		**Pn**	**16 35 34.6**	**-2.5**
	comp=N,1.2nm,0.3s,baz=309,slow=13,SNR=77							
CMAR					Lg	Lg	16 37 35.8	
	baz=31,slow=36							
	comp=N,5.2nm,0.6s							
CM02	**Chiang Mai Arr**	**7.07**	**130**	P		**Pn**	**16 35 38.8**	**+1.4**
	comp=N,0.4nmcomp=N,0.6nmcomp=N,713nmcomp=N,95nm,0.8s							
CM01	**Chiang Mai Arr**	**7.09**	**130**	P		**Pn**	**16 35 39.4**	**+1.8**
	comp=N,0.5nmcomp=N,0.7nmcomp=N,39nmcomp=N,885nm							
	comp=N,106nm,0.8s							
CM05	**Chiang Mai Arr**	**7.09**	**131**	P		**Pn**	**16 35 39.5**	**+1.8**
	comp=N,0.5nmcomp=N,599nmcomp=N,69nm,0.8s							
CM09	**Chiang Mai Arr**	**7.09**	**130**	P		**Pn**	**16 35 39.5**	**+1.8**
	comp=N,0.4nmcomp=N,0.7nmcomp=N,42nmcomp=N,758nm							
	comp=N,108nm,0.8s							
CM04	**Chiang Mai Arr**	**7.12**	**131**	P		**Pn**	**16 35 39.0**	**+1.0**
	comp=N,0.3nmcomp=N,0.8nmcomp=N,733nmcomp=N,100nm,0.8s							
BWNR	**Bhubaneshwar**	**7.51**	**249**	*eP*		**Pn**	**16 35 43.2**	**-0.2**
BWNR				*ex*		**Sn**	**16 37 01.2**	**-7.2**
GAYA	**Gaya**	**7.55**	**284**	*eP*		**Pn**	**16 35 42.8**	**-1.2**
GAYA				*eS*		**Sn**	**16 37 05.4**	**-3.9**
EVN	**Everest**	**7.56**	**311**			**Pn**	**16 35 44.4**	**-0.2**
EVN	**Everest**	**7.56**	**311**	P		**Pn**	**16 35 44.4**	**-0.2**
STMR	**SITAMARHI**	**8.11**	**298**	*eP*		**Pn**	**16 35 52.1**	**+0.5**
STMR				*eS*		**Sn**	**16 37 17.9**	**-5.2**
PZH	**PanZhiHua**	**8.38**	**65**	P		**Pn**	**16 35 58.6**	**+3.2**
PZH				S		**Sn**	**16 37 36.4**	**+6.6**
PZH				pmax	pmax			
	comp=N,140nm,1.2s							
PZH				pmax	pmax			
	comp=N,480nm,3.5s							
PZH					L	L		
	comp=N,10μm,11.9s							
PZH					L	L		
	comp=N,5μm,12.0s							
PZH					L	L		
	comp=N,5μm,15.8s							
KMI2	**Kunming**	**8.87**	**75**	P		**Pn**	**16 36 05.5**	**+3.3**
KMI2				S		**Sn**	**16 37 38.3**	**-3.7**
KMI2				SMN				
	comp=N,53nm,1.9s							
KMI2				SME				
	comp=N,51nm,2.1s							
KMI2					L	L		
	comp=N,14μm,13.4s							
KMI2					L	L		
	comp=N,5μm,10.2s							
KMI2					L	L		
	comp=N,4μm,17.4s							
JHSG	**JHARSUGUGA**	**8.91**	**263**	*ex*		**Pn**	**16 36 06.2**	**+3.7**
JHSG				*ex*		**Sn**	**16 37 40.9**	**-1.8**
UTHA	**Uthaitani**	**9.52**	**141**	P		**Pn**	**16 36 14.0**	**+3.0**
KHLT	**Khaolaem Dam**	**9.70**	**148**	P		**Pn**	**16 36 14.3**	**+0.9**
	comp=N,3.6nmcomp=N,38nm,1.6s							
RAGD	**RAYAGADA**	**9.95**	**249**	*eP*		**Pn**	**16 36 16.8**	**-0.1**
RAGD				*eS*		**Sn**	**16 38 01.7**	**-6.8**
BLSP	**Bilaspur**	**10.31**	**266**	*eP*		**Pn**	**16 36 22.0**	**+0.1**
BLSP				*i* x		x	16 36 34.4	
BLSP				*eS*		**Sn**	**16 38 10.0**	**-7.3**
VIS	**Vishakhapatnam**	**10.78**	**242**	*eP*		**Pn**	**16 36 27.5**	**-0.8**
VIS				*eS*		**Sn**	**16 38 20.4**	**-8.3**
PBA	**Port Blair**	**11.44**	**183**			**Pn**	**16 36 37.9**	**+0.7**
PBA	**Port Blair**	**11.44**	**183**	*ex*		**Pn**	**16 36 39.5**	**+2.2**
PBA				*ex*		**Sn**	**16 38 40.0**	**-4.7**
CD2	**Chengdu**	**12.12**	**48**	*eP*		**Pn**	**16 36 46.5**	**-0.1**
CD2				S		**Sn**	**16 39 04.3**	**+2.8**
CD2					L	L		
	comp=N,14μm,15.0s							
CD2					L	L		
	comp=N,8μm,15.7s							
CD2					L	L		
	comp=N,7μm,13.5s							
GOMU	**GeErMu**	**13.08**	**5**	P		**Pn**	**16 36 59.5**	**-0.5**
GOMU				pP		P	16 37 02.5	-7.8
GOMU				sP			16 37 04.8	
GOMU				S		**Sn**	**16 39 22.6**	**-2.8**
GOMU				pmax	pmax			
	comp=N,36nm,0.8s							
GOMU					L	L		
	comp=N,5μm,12.9s							
GOMU					L	L		
	comp=N,2μm,12.2s							
NGP	**Nagpur**	**13.34**	**264**	*eP*		**Pn**	**16 37 02.6**	**-0.6**
NGP					IAmb	IAmb	16 37 10.2	
	comp=Z,57nm,0.6s							
NGP				*ex*		x	16 39 21.6	
PTH	**Pithoragarh**	**13.36**	**301**	*ex*		**Pn**	**16 36 59.8**	**-3.9**
PTH				*eS*		Sn	16 39 21.6	-11
LGTI	**Lohaghat**	**13.38**	**301**	*eP*		**Pn**	**16 37 00.9**	**-3.0**
JHNI	**Jhansi**	**13.58**	**283**	*ex*		**Pn**	**16 37 03.3**	**-3.2**
JHNI				*ex*		x	16 39 24.1	
BHPL	**Bhopal**	**14.59**	**274**	*eP*		**Pn**	**16 37 18.9**	**-1.5**
BHPL				*ex*		Sn	16 39 52.7	-9.2
GUNA	**GUNA**	**14.67**	**279**	*eP*		**Pn**	**16 37 21.2**	**-0.3**
GUNA					IAmb	IAmb	16 37 22.2	
	comp=Z,28nm,0.5s							
GUNA				*ex*		**Sn**	**16 39 60.0**	**-3.9**
HYB	**Hyderabad**	**14.95**	**250**	*eP*		**Pn**	**16 37 23.0**	**-2.2**
HYB					IAmb	IAmb	16 37 27.6	
	comp=Z,142nm,1.6s							
HYB				*ex*		x	16 40 00.7	
HYB	**Hyderabad**	**14.95**	**250**	*eP*		**Pn**	**16 37 24.2**	**-1.0**
HYB				*eS*		**Sn**	**16 40 11.7**	**+1.0**
UTK	**UTTARKASHI**	**15.23**	**303**	*eP*		**Pn**	**16 37 28.2**	**-0.9**
NDI	**New Delhi**	**15.47**	**294**	*eP*		**Pn**	**16 37 29.6**	**-2.6**
NDI				*ex*		x	16 40 10.5	
LZDM	**Lanzhou Array**	**15.64**	**33**	Pn		**Pn**	**16 37 32.8**	**-1.8**
	baz=197,slow=9.3							
LZDM					LR	LR	16 44 25.0	
	comp=Z,4μm,18.5s,baz=250,slow=41							
	comp=Z,4.1nm,0.5s							
KLP	**Kalpa**	**15.75**	**305**	*ex*		**Pn**	**16 37 32.3**	**-3.7**
KLP					IAmb	IAmb	16 37 41.9	
	comp=Z,114nm,1.1s							
LZH	**Lanzhou**	**15.82**	**33**	*eP*		**Pn**	**16 37 34.4**	**-2.3**
LZH				sP		P	16 37 41.6	+1.1
LZH				S		**Sn**	**16 40 33.1**	**+1.3**
LZH				pmax	pmax			
	comp=Z,16nm,1.7s							
LZH				pmax	pmax			
	comp=Z,630nm,4.3s							
LZH					L	L		
	comp=Z,11μm,15.2s							
LZH					L	L		
	comp=Z,7μm,17.1s							
LZH					L	L		
	comp=Z,10μm,15.9s							
MDRS	**Chennai**	**15.93**	**233**	*eP*		**Pn**	**16 37 36.8**	**-1.2**
MDRS					IAmb	IAmb	16 37 39.5	
	comp=Z,172nm,1.5s							
MDRS				*ex*		x	16 40 24.6	
QIZ	**Qiongzhong**	**15.98**	**102**	P		**Pn**	**16 37 37.3**	**-1.5**
QIZ				S		**Sn**	**16 40 36.1**	**+0.3**
QIZ					L	L		
	comp=Z,4μm,16.1s							
QIZ					L	L		
	comp=Z,2μm,18.0s							
QIZ					L	L		
	comp=Z,2μm,10.2s							
BHK	**Bhakra**	**17.12**	**302**	*ex*		**Pn**	**16 37 53.3**	**+0.1**
BHK					IAmb	IAmb	16 37 56.7	
	comp=Z,74nm,0.9s							
BHK				*ex*		x	16 40 55.5	
GTA2	**Gaotai**	**17.20**	**17**	*eP*		**Pn**	**16 37 52.8**	**-1.4**
GTA2				pP		P	16 37 57.3	+1.6
GTA2				S		**Sn**	**16 41 09.4**	**+4.1**
GTA2					L	L		
	comp=Z,7μm,13.1s							
GTA2					L	L		
	comp=Z,3μm,11.7s							
GTA2					L	L		
	comp=Z,8μm,13.4s							
AJM	**Ajmer**	**17.25**	**285**	*eP*		**Pn**	**16 37 52.3**	**-2.6**
AJM					IAmb	IAmb	16 37 58.8	
	comp=Z,40nm,0.8s							
AJM				*ex*		x	16 40 53.1	
XAN	**Xi'an**	**17.48**	**48**	P		**Pn**	**16 37 57.4**	**-0.3**
XAN				pP		pP	16 38 01.3	-2.2
XAN				sP		sP	16 38 04.6	-1.1
XAN					S	**Sn**	**16 41 13.3**	**+1.2**
XAN				pmax	pmax			
	comp=Z,12nm,1.2s							
XAN					L	L		
	comp=Z,7μm,15.8s							
XAN					L	L		
	comp=Z,3μm,14.4s							
XAN					L	L		
	comp=Z,3μm,15.8s							
DHRM	**DHARAMSHALA**	**17.55**	**305**	*ex*		**Pn**	**16 37 55.6**	**-3.1**
DHRM					IAmb	IAmb	16 37 59.1	
	comp=Z,87nm,1.0s							
TSSA	**Tissa**	**17.93**	**306**	*eP*		**Pn**	**16 38 01.4**	**-2.1**
TSSA					IAmb	IAmb	16 38 07.8	
	comp=Z,27nm,0.8s							
UDPR	**Udaipur**	**17.96**	**278**	*eP*		**Pn**	**16 38 03.5**	**-0.3**
UDPR					IAmb	IAmb	16 38 09.5	
	comp=Z,152nm,1.6s							
THN	**Thein Dam**	**18.04**	**305**	*eP*		**Pn**	**16 38 03.5**	**-1.1**
LHMI	**Lhok Sumawe**	**18.16**	**168**	P		**P**	**16 38 10.2**	**+3.9**
	comp=Z,133nm,1.2s							
LHMI	**Lhok Sumawe**	**18.16**	**168**	P		**P**	**16 38 08.0**	**+1.7**
DLV	**Lat**	**18.26**	**125**	P		**P**	**16 38 09.5**	**+1.8**
CNSH	**ChangSha**	**18.40**	**70**	P		**P**	**16 38 07.6**	**-1.4**
CNSH				S		**Sn**	**16 41 34.1**	**-0.3**
CNSH				pmax	pmax			
	comp=Z,18nm,1.6s							
CNSH					L	L		
	comp=Z,8μm,14.8s							
CNSH					L	L		
	comp=Z,2μm,14.8s							
CNSH					L	L		
	comp=Z,2μm,16.4s							
GZH2	**Guangzhou**	**18.70**	**84**	P		**Pn**	**16 38 12.6**	**-0.1**
GZH2				S		**Sn**	**16 41 42.4**	**+0.7**
GZH2				pmax	pmax			
	comp=Z,45nm,1.0s							
GZH2					L	L		
	comp=Z,3μm,8.3s							
GZH2					L	L		
	comp=Z,2μm,7.5s							
GZH2					L	L		
	comp=Z,3μm,7.8s							
JMU	**Jammu**	**18.90**	**305**	*eP*		**P**	**16 38 14.2**	**-0.2**
KULM	**Kulim**	**19.12**	**157**	P		**Pn**	**16 38 17.9**	**+0.1**
KULM	**Kulim**	**19.12**	**157**	P		**Pn**	**16 38 17.6**	**-0.2**
KULM	**Kulim**	**19.12**	**157**	P		**Pn**	**16 38 17.8**	**0.0**
KOD	**Kodaikanal**	**19.83**	**232**	*eP*		**P**	**16 38 25.0**	**0.0**
KOD					IAmb	IAmb	16 38 32.9	
	comp=Z,18nm,0.8s							
KOD				*eS*		**Sn**	**16 42 10.7**	**+1.2**
GOA	**Goa**	**19.87**	**251**	*ex*		**Pn**	**16 38 28.3**	**+1.6**
GOA					IAmb	IAmb	16 38 29.9	
	comp=Z,130nm,1.0s							
PALK	**Pallekele**	**19.89**	**219**	P		**Pn**	**16 38 27.0**	**0.0**
	comp=Z,17nm,1.0s,baz=27,slow=16,SNR=4.6							
PALK				S		S	16 41 55.5	-13
	comp=Z,3.9nm,0.6s,baz=96,slow=22,SNR=4.5							
PALK				LR		LR	16 48 44.3	
	comp=Z,979nm,18.4s,baz=41,slow=45							
	comp=Z,17nm,1.0s							
WHN	**Wuhan**	**20.17**	**64**	P		Pn	16 38 30.1	-0.1
WHN				S		Sn	16 42 18.6	+1.6
WHN				pmax	pmax			
	comp=Z,950nm,3.2s							
WHN					L	L		
	comp=Z,11μm,11.5s							
WHN					L	L		
	comp=Z,6μm,12.1s							
WHN					L	L		
	comp=Z,6μm,11.8s							
LYN	**LuoYang**	**20.25**	**52**	P		Pn	16 38 30.6	-0.5
LYN				pP		pP	16 38 34.9	+1.0
LYN				sS		Sn	16 42 18.5	-0.4
LYN				pmax	pmax			
	comp=Z,14nm,0.8s							
LYN				pmax	pmax			
	comp=Z,150nm,8.2s							
LYN					L	L		
	comp=Z,4μm,11.0s							
LYN					L	L		
	comp=Z,3μm,12.3s							
LYN					L	L		
	comp=Z,6μm,16.1s							
NIL	**Nilore**	**20.46**	**305**	P		**P**	**16 38 31.1**	**-0.5**
NIL				pmax	pmax			
	comp=Z,173nm,1.0s							
NIL	**Nilore**	**20.46**	**305**	P		**P**	**16 38 31.1**	**-0.5**
NIL	**Nilore**	**20.46**	**305**	P		**P**	**16 38 31.1**	**-0.5**
JASL	**Jaisalmer**	**20.62**	**285**	*eP*		**P**	**16 38 33.0**	**-0.2**
JASL					IAmb	IAmb	16 38 35.3	
	comp=Z,27nm,0.5s							
SNSI	**Sinabang, Aceh**	**20.82**	**171**	P		P	16 38 27.9	-7.6
WMQ	**Urumqi**	**21.13**	**349**	*eP*		**P**	**16 38 38.8**	**+0.1**
WMQ				pP		sP	16 38 44.9	-0.7
WMQ				S		**S**	**16 42 34.0**	**+0.6**
WMQ				pmax	pmax			
	comp=Z,20nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,110nm,3.7s							
WMQ					L	L		
	comp=Z,2μm,15.7s							
WMQ					L	L		
	comp=Z,1μm,23.5s							
WMQ					L	L		
	comp=Z,2μm,20.1s							
WUS	**Wushi**	**21.53**	**330**	P		**P**	**16 38 42.4**	**-0.8**
KSH2	**Kashi**	**21.95**	**321**	P		**P**	**16 38 46.8**	**-0.8**
KSH2				pP		pP	16 38 50.3	-2.0
KSH2				S		**S**	**16 42 43.4**	**-6.2**
KSH2				pmax	pmax			
	comp=Z,17nm,1.2s							
KSH2					L	L		
	comp=Z,2μm,16.1s							
KSH2					L	L		
	comp=Z,2μm,20.6s							
KSH2					L	L		
	comp=Z,4μm,18.2s							
GSI	**Gunungsitoli**	**22.11**	**169**	P		**P**	**16 38 45.7**	**-3.5**
GSI					IAmb	IAmb	16 39 06.1	
	comp=Z,62nm,0.8s							
GSI	**Gunungsitoli**	**22.11**	**169**	P		**P**	**16 38 49.4**	**+0.1**
	comp=Z,88nm,0.9s							
GSI	**Gunungsitoli**	**22.11**	**169**	P		**P**	**16 38 47.7**	**-1.6**
BTO2	**Baotou**	**22.43**	**35**	*eP*		**P**	**16 38 51.3**	**-1.5

HNS L L
comp=Z,27nm,0.9s
HNS L L
comp=Z,2µm,11.0s
HNS L L
comp=Z,2µm,13.5s
HNS L L
comp=Z,2µm,15.9s
NRN Naryn 23.29 326 P **P 16 39 01.8 -0.1**
NRN pmax pmax
comp=Z,50nm,1.2s
NRN Naryn 23.29 326 P **P 16 39 01.8 -0.1**
NRN IAmb IAmb 16 39 19.7
comp=Z,50nm,1.2s
SATY Saty 23.38 332 *e*P **P 16 39 02.5 -0.1**
SATY pmax pmax
comp=Z,25nm,0.9s
SATY Saty 23.38 332 *e*P **P 16 39 02.6 -0.1**
comp=Z,25nm,0.9s
HHC Hu-ho-hao-te 23.41 37 *e*P **P 16 39 03.6 +0.7**
HHC pP pP 16 39 08.3 +0.5
HHC sP sP 16 39 11.1 +1.2
HHC S **S 16 43 12.0 -3.7**
HHC sS pS 16 43 22.1 +1.1
HHC pmax pmax
comp=Z,15nm,0.8s
HHC L L
comp=Z,6µm,14.4s
HHC L L
comp=Z,3µm,13.6s
HHC L L
comp=Z,7µm,15.1s
MANEM Manem 23.45 313 **P 16 39 03.3 -0.2**
MANEM IAmb IAmb 16 39 11.5
comp=Z,268nm,1.0s
MYKOM Kota Tinggi 23.57 153 P **P 16 39 03.1 -1.4**
MYKOM Kota Tinggi 23.57 153 P **P 16 39 06.6 +2.1**
MYKOM Kota Tinggi 23.57 153 P **P 16 39 04.5 0.0**
KPKS Kokpek 23.59 333 *e*P **P 16 39 04.2 -0.4**
KPKS Kokpek 23.59 333 *e*P **P 16 39 04.3 -0.4**
ULHL Ulahol 23.76 327 P **P 16 39 06.8 +0.4**
SNR=17
KBL Kabul 24.02 304 P **P 16 39 08.1 -0.9**
KBL pmax pmax
comp=Z,78nm,0.9s
KBL Kabul 24.02 304 P **P 16 39 08.1 -0.9**
KBL Kabul 24.02 304 P **P 16 39 08.6 -0.4**
TNSS Tian-Shan 24.02 330 *e*P **P 16 39 08.6 -0.5**
TNSS Tian-Shan 24.02 330 *e*P **P 16 39 08.7 -0.5**
MDOK Medeo 24.07 330 *e*P **P 16 39 09.2 -0.1**
MDOK Medeo 24.07 330 *e*P **P 16 39 09.2 -0.1**
BOOM Boomskoye usch 24.09 327 IAmb IAmb 16 39 37.9
comp=Z,53nm,1.1s
AAA Alma-Ata 24.17 330 *e*P **P 16 39 10.0 -0.1**
comp=Z,55nm,1.0s
NJ2 Nanjing 24.29 63 ⇑P **P 16 39 10.8 -0.4**
NJ2 S **S 16 43 31.6 +2.0**
NJ2 SS **SnSn 16 44 20.5 +8.0**
NJ2 pmax pmax
comp=Z,64nm,1.1s
NJ2 L L
comp=Z,12µm,13.6s
NJ2 L L
comp=Z,6µm,13.9s
NJ2 L L
comp=Z,5µm,12.8s
TIA Tai'an 24.39 52 P **P 16 39 11.8 -0.3**
TIA PP sP 16 39 42.1 +23
TIA S **S 16 43 23.5 -7.7**
TIA pmax pmax
comp=Z,20nm,1.3s
TIA L L
comp=Z,4µm,18.2s
TIA L L
comp=Z,3µm,15.6s
TIA L L
comp=Z,4µm,15.1s
PPI Padang Panjang 24.46 163 P **P 16 39 14.2 +1.4**
comp=Z,20nm,0.8s
TKM2 Tokmak 2 24.58 328 P **P 16 39 14.7 +0.6**
SNR=34
UCH Uchtor 24.64 325 P **P 16 39 15.5 +0.7**
SNR=16
ARSB Arslanbob 24.87 322 IAmb IAmb 16 39 33.4
comp=Z,41nm,1.0s
AAK Ala-Archa 24.94 326 P **P 16 39 18.3 +1.1**
SNR=6.3
AAK Ala-Archa 24.94 326 *i* P **P 16 39 18.0 +0.8**
AAK pmax pmax
comp=Z,82nm,0.6s
AAK Ala-Archa 24.94 326 P **P 16 39 17.0 -0.2**
AAK IAmb IAmb 16 39 34.4
comp=Z,27nm,0.9s
AAK Ala-Archa 24.94 326 P **P 16 39 18.1 +0.9**
TDK Taldyqorghan 24.97 334 *e*P **P 16 39 17.2 0.0**
TDK Taldyqorghan 24.97 334 *e*P **P 16 39 17.3 0.0**
GAR Garm 25.14 314 P **P 16 39 18.4 -0.6**
ZSN Zaisan 25.18 346 *e*P **P 16 39 19.3 +0.2**
ZSN pmax pmax
comp=Z,16nm,1.0s
ZSN Zaisan 25.18 346 *e*P **P 16 39 19.3 +0.2**
comp=Z,16nm,1.0s
MK31 Makanchi Array 25.21 342 *i* P **P 16 39 19.0 -0.4**
MK31 pmax pmax
comp=Z,18nm,0.7s
MKAR Makanchi Array 25.21 342 P **P 16 39 18.9 -0.5**
comp=Z,29nm,0.7s,baz=156,slow=9.1,SNR=68
MKAR PcP **PcP 16 42 52.9 +0.1**
comp=Z,0.6nm,0.5s,baz=209,slow=2.2,SNR=1.8
MKAR ScP **ScP 16 46 31.6 +0.1**
comp=Z,0.6nm,0.9s,baz=180,slow=2.9,SNR=2.5
MKAR LR LR 16 51 34.1
comp=Z,977nm,21.0s,baz=162,slow=42
comp=Z,29nm,0.7s
MKAR Makanchi Array 25.21 342 P **P 16 39 18.9 -0.5**
MKAR PcP **PcP 16 42 54.5 +1.6**
MKAR ScP **ScP 16 46 32.0 +0.5**
MAKZ Makanchi 25.31 342 P **P 16 39 20.0 -0.4**
MAKZ Makanchi 25.31 342 P **P 16 39 19.5 -0.8**
MAKZ IAmb IAmb 16 39 24.8
comp=Z,24nm,0.7s
MAKZ Makanchi 25.31 342 P **P 16 39 19.5 -0.8**
EKS2 Erkin-Say 25.33 325 P **P 16 39 21.7 +1.0**
SNR=27
USP Ospenovka 25.39 327 P **P 16 39 21.5 +0.4**
SNR=22
SGDS Sogindy 25.45 327 *e*P **P 16 39 21.5 -0.2**
BJI2 Beijing 25.64 44 P **P 16 39 23.5 +0.1**
BJI2 S **S 16 43 52.9 +1.8**
BJI2 pmax pmax
comp=Z,5.0nm,0.7s
BJI2 pmax pmax
comp=Z,60nm,3.5s
BJI2 L L
comp=Z,1µm,11.8s
BJI2 L L
comp=Z,370nm,9.6s
BJI2 L L
comp=Z,820nm,17.1s
CHGR Chuyangaron 25.73 313⇓*e*P **P 16 39 23.6 -0.8**
CHGR pmax pmax
comp=Z,51nm,0.7s
DSRI Dabo 25.92 153 P **P 16 39 28.3 +2.2**
comp=Z,41nm,1.4s
SHAA Shahritus 25.93 309 P **P 16 39 25.4 -0.8**
SHAA IAmb IAmb 16 39 29.4
comp=Z,191nm,0.7s
SSE Sheshan 26.02 66 P **P 16 39 24.9 -2.0**
SSE S **S 16 43 57.6 +0.4**
SSE pmax pmax
comp=Z,3.0nm,0.5s
SSE pmax pmax
comp=Z,80nm,3.9s
SSE L L
comp=Z,3µm,16.8s
SONM Songino Array 26.77 20 P **P 16 39 33.0 -0.7**
comp=Z,4.9nm,0.7s,baz=199,slow=9.4,SNR=22
SONM ScP **ScP 16 46 34.2 -2.1**
comp=Z,0.4nm,0.7s,baz=197,slow=4.5,SNR=3.5
SONM LR LR 16 51 48.0
comp=Z,3µm,19.9s,baz=203,slow=40
comp=Z,4.9nm,0.7s
SONM Songino Array 26.77 20 P **P 16 39 33.0 -0.7**
SONM Songino Array 26.77 20 P **P 16 39 33.7 0.0**
SONM IAmb IAmb 16 39 40.6
comp=Z,31nm,1.2s
DGZ Jazzator, Alta 26.90 352⇓*e*P **P 16 39 35.7 +0.8**
DGZ pmax pmax
comp=Z,23nm,1.3s
BTLS Baital 26.91 329 *e*P **P 16 39 34.8 0.0**
BTLS Baital 26.91 329 *e*P **P 16 39 34.8 0.0**
ULN Ulaanbaatar 27.01 21 *de*P **P 16 39 35.4 -0.5**
ULN pmax pmax
comp=Z,21nm,1.6s
ULN Ulaanbaatar 27.01 21 P **P 16 39 37.1 +1.2**
ULN Ulaanbaatar 27.01 21 P **P 16 39 35.8 -0.1**
IUG Iuzhnay 27.10 320 *e*P **P 16 39 36.5 -0.3**
IUG pmax pmax
comp=Z,25nm,1.0s
IUG Iuzhnay 27.10 320 *e*P **P 16 39 36.5 -0.3**
comp=Z,25nm,1.0s
KK31 Karatay Array 27.42 322 *i* P **P 16 39 42.7 +3.2**
KKAR Karatay Array 27.42 322 P **P 16 39 38.1 -1.3**
KKAR Karatay Array 27.42 322 P **P 16 39 38.1 -1.3**
CHM Chimkent 27.46 320 *e*P **P 16 39 39.7 -0.1**
CHM pmax pmax
comp=Z,10.0nm,0.7s
CHM Chimkent 27.46 320 *e*P **P 16 39 39.7 -0.1**
comp=Z,10nm,0.7s
BRLS Boroldoy 27.76 321 *e*P **P 16 39 41.4 -1.1**
BRLS Boroldoy 27.76 321 *e*P **P 16 39 41.5 -1.1**
XLT XiLinHaoTe 27.94 37 *e*P **P 16 39 43.3 -0.9**
XLT sP pP 16 39 50.1 +0.9
XLT S **S 16 44 26.1 -1.4**
XLT pmax pmax
comp=Z,21nm,1.6s
XLT pmax pmax
comp=Z,160nm,3.8s
XLT L L
comp=Z,6µm,13.6s
XLT L L
comp=Z,9µm,14.0s
ZAK Zakamensk 28.29 14 *e*P **P 16 39 48.8 +1.5**
ZAK pmax pmax
comp=Z,26nm,1.8s
DL2 Dalian 28.77 50 P **P 16 39 51.3 -0.2**
DL2 S **S 16 44 41.9 +1.3**
DL2 pmax pmax
comp=Z,33nm,1.1s
DL2 pmax pmax
comp=Z,190nm,5.5s
DL2 L L
comp=Z,3µm,18.4s
DL2 L L
comp=Z,2µm,19.7s
DL2 L L
comp=Z,2µm,19.4s
MOY Mondy 29.09 10 *e*P **P 16 39 56.1 +1.7**
MOY pmax pmax
comp=Z,17nm,2.5s
TLY Talaya 29.59 13 LR LR 16 53 32.5
comp=Z,3µm,18.5s,baz=192,slow=40
KURBB Kurchatov Arra 29.75 341 P **P 16 39 59.3 -0.8**
comp=Z,6.5nm,0.8s,baz=159,slow=7.8,SNR=41
KURBB PcP **PcP 16 43 03.7 +0.1**
comp=Z,1.9nm,0.6s,baz=164,slow=2.3,SNR=8.7
KURBB ScP **ScP 16 46 45.1 -0.1**
comp=Z,0.6nm,0.8s,baz=165,slow=3.8,SNR=3.3
KURBB LR LR 16 54 17.6
comp=Z,1µm,18.6s,baz=174,slow=41
comp=Z,6.5nm,0.8s
KURBB Kurchatov Arra 29.75 341 P **P 16 39 58.3 -1.7**
KURK Kurchatov 29.80 341 P **P 16 39 59.3 -1.2**
KURK 16 43 03.7
KURK Kurchatov 29.80 341 P **P 16 39 58.5 -2.0**
KURK Kurchatov 29.80 341 P **P 16 39 59.5 -1.1**
IRK Irkutsk 30.25 13 *e*P **P 16 40 04.2 -0.3**
IRK pmax pmax
comp=Z,33nm,1.6s
SNY Shenyang 31.39 46 ⇑P **P 16 40 14.4 -0.2**
SNY S **S 16 45 18.6 -2.9**
SNY pmax pmax
comp=Z,6.0nm,0.9s
SNY pmax pmax
comp=Z,44nm,4.7s
SNY L L
comp=Z,1µm,16.7s
SNY L L
comp=Z,1µm,18.7s
SNY L L
comp=Z,2µm,15.1s
ZAA0 Zalesovo Array 31.42 350 IAmb IAmb 16 40 28.8
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 31.42 350 P **P 16 40 13.9 -0.9**
comp=Z,11nm,0.7s,baz=167,slow=8.5,SNR=24
ZALV PcP **PcP 16 43 07.0 -0.9**
comp=Z,0.5nm,0.3s,baz=190,slow=4.4,SNR=2.5
ZALV LR LR 16 54 39.3
comp=Z,731nm,20.4s,baz=158,slow=40
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 31.42 350 P **P 16 40 13.5 -1.3**
WSAR Wadi Sarin 31.81 277 LR LR 16 53 35.8
comp=Z,5.8nm,20.1s,baz=107,slow=37
JOW Kunigami 31.86 76 LR LR 16 55 40.8
comp=Z,1µm,19.9s,baz=250,slow=41
KSRS Korea Array 32.93 56 P **P 16 40 25.6 -2.7**
comp=Z,0.8nm,0.6s,baz=237,slow=8.7,SNR=5.4
KSRS LR LR 16 55 12.1
comp=Z,1µm,18.3s,baz=255,slow=39
comp=Z,0.8nm,0.6s
CN2 Changchun 33.51 44 P **P 16 40 36.8 +3.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 L L
comp=Z,2µm,14.0s
CN2 L L
comp=Z,1µm,14.0s
CN2 L L
comp=Z,1µm,15.0s
HILR Hailar Array B 33.57 32 P **P 16 40 32.1 -1.7**
comp=Z,10nm,0.5s,baz=223,slow=9.4,SNR=16
HILR LR LR 16 55 53.4
comp=Z,3µm,20.3s,baz=95,slow=40
comp=Z,10nm,0.5s
JNU Nakatsue 34.45 65 LR LR 16 55 19.6
comp=Z,731nm,19.0s,baz=257,slow=38
BVAR Borovoye Array 34.55 336 P **P 16 40 41.5 -0.6**
comp=Z,5.1nm,0.7s,baz=142,slow=9.4,SNR=15
BVAR PcP **PcP 16 43 17.9 +1.2**
comp=Z,2.7nm,0.6s,baz=140,slow=3.3,SNR=5.5
comp=Z,5.1nm,0.7s
BORK Borovoye 34.59 335 P **P 16 40 41.4 -1.1**
BORK pmax pmax
comp=Z,7.0nm,0.8s
BORK Borovoye 34.59 335 P **P 16 40 41.4 -1.1**
DAV Davao City (W) 34.91 112 LR LR 16 57 10.4
comp=Z,538nm,19.4s,baz=282,slow=40
BNX BinXian 35.65 42 ⇓P **P 16 40 50.8 -0.9**
BNX PP **PnPn 16 42 10.1 -1.1**
BNX S **S 16 46 28.5 +1.0**
BNX pmax pmax
comp=Z,21nm,1.1s
BNX pmax pmax
comp=Z,120nm,4.6s
BNX L L
comp=Z,2µm,14.4s
BNX L L
comp=Z,1µm,13.3s
BNX L L
comp=Z,2µm,13.0s
GTOI Gorontalo 36.52 124 P **P 16 41 03.2 +3.7**
comp=Z,19nm,0.7s
MDJ Mudanjiang 36.55 45 P **P 16 40 59.4 -0.1**
MDJ S **S 16 46 41.8 +0.4**
MDJ pmax pmax
comp=Z,6.0nm,1.1s
MDJ L L
comp=Z,1µm,12.9s
MDJ L L
comp=Z,680nm,13.5s
MDJ L L
comp=Z,900nm,13.4s
AB31 Akbulak array 36.96 323 *i* P **P 16 41 02.5 -0.4**
AB31 Akbulak array 36.96 323 P **P 16 41 02.8 -0.1**
LUWI Luwuk 37.43 126 P **P 16 41 10.5 +3.2**
comp=Z,59nm,1.1s
LUWI Luwuk 37.43 126 P **P 16 41 08.6 +1.4**
VLA Vladivostok 37.54 49 *de*P **P 16 41 08.0 +0.1**
VLA pmax pmax
comp=Z,25nm,1.1s
BOD Bodaibo 37.73 18 *e*P **P 16 41 10.2 +0.9**
BOD pmax pmax
comp=Z,43nm,1.5s
HEH HeiHe 37.93 36 *e*P **P 16 41 09.6 -1.5**
HEH pP **pP 16 41 12.8 -3.4**
HEH S **S 16 47 03.6 +1.4**
HEH SS **SnSn 16 49 37.3 -6.5**
HEH pmax pmax
comp=Z,51nm,1.0s
HEH L L
comp=Z,4µm,14.1s
HEH L L
comp=Z,5µm,14.9s
HEH L L
comp=Z,9µm,14.8s
USA0B Ussuriysk Arra 37.98 47 *de*P **P 16 41 10.3 -1.3**
USA0B Ussuriysk Arra 37.98 47 P **P 16 41 09.9 -1.7**
USRK Ussuriysk Ar. 37.98 47 P **P 16 41 09.2 -2.4**
comp=Z,6.1nm,0.8s,baz=249,slow=9.3,SNR=16
USRK LR LR 16 59 25.9
comp=Z,701nm,20.6s,baz=257,slow=41
comp=Z,6.1nm,0.8s
USRK Ussuriysk Ar. 37.98 47 P **P 16 41 09.5 -2.1**
USRK Ussuriysk Ar. 37.98 47 P **P 16 41 09.5 -2.1**
KAPI Kappang 38.10 134 LR LR 16 58 57.5
comp=Z,478nm,19.4s,baz=262,slow=40
AKTO Aktyubinsk 38.65 324 LR LR 16 59 23.2
comp=Z,1µm,19.6s,baz=176,slow=40
AKTO Aktyubinsk 38.65 324 P **P 16 41 16.1 -1.0**
ZEA Zeya 39.84 31 *e*P **P 16 41 28.8 +1.8**
ZEA MLR MLR
comp=Z,500nm,17.0s
MAJO Matsushiro 40.84 60⇓*e*P **P 16 41 34.5 -1.1**
MAJO pmax pmax
comp=Z,57nm,2.8s
MAJO Matsushiro 40.84 60 P **P 16 41 34.3 -1.3**
MJAR Matsushiro Arr 40.84 60 P **P 16 41 33.3 -2.3**
comp=Z,5.7nm,0.8s,baz=272,slow=9.6,SNR=22
MJAR PcP **PcP 16 43 37.3 +0.9**
comp=Z,2.1nm,0.7s,baz=224,slow=1.2,SNR=6.3
MJAR LR LR 16 59 04.1
comp=Z,690nm,19.5s,baz=262,slow=37
comp=Z,5.7nm,0.8s
MJAR Matsushiro Arr 40.84 60 PcP **PcP 16 43 36.8 +0.4**
SVE Sverdlovsk 41.19 333 *e*P **P 16 41 38.2 0.0**
SVE pmax pmax
comp=Z,38nm,1.1s
ARTI Arti 41.87 332 LR LR 17 02 20.4
comp=Z,930nm,18.9s,baz=130,slow=41
ARTI Arti 41.87 332 *d i* P **P 16 41 43.2 -0.6**
ARTI 16 43 46.6
ARTI S **S 16 48 02.4 +1.3**
ARTI SS **SS 16 51 08.0 +0.6**
ARTI pmax pmax
comp=Z,21nm,1.4s
ARTI MLR MLR
comp=Z,690nm,16.0s
ARTI Arti 41.87 332 **P 16 41 42.8 -1.0**
ARTI IAmb IAmb 16 41 46.8
comp=Z,20nm,0.4s
JHJ Hachijo jima 2 41.90 66 LR LR 17 00 27.1
comp=Z,852nm,18.2s,baz=116,slow=38
MAK Makhachkala 42.56 309 *e*P **P 16 41 48.7 -0.8**
MAK *e* 16 43 24.5
MAK *e*S **S 16 48 12.0 +0.5**
MAK *e*SSS SSS 16 51 52.3
MAK pmax pmax
comp=Z,163nm,1.4s
MAK MLR MLR
comp=Z,1µm,19.0s
GRNR Gornyy 43.24 39⇓*i* P **P 16 41 54.2 -0.8**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,590nm,11.0s
GRNR MLR MLR
comp=N,480nm,13.0s
GRNR MLR MLR
comp=Z,1µm,12.0s
RAYN Ar Rayn 43.71 280 P **P 16 42 00.3 +1.1**
RAYN pmax pmax
comp=Z,8.0nm,0.8s
RAYN Ar Rayn 43.71 280 P **P 16 42 00.3 +1.1**
RAYN Ar Rayn 43.71 280 P **P 16 42 02.2 +3.0**
GNI Garni 44.10 304 P **P 16 42 00.3 -2.0**
JCJ Chichijima 44.23 74 LR LR 16 59 28.3
comp=Z,372nm,21.8s,baz=314,slow=35
SOEI Soe 44.59 134 P **P 16 42 04.7 -1.7**
SOEI Soe 44.59 134 P **P 16 42 09.5 +3.1**
SOEI Soe 44.59 134 P **P 16 42 05.3 -1.1**
HAKT HAKKARI 44.64 301 P **P 16 42 09.6 +2.9**
ASAJ Asahikawa 45.30 50 LR LR 17 02 22.3
comp=Z,470nm,21.3s,baz=264,slow=38
BELG Belogornoye 45.33 322 LR LR 17 03 39.2
comp=Z,1µm,21.0s,baz=105,slow=39
BELG Belogornoye 45.33 322 *de*P **P 16 42 11.0 -0.6**
BELG pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 46.00 309 P **P 16 42 18.0 +0.9**
comp=Z,2.2nm,0.7s,baz=120,slow=7.4,SNR=7.3
comp=Z,2.2nm,0.7s
KBZ Khabaz 46.00 309 P **P 16 42 18.0 +0.9**
YSS Yuzhno-Sakhali 46.01 46 *e*P **P 16 42 16.1 -1.1**
YSS *e*S **S 16 49 00.1 -1.6**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=N,800nm,15.0s
YSS MLR MLR
comp=Z,1µm,15.0s
YSS MLR MLR
comp=E,2µm,14.0s
YSS Yuzhno-Sakhali 46.01 46 P **P 16 42 15.4 -1.8**
YSS IAmb IAmb 16 42 21.7
comp=Z,32nm,1.1s
YSS Yuzhno-Sakhali 46.01 46 P **P 16 42 20.0 +2.8**
YAK Yakutsk 46.06 23 LR LR 17 03 25.7
comp=Z,2µm,19.8s,baz=223,slow=39
YAK Yakutsk 46.06 23 *e*P **P 16 42 16.7 -0.5**
YAK *e* 16 43 53.7
YAK *e* 16 44 03.6
YAK *e*PPP PPP 16 44 43.8
YAK *e*S **S 16 49 02.0 +0.1**
YAK *e**SS **sS 16 49 12.6 +2.2**
YAK *e* 16 52 10.2
YAK *e*SSS SSS 16 53 17.8
YAK pmax pmax
comp=Z,19nm,1.4s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,12nm,1.2s
YAK pmax pmax
comp=Z,105nm,4.0s
YAK pmax pmax
comp=N,73nm,4.3s
YAK pmax pmax
comp=E,40nm,2.4s
YAK smax smax
comp=N,63nm,3.1s
YAK smax smax
comp=E,53nm,3.4s
YAK MLR MLR
comp=N,500nm,15.0s
YAK MLR MLR
comp=Z,867nm,16.0s
YAK MLR MLR
comp=E,1µm,26.0s
YAK Yakutsk 46.06 23 P **P 16 42 15.8 -1.4**
SHA1 Shidzhatmaz 46.18 309⇑*e*P **P 16 42 17.3 -1.5**
KIV Kislovodsk 46.19 309 *e*P **P 16 42 17.4 -1.4**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,395nm,17.0s
KIV Kislovodsk 46.19 309 P **P 16 42 18.3 -0.4**
KIV Kislovodsk 46.19 309 P **P 16 42 18.4 -0.4**
comp=Z,17nm,1.1s
NRIK Noril'sk 46.34 357 P **P 16 42 18.7 -0.7**
comp=Z,8.4nm,0.8s,baz=155,slow=7.3,SNR=11
NRIK LR LR 17 03 48.1
comp=Z,745nm,18.7s,baz=182,slow=39
comp=Z,8.4nm,0.8s
NRIK Noril'sk 46.34 357 P **P 16 42 19.4 0.0**
NRIK pmax pmax
comp=Z,13nm,0.8s
NRIK Noril'sk 46.34 357 P **P 16 42 19.4 0.0**
NRIK IAmb IAmb 16 42 27.8
comp=Z,13nm,0.8s

TYV **Tymovskoe** 46.99 41 *e*P **P** **16 42 25.8 +1.1**
TYV *e*S **S** **16 49 19.6 +4.0**
TYV pmax pmax
comp=Z,13nm,1.5s
TYV pmax pmax
comp=Z,300nm,4.2s
TYV smax smax
comp=N,200nm,9.0s
TYV smax smax
comp=E,300nm,9.0s
TYV MLR MLR
comp=Z,1μm,15.0s
KIRV Kirov 47.12 330 LR LR 17 05 20.8
comp=Z,897nm,18.7s,baz=132,slow=40
KIRV Kirov 47.12 330 *ce*P **P** **16 42 24.7 -0.9**
LABN Labinsk 47.69 310 *e*P **P** **16 42 28.0 -2.4**
LABN pmax pmax
comp=E,31nm,0.7s
LABN MLR MLR
comp=E,1μm,18.0s
LABN MLR MLR
comp=Z,771nm,17.0s
ERBR Yeremizino-Bor 48.03 311 *e*P **P** **16 42 34.5 +1.5**
ERBR pmax pmax
comp=Z,11nm,0.6s
ERBR MLR MLR
comp=Z,586nm,21.0s
SOC Sochi 48.27 308 *e*P **P** **16 42 35.8 +1.0**
SOC *e* 16 44 27.4
SOC *e*PPP PPP 16 45 19.0
SOC *e*S **S** **16 49 36.9 +2.9**
SOC *e*SS **SS** **16 53 02.4 -0.9**
SOC *e*SSS SSS 16 54 09.4
SOC pmax pmax
comp=Z,12nm,0.8s
SOC MLR MLR
comp=Z,255nm,17.0s
KELT Kelkit 48.29 304 P **P** **16 42 37.7 +2.4**
VRH Novokhopyorsk 48.41 319 P **P** **16 42 34.2 -1.6**
VRH pmax pmax
comp=Z,29nm,1.0s
ARPR Arpgir-MALATY 48.95 302 P **P** **16 42 43.8 +3.5**
ATD Arta Tunnel 49.29 265 LR LR 17 03 40.8
comp=Z,15nm,19.1s,baz=106,slow=36
GUMO Guam 49.65 92 LR LR 17 04 48.6
comp=Z,178nm,18.8s,baz=282,slow=38
VORD Divnogorie 49.84 318 *e*P **P** **16 42 43.5 -3.2**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 49.98 318 P **P** **16 42 46.7 -1.1**
VSR pmax pmax
comp=Z,24nm,1.6s
ANN Anapa 50.04 310 *e*P **P** **16 42 49.2 +0.9**
ANN pmax pmax
comp=Z,39nm,0.9s
ANN MLR MLR
comp=E,598nm,18.0s
ANN MLR MLR
comp=N,383nm,16.0s
ANN MLR MLR
comp=Z,406nm,16.0s
VORR Voronezh 50.05 319 P **P** **16 42 47.4 -0.9**
VORR pmax pmax
comp=Z,28nm,0.9s
ASF Jabal al Asfar 50.27 293 LR LR 17 08 07.2
comp=Z,401nm,18.3s,baz=205,slow=41
LPSR Galich'ya Gora 50.44 320 P **P** **16 42 50.5 -0.8**
LPSR pmax pmax
comp=Z,28nm,0.9s
MBWA Marble Bar 51.02 148 P **P** **16 42 55.3 -0.6**
comp=Z,26nm,0.8s
MBWA Marble Bar 51.02 148 P **P** **16 42 55.7 -0.2**
MBWA IAmb IAmb 16 42 57.9
comp=Z,18nm,0.7s
MMAI Mount Meron Ar 51.46 295 LR LR 17 07 46.3
comp=Z,530nm,20.9s,baz=86,slow=40
FITZ Fitzroy Crossi 51.76 140 P **P** **16 43 00.2 -1.3**
comp=Z,2.8nm,1.3s
FITZ Fitzroy Crossi 51.76 140 LR LR 17 08 41.3
comp=Z,600nm,19.5s,baz=274,slow=40
FITZ Fitzroy Crossi 51.76 140 P **P** **16 43 00.7 -0.9**
KNRA Kununurra 51.89 135 P **P** **16 43 00.9 -1.6**
comp=Z,20nm,1.2s
KNRA Kununurra 51.89 135 P **P** **16 43 01.4 -1.2**
KNRA IAmb IAmb 16 43 05.7
comp=Z,14nm,0.8s
MOS Moscow 51.98 324 *e*P **P** **16 43 05.8 +3.0**
MOS *e* 16 44 11.6
MOS *e* 16 45 04.8
MOS *e*S **S** **16 50 31.3 +6.0**
EIL Elat 52.19 290 LR LR 17 09 21.9
comp=Z,412nm,18.0s,baz=90,slow=41
BZK Bozkurt 52.34 306 ⇑P **P** **16 43 06.4 +0.8**
GENI Genyem 52.34 113 P **P** **16 43 09.3 +3.3**
KIRS Kirsehir-Merke 52.38 302 ⇑P **P** **16 43 06.9 +0.7**
SIM Simferopol' 52.40 310 *e*P P 16 43 11.2 +5.1
SIM *e* 17 43 14.5
SIM pmax pmax
comp=Z,14nm,0.8s
SIM MLR MLR
comp=Z,260nm,17.0s
SIM pmax pmax
comp=Z,280nm,17.0s
SIM pmax pmax
comp=Z,59nm,0.8s
OBN Obninsk 52.41 323 LR LR 17 09 08.2
comp=Z,505nm,19.0s,baz=80,slow=40
OBN Obninsk 52.41 323 *ce*P **P** **16 43 08.1 +2.2**
OBN *e*S **S** **16 50 36.0 +4.8**
OBN pmax pmax
comp=Z,33nm,1.3s
OBN MLR MLR
comp=Z,461nm,19.0s
OBN Obninsk 52.41 323 P **P** **16 43 06.4 +0.5**
comp=Z,25nm,0.6s
TIXI Tiksi 52.57 13 LR LR 17 08 50.3
comp=Z,674nm,19.2s,baz=235,slow=40
TIXI Tiksi 52.57 13 *ce*P **P** **16 43 08.2 +1.3**
TIXI pmax pmax
comp=Z,56nm,1.3s
BR104 Keskin Array S 52.59 303 P **P** **16 43 07.8 0.0**
comp=Z,4.6nm,1.0s
BR131 Keskin Array S 52.59 303 ⇑ *e*P **P** **16 43 06.4 -1.4**
BRTR Keskin Array B 52.59 303 P **P** **16 43 06.5 -1.3**
comp=Z,1.3nm,0.8s,baz=98,slow=9.1,SNR=7.9
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 52.59 303 P **P** **16 43 07.8 0.0**
BRTR Keskin Array B 52.59 303 P **P** **16 43 07.8 0.0**
BR106 Keskin Array S 52.61 303 P **P** **16 43 08.9 +1.0**
comp=Z,2.9nm,1.3s
BR105 Keskin Array S 52.61 303 P **P** **16 43 08.5 +0.6**
comp=Z,49nmcomp=Z,4.0nm,1.1s
KLMR Klimovskoe 52.62 330 *e*P **P** **16 43 06.0 -1.4**
KLMR pmax pmax
comp=Z,27nm,1.4s
KLMR MLR MLR
comp=Z,501nm,16.0s
JAY Jayapura 52.76 112 P P 16 43 19.6 +10
MA2 Magadan 53.97 32 LR LR 17 08 37.3
comp=Z,2μm,20.3s,baz=248,slow=39
NE56 Odesa 54.75 312 P **P** **16 43 23.8 +0.5**
MEEK Meekatharra 55.22 152 P **P** **16 43 28.1 +1.2**
comp=Z,46nm,1.0s
ELL Elmali 55.66 300 P **P** **16 43 29.3 -0.9**
ELL pmax pmax
comp=Z,48nm,1.2s
ELL Elmali 55.66 300 P **P** **16 43 29.3 -0.9**
SEY Seymchan 55.68 28 LR LR 17 10 38.9
comp=Z,866nm,19.0s,baz=252,slow=40
SEY Seymchan 55.68 28 *ce*P **P** **16 43 27.9 -1.8**
SEY pmax pmax
comp=Z,15nm,1.3s
YLV Yalova 55.84 304 P **P** **16 43 32.6 +1.2**
comp=Z,15nm,1.3s
AKASG Malin Array Be 56.11 316 P **P** **16 43 31.4 -1.6**
comp=Z,1.2nm,0.4s,baz=79,slow=6.2,SNR=7.2
AKASG PP **PP** **16 45 37.3 -0.6**
comp=Z,0.9nm,0.5s,baz=84,slow=8.7,SNR=2.5
AKASG LR LR 17 11 26.7
comp=Z,440nm,21.6s,baz=78,slow=40
comp=Z,1.2nm,0.4s
AKASG Malin Array Be 56.11 316 *i* P **P** **16 43 35.0 +2.0**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 56.11 316 *de*P **P** **16 43 33.6 +0.6**
AKBB Malin Array Si 56.11 316 P **P** **16 43 32.6 -0.4**
AKBB IAmb IAmb 16 43 38.4
comp=Z,9.5nm,0.8s
AKBB Malin Array Si 56.11 316 P **P** **16 43 31.8 -1.2**
KIEV Kiev 56.12 316 ⇑P **P** **16 43 32.7 -0.3**
KIEV Kiev 56.12 316 P **P** **16 43 32.7 -0.3**
KIEV Kiev 56.12 316 P **P** **16 43 32.3 -0.7**
TPGR Topolog 56.44 309 ⇑P **P** **16 43 35.2 -0.3**
TIRR Tirgusor 56.45 309 ⇓P **P** **16 43 36.2 +0.7**
TIRR Tirgusor 56.45 309 P **P** **16 43 36.2 +0.7**
PEA0B Petropavlovsk- 56.53 41 *ce*P **P** **16 43 36.5 +0.5**
PETK Petropavlovsk- 56.53 41 P **P** **16 43 33.5 -2.5**
comp=Z,4.5nm,1.0s,baz=275,slow=3.6,SNR=7.1
PETK LR LR 17 11 07.8
comp=Z,851nm,18.3s,baz=259,slow=40
comp=Z,4.5nm,1.0s
SORM Soroca 56.54 313 ⇑P **P** **16 43 36.1 -0.1**
SORM Soroca 56.54 313 P **P** **16 43 36.0 -0.1**
SORM Soroca 56.54 313 P **P** **16 43 34.7 -1.4**
comp=Z,446nmcomp=Z,11nm,1.3s
CFR Carcaliu 56.64 310 ⇑P **P** **16 43 38.0 +1.1**
CFR Carcaliu 56.64 310 P **P** **16 43 38.0 +1.1**
LUBAR Lubar, Ukraine 57.00 315 P **P** **16 43 38.3 -1.1**
PET Petropavlovsk 57.10 41 ⇑ *e*P **P** **16 43 37.8 -2.2**
PET pmax pmax
comp=Z,5.0nm,0.9s
PET Petropavlovsk 57.10 41 P **P** **16 43 39.2 -0.8**
comp=Z,11nm,1.8s
MI28 Mi28,Pidlybu 57.11 317 P **P** **16 43 37.1 -3.0**
LVZ Lovozero 57.11 337 ⇑ *e*P **P** **16 43 41.7 +1.8**
LVZ pmax pmax
comp=Z,28nm,1.3s
MNK Minsk 57.26 321 *i* P **P** **16 43 42.4 +1.3**
comp=E,13nm,0.8s
MNK *i* P **P** **16 43 42.4 +1.3**
comp=N,19nm,0.9s
MNK *i* P **P** **16 43 42.4 +1.3**
comp=Z,21nm,0.8s,baz=95
MNK *i* PcP **PcP** **16 44 34.1 -1.2**
MNK *i* PP **PP** **16 45 47.7 -0.4**
MNK *i* PPP PPP 16 47 04.2
MNK *i* S **S** **16 51 37.7 +1.3**
MNK *i* SS **SS** **16 55 28.6 +3.3**
MNK *i* SSS SSS 16 57 53.6
MNK *i* LQ LQ 17 03 47.3
MNK *i* LR LR 17 07 26.1
MNK *i* LRM MLR 17 10 59.4
comp=E,430nm,16.7s
MNK Minsk 57.26 321 *i* P **P** **16 43 42.3 +1.3**
MNK *i* 16 44 34.0
MNK *i* 16 45 47.6
MNK *i* PPP PPP 16 47 04.1
MNK *i* S **S** **16 51 37.7 +1.3**
MNK *i* SS **SS** **16 55 28.6 +3.3**
MNK pmax pmax
comp=Z,21nm,0.8s
MNK pmax pmax
comp=N,19nm,0.9s
MNK pmax pmax
comp=E,13nm,0.8s
MNK MLR MLR
comp=E,430nm,17.0s
MNK MLR MLR
comp=N,532nm,17.0s
MNK MLR MLR
comp=Z,699nm,16.0s
PETR Petresti 57.28 310 ⇓P **P** **16 43 37.4 -4.0**
APA Apatity 57.44 337 ⇓ *e*P **P** **16 43 40.5 -1.7**
APA *e* 16 45 50.6
APA *e*S **S** **16 51 35.4 -3.1**
APA *e* 16 53 28.2
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,465nm,20.1s
VRI Vrincioaia 57.63 311 ⇓P **P** **16 43 43.7 -0.3**
VRI Vrincioaia 57.63 311 P **P** **16 43 43.6 -0.3**
VRI Vrincioaia 57.63 311 P **P** **16 43 43.6 -0.3**
comp=Z,31nm,1.2s
TESR Tescani 57.67 311 P **P** **16 43 43.6 -0.6**
comp=Z,15nm,1.2s
PLOR Plostina 57.68 311 ⇑P **P** **16 43 44.9 +0.5**
PLOR Plostina 57.68 311 P **P** **16 43 44.8 +0.5**
ISR Istrita 57.77 310 ⇑P **P** **16 43 45.9 +0.9**
ISR Istrita 57.77 310 P **P** **16 43 45.9 +0.9**
ISR Istrita 57.77 310 P **P** **16 43 45.4 +0.4**
comp=Z,19nm,1.2s
KMPD K-Podol'skiy 57.81 314 P **P** **16 43 43.6 -1.5**
ONER Baraj Valea Uz 57.85 311 ⇑P **P** **16 43 45.4 -0.1**
NACGM Naroch 57.93 321 *e*P **P** **16 43 45.5 -0.3**
comp=Z,31nm,0.8s,baz=95
COVR Voineasa-Covas 57.99 311 ⇓P **P** **16 43 46.9 +0.4**
BIZ Bicaz 58.05 312 ⇑P **P** **16 43 46.6 -0.3**
TURR Turia 58.12 311 ⇑P **P** **16 43 48.6 +1.2**
MLR Muntele Rosu 58.18 310 ⇑P **P** **16 43 48.9 +0.9**
MLR Muntele Rosu 58.18 310 P **P** **16 43 48.9 +0.9**
MLR Muntele Rosu 58.18 310 P **P** **16 43 48.1 +0.1**
comp=Z,287nmcomp=Z,25nm,0.9s
RNPP5 Staryi Chortor 58.24 317 P **P** **16 43 48.3 +0.2**
RNPP9 Sopachiv 58.25 317 P **P** **16 43 47.0 -1.1**
RNPP8 Varash 58.27 317 P **P** **16 43 48.1 -0.2**
WRA Warramunga Arr 58.63 134 P **P** **16 43 49.9 -1.3**
comp=Z,12nm,0.5s,baz=321,slow=7.5,SNR=203
WRA PcP **PcP** **16 44 43.0 +1.8**
comp=Z,0.9nm,0.4s,baz=332,slow=3.6,SNR=1.6
WRA ScP **ScP** **16 48 40.9 -0.4**
comp=Z,0.3nm,0.6s,baz=327,slow=4.0,SNR=1.6
comp=Z,12nm,0.5s
WRA Warramunga Arr 58.63 134 *i* P **P** **16 43 49.9 -1.3**
WRA pmax pmax
comp=Z,14nm,0.5s
WRA Warramunga Arr 58.63 134 **P** **16 43 49.4 -1.8**
WRAB Tennant Creek 58.63 134 P **P** **16 43 50.5 -0.7**
WRAB pmax pmax
comp=Z,12nm,0.7s
WRAB Tennant Creek 58.63 134 P **P** **16 43 50.5 -0.7**
WRAB IAmb IAmb 16 43 53.2
comp=Z,12nm,0.7s
BURAR Bucovina Array 58.64 313 ⇑P **P** **16 43 51.5 +0.3**
BURAR Bucovina Array 58.64 313 P **P** **16 43 51.4 +0.3**
BURAR Bucovina Array 58.64 313 P **P** **16 43 50.4 -0.7**
BUR08 Bucovina Ar. S 58.65 313 P **P** **16 43 51.8 +0.6**
WRKA Warakurna 58.71 142 P **P** **16 43 50.4 -1.3**
comp=Z,24nm,0.6s
WR8 Warramunga Arr 58.75 134 P **P** **16 43 50.8 -1.2**
VOIR 58.81 310 ⇑P **P** **16 43 52.3 -0.1**
VOIR 58.81 310 P **P** **16 43 52.2 -0.1**
MUN Mundaring 59.03 157 P **P** **16 43 53.7 -0.1**
comp=Z,59nm,0.7s
FINES FINESS Array B 59.07 329 P **P** **16 43 52.6 -1.0**
comp=Z,3.3nm,0.8s,baz=101,slow=9.9,SNR=12
FINES LR LR 17 11 40.8
comp=Z,652nm,19.7s,baz=104,slow=38
comp=Z,3.3nm,0.8s
FINES FINESS Array B 59.07 329 *i* P **P** **16 43 54.9 +1.3**
FINES pmax pmax
comp=Z,4.0nm,0.8s
KLBR Kellerberrin 59.25 156 P **P** **16 43 52.3 -3.0**
comp=Z,50nm,0.7s
LODK Lodwar 59.26 260 P **P** **16 43 54.8 -1.1**
VADS Vadso 59.63 339 *e*P **P** **16 43 59.2 +1.8**
VADS IAmb IAmb 16 44 00.2
comp=Z,20nm,0.8s
VADS IAMs_20 IAMs_20 17 13 22.2
comp=Z,551nm,19.5s
IDI Anoyia 59.87 298 LR LR 17 16 12.4
comp=Z,220nm,19.9s,baz=114,slow=42
SUW Suwalki 59.98 320 P **P** **16 44 00.8 +0.7**
SUW Suwalki 59.98 320 P **P** **16 44 00.8 +0.7**
MARR Marisel-Cluj 60.10 312 ⇑P **P** **16 44 01.3 +0.1**
DRGR 60.38 312 ⇑P **P** **16 44 03.1 0.0**
DRGR 60.38 312 P **P** **16 44 03.0 0.0**
KOLS Kolonicke sedl 60.58 314 *e*P **P** **16 44 06.2 +1.9**
KOLS Kolonicke sedl 60.58 314 *e*P **P** **16 44 06.2 +1.9**
ARA0 ARCESS Array S 60.77 338 *e*P **P** **16 44 04.8 -0.5**
ARA0 IAMs_20 IAMs_20 17 14 15.4
comp=Z,604nm,16.1s
ARCES ARCESS Array B 60.77 338 P **P** **16 44 04.5 -0.8**
comp=Z,3.0nm,0.6s,baz=99,slow=7.9,SNR=15
ARCES LR LR 17 13 29.4
comp=Z,467nm,19.2s,baz=102,slow=39
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 60.77 338 P **P** **16 44 04.0 -1.3**
ARCES IAmb IAmb 16 44 11.4
comp=Z,24nm,1.6s
AS15 Alice Springs 60.99 137 P **P** **16 44 06.7 -0.7**
comp=Z,25nm,0.6s
AS31 Alice Springs 61.01 137 P **P** **16 44 06.8 -0.8**
comp=Z,10nm,0.6s
AS31 Alice Springs 61.01 137 P **P** **16 44 06.2 -1.4**
AS31 IAmb IAmb 16 44 10.1
comp=Z,7.0nm,0.5s
ASAR Alice Springs 61.01 137 P **P** **16 44 06.6 -0.9**
comp=Z,16nm,0.5s,baz=317,slow=6.8,SNR=408
ASAR PKP2bc **P'P'bc** **17 13 31.6 +1.3**
comp=Z,0.5nm,0.8s,baz=131,slow=3.8,SNR=6.2
ASAR LR LR 17 13 53.8
comp=Z,414nm,19.8s,baz=268,slow=39
comp=Z,16nm,0.5s
ASAR Alice Springs 61.01 137 P **P** **16 44 06.8 -0.8**
ASAR Alice Springs 61.01 137 P **P** **16 44 06.8 -0.8**
AS09 Alice Springs 61.06 137 P **P** **16 44 07.2 -0.7**
comp=Z,32nm,1.0s
AS17 Alice Springs 61.06 137 P **P** **16 44 07.4 -0.5**
comp=Z,27nm,0.6s
SIRR Siria 61.13 311 ⇑P **P** **16 44 08.7 +0.5**
OPO Ambohidratompo 61.20 231 LR LR 17 10 59.6
comp=Z,193nm,18.2s,baz=116,slow=36
BZS Buzias 61.21 311 ⇑P **P** **16 44 09.3 +0.7**
BZS Buzias 61.21 311 P **P** **16 44 09.3 +0.7**
MDVR Moldovita 61.21 310 ⇑P **P** **16 44 08.7 -0.1**
KTK1 Kautokeino 61.46 337 *e*P **P** **16 44 09.0 -1.0**
KTK1 IAmb IAmb 16 44 12.5
comp=Z,8.9nm,0.8s
KTK1 IAMs_20 IAMs_20 17 10 14.0
comp=Z,1571μm,99.9s
NIE Niedzica 61.85 315 *e*P **P** **16 44 14.5 +1.6**
OJC Ojcow 62.12 316 *e*P **P** **16 44 11.4 -3.4**
BILL Bilibino 62.39 24 *ce*P **P** **16 44 15.3 -0.9**
BILL pmax pmax
comp=Z,8.0nm,0.8s
BILL Bilibino 62.39 24 P **P** **16 44 16.0 -0.2**
BILL IAmb IAmb 16 44 18.4
comp=Z,13nm,0.8s
LANS Liptovska Anna 62.41 315 *e*P **P** **16 44 19.7 +3.0**
LANS Liptovska Anna 62.41 315 *e*P **P** **16 44 19.7 +3.0**
JETT Jettan, Norway 62.54 338 *e*P **P** **16 44 16.6 -0.6**
JETT IAmb IAmb 16 44 22.8
comp=Z,72nm,1.6s
QIS Mount Isa 62.66 130 P **P** **16 44 18.5 -0.2**
comp=Z,10nm,0.7s
TRO Tromso 63.07 338 *e*P **P** **16 44 19.4 -1.2**
TRO IAmb IAmb 16 44 22.9
comp=Z,18nm,1.0s
TRO IAMs_20 IAMs_20 17 13 16.6
comp=Z,568nm,21.2s
OKC Ostrava-Krasne 63.21 315 AMS AMS 17 16 50.0
comp=Z,300nm,17.1s
MORH Mrgy, Hungar 63.23 311 ⇓P **P** **16 44 23.2 +1.0**
PDG Podgorica 63.24 307 ⇑P **P** **16 44 23.4 +1.1**
STEB Steborice 63.45 316 *e*P **P** **16 44 24.4 +0.8**
MAUC Maruska 63.46 315 *e*P **P** **16 44 27.3 +3.6**
MORC Moravsky Berou 63.61 315 P **P** **16 44 25.8 +1.1**
MORC pmax pmax
comp=Z,11nm,1.2s
MORC Moravsky Berou 63.61 315 P **P** **16 44 25.8 +1.1**
MORC IAmb IAmb 16 44 31.3
comp=Z,11nm,1.2s
MORC Moravsky Berou 63.61 315 *e*P **P** **16 44 26.9 +2.2**
JAVC Velka Javorina 63.61 314 *e*P **P** **16 44 27.6 +2.9**
MODS Modra-Piesok 63.92 314 *e*P **P** **16 44 29.8 +3.1**
MODS Modra-Piesok 63.92 314 *e*P **P** **16 44 29.8 +3.1**
KRLC Kraliky 64.07 316 *e*P **P** **16 44 29.1 +1.4**
KRLC MLR MLR
comp=Z,400nm,21.6s
KRLC Kraliky 64.07 316 *e*P **P** **16 44 29.1 +1.4**
KRLC AMS AMS 17 15 10.0
comp=Z,400nm,21.6s
FAUS Fauske 64.25 335 *e*P **P** **16 44 27.3 -1.2**
FAUS IAMs_20 IAMs_20 17 15 23.2
comp=Z,885nm,26.2s
VRAC Vranov 64.27 315 LR LR 17 17 27.2
comp=Z,297nm,20.8s,baz=78,slow=41
VRAC Vranov 64.27 315 ⇑P **P** **16 44 30.2 +1.1**
VRAC Vranov 64.27 315 P **P** **16 44 30.1 +1.1**
VRAC Vranov 64.27 315 *e*P **P** **16 44 30.3 +1.3**
STEI Steigen 64.29 336 *e*P **P** **16 44 27.4 -1.3**
STEI IAmb IAmb 16 44 34.0
comp=Z,262nm,2.7s
STEI IAMs_20 IAMs_20 17 15 24.2
comp=Z,1μm,26.1s
KSP Ksiaz 64.31 317 *e*P P 16 44 20.7 -8.5
DPC Dobruska-Polom 64.34 316 *e*P **P** **16 44 30.8 +1.3**
DPC MLR MLR
comp=Z,500nm,23.7s
DPC Dobruska-Polom 64.34 316 *e*P **P** **16 44 30.8 +1.3**
DPC AMS AMS 17 15 30.0
comp=Z,500nm,23.7s
OSTC Ostas 64.38 316 AMS AMS 17 15 30.0
comp=Z,700nm,17.4s
KRUC Moravsky 64.43 315 *e*P **P** **16 44 32.3 +2.3**
CHVC Chvalec 64.48 316 AMS AMS 17 15 40.0
comp=Z,600nm,17.8s
UPC Upice 64.52 316 AMS AMS 17 15 30.0
comp=Z,600nm,17.7s
MOR8 Moi Rana 64.57 334 *e*P **P** **16 44 31.0 +0.4**
MOR8 IAmb IAmb 16 44 32.1
comp=Z,20nm,1.1s
MOR8 IAMs_20 IAMs_20 17 15 05.4
comp=Z,631nm,24.3s
RONA Rosalia, Austr 64.65 313 *e*pP pP 16 44 34.6 -2.4
comp=Z,4.6nm,1.0s
RAUS Rausandaksla 64.73 334 *e*P **P** **16 44 32.3 +0.7**
RAUS IAmb IAmb 16 44 36.3
comp=Z,16nm,0.9s
RAUS IAMs_20 IAMs_20 17 15 15.5
comp=Z,696nm,21.5s
SPA0 Spitsbergen Ar 64.83 347 *e*P **P** **16 44 33.2 +1.0**
SPA0 IAmb IAmb 16 44 35.5
comp=Z,31nm,1.4s
SPA0 IAMs_20 IAMs_20 17 18 21.3
comp=Z,914nm,20.2s
SPITS Spitsbergen Ar 64.83 347 P **P** **16 44 31.7 -0.5**
comp=Z,3.2nm,0.6s,baz=131,slow=10,SNR=5.2
SPITS LR LR 17 18 48.3
comp=Z,851nm,19.0s,baz=88,slow=42
comp=Z,3.2nm,0.6s
CONA Conrad Observa 64.91 314 *i* pP **P** **16 44 35.1 +1.8**
comp=Z,7.1nm,1.1s
LOF Lofoten 64.93 336 *e*P **P** **16 44 29.8 -3.1**
LOF IAMs_20 IAMs_20 17 15 44.4
comp=Z,948nm,23.1s
VAGH Vaagaholmen 65.04 334 *e*P **P** **16 44 35.4 +1.8**
VAGH IAmb IAmb 16 44 35.6
comp=Z,34nm,1.2s
VAGH IAMs_20 IAMs_20 17 15 25.3
comp=Z,990nm,18.8s
HFS Hagfors 65.07 327 P **P** **16 44 32.7 -1.3**
comp=Z,7.7nm,0.8s,baz=95,slow=5.1,SNR=14
HFS LR LR 17 13 34.8
comp=Z,194nm,20.1s,baz=95,slow=37
comp=Z,7.7nm,0.8s
LEIR Leirfjorden 65.11 334 *e*P **P** **16 44 33.0 -1.1**
LEIR IAmb IAmb 16 44 46.6
comp=Z,22nm,1.0s
LEIR IAMs_20 IAMs_20 17 16 33.8
comp=Z,680nm,17.7s
MBAR Mbarara 65.15 258 LR LR 17 14 56.5
comp=Z,332nm,19.1s,baz=69,slow=38
MBAR Mbarara 65.15 258 ⇑ *e*P **P** **16 44 35.9 +0.4**
MBAR pmax pmax
comp=Z,6.0nm,1.1s
ARSA Arzberg 65.23 313 *e*pP **P** **16 44 37.8 +2.5**
comp=Z,2.1nm,0.7s
PRU Pruhonice 65.52 316 AMS AMS 17 16 10.0
comp=Z,600nm,22.3s
TIP Timpagrande 65.63 304 ⇑P **P** **16 44 38.5 +0.3**
TIP Timpagrande 65.63 304 P **P** **16 44 39.2 +1.1**
TIP IAmb IAmb 16 44 44.2
comp=Z,16nm,1.2s
SOKA Soboth 65.64 312 *e*pP **P** **16 44 39.9 +1.8**
comp=Z,6.3nm,1.2s
RICC Richard 65.73 317 AMS AMS 17 16 20.0
comp=Z,800nm,18.3s
BRG Berggiesshubel 65.78 317 *e*P **P** **16 44 41.1 +2.3**
comp=Z,5.8nm,1.0s,baz=82,slow=6.3
BRG Berggiesshubel 65.78 317 *e*P **P** **16 44 40.9 +2.1**
BRG Amp 16 44 42.7
comp=Z,5.8nm,1.0s
ZVC Zvikov 65.81 315 *e*P **P** **16 44 41.5 +2.5**
ZVC *ex* x 16 44 51.2

ZVC AMS AMS 17 16 30.0
comp=Z,400nm,15.9s
CKRC Cesky Krumlov 65.82 315 AMS AMS 17 14 10.0
comp=Z,300nm,19.3s
MOA Molln 65.99 314 *ep*P **P 16 44 41.9 +1.7**
comp=Z,4.7nm,0.8s
OBKA Obir 66.00 312 *i* pP **P 16 44 42.6 +2.2**
comp=Z,4.5nm,1.0s
NC602 NORSAR Array S 66.09 328 *e*P **P 16 44 38.2 -2.3**
NC602 IAmb IAmb 16 44 43.0
comp=Z,20nm,1.1s
NC602 IAMs_20 IAMs_20 17 16 04.4
comp=Z,616nm,17.9s
HSKC Hora Svate Kat 66.14 317 AMS AMS 17 16 30.0
comp=Z,800nm,19.0s
GEC2 GERESS Array S 66.22 315 *e*P **P 16 44 43.5 +1.7**
comp=Z,6.3nm,0.8s,baz=82,slow=6.3
GERES GERESS Array B 66.22 315 P **P 16 44 40.7 -1.1**
comp=Z,3.1nm,0.6s,baz=76,slow=5.6,SNR=22
GERES LR LR 17 19 37.9
comp=Z,292nm,18.3s,baz=53,slow=42
comp=Z,3.1nm,0.6s
NB2 NORSAR Subarra 66.22 328 P **P 16 44 39.5 -2.0**
comp=Z,15nm,1.1s,baz=84,slow=6.5
NB2 NORSAR Subarra 66.22 328 P **P 16 44 39.5 -2.0**
NOA NORSAR Array B 66.22 328 P **P 16 44 39.9 -1.6**
comp=Z,5.4nm,0.8s,baz=85,slow=6.4,SNR=13
NOA LR LR 17 16 25.2
comp=Z,515nm,19.3s,baz=90,slow=39
comp=Z,5.4nm,0.8s
KHC Kasperske Hory 66.25 315 *e*P **P 16 44 43.0 +1.1**
KHC MLR MLR
comp=Z,400nm,18.1s
KHC Kasperske Hory 66.25 315 *e*P **P 16 44 43.0 +1.1**
KHC *ex* x 16 44 53.2
KHC AMS AMS 17 16 40.0
comp=Z,400nm,18.1s
CLL Collm 66.31 317 *i* P **P 16 44 43.9 +1.7**
CLL MLR MLR
comp=Z,900nm,22.0s
CLL Collm 66.31 317 *e*L L 17 17 54.8
comp=Z,430nm,21.2s
CLL Collm 66.31 317 *i* P **P 16 44 43.9 +1.7**
CLL *e*SS SS 16 57 42.0 -5.1
CLL *e*SSS SSS 17 00 54.0
CLL AMS AMS 17 16 00.0
comp=Z,900nm,22.0s
NC204 NORSAR Array S 66.42 328 P **P 16 44 41.4 -1.4**
NC204 IAmb IAmb 16 44 45.1
comp=Z,11nm,0.9s
BIOA Bad Ischl, Aus 66.43 314 *ep*P **P 16 44 44.9 +1.9**
comp=Z,1.2nm,0.4s
SHEM Shemya Is, Ala 66.45 41 LR LR 17 17 13.0
comp=Z,187nm,19.2s,baz=276,slow=39
WET Wettzell 66.71 315 *e*P **P 16 44 46.2 +1.4**
comp=Z,4.7nm,0.9s,baz=82,slow=6.3
WET *e*L L 17 17 27.2
comp=Z,416nm,20.1s
TANN Tannenbergstha 66.78 317 *e*P **P 16 44 47.8 +2.5**
comp=Z,6.4nm,1.2s,baz=82,slow=6.3
PLN Plauen 66.96 317 *e*P **P 16 44 48.9 +2.5**
comp=Z,1.1nm,0.9s,baz=82,slow=6.3
ROTZ Rotzenmuhle 67.04 316 *e*P **P 16 44 49.8 +2.9**
comp=Z,3.9nm,1.2s,baz=82,slow=6.3
NEUB Neuenburg 67.09 318 *e*P **P 16 44 49.3 +2.2**
comp=Z,9.8nm,1.0s,baz=82,slow=6.3
GORT1 Trebel 67.11 319 *e*P **P 16 44 49.7 +2.5**
comp=Z,17nm,1.0s,baz=82,slow=6.3
DOMB Dombas 67.15 329 *e*P **P 16 44 46.5 -0.9**
DOMB IAmb IAmb 16 44 50.0
comp=Z,88nm,1.9s
DOMB IAMs_20 IAMs_20 17 16 02.4
comp=Z,642nm,16.9s
CTA Charters Tower 67.19 126 P **P 16 44 47.7 -0.5**
comp=Z,4.7nm,1.1s
CTAO Charters Tower 67.19 126 P **P 16 44 48.2 0.0**
CTAO pmax pmax
comp=Z,17nm,1.2s
CTAO Charters Tower 67.19 126 P **P 16 44 48.2 0.0**
CTAO IAmb IAmb 16 45 02.2
comp=Z,17nm,1.1s
FLTG Flechtingen 67.25 319 *e*P **P 16 44 50.0 +1.9**
comp=Z,20nm,1.6s,baz=82,slow=6.3
MOX Moxa 67.28 317 *e*L L 17 17 26.5
comp=Z,797nm,21.5s
ABTA Abfaltersbach 67.34 313 *i* pP **P 16 44 49.8 +0.9**
comp=Z,4.1nm,1.0s
BSEG Bad Segeberg 67.56 321 *e*P **P 16 44 52.7 +2.7**
comp=Z,5.4nm,0.8s,baz=82,slow=6.3
BSEG *e*L L 17 19 15.8
comp=Z,380nm,18.0s
FDMO Fiordimonte 67.63 309 P **P 16 44 51.5 +0.8**
NRCA Norcia 67.65 308 P **P 16 44 51.9 +0.9**
SKAR Skarslia 67.68 328 *e*P **P 16 44 51.2 +0.4**
GRF Grafenberg Arr 67.69 316 *e*P **P 16 44 52.6 +1.7**
comp=Z,8.7nm,1.2s,baz=82,slow=6.3
GRF *e*L L 17 17 53.8
comp=Z,739nm,20.7s
VAE Valguarnera 67.78 303 LR LR 17 19 53.8
comp=Z,170nm,20.6s,baz=164,slow=41
MOL Molde 67.79 330 *e*P **P 16 44 51.9 +0.6**
MOL IAmb IAmb 16 44 54.0
comp=Z,25nm,1.1s
MOL IAMs_20 IAMs_20 17 15 19.0
comp=Z,730nm,24.2s
WTTA Wattenberg 67.84 313 *ep*P **P 16 44 54.4 +2.2**
comp=Z,4.8nm,0.8s
CLZ Clausthal 67.86 318 *e*P **P 16 44 54.5 +2.4**
comp=Z,7.8nm,1.0s,baz=82,slow=6.3
WATA Walderalm 67.87 313 *ep*P **P 16 44 54.4 +2.0**
comp=Z,4.3nm,0.8s
FUR Furstenfeldbru 67.92 314 *e*L L 17 18 29.4
comp=Z,253nm,21.4s
SQTA Sankt Quirin 68.14 313 *i* pP **P 16 44 55.7 +1.7**
comp=Z,4.7nm,0.7s
GTTG Gottingen 68.16 318 *e*P **P 16 44 56.3 +2.4**
comp=Z,8.8nm,0.9s,baz=82,slow=6.3
MOTA Moosalm 68.18 313 *i* pP **P 16 44 55.7 +1.4**
comp=Z,7.4nm,0.9s
INKA Innaminka 68.24 135 P **P 16 44 54.9 +0.2**
INKA IAmb IAmb 16 44 59.0
comp=Z,16nm,1.4s
RETH Rethem/Aller, 68.32 319 *e*P **P 16 44 57.4 +2.6**
comp=Z,12nm,1.5s,baz=82,slow=6.3
RETA Reutte 68.38 314 *i* pP **P 16 44 57.4 +1.9**
comp=Z,9.0nm,1.0s
FETA Feichten 68.50 313 *i* pP **P 16 44 57.5 +1.2**
comp=Z,7.3nm,1.0s
DAVA Damuels 69.01 314 *i* P **P 16 44 58.0 -1.5**
comp=Z,12nm,1.4s
DAVOX Davos/Dischmat 69.11 313 LR LR 17 21 15.9
comp=Z,261nm,19.7s,baz=81,slow=41
TNS Taunus Mts 69.35 317 *e*P **P 16 45 03.6 +2.1**
comp=Z,7.0nm,1.0s,baz=82,slow=6.3
TNS *e*L L 17 18 39.7
comp=Z,524nm,21.8s
IBBN Ibbenburen 69.36 319 *e*P **P 16 45 03.7 +2.4**
comp=Z,6.0nm,1.0s,baz=82,slow=6.3
QLP Quilpie 69.80 132 P **P 16 45 04.0 -0.3**
comp=Z,24nm,0.7s
BFO Black Forest 69.81 315 *e*P **P 16 45 06.1 +1.8**
comp=Z,6.6nm,1.2s,baz=82,slow=6.3
BFO *e*L L 17 19 12.0
comp=Z,385nm,20.6s
AMKA Amchitka 69.84 42 P **P 16 45 04.0 -0.4**
BTNL Ternell 70.72 318 *d*P **P 16 45 11.8 +2.1**
HTT Hallett 71.10 141 P **P 16 45 10.4 -1.8**
STKA Stephens Creek 71.61 138 P **P 16 45 14.3 -1.0**
comp=Z,48nm,2.6s
STKA Stephens Creek 71.61 138 P **P 16 45 14.3 -1.0**
comp=Z,6.2nm,0.9s,baz=236,slow=5.9,SNR=4.9
STKA LR LR 17 20 34.9
comp=Z,504nm,21.9s,baz=280,slow=39
comp=Z,6.2nm,0.9s
BMRD Maredsous 71.63 318 *d*P **P 16 45 17.3 +2.1**
GAMB Gambell 71.68 28 P **P 16 45 14.7 -0.5**
baz=285
DOU Dourbes 71.79 317 *d*P **P 16 45 18.7 +2.5**
JMIC Jan Mayen 72.09 340 LR LR 17 20 53.3
comp=Z,249nm,21.3s,baz=66,slow=39
KEST Kesra 72.17 302 P **P 16 45 18.6 -0.2**
comp=Z,13nm,1.0s,baz=18,slow=3.0,SNR=7.2
KEST LR LR 17 22 47.2
comp=Z,229nm,18.7s,baz=15,slow=41
comp=Z,13nm,1.0s
TNA Tin City 72.73 26 P **P 16 45 21.1 -0.5**
baz=288

C16K Lisburne Hills 72.83 22 P **P 16 45 21.6 -0.5**
baz=289
F14K Arctic Creek 73.39 25 P **P 16 45 25.2 -0.3**
baz=289
C17K DeLong Mountai 73.52 22 P **P 16 45 25.8 -0.4**
baz=291
A19K Wainwright 73.57 20 P **P 16 45 26.0 -0.4**
baz=292
D17K Noatak River 73.83 23 P **P 16 45 27.6 -0.4**
baz=291
EIDS Eidsvold 73.90 127 P **P 16 45 26.0 -3.0**
comp=Z,15nm,0.9s
EIDS Eidsvold 73.90 127 IAmb IAmb 16 45 32.6
comp=Z,13nm,0.9s
F15K North Star Dit 73.97 25 P **P 16 45 28.3 -0.5**
baz=290
ANM Nome 74.08 26 P **P 16 45 29.3 -0.2**
baz=290
C18K Utukok River 74.13 22 IAmb IAmb 16 45 32.6
comp=Z,9.2nm,0.7s
C18K Utukok River 74.13 22 P **P 16 45 29.6 -0.2**
baz=293
LSZ Lusaka 74.23 245 LR LR 17 16 01.2
comp=Z,287nm,21.5s,baz=68,slow=34
G15K Niukluk 74.46 25 P **P 16 45 31.5 -0.3**
baz=291
C19K Lookout Ridge 74.48 21 IAmb IAmb 16 45 34.8
comp=Z,14nm,0.8s
C19K Lookout Ridge 74.48 21 P **P 16 45 31.5 -0.3**
baz=294
E17K Hotham Inlet 74.52 23 P **P 16 45 31.7 -0.4**
baz=293
E18K Tukpahlearik C 74.82 23 IAmb IAmb 16 45 36.3
comp=Z,14nm,0.7s
E18K Tukpahlearik C 74.82 23 P **P 16 45 33.7 0.0**
baz=294
EKA Eskdalemuir Ar 74.83 324 P **P 16 45 33.3 -0.8**
comp=Z,2.3nm,0.7s,baz=91,slow=4.3,SNR=6.3
EKA LR LR 17 24 20.9
comp=Z,350nm,18.1s,baz=74,slow=40
comp=Z,2.3nm,0.7s
B20K Meade River 74.87 20 P **P 16 45 34.1 +0.1**
baz=296
F17K Baldwin Pennin 74.98 24 P **P 16 45 34.5 -0.2**
F17K Baldwin Pennin 74.98 24 P **P 16 45 34.6 -0.1**
baz=293,SNR=5.7
A22K Sinclair Lake 75.07 18 P **P 16 45 34.8 -0.3**
baz=298
M11K Mekoryuk 75.18 30 P **P 16 45 35.2 -0.7**
baz=291
D19K Kuna River 75.23 21 P **P 16 45 35.7 -0.5**
baz=296
H16K Elim 75.31 26 P **P 16 45 35.6 -1.0**
baz=293
K13K Kusilvak Mount 75.32 29 P **P 16 45 36.6 -0.2**
baz=292
J14K Nanvaranak Lak 75.50 28 P **P 16 45 37.5 -0.2**
baz=292
F18K Selawik 75.50 23 P **P 16 45 37.5 -0.1**
baz=295
G17K Kiwalik Mounta 75.58 24 P **P 16 45 37.8 -0.5**
baz=294
D20K Etivluk River 75.62 21 P **P 16 45 38.2 -0.2**
baz=297
B21K Ikpikpuk River 75.83 20 P **P 16 45 40.3 +0.7**
B21K IAmb IAmb 16 45 50.4
comp=Z,23nm,1.2s
B21K Ikpikpuk River 75.83 20 P **P 16 45 39.7 +0.2**
baz=298
B22K Teshekpuk Lake 75.84 19 P **P 16 45 39.5 -0.1**
baz=299
E20K Nigu River 75.97 21 P **P 16 45 40.1 -0.4**
baz=297
E19K Redstone River 75.98 22 IAmb IAmb 16 45 42.9
comp=Z,12nm,0.7s
E19K Redstone River 75.98 22 P **P 16 45 40.6 +0.1**
baz=297
C21K Knifeblade Rid 76.00 20 P **P 16 45 40.3 -0.3**
baz=298
F19K Shaleruckik Mo 76.07 23 P **P 16 45 39.9 -1.1**
F19K IAmb IAmb 16 45 42.8
comp=Z,9.7nm,0.7s
F19K Shaleruckik Mo 76.07 23 P **P 16 45 40.6 -0.3**
baz=296,SNR=14
H17K Granite Mounta 76.10 25 P **P 16 45 40.8 -0.4**
baz=295
G18K Tagagawik 76.17 24 P **P 16 45 40.6 -0.9**
baz=296
I17K Unalakleet 76.23 26 P **P 16 45 41.1 -0.7**
baz=294
L14K Kuka Creek 76.42 29 P **P 16 45 42.7 -0.3**
baz=293
J16K Anvik River 76.52 27 P **P 16 45 42.8 -0.8**
J16K IAmb IAmb 16 45 46.0
comp=Z,10nm,0.8s
J16K Anvik River 76.52 27 P **P 16 45 43.3 -0.2**
baz=295,SNR=7.2
K15K Wolf Creek Mou 76.54 28 IAmb IAmb 16 45 54.6
comp=Z,21nm,1.4s
K15K Wolf Creek Mou 76.54 28 P **P 16 45 43.2 -0.5**
baz=294
MATP Matopo 76.58 241 LR LR 17 16 28.9
comp=Z,340nm,21.9s,baz=90,slow=33
H18K Honhosa River 76.60 24 IAmb IAmb 16 45 46.1
comp=Z,6.8nm,0.7s
H18K Honhosa River 76.60 24 P **P 16 45 44.3 +0.3**
baz=296
E21K Killik River 76.61 21 P **P 16 45 43.8 -0.3**
baz=299,SNR=30
G19K Purcell Mounta 76.63 23 IAmb IAmb 16 46 12.4
comp=Z,14nm,1.3s
G19K Purcell Mounta 76.63 23 P **P 16 45 44.0 -0.2**
baz=297
F20K Avaraart Lake 76.69 22 IAmb IAmb 16 45 46.7
comp=Z,9.8nm,0.7s
F20K Avaraart Lake 76.69 22 P **P 16 45 44.0 -0.5**
baz=298,SNR=17
L15K Ungalak Mounta 76.81 28 P **P 16 45 45.0 -0.2**
baz=294
C23K Itkillik River 76.93 19 P **P 16 45 46.2 +0.4**
baz=302,SNR=12
M14K Bethel 76.98 29 IAmb IAmb 16 45 56.7
comp=Z,13nm,1.0s
M14K Bethel 76.98 29 P **P 16 45 46.3 +0.1**
baz=294
J17K VABM Dome 77.09 26 P **P 16 45 47.0 +0.2**
baz=296,SNR=6.6
H19K Roundabout Mou 77.15 24 IAmb IAmb 16 45 50.3
comp=Z,9.4nm,0.8s
H19K Roundabout Mou 77.15 24 P **P 16 45 47.1 0.0**
baz=298,SNR=10
GCSA Galena City Sc 77.35 24 P **P 16 45 48.2 0.0**
baz=297
D23K Nanushuk River 77.37 19 P **P 16 45 48.1 -0.2**
baz=302,SNR=23
F21K Alatna River 77.37 22 IAmb IAmb 16 45 52.2
comp=Z,13nm,0.7s
F21K Alatna River 77.37 22 P **P 16 45 48.0 -0.3**
baz=300,SNR=25
UNV Unalaska Vale 77.40 37 P **P 16 45 48.8 +0.1**
baz=292
NEEM North Greenlan 77.43 352 *i* P **P 16 45 50.0 +1.2**
NEEM IAmb IAmb 16 45 50.7
comp=Z,18nm,0.9s
N14K Kuskokwak Cree 77.44 30 P **P 16 45 48.7 -0.1**
baz=294
M15K Kasigluk River 77.57 29 P **P 16 45 49.5 -0.1**
baz=295,SNR=5.9
F22K John River 77.66 21 P **P 16 45 50.1 +0.1**
baz=301,SNR=16
L16K Owhat River 77.66 28 P **P 16 45 49.8 -0.2**
baz=296
K17K Iditarod 77.71 27 IAmb IAmb 16 46 00.8
comp=Z,18nm,0.9s
K17K Iditarod 77.71 27 P **P 16 45 49.9 -0.3**
baz=297
G21K Allakaket 77.72 22 IAmb IAmb 16 45 52.4
comp=Z,10nm,0.8s
G21K Allakaket 77.72 22 P **P 16 45 50.2 -0.2**
baz=300
H20K Anotleneega Mo 77.74 23 P **P 16 45 50.1 -0.3**
baz=299,SNR=12
D24K Happy Valley 77.83 19 P **P 16 45 50.8 0.0**
baz=304,SNR=5.9
TOLK Toolik Lake Re 77.89 19 P **P 16 45 51.1 -0.2**
baz=303,SNR=15
IMAR Indian Mountai 77.90 23 P **P 16 45 50.6 -0.7**
O14K Tigyukauivet M 77.92 30 P **P 16 45 51.2 -0.3**
baz=295
L17K Donlin 77.97 27 P **P 16 45 51.2 -0.6**
baz=297
J18K Innoko River 78.01 26 P **P 16 45 51.0 -1.0**
J18K Innoko River 78.01 26 P **P 16 45 51.3 -0.6**
baz=298,SNR=11
N15K Kwethluk River 78.06 29 IAmb IAmb 16 46 02.4
comp=Z,17nm,1.3s
N15K Kwethluk River 78.06 29 P **P 16 45 52.2 -0.1**
baz=296
J19K Poorman 78.19 25 IAmb IAmb 16 45 55.5
comp=Z,8.0nm,0.7s
J19K Poorman 78.19 25 P **P 16 45 52.6 -0.3**
baz=299,SNR=12
M16K Timber Creek 78.19 28 P **P 16 45 52.8 -0.2**
baz=296
G22K Bettles 78.19 21 P **P 16 45 53.1 +0.2**
baz=302
E23K Chandalar 78.20 20 IAmb IAmb 16 45 55.7
comp=Z,10nm,0.7s
E23K Chandalar 78.20 20 P **P 16 45 52.7 -0.3**
baz=303,SNR=13
I20K Naaghedeneel 78.23 24 P **P 16 45 52.7 -0.4**
baz=300
H21K Melozitna River 78.40 23 P **P 16 45 53.9 -0.3**
baz=301,SNR=31
D25K Kavik River 78.45 18 IAmb IAmb 16 45 57.6
comp=Z,11nm,0.7s
D25K Kavik River 78.45 18 P **P 16 45 53.9 -0.4**
baz=306,SNR=12
COLD Coldfoot 78.46 21 P **P 16 45 54.0 -0.4**
baz=303
C26K Camden Bay 78.51 17 P **P 16 45 54.7 +0.1**
baz=307
N16K Nishlik Lake 78.52 29 P **P 16 45 54.5 -0.4**
baz=297
E24K Your Creek 78.54 20 P **P 16 45 54.4 -0.5**
baz=304,SNR=37
L18K Granite Mounta 78.61 27 P **P 16 45 55.1 -0.2**
baz=298
O15K Ungalikthiuk R 78.62 30 P **P 16 45 54.9 -0.5**
baz=296
J20K Nowinta River 78.66 24 P **P 16 45 55.2 -0.3**
baz=300,SNR=8.7
M17K Holitna River 78.67 28 P **P 16 45 55.3 -0.4**
baz=298,SNR=6.0
H22K Ishtalitna Cre 78.78 22 IAmb IAmb 16 45 59.0
comp=Z,12nm,0.7s
H22K Ishtalitna Cre 78.78 22 P **P 16 45 55.8 -0.4**
baz=302,SNR=21
G23K Bananza Creek 78.80 21 P **P 16 45 56.0 -0.3**
baz=303,SNR=12
I21K Tanana 78.95 23 IAmb IAmb 16 46 07.8
comp=Z,13nm,1.0s
I21K Tanana 78.95 23 P **P 16 45 57.0 -0.1**
baz=302,SNR=6.3
C27K Jago River 79.02 17 P **P 16 45 57.4 -0.1**
baz=308
F24K Squaw Lake 79.04 20 IAmb IAmb 16 46 00.5
comp=Z,9.5nm,0.7s
F24K Squaw Lake 79.04 20 P **P 16 45 57.4 -0.2**
baz=305,SNR=19
K20K Telida 79.10 25 P **P 16 45 57.9 -0.1**
baz=300
BORG Borgarnes 79.13 337 LR LR 17 24 13.3
comp=Z,118nm,18.6s,baz=64,slow=38
SUMG Summit 79.16 347 P **P 16 45 58.8 +0.2**
SUMG pmax pmax
comp=Z,17nm,1.3s
SUMG Summit 79.16 347 P **P 16 45 58.8 +0.2**
SUMG IAmb IAmb 16 46 06.0
comp=Z,17nm,1.3s
SUMG Summit 79.16 347 *i* P **P 16 45 59.0 +0.3**
SUMG IAmb IAmb 16 46 06.3
comp=Z,13nm,1.1s
N17K Nushagak Hills 79.19 28 IAmb IAmb 16 46 09.1
comp=Z,18nm,1.6s
N17K Nushagak Hills 79.19 28 P **P 16 45 58.6 +0.1**
baz=298
O16K Kokwok River B 79.22 29 P **P 16 45 58.5 -0.2**
baz=297
M18K Stony River 79.31 27 P **P 16 45 59.2 +0.1**
baz=299,SNR=5.1
L19K White Mountain 79.38 26 IAmb IAmb 16 46 15.9
comp=Z,14nm,1.3s
L19K White Mountain 79.38 26 P **P 16 45 59.6 0.0**
baz=300,SNR=7.3
E25K Arctic Village 79.41 19 IAmb IAmb 16 46 27.0
comp=Z,29nm,1.6s
E25K Arctic Village 79.41 19 P **P 16 45 59.7 +0.1**
baz=307,SNR=6.6
H23K Yukon River 79.45 22 P **P 16 46 00.0 +0.1**
baz=304
MLY Manley 79.47 23 IAmb IAmb 16 46 03.0
comp=Z,16nm,0.8s
MLY Manley 79.47 23 P **P 16 45 59.6 -0.5**
baz=303,SNR=27
CHUM Lake Minchumin 79.50 24 P **P 16 45 59.8 -0.3**
baz=302,SNR=8.0
P16K Nushagak River 79.53 30 P **P 16 46 00.1 -0.2**
baz=298
O17K Koliganek Bris 79.59 29 P **P 16 46 00.3 -0.3**
baz=298
G24K Hadweenzic Riv 79.65 21 P **P 16 46 00.3 -0.6**
baz=305,SNR=9.9
N18K Kilae Creek 79.68 28 P **P 16 46 01.0 -0.3**
baz=299
F25K Christian Rive 79.70 19 IAmb IAmb 16 46 04.7
comp=Z,11nm,0.7s
F25K Christian Rive 79.70 19 P **P 16 46 00.9 -0.3**
baz=307,SNR=18
M19K Big River Lodg 79.70 26 P **P 16 46 01.5 +0.2**
baz=300
CAST Castle Rocks 79.84 25 P **P 16 46 02.2 +0.1**
baz=302,SNR=27
I23K Minto, Yukon-K 79.89 22 P **P 16 46 02.0 -0.2**
baz=304,SNR=10
SDPT Sand Point 79.99 34 P **P 16 46 02.7 -0.3**
baz=296
H24K Noodor Dome 80.01 21 IAmb IAmb 16 46 09.8
comp=Z,22nm,1.6s
H24K Noodor Dome 80.01 21 P **P 16 46 03.0 0.0**
baz=305,SNR=8.0
D27M Malcolm River 80.01 17 P **P 16 46 02.8 -0.2**
baz=311
S14K Fog Glacier 80.04 33 P **P 16 46 02.9 -0.5**
baz=297
G25K Bearman Lake 80.05 20 P **P 16 46 03.0 0.0**
baz=306,SNR=13
PPLA Purkeypile 80.07 25 IAmb IAmb 16 46 09.9
comp=Z,11nm,0.8s
PPLA Purkeypile 80.07 25 P **P 16 46 03.3 -0.2**
baz=302
F26K Sheenjek River 80.09 19 P **P 16 46 03.1 -0.2**
baz=308,SNR=13
P17K Kvichak River 80.16 29 IAmb IAmb 16 46 13.3
comp=Z,19nm,1.0s
P17K Kvichak River 80.16 29 P **P 16 46 03.7 -0.1**
baz=299
N19K Bonanza Creek 80.22 27 P **P 16 46 03.7 -0.5**
baz=300,SNR=6.6
M20K Styx River 80.23 26 P **P 16 46 03.6 -0.7**
baz=301
NEA2 Nenana 80.31 23 P **P 16 46 04.1 -0.4**
baz=304,SNR=12
O18K Koktuh Hills 80.38 28 IAmb IAmb 16 46 07.3
comp=Z,11nm,0.8s
O18K Koktuh Hills 80.38 28 P **P 16 46 04.6 -0.5**
baz=300,SNR=6.0
TRF Thorofare Moun 80.50 24 P **P 16 46 05.3 -0.5**
baz=303
E27K Coleen River 80.53 18 IAmb IAmb 16 47 05.0
comp=Z,26nm,1.6s
E27K Coleen River 80.53 18 P **P 16 46 05.2 -0.4**
baz=310
COLA College 80.58 22 *e*P **P 16 46 05.0 -0.9**
COLA pmax pmax
comp=Z,20nm,1.9s
POKR Poker Plat Res 80.58 22 P **P 16 46 05.5 -0.4**
baz=306
CHGN Chignik 80.60 32 IAmb IAmb 16 46 08.3
comp=Z,13nm,0.6s
CHGN Chignik 80.60 32 P **P 16 46 05.8 -0.4**
baz=298
P18K Big Mountain, 80.60 29 P **P 16 46 05.6 -0.6**
baz=300
G26K Porcupine Rive 80.67 20 IAmb IAmb 16 46 09.7
comp=Z,17nm,0.8s

G26K	**Porcupine Rive**	**80.67**	**20**	P		**P**	**16 46 06.2**	**-0.1**
	baz=308,SNR=21							
KULLO	**Kullorsuaq**	**80.67**	**352**	*i* P		**P**	**16 46 06.7**	**+0.4**
KULLO				IAmb		IAmb	16 46 08.2	
	comp=Z,11nm,0.9s							
CHNA	**Chernabura Isl**	**80.68**	**34**	P		**P**	**16 46 06.6**	**-0.1**
	baz=297							
SKT	**Skwentna**	**80.82**	**26**	P		**P**	**16 46 06.8**	**-0.5**
	baz=302,SNR=7.7							
L22K	**Petersville**	**80.82**	**25**	IAmb		IAmb	16 46 09.1	
	comp=Z,15nm,0.7s							
L22K	**Petersville**	**80.82**	**25**	P		**P**	**16 46 06.8**	**-0.5**
	baz=303,SNR=12							
E28M	**Babbage River**	**80.83**	**17**	IAmb		IAmb	16 46 10.0	
	comp=Z,8.7nm,0.7s							
E28M	**Babbage River**	**80.83**	**17**	P		**P**	**16 46 07.0**	**-0.2**
	baz=312,SNR=7.4							
MCK	**McKinley**	**80.85**	**24**	IAmb		IAmb	16 46 09.8	
	comp=Z,10.0nm,0.7s							
MCK	**McKinley**	**80.85**	**24**	P		**P**	**16 46 07.3**	**-0.2**
	baz=304,SNR=8.1							
ESDC	**Sonseca Array**	**80.86**	**309**	P		**P**	**16 46 07.7**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=61,slow=5.0,SNR=11							
ESDC				LR		LR	17 30 24.6	
	comp=Z,155nm,18.2s,baz=46,slow=42							
	comp=Z,2.3nm,0.9s							
Q17K	**Contact Creek**	**80.86**	**30**	P		**P**	**16 46 07.3**	**-0.5**
	baz=299							
STLK	**Strandline Lak**	**80.96**	**26**	IAmb		IAmb	16 49 01.1	
	comp=Z,5.3nm,0.4s							
ILAR	**Eielson Array**	**80.97**	**22**	P		**P**	**16 46 06.2**	**-1.8**
	comp=Z,4.6nm,0.6s,baz=296,slow=4.4,SNR=41							
ILAR				PP		**PP**	**16 49 14.3**	**+2.1**
	comp=Z,1.2nm,1.1s,baz=295,slow=7.2,SNR=5.9							
ILAR				LR		LR	17 26 08.6	
	comp=Z,730nm,18.7s,baz=290,slow=39							
	comp=Z,4.6nm,0.6s							
ILAR	**Eielson Array**	**80.97**	**22**	P		**P**	**16 46 06.6**	**-1.5**
ILAR	**Eielson Array**	**80.97**	**22**	P		**P**	**16 46 06.6**	**-1.5**
PRP	**Porcupine Dome**	**80.99**	**21**	IAmb		IAmb	16 46 11.0	
	comp=Z,13nm,0.8s							
PRP	**Porcupine Dome**	**80.99**	**21**	P		**P**	**16 46 07.9**	**-0.4**
	baz=307,SNR=8.0							
Q18K	**Katmai Hardscr**	**81.08**	**29**	P		**P**	**16 46 08.2**	**-0.7**
	baz=300							
ACHA	**Angle Creek He**	**81.15**	**30**	IAmb		IAmb	16 46 13.4	
	comp=Z,25nm,1.8s							
HDA	**Harding Lake**	**81.17**	**22**	P		**P**	**16 46 09.0**	**-0.1**
	baz=306							
ILSW	**Iliamna Southw**	**81.21**	**28**	IAmb		IAmb	16 46 41.2	
	comp=Z,9.7nm,0.5s							
LBTB	**Lobatse**	**81.22**	**238**	LR		LR	17 20 39.9	
	comp=Z,302nm,20.2s,baz=58,slow=34							
LBTB	**Lobatse**	**81.22**	**238**	P		**P**	**16 46 09.5**	**-0.6**
LBTB				pmax		pmax		
	comp=Z,12nm,1.2s							
LBTB	**Lobatse**	**81.22**	**238**			**P**	**16 46 09.5**	**-0.6**
P19K	**Oil Pt**	**81.35**	**28**	P		**P**	**16 46 10.0**	**-0.2**
	baz=301							
O20K	**Slope Mountain**	**81.38**	**28**	P		**P**	**16 46 10.0**	**-0.4**
	baz=302							
F28M	**Old Crow**	**81.40**	**18**	P		**P**	**16 46 10.0**	**-0.3**
	baz=312,SNR=6.7							
G27K	**Doyon Strip**	**81.41**	**19**	P		**P**	**16 46 09.6**	**-0.8**
	baz=310							
E29M	**Blow River**	**81.42**	**17**	P		**P**	**16 46 10.4**	**0.0**
	baz=314							
WAT1	**Susitna Watana**	**81.50**	**24**	P		**P**	**16 46 10.9**	**-0.1**
	baz=305							
A36M	**Sachs Harbour**	**81.52**	**11**	P		**P**	**16 46 10.7**	**-0.1**
	baz=325,SNR=10							
J25K	**Salcha River,**	**81.59**	**22**	P		**P**	**16 46 10.9**	**-0.5**
	baz=307,SNR=12							
DHY	**Denali Highway**	**81.80**	**24**	P		**P**	**16 46 12.3**	**-0.4**
	baz=306							
H27K	**Steamboat Moun**	**81.82**	**20**	IAmb		IAmb	16 46 15.5	
	comp=Z,9.2nm,0.7s							
H27K	**Steamboat Moun**	**81.82**	**20**	P		**P**	**16 46 12.1**	**-0.5**
	baz=310,SNR=17							
K24K	**Donnelly Dome**	**81.94**	**23**	P		**P**	**16 46 12.8**	**-0.4**
	baz=307,SNR=19							
WAT6	**Susitna Watana**	**81.95**	**24**	P		**P**	**16 46 13.0**	**-0.5**
	baz=306							
GHO	**Glory Hole Cre**	**81.97**	**25**	IAmb		IAmb	16 46 19.7	
	comp=Z,9.2nm,0.8s							
PMR	**Palmer**	**81.99**	**25**	P		**P**	**16 46 13.1**	**-0.3**
	baz=304							
SML	**Sawmill**	**82.18**	**25**	P		**P**	**16 46 14.0**	**-0.5**
	baz=305,SNR=6.8							
I27K	**Kandik River**	**82.20**	**20**	IAmb		IAmb	16 46 39.1	
	comp=Z,20nm,1.1s							
I27K	**Kandik River**	**82.20**	**20**	P		**P**	**16 46 14.3**	**-0.3**
	baz=310,SNR=18							
RES	**Resolute Bay**	**82.26**	**2**	LR		LR	17 24 54.9	
	comp=Z,293nm,20.1s,baz=2.0,slow=37							
RIDG	**Independent Ri**	**82.31**	**22**	IAmb		IAmb	16 46 17.9	
	comp=Z,16nm,0.7s							
RIDG	**Independent Ri**	**82.31**	**22**	P		**P**	**16 46 14.8**	**-0.5**
	baz=308,SNR=17							
KNK	**Knik Glacier**	**82.36**	**25**	P		**P**	**16 46 15.2**	**-0.2**
	baz=305							
BRSE	**Bradley Lake S**	**82.37**	**27**	P		**P**	**16 46 15.6**	**0.0**
	baz=303							
G29M	**Pine Creek**	**82.40**	**18**	IAmb		IAmb	16 46 46.6	
	comp=Z,26nm,1.4s							
G29M	**Pine Creek**	**82.40**	**18**	P		**P**	**16 46 15.8**	**+0.2**
	baz=314							
M23K	**Glacier View**	**82.42**	**25**	P		**P**	**16 46 15.7**	**-0.1**
	baz=306,SNR=5.8							
MVO	**Moncorvo**	**82.43**	**311**	*e*pP		**P**	**16 46 18.6**	**+2.3**
SCRK	**Sand Creek**	**82.46**	**22**	IAmb		IAmb	16 46 18.2	
	comp=Z,13nm,0.7s							
SCRK	**Sand Creek**	**82.46**	**22**	P		**P**	**16 46 15.9**	**-0.2**
	baz=309,SNR=24							
F30M	**Barrier River**	**82.53**	**17**	IAmb		IAmb	16 46 40.8	
	comp=Z,25nm,1.3s							
F30M	**Barrier River**	**82.53**	**17**	P		**P**	**16 46 16.1**	**-0.2**
	baz=316,SNR=7.0							
SCM	**Sheep Creek Mo**	**82.55**	**25**	P		**P**	**16 46 16.4**	**-0.1**
	baz=306							
PAX	**Paxson**	**82.56**	**23**	IAmb		IAmb	16 46 27.8	
	comp=Z,14nm,1.4s							
PAX	**Paxson**	**82.56**	**23**	P		**P**	**16 46 16.5**	**-0.1**
	baz=308							
OHAK	**Old Harbor**	**82.60**	**30**	IAmb		IAmb	16 46 20.2	
	comp=Z,10nm,0.9s							
OHAK	**Old Harbor**	**82.60**	**30**	P		**P**	**16 46 16.6**	**-0.1**
	baz=302							
INK	**Inuvik**	**82.61**	**16**	LR		LR	17 28 03.9	
	comp=Z,314nm,20.1s,baz=276,slow=39							
INK	**Inuvik**	**82.61**	**16**	IAmb		IAmb	16 46 29.8	
	comp=Z,14nm,0.9s							
INK	**Inuvik**	**82.61**	**16**	P		**P**	**16 46 16.5**	**-0.1**
	baz=317,SNR=13							
KDAK	**Kodiak Island**	**82.62**	**30**	LR		LR	17 26 30.2	
	comp=Z,502nm,20.3s,baz=296,slow=38							
KDAK	**Kodiak Island**	**82.62**	**30**	P		**P**	**16 46 16.3**	**-0.6**
KDAK				pmax		pmax		
	comp=Z,75nm,1.9s							
KDAK	**Kodiak Island**	**82.62**	**30**			**P**	**16 46 16.3**	**-0.6**
KDAK	**Kodiak Island**	**82.62**	**30**	P		**P**	**16 46 16.8**	**0.0**
	baz=302							
SEW	**Seward**	**82.70**	**27**	P		**P**	**16 46 17.3**	**+0.1**
	baz=304							
PWL	**Port Wells**	**82.72**	**26**	P		**P**	**16 46 16.9**	**-0.4**
	baz=305							
H29M	**Whitestone**	**82.78**	**19**	IAmb		IAmb	16 46 19.6	
	comp=Z,7.0nm,0.7s							
H29M	**Whitestone**	**82.78**	**19**	P		**P**	**16 46 17.5**	**-0.1**
	baz=313,SNR=8.6							
M24K	**Tolsona, Glenn**	**82.82**	**24**	P		**P**	**16 46 17.6**	**-0.3**
	baz=307							
I28M	**Miner Creek**	**82.83**	**20**	IAmb		IAmb	16 46 20.1	
	comp=Z,6.9nm,0.7s							
I28M	**Miner Creek**	**82.83**	**20**	P		**P**	**16 46 17.8**	**-0.1**
	baz=312,SNR=14							
G30M	**tAoh Zrail Nji**	**82.86**	**18**	P		**P**	**16 46 17.9**	**-0.1**
	baz=315,SNR=16							
POLO	**Lamas de Olo**	**82.87**	**312**	*e*pP		pP	16 46 22.9	-1.1
HARP	**HAARP**	**83.02**	**24**	P		**P**	**16 46 18.7**	**-0.3**
	baz=308							
K27K	**Chicken**	**83.08**	**21**	IAmb		IAmb	16 46 49.8	
	comp=Z,19nm,1.2s							
MTE	**Manteigas**	**83.10**	**311**	*e*pP		pP	16 46 23.1	-2.1
EPYK	**Eagle Plains**	**83.16**	**18**	IAmb		IAmb	16 46 24.1	
	comp=Z,7.8nm,0.8s							
EPYK	**Eagle Plains**	**83.16**	**18**	P		**P**	**16 46 19.3**	**-0.2**
	baz=315							
F31M	**Tsiigehtchic**	**83.20**	**17**	P		**P**	**16 46 19.4**	**-0.3**
	baz=317,SNR=6.2							
GLI	**Glacier Island**	**83.20**	**25**	P		**P**	**16 46 19.8**	**-0.1**
	baz=306							
MENT	**Mentasta**	**83.21**	**23**	IAmb		IAmb	16 48 59.3	
	comp=Z,13nm,0.8s							
PCBR	**Castelo Branco**	**83.28**	**310**	*e*P		**P**	**16 46 20.5**	**-0.2**
PCBR				*e*pP		**PcP**	**16 46 24.7**	**-0.4**
KLU	**Klutina**	**83.29**	**25**	P		**P**	**16 46 19.4**	**-1.0**
KLU	**Klutina**	**83.29**	**25**	P		**P**	**16 46 20.0**	**-0.4**
	baz=307,SNR=9.1							
BOSA	**Boshof**	**83.31**	**235**	P		**P**	**16 46 20.8**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=37,slow=3.5,SNR=7.6							
BOSA				LR		LR	17 23 38.3	
	comp=Z,284nm,19.4s,baz=67,slow=36							
	comp=Z,4.4nm,0.9s							
PMRV	**Marv??o**	**83.39**	**310**	*e*P		**P**	**16 46 22.4**	**+1.1**
G31M	**Satah River**	**83.44**	**17**	P		**P**	**16 46 20.8**	**-0.1**
	baz=317,SNR=9.1							
P23K	**Montague Islan**	**83.60**	**26**	P		**P**	**16 46 21.9**	**0.0**
	baz=306							
PBAR	**Barrancos**	**83.66**	**309**	*e*P		**P**	**16 46 23.6**	**+0.9**
N25K	**Chitina, Valde**	**83.72**	**24**	P		**P**	**16 46 22.7**	**+0.1**
	baz=308,SNR=14							
L27K	**Beaver Creek,**	**83.79**	**22**	IAmb		IAmb	16 46 26.7	
	comp=Z,26nm,1.6s							
L27K	**Beaver Creek,**	**83.79**	**22**	P		**P**	**16 46 23.2**	**+0.3**
	baz=311,SNR=9.0							
BCAR	**Beaver Creek A**	**83.80**	**22**	P		**P**	**16 46 22.4**	**-0.5**
M26K	**Nabesna, AK**	**83.81**	**23**	IAmb		IAmb	16 46 26.8	
	comp=Z,10nm,1.0s							
M26K	**Nabesna, AK**	**83.81**	**23**	P		**P**	**16 46 22.6**	**-0.4**
	baz=310,SNR=5.6							
PCAS	**Casmilo, Conde**	**83.91**	**311**	*e*P		**P**	**16 46 23.5**	**-0.3**
C36M	**Paulatuk**	**83.93**	**13**	P		**P**	**16 46 23.1**	**-0.3**
	baz=326,SNR=14							
EYAK	**Cordova Ski Ar**	**83.93**	**25**	P		**P**	**16 46 23.3**	**-0.2**
	baz=308							
DAWY	**Dawson**	**83.94**	**21**	IAmb		IAmb	16 47 02.0	
	comp=Z,14nm,1.7s							
DAWY	**Dawson**	**83.94**	**21**	P		**P**	**16 46 23.3**	**-0.3**
	baz=313							
MDT	**Midelt**	**84.01**	**303**	LR		LR	17 31 40.4	
	comp=Z,148nm,18.8s,baz=96,slow=41							
J29N	**Klondike Camp**	**84.05**	**20**	P		**P**	**16 46 24.0**	**-0.2**
	baz=314							
I30M	**Mount Dempster**	**84.07**	**19**	IAmb		IAmb	16 46 34.2	
	comp=Z,10.0nm,0.9s							
I30M	**Mount Dempster**	**84.07**	**19**	P		**P**	**16 46 23.9**	**-0.5**
	baz=315,SNR=15							
PARRA	**Arraiolos**	**84.10**	**310**	*e*P		**P**	**16 46 24.4**	**-0.6**
BMRM	**Bremner River**	**84.12**	**25**	P		**P**	**16 46 24.5**	**-0.1**
	baz=308,SNR=8.5							
GLB	**Gilahina Butte**	**84.12**	**24**	IAmb		IAmb	16 46 35.8	
	comp=Z,23nm,1.4s							
M27K	**Edge Creek, AK**	**84.23**	**23**	IAmb		IAmb	16 47 04.0	
	comp=Z,14nm,1.1s							
M27K	**Edge Creek, AK**	**84.23**	**23**	P		**P**	**16 46 25.2**	**-0.1**
	baz=311							
H31M	**Peel River**	**84.24**	**18**	P		**P**	**16 46 25.5**	**+0.4**
	baz=317,SNR=10							
Q23K	**Middleton Isla**	**84.37**	**26**	P		**P**	**16 46 26.2**	**+0.4**
	baz=307							
VRDI	**Verde Repeater**	**84.39**	**24**	IAmb		IAmb	16 46 36.6	
	comp=Z,14nm,1.0s							
MCARA	**McCarthy VSAT**	**84.45**	**24**	P		**P**	**16 46 26.2**	**0.0**
	baz=310							
J30M	**Hart River**	**84.55**	**19**	IAmb		IAmb	16 46 50.2	
	comp=Z,8.3nm,1.2s							
J30M	**Hart River**	**84.55**	**19**	P		**P**	**16 46 26.9**	**+0.1**
	baz=315,SNR=7.8							
BVCY	**Beaver Creek**	**84.56**	**22**	P		**P**	**16 46 27.5**	**+0.7**
	baz=312							
K29M	**Barlow Dome**	**84.69**	**20**	P		**P**	**16 46 28.1**	**+0.5**
	baz=314,SNR=6.8							
CRQE	**Cirque**	**84.83**	**24**	P		**P**	**16 46 28.6**	**+0.3**
	baz=310							
KAIM	**Kayak Island**	**84.84**	**25**	P		**P**	**16 46 28.6**	**+0.4**
	baz=309							
TSUM	**Tsumeb**	**85.01**	**247**	LR		LR	17 22 42.1	
	comp=Z,278nm,21.7s,baz=60,slow=34							
L29M	**L29M**	**85.01**	**21**	IAmb		IAmb	16 47 06.9	
	comp=Z,8.9nm,1.1s							
L29M	**L29M**	**85.01**	**21**	P		**P**	**16 46 29.6**	**+0.5**
	baz=314							
YUK3	**Moose Creek**	**85.12**	**23**	P		**P**	**16 46 30.3**	**+0.4**
	baz=312							
GRNC	**Granite Creek**	**85.34**	**24**	IAmb		IAmb	16 46 36.6	
	comp=Z,7.7nm,0.7s							
M29M	**Somme Creek**	**85.36**	**21**	IAmb		IAmb	16 46 33.8	
	comp=Z,6.0nm,0.7s							
M29M	**Somme Creek**	**85.36**	**21**	P		**P**	**16 46 31.2**	**+0.3**
	baz=314,SNR=12							
YUK8	**Steele Glacier**	**85.70**	**23**	P		**P**	**16 46 33.0**	**+0.2**
	baz=312							
M30M	**Minto, Yukon**	**85.82**	**21**	P		**P**	**16 46 32.6**	**-0.5**
	baz=315							
O28M	**Mount Upton**	**85.89**	**23**	IAmb		IAmb	16 46 37.5	
	comp=Z,7.1nm,0.9s							
O28M	**Mount Upton**	**85.89**	**23**	P		**P**	**16 46 34.2**	**+0.4**
	baz=312							
YUK4	**Talbot Arm**	**86.05**	**22**	P		**P**	**16 46 34.5**	**0.0**
	baz=314,SNR=7.1							
SFJD	**Kangerlussuaq**	**86.16**	**347**	LR		LR	17 29 25.4	
	comp=Z,471nm,19.0s,baz=28,slow=39							
PINM	**Pinnacle**	**86.32**	**24**	P		**P**	**16 46 36.1**	**+0.5**
	baz=312							
TORD	**Torodi Ar. Bea**	**86.36**	**283**	P		**P**	**16 46 36.0**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=54,slow=4.5,SNR=17							
TORD				PP		**PP**	**16 49 59.7**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=52,slow=7.7,SNR=3.9							
	comp=Z,3.4nm,0.8s							
YUK6	**Outpost Mounta**	**86.43**	**23**	P		**P**	**16 46 37.2**	**+0.8**
	baz=314,SNR=5.2							
N30M	**Aishikik Lake**	**86.51**	**22**	IAmb		IAmb	16 46 39.4	
	comp=Z,5.7nm,0.7s							
N30M	**Aishikik Lake**	**86.51**	**22**	P		**P**	**16 46 37.3**	**+0.7**
	baz=315							
O29M	**Mount Kennedy**	**86.80**	**23**	P		**P**	**16 46 39.0**	**+0.9**
	baz=314							
HYT	**Haines Junctio**	**86.81**	**22**	IAmb		IAmb	16 47 17.3	
	comp=Z,11nm,1.3s							
HYT	**Haines Junctio**	**86.81**	**22**	P		**P**	**16 46 39.1**	**+0.9**
	baz=314							
M31M	**Drury Creek, Y**	**86.87**	**20**	P		**P**	**16 46 38.4**	**+0.2**
	baz=317							
N31M	**Braeburn, Yuko**	**86.94**	**21**	IAmb		IAmb	16 46 41.2	
	comp=Z,12nm,0.7s							
N31M	**Braeburn, Yuko**	**86.94**	**21**	P		**P**	**16 46 39.1**	**+0.5**
	baz=316							
O30N	**Mendenhall**	**87.34**	**22**	IAmb		IAmb	16 46 43.4	
	comp=Z,7.0nm,0.7s							
O30N	**Mendenhall**	**87.34**	**22**	P		**P**	**16 46 41.0**	**+0.4**
	baz=316							
P30M	**Million Dollar**	**87.50**	**23**	P		**P**	**16 46 41.8**	**+0.3**
	baz=315							
MMPY	**Sheldon Lake,**	**87.52**	**19**	P		**P**	**16 46 41.6**	**+0.2**
	baz=320							
P29M	**Windy Craggy**	**87.57**	**23**	P		**P**	**16 46 42.0**	**+0.3**
	baz=314							
WHY	**Whitehorse**	**87.84**	**22**	P		**P**	**16 46 43.2**	**+0.1**
	baz=317							
N32M	**Quiet Lake**	**88.07**	**21**	P		**P**	**16 46 44.2**	**+0.1**
	baz=318							
PLBC	**Pleasant Camp**	**88.19**	**23**	P		**P**	**16 46 44.4**	**-0.2**
	baz=315							
SUR	**Sutherland**	**88.50**	**234**	LR		LR	17 25 30.3	
	comp=Z,202nm,19.4s,baz=78,slow=35							
SKAG	**Skagway**	**88.55**	**23**	P		**P**	**16 46 47.1**	**+0.8**
	baz=316							
P33M	**Teslin, Yukon**	**88.86**	**21**	P		**P**	**16 46 48.4**	**+0.6**
	baz=318							
P32M	**Atlin**	**89.02**	**22**	P		**P**	**16 46 48.8**	**+0.2**
	baz=318							
WRGLY	**Wrigley**	**89.17**	**16**	P		**P**	**16 46 49.4**	**+0.3**
	baz=327							
TGTN	**Hyland Airport**	**89.26**	**19**	P		**P**	**16 46 50.0**	**+0.3**
	baz=322							
S31K	**Pelican**	**89.31**	**24**	P		**P**	**16 46 50.2**	**+0.3**
	baz=316							
Q32M	**Nakina River**	**89.98**	**22**	P		**P**	**16 46 53.0**	**-0.4**
	baz=319							
R33M	**Jennings River**	**90.09**	**21**	P		**P**	**16 46 53.7**	**0.0**
	baz=320							
SIT	**Sitka**	**90.30**	**24**	P		**P**	**16 46 54.8**	**+0.3**
	baz=316							
DLBC	**Dease Lake**	**91.14**	**21**	LR		LR	17 32 23.2	
	comp=Z,334nm,18.9s,baz=280,slow=39							
S34M	**Telegraph Cree**	**91.17**	**22**	IAmb		IAmb	16 47 03.0	
	comp=Z,5.5nm,0.8s							
S34M	**Telegraph Cree**	**91.17**	**22**	P		**P**	**16 46 59.0**	**+0.4**
	baz=320							
YKA	**Yellowknife Ar**	**91.81**	**13**	P		**P**	**16 47 00.4**	**-1.0**
	comp=Z,2.4nm,0.7s,baz=332,slow=4.5,SNR=18							
YKA				PP		**PP**	**16 50 36.1**	**-3.4**
	comp=Z,0.5nm,0.7s,baz=336,slow=7.6,SNR=3.9							
YKA				LR		LR	17 32 12.5	
	comp=Z,180nm,18.7s,baz=315,slow=38							
	comp=Z,2.4nm,0.7s							
YKA	**Yellowknife Ar**	**91.81**	**13**	*i* P		**P**	**16 47 01.9**	**+0.4**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
YKA	**Yellowknife Ar**	**91.81**	**13**	P		**P**	**16 47 00.1**	**-1.4**
YKAW1	**Yellowknife Wh**	**91.84**	**13**	IAmb		IAmb	16 47 04.9	
	comp=Z,4.9nm,0.9s							
WRAK	**Wrangell Islan**	**91.88**	**23**	P		**P**	**16 47 02.2**	**+0.4**
	baz=319							
T35M	**Bob Quinn**	**92.20**	**22**	IAmb		IAmb	16 47 07.2	
	comp=Z,5.5nm,0.7s							
T35M	**Bob Quinn**	**92.20**	**22**	P		**P**	**16 47 04.0**	**+0.6**
	baz=321							
FRB	**Frobisher Bay**	**92.23**	**352**	LR		LR	17 32 22.0	
	comp=Z,316nm,20.8s,baz=358,slow=38							
CRAG	**Craig**	**92.30**	**24**	P		**P**	**16 47 04.1**	**+0.3**
	baz=318							
V35K	**Ketchikan**	**92.97**	**24**	P		**P**	**16 47 07.0**	**0.0**
	baz=319							
MAW	**Mawson**	**93.25**	**191**	LR		LR	17 23 46.6	
	comp=Z,142nm,20.9s,baz=26,slow=32							
DBIC	**Dimbokro**	**94.84**	**279**	LR		LR	17 33 46.6	
	comp=Z,303nm,19.4s,baz=74,slow=38							
BBB	**Bella Bella**	**96.73**	**24**	LR		LR	17 33 40.1	
	comp=Z,393nm,21.8s,baz=313,slow=37							
RPZ	**Rata Peaks**	**97.34**	**134**	LR		LR	17 33 10.7	
	comp=Z,77nm,21.2s,baz=270,slow=37							
URZ	**Urewera**	**99.38**	**128**	LR		LR	17 35 58.3	
	comp=Z,74nm,21.9s,baz=276,slow=38							
AFI	**Afiamalu**	**99.80**	**101**	LR		LR	17 31 50.0	
	comp=Z,54nm,19.8s,baz=20,slow=35							
PPT2	**Papeete2**	**121.19**	**97**	*e*LR		LR	17 29 54.3	
	comp=Z,132nm,24.0s							
TXAR	**Lajitas Array**	**125.33**	**18**	PKP		**PKiKP**	**16 52 55.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=282,slow=1.0,SNR=13							
TAOE	**Nuku Hiva Isla**	**126.99**	**84**	*e*LR		LR	17 32 44.8	
	comp=Z,147nm,24.5s							
SDV	**Santo Domingo**	**144.49**	**332**			**PKPab**	**16 53 28.5**	**-1.1**
CPUP	**Villa Florida**	**153.15**	**257**	PKPbc		**PKiKP**	**16 53 52.4**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=84,slow=2.7,SNR=9.7							
LPAZ	**La Paz**	**161.23**	**288**	PKP		**PKPdf**	**16 53 56.8**	**+0.9**
	comp=Z,1.9nm,1.0s,baz=57,slow=7.5,SNR=4.6							

IDC 17 16:42:26.9±4.3, 23°41.N×93°75.E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=342.3km s-min=30.5km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.09**	**341**	P	P	16 47 53.2	0.0
	0.1nm,0.4s,baz=153,slow=9.7,SNR=1.9						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**58.51**	**134**	P	P	16 52 25.0	-0.3
	0.2nm,0.6s,baz=322,slow=7.4,SNR=4.7						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**60.91**	**137**	P	P	16 52 41.9	+0.1
	0.3nm,0.5s,baz=317,slow=6.7,SNR=11						
	0.3nm,0.5s						

IDC 17 16:49:53.1±0.6, 14°.05N×144°.76E, h173km±5km, mb3.3/9, mbtmp3.8/9, Error ellipse: s-maj=36.0km s-min=14.6km az=85.0
NEIC 17 16:49:54.5±0.8, 14°.0N±0°.1×144°.5E±0°.2, h172km±9km, mb3.9/10, Error ellipse: s-maj=27.5km s-min=13.4km az=111.0

ISC 17 16:49:53.6±0.7, 14°.03N±0°.09×144°.5E±0°.1, h172km, n26, σ0s95/28, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.59**	**138**	P	**Pn**	**16 50 17.9**	**0.0**
	105nm,0.2s,baz=72,slow=3.2,SNR=82						
GUMO				S	**Sn**	**16 50 36.4**	**-0.1**
	194nm,0.3s,baz=335,slow=7.2,SNR=7.5						
GUMO	**Guam**	**0.59**	**138**		**Pn**	**16 50 18.5**	**+0.6**
GUMO					**Sn**	**16 50 37.0**	**+0.4**
DPSS	**Saipan**	**1.76**	**47**	Pn	**Pn**	**16 50 28.3**	**+0.8**
PATS	**Pohnpei**	**15.38**	**116**	P	**P**	**16 53 24.0**	**+1.4**
JGF	**Kuroka**	**22.41**	**345**	P	**P**	**16 54 38.8**	**+0.8**
JGF				IAmb	IAmb	16 54 51.8	
	comp=Z,4.4nm,0.8s						
MJAR	**Matsushiro Arr**	**23.11**	**347**	P	**P**	**16 54 44.0**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=173,slow=11,SNR=8.2						
	comp

LLP	**Lapu-Lapu**	**2.24**	**281**	*e*P		**Pb**	**17 02 04.4**	**+0.1**
LLP				*i* S		**Sg**	**17 02 34.3**	**-1.7**
BUKP	**Musuan**	**2.29**	**209**	*e*P		**Pb**	**17 02 06.1**	**+0.9**
BUKP				*e*S		**Sg**	**17 02 37.1**	**-0.5**
TBP	**Tagbilaran**	**2.31**	**265**	*e*P		**Pb**	**17 02 05.8**	**+0.2**
TBP				*e*S		**Sb**	**17 02 35.0**	**+1.0**
LSIP	**Lazi, Siquijor**	**2.64**	**254**	*e*P		**Pb**	**17 02 10.5**	**-0.6**
LSIP				*e*S		**Sb**	**17 02 44.3**	**+0.7**
KCP	**Kidapawan**	**3.06**	**201**	*i* P		**Pb**	**17 02 17.7**	**-0.7**
KCP				*e*S		**Sn**	**17 02 48.2**	**-0.6**
DCPH	**Dipolog City**	**3.09**	**245**	*i* P		**Pb**	**17 02 17.4**	**-1.5**
DCPH				*e*S		**Sn**	**17 02 51.1**	**+1.7**
PAGZ	**Pagadian**	**3.44**	**234**	*e*P		**Pb**	**17 02 23.5**	**-1.3**
WRA	**Warramunga Arr**	**30.71**	**165**	P		**P**	**17 07 37.9**	**-0.9**
	0.5nm,1.0s,baz=344,slow=8.4,SNR=3.2 0.5nm,1.0s							
ASAR	**Alice Springs**	**34.19**	**167**	P		**P**	**17 08 07.9**	**-1.4**
	0.2nm,0.7s,baz=354,slow=7.0,SNR=5.3 0.2nm,0.7s							
H11S3	**WAKE ISLAND Hy**	**40.10**	**73**	T		T	17 51 47.1	
	baz=262,slow=75,SNR=5.9							
H11S1	**WAKE ISLAND Hy**	**40.11**	**73**	T		T	17 51 51.0	
	baz=262,slow=75,SNR=6.2							
H11S2	**WAKE ISLAND Hy**	**40.12**	**73**	T		T	17 51 50.9	
	baz=262,slow=75,SNR=6.6							
H11N1	**WAKE ISLAND Hy**	**40.44**	**71**	T		T	17 52 16.5	
	baz=264,slow=74,SNR=7.1							
H11N2	**WAKE ISLAND Hy**	**40.45**	**71**	T		T	17 52 18.2	
	baz=264,slow=74,SNR=6.6							
H11N3	**WAKE ISLAND Hy**	**40.46**	**71**	T		T	17 52 24.3	
	baz=264,slow=74,SNR=7.7							
MKAR	**Makanchi Array**	**52.29**	**323**	P		**P**	**17 10 34.0**	**-1.3**
	0.4nm,0.6s,baz=106,slow=7.7,SNR=4.1 0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**56.35**	**326**	P		**P**	**17 11 03.7**	**-1.1**
	0.3nm,0.7s,baz=125,slow=5.8,SNR=2.7 0.3nm,0.7s							
YKA	**Yellowknife Ar**	**94.14**	**24**	P		**P**	**17 14 42.0**	**-0.2**
	0.4nm,0.7s,baz=308,slow=4.9,SNR=2.9 0.4nm,0.7s							

IDC ***17*** *17:03:24.9±4.0, 47°.57N×92°.45W, h0km, mbtmp2.8/2, ML3.5/1, Error ellipse: s-maj=47.5km s-min=19.4km az=79.0*

NEIC ***17*** *17:03:25.4±1.0, 47°.54N±0°.03×92°.59W±0°.06, h0km±1km, mb_Lg2.9/30, ML3.0/12, Error ellipse: s-maj=7.3km s-min=6.0km az=81.0*

ISC 17 17:03:23.9±1.1, 47°.55N±0°.05×92°.56W±0°.05, h0km, n27, σ0§67/18, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EYMN	**Ely**	**0.82**	**61**			**Pb**	**17 03 41.0**	**0.0**
E38A	**The Farm, Brul**	**1.17**	**144**			**Pn**	**17 03 48.0**	**+0.5**
E38A				IAML			17 04 11.5	
	234nm,0.5s							
E38A				IAML			17 04 21.4	
	240nm,1.7s							
EPLO	**Experimental L**	**2.26**	**340**	Pn		**Pb**	**17 04 04.8**	**-0.8**
EPLO				IAML			17 04 40.4	
	comp=E,69nm,1.5s							
SPMN	**Marine on St.**	**2.33**	**184**			**Pn**	**17 04 03.9**	**+0.3**
SPMN				IAmb_Lg			17 04 39.8	
	comp=Z,35nm,0.8s							
AGMN	**Agassiz Nation**	**2.34**	**290**			**Pn**	**17 04 04.1**	**+0.5**
AGMN				IAmb_Lg			17 04 38.2	
	comp=Z,45nm,0.9s							
AGMN				IAML			17 04 46.7	
	comp=Z,84nm,1.0s							
TBO	**Thunder Bay**	**2.38**	**61**			**Pn**	**17 04 04.2**	**0.0**
TBO				IAML			17 04 53.5	
	comp=E,105nm,1.3s							
TBO				IAML			17 04 53.6	
	comp=N,80nm,1.2s							
G40A	**Rib Lake**	**2.81**	**144**			**Pn**	**17 04 10.2**	**+0.2**
F33A	**5 Mile Ranch,**	**3.09**	**238**			**Pn**	**17 04 14.3**	**+0.4**
F33A				IAmb_Lg			17 05 07.4	
	comp=Z,48nm,1.2s							
ULM	**Lac du Bonnet**	**3.48**	**322**	Pn		**Pn**	**17 04 20.5**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=124,slow=15,SNR=1.4							
ULM				Pg		**Pb**	**17 04 26.2**	**0.0**
	comp=Z,0.7nm,0.3s,baz=138,slow=18,SNR=5.1							
ULM				Lg		Lg	17 05 13.7	
	comp=Z,5.8nm,0.3s,baz=34,slow=13,SNR=36							
ULM	**Lac du Bonnet**	**3.48**	**322**			**Pn**	**17 04 19.7**	**+0.5**
ULM				IAmb_Lg			17 05 15.3	
	comp=Z,56nm,1.0s							
I10CA	**LAC DU BONNET**	**3.50**	**321**	I		I	17 23 50.0	
	baz=137,slow=314,SNR=0.3							
I37A	**Lemond, Waseca**	**3.58**	**190**			**Pn**	**17 04 21.0**	**+0.3**
I40A	**Norwalk**	**3.90**	**159**	Pn		**Pn**	**17 04 25.6**	**+0.5**
I40A				IAmb_Lg			17 05 30.9	
	comp=Z,19nm,0.8s							
I42A	**Draeger Farm,**	**4.46**	**144**	Pn		**Pn**	**17 04 34.3**	**+1.5**
H43A	**Windswept, Lux**	**4.54**	**131**	Pn		**Pn**	**17 04 34.3**	**+0.5**
ECSD	**EROS Data Cent**	**4.76**	**218**			**Pn**	**17 04 37.4**	**+0.5**
ECSD				IAmb_Lg			17 06 05.7	
	comp=Z,17nm,1.2s							
JFWS	**Jewell Farm**	**4.92**	**160**			**Pn**	**17 04 38.8**	**-0.2**
JFWS				IAmb_Lg			17 06 06.3	
	comp=Z,28nm,0.9s							
L40A	**Anamosa**	**5.57**	**170**	IAmb_Lg			17 06 23.9	
	comp=Z,24nm,1.3s							
E28A	**Huff**	**5.64**	**263**	IAmb_Lg			17 06 38.3	
	comp=Z,17nm,0.9s							
E46A	**Sault Ste Mari**	**5.77**	**99**	IAmb_Lg			17 06 41.0	
	comp=Z,12nm,1.0s							
L34A	**Svendsen Farm,**	**6.21**	**207**	IAmb_Lg			17 06 45.4	
	comp=Z,16nm,0.8s							
N38A	**Joes South For**	**6.77**	**184**	IAmb_Lg			17 07 11.7	
	comp=Z,20nm,1.0s							
N41A	**Harden Midland**	**6.95**	**169**	IAmb_Lg			17 07 07.4	
	comp=Z,16nm,1.0s							
K30B	**Basset**	**6.97**	**228**	IAmb_Lg			17 07 16.7	
	comp=Z,23nm,0.9s							
FFC	**Flin Flon**	**9.30**	**324**	IAmb_Lg			17 08 20.4	
	comp=Z,6.3nm,1.2s							
PDAR	**Pinedale Array**	**12.91**	**254**	Pn		**Pn**	**17 06 28.3**	**-0.5**
	baz=54,slow=12,SNR=0.8 comp=Z,0.2nm,0.4s							
I56US	**NEWPORT INFRASI**	**16.47**	**282**	I		I	18 46 00.0	
	baz=84,slow=308,SNR=0.7							

IDC ***17*** *17:05:30.0±0.8, 23°.16N×93°.52E, h0km, mb3.7/11, mbtmp3.7/11, MS3.9/3, Error ellipse: s-maj=17.8km s-min=14.0km az=173.0*

NDI ***17*** *17:05:33.4±1.9, 23°.18N×93°.33E, h10km, ML3.0, MW3.2, Presumed earthquake*

ISC 17 17:05:32.3±0.8, 23°.20N±0°.06×93°.29E±0°.07, h10km, n23, σ1§44/26, mb3.6/10, MS3.9/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BRDH	**Bariadhala**	**1.60**	**251**	Pn		**Pn**	**17 06 01.8**	**+1.2**
	72nm,0.3s,baz=73,slow=11,SNR=12							
BRDH				Lg		Lg	17 06 27.2	
	170nm,0.3s,baz=258,slow=20,SNR=22							
IMP	**Imphal**	**1.73**	**20**	*e*P		**Pn**	**17 06 04.0**	**+1.5**
IMP				*e*S		**Sb**	**17 06 27.4**	**+1.3**
IMP				IAML			17 06 48.3	
	comp=E,141nm,0.6s							
IMP				IAML			17 07 04.1	
	comp=E,132nm,0.6s							
KOHI	**KOHIMA**	**2.62**	**16**	*e*P		**Pn**	**17 06 15.8**	**+1.0**
KOHI				*e*S		**Sn**	**17 06 48.1**	**+1.4**
KOHI				IAML			17 06 58.7	
	comp=E,218nm,1.0s							
KOHI				IAML			17 07 04.9	
	comp=E,174nm,0.9s							
KOHI				IAML			17 07 10.8	
	comp=E,154nm,0.9s							
SHL	**Shillong**	**2.68**	**332**	*e*P		**Pn**	**17 06 16.0**	**+0.3**
SHL				*e*S		**Sn**	**17 06 48.9**	**+0.6**
SHL				IAML			17 07 01.2	
	comp=E,105nm,0.2s							
SHL				IAML			17 07 08.9	
	comp=E,199nm,0.2s							
GUWA	**GUWAHATI**	**3.31**	**334**	*e*S		**Sn**	**17 07 03.5**	**-0.2**
GUWA				IAML			17 07 10.2	
	comp=E,22nm,0.8s							
GUWA				IAML			17 07 10.3	
	comp=N,16nm,0.0s							
TEZP	**TEZPUR**	**3.43**	**353**	*ex*		**Pn**	**17 06 24.8**	**-1.0**
TEZP				*ex*		**Sn**	**17 07 02.5**	**-4.1**
TEZP				IAML			17 07 10.4	
	comp=N,55nm,0.3s							
TEZP				IAML			17 07 10.9	
	comp=E,41nm,0.3s							
DHUB	**DHUBRI**	**4.11**	**314**	*e*P		**Pn**	**17 06 35.4**	**+0.3**
BOK	**Bokaro**	**6.82**	**276**	*e*P		**Pn**	**17 07 14.4**	**+2.0**
BOK				*e*S		**Sn**	**17 08 28.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**7.09**	**131**	Pn		**Pn**	**17 07 17.1**	**+0.9**
	comp=E,0.4nm,0.3s,baz=306,slow=14,SNR=16							
CMAR				Lg		Lg	17 09 06.0	
	comp=E,0.3nm,0.3s,baz=304,slow=24,SNR=1.1							
BWNR	**Bhubaneshwar**	**7.54**	**248**	*e*P		**Pn**	**17 07 23.3**	**+1.1**
MKAR	**Makanchi Array**	**25.15**	**342**	P		**P**	**17 10 57.1**	**-0.5**
	comp=E,0.4nm,0.4s,baz=176,slow=10,SNR=11							
MKAR				LR		LR	17 23 06.1	
	comp=E,180nm,19.2s,baz=318,slow=42 comp=E,0.4nm,0.4s							
SONM	**Songino Array**	**26.72**	**20**	P		**P**	**17 11 11.5**	**-0.4**
	comp=E,0.5nm,0.5s,baz=207,slow=13,SNR=3.5 comp=E,0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**29.69**	**341**	P		**P**	**17 11 37.8**	**-0.4**
	comp=E,0.2nm,0.4s,baz=152,slow=9.0,SNR=2.4 comp=E,0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**31.36**	**350**	P		**P**	**17 11 52.7**	**-0.2**
	comp=E,0.3nm,0.3s,baz=201,slow=7.7,SNR=1.9 comp=E,0.3nm,0.3s							
OBN	**Obninsk**	**52.36**	**323**	LR		LR	17 38 42.9	
	comp=E,123nm,20.1s,baz=174,slow=38							
WRA	**Warramunga Arr**	**58.67**	**134**	P		**P**	**17 15 27.9**	**-2.3**
	comp=E,0.4nm,0.5s,baz=321,slow=7.4,SNR=24 comp=E,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**60.72**	**338**	P		**P**	**17 15 44.7**	**+1.1**
	comp=E,0.8nm,0.7s,baz=104,slow=6.9,SNR=1.2 comp=E,0.8nm,0.7s							
ASAR	**Alice Springs**	**61.05**	**137**	P		**P**	**17 15 44.7**	**-1.9**
	comp=E,1.0nm,0.5s,baz=319,slow=6.7,SNR=65 comp=E,1.0nm,0.5s							
HFS	**Hagfors**	**65.02**	**327**	P		**P**	**17 16 12.8**	**+0.4**
	comp=E,1.4nm,0.8s,baz=46,slow=6.2,SNR=1.2 comp=E,1.4nm,0.8s							
GERES	**GERESS Array B**	**66.17**	**315**	P		**P**	**17 16 21.0**	**+0.8**
	comp=E,0.2nm,0.5s,baz=94,slow=8.7,SNR=2.8 comp=E,0.2nm,0.5s							
VAE	**Valguarnera**	**67.75**	**303**	LR		LR	17 50 49.7	
	comp=E,91nm,18.8s,baz=160,slow=40							
ILAR	**Eielson Array**	**80.92**	**22**	P		**P**	**17 17 45.6**	**-0.9**
	comp=E,0.3nm,0.6s,baz=292,slow=4.9,SNR=4.5 comp=E,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**86.35**	**283**	P		**P**	**17 18 15.7**	**+0.4**
	comp=E,0.3nm,0.5s,baz=90,slow=4.3,SNR=2.2 comp=E,0.3nm,0.5s							

IDC ***17*** *17:15:09.1±0.8, 1°.44S×99°.34E, h0km, mb4.0/14, mbtmp4.0/15, ML3.7/1, Error ellipse: s-maj=37.1km s-min=15.1km az=59.0*

NEIC ***17*** *17:15:13.7±1.0, 1°.40S±0°.08×99°.32E±0°.09, h27km±4km, mb4.1/15, Error ellipse: s-maj=14.7km s-min=7.3km az=50.0*

DJA ***17*** *17:15:16.1±0.3, 1°.S±3°×9°9E±°, h93km±9km, M4.2/30, mB5.3/1, mb4.2/7, MLv4.2/30, Mw(mB)4.8/1*

ISC 17 17:15:14.0±0.5, 1°.32S±0°.05×99°.42E±0°.06, h30km, n66, σ1§10/57, mb4.1/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PPI	**Padang Panjang**	**1.30**	**49**	P		**Pb**	**17 15 39.2**	**+1.3**
PPSI	**Pulau Pagai**	**1.55**	**157**	P		**Pb**	**17 15 44.7**	**+2.6**
BKNI	**Bangkinang**	**2.31**	**45**			**Pn**	**17 15 52.9**	**+2.9**
BKNI	**Bangkinang**	**2.31**	**45**	P		**Pb**	**17 15 54.4**	**-0.5**
GSI	**Gunungsitoli**	**3.19**	**325**			**Pn**	**17 16 02.0**	**-0.1**
GSI	**Gunungsitoli**	**3.19**	**325**	P		**Pn**	**17 16 03.8**	**+1.6**
KSI	**Kapahiang**	**3.93**	**126**	P		**Pn**	**17 16 14.5**	**+2.1**
RPSI	**Rantau Prapat**	**4.02**	**353**	Pn		**Pn**	**17 16 14.1**	**+0.6**
MNAI	**Manna**	**4.65**	**131**	Pn		**Pn**	**17 16 22.6**	**+0.3**
MNAI				Sn		**Sn**	**17 17 13.4**	**-1.8**
MNAI	**Manna**	**4.65**	**131**	P		**Pn**	**17 16 23.1**	**+0.9**
DSRI	**Dabo**	**5.23**	**81**	P		**Pn**	**17 16 29.1**	**-1.1**
	0.1nm10nm,0.7s							
MYKOM	**Kota Tinggi**	**5.41**	**55**	Pn		**Pn**	**17 16 33.3**	**+0.7**
MYKOM	**Kota Tinggi**	**5.41**	**55**	P		**Pn**	**17 16 35.9**	**+3.3**
KULM	**Kulim**	**6.68**	**11**	Pn		**Pn**	**17 16 51.3**	**+1.2**
KULM	**Kulim**	**6.68**	**11**	P		**Pn**	**17 16 51.6**	**+1.4**
UGM	**Wanagama**	**12.86**	**121**	Pn		**Pn**	**17 18 14.8**	**-0.1**
KKM	**Kota Kinabalu**	**18.30**	**66**	P		**P**	**17 19 26.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**19.66**	**359**	P		**P**	**17 19 40.4**	**-0.2**
	0.1nm,0.3s,baz=176,slow=11,SNR=13 1.4nm,0.7s							
H08S2	**Diego Garcia H**	**27.55**	**256**	T		T	17 48 58.8	
	baz=78,slow=75,SNR=130							
H08S3	**Diego Garcia H**	**27.56**	**256**	T		T	17 49 01.0	
	baz=78,slow=75,SNR=170							
H08S1	**Diego Carcia H**	**27.57**	**256**	T		T	17 49 02.2	
	baz=78,slow=75,SNR=109							
FITZ	**Fitzroy Crossi**	**30.68**	**125**	P		**P**	**17 21 24.5**	**-1.7**
H01W3	**Cape Leeuwin H**	**36.10**	**159**	T		T	18 00 05.7	
	baz=335,slow=76,SNR=54							
H01W2	**Cape Leeuwin H**	**36.12**	**159**	T		T	18 00 05.8	
	baz=335,slow=76,SNR=57							
H01W1	**Cape Leeuwin H**	**36.12**	**159**	T		T	18 00 07.4	
	baz=335,slow=76,SNR=50							
WRA	**Warramunga Arr**	**38.84**	**121**	P		**P**	**17 22 35.6**	**-1.1**
	2.8nm,0.8s,baz=302,slow=9.2,SNR=46							
WRA				PcP		**PcP**	**17 24 47.5**	**-0.2**
	0.2nm,0.7s,baz=315,slow=3.4,SNR=1.5 2.8nm,0.8s							
WRA	**Warramunga Arr**	**38.84**	**121**	IAmb		IAmb	17 22 43.7	
	comp=Z,0.5nm,1.4s							
WR8	**Warramunga Arr**	**38.98**	**121**	P		**P**	**17 22 36.8**	**-1.2**
AS31	**Alice Springs**	**40.12**	**126**	P		**P**	**17 22 46.8**	**-0.7**
ASAR	**Alice Springs**	**40.12**	**126**	P		**P**	**17 22 46.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=296,slow=7.0,SNR=29							
ASAR				PcP		**PcP**	**17 24 51.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=290,slow=3.1,SNR=1.6 comp=Z,1.2nm,0.7s							
KSRS	**Korea Array**	**46.74**	**31**	P		**P**	**17 23 40.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=230,slow=8.7,SNR=5.2 comp=Z,0.6nm,0.7s							
INKA	**Innaminka**	**47.47**	**127**	P		**P**	**17 23 46.0**	**-0.4**
INKA				IAmb		IAmb	17 23 47.5	
	comp=Z,2.5nm,1.1s							
SONM	**Songino Array**	**49.33**	**6**	P		**P**	**17 24 01.7**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=186,slow=10,SNR=4.8							
SONM				PcP		**PcP**	**17 25 22.5**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=172,slow=3.7,SNR=2.8 comp=Z,0.6nm,0.7s							
SONM	**Songino Array**	**49.33**	**6**	P		**P**	**17 24 01.4**	**+0.9**
SONM				IAmb		IAmb	17 24 02.5	
	comp=Z,2.0nm,1.4s							
CTAO	**Charters Tower**	**49.41**	**115**	P		**P**	**17 24 00.6**	**-0.9**
STKA	**Stephens Creek**	**50.03**	**132**	P		**P**	**17 24 06.0**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=326,slow=8.8,SNR=3.2 comp=Z,2.2nm,0.8s							
MKAR	**Makanchi Array**	**50.22**	**345**	P		**P**	**17 24 08.2**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=146,slow=8.3,SNR=16							
MKAR				PcP		**PcP**	**17 25 26.8**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=165,slow=5.0,SNR=1.3 comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**50.22**	**345**	P		**P**	**17 24 07.5**	**+0.2**
USRK	**Ussuriysk Ar.**	**53.84**	**29**	P		**P**	**17 24 34.9**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=214,slow=10,SNR=2.1 comp=Z,1.4nm,0.6s							
KURBB	**Kurchatov Arra**	**54.74**	**344**	P		**P**	**17 24 41.2**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=163,slow=7.1,SNR=5.9 comp=Z,1.0nm,0.9s							
KURK	**Kurchatov**	**54.80**	**344**	P		**P**	**17 24 41.1**	**+0.2**
KURK	**Kurchatov**	**54.80**	**344**	IAmb		IAmb	17 24 47.0	
	comp=Z,1.6nm,0.6s							
ZAA0	**Zalesovo Array**	**56.40**	**350**	P		**P**	**17 24 52.2**	**-0.2**
ZAA0				IAmb		IAmb	17 25 08.6	
	comp=Z,2.5nm,0.8s							
ZALV	**Zalesovo Beam**	**56.40**	**350**	P		**P**	**17 24 52.8**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=170,slow=4.5,SNR=8.0 comp=Z,1.3nm,0.4s							
ZALV	**Zalesovo Beam**	**56.40**	**350**			**P**	**17 24 52.5**	**+0.1**
AB31	**Akbulak array**	**60.77**	**331**	P		**P**	**17 25 22.1**	**-0.9**
AB31				IAmb		IAmb	17 25 22.7	
	comp=Z,1.9nm,1.2s							
ABKAR	**Akbulak array**	**60.77**	**331**	P		**P**	**17 25 21.5**	**-1.5**
H04N2	**CROZET ISLANDS**	**61.00**	**216**	T		T	18 30 49.7	
	baz=59,slow=75,SNR=132							
H04N1	**CROZET ISLANDS**	**61.01**	**216**	T		T	18 30 58.7	
	baz=59,slow=75,SNR=143							
H04N3	**CROZET ISLANDS**	**61.01**	**216**	T		T	18 30 57.3	
	baz=59,slow=75,SNR=136							
H04S1	**CROZET ISLANDS**	**61.30**	**215**	T		T	18 31 08.6	
	baz=56,slow=75,SNR=58							
H04S3	**CROZET ISLANDS**	**61.31**	**215**	T		T	18 31 06.0	
	baz=56,slow=75,SNR=71							
H04S2	**CROZET ISLANDS**	**61.31**	**215**	T		T	18 31 10.6	
	baz=56,slow=75,SNR=44							
YAK	**Yakutsk**	**67.24**	**15**	P		**P**	**17 26 04.5**	**-0.8**
KBZ	**Khabaz**	**67.41**	**319**	P		**P**	**17 26 06.2**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=135,slow=5.0,SNR=4.0 comp=Z,1.4nm,0.6s							
BURAR	**Bucovina Array**	**80.37**	**319**	P		**P**	**17 27 22.7**	**0.0**
BURAR				IAmb		IAmb	17 27 23.9	
	comp=Z,0.9nm,0.8s							
BUR08	**Bucovina Ar. S**	**80.38**	**319**	P		**P**	**17 27 22.8**	**0.0**
BUR08				IAmb		IAmb	17 27 24.0	
	comp=Z,1.0nm,0.7s							
FINES	**FINESS Array B**	**83.24**	**332**	P		**P**	**17 27 37.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=88,slow=9.7,SNR=5.8 comp=Z,0.6nm,0.6s							
QSPA	**South Pole Qui**	**88.64**	**180**	P		**P**	**17 28 04.0**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=240,slow=2.6,SNR=2.5 comp=Z,1.0nm,1.0s							
QSPA	**South Pole Qui**	**88.64**	**180**	P		**P**	**17 28 03.2**	**-0.9**
HFS	**Hagfors**	**89.00**	**330**	P		**P**	**17 28 05.9**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=87,slow=8.8,SNR=1.8 comp=Z,1.3nm,0.9s							
SPITS	**Spitsbergen Ar**	**89.85**	**348**	P		**P**	**17 28 09.8**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=69,slow=8.2,SNR=1.9 comp=Z,4.9nm,0.9s							
TX31	**Lajitas Ar. Si**	**144.51**	**36**			**PKPab**	**17 34 46.7**	**-0.1**
TXAR	**Lajitas Array**	**144.51**	**36**	PKP		**PKPab**	**17 34 48.1**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=288,slow=1.3,SNR=26							
TZTN	**Tazewell**	**144.84**	**4**	PKPdf		**PKPab**	**17 34 47.4**	**-0.2**
CO03	**El Pedregal**	**146.66**	**196**	PKPbc		**PKPdf**	**17 34 52.8**	**+0.8**

BJI ***17*** *17:35:50.4, 7°.91S×148°.34E, h109km, mB5.0/5, mb4.8/38*

NEIC ***17*** *17:35:52.0±1.5, 8°.04S±0°.06×147°.91E±0°.07, h97km±3km, mb4.8/67, Error ellipse: s-maj=11.5km s-min=7.1km az=125.0*

DJA ***17*** *17:35:52.9±0.9, 8°.S±5°×14°8E±°, h104km±5km, M4.9/25, mb4.8/25, mB5.8/7, MLv4.6/1, Mw(mB)5.3/7*

IDC ***17*** *17:35:52.9±1.1, 8°.03S×147°.74E, h102km±9km, mb4.1/19, mbtmp4.5/23, MS3.2/1, Error ellipse: s-maj=18.0km s-min=9.2km az=99.0*

ISC 17 17:35:51.7±0.5, 8°.05S±0°.04×147°.90E±0°.06, h99km±4km, n175, σ1§29/186, mb4.7/62, 2C-1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**1.53**	**209**	P		**Pn**	**17 36 18.9**	**+0.6**
	1µm,0.5s,baz=30,slow=8.0,SNR=998							
PMG				S		**Sn**	**17 36 39.1**	**+0.6**
	962nm,0.3s,baz=27,slow=12,SNR=8.5							
PMG				LR		LR	17 36 43.3	
	comp=Z,289nm,18.1s,baz=8.0,slow=34							
PMG	**Port Moresby**	**1.53**	**209**	P		**Sn**	**17 36 38.9**	**+0.4**
PMG	**Port Moresby**	**1.53**	**209**	P		**Pn**	**17 36 18.8**	**+0.5**
PMG	**Port Moresby**	**1.53**	**209**	P		**Sn**	**17 36 38.8**	**+0.3**
PMG	**Port Moresby**	**1.53**	**209**			**Pn**	**17 36 18.8**	**+0.5**
PMG				Sn		**Sn**	**17 36 38.1**	**-0.4**
PMG	**Port Moresby**	**1.53**	**209**	P		**Pn**	**17 36 19.8**	**+1.5**
BULU	**Kimbe**	**3.46**	**44**	P		Pn	17 36 52.9	+9.2
RABL	**Rabaul**	**5.71**	**48**			**Pn**	**17 37 13.6**	**-0.6**
RABL				Sn		**Sn**	**17 38 13.3**	**-5.2**
MANU	**Manus Island**	**5.99**	**355**	Pn		**Pn**	**17 37 18.3**	**+0.3**
COEN	**Coen**	**7.48**	**218**	Pn		**Pn**	**17 37 38.5**	**+0.3**
COEN				Sn		**Sn**	**17 38 58.6**	**-2.9**
JAY	**Jayapura**	**9.03**	**307**	P		**Pn**	**17 37 58.3**	**-1.1**
	6.2nm,0.3s,baz=133,slow=6.7,SNR=21							
TATA	**Tatamba Isabel**	**11.79**	**92**	P		Pn	17 38 44.3	+7.6
CTA	**Charters Tower**	**12.07**	**187**	P		**Pn**	**17 38 42.8**	**+2.4**
	12nm,0.4s,baz=0.2,slow=13,SNR=44							
CTAO	**Charters Tower**	**12.07**	**187**	P		**Pn**	**17 38 42.0**	**+1.6**
CTAO	**Charters Tower**	**12.07**	**187**			**Pn**	**17 38 42.8**	**+2.4**
FAKI	**Fak Fak**	**16.39**	**287**	P		**Pn**	**17 39 35.5**	**-0.6**
FAKI	**Fak Fak**	**16.39**	**287**			**Pn**	**17 39 36.2**	**+0.1**
MTN	**Manton Dam**	**17.16**	**252**			**Pn**	**17 39 44.9**	**-0.6**
EIDS	**Eidsvold**	**17.48**	**170**	P		**P**	**17 39 48.6**	**-0.5**
WB0	**Warramunga Arr**	**17.52**	**227**			**P**	**17 39 49.1**	**-0.4**
WRAB	**Tennant

comp=Z,28nm,1.2s
JGF Kuroka 44.54 348 P P 17 43 56.6 +2.8
JGF Kuroka 44.54 348 P P 17 43 53.2 -0.5
MYKOM Kota Tinggi 45.01 281 P P 17 43 57.0 -0.8
MYKOM IAmb IAmb 17 43 59.2
comp=Z,9.3nm,0.9s
MJAR Matsushiro Arr 45.28 349 P P 17 43 59.0 -0.7
comp=Z,6.3nm,0.9s,baz=179,slow=8.8,SNR=18
comp=Z,6.3nm,0.9s
MJAR Matsushiro Arr 45.28 349 P 17 43 59.1 -0.5
MAJO Matsushiro 45.28 349 P P 17 43 59.4 -0.2
MAJO IAmb IAmb 17 44 00.2
comp=Z,12nm,0.8s
MAJO Matsushiro 45.28 349 P P 17 43 59.1 -0.5
MAJO sP **sP** **17 44 32.9 -0.2**
MJB9 Matsu-Tunnel 45.29 349 P P 17 44 00.1 +0.4
MJB9 IAmb IAmb 17 44 01.2
comp=Z,12nm,0.8s
NJ2 Nanjing 48.58 327 *eP* **P 17 44 25.8 +0.5**
NJ2 pmax pmax
comp=Z,17nm,0.7s
KULM Kulim 48.96 284 P P 17 44 28.9 +0.3
KULM Kulim 48.96 284 P P 17 44 27.8 -0.8
KSRS Korea Array 48.98 339 P P 17 44 28.5 +0.3
comp=Z,3.9nm,0.7s,baz=154,slow=8.1,SNR=26
comp=Z,3.9nm,0.7s
KSAR Wonju Array Be 48.98 339 P P 17 44 27.7 -0.6
KSAR PcP **PcP** **17 45 49.8 -1.2**
KS19 Wonju Array Si 49.04 339 P 17 44 28.6 -0.2
KS19 IAmb IAmb 17 44 29.3
comp=Z,11nm,1.0s
KS19 **PcP** **17 45 50.4 -0.8**
RPSI Rantau Prapat 50.00 280 P P 17 44 35.1 -1.4
RPSI IAmb IAmb 17 44 37.1
comp=Z,13nm,1.2s
GSI Gunungsitoli 51.03 278 P P 17 44 44.6 +0.3
GSI Gunungsitoli 51.03 278 P P 17 44 43.3 -1.0
SLVN Son La 52.13 305 P P 17 44 52.4 0.0
JKA Kamikawa-asahi 52.15 355 P P 17 44 52.7 +0.7
USRK Ussuriysk Ar. 53.97 346 P P 17 45 06.2 +0.9
comp=Z,2.1nm,0.6s,baz=125,slow=8.0,SNR=2.3
comp=Z,2.1nm,0.6s
YSS Yuzhno-Sakhali 54.95 356 P P 17 45 12.9 +0.5
YSS PcP **PcP** **17 46 13.0 -0.1**
KMI2 Kunming 54.97 308 P P 17 45 14.8 +1.6
KMI2 pmax pmax
comp=Z,12nm,0.9s
MDJ Mudanjiang 54.97 344 P P 17 45 13.8 +1.2
MDJ pmax pmax
comp=Z,7.0nm,0.5s
MDJ L L
comp=Z,80nm,5.1s
MDJ L L
comp=Z,53nm,4.4s
MDJ L L
comp=Z,120nm,11.4s
CM31 Chiang Mai Arr 55.02 299 P P 17 45 13.2 -0.3
CM31 IAmb IAmb 17 45 15.5
comp=Z,6.5nm,0.8s
CMAR Chiang Mai Arr 55.02 299 P P 17 45 14.7 +1.2
comp=Z,5.0nm,0.7s,baz=121,slow=5.6,SNR=45
comp=Z,5.0nm,0.7s
CMAR Chiang Mai Arr 55.02 299 P 17 45 13.3 -0.1
CHTO Chiang Mai 55.16 299 P P 17 45 14.9 +0.4
CHTO IAmb IAmb 17 45 16.2
comp=Z,5.5nm,0.8s
CHTO Chiang Mai 55.16 299 P P 17 45 15.2 +0.8
comp=Z,8.7nm,1.7s
CHTO Chiang Mai 55.16 299 P P 17 45 15.3 +0.8
XAN Xi'an 55.83 321 P P 17 45 18.9 -0.2
XAN pmax pmax
comp=Z,13nm,0.9s
XAN Xi'an 55.83 321 P P 17 45 18.9 -0.2
XAN sP **sP** **17 45 54.0 -0.1**
XAN PcP **PcP** **17 46 16.4 -0.5**
HHC Hu-ho-hao-te 59.04 328 *eP* **P 17 45 45.3 +3.7**
HHC pmax pmax
comp=Z,9.0nm,0.6s
LZH Lanzhou 60.34 320 *eP* **P 17 45 52.0 +1.3**
LZH pP pP 17 46 15.9 +0.8
LZH pmax pmax
comp=Z,21nm,1.4s
LZDM Lanzhou Array 60.36 319 P P 17 45 52.5 +1.5
comp=Z,0.6nm,0.3s,baz=116,slow=12,SNR=3.8
comp=Z,0.6nm,0.3s
MORE Moreh 61.34 303 P P 17 45 56.6 -0.9
MORE IAmb IAmb 17 45 57.3
comp=Z,14nm,1.1s
PEA0B Petropavlovsk- 61.49 7 P P 17 45 57.9 0.0
PETK Petropavlovsk- 61.49 7 P P 17 45 59.0 +1.1
comp=Z,2.9nm,0.5s,baz=157,slow=5.2,SNR=13
comp=Z,2.9nm,0.5s
PETK Petropavlovsk- 61.49 7 P P 17 45 58.0 +0.1
CASY Casey 63.53 196 P P 17 46 11.7 +0.4
CASY IAmb IAmb 17 46 29.9
comp=Z,15nm,1.6s
CASY Casey 63.53 196 P P 17 46 12.1 +0.7
SHL Shillong 63.88 303 P P 17 46 14.2 -0.4
SHL IAmb IAmb 17 46 16.6
comp=Z,24nm,1.1s
GTA2 Gaotai 64.96 320 *eP* **P 17 46 22.3 +1.0**
GTA2 pP pP 17 46 45.3 -0.7
GTA2 pmax pmax
comp=Z,5.0nm,1.2s
ULN Ulaanbaatar 66.33 331 P P 17 46 30.3 +0.4
ULN x **pP** **17 46 55.4 +0.7**
SONM Songino Array 66.62 331 P P 17 46 31.8 0.0
comp=Z,2.3nm,0.9s,baz=134,slow=4.4,SNR=9.6
comp=Z,2.3nm,0.9s
SONM Songino Array 66.62 331 P P 17 46 31.9 +0.1
ATKA Atka Island 68.21 24 P P 17 46 45.7 +4.2
CCD Concordia, Ant 68.45 187 P P 17 46 44.3 +1.1
CCD PcP **pP** **17 47 09.1 +1.0**
PALK Pallekele 68.70 281 P P 17 46 46.2 +0.8
comp=Z,5.2nm,0.7s,baz=122,slow=3.1,SNR=5.2
comp=Z,5.2nm,0.7s
VNDA Vanda 69.82 177 P P 17 46 52.6 +1.5
comp=Z,1.9nm,0.8s,baz=334,slow=7.4,SNR=11
comp=Z,1.9nm,0.8s
VNDA Vanda 69.82 177 P P 17 46 52.2 +1.1
VNDA Vanda 69.82 177 P P 17 46 51.8 +0.6
VNDA pP **pP** **17 47 15.8 -0.4**
SEY Seymchan 70.86 2 P P 17 46 58.0 +0.5
comp=Z,1.5nm,0.5s,baz=96,slow=10,SNR=6.7
comp=Z,1.5nm,0.5s
LVA Lava Point 73.05 26 P P 17 47 11.6 +0.7
AKUT Akutan 73.15 26 P P 17 47 11.7 +0.3
WMQ Urumqi 74.92 319 ⇓*P* **P 17 47 23.5 +1.4**
WMQ pmax pmax
comp=Z,14nm,1.1s
HMDM Hanimaadhoo 75.94 279 P P 17 47 27.0 -1.4
SDPT Sand Point 76.30 27 P P 17 47 29.4 -0.1
CHGN Chignik 77.80 27 P P 17 47 38.0 +0.1
CHGN IAmb IAmb 17 50 23.2
comp=Z,16nm,1.2s
O14K Tigyukauivet M 78.35 24 P P 17 47 41.4 +0.4
O14K IAmb IAmb 17 50 18.8
comp=Z,48nm,1.8s
O15K Ungalikthiuk R 78.89 25 P P 17 47 43.8 -0.2
O15K IAmb IAmb 17 50 18.1
comp=Z,26nm,1.8s
M14K Bethel 79.02 23 P P 17 47 44.1 -0.5
M14K IAmb IAmb 17 49 02.6
comp=Z,32nm,1.9s
N15K Kwethluk River 79.38 24 P P 17 47 46.5 -0.2
N15K IAmb IAmb 17 49 46.0
comp=Z,21nm,1.7s
MKAR Makanchi Array 79.64 320 P P 17 47 48.7 +0.4
comp=Z,3.6nm,0.7s,baz=110,slow=5.7,SNR=39
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 79.64 320 P 17 47 48.6 +0.2
MAKZ Makanchi 79.84 320 P 17 47 49.4 -0.1
MAKZ Makanchi 79.84 320 P P 17 47 49.7 +0.3
MAKZ PcP **PcP** **17 47 56.6 -0.2**
O16K Kokwok River B 79.85 25 P P 17 47 49.7 +0.6
O16K IAmb IAmb 17 49 49.3
comp=Z,22nm,1.9s
K15K Wolf Creek Mou 80.16 21 P P 17 47 51.3 +0.6
K15K IAmb IAmb 17 48 51.2
comp=Z,36nm,1.9s
PDGK Podgornoye 80.17 316 P 17 47 51.3 -0.2
ACHA Angle Creek He 80.26 27 P P 17 47 51.2 -0.3
ACHA IAmb IAmb 17 48 09.6
comp=Z,5.2nm,0.5s
L16K Owhat River 80.56 23 P P 17 47 53.2 +0.3
L16K IAmb IAmb 17 49 36.1
comp=Z,20nm,1.9s
PRZ Przheval'sk 80.63 315 IAmb IAmb 17 47 56.4
comp=Z,15nm,0.7s
OHAK Old Harbor 80.67 28 P P 17 47 53.9 +0.4
OHAK IAmb IAmb 17 48 10.1
comp=Z,29nm,1.8s
MAW Mawson 80.71 203 P P 17 47 54.0 +0.4
N17K Nushagak Hills 80.76 24 P P 17 47 54.3 +0.3
ZAAO Zalesovo Array 81.22 328 P P 17 47 55.5 -1.1
ZALV Zalesovo Beam 81.22 328 P P 17 47 55.7 -0.8
comp=Z,2.2nm,0.5s,baz=114,slow=5.8,SNR=14
comp=Z,2.2nm,0.5s
KDJ Kajisay 81.36 315 P P 17 47 58.1 +0.3
KDJ IAmb IAmb 17 47 59.6
comp=Z,9.7nm,0.8s
N18K Kilae Creek 81.38 24 P P 17 47 58.2 +0.9
N18K IAmb IAmb 17 48 18.6
comp=Z,24nm,2.0s
KSH2 Kashi 81.60 311 P P 17 48 00.0 +0.9
KSH2 pmax pmax
comp=Z,3.0nm,1.1s
NIL Nilore 81.84 306 P 17 47 60.0 -0.4
NIL IAmb IAmb 17 48 01.7
comp=Z,11nm,0.8s
QSPA South Pole Qui 81.93 180 P P 17 48 01.2 +0.9
comp=Z,6.3nm,0.6s,baz=354,slow=1.4,SNR=78
comp=Z,6.3nm,0.6s
QSPA South Pole Qui 81.93 180 P 17 48 00.7 +0.3
KURK Kurchatov 83.38 323 P 17 48 07.1 -0.8
KURK Kurchatov 83.38 323 P P 17 48 07.9 0.0
KURBB Kurchatov Arra 83.40 323 P P 17 48 08.2 +0.1
comp=Z,1.8nm,0.7s,baz=116,slow=4.1,SNR=12
comp=Z,1.8nm,0.7s
KK31 Karatay Array 86.36 314 P 17 48 22.2 -0.9
KKAR Karatay Array 86.36 314 P 17 48 21.9 -1.2
ILAR Eielson Array 87.01 23 P P 17 48 24.9 -0.8
comp=Z,0.8nm,0.8s,baz=237,slow=5.7,SNR=6.3
comp=Z,0.8nm,0.8s
NRIK Noril'sk 87.49 342 P P 17 48 27.1 -0.8
comp=Z,3.1nm,0.7s,baz=137,slow=5.3,SNR=4.0
comp=Z,3.1nm,0.7s
BVAR Borovoye Array 88.94 324 P P 17 48 34.2 -1.0
comp=Z,1.2nm,0.5s,baz=111,slow=6.5,SNR=6.1
comp=Z,1.2nm,0.5s
AB31 Akbulak array 94.71 319 P 17 49 00.1 -1.8
AB31 IAmb IAmb 17 49 01.1
comp=Z,2.8nm,0.7s
ABKAR Akbulak array 94.71 319 P P 17 48 59.5 -2.4
TROLL Troll, Antarti 96.95 190 ⇑*P* **P 17 49 12.0 +0.1**
comp=Z,51nm,0.4s
SNAA Sanae 98.12 189 ⇑*P* **P 17 49 17.1 0.0**
comp=Z,10nm,0.4s
GERES GERESS Array B 124.09 325 PKP **PKPdf 17 54 38.9 0.0**
comp=Z,0.6nm,0.7s,baz=60,slow=3.2,SNR=4.0
TORD Torodi Ar. Bea 146.42 282 PKPbc **PKPbc 17 55 22.8 +0.4**
comp=Z,8.4nm,0.7s,baz=78,slow=3.1,SNR=46
BDFB Brasília 151.67 146 PKPbc **PKiKP 17 55 36.5 +0.2**
comp=Z,4.9nm,0.5s,baz=168,slow=2.9,SNR=6.4
DBIC Dimbokro 152.95 269 PKPbc **PKiKP 17 55 39.3 +0.5**
comp=Z,4.6nm,0.5s,baz=96,slow=2.3,SNR=6.1

*KRSC **17** 17:38:27.5±0.9, 55.°01N×161.°46E, h114km±12km, Ml3.9*
*MOS **17** 17:38:28.1±0.7, 55.°06N×161.°45E, h118km, mb3.5/1, Error ellipse: s-maj=11.5km s-min=4.6km az=78.1*
*NEIC **17** 17:38:29.6±2.4, 55.°2N±0.°1×160.°9E±0.°3, h111km±9km, mb4.2/11, Error ellipse: s-maj=25.1km s-min=13.8km az=124.0*
*IDC **17** 17:38:30.1±3.6, 55.°20N×161.°02E, h119km±26km, mb3.3/11, mbtmp3.8/12, MS3.3/1, Error ellipse: s-maj=44.2km s-min=17.7km az=95.0*
ISC 17 17:38:28.4±0.7, 55.°02N±0.°03×161.°42E±0.°04, h118km±5km, n117, σ1°30/158, mb3.7/12, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MKZ	**Mys Kozlova**	**0.50**	**159**	*eS*		**Sn**	**17 38 59.3**	**-0.1**
TUMD	**Tumrok D**	**0.61**	**288**	PN		**Pn**	**17 38 46.9**	**+0.1**
TUMD				S		**Sn**	**17 39 00.3**	**-0.5**
TUMD	**Tumrok D**	**0.61**	**288**	*eP*		**Pn**	**17 38 47.0**	**+0.1**
TUMD				*eS*		**Sn**	**17 39 00.4**	**-0.5**
TUMR	**Tumrok**	**0.77**	**290**	PN		**Pn**	**17 38 49.0**	**+0.7**
TUMR				S		**Sn**	**17 39 03.5**	**+0.2**
TUMR	**Tumrok**	**0.77**	**290**	*eP*		**Pn**	**17 38 49.0**	**+0.7**
TUMR				*eS*		**Sn**	**17 39 03.5**	**+0.2**
KMNR	**Kamenistaya**	**1.00**	**318**	PN		**Pn**	**17 38 50.8**	**+0.6**
KMNR				S		**Sn**	**17 39 08.3**	**+1.5**
KMNR	**Kamenistaya**	**1.00**	**318**	*eP*		**Pn**	**17 38 50.9**	**+0.6**
KMNR				*eS*		**Sn**	**17 39 08.4**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**1.01**	**336**	PN		**Pn**	**17 38 50.5**	**+0.1**
BZGR				S		**Sn**	**17 39 05.5**	**-1.5**
BZGR	**Bezymyannyi-Gr**	**1.01**	**336**	*eP*		**Pn**	**17 38 50.6**	**+0.1**
BZGR				*eS*		**Sn**	**17 39 05.6**	**-1.5**
BZP	**Bezymyannyi-Pe**	**1.02**	**331**	PN		**Pn**	**17 38 50.7**	**+0.1**
BZP	**Bezymyannyi-Pe**	**1.02**	**331**	*eP*		**Pn**	**17 38 50.7**	**+0.1**
BZMR	**Bezymyannaya**	**1.05**	**330**	PN		**Pn**	**17 38 51.1**	**+0.2**
BZMR	**Bezymyannaya**	**1.05**	**330**	*eP*		**Pn**	**17 38 51.2**	**+0.2**
ZLN	**Zelenaya**	**1.05**	**341**	PN		**Pn**	**17 38 51.6**	**+0.7**
ZLN	**Zelenaya**	**1.05**	**341**	*eP*		**Pn**	**17 38 51.6**	**+0.7**
BZWR	**Bezymyannyi-We**	**1.08**	**331**	PN		**Pn**	**17 38 51.4**	**+0.2**
BZWR	**Bezymyannyi-We**	**1.08**	**331**	*eP*		**Pn**	**17 38 51.5**	**+0.2**
KIRR	**Kirishev**	**1.11**	**327**	PN		**Pn**	**17 38 51.5**	**0.0**
KIRR	**Kirishev**	**1.11**	**327**	*eP*		**Pn**	**17 38 51.6**	**0.0**
LGNR	**Loginova**	**1.14**	**339**	PN		**Pn**	**17 38 52.9**	**+1.0**
LGNR				S		**Sn**	**17 39 10.2**	**+0.4**
LGNR	**Loginova**	**1.14**	**339**	*eP*		**Pn**	**17 38 52.9**	**+1.0**
LGNR				*eS*		**Sn**	**17 39 10.3**	**+0.4**
CIRR	**Tsirk**	**1.16**	**341**	PN		**Pn**	**17 38 52.6**	**+0.6**
CIRR	**Tsirk**	**1.16**	**341**	*eP*		**Pn**	**17 38 52.6**	**+0.6**
KPT	**Kopyto**	**1.16**	**325**	PN		**Pn**	**17 38 52.1**	**+0.1**
KPT	**Kopyto**	**1.16**	**325**	*eP*		**Pn**	**17 38 52.1**	**+0.1**
KOZ	**Kozyrevsk**	**1.36**	**320**	PN		**Pn**	**17 38 54.5**	**+0.5**
KOZ	**Kozyrevsk**	**1.36**	**320**	*eP*		**Pn**	**17 38 54.5**	**+0.5**
KLY	**Klyuchi**	**1.36**	**342**	PN		**Pn**	**17 38 54.2**	**+0.2**
KLY				S		**Sn**	**17 39 13.4**	**-0.1**
KLY	**Klyuchi**	**1.36**	**342**	*eP*		**Pn**	**17 38 54.3**	**+0.2**
KLY				*eS*		**Sn**	**17 39 13.5**	**-0.1**
KBTR	**Krutoberegovo**	**1.43**	**33**	PN		**Pn**	**17 38 55.9**	**+1.1**
KBTR				S		**Sn**	**17 39 15.0**	**+0.1**
KBTR	**Krutoberegovo**	**1.43**	**33**	*eP*		**Pn**	**17 38 55.9**	**+1.1**
KBTR				*eS*		**Sn**	**17 39 15.1**	**+0.1**
KBG	**Krutoberegovo**	**1.44**	**30**	PN		**Pn**	**17 38 55.7**	**+0.9**
KBG	**Krutoberegovo**	**1.44**	**30**	*eP*		**Pn**	**17 38 55.8**	**+0.9**
KII	**Karymskiy**	**1.51**	**230**	*eS*		**Sn**	**17 39 15.4**	**-1.4**
BDR	**Baidarnaya**	**1.55**	**356**	*eS*		**Sn**	**17 39 19.9**	**+2.3**
SMKR	**Semkarok**	**1.56**	**1**	PN		**Pn**	**17 38 57.3**	**+0.9**
SMKR	**Semkarok**	**1.56**	**1**	*eP*		**Pn**	**17 38 57.4**	**+0.9**
SRDR	**Sredinnyy**	**1.61**	**324**	PN		**Pn**	**17 38 57.2**	**+0.2**
SRDR	**Sredinnyy**	**1.61**	**324**	*eP*		**Pn**	**17 38 57.2**	**+0.2**
SPN	**Mys Shipunski**	**2.10**	**204**	PN		**Pn**	**17 39 03.3**	**+0.4**
SPN				S		**Sn**	**17 39 27.8**	**-1.5**
SPN	**Mys Shipunski**	**2.10**	**204**	*eP*		**Pn**	**17 39 03.4**	**+0.4**
SPN				*eS*		**Sn**	**17 39 27.9**	**-1.5**
NLC	**Nalytchevo**	**2.22**	**214**	PN		**Pn**	**17 39 04.9**	**+0.5**
NLC				S		**Sn**	**17 39 31.1**	**-1.0**
NLC	**Nalytchevo**	**2.22**	**214**	*eP*		**Pn**	**17 39 05.0**	**+0.5**
NLC				*eS*		**Sn**	**17 39 31.1**	**-1.0**
SDLR	**Sedlovina**	**2.30**	**221**	PN		**Pn**	**17 39 06.9**	**+1.3**
SDLR	**Sedlovina**	**2.30**	**221**	*eP*		**Pn**	**17 39 07.0**	**+1.3**
KRER	**Koryakskii**	**2.33**	**223**	PN		**Pn**	**17 39 07.9**	**+1.8**
KRER				S		**Sn**	**17 39 36.3**	**+1.4**
KRER	**Koryakskii**	**2.33**	**223**	*eP*		**Pn**	**17 39 07.9**	**+1.8**
KRER				*eS*		**Sn**	**17 39 36.3**	**+1.4**
KRX	**Arik**	**2.33**	**225**	PN		**Pn**	**17 39 07.9**	**+1.9**
KRX				S		**Sn**	**17 39 36.3**	**+1.5**
KRX	**Arik**	**2.33**	**225**	*eP*		**Pn**	**17 39 07.9**	**+1.9**
KRX				*eS*		**Sn**	**17 39 36.4**	**+1.5**
SMAR	**Somma**	**2.34**	**222**	PN		**Pn**	**17 39 07.3**	**+1.1**
SMAR	**Somma**	**2.34**	**222**	*eP*		**Pn**	**17 39 07.3**	**+1.1**
AVH	**Avacha**	**2.36**	**223**	PN		**Pn**	**17 39 08.1**	**+1.7**
AVH	**Avacha**	**2.36**	**223**	*eP*		**Pn**	**17 39 08.1**	**+1.7**
UGLR	**Uglovaya**	**2.37**	**221**	PN		**Pn**	**17 39 08.0**	**+1.5**
UGLR				S		**Sn**	**17 39 36.2**	**+0.4**
UGLR	**Uglovaya**	**2.37**	**221**	*eP*		**Pn**	**17 39 08.1**	**+1.5**
UGLR				*eS*		**Sn**	**17 39 36.3**	**+0.4**
KOK	**Koryaka**	**2.38**	**224**	PN		**Pn**	**17 39 08.4**	**+1.7**
KOK	**Koryaka**	**2.38**	**224**	*eP*		**Pn**	**17 39 08.4**	**+1.7**
GNL	**Ganaly**	**2.43**	**238**	PN		**Pn**	**17 39 08.4**	**+1.2**
GNL	**Ganaly**	**2.43**	**238**	*eP*		**Pn**	**17 39 08.5**	**+1.2**
DALK	**Dalny**	**2.54**	**219**	PN		**Pn**	**17 39 09.5**	**+1.0**
DALK				S		**Sn**	**17 39 39.4**	**0.0**
DALK	**Dalny**	**2.54**	**219**	*eP*		**Pn**	**17 39 09.6**	**+1.0**
DALK				*eS*		**Sn**	**17 39 39.5**	**0.0**
INSR	**Institute**	**2.57**	**221**	*eS*		**Sn**	**17 39 40.1**	**+0.1**
PET	**Petropavlovsk**	**2.58**	**220**	*ePN*		**Pn**	**17 39 10.1**	**+1.0**
PET				*eS*		**Sn**	**17 39 40.7**	**+0.3**
PET				pmax	pmax			
	comp=Z,27nm,0.7s							
PET				smax	smax			
	comp=E,264nm,0.4s							
PET				smax	smax			
	comp=N,304nm,0.6s							
PET	**Petropavlovsk**	**2.58**	**220**			**Pn**	**17 39 09.9**	**+0.8**
PET				Sn		**Sn**	**17 39 40.0**	**-0.4**
PET	**Petropavlovsk**	**2.58**	**220**	*eP*		**Pn**	**17 39 10.4**	**+1.3**
PET				*eS*		**Sn**	**17 39 40.5**	**+0.1**
BKI	**Bering**	**2.62**	**84**	PN		**Pn**	**17 39 10.5**	**+0.9**
BKI				S		**Sn**	**17 39 40.4**	**-0.9**
BKI	**Bering**	**2.62**	**84**	*eP*		**Pn**	**17 39 10.5**	**+0.9**
BKI				*eS*		**Sn**	**17 39 40.5**	**-0.9**
PEA0B	**Petropavlovsk-**	**2.91**	**230**	PN		**Pn**	**17 39 14.8**	**+1.4**
PEA0B				S		**Sn**	**17 39 48.7**	**+0.6**
PEA0B	**Petropavlovsk-**	**2.91**	**230**	Pn		**Pn**	**17 39 14.2**	**+0.8**
PEA0B				Sn		**Sn**	**17 39 48.8**	**+0.7**
PETK	**Petropavlovsk-**	**2.91**	**230**	P		**Pn**	**17 39 14.7**	**+1.2**
	comp=N,3.8nm,0.5s,baz=52,slow=15,SNR=59							
PETK				S		**Sn**	**17 39 49.2**	**+1.1**
	comp=N,5.0nm,0.4s,baz=67,slow=21,SNR=5.2							
PETK	**Petropavlovsk-**	**2.91**	**230**			**Pn**	**17 39 14.1**	**+0.6**
PETK						**Sn**	**17 39 47.6**	**-0.6**
KRMR	**Karymshinskiy**	**2.93**	**223**	PN		**Pn**	**17 39 14.8**	**+1.1**
KRMR				S		**Sn**	**17 39 50.0**	**+1.5**
KRMR	**Karymshinskiy**	**2.93**	**223**	*eP*		**Pn**	**17 39 14.8**	**+1.1**
KRMR				*eS*		**Sn**	**17 39 50.1**	**+1.5**
RUS	**Russkaya**	**3.12**	**215**	PN		**Pn**	**17 39 16.3**	**+0.3**
RUS				S		**Sn**	**17 39 51.0**	**-1.8**
RUS	**Russkaya**	**3.12**	**215**	*eP*		**Pn**	**17 39 16.4**	**+0.3**
RUS				*eS*		**Sn**	**17 39 51.1**	**-1.8**
TIGL	**Tigil**	**3.14**	**332**	PN		**Pn**	**17 39 16.6**	**+0.2**
TIGL	**Tigil**	**3.14**	**332**	*eP*		**Pn**	**17 39 16.7**	**+0.2**
GRL	**Gorelyy**	**3.17**	**220**	PN		**Pn**	**17 39 18.8**	**+1.9**
GRL	**Gorelyy**	**3.17**	**220**	*eP*		**Pn**	**17 39 18.9**	**+1.9**
MTVR	**Mutnovka**	**3.19**	**218**	PN		**Pn**	**17 39 18.6**	**+1.4**
MTVR				S		**Sn**	**17 39 54.9**	**+0.1**
MTVR	**Mutnovka**	**3.19**	**218**	*eP*		**Pn**	**17 39 18.6**	**+1.4**
MTVR				*eS*		**Sn**	**17 39 54.9**	**+0.1**
APC	**Apacha**	**3.28**	**232**	PN		**Pn**	**17 39 20.2**	**+2.0**
APC	**Apacha**	**3.28**	**232**	*eP*		**Pn**	**17 39 20.3**	**+2.0**
ASAK	**Asacha**	**3.37**	**220**	PN		**Pn**	**17 39 20.6**	**+1.1**
ASAK	**Asacha**	**3.37**	**220**	*eP*		**Pn**	**17 39 20.7**	**+1.1**
KDTR	**Khodutka, Kamc**	**3.79**	**213**	PN		**Pn**	**17 39 25.0**	**0.0**
KDTR				S		**Sn**	**17 40 05.1**	**-3.7**
KDTR	**Khodutka, Kamc**	**3.79**	**213**	*eP*		**Pn**	**17 39 25.0**	**0.0**
KDTR				*eS*		**Sn**	**17 40 05.2**	**-3.7**
OSSR	**Ossora**	**4.33**	**11**	PN		**Pn**	**17 39 31.3**	**-0.8**
OSSR	**Ossora**	**4.33**	**11**	*eP*		**Pn**	**17 39 31.4**	**-0.8**
ERM	**Erimo**	**17.69**	**230**	P		**P**	**17 42 24.1**	**-2.3**
ERM				pmax	pmax			
	comp=Z,22nm,1.3s							
ERM	**Erimo**	**17.69**	**230**			**P**	**17 42 24.1**	**-2.3**
ERM				IAmb	IAmb		17 42 45.6	
	comp=Z,22nm,1.2s							
YAK	**Yakutsk**	**17.84**	**306**	P		**P**	**17 42 26.8**	**-1.0**
	comp=Z,8.9nm,0.5s,baz=90,slow=7.1,SNR=4.8							
YAK	**Yakutsk**	**17.84**	**306**	P		**P**	**17 42 23.3**	**-4.5**
YAK				IAmb	IAmb		17 42 28.3	
	comp=Z,8.4nm,0.6s							
C16K	**Lisburne Hills**	**20.27**	**36**	P		**P**	**17 42 52.2**	**-1.9**
USRK	**Ussuriysk Ar.**	**21.76**	**252**	LR		LR	17 52 46.5	
	comp=Z,71nm,18.5s,baz=203,slow=40							
MJB9	**Matsu-Tunnel**	**24.37**	**230**	P		**P**	**17 43 34.9**	**-0.5**
MAJO	**Matsushiro**	**24.37**	**230**	P		**P**	**17 43 34.3**	**-1.0**
MJAR	**Matsushiro Arr**	**24.37**	**230**	P		**P**	**17 43 36.7**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=29,slow=8.5,SNR=6.8							
	comp=Z,1.8nm,0.8s							
MJAR	**Matsushiro Arr**	**24.37**	**230**	P		**P**	**17 43 36.0**	**+0.7**
MJAR				IAmb	IAmb		17 44 00.6	
	comp=Z,4.0nm,0.8s							
G24K	**Hadweenzic Riv**	**26.63**	**44**	P		**P**	**17 44 02.2**	**+6.7**
G24K				IAmb	IAmb		17 44 12.4	
	comp=Z,4.4nm,0.9s							
SPITS	**Spitsbergen Ar**	**45.36**	**350**	P		**P**	**17 46 33.6**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=44,slow=13,SNR=1.5							
	comp=Z,2.1nm,0.8s							
KURK	**Kurchatov**	**47.39**	**301**	P		**P**	**17 46 49.8**	**-0.5**
KURK	**Kurchatov**	**47.39**	**301**	P		**P**	**17 46 49.8**	**-0.5**
KURK	**Kurchatov**	**47.39**	**301**	IAmb	IAmb		17 46 50.5	
	comp=Z,0.9nm,0.8s							
KURBB	**Kurchatov Arra**	**47.49**	**301**	P		**P**	**17 46 49.8**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=56,slow=8.1,SNR=7.1							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**48.03**	**295**	P		**P**	**17 46 55.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=47,slow=7.1,SNR=4.2							
	comp=Z,0.2nm,0.4s							
ABKAR	**Akbulak array**	**57.14**	**310**	P		**P**	**17 48 00.9**	**-1.3**
FIA1	**FINESS Array S**	**58.65**	**337**	P		**P**	**17 48 11.9**	**-0.7**
FINES	**FINESS Array B**	**58.65**	**337**	P		**P**	**17 48 12.3**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=42,slow=7.5,SNR=11							
	comp=Z,0.5nm,0.4s							
NOA	**NORSAR Array B**	**61.90**	**344**	P		**P**	**17 48 35.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=19,slow=5.2,SNR=1.6							
	comp=Z,0.2nm,0.5s							
HFS	**Hagfors**	**62.35**	**342**	P		**P**	**17 48 37.1**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=20,slow=4.6,SNR=4.5							
	comp=Z,1.1nm,0.6s							
BRTR	**Keskin Array B**	**75.62**	**321**	P		**P**	**17 50 00.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=35,slow=8.2,SNR=2.1							
	comp=Z,0.4nm,0.4s							
WRA	**Warramunga Arr**	**78.16**	**206**	P		**P**	**17 50 16.1**	**+1.7**
	comp=Z,0.2nm,0.8s,baz=18,slow=5.8,SNR=1.5							
	comp=Z,0.2nm,0.8s							
ASAR	**Alice Springs**	**81.84**	**205**	P		**P**	**17 50 36.0**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=17,slow=4.9,SNR=7.6							
	comp=Z,0.2nm,0.4s							
ASAR	**Alice Springs**	**81.84**	**205**	P		**P**	**17 50 35.2**	**+1.1**
ESDC	**Sonseca Array**	**84.84**	**349**	P		**P**	**17 50 50.8**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=18,slow=4.0,

OBIP				*e*S		**Sg**	**17 39 13.7**	**-2.1**
CELP	**Cerrillos**	**1.08**	**120**	⇑*i*P		**Pg**	**17 38 59.6**	**-2.2**
CELP				⇑*i*S		**Sg**	**17 39 15.2**	**-0.7**
CELP				IAML			17 39 18.5	
	comp=N,30nm,0.2s							
CELP	**Cerrillos**	**1.08**	**120**	⇑*i*P		**Pg**	**17 39 00.4**	**-1.4**
HIDR	**Higuey Centro**	**1.09**	**269**	⇑*i*P		**Pg**	**17 39 00.2**	**-1.8**
HIDR				⇑*i*S		**Sg**	**17 39 14.4**	**-2.0**
HIDR				IAML			17 39 14.8	
	comp=N,89nm,0.4s							
ECPR	**Experimental S**	**1.18**	**104**	⇑*i*P		**Pb**	**17 39 02.3**	**-0.4**
SJG	**San Juan**	**1.44**	**110**	⇑*i*P		**Pn**	**17 39 07.6**	**+1.6**
SJG				⇑*i*S		**Sn**	**17 39 25.9**	**+1.6**
PDPR	**Patillas Dam,**	**1.58**	**112**	⇓*i*P		**Pn**	**17 39 08.9**	**+0.9**
HATOM	**Hato Mayor del**	**1.73**	**276**	⇑*i*P		**Pn**	**17 39 11.5**	**+1.4**
HATOM				⇑*i*S		**Sn**	**17 39 32.1**	**+0.4**
HATOM				IAML			17 39 43.0	
	comp=N,13nm,1.1s							

IDC ***17*** *17:45:23.8±0.5, 11°.77N×94°.82E, h0km, mb4.0/25, mbtmp4.0/26, ML3.5/1, MS3.6/11, Error ellipse: s-maj=18.5km s-min=13.3km az=64.0*

NEIC ***17*** *17:45:24.0±1.5, 12°.05N±0°.07×95°.10E±0°.06, h10km±1km, mb4.8/65, Error ellipse: s-maj=12.1km s-min=9.4km az=348.0*

NDI ***17*** *17:45:28.2±3.1, 12°.27N×94°.90E, h8km±79km, mb4.8, ML4.1, MW4.6, Presumed earthquake*

BJI ***17*** *17:45:28.4, 12°.43N×95°.16E, h3km, mB4.8/6, mb4.3/35, Ms4.2/15, Ms7 4.0/14*

BKK ***17*** *17:45:29.3±1.8, 12°.N±3°×9°.5E±1°.7, h82km±86km, M4.3/13, mB4.7/6, mb4.5/6, MLv4.4/13, Mw(mB)3.9/6*

ISC 17 17:45:25.4±0.4, 11°.92N±0°.06×95°.07E±0°.04, h21km, n148, σ1§94/128, **mb4.6**/66, **MS3.7**/16, **2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.30**	**264**			**Pn**	**17 46 03.8**	**+1.7**
PBA				Sn		**Sn**	**17 46 29.2**	**-0.5**
PBA	**Port Blair**	**2.30**	**264**	*i* P		**Pb**	**17 46 04.8**	**-1.3**
PBA				*e*S		**Sb**	**17 46 32.6**	**-1.4**
PBA				IAML			17 46 48.4	
	comp=N,1μm,0.8s							
RNTT	**Ranong**	**4.19**	**127**	P		**Pn**	**17 46 29.2**	**+1.1**
KHLT	**Khaolaem Dam**	**4.46**	**50**	P		**Pn**	**17 46 32.4**	**+0.6**
PKDT	**Phuket**	**5.13**	**141**	P		**Pn**	**17 46 43.3**	**+2.2**
UTHA	**Uthaitani**	**5.58**	**49**	P		**Pn**	**17 46 47.8**	**+0.6**
CM31	**Chiang Mai Arr**	**7.50**	**29**			**Pn**	**17 47 11.5**	**-2.1**
CMAR	**Chiang Mai Arr**	**7.50**	**29**	Pn		**Pn**	**17 47 15.2**	**+1.6**
	comp=N,0.4nm,0.3s,baz=219,slow=15,SNR=17							
CMAR				Sn		Sn	17 48 48.3	+10
	baz=214,slow=16							
CMAR				Lg		Lg	17 49 29.2	
	baz=187,slow=29							
CMAR	**Chiang Mai Arr**	**7.50**	**29**			**Pn**	**17 47 11.8**	**-1.8**
CHTO	**Chiang Mai**	**7.80**	**28**			**Pn**	**17 47 15.6**	**-2.2**
KULM	**Kulim**	**8.59**	**140**			**Pn**	**17 47 28.3**	**-0.3**
BWNR	**Bhubaneshwar**	**12.15**	**314**	*ex*		Pn	17 48 22.8	+5.5
MORE	**Moreh**	**12.27**	**357**			**Pn**	**17 48 16.8**	**-2.2**
SLVN	**Son La**	**12.62**	**41**	Pn		**Pn**	**17 48 21.5**	**-2.3**
VIS	**Vishakhapatnam**	**12.73**	**298**	*ex*		Pn	17 48 32.7	+7.4
VIS				*e*S		Sn	17 50 32.4	-14
VIS				IAML			17 50 49.1	
	comp=N,40nm,0.8s							
VIS				IAML			17 50 49.2	
	comp=E,30nm,0.5s							
IMP	**Imphal**	**12.89**	**355**	*e*P		**Pn**	**17 48 25.3**	**-2.2**
MYKOM	**Kota Tinggi**	**13.31**	**138**			**Pn**	**17 48 30.8**	**-2.4**
TNCH	**TengChong**	**13.44**	**14**	P		**Pn**	**17 48 35.1**	**-0.1**
TNCH				PP		**P**	**17 48 46.0**	**+1.6**
TNCH				pmax		pmax		
	comp=E,210nm,4.7s							
KOHI	**KOHIMA**	**13.76**	**356**	*e*P		**Pn**	**17 48 36.6**	**-2.9**
SHL	**Shillong**	**13.91**	**348**			**Pn**	**17 48 37.4**	**-4.1**
PALK	**Pallekele**	**14.90**	**253**	Pn		**Pn**	**17 48 50.7**	**-4.3**
	comp=E,0.2nm,0.3s,baz=73,slow=11,SNR=1.8							
	comp=E,4.8nm,0.8s							
KMI2	**Kunming**	**15.03**	**28**	⇓P		**P**	**17 48 59.3**	**-2.8**
KMI2				pmax		pmax		
	comp=E,7.0nm,0.6s							
KMI2				pmax		pmax		
	comp=E,180nm,10.2s							
KMI2				L		L		
	comp=E,440nm,10.3s							
KMI2				L		L		
	comp=E,240nm,13.9s							
KMI2				L		L		
	comp=E,370nm,12.1s							
PZH	**PanZhiHua**	**15.81**	**22**	P		**Pn**	**17 49 06.8**	**-0.2**
PZH				pmax		pmax		
	comp=E,10.0nm,1.2s							
GAYA	**Gaya**	**15.85**	**325**	*e*P		**Pn**	**17 49 07.6**	**+0.3**
QIZ	**Qiongzhong**	**15.89**	**62**	P		**Pn**	**17 49 06.3**	**-1.6**
QIZ				S		**Sn**	**17 52 02.6**	**-0.9**
QIZ				L		L		
	comp=E,260nm,8.8s							
QIZ				L		L		
	comp=E,370nm,9.2s							
QIZ				L		L		
	comp=E,370nm,10.5s							
HYB	**Hyderabad**	**16.89**	**291**	*e*P		**Pn**	**17 49 20.1**	**-0.6**
HYB				*e*S		**Sn**	**17 52 28.7**	**+0.9**
EVN	**Everest**	**17.73**	**335**			**Pn**	**17 49 29.2**	**-2.5**
KKM	**Kota Kinabalu**	**21.68**	**104**	P		**P**	**17 50 12.2**	**-2.9**
KKM				IAmb		IAmb	17 50 32.4	
	comp=Z,35nm,0.9s							
LGTI	**Lohaghat**	**22.30**	**324**	*e*P		**P**	**17 50 22.9**	**+1.2**
LGTI				*ex*		x	17 50 29.8	
PTH	**Pithoragarh**	**22.37**	**324**	*e*P		**P**	**17 50 23.4**	**+0.9**
PTH				*ex*		x	17 50 31.9	
PTH				IAmb		IAmb	17 50 33.4	
	comp=Z,20nm,1.0s							
LEM	**Lembang**	**22.42**	**146**	LR		LR	18 00 45.7	
	comp=Z,191nm,18.8s,baz=296,slow=41							
GOMU	**GeErMu**	**24.18**	**359**	P		**P**	**17 50 38.8**	**-1.9**
GOMU				pmax		pmax		
	comp=Z,8.0nm,0.6s							
GOMU				L		L		
	comp=Z,170nm,7.7s							
GOMU				L		L		
	comp=Z,290nm,6.3s							
KLP	**Kalpa**	**24.94**	**324**	*ex*		**P**	**17 50 52.8**	**+5.1**
KLP				*ex*		x	17 50 54.4	
KLP				IAmb		IAmb	17 51 00.0	
	comp=Z,20nm,0.5s							
LZDM	**Lanzhou Array**	**25.17**	**17**	P		**P**	**17 50 51.8**	**+2.0**
	comp=Z,1.1nm,0.4s,baz=235,slow=15,SNR=1.5							
	comp=Z,1.1nm,0.4s							
TGY	**Tagaytay City**	**25.29**	**82**	LR		LR	18 00 05.0	
	comp=Z,79nm,19.3s,baz=270,slow=34							
LZH	**Lanzhou**	**25.33**	**17**	*e*P		P	17 50 58.4	+7.4
LZH				pP		pwP	17 51 02.3	+1.9
LZH				pmax		pmax		
	comp=Z,20nm,1.3s							
LZH				L		L		
	comp=Z,260nm,15.9s							
LZH				L		L		
	comp=Z,300nm,14.6s							
LZH				L		L		
	comp=Z,300nm,15.6s							
XAN	**Xi'an**	**25.39**	**28**	P		**P**	**17 50 51.0**	**-0.4**
XAN				sP		sP	17 50 58.9	-0.3
XAN				pmax		pmax		
	comp=Z,5.0nm,1.4s							
XAN				L		L		
	comp=Z,140nm,11.0s							
XAN				L		L		
	comp=Z,450nm,12.4s							
XAN				L		L		
	comp=Z,280nm,12.4s							
WHN	**Wuhan**	**25.74**	**41**	P		P	17 51 01.3	+6.8
WHN				pP		pwP	17 51 05.3	+1.4
WHN				L		L		
	comp=Z,500nm,10.2s							
WHN				L		L		
	comp=Z,720nm,9.7s							
WHN				L		L		
	comp=Z,760nm,13.1s							
TSSA	**Tissa**	**27.10**	**323**	IAmb		IAmb	17 56 34.2	
	comp=Z,20nm,0.6s							
GTA2	**Gaotai**	**27.77**	**8**	*e*P		**P**	**17 51 18.5**	**+5.6**
GTA2				pP		pwP	17 51 23.1	+0.7
GTA2				pmax		pmax		
	comp=Z,6.0nm,1.2s							
GTA2				L		L		
	comp=Z,190nm,15.5s							
GTA2				L		L		
	comp=Z,260nm,13.1s							
GTA2				L		L		
	comp=Z,150nm,11.0s							
YOJ	**Yonaguni jima**	**29.26**	**61**	P		**P**	**17 51 23.9**	**-2.2**
NIL	**Nilore**	**29.41**	**321**	P		**P**	**17 51 26.1**	**-1.4**
NIL				IAmb		IAmb	17 51 37.0	
	comp=Z,8.7nm,1.0s							
NJ2	**Nanjing**	**29.67**	**44**	*e*P		**P**	**17 51 29.4**	**-0.4**
NJ2				pmax		pmax		
	comp=Z,14nm,0.5s							
KAPI	**Kappang**	**29.76**	**123**	LR		LR	18 03 31.1	
	comp=Z,160nm,20.1s,baz=270,slow=36							
KSH2	**Kashi**	**32.18**	**331**	P		**P**	**17 51 56.3**	**+4.3**
KSH2				pP		sP	17 51 58.8	-1.4
KSH2				pmax		pmax		
	comp=Z,6.0nm,0.9s							
HHC	**Hu-ho-hao-te**	**32.26**	**24**	*e*P		**P**	**17 51 52.8**	**+0.1**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.7s							
WMQ	**Urumqi**	**32.42**	**350**	*e*P		**P**	**17 51 55.1**	**+1.1**
MANEM	**Manem**	**33.01**	**325**	P		**P**	**17 51 57.7**	**-1.8**
MANEM				IAmb		IAmb	17 52 15.3	
	comp=Z,14nm,1.0s							
TARG	**Taragay, Kyrgy**	**33.32**	**336**			**P**	**17 52 00.6**	**-1.7**
TARG				IAmb		IAmb	17 52 14.0	
	comp=Z,11nm,1.0s							
PRZ	**Przheval'sk**	**33.73**	**338**	P		**P**	**17 52 04.0**	**-1.6**
NRN	**Naryn**	**33.82**	**334**	P		**P**	**17 52 05.2**	**-1.4**
KDJ	**Kajisay**	**33.91**	**336**	P		**P**	**17 52 05.5**	**-1.6**
KDJ				IAmb		IAmb	17 52 18.7	
	comp=Z,20nm,1.5s							
PDGK	**Podgornoye**	**34.08**	**340**			**P**	**17 52 06.9**	**-1.7**
BOOM	**Boomskoye usch**	**34.71**	**335**	P		**P**	**17 52 12.2**	**-1.9**
GAR	**Garm**	**34.80**	**325**	P		**P**	**17 52 12.9**	**-1.9**
GAR				IAmb		IAmb	17 52 24.4	
	comp=Z,9.4nm,0.9s							
ARSB	**Arslanbob**	**35.11**	**330**	P		**P**	**17 52 15.4**	**-2.1**
ARSB				IAmb		IAmb	17 52 29.7	
	comp=Z,5.6nm,0.7s							
SHAA	**Shahritus**	**35.13**	**321**			**P**	**17 52 15.7**	**-1.9**
SHAA				IAmb		IAmb	17 52 29.4	
	comp=Z,15nm,0.6s							
CHGR	**Chuyangaron**	**35.23**	**324**	P		**P**	**17 52 16.5**	**-2.0**
BTK	**Batken**	**35.27**	**327**	P		**P**	**17 52 16.8**	**-2.0**
BTK				IAmb		IAmb	17 52 30.5	
	comp=Z,14nm,1.3s							
AAK	**Ala-Archa**	**35.45**	**333**	P		**P**	**17 52 23.8**	**+3.4**
	comp=Z,1.1nm,0.4s,baz=196,slow=7.4,SNR=1.2							
	comp=Z,1.1nm,0.4s							
AAK	**Ala-Archa**	**35.45**	**333**	P		**P**	**17 52 18.3**	**-2.2**
AAK				IAmb		IAmb	17 52 32.0	
	comp=Z,17nm,1.6s							
SOEI	**Soe**	**36.13**	**125**	P		**P**	**17 52 25.2**	**-1.3**
MKAR	**Makanchi Array**	**36.40**	**345**	P		**P**	**17 52 30.5**	**+2.1**
	comp=Z,1.6nm,0.9s,baz=160,slow=9.0,SNR=11							
MKAR				LR		LR	18 09 57.5	
	comp=Z,66nm,21.1s,baz=179,slow=40							
	comp=Z,1.6nm,0.9s							
MKAR	**Makanchi Array**	**36.40**	**345**			**P**	**17 52 27.8**	**-0.5**
MAKZ	**Makanchi**	**36.49**	**345**	P		**P**	**17 52 29.2**	**0.0**
XLT	**XiLinHaoTe**	**36.65**	**26**	*e*P		P	17 52 36.1	+5.5
XLT				pP		pwP	17 52 40.1	0.0
XLT				PP		**PP**	**17 54 01.0**	**+6.8**
XLT				pmax		pmax		
	comp=Z,12nm,0.9s							
XLT				L		L		
	comp=Z,190nm,13.6s							
XLT				L		L		
	comp=Z,210nm,12.8s							
JMZ	**Minamidaito 2**	**36.76**	**63**	P		**P**	**17 52 30.4**	**-1.3**
SONM	**Songino Array**	**37.04**	**13**	P		**P**	**17 52 37.9**	**+4.0**
	comp=Z,1.6nm,1.0s,baz=194,slow=7.1,SNR=18							
	comp=Z,1.6nm,1.0s							
SONM	**Songino Array**	**37.04**	**13**			**P**	**17 52 33.2**	**-0.7**
ULN	**Ulaanbaatar**	**37.21**	**13**	P		**P**	**17 52 33.8**	**-1.6**
KK31	**Karatay Array**	**37.66**	**330**	P		**P**	**17 52 38.0**	**-1.1**
KKAR	**Karatay Array**	**37.66**	**330**	P		**P**	**17 52 37.5**	**-1.5**
KSRS	**Korea Array**	**38.87**	**43**	P		P	17 52 53.6	+4.3
	comp=Z,2.7nm,0.9s,baz=239,slow=9.4,SNR=10							
	comp=Z,2.7nm,0.8s							
KURBB	**Kurchatov Arra**	**40.90**	**344**	P		**P**	**17 53 09.6**	**+3.6**
	comp=Z,1.2nm,0.7s,baz=157,slow=7.8,SNR=9.9							
	comp=Z,1.2nm,0.7s							
KURK	**Kurchatov**	**40.96**	**344**	P		**P**	**17 53 05.7**	**-0.8**
CN2	**Changchun**	**41.16**	**34**	P		P	17 53 13.5	+5.3
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
ZAA0	**Zalesovo Array**	**42.71**	**351**	P		**P**	**17 53 20.1**	**-0.6**
ZAA0				IAmb		IAmb	17 53 33.9	
	comp=Z,6.2nm,0.6s							
ZALV	**Zalesovo Beam**	**42.71**	**351**	P		**P**	**17 53 24.5**	**+3.7**
	comp=Z,1.7nm,0.7s,baz=169,slow=8.8,SNR=9.3							
	comp=Z,1.7nm,0.7s							
ZALV	**Zalesovo Beam**	**42.71**	**351**	P		**P**	**17 53 20.5**	**-0.2**
BNX	**BinXian**	**43.48**	**33**	⇓P		P	17 53 32.1	+5.0
BNX				pmax		pmax		
	comp=Z,13nm,1.0s							
BVAR	**Borovoye Array**	**45.52**	**339**	P		**P**	**17 53 46.0**	**+2.7**
	comp=Z,0.7nm,0.4s,baz=165,slow=6.2,SNR=6.6							
	comp=Z,0.7nm,0.4s							
MJAR	**Matsushiro Arr**	**45.83**	**50**	P		P	17 53 50.4	+4.3
	comp=Z,0.6nm,0.6s,baz=229,slow=9.2,SNR=5.6							
MJAR				LR		LR	18 14 41.1	
	comp=Z,41nm,18.6s,baz=239,slow=38							
	comp=Z,0.6nm,0.6s							
MJAR	**Matsushiro Arr**	**45.83**	**50**	P		**P**	**17 53 44.4**	**-1.7**
AB31	**Akbulak array**	**47.20**	**329**	P		**P**	**17 53 55.4**	**-1.2**
AB31				IAmb		IAmb	17 54 06.9	
	comp=Z,5.2nm,0.9s							
ABKAR	**Akbulak array**	**47.20**	**329**	P		**P**	**17 53 55.0**	**-1.6**
WRA	**Warramunga Arr**	**49.96**	**129**	P		**P**	**17 54 20.4**	**+2.0**
	comp=Z,1.9nm,0.8s,baz=306,slow=8.3,SNR=17							
WRA				PcP		**PcP**	**17 55 40.2**	**+1.8**
	comp=Z,1.4nm,0.7s,baz=314,slow=2.7,SNR=10							
	comp=Z,1.9nm,0.8s							
WRA	**Warramunga Arr**	**49.96**	**129**	P		**P**	**17 54 18.4**	**+0.1**
WRAB	**Tennant Creek**	**49.97**	**129**	P		**P**	**17 54 18.6**	**+0.3**
WRAB				IAmb		IAmb	17 54 30.5	
	comp=Z,17nm,1.4s							
WR8	**Warramunga Arr**	**50.09**	**129**	P		**P**	**17 54 19.3**	**0.0**
WR8				IAmb		IAmb	17 54 31.6	
	comp=Z,8.9nm,1.2s							
ASAR	**Alice Springs**	**51.89**	**133**	P		**P**	**17 54 35.0**	**+2.2**
	comp=Z,1.8nm,0.9s,baz=308,slow=6.9,SNR=19							
ASAR				PcP		**PcP**	**17 55 47.9**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=316,slow=3.3,SNR=5.3							
ASAR				LR		LR	18 17 19.6	
	comp=Z,86nm,21.0s,baz=314,slow=37							
	comp=Z,1.8nm,0.9s							
ASAR	**Alice Springs**	**51.89**	**133**	P		**P**	**17 54 33.9**	**+1.1**
GNI	**Garni**	**52.36**	**312**	LR		LR	18 20 08.1	
	comp=Z,33nm,19.2s,baz=97,slow=40							
ARTI	**Arti**	**52.62**	**335**	LR		LR	18 19 18.2	
	comp=Z,70nm,21.3s,baz=137,slow=39							
ARTI	**Arti**	**52.62**	**335**	P		**P**	**17 54 38.1**	**+0.4**
ARTI				IAmb		IAmb	17 54 47.4	
	comp=Z,8.8nm,0.8s							
KIV	**Kislovodsk**	**55.02**	**316**	P		**P**	**17 54 54.8**	**-0.8**
KIV				IAmb		IAmb	17 55 28.8	
	comp=Z,8.1nm,0.7s							
KIRV	**Kirov**	**57.78**	**334**	LR		LR	18 22 31.6	
	comp=Z,76nm,18.6s,baz=129,slow=38							
EIL	**Elat**	**58.30**	**298**	LR		LR	18 24 46.5	
	comp=Z,42nm,18.0s,baz=98,slow=41							
FOMA	**Nahampoana Res**	**59.53**	**232**	P		**P**	**17 55 27.2**	**-0.4**
LODK	**Lodwar**	**59.67**	**267**	P		**P**	**17 55 28.1**	**-0.8**
LODK				IAmb		IAmb	17 55 28.9	
	comp=Z,9.5nm,1.6s							
BR131	**Keskin Array S**	**60.56**	**309**	P		**P**	**17 55 33.5**	**-1.1**
BRTR	**Keskin Array B**	**60.56**	**309**	P		**P**	**17 55 34.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=120,slow=7.3,SNR=5.5							
BRTR				LR		LR	18 24 56.3	
	comp=Z,46nm,18.0s,baz=122,slow=39							
	comp=Z,0.8nm,0.7s							
BRTR	**Keskin Array B**	**60.56**	**309**	P		**P**	**17 55 33.4**	**-1.3**
ELL	**Elmali**	**63.10**	**305**	P		**P**	**17 55 50.5**	**-1.3**
ELL				IAmb		IAmb	17 56 05.9	
	comp=Z,9.8nm,0.9s							
PETK	**Petropavlovsk-**	**64.21**	**36**	P		**P**	**17 56 02.3**	**+3.7**
	comp=Z,2.3nm,1.1s,baz=230,slow=8.2,SNR=3.1							
	comp=Z,2.3nm,1.1s							
PETK	**Petropavlovsk-**	**64.21**	**36**	P		**P**	**17 55 58.1**	**-0.6**
BURAR	**Bucovina Array**	**67.72**	**317**	P		**P**	**17 56 20.4**	**-1.1**
FIA1	**FINESS Array S**	**69.60**	**331**	P		**P**	**17 56 31.8**	**-0.9**
FINES	**FINESS Array B**	**69.60**	**331**	P		**P**	**17 56 34.0**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=138,slow=6.8,SNR=3.9							
	comp=Z,0.9nm,0.8s							
FINES	**FINESS Array B**	**69.60**	**331**	P		**P**	**17 56 31.8**	**-1.0**
ARCES	**ARCESS Array B**	**71.80**	**340**	P		**P**	**17 56 48.3**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=77,slow=4.9,SNR=4.8							
	comp=Z,0.9nm,0.7s							
ARCES	**ARCESS Array B**	**71.80**	**340**	P		**P**	**17 56 45.7**	**-0.4**
HFS	**Hagfors**	**75.46**	**329**	P		**P**	**17 57 08.7**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=138,slow=7.2,SNR=4.6							
	comp=Z,0.6nm,0.4s							
GEC2	**GERESS Array S**	**75.46**	**318**	P		**P**	**17 57 06.6**	**-1.5**
GERES	**GERESS Array B**	**75.46**	**318**	P		**P**	**17 57 09.0**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=92,slow=4.3,SNR=8.7							
	comp=Z,0.9nm,0.7s							
GERES	**GERESS Array B**	**75.46**	**318**	P		**P**	**17 57 06.9**	**-1.2**
CLL	**Collm**	**75.85**	**320**	*e*P		P	**17 57 12.0**	**+1.9**
SPITS	**Spitsbergen Ar**	**76.09**	**348**	P		**P**	**17 57 12.3**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=98,slow=10,SNR=5.7							
	comp=Z,0.9nm,0.5s							
NB2	**NORSAR Subarra**	**76.69**	**330**	P		P	17 57 24.0	+9.2
	comp=Z,1.3nm,0.7s,baz=90,slow=5.9							
NOA	**NORSAR Array B**	**76.69**	**330**	P		**P**	**17 57 16.1**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=82,slow=6.0,SNR=4.5							
	comp=Z,0.6nm,0.8s							
BOSA	**Boshof**	**78.51**	**237**	P		**P**	**17 57 27.6**	**+2.0**
	comp=Z,3.4nm,0.8s,baz=58,slow=7.9,SNR=7.3							
	comp=Z,3.4nm,0.8s							
BOSA	**Boshof**	**78.51**	**237**	P		**P**	**17 57 26.6**	**+0.9**
MAW	**Mawson**	**82.66**	**192**	P		**P**	**17 57 48.9**	**+2.1**
	comp=Z,2.4nm,0.8s,baz=21,slow=5.3,SNR=4.0							
	comp=Z,2.4nm,0.8s							
EKA	**Eskdalemuir Ar**	**84.93**	**325**	P		**P**	**17 58 00.5**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=82,slow=6.1,SNR=3.9							
	comp=Z,1.2nm,0.8s							
J16K	**Anvik River**	**85.78**	**26**	P		**P**	**17 58 03.2**	**+0.2**
G19K	**Purcell Mounta**	**86.24**	**23**	P		**P**	**17 58 05.0**	**-0.2**
G19K				IAmb		IAmb	17 58 15.7	
	comp=Z,7.8nm,0.9s							
F20K	**Avaraart Lake**	**86.42**	**22**	P		**P**	**17 58 06.1**	**+0.1**
E21K	**Killik River**	**86.48**	**20**	P		**P**	**17 58 06.5**	**+0.1**
N15K	**Kwethluk River**	**87.00**	**29**	P		**P**	**17 58 09.3**	**+0.3**
N15K				IAmb		IAmb	17 58 19.4	
	comp=Z,9.8nm,1.1s							
MSVF	**Nonsavu**	**87.03**	**109**	P		**P**	**17 58 11.8**	**+1.8**
	comp=Z,4.2nm,0.8s,baz=293,slow=13,SNR=3.6							
	comp=Z,4.2nm,0.8s							
MSVF	**Nonsavu**	**87.03**	**109**	P		**P**	**17 58 09.7**	**-0.3**
F21K	**Alatna River**	**87.15**	**21**	IAmb		IAmb	17 58 20.0	
	comp=Z,6.8nm,0.9s							
IMAR	**Indian Mountai**	**87.56**	**22**	P		**P**	**17 58 11.2**	**-0.5**
J19K	**Poorman**	**87.62**	**25**	IAmb		IAmb	17 58 22.8	
	comp=Z,6.7nm,1.0s							
H22K	**Ishtalitna Cre**	**88.48**	**22**	P		**P**	**17 58 16.5**	**+0.4**
K20K	**Telida**	**88.51**	**25**	IAmb		IAmb	17 58 27.3	
	comp=Z,4.3nm,0.8s							
MLY	**Manley**	**89.11**	**23**	IAmb		IAmb	17 58 29.7	
	comp=Z,7.2nm,0.8s							
N19K	**Bonanza Creek**	**89.35**	**27**	P		**P**	**17 58 20.5**	**+0.2**
I23K	**Minto, Yukon-K**	**89.57**	**22**	IAmb		IAmb	17 58 31.9	
	comp=Z,8.0nm,1.1s							
TORD	**Torodi Ar. Bea**	**90.56**	**283**	P		**P**	**17 58 26.5**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=73,slow=3.1,SNR=3.6							
	comp=Z,1.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**90.56**	**283**	IAmb		IAmb	18 00 51.3	
	comp=Z,4.0nm,0.6s							
ILAR	**Eielson Array**	**90.67**	**22**	P		**P**	**17 58 27.4**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=302,slow=4.4,SNR=4.2							
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**90.67**	**22**	P		**P**	**17 58 26.0**	**-0.3**
I27K	**Kandik River**	**92.10**	**20**	IAmb		IAmb	17 58 44.2	
	comp=Z,6.5nm,1.1s							
SCRK	**Sand Creek**	**92.17**	**22**	IAmb		IAmb	17 58 43.7	
	comp=Z,4.5nm,0.9s							
I28M	**Miner Creek**	**92.76**	**20**	IAmb		IAmb	17 58 46.9	
	comp=Z,3.3nm,0.8s							
I30M	**Mount Dempster**	**94.07**	**19**	IAmb		IAmb	17 58 52.3	
	comp=Z,4.0nm,0.9s							
L29M	**L29M**	**94.81**	**21**	P		**P**	**17 58 45.6**	**+0.1**
L29M				IAmb		IAmb	17 58 56.5	
	comp=Z,4.8nm,0.9s							
PLCA	**Paso Flores**	**148.63**	**201**	PKPbc		**PKiKP**	**18 05 12.3**	**-0.6**
	comp=Z,3.5nm,1.0s,baz=158,slow=2.8,SNR=4.4							

NEIC ***17*** *17:49:24.6±2.1, 33°.78S±0°.08×178°.7W±0°.1, h10km±2km, mb4.0/10, Error ellipse: s-maj=23.5km s-min=5.0km az=125.0*

IDC ***17*** *17:49:31.3±2.2, 33°.61S×179°.83W, h0km, mb3.6/2, mbt

comp=N,180nm,1.0s
KSH2 smax smax
comp=E,130nm,0.8s
TARG Taragay, Kyrgy 7.07 331 Pn Pn 17 56 44.2 -0.1
PRZ Przheval'sk 7.51 337 Pn Pn 17 56 50.8 +0.6
KDJ Kajisay 7.66 329 Pn Pn 17 56 51.9 -0.3
NRN Naryn 7.66 321 Pn Pn 17 56 53.6 +1.2
NIL Nilore 7.81 258 Pn Pn 17 56 55.1 +0.9
PDGK Podgornoye 8.00 344 Pn Pn 17 56 58.6 +1.7
BOOM Boomskoye usch 8.49 326 Pn Pn 17 57 05.1 +1.4
EVN Everest 8.53 153 Pn Pn 17 57 05.0 +0.4
MANEM Manem 8.84 286 Pn Pn 17 57 10.0 +1.4
WMQ Urumqi 9.12 25 Pn Pn 17 57 17.8 +5.6
WMQ smax smax
comp=N,25nm,1.8s
WMQ smax smax
comp=E,24nm,1.6s
AAK Ala-Archa 9.30 321 Pn Pn 17 57 17.3 +2.5
comp=E,0.5nm,0.3s,baz=142,slow=14,SNR=6.9
AAK Pg 17 57 48.7
comp=E,1.8nm,0.3s,baz=167,slow=14,SNR=17
AAK Lg Lg 17 59 54.4
comp=E,0.4nm,0.3s,baz=156,slow=17,SNR=2.3
comp=E,2.3nm,0.4s
AAK Ala-Archa 9.30 321 Pn 17 57 16.3 +1.5
ARSB Arslanbob 9.32 310 Pn 17 57 16.5 +1.5
FRU1 Bishkek 9.36 322 Pn 17 57 17.0 +1.5
BTK Batken 10.18 299 Pn 17 57 27.8 +1.2
GAR Garm 10.20 293 Pn 17 57 28.3 +1.2
CHGR Chuyangaron 11.00 290 Pn 17 57 39.3 +1.3
KBL Kabul 11.02 268 Pn 17 57 39.3 +1.0
MKAR Makanchi Array 11.14 360 Pn Pn 17 57 41.1 +1.3
comp=E,0.9nm,0.3s,baz=183,slow=12,SNR=30
MKAR Sn **Sn 17 59 42.7 -1.7**
comp=E,0.4nm,0.3s,baz=174,slow=24,SNR=5.8
MKAR Lg Lg 18 00 55.8
baz=186,slow=28
comp=E,6.3nm,0.5s
MKAR Makanchi Array 11.14 360 Pn 17 57 39.9 +0.1
MAKZ Makanchi 11.16 358 Pn 17 57 40.5 +0.4
SHAA Shahritus 11.65 284 Pn 17 57 47.1 +0.3
KK31 Karatay Array 11.84 313 Pn 17 57 49.5 +0.1
KKAR Karatay Array 11.84 313 Pn Pn 17 57 48.6 -0.8
SHL Shillong 12.93 138 Pn Pn 17 58 02.6 -1.9
GTA2 Gaotai 14.28 69 *eP* Pn 17 58 25.4 +2.6
GTA2 sP P 17 58 33.0 +2.9
GTA2 pmax pmax
comp=E,2.0nm,1.4s
KURBB Kurchatov Arra 15.23 351 Pn Pn **17 58 33.9 -1.6**
baz=172,slow=12,SNR=15
KURBB Lg Lg 18 03 06.2
baz=181,slow=27
KURBB LR LR 18 05 22.0
comp=E,184nm,19.3s,baz=178,slow=41
comp=Z,1.7nm,0.8s
KURK Kurchatov 15.31 351 Pn 17 58 34.2 -2.3
KURK IAmb IAmb 17 59 03.9
comp=Z,3.8nm,0.8s
MORE Moreh 15.32 135 Pn 17 58 35.3 -1.5
HRA Herat 16.58 272 Pn 17 58 51.8 -1.4
HRA IAmb IAmb 17 58 56.9
comp=Z,11nm,1.1s
LZDM Lanzhou Array 17.27 83 P Pn **17 59 01.7 -0.2**
comp=Z,1.0nm,0.4s,baz=159,slow=13,SNR=1.3
ZAA0 Zalesovo Array 18.38 5 Pn 17 59 13.1 -2.2
ZALV Zalesovo Beam 18.38 5 P Pn **17 59 15.3 +0.1**
comp=E,0.2nm,0.3s,baz=190,slow=12,SNR=15
comp=Z,2.8nm,0.7s
ZALV Zalesovo Beam 18.38 5 Pn 17 59 12.9 -2.4
BVAR Borovoye Array 19.34 338 P P **17 59 26.8 +0.9**
baz=134,slow=11,SNR=8.7
comp=Z,1.5nm,0.6s
BORK Borovoye 19.38 338 P 17 59 25.6 -0.7
BORK IAmb IAmb 17 59 36.6
comp=Z,11nm,1.1s
AB31 Akbulak array 21.34 317 P 17 59 47.1 -0.5
AB31 IAmb IAmb 17 59 52.4
comp=Z,10nm,1.2s
ABKAR Akbulak array 21.34 317 P 17 59 46.8 -0.8
SONM Songino Array 21.54 48 P P **17 59 52.5 +2.5**
comp=Z,1.5nm,1.0s,baz=234,slow=10,SNR=8.2
comp=Z,1.5nm,1.0s
SONM Songino Array 21.54 48 P P **17 59 49.0 -1.0**
ULN Ulaanbaatar 21.96 49 P P **17 59 53.1 -1.3**
CMAR Chiang Mai Arr 22.52 135 P P **18 00 01.3 +0.8**
comp=Z,1.4nm,0.7s,baz=309,slow=10,SNR=12
comp=Z,1.4nm,0.7s
CMAR Chiang Mai Arr 22.52 135 P P **18 00 00.2 -0.3**
ENH Enshi 23.30 96 P P **18 00 08.3 -0.2**
HHC Hu-ho-hao-te 23.41 68 *eP* P 18 00 01.0 -8.7
HHC pmax pmax
comp=Z,6.0nm,0.6s
SLVN Son La 23.59 121 P P **18 00 10.9 -0.7**
SLVN IAmb IAmb 18 00 34.6
comp=Z,11nm,1.5s
ARTI Arti 26.38 329 P 18 00 35.6 -1.1
ARTI IAmb IAmb 18 00 43.0
comp=Z,5.5nm,0.8s
PALK Pallekele 28.28 184 P P **18 00 53.5 -0.7**
RAYN Ar Rayn 34.11 259 P 18 01 45.4 -0.2
RAYN IAmb IAmb 18 01 46.8
comp=Z,3.6nm,0.8s
KSRS Korea Array 36.33 73 P P **18 02 05.5 +1.1**
comp=Z,0.8nm,0.9s,baz=297,slow=8.3,SNR=4.8
comp=Z,0.8nm,0.9s
BR131 Keskin Array S 38.44 291 P 18 02 22.4 -0.1
BR131 IAmb IAmb 18 02 25.3
comp=Z,6.2nm,1.1s
BRTR Keskin Array B 38.44 291 P P **18 02 24.0 +1.4**
comp=Z,3.4nm,1.0s,baz=94,slow=6.6,SNR=16
comp=Z,3.4nm,1.0s
BRTR Keskin Array B 38.44 291 P 18 02 23.2 +0.7
MMAI Mount Meron Ar 38.63 280 LR LR 18 22 55.9
comp=Z,52nm,19.1s,baz=100,slow=43
MDUB Mudurnu 40.16 293 P P **18 02 37.1 +0.3**
AKASG Malin Array Be 40.71 309 P P **18 02 41.5 +0.4**
comp=Z,0.2nm,0.3s,baz=81,slow=6.3,SNR=4.3
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 40.71 309 IAmb IAmb 18 02 57.2
comp=Z,3.5nm,1.2s
AKBB Malin Array Si 40.71 309 P P **18 02 41.1 +0.1**
AKBB IAmb IAmb 18 02 43.0
comp=Z,6.4nm,1.1s
KIEV Kiev 40.72 309 P P **18 02 42.3 +1.2**
MLR Muntele Rosu 43.21 301 P P **18 03 02.1 +0.3**
BURAR Bucovina Array 43.47 304 P P **18 03 04.3 +0.5**
FINES FINESS Array B 43.47 324 P P **18 03 04.3 +0.8**
comp=Z,1.8nm,0.8s,baz=101,slow=9.5,SNR=4.4
comp=Z,1.8nm,0.8s
PABE Paberze 43.98 316 P P **18 03 08.0 +0.4**
MJAR Matsushiro Arr 44.54 72 P P **18 03 12.9 +0.4**
comp=Z,1.3nm,0.8s,baz=292,slow=9.9,SNR=5.4
comp=Z,1.3nm,0.8s
MJAR Matsushiro Arr 44.54 72 IAmb IAmb 18 03 14.6
comp=Z,3.6nm,1.4s
MORC Moravsky Berou 48.25 308 P P 18 03 41.9 +0.5
MA2 Magadan 49.28 39 LR LR 18 27 17.3
comp=Z,76nm,18.2s,baz=264,slow=39
HFS Hagfors 49.44 322 P P **18 03 52.3 +2.0**
comp=Z,2.3nm,0.9s,baz=0.0,slow=1.7,SNR=2.6
comp=Z,2.3nm,0.9s
NOA NORSAR Array B 50.61 323 P P **18 04 00.1 +0.8**
comp=Z,1.8nm,1.0s,baz=86,slow=7.3,SNR=3.5
comp=Z,1.8nm,1.0s
CLL Collm 50.85 311 *eP* P **18 04 03.0 +1.8**
GEC2 GERESS Array S 50.89 308 P P **18 04 02.4 +0.7**
GERES GERESS Array B 50.89 308 P P **18 04 03.1 +1.4**
comp=Z,1.9nm,1.1s,baz=104,slow=4.3,SNR=11
comp=Z,1.9nm,1.1s
GERES GERESS Array B 50.89 308 P P **18 04 01.8 +0.2**
TIP Timpagrande 51.25 295 P P **18 04 03.3 -1.2**
ILAR Eielson Array 72.75 20 P P **18 06 27.9 -0.6**
comp=Z,0.6nm,0.8s,baz=313,slow=3.8,SNR=5.2
comp=Z,0.6nm,0.8s
WRA Warramunga Arr 73.98 130 P P **18 06 36.0 -0.4**
comp=Z,1.2nm,1.0s,baz=326,slow=5.7,SNR=10.0
comp=Z,1.2nm,1.0s
TORD Torodi Ar. Bea 74.99 276 P P **18 06 42.2 -0.2**
comp=Z,0.5nm,0.4s,baz=43,slow=5.5,SNR=5.9
comp=Z,0.5nm,0.4s
ASAR Alice Springs 76.50 132 P P **18 06 50.5 -0.3**
comp=Z,0.8nm,0.9s,baz=318,slow=5.4,SNR=6.8
comp=Z,0.8nm,0.9s
YKA Yellowknife Ar 81.24 8 P P **18 07 16.7 +0.4**
comp=Z,0.3nm,0.5s,baz=340,slow=5.4,SNR=3.0
comp=Z,0.3nm,0.5s

CPUP Villa Florida 144.47 274 PKP **PKPab 18 14 35.7 +0.1**
comp=Z,1.8nm,0.9s,baz=162,slow=3.2,SNR=3.9

*BKK **17** 17:55:43.3±0.5, 12°N±4°×9°5E±°, h10km,M3.8/11,mB4.2/1, mb3.8/4,Mjma3.8/11,ML3.9/11,MLv3.9/11,Mw(mB)3.2/1*
*IDC **17** 17:55:39.8±1.3, 12°4N±0°1×95°22E±0°07, h19km, n4, σ0°93°/5,* **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.55**	**252**	*eP*		**Pn**	**17 56 20.9**	**+0.7**
PBA				*i*	x	x	17 56 20.9	
	baz=23,slow=28							
PBA				*eS*		**Sb**	**17 56 55.1**	**-0.8**
PBA				IAML			17 57 06.3	
	comp=E,97nm,0.9s							
PBA				IAML			17 57 09.2	
	comp=N,114nm,0.7s							
KHLT	**Khaolaem Dam**	**4.02**	**54**	P		**Pb**	**17 56 49.9**	**-0.3**
RNTT	**Ranong**	**4.41**	**133**	P		**Pn**	**17 56 46.5**	**+0.7**
PKDT	**Phuket**	**5.46**	**146**	P		**Pn**	**17 57 00.2**	**-0.1**
	comp=N,0.1nmcomp=N,0.1nmcomp=N,11nm,1.3s							

*BKK **17** 18:06:17.6±2.4, 12°N±7°×9°5E±2°1, h49km, M3.8/6, mb4.0/2, Mjma3.6/6, ML3.7/6, MLv3.8/5*
*IDC **17** 18:06:22.7±1.8, 12°41N×95°.77E, h0km, mb3.5/5, mbtmp3.4/6, ML3.2/1, Error ellipse: s-maj=72.4km s-min=22.2km az=63.0*
ISC 17 18:06:23.5±1.6, 12°3N±0°1×95°.8E±0°.2, h10km, n8, σ1°88/8, mb3.4/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KHLT	**Khaolaem Dam**	**3.68**	**47**	P		**Pn**	**18 07 21.1**	**+0.7**
RNTT	**Ranong**	**3.88**	**137**	P		Pn	18 07 18.6	-4.7
RNTT				S		**Sn**	**18 08 06.6**	**-2.4**
CMAR	**Chiang Mai Arr**	**6.84**	**26**	Pn		**Pn**	**18 08 02.9**	**-1.1**
	0.1nm,0.3s,baz=215,slow=14,SNR=5.0							
	0.6nm,0.6s							
MKAR	**Makanchi Array**	**36.24**	**344**	P		**P**	**18 13 26.4**	**-0.5**
	0.6nm,0.9s,baz=150,slow=7.8,SNR=4.6							
	0.6nm,0.9s							
KURBB	**Kurchatov Arra**	**40.77**	**343**	P		**P**	**18 14 02.9**	**-1.8**
	0.2nm,0.3s,baz=160,slow=8.1,SNR=4.9							
	0.2nm,0.2s							
ZALV	**Zalesovo Beam**	**42.47**	**350**	P		**P**	**18 14 19.6**	**+1.0**
	0.2nm,0.3s,baz=180,slow=10,SNR=1.6							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**49.63**	**130**	P		**P**	**18 15 17.7**	**+2.1**
	0.2nm,0.3s,baz=310,slow=8.3,SNR=2.6							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**51.61**	**134**	P		**P**	**18 15 31.6**	**+1.1**
	0.3nm,0.8s,baz=315,slow=6.2,SNR=4.9							
	0.3nm,0.8s							

*IDC **17** 18:06:39.8±0.6, 59°.88N×152°.88W, h115km±6km, mb3.7/19, mbtmp4.0/24, Error ellipse: s-maj=11.3km s-min=8.0km az=79.0*
*NEIC **17** 18:06:40.1±1.4, 59°.97N±0°.03×152°.91W±0°.06, h117km±3km, mb4.2/31, ML4.1/194, ML3.9(AEIC), Error ellipse: s-maj=5.0km s-min=4.6km az=193.0*
*AEIC **17** 18:06:41.6±1.8, 59°.96N±0°.03×152°.90W±0°.05, h108km±3km, Error ellipse: s-maj=4.9km s-min=3.9km az=181.0*
ISC 17 18:06:39.9±0.5, 59°.96N±0°.04×152°.88W±0°.03, h118km±4km, n320, σ0°91/345, mb4.1/30, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.09**	**310**			**Pn**	**18 06 55.9**	**-0.3**
IVE						**Sn**	**18 07 08.1**	**-0.4**
ILS	**Iliamna Low So**	**0.09**	**269**			**Pn**	**18 06 55.9**	**-0.3**
ILS						**Sn**	**18 07 08.1**	**-0.4**
ILSW	**Iliamna Southw**	**0.13**	**280**			**Pn**	**18 06 55.7**	**-0.7**
ILSW				IAML			18 07 08.7	
	comp=E,5μm,0.8s							
ILSW				IAML			18 07 09.8	
	comp=N,2μm,0.5s							
ILSW	**Iliamna Southw**	**0.13**	**280**			**Sn**	**18 07 07.9**	**-0.7**
O20K	**Slope Mountain**	**0.18**	**47**			**Pn**	**18 06 56.5**	**+0.1**
O20K						**Sn**	**18 07 08.7**	**0.0**
P19K	**Oil Pt**	**0.36**	**210**			**Pn**	**18 06 56.9**	**0.0**
P19K						**Sn**	**18 07 09.7**	**0.0**
RED	**Redoubt Volcan**	**0.46**	**7**			**Pn**	**18 06 57.4**	**-0.1**
RED				Sn		**Sn**	**18 07 09.7**	**-1.2**
RED				IAML			18 07 10.7	
	comp=E,8μm,0.7s							
RED				IAML			18 07 10.8	
	comp=N,4μm,0.5s							
RDSO	**Redoubt South**	**0.50**	**8**			**Pn**	**18 06 57.7**	**-0.1**
RDSO						**Sn**	**18 07 10.6**	**-0.8**
NCT	**North Crescent**	**0.60**	**358**			**Pn**	**18 06 58.5**	**0.0**
NCT						**Sn**	**18 07 11.5**	**-1.0**
RDJH	**Redoubt Jeurge**	**0.63**	**3**			**Pn**	**18 06 58.7**	**-0.1**
RDJH						**Sn**	**18 07 12.2**	**-0.7**
DFR	**Drift River**	**0.64**	**9**			**Pn**	**18 06 58.7**	**-0.1**
RDT	**Redoubt**	**0.66**	**21**			**Pn**	**18 06 58.8**	**0.0**
RDT						**Sn**	**18 07 12.4**	**-0.7**
HOM	**Homer**	**0.69**	**115**			**Pn**	**18 06 59.4**	**+0.4**
HOM				Sn		**Sn**	**18 07 13.9**	**+0.5**
O19K	**Port Alsworth**	**0.76**	**289**			**Pn**	**18 06 59.4**	**-0.1**
O19K				Sn		**Sn**	**18 07 13.4**	**-0.9**
CNPM	**China Poot**	**0.94**	**117**			**Pn**	**18 07 01.5**	**+0.3**
CNPM				Sn		**Sn**	**18 07 16.8**	**-0.5**
BRLK	**Bradley Lake**	**1.03**	**100**			**Pn**	**18 07 02.2**	**+0.2**
BRLK				Sn		**Sn**	**18 07 18.2**	**-0.5**
BRSE	**Bradley Lake S**	**1.10**	**101**			**Pn**	**18 07 03.2**	**+0.4**
BRSE						**Sn**	**18 07 20.2**	**0.0**
N19K	**Bonanza Creek**	**1.17**	**318**			**Pn**	**18 07 03.5**	**0.0**
N19K				Sn		**Sn**	**18 07 20.2**	**-1.4**
N19K				IAML			18 07 21.5	
	comp=E,4μm,0.8s							
N19K				IAML			18 07 21.8	
	comp=N,3μm,0.6s							
O18K	**Koktuh Hills**	**1.18**	**266**			**Pn**	**18 07 03.5**	**-0.1**
O18K				Sn		**Sn**	**18 07 20.3**	**-1.3**
O18K				IAML			18 07 21.3	
	comp=E,3μm,0.8s							
O18K				IAML			18 07 21.5	
	comp=N,1μm,0.5s							
CAPN	**Captain Cook N**	**1.18**	**46**			**Pn**	**18 07 05.6**	**+2.1**
CKL	**Chakachamna La**	**1.27**	**12**			**Pn**	**18 07 05.0**	**+0.3**
SPCR	**Spurr Chakacha**	**1.29**	**15**			**Pn**	**18 07 05.1**	**+0.3**
SPU	**Mount Spurr**	**1.29**	**18**			**Pn**	**18 07 05.0**	**+0.1**
P18K	**Big Mountain,**	**1.32**	**245**			**Pn**	**18 07 04.8**	**-0.4**
P18K						**Sn**	**18 07 23.1**	**-1.3**
SPBG	**Spurr Blockage**	**1.33**	**11**			**Pn**	**18 07 05.9**	**+0.6**
SPWE	**Spurr West**	**1.33**	**7**			**Pn**	**18 07 06.0**	**+0.7**
SPCG	**Spurr Capps Gl**	**1.40**	**17**			**Pn**	**18 07 06.6**	**+0.4**
SPNN	**North Nagishla**	**1.42**	**4**			**Pn**	**18 07 06.7**	**+0.3**
SLKM	**Skilak Lake**	**1.44**	**66**			**Pn**	**18 07 06.2**	**-0.3**
SLKM				Sn		**Sn**	**18 07 25.5**	**-1.2**
STLK	**Strandline Lak**	**1.63**	**18**			**Pn**	**18 07 09.0**	**+0.3**
STLK				Sn		**Sn**	**18 07 28.9**	**-1.8**
STLK				IAML			18 07 34.0	
	comp=N,712nm,0.4s							
O22K	**Cooper Landing**	**1.66**	**70**			**Pn**	**18 07 09.3**	**+0.3**
O22K	**Cooper Landing**	**1.66**	**70**			**Sn**	**18 07 30.8**	**-0.4**
N18K	**Kilae Creek**	**1.66**	**297**			**Pn**	**18 07 08.9**	**-0.2**
N18K				Sn		**Sn**	**18 07 29.2**	**-2.1**
N18K				IAML			18 07 30.8	
	comp=E,884nm,0.6s							
KAHG	**Katmai Hook Gl**	**1.70**	**211**			**Pn**	**18 07 10.2**	**+0.5**
Q18K	**Katmai Hardscr**	**1.71**	**221**			**Pn**	**18 07 10.0**	**+0.2**
SEW	**Seward**	**1.73**	**84**			**Pn**	**18 07 09.6**	**-0.2**
SEW				IAML			18 07 33.0	
	comp=N,2μm,0.8s							
SEW				IAML			18 07 35.6	
	comp=E,2μm,0.6s							
SEW	**Seward**	**1.73**	**84**			**Sn**	**18 07 31.5**	**-1.1**
KARR	**Katmai Rainbow**	**1.74**	**213**			**Pn**	**18 07 10.6**	**+0.6**
KAWH	**Katmai**	**1.86**	**213**			**Pn**	**18 07 11.9**	**+0.3**
RC01	**Rabbit Creek A**	**1.92**	**53**			**Pn**	**18 07 12.5**	**+0.2**
RC01	**Rabbit Creek A**	**1.92**	**53**			**Sn**	**18 07 36.2**	**-0.8**
M20K	**Styx River**	**1.93**	**356**			**Pn**	**18 07 12.9**	**+0.5**
M20K	**Styx River**	**1.93**	**356**			**Sn**	**18 07 37.7**	**+0.3**
P17K	**Kvichak River**	**1.97**	**249**			**Pn**	**18 07 13.1**	**+0.3**
P17K				IAML			18 07 44.9	
	comp=N,1μm,0.9s							
P17K				IAML			18 08 12.3	
	comp=E,2μm,1.0s							
KAKN	**Katmai Knife C**	**2.01**	**215**			**Pn**	**18 07 13.7**	**+0.2**
KAKN						**Sn**	**18 07 38.4**	**-0.7**
M19K	**Big River Lodg**	**2.08**	**340**			**Pn**	**18 07 14.6**	**+0.3**
KABU	**Katmai Buttres**	**2.10**	**217**			**Pn**	**18 07 15.2**	**+0.6**
M18K	**Stony River**	**2.11**	**318**			**Pn**	**18 07 14.4**	**-0.2**
SKT	**Skwentna**	**2.13**	**17**			**Pn**	**18 07 15.1**	**+0.2**
SKT				IAML			18 07 45.2	
	comp=E,482nm,0.3s							
O17K	**Koliganek Bris**	**2.13**	**267**			**Pn**	**18 07 14.8**	**-0.1**
O17K						**Sn**	**18 07 38.6**	**-3.0**
ACHA	**Angle Creek He**	**2.16**	**217**			**Pn**	**18 07 15.5**	**+0.1**
MGLS	**Mageik Landsli**	**2.18**	**214**			**Pn**	**18 07 16.1**	**+0.6**
KDAK	**Kodiak Island**	**2.19**	**176**	P		**Pn**	**18 07 14.8**	**-0.8**
	comp=E,202nm,0.5s,baz=60,slow=4.0,SNR=224							
KDAK				S		**Sn**	**18 07 40.4**	**-2.5**
	comp=E,235nm,0.3s,baz=9.6,slow=17,SNR=40							
KDAK	**Kodiak Island**	**2.19**	**176**			**Pn**	**18 07 14.7**	**-0.9**
KDAK				IAML			18 07 42.9	
	comp=E,1μm,0.6s							
KDAK				IAML			18 07 43.2	
	comp=E,917nm,0.4s							
N17K	**Nushagak Hills**	**2.22**	**287**			**Pn**	**18 07 15.8**	**-0.2**
N17K				IAML			18 07 41.8	
	comp=E,500nm,1.2s							
ANCK	**Angle Creek**	**2.22**	**218**			**Pn**	**18 07 16.7**	**+0.6**
M22K	**Willow**	**2.25**	**36**			**Pn**	**18 07 15.8**	**-0.6**
CAHL	**Cahill**	**2.29**	**214**			**Pn**	**18 07 17.6**	**+0.7**
Q17K	**Contact Creek**	**2.30**	**224**			**Pn**	**18 07 17.3**	**+0.2**
KJL	**Kejulik**	**2.37**	**217**			**Pn**	**18 07 18.8**	**+0.9**
L19K	**White Mountain**	**2.43**	**338**			**Pn**	**18 07 18.7**	**+0.1**
PWL	**Port Wells**	**2.43**	**66**			**Pn**	**18 07 17.9**	**-0.8**
PWL				IAML			18 07 50.1	
	comp=E,2μm,0.5s							
PMR	**Palmer**	**2.46**	**47**	P		**Pn**	**18 07 19.3**	**+0.3**
PMR	**Palmer**	**2.46**	**47**			**Pn**	**18 07 18.3**	**-0.8**
PMR				IAML			18 07 48.5	
	comp=E,820nm,0.4s							
PMR				IAML			18 07 49.9	
	comp=N,696nm,0.3s							
KNK	**Knik Glacier**	**2.62**	**54**			**Pn**	**18 07 20.4**	**-0.7**
KNK				IAML			18 07 52.3	
	comp=E,2μm,0.9s							
KNK				IAML			18 07 52.9	
	comp=N,2μm,0.5s							
GHO	**Glory Hole Cre**	**2.66**	**45**			**Pn**	**18 07 21.1**	**-0.5**
GHO				IAML			18 07 53.4	
	comp=N,1μm,0.7s							
GHO				IAML			18 07 57.6	
	comp=E,1μm,0.6s							
O16K	**Kokwok River B**	**2.66**	**264**			**Pn**	**18 07 22.0**	**+0.4**
M17K	**Holitna River**	**2.67**	**305**			**Pn**	**18 07 21.6**	**-0.1**
M17K				IAML			18 08 10.5	
	comp=N,501nm,0.8s							
M17K				IAML			18 08 14.7	
	comp=E,510nm,0.8s							
OHAK	**Old Harbor**	**2.75**	**185**	P		**Pn**	**18 07 21.7**	**-1.2**
OHAK	**Old Harbor**	**2.75**	**185**			**Pn**	**18 07 21.8**	**-1.0**
OHAK				IAML			18 07 54.4	
	comp=N,434nm,0.4s							
OHAK				IAML			18 08 00.9	
	comp=E,281nm,0.7s							
P23K	**Montague Islan**	**2.75**	**87**			**Pn**	**18 07 23.3**	**+0.4**
CUT	**Chulitna**	**2.76**	**26**			**Pn**	**18 07 23.3**	**+0.4**
CUT				IAML			18 07 57.3	
	comp=N,1μm,0.4s							
CUT				IAML			18 07 60.0	
	comp=E,1μm,0.4s							
P16K	**Nushagak River**	**2.77**	**253**			**Pn**	**18 07 23.7**	**+0.7**
P16K				IAML			18 08 12.6	
	comp=N,496nm,0.8s							
P16K				IAML			18 08 36.3	
	comp=E,426nm,1.1s							
L22K	**Petersville**	**2.77**	**21**			**Pn**	**18 07 23.2**	**+0.1**
L22K				IAML			18 07 58.5	
	comp=E,510nm,0.4s							
L22K				IAML			18 08 00.4	
	comp=N,299nm,0.5s							
PLK2	**Peulik 2**	**2.84**	**221**			**Pn**	**18 07 24.9**	**+0.9**
PLK5	**Peulik 5**	**2.86**	**228**			**Pn**	**18 07 24.3**	**+0.2**
PLK3	**Peulik 3**	**2.88**	**219**			**Pn**	**18 07 25.4**	**+0.9**
SML	**Sawmill**	**2.90**	**48**			**Pn**	**18 07 24.1**	**-0.7**
SML				IAML			18 07 59.4	
	comp=N,953nm,0.8s							
SML				IAML			18 08 05.2	
	comp=E,597nm,0.4s							
PLK1	**Peulik 1**	**2.90**	**223**			**Pn**	**18 07 25.6**	**+0.8**
L18K	**Granite Mounta**	**2.93**	**322**			**Pn**	**18 07 24.9**	**-0.1**
R17L	**Mt. Peulik Vol**	**2.96**	**219**			**Pn**	**18 07 26.4**	**+0.8**
PPLA	**Purkeypile**	**2.97**	**6**			**Pn**	**18 07 26.2**	**+0.4**
PPLA				IAML			18 08 04.7	
	comp=E,267nm,0.9s							
N16K	**Nishlik Lake**	**2.98**	**282**			**Pn**	**18 07 26.4**	**+0.5**
GLI	**Glacier Island**	**3.01**	**70**			**Pn**	**18 07 24.7**	**-1.5**
GLI				IAML			18 08 02.7	
	comp=E,1μm,0.8s							
GLI				IAML			18 08 05.5	
	comp=N,751nm,0.6s							
PLBL	**Peulik Blue Cr**	**3.05**	**224**			**Pn**	**18 07 27.6**	**+0.8**
M23K	**Glacier View**	**3.12**	**52**			**Pn**	**18 07 27.2**	**-0.5**
M16K	**Timber Creek**	**3.19**	**292**			**Pn**	**18 07 28.8**	**+0.2**
HIN	**Hinchinbrook I**	**3.22**	**79**			**Pn**	**18 07 28.7**	**-0.2**
FID	**Port Fidalgo**	**3.28**	**73**			**Pn**	**18 07 28.1**	**-1.6**
SCM	**Sheep Creek Mo**	**3.30**	**53**			**Pn**	**18 07 29.6**	**-0.5**
SCM				IAML			18 08 09.7	
	comp=E,775nm,0.9s							
SCM				IAML			18 08 16.0	
	comp=N,703nm,0.8s							
MID	**Middleton Isla**	**3.36**	**96**			**Pn**	**18 07 30.5**	**-0.2**
MID				IAML			18 08 11.9	
	comp=E,716nm,0.6s							
L17K	**Donlin**	**3.42**	**312**			**Pn**	**18 07 31.4**	**-0.2**
K20K	**Telida**	**3.46**	**351**			**Pn**	**18 07 32.5**	**+0.5**
WAT7	**Susitna Watana**	**3.47**	**32**			**Pn**	**18 07 32.7**	**+0.3**
SII	**Sitkinak Islan**	**3.48**	**192**			**Pn**	**18 07 31.4**	**-1.1**
SII	**Sitkinak Islan**	**3.48**	**192**	IAML			18 08 12.4	
	comp=E,451nm,0.4s							
SII				IAML			18 08 28.1	
	comp=N,370nm,0.6s							
CAST	**Castle Rocks**	**3.49**	**6**			**Pn**	**18 07 32.7**	**+0.1**
WAT1	**Susitna Watana**	**3.55**	**34**			**Pn**	**18 07 33.4**	**0.0**
EYAK	**Cordova Ski Ar**	**3.60**	**77**	P		**Pn**	**18 07 34.2**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.60**	**77**			**Pn**	**18 07 33.8**	**-0.3**
EYAK				IAML			18 08 17.7	
	comp=E,316nm,0.4s							
EYAK				IAML			18 08 18.7	
	comp=N,344nm,0.5s							
WAT6	**Susitna Watana**	**3.62**	**41**			**Pn**	**18 07 34.1**	**-0.2**
O15K	**Ungalikthiuk R**	**3.62**	**260**			**Pn**	**18 07 35.3**	**+1.0**
N15K	**Kwethluk River**	**3.62**	**276**			**Pn**	**18 07 35.3**	**+1.1**
N15K				IAML			18 08 17.5	
	comp=N,158nm,0.8s							
N15K				IAML			18 08 44.1	
	comp=E,165nm,0.8s							
L16K	**Owhat River**	**3.67**	**301**			**Pn**	**18 07 34.7**	**-0.3**
DIV	**Divide**	**3.70**	**68**			**Pn**	**18 07 34.9**

RND IAML 18 08 25.2
comp=N,129nm,0.7s
J18K Innoko River 3.96 334 Pn 18 07 38.6 -0.2
DHY Denali Highway 4.09 38 Pn 18 07 40.6 0.0
DHY IAML 18 08 29.2
comp=N,258nm,0.6s
DHY IAML 18 08 31.1
comp=E,306nm,0.5s
ANNW Aniakchak Nort 4.11 225 Pn 18 07 41.8 +1.0
GOAT Goat Mountain 4.11 78 Pn 18 07 40.6 -0.2
RAGM Ragged Mountai 4.12 80 Pn 18 07 41.2 +0.2
BMRM Bremner River 4.22 73 Pn 18 07 42.4 0.0
MCK McKinley 4.22 25 Pn 18 07 42.4 +0.1
MCK IAML 18 08 33.3
comp=N,98nm,0.4s
MCK IAML 18 08 34.4
comp=E,121nm,0.5s
J19K Poorman 4.25 343 Pn 18 07 42.7 +0.1
ANPB Aniakchak Plen 4.25 224 Pn 18 07 43.0 +0.2
KAIM Kayak Island 4.26 87 Pn 18 07 43.3 +0.6
J20K Nowinta River 4.27 353 Pn 18 07 43.5 +0.5
O14K Tigyukauivet M 4.32 264 Pn 18 07 44.6 +1.1
N25K Chitina, Valde 4.38 64 Pn 18 07 44.1 -0.4
N14K Kuskokwak Cree 4.43 273 Pn 18 07 46.2 +1.2
N14K IAML 18 08 48.0
comp=N,122nm,1.6s
N14K IAML 18 09 22.2
comp=E,129nm,1.6s
HARP HAARP 4.47 53 Pn 18 07 45.6 0.0
HARP IAML 18 09 08.9
comp=N,351nm,0.8s
BWN Browne 4.52 19 Pn 18 07 46.8 +0.6
BWN IAML 18 09 01.7
comp=N,162nm,1.0s
BWN IAML 18 09 37.5
comp=E,175nm,1.2s
J17K VABM Dome 4.54 322 Pn 18 07 46.0 -0.5
J17K IAML 18 09 18.3
comp=N,69nm,0.8s
L15K Ungalak Mounta 4.55 296 Pn 18 07 46.9 +0.2
M14K Bethel 4.58 284 Pn 18 07 47.9 +0.8
M14K IAML 18 08 57.0
comp=N,65nm,1.4s
M14K IAML 18 09 18.1
comp=E,67nm,1.6s
BERG Berg Lake 4.61 81 Pn 18 07 47.4 -0.1
PAX Paxson 4.66 46 Pn 18 07 48.2 0.0
PAX IAML 18 08 43.1
comp=N,121nm,0.7s
PAX IAML 18 09 07.9
comp=E,98nm,0.9s
CHGN Chignik 4.70 221 Pn 18 07 48.7 +0.1
CHGN IAML 18 08 43.4
comp=E,156nm,0.1s
CHGN IAML 18 08 45.2
comp=N,125nm,0.3s
GLB Gilahina Butte 4.70 68 Pn 18 07 48.4 -0.4
GLB IAML 18 08 43.2
comp=E,269nm,0.7s
K15K Wolf Creek Mou 4.80 303 Pn 18 07 50.4 +0.4
VRDI Verde Repeater 4.82 71 Pn 18 07 50.5 0.0
VRDI IAML 18 08 47.0
comp=N,293nm,0.6s
VRDI IAML 18 08 47.5
comp=E,166nm,0.6s
CRQM Cirque 4.90 76 Pn 18 07 52.0 +0.4
I20K Naaghedeneel 4.91 352 Pn 18 07 52.0 +0.6
I20K IAML 18 09 30.6
comp=N,243nm,1.2s
I20K IAML 18 09 40.6
comp=E,173nm,1.0s
J16K Anvik River 4.97 315 Pn 18 07 52.0 -0.3
NEA2 Nenana 4.98 19 Pn 18 07 52.0 -0.4
L14K Kuka Creek 5.02 290 Pn 18 07 53.5 +0.6
L14K IAML 18 08 35.8
comp=E,135nm,1.3s
L14K IAML 18 09 38.9
comp=N,64nm,1.4s
WRH Wood River Hil 5.05 24 Pn 18 07 53.1 -0.3
WRH IAML 18 08 50.0
comp=E,82nm,0.5s
WRH IAML 18 08 50.2
comp=N,53nm,0.8s
MCARA McCarthy VSAT 5.05 69 Pn 18 07 53.5 0.0
TGL Tana Glacier 5.05 77 Pn 18 07 53.5 -0.1
VNFG Fog Glacier, M 5.11 227 Pn 18 07 54.5 +0.3
VNFG IAML 18 09 02.9
comp=E,110nm,0.6s
VNFG IAML 18 09 09.3
comp=N,108nm,0.6s
K24K Donnelly Dome 5.11 38 Pn 18 07 55.3 +1.0
GCSA Galena City Sc 5.15 341 Pn 18 07 54.8 +0.1
MLY Manley 5.19 10 Pn 18 07 54.9 -0.4
BARK Barkley Ridge 5.21 81 Pn 18 07 55.7 +0.1
CYK Cape Yakataga 5.22 84 Pn 18 07 56.7 +1.1
VNKR Veniaminof 5 5.24 224 Pn 18 07 56.1 +0.2
M13K Dall Lake 5.25 279 Pn 18 07 57.4 +1.4
M13K IAML 18 09 55.3
comp=E,73nm,1.8s
M13K IAML 18 09 55.6
comp=N,81nm,1.9s
I21K Tanana 5.26 4 Pn 18 07 56.0 -0.2
I21K IAML 18 09 36.4
comp=E,42nm,1.0s
HDA Harding Lake 5.26 29 Pn 18 07 55.9 -0.3
HDA IAML 18 08 56.0
comp=N,219nm,0.6s
HDA IAML 18 08 56.0
comp=E,168nm,0.6s
CCB Clear Creek Bu 5.26 25 Pn 18 07 55.8 -0.5
CCB IAML 18 08 56.8
comp=E,73nm,0.5s
MENT Mentasta 5.31 52 Pn **Pn 18 07 58.9 +2.0**
MENT IAML 18 09 10.5
comp=N,145nm,0.5s
MENT IAML 18 09 15.9
comp=E,174nm,0.5s
RIDG Independent Ri 5.37 42 Pn 18 07 58.0 +0.3
RIDG IAML 18 08 59.0
comp=E,179nm,0.9s
RIDG IAML 18 09 07.1
comp=N,96nm,0.5s
M26K Nabesna, AK 5.37 59 Pn 18 07 57.8 0.0
M26K IAML 18 09 00.6
comp=N,92nm,0.5s
M26K IAML 18 09 02.1
comp=E,71nm,0.5s
I17K Unalakleet 5.40 320 Pn 18 07 57.8 -0.2
PS08 TAPS Pump Stn8 5.40 29 Pn 18 07 57.9 -0.2
I23K Minto, Yukon-K 5.46 16 Pn 18 07 58.9 +0.1
COLA College 5.46 23 P **Pn 18 07 58.8 0.0**
COLA College 5.46 23 Pn 18 07 58.3 -0.5
MDM Murphy Dome 5.46 21 Pn 18 07 58.8 -0.1
IL31 5.58 27 Pn 18 08 00.2 -0.2
ILAR Eielson Array 5.58 27 P **Pn 18 07 59.9 -0.5**
comp=E,4.8nm,0.5s,baz=219,slow=14,SNR=50
ILAR S **Sn 18 08 57.9 -5.4**
comp=E,9.9nm,0.6s,baz=190,slow=16,SNR=1.8
H21K Melozitna River 5.72 0 Pn 18 08 02.1 -0.3
POKR Poker Plat Res 5.75 24 Pn 18 08 03.1 +0.2
H18K Honhosa River 5.79 336 Pn 18 08 03.5 +0.1
H19K Roundabout Mou 5.82 345 Pn 18 08 03.3 -0.4
M27K Edge Creek, AK 5.84 61 Pn 18 08 04.3 +0.1
J14K Nanvaranak Lak 5.85 303 Pn 18 08 03.9 -0.2
LOGN Logan Glacier 5.95 77 Pn 18 08 06.2 +0.5
K13K Kusilvak Mount 6.07 294 Pn 18 08 08.1 +1.0
H23K Yukon River 6.08 13 Pn 18 08 07.0 -0.3
BC01 Beaver Creek A 6.13 55 Pn 18 08 07.9 -0.1
L27K Beaver Creek, 6.13 55 Pn 18 08 08.0 -0.1
BC03 6.15 55 Pn 18 08 08.4 +0.2
SDPT Sand Point 6.16 225 P **Pn 18 08 07.9 -0.5**
SDPT Sand Point 6.16 225 Pn 18 08 07.5 -0.8
CHNA Chernabura Isl 6.29 218 P **Pn 18 08 08.8 -1.3**
CNBA Chernabura Isl 6.30 218 Pn 18 08 08.8 -1.5
H24K Noodor Dome 6.33 19 Pn 18 08 10.1 -0.5
YUK3 Moose Creek 6.33 68 Pn 18 08 11.7 +0.8
G18K Tagagawik 6.51 339 Pn 18 08 11.1 -1.9
PS1A Pavlof South-1 6.58 230 Pn 18 08 14.5 +0.5
G21K Allakaket 6.59 358 Pn 18 08 14.5 +0.4
G17K Kiwalik Mounta 6.60 331 Pn 18 08 14.1 -0.2
PN7A Pavlof North-7 6.67 231 Pn 18 08 15.7 +0.4
DOL Dolgoi Island 6.83 229 Pn 18 08 17.5 +0.1
G23K Bananza Creek 6.90 9 Pn 18 08 17.9 -0.4
DTNA Dutton South F 6.97 230 Pn 18 08 19.6 +0.2

DT1 Dutton Round H 7.01 230 Pn 18 08 20.0 +0.1
O29M Mount Kennedy 7.16 81 Pn 18 08 22.5 +0.6
G24K Hadweenzic Riv 7.19 17 Pn 18 08 21.5 -0.7
G15K Niukluk 7.22 319 Pn 18 08 22.6 0.0
F19K Shaleruckik Mo 7.24 344 Pn 18 08 23.5 +0.6
F21K Alatna River 7.30 358 Pn 18 08 24.2 +0.5
F18K Selawik 7.33 338 Pn 18 08 24.3 +0.3
G25K Bearman Lake 7.47 21 Pn 18 08 25.6 -0.5
F17K Baldwin Pennin 7.52 333 Pn 18 08 25.7 -0.9
P29M Windy Craggy 7.65 86 Pn 18 08 29.1 +0.6
I27K Kandik River 7.66 38 Pn 18 08 29.2 +0.7
HYT Haines Junctio 7.67 77 Pn 18 08 29.5 +0.6
E19K Redstone River 7.77 348 Pn 18 08 31.1 +1.1
F15K North Star Dit 7.88 322 Pn 18 08 32.0 +0.5
N30M Aishikik Lake 7.89 72 Pn 18 08 31.3 -0.5
I28M Miner Creek 8.10 42 Pn 18 08 34.2 -0.3
G26K Porcupine Rive 8.10 26 Pn 18 08 33.9 -0.6
H27K Steamboat Moun 8.12 34 Pn 18 08 34.2 -0.7
E17K Hotham Inlet 8.18 335 Pn 18 08 36.2 +0.7
E22K Anaktuvuk Pass 8.22 3 Pn 18 08 37.7 +1.5
F14K Arctic Creek 8.28 318 Pn 18 08 36.5 -0.5
F25K Christian Rive 8.30 20 Pn 18 08 36.0 -1.2
BM02 Burnt Mountain 8.36 23 Pn 18 08 37.2 -0.9
PLBC Pleasant Camp 8.37 86 Pn 18 08 38.7 +0.5
E24K Your Creek 8.37 11 Pn 18 08 38.2 0.0
E20K Nigu River 8.45 352 Pn 18 08 40.8 +1.4
G27K Doyon Strip 8.51 31 Pn 18 08 40.1 +0.1
E21K Kilfik River 8.53 357 Pn 18 08 41.3 +0.9
F26K Sheenjek River 8.66 23 Pn 18 08 41.4 -0.7
S31K Pelican 8.83 96 Pn 18 08 42.9 -1.6
TOLK Toolik Lake Re 8.83 8 Pn 18 08 46.3 +1.8
D19K Kuna River 8.86 347 Pn 18 08 45.7 +0.9
TNA Tin City 8.88 316 Pn 18 08 45.4 +0.4
SKAG Skagway 8.88 86 P **Pn 18 08 47.9 +2.8**
D20K Etiviluk River 8.94 351 Pn 18 08 46.5 +0.8
WHY Whitehorse 8.96 78 Pn 18 08 46.8 +0.5
D23K Nanushuk River 9.09 5 Pn 18 08 49.0 +1.1
AKSA Akutan Strait 9.09 236 Pn 18 08 49.2 +1.2
C21K Knifeblade Rid 9.27 356 Pn 18 08 51.7 +1.4
BESE Bessie Mountai 9.33 91 Pn 18 08 53.3 +2.0
C18K Utukok River 9.43 341 Pn 18 08 54.3 +1.8
SIT Sitka 9.63 100 P **Pn 18 08 55.1 -0.1**
UNV Unalaska Valle 9.64 236 P **Pn 18 08 55.4 +0.1**
P32M Atlin 9.67 84 Pn 18 08 55.8 0.0
MNAT Makushin Natee 9.68 237 Pn 18 08 55.7 -0.3
D25K Kavik River 9.80 14 Pn 18 08 57.4 0.0
MGOD Makushin Gods 9.83 237 Pn 18 08 58.7 +0.7
P33M Teslin, Yukon 10.02 80 Pn 18 08 59.6 -1.0
Q32M Nakina River 10.53 86 Pn 18 09 08.7 +1.2
U33K Whale Pass 11.14 102 Pn 18 09 14.8 -0.8
CRAG Craig 11.46 104 P **Pn 18 09 20.7 +0.9**
DLBC Dease Lake 11.80 87 P **Pn 18 09 24.4 +0.1**
comp=E,5.8nm,0.4s,baz=216,slow=9.5,SNR=17
DLBC S **Sn 18 11 34.4 +0.4**
comp=E,10nm,0.5s,baz=127,slow=22,SNR=7.3
INK Inuvik 11.83 37 P **Pn 18 09 26.4 +1.8**
comp=E,1.2nm,0.4s,baz=225,slow=15,SNR=7.2
INK Inuvik 11.83 37 Pn 18 09 24.2 -0.4
V35K Ketchikan 12.28 103 Pn 18 09 28.1 -2.4
DIB Dawson Inlet, 13.09 112 Pn **Pn 18 09 40.6 -0.5**
MOBC Moresby Island 13.36 111 Pn **Pn 18 09 43.7 -1.0**
RUBB Prince Rupert 13.48 105 Pn **P 18 09 49.0 -2.2**
ATKA Atka Island 14.16 246 P **Pn 18 09 55.9 +1.0**
ATKA Atka Island 14.16 246 Pn **Pn 18 09 53.5 -1.3**
HG4B Hotspring 14.27 113 Pn **Pn 18 09 54.9 -1.4**
GSTR Great Sitkin T 15.10 249 Pn **Pn 18 10 05.0 -1.8**
C36M Paulatuk 15.33 40 Pn **Pn 18 10 07.3 -2.3**
ADK Adak 15.53 249 P **P 18 10 13.7 -0.2**
ADK Adak 15.53 249 Pn **Pn 18 10 09.9 -2.2**
ADK IAmb IAmb 18 10 26.2
comp=Z,15nm,0.9s
KIWB Kanaga Island 15.77 250 Pn **Pn 18 10 13.0 -2.1**
KIWB IAmb IAmb 18 10 33.3
comp=Z,28nm,1.1s
BBB Bella Bella 15.79 109 S **Sn 18 13 08.2 -2.0**
comp=Z,5.5nm,0.8s,baz=5.5,slow=3.8,SNR=3.0
BBB Bella Bella 15.79 109 Pn **Pn 18 10 14.4 -1.0**
BBB IAmb IAmb 18 10 18.4
comp=Z,41nm,1.4s
A36M Sachs Harbour 16.26 31 Pn **Pn 18 10 18.7 -2.3**
A36M IAmb IAmb 18 10 48.3
comp=Z,7.3nm,0.7s
AMKA Amchitka 17.77 253 P **P 18 10 37.1 -1.4**
AMKA IAmb IAmb 18 10 43.5
comp=Z,17nm,0.7s
YKAW3 Yellowknife Wh 18.40 65 P 18 10 43.0 -2.4
YKA Yellowknife Ar 18.41 66 P **Pn 18 10 47.2 +0.1**
comp=Z,3.3nm,0.5s,baz=279,slow=9.9,SNR=45
YKA PcP **PcP 18 15 11.1 +0.4**
comp=Z,0.5nm,0.4s,baz=271,slow=1.5,SNR=6.6
YKA Yellowknife Ar 18.41 66 P P 18 10 43.7 -1.9
YKAW1 Yellowknife Wh 18.47 66 P 18 10 43.6 -2.6
NEW Newport 23.68 104 P P 18 11 42.1 +1.5
PEA0B Petropavlovsk- 27.52 278 P P 18 12 15.8 +0.8
PEA0B IAmb IAmb 18 12 16.6
comp=Z,4.7nm,0.8s
PETK Petropavlovsk- 27.52 278 P P 18 12 15.6 +0.5
comp=Z,3.3nm,0.5s,baz=68,slow=14,SNR=36
comp=Z,3.3nm,0.5s
PETK Petropavlovsk- 27.52 278 P P 18 12 15.4 +0.4
MA2 Magadan 27.65 294 P P 18 12 17.1 +1.0
MA2 IAmb IAmb 18 12 41.5
comp=Z,14nm,1.1s
PDAR Pinedale Array 31.33 104 P P 18 12 50.6 +1.5
comp=Z,0.2nm,0.4s,baz=286,slow=9.0,SNR=2.0
comp=Z,0.2nm,0.4s
ULM Lac du Bonnet 33.02 81 P P 18 13 04.6 +1.1
comp=Z,1.4nm,0.5s,baz=281,slow=8.2,SNR=3.1
comp=Z,1.4nm,0.5s
ULM Lac du Bonnet 33.02 81 IAmb IAmb 18 13 06.8
comp=Z,2.1nm,0.9s
YAK Yakutsk 35.54 308 P P 18 13 25.2 +0.2
YAK IAmb IAmb 18 13 26.9
comp=Z,3.2nm,0.7s
EYMN Ely 36.70 81 P P 18 13 37.5 +2.3
EYMN IAmb IAmb 18 14 04.4
comp=Z,3.5nm,0.8s
SPITS Spitsbergen Ar 41.95 3 P P 18 14 17.7 -0.6
comp=Z,0.4nm,0.3s,baz=46,slow=7.1,SNR=6.4
comp=Z,0.4nm,0.3s
HEH HeiHe 43.92 294 *e*P **P 18 14 34.3 -0.1**
HEH pmax pmax
comp=Z,6.0nm,0.9s
TXAR Lajitas Array 44.91 111 P P 18 14 44.4 +1.7
comp=Z,0.2nm,0.5s,baz=323,slow=5.7,SNR=2.4
TXAR pP **pP 18 15 09.2 -0.6**
comp=Z,0.8nm,0.9s,baz=320,slow=6.7,SNR=2.3
comp=Z,0.2nm,0.5s
USRK Ussuriysk Ar. 46.11 285 P P 18 14 51.7 -0.1
comp=Z,1.3nm,0.5s,baz=51,slow=11,SNR=2.1
comp=Z,1.3nm,0.5s
BNX BinXian 47.17 290 ⇓P **P 18 15 01.1 +1.0**
BNX pmax pmax
comp=Z,6.0nm,0.7s
MJAR Matsushiro Arr 48.84 274 P P 18 15 13.5 +0.4
comp=Z,0.9nm,0.6s,baz=42,slow=6.5,SNR=3.9
comp=Z,0.9nm,0.6s
BATG Bathurst New B 49.31 64 P P 18 15 17.2 +0.7
F64A Sherman 49.33 67 P P 18 15 17.1 +0.5
CN2 Changchun 49.55 290 P P 18 15 19.0 +0.7
CN2 pmax pmax
comp=Z,20nm,0.7s
JGF Kuroka 50.01 274 P P 18 15 22.4 +0.5
ARCES ARCESS Array B 50.79 1 P P 18 15 28.5 +1.1
comp=Z,1.0nm,0.6s,baz=15,slow=12,SNR=1.9
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 50.79 1 IAmb IAmb 18 15 38.7
comp=Z,5.2nm,1.3s
GBN Guysborough 52.78 62 P P 18 15 43.4 +1.0
KSRS Korea Array 53.25 283 P P 18 15 47.8 +1.9
comp=Z,3.8nm,0.5s,baz=38,slow=7.2,SNR=28
comp=Z,3.8nm,0.5s
ULN Ulaanbaatar 54.57 306 P P 18 15 56.3 +0.7
SONM Songino Array 54.86 306 P P 18 15 59.8 +2.1
comp=Z,8.0nm,0.7s,baz=45,slow=6.5,SNR=52
SONM pP **pP 18 16 26.8 +0.8**
comp=Z,1.4nm,0.8s,baz=30,slow=7.5,SNR=3.3
comp=Z,8.0nm,0.7s
SONM Songino Array 54.86 306 P 18 15 59.3 +1.5
ZAA0 Zalesovo Array 57.44 324 P 18 16 16.0 +0.3
ZALV Zalesovo Beam 57.44 324 P **P 18 16 16.7 +1.0**
comp=Z,4.1nm,0.4s,baz=35,slow=6.9,SNR=24
ZALV pP **pP 18 16 44.9 +0.7**
comp=Z,1.9nm,0.7s,baz=31,slow=8.2,SNR=4.0
comp=Z,4.1nm,0.4s
ZALV Zalesovo Beam 57.44 324 P 18 16 15.5 -0.3
NBO00 NORSAR Array S 58.68 9 P **P 18 16 24.1 -0.2**
FIA1 FINESS Array S 58.92 1 P **P 18 16 25.9 0.0**
FINES FINESS Array B 58.92 1 P **P 18 16 26.2 +0.3**
comp=Z,1.2nm,0.7s,baz=329,slow=7.1,SNR=5.0
comp=Z,1.2nm,0.7s
HFS Hagfors 59.78 8 P **P 18 16 31.2 -0.7**
comp=Z,0.6nm,0.5s,baz=26,slow=4.1,SNR=4.5
comp=Z,0.6nm,0.5s
KURK Kurchatov 62.09 326 P 18 16 47.2 -0.5
KURK IAmb IAmb 18 16 49.2
comp=Z,2.6nm,0.9s
KURK Kurchatov 62.09 326 pP 18 17 17.1 +0.6
BVAR Borovoye Array 62.13 332 P **P 18 16 46.9 -1.0**
comp=Z,2.5nm,0.6s,baz=3.8,slow=9.1,SNR=11
comp=Z,2.5nm,0.6s
KURBB Kurchatov Arra 62.20 326 P **P 18 16 48.5 +0.1**
comp=Z,1.4nm,0.5s,baz=29,slow=6.4,SNR=12
KURBB pP **pP 18 17 17.1 -0.2**
comp=Z,0.7nm,0.7s,baz=27,slow=6.5,SNR=3.6
comp=Z,1.4nm,0.5s
EKA Eskdalemuir Ar 62.55 19 P **P 18 16 50.6 +0.1**
comp=Z,0.7nm,0.4s,baz=331,slow=5.3,SNR=6.9
comp=Z,0.7nm,0.4s
GTA2 Gaotai 64.46 305 P **P 18 17 04.6 +1.0**
GTA2 pmax pmax
comp=Z,8.0nm,0.8s
MK31 Makanchi Array 64.50 321 P P 18 17 03.7 +0.1
MKAR Makanchi Array 64.50 321 P **P 18 17 02.8 -0.8**
comp=Z,1.0nm,0.5s,baz=34,slow=6.1,SNR=14
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 64.50 321 P P 18 17 03.3 -0.3
MAKZ Makanchi 64.59 322 P P 18 17 03.7 -0.5
MAKZ IAmb IAmb 18 17 05.0
comp=Z,2.5nm,0.9s
AB31 Akbulak array 67.92 337 P P 18 17 24.4 -0.9
AB31 IAmb IAmb 18 17 26.6
comp=Z,1.4nm,0.8s
ABKAR Akbulak array 67.92 337 P P 18 17 24.6 -0.7
GERES GERESS Array B 71.00 9 P **P 18 17 44.2 -0.2**
comp=Z,0.3nm,0.5s,baz=238,slow=2.5,SNR=4.4
comp=Z,0.3nm,0.5s
ESDC Sonseca Array 77.47 24 P **P 18 18 22.6 +0.6**
comp=Z,1.1nm,0.8s,baz=344,slow=6.8,SNR=6.6
comp=Z,1.1nm,0.8s
ESDC Sonseca Array 77.47 24 IAmb IAmb 18 18 23.4
comp=Z,4.5nm,1.1s
BOSA Boshof 148.63 3 PKPbc **PKPbc 18 26 12.7 0.0**
comp=Z,2.4nm,0.5s,baz=352,slow=3.8,SNR=15
QSPA South Pole Qui 149.76 180 PKPbc **PKPbc 18 26 14.0 -0.2**
comp=Z,3.6nm,0.7s,baz=282,slow=0.5,SNR=29
QSPA South Pole Qui 149.76 180 PKiKP 18 26 15.0 -0.1

BKK 17 18:12:06.8±4.5, 12°N±8°×9°5E±4°2, h10km, M3.9/6, mb4.2/1, Mjma3.8/6, ML3.8/6, MLv3.8/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.11**	**260**	*e*P	Pg	18 12 53.0	+5.7
PBA				*i* x	x	18 12 53.0	
	baz=36,slow=22						
PBA				*e*S	Sg	18 13 16.6	+2.0
PBA				IAML		18 13 27.8	
	comp=E,90nm,0.7s						
PBA				IAML		18 13 28.1	
	comp=N,32nm,0.5s						
RNTT	**Ranong**	**4.43**	**126**	P	Pn	18 13 14.1	0.0
KHLT	**Khaolaem Dam**	**4.54**	**53**	P	Pn	18 13 15.9	+0.2

NOU ***17*** *18:19:39.9, 10°.48S×161°.44E, h23km, mb5.0/25, Solomon Islands*
IDC ***17*** *18:19:40.4±2.7, 10°.53S×161°.31E, h50km±24km, mb3.6/7, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=27.6km s-min=19.5km az=75.0*
NEIC ***17*** *18:19:41.6±1.7, 10°.50S±0°.09×161°.3E±0°.1, h66km±8km, mb4.1/15, Error ellipse: s-maj=21.0km s-min=3.5km az=50.0*

ISC 17 18:19:40.7±0.6, 10°.52S±0°.05×161°.43E±0°.05, h61km, n57, σ1s57/54, mb4.0/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**0.47**	**83**	P	**Pn**	**18 19 50.1**	**-2.3**
HURO	**Huro Makira**	**0.47**	**83**	S	**Sn**	**18 19 58.0**	**-2.9**
NGOA	**Tingoa Renbel**	**1.69**	**233**	P	**Pn**	**18 20 06.6**	**-1.4**
HNR	**Honiara**	**1.82**	**306**	P	**Pn**	**18 20 07.6**	**-2.1**
	110nm,0.5s,baz=221,slow=2.7,SNR=86						
HNR				S	**Sn**	**18 20 31.9**	**+0.1**
	184nm,0.5s,baz=48,slow=23,SNR=40						
HNR				LR	LR	18 21 02.8	
	comp=Z,15nm,21.5s,baz=206,slow=48						
HNR	**Honiara**	**1.82**	**306**	P	**Pn**	**18 20 08.0**	**-1.8**
HNR	**Honiara**	**1.82**	**306**	S	**Sn**	**18 20 34.5**	**+2.7**
HNR	**Honiara**	**1.82**	**306**		**Pn**	**18 20 07.5**	**-2.2**
HNR					**Sn**	**18 20 30.1**	**-1.7**
ALEG	**Aligegeo Malai**	**1.90**	**337**	P	**Pn**	**18 20 11.2**	**+0.3**
ALEG	**Aligegeo Malai**	**1.90**	**337**	S	**Sn**	**18 20 35.0**	**+1.2**
SAVO	**Savo Central**	**2.10**	**310**	P	**Pn**	**18 20 12.0**	**-1.6**
TATA	**Tatamba Isabel**	**2.66**	**323**	P	**Pn**	**18 20 21.1**	**-0.1**
TATA	**Tatamba Isabel**	**2.66**	**323**	S	**Sn**	**18 20 51.5**	**-0.9**
DVP	**Devils Point**	**9.70**	**138**	P	**Pn**	**18 21 59.4**	**+1.8**
DVP	**Devils Point**	**9.70**	**138**	S	**Sn**	**18 23 46.6**	**+1.5**
KOUNC	**Koumac, New Ca**	**10.34**	**165**	P	**Pn**	**18 22 09.1**	**+2.7**
KOUNC	**Koumac, New Ca**	**10.34**	**165**	Pn	**Pn**	**18 22 08.2**	**+1.9**
RABL	**Rabaul**	**11.14**	**304**		**Pn**	**18 22 17.1**	**-0.2**
NOUC	**Port Laguerre**	**12.42**	**159**	P	**Pn**	**18 22 37.4**	**+2.6**
DZM	**Mont Dzumac**	**12.45**	**158**	P	**Pn**	**18 22 36.9**	**+1.7**
	3.9nm,0.3s,baz=18,slow=9.8,SNR=80						
DZM				S	**Sn**	**18 24 53.4**	**+1.0**
	5.1nm,0.7s,baz=315,slow=16,SNR=2.0 12nm,0.5s						
MARNC	**Mare, Loyalty**	**12.60**	**151**	P	**Pn**	**18 22 39.9**	**+2.7**
MARNC	**Mare, Loyalty**	**12.60**	**151**	Pn	**Pn**	**18 22 38.2**	**+1.0**
YATNC	**Mamie plateau,**	**12.61**	**156**	P	**Pn**	**18 22 38.6**	**+1.3**
ONTNC	**Ouen Toro**	**12.67**	**158**	P	**Pn**	**18 22 39.9**	**+1.8**
ONTNC	**Ouen Toro**	**12.67**	**158**	Pn	**Pn**	**18 22 39.3**	**+1.1**
OUENC	**Ouen Island, N**	**12.91**	**157**	P	**Pn**	**18 22 44.2**	**+2.7**
OUENC	**Ouen Island, N**	**12.91**	**157**	Pn	**Pn**	**18 22 43.1**	**+1.6**
MANU	**Manus Island**	**16.31**	**300**	P	**P**	**18 23 28.0**	**0.0**
MANU				IAmb	IAmb	18 24 05.0	
	comp=Z,24nm,1.2s						
CTA	**Charters Tower**	**17.44**	**235**	P	**Pn**	**18 23 39.4**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=81,slow=14,SNR=5.5 comp=Z,4.9nm,1.0s						
CTAO	**Charters Tower**	**17.44**	**235**	P	**P**	**18 23 40.6**	**+0.1**
CTAO				IAmb	IAmb	18 23 46.0	
	comp=Z,7.6nm,0.9s						
INKA	**Innaminka**	**25.91**	**226**	P	**P**	**18 25 07.4**	**+0.2**
WR8	**Warramunga Arr**	**27.59**	**247**	P	**P**	**18 25 21.7**	**-0.8**
WR8				IAmb	IAmb	18 25 55.9	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**27.73**	**247**	P	**P**	**18 25 23.1**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=77,slow=8.9,SNR=8.5 comp=Z,1.1nm,0.8s						
WRA	**Warramunga Arr**	**27.73**	**247**	P	**P**	**18 25 22.3**	**-1.4**
H11S2	**WAKE ISLAND Hy**	**29.30**	**10**	T	T	18 56 59.0	
	baz=188,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.30**	**10**	T	T	18 57 04.3	
	baz=188,slow=76,SNR=45						
AS31	**Alice Springs**	**29.31**	**240**	P	**P**	**18 25 35.9**	**-1.8**
ASAR	**Alice Springs**	**29.31**	**240**	P	**P**	**18 25 36.5**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=64,slow=10,SNR=7.2 comp=Z,0.1nm,0.4s						
H11S1	**WAKE ISLAND Hy**	**29.31**	**10**	T	T	18 57 09.6	
	baz=188,slow=76,SNR=33						
H11N1	**WAKE ISLAND Hy**	**30.52**	**10**	T	T	18 58 35.8	
	baz=188,slow=76,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**30.53**	**10**	T	T	18 58 32.6	
	baz=188,slow=76,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**30.54**	**10**	T	T	18 58 32.2	
	baz=188,slow=76,SNR=3.9						
KNRA	**Kununurra**	**32.21**	**257**	P	**P**	**18 26 01.8**	**-1.5**
BBOO	**Buckleboo**	**32.21**	**223**	P	**P**	**18 26 01.2**	**-2.0**
FITZ	**Fitzroy Crossi**	**35.44**	**254**	P	**P**	**18 26 28.7**	**-2.7**
FITZ				IAmb	IAmb	18 26 49.9	
	comp=Z,3.0nm,1.4s						
SONM	**Songino Array**	**75.78**	**325**	P	**P**	**18 31 21.7**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=138,slow=5.6,SNR=8.3 comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**75.78**	**325**	P	**P**	**18 31 20.5**	**+0.3**

SONM				IAmb	IAmb	18 31 23.7
	comp=Z,1.2nm,0.8s					
M16K	**Timber Creek**	**77.85**	**19**	P	**P**	**18 31 31.9 +0.5**
L18K	**Granite Mounta**	**79.47**	**19**	P	**P**	**18 31 40.7 +0.4**
L18K				IAmb	IAmb	18 32 18.9
	comp=Z,3.4nm,1.2s					
QSPA	**South Pole Qui**	**79.48**	**180**	P	**P**	**18 31 41.8 +1.3**
	comp=Z,2.0nm,1.2s,baz=281,slow=9.0,SNR=2.0 comp=Z,2.0nm,1.2s					
QSPA	**South Pole Qui**	**79.48**	**180**	P	**P**	**18 31 40.4 -0.2**
QSPA				IAmb	IAmb	18 31 52.8
	comp=Z,4.2nm,1.2s					
J17K	**VABM Dome**	**79.65**	**17**	P	**P**	**18 31 42.2 +0.9**
CAST	**Castle Rocks**	**81.80**	**19**	P	**P**	**18 31 51.9 -1.0**
CAST				IAmb	IAmb	18 32 11.2
	comp=Z,3.5nm,1.3s					
IMAR	**Indian Mountai**	**83.11**	**17**	P	**P**	**18 31 59.5 -0.1**
ILAR	**Eielson Array**	**84.41**	**20**	P	**P**	**18 32 06.6 +0.4**
	comp=Z,0.2nm,0.4s,baz=237,slow=5.2,SNR=2.6 comp=Z,0.2nm,0.4s					
MKAR	**Makanchi Array**	**90.26**	**318**	P	**P**	**18 32 36.5 +1.6**
	comp=Z,0.3nm,0.5s,baz=94,slow=6.0,SNR=4.8 comp=Z,0.3nm,0.5s					
MKAR	**Makanchi Array**	**90.26**	**318**	P	**P**	**18 32 34.2 -0.7**
YKA	**Yellowknife Ar**	**96.47**	**28**	P	**P**	**18 33 02.6 -0.4**
	comp=Z,0.3nm,0.4s,baz=260,slow=4.8,SNR=5.9 comp=Z,0.3nm,0.4s					

MOS ***17*** *18:32:57.4±1.1, 12°.02N×95°.02E, h10km, mb5.6/76, MS5.4/60, Error ellipse: s-maj=5.7km s-min=3.4km az=109.7*

NEIC ***17*** *18:32:58.7±2.4, 12°.10N±0°.06×94°.98E±0°.05, h5km±2km, mb5.9/379, Ms_20 5.6/640, Mwb5.7/75, Mww5.7/30, Error ellipse: s-maj=9.0km s-min=6.2km az=195.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.12; Mθθ=-1.39; Mϕϕ=1.28; Mrθ=-2.90; Mθϕ=3.30; Mϕr=-1.59; Fault plane solution: M₀=4.86000×10¹⁷ NP1: ϕs=164.76000°, δ49.28000°, λ174.48000°. NP2: ϕs=258.37000°, δ85.82000°, λ40.85000°. Principal axes: T 5.2673, Plg31.0000°, Azm130.0000°; N -0.9561, Plg49.0000°, Azm263.0000°; P -4.3112, Plg24.0000°, Azm24.0000°;*

BJI ***17*** *18:32:58.1, 11°.82N×94°.97E, h27km, mB5.8/75, mb5.5/81, Ms6.0/96, Ms7 5.7/91*

IDC ***17*** *18:32:58.0±0.3, 12°.10N×95°.00E, h0km, mb5.0/50, mbtmp5.0/52, ML5.4/2, MS5.3/83, Error ellipse: s-maj=10.3km s-min=8.8km az=56.0*

ISC-PP ***17*** *18:32:58, 12°.10N×94°.97E, h14km, Mwppsm6.1, Moment Tensor Solution. s51 Moment tensor: Scale 10¹⁸Nm; Mrr0.10±.08; Mθθ0.65±.30; Mϕϕ-0.11±.18; Mrθ-0.19±.18; Mθϕ0.29±.13; Mϕr0.40±.15; Fault plane solution: M₀1.70000×10¹⁸ NP1:ϕs107.80000°, δ72.90000°, λ333.70000°. NP2:ϕs206.00000°, δ65.00000°, λ-161.10000°.*

NEIC ***17*** *18:32:59, 12°.11N×94°.97E, h6km*

PTWC ***17*** *18:32:59, 12°.10N×95°.10E, h10km, Mwp5.8/10, ANDAMAN ISLANDS, INDIA REGION*

IPGP ***17*** *18:32:59.0, 12°.09N×94°.94E, h6km, Mw5.8, Fault plane solution: NP1:ϕs82.00000°, δ79.00000°, λ-33.00000°. NP2:ϕs179.00000°, δ58.00000°, λ-167.00000°.*

BKK ***17*** *18:32:59.5±0.9, 12°.N±2°×9°.5E±°, h9km±6km, mB5.8/62, mb5.6/73, Mjma5.9/60, ML5.8/30, MLv5.6/35, Mw(mB)5.4/62, MwMwp5.0/37, Mwp5.3/37*

BGR ***17*** *18:33:00.1, 10°.82N×94°.52E, h33km, mb5.6, mB_BB6.1, Ms5.4*

NDI ***17*** *18:33:00.7±3.4, 12°.13N×95°.21E, h10km, mb5.9, MW5.6, Presumed earthquake*

GCMT ***17*** *18:33:00.7±0.1, 12°.01N±0°.01×95°.07E±0°.01, h12km, MW5.7/159, Moment Tensor Solution. s138,c282; s159,c346; Duration: 1s8 Moment tensor: Scale 10¹⁷ Nm; Mrr-1.35±.04; Mθθ0.09±.04; Mϕϕ1.26±.04; Mrθ-0.45±.10; Mθϕ4.44±.03; Mϕr0.91±.10; Best double couple: M₀4.65000×10¹⁷ NP1:ϕs85.00000°, δ74.00000°, λ-11.00000°. NP2:ϕs178.00000°, δ79.00000°, λ-164.00000°. Principal axes: T 5.1780, Plg3.0000°, Azm311.0000°; N -1.0540, Plg71.0000°, Azm211.0000°; P -4.1220, Plg19.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *18:33:00, 12°.11N×94°.97E, h5km*

GFZ ***17*** *18:33:01.9, 12°.21N×95°.05E, h21km, Mw5.7/136, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.65; Mθθ-0.13; Mϕϕ1.79; Mrθ-0.91; Mθϕ4.44; Mϕr0.09; Fault plane solution: M₀4.84870×10¹⁷ NP1: ϕs175.05626°, δ74.01365°, λ-169.54704°. NP2: ϕs82.14756°, δ79.95557°, λ-16.24202°. Principal axes: T 5.4036, Plg4.0953°, Azm129.2552°; N -1.4325, Plg70.9745°, Azm231.2390°; P -3.9710, Plg18.5463°, Azm37.8788°;*

GFZ ***17*** *18:33:01.3±0.2, 12°.N±2°×9°.5E±°, h10km, M5.5/37, mb5.5/37*

DJA ***17*** *18:33:02.3±0.2, 12°.N±2°×9°.5E±°, h10km, M5.5/55, mB5.8/47, mb5.5/55, MLv5.7/13, Mw(mB)5.4/47, MwMwp5.5/41, Mwp5.6/41*

NEIC ***17*** *18:33:08.3, 12°.01N×94°.76E, h12km, Moment Tensor Solution. Duration: 3s8 Moment tensor: Scale 10¹⁷Nm; Mrr-1.08; Mθθ-0.43; Mϕϕ1.50; Mrθ-0.43; Mθϕ3.73; Mϕr1.03; Fault plane solution: M₀4.12000×10¹⁷ NP1:ϕs81.29000°, δ71.20000°, λ-10.84000°. NP2:ϕs174.83000°, δ79.74000°, λ-160.88000°. Principal axes: T 4.4479, Plg6.0000°, Azm307.0000°; N -0.7674, Plg68.0000°, Azm202.0000°; P -3.6805, Plg21.0000°, Azm39.0000°;*

ISC 17 18:33:00.6±0.2, 12°.09N±0°.03×95°.00E±0°.03, h14km, h14km:pP-P,n1742,σ1s63/1505, mb5.7/467, MS5.6/500, 37C-73D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.25**	**259**	P		**Pn**	**18 33 38.2**	**+0.8**
PBA	**Port Blair**	**2.25**	**259**			**Pn**	**18 33 37.3**	**-0.2**
PBA	**Port Blair**	**2.25**	**259**	P		**Pn**	**18 33 38.4**	**+0.9**
PBA	**Port Blair**	**2.25**	**259**	P		**Pn**	**18 33 38.4**	**+0.9**
PBA	**Port Blair**	**2.25**	**259**	*e*P		**Pn**	**18 33 38.4**	**+0.9**
PBA				*e*S		**Sg**	**18 34 13.3**	**+0.3**
RNTT	**Ranong**	**4.34**	**128**	P		**Pn**	**18 34 02.5**	**-3.7**
KHLT	**Khaolaem Dam**	**4.41**	**52**	P		**Pn**	**18 34 05.8**	**-1.3**
PKDT	**Phuket**	**5.31**	**141**	P		**Pn**	**18 34 16.4**	**-3.1**
UTHA	**Uthaitani**	**5.53**	**51**	P		**Pn**	**18 34 21.4**	**-1.1**
	4um454nm,0.9s							
BSI	**Banda Aceh**	**6.56**	**177**	P		Pn	18 34 41.9	+5.2
	17um5um333nm,1.0s							
MHMT	**Maesarieng**	**6.68**	**25**	P		**Pn**	**18 34 39.8**	**+1.4**
	1.7nm1.9nm181nm703nm,0.9s							
LHMI	**Lhok Sumawe**	**7.08**	**164**	P		**Pn**	**18 34 45.0**	**+1.1**
LHMI	**Lhok Sumawe**	**7.08**	**164**			**Pn**	**18 34 43.6**	**-0.2**
LHMI	**Lhok Sumawe**	**7.08**	**164**	P		**Pn**	**18 34 42.2**	**-1.7**
LHMI	**Lhok Sumawe**	**7.08**	**164**	P		**Pn**	**18 34 45.5**	**+1.6**
	2.3nm8µm393nm,1.1s							
LHMI	**Lhok Sumawe**	**7.08**	**164**	P		**Pn**	**18 34 45.0**	**+1.1**
CM13	**Chiang Mai Arr**	**7.34**	**30**	P		**Pn**	**18 34 48.2**	**+0.8**
	2.0nm256nm,0.9s							
CM05	**Chiang Mai Arr**	**7.34**	**31**	P		**Pn**	**18 34 48.4**	**+0.9**
	0.9nm324nm,0.8s							
CM04	**Chiang Mai Arr**	**7.36**	**31**	P		**Pn**	**18 34 48.0**	**+0.3**
	1.2nm2.2nm148nm3µm383nm,0.9s							
CM01	**Chiang Mai Arr**	**7.36**	**31**	P		**Pn**	**18 34 48.0**	**+0.2**
	1.1nm2.4nm3µm406nm,0.8s							
CM02	**Chiang Mai Arr**	**7.37**	**31**	P		**Pn**	**18 34 48.3**	**+0.5**
	1.0nm2.0nm2µm365nm,0.8s							
CM31	**Chiang Mai Arr**	**7.39**	**30**	P		**Pn**	**18 34 49.1**	**+1.0**
	SNR=156							
CM31				P		**Pn**	**18 34 49.1**	**+1.0**
	SNR=156							
CM31	**Chiang Mai Arr**	**7.39**	**30**			**Pn**	**18 34 47.6**	**-0.4**
CM31	**Chiang Mai Arr**	**7.39**	**30**	P		**Pn**	**18 34 47.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**7.39**	**30**	Pn		**Pn**	**18 34 48.5**	**+0.4**
	7.9nm,0.3s,baz=219,slow=14,SNR=394							
CMAR				Lg		Lg	18 36 52.5	
	baz=202,slow=27							
CMAR				LR		LR	18 37 58.4	
	comp=Z,22µm,19.9s,baz=205,slow=41 198nm,0.8s							
CMAR	**Chiang Mai Arr**	**7.39**	**30**	*i* P		**Pn**	**18 34 48.5**	**+0.4**
CMAR						pmax	pmax	
	comp=Z,216nm,0.8s							
CMAR	**Chiang Mai Arr**	**7.39**	**30**			**Pn**	**18 34 47.6**	**-0.4**
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 53.2**	**+0.9**
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 52.6**	**+0.3**
	comp=Z,0.6nmcomp=Z,31nmcomp=Z,24µmcomp=Z,4µm comp=Z,145nm,0.9s							
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 51.8**	**-0.5**
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 52.5**	**+0.3**
CHTO				P		**Pn**	**18 34 52.5**	**+0.3**
CHTO				S		**Sn**	**18 36 17.1**	**-2.1**
CHTO				S		**Sn**	**18 36 17.1**	**-2.1**
CHTO	**Chiang Mai**	**7.69**	**29**			**Pn**	**18 34 51.8**	**-0.5**
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 50.3**	**-2.0**
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 53.9**	**+1.6**
	comp=Z,24µmcomp=Z,4µmcomp=Z,146nm,0.9s							
CHTO	**Chiang Mai**	**7.69**	**29**	P		**Pn**	**18 34 52.6**	**+0.3**
NPW	**Naypyitaw**	**7.72**	**8**	P		**Pn**	**18 34 54.1**	**+1.4**
LAMP	**Lampang**	**7.80**	**34**	P		**Pn**	**18 34 54.1**	**+0.3**
	comp=Z,0.9nmcomp=Z,0.9nmcomp=Z,27nmcomp=Z,24µm comp=Z,3µmcomp=Z,251nm,1.0s							
CMAI	**Chiengmai2**	**8.71**	**26**	P		**Pn**	**18 35 08.2**	**+1.7**
KULM	**Kulim**	**8.76**	**140**	P		**Pn**	**18 35 04.9**	**-2.1**
KULM	**Kulim**	**8.76**	**140**			**Pn**	**18 35 03.3**	**-3.7**
KULM	**Kulim**	**8.76**	**140**	P		**Pn**	**18 35 04.3**	**-2.7**
KULM	**Kulim**	**8.76**	**140**	P		**Pn**	**18 35 05.7**	**-1.3**
KULM	**Kulim**	**8.76**	**140**	P		**Pn**	**18 35 04.3**	**-2.7**
TPTI		**9.03**	**166**	P		**Pn**	**18 35 13.8**	**+3.1**
SNSI	**Sinabang, Aceh**	**9.71**	**172**	P		**Pn**	**18 35 24.5**	**+4.6**
	comp=Z,456nm,1.0s							
SKNT	**Sakolnakorn**	**9.96**	**60**	P		**Pn**	**18 35 22.2**	**-1.2**
	comp=Z,11µmcomp=Z,4µmcomp=Z,281nm,1.0s							
PSI	**Prapat**	**10.01**	**157**	P		**Pn**	**18 35 26.2**	**+2.0**
PSI	**Prapat**	**10.01**	**157**	P		**Pn**	**18 35 24.4**	**+0.2**
PSI	**Prapat**	**10.01**	**157**	P		**Pn**	**18 35 27.4**	**+3.2**
RPSI	**Rantau Prapat**	**10.11**	**157**			**Pn**	**18 35 24.4**	**-1.1**
RPSI	**Rantau Prapat**	**10.11**	**157**	P		**Pn**	**18 35 25.6**	**+0.2**
BRDH	**Bariadhala**	**11.01**	**344**	Pn		**Pn**	**18 35 37.2**	**-0.5**
	comp=Z,85nm,0.3s,baz=102,slow=5.4,SNR=10							
BRDH				LR		LR	18 41 12.5	
	comp=Z,22µm,20.1s,baz=160,slow=45							
GSI	**Gunungsitoli**	**11.01**	**166**	P		**Pn**	**18 35 40.0**	**+2.1**
GSI	**Gunungsitoli**	**11.01**	**166**			**Pn**	**18 35 37.3**	**-0.6**
GSI	**Gunungsitoli**	**11.01**	**166**	P		**Pn**	**18 35 40.9**	**+3.0**
	comp=Z,21µmcomp=Z,105nm,1.0s							
GSI	**Gunungsitoli**	**11.01**	**166**	P		Pn	18 35 42.6	+4.7
BWNR	**Bhubaneshwar**	**11.98**	**314**	*e*P		**Pn**	**18 35 51.5**	**+0.5**
BWNR				IAmb		IAmb	18 35 54.4	
	comp=Z,386nm,0.6s							
BWNR				*i* x		x	18 36 01.3	
MORE	**Moreh**	**12.10**	**357**			**Pn**	**18 35 49.9**	**-2.8**
SLVN	**Son La**	**12.54**	**42**	P		**Pn**	**18 36 00.6**	**+1.9**
SLVN	**Son La**	**12.54**	**42**			**Pn**	**18 35 58.7**	**0.0**
SLVN	**Son La**	**12.54**	**42**	P		**Pn**	**18 35 59.7**	**+1.0**
VIS	**Vishakhapatnam**	**12.59**	**298**	*e*P		**Pn**	**18 35 59.7**	**+0.3**
VIS				*i* x		x	18 39 05.4	
BKNI	**Bangkinang**	**13.13**	**152**	P		**Pn**	**18 36 07.6**	**+0.8**
BKNI	**Bangkinang**	**13.13**	**152**			**Pn**	**18 36 07.0**	**+0.2**
BKNI	**Bangkinang**	**13.13**	**152**	P		**Pn**	**18 36 08.9**	**+2.1**
BKNI	**Bangkinang**	**13.13**	**152**	P		**Pn**	**18 36 08.3**	**+1.4**
DLV	**Lat**	**13.19**	**89**	P		**Pn**	**18 36 10.6**	**+2.8**
DLV	**Lat**	**13.19**	**89**	P		**Pn**	**18 36 09.7**	**+1.9**
DLV	**Lat**	**13.19**	**89**			**Pn**	**18 36 07.2**	**-0.7**
DLV	**Lat**	**13.19**	**89**	P		**Pn**	**18 36 10.9**	**+3.1**
RAGD	**RAYAGADA**	**13.20**	**304**	*e*P		**Pn**	**18 36 08.4**	**+0.7**
RAGD				*i* x		x	18 39 26.1	
TNCH	**TengChong**	**13.29**	**14**	P		**Pn**	**18 36 11.3**	**+2.1**
TNCH				S		**Sn**	**18 38 40.9**	**+3.9**
TNCH				pmax		pmax		
	comp=Z,350nm,2.7s							
TNCH				pmax		pmax		
	comp=Z,6µm,4.8s							
TNCH				L		L		
	comp=Z,34µm,11.0s							
TNCH				L		L		
	comp=Z,41µm,10.1s							
TNCH				L		L		
	comp=Z,41µm,14.0s							
MYKOM	**Kota Tinggi**	**13.48**	**139**	P		**Pn**	**18 36 10.3**	**-1.2**
MYKOM	**Kota Tinggi**	**13.48**	**139**			**Pn**	**18 36 09.8**	**-1.8**
MYKOM	**Kota Tinggi**	**13.48**	**139**	P		**Pn**	**18 36 11.9**	**+0.4**
	comp=Z,5µmcomp=Z,380nm,1.3s							
MYKOM	**Kota Tinggi**	**13.48**	**139**	P		**Pn**	**18 36 10.7**	**-0.9**
PPI	**Padang Panjang**	**13.57**	**156**	P		**Pn**	**18 36 14.7**	**+1.9**
	comp=Z,18µmcomp=Z,108nm,1.1s							
SHL	**Shillong**	**13.73**	**348**	P		Pn	18 36 10.3	-4.8
SHL	**Shillong**	**13.73**	**348**	P		**Pn**	**18 36 12.3**	**-2.8**
	SNR=63							
SHL	**Shillong**	**13.73**	**348**			Pn	18 36 10.3	-4.8
SHL	**Shillong**	**13.73**	**348**	*ex*		x	18 36 12.2	
BOK	**Bokaro**	**14.51**	**325**	*e*P		**Pn**	**18 36 24.7**	**-0.9**
BOK				*i* x		x	18 40 27.9	
VJD	**Vijayawada**	**14.59**	**289**	*ex*		**P**	**18 36 35.1**	**+2.0**
SHBG	**Sahibganj**	**14.81**	**333**	*e*P		**Pn**	**18 36 29.6**	**-0.2**
PALK	**Pallekele**	**14.88**	**253**	Pn		**Pn**	**18 36 30.7**	**-0.1**
	comp=Z,8.2nm,1.1s,baz=87,slow=9.4,SNR=1.8							
PALK				Sn		**Sn**	**18 39 09.6**	**-6.1**
	comp=Z,2.7nm,0.3s,baz=170,slow=20,SNR=5.1							
PALK				LR		LR	18 42 17.5	
	comp=Z,6µm,18.2s,baz=66,slow=38							
PALK	**Pallekele**	**14.88**	**253**	P		**P**	**18 36 39.3**	**+2.8**
PALK	**Pallekele**	**14.88**	**253**	P		**P**	**18 36 36.7**	**+0.2**
PALK				S		**Sn**	**18 39 19.9**	**+4.2**
PALK	**Pallekele**	**14.88**	**253**			**Pn**	**18 36 27.3**	**-3.5**
PALK	**Pallekele**	**14.88**	**253**	P		**Pn**	**18 36 33.6**	**+2.8**
KMI2	**Kunming**	**14.91**	**28**	||P	**P**	**18 36 34.4**	**-2.6**
KMI2				S		**Sn**	**18 39 21.0**	**+4.4**
KMI2				pmax		pmax		
	comp=Z,5µm,5.0s							
KMI2				L		L		
	comp=Z,33µm,15.3s							
KMI2				L		L		
	comp=Z,37µm,14.2s							
KMI2				L		L		
	comp=Z,28µm,12.8s							
JPG	**JALPAIGURI**	**15.55**	**339**	*ex*		**P**	**18 36 45.5**	**+1.6**
GAYA	**Gaya**	**15.67**	**325**	*e*P		**Pn**	**18 36 40.8**	**-0.3**
PZH	**PanZhiHua**	**15.68**	**23**	P		**P**	**18 36 43.8**	**-1.6**
PZH				S		**Sn**	**18 39 42.5**	**+7.4**
PZH				pmax		pmax		
	comp=Z,5µm,4.1s							
PZH				L		L		
	comp=Z,23µm,12.2s							
PZH				L		L		
	comp=Z,34µm,13.3s							
PZH				L		L		
	comp=Z,27µm,11.1s							
DSRI	**Dabo**	**15.69**	**142**	P		**Pn**	**18 36 42.0**	**+0.5**
	comp=Z,12µmcomp=Z,3µmcomp=Z,206nm,1.2s							
BLSP	**Bilaspur**	**15.78**	**311**	*e*P		**Pn**	**18 36 43.8**	**+1.3**
BLSP				*i* x		x	18 36 51.7	
QIZ	**Qiongzhong**	**15.87**	**62**	P		**Pn**	**18 36 44.9**	**+1.2**
QIZ				S		**Sn**	**18 39 40.3**	**+0.7**
QIZ				pmax		pmax		
	comp=Z,200nm,2.5s							
QIZ				pmax		pmax		
	comp=Z,2µm,5.1s							
QIZ				L		L		
	comp=Z,45µm,17.9s							
QIZ				L		L		
	comp=Z,15µm,17.1s							
QIZ				L		L		
	comp=Z,27µm,11.2s							
JMBI	**JAMBI**	**16.11**	**147**	P		**P**	**18 36 50.2**	**+0.1**
SALM	**Salem**	**16.49**	**270**	*e*P		**P**	**18 36 53.6**	**-0.7**
HYB	**Hyderabad**	**16.76**	**290**	*e*P		**P**	**18 36 56.7**	**-0.7**
HYB	**Hyderabad**	**16.76**	**290**	*e*P		**Pn**	**18 36 53.9**	**-1.3**
HYB				*e*S		**S**	**18 40 12.0**	**-0.2**
STMR	**SITAMARHI**	**17.22**	**329**	*e*P		**P**	**18 37 04.9**	**+2.6**
KOD	**Kodaikanal**	**17.30**	**266**	*e*P		**P**	**18 37 06.8**	**+3.2**
KSI	**Kapahiang**	**17.36**	**154**	P		**P**	**18 37 05.6**	**+1.6**
	comp=Z,11µmcomp=Z,4µmcomp=Z,254nm,0.9s							
EVN	**Everest**	**17.55**	**335**	P		**Pn**	**18 37 03.2**	**-2.4**
EVN	**Everest**	**17.55**	**335**	P		**P**	**18 37 06.2**	**-0.5**
NGP	**Nagpur**	**17.74**	**303**	*e*P		**P**	**18 37 10.7**	**+2.5**
PMBI	**Palembang**	**17.80**	**146**	P		**P**	**18 37 10.2**	**+1.4**
PMBI	**Palembang**	**17.80**	**146**	P		**Pn**	**18 37 07.9**	**-0.2**
PMBI	**Palembang**	**17.80**	**146**	P		**P**	**18 37 12.9**	**+4.1**
	comp=Z,8µmcomp=Z,544nm,1.0s							
PMBI	**Palembang**	**17.80**	**146**	P		**P**	**18 37 12.7**	**+3.9**
LSA	**Lhasa**	**17.89**	**349**	P		**Pn**	**18 37 08.3**	**-1.3**
LSA	**Lhasa**	**17.89**	**349**	P		**Pn**	**18 37 06.9**	**-2.6**
LSA				pmax		pmax		
	comp=Z,230nm,1.1s							
LSA	**Lhasa**	**17.89**	**349**	P		**Pn**	**18 37 06.9**	**-2.6**
GYA	**Guiyang**	**18.02**	**36**	P		**P**	**18 37 12.5**	**+1.1**
GYA				S		**S**	**18 40 40.8**	**+2.9**
GYA				pmax		pmax		
	comp=Z,340nm,1.0s							
GYA				L		L		
	comp=Z,2µm,10.3s							
GYA				L		L		
	comp=Z,5µm,10.1s							
ALBI	**Allahabad**	**18.12**	**318**	*e*P		**P**	**18 37 15.1**	**+2.8**
MNAI	**Manna**	**18.15**	**154**	P		**P**	**18 37 12.6**	**-0.1**
GKPR	**Gorakhpur**	**18.18**	**325**	*e*P		**P**	**18 37 16.0**	**+3.0**
GKPR				IAmb		IAmb	18 37 22.6	
	comp=Z,604nm,0.5s							
LATR	**Latur**	**18.89**	**292**	*e*P		**Pn**	**18 37 23.1**	**+1.6**
TPI	**Tanjungpandan**	**19.38**	**139**	P		**Pn**	**18 37 28.3**	**+0.9**
GULI	**GuiLin**	**19.58**	**46**	P		**P**	**18 37 27.6**	**-0.7**
GULI				S		**S**	**18 41 04.9**	**-4.2**
GULI				pmax		pmax		
	comp=Z,500nm,1.1s							
GULI				L		L		
	comp=Z,20µm,10.8s							
GULI				L		L		
	comp=Z,23µm,11.9s							
GULI				L		L		
	comp=Z,14µm,13.0s							
BHPL	**Bhopal**	**20.06**	**306**	*e*P		Pn	18 37 36.9	+1.4
BHPL				*i* x		x	18 43 07.0	
JHNI	**Jhansi**	**20.40**	**313**	*e*P		Pn	18 37 39.5	0.0
CD2	**Chengdu**	**20.41**	**22**	P		**P**	**18 37 37.8**	**+0.4**
CD2				pP		sP	18 37 41.9	-0.2
CD2				S		**S**	**18 41 27.1**	**+1.4**
CD2				pmax		pmax		
	comp=Z,280nm,0.8s							
CD2				pmax		pmax		
	comp=Z,3µm,4.0s							
CD2				L		L		
	comp=Z,26µm,11.2s							
CD2				L		L		
	comp=Z,40µm,10.9s							
CD2				L		L		
	comp=Z,26µm,10.5s							
KAD	**Karad**	**20.79**	**287**	*e*P		Pn	18 37 44.0	0.0
KAD				IAmb		IAmb	18 37 56.4	
	comp=Z,260nm,0.9s							
GOA	**Goa**	**20.84**	**282**	*ex*		**P**	**18 37 39.7**	**-2.5**
GUNA	**GUNA**	**20.88**	**309**	*e*P		Pn	18 37 45.2	+0.1
GUNA				IAmb		IAmb	18 37 46.8	
	comp=Z,145nm,0.6s							
GUNA				*i* x		x	18 37 53.0	
HKPS	**Hong Kong Po S**	**20.88**	**58**	P		Pn	18 37 44.0	-1.1
HKPS	**Hong Kong Po S**	**20.88**	**58**	P		**P**	**18 37 42.0**	**-0.6**
HKPS	**Hong Kong Po S**	**20.88**	**58**	P		Pn	18 37 44.0	-1.1
FRKB	**FARRUKHABAD**	**21.01**	**319**	*e*P		**P**	**18 37 46.7**	**+2.8**
FRKB				*i* x		x	18 37 54.8	
GZH2	**Guangzhou**	**21.12**	**54**	P		**P**	**18 37 45.3**	**+0.2**
GZH2				pP		**sP**	**18 37 49.9**	**-0.1**
GZH2				S		**S**	**18 41 42.3**	**+2.4**
GZH2				pmax		pmax		
	comp=Z,4µm,6.0s							
GZH2				L		L		
	comp=Z,12µm,9.4s							
GZH2				L		L		
	comp=Z,16µm,13.3s							
GZH2				L		L		
	comp=Z,18µm,13.6s							
POO	**Poona**	**21.37**	**290**	*e*P		**P**	**18 37 50.3**	**+2.4**
POO				IAmb		IAmb	18 37 55.7	
	comp=Z,138nm,0.8s							
KKM	**Kota Kinabalu**	**21.78**	**104**	P		**P**	**18 37 55.3**	**+2.9**
KKM	**Kota Kinabalu**	**21.78**	**104**	P		**P**	**18 37 52.8**	**+0.4**
KKM				IAmb		IAmb	18 38 08.8	
	comp=Z,646nm,1.0s							
KKM	**Kota Kinabalu**	**21.78**	**104**	P		**P**	**18 37 58.6**	**+6.2**
AGRA	**Agra**	**21.98**	**316**	*e*P		**P**	**18 37 56.3**	**+2.0**
LGTI	**Lohaghat**	**22.12**	**323**	*e*P		**P**	**18 37 57.4**	**+1.4**
HMDM	**Hanimaadhoo**	**22.16**	**258**	P		**P**	**18 37 55.8**	**-0.5**
HMDM				IAmb		IAmb	18 38 16.6	
	comp=Z,1µm,1.9s							
PTH	**Pithoragarh**	**22.19**	**324**	*e*P		**P**	**18 37 57.3**	**+0.5**
PTH				IAmb		IAmb	18 38 08.6	
	comp=Z,3µm,1.7s							
ENH	**Enshi**	**22.54**	**34**	P		**P**	**18 38 00.4**	**+0.1**
ENH	**Enshi**	**22.54**	**34**	P		**P**	**18 37 59.3**	**-1.0**
ENH				IAmb		IAmb	18 38 16.8	
	comp=Z,329nm,1.0s							
LEM	**Lembang**	**22.59**	**146**	LR		LR	18 47 24.0	
	comp=Z,15µm,21.6s,baz=303,slow=38							
BBJI	**Bungbulang**	**23.14**	**146**	P		**P**	**18 38 08.4**	**+1.7**
BBJI	**Bungbulang**	**23.14**	**146**	P		**P**	**18 38 06.4**	**-0.3**
CNSH	**ChangSha**	**23.18**	**44**	||P	**P**	**18 38 06.4**	**-0.6**
CNSH				S		**S**	**18 42 20.3**	**+1.9**
CNSH				pmax		pmax		
	comp=Z,160nm,1.5s							
CNSH				L		L		
	comp=Z,20µm,14.5s							
CNSH				L		L		
	comp=Z,14µm,15.5s							
CNSH				L		L		
	comp=Z,10µm,12.7s							
SONA	**Sohna**	**23.23**	**316**	*e*P		**P**	**

XAN pmax pmax
comp=Z,3µm,6.2s
XAN L L
comp=Z,22µm,13.1s
XAN L L
comp=Z,32µm,12.4s
XAN L L
comp=Z,27µm,12.4s
TGY Tagaytay City 25.34 83 P **P** **18 38 28.6 +1.2**
comp=Z,311nm,0.8s,baz=230,slow=2.6,SNR=6.5
TGY LR LR 18 47 47.9
comp=Z,8µm,18.5s,baz=281,slow=35
KNMB Chin-men Tao 25.34 58 P **P** **18 38 28.1 +0.9**
BKB Balikpapan 25.47 120 P **P** **18 38 29.9 +1.4**
BKB Balikpapan 25.47 120 P **P** **18 38 28.4 -0.2**
BKB IAmb IAmb 18 38 40.6
comp=Z,187nm,0.9s
BKB Balikpapan 25.47 120 P **P** **18 38 33.6 +5.1**
WHN Wuhan 25.66 41 ⇓P **P** **18 38 30.3 +0.2**
WHN S **S** **18 43 02.1 +4.0**
WHN pmax pmax
comp=Z,970nm,0.9s
WHN pmax pmax
comp=Z,7µm,4.5s
WHN L L
comp=Z,38µm,10.9s
WHN L L
comp=Z,31µm,12.0s
WHN L L
comp=Z,73µm,13.0s
QZH2 Quanzhou 25.72 57 P **P** **18 38 30.5 -0.2**
QZH2 S **S** **18 43 00.4 +1.1**
QZH2 pmax pmax
comp=Z,140nm,1.3s
QZH2 pmax pmax
comp=Z,2µm,5.7s
QZH2 L L
comp=Z,14µm,13.7s
QZH2 L L
comp=Z,19µm,15.8s
QZH2 L L
comp=Z,16µm,16.8s
BKNR BIKANER 25.77 311 *e*P **P** **18 38 34.8 +3.7**
BKNR IAmb IAmb 18 38 41.2
comp=Z,315nm,0.8s
PACPP Pamplona Cagay 26.18 73 *e*P **P** **18 38 33.4 -1.5**
PACPP *e*S **S** **18 43 06.7 0.0**
DHRM DHARAMSHALA 26.42 322 *e*P **P** **18 38 37.7 +0.4**
DHRM IAmb IAmb 18 38 39.1
comp=Z,85nm,0.5s
DHRM *i* x x 18 38 46.7
SGCP Gonzaga 26.79 73 *e*P **P** **18 38 40.0 -0.4**
TPUB Ta-pu 26.79 62 P **P** **18 38 42.7 +2.2**
TPUB Ta-pu 26.79 62 P **P** **18 38 40.8 +0.3**
TPUB Ta-pu 26.79 62 P **P** **18 38 45.9 +5.4**
THN Thein Dam 26.88 322 *e*P **P** **18 38 41.2 -0.1**
TSSA Tissa 26.93 323 *e*P **P** **18 38 42.4 +0.6**
TSSA IAmb IAmb 18 38 44.5
comp=Z,16nm,0.6s
PALP Palanan 26.98 76 *e*P **P** **18 38 41.1 -1.1**
JASL Jaisalmer 27.02 307 *e*P **P** **18 38 46.7 +4.3**
JASL IAmb IAmb 18 38 58.7
comp=Z,142nm,1.0s
TWG Pinlang 27.02 63 P **P** **18 38 42.9 +0.4**
TWG IAMs_20 IAMs_20 18 51 08.9
comp=Z,14µm,18.0s
TWG Pinlang 27.02 63 P **P** **18 38 48.6 +6.1**
TWGBT Beinan 27.02 63 P **P** **18 38 45.4 +2.9**
SSLB Suanglung 27.24 61 P **P** **18 38 47.3 +2.8**
SSLB Suanglung 27.24 61 P **P** **18 38 44.8 +0.3**
SSLB Suanglung 27.24 61 P **P** **18 38 48.1 +3.6**
YULB Yu-li 27.40 62 P **P** **18 38 48.0 +2.1**
YULB Yu-li 27.40 62 P **P** **18 38 45.8 -0.1**
YULB IAMs_20 IAMs_20 18 49 38.9
comp=Z,19µm,19.0s
YULB Yu-li 27.40 62 P **P** **18 38 46.8 +0.8**
LYN LuoYang 27.43 33 ⇓P **P** **18 38 46.3 +0.3**
LYN sP pwP 18 38 56.1 +3.3
LYN S **S** **18 43 23.3 -2.8**
LYN pmax pmax
comp=Z,75nm,0.9s
LYN pmax pmax
comp=Z,2µm,7.0s
LYN L L
comp=Z,34µm,12.0s
LYN L L
comp=Z,21µm,14.3s
LYN L L
comp=Z,46µm,13.7s
GTA2 Gaotai 27.61 8 ⇓P **P** **18 38 48.8 +1.0**
GTA2 pP sP 18 38 53.1 +0.4
GTA2 S **S** **18 43 28.8 -0.3**
GTA2 SS **SnSn** **18 44 52.6 +12**
GTA2 pmax pmax
comp=Z,52nm,1.1s
GTA2 pmax pmax
comp=Z,2µm,8.6s
GTA2 L L
comp=Z,7µm,10.7s
GTA2 L L
comp=Z,10µm,14.8s
GTA2 L L
comp=Z,6µm,16.8s
JMU Jammu 27.68 321 *e*P **P** **18 38 49.2 +0.8**
JMU *i* x x 18 38 57.7
TOLI2 Tolitoli 27.80 111 P **P** **18 38 52.2 +2.7**
TOLI2 Tolitoli 27.80 111 P **P** **18 38 49.7 +0.1**
TOLI2 Tolitoli 27.80 111 P **P** **18 38 53.9 +4.3**
YHNB Yeheng 27.92 60 P **P** **18 38 53.5 +2.9**
YHNB Yeheng 27.92 60 P **P** **18 38 50.0 -0.6**
YHNB IAmb IAmb 18 39 21.7
comp=Z,252nm,1.6s
YHNB Yeheng 27.92 60 P **P** **18 38 53.7 +3.1**
JAGI Jajag, Banyuwa 27.92 136 P **P** **18 38 51.9 +1.3**
JAGI Jajag, Banyuwa 27.92 136 P **P** **18 38 50.3 -0.3**
JAGI IAmb IAmb 18 39 34.8
comp=Z,168nm,1.3s
JAGI IAMs_20 IAMs_20 18 51 32.1
comp=Z,16µm,18.0s
JAGI Jajag, Banyuwa 27.92 136 P **P** **18 38 54.7 +4.0**
NACB Ninganchiao 27.92 61 P **P** **18 38 51.1 +0.5**
DCPH Dipolog City 28.10 94 *e*P **P** **18 38 52.4 +0.1**
TATO Taipei 28.13 59 P **P** **18 38 52.6 +0.2**
TATO IAmb IAmb 18 39 35.5
comp=Z,214nm,1.4s
PAGZ Pagadian 28.26 96 *e*P **P** **18 38 54.5 +0.9**
LSIP Lazi, Siquijor 28.29 93 *e*P **P** **18 38 53.9 0.0**
LSIP *e*S **S** **18 43 36.9 -3.1**
TBP Tagbilaran 28.43 92 *e*P **P** **18 38 54.3 -1.0**
TBP *i* S **S** **18 43 41.2 -1.1**
SRNI Srinagar 28.58 323 *e*P **P** **18 38 58.1 +1.5**
SRNI IAmb IAmb 18 39 07.3
comp=Z,156nm,0.5s
YOJ Yonaguni jima 29.23 61 P **P** **18 39 02.5 +0.2**
YOJ pmax pmax
comp=Z,147nm,1.2s
YOJ Yonaguni jima 29.23 61 P **P** **18 39 02.5 +0.2**
YOJ IAmb IAmb 18 39 22.8
comp=Z,147nm,1.2s
NIL Nilore 29.24 321 P **P** **18 39 01.3 -1.0**
NIL pmax pmax
comp=Z,226nm,1.2s
NIL Nilore 29.24 321 P **P** **18 39 02.5 +0.2**
NIL Nilore 29.24 321 P **P** **18 39 01.3 -1.0**
NIL IAmb IAmb 18 39 26.2
comp=Z,226nm,1.2s
NIL Nilore 29.24 321 P **P** **18 39 02.7 +0.4**
MSLP Maasin 29.36 91 *e*P **P** **18 39 05.3 +1.9**
PLP Palo 29.37 89 *e*P **P** **18 39 01.6 -2.0**
NJ2 Nanjing 29.60 44 ⇓*i*P **P** **18 39 05.6 +0.2**
NJ2 pP **sP** **18 39 11.1 +0.7**
NJ2 sP **pwP** **18 39 13.9 +1.9**
NJ2 PP **PnPn** **18 40 01.8 +1.6**
NJ2 S **S** **18 43 58.6 -1.6**
NJ2 pmax pmax
comp=Z,190nm,0.9s
NJ2 pmax pmax
comp=Z,3µm,3.5s
NJ2 L L
comp=Z,29µm,12.4s
NJ2 L L
comp=Z,35µm,13.8s
NJ2 L L
comp=Z,45µm,12.6s

H08S3 Diego Garcia H 29.75 230 T T 19 09 43.2
baz=49,slow=76,SNR=17
H08S2 Diego Garcia H 29.75 230 T T 19 09 49.4
baz=49,slow=76,SNR=11
H08S1 Diego Garcia H 29.77 230 T T 19 09 53.6
baz=49,slow=76,SNR=12
BUKP Musuan 29.89 95 *e*P **P** **18 39 07.6 -0.6**
KAPI Kappang 29.91 123 LR LR 18 51 19.7
comp=Z,7µm,20.3s,baz=284,slow=37
KAPI Kappang 29.91 123 P **P** **18 39 10.9 +2.6**
KAPI Kappang 29.91 123 P **P** **18 39 08.0 -0.3**
KAPI pmax pmax
comp=Z,59nm,1.0s
KAPI Kappang 29.91 123 P **P** **18 39 08.0 -0.3**
TIY Taiyuan 29.91 28 *e*P **P** **18 39 07.5 -0.7**
TIY S **S** **18 44 06.6 +1.4**
TIY pmax pmax
comp=Z,750nm,4.1s
TIY L L
comp=Z,30µm,13.1s
TIY L L
comp=Z,13µm,11.3s
TIY L L
comp=Z,27µm,11.7s
LUWI Luwuk 30.51 113 P **P** **18 39 15.2 +1.6**
LUWI Luwuk 30.51 113 P **P** **18 39 13.4 -0.2**
LUWI IAmb IAmb 18 39 24.0
comp=Z,285nm,1.0s
LUWI Luwuk 30.51 113 P **P** **18 39 14.6 +1.0**
DAV Davao City (W) 30.55 97 LR LR 18 52 43.3
comp=Z,5µm,18.4s,baz=286,slow=39
DAV Davao City (W) 30.55 97 P **P** **18 39 14.8 +0.8**
DAV IAmb IAmb 18 39 25.7
comp=Z,257nm,1.3s
DAV Davao City (W) 30.55 97 P **P** **18 39 14.0 0.0**
SSE Sheshan 30.70 48 P **P** **18 39 15.5 +0.4**
SSE S **S** **18 44 19.4 +1.9**
SSE SS **ScP** **18 45 55.8 +0.4**
SSE ScS **ScS** **18 49 48.3 -3.7**
SSE pmax pmax
comp=Z,16nm,1.0s
SSE pmax pmax
comp=Z,500nm,4.8s
HNS HongShan 30.77 32 ⇓P **P** **18 39 16.3 +0.6**
HNS S **S** **18 44 22.8 +4.2**
HNS pmax pmax
comp=Z,82nm,0.7s
HNS pmax pmax
comp=Z,1µm,6.3s
HNS L L
comp=Z,9µm,14.7s
HNS L L
comp=Z,15µm,13.7s
HNS L L
comp=Z,17µm,13.7s
TIA Tai'an 31.22 36 P **P** **18 39 18.9 -0.8**
TIA S **S** **18 44 25.8 +0.1**
TIA pmax pmax
comp=Z,36nm,1.4s
TIA pmax pmax
comp=Z,1µm,6.3s
TIA L L
comp=Z,13µm,15.8s
TIA L L
comp=Z,20µm,15.1s
TIA L L
comp=Z,9µm,21.1s
BTO2 Baotou 31.40 22 *e*P **P** **18 39 20.8 -0.6**
BTO2 PP **PnPn** **18 40 25.1 +1.0**
BTO2 S **S** **18 44 29.5 +0.9**
BTO2 pmax pmax
comp=Z,50nm,1.1s
BTO2 pmax pmax
comp=Z,2µm,7.0s
BTO2 L L
comp=Z,16µm,13.3s
BTO2 L L
comp=Z,39µm,14.9s
BTO2 L L
comp=Z,16µm,22.2s
KSH2 Kashi 32.00 331 P **P** **18 39 26.4 -0.3**
KSH2 sP pwP 18 39 34.0 +1.1
KSH2 S **S** **18 44 37.0 -1.0**
KSH2 pmax pmax
comp=Z,13nm,1.1s
KSH2 L L
comp=Z,5µm,20.6s
KSH2 L L
comp=Z,7µm,21.6s
KSH2 L L
comp=Z,12µm,22.7s
WUS Wushi 32.13 337 IAmb IAmb 18 39 39.0
comp=Z,246nm,1.0s
HHC Hu-ho-hao-te 32.14 24 ⇓*i*P **P** **18 39 28.0 +0.2**
HHC sP pwP 18 39 37.5 +2.8
HHC S **S** **18 44 39.4 -0.7**
HHC pmax pmax
comp=Z,45nm,1.2s
HHC pmax pmax
comp=Z,870nm,7.6s
HHC L L
comp=Z,17µm,12.3s
HHC L L
comp=Z,11µm,13.4s
HHC L L
comp=Z,16µm,12.9s
WMQ Urumqi 32.24 350 ⇓P **P** **18 39 29.9 +1.2**
WMQ S **S** **18 44 41.6 0.0**
WMQ pmax pmax
comp=Z,880nm,4.5s
WMQ L L
comp=Z,7µm,15.5s
WMQ L L
comp=Z,4µm,23.5s
WMQ L L
comp=Z,4µm,23.9s
KBL Kabul 32.50 318 P **P** **18 39 30.5 -0.7**
KBL pmax pmax
comp=Z,48nm,0.9s
KBL Kabul 32.50 318 P **P** **18 39 31.5 +0.3**
KBL SNR=28 P **P** **18 39 31.5 +0.3**
SNR=28
KBL Kabul 32.50 318 P **P** **18 39 30.5 -0.7**
KBL Kabul 32.50 318 P **P** **18 39 31.7 +0.5**
MANEM Manem 32.84 325 P **P** **18 39 33.8 -0.4**
MANEM IAmb IAmb 18 39 50.8
comp=Z,212nm,0.7s
TARG Taragay, Kyrgy 33.14 336 P **P** **18 39 36.9 0.0**
TARG pmax pmax
comp=Z,281nm,0.9s
TARG Taragay, Kyrgy 33.14 336 P **P** **18 39 36.9 0.0**
TARG Taragay, Kyrgy 33.14 336 P **P** **18 39 38.5 +1.6**
BJT Baijiatuau 33.51 30 P **P** **18 39 40.4 +0.6**
BJT Baijiatuau 33.51 30 IAmb IAmb 18 39 50.9
comp=Z,134nm,1.5s
BJT Baijiatuau 33.51 30 IAMs_20 IAMs_20 18 53 28.1
comp=Z,11µm,19.0s
BJI2 Beijing 33.52 30 P **P** **18 39 40.8 +1.0**
BJI2 PP **PnPn** **18 40 51.1 0.0**
BJI2 S **S** **18 45 04.0 +2.7**
BJI2 pmax pmax
comp=Z,23nm,1.2s
BJI2 pmax pmax
comp=Z,720nm,4.3s
BJI2 L L
comp=Z,5µm,15.1s
BJI2 L L
comp=Z,9µm,13.5s
BJI2 L L
comp=Z,6µm,19.3s
SHLS Shalkode 33.76 339 *d*iP **P** **18 39 42.1 +0.1**
SHLS *e*S **S** **18 45 05.9 +0.7**
SHLS pmax pmax
comp=Z,61nm,1.2s
SHLS Shalkode 33.76 339 ⇓*i*P **P** **18 39 42.2 +0.1**
comp=Z,61nm,1.2s
SHLS *e*S **S** **18 45 06.0 +0.7**
SANI Sanana 33.84 112 P **P** **18 39 45.0 +2.1**
SANI Sanana 33.84 112 P **P** **18 39 44.9 +2.1**
PDGK Podgornoye 33.90 340 P **P** **18 39 44.7 +1.5**
PDGK Podgornoye 33.90 340 P **P** **18 39 41.7 -1.6**
UZB Uzynbulak 33.90 339 *d*iP **P** **18 39 44.5 +1.2**
UZB *e*S **S** **18 45 10.4 +2.8**
UZB pmax pmax
comp=Z,54nm,1.4s

UZB Uzynbulak 33.90 339 ⇓*i*P **P** **18 39 44.5 +1.2**
comp=Z,54nm,1.4s
UZB *e*S **S** **18 45 10.4 +2.8**
MMRI Maumere 34.01 126 P **P** **18 39 46.3 +1.9**
MMRI Maumere 34.01 126 P **P** **18 39 43.3 -1.1**
MMRI IAmb IAmb 18 40 13.8
comp=Z,154nm,1.3s
MMRI Maumere 34.01 126 P P 18 39 50.6 +6.2
TNTI Ternate 34.02 107 P **P** **18 39 42.9 -1.6**
TNTI Ternate 34.02 107 P **P** **18 39 42.2 -2.3**
TNTI Ternate 34.02 107 P **P** **18 39 42.9 -1.6**
SATY Saty 34.05 338 *d*iP **P** **18 39 45.8 +1.3**
SATY *e*S **S** **18 45 12.7 +2.9**
SATY pmax pmax
comp=Z,77nm,1.3s
SATY Saty 34.05 338 ⇓*i*P **P** **18 39 45.9 +1.4**
comp=Z,77nm,1.3s
SATY *e*S **S** **18 45 12.7 +2.9**
ULHL Ulahol 34.20 335 P **P** **18 39 46.7 +0.7**
SNR=14
KPKS Kokpek 34.30 339 *e*P **P** **18 39 47.9 +1.2**
KPKS *e*S **S** **18 45 16.3 +2.7**
KPKS Kokpek 34.30 339 *e*P **P** **18 39 47.9 +1.2**
KPKS *e*S **S** **18 45 16.4 +2.8**
JOW Kunigami 34.50 60 LR LR 18 55 33.4
comp=Z,4µm,19.8s,baz=236,slow=39
JOW Kunigami 34.50 60 P **P** **18 39 46.1 -2.4**
JOW IAmb IAmb 18 40 00.4
comp=Z,296nm,2.0s
JOW Kunigami 34.50 60 P **P** **18 39 50.3 +1.8**
BOOM Boomskoye usch 34.53 335 IAmb IAmb 18 39 59.4
comp=Z,124nm,1.1s
TNSS Tian-Shan 34.58 336 *e*P **P** **18 39 50.4 +1.0**
TNSS Tian-Shan 34.58 336 *e*P **P** **18 39 50.5 +1.0**
GAR Garm 34.62 325 P **P** **18 39 48.5 -1.1**
GAR IAmb IAmb 18 39 59.4
comp=Z,264nm,1.0s
GAR Garm 34.62 325 P **P** **18 39 49.5 -0.1**
MDOK Medeo 34.65 337 *e*P **P** **18 39 51.0 +1.3**
MDOK *e*S **S** **18 45 22.0 +2.9**
MDOK Medeo 34.65 337 *e*P **P** **18 39 51.1 +1.3**
MDOK *e*S **S** **18 45 22.0 +2.9**
MDOK LR LR 18 55 20.7
KNDC Almaty 34.73 337 P **P** **18 39 52.6 +2.3**
AAA Alma-Ata 34.74 337 *e*P **P** **18 39 51.9 +1.5**
AAA pmax pmax
comp=Z,62nm,1.1s
AAA Alma-Ata 34.74 337 *e*P **P** **18 39 52.0 +1.5**
comp=Z,62nm,1.1s
UCH Uchtor 34.93 333 P **P** **18 39 52.7 +0.2**
SNR=9.7
ARSB Arslanbob 34.93 330 IAmb IAmb 18 40 03.5
comp=Z,280nm,1.2s
SHAA Shahritus 34.95 321 P **P** **18 39 51.0 -1.3**
SHAA IAmb IAmb 18 40 01.5
comp=Z,349nm,1.1s
TKM2 Tokmak 2 35.03 335 P **P** **18 39 53.8 +0.7**
SNR=33
CHGR Chuyangaron 35.05 324 *ce*P **P** **18 39 51.6 -1.6**
CHGR pmax pmax
comp=Z,67nm,0.8s
CHGR MLR MLR
comp=Z,11µm,20.0s
KBK Karagaybulak 35.09 334 P **P** **18 39 55.2 +1.6**
SNR=10
BTK Batken 35.09 327 IAmb IAmb 18 40 05.5
comp=Z,398nm,1.4s
AAK Ala-Archa 35.27 333 P **P** **18 39 56.5 +1.4**
comp=Z,16nm,0.8s,baz=158,slow=6.8,SNR=19
AAK LR LR 18 56 04.9
comp=Z,14µm,22.0s,baz=145,slow=39
comp=Z,16nm,0.8s
AAK Ala-Archa 35.27 333 P **P** **18 39 56.6 +1.4**
SNR=9.8
AAK Ala-Archa 35.27 333 *i* P **P** **18 39 55.9 +0.8**
SNR=14
AAK Ala-Archa 35.27 333 P **P** **18 39 56.5 +1.4**
AAK P **P** **18 39 56.5 +1.4**
AAK Ala-Archa 35.27 333 P **P** **18 39 54.9 -0.2**
AAK IAmb IAmb 18 40 06.5
comp=Z,160nm,1.1s
AAK Ala-Archa 35.27 333 IAMs_20 IAMs_20 18 55 42.9
comp=Z,14µm,22.0s
AAK Ala-Archa 35.27 333 P **P** **18 39 56.6 +1.4**
JLN Jalan Bani Buh 35.37 291 P **P** **18 39 58.3 +2.2**
SNR=13
CHMS Chumysh 35.45 334 P **P** **18 39 58.4 +1.9**
SNR=7.1
EKS2 Erkin-Say 35.61 333 P **P** **18 39 59.8 +1.8**
SNR=28
DL2 Dalian 35.67 37 P **P** **18 39 58.9 +0.5**
DL2 PP **PP** **18 41 15.9 -3.6**
DL2 S **S** **18 45 36.1 +1.5**
DL2 SS **SnSn** **18 47 55.3 -0.9**
DL2 pmax pmax
comp=Z,200nm,1.1s
DL2 pmax pmax
comp=Z,2µm,4.9s
DL2 L L
comp=Z,5µm,16.9s
DL2 L L
comp=Z,14µm,15.9s
DL2 L L
comp=Z,13µm,12.3s
TDK Taldyqorghan 35.74 340 *e*P **P** **18 39 59.7 +0.7**
TDK pmax pmax
comp=Z,123nm,1.6s
TDK MLR MLR
comp=Z,3µm,15.0s
TDK Taldyqorghan 35.74 340 *e*P **P** **18 39 59.7 +0.7**
comp=Z,122nm,1.6s
TDK LR LR 18 56 02.2
comp=Z,3µm,15.5s
USP Ospenovka 35.77 334 P **P** **18 39 59.8 +0.4**
SNR=37
WBK Wadi Bani Khal 35.86 292 P **P** **18 40 03.2 +2.9**
SNR=11
SGDS Sogindy 35.87 334 *e*P **P** **18 40 01.0 +0.8**
comp=Z,32nm,0.9s
BATI Baumata 36.08 127 LR LR 18 56 22.5
comp=Z,6µm,19.0s,baz=324,slow=39
MK31 Makanchi Array 36.22 345 *de*P **P** **18 40 03.6 +0.5**
MK31 pmax pmax
comp=Z,67nm,0.8s
MKAR Makanchi Array 36.22 345 P **P** **18 40 03.4 +0.3**
comp=Z,21nm,0.8s,baz=151,slow=7.9,SNR=89
MKAR LR LR 18 59 53.9
comp=Z,4µm,18.0s,baz=159,slow=45
MKAR PKPPKP 19 12 54.2
comp=Z,0.7nm,1.1s,baz=330,slow=4.6,SNR=3.7
comp=Z,21nm,0.8s
MKAR Makanchi Array 36.22 345 *i* P **P** **18 40 03.4 +0.3**
MKAR pmax pmax
comp=Z,22nm,0.9s
MKAR Makanchi Array 36.22 345 P **P** **18 40 02.7 -0.4**
ZSN Zaisan 36.27 348 *d*iP **P** **18 40 04.8 +1.4**
ZSN *e*S **S** **18 45 46.7 +3.2**
ZSN pmax pmax
comp=Z,62nm,1.9s
ZSN Zaisan 36.27 348 ⇓*i*P **P** **18 40 04.9 +1.5**
comp=Z,62nm,1.9s
ZSN *e*S **S** **18 45 46.8 +3.2**
SOEI Soe 36.29 125 P **P** **18 40 05.8 +1.7**
SOEI Soe 36.29 125 P **P** **18 40 02.6 -1.5**
SOEI IAmb IAmb 18 40 39.2
comp=Z,199nm,1.0s
SOEI Soe 36.29 125 P **P** **18 40 06.5 +2.4**
WSAR Wadi Sarin 36.29 293 LR LR 18 54 26.6
comp=Z,37nm,21.6s,baz=121,slow=36
WSAR Wadi Sarin 36.29 293 P **P** **18 40 07.0 +3.0**
SNR=7.2
MAKZ Makanchi 36.31 345 P **P** **18 40 04.3 +0.4**
MAKZ Makanchi 36.31 345 P **P** **18 40 03.1 -0.8**
MHTO MHTO 36.51 289 P **P** **18 40 06.8 +1.0**
SNR=6.4
XLT XiLinHaoTe 36.53 26 *e*P **P** **18 40 06.4 +0.5**
XLT pP sP 18 40 11.3 +0.5
XLT sP pwP 18 40 14.6 +1.9
XLT PP **PP** **18 41 31.3 +2.2**
XLT PcP **PcP** **18 42 29.0 -0.4**
XLT S **S** **18 45 45.5 -2.4**
XLT pmax pmax
comp=Z,79nm,0.8s
XLT pmax pmax
comp=Z,950nm,6.6s

XLT L L
comp=Z,22µm,14.9s
XLT L L
comp=Z,12µm,12.8s
JMDO Jabal Madar 36.60 291 P **P** **18 40 09.1 +2.4**
SNR=8.6
SMDO Samad 36.78 292 P **P** **18 40 10.7 +2.5**
SNR=15
DQM DQM 36.78 287 P **P** **18 40 10.2 +2.0**
BIDO Bidbid 36.80 293 P **P** **18 40 10.4 +2.1**
SNR=11
SONM Songino Array 36.89 13 P **P** **18 40 09.2 +0.3**
comp=Z,28nm,0.9s,baz=197,slow=9.1,SNR=110
SONM LR LR 18 56 58.4
comp=Z,10µm,20.5s,baz=196,slow=39
SONM P3KPbc 19 10 43.8
comp=Z,0.3nm,0.6s,baz=8.9,slow=4.7,SNR=4.2
comp=Z,28nm,0.9s
SONM Songino Array 36.89 13 *e*P **P** **18 40 08.0 -0.9**
DZA Taraz 36.92 331 *e*P **P** **18 40 10.4 +1.3**
DZA Taraz 36.92 331 *e*P **P** **18 40 10.4 +1.3**
IUG Iuzhnay 37.01 329 *e*P **P** **18 40 11.3 +1.3**
IUG *e*S **S** **18 45 58.1 +2.8**
IUG pmax pmax
comp=Z,111nm,1.7s
IUG Iuzhnay 37.01 329 *e*P **P** **18 40 11.3 +1.3**
comp=Z,111nm,1.7s
IUG *e*S **S** **18 45 58.2 +2.8**
ULN Ulaanbaatar 37.07 13 *de*P **P** **18 40 10.6 +0.2**
ULN pmax pmax
comp=Z,114nm,1.4s
ULN MLR MLR
comp=Z,13µm,15.0s
ULN Ulaanbaatar 37.07 13 P **P** **18 40 10.4 -0.1**
ULN Ulaanbaatar 37.07 13 P **P** **18 40 09.9 -0.5**
ULN Ulaanbaatar 37.07 13 P **P** **18 40 10.8 +0.3**
HRA Herat 37.13 312 P **P** **18 40 09.5 -1.7**
CHM Chimkent 37.36 328 *e*P **P** **18 40 14.0 +1.2**
CHM pmax pmax
comp=Z,37nm,0.8s
CHM Chimkent 37.36 328 *e*P **P** **18 40 14.1 +1.2**
comp=Z,37nm,0.8s
CHM LR LR 18 57 11.8
BTLS Baital 37.41 335 *e*P **P** **18 40 14.4 +1.3**
BTLS Baital 37.41 335 *e*P **P** **18 40 14.5 +1.3**
KK31 Karatay Array 37.48 330 *i* P **P** **18 40 13.8 0.0**
KKAR Karatay Array 37.48 330 P **P** **18 40 12.9 -0.9**
KKAR Karatay Array 37.48 330 P **P** **18 40 12.9 -0.9**
BSY Bisya 37.49 292 P **P** **18 40 16.7 +2.4**
SNR=18
HOQ Hoqain 37.54 293 P **P** **18 40 17.0 +2.4**
SNR=13
HOQ P **P** **18 40 17.0 +2.4**
SNR=13
HJU Haeju 37.67 41 P **P** **18 40 13.4 -2.1**
HJU AmB
comp=Z,934nm,2.1s
HJU AMS AMS
comp=Z,12µm,14.3s
TJN Taejon 37.85 45 P **P** **18 40 16.2 -0.8**
TJN Taejon 37.85 45 *d* iP **P** **18 40 16.5 -0.5**
JSU Suzuyama 37.93 54 P **P** **18 40 18.1 +0.2**
JSU Suzuyama 37.93 54 P **P** **18 40 18.0 +0.2**
INCN Inchon 37.95 43 P **P** **18 40 17.3 -0.6**
INCN Inchon 37.95 43 P **P** **18 40 16.1 -1.8**
INCN pmax pmax
comp=Z,326nm,1.9s
INCN MLR MLR
comp=Z,7µm,22.0s
INCN Inchon 37.95 43 P **P** **18 40 16.1 -1.8**
INCN IAmb IAmb 18 40 27.4
comp=Z,326nm,1.9s
INCN Inchon 37.95 43 P **P** **18 40 17.4 -0.6**
DGZ Jazzator, Alta 38.02 352 *de*P **P** **18 40 18.1 -0.4**
DGZ pmax pmax
comp=Z,51nm,1.1s
SUJ Sinuiju 38.14 38 P **P** **18 40 17.5 -1.9**
ARQ Araqi 38.21 292 P **P** **18 40 22.5 +2.1**
SNR=9.0
SIJI Sorong 38.24 107 P **P** **18 40 19.9 -0.7**
comp=Z,13nm,1.0s,baz=285,slow=5.9,SNR=7.0
comp=Z,13nm,1.0s
PYAG Pyongyang 38.27 40 P **P** **18 40 19.1 -1.5**
PYAG S **S** **18 46 12.3 -1.9**
PYAG AmB
comp=Z,1µm,4.3s
PYAG AMS AMS
comp=Z,7µm,12.4s
SOHO SOHO 38.35 294 *i* P **P** **18 40 22.9 +1.5**
SNR=11
SOHO SOHO 38.35 294 P **P** **18 40 22.8 +1.4**
SNY Shenyang 38.72 35 ⇓P **P** **18 40 24.3 0.0**
SNY S **S** **18 46 22.0 +1.1**
SNY pmax pmax
comp=Z,52nm,1.1s
SNY pmax pmax
comp=Z,1µm,5.8s
SNY L L
comp=Z,7µm,14.5s
SNY L L
comp=Z,8µm,14.8s
SNY L L
comp=Z,10µm,14.2s
KSAR Wonju Array Be 38.76 44 P **P** **18 40 23.4 -1.3**
KSAR Wonju Array Be 38.76 44 P **P** **18 40 23.4 -1.3**
KS19 Wonju Array Si 38.78 44 IAmb IAmb 18 40 35.6
comp=Z,334nm,1.9s
ZAK Zakamensk 38.78 8 *e*P **P** **18 40 24.7 -0.1**
ZAK *e* 18 41 53.5
ZAK pmax pmax
comp=Z,107nm,1.7s
ZAK pmax pmax
comp=Z,51nm,2.4s
KSRS Korea Array 38.80 44 P **P** **18 40 24.2 -0.8**
comp=Z,27nm,0.8s,baz=242,slow=9.4,SNR=113
KSRS PcP **PcP** **18 42 36.9 +0.6**
comp=Z,2.8nm,0.8s,baz=207,slow=2.2,SNR=5.2
KSRS LR LR 18 57 26.9
comp=Z,5µm,18.8s,baz=230,slow=38
comp=Z,27nm,0.8s
MDH Madha 38.80 295 P **P** **18 40 26.6 +1.4**
MDH P **P** **18 40 26.6 +1.4**
UOSS Minazif 38.80 295 *i* P **P** **18 40 28.0 +2.7**
SNR=6.3
UOSS Minazif 38.80 295 P P 18 40 30.7 +5.5
UOSS Minazif 38.80 295 P **P** **18 40 23.4 -1.9**
HATD Hatta, Dubai 38.84 295 *i* P **P** **18 40 26.7 +1.1**
SNR=15
HATD Hatta, Dubai 38.84 295 P **P** **18 40 27.7 +2.1**
SNR=13
HATD P **P** **18 40 27.7 +2.1**
SNR=13
ASHO Ashiyiah 38.88 294 *i* P **P** **18 40 27.7 +1.7**
SNR=13
ASHO Ashiyiah 38.88 294 P **P** **18 40 28.3 +2.3**
SNR=16
ASHO P **P** **18 40 28.3 +2.3**
SNR=16
JNU Nakatsue 38.90 52 P **P** **18 40 26.2 +0.2**
comp=Z,72nm,1.0s,baz=229,slow=2.1,SNR=39
comp=Z,72nm,1.0s
MSFE Esma-Masafi 38.93 295 P **P** **18 40 29.0 +2.6**
BANOM Banah 38.94 296 P **P** **18 40 28.3 +2.0**
ALNE Al Ain 39.03 293 *i* P **P** **18 40 29.9 +2.7**
SNR=7.0
ALNE Al Ain 39.03 293 P **P** **18 40 29.2 +2.0**
SNR=17
SHME Shamm 39.10 297 P **P** **18 40 30.6 +2.9**
SHME P **P** **18 40 30.6 +2.9**
NAZ Nazwa, Dubai 39.30 295 P **P** **18 40 30.7 +1.4**
UMZA Um Al Zommool 39.34 291 P **P** **18 40 31.5 +1.8**
UMZA P **P** **18 40 31.5 +1.8**
ASUD Al Ashush, Dub 39.52 294 P **P** **18 40 32.5 +1.2**
ASUD Al Ashush, Dub 39.52 294 P **P** **18 40 32.6 +1.4**
SNR=9.5
MOY Mondy 39.77 6 *e*P **P** **18 40 32.6 -0.5**
MOY pmax pmax
comp=Z,67nm,2.4s
AJN Ajban 39.81 294 *i* P **P** **18 40 35.3 +1.6**
SNR=9.8
AJN Ajban 39.81 294 P **P** **18 40 34.9 +1.2**
SNR=11
HHU Hamhung 39.90 40 P **P** **18 40 31.7 -2.5**
HHU S **S** **18 46 36.7 -2.0**
HHU AmB
comp=Z,1µm,1.4s

HHU AMS AMS
comp=Z,6µm,13.7s
FAKI Fak Fak 39.91 110 P **P** **18 40 34.3 -0.3**
FAKI Fak Fak 39.91 110 P **P** **18 40 33.4 -1.2**
FAKI Fak Fak 39.91 110 P **P** **18 40 34.4 -0.2**
TLY Talaya 40.10 8 P **P** **18 40 37.1 +1.4**
comp=Z,16nm,0.9s,baz=181,slow=10,SNR=19
TLY LR LR 19 00 33.3
comp=Z,4µm,18.4s,baz=184,slow=41
comp=Z,16nm,0.9s
TLY Talaya 40.10 8 P **P** **18 40 37.2 +1.4**
TLY P **P** **18 40 37.2 +1.4**
TLY Talaya 40.10 8 P **P** **18 40 34.8 -0.9**
TLY Talaya 40.10 8 P **P** **18 40 37.3 +1.5**
WHFO Wadi Hawf 40.18 283 P **P** **18 40 38.3 +1.4**
MZWR Madinat Zayed 40.67 292 P **P** **18 40 41.9 +1.1**
KURBB Kurchatov Arra 40.72 344 P **P** **18 40 41.2 +0.4**
comp=Z,23nm,0.8s,baz=159,slow=7.9,SNR=28
KURBB LR LR 19 02 46.2
comp=Z,3µm,18.2s,baz=164,slow=44
comp=Z,23nm,0.8s
IRK Irkutsk 40.74 9 *e*P **P** **18 40 41.0 0.0**
IRK *e* 18 42 19.0
IRK *e*S **S** **18 46 57.5 +6.5**
IRK pmax pmax
comp=Z,225nm,2.2s
KURK Kurchatov 40.78 344 *d* iP **P** **18 40 41.6 +0.3**
KURK pmax pmax
comp=Z,39nm,1.0s
KURK MLR MLR
comp=Z,7µm,25.0s
KURK Kurchatov 40.78 344 P **P** **18 40 41.8 +0.5**
KURK Kurchatov 40.78 344 P **P** **18 40 40.2 -1.1**
KURK Kurchatov 40.78 344 P **P** **18 40 41.8 +0.5**
MZR Muzera 40.92 291 *i* P **P** **18 40 44.2 +1.3**
SNR=8.7
MZR Muzera 40.92 291 P **P** **18 40 43.9 +1.0**
SNR=13
MBWA Marble Bar 41.01 143 P **P** **18 40 44.0 +0.5**
comp=Z,109nm,1.5s
MBWA Marble Bar 41.01 143 P **P** **18 40 43.4 -0.2**
MBWA Marble Bar 41.01 143 P **P** **18 40 42.2 -1.3**
MBWA IAmb IAmb 18 40 52.9
comp=Z,409nm,1.9s
CN2 Changchun 41.06 34 P **P** **18 40 43.9 +0.2**
CN2 pP sP 18 40 48.4 -0.3
CN2 PP **PnPn** **18 42 23.0 +0.2**
CN2 S **S** **18 46 56.3 +0.4**
CN2 pmax pmax
comp=Z,170nm,0.8s
CN2 pmax pmax
comp=Z,1µm,5.0s
CN2 L L
comp=Z,8µm,14.0s
CN2 L L
comp=Z,8µm,14.0s
CN2 L L
comp=Z,8µm,14.0s
JMN Monobe 41.45 52 P **P** **18 40 48.2 +1.1**
JMN Monobe 41.45 52 IAmb IAmb 18 40 57.9
comp=Z,324nm,1.5s
JMN Monobe 41.45 52 P **P** **18 40 48.6 +1.5**
GHWR Ruwais 41.61 292 P **P** **18 40 49.5 +0.9**
JRN Qarnain Island 41.79 294 P **P** **18 40 50.6 +0.6**
HIA Hailar 42.34 24 IAMs_20 IAMs_20 19 00 33.7
comp=Z,7µm,18.0s
ZAA0 Zalesovo Array 42.53 351 P **P** **18 40 54.9 -0.7**
ZALV Zalesovo Beam 42.53 351 P **P** **18 40 55.5 -0.1**
comp=Z,17nm,0.6s,baz=175,slow=8.3,SNR=84
ZALV LR LR 19 01 09.2
comp=Z,2µm,21.1s,baz=176,slow=40
comp=Z,17nm,0.6s
ZALV Zalesovo Beam 42.53 351 P **P** **18 40 55.0 -0.6**
HILR Hailar Array B 42.58 24 P **P** **18 40 55.9 -0.3**
comp=Z,6.5nm,0.5s,baz=188,slow=8.8,SNR=8.0
HILR PcP **PcP** **18 42 49.5 +1.1**
comp=Z,24nm,1.0s,baz=157,slow=4.1,SNR=3.7
HILR LR LR 19 02 00.2
comp=Z,2µm,18.0s,baz=120,slow=41
comp=Z,6.5nm,0.5s
FITZ Fitzroy Crossi 42.59 134 P **P** **18 40 55.4 -1.2**
comp=Z,10nm,0.8s
FITZ Fitzroy Crossi 42.59 134 LR LR 18 59 07.3
comp=Z,5µm,21.5s,baz=302,slow=37
FITZ Fitzroy Crossi 42.59 134 P **P** **18 40 55.3 -1.2**
SLWR Sila 42.70 292 P **P** **18 40 57.8 +0.4**
KNRA Kununurra 43.33 129 P **P** **18 41 01.7 -0.8**
comp=Z,29nm,1.0s
KNRA Kununurra 43.33 129 P **P** **18 41 00.5 -2.1**
BNX BinXian 43.38 33 ⇓P **P** **18 41 02.0 -0.6**
BNX PP **PP** **18 42 42.3 -1.2**
BNX S **S** **18 47 31.3 +1.2**
BNX pmax pmax
comp=Z,82nm,1.0s
BNX pmax pmax
comp=Z,890nm,6.7s
BNX L L
comp=Z,11µm,14.6s
BNX L L
comp=Z,10µm,15.2s
BNX L L
comp=Z,11µm,12.7s
PSTR Posyet 43.47 39 ⇓ *e*P **P** **18 41 02.5 -0.9**
MTN Manton Dam 43.57 123 P P 18 41 11.5 +6.9
comp=Z,18nm,1.6s
MTN Manton Dam 43.57 123 P **P** **18 41 03.0 -1.6**
MDJ Mudanjiang 43.89 36 P **P** **18 41 07.2 +0.5**
MDJ Mudanjiang 43.89 36 P **P** **18 41 06.5 -0.2**
MDJ PcP **PcP** **18 42 51.1 -1.7**
MDJ S **S** **18 47 39.3 +1.7**
MDJ pmax pmax
comp=Z,27nm,2.3s
MDJ pmax pmax
comp=Z,1µm,5.4s
MDJ L L
comp=Z,6µm,12.9s
MDJ L L
comp=Z,8µm,13.5s
MDJ L L
comp=Z,9µm,14.2s
VLA Vladivostok 44.39 39 *c* iP **P** **18 41 10.9 +0.1**
VLA pmax pmax
comp=Z,60nm,1.1s
VLA MLR MLR
comp=Z,6µm,15.0s
ROCAM Rodrigues Isla 44.40 225 P **P** **18 41 09.6 -1.5**
ROCAM IAmb IAmb 18 41 20.0
comp=Z,265nm,1.1s
INU Inuyama 44.45 51 P **P** **18 41 11.2 -0.2**
INU Inuyama 44.45 51 P **P** **18 41 11.1 -0.2**
KDU Kakadu 44.59 122 P P 18 41 19.0 +6.3
comp=Z,14nm,1.1s
JGF Kuroka 44.80 51 IAmb IAmb 18 41 23.9
comp=Z,387nm,2.0s
MEEK Meekatharra 44.81 149 P **P** **18 41 16.6 +2.2**
comp=Z,216nm,1.1s
USA0B Ussuriysk Arra 45.05 38 *d* iP **P** **18 41 15.4 -0.6**
USRK Ussuriysk Ar. 45.05 38 P **P** **18 41 15.0 -1.0**
comp=Z,20nm,0.9s,baz=238,slow=7.1,SNR=24
USRK PcP **PcP** **18 42 57.5 +0.8**
comp=Z,11nm,0.7s,baz=234,slow=3.9,SNR=6.4
USRK LR LR 19 00 40.2
comp=Z,3µm,18.6s,baz=230,slow=37
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 45.05 38 P **P** **18 41 15.3 -0.7**
BVAR Borovoye Array 45.34 339 P **P** **18 41 18.1 -0.1**
comp=Z,8.0nm,0.7s,baz=128,slow=9.6,SNR=31
BVAR PcP **PcP** **18 42 59.1 +1.5**
comp=Z,10nm,0.7s,baz=180,slow=2.7,SNR=3.7
comp=Z,8.0nm,0.7s
BORK Borovoye 45.38 339 P **P** **18 41 17.1 -1.4**
BORK pmax pmax
comp=Z,46nm,0.8s
BORK MLR MLR
comp=Z,4µm,21.0s
BORK Borovoye 45.38 339 P **P** **18 41 17.1 -1.4**
MORW Morawa 45.68 154 P **P** **18 41 23.9 +2.7**
comp=Z,98nm,1.4s
MORW Morawa 45.68 154 IAmb IAmb 18 41 31.3
comp=Z,165nm,1.3s
MJB9 Matsu-Tunnel 45.77 50 P **P** **18 41 21.3 -0.6**
MJB9 IAmb IAmb 18 41 32.6
comp=Z,234nm,1.7s
MAJO Matsushiro 45.77 50 P **P** **18 41 22.0 +0.1**
MAJO Matsushiro 45.77 50 *d* iP **P** **18 41 21.1 -0.8**
MAJO pmax pmax
comp=Z,34nm,1.0s
MAJO MLR MLR
comp=Z,4µm,18.0s
MAJO Matsushiro 45.77 50 P **P** **18 41 20.9 -1.0**
MAJO IAmb IAmb 18 41 31.7
comp=Z,239nm,1.7s
MJAR Matsushiro Arr 45.77 50 P **P** **18 41 21.0 -0.9**
comp=Z,29nm,1.1s,baz=252,slow=10,SNR=50
MJAR PcP **PcP** **18 42 59.5 -0.1**
comp=Z,9.4nm,0.9s,baz=244,slow=2.5,SNR=6.6
MJAR LR LR 19 02 37.7
comp=Z,5µm,18.3s,baz=248,slow=39
comp=Z,29nm,1.1s
MJAR Matsushiro Arr 45.77 50 IAmb IAmb 18 41 31.8
comp=Z,98nm,1.0s
MJAR **PcP** **18 42 58.8 -0.7**
JHJ Hachijo jima 2 45.91 55 LR LR 19 01 38.5
comp=Z,3µm,18.8s,baz=232,slow=38
HEH HeiHe 46.40 28 *e*P **P** **18 41 25.8 -0.8**
HEH sP **pwP** **18 41 33.8 +0.3**
HEH PP **PP** **18 43 14.8 -0.8**
HEH S **S** **18 48 14.4 +0.6**
HEH pmax pmax
comp=Z,43nm,1.4s
HEH pmax pmax
comp=Z,1µm,6.2s
HEH L L
comp=Z,12µm,14.9s
HEH L L
comp=Z,7µm,15.2s
HEH L L
comp=Z,14µm,14.2s
JCJ Chichijima 46.61 64 LR LR 19 00 20.2
comp=Z,1µm,19.9s,baz=259,slow=35
AB31 Akbulak array 47.02 329 *i* P **P** **18 41 31.7 +0.2**
AB31 Akbulak array 47.02 329 P **P** **18 41 30.4 -1.0**
AB31 IAmb IAmb 18 41 42.5
comp=Z,141nm,1.2s
ABKAR Akbulak array 47.02 329 P **P** **18 41 30.3 -1.2**
GENI Genyem 47.19 105 P **P** **18 41 35.5 +2.2**
BLDU Ballidu 47.31 154 P **P** **18 41 36.3 +2.3**
comp=Z,90nm,1.3s
JAY Jayapura 47.67 105 P **P** **18 41 37.8 +0.7**
comp=Z,4.9nm,1.1s,baz=253,slow=19,SNR=4.2
comp=Z,4.9nm,1.1s
MTKN Mount Kenneth 48.08 156 P **P** **18 41 43.1 +3.2**
comp=Z,230nm,1.0s
RAYN Ar Rayn 48.27 291 *i* P **P** **18 41 42.0 +0.4**
SNR=5.6
RAYN Ar Rayn 48.27 291 P **P** **18 41 39.5 -2.1**
RAYN pmax pmax
comp=Z,52nm,1.2s
RAYN MLR MLR
comp=Z,6µm,20.0s
RAYN Ar Rayn 48.27 291 P **P** **18 41 41.8 +0.1**
RAYN Ar Rayn 48.27 291 P **P** **18 41 39.5 -2.1**
RAYN Ar Rayn 48.27 291 IAMs_20 IAMs_20 19 03 20.5
comp=Z,6µm,20.0s
MUN Mundaring 48.30 156 P P 18 41 47.7 +6.2
comp=Z,125nm,1.3s
GUMO Guam 48.58 82 LR LR 18 59 51.9
comp=Z,2µm,21.2s,baz=276,slow=33
KLBR Kellerberrin 48.60 154 P P 18 41 49.8 +5.8
comp=Z,185nm,1.0s
AKTO Aktyubinsk 48.73 329 LR LR 19 04 04.8
comp=Z,4µm,21.1s,baz=133,slow=38
AKTO Aktyubinsk 48.73 329 P **P** **18 41 44.9 +0.2**
ZEA Zeya 48.79 25 *e*P **P** **18 41 45.0 -0.1**
ZEA *e*S **S** **18 48 49.5 +1.8**
ZEA pmax pmax
comp=Z,300nm,5.7s
ZEA pmax pmax
comp=E,100nm,3.1s
ZEA pmax pmax
comp=N,100nm,5.8s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,40nm,1.2s
ZEA smax smax
comp=E,300nm,14.3s
ZEA smax smax
comp=N,400nm,14.1s
ZEA MLR MLR
comp=N,6µm,15.0s
ZEA MLR MLR
comp=Z,7µm,15.0s
WRKA Warakurna 49.15 139 P **P** **18 41 47.2 -1.1**
comp=Z,43nm,1.1s
JTM Tenmabayashi 49.41 46 P **P** **18 41 50.9 +0.8**
JTM Tenmabayashi 49.41 46 IAmb IAmb 18 42 00.0
comp=Z,230nm,1.2s
NWAO Narrogin (SRO) 49.54 155 P **P** **18 41 53.5 +2.4**
comp=Z,137nm,1.5s
NWAO Narrogin (SRO) 49.54 155 P **P** **18 41 53.5 +2.4**
NWAO Narrogin (SRO) 49.54 155 P P 18 41 58.2 +7.1
NWAO Narrogin (SRO) 49.54 155 LR LR 19 02 14.7
comp=Z,9µm,21.9s,baz=334,slow=35
NWAO Narrogin (SRO) 49.54 155 P **P** **18 41 53.0 +1.9**
NWAO Narrogin (SRO) 49.54 155 P **P** **18 41 49.9 -1.2**
NWAO pmax pmax
comp=Z,221nm,1.3s
NWAO Narrogin (SRO) 49.54 155 P **P** **18 41 49.9 -1.2**
NWAO IAmb IAmb 18 42 01.0
comp=Z,221nm,1.3s
WB0 Warramunga Arr 50.06 129 IAmb IAmb 18 42 04.7
comp=Z,106nm,0.8s
WB9 Warramunga Arr 50.07 129 P **P** **18 41 55.4 0.0**
comp=Z,145nm,0.9s
H01W3 Cape Leeuwin H 50.12 159 T T 19 36 47.1
baz=331,slow=76,SNR=6.7
WR1 Warramunga Arr 50.12 129 P **P** **18 41 55.5 -0.3**
comp=Z,99nm,1.1s
WRA Warramunga Arr 50.12 129 P **P** **18 41 55.1 -0.6**
comp=Z,17nm,0.8s,baz=307,slow=8.3,SNR=56
WRA S **S** **18 49 11.7 +4.4**
comp=Z,2.0nm,1.2s,baz=305,slow=14,SNR=5.3
WRA LR LR 19 06 05.7
comp=Z,2µm,20.4s,baz=320,slow=40
comp=Z,17nm,0.8s
WRA Warramunga Arr 50.12 129 *i* P **P** **18 41 55.2 -0.6**
WRA pmax pmax
comp=Z,19nm,0.9s
WRA Warramunga Arr 50.12 129 P **P** **18 41 54.5 -1.3**
WRAB Tennant Creek 50.13 129 P **P** **18 41 55.1 -0.7**
WRAB Tennant Creek 50.13 129 *ce*P **P** **18 41 55.2 -0.6**
WRAB pmax pmax
comp=Z,43nm,1.1s
WRAB Tennant Creek 50.13 129 P **P** **18 41 54.6 -1.2**
WRAB IAmb IAmb 18 42 05.3
comp=Z,94nm,0.9s
H01W2 Cape Leeuwin H 50.13 159 T T 19 36 42.5
baz=331,slow=76,SNR=7.4
H01W1 Cape Leeuwin H 50.13 159 T T 19 36 43.4
baz=331,slow=76,SNR=5.4
WB2 Warramunga Arr 50.13 129 P **P** **18 41 55.6 -0.3**
comp=Z,118nm,1.0s
WR8 Warramunga Arr 50.25 129 IAmb IAmb 18 42 06.3
comp=Z,140nm,0.9s
WR0 Warramunga Arr 50.29 129 P **P** **18 41 56.6 -0.4**
comp=Z,155nm,1.1s
KMBL Kambalda 50.32 150 P **P** **18 41 59.4 +2.3**
comp=Z,64nm,1.2s
RER Riviere de l'E 50.78 230 P **P** **18 41 59.7 -1.1**
RKGY Rocky Gully 50.91 157 P **P** **18 42 02.5 +1.1**
comp=Z,157nm,1.3s
ATD Arta Tunnel 50.99 275 LR LR 19 01 19.7
comp=Z,113nm,18.9s,baz=84,slow=33
ATD Arta Tunnel 50.99 275 P **P** **18 42 01.3 -1.2**
GRNR Gornyy 51.21 33 ⇓ *i* P **P** **18 42 03.9 +0.3**
GRNR pmax pmax
comp=Z,20nm,1.3s
GRNR MLR MLR
comp=E,1µm,14.0s
MAK Makhachkala 51.21 316 *e*P P 18 41 58.9 -4.8
MAK *e* 18 43 57.2
MAK *e*S **S** **18 49 15.2 -6.6**
MAK *e*SS **SS** **18 52 55.1 -2.2**
MAK pmax pmax
comp=Z,124nm,1.0s
MAK MLR MLR
comp=Z,3µm,20.0s
ERM Erimo 51.32 45 P **P** **18 42 06.2 +1.7**
ERM Erimo 51.32 45 P **P** **18 42 03.7 -0.8**
ERM pmax pmax
comp=Z,101nm,1.6s
ERM MLR MLR

comp=Z,5μm,19.0s
ERM Erimo 51.32 45 P **P** **18 42 03.7 -0.8**
ERM Erimo 51.32 45 IAMs_20 IAMs_20 19 05 49.7
comp=Z,5μm,19.0s
JEM Erimo 51.32 45 P **P** **18 42 05.8 +1.3**
ASAJ Asahikawa 51.73 43 P **P** **18 42 06.4 -1.1**
comp=Z,39nm,1.0s,baz=249,slow=13,SNR=20
ASAJ LR LR 19 05 05.2
comp=Z,3μm,19.9s,baz=248,slow=37
comp=Z,39nm,1.0s
JKA Kamikawa-asahi 51.73 43 IAmb IAmb 18 42 37.1
comp=Z,377nm,1.9s
SVE Sverdlovsk 51.85 337*ce*P **P** **18 42 08.9 +0.6**
SVE *e*S **S** **18 49 31.4 +1.2**
SVE *e* 18 53 06.6
SVE pmax pmax
comp=Z,230nm,1.1s
SVE MLR MLR
comp=Z,3μm,20.0s
AS15 Alice Springs 52.04 133 P **P** **18 42 10.2 0.0**
comp=Z,84nm,0.9s
AS31 Alice Springs 52.06 133 P **P** **18 42 10.2 -0.1**
comp=Z,29nm,0.8s
AS31 Alice Springs 52.06 133 P **P** **18 42 08.2 -2.1**
ASAR Alice Springs 52.06 133 P **P** **18 42 08.8 -1.5**
comp=Z,8.4nm,0.9s,baz=311,slow=5.8,SNR=47
ASAR LR LR 19 04 42.0
comp=Z,3μm,21.6s,baz=302,slow=37
comp=Z,8.4nm,0.9s
ASAR Alice Springs 52.06 133 P **P** **18 42 08.3 -2.0**
AUALC St Philip's Co 52.06 133 P **P** **18 42 09.7 -0.6**
AS09 Alice Springs 52.10 133 P **P** **18 42 10.6 -0.1**
comp=Z,104nm,0.9s
AS17 Alice Springs 52.12 133 P **P** **18 42 10.8 0.0**
comp=Z,77nm,0.9s
GNI Garni 52.20 312 LR LR 19 08 08.6
comp=Z,3μm,19.3s,baz=106,slow=40
GNI Garni 52.20 312 P **P** **18 42 12.0 +0.7**
GNI Garni 52.20 312*de*P **P** **18 42 12.3 +0.9**
GNI pmax pmax
comp=Z,50nm,1.3s
GNI MLR MLR
comp=Z,3μm,19.0s
GNI Garni 52.20 312 P **P** **18 42 12.3 +0.9**
GNI P **P** **18 42 12.3 +0.9**
GNI Garni 52.20 312 P **P** **18 42 08.8 -2.6**
GNI IAmb IAmb 18 42 43.2
comp=Z,207nm,1.2s
GNI Garni 52.20 312 P **P** **18 42 11.5 +0.1**
comp=Z,2μmcomp=Z,146nm,1.0s
ARTI Arti 52.44 335 P **P** **18 42 11.7 -1.0**
comp=Z,31nm,1.0s,baz=138,slow=3.7,SNR=18
ARTI LR LR 19 08 35.5
comp=Z,3μm,19.3s,baz=136,slow=41
comp=Z,31nm,1.0s
ARTI Arti 52.44 335*d i*P **P** **18 42 12.4 -0.3**
ARTI pmax pmax
comp=Z,32nm,1.0s
ARTI MLR MLR
comp=Z,5μm,22.0s
ARTI Arti 52.44 335 P **P** **18 42 10.8 -1.9**
ARTI IAmb IAmb 18 42 24.1
comp=Z,94nm,0.9s
YSS Yuzhno-Sakhali 52.98 39 P **P** **18 42 17.1 +0.3**
YSS Yuzhno-Sakhali 52.98 39 P **P** **18 42 17.2 +0.4**
YSS Yuzhno-Sakhali 52.98 39 P **P** **18 42 15.0 -1.8**
YSS IAmb IAmb 18 42 28.0
comp=Z,87nm,1.1s
FORT Forrest 53.16 144 P P 18 42 26.0 +7.7
comp=Z,65nm,1.1s
FORT Forrest 53.16 144 P **P** **18 42 16.8 -1.5**
UGL Uglegorsk 53.50 37 *e*P **P** **18 42 20.4 -0.1**
UGL *e*S **S** **18 49 56.3 +3.4**
UGL pmax pmax
comp=Z,1μm,3.6s
UGL pmax pmax
comp=Z,100nm,1.3s
UGL smax smax
comp=E,2μm,8.0s
UGL smax smax
comp=N,200nm,5.8s
UGL MLR MLR
comp=E,7μm,13.0s
UGL MLR MLR
comp=N,6μm,13.0s
UGL MLR MLR
comp=Z,7μm,14.0s
MANU Manus Island 53.88 102 P **P** **18 42 21.7 -2.2**
YUK Yuzh-Kuril'sk 53.88 44 *e*P **P** **18 42 21.4 -2.1**
YUK *i*S **S** **18 49 53.9 -4.4**
YUK SS **SKiKP** **18 53 38.1 +1.1**
YUK pmax pmax
comp=Z,406nm,1.3s
YUK pmax pmax
comp=N,179nm,1.2s
YUK pmax pmax
comp=E,187nm,1.1s
YUK MLR MLR
comp=N,915nm,15.0s
YUK MLR MLR
comp=E,4μm,15.0s
YUK MLR MLR
comp=Z,3μm,15.0s
QIS Mount Isa 54.55 126 P **P** **18 42 28.6 -0.1**
comp=Z,61nm,0.9s
KBZ Khabaz 54.63 315 P **P** **18 42 29.6 +0.6**
comp=Z,2.5nm,0.7s,baz=112,slow=7.3,SNR=8.9
comp=Z,2.5nm,0.7s
TYV Tymovskoe 54.66 35 *e*P **P** **18 42 29.9 +0.9**
TYV *e*S **S** **18 50 10.9 +2.4**
TYV pmax pmax
comp=Z,900nm,5.1s
TYV pmax pmax
comp=Z,58nm,1.3s
TYV smax smax
comp=N,700nm,8.3s
TYV smax smax
comp=E,1μm,8.3s
TYV MLR MLR
comp=Z,4μm,12.0s
SHA1 Shidzhatmaz 54.80 315*ce*P **P** **18 42 30.5 0.0**
KVAR Kislovodsk Arr 54.84 316 LR LR 19 09 24.5
comp=Z,2μm,20.9s,baz=233,slow=40
KIV Kislovodsk 54.85 316 ⇓P **P** **18 42 30.9 +0.2**
KIV Kislovodsk 54.85 316 *i* P **P** **18 42 30.8 +0.2**
SNR=11
KIV Kislovodsk 54.85 316 *e*P **P** **18 42 30.9 +0.2**
KIV *e*S **S** **18 50 13.1 +1.5**
KIV pmax pmax
comp=Z,95nm,1.0s
KIV pmax pmax
comp=Z,108nm,4.3s
KIV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 54.85 316 P **P** **18 42 30.7 +0.1**
KIV P **P** **18 42 30.7 +0.1**
KIV Kislovodsk 54.85 316 P **P** **18 42 29.1 -1.5**
KIV IAmb IAmb 18 42 42.1
comp=Z,141nm,1.0s
KIV Kislovodsk 54.85 316 P **P** **18 42 30.0 -0.7**
comp=Z,1μmcomp=Z,107nm,0.9s
GOF Gofitskoye 54.97 317*ce*P **P** **18 42 32.3 +0.9**
GOF *e*S **S** **18 50 11.7 -1.3**
BELG Belogornoye 55.23 327 LR LR 19 10 23.9
comp=Z,2μm,20.6s,baz=115,slow=41
BELG Belogornoye 55.23 327*d i*P **P** **18 42 31.9 -1.2**
BELG pmax pmax
comp=Z,19nm,0.9s
FURI Furi 55.40 273 IAMs_20 IAMs_20 19 04 51.7
comp=Z,6μm,20.0s
KUR Kuril'sk 55.63 43 P **P** **18 42 36.4 +0.3**
KUR S **S** **18 50 15.3 -6.5**
KUR 18 52 18.9
KUR pmax pmax
comp=Z,1μm,3.7s
KUR pmax pmax
comp=Z,403nm,1.2s
KUR MLR MLR
comp=Z,3μm,16.0s
YAK Yakutsk 55.76 19 P **P** **18 42 35.9 -0.8**
comp=Z,43nm,0.7s,baz=29,slow=0.5,SNR=29
YAK LR LR 19 07 33.7
comp=Z,5μm,18.2s,baz=220,slow=37
comp=Z,43nm,0.7s
YAK Yakutsk 55.76 19*d i*P **P** **18 42 35.6 -1.1**
YAK *e* 18 43 35.0
YAK *e* 18 44 39.5
YAK *e*PPP PPP 18 45 51.7
YAK *e*S **S** **18 50 21.7 -1.2**
YAK *e* 18 52 26.1
YAK *e*SS **SS** **18 54 07.7 -0.6**
YAK *e*SSS SSS 18 56 17.6
YAK pmax pmax
comp=Z,68nm,1.5s
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=E,52nm,1.5s
YAK pmax pmax
comp=Z,235nm,6.2s
YAK pmax pmax
comp=N,120nm,3.2s
YAK pmax pmax
comp=E,79nm,3.2s
YAK smax smax
comp=E,302nm,3.6s
YAK smax smax
comp=N,309nm,6.6s
YAK MLR MLR
comp=Z,5μm,16.0s
YAK MLR MLR
comp=N,2μm,15.0s
YAK MLR MLR
comp=E,4μm,18.0s
YAK Yakutsk 55.76 19 P **P** **18 42 35.1 -1.6**
YAK IAmb IAmb 18 42 46.0
comp=Z,122nm,1.1s
YAK Yakutsk 55.76 19 IAMs_20 IAMs_20 19 07 17.2
comp=Z,5μm,20.0s
ABPO Ambohimpanom 56.32 237 P **P** **18 42 39.1 -2.6**
ABPO pmax pmax
comp=Z,146nm,2.0s
ABPO MLR MLR
comp=Z,2μm,18.0s
ABPO Ambohimpanom 56.32 237 P **P** **18 42 39.1 -2.6**
ABPO IAmb IAmb 18 43 33.7
comp=Z,146nm,2.0s
LABN Labinsk 56.40 316 *e*P **P** **18 42 40.9 -0.8**
LABN *e*S **S** **18 50 34.5 +2.4**
LABN pmax pmax
comp=Z,34nm,0.6s
LABN MLR MLR
comp=N,4μm,18.0s
LABN MLR MLR
comp=Z,3μm,19.0s
LABN MLR MLR
comp=E,3μm,17.0s
VSLR Vesoyloye 56.53 314⇑ *e*P **P** **18 42 40.1 -2.6**
VSLR pmax pmax
comp=Z,41nm,0.9s
ARPR Arapgir-MALATY 56.70 309 IAmb IAmb 18 43 11.0
comp=Z,117nm,1.1s
ASF Jabal al Asfar 56.73 301 LR LR 19 11 39.4
comp=Z,4μm,18.1s,baz=26,slow=41
SOC Sochi 56.79 314*c i*P **P** **18 42 44.4 -0.1**
SOC *e* 18 44 48.4
SOC *e*PPP PPP 18 46 06.8
SOC *e*S **S** **18 50 37.8 +0.6**
SOC *e*SSS SSS 18 56 42.6
SOC pmax pmax
comp=Z,53nm,0.8s
SOC MLR MLR
comp=Z,2μm,22.0s
ERBR Yeremizino-Bor 56.89 317 *e*P **P** **18 42 43.6 -1.5**
ERBR *e*S **S** **18 50 38.4 -0.1**
ERBR pmax pmax
comp=Z,43nm,0.9s
ERBR MLR MLR
comp=N,3μm,20.0s
ERBR MLR MLR
comp=Z,4μm,20.0s
ERBR MLR MLR
comp=E,6μm,17.0s
MTSU Mount Surprise 57.18 121 P **P** **18 42 51.6 +4.0**
comp=Z,11nm,1.0s
GAZ Gaziantep 57.21 306 IAmb IAmb 18 43 00.6
comp=Z,64nm,1.0s
NRIK Noril'sk 57.40 357 P **P** **18 42 48.0 -0.4**
comp=Z,4.8nm,0.6s,baz=189,slow=9.0,SNR=6.0
NRIK LR LR 19 11 10.3
comp=Z,2μm,20.8s,baz=176,slow=40
comp=Z,4.8nm,0.6s
NRIK Noril'sk 57.40 357 P **P** **18 42 48.0 -0.4**
NRIK Noril'sk 57.40 357 P **P** **18 42 47.0 -1.4**
KIRV Kirov 57.60 334 P **P** **18 42 49.9 0.0**
comp=Z,18nm,0.6s,baz=130,slow=4.1,SNR=7.5
KIRV LR LR 19 09 57.8
comp=Z,5μm,21.2s,baz=130,slow=38
comp=Z,18nm,0.6s
GHAJ Ghor Haditha 57.77 299 P **P** **18 42 49.0 -2.6**
GHAJ IAmb IAmb 18 43 06.7
comp=Z,147nm,1.6s
VRH Novokhopyorsk 58.02 324 *e*P **P** **18 42 51.8 -1.2**
VRH pmax pmax
comp=Z,30nm,0.9s
MMAI Mount Meron Ar 58.08 301 P **P** **18 42 54.1 +0.3**
comp=Z,3.0nm,0.8s,baz=119,slow=12,SNR=5.4
MMAI LR LR 19 11 15.3
comp=Z,3μm,19.6s,baz=84,slow=40
comp=Z,3.0nm,0.8s
VOI Vohitsoka 58.12 235 P **P** **18 42 52.2 -2.1**
EIL Elat 58.17 297 LR LR 19 12 05.2
comp=Z,2μm,18.8s,baz=104,slow=40
KIBK Kibwezi 58.37 260 P **P** **18 42 54.7 -1.4**
ANN Anapa 58.70 315 *e*P **P** **18 42 55.6 -2.2**
ANN *e*PPP PPP 18 46 30.4
ANN *e*S **S** **18 51 00.3 -1.9**
ANN pmax pmax
comp=Z,47nm,1.0s
ANN MLR MLR
comp=Z,3μm,18.0s
ANN MLR MLR
comp=N,3μm,19.0s
ANN MLR MLR
comp=E,4μm,20.0s
RABL Rabaul 59.08 102 P **P** **18 42 58.6 -2.4**
RABL IAmb IAmb 18 43 12.4
comp=Z,108nm,0.8s
VORD Divnogorie 59.36 323 *e*P **P** **18 43 01.2 -1.1**
VORD pmax pmax
comp=Z,30nm,0.9s
BBOO Buckleboo 59.41 140 P P 18 43 09.7 +6.8
comp=Z,86nm,1.2s
BBOO Buckleboo 59.41 140 P **P** **18 43 01.2 -1.8**
BBOO IAmb IAmb 18 43 12.4
comp=Z,71nm,1.0s
INKA Innaminka 59.42 132 P **P** **18 43 02.1 -1.0**
VSR Storozhevoye 59.52 323 P **P** **18 43 01.7 -1.7**
VSR pmax pmax
comp=Z,174nm,2.7s
LODK Lodwar 59.61 267 P **P** **18 43 09.2 +4.4**
LODK Lodwar 59.61 267 P **P** **18 43 01.2 -3.6**
LODK IAMs_20 IAMs_20 19 08 28.6
comp=Z,4μm,19.0s
VORR Voronezh 59.65 323 P **P** **18 43 03.9 -0.4**
VORR pmax pmax
comp=Z,82nm,1.2s
CTA Charters Tower 59.71 122 P **P** **18 43 04.8 -0.4**
comp=Z,14nm,1.1s,baz=281,slow=6.1,SNR=6.8
CTA LR LR 19 10 19.1
comp=Z,2μm,21.4s,baz=282,slow=38
comp=Z,14nm,1.1s
CTAO Charters Tower 59.71 122 P **P** **18 43 06.0 +0.8**
CTAO Charters Tower 59.71 122 P **P** **18 43 03.0 -2.3**
CTAO pmax pmax
comp=Z,55nm,1.2s
CTAO MLR MLR
comp=Z,3μm,20.0s
CTAO Charters Tower 59.71 122 P **P** **18 43 03.0 -2.3**
CSS Mathiatis 60.01 303 P **P** **18 43 10.4 +3.3**
KIRS Kirsehir-Merke 60.09 308 ⇑P **P** **18 43 07.1 -0.6**
LPSR Galich'ya Gora 60.14 324 P **P** **18 43 07.0 -0.7**
LPSR pmax pmax
comp=Z,179nm,2.8s
AUCAS Cummins Area S 60.17 141 P **P** **18 43 08.7 +0.6**
BR131 Keskin Array S 60.40 309*d i*P **P** **18 43 08.3 -1.6**
BR131 Keskin Array S 60.40 309 P **P** **18 43 08.8 -1.2**
SNR=50
BR131 Keskin Array S 60.40 309 IAmb IAmb 18 43 21.6
comp=Z,57nm,0.8s
BRTR Keskin Array B 60.40 309 P **P** **18 43 08.7 -1.2**
comp=Z,8.5nm,0.8s,baz=125,slow=7.1,SNR=43
BRTR LR LR 19 12 54.9
comp=Z,3μm,20.6s,baz=99,slow=40
comp=Z,8.5nm,0.8s
BRTR Keskin Array B 60.40 309 P **P** **18 43 07.2 -2.6**
AUAYR Ayr State High 60.44 121 P **P** **18 43 11.5 +1.3**
BZK Bozkurt 60.51 311 ⇓P **P** **18 43 10.0 -0.3**
AUJCS Jamestown Cent 61.29 139 P **P** **18 43 17.4 +1.6**
QLP Quilpie 61.36 129 P **P** **18 43 17.2 +0.9**
comp=Z,183nm,1.1s
HTT Hallett 61.64 139 P **P** **18 43 19.2 +1.0**
comp=Z,51nm,1.2s
MOS Moscow 61.98 327 *e*P **P** **18 43 20.0 -0.1**
MOS *e* 18 45 38.4
MOS *e*PPP PPP 18 47 05.8
MOS *e*S **S** **18 51 44.1 +0.2**
MOS pmax pmax
comp=Z,144nm,1.1s
MOS pmax pmax
comp=Z,700nm,2.2s
MOS smax smax
comp=N,1μm,6.8s
OBN Obninsk 62.32 326 LR LR 19 15 34.9
comp=N,2μm,18.4s,baz=112,slow=41
OBN Obninsk 62.32 326 ⇑P **P** **18 43 22.2 -0.2**
OBN Obninsk 62.32 326*d i*P **P** **18 43 21.8 -0.6**
OBN *i* *PP **pP** **18 43 24.6 -1.7**
OBN *i* *SP **sP** **18 43 26.6 -1.3**
OBN *e* 18 44 03.1
OBN *e* 18 45 35.5
OBN *e*PPP PPP 18 47 10.7
OBN *e*S **S** **18 51 47.3 -0.9**
OBN *e*SS **SS** **18 55 47.1 -4.5**
OBN *e*SSS SSS 18 58 33.8
OBN pmax pmax
comp=Z,31nm,1.0s
OBN MLR MLR
comp=Z,3μm,19.0s
OBN Obninsk 62.32 326 P **P** **18 43 20.3 -2.1**
OBN Obninsk 62.32 326 P **P** **18 43 21.3 -1.1**
comp=Z,2μmcomp=Z,117nm,1.8s
MDUB Mudurnu 62.36 309 IAmb IAmb 18 44 10.7
comp=Z,36nm,0.7s
AUMAR Marden Senior 62.39 140 P **P** **18 43 23.7 +0.6**
STKA Stephens Creek 62.45 136 P **P** **18 43 23.9 +0.2**
comp=Z,436nm,1.1s
STKA Stephens Creek 62.45 136 P **P** **18 43 23.6 -0.1**
comp=Z,13nm,0.8s,baz=314,slow=8.2,SNR=8.9
STKA LR LR 19 13 05.6
comp=Z,3μm,19.9s,baz=296,slow=38
comp=Z,13nm,0.8s
SKR Severo-Kuril's 62.54 39 *e*P **P** **18 43 22.4 -1.5**
SKR *e*S **S** **18 51 53.4 +2.2**
SKR pmax pmax
comp=Z,1μm,4.0s
SKR pmax pmax
comp=Z,98nm,1.5s
SKR MLR MLR
comp=Z,3μm,17.0s
MA2 Magadan 62.67 28 P **P** **18 43 24.0 -0.6**
comp=Z,84nm,0.8s,baz=246,slow=6.7,SNR=26
comp=Z,84nm,0.8s
MA2 Magadan 62.67 28 P **P** **18 43 25.2 +0.6**
MA2 Magadan 62.67 28*de*P **P** **18 43 24.7 +0.1**
MA2 pmax pmax
comp=Z,101nm,0.9s
MA2 MLR MLR
comp=Z,4μm,16.0s
MA2 Magadan 62.67 28 P **P** **18 43 22.4 -2.2**
MA2 IAmb IAmb 18 43 35.4
comp=Z,121nm,1.0s
MA2 IAMs_20 IAMs_20 19 14 52.3
comp=Z,5μm,18.0s
MA2 Magadan 62.67 28 P **P** **18 43 24.0 -0.6**
comp=Z,2μmcomp=Z,139nm,0.9s
ELL Elmali 62.95 305 IAmb IAmb 18 43 39.2
comp=Z,76nm,0.8s
AUMBR Murray Bridge 62.95 140 P **P** **18 43 28.3 +1.4**
TIXI Tiksi 62.96 11 P **P** **18 43 24.5 -1.8**
comp=Z,33nm,0.6s,baz=237,slow=3.8,SNR=7.6
TIXI LR LR 19 15 40.9
comp=Z,3μm,18.1s,baz=234,slow=41
comp=Z,33nm,0.6s
TIXI Tiksi 62.96 11*de*P **P** **18 43 25.3 -1.1**
TIXI pmax pmax
comp=Z,101nm,1.7s
TIXI MLR MLR
comp=Z,4μm,16.0s
TIXI Tiksi 62.96 11 P **P** **18 43 23.9 -2.4**
TIXI IAMs_20 IAMs_20 19 13 07.0
comp=Z,4μm,18.0s
KLMR Klimovskoe 63.08 333 *e*P **P** **18 43 26.3 -1.0**
KLMR pmax pmax
comp=Z,109nm,1.2s
KLMR MLR MLR
comp=Z,2μm,17.0s
PEA0B Petropavlovsk- 64.12 37*de*P **P** **18 43 33.4 -1.0**
PETK Petropavlovsk- 64.12 37 P **P** **18 43 32.7 -1.7**
comp=Z,8.7nm,0.8s,baz=235,slow=4.9,SNR=24
PETK LR LR 19 13 59.7
comp=Z,2μm,18.7s,baz=246,slow=38
comp=Z,8.7nm,0.8s
PURM Purcari 64.24 316 P **P** **18 43 35.1 -0.2**
comp=Z,2μmcomp=Z,75nm,0.9s
PET Petropavlovsk 64.66 37 P **P** **18 43 37.9 0.0**
PET Petropavlovsk 64.66 37 *e*P **P** **18 43 37.2 -0.7**
PET *e*S **S** **18 52 15.6 -1.8**
PET *e*SS **SS** **18 56 24.9 -3.2**
PET pmax pmax
comp=Z,600nm,4.7s
PET pmax pmax
comp=Z,300nm,8.0s
PET pmax pmax
comp=Z,28nm,1.0s
PET MLR MLR
comp=Z,4μm,17.0s
PET MLR MLR
comp=Z,4μm,16.0s
PET Petropavlovsk 64.66 37 P **P** **18 43 35.9 -2.0**
PET IAMs_20 IAMs_20 19 15 59.2
comp=Z,4μm,18.0s
PET Petropavlovsk 64.66 37 P **P** **18 43 36.4 -1.5**
comp=Z,938nmcomp=Z,32nm,1.2s
BAL3X Bal3x, Balta 64.67 317 P **P** **18 43 42.4 +4.3**
AUNRC North Rockhamp 64.73 123 P **P** **18 43 40.0 +1.1**
TLCR 64.76 314 ⇓P **P** **18 43 38.5 -0.3**
TLCR 64.76 314 P **P** **18 43 38.4 -0.3**
SEY Seymchan 64.77 25 P **P** **18 43 37.4 -1.1**
comp=Z,18nm,1.1s,baz=251,slow=7.4,SNR=18
SEY LR LR 19 12 48.8
comp=Z,3μm,18.6s,baz=245,slow=37
comp=Z,18nm,1.1s
SEY Seymchan 64.77 25*de*P **P** **18 43 37.9 -0.6**
SEY pmax pmax
comp=Z,85nm,2.5s
SEY MLR MLR
comp=Z,3μm,15.0s
ADZR Andozero 64.92 336 *e*P **P** **18 43 37.5 -1.9**
ADZR S **S** **18 52 20.4 +0.1**
ADZR pmax pmax
comp=Z,104nm,1.0s
ADZR MLR MLR
comp=Z,4μm,19.0s
TIRR Tirgusor 64.94 313 ⇑P **P** **18 43 38.6 -1.4**
TIRR Tirgusor 64.94 313 P **P** **18 43 38.5 -1.4**
TIRR Tirgusor 64.94 313 P **P** **18 43 39.0 -0.9**
comp=Z,617nmcomp=Z,28nm,1.4s
TPGR Topolog 64.99 314 ⇓P **P** **18 43 39.6 -0.7**
MBAR Mbarara 65.01 264 LR LR 19 11 33.4
comp=Z,2μm,19.2s,baz=72,slow=36
MBAR Mbarara 65.01 264 P P 18 43 47.5 +6.5
PSN Preselentsi 65.03 313 *e*P P 18 43 46.4 +5.9
KARP Karpathos 65.08 304 P **P** **18 43 40.7 -0.4**
comp=Z,2μmcomp=Z,200nm,1.0s
CMSA Cobar Meteorol 65.11 133 P **P** **18 43 41.9 +0.7**
comp=Z,171nm,1.0s
CFR Carcaliu 65.23 314 ⇑P **P** **18 43 41.2 -0.6**
CFR Carcaliu 65.23 314 P **P** **18 43 41.2 -0.6**
AKASG Malin Array Be 65.43 320 P **P** **18 43 41.2 -1.7**
comp=Z,2.6nm,0.7s,baz=90,slow=4.8,SNR=12
AKASG PP **PP** **18 46 10.5 +3.6**
comp=Z,6.7nm,0.9s,baz=88,slow=6.8,SNR=4.2
AKASG LR LR 19 16 04.2
comp=Z,3μm,21.0s,baz=98,slow=40
comp=Z,2.6nm,0.7s
AKASG Malin Array Be 65.43 320 *i* P **P** **18 43 42.0 -1.0**
AKASG pmax pmax

comp=Z,7.0nm,0.9s
AKBB Malin Array Si 65.43 320⇑ *e*P **P** **18 43 42.0 -1.0**
AKBB Malin Array Si 65.43 320 P **P** **18 43 41.2 -1.8**
KIEV Kiev 65.44 320 ⇓P **P** **18 43 41.9 -1.1**
KIEV Kiev 65.44 320 *i* P **P** **18 43 41.7 -1.3**
SNR=8.6
KIEV Kiev 65.44 320 P **P** **18 43 42.1 -0.9**
KIEV Kiev 65.44 320 P **P** **18 43 42.1 -0.9**
KIEV Kiev 65.44 320 P **P** **18 43 41.5 -1.5**
comp=Z,3µmcomp=Z,96nm,1.1s
PRD Provadia 65.50 312 *e*P **P** **18 43 43.9 +0.3**
SORM Soroca 65.53 317 ⇑P **P** **18 43 42.9 -0.8**
SORM Soroca 65.53 317 P **P** **18 43 42.8 -0.8**
SORM Soroca 65.53 317 P **P** **18 43 42.6 -1.1**
comp=Z,1µmcomp=Z,61nm,0.8s
AK21 Malin Array Si 65.56 320 P **P** **18 43 42.0 -1.8**
ARPS Mount Arapiles 65.59 140 P **P** **18 43 46.4 +2.2**
comp=Z,16nm,1.1s
AULRC Lightning Ridg 65.67 130 P **P** **18 43 45.4 +0.6**
PETR Petresti 65.94 315 ⇓P P 18 43 37.8 -8.6
JMB Yambol 66.08 311 *e*P **P** **18 43 47.0 -0.3**
EIDS Eidsvold 66.10 125 P **P** **18 43 48.7 +1.0**
comp=Z,30nm,1.4s
LUBAR Lubar, Ukraine 66.22 319 P **P** **18 43 46.1 -1.9**
VRI Vrincioaia 66.31 315 ⇑P **P** **18 43 49.2 +0.4**
VRI Vrincioaia 66.31 315 P **P** **18 43 49.2 +0.4**
VRI Vrincioaia 66.31 315 P **P** **18 43 48.0 -0.8**
comp=Z,1µmcomp=Z,63nm,1.0s
ISR Istrita 66.35 314 ⇑P **P** **18 43 47.9 -1.2**
ISR Istrita 66.35 314 P **P** **18 43 47.9 -1.2**
PLOR Plostina 66.36 315 ⇓P **P** **18 43 49.3 +0.1**
PLOR Plostina 66.36 315 P **P** **18 43 49.2 +0.1**
TESR Tescani 66.44 316 ⇓P **P** **18 43 49.2 -0.4**
TESR Tescani 66.44 316 P **P** **18 43 48.3 -1.3**
comp=Z,1µmcomp=Z,49nm,2.0s
MI28 MI28,Pidlybu 66.44 320 P **P** **18 43 47.6 -1.9**
SZH Strazhitsa 66.56 312 *e*P **P** **18 43 50.2 -0.2**
ONER Baraj Valea Uz 66.59 315 ⇓P **P** **18 43 50.6 0.0**
GIRR Girov 66.60 316 ⇑P **P** **18 43 51.3 +0.7**
COVR Voineasa-Covas 66.67 315 ⇓P **P** **18 43 52.0 +0.9**
MLR Muntele Rosu 66.81 314 LR LR 19 17 01.7
comp=Z,4µm,21.3s,baz=92,slow=40
MLR Muntele Rosu 66.81 314 ⇑P **P** **18 43 52.4 +0.3**
MLR Muntele Rosu 66.81 314 P **P** **18 43 52.4 +0.3**
MLR Muntele Rosu 66.81 314 IAmb IAmb 18 44 05.9
comp=Z,69nm,1.1s
MLR IAMs_20 IAMs_20 19 16 39.6
comp=Z,3µm,21.0s
MLR Muntele Rosu 66.81 314 P **P** **18 43 51.5 -0.6**
comp=Z,936nmcomp=Z,68nm,1.3s
PRAR RASCA 66.84 316 ⇓P **P** **18 43 52.6 +0.5**
KMPD K-Podol'skiy 66.84 318 P **P** **18 43 48.8 -3.3**
BIZ Bicaz 66.87 316 ⇑P **P** **18 43 52.1 -0.2**
KDZ Kurdzhali 66.89 310 *e*P **P** **18 43 52.1 -0.4**
IDI Anoyia 66.93 303 LR LR 19 16 59.8
comp=Z,623nm,22.0s,baz=84,slow=40
PUL Pulkovo 66.97 330⇑ *e*P **P** **18 43 52.9 +0.2**
PUL pmax pmax
comp=Z,71nm,1.2s
MNK Minsk 66.99 324 *i* P **P** **18 43 53.1 +0.1**
comp=E,7.0nm,0.9s
MNK *i* P **P** **18 43 53.1 +0.1**
comp=N,28nm,0.9s
MNK *i* P **P** **18 43 53.1 +0.1**
comp=Z,55nm,0.9s,baz=102
MNK *i* PcP **PcP** **18 44 21.4 +0.1**
MNK *i* PP **PP** **18 46 20.3 -0.1**
MNK *i* PPP PPP 18 47 56.2
MNK *i* S **S** **18 52 44.0 -1.9**
MNK *i* PS **PnS** **18 53 05.0 -2.5**
MNK *i* SS **SS** **18 57 06.3 +1.9**
MNK *i* SSS SSS 19 00 17.7
MNK *i* LR LR 19 14 08.5
MNK Minsk 66.99 324*c* *i*P **P** **18 43 53.0 +0.1**
AUMAG Moama Anglican 67.06 138 P **P** **18 43 55.1 +1.5**
DOPR Dopca 67.25 315 ⇑P **P** **18 43 54.3 -0.5**
RZN Rozhen 67.34 310 *e*P **P** **18 43 55.8 +0.2**
PLD Plovdiv 67.37 311 *e*P **P** **18 43 55.9 +0.4**
VOIR 67.43 314 ⇑P **P** **18 43 55.9 -0.1**
VOIR 67.43 314 P **P** **18 43 55.9 -0.1**
BURAR Bucovina Array 67.55 317 ⇑P **P** **18 43 55.4 -1.3**
BURAR Bucovina Array 67.55 317 P **P** **18 43 55.4 -1.3**
BURAR Bucovina Array 67.55 317 P **P** **18 43 54.9 -1.9**
PLVB Pleven 67.55 312 ⇑P **P** **18 43 56.6 -0.1**
BUR08 Bucovina Ar. S 67.56 317 IAmb IAmb 18 44 32.6
comp=Z,129nm,2.0s
AUDCS Dubbo College 67.59 132 P **P** **18 43 58.3 +1.2**
RNPP5 Staryi Chortor 67.60 321 P **P** **18 43 55.8 -1.1**
RNPP9 Sopachiv 67.63 321 P **P** **18 43 55.8 -1.2**
NACGM Naroch 67.70 325⇑ *i*P **P** **18 43 57.6 +0.2**
comp=Z,144nm,0.8s,baz=101
ARR Arges 67.71 314 ⇓P **P** **18 43 57.6 -0.2**
AUTOO Toowoomba Stat 67.81 126 P **P** **18 44 00.2 +1.6**
LVZ Lovozero 67.93 339 P **P** **18 43 59.8 +1.1**
LVZ Lovozero 67.93 339 IAMs_20 IAMs_20 19 18 04.6
comp=Z,4µm,18.0s
MDB Medias 67.96 315 ⇑P **P** **18 43 57.6 -1.6**
MDB Medias 67.96 315 P **P** **18 43 57.6 -1.6**
MMB Musomishta 68.07 310 *e*P P 18 44 05.6 +5.5
MPEP Malo Peshtene 68.19 312 *e*P **P** **18 44 00.8 +0.1**
APA Apatity 68.24 339⇓ *i*P **P** **18 44 01.4 +0.8**
APA *i* 18 44 26.7
APA *i* 18 46 34.8
APA *i* S **S** **18 53 00.4 -0.1**
APA *i* 18 53 56.8
APA pmax pmax
comp=Z,48nm,1.0s
APA MLR MLR
comp=Z,5µm,29.2s
AUBSH Beerwah State 68.27 125 P **P** **18 44 03.0 +1.6**
LOT Lotru 68.33 314 ⇓P **P** **18 44 01.3 -0.4**
PLNA Plana 68.36 311 *e*P **P** **18 44 01.9 -0.1**
TOO Toolangi 68.40 139 P **P** **18 44 04.2 +2.1**
comp=Z,24nm,1.2s
VSU Vasula 68.45 328*de*P **P** **18 44 00.5 -1.5**
VSU pmax pmax
comp=Z,36nm,1.0s
VSU MLR MLR
comp=Z,4µm,20.0s
BLSH Balsha 68.50 311 *e*P **P** **18 44 02.8 +0.1**
ALEG Aligegeo Malai 68.50 104 P **P** **18 44 05.1 +2.0**
VTS Vitosha 68.51 311 *e*P **P** **18 44 02.6 -0.4**
KKB Krupnik 68.55 310 *e*P **P** **18 44 02.2 -0.9**
AUPHS Peel High Scho 68.68 130 P **P** **18 44 06.0 +2.0**
MARR Marisel-Cluj 68.88 315 ⇑P **P** **18 44 05.1 0.0**
ARMA Armidale 68.90 129 P **P** **18 44 07.9 +2.4**
comp=Z,44nm,1.1s
VAY Valandovo 68.95 310 *i* P P 18 44 10.3 +4.8
LIT Litokhoron 68.96 308 IAmb IAmb 18 44 25.3
comp=Z,85nm,1.6s
GZR Gura Zlata 69.02 314 ⇓P **P** **18 44 03.9 -2.1**
GZR Gura Zlata 69.02 314 P **P** **18 44 03.8 -2.1**
HERR Herculane 69.24 313 ⇑P **P** **18 44 06.0 -1.3**
ITM Ithomi 69.35 305 IAmb IAmb 18 44 19.2
comp=Z,61nm,0.7s
KWP Kalwaria Pacla 69.42 319 *e*P P 18 44 13.1 +4.8
FINES FINESS Array B 69.42 331 P **P** **18 44 06.8 -1.2**
comp=Z,8.4nm,0.7s,baz=100,slow=5.9,SNR=42
FINES LR LR 19 16 57.5
comp=Z,4µm,21.6s,baz=104,slow=38
comp=Z,8.4nm,0.7s
FINES FINESS Array B 69.42 331 *i* P **P** **18 44 08.0 0.0**
FINES pmax pmax
comp=Z,8.0nm,0.6s
AUMTS Mt Stromlo 69.49 135 P **P** **18 44 10.1 +1.2**
CAN Canberra 69.49 135 P P 18 44 17.4 +8.5
comp=Z,49nm,1.4s
CAN Canberra 69.49 135 P **P** **18 44 10.1 +1.2**
CAN Canberra 69.49 135 IAMs_20 IAMs_20 19 15 15.2
comp=Z,4µm,20.0s
AUMHS Melrose High S 69.57 135 P **P** **18 44 10.9 +1.5**
UZHM Uzhgorod 69.60 317 P **P** **18 44 13.3 +3.9**
SUW Suwalki 69.63 323 *e*P **P** **18 44 09.6 +0.1**
SUW Suwalki 69.63 323 IAMs_20 IAMs_20 19 18 53.0
comp=Z,4µm,21.0s
KOLS Kolonicke sedl 69.64 318 *e*P **P** **18 44 10.0 +0.3**
KOLS pmax pmax
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 69.64 318 *e*P **P** **18 44 10.0 +0.3**
MDVR Moldovita 69.73 313 ⇑P **P** **18 44 08.9 -1.5**
CNB Canberra Magne 69.74 135 P P 18 44 18.7 +8.2
comp=Z,1.7nm,1.4s
H04N2 CROZET ISLANDS 69.76 210 T T 20 00 47.3
baz=49,slow=77,SNR=12
H04N1 CROZET ISLANDS 69.77 210 T T 20 00 47.3
baz=49,slow=77,SNR=11
H04N3 CROZET ISLANDS 69.78 210 T T 20 00 47.3
baz=49,slow=77,SNR=10
HURO Huro Makira 70.13 106 P **P** **18 44 14.8 +1.6**
H04S1 CROZET ISLANDS 70.18 210 T T 20 01 13.9
baz=51,slow=74,SNR=3.1
H04S3 CROZET ISLANDS 70.19 210 T T 20 01 15.0
baz=51,slow=74,SNR=8.8
H04S2 CROZET ISLANDS 70.20 210 T T 20 01 14.5
baz=51
OHR Ohrid 70.28 309 *i* P P 18 44 18.9 +5.2
STHS Stebnicka Huta 70.35 318 *e*P **P** **18 44 14.4 +0.4**
STHS *e* 18 44 20.3
STHS Stebnicka Huta 70.35 318 *e*P **P** **18 44 14.4 +0.4**
STHS *e* 18 44 20.2
VADS Vadso 70.52 341 *e*P **P** **18 44 14.6 0.0**
VADS IAmb IAmb 18 44 24.6
comp=Z,51nm,1.0s
VADS *e*PP **PP** **18 46 49.2 -1.4**
VADS *e*S **S** **18 53 29.1 +1.9**
VADS *e*SS **SS** **18 57 56.4 -1.8**
VADS IAMs_20 IAMs_20 19 18 49.9
comp=Z,3µm,20.2s
BEL Belsk 70.83 321 *e*P **P** **18 44 17.1 +0.2**
NIE Niedzica 70.97 318 *e*P **P** **18 44 17.9 +0.1**
PSZ Piszkesteto 71.15 317 ⇓P **P** **18 44 18.9 -0.1**
PSZ Piszkesteto 71.15 317 P **P** **18 44 18.9 -0.1**
PSZ Piszkesteto 71.15 317 IAmb IAmb 18 44 31.8
comp=Z,105nm,1.6s
KEV Kevo 71.18 340 P **P** **18 44 16.4 -2.2**
KEV pmax pmax
comp=Z,78nm,1.5s
KEV MLR MLR
comp=Z,5µm,20.0s
KEV Kevo 71.18 340 P **P** **18 44 16.4 -2.2**
KEV IAmb IAmb 18 44 47.5
comp=Z,78nm,1.5s
KEV IAMs_20 IAMs_20 19 19 05.4
comp=Z,5µm,20.0s
OJC Ojcow 71.34 319 *e*P **P** **18 44 19.4 -0.6**
LANS Liptovska Anna 71.50 318 *e*P **P** **18 44 21.4 +0.4**
LANS *e* 18 44 29.4
LANS pmax pmax
comp=Z,2.0nm,1.0s
LANS Liptovska Anna 71.50 318 *e*P **P** **18 44 21.3 +0.3**
LANS *e* 18 44 29.4
LSZ Lusaka 71.51 249 LR LR 19 13 47.4
comp=Z,1µm,18.3s,baz=77,slow=34
ARA0 ARCESS Array S 71.62 340 *e*P **P** **18 44 21.3 -0.1**
ARA0 IAmb IAmb 18 44 36.9
comp=Z,50nm,1.1s
ARA0 *e*PP **PP** **18 46 59.5 -0.6**
ARA0 *e*S **S** **18 53 41.2 +1.0**
ARA0 *e*SS **SS** **18 58 15.3 +0.1**
ARA0 IAMs_20 IAMs_20 19 19 08.7
comp=Z,5µm,20.2s
ARCES ARCESS Array B 71.62 340 P **P** **18 44 20.7 -0.6**
comp=Z,3.5nm,0.6s,baz=96,slow=4.9,SNR=13
ARCES PP **PP** **18 47 03.5 +3.3**
comp=Z,8.2nm,1.0s,baz=105,slow=8.9,SNR=3.8
ARCES LR LR 19 19 26.8
comp=Z,5µm,20.5s,baz=109,slow=39
comp=Z,3.5nm,0.6s
ARCES ARCESS Array B 71.62 340 P **P** **18 44 21.0 -0.4**
ARCES pmax pmax
comp=Z,50nm,1.2s
ARCES ARCESS Array B 71.62 340 P **P** **18 44 21.0 -0.4**
BILL Bilibino 71.88 22*de*P **P** **18 44 22.2 -0.7**
BILL pmax pmax
comp=Z,68nm,1.3s
BILL MLR MLR
comp=Z,6µm,17.0s
BILL Bilibino 71.88 22 P **P** **18 44 21.7 -1.3**
BILL IAmb IAmb 18 44 33.1
comp=Z,131nm,1.1s
MORH Mrgy, Hungar 71.95 315 ⇑P **P** **18 44 23.2 -0.5**
SRO Srobarova 72.21 316 *e*P **P** **18 44 25.3 0.0**
SRO *e* 18 44 33.2
SRO pmax pmax
comp=Z,16nm,0.7s
SRO Srobarova 72.21 316 *e*P **P** **18 44 25.3 0.0**
SRO *e* 18 44 33.2
KTK1 Kautokeino 72.28 339 *e*P **P** **18 44 25.2 -0.1**
KTK1 IAmb IAmb 18 44 35.1
comp=Z,36nm,0.8s
KTK1 *e*PP **PP** **18 47 04.7 -1.1**
KTK1 *e*S **S** **18 53 48.1 +0.4**
KTK1 *e*SS **SS** **18 58 25.7 +0.4**
KTK1 IAMs_20 IAMs_20 19 18 12.8
comp=Z,5µm,21.9s
OKC Ostrava-Krasne 72.39 319 *e*P **P** **18 44 27.6 +1.3**
OKC *e*S **S** **18 53 47.4 -2.2**
OKC MLR MLR
comp=Z,1µm,21.4s
OKC Ostrava-Krasne 72.39 319 *e*P **P** **18 44 27.6 +1.3**
OKC *e*S **S** **18 53 47.4 -2.2**
OKC AMS AMS 19 22 30.0
comp=Z,1µm,21.4s
STEB Steborice 72.63 319 *e*P **P** **18 44 28.1 +0.3**
TAU Tasmania Unive 72.66 142 P **P** **18 44 29.6 +1.7**
PILG Pilgrimsrest, 72.67 239 *e*P **P** **18 44 27.9 -0.7**
JAVC Velka Javorina 72.67 318 *e*P **P** **18 44 28.1 0.0**
JAVC *e*S **S** **18 53 52.2 -0.8**
MORC Moravsky Berou 72.78 319 ⇑P **P** **18 44 29.2 +0.5**
MORC Moravsky Berou 72.78 319 P **P** **18 44 29.1 +0.5**
MORC Moravsky Berou 72.78 319 IAmb IAmb 18 44 39.4
comp=Z,61nm,1.0s
MORC Moravsky Berou 72.78 319 *e*P **P** **18 44 28.2 -0.5**
MORC *e*S **S** **18 53 52.5 -1.7**
SMOL Smolenice 72.82 317 *e*P **P** **18 44 28.7 -0.2**
MODS Modra-Piesok 72.92 317 *e*P **P** **18 44 30.9 +1.4**
MODS *e* 18 44 36.6
MODS pmax pmax
comp=Z,21nm,1.0s
MODS Modra-Piesok 72.92 317 *e*P **P** **18 44 30.9 +1.4**
MODS *e* 18 44 36.6
MATP Matopo 72.93 244 LR LR 19 11 18.0
comp=Z,966nm,21.5s,baz=83,slow=32
KRLC Kraliky 73.28 319 *e*P **P** **18 44 31.8 +0.2**
KRLC *e* 18 44 39.3
KRLC *e*S **S** **18 53 58.5 -1.3**
KRLC MLR MLR
comp=Z,2µm,23.3s
KRLC Kraliky 73.28 319 *e*P **P** **18 44 31.8 +0.2**
KRLC *ex* x 18 44 39.3
KRLC *e*S **S** **18 53 58.5 -1.3**
KRLC AMS AMS 19 20 40.0
comp=Z,2µm,23.3s
JETT Jettan, Norway 73.38 339 *e*P **P** **18 44 31.6 -0.3**
JETT IAmb IAmb 18 45 00.4
comp=Z,50nm,0.9s
JETT IAMs_20 IAMs_20 19 19 20.4
comp=Z,5µm,24.0s
VRAC Vranov 73.38 318 ⇑P **P** **18 44 32.5 +0.3**
VRAC Vranov 73.38 318 P **P** **18 44 32.5 +0.3**
VRAC Vranov 73.38 318 *e*P **P** **18 44 31.6 -0.7**
VRAC *e*S **S** **18 53 59.7 -1.3**
KRUC Moravsky 73.51 318 *e*P **P** **18 44 32.3 -0.7**
KRUC *e*S **S** **18 53 59.6 -2.8**
RONA Rosalia, Austr 73.57 316 *i* P **P** **18 44 33.1 -0.4**
comp=Z,11nm,1.0s
DPC Dobruska-Polom 73.58 319 *e*P **P** **18 44 34.1 +0.7**
DPC *e* 18 44 41.5
DPC *e*S **S** **18 54 01.3 -1.9**
DPC MLR MLR
comp=Z,2µm,22.0s
DPC Dobruska-Polom 73.58 319 *e*P **P** **18 44 34.1 +0.7**
DPC *ex* x 18 44 41.5
DPC *e*S **S** **18 54 01.3 -1.9**
DPC AMS AMS 19 20 50.0
comp=Z,2µm,22.0s
KSP Ksiaz 73.60 320 *e*P **P** **18 44 34.0 +0.5**
KOGS Kog 73.61 315 *i* P **P** **18 44 32.7 -0.9**
KOGS *e*S **S** **18 53 59.8 -3.7**
OSTC Ostas 73.65 319 *e*P **P** **18 44 33.9 +0.1**
OSTC *e* 18 44 41.8
OSTC *e*S **SKiKP** **18 54 01.3 -2.4**
OSTC MLR MLR
comp=Z,2µm,22.8s
OSTC Ostas 73.65 319 *e*P **P** **18 44 33.9 +0.1**
OSTC *ex* x 18 44 41.8
OSTC *e*S **SKiKP** **18 54 01.3 -2.4**
OSTC AMS AMS 19 20 50.0
comp=Z,2µm,22.8s
HOPEN Hopen 73.69 347 *e*P **P** **18 44 33.5 0.0**
HOPEN IAmb IAmb 18 44 43.2
comp=Z,72nm,1.3s
HOPEN *e*PP **PP** **18 47 17.0 -0.6**
HOPEN *e*S **S** **18 54 05.3 +1.8**
HOPEN *e*SS **SS** **18 58 48.5 +2.0**
HOPEN IAMs_20 IAMs_20 19 22 56.4
comp=Z,4µm,20.0s
WINA Alland / Wiene 73.72 317 *i* P **P** **18 44 33.9 -0.3**
SNR=9.7
CHVC Chvalec 73.75 319 *e*P **P** **18 44 34.8 +0.4**
CHVC MLR MLR
comp=Z,2µm,21.8s
CHVC Chvalec 73.75 319 *e*P **P** **18 44 34.8 +0.4**
CHVC AMS AMS 19 20 50.0
comp=Z,2µm,21.8s
UPC Upice 73.78 319 *e*P **P** **18 44 35.7 +1.2**
UPC *e*S **SKiKP** **18 54 04.5 +0.7**
UPC MLR MLR
comp=Z,3µm,22.3s
UPC Upice 73.78 319 *e*P **P** **18 44 35.7 +1.2**
UPC *e*S **SKiKP** **18 54 04.5 +0.7**
UPC AMS AMS 19 20 50.0
comp=Z,3µm,22.3s
CONA Conrad Observa 73.86 317 *i* P **P** **18 44 34.4 -0.8**
comp=Z,17nm,1.0s,SNR=6.4
SHEM Shemya Is, Ala 73.88 38 P **P** **18 44 34.7 -0.3**
comp=Z,95nm,0.7s,baz=326,slow=2.4,SNR=17
SHEM LR LR 19 16 12.0
comp=Z,1µm,21.9s,baz=252,slow=35
comp=Z,95nm,0.7s
SHEM Shemya Is, Ala 73.88 38 IAmb IAmb 18 44 44.4
comp=Z,129nm,0.8s
SMY Shemya 73.88 38 P **P** **18 44 33.6 -1.4**
SMY Shemya 73.88 38 IAmb IAmb 18 44 43.0
comp=Z,173nm,0.9s
TRO Tromso 73.90 339 *e*P **P** **18 44 34.5 -0.3**
TRO IAmb IAmb 18 44 49.4
comp=Z,198nm,1.9s
TRO *e*PP **PP** **18 47 19.6 +0.1**
TRO *e*S **S** **18 54 06.8 +0.8**
TRO *e*SS **SS** **18 58 52.5 +2.6**
TRO IAMs_20 IAMs_20 19 19 37.6
comp=Z,5µm,23.2s
BLEU Blekinge 74.04 325 *i* P **P** **18 44 35.2 -0.7**
ARSA Arzberg 74.10 316 *i* P **P** **18 44 36.1 -0.4**
comp=Z,28nm,1.6s,SNR=6.1
CEL Celeste 74.11 307 IAmb IAmb 18 44 48.5
comp=Z,72nm,1.0s
PERS Pernice 74.39 315 *i* P **P** **18 44 37.0 -1.2**
SOKA Soboth 74.44 315 *e*P **P** **18 44 38.2 -0.4**
comp=Z,32nm,1.1s,SNR=13
BSD Bornholm Skovb 74.51 324 *i* P **P** **18 44 38.9 +0.3**
BSD IAmb IAmb 18 44 47.3
comp=Z,57nm,1.0s
BJO1 Bjornoya 74.69 344 *e*P **P** **18 44 39.2 -0.2**
BJO1 IAmb IAmb 18 45 04.3
comp=Z,64nm,1.0s
BJO1 IAMs_20 IAMs_20 19 23 56.3
comp=Z,3µm,18.1s
PRU Pruhonice 74.72 319 *e*P **P** **18 44 40.5 +0.5**
PRU *e* 18 44 48.1
PRU *e*S **S** **18 54 14.5 -1.5**
PRU MLR MLR
comp=Z,2µm,20.9s
PRU Pruhonice 74.72 319 *e*P **P** **18 44 40.5 +0.5**
PRU *ex* x 18 44 48.1
PRU *e*S **S** **18 54 14.5 -1.5**
PRU AMS AMS 19 21 40.0
comp=Z,2µm,20.9s
LEPH Lephalale, Lim 74.74 241 *e*P **P** **18 44 39.2 -1.5**
SESA Seetaler Alpe, 74.75 316 *i* P **P** **18 44 40.2 -0.3**
SNR=10
OBKA Obir 74.78 315 *i* P **P** **18 44 40.4 -0.2**
comp=Z,24nm,0.9s
LJU Ljubljana 74.81 315 *i* P **P** **18 44 39.9 -0.8**
LJU *e* 18 47 31.6
LJU *e*S **S** **18 54 14.1 -3.0**
CKRC Cesky Krumlov 74.89 318 *e*P **P** **18 44 41.5 +0.4**
CKRC *e*S **S** **18 54 15.4 -2.6**
CKRC MLR MLR
comp=Z,2µm,21.9s
CKRC Cesky Krumlov 74.89 318 *e*P **P** **18 44 41.5 +0.4**
CKRC *e*S **S** **18 54 15.4 -2.6**
CKRC AMS AMS 19 23 20.0
comp=Z,2µm,21.9s
MOA Molln 74.94 316 *i* P **P** **18 44 40.0 -1.4**
comp=Z,30nm,1.0s
ZVC Zvikov 74.95 318 *e*P **P** **18 44 41.5 +0.1**
ZVC *e*S **S** **18 54 14.2 -4.4**
ZVC AMS AMS 19 21 30.0
comp=Z,2µm,21.9s
FAUS Fauske 74.96 337 *e*P **P** **18 44 40.9 -0.1**
FAUS IAmb IAmb 18 44 51.0
comp=Z,348nm,2.2s
FAUS *e*S **S** **18 54 19.2 +1.2**
FAUS *e*SS **SS** **18 59 08.1 +2.0**
FAUS IAMs_20 IAMs_20 19 19 50.2
comp=Z,3µm,22.6s
RICC Richard 75.00 319 AMS AMS 19 22 00.0
comp=Z,3µm,21.1s
STEI Steigen 75.03 337 *e*P **P** **18 44 41.5 +0.1**
STEI IAmb IAmb 18 44 54.7
comp=Z,102nm,1.4s
STEI *e*S **S** **18 54 20.1 +1.4**
STEI IAMs_20 IAMs_20 19 19 54.5
comp=Z,6µm,23.2s
BRG Berggiesshubel 75.09 320 *e*P **P** **18 44 42.1 0.0**
comp=Z,62nm,0.9s,baz=88,slow=5.6
BRG Berggiesshubel 75.09 320 *i* P **P** **18 44 42.5 +0.3**
BRG Amp 18 44 44.0
comp=Z,12nm,0.7s
BRG Berggiesshubel 75.09 320 P P 18 44 49.9 +7.7
BRG Amp 18 44 52.9
comp=Z,63nm,0.9s
BRG ⇑PP **PcP** **18 44 57.5 +1.8**
BRG Amp 18 44 58.9
comp=Z,22nm,0.9s
BRG PP **PP** **18 47 24.7 -5.4**
BRG Amp 18 47 27.2
comp=Z,15nm,1.4s
BRG Berggiesshubel 75.09 320 S **S** **18 54 20.0 -0.1**
BRG Berggiesshubel 75.09 320 SS SS 18 59 19.0 +10
DEL Delary 75.12 325 *i* P **P** **18 44 43.1 +0.9**
RUE Ruedersdorf 75.17 321 *e*P **P** **18 44 42.4 -0.1**
comp=Z,150nm,0.8s,baz=88,slow=5.6
MOR8 Moi Rana 75.21 336 *e*P **P** **18 44 41.2 -1.4**
MOR8 IAmb IAmb 18 44 57.9
comp=Z,64nm,1.1s
MOR8 *e*S **S** **18 54 20.4 -0.5**
MOR8 *e*SS **SS** **18 59 09.8 -0.2**
MOR8 IAMs_20 IAMs_20 19 20 20.4
comp=Z,3µm,21.8s
HFS Hagfors 75.28 329 P **P** **18 44 41.9 -1.2**
comp=Z,11nm,0.6s,baz=116,slow=3.4,SNR=40
HFS LR LR 19 21 38.8
comp=Z,4µm,21.3s,baz=94,slow=39
comp=Z,11nm,0.6s
GEC2 GERESS Array S 75.29 318 IAmb IAmb 18 44 53.9
comp=Z,54nm,0.9s
GEC2 GERESS Array S 75.29 318 *e*P **P** **18 44 43.2 -0.3**
comp=Z,54nm,0.9s,baz=88,slow=5.6
GEC2 *e*L L 19 23 51.6
comp=Z,2µm,20.7s
GERES GERESS Array B 75.29 318 P **P** **18 44 42.5 -1.0**
comp=Z,13nm,0.7s,baz=88,slow=5.0,SNR=94
GERES LR LR 19 24 11.3
comp=Z,1µm,18.4s,baz=90,slow=41
comp=Z,13nm,0.7s
GERES GERESS Array B 75.29 318 P **P** **18 44 43.0 -0.5**
GERES GERESS Array B 75.29 318 P **P** **18 44 43.0 -0.5**
VAE Valguarnera 75.33 306 LR LR 19 22 25.3
comp=Z,597nm,18.7s,baz=81,slow=39
LUNU Lund 75.35 325 *i* P **P** **18 44 43.3 -0.2**
KHC Kasperske Hory 75.36 318 *e*P **P** **18 44 43.9 +0.1**
KHC *e* 18 44 50.9
KHC *e*S **S** **18 54 22.5 -0.8**
KHC MLR MLR
comp=Z,1µm,20.7s
KHC Kasperske Hory 75.36 318 *e*P **P** **18 44 43.9 +0.1**
KHC *ex* x 18 44 50.9
KHC *e*S **S** **18 54 22.5 -0.8**
KHC AMS AMS 19 25 20.0

comp=Z,1µm,20.7s
BIOA Bad Ischl, Aus 75.37 316 *i* P **P 18 44 43.0 -0.9**
comp=Z,28nm,0.9s
RAUS Rausandaksla 75.39 336 *e*P **P 18 44 43.5 0.0**
RAUS IAmb IAmb 18 44 57.4
comp=Z,76nm,1.1s
RAUS *e*PP **PP 18 47 31.9 -0.3**
RAUS *e*S **S 18 54 23.5 +0.7**
RAUS *e*SS **SS 18 59 13.6 +1.0**
RAUS IAMs_20 IAMs_20 19 20 28.9
comp=Z,4µm,21.4s
MYKA Terra Mystica 75.40 315 *i* P **P 18 44 43.4 -0.8**
comp=Z,36nm,1.8s
HSKC Hora Svate Kat 75.42 319 *e*P **P 18 44 45.0 +0.9**
HSKC AMS AMS 19 22 00.0
comp=Z,3µm,23.1s
SABO M.te Sabotino 75.46 315 IAmb IAmb 18 44 54.1
comp=Z,56nm,0.9s
HRAO HartRAO 75.56 239 *e*P **P 18 44 44.1 -1.3**
KBA Koelnbreinsper 75.59 316 *i* P **P 18 44 43.8 -1.5**
comp=Z,32nm,1.0s
BJUU Bjuv 75.59 325 *i* P **P 18 44 44.7 -0.2**
CLL Collm 75.67 320 *i* P **P 18 44 45.1 -0.4**
CLL *i* 18 44 50.0
CLL *e*S **S 18 54 26.0 -0.5**
CLL pmax pmax
comp=Z,41nm,1.0s
CLL pmax pmax
comp=Z,18nm,1.1s
CLL MLR MLR
comp=Z,3µm,21.0s
CLL Collm 75.67 320 IAMs_20 IAMs_20 19 23 21.0
comp=Z,3µm,20.0s
CLL Collm 75.67 320 *e*P **P 18 44 45.1 -0.4**
comp=Z,49nm,1.2s,baz=88,slow=5.6
CLL *e*L L 19 23 11.2
comp=Z,3µm,20.9s
CLL Collm 75.67 320 *i* P **P 18 44 45.1 -0.4**
comp=Z,17nm,1.4s
CLL *i* P(2) 18 44 50.0
comp=Z,18nm,1.1s
CLL *i* Pmax 18 44 54.4
comp=Z,41nm,1.0s
CLL *e*PP **PP 18 47 30.0 -5.0**
CLL *e*PPP PPP 18 49 24.0
CLL *e*PPPP 18 50 30.0
CLL *e*S **S 18 54 26.0 -0.5**
CLL *e*PPS PPS 18 55 18.0
CLL *e*SS **SS 18 59 18.0 +0.3**
CLL *e*SSS SSS 19 02 42.0
CLL *e*SSSS 19 05 00.0
CLL AMS AMS 19 22 00.0
comp=N,2µm,20.8s
CLL AMS AMS 19 22 00.0
comp=E,2µm,22.0s
CLL AMS AMS 19 22 00.0
comp=Z,3µm,21.0s
LOF Lofoten 75.68 338 *e*P **P 18 44 44.8 -0.3**
LOF IAmb IAmb 18 44 58.1
comp=Z,54nm,1.2s
LOF *e*S **S 18 54 26.4 +0.5**
LOF *e*SS **SS 18 59 19.3 +2.3**
LOF IAMs_20 IAMs_20 19 20 14.1
comp=Z,5µm,22.5s
VAGH Vaagaholmen 75.71 336 *e*P **P 18 44 45.5 +0.2**
VAGH IAmb IAmb 18 45 03.4
comp=Z,32nm,1.0s
VAGH *e*PP **PP 18 47 34.9 0.0**
VAGH *e*S **S 18 54 28.0 +1.7**
VAGH *e*SS **SS 18 59 18.3 +0.8**
VAGH IAMs_20 IAMs_20 19 20 39.1
comp=Z,4µm,23.4s
LEIR Leirfjorden 75.74 335 *e*P **P 18 44 45.5 -0.1**
LEIR IAmb IAmb 18 45 01.7
comp=Z,67nm,1.0s
LEIR *e*PP **PP 18 47 34.5 -0.7**
LEIR *e*S **S 18 54 27.1 +0.4**
LEIR *e*SS **SS 18 59 18.6 +0.6**
LEIR IAMs_20 IAMs_20 19 24 50.0
comp=Z,3µm,16.5s
FABU Falkenberg 75.76 326 *i* P **P 18 44 44.9 -1.0**
KONS Konsvik 75.76 336 *e*P **P 18 44 45.8 +0.2**
KONS IAmb IAmb 18 45 17.4
comp=Z,45nm,1.1s
KONS *e*SS SS 18 59 20.6 +2.4
KONS IAMs_20 IAMs_20 19 20 39.9
comp=Z,4µm,22.9s
STOK Stokkvaagen 75.79 336 *e*P **P 18 44 45.2 -0.7**
STOK IAmb IAmb 18 45 01.1
comp=Z,38nm,1.0s
STOK *e*S **S 18 54 28.0 +0.8**
STOK *e*SS **SS 18 59 20.8 +2.1**
STOK IAMs_20 IAMs_20 19 20 40.9
comp=Z,3µm,19.8s
WET Wettzell 75.82 318 *e*P **P 18 44 46.2 -0.3**
comp=Z,42nm,1.0s,baz=88,slow=5.6
WET *e*L L 19 22 22.3
comp=Z,1µm,22.0s
SPB2 Spitsbergen Ar 75.91 348 IAmb IAmb 18 45 16.8
comp=Z,78nm,1.1s
SPA0 Spitsbergen Ar 75.92 348 *e*P **P 18 44 46.2 -0.3**
SPA0 IAmb IAmb 18 45 13.4
comp=Z,177nm,1.4s
SPA0 *e*S **S 18 54 28.2 -0.1**
SPA0 *e*SS **SS 18 59 22.8 +2.5**
SPA0 IAMs_20 IAMs_20 19 26 13.6
comp=Z,3µm,16.2s
SPITS Spitsbergen Ar 75.92 348 P **P 18 44 45.8 -0.7**
comp=Z,16nm,0.6s,baz=92,slow=10,SNR=41
SPITS LR LR 19 22 59.3
comp=Z,3µm,21.8s,baz=89,slow=40
comp=Z,16nm,0.6s
HSPB Hornsund (broa 75.93 347 *e*P **P 18 44 46.7 +0.2**
RJOB Jochberg 75.93 316 *e*P **P 18 44 45.9 -1.2**
comp=Z,21nm,0.8s,baz=88,slow=5.6
LESA Schwarzleotal 76.03 316 *i* P **P 18 44 46.2 -1.5**
comp=Z,28nm,1.0s,SNR=10
TANN Tannenbergstha 76.05 319 *e*P **P 18 44 47.4 -0.3**
comp=Z,33nm,1.0s,baz=88,slow=5.6
NKC Novy Kostel 76.06 319 AMS AMS 19 22 40.0
comp=Z,3µm,18.1s
STAL STALIGIAL 76.06 315 IAmb IAmb 18 44 57.6
comp=Z,89nm,1.0s
ABTA Abfaltersbach 76.17 315 *e*P **P 18 44 48.8 +0.2**
comp=Z,19nm,0.9s
NSS Namsos 76.18 334 *e*P **P 18 44 47.5 -0.6**
NSS IAmb IAmb 18 45 03.2
comp=Z,59nm,1.0s
NSS IAMs_20 IAMs_20 19 24 53.2
comp=Z,2µm,18.5s
ONAU Onsala 76.19 326 *i* P **P 18 44 49.1 +0.8**
ROTZ Rotzenmuhle 76.23 319 *e*P **P 18 44 48.9 +0.1**
comp=Z,15nm,1.1s,baz=88,slow=5.6
PLN Plauen 76.24 319 *e*P **P 18 44 48.5 -0.3**
comp=Z,10nm,0.8s,baz=88,slow=5.6
NC405 NORSAR Array S 76.27 330 IAmb IAmb 18 44 58.9
comp=Z,72nm,1.1s
TJOU Tjoern 76.34 327 *i* P **P 18 44 49.1 0.0**
NC602 NORSAR Array S 76.35 330 *e*P **P 18 44 48.5 -0.7**
NC602 IAmb IAmb 18 44 58.8
comp=Z,65nm,0.8s
NC602 *e*PP **PP 18 47 40.0 -0.5**
NC602 *e*S **S 18 54 34.3 +0.6**
NC602 *e*SS **SS 18 59 28.8 +1.3**
NC602 IAMs_20 IAMs_20 19 23 51.8
comp=Z,3µm,16.4s
NC602 NORSAR Array S 76.35 330 IAmb IAmb 18 44 59.1
comp=Z,69nm,0.9s
NC303 NORSAR Array S 76.43 330 IAmb IAmb 18 44 59.9
comp=Z,83nm,1.1s
NEUB Neuenburg 76.45 320 *e*P **P 18 44 49.8 -0.1**
comp=Z,66nm,0.9s,baz=88,slow=5.6
NB2 NORSAR Subarra 76.51 330 P **P 18 44 49.0 -1.1**
comp=Z,61nm,1.0s,baz=90,slow=5.9
NB2 PP **PP 18 47 41.4 -0.5**
comp=Z,28nm,1.2s,baz=89,slow=8.6
NB2 NORSAR Subarra 76.51 330 P **P 18 44 49.0 -1.1**
NOA NORSAR Array B 76.51 330 P **P 18 44 49.2 -0.9**
comp=Z,6.6nm,1.1s,baz=90,slow=5.7,SNR=26
NOA PP **PP 18 47 44.4 +2.6**
comp=Z,9.5nm,1.0s,baz=90,slow=8.5,SNR=4.5
NOA LR LR 19 23 19.5
comp=Z,2µm,19.6s,baz=105,slow=40
comp=Z,6.6nm,1.1s
STRU Stroemstad 76.55 328 *e*P **P 18 44 50.8 +0.5**
MOX Moxa 76.58 319 *e*P **P 18 44 50.4 -0.3**
comp=Z,41nm,0.8s,baz=88,slow=5.6
MOX *e*L L 19 23 20.2
comp=Z,2µm,21.1s
GORT1 Trebel 76.66 322 *e*P **P 18 44 51.0 0.0**
comp=Z,146nm,1.1s,baz=88,slow=5.6
NAO01 NORSAR Array S 76.67 330 IAmb IAmb 18 45 00.9
comp=Z,62nm,1.0s
FLTG Flechtingen 76.73 321 *e*P **P 18 44 50.7 -0.8**
comp=Z,34nm,0.8s,baz=88,slow=5.6
WTTA Wattenberg 76.74 316 *i* P **P 18 44 49.8 -2.1**
comp=Z,41nm,1.1s,SNR=9.0
OSL Oslo 76.77 329 *e*P **P 18 44 51.1 -0.4**
OSL IAmb IAmb 18 45 01.7
comp=Z,169nm,1.0s
WATA Walderalm 76.78 316 *e*P **P 18 44 50.5 -1.6**
comp=Z,33nm,0.9s
CTI Castel Tesino 76.81 315 P **P 18 44 50.2 -2.0**
CTI pmax pmax
comp=Z,69nm,0.9s
CTI Castel Tesino 76.81 315 P **P 18 44 50.2 -2.0**
CTI IAmb IAmb 18 45 02.5
comp=Z,69nm,0.9s
GRA1 Grafenberg Arr 76.88 318 IAmb IAmb 18 45 03.3
comp=Z,66nm,1.0s
GRF Grafenberg Arr 76.88 318 *e*P **P 18 44 52.5 +0.1**
comp=Z,64nm,1.0s,baz=88,slow=5.6
GRF *e*L L 19 23 01.9
comp=Z,3µm,21.9s
GRFO Grafenberg 76.88 318 P **P 18 44 53.1 +0.7**
GRFO MLR MLR
comp=Z,3µm,22.0s
GRFO Grafenberg 76.88 318 P **P 18 44 53.0 +0.7**
KBS Kingsbay 76.88 349 *de*P **P 18 44 51.3 -0.5**
KBS pmax pmax
comp=Z,27nm,2.5s
KBS MLR MLR
comp=Z,3µm,22.0s
KBS Kingsbay 76.88 349 *e*P **P 18 44 51.8 0.0**
KBS IAmb IAmb 18 45 17.9
comp=Z,55nm,1.2s
KBS *e*S **S 18 54 39.2 +0.3**
KBS *e*SS **SS 18 59 37.5 +2.6**
KBS IAMs_20 IAMs_20 19 31 08.2
comp=Z,3µm,15.0s
KBS Kingsbay 76.88 349 P **P 18 44 50.1 -1.8**
KBS IAMs_20 IAMs_20 19 23 16.9
comp=Z,3µm,21.0s
FUR Furstenfeldbru 76.93 317 *e*L L 19 26 26.9
comp=Z,815nm,21.7s
LBTB Lobatse 77.02 241 LR LR 19 15 02.1
comp=Z,2µm,20.4s,baz=75,slow=33
LBTB Lobatse 77.02 241 P **P 18 44 50.9 -2.8**
LBTB pmax pmax
comp=Z,38nm,1.0s
LBTB Lobatse 77.02 241 P **P 18 44 50.9 -2.8**
LBTB Lobatse 77.02 241 *e*P **P 18 44 51.9 -1.8**
SQTA Sankt Quirin 77.04 316 *i* P **P 18 44 51.8 -1.6**
comp=Z,33nm,1.5s,SNR=9.2
ASSE Asse, Remlinge 77.09 321 *e*P **P 18 44 53.2 -0.2**
comp=Z,864nm,3.0s,baz=88,slow=5.6
MOTA Moosalm 77.10 316 *i* P **P 18 44 52.3 -1.5**
comp=Z,56nm,1.0s,SNR=11
AMKA Amchitka 77.11 40 IAmb IAmb 18 45 02.5
comp=Z,53nm,0.8s
BSEG Bad Segeberg 77.21 323 *e*P **P 18 44 54.3 +0.2**
comp=Z,85nm,1.0s,baz=88,slow=5.6
BSEG *e*L L 19 24 52.1
comp=Z,2µm,20.2s
CLZ Clausthal 77.29 321 *e*P **P 18 44 54.6 -0.1**
comp=Z,90nm,1.0s,baz=88,slow=5.6
RETA Reutte 77.32 316 *e*P **P 18 44 53.3 -1.7**
comp=Z,51nm,0.8s,SNR=11
KONO Kongsberg 77.35 329 *de*P **P 18 44 54.2 -0.6**
KONO pmax pmax
comp=Z,40nm,2.0s
KONO MLR MLR
comp=Z,3µm,20.0s
KONO Kongsberg 77.35 329 *e*P P 18 45 01.0 +6.2
KONO *e*S **S 18 54 45.5 +1.0**
KONO *e*SS **SS 18 59 44.3 +1.8**
KONO IAMs_20 IAMs_20 19 22 52.9
comp=Z,3µm,18.0s
KONO Kongsberg 77.35 329 IAMs_20 IAMs_20 19 22 58.8
comp=Z,3µm,20.0s
FETA Feichten 77.38 316 *i* P **P 18 44 54.0 -1.4**
comp=Z,25nm,0.9s,SNR=8.5
ZCCA Zocca 77.41 313 IAmb IAmb 18 45 09.7
comp=Z,100nm,1.0s
DOMB Dombas 77.52 331 *e*P **P 18 44 55.1 -0.6**
DOMB IAmb IAmb 18 45 05.8
comp=Z,48nm,0.9s
DOMB IAMs_20 IAMs_20 19 19 49.8
comp=Z,5µm,26.5s
GTTG Gottingen 77.56 320 *e*P **P 18 44 56.1 -0.1**
comp=Z,85nm,0.9s,baz=88,slow=5.6
FUORN Ofenpass-Fuorn 77.73 315 IAmb IAmb 18 45 07.9
comp=Z,172nm,2.0s
MUD Monsted U'grnd 77.73 325 *i* P **P 18 44 57.1 +0.1**
MUD IAmb IAmb 18 45 07.7
comp=Z,87nm,1.0s
DZM Mont Dzumac 77.82 116 P **P 18 44 58.8 +0.6**
comp=Z,25nm,1.1s,baz=137,slow=3.7,SNR=3.1
DZM LR LR 19 24 07.8
comp=Z,1µm,18.7s,baz=299,slow=39
comp=Z,25nm,1.1s
RETH Rethem/Aller, 77.86 322 *e*P **P 18 44 57.7 0.0**
comp=Z,70nm,1.2s,baz=88,slow=5.6
DAVA Damuels 77.93 316 *i* P **P 18 44 57.8 -0.7**
comp=Z,47nm,0.9s,SNR=8.6
SKAR Skarslia 77.94 330 *e*P **P 18 44 57.8 -0.4**
SKAR IAmb IAmb 18 45 08.3
comp=Z,38nm,1.0s
SKAR *e*S **S 18 54 51.6 +0.5**
SKAR *e*SS **SS 18 59 52.8 +1.1**
SKAR IAMs_20 IAMs_20 19 22 29.8
comp=Z,4µm,20.9s
DAVOX Davos/Dischmat 77.98 316 LR LR 19 26 25.0
comp=Z,1µm,19.2s,baz=68,slow=41
HOMB Homborsund 77.98 327 *e*P **P 18 44 57.8 -0.5**
HOMB *e*S **S 18 54 52.8 +1.4**
HOMB *e*SS **SS 18 59 54.0 +1.9**
HOMB IAMs_20 IAMs_20 19 22 28.2
comp=Z,3µm,26.1s
MOL Molde 78.20 332 *e*P **P 18 45 00.6 +1.2**
MOL IAmb IAmb 18 45 10.1
comp=Z,39nm,0.8s
MOL *e*S **S 18 54 53.2 -0.4**
MOL *e*SS **SS 18 59 58.1 +2.9**
MOL IAMs_20 IAMs_20 19 22 33.6
comp=Z,6µm,21.2s
YATNC Mamie plateau, 78.21 116 P **P 18 45 01.6 +1.3**
TUE Stuetta 78.37 315 IAmb IAmb 18 45 13.6
comp=Z,48nm,0.8s
AKN Aaknes 78.48 331 *e*P **P 18 45 00.8 -0.3**
AKN IAmb IAmb 18 45 11.7
comp=Z,49nm,1.0s
AKN *e*S **S 18 54 57.0 +0.2**
AKN IAMs_20 IAMs_20 19 22 41.4
comp=Z,4µm,19.8s
BOSA Boshof 78.55 237 P **P 18 45 02.6 +0.4**
comp=Z,7.2nm,0.7s,baz=105,slow=4.8,SNR=13
BOSA LR LR 19 15 54.8
comp=Z,2µm,19.4s,baz=72,slow=33
comp=Z,7.2nm,0.7s
BOSA Boshof 78.55 237 IAmb IAmb 18 45 11.5
comp=Z,79nm,1.1s
BOSA Boshof 78.55 237 *e*P **P 18 45 02.8 +0.6**
KASTN Kahler Asten 78.56 320 *e*P **P 18 45 01.4 -0.4**
comp=Z,51nm,1.1s,baz=88,slow=5.6
TNS Taunus Mts 78.62 319 *e*P **P 18 45 01.9 -0.3**
comp=Z,32nm,0.8s,baz=88,slow=5.6
TNS *e*L L 19 25 02.2
comp=Z,3µm,21.0s
ODD1 Odda 78.83 329 *e*P **P 18 45 02.8 -0.3**
ODD1 IAmb IAmb 18 45 11.9
comp=Z,491nm,2.8s
ODD1 *e*S **S 18 55 00.2 -0.4**
ODD1 IAMs_20 IAMs_20 19 23 07.0
comp=Z,4µm,21.9s
IBBN Ibbenburen 78.87 321 *e*P **P 18 45 03.4 +0.1**
comp=Z,141nm,1.0s,baz=88,slow=5.6
BFO Black Forest 78.88 317 P **P 18 45 01.4 -2.2**
BFO pmax pmax
comp=Z,22nm,0.9s
BFO MLR MLR
comp=Z,1µm,20.0s
BFO Black Forest 78.88 317 P **P 18 45 01.4 -2.2**
comp=Z,26nm,1.0s,baz=88,slow=5.6
BFO *e*L L 19 26 31.5
comp=Z,1µm,20.6s
HYA Hoyanger 78.94 330 *e*P **P 18 45 03.1 -0.5**
HYA IAmb IAmb 18 45 13.9
comp=Z,44nm,1.0s
HYA *e*S **S 18 55 02.3 +0.7**
HYA *e*SS **SS 19 00 04.5 -2.0**
HYA IAMs_20 IAMs_20 19 25 42.5
comp=Z,4µm,20.4s
BLS5 Blasjo 78.96 329 *e*P **P 18 45 02.8 -1.0**
BLS5 IAmb IAmb 18 45 14.3
comp=Z,50nm,0.8s
BLS5 *e*S **S 18 55 02.5 +0.6**
BLS5 IAMs_20 IAMs_20 19 27 16.3
comp=Z,4µm,16.5s
CASY Casey 78.99 174 P **P 18 45 02.3 -1.3**
MARNC Mare, Loyalty 79.04 115 P **P 18 45 06.3 +1.5**
MARNC Mare, Loyalty 79.04 115 P **P 18 45 02.5 -2.4**
MARNC IAmb IAmb 18 45 16.4
comp=Z,140nm,0.9s
BUG Bochum--Univer 79.25 320 *e*P **P 18 45 05.4 -0.1**
comp=Z,115nm,0.9s,baz=88,slow=5.6
KIWB Kanaga Island 79.28 39 IAmb IAmb 18 45 14.1
comp=Z,98nm,1.2s
BER Bergen 79.43 330 *e*P **P 18 45 06.1 -0.2**
BER IAmb IAmb 18 45 07.2
comp=Z,334nm,2.4s
BER *e*S **S 18 55 07.1 +0.3**
BER IAMs_20 IAMs_20 19 23 23.8
comp=Z,4µm,21.9s
FOO Floro 79.45 331 *e*P **P 18 45 06.1 -0.2**
FOO IAmb IAmb 18 45 16.7
comp=Z,274nm,2.0s
FOO *e*S **S 18 55 06.8 -0.2**
FOO IAMs_20 IAMs_20 19 24 41.3
comp=Z,3µm,20.7s
ASK Askoy 79.49 330 *e*P **P 18 45 06.1 -0.5**
ASK IAmb IAmb 18 45 08.6
comp=Z,112nm,1.5s
ASK *e*S **S 18 55 06.8 -0.7**
ASK IAMs_20 IAMs_20 19 23 26.1
comp=Z,4µm,24.8s
KEST Kesra 79.56 304 P **P 18 45 07.5 -0.1**
comp=Z,9.4nm,0.8s,baz=318,slow=1.9,SNR=9.1
KEST LR LR 19 25 47.5
comp=Z,891nm,19.9s,baz=78,slow=40
comp=Z,9.4nm,0.8s
KEST Kesra 79.56 304 P **P 18 45 07.0 -0.6**
KMY Karmoy 79.60 328 *e*P **P 18 45 06.8 -0.4**
KMY IAmb IAmb 18 45 17.6
comp=Z,54nm,1.0s
KMY *e*S **S 18 55 09.5 +0.9**
KMY IAMs_20 IAMs_20 19 27 43.0
comp=Z,3µm,16.8s
BTNL Ternell 80.06 320 *d*P **P 18 45 10.8 +0.8**
comp=Z,15nm,1.0s
MEM Membach 80.14 320 *d*P **P 18 45 11.1 +0.8**
comp=Z,24nm,1.1s
WLF Walferdange 80.16 319 *d*P **P 18 45 11.2 +0.8**
comp=Z,26nm,1.1s
WLF Walferdange 80.16 319 *e*P **P 18 45 10.4 -0.1**
comp=Z,74nm,1.2s,baz=88,slow=5.6
BHOU Houvegnez 80.17 319 *d*P **P 18 45 09.6 -1.0**
comp=Z,23nm,1.0s
BSTI Sart Tilman 80.42 320 *d*P **P 18 45 11.9 +0.1**
comp=Z,6.7nm,0.9s
BCLA Clavier 80.61 320 *d*P **P 18 45 10.5 -2.3**
comp=Z,33nm,0.9s
RCHB Rochefort 80.69 319 *d*P **P 18 45 12.5 -0.8**
comp=Z,19nm,0.9s
GAMB Gambell 80.71 27 IAmb IAmb 18 45 24.1
comp=Z,133nm,1.6s
GAMB IAMs_20 IAMs_20 19 24 36.1
comp=Z,3µm,19.0s
GAMB Gambell 80.71 27 P **P 18 45 12.8 -0.3**
baz=278
BGES Gesves 80.75 320 *d*P **P 18 45 13.7 +0.1**
comp=Z,32nm,0.9s
BMRD Maredsous 80.96 320 *d*P **P 18 45 14.3 -0.5**
comp=Z,28nm,1.0s
KROM Kromhout 81.02 232 *e*P **P 18 45 19.9 +4.6**
DOU Dourbes 81.10 319 *d*P **P 18 45 14.5 -1.0**
comp=Z,28nm,1.0s
UCC Uccle 81.15 320 *d*P **P 18 45 14.7 -1.0**
comp=Z,20nm,0.9s
NOR Nord 81.22 352 *i* P **P 18 45 15.1 -0.5**
NOR IAmb IAmb 18 45 25.0
comp=Z,36nm,1.1s
TNA Tin City 82.00 25 IAMs_20 IAMs_20 19 23 04.2
comp=Z,2µm,19.0s
TNA Tin City 82.00 25 P **P 18 45 19.8 -0.2**
baz=282
C16K Lisburne Hills 82.41 22 P **P 18 45 22.0 0.0**
baz=284
SPIA Saint Paul Isl 82.51 33 P **P 18 45 22.7 0.0**
baz=281
F14K Arctic Creek 82.67 25 P **P 18 45 23.8 +0.3**
baz=283
MAW Mawson 82.81 192 P **P 18 45 25.4 +1.5**
comp=Z,12nm,1.6s
MAW Mawson 82.81 192 P **P 18 45 24.2 +0.3**
comp=Z,13nm,1.1s,baz=28,slow=8.7,SNR=12
MAW LR LR 19 17 16.7
comp=Z,2µm,18.9s,baz=26,slow=32
comp=Z,13nm,1.1s
CLF Chambon-Foret 82.94 317 IAmb IAmb 18 45 35.6
comp=Z,96nm,1.1s
MERW Merweville 82.95 235 *e*P **P 18 45 26.2 +0.6**
JNW Jan Mayen West 82.97 341 *e*S **S 18 55 44.5 +1.2**
JMIC Jan Mayen 83.01 341 LR LR 19 25 38.0
comp=Z,801nm,21.6s,baz=78,slow=38
JMIC Jan Mayen 83.01 341 *e*SKsac **SKSac 18 55 46.5 +0.2**
C17K DeLong Mountai 83.14 21 P **P 18 45 26.0 +0.1**
baz=285,SNR=9.7
ANM Nome 83.28 25 IAmb IAmb 18 45 37.8
comp=Z,100nm,1.3s
ANM IAMs_20 IAMs_20 19 21 52.9
comp=Z,3µm,19.0s
ANM Nome 83.28 25 P **P 18 45 26.4 -0.3**
baz=284
F15K North Star Dit 83.30 24 IAMs_20 IAMs_20 19 23 53.3
comp=Z,3µm,20.0s
F15K North Star Dit 83.30 24 P **P 18 45 27.2 +0.5**
baz=284,SNR=9.4
RDOG Red Dog Mine 83.35 22 IAmb IAmb 18 45 37.9
comp=Z,98nm,1.3s
RDOG Red Dog Mine 83.35 22 P **P 18 45 27.1 +0.2**
baz=286
A19K Wainwright 83.37 19 P **P 18 45 26.7 -0.3**
baz=287
D17K Noatak River 83.38 22 P **P 18 45 27.3 +0.2**
baz=286,SNR=23
SUR Sutherland 83.42 235 LR LR 19 17 14.8
comp=Z,1µm,21.5s,baz=69,slow=32
SUR Sutherland 83.42 235 P **P 18 45 26.0 -2.2**
SUR IAmb IAmb 18 45 39.0
comp=Z,64nm,0.8s
G15K Niukluk 83.72 25 P **P 18 45 28.1 -0.8**
baz=285,SNR=6.0
C18K Utukok River 83.79 21 P **P 18 45 29.6 +0.3**
baz=287,SNR=19
M11K Mekoryuk 83.90 30 P **P 18 45 29.4 -0.4**
baz=284
E17K Hotham Inlet 84.02 23 P **P 18 45 30.9 +0.5**
baz=287,SNR=5.8
EDA Edea 84.19 273 IAMs_20 IAMs_20 19 22 40.8
comp=Z,3µm,19.0s
C19K Lookout Ridge 84.20 20 P **P 18 45 31.9 +0.5**
baz=289
K13K Kusilvak Mount 84.25 28 IAmb IAmb 18 45 42.6
comp=Z,100nm,1.4s
K13K IAMs_20 IAMs_20 19 25 23.6
comp=Z,3µm,20.0s
K13K Kusilvak Mount 84.25 28 P **P 18 45 31.4 -0.2**
baz=285,SNR=8.9
G16K Koyuk River 84.30 24 IAMs_20 IAMs_20 19 24 42.8
comp=Z,2µm,18.0s
G16K Koyuk River 84.30 24 P **P 18 45 32.0 +0.1**
baz=286
E18K Tukpahlearik C 84.37 22 IAmb IAmb 18 45 43.5
comp=Z,88nm,1.1s
E18K Tukpahlearik C 84.37 22 P **P 18 45 32.4 +0.2**
baz=288,SNR=20
A21K Barrow 84.40 18 P **P 18 45 31.9 -0.4**
baz=291

F17K **Baldwin Pennin** 84.43 23 IAmb IAmb 18 45 43.7
comp=Z,72nm,1.0s
F17K IAMs_20 IAMs_20 19 26 08.2
comp=Z,3μm,19.0s
F17K **Baldwin Pennin** 84.43 23 P **P** **18 45 33.2 +0.8**
baz=287,SNR=8.5
J14K **Nanvaranak Lak** 84.53 27 IAmb IAmb 18 45 44.0
comp=Z,97nm,1.3s
J14K IAMs_20 IAMs_20 19 28 50.0
comp=Z,3μm,18.0s
J14K **Nanvaranak Lak** 84.53 27 P **P** **18 45 32.5 -0.5**
baz=286,SNR=12
H16K **Elim** 84.56 25 P **P** **18 45 33.1 -0.1**
baz=287,SNR=12
B20K **Meade River** 84.70 19 IAMs_20 IAMs_20 19 27 54.2
comp=Z,3μm,19.0s
B20K **Meade River** 84.70 19 P **P** **18 45 34.0 +0.2**
baz=291,SNR=8.1
EKA **Eskdalemuir Ar** 84.75 325 P **P** **18 45 34.8 +0.4**
comp=Z,3.9nm,0.7s,baz=88,slow=5.0,SNR=8.5
EKA LR LR 19 27 25.9
comp=Z,1μm,20.8s,baz=70,slow=39
comp=Z,3.9nm,0.7s
D19K **Kuna River** 84.91 21 P **P** **18 45 35.2 +0.3**
baz=290
G17K **Kiwalik Mounta** 84.95 24 P **P** **18 45 35.2 +0.1**
baz=288,SNR=13
F18K **Selawik** 84.99 23 P **P** **18 45 35.5 +0.2**
baz=289,SNR=22
A22K **Sinclair Lake** 85.01 18 P **P** **18 45 35.0 -0.3**
baz=293
M13K **Dall Lake** 85.26 29 IAMs_20 IAMs_20 19 24 43.5
comp=Z,2μm,20.0s
M13K **Dall Lake** 85.26 29 P **P** **18 45 37.1 +0.4**
baz=286
UNV **Unalaska Valle** 85.30 36 P **P** **18 45 37.7 +0.6**
baz=284
L14K **Kuka Creek** 85.31 28 P **P** **18 45 35.1 -1.9**
L14K IAmb IAmb 18 45 48.3
comp=Z,175nm,1.8s
L14K IAMs_20 IAMs_20 19 28 46.9
comp=Z,3μm,18.0s
L14K **Kuka Creek** 85.31 28 P **P** **18 45 36.9 -0.1**
baz=287,SNR=17
D20K **Etivluk River** 85.35 20 P **P** **18 45 37.4 +0.3**
baz=291
H17K **Granite Mounta** 85.42 24 IAmb IAmb 18 45 48.8
comp=Z,106nm,1.1s
H17K **Granite Mounta** 85.42 24 P **P** **18 45 37.7 +0.2**
baz=289,SNR=24
I17K **Unalakleet** 85.43 25 IAmb IAmb 18 45 49.0
comp=Z,84nm,1.3s
I17K IAMs_20 IAMs_20 19 28 12.8
comp=Z,3μm,18.0s
I17K **Unalakleet** 85.43 25 P **P** **18 45 38.0 +0.4**
baz=288,SNR=8.9
K15K **Wolf Creek Mou** 85.56 27 IAmb IAmb 18 45 49.7
comp=Z,153nm,1.6s
K15K IAMs_20 IAMs_20 19 26 32.2
comp=Z,3μm,20.0s
K15K **Wolf Creek Mou** 85.56 27 P **P** **18 45 38.4 +0.2**
baz=288,SNR=8.9
E19K **Redstone River** 85.59 22 P **P** **18 45 38.2 -0.1**
baz=291
G18K **Tagagawik** 85.60 23 IAMs_20 IAMs_20 19 27 40.2
comp=Z,3μm,19.0s
G18K **Tagagawik** 85.60 23 P **P** **18 45 38.1 -0.3**
baz=290,SNR=8.7
F19K **Shaleruckik Mo** 85.61 22 IAmb IAmb 18 45 49.2
comp=Z,170nm,1.4s
F19K **Shaleruckik Mo** 85.61 22 P **P** **18 45 38.1 -0.3**
baz=290,SNR=25
AKUT **Akutan** 85.64 36 IAmb IAmb 18 45 38.3
comp=Z,58nm,1.0s
J16K **Anvik River** 85.66 26 IAmb IAmb 18 45 50.1
comp=Z,116nm,0.9s
J16K IAMs_20 IAMs_20 19 29 17.9
comp=Z,2μm,18.0s
J16K **Anvik River** 85.66 26 P **P** **18 45 39.1 +0.4**
baz=288,SNR=42
E20K **Nigu River** 85.67 21 P **P** **18 45 38.9 +0.2**
baz=292,SNR=52
B21K **Ikpikpuk River** 85.67 19 P **P** **18 45 39.1 +0.5**
baz=293,SNR=19
B22K **Teshekpuk Lake** 85.75 18 P **P** **18 45 38.8 -0.3**
baz=294
L15K **Ungalak Mounta** 85.76 28 P **P** **18 45 39.0 -0.2**
baz=288,SNR=24
C21K **Knifeblade Rid** 85.80 20 P **P** **18 45 39.4 +0.1**
baz=293,SNR=20
M14K **Bethel** 85.82 29 IAMs_20 IAMs_20 19 25 01.3
comp=Z,2μm,21.0s
M14K **Bethel** 85.82 29 P **P** **18 45 39.1 -0.4**
baz=287,SNR=14
H18K **Honhosa River** 85.97 24 IAmb IAmb 18 45 51.1
comp=Z,113nm,1.4s
H18K IAMs_20 IAMs_20 19 23 45.0
comp=Z,2μm,22.0s
H18K **Honhosa River** 85.97 24 P **P** **18 45 40.1 -0.2**
baz=290
G19K **Purcell Mounta** 86.12 23 P **P** **18 45 40.6 -0.3**
baz=291,SNR=55
FUNA **Funafuti** 86.15 100 P **P** **18 45 43.3 +1.2**
N14K **Kuskokwak Cree** 86.20 29 IAmb IAmb 18 45 50.3
comp=Z,237nm,1.6s
N14K IAMs_20 IAMs_20 19 25 42.4
comp=Z,2μm,19.0s
N14K **Kuskokwak Cree** 86.20 29 P **P** **18 45 41.4 0.0**
baz=288,SNR=11
J17K **VABM Dome** 86.27 26 IAmb IAmb 18 45 53.0
comp=Z,80nm,1.0s
J17K IAMs_20 IAMs_20 19 26 17.1
comp=Z,3μm,20.0s
J17K **VABM Dome** 86.27 26 P **P** **18 45 41.8 +0.1**
baz=290,SNR=24
F20K **Avaraart Lake** 86.28 22 P **P** **18 45 41.7 0.0**
baz=292,SNR=123
E21K **Killik River** 86.35 20 IAMs_20 IAMs_20 19 28 04.8
comp=Z,3μm,21.0s
E21K **Killik River** 86.35 20 P **P** **18 45 41.9 -0.2**
baz=294,SNR=77
M15K **Kasigluk River** 86.43 29 P **P** **18 45 42.4 -0.2**
baz=288,SNR=18
H19K **Roundabout Mou** 86.59 23 IAmb IAmb 18 45 54.7
comp=Z,186nm,1.4s
H19K IAMs_20 IAMs_20 19 28 21.2
comp=Z,2μm,18.0s
H19K **Roundabout Mou** 86.59 23 P **P** **18 45 43.5 +0.3**
baz=292,SNR=41
O14K **Tigyukauivet M** 86.61 30 IAmb IAmb 18 45 52.4
comp=Z,113nm,1.8s
O14K **Tigyukauivet M** 86.61 30 P **P** **18 45 43.2 -0.2**
baz=288
L16K **Owhat River** 86.66 27 IAmb IAmb 18 45 54.8
comp=Z,170nm,1.8s
L16K **Owhat River** 86.66 27 P **P** **18 45 43.5 -0.2**
baz=289,SNR=18
GCSA **Galena City Sc** 86.71 24 P **P** **18 45 44.2 +0.4**
baz=292,SNR=6.4
K17K **Iditarod** 86.84 26 IAmb IAmb 18 45 55.8
comp=Z,79nm,0.9s
K17K IAMs_20 IAMs_20 19 29 17.1
comp=Z,3μm,18.0s
K17K **Iditarod** 86.84 26 P **P** **18 45 44.7 +0.2**
baz=290,SNR=27
C23K **Itkillik River** 86.84 18 P **P** **18 45 44.3 -0.1**
baz=297,SNR=8.6
ILTH **Belurgan, Co L** 86.87 325 P P 18 45 52.9 +8.1
N15K **Kwethluk River** 86.88 29 IAmb IAmb 18 45 56.6
comp=Z,67nm,1.1s
N15K IAMs_20 IAMs_20 19 25 46.4
comp=Z,3μm,20.0s
N15K **Kwethluk River** 86.88 29 P **P** **18 45 44.4 -0.4**
baz=289,SNR=34
JCZ **Jackson Bay** 86.98 136 P **P** **18 45 46.1 +0.5**
F21K **Alatna River** 87.02 21 P **P** **18 45 44.2 -1.2**
F21K **Alatna River** 87.02 21 P **P** **18 45 45.3 -0.1**
baz=294,SNR=71
L17K **Donlin** 87.04 27 P **P** **18 45 45.7 +0.2**
baz=290,SNR=12
DSB **Dublin** 87.11 324 P P 18 45 55.0 +8.9
M16K **Timber Creek** 87.13 28 IAmb IAmb 18 45 57.0
comp=Z,49nm,1.0s
M16K IAMs_20 IAMs_20 19 28 28.8
comp=Z,3μm,21.0s
M16K **Timber Creek** 87.13 28 P **P** **18 45 46.0 0.0**
baz=290,SNR=17
MSVF **Nonsavu** 87.14 109 P **P** **18 45 47.4 +0.5**
comp=Z,30nm,0.9s,baz=256,slow=5.1,SNR=17
comp=Z,30nm,0.9s
MSVF **Nonsavu** 87.14 109 P **P** **18 45 47.8 +0.8**
MSVF **Nonsavu** 87.14 109 P **P** **18 45 47.2 +0.3**
MSVF IAmb IAmb 18 46 00.9
comp=Z,42nm,0.9s
H20K **Anotelenega Mo** 87.20 23 P **P** **18 45 46.6 +0.3**
baz=293,SNR=53
E22K **Anaktuvuk Pass** 87.21 20 P **P** **18 45 46.1 -0.3**
baz=296
D23K **Nanushuk River** 87.21 19 P **P** **18 45 46.7 +0.4**
baz=297,SNR=21
IDGL **Inch Island, C** 87.23 326 P P 18 45 54.9 +8.3
J18K **Innoko River** 87.24 25 IAmb IAmb 18 45 57.5
comp=Z,56nm,0.9s
J18K IAMs_20 IAMs_20 19 28 34.7
comp=Z,3μm,18.0s
J18K **Innoko River** 87.24 25 P **P** **18 45 46.5 -0.1**
baz=292,SNR=24
G21K **Allakaket** 87.31 22 IAmb IAmb 18 45 58.4
comp=Z,106nm,0.9s
G21K **Allakaket** 87.31 22 P **P** **18 45 46.8 +0.1**
baz=294
O15K **Ungalikthiuk R** 87.33 30 IAmb IAmb 18 45 57.6
comp=Z,56nm,1.2s
O15K **Ungalikthiuk R** 87.33 30 P **P** **18 45 46.3 -0.7**
baz=289,SNR=12
F22K **John River** 87.36 21 P **P** **18 45 46.9 -0.1**
baz=296,SNR=30
WKZ **Wanaka** 87.39 137 IAMs_20 IAMs_20 19 22 43.1
comp=Z,3μm,21.0s
N16K **Nishlik Lake** 87.40 28 P **P** **18 45 47.6 +0.3**
baz=290,SNR=50
IMAR **Indian Mountai** 87.44 22 P **P** **18 45 46.4 -1.0**
J19K **Poorman** 87.50 25 IAmb IAmb 18 45 59.2
comp=Z,66nm,1.0s
J19K **Poorman** 87.50 25 P **P** **18 45 48.2 +0.5**
baz=293,SNR=55
FOZ **Fox Glacier** 87.50 135 IAMs_20 IAMs_20 19 21 43.1
comp=Z,3μm,21.0s
IWEX **Carrickbyrne,** 87.59 323 P P 18 45 57.0 +8.6
I20K **Naaghedeneel** 87.64 24 P **P** **18 45 49.1 +0.8**
baz=294,SNR=27
M17K **Holitna River** 87.68 27 IAMs_20 IAMs_20 19 29 52.5
comp=Z,2μm,19.0s
M17K **Holitna River** 87.68 27 P **P** **18 45 49.4 +0.7**
baz=291,SNR=21
L18K **Granite Mounta** 87.72 26 IAmb IAmb 18 46 00.2
comp=Z,53nm,1.3s
L18K IAMs_20 IAMs_20 19 28 01.3
comp=Z,3μm,18.0s
L18K **Granite Mounta** 87.72 26 P **P** **18 45 49.2 +0.4**
baz=292,SNR=17
D24K **Happy Valley** 87.72 19 P **P** **18 45 48.6 -0.1**
baz=299
TOLK **Toolik Lake Re** 87.72 19 P **P** **18 45 49.2 +0.4**
baz=298,SNR=13
G22K **Bettles** 87.85 21 P **P** **18 45 49.2 -0.1**
baz=296
H21K **Melozitna Rive** 87.92 23 P **P** **18 45 50.4 +0.6**
baz=295,SNR=113
E23K **Chandalar** 87.98 20 P **P** **18 45 50.4 +0.4**
baz=298,SNR=16
J20K **Nowinta River** 88.02 24 IAMs_20 IAMs_20 19 29 15.1
comp=Z,3μm,20.0s
J20K **Nowinta River** 88.02 24 P **P** **18 45 50.7 +0.4**
baz=294,SNR=27
O16K **Kokwok River B** 88.02 29 IAmb IAmb 18 46 01.3
comp=Z,112nm,1.7s
O16K IAMs_20 IAMs_20 19 26 30.6
comp=Z,2μm,18.0s
O16K **Kokwok River B** 88.02 29 P **P** **18 45 50.2 -0.1**
baz=291,SNR=11
LBZ **Lake Bemmore** 88.03 136 IAMs_20 IAMs_20 19 25 39.1
comp=Z,2μm,20.0s
N17K **Nushagak Hills** 88.11 28 IAmb IAmb 18 46 02.2
comp=Z,77nm,1.3s
N17K IAMs_20 IAMs_20 19 28 60.0
comp=Z,3μm,19.0s
N17K **Nushagak Hills** 88.11 28 P **P** **18 45 50.9 +0.1**
baz=291,SNR=26
COLD **Coldfoot** 88.17 21 P **P** **18 45 50.9 0.0**
baz=297,SNR=13
SDPT **Sand Point** 88.24 34 P **P** **18 45 49.9 -1.4**
SDPT **Sand Point** 88.24 34 IAmb IAmb 18 46 00.7
comp=Z,88nm,1.1s
SDPT **Sand Point** 88.24 34 P **P** **18 45 50.0 -1.4**
baz=289,SNR=8.7
P16K **Nushagak River** 88.27 30 IAmb IAmb 18 46 02.2
comp=Z,58nm,1.2s
P16K IAMs_20 IAMs_20 19 27 58.2
comp=Z,2μm,20.0s
P16K **Nushagak River** 88.27 30 P **P** **18 45 50.8 -0.7**
baz=291
E24K **Your Creek** 88.35 20 P **P** **18 45 51.9 +0.1**
baz=299,SNR=14
H22K **Ishtalitna Cre** 88.35 22 IAMs_20 IAMs_20 19 23 56.8
comp=Z,3μm,21.0s
H22K **Ishtalitna Cre** 88.35 22 P **P** **18 45 52.5 +0.7**
baz=296,SNR=95
M18K **Stony River** 88.37 27 P **P** **18 45 52.3 +0.4**
baz=292,SNR=18
INZ **Inchbonnie** 88.38 134 IAmb IAmb 18 46 10.6
comp=Z,125nm,1.5s
INZ IAMs_20 IAMs_20 19 25 06.3
comp=Z,3μm,21.0s
K20K **Telida** 88.38 25 P **P** **18 45 52.7 +0.7**
baz=294,SNR=60
DGTI **Dogotuki** 88.39 107 P **P** **18 45 54.3 +1.4**
D25K **Kavik River** 88.39 18 P **P** **18 45 52.2 +0.2**
baz=301,SNR=29
RPZ **Rata Peaks** 88.41 135 LR LR 19 25 54.6
comp=Z,259nm,21.8s,baz=270,slow=36
S14K **Fog Glacier** 88.43 33 P **P** **18 45 51.4 -1.0**
baz=290,SNR=8.1
VNFG **Fog Glacier, M** 88.43 33 IAmb IAmb 18 46 02.0
comp=Z,64nm,0.8s
O17K **Koliganek Bris** 88.43 29 P **P** **18 45 52.1 -0.2**
baz=292
I21K **Tanana** 88.44 23 IAMs_20 IAMs_20 19 28 33.2
comp=Z,2μm,20.0s
I21K **Tanana** 88.44 23 P **P** **18 45 53.0 +0.9**
baz=296,SNR=86
G23K **Bananza Creek** 88.47 21 P **P** **18 45 52.8 +0.4**
baz=298,SNR=24
C26K **Camden Bay** 88.52 17 P **P** **18 45 52.8 +0.4**
baz=302
L19K **White Mountain** 88.53 26 IAmb IAmb 18 46 04.3
comp=Z,40nm,1.0s
L19K IAMs_20 IAMs_20 19 26 40.7
comp=Z,3μm,20.0s
L19K **White Mountain** 88.53 26 P **P** **18 45 53.2 +0.5**
baz=293,SNR=27
NEEM **North Greenlan** 88.54 353 *i* P **P** **18 45 52.9 0.0**
NEEM IAmb IAmb 18 46 04.2
comp=Z,42nm,1.1s
N18K **Kilae Creek** 88.65 28 P **P** **18 45 52.3 -1.0**
N18K IAMs_20 IAMs_20 19 29 37.1
comp=Z,3μm,20.0s
N18K **Kilae Creek** 88.65 28 P **P** **18 45 53.5 +0.2**
baz=292,SNR=8.0
IGLA **Glengowla, Co** 88.78 325 P P 18 46 02.1 +8.1
TAVE **Taveuni** 88.81 107 P **P** **18 45 56.5 +1.7**
F24K **Squaw Lake** 88.82 20 IAmb IAmb 18 46 05.6
comp=Z,104nm,1.6s
F24K **Squaw Lake** 88.82 20 P **P** **18 45 54.5 +0.5**
baz=300,SNR=13
M19K **Big River Lodg** 88.84 26 IAMs_20 IAMs_20 19 28 36.9
comp=Z,2μm,18.0s
M19K **Big River Lodg** 88.84 26 P **P** **18 45 54.7 +0.6**
baz=294
CHUM **Lake Minchumin** 88.88 24 P **P** **18 45 54.9 +0.6**
baz=296
CHNA **Chernabura Isl** 88.89 34 P **P** **18 45 54.3 -0.2**
CHNA **Chernabura Isl** 88.89 34 P **P** **18 45 53.3 -1.1**
baz=290,SNR=5.5
CNBA **Chernabura Isl** 88.90 34 IAmb IAmb 18 46 04.2
comp=Z,53nm,0.8s
CNBA IAMs_20 IAMs_20 19 29 00.9
comp=Z,2μm,21.0s
P17K **Kvichak River** 88.96 29 IAMs_20 IAMs_20 19 28 29.3
comp=Z,2μm,20.0s
P17K **Kvichak River** 88.96 29 P **P** **18 45 54.8 +0.1**
baz=292,SNR=20
LTZ **Lake Taylor** 88.98 134 IAMs_20 IAMs_20 19 25 22.1
comp=Z,3μm,21.0s
OXZ **Oxford** 88.98 135 P **P** **18 45 54.2 -0.9**
OXZ IAMs_20 IAMs_20 19 24 27.1
comp=Z,2μm,21.0s
MLY **Manley** 88.98 23 IAMs_20 IAMs_20 19 29 47.4
comp=Z,2μm,19.0s
MLY **Manley** 88.98 23 P **P** **18 45 55.2 +0.4**
baz=297,SNR=73
CHGN **Chignik** 89.02 32 IAmb IAmb 18 46 06.5
comp=Z,50nm,0.8s
CHGN **Chignik** 89.02 32 P **P** **18 45 53.5 -1.5**
baz=290,SNR=12
C27K **Jago River** 89.03 17 P **P** **18 45 54.6 -0.2**
baz=303
Q16K **King Salmon** 89.05 30 P **P** **18 45 54.4 -0.7**
baz=292
H23K **Yukon River** 89.06 22 IAMs_20 IAMs_20 19 29 06.4
comp=Z,2μm,20.0s
H23K **Yukon River** 89.06 22 P **P** **18 45 55.6 +0.5**
baz=298
THZ **Tophouse** 89.12 133 IAMs_20 IAMs_20 19 27 57.1
comp=Z,3μm,21.0s
ESDC **Sonseca Array** 89.16 310 P **P** **18 45 55.0 -1.2**
comp=Z,1.3nm,0.6s,baz=63,slow=3.8,SNR=12
ESDC PKKPbc **PKKPbc** **19 03 38.4 +4.2**
comp=Z,0.2nm,0.3s,baz=254,slow=2.8,SNR=4.6
ESDC LR LR 19 30 45.5
comp=Z,461nm,20.0s,baz=60,slow=39
comp=Z,1.3nm,0.6s
ESDC **Sonseca Array** 89.16 310 P **P** **18 45 55.0 -1.2**
ESDC IAmb IAmb 18 46 02.9
comp=Z,182nm,1.9s
CAST **Castle Rocks** 89.17 24 P **P** **18 45 56.0 +0.3**
baz=296
N19K **Bonanza Creek** 89.23 27 IAmb IAmb 18 46 07.6
comp=Z,73nm,0.8s
N19K IAMs_20 IAMs_20 19 25 08.5
comp=Z,2μm,20.0s
N19K **Bonanza Creek** 89.23 27 P **P** **18 45 56.1 0.0**
baz=294,SNR=38
E25K **Arctic Village** 89.27 19 IAmb IAmb 18 46 07.5
comp=Z,113nm,1.8s
E25K **Arctic Village** 89.27 19 P **P** **18 45 56.1 0.0**
baz=302,SNR=9.8
O18K **Koktuh Hills** 89.28 28 IAmb IAmb 18 46 07.7
comp=Z,155nm,1.4s
O18K IAMs_20 IAMs_20 19 30 10.9
comp=Z,2μm,18.0s
O18K **Koktuh Hills** 89.28 28 P **P** **18 45 56.4 +0.1**
baz=293,SNR=18
NNZ **Nelson** 89.31 132 IAMs_20 IAMs_20 19 28 24.0
comp=Z,3μm,20.0s
PPLA **Purkeypile** 89.35 25 P **P** **18 45 56.9 +0.2**
baz=296
G24K **Hadweenzic Riv** 89.36 21 IAmb IAmb 18 46 07.2
comp=Z,85nm,1.4s
G24K **Hadweenzic Riv** 89.36 21 P **P** **18 45 56.9 +0.4**
baz=300,SNR=17
M20K **Styx River** 89.39 26 IAmb IAmb 18 46 09.5
comp=Z,69nm,1.2s
M20K IAMs_20 IAMs_20 19 27 18.5
comp=Z,2μm,19.0s
M20K **Styx River** 89.39 26 P **P** **18 45 57.4 +0.6**
baz=295,SNR=20
I23K **Minto, Yukon-K** 89.44 22 IAmb IAmb 18 46 07.4
comp=Z,116nm,1.5s
I23K IAMs_20 IAMs_20 19 30 22.6
comp=Z,2μm,20.0s
I23K **Minto, Yukon-K** 89.44 22 P **P** **18 45 57.3 +0.4**
baz=298,SNR=42
P18K **Big Mountain,** 89.46 29 P **P** **18 45 56.5 -0.7**
baz=293
PAB **San Pablo** 89.48 310 P **P** **18 45 55.3 -2.4**
PAB pmax pmax
comp=Z,13nm,1.0s
PAB MLR MLR
comp=Z,1μm,22.0s
PAB **San Pablo** 89.48 310 P **P** **18 45 55.3 -2.4**
F25K **Christian Rive** 89.52 20 IAmb IAmb 18 46 08.4
comp=Z,60nm,1.2s
F25K **Christian Rive** 89.52 20 P **P** **18 45 57.9 +0.6**
baz=302,SNR=21
GVZ **Greta Valley S** 89.57 134 IAMs_20 IAMs_20 19 26 31.8
comp=Z,3μm,20.0s
Q17K **Contact Creek** 89.58 30 P **P** **18 45 56.2 -1.6**
baz=292
R17L **Mt. Peulik Vol** 89.58 31 P **P** **18 45 56.5 -1.2**
baz=292,SNR=6.2
HIZ **Hauiti** 89.65 129 IAMs_20 IAMs_20 19 25 26.0
comp=Z,2μm,20.0s
H24K **Noodor Dome** 89.65 21 IAmb IAmb 18 46 08.6
comp=Z,168nm,1.7s
H24K IAMs_20 IAMs_20 19 28 55.1
comp=Z,3μm,20.0s
H24K **Noodor Dome** 89.65 21 P **P** **18 45 58.3 +0.4**
baz=300,SNR=19
SYO **Syowa Base** 89.66 197 *ie* P **P** **18 45 57.0 -0.6**
SYO **Syowa Base** 89.66 197 *ie* P P 18 46 03.4 +5.8
KHZ **Kahutara** 89.76 133 IAMs_20 IAMs_20 19 28 25.1
comp=Z,3μm,19.0s
G25K **Bearman Lake** 89.80 20 P **P** **18 45 58.4 -0.1**
baz=301,SNR=11
NEA2 **Nenana** 89.82 23 IAmb IAmb 18 46 09.5
comp=Z,34nm,0.8s
NEA2 IAMs_20 IAMs_20 19 30 23.5
comp=Z,2μm,19.0s
NEA2 **Nenana** 89.82 23 P **P** **18 45 58.2 -0.5**
baz=298,SNR=45
Q18K **Katmai Hardscr** 89.85 29 P **P** **18 45 57.4 -1.7**
baz=293,SNR=16
BWN **Browne** 89.86 23 IAMs_20 IAMs_20 19 29 30.5
comp=Z,3μm,21.0s
TRF **Thorofare Moun** 89.88 24 IAmb IAmb 18 46 11.1
comp=Z,65nm,0.9s
TRF IAMs_20 IAMs_20 19 30 25.2
comp=Z,3μm,20.0s
TRF **Thorofare Moun** 89.88 24 P **P** **18 45 58.7 -0.5**
baz=297,SNR=28
BORG **Borgarnes** 89.89 337 LR LR 19 28 18.0
comp=Z,2μm,21.0s,baz=62,slow=37
TOZ **Tahuroa Road** 89.93 129 IAMs_20 IAMs_20 19 28 44.5
comp=Z,2μm,20.0s
F26K **Sheenjek River** 89.95 19 P **P** **18 45 59.2 -0.1**
baz=303,SNR=27
SKT **Skwentna** 90.03 26 IAmb IAmb 18 46 10.2
comp=Z,112nm,0.9s
SKT IAMs_20 IAMs_20 19 30 17.4
comp=Z,3μm,20.0s
SKT **Skwentna** 90.03 26 P **P** **18 45 59.3 -0.5**
baz=296,SNR=42
D27M **Malcolm River** 90.04 17 IAMs_20 IAMs_20 19 32 05.2
comp=Z,3μm,19.0s
D27M **Malcolm River** 90.04 17 P **P** **18 45 59.6 -0.1**
baz=306,SNR=17
SPCR **Spurr Chakacha** 90.08 27 P **P** **18 45 59.3 -0.7**
baz=296
L22K **Petersville** 90.10 25 IAmb IAmb 18 46 11.7
comp=Z,113nm,1.1s
L22K IAMs_20 IAMs_20 19 30 25.3
comp=Z,3μm,18.0s
L22K **Petersville** 90.10 25 P **P** **18 45 60.0 -0.1**
baz=297,SNR=41
COLA **College** 90.14 22 P **P** **18 46 00.1 0.0**
COLA **College** 90.14 22 *de* P **P** **18 45 59.5 -0.6**
COLA pmax pmax
comp=Z,11nm,0.9s
COLA MLR MLR
comp=Z,2μm,22.0s
COLA **College** 90.14 22 IAMs_20 IAMs_20 19 27 31.9
comp=Z,2μm,21.0s
COLA **College** 90.14 22 P **P** **18 45 60.0 -0.1**
baz=300
SPU **Mount Spurr** 90.16 26 IAmb IAmb 18 46 10.9
comp=Z,42nm,1.0s
RED **Redoubt Volcan** 90.17 27 IAmb IAmb 18 46 10.7
comp=Z,207nm,1.8s
POKR **Poker Plat Res** 90.17 22 P **P** **18 46 00.3 -0.1**
baz=300
ILSW **Iliamna Southw** 90.18 28 IAmb IAmb 18 46 10.6
comp=Z,38nm,1.0s
SUMG **Summit** 90.25 347 IAmb IAmb 18 46 10.9
comp=Z,37nm,0.9s
SUMG **Summit** 90.25 347 *i* P **P** **18 46 00.9 -0.1**
SUMG IAmb IAmb 18 46 11.2
comp=Z,38nm,0.9s
WRH **Wood River Hil** 90.25 23 IAMs_20 IAMs_20 19 30 37.9
comp=Z,2μm,20.0s
MCK **McKinley** 90.28 24 P **P** **18 46 00.5 -0.4**
baz=299,SNR=32
P19K **Oil Pt** 90.28 28 P **P** **18 45 59.7 -1.2**
baz=295

SNZO	**South Karori**	90.29	132		IAMs_20	IAMs_20	19 28 29.1		
	comp=Z,3μm,20.0s								
CUT	**Chulitna**	90.37	25		P	**P**	**18 46 00.3**	**-1.0**	
	baz=297								
O20K	**Slope Mountain**	90.38	28		P	**P**	**18 45 59.8**	**-1.7**	
	baz=295								
TORD	**Torodi Ar. Bea**	90.45	283		P	**P**	**18 46 02.0**	**-0.6**	
	comp=Z,6.0nm,0.9s,baz=79,slow=4.6,SNR=22								
TORD					PP	**PP**	**18 49 42.7**	**+5.5**	
	comp=Z,11nm,1.0s,baz=65,slow=5.2,SNR=11								
TORD					PKKPbc	**PKKPbc**	**19 03 34.0**	**+3.7**	
	comp=Z,0.4nm,0.6s,baz=290,slow=3.1,SNR=4.4								
TORD					LR	LR	19 25 45.1		
	comp=Z,787nm,20.9s,baz=77,slow=35								
	comp=Z,6.0nm,0.9s								
TORD	**Torodi Ar. Bea**	90.45	283		P	**P**	**18 46 01.1**	**-1.6**	
RND	**Reindeer**	90.47	24		P	**P**	**18 45 59.8**	**-2.0**	
RND					pmax	pmax			
	comp=Z,236nm,1.4s								
RND					MLR	MLR			
	comp=Z,3μm,18.0s								
RND	**Reindeer**	90.47	24		P	**P**	**18 45 59.8**	**-2.0**	
E27K	**Coleen River**	90.47	18		IAmb	IAmb	18 46 12.8		
	comp=Z,123nm,1.6s								
E27K					IAMs_20	IAMs_20	19 30 34.6		
	comp=Z,3μm,20.0s								
E27K	**Coleen River**	90.47	18		P	**P**	**18 46 01.6**	**-0.1**	
	baz=305,SNR=10								
G26K	**Porcupine Rive**	90.48	20		P	**P**	**18 46 01.8**	**+0.1**	
	baz=303,SNR=41								
IL31		90.55	22		IAmb	IAmb	18 46 11.9		
	comp=Z,63nm,1.5s								
ILAR	**Eielson Array**	90.55	22		P	**P**	**18 46 00.6**	**-1.5**	
	comp=Z,9.7nm,0.7s,baz=286,slow=4.1,SNR=69								
ILAR					PP	**PP**	**18 49 41.8**	**+5.4**	
	comp=Z,2.5nm,0.9s,baz=302,slow=6.3,SNR=4.6								
ILAR					PKKPbc	**PKKPbc**	**19 03 33.7**	**+2.2**	
	comp=Z,0.5nm,0.8s,baz=54,slow=2.4,SNR=4.1								
ILAR					LR	LR	19 28 39.0		
	comp=Z,2μm,20.3s,baz=300,slow=37								
	comp=Z,9.7nm,0.7s								
ILAR	**Eielson Array**	90.55	22		P	**P**	**18 46 00.3**	**-1.8**	
PBRG	**Braganca**	90.61	313	*e*	P	**P**	**18 46 04.0**	**+1.1**	
PBRG				*i*	IAmb	IAmb	18 46 11.7		
	comp=Z,45nm,1.3s								
D28M	**Stokes Point**	90.62	17		P	**P**	**18 46 02.9**	**+0.6**	
	baz=308								
PRP	**Porcupine Dome**	90.65	21		P	**P**	**18 46 02.8**	**0.0**	
	baz=302,SNR=10								
HDA	**Harding Lake**	90.71	23		P	**P**	**18 46 01.2**	**-1.6**	
	baz=300,SNR=16								
M22K	**Willow**	90.73	26		IAMs_20	IAMs_20	19 30 37.9		
	comp=Z,3μm,20.0s								
M22K	**Willow**	90.73	26		P	**P**	**18 46 02.6**	**-0.3**	
	baz=298								
CAPN	**Captain Cook N**	90.73	27		P	**P**	**18 46 03.4**	**+0.5**	
	baz=297								
MRZ	**Mangatainoka R**	90.76	131		IAMs_20	IAMs_20	19 29 07.5		
	comp=Z,3μm,20.0s								
E28M	**Babbage River**	90.84	17		IAMs_20	IAMs_20	19 31 37.3		
	comp=Z,3μm,21.0s								
E28M	**Babbage River**	90.84	17		P	**P**	**18 46 03.2**	**-0.2**	
	baz=307,SNR=19								
WAT1	**Susitna Watana**	90.87	24		P	**P**	**18 46 02.8**	**-0.8**	
	baz=299								
MVO	**Moncorvo**	91.00	312	*e*	P	**P**	**18 46 05.4**	**+0.6**	
MVO				*i*	IAmb	IAmb	18 46 13.6		
	comp=Z,60nm,0.8s								
MVO				*e*	S	**S**	**18 57 08.1**	**+5.9**	
MVO				*e*	LR	LR	19 19 00.7		
MVO				*i*	IAMs_20	IAMs_20	19 34 29.3		
	comp=Z,1μm,20.0s								
HOM	**Homer**	91.01	28		P	**P**	**18 46 03.4**	**-0.9**	
	baz=296								
SII	**Sitkinak Islan**	91.10	31		IAmb	IAmb	18 46 18.5		
	comp=Z,68nm,0.9s								
SII	**Sitkinak Islan**	91.10	31		P	**P**	**18 46 04.4**	**-0.4**	
	baz=294								
J25K	**Salcha River,**	91.19	22		IAmb	IAmb	18 46 15.2		
	comp=Z,55nm,1.3s								
J25K					IAMs_20	IAMs_20	19 31 16.7		
	comp=Z,2μm,21.0s								
J25K	**Salcha River,**	91.19	22		P	**P**	**18 46 04.4**	**-0.7**	
	baz=302,SNR=14								
RC01	**Rabbit Creek A**	91.20	26		IAMs_20	IAMs_20	19 31 06.4		
	comp=Z,3μm,20.0s								
RC01	**Rabbit Creek A**	91.20	26		P	**P**	**18 46 04.5**	**-0.7**	
	baz=298,SNR=9.2								
DHY	**Denali Highway**	91.21	24		IAmb	IAmb	18 46 16.1		
	comp=Z,35nm,1.0s								
DHY					IAMs_20	IAMs_20	19 30 43.6		
	comp=Z,3μm,19.0s								
DHY	**Denali Highway**	91.21	24		P	**P**	**18 46 04.7**	**-0.7**	
	baz=300								
PMR	**Palmer**	91.22	25		P	**P**	**18 46 05.0**	**-0.2**	
PMR	**Palmer**	91.22	25		IAmb	IAmb	18 46 16.0		
	comp=Z,80nm,0.9s								
PMR	**Palmer**	91.22	25		P	**P**	**18 46 05.0**	**-0.2**	
	baz=298,SNR=9.9								
CNPM	**China Poot**	91.25	28		P	**P**	**18 46 04.3**	**-1.2**	
CNPM					IAmb	IAmb	18 46 15.8		
	comp=Z,66nm,1.0s								
CNPM					IAMs_20	IAMs_20	19 32 24.9		
	comp=Z,2μm,18.0s								
G27K	**Doyon Strip**	91.25	19		IAmb	IAmb	18 46 16.5		
	comp=Z,130nm,1.8s								
G27K	**Doyon Strip**	91.25	19		P	**P**	**18 46 05.6**	**+0.2**	
	baz=305,SNR=18								
SLKM	**Skilak Lake**	91.26	27		IAMs_20	IAMs_20	19 30 42.0		
	comp=Z,2μm,20.0s								
OHAK	**Old Harbor**	91.27	30		P	**P**	**18 46 05.4**	**-0.1**	
OHAK	**Old Harbor**	91.27	30		IAmb	IAmb	18 46 15.2		
	comp=Z,46nm,0.8s								
OHAK	**Old Harbor**	91.27	30		P	**P**	**18 46 05.2**	**-0.4**	
	baz=295,SNR=9.9								
URZ	**Urewera**	91.30	129		P	**P**	**18 46 05.2**	**-0.8**	
	comp=Z,16nm,1.0s,baz=258,slow=2.8,SNR=6.0								
	comp=Z,16nm,1.0s								
BRLK	**Bradley Lake**	91.30	28		IAMs_20	IAMs_20	19 25 48.1		
	comp=Z,2μm,20.0s								
WAT6	**Susitna Watana**	91.31	24		P	**P**	**18 46 05.0**	**-0.9**	
	baz=300,SNR=14								
F28M	**Old Crow**	91.34	18		P	**P**	**18 46 05.4**	**-0.4**	
	baz=307,SNR=15								
BRSE	**Bradley Lake S**	91.38	28		P	**P**	**18 46 05.4**	**-0.7**	
	baz=297,SNR=7.0								
KDAK	**Kodiak Island**	91.38	30		LR	LR	19 32 12.0		
	comp=Z,1μm,18.6s,baz=313,slow=39								
KDAK	**Kodiak Island**	91.38	30	*d*	P	**P**	**18 46 05.6**	**-0.4**	
KDAK					pmax	pmax			
	comp=Z,53nm,1.1s								
KDAK					MLR	MLR			
	comp=Z,3μm,20.0s								
KDAK	**Kodiak Island**	91.38	30		P	**P**	**18 46 05.2**	**-0.8**	
KDAK					IAmb	IAmb	18 46 15.0		
	comp=Z,163nm,1.6s								
KDAK	**Kodiak Island**	91.38	30		IAMs_20	IAMs_20	19 27 32.4		
	comp=Z,3μm,21.0s								
KDAK	**Kodiak Island**	91.38	30		P	**P**	**18 46 05.9**	**-0.1**	
	baz=295								
MDT	**Midelt**	91.45	304		LR	LR	19 32 39.7		
	comp=Z,1μm,18.6s,baz=91,slow=39								
E29M	**Blow River**	91.45	17		IAMs_20	IAMs_20	19 27 12.4		
	comp=Z,2μm,20.0s								
E29M	**Blow River**	91.45	17		P	**P**	**18 46 05.9**	**-0.3**	
	baz=309,SNR=16								
SML	**Sawmill**	91.45	25		IAMs_20	IAMs_20	19 29 52.0		
	comp=Z,3μm,19.0s								
SML	**Sawmill**	91.45	25		P	**P**	**18 46 06.7**	**+0.3**	
	baz=299,SNR=32								
K24K	**Donnelly Dome**	91.46	23		IAMs_20	IAMs_20	19 27 21.0		
	comp=Z,2μm,21.0s								
K24K	**Donnelly Dome**	91.46	23		P	**P**	**18 46 06.0**	**-0.4**	
	baz=301,SNR=5.2								
PVRL	**Vila Real**	91.47	313	*i*	IAmb	IAmb	18 46 16.0		
	comp=Z,52nm,1.3s								
O22K	**Cooper Landing**	91.49	27		IAmb	IAmb	18 46 28.0		
	comp=Z,65nm,0.7s								
O22K					IAMs_20	IAMs_20	19 33 16.1		
	comp=Z,3μm,20.0s								
O22K	**Cooper Landing**	91.49	27		P	**P**	**18 46 05.3**	**-1.2**	
	baz=298								
POLO	**Lamas de Olo**	91.49	313	*i*	IAmb	IAmb	18 46 16.4		
	comp=Z,24nm,2.0s								
MD01	**Midelt array s**	91.56	304		P	**P**	**18 46 05.0**	**-2.6**	
PCAB	**Cabril**	91.56	313	*i*	IAmb	IAmb	18 46 19.6		
	comp=Z,68nm,1.7s								
KNK	**Knik Glacier**	91.59	25		IAMs_20	IAMs_20	19 29 57.7		
	comp=Z,3μm,21.0s								
KNK	**Knik Glacier**	91.59	25		P	**P**	**18 46 07.1**	**+0.1**	
	baz=299,SNR=13								
MTE	**Manteigas**	91.60	312	*i*	IAmb	IAmb	18 46 20.5		
	comp=Z,72nm,1.9s								
MTE				*e*	S	**S**	**18 57 08.7**	**+1.0**	
MTE				*e*	LR	LR	19 19 08.1		
MTE				*i*	IAMs_20	IAMs_20	19 34 06.1		
	comp=Z,1μm,22.0s								
I26K	**Coal Creek Min**	91.60	21		P	**P**	**18 46 06.9**	**0.0**	
	baz=304								
H27K	**Steamboat Moun**	91.63	20		P	**P**	**18 46 07.3**	**+0.1**	
	baz=305,SNR=33								
PGAV	**Gavieira, Arco**	91.65	313	*e*	P	**P**	**18 46 08.6**	**+0.8**	
PGAV				*e*	S	**S**	**18 57 08.7**	**+0.6**	
PGAV				*e*	LR	LR	19 17 26.3		
PGAV				*i*	IAMs_20	IAMs_20	19 35 25.4		
	comp=Z,687nm,20.0s								
M23K	**Glacier View**	91.71	25		P	**P**	**18 46 06.5**	**-1.1**	
	baz=300,SNR=16								
PCBR	**Castelo Branco**	91.72	311	*e*	P	**P**	**18 46 09.9**	**+1.9**	
PCBR				*i*	IAmb	IAmb	18 46 17.0		
	comp=Z,67nm,1.1s								
SFS	**San Fernando**	91.73	308		IAMs_20	IAMs_20	19 32 30.5		
	comp=Z,3μm,20.0s								
PVIS	**Viseu**	91.76	312	*e*	P	**P**	**18 46 10.0**	**+1.7**	
PMRV	**Marv??o**	91.78	311	*e*	P	**P**	**18 46 09.3**	**+1.0**	
PMRV				*i*	IAmb	IAmb	18 46 20.5		
	comp=Z,44nm,1.4s								
PMRV				*e*	S	**S**	**18 57 06.4**	**-2.8**	
PMRV				*e*	LR	LR	19 19 11.8		
PMRV				*i*	IAMs_20	IAMs_20	19 33 01.3		
	comp=Z,862nm,22.0s								
SEW	**Seward**	91.79	27		IAmb	IAmb	18 46 18.6		
	comp=Z,86nm,1.0s								
SEW					IAMs_20	IAMs_20	19 33 26.0		
	comp=Z,2μm,20.0s								
SEW	**Seward**	91.79	27		P	**P**	**18 46 07.4**	**-0.5**	
	baz=298								
RIDG	**Independent Ri**	91.84	23		IAmb	IAmb	18 46 18.6		
	comp=Z,106nm,1.4s								
RIDG					IAMs_20	IAMs_20	19 28 56.2		
	comp=Z,2μm,22.0s								
RIDG	**Independent Ri**	91.84	23		P	**P**	**18 46 07.6**	**-0.6**	
	baz=302,SNR=14								
SCM	**Sheep Creek Mo**	91.86	25		P	**P**	**18 46 08.9**	**+0.6**	
	baz=300,SNR=12								
PBAR	**Barrancos**	91.88	310	*e*	P	**P**	**18 46 09.9**	**+1.1**	
PBAR				*i*	IAmb	IAmb	18 46 24.3		
	comp=Z,76nm,1.3s								
PWL	**Port Wells**	91.91	26		IAMs_20	IAMs_20	19 31 38.2		
	comp=Z,2μm,19.0s								
PWL	**Port Wells**	91.91	26		P	**P**	**18 46 08.6**	**+0.1**	
	baz=299,SNR=12								
I27K	**Kandik River**	91.96	20		P	**P**	**18 46 08.9**	**+0.2**	
	baz=305,SNR=35								
A36M	**Sachs Harbour**	91.98	12		IAmb	IAmb	18 46 18.9		
	comp=Z,66nm,0.8s								
A36M					IAMs_20	IAMs_20	19 33 06.0		
	comp=Z,2μm,21.0s								
A36M	**Sachs Harbour**	91.98	12		P	**P**	**18 46 08.0**	**-0.6**	
	baz=321,SNR=11								
PAX	**Paxson**	92.02	23		IAmb	IAmb	18 46 20.4		
	comp=Z,152nm,1.8s								
PAX	**Paxson**	92.02	23		P	**P**	**18 46 08.9**	**-0.1**	
	baz=302,SNR=7.7								
SCRK	**Sand Creek**	92.04	22		IAMs_20	IAMs_20	19 27 39.2		
	comp=Z,2μm,20.0s								
SCRK	**Sand Creek**	92.04	22		P	**P**	**18 46 09.2**	**0.0**	
	baz=303,SNR=37								
MXZ	**Matakaoa Point**	92.05	128		IAMs_20	IAMs_20	19 27 57.7		
	comp=Z,3μm,21.0s								
PTO	**Porto**	92.14	313	*i*	IAmb	IAmb	18 46 19.3		
	comp=Z,67nm,0.9s								
M24K	**Tolsona, Glenn**	92.19	24		IAMs_20	IAMs_20	19 33 09.3		
	comp=Z,2μm,18.0s								
M24K	**Tolsona, Glenn**	92.19	24		P	**P**	**18 46 10.3**	**+0.5**	
	baz=301								
PSARD	**Sardoal**	92.29	311	*e*	P	**P**	**18 46 12.0**	**+1.3**	
PSARD				*i*	IAmb	IAmb	18 46 19.9		
	comp=Z,102nm,1.1s								
G29M	**Pine Creek**	92.34	18		P	**P**	**18 46 10.4**	**0.0**	
	baz=309,SNR=19								
GLI	**Glacier Island**	92.43	26		IAMs_20	IAMs_20	19 30 34.9		
	comp=Z,2μm,20.0s								
GLI	**Glacier Island**	92.43	26		P	**P**	**18 46 11.3**	**+0.4**	
	baz=300								
PARRA	**Arraiolos**	92.44	310	*i*	IAmb	IAmb	18 46 20.1		
	comp=Z,39nm,1.0s								
HARP	**HAARP**	92.44	24		IAmb	IAmb	18 46 22.5		
	comp=Z,70nm,1.0s								
HARP	**HAARP**	92.44	24		P	**P**	**18 46 11.3**	**+0.4**	
	baz=302,SNR=7.9								
PMTG	**Montargil**	92.50	311	*e*	P	**P**	**18 46 12.9**	**+1.3**	
PMTG				*i*	IAmb	IAmb	18 46 25.3		
	comp=Z,38nm,0.5s								
EVO	**Evora**	92.50	310	*e*	P	**P**	**18 46 13.0**	**+1.3**	
EVO				*i*	IAmb	IAmb	18 46 27.7		
	comp=Z,26nm,2.7s								
PBEJ	**Beja**	92.54	310	*e*	P	**P**	**18 46 13.0**	**+1.1**	
PBEJ				*i*	IAmb	IAmb	18 46 24.4		
	comp=Z,31nm,1.2s								
F30M	**Barrier River**	92.56	17		P	**P**	**18 46 11.5**	**+0.2**	
	baz=311,SNR=9.4								
KLU	**Klutina**	92.61	25		P	**P**	**18 46 10.6**	**-1.2**	
KLU					IAmb	IAmb	18 46 23.2		
	comp=Z,113nm,1.5s								
KLU					IAMs_20	IAMs_20	19 32 12.4		
	comp=Z,2μm,20.0s								
KLU	**Klutina**	92.61	25		P	**P**	**18 46 12.6**	**+0.8**	
	baz=301,SNR=7.5								
PVAQ	**Vaqueiros**	92.62	309	*e*	S	S	18 57 01.4	-15	
PVAQ				*e*	LR	LR	19 18 46.7		
PVAQ				*i*	IAMs_20	IAMs_20	19 33 26.1		
	comp=Z,884nm,20.0s								
I28M	**Miner Creek**	92.62	20		P	**P**	**18 46 11.7**	**-0.1**	
	baz=307,SNR=32								
H29M	**Whitestone**	92.66	19		IAmb	IAmb	18 46 23.2		
	comp=Z,48nm,1.1s								
H29M	**Whitestone**	92.66	19		P	**P**	**18 46 11.3**	**-0.6**	
	baz=308,SNR=23								
K27K	**Chicken**	92.71	22		IAmb	IAmb	18 46 24.0		
	comp=Z,87nm,1.3s								
K27K					IAMs_20	IAMs_20	19 31 46.9		
	comp=Z,2μm,20.0s								
MENT	**Mentasta**	92.71	23		P	**P**	**18 46 13.1**	**+0.9**	
INK	**Inuvik**	92.73	16		LR	LR	19 32 59.6		
	comp=Z,2μm,21.9s,baz=294,slow=39								
INK	**Inuvik**	92.73	16		P	**P**	**18 46 12.2**	**+0.1**	
	baz=313,SNR=18								
P23K	**Montague Islan**	92.74	26		IAMs_20	IAMs_20	19 27 04.1		
	comp=Z,2μm,19.0s								
P23K	**Montague Islan**	92.74	26		P	**P**	**18 46 11.2**	**-1.1**	
	baz=300								
FID	**Port Fidalgo**	92.76	26		IAMs_20	IAMs_20	19 32 03.5		
	comp=Z,3μm,20.0s								
MOE	**Montemor**	92.76	310	*i*	IAmb	IAmb	18 46 22.3		
	comp=Z,40nm,1.9s								
L26K	**Log Cabin Wild**	92.80	23		IAmb	IAmb	18 46 24.4		
	comp=Z,91nm,1.3s								
L26K					IAMs_20	IAMs_20	19 28 13.5		
	comp=Z,2μm,20.0s								
L26K	**Log Cabin Wild**	92.80	23		P	**P**	**18 46 13.5**	**+0.9**	
	baz=304,SNR=24								
G30M	**tAoh Zrail Nji**	92.84	18		P	**P**	**18 46 12.1**	**-0.6**	
	baz=310,SNR=20								
DIV	**Divide**	92.86	25		IAMs_20	IAMs_20	19 30 37.1		
	comp=Z,2μm,19.0s								
MESJ	**Messejana**	92.87	309	*e*	P	**P**	**18 46 13.2**	**-0.2**	
MESJ				*e*	SKSac	**SKSac**	**18 56 45.6**	**-1.6**	
MESJ					IAMs_20	IAMs_20	19 33 57.8		
	comp=Z,999nm,17.1s								
MESJ	**Messejana**	92.87	309	*e*	P	**P**	**18 46 14.8**	**+1.4**	
MESJ				*i*	IAmb	IAmb	18 46 30.6		
	comp=Z,50nm,1.7s								
MESJ	**Messejana**	92.87	309	*e*	P	**P**	**18 46 13.2**	**-0.2**	
MESJ				*e*			18 56 45.6		
HIN	**Hinchinbrook I**	92.93	26		IAMs_20	IAMs_20	19 33 28.0		
	comp=Z,3μm,18.0s								
PLOUS	**Minas do Lousa**	92.96	310	*e*	P	**P**	**18 46 15.7**	**+1.9**	
PLOUS				*i*	IAmb	IAmb	18 46 26.8		
	comp=Z,39nm,1.9s								
EPYK	**Eagle Plains**	93.08	18		P	**P**	**18 46 13.0**	**-0.9**	
	baz=310								
N25K	**Chitina, Valde**	93.09	24		P	**P**	**18 46 14.4**	**+0.4**	
	baz=302,SNR=19								
EYAK	**Cordova Ski Ar**	93.17	26		P	**P**	**18 46 15.4**	**+1.1**	
	comp=Z,3μm,21.0s								
EYAK	**Cordova Ski Ar**	93.17	26		IAmb	IAmb	18 46 25.9		
	comp=Z,51nm,1.1s								
EYAK	**Cordova Ski Ar**	93.17	26		P	**P**	**18 46 14.4**	**+0.1**	
	baz=301								
RES	**Resolute Bay**	93.18	3		LR	LR	19 33 07.2		
	comp=Z,1μm,20.0s,baz=344,slow=39								
UPNV	**Upernavik**	93.24	352	*i*	P	**P**	**18 46 12.6**	**-1.7**	
UPNV					IAmb	IAmb	18 46 24.4		
	comp=Z,21nm,0.4s								
F31M	**Tsiigehtchic**	93.26	17		IAMs_20	IAMs_20	19 33 20.2		
	comp=Z,2μm,20.0s								
F31M	**Tsiigehtchic**	93.26	17		P	**P**	**18 46 14.0**	**-0.5**	
	baz=313,SNR=18								
M26K	**Nabesna, AK**	93.28	23		P	**P**	**18 46 14.9**	**0.0**	
	baz=304,SNR=26								
RAO	**Raoul Island**	93.30	119		LR	LR	19 29 40.6		
	comp=Z,994nm,21.2s,baz=286,slow=36								
PTEO	**Sao Teotonio**	93.34	309	*e*	P	**P**	**18 46 16.9**	**+1.3**	
L27K	**Beaver Creek,**	93.35	22		IAmb	IAmb	18 46 26.9		
	comp=Z,41nm,1.3s								
L27K					IAMs_20	IAMs_20	19 32 53.0		
	comp=Z,3μm,18.0s								
L27K	**Beaver Creek,**	93.35	22		P	**P**	**18 46 15.3**	**+0.2**	
	baz=305,SNR=23								
MORF	**Marmelete**	93.36	309	*e*	P	**P**	**18 46 15.3**	**-0.4**	
MORF				*e*	SKSac	**SKSac**	**18 56 48.5**	**-1.6**	
MORF					IAMs_20	IAMs_20	19 33 42.9		
	comp=E,2μm,22.2s								
MORF	**Marmelete**	93.36	309	*e*	P	**P**	**18 46 15.3**	**-0.4**	
MORF				*e*			18 56 48.5		
BCAR	**Beaver Creek A**	93.37	22		P	**P**	**18 46 15.3**	**+0.1**	
BMRM	**Bremner River**	93.42	25		IAmb	IAmb	18 46 29.6		
	comp=Z,57nm,0.9s								
BMRM					IAMs_20	IAMs_20	19 27 31.1		
	comp=Z,2μm,20.0s								
BMRM	**Bremner River**	93.42	25		P	**P**	**18 46 15.6**	**0.0**	
	baz=302,SNR=23								
G31M	**Satah River**	93.46	17		IAMs_20	IAMs_20	19 30 01.5		
	comp=Z,2μm,20.0s								
G31M	**Satah River**	93.46	17		P	**P**	**18 46 14.8**	**-0.6**	
	baz=312,SNR=19								
Q23K	**Middleton Isla**	93.49	27		P	**P**	**18 46 15.3**	**-0.4**	
	baz=301								
GLB	**Gilahina Butte**	93.49	24		IAmb	IAmb	18 46 27.3		
	comp=Z,33nm,1.0s								
GLB					IAMs_20	IAMs_20	19 36 02.8		
	comp=Z,2μm,20.0s								
MID	**Middleton Isla**	93.49	27		IAMs_20	IAMs_20	19 27 37.0		
	comp=Z,3μm,19.0s								
AVE	**Averroes**	93.58	305		IAMs_20	IAMs_20	19 32 30.8		
	comp=Z,2μm,20.0s								
DAWY	**Dawson**	93.64	21		P	**P**	**18 46 15.2**	**-1.2**	
DAWY					IAmb	IAmb	18 46 27.3		
	comp=Z,105nm,1.4s								
DAWY	**Dawson**	93.64	21		P	**P**	**18 46 16.2**	**-0.3**	
	baz=307,SNR=8.8								
M27K	**Edge Creek, AK**	93.74	23		P	**P**	**18 46 17.4**	**+0.3**	
	baz=305,SNR=17								
VRDI	**Verde Repeater**	93.75	24		IAmb	IAmb	18 46 28.6		
	comp=Z,29nm,0.9s								
VRDI					IAMs_20	IAMs_20	19 32 39.8		
	comp=Z,2μm,19.0s								
J29N	**Klondike Camp**	93.81	20		P	**P**	**18 46 17.0**	**-0.3**	
	baz=308								
MCARA	**McCarthy VSAT**	93.84	24		IAmb	IAmb	18 46 20.4		
	comp=Z,40nm,0.9s								
MCARA					IAMs_20	IAMs_20	19 32 44.0		
	comp=Z,2μm,20.0s								
MCARA	**McCarthy VSAT**	93.84	24		P	**P**	**18 46 17.4**	**+0.1**	
	baz=304,SNR=9.7								
I30M	**Mount Dempster**	93.93	19		P	**P**	**18 46 16.9**	**-1.0**	
	baz=310,SNR=37								
BVCY	**Beaver Creek**	94.09	23		P	**P**	**18 46 17.3**	**-1.3**	
	baz=306,SNR=6.8								
BERG	**Berg Lake**	94.11	25		IAmb	IAmb	18 46 30.2		
	comp=Z,46nm,0.8s								
CRQM	**Cirque**	94.14	25		IAmb	IAmb	18 46 30.4		
	comp=Z,39nm,1.1s								
CRQM					IAMs_20	IAMs_20	19 31 30.6		
	comp=Z,2μm,19.0s								
CRQE	**Cirque**	94.16	25		P	**P**	**18 46 18.4**	**-0.7**	
	baz=304								
H31M	**Peel River**	94.19	18		P	**P**	**18 46 18.6**	**-0.3**	
	baz=312,SNR=34								
TGL	**Tana Glacier**	94.27	25		IAmb	IAmb	18 46 30.9		
	comp=Z,36nm,0.8s								
TGL					IAMs_20	IAMs_20	19 36 28.4		
	comp=Z,2μm,18.0s								
C36M	**Paulatuk**	94.29	13		IAMs_20	IAMs_20	19 36 41.3		
	comp=Z,2μm,20.0s								
C36M	**Paulatuk**	94.29	13	

M31M IAMs_20 IAMs_20 19 36 43.3
comp=Z,2µm,18.0s
M31M Drury Creek, Y 96.58 21 P **P** **18 46 29.7 -0.2**
baz=312,SNR=8.4
VNDA Vanda 96.86 168 P **P** **18 46 30.4 -0.3**
comp=Z,1.2nm,1.0s,baz=339,slow=8.7,SNR=4.2
VNDA LR LR 19 26 43.0
comp=Z,452nm,19.6s,baz=312,slow=33
comp=Z,1.2nm,1.0s
VNDA Vanda 96.86 168 P **P** **18 46 29.2 -1.5**
O30N Mendenhall 96.91 23 IAmb IAmb 18 46 42.9
comp=Z,52nm,1.2s
O30N Mendenhall 96.91 23 P **P** **18 46 30.5 -0.9**
baz=310,SNR=17
P30M Million Dollar 96.99 23 P **P** **18 46 31.5 -0.3**
baz=309
P29M Windy Craggy 96.99 24 IAMs_20 IAMs_20 19 34 48.3
comp=Z,µm,20.0s
P29M Windy Craggy 96.99 24 P **P** **18 46 30.8 -1.0**
baz=308
SFJD Kangerlussuaq 97.24 347 LR LR 19 39 49.7
comp=Z,1µm,18.2s,baz=29,slow=41
SFJD Kangerlussuaq 97.24 347 IAMs_20 IAMs_20 19 33 59.7
comp=Z,2µm,21.0s
MMPY Sheldon Lake, 97.36 20 IAmb IAmb 18 46 45.0
comp=Z,55nm,1.4s
MMPY Sheldon Lake, 97.36 20 P **P** **18 46 33.0 -0.5**
baz=315,SNR=16
WHY Whitehorse 97.43 22 IAmb IAmb 18 46 44.8
comp=Z,44nm,1.1s
WHY Whitehorse 97.43 22 P **P** **18 46 33.1 -0.8**
baz=311
PLBC Pleasant Camp 97.64 24 P **P** **18 46 33.5 -1.2**
baz=310
N32M Quiet Lake 97.75 21 IAmb IAmb 18 46 46.2
comp=Z,43nm,1.2s
N32M IAMs_20 IAMs_20 19 37 29.3
comp=Z,2µm,18.0s
N32M Quiet Lake 97.75 21 P **P** **18 46 34.6 -0.7**
baz=313
SKAG Skagway 98.05 23 P **P** **18 46 35.9 -0.5**
baz=311
DBIC Dimbokro 98.18 279 LR LR 19 29 45.4
comp=Z,879nm,20.0s,baz=75,slow=35
P33M Teslin, Yukon 98.49 22 P Pdif 18 46 40.0 +1.4
P33M IAmb IAmb 18 46 49.6
comp=Z,36nm,1.6s
P33M IAMs_20 IAMs_20 19 36 57.8
comp=Z,2µm,18.0s
P33M Teslin, Yukon 98.49 22 P **P** **18 46 38.2 -0.4**
baz=313
P32M Atlin 98.58 23 IAmb IAmb 18 46 50.3
comp=Z,29nm,1.3s
P32M IAMs_20 IAMs_20 19 36 09.2
comp=Z,2µm,19.0s
P32M Atlin 98.58 23 P **P** **18 46 38.4 -0.5**
baz=312
S31K Pelican 98.65 25 IAMs_20 IAMs_20 19 34 31.3
comp=Z,2µm,20.0s
S31K Pelican 98.65 25 P **P** **18 46 38.4 -0.8**
baz=310
NVL N'lazarevskaya 99.08 199 *e*P **Pdif** **18 46 37.2 -3.6**
NVL *e*S **SKSac** **18 57 15.3 -3.0**
NVL *e*SS **SS** **19 05 07.9 +8.9**
NVL *e*SSS SSS 19 08 46.0
NVL pmax pmax
comp=Z,8.0nm,0.8s
NVL MLR MLR
comp=Z,595nm,18.0s
TGTN Hyland Airport 99.13 19 P **Pdif** **18 46 40.6 -0.9**
baz=317
R32K Eaglecrest 99.14 24 IAMs_20 IAMs_20 19 36 01.2
comp=Z,2µm,21.0s
R32K Eaglecrest 99.14 24 P **Pdif** **18 46 40.4 -1.1**
baz=311
JIS Juneau Island 99.19 24 P **Pdif** **18 46 42.3 +0.7**
WRGLY Wrigley 99.28 17 P **Pdif** **18 46 39.4 -2.6**
WRGLY IAmb IAmb 18 46 53.0
comp=Z,40nm,1.3s
WRGLY Wrigley 99.28 17 P **Pdif** **18 46 40.4 -1.6**
baz=322
Q32M Nakina River 99.55 23 IAMs_20 IAMs_20 19 32 05.9
comp=Z,2µm,22.0s
Q32M Nakina River 99.55 23 P **Pdif** **18 46 42.7 -0.8**
baz=313
SIT Sitka 99.61 25 P **Pdif** **18 46 42.9 -0.6**
baz=310
S32K Killisnoo 99.65 25 P **Pdif** **18 46 42.4 -1.3**
baz=311
R33M Jennings River 99.73 22 P **Pdif** **18 46 42.2 -2.1**
baz=315,SNR=6.4
WTLY Watson Lake, Y 99.99 21 P **Pdif** **18 46 43.1 -2.2**
baz=317
NRS Narsarsuaq 100.58 342 IAMs_20 IAMs_20 19 34 40.2
comp=Z,2µm,22.0s
S34M Telegraph Cree 100.71 23 IAMs_20 IAMs_20 19 37 02.6
comp=Z,3µm,19.0s
S34M Telegraph Cree 100.71 23 P **Pdif** **18 46 46.3 -2.1**
baz=314
DLBC Dease Lake 100.76 22 P **Pdif** **18 46 47.4 -1.4**
baz=315
U33K Whale Pass 101.15 25 IAMs_20 IAMs_20 19 31 16.3
comp=Z,2µm,20.0s
U33K Whale Pass 101.15 25 P **Pdif** **18 46 48.3 -2.1**
baz=312
WRAK Wrangell Islan 101.26 25 IAMs_20 IAMs_20 19 33 56.2
comp=Z,2µm,21.0s
WRAK Wrangell Islan 101.26 25 P **Pdif** **18 46 49.0 -1.9**
baz=313
IVI Ivigtut 101.36 343 IAMs_20 IAMs_20 19 41 04.9
comp=Z,2µm,20.0s
PMOZ Porto Moniz, M 101.47 307 *e*SS SS 19 05 41.3 +7.4
PMOZ eLR LR 19 23 07.2
PMOZ *i* IAMs_20 IAMs_20 19 37 42.1
comp=Z,976nm,20.0s
KOTAN Kotaneelee Air 101.54 19 P **Pdif** **18 46 50.4 -1.7**
baz=321
CRAG Craig 101.58 26 P **Pdif** **18 46 51.1 -1.3**
baz=312
T35M Bob Quinn 101.70 23 IAMs_20 IAMs_20 19 34 37.9
comp=Z,2µm,22.0s
T35M Bob Quinn 101.70 23 P **Pdif** **18 46 51.8 -1.1**
baz=315
QSPA South Pole Qui 101.96 180 PP **PP** **18 51 05.5 +0.4**
comp=Z,4.4nm,1.1s,baz=308,slow=4.3,SNR=3.9
QSPA PKKPbc **PKKPdf** **19 03 05.5 -3.0**
comp=Z,1.7nm,0.8s,baz=188,slow=1.1,SNR=6.2
QSPA South Pole Qui 101.96 180 IAMs_20 IAMs_20 19 31 09.2
comp=Z,2µm,19.0s
YKA Yellowknife Ar 102.16 14 P **Pdif** **18 46 53.5 -1.2**
comp=Z,1.6nm,0.9s,baz=328,slow=4.4,SNR=7.8
YKA PP **PP** **18 51 04.4 -1.4**
comp=Z,4.4nm,1.0s,baz=335,slow=7.4,SNR=11
YKA PKKPbc **PKKPdf** **19 03 03.7 -2.4**
comp=Z,1.3nm,0.8s,baz=154,slow=2.7,SNR=7.2
YKA Yellowknife Ar 102.16 14 *i* P **Pdif** **18 46 55.0 +0.2**
YKA pmax pmax
comp=Z,2.0nm,0.9s
TROLL Troll, Antarti 102.17 199 ⇑P **Pdif** **18 47 06.0 +11**
comp=Z,143nm,0.5s
V35K Ketchikan 102.31 25 IAMs_20 IAMs_20 19 34 42.0
comp=Z,2µm,20.0s
V35K Ketchikan 102.31 25 P **Pdif** **18 46 54.7 -0.8**
baz=313
VNA2 Neumayer--Watz 105.40 199 P **Pdif** **18 47 17.8 +8.9**
baz=321
NLWA Neilton Lookou 111.39 27 IAMs_20 IAMs_20 19 45 00.4
comp=Z,2µm,19.0s
SCHQ Schefferville 111.59 349 PKKPbc PKKPbc 19 02 34.6 +3.9
comp=Z,5.2nm,0.8s,baz=216,slow=2.8,SNR=7.4
FFC Flin Flon 111.91 11 IAMs_20 IAMs_20 19 43 17.9
comp=Z,2µm,22.0s
NEW Newport 113.50 23 IAMs_20 IAMs_20 19 42 48.7
comp=Z,2µm,22.0s
BMO Blue Mountains 116.22 25 IAMs_20 IAMs_20 19 42 57.9
comp=Z,1µm,22.0s
EGMT Eagleton 116.23 18 IAMs_20 IAMs_20 19 45 16.8
comp=Z,2µm,21.0s
KHMM Horse Mountain 116.29 32 IAMs_20 IAMs_20 19 45 17.6
comp=Z,1µm,19.0s
PLID Pearl Lake 116.56 24 IAMs_20 IAMs_20 19 43 25.7
comp=Z,2µm,22.0s
KHBM Hayfork Bally 116.71 32 IAMs_20 IAMs_20 19 43 35.8
comp=Z,1µm,20.0s
ULM Lac du Bonnet 117.20 8 PKP **PKPdf** **18 51 43.8 -1.8**
comp=Z,2.4nm,0.9s,baz=236,slow=3.6,SNR=3.3
ULM PKKPbc **PKKPab** **19 02 14.7 -0.8**
comp=Z,7.8nm,0.7s,baz=165,slow=6.1,SNR=7.9

DGMT Dagmar 117.35 14 IAMs_20 IAMs_20 19 49 01.0
comp=Z,2µm,20.0s
WVOR Wild Horse Val 117.58 28 IAMs_20 IAMs_20 19 44 47.2
comp=Z,1µm,21.0s
PPT2 Papeete2 117.58 104 *e*PP **PP** **18 52 54.6 -5.1**
comp=Z,82nm,24.0s
PPT2 *e*S 18 59 26.3
comp=Z,262nm,25.0s
PPT2 *e*SS **SS** **19 09 16.0 +4.2**
comp=Z,779nm,26.5s
PPT2 eLQ LQ 19 22 29.4
comp=Z,580nm,26.8s
PPT2 eLR LR 19 27 31.0
comp=Z,987nm,23.2s
PPT2 eLR LR 19 27 35.8
comp=Z,1µm,23.0s
BOZ Bozeman (W) 117.76 21 IAMs_20 IAMs_20 19 46 54.2
comp=Z,2µm,19.0s
MFID Camas Ranch 118.00 25 IAMs_20 IAMs_20 19 44 14.2
comp=Z,1µm,22.0s
HOPS Hopland Field 118.01 33 IAMs_20 IAMs_20 19 48 52.2
comp=Z,1µm,20.0s
HLID Hailey 118.45 24 IAMs_20 IAMs_20 19 41 39.0
comp=Z,2µm,22.0s
LAO LASA Array 118.47 16 IAMs_20 IAMs_20 19 43 43.8
comp=Z,2µm,22.0s
MDND Maddock 118.93 11 IAMs_20 IAMs_20 19 53 22.6
comp=Z,2µm,20.0s
RLMT Red Lodge 118.97 19 IAMs_20 IAMs_20 19 48 57.2
comp=Z,2µm,20.0s
AGMN Agassiz Nation 119.11 8 IAMs_20 IAMs_20 19 47 29.3
comp=Z,1µm,20.0s
D62A Allapoint, All 119.39 348 IAMs_20 IAMs_20 19 47 55.6
comp=Z,2µm,22.0s
FXWY Fox Creek 119.67 22 IAMs_20 IAMs_20 19 52 07.0
comp=Z,1µm,18.0s
SNOW Snow King Moun 119.92 21 IAMs_20 IAMs_20 19 46 36.6
comp=Z,1µm,21.0s
EYMN Ely 119.96 5 **PKPdf** **18 51 48.3 -2.7**
F64A Sherman 120.40 347 IAMs_20 IAMs_20 19 54 04.2
comp=Z,2µm,21.0s
ELK Elko 120.45 26 PKP **PKPdf** **18 51 51.5 -0.9**
comp=Z,1.1nm,0.7s,baz=303,slow=2.8,SNR=4.9
ELK PP **PP** **18 53 23.2 +5.4**
comp=Z,1.4nm,0.8s,baz=305,slow=7.9,SNR=3.1
ELK PKKPbc **PKKPab** **19 02 02.8 +1.3**
comp=Z,2.0nm,0.9s,baz=155,slow=4.9,SNR=5.0
G65A Princeton 120.84 346 IAMs_20 IAMs_20 19 50 29.9
comp=Z,2µm,20.0s
NVAR Mina Array Bea 120.88 30 PKP **PKPdf** **18 51 52.5 -0.8**
comp=Z,2.5nm,0.6s,baz=342,slow=2.3,SNR=11
NVAR PKKPbc **PKKPab** **19 02 01.8 +2.3**
comp=Z,0.9nm,0.7s,baz=112,slow=3.1,SNR=4.6
NVAR Mina Array Bea 120.88 30 **PKPdf** **18 51 50.2 -3.1**
BW06 Boulder Array 120.95 21 IAMs_20 IAMs_20 19 51 16.8
comp=Z,1µm,20.0s
PDAR Pinedale Array 120.95 21 PKP **PKPdf** **18 51 52.5 -0.8**
comp=Z,2.0nm,0.9s,baz=48,slow=2.2,SNR=12
PDAR PKKPbc **PKKPab** **19 01 59.7 +0.4**
comp=Z,1.6nm,0.6s,baz=157,slow=3.3,SNR=4.0
PDAR Pinedale Array 120.95 21 **PKPdf** **18 51 50.2 -3.1**
PKME Peaks-Kenny Pk 121.17 347 IAMs_20 IAMs_20 19 46 44.8
comp=Z,1µm,21.0s
HWUT Hardware Ranch 121.23 23 IAMs_20 IAMs_20 19 49 43.3
comp=Z,2µm,21.0s
EMMW East Machias 121.28 345 IAMs_20 IAMs_20 19 52 48.5
comp=Z,1µm,20.0s
RSSD Black Hills 121.44 16 IAMs_20 IAMs_20 19 48 48.2
comp=Z,2µm,22.0s
F33A 5 Mile Ranch, 121.45 9 IAMs_20 IAMs_20 19 51 44.1
comp=Z,2µm,21.0s
G62A West of Eustis 121.48 348 IAMs_20 IAMs_20 19 46 43.8
comp=Z,2µm,22.0s
WVL Waterville 121.92 347 IAMs_20 IAMs_20 19 46 46.5
comp=Z,1µm,21.0s
K22A Casper 122.06 19 IAMs_20 IAMs_20 19 46 36.0
comp=Z,1µm,22.0s
H62A Milan 122.22 348 IAMs_20 IAMs_20 19 48 16.5
comp=Z,2µm,21.0s
SUSD Miller 122.33 12 IAMs_20 IAMs_20 19 50 13.5
comp=Z,2µm,20.0s
F42A Maple Grove Fa 122.36 3 IAMs_20 IAMs_20 19 53 11.9
comp=Z,2µm,22.0s
SPMN Mane on St. 122.52 7 IAMs_20 IAMs_20 19 51 21.4
comp=Z,1µm,20.0s
CWC Cottonwood Cre 122.53 31 IAMs_20 IAMs_20 19 49 46.8
comp=Z,1µm,21.0s
LBNH Lisbon 122.69 349 IAMs_20 IAMs_20 19 52 49.9
comp=Z,1µm,19.0s
I62A Tamworth 122.93 348 IAMs_20 IAMs_20 19 51 52.2
comp=Z,2µm,22.0s
FURC Furnace Creek, 123.13 31 IAMs_20 IAMs_20 19 44 58.4
comp=Z,1µm,21.0s
SADO Sadowa 123.16 355 PKP **PKPdf** **18 51 55.7 -1.5**
comp=Z,4.0nm,0.5s,baz=345,slow=3.0,SNR=4.0
HNH Hanover 123.28 349 IAMs_20 IAMs_20 19 47 53.4
comp=Z,2µm,22.0s
ECSD EROS Data Cent 123.45 10 IAMs_20 IAMs_20 19 52 36.0
comp=Z,2µm,20.0s
I37A Lemond, Waseca 123.64 7 IAMs_20 IAMs_20 19 51 58.2
comp=Z,2µm,21.0s
H43A Windswept, Lux 123.66 2 IAMs_20 IAMs_20 19 50 12.3
comp=Z,1µm,21.0s
J61A Chester 123.67 349 IAMs_20 IAMs_20 19 47 53.8
comp=Z,2µm,22.0s
O20A White River Ci 123.74 21 IAMs_20 IAMs_20 19 54 32.6
comp=Z,1µm,18.0s
J59A Piesco 123.89 351 IAMs_20 IAMs_20 19 49 58.6
comp=Z,2µm,21.0s
I40A Norwalk 124.06 5 IAMs_20 IAMs_20 19 54 19.9
comp=Z,2µm,21.0s
I45A Fountain 124.14 1 IAMs_20 IAMs_20 19 55 58.0
comp=Z,2µm,19.0s
J57A Williamstown 124.16 352 IAMs_20 IAMs_20 19 52 10.7
comp=Z,2µm,21.0s
I42A Draeger Farm, 124.18 3 IAMs_20 IAMs_20 19 52 09.1
comp=Z,1µm,20.0s
I49A Point Hope 124.21 358 IAMs_20 IAMs_20 19 50 25.8
comp=Z,2µm,21.0s
K62A Royalston 124.27 349 IAMs_20 IAMs_20 19 56 22.7
comp=Z,1µm,20.0s
WES Weston 124.36 348 IAMs_20 IAMs_20 19 57 46.0
comp=Z,1µm,19.0s
TRY Troy 124.47 350 IAMs_20 IAMs_20 19 49 05.8
comp=Z,1µm,20.0s
L61B Northampton 124.56 349 IAMs_20 IAMs_20 19 48 28.4
comp=Z,2µm,22.0s
L64A Middleborough 124.69 347 IAMs_20 IAMs_20 19 53 08.7
comp=Z,2µm,20.0s
K57A Scipio Center 124.90 352 IAMs_20 IAMs_20 19 52 11.2
comp=Z,2µm,21.0s
ISCO Idaho Springs 124.93 19 IAMs_20 IAMs_20 19 58 28.0
comp=Z,2µm,19.0s
M65A Busby, Falmout 125.00 347 IAMs_20 IAMs_20 19 57 52.0
comp=Z,1µm,18.0s
JFWS Jewell Farm 125.06 5 IAMs_20 IAMs_20 19 55 07.4
comp=Z,2µm,21.0s
L59A Walton 125.22 351 IAMs_20 IAMs_20 19 50 17.7
comp=Z,1µm,20.0s
BINY Binghamton 125.35 352 IAMs_20 IAMs_20 19 55 00.1
comp=Z,1µm,20.0s
K50A Casco 125.36 358 IAMs_20 IAMs_20 19 50 59.4
comp=Z,2µm,20.0s
K43A Burlington 125.39 3 IAMs_20 IAMs_20 19 53 42.2
comp=Z,1µm,21.0s
M63A Gales Ferry 125.45 348 IAMs_20 IAMs_20 19 54 03.9
comp=Z,1µm,20.0s
TAOE Nuku Hiva Isla 125.74 92 *e*S **SKSac** **18 59 06.9 -1.0**
comp=Z,181nm,26.6s
TAOE *e*SS SS 19 10 45.5 -11
comp=Z,377nm,29.5s
TAOE eLR LR 19 31 14.5
comp=Z,1µm,24.2s
IRM Iron Mountain 125.81 31 IAMs_20 IAMs_20 19 51 43.4
comp=Z,1µm,22.0s
Q24A Divide 125.84 19 IAMs_20 IAMs_20 19 46 33.1
comp=Z,2µm,21.0s
AAM Ann Arbor 125.87 359 IAMs_20 IAMs_20 19 58 17.7
comp=Z,2µm,20.0s
WSPT Westport, CT 125.92 349 IAMs_20 IAMs_20 19 49 18.3
comp=Z,1µm,22.0s
L44A Lake County Fo 125.94 3 IAMs_20 IAMs_20 19 53 47.7
comp=Z,2µm,22.0s
N62A Caumsett State 126.18 349 IAMs_20 IAMs_20 19 53 09.2
comp=Z,1µm,21.0s
MVCO Mesa Verde 126.22 23 IAMs_20 IAMs_20 19 58 42.4
comp=Z,1µm,20.0s
M57A Sunshine Farm, 126.35 353 IAMs_20 IAMs_20 19 57 13.5
comp=Z,1µm,18.0s
S22A 4UR Ranch, Cre 126.36 21 IAMs_20 IAMs_20 19 54 57.1
comp=Z,1µm,19.0s
N35A Tabor 126.41 10 IAMs_20 IAMs_20 19 56 00.3
comp=Z,2µm,22.0s
KSCO Kaye Shedlock' 126.57 17 IAMs_20 IAMs_20 19 49 45.2
comp=Z,2µm,21.0s
N58A Sunbury 126.79 352 IAMs_20 IAMs_20 19 52 29.1
comp=Z,2µm,21.0s
SDCO Great Sand Dun 126.83 20 IAMs_20 IAMs_20 19 59 02.3
comp=Z,2µm,20.0s
GLA Glamis 126.85 31 IAMs_20 IAMs_20 19 52 25.0
comp=Z,1µm,19.0s
N51A Ashland 127.21 358 IAMs_20 IAMs_20 19 53 02.2
comp=Z,1µm,20.0s
N53A Lisbon 127.23 356 IAMs_20 IAMs_20 19 56 38.9
comp=Z,1µm,18.0s
N49A Columbus Grove 127.25 359 IAMs_20 IAMs_20 19 51 20.4
comp=Z,2µm,21.0s
P61A Hammonton 127.64 350 IAMs_20 IAMs_20 20 00 19.7
comp=Z,2µm,18.0s
T25A Trinidad 127.74 20 IAMs_20 IAMs_20 19 52 44.4
comp=Z,2µm,21.0s
SFIN Lafayette 127.77 2 IAMs_20 IAMs_20 19 54 29.0
comp=Z,2µm,22.0s
O54A Avella 127.82 356 IAMs_20 IAMs_20 19 53 53.5
comp=Z,2µm,18.0s
ACSO Alum Creek Sta 127.92 358 IAMs_20 IAMs_20 19 52 25.9
comp=Z,2µm,22.0s
O48B Farmland 127.92 0 IAMs_20 IAMs_20 19 55 55.2
comp=Z,2µm,20.0s
O52A Adamsville 127.98 357 IAMs_20 IAMs_20 19 51 38.7
comp=Z,2µm,22.0s
O49A Covington 127.99 359 IAMs_20 IAMs_20 19 56 25.9
comp=Z,2µm,20.0s
R32A Long Quarter, 128.14 14 IAMs_20 IAMs_20 19 49 01.5
comp=Z,2µm,21.0s
P57A Homestead Farm 128.28 353 IAMs_20 IAMs_20 19 51 56.8
comp=Z,2µm,20.0s
Q56A Snyder Ridge, 128.85 354 IAMs_20 IAMs_20 19 55 57.7
comp=Z,2µm,20.0s
ANMO Albuquerque 128.99 23 PKP **PKPdf** **18 52 08.8 -0.1**
comp=Z,2.3nm,0.8s,baz=224,slow=3.5,SNR=6.2
ANMO Albuquerque 128.99 23 PKIKP **PKiKP** **18 52 10.1 +0.5**
ANMO MLR MLR
comp=Z,2µm,22.0s
ANMO Albuquerque 128.99 23 **PKiKP** **18 52 10.1 +0.5**
ANMO Albuquerque 128.99 23 IAMs_20 IAMs_20 20 00 02.7
comp=Z,2µm,22.0s
ALQ Albuquerque 128.99 23 IAMs_20 IAMs_20 20 00 13.8
comp=Z,2µm,21.0s
ALQ Albuquerque 128.99 23 IAMs_20 IAMs_20 20 00 13.8
comp=Z,2µm,21.0s
R61A Willards 129.04 350 IAMs_20 IAMs_20 20 00 20.8
comp=Z,1µm,19.0s
Q51A Peebles 129.13 358 IAMs_20 IAMs_20 19 53 14.1
comp=Z,2µm,22.0s
Q52A Bidwell 129.15 357 IAMs_20 IAMs_20 19 55 27.7
comp=Z,2µm,21.0s
TUC Tucson 129.43 28 IAMs_20 IAMs_20 20 01 31.9
comp=Z,1µm,20.0s
CBN Corbin Frederi 129.47 352 IAMs_20 IAMs_20 19 52 17.0
comp=Z,2µm,20.0s
R55A Marlinton 129.69 355 IAMs_20 IAMs_20 19 56 28.9
comp=Z,2µm,21.0s
S61A Accomac 129.73 350 IAMs_20 IAMs_20 19 59 03.0
comp=Z,1µm,18.0s
R58B Mineral 129.77 353 IAMs_20 IAMs_20 19 31 34.0
comp=Z,2µm,20.0s
CCM Cathedral Cave 129.78 6 IAMs_20 IAMs_20 19 59 33.5
comp=Z,2µm,20.0s
R49A Shelbyville 129.89 0 IAMs_20 IAMs_20 19 55 58.1
comp=Z,2µm,20.0s
S54A Dingess, Beckl 130.26 356 IAMs_20 IAMs_20 20 00 10.9
comp=Z,2µm,20.0s
AMTX Amarillo 130.68 18 IAMs_20 IAMs_20 19 57 46.0
comp=Z,2µm,22.0s
T59A Double "B" Far 130.70 352 IAMs_20 IAMs_20 19 56 51.8
comp=Z,1µm,20.0s
T42A Van Buren 130.81 6 IAMs_20 IAMs_20 19 56 47.7
comp=Z,2µm,20.0s
T47A Sharon Grove 131.15 2 IAMs_20 IAMs_20 19 58 36.5
comp=Z,1µm,19.0s
MSTX Muleshoe 131.17 20 IAMs_20 IAMs_20 19 59 21.3
comp=Z,1µm,18.0s
TUL3 Leonard 131.18 12 IAMs_20 IAMs_20 19 53 44.9
comp=Z,2µm,21.0s
TZTN Tazewell 131.61 358 IAMs_20 IAMs_20 19 52 45.5
comp=Z,2µm,22.0s
WMOK Wichita Mounta 131.63 15 IAMs_20 IAMs_20 19 54 52.0
comp=Z,2µm,22.0s
U56A King 131.63 355 IAMs_20 IAMs_20 19 58 32.3
comp=Z,2µm,19.0s
U49A Red Boiling Sp 131.66 1 IAMs_20 IAMs_20 19 57 01.0
comp=Z,2µm,21.0s
V61A Roper 131.72 351 IAMs_20 IAMs_20 20 00 48.8
comp=Z,1µm,20.0s
EPT El Paso 131.76 25 IAMs_20 IAMs_20 19 59 57.4
comp=Z,1µm,20.0s
MNTX Cornudas Mount 132.28 24 IAMs_20 IAMs_20 19 58 25.9
comp=Z,1µm,21.0s
V48A Smith Brothers 132.40 2 IAMs_20 IAMs_20 19 58 36.8
comp=Z,1µm,19.0s
TKL Tuckaleechee C 132.50 359 PKP **PKPdf** **18 52 15.1 -0.2**
comp=Z,3.6nm,0.7s,baz=101,slow=1.7,SNR=6.7
W50A Signal Mountai 132.97 0 IAMs_20 IAMs_20 19 52 58.8
comp=Z,1µm,21.0s
X58A Rowland 133.31 354 IAMs_20 IAMs_20 20 00 09.7
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 133.39 17 IAMs_20 IAMs_20 20 01 04.7
comp=Z,1µm,20.0s
X51A Calhoun 133.60 360 IAMs_20 IAMs_20 19 58 39.6
comp=Z,1µm,20.0s
X48A Hartselle 133.68 2 IAMs_20 IAMs_20 19 56 05.5
comp=Z,2µm,21.0s
Y60A Bolivia 133.71 352 IAMs_20 IAMs_20 19 58 29.5
comp=Z,1µm,21.0s
Y57A Sumter 133.94 355 IAMs_20 IAMs_20 20 00 00.5
comp=Z,1µm,19.0s
Y58A Scranton 133.98 354 IAMs_20 IAMs_20 20 02 44.6
comp=Z,2µm,19.0s
WHTX Lake Whitney, 134.58 15 IAMs_20 IAMs_20 19 58 53.0
comp=Z,1µm,19.0s
143A Socs Landing, 135.04 8 IAMs_20 IAMs_20 19 57 09.9
comp=Z,2µm,21.0s
TXAR Lajitas Array 135.05 23 PKP **PKPdf** **18 52 17.5 -2.8**
comp=Z,1.4nm,0.8s,baz=276,slow=2.7,SNR=7.7
TXAR PP **PP** **18 54 55.5 +1.7**
comp=Z,0.7nm,0.8s,baz=338,slow=6.9,SNR=3.9
TXAR SKKPbc SKKPbc 19 04 54.0 -1.7
comp=Z,0.6nm,0.8s,baz=152,slow=5.7,SNR=4.6
TXAR Lajitas Array 135.05 23 **PKPdf** **18 52 15.8 -4.6**
154A Montrose 135.51 358 IAMs_20 IAMs_20 20 01 21.1
comp=Z,1µm,18.0s
257A Skidaway Islan 136.02 355 IAMs_20 IAMs_20 19 58 20.6
comp=Z,2µm,20.0s
HKT Hockley 136.92 14 IAMs_20 IAMs_20 19 58 11.6
comp=Z,2µm,20.0s
SJMB Sao Joao De Ma 137.33 256 *e*P **PKiKP** **18 52 25.6 -0.9**
456A Hilliard 137.34 356 IAMs_20 IAMs_20 19 58 44.4
comp=Z,1µm,22.0s
451A Vernon 137.54 1 IAMs_20 IAMs_20 20 03 43.7
comp=Z,2µm,19.0s
553A Crawfordville 137.97 359 IAMs_20 IAMs_20 19 56 35.0
comp=Z,2µm,20.0s
656A Willston 138.72 357 IAMs_20 IAMs_20 20 01 55.9
comp=Z,1µm,20.0s
DIAM Diamantina, MG 139.71 256 *e*P **PKPdf** **18 52 29.9 +0.6**
DWPF Disney Wildern 139.89 355 IAMs_20 IAMs_20 19 55 32.0
comp=Z,1µm,22.0s
JANB Januaria 140.38 261 *e*P **PKPdf** **18 52 31.0 +0.6**
SDBA SAO DESIDERIO 140.84 265 *e*P **PKPdf** **18 52 31.8 +0.6**
060A Indiantown 140.85 353 IAMs_20 IAMs_20 20 04 08.5
comp=Z,1µm,20.0s
SPB Sao Paulo 142.57 247 IAMs_20 IAMs_20 19 45 04.3
comp=Z,1µm,22.0s
SMTB Santa Maria do 143.09 271 *e*P **PKPdf** **18 52 35.8 +0.6**
GDSD La Dsirade Is 143.17 319 IAMs_20 IAMs_20 19 56 46.6
comp=Z,1µm,22.0s
SEUS St. Eustatius 143.44 323 IAMs_20 IAMs_20 19 57 25.3
comp=Z,1µm,21.0s
SABA Saba 143.49 324 IAMs_20 IAMs_20 19 59 42.6
comp=Z,1µm,21.0s
CBE Ff, Capester 143.69 320 IAMs_20 IAMs_20 19 57 01.6
comp=Z,1µm,21.0s
BDFB Brasilia 143.95 260 PKP **PKPdf** **18 52 37.1 +0.3**
comp=Z,9.8nm,0.8s,baz=120,slow=3.7,SNR=6.2
BB19B Bebedouro 144.00 251 *e*P **PKPdf** **18 52 37.9 +1.1**

IPMB	**Ipameri, GO**	**144.04 256**	*eP*		**PKPdf**	**18 52 37.9**	**+1.0**
FDFM	**Morne la Roset**	**144.39 318**			**PKPab**	**18 52 33.7**	**-1.9**
COYC	**Coyhaique**	**144.86 196**			**PKPab**	**18 52 33.9**	**-2.5**
ITAB	**Concordia**	**145.71 239**	*eP*		**PKPab**	**18 52 40.6**	**+0.4**
UNM	**Universidad Na**	**145.80 24**	IAMs_20	IAMs_20		20 08 34.0	
	comp=Z,947nm,20.0s						
LDASE	**Londrina, Braz**	**145.92 246**	*eP*		**PKPbc**	**18 52 40.7**	**0.0**
SDDR	**Presa de Saban**	**146.30 336**	IAMs_20	IAMs_20		20 00 51.7	
	comp=Z,1µm,22.0s						
PTGB	**Pitanga**	**146.42 243**	*eP*		**PKPbc**	**18 52 41.6**	**-0.6**
GTBY	**Guantanamo Bay**	**146.73 343**	IAMs_20	IAMs_20		20 11 29.7	
	comp=Z,949nm,19.0s						
ANCO	**Parque Anchore**	**146.94 224**	*eP*		**PKPbc**	**18 52 43.1**	**-0.1**
TRQA	**Tornquist**	**146.97 214**	IAMs_20	IAMs_20		19 57 45.6	
	comp=Z,1µm,18.0s						
SNDB	**Serra Nova Dou**	**147.05 267**	*eP*		**PKPbc**	**18 52 43.3**	**-0.9**
TRCB	**Terra Rica**	**147.41 247**	*eP*		**PKPbc**	**18 52 44.1**	**-0.9**
ARAG	**Araguaiana, MT**	**147.61 260**	*eP*		**PKPdf**	**18 52 43.2**	**+0.3**
TEIG	**Tepich**	**147.73 6**	IAMs_20	IAMs_20		20 03 20.8	
	comp=Z,1µm,22.0s						
PSAL	**Palomas, Salto**	**148.43 229**	*eP*		**PKPbc**	**18 52 47.0**	**-0.3**
PLCA	**Paso Flores**	**148.76 201**	PKPbc		**PKiKP**	**18 52 48.8**	**-0.7**
	comp=Z,18nm,1.1s,baz=142,slow=4.9,SNR=8.8						
PLCA	**Paso Flores**	**148.76 201**	*eP*		**PKPdf**	**18 52 45.0**	**+0.7**
MTDJ	**Mount Denham**	**148.99 346**	IAMs_20	IAMs_20		20 05 42.4	
	comp=Z,1µm,20.0s						
CMIG	**Matias Romero**	**149.41 19**	PKPbc		**PKPbc**	**18 52 49.3**	**-0.9**
	comp=Z,12nm,0.9s,baz=0.4,slow=4.0,SNR=9.5						
AMBA	**Amambai (Brazi**	**149.48 245**	*eP*		**PKPdf**	**18 52 48.0**	**+2.2**
LR05	**Currie**	**149.71 200**			**PKPdf**	**18 52 40.5**	**-5.1**
ITTB	**Itaituba**	**150.06 282**	*eP*		**PKPdf**	**18 52 46.7**	**-0.3**
NPGB	**Novo Progresso**	**150.36 277**	*eP*		**PKPdf**	**18 52 47.6**	**+0.1**
CPUP	**Villa Florida**	**150.37 237**	PKPbc		**PKPbc**	**18 52 52.1**	**-0.2**
	comp=Z,9.3nm,0.9s,baz=110,slow=0.9,SNR=13						
PP1B	**Ponte de Pedra**	**150.40 256**	*eP*		**PKPdf**	**18 52 48.5**	**+1.1**
SALV	**Santo Antonio**	**151.33 259**	*eP*		**PKPdf**	**18 52 49.1**	**+0.2**
CLDB	**Colider**	**151.36 269**	*eP*		**PKPdf**	**18 52 50.1**	**+1.2**
BOAV	**Boa Vista**	**151.74 299**	*eP*		**PKPdf**	**18 52 49.3**	**-0.3**
MURT	**Porto Murtinho**	**152.16 246**	*eP*		**PKPdf**	**18 52 51.3**	**+1.4**
BO02	**Sierra Bellavi**	**153.97 207**	IAMs_20	IAMs_20		20 04 12.2	
	comp=Z,1µm,19.0s						
PTLB	**Pontes e Lacer**	**154.67 259**	PKPdf		**PKPdf**	**18 52 47.9**	**-5.8**
PTLB					**pPKPdf**	**18 52 58.2**	**+0.2**
PTLB	**Pontes e Lacer**	**154.67 259**	*eP*		**PKPdf**	**18 52 53.4**	**-0.3**
SDV	**Santo Domingo**	**154.74 325**	PKPdf		**PKPdf**	**18 52 48.5**	**-5.6**
SDV					**pPKPdf**	**18 52 58.2**	**-0.3**
SDV	**Santo Domingo**	**154.74 325**	*eP*		**PKPdf**	**18 52 53.2**	**-1.0**
MT01	**Popeta**	**154.95 208**			**PKPdf**	**18 52 50.8**	**-2.9**
CFA	**Coronel Fontan**	**155.18 216**	PKP		**PKPdf**	**18 52 54.3**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=283,slow=1.2,SNR=4.4						
CFA			PKPab		**PKPab**	**18 53 16.5**	**-2.2**
	comp=Z,9.1nm,1.0s,baz=196,slow=1.9,SNR=9.3						
VILB	**Vilhena**	**155.78 265**	*eP*		**PKPdf**	**18 52 57.5**	**+2.2**
BBSD	**Serra de San D**	**155.88 255**	*eP*		**PKPdf**	**18 52 55.2**	**-0.2**
SIV	**San Ignacio**	**156.47 258**	PKP		**PKPdf**	**18 52 56.7**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=55,slow=1.8,SNR=7.1						
GO04	**Tololo Observa**	**157.70 214**	IAMs_20	IAMs_20		20 09 05.7	
	comp=Z,843nm,20.0s						
JTS	**Las Juntas de**	**157.77 360**	IAMs_20	IAMs_20		20 09 15.7	
	comp=Z,872nm,22.0s						
HDC	**Heredia**	**158.04 358**	IAMs_20	IAMs_20		20 16 00.8	
	comp=Z,801nm,20.0s						
AC02	**Maricunga**	**159.08 223**	IAMs_20	IAMs_20		20 04 00.3	
	comp=Z,1µm,20.0s						
LPAZ	**La Paz**	**163.12 254**	PKP		**PKPdf**	**18 53 04.8**	**+0.4**
	comp=Z,4.0nm,1.1s,baz=70,slow=0.9,SNR=9.1						
LPAZ			PKPab		**PKPab**	**18 53 54.4**	**-0.1**
	comp=Z,28nm,1.1s,baz=71,slow=5.2,SNR=18						
LPAZ	**La Paz**	**163.12 254**	*eP*		**PKPdf**	**18 53 06.7**	**+2.2**
OTAV	**Otavalo**	**166.14 332**	*eP*		**PKPdf**	**18 53 08.9**	**+1.8**
ATAH	**Atahualpa**	**171.84 306**	PKPab		**PKPab**	**18 54 32.5**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=18,slow=6.4,SNR=2.3						

JMA 17 18:40:28.9±0.0, 39.5N±0.1×141.7E±0.2, h9km, MV0.6/21, SOUTHERN IWATE PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.12**	**53**	*i* P	Pg	18 40 31.7	+0.1
MIYJ				S	Sg	18 40 33.5	-0.1
JOM	**Ohasama**	**0.32**	**264**	P	Pg	18 40 35.4	+0.2
JOM				*eS*	Sg	18 40 39.8	+0.4
OFUJ	**Ofunato**	**0.43**	**183**	P	Pg	18 40 37.0	-0.2
OFUJ				*eS*	Sg	18 40 43.0	+0.1
JTH	**Tanohata**	**0.45**	**16**	*eP*	Pg	18 40 37.8	+0.1
JTH				*eS*	Sg	18 40 43.6	+0.1
JKZ	**Kuzumaki**	**0.56**	**329**	*eS*	Sg	18 40 46.5	-0.5
JMK	**Ichinoseki**	**0.67**	**214**	*eP*	Pg	18 40 42.0	+0.2
JMK				*eS*	Sg	18 40 50.4	-0.1

*NEIC **17** 18:41:32.7±2.1, 14.88S±0.09×167.5E±0.1, h124km±7km, mb4.5/29, Error ellipse: s-maj=16.1km s-min=11.4km az=64.0*
*IDC **17** 18:41:33.7±3.4, 14.86S×167.39E, h132km±28km, mb3.8/7, mbtmp4.2/9, Error ellipse: s-maj=28.1km s-min=21.7km az=60.0*
*NOU **17** 18:41:35.4, 15.01S×167.22E, h85km, MLv4.9/21, Vanuatu Islands*
ISC 17 18:41:33.3±0.6, 14.90S±0.07×167.43E±0.08, h129km, n55, σ1§07/56, mb4.4/17, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.90**	**166**	P	**Pn**	**18 42 19.3**	**+0.7**
RTV	**Rentapao**	**3.03**	**162**	P	**Pn**	**18 42 21.8**	**+1.6**
KOUNC	**Koumac, New Ca**	**6.37**	**208**	P	**Pn**	**18 43 05.0**	**+0.2**
MARNC	**Mare, Loyalty**	**6.57**	**175**	P	**Pn**	**18 43 06.2**	**-1.2**
HURO	**Huro Makira**	**6.97**	**309**	P	**Pn**	**18 43 12.7**	**-0.2**
YATNC	**Mamie plateau,**	**7.14**	**184**	P	**Pn**	**18 43 15.0**	**-0.1**
DZM	**Mont Dzumac**	**7.19**	**187**	P	**Pn**	**18 43 15.2**	**-0.8**
	8.2nm,0.3s,baz=310,slow=13,SNR=27						
DZM				S	**Sn**	**18 44 35.6**	**-0.7**
	8.7nm,0.3s,baz=156,slow=22,SNR=5.7						
NOUC	**Port Laguerre**	**7.24**	**188**	P	**Pn**	**18 43 17.5**	**+1.0**
ONTNC	**Ouen Toro**	**7.42**	**187**	P	**Pn**	**18 43 20.1**	**+1.1**
OUENC	**Ouen Island, N**	**7.50**	**184**	P	**Pn**	**18 43 21.2**	**+1.2**
NGOA	**Tingoa Renbel**	**7.91**	**294**	P	**Pn**	**18 43 25.6**	**0.0**
HNR	**Honiara**	**9.12**	**306**	P	**Pn**	**18 43 43.3**	**+1.5**
	3.0nm,0.3s,baz=17,slow=3.9,SNR=5.2						
HNR	**Honiara**	**9.12**	**306**	Pn	**Pn**	**18 43 41.3**	**-0.5**
HNR				Sn	**Sn**	**18 45 21.3**	**-1.4**
SAVO	**Savo Central**	**9.39**	**307**	P	**Pn**	**18 43 48.0**	**+2.5**
EIDS	**Eidsvold**	**18.53**	**233**	P	**Pn**	**18 45 41.8**	**+0.1**
EIDS				IAmb	IAmb	18 45 42.7	
	comp=Z,13nm,0.7s						
PMG	**Port Moresby**	**20.55**	**283**	P	Pn	18 46 07.6	+2.2
PMG				IAmb	IAmb	18 46 42.4	
	comp=Z,23nm,0.9s						
CTA	**Charters Tower**	**20.84**	**253**	P	**P**	**18 46 06.0**	**+1.1**
	comp=Z,5.1nm,0.7s,baz=74,slow=13,SNR=2.7						
	comp=Z,5.1nm,0.7s						
CTAO	**Charters Tower**	**20.84**	**253**	P	**P**	**18 46 06.1**	**+1.1**
TOZ	**Tahuroa Road**	**23.84**	**164**	P	**P**	**18 46 36.1**	**+1.6**
TOZ				IAmb	IAmb	18 46 37.8	
	comp=Z,48nm,1.4s						
RTZ	**Ruatahuna**	**25.08**	**162**	P	**P**	**18 46 46.1**	**+0.2**
MRZ	**Mangatainoka R**	**26.63**	**166**	P	**P**	**18 46 59.0**	**-0.8**
INKA	**Innaminka**	**27.88**	**238**	P	**P**	**18 47 11.0**	**0.0**
LTZ	**Lake Taylor**	**28.09**	**172**	P	**P**	**18 47 13.2**	**+0.4**
STKA	**Stephens Creek**	**29.00**	**230**	P	**P**	**18 47 22.1**	**+1.1**
	comp=Z,3.0nm,0.6s,baz=60,slow=9.5,SNR=7.4						
	comp=Z,3.0nm,0.6s						
LBZ	**Lake Benmore**	**29.48**	**176**	P	**P**	**18 47 24.9**	**-0.2**
LBZ				IAmb	IAmb	18 47 57.5	
	comp=Z,21nm,1.3s						
WR8	**Warramunga Arr**	**31.79**	**256**	P	**P**	**18 47 44.1**	**-1.6**
WR8				IAmb	IAmb	18 47 59.3	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**31.88**	**256**	P	**P**	**18 47 44.8**	**-1.7**
WB0				IAmb	IAmb	18 47 59.3	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**31.94**	**256**	P	**P**	**18 47 45.8**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=82,slow=7.2,SNR=9.3						
	comp=Z,0.9nm,0.6s						
AS31	**Alice Springs**	**32.76**	**249**	P	**P**	**18 47 53.2**	**-1.0**
ASAR	**Alice Springs**	**32.76**	**249**	P	**P**	**18 47 53.2**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=77,slow=9.2,SNR=36						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**32.76**	**249**	P	**P**	**18 47 52.9**	**-1.3**
BBOO	**Buckleboo**	**33.60**	**232**	P	**P**	**18 48 01.1**	**-0.3**
MTN	**Manton Dam**	**35.28**	**269**	P	**P**	**18 48 14.1**	**-1.9**
DPSS	**Saipan**	**36.80**	**324**	P	**P**	**18 48 30.3**	**+1.3**
KNRA	**Kununurra**	**37.28**	**264**	P	**P**	**18 48 32.0**	**-1.0**
KNRA				IAmb	IAmb	18 49 14.7	
	comp=Z,9.6nm,1.2s						
FITZ	**Fitzroy Crossi**	**40.14**	**260**	P	**P**	**18 48 56.0**	**-0.9**
PPTF	**Pamatai, Papee**	**41.31**	**100**	P	**P**	**18 49 04.4**	**-2.2**
MORW	**Morawa**	**49.34**	**244**	P	**P**	**18 50 09.5**	**-0.2**
VNDA	**Vanda**	**62.70**	**181**	P	**P**	**18 51 44.8**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=352,slow=6.8,SNR=7.5						
	comp=Z,2.4nm,0.9s						
VNDA	**Vanda**	**62.70**	**181**	P	**P**	**18 51 44.2**	**+0.3**
VNDA				IAmb	IAmb	18 51 45.1	
	comp=Z,3.8nm,1.2s						
SBA	**Scott Base**	**62.97**	**180**	P	**P**	**18 51 46.8**	**+1.1**
SBA				IAmb	IAmb	18 51 48.3	
	comp=Z,6.8nm,0.8s						
CASY	**Casey**	**63.43**	**202**	P	**P**	**18 51 49.0**	**+0.1**
CASY				IAmb	IAmb	18 51 49.8	
	comp=Z,4.5nm,0.9s						
QSPA	**South Pole Qui**	**75.13**	**180**	P	**P**	**18 53 01.8**	**+0.7**
	comp=Z,5.2nm,0.7s,baz=168,slow=6.8,SNR=28						
	comp=Z,5.2nm,0.7s						
QSPA	**South Pole Qui**	**75.13**	**180**	P	**P**	**18 53 01.4**	**+0.2**
QSPA				IAmb	IAmb	18 53 04.2	
	comp=Z,6.7nm,0.9s						
K15K	**Wolf Creek Mou**	**80.72**	**14**	P	**P**	**18 53 32.8**	**+1.1**
K15K				IAmb	IAmb	18 53 40.9	
	comp=Z,8.1nm,1.4s						
L16K	**Owhat River**	**80.72**	**15**	P	**P**	**18 53 32.8**	**+1.1**
L16K				IAmb	IAmb	18 54 09.1	
	comp=Z,8.7nm,1.5s						
MAW	**Mawson**	**81.78**	**202**	P	**P**	**18 53 37.4**	**-0.1**
ILAR	**Eielson Array**	**86.64**	**18**	P	**P**	**18 54 01.2**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=261,slow=5.5,SNR=2.7						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**86.64**	**18**	P	**P**	**18 54 00.6**	**-1.3**
F21K	**Alatna River**	**86.74**	**14**	P	**P**	**18 54 03.8**	**+1.4**
D20K	**Etivluk River**	**87.25**	**12**	P	**P**	**18 54 04.8**	**0.0**
D20K				IAmb	IAmb	18 54 35.4	
	comp=Z,12nm,1.4s						
TROLL	**Troll, Antarti**	**92.70**	**185**	⇓P	**P**	**18 54 30.6**	**+0.1**
	comp=Z,143nm,0.5s						
SNAA	**Sanae**	**93.39**	**183**	P	**P**	**18 54 32.9**	**-0.7**
SNAA				IAmb	IAmb	18 54 45.1	
	comp=Z,4.7nm,1.3s						
ARCES	**ARCESS Array B**	**120.46**	**345**	PKP	**PKPdf**	**19 00 08.5**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=50,slow=1.9,SNR=6.3						
ARCES	**ARCESS Array B**	**120.46**	**345**		**PKPdf**	**19 00 07.9**	**-1.0**

*IDC **17** 18:45:42.2±1.0, 15.72N×39.88E, h0km, mb3.6/8, mbtmp3.6/8, ML2.4/1, MS4.6/1, Error ellipse: s-maj=25.6km s-min=17.4km az=50.0*
*NEIC **17** 18:45:43.3±0.9, 15.67N±0.07×39.9E±0.1, h10km±2km, mb4.2/10, Error ellipse: s-maj=23.1km s-min=9.7km az=285.0*
ISC 17 18:45:43.4±0.7, 15.75N±0.09×39.8E±0.1, h10km, n27, σ0§90/25, mb3.9/11, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**5.12**	**145**	Pn	**Pn**	**18 47 00.0**	**-0.2**
	0.2nm,0.3s,baz=269,slow=10.0,SNR=6.7						
ATD				Pg	**Pb**	**18 47 14.2**	**+1.1**
	0.3nm,0.3s,baz=312,slow=10,SNR=8.9						
ATD				Lg	Lg	18 48 21.0	
	baz=275,slow=22,SNR=0.9						
ATD	**Arta Tunnel**	**5.12**	**145**		**Pn**	**18 46 58.3**	**-1.9**
RAYN	**Ar Rayn**	**9.39**	**34**	Pn	**Pn**	**18 47 58.9**	**0.0**
BRTR	**Keskin Array B**	**24.49**	**348**	P	**P**	**18 51 02.0**	**-1.0**
	0.8nm,0.7s,baz=179,slow=7.4,SNR=4.1						
	0.8nm,0.7s						
BRTR	**Keskin Array B**	**24.49**	**348**	P	**P**	**18 51 01.4**	**-1.6**
SNOP	**Sinop**	**26.48**	**352**	P	**P**	**18 51 19.4**	**-1.4**
SNOP				IAmb	IAmb	18 51 22.3	
	comp=Z,9.0nm,1.1s						
RDO	**Rodhopi**	**28.17**	**337**	P	**P**	**18 51 36.1**	**+0.1**
RDO				IAmb	IAmb	18 51 41.8	
	comp=Z,4.1nm,1.0s						
BURAR	**Bucovina Array**	**34.00**	**342**	P	**P**	**18 52 28.3**	**+0.8**
CASP	**Castiglione de**	**36.61**	**323**	P	**P**	**18 52 49.9**	**0.0**
TORD	**Torodi Ar. Bea**	**37.00**	**271**	P	**P**	**18 52 54.4**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=86,slow=7.8,SNR=6.9						
	comp=Z,3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**37.00**	**271**	P	**P**	**18 52 52.1**	**-1.4**
TORD				IAmb	IAmb	18 53 07.2	
	comp=Z,3.2nm,0.7s						
GEC2	**GERESS Array S**	**39.32**	**333**	P	**P**	**18 53 13.3**	**+0.5**
GEC2				IAmb	IAmb	18 53 17.8	
	comp=Z,3.1nm,1.1s						
GERES	**GERESS Array B**	**39.32**	**333**	P	**P**	**18 53 13.4**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=146,slow=9.7,SNR=6.3						
	comp=Z,0.9nm,0.9s						
GERES	**GERESS Array B**	**39.32**	**333**	P	**P**	**18 53 12.9**	**+0.1**
PALK	**Pallekele**	**40.85**	**97**	LR	LR	19 09 11.6	
	comp=Z,681nm,18.8s,baz=44,slow=34						
ESDC	**Sonseca Array**	**44.93**	**311**	P	**P**	**18 53 59.3**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=108,slow=9.0,SNR=4.4						
	comp=Z,1.1nm,1.1s						
ESDC	**Sonseca Array**	**44.93**	**311**	IAmb	IAmb	18 54 10.2	
	comp=Z,8.1nm,1.4s						
KURBB	**Kurchatov Arra**	**46.63**	**33**	P	**P**	**18 54 12.6**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=215,slow=15,SNR=2.0						
	comp=Z,0.3nm,0.7s						
KURK	**Kurchatov**	**46.73**	**33**	P	**P**	**18 54 12.6**	**0.0**
KURK	**Kurchatov**	**46.73**	**33**	IAmb	IAmb	18 54 19.2	
	comp=Z,6.3nm,1.3s						
MKAR	**Makanchi Array**	**46.83**	**39**	P	**P**	**18 54 14.3**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=215,slow=5.5,SNR=4.2						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**46.83**	**39**	P	**P**	**18 54 12.9**	**-0.6**
ZAA0	**Zalesovo Array**	**51.66**	**32**	P	**P**	**18 54 50.7**	**+0.3**
ZAA0				IAmb	IAmb	18 55 00.7	
	comp=Z,5.4nm,1.4s						
ZALV	**Zalesovo Beam**	**51.66**	**32**	P	**P**	**18 54 50.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=261,slow=7.4,SNR=4.0						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**51.66**	**32**	P	**P**	**18 54 49.8**	**-0.5**
SONM	**Songino Array**	**62.77**	**44**	P	**P**	**18 56 10.2**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=261,slow=5.5,SNR=4.0						
	comp=Z,0.6nm,0.7s						
SONM	**Songino Array**	**62.77**	**44**	P	**P**	**18 56 08.8**	**-0.5**

*IDC **17** 18:57:16.4±1.0, 12.25N×95.24E, h0km, mb3.5/10, mbtmp3.5/11, ML3.5/1, Error ellipse: s-maj=37.8km s-min=18.1km az=55.0*
*BKK **17** 18:57:20.7±0.8, 12.7N±3.3×9.5E±, h21km, M4.0/12, mB4.2/4, mb4.2/6, Mjma4.1/12, ML4.2/12, MLv4.1/12, Mw(mB)3.3/4*
ISC 17 18:57:17.5±0.9, 12.09N±0.10×95.2E±0.1, h10km, n15, σ1§22/14, mb3.5/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RNTT	**Ranong**	**4.16**	**130**	P	**Pn**	**18 58 21.1**	**0.0**
RNTT				S	**Sn**	**18 59 08.0**	**-1.8**
KHLT	**Khaolaem Dam**	**4.22**	**50**	P	**Pn**	**18 58 23.3**	**+1.4**
PKDT	**Phuket**	**5.17**	**144**	P	**Pn**	**18 58 34.9**	**0.0**
	0.3nm0.2nm1.5nm20nm,0.6s						
UTHA	**Uthaitani**	**5.34**	**49**	P	**Pn**	**18 58 38.8**	**+1.5**
CMAR	**Chiang Mai Arr**	**7.27**	**29**	Pn	**Pn**	**18 59 03.7**	**-0.1**
	0.2nm,0.3s,baz=219,slow=15,SNR=13						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**36.28**	**345**	P	P	19 04 19.4	-1.6
	1.0nm,1.0s,baz=163,slow=9.5,SNR=5.6						
	1.0nm,1.0s						
SONM	**Songino Array**	**36.84**	**13**	P	**P**	**19 04 24.7**	**-1.2**
	0.5nm,0.8s,baz=189,slow=8.4,SNR=4.5						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**40.79**	**344**	P	P	19 04 56.7	-2.1
	0.6nm,0.8s,baz=174,slow=7.9,SNR=4.9						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**42.57**	**351**	P	**P**	**19 05 12.3**	**-1.1**
	0.3nm,0.4s,baz=165,slow=6.0,SNR=1.9						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**49.94**	**129**	P	**P**	**19 06 12.9**	**+0.9**
	0.5nm,0.9s,baz=303,slow=7.4,SNR=12						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**51.89**	**133**	P	**P**	**19 06 27.7**	**+1.1**
	0.3nm,0.9s,baz=312,slow=6.7,SNR=11						
	0.3nm,0.9s						
BRTR	**Keskin Array B**	**60.58**	**309**	P	**P**	**19 07 27.6**	**-1.1**
	0.2nm,0.5s,baz=130,slow=6.8,SNR=7.3						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**69.53**	**331**	P	**P**	**19 08 25.8**	**-0.4**
	1.0nm,1.0s,baz=102,slow=8.0,SNR=4.7						
	1.0nm,1.0s						
HFS	**Hagfors**	**75.40**	**329**	P	**P**	**19 09 02.6**	**+1.4**
	1.2nm,0.8s,baz=69,slow=7.9,SNR=2.1						
	1.2nm,0.8s						
GERES	**GERESS Array B**	**75.45**	**318**	P	**P**	**19 09 03.0**	**+1.0**
	0.5nm,0.9s,baz=95,slow=4.7,SNR=9.4						
	0.5nm,0.9s						

*DJA **17** 19:57:42.1±0.4, 1.1N±5.5×12.4E±, h265km±5km, M4.1/20, mB4.5/1, mb4.0/4, MLv4.1/20, Mw(mB)3.7/1*
*IDC **17** 19:57:43.1±3.0, 1.20N×123.98E, h267km±33km, mb3.2/5, mbtmp3.9/8, Error ellipse: s-maj=37.6km s-min=15.0km az=73.0*
ISC 17 19:57:41.5±0.8, 1.24N±0.07×124.01E±0.09, h250km, n17, σ1§81/18, mb3.6/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**0.85**	**76**	P	**Pn**	**19 58 18.8**	**+3.0**
GTOI	**Gorontalo**	**1.17**	**239**	P	**Pn**	**19 58 20.1**	**+2.6**
LUWI	**Luwuk**	**2.58**	**209**	P	**Pn**	**19 58 29.5**	**-0.1**
SGSI	**Sangihe**	**2.86**	**32**	P	**Pn**	**19 58 34.6**	**+2.1**
TNTI	**Ternate**	**3.39**	**98**	P	**Pn**	**19 58 39.5**	**+1.2**
SANI	**Sanana**	**3.82**	**149**	P	**Pn**	**19 58 42.7**	**-0.5**
PCI	**Palu**	**4.69**	**243**	P	**Pn**	**19 58 54.3**	**+0.8**
MMSI	**Mamuju**	**6.42**	**233**	P	**Pn**	**19 59 15.9**	**+0.9**
CDOP	**Cateel, Davao**	**6.93**	**20**	*eP*	**Pn**	**19 59 22.9**	**+1.5**
CDOP				*eS*	**S**	**20 00 37.7**	**-3.8**
SIJI	**Sorong**	**7.55**	**106**	P	**Pn**	**19 59 31.4**	**+2.2**
	1.6nm,0.3s,baz=166,slow=21,SNR=4.4						
BATI	**Baumata**	**11.38**	**182**	P	**P**	**20 00 19.5**	**-1.8**
	20nm,0.5s,baz=103,slow=1.1,SNR=5.6						
FITZ	**Fitzroy Crossi**	**19.29**	**175**	P	**P**	**20 01 47.3**	**-0.7**
	1.5nm,0.6s,baz=354,slow=6.8,SNR=20						
WRA	**Warramunga Arr**	**23.36**	**155**	P	**P**	**20 02 27.9**	**-0.2**
	2.6nm,0.4s,baz=336,slow=10.0,SNR=90						
	2.6nm,0.4s						
ASAR	**Alice Springs**	**26.56**	**159**	P	**P**	**20 02 56.9**	**0.0**
	0.5nm,0.3s,baz=338,slow=9.9,SNR=22						
	0.5nm,0.3s						
STKA	**Stephens Creek**	**36.92**	**155**	P	**P**	**20 04 27.3**	**+0.6**
	0.9nm,0.3s,baz=326,slow=11,SNR=10						
	0.9nm,0.3s						
SONM	**Songino Array**	**48.86**	**344**	P	**P**	**20 06 01.9**	**-0.2**
	0.3nm,0.5s,baz=151,slow=6.6,SNR=2.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.10**	**327**	P	**P**	**20 07 09.1**	**+0.1**
	0.2nm,0.3s,baz=117,slow=7.9,SNR=8.0						
	0.2nm,0.3s						

IDC 17 20:18:34.7±2.3, 6.28S×130.19E, h136km±32km, mb3.4/1, mbtmp3.7/5, Error ellipse: s-maj=62.0km s-min=16.0km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.48**	**11**	P	Pn	20 19 56.2	+1.8
	5.2nm,0.2s,baz=66,slow=3.7,SNR=28						
SIJI				S	Sn	20 20 56.0	-0.5
	14nm,0.2s,baz=264,slow=23,SNR=18						
FITZ	**Fitzroy Crossi**	**12.56**	**200**	P	Pn	20 21 27.1	-1.7
	0.7nm,0.6s,baz=28,slow=11,SNR=9.8						
FITZ				S	Sn	20 23 36.1	-11
	2.1nm,0.5s,baz=186,slow=15,SNR=8.0						
WRA	**Warramunga Arr**	**14.17**	**164**	P	Pn	20 21 49.0	-0.4
	0.4nm,0.3s,baz=346,slow=12,SNR=27		

BLB					Lg	Lg	20 45 07.2		
	28nm,0.2s								
BOOM	**Boomskoye usch**	**2.57**	**291**	⇑	*e*P	**Pn**	**20 44 29.6**	**+0.3**	
BOOM				⇑	*e*S	**Sb**	**20 45 03.3**	**-2.2**	
KNOS	**Konyrlen**	**2.73**	**360**		Pg	**Pb**	**20 44 36.8**	**+0.3**	
	4.4nm,0.3s								
KNOS					Lg	Lg	20 45 12.9		
	13nm,0.2s								
DJR	**Jarkent**	**2.74**	**9**		Pg	**Pb**	**20 44 36.9**	**+0.4**	
	1.7nm,0.1s								
DJR					Lg	Lg	20 45 13.1		
	12nm,0.3s								
DJR	**Jarkent**	**2.74**	**9**		*e*P	**Pb**	**20 44 36.9**	**+0.4**	
	1.7nm,0.1s								
DJR					*e*S	**Sg**	**20 45 13.1**	**-2.3**	
	13nm,0.3s								
ARXS	**Arharly**	**2.77**	**339**		Pg	**Pb**	**20 44 37.5**	**+0.4**	
	3.2nm,0.5s								
ARXS					Lg	Lg	20 45 14.2		
	16nm,0.3s								
ARXS	**Arharly**	**2.77**	**339**		*e*P	**Pb**	**20 44 37.5**	**+0.4**	
	1.7nm,0.3s								
ARXS					*e*S	**Sg**	**20 45 14.2**	**-2.3**	
	16nm,0.3s								
KST	**Kastek**	**2.78**	**302**		Pg	**Pb**	**20 44 37.4**	**+0.1**	
	2.1nm,0.2s								
KST					Lg	Lg	20 45 14.0		
	16nm,0.4s								
KST	**Kastek**	**2.78**	**302**		*e*P	**Pb**	**20 44 37.4**	**+0.1**	
	2.1nm,0.2s								
KST					*e*S	**Sb**	**20 45 14.0**	**+2.5**	
	16nm,0.4s								
KAPS	**Kapalarasan**	**3.66**	**2**		*e*P	**Pb**	**20 44 53.0**	**+0.8**	
	1.5nm,0.1s								
KAPS					*e*S	**Sg**	**20 45 40.5**	**-4.4**	
	7.9nm,0.2s								
SGDS	**Sogindy**	**3.83**	**300**		Pg	**Pb**	**20 44 57.3**	**+2.2**	
	0.8nm,0.2s								
SGDS					Lg	Lg	20 45 48.0		
	2.9nm,0.4s								
MK31	**Makanchi Array**	**5.62**	**22**		Pn	**Pn**	**20 45 13.6**	**+2.5**	
	0.4nm,0.8s,baz=207,slow=15,SNR=4.2								
MK31				⇓	Sn	**Sn**	**20 46 18.1**	**+2.4**	
	0.4nm,0.5s,baz=205,slow=21								
MK31				⇑	Lg	Lg	20 46 43.1		
	0.1nm,0.3s,baz=201,slow=26								

MOS ***17*** *20:51:20.8±0.9,36°.73N×71°.51E,h178km,mb4.4/20,Error ellipse: s-maj=5.9km s-min=3.7km az=88.2*
IDC ***17*** *20:51:20.6±2.6,36°.65N×71°.49E,h166km±23km,mb3.7/22, mbtmp4.2/28,MS3.2/1,Error ellipse: s-maj=16.2km s-min=9.7km az=12.0*
GFZ ***17*** *20:51:22.9±0.3,37°.N±3°×7°.1E±°,h166km±3km,M4.1/17, mb4.5/17*
NEIC ***17*** *20:51:22.1±1.8,36°.75N±0°.05×71°.43E±0°.08,h179km±5km, mb4.3/102,Error ellipse: s-maj=9.1km s-min=7.0km az=66.0*
NNC ***17*** *20:51:27.1±2.5,37°.18N×71°.51E,h191km±22km,mb3.6, mpv4.6,Error ellipse: s-maj=22.1km s-min=12.9km az=16.0*

ISC 17 20:51:20.8±0.6,36°.70N±0°.04×71°.46E±0°.04,h168km±6km, n386,σ1$35/415,mb4.2/92,26C-27D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
MANEM	**Manem**	**0.86**	**12**			**Pn**	**20 51 49.0 +2.4**
MANEM				Sn		**Sn**	**20 52 08.0 +1.6**
GAR	**Garm**	**2.47**	**339**			**Pn**	**20 52 03.4 +0.8**
GAR				Sn		**Sn**	**20 52 32.5 -2.4**
GAR	**Garm**	**2.47**	**339**	P		**Pn**	**20 52 03.5 +1.0**
CHGR	**Chuyangaron**	**2.67**	**318**	*c i*	PN	**Pn**	**20 52 05.5 +0.5**
CHGR	**Chuyangaron**	**2.67**	**318**	Pn		**Pn**	**20 52 05.5 +0.5**
CHGR				Sn		**Sn**	**20 52 37.0 -2.3**
DRK	**Karamyk**	**2.79**	**5**	PN		**Pn**	**20 52 08.1 +1.6**
DRK							20 52 41.0
DRK	**Karamyk**	**2.79**	**5**			**Pn**	**20 52 08.1 +1.6**
DRK				Sn		**Sn**	**20 52 41.0 -1.1**
DRK	**Karamyk**	**2.79**	**5**	P		**Pn**	**20 52 08.3 +1.8**
SHAA	**Shahritus**	**2.80**	**289**			**Pn**	**20 52 07.5 +0.9**
SHAA				Sn		**Sn**	**20 52 41.2 -0.8**
KBL	**Kabul**	**2.92**	**223**	PN		**Pn**	**20 52 09.4 +1.2**
KBL	**Kabul**	**2.92**	**223**			**Pn**	**20 52 09.4 +1.2**
KBL				Sn		**Sn**	**20 52 44.7 -0.2**
KBL	**Kabul**	**2.92**	**223**	P		**Pn**	**20 52 09.7 +1.5**
NIL	**Nilore**	**3.38**	**154**	PN		**Pn**	**20 52 16.6 +2.9**
NIL							20 52 57.0
NIL	**Nilore**	**3.38**	**154**			**Pn**	**20 52 16.6 +2.9**
NIL				Sn		**Sn**	**20 52 57.0 +2.2**
NIL	**Nilore**	**3.38**	**154**	P		**Pn**	**20 52 16.8 +3.1**
BTK	**Batken**	**3.39**	**352**	PN		**Pn**	**20 52 15.3 +1.5**
BTK							20 52 54.0
BTK	**Batken**	**3.39**	**352**			**Pn**	**20 52 15.2 +1.5**
BTK				Sn		**Sn**	**20 52 54.0 -1.1**
BTK	**Batken**	**3.39**	**352**	P		**Pn**	**20 52 15.6 +1.8**
OHH	**Osh**	**3.95**	**15**	P		**Pn**	**20 52 22.2 +1.2**
KSH2	**Kashi**	**4.06**	**52**	Pn		**Pn**	**20 52 25.6 +3.2**
KSH2				Sn		**Sn**	**20 53 11.9 +1.4**
KSH2				smax		smax	
	comp=N,4μm,0.6s						
KSH2				smax		smax	
	comp=E,2μm,0.6s						
ARSB	**Arslanbob**	**4.76**	**14**	PN		**Pn**	**20 52 31.4 -0.1**
ARSB	**Arslanbob**	**4.76**	**14**			**Pn**	**20 52 31.4 -0.1**
ARSB				Sn		**Sn**	**20 53 23.1 -3.9**
JMU	**Jammu**	**4.79**	**144**	*e*P		**Pn**	**20 52 34.8 +2.8**
JMU				*e*S		**Sn**	**20 53 31.1 +3.6**
JMU				IAML			20 53 35.5
	comp=N,306nm,0.3s						
JMU				IAML			20 53 35.7
	comp=E,331nm,0.4s						
ARK	**Arkit**	**5.10**	**4**	P		**Pn**	**20 52 36.0 +0.1**
THN	**Thein Dam**	**5.53**	**139**	*e*P		**Pn**	**20 52 43.7 +2.1**
THN				*e*S		**Sn**	**20 53 44.8 -0.2**
IUG	**Iuzhnay**	**5.55**	**349**	*c i*	PN	**Pn**	**20 52 42.5 +0.7**
IUG	**Iuzhnay**	**5.55**	**349**	⇑	*i*P	**Pn**	**20 52 42.5 +0.7**
CHM	**Chimkent**	**5.79**	**346**	*e*	PN	**Pn**	**20 52 45.8 +1.0**
CHM				*e*S		**Sn**	**20 53 51.6 +0.8**
CHM	**Chimkent**	**5.79**	**346**	*e*P		**Pn**	**20 52 45.9 +1.0**
CHM				*e*S		**Sn**	**20 53 51.7 +0.8**
NRN	**Naryn**	**5.90**	**35**	PN		**Pn**	**20 52 46.1 -0.5**
NRN	**Naryn**	**5.90**	**35**			**Pn**	**20 52 46.1 -0.5**
UCH	**Uchtor**	**6.00**	**22**	P		**Pn**	**20 52 48.8 +0.7**
	SNR=87						
DZA	**Taraz**	**6.18**	**359**	*e*	PN	**Pn**	**20 52 50.8 +0.8**
DZA	**Taraz**	**6.18**	**359**	*e*P		**Pn**	**20 52 50.8 +0.8**
EKS2	**Erkin-Say**	**6.21**	**16**	P		**Pn**	**20 52 51.5 +1.0**
	SNR=38						
AAK	**Ala-Archa**	**6.37**	**21**	P		**Pn**	**20 52 53.4 +0.7**
	comp=E,25nm,0.3s,baz=200,slow=6.6,SNR=45						
AAK				S		**Sn**	**20 54 02.0 -2.8**
	comp=E,25nm,0.7s,baz=188,slow=8.1,SNR=4.9						
AAK	**Ala-Archa**	**6.37**	**21**	P		**Pn**	**20 52 53.6 +0.9**
	SNR=38						
AAK	**Ala-Archa**	**6.37**	**21**	P		**Pn**	**20 52 53.3 +0.7**
AAK				S		**Sn**	**20 54 01.4 -3.5**
AAK	**Ala-Archa**	**6.37**	**21**			**Pn**	**20 52 53.1 +0.5**
AAK	**Ala-Archa**	**6.37**	**21**	P		**Pn**	**20 52 53.7 +1.0**
KK31	**Karatay Array**	**6.43**	**354**	P		**Pn**	**20 52 53.8 +0.4**
	comp=E,13nm,0.3s,baz=175,slow=11,SNR=267						
KK31				⇑	S	**Sn**	**20 54 02.7 -3.5**
	comp=E,163nm,0.8s,baz=176,slow=15,SNR=24						
KK31	**Karatay Array**	**6.43**	**354**	PN		**Pn**	**20 52 53.5 +0.1**
KK31	**Karatay Array**	**6.43**	**354**			**Pn**	**20 52 53.5 +0.1**
KKAR	**Karatay Array**	**6.43**	**354**	PN		**Pn**	**20 52 53.7 +0.3**
KKAR	**Karatay Array**	**6.43**	**354**			**Pn**	**20 52 53.7 +0.3**
BRLS	**Boroldaу**	**6.44**	**349**	*e*	PN	**Pn**	**20 52 50.8 -2.7**
BRLS	**Boroldaу**	**6.44**	**349**	*e*P		**Pn**	**20 52 50.8 -2.7**
KBK	**Karagaybulak**	**6.53**	**23**	P		**Pn**	**20 52 55.9 +1.1**
	SNR=19						
FRU1	**Bishkek**	**6.57**	**21**	PN		**Pn**	**20 52 55.7 +0.5**
FRU1	**Bishkek**	**6.57**	**21**			**Pn**	**20 52 55.7 +0.5**
ULHL	**Ulahol**	**6.66**	**32**	P		**Pn**	**20 52 57.0 +0.5**
	SNR=21						
BHK	**Bhakra**	**6.68**	**141**	*e*P		**Pn**	**20 52 57.9 +1.1**
BHK				*e*S		**Sn**	**20 54 12.0 -0.2**
BHK				IAML			20 54 15.5
	comp=E,195nm,0.3s						
BHK				IAML			20 54 16.0
	comp=N,190nm,0.3s						
BOOM	**Boomskoye usch**	**6.73**	**30**	PN		**Pn**	**20 52 58.1 +0.6**
BOOM	**Boomskoye usch**	**6.73**	**30**			**Pn**	**20 52 58.1 +0.6**
BOOM	**Boomskoye usch**	**6.73**	**30**	P		**Pn**	**20 52 58.4 +1.0**
CHMS	**Chumysh**	**6.78**	**21**	P		**Pn**	**20 52 58.7 +0.7**
	SNR=14						
USP	**Ospenovka**	**6.96**	**19**	P		**Pn**	**20 53 00.4 +0.1**
	SNR=21						
TKM2	**Tokmak 2**	**6.98**	**26**	P		**Pn**	**20 53 01.3 +0.6**
	SNR=46						
KDJ	**Kajisay**	**7.00**	**37**	PN		**Pn**	**20 53 01.1 +0.1**
KDJ	**Kajisay**	**7.00**	**37**			**Pn**	**20 53 01.1 +0.1**
KDJ	**Kajisay**	**7.00**	**37**	P		**Pn**	**20 53 01.5 +0.5**
TARG	**Taragay, Kyrgy**	**7.03**	**43**	PN		**Pn**	**20 53 02.0 +0.4**
TARG	**Taragay, Kyrgy**	**7.03**	**43**			**Pn**	**20 53 02.0 +0.4**
TARG	**Taragay, Kyrgy**	**7.03**	**43**	P		**Pn**	**20 53 02.3 +0.7**
SGDS	**Sogindy**	**7.17**	**19**	*e*P		**Pn**	**20 53 03.0 -0.1**
WUS	**Wushi**	**7.53**	**51**			**Pn**	**20 53 08.9 +0.9**
TNSS	**Tian-Shan**	**7.60**	**32**	*e*	PN	**Pn**	**20 53 09.6 +0.4**
TNSS	**Tian-Shan**	**7.60**	**32**	*e*P		**Pn**	**20 53 09.6 +0.4**
KLP	**Kalpa**	**7.63**	**131**	*e*P		**Pn**	**20 53 10.3 +0.7**
KLP				*e*S		**Sn**	**20 54 31.4 -3.9**
KLP				IAML			20 54 36.7
	comp=N,350nm,0.7s						
KLP				IAML			20 54 39.3
	comp=E,332nm,0.4s						
AAA	**Alma-Ata**	**7.73**	**31**	*e*	PN	**Pn**	**20 53 11.2 +0.7**
AAA	**Alma-Ata**	**7.73**	**31**	*e*P		**Pn**	**20 53 11.3 +0.7**
MDOK	**Medeo**	**7.75**	**32**	*e*	PN	**Pn**	**20 53 11.4 +0.5**
MDOK	**Medeo**	**7.75**	**32**	*e*P		**Pn**	**20 53 11.4 +0.5**
HRA	**Herat**	**7.86**	**256**			**Pn**	**20 53 12.5 0.0**
PRZ	**Przheval'sk**	**7.87**	**41**	PN		**Pn**	**20 53 13.8 +1.2**
PRZ	**Przheval'sk**	**7.87**	**41**			**Pn**	**20 53 13.8 +1.2**
PRZ	**Przheval'sk**	**7.87**	**41**	P		**Pn**	**20 53 14.4 +1.8**
KUU	**Kurty**	**8.09**	**26**	*e*	PN	**Pn**	**20 53 15.9 +0.6**
KUU	**Kurty**	**8.09**	**26**	*e*P		**Pn**	**20 53 15.1 -0.2**
SATY	**Saty**	**8.29**	**38**	*e*	PN	**Pn**	**20 53 18.2 +0.2**
SATY	**Saty**	**8.29**	**38**	*e*P		**Pn**	**20 53 18.2 +0.2**
UTK	**UTTARKASHI**	**8.32**	**134**	*e*P		**Pn**	**20 53 19.7 +1.1**
UTK				*e*S		**Sn**	**20 54 47.6 -4.0**
UTK				IAML			20 54 50.1
	comp=E,286nm,0.1s						
UTK				IAML			20 54 50.7
	comp=N,315nm,0.4s						
UZB	**Uzynbulak**	**8.67**	**40**	*e*	PN	**Pn**	**20 53 23.5 +0.5**
UZB	**Uzynbulak**	**8.67**	**40**	*e*P		**Pn**	**20 53 23.5 +0.5**
KPKS	**Kokpek**	**8.73**	**37**	*e*	PN	**Pn**	**20 53 24.1 +0.3**
KPKS	**Kokpek**	**8.73**	**37**	*e*P		**Pn**	**20 53 24.1 +0.3**
SHLS	**Shalkode**	**8.90**	**41**	*e*P		**Pn**	**20 53 29.4 +3.3**
SHLS	**Shalkode**	**8.90**	**41**	*e*P		**Pn**	**20 53 29.5 +3.3**
PDGK	**Podgornoye**	**9.04**	**40**	⇑P		**Pn**	**20 53 27.6 -0.3**
	comp=N,30nm,0.7s						
PDGK				⇑	S	**Sn**	**20 55 05.7 -2.8**
	comp=N,6.9nm,0.7s						
PDGK	**Podgornoye**	**9.04**	**40**	PN		**Pn**	**20 53 27.5 -0.4**
PDGK	**Podgornoye**	**9.04**	**40**			**Pn**	**20 53 27.5 -0.4**
JOSI	**Joshimath**	**9.12**	**130**	*e*P		**Pn**	**20 53 30.6 +1.5**
JOSI				IAML			20 53 31.9
	comp=N,75nm,0.8s						
JOSI				*e*S		**Sn**	**20 55 04.4 -6.3**
JOSI				IAML			20 55 10.8
	comp=E,216nm,0.1s						
JOSI				IAML			20 55 11.8
	comp=N,131nm,0.4s						
UDPR	**Udaipur**	**12.24**	**170**	*e*P		**P**	**20 54 14.0 -1.3**
UDPR				*e*S		**Sn**	**20 56 19.2 -6.3**
MAKZ	**Makanchi**	**12.78**	**35**	P		**Pn**	**20 54 15.6 -0.8**
MAKZ	**Makanchi**	**12.78**	**35**			**Pn**	**20 54 15.6 -0.8**
MAKZ	**Makanchi**	**12.78**	**35**	P		**Pn**	**20 54 15.9 -0.5**
MK31	**Makanchi Array**	**12.91**	**35**	P		**Pn**	**20 54 18.5 +0.4**
	comp=N,3.1nm,0.5s,baz=220,slow=13,SNR=106						
MK31	**Makanchi Array**	**12.91**	**35**	*ce*	P	**Pn**	**20 54 17.5 -0.6**
MKAR	**Makanchi Array**	**12.91**	**35**	P		**Pn**	**20 54 18.4 +0.2**
	comp=N,2.9nm,0.5s,baz=221,slow=14,SNR=46						
MKAR	**Makanchi Array**	**12.91**	**35**			**Pn**	**20 54 17.4 -0.8**
WMQ	**Urumqi**	**14.28**	**55**	*e*P		**Pn**	**20 54 36.0 +0.6**
WMQ				pmax		pmax	
	comp=Z,15nm,1.1s						
BHPL	**Bhopal**	**14.37**	**157**	*e*P		**P**	**20 54 41.0 +2.0**
ZSN	**Zaisan**	**14.62**	**39**	*e*P		**Pn**	**20 54 40.5 +0.9**
ZSN	**Zaisan**	**14.62**	**39**	*e*P		**Pn**	**20 54 40.5 +0.9**
KURBB	**Kurchatov Arra**	**14.81**	**18**	P		**P**	**20 54 43.2 -0.3**
	comp=Z,10nm,0.6s,baz=206,slow=10,SNR=41						
KURBB				S		**S**	**20 57 28.9 -1.8**
	comp=Z,2.4nm,1.0s,baz=208,slow=19,SNR=5.7						
KURBB	**Kurchatov Arra**	**14.81**	**18**	⇓P		**P**	**20 54 43.2 -0.3**
	comp=Z,19nm,0.5s						
KURK	**Kurchatov**	**14.92**	**18**	⇓P		**P**	**20 54 44.5 -0.2**
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**14.92**	**18**	P		**Pn**	**20 54 43.3 0.0**
KURK				S		**Sn**	**20 57 29.0 -0.3**
KURK	**Kurchatov**	**14.92**	**18**			**Pn**	**20 54 41.7 -1.5**
KURK	**Kurchatov**	**14.92**	**18**	P		**Pn**	**20 54 45.0 +0.2**
AB31	**Akbulak array**	**15.09**	**330**	⇓P		**Pn**	**20 54 44.3 -1.1**
	comp=Z,1.4nm,0.3s,baz=140,slow=12,SNR=94						
AB31				⇑	S	Sn	20 57 20.3 -13
	comp=Z,5.7nm,0.7s,baz=117,slow=39,SNR=6.0						
AB31	**Akbulak array**	**15.09**	**330**			**Pn**	**20 54 43.7 -1.7**
ABKAR	**Akbulak array**	**15.09**	**330**			**Pn**	**20 54 44.0 -1.4**
EVN	**Everest**	**15.62**	**120**			**Pn**	**20 54 52.2 -0.5**
EVN	**Everest**	**15.62**	**120**	P		**P**	**20 54 53.9 +0.5**
BVAR	**Borovoye Array**	**16.34**	**358**	P		**Pn**	**20 55 01.9 +1.3**
	comp=Z,4.5nm,0.6s,baz=158,slow=10,SNR=17						
BVAR				S		**S**	**20 58 00.1 -1.1**
	comp=Z,3.3nm,0.9s,baz=172,slow=22,SNR=5.4						
BORK	**Borovoye**	**16.36**	**358**	P		**P**	**20 54 59.5 -1.2**
BORK				pmax		pmax	
	comp=Z,5.0nm,0.8s						
BORK	**Borovoye**	**16.36**	**358**			**P**	**20 54 59.5 -1.2**
AKTO	**Aktyubinsk**	**16.79**	**329**	P		**Pn**	**20 55 06.6 +0.5**
	comp=Z,17nm,0.5s,baz=140,slow=6.9,SNR=52						
AKTO	**Aktyubinsk**	**16.79**	**329**	⇑P		**Pn**	**20 55 06.3 +0.2**
	comp=Z,6.9nm,0.5s						
AKTO				⇓	S	**S**	**20 58 07.0 -4.7**
	comp=Z,2.9nm,0.7s						
DGZ	**Jazzator, Alta**	**17.40**	**37**	*de*P		**Pn**	**20 55 13.4 0.0**
DGZ				pmax		pmax	
	comp=Z,17nm,0.9s						
UOSS	**Minazif**	**17.55**	**232**			**P**	**20 55 13.2 -0.8**
LSA	**Lhasa**	**17.88**	**107**	P		**P**	**20 55 17.1 -0.9**
LSA				pmax		pmax	
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**17.88**	**107**	P		**P**	**20 55 17.1 -0.9**
LSA				IAmb		IAmb	20 55 24.2
	comp=Z,9.3nm,0.6s						
ZAA0	**Zalesovo Array**	**19.58**	**24**			**P**	**20 55 35.5 -0.2**
ZALV	**Zalesovo Beam**	**19.58**	**24**	P		**P**	**20 55 36.0 +0.3**
	comp=Z,8.0nm,0.3s,baz=215,slow=11,SNR=70						
ZALV	**Zalesovo Beam**	**19.58**	**24**	P		**P**	**20 55 36.0 +0.3**
ZALV	**Zalesovo Beam**	**19.58**	**24**			**P**	**20 55 35.5 -0.2**
SHL	**Shillong**	**20.66**	**117**	P		**P**	**20 55 48.1 +0.3**
SHL				pmax		pmax	
	comp=Z,10.0nm,0.7s						
SHL	**Shillong**	**20.66**	**117**	P		**P**	**20 55 48.1 +0.3**
SHL				IAmb		IAmb	20 55 51.9
	comp=Z,9.8nm,0.7s						
GNI	**Garni**	**21.19**	**288**	P		**P**	**20 55 54.0 +0.7**
	comp=Z,11nm,0.9s,baz=26,slow=4.9,SNR=6.1						
GNI				LR		LR	21 06 32.6
	comp=E,64nm,18.3s,baz=308,slow=43						
	comp=Z,11nm,0.9s						
GNI	**Garni**	**21.19**	**288**	*de*P		**P**	**20 55 56.5 +3.3**
GNI				pmax		pmax	
	comp=Z,25nm,1.3s						
GNI	**Garni**	**21.19**	**288**			**P**	**20 55 51.3 -2.0**
GNI	**Garni**	**21.19**	**288**	P		**P**	**20 55 56.3 +3.1**
	comp=Z,23nm,1.0s						
GNI	**Garni**	**21.19**	**288**	P		**P**	**20 55 56.6 +3.3**
ARTI	**Arti**	**21.58**	**340**	P		**P**	**20 55 57.2 +0.1**
	comp=Z,2.4nm,0.4s,baz=123,slow=3.4,SNR=6.2						
	comp=Z,2.4nm,0.4s						
ARTI	**Arti**	**21.58**	**340**	*c i*	P	**P**	**20 55 57.1 +0.1**
ARTI							20 56 36.8
ARTI				S		**S**	**20 59 46.5 +1.5**
ARTI				pmax		pmax	
	comp=Z,7.0nm,1.2s						
ARTI	**Arti**	**21.58**	**340**	P		**P**	**20 55 55.2 -1.8**
ARTI				IAmb		IAmb	20 55 58.1
	comp=Z,6.1nm,0.5s						
NCK	**Nalchik**	**22.30**	**296**	⇑	*e*P	**P**	**20 56 05.5 +1.0**
NCK				pmax		pmax	
	comp=Z,11nm,0.8s						
GTA2	**Gaotai**	**22.41**	**74**	*e*P		**P**	**20 56 07.9 +2.3**
GTA2				pmax		pmax	
	comp=Z,5.0nm,0.9s						
GEVA	**Gevas**	**22.56**	**283**	P		**P**	**20 56 05.5 -1.6**
EPOS	**Posof**	**22.75**	**291**	P		**P**	**20 56 11.8 +3.0**
KBZ	**Khabaz**	**22.84**	**297**	P		**P**	**20 56 09.5 +0.2**
	comp=Z,3.3nm,0.6s,baz=115,slow=8.1,SNR=13						
	comp=Z,3.3nm,0.6s						
KBZ	**Khabaz**	**22.84**	**297**	*ce*	P	**P**	**20 56 09.7 +0.3**
KBZ				pmax		pmax	
	comp=Z,4.0nm,0.7s						
SHA1	**Shidzhatmaz**	**23.01**	**297**	*c i*	P	**P**	**20 56 12.4 +1.1**
KIV	**Kislovodsk**	**23.02**	**297**	*e*P		**P**	**20 56 12.1 +0.9**
KIV				*e*S		**S**	**21 00 10.7 +1.7**
KIV				pmax		pmax	
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**23.02**	**297**	P		**P**	**20 56 10.3 -0.9**
KIV				IAmb		IAmb	20 56 48.6
	comp=Z,8.7nm,0.7s						
MORE	**Moreh**	**23.21**	**116**			**P**	**20 56 13.0 0.0**
MORE				IAmb		IAmb	20 56 16.7
	comp=Z,7.0nm,0.6s						
KNGR	**Kungurtug, Tuv**	**23.27**	**45**	*de*	P	**P**	**20 56 15.5 +2.2**
KNGR				pmax		pmax	
	comp=Z,18nm,0.8s						
KOPT	**Kop Dagi**	**24.44**	**287**	P		**P**	**20 56 23.3 -1.0**
KOPT				IAmb		IAmb	20 56 32.5
	comp=Z,8.3nm,1.3s						
RAYN	**Ar Rayn**	**25.92**	**247**	P		**P**	**20 56 36.4 -1.2**
RAYN				pmax		pmax	
	comp=Z,3.0nm,0.5s						
RAYN	**Ar Rayn**	**25.92**	**247**	P		**P**	**20 56 36.4 -1.2**
RAYN				IAmb		IAmb	20 56 43.2
	comp=Z,2.6nm,0.5s						
ARPR	**Arapgir-MALATY**	**26.17**	**285**	P		**P**	**20 56 38.5 -1.3**
GAZ	**Gaziantep**	**27.30**	**281**	P		**P**	**20 56 47.4 -2.4**
SONM	**Songino Array**	**27.91**	**55**	P		**P**	**20 56 55.8 +0.6**
	comp=Z,2.9nm,0.7s,baz=264,slow=9.4,SNR=22						
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**27.91**	**55**	*e*P		**P**	**20 56 56.9 +1.7**
SONM				pmax		pmax	
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**27.91**	**55**	P		**P**	**20 56 54.0 -1.3**
ULN	**Ulaanbaatar**	**28.36**	**56**	⇑	*e*P	**P**	**20 57 00.4 +1.2**
ULN				pmax		pmax	
	comp=Z,3.0nm,0.7s						
ULN	**Ulaanbaatar**	**28.36**	**56**	P		**P**	**20 56 58.4 -0.7**
ULN				IAmb		IAmb	20 57 01.5
	comp=Z,2.7nm,0.7s						
ULN	**Ulaanbaatar**	**28.36**	**56**	P		**P**	**20 57 00.9 +1.7**
SNOP	**Sinop**	**28.39**	**292**	P		**P**	**20 56 58.1 -1.2**
SNOP				IAmb		IAmb	20 57 14.3
	comp=Z,4.0nm,0.8s						
BZK	**Bozkurt**	**29.29**	**292**	P		**P**	**20 57 06.1 -1.2**
BR131	**Keskin Array S**	**29.73**	**287**	*de*P		**P**	**20 57 13.0 +1.7**
BR131	**Keskin Array S**	**29.73**	**287**			**P**	**20 57 10.6 -0.8**
BR131				IAmb		IAmb	20 57 14.0
	comp=Z,3.3nm,0.6s						
BRTR	**Keskin Array B**	**29.73**	**287**	P		**P**	**20 57 12.3 +0.9**
	comp=Z,2.2nm,0.5s,baz=103,slow=8.7,SNR=18						
	comp=Z,2.2nm,0.5s						
BRTR	**Keskin Array B**	**29.73**	**287**	*e*P		**P**	**20 57 13.1 +1.7**
BRTR				pmax		pmax	
	comp=Z,2.0nm,0.5s						
BRTR	**Keskin Array B**	**29.73**	**287**	P		**P**	**20 57 10.5 -0.9**
CMAR	**Chiang Mai Arr**	**30.23**	**120**	P		**P**	**20 57 17.1 +1.3**
	comp=Z,0.6nm,0.6s,baz=307,slow=9.4,SNR=7.6						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.23**	**120**	*e*P		**P**	**20 57 18.1 +2.3**
CMAR				pmax		pmax	
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.23**	**120**	P		**P**	**20 57 14.9 -1.0**
XAN	**Xi'an**	**30.54**	**84**	P		**P**	**20 57 20.1 +1.6**
XAN				pmax		pmax	
	comp=Z,6.0nm,0.8s						
ENH	**Enshi**	**32.20**	**90**	P		**P**	**20 57 32.5 -0.6**
AK10	**Malin Array Si**	**33.08**	**308**	P		**P**	**20 57 41.4 +1.0**
AK06	**Malin Array Si**	**33.11**	**308**	P		**P**	**20 57 41.6 +0.9**
AKASG	**Malin Array Be**	**33.11**	**309**	P		**P**	**20 57 41.1 +0.5**
	comp=Z,2.7nm,0.5s,baz=82,slow=7.5,SNR=18						
	comp=Z,2.7nm,0.5s						
AKASG	**Malin Array Be**	**33.11**	**309**	P		**P**	**20 57 39.3 -1.4**
AKBB	**Malin Array Si**	**33.11**	**309

PSZ	**Piszkesteto**	**39.07**	**303**	P		**P**	**20 58 30.8**	**-0.7**
PSZ				IAmb		IAmb	20 58 34.3	
	comp=Z,3.9nm,0.8s							
OJC	**Ojcow**	**39.08**	**307**	P		**P**	**20 58 30.3**	**-1.1**
OJC	**Ojcow**	**39.08**	**307**	P		**P**	**20 58 30.3**	**-1.1**
ITM	**Ithomi**	**39.23**	**286**	P		**P**	**20 58 32.6**	**-0.2**
KEK	**Kerkira**	**40.25**	**291**	P		**P**	**20 58 41.2**	**0.0**
VADS	**Vadso**	**40.26**	**339**	*e*P		**P**	**20 58 41.5**	**+0.7**
MAUC	**Maruska**	**40.37**	**306**	*e*P		**P**	**20 58 44.0**	**+1.9**
STEB	**Steborice**	**40.39**	**307**	*e*P		**P**	**20 58 43.2**	**+1.0**
MORC	**Moravsky Berou**	**40.54**	**306**	P		**P**	**20 58 43.3**	**-0.2**
MORC				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MORC	**Moravsky Berou**	**40.54**	**306**	P		**P**	**20 58 43.3**	**-0.2**
MORC	**Moravsky Berou**	**40.54**	**306**	*e*P		**P**	**20 58 44.8**	**+1.3**
KEV	**Kevo**	**40.75**	**338**	P		**P**	**20 58 44.6**	**-0.3**
KEV				pmax		pmax		
	comp=Z,15nm,1.3s							
KEV	**Kevo**	**40.75**	**338**	P		**P**	**20 58 44.5**	**-0.3**
KEV				IAmb		IAmb	20 59 19.4	
	comp=Z,15nm,1.3s							
KRLC	**Kraliky**	**41.02**	**307**	*e*P		**P**	**20 58 48.7**	**+1.3**
KRLC	**Kraliky**	**41.02**	**307**	*e*P		**P**	**20 58 48.7**	**+1.3**
ARA0	**ARCESS Array S**	**41.10**	**337**	*e*P		**P**	**20 58 48.0**	**+0.3**
ARCES	**ARCESS Array B**	**41.10**	**337**	P		**P**	**20 58 48.8**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=114,slow=7.6,SNR=17							
	comp=Z,0.8nm,0.3s							
ARCES	**ARCESS Array B**	**41.10**	**337**	P		**P**	**20 58 48.1**	**+0.3**
ARCES				IAmb		IAmb	20 59 09.3	
	comp=Z,8.6nm,1.2s							
VRAC	**Vranov**	**41.18**	**306**	*e*P		**P**	**20 58 50.1**	**+1.4**
VRAC	**Vranov**	**41.18**	**306**	P		**P**	**20 58 50.5**	**+1.8**
DPC	**Dobruska-Polom**	**41.30**	**307**	*e*P		**P**	**20 58 50.7**	**+1.0**
DPC	**Dobruska-Polom**	**41.30**	**307**	*e*P		**P**	**20 58 50.7**	**+1.0**
KRUC	**Moravsky**	**41.33**	**305**	*e*P		**P**	**20 58 50.9**	**+1.0**
CHVC	**Chvalec**	**41.47**	**308**	*e*P		**P**	**20 58 52.6**	**+1.6**
CHVC	**Chvalec**	**41.47**	**308**	*e*P		**P**	**20 58 52.6**	**+1.6**
RONA	**Rosalia, Austr**	**41.51**	**303**	*i* P		**P**	**20 58 52.7**	**+1.3**
	comp=Z,6.9nm,1.3s							
KTK1	**Kautokeino**	**41.58**	**336**	*e*P		**P**	**20 58 52.1**	**+0.5**
WINA	**Alland / Wiene**	**41.62**	**304**	*i* P		**P**	**20 58 51.9**	**-0.4**
	SNR=14							
CONA	**Conrad Observa**	**41.78**	**304**	*i* P		**P**	**20 58 55.1**	**+1.4**
	comp=Z,3.9nm,0.7s							
HEH	**HeiHe**	**41.83**	**53**	*e*P		**P**	**20 58 55.1**	**+1.2**
HEH				pmax		pmax		
	comp=Z,14nm,0.6s							
PRU	**Pruhonice**	**42.47**	**307**	*e*P		**P**	**20 59 00.6**	**+1.5**
PRU	**Pruhonice**	**42.47**	**307**	*e*P		**P**	**20 59 00.6**	**+1.5**
SOKA	**Soboth**	**42.48**	**302**	*i* P		**P**	**20 59 00.6**	**+1.2**
	comp=Z,9.5nm,1.3s							
JETT	**Jettan, Norway**	**42.72**	**336**	*e*P		**P**	**20 59 02.2**	**+1.2**
JETT				IAmb		IAmb	20 59 04.3	
	comp=Z,9.7nm,1.1s							
ZVC	**Zvikov**	**42.74**	**306**	*e*P		**P**	**20 59 03.2**	**+1.9**
BRG	**Berggiesshubel**	**42.79**	**308**	⇓*i* P		**P**	**20 59 03.0**	**+1.4**
BRG				Amp			20 59 03.5	
	comp=Z,3.3nm,0.5s							
SGRT	**San Giovanni R**	**42.82**	**295**	P		**P**	**20 59 01.4**	**-0.8**
MOA	**Molln**	**42.85**	**304**	*i* P		**P**	**20 59 03.4**	**+1.1**
	comp=Z,3.9nm,0.8s,SNR=4.2							
GERES	**GERESS Array B**	**43.12**	**305**	P		**P**	**20 59 05.0**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=90,slow=6.0,SNR=8.6							
	comp=Z,0.5nm,0.5s							
GERES	**GERESS Array B**	**43.12**	**305**	*e*P		**P**	**20 59 05.5**	**+1.0**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.5s							
GERES	**GERESS Array B**	**43.12**	**305**	P		**P**	**20 59 04.8**	**+0.3**
HFS	**Hagfors**	**43.14**	**322**	P		**P**	**20 59 04.8**	**+0.5**
	comp=Z,9.2nm,0.5s,baz=99,slow=9.5,SNR=59							
	comp=Z,9.2nm,0.5s							
KHC	**Kasperske Hory**	**43.17**	**306**	*e*P		**P**	**20 59 06.2**	**+1.4**
KHC	**Kasperske Hory**	**43.17**	**306**	*e*P		**P**	**20 59 06.2**	**+1.4**
KHC	**Kasperske Hory**	**43.17**	**306**	P		**P**	**20 59 05.0**	**+0.2**
TRO	**Tromso**	**43.23**	**336**	*e*P		**P**	**20 59 05.2**	**+0.3**
BIOA	**Bad Ischl, Aus**	**43.29**	**303**	*e*P		**P**	**20 59 05.9**	**+0.1**
	comp=Z,1.5nm,0.4s							
CLL	**Collm**	**43.35**	**309**	*i* P		**P**	**20 59 07.1**	**+0.9**
CLL				pmax		pmax		
	comp=Z,10.0nm,1.6s							
CLL	**Collm**	**43.35**	**309**	*i* P		**P**	**20 59 07.1**	**+0.9**
	comp=Z,10.0nm,1.6s							
CLL				*e*PP		**PP**	**21 00 50.0**	**-0.2**
MYKA	**Terra Mystica**	**43.43**	**302**	*e*P		**P**	**20 59 07.7**	**+0.7**
	comp=Z,3.8nm,1.2s							
TRI	**Trieste**	**43.49**	**301**	P		**P**	**20 59 08.0**	**+0.7**
TRI				pmax		pmax		
	comp=Z,23nm,1.2s							
TRI	**Trieste**	**43.49**	**301**	P		**P**	**20 59 08.0**	**+0.7**
SABO	**M.te Sabotino**	**43.56**	**301**	P		**P**	**20 59 08.5**	**+0.5**
KBA	**Koelnbreinsper**	**43.57**	**303**	*e*P		**P**	**20 59 09.7**	**+1.5**
	comp=Z,4.1nm,1.1s							
YAK	**Yakutsk**	**43.59**	**36***c*	*e*P		**P**	**20 59 08.0**	**+0.2**
YAK				pmax		pmax		
	comp=Z,8.0nm,0.7s							
YAK	**Yakutsk**	**43.59**	**36**			**P**	**20 59 07.8**	**0.0**
FAUS	**Fauske**	**43.80**	**332**	*e*P		**P**	**20 59 10.4**	**+1.0**
MOR8	**Moi Rana**	**43.82**	**331**	*e*P		**P**	**20 59 09.9**	**+0.2**
MOR8				IAmb		IAmb	20 59 10.4	
	comp=Z,7.0nm,0.5s							
STEI	**Steigen**	**43.96**	**333**	*e*P		**P**	**20 59 12.1**	**+1.4**
LESA	**Schwarzleotal**	**43.97**	**303**	*i* P		**P**	**20 59 12.0**	**+0.7**
	comp=Z,4.0nm,0.5s							
STAL	**STALIGIAL**	**44.13**	**302**	P		**P**	**20 59 12.7**	**+0.3**
STAL				IAmb		IAmb	20 59 13.7	
	comp=Z,7.8nm,1.2s							
ABTA	**Abfaltersbach**	**44.19**	**302**	*i* P		**P**	**20 59 13.6**	**+0.6**
	comp=Z,2.2nm,0.7s							
NC405	**NORSAR Array S**	**44.21**	**323**	P		**P**	**20 59 13.2**	**+0.3**
NC405				IAmb		IAmb	20 59 13.8	
	comp=Z,8.8nm,1.2s							
NC602	**NORSAR Array S**	**44.26**	**322**	*e*P		**P**	**20 59 13.2**	**-0.1**
NC602	**NORSAR Array S**	**44.26**	**322**	P		**P**	**20 59 12.5**	**-0.8**
NC602				IAmb		IAmb	20 59 29.7	
	comp=Z,11nm,1.2s							
NC303	**NORSAR Array S**	**44.38**	**323**	P		**P**	**20 59 14.7**	**+0.5**
NC303				IAmb		IAmb	20 59 15.5	
	comp=Z,7.5nm,0.6s							
NB201	**NORSAR Array S**	**44.41**	**323**	P		**P**	**20 59 14.5**	**0.0**
NB201				IAmb		IAmb	20 59 37.1	
	comp=Z,9.2nm,1.1s							
KONS	**Konsvik**	**44.42**	**331**	*e*P		**P**	**20 59 15.2**	**+0.9**
STOK	**Stokkvaagen**	**44.42**	**331**	*e*P		**P**	**20 59 15.2**	**+0.8**
NB2	**NORSAR Subarra**	**44.44**	**323**	P		**P**	**20 59 15.0**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=97,slow=7.9							
NB2	**NORSAR Subarra**	**44.44**	**323**	P		**P**	**20 59 15.0**	**+0.2**
NOA	**NORSAR Array B**	**44.44**	**323**	P		**P**	**20 59 14.9**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=101,slow=7.3,SNR=21							
	comp=Z,2.3nm,0.5s							
NOA	**NORSAR Array B**	**44.44**	**323**	P		**P**	**20 59 15.0**	**+0.2**
FDMO	**Fiordimonte**	**44.47**	**297**	P		**P**	**20 59 16.3**	**+1.1**
FDMO				IAmb		IAmb	20 59 35.5	
	comp=Z,8.4nm,1.2s							
NAO01	**NORSAR Array S**	**44.59**	**323**	P		**P**	**20 59 15.1**	**-0.8**
NBO00	**NORSAR Array S**	**44.65**	**323**	P		**P**	**20 59 16.0**	**-0.4**
NBO00				IAmb		IAmb	20 59 17.3	
	comp=Z,6.2nm,0.8s							
NC204	**NORSAR Array S**	**44.68**	**323**	P		**P**	**20 59 16.4**	**-0.3**
NC204				IAmb		IAmb	20 59 56.3	
	comp=Z,18nm,1.4s							
WTTA	**Wattenberg**	**44.70**	**303**	*i* P		**P**	**20 59 17.4**	**+0.2**
	comp=Z,7.1nm,1.1s							
WATA	**Walderalm**	**44.73**	**303**	*e*P		**P**	**20 59 17.5**	**+0.1**
	comp=Z,8.9nm,2.0s							
MURB	**Monte Urbino**	**44.82**	**297**	P		**P**	**20 59 20.2**	**+2.2**
MURB				IAmb		IAmb	20 59 21.1	
	comp=Z,8.4nm,0.6s							
CTI	**Castel Tesino**	**44.89**	**301**	P		**P**	**20 59 18.6**	**0.0**
CTI				pmax		pmax		
	comp=Z,6.0nm,0.6s							
CTI	**Castel Tesino**	**44.89**	**301**	P		**P**	**20 59 18.6**	**0.0**
CTI				IAmb		IAmb	20 59 19.9	
	comp=Z,5.8nm,0.6s							
SQTA	**Sankt Quirin**	**44.99**	**303**	*i* P		**P**	**20 59 19.3**	**-0.1**
	comp=Z,2.9nm,0.7s							
MOTA	**Moosalm**	**45.04**	**303**	*i* P		**P**	**20 59 19.6**	**-0.3**
	comp=Z,3.9nm,0.8s							
KONO	**Kongsberg**	**45.16**	**321**	P		**P**	**20 59 20.8**	**+0.4**
KONO				pmax		pmax		
	comp=Z,19nm,1.3s							
KONO	**Kongsberg**	**45.16**	**321**	*e*P		**P**	**20 59 21.0**	**+0.6**
KONO	**Kongsberg**	**45.16**	**321**	P		**P**	**20 59 20.8**	**+0.4**
KONO				IAmb		IAmb	20 59 34.3	
	comp=Z,19nm,1.3s							
FETA	**Feichten**	**45.35**	**303**	*e*P		**P**	**20 59 21.6**	**-0.7**
	comp=Z,3.8nm,1.3s							
FUORN	**Ofenpass-Fuorn**	**45.73**	**302**	P		**P**	**20 59 25.7**	**+0.3**
SALO	**Salr**	**45.74**	**301**	P		**P**	**20 59 26.1**	**+0.8**
DAVA	**Damuels**	**45.87**	**303**	*i* P		**P**	**20 59 26.7**	**+0.3**
	comp=Z,8.9nm,0.5s							
TUE	**Stuetta**	**46.38**	**302**	P		**P**	**20 59 30.6**	**+0.2**
BER	**Bergen**	**47.31**	**322**	*e*P		**P**	**20 59 38.1**	**+1.0**
SPITS	**Spitsbergen Ar**	**47.38**	**347**	P		**P**	**20 59 38.5**	**+1.0**
SPITS				pmax		pmax		
	comp=Z,20nm,1.3s							
SENIN	**Lac Senin/Sane**	**47.79**	**303**			**P**	**20 59 41.5**	**+0.2**
SENIN				IAmb		IAmb	20 59 42.4	
	comp=Z,5.0nm,0.7s							
KEST	**Kesra**	**49.32**	**289**	P		**P**	**20 59 54.1**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=333,slow=7.6,SNR=4.8							
	comp=Z,1.3nm,0.5s							
KEST	**Kesra**	**49.32**	**289**	P		**P**	**20 59 53.8**	**+0.8**
KEST				IAmb		IAmb	21 00 04.4	
	comp=Z,18nm,1.4s							
SSB	**Saint Sauveur**	**49.92**	**302**	P		**P**	**20 59 58.0**	**+0.6**
SSB				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SSB	**Saint Sauveur**	**49.92**	**302**	P		**P**	**20 59 58.0**	**+0.6**
EKA	**Eskdalemuir Ar**	**52.40**	**316**	P		**P**	**21 00 15.7**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=77,slow=6.4,SNR=6.0							
	comp=Z,1.2nm,0.7s							
CORI	**Orista**	**52.61**	**299**	P		**P**	**21 00 17.9**	**+0.6**
CEST	**Esterri de Car**	**52.97**	**300**	P		**P**	**21 00 20.1**	**0.0**
CEST				IAmb		IAmb	21 00 50.0	
	comp=Z,9.4nm,1.1s							
ESBB	**Sonseca Array**	**57.69**	**298**	P		**P**	**21 00 53.6**	**-0.2**
ESBB				IAmb		IAmb	21 00 56.8	
	comp=Z,3.4nm,1.0s							
ESDC	**Sonseca Array**	**57.69**	**298**	P		**P**	**21 00 54.4**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=56,slow=7.3,SNR=19							
	comp=Z,1.9nm,0.7s							
ESDC	**Sonseca Array**	**57.69**	**298**	P		**P**	**21 00 53.7**	**-0.1**
ESDC				IAmb		IAmb	21 00 54.6	
	comp=Z,6.3nm,1.3s							
PETK	**Petropavlovsk-**	**59.56**	**44**	P		**P**	**21 01 06.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=312,slow=3.5,SNR=4.1							
	comp=Z,0.6nm,0.5s							
PETK	**Petropavlovsk-**	**59.56**	**44**	P		**P**	**21 01 06.0**	**-0.5**
SUMG	**Summit**	**60.99**	**341**	P		**P**	**21 01 17.5**	**+1.2**
SUMG				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SUMG	**Summit**	**60.99**	**341**	P		**P**	**21 01 17.5**	**+1.2**
SUMG				IAmb		IAmb	21 01 56.3	
	comp=Z,3.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P		**P**	**21 01 48.5**	**-1.7**
	comp=Z,3.1nm,0.6s,baz=48,slow=6.0,SNR=22							
	comp=Z,3.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**66.09**	**269**	IAmb		IAmb	21 01 49.0	
	comp=Z,5.1nm,0.7s							
C19K	**Lookout Ridge**	**68.02**	**18**	P		**P**	**21 02 01.6**	**+0.1**
D19K	**Kuna River**	**68.84**	**18**	P		**P**	**21 02 06.2**	**-0.5**
D19K				IAmb		IAmb	21 02 07.2	
	comp=Z,3.6nm,0.9s							
E18K	**Tukpahlearik C**	**69.01**	**19**	P		**P**	**21 02 07.9**	**+0.3**
E18K				IAmb		IAmb	21 02 49.5	
	comp=Z,7.8nm,1.4s							
F15K	**North Star Dit**	**69.12**	**22**	P		**P**	**21 02 08.6**	**+0.3**
E19K	**Redstone River**	**69.85**	**18**	P		**P**	**21 02 12.5**	**-0.3**
E19K				IAmb		IAmb	21 02 37.4	
	comp=Z,4.8nm,1.2s							
NRS	**Narsarsuaq**	**69.86**	**333**	P		**P**	**21 02 13.5**	**+0.6**
NRS				pmax		pmax		
	comp=Z,16nm,0.8s							
NRS	**Narsarsuaq**	**69.86**	**333**	P		**P**	**21 02 13.5**	**+0.6**
E22K	**Anaktuvuk Pass**	**70.58**	**16**	P		**P**	**21 02 16.5**	**-0.8**
D25K	**Kavik River**	**70.68**	**13**	P		**P**	**21 02 19.4**	**+1.5**
D25K				IAmb		IAmb	21 02 40.2	
	comp=Z,8.2nm,1.4s							
G19K	**Purcell Mounta**	**70.90**	**19**	P		**P**	**21 02 18.9**	**-0.3**
F21K	**Alatna River**	**70.94**	**17**	P		**P**	**21 02 18.9**	**-0.5**
E24K	**Your Creek**	**71.33**	**15**	P		**P**	**21 02 22.3**	**+0.5**
H19K	**Roundabout Mou**	**71.54**	**19**	P		**P**	**21 02 23.2**	**+0.2**
H19K				IAmb		IAmb	21 02 35.1	
	comp=Z,7.7nm,1.4s							
IMAR	**Indian Mountai**	**71.87**	**18**	P		**P**	**21 02 24.7**	**-0.3**
K17K	**Iditarod**	**73.21**	**22**	P		**P**	**21 02 33.5**	**+0.5**
K17K				IAmb		IAmb	21 03 14.2	
	comp=Z,6.8nm,1.4s							
M14K	**Bethel**	**73.55**	**24**	P		**P**	**21 02 35.8**	**+0.8**
M14K				IAmb		IAmb	21 03 14.5	
	comp=Z,12nm,1.4s							
C36M	**Paulatuk**	**73.64**	**6**	P		**P**	**21 02 35.4**	**+0.1**
C36M				IAmb		IAmb	21 02 36.1	
	comp=Z,3.4nm,0.5s							
K20K	**Telida**	**73.90**	**20**	P		**P**	**21 02 37.2**	**+0.2**
K20K				IAmb		IAmb	21 02 38.6	
	comp=Z,10nm,1.3s							
CAST	**Castle Rocks**	**74.37**	**19**	P		**P**	**21 02 39.5**	**-0.2**
ILAR	**Eielson Array**	**74.48**	**16**	P		**P**	**21 02 40.0**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=301,slow=4.4,SNR=5.8							
	comp=Z,0.6nm,0.9s							
G30M	**tAoh Zraii Nji**	**74.50**	**11**	P		**P**	**21 02 40.7**	**+0.3**
KNRA	**Kununurra**	**75.02**	**123**	P		**P**	**21 02 43.1**	**-0.9**
KNRA				IAmb		IAmb	21 02 43.7	
	comp=Z,13nm,1.5s							
LBTB	**Lobatse**	**75.08**	**222**	P		**P**	**21 02 43.7**	**-0.7**
LBTB	**Lobatse**	**75.08**	**222**	P		**P**	**21 02 43.7**	**-0.7**
LBTB				IAmb		IAmb	21 02 45.5	
	comp=Z,11nm,1.5s							
I28M	**Miner Creek**	**75.28**	**13**	P		**P**	**21 02 44.3**	**-0.8**
TSUM	**Tsumeb**	**75.33**	**232**	P		**P**	**21 02 44.6**	**-1.3**
H31M	**Peel River**	**75.88**	**11**	P		**P**	**21 02 47.9**	**-0.4**
H31M				IAmb		IAmb	21 03 28.3	
	comp=Z,7.0nm,1.5s							
YKA	**Yellowknife Ar**	**81.03**	**3**	P		**P**	**21 03 16.8**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=351,slow=5.4,SNR=6.9							
	comp=Z,0.6nm,0.5s							
YKA	**Yellowknife Ar**	**81.03**	**3**	P		**P**	**21 03 16.2**	**-0.3**
WRA	**Warramunga Arr**	**81.78**	**122**	P		**P**	**21 03 20.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=324,slow=4.9,SNR=14							
	comp=Z,0.9nm,0.8s							
WRA	**Warramunga Arr**	**81.78**	**122**	P		**P**	**21 03 20.1**	**-1.0**
WB2	**Warramunga Arr**	**81.79**	**122**	P		**P**	**21 03 19.9**	**-1.3**
WB2				IAmb		IAmb	21 03 59.9	
	comp=Z,6.8nm,1.2s							
AS31	**Alice Springs**	**84.07**	**125**	P		**P**	**21 03 32.1**	**-0.7**
ASAR	**Alice Springs**	**84.07**	**125**	P		**P**	**21 03 32.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=312,slow=5.0,SNR=15							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**84.07**	**125**	P		**P**	**21 03 31.7**	**-1.1**

*JSN **17** 21:20:22.1±0.5, 18.°06N×77.°58W, h19km±3km, MD3.4, Confirmed Earthquake*

*SSNC **17** 21:20:23.2±2.5, 18.°19N×77.°60W, h20km±6km, MD3.3, ML2.8, MW2.7, Presumed earthquake*

ISC 17 21:20:21.2±1.4, **18.°07N**±0.°06×**77.°54W**±0.°03, **h19**km±3km, **n18**, σ1°**68**/37, **7C-7D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CVJ	**Coleyville**	**0.16**	**2**	⇓*i* P		**Pg**	**21 20 26.6**	**+0.9**
CVJ				⇑*i* S		**Sg**	**21 20 29.9**	**+1.0**
MTDJ	**Mount Denham**	**0.16**	**2**	*i* P		**Pg**	**21 20 26.6**	**+0.9**
MTDJ	**Mount Denham**	**0.16**	**2**	*e*P		**Pg**	**21 20 26.5**	**+0.7**
MTDJ				*e*S		**Sg**	**21 20 29.3**	**+0.5**
MTDJ				IAML			21 20 30.6	
	12μm,0.3s							
MTDJ				IAML			21 20 32.1	
	comp=Z,4μm,0.3s							
MCJ	**Malvern**	**0.20**	**224**	⇓*i* P		**Pb**	**21 20 26.5**	**+0.8**
MCJ				*i* S		**Sb**	**21 20 30.1**	**+1.5**
PCJ	**Portland Cotta**	**0.49**	**132**	⇑*i* P		**Pb**	**21 20 31.4**	**+0.1**
PCJ				⇓*i* S		**Sb**	**21 20 38.5**	**+0.5**
BNJ	**Bonny Gate**	**0.61**	**66**	⇓*i* P		**Pb**	**21 20 34.1**	**+0.8**
BNJ				⇑*i* S		**Sb**	**21 20 43.3**	**+1.8**
STH	**Stony Hill**	**0.70**	**89**	⇑*i* P		**Pb**	**21 20 35.1**	**+0.4**
STH				⇑*i* P		**Pb**	**21 20 35.2**	**+0.4**
STH				⇑*i* S		**Sb**	**21 20 45.4**	**+1.4**
HOJ	**Hope**	**0.76**	**95**	⇓*i* P		**Pb**	**21 20 36.4**	**+0.6**
HOJ				⇓*i* P		**Pb**	**21 20 36.4**	**+0.6**
GWJ	**Greenwich**	**0.77**	**89**	⇑*i* P		**Pb**	**21 20 36.6**	**+0.5**
GWJ				*i* P		**Pb**	**21 20 36.7**	**+0.5**
GWJ				⇓*i* S		**Sb**	**21 20 47.9**	**+1.5**
CHIV	**Chivirico**	**2.18**	**29**	*e*P		**Pn**	**21 20 55.5**	**-0.9**
CHIV				*e*S		**Sn**	**21 21 19.0**	**-3.9**
CHIV				IAML			21 21 22.3	
	comp=N,16nm,0.1s							
CHIV				IAML			21 21 22.7	
	comp=E,16nm,0.1s							
RCC	**Rio Carpintero**	**2.59**	**42**	*e*P		**Pn**	**21 21 01.4**	**-0.7**
RCC				*e*S		**Sn**	**21 21 30.2**	**-3.0**
RCC				IAML			21 21 33.0	
	comp=E,7.9nm,0.4s							
RCC				IAML			21 21 33.9	
	comp=N,5.5nm,0.2s							
GTBY	**Guantanamo Bay**	**2.95**	**51**	*e*P		**Pn**	**21 21 06.5**	**-0.6**
GTBY				*e*S		**Sn**	**21 21 40.9**	**-1.1**
GTBY				IAML			21 21 42.2	
	comp=N,14nm,0.3s							
GTBY				IAML			21 21 44.0	
	comp=N,24nm,0.6s							
CCCC	**Cccc**	**3.12**	**356**	*e*P		**Pn**	**21 21 08.9**	**-0.5**
CCCC				*e*S		**Sn**	**21 21 47.6**	**+1.4**
CCCC				IAML			21 21 48.3	
	comp=E,6.8nm,0.5s							
CCCC				IAML			21 21 50.2	
	comp=N,5.9nm,0.3s							
HLGC	**Holguin**	**3.13**	**26**	*e*P		**Pn**	**21 21 10.4**	**+0.7**
HLGC				*e*S		**Sn**	**21 21 45.7**	**-1.0**
HLGC				IAML			21 21 47.4	
	comp=E,15nm,0.8s							
HLGC				IAML			21 21 51.4	
	comp=N,17nm,0.4s							
QMBU	**Quimbuelo**	**3.34**	**50**	*e*P		**Pn**	**21 21 11.1**	**-1.4**
QMBU				*e*S		**Sn**	**21 21 48.0**	**-3.7**
QMBU				IAML			21 21 50.9	
	comp=E,25nm,0.2s							
QMBU				IAML			21 21 56.4	
	comp=N,19nm,0.5s							
FSCY	**Frank Sound, G**	**3.67**	**290**	*e*P		**Pn**	**21 21 16.0**	**-1.0**
FSCY				*e*S		**Sn**	**21 21 55.4**	**-4.3**
MASC	**Masc**	**3.77**	**56**	*e*P		**Pn**	**21 21 18.7**	**+0.4**
MASC				*e*S		**Sn**	**21 21 59.5**	**-2.6**
MASC				IAML			21 22 02.8	
	comp=E,11nm,1.3s							
MASC				IAML			21 22 13.2	
	comp=N,20nm,1.3s							
MGV	**Manicaragua**	**4.63**	**331**	*e*P		**Pn**	**21 21 30.5**	**+0.3**
MGV				*e*S		**Sn**	**21 22 21.3**	**-2.1**
MGV				IAML			21 23 49.1	
	comp=Z,20nm,1.0s							

*IDC **17** 21:32:21.5±0.8, 37.°35N×36.°29E, h0km, mb3.8/9, mbtmp3.7/14, ML3.6/4, MS2.5/2, Error ellipse: s-maj=16.1km s-min=12.0km az=75.0*

*ISK **17** 21:32:21.9, 37.°39N×36.°36E, h9km, ML3.8/23*

*GII **17** 21:32:23.0±0.0, 37.°453N±0.°004×36.°461E±0.°001, h0km, Mws3.9, confirmed*

*AFAD **17** 21:32:22.2, 37.°40N×36.°35E, h16km±1km, ML3.9*

*NEIC **17** 21:32:23.2±1.7, 37.°37N±0.°03×36.°37E±0.°02, h10km±2km, mb4.0/12, Error ellipse: s-maj=6.3km s-min=2.9km az=151.0*

ISC 17 21:32:22.3±1.0, **37.°39N**±0.°02×**36.°38E**±0.°02, **h6**km±7km, **n145**, σ1°**11**/165, **mb3.7**/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ANDN	**Andirin**	**0.19**	**353**	P		**Pg**	**21 32 26.7**	**+0.6**
ANDN				S		**Sg**	**21 32 30.0**	**+1.3**
ANDN				IAML			21 32 32.0	
	comp=E,3μm,0.5s							
ANDN				IAML			21 32 33.0	
	comp=N,3μm,0.3s							
KAMA	**Osmaniye**	**0.31**	**131**	P		**Pg**	**21 32 28.9**	**+0.5**
KMRS	**Kahramanmaras**	**0.43**	**75**	Pg		**Pg**	**21 32 31.1**	**+0.4**
KMRS				Sg		**Sb**	**21 32 37.8**	**-1.4**
KOZT	**Kozan**	**0.45**	**282**	Pg		**Pg**	**21 32 30.8**	**-0.1**
KOZT				Sg		**Sg**	**21 32 37.4**	**+0.6**
KAHM	**Kahramanmaras,**	**0.50**	**75**	P		**Pg**	**21 32 32.5**	**+0.4**
KAHM				S		**Sg**	**21 32 38.2**	**-0.4**

KSHT				S		Sn	21 34 23.3	+1.4	
MMA0B	**Mount Meron ar**	**4.44**	**191**	P		Pn	21 33 31.5	+1.3	
MMA0B				S		Sn	21 34 24.0	+1.7	
MMAI	**Mount Meron Ar**	**4.44**	**191**	Pn		Pn	21 33 30.2	0.0	
	9.3nm,0.3s,baz=9.3,slow=16,SNR=77								
MMAI				Sn		Sn	21 34 22.9	+0.6	
	15nm,0.3s,baz=357,slow=30,SNR=15								
MMAI				LR		LR	21 34 43.7		
	comp=Z,37nm,21.2s,baz=142,slow=32								
	3.5nm,0.3s								
SNOP	**Sinop**	**4.71**	**349**	Pn		Pn	21 33 34.8	+0.9	
OFRI	**`Ofer**	**4.89**	**194**	P		Pn	21 33 38.1	+1.6	
OFRI				S		Sn	21 34 35.6	+2.2	
BZK	**Bozkurt**	**4.92**	**339**	Pn		Pn	21 33 36.5	-0.2	
MMLI	**Mount Malkishu**	**5.00**	**189**	P		Pn	21 33 39.7	+1.7	
MMLI				S		Sn	21 34 38.5	+2.3	
MDUB	**Mudurnu**	**5.08**	**309**			Pn	21 33 39.5	+0.5	
QRNJ	**Al-Qirein**	**5.09**	**188**	P		Pn	21 33 44.0	+4.9	
	13nm24μm2μm,0.7s								
ELL	**Elmali**	**5.21**	**265**			Pn	21 33 42.4	+1.5	
ASF	**Jabal al Asfar**	**5.22**	**175**	Pn		Pn	21 33 42.1	+1.0	
	0.7nm,0.3s,baz=144,slow=21,SNR=6.3								
ASF				Lg		Lg	21 35 07.1		
	2.7nm,0.3s,baz=20,slow=21,SNR=4.0								
	1.4nm,0.3s								
ASF	**Jabal al Asfar**	**5.22**	**175**	P		**Pb**	21 33 49.6	-4.5	
	1.1nm172nm,0.9s								
SLTI	**Sal'it**	**5.25**	**192**	P		Pn	21 33 41.2	-0.3	
SLTI				S		Sn	21 34 44.3	+2.0	
GEVA	**Gevas**	**5.37**	**78**			Pn	21 33 44.0	+0.9	
AMAZ	**Amatzia**	**5.97**	**192**	P		Pn	21 33 52.6	+1.4	
AMAZ				S		Sn	21 35 02.5	+2.6	
GHAJ	**Ghor Haditha**	**6.11**	**187**	P		Pn	21 33 54.5	+1.4	
GHAJ				S		Sn	21 35 05.1	+1.8	
MSBI	**Mazada**	**6.12**	**188**	P		Pn	21 33 54.9	+1.6	
MSBI				S		Sn	21 35 05.5	+1.9	
KZIT	**Kziot**	**6.67**	**195**	P		Pn	21 34 02.7	+1.8	
KZIT				S		Sn	21 35 19.5	+2.3	
RMNI	**Mount Ramon**	**6.91**	**192**	P		Pn	21 34 05.9	+1.7	
BALB	**Balikesir**	**7.03**	**291**	Pn		Pn	21 34 04.2	-1.5	
GNI	**Garni**	**7.09**	**65**	Pn		Pn	21 34 07.6	+0.8	
KARP	**Karpathos**	**7.65**	**259**	Pn		Pn	21 34 14.2	-0.1	
ALN	**Alexandroupoli**	**8.76**	**297**	Pn		Pn	21 34 31.4	+1.9	
RDO	**Rodhopi**	**9.20**	**297**	Pn		Pn	21 34 36.1	+0.6	
TIRR	**Tirgusor**	**9.28**	**322**			Pn	21 34 37.0	+0.5	
IDI	**Anoyia**	**9.50**	**261**	Pn		Pn	21 34 39.4	-0.3	
	3.2nm,0.3s,baz=72,slow=14,SNR=11								
IDI	**Anoyia**	**9.50**	**261**			Pn	21 34 38.9	-0.9	
BURAR	**Bucovina Array**	**13.11**	**325**	Pn		Pn	21 35 29.7	+0.6	
BUR08	**Bucovina Ar. S**	**13.13**	**325**	Pn		Pn	21 35 30.9	+1.4	
AKASG	**Malin Array Be**	**14.26**	**341**	Pn		Pn	21 35 45.5	+0.9	
	0.3nm,0.3s,baz=174,slow=12,SNR=4.2								
	0.2nm,0.3s								
GUMA	**Gualdo di Mace**	**18.46**	**295**	P		**P**	21 36 38.2	-0.5	
NACGM	**Naroch**	**18.70**	**343**	*e*P		Pn	21 36 42.7	+1.1	
	comp=Z,6.0nm,0.8s,baz=156								
SUW	**Suwalki**	**18.95**	**335**	P		**Pn**	21 36 44.6	0.0	
SABO	**M.te Sabotino**	**19.00**	**304**	P		**P**	21 36 44.6	0.0	
SABO				IAmb		IAmb	21 37 25.2		
	comp=Z,17nm,1.2s								
MYKA	**Terra Mystica**	**19.20**	**306**	*i* pP		pP	21 36 48.9	+0.3	
	comp=Z,8.9nm,1.1s								
MOA	**Molln**	**19.27**	**310**	*e*pP		pP	21 36 50.1	+0.7	
	comp=Z,4.3nm,1.2s								
ABTA	**Abfaltersbach**	**19.97**	**305**	*e*pP		**Pn**	21 36 56.8	-0.1	
	comp=Z,5.3nm,1.1s								
PABE	**Paberze**	**19.98**	**339**	P		**P**	21 36 55.8	+0.6	
PABE				IAmb		IAmb	21 37 22.9		
	comp=Z,8.1nm,0.6s								
GEC2	**GERESS Array S**	**20.04**	**312**	P		**P**	21 36 56.8	+0.7	
GERES	**GERESS Array B**	**20.04**	**312**	P		**P**	21 36 56.4	+0.3	
	comp=Z,174nm,0.8s,baz=106,slow=13,SNR=50								
LESA	**Schwarzleotal**	**20.09**	**307**	*e*Pn		**P**	21 36 57.3	+0.6	
	comp=Z,3.8nm,1.0s								
TEOL	**Teolo**	**20.12**	**301**	P		**P**	21 36 56.0	-0.9	
KHC	**Kasperske Hory**	**20.24**	**313**	P		**P**	21 36 57.8	-0.4	
CTI	**Castel Tesino**	**20.32**	**303**	P		**P**	21 36 58.0	-1.1	
CTI				IAmb		IAmb	21 37 00.5		
	comp=Z,6.8nm,0.9s								
WTTA	**Wattenberg**	**20.70**	**306**	*i* Pn		**P**	21 37 03.3	0.0	
	comp=Z,6.0nm,1.3s								
WATA	**Walderalm**	**20.77**	**306**	*e*P		**P**	21 37 05.0	+1.0	
	comp=Z,4.8nm,1.2s								
BRG	**Berggiesshubel**	**20.89**	**317**	*e*P		**P**	21 37 05.7	+0.6	
BRG				Amp			21 37 08.4		
	comp=Z,3.3nm,1.1s								
BRG	**Berggiesshubel**	**20.89**	**317**	P		Pn	21 37 13.1	+5.5	
BRG				Amp			21 37 14.4		
	comp=Z,1.7nm,1.0s								
SQTA	**Sankt Quirin**	**20.96**	**306**	*e*Pn		**P**	21 37 06.2	+0.1	
	comp=Z,6.5nm,1.3s								
MOTA	**Moosalm**	**21.07**	**306**	*e*P		**P**	21 37 08.1	+0.8	
	comp=Z,2.1nm,1.0s								
HRA	**Herat**	**21.15**	**90**	P		**P**	21 37 07.8	-0.6	
RETA	**Reutte**	**21.34**	**306**	*i* Pn		**P**	21 37 09.8	-0.3	
	comp=Z,2.0nm,0.6s								
CLL	**Collm**	**21.62**	**317**	P		**P**	21 37 11.6	-1.4	
CLL				IAmb		IAmb	21 37 15.7		
	comp=Z,5.2nm,1.2s								
DAVA	**Damuels**	**21.84**	**305**	*e*P		**P**	21 37 14.9	-0.8	
	comp=Z,4.2nm,1.1s								
BFO	**Black Forest**	**23.16**	**307**	P		**P**	21 37 28.4	-1.0	
BFO				IAmb		IAmb	21 37 30.0		
	comp=Z,6.5nm,1.0s								
ECH	**Echery**	**23.87**	**306**			**P**	21 37 35.9	-0.6	
FINES	**FINESS Array B**	**24.93**	**348**	P		**P**	21 37 45.8	-0.2	
	comp=Z,0.8nm,0.6s,baz=158,slow=7.9,SNR=7.4								
	comp=Z,0.8nm,0.6s								
KK31	**Karatay Array**	**26.55**	**67**	P		**P**	21 38 01.1	+0.1	
KK31				IAmb		IAmb	21 38 06.5		
	comp=Z,2.8nm,1.1s								
KKAR	**Karatay Array**	**26.55**	**67**	P		**P**	21 38 01.2	+0.3	
HFS	**Hagfors**	**26.96**	**335**	P		**P**	21 38 03.9	-0.6	
	comp=Z,0.7nm,0.4s,baz=159,slow=8.9,SNR=4.0								
	comp=Z,0.7nm,0.4s								
NOA	**NORSAR Array B**	**28.47**	**334**	P		**P**	21 38 17.3	-0.6	
	comp=Z,0.5nm,0.8s,baz=162,slow=5.7,SNR=2.7								
	comp=Z,0.5nm,0.8s								
EKA	**Eskdalemuir Ar**	**32.09**	**317**	P		**P**	21 38 49.0	-0.9	
	comp=Z,1.2nm,0.7s,baz=98,slow=9.4,SNR=5.0								
	comp=Z,1.2nm,0.7s								
KURBB	**Kurchatov Arra**	**32.62**	**52**	P		**P**	21 38 56.0	+1.4	
	comp=Z,0.9nm,0.8s,baz=266,slow=8.9,SNR=8.1								
	comp=Z,0.9nm,0.8s								
MKAR	**Makanchi Array**	**34.91**	**60**	P		**P**	21 39 16.2	+1.5	
	comp=Z,0.7nm,0.7s,baz=262,slow=8.2,SNR=6.1								
	comp=Z,0.7nm,0.7s								
MKAR	**Makanchi Array**	**34.91**	**60**	P		**P**	21 39 15.0	+0.3	
ZALV	**Zalesovo Beam**	**36.87**	**47**	P		**P**	21 39 30.6	-0.7	
	comp=Z,0.5nm,0.5s,baz=264,slow=9.7,SNR=4.8								
	comp=Z,0.5nm,0.5s								
ZALV	**Zalesovo Beam**	**36.87**	**47**	P		**P**	21 39 30.1	-1.2	
TORD	**Torodi Ar. Bea**	**39.22**	**241**	P		**P**	21 39 50.3	-1.2	
	comp=Z,2.8nm,0.8s,baz=42,slow=8.1,SNR=16								
	comp=Z,2.8nm,0.8s								
DBIC	**Dimbokro**	**48.34**	**241**	P		**P**	21 41 03.7	-1.1	
	comp=Z,2.9nm,0.6s,baz=24,slow=10.0,SNR=2.2								
	comp=Z,2.3nm,0.6s								

*AEIC **17** 21:38:24.7±1.9,51°.37N±0°.07×177°.46W±0°.04,h26km±7km, Error ellipse: s-maj=10.1km s-min=2.7km az=168.0*

NEIC 17 21:38:25.0±1.2,51°.38N±0°.06×177°.46W±0°.04,h32km±9km, ML3.8/10,ML3.5(AEIC),Error ellipse: s-maj=9.5km s-min=3.7km az=176.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.41**	**20**		Pb	21 38 33.8	-0.2
KIMD					Sn	21 38 40.8	-0.4
TAFL	**Tanaga Flats**	**0.47**	**324**		Pb	21 38 34.8	-0.2
TAFL					Sn	21 38 42.7	0.0
TAPA	**Tanaga Point A**	**0.49**	**333**		Pb	21 38 35.3	0.0
TAPA					Sn	21 38 43.2	-0.1
KIWB	**Kanaga Island**	**0.51**	**22**		Pb	21 38 35.6	-0.1
KIWB					Sn	21 38 43.7	0.0
KIKV	**Kanaga Island**	**0.53**	**20**		Pb	21 38 35.8	-0.2
KIKV					Sn	21 38 44.2	0.0
KICM	**Kanaga Island**	**0.56**	**17**		Pb	21 38 36.6	+0.1
KICM					Sn	21 38 45.2	+0.2
TASE	**Tanaga Southea**	**0.58**	**322**		Pb	21 38 36.8	0.0
TASE					Sb	21 38 45.3	+0.3
TAFP	**Tanaga Falls P**	**0.62**	**328**		Pb	21 38 37.0	-0.3
TAFP					Sn	21 38 46.1	-0.2
TANO	**Tanaga North**	**0.68**	**323**		Sb	21 38 47.4	-0.2
ADK	**Adak**	**0.70**	**43**	Pn	Pn	21 38 38.3	-0.4
ADK				IAML		21 38 48.5	
	5μm,0.6s						
ADK				IAML		21 38 48.5	
	6μm,0.6s						
ADK	**Adak**	**0.70**	**43**		Sb	21 38 48.0	-0.1
ETKA	**Kagalaska Isla**	**0.81**	**53**		Pn	21 38 39.4	-0.9
ETKA					Sn	21 38 50.3	-0.9
GAKI	**Gareloi-Kavalg**	**0.86**	**282**		Pn	21 38 40.1	-0.8
GAKI					Sn	21 38 51.5	-0.9
GAEA	**Gareloi East**	**0.90**	**297**		Sn	21 38 53.1	-0.2
GANE	**Gareloi Northe**	**0.93**	**299**		Pn	21 38 41.8	0.0
GSSP	**Great Sitkin S**	**1.07**	**48**		Pn	21 38 43.9	+0.2
GSMY	**Great Sitkin M**	**1.10**	**52**		Pn	21 38 44.0	-0.1
GSTR	**Great Sitkin T**	**1.13**	**50**	Pn	Pn	21 38 44.6	+0.1
GSTR				IAML		21 39 02.8	
	comp=E,3μm,0.3s						
GSTR				IAML		21 39 05.8	
	comp=N,3μm,0.4s						
CEPE	**Semis' Perret**	**1.89**	**289**		Pn	21 38 55.7	+0.7
CESW	**Semis' Southwe**	**1.93**	**287**		Pn	21 38 55.7	+0.1
AMKA	**Amchitka**	**2.03**	**271**	Pn	Pn	21 38 56.1	-0.8
ATKA	**Atka Island**	**2.19**	**67**	Pn	Pn	21 38 58.9	-0.2
ATKA				IAML		21 39 36.9	
	comp=E,208nm,1.0s						
ATKA				IAML		21 39 37.7	
	comp=N,369nm,0.6s						
KOWE	**Korovin West**	**2.22**	**62**		Pn	21 39 00.2	+0.7
KOKL	**Mount Kliuchef**	**2.23**	**64**		Pn	21 39 00.5	+0.7
KOFP	**Korovin Flat P**	**2.27**	**65**		Pn	21 39 01.0	+0.7
KOSE	**Korovin Southe**	**2.32**	**64**		Pn	21 39 02.0	+0.9
LSSE	**Little Sitkin**	**2.54**	**284**		Pn	21 39 04.8	+0.9
LSPA	**Little Sitkin**	**2.54**	**285**		Pn	21 39 05.0	+1.1
LSNW	**Little Sitkin**	**2.58**	**285**		Pn	21 39 05.4	+1.0
LVA	**Lava Point**	**7.47**	**64**	Pn	Pn	21 40 13.1	+1.5
SDPT	**Sand Point**	**10.89**	**62**	Pn	Pn	21 40 57.9	-0.5
M11K	**Mekoryuk**	**11.00**	**31**	Pn	Pn	21 41 00.2	+0.3
CNBA	**Chernabura Isl**	**11.28**	**65**	Pn	Pn	21 41 02.3	-1.4

*MAN **17** 22:12:47.0,4°.02N×124°.91E,h96km,MS4.4*
*DJA **17** 22:12:48.4±0.7,4°N±6°×12°.5E±°,h10km,M4.3/11,mB5.4/1, mb4.5/2,MLv4.2/11,Mw(mB)4.8/1*
*NEIC **17** 22:12:49.7±1.5,3°.99N±0°.06×125°.07E±0°.07,h49km±9km, mb4.3/22, Error ellipse: s-maj=10.7km s-min=7.2km az=118.0*
*IDC **17** 22:12:52.8±2.3,4°.07N×125°.29E,h86km±21km,mb3.7/12, mbtmp4.0/14,MS3.4/2, Error ellipse: s-maj=33.8km s-min=11.5km az=77.0*

ISC 17 22:12:43.3±2.9,4°.05N±0°.03×125°.01E±0°.05,h5km±19km, n66,σ1s66/76,mb4.2/21,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.63**	**125**	P	**Pn**	**22 12 57.9**	**-1.0**
SGSI				S	**Sb**	**22 13 05.2**	**-0.7**
GSPH	**General Santos**	**2.02**	**358**	*i* P	**Pb**	**22 13 19.8**	**-0.9**
GSPH				*i* S	**Sn**	**22 13 42.1**	**-1.9**
DDMP	**Don Marcelino,**	**2.16**	**19**	*i* P	**Pn**	**22 13 20.7**	**+0.8**
DDMP				*i* S	**Sn**	**22 13 46.0**	**-1.1**
MNI	**Manado**	**2.59**	**184**	P	**Pn**	**22 13 27.3**	**+1.3**
MNI				S	**Sn**	**22 13 54.0**	**-3.9**
KCP	**Kidapawan**	**2.94**	**1**	*i* P	**Pn**	**22 13 33.3**	**+2.5**
KCP				*i* S	**Sn**	**22 14 08.2**	**+1.7**
DAV	**Davao City (W)**	**3.05**	**11**	P	**Pb**	**22 13 36.5**	**-1.7**
	132nm,0.3s,baz=125,slow=3.5,SNR=4.9						
DAV				S	**Sb**	**22 14 14.1**	**-1.6**
	292nm,0.5s,baz=129,slow=19,SNR=6.9						
DAV				LR	LR	22 15 12.7	
	comp=Z,288nm,21.1s,baz=206,slow=47						
DAV	**Davao City (W)**	**3.05**	**11**		**Pb**	**22 13 35.7**	**-2.5**
DMPH	**Davao City--Mi**	**3.05**	**9**	*i* P	**Pb**	**22 13 36.4**	**-1.9**
DMPH				*i* S	**Sb**	**22 14 13.2**	**-2.6**
BUKP	**Musuan**	**3.81**	**1**	*e*P	**Pn**	**22 13 45.5**	**+2.8**
BUKP				*e*S	**Sn**	**22 14 29.9**	**+2.1**
GTOI	**Gorontalo**	**3.94**	**211**	P	**Pn**	**22 13 44.8**	**+0.4**
CDOP	**Cateel, Davao**	**3.97**	**21**	*e*P	**Pn**	**22 13 47.1**	**+2.2**
CDOP				*e*S	**Sn**	**22 14 33.2**	**+1.3**
TNTI	**Ternate**	**4.02**	**144**	Pn	**Pn**	**22 13 47.9**	**+2.3**
TNTI	**Ternate**	**4.02**	**144**	P	**Pn**	**22 13 46.8**	**+1.3**
ZCP	**Zamboanga City**	**4.09**	**315**	*i* P	**Pn**	**22 13 47.2**	**+0.6**
ZCP				*i* S	**Sn**	**22 14 30.3**	**-4.6**
PAGZ	**Pagadian**	**4.11**	**337**	*e*P	**Pn**	**22 13 47.9**	**+1.1**
PAGZ				*e*S	**Sn**	**22 14 30.4**	**-4.8**
BIPH	**Bislig**	**4.32**	**18**	*e*P	**Pn**	**22 13 50.2**	**+0.5**
BIPH				*e*S	**Sn**	**22 14 39.6**	**-0.9**
TSSP	**Tandag City**	**5.10**	**13**	*e*P	**Pn**	**22 14 01.6**	**+1.2**
TSSP				*e*S	**Sn**	**22 14 59.8**	**0.0**
TOLI2	**Tolitoli**	**5.14**	**235**		**Pn**	**22 14 01.0**	**+0.1**
LUWI	**Luwuk**	**5.53**	**204**		**Pn**	**22 14 08.9**	**+2.6**
LUWI	**Luwuk**	**5.53**	**204**	P	**Pb**	22 14 14.6	-5.8
SANI	**Sanana**	**6.14**	**171**	P	**Pn**	**22 14 15.0**	**+0.3**
	0.1nm26nm,0.9s						
KKM	**Kk. Kinabalu**	**8.98**	**283**	Pn	**Pn**	**22 14 57.8**	**+3.8**
GENI	**Genyem**	**16.52**	**113**	P	**P**	**22 16 39.3**	**+0.7**
JAY	**Jayapura**	**16.98**	**112**	P	**P**	**22 16 42.4**	**-1.5**
	12nm,0.9s,baz=270,slow=4.8,SNR=8.4						
MTN	**Manton Dam**	**17.85**	**160**	P	**P**	**22 16 54.7**	**+1.3**
YULB	**Yu-li**	**19.56**	**350**	P	**Pn**	**22 17 13.6**	**+0.1**
YULB				IAmb	IAmb	22 17 37.3	
	comp=Z,24nm,1.5s						
TPUB	**Ta-pu**	**19.60**	**348**	P	**Pn**	**22 17 13.9**	**0.0**
KNRA	**Kununurra**	**19.95**	**169**	P	**P**	**22 17 16.1**	**-0.3**
KNRA				IAmb	IAmb	22 17 32.0	
	comp=Z,13nm,1.2s						
SSLB	**Suanglung**	**20.01**	**349**	P	Pn	22 17 19.0	+0.2
SSLB				IAmb	IAmb	22 18 02.5	
	comp=Z,30nm,1.4s						
MYKOM	**Kota Tinggi**	**21.25**	**265**	P	**P**	**22 17 31.7**	**+1.1**
MYKOM				IAmb	IAmb	22 17 40.7	
	comp=Z,8.2nm,0.7s						
KNMB	**Chin-men Tao**	**21.28**	**343**	P	**P**	**22 17 31.9**	**+1.2**
FITZ	**Fitzroy Crossi**	**22.02**	**178**	P	**P**	**22 17 40.0**	**+1.3**
	comp=Z,3.3nm,1.0s,baz=0.8,slow=12,SNR=2.7						
	comp=Z,3.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**22.02**	**178**	P	**P**	**22 17 39.8**	**+1.1**
JOW	**Kunigami**	**22.87**	**8**	P	**P**	**22 17 48.4**	**+0.6**
COEN	**Coen**	**25.39**	**135**	P	**P**	**22 18 11.0**	**-0.9**
COEN				IAmb	IAmb	22 18 45.6	
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	**25.40**	**159**	P	**P**	**22 18 11.7**	**-0.3**
WB0				IAmb	IAmb	22 18 24.6	
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	**25.54**	**159**	P	**P**	**22 18 13.3**	**+0.1**
WRAB				IAmb	IAmb	22 18 26.1	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**25.54**	**159**	P	**P**	**22 18 13.2**	**0.0**
	comp=Z,2.2nm,0.6s,baz=341,slow=10,SNR=21						
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**25.54**	**159**		**P**	**22 18 12.5**	**-0.7**
WR8	**Warramunga Arr**	**25.61**	**159**		**P**	**22 18 14.2**	**+0.4**
WR8				IAmb	IAmb	22 18 27.3	
	comp=Z,8.4nm,0.9s						
ASAR	**Alice Springs**	**28.88**	**163**	P	**P**	**22 18 43.5**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=340,slow=9.2,SNR=7.3						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**28.88**	**163**	P	**P**	**22 18 42.6**	**-0.6**
KSRS	**Korea Array**	**33.35**	**4**	P	**P**	**22 19 22.3**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=183,slow=10,SNR=9.2						
	comp=Z,1.4nm,0.7s						
MJAR	**Matsushiro Arr**	**34.54**	**19**	P	**P**	**22 19 30.6**	**-2.2**
	comp=Z,1.6nm,0.7s,baz=191,slow=9.8,SNR=4.2						
	comp=Z,1.6nm,0.7s						
KOHI	**KOHIMA**	**36.65**	**309**	*e*P	**P**	**22 19 52.6**	**+1.3**
SHL	**Shillong**	**38.31**	**307**		**P**	**22 20 08.2**	**+2.7**
SHL	**Shillong**	**38.31**	**307**	*e*P	**P**	**22 20 08.2**	**+2.7**
USRK	**Ussuriysk Ar.**	**40.46**	**8**	P	**P**	**22 20 23.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=193,slow=6.7,SNR=2.5						
	comp=Z,1.6nm,0.6s						
EVN	**Everest**	**43.43**	**307**		**P**	**22 20 49.1**	**+0.9**
EVN				IAmb	IAmb	22 20 52.1	
	comp=Z,7.7nm,0.7s						
SONM	**Songino Array**	**46.47**	**343**	P	**P**	**22 21 13.1**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=161,slow=6.1,SNR=1.9						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**46.47**	**343**	P	**P**	**22 21 12.6**	**+1.1**
PETK	**Petropavlovsk-**	**55.80**	**23**	P	**P**	**22 22 19.8**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=141,slow=2.8,SNR=4.7						
	comp=Z,1.6nm,0.7s						
PETK	**Petropavlovsk-**	**55.80**	**23**	P	**P**	**22 22 20.2**	**-1.1**
PDGK	**Podgornoye**	**56.09**	**321**	P	**P**	**22 22 24.6**	**+0.8**
MKAR	**Makanchi Array**	**56.33**	**326**	P	**P**	**22 22 26.4**	**+1.1**
	comp=Z,2.9nm,0.6s,baz=122,slow=8.3,SNR=40						
	comp=Z,2.9nm,0.6s						
KDJ	**Kajisay**	**56.98**	**319**	P	**P**	**22 22 30.9**	**+0.7**
KDJ				IAmb	IAmb	22 22 33.4	
	comp=Z,1.8nm,0.9s						
AAK	**Ala-Archa**	**58.98**	**318**	LR	LR	22 51 38.8	
	comp=Z,69nm,18.6s,baz=132,slow=39						
ZAA0	**Zalesovo Array**	**59.54**	**334**	P	**P**	**22 22 47.5**	**-0.1**
ZALV	**Zalesovo Beam**	**59.54**	**334**	P	**P**	**22 22 46.3**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=102,slow=4.9,SNR=4.4						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**59.54**	**334**	P	**P**	**22 22 46.6**	**-1.0**
BTK	**Batken**	**60.47**	**314**	P	**P**	**22 22 54.2**	**-0.2**
BTK				IAmb	IAmb	22 23 23.4	
	comp=Z,2.2nm,0.9s						
KURBB	**Kurchatov Arra**	**60.55**	**328**	P	**P**	**22 22 54.4**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=126,slow=6.1,SNR=49						
	comp=Z,4.5nm,0.8s						
KURK	**Kurchatov**	**60.56**	**328**		**P**	**22 22 55.0**	**+0.3**
KKAR	**Karatay Array**	**61.84**	**317**	P	**P**	**22 23 03.6**	**0.0**
BVAR	**Borovoye Array**	**66.12**	**327**	P	**P**	**22 23 32.0**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=120,slow=8.8,SNR=5.4						
	comp=Z,1.7nm,0.8s						
BORK	**Borovoye**	**66.17**	**327**		**P**	**22 23 31.2**	**-0.7**
BORK				IAmb	IAmb	22 23 33.4	
	comp=Z,2.8nm,0.9s						

*PAS **17** 22:13:06.0±1.0,35°.702N±0°.008×117°.58W±0°.01, h3km±1km,Error ellipse: s-maj=1.2km s-min=1.1km az=179.0*

NEIC 17 22:13:05.5±1.3,35°.703N±0°.009×117°.558W±0°.009, h5km±1km,ML2.5/82,ML2.4/25(PAS),Error ellipse: s-maj=2.5km s-min=1.5km az=239.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPO	**China Lake**	**0.10**	**238**		Pg	22 13 08.1	+0.5
GPO					Sg	22 13 10.1	+1.0
SRTC	**Snort**	**0.16**	**266**		Pg	22 13 09.3	+0.6
SRTC					Sg	22 13 12.3	+1.5
TOW	**Tower One**	**0.20**	**302**		Pg	22 13 13.8	+4.4
CCCA	**Chr Cany lake**	**0.24**	**138**		Pg	22 13 10.7	+0.6
CCCA				IAML		22 13 16.6	
	comp=E,964nm,0.3s						
LRMC	**Laurel Mtn Rad**	**0.24**	**205**		Pg	22 13 10.5	+0.3
LRMC				IAML		22 13 11.5	
	comp=E,575nm,0.2s						
LRMC				IAML		22 13 15.1	
	comp=N,655nm,0.2s						
RCWM	**Renegade Canyo**	**0.26**	**344**		Pg	22 13 11.1	+0.5
RCWM					Sg	22 13 14.9	+0.9
WNMM	**Nine Mile Cany**	**0.32**	**296**		Pn	22 13 16.4	-0.3
WVPM	**Volcano Peak E**	**0.32**	**319**		Pg	22 13 12.1	+0.2
WVPM					Sg	22 13 16.9	+0.7
JRC2	**Joshua Ridge**	**0.35**	**324**		Pg	22 13 12.5	+0.3
JRC2					Sg	22 13 17.4	+0.6
MPMC	**Manual Prospec**	**0.36**	**9**		Sg	22 13 18.4	+1.1
MPMC	**Manual Prospec**	**0.36**	**9**		Pg	22 13 12.7	+0.2
MPMC				IAML		22 13 13.5	
	comp=N,110nm,0.3s						
MPMC				IAML		22 13 13.6	
	comp=E,116nm,0.2s						
WCSM	**Coso Springs S**	**0.36**	**332**		Pg	22 13 12.9	+0.3
WCSM					Sg	22 13 18.0	+0.6
WRVM	**Rose V. Centra**	**0.41**	**319**		Sg	22 13 19.0	+0.3
DTP	**Desert Tortois**	**0.49**	**208**	

NEIC 17 22:17:21.6±2.4, 9.75S±0.06×154.86E±0.09, h10km±1km, mb4.6/33, Error ellipse: s-maj=15.0km s-min=9.2km az=289.0

ISC 17 22:17:20.8±0.4, **9.75S**±0.07×**154.87E**±0.08, **h10**km, **n68,** σ0s**.86**/**54**, **mb4.5**/21, **MS3.5**/10, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.01**	**87**	LR	LR	22 20 19.2	
	comp=Z,8.7nm,20.9s,baz=327,slow=36						
KRVT	**Keravat (AS076**	**6.10**	**332**	LR	LR	22 20 32.3	
	comp=Z,76nm,21.6s,baz=63,slow=32						
RABL	**Rabaul**	**6.14**	**334**	Pn	**Pn**	**22 18 52.2**	**+0.6**
COEN	**Coen**	**12.19**	**249**	Pn	**Pn**	**22 20 14.5**	**-0.1**
CTA	**Charters Tower**	**13.23**	**218**	LR	LR	22 25 25.8	
	comp=Z,273nm,18.1s,baz=52,slow=37						
CTAO	**Charters Tower**	**13.23**	**218**	Pn	**Pn**	**22 20 27.8**	**-1.0**
KOUNC	**Koumac, New Ca**	**14.06**	**141**	Pn	**Pn**	**22 20 40.2**	**0.0**
EIDS	**Eidsvold**	**15.95**	**193**	Pn	**Pn**	**22 21 05.6**	**+0.2**
DZM	**Mont Dzumac**	**16.54**	**139**	Pn	**Pn**	**22 21 13.1**	**0.0**
	0.2nm,0.3s,baz=276,slow=4.6,SNR=3.4 6.4nm,0.9s						
PATS	**Pohnpei**	**16.82**	**12**	Pn	**Pn**	**22 21 16.4**	**-0.2**
PATS				IAmb	IAmb	22 21 22.6	
	comp=Z,73nm,1.2s						
WR8	**Warramunga Arr**	**22.13**	**240**	P	**P**	**22 22 16.5**	**-0.2**
WB0	**Warramunga Arr**	**22.14**	**241**	P	**P**	**22 22 17.4**	**+0.5**
WRAB	**Tennant Creek**	**22.25**	**241**	P	**P**	**22 22 18.7**	**+0.6**
WRA	**Warramunga Arr**	**22.26**	**241**	P	**P**	**22 22 17.3**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=66,slow=9.9,SNR=11 comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.26**	**241**	P	**P**	**22 22 17.8**	**-0.4**
INKA	**Innaminka**	**22.31**	**215**	P	**P**	**22 22 17.6**	**-0.9**
MSVF	**Nonsavu**	**23.85**	**112**	P	**P**	**22 22 35.3**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=322,slow=12,SNR=3.9						
MSVF				LR	LR	22 29 56.4	
	comp=Z,122nm,21.7s,baz=308,slow=32 comp=Z,4.1nm,0.9s						
MSVF	**Nonsavu**	**23.85**	**112**	P	**P**	**22 22 33.9**	**-0.7**
AS31	**Alice Springs**	**24.34**	**233**	P	**P**	**22 22 38.6**	**-0.5**
ASAR	**Alice Springs**	**24.34**	**233**	P	**P**	**22 22 38.2**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=61,slow=10.0,SNR=12						
ASAR				LR	LR	22 32 31.9	
	comp=Z,144nm,18.3s,baz=332,slow=38 comp=Z,1.8nm,0.9s						
ASAR	**Alice Springs**	**24.34**	**233**	P	**P**	**22 22 37.6**	**-1.5**
GUMO	**Guam**	**25.22**	**337**	LR	LR	22 31 40.1	
	comp=Z,75nm,19.9s,baz=103,slow=34						
STKA	**Stephens Creek**	**25.23**	**207**	P	**P**	**22 22 46.2**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=37,slow=14,SNR=4.6						
STKA				LR	LR	22 32 23.3	
	comp=Z,196nm,18.6s,baz=20,slow=36 comp=Z,3.8nm,0.9s						
FUTU	**Fugatoga**	**26.79**	**102**	P	**P**	**22 23 00.7**	**-0.5**
SOEI	**Soe**	**30.16**	**267**	P	**P**	**22 23 32.0**	**+0.5**
SOEI				IAmb	IAmb	22 23 33.6	
	comp=Z,32nm,1.2s						
URZ	**Urewera**	**34.72**	**148**	LR	LR	22 36 49.4	
	comp=Z,180nm,18.8s,baz=299,slow=34						
RPZ	**Rata Peaks**	**36.65**	**160**	LR	LR	22 37 47.2	
	comp=Z,45nm,19.9s,baz=62,slow=34						
DCZ	**Deep Cove**	**37.13**	**166**	P	**P**	**22 24 31.8**	**+0.2**
DCZ				IAmb	IAmb	22 24 39.7	
	comp=Z,19nm,1.1s						
JOW	**Kunigami**	**44.59**	**325**	P	**P**	**22 25 32.8**	**-0.5**
MCQ	**Macquarie Isla**	**44.76**	**177**	P	**P**	**22 25 35.7**	**+1.5**
YULB	**Yu-li**	**46.51**	**316**	P	**P**	**22 25 48.8**	**+0.2**
YULB				IAmb	IAmb	22 25 51.7	
	comp=Z,12nm,1.1s						
BBJI	**Bungbulang**	**46.72**	**269**	P	**P**	**22 25 51.0**	**+0.5**
MYKOM	**Kota Tinggi**	**52.08**	**280**	P	**P**	**22 26 31.6**	**+0.1**
MYKOM				IAmb	IAmb	22 26 46.1	
	comp=Z,6.7nm,1.1s						
KSAR	**Wonju Array Be**	**53.32**	**333**	P	**P**	**22 26 40.9**	**+0.8**
ASAJ	**Asahikawa**	**54.75**	**349**	LR	LR	22 46 42.1	
	comp=Z,56nm,21.4s,baz=166,slow=32						
USRK	**Ussuriysk Ar.**	**57.56**	**341**	P	**P**	**22 27 10.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**61.88**	**297**	P	**P**	**22 27 40.9**	**0.0**
PETK	**Petropavlovsk-**	**62.65**	**2**	P	**P**	**22 27 45.8**	**+0.4**
GSTR	**Great Sitkin T**	**66.47**	**19**	P	**P**	**22 28 08.7**	**-1.7**
MA2	**Magadan**	**69.17**	**358**	P	**P**	**22 28 27.0**	**-0.2**
ULN	**Ulaanbaatar**	**71.25**	**328**	P	**P**	**22 28 39.4**	**-1.0**
ULN				IAmb	IAmb	22 28 52.8	
	comp=Z,3.6nm,1.4s						
SONM	**Songino Array**	**71.58**	**328**	P	**P**	**22 28 41.7**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=143,slow=5.2,SNR=4.8 comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**71.58**	**328**	P	**P**	**22 28 41.1**	**-1.2**
SONM				IAmb	IAmb	22 28 50.1	
	comp=Z,2.2nm,1.1s						
QSPA	**South Pole Qui**	**80.25**	**180**	P	**P**	**22 29 31.2**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=63,slow=4.5,SNR=3.2 comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	**80.25**	**180**	P	**P**	**22 29 30.3**	**-1.3**
QSPA				IAmb	IAmb	22 29 37.7	
	comp=Z,6.7nm,1.4s						
CAST	**Castle Rocks**	**83.31**	**21**	IAmb	IAmb	22 29 48.9	
	comp=Z,3.6nm,1.0s						
MKAR	**Makanchi Array**	**85.38**	**319**	P	**P**	**22 29 58.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=105,slow=6.9,SNR=6.1 comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**85.96**	**21**	P	**P**	**22 30 00.2**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=261,slow=5.0,SNR=6.8 comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**85.96**	**21**	P	**P**	**22 29 59.8**	**-1.1**
G23K	**Bananza Creek**	**85.99**	**19**	P	**P**	**22 30 00.9**	**-0.2**
G23K				IAmb	IAmb	22 30 03.5	
	comp=Z,2.5nm,1.1s						
K27K	**Chicken**	**87.38**	**23**	IAmb	IAmb	22 30 11.8	
	comp=Z,5.3nm,1.1s						
KDJ	**Kajisay**	**87.48**	**313**	P	**P**	**22 30 10.0**	**+0.9**
KDJ				IAmb	IAmb	22 30 20.4	
	comp=Z,5.8nm,1.3s						
I27K	**Kandik River**	**88.30**	**22**	IAmb	IAmb	22 30 14.0	
	comp=Z,5.8nm,1.2s						
H27K	**Steamboat Moun**	**88.63**	**21**	IAmb	IAmb	22 30 15.6	
	comp=Z,6.6nm,1.4s						
I28M	**Miner Creek**	**88.85**	**22**	IAmb	IAmb	22 30 17.3	
	comp=Z,3.0nm,1.1s						
K29M	**Barlow Dome**	**89.10**	**24**	IAmb	IAmb	22 30 17.9	
	comp=Z,4.0nm,1.1s						
YBH	**Yreka Blue Hor**	**90.81**	**48**	LR	LR	23 03 49.5	
	comp=Z,28nm,21.2s,baz=344,slow=31						
NVAR	**Mina Array Bea**	**93.51**	**52**	LR	LR	23 05 01.4	
	comp=Z,17nm,21.4s,baz=290,slow=31						
WCT	**Wildcat Mounta**	**94.56**	**54**	P	**P**	**22 30 45.0**	**+2.9**
NEW	**Newport**	**95.86**	**42**	LR	LR	23 07 21.4	
	comp=Z,33nm,20.8s,baz=348,slow=31						
ESDC	**Sonseca Array**	**144.73**	**331**	PKP	**PKPab**	**22 36 57.2**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=20,slow=2.4,SNR=5.4						
ESDC	**Sonseca Array**	**144.73**	**331**		**PKPab**	**22 36 56.7**	**-0.4**
BDFB	**Brasilia**	**146.09**	**138**	PKPdf	**PKPdf**	**22 37 01.6**	**+0.2**
MD01	**Midelt array s**	**150.29**	**324**	PKPbc	**PKPbc**	**22 37 14.0**	**+0.9**
MD31	**MD31**	**150.29**	**324**	PKPdf	**PKPdf**	**22 37 06.1**	**-1.7**
MD31				PKPbc	**PKPbc**	**22 37 13.4**	**+0.4**
AVE	**Averroes**	**151.44**	**328**	PKPdf	**PKPdf**	**22 37 09.0**	**-0.4**
ASCN	**Ascension**	**159.42**	**212**	PKPdf	**PKPdf**	**22 37 20.9**	**+0.1**
ASCN				PKPab	**PKPab**	**22 37 59.1**	**+0.8**
SACV	**Santiago Islan**	**174.60**	**344**	PKPdf	**PKPdf**	**22 37 30.8**	**-1.2**

IDC 17 22:17:50.8±5.0, 6.75N×73.10W, h163km±33km, mb2.9/2, mbtmp3.5/3, Error ellipse: s-maj=87.3km s-min=31.5km az=86.0

FUNV 17 22:17:51.9, 7.13N×73.16W, h0km, MW3.3, Presumed earthquake

RSNC 17 22:17:51.0±0.0, 7.1N×7.3W×, h145km±2km, M3.2, mB4.4, mb3.8, ML2.9, Mw(mB)3.6

ISC 17 22:17:50.2±0.9, **6.85N**±0.03×**73.10W**±0.04, **h147**km±6km, **n40,** σ1s**38**/**70**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**197**	P	**Pn**	**22 18 10.7**	**0.0**
BARC				S	**Sn**	**22 18 25.3**	**-0.9**
PAMC	**Pamplona, Colo**	**0.63**	**40**	P	**Pn**	**22 18 13.6**	**+1.0**
PAMC				S	**Sn**	**22 18 30.5**	**+0.9**
BRJC	**Barrancabermej**	**0.65**	**281**	P	**Pn**	**22 18 12.5**	**+0.4**
BRJC				S	**Sn**	**22 18 29.0**	**+0.3**
RUSC	**La Rusia**	**0.95**	**179**	P	**Pn**	**22 18 14.6**	**-0.4**
RUSC				*eS*	**Sn**	**22 18 32.8**	**-0.9**
RUSC	**La Rusia**	**0.95**	**179**	*eP*	**Pn**	**22 18 14.5**	**-0.4**
RUSC				*eS*	**Sn**	**22 18 31.6**	**-2.1**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P	**Pn**	**22 18 17.4**	**-0.9**
PTBC				S	**Sn**	**22 18 38.2**	**-1.6**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**22 18 19.1**	**+0.4**
OCAC				S	**Sn**	**22 18 40.6**	**+0.1**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**22 18 19.7**	**-0.3**
SPBC				S	**Sn**	**22 18 40.9**	**-2.0**
NORC	**Norcasia**	**2.17**	**234**	P	**Pn**	**22 18 26.7**	**-0.6**
NORC				S	**Sn**	**22 18 53.9**	**-1.9**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**22 18 29.6**	**+0.5**
CHIC				S	**Sn**	**22 18 58.1**	**-0.9**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**22 18 30.8**	**+1.1**
	47nm,0.3s,baz=287,slow=20,SNR=19						
ROSC				S	**Sn**	**22 19 00.6**	**+0.8**
	99nm,0.3s,baz=197,slow=19,SNR=17						
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**22 18 30.6**	**+1.0**
ROSC				S	**Sn**	**22 19 00.7**	**+0.8**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**22 18 31.3**	**-0.2**
HELC				S	**Sn**	**22 19 03.3**	**0.0**
HELC	**Santa Helena**	**2.50**	**255**	*eP*	**Pn**	**22 18 33.2**	**+1.6**
HELC				*eS*	**Sn**	**22 19 05.2**	**+1.9**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P	**Pn**	**22 18 32.9**	**+1.1**
UREC	**San Jos de Ur**	**2.57**	**290**	P	**Pn**	**22 18 31.0**	**-1.1**
UREC				S	**Sn**	**22 19 02.4**	**-2.0**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	P	**Pn**	**22 18 35.5**	**+0.5**
GUY2C				S	**Sn**	**22 19 09.6**	**0.0**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	**22 18 33.8**	**-1.1**
VILC				S	**Sn**	**22 19 08.6**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.81**	**160**	P	**Pn**	**22 18 34.0**	**-1.1**
PTGC				S	**Sn**	**22 19 06.9**	**-2.8**
CBOC	**Ciudad Bolivar**	**3.05**	**251**	P	**Pn**	**22 18 38.5**	**+0.2**
CBOC				S	**Sn**	**22 19 14.3**	**-1.2**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**22 18 38.7**	**0.0**
DBBC				S	**Sn**	**22 19 14.8**	**-1.4**
SDV	**Santo Domingo**	**3.17**	**50**	*eP*	**Pn**	**22 18 40.7**	**+0.9**
SDV				*eS*	**Sn**	**22 19 16.8**	**-1.5**
ARGC	**Ariguani, Magd**	**3.19**	**339**	P	**Pn**	**22 18 41.2**	**+1.2**
ARGC				S	**Sn**	**22 19 18.4**	**-0.1**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**22 18 45.0**	**-0.1**
PRAC				S	**Sn**	**22 19 26.8**	**-0.9**
APAC	**Apartado, Choc**	**3.60**	**287**	P	**Pn**	**22 18 45.3**	**+0.1**
APAC				S	**Sn**	**22 19 28.4**	**+0.5**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**22 18 45.1**	**-0.4**
ORTC				S	**Sn**	**22 19 27.4**	**-1.0**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**22 18 45.0**	**-1.0**
SJCC				S	**Sn**	**22 19 27.1**	**-2.2**
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*	**Pn**	**22 18 45.6**	**-0.4**
SJCC				*eS*	**Sn**	**22 19 24.6**	**-4.7**
PLMC	**San Jos del P**	**3.71**	**239**	P	**Pn**	**22 18 46.8**	**+0.1**
PLMC				S	**Sn**	**22 19 28.7**	**-1.8**
SMRC	**Santa Marta, M**	**4.42**	**346**	P	**Pn**	**22 18 57.8**	**+1.8**
SMRC				S	**Sn**	**22 19 44.7**	**-2.6**
PTAC	**Punta Ardita,**	**4.68**	**274**	P	**Pn**	**22 18 58.8**	**-0.6**
PTAC				S	**Sn**	**22 19 51.9**	**-1.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**22 19 01.8**	**-1.0**
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*	**Pn**	**22 19 02.1**	**-0.7**
JAMC	**Jamundi, Valle**	**5.07**	**225**	P	**Pn**	**22 19 04.9**	**+0.1**
	540nm8.1nm,0.6s						
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**22 19 10.0**	**-1.4**
	5.8nm,0.4s						
BBAC	**Balboa, Cauca**	**6.33**	**221**	P	**Pn**	**22 19 21.7**	**+0.1**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**22 24 41.5**	**+0.4**
	0.3nm,0.8s,baz=121,slow=10.0,SNR=2.5 0.3nm,0.8s						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**22 28 01.5**	**-1.2**
	0.3nm,0.6s,baz=138,slow=8.6,SNR=3.9 0.3nm,0.6s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPdf**	**22 37 20.0**	**+2.2**
	0.2nm,0.5s,baz=110,slow=4.2,SNR=5.2						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPdf**	**22 37 23.6**	**+3.8**
	0.3nm,0.4s,baz=107,slow=2.8,SNR=13						

IDC 17 22:23:13.9±1.0, 8.14N×137.75E, h0km, mb3.9/12, mbtmp3.9/12, MS3.5/14, Error ellipse: s-maj=42.0km s-min=18.0km az=80.0

NEIC 17 22:23:14.5±1.4, 8.06N±0.08×137.9E±0.1, h10km±1km, mb4.7/13, Error ellipse: s-maj=18.0km s-min=13.3km az=104.0

ISC 17 22:23:14.1±0.6, **8.09N**±0.07×**137.90E**±0.09, **h10**km, **n48,** σ1s**13**/**31**, **mb4.1**/16, **MS3.6**/12, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**10.50**	**47**	Pn	**Pn**	**22 25 43.2**	**-1.6**
JAY	**Jayapura**	**10.90**	**165**	LR	LR	22 29 24.9	
	comp=Z,450nm,21.3s,baz=292,slow=34						
FAKI	**Fak Fak**	**12.30**	**207**	Pn	**Pn**	**22 26 09.3**	**-0.2**
MANU	**Manus Island**	**13.80**	**136**	Pn	**Pn**	**22 26 29.4**	**-0.6**
LUWI	**Luwuk**	**17.60**	**240**	Pn	**Pn**	**22 27 18.4**	**-1.3**
LUWI				IAmb	IAmb	22 27 33.0	
	comp=Z,39nm,0.6s						
TOLI2	**Tolitoli**	**18.41**	**249**	P	**P**	**22 27 28.9**	**-0.8**
KRVT	**Keravat (AS076**	**18.71**	**131**	LR	LR	22 33 30.3	
	comp=Z,43nm,19.6s,baz=227,slow=33						
PMG	**Port Moresby**	**19.67**	**152**	LR	LR	22 34 52.0	
	comp=Z,167nm,18.2s,baz=266,slow=35						
PMG	**Port Moresby**	**19.67**	**152**	P	**P**	**22 27 43.0**	**-0.5**
PMG				IAmb	IAmb	22 27 51.3	
	comp=Z,23nm,0.8s						
JOW	**Kunigami**	**20.76**	**335**	P	**P**	**22 27 55.2**	**-0.1**
JOW				IAmb	IAmb	22 27 57.0	
	comp=Z,59nm,1.4s						
TWG	**Pinlang**	**21.82**	**314**	P	**P**	**22 28 05.1**	**-1.6**
TWG				IAmb	IAmb	22 28 13.5	
	comp=Z,46nm,1.3s						
SOEI	**Soe**	**22.33**	**218**	P	**P**	**22 28 11.3**	**-1.0**
COEN	**Coen**	**22.52**	**167**	P	**P**	**22 28 11.8**	**-2.4**
COEN				IAmb	IAmb	22 28 51.9	
	comp=Z,13nm,0.8s						
TATO	**Taipei**	**22.97**	**319**	P	**P**	**22 28 17.6**	**-1.4**
HNR	**Honiara**	**28.02**	**128**	LR	LR	22 39 10.0	
	comp=Z,4.7nm,19.1s,baz=5.5,slow=34						
WRA	**Warramunga Arr**	**28.07**	**187**	P	**P**	**22 29 07.0**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=5.8,slow=9.2,SNR=7.1 comp=Z,1.7nm,0.8s						
MAJO	**Matsushiro**	**28.33**	**1**	P	**P**	**22 29 08.0**	**-0.2**
MAJO				IAmb	IAmb	22 29 10.3	
	comp=Z,20nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**29.82**	**67**	T	T	23 01 12.7	
	baz=254,slow=75,SNR=163						
H11S1	**WAKE ISLAND Hy**	**29.84**	**67**	T	T	23 01 12.7	
	baz=254,slow=75,SNR=139						
H11S2	**WAKE ISLAND Hy**	**29.84**	**67**	T	T	23 01 08.3	
	baz=254,slow=75,SNR=179						
H11N1	**WAKE ISLAND Hy**	**30.37**	**65**	T	T	23 02 01.3	
	baz=252,slow=75,SNR=34						
H11N2	**WAKE ISLAND Hy**	**30.38**	**65**	T	T	23 01 59.7	
	baz=252,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**30.38**	**65**	T	T	23 01 56.0	
	baz=252,slow=75,SNR=35						
KSRS	**Korea Array**	**30.60**	**344**	P	**P**	**22 29 29.0**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=161,slow=12,SNR=2.0						
KSRS				LR	LR	22 40 07.7	
	comp=Z,53nm,21.4s,baz=200,slow=33 comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**31.80**	**187**	P	**P**	**22 29 41.4**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=16,slow=12,SNR=2.4 comp=Z,0.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**36.34**	**353**	P	**P**	**22 30 19.4**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=197,slow=4.5,SNR=2.5						
USRK				LR	LR	22 42 44.4	
	comp=Z,80nm,21.0s,baz=187,slow=32 comp=Z,0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**36.34**	**353**	P	**P**	**22 30 17.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.21**	**289**	P	**P**	**22 30 43.5**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=102,slow=8.1,SNR=4.2						
CMAR				LR	LR	22 45 22.3	
	comp=Z,25nm,21.5s,baz=215,slow=34 comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.21**	**289**	P	**P**	**22 30 42.9**	**0.0**
SONM	**Songino Array**	**47.77**	**332**	P	**P**	**22 31 52.8**	**+1.1**
	comp=Z,2.1nm,1.0s,baz=149,slow=7.8,SNR=8.3 comp=Z,2.1nm,1.0s						
SONM	**Songino Array**	**47.77**	**332**	P	**P**	**22 31 52.2**	**+0.5**
MA2	**Magadan**	**52.30**	**8**	LR	LR	22 52 20.7	
	comp=Z,52nm,21.6s,baz=238,slow=33						
MKAR	**Makanchi Array**	**60.93**	**320**	P	**P**	**22 33 27.8**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=100,slow=9.3,SNR=15 comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**60.93**	**320**	P	**P**	**22 33 27.6**	**+0.1**
MAKZ	**Makanchi**	**61.14**	**319**	P	**P**	**22 33 27.6**	**-1.2**
ZALV	**Zalesovo Beam**	**62.34**	**328**	P	**P**	**22 33 36.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=117,slow=8.3,SNR=2.1						
ZALV				LR	LR	23 00 46.6	
	comp=Z,36nm,20.2s,baz=154,slow=36						
	comp=Z,0.3nm,0.3s						
TIXI	**Tiksi**	**63.75**	**357**	LR	LR	23 00 17.4	
	comp=Z,67nm,19.7s,baz=192,slow=35						
KURK	**Kurchatov**	**64.57**	**323**	P	**P**	**22 33 51.7**	**+0.2**
KURBB	**Kurchatov Arra**	**64.59**	**323**	P	**P**	**22 33 51.8**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=113,slow=5.7,SNR=21 comp=Z,1.9nm,0.5s						
BVAR	**Borovoye Array**	**70.11**	**324**	P	**P**	**22 34 27.0**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=108,slow=8.1,SNR=19 comp=Z,2.9nm,0.5s						
BORK	**Borovoye**	**70.16**	**324**	P	**P**	**22 34 27.1**	**+0.1**
BORK				IAmb	IAmb	22 34 28.0	
	comp=Z,4.4nm,0.6s						
KDAK	**Kodiak Island**	**72.33**	**32**	LR	LR	23 03 57.0	
	comp=Z,32nm,18.8s,baz=302,slow=34						
ILAR	**Eielson Array**	**76.44**	**25**	P	**P**	**22 35 05.3**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=252,slow=4.4,SNR=4.5 comp=Z,0.4nm,0.8s						
KIRV	**Kirov**	**82.37**	**328**	LR	LR	23 12 58.6	
	comp=Z,40nm,21.7s,baz=84,slow=36						
VNDA	**Vanda**	**86.53**	**175**	P	**P**	**22 35 59.0**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=346,slow=2.5,SNR=1.9 comp=Z,0.4nm,0.6s						
SPITS	**Spitsbergen Ar**	**88.28**	**350**	LR	LR	23 16 06.9	
	comp=Z,40nm,19.6s,baz=83,slow=36						
YKA	**Yellowknife Ar**	**90.83**	**26**	LR	LR	23 14 47.9	
	comp=Z,25nm,20.0s,baz=324,slow=34						
RES	**Resolute Bay**	**91.40**	**12**	LR	LR	23 19 57.9	
	comp=Z,22nm,18.6s,baz=1.5,slow=37						

UCR 17 22:23:46.7±0.6, 10.24N×84.27W, h93km±3km, MW4.1, Presumed earthquake

CATAC 17 22:23:48.2±0.4, 10.7N±3.3×8.4W±, h71km±5km, M3.6/7, MLv3.6/7, Error ellipse: s-maj=9.5km s-min=4.1km az=57.0, confirmed

ISC 17 22:23:48.0±1.5, **10.22N**±0.04×**84.28W**±0.04, **h86**km±8km, **n82,** σ0s**47**/**89**, **7C-20D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VPS5	**V. Poas**	**0.05**	**121**	*eP*	**Pn**	**22 24 00.3**	**-0.3**
VPS8	**V Poas**	**0.05**	**139**	*eP*	**Pn**	**22 24 00.4**	**-0.3**
VPL1	**V. Platanar**	**0.10**	**294**	*eP*	**Pn**	**22 24 00.4**	**-0.2**
VPL3	**V. Platanar**	**0.14**	**346**	*eP*	**Pn**	**22 24 00.3**	**-0.2**
VPL3				*eS*	**Sn**	**22 24 10.6**	**+1.0**
ARTO	**Ro Cuarto**	**0.14**	**25**	*eP*	**Pn**	**22 24 00.2**	**-0.3**
SARCI	**Sarchi**	**0.14**	**209**	*eP*	**Pn**	**22 24 00.4**	**-0.2**
TCS1	**Tacares**	**0.17**	**188**	P	**Pn**	**22 24 00.5**	**-0.2**
TCS1	**Tacares**	**0.17**	**188**	*eP*	**Pn**	**22 24 00.4**	**-0.2**
VBV1	**V. Barva**	**0.20**	**121**	*eP*	**Pn**	**22 24 00.6**	**-0.4**
PALD	**Palmares**	**0.23**	**224**	*eP*	**Pn**	**22 24 00.1**	**-0.7**
ITAL	**Pital**	**0.23**	**1**	*eP*	**Pn**	**22 24 00.4**	**-0.3**
BELE	**Belen**	**0.25**	**160**	*eP*	**Pn**	**22 24 00.4**	**-0.5**
ATEO	**Atenas**	**0.26**	**204**	*eP*	**Pn**	**22 24 00.4**	**-0.6**
HEME	**Heredia, Merce**	**0.26**	**148**	*eP*	**Pn**	**22 24 00.7**	**-0.4**
HDC	**Heredia**	**0.27**	**143**	*eP*	**Pn**	**22 24 00.7**	**-0.3**
SANTA	**Santa Ana**	**0.30**	**162**	*eP*	**Pn**	**22 24 00.6**	**-0.6**
SANTA				*eS*	**Sn**	**22 24 11.0**	**+0.2**
TRB2	**Turrubares**	**0.35**	**209**	*eP*	**Pn**	**22 24 00.9**	**-0.5**
LUJA	**Lujan**	**0.35**	**145**	*eP*	**Pn**	**22 24 01.1**	**-0.4**
SJS	**Escuela Geolog**	**0.35**	**142**	*eP*	**Pn**	**22 24 01.1**	**-0.4**
ECI	**Escuela Centro**	**0.35**	**141**	*eP*	**Pn**	**22 24 01.1**	**-0.4**
SJS3	**Mercedes San J**	**0.35**	**142**	*eP*	**Pn**	**22 24 01.2**	**-0.3**
CORON	**Coronado**	**0.36**	**132**	*eP*	**Pn**	**22 24 01.4**	**-0.3**
CVIMO	**Finca Echandi**	**0.38**	**120**	*eP*	Pn	22 24 05.8	+4.0
OROT	**Orotina**	**0.39**	**219**	*eP*	**Pn**	**22 24 01.2**	**-0.4**
ACOS	**Acosta**	**0.43**	**165**	*eP*	**Pn**	**22 24 01.7**	**-0.4**
ARZA	**Esparza**	**0.45**	**240**	*eP*	**Pn**	**22 24 01.

AVH	**Avacha**	**3.93**	**242**	*e*P	Pn	22 50 27.5 +4.8
KOK	**Koryaka**	**3.97**	**243**	*e*P	Pn	22 50 27.8 +4.7
GNL	**Ganaly**	**4.14**	**251**	*e*P	Pn	22 50 29.8 +4.1
RUS	**Russkaya**	**4.54**	**234**	*e*P	Pn	22 50 33.9 +3.0
MTVR	**Mutnovka**	**4.66**	**236**	*e*P	Pn	22 50 36.4 +3.6
ASAK	**Asacha**	**4.86**	**237**	*e*P	Pn	22 50 39.5 +4.1
KDTR	**Khodutka, Kamc**	**5.16**	**231**	*e*P	Pn	22 50 42.4 +3.0

IDC ***17*** *22:55:32.4±0.7, 24°.64N×92°.52E, h0km, mb3.7/11, mbtmp3.8/12, ML4.2/1, MS4.0/2, Error ellipse: s-maj=23.2km s-min=12.5km az=89.0*
NDI ***17*** *22:55:37.7±2.4, 24°.55N×92°.43E, h31km±21km, ML3.9, MW3.8, Presumed earthquake*
NEIC ***17*** *22:55:38.7±1.2, 24°.61N±0°.05×92°.38E±0°.06, h40km±6km, mb4.3/63, Error ellipse: s-maj=9.5km s-min=5.2km az=52.0*
ISC 17 22:55:35.8±1.3, 24°.53N±0°.04×92°.38E±0°.03, h24km±10km, n100, σ0s85/104, mb4.3/42, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.13**	**337**		**Pb**	**22 55 56.9**	**+0.2**
SHL				Sn	**Sb**	**22 56 10.8**	**-0.2**
SHL	**Shillong**	**1.13**	**337**	*e*P	**Pb**	**22 55 56.7**	**-0.1**
SHL				*e*S	**Sn**	**22 56 11.9**	**+0.8**
SHL				IAML		22 56 12.2	
	comp=E,4μm,0.2s						
SHL				IAML		22 56 23.2	
	comp=E,3μm,0.3s						
IMP	**Imphal**	**1.46**	**78**	*e*P	**Pb**	**22 56 03.0**	**+0.7**
IMP				*e*S	**Sn**	**22 56 18.1**	**-1.1**
MORE	**Moreh**	**1.78**	**99**		**Pb**	**22 56 07.2**	**-0.6**
MORE				Sn	**Sb**	**22 56 28.8**	**-0.9**
BRDH	**Bariadhala**	**1.96**	**200**	Pn	**Pb**	**22 56 10.6**	**-0.2**
	comp=E,76nm,0.3s,baz=239,slow=22,SNR=15						
BRDH				Lg	Lg	22 56 39.6	
	comp=E,144nm,0.3s,baz=126,slow=23,SNR=6.6						
	comp=E,150nm,0.3s						
KOHI	**KOHIMA**	**1.97**	**53**	*e*P	**Pn**	**22 56 08.3**	**+0.5**
KOHI				*i* x	**Pb**	**22 56 10.7**	**-0.3**
KOHI				*e*S	**Sn**	**22 56 32.2**	**+0.4**
KOHI				IAML		22 56 38.0	
	comp=E,930nm,0.3s						
KOHI				IAML		22 56 42.2	
	comp=E,873nm,0.3s						
DHUB	**DHUBRI**	**2.62**	**305**	*e*P	**Pn**	**22 56 17.7**	**+1.1**
SHBG	**Sahibganj**	**4.36**	**280**	*e*S	**Sn**	**22 57 30.5**	**-0.3**
LSA	**Lhasa**	**5.27**	**348**	Pn	**Pn**	**22 56 52.3**	**-1.2**
BOK	**Bokaro**	**5.97**	**264**	*e*P	**Pn**	**22 57 05.2**	**+2.4**
BOK				*e*S	**Sn**	**22 58 06.4**	**-4.1**
EVN	**Everest**	**6.05**	**306**		**Pn**	**22 57 05.6**	**+1.2**
GAYA	**Gaya**	**6.50**	**274**	*e*P	**Pn**	**22 57 11.7**	**+1.7**
GAYA				*e*S	**Sn**	**22 58 21.3**	**-2.2**
GTA2	**Gaotai**	**16.16**	**21**	*e*P	**P**	**22 59 25.3**	**+0.7**
GTA2				pP	pP	22 59 28.3	-2.8
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LHMI	**Lhok Sumawe**	**19.69**	**166**	P	**Pn**	**23 00 05.2**	**+0.3**
KSH2	**Kashi**	**20.35**	**320**	P	Pn	23 00 16.3	+3.5
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TARG	**Taragay, Kyrgy**	**21.00**	**328**	P	**P**	**23 00 17.2**	**-0.7**
PRZ	**Przheval'sk**	**21.31**	**331**	P	**P**	**23 00 19.9**	**-1.2**
PRZ				IAmb	IAmb	23 00 26.7	
	comp=Z,6.8nm,0.7s						
PDGK	**Podgornoye**	**21.54**	**334**	P	**P**	**23 00 22.6**	**-0.8**
KDJ	**Kajisay**	**21.61**	**328**	P	**P**	**23 00 24.3**	**+0.1**
MANEM	**Manem**	**21.91**	**311**	P	**P**	**23 00 27.7**	**+0.1**
MANEM				IAmb	IAmb	23 00 32.0	
	comp=Z,8.2nm,0.7s						
BOOM	**Boomskoye usch**	**22.48**	**327**	P	**P**	**23 00 34.0**	**+0.3**
KBL	**Kabul**	**22.57**	**302**	P	**P**	**23 00 34.7**	**-0.1**
AAK	**Ala-Archa**	**23.33**	**325**	P	**P**	**23 00 43.0**	**+0.6**
GAR	**Garm**	**23.58**	**313**	P	**P**	**23 00 43.7**	**-1.2**
GAR				IAmb	IAmb	23 00 46.4	
	comp=Z,5.7nm,0.8s						
MKAR	**Makanchi Array**	**23.64**	**343**	P	**P**	**23 00 45.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=170,slow=7.8,SNR=8.9						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**23.64**	**343**	P	**P**	**23 00 44.3**	**-0.9**
BTK	**Batken**	**23.82**	**316**	P	**P**	**23 00 46.7**	**-0.4**
SHAA	**Shahritus**	**24.42**	**308**	P	**P**	**23 00 51.9**	**-0.8**
SHAA				IAmb	IAmb	23 00 53.5	
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**25.78**	**22**	P	**P**	**23 01 05.6**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=200,slow=9.5,SNR=5.8						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**25.78**	**22**	P	**P**	**23 01 03.9**	**-1.1**
ULN	**Ulaanbaatar**	**26.04**	**23**	P	**P**	**23 01 07.6**	**+0.3**
YULB	**Yu-li**	**26.43**	**86**	P	**P**	**23 01 11.8**	**+0.9**
YULB				IAmb	IAmb	23 01 33.3	
	comp=Z,19nm,1.2s						
KURBB	**Kurchatov Arra**	**28.17**	**341**	P	**P**	**23 01 24.4**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=145,slow=9.0,SNR=4.1						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**28.23**	**341**	P	**P**	**23 01 26.5**	**-0.2**
ZALV	**Zalesovo Beam**	**29.92**	**351**	P	**P**	**23 01 41.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=160,slow=7.7,SNR=4.4						
	comp=Z,0.7nm,0.4s						
AB31	**Akbulak array**	**35.36**	**323**	P	**P**	**23 02 29.7**	**+0.4**
ABKAR	**Akbulak array**	**35.36**	**323**	P	**P**	**23 02 29.9**	**+0.6**
KBZ	**Khabaz**	**44.49**	**308**	LR	LR	23 24 32.9	
	comp=Z,36nm,18.3s,baz=118,slow=39						
KNRA	**Kununurra**	**53.46**	**135**	P	**P**	**23 04 54.0**	**-0.3**
KNRA				IAmb	IAmb	23 05 35.4	
	comp=Z,7.8nm,1.2s						
FINES	**FINESS Array B**	**57.45**	**329**	P	**P**	**23 05 22.4**	**0.0**
	comp=Z,0.8nm,0.6s,baz=101,slow=9.9,SNR=8.2						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**57.45**	**329**	P	**P**	**23 05 22.1**	**-0.3**
PABE	**Paberze**	**57.98**	**321**	P	**P**	**23 05 26.9**	**+0.7**
ARCES	**ARCESS Array B**	**59.18**	**338**	P	**P**	**23 05 34.6**	**+0.2**
WRA	**Warramunga Arr**	**60.19**	**134**	P	**P**	**23 05 42.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=321,slow=7.5,SNR=11						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**60.19**	**134**	P	**P**	**23 05 41.6**	**-0.5**
WR8	**Warramunga Arr**	**60.30**	**133**	P	**P**	**23 05 42.9**	**+0.1**
ASAR	**Alice Springs**	**62.59**	**137**	P	**P**	**23 05 57.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=322,slow=6.9,SNR=9.1						
	comp=Z,0.4nm,0.5s						
VRAC	**Vranov**	**62.71**	**314**	LR	LR	23 35 24.4	
	comp=Z,470nm,19.8s,baz=298,slow=38						
HFS	**Hagfors**	**63.46**	**327**	P	**P**	**23 06 03.5**	**0.0**
	comp=Z,1.4nm,0.4s,baz=108,slow=4.8,SNR=14						
	comp=Z,1.4nm,0.4s						
NC405	**NORSAR Array S**	**64.36**	**328**	P	**P**	**23 06 09.3**	**-0.2**
NB2	**NORSAR Subarra**	**64.61**	**328**	P	**P**	**23 06 10.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=83,slow=6.5						
NOA	**NORSAR Array B**	**64.61**	**328**	P	**P**	**23 06 10.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=86,slow=6.3,SNR=3.9						
	comp=Z,0.7nm,0.7s						
GEC2	**GERESS Array S**	**64.65**	**314**	P	**P**	**23 06 12.1**	**+0.4**
GEC2				IAmb	IAmb	23 06 50.5	
	comp=Z,2.5nm,1.2s						
GERES	**GERESS Array B**	**64.65**	**314**	P	**P**	**23 06 12.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=76,slow=5.6,SNR=8.9						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**64.65**	**314**	P	**P**	**23 06 11.9**	**+0.2**
CLL	**Colim**	**64.73**	**317**	*i* pP	pP	23 06 21.1	+1.5
	comp=Z,18nm,2.0s						
NAO01	**NORSAR Array S**	**64.79**	**328**	P	**P**	**23 06 12.0**	**-0.3**
NC204	**NORSAR Array S**	**64.81**	**328**	P	**P**	**23 06 12.6**	**+0.1**
STAL	**STALIGIAL**	**65.75**	**312**	P	**P**	**23 06 18.1**	**-0.7**
FDMO	**Fiordimonte**	**66.12**	**308**	P	**P**	**23 06 21.1**	**-0.1**
C19K	**Lookout Ridge**	**73.49**	**21**	P	**P**	**23 07 06.9**	**+0.8**
C23K	**Itkillik River**	**75.89**	**19**	P	**P**	**23 07 20.8**	**+0.9**
D23K	**Nanushuk River**	**76.35**	**19**	P	**P**	**23 07 23.9**	**+1.3**
D23K				IAmb	IAmb	23 07 24.8	
	comp=Z,4.8nm,0.9s						
F21K	**Alatna River**	**76.40**	**21**	P	**P**	**23 07 23.0**	**+0.1**
F21K				IAmb	IAmb	23 07 24.9	
	comp=Z,2.1nm,0.9s						
E22K	**Anaktuvuk Pass**	**76.45**	**20**	P	**P**	**23 07 22.9**	**-0.3**
E22K				IAmb	IAmb	23 07 25.0	
	comp=Z,3.5nm,1.1s						
G21K	**Allakaket**	**76.76**	**22**	P	**P**	**23 07 24.7**	**-0.3**
G21K				IAmb	IAmb	23 07 45.8	
	comp=Z,6.2nm,1.5s						
IMAR	**Indian Mountai**	**76.95**	**23**	P	**P**	**23 07 26.6**	**+0.6**
M16K	**Timber Creek**	**77.37**	**28**	P	**P**	**23 07 28.9**	**+0.4**
M16K				IAmb	IAmb	23 07 35.8	
	comp=Z,7.5nm,1.4s						
D25K	**Kavik River**	**77.40**	**18**	P	**P**	**23 07 29.2**	**+0.6**
D25K				IAmb	IAmb	23 07 52.4	
	comp=Z,5.9nm,1.2s						
H21K	**Melozitna Rive**	**77.45**	**23**		**P**	**23 07 29.3**	**+0.4**
H21K				IAmb	IAmb	23 07 37.6	
	comp=Z,4.3nm,1.4s						
E24K	**Your Creek**	**77.52**	**20**	P	**P**	**23 07 30.3**	**+1.0**
E24K				IAmb	IAmb	23 07 31.3	
	comp=Z,3.4nm,0.8s						
E25K	**Arctic Village**	**78.37**	**19**	P	**P**	**23 07 34.5**	**+0.5**
E25K				IAmb	IAmb	23 07 40.2	
	comp=Z,7.5nm,1.5s						
TULEG	**Thule**	**78.50**	**356**	P	**P**	**23 07 33.1**	**-1.3**
F25K	**Christian Rive**	**78.68**	**19**	P	**P**	**23 07 36.8**	**+1.1**
F25K				IAmb	IAmb	23 07 47.9	
	comp=Z,6.7nm,1.5s						
CAST	**Castle Rocks**	**78.93**	**24**	P	**P**	**23 07 37.3**	**+0.2**
CAST				IAmb	IAmb	23 07 38.8	
	comp=Z,3.6nm,1.4s						
G26K	**Porcupine Rive**	**79.64**	**19**	P	**P**	**23 07 42.2**	**+1.3**
G26K				IAmb	IAmb	23 07 43.2	
	comp=Z,2.0nm,0.9s						
L22K	**Petersville**	**79.92**	**25**	P	**P**	**23 07 42.7**	**+0.1**
L22K				IAmb	IAmb	23 08 11.1	
	comp=Z,10nm,1.5s						
ILAR	**Eielson Array**	**80.01**	**22**	P	**P**	**23 07 43.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=295,slow=3.7,SNR=5.6						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**80.01**	**22**	P	**P**	**23 07 42.7**	**-0.3**
STLK	**Strandline Lak**	**80.09**	**26**	P	**P**	**23 07 44.2**	**+0.7**
STLK				IAmb	IAmb	23 08 06.1	
	comp=Z,7.2nm,1.4s						
E29M	**Blow River**	**80.34**	**17**	P	**P**	**23 07 45.3**	**+0.6**
E29M				IAmb	IAmb	23 07 54.8	
	comp=Z,3.5nm,1.1s						
F28M	**Old Crow**	**80.34**	**18**	P	**P**	**23 07 44.6**	**-0.1**
F28M				IAmb	IAmb	23 08 15.1	
	comp=Z,2.6nm,1.1s						
H27K	**Steamboat Moun**	**80.80**	**19**	P	**P**	**23 07 48.1**	**+0.9**
I27K	**Kandik River**	**81.19**	**20**	P	**P**	**23 07 50.7**	**+1.4**
I27K				IAmb	IAmb	23 07 52.6	
	comp=Z,6.0nm,1.4s						
LBTB	**Lobatse**	**81.25**	**238**	P	**P**	**23 07 51.1**	**+0.8**
LBTB				IAmb	IAmb	23 08 04.6	
	comp=Z,9.7nm,1.4s						
SML	**Sawmill**	**81.28**	**25**	P	**P**	**23 07 49.6**	**-0.2**
RIDG	**Independent Ri**	**81.35**	**22**	P	**P**	**23 07 50.9**	**+0.7**
RIDG				IAmb	IAmb	23 08 22.3	
	comp=Z,7.8nm,1.4s						
INK	**Inuvik**	**81.51**	**16**	P	**P**	**23 07 51.0**	**+0.1**
INK				IAmb	IAmb	23 08 27.1	
	comp=Z,2.8nm,1.1s						
H29M	**Whitestone**	**81.74**	**18**	P	**P**	**23 07 52.4**	**+0.2**
G30M	**tAoh Zraii Nji**	**81.80**	**17**	P	**P**	**23 07 52.7**	**+0.2**
G30M				IAmb	IAmb	23 08 14.6	
	comp=Z,3.8nm,1.1s						
I28M	**Miner Creek**	**81.81**	**20**	P	**P**	**23 07 52.9**	**+0.3**
G31M	**Satah River**	**82.36**	**17**	P	**P**	**23 07 55.3**	**0.0**
G31M				IAmb	IAmb	23 07 57.2	
	comp=Z,3.7nm,1.4s						
BCAR	**Beaver Creek A**	**82.84**	**22**	P	**P**	**23 07 59.0**	**+1.0**
I30M	**Mount Dempster**	**83.03**	**19**	P	**P**	**23 07 59.0**	**-0.1**
I30M				IAmb	IAmb	23 08 20.0	
	comp=Z,4.5nm,1.4s						
RAGM	**Ragged Mountai**	**83.55**	**25**	P	**P**	**23 08 01.8**	**+0.1**
MARNC	**Mare, Loyalty**	**86.57**	**115**	P	**P**	**23 08 18.1**	**+0.7**
P33M	**Teslin, Yukon**	**87.87**	**21**	P	**P**	**23 08 22.5**	**-0.8**
P33M				IAmb	IAmb	23 08 59.1	
	comp=Z,3.3nm,1.2s						
Q32M	**Nakina River**	**89.01**	**21**	P	**P**	**23 08 29.6**	**+0.8**
FUNA	**Funafuti**	**90.62**	**99**	P	**P**	**23 08 37.4**	**+0.6**
CASY	**Casey**	**91.57**	**173**	P	**P**	**23 08 39.3**	**-0.7**

IDC 17 23:06:27.6±3.1, 7°.51N×93°.35E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=155.4km s-min=30.8km az=56.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**25.67**	**235**	T	T	23 38 39.9	
	baz=55,slow=75,SNR=10						
H08S2	**Diego Garcia H**	**25.67**	**235**	T	T	23 38 44.5	
	baz=55,slow=75,SNR=14						
H08S1	**Diego Carcia H**	**25.69**	**235**	T	T	23 38 47.0	
	baz=55,slow=75,SNR=8.5						
MKAR	**Makanchi Array**	**40.28**	**348**	P	P	23 14 06.0	-0.4
	0.6nm,0.5s,baz=168,slow=7.9,SNR=6.7						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**44.71**	**347**	P	P	23 14 42.4	0.0
	1.2nm,0.2s,baz=171,slow=7.8,SNR=4.3						
	1.2nm,0.2s						
ZALV	**Zalesovo Beam**	**46.82**	**353**	P	P	23 14 59.0	+0.1
	0.4nm,0.4s,baz=168,slow=8.4,SNR=5.6						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**48.69**	**125**	P	P	23 15 14.0	-0.1
	0.2nm,0.7s,baz=302,slow=7.1,SNR=1.5						
	0.2nm,0.7s						
H04N2	**CROZET ISLANDS**	**65.01**	**211**	T	T	00 28 06.0	
	baz=43						
H04N1	**CROZET ISLANDS**	**65.02**	**211**	T	T	00 28 04.5	
	baz=43,SNR=11						
H04N3	**CROZET ISLANDS**	**65.03**	**211**	T	T	00 28 02.3	
	baz=43						
FINES	**FINESS Array B**	**72.67**	**332**	P	P	23 17 57.1	+0.1
	1.0nm,0.8s,baz=98,slow=5.8,SNR=3.6						
	1.0nm,0.8s						

IDC ***17*** *23:16:18.1±1.8, 7°.31S×152°.21E, h0km, mb4.0/7, mbtmp4.0/8, ML2.2/1, MS2.8/2, Error ellipse: s-maj=49.8km s-min=22.4km az=109.0*
NEIC ***17*** *23:16:19.6±0.9, 7°.20S±0°.06×152°.1E±0°.1, h10km±2km, mb4.1/11, Error ellipse: s-maj=24.3km s-min=3.1km az=115.0*
ISC 17 23:16:19.0±0.8, 7°.28S±0°.08×152°.2E±0°.1, h10km, n25, σ1s03/26, mb4.1/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.96**	**356**	LR	LR	23 18 17.8	
	comp=Z,46nm,19.9s,baz=197,slow=40						
RABL	**Rabaul**	**3.07**	**359**	Pn	**Pn**	**23 17 07.2**	**-0.4**
RABL				Sn	**Sn**	**23 17 42.8**	**-1.6**
PMG	**Port Moresby**	**5.44**	**247**	Pn	**Pn**	**23 17 41.3**	**+1.2**
	4.7nm,0.3s,baz=41,slow=14,SNR=3.8						
PMG				Sn	**Sn**	**23 18 42.8**	**0.0**
	4.6nm,0.3s,baz=57,slow=19,SNR=7.0						
	17nm,0.5s						
PMG	**Port Moresby**	**5.44**	**247**	Pn	**Pn**	**23 17 39.4**	**-0.8**
PMG				Sn	**Sn**	**23 18 40.6**	**-2.2**
ONTNC	**Ouen Toro**	**20.28**	**139**	P	**P**	**23 20 53.5**	**-1.5**
WB0	**Warramunga Arr**	**21.29**	**233**	P	**P**	**23 21 05.5**	**-0.4**
WB0				IAmb	IAmb	23 21 06.9	
	comp=Z,7.0nm,0.8s						
WR8	**Warramunga Arr**	**21.31**	**232**	P	**P**	**23 21 05.3**	**-0.8**
WR8				IAmb	IAmb	23 21 07.2	
	comp=Z,9.9nm,0.9s						
WRAB	**Tennant Creek**	**21.41**	**232**	P	**P**	**23 21 06.2**	**-1.0**
WRAB				IAmb	IAmb	23 21 08.7	
	comp=Z,7.8nm,0.9s						
WRA	**Warramunga Arr**	**21.43**	**232**	P	**P**	**23 21 07.4**	**0.0**
	comp=Z,7.1nm,0.9s,baz=55,slow=10,SNR=28						
	comp=Z,7.1nm,0.9s						
WRA	**Warramunga Arr**	**21.43**	**232**	P	**P**	**23 21 06.0**	**-1.4**
MTN	**Manton Dam**	**21.48**	**253**	P	**P**	**23 21 06.3**	**-1.6**
MTN				IAmb	IAmb	23 21 07.8	
	comp=Z,4.9nm,1.1s						
AS31	**Alice Springs**	**23.97**	**225**	P	**P**	**23 21 34.0**	**+0.2**
AS31				IAmb	IAmb	23 21 35.5	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**23.97**	**225**	P	**P**	**23 21 34.3**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=58,slow=8.8,SNR=48						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**23.97**	**225**	P	**P**	**23 21 33.9**	**+0.1**
KNRA	**Kununurra**	**24.44**	**248**	P	**P**	**23 21 36.9**	**-1.2**
KNRA				IAmb	IAmb	23 21 43.1	
	comp=Z,5.3nm,0.6s						
STKA	**Stephens Creek**	**26.40**	**201**	P	**P**	**23 21 56.1**	**+0.3**
	comp=Z,7.4nm,1.0s,baz=354,slow=8.0,SNR=5.0						
	comp=Z,7.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**28.03**	**245**	P	**P**	**23 22 10.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**58.44**	**297**	P	**P**	**23 26 16.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=108,slow=9.4,SNR=4.7						
	comp=Z,0.5nm,0.3s						
SHEM	**Shemya Is, Ala**	**62.62**	**15**	LR	LR	23 50 11.6	
	comp=Z,20nm,19.1s,baz=252,slow=32						
SONM	**Songino Array**	**68.12**	**329**	P	**P**	**23 27 20.7**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=130,slow=4.8,SNR=6.5						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**81.81**	**319**	P	**P**	**23 28 39.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=107,slow=10.0,SNR=2.5						
	comp=Z,0.3nm,0.8s						
GLI	**Glacier Island**	**82.66**	**25**		**P**	**23 28 42.9**	**+0.5**
E19K	**Redstone River**	**82.71**	**17**	P	**P**	**23 28 42.5**	**-0.1**
E19K				IAmb	IAmb	23 28 52.8	
	comp=Z,2.5nm,0.9s						
ZALV	**Zalesovo Beam**	**82.89**	**327**	P	**P**	**23 28 43.7**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=111,slow=8.1,SNR=3.7						
	comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.43**	**284**	PKPbc	**PKPbc**	**23 36 12.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=53,slow=2.9,SNR=2.4						

IDC 17 23:22:25.9±1.8, 4°.59S×145°.41E, h0km, mb3.3/2, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=61.7km s-min=29.0km az=112.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.09**	**160**	Pn	Pn	23 23 42.3	-1.2
	3.0nm,0.3s,baz=0.0,slow=12,SNR=2.5						
PMG				Sn	Sn	23 24 34.8	-8.3
	2.3nm,0.3s,baz=206,slow=18,SNR=1.8						
	12nm,0.4s						
WRA	**Warramunga Arr**	**18.69**	**214**	P	Pn	23 26 46.1	-0.1
	0.1nm,0.3s,baz=34,slow=11,SNR=8.4						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.98**	**209**	P	P	23 27 21.9	+0.3
	0.3nm,0.4s,baz=39,slow=8.2,SNR=9.1						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**84.82**	**23**	P	P	23 35 02.1	0.0
	0.3nm,0.6s,baz=237,slow=4.3,SNR=4.4						
	0.3nm,0.6s						

IDC ***17*** *23:29:31.6±2.8, 5°.13S×153°.71E, h0km, mb4.0/6, mbtmp4.1/7, ML2.4/1, MS3.1/1, Error ellipse: s-maj=86.0km s-min=26.8km az=112.0*
NEIC ***17*** *23:29:38.8±1.5, 4°.95S±0°.08×153°.2E±0°.1, h29km±6km, mb4.3/7, Error ellipse: s-maj=17.8km s-min=10.8km az=104.0*
ISC 17 23:29:40.3±1.0, 4°.95S±0°.09×153°.2E±0°.1, h43km, n24, σ1s01/26, mb4.2/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.25**	**307**		**Pn**	**23 30 00.8**	**-0.6**
MANU	**Manus Island**	**6.47**	**296**		**Pn**	**23 31 15.0**	**+1.9**
PMG	**Port Moresby**	**7.43**	**233**	Pn	**Pn**	**23 31 27.8**	**+1.6**
	3.4nm,0.3s,baz=14,slow=4.9,SNR=4.4						
PMG				Sn	**Sn**	**23 32 47.7**	**-1.6**
	6.7nm,0.3s,baz=313,slow=18,SNR=6.4						
PMG				LR	LR	23 34 59.5	
	comp=Z,121nm,18.7s,baz=318,slow=42						
	18nm,0.5s						
PMG	**Port Moresby**	**7.43**	**233**		**Pn**	**23 31 26.8**	**+0.6**
PMG				Sn	**Sn**	**23 32 48.6**	**-0.7**
WB0	**Warramunga Arr**	**23.48**	**230**	P	**P**	**23 34 45.0**	**-1.3**
WB0				IAmb	IAmb	23 34 47.1	
	comp=Z,9.7nm,0.9s						
WR8	**Warramunga Arr**	**23.52**	**229**	P	**P**	**23 34 46.3**	**-0.4**
WR8				IAmb	IAmb	23 34 47.9	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**23.61**	**229**	P	**P**	**23 34 46.9**	**-0.7**
WRAB				IAmb	IAmb	23 34 48.2	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**23.63**	**229**	P	**P**	**23 34 46.0**	**-1.8**
	comp=Z,7.1nm,0.9s,baz=53,slow=9.6,SNR=32						
	comp=Z,7.1nm,0.9s						
WRA	**Warramunga Arr**	**23.63**	**229**	P	**P**	**23 34 46.8**	**-0.9**
INKA	**Innaminka**	**25.57**	**206**	P	**P**	**23 35 06.8**	**+1.5**
INKA				IAmb	IAmb	23 35 21.6	
	comp=Z,1.9nm,0.9s						
KNRA	**Kununurra**	**26.24**	**244**	P	**P**	**23 35 10.7**	**-0.9**
KNRA				IAmb	IAmb	23 35 15.2	
	comp=Z,6.5nm,0.7s						
ASAR	**Alice Springs**	**26.30**	**223**	P	**P**	**23 35 11.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=54,slow=9.0,SNR=12						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**26.30**	**223**	P	**P**	**23 35 11.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**58.27**	**295**	P	**P**	**23 39 32.3**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=111,slow=5.4,SNR=5.4						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**58.27**	**295**	P	**P**	**23 39 31.1**	**0.0**
MKAR	**Makanchi Array**	**80.68**	**319**	P	**P**	**23 41 50.0**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=101,slow=7.6,SNR=2.7	

ETL	**Fush Village**	**1.03**	**240**	P		**Pn**	**23 55 32.1**	**-0.3**
ETL				*i* S		**Sn**	**23 55 48.2**	**-0.2**
NACB	**Ninganchiao**	**1.05**	**242**	*i* P		**Pn**	**23 55 31.6**	**-0.9**
NACB				*i* S		**Sn**	**23 55 47.2**	**-1.5**
YM01	**YM01**	**1.05**	**297**	⇑*i*P		**Pn**	**23 55 32.3**	**-0.3**
YM01				*i* S		**Sn**	**23 55 48.1**	**-0.7**
YM08	**YM08**	**1.06**	**299**	P		**Pn**	**23 55 31.9**	**-0.8**
YM08				*i* S		**Sn**	**23 55 47.8**	**-1.1**
PCYT	**Pengchaiyu**	**1.07**	**333**	*i* P		**Pn**	**23 55 33.0**	**+0.3**
PCYT				*e*S		**Sn**	**23 55 50.4**	**+1.4**
IRIF	**Iriomote-Funau**	**1.08**	**108**	P		**Pn**	**23 55 32.5**	**-0.3**
IRIF				S		**Sn**	**23 55 48.9**	**-0.3**
ZUZH	**Zhuzihu**	**1.08**	**297**	*i* P		**Pn**	**23 55 32.5**	**-0.4**
ZUZH				*i* S		**Sn**	**23 55 48.7**	**-0.7**
TWY	**Chenhua**	**1.09**	**303**	*i* P		**Pn**	**23 55 33.0**	**+0.1**
TWY				S		**Sn**	**23 55 49.7**	**+0.1**
TWD	**Chiawan**	**1.09**	**238**	*i* P		**Pn**	**23 55 32.1**	**-0.9**
TWD				*i* S		**Sn**	**23 55 49.4**	**-0.1**
YHNB	**Yeheng**	**1.12**	**270**	⇑*i*P		**Pn**	**23 55 33.4**	**0.0**
YHNB				*i* S		**Sn**	**23 55 50.0**	**-0.2**
ETLH	**Xiulin Townshi**	**1.13**	**246**	*i* P		**Pn**	**23 55 32.9**	**-0.6**
ETLH				*i* S		**Sn**	**23 55 49.7**	**-0.6**
NSK	**Sanguang**	**1.14**	**270**	⇑*i*P		**Pn**	**23 55 33.5**	**0.0**
NSK				*i* S		**Sn**	**23 55 50.2**	**-0.3**
NNSB	**Datong**	**1.14**	**258**	*i* P		**Pn**	**23 55 33.4**	**-0.3**
NNSB				*i* S		**Sn**	**23 55 50.8**	**+0.1**
NNS	**Nan Shan**	**1.15**	**259**	*i* P		**Pn**	**23 55 33.9**	**+0.2**
NNS				*i* S		**Sn**	**23 55 50.7**	**-0.1**
NTST	**Danshui**	**1.16**	**295**	P		**Pn**	**23 55 33.4**	**-0.3**
NTST				*i* S		**Sn**	**23 55 50.8**	**0.0**
TWS1	**Kuangyinshan**	**1.16**	**292**	*i* P		**Pn**	**23 55 33.6**	**-0.2**
TWS1				S		**Sn**	**23 55 50.3**	**-0.5**
TEYL	**Yanliau Villag**	**1.22**	**229**	*i* P		**Pn**	**23 55 33.9**	**-0.5**
TEYL				*i* S		**Sn**	**23 55 51.9**	**-0.1**
ETM	**Tongmen**	**1.24**	**236**	*i* P		**Pn**	**23 55 34.0**	**-0.6**
ETM				*i* S		**Sn**	**23 55 51.7**	**-0.7**
HATJ	**Hateruma jima**	**1.25**	**119**	*e*S		**Sn**	**23 55 52.9**	**+0.2**
LXIB	**Xiulin Townshi**	**1.27**	**239**	⇑*i*P		**Pn**	**23 55 34.3**	**-0.8**
LXIB				*e*S		**Sn**	**23 55 52.0**	**-1.2**
SHUL	**Shoufeng**	**1.30**	**227**	*i* P		**Pn**	**23 55 35.4**	**0.0**
SHUL				*i* S		**Sn**	**23 55 53.4**	**-0.3**
KSHI	**Guanxi Townshi**	**1.31**	**275**	*i* P		**Pn**	**23 55 35.5**	**+0.1**
KSHI				*e*S		**Sn**	**23 55 52.9**	**-0.9**
WHF	**Hehuan Shan**	**1.33**	**247**	*i* P		**Pn**	**23 55 36.0**	**-0.1**
WHF				*i* S		**Sn**	**23 55 54.5**	**-0.5**
JKRS	**Kuro-shima**	**1.35**	**108**	P		**Pn**	**23 55 36.2**	**+0.3**
JKRS				S		**Sn**	**23 55 55.3**	**+0.7**
NFF	**Wufeng Townshi**	**1.36**	**269**	*i* P		**Pn**	**23 55 35.9**	**-0.1**
NFF				*i* S		**Sn**	**23 55 54.3**	**-0.6**
TEGC	**Jichi Village**	**1.37**	**226**	P		**Pn**	**23 55 35.4**	**-1.0**
TEGC				*i* S		**Sn**	**23 55 55.4**	**+0.3**
TWT	**Tachien**	**1.37**	**253**	*i* P		**Pn**	**23 55 36.9**	**+0.6**
TWT				*i* S		**Sn**	**23 55 55.6**	**+0.2**
TDCB	**Techi**	**1.39**	**253**	*i* P		**Pn**	**23 55 36.9**	**+0.4**
TDCB				*i* S		**Sn**	**23 55 55.3**	**-0.4**
JIJ	**Ishigaki jima**	**1.43**	**102**	P		**Pn**	**23 55 36.6**	**-0.3**
JIJ				S		**Sn**	**23 55 55.5**	**-0.9**
LIOB	**Emei**	**1.45**	**269**	*i* P		**Pn**	**23 55 37.1**	**0.0**
LIOB				*i* S		**Sn**	**23 55 56.4**	**-0.4**
NSTT	**Nanjuang**	**1.46**	**269**	*i* P		**Pn**	**23 55 37.2**	**-0.1**
NSTT				*i* S		**Sn**	**23 55 56.2**	**-0.9**
WARBT	**Fenglin Townsh**	**1.47**	**230**	*i* P		**Pn**	**23 55 36.3**	**-1.0**
WARBT				*e*S		**Sn**	**23 55 54.2**	**-2.9**
OWD	**Renai**	**1.49**	**242**	*i* P		**Pn**	**23 55 37.5**	**-0.2**
OWD				*i* S		**Sn**	**23 55 56.5**	**-1.4**
WUSB	**Renai**	**1.52**	**244**	*i* P		**Pn**	**23 55 38.2**	**+0.1**
WUSB				*i* S		**Sn**	**23 55 57.8**	**-0.8**
JISG	**Ishigakijimahi**	**1.55**	**93**	*i* P		**Pn**	**23 55 38.0**	**-0.3**
JISG				S		**Sn**	**23 55 58.2**	**-0.8**
WHP	**Taichung City**	**1.56**	**256**	*i* P		**Pn**	**23 55 39.1**	**+0.5**
WHP				*i* S		**Sn**	**23 55 59.6**	**+0.2**
HGSD	**Ruisui**	**1.60**	**223**	*i* P		**Pn**	**23 55 38.2**	**-0.6**
HGSD				S		**Sn**	**23 56 00.2**	**+0.2**
VWDT	**VWDT**	**1.62**	**236**	*i* P		**Pn**	**23 55 39.3**	**+0.1**
VWDT				*i* S		**Sn**	**23 56 00.5**	**0.0**
EHYH	**Wanrong**	**1.65**	**225**	*e*P		**Pn**	**23 55 40.2**	**+0.7**
EHYH				*i* S		**Sn**	**23 55 59.7**	**-1.4**
NMLH	**Miaoli**	**1.66**	**266**	*i* P		**Pn**	**23 55 40.0**	**+0.4**
NMLH				S		**Sn**	**23 56 01.7**	**+0.4**
WCS	**Beigang Elemen**	**1.66**	**249**	*i* P		**Pn**	**23 55 40.2**	**+0.5**
WCS				*i* S		**Sn**	**23 56 02.3**	**+0.9**
TWQ1	**Liyutan**	**1.70**	**259**	*e*P		**Pn**	**23 55 40.0**	**-0.2**
TWQ1				*i* S		**Sn**	**23 56 02.7**	**+0.3**
SMLT	**Sun Moon Lake**	**1.75**	**244**	*i* P		**Pn**	**23 55 41.2**	**+0.3**
SMLT				*e*S		**Sn**	**23 56 03.4**	**+1.9**
SSLB	**Suanglung**	**1.75**	**240**	*e*P		**Pn**	**23 55 41.6**	**+0.8**
SSLB				S		**Sn**	**23 56 03.7**	**+0.3**
YULB	**Yu-li**	**1.75**	**223**	*i* P		**Pn**	**23 55 39.3**	**-1.5**
YULB				*i* S		**Sn**	**23 56 01.7**	**-1.7**
TYC	**Yuchr**	**1.77**	**245**	*i* P		**Pn**	**23 55 41.8**	**+0.8**
TYC				*i* S		**Sn**	**23 56 05.4**	**+1.6**
TWF1	**Yuli**	**1.78**	**223**	*i* P		**Pn**	**23 55 40.0**	**-1.1**
TWF1				S		**Sn**	**23 56 02.9**	**-1.2**
CHKH	**Chenggong**	**1.84**	**217**	P		**Pn**	**23 55 40.9**	**-1.0**
WHYT	**Xinyi Township**	**1.87**	**239**	*i* P		**Pn**	**23 55 43.6**	**+1.3**
WHYT				S		**Sn**	**23 56 07.7**	**+1.4**
FULB	**Fuli**	**1.90**	**220**	*i* P		**Pn**	**23 55 43.2**	**+0.6**
FULB				*i* S		**Sn**	**23 56 06.6**	**-0.1**
JTJ	**Tarama**	**1.91**	**91**	P		**Pn**	**23 55 42.6**	**-0.1**
JTJ				*e*S		**Sn**	**23 56 06.1**	**-0.7**
ALS	**Alishan**	**2.01**	**235**	*i* P		**Pn**	**23 55 45.0**	**+0.6**
ALS				*e*S		**Sn**	**23 56 11.9**	**+2.1**
CHN5	**Tsauling**	**2.06**	**239**	*i* P		**Pn**	**23 55 41.8**	**+0.6**
CHN5				*e*S		**Sn**	**23 56 12.7**	**+2.1**
ELDTW	**Lidau**	**2.07**	**225**	*e*P		**Pn**	**23 55 43.1**	**-1.9**
ELDTW				*e*S		**Sn**	**23 56 10.6**	**-0.3**
CHN4	**Tsaushan**	**2.26**	**235**	*i* P		**Pn**	**23 55 47.8**	**+0.4**
CHN4				S		**Sn**	**23 56 15.9**	**+0.8**
TPUB	**Ta-pu**	**2.27**	**233**	*e*P		**Pn**	**23 55 46.4**	**-1.0**
TPUB				S		**Sn**	**23 56 16.1**	**+0.9**
WTP	**Ta-pu**	**2.31**	**232**	*e*P		**Pn**	**23 55 48.5**	**+0.5**
WTP				*i* S		**Sn**	**23 56 17.7**	**+1.4**
TWK	**Hsinying**	**2.39**	**235**	*e*P		**Pn**	**23 55 49.4**	**+0.4**
TWK				*e*S		**Sn**	**23 56 20.4**	**+2.2**
CHN1	**Nanshi**	**2.41**	**233**	*i* P		**Pn**	**23 55 49.7**	**+0.4**
CHN1				S		**Sn**	**23 56 18.6**	**0.0**
JMJ2	**Miyako jima3**	**2.48**	**88**	*e*P		**Pn**	**23 55 50.5**	**+0.4**

NOU 17 23:55:29.8, 16°.06S×167°.58E, h39km, MLv4.4/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.75**	**161**	P	Pn	23 55 58.4	+0.7
DVP	**Devils Point**	**1.75**	**161**	S	Sn	23 56 19.9	+1.1
RTV	**Rentapao**	**1.90**	**155**	P	Pn	23 56 00.4	+0.7
RTV	**Rentapao**	**1.90**	**155**	S	Sn	23 56 23.0	+0.5
YATNC	**Mamie plateau,**	**6.00**	**186**	P	Pn	23 56 55.0	-1.1
NOUC	**Port Laguerre**	**6.13**	**191**	P	Pn	23 56 58.3	+0.5
OUENC	**Ouen Island, N**	**6.36**	**186**	P	Pn	23 57 02.2	+1.1

*UPA **17** 23:56:40.8±3.0, 8°.78N×83°.05W, h52km±21km, ML2.9, Presumed earthquake*
*UCR **17** 23:56:42.5±0.9, 8°.38N×82°.87W, h30km±3km, MW3.6, Presumed earthquake*

ISC 17 23:56:42.2±1.2, 8°.39N±0°.05×82°.87W±0°.04, h32km±8km, n22, σ0s52/26, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPPC	**Paso Canoas**	**0.14**	**11**	*e*P	**Pb**	**23 56 48.0**	**-0.2**
LPPC				*e*S	**Sb**	**23 56 52.5**	**+0.2**
PTPA	**Petro Terminal**	**0.19**	**181**	*e*P	**Pb**	**23 56 48.6**	**-0.1**
PTPA				*e*S	**Sb**	**23 56 53.8**	**+0.8**
NELY	**Ciudad Neily**	**0.27**	**343**	*e*P	**Pb**	**23 56 49.5**	**-0.1**
NELY	**Ciudad Neily**	**0.27**	**343**	*i* P	**Pb**	**23 56 48.1**	**-1.5**
NELY				*e*S	**Sb**	**23 56 54.7**	**+0.2**
FITO	**Golfito**	**0.37**	**309**	*e*P	**Pb**	**23 56 49.9**	**-0.9**
CLLRA	**Cordillera,**	**0.43**	**35**	*i* P	**Pb**	**23 56 52.1**	**+0.2**
BRU2	**Volcan**	**0.44**	**23**	*e*P	**Pb**	**23 56 52.2**	**+0.2**
BRU2	**Volcan**	**0.44**	**23**	*i* P	**Pb**	**23 56 51.8**	**-0.2**
VITO	**San Vito**	**0.44**	**346**	*e*P	**Pb**	**23 56 52.2**	**+0.3**
SCLRA	**Santa Clara, W**	**0.45**	**11**	*e*P	**Pb**	**23 56 52.5**	**+0.4**
PIRO	**Carate, Puerto**	**0.47**	**272**	*e*P	**Pb**	**23 56 51.7**	**-0.6**
BQTLY	**Boquete Panama**	**0.54**	**48**	*e*P	**Pb**	**23 56 53.4**	**-0.2**
ALCO	**Alturas Coton,**	**0.56**	**3**	*e*P	**Pb**	**23 56 53.6**	**-0.2**
FIMO	**Fila Mora**	**0.77**	**321**	*e*P	**Pn**	**23 56 56.9**	**0.0**
PBNVO	**Pueblo Nuevo,**	**0.83**	**53**	*e*P	**Pn**	**23 56 57.3**	**-0.4**
PBNVO	**Pueblo Nuevo,**	**0.83**	**53**	⇓*i*P	**Pn**	**23 56 57.5**	**-0.2**
PBNVO				*e*S	**Sb**	**23 57 08.9**	**-0.2**
PBNVO				IAML		23 57 10.3	
	comp=Z,266nm,0.2s						
RBALA	**Bur**	**0.85**	**55**	*e*P	**Pn**	**23 56 58.0**	**0.0**
RBALA	**Bur**	**0.85**	**55**	*i* P	**Pn**	**23 56 58.0**	**0.0**
RBALA				*e*S	**Sb**	**23 57 09.5**	**-0.4**
DRK0	**Durika**	**0.94**	**337**	*e*S	Sn	23 57 00.8	-11
EDPE	**Pejibaye, P**	**1.03**	**318**	*e*P	**Pn**	**23 57 01.0**	**+0.4**
KKNTU	**Kakint[e]**	**1.14**	**67**	*e*P	**Pn**	**23 57 01.9**	**-0.1**
PIEC	**Cerro El Cedra**	**1.63**	**319**	*e*P	**Pn**	**23 57 09.8**	**+0.8**

IDC 18 00:25:18.1±2.4, 6°.11S×130°.00E, h0km, mb3.7/1, mbtmp3.4/3, ML3.4/2, MS3.5/1, Error ellipse: s-maj=148.8km s-min=31.9km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.38**	**163**	Pn	Pn	00 28 43.5	+0.3
	0.2nm,0.3s,baz=347,slow=13,SNR=11						
WRA				Sn	Sn	00 31 11.6	-12
	0.4nm,0.3s,baz=336,slow=22,SNR=10						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.86**	**168**	P	Pn	00 29 27.9	-0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=5.7						
ASAR				S	Sn	00 32 34.5	-13
	0.3nm,0.4s,baz=345,slow=25,SNR=4.6						
	0.3nm,0.6s						
JCJ	**Chichijima**	**35.05**	**19**	LR	LR	00 43 26.9	
	comp=Z,90nm,21.9s,baz=160,slow=31						
MKAR	**Makanchi Array**	**67.48**	**327**	P	P	00 36 16.0	0.0
	0.4nm,0.5s,baz=118,slow=7.7,SNR=5.2						
	0.4nm,0.5s						

*IDC **18** 00:40:05.6±1.0, 37°.34N×20°.73E, h0km, mb3.5/8, mbtmp3.4/16, ML3.2/6, Error ellipse: s-maj=19.0km s-min=15.9km az=176.0*
*ATH **18** 00:40:05.8, 37°.22N×20°.40E, h9km±3km, ML3.4/21, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **18** 00:40:08.0, 37°.N±2°×2°.0E±°, h0km±1km, M3.2/31, MLh3.2/31*

ISC 18 00:40:07.9±1.3, 37°.30N±0°.03×20°.52E±0°.04, h13km±9km, n93, σ0s95/106, mb3.4/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.48**	**32**	P	**Pb**	**00 40 18.2**	**0.0**
LTHK				S	**Sb**	**00 40 25.8**	**+0.7**
LTHK	**Lithakia**	**0.48**	**32**	P	**Pb**	**00 40 18.1**	**-0.1**
LTHK				S	**Sg**	**00 40 25.3**	**+1.5**
ORTH	**Orthonies,Zaky**	**0.57**	**15**	P	**Pb**	**00 40 19.5**	**-0.2**
ORTH				S	**Sb**	**00 40 28.3**	**+0.6**
ORTH	**Orthonies,Zaky**	**0.57**	**15**	P	**Pb**	**00 40 19.5**	**-0.2**
ORTH				S	**Sb**	**00 40 28.1**	**+0.4**
KYPS	**Kipseli, Zakin**	**0.57**	**25**	P	**Pb**	**00 40 19.9**	**+0.1**
KYPS				S	**Sb**	**00 40 28.9**	**+1.1**
CLEM	**Kyllini,Ilia,G**	**0.77**	**40**	P	**Pb**	**00 40 23.1**	**0.0**
CLEM				S	**Sb**	**00 40 34.4**	**+1.0**
RTZL	**Ratzakli, Kefa**	**0.80**	**15**	P	**Pb**	**00 40 23.6**	**0.0**
RTZL				S	**Sb**	**00 40 35.9**	**+1.6**
RTZL	**Ratzakli, Kefa**	**0.80**	**15**	P	**Pb**	**00 40 23.6**	**0.0**
RTZL				S	**Sb**	**00 40 35.2**	**+0.9**
KFL1	**Kefalonia,Entr**	**0.86**	**359**	P	**Pb**	**00 40 24.0**	**-0.7**
KFL1				S	**Sb**	**00 40 36.4**	**+0.2**
LCHA	**Lechaina**	**0.87**	**43**	P	**Pg**	**00 40 24.6**	**-0.1**
LCHA				S	**Sb**	**00 40 37.8**	**+1.5**
VLS	**Valsamata**	**0.88**	**4**	P	**Pb**	**00 40 24.4**	**-0.5**
VLS	**Valsamata**	**0.88**	**4**	P	**Pb**	**00 40 24.4**	**-0.5**
VLS				S	**Sb**	**00 40 36.6**	**0.0**
ZARO	**Zacharo**	**0.92**	**78**	P	**Pg**	**00 40 25.3**	**-0.4**
ZARO				S	**Sg**	**00 40 37.8**	**+0.1**
DMLN	**Damoulianata-K**	**0.94**	**353**	P	**Pg**	**00 40 24.4**	**-1.6**
DMLN	**Damoulianata-K**	**0.94**	**353**	P	**Pg**	**00 40 24.5**	**-1.6**
AMT	**Artemida-Makis**	**0.98**	**76**	P	**Pb**	**00 40 26.8**	**+0.1**
PYL1	**Pylos**	**1.02**	**112**	P	**Pg**	**00 40 26.7**	**-0.8**
PYL	**PYLOS**	**1.06**	**112**	P	**Pb**	**00 40 27.8**	**-0.3**
PYL	**PYLOS**	**1.06**	**112**	P	**Pg**	**00 40 27.5**	**-0.8**
RLS	**Riolos of Patr**	**1.07**	**45**	P	**Pn**	**00 40 28.6**	**0.0**
RLS	**Riolos of Patr**	**1.07**	**45**	P	**Pg**	**00 40 28.2**	**-0.3**
MTHA	**Methoni**	**1.07**	**116**	P	**Pb**	**00 40 27.8**	**-0.4**
AXS	**Araxos**	**1.12**	**37**	P	**Pg**	**00 40 29.1**	**-0.4**
AXS	**Araxos**	**1.12**	**37**	P	**Pg**	**00 40 28.8**	**-0.7**
ITM	**Ithomi**	**1.13**	**96**	P	**Pn**	**00 40 29.9**	**+0.5**
ITM	**Ithomi**	**1.13**	**96**	P	**Pg**	**00 40 29.0**	**-0.7**
DRO	**Drossia**	**1.15**	**55**	P	**Pn**	**00 40 29.9**	**+0.3**
DRO	**Drossia**	**1.15**	**55**	P	**Pn**	**00 40 30.0**	**+0.3**
FSK	**Fiskardo**	**1.16**	**2**	P	**Pg**	**00 40 28.9**	**-1.2**
FSK	**Fiskardo**	**1.16**	**2**	P	**Pg**	**00 40 29.1**	**-1.0**
VALY	**Valyra**	**1.18**	**96**	P	**Pg**	**00 40 31.4**	**+0.8**
VALY	**Valyra**	**1.18**	**96**	P	**Pg**	**00 40 30.1**	**-0.5**
MSL1	**Messolongi**	**1.29**	**34**	P	**Pn**	**00 40 30.6**	**-0.9**
PLEV	**Plevrona-Mesol**	**1.31**	**32**	P	**Pg**	**00 40 33.3**	**+0.2**
PLEV	**Plevrona-Mesol**	**1.31**	**32**	P	**Pn**	**00 40 31.9**	**-0.1**
AST1	**Astakos**	**1.32**	**20**	P	**Pg**	**00 40 34.1**	**+0.9**
EVGI	**Lefkada island**	**1.32**	**5**	P	**Pb**	**00 40 32.1**	**-0.5**
DRAG	**Dragano-Lefkad**	**1.38**	**2**	P	**Pg**	**00 40 33.2**	**-1.2**
DRAG	**Dragano-Lefkad**	**1.38**	**2**	P	**Pn**	**00 40 32.8**	**-0.1**
UPR	**Univesity Cam**	**1.41**	**45**	P	**Pn**	**00 40 33.5**	**+0.3**
NYDR	**Nydri-Lefkada**	**1.42**	**6**	P	**Pb**	**00 40 33.8**	**-0.3**
NYDR	**Nydri-Lefkada**	**1.42**	**6**	P	**Pn**	**00 40 33.1**	**-0.2**
AGRP	**Agrapidokambos**	**1.45**	**41**	P	**Pn**	**00 40 34.0**	**+0.2**
LKD2	**Lefkada island**	**1.49**	**4**	P	**Pg**	**00 40 35.4**	**-1.1**
LKD2	**Lefkada island**	**1.49**	**4**	P	**Pn**	**00 40 34.3**	**-0.1**
VLX	**Vlachokerasia**	**1.49**	**87**	P	**Pb**	**00 40 35.6**	**+0.2**
KLV	**Kalavryta, Ach**	**1.49**	**60**	P	**Pb**	**00 40 35.5**	**0.0**
KLV	**Kalavryta, Ach**	**1.49**	**60**	P	**Pn**	**00 40 34.9**	**+0.4**
TSLK	**Tsoukalades, L**	**1.52**	**4**	P	**Pn**	**00 40 34.5**	**-0.3**
PVO	**Paravola**	**1.54**	**31**	P	**Pg**	**00 40 37.2**	**-0.2**
PVO	**Paravola**	**1.54**	**31**	P	**Pn**	**00 40 35.2**	**+0.2**
AGEO	**AgiosGiorgios,**	**1.56**	**51**	P	**Pb**	**00 40 36.6**	**0.0**
EFP	**Efpalio**	**1.57**	**44**	P	**Pn**	**00 40 36.2**	**+0.8**
TEME	**Temeni, Aigial**	**1.57**	**53**	P	**Pb**	**00 40 36.8**	**0.0**
GUR	**Goura**	**1.58**	**66**	P	**Pn**	**00 40 37.5**	**+0.4**
GUR	**Goura**	**1.58**	**66**	P	**Pn**	**00 40 36.0**	**+0.2**
MG00	**Magoula, Dorid**	**1.59**	**45**	P	**Pn**	**00 40 36.5**	**+0.8**
PYRG	**Pyrgos, Dorida**	**1.62**	**47**	P	**Pb**	**00 40 37.4**	**-0.3**
SERG	**Sergoula**	**1.65**	**47**	P	**Pb**	**00 40 38.4**	**+0.2**
SERG	**Sergoula**	**1.65**	**47**	P	**Pb**	**00 40 37.9**	**-0.3**
KALE	**Kalithea**	**1.68**	**49**	P	**Pg**	**00 40 39.7**	**-0.5**
ANX	**Ano Chora**	**1.70**	**40**	P	**Pb**	**00 40 39.5**	**+0.4**
EVR	**Evrytania**	**1.91**	**32**	P	**Pg**	**00 40 43.5**	**-1.0**
VLI	**Velíai**	**2.02**	**106**	P	**Pb**	**00 40 44.0**	**-0.6**
LTK	**Loutraki**	**2.08**	**69**	P	**Pn**	**00 40 43.8**	**+1.4**
TETR	**Tetrakomo, Epi**	**2.12**	**16**	P	**Pb**	**00 40 45.6**	**-0.7**
MAKR	**Makrakomi, Fth**	**2.13**	**36**	P	**Pb**	**00 40 46.6**	**+0.2**
AGG	**Agios Georgios**	**2.23**	**39**	P	**Pb**	**00 40 47.0**	**-1.1**
PRMD	**Pramanda**	**2.27**	**11**	P	**Pb**	**00 40 47.5**	**-1.3**
VILL	**Villia**	**2.38**	**68**	P	**Pn**	**00 40 47.8**	**+1.2**
ATAL	**Atalanti**	**2.42**	**54**	P	**Pn**	**00 40 49.1**	**+2.0**
THL	**Klokotos Trika**	**2.55**	**27**	P	**Pb**	**00 40 51.2**	**-2.2**
OHR	**Ohrid**	**3.81**	**3**	Pn	**Pn**	**00 41 08.2**	**+1.9**
IDI	**Amoyia**	**4.07**	**118**	Pn	**Pn**	**00 41 08.6**	**-1.3**
	6.3nm,0.9s,baz=209,slow=15,SNR=9.5						
IDI				Sn	**Sn**	**00 41 55.0**	**-2.4**
	2.6nm,0.3s,baz=266,slow=22,SNR=7.4						
VAY	**Valandovo**	**4.32**	**21**	*i* Pn	**Pn**	**00 41 14.8**	**+1.5**
VAE	**Valguarnera**	**4.86**	**274**	Pn	Pn	00 41 23.6	+2.8
	4.7nm,0.5s,baz=256,slow=20,SNR=1.8						
VAE				Sn	**Sn**	**00 42 19.8**	**+2.8**
	1.5nm,0.3s,baz=42,slow=12,SNR=1.6						
KEST	**Kesra**	**9.13**	**263**	Pn	**Pn**	**00 42 20.8**	**+1.4**
	0.1nm,0.3s,baz=263,slow=16,SNR=2.1						
	2.4nm,0.8s						
MLR	**Muntele Rosu**	**9.14**	**25**	Pn	**Pn**	**00 42 19.2**	**-0.3**
	0.2nm,0.3s,baz=283,slow=20,SNR=5.9						
	0.4nm,0.7s						
OBKA	**Obir**	**10.21**	**336**	*i* Pn	**Pn**	**00 42 35.1**	**+0.9**
	0.2nm,0.1s						
SOKA	**Soboth**	**10.21**	**338**	*i* Pn	**Pn**	**00 42 33.6**	**-0.6**
	0.8nm,0.2s						
BRTR	**Keskin Array B**	**10.57**	**73**	Pn	**Pn**	**00 42 36.5**	**-2.6**
	baz=256,slow=13,SNR=2.8						
	0.3nm,0.5s						
MOA	**Molln**	**11.50**	**338**	*i* Pn	**Pn**	**00 42 52.8**	**+1.1**
	0.4nm,0.2s						
DAVOX	**Davos/Dischmat**	**12.32**	**324**	Pn	**Pn**	**00 43 04.2**	**+1.0**
	0.1nm,0.3s,baz=69,slow=4.6,SNR=1.6						
	0.5nm,0.3s						
GERES	**GERESS Array B**	**12.56**	**339**	Pn	**Pn**	**00 43 06.6**	**+0.3**
	baz=172,slow=16,SNR=1.9						
	0.1nm,0.2s						
ESDC	**Sonseca Array**	**19.29**	**285**	P	**Pn**	**00 44 34.5**	**+0.9**
	baz=82,slow=9.8,SNR=5.7						
	0.5nm,0.9s						
HFS	**Hagfors**	**23.26**	**351**	P	**P**	**00 45 13.9**	**-0.9**
	1.2nm,0.5s,baz=151,slow=10,SNR=5.2						
	1.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**24.14**	**326**	P	**P**	**00 45 23.5**	**+0.1**
	0.3nm,0.4s,baz=121,slow=8.1,SNR=5.2						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**24.42**	**6**	P	**P**	**00 45 24.8**	**-1.0**
	0.6nm,0.6s,baz=190,slow=7.7,SNR=4.7						
	0.6nm,0.6s						
NOA	**NORSAR Array B**	**24.47**	**349**	P	**P**	**00 45 26.1**	**-0.3**
	0.7nm,0.7s,baz=162,slow=8.8,SNR=4.4						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.35**	**220**	P	**P**	**00 46 11.0**	**+0.4**
	0.3nm,0.6s,baz=35,slow=9.0,SNR=7.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**42.76**	**53**	P	**P**	**00 48 03.1**	**-1.7**
	0.3nm,0.6s,baz=284,slow=8.5,SNR=4.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**45.77**	**58**	P	**P**	**00 48 28.1**	**-0.9**
	0.3nm,0.5s,baz=264,slow=9.2,SNR=4.2						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**46.28**	**47**	P	**P**	**00 48 31.1**	**-1.8**
	0.5nm,0.4s,baz=286,slow=9.0,SNR=4.3						
	0.5nm,0.4s						

IDC 18 01:16:10.7±2.1, 3°.02N×129°.17E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=144.2km s-min=23.7km az=69.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.38**	**168**	P	P	01 21 20.8	-0.4
	1.3nm,0.9s,baz=347,slow=10,SNR=7.1						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**26.92**	**170**	P	P	01 21 54.0	+0.1
	0.1nm,0.4s,baz=355,slow=11,SNR=1.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.54**	**324**	P	P	01 26 16.2	+0.2
	0.5nm,0.7s,baz=108,slow=8.1,SNR=4.5						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.66**	**327**	P	P	01 26

ellipse: s-maj=13.6km s-min=9.6km az=50.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-5.16; $M_{\theta\theta}$5.81; $M_{\phi\phi}$-0.65; $M_{r\theta}$-1.22; $M_{\theta\phi}$0.18; $M_{\phi r}$2.77; Fault plane solution: M_o6.29000×10^{17} NP1: ϕ_s112.26000°,δ56.21000°,λ-59.74000°. NP2: ϕ_s245.89000°,δ44.12000°,λ-126.99000°. Principal axes: T 5.9478, Plg7.0000°, Azm181.0000°; N 0.6415, Plg25.0000°, Azm274.0000°; P -6.5892, Plg64.0000°, Azm77.0000°;

NOU ***18*** *01:37:16.1, 10˙39S×161˙40E, h56km, ML5.9/132, Solomon Islands*

PTWC ***18*** *01:37:16, 10˙50S×161˙30E, h53km, Mwp5.9/11*

IDC ***18*** *01:37:17.2±1.4, 10˙37S×161˙35E, h75km±11km, mb4.9/34, mbtmp5.3/38, MS5.2/65, Error ellipse: s-maj=13.1km s-min=9.2km az=72.0*

GCMT ***18*** *01:37:17.5±0.1, 10˙42S×161˙28E, h51km, MW5.8/169, Moment Tensor Solution. s158,c344; s169,c459; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.55±.04; $M_{\theta\theta}$6.62±.04; $M_{\phi\phi}$-3.07±.04; $M_{r\theta}$-2.30±.05; $M_{\theta\phi}$0.43±.04; $M_{\phi r}$2.13±.04; Best double couple: M_o6.45100×10^{17} NP1:ϕ_s233.00000°,δ46.00000°, λ-147.00000°. NP2:ϕ_s119.00000°,δ67.00000°, λ-48.00000°. Principal axes: T 7.1160, Plg12.0000°, Azm180.0000°; N -1.3300, Plg38.0000°, Azm280.0000°; P -5.7860, Plg50.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

MOS ***18*** *01:37:17.2±1.0, 10˙26S×161˙20E, h81km, mb5.6/46, MS5.4/23 Error ellipse: s-maj=7.9km s-min=5.8km az=116.0*

NEIC ***18*** *01:37:23, 10˙36S×161˙38E, h46km, Moment Tensor Solution. Duration: 3s1.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.86; $M_{\theta\theta}$5.36; $M_{\phi\phi}$-2.50; $M_{r\theta}$-2.63; $M_{\theta\phi}$0.95; $M_{\phi r}$2.46; Fault plane solution: M_o5.96000×10^{17} NP1: ϕ_s228.08000°,δ44.06000°,λ-151.51000°. NP2: ϕ_s116.77000°,δ70.62000°,λ-49.61000°. Principal axes: T 6.1393, Plg16.0000°, Azm178.0000°; N -0.3854, Plg38.0000°, Azm281.0000°; P -5.7539, Plg48.0000°, Azm70.0000°;*

ISC 18 01:37:14.8±0.2, 10˙39S±0˙03×161˙35E±0˙03, h50km±1km, h51km:pP-P, n1622, s1951/1424, mb5.8/441, MS5.5/442, 28C-47D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**0.55**	**98**	P	**Pn**	**01 37 27.4**	**+0.7**
HNR	**Honiara**	**1.68**	**305**	P	**Pn**	**01 37 43.4**	**+1.7**
	3μm,0.8s,baz=102,slow=0.4,SNR=275						
HNR				S	**Sn**	**01 38 05.6**	**+3.6**
	4μm,0.5s,baz=274,slow=24,SNR=8.3						
HNR				LR	LR	01 38 40.2	
	comp=Z,5μm,19.2s,baz=212,slow=50						
HNR	**Honiara**	**1.68**	**305**	P	**Pn**	**01 37 43.9**	**+2.2**
HNR	**Honiara**	**1.68**	**305**	S	**Sn**	**01 38 06.3**	**+4.3**
HNR	**Honiara**	**1.68**	**305**		**Pn**	**01 37 43.6**	**+2.0**
HNR	**Honiara**	**1.68**	**305**	P	**Pn**	**01 37 43.7**	**+2.0**
HNR	**Honiara**	**1.68**	**305**	P	**Pn**	**01 37 43.7**	**+2.0**
NGOA	**Tingoa Renbel**	**1.71**	**227**	P	**Pn**	**01 37 42.5**	**+0.4**
NGOA	**Tingoa Renbel**	**1.71**	**227**	P	**Pn**	**01 37 41.6**	**-0.5**
ALEG	**Aligegeo Malai**	**1.75**	**338**	P	**Pn**	**01 37 45.1**	**+2.4**
SAVO	**Savo Central**	**1.95**	**309**	P	**Pn**	**01 37 47.9**	**+2.4**
SAVO	**Savo Central**	**1.95**	**309**	P	**Pn**	**01 37 47.4**	**+1.9**
TATA	**Tatamba Isabel**	**2.51**	**323**	P	**Pn**	**01 37 55.3**	**+2.2**
TATA	**Tatamba Isabel**	**2.51**	**323**	S	**Sn**	**01 38 24.8**	**+2.3**
TATA	**Tatamba Isabel**	**2.51**	**323**	P	**Pn**	**01 37 56.3**	**+3.2**
DVP	**Devils Point**	**9.86**	**138**	P	**Pn**	**01 39 34.9**	**+1.0**
DVP	**Devils Point**	**9.86**	**138**	P	**Pn**	**01 39 34.8**	**+0.9**
RTV	**Rentapao**	**10.06**	**138**	P	**Pn**	**01 39 37.3**	**+0.6**
RTV	**Rentapao**	**10.06**	**138**	P	**Pn**	**01 39 37.5**	**+0.8**
KOUNC	**Koumac, New Ca**	**10.49**	**165**	P	**Pn**	**01 39 43.9**	**+1.4**
KOUNC	**Koumac, New Ca**	**10.49**	**165**		**Pn**	**01 39 43.1**	**+0.6**
KOUNC	**Koumac, New Ca**	**10.49**	**165**	P	**Pn**	**01 39 43.5**	**+1.0**
RABL	**Rabaul**	**10.99**	**303**		**Pn**	**01 39 50.4**	**+0.9**
KRVT	**Keravat (AS076**	**11.04**	**303**	LR	LR	01 44 28.1	
	comp=Z,6μm,19.1s,baz=42,slow=39						
NOUC	**Port Laguerre**	**12.57**	**158**	P	**Pn**	**01 40 13.5**	**+2.5**
DZM	**Mont Dzumac**	**12.60**	**158**	P	**Pn**	**01 40 13.4**	**+2.0**
	251nm,0.6s,baz=346,slow=13						
DZM				S	**Sn**	**01 42 27.6**	**-2.8**
	74nm,0.3s,baz=344,slow=18,SNR=3.7						
DZM				LR	LR	01 44 15.4	
	comp=Z,25μm,21.0s,baz=336,slow=33						
MARNC	**Mare, Loyalty**	**12.76**	**151**	P	**Pn**	**01 40 14.7**	**+1.2**
MARNC	**Mare, Loyalty**	**12.76**	**151**		**Pn**	**01 40 14.9**	**+1.4**
MARNC	**Mare, Loyalty**	**12.76**	**151**	P	**Pn**	**01 40 14.7**	**+1.2**
YATNC	**Mamie plateau,**	**12.76**	**156**	P	**Pn**	**01 40 13.5**	**-0.1**
YATNC	**Mamie plateau,**	**12.76**	**156**	S	**Sn**	**01 42 34.3**	**+0.1**
YATNC	**Mamie plateau,**	**12.76**	**156**	P	**Pn**	**01 40 13.3**	**-0.3**
ONTNC	**Ouen Toro**	**12.82**	**158**	P	**Pn**	**01 40 16.8**	**+2.4**
ONTNC	**Ouen Toro**	**12.82**	**158**	S	**Sn**	**01 42 35.7**	**+0.1**
ONTNC	**Ouen Toro**	**12.82**	**158**		**Pn**	**01 40 15.7**	**+1.4**
ONTNC	**Ouen Toro**	**12.82**	**158**	P	**Pn**	**01 40 16.4**	**+2.0**
OUENC	**Ouen Island, N**	**13.07**	**157**	P	**Pn**	**01 40 19.5**	**+1.8**
OUENC	**Ouen Island, N**	**13.07**	**157**	S	**Sn**	**01 42 41.4**	**-0.2**
OUENC	**Ouen Island, N**	**13.07**	**157**		**Pn**	**01 40 18.9**	**+1.1**
OUENC	**Ouen Island, N**	**13.07**	**157**	P	**Pn**	**01 40 20.0**	**+2.3**
PMG	**Port Moresby**	**14.01**	**273**	P	**Pn**	**01 40 33.7**	**+3.1**
	39nm,0.9s,baz=118,slow=6.5,SNR=14						
PMG				LR	LR	01 45 37.9	
	comp=Z,25μm,21.2s,baz=113,slow=36						
PMG	**Port Moresby**	**14.01**	**273**	P	**Pn**	**01 40 33.8**	**+3.1**
PMG	**Port Moresby**	**14.01**	**273**	P	**P**	**01 40 34.7**	**-2.5**
PMG	**Port Moresby**	**14.01**	**273**	P	**P**	**01 40 34.7**	**-2.5**
PMG	**Port Moresby**	**14.01**	**273**	P	**P**	**01 40 35.0**	**-2.2**
	7μm6μm371nm,1.3s						
PMG	**Port Moresby**	**14.01**	**273**	P	**Pn**	**01 40 33.3**	**+2.6**
AUAYR	**Ayr State High**	**16.26**	**234**	P	**P**	**01 41 01.8**	**-0.3**
TARA	**Tarawa**	**16.40**	**45**	P	**P**	**01 41 02.8**	**-1.0**
TARA	**Tarawa**	**16.40**	**45**	P	**Pn**	**01 41 01.2**	**-0.4**
AUNRC	**North Rockhamp**	**16.51**	**217**	P	**P**	**01 41 04.9**	**-0.1**
PATS	**Pohnpei**	**17.38**	**350**	P	**Pn**	**01 41 12.9**	**-0.9**
	comp=Z,712nm,0.9s,comp=Z,0.0nm						
PATS	**Pohnpei**	**17.38**	**350**	P	**Pn**	**01 41 13.9**	**0.0**
PATS	**Pohnpei**	**17.38**	**350**		**Pn**	**01 41 14.2**	**+0.4**
PATS	**Pohnpei**	**17.38**	**350**	P	**Pn**	**01 41 12.2**	**-1.7**
CTA	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 17.0**	**+1.6**
CTA	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 17.1**	**+1.7**
	comp=Z,133nm,0.8s,baz=54,slow=13,SNR=53						
CTA				S	**Sn**	**01 44 24.4**	**-3.9**
	comp=Z,8.5nm,0.5s,baz=10,slow=13,SNR=1.2						
CTA				LR	LR	01 47 13.9	
	comp=Z,12μm,21.1s,baz=54,slow=34						
CTAO	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 17.6**	**+2.2**
CTAO	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 17.3**	**+1.9**
CTAO				pmax	pmax		
	comp=Z,131nm,0.8s						
CTAO				pmax	pmax		
	comp=Z,106nm,0.7s						
CTAO	**Charters Tower**	**17.45**	**235**		**P**	**01 41 17.3**	**+1.9**
CTAO	**Charters Tower**	**17.45**	**235**	Pn	**P**	**01 41 16.9**	**+1.6**
CTAO				IAmb	IAmb	01 41 22.7	
	comp=Z,106nm,0.7s						
CTAO	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 17.5**	**+2.2**
CTAO	**Charters Tower**	**17.45**	**235**	P	**P**	**01 41 16.2**	**+0.9**
FUNA	**Funafuti**	**17.71**	**86**	P	**Pn**	**01 41 18.1**	**+0.2**
FUNA	**Funafuti**	**17.71**	**86**	P	**Pn**	**01 41 17.7**	**-0.3**
FUNA				IAmb	IAmb	01 41 20.4	
	comp=Z,943nm,1.4s						
FUNA	**Funafuti**	**17.71**	**86**	P	**Pn**	**01 41 16.4**	**-1.5**
MSVF	**Nonsavu**	**17.76**	**116**	P	**P**	**01 41 20.4**	**+1.5**
	comp=Z,288nm,1.0s,baz=278,slow=6.6,SNR=123						
MSVF				LR	LR	01 47 20.1	
	comp=Z,3μm,20.2s,baz=289,slow=34						
MSVF	**Nonsavu**	**17.76**	**116**	P	**P**	**01 41 20.5**	**+1.6**
MSVF	**Nonsavu**	**17.76**	**116**	P	**P**	**01 41 20.6**	**+1.6**
MSVF				pmax	pmax		
	comp=Z,659nm,1.2s						
MSVF	**Nonsavu**	**17.76**	**116**	P	**P**	**01 41 20.6**	**+1.6**
MSVF	**Nonsavu**	**17.76**	**116**	P	**P**	**01 41 20.9**	**+2.0**
EIDS	**Eidsvold**	**17.80**	**212**	P	**P**	**01 41 20.9**	**+1.7**
	comp=Z,224nm,1.6s,comp=Z,0.0nm						
EIDS	**Eidsvold**	**17.80**	**212**		**P**	**01 41 20.6**	**+1.4**
EIDS	**Eidsvold**	**17.80**	**212**	P	**P**	**01 41 21.2**	**+2.1**
COEN	**Coen**	**18.11**	**257**	P	**Pn**	**01 41 27.1**	**+4.2**
	comp=Z,121nm,1.4s						
COEN	**Coen**	**18.11**	**257**	P	**Pn**	**01 41 27.0**	**+4.1**
COEN	**Coen**	**18.11**	**257**	P	**Pn**	**01 41 24.4**	**+1.5**
AUBSH	**Beerwah State**	**18.20**	**205**	P	**Pn**	**01 41 26.1**	**+2.3**
MTSU	**Mount Surprise**	**18.20**	**243**	P	**Pn**	**01 41 27.5**	**+3.5**
	comp=Z,198nm,0.9s						
AUTOO	**Toowoomba Stat**	**19.21**	**206**	P	**Pn**	**01 41 36.9**	**+0.8**
RMQ	**Roma**	**19.94**	**215**	P	**Pn**	**01 41 46.0**	**+1.3**
	comp=Z,306nm,1.5s						
RMQ	**Roma**	**19.94**	**215**	P	**Pn**	**01 41 45.5**	**+0.8**
FUTU	**Fugatoga**	**20.43**	**103**	P	Pn	01 41 49.4	-1.2
FUTU	**Fugatoga**	**20.43**	**103**	P	**P**	**01 41 48.9**	**+0.8**
FUTU	**Fugatoga**	**20.43**	**103**	P	**P**	**01 41 49.0**	**+0.9**
FUTU	**Fugatoga**	**20.43**	**103**	P	**P**	**01 41 48.1**	**+0.1**
ARMA	**Armidale**	**21.88**	**203**	P	**P**	**01 42 04.7**	**+1.0**
	comp=Z,223nm,1.7s,comp=Z,0.0nm						
ARMA	**Armidale**	**21.88**	**203**		**P**	**01 42 04.5**	**+0.8**
ARMA	**Armidale**	**21.88**	**203**	P	**P**	**01 42 04.9**	**+1.2**
JAY	**Jayapura**	**21.94**	**289**	P	**P**	**01 42 03.5**	**-0.9**
	comp=Z,68nm,0.8s,baz=106,slow=8.2						
	comp=Z,68nm,0.8s						
JAY	**Jayapura**	**21.94**	**289**	P	**P**	**01 42 03.4**	**-0.9**
JAY	**Jayapura**	**21.94**	**289**	P	**P**	**01 42 02.8**	**-1.5**
	comp=Z,186nm,1.0s						
GENI	**Genyem**	**22.41**	**289**	P	**P**	**01 42 10.4**	**+1.1**
GENI	**Genyem**	**22.41**	**289**	P	**P**	**01 42 13.6**	**+4.3**
	comp=Z,303nm,1.0s						
GENI	**Genyem**	**22.41**	**289**	P	**P**	**01 42 10.1**	**+0.7**
AULRC	**Lightning Ridg**	**22.69**	**212**	P	**P**	**01 42 12.7**	**+0.5**
AUPHS	**Peel High Scho**	**22.78**	**204**	P	**P**	**01 42 13.9**	**+0.8**
QLP	**Quilpie**	**22.81**	**223**	P	**P**	**01 42 14.3**	**+0.7**
	comp=Z,362nm,1.2s						
QLP	**Quilpie**	**22.81**	**223**	P	**P**	**01 42 14.2**	**+0.7**
QLP	**Quilpie**	**22.81**	**223**	P	**P**	**01 42 14.2**	**+0.7**
QIS	**Mount Isa**	**23.23**	**242**	P	**P**	**01 42 19.1**	**+1.2**
	comp=Z,164nm,1.0s,comp=Z,0.0nm						
QIS	**Mount Isa**	**23.23**	**242**	P	**P**	**01 42 19.2**	**+1.3**
AUDCS	**Dubbo College**	**24.70**	**207**	P	**P**	**01 42 32.5**	**+1.2**
CMSA	**Cobar Meteorol**	**25.56**	**212**	P	**P**	**01 42 39.5**	**+0.4**
	comp=Z,128nm,1.8s						
CMSA	**Cobar Meteorol**	**25.56**	**212**	P	**P**	**01 42 40.1**	**+1.1**
INKA	**Innaminka**	**25.94**	**225**	P	**P**	**01 42 43.2**	**+0.7**
SRPI	**Serui, Papua**	**26.34**	**287**	P	**P**	**01 42 51.4**	**+5.1**
AFI	**Afiamalu**	**26.50**	**100**	LR	LR	01 51 06.8	
	comp=Z,7μm,21.0s,baz=282,slow=31						
AFI	**Afiamalu**	**26.50**	**100**	P	**P**	**01 42 47.4**	**-0.4**
AFI				pmax	pmax		
	comp=Z,215nm,1.2s						
AFI	**Afiamalu**	**26.50**	**100**	P	**P**	**01 42 47.4**	**-0.4**
BAKI	**Biak**	**26.70**	**288**	P	**P**	**01 42 52.7**	**+3.2**
	comp=Z,4μmcomp=Z,243nm,1.5s						
RAO	**Raoul Island**	**26.98**	**137**	LR	LR	01 51 45.8	
	comp=Z,4μm,20.2s,baz=312,slow=32						
CNB	**Canberra Magne**	**27.10**	**202**	P	**P**	**01 42 54.2**	**+1.1**
	comp=Z,3.2nm,1.4s						
OUZ	**Omahuta**	**27.12**	**158**	IAMs_20	IAMs_20	01 51 41.9	
	comp=Z,17μm,20.0s						
AUDAR	**Daramalan Coll**	**27.13**	**202**	P	**P**	**01 42 54.8**	**+1.6**
AUMTS	**Mt Stromlo**	**27.24**	**202**	P	**P**	**01 42 55.8**	**+1.5**
CAN	**Canberra**	**27.24**	**202**	P	**P**	**01 42 52.9**	**-1.3**
	comp=Z,131nm,1.4s						
CAN	**Canberra**	**27.24**	**202**	P	**P**	**01 42 55.7**	**+1.4**
CAN	**Canberra**	**27.24**	**202**	IAMs_20	IAMs_20	01 52 11.2	
	comp=Z,12μm,21.0s						
CAN	**Canberra**	**27.24**	**202**	P	**P**	**01 42 53.7**	**-0.5**
AUMHS	**Melrose High S**	**27.25**	**202**	P	**P**	**01 42 55.9**	**+1.6**
WR8	**Warramunga Arr**	**27.56**	**247**	P	**P**	**01 42 57.5**	**+0.3**
WR8				IAmb	IAmb	01 43 17.1	
	comp=Z,614nm,1.9s						
WB0	**Warramunga Arr**	**27.61**	**247**	IAmb	IAmb	01 43 30.3	
	comp=Z,201nm,1.0s						
WRAB	**Tennant Creek**	**27.69**	**247**	P	**P**	**01 42 58.8**	**+0.4**
WRAB	**Tennant Creek**	**27.69**	**247**	*ce*P	**P**	**01 42 58.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,80nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,10μm,21.0s						
WRAB	**Tennant Creek**	**27.69**	**247**	P	**P**	**01 42 59.1**	**+0.7**
WRA	**Warramunga Arr**	**27.70**	**247**	P	**P**	**01 42 59.0**	**+0.5**
	comp=Z,33nm,0.8s,baz=77,slow=8.9,SNR=161						
WRA				LR	LR	01 53 30.1	
	comp=Z,8μm,21.3s,baz=76,slow=35						
	comp=Z,33nm,0.8s						
WRA	**Warramunga Arr**	**27.70**	**247**	*i* P	**P**	**01 42 59.0**	**+0.5**
WRA				pmax	pmax		
	comp=Z,19nm,0.4s						
WRA	**Warramunga Arr**	**27.70**	**247**	P	**P**	**01 42 58.1**	**-0.4**
STKA	**Stephens Creek**	**28.12**	**218**	P	**P**	**01 43 02.4**	**+0.3**
STKA	**Stephens Creek**	**28.12**	**218**	P	**P**	**01 43 02.1**	**0.0**
	comp=Z,20nm,0.8s,baz=29,slow=11,SNR=19						
STKA				LR	LR	01 54 10.2	
	comp=Z,14μm,18.3s,baz=39,slow=36						
	comp=Z,20nm,0.8s						
STKA	**Stephens Creek**	**28.12**	**218**	*ll e*P	**P**	**01 43 03.1**	**+1.0**
STKA	**Stephens Creek**	**28.12**	**218**	P	**P**	**01 43 03.5**	**+1.4**
KDU	**Kakadu**	**28.37**	**263**	P	**P**	**01 43 04.6**	**+0.1**
	comp=Z,42nm,1.1s						
MILA	**Mila**	**28.74**	**201**	P	**P**	**01 43 08.8**	**+1.2**
	comp=Z,43nm,1.4s						
GUMO	**Guam**	**28.90**	**325**	LR	LR	01 54 01.7	
	comp=Z,7μm,21.6s,baz=147,slow=35						
H11S2	**WAKE ISLAND Hy**	**29.18**	**10**	T	T	02 14 13.8	
	baz=188,slow=76,SNR=413						
H11S3	**WAKE ISLAND Hy**	**29.18**	**10**	T	T	02 14 14.4	
	baz=188,slow=76,SNR=8.3						
H11S1	**WAKE ISLAND Hy**	**29.20**	**10**	T	T	02 14 12.1	
	baz=188,slow=76,SNR=484						
AS17	**Alice Springs**	**29.22**	**240**	P	**P**	**01 43 11.6**	**-0.5**
	comp=Z,41nm,1.1s						
AS09	**Alice Springs**	**29.28**	**240**	P	**P**	**01 43 12.3**	**-0.3**
	comp=Z,55nm,0.9s						
AS15	**Alice Springs**	**29.28**	**240**	P	**P**	**01 43 12.0**	**-0.6**
	comp=Z,45nm,1.1s						
AS31	**Alice Springs**	**29.30**	**240**	P	**P**	**01 43 12.4**	**-0.3**
	comp=Z,9.8nm,1.1s						
ASAR	**Alice Springs**	**29.30**	**240**	P	**P**	**01 43 12.4**	**-0.3**
	comp=Z,19nm,0.8s,baz=69,slow=9.5,SNR=98						
ASAR				LR	LR	01 54 23.6	
	comp=Z,17μm,20.3s,baz=64,slow=35						
ASAR				P3KPbc		02 15 16.4	
	comp=Z,0.6nm,0.5s,baz=238,slow=4.3,SNR=10						
	comp=Z,19nm,0.8s						
ASAR	**Alice Springs**	**29.30**	**240**	P	**P**	**01 43 12.1**	**-0.6**
AUALC	**St Philip's Co**	**29.32**	**240**	P	**P**	**01 43 13.1**	**+0.1**
MTN	**Manton Dam**	**29.68**	**262**	P	**P**	**01 43 16.1**	**-0.1**
	comp=Z,24nm,1.1s						
MTN	**Manton Dam**	**29.68**	**262**	P	**P**	**01 43 16.5**	**+0.3**
TOZ	**Tahuroa Road**	**30.05**	**157**	P	**P**	**01 43 20.9**	**+1.7**
TOZ				IAmb	IAmb	01 43 41.2	
	comp=Z,286nm,1.8s						
TOZ				IAMs_20	IAMs_20	01 53 20.6	
	comp=Z,13μm,21.0s						
H11N1	**WAKE ISLAND Hy**	**30.41**	**10**	T	T	02 15 45.0	
	baz=188,slow=76,SNR=93						
H11N3	**WAKE ISLAND Hy**	**30.42**	**10**	T	T	02 15 47.9	
	baz=188,slow=76,SNR=92						
H11N2	**WAKE ISLAND Hy**	**30.43**	**10**	T	T	02 15 47.3	
	baz=188,slow=76,SNR=6.0						
HIZ	**Hauiti**	**30.51**	**159**	IAmb	IAmb	01 43 38.0	
	comp=Z,430nm,1.4s						
HIZ				IAMs_20	IAMs_20	01 53 55.6	
	comp=Z,10μm,20.0s						
HIZ	**Hauiti**	**30.51**	**159**	P	**P**	**01 43 25.1**	**+2.0**
TOO	**Toolangi**	**30.59**	**205**	P	**P**	**01 43 25.5**	**+1.4**
	comp=Z,61nm,1.4s						
HTT	**Hallett**	**30.82**	**219**	P	**P**	**01 43 26.5**	**+0.4**
	comp=Z,26nm,1.0s						
AUJCS	**Jamestown Cent**	**30.86**	**219**	P	**P**	**01 43 27.7**	**+1.3**
URZ	**Urewera**	**31.14**	**156**	LR	LR	01 54 34.1	
	comp=Z,7μm,20.1s,baz=326,slow=33						
URZ	**Urewera**	**31.14**	**156**	P	**P**	**01 43 29.2**	**+0.4**
SIJI	**Sorong**	**31.36**	**286**	LR	LR	01 58 07.9	
	comp=Z,4μm,19.8s,baz=97,slow=40						
SIJI	**Sorong**	**31.36**	**286**	P	**P**	**01 43 32.0**	**+1.0**
RTZ	**Ruatahuna**	**31.40**	**156**	P	**P**	**01 43 31.9**	**+0.8**
RTZ				IAmb	IAmb	01 43 58.4	
	comp=Z,371nm,1.4s						
ARPS	**Mount Arapiles**	**31.63**	**211**	P	**P**	**01 43 34.2**	**+1.1**
	comp=Z,36nm,1.5s						
BKZ	**Black Stump Fm**	**31.68**	**157**	P	**P**	**01 43 34.1**	**+0.5**
BKZ	**Black Stump Fm**	**31.68**	**157**	P	**P**	**01 43 33.9**	**+0.3**
AUMBR	**Murray Bridge**	**31.79**	**216**	P	**P**	**01 43 35.5**	**+1.0**
KNRA	**Kununurra**	**32.15**	**257**	P	**P**	**01 43 37.7**	**-0.2**
	comp=Z,184nm,1.1s						
KNRA	**Kununurra**	**32.15**	**257**	P	**P**	**01 43 38.0**	**+0.1**
KNRA				IAmb	IAmb	01 44 08.5	
	comp=Z,143nm,0.9s						
BBOO	**Buckleboo**	**32.25**	**222**	P	**P**	**01 43 39.2**	**+0.7**
	comp=Z,131nm,0.9s						
BBOO	**Buckleboo**	**32.25**	**222**	IAmb	IAmb	01 43 46.1	
	comp=Z,106nm,0.8s						
BBOO	**Buckleboo**	**32.25**	**222**	P	**P**	**01 43 37.5**	**-1.1**
DSZ	**Denniston Nort**	**32.56**	**165**	IAmb	IAmb	01 44 02.8	
	comp=Z,512nm,1.9s						
MRZ	**Mangatainoka R**	**32.67**	**160**	P	**P**	**01 43 42.4**	**+0.2**
MRZ				IAmb	IAmb	01 44 00.8	
	comp=Z,443nm,1.9s						
BFZ	**Birch Farm**	**32.92**	**159**	IAMs_20	IAMs_20	01 55 46.5	
	comp=Z,11μm,19.0s						
BFZ	**Birch Farm**	**32.92**	**159**	P	**P**	**01 43 42.6**	**-1.8**
AUCAS	**Cummins Area S**	**33.37**	**221**	P	**P**	**01 43 50.0**	**+1.6**
KHZ	**Kahutara**	**33.64**	**164**	IAMs_20	IAMs_20	01 56 08.6	
	comp=Z,9μm,20.0s						
KHZ	**Kahutara**	**33.64**	**164**	P	**P**	**01 43 51.1**	**+0.6**
LTZ	**Lake Taylor**	**33.65**	**165**	P	**P**	**01 43 52.0**	**+1.3**
LTZ				IAmb	IAmb	01 44 15.8	
	comp=Z,194nm,1.3s						
FOZ	**Fox Glacier**	**33.83**	**169**	IAmb	IAmb	01 43 56.5	
	comp=Z,108nm,1.0s						
OXZ	**Oxford**	**34.10**	**166**	IAmb	IAmb	01 44 19.4	
	comp=Z,123nm,1.0s						
JCZ	**Jackson Bay**	**34.17**	**170**	P	**P**	**01 43 56.9**	**+1.6**
MOO	**Moorlands**	**34.25**	**199**	P	**P**	**01 43 58.4**	**+2.6**
	comp=Z,151nm,1.5s						
MOO	**Moorlands**	**34.25**	**199**	P	**P**	**01 43 57.8**	**+1.9**
RPZ	**Rata Peaks**	**34.25**	**167**	LR	LR	01 56 22.0	
	comp=Z,1μm,20.3s,baz=342,slow=33						
RPZ	**Rata Peaks**	**34.25**	**167**	P	**P**	**01 43 57.0**	**+1.0**
WRKA	**Warakurna**	**34.57**	**241**	P	**P**	**01 43 57.6**	**-1.4**
	comp=Z,17nm,0.9s						
MQZ	**McQueen's Vall**	**34.61**	**166**	P	**P**	**01 43 59.2**	**+0.2**
TAU	**Tasmania Unive**	**34.63**	**198**	P	**P**	**01 44 00.9**	**+1.7**
TAU	**Tasmania Unive**	**34.63**	**198**	P	**P**	**01 44 00.0**	**+0.9**
TAU				pmax	pmax		
	comp=Z,165nm,1.4s						
TAU	**Tasmania Unive**	**34.63**	**198**	P	**P**	**01 44 00.0**	**+0.9**
TAU				IAmb	IAmb	01 44 19.5	
	comp=Z,165nm,1.4s						
TAU	**Tasmania Unive**	**34.63**	**198**	P	**P**	**01 43 59.8**	**+0.7**
LBZ	**Lake Benmore**	**34.72**	**169**	IAmb	IAmb	01 44 27.1	
	comp=Z,214nm,1.9s						
WKZ	**Wanaka**	**34.94**	**170**	IAmb	IAmb	01 44 36.9	
	comp=Z,187nm,1.5s						
DCZ	**Deep Cove**	**35.30**	**173**	IAmb	IAmb	01 44 38.6	
	comp=Z,109nm,1.1s						
FITZ	**Fitzroy Crossi**	**35.39**	**253**	P	**P**	**01 44 06.2**	**+0.1**
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.39**	**253**	LR	LR	01 58 15.5	
	comp=Z,3μm,21.9s,baz=79,slow=36						
FITZ	**Fitzroy Crossi**	**35.39**	**253**	P	**P**	**01 44 06.2**	**+0.1**
GAMI	**Galela, Maluku**	**35.54**	**288**	P	**P**	**01 44 08.8**	**+1.4**
	comp=Z,3μmcomp=Z,107nm,1.1s						
TNTI	**Ternate**	**35.58**	**286**	P	**P**	**01 44 09.2**	**+1.5**
	comp=Z,87nm,1.5s						
TNTI	**Ternate**	**35.58**	**286**	P	**P**	**01 44 07.5**	**-0.2**
SANI	**Sanana**	**36.08**	**281**	P	**P**	**01 44 13.8**	**+1.8**
SANI	**Sanana**	**36.08**	**281**	P	**P**	**01 44 12.2**	**+0.2**
	comp=Z,6μmcomp=Z,397nm,1.4s						
SANI	**Sanana**	**36.08**	**281**	P	**P**	**01 44 12.0**	**0.0**
SOEI	**Soe**	**36.50**	**268**	P	**P**	**01 44 17.3**	**+1.5**
SOEI	**Soe**	**36.50**	**268**	IAmb	IAmb	01 44 55.1	
	comp=Z,159nm,1.1s						
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MYLDM **Lahad Datu** 45.38 288 P **P** 01 45 30.2 +1.5
MYLDM **Lahad Datu** 45.38 288 P **P** 01 45 29.0 +0.3
MYLDM IAmb IAmb 01 45 55.3
comp=Z,232nm,1.2s
MYLDM **Lahad Datu** 45.38 288 P **P** 01 45 29.5 +0.8
comp=Z,3μmcomp=Z,166nm,1.3s
MYLDM **Lahad Datu** 45.38 288 P **P** 01 45 30.0 +1.3
KLBR **Kellerberrin** 45.45 236 P **P** 01 45 29.0 0.0
comp=Z,79nm,1.1s
KLBR **Kellerberrin** 45.45 236 P **P** 01 45 29.5 +0.4
IGBI **Denpasar** 45.55 268 P **P** 01 45 30.9 +0.9
BLDU **Ballidu** 46.02 237 P **P** 01 45 34.5 +0.9
comp=Z,86nm,1.0s
BLDU **Ballidu** 46.02 237 P **P** 01 45 34.6 +0.9
MORW **Morawa** 46.18 240 P **P** 01 45 35.1 +0.3
NWAO **Narrogin (SRO)** 46.29 234 P **P** 01 45 36.5 +0.9
comp=Z,76nm,1.0s
NWAO **Narrogin (SRO)** 46.29 234 LR LR 02 05 04.1
comp=Z,6μm,20.4s,baz=74,slow=36
NWAO **Narrogin (SRO)** 46.29 234 IAMs_20 IAMs_20 02 04 42.8
comp=Z,6μm,21.0s
JAGI **Jajag, Banyuwa** 46.56 268 P **P** 01 45 37.2 -0.9
JAGI **Jajag, Banyuwa** 46.56 268 P **P** 01 45 36.8 -1.3
JAGI **Jajag, Banyuwa** 46.56 268 P **P** 01 45 37.4 -0.7
comp=Z,5μmcomp=Z,289nm,1.0s
JAGI **Jajag, Banyuwa** 46.56 268 P **P** 01 45 37.2 -0.9
MUN **Mundaring** 46.82 236 P **P** 01 45 41.5 +1.6
comp=Z,53nm,1.2s,comp=Z,0.0nm
TGY **Tagaytay City** 46.89 301 LR LR 02 02 34.9
comp=Z,1μm,21.9s,baz=122,slow=32
KKM **Kota Kinabalu** 47.81 288 P **P** 01 45 47.4 -0.5
KKM **Kota Kinabalu** 47.81 288 IAmb IAmb 01 46 23.4
comp=Z,99nm,0.9s
KKM **Kota Kinabalu** 47.81 288 P **P** 01 45 48.0 +0.1
comp=Z,2μmcomp=Z,115nm,1.2s
KKM **Kota Kinabalu** 47.81 288 P **P** 01 45 47.7 -0.2
JHJ **Hachijo jima 2** 47.90 335 P **P** 01 45 47.7 -0.4
comp=Z,164nm,0.9s,baz=142,slow=5.1,SNR=6.9
JHJ LR LR 02 05 50.2
comp=Z,3μm,19.9s,baz=114,slow=36
comp=Z,164nm,0.9s
PAE **Paea** 48.05 104 *e*LR LR 01 59 34.1
comp=Z,3μm,22.7s
PPT **Papeete** 48.05 104 P **P** 01 45 50.0 +0.5
comp=Z,48nm,0.8s,baz=304,slow=18,SNR=5.1
PPT LR LR 02 01 37.4
comp=Z,1μm,20.1s,baz=273,slow=30
comp=Z,48nm,0.8s
PPT2 **Papeete2** 48.05 104 *e*P **P** 01 45 49.4 -0.3
comp=Z,86nm,1.3s
PPT2 *e*PKP2 **P** 01 45 51.0 +1.3
comp=Z,911nm,26.5s
PPT2 *e*PP PP 01 47 32.7 -9.5
comp=Z,509nm,29.8s
PPT2 *e*S **S** 01 52 42.1 -2.7
comp=Z,942nm,25.8s
PPT2 *e*LQ LQ 01 57 32.7
comp=Z,4μm,24.5s
PPT2 *e*LR LR 01 59 21.8
comp=Z,6μm,27.5s
TIAR **Tiarei** 48.27 104 *e*PKP2 **P** 01 45 55.3 +4.0
comp=Z,328nm,0.8s
TVO **Taravao** 48.37 105 *e*PKP2 **P** 01 45 53.4 +1.3
comp=Z,131nm,1.0s
TVO *e*LR LR 01 59 36.7
comp=Z,3μm,25.8s
JOW **Kunigami** 48.99 320 P **P** 01 45 57.8 +1.2
JOW **Kunigami** 48.99 320 P **P** 01 45 58.1 +1.5
SNJI **Sawahan-Nganju** 48.99 269 P **P** 01 45 57.7 +0.6
comp=Z,6μmcomp=Z,357nm,1.5s
PMOR **Pomariorio Ree** 49.65 101 *e*P **P** 01 46 02.2 +0.4
comp=Z,147nm,1.2s
PMOR *e*T T 02 45 19.8
comp=Z,3.1nm,0.2s
VAH **Vaihoa** 49.90 101 *e*P **P** 01 46 04.8 +1.0
comp=Z,159nm,1.4s
KEKH **Kekaha** 49.95 50 P **P** 01 46 05.2 +1.2
KEKH **Kekaha** 49.95 50 P **P** 01 46 05.3 +1.4
SMRI **Semarang** 50.38 269 P **P** 01 46 09.0 +1.5
SMRI **Semarang** 50.38 269 P **P** 01 46 08.2 +0.7
comp=Z,321nm,1.4s
SMRI **Semarang** 50.38 269 P **P** 01 46 08.4 +0.9
SMRI pP **pP** 01 46 20.4 -0.1
YOGI **Yogyakarta** 50.43 268 P **P** 01 46 08.6 +0.8
KIP **Kipapa** 50.91 51 P **P** 01 46 11.9 +0.6
KIP **Kipapa** 50.91 51 P **P** 01 46 12.2 +0.9
KIP pmax pmax
comp=Z,221nm,1.2s
KIP **Kipapa** 50.91 51 P **P** 01 46 12.2 +0.9
KIP IAmb IAmb 01 46 13.3
comp=Z,221nm,1.1s
KIP **Kipapa** 50.91 51 IAMs_20 IAMs_20 02 02 25.3
comp=Z,5μm,20.0s
INU **Inuyama** 50.98 334 P **P** 01 46 11.7 +0.2
INU **Inuyama** 50.98 334 IAmb IAmb 01 46 13.3
comp=Z,164nm,1.1s
INU **Inuyama** 50.98 334 P **P** 01 46 12.5 +0.9
INU **Inuyama** 50.98 334 P **P** 01 46 11.7 +0.2
INU pP **pP** 01 46 26.6 +1.8
YOJ **Yonaguni jima** 50.99 313 P **P** 01 46 13.6 +1.8
JGF **Kuroka** 51.05 335 P **P** 01 46 12.3 +0.2
JGF **Kuroka** 51.05 335 IAmb IAmb 01 46 31.8
comp=Z,227nm,1.4s
JGF **Kuroka** 51.05 335 P **P** 01 46 12.8 +0.6
JMN **Monobe** 51.06 330 P **P** 01 46 13.0 +0.7
JMN **Monobe** 51.06 330 P **P** 01 46 13.6 +1.3
JSU **Suzuyama** 51.10 326 P **P** 01 46 13.1 +0.5
JSU **Suzuyama** 51.10 326 IAmb IAmb 01 46 33.1
comp=Z,231nm,1.2s
JSU **Suzuyama** 51.10 326 P **P** 01 46 13.4 +0.9
MJAR **Matsushiro Arr** 51.51 336 P **P** 01 46 14.3 -1.3
comp=Z,26nm,0.9s,baz=167,slow=8.4,SNR=48
MJAR LR LR 02 07 34.3
comp=Z,2μm,20.6s,baz=144,slow=35
comp=Z,26nm,0.9s
MJAR **Matsushiro Arr** 51.51 336 P **P** 01 46 14.9 -0.6
MJAR pmax pmax
comp=Z,66nm,1.1s
MJAR **Matsushiro Arr** 51.51 336 P **P** 01 46 14.9 -0.6
MAJO **Matsushiro** 51.52 336 P **P** 01 46 15.2 -0.4
MAJO **Matsushiro** 51.52 336 P **P** 01 46 14.9 -0.7
MAJO pmax pmax
comp=Z,107nm,1.2s
MAJO MLR MLR
comp=Z,3μm,20.0s
MAJO **Matsushiro** 51.52 336 P **P** 01 46 14.9 -0.7
MAJO IAmb IAmb 01 46 34.6
comp=Z,107nm,1.1s
MAJO **Matsushiro** 51.52 336 P **P** 01 46 15.1 -0.4
MJB9 **Matsu-Tunnel** 51.52 336 IAmb IAmb 01 46 35.6
comp=Z,104nm,1.1s
KHLU **Kahalu`u** 51.59 55 P **P** 01 46 17.2 +0.7
YULB **Yu-li** 51.60 311 P **P** 01 46 16.9 +0.5
YULB **Yu-li** 51.60 311 IAmb IAmb 01 46 37.2
comp=Z,108nm,0.8s
YULB **Yu-li** 51.60 311 P **P** 01 46 17.1 +0.7
MLOA **Mauna Loa Obse** 51.82 55 P **P** 01 46 20.0 +1.4
NACB **Ninganchiao** 51.84 312 P **P** 01 46 19.0 +0.8
NACB **Ninganchiao** 51.84 312 P **P** 01 46 18.7 +0.5
KHLH **Kahului Airpor** 51.86 53 P **P** 01 46 20.5 +2.1
HLK **Haleakala** 51.93 53 P **P** 01 46 20.6 +1.4
POHA **Pohakuloa** 51.97 55 P **P** 01 46 20.7 +1.2
POHA **Pohakuloa** 51.97 55 P **P** 01 46 19.7 +0.3
POHA IAMs_20 IAMs_20 02 03 30.2
comp=Z,4μm,21.0s
POHA **Pohakuloa** 51.97 55 P **P** 01 46 20.1 +0.6
POHA **Pohakuloa** 51.97 55 P **P** 01 46 19.8 +0.3
POHA PcP **PcP** 01 47 30.9 -0.6
BYL **Byron's Ledge** 52.01 55 IAmb IAmb 01 46 21.5
comp=Z,154nm,0.9s
HATHI **Halema'uma'u T** 52.02 55 IAmb IAmb 01 46 41.4
comp=Z,112nm,0.8s
TPUB **Ta-pu** 52.04 310 P **P** 01 46 19.8 +0.1
TPUB **Ta-pu** 52.04 310 P **P** 01 46 19.5 -0.3
SSLB **Suanglung** 52.08 311 P **P** 01 46 20.4 +0.4
SSLB **Suanglung** 52.08 311 IAmb IAmb 01 46 39.8
comp=Z,106nm,0.9s
SSLB **Suanglung** 52.08 311 P **P** 01 46 20.0 -0.1
JNU **Nakatsue** 52.11 327 P **P** 01 46 19.9 -0.2
comp=Z,79nm,1.0s,baz=117,slow=5.1,SNR=34
comp=Z,79nm,1.0s
YHNB **Yeheng** 52.30 312 P **P** 01 46 22.4 +0.7
YHNB **Yeheng** 52.30 312 P **P** 01 46 21.9 +0.3
YHNB **Yeheng** 52.30 312 P **P** 01 46 22.9 +1.2
BBJI **Bungbulang** 53.08 268 P **P** 01 46 28.5 +0.9

BBJI **Bungbulang** 53.08 268 IAmb IAmb 01 46 41.9
comp=Z,82nm,1.0s
BBJI **Bungbulang** 53.08 268 P **P** 01 46 28.3 +0.7
comp=Z,2μmcomp=Z,90nm,1.0s
BBJI **Bungbulang** 53.08 268 P **P** 01 46 27.1 -0.5
LEM **Lembang** 53.19 269 LR LR 02 12 25.9
comp=Z,1μm,19.1s,baz=108,slow=40
TPI **Tanjungpandan** 53.81 274 P **P** 01 46 33.6 +0.6
comp=Z,3μmcomp=Z,160nm,1.8s
JTM **Tenmabayashi** 54.26 341 P **P** 01 46 36.6 +0.9
JTM **Tenmabayashi** 54.26 341 IAmb IAmb 01 46 37.1
comp=Z,133nm,1.0s
QZH2 **Quanzhou** 54.50 311 P **P** 01 46 37.0 -0.7
QZH2 pP **pP** 01 46 50.3 -1.0
QZH2 S **S** 01 54 13.0 -0.4
QZH2 pmax pmax
comp=Z,410nm,5.6s
QZH2 L L
comp=Z,2μm,23.0s
QZH2 L L
comp=Z,1μm,18.9s
QZH2 L L
comp=Z,2μm,26.4s
ERM **Erimo** 54.76 343 P **P** 01 46 40.6 +1.3
ERM **Erimo** 54.76 343 *de*P **P** 01 46 39.9 +0.6
ERM pmax pmax
comp=Z,130nm,1.7s
ERM **Erimo** 54.76 343 P **P** 01 46 39.5 +0.2
ERM IAmb IAmb 01 46 54.7
comp=Z,196nm,1.6s
ERM **Erimo** 54.76 343 P **P** 01 46 40.8 +1.5
JEM **Erimo** 54.76 343 P **P** 01 46 40.5 +1.2
YUK **Yuzh-Kuril'sk** 55.97 347 *e*P **P** 01 46 48.9 +1.0
YUK *i* 01 47 50.6
YUK *i* 01 48 51.8
YUK *i*S **S** 01 54 28.6 -3.7
YUK SS SS 01 58 07.3 -12
YUK SSS SSS 02 00 27.0
YUK pmax pmax
comp=E,295nm,1.1s
YUK pmax pmax
comp=Z,317nm,1.1s
YUK pmax pmax
comp=N,247nm,0.9s
YUK pmax pmax
comp=Z,365nm,1.8s
SSE **Sheshan** 56.43 318 P **P** 01 46 50.5 -1.0
SSE S **S** 01 54 37.4 -1.6
SSE pmax pmax
comp=Z,25nm,0.9s
SSE pmax pmax
comp=Z,260nm,4.5s
SSE L L
comp=Z,450nm,21.4s
SSE L L
comp=Z,380nm,20.6s
TJN **Taejon** 56.46 327 P **P** 01 46 51.9 +0.3
TJN **Taejon** 56.46 327 *d i*P **P** 01 46 51.5 -0.1
TJN pmax pmax
comp=Z,10.0nm,1.1s
KUR **Kuril'sk** 56.69 349 P **P** 01 46 52.7 -0.3
KUR S **S** 01 54 41.5 -0.3
KUR pmax pmax
comp=Z,325nm,1.4s
KUR pmax pmax
comp=Z,1μm,4.8s
KUR MLR MLR
comp=N,1μm,19.0s
KUR MLR MLR
comp=Z,2μm,19.0s
JKA **Kamikawa-asahi** 56.86 344 IAmb IAmb 01 47 13.8
comp=Z,163nm,0.9s
JKA **Kamikawa-asahi** 56.86 344 P **P** 01 46 56.0 +1.7
ASAJ **Asahikawa** 56.86 344 P **P** 01 46 55.4 +1.1
comp=Z,205nm,1.1s,baz=224,slow=12,SNR=38
ASAJ LR LR 02 08 40.4
comp=Z,10μm,22.0s,baz=170,slow=33
comp=Z,205nm,1.1s
KSRS **Korea Array** 56.98 328 P **P** 01 46 55.4 +0.1
comp=Z,33nm,1.0s,baz=147,slow=7.1,SNR=95
KSRS LR LR 02 09 53.0
comp=Z,3μm,20.7s,baz=135,slow=34
comp=Z,33nm,1.0s
KSAR **Wonju Array Be** 56.99 328 P **P** 01 46 54.8 -0.6
KSAR **Wonju Array Be** 56.99 328 P **P** 01 46 54.8 -0.6
DLV **Lat** 57.01 292 P **P** 01 46 56.5 +0.3
KS19 **Wonju Array Si** 57.05 328 IAmb IAmb 01 47 16.2
comp=Z,100nm,1.1s
GZH2 **Guangzhou** 57.60 307 P **P** 01 47 00.3 +0.3
GZH2 pP **pP** 01 47 12.8 -0.9
GZH2 S **S** 01 54 56.3 +1.6
GZH2 pmax pmax
comp=Z,490nm,3.3s
GZH2 L L
comp=Z,860nm,21.7s
GZH2 L L
comp=Z,1μm,19.8s
GZH2 L L
comp=Z,2μm,21.3s
TAOE **Nuku Hiva Isla** 57.64 94 *e*PKP2 **P** 01 47 01.5 +1.0
comp=Z,674nm,27.1s
TAOE *e*PP **PP** 01 49 03.8 -5.0
comp=Z,177nm,25.9s
TAOE *e*S **S** 01 55 00.3 +4.6
comp=Z,873nm,25.9s
TAOE *e*SS **SS** 01 58 48.0 +1.3
comp=Z,313nm,25.6s
TAOE *e*LR LR 02 03 48.8
comp=Z,5μm,25.9s
INCN **Inchon** 57.67 328 P **P** 01 47 01.4 +1.2
INCN **Inchon** 57.67 328 P **P** 01 47 00.2 0.0
INCN pmax pmax
comp=Z,247nm,1.1s
INCN **Inchon** 57.67 328 P **P** 01 47 00.2 0.0
INCN **Inchon** 57.67 328 P **P** 01 47 01.0 +0.7
INCN **Inchon** 57.67 328 P **P** 01 47 00.3 0.0
INCN pP **pP** 01 47 14.2 +0.5
INCN sP **sP** 01 47 20.5 +1.3
MYKOM **Kota Tinggi** 58.48 279 P **P** 01 47 06.7 +0.4
MYKOM **Kota Tinggi** 58.48 279 IAmb IAmb 01 47 20.9
comp=Z,276nm,2.0s
MYKOM **Kota Tinggi** 58.48 279 P **P** 01 47 06.5 +0.2
HJU **Haeju** 58.57 327 P **P** 01 47 05.8 -0.7
HJU pP **pP** 01 47 19.5 -0.4
HJU S **S** 01 55 07.2 +0.4
HJU AmB
comp=Z,502nm,1.8s
HJU AMS AMS
comp=Z,4μm,24.8s
NJ2 **Nanjing** 58.58 318 ⇑P **P** 01 47 07.3 +0.7
NJ2 pP **pP** 01 47 19.9 -0.2
NJ2 sP **sP** 01 47 24.6 -1.2
NJ2 S **S** 01 55 07.9 +0.8
NJ2 sS **pS** 01 55 24.1 +0.7
NJ2 pmax pmax
comp=Z,51nm,0.9s
NJ2 pmax pmax
comp=Z,2μm,8.8s
NJ2 L L
comp=Z,3μm,17.8s
NJ2 L L
comp=Z,3μm,20.8s
NJ2 L L
comp=Z,9μm,18.6s
QIZ **Qiongzhong** 58.58 300 P **P** 01 47 06.9 0.0
QIZ pP **pP** 01 47 19.0 -1.1
QIZ S **S** 01 55 08.1 +0.5
QIZ pmax pmax
comp=Z,34nm,1.5s
QIZ L L
comp=Z,670nm,18.7s
QIZ L L
comp=Z,1μm,21.0s
QIZ L L
comp=Z,2μm,22.7s
HHU **Hamhung** 59.07 330 P **P** 01 47 08.9 -1.0
HHU S **S** 01 55 14.7 +1.5
HHU AmB
comp=Z,494nm,1.7s
HHU AMS AMS
comp=Z,518nm,8.3s
PYAG **Pyongyang** 59.30 328 P **P** 01 47 11.6 +0.1
PYAG S **S** 01 55 17.8 +1.6
PYAG AmB
comp=Z,590nm,1.7s

PYAG AMS AMS
comp=Z,3μm,21.4s
YSS **Yuzhno-Sakhali** 59.45 345 P **P** 01 47 13.9 +1.5
YSS **Yuzhno-Sakhali** 59.45 345 *ke*P **P** 01 47 12.6 +0.2
YSS *e**SP **sP** 01 47 30.8 -1.2
YSS *e*S **S** 01 55 15.8 -2.1
YSS *e*PPS PPS 01 55 38.4
YSS *e*SSS SSS 02 01 42.5
YSS pmax pmax
comp=Z,80nm,1.3s
YSS pmax pmax
comp=Z,400nm,4.5s
YSS pmax pmax
comp=N,200nm,4.1s
YSS smax smax
comp=N,700nm,5.6s
YSS MLR MLR
comp=Z,4μm,18.0s
YSS MLR MLR
comp=N,3μm,17.0s
YSS MLR MLR
comp=E,1μm,17.0s
YSS **Yuzhno-Sakhali** 59.45 345 P **P** 01 47 13.5 +1.1
YSS IAmb IAmb 01 47 27.8
comp=Z,189nm,1.4s
YSS **Yuzhno-Sakhali** 59.45 345 P **P** 01 47 13.8 +1.4
VLA **Vladivostok** 59.66 335 ‖*e*P **P** 01 47 15.2 +1.4
VLA pmax pmax
comp=Z,131nm,1.3s
PSTR **Posyet** 59.73 334 *c i*P **P** 01 47 14.9 +0.6
CNSH **ChangSha** 60.51 311 P **P** 01 47 20.8 +0.8
CNSH S **S** 01 55 32.3 +0.1
CNSH pmax pmax
comp=Z,25nm,1.2s
CNSH L L
comp=Z,730nm,16.7s
CNSH L L
comp=Z,890nm,19.3s
CNSH L L
comp=Z,2μm,26.3s
USA0B **Ussuriysk Arra** 60.51 336 P **P** 01 47 20.2 +0.5
USA0B pmax pmax
comp=Z,214nm,1.0s
USA0B **Ussuriysk Arra** 60.51 336 P **P** 01 47 20.2 +0.5
USRK **Ussuriysk Ar.** 60.51 336 P **P** 01 47 20.1 +0.4
comp=Z,71nm,1.0s,baz=142,slow=6.5,SNR=118
USRK LR LR 02 12 10.0
comp=Z,2μm,20.2s,baz=138,slow=35
comp=Z,71nm,1.0s
USRK **Ussuriysk Ar.** 60.51 336 P **P** 01 47 19.9 +0.2
SUJ **Sinuiju** 60.74 328 P **P** 01 47 21.9 +0.6
WHN **Wuhan** 60.77 314 ⇑P **P** 01 47 21.8 +0.1
WHN pP **pP** 01 47 35.8 +0.4
WHN S **S** 01 55 35.3 -0.2
WHN pmax pmax
comp=Z,160nm,0.7s
WHN pmax pmax
comp=Z,1μm,9.7s
WHN L L
comp=Z,3μm,15.3s
WHN L L
comp=Z,3μm,17.2s
WHN L L
comp=Z,8μm,21.7s
BKNI **Bangkinang** 60.90 276 P **P** 01 47 25.3 +2.3
BKNI **Bangkinang** 60.90 276 P **P** 01 47 23.5 +0.5
comp=Z,6μmcomp=Z,307nm,1.8s
BKNI **Bangkinang** 60.90 276 P **P** 01 47 23.7 +0.7
SKR **Severo-Kuril's** 60.99 356 ‖*e*P **P** 01 47 22.4 -0.4
GULI **GuiLin** 61.02 306 ⇑P **P** 01 47 22.6 -0.9
GULI S **S** 01 55 37.0 -1.8
GULI pmax pmax
comp=Z,31nm,1.3s
GULI L L
comp=Z,860nm,22.7s
GULI L L
comp=Z,960nm,22.2s
GULI L L
comp=Z,2μm,20.6s
PPI **Padang Panjang** 61.37 275 P **P** 01 47 26.7 +0.6
comp=Z,4μmcomp=Z,104nm,1.2s
DL2 **Dalian** 61.42 325 P **P** 01 47 27.1 +1.1
DL2 pP **pP** 01 47 38.4 -1.1
DL2 sP **sP** 01 47 43.8 -1.3
DL2 S **S** 01 55 43.3 -0.1
DL2 pmax pmax
comp=Z,120nm,1.0s
DL2 pmax pmax
comp=Z,750nm,6.0s
DL2 L L
comp=Z,1μm,20.8s
DL2 L L
comp=Z,1μm,24.7s
DL2 L L
comp=Z,3μm,23.1s
UGL **Uglegorsk** 61.60 346 *e*P **P** 01 47 27.0 +0.1
UGL *e*S **S** 01 55 45.5 +0.2
UGL pmax pmax
comp=Z,900nm,3.2s
UGL pmax pmax
comp=Z,120nm,1.1s
UGL smax smax
comp=E,600nm,5.3s
UGL smax smax
comp=N,2μm,6.8s
UGL MLR MLR
comp=E,1μm,16.0s
UGL MLR MLR
comp=N,2μm,17.0s
UGL MLR MLR
comp=Z,3μm,19.0s
MDJ **Mudanjiang** 61.84 335 P **P** 01 47 29.6 +0.9
MDJ **Mudanjiang** 61.84 335 IAmb IAmb 01 47 49.3
comp=Z,168nm,1.2s
MDJ IAMs_20 IAMs_20 02 13 32.8
comp=Z,3μm,20.0s
MDJ **Mudanjiang** 61.84 335 P **P** 01 47 29.5 +0.9
MDJ pP pP 01 47 43.1 +0.4
MDJ S **S** 01 55 48.3 -0.2
MDJ pmax pmax
comp=Z,120nm,1.4s
MDJ pmax pmax
comp=Z,790nm,5.8s
MDJ L L
comp=Z,2μm,19.8s
MDJ L L
comp=Z,2μm,16.7s
MDJ L L
comp=Z,4μm,20.3s
MDJ **Mudanjiang** 61.84 335 P **P** 01 47 29.2 +0.5
TIA **Tai'an** 62.30 320 P **P** 01 47 30.9 -1.1
TIA PcP **PcP** 01 48 09.4 -2.0
TIA S **S** 01 55 52.0 -2.7
TIA SS **SS** 01 59 53.8 -5.4
TIA pmax pmax
comp=Z,16nm,1.2s
TIA pmax pmax
comp=Z,290nm,5.1s
TIA L L
comp=Z,1μm,19.1s
TIA L L
comp=Z,1μm,21.6s
TIA L L
comp=Z,2μm,20.5s
KULM **Kulim** 62.41 282 P **P** 01 47 33.1 -0.1
KULM **Kulim** 62.41 282 P **P** 01 47 32.0 -1.1
KULM **Kulim** 62.41 282 P **P** 01 47 32.6 -0.5
SNY **Shenyang** 62.47 329 ⇑P **P** 01 47 33.0 0.0
SNY S **S** 01 55 55.8 -0.8
SNY pmax pmax
comp=Z,16nm,1.4s
SNY pmax pmax
comp=Z,460nm,6.0s
SNY L L
comp=Z,810nm,17.8s
SNY L L
comp=Z,1μm,18.6s
SNY L L
comp=Z,2μm,18.6s
SISI **Saibi** 62.48 274 P **P** 01 47 34.2 +0.6
comp=Z,120nm,1.1s
CN2 **Changchun** 63.04 332 *e*P **P** 01 47 36.5 -0.2
CN2 *ep*P pP 01 47 50.9 +0.7
CN2 *es*P sP 01 47 54.8 -0.9
CN2 *e*S **S** 01 56 03.0 -0.6
CN2 pmax pmax

comp=Z,90nm,1.3s
CN2 L L
comp=Z,2µm,17.0s
CN2 L L
comp=Z,2µm,17.0s
CN2 L L
comp=Z,2µm,19.0s
TYV Tymovskoe 63.13 347 *e*P **P 01 47 37.5 +0.4**
TYV *e*S **S 01 56 04.8 +0.3**
TYV pmax pmax
comp=Z,700nm,4.0s
TYV pmax pmax
comp=Z,78nm,1.4s
TYV smax smax
comp=N,2µm,5.4s
TYV smax smax
comp=E,700nm,5.4s
PET Petropavlovsk 63.20 358 P **P 01 47 38.7 +1.1**
PET Petropavlovsk 63.20 358 *d i*P **P 01 47 36.8 -0.8**
PET *e* 01 49 53.1
PET *i* S **S 01 56 06.3 +1.0**
PET *e*PS 01 56 29.2
PET *e*PPS PPS 01 56 41.8
PET *e*SS **SS 02 00 09.1 -3.5**
PET pmax pmax
comp=Z,700nm,7.9s
PET pmax pmax
comp=Z,87nm,1.3s
PET pmax pmax
comp=Z,300nm,8.2s
PET pmax pmax
comp=Z,300nm,4.2s
PET MLR MLR
comp=Z,1µm,19.0s
PET MLR MLR
comp=Z,2µm,21.0s
PET Petropavlovsk 63.20 358 P **P 01 47 37.2 -0.4**
PET IAmb IAmb 01 47 39.0
comp=Z,160nm,1.4s
PET Petropavlovsk 63.20 358 P **P 01 47 36.6 -1.0**
comp=Z,2µmcomp=Z,60nm,1.1s
PET Petropavlovsk 63.20 358 P **P 01 47 38.2 +0.6**
PET Petropavlovsk 63.20 358 P **P 01 47 36.3 -1.3**
PEA0B Petropavlovsk- 63.33 358 *de*P **P 01 47 38.1 -0.3**
PETK Petropavlovsk- 63.33 358 P **P 01 47 38.0 -0.4**
comp=Z,30nm,0.9s,baz=131,slow=4.5,SNR=37
PETK LR LR 02 11 13.4
comp=Z,2µm,21.8s,baz=169,slow=32
comp=Z,30nm,0.9s
PETK Petropavlovsk- 63.33 358 P **P 01 47 37.9 -0.5**
AMKA Amchitka 63.46 12 P **P 01 47 39.6 +0.3**
AMKA IAmb IAmb 01 47 41.7
comp=Z,130nm,1.2s
RPSI Rantau Prapat 63.47 278 P **P 01 47 39.4 -0.8**
RPSI IAmb IAmb 01 47 53.3
comp=Z,200nm,1.6s
PSI Prapat 63.50 278 P **P 01 47 39.1 -1.4**
PSI Prapat 63.50 278 P **P 01 47 39.4 -1.1**
PSI pmax pmax
comp=Z,200nm,1.6s
PSI Prapat 63.50 278 P **P 01 47 39.4 -1.1**
comp=Z,2µmcomp=Z,55nm,1.3s
BNX BinXian 63.66 334 ⇓P **P 01 47 40.3 -0.5**
BNX pP **pP 01 47 51.5 -3.3**
BNX PP **PP 01 50 02.8 +1.3**
BNX S **S 01 56 13.1 +1.8**
BNX pmax pmax
comp=Z,90nm,1.2s
BNX pmax pmax
comp=Z,740nm,4.3s
BNX L L
comp=Z,2µm,23.8s
BNX L L
comp=Z,890nm,23.9s
BNX L L
comp=Z,3µm,23.9s
SHEM Shemya Is, Ala 63.81 9 LR LR 02 09 56.5
comp=Z,2µm,21.5s,baz=194,slow=31
SMY Shemya 63.81 9 P **P 01 47 40.9 -0.7**
LYN LuoYang 64.35 316 P **P 01 47 44.8 -0.7**
LYN pP pP 01 47 58.8 -0.4
LYN S **S 01 56 16.9 -3.4**
LYN sS sS 01 56 41.8 -1.7
LYN pmax pmax
comp=Z,32nm,1.6s
LYN pmax pmax
comp=Z,790nm,4.8s
LYN L L
comp=Z,2µm,25.4s
LYN L L
comp=Z,950nm,21.0s
LYN L L
comp=Z,3µm,26.4s
GSI Gunungsitoli 64.49 276 P **P 01 47 46.7 -0.2**
GSI Gunungsitoli 64.49 276 P **P 01 47 46.4 -0.5**
GSI Gunungsitoli 64.49 276 P **P 01 47 46.7 -0.2**
comp=Z,203nm,1.0s
GSI Gunungsitoli 64.49 276 P **P 01 47 46.8 -0.1**
GYA Guiyang 64.50 306 ⇓P **P 01 47 48.5 +1.6**
GYA pP pP 01 48 00.4 -0.3
GYA sP sP 01 48 06.9 +0.6
GYA S **S 01 56 19.5 -3.2**
GYA pmax pmax
comp=Z,26nm,0.8s
GYA L L
comp=Z,670nm,22.8s
GYA L L
comp=Z,1µm,19.6s
GYA L L
comp=Z,2µm,22.3s
HNS HongShan 64.56 320 ⇑P **P 01 47 47.0 +0.2**
HNS S **S 01 56 19.4 -3.3**
HNS pmax pmax
comp=Z,48nm,1.5s
HNS L L
comp=Z,1µm,19.1s
HNS L L
comp=Z,1µm,20.1s
HNS L L
comp=Z,2µm,19.2s
SLVN Son La 64.61 300 P **P 01 47 48.5 +0.9**
GRNR Gornyy 64.65 343 ⇓*i*P **P 01 47 47.9 +0.7**
GRNR pmax pmax
comp=Z,50nm,1.3s
KIWB Kanaga Island 64.71 15 P **P 01 47 49.0 +1.4**
ADK Adak 64.86 15 P **P 01 47 49.5 +1.1**
ADK Adak 64.86 15 P **P 01 47 48.4 -0.1**
ADK pmax pmax
comp=Z,504nm,1.5s
ADK Adak 64.86 15 P **P 01 47 48.4 -0.1**
ADK Adak 64.86 15 IAms_20 IAms_20 02 09 47.5
comp=Z,3µm,22.0s
ADK Adak 64.86 15 P **P 01 47 49.3 +0.8**
ADK Adak 64.86 15 P **P 01 47 49.6 +1.1**
ADK pP **pP 01 48 03.6 +1.0**
ADK PcP **PcP 01 48 22.2 +0.8**
GSTR Great Sitkin T 65.21 15 IAmb IAmb 01 48 11.1
comp=Z,170nm,0.9s
BJI2 Beijing 65.30 323 P **P 01 47 51.3 -0.3**
BJI2 pP **pP 01 48 03.8 -1.5**
BJI2 sP **sP 01 48 09.9 -0.9**
BJI2 S **S 01 56 30.5 -1.3**
BJI2 sS **pS 01 56 48.9 +0.5**
BJI2 pmax pmax
comp=Z,9.0nm,1.6s
BJI2 pmax pmax
comp=Z,200nm,3.5s
BJI2 L L
comp=Z,510nm,22.1s
BJI2 L L
comp=Z,560nm,22.0s
BJI2 L L
comp=Z,980nm,22.1s
BJT Baijiatuau 65.31 323 P **P 01 47 52.9 +1.3**
BJT Baijiatuau 65.31 323 P **P 01 47 51.4 -0.3**
CASY Casey 65.45 200 P **P 01 47 52.6 +0.4**
CASY Casey 65.45 200 P **P 01 47 53.0 +0.8**
ATKA Atka Island 65.80 16 P **P 01 47 55.4 +0.8**
ATKA Atka Island 65.80 16 IAms_20 IAms_20 02 10 01.4
comp=Z,3µm,22.0s
TIY Taiyuan 66.19 319 *e*P **P 01 47 57.3 -0.2**
TIY pP **pP 01 48 10.0 -1.2**
TIY S **S 01 56 42.9 -0.1**
TIY sS **sS 01 57 04.0 -2.3**
TIY pmax pmax
comp=Z,430nm,6.4s
TIY L L
comp=Z,980nm,19.2s
TIY L L
comp=Z,1µm,19.9s
TIY L L
comp=Z,2µm,19.9s
XAN Xi'an 66.53 314 P **P 01 47 58.5 -1.2**
XAN pP pP 01 48 12.3 -1.2
XAN sP sP 01 48 19.1 +0.1
XAN S **S 01 56 42.9 -4.2**
XAN sS pS 01 57 05.3 +2.0
XAN pmax pmax
comp=Z,40nm,1.5s
XAN L L
comp=Z,1µm,21.3s
XAN L L
comp=Z,2µm,23.8s
XAN L L
comp=Z,3µm,22.7s
XAN Xi'an 66.53 314 P **P 01 47 59.8 +0.1**
XAN pP **pP 01 48 14.1 +0.6**
XAN sP **sP 01 48 19.2 +0.2**
VNDA Vanda 67.11 180 P **P 01 48 02.7 +0.1**
comp=Z,22nm,0.8s,baz=343,slow=6.6,SNR=113
VNDA LR LR 02 11 54.3
comp=Z,2µm,21.7s,baz=6.5,slow=31
comp=Z,22nm,0.8s
VNDA Vanda 67.11 180 P **P 01 48 02.9 +0.3**
VNDA pmax pmax
comp=Z,90nm,1.4s
VNDA Vanda 67.11 180 P **P 01 48 02.9 +0.3**
KMI2 Kunming 67.12 303 ⇓P **P 01 48 03.6 -0.3**
KMI2 pP pP 01 48 17.4 -0.4
KMI2 sP sP 01 48 23.5 +0.1
KMI2 S **S 01 56 54.6 -0.3**
KMI2 SKS **SKSac 01 57 57.0 -0.6**
KMI2 pmax pmax
comp=Z,73nm,1.4s
KMI2 pmax pmax
comp=Z,400nm,4.6s
KMI2 L L
comp=Z,500nm,23.2s
KMI2 L L
comp=Z,870nm,22.3s
KMI2 L L
comp=Z,2µm,24.2s
HEH HeiHe 67.26 337 *e*P **P 01 48 02.8 -1.1**
HEH pP **pP 01 48 16.3 -1.8**
HEH S **S 01 56 53.6 -1.5**
HEH pmax pmax
comp=Z,62nm,1.2s
HEH pmax pmax
comp=Z,900nm,4.3s
HEH L L
comp=Z,1µm,22.6s
HEH L L
comp=Z,3µm,22.0s
HEH L L
comp=Z,4µm,21.2s
SBA Scott Base 67.50 179 P **P 01 48 06.3 +1.2**
SBA pmax pmax
comp=Z,172nm,1.7s
SBA Scott Base 67.50 179 P **P 01 48 06.3 +1.2**
SBA IAmb IAmb 01 48 27.4
comp=Z,172nm,1.6s
XLT XiLinHaoTe 67.87 326 *e*P **P 01 48 08.3 +0.2**
XLT pP pP 01 48 21.3 -0.4
XLT sP sP 01 48 28.3 +1.1
XLT S **S 01 57 01.5 -1.4**
XLT sS sS 01 57 23.3 -2.9
XLT pmax pmax
comp=Z,130nm,1.4s
XLT pmax pmax
comp=Z,730nm,3.5s
XLT L L
comp=Z,1µm,17.8s
XLT L L
comp=Z,2µm,17.8s
CMAR Chiang Mai Arr 67.90 295 P **P 01 48 08.2 -0.4**
comp=Z,5.5nm,0.6s,baz=121,slow=4.5,SNR=26
CMAR PKP2bc **P'P'bc 02 16 30.1 -1.6**
comp=Z,1.5nm,0.3s,baz=284,slow=4.3,SNR=10.0
CMAR LR LR 02 17 02.5
comp=Z,319nm,21.0s,baz=95,slow=35
comp=Z,5.5nm,0.6s
CMAR Chiang Mai Arr 67.90 295 P **P 01 48 09.0 +0.3**
CMAR Chiang Mai Arr 67.90 295 P **P 01 48 09.0 +0.3**
CHTO Chiang Mai 68.02 295 P **P 01 48 10.1 +0.7**
CHTO Chiang Mai 68.02 295 P **P 01 48 08.9 -0.5**
CHTO pmax pmax
comp=Z,70nm,1.4s
CHTO Chiang Mai 68.02 295 P **P 01 48 08.9 -0.5**
CHTO Chiang Mai 68.02 295 P **P 01 48 09.3 -0.1**
CHTO Chiang Mai 68.02 295 P **P 01 48 09.1 -0.4**
PZH PanZhiHua 68.50 304 P **P 01 48 11.8 -0.6**
PZH S **S 01 57 09.4 -1.8**
PZH SS **SS 02 01 31.8 -4.3**
PZH pmax pmax
comp=Z,10.0nm,1.7s
PZH pmax pmax
comp=Z,220nm,5.2s
PZH L L
comp=Z,1µm,21.9s
PZH L L
comp=Z,720nm,19.2s
PZH L L
comp=Z,1µm,23.3s
HHC Hu-ho-hao-te 68.58 322 *e*P **P 01 48 12.8 +0.2**
HHC pP pP 01 48 26.3 -0.1
HHC S **S 01 57 10.5 -1.1**
HHC sS sS 01 57 32.8 -2.2
HHC pmax pmax
comp=Z,33nm,1.5s
HHC pmax pmax
comp=Z,530nm,6.8s
HHC L L
comp=Z,880nm,21.0s
HHC L L
comp=Z,1µm,21.9s
HHC L L
comp=Z,2µm,21.6s
CD2 Chengdu 68.80 309 P **P 01 48 14.0 -0.1**
CD2 pP pP 01 48 26.3 -1.7
CD2 S **S 01 57 13.0 -1.4**
CD2 sS sS 01 57 36.4 -1.1
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,460nm,4.0s
CD2 L L
comp=Z,2µm,25.0s
CD2 L L
comp=Z,2µm,24.7s
CD2 L L
comp=Z,2µm,24.5s
UNV Unalaska Valle 69.56 20 P **P 01 48 18.5 +0.3**
UNV Unalaska Valle 69.56 20 IAmb IAmb 01 48 39.1
comp=Z,107nm,1.0s
UNV IAms_20 IAms_20 02 12 22.9
comp=Z,3µm,22.0s
UNV Unalaska Valle 69.56 20 P **P 01 48 18.0 -0.2**
baz=214,SNR=14
UNV S **S 01 57 22.5 +0.1**
baz=214
BTO2 Baotou 69.56 321 *e*P **P 01 48 18.3 -0.4**
BTO2 pP **pP 01 48 31.9 -0.6**
BTO2 PP **PP 01 50 52.8 -0.4**
BTO2 S **S 01 57 20.6 -2.7**
BTO2 pmax pmax
comp=Z,57nm,1.3s
BTO2 pmax pmax
comp=Z,1µm,7.3s
BTO2 L L
comp=Z,3µm,20.9s
BTO2 L L
comp=Z,1µm,13.3s
BTO2 L L
comp=Z,5µm,22.6s
HIA Hailar 69.73 332 P **P 01 48 20.2 +0.8**
HIA Hailar 69.73 332 IAms_20 IAms_20 02 15 37.5
comp=Z,4µm,22.0s
HIA Hailar 69.73 332 P **P 01 48 20.0 +0.5**
HIA Hailar 69.73 332 P **P 01 48 19.1 -0.3**
HIA pP **pP 01 48 34.2 +0.5**
HILR Hailar Array B 69.93 333 P **P 01 48 20.7 0.0**
comp=Z,8.3nm,0.5s,baz=140,slow=9.5,SNR=12
HILR LR LR 02 16 39.9
comp=Z,3µm,21.7s,baz=100,slow=34
comp=Z,8.3nm,0.5s
LVA Lava Point 69.98 20 IAmb IAmb 01 48 46.6
comp=Z,158nm,1.1s
AKUT Akutan 70.05 20 P **P 01 48 21.5 +0.3**
AKUT Akutan 70.05 20 IAmb IAmb 01 48 22.4
comp=Z,274nm,1.5s
ZEA Zeya 70.14 339 *e*P **P 01 48 22.0 +0.2**
ZEA *e*S **S 01 57 31.5 +2.4**
ZEA pmax pmax
comp=E,100nm,2.4s
ZEA pmax pmax
comp=N,200nm,2.3s
ZEA pmax pmax
comp=Z,600nm,2.2s
ZEA pmax pmax
comp=Z,120nm,1.4s
ZEA smax smax
comp=N,400nm,7.4s
ZEA MLR MLR
comp=N,600nm,20.0s
ZEA MLR MLR
comp=E,500nm,20.0s
ZEA MLR MLR
comp=Z,1µm,19.0s
MA2 Magadan 70.25 354 LR LR 02 16 25.8
comp=Z,2µm,20.8s,baz=184,slow=33
MA2 Magadan 70.25 354 P **P 01 48 22.3 -0.1**
MA2 Magadan 70.25 354 P **P 01 48 22.2 -0.1**
MA2 pmax pmax
comp=Z,298nm,1.6s
MA2 Magadan 70.25 354 P **P 01 48 22.2 -0.2**
MA2 IAmb IAmb 01 48 36.8
comp=Z,298nm,1.6s
MA2 IAMs_20 IAMs_20 02 16 24.5
comp=Z,3µm,21.0s
MA2 Magadan 70.25 354 P **P 01 48 21.1 -1.3**
comp=Z,2µmcomp=Z,114nm,1.7s
MA2 Magadan 70.25 354 P **P 01 48 22.6 +0.2**
TNCH TengChong 70.60 301 P **P 01 48 25.1 -0.4**
TNCH pP pP 01 48 37.6 -1.9
TNCH S **S 01 57 35.8 -0.2**
TNCH sS pS 01 57 56.0 +2.9
TNCH SS **SS 02 02 10.3 +1.6**
TNCH pmax pmax
comp=Z,32nm,0.8s
TNCH pmax pmax
comp=Z,360nm,3.7s
TNCH L L
comp=Z,440nm,17.9s
TNCH L L
comp=Z,540nm,21.4s
TNCH L L
comp=Z,1µm,26.7s
LZH Lanzhou 71.15 314 P **P 01 48 28.9 +0.3**
LZH pP pP 01 48 44.0 +1.5
LZH S **S 01 57 42.4 +0.4**
LZH sS sS 01 58 03.4 -2.0
LZH pmax pmax
comp=Z,32nm,1.1s
LZH pmax pmax
comp=Z,550nm,4.5s
LZH L L
comp=Z,610nm,18.7s
LZH L L
comp=Z,1µm,17.3s
LZH L L
comp=Z,2µm,20.4s
LZDM Lanzhou Array 71.19 314 P **P 01 48 29.5 +0.4**
comp=Z,1.5nm,0.3s,baz=170,slow=4.2,SNR=8.5
LZDM LR LR 02 17 08.8
comp=Z,1µm,21.8s,baz=100,slow=34
comp=Z,1.5nm,0.3s
SPIA Saint Paul Isl 71.28 16 P **P 01 48 28.9 +0.3**
SPIA Saint Paul Isl 71.28 16 IAmb IAmb 01 48 44.2
comp=Z,225nm,1.1s
SPIA Saint Paul Isl 71.28 16 P **P 01 48 29.2 +0.6**
SPIA baz=210 S **S 01 57 45.5 +3.3**
baz=210
CNBA Chernabura Isl 72.79 22 IAmb IAmb 01 48 39.0
comp=Z,228nm,1.5s
CHNA Chernabura Isl 72.80 22 P **P 01 48 37.3 -0.4**
CHNA Chernabura Isl 72.80 22 P **P 01 48 37.3 -0.4**
baz=220,SNR=12
CHNA S **S 01 57 58.9 -0.8**
baz=220
SDPT Sand Point 72.87 22 P **P 01 48 38.0 -0.2**
SDPT Sand Point 72.87 22 IAmb IAmb 01 48 39.0
comp=Z,119nm,0.8s
SDPT Sand Point 72.87 22 P **P 01 48 37.8 -0.4**
baz=219,SNR=12
SDPT S **S 01 57 59.1 -1.5**
baz=219
SEY Seymchan 73.43 356 LR LR 02 17 50.2
comp=Z,3µm,21.6s,baz=174,slow=33
SEY Seymchan 73.43 356 *de*P **P 01 48 41.1 -0.3**
SEY pmax pmax
comp=Z,140nm,1.7s
S14K Fog Glacier 73.92 21 P **P 01 48 44.4 -0.1**
baz=220,SNR=20
S14K S **S 01 58 14.2 +1.6**
baz=220
VNFG Fog Glacier, M 73.92 21 IAmb IAmb 01 48 46.0
comp=Z,158nm,0.9s
VNFG IAMs_20 IAMs_20 02 14 55.1
comp=Z,5µm,21.0s
CHGN Chignik 74.35 22 IAmb IAmb 01 48 47.8
comp=Z,152nm,1.4s
CHGN Chignik 74.35 22 P **P 01 48 46.4 -0.4**
baz=221,SNR=15
M11K Mekoryuk 75.12 16 IAmb IAmb 01 48 53.9
comp=Z,200nm,1.4s
M11K Mekoryuk 75.12 16 P **P 01 48 52.1 +0.9**
baz=213
M11K S **S 01 58 29.0 +3.3**
baz=213
ULN Ulaanbaatar 75.28 326 P **P 01 48 53.0 +0.4**
ULN pmax pmax
comp=Z,280nm,1.4s
ULN MLR MLR
comp=Z,2µm,19.0s
ULN Ulaanbaatar 75.28 326 P **P 01 48 53.0 +0.4**
ULN IAmb IAmb 01 49 15.0
comp=Z,280nm,1.4s
ULN Ulaanbaatar 75.28 326 IAMs_20 IAMs_20 02 22 39.9
comp=Z,2µm,19.0s
ULN Ulaanbaatar 75.28 326 P **P 01 48 53.2 +0.5**
ULN Ulaanbaatar 75.28 326 P **P 01 48 53.2 +0.5**
ULN Ulaanbaatar 75.28 326 P **P 01 48 53.1 +0.4**
ULN sP **sP 01 49 13.4 +1.5**
GTA2 Gaotai 75.59 315 P **P 01 48 54.8 +0.1**
GTA2 pP PcP 01 49 07.8 +0.4
GTA2 S **S 01 58 31.3 -0.8**
GTA2 sS pS 01 58 50.8 +1.4
GTA2 ScS **SKSac 01 58 56.9 -3.9**
GTA2 pmax pmax
comp=Z,42nm,1.6s
GTA2 pmax pmax
comp=Z,570nm,8.3s
GTA2 L L
comp=Z,1µm,21.3s
GTA2 L L
comp=Z,980nm,23.7s
GTA2 L L
comp=Z,2µm,24.8s
SONM Songino Array 75.63 325 P **P 01 48 54.9 +0.2**
comp=Z,24nm,0.7s,baz=142,slow=5.5,SNR=81
SONM LR LR 02 23 40.6
comp=Z,2µm,18.6s,baz=118,slow=37
comp=Z,24nm,0.7s
SONM Songino Array 75.63 325 P **P 01 48 54.5 -0.2**
SONM IAmb IAmb 01 49 16.1
comp=Z,131nm,1.0s
O14K Tigyukauivet M 75.65 19 IAmb IAmb 01 48 56.3
comp=Z,115nm,0.9s
O14K IAMs_20 IAMs_20 02 16 27.9
comp=Z,4µm,22.0s
O14K Tigyukauivet M 75.65 19 P **P 01 48 54.7 +0.4**
baz=218,SNR=34
O14K S **S 01 58 32.4 +0.8**
baz=218
M13K Dall Lake 75.95 17 IAmb IAmb 01 49 12.4
comp=Z,172nm,1.1s
M13K Dall Lake 75.95 17 P **P 01 48 57.1 +1.1**

baz=216,SNR=18
M13K S **S** **01 58 38.3 +3.5**
baz=216
N14K Kuskokwak Cree **76.05 18** IAmb IAmb 01 49 33.1
comp=Z,97nm,0.9s
N14K IAMs_20 IAMs_20 02 16 09.4
comp=Z,3µm,22.0s
N14K Kuskokwak Cree **76.05 18** P **P** **01 48 56.8 +0.3**
baz=218,SNR=19
N14K S **S** **01 58 38.0 +2.1**
baz=218
O15K Ungalikthiuk R **76.05 19** IAMs_20 IAMs_20 02 18 59.5
comp=Z,2µm,20.0s
O15K Ungalikthiuk R **76.05 19** P **P** **01 48 56.5 -0.1**
baz=219,SNR=9.3
O15K S **S** **01 58 35.5 -0.5**
baz=219
R17L Mt. Peulik Vol **76.09 22** P **P** **01 48 57.3 +0.4**
baz=223,SNR=36
R17L S **S** **01 58 36.1 -0.5**
baz=223
SII Sitkinak Islan **76.15 24** P **P** **01 48 57.7 +0.4**
baz=225
SII S **S** **01 58 37.6 +0.3**
baz=225
YAK Yakutsk **76.31 345** LR LR 02 20 04.5
comp=Z,3µm,21.8s,baz=137,slow=34
YAK Yakutsk **76.31 345** *d* iP **P** **01 48 57.6 -0.4**
YAK *e* 01 49 09.1
YAK *e**PP **pP** **01 49 14.9 +2.7**
YAK *e* 01 51 46.2
YAK *e*PPP PPP 01 53 34.7
YAK *e*S **S** **01 58 37.7 -1.0**
YAK *e* 01 59 01.8
YAK *e**SS **ScS** **01 59 08.3 -0.6**
YAK *e*SS **SS** **02 03 34.2 +0.3**
YAK pmax pmax
comp=Z,118nm,1.2s
YAK pmax pmax
comp=N,44nm,1.5s
YAK pmax pmax
comp=E,24nm,1.3s
YAK pmax pmax
comp=Z,101nm,2.7s
YAK pmax pmax
comp=N,143nm,3.0s
YAK pmax pmax
comp=E,74nm,2.9s
YAK smax smax
comp=N,633nm,4.3s
YAK smax smax
comp=E,205nm,5.2s
YAK MLR MLR
comp=Z,2µm,21.0s
YAK MLR MLR
comp=N,381nm,21.0s
YAK MLR MLR
comp=E,943nm,20.0s
YAK Yakutsk **76.31 345** P **P** **01 48 57.9 0.0**
YAK Yakutsk **76.31 345** IAMs_20 IAMs_20 02 19 35.0
comp=Z,4µm,22.0s
YAK Yakutsk **76.31 345** P **P** **01 48 58.4 +0.4**
SHL Shillong **76.42 300** *e*P **P** **01 49 00.0 +0.3**
SHL IAmb IAmb 01 49 14.1
comp=Z,121nm,1.8s
P16K Nushagak River **76.56 20** IAmb IAmb 01 49 01.1
comp=Z,128nm,1.0s
P16K IAMs_20 IAMs_20 02 16 30.8
comp=Z,3µm,22.0s
P16K Nushagak River **76.56 20** P **P** **01 48 59.2 -0.2**
baz=221,SNR=22
P16K S **S** **01 58 41.0 -0.6**
baz=221
M14K Bethel **76.63 18** IAmb IAmb 01 49 16.5
comp=Z,203nm,1.1s
M14K IAMs_20 IAMs_20 02 16 27.7
comp=Z,2µm,22.0s
M14K Bethel **76.63 18** P **P** **01 49 00.4 +0.6**
baz=217,SNR=53
M14K S **S** **01 58 44.2 +1.9**
baz=217
Q17K Contact Creek **76.73 22** P **P** **01 49 00.6 0.0**
baz=223,SNR=24
Q17K S **S** **01 58 43.1 -0.6**
baz=223
N15K Kwethluk River **76.74 19** IAmb IAmb 01 49 22.8
comp=Z,90nm,1.1s
N15K IAMs_20 IAMs_20 02 17 33.6
comp=Z,4µm,21.0s
N15K Kwethluk River **76.74 19** P **P** **01 49 01.2 +0.7**
baz=219,SNR=52
N15K S **S** **01 58 45.8 +2.2**
baz=219
Q16K King Salmon **76.75 21** P **P** **01 49 00.6 +0.1**
baz=222,SNR=11
Q16K S **S** **01 58 44.3 +0.6**
baz=222
GAMB Gambell **76.76 12** IAmb IAmb 01 49 16.3
comp=Z,131nm,1.4s
GAMB IAMs_20 IAMs_20 02 15 54.2
comp=Z,3µm,22.0s
GAMB Gambell **76.76 12** P **P** **01 49 00.9 +0.5**
baz=207,SNR=5.9
GAMB S **S** **01 58 45.4 +1.9**
baz=207
K13K Kusilvak Mount **76.83 16** IAMs_20 IAMs_20 02 16 50.0
comp=Z,2µm,22.0s
K13K Kusilvak Mount **76.83 16** P **P** **01 49 01.8 +0.8**
baz=214,SNR=19
K13K S **S** **01 58 46.8 +2.3**
baz=214
L14K Kuka Creek **76.89 17** IAmb IAmb 01 49 03.7
comp=Z,164nm,1.2s
L14K Kuka Creek **76.89 17** P **P** **01 49 02.2 +0.9**
baz=216,SNR=44
L14K S **S** **01 58 47.3 +2.2**
baz=216
ACHA Angle Creek He **76.89 22** IAmb IAmb 01 49 19.9
comp=Z,264nm,1.8s
O16K Kokwok River B **76.95 20** P **P** **01 49 00.8 -0.8**
baz=221,SNR=25
OHAK Old Harbor **76.96 23** P **P** **01 49 02.4 +0.6**
OHAK Old Harbor **76.96 23** IAmb IAmb 01 49 03.8
comp=Z,225nm,1.3s
OHAK Old Harbor **76.96 23** P **P** **01 49 02.3 +0.6**
baz=226,SNR=26
OHAK S **S** **01 58 46.1 +0.1**
baz=226
M15K Kasigluk River **76.97 18** P **P** **01 49 02.2 +0.5**
baz=218,SNR=56
M15K S **S** **01 58 46.6 +0.7**
baz=218
P17K Kvichak River **77.21 21** IAmb IAmb 01 49 03.9
comp=Z,254nm,1.6s
P17K Kvichak River **77.21 21** P **P** **01 49 02.4 -0.7**
baz=223,SNR=16
Q18K Katmai Hardscr **77.33 22** P **P** **01 49 03.9 -0.1**
baz=224,SNR=59
Q18K S **S** **01 58 49.2 -1.1**
baz=224
N16K Nishlik Lake **77.39 19** P **P** **01 49 05.5 +1.2**
baz=220,SNR=53
N16K S **S** **01 58 53.8 +3.1**
baz=220
O17K Koliganek Bris **77.42 20** P **P** **01 49 04.2 -0.1**
baz=222,SNR=42
O17K S **S** **01 58 50.1 -0.7**
baz=222
L15K Ungalak Mounta **77.51 17** P **P** **01 49 04.9 +0.2**
baz=217,SNR=40
L15K S **S** **01 58 53.2 +1.4**
baz=217
KDAK Kodiak Island **77.63 23** P **P** **01 49 05.0 -0.5**
comp=Z,138nm,1.1s,baz=236,slow=3.6,SNR=50
KDAK LR LR 02 19 40.7
comp=Z,3µm,19.6s,baz=225,slow=33
comp=Z,138nm,1.1s
KDAK Kodiak Island **77.63 23** P **P** **01 49 06.3 +0.8**
KDAK pmax pmax
comp=Z,119nm,0.9s
KDAK Kodiak Island **77.63 23** P **P** **01 49 06.3 +0.8**
KDAK IAmb IAmb 01 49 07.5
comp=Z,119nm,0.9s
KDAK Kodiak Island **77.63 23** IAMs_20 IAMs_20 02 19 58.1
comp=Z,3µm,20.0s
KDAK Kodiak Island **77.63 23** P **P** **01 49 06.0 +0.5**
baz=226
KDAK Kodiak Island **77.63 23** P **P** **01 49 04.0 -1.5**

M16K Timber Creek **77.76 19** IAmb IAmb 01 49 08.8
comp=Z,102nm,0.8s
M16K IAMs_20 IAMs_20 02 18 04.5
comp=Z,3µm,21.0s
M16K Timber Creek **77.76 19** P **P** **01 49 07.2 +1.0**
baz=220,SNR=58
M16K S **S** **01 58 57.9 +3.3**
baz=220
P18K Big Mountain, **77.78 21** P **P** **01 49 06.2 -0.3**
baz=224,SNR=30
P18K S **S** **01 58 54.5 -0.5**
baz=224
GOMU GeErMu **77.79 311** P **P** **01 49 08.4 +1.0**
GOMU S **S** **01 58 57.3 +0.6**
GOMU pmax pmax
comp=Z,14nm,0.6s
GOMU L L
comp=Z,780nm,17.8s
GOMU L L
comp=Z,550nm,18.0s
J14K Nanvaranak Lak **77.80 16** IAmb IAmb 01 49 22.7
comp=Z,202nm,1.2s
J14K IAMs_20 IAMs_20 02 18 12.6
comp=Z,2µm,21.0s
J14K Nanvaranak Lak **77.80 16** P **P** **01 49 07.4 +1.1**
baz=215,SNR=43
J14K S **S** **01 58 57.8 +3.0**
baz=215
N17K Nushagak Hills **77.95 20** P **P** **01 49 08.4 +1.2**
baz=222,SNR=66
N17K S **S** **01 58 57.6 +0.9**
baz=222
K15K Wolf Creek Mou **77.98 17** IAmb IAmb 01 49 24.4
comp=Z,211nm,1.1s
K15K Wolf Creek Mou **77.98 17** P **P** **01 49 08.4 +1.0**
baz=217,SNR=70
K15K S **S** **01 58 59.6 +2.6**
baz=217
O18K Koktuh Hills **78.12 21** IAmb IAmb 01 49 09.6
comp=Z,219nm,1.7s
O18K Koktuh Hills **78.12 21** P **P** **01 49 08.1 -0.2**
baz=224,SNR=13
O18K S **S** **01 58 58.4 -0.2**
baz=224
L16K Owhat River **78.13 18** IAmb IAmb 01 49 10.4
comp=Z,213nm,1.6s
L16K IAMs_20 IAMs_20 02 18 39.3
comp=Z,3µm,20.0s
L16K Owhat River **78.13 18** P **P** **01 49 08.9 +0.7**
baz=219,SNR=37
L16K S **S** **01 58 59.3 +0.8**
baz=219
BOD Bodaibo **78.15 336** *e*P **P** **01 49 07.1 -1.3**
BOD pmax pmax
comp=Z,130nm,1.6s
BILL Bilibino **78.31 2** *de*P **P** **01 49 09.0 -0.1**
BILL pmax pmax
comp=Z,208nm,1.7s
BILL Bilibino **78.31 2** P **P** **01 49 09.7 +0.6**
BILL Bilibino **78.31 2** P **P** **01 49 09.8 +0.6**
BILL pP **pP** **01 49 23.8 +0.3**
N18K Kilae Creek **78.49 20** IAmb IAmb 01 49 12.7
comp=Z,247nm,1.4s
N18K IAMs_20 IAMs_20 02 18 05.0
comp=Z,3µm,21.0s
N18K Kilae Creek **78.49 20** P **P** **01 49 11.2 +0.9**
baz=223,SNR=56
N18K S **S** **01 59 03.7 +1.1**
baz=223
M17K Holitna River **78.52 19** IAmb IAmb 01 49 27.3
comp=Z,99nm,1.1s
M17K IAMs_20 IAMs_20 02 17 55.8
comp=Z,3µm,21.0s
M17K Holitna River **78.52 19** P **P** **01 49 11.8 +1.4**
baz=221,SNR=33
M17K S **S** **01 59 05.3 +2.5**
baz=221
O19K Port Alsworth **78.68 21** IAmb IAmb 01 49 26.4
comp=Z,160nm,1.4s
O19K IAMs_20 IAMs_20 02 17 33.0
comp=Z,4µm,22.0s
O19K Port Alsworth **78.68 21** P **P** **01 49 11.3 0.0**
baz=224,SNR=6.0
O19K S **S** **01 59 04.7 +0.2**
baz=224
P19K Oil Pt **78.68 22** P **P** **01 49 11.5 +0.1**
baz=226,SNR=35
P19K S **S** **01 59 05.5 +0.9**
baz=226
ZAK Zakamensk **78.73 326** *e*P **P** **01 49 11.0 -0.9**
ZAK pmax pmax
comp=Z,85nm,1.9s
L17K Donlin **78.81 18** P **P** **01 49 13.3 +1.3**
baz=220,SNR=61
L17K S **S** **01 59 09.1 +3.2**
baz=220
ANM Nome **78.84 14** IAMs_20 IAMs_20 02 17 18.2
comp=Z,3µm,22.0s
ANM Nome **78.84 14** P **P** **01 49 12.9 +0.8**
baz=213
ANM S **S** **01 59 09.0 +2.9**
baz=213
ILSW Iliamna Southw **78.95 21** IAmb IAmb 01 49 14.0
comp=Z,238nm,1.3s
J16K Anvik River **79.03 16** IAmb IAmb 01 49 30.5
comp=Z,252nm,1.4s
J16K Anvik River **79.03 16** P **P** **01 49 14.5 +1.3**
baz=218,SNR=61
J16K S **S** **01 59 12.2 +4.0**
baz=218
N19K Bonanza Creek **79.07 20** P **P** **01 49 13.6 0.0**
baz=224,SNR=31
N19K S **S** **01 59 09.5 +0.7**
baz=224
M18K Stony River **79.11 19** P **P** **01 49 14.9 +1.3**
baz=223,SNR=71
M18K S **S** **01 59 12.3 +3.2**
baz=223
TNA Tin City **79.11 13** IAMs_20 IAMs_20 02 17 17.4
comp=Z,2µm,22.0s
TNA Tin City **79.11 13** P **P** **01 49 14.0 +0.5**
baz=211
TNA S **S** **01 59 10.0 +1.1**
baz=211
IRK Irkutsk **79.19 328** *e*P **P** **01 49 13.4 -0.9**
IRK *e* 01 49 26.5
IRK *e*S **S** **01 59 02.6 -7.8**
IRK pmax pmax
comp=Z,139nm,2.1s
O20K Slope Mountain **79.20 22** P **P** **01 49 14.1 -0.2**
baz=226,SNR=21
O20K S **S** **01 59 11.1 +0.9**
baz=226
TLY Talaya **79.22 328** P **P** **01 49 13.8 -0.6**
comp=Z,16nm,1.1s,baz=138,slow=5.8,SNR=16
TLY LR LR 02 24 18.3
comp=Z,2µm,20.2s,baz=114,slow=36
comp=Z,16nm,1.1s
TLY Talaya **79.22 328** *d* iP **P** **01 49 13.9 -0.6**
TLY pmax pmax
comp=Z,84nm,1.7s
TLY MLR MLR
comp=Z,2µm,20.0s
TLY Talaya **79.22 328** P **P** **01 49 14.7 +0.2**
TLY IAmb IAmb 01 49 36.0
comp=Z,365nm,1.8s
TLY Talaya **79.22 328** P **P** **01 49 14.2 -0.3**
TLY Talaya **79.22 328** P **P** **01 49 14.1 -0.4**
TLY pP **pP** **01 49 28.0 -1.0**
K17K Iditarod **79.25 18** IAmb IAmb 01 49 31.6
comp=Z,281nm,1.3s
K17K IAMs_20 IAMs_20 02 19 13.1
comp=Z,3µm,21.0s
K17K Iditarod **79.25 18** P **P** **01 49 15.7 +1.3**
baz=220,SNR=80
K17K S **S** **01 59 12.2 +1.6**
baz=220
HOM Homer **79.27 22** P **P** **01 49 15.2 +0.7**
baz=227
HOM S **S** **01 59 13.4 +2.6**
baz=227
CNPM China Poot **79.33 22** IAmb IAmb 01 49 17.1
comp=Z,245nm,1.1s
L18K Granite Mounta **79.37 19** IAmb IAmb 01 49 32.5
comp=Z,228nm,1.1s
L18K IAMs_20 IAMs_20 02 21 35.3
comp=Z,3µm,20.0s
L18K Granite Mounta **79.37 19** P **P** **01 49 16.3 +1.2**

baz=222,SNR=150
L18K S **S** **01 59 14.4 +2.6**
baz=222
F14K Arctic Creek **79.39 13** P **P** **01 49 15.6 +0.6**
baz=212
F14K S **S** **01 59 14.4 +2.6**
baz=212
I17K Unalakleet **79.48 16** IAmb IAmb 01 49 32.2
comp=Z,183nm,1.4s
I17K Unalakleet **79.48 16** P **P** **01 49 16.9 +1.3**
baz=218,SNR=28
I17K S **S** **01 59 15.9 +3.1**
baz=218
G15K Niukluk **79.52 14** P **P** **01 49 16.3 +0.5**
baz=215
G15K S **S** **01 59 14.1 +0.9**
baz=215
J17K VABM Dome **79.55 17** P **P** **01 49 17.2 +1.2**
baz=220,SNR=70
J17K S **S** **01 59 16.7 +3.1**
baz=220
QSPA South Pole Qui **79.61 180** P **P** **01 49 16.4 -0.1**
comp=Z,42nm,0.9s,baz=0.2,slow=2.6,SNR=70
QSPA LR LR 02 20 52.5
comp=Z,858nm,20.1s,baz=18,slow=33
comp=Z,42nm,0.9s
QSPA South Pole Qui **79.61 180** P **P** **01 49 16.2 -0.4**
QSPA IAmb IAmb 01 49 37.6
comp=Z,149nm,1.3s
QSPA South Pole Qui **79.61 180** P **P** **01 49 16.7 +0.1**
BRLK Bradley Lake **79.63 22** IAmb IAmb 01 49 18.4
comp=Z,147nm,1.1s
BRSE Bradley Lake S **79.67 22** P **P** **01 49 17.3 +0.6**
baz=228,SNR=13
BRSE S **S** **01 59 16.2 +1.2**
baz=228
H16K Elim **79.67 15** P **P** **01 49 17.4 +0.8**
baz=216,SNR=6.0
H16K S **S** **01 59 16.5 +1.6**
baz=216
L19K White Mountain **79.93 19** IAmb IAmb 01 49 20.7
comp=Z,107nm,0.8s
L19K IAMs_20 IAMs_20 02 19 45.0
comp=Z,3µm,21.0s
L19K White Mountain **79.93 19** P **P** **01 49 19.0 +0.9**
baz=224,SNR=136
L19K S **S** **01 59 20.2 +2.4**
baz=224
F15K North Star Dit **79.97 14** IAMs_20 IAMs_20 02 18 49.0
comp=Z,3µm,22.0s
F15K North Star Dit **79.97 14** P **P** **01 49 18.6 +0.3**
baz=214,SNR=7.6
F15K S **S** **01 59 19.1 +1.1**
baz=214
SPCR Spurr Chakacha **80.13 21** P **P** **01 49 18.7 -0.6**
baz=226,SNR=5.7
SPCR S **S** **01 59 19.3 -0.7**
baz=226
CAPN Captain Cook N **80.21 22** P **P** **01 49 20.9 +1.4**
baz=227,SNR=10
CAPN S **S** **01 59 22.8 +2.2**
baz=227
G16K Koyuk River **80.26 15** IAmb IAmb 01 49 36.7
comp=Z,164nm,1.4s
G16K Koyuk River **80.26 15** P **P** **01 49 20.6 +0.8**
baz=216,SNR=28
G16K S **S** **01 59 23.3 +2.3**
baz=216
M20K Styx River **80.29 20** IAmb IAmb 01 49 22.2
comp=Z,256nm,1.6s
M20K IAMs_20 IAMs_20 02 18 47.6
comp=Z,4µm,22.0s
M20K Styx River **80.29 20** P **P** **01 49 20.5 +0.4**
baz=225,SNR=46
M20K S **S** **01 59 22.2 +0.5**
baz=225
J18K Innoko River **80.30 18** IAMs_20 IAMs_20 02 20 04.8
comp=Z,3µm,21.0s
J18K Innoko River **80.30 18** P **P** **01 49 20.7 +0.6**
baz=222,SNR=102
J18K S **S** **01 59 22.4 +0.9**
baz=222
SLKM Skilak Lake **80.37 22** IAmb IAmb 01 49 22.2
comp=Z,166nm,1.1s
SEW Seward **80.39 23** IAmb IAmb 01 49 25.5
comp=Z,220nm,1.4s
SEW Seward **80.39 23** P **P** **01 49 21.0 +0.4**
baz=229,SNR=14
SEW S **S** **01 59 24.5 +1.9**
baz=229
H17K Granite Mounta **80.52 16** IAmb IAmb 01 49 37.3
comp=Z,158nm,1.4s
H17K Granite Mounta **80.52 16** P **P** **01 49 21.9 +0.7**
baz=219,SNR=31
H17K S **S** **01 59 26.0 +2.2**
baz=219
O22K Cooper Landing **80.54 22** P **P** **01 49 21.9 +0.5**
baz=229,SNR=6.2
O22K S **S** **01 59 26.4 +2.3**
baz=229
MOY Mondy **80.63 327** *e*P **P** **01 49 21.6 -0.6**
MOY pmax pmax
comp=Z,80nm,2.6s
G17K Kiwalik Mounta **80.77 15** P **P** **01 49 23.3 +0.8**
baz=218,SNR=26
G17K S **S** **01 59 28.8 +2.4**
baz=218
SKT Skwentna **80.90 21** IAMs_20 IAMs_20 02 20 18.7
comp=Z,3µm,20.0s
SKT Skwentna **80.90 21** P **P** **01 49 22.2 -1.1**
baz=227,SNR=16
SKT S **S** **01 59 26.6 -1.3**
baz=227
RC01 Rabbit Creek A **80.94 22** P **P** **01 49 23.6 0.0**
baz=229,SNR=12
RC01 S **S** **01 59 28.8 +0.5**
baz=229
J19K Poorman **81.02 18** IAmb IAmb 01 49 40.3
comp=Z,147nm,1.2s
J19K IAMs_20 IAMs_20 02 19 01.7
comp=Z,3µm,22.0s
J19K Poorman **81.02 18** P **P** **01 49 25.0 +1.1**
baz=223,SNR=107
J19K S **S** **01 59 30.8 +1.7**
baz=223
K20K Telida **81.03 19** IAmb IAmb 01 49 26.5
comp=Z,137nm,1.1s
K20K IAMs_20 IAMs_20 02 18 28.1
comp=Z,3µm,22.0s
K20K Telida **81.03 19** P **P** **01 49 25.2 +1.2**
baz=224,SNR=78
K20K S **S** **01 59 31.8 +2.6**
baz=224
H18K Honhosa River **81.11 16** P **P** **01 49 24.3 0.0**
baz=220,SNR=15
H18K S **S** **01 59 30.5 +0.6**
baz=220
P23K Montague Islan **81.11 23** P **P** **01 49 25.1 +0.6**
baz=231
BOK Bokaro **81.12 296** *e*P **P** **01 49 25.5 +0.1**
BOK IAmb IAmb 01 49 58.1
comp=Z,13nm,0.5s
Q23K Middleton Isla **81.17 24** P **P** **01 49 25.4 +0.7**
baz=232
MID Middleton Isla **81.18 24** IAMs_20 IAMs_20 02 18 06.0
comp=Z,3µm,21.0s
GCSA Galena City Sc **81.21 17** P **P** **01 49 25.6 +0.8**
baz=222,SNR=27
GCSA S **S** **01 59 31.4 +0.5**
baz=222
M22K Willow **81.24 21** IAMs_20 IAMs_20 02 18 33.8
comp=Z,2µm,22.0s
M22K Willow **81.24 21** P **P** **01 49 25.1 0.0**
baz=228,SNR=8.3
M22K S **S** **01 59 32.6 +1.3**
baz=228
PWL Port Wells **81.31 22** IAmb IAmb 01 49 43.9
comp=Z,158nm,1.1s
PWL Port Wells **81.31 22** P **P** **01 49 25.7 +0.2**
baz=230
PWL S **S** **01 59 33.7 +1.5**
baz=230
PPLA Purkeypile **81.31 20** IAmb IAmb 01 49 41.4
comp=Z,234nm,1.5s
PPLA IAMs_20 IAMs_20 02 19 32.5
comp=Z,4µm,21.0s
PPLA Purkeypile **81.31 20** P **P** **01 49 25.4 -0.3**
baz=226,SNR=29

PPLA S **S** **01 59 32.2 -0.3**
baz=226
F17K Baldwin Pennin **81.37 14** IAmb IAmb 01 49 42.5
comp=Z,168nm,1.4s
F17K Baldwin Pennin **81.37 14** P **P** **01 49 26.5 +0.9**
baz=217,SNR=12
F17K S **S** **01 59 34.4 +1.9**
baz=217
EVN Everest **81.45 300** P **P** **01 49 28.1 +0.2**
PMR Palmer **81.49 22** P **P** **01 49 26.3 -0.1**
PMR Palmer **81.49 22** P **P** **01 49 26.6 +0.2**
baz=229,SNR=27
PMR S **S** **01 59 34.1 +0.1**
baz=229
L22K Petersville **81.53 20** IAMs_20 IAMs_20 02 19 59.4
comp=Z,3µm,21.0s
L22K Petersville **81.53 20** P **P** **01 49 26.0 -0.7**
baz=228,SNR=42
L22K S **S** **01 59 33.5 -1.1**
baz=228
J20K Nowinta River **81.60 18** IAMs_20 IAMs_20 02 20 55.0
comp=Z,3µm,20.0s
J20K Nowinta River **81.60 18** P **P** **01 49 28.0 +1.1**
baz=224,SNR=130
J20K S **S** **01 59 36.9 +1.9**
baz=224
G18K Tagagawik **81.60 15** IAmb IAmb 01 49 43.3
comp=Z,119nm,1.4s
G18K Tagagawik **81.60 15** P **P** **01 49 27.3 +0.3**
baz=220,SNR=33
G18K S **S** **01 59 36.3 +1.3**
baz=220
KNK Knik Glacier **81.62 22** IAmb IAmb 01 49 44.0
comp=Z,267nm,1.6s
KNK Knik Glacier **81.62 22** P **P** **01 49 27.6 +0.5**
baz=230,SNR=8.1
KNK S **S** **01 59 36.9 +1.5**
baz=230
CUT Chulitna **81.63 21** IAMs_20 IAMs_20 02 20 50.9
comp=Z,3µm,21.0s
CUT Chulitna **81.63 21** P **P** **01 49 26.8 -0.3**
baz=228,SNR=15
GHO Glory Hole Cre **81.68 22** IAmb IAmb 01 49 43.4
comp=Z,88nm,0.9s
CAST Castle Rocks **81.71 19** IAMs_20 IAMs_20 02 19 34.0
comp=Z,4µm,22.0s
CAST Castle Rocks **81.71 19** P **P** **01 49 27.5 -0.1**
baz=226,SNR=144
CAST S **S** **01 59 35.4 -0.9**
baz=226
E17K Hotham Inlet **81.75 14** P **P** **01 49 28.6 +1.0**
baz=216,SNR=36
E17K S **S** **01 59 37.7 +1.2**
baz=216
GLI Glacier Island **81.79 23** IAMs_20 IAMs_20 02 21 08.4
comp=Z,3µm,20.0s
GLI Glacier Island **81.79 23** P **P** **01 49 28.2 +0.2**
baz=231,SNR=9.2
GLI S **S** **01 59 37.7 +0.5**
baz=231
F18K Selawik **81.89 15** P **P** **01 49 28.7 +0.3**
baz=219,SNR=21
F18K S **S** **01 59 39.3 +1.4**
baz=219
H19K Roundabout Mou **81.92 16** IAmb IAmb 01 49 45.4
comp=Z,225nm,1.4s
H19K Roundabout Mou **81.92 16** P **P** **01 49 29.3 +0.8**
baz=222,SNR=72
H19K S **S** **01 59 39.7 +1.5**
baz=222
SML Sawmill **81.92 22** IAmb IAmb 01 49 45.4
comp=Z,196nm,1.2s
SML Sawmill **81.92 22** P **P** **01 49 29.3 +0.5**
baz=230,SNR=22
SML S **S** **01 59 40.4 +1.8**
baz=230
I20K Naaghedeneel **81.94 18** IAMs_20 IAMs_20 02 19 19.3
comp=Z,3µm,22.0s
I20K Naaghedeneel **81.94 18** P **P** **01 49 29.9 +1.2**
baz=224,SNR=47
I20K S **S** **01 59 41.7 +3.2**
baz=224
CHUM Lake Minchumin **81.96 19** P **P** **01 49 29.4 +0.5**
baz=226,SNR=21
CHUM S **S** **01 59 38.7 0.0**
baz=226
C16K Lisburne Hills **81.97 12** IAMs_20 IAMs_20 02 18 54.8
comp=Z,3µm,22.0s
C16K Lisburne Hills **81.97 12** P **P** **01 49 28.8 +0.1**
baz=213
C16K S **S** **01 59 39.3 +0.7**
baz=213
D17K Noatak River **81.97 13** P **P** **01 49 29.4 +0.6**
baz=215,SNR=21
D17K S **S** **01 59 40.5 +1.8**
baz=215
KNGR Kungurtug, Tuv **82.05 325** *ce*P **P** **01 49 30.1 +0.3**
KNGR pmax pmax
comp=Z,57nm,1.7s
KNGR MLR MLR
comp=Z,1µm,19.0s
EYAK Cordova Ski Ar **82.10 23** P **P** **01 49 29.6 0.0**
EYAK Cordova Ski Ar **82.10 23** IAmb IAmb 01 49 33.5
comp=Z,161nm,1.4s
EYAK Cordova Ski Ar **82.10 23** P **P** **01 49 30.1 +0.5**
baz=232,SNR=8.0
EYAK S **S** **01 59 40.7 +0.4**
baz=232
M23K Glacier View **82.13 22** P **P** **01 49 30.2 +0.3**
baz=230,SNR=16
M23K S **S** **01 59 41.8 +1.1**
baz=230
RAGD RAYAGADA **82.17 291** *e*P **P** **01 49 31.2 +0.2**
RAGD IAmb IAmb 01 49 46.4
comp=Z,62nm,1.4s
PALK Pallekele **82.17 279** LR LR 02 30 59.6
comp=Z,419nm,19.5s,baz=104,slow=39
PALK Pallekele **82.17 279**‖ *e*P **P** **01 49 30.5 -0.7**
PALK pmax pmax
comp=Z,30nm,1.6s
PALK MLR MLR
comp=Z,1µm,23.0s
KTH Kantishna Hill **82.18 20** IAmb IAmb 01 49 45.5
comp=Z,149nm,1.1s
KTH IAMs_20 IAMs_20 02 19 59.5
comp=Z,4µm,22.0s
G19K Purcell Mounta **82.20 16** IAmb IAmb 01 49 47.0
comp=Z,255nm,1.4s
G19K IAMs_20 IAMs_20 02 21 31.1
comp=Z,2µm,22.0s
G19K Purcell Mounta **82.20 16** P **P** **01 49 30.9 +0.8**
baz=221,SNR=79
G19K S **S** **01 59 43.0 +1.7**
baz=221
KAIM Kayak Island **82.26 24** IAmb IAmb 01 49 34.3
comp=Z,170nm,1.0s
KAIM IAMs_20 IAMs_20 02 21 13.5
comp=Z,3µm,20.0s
KAIM Kayak Island **82.26 24** P **P** **01 49 31.4 +0.9**
baz=234
RDOG Red Dog Mine **82.30 13** IAmb IAmb 01 49 47.2
comp=Z,200nm,1.4s
RDOG IAMs_20 IAMs_20 02 19 40.5
comp=Z,2µm,22.0s
RDOG Red Dog Mine **82.30 13** P **P** **01 49 31.2 +0.6**
baz=215,SNR=14
RDOG S **S** **01 59 42.9 +0.8**
baz=215
SCM Sheep Creek Mo **82.30 22** P **P** **01 49 31.4 +0.6**
baz=231,SNR=21
SCM S **S** **01 59 44.3 +1.7**
baz=231
E18K Tukpahlearik C **82.31 14** IAmb IAmb 01 49 47.3
comp=Z,117nm,1.3s
E18K IAMs_20 IAMs_20 02 20 12.9
comp=Z,2µm,22.0s
E18K Tukpahlearik C **82.31 14** P **P** **01 49 31.2 +0.6**
baz=218,SNR=31
E18K S **S** **01 59 42.8 +0.6**
baz=218
TRF Thorofare Moun **82.32 20** P **P** **01 49 30.3 -0.7**
baz=228,SNR=42
TRF S **S** **01 59 42.1 -0.8**
baz=228
H20K Anotleneega Mo **82.33 17** P **P** **01 49 31.5 +0.7**
baz=223,SNR=74
H20K S **S** **01 59 44.3 +1.8**
baz=223

RAGM Ragged Mountai **82.43 24** IAmb IAmb 01 49 57.9
comp=Z,108nm,1.0s
DIV Divide **82.45 23** IAmb IAmb 01 49 35.4
comp=Z,209nm,1.5s
WAT1 Susitna Watana **82.50 21** P **P** **01 49 31.8 0.0**
baz=230
WAT1 S **S** **01 59 44.9 +0.4**
baz=230
F19K Shaleruckik Mo **82.55 15** IAmb IAmb 01 49 48.4
comp=Z,185nm,1.4s
F19K Shaleruckik Mo **82.55 15** P **P** **01 49 32.3 +0.4**
baz=220,SNR=40
F19K S **S** **01 59 45.5 +0.8**
baz=220
C17K DeLong Mountai **82.58 12** P **P** **01 49 32.5 +0.4**
baz=215,SNR=8.8
KLU Klutina **82.61 23** IAmb IAmb 01 49 36.5
comp=Z,140nm,1.2s
KLU IAMs_20 IAMs_20 02 22 34.0
comp=Z,2µm,20.0s
KLU Klutina **82.61 23** P **P** **01 49 32.9 +0.5**
baz=232,SNR=32
KLU S **S** **01 59 47.6 +1.9**
baz=232
WAT6 Susitna Watana **82.63 21** P **P** **01 49 32.9 +0.3**
baz=230,SNR=32
WAT6 S **S** **01 59 47.1 +1.1**
baz=230
RND Reindeer **82.78 20** IAMs_20 IAMs_20 02 21 48.2
comp=Z,3µm,20.0s
BMRM Bremner River **82.80 23** IAmb IAmb 01 49 37.9
comp=Z,204nm,1.4s
BMRM Bremner River **82.80 23** P **P** **01 49 33.9 +0.5**
baz=233,SNR=25
BERG Berg Lake **82.82 24** IAmb IAmb 01 49 35.8
comp=Z,142nm,1.0s
BERG IAMs_20 IAMs_20 02 21 10.8
comp=Z,3µm,20.0s
M24K Tolsona, Glenn **82.90 22** IAmb IAmb 01 49 36.5
comp=Z,141nm,0.8s
M24K IAMs_20 IAMs_20 02 20 08.5
comp=Z,3µm,22.0s
M24K Tolsona, Glenn **82.90 22** P **P** **01 49 35.0 +1.1**
baz=232,SNR=29
MCK McKinley **82.96 20** P **P** **01 49 33.8 -0.4**
baz=229,SNR=116
MCK S **S** **01 59 47.8 -1.3**
baz=229
I21K Tanana **82.97 18** IAmb IAmb 01 49 51.0
comp=Z,161nm,1.1s
I21K IAMs_20 IAMs_20 02 20 44.2
comp=Z,2µm,20.0s
I21K Tanana **82.97 18** P **P** **01 49 34.9 +0.8**
baz=226,SNR=88
I21K S **S** **01 59 50.5 +1.5**
baz=226
IMAR Indian Mountai **83.01 17** P **P** **01 49 34.6 +0.2**
H21K Melozitna Rive **83.05 17** IAmb IAmb 01 49 36.9
comp=Z,138nm,1.3s
H21K IAMs_20 IAMs_20 02 20 03.6
comp=Z,3µm,22.0s
H21K Melozitna Rive **83.05 17** P **P** **01 49 35.2 +0.7**
baz=225,SNR=82
H21K S **S** **01 59 51.1 +1.2**
baz=225
DHY Denali Highway **83.08 21** IAmb IAmb 01 49 36.6
comp=Z,120nm,1.5s
DHY Denali Highway **83.08 21** P **P** **01 49 35.2 +0.3**
baz=231,SNR=25
DHY S **S** **01 59 51.2 +0.6**
baz=231
C18K Utukok River **83.15 13** IAmb IAmb 01 49 51.4
comp=Z,156nm,1.2s
C18K IAMs_20 IAMs_20 02 21 01.3
comp=Z,2µm,21.0s
C18K Utukok River **83.15 13** P **P** **01 49 35.4 +0.4**
baz=217,SNR=16
E19K Redstone River **83.16 15** P **P** **01 49 35.9 +0.9**
baz=221,SNR=74
E19K S **S** **01 59 51.0 0.0**
baz=221
N25K Chitina, Valde **83.19 23** P **P** **01 49 36.2 +0.8**
baz=233,SNR=41
N25K S **S** **01 59 52.0 +0.4**
baz=233
F20K Avaraart Lake **83.25 16** IAMs_20 IAMs_20 02 22 02.7
comp=Z,2µm,21.0s
F20K Avaraart Lake **83.25 16** P **P** **01 49 36.3 +0.8**
baz=222,SNR=37
F20K S **S** **01 59 52.5 +0.8**
baz=222
MLY Manley **83.25 18** IAmb IAmb 01 49 37.3
comp=Z,205nm,1.4s
MLY IAMs_20 IAMs_20 02 25 12.6
comp=Z,2µm,20.0s
MLY Manley **83.25 18** P **P** **01 49 35.7 0.0**
baz=227,SNR=117
MLY S **S** **01 59 51.5 -0.5**
baz=227
CRQM Cirque **83.26 24** IAmb IAmb 01 49 44.1
comp=Z,96nm,0.9s
CRQM IAMs_20 IAMs_20 02 21 57.5
comp=Z,2µm,20.0s
CRQE Cirque **83.28 24** P **P** **01 49 36.5 +0.5**
baz=235,SNR=20
TGL Tana Glacier **83.38 24** IAMs_20 IAMs_20 02 21 19.3
comp=Z,2µm,21.0s
GLB Gilahina Butte **83.39 23** IAmb IAmb 01 49 40.2
comp=Z,239nm,1.6s
HARP HAARP **83.46 22** IAmb IAmb 01 49 54.4
comp=Z,167nm,1.2s
HARP IAMs_20 IAMs_20 02 20 15.2
comp=Z,3µm,22.0s
HARP HAARP **83.46 22** P **P** **01 49 37.6 +0.9**
baz=233,SNR=11
G21K Allakaket **83.46 17** IAmb IAmb 01 49 53.3
comp=Z,124nm,1.4s
G21K Allakaket **83.46 17** P **P** **01 49 37.1 +0.5**
baz=224,SNR=57
G21K S **SKSac** **01 59 55.0 +0.4**
baz=224
NEA2 Nenana **83.48 19** IAmb IAmb 01 49 52.4
comp=Z,183nm,1.2s
NEA2 IAMs_20 IAMs_20 02 21 12.0
comp=Z,3µm,21.0s
NEA2 Nenana **83.48 19** P **P** **01 49 36.3 -0.5**
baz=229,SNR=72
NEA2 S **S** **01 59 53.9 -0.4**
baz=229
H22K Ishtalitna Cre **83.64 18** IAmb IAmb 01 49 54.5
comp=Z,210nm,1.4s
H22K IAMs_20 IAMs_20 02 20 44.1
comp=Z,3µm,21.0s
H22K Ishtalitna Cre **83.64 18** P **P** **01 49 38.4 +0.8**
baz=227,SNR=172
MCARA McCarthy VSAT **83.67 24** IAmb IAmb 01 50 25.2
comp=Z,88nm,0.9s
MCARA IAMs_20 IAMs_20 02 20 10.9
comp=Z,4µm,22.0s
MCARA McCarthy VSAT **83.67 24** P **P** **01 49 38.5 +0.7**
baz=235,SNR=17
MAW Mawson **83.69 202** P **P** **01 49 38.2 +0.4**
comp=Z,11nm,1.1s
MAW Mawson **83.69 202** P **P** **01 49 37.4 -0.4**
comp=Z,27nm,0.9s,baz=97,slow=6.6,SNR=34
MAW LR LR 02 21 47.5
comp=Z,1µm,21.5s,baz=88,slow=32
comp=Z,27nm,0.9s
MAW Mawson **83.69 202** P **P** **01 49 38.4 +0.6**
MAW pmax pmax
comp=Z,21nm,1.4s
MAW Mawson **83.69 202** P **P** **01 49 38.4 +0.6**
MAW Mawson **83.69 202** P **P** **01 49 38.2 +0.4**
PAX Paxson **83.69 22** P **P** **01 49 38.0 +0.1**
baz=232,SNR=16
WRH Wood River Hil **83.73 20** IAmb IAmb 01 49 57.7
comp=Z,75nm,1.0s
D19K Kuna River **83.74 14** IAmb IAmb 01 49 54.5
comp=Z,107nm,1.2s
D19K IAMs_20 IAMs_20 02 20 24.7
comp=Z,2µm,22.0s
D19K Kuna River **83.74 14** P **P** **01 49 38.3 +0.3**
baz=220,SNR=23
I23K Minto, Yukon-K **83.76 19** IAMs_20 IAMs_20 02 22 33.2
comp=Z,3µm,21.0s
I23K Minto, Yukon-K **83.76 19** P **P** **01 49 38.0 -0.2**
baz=229,SNR=28
GRNC Granite Creek **83.81 24** IAmb IAmb 01 50 01.1
comp=Z,290nm,1.6s
GRNC IAMs_20 IAMs_20 02 21 41.5
comp=Z,2µm,21.0s
C19K Lookout Ridge **83.87 13** IAmb IAmb 01 49 55.6
comp=Z,194nm,1.2s
C19K IAMs_20 IAMs_20 02 25 28.2
comp=Z,2µm,20.0s
C19K Lookout Ridge **83.87 13** P **P** **01 49 39.6 +0.9**
baz=218,SNR=17
F21K Alatna River **83.97 16** IAmb IAmb 01 49 55.0
comp=Z,188nm,1.8s
F21K Alatna River **83.97 16** P **P** **01 49 39.6 +0.4**
baz=224
E20K Nigu River **84.03 15** P **P** **01 49 40.2 +0.6**
baz=222,SNR=66
BARN Barnard Glacie **84.03 24** IAMs_20 IAMs_20 02 21 50.3
comp=Z,2µm,20.0s
COLA College **84.07 19** P **P** **01 49 39.2 -0.5**
COLA College **84.07 19***d* P **P** **01 49 38.9 -0.8**
COLA pmax pmax
comp=Z,97nm,1.1s
COLA College **84.07 19** P **P** **01 49 38.9 -0.8**
COLA IAmb IAmb 01 49 59.7
comp=Z,81nm,0.9s
COLA College **84.07 19** P **P** **01 49 39.4 -0.2**
baz=230
COLA College **84.07 19** P **P** **01 49 39.2 -0.5**
COLA College **84.07 19** P **P** **01 49 39.5 -0.2**
COLA pP **pP** **01 49 53.1 -1.2**
COLA sP **sP** **01 49 58.7 -1.2**
HDA Harding Lake **84.07 20** IAmb IAmb 01 49 55.8
comp=Z,180nm,1.2s
HDA IAMs_20 IAMs_20 02 22 50.4
comp=Z,2µm,21.0s
HDA Harding Lake **84.07 20** P **P** **01 49 39.7 -0.1**
baz=231,SNR=87
PINM Pinnacle **84.08 25** P **P** **01 49 40.9 +0.9**
baz=237,SNR=15
K24K Donnelly Dome **84.09 21** IAmb IAmb 01 49 56.9
comp=Z,76nm,1.0s
K24K Donnelly Dome **84.09 21** P **P** **01 49 40.5 +0.6**
baz=232,SNR=22
H23K Yukon River **84.15 18** IAmb IAmb 01 49 56.9
comp=Z,125nm,1.2s
H23K IAMs_20 IAMs_20 02 20 48.6
comp=Z,3µm,22.0s
H23K Yukon River **84.15 18** P **P** **01 49 40.9 +0.7**
baz=228
LOGN Logan Glacier **84.16 25** IAMs_20 IAMs_20 02 21 21.9
comp=Z,2µm,20.0s
D20K Etivluk River **84.26 14** IAmb IAmb 01 49 57.4
comp=Z,213nm,1.5s
D20K IAMs_20 IAMs_20 02 20 28.6
comp=Z,2µm,22.0s
D20K Etivluk River **84.26 14** P **P** **01 49 41.2 +0.5**
baz=221,SNR=31
M26K Nabesna, AK **84.27 23** IAmb IAmb 01 49 57.1
comp=Z,110nm,1.3s
M26K IAMs_20 IAMs_20 02 20 44.7
comp=Z,3µm,22.0s
M26K Nabesna, AK **84.27 23** P **P** **01 49 41.6 +0.7**
baz=235,SNR=22
MENT Mentasta **84.31 22** P **P** **01 49 41.5 +0.4**
IL31 **84.32 20** IAmb IAmb 01 49 56.6
comp=Z,115nm,1.2s
ILAR Eielson Array **84.32 20** P **P** **01 49 40.3 -0.7**
comp=Z,22nm,0.6s,baz=244,slow=5.3,SNR=137
ILAR LR LR 02 21 56.9
comp=Z,4µm,21.4s,baz=206,slow=32
comp=Z,22nm,0.6s
ILAR Eielson Array **84.32 20** P **P** **01 49 40.7 -0.3**
ILAR Eielson Array **84.32 20** P **P** **01 49 40.7 -0.3**
POKR Poker Plat Res **84.36 19** P **P** **01 49 40.6 -0.6**
baz=230
RIDG Independent Ri **84.38 21** IAmb IAmb 01 49 58.1
comp=Z,113nm,1.2s
RIDG Independent Ri **84.38 21** P **P** **01 49 41.9 +0.5**
baz=233,SNR=45
A19K Wainwright **84.43 12** P **P** **01 49 41.9 +0.5**
baz=217
O28M Mount Upton **84.47 25** IAmb IAmb 01 49 44.7
comp=Z,181nm,1.1s
O28M IAMs_20 IAMs_20 02 21 11.2
comp=Z,2µm,21.0s
O28M Mount Upton **84.47 25** P **P** **01 49 43.0 +0.8**
baz=237,SNR=48
DIB Dawson Inlet, **84.50 34** IAmb IAmb 01 49 47.4
comp=Z,128nm,1.3s
H02S1 DAWSON INLET T **84.50 34** T T 03 23 00.2
SNR=366
H02S2 DAWSON INLET T **84.50 34** T T 03 23 00.2
SNR=375
L26K Log Cabin Wild **84.50 22** IAmb IAmb 01 50 00.4
comp=Z,104nm,1.4s
L26K IAMs_20 IAMs_20 02 21 10.8
comp=Z,2µm,22.0s
L26K Log Cabin Wild **84.50 22** P **P** **01 49 42.8 +0.8**
baz=234
F22K John River **84.53 16** P **P** **01 49 42.7 +0.6**
baz=226
G23K Bananza Creek **84.60 17** IAmb IAmb 01 49 59.5
comp=Z,89nm,1.3s
G23K IAMs_20 IAMs_20 02 24 09.6
comp=Z,2µm,20.0s
G23K Bananza Creek **84.60 17** P **P** **01 49 43.3 +0.9**
baz=228,SNR=43
TIXI Tiksi **84.67 350** LR LR 02 26 30.0
comp=Z,1µm,21.1s,baz=166,slow=35
TIXI Tiksi **84.67 350** *de*P **P** **01 49 41.8 -0.8**
TIXI pmax pmax
comp=Z,55nm,1.7s
TIXI Tiksi **84.67 350** P **P** **01 49 41.0 -1.6**
M27K Edge Creek, AK **84.67 23** P **P** **01 49 44.2 +1.2**
baz=236,SNR=114
H24K Noodor Dome **84.68 19** IAMs_20 IAMs_20 02 26 06.5
comp=Z,2µm,20.0s
H24K Noodor Dome **84.68 19** P **P** **01 49 42.4 -0.5**
baz=230,SNR=14
H24K S **S** **02 00 08.6 +2.3**
baz=230
E21K Killik River **84.72 15** IAmb IAmb 01 49 58.9
comp=Z,268nm,1.9s
E21K IAMs_20 IAMs_20 02 23 42.8
comp=Z,2µm,20.0s
E21K Killik River **84.72 15** P **P** **01 49 43.6 +0.5**
baz=224
J25K Salcha River, **84.73 20** IAmb IAmb 01 49 45.0
comp=Z,65nm,0.9s
J25K IAMs_20 IAMs_20 02 24 43.9
comp=Z,3µm,20.0s
J25K Salcha River, **84.73 20** P **P** **01 49 43.4 +0.2**
baz=232,SNR=80
RPN Rapa Nui **84.74 116** LR LR 02 19 28.0
comp=Z,979nm,21.9s,baz=270,slow=30
MOBC Moresby Island **84.75 34** IAmb IAmb 01 49 45.9
comp=Z,111nm,1.2s
SIT Sitka **84.77 29** P **P** **01 49 43.8 +0.3**
baz=242
SIT S **S** **02 00 11.3 +3.9**
baz=242
S31K Pelican **84.77 28** IAMs_20 IAMs_20 02 18 44.1
comp=Z,3µm,22.0s
S31K Pelican **84.77 28** P **P** **01 49 44.2 +0.8**
baz=241,SNR=8.3
SCRK Sand Creek **84.83 21** IAmb IAmb 01 49 45.9
comp=Z,62nm,0.9s
SCRK Sand Creek **84.83 21** P **P** **01 49 44.3 +0.5**
baz=234,SNR=77
SCRK S **S** **02 00 09.8 +1.7**
baz=234
COLD Coldfoot **84.90 17** IAMs_20 IAMs_20 02 21 56.3
comp=Z,3µm,22.0s
COLD Coldfoot **84.90 17** P **P** **01 49 44.9 +1.0**
baz=228,SNR=22
COLD S **S** **02 00 12.1 +3.7**
baz=228
O29M Mount Kennedy **84.90 26** IAmb IAmb 01 49 46.7
comp=Z,190nm,1.8s
O29M Mount Kennedy **84.90 26** P **P** **01 49 45.2 +1.0**
baz=239,SNR=8.8
O29M S **S** **02 00 12.3 +3.4**
baz=239
YUK3 Moose Creek **84.91 24** P **P** **01 49 45.4 +1.0**
baz=237,SNR=42
P29M Windy Craggy **84.92 26** IAmb IAmb 01 50 01.4
comp=Z,217nm,1.8s
P29M Windy Craggy **84.92 26** P **P** **01 49 45.2 +1.0**
baz=240,SNR=10

P29M S **S** **02 00 13.1 +4.2**
baz=240
YUK8 **Steele Glacier** **84.92 25** P **P** **01 49 45.6 +1.1**
baz=238,SNR=95
YUK8 S **S** **02 00 13.1 +3.8**
baz=238
C21K **Knifeblade Rid** **85.04 14** P **P** **01 49 45.6 +1.0**
baz=223,SNR=31
E22K **Anaktuvuk Pass** **85.07 16** P **P** **01 49 45.4 +0.5**
baz=226
E22K S **S** **02 00 13.2 +3.1**
baz=226
L27K **Beaver Creek,** **85.09 22** IAMs_20 IAMs_20 02 22 13.5
comp=Z,3µm,20.0s
L27K **Beaver Creek,** **85.09 22** P **P** **01 49 46.0 +1.0**
baz=236,SNR=91
L27K S **S** **02 00 13.2 +2.8**
baz=236
BVCY **Beaver Creek** **85.10 23** P **P** **01 49 46.2 +1.2**
baz=237,SNR=33
BCAR **Beaver Creek A** **85.11 23** P **P** **01 49 46.3 +1.2**
B20K **Meade River** **85.12 13** IAmb IAmb 01 50 01.5
comp=Z,65nm,1.1s
B20K IAMs_20 IAMs_20 02 21 46.2
comp=Z,2µm,22.0s
B20K **Meade River** **85.12 13** P **P** **01 49 45.5 +0.6**
baz=221,SNR=10
CRAG **Craig** **85.14 31** P **P** **01 49 45.4 +0.1**
baz=244
R31K **City Hall, Gus** **85.22 28** P **P** **01 49 46.3 +0.7**
baz=242
PRP **Porcupine Dome** **85.23 20** P **P** **01 49 45.8 0.0**
baz=232,SNR=8.1
BRWY **Burwash Landin** **85.27 25** P **P** **01 49 47.4 +1.5**
baz=238,SNR=38
BRWY S **S** **02 00 15.8 +3.5**
baz=238
YUK6 **Outpost Mounta** **85.32 25** P **P** **01 49 47.5 +1.0**
baz=239,SNR=31
YUK6 S **S** **02 00 16.5 +3.3**
baz=239
KCPM **Cahto Peak** **85.32 48** IAmb IAmb 01 50 03.6
comp=Z,142nm,1.3s
KCPM IAMs_20 IAMs_20 02 19 13.3
comp=Z,3µm,22.0s
S32K **Killisnoo** **85.32 29** IAMs_20 IAMs_20 02 25 32.7
comp=Z,2µm,19.0s
S32K **Killisnoo** **85.32 29** P **P** **01 49 46.7 +0.6**
baz=242
S32K S **S** **02 00 17.4 +4.6**
baz=242
G24K **Hadweenzic Riv** **85.36 18** IAmb IAmb 01 50 03.1
comp=Z,134nm,1.2s
G24K IAMs_20 IAMs_20 02 21 35.6
comp=Z,3µm,22.0s
G24K **Hadweenzic Riv** **85.36 18** P **P** **01 49 46.9 +0.6**
baz=230,SNR=55
MCCM **Marconi Confer** **85.39 50** IAMs_20 IAMs_20 02 19 05.2
comp=Z,2µm,21.0s
YUK4 **Talbot Arm** **85.41 25** P **P** **01 49 48.6 +1.7**
baz=239,SNR=52
YUK4 S **S** **02 00 16.0 +1.9**
baz=239
B21K **Ikpikpuk River** **85.42 14** IAmb IAmb 01 50 03.3
comp=Z,84nm,1.1s
B21K IAMs_20 IAMs_20 02 22 04.2
comp=Z,3µm,22.0s
B21K **Ikpikpuk River** **85.42 14** P **P** **01 49 47.3 +0.9**
baz=223,SNR=14
U33K **Whale Pass** **85.43 31** IAMs_20 IAMs_20 02 20 14.5
comp=Z,3µm,20.0s
U33K **Whale Pass** **85.43 31** P **P** **01 49 47.6 +0.9**
baz=244,SNR=5.2
U33K S **S** **02 00 17.9 +4.0**
baz=244
PLBC **Pleasant Camp** **85.44 27** P **P** **01 49 47.1 +0.4**
baz=241,SNR=19
PLBC S **S** **02 00 17.1 +3.2**
baz=241
HOPS **Hopland Field** **85.49 49** IAmb IAmb 01 49 50.2
comp=Z,179nm,1.5s
HOPS IAMs_20 IAMs_20 02 19 18.9
comp=Z,2µm,21.0s
P30M **Million Dollar** **85.50 26** P **P** **01 49 47.8 +0.6**
baz=240
P30M S **S** **02 00 17.3 +2.6**
baz=240
KHMM **Horse Mountain** **85.57 47** IAmb IAmb 01 49 51.1
comp=Z,84nm,1.2s
WMQ **Urumqi** **85.59 316** *e*P **P** **01 49 48.0 0.0**
WMQ pP pP 01 50 00.8 -1.3
WMQ sP sP 01 50 07.8 +0.3
WMQ SKS **SKSac** **02 00 06.8 -2.6**
WMQ pmax pmax
comp=Z,24nm,1.9s
WMQ pmax pmax
comp=Z,370nm,4.1s
WMQ L L
comp=Z,730nm,20.1s
WMQ L L
comp=Z,920nm,24.7s
WMQ L L
comp=Z,1µm,24.0s
WMQ **Urumqi** **85.59 316** P **P** **01 49 47.5 -0.5**
WMQ x x 01 50 07.8
HYT **Haines Junctio** **85.62 25** P **P** **01 49 48.5 +0.7**
baz=240,SNR=21
HYT S **S** **02 00 18.9 +2.9**
baz=240
E23K **Chandalar** **85.62 17** P **P** **01 49 48.5 +0.9**
baz=228,SNR=41
E23K S **S** **02 00 17.0 +1.3**
baz=228
GDXM **Geysers** **85.65 49** IAmb IAmb 01 49 51.2
comp=Z,70nm,1.2s
JRSC **Jasper Ridge** **85.67 51** IAmb IAmb 01 49 54.2
comp=Z,84nm,1.2s
BESE **Bessie Mountai** **85.71 28** IAmb IAmb 01 50 04.4
comp=Z,144nm,1.8s
BESE IAMs_20 IAMs_20 02 19 45.8
comp=Z,3µm,22.0s
R32K **Eaglecrest** **85.72 28** IAMs_20 IAMs_20 02 19 35.2
comp=Z,3µm,21.0s
R32K **Eaglecrest** **85.72 28** P **P** **01 49 48.4 +0.2**
baz=242
F24K **Squaw Lake** **85.77 17** IAMs_20 IAMs_20 02 21 39.3
comp=Z,2µm,22.0s
F24K **Squaw Lake** **85.77 17** P **P** **01 49 49.6 +1.3**
baz=230,SNR=37
F24K S **S** **02 00 19.2 +2.3**
baz=230
CVS **Carmenet Viney** **85.77 50** IAmb IAmb 01 49 51.1
comp=Z,110nm,1.4s
CVS IAMs_20 IAMs_20 02 19 16.1
comp=Z,2µm,21.0s
JIS **Juneau Island** **85.78 29** P **P** **01 49 48.9 +0.5**
FORD **Fort Ord Natur** **85.82 52** IAMs_20 IAMs_20 02 19 12.5
comp=Z,2µm,21.0s
T33K **Petersburg** **85.82 30** P **P** **01 49 48.8 +0.1**
baz=244
G25K **Bearman Lake** **85.83 18** P **P** **01 49 49.3 +0.8**
baz=232,SNR=39
G25K S **S** **02 00 20.1 +2.7**
baz=232
V35K **Ketchikan** **85.86 32** P **P** **01 49 48.8 -0.1**
baz=245
V35K S **S** **02 00 22.3 +4.1**
baz=245
KHBM **Hayfork Bally** **85.88 48** IAmb IAmb 01 50 06.3
comp=Z,121nm,1.6s
KHBM IAMs_20 IAMs_20 02 19 30.0
comp=Z,2µm,22.0s
KOD **Kodaikanal** **85.89 281** *e*P **P** **01 49 51.4 +1.0**
KOD IAmb IAmb 01 50 04.6
comp=Z,32nm,1.1s
SKAG **Skagway** **85.90 27** P **P** **01 49 50.4 +1.4**
SKAG **Skagway** **85.90 27** P **P** **01 49 49.4 +0.4**
baz=242
SKAG S **S** **02 00 21.1 +2.7**
baz=242
I26K **Coal Creek Min** **85.90 20** P **P** **01 49 49.8 +0.9**
baz=234
I26K S **S** **02 00 19.9 +1.6**
baz=234
WRAK **Wrangell Islan** **85.95 31** IAMs_20 IAMs_20 02 20 29.4
comp=Z,3µm,20.0s
WRAK **Wrangell Islan** **85.95 31** P **P** **01 49 49.3 0.0**
baz=244
WRAK S **S** **02 00 23.4 +4.3**
baz=244
D23K **Nanushuk River** **85.95 16** IAMs_20 IAMs_20 02 26 27.2
comp=Z,2µm,20.0s
D23K **Nanushuk River** **85.95 16** P **P** **01 49 50.4 +1.3**
baz=227,SNR=33
D23K S **S** **02 00 21.9 +3.3**
baz=227
E24K **Your Creek** **85.95 17** IAMs_20 IAMs_20 02 25 05.3
comp=Z,2µm,20.0s
E24K **Your Creek** **85.95 17** P **P** **01 49 49.9 +0.6**
baz=229,SNR=17
E24K S **S** **02 00 20.6 +1.8**
baz=229
FYU **Fort Yukon** **85.97 19** IAmb IAmb 01 50 06.3
comp=Z,87nm,1.4s
TOLK **Toolik Lake Re** **86.03 16** P **P** **01 49 50.3 +0.8**
baz=228,SNR=17
TOLK S **S** **02 00 22.3 +2.8**
baz=228
O02D **Mt. Diablo Mer** **86.05 48** IAmb IAmb 01 49 53.4
comp=Z,70nm,1.1s
O02D IAMs_20 IAMs_20 02 19 24.6
comp=Z,3µm,22.0s
HULI **Fort Hunter Li** **86.06 52** IAMs_20 IAMs_20 02 19 08.9
comp=Z,3µm,22.0s
M29M **Somme Creek** **86.06 24** IAMs_20 IAMs_20 02 23 16.1
comp=Z,3µm,21.0s
M29M **Somme Creek** **86.06 24** P **P** **01 49 50.8 +0.9**
baz=239,SNR=59
M29M S **S** **02 00 22.7 +2.5**
baz=239
L02F **Cave Junction** **86.06 46** IAmb IAmb 01 49 53.2
comp=Z,79nm,1.6s
SAO **San Andreas Ge** **86.09 52** IAmb IAmb 01 49 53.2
comp=Z,108nm,1.4s
SAO IAMs_20 IAMs_20 02 19 08.9
comp=Z,2µm,22.0s
MHC **Mount Hamilton** **86.10 51** IAmb IAmb 01 49 53.4
comp=Z,151nm,1.4s
N30M **Aishikik Lake** **86.11 25** IAMs_20 IAMs_20 02 21 32.7
comp=Z,3µm,21.0s
N30M **Aishikik Lake** **86.11 25** P **P** **01 49 51.0 +0.9**
baz=240,SNR=18
N30M S **S** **02 00 23.4 +2.7**
baz=240
J01E **Myrtle Point** **86.13 45** IAmb IAmb 01 49 53.3
comp=Z,98nm,1.1s
K02D **Willamette Mer** **86.17 46** IAmb IAmb 01 49 53.6
comp=Z,54nm,1.0s
O30N **Mendenhall** **86.20 26** P **P** **01 49 50.8 +0.2**
baz=241,SNR=17
O30N S **S** **02 00 24.0 +2.6**
baz=241
B22K **Teshekpuk Lake** **86.23 14** IAMs_20 IAMs_20 02 22 41.4
comp=Z,3µm,22.0s
B22K **Teshekpuk Lake** **86.23 14** P **P** **01 49 51.0 +0.7**
baz=224
B22K S **S** **02 00 24.4 +3.2**
baz=224
A21K **Barrow** **86.23 12** P **P** **01 49 50.9 +0.5**
baz=221
HYB **Hyderabad** **86.30 288** *e*P **P** **01 49 52.5 +0.5**
A22K **Sinclair Lake** **86.35 13** P **P** **01 49 51.8 +0.8**
baz=223
M02C **Callahan** **86.36 47** IAmb IAmb 01 49 54.9
comp=Z,67nm,1.1s
F25K **Christian Rive** **86.48 18** IAmb IAmb 01 49 54.8
comp=Z,71nm,1.4s
F25K IAMs_20 IAMs_20 02 25 07.2
comp=Z,2µm,21.0s
F25K **Christian Rive** **86.48 18** P **P** **01 49 53.1 +1.2**
baz=232,SNR=20
F25K S **S** **02 00 27.1 +3.1**
baz=232
BBB **Bella Bella** **86.53 36** LR LR 02 20 54.8
comp=Z,2µm,21.4s,baz=256,slow=30
L29M **L29M** **86.53 23** IAMs_20 IAMs_20 02 21 29.7
comp=Z,3µm,22.0s
L29M **L29M** **86.53 23** P **P** **01 49 53.2 +1.0**
baz=239,SNR=164
L29M S **S** **02 00 27.7 +3.1**
baz=239
DAWY **Dawson** **86.55 22** P **P** **01 49 53.3 +1.1**
baz=238,SNR=120
DAWY S **S** **02 00 27.0 +2.2**
baz=238
C23K **Itkillik River** **86.56 15** IAMs_20 IAMs_20 02 24 33.3
comp=Z,2µm,21.0s
C23K **Itkillik River** **86.56 15** P **P** **01 49 53.2 +1.1**
baz=227,SNR=11
C23K S **S** **02 00 27.7 +3.1**
baz=227
YBH **Yreka Blue Hor** **86.56 47** LR LR 02 20 58.8
comp=Z,1µm,21.9s,baz=262,slow=30
YBH **Yreka Blue Hor** **86.56 47** IAmb IAmb 01 49 55.7
comp=Z,58nm,1.1s
D24K **Happy Valley** **86.57 16** IAMs_20 IAMs_20 02 26 36.6
comp=Z,2µm,20.0s
D24K **Happy Valley** **86.57 16** P **P** **01 49 53.1 +0.9**
baz=229
D24K S **S** **02 00 26.8 +2.2**
baz=229
PKD **Bear Valley Ra** **86.58 53** IAmb IAmb 01 49 55.7
comp=Z,155nm,1.3s
I27K **Kandik River** **86.60 20** P **P** **01 49 53.3 +0.8**
baz=236,SNR=103
I27K S **S** **02 00 27.1 +1.8**
baz=236
G26K **Porcupine Rive** **86.67 19** P **P** **01 49 54.1 +1.5**
baz=234,SNR=84
G26K S **S** **02 00 28.1 +2.5**
baz=234
WHY **Whitehorse** **86.67 26** IAmb IAmb 01 50 15.2
comp=Z,106nm,1.5s
WHY **Whitehorse** **86.67 26** P **P** **01 49 53.1 +0.2**
baz=242,SNR=5.9
WHY S **S** **02 00 28.5 +2.3**
baz=242
N31M **Braeburn, Yuko** **86.68 25** IAmb IAmb 01 50 15.4
comp=Z,80nm,1.1s
N31M **Braeburn, Yuko** **86.68 25** P **P** **01 49 53.5 +0.6**
baz=241,SNR=15
N31M S **S** **02 00 29.3 +3.2**
baz=241
P32M **Atlin** **86.69 27** P **P** **01 49 53.0 0.0**
baz=243,SNR=7.1
P32M S **S** **02 00 29.4 +3.0**
baz=243
I03D **Drain, OR** **86.70 45** IAmb IAmb 01 49 55.9
comp=Z,55nm,1.0s
M30M **Minto, Yukon** **86.79 24** IAmb IAmb 01 49 55.9
comp=Z,50nm,0.7s
M30M IAMs_20 IAMs_20 02 23 18.6
comp=Z,3µm,20.0s
M30M **Minto, Yukon** **86.79 24** P **P** **01 49 54.3 +0.8**
baz=240,SNR=77
M30M S **S** **02 00 30.0 +2.8**
baz=240
O03E **Paynes Creek** **86.81 48** IAmb IAmb 01 49 56.3
comp=Z,134nm,1.2s
ORV **Oroville** **86.82 49** IAmb IAmb 01 49 56.3
comp=Z,77nm,1.4s
E25K **Arctic Village** **86.83 17** IAmb IAmb 01 50 10.1
comp=Z,207nm,1.9s
E25K IAMs_20 IAMs_20 02 23 48.4
comp=Z,3µm,21.0s
E25K **Arctic Village** **86.83 17** P **P** **01 49 54.6 +1.2**
baz=232,SNR=20
E25K S **S** **02 00 29.8 +2.5**
baz=232
M03C **McCloud** **86.85 47** IAmb IAmb 01 49 56.8
comp=Z,122nm,1.0s
H27K **Steamboat Moun** **86.98 20** IAMs_20 IAMs_20 02 25 34.6
comp=Z,3µm,20.0s
H27K **Steamboat Moun** **86.98 20** P **P** **01 49 55.5 +1.2**
baz=236,SNR=98
H27K S **S** **02 00 31.7 +2.8**
baz=236
L04D **Klamath Falls** **86.99 46** IAmb IAmb 01 49 57.4
comp=Z,81nm,1.1s
COR **Corvallis** **87.00 44** IAMs_20 IAMs_20 02 20 20.4
comp=Z,2µm,22.0s
F26K **Sheenjek River** **87.00 18** IAmb IAmb 01 50 11.3
comp=Z,119nm,1.6s
F26K IAMs_20 IAMs_20 02 22 16.9
comp=Z,3µm,22.0s
F26K **Sheenjek River** **87.00 18** P **P** **01 49 55.9 +1.5**
baz=233,SNR=20
F26K S **S** **02 00 31.1 +2.1**
baz=233
AFDM **Forest Hills D** **87.05 50** IAmb IAmb 01 49 57.5
comp=Z,100nm,1.4s
Q32M **Nakina River** **87.08 28** IAMs_20 IAMs_20 02 20 17.3
comp=Z,3µm,22.0s
Q32M **Nakina River** **87.08 28** P **P** **01 49 55.2 +0.1**
baz=244,SNR=9.3
Q32M S **S** **02 00 33.4 +3.0**
baz=244
BUCK **Buck Mountain** **87.10 44** IAmb IAmb 01 50 00.0
comp=Z,172nm,1.4s
I28M **Miner Creek** **87.10 21** P **P** **01 49 55.6 +0.6**
baz=237,SNR=71
I28M S **S** **02 00 32.0 +1.8**
baz=237
K29M **Barlow Dome** **87.14 23** P **P** **01 49 56.1 +0.9**
baz=240,SNR=110
K29M S **S** **02 00 33.0 +2.3**
baz=240
S34M **Telegraph Cree** **87.18 30** IAMs_20 IAMs_20 02 25 36.0
comp=Z,2µm,19.0s
S34M **Telegraph Cree** **87.18 30** P **P** **01 49 55.6 +0.2**
baz=246,SNR=10
S34M S **S** **02 00 35.5 +4.5**
baz=246
J29N **Klondike Camp** **87.19 22** P **P** **01 49 56.9 +1.5**
baz=239,SNR=14
J29N S **S** **02 00 34.4 +3.4**
baz=239
G03D **McMinnville, O** **87.21 43** IAmb IAmb 01 49 58.5
comp=Z,103nm,1.1s
T35M **Bob Quinn** **87.23 31** IAMs_20 IAMs_20 02 25 46.4
comp=Z,3µm,19.0s
T35M **Bob Quinn** **87.23 31** P **P** **01 49 55.6 0.0**
baz=246
T35M S **S** **02 00 35.1 +3.5**
baz=246
F03A **Seaside** **87.23 42** IAmb IAmb 01 49 58.6
comp=Z,144nm,1.3s
CMB **Columbia Colle** **87.25 51** IAmb IAmb 01 50 12.5
comp=Z,112nm,1.8s
G27K **Doyon Strip** **87.27 19** IAMs_20 IAMs_20 02 22 44.1
comp=Z,2µm,21.0s
G27K **Doyon Strip** **87.27 19** P **P** **01 49 56.9 +1.2**
baz=236,SNR=54
G27K S **S** **02 00 35.3 +3.7**
baz=236
D25K **Kavik River** **87.35 16** P **P** **01 49 56.6 +0.6**
baz=231,SNR=13
D25K S **S** **02 00 34.1 +1.8**
baz=231
H04D **Lebanon** **87.36 44** IAmb IAmb 01 49 59.3
comp=Z,100nm,1.2s
P33M **Teslin, Yukon** **87.38 27** P **P** **01 49 55.9 -0.4**
baz=244
P33M S **S** **02 00 36.3 +3.3**
baz=244
CBB **Campbell River** **87.40 38** IAmb IAmb 01 49 59.5
comp=Z,83nm,1.6s
J04A **Umpqua Nationa** **87.42 45** IAmb IAmb 01 49 59.7
comp=Z,94nm,0.9s
NLWA **Neilton Lookou** **87.48 41** IAmb IAmb 01 50 13.8
comp=Z,165nm,1.9s
NLWA IAMs_20 IAMs_20 02 21 23.2
comp=Z,3µm,21.0s
K04D **Chiloquin, OR** **87.50 46** IAmb IAmb 01 50 12.8
comp=Z,57nm,0.6s
M31M **Drury Creek, Y** **87.59 25** P **P** **01 49 57.1 -0.2**
baz=242,SNR=7.3
M31M S **S** **02 00 36.9 +2.0**
baz=242
DGZ **Jazzator, Alta** **87.67 321** *de*P **P** **01 49 56.9 -1.2**
DGZ pmax pmax
comp=Z,22nm,1.7s
DGZ MLR MLR
comp=Z,2µm,20.0s
N32M **Quiet Lake** **87.67 26** P **P** **01 49 57.8 +0.1**
baz=244
N32M S **S** **02 00 38.9 +3.1**
baz=244
G04A **Mulino** **87.74 43** IAmb IAmb 01 50 00.8
comp=Z,90nm,1.2s
BEKR **Beckworth** **87.75 49** IAmb IAmb 01 50 01.2
comp=Z,131nm,1.6s
H04A **Detroit Lake** **87.79 44** IAmb IAmb 01 50 00.7
comp=Z,66nm,1.2s
WIFE **Three Sisters-** **87.86 45** IAmb IAmb 01 50 01.8
comp=Z,77nm,1.2s
R33M **Jennings River** **87.87 28** IAMs_20 IAMs_20 02 21 16.2
comp=Z,2µm,21.0s
R33M **Jennings River** **87.87 28** P **P** **01 49 58.8 -0.1**
baz=246,SNR=22
R33M S **S** **02 00 41.5 +3.7**
baz=246
DLBC **Dease Lake** **87.93 29** P **P** **01 49 58.7 -0.3**
baz=246,SNR=17
DLBC S **S** **02 00 42.5 +4.2**
baz=246
J30M **Hart River** **87.96 22** IAmb IAmb 01 50 16.5
comp=Z,187nm,1.6s
J30M **Hart River** **87.96 22** P **P** **01 49 59.9 +0.7**
baz=241,SNR=44
J30M S **S** **02 00 41.3 +2.8**
baz=241
J05D **Fort Rock, OR** **88.05 45** IAmb IAmb 01 50 02.9
comp=Z,77nm,1.0s
H29M **Whitestone** **88.06 21** IAmb IAmb 01 50 15.6
comp=Z,157nm,1.6s
H29M **Whitestone** **88.06 21** P **P** **01 50 00.1 +0.7**
baz=239,SNR=23
H29M S **S** **02 00 41.7 +2.6**
baz=239
E27K **Coleen River** **88.07 18** IAmb IAmb 01 50 17.2
comp=Z,112nm,1.2s
E27K **Coleen River** **88.07 18** P **P** **01 50 00.7 +1.3**
baz=236,SNR=52
E27K S **S** **02 00 42.1 +2.9**
baz=236
C26K **Camden Bay** **88.12 16** P **P** **01 50 00.9 +1.3**
baz=232
C26K S **S** **02 00 41.2 +1.7**
baz=232
ISA **Isabella, Lake** **88.13 53** IAmb IAmb 01 50 03.1
comp=Z,168nm,1.6s
K05A **Summer Lake** **88.14 46** IAmb IAmb 01 50 03.4
comp=Z,103nm,1.1s
I30M **Mount Dempster** **88.26 22** IAMs_20 IAMs_20 02 25 03.4
comp=Z,2µm,21.0s
I30M **Mount Dempster** **88.26 22** P **P** **01 50 01.2 +0.6**
baz=241,SNR=86
I30M S **S** **02 00 43.3 +1.9**
baz=241
C27K **Jago River** **88.28 17** IAmb IAmb 01 50 05.6
comp=Z,104nm,1.4s
C27K IAMs_20 IAMs_20 02 24 38.8
comp=Z,3µm,21.0s
C27K **Jago River** **88.28 17** P **P** **01 50 01.4 +1.0**
baz=234,SNR=9.6
C27K S **S** **02 00 44.4 +3.3**
baz=234
F28M **Old Crow** **88.30 19** IAmb IAmb 01 50 17.0
comp=Z,189nm,1.9s
F28M IAMs_20 IAMs_20 02 24 09.2
comp=Z,3µm,22.0s
F28M **Old Crow** **88.30 19** P **P** **01 50 01.6 +1.1**
baz=237,SNR=16
F28M S **S** **02 00 45.3 +4.0**
baz=237
PINE **Pine Mountain** **88.40 45** IAmb IAmb 01 50 04.6
comp=Z,119nm,1.3s
ELS **Elsinore Mount** **88.49 56** IAmb IAmb 01 50 04.8
comp=Z,173nm,1.8s
G29M **Pine Creek** **88.53 20** P **P** **01 50 02.5 +0.8**
baz=239,SNR=31
G29M S **S** **02 00 46.6 +3.0**
baz=239
ZSN **Zaisan** **88.60 319** *e*P **P** **01 50 00.8 -1.5**
ZSN pmax pmax
comp=Z,34nm,1.9s
ZSN **Zaisan** **88.60 319** *e*P **P** **01 50 00.9 -1.5**
comp=Z,34nm,1.9s
CWC **Cottonwood Cre** **88.63 53** IAmb IAmb 01 50 05.6
comp=Z,136nm,1.5s
A04D **Lummi Island** **88.63 40** IAmb IAmb 01 50 06.3
comp=Z,98nm,1.1s
TIN **Tinemaha, Big** **88.66 52** IAMs_20 IAMs_20 02 20 51.8

comp=Z,2µm,21.0s
EPYK Eagle Plains 88.71 21 P **P** **01 50 03.2 +0.7**
baz=240,SNR=65
EPYK S **S** **02 00 47.7 +2.4**
baz=240
D27M Malcolm River 88.85 18 IAmb IAmb 01 50 25.0
comp=Z,132nm,1.8s
D27M IAMs_20 IAMs_20 02 24 36.9
comp=Z,2µm,22.0s
D27M Malcolm River 88.85 18 P **P** **01 50 04.7 +1.5**
baz=236,SNR=7.0
D27M S **S** **02 00 49.0 +2.3**
baz=236
BAR Barrett 88.89 57 IAmb IAmb 01 50 20.5
comp=Z,107nm,1.3s
BAR IAMs_20 IAMs_20 02 20 31.1
comp=Z,3µm,22.0s
NVAR Mina Array Bea 88.94 51 P **P** **01 50 04.9 +0.4**
comp=Z,22nm,0.9s,baz=243,slow=5.0,SNR=84
NVAR PP **PP** **01 53 33.0 -1.7**
comp=Z,1.7nm,0.9s,baz=265,slow=4.6,SNR=2.6
NVAR LR LR 02 22 54.2
comp=Z,2µm,21.5s,baz=262,slow=31
comp=Z,22nm,0.9s
NVAR Mina Array Bea 88.94 51 P **P** **01 50 05.1 +0.6**
E28M Babbage River 88.94 18 P **P** **01 50 04.6 +1.1**
baz=238,SNR=22
E28M S **S** **02 00 49.6 +2.3**
baz=238
MPMC Manual Prospec 89.00 53 IAmb IAmb 01 50 07.5
comp=Z,105nm,1.4s
MMPY Sheldon Lake, 89.09 25 P **P** **01 50 05.0 +0.6**
baz=245,SNR=17
MMPY S **S** **02 00 52.0 +3.0**
baz=245
WTLY Watson Lake, Y 89.17 28 P **P** **01 50 04.9 +0.1**
baz=247
G30M tAoh Zraii Nji 89.18 20 P **P** **01 50 05.2 +0.4**
baz=241,SNR=37
G30M S **S** **02 00 50.9 +1.2**
baz=241
HNLY HANLEY 89.23 303 *e*P **P** **01 50 05.8 -0.5**
HNLY IAmb IAmb 01 50 14.1
comp=Z,19nm,1.4s
KVN Kaiserville 89.24 50 IAmb IAmb 01 50 08.4
comp=Z,118nm,1.6s
PFO Pinyon Flats O 89.27 56 LR LR 02 21 49.7
comp=Z,4µm,21.7s,baz=282,slow=30
PFO Pinyon Flats O 89.27 56*d i*P **P** **01 50 06.7 +0.6**
PFO pmax pmax
comp=Z,49nm,1.3s
PFO Pinyon Flats O 89.27 56 P **P** **01 50 06.6 +0.6**
PFO IAmb IAmb 01 50 08.6
comp=Z,122nm,1.6s
PFO Pinyon Flats O 89.27 56 P **P** **01 50 06.7 +0.6**
PFO pP **pP** **01 50 21.8 +1.0**
H31M Peel River 89.29 22 IAmb IAmb 01 50 21.1
comp=Z,76nm,1.2s
H31M IAMs_20 IAMs_20 02 28 43.4
comp=Z,2µm,20.0s
H31M Peel River 89.29 22 P **P** **01 50 05.9 +0.7**
baz=242,SNR=26
H31M S **S** **02 00 52.8 +2.1**
baz=242
E29M Blow River 89.34 19 IAmb IAmb 01 50 21.3
comp=Z,127nm,1.9s
E29M IAMs_20 IAMs_20 02 24 20.8
comp=Z,3µm,21.0s
E29M Blow River 89.34 19 P **P** **01 50 06.3 +0.9**
baz=239,SNR=10
E29M S **S** **02 00 52.2 +1.2**
baz=239
PMD Palm Desert 89.34 56 IAmb IAmb 01 50 08.7
comp=Z,102nm,1.4s
GSC Goldstone, Bar 89.37 54 IAmb IAmb 01 50 09.0
comp=Z,84nm,1.3s
QSM Queen of Sheba 89.47 53 IAmb IAmb 01 50 09.2
comp=Z,116nm,1.3s
LTY Liberty 89.53 42 P **P** **01 50 06.8 0.0**
LTY IAmb IAmb 01 50 08.9
comp=Z,97nm,1.6s
D28M Stokes Point 89.57 18 P **P** **01 50 07.4 +1.0**
baz=238
MXC Moxie City 89.59 43 IAmb IAmb 01 50 24.6
comp=Z,108nm,1.8s
F30M Barrier River 89.64 20 IAmb IAmb 01 50 23.7
comp=Z,134nm,1.5s
F30M Barrier River 89.64 20 P **P** **01 50 07.7 +0.9**
baz=241,SNR=23
F30M S **S** **02 00 55.4 +1.5**
baz=241
F07A Phinny Hill Vi 89.66 43 IAmb IAmb 01 50 10.0
comp=Z,133nm,1.6s
WVOR Wild Horse Val 89.67 47 P **P** **01 50 08.6 +0.9**
WVOR pmax pmax
comp=Z,275nm,1.5s
WVOR Wild Horse Val 89.67 47 P **P** **01 50 08.6 +0.9**
WVOR Wild Horse Val 89.67 47 P **P** **01 50 08.9 +1.3**
GWY Greenwater Val 89.68 53 IAmb IAmb 01 50 10.2
comp=Z,112nm,1.4s
TPH Tonopah 89.68 51 IAmb IAmb 01 50 10.4
comp=Z,132nm,1.5s
BELC Belle Mtn. Jos 89.73 55 IAMs_20 IAMs_20 02 22 14.5
comp=Z,3µm,20.0s
G31M Satah River 89.83 21 P **P** **01 50 08.3 +0.7**
baz=242,SNR=23
G31M S **S** **02 00 57.6 +2.0**
baz=242
WCT Wildcat Mounta 89.85 53 IAmb IAmb 01 50 11.2
comp=Z,103nm,1.2s
J08A Circle Bar Ran 90.01 46 IAmb IAmb 01 50 11.9
comp=Z,67nm,1.0s
HAWA Hanford 90.05 43 IAmb IAmb 01 50 11.8
comp=Z,144nm,1.6s
HAWA IAMs_20 IAMs_20 02 23 30.4
comp=Z,2µm,20.0s
BC3 Big Chuckawall 90.10 56 IAMs_20 IAMs_20 02 22 03.3
comp=Z,3µm,22.0s
MK31 Makanchi Array 90.11 318*de*P **P** **01 50 08.3 -1.2**
MKAR Makanchi Array 90.11 318 P **P** **01 50 08.4 -1.1**
comp=Z,3.0nm,0.5s,baz=104,slow=5.5,SNR=9.5
MKAR LR LR 02 32 44.0
comp=Z,638nm,19.2s,baz=78,slow=37
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 90.11 318*ce*P **P** **01 50 09.0 -0.5**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
WAH2 Wahluke Slope 90.12 42 IAmb IAmb 01 50 11.8
comp=Z,94nm,1.4s
TPNV Topopah Spring 90.18 53 IAmb IAmb 01 50 12.8
comp=Z,106nm,1.2s
TPNV IAMs_20 IAMs_20 02 21 30.3
comp=Z,3µm,22.0s
LIRD Liard River Hi 90.18 29 P **P** **01 50 08.9 -0.6**
baz=250
BMN Battle Mountai 90.22 49 IAmb IAmb 01 50 13.1
comp=Z,92nm,1.2s
F31M Tsiigehtchic 90.25 20 P **P** **01 50 10.0 +0.4**
baz=243,SNR=12
F31M S **S** **02 01 00.8 +1.3**
baz=243
MAKZ Makanchi 90.32 318 P **P** **01 50 09.8 -0.7**
MAKZ pmax pmax
comp=Z,58nm,1.3s
MAKZ MLR MLR
comp=Z,900nm,21.0s
MAKZ Makanchi 90.32 318 P **P** **01 50 09.8 -0.7**
MAKZ IAmb IAmb 01 50 31.8
comp=Z,58nm,1.3s
MAKZ Makanchi 90.32 318 P **P** **01 50 08.7 -1.7**
MTPC Mountain Pass 90.41 54 IAmb IAmb 01 50 13.9
comp=Z,106nm,1.4s
IRM Iron Mountain 90.46 55 IAMs_20 IAMs_20 02 22 25.7
comp=Z,3µm,21.0s
GLA Glamis 90.48 57 IAMs_20 IAMs_20 02 21 31.5
comp=Z,2µm,22.0s
ZAA0 Zalesovo Array 90.52 325 IAmb IAmb 01 50 25.3
comp=Z,117nm,2.0s
ZALV Zalesovo Beam 90.52 325 P **P** **01 50 09.1 -2.1**
comp=Z,2.0nm,0.6s,baz=120,slow=5.6,SNR=9.2
ZALV LR LR 02 31 09.3
comp=Z,1µm,20.8s,baz=97,slow=36
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 90.52 325 *i* P **P** **01 50 09.6 -1.6**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 90.52 325 P **P** **01 50 09.3 -1.9**
D08A Wollman Farm, 90.62 42 IAmb IAmb 01 50 14.2
comp=Z,99nm,1.4s
B08A Colville Reser 90.69 41 IAmb IAmb 01 50 13.9
comp=Z,77nm,1.2s
INK Inuvik 90.72 20 LR LR 02 26 41.9
comp=Z,4µm,20.6s,baz=240,slow=33
INK Inuvik 90.72 20 IAmb IAmb 01 50 13.5
comp=Z,70nm,1.4s
INK Inuvik 90.72 20 P **P** **01 50 12.0 +0.3**
baz=243,SNR=15
INK S **S** **02 01 03.4 -0.3**
baz=243
INK Inuvik 90.72 20 P **P** **01 50 11.8 +0.1**
LNOR Lincton Mounta 90.76 44 IAmb IAmb 01 50 14.9
comp=Z,78nm,1.7s
BLYC Blythe 90.88 56 IAmb IAmb 01 50 16.1
comp=Z,47nm,1.1s
WUS Wushi 90.91 312 IAmb IAmb 01 50 35.2
comp=Z,98nm,1.9s
WUS Wushi 90.91 312 P **P** **01 50 13.2 -0.4**
H06N1 SOCORRO T-PHAS 91.13 71 T T 03 30 46.1
SNR=47
H06S1 SOCORRO T 91.13 71 T T 03 30 46.2
SNR=46
SHLS Shalkode 91.17 314 *e*P **P** **01 50 11.5 -3.2**
SHLS pmax pmax
comp=Z,14nm,1.0s
SHLS Shalkode 91.17 314 *e*P **P** **01 50 11.5 -3.2**
comp=Z,14nm,1.0s
113A Mohawk Valley, 91.30 57 IAmb IAmb 01 50 18.0
comp=Z,98nm,1.7s
KOTAN Kotaneelee Air 91.40 29 P **P** **01 50 14.3 -0.9**
baz=252
KOTAN S **S** **02 01 10.3 -0.1**
baz=252
UZB Uzunbulak 91.49 313 *e*P **P** **01 50 14.4 -1.7**
UZB pmax pmax
comp=Z,9.0nm,1.0s
UZB Uzunbulak 91.49 313 *e*P **P** **01 50 14.5 -1.7**
comp=Z,8.8nm,1.0s
SRIG Santa Rosalia 91.55 63 P **P** **01 50 18.1 +1.5**
TSSA Tissa 91.57 303 *e*P **P** **01 50 19.8 +3.0**
TSSA *i* x x 01 50 50.8
W13A Hualapai Mount 91.67 55 IAmb IAmb 01 50 19.9
comp=Z,115nm,1.7s
ELK Elko 91.77 49 LR LR 02 23 31.1
comp=Z,2µm,22.0s,baz=247,slow=30
ELK Elko 91.77 49 IAmb IAmb 01 50 20.2
comp=Z,44nm,1.1s
ELK IAMs_20 IAMs_20 02 22 46.1
comp=Z,2µm,22.0s
PRZ Przheval'sk 91.79 313 IAmb IAmb 01 50 39.3
comp=Z,55nm,1.1s
PRZ Przheval'sk 91.79 313 P **P** **01 50 18.3 +0.6**
KPKS Kokpek 91.80 314 *e*P **P** **01 50 15.8 -1.7**
KPKS *e*S **SKSac** **02 00 44.7 -1.7**
KPKS Kokpek 91.80 314 *e*P **P** **01 50 15.8 -1.7**
KPKS *e*S **SKSac** **02 00 44.7 -1.7**
MFID Camas Ranch 91.90 46 IAmb IAmb 01 50 20.7
comp=Z,81nm,1.2s
MFID IAMs_20 IAMs_20 02 25 11.6
comp=Z,2µm,20.0s
SATY Saty 91.91 313 *e*P **P** **01 50 16.4 -1.7**
SATY *e*S **SKSac** **02 00 45.3 -1.8**
SATY pmax pmax
comp=Z,20nm,1.8s
SATY Saty 91.91 313 *e*P **P** **01 50 16.4 -1.7**
comp=Z,20nm,1.8s
SATY *e*S **SKSac** **02 00 45.4 -1.7**
TARG Taragay, Kyrgy 92.06 312 P **P** **01 50 18.2 -1.0**
NEW Newport 92.09 41 LR LR 02 24 16.7
comp=Z,2µm,21.3s,baz=265,slow=31
NEW Newport 92.09 41 IAmb IAmb 01 50 20.5
comp=Z,75nm,1.2s
NEW Newport 92.09 41 IAMs_20 IAMs_20 02 23 55.4
comp=Z,2µm,21.0s
NEW Newport 92.09 41 P **P** **01 50 19.0 +0.3**
PLID Pearl Lake 92.14 45 IAmb IAmb 01 50 35.0
comp=Z,93nm,1.4s
Y14A Wickenburg 92.15 56 IAmb IAmb 01 50 35.8
comp=Z,65nm,1.9s
TDK Taldyqorghan 92.32 315 *e*P **P** **01 50 18.3 -1.5**
TDK pmax pmax
comp=Z,15nm,1.5s
TDK Taldyqorghan 92.32 315 *e*P **P** **01 50 18.3 -1.5**
comp=Z,15nm,1.5s
TDK LR LR 02 34 06.0
comp=Z,755nm,19.2s
PSUT Pine Spring 92.36 51 IAmb IAmb 01 50 23.1
comp=Z,87nm,1.5s
LCMT Little Creek M 92.55 53 IAmb IAmb 01 50 24.0
comp=Z,97nm,1.5s
CCUT Cedar City 92.56 52 IAmb IAmb 01 50 24.5
comp=Z,63nm,1.5s
KDJ Kajisay 92.60 312 P **P** **01 50 21.3 -0.1**
WRGLY Wrigley 92.63 26 IAmb IAmb 01 50 35.9
comp=Z,57nm,1.6s
WRGLY Wrigley 92.63 26 P **P** **01 50 20.5 -0.3**
baz=252
WRGLY S **S** **02 01 24.1 +2.9**
baz=252
LPIG La Paz 92.69 66 LR LR 02 22 55.8
comp=Z,762nm,21.2s,baz=260,slow=30
SZCU Shurtz Canyon 92.78 52 IAmb IAmb 01 50 25.3
comp=Z,93nm,1.5s
ASAI AK-SAY(Kyrgyzs 92.85 311 P **P** **01 50 22.6 -0.2**
MDOK Medeo 92.90 313 *e*P **P** **01 50 20.7 -2.0**
MDOK Medeo 92.90 313 *e*P **P** **01 50 20.8 -2.0**
MDOK LR LR 02 33 54.1
SLBS Sierra La Lagu 92.94 67 P **P** **01 50 23.5 +0.3**
SLBS Sierra La Lagu 92.94 67 P **P** **01 50 24.4 +1.2**
HLID Hailey 92.94 46 IAmb IAmb 01 50 25.8
comp=Z,77nm,1.2s
HLID IAMs_20 IAMs_20 02 26 15.1
comp=Z,2µm,20.0s
HLID Hailey 92.94 46 P **P** **01 50 24.1 +1.2**
TNSS Tian-Shan 92.95 313 *e*P **P** **01 50 21.0 -2.3**
TNSS Tian-Shan 92.95 313 *e*P **P** **01 50 21.0 -2.3**
HSIG 92.98 61 IAmb IAmb 01 50 25.6
comp=Z,107nm,1.6s
AAA Alma-Ata 93.01 313 *e*P **P** **01 50 21.3 -1.8**
AAA Alma-Ata 93.01 313 *e*P **P** **01 50 21.4 -1.8**
AAA LR LR 02 34 10.5
comp=Z,2µm,17.3s
U15A North Rim 93.19 54 IAmb IAmb 01 50 41.2
comp=Z,113nm,1.8s
KSH2 Kashi 93.23 309 P **P** **01 50 25.8 +1.5**
KSH2 pP pP 01 50 37.3 -1.3
KSH2 sP sP 01 50 45.0 +1.1
KSH2 SKS **SKSac** **02 00 51.4 -3.3**
KSH2 pmax pmax
comp=Z,3.0nm,0.6s
KSH2 pmax pmax
comp=Z,260nm,6.0s
KSH2 L L
comp=Z,600nm,24.4s
KSH2 L L
comp=Z,840nm,22.3s
KSH2 L L
comp=Z,1µm,22.3s
ELIB Princess Elisa 93.31 192 *d*P **P** **01 50 22.6 -1.5**
comp=Z,8.7nm,1.6s
LDM Libby Dam 93.31 41 IAmb IAmb 01 50 41.5
comp=Z,107nm,1.5s
KURK Kurchatov 93.39 321 P **P** **01 50 23.2 -1.3**
KURK pmax pmax
comp=Z,39nm,1.3s
KURK MLR MLR
comp=Z,2µm,20.0s
KURK Kurchatov 93.39 321 P **P** **01 50 23.2 -1.3**
KURK Kurchatov 93.39 321 IAMs_20 IAMs_20 02 33 03.3
comp=Z,2µm,20.0s
KURK Kurchatov 93.39 321 P **P** **01 50 22.8 -1.8**
KURBB Kurchatov Arra 93.43 321 P **P** **01 50 22.8 -1.9**
comp=Z,2.9nm,0.8s,baz=109,slow=3.3,SNR=25
KURBB PP **PP** **01 54 08.2 -1.3**
comp=Z,2.3nm,1.0s,baz=98,slow=7.7,SNR=4.6
KURBB LR LR 02 33 17.0
comp=Z,1µm,20.6s,baz=122,slow=36
comp=Z,2.9nm,0.8s
BGU Big Grassy Mou 93.44 49 IAmb IAmb 01 50 27.8
comp=Z,86nm,1.8s
TCRU Three Creeks R 93.46 52 IAmb IAmb 01 50 45.0
comp=Z,76nm,1.7s
DUG Dugway, Tooele 93.47 50 IAmb IAmb 01 50 42.0
comp=Z,82nm,1.8s
DUG Dugway, Tooele 93.47 50 P **P** **01 50 26.4 +1.0**
MTPU Mount Pierson 93.56 52 IAmb IAmb 01 50 29.7
comp=Z,86nm,1.6s
BOOM Boomskoye usch 93.57 312 P **P** **01 50 25.6 -0.3**
TUC Tucson 93.69 58 P **P** **01 50 27.5 +1.0**
TUC pmax pmax
comp=Z,13nm,1.1s
TUC Tucson 93.69 58 P **P** **01 50 27.5 +1.0**
TUC Tucson 93.69 58 P **P** **01 50 27.8 +1.3**
WUAZ Wupatki 93.76 55 IAmb IAmb 01 50 29.8
comp=Z,59nm,1.8s
HVU Hansel Valley 93.79 48 IAmb IAmb 01 50 44.6
comp=Z,86nm,1.4s
MSO Missoula 93.90 43 IAMs_20 IAMs_20 02 26 29.4
comp=Z,2µm,20.0s
SPUT South Promonto 93.95 49 IAmb IAmb 01 50 31.6
comp=Z,63nm,1.8s
NRIK Noril'sk 94.02 340 P **P** **01 50 25.1 -1.9**
comp=Z,9.4nm,1.1s,baz=114,slow=4.0,SNR=11
NRIK LR LR 02 31 17.5
comp=Z,5µm,21.9s,baz=106,slow=34
comp=Z,9.4nm,1.1s
NRIK Noril'sk 94.02 340*d i*P **P** **01 50 25.1 -1.9**
NRIK pmax pmax
comp=Z,13nm,1.3s
NRIK MLR MLR
comp=Z,6µm,22.0s
NRIK Noril'sk 94.02 340 IAmb IAmb 01 50 41.2
comp=Z,64nm,1.6s
C36M Paulatuk 94.29 20 IAmb IAmb 01 50 44.3
comp=Z,93nm,1.3s
C36M IAMs_20 IAMs_20 02 26 02.6
comp=Z,3µm,22.0s
C36M Paulatuk 94.29 20 P **P** **01 50 28.4 +0.1**
baz=252,SNR=29
C36M S **S** **02 01 37.4 +1.8**
baz=252
MPU Maple Canyon 94.33 50 IAmb IAmb 01 50 32.2
comp=Z,64nm,1.7s
DLMT Dillon 94.56 45 IAMs_20 IAMs_20 02 25 14.7
comp=Z,2µm,22.0s
AAK Ala-Archa 94.65 312⇑*e*P **P** **01 50 29.5 -1.3**
AAK pmax pmax
comp=Z,6.0nm,1.8s
AAK MLR MLR
comp=Z,585nm,18.0s
HWUT Hardware Ranch 94.65 49 P **P** **01 50 31.2 +0.4**
SGDS Sogindy 94.69 313 *e*P **P** **01 50 29.1 -1.8**
A36M Sachs Harbour 94.76 17 IAmb IAmb 01 51 07.1
comp=Z,35nm,0.9s
A36M IAMs_20 IAMs_20 02 30 10.9
comp=Z,3µm,20.0s
A36M Sachs Harbour 94.76 17 P **P** **01 50 30.7 +0.4**
baz=251,SNR=9.9
A36M S **S** **02 01 42.7 +3.1**
baz=251
ECR Eagle Creek 95.03 47 IAmb IAmb 01 50 50.2
comp=Z,72nm,1.8s
BSUT Blindstream Ca 95.08 50 IAmb IAmb 01 50 55.0
comp=Z,62nm,1.7s
DUN6 Lazy B Ranch 95.14 58 IAmb IAmb 01 50 35.8
comp=Z,48nm,1.1s
AHID Auburn Hatcher 95.18 48 P **P** **01 50 34.0 +0.7**
BOZ Bozeman (W) 95.27 45 IAMs_20 IAMs_20 02 25 46.5
comp=Z,2µm,22.0s
BTLS Baital 95.37 315 *e*P **P** **01 50 32.3 -1.5**
BTLS Baital 95.37 315 *e*P **P** **01 50 32.4 -1.5**
FXWY Fox Creek 95.38 47 IAMs_20 IAMs_20 02 27 34.5
comp=Z,2µm,20.0s
EDM Edmonton 95.44 37 IAmb IAmb 01 50 35.1
comp=Z,103nm,1.5s
YHL Hebgen Lake 95.46 46 IAmb IAmb 01 50 37.6
comp=Z,45nm,1.2s
SNOW Snow King Moun 95.54 47 IAmb IAmb 01 50 52.8
comp=Z,59nm,1.7s
SNOW IAMs_20 IAMs_20 02 27 22.0
comp=Z,2µm,20.0s
ARSB Arslanbob 95.55 311 IAmb IAmb 01 51 30.7
comp=Z,53nm,1.7s
YMR Madison River 95.58 46 IAmb IAmb 01 50 38.2
comp=Z,52nm,1.2s
LOHW Long Hollow 95.67 47 IAMs_20 IAMs_20 02 27 25.5
comp=Z,1µm,20.0s
PV23 Carpenter Ridg 96.10 52 IAmb IAmb 01 50 42.3
comp=Z,86nm,1.5s
PV18 Skein Mesa, Pa 96.15 52 IAmb IAmb 01 50 54.1
comp=Z,46nm,1.5s
PV11 David Mesa, Pa 96.18 52 IAmb IAmb 01 51 00.9
comp=Z,45nm,1.5s
PV12 Saucer Basin, 96.24 52 IAmb IAmb 01 50 42.9
comp=Z,27nm,1.0s
PV02 Paradox Valley 96.27 52 IAmb IAmb 01 50 54.5
comp=Z,65nm,1.9s
PDAR Pinedale Array 96.31 48 P **P** **01 50 37.9 -0.6**
comp=Z,1.7nm,0.5s,baz=174,slow=3.0,SNR=7.7
PDAR LR LR 02 29 08.2
comp=Z,786nm,20.4s,baz=281,slow=32
comp=Z,1.7nm,0.5s
PDAR Pinedale Array 96.31 48 P **P** **01 50 38.2 -0.2**
MVCO Mesa Verde 96.32 53 P **P** **01 50 38.9 +0.3**
YKA Yellowknife Ar 96.39 28 P **P** **01 50 37.3 -0.7**
comp=Z,8.3nm,0.5s,baz=262,slow=4.6,SNR=134
YKA PP **PP** **01 54 32.7 +0.4**
comp=Z,0.6nm,0.9s,baz=135,slow=13,SNR=4.3
YKA PKiKP **PKiKP** **01 55 15.6 +0.1**
comp=Z,0.4nm,0.6s,baz=254,slow=1.1,SNR=4.5
YKA LR LR 02 27 05.3
comp=Z,2µm,21.7s,baz=248,slow=31
comp=Z,8.3nm,0.5s
YKAW3 Yellowknife Wh 96.41 28 IAmb IAmb 01 50 38.8
comp=Z,71nm,1.6s
NVL N'lazarevskaya 96.42 190 *e*P P 01 50 49.8 +12
NVL *e*SS SS 02 08 35.5 +8.5
NVL pmax pmax
comp=Z,9.0nm,1.0s
NVL MLR MLR
comp=Z,997nm,15.0s
YKAW1 Yellowknife Wh 96.45 28 IAmb IAmb 01 50 39.0
comp=Z,83nm,1.6s
TROLL Troll, Antarti 96.59 186 P **P** **01 50 38.8 -0.2**
comp=Z,453nm,1.0s
TROLL ⇑pP **pP** **01 50 53.6 +0.9**
EGMT Eagleton 96.90 43 IAmb IAmb 01 50 42.7
comp=Z,35nm,0.8s
O20A White River Ci 96.92 51 IAMs_20 IAMs_20 02 27 30.7
comp=Z,2µm,20.0s
DZA Taraz 96.99 312 *e*P **P** **01 50 39.5 -1.7**
DZA Taraz 96.99 312 *e*P **P** **01 50 39.6 -1.7**
EPT El Paso 97.20 59 IAMs_20 IAMs_20 02 27 18.5
comp=Z,2µm,21.0s
SNAA Sanae 97.44 185⇓P Pdif 01 50 44.5 +1.6
comp=Z,249nm,1.0s
SNAA Sanae 97.44 185 P **P** **01 50 41.9 -0.9**
comp=Z,3.2nm,0.8s,baz=199,slow=4.6,SNR=8.5
SNAA LR LR 02 34 11.8
comp=Z,1µm,18.3s,baz=176,slow=35
comp=Z,3.2nm,0.8s
SNAA Sanae 97.44 185 P **P** **01 50 41.6 -1.2**
SNAA IAmb IAmb 01 51 03.6
comp=Z,62nm,1.6s
SNAA IAMs_20 IAMs_20 02 32 12.4
comp=Z,2µm,22.0s
SNAA Sanae 97.44 185 P **P** **01 50 42.1 -0.7**
KKAR Karatay Array 97.61 312 P **P** **01 50 41.7 -2.4**
KKAR Karatay Array 97.61 312 P **P** **01 50 41.7 -2.4**
ALQ Albuquerque 97.65 56 IAMs_20 IAMs_20 02 25 50.1
comp=Z,2µm,22.0s
ALQ Albuquerque 97.65 56 IAMs_20 IAMs_20 02 25 50.2
comp=Z,2µm,22.0s
ANMO Albuquerque 97.65 56 LR LR 02 26 23.8
comp=Z,1µm,21.7s,baz=266,slow=30
ANMO Albuquerque 97.65 56 P Pdif 01 50 45.3 +0.6
ANMO pmax pmax
comp=Z,6.0nm,1.0s
ANMO Albuquerque 97.65 56 P Pdif 01 50 45.3 +0.6
ANMO Albuquerque 97.65 56 IAMs_20 IAMs_20 02 25 50.3
comp=Z,2µm,22.0s
ANMO Albuquerque 97.65 56 P Pdif 01 50 45.1 +0.4
PMSA Palmer Station 97.71 162 LR LR 02 27 37.6
comp=Z,1µm,21.8s,baz=231,slow=31
IUG Iuzhnay 97.85 311 *e*P **P** **01 50 43.2 -2.1**
IUG Iuzhnay 97.85 311 *e*P **P** **01 50 43.2 -2.1**
BRLS Boroldoy 98.10 312 *e*P **P** **01 50 44.8 -1.4**
BRLS Boroldoy 98.10 312 *e*P **P** **01 50 44.8 -1.4**
MNTX Cornudas Mount 98.14 59 IAMs_20 IAMs_20 02 27 58.4
comp=Z,2µm,20.0s
MNTX Cornudas Mount 98.14 59 P Pdif 01 50 47.5 +0.8
CHM Chimkent 98.19 312 *e*P **P** **01 50 44.9 -1.7**

CHM pmax pmax
comp=Z,9.0nm,0.7s
CHM MLR MLR
comp=Z,863nm,20.0s
CHM Chimkent 98.19 312 *e*P **P 01 50 45.0 -1.7**
comp=Z,8.5nm,0.7s
CHM LR LR 02 37 15.0
comp=Z,864nm,19.6s
VNA2 Neumayer--Watz 98.51 184 ⇓P Pdif 01 50 48.1 +0.6
comp=Z,6.1nm,0.6s,baz=171,slow=4.7
VNA2 ⇑pP pP 01 51 01.9 -0.1
comp=Z,6.8nm,0.7s,baz=180,slow=4.1
VNA2 Neumayer--Watz 98.51 184 P **P 01 50 46.8 -0.8**
K22A Casper 98.51 48 IAmb IAmb 01 51 05.3
comp=Z,44nm,1.7s
K22A IAMs_20 IAMs_20 02 29 46.5
comp=Z,1µm,20.0s
BVAR Borovoye Array 98.79 322 P **P 01 50 47.6 -1.5**
comp=Z,2.7nm,0.6s,baz=40,slow=7.8,SNR=13
comp=Z,2.7nm,0.6s
BORK Borovoye 98.83 322 P **P 01 50 46.8 -2.4**
BORK pmax pmax
comp=Z,20nm,1.1s
BORK MLR MLR
comp=Z,2µm,21.0s
BORK Borovoye 98.83 322 P **P 01 50 46.8 -2.4**
BORK IAMs_20 IAMs_20 02 36 58.1
comp=Z,2µm,21.0s
VNA1 Neumayer--Stat 98.83 183 ⇓pP pP 01 51 01.7 -1.7
comp=Z,11nm,1.0s
TPB28 98.88 59 IAmb IAmb 01 54 41.0
comp=Z,10nm,1.6s
ISCO Idaho Springs 98.89 51 IAMs_20 IAMs_20 02 27 19.7
comp=Z,3µm,22.0s
ISCO Idaho Springs 98.89 51 P Pdif 01 50 51.0 +0.8
LAO LASA Array 99.13 44 IAmb IAmb 01 50 53.5
comp=Z,60nm,1.2s
LAO IAMs_20 IAMs_20 02 29 37.8
comp=Z,1µm,21.0s
TXAR Lajitas Array 99.33 62 P **Pdif 01 50 50.3 -1.9**
comp=Z,0.3nm,0.7s,baz=223,slow=4.7,SNR=7.2
TXAR PP **PP 01 54 54.2 -1.6**
comp=Z,13nm,1.2s,baz=248,slow=5.3,SNR=20
TXAR PKKPbc **PKKPdf 02 07 22.4 +1.6**
comp=Z,1.0nm,0.9s,baz=137,slow=4.3,SNR=6.8
TXAR LR LR 02 27 22.6
comp=Z,2µm,21.6s,baz=270,slow=30
comp=Z,0.3nm,0.7s
TXAR Lajitas Array 99.33 62 P **Pdif 01 50 52.6 +0.5**
TXAR Lajitas Array 99.33 62 P **Pdif 01 50 52.6 +0.5**
RSSD Black Hills 100.45 47 IAMs_20 IAMs_20 02 30 18.8
comp=Z,1µm,20.0s
RSSD Black Hills 100.45 47 P **Pdif 01 50 58.1 +1.1**
MSTX Muleshoe 100.57 57 IAMs_20 IAMs_20 02 27 25.7
comp=Z,1µm,21.0s
AMTX Amarillo 101.55 56 IAMs_20 IAMs_20 02 27 48.5
comp=Z,1µm,22.0s
OGNE Ogallala 101.71 50 IAMs_20 IAMs_20 02 30 54.3
comp=Z,2µm,21.0s
E28A Huff 102.93 45 IAMs_20 IAMs_20 02 31 59.3
comp=Z,1µm,20.0s
ABTX Abilene, Hawle 103.07 59 IAMs_20 IAMs_20 02 31 16.0
comp=Z,2µm,20.0s
K30B Basset 103.60 49 IAMs_20 IAMs_20 02 32 38.2
comp=Z,2µm,20.0s
WMOK Wichita Mounta 103.92 57 IAMs_20 IAMs_20 02 33 44.3
comp=Z,1µm,20.0s
SUSD Miller 104.11 47 IAMs_20 IAMs_20 02 31 20.7
comp=Z,2µm,21.0s
735A Kenedy 104.39 63 IAMs_20 IAMs_20 02 29 23.0
comp=Z,2µm,22.0s
BGNE Belgrade 104.66 50 IAMs_20 IAMs_20 02 32 46.3
comp=Z,1µm,20.0s
WHTX Lake Whitney, 104.88 60 IAMs_20 IAMs_20 02 31 11.0
comp=Z,2µm,21.0s
Z35A Perchaven, San 105.12 58 IAMs_20 IAMs_20 02 31 53.2
comp=Z,1µm,21.0s
OK051 E0350 and S346 105.58 55 IAMs_20 IAMs_20 02 30 55.0
comp=Z,2µm,22.0s
OK052 Battle Ridge R 105.59 55 IAMs_20 IAMs_20 02 30 00.4
comp=Z,2µm,22.0s
ARTI Arti 105.76 326 P **Pdif 01 51 31.8 +12**
ARTI 01 55 45.0
ARTI SP SP 02 04 47.9 -5.9
ARTI SS **SS 02 10 43.7 +5.3**
ARTI MLR MLR
comp=Z,2µm,23.0s
ECSD EROS Data Cent 105.80 47 IAMs_20 IAMs_20 02 32 43.3
comp=Z,2µm,21.0s
T35A Sooner Cattle 105.85 55 IAMs_20 IAMs_20 02 33 20.1
comp=Z,2µm,20.0s
F33A 5 Mile Ranch, 105.99 45 IAMs_20 IAMs_20 02 31 45.2
comp=Z,1µm,21.0s
L34A Svendsen Farm, 105.99 49 IAMs_20 IAMs_20 02 35 24.5
comp=Z,2µm,20.0s
ULM Lac du Bonnet 106.09 41 Pdiff **Pdif 01 51 19.0 -2.6**
comp=Z,3.3nm,0.7s,baz=283,slow=8.0,SNR=4.6
ULM PP **PP 01 55 41.9 -3.9**
comp=Z,6.8nm,1.1s,baz=270,slow=8.1,SNR=5.5
HKT Hockley 106.17 62 IAMs_20 IAMs_20 02 30 56.1
comp=Z,2µm,22.0s
AGMN Agassiz Nation 106.19 43 IAMs_20 IAMs_20 02 33 57.5
comp=Z,1µm,22.0s
N35A Tabor 106.55 50 IAMs_20 IAMs_20 02 32 51.4
comp=Z,2µm,21.0s
Z38A Mt. Pleasant 107.02 58 IAMs_20 IAMs_20 02 34 09.4
comp=Z,1µm,20.0s
NATX Nacogdoches 107.25 60 IAMs_20 IAMs_20 02 33 37.7
comp=Z,2µm,21.0s
U38A Gravette 107.55 55 IAMs_20 IAMs_20 02 31 44.3
comp=Z,2µm,22.0s
I37A Lemond, Waseca 108.11 47 IAMs_20 IAMs_20 02 34 01.5
comp=Z,2µm,21.0s
VOI Vohitsoka 108.25 243 IAMs_20 IAMs_20 02 34 06.5
comp=Z,2µm,22.0s
N38A Joes South For 108.38 50 IAMs_20 IAMs_20 02 34 16.8
comp=Z,2µm,21.0s
S39A Bolivar 108.39 54 IAMs_20 IAMs_20 02 33 40.4
comp=Z,2µm,21.0s
SPMN Marine on St. 108.46 46 IAMs_20 IAMs_20 02 35 41.8
comp=Z,2µm,20.0s
EYMN Ely 109.14 43 IAMs_20 IAMs_20 02 36 00.4
comp=Z,1µm,20.0s
R40A Maddies Statio 109.21 53 IAMs_20 IAMs_20 02 32 42.0
comp=Z,2µm,22.0s
E38A The Farm, Brul 109.22 44 IAMs_20 IAMs_20 02 35 47.8
comp=Z,2µm,20.0s
L40A Anamosa 109.82 49 IAMs_20 IAMs_20 02 38 14.0
comp=Z,1µm,19.0s
KBS Kingsbay 109.85 354 IAMs_20 IAMs_20 02 35 33.1
comp=Z,2µm,22.0s
SPITS Spitsbergen Ar 109.97 353 PKiKP **PKiKP 01 55 37.4 -2.5**
comp=Z,2.7nm,0.7s,baz=79,slow=2.9,SNR=1.5
143A Socs Landing, 110.02 59 IAMs_20 IAMs_20 02 34 15.0
comp=Z,2µm,22.0s
CCM Cathedral Cave 110.02 53 IAMs_20 IAMs_20 02 33 05.6
comp=Z,2µm,22.0s
T42A Van Buren 110.18 54 IAMs_20 IAMs_20 02 33 41.0
comp=Z,2µm,21.0s
N41A Harden Midland 110.19 50 IAMs_20 IAMs_20 02 35 30.7
comp=Z,2µm,20.0s
G40A Rib Lake 110.29 46 IAMs_20 IAMs_20 02 37 15.2
comp=Z,1µm,20.0s
VBMS Vicksburg 110.77 59 IAMs_20 IAMs_20 02 36 57.0
comp=Z,2µm,20.0s
L42A Oliver, Polo 110.98 49 IAMs_20 IAMs_20 02 35 00.7
comp=Z,2µm,22.0s
I42A Draeger Farm, 111.35 47 IAMs_20 IAMs_20 02 35 33.3
comp=Z,1µm,21.0s
HDIL Hopedale 111.38 51 IAMs_20 IAMs_20 02 35 12.5
comp=Z,2µm,22.0s
S44A Carbondale 111.61 54 IAMs_20 IAMs_20 02 34 04.7
comp=Z,2µm,22.0s
OXF Oxford 111.65 57 IAMs_20 IAMs_20 02 36 58.9
comp=Z,1µm,21.0s
F42A Maple Grove Fa 111.68 45 IAMs_20 IAMs_20 02 37 06.8
comp=Z,2µm,21.0s
346A Big Creek Wild 111.68 60 IAMs_20 IAMs_20 02 35 47.0
comp=Z,2µm,21.0s
K43A Burlington 111.90 48 IAMs_20 IAMs_20 02 36 47.9
comp=Z,2µm,21.0s
H43A Windswept, Lux 112.10 46 IAMs_20 IAMs_20 02 37 27.0
comp=Z,2µm,20.0s
T45A Paducah 112.14 54 IAMs_20 IAMs_20 02 37 50.7
comp=Z,1µm,20.0s
Z47A Carrollton 112.81 58 IAMs_20 IAMs_20 02 38 03.2
comp=Z,1µm,20.0s
LVZ Lovozero 112.85 341 IAMs_20 IAMs_20 02 44 54.9
comp=Z,2µm,21.0s
WVT Waverly 112.85 55 IAMs_20 IAMs_20 02 35 41.0
comp=Z,1µm,22.0s
SFIN Lafayette 113.07 51 IAMs_20 IAMs_20 02 36 15.3
comp=Z,2µm,22.0s
I45A Fountain 113.25 47 IAMs_20 IAMs_20 02 35 57.9
comp=Z,2µm,22.0s
T47A Sharon Grove 113.37 54 IAMs_20 IAMs_20 02 36 42.7
comp=Z,1µm,21.0s
X48A Hartselle 113.60 57 IAMs_20 IAMs_20 02 40 03.0
comp=Z,1µm,21.0s
V48A Smith Brothers 113.70 56 IAMs_20 IAMs_20 02 35 42.4
comp=Z,1µm,22.0s
LRAL Lakeview Retre 113.72 59 IAMs_20 IAMs_20 02 38 51.2
comp=Z,1µm,20.0s
BRAL Brewton 113.75 61 IAMs_20 IAMs_20 02 37 22.3
comp=Z,2µm,21.0s
MT02 Curacav 113.84 133 IAMs_20 IAMs_20 02 33 14.2
comp=Z,1µm,21.0s
KEV Kevo 114.04 344 IAMs_20 IAMs_20 02 48 19.0
comp=Z,1µm,21.0s
N47A Urbana 114.07 50 IAMs_20 IAMs_20 02 37 31.8
comp=Z,2µm,21.0s
Y49A Blount Mountai 114.16 58 IAMs_20 IAMs_20 02 36 25.9
comp=Z,1µm,22.0s
E46A Sault Ste Mari 114.22 44 IAMs_20 IAMs_20 02 41 19.1
comp=Z,1µm,20.0s
KLMR Klimovskoe 114.22 333 *e*P **Pdif 01 51 53.0 -4.5**
KLMR *e* 02 06 26.5
KLMR pmax pmax
comp=Z,13nm,1.5s
KLMR MLR MLR
comp=Z,2µm,19.0s
J47A Sunmer 114.39 47 IAMs_20 IAMs_20 02 36 48.9
comp=Z,1µm,22.0s
250A Grady 114.39 60 IAMs_20 IAMs_20 02 37 12.0
comp=Z,2µm,22.0s
MAK Makhachkala 114.43 312 *i* P **Pdif 01 51 58.8 0.0**
MAK *i* 01 55 48.7
MAK *e* 01 56 45.5
MAK *e*PPP PPP 01 59 07.4
MAK *e* 02 02 27.0
MAK *e*PS PKKPbc 02 06 20.7 -9.0
MAK *e*SS SS 02 12 33.0 -2.2
MAK *e*SSS SSS 02 16 50.3
MAK pmax pmax
comp=Z,27nm,0.4s
U49A Red Boiling Sp 114.47 55 IAMs_20 IAMs_20 02 36 33.4
comp=Z,2µm,22.0s
O48B Farmland 114.56 50 IAMs_20 IAMs_20 02 36 38.7
comp=Z,2µm,22.0s
ARCES ARCESS Array B 114.58 344 PKP **PKiKP 01 55 46.4 -2.5**
comp=Z,1.1nm,0.5s,baz=91,slow=1.6,SNR=14
451A Vernon 114.90 61 IAMs_20 IAMs_20 02 38 20.6
comp=Z,2µm,22.0s
W50A Signal Mountai 114.97 56 IAMs_20 IAMs_20 02 36 29.1
comp=Z,1µm,22.0s
N49A Columbus Grove 115.20 50 IAMs_20 IAMs_20 02 39 07.7
comp=Z,2µm,20.0s
352A Blakely 115.55 60 IAMs_20 IAMs_20 02 38 19.0
comp=Z,1µm,22.0s
152A Waverly Hall 115.66 59 IAMs_20 IAMs_20 02 40 20.5
comp=Z,2µm,20.0s
I49A Point Hope 115.70 46 IAMs_20 IAMs_20 02 38 04.5
comp=Z,2µm,21.0s
M50A Fremont 115.98 49 IAMs_20 IAMs_20 02 38 02.2
comp=Z,2µm,22.0s
553A Crawfordville 116.05 62 IAMs_20 IAMs_20 02 39 19.2
comp=Z,2µm,21.0s
K50A Casco 116.05 47 IAMs_20 IAMs_20 02 37 37.0
comp=Z,2µm,22.0s
S51A Beattyville 116.09 53 IAMs_20 IAMs_20 02 38 21.6
comp=Z,1µm,22.0s
Y52A Lilburn 116.11 57 IAMs_20 IAMs_20 02 41 51.4
comp=Z,1µm,20.0s
TZTN Tazewell 116.26 54 IAMs_20 IAMs_20 02 38 21.1
comp=Z,2µm,21.0s
VRH Novokhopyorsk 116.44 322 PKIKP **PKPdf 01 55 51.4 -1.5**
VRH pmax pmax
comp=Z,15nm,1.2s
GOGA Godfrey 116.64 58 IAMs_20 IAMs_20 02 39 15.6
comp=Z,2µm,21.0s
TIGA Tifton 116.70 60 IAMs_20 IAMs_20 02 40 17.2
comp=Z,1µm,21.0s
SUMG Summit 116.73 7 IAMs_20 IAMs_20 02 45 21.4
comp=Z,1µm,21.0s
AC05 El Transito 116.74 130 IAMs_20 IAMs_20 02 33 38.4
comp=Z,1µm,20.0s
V53A Saluda 116.95 55 **PKiKP 01 55 54.9 +0.4**
V53A IAMs_20 IAMs_20 02 37 46.5
comp=Z,1µm,22.0s
154A Montrose 117.02 59 IAMs_20 IAMs_20 02 38 52.5
comp=Z,1µm,22.0s
O52A Adamsville 117.09 50 IAMs_20 IAMs_20 02 40 01.8
comp=Z,2µm,21.0s
MOS Moscow 117.17 328 *i* PKIKP **PKPdf 01 55 53.0 -1.2**
MOS *e* 01 57 01.9
MOS MLR MLR
comp=Z,2µm,22.0s
MOS MLR MLR
comp=N,1µm,23.0s
MOS MLR MLR
comp=E,2µm,22.0s
M52A Chesterland 117.20 49 IAMs_20 IAMs_20 02 39 23.6
comp=Z,2µm,22.0s
P53A Whipple 117.53 51 **PKiKP 01 55 55.8 +0.3**
KBZ Khabaz 117.59 314 PP **PP 01 57 04.6 -3.6**
comp=Z,2.3nm,0.9s,baz=50,slow=6.5,SNR=5.4
KBZ PKKPbc **PKKPbc 02 06 18.2 -0.5**
comp=Z,1.7nm,0.8s,baz=233,slow=3.9,SNR=4.9
ILULI Ilulissat 117.63 12 IAMs_20 IAMs_20 02 42 15.4
comp=Z,2µm,22.0s
U54A Nelsons Funny 117.64 54 IAMs_20 IAMs_20 02 40 24.7
comp=Z,1µm,20.0s
KIV Kislovodsk 117.69 314 *i* PKIKP **PKiKP 01 55 57.2 +1.5**
KIV *e* 01 57 09.6
KIV *e*PS PKKPdf 02 06 56.1 +9.3
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,932nm,22.0s
KIV Kislovodsk 117.69 314 IAMs_20 IAMs_20 02 48 24.6
comp=Z,1µm,22.0s
656A Willston 117.74 62 IAMs_20 IAMs_20 02 40 04.1
comp=Z,1µm,21.0s
OBN Obninsk 117.97 328 *i* PKIKP **PKiKP 01 55 56.1 +0.3**
OBN *e* 01 57 09.1
OBN *e*PPP PPP 01 59 38.0
OBN *e*SS SS 02 13 23.1 +2.7
OBN *e*SSS SSS 02 17 44.5
OBN pmax pmax
comp=Z,2.0nm,0.6s
OBN MLR MLR
comp=Z,3µm,24.0s
ERPA Erie 118.09 48 IAMs_20 IAMs_20 02 41 36.0
comp=Z,1µm,20.0s
456A Hilliard 118.09 61 IAMs_20 IAMs_20 02 40 43.2
comp=Z,1µm,21.0s
O54A Avella 118.18 50 IAMs_20 IAMs_20 02 41 17.6
comp=Z,1µm,20.0s
KMSC Kings Mountain 118.21 56 IAMs_20 IAMs_20 02 40 25.4
comp=Z,1µm,22.0s
V55A Taylorsville 118.22 55 IAMs_20 IAMs_20 02 39 41.0
comp=Z,1µm,22.0s
BLA Blacksburg 118.65 53 IAMs_20 IAMs_20 02 42 27.4
comp=Z,1µm,20.0s
MCWV Mont Chateau 118.68 50 IAMs_20 IAMs_20 02 40 00.9
comp=Z,2µm,22.0s
DWPF Disney Wildern 118.79 64 IAMs_20 IAMs_20 02 40 37.9
comp=Z,1µm,22.0s
U56A King 118.81 54 IAMs_20 IAMs_20 02 38 44.8
comp=Z,1µm,22.0s
257A Skidaway Islan 118.83 59 IAMs_20 IAMs_20 02 40 07.6
comp=Z,1µm,22.0s
Y57A Sumter 119.13 57 IAMs_20 IAMs_20 02 42 10.3
comp=Z,1µm,20.0s
NHSC New Hope 119.42 58 IAMs_20 IAMs_20 02 42 19.0
comp=Z,2µm,20.0s
SFJD Kangerlussuaq 119.53 14 IAMs_20 IAMs_20 02 46 34.5
comp=Z,2µm,22.0s
FINES FINESS Array B 119.54 337 PKP **PKiKP 01 55 58.7 0.0**
comp=Z,0.6nm,0.5s,baz=100,slow=1.6,SNR=9.7
FINES PP **PP 01 57 19.9 -1.0**
comp=Z,2.1nm,0.8s,baz=90,slow=4.2,SNR=1.8
Y58A Scranton 119.74 57 IAMs_20 IAMs_20 02 42 36.5
comp=Z,1µm,20.0s
060A Indiantown 119.80 65 IAMs_20 IAMs_20 02 41 38.8
comp=Z,1µm,22.0s
L56A Greenwood 119.85 47 IAMs_20 IAMs_20 02 40 37.5
comp=Z,2µm,21.0s
SOC Sochi 119.87 314 *i* PKIKP **PKPdf 01 55 59.7 -0.1**
SOC *e* 01 57 23.5
SOC *e*PPP PPP 01 59 55.5
SOC *e*SS SS 02 13 34.9 -11
SOC *e*SSS SSS 02 18 15.0
V58A Windy Hill, Pi 119.91 55 IAMs_20 IAMs_20 02 41 31.9
comp=Z,1µm,22.0s
X58A Rowland 119.92 56 IAMs_20 IAMs_20 02 43 49.2
comp=Z,1µm,21.0s
K57A Scipio Center 120.45 46 **PKiKP 01 56 01.1 +0.1**
K57A IAMs_20 IAMs_20 02 43 16.3
comp=Z,1µm,20.0s
W59A Clinton 120.56 55 IAMs_20 IAMs_20 02 45 11.9
comp=Z,1µm,19.0s
J57A Williamstown 120.64 45 IAMs_20 IAMs_20 02 42 10.2
comp=Z,1µm,21.0s
Y60A Bolivia 120.92 57 IAMs_20 IAMs_20 02 41 35.7
comp=Z,2µm,22.0s
BINY Binghamton 120.97 47 IAMs_20 IAMs_20 02 47 45.0
comp=Z,1µm,19.0s
PB01 IPOC Station P 121.09 122 IAMs_20 IAMs_20 02 36 39.6
comp=Z,1µm,21.0s
LONY Lake Ozonia 121.27 44 IAMs_20 IAMs_20 02 43 07.8
comp=Z,1µm,21.0s
L59A Walton 121.64 47 IAMs_20 IAMs_20 02 50 33.0
comp=Z,1µm,18.0s
J59A Piesco 121.67 45 IAMs_20 IAMs_20 02 45 45.2
comp=Z,2µm,20.0s
SCHQ Schefferville 121.72 30 PKP **PKiKP 01 56 03.2 0.0**
comp=Z,3.6nm,0.7s,baz=292,slow=3.8,SNR=3.6
V61A Roper 121.95 54 IAMs_20 IAMs_20 02 41 34.7
comp=Z,2µm,22.0s
KIBK Kibwezi 122.17 261 IAMs_20 IAMs_20 02 45 51.1
comp=Z,939nm,20.0s
TRY Troy 122.47 46 IAMs_20 IAMs_20 02 44 30.7
comp=Z,2µm,21.0s
BOSA Boshof 122.53 226 PKP **PKiKP 01 56 05.7 -0.1**
comp=Z,2.8nm,0.6s,baz=166,slow=3.5,SNR=8.1
BOSA PKKPbc **PKKPbc 02 05 58.6 -1.8**
comp=Z,1.7nm,0.8s,baz=291,slow=4.3,SNR=4.6
MNK Minsk 122.70 330 *i* PKP **PKPdf 01 56 03.5 -1.4**
comp=E,12nm,0.8s
MNK *i* PKP **PKPdf 01 56 03.5 -1.4**
comp=N,11nm,0.8s,baz=58
MNK *i* PKP **PKPdf 01 56 03.5 -1.4**
comp=Z,4.0nm,0.5s
MNK *i* pPKP **pPKPdf 01 56 17.2 -2.5**
MNK *i* PP **PP 01 57 43.4 +0.7**
MNK *i* PPP PPP 02 00 17.6
MNK *i* SKS **SKSdf 02 03 10.4 -2.3**
MNK *i* SKKS **SKKSdf 02 13 41.8 -4.3**
MNK *i* SS **SS 02 14 22.8 +1.7**
MNK *i* SSS SSS 02 18 55.2
MNK *i* LRM MLR 02 47 20.8
comp=Z,2µm,23.6s
MNK *i* LRM MLR 02 48 18.1
comp=E,2µm,22.7s
MNK *i* LRM MLR 02 49 30.6
comp=N,1µm,21.8s
MNK Minsk 122.70 330 *i* PKIKP **PKPdf 01 56 03.5 -1.4**
MNK *i* 01 57 43.3
MNK *i* PPP PPP 02 00 17.6
MNK *i* 02 03 10.3
MNK *i* SS SS 02 14 22.7 +1.7
MNK *i* SSS SSS 02 18 55.1
MNK pmax pmax
comp=Z,4.0nm,0.5s
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=E,12nm,0.8s
MNK MLR MLR
comp=Z,2µm,24.0s
MNK MLR MLR
comp=E,2µm,23.0s
MNK MLR MLR
comp=N,1µm,22.0s
J61A Chester 123.06 45 IAMs_20 IAMs_20 02 43 23.1
comp=Z,1µm,20.0s
HNH Hanover 123.13 44 IAMs_20 IAMs_20 02 48 33.9
comp=Z,1µm,20.0s
LBNH Lisbon 123.19 44 IAMs_20 IAMs_20 02 46 12.7
comp=Z,2µm,20.0s
L61B Northampton 123.25 46 IAMs_20 IAMs_20 02 48 52.3
comp=Z,1µm,19.0s
CZSB Cruzeiro do Su 123.26 106 **PKiKP 01 56 07.6 +0.2**
CZSB Cruzeiro do Su 123.26 106 *e*P **PKiKP 01 56 07.8 +0.4**
K62A Royalston 123.49 45 IAMs_20 IAMs_20 02 45 41.8
comp=Z,1µm,21.0s
H62A Milan 123.60 43 IAMs_20 IAMs_20 02 53 13.3
comp=Z,1µm,21.0s
I62A Tamworth 123.72 44 IAMs_20 IAMs_20 02 44 10.6
comp=Z,2µm,20.0s
AKASG Malin Array Be 123.91 325 PKP **PKPdf 01 56 06.4 -0.9**
comp=Z,1.8nm,0.7s,baz=61,slow=2.0,SNR=9.2
AKBB Malin Array Si 123.91 325*c* i PKIKP **PKiKP 01 56 07.6 0.0**
KIEV Kiev 123.92 325 PKPdf **PKiKP 01 56 10.2 +2.6**
HRV Adam Dziewonsk 124.02 45 IAMs_20 IAMs_20 02 42 43.6
comp=Z,2µm,22.0s
I63A Otisfield 124.17 43 IAMs_20 IAMs_20 02 47 19.4
comp=Z,1µm,20.0s
WES Weston 124.22 45 IAMs_20 IAMs_20 02 42 39.1
comp=Z,2µm,22.0s
LPAZ La Paz 124.33 118 PKP **PKPdf 01 56 09.2 -0.7**
comp=Z,4.5nm,1.1s,baz=194,slow=0.6,SNR=8.3
LPAZ La Paz 124.33 118 *e*P **PKPdf 01 56 09.9 0.0**
MI28 MI28,Pidlybu 124.66 326 PKPdf **PKPdf 01 56 07.7 -1.0**
L64A Middleborough 124.71 46 IAMs_20 IAMs_20 02 44 36.9
comp=Z,2µm,20.0s
HFS Hagfors 124.83 341 PKP **PKPdf 01 56 07.0 -1.8**
comp=Z,1.8nm,0.7s,baz=35,slow=3.5,SNR=2.9
NB2 NORSAR Subarra 124.87 343 PKPdf **PKPdf 01 56 08.4 -0.5**
comp=Z,6.0nm,1.7s,baz=39,slow=1.9
NOA NORSAR Array B 124.87 343 PKP **PKPdf 01 56 07.4 -1.5**
comp=Z,1.6nm,0.9s,baz=36,slow=2.0,SNR=3.8
LUBAR Lubar, Ukraine 125.11 325 PKPdf **PKPdf 01 56 08.1 -1.6**
SUW Suwalki 125.26 331 *e*PKP **PKiKP 01 56 10.2 0.0**
KIRS Kirsehir-Merke 125.29 311 ⇑P **PKPdf 01 56 07.2 -3.3**
BR131 Keskin Array S 125.32 312 ⇑i PKIKP **PKPdf 01 56 10.4 -0.2**
BRTR Keskin Array B 125.32 312 PKP **PKPdf 01 56 10.8 +0.2**
comp=Z,1.2nm,0.7s,baz=140,slow=7.2,SNR=7.4
BRTR PP **PP 01 58 00.8 -0.3**
comp=Z,2.5nm,1.1s,baz=108,slow=4.7,SNR=2.2
RNPP9 Sopachiv 125.37 327 PKPdf **PKiKP 01 56 11.2 +0.7**
RNPP8 Varash 125.43 327 PKPdf **PKiKP 01 56 12.6 +2.0**
RNPP5 Staryi Chortor 125.47 327 PKPdf **PKPdf 01 56 09.2 -1.1**
MMAI Mount Meron Ar 125.62 303 PKP **PKPdf 01 56 11.3 +0.1**
comp=Z,2.9nm,0.8s,baz=89,slow=5.3,SNR=6.9
SORM Soroca 125.62 323 ⇑P **PKPdf 01 56 10.7 0.0**
SORM Soroca 125.62 323 ⇑PKIKP **PKPdf 01 56 10.7 0.0**
SORM Soroca 125.62 323 PKPdf **PKPdf 01 56 09.1 -1.6**
G65A Princeton 125.73 41 IAMs_20 IAMs_20 02 42 47.4
comp=Z,2µm,22.0s
KONO Kongsberg 126.47 343 IAMs_20 IAMs_20 02 48 27.8
comp=Z,2µm,20.0s
KMPD K-Podol'skiy 126.52 324 PKPdf **PKPdf 01 56 10.4 -2.0**
CSS Mathiatis 126.86 306 IAMs_20 IAMs_20 02 59 34.2
comp=Z,991nm,21.0s
CFR Carcaliu 127.09 320 ⇑P **PKPdf 01 56 13.5 -0.1**
CFR Carcaliu 127.09 320 ⇑PKIKP **PKPdf 01 56 13.5 -0.1**
TIRR Tirgusor 127.23 319 IAMs_20 IAMs_20 02 55 13.6
comp=Z,1µm,20.0s
R9F13 Warsaw-Wawer 127.32 330 *e*PKP **PKiKP 01 56 15.0 +0.7**
R9F13 *e*PP **PP 01 58 14.4 +0.9**
BIZ Bicaz 127.53 323 ⇑P **PKiKP 01 56 14.8 -0.2**
CPUP Villa Florida 127.61 135 PKP **PKPdf 01 56 14.7 -0.5**
comp=Z,1.4nm,0.8s,baz=50,slow=3.3,SNR=3.6
BURAR Bucovina Array 127.72 324 ⇑P **PKiKP 01 56 17.7 +2.2**
BURAR Bucovina Array 127.72 324 ⇑PKIKP **PKiKP 01 56 17.7 +2.2**
BEL Belsk 127.73 330 *e*PKP **PKiKP 01 56 15.6 +0.5**
KWP Kalwaria Pacla 128.04 327 *e*PKP **PKPdf 01 56 14.6 -0.7**
MLR Muntele Rosu 128.32 321 ⇓P **PKPdf 01 56 15.6 -0.5**
MLR Muntele Rosu 128.32 321 ⇓PKIKP **PKPdf 01 56 15.6 -0.5**
MLR Muntele Rosu 128.32 321 IAMs_20 IAMs_20 02 58 31.1
comp=Z,1µm,20.0s
DOPR Dopca 128.44 322 ⇑P **PKiKP 01 56 20.7 +3.8**
GKP Gorka Klasztor 128.46 333 *e*PKP **PKiKP 01 56 16.9 +0.3**
KOLS Kolonicke sedl 128.67 326 *e*PKIKP **PKPdf 01 56 16.8 +0.3**
KOLS Kolonicke sedl 128.67 326 *e*PKP **PKPdf 01 56 16.8 +0.3**
SDV Santo Domingo 128.78 87 *e*P **PKPdf 01 56 17.6 -0.3**
ARR Arges 129.19 321 ⇓P **PKiKP 01 56 18.7 +0.3**
OJC Ojcow 129.22 329 *e*PKP **PKiKP 01 56 18.3 +0.1**

MARR	**Marisel-Cluj**	**129.43**	**324**	⇓P		**PKiKP**	**01 56 18.9**	**+0.1**
NIE	**Niedzica**	**129.45**	**328**	*e*PKP		**PKiKP**	**01 56 19.7**	**+0.9**
DRGR		**129.61**	**324**	⇓P		**PKPdf**	**01 56 15.8**	**-2.6**
DRGR		**129.61**	**324**	⇓PKiKP		**PKPdf**	**01 56 15.8**	**-2.6**
LANS	**Liptovska Anna**	**130.04**	**328**	*e*PKiKP		**PKiKP**	**01 56 21.1**	**+1.1**
LANS	**Liptovska Anna**	**130.04**	**328**	*e*PKP		**PKiKP**	**01 56 21.1**	**+1.1**
OKC	**Ostrava-Krasne**	**130.29**	**329**	AMS	AMS		02 54 10.0	
	comp=Z,2μm,21.9s							
BBSD	**Serra de San D**	**130.30**	**123**	*e*P		**PKiKP**	**01 56 21.2**	**-0.2**
GZR	**Gura Zlata**	**130.31**	**322**	⇑P		**PKPdf**	**01 56 20.2**	**+0.4**
GZR	**Gura Zlata**	**130.31**	**322**	⇑PKiKP		**PKPdf**	**01 56 20.2**	**+0.4**
STEB	**Steborice**	**130.41**	**330**	*e*PKP		**PKiKP**	**01 56 20.7**	**+0.1**
RUE	**Ruedersdorf**	**130.51**	**334**	*e*PKPdf		**PKPdf**	**01 56 19.7**	**-0.1**
	baz=43,slow=1.8							
KSP	**Ksiaz**	**130.53**	**331**	*e*PKP		**PKiKP**	**01 56 21.3**	**+0.4**
PSZ	**Piszkesteto**	**130.55**	**327**	⇓P		**PKiKP**	**01 56 22.0**	**+0.9**
PSZ	**Piszkesteto**	**130.55**	**327**	⇓PKiKP		**PKiKP**	**01 56 22.0**	**+0.9**
MORC	**Moravsky Berou**	**130.63**	**330**	*e*PKP		**PKPdf**	**01 56 19.2**	**-1.1**
MORC				*e*			01 56 34.3	
OSTC	**Ostas**	**130.76**	**331**	*e*PKiKP		**PKiKP**	**01 56 22.6**	**+1.3**
OSTC				MLR	MLR			
	comp=Z,5μm,23.2s							
OSTC	**Ostas**	**130.76**	**331**	*e*PKP		**PKiKP**	**01 56 22.6**	**+1.3**
OSTC				AMS	AMS		02 53 30.0	
	comp=Z,5μm,23.2s							
HERR	**Herculane**	**130.79**	**322**	⇑P		**PKPdf**	**01 56 20.9**	**+0.2**
BSEG	**Bad Segeberg**	**130.80**	**338**	*e*PKPdf		**PKPdf**	**01 56 20.5**	**+0.1**
	baz=43,slow=1.8							
BSEG				*ep*PKPdf		**pPKPdf**	**01 56 33.8**	**-1.3**
BSEG				*e*L	L		02 56 32.6	
	comp=Z,825nm,21.3s							
KRLC	**Kraliky**	**130.81**	**330**	*e*PP		**PP**	**01 58 32.3**	**-4.0**
KRLC				AMS	AMS		02 53 40.0	
	comp=Z,3μm,23.4s							
CHVC	**Chvalec**	**130.81**	**331**	AMS	AMS		02 53 40.0	
	comp=Z,5μm,22.3s							
DPC	**Dobruska-Polom**	**130.85**	**331**	*e*PP		**PP**	**01 58 30.6**	**-6.0**
DPC				AMS	AMS		02 53 10.0	
	comp=Z,4μm,22.9s							
BZS	**Buzias**	**130.88**	**323**	⇓P		**PKiKP**	**01 56 22.4**	**+0.7**
BZS	**Buzias**	**130.88**	**323**	⇓PKiKP		**PKiKP**	**01 56 22.4**	**+0.7**
UPC	**Upice**	**130.89**	**331**	AMS	AMS		02 53 40.0	
	comp=Z,5μm,21.8s							
JAVC	**Velka Javorina**	**131.15**	**329**	*e*PKP		**PKPdf**	**01 56 21.3**	**0.0**
JAVC				*e*			01 56 35.8	
MDVR	**Moldovita**	**131.27**	**322**	⇑P		**PKiKP**	**01 56 22.6**	**0.0**
VRAC	**Vranov**	**131.40**	**330**	*e*PKP		**PKPdf**	**01 56 20.9**	**-0.8**
VRAC				*e*			01 56 35.8	
BRG	**Berggiesshubel**	**131.59**	**333**	*e*PKPdf		**PKPdf**	**01 56 22.2**	**+0.2**
	baz=43,slow=1.8							
BRG	**Berggiesshubel**	**131.59**	**333**	⇓*e*PKPf			01 56 22.5	
BRG				Amp			01 56 24.6	
	comp=Z,14nm,1.5s							
BRG				⇓pPKPf			01 56 36.1	
BRG				Amp			01 56 37.6	
	comp=Z,45nm,1.6s							
BRG	**Berggiesshubel**	**131.59**	**333**	PP	PP		01 58 41.0	-0.2
BRG				SKP			01 59 44.8	
BRG				Amp			01 59 48.8	
	comp=Z,38nm,1.6s							
KRUC	**Moravsky**	**131.66**	**330**	*e*PKP		**PKPdf**	**01 56 20.6**	**-1.6**
KRUC				*e*			01 56 36.1	
FLTG	**Flechtingen**	**131.68**	**336**	*e*PKPdf		**PKPdf**	**01 56 21.9**	**-0.2**
	baz=43,slow=1.8							
FLTG				*ep*PKPdf		**pPKPdf**	**01 56 35.3**	**-1.5**
CLL	**Collm**	**131.69**	**334**	*i* PKiKP		**PKPdf**	**01 56 21.7**	**-0.4**
CLL				pmax	pmax			
	comp=Z,26nm,2.0s							
CLL	**Collm**	**131.69**	**334**	*e*PKPdf		**PKPdf**	**01 56 22.0**	**-0.1**
	baz=43,slow=1.8							
CLL				*e*L	L		02 57 34.4	
	comp=Z,1μm,21.6s							
CLL	**Collm**	**131.69**	**334**	*i* PKPdf		**PKPdf**	**01 56 21.7**	**-0.4**
	comp=Z,26nm,2.0s							
CLL				*i* pPKPdf		**pPKPdf**	**01 56 34.7**	**-2.3**
	comp=Z,43nm,1.8s							
CLL				*i* PP		**PP**	**01 58 39.9**	**-2.0**
CLL				*i* pPP			01 58 53.2	
CLL				*i* sPP			01 59 00.2	
CLL				*i* SKPbc		**SKPab**	**01 59 44.5**	**+0.1**
	comp=Z,53nm,1.8s							
CLL				*e*PKSbc		**PKSbc**	**01 59 55.0**	**+6.1**
CLL				*i* sSKPbc			02 00 09.8	
CLL				*e*SKSac		**SKSdf**	**02 03 30.0**	**+0.6**
CLL				*e*SKSP			02 08 36.0	
CLL				*e*SP		**SP**	**02 08 54.0**	**+3.8**
CLL				*e*PPS	PPS		02 10 30.0	
CLL				*ex*	x		02 12 00.0	
RICC	**Richard**	**131.75**	**332**	AMS	AMS		02 52 30.0	
	comp=Z,3μm,23.5s							
PRU	**Pruhonice**	**131.93**	**332**	AMS	AMS		02 55 00.0	
	comp=Z,3μm,23.0s							
HSKC	**Hora Svate Kat**	**132.01**	**333**	AMS	AMS		02 57 00.0	
	comp=Z,2μm,19.9s							
ASSE	**Asse, Remlinge**	**132.06**	**336**	*ep*PKPdf	pPKPdf		01 56 35.5	-2.1
RETH	**Rethem/Aller,**	**132.10**	**337**	*e*PKPdf		**PKPdf**	**01 56 23.0**	**+0.2**
	baz=43,slow=1.8							
RETH				*ep*PKPdf		**pPKPdf**	**01 56 36.2**	**-1.5**
MORH	**Mrgy, Hungar**	**132.25**	**325**	⇓P		**PKPdf**	**01 56 21.4**	**-1.9**
NEUB	**Neuenburg**	**132.29**	**334**	*e*PKPdf		**PKPdf**	**01 56 23.4**	**+0.1**
	baz=43,slow=1.8							
CLZ	**Clausthal**	**132.40**	**336**	*e*PKPdf		**PKPdf**	**01 56 22.5**	**-1.0**
	baz=43,slow=1.8							
ZVC	**Zvikov**	**132.48**	**331**	AMS	AMS		02 55 10.0	
	comp=Z,4μm,22.4s							
TANN	**Tannenbergstha**	**132.58**	**333**	*e*PKPdf		**PKPdf**	**01 56 23.0**	**-0.9**
	baz=43,slow=1.8							
RONA	**Rosalia, Austr**	**132.60**	**328**	*e*PKP		**PKPdf**	**01 56 23.4**	**-0.6**
	comp=Z,20nm,1.7s							
RONA				*e*PP		**PP**	**01 58 49.6**	**+1.6**
	comp=Z,0.9nm,0.8s							
PLN	**Plauen**	**132.66**	**334**	*e*PKPdf		**PKPdf**	**01 56 23.8**	**-0.2**
	baz=43,slow=1.8							
CONA	**Conrad Observa**	**132.67**	**329**	*i* PKP		**PKPdf**	**01 56 23.5**	**-0.8**
	comp=Z,19nm,1.2s							
VILB	**Vilhena**	**132.68**	**118**	*e*P		**PKPdf**	**01 56 24.5**	**-0.6**
NKC	**Novy Kostel**	**132.72**	**333**	*e*PP	PP		01 58 39.6	-8.9
NKC				AMS	AMS		02 55 20.0	
	comp=Z,3μm,22.1s							
MOX	**Moxa**	**132.78**	**334**	*e*PKPdf		**PKPdf**	**01 56 23.9**	**-0.4**
	baz=43,slow=1.8							
MOX				*ep*PKPdf		**pPKPdf**	**01 56 37.3**	**-1.8**
MOX				*e*L	L		02 54 43.4	
	comp=Z,1μm,21.7s							
CKRC	**Cesky Krumlov**	**132.85**	**331**	*e*PKiKP		**PKPdf**	**01 56 24.0**	**-0.5**
CKRC				MLR	MLR			
	comp=Z,4μm,23.3s							
CKRC	**Cesky Krumlov**	**132.85**	**331**	*e*PKP		**PKPdf**	**01 56 24.0**	**-0.5**
CKRC				*e*PP		**PP**	**01 58 42.9**	**-6.5**
CKRC				*e*SKS		**SKPab**	**01 59 52.5**	**+3.0**
CKRC				AMS	AMS		02 55 00.0	
	comp=Z,4μm,23.3s							
KHC	**Kasperske Hory**	**132.98**	**331**	*e*PKiKP		**PKiKP**	**01 56 26.4**	**+0.5**
KHC				*e*			01 58 46.6	
KHC				MLR	MLR			
	comp=Z,4μm,22.7s							
KHC	**Kasperske Hory**	**132.98**	**331**	*e*PKP		**PKiKP**	**01 56 26.4**	**+0.5**
KHC				*e*PP		**PP**	**01 58 46.6**	**-3.7**
KHC				*e*SKS		**SKiKP**	**01 59 54.3**	**-3.6**
KHC				AMS	AMS		02 54 10.0	
	comp=Z,4μm,22.7s							
IBBN	**Ibbenburen**	**133.04**	**338**	*e*PKPdf		**PKPdf**	**01 56 24.0**	**-0.6**
	baz=43,slow=1.8							
IBBN				*ep*PKPdf		**pPKPdf**	**01 56 38.5**	**-1.0**
GEC2	**GERESS Array S**	**133.12**	**331**	*e*PKPdf		**PKPdf**	**01 56 24.4**	**-0.7**
	baz=43,slow=1.8							
GEC2				*e*L	L		02 55 50.1	
	comp=Z,4μm,22.0s							
GERES	**GERESS Array B**	**133.12**	**331**	PKP		**PKPdf**	**01 56 25.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=116,slow=3.1,SNR=3.7							
ROTZ	**Rotzenmuhle**	**133.16**	**333**	*e*PKPdf		**PKPdf**	**01 56 24.4**	**-0.6**
	baz=43,slow=1.8							
ARSA	**Arzberg**	**133.29**	**328**	*e*PKP		**PKPdf**	**01 56 24.9**	**-0.4**
	comp=Z,9.1nm,1.7s							
ARSA				*e*PP		**PP**	**01 58 52.7**	**+0.4**
	comp=Z,5.0nm,1.3s							
WET	**Wettzell**	**133.30**	**332**	*e*PKPdf		**PKPdf**	**01 56 23.9**	**-1.4**
	baz=43,slow=1.8							
WET				*e*L	L		02 55 51.6	
	comp=Z,2μm,21.8s							
UBBA	**Unterbreizbach**	**133.33**	**335**	*e*PKPdf		**PKPdf**	**01 56 24.9**	**-0.2**
	baz=43,slow=1.8							
MOA	**Molln**	**133.53**	**330**	*e*PKP		**PKPdf**	**01 56 25.9**	**+0.1**
	comp=Z,0.4nm,0.3s							
MOA				*e*PP		**PP**	**01 58 56.4**	**+2.6**
	comp=Z,0.3nm,0.2s							
EKA	**Eskdalemuir Ar**	**133.53**	**348**	PKP		**PKPdf**	**01 56 24.4**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=3.8,slow=2.5,SNR=3.4							
GRF	**Grafenberg Arr**	**133.65**	**333**	*e*PKPdf		**PKPdf**	**01 56 24.2**	**-1.7**
	baz=43,slow=1.8							
GRF				*ep*PKPdf		**pPKPdf**	**01 56 40.3**	**-0.5**
GRF				*e*L	L		02 57 17.7	
	comp=Z,2μm,21.5s							
TSUM	**Tsumeb**	**133.73**	**231**	IAMs_20	IAMs_20		02 51 48.9	
	comp=Z,1μm,18.0s							
SESA	**Seetaler Alpe,**	**133.87**	**329**	*e*PKP		**PKPdf**	**01 56 27.2**	**+0.6**
	comp=Z,6.3nm,1.1s							
SESA				*e*PP		**PP**	**01 58 54.6**	**-1.6**
	comp=Z,13nm,1.3s							
SOKA	**Soboth**	**133.92**	**328**	*e*PKP		**PKPdf**	**01 56 26.1**	**-0.5**
	comp=Z,13nm,2.0s							
SOKA				*e*PP		**PP**	**01 58 54.5**	**-1.9**
	comp=Z,8.0nm,1.4s							
BIOA	**Bad Ischl, Aus**	**133.95**	**330**	*e*PKP		**PKPdf**	**01 56 26.5**	**-0.1**
	comp=Z,0.8nm,0.3s							
BIOA				*e*PP		**PP**	**01 58 57.7**	**+1.2**
	comp=Z,0.8nm,0.3s							
PDG	**Podgorica**	**134.04**	**321**	IAMs_20	IAMs_20		03 01 13.2	
	comp=Z,1μm,21.0s							
TNS	**Taunus Mts**	**134.42**	**336**	*e*L	L		02 56 41.4	
	comp=Z,2μm,21.9s							
KBA	**Koelnbreinsper**	**134.51**	**329**	*e*PKP		**PKPdf**	**01 56 27.4**	**-0.4**
	comp=Z,3.2nm,1.0s							
KBA				*e*PP		**PP**	**01 58 59.8**	**-0.4**
	comp=Z,9.2nm,1.3s							
LESA	**Schwarzleotal**	**134.60**	**330**	*e*PKP		**PKPdf**	**01 56 27.0**	**-0.9**
	comp=Z,1.3nm,0.5s							
LESA				*e*PP		**PP**	**01 59 00.3**	**-0.4**
	comp=Z,16nm,1.8s							
MYKA	**Terra Mystica**	**134.66**	**329**	*e*PKP		**PKPdf**	**01 56 26.7**	**-1.3**
	comp=Z,4.0nm,1.0s							
FUR	**Furstenfeldbru**	**134.74**	**332**	*e*L	L		02 57 14.8	
	comp=Z,2μm,21.9s							
WATA	**Walderalm**	**135.20**	**331**	*e*PP		**PP**	**01 59 06.2**	**+1.7**
	comp=Z,0.8nm,0.4s							
WTTA	**Wattenberg**	**135.22**	**331**	*e*PP		**PP**	**01 59 05.1**	**+0.4**
	comp=Z,6.4nm,1.2s							
STU	**Stuttgart**	**135.22**	**334**	IAMs_20	IAMs_20		03 03 44.2	
	comp=Z,1μm,19.0s							
MOTA	**Moosalm**	**135.41**	**331**	*e*PKP		**PKPdf**	**01 56 28.5**	**-1.0**
	comp=Z,6.9nm,1.3s							
MOTA				*e*PP		**PP**	**01 59 05.3**	**-0.5**
	comp=Z,5.1nm,1.1s							
SQTA	**Sankt Quirin**	**135.45**	**331**	*e*PKP		**PKPdf**	**01 56 28.5**	**-1.0**
	comp=Z,1.0nm,0.6s							
SQTA				*e*PP		**PP**	**01 59 04.9**	**-1.2**
	comp=Z,10nm,1.6s							
RETA	**Reutte**	**135.47**	**332**	*e*PKP		**PKPdf**	**01 56 28.5**	**-1.0**
	comp=Z,0.8nm,0.6s							
RETA				*e*PP		**PP**	**01 59 07.1**	**+1.0**
	comp=Z,6.7nm,1.7s							
UCC	**Uccle**	**135.49**	**339**	*d*PKP		**PKiKP**	**01 56 31.3**	**+0.5**
UCC				*dp*PKP		**pPKPdf**	**01 56 43.4**	**-0.7**
BMRD	**Maredsous**	**135.76**	**339**	*d*PKP		**PKPdf**	**01 56 30.0**	**+0.2**
BMRD				*dp*PKP		**pPKPdf**	**01 56 45.2**	**+0.6**
WLF	**Walferdange**	**135.77**	**337**	*d*PKP		**PKPdf**	**01 56 29.8**	**-0.1**
WLF				*dp*PKP		**pPKPdf**	**01 56 44.2**	**-0.5**
WLF	**Walferdange**	**135.77**	**337**	*e*PKPdf		**PKPdf**	**01 56 30.4**	**+0.5**
	baz=43,slow=1.8							
FETA	**Feichten**	**135.82**	**331**	*e*PKP		**PKPdf**	**01 56 28.5**	**-1.8**
	comp=Z,2.1nm,0.9s							
BFO	**Black Forest**	**135.93**	**334**	IAMs_20	IAMs_20		02 58 55.0	
	comp=Z,1μm,21.0s							
BFO	**Black Forest**	**135.93**	**334**	*e*L	L		02 58 56.0	
	comp=Z,1μm,20.7s							
DOU	**Dourbes**	**135.99**	**339**	*d*PKPdf		**PKPdf**	**01 56 29.9**	**-0.4**
DAVA	**Damuels**	**136.03**	**332**	*e*PKP		**PKPdf**	**01 56 28.6**	**-2.1**
	comp=Z,1.3nm,1.0s							
DAVA				*e*PP		**PP**	**01 59 08.1**	**-1.6**
	comp=Z,0.2nm,0.3s							
TIP	**Timpagrande**	**137.39**	**318**	IAMs_20	IAMs_20		03 01 55.6	
	comp=Z,2μm,22.0s							
BOAV	**Boa Vista**	**137.68**	**98**	*e*P		**PKPdf**	**01 56 33.5**	**-1.0**
CBE	**Ff, Capester**	**137.87**	**78**	IAMs_20	IAMs_20		02 51 54.5	
	comp=Z,846nm,22.0s							
CEL	**Celeste**	**138.45**	**318**	IAMs_20	IAMs_20		03 01 24.9	
	comp=Z,1μm,22.0s							
SNDB	**Serra Nova Dou**	**140.69**	**124**	*e*P		**PKiKP**	**01 56 43.2**	**+0.6**
BDFB	**Brasilia**	**141.09**	**131**	PKhKP	PKPpre		01 56 36.1	
	comp=Z,1.7nm,0.6s,baz=14,slow=2.8,SNR=4.5							
VSL	**Vilasalto**	**141.76**	**324**	IAMs_20	IAMs_20		03 04 31.6	
	comp=Z,1μm,20.0s							
RIB01	**Linhares ES**	**143.53**	**144**	*e*P		**PKPdf**	**01 56 45.6**	**+0.7**
SJMB	**Sao Joao De Ma**	**143.53**	**142**	*e*P		**PKPdf**	**01 56 45.0**	**+0.1**
BSFB	**Barra de Sao F**	**143.64**	**143**	*e*P		**PKPdf**	**01 56 46.6**	**+1.5**
JANB	**Januaria**	**144.14**	**134**	*e*P		**PKPdf**	**01 56 45.2**	**-0.9**
KEST	**Kesra**	**144.19**	**319**	PKP	PKPbc		01 56 44.5	+0.7
	comp=Z,5.4nm,0.5s,baz=61,slow=1.7,SNR=27							
KEST	**Kesra**	**144.19**	**319**			**PKPab**	**01 56 43.6**	**+0.1**
MAHO	**Mahon**	**144.25**	**329**	IAMs_20	IAMs_20		03 02 22.8	
	comp=Z,1μm,22.0s							
ARCA	**Araçuai, MG**	**144.45**	**139**	*e*P		**PKPdf**	**01 56 46.2**	**-0.4**
CMAH	**Djebel Manchou**	**144.82**	**322**	P		**PKPab**	**01 56 45.3**	**-0.5**
PRPB	**Parauapebas**	**144.88**	**117**	*e*P		**PKPdf**	**01 56 47.2**	**-0.2**
CKFL	**Kef-Lekhel**	**145.39**	**323**	P		**PKPbc**	**01 56 47.2**	**-0.5**
SMTB	**Santa Maria do**	**145.43**	**123**	*e*P		**PKPbc**	**01 56 47.8**	**-0.6**
SDBA	**SAO DESIDERIO**	**145.46**	**130**	*e*P		**PKPdf**	**01 56 48.4**	**-0.1**
CASM	**Ain Smara**	**145.62**	**323**	P		**PKPdf**	**01 56 47.9**	**-0.2**
DFRA	**Djebel Bou Aff**	**145.79**	**324**	P		**PKPab**	**01 56 49.3**	**-0.1**
CTEI	**Djebel Teioual**	**145.80**	**322**	P		**PKPdf**	**01 56 48.1**	**-0.4**
PBRG	**Braganca**	**147.00**	**344**	*e*PKP		**PKPdf**	**01 56 49.2**	**-1.0**
CMC01	**Camacan, BA**	**147.11**	**141**	*e*P		**PKPdf**	**01 56 51.4**	**+0.3**
PGAV	**Gavieira, Arco**	**147.25**	**346**	*e*PKP		**PKPdf**	**01 56 49.1**	**-1.7**
PGAV				*e*PP		**PP**	**02 00 19.4**	**+1.9**
PGAV				*e*SS	SS		02 19 16.7	+1.7
PGAV				*e*LQ	LQ		02 38 44.1	
PGAV				*e*LR	LR		02 49 12.8	
PGAV				*i* IAMs_20	IAMs_20		03 07 02.2	
	comp=Z,650nm,20.0s							
PCAB	**Cabril**	**147.44**	**345**	*e*PKP		**PKiKP**	**01 56 55.8**	**+0.1**
MVO	**Moncorvo**	**147.68**	**343**	*e*PKP		**PKPbc**	**01 56 53.0**	**-1.3**
MVO				*e*LQ	LQ		02 41 30.7	
MVO				*e*LR	LR		02 47 59.6	
MVO				*i* IAMs_20	IAMs_20		03 03 38.6	
	comp=Z,934nm,22.0s							
POLO	**Lamas de Olo**	**147.69**	**345**	*e*PKP		**PKPdf**	**01 56 50.1**	**-1.3**
PVRL	**Vila Real**	**147.76**	**344**	*e*PKP		**PKPbc**	**01 56 54.1**	**-0.3**
ESDC	**Sonseca Array**	**148.04**	**338**	PKPbc		**PKPbc**	**01 56 54.5**	**-0.7**
	comp=Z,11nm,1.2s,baz=18,slow=2.5,SNR=18							
ESDC				PP		**PP**	**02 00 20.5**	**-1.7**
	comp=Z,2.3nm,1.1s,baz=21,slow=5.8,SNR=3.2							
ESDC	**Sonseca Array**	**148.04**	**338**			**PKPdf**	**01 56 52.6**	**+0.6**
PTO	**Porto**	**148.12**	**346**	*e*PKP		**PKPbc**	**01 56 54.8**	**-0.5**
PAB	**San Pablo**	**148.29**	**339**	PKiKP		**PKPdf**	**01 56 53.1**	**+0.6**
PAB	**San Pablo**	**148.29**	**339**			**PKPdf**	**01 56 53.1**	**+0.6**
PAB	**San Pablo**	**148.29**	**339**	IAMs_20	IAMs_20		03 07 28.6	
	comp=Z,1μm,22.0s							
PVIS	**Viseu**	**148.33**	**344**	*e*PKP		**PKPbc**	**01 56 54.8**	**-1.2**
MTE	**Manteigas**	**148.53**	**344**	*e*PKP		**PKPbc**	**01 56 56.0**	**-0.5**
MTE				*e*SS	SS		02 19 31.4	+2.0
MTE				*e*LQ	LQ		02 39 23.1	
MTE				*e*LR	LR		02 48 14.1	
MTE				*i* IAMs_20	IAMs_20		03 04 41.6	
	comp=Z,784nm,22.0s							
MTE	**Manteigas**	**148.53**	**344**	IAMs_20	IAMs_20		03 04 10.3	
	comp=Z,1μm,22.0s							
PCBR	**Castelo Branco**	**149.03**	**343**	*e*PKP		**PKPbc**	**01 56 56.3**	**-1.4**
PCAS	**Casmilo, Conde**	**149.11**	**345**	*e*PKP		**PKPbc**	**01 56 56.8**	**-1.1**
PMRV	**Marv??o**	**149.39**	**343**	*e*PKP		**PKPdf**	**01 56 54.3**	**+0.1**
PMRV				*e*SS	SS		02 19 47.3	+8.3
PMRV				*e*LQ	LQ		02 38 42.1	
PMRV				*e*LR	LR		02 50 46.4	
PMRV				*i* IAMs_20	IAMs_20		03 04 56.4	
	comp=Z,1μm,22.0s							
PSARD	**Sardoal**	**149.45**	**344**	*e*PKP		**PKPbc**	**01 56 57.6**	**-1.1**
PSBE	**So Bento**	**149.70**	**345**	*e*PKP		**PKPbc**	**01 56 58.6**	**-0.8**
NBPN	**Ponto Novo - B**	**149.93**	**134**	*e*P		**PKPdf**	**01 56 55.9**	**+0.1**
PMTG	**Montargil**	**149.96**	**344**	*e*PKP		**PKPbc**	**01 56 59.3**	**-0.7**
PARRA	**Arraiolos**	**150.15**	**343**	*e*PKP		**PKPbc**	**01 56 54.2**	**-1.2**
PGRA	**Graciosa**	**150.29**	**15**	*e*PKP		**PKPbc**	**01 56 59.9**	**-0.9**
PMAFR	**Mafra**	**150.35**	**345**	*e*PKP		**PKPdf**	**01 56 53.6**	**-2.1**
EVO	**Evora**	**150.40**	**343**	*e*PKP		**PKPdf**	**01 56 55.7**	**-0.1**
PBAR	**Barrancos**	**150.44**	**341**	*e*PKP		**PKiKP**	**01 57 01.9**	**0.0**
MOE	**Montemor**	**150.51**	**343**	*e*PKP		**PKPdf**	**01 56 56.9**	**+0.9**
CALA	**Caldeira**	**150.52**	**16**	*e*PKP		**PKPbc**	**01 56 59.6**	**-1.9**
HOR	**Horta**	**150.59**	**16**	*e*PKP		**PKPdf**	**01 56 57.8**	**+1.7**
EDA	**Edea**	**150.68**	**259**			**PKPdf**	**01 56 58.7**	**+1.8**
EDA				IAMs_20	IAMs_20		03 03 13.3	
	comp=Z,994nm,20.0s							
PAGU	**Agualva, Azore**	**150.73**	**14**	*e*PKP		**PKPdf**	**01 56 59.0**	**+2.7**
ADH	**Angra Heroismo**	**150.83**	**14**	*e*PKP		**PKPbc**	**01 57 00.8**	**-1.3**
PBEJ	**Beja**	**150.83**	**342**	*e*PKP		**PKPbc**	**01 57 01.9**	**-0.2**
PLOUS	**Minas do Lousa**	**150.98**	**343**	*e*PKP		**PKPdf**	**01 56 57.0**	**+0.3**
MESJ	**Messejana**	**151.10**	**343**	*e*PKPdf		**PKPdf**	**01 56 56.9**	**-0.1**
MESJ				*e*PP		**PP**	**02 00 41.6**	**+1.9**
MESJ				IAMs_20	IAMs_20		03 04 33.4	
	comp=Z,2μm,24.6s							
MESJ	**Messejana**	**151.10**	**343**	*e*PKP		**PKPbc**	**01 57 02.8**	**0.0**
MESJ	**Messejana**	**151.10**	**343**	*e*PKiKP		**PKPdf**	**01 56 56.8**	**-0.1**
MESJ				*e*			02 00 41.7	
PCVE	**Castro Verde**	**151.24**	**342**	*e*PKP		**PKiKP**	**01 57 03.8**	**+0.2**
PVAQ	**Vaqueiros**	**151.36**	**342**	*e*PKP		**PKPdf**	**01 56 55.8**	**-1.6**
PVAQ				*e*PP		**PP**	**02 00 45.5**	**+4.3**
PVAQ				*e*SS	SS		02 19 55.4	-5.4
PVAQ				*e*LQ	LQ		02 39 47.7	
PVAQ				*e*LR	LR		02 52 03.6	
PVAQ				*i* IAMs_20	IAMs_20		03 06 06.6	
	comp=Z,2μm,22.0s							
PTEO	**Sao Teotonio**	**151.52**	**343**	*e*PKP		**PKPdf**	**01 56 55.3**	**-2.2**
PBDV	**Barranco-do-Ve**	**151.57**	**342**	*e*PKP		**PKPbc**	**01 57 03.0**	**-0.9**
MORF	**Marmelete**	**151.73**	**343**	*e*PKPdf		**PKPdf**	**01 56 57.8**	**-0.1**
MORF				*e*PP		**PP**	**02 00 45.2**	**+1.8**
MORF				IAMs_20	IAMs_20		03 02 45.4	
	comp=E,2μm,25.8s							
MORF	**Marmelete**	**151.73**	**343**	*e*PKIKP		**PKPdf**	**01 56 57.8**	**-0.1**
MORF				*e*			02 00 45.2	
PSET	**Sete Cidades**	**151.96**	**12**	*e*PKP		**PKPdf**	**01 57 00.5**	**+2.3**
PDA	**Ponta Delgada**	**152.04**	**12**	*e*PKP		**PKPbc**	**01 57 01.7**	**-3.2**
CMLA	**Cha da Macela**	**152.06**	**12**	*e*PKP		**PKPbc**	**01 57 04.4**	**-0.6**
PSMN	**Pico do Norte,**	**152.88**	**11**	*e*PKP		**PKPdf**	**01 57 03.2**	**+3.6**
MD01	**Midelt array s**	**154.23**	**332**			**PKPdf**	**01 57 01.3**	**-0.6**
AVE	**Averroes**	**154.97**	**337**	IAMs_20	IAMs_20		03 11 29.4	
	comp=Z,1μm,21.0s							
RCBR	**Riachuelo**	**156.45**	**132**	IAMs_20	IAMs_20		03 01 48.8	
	comp=Z,997nm,22.0s							
PMOZ	**Porto Moniz, M**	**157.64**	**357**	*e*PP		**PP**	**02 01 15.8**	**-0.5**
PMOZ				*e*SS	SS		02 21 18.3	+10
PMOZ

KDJ ⇑eS Sn 02 23 15.6 +1.1
ANVS Anan'yevo 1.47 322 ⇑eP Pn 02 22 57.0 -0.1
ANVS ⇑eS Sg 02 23 17.6 +0.8
SATY Saty 1.48 346 P Pb 02 22 58.0 +0.3
15nm,0.2s
SATY S Sb 02 23 17.2 +0.2
91nm,0.2s
SATY Saty 1.48 346 eP Pb 02 22 58.0 +0.3
15nm,0.2s
SATY eS Sb 02 23 17.2 +0.2
91nm,0.2s
UZB Uzynbulak 1.53 4 P Pn 02 22 57.8 +0.1
10nm,0.2s
UZB S Sn 02 23 17.0 -1.3
32nm,0.2s
UZB Uzynbulak 1.53 4 eP Pn 02 22 57.8 +0.1
UZB eS Sn 02 23 17.0 -1.3
SHLS Shalkode 1.59 15 P Pg 02 23 00.4 +0.5
15nm,0.2s
SHLS S Sg 02 23 21.4 +0.8
85nm,0.4s
SHLS Shalkode 1.59 15 eP Pg 02 23 00.4 +0.5
15nm,0.2s
SHLS eS Sg 02 23 21.7 +1.1
85nm,0.4s
PDGK Podgornoye 1.76 14 ⇓Pg Pn 02 23 00.4 -0.6
2.4nm,0.4s
PDGK ⇑Lg Lg 02 23 23.5
22nm,0.5s
KPKS Kokpek 1.85 355 P Pb 02 23 03.3 -0.6
0.5nm,0.2s
KPKS S Sn 02 23 26.4 +0.3
60nm,0.1s
KPKS Kokpek 1.85 355 eP Pb 02 23 03.3 -0.6
0.5nm,0.2s
KPKS eS Sn 02 23 26.4 +0.3
60nm,0.1s
KURS Kuram 1.94 344 P Pb 02 23 05.8 +0.3
9.1nm,0.3s
KURS S Sb 02 23 30.5 +0.4
37nm,0.5s
KURS Kuram 1.94 344 eP Pb 02 23 05.8 +0.3
9.1nm,0.3s
KURS eS Sb 02 23 30.5 +0.4
37nm,0.5s
TNSS Tian-Shan 2.02 315 Pg Pg 02 23 08.7 +0.6
4.4nm,0.2s
TNSS Lg Lg 02 23 35.7
9.7nm,0.5s
TNSS Tian-Shan 2.02 315 eP Pg 02 23 08.7 +0.6
4.4nm,0.2s
TNSS eS Sg 02 23 35.6 +1.4
9.7nm,0.5s
MDOK Medeo 2.06 319 Pg Pg 02 23 08.8 -0.1
8.6nm,0.3s
MDOK Lg Lg 02 23 35.7
31nm,0.4s
MDOK Medeo 2.06 319 eP Pg 02 23 08.8 -0.1
8.6nm,0.3s
MDOK eS Sg 02 23 35.6 +0.2
31nm,0.4s
ULHL Ulahol 2.07 288 ⇑eP Pb 02 23 06.8 -1.0
ULHL ⇑eS Sb 02 23 34.4 +0.4
KTMS Ketmen 2.12 30 Pg Pb 02 23 08.4 -0.2
1.9nm,0.2s
KTMS Lg Lg 02 23 34.7
13nm,0.2s
KTMS Ketmen 2.12 30 eP Pb 02 23 08.4 -0.2
1.9nm,0.2s
KTMS eS Sb 02 23 34.7 -0.6
13nm,0.2s
NRN Naryn 2.18 266 ⇓eP Pb 02 23 08.8 -0.9
NRN ⇓eS Sb 02 23 37.9 +0.7
IZV Izvestkoviy 2.20 311 Pg Pg 02 23 11.9 +0.3
9.2nm,0.2s
IZV Lg Lg 02 23 41.0
28nm,0.2s
IZV Izvestkoviy 2.20 311 eP Pg 02 23 11.9 +0.3
IZV eS Sg 02 23 41.0 +0.8
BOOM Boomskoye usch 2.36 293 ⇓eP Pn 02 23 10.6 +1.3
BOOM ⇓eS Sb 02 23 41.1 -1.2
BLB Baldybastay 2.49 353 Pg Pb 02 23 15.5 +0.6
7.8nm,0.2s
BLB Lg Lg 02 23 47.2
19nm,0.1s
KST Kastek 2.59 304 Pg Pg 02 23 19.2 +0.1
2.9nm,0.3s
KST Lg Lg 02 23 53.5
39nm,0.7s
KST Kastek 2.59 304 eP Pg 02 23 19.2 +0.1
2.9nm,0.3s
KST eS Sg 02 23 53.5 +0.8
39nm,0.7s
KTBS Karatobe 2.65 323 Pg Pg 02 23 19.3 -0.8
0.7nm,0.1s
KTBS Lg Lg 02 23 53.5
32nm,0.6s
KTBS Karatobe 2.65 323 eP Pg 02 23 19.3 -0.8
0.7nm,0.1s
KTBS eS Sg 02 23 53.5 -0.9
32nm,0.6s
ARXS Arharly 2.70 344 Pg Pb 02 23 19.9 +1.4
2.5nm,0.3s
ARXS Lg Lg 02 23 54.6
21nm,0.3s
ARXS Arharly 2.70 344 eP Pb 02 23 19.9 +1.4
2.5nm,0.3s
ARXS eS Sg 02 23 54.6 -1.7
21nm,0.3s
KNOS Konyrlen 2.74 4 Pg Pb 02 23 19.9 +0.6
2.4nm,0.2s
KNOS Lg Lg 02 23 54.4
24nm,0.1s
DJR Jarkent 2.79 13 Pg Pb 02 23 20.3 +0.4
2.7nm,0.2s
DJR Lg Lg 02 23 55.4
17nm,0.2s
KRBS Karabastau 3.15 312 Pg Pg 02 23 28.9 -0.8
1.1nm,0.4s
KRBS Lg Lg 02 24 10.0
2.1nm,0.4s
KRBS Karabastau 3.15 312 eP Pg 02 23 28.9 -0.8
1.1nm,0.4s
KRBS eS Sg 02 24 10.0 -0.5
2.1nm,0.4s
AAK Ala-Archa 3.42 289 ⇑Lg Lg 02 24 20.0
1.3nm,0.5s
BTLS Baital 4.91 316 Pg Pg 02 24 01.2 -2.3
0.9nm,0.2s
BTLS Lg Lg 02 25 05.3
2.6nm,0.4s
BTLS Baital 4.91 316 eP Pg 02 24 01.2 -2.3
0.9nm,0.2s
BTLS eS Sg 02 25 05.3 -1.9
2.6nm,0.4s

*AEIC **18** 02:27:01.9±3.1,53°.10N±0°.03×166°.61W±0°.06,h33$^{km}_{\pm 4km}$, Error ellipse: s-maj=6.1km s-min=3.5km az=129.0*
*IDC **18** 02:27:01.8±2.6,53°.29N×166°.83W,h44$^{km}_{\pm 23km}$,mb3.9/27, mbtmp4.1/29,ML4.0/2,MS4.2/1,Error ellipse: s-maj=19.7km s-min=11.1km az=178.0*
*NEIC **18** 02:27:03.3±2.0,53°.21N±0°.05×166°.74W±0°.07,h56$^{km}_{\pm 2km}$, mb4.3/135,ML4.3/12,ML4.2(AEIC),Error ellipse: s-maj=8.8km s-min=4.4km az=148.0*
ISC 18 02:27:02.9±1.1,53°.15N±0°.09×166°.67W±0°.04,h56$^{km}_{\pm 8km}$, n196,σ1$^{s}_{\pm 22}$/147,mb4.3/61,Fox Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
MGOD	**Makushin Gods**	**0.66**	**350**		**Pn**	**02 27 15.6**	**-0.8**
MGOD					**Sn**	**02 27 26.4**	**+0.2**
MAPS	**Pakushin South**	**0.68**	**347**		**Pn**	**02 27 16.2**	**-0.4**
MAPS					**Sn**	**02 27 27.0**	**+0.4**
UNV	**Unalaska Valle**	**0.70**	**8**	P	**Pn**	**02 27 15.6**	**-1.3**
UNV	**Unalaska Valle**	**0.70**	**8**	S	**Sn**	**02 27 25.6**	**-1.5**
UNV	**Unalaska Valle**	**0.70**	**8**		**Pn**	**02 27 15.7**	**-1.3**
UNV				Sn	**Sn**	**02 27 25.3**	**-1.8**
UNV				IAML		02 27 33.6	
	comp=E,5μm,0.6s						
MNAT	**Makushin Natee**	**0.74**	**360**		**Pn**	**02 27 16.6**	**-0.7**
MNAT					**Sn**	**02 27 28.0**	**+0.2**
OKFG	**Magazine Ridge**	**0.79**	**290**		**Pn**	**02 27 17.1**	**-0.8**
OKTU	**Okmok Mt. Tuli**	**0.85**	**287**		**Pn**	**02 27 18.2**	**-0.6**
OKNC	**Okmok New Cone**	**0.92**	**290**		**Pn**	**02 27 19.1**	**-0.6**
OKNC					**Sn**	**02 27 32.2**	**+0.1**
OKCE	**Okmok Cone E**	**0.94**	**288**		**Pn**	**02 27 19.4**	**-0.5**
ZRO	**Akutan Zero**	**1.03**	**23**		**Pn**	**02 27 20.7**	**-0.5**
ZRO					**Sn**	**02 27 35.4**	**+0.7**
AKBBA	**Akutan Broad B**	**1.05**	**25**		**Sn**	**02 27 35.5**	**+0.4**
AKV	**Akutan Volcano**	**1.07**	**23**		**Pn**	**02 27 21.2**	**-0.4**
LVA	**Lava Point**	**1.08**	**20**		**Pn**	**02 27 21.6**	**-0.2**
LVA				Sn	**Sn**	**02 27 37.0**	**+1.1**
AKUT	**Akutan**	**1.12**	**28**	P	**Pn**	**02 27 21.4**	**-0.9**
AKUT	**Akutan**	**1.12**	**28**	S	**Sn**	**02 27 37.7**	**+0.9**
AKUT	**Akutan**	**1.12**	**28**		**Pn**	**02 27 21.8**	**-0.6**
AKUT				Sn	**Sn**	**02 27 37.0**	**+0.2**
AKUT				IAML		02 27 38.8	
	comp=E,4μm,0.4s						
AKUT				IAML		02 27 38.8	
	comp=N,5μm,0.6s						
AKGG	**Akutan Green G**	**1.13**	**21**		**Sn**	**02 27 37.7**	**+0.7**
SDPT	**Sand Point**	**4.25**	**56**	P	**Pn**	**02 28 04.5**	**-0.5**
SDPT	**Sand Point**	**4.25**	**56**		**Pn**	**02 28 04.5**	**-0.5**
SDPT				IAML		02 29 10.9	
	comp=E,336nm,1.3s						
SDPT				IAML		02 29 19.8	
	comp=N,441nm,1.0s						
CNBA	**Chernabura Isl**	**4.50**	**65**		**Pn**	**02 28 07.1**	**-1.4**
CHNA	**Chernabura Isl**	**4.51**	**65**	P	**Pn**	**02 28 07.1**	**-1.4**
CHNA	**Chernabura Isl**	**4.51**	**65**	S	**Sn**	**02 28 58.5**	**-1.0**
SPIA	**Saint Paul Isl**	**4.53**	**335**	P	**Pn**	**02 28 11.1**	**+2.4**
SPIA	**Saint Paul Isl**	**4.53**	**335**	S	**Sn**	**02 29 02.5**	**+2.5**
SPIA	**Saint Paul Isl**	**4.53**	**335**		**Pn**	**02 28 10.7**	**+2.0**
ATKA	**Atka Island**	**4.67**	**261**	P	**Pn**	**02 28 11.5**	**+0.7**
ATKA	**Atka Island**	**4.67**	**261**	S	**Sn**	**02 29 03.6**	**0.0**
ATKA	**Atka Island**	**4.67**	**261**		**Pn**	**02 28 11.5**	**+0.7**
VNFG	**Fog Glacier, M**	**5.19**	**50**		**Pn**	**02 28 18.4**	**+0.5**
VNFG				IAML		02 29 56.6	
	comp=E,345nm,0.9s						
CHGN	**Chignik**	**5.73**	**53**		**Pn**	**02 28 25.2**	**-0.1**
ADK	**Adak**	**6.24**	**262**	P	**Pn**	**02 28 32.8**	**+0.6**
ADK	**Adak**	**6.24**	**262**	S	**Sn**	**02 29 42.3**	**+0.2**
ADK	**Adak**	**6.24**	**262**		**Pn**	**02 28 32.9**	**+0.7**
KIWB	**Kanaga Island**	**6.53**	**263**		**Pn**	**02 28 37.2**	**+1.0**
O14K	**Ingyukauivet M**	**6.82**	**24**		**Pn**	**02 28 41.9**	**+1.7**
CHIR	**Chirikof Islan**	**6.97**	**63**	P	**Pn**	**02 28 40.4**	**-1.8**
O15K	**Ungalikthiuk R**	**7.15**	**30**		**Pn**	**02 28 45.8**	**+1.2**
M11K	**Mekoryuk**	**7.26**	**2**		**Pn**	**02 28 48.5**	**+2.4**
N14K	**Kuskokwak Cree**	**7.33**	**20**		**Pn**	**02 28 49.3**	**+2.3**
M13K	**Dall Lake**	**7.51**	**13**		**Pn**	**02 28 51.8**	**+2.3**
N15K	**Kwethluk River**	**7.91**	**25**		**Pn**	**02 28 56.8**	**+1.7**
SII	**Sitkinak Islan**	**7.97**	**60**	P	**Pn**	**02 28 53.9**	**-2.1**
OHAK	**Old Harbor**	**8.68**	**57**	P	**Pn**	**02 29 04.1**	**-1.4**
AMKA	**Amchitka**	**8.78**	**264**		**Pn**	**02 29 07.0**	**0.0**
KDAK	**Kodiak Island**	**9.25**	**54**	P	**Pn**	**02 29 11.0**	**-2.3**
	comp=E,3.6nm,0.3s,baz=226,slow=4.8,SNR=51						
KDAK				S	Sn	02 30 45.0	-11
	comp=E,5.2nm,0.8s,baz=280,slow=18,SNR=1.4 comp=E,8.5nm,0.4s						
KDAK	**Kodiak Island**	**9.25**	**54**		**Pn**	**02 29 11.1**	**-2.2**
ILSW	**Iliamna Southw**	**10.12**	**42**		**Pn**	**02 29 26.0**	**+0.7**
N19K	**Bonanza Creek**	**10.15**	**36**		**Pn**	**02 29 26.8**	**+1.1**
GAMB	**Gambell**	**10.97**	**348**		**Pn**	**02 29 39.2**	**+2.4**
J17K	**VABM Dome**	**11.02**	**18**		**Pn**	**02 29 39.1**	**+1.6**
SHEM	**Shemya Is, Ala**	**11.61**	**276**	S	Sn	02 31 38.8	-15
	comp=E,7.5nm,0.3s,baz=246,slow=7.0,SNR=5.0						
J19K	**Poorman**	**12.28**	**23**		**Pn**	**02 29 54.4**	**-0.3**
IMAR	**Indian Mountai**	**14.39**	**22**		**Pn**	**02 30 25.1**	**+1.8**
GLB	**Gilahina Butte**	**14.82**	**47**		**Pn**	**02 30 25.6**	**-3.3**
VRDI	**Verde Repeater**	**14.89**	**48**		**Pn**	**02 30 27.1**	**-2.8**
RDOG	**Red Dog Mine**	**15.06**	**5**	IAmb	IAmb	02 30 32.3	
	comp=Z,9.8nm,0.6s						
E19K	**Restone River**	**15.07**	**14**	IAmb	IAmb	02 30 43.1	
	comp=Z,10nm,0.8s						
MCARA	**McCarthy VSAT**	**15.14**	**48**	IAmb	IAmb	02 30 42.8	
	comp=Z,22nm,0.9s						
K24K	**Donnelly Dome**	**15.19**	**37**	IAmb	IAmb	02 30 41.5	
	comp=Z,28nm,1.3s						
H23K	**Yukon River**	**15.32**	**27**	IAmb	IAmb	02 30 58.2	
	comp=Z,18nm,1.3s						
ILAR	**Eielson Array**	**15.39**	**33**	P	**Pn**	**02 30 33.0**	**-3.2**
	comp=Z,0.3nm,0.3s,baz=228,slow=11,SNR=15						
ILAR				LR	LR	02 37 09.3	
	comp=Z,751nm,18.7s,baz=266,slow=40 comp=Z,0.8nm,0.4s						
ILAR	**Eielson Array**	**15.39**	**33**		**Pn**	**02 30 35.8**	**-0.4**
RIDG	**Independent Ri**	**15.49**	**38**	IAmb	IAmb	02 30 46.2	
	comp=Z,9.6nm,0.7s						
BARN	**Barnard Glacie**	**15.64**	**50**	IAmb	IAmb	02 30 45.4	
	comp=Z,28nm,0.7s						
L26K	**Log Cabin Wild**	**15.71**	**42**	IAmb	IAmb	02 30 44.0	
	comp=Z,28nm,0.6s						
H24K	**Noodor Dome**	**15.80**	**29**	IAmb	IAmb	02 30 46.5	
	comp=Z,16nm,1.0s						
G23K	**Bananza Creek**	**15.87**	**25**	IAmb	IAmb	02 30 47.6	
	comp=Z,18nm,1.0s						
LOGN	**Logan Glacier**	**15.88**	**51**	IAmb	IAmb	02 30 47.9	
	comp=Z,21nm,0.8s						
D19K	**Kuna River**	**15.92**	**12**	IAmb	IAmb	02 31 06.9	
	comp=Z,25nm,1.4s						
SCRK	**Sand Creek**	**15.95**	**38**	IAmb	IAmb	02 30 46.1	
	comp=Z,18nm,0.6s						
M27K	**Edge Creek, AK**	**16.03**	**45**	IAmb	IAmb	02 30 51.9	
	comp=Z,15nm,0.8s						
O28M	**Mount Upton**	**16.24**	**51**	IAmb	IAmb	02 30 53.4	
	comp=Z,17nm,0.6s						
BCAR	**Beaver Creek A**	**16.36**	**43**		**Pn**	**02 30 46.4**	**-2.2**
P29M	**Windy Craggy**	**17.18**	**56**	IAmb	IAmb	02 31 15.7	
	comp=Z,31nm,0.8s						
B21K	**Ikpikpuk River**	**17.45**	**14**	IAmb	IAmb	02 31 07.9	
	comp=Z,12nm,0.8s						
M29M	**Somme Creek**	**17.54**	**47**	IAmb	IAmb	02 31 11.5	
	comp=Z,14nm,0.8s						
D23K	**Nanushuk River**	**17.55**	**19**	IAmb	IAmb	02 31 12.8	
	comp=Z,22nm,1.2s						
DAWY	**Dawson**	**17.76**	**41**	IAmb	IAmb	02 31 11.7	
	comp=Z,9.9nm,0.7s						
L29M	**L29M**	**17.91**	**45**	IAmb	IAmb	02 31 10.4	
	comp=Z,16nm,0.7s						
D24K	**Happy Valley**	**18.09**	**21**	IAmb	IAmb	02 31 13.3	
	comp=Z,23nm,1.3s						
C23K	**Itkillik River**	**18.30**	**18**	IAmb	IAmb	02 31 16.2	
	comp=Z,16nm,0.8s						
SKAG	**Skagway**	**18.38**	**57**	P	**Pn**	**02 31 16.2**	**+2.9**
SKAG	**Skagway**	**18.38**	**57**	IAmb	IAmb	02 31 18.5	
	comp=Z,19nm,0.8s						
K29M	**Barlow Dome**	**18.43**	**43**		**P**	**02 31 13.2**	**-0.3**
BESE	**Bessie Mountai**	**18.55**	**60**	IAmb	IAmb	02 31 18.4	
	comp=Z,22nm,0.8s						
JIS	**Juneau Island**	**18.78**	**61**	P	**Pn**	**02 31 19.4**	**+1.2**
H29M	**Whitestone**	**19.14**	**36**	IAmb	IAmb	02 31 22.2	
	comp=Z,19nm,0.6s						
CRAG	**Craig**	**19.60**	**70**	P	**Pn**	**02 31 28.3**	**+0.3**
G29M	**Pine Creek**	**19.61**	**34**	IAmb	IAmb	02 31 26.5	
	comp=Z,20nm,0.8s						
P33M	**Teslin, Yukon**	**19.72**	**56**	IAmb	IAmb	02 31 30.6	
	comp=Z,21nm,0.8s						
Q32M	**Nakina River**	**19.91**	**59**	IAmb	IAmb	02 31 35.9	
	comp=Z,33nm,1.1s						
G30M	**tAoh Zraii Nji**	**20.26**	**35**	IAmb	IAmb	02 31 32.8	
	comp=Z,19nm,0.8s						
H02S1	**DAWSON INLET T** SNR=12	**20.39**	**76**	T	T	02 52 25.8	
H02S2	**DAWSON INLET T** SNR=14	**20.39**	**76**	T	T	02 52 23.8	
H31M	**Peel River**	**20.44**	**39**	IAmb	IAmb	02 31 34.8	
	comp=Z,21nm,0.8s						
E29M	**Blow River**	**20.44**	**31**	P	**P**	**02 31 34.5**	**-0.7**
E29M				IAmb	IAmb	02 31 37.6	
	comp=Z,11nm,0.8s						
S34M	**Telegraph Cree**	**20.51**	**62**	IAmb	IAmb	02 31 42.6	
	comp=Z,23nm,1.1s						
F30M	**Barrier River**	**20.71**	**34**	P	**P**	**02 31 36.1**	**-2.0**
F30M				IAmb	IAmb	02 31 37.8	
	comp=Z,12nm,0.8s						
MMPY	**Sheldon Lake,**	**20.81**	**49**	P	**P**	**02 31 40.3**	**+1.0**
G31M	**Satah River**	**20.92**	**36**	IAmb	IAmb	02 31 38.8	
	comp=Z,7.6nm,0.7s						
DLBC	**Dease Lake**	**21.08**	**61**	P	**P**	**02 31 43.1**	**+0.9**
	comp=Z,20nm,0.9s,baz=277,slow=16,SNR=4.5 comp=Z,20nm,0.9s						
PEA0B	**Petropavlovsk-**	**21.25**	**284**	P	**P**	**02 31 43.0**	**-1.0**
PEA0B				IAmb	IAmb	02 31 49.0	
	comp=Z,9.7nm,0.8s						
PETK	**Petropavlovsk-**	**21.25**	**284**	P	**P**	**02 31 43.2**	**-0.8**
	comp=Z,4.8nm,0.6s,baz=85,slow=12,SNR=15 comp=Z,4.8nm,0.6s						
PETK	**Petropavlovsk-**	**21.25**	**284**	P	**P**	**02 31 44.0**	**0.0**
F31M	**Tsiigehtchic**	**21.33**	**35**	IAmb	IAmb	02 31 47.4	
	comp=Z,11nm,0.8s						
RUBB	**Prince Rupert**	**21.43**	**72**	P	**P**	**02 31 47.2**	**+1.3**
RUBB				IAmb	IAmb	02 32 02.8	
	comp=Z,11nm,0.9s						
INK	**Inuvik**	**21.79**	**33**	P	**P**	**02 31 47.5**	**-2.2**
	comp=Z,19nm,0.5s,baz=257,slow=8.0,SNR=38 comp=Z,19nm,0.5s						
INK	**Inuvik**	**21.79**	**33**	P	**P**	**02 31 47.7**	**-2.0**
C36M	**Paulatuk**	**25.36**	**34**	IAmb	IAmb	02 32 24.6	
	comp=Z,12nm,0.7s						
YKAW3	**Yellowknife Wh**	**28.48**	**50**	IAmb	IAmb	02 33 00.2	
	comp=Z,4.8nm,0.9s						
YKA	**Yellowknife Ar**	**28.49**	**50**	P	**P**	**02 32 53.0**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=278,slow=9.1,SNR=19 comp=Z,2.1nm,0.7s						
YKA	**Yellowknife Ar**	**28.49**	**50**	P	**P**	**02 32 51.9**	**-0.5**
NEW	**Newport**	**31.24**	**79**	P	**P**	**02 33 17.1**	**+0.2**
NEW				IAmb	IAmb	02 33 20.0	
	comp=Z,4.0nm,0.8s						
EDM	**Edmonton**	**31.33**	**68**	IAmb	IAmb	02 33 20.2	
	comp=Z,5.0nm,0.7s						
YBH	**Yreka Blue Hor**	**31.37**	**93**	P	**P**	**02 33 19.5**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=308,slow=5.9,SNR=1.6 comp=Z,1.2nm,0.7s						
YBH	**Yreka Blue Hor**	**31.37**	**93**	IAmb	IAmb	02 33 50.1	
	comp=Z,11nm,1.4s						
NVAR	**Mina Array Bea**	**36.06**	**94**	P	**P**	**02 34 00.8**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=301,slow=8.1,SNR=4.5 comp=Z,1.0nm,0.7s						
RLMT	**Red Lodge**	**37.49**	**79**	IAmb	IAmb	02 34 14.0	
	comp=Z,3.9nm,1.0s						
PDAR	**Pinedale Array**	**38.66**	**82**	P	**P**	**02 34 21.4**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=310,slow=5.6,SNR=9.0 comp=Z,0.7nm,0.7s						
H11N2	**WAKE ISLAND Hy** baz=24,slow=76,SNR=386	**39.11**	**222**	T	T	03 16 06.9	
H11N3	**WAKE ISLAND Hy** baz=24,slow=76,SNR=380	**39.11**	**222**	T	T	03 16 08.1	
H11N1	**WAKE ISLAND Hy** baz=24,slow=76,SNR=279	**39.12**	**222**	T	T	03 16 09.2	
H11S1	**WAKE ISLAND Hy** baz=24,slow=76,SNR=477	**40.29**	**221**	T	T	03 17 39.1	
H11S2	**WAKE ISLAND Hy** baz=24,slow=76,SNR=335	**40.30**	**221**	T	T	03 17 37.8	
H11S3	**WAKE ISLAND Hy** baz=24,slow=76,SNR=438	**40.30**	**221**	T	T	03 17 37.3	
O20A	**White River Ci**	**41.04**	**84**	P	**P**	**02 34 41.7**	**+1.0**
O20A				IAmb	IAmb	02 35 00.1	
	comp=Z,4.7nm,0.8s						
PV19	**Morning Glory**	**41.75**	**87**	P	**P**	**02 34 47.7**	**+1.1**
PV19				IAmb	IAmb	02 35 05.1	
	comp=Z,6.8nm,1.3s						
PV18	**Skein Mesa, Pa**	**41.84**	**87**	IAmb	IAmb	02 34 59.0	
	comp=Z,5.0nm,0.9s						
PV13	**Radium Mtn., P**	**41.95**	**87**	IAmb	IAmb	02 35 02.8	
	comp=Z,4.3nm,0.8s						
PV02	**Paradox Valley**	**41.96**	**87**	IAmb	IAmb	02 34 54.4	
	comp=Z,9.1nm,1.1s						
ULM	**Lac du Bonnet**	**42.34**	**64**	P	**P**	**02 34 49.9**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=281,slow=7.6,SNR=4.0 comp=Z,2.6nm,0.9s						
ULM	**Lac du Bonnet**	**42.34**	**64**	IAmb	IAmb	02 34 52.4	
	comp=Z,3.6nm,0.9s						
MVCO	**Mesa Verde**	**42.76**	**88**	P	**P**	**02 34 54.8**	**0.0**
MVCO				IAmb	IAmb	02 35 04.4	
	comp=Z,4.7nm,0.7s						
NEEM	**North Greenlan**	**43.78**	**17**	*i* P	**P**	**02 35 02.8**	**+0.1**
NEEM				IAmb	IAmb	02 35 03.0	
	comp=Z,14nm,0.7s						
KULLO	**Kullorsuaq**	**44.32**	**21**	*i* P	**P**	**02 35 06.4**	**-0.2**
KULLO				IAmb	IAmb	02 35 07.5	
	comp=Z,8.5nm,0.9s						
UPNV	**Upernavik**	**45.64**	**23**	*i* P	**P**	**02 35 16.8**	**-0.3**
UPNV				IAmb	IAmb	02 35 19.0	
	comp=Z,4.5nm,0.5s						
EYMN	**Ely**	**46.01**	**65**	P	**P**	**02 35 20.4**	**0.0**
EYMN				IAmb	IAmb	02 35 21.6	
	comp=Z,4.1nm,0.9s						
KSRS	**Korea Array**	**46.93**	**278**	P	**P**	**02 35 27.4**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=58,slow=7.5,SNR=7.6 comp=Z,1.5nm,0.6s						
JNU	**Nakatsue**	**48.09**	**271**	P	**P**	**02 35 35.0**	**-1.8**
	comp=Z,4.2nm,0.7s,baz=11,slow=5.2,SNR=3.3 comp=Z,4.2nm,0.7s						
DAG	**Danmarks Havn**	**48.77**	**9**	*i* P	**P**	**02 35 40.4**	**-1.0**
DAG				IAmb	IAmb	02 35 41.4	
	comp=Z,3.1nm,0.5s						
SUMG	**Summit**	**49.54**	**18**	P	**P**	**02 35 48.3**	**+0.5**
SUMG	**Summit**	**49.54**	**18**	*i* P	**P**	**02 35 48.0**	**+0.2**
SUMG				IAmb	IAmb	02 35 48.8	
	comp=Z,11nm,0.6s						
E46A	**Sault Ste Mari**	**50.85**	**62**	P	**P**	**02 35 57.4**	**-0.2**
E46A				IAmb	IAmb	02 36 01.6	
	comp=Z,5.7nm,1.0s						
P40A	**Paris**	**50.98**	**74**	P	**P**	**02 35 58.2**	**-0.4**
TX31	**Lajitas Ar. Si**	**51.11**	**92**	P	**P**	**02 36 01.4**	**+1.5**
TX31				IAmb	IAmb	02 36 12.5	
	comp=Z,2.5nm,0.8s						
TXAR	**Lajitas Array**	**51.11**	**92**	P	**P**	**02 36 00.8**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=298,slow=5.0,SNR=16						
TXAR				ScP	**ScP**	**02 41 07.0**	**+0.8**
	comp=Z,0.2nm,0.8s,baz=265,slow=6.0,SNR=3.5 comp=Z,1.4nm,0.7s						
R40A	**Maddies Statio**	**51.68**	**75**	P	**P**	**02 36 02.5**	**-1.4**
R40A				IAmb	IAmb	02 36 11.1	
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**52.29**	**302**	P	**P**	**02 36 07.4**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=71,slow=7.1,SNR=6.0						
SONM				PcP	**PcP**	**02 37 17.4**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=96,slow=2.2,SNR=6.0 comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**52.29**	**302**	IAmb	IAmb	02 36 10.1	
	comp=Z,1.6nm,1.0s						
FCAR	**Ozark Folk Cen**	**53.40**	**77**	IAmb	IAmb	02 36 29.1	
	comp=Z,7.5nm,1.3s						
SCHQ	**Schefferville**	**53.73**	**45**	P	**P**	**02 36 19.1**	**+0.3**
	comp=Z,8.9nm,0.8s,baz=317,slow=7.8,SNR=12 comp=Z,8.9nm,0.8s						
HHC	**Hu-ho-hao-te**	**54.16**	**292**	*eP*	**P**	**02 36 23.5**	**+1.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.7s						
TRQ	**Mont Tremblant**	**56.01**	**57**	P	**P**	**02 36 36.0**	**+0.6**
TRQ				IAmb	IAmb	02 36 37.0	
	comp=Z,3.4nm,1.0s						
CFNY	**Clifton-Fine,**	**57.18**	**59**	P	**P**	**02 36 44.3**	**+0.5**
ZALV	**Zalesovo Beam**	**57.94**	**319**	P	**P**	**02 36 47.7**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=28,slow=6.7,SNR=3.1						
ZALV				PcP	**PcP**	**02 37 39.3**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=58,slow=9.1,SNR=5.0 comp=Z,0.6nm,0.3s						
L59A	**Walton**	**58.58**	**61**	P	**P**	**02 36 55.8**	**+2.2**
SSLB	**Suanglung**	**60.84**	**271**	P	**P**	**02 37 09.7**	**+0.4**
DRLN	**Deer Lake**	**61.74**	**45**	P	**P**	**02 37 15.9**	**+0.8**
KURK	**Kurchatov**	**62.86**	**320**	P	**P**	**02 37 23.3**	**+0.8**
KURK	**Kurchatov**	**62.86**	**320**	IAmb	IAmb	02 37 23.4	
	comp=Z,1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**62.97**	**320**	P	**P**	**02 37 23.3**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=47,slow=7.3,SNR=6.2 comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**64.00**	**326**	P	**P**	**02 37

KMI2	**Kunming**	**70.62**	**286**	P	**P**	**02 38 12.5**	**-0.1**
KMI2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**71.03**	**10**	P	**P**	**02 38 14.4**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=344,slow=4.3,SNR=9.0						
	comp=Z,2.6nm,0.7s						
KK31	**Karatay Array**	**72.28**	**320**	P	**P**	**02 38 22.1**	**+0.1**
KK31				IAmb	IAmb	02 38 22.6	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**72.28**	**320**	P	**P**	**02 38 21.5**	**-0.6**
CHTO	**Chiang Mai**	**77.74**	**285**	P	**P**	**02 38 54.0**	**+0.2**
CHTO				IAmb	IAmb	02 38 54.7	
	comp=Z,5.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**78.02**	**285**	P	**P**	**02 38 55.8**	**+0.4**
	comp=Z,7.2nm,1.0s,baz=23,slow=6.1,SNR=28						
	comp=Z,7.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**78.02**	**285**	P	**P**	**02 38 55.9**	**+0.5**
KBZ	**Khabaz**	**80.21**	**339**	P	**P**	**02 39 05.5**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=23,slow=3.5,SNR=6.0						
	comp=Z,2.0nm,0.7s						
MTN	**Manton Dam**	**84.39**	**240**	P	**P**	**02 39 29.1**	**0.0**
MTN				IAmb	IAmb	02 39 59.2	
	comp=Z,5.1nm,1.2s						
BR131	**Keskin Array S**	**85.84**	**344**	P	**P**	**02 39 37.3**	**+0.9**
BR131				IAmb	IAmb	02 39 37.9	
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**85.84**	**344**	P	**P**	**02 39 36.5**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=42,slon=2.0,SNR=15						
	comp=Z,2.1nm,0.8s						
BRTR	**Keskin Array B**	**85.84**	**344**	P	**P**	**02 39 37.3**	**+0.9**
ESDC	**Sonseca Array**	**86.35**	**13**	P	**P**	**02 39 38.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=347,slow=4.3,SNR=12						
	comp=Z,0.6nm,0.7s						
ESDC	**Sonseca Array**	**86.35**	**13**	P	**P**	**02 39 39.3**	**+0.6**
ESDC				IAmb	IAmb	02 40 06.2	
	comp=Z,2.5nm,1.4s						
WRA	**Warramunga Arr**	**88.78**	**234**	P	**P**	**02 39 49.8**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=40,slow=4.9,SNR=16						
	comp=Z,2.6nm,0.9s						
WRA	**Warramunga Arr**	**88.78**	**234**	IAmb	IAmb	02 39 50.8	
	comp=Z,0.5nm,1.3s						
ASAR	**Alice Springs**	**92.16**	**232**	P	**P**	**02 40 06.3**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=39,slow=4.5,SNR=13						
	comp=Z,2.2nm,0.9s						
H03N2	**Juan Fernandez**	**114.71**	**113**	T	T	04 50 42.6	
	baz=322,slow=77,SNR=14						
H03N1	**Juan Fernandez**	**114.72**	**113**	T	T	04 50 43.8	
	baz=322,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**114.72**	**113**	T	T	04 50 43.3	
	baz=322,slow=77,SNR=27						
QSPA	**South Pole Qui**	**142.92**	**180**	PKhKP	PKPpre	02 46 24.4	
	comp=Z,1.6nm,0.4s,baz=254,slow=0.5,SNR=16						
MAW	**Mawson**	**152.51**	**219**	PKPbc	**PKiKP**	**02 46 51.6**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=275,slow=17,SNR=2.2						

*MAN **18** 02:45:11.0, 12°.91N×125°.89E, h2km, MS3.8*
*IDC **18** 02:45:12.5±0.9, 12°.68N×125°.69E, h0km, mb4.0/11, mbtmp4.0/11, Error ellipse: s-maj=47.7km s-min=14.5km az=70.0*
ISC 18 02:45:13.4±0.8, 12°.73N±0°.05×125°.84E±0°.06, h10km, n24, σ1°60/29, mb4.1/11, Samar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLP	**Palo**	**1.77**	**208**	*eP*		**Pn**	**02 45 44.4**	**+0.3**
PLP				*eS*		**Sn**	**02 46 06.7**	**0.0**
PVCP	**Virac**	**1.85**	**298**	*eP*		**Pg**	**02 45 46.5**	**-2.5**
PVCP				*i* S		**Sg**	**02 46 16.3**	**+3.3**
MMPH	**Masbate**	**2.20**	**260**	*i* P		**Pb**	**02 45 59.7**	**-2.6**
MMPH				*i* S		**Sb**	**02 46 19.5**	**-1.0**
MSLP	**Maasin**	**2.76**	**201**	*i* P		**Pn**	**02 45 59.4**	**+1.7**
MSLP				*i* S		**Sn**	**02 46 33.7**	**+2.6**
SCPH	**Surigao**	**2.95**	**187**	*i* P		**Pn**	**02 46 01.2**	**+0.8**
SCPH				*i* S		**Sn**	**02 46 36.9**	**+0.9**
LLP	**Lapu-Lapu**	**3.02**	**218**	*eP*		**Pn**	**02 46 04.0**	**+2.6**
LLP				*eS*		**Sg**	**02 46 51.1**	**+0.5**
AUQP	**San Andres**	**3.14**	**281**	*i* P		Pg	02 46 19.8	+6.2
AUQP				*eS*		**Sb**	**02 46 47.2**	**-0.5**
TBP	**Tagbilaran**	**3.59**	**213**	*eP*		**Pn**	**02 46 10.2**	**+1.0**
CGP	**Cagayan de Oro**	**4.40**	**195**	*eP*		**Pb**	**02 46 30.0**	**-0.8**
CGP				*eS*		**Sn**	**02 47 12.6**	**+1.0**
BIPH	**Bislig**	**4.55**	**173**	*i* P		**Pb**	**02 46 30.1**	**-3.4**
BIPH				*eS*		**Sn**	**02 47 14.4**	**-0.9**
KSRS	**Korea Array**	**24.69**	**4**	P		**P**	**02 50 34.5**	**-0.1**
	0.8nm,0.7s,baz=186,slow=11,SNR=4.4							
	0.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**26.51**	**286**	P		**P**	**02 50 49.7**	**-1.6**
	1.1nm,0.3s,baz=90,slow=9.4,SNR=4.3							
	1.1nm,0.3s							
FITZ	**Fitzroy Crossi**	**30.64**	**180**	P		**P**	**02 51 27.7**	**-0.3**
	6.7nm,0.7s,baz=2.7,slow=6.3,SNR=23							
	6.7nm,0.7s							
WRA	**Warramunga Arr**	**33.53**	**165**	P		**P**	**02 51 53.2**	**-0.4**
	0.9nm,0.9s,baz=345,slow=9.2,SNR=5.1							
	0.9nm,0.9s							
ASAR	**Alice Springs**	**37.03**	**168**	P		**P**	**02 52 24.9**	**+1.3**
	0.7nm,0.4s,baz=346,slow=7.4,SNR=16							
	0.7nm,0.4s							
H11N1	**WAKE ISLAND Hy**	**39.95**	**75**	T		T	03 36 07.1	
	baz=266							
H11N2	**WAKE ISLAND Hy**	**39.95**	**74**	T		T	03 36 07.7	
	baz=266							
H11N3	**WAKE ISLAND Hy**	**39.96**	**74**	T		T	03 36 06.5	
	baz=266							
STKA	**Stephens Creek**	**46.86**	**162**	P		**P**	**02 53 44.4**	**+0.6**
	6.0nm,0.9s,baz=340,slow=5.5,SNR=4.3							
	6.0nm,0.9s							
MKAR	**Makanchi Array**	**49.83**	**322**	P		**P**	**02 54 07.2**	**+0.5**
	1.1nm,0.8s,baz=123,slow=8.0,SNR=8.6							
	1.1nm,0.8s							
ZALV	**Zalesovo Beam**	**52.28**	**331**	P		**P**	**02 54 25.3**	**+0.4**
	0.4nm,0.4s,baz=101,slow=3.2,SNR=3.7							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**53.83**	**325**	P		**P**	**02 54 37.6**	**+1.2**
	1.5nm,0.6s,baz=122,slow=7.5,SNR=12							
	1.5nm,0.6s							
BVAR	**Borovoye Array**	**59.42**	**325**	P		**P**	**02 55 17.2**	**+1.0**
	1.1nm,0.5s,baz=121,slow=7.2,SNR=6.0							
	1.1nm,0.5s							
FINES	**FINESS Array B**	**83.54**	**332**	P		**P**	**02 57 42.0**	**+0.5**
	1.8nm,0.9s,baz=90,slow=5.5,SNR=3.1							
	1.8nm,0.9s							

*RSNC **18** 02:53:15.5±0.0, 7°.1×7°.3W±°, h147km±1km, M2.6, ML2.3, MLv2.9*
*FUNV **18** 02:53:17.8, 7°.12N×73°.23W, h17km, MW3.3, Presumed earthquake*
ISC 18 02:53:13.4±1.5, 6°.87N±0°.03×73°.16W±0°.04, h158km±9km, n26, σ1°36/52, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**184**	P		**Pn**	**02 53 35.5**	**+0.4**
BARC				S		**Sn**	**02 53 50.7**	**-1.0**
BRJC	**Barrancabermej**	**0.58**	**280**	P		**Pn**	**02 53 37.1**	**+1.1**
BRJC				S		**Sn**	**02 53 52.9**	**-0.4**
PAMC	**Pamplona, Colo**	**0.65**	**45**	P		**Pn**	**02 53 38.5**	**+1.5**
PAMC				S		**Sn**	**02 53 55.5**	**+0.5**
RUSC	**La Rusia**	**0.98**	**175**	P		**Pn**	**02 53 39.4**	**+0.1**
RUSC				S		**Sn**	**02 53 58.4**	**-0.7**
RUSC	**La Rusia**	**0.98**	**175**	*eP*		**Pn**	**02 53 39.3**	**+0.1**
RUSC				*eS*		**Sn**	**02 53 57.0**	**-2.1**
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	P		**Pn**	**02 53 42.0**	**+0.2**
PTBC				S		**Sn**	**02 54 02.7**	**-0.9**
OCAC	**Ocana**	**1.36**	**354**	P		**Pn**	**02 53 43.6**	**+1.3**
OCAC				S		**Sn**	**02 54 05.4**	**+0.7**
SPBC	**San Pablo de B**	**1.51**	**217**	P		**Pn**	**02 53 44.3**	**+0.5**
SPBC				S		**Sn**	**02 54 05.2**	**-1.9**
NORC	**Norcasia**	**2.14**	**233**	P		**Pn**	**02 53 51.5**	**+0.9**
NORC				S		**Sn**	**02 54 18.5**	**-0.8**
CHIC	**Chingaza**	**2.30**	**194**	P		**Pn**	**02 53 53.7**	**+0.8**
CHIC				S		**Sn**	**02 54 22.8**	**-0.6**
ROSC	**El Rosal**	**2.33**	**210**	P		**Pn**	**02 53 55.1**	**+1.9**
ROSC				S		**Sn**	**02 54 23.9**	**0.0**
HELC	**Santa Helena**	**2.44**	**254**	P		**Pn**	**02 53 56.0**	**+1.4**
HELC				S		**Sn**	**02 54 23.9**	**-2.4**
HELC	**Santa Helena**	**2.44**	**254**	*eP*		**Pn**	**02 53 56.9**	**+2.3**
HELC				*eS*		**Sn**	**02 54 25.6**	**-0.8**
CVER	**Cruz Verde, Cu**	**2.51**	**201**	P		**Pn**	**02 53 56.2**	**+0.8**
CVER				S		**Sn**	**02 54 27.9**	**0.0**
UREC	**San Jos de Ur**	**2.51**	**291**	P		**Pn**	**02 53 54.7**	**-0.2**
UREC				S		**Sn**	**02 54 26.0**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.73**	**233**	P		**Pn**	**02 53 59.4**	**+1.2**
GUY2C				S		**Sn**	**02 54 31.7**	**-1.1**
VILC	**Villavicencio,**	**2.79**	**191**	P		**Pn**	**02 53 59.0**	**+0.4**
VILC				S		**Sn**	**02 54 32.2**	**-1.5**
CBOC	**Ciudad Bolivar**	**3.00**	**251**	P		**Pn**	**02 54 01.5**	**+0.3**
CBOC				S		**Sn**	**02 54 39.6**	**+1.3**
DBBC	**Dabeiba**	**3.03**	**273**	P		**Pn**	**02 54 01.7**	**+0.2**
DBBC				S		**Sn**	**02 54 38.6**	**-0.1**
ARGC	**Ariguani, Magd**	**3.15**	**340**	P		**Pn**	**02 54 04.6**	**+1.6**
ARGC				S		**Sn**	**02 54 42.3**	**+0.8**
SDV	**Santo Domingo**	**3.21**	**51**	*eP*		**Pn**	**02 54 05.1**	**+1.3**
SDV				*eS*		**Sn**	**02 54 40.7**	**-2.3**
APAC	**Apartado, Choc**	**3.54**	**287**	P		**Pn**	**02 54 09.1**	**+1.2**
APAC				S		**Sn**	**02 54 50.0**	**-0.2**
PRAC	**Prado**	**3.58**	**209**	P		**Pn**	**02 54 08.8**	**+0.4**
PRAC				S		**Sn**	**02 54 50.6**	**-0.7**
SJCC	**San Jacinto, C**	**3.60**	**327**	P		**Pn**	**02 54 09.1**	**+0.3**
SJCC				S		**Sn**	**02 54 49.9**	**-2.0**
SJCC	**San Jacinto, C**	**3.60**	**327**	*eP*		**Pn**	**02 54 08.7**	**-0.1**
SJCC				*eS*		**Sn**	**02 54 46.9**	**-5.0**
PLMC	**San Jos del P**	**3.67**	**238**	P		**Pn**	**02 54 10.7**	**+1.1**
PLMC				S		**Sn**	**02 54 53.7**	**+0.4**

IDC 18 02:54:20.0±2.3, 24°.09S×176°.24W, h0km, mb3.9/3, mbtmp3.9/4, ML5.0/1, Error ellipse: s-maj=61.5km s-min=49.5km az=151.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**8.27**	**319**	Pn		Pn	02 56 21.4	0.0
	0.7nm,0.3s,baz=150,slow=20,SNR=8.8							
	6.3nm,1.0s							
ASAR	**Alice Springs**	**45.39**	**260**	P		P	03 02 40.4	-0.2
	0.4nm,0.6s,baz=95,slow=7.2,SNR=6.5							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**45.82**	**265**	P		P	03 02 44.2	+0.1
	0.7nm,0.5s,baz=104,slow=8.3,SNR=13							
	0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**92.83**	**289**	P		P	03 07 34.0	-1.1
	0.8nm,0.3s,baz=106,slow=4.6,SNR=1.0							
	0.8nm,0.3s							
BRTR	**Keskin Array B**	**150.40**	**309**	PKPbc		PKPbc	03 14 14.1	+0.2
	0.5nm,0.7s,baz=96,slow=2.9,SNR=4.2							
GERES	**GERESS Array B**	**154.07**	**345**	PKPbc		PKPbc	03 14 21.6	-0.2
	0.1nm,0.3s,baz=16,slow=1.8,SNR=1.2							

*IDC **18** 02:56:38.5±1.1, 59°.46S×26°.29W, h0km, mb3.8/6, mbtmp3.9/7, ML4.5/1, Error ellipse: s-maj=39.5km s-min=23.7km az=72.0*
ISC 18 02:56:45.1±0.9, 59°.6S±0°.2×26°.2W±0°.2, h50km, n15, σ1°23/12, mb3.6/5, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.37**	**154**	⇑P		**Pn**	**02 59 50.6**	**-1.2**
	comp=Z,13nm,0.3s							
VNA2	**Neumayer--Watz**	**13.77**	**154**	⇑P		**Pn**	**02 59 55.3**	**-2.0**
	comp=Z,4.3nm,0.2s,baz=312,slow=14							
SNAA	**Sanae**	**15.35**	**152**	⇑P		**Pn**	**03 00 17.2**	**-0.9**
	comp=Z,112nm,0.3s							
SNAA	**Sanae**	**15.35**	**152**	Pn		**Pn**	**03 00 17.3**	**-0.9**
	comp=Z,2.0nm,0.3s,baz=314,slow=18,SNR=41							
	comp=Z,4.5nm,0.4s							
TROLL	**Troll, Antarti**	**16.91**	**149**	⇑P		**Pn**	**03 00 37.4**	**-0.5**
	comp=Z,112nm,0.3s							
QSPA	**South Pole Qui**	**30.68**	**180**	P		**P**	**03 02 55.2**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=232,slow=1.8,SNR=9.5							
	comp=Z,0.6nm,0.5s							
PLCA	**Paso Flores**	**33.25**	**284**	P		**P**	**03 03 16.1**	**-1.2**
	comp=Z,2.3nm,1.2s,baz=97,slow=2.5,SNR=3.1							
	comp=Z,2.3nm,1.2s							
VNDA	**Vanda**	**43.08**	**183**	P		**P**	**03 04 40.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=166,slow=11,SNR=1.6							
	comp=Z,0.7nm,0.8s							
H04S2	**CROZET ISLANDS**	**45.74**	**110**	T		T	03 55 21.7	
	baz=225,slow=76,SNR=6.2							
H04S3	**CROZET ISLANDS**	**45.75**	**110**	T		T	03 55 21.1	
	baz=225,slow=76,SNR=5.5							
H04S1	**CROZET ISLANDS**	**45.76**	**110**	T		T	03 55 22.8	
	baz=225,slow=76,SNR=5.3							
LPAZ	**La Paz**	**52.85**	**306**	P		**P**	**03 05 56.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=174,slow=9.2,SNR=1.2							
	comp=Z,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**75.90**	**28**	P		**P**	**03 08 26.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=198,slow=6.7,SNR=6.3							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**95.48**	**162**	P		**P**	**03 10 05.4**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=177,slow=5.3,SNR=5.7							
	comp=Z,0.5nm,0.9s							
YKA	**Yellowknife Ar**	**139.08**	**315**	PKP		**PKPdf**	**03 16 03.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=128,slow=3.1,SNR=3.6							

*IDC **18** 02:57:40.2±1.0, 13°.18N×51°.01E, h0km, mb3.8/15, mbtmp3.8/16, ML3.1/1, MS3.9/2, Error ellipse: s-maj=25.1km s-min=17.9km az=6.0*
*NEIC **18** 02:57:41.3±1.6, 13°.1N±0°.2×50°.94E±0°.05, h10km±2km, mb4.2/11, Error ellipse: s-maj=28.6km s-min=5.9km az=169.0*
ISC 18 02:57:42.4±0.9, 13°.2N±0°.2×50°.98E±0°.10, h16km, n35, σ0°.79/34, mb4.0/21, 1C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATD	**Arta Tunnel**	**8.11**	**259**	Pn		**Pn**	**02 59 39.9**	**+0.3**
	0.2nm,0.3s,baz=80,slow=14,SNR=13							
	0.6nm,0.2s							
ATD	**Arta Tunnel**	**8.11**	**259**			**Pn**	**02 59 38.1**	**-1.6**
HRA	**Herat**	**23.47**	**24**	P		**P**	**03 02 51.9**	**+0.3**
HRA				IAmb		IAmb	03 03 06.3	
	comp=Z,5.0nm,0.9s							
CSS	**Mathiatis**	**26.94**	**327**	P		**P**	**03 03 21.1**	**-2.1**
CSS				IAmb		IAmb	03 04 00.2	
	comp=Z,6.7nm,1.0s							
ARPR	**Arapgir-MALATY**	**28.14**	**339**	P		**P**	**03 03 34.7**	**+0.6**
BRTR	**Keskin Array B**	**30.55**	**333**	P		**P**	**03 03 56.4**	**+0.9**
KBZ	**Khabaz**	**31.24**	**349**	P		**P**	**03 04 01.9**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=168,slow=9.9,SNR=4.9							
	comp=Z,2.4nm,1.0s							
KK31	**Karatay Array**	**34.26**	**26**	P		**P**	**03 04 26.4**	**-1.4**
KK31				IAmb		IAmb	03 04 38.3	
	comp=Z,4.5nm,1.5s							
KKAR	**Karatay Array**	**34.26**	**26**	P		**P**	**03 04 27.4**	**-0.4**
AB31	**Akbulak array**	**36.74**	**10**	Pg		**P**	**03 04 49.8**	**+0.9**
	comp=Z,3.9nm,1.3s,baz=334,slow=17,SNR=7.2							
AB31				⇑Lg		Lg	03 05 27.9	
	comp=Z,0.2nm,0.4s,baz=335,slow=28							
AB31	**Akbulak array**	**36.74**	**10**	P		**P**	**03 04 48.7**	**-0.2**
ABKAR	**Akbulak array**	**36.74**	**10**	P		**P**	**03 04 48.7**	**-0.2**
TARG	**Taragay, Kyrgy**	**36.80**	**34**	P		**P**	**03 04 49.3**	**-0.8**
TARG				IAmb		IAmb	03 04 58.4	
	comp=Z,5.5nm,1.5s							
BELG	**Belogornoye**	**39.22**	**357**	LR		LR	03 27 08.4	
	comp=Z,209nm,18.4s,baz=278,slow=45							
AKASG	**Malin Array Be**	**41.41**	**339**	P		**P**	**03 05 28.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=80,slow=1.1,SNR=4.1							
	comp=Z,0.2nm,0.3s							
MAKZ	**Makanchi**	**42.44**	**32**	P		**P**	**03 05 36.1**	**-0.4**
MKAR	**Makanchi Array**	**42.59**	**32**	P		**P**	**03 05 38.3**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=222,slow=8.5,SNR=11							
	comp=Z,0.8nm,0.5s							
MKAR	**Makanchi Array**	**42.59**	**32**	P		**P**	**03 05 37.5**	**-0.3**
BVAR	**Borovoye Array**	**42.67**	**17**	P		**P**	**03 05 38.8**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=193,slow=6.1,SNR=3.6							
	comp=Z,0.7nm,0.4s							
KURBB	**Kurchatov Arra**	**43.57**	**25**	P		**P**	**03 05 45.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=225,slow=8.1,SNR=5.5							
KURBB				LR		LR	03 25 20.3	
	comp=Z,141nm,21.2s,baz=190,slow=38							
	comp=Z,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**46.35**	**77**	P		**P**	**03 06 08.3**	**+0.2**
	comp=Z,1.8nm,0.4s,baz=275,slow=8.8,SNR=15							
	comp=Z,1.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**46.35**	**77**	P		**P**	**03 06 07.9**	**-0.3**
GERES	**GERESS Array B**	**47.01**	**327**	P		**P**	**03 06 12.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=141,slow=13,SNR=2.0							
	comp=Z,0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**47.92**	**276**	P		**P**	**03 06 21.5**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=90,slow=7.7,SNR=10							
	comp=Z,1.6nm,0.8s							
ZAA0	**Zalesovo Array**	**48.64**	**26**	P		**P**	**03 06 24.6**	**-0.8**
ZAA0				IAmb		IAmb	03 06 26.3	
	comp=Z,1.9nm,1.0s							
ZALV	**Zalesovo Beam**	**48.64**	**26**	P		**P**	**03 06 24.6**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=224,slow=8.3,SNR=4.5							
	comp=Z,0.7nm,0.6s							
ZALV	**Zalesovo Beam**	**48.64**	**26**	P		**P**	**03 06 24.5**	**-1.0**
FINES	**FINESS Array B**	**51.46**	**345**	P		**P**	**03 06 46.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=125,slow=17,SNR=5.5							
	comp=Z,0.7nm,0.7s							
FINES	**FINESS Array B**	**51.46**	**345**	P		**P**	**03 06 46.3**	**-0.4**
HFS	**Hagfors**	**54.28**	**338**	P		**P**	**03 07 07.5**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=154,slow=11,SNR=1.9							
	comp=Z,1.8nm,1.0s							
ESDC	**Sonseca Array**	**54.85**	**309**	P		**P**	**03 07 12.5**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=96,slow=6.2,SNR=10							
	comp=Z,0.7nm,0.7s							
NC303	**NORSAR Array S**	**55.86**	**338**	P		**P**	**03 07 20.3**	**+1.2**
NC303				IAmb		IAmb	03 07 22.1	
	comp=Z,6.7nm,1.1s							
SONM	**Songino Array**	**57.33**	**41**	P		**P**	**03 07 30.2**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=226,slow=8.0,SNR=5.0							
	comp=Z,0.9nm,0.9s							
WRA	**Warramunga Arr**	**88.33**	**111**	P		**P**	**03 10 34.1**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=296,slow=4.1,SNR=9.6							
	comp=Z,0.9nm,0.9s							
ASAR	**Alice Springs**	**88.88**	**114**	P		**P**	**03 10 36.6**	**0.0**
	comp=Z,0.4nm,0.5s,baz=286,slow=4.4,SNR=7.1							
	comp=Z,0.4nm,0.5s							

NOU 18 03:02:49.6, 17°.00S×167°.72E, h19km, MLv4.3/20, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**0.85**	**148**	P		**Pn**	03 03 07.3	+0.8
DVP	**Devils Point**	**0.85**	**148**	S		**Sn**	03 03 18.0	-0.5
RTV	**Rentapao**	**1.04**	**140**	P		**Pn**	03 03 09.2	+0.1
RTV	**Rentapao**	**1.04**	**140**	S		**Sn**	03 03 23.1	0.0
MARNC	**Mare, Loyalty**	**4.47**	**176**	P		**Pn**	03 03 56.2	-0.1
KOUNC	**Koumac, New Ca**	**4.80**	**222**	P		**Pn**	03 04 01.6	+0.7
YATNC	**Mamie plateau,**	**5.09**	**189**	P		**Pn**	03 04 04.3	-0.7
NOUC	**Port Laguerre**	**5.25**	**195**	P		**Pn**	03 04 07.2	+0.1
ONTNC	**Ouen Toro**	**5.41**	**193**	P		**Pn**	03 04 10.3	+1.0
OUENC	**Ouen Island, N**	**5.45**	**189**	P		**Pn**	03 04 11.5	+1.6

*NEIC **18** 03:14:15.4±2.0, 8°.27S±0°.07×119°.51E±0°.08, h183km±2km, mb4.6/23, Error ellipse: s-maj=11.1km s-min=9.9km az=57.0*
*GFZ **18** 03:14:15.1±0.1, 8°.5S±2°.1×120°.0E±°, h191km, M4.6/25, mb4.7/25*
*BJI **18** 03:14:15.4, 8°.47S×120°.19E, h222km, mB4.5/4, mb4.5/20*
*IDC **18** 03:14:16.4±1.2, 8°.16S×119°.60E, h196km±10km, mb3.9/16, mbtmp4.5/20, MS3.3/1, Error ellipse: s-maj=17.6km s-min=8.9km az=74.0*
*DJA **18** 03:14:16.1±0.2, 8°.5S±2°.1×120°.0E±°, h178km±3km, M4.7/25, mB5.2/13, mb4.8/21, MLv4.8/25, Mw(mB)4.6/13*
ISC 18 03:14:15.0±0.3, 8°.35S±0°.04×119°.62E±0°.05, h183km, n166, σ1°52/169, mb4.5/31, 1D, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LBFI	**Labuhan Bajo,**	**0.30**	**115**	P		**Pn**	**03 14 40.4**	**+0.9**
LBFI	**Labuhan Bajo,**	**0.30**	**115**	P		**Pn**	**03 14 39.9**	**+0.4**
DBNI	**Kabupaten Domp**	**1.30**	**263**	P		**Pn**	**03 14 45.1**	**-0.4**
DBNI	**Kabupaten Domp**	**1.30**	**263**	P		**Pn**	**03 14 45.0**	**-0.4**
WBSI	**Waikabubak, Su**	**1.30**	**190**	P		**Pn**	**03 14 45.0**	**-0.5**
WBSI	**Waikabubak, Su**	**1.30**	**190**	P		**Pn**	**03 14 45.1**	**-0.5**
WSI	**Waingapu**	**1.47**	**153**	P		**Pn**	**03 14 47.8**	**+0.8**
WSI				S		**Sn**	**03 15 11.3**	**-0.5**
PLAI	**Plampang**	**1.88**	**255**	P		**Pn**	**03 14 50.7**	**-0.4**
PLAI	**Plampang**	**1.88**	**255**	P		**Pn**	**03 14 51.1**	**0.0**
PLAI				S		**Sn**	**03 15 17.9**	**-1.1**
PLAI	**Plampang**	**1.88**	**255**	P		**Pn**	**03 14 51.3**	**+0.2**
BSSI	**Bau Bau, Buton**	**2.

MBWA	Marble Bar	12.73	180			Pn	03 17 10.3	+0.5
GAMI	Galela, Maluku	12.99	39	P		Pn	03 17 07.7	-5.4
FAKI	Fak Fak	13.68	67			Pn	03 17 20.6	-1.1
FAKI	Fak Fak	13.68	67	P		Pn	03 17 23.5	+1.8
	75nm,0.7s							
FAKI	Fak Fak	13.68	67	P		Pn	03 17 20.7	-1.0
SWI	Sorong	13.78	58	P		Pn	03 17 22.3	-0.6
SIJI	Sorong	13.78	58	P		Pn	03 17 21.8	-1.2
	36nm,0.6s,baz=242,slow=5.3,SNR=11							
SIJI	Sorong	13.78	58	P		Pn	03 17 23.1	+0.1
	1µm59nm,0.8s							
SIJI	Sorong	13.78	58	P		Pn	03 17 22.2	-0.8
GIRL	Giralia	15.12	199	P		P	03 17 42.6	+2.2
MEEK	Meekatharra	18.21	183	P		P	03 18 15.0	+0.6
WB0	Warramunga Arr	18.26	130	P		P	03 18 16.0	+1.0
WB0				IAmb		IAmb	03 18 18.4	
	comp=Z,30nm,0.7s							
WRA	Warramunga Arr	18.32	131	P		P	03 18 16.5	+0.8
	comp=Z,19nm,0.8s,baz=302,slow=13,SNR=74							
WRA				S		S	03 21 34.4	-1.3
	comp=Z,11nm,0.6s,baz=306,slow=24,SNR=6.5							
WRAB	Tennant Creek	18.33	130	P		P	03 18 16.5	+0.8
WRAB	Tennant Creek	18.33	130	P		P	03 18 16.7	+1.0
WR8	Warramunga Arr	18.45	130	P		P	03 18 18.2	+1.1
AS31	Alice Springs	20.47	140	P		P	03 18 40.0	+1.1
AS31				IAmb		IAmb	03 18 42.8	
	comp=Z,21nm,0.4s							
ASAR	Alice Springs	20.47	140	P		P	03 18 40.1	+1.3
	comp=Z,28nm,0.5s,baz=328,slow=9.3,SNR=5.0							
ASAR				S		S	03 22 15.7	-2.3
	comp=Z,11nm,0.8s,baz=320,slow=21,SNR=20							
ASAR				ScP		ScP	03 26 00.5	-2.0
	comp=Z,1.2nm,0.6s,baz=328,slow=2.4,SNR=4.1							
	comp=Z,28nm,0.5s							
AUALC	St Philip's Co	20.48	140	P		P	03 18 40.1	+1.2
MORW	Morawa	20.88	189	P		P	03 18 42.3	-0.8
MORW				IAmb		IAmb	03 19 05.6	
	comp=Z,31nm,1.2s							
JAY	Jayapura	21.77	76	LR		LR	03 27 46.5	
	comp=Z,78nm,20.8s,baz=22,slow=37							
QIS	Mount Isa	22.81	124	P		P	03 19 01.9	-0.4
FORT	Forrest	23.67	162	P		P	03 19 11.2	+1.2
FORT				IAmb		IAmb	03 19 13.3	
	comp=Z,30nm,0.8s							
COEN	Coen	23.76	106	P		P	03 19 11.0	-0.1
COEN				IAmb		IAmb	03 19 13.8	
	comp=Z,27nm,0.8s							
COEN	Coen	23.76	106	P		P	03 19 11.5	+0.5
NWAO	Narrogin (SRO)	24.55	185	P		P	03 19 17.8	-0.3
BBOO	Buckleboo	28.71	150	P		P	03 19 56.6	+1.4
BBOO	Buckleboo	28.71	150	P		P	03 19 55.8	+0.6
STKA	Stephens Creek	31.07	142	P		P	03 20 17.7	+1.6
	comp=Z,17nm,0.6s,baz=319,slow=8.7,SNR=28							
STKA				ScP		ScP	03 26 31.6	-1.4
	comp=Z,2.6nm,0.6s,baz=322,slow=6.7,SNR=4.8							
	comp=Z,17nm,0.6s							
STKA	Stephens Creek	31.07	142	P		P	03 20 16.3	+0.3
YULB	Yu-li	31.59	3	P		P	03 20 17.9	-2.7
CMSA	Cobar Meteorol	33.48	137	P		P	03 20 37.7	+0.6
PZH	PanZhiHua	38.75	334	P		P	03 21 23.6	+1.7
WHN	Wuhan	39.00	353	⇓P		P	03 21 24.5	+0.7
WHN				pmax		pmax		
	comp=Z,36nm,0.6s							
NJ2	Nanjing	40.18	359	*eP*		P	03 21 34.1	+0.6
NJ2				pmax		pmax		
	comp=Z,45nm,0.5s							
CD2	Chengdu	41.90	339	*eP*		P	03 21 48.0	+0.4
XAN	Xi'an	43.36	347	P		P	03 21 59.3	-0.1
XAN				pmax		pmax		
	comp=Z,14nm,0.8s							
KSRS	Korea Array	46.22	9	P		P	03 22 20.2	-1.6
	comp=Z,2.2nm,0.7s,baz=187,slow=8.5,SNR=14							
	comp=Z,2.2nm,0.7s							
MJAR	Matsushiro Arr	47.95	20	P		P	03 22 32.6	-2.6
	comp=Z,2.1nm,0.8s,baz=191,slow=6.8,SNR=6.0							
	comp=Z,2.1nm,0.8s							
MJAR	Matsushiro Arr	47.95	20	IAmb		IAmb	03 22 33.1	
	comp=Z,7.2nm,1.4s							
BJI2	Beijing	48.23	356	P		P	03 22 36.8	-0.5
BJI2				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MARNC	Mare, Loyalty	48.37	111	P		P	03 22 40.6	+1.9
HHC	Hu-ho-hao-te	49.52	352	*eP*		P	03 22 48.5	+1.3
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,60nm,4.9s							
GTA2	Gaotai	51.04	340	*eP*		P	03 23 00.0	+1.3
GTA2				pmax		pmax		
	comp=Z,6.0nm,0.9s							
XLT	XiLinHaoTe	52.10	357	*eP*		P	03 23 06.0	-0.4
XLT				pmax		pmax		
	comp=Z,9.0nm,0.6s							
MDJ	Mudanjiang	53.49	9	P		P	03 23 15.6	-0.8
MDJ				pmax		pmax		
	comp=Z,11nm,0.8s							
USRK	Ussuriysk Ar.	53.49	11	P		P	03 23 14.2	-2.3
	comp=Z,3.5nm,0.7s,baz=196,slow=7.1,SNR=8.3							
	comp=Z,3.5nm,0.7s							
JKA	Kamikawa-asahi	56.22	20	P		P	03 23 34.0	-2.0
JKA				IAmb		IAmb	03 24 07.4	
	comp=Z,30nm,1.5s							
ULN	Ulaanbaatar	57.07	350	P		P	03 23 41.1	-1.0
SONM	Songino Array	57.15	349	P		P	03 23 41.9	-0.8
	comp=Z,4.9nm,0.9s,baz=167,slow=8.2,SNR=18							
	comp=Z,4.9nm,0.9s							
SONM	Songino Array	57.15	349	P		P	03 23 42.4	-0.4
SONM				IAmb		IAmb	03 23 43.6	
	comp=Z,5.0nm,1.0s							
MSVF	Nonsavu	57.49	106	P		P	03 23 46.0	+0.3
	comp=Z,6.0nm,0.7s,baz=269,slow=6.9,SNR=4.6							
	comp=Z,6.0nm,0.7s							
MSVF	Nonsavu	57.49	106	IAmb		IAmb	03 23 47.6	
	comp=Z,7.4nm,0.8s							
HILR	Hailar Array B	57.66	0	P		P	03 23 45.5	-0.7
	comp=Z,3.3nm,0.4s,baz=176,slow=10,SNR=8.0							
	comp=Z,3.3nm,0.4s							
CASY	Casey	58.18	184	P		P	03 23 50.5	+1.0
CASY				IAmb		IAmb	03 24 08.0	
	comp=Z,8.7nm,1.2s							
HEH	HeiHe	58.76	6	*eP*		P	03 23 52.4	-1.2
HEH				pmax		pmax		
	comp=Z,8.0nm,0.9s							
WMQ	Urumqi	59.45	334	*eP*		P	03 23 59.6	+1.0
MKAR	Makanchi Array	64.17	332	P		P	03 24 28.8	-1.2
	comp=Z,1.3nm,0.4s,baz=154,slow=6.4,SNR=15							
	comp=Z,1.3nm,0.4s							
ZAA0	Zalesovo Array	68.66	339	P		P	03 24 57.1	-1.3
ZAA0				IAmb		IAmb	03 25 00.3	
	comp=Z,2.6nm,0.7s							
ZALV	Zalesovo Beam	68.66	339	P		P	03 24 56.4	-2.0
	comp=Z,2.6nm,0.5s,baz=148,slow=4.1,SNR=13							
	comp=Z,2.6nm,0.5s							
ZALV	Zalesovo Beam	68.66	339	P		P	03 24 56.7	-1.6
KURBB	Kurchatov Arra	68.67	333	P		P	03 24 56.8	-1.7
	comp=Z,1.5nm,0.2s,baz=142,slow=5.1,SNR=1.8							
	comp=Z,1.5nm,0.2s							
KURK	Kurchatov	68.69	333	P		P	03 24 57.0	-1.6
PEA0B	Petropavlovsk-	69.24	23	P		P	03 25 01.7	-0.2
PEA0B				IAmb		IAmb	03 25 02.4	
	comp=Z,7.6nm,0.7s							
PETK	Petropavlovsk-	69.24	23	P		P	03 25 01.6	-0.4
	comp=Z,5.1nm,0.6s,baz=223,slow=2.2,SNR=20							
	comp=Z,5.1nm,0.6s							
PETK	Petropavlovsk-	69.24	23	P		P	03 25 01.8	-0.2
MAW	Mawson	70.05	200	P		P	03 25 07.9	+1.2
	comp=Z,1.7nm,0.6s,baz=48,slow=5.8,SNR=4.0							
	comp=Z,1.7nm,0.6s							
VNDA	Vanda	72.53	171	P		P	03 25 23.3	+1.8
	comp=Z,1.3nm,0.5s,baz=314,slow=7.0,SNR=16							
	comp=Z,1.3nm,0.5s							
VNDA	Vanda	72.53	171	P		P	03 25 23.5	+2.0
SBA	Scott Base	73.53	171	P		P	03 25 29.7	+2.4
BVAR	Borovoye Array	74.02	332	P		P	03 25 28.6	-2.0
	comp=Z,0.8nm,0.5s,baz=118,slow=8.0,SNR=2.6							
	comp=Z,0.8nm,0.5s							
AB31	Akbulak array	77.39	325	P		P	03 25 48.5	-1.2
QSPA	South Pole Qui	81.64	180	P		P	03 26 13.3	+0.8
	comp=Z,1.6nm,1.0s,baz=343,slow=4.4,SNR=2.7							
	comp=Z,1.6nm,1.0s							
QSPA	South Pole Qui	81.64	180	P		P	03 26 13.6	+1.0
G19K	Purcell Mounta	94.87	24	P		P	03 27 14.9	-0.9
G19K				IAmb		IAmb	03 27 16.6	
	comp=Z,5.0nm,0.9s							
TORD	Torodi Ar. Bea	118.95	280	PKP		PKPdf	03 32 42.0	-0.9
	comp=Z,0.6nm,0.5s,baz=44,slow=2.2,SNR=5.3							
NVAR	Mina Array Bea	120.14	50	PKP		PKPdf	03 32 44.8	0.0
	comp=Z,0.6nm,0.7s,baz=274,slow=2.4,SNR=4.6							
NVAR	Mina Array Bea	120.14	50			PKPdf	03 32 45.2	+0.4
TXAR	Lajitas Array	134.37	57	PKP		PKPdf	03 33 12.7	+0.7
	comp=Z,0.7nm,0.8s,baz=322,slow=0.9,SNR=4.4							
CPUP	Villa Florida	145.40	185	PKPbc		PKPbc	03 33 32.7	+0.5
	comp=Z,0.9nm,0.6s,baz=104,slow=1.8,SNR=5.7							
CPUP	Villa Florida	145.40	185			PKPdf	03 33 31.9	-0.1
LPAZ	La Paz	154.34	163	PKPbc		PKiKP	03 33 56.2	+0.8
	comp=Z,0.2nm,0.4s,baz=221,slow=12,SNR=1.1							
LPAZ				PKPab		PKPab	03 34 09.4	-0.5
	comp=Z,1.1nm,0.7s,baz=185,slow=2.0,SNR=8.9							

SJA ***18*** *03:17:33.0±0.7,20.°61S×70.°94W,h29km±4km, ML4.4, MW4.5*
GFZ ***18*** *03:17:35.7±0.3,21.°S±2.°×7.°1W±.°, h10km, M4.6/17, mb4.4/10, Error ellipse: s-maj=8.5km s-min=3.8km az=99.0, confirmed*
NEIC ***18*** *03:17:38.1±2.3,20.°70S±0.°04×70.°79W±0.°08, h35km±2km, mb4.7/11, Mwr4.2/39, Mwr4.7(GUC), Error ellipse: s-maj=12.2km s-min=7.3km az=85.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.96; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$-0.65; $M_{r\theta}$0.58; $M_{\theta\phi}$0.90; $M_{\phi r}$-2.10; Fault plane solution: $M_0$2.51000×10^{15} NP1:ϕs162.64000°, δ77.26000°, λ104.84000°. NP2:ϕs292.42000°, δ19.47000°, λ41.45000°. Principal axes: T 2.4076, Plg55.0000°, Azm91.0000°; N 0.1908, Plg14.0000°, Azm339.0000°; P -2.5985, Plg31.0000°, Azm240.0000°;*
GUC ***18*** *03:17:38.2±0.6,20.°62S×70.°71W,h29km±2km, ML4.5*
NEIC ***18*** *03:17:38.1,20.°70S×70.°79W, h35km*
IDC ***18*** *03:17:41.3±2.8,20.°78S×70.°66W,h69km±24km, mb3.6/5, mbtmp3.9/10,MS3.7/2, Error ellipse: s-maj=28.2km s-min=19.0km az=96.0*
VAO ***18*** *03:17:45.0±1.0,20.°35S×70.°26W,h47km±6km, mb4.4, Presumed earthquake*

ISC 18 03:17:37.2±1.2, 20.°67S±0.°03×70.°76W±0.°05, h31km±9km, **n153,σ1s67/163,mb4.2/7,1C-10D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.71	56	*eP*		Pb	03 17 49.5	-1.6
TA02				IAML			03 18 04.3	
	comp=Z,7µm,0.6s							
TA02	Huaiquique	0.71	56	⇓*iP*		Pb	03 17 49.4	-1.6
TA02				*i* S		Sb	03 17 58.2	-2.4
TA02				IAML			03 17 59.6	
	comp=N,33µm,0.1s							
TA02	Huaiquique	0.71	56	P		Pb	03 17 49.5	-1.6
PB02	IPOC Station P	1.03	129	*eP*		Pn	03 17 54.9	-0.8
PB02				IAML			03 18 12.7	
	comp=Z,15µm,0.4s							
PB02	IPOC Station P	1.03	129	⇓*iP*		Pn	03 17 55.4	-0.4
PB02				*i* S		Sn	03 18 09.2	0.0
PB02				IAML			03 18 17.1	
	comp=E,20µm,0.6s							
PB02	IPOC Station P	1.03	129			Pn	03 17 55.3	-0.4
PB02	IPOC Station P	1.03	129	P		Pn	03 17 55.5	-0.2
PSGCX	Pisagua	1.22	29	*eP*		Pn	03 17 57.0	-1.2
PSGCX				IAML			03 18 16.1	
	comp=Z,5µm,0.4s							
PSGCX	Pisagua	1.22	29	⇓*iP*		Pn	03 17 57.6	-0.7
PSGCX				*i* S		Sn	03 18 12.3	-1.5
PSGCX	Pisagua	1.22	29			Pn	03 17 57.6	-0.7
PSGCX	Pisagua	1.22	29	P		Pn	03 17 57.7	-0.5
PB01	IPOC Station P	1.25	108			Pn	03 17 58.8	+0.2
PB07	IPOC Station P	1.33	143	*eP*		Pn	03 17 60.0	+0.1
PB07				IAML			03 18 27.2	
	comp=Z,3µm,0.5s							
PB07	IPOC Station P	1.33	143	⇓*iP*		Pn	03 18 00.4	+0.6
PB07				*i* S		Sn	03 18 18.5	+1.8
PB07	IPOC Station P	1.33	143			Pn	03 18 00.5	+0.6
PB07	IPOC Station P	1.33	143	P		Pn	03 18 00.6	+0.7
PB11	IPOC Station P	1.37	49	*eP*		Pn	03 17 59.7	-0.7
PB11				IAML			03 18 24.7	
	comp=Z,8µm,1.0s							
PB11	IPOC Station P	1.37	49	⇓*iP*		Pn	03 18 00.2	-0.2
PB11				*i* S		Sn	03 18 16.9	-0.6
PB11				IAML			03 18 20.3	
	comp=N,26µm,0.4s							
PB11	IPOC Station P	1.37	49			Pn	03 18 00.2	-0.2
PB11	IPOC Station P	1.37	49	P		Pn	03 18 00.3	0.0
PB08	IPOC Station P	1.59	71	*eP*		Pn	03 18 03.5	-0.2
PB08				*eS*		Sn	03 18 20.3	-3.1
PB08				IAML			03 18 27.2	
	comp=Z,6µm,0.5s							
PB08	IPOC Station P	1.59	71	⇓*iP*		Pn	03 18 04.0	+0.4
PB08				*i* S		Sn	03 18 23.8	+0.4
PB08				IAML			03 18 26.9	
	comp=E,8µm,0.3s							
PB08	IPOC Station P	1.59	71			Pn	03 18 04.0	+0.4
PB08	IPOC Station P	1.59	71	P		Pn	03 18 04.3	+0.6
PB03	IPOC Station P	1.66	146	*eP*		Pn	03 18 04.8	+0.4
PB03				IAML			03 18 33.5	
	comp=Z,2µm,0.8s							
PB03	IPOC Station P	1.66	146	⇓*iP*		Pn	03 18 05.1	+0.7
PB03				*i* S		Sb	03 18 27.6	-0.4
PB03	IPOC Station P	1.66	146			Pn	03 18 04.9	+0.4
PB03	IPOC Station P	1.66	146	P		Pn	03 18 05.3	+0.8
GO01	Chusmiza	1.77	56	*eP*		Pn	03 18 06.3	+0.1
GO01				IAML			03 18 35.2	
	comp=Z,4µm,0.4s							
GO01	Chusmiza	1.77	56	*eP*		Pn	03 18 06.8	+0.6
GO01				*i* S		Sn	03 18 29.5	+1.6
GO01				IAML			03 18 31.6	
	comp=N,7µm,0.4s							
GO01	Chusmiza	1.77	56			Pn	03 18 06.9	+0.7
GO01	Chusmiza	1.77	56	P		Pn	03 18 07.1	+0.9
PB09	IPOC Station P	1.81	129	*eP*		Pn	03 18 08.1	+1.7
PB09				IAML			03 18 41.2	
	comp=Z,4µm,0.6s							
PB09	IPOC Station P	1.81	129	⇓*iP*		Pn	03 18 08.6	+2.2
PB09				*i* S		Sb	03 18 32.8	+0.7
PB09				IAML			03 18 36.8	
	comp=E,5µm,0.7s							
PB09	IPOC Station P	1.81	129			Pn	03 18 08.6	+2.2
PB09	IPOC Station P	1.81	129	P		Pn	03 18 08.3	+1.9
PB12	IPOC Station P	2.08	11	*eP*		Pn	03 18 05.9	-4.2
PB12				*eS*		Sn	03 18 37.9	+2.9
PB12				IAML			03 18 43.2	
	comp=Z,3µm,0.6s							
PB12	IPOC Station P	2.08	11	*eP*		Pn	03 18 10.4	+0.3
PB12				*i* S		Sn	03 18 35.8	+0.8
PB12				*eS*			03 18 39.0	
PB12				IAML			03 18 44.3	
	comp=E,4µm,0.6s							
PB12	IPOC Station P	2.08	11			Pn	03 18 11.1	+1.0
PB12	IPOC Station P	2.08	11	P		Pn	03 18 11.3	+1.2
PB05	IPOC Station P	2.24	167	*eP*		Pn	03 18 11.6	-0.7
PB05				*eS*		Sb	03 18 42.7	-1.7
PB05				IAML			03 18 58.9	
	comp=Z,963nm,0.7s							
PB05	IPOC Station P	2.24	167	⇓*iP*		Pn	03 18 12.1	-0.1
PB05				*i* S		Sb	03 18 43.9	-0.5
PB05	IPOC Station P	2.24	167	P		Pn	03 18 12.3	+0.1
PB06	IPOC Station P	2.31	152	*eP*		Pn	03 18 13.9	+0.5
PB06				*eS*		Sn	03 18 43.7	+2.9
PB06				IAML			03 18 53.8	
	comp=Z,2µm,0.7s							
PB06	IPOC Station P	2.31	152	⇓*iP*		Pn	03 18 13.8	+0.5
PB06				*i* S		Sb	03 18 46.7	+0.2
PB06	IPOC Station P	2.31	152			Pn	03 18 13.8	+0.5
PB06	IPOC Station P	2.31	152	P		Pn	03 18 14.0	+0.7
AP01	Chacalluta	2.32	10	*eP*		Pn	03 18 15.2	+1.9
AP01				*eS*		Sb	03 18 49.6	+3.1
AP01				IAML			03 18 56.9	
	comp=Z,4µm,0.8s							
AP01	Chacalluta	2.32	10	*eP*		Pn	03 18 15.8	+2.5
AP01				*eS*		Sb	03 18 46.2	-0.3
AP01				IAML			03 18 58.4	
	comp=E,6µm,0.4s							
AP01	Chacalluta	2.32	10			Pn	03 18 15.1	+1.9
AP01	Chacalluta	2.32	10	P		Pn	03 18 15.4	+2.2
PB16	IPOC Station P	2.60	27	*eP*		Pn	03 18 18.6	+1.0
PB16				*eS*		Sn	03 18 49.3	+0.7
PB16				IAML			03 18 59.8	
	comp=Z,2µm,0.8s							
PB16	IPOC Station P	2.60	27	⇑*eP*		Pn	03 18 18.7	+1.0
PB16				*i* S		Sn	03 18 51.1	+2.5
PB16				IAML			03 19 02.0	
	comp=N,1µm,0.5s							
PB16	IPOC Station P	2.60	27			Pn	03 18 18.7	+1.0
PB16	IPOC Station P	2.60	27	P		Pn	03 18 20.0	+2.3
PB18	Visviri	3.29	22	*eP*		Pn	03 18 31.6	+4.5
PB18				IAML			03 19 28.4	
	comp=E,2µm,0.4s							
PB18	Visviri	3.29	22			Pn	03 18 31.6	+4.5
PB18	Visviri	3.29	22	P		Pn	03 18 29.4	+2.3
AF01	San Pedro de A	3.30	134	*eP*		Pn	03 18 28.7	+1.6
AF01				*eS*		Sb	03 19 12.7	-2.5
AF01				IAML			03 19 44.6	
	comp=Z,4µm,0.6s							
AF01	San Pedro de A	3.30	134	*eP*		Pn	03 18 30.7	+3.6
AF01	San Pedro de A	3.30	134			Pn	03 18 30.6	+3.6
PB14	IPOC Station P	3.95	175	*eP*		Pn	03 18 34.8	-1.2
PB14				*eS*		Sb	03 19 38.0	+4.0
PB14				IAML			03 19 53.6	
	comp=Z,233nm,0.8s							
PB14	IPOC Station P	3.95	175			Pn	03 18 35.3	-0.8
PB14	IPOC Station P	3.95	175	P		Pn	03 18 34.3	-1.7
LPAZ	La Paz	5.02	30	P		Pn	03 18 56.1	+5.1
	comp=Z,7.3nm,0.3s,baz=224,slow=6.1,SNR=39							
LPAZ	La Paz	5.02	30			Pn	03 18 53.6	+2.6
LPAZ	La Paz	5.02	30	*eP*		Pn	03 18 50.8	-0.1
LPAZ	La Paz	5.02	30	P		Pn	03 18 53.5	+2.5
AC02	Maricunga	6.32	167			Pn	03 19 09.1	+0.4
AC02	Maricunga	6.32	167	P		Pn	03 19 09.0	+0.2
GO03	Copiapo	6.91	176	P		Pn	03 19 15.1	-1.4
AC04	Llanos de Chal	7.51	182	P		Pn	03 19 24.1	-0.5
AC05	El Transito	8.15	177			Pn	03 19 32.6	-0.9
AC05	El Transito	8.15	177	P		Pn	03 19 33.1	-0.4
LCO	Las Campanas	8.31	180	P		Pn	03 19 35.4	-0.4
CO01	Juntas del Tor	9.29	176	P		Pn	03 19 49.6	+0.3
GO04	Tololo Observa	9.47	180	P		Pn	03 19 51.4	-0.3
CO03	El Pedregal	10.13	180	P		Pn	03 20 01.8	+1.1
BBSD	Serra de San D	10.21	72	*eP*		Pn	03 20 01.8	+0.2
SIV	San Ignacio	10.30	65	P		Pn	03 20 04.2	+1.1
	comp=Z,22nm,0.7s,baz=248,slow=11,SNR=66							
NNA	Nana	10.42	325	P		Pn	03 20 05.0	+0.4
CFA	Coronel Fontan	11.13	169	P		Pn	03 20 16.8	+2.6
	comp=Z,0.5nm,0.5s,baz=356,slow=13,SNR=10							
COIM	Forte Coimbra	12.20	89	*eP*		Pn	03 20 28.0	-0.8
PTLB	Pontes e Lacer	12.21	67			Pn	03 20 30.9	+1.8
PTLB	Pontes e Lacer	12.21	67	*eP*		Pn	03 20 29.0	0.0
MURT	Porto Murtinho	12.31	97	*eP*		Pn	03 20 31.1	+0.7
VILB	Vilhena	12.68	54			Pn	03 20 36.9	+1.3
VILB	Vilhena	12.68	54	*eP*		Pn	03 20 35.6	0.0
CZSB	Cruzeiro do Su	13.00	351	*eP*		Pn	03 20 44.0	+4.2
CPUP	Villa Florida	13.55	117	P		Pn	03 20 48.6	+1.4
	comp=Z,1.4nm,0.8s,baz=315,slow=13,SNR=4.1							
CPUP	Villa Florida	13.55	117	*eP*		Pn	03 20 51.5	+4.2
AQDB	Aquidauana	14.11	92	*eP*		Pn	03 20 56.9	+1.9
AQDB	Aquidauana	14.11	92	P		Pn	03 20 55.9	+1.0
SJPY	San Joaquin	14.18	110	*eP*		Pn	03 20 58.3	+2.3
H03N1	Juan Fernandez	14.64	208	T		T	03 36 12.6	
	baz=33,slow=72,SNR=287							
H03N2	Juan Fernandez	14.65	208	T		T	03 36 12.6	
	baz=33,slow=72,SNR=217							
H03N3	Juan Fernandez	14.66	208	T		T	03 36 09.8	
	baz=33,slow=72,SNR=220							
SALV	Santo Antonio	15.07	74	*eP*		Pn	03 21 08.6	+0.6
PP1B	Ponte de Pedra	15.31	81	*eP*		Pn	03 21 11.8	+0.5
ATAH	Atahualpa	15.35	330	LR		LR	03 27 43.5	
	comp=Z,252nm,20.7s,baz=55,slow=39							
TRCB	Terra Rica	16.97	100			Pn	03 21 29.2	-3.3
TRCB				IAmb		IAmb	03 21 38.8	
	comp=Z,23nm,0.6s							
TRCB	Terra Rica	16.97	100	*eP*		Pn	03 21 34.1	+1.6
CLDB	Colider	17.37	58	*eP*		Pn	03 21 37.1	-0.3
CLDB	Colider	17.37	58	P		Pn	03 21 36.3	-1.1
PTGB	Pitanga	17.71	107	*eP*		P	03 21 44.8	+2.4
ITAB	Concordia	18.23	115			P	03 21 47.4	-0.6
ITAB				IAmb		IAmb	03 22 20.9	
	comp=Z,70nm,1.5s							
CPSB	Cacapava Do Su	18.37	125	P		P	03 21 48.8	-0.7
CPSB	Cacapava Do Su	18.37	125	*eP*		Pn	03 21 53.6	+3.9
CPSB	Cacapava Do Su	18.37	125	P		Pn	03 21 51.2	+1.5
LDASE	Londrina, Braz	18.41	102	*eP*		P	03 21 51.0	+1.0
ARAG	Araguaiana, MT	18.66	78	*eP*		P	03 21 53.3	+0.6
FRTB	Fartura	19.83	102	*eP*		Pn	03 22 08.1	+0.8
FRTB	Fartura	19.83	102	P

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.60**	**347**	*eP*	**Pb**	**03 34 37.9**	**+0.6**
	10nm,0.1s						
SHLS				*eS*	**Sn**	**03 34 47.7**	**-2.1**
	52nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**322**	*eP*	**Pg**	**03 34 38.7**	**+0.5**
UZB				*eS*	**Sb**	**03 34 49.6**	**-0.4**
PRZ	**Przheval'sk**	**0.93**	**265**⇑	*eP*	**Pg**	**03 34 40.7**	**-1.1**
PRZ				⇑*eS*	**Sg**	**03 34 53.6**	**-0.2**
KPKS	**Kokpek**	**1.14**	**322**	P	**Pn**	**03 34 46.6**	**-0.3**
	0.5nm,0.2s						
KPKS				S	**Sb**	**03 35 01.8**	**+0.2**
	1.9nm,0.4s						
KPKS	**Kokpek**	**1.14**	**322**	*eP*	**Pg**	**03 34 45.4**	**-0.5**
	0.5nm,0.2s						
KPKS				*eS*	**Sb**	**03 35 01.8**	**+0.2**
	1.9nm,0.4s						
ANVS	**Anan'yevo**	**1.48**	**279**⇑	*eP*	**Pn**	**03 34 50.7**	**-0.9**
ANVS				⇑*eS*	**Sn**	**03 35 10.6**	**-0.8**
TARG	**Taragay, Kyrgy**	**1.61**	**239**⇓	*eP*	**Pn**	**03 34 52.7**	**-0.9**
TARG				⇓*eS*	**Sn**	**03 35 14.0**	**-1.0**
BLB	**Baldybastay**	**1.75**	**331**	P	**Pg**	**03 34 57.3**	**-0.2**
	3.8nm,0.2s						
BLB				S	**Sg**	**03 35 20.1**	**-0.1**
	5.5nm,0.2s						
KNOS	**Konyrlen**	**1.82**	**349**	P	**Pg**	**03 34 59.1**	**+0.1**
	1.2nm,0.1s						
KNOS				S	**Sg**	**03 35 23.1**	**+0.5**
	2.2nm,0.3s						
KDJ	**Kajisay**	**1.88**	**257**⇑	*eP*	**Pn**	**03 34 57.4**	**+0.3**
KDJ				⇑*eS*	**Sn**	**03 35 22.2**	**+0.8**
ULHL	**Ulahol**	**2.54**	**264**⇑	*eP*	**Pn**	**03 35 06.8**	**+0.5**
ULHL				⇑*eS*	**Sn**	**03 35 38.5**	**+0.7**
BOOM	**Boomskoye usch**	**2.74**	**270**⇑	*eP*	**Pn**	**03 35 09.5**	**+0.5**
BOOM				⇑*eS*	**Sn**	**03 35 43.2**	**+0.6**
NRN	**Naryn**	**2.94**	**249**⇑	*eP*	**Pn**	**03 35 12.7**	**+0.8**
NRN				⇑*eS*	**Sn**	**03 35 48.6**	**+0.7**

*NNC **18** 03:40:11.7±0.6,42°.89N×78°.66E,h0km,mb3.0,mpv3.3,*
Error ellipse: s-maj=4.6km s-min=2.0km az=173.0
*SOME **18** 03:40:12.8,42°.90N×78°.60E,h10km*
*KRNET **18** 03:40:12.5±0.1,42°.87N×78°.60E,h35km,mb2.5*
ISC 18 03:40:12.3±1.0,**42°.87N**±0°.03×**78°.59E**±0°.02,**h12**km±7km,
n40,σ1§16/71,14C-8D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.23**	**325**	P	**Pg**	**03 40 17.7**	**+0.3**
	41nm,0.1s						
SATY				S	**Sg**	**03 40 21.5**	**+0.6**
	417nm,0.1s						
SATY	**Saty**	**0.23**	**325**	*eP*	**Pg**	**03 40 17.7**	**+0.3**
	41nm,0.1s						
SATY				*eS*	**Sg**	**03 40 21.5**	**+0.6**
	417nm,0.1s						
PRZ	**Przheval'sk**	**0.41**	**200**⇓	*eP*	**Pb**	**03 40 21.9**	**+0.3**
PRZ				⇓*eS*	**Sb**	**03 40 28.8**	**+1.0**
UZB	**Uzynbulak**	**0.42**	**48**	P	**Pg**	**03 40 19.8**	**-0.9**
	72nm,0.1s						
UZB				S	**Sg**	**03 40 25.1**	**-1.4**
	230nm,0.1s						
UZB	**Uzynbulak**	**0.42**	**48**	*eP*	**Pg**	**03 40 19.9**	**-0.9**
UZB				*eS*	**Sg**	**03 40 25.1**	**-1.4**
KPKS	**Kokpek**	**0.60**	**7**	P	**Pg**	**03 40 23.5**	**-0.6**
	0.3nm,0.1s						
KPKS				S	**Sg**	**03 40 31.2**	**-0.9**
	92nm,0.2s						
KPKS	**Kokpek**	**0.60**	**7**	*eP*	**Pg**	**03 40 23.5**	**-0.6**
	0.3nm,0.1s						
KPKS				*eS*	**Sg**	**03 40 31.2**	**-0.9**
	92nm,0.2s						
ANVS	**Anan'yevo**	**0.68**	**263**⇓	*eP*	**Pg**	**03 40 26.3**	**+0.7**
ANVS				⇓*eS*	**Sb**	**03 40 36.3**	**+0.5**
KURS	**Kuram**	**0.69**	**334**	P	**Pg**	**03 40 25.5**	**-0.3**
	17nm,0.2s						
KURS				S	**Sg**	**03 40 34.7**	**-0.3**
	13nm,0.3s						
KURS	**Kuram**	**0.69**	**334**	*eP*	**Pg**	**03 40 25.5**	**-0.3**
	17nm,0.2s						
KURS				*eS*	**Sg**	**03 40 34.7**	**-0.3**
	13nm,0.3s						
SHLS	**Shalkode**	**0.70**	**65**	P	**Pn**	**03 40 30.3**	**+2.1**
	11nm,0.1s						
SHLS				S	**Sn**	**03 40 42.9**	**+3.9**
	42nm,0.1s						
SHLS	**Shalkode**	**0.70**	**65**	*eP*	**Pn**	**03 40 30.3**	**+2.1**
	11nm,0.1s						
SHLS				*eS*	**Sn**	**03 40 42.9**	**+3.9**
	42nm,0.1s						
PDGK	**Podgornoye**	**0.81**	**55**⇑	P	**Pg**	**03 40 26.2**	**-1.7**
	4.4nm,0.5s						
PDGK				⇑S	**Sg**	**03 40 36.0**	**-2.6**
	22nm,0.3s						
MDOK	**Medeo**	**1.17**	**285**	Pg	**Pb**	**03 40 34.6**	**+0.1**
	3.9nm,0.3s						
MDOK				Lg	Lg	03 40 50.3	
	24nm,0.2s						
MDOK	**Medeo**	**1.17**	**285**	*eP*	**Pb**	**03 40 34.6**	**+0.1**
	3.9nm,0.3s						
MDOK				*eS*	**Sg**	**03 40 50.3**	**+0.3**
	24nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**279**	P	**Pb**	**03 40 35.9**	**+0.4**
	0.8nm,0.1s						
TNSS				S	**Sn**	**03 40 52.6**	**+0.5**
	3.2nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**279**	*eP*	**Pb**	**03 40 36.0**	**+0.4**
	0.8nm,0.1s						
TNSS				*eS*	**Sn**	**03 40 52.6**	**+0.5**
	3.2nm,0.2s						
BLB	**Baldybastay**	**1.23**	**356**	P	**Pb**	**03 40 35.0**	**-0.6**
	61nm,0.1s						
BLB				S	**Sb**	**03 40 51.0**	**-0.5**
	33nm,0.1s						
KDJ	**Kajisay**	**1.28**	**235**⇑	*eP*	**Pn**	**03 40 35.6**	**-0.5**
KDJ				⇑*eS*	**Sb**	**03 40 52.4**	**-0.4**
TARG	**Taragay, Kyrgy**	**1.28**	**207**⇓	*eP*	**Pn**	**03 40 35.8**	**-0.5**
TARG				⇓*eS*	**Sb**	**03 40 52.8**	**-0.3**
ARXS	**Arharly**	**1.46**	**338**	P	**Pb**	**03 40 39.1**	**-0.3**
	7.4nm,0.2s						
ARXS				S	**Sb**	**03 40 58.1**	**+0.2**
	16nm,0.2s						
ARXS	**Arharly**	**1.46**	**338**	*eP*	**Pb**	**03 40 39.1**	**-0.3**
	7.4nm,0.2s						
ARXS				*eS*	**Sb**	**03 40 58.1**	**+0.2**
	16nm,0.2s						
KNOS	**Konyrlen**	**1.55**	**16**	P	**Pn**	**03 40 40.3**	**+0.4**
	5.7nm,0.1s						
KNOS				S	**Sn**	**03 40 60.0**	**-0.1**
	29nm,0.2s						
KTBS	**Karatobe**	**1.63**	**302**	P	**Pb**	**03 40 42.5**	**+0.2**
	4.1nm,0.1s						
KTBS				S	**Sb**	**03 41 03.5**	**+0.6**
	32nm,0.2s						
KTBS	**Karatobe**	**1.63**	**302**	*eP*	**Pb**	**03 40 42.5**	**+0.2**
	4.1nm,0.1s						
KTBS				*eS*	**Sb**	**03 41 03.5**	**+0.6**
	32nm,0.3s						
DJR	**Jarkent**	**1.71**	**30**	P	**Pb**	**03 40 43.2**	**-0.5**
	7.5nm,0.2s						
DJR				S	**Sb**	**03 41 04.9**	**-0.2**
	21nm,0.4s						
ULHL	**Ulahol**	**1.84**	**251**⇑	*eP*	**Pn**	**03 40 43.6**	**-0.3**
ULHL				⇑*eS*	**Sn**	**03 41 06.3**	**-1.0**
KST	**Kastek**	**1.94**	**276**	Pg	**Pb**	**03 40 48.6**	**+1.0**
	3.4nm,0.1s						
KST				Lg	Lg	03 41 14.3	
	14nm,0.7s						
KST	**Kastek**	**1.94**	**276**	*eP*	**Pb**	**03 40 48.6**	**+1.0**
	3.4nm,0.1s						
KST				*eS*	**Sg**	**03 41 14.3**	**-0.2**
	14nm,0.7s						
BOOM	**Boomskoye usch**	**1.99**	**260**⇑	*eP*	**Pn**	**03 40 45.6**	**-0.3**
BOOM				⇑*eS*	**Sn**	**03 41 09.7**	**-1.1**
TKM2	**Tokmak 2**	**2.20**	**272**⇓	*eP*	**Pn**	**03 40 48.5**	**-0.4**
TKM2				⇓*eS*	**Sn**	**03 41 14.9**	**-1.2**
KRBS	**Karabastau**	**2.28**	**292**	Pg	**Pb**	**03 40 54.6**	**+1.1**
	1.2nm,0.2s						
KRBS				Lg	Lg	03 41 24.1	
	46nm,0.2s						
KRBS	**Karabastau**	**2.28**	**292**	*eP*	**Pb**	**03 40 54.6**	**+1.1**
	1.2nm,0.2s						
KRBS				*eS*	**Sg**	**03 41 24.1**	**-1.6**
	46nm,0.2s						
NRN	**Naryn**	**2.40**	**234**⇑	*eP*	**Pn**	**03 40 51.7**	**0.0**
NRN				⇑*eS*	**Sn**	**03 41 20.3**	**-0.9**
KAPS	**Kapalarasan**	**2.48**	**13**	Pg	**Pb**	**03 40 57.7**	**+0.9**
	3.0nm,0.1s						
KAPS				Lg	Lg	03 41 29.6	
	38nm,0.1s						
KAPS	**Kapalarasan**	**2.48**	**13**	*eP*	**Pb**	**03 40 57.7**	**+0.9**
	3.0nm,0.1s						
KAPS				*eS*	**Sg**	**03 41 29.6**	**-2.4**
	38nm,0.1s						
SGDS	**Sogindy**	**2.96**	**283**	Pg	**Pb**	**03 41 07.0**	**+2.0**
	2.4nm,0.6s						
SGDS				Lg	Lg	03 41 45.6	
	5.1nm,0.2s						
USP	**Ospenovka**	**3.02**	**279**⇑	*eP*	**Pn**	**03 40 59.8**	**-0.2**
USP				⇑*eS*	**Sn**	**03 41 34.5**	**-1.7**
AAK	**Ala-Archa**	**3.02**	**267**	⇑Lg	Lg	03 41 46.8	
	3.3nm,0.9s						
MK31	**Makanchi Array**	**4.73**	**33**	⇑Lg	Lg	03 42 37.8	
	0.4nm,0.5s,baz=212,slow=28,SNR=5.8						

*IDC **18** 03:42:12.3±3.2,7°.73S×158°.52E,h73km±30km,mb3.5/8,*
mbtmp3.8/9,Error ellipse: s-maj=25.8km s-min=23.2km
az=148.0
ISC 18 03:42:08.5±0.7,**7°.6S**±0°.1×**158°.4E**±0°.2,**h38**km,**n17,**
σ1§38/13,mb3.7/8,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.41**	**140**	P	**Pn**	**03 42 46.8**	**+1.4**
	24nm,0.5s,baz=158,slow=24,SNR=15						
HNR				S	**Sn**	**03 43 13.8**	**+0.1**
	22nm,0.3s,baz=276,slow=14,SNR=14						
WRA	**Warramunga Arr**	**26.34**	**240**	P	**P**	**03 47 42.1**	**+1.0**
	1.3nm,0.6s,baz=65,slow=8.7,SNR=16						
WRA				PcP	**PcP**	**03 51 06.8**	**+0.2**
	0.2nm,0.4s,baz=62,slow=2.9,SNR=1.8						
	1.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.17**	**17**	T	T	04 16 12.3	
	baz=198,slow=76,SNR=634						
H11S2	**WAKE ISLAND Hy**	**27.17**	**18**	T	T	04 16 12.4	
	baz=198,slow=76,SNR=638						
H11S1	**WAKE ISLAND Hy**	**27.19**	**17**	T	T	04 16 06.9	
	baz=198,slow=76,SNR=450						
H11N1	**WAKE ISLAND Hy**	**28.38**	**17**	T	T	04 17 35.1	
	baz=198,slow=76,SNR=227						
H11N3	**WAKE ISLAND Hy**	**28.39**	**17**	T	T	04 17 35.8	
	baz=198,slow=76,SNR=191						
H11N2	**WAKE ISLAND Hy**	**28.40**	**17**	T	T	04 17 36.5	
	baz=198,slow=76,SNR=152						
ASAR	**Alice Springs**	**28.41**	**233**	P	**P**	**03 48 00.1**	**+0.5**
	0.3nm,0.4s,baz=64,slow=9.3,SNR=5.4						
	0.3nm,0.4s						
VNDA	**Vanda**	**69.93**	**179**	P	**P**	**03 53 14.6**	**-0.7**
	0.7nm,0.8s,baz=322,slow=4.6,SNR=4.6						
	0.7nm,0.8s						
SONM	**Songino Array**	**71.67**	**326**	P	**P**	**03 53 27.6**	**+1.1**
	0.9nm,0.7s,baz=138,slow=6.0,SNR=3.9						
	0.9nm,0.7s						
QSPA	**South Pole Qui**	**82.40**	**180**	P	**P**	**03 54 25.3**	**-1.3**
	0.5nm,0.7s,baz=347,slow=14,SNR=1.4						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**82.71**	**21**	P	**P**	**03 54 28.1**	**+0.1**
	0.5nm,0.9s,baz=252,slow=4.9,SNR=4.7						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**86.07**	**318**	P	**P**	**03 54 46.6**	**+1.3**
	0.3nm,0.5s,baz=90,slow=6.5,SNR=4.8						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**95.28**	**28**	P	**P**	**03 55 27.9**	**-0.2**
	0.5nm,0.8s,baz=260,slow=4.8,SNR=4.7						
	0.5nm,0.8s						
KEST	**Kesra**	**140.16**	**319**	PKP	**PKPdf**	**04 01 30.7**	**-3.0**
	1.3nm,0.7s,baz=34,slow=1.4,SNR=6.5						
BDFB	**Brasilia**	**145.13**	**131**	PKP	**PKPab**	**04 01 41.5**	**-1.2**
	2.0nm,0.7s,baz=225,slow=11,SNR=3.9						

*DNK **18** 03:48:59.7±1.1,51°.55N×16°.13E,h22km±32km,ML2.4,*
Presumed earthquake
*IDC **18** 03:49:00.3±0.7,51°.64N×15°.93E,h0km,mbtmp3.1/7,*
ML2.5/7,Error ellipse: s-maj=13.6km s-min=6.8km
az=109.0
*IPEC **18** 03:49:00.3±0.2,51°.58N×16°.20E,h1km,ML2.8/7,Error*
ellipse: s-maj=2.0km s-min=1.2km az=72.0
*GFZ **18** 03:49:03.4±0.4,52°.N±4°.×1°.6E±°,h10km,M3.3/19*
*PRU **18** 03:49:03.1,51°.49N×16°.07E,h0km*
ISC 18 03:48:58.3±0.7,**51°.63N**±0°.03×**16°.12E**±0°.02,**h0**km,**n97,**
σ1§49/161,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.79**	**172**	*i* Pg	**Pb**	**03 49 15.0**	**+0.1**
KSP				*e*Sg	**Sb**	**03 49 25.1**	**-1.1**
CHVC	**Chvalec**	**1.04**	**182**	*e*PG	**Pb**	**03 49 19.7**	**+0.5**
CHVC				*e*SG	**Sb**	**03 49 32.7**	**-0.7**
	comp=Z,61nm,0.4s						
OSTC	**Ostas**	**1.07**	**177**	*e*PG	**Pb**	**03 49 20.4**	**+0.7**
OSTC				*e*SG	**Sb**	**03 49 33.1**	**-1.2**
	comp=Z,89nm,0.4s						
UPC	**Upice**	**1.12**	**184**	*e*PG	**Pb**	**03 49 21.1**	**+0.5**
UPC				*e*SG	**Sb**	**03 49 35.3**	**-0.4**
	comp=Z,139nm,0.5s						
UPC	**Upice**	**1.12**	**184**	P	**Pb**	**03 49 21.1**	**+0.5**
DPC	**Dobruska-Polom**	**1.29**	**174**	*e*PG	**Pb**	**03 49 23.8**	**+0.5**
DPC				*e*SG	**Sb**	**03 49 39.9**	**-0.5**
	comp=Z,135nm,0.8s						
DPC	**Dobruska-Polom**	**1.29**	**174**	P	**Pb**	**03 49 23.9**	**+0.5**
PIVO	**Bartosovice**	**1.47**	**169**	*e*Pg	**Pn**	**03 49 26.7**	**+0.7**
	baz=351						
PIVO				*e*Sg	**Sg**	**03 49 44.5**	**-0.9**
	131nm,0.5s,baz=351						
BRG	**Berggiesshubel**	**1.56**	**242**	P	**Pn**	**03 49 28.2**	**+0.9**
BRG	**Berggiesshubel**	**1.56**	**242**	Pn	**Pn**	**03 49 27.8**	**+0.5**
BRG				Pg	**Pg**	**03 49 29.6**	**+1.4**
BRG				Sg	**Sn**	**03 49 49.5**	**+1.3**
BRG				Amp		03 49 50.4	
	comp=Z,148nm,0.5s						
KRLC	**Kraliky**	**1.61**	**165**	*e*PG	**Pb**	**03 49 29.1**	**+0.2**
KRLC				*e*SG	**Sn**	**03 49 50.3**	**+0.8**
	comp=Z,72nm,0.5s						
KRLC	**Kraliky**	**1.61**	**165**	P	**Pn**	**03 49 29.0**	**+1.0**
RUE	**Ruedersdorf**	**1.68**	**301**	P	**Pn**	**03 49 30.2**	**+1.4**
ANAC	**Anensky vrch**	**1.75**	**152**	*e*Pn	**Pn**	**03 49 30.9**	**+1.0**
	baz=334						
ANAC				*e*Sg	**Sn**	**03 49 52.8**	**-0.1**
	comp=Z,54nm,0.5s,baz=334						
RYBC	**Ceska Rybna**	**1.82**	**181**	*e*Pn	**Pn**	**03 49 31.9**	**+1.0**
	baz=2.7						
RYBC				*e*Sg	**Sg**	**03 49 56.2**	**-0.6**
	baz=2.7						
PRU	**Pruhonice**	**1.92**	**212**	*e*PN	**Pn**	**03 49 32.8**	**+0.6**
PRU				*e*PG	**Pg**	**03 49 35.1**	**0.0**
PRU				*e*SG	**Sg**	**03 49 59.3**	**-0.7**
	comp=Z,61nm,0.7s						
PRU	**Pruhonice**	**1.92**	**212**	P	**Pn**	**03 49 33.0**	**+0.8**
CLL	**Collm**	**1.98**	**262**	*i* Pn	**Pn**	**03 49 33.7**	**+0.8**
CLL				*e*Pg	**Pb**	**03 49 37.0**	**+1.9**
CLL				*i* x	x	03 49 40.6	
CLL				*e*Sg	**Sb**	**03 50 02.0**	**+1.8**
	comp=Z,35nm,0.6s						
HSKC	**Hora Svate Kat**	**1.98**	**240**	*e*PG	**Pb**	**03 49 35.6**	**+0.5**
HSKC	**Hora Svate Kat**	**1.98**	**240**	P	**Pn**	**03 49 34.9**	**+1.8**
STEB	**Steborice**	**1.99**	**148**	*e*PN	**Pn**	**03 49 33.7**	**+0.5**
STEB				*e*PG	**Pg**	**03 49 37.1**	**+0.7**
STEB				*e*SG	**Sg**	**03 50 02.7**	**+0.4**
	comp=Z,145nm,0.8s						
RAC	**Raciborz**	**2.03**	**139**	*e*PG	**Pg**	**03 49 38.8**	**+1.7**
RAC				*e*SG	**Sg**	**03 50 06.1**	**+2.7**
MORC	**Moravsky Berou**	**2.06**	**153**	*e*Pn	**Pn**	**03 49 35.0**	**+0.8**
	baz=335						
MORC				*e*Sg	**Sb**	**03 50 02.8**	**0.0**
	comp=Z,54nm,0.6s,baz=335						
MORC	**Moravsky Berou**	**2.06**	**153**	P	**Pn**	**03 49 35.2**	**+1.1**
OKC	**Ostrava-Krasne**	**2.21**	**144**	*e*PG	**Pg**	**03 49 40.8**	**+0.3**
OKC				*e*SG	**Sg**	**03 50 08.5**	**-0.6**
	comp=Z,55nm,0.5s						
OKC	**Ostrava-Krasne**	**2.21**	**144**	P	**Pg**	**03 49 41.4**	**+0.9**
VRAC	**Vranov**	**2.34**	**172**	Pn	**Pn**	**03 49 39.8**	**+1.8**
	comp=Z,3.0nm,0.3s,baz=348,slow=16,SNR=13						
VRAC				Sn	**Sb**	**03 50 11.3**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=234,slow=16,SNR=3.8						
	comp=Z,9.4nm,0.4s						
VRAC	**Vranov**	**2.34**	**172**	*e*Pn	**Pn**	**03 49 39.2**	**+1.2**
	baz=354						
VRAC				*e*Sg	**Sg**	**03 50 11.9**	**-1.6**
	comp=Z,49nm,0.8s,baz=354						
VRAC	**Vranov**	**2.34**	**172**	P	**Pn**	**03 49 40.1**	**+2.1**
MAUC	**Maruska**	**2.51**	**154**	*e*PN	**Pn**	**03 49 41.7**	**+1.3**
MAUC				*e*PG	**Pg**	**03 49 46.6**	**+0.2**
KRUC	**Moravsky**	**2.58**	**176**	*e*Pn	**Pn**	**03 49 42.3**	**+1.1**
	baz=357						
KRUC				*e*Sg	**Sg**	**03 50 19.3**	**-1.6**
	comp=Z,49nm,1.0s,baz=357						
KRUC	**Moravsky**	**2.58**	**176**	*e*PN	**Pn**	**03 49 42.4**	**+1.2**
KRUC				*e*SG	**Sg**	**03 50 19.4**	**-1.5**
KRUC	**Moravsky**	**2.58**	**176**	P	**Pn**	**03 49 43.4**	**+2.2**
TANN	**Tannenbergstha**	**2.61**	**244**	P	**Pn**	**03 49 43.1**	**+1.4**
STAC	**Stalkov**	**2.66**	**192**	*e*Pn	**Pn**	**03 49 43.6**	**+1.3**
	baz=12						
STAC				*e*Sg	**Sg**	**03 50 22.0**	**-1.5**
	comp=Z,45nm,0.6s,baz=12						
NKC	**Novy Kostel**	**2.71**	**240**	*e*PN	**Pn**	**03 49 44.5**	**+1.4**
NKC				*e*PG	**Pg**	**03 49 51.0**	**+0.8**
NKC				*e*SG	**Sg**	**03 50 25.4**	**+0.1**
	comp=Z,77nm,0.4s						
NKC	**Novy Kostel**	**2.71**	**240**	P	**Pn**	**03 49 45.0**	**+1.9**
OJC	**Ojcow**	**2.72**	**120**	*e*Pn	**Pn**	**03 49 43.0**	**-0.2**
OJC				*e*Pg	**Pg**	**03 49 51.5**	**+1.1**
OJC				*e*Sg	**Sg**	**03 50 26.7**	**+1.1**
OJC	**Ojcow**	**2.72**	**120**	P	**Pg**	**03 49 51.2**	**+0.8**
JAVC	**Velka Javorina**	**2.95**	**160**	*e*Pn	**Pn**	**03 49 47.4**	**+1.1**
	baz=341						
JAVC	**Velka Javorina**	**2.95**	**160**	*e*PN	**Pn**	**03 49 47.5**	**+1.1**
KHC	**Kasperske Hory**	**2.98**	**214**	*e*Pn	**Pn**	**03 49 47.0**	**+0.2**
KHC				*e*PG	**Pb**	**03 49 54.0**	**+1.7**
KHC				*e*SN	**Sn**	**03 50 24.0**	**+0.7**
KHC				*e*SG	**Sg**	**03 50 33.4**	**-0.6**
	comp=Z,20nm,0.6s						
KHC	**Kasperske Hory**	**2.98**	**214**	P	**Pn**	**03 49 49.4**	**+2.5**
CKRC	**Cesky Krumlov**	**3.04**	**203**	*e*PN	**Pn**	**03 49 49.5**	**+1.9**
CKRC				*e*PG	**Pg**	**03 49 55.3**	**-1.2**
CKRC				*e*SG	**Sg**	**03 50 35.6**	**-0.3**
GERES	**GERESS Array B**	**3.19**	**210**	Pn	**Pn**	**03 49 51.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=44						
GERES				Pg	**Pb**	**03 49 57.4**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=28,slow=15,SNR=26						
GERES				Sn	**Sn**	**03 50 29.4**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=27,slow=22,SNR=5.8						
GERES				Lg	Lg	03 50 37.6	
	comp=Z,0.8nm,0.3s,baz=27,slow=30,SNR=14						
	comp=Z,2.8nm,0.3s						
WET	**Wettzell**	**3.24**	**221**	P	**Pn**	**03 49 51.9**	**+1.5**
LANS	**Liptovska Anna**	**3.28**	**138**	*e*PN	**Pn**	**03 49 52.7**	**+1.8**
LANS				*e*PG	**Pg**	**03 50 00.3**	**-0.7**
LANS				*e*SG	**Sg**	**03 50 42.8**	**-0.7**
MODS	**Modra-Piesok**	**3.34**	**167**	*e*PN	**Pn**	**03 49 54.2**	**+2.4**
MODS				*e*PG	**Pg**	**03 50 02.7**	**+0.4**
MODS				*e*SG	**Sg**	**03 50 44.8**	**-0.8**
NIE	**Niedzica**	**3.46**	**128**	*e*Pg	**Pg**	**03 50 05.6**	**+0.9**
NIE				*e*Sg	**Sg**	**03 50 49.9**	**+0.4**
WINA	**Alland / Wiene**	**3.52**	**181**	Pn	**Pn**	**03 49 55.6**	**+1.4**
	SNR=5.9						
BSD	**Bornholm Skovb**	**3.57**	**349**	*i* P	**Pn**	**03 49 55.6**	**+0.9**
BSD				*i* S	**Sn**	**03 50 35.4**	**-2.2**
BSD				IAML		03 50 44.7	
	comp=Z,3.8nm,0.5s						
GRA3	**Grafenberg Arr**	**3.58**	**240**	P	**Pn**	**03 49 57.1**	**+2.1**
GRB3	**Grafenberg Arr**	**3.58**	**232**	P	**Pn**	**03 49 56.7**	**+1.7**
GRB4	**Grafenberg Arr**	**3.62**	**235**	P	**Pn**	**03 49 57.9**	**+2.3**
GRB1	**Grafenberg Arr**	**3.62**	**234**	P	**Pn**	**03 49 58.3**	**+2.6**
GRA1	**Grafenberg Arr**	**3.67**	**240**	P	**Pn**	**03 49 58.1**	**+1.8**
GRFO	**Grafenberg**	**3.67**	**240**	P	**Pn**	**03 49 58.3**	**+2.0**
GRB2	**Grafenberg Arr**	**3.70**	**232**	P	**Pn**	**03 49 59.8**	**+3.2**
CONA	**Conrad Observa**	**3.71**	**183**	*e*Pn	**Pn**	**03 49 58.3**	**+1.5**
	comp=Z,1.2nm,0.3s,SNR=9.5						
CONA				*i* Sn	**Sn**	**03 50 38.7**	**-2.6**
	comp=Z,4.7nm,0.4s						
GRC4	**Grafenberg Arr**	**3.89**	**231**	P	**Pn**	**03 50 02.4**	**+3.1**
RONA	**Rosalia, Austr**	**3.94**	**178**	*i* Pn	**Pn**	**03 50 00.3**	**+0.4**
	comp=Z,0.6nm,0.3s						
RONA				*e*Sn	**Sn**	**03 50 44.5**	**-2.3**
	comp=Z,0.1nm,0.1s						
STHS	**Stebnicka Huta**	**3.95**	**122**	*e*PG	**Pg**	**03 50 14.5**	**+0.6**
STHS				*e*SG	**Sg**	**03 51 08.4**	**+3.4**
MOA	**Molln**	**3.97**	**198**	*e*Pn	**Pn**	**03 50 01.5**	**+1.2**
	comp=Z,5.8nm,0.3s,SNR=26						
MOA				*i* Sn	**Sn**	**03 50 45.8**	**-1.8**
	comp=Z,3.9nm,0.5s						
MOA	**Molln**	**3.97**	**198**	P	**Pn**	**03 50 02.0**	**+1.6**
GRC3	**Grafenberg Arr**	**4.00**	**228**	P	**Pn**	**03 50 02.5**	**+1.8**
BIOA	**Bad Ischl, Aus**	**4.26**	**203**	*i* Pn	**Pn**	**03 50 05.6**	**+1.3**
	comp=Z,0.1nm,0.1s,SNR=7.0						
BIOA				*e*Sn	**Sn**	**03 50 52.9**	**-1.8**
	comp=Z,4.0nm,0.3s						
LUNU	**Lund**	**4.32**	**339**	*i*

AKASG	**Malin Array Be**	**8.29**	**91**	Pn		**Pn**	**03 50 59.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=280,slow=12,SNR=4.2							
	comp=Z,1.5nn,0.6s							
HFS	**Hagfors**	**8.63**	**352**	Pn		**Pn**	**03 51 03.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=1.4							
	comp=Z,1.7nm,1.0s							
NOA	**NORSAR Array B**	**9.82**	**346**	Pn		**Pn**	**03 51 19.0**	**-1.6**
	baz=158,slow=12,SNR=1.0							
	comp=Z,0.2nm,0.6s							
FINES	**FINESS Array B**	**11.25**	**25**	Pn		**Pn**	**03 51 38.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=5.9							
FINES				Sn		Sn	03 53 39.2	-7.3
	comp=Z,0.2nm,0.3s,baz=213,slow=23,SNR=6.0							
	comp=Z,1.0nm,0.8s							
EKA	**Eskdalemuir Ar**	**12.06**	**295**	Pn		Pn	03 51 48.5	-2.7
	baz=104,slow=13							

IDC 18 03:50:16.2±8.4, 22°.03S×172°.33W, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=386.4km s-min=64.7km az=147.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**49.33**	**257**	P	P	03 59 06.9	-0.7
	0.1nm,0.3s,baz=98,slow=7.7,SNR=4.5						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**49.63**	**262**	P	P	03 59 10.3	+0.5
	0.1nm,0.3s,baz=102,slow=8.7,SNR=5.9						
	0.1nm,0.3s						
AKASG	**Malin Array Be**	**146.78**	**335**	PKPbc	PKPdf	04 09 59.1	+0.8
	0.6nm,0.5s,baz=48,slow=1.5,SNR=1.6						

IDC 18 04:09:05.4±1.9, 36°.54N×6°.42E, h0km, mb3.1/1, mbtmp3.0/4, ML3.4/2, Error ellipse: s-maj=31.8km s-min=26.5km az=23.0
CRAAG 18 04:09:05.3, 36°.54N×6°.35E, Ml3.0, Algrie 08km NE Sidi-Merouane
ISC 18 04:09:05.8±1.3, 36°.54N±0°.04×6°.40E±0°.05, h6km±12km, n16, σ0s80/17, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBHR	**Beni Haroun da**	**0.11**	**282**	P	**Pg**	**04 09 08.1**	**-0.1**
CBOS	**Bilal Ibnou Ra**	**0.26**	**345**	P	**Pg**	**04 09 11.5**	**+0.6**
CASM	**Ain Smara**	**0.29**	**166**	P	**Pb**	**04 09 12.3**	**-1.2**
CKFL	**Kef-Lekhel**	**0.29**	**119**	P	**Pb**	**04 09 13.2**	**-0.4**
COAT	**Oued Athmania**	**0.32**	**197**	P	**Pg**	**04 09 12.7**	**+0.5**
DFRA	**Djebel Bou Aff**	**0.42**	**270**	P	**Pg**	**04 09 13.9**	**-0.2**
CAEH	**Ain El Ouahch**	**0.43**	**57**	P	**Pb**	**04 09 15.8**	**-0.1**
CTEI	**Djebel Teioual**	**0.48**	**180**	P	**Pb**	**04 09 15.8**	**-1.0**
CSGS	**Sigus**	**0.48**	**149**	P	**Pb**	**04 09 16.6**	**-0.2**
CJSR	**Ain Djasser**	**0.77**	**208**	P	**Pb**	**04 09 21.8**	**+0.1**
CMAH	**Djebel Manchou**	**0.82**	**84**	P	**Pn**	**04 09 23.7**	**-0.3**
CTGD	**Timgad**	**1.01**	**174**	P	**Pn**	**04 09 27.4**	**+0.7**
KEST	**Kesra**	**2.52**	**108**	Pn	**Pn**	**04 09 48.5**	**+1.2**
	9.9nm,0.3s,baz=296,slow=5.1,SNR=64						
KEST				Sn	**Sn**	**04 10 18.4**	**+0.1**
	0.5nm,0.3s,baz=184,slow=21,SNR=2.0						
	27nm,0.4s						
ESDC	**Sonseca Array**	**8.75**	**294**	Pn	**Pn**	**04 11 13.8**	**+1.0**
	0.1nm,0.3s,baz=105,slow=14,SNR=5.3						
	0.2nm,0.5s						
GERES	**GERESS Array B**	**13.40**	**21**	Pn	**Pn**	**04 12 15.1**	**-1.5**
	0.1nm,0.4s,baz=203,slow=15,SNR=1.7						
TORD	**Torodi Ar. Bea**	**23.68**	**191**	P	**P**	**04 14 18.3**	**+0.1**
	0.4nm,0.7s,baz=11,slow=9.1,SNR=1.7						
	0.4nm,0.7s						

IDC 18 04:24:21.6±3.5, 38°.65N×70°.94E, h0km, mb3.4/2, mbtmp3.5/4, ML2.9/2, MS3.5/1, Error ellipse: s-maj=88.6km s-min=23.7km az=151.0
NNC 18 04:24:23.6±8.0, 38°.64N×70°.91E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=70.5km s-min=36.9km az=171.0
ISC 18 04:24:24.2±2.2, 38°.4N±0°.2×70°.77E±0°.10, h47km, n17, σ1s77/19, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.71**	**358**	⇑P	**Pn**	**04 25 33.1**	**+0.3**
	3.9nm,0.3s,baz=169,slow=12,SNR=78						
KK31				S	**Sn**	**04 26 30.6**	**+4.5**
	19nm,0.6s,baz=163,slow=24,SNR=8.4						
UCH	**Uchtor**	**4.78**	**36**	P	**Pn**	**04 25 34.6**	**+0.5**
	SNR=45						
EKS2	**Erkin-Say**	**4.84**	**27**	P	**Pn**	**04 25 34.8**	**+0.1**
	SNR=17						
AAK	**Ala-Archa**	**5.10**	**33**	P	**Pn**	**04 25 38.8**	**+0.6**
	SNR=18						
AAK	**Ala-Archa**	**5.10**	**33**	⇓P	**Pn**	**04 25 38.7**	**+0.5**
	3.7nm,0.4s						
AAK				⇑S	**Sn**	**04 26 34.7**	**-1.2**
	3.2nm,0.5s						
KBK	**Karagaybulak**	**5.32**	**35**	P	**Pn**	**04 25 43.0**	**+1.8**
	SNR=11						
CHMS	**Chumysh**	**5.50**	**32**	P	**Pn**	**04 25 44.2**	**+0.5**
	SNR=14						
USP	**Ospenovka**	**5.63**	**29**	P	**Pn**	**04 25 45.2**	**-0.2**
	SNR=16						
ULHL	**Ulahol**	**5.68**	**46**	P	**Pn**	**04 25 48.3**	**+2.0**
	SNR=7.8						
TKM2	**Tokmak 2**	**5.82**	**37**	P	**Pn**	**04 25 48.7**	**+0.5**
	SNR=21						
MKAR	**Makanchi Array**	**11.93**	**42**	Pn	**Pn**	**04 27 09.9**	**-1.6**
	0.1nm,0.3s,baz=235,slow=14,SNR=8.0						
	1.0nm,0.8s						
AB31	**Akbulak array**	**13.37**	**328**	P	**Pn**	**04 27 29.5**	**-1.7**
	1.6nm,0.5s,baz=131,slow=11,SNR=37						
AB31				⇓S	**Sn**	**04 29 56.2**	**-2.0**
	5.0nm,0.7s,baz=140,slow=24,SNR=6.1						
AKTO	**Aktyubinsk**	**15.07**	**327**	⇓P	**P**	**04 27 57.5**	**-1.0**
	5.7nm,1.4s						
AKTO				⇑S	**Sn**	**04 30 38.5**	**-1.2**
	1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**18.29**	**27**	P	**P**	**04 28 32.5**	**-1.5**
	0.3nm,0.3s,baz=213,slow=12,SNR=6.0						
	1.4nm,0.5s						
FINES	**FINESS Array B**	**35.83**	**325**	P	**P**	**04 31 21.4**	**+2.5**
	0.9nm,0.8s,baz=115,slow=7.3,SNR=3.8						
	0.9nm,0.8s						
HILR	**Hailar Array B**	**36.37**	**56**	LR	LR	04 45 22.6	
	comp=Z,66nm,18.8s,baz=130,slow=35						
TORD	**Torodi Ar. Bea**	**65.60**	**268**	P	P	04 35 08.4	+4.8
	0.3nm,0.9s,baz=67,slow=6.2,SNR=1.3						
	0.3nm,0.9s						

IDC 18 04:27:18.5±1.2, 0°.98S×127°.45E, h0km, mb3.6/4, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=36.1km s-min=22.0km az=55.0
DJA 18 04:27:21.6±0.2, 1°.5±1°×12°.7E±°, h10km, M4.1/17, mB5.1/1, mb4.7/2, MLv3.8/17, Mw(mB)4.4/1
ISC 18 04:27:23.8±1.0, 1°.01S±0°.06×127°.52E±0°.05, h31km, n10, σ1s18/14, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.78**	**355**	P	**Pn**	**04 27 51.5**	**-1.0**
TNTI				S	**Sn**	**04 28 14.9**	**+0.9**
SANI	**Sanana**	**1.84**	**236**	P	**Pn**	**04 27 52.9**	**-0.4**
SANI				S	**Sn**	**04 28 16.8**	**+1.2**
GAMI	**Galela, Maluku**	**2.84**	**5**	P	**Pn**	**04 28 07.6**	**+0.5**
SIJI	**Sorong**	**3.75**	**88**	Pn	**Pn**	**04 28 19.6**	**0.0**
	1.5nm,0.3s,baz=22,slow=23,SNR=8.9						
SIJI				Sn	**Sn**	**04 29 04.0**	**+1.2**
	2.1nm,0.3s,baz=224,slow=22,SNR=1.8						
	4.4nm,0.3s						
SIJI	**Sorong**	**3.75**	**88**	P	**Pn**	**04 28 19.6**	**0.0**
SIJI				S	**Sn**	**04 29 05.0**	**+2.2**
GTOI	**Gorontalo**	**4.79**	**290**	P	**Pn**	**04 28 35.6**	**+1.7**
WRA	**Warramunga Arr**	**19.96**	**161**	P	**P**	**04 31 53.0**	**-0.6**
	0.6nm,0.3s,baz=340,slow=11,SNR=20						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**23.36**	**165**	P	**P**	**04 32 29.4**	**-0.4**
	2.1nm,0.8s,baz=343,slow=11,SNR=28						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**61.90**	**326**	P	**P**	**04 37 39.3**	**-1.1**
	0.3nm,0.4s,baz=116,slow=7.8,SNR=4.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**66.15**	**328**	P	**P**	**04 38 07.3**	**-0.9**
	0.3nm,0.5s,baz=128,slow=5.9,SNR=1.9						
	0.3nm,0.5s						

IDC 18 04:28:43.7±0.8, 3°.48S×136°.74E, h0km, mb3.8/7, mbtmp3.9/11, ML3.9/4, MS3.1/1, Error ellipse: s-maj=29.4km s-min=19.8km az=69.0
NEIC 18 04:28:44.7±1.3, 3°.4S±0°.1×136°.72E±0°.08, h10km±1km, mb4.1/5, Error ellipse: s-maj=19.5km s-min=12.8km az=357.0
ISC 18 04:28:47.8±0.7, 3°.45S±0°.09×136°.68E±0°.07, h35km, n25, σ2s06/27, mb3.7/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.12**	**77**	Pn	**Pn**	**04 29 46.6**	**-1.8**
	1.6nm,0.3s,baz=227,slow=18,SNR=3.8						
JAY				Sn	**Sn**	**04 30 32.9**	**-2.6**
	1.3nm,0.3s,baz=303,slow=18,SNR=4.1						
	4.2nm,0.5s						
FAKI	**Fak Fak**	**4.46**	**277**		**Pn**	**04 29 52.2**	**-0.7**
SIJI	**Sorong**	**5.98**	**295**	Pn	**Pn**	**04 30 13.6**	**-0.3**
	4.8nm,0.3s,baz=149,slow=24,SNR=5.8						
SIJI				Sn	**Sn**	**04 31 16.9**	**-4.4**
	2.0nm,0.3s,baz=41,slow=9.5,SNR=4.6						
SIJI				LR	LR	04 33 22.4	
	comp=Z,182nm,20.1s,baz=64,slow=46						
	17nm,0.4s						
MTN	**Manton Dam**	**10.83**	**210**		**Pn**	**04 31 20.7**	**+0.2**
KNRA	**Kununurra**	**14.44**	**212**		**Pn**	**04 32 07.7**	**-2.1**
WRA	**Warramunga Arr**	**16.55**	**188**	Pn	**Pn**	**04 32 32.5**	**-5.0**
	0.2nm,0.3s,baz=4.5,slow=13,SNR=6.3						
KAPI	**Kappang**	**16.95**	**264**	Pn	**Pn**	**04 32 42.0**	**-0.4**
KAPI				IAmb	IAmb	04 33 23.2	
	comp=Z,16nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.14**	**216**	P	**Pn**	**04 32 55.8**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=17,slow=8.1,SNR=7.9						
FITZ				S	Sn	04 36 08.5	-10
	comp=Z,2.1nm,0.6s,baz=111,slow=14,SNR=2.6						
	comp=Z,3.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.14**	**216**	P	**Pn**	**04 32 55.7**	**-1.4**
CTA	**Charters Tower**	**19.00**	**151**	P	**P**	**04 33 06.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=327,slow=8.8,SNR=7.2						
	comp=Z,2.9nm,0.8s						
AS31	**Alice Springs**	**20.28**	**187**	P	**P**	**04 33 22.3**	**+1.7**
AS31				IAmb	IAmb	04 33 31.0	
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**20.28**	**187**	P	**P**	**04 33 21.4**	**+0.8**
	comp=Z,8.5nm,0.8s,baz=13,slow=11,SNR=53						
	comp=Z,8.5nm,0.8s						
ASAR	**Alice Springs**	**20.28**	**187**	P	**P**	**04 33 22.4**	**+1.8**
MBWA	**Marble Bar**	**24.12**	**222**	P	**P**	**04 34 00.8**	**+0.3**
MBWA				IAmb	IAmb	04 34 39.0	
	comp=Z,13nm,1.1s						
MKAR	**Makanchi Array**	**69.15**	**323**	P	**P**	**04 39 51.7**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=121,slow=5.9,SNR=3.8						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**69.15**	**323**	P	**P**	**04 39 52.6**	**+1.8**
ZALV	**Zalesovo Beam**	**71.56**	**331**	P	**P**	**04 40 07.3**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=130,slow=7.1,SNR=1.7						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**73.17**	**326**	P	**P**	**04 40 17.4**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=116,slow=6.3,SNR=0.9						
	comp=Z,0.2nm,0.4s						
BVAR	**Borovoye Array**	**78.76**	**326**	P	**P**	**04 40 49.4**	**+2.6**
	comp=Z,0.4nm,0.4s,baz=109,slow=7.8,SNR=1.7						
	comp=Z,0.4nm,0.4s						
QSPA	**South Pole Qui**	**86.50**	**180**	P	**P**	**04 41 28.3**	**+1.3**
	comp=Z,2.2nm,1.0s,baz=272,slow=1.5,SNR=5.3						
	comp=Z,2.2nm,1.0s						
QSPA	**South Pole Qui**	**86.50**	**180**	P	**P**	**04 41 25.3**	**-1.7**
ILAR	**Eielson Array**	**87.34**	**25**	P	**P**	**04 41 31.5**	**+0.5**
	comp=Z,0.2nm,0.8s,baz=269,slow=5.4,SNR=2.0						
	comp=Z,0.2nm,0.8s						
PB18	**Visviri**	**146.79**	**130**		**PKiKP**	**04 48 32.5**	**+1.8**
CPUP	**Villa Florida**	**147.44**	**156**	PKPbc	**PKPbc**	**04 48 29.7**	**+0.9**
	comp=Z,1.2nm,1.1s,baz=177,slow=12,SNR=3.3						
LPAZ	**La Paz**	**148.60**	**129**	PKPbc	**PKPbc**	**04 48 34.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=174,slow=8.5,SNR=1.9						

IDC 18 04:30:17.6±2.0, 36°.35N×141°.33E, h0km, mb3.8/6, mbtmp3.9/9, ML2.9/2, MS3.5/2, Error ellipse: s-maj=56.6km s-min=19.5km az=68.0
JMA 18 04:30:22.4±0.1, 36°.4N±0°.3×141°.1E±0°.9, h41km±1km, MV3.5/35, E OFF IBARAKI PREF
JMA Felt I J1 at E OFF IBARAKI PREF .
ISC 18 04:30:20.8±1.1, 36°.33N±0°.05×141°.17E±0°.08, h20km±8km, n27, σ1s10/24, mb3.9/6, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.47**	**272**	P	**Pb**	**04 30 31.8**	**+1.3**
JHYU				S	**Sb**	**04 30 37.9**	**+0.9**
JHO	**Hitachi**	**0.56**	**300**	P	**Pb**	**04 30 32.5**	**+0.5**
JHO				eS	**Sb**	**04 30 39.2**	**-0.5**
JIHU	**Itakohorinouch**	**0.64**	**236**	eP	**Pn**	**04 30 34.8**	**+0.2**
JYT	**Yasato**	**0.80**	**263**	P	**Pb**	**04 30 35.9**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.83**	**339**	⇓P	**Pb**	**04 30 36.6**	**0.0**
ONAJ				⇓S	**Sb**	**04 30 46.3**	**-1.1**
JFK	**Kawauchi**	**1.07**	**347**	P	**Pn**	**04 30 40.0**	**-0.6**
JAG	**Ashikaga**	**1.39**	**275**	P	**Pn**	**04 30 44.4**	**-0.6**
JAG				S	**Sn**	**04 31 00.4**	**-2.4**
JOTO	**OTAMA OYAMA**	**1.40**	**332**	P	**Pn**	**04 30 46.0**	**+0.7**
JOTO				S	**Sn**	**04 31 02.7**	**-0.5**
MJAR	**Matsushiro Arr**	**2.40**	**276**	Pn	**Pn**	**04 30 59.1**	**+0.2**
	1.5nm,0.3s,baz=109,slow=9.1,SNR=48						
MJAR				Sn	**Sn**	**04 31 26.7**	**-1.1**
	2.3nm,0.3s,baz=74,slow=20,SNR=8.5						
	13nm,0.7s						
JHJ	**Hachijo jima 2**	**3.40**	**200**	Pn	**Pn**	**04 31 13.6**	**+0.9**
	5.9nm,0.3s,baz=70,slow=21,SNR=1.3						
JHJ				Sn	**Sn**	**04 31 51.9**	**-0.5**
	23nm,0.3s,baz=68,slow=19,SNR=6.2						
JHJ				LR	LR	04 32 41.0	
	comp=Z,597nm,19.2s,baz=104,slow=42						
	83nm,0.7s						
JCJ	**Chichijima**	**9.24**	**174**	Pn	**Pn**	**04 32 30.1**	**-2.8**
	22nm,0.4s,baz=93,slow=22,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**27.96**	**119**	T	T	05 05 32.1	
	baz=312,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**27.97**	**119**	T	T	05 05 31.4	
	baz=312,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**27.98**	**119**	T	T	05 05 32.1	
	baz=312,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**28.65**	**121**	T	T	05 06 21.4	
	baz=314,slow=75,SNR=134						
H11S3	**WAKE ISLAND Hy**	**28.65**	**122**	T	T	05 06 19.2	
	baz=314,slow=75,SNR=75						
H11S2	**WAKE ISLAND Hy**	**28.66**	**121**	T	T	05 06 20.3	
	baz=314,slow=75,SNR=60						
ZALV	**Zalesovo Beam**	**42.25**	**313**	P	**P**	**04 38 13.0**	**+0.5**
	1.6nm,0.6s,baz=92,slow=8.2,SNR=6.1						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**44.33**	**303**	P	**P**	**04 38 30.5**	**+1.1**
	0.4nm,0.6s,baz=86,slow=9.6,SNR=4.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**46.29**	**308**	P	**P**	**04 38 44.9**	**+0.1**
	1.1nm,0.5s,baz=85,slow=7.7,SNR=14						
	1.1nm,0.5s						
BVAR	**Borovoye Array**	**50.91**	**313**	P	**P**	**04 39 20.8**	**+0.5**
	0.7nm,0.5s,baz=76,slow=8.2,SNR=2.3						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**56.33**	**188**	P	**P**	**04 40 00.7**	**+0.3**
	0.4nm,0.3s,baz=5.8,slow=7.3,SNR=4.8						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**60.06**	**188**	P	**P**	**04 40 27.1**	**+0.7**
	0.4nm,0.6s,baz=7.1,slow=5.3,SNR=1.6						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**74.74**	**322**	LR	LR	05 15 46.1	
	comp=Z,29nm,19.8s,baz=120,slow=36						
H03N2	**Juan Fernandez**	**147.14**	**97**	T	T	07 34 35.6	
	baz=291,slow=76,SNR=3.8						
H03N3	**Juan Fernandez**	**147.15**	**97**	T	T	07 34 35.6	
	baz=291,slow=76,SNR=4.3						
H03N1	**Juan Fernandez**	**147.15**	**97**	T	T	07 34 38.7	
	baz=291,slow=76,SNR=3.4						

IDC 18 04:51:36.0±1.2, 0°.67N×122°.50E, h0km, mb3.5/4, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=116.5km s-min=20.4km az=67.0
DJA 18 04:51:58.2±0.4, 0°.7N±3°×12°.2E±°, h195km±4km, M3.9/14, mB5.2/1, mb4.2/2, MLv3.7/14, Mw(mB)4.5/1
ISC 18 04:51:57.5±0.9, 0°.26N±0°.09×121°.89E±0°.09, h200km, n10, σ0s98/12, mb3.3/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.18**	**192**	P	**Pn**	**04 52 29.8**	**+1.2**
GTOI	**Gorontalo**	**1.19**	**71**	P	**Pn**	**04 52 28.8**	**+0.2**
GTOI				S	**Sn**	**04 52 53.1**	**+0.5**
LUWI	**Luwuk**	**1.56**	**146**	P	**Pn**	**04 52 32.8**	**+1.1**
LUWI				S	**Sn**	**04 52 58.9**	**+0.5**
MPSI	**Mapaga**	**1.99**	**272**	P	**Pn**	**04 52 37.2**	**+1.3**
PCI	**Palu**	**2.35**	**241**	P	**Pn**	**04 52 39.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.61**	**169**	P	**P**	**04 55 59.0**	**-0.9**
	0.2nm,0.3s,baz=339,slow=14,SNR=3.1						
	2.4nm,0.8s						
WRA	**Warramunga Arr**	**23.49**	**149**	P	**P**	**04 56 47.8**	**-1.6**
	0.4nm,0.4s,baz=330,slow=11,SNR=18						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.49**	**155**	P	**P**	**04 57 16.6**	**+0.1**
	0.2nm,0.4s,baz=343,slow=14,SNR=13						
	0.2nm,0.4s						
SONM	**Songino Array**	**49.27**	**346**	P	**P**	**05 00 25.7**	**-0.3**
	0.5nm,0.7s,baz=171,slow=10,SNR=2.9						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**57.82**	**329**	P	**P**	**05 01 28.1**	**0.0**
	0.5nm,0.5s,baz=125,slow=7.2,SNR=4.8						
	0.5nm,0.5s						

IDC 18 05:03:33.4±2.5, 46°.60N×27°.70W, h0km, mb3.5/2, mbtmp3.5/3, ML3.9/1, MS3.0/4, Error ellipse: s-maj=79.0km s-min=42.1km az=58.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.61**	**103**	P	Pn	05 07 53.6	+1.2
	0.1nm,0.3s,baz=297,slow=12,SNR=5.3						
ESDC				LR	LR	05 13 06.8	
	comp=Z,46nm,20.8s,baz=253,slow=31						
	0.5nm,0.6s						
DAVOX	**Davos/Dischmat**	**25.62**	**76**	LR	LR	05 19 24.6	
	comp=Z,23nm,18.3s,baz=298,slow=37						
VRAC	**Vranov**	**29.47**	**68**	LR	LR	05 20 55.6	
	comp=Z,31nm,18.5s,baz=46,slow=35						
TORD	**Torodi Ar. Bea**	**41.50**	**134**	P	P	05 11 21.4	-0.9
	0.6nm,0.9s,baz=335,slow=9.5,SNR=2.6						
	0.6nm,0.9s						
BRTR	**Keskin Array B**	**44.26**	**76**	LR	LR	05 31 05.7	
	comp=Z,28nm,18.2s,baz=14,slow=37						
H10N2	**ASCENSION HYDR**	**55.45**	**164**	T	T	06 12 33.0	
	baz=352						
H10N3	**ASCENSION HYDR**	**55.46**	**164**	T	T	06 12 34.3	
	baz=352						
H10N1	**ASCENSION HYDR**	**55.47**	**164**	T	T	06 12 33.2	
	baz=352						
MKAR	**Makanchi Array**	**68.64**	**44**	P	P	05 14 37.5	-0.6
	0.4nm,0.6s,baz=330,slow=5.4,SNR=5.0						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**149.61**	**35**	PKPbc	PKPbc	05 23 24.8	-0.2
	0.7nm,1.0s,baz=335,slow=3.7,SNR=3.6						
ASAR	**Alice Springs**	**152.75**	**39**	PKPbc	PKiKP	05 23 32.8	+0.3
	0.3nm,0.6s,baz=329,slow=1.8,SNR=4.1						

IDC 18 05:06:16.2±2.4, 48°.66N×153°.27E, h167km±26km, mb3.0/7, mbtmp3.7/12, MS2.4/1, Error ellipse: s-maj=49.5km s-min=12.5km az=137.0
ISC 18 05:06:14.8±0.8, 48°.5N±0°.2×153°.5E±0°.2, h150km, n15, σ0s93/12, mb3.4/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.32**	**29**	P	**Pn**	**05 07 33.9**	**+1.6**
	2.7nm,0.4s,baz=198,slow=10.0,SNR=16						
ASAJ	**Asahikawa**	**8.72**	**244**	P	**Pn**	**05 08 18.3**	**+0.6**
	6.3nm,0.2s,baz=73,slow=14,SNR=10						
SHEM	**Shemya Is, Ala**	**13.74**	**64**	P	**Pn**	**05 09 23.0**	**-0.2**
	12nm,0.6s,baz=305,slow=6.0,SNR=4.2						
SHEM				LR	LR	05 15 56.8	
	comp=Z,16nm,18.9s,baz=310,slow=42						
USRK	**Ussuriysk Ar.**	**15.44**	**262**	P	**Pn**	**05 09 44.0**	**-0.5**
	2.2nm,0.6s,baz=74,slow=15,SNR=3.7						
MJAR	**Matsushiro Arr**	**16.39**	**229**	P	**P**	**05 09 57.1**	**+0.8**
	1.1nm,0.3s,baz=28,slow=11,SNR=5.1						
KSRS	**Korea Array**	**21.62**	**249**	P	**P**	**05 10 51.5**	**-1.4**
	0.8nm,0.4s,baz=46,slow=10,SNR=4.1						
	0.8nm,0.4s						
H11S1	**WAKE ISLAND Hy**	**31.80**	**156**	T	T	05 46 10.0	
	baz=342						
H11S3	**WAKE ISLAND Hy**	**31.81**	**156**	T	T	05 46 08.9	
	baz=342						
H11S2	**WAKE ISLAND Hy**	**31.82**	**156**	T	T	05 46 04.0	
	baz=342						
ILAR	**Eielson Array**	**35.02**	**40**	P	**P**	**05 12 52.0**	**-0.5**
	0.5nm,0.6s,baz=261,slow=5.9,SNR=7.9						
	0.5nm,0.6s						
YKA	**Yellowknife Ar**	**49.37**	**38**	P	**P**	**05 14 48.0**	**-0.5**
	0.3nm,0.5s,baz=301,slow=6.8,SNR=5.4						
	0.3nm,0.5s						
PDAR	**Pinedale Array**	**63.52**	**55**	P	**P**	**05 16 28.3**	**-0.9**
	0.1nm,0.5s,baz=306,slow=7.4,SNR=2.3						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**70.26**	**199**	P	**P**	**05 17 11.3**	**-0.3**
	0.5nm,0.8s,baz=8.1,slow=6.7,SNR=6.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**73.96**	**199**	P	**P**	**05 17 34.4**	**+0.8**
	0.4nm,0.5s,baz=11,slow=

NEUV	**Arroyo Zacate**	**2.67**	**334**	*e*P		**Pn**	**05 21 52.6**	**-0.5**
NEUV				e S		**Sn**	**05 22 21.9**	**-2.4**
OXLC	**Oaxaca**	**2.70**	**311**	*e*P		**Pn**	**05 21 55.4**	**+1.7**
OXLC				e S		**Sn**	**05 22 25.3**	**+0.1**
OXBJ	**Oaxaca**	**2.72**	**310**	e S		**Sn**	**05 22 26.9**	**+1.2**
VHO	**Vista Hermosa**	**2.73**	**310**	*e*P		**Pn**	**05 21 55.1**	**+1.0**
VHO				e S		**Sn**	**05 22 25.7**	**-0.2**
RTAL	**Retalhuleu**	**2.88**	**105**	*e*P		**Pn**	**05 21 55.9**	**-0.1**
RTAL				e S		**Sn**	**05 22 26.8**	**-2.6**
HUEH	**Huehuetenango**	**2.95**	**89**	*e*P		**Pn**	**05 21 59.4**	**+2.2**
HUEH				e S		**Sn**	**05 22 34.1**	**+2.6**
HUEH	**Huehuetenango**	**2.95**	**89**	*i* P		**Pn**	**05 21 59.3**	**+2.2**
QUEO	**Labor Ovalle**	**2.98**	**98**	*i* P		**Pn**	**05 21 57.3**	**-0.3**
QUEO				IAML			05 22 48.4	
	comp=N,754nm,0.7s							
STG8	**El Palmar, Qui**	**3.22**	**105**	*i* P		**Pn**	05 21 56.8	-4.1
STG8				*i* S		Sn	05 22 26.4	-12
STG8				IAML			05 22 36.9	
	comp=E,912nm,0.2s							
STG5	**El Palmar, Qui**	**3.23**	**106**	*i* P		**Pn**	05 21 56.7	-4.2
YOIG	**Yosondua**	**3.26**	**299**	*e*P		**Pn**	**05 22 03.4**	**+2.0**
YOIG				e S		**Sn**	**05 22 36.8**	**-2.3**
TXIG	**Tlaxiaco**	**3.64**	**303**	*e*P		**Pn**	**05 22 08.5**	**+1.9**
TXIG				e S		**Sn**	**05 22 46.5**	**-2.0**
TOIG	**Toxpalan**	**3.67**	**319**	*e*P		**Pn**	**05 22 09.9**	**+3.0**
TOIG				e S		**Sn**	**05 22 49.1**	**+0.1**
APG	**El Apazote**	**3.97**	**94**	Pn		**Pn**	**05 22 13.7**	**+2.5**
	comp=E,0.3nm,0.3s,baz=205,slow=14,SNR=14							
APG				Sn		**Sn**	**05 23 02.3**	**+5.7**
	comp=E,1.6nm,0.3s,baz=69,slow=21,SNR=10							
	comp=E,0.8nm,0.4s							
APG	**El Apazote**	**3.97**	**94**	*i* P		**Pn**	**05 22 12.4**	**+1.3**
HLIG	**Huajuapan de L**	**3.99**	**309**	*e*P		**Pn**	**05 22 13.8**	**+2.3**
HLIG				e S		**Sn**	**05 22 56.6**	**-0.6**
TPIG	**Tehuac#an**	**4.09**	**319**	*e*P		**Pn**	**05 22 13.2**	**+0.4**
TPIG				e S		**Sn**	**05 23 00.0**	**+0.4**
FTIG	**Fresnillo de T**	**4.29**	**308**	*e*P		**Pn**	**05 22 18.1**	**+2.6**
FTIG				e S		**Sn**	**05 23 02.8**	**-1.6**
MGIG	**Malinaltepec**	**4.36**	**297**	*e*P		**Pn**	**05 22 14.6**	**-1.9**
MGIG				e S		**Sn**	**05 23 02.5**	**-3.5**
TLIG	**Tlapa**	**4.45**	**301**	*e*P		Pn	05 22 13.2	-4.5
TLIG				e S		**Sn**	**05 23 05.6**	**-2.7**
JAUV	**Jalcomulco**	**4.57**	**332**	*e*P		**Pn**	**05 22 18.2**	**-1.1**
JAUV				e S		**Sn**	**05 23 08.3**	**-2.9**
CRIG	**Cruz Grande**	**4.62**	**289**	*e*P		**Pn**	**05 22 20.7**	**+0.8**
CRIG				e S		**Sn**	**05 23 06.6**	**-5.7**
PETF	**Flores**	**4.79**	**70**	*e*P		**Pn**	**05 22 23.0**	**+0.8**
PETF				e S		**Sn**	**05 23 12.0**	**-4.5**
PETF	**Flores**	**4.79**	**70**	*i* P		**Pn**	**05 22 23.6**	**+1.4**
PETF				*i* S		**Sn**	**05 23 12.9**	**-3.6**
NUBE	**Las Nubes**	**4.83**	**106**	*i* P		**Pn**	**05 22 24.5**	**+1.4**
NUBE				*i* S		**Sn**	**05 23 12.0**	**-5.9**
ZAFR2	**Estanzuela, Za**	**5.09**	**98**	*i* P		**Pn**	**05 22 24.1**	**-2.3**
DAIG	**Los Arroyos**	**5.18**	**290**	*e*P		**Pn**	**05 22 27.2**	**-0.4**
DAIG				e S		**Sn**	**05 23 21.3**	**-4.8**
JAYA	**Jayaque - finc**	**5.22**	**108**	*i* P		**Pn**	**05 22 28.4**	**+0.1**
PBCV	**Popocatepetl**	**5.29**	**314**	*e*P		**Pn**	**05 22 30.6**	**+1.1**
PBCV				e S		**Sn**	**05 23 31.9**	**+2.6**
PPSX	**Xalitzintla**	**5.32**	**315**	*e*P		**Pn**	**05 22 31.0**	**+1.1**
PPSX				e S		**Sn**	**05 23 32.1**	**+1.9**
MEIG	**Mezcala**	**5.50**	**299**	*e*P		**Pn**	**05 22 35.0**	**+2.8**
MEIG				e S		**Sn**	**05 23 30.9**	**-3.4**
YAIG	**Yautepec**	**5.57**	**310**	*e*P		**Pn**	**05 22 34.0**	**+0.8**
YAIG				e S		**Sn**	**05 23 33.7**	**-2.3**
SARH	**Santa Rosa de**	**5.63**	**95**	*i* P		**Pn**	**05 22 35.0**	**+1.1**
CXUV	**Coxquihui**	**5.63**	**330**	*e*P		**Pn**	**05 22 35.3**	**+1.5**
CXUV				e S		**Sn**	**05 23 33.2**	**-4.2**
PLIG	**Platanillo**	**5.64**	**304**	*e*P		**Pn**	**05 22 37.4**	**+3.4**
PLIG				e S		**Sn**	**05 23 35.3**	**-2.3**
ARIG	**Puente Sto Nin**	**6.28**	**299**	*e*P		**Pn**	**05 22 45.4**	**+2.7**
ARIG				e S		**Sn**	**05 23 51.1**	**-2.2**
TXAR	**Lajitas Array**	**16.29**	**330**	Pn		**Pn**	**05 24 57.6**	**-1.2**
	baz=150,slow=8.0,SNR=1.8							
	comp=E,0.2nm,0.7s							
NVAR	**Mina Array Bea**	**31.11**	**322**	P		**P**	**05 27 27.7**	**-0.3**
	comp=E,0.1nm,0.3s,baz=122,slow=9.7,SNR=1.8							
	comp=E,0.1nm,0.3s							
YKA	**Yellowknife Ar**	**49.21**	**348**	P		**P**	**05 29 56.5**	**-0.6**
	comp=E,0.2nm,0.6s,baz=156,slow=7.2,SNR=3.8							
	comp=E,0.2nm,0.6s							

*IDC **18** 05:35:09.1±0.7, 12°.54N×125°.41E, h0km, mb4.0/12, mbtmp4.1/14, ML4.7/1, MS3.3/10, Error ellipse: s-maj=35.2km s-min=13.6km az=67.0*
*MAN **18** 05:35:11.0, 12°.72N×125°.70E, h69km, MS4.0*
ISC 18 05:35:13.3±0.7, 12°.65N±0°.05×125°.75E±0°.06, h33km, n44, σ1§84/42, mb4.1/12, MS3.2/7, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.66**	**207**	*e*P	**Pn**	**05 35 39.0**	**-1.1**
PLP				e S	**Sn**	**05 36 01.1**	**+0.9**
MMPH	**Masbate**	**2.10**	**262**	*i* P	**Pn**	**05 35 44.8**	**-1.3**
MMPH				*i* S	**Sn**	**05 36 11.1**	**-0.1**
MSLP	**Maasin**	**2.65**	**199**	*i* P	**Pn**	**05 35 56.1**	**+2.3**
MSLP				*i* S	**Sb**	**05 36 29.2**	**-3.0**
SCPH	**Surigao**	**2.86**	**185**	*e*P	**Pn**	**05 35 57.0**	**+0.4**
LLP	**Lapu-Lapu**	**2.90**	**217**	*e*P	**Pn**	**05 35 56.5**	**-0.8**
LLP				*i* S	**Sb**	**05 36 38.8**	**-0.8**
TBP	**Tagbilaran**	**3.47**	**212**	*e*P	**Pn**	**05 36 08.6**	**+3.5**
TBP				e S	**Sn**	**05 36 48.1**	**+3.0**
IBAJ	**Ibajay, Aklan**	**3.60**	**257**	*i* P	**Pn**	**05 36 04.0**	**-2.8**
TSSP	**Tandag City**	**3.61**	**173**	*e*P	**Pn**	**05 36 07.0**	**+0.1**
TSSP				e S	**Sn**	**05 36 49.9**	**+1.4**
BUTP	**Butuan**	**3.66**	**182**	*e*P	**Pn**	**05 36 08.4**	**+0.7**
BUTP				e S	**Sn**	**05 36 50.5**	**+0.8**
LSIP	**Lazi, Siquijor**	**4.07**	**211**	*i* P	**Pn**	**05 36 13.5**	**+0.2**
LSIP				*i* S	Sb	05 37 51.2	+38
JAP	**San Jose, Anti**	**4.18**	**244**	*e*P	**Pn**	**05 36 16.9**	**+2.1**
CGP	**Cagayan de Oro**	**4.29**	**194**	*e*P	**Pn**	**05 36 20.0**	**+3.6**
CGP				e S	**Sn**	**05 37 07.0**	**+1.6**
BIPH	**Bislig**	**4.47**	**172**	*i* P	Pb	05 36 25.9	-5.4
BIPH				e S	**Sn**	**05 37 09.2**	**-0.7**
DCPH	**Dipolog City**	**4.68**	**211**	*i* P	Pn	05 36 07.1	-15
DCPH				*i* S	**Sn**	**05 37 16.8**	**+2.0**
BUKP	**Musuan**	**4.79**	**188**	*i* P	**Pn**	**05 36 19.4**	**-3.8**
BUKP				*i* S	**Sn**	**05 37 20.9**	**+3.3**
CDOP	**Cateel, Davao**	**4.88**	**172**	*i* P	Pn	05 36 18.8	-5.6
CDOP				*i* S	**Sn**	**05 37 17.2**	**-2.6**
TGY	**Tagaytay City**	**4.90**	**288**	Pn	Pn	05 36 20.2	-4.6
	32nm,0.3s,baz=315,slow=21,SNR=4.0						
	146nm,0.3s						
TGY	**Tagaytay City**	**4.90**	**288**	*e*P	**Pn**	**05 36 26.9**	**+2.0**
DAV	**Davao City (W)**	**5.54**	**182**	LR	LR	05 39 09.3	
	comp=Z,705nm,19.7s,baz=116,slow=44						
KCP	**Kidapawan**	**5.64**	**187**	*e*P	Pn	05 36 40.4	+5.4
JOW	**Kunigami**	**14.31**	**9**	LR	LR	05 43 18.7	
	comp=Z,102nm,19.0s,baz=170,slow=34						
KAPI	**Kappang**	**18.53**	**199**	P	**P**	**05 39 25.8**	**-1.4**
	5.5nm,0.4s,baz=16,slow=12,SNR=3.6						
GUMO	**Guam**	**18.64**	**85**	LR	LR	05 45 13.1	
	comp=Z,59nm,19.9s,baz=80,slow=32						
JCJ	**Chichijima**	**21.07**	**45**	LR	LR	05 47 48.4	
	comp=Z,85nm,20.8s,baz=135,slow=36						
JAY	**Jayapura**	**21.15**	**134**	LR	LR	05 49 12.1	
	comp=Z,97nm,19.1s,baz=7.0,slow=40						
KSRS	**Korea Array**	**24.78**	**4**	P	**P**	**05 40 34.9**	**+2.8**
	0.9nm,0.8s,baz=172,slow=10,SNR=4.8						
KSRS				LR	LR	05 50 10.7	
	comp=Z,47nm,20.8s,baz=205,slow=36						
	0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**26.30**	**23**	LR	LR	05 50 43.5	
	comp=Z,104nm,19.2s,baz=196,slow=35						
CMAR	**Chiang Mai Arr**	**26.45**	**286**	P	**P**	**05 40 45.3**	**-2.2**
	1.2nm,0.3s,baz=94,slow=7.6,SNR=8.7						
CMAR				LR	LR	05 50 31.6	
	comp=Z,68nm,19.3s,baz=135,slow=35						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**33.47**	**165**	P	**P**	**05 41 49.1**	**-0.6**
	0.6nm,0.6s,baz=345,slow=9.4,SNR=8.1						
WRA				PcP	**PcP**	**05 44 31.1**	**+0.7**
	1.1nm,0.7s,baz=342,slow=2.9,SNR=7.6						
	0.6nm,0.6s						
ASAJ	**Asahikawa**	**34.54**	**22**	LR	LR	05 56 25.5	
	comp=Z,26nm,18.1s,baz=186,slow=37						
ASAR	**Alice Springs**	**36.96**	**168**	P	**P**	**05 42 20.1**	**+0.3**
	0.7nm,0.4s,baz=349,slow=7.4,SNR=26						
ASAR				PcP	**PcP**	**05 44 41.1**	**+0.5**
	0.7nm,0.5s,baz=341,slow=2.4,SNR=6.4						
	0.7nm,0.4s						
SONM	**Songino Array**	**38.63**	**339**	P	**P**	**05 42 32.4**	**-1.3**
	0.5nm,0.4s,baz=175,slow=8.9,SNR=4.9						
	0.5nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**40.05**	**74**	T	T	06 26 03.1	
	baz=266,slow=75,SNR=63						
H11N2	**WAKE ISLAND Hy**	**40.06**	**74**	T	T	06 26 04.8	
	baz=266,slow=75,SNR=44						
H11N3	**WAKE ISLAND Hy**	**40.07**	**74**	T	T	06 26 06.3	
	baz=266,slow=75,SNR=62						
STKA	**Stephens Creek**	**46.80**	**161**	P	**P**	**05 43 40.6**	**+0.7**
	2.8nm,0.8s,baz=314,slow=6.1,SNR=3.6						
	2.8nm,0.8s						
PETK	**Petropavlovsk-**	**47.71**	**26**	LR	LR	06 01 53.7	
	comp=Z,50nm,20.9s,baz=244,slow=34						
MKAR	**Makanchi Array**	**49.85**	**322**	P	**P**	**05 44 03.9**	**+0.5**
	2.6nm,1.0s,baz=113,slow=9.3,SNR=12						
	2.6nm,1.0s						
ZALV	**Zalesovo Beam**	**52.31**	**331**	P	**P**	**05 44 20.6**	**-1.1**
	1.2nm,0.7s,baz=116,slow=6.8,SNR=4.4						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**53.85**	**325**	P	**P**	**05 44 33.5**	**+0.5**
	2.3nm,0.7s,baz=122,slow=7.4,SNR=14						
	2.3nm,0.7s						
BVAR	**Borovoye Array**	**59.44**	**325**	P	**P**	**05 45 13.2**	**+0.4**
	1.8nm,0.7s,baz=119,slow=12,SNR=7.3						
	1.8nm,0.7s						
KBZ	**Khabaz**	**76.24**	**312**	P	**P**	**05 46 59.0**	**+0.3**
	2.4nm,0.9s,baz=156,slow=2.4,SNR=4.5						
	2.4nm,0.9s						
FINES	**FINESS Array B**	**83.57**	**332**	P	**P**	**05 47 38.0**	**0.0**
	1.8nm,1.0s,baz=60,slow=4.6,SNR=4.4						
	1.8nm,1.0s						
PLCA	**Paso Flores**	**148.57**	**156**	PKPbc	**PKiKP**	**05 54 59.1**	**+0.2**
	4.2nm,1.0s,baz=231,slow=8.5,SNR=2.9						

*SOF **18** 05:35:20.6, 43°.29N±0°.03×19°.85E±0°.02, h20km±3km, MD3.9/8*
*RHSSO **18** 05:35:24.6±0.5, 43°.23N×20°.15E, h6km±2km, ML3.2/8*
*PDG **18** 05:35:24.6±0.5, 43°.21N×20°.17E, h9km±1km, MD3.4/5, ML3.3/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BEO **18** 05:35:24.2±0.2, 43°.20N×20°.21E, h1km±1km, ML3.4/17*
*PRU **18** 05:35:29.2, 43°.38N×19°.77E, h1km*
ISC 18 05:35:23.7±1.0, 43°.21N±0°.02×20°.18E±0°.01, h3km±9km, n130, σ1§11/199, 15C-19D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.15**	**288**	*e*Pg	**Pg**	**05 35 26.8**	**+0.1**
SJES				e Sg	**Sg**	**05 35 29.6**	**+0.8**
SJES	**Sjenica**	**0.15**	**288**	*e*Pg	**Pg**	**05 35 27.3**	**+0.6**
SJES				e Sg	**Sg**	**05 35 30.1**	**+1.3**
IVAS	**Ivanjica**	**0.36**	**357**	*e*Pg	**Pg**	**05 35 30.4**	**-0.3**
IVAS				e Sg	**Sg**	**05 35 35.7**	**+0.3**
IVA	**Berane**	**0.40**	**211**	⇓*i*Pg	**Pg**	**05 35 31.6**	**+0.2**
IVA				*i* Sg	**Sg**	**05 35 37.1**	**+0.5**
PLE	**Pljevlja**	**0.59**	**282**	⇓*i*Pg	**Pg**	**05 35 35.3**	**+0.4**
PLE				*i* Sg	**Sb**	**05 35 43.6**	**-1.8**
KOME	**Kolasin**	**0.60**	**233**	⇑*i*Pg	**Pg**	**05 35 35.2**	**-0.1**
KOME				*i* Sg	**Sg**	**05 35 43.9**	**+0.8**
GOCS	**Kraljevo Serbi**	**0.62**	**55**	*e*Pg	**Pg**	**05 35 35.3**	**-0.2**
GOCS				e Sg	**Sg**	**05 35 44.0**	**+0.5**
PVY	**Plav**	**0.64**	**194**	⇓*i*Pg	**Pg**	**05 35 35.7**	**-0.2**
PVY				*i* Sg	**Sg**	**05 35 44.6**	**+0.4**
SELS	**Selova**	**0.69**	**89**	*e*Pg	**Pg**	**05 35 36.8**	**-0.1**
SELS				e Sg	**Sg**	**05 35 46.1**	**+0.2**
GRUS	**Gruza**	**0.78**	**30**	*e*Pg	**Pg**	**05 35 39.2**	**+0.5**
GRUS				e Sg	**Sb**	**05 35 50.8**	**-0.1**
BBLS	**Lazi&#263i**	**0.86**	**320**	*e*Pg	**Pg**	**05 35 39.7**	**-0.5**
BBLS	**Lazi&#263i**	**0.86**	**320**	⇑*i*Pg	**Pg**	**05 35 39.7**	**-0.5**
BBLS				e Sg	**Sb**	**05 35 52.0**	**-1.3**
DIVS	**Divibare**	**0.89**	**352**	*e*Pg	**Pg**	**05 35 40.8**	**0.0**
DIVS				e Sg	**Sb**	**05 35 53.4**	**-0.9**
UPM	**Unac-Piva**	**0.93**	**270**	*e*Pg	**Pg**	**05 35 41.3**	**-0.2**
UPM				e Sg	**Sg**	**05 35 53.5**	**0.0**
UPM	**Unac-Piva**	**0.93**	**270**	⇓*i*Pg	**Pg**	**05 35 41.3**	**-0.2**
UPM				*i* Sg	**Sb**	**05 35 54.8**	**-0.6**
NKME	**Niksic**	**1.00**	**244**	⇑*i*Pg	**Pg**	**05 35 41.9**	**-1.0**
NKME				*i* Sg	**Sb**	**05 35 57.6**	**+0.3**
TRUS	**Trudelj**	**1.02**	**9**	*e*Pg	**Pg**	**05 35 43.6**	**+0.3**
TRUS				e Sg	**Sb**	**05 35 57.8**	**-0.1**
PDG	**Podgorica**	**1.03**	**221**	⇑*e*Pg	**Pg**	**05 35 42.7**	**-0.8**
PDG				⇑e S	**Sg**	**05 35 55.7**	**-1.3**
PDG	**Podgorica**	**1.03**	**221**	*e*Pg	**Pg**	**05 35 42.6**	**-0.9**
PDG				e Sg	**Sg**	**05 35 56.3**	**-0.6**
PDG	**Podgorica**	**1.03**	**221**	*e*Pg	**Pg**	**05 35 42.4**	**-1.1**
PDG				e Sg	**Sb**	**05 35 57.5**	**-0.7**
PDG	**Podgorica**	**1.03**	**221**	⇑*i*Pg	**Pg**	**05 35 42.7**	**-0.8**
PDG				*i* Sg	**Sb**	**05 35 58.4**	**+0.2**
CEME	**Cevo**	**1.14**	**235**	⇓*i*Pg	**Pg**	**05 35 44.5**	**-1.0**
CEME				*i* Sg	**Sn**	**05 35 59.4**	**-0.4**
KLINJ	**Klinje**	**1.16**	**268**	*e*Pg	**Pg**	**05 35 45.7**	**-0.3**
KLINJ				e Sg	**Sg**	**05 36 00.5**	**-0.6**
BRY	**Bratogost**	**1.24**	**256**	*e*Pg	**Pg**	**05 35 46.6**	**-0.8**
BRY				e Sg	**Sg**	**05 36 02.8**	**-0.7**
BRY	**Bratogost**	**1.24**	**256**	⇓*i*Pg	**Pg**	**05 35 46.4**	**-1.0**
BRY				*i* Sg	**Sn**	**05 36 04.4**	**-1.0**
DRME	**Dracevica, Mon**	**1.26**	**216**	*e*Pg	**Pg**	**05 35 46.6**	**-1.2**
DRME				e Sg	**Sb**	**05 36 04.9**	**+0.2**
DRME	**Dracevica, Mon**	**1.26**	**216**	⇓*i*Pg	**Pg**	**05 35 46.6**	**-1.2**
DRME				*i* Sg	**Sn**	**05 36 06.0**	**+0.3**
BARS	**Barje**	**1.27**	**108**	*e*Pg	**Pg**	**05 35 47.3**	**-0.7**
BARS				e Sg	**Sg**	**05 36 03.9**	**-0.5**
BUM	**Brajici-Budva**	**1.31**	**226**	⇑*i*Pg	**Pg**	**05 35 47.9**	**-0.9**
BUM				*i* Sg	**Sn**	**05 36 08.2**	**+1.1**
TEKS	**Tekeris**	**1.41**	**341**	*e*Pg	**Pn**	**05 35 49.7**	**-0.7**
TEKS				e Sg	**Sn**	**05 36 10.8**	**+1.3**
TEKS	**Tekeris**	**1.41**	**341**	*e*Pg	**Pn**	**05 35 49.5**	**-0.9**
TEKS				e Sg	**Sn**	**05 36 09.4**	**-0.1**
ULC	**Ulcinj**	**1.43**	**209**	⇓*i*Pg	**Pn**	**05 35 50.3**	**-0.2**
ULC				*i* Sg	**Sn**	**05 36 11.0**	**+1.2**
TREB	**Trebinje**	**1.43**	**250**	*e*Pg	**Pn**	**05 35 50.3**	**-0.2**
TREB				e Sg	**Sn**	**05 36 10.9**	**+1.1**
TREB	**Trebinje**	**1.43**	**250**	⇑*i*Pg	**Pn**	**05 35 50.1**	**-0.4**
TREB				e Sg	**Sn**	**05 36 10.4**	**+0.6**
HCY	**Herceg Novi**	**1.46**	**239**	*e*Pg	**Pn**	**05 35 50.9**	**0.0**
HCY				e Sg	**Sn**	**05 36 10.7**	**+0.2**
HCY	**Herceg Novi**	**1.46**	**239**	⇓*i*Pg	**Pn**	**05 35 50.2**	**-0.7**
HCY				*i* Sg	**Sn**	**05 36 11.9**	**+1.4**
AVAS	**Avala Beograd**	**1.50**	**9**	*e*Pg	**Pn**	**05 35 50.3**	**-1.3**
AVAS				e Sg	**Sg**	**05 36 12.3**	**+0.4**
DBRK	**Dubrovnik**	**1.59**	**251**	*e*Pg	**Pg**	**05 35 54.7**	**+0.6**
DBRK				Sg	**Sg**	**05 36 16.2**	**+1.6**
BORS2	**Bor- Borsko je**	**1.60**	**56**	*e*Pg	**Pn**	**05 35 51.1**	**-1.8**
BORS2				e Sg	**Sn**	**05 36 15.7**	**-0.4**
ZAGS	**Zajecar**	**1.61**	**68**	*e*Pg	**Pn**	**05 35 52.6**	**-0.4**
ZAGS				e Sg	**Sb**	**05 36 15.7**	**+0.9**
KUBS	**Kucevo**	**1.62**	**42**	*e*Pg	**Pn**	**05 35 53.0**	**-0.1**
KUBS				e Sg	**Sn**	**05 36 14.4**	**-0.1**
ZAPS	**Zavoj**	**1.80**	**87**	*e*Pn	**Pn**	**05 35 55.3**	**-0.3**
ZAPS				e Sn	**Sn**	**05 36 18.5**	**-0.5**
BOSS	**Bosilegrad**	**1.84**	**112**	*e*Pn	**Pn**	**05 35 55.5**	**-0.7**
BOSS				e Sn	**Sn**	**05 36 19.5**	**-0.5**
STON	**Ston**	**1.85**	**260**	*e*Pn	**Pb**	**05 35 57.7**	**-0.4**
STON				Sn	**Sg**	**05 36 23.1**	**+0.1**
STON	**Ston**	**1.85**	**260**	*e*Pn	**Pb**	**05 35 58.1**	**0.0**
STON				e Sg	**Sg**	**05 36 23.9**	**+0.9**
TRAN	**Tran**	**1.85**	**101**	P	**Pn**	**05 35 56.4**	**0.0**
TRAN				S	**Sb**	**05 36 23.0**	**+1.1**
BLKB	**Belogradchik**	**1.87**	**77**	*e*Pn	**Pn**	**05 35 56.4**	**-0.2**
BLKB				e Sn	**Sn**	**05 36 21.9**	**+1.2**
MDVR	**Moldovita**	**1.92**	**35**	⇓P	**Pb**	**05 35 58.8**	**-0.6**
MDVR	**Moldovita**	**1.92**	**35**	*e*Pn	**Pn**	**05 35 56.5**	**-0.7**
MDVR				e Sn	**Sb**	**05 36 23.7**	**-0.1**
FRGS	**Fruska Gora**	**1.96**	**352**	*e*Pn	**Pn**	**05 35 58.7**	**+0.8**
FRGS				e Sg	**Sg**	**05 36 27.2**	**+0.5**
FRGS	**Fruska Gora**	**1.96**	**352**	*e*Pn	**Pn**	**05 35 58.2**	**+0.3**
FRGS				e Sn	**Sn**	**05 36 23.4**	**+0.4**
VRSS	**Vrsac**	**2.08**	**23**	*e*Pn	**Pn**	**05 35 58.3**	**-1.2**
VRSS				e Sg	**Sg**	**05 36 31.2**	**+0.7**
OHR	**Ohrid**	**2.15**	**167**	*i* Pn	**Pn**	**05 36 01.7**	**+1.2**
OHR				*i* Sn	**Sg**	**05 36 33.6**	**+0.8**
RICI	**Ricice**	**2.24**	**278**	*e*Pn	**Pb**	**05 36 03.7**	**-1.0**
RICI				Sn	**Sb**	**05 36 32.5**	**-0.3**
BLSH	**Balsha**	**2.30**	**98**	P	**Pn**	**05 36 02.6**	**0.0**
MAKA	**Makarska**	**2.31**	**273**	*e*Pn	**Pb**	**05 36 05.0**	**-0.9**
MAKA				Sn	**Sb**	**05 36 34.6**	**-0.2**
VTS	**Vitosha**	**2.33**	**104**	P	**Pn**	**05 36 02.4**	**-0.6**
VTS				S	**Sn**	**05 36 34.4**	**+2.2**
VTS	**Vitosha**	**2.33**	**104**	*e*Pn	**Pn**	**05 36 02.4**	**-0.6**
LSTV	**Lastovo**	**2.45**	**261**	*e*Pn	**Pb**	**05 36 06.9**	**-1.5**
PLNA	**Plana**	**2.50**	**106**	P	**Pn**	**05 36 05.1**	**-0.3**
KKB	**Krupnik**	**2.58**	**121**	P	**Pn**	**05 36 06.2**	**-0.1**
VAY	**Valandovo**	**2.60**	**136**	*i* Pn	**Pb**	**05 36 11.3**	**+0.5**
MPEP	**Malo Peshtene**	**2.61**	**86**	P	**Pb**	**05 36 11.1**	**0.0**
MPEP				S	**Sg**	**05 36 48.0**	**+0.6**
BZS	**Buzias**	**2.62**	**23**	⇓P	**Pn**	**05 36 07.4**	**+0.5**
BZS	**Buzias**	**2.62**	**23**	*e*Pn	**Pn**	**05 36 05.9**	**-0.9**
SRE	**Strehaia**	**2.62**	**55**	⇓P	**Pn**	**05 36 09.2**	**+2.3**
BLY	**Banja Luka**	**2.65**	**306**	*e*Pn	**Pb**	**05 36 09.3**	**-2.5**
BLY	**Banja Luka**	**2.65**	**306**	⇑*i*Pn	**Pn**	**05 36 08.5**	**+1.2**
BLY				e Sn	**Sn**	**05 36 40.1**	**+0.2**
KIJV	**Kijevo**	**2.85**	**287**	*i* Pn	**Pb**	**05 36 13.2**	**-2.0**
MMB	**Musomishta**	**3.13**	**121**	P	**Pn**	**05 36 13.8**	**-0.1**
MORH	**Mrgy, Hungar**	**3.19**	**341**	⇓P	**Pn**	**05 36 13.1**	**-1.7**
MORH	**Mrgy, Hungar**	**3.19**	**341**	*e*Pn	**Pn**	**05 36 14.3**	**-0.5**
MORH				e Sn	**Sn**	**05 36 52.1**	**-1.2**
SIRR	**Siria**	**3.23**	**19**	⇓P	**Pn**	**05 36 15.2**	**-0.2**
SIRR	**Siria**	**3.23**	**19**	*e*Pn	**Pn**	**05 36 15.2**	**-0.2**
ZIRJ	**Zirje**	**3.33**	**279**	*e*Pn	**Pn**	**05 36 18.8**	**+2.1**
LOT	**Lotru**	**3.41**	**48**	⇓P	**Pn**	**05 36 19.5**	**+1.6**
MOSL	**Moslavina**	**3.43**	**316**	*e*Pn	**Pn**	**05 36 20.9**	**+2.8**
UDBI	**Udbina**	**3.45**	**294**	*e*Pn	**Pn**	**05 36 21.3**	**+3.0**
PLIT	**Plitvice**	**3.68**	**298**	*e*Pn	**Pn**	**05 36 24.3**	**+2.8**
IGT	**Igoumenitsa**	**3.68**	**178**	*e*Pn	**Pn**	**05 36 23.6**	**+2.1**
RZN	**Rozhen**	**3.70**	**113**	P	**Pb**	**05 36 30.1**	**+0.3**
RZN				S	**Sg**	**05 37 21.0**	**-1.6**
DUGI	**Dugi Otok**	**3.80**	**284**	*e*Pn	**Pn**	**05 36 25.8**	**+2.8**
ARR	**Arges**	**3.86**	**55**	⇓P	**Pn**	**05 36 25.0**	**+1.0**
VIRC	**Vir**	**3.86**	**288**	*e*Pn	**Pn**	**05 36 25.8**	**+1.9**
KALN	**Kalnik**	**3.94**	**319**	*e*Pn	**Pn**	**05 36 27.8**	**+2.7**
DRGR		**4.00**	**26**	⇓P	**Pn**	**05 36 27.0**	**+1.0**
DRGR		**4.00**	**26**	*e*Pn	**Pn**	**05 36 25.7**	**-0.3**
BEHE	**Becsehely**	**4.05**	**325**	⇑*i*Pn	**Pn**	**05 36 26.8**	**+0.2**
BEHE				e Sn	**Sn**	**05 37 12.8**	**-1.8**
KDZ	**Kurdzhali**	**4.14**	**111**

IDC ***18*** *05:56:37.8±1.9, 64.˝25N×22.˝36W, h0km, mb3.6/6, mbtmp3.6/6, MS3.1/8, Error ellipse: s-maj=44.7km s-min=15.3km az=159.0*

ISC 18 05:56:36.8±0.7, 63.˚87N±0.˚03×22.˚37W±0.˚02, h10km, n40, σ1§44/56, mb3.7/7, MS3.0/6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**0.04**	**253**	P	**Pg**	**05 56 36.9**	**-1.7**
IGRV				S	**Sg**	**05 56 37.9**	**-2.1**
IVOG	**Vogar**	**0.10**	**355**	P	**Pg**	**05 56 38.8**	**-0.6**
IVOG				S	**Sg**	**05 56 41.0**	**-0.2**
IRNE	**Reykjanes**	**0.16**	**251**	P	**Pg**	**05 56 39.3**	**-0.9**
IRNE				S	**Sg**	**05 56 41.5**	**-1.1**
INYL	**Nylenda**	**0.19**	**303**	P	**Pg**	**05 56 39.8**	**-1.0**
INYL				S	**Sg**	**05 56 42.7**	**-0.9**
IKAS	**Kald??rsel**	**0.28**	**56**	P	**Pg**	**05 56 42.3**	**0.0**
IKAS				S	**Sb**	**05 56 47.2**	**-1.3**
IVOS	**Vogsosar**	**0.30**	**93**	P	**Pg**	**05 56 42.8**	**+0.1**
IVOS				S	**Sb**	**05 56 47.7**	**-1.4**
IBJA	**Bjarnastaoir**	**0.48**	**80**	P	**Pg**	**05 56 46.0**	**-0.1**
IBJA				S	**Sb**	**05 56 53.4**	**-0.9**
IEDA	**Engidalur**	**0.48**	**63**	P	**Pg**	**05 56 45.7**	**-0.5**
IEDA				S	**Sg**	**05 56 53.0**	**+0.4**
IMOR	**Morastadir**	**0.51**	**32**	P	**Pg**	**05 56 45.7**	**-1.1**
IMOR				S	**Sg**	**05 56 53.2**	**-0.4**
IKRO	**Krokur**	**0.60**	**67**	P	**Pg**	**05 56 47.7**	**-0.6**
IKRO				S	**Sb**	**05 56 56.6**	**-1.2**
ISOL	**Solvholt**	**0.63**	**84**	P	**Pg**	**05 56 48.5**	**-0.5**
ISOL				S	**Sb**	**05 56 57.8**	**-1.0**
IASM	**Asmuli**	**0.78**	**92**	P	**Pg**	**05 56 50.7**	**-1.1**
IASM				S	**Sg**	**05 57 01.8**	**-0.1**
ISAU	**Saurbar**	**0.87**	**81**	P	**Pg**	**05 56 52.3**	**-1.3**
ISAU				S	**Sb**	**05 57 04.8**	**-0.9**
BORG	**Borgarnes** 275nm,0.3s,baz=208,slow=3.9,SNR=52	**0.99**	**27**	Pn	**Pg**	**05 56 53.6**	**-2.3**
BORG	254nm,0.3s,baz=79,slow=20,SNR=23			Sn	**Sg**	**05 57 07.4**	**-1.3**
IASB	**sbjarnarstai**	**0.99**	**27**	P	**Pg**	**05 56 53.6**	**-2.3**
IASB				S	**Sg**	**05 57 07.3**	**-1.5**
IVES	**Vestmannaeyjar**	**1.02**	**114**	P	**Pg**	**05 56 54.7**	**-1.7**
IVES				S	**Sg**	**05 57 08.3**	**-1.4**
IGYG	**Gygjarholskot**	**1.03**	**65**	P	**Pg**	**05 56 54.8**	**-1.9**
IGYG				S	**Sg**	**05 57 09.6**	**-0.5**
IVEY	**Vestmannaeyjar**	**1.04**	**115**	P	**Pg**	**05 56 55.3**	**-1.4**
IVEY				S	**Sg**	**05 57 09.1**	**-1.1**
IBEY	**Bjarnarey**	**1.06**	**113**	P	**Pg**	**05 56 55.3**	**-1.8**
IBEY				S	**Sg**	**05 57 10.1**	**-0.8**
IHAU	**Haukadalur**	**1.07**	**84**	P	**Pg**	**05 56 55.2**	**-2.0**
IHAU				S	**Sg**	**05 57 10.7**	**-0.5**
IMID	**Miomork**	**1.12**	**100**	P	**Pb**	**05 56 56.6**	**-1.7**
IMID				S	**Sg**	**05 57 11.7**	**-1.2**
IFED	**Fedgar**	**1.19**	**81**	P	**Pb**	**05 56 57.6**	**-1.9**
IFED				S	**Sg**	**05 57 15.0**	**-0.2**
IMJO	**Mjoaskard**	**1.20**	**86**	P	**Pb**	**05 56 57.9**	**-1.6**
IMJO				S	**Sg**	**05 57 15.0**	**-0.2**
IHES	**Hestalda**	**1.25**	**81**	P	**Pb**	**05 56 58.8**	**-1.6**
IHES				S	**Sb**	**05 57 16.3**	**-0.4**
HFS	**Hagfors** comp=Z,24nm,20.7s,baz=355,slow=36	**17.18**	**86**	LR	LR	06 07 03.3	
ARCES	**ARCESS Array B** comp=Z,46nm,19.3s,baz=102,slow=30	**19.30**	**52**	LR	LR	06 06 18.1	
FRB	**Frobisher Bay** comp=Z,70nm,20.4s,baz=20,slow=34	**20.04**	**291**	LR	LR	06 07 56.2	
FINES	**FINESS Array B** 3.6nm,1.1s,baz=303,slow=11,SNR=4.2 3.6nm,1.1s	**21.96**	**74**	P	**P**	**06 01 32.3**	**+2.1**
CLL	**Collm** comp=Z,9.0nm,1.5s	**22.39**	**107**	*i* P	**P**	**06 01 36.3**	**+1.4**
CLL				*i* x	x	06 01 41.6	
CLL				*e*SSS	SSS	06 06 25.0	
BRG	**Berggiesshubel**	**23.11**	**107**	*e*P	**P**	**06 01 47.6**	**+5.1**
BRG	comp=Z,2.9nm,1.1s			Amp		06 01 48.8	
SCHQ	**Schefferville** comp=Z,48nm,18.8s,baz=70,slow=32	**23.91**	**269**	LR	LR	06 09 29.3	
DAVOX	**Davos/Dischmat** comp=Z,37nm,19.9s,baz=327,slow=36	**24.57**	**119**	LR	LR	06 11 41.6	
VRAC	**Vranov** comp=Z,30nm,20.8s,baz=6.0,slow=37	**25.41**	**106**	LR	LR	06 12 29.1	
MLR	**Muntele Rosu** comp=Z,41nm,19.5s,baz=34,slow=38	**32.39**	**101**	LR	LR	06 16 59.6	
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.9s,baz=42,slow=9.3,SNR=4.8 comp=Z,0.7nm,0.9s	**38.18**	**311**	P	**P**	**06 03 56.7**	**+0.9**
ILAR	**Eielson Array** comp=Z,1.0nm,1.0s,baz=5.1,slow=5.4,SNR=7.8 comp=Z,1.0nm,1.0s	**45.37**	**330**	P	**P**	**06 04 55.1**	**+0.5**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.4s,baz=72,slow=9.5,SNR=4.4 comp=Z,0.2nm,0.4s	**51.49**	**290**	P	**P**	**06 05 43.2**	**+0.8**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.7s,baz=339,slow=6.2,SNR=3.9 comp=Z,0.4nm,0.7s	**54.94**	**54**	P	**P**	**06 06 08.7**	**+1.3**
ELK	**Elko** comp=Z,45nm,18.4s,baz=274,slow=36	**55.52**	**293**	LR	LR	06 29 53.7	
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.9s,baz=64,slow=5.4,SNR=5.9 comp=Z,0.8nm,0.9s	**58.73**	**294**	P	**P**	**06 06 35.8**	**+1.1**

IDC 18 06:03:22.9±6.5, 23.˚72S×120.˚16E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=52.4km s-min=48.3km az=95.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=228,slow=14,SNR=1.5	**7.58**	**44**	Pn	Pn	06 05 14.9	+0.2
FITZ	0.1nm,0.3s,baz=116,slow=20,SNR=4.5 0.8nm,0.5s			Lg	Lg	06 07 22.9	
NWAO	**Narrogin (SRO)** 0.4nm,0.3s,baz=151,slow=9.2,SNR=1.7	**9.53**	**195**	Lg	Lg	06 08 25.0	
ASAR	**Alice Springs** 0.1nm,0.3s,baz=271,slow=12,SNR=7.5	**12.60**	**93**	Pn	Pn	06 06 23.8	+0.2
ASAR	0.1nm,0.3s,baz=268,slow=22,SNR=5.6			Sn	Sn	06 08 39.4	-5.2
ASAR	0.1nm,0.3s,baz=276,slow=29,SNR=2.2 0.4nm,0.6s			Lg	Lg	06 10 04.5	
I07AU	**WARRAMUNGA INF** baz=250,slow=319,SNR=1.6	**13.69**	**77**	I	I	07 26 00.0	
WRA	**Warramunga Ar** baz=259,slow=12,SNR=1.3	**13.69**	**77**	Pn	Pn	06 06 38.1	-0.4
WRA	baz=248,slow=30 0.5nm,1.1s			Lg	Lg	06 10 37.9	

IDC 18 06:05:35.9±2.0, 6.˚62S×129.˚81E, h0km, mb3.6/2, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=90.9km s-min=27.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=22,slow=10,SNR=7.3	**12.11**	**199**	Pn	Pn	06 08 30.9	+1.1
FITZ	0.4nm,0.3s,baz=122,slow=20,SNR=6.8 3.7nm,0.8s			Sn	Sn	06 10 32.2	-13
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=343,slow=14,SNR=15	**13.96**	**162**	Pn	Pn	06 08 53.9	-1.2
WRA	0.4nm,0.3s,baz=338,slow=22,SNR=2.5 0.1nm,0.3s			Sn	Sn	06 11 17.6	-13
ASAR	**Alice Springs** 0.1nm,0.3s,baz=345,slow=12,SNR=6.1 0.4nm,0.6s	**17.40**	**167**	P	Pn	06 09 40.3	0.0
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=134,slow=6.2,SNR=3.0 0.3nm,0.5s	**67.81**	**327**	P	P	06 16 36.3	+0.5
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=113,slow=5.1,SNR=1.4 0.2nm,0.3s	**72.09**	**329**	P	P	06 17 01.5	-0.5

IDC ***18*** *06:07:12.2±1.1, 11.˚71N×94.˚25E, h0km, mb3.5/9, mbtmp3.5/10, ML3.8/1, MS3.5/1, Error ellipse: s-maj=40.0km s-min=21.9km az=55.0*
BKK ***18*** *06:07:23.9±2.0, 12.˚N±5.˚9×95.˚5E±.˚, h32km±35km, M3.9/6, Mjma3.9/6, ML3.9/6, MLv3.9/5*

ISC 18 06:07:16.7±1.0, 11.˚7N±0.˚1×94.˚5E±0.˚2, h35km, n16, σ1§63/11, mb3.5/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNTT	**Ranong**	**4.49**	**120**	P	**Pn**	**06 08 19.8**	**-2.4**
KHLT	**Khaolaem Dam**	**5.02**	**51**	P	Pn	06 08 27.7	-1.8
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=212,slow=13,SNR=5.1 0.8nm,0.3s	**7.97**	**32**	Pn	**Pn**	**06 09 10.2**	**0.0**
TGY	**Tagaytay City** comp=Z,111nm,19.2s,baz=38,slow=37	**25.84**	**82**	LR	LR	06 23 14.5	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=171,slow=10,SNR=2.5 0.1nm,0.3s	**36.51**	**346**	P	**P**	**06 14 18.6**	**-0.1**
SONM	**Songino Array** 0.8nm,0.8s,baz=177,slow=5.9,SNR=4.2 0.8nm,0.8s	**37.39**	**13**	P	**P**	**06 14 27.3**	**+0.9**
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=160,slow=7.5,SNR=1.7 0.5nm,0.5s	**42.87**	**352**	P	**P**	**06 15 11.7**	**+0.1**
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=301,slow=8.7,SNR=1.7 0.4nm,1.0s	**50.22**	**128**	P	**P**	**06 16 12.1**	**+2.5**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=308,slow=6.7,SNR=4.7 0.3nm,0.6s	**52.11**	**133**	P	**P**	**06 16 26.2**	**+2.4**
BRTR	**Keskin Array B** 0.4nm,0.5s,baz=114,slow=9.9,SNR=1.6 0.4nm,0.5s	**60.31**	**309**	P	**P**	**06 17 21.2**	**-1.1**
H04N2	**CROZET ISLANDS** baz=52,slow=74,SNR=9.4	**69.18**	**210**	T	T	07 33 16.7	
H04N1	**CROZET ISLANDS** baz=52,slow=74,SNR=8.0	**69.19**	**210**	T	T	07 33 21.7	
H04N3	**CROZET ISLANDS** baz=52,slow=74	**69.20**	**210**	T	T	07 33 15.7	
FINES	**FINESS Array B** 0.9nm,0.8s,baz=36,slow=7.8,SNR=3.4 0.9nm,0.8s	**69.57**	**332**	P	**P**	**06 18 21.0**	**-0.9**
GERES	**GERESS Array B** 0.1nm,0.4s,baz=104,slow=4.3,SNR=5.2 0.1nm,0.4s	**75.29**	**318**	P	**P**	**06 18 56.0**	**-0.4**
HFS	**Hagfors** 1.0nm,0.8s,baz=83,slow=6.9,SNR=1.6 1.0nm,0.8s	**75.40**	**329**	P	**P**	**06 18 57.2**	**+0.4**

SNET ***18*** *06:17:33.2±1.6, 13.˚61N×90.˚28W, h78km, ML2.7, Presumed earthquake*
GCG ***18*** *06:17:34.7±0.7, 13.˚64N×90.˚28W, h66km±10km, MD3.8, ML3.9, MW2.9, Presumed earthquake*
CATAC ***18*** *06:17:34.8±0.4, 14.˚N±4.˚×9.˚0W±.˚, h51km±4km, M2.9/18, MLv2.9/18, Error ellipse: s-maj=8.3km s-min=3.5km az=16.3, confirmed*

ISC 18 06:17:35.6±1.6, 13.˚61N±0.˚07×90.˚24W±0.˚04, h70km±10km, n36, σ1§14/59, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.32**	**42**	P	**Pn**	**06 17 45.9**	**-1.1**
FAME				S	**Sn**	**06 17 54.7**	**-0.6**
NUBE	**Las Nubes**	**0.53**	**56**	P	**Pn**	**06 17 48.3**	**-0.7**
NUBE				S	**Sn**	**06 17 59.4**	**+0.6**
NUBE	**Las Nubes**	**0.53**	**56**	*i* P	**Pn**	**06 17 48.3**	**-0.7**
LOAL	**Lomas de Alarc**	**0.59**	**49**	P	**Pn**	**06 17 48.9**	**-0.6**
LOAL				S	**Sn**	**06 18 00.5**	**+0.8**
SLOZ	**Alcaldia de Sa**	**0.61**	**46**	P	**Pn**	**06 17 48.9**	**-0.7**
SLOZ				S	**Sn**	**06 18 00.7**	**+0.8**
CEVE	**Cerro Verde**	**0.64**	**70**	P	**Pn**	**06 17 49.7**	**-0.4**
CEVE	**Cerro Verde**	**0.64**	**70**	*i* P	**Pn**	**06 17 50.5**	**+0.4**
CEVE				*e*S	**Sn**	**06 18 01.6**	**+0.8**
SBLS	**San Blas**	**0.64**	**69**	*i* P	**Pn**	**06 17 49.2**	**-1.0**
SBLS				*e*S	**Sn**	**06 18 01.1**	**+0.3**
FG16	**Alotenango, Sa**	**0.71**	**338**	*i* P	**Pn**	**06 17 53.4**	**+2.4**
FG8	**Yepocapa, Chim**	**0.72**	**334**	*i* P	**Pn**	**06 17 53.9**	**+2.9**
UNIC	**Universidad Ca**	**0.77**	**61**	P	**Pn**	**06 17 50.4**	**-1.0**
UNIC				S	**Sn**	**06 18 03.2**	**+0.2**
JAYA	**Jayaque - finc**	**0.77**	**86**	P	**Pn**	**06 17 50.8**	**-0.7**
JAYA	**Jayaque - finc**	**0.77**	**86**	*i* P	**Pn**	**06 17 50.8**	**-0.7**
JAYA				*i* S	**Sn**	**06 18 02.6**	**-0.7**
JAYA	**Jayaque - finc**	**0.77**	**86**	*i* P	**Pn**	**06 17 50.7**	**-0.7**
JAYA				*e*S	**Sn**	**06 18 03.1**	**-0.1**
CEDA	**San Andres**	**0.84**	**76**	P	**Pn**	**06 17 51.3**	**-0.9**
CEDA				S	**Sn**	**06 18 04.9**	**+0.3**
JUAM	**Asuncion Mita**	**0.89**	**35**	*i* P	**Pn**	**06 17 51.7**	**-1.1**
JUAM				*i* S	**Sn**	**06 18 05.0**	**-0.7**
PMON	**Piamonte**	**0.90**	**83**	P	**Pn**	**06 17 52.4**	**-0.6**
PMON				S	**Sn**	**06 18 06.6**	**+0.6**
PMON	**Piamonte**	**0.90**	**83**	*i* P	**Pn**	**06 17 52.5**	**-0.6**
ESSG	**Sabana Grande**	**0.96**	**323**	*i* P	**Pn**	**06 17 52.2**	**-1.6**
UEES	**Universidad Ev**	**0.98**	**83**	P	**Pn**	**06 17 53.8**	**-0.1**
UEES				S	**Sn**	**06 18 08.9**	**+1.4**
SEMO	**Seminario San**	**0.99**	**84**	P	**Pn**	**06 17 54.7**	**+0.6**
SEMO				S	**Sn**	**06 18 08.9**	**+1.1**
LOMA	**Loma Larga**	**1.04**	**88**	P	**Pn**	**06 17 54.5**	**-0.3**
LOMA				S	**Sn**	**06 18 09.8**	**+0.9**
MTO3	**Montecristo**	**1.16**	**47**	P	**Pn**	**06 17 55.4**	**-1.1**
MTO3	**Montecristo**	**1.16**	**47**	*i* P	**Pn**	**06 17 55.3**	**-1.1**
MTO3	**Montecristo**	**1.16**	**47**	*i* P	**Pn**	**06 17 55.4**	**-1.1**
MTO3				*e*S	**Sn**	**06 18 11.3**	**-0.6**
PAVA	**Las Pavas**	**1.27**	**85**	P	**Pn**	**06 17 57.0**	**-0.7**
PAVA				S	**Sn**	**06 18 14.8**	**+0.6**
ESQI	**Esquipulas**	**1.29**	**42**	P	**Pn**	**06 17 57.3**	**-0.7**
ESQI				S	**Sn**	**06 18 14.9**	**+0.3**
ZAFR2	**Estanzuela, Za**	**1.29**	**42**	*i* P	**Pn**	**06 18 00.0**	**+2.1**
COEG	**Centro de Oper**	**1.32**	**89**	P	**Pn**	**06 17 57.8**	**-0.5**
COEG				S	**Sn**	**06 18 15.6**	**+0.3**
STG5	**El Palmar, Qui**	**1.34**	**307**	*i* P	**Pn**	**06 18 01.7**	**+3.1**
APG	**El Apazote**	**1.41**	**351**	*i* P	**Pn**	**06 17 59.1**	**-0.5**
TECO	**Alcaldia de Te**	**1.42**	**93**	P	**Pn**	**06 17 58.9**	**-0.7**
TECO				S	**Sn**	**06 18 17.7**	**+0.2**
P5NO	**Presa 5 de nov**	**1.49**	**75**	S	**Sn**	**06 18 18.8**	**-0.4**
RTAL	**Retalhuleu**	**1.68**	**303**	P	**Pn**	**06 18 00.7**	**-2.4**
RTAL				S	**Sn**	**06 18 21.5**	**-2.3**
SARH	**Santa Rosa de**	**1.85**	**51**	P	**Pn**	**06 18 05.0**	**-0.3**
SARH				S	**Sn**	**06 18 28.6**	**+0.8**
PACA	**Pacayal**	**1.87**	**94**	P	**Pn**	**06 18 06.1**	**+0.5**
PACA				S	**Sn**	**06 18 30.4**	**+2.0**

MAN ***18*** *06:42:28.0, 13.˚62N×119.˚81E, h10km, MS3.8*
IDC ***18*** *06:42:34.3±1.7, 13.˚82N×120.˚10E, h77km±16km, mb3.5/12, mbtmp3.8/12, MS3.7/14, Error ellipse: s-maj=29.8km s-min=14.0km az=64.0*

ISC 18 06:42:25.2±2.2, 13.˚69N±0.˚05×119.˚63E±0.˚07, h6km±13km, n30, σ2§12/27, mb3.9/11, MS3.6/13, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City** 3µm,0.4s,baz=246,slow=3.7,SNR=41	**1.34**	**72**	P	**Pg**	**06 42 51.1**	**+0.2**
TGY	11µm,0.7s,baz=272,slow=22,SNR=5.6			S	**Sb**	**06 43 05.8**	**-2.5**
TGY	**Tagaytay City**	**1.34**	**72**	*e*P	**Pg**	**06 42 51.2**	**+0.2**
TGY				*e*S	**Sn**	**06 43 08.2**	**-0.5**
QVPH	**Quezon City--P**	**1.69**	**55**	*i* P	**Pn**	**06 42 56.3**	**+1.0**
QVPH				*i* S	**Sb**	**06 43 18.3**	**0.0**
SMPP	**San Manuel, Pa**	**2.65**	**22**	*i* P	**Pn**	**06 43 12.7**	**+4.0**
SMPP				*e*S	**Sn**	**06 43 38.6**	**-2.5**
BOLP	**Bolinao**	**2.69**	**6**	*e*P	**Pn**	**06 43 09.1**	**-0.1**
BOLP				*i* S	**Sn**	**06 43 36.8**	**-5.3**
IBAJ	**Ibajay, Aklan**	**3.10**	**127**	*i* P	**Pg**	**06 43 23.3**	**-1.4**
JAP	**San Jose, Anti**	**3.70**	**142**	*e*P	**Pn**	**06 43 24.9**	**+2.0**
PALP	**Palanan**	**4.31**	**38**	*e*P	Pn	06 43 37.8	+6.4
PALP				*i* S	**Sn**	**06 44 24.1**	**+2.1**
PACPP	**Pamplona Cagay**	**5.03**	**19**	*e*P	**Pn**	**06 43 41.7**	**+0.4**
PACPP				*e*S	**Sn**	**06 44 43.8**	**+4.1**
KAPI	**Kappang** comp=Z,11nm,18.5s,baz=124,slow=40	**18.58**	**180**	LR	LR	06 55 01.9	
CMAR	**Chiang Mai Arr** 1.1nm,0.3s,baz=100,slow=8.9,SNR=9.9	**20.43**	**286**	P	Pn	06 47 10.2	+4.6
CMAR	comp=Z,73nm,18.2s,baz=160,slow=35 1.1nm,0.3s			LR	LR	06 54 44.8	
GUMO	**Guam** comp=Z,74nm,18.9s,baz=174,slow=40	**24.53**	**87**	LR	LR	06 58 24.7	
KSRS	**Korea Array** 0.7nm,0.6s,baz=198,slow=10,SNR=2.0	**24.80**	**16**	P	**P**	**06 47 46.0**	**-2.1**
KSRS	comp=Z,103nm,19.7s,baz=200,slow=38 0.7nm,0.6s			LR	LR	06 58 15.7	
JAY	**Jayapura** comp=Z,158nm,18.4s,baz=344,slow=40	**26.38**	**126**	LR	LR	06 59 44.4	
SONM	**Songino Array** 0.6nm,0.5s,baz=155,slow=8.1,SNR=2.5	**35.79**	**345**	P	**P**	**06 49 24.8**	**-0.5**
WRA	**Warramunga Arr** 2.9nm,0.8s,baz=337,slow=9.4,SNR=16	**36.42**	**156**	P	**P**	**06 49 30.6**	**-0.3**
WRA	comp=Z,412nm,19.7s,baz=279,slow=42 2.9nm,0.8s			LR	LR	07 07 50.1	
ASAR	**Alice Springs** 1.4nm,0.7s,baz=334,slow=6.5,SNR=19	**39.66**	**159**	P	**P**	**06 49 58.9**	**+0.6**
ASAR	0.4nm,1.0s,baz=339,slow=3.1,SNR=1.7 1.4nm,0.7s			PcP	**PcP**	**06 52 04.6**	**-0.7**
MKAR	**Makanchi Array** 1.1nm,0.7s,baz=133,slow=9.3,SNR=12	**45.43**	**324**	P	**P**	**06 50 46.5**	**+1.6**
MKAR	comp=Z,60nm,19.0s,baz=136,slow=35 1.1nm,0.7s			LR	LR	07 08 54.9	
ZALV	**Zalesovo Beam** 0.9nm,0.5s,baz=137,slow=6.6,SNR=4.1	**48.60**	**333**	P	**P**	**06 51 10.6**	**+1.1**
ZALV	comp=Z,51nm,18.2s,baz=152,slow=35 0.9nm,0.5s			LR	LR	07 11 06.0	
PETK	**Petropavlovsk-** 2.6nm,0.8s,baz=122,slow=7.9,SNR=14 2.6nm,0.8s	**49.54**	**29**	LR	LR	07 14 24.1	
KURBB	**Kurchatov Arra** 0.8nm,0.5s,baz=105,slow=11,SNR=2.8 0.8nm,0.5s	**49.62**	**327**	P	**P**	**06 51 19.6**	**+2.2**
BVAR	**Borovoye Array** 1.1nm,0.7s,baz=90,slow=5.3,SNR=4.7 1.6nm,0.9s	**55.20**	**326**	P	**P**	**06 52 00.2**	**+1.3**
TIXI	**Tiksi** comp=Z,77nm,18.6s,baz=198,slow=38	**58.21**	**3**	LR	LR	07 18 57.0	
NRIK	**Noril'sk** comp=Z,74nm,19.9s,baz=168,slow=38	**59.20**	**347**	LR	LR	07 19 56.5	
ARCES	**ARCESS Array B** 1.6nm,0.9s,baz=93,slow=5.3,SNR=4.7 1.6nm,0.9s	**78.73**	**339**	P	**P**	**06 54 27.9**	**-0.4**
EIL	**Elat** comp=Z,42nm,18.8s,baz=88,slow=40	**78.80**	**298**	LR	LR	07 35 17.4	
SPITS	**Spitsbergen Ar** comp=Z,57nm,18.1s,baz=94,slow=40	**79.39**	**348**	LR	LR	07 35 36.1	
FINES	**FINESS Array B** 0.3nm,0.4s,baz=64,slow=6.3,SNR=3.8 0.3nm,0.4s	**79.73**	**331**	P	**P**	**06 54 35.1**	**+0.8**
NOA	**NORSAR Array B** comp=Z,31nm,18.2s,baz=100,slow=37	**86.79**	**332**	LR	LR	07 35 43.3	
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=307,slow=4.2,SNR=1.6 0.1nm,0.6s	**93.19**	**22**	P	**P**	**06 55 39.1**	**-1.2**

IDC ***18*** *06:42:48.9±12.0, 2.˚25N×127.˚87E, h152km±117km, mb3.4/6, mbtmp3.9/6, Error ellipse: s-maj=118.3km s-min=20.0km az=63.0*
DJA ***18*** *06:42:50.7±0.6, 3.˚N±4.˚×12.˚8E±.˚, h161km±4km, M3.9/12, mB5.1/1, mb4.2/4, MLv3.8/12, Mw(mB)4.4/1*

ISC 18 06:42:47.6±1.2, 2.˚61N±0.˚09×128.˚5E±0.˚1, h150km, n11, σ1§78/14, mb4.0/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.06**	**223**	P	**Pn**	**06 43 16.0**	**+3.1**
TNTI	**Ternate**	**2.16**	**212**	P	**Pn**	**06 43 26.7**	**+2.0**
TNTI				S	**Sn**	**06 43 54.2**	**+1.0**
SGSI	**Sangihe**	**3.17**	**290**	P	**Pn**	**06 43 37.4**	**+0.3**
SGSI				S	**Sn**	**06 44 14.8**	**-0.7**
SANI	**Sanana** 2µm89nm,0.7s	**5.28**	**209**	P	**Pn**	**06 44 04.1**	**-0.6**
GTOI	**Gorontalo**	**5.84**	**250**	P	**Pn**	**06 44 13.5**	**+1.2**
FITZ	**Fitzroy Crossi** 0.7nm,0.4s,baz=12,slow=11,SNR=1.6 0.7nm,0.4s	**20.77**	**188**	P	**P**	**06 47 12.9**	**-4.0**
WRA	**Warramunga Arr** 1.9nm,0.5s,baz=344,slow=9.9,SNR=28 1.9nm,0.5s	**23.13**	**166**	P	**P**	**06 47 40.2**	**-0.5**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=353,slow=7.8,SNR=7.8	**26.64**	**169**	P	**P**	**06 48 11.9**	**-0.6**
ASAR	0.3nm,0.4s,baz=353,slow=2.1,SNR=4.1 0.4nm,0.6s			PcP	**PcP**	**06 51 32.6**	**-0.1**
STKA	**Stephens Creek** 1.2nm,0.4s,baz=321,slow=14,SNR=2.9 1.2nm,0.4s	**36.48**	**161**	P	**P**	**06 49 38.5**	**+0.1**
MKAR	**Makanchi Array** 1.3nm,0.5s,baz=114,slow=8.4,SNR=14 1.3nm,0.5s	**59.49**	**325**	P	**P**	**06 52 35.7**	**+0.8**
KURBB	**Kurchatov Arra** 1.1nm,0.4s,baz=126,slow=6.5,SNR=6.9 1.1nm,0.4s	**63.64**	**327**	P	**P**	**06 53 03.1**	**+0.5**

FCIAR ***18*** *06:58:05.0, 76.˚12N×26.˚25E, h10km, station OMEGA has station magnitude of 3.30*
NAO ***18*** *06:58:10.9±0.9, 75.˚90N×23.˚75E, h10km, ML2.6*
BER ***18*** *06:58:13.0±3.1, 75.˚91N×24.˚06E, h16km±14km, ML2.5, ML2.5(NAO), Confirmed Earthquake*
KOLA ***18*** *06:58:22.7, 75.˚05N×25.˚09E, h0km, ML2.2, Barentz Sea*

ISC 18 06:58:07.1±0.9, 75.˚86N±0.˚03×24.˚12E±0.˚06, h10km, n26, σ2§85/51, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**0.69**	**18**	Pg	**Pn**	**06 58 24.4**	**+1.5**
HOPEN				Sg	**Sn**	**06 58 33.6**	**0.0**
HOPEN	**Hopen**	**0.69**	**18**	*i*P	**Pn**	**06 58 24.4**	**+1.5**
HOPEN				*e*S	**Sn**	**06 58 33.6**	**0.0**
HOPEN	comp=Z,431nm,0.2s			IAML		06 58 34.1	
HOPEN	**Hopen**	**0.69**	**18**	*e*P	**Pn**	**06 58 24.3**	**+1.5**
HOPEN				*e*S	**Sb**	**06 58 31.4**	**+0.7**
BJO1	**Bjornoya**	**1.90**	**227**	Pg	**Pg**	**06 58 46.2**	**+2.8**
BJO1				Sg	**Sg**	**06 59 08.0**	**0.0**
BJO1	**Bjornoya**	**1.90**	**227**	*e*P	**Pg**	**06 58 45.7**	**+2.3**
BJO1				*e*S	**Sg**	**06 59 07.1**	**-0.8**
BJO1	comp=Z,55nm,0.4s			IAML		06 59 14.7	
BJO1	**Bjornoya**	**1.90**	**227**	*e*P	**Pn**	**06 58 37.6**	**-1.8**
BJO1				*e*S	**Sg**	**06 59 08.6**	**+0.6**
BEAR	**Bear Island, N** baz=41,slow=18	**1.90**	**226**	Pg	**Pg**	**06 58 46.1**	**+2.6**
BEAR	baz=41,slow=37			Sg	**Sg**	**06 59 08.6**	**+0.5**
SPA0	**Spitsbergen Ar** baz=141,slow=16	**2.91**	**327**	Pn	**Pn**	**06 58 54.5**	**+1.1**
SPA0	baz=136,slow=37			Sn	**Sn**	**06 59 27.0**	**-1.4**
SPA0	baz=134,slow=37			Sg	**Sg**	**06 59 39.1**	**-1.4**
SPA0

IDC ***18*** *07:24:01.6±1.1,60°.48S×28°.43W,h0km,mb3.8/4, mbtmp3.9/5,ML4.2/1,MS3.2/3,Error ellipse: s-maj=49.8km s-min=25.0km az=81.0*

ISC 18 07:24:02.9±1.0,60°.5S±0°.2×28°.4W±0°.3,h10km,n20, σ0°47/10,mb3.7/3,4C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.08**	**149**	⇑P	**Pn**	**07 27 08.5**	**+0.1**
	comp=Z,10nm,0.3s						
VNA2	**Neumayer--Watz**	**13.48**	**150**	⇑P	**Pn**	**07 27 13.9**	**0.0**
	comp=Z,1.7nm,0.3s,baz=302,slow=14						
SNAA	**Sanae**	**15.10**	**148**	⇑P	**Pn**	**07 27 36.4**	**+0.4**
	comp=Z,72nm,0.5s						
SNAA	**Sanae**	**15.10**	**148**	Pn	**Pn**	**07 27 36.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=305,slow=15,SNR=16						
SNAA				LR	LR	07 32 43.8	
	comp=Z,86nm,18.6s,baz=230,slow=35 comp=Z,3.3nm,0.5s						
TROLL	**Troll, Antarti**	**16.71**	**146**	⇑P	**P**	**07 27 58.6**	**-0.6**
	comp=Z,30nm,0.3s						
PMSA	**Palmer Station**	**16.77**	**240**	LR	LR	07 33 05.4	
	comp=Z,81nm,18.7s,baz=142,slow=32						
QSPA	**South Pole Qui**	**29.75**	**180**	P	**P**	**07 30 09.4**	**+0.2**
	comp=Z,2.6nm,1.1s,baz=176,slow=4.6,SNR=4.2 comp=Z,2.6nm,1.1s						
PLCA	**Paso Flores**	**32.46**	**288**	LR	LR	07 43 25.0	
	comp=Z,34nm,18.8s,baz=140,slow=36						
VNDA	**Vanda**	**42.09**	**183**	P	**P**	**07 31 54.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=162,slow=6.4,SNR=3.8 comp=Z,0.5nm,0.7s						
H04S2	**CROZET ISLANDS**	**46.45**	**111**	T	T	08 23 22.6	
	baz=223,slow=74,SNR=66						
H04S3	**CROZET ISLANDS**	**46.45**	**111**	T	T	08 23 23.7	
	baz=223,slow=74,SNR=52						
H04S1	**CROZET ISLANDS**	**46.46**	**111**	T	T	08 23 23.7	
	baz=223,slow=74,SNR=51						
H10S2	**ASCENSION HYDR**	**52.45**	**17**	T	T	08 30 18.3	
	baz=189,slow=74,SNR=27						
H10S3	**ASCENSION HYDR**	**52.45**	**17**	T	T	08 30 18.7	
	baz=31,slow=74,SNR=30						
LPAZ	**La Paz**	**52.56**	**309**	P	**P**	**07 33 16.7**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=170,slow=10,SNR=5.1 comp=Z,0.5nm,0.5s						
H10N1	**ASCENSION HYDR**	**53.57**	**17**	T	T	08 31 45.4	
	baz=189						
H10N3	**ASCENSION HYDR**	**53.57**	**17**	T	T	08 31 48.2	
	baz=189						
H10N2	**ASCENSION HYDR**	**53.58**	**17**	T	T	08 31 49.6	
	baz=189						
TORD	**Torodi Ar. Bea**	**77.24**	**30**	P	**P**	**07 35 57.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=197,slow=6.3,SNR=6.5 comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**152.39**	**306**	PKPbc	**PKiKP**	**07 43 58.6**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=113,slow=1.2,SNR=5.0						

TRN 18 07:31:01.9,16°.41N×61°.14W,h31km,MD3.5,1D,East of Guadeloupe.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSDZ	**La Diserade, G**	**0.12**	**143**	⇓*i*P	Pn	07 31 08.9	+1.2
DSDZ				*e*S	Sb	07 31 13.4	+2.0
MAGL	**Barre de l'ile**	**0.48**	**196**	*e*P	Pn	07 31 13.9	+1.3
MAGL				*e*S	Sn	07 31 21.9	+2.0
DHSZ	**Broadband at M**	**0.61**	**257**	*e*P	Pn	07 31 15.9	+1.5
DHSZ				*e*S	Sn	07 31 25.2	+2.0
MMLZ	**Guadeloupe Bro**	**0.62**	**234**	*e*P	Pn	07 31 16.7	+2.2
MMLZ				*e*S	Sn	07 31 25.7	+2.2
TBG	**Guadaloupe-3**	**0.74**	**221**	*e*P	Pb	07 31 17.9	+1.7
TBG				*e*S	Sn	07 31 28.9	+2.6
DWS	**Wesley**	**0.85**	**191**	*e*P	Pb	07 31 19.2	+1.0
DWS				*e*S	Sb	07 31 31.3	+1.9
DSLB	**Salisbury**	**1.00**	**195**	*e*P	Pb	07 31 21.9	+1.1
DSLB				*e*S	Sb	07 31 35.6	+1.9
MBWH	**Windy Hill**	**1.06**	**288**	*e*P	Pb	07 31 22.6	+0.9
MBWH				*e*S	Sb	07 31 36.9	+1.6
ANWB	**Willy Bob**	**1.39**	**334**	*e*P	Pn	07 31 26.0	+0.8
ANWB				*e*S	Sb	07 31 44.2	-0.6
SKI	**Saint Kitts**	**1.78**	**301**	*e*P	Pn	07 31 32.0	+1.4
SKI				*e*S	Sb	07 31 55.1	-0.8
BIM	**Bigot**	**1.89**	**178**	*e*P	Pn	07 31 33.8	+1.8
BIM				*e*S	Sn	07 31 56.7	+2.0
SLBI	**Saint Lucia, B**	**2.38**	**176**	*e*P	Pn	07 31 40.7	+2.0
SLBI				*e*S	Sn	07 32 08.6	+1.7

IDC ***18*** *07:39:52.3±8.4,10°.88N×93°.33E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=455.5km s-min=23.6km az=60.0*

BKK ***18*** *07:39:53.3±0.5,12°.N±4°×9°.5E±°,h10km,M4.1/9,mB4.9/3, mb4.3/4,Mjma3.9/9,ML4.1/9,MLv4.1/9,Mw(mB)4.1/3*

ISC 18 07:40:00.5±1.5,12°.3N±0°.1×95°.9E±0°.2,h10km,n7,σ1°74/7, mb3.6/5,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHLT	**Khaolaem Dam**	**3.60**	**46**	P	**Pb**	**07 41 04.1**	**-0.3**
RNTT	**Ranong**	**3.83**	**139**	P	**Pn**	**07 40 58.6**	**-0.9**
MKAR	**Makanchi Array**	**36.26**	**344**	P	**P**	**07 47 04.4**	**+0.5**
	0.8nm,0.8s,baz=160,slow=9.0,SNR=3.9 0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**40.78**	**343**	P	**P**	**07 47 39.7**	**-2.2**
	0.5nm,0.2s,baz=162,slow=7.8,SNR=1.6 0.5nm,0.2s						
ZALV	**Zalesovo Beam**	**42.48**	**350**	P	**P**	**07 47 57.1**	**+1.4**
	0.6nm,0.5s,baz=167,slow=6.8,SNR=1.9 0.6nm,0.5s						
WRA	**Warramunga Arr**	**49.56**	**130**	P	**P**	**07 48 54.2**	**+2.1**
	0.5nm,0.6s,baz=308,slow=8.1,SNR=1.5 0.5nm,0.6s						
ASAR	**Alice Springs**	**51.55**	**134**	P	**P**	**07 49 07.0**	**-0.1**
	0.5nm,1.0s,baz=310,slow=7.1,SNR=4.8 0.5nm,1.0s						

IDC ***18*** *07:53:10.0±0.8,60°.43S×28°.25W,h0km,mb3.9/7, mbtmp4.0/8,ML4.5/1,MS3.5/9,Error ellipse: s-maj=41.7km s-min=19.5km az=71.0*

NEIC ***18*** *07:53:12.5±1.5,60°.7S±0°.1×28°.9W±0°.3,h10km±1km, mb4.4/13,Error ellipse: s-maj=24.9km s-min=16.4km az=48.0*

ISC 18 07:53:11.7±0.6,60°.63S±0°.09×28°.7W±0°.1,h10km,n49, σ1°38/34,mb4.2/10,MS3.7/7,3C-1D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	**7.86**	**262**	Pn	**Pn**	**07 55 03.8**	**-2.1**
VNA1	**Neumayer--Stat**	**13.03**	**149**	⇓P	**Pn**	**07 56 17.7**	**+1.2**
	comp=Z,28nm,0.3s						
VNA2	**Neumayer--Watz**	**13.43**	**149**	⇑P	**Pn**	**07 56 23.2**	**+1.2**
	comp=Z,6.3nm,0.4s,baz=299,slow=14						
ESPZ	**Base Esperanza**	**13.50**	**246**	Pn	**Pn**	**07 56 22.3**	**-0.8**
SNAA	**Sanae**	**15.05**	**148**	⇑P	**Pn**	**07 56 46.0**	**+1.8**
	comp=Z,167nm,0.4s						
SNAA	**Sanae**	**15.05**	**148**	Pn	**Pn**	**07 56 45.0**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=304,slow=15,SNR=15						
SNAA				Sn	**Sn**	**07 59 26.4**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=323,slow=20,SNR=1.1						
SNAA				LR	LR	08 01 23.2	
	comp=Z,146nm,21.0s,baz=104,slow=33 comp=Z,7.0nm,0.5s						
SNAA	**Sanae**	**15.05**	**148**	Pn	**Pn**	**07 56 44.7**	**+0.6**
SNAA				IAmb	IAmb	07 56 48.9	
	comp=Z,7.8nm,0.5s						
PMSA	**Palmer Station**	**16.57**	**240**	LR	LR	08 02 33.7	
	comp=Z,153nm,19.2s,baz=84,slow=33						
TROLL	**Troll, Antarti**	**16.67**	**146**	⇑P	**P**	**07 57 08.0**	**+0.4**
	comp=Z,183nm,0.5s						
BELA	**Belgrano 2**	**17.43**	**184**	P	**P**	**07 57 16.2**	**+0.4**
AY03	**Cochrane**	**28.47**	**278**	P	**P**	**07 59 06.8**	**+0.2**
QSPA	**South Pole Qui**	**29.60**	**180**	P	**P**	**07 59 18.1**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=179,slow=4.3,SNR=4.6 comp=Z,1.1nm,0.9s						
QSPA	**South Pole Qui**	**29.60**	**180**	P	**P**	**07 59 17.8**	**+1.1**
QSPA				IAmb	IAmb	07 59 28.4	
	comp=Z,6.0nm,1.1s						
PLCA	**Paso Flores**	**32.36**	**289**	LR	LR	08 12 43.9	
	comp=Z,42nm,21.1s,baz=152,slow=36						
PLCA	**Paso Flores**	**32.36**	**289**	P	**P**	**07 59 41.2**	**+0.1**
PLCA				IAmb	IAmb	08 00 06.8	
	comp=Z,5.6nm,1.2s						

CPSB	**Cacapava Do Su**	**34.41**	**320**	P	**P**	**07 59 59.5**	**+0.5**
MAW	**Mawson**	**37.02**	**140**	LR	LR	08 13 28.9	
	comp=Z,75nm,19.1s,baz=64,slow=33						
VA03	**San Esteban**	**38.91**	**297**	P	**P**	**08 00 39.3**	**+1.9**
CPUP	**Villa Florida**	**39.45**	**317**	P	**P**	**08 00 42.1**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=182,slow=18,SNR=4.0						
CPUP				LR	LR	08 15 38.3	
	comp=Z,39nm,20.6s,baz=50,slow=34 comp=Z,2.5nm,1.0s						
VAO	**Valinhos**	**39.70**	**333**	P	**P**	**08 00 45.5**	**+1.5**
VAO				IAmb	IAmb	08 00 57.1	
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**41.94**	**183**	P	**P**	**08 01 03.5**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=184,slow=5.4,SNR=4.4 comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**41.94**	**183**	P	**P**	**08 01 00.5**	**-1.4**
AC02	**Maricunga**	**43.44**	**303**	P	**P**	**08 01 14.6**	**-0.6**
AC02				IAmb	IAmb	08 01 20.8	
	comp=Z,6.3nm,1.1s						
H04S2	**CROZET ISLANDS**	**46.53**	**111**	T	T	08 52 33.5	
	baz=222,slow=74,SNR=312						
H04S3	**CROZET ISLANDS**	**46.54**	**111**	T	T	08 52 37.7	
	baz=222,slow=74,SNR=215						
H04S1	**CROZET ISLANDS**	**46.55**	**111**	T	T	08 52 34.6	
	baz=222,slow=74,SNR=204						
BDFB	**Brasilia**	**47.05**	**334**	P	**P**	**08 01 43.0**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=166,slow=12,SNR=8.5 comp=Z,1.8nm,0.5s						
BOSA	**Boshof**	**47.98**	**73**	LR	LR	08 17 14.6	
	comp=Z,92nm,18.9s,baz=116,slow=30						
PTLB	**Pontes e Lacer**	**50.19**	**321**	P	**P**	**08 02 07.1**	**-0.4**
PTLB				IAmb	IAmb	08 02 12.4	
	comp=Z,3.9nm,1.1s						
LPAZ	**La Paz**	**52.54**	**310**	P	**P**	**08 02 24.4**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=185,slow=4.2,SNR=7.0 comp=Z,1.3nm,0.7s						
LPAZ	**La Paz**	**52.54**	**310**	P	**P**	**08 02 26.3**	**+0.6**
LPAZ				IAmb	IAmb	08 02 32.4	
	comp=Z,4.6nm,1.1s						
H10S2	**ASCENSION HYDR**	**52.63**	**18**	T	T	08 59 34.5	
	baz=31,slow=74,SNR=94						
H10S3	**ASCENSION HYDR**	**52.63**	**18**	T	T	08 59 34.1	
	baz=189,slow=74,SNR=91						
H10N1	**ASCENSION HYDR**	**53.75**	**18**	T	T	09 00 52.7	
	baz=191,slow=78,SNR=7.3						
H10N3	**ASCENSION HYDR**	**53.75**	**18**	T	T	09 00 54.3	
	baz=191,slow=78,SNR=32						
H10N2	**ASCENSION HYDR**	**53.77**	**18**	T	T	09 00 53.8	
	baz=191,slow=78,SNR=17						
MATP	**Matopo**	**56.49**	**71**	LR	LR	08 23 47.5	
	comp=Z,79nm,18.2s,baz=112,slow=33						
LSZ	**Lusaka**	**60.82**	**68**	LR	LR	08 24 25.4	
	comp=Z,56nm,21.3s,baz=153,slow=31						
BOAV	**Boa Vista**	**67.52**	**325**	P	**P**	**08 04 07.9**	**+0.1**
SDV	**Santo Domingo**	**76.77**	**317**	LR	LR	08 42 58.1	
	comp=Z,32nm,18.1s,baz=160,slow=39						
TORD	**Torodi Ar. Bea**	**77.44**	**30**	P	**P**	**08 05 05.5**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=194,slow=6.3,SNR=6.1 comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**94.82**	**164**	P	**P**	**08 06 34.3**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=187,slow=3.8,SNR=2.5 comp=Z,0.4nm,0.8s						
ZAA0	**Zalesovo Array**	**144.90**	**70**	PKPbc	PKPbc	08 12 46.9	+0.1
ZALV	**Zalesovo Beam**	**144.90**	**70**	PKP	**PKPab**	**08 12 46.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=237,slow=4.3,SNR=1.5						
H31M	**Peel River**	**147.94**	**312**	PKPdf	**PKPdf**	**08 12 53.0**	**+0.7**
L29M	**L29M**	**148.15**	**306**		**PKPbc**	**08 12 55.9**	**-0.3**
BCAR	**Beaver Creek A**	**149.60**	**304**	PKPdf	**PKPdf**	**08 12 54.9**	**-0.3**
SONM	**Songino Array**	**151.43**	**96**	PKPbc	**PKPbc**	**08 13 02.4**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=226,slow=3.8,SNR=3.6						
ILAR	**Eielson Array**	**152.35**	**305**	PKPbc	**PKiKP**	**08 13 07.8**	**+1.4**
	comp=Z,1.4nm,0.9s,baz=154,slow=1.9,SNR=8.4						

RSPR 18 08:02:18.2,17°.94N×66°.95W,h13km,MD2.5/18,3C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.08**	**64**	⇑*i*P	Pg	08 02 21.1	0.0
GBPR				*e*S	Sg	08 02 23.4	+0.4
MLPR	**Magueyes Islan**	**0.09**	**288**	⇑*i*P	Pg	08 02 21.2	0.0
CRPR	**Cabo Rojo, PR**	**0.16**	**294**	⇑*i*P	Pg	08 02 22.2	0.0
LSP	**Las Mesas**	**0.27**	**331**	⇑*i*P	Pg	08 02 24.1	+0.2
LSP				*e*S	Sb	08 02 29.9	-0.5
PRSN	**Puerto Rico Se**	**0.33**	**326**	⇑*i*P	Pg	08 02 24.9	-0.1
OBIP	**Obispado Ponce**	**0.34**	**73**	⇓*i*P	Pg	08 02 25.0	-0.3
OBIP				*e*S	Sg	08 02 30.2	+0.2
CELP	**Cerrillos**	**0.38**	**69**	⇑*i*P	Pg	08 02 25.7	-0.2
UUPR	**Utuado, UPR, P**	**0.38**	**35**	⇓*i*P	Pg	08 02 25.6	-0.4
AOPR	**Arecibo Observ**	**0.45**	**25**	⇓*i*P	Pg	08 02 26.7	-0.4
AGPR	**Aguadilla, PR**	**0.55**	**344**	⇑*e*P	Pg	08 02 28.7	-0.3
IDE	**Isla Desecheo**	**0.67**	**312**	⇑*i*P	Pg	08 02 30.7	-0.6
IDE				*e*S	Sg	08 02 39.9	-0.1
EMPR	**Esperanza - Ma**	**0.67**	**37**	⇓*e*P	Pg	08 02 31.1	-0.2
EMPR				*e*S	Sb	08 02 40.7	-0.2
ECPR	**Experimental S**	**0.68**	**56**	⇓*i*P	Pg	08 02 30.5	-0.9
SJG	**San Juan**	**0.78**	**77**	⇓*e*P	Pg	08 02 32.1	-1.4
IGPR	**InterUniversit**	**0.81**	**88**	⇓*e*P	Pg	08 02 32.9	-1.0
PDPR	**Patillas Dam,**	**0.89**	**85**	⇓*e*P	Pg	08 02 34.2	-1.3
HUMP	**Col San Antoni**	**1.07**	**79**	⇓*e*P	Pb	08 02 37.1	-1.5

TRN ***18*** *08:03:45.0,10°.85N×62°.12W,h82km,MD2.8,North of the Paria peninsula.*

FUNV ***18*** *08:03:52.5,10°.91N×62°.26W,h8km,MW3.5,Presumed earthquake*

ISC 18 08:03:53.5±3.6,10°.93N±0°.08×62°.2W±0°.2,h9km±11km,n9, σ0°80/17,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.69**	**109**	*e*P	**Pn**	**08 04 10.5**	**+1.1**
DMDM				*e*S	**Sn**	**08 04 20.8**	**+0.6**
PSMG	**Mucurapo Girls**	**0.72**	**111**	*e*S	**Sn**	**08 04 21.3**	**+0.4**
TRN	**Trinidad (W)**	**0.84**	**109**	*e*P	**Pg**	**08 04 08.9**	**-0.8**
TRN				*e*S	**Sg**	**08 04 20.6**	**-0.2**
TRN	**Trinidad (W)**	**0.84**	**109**	*e*P	**Pn**	**08 04 12.5**	**+0.5**
TRN				*e*S	**Sn**	**08 04 23.2**	**-0.8**
GRFF	**Grenada Fort F**	**1.21**	**23**	*e*P	**Pg**	**08 04 17.8**	**+1.1**
GRFF				*e*S	**Sn**	**08 04 33.8**	**+0.7**
GRGR	**Grenville**	**1.32**	**25**	*e*P	**Pn**	**08 04 17.2**	**-0.8**
GRGR				*e*S	**Sb**	**08 04 35.2**	**-0.2**
GRGR	**Grenville**	**1.32**	**25**	*e*P	**Pg**	**08 04 18.5**	**-0.3**
GRGR				*e*S	**Sg**	**08 04 36.7**	**+0.7**
GCMP	**Grenada, Carri**	**1.73**	**26**	*e*P	**Pn**	**08 04 22.4**	**-1.3**
GCMP				*e*S	**Sn**	**08 04 45.4**	**-0.5**
GCMP	**Grenada, Carri**	**1.73**	**26**	*e*P	**Pn**	**08 04 23.9**	**+0.1**
GCMP				*e*S	**Sn**	**08 04 45.9**	**0.0**

SNET ***18*** *08:40:53.1±2.4,12°.73N×88°.72W,h16km,ML2.9, Presumed earthquake*

CATAC ***18*** *08:40:54.1±0.7,13°.N±4°×8°.9W±°,h34km±7km,M2.9/14, MLv2.9/14,Error ellipse: s-maj=9.4km s-min=3.1km az=26.1,confirmed*

GCG ***18*** *08:40:57.1±1.3,13°.06N×88°.80W,h6km±35km,MD3.8, Presumed earthquake*

ISC 18 08:40:49.3±2.0,12°.59N±0°.08×88°.80W±0°.04,h10km±10km, n34,σ0°73/53,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.94**	**1**	P	**Pn**	**08 41 08.9**	**+0.1**
TECO				S	**Sg**	**08 41 19.9**	**+0.1**
TECA	**Tecapa**	**0.94**	**18**	*i*P	**Pn**	**08 41 09.1**	**+0.2**
INTP	**Intipuca**	**0.95**	**50**	*i*P	**Pn**	**08 41 09.1**	**+0.3**
INTP				*e*S	**Sg**	**08 41 20.2**	**+0.3**
RANC	**El Ranchito**	**0.98**	**31**	P	**Pb**	**08 41 09.3**	**+0.8**
RANC				S	**Sg**	**08 41 20.9**	**0.0**
RANC	**El Ranchito**	**0.98**	**31**	*i*P	**Pb**	**08 41 08.9**	**+0.4**
PACA	**Pacayal**	**0.99**	**28**	P	**Pn**	**08 41 09.6**	**+0.1**
PACA	**Pacayal**	**0.99**	**28**	*i*P	**Pn**	**08 41 09.8**	**+0.3**
PACA				*e*S	**Sg**	**08 41 21.7**	**+0.4**
COEG	**Centro de Oper**	**1.02**	**356**	P	**Pn**	**08 41 10.1**	**+0.1**
COEG	**Centro de Oper**	**1.02**	**356**	*i*P	**Pb**	**08 41 09.8**	**+0.5**
COEG				*e*S	**Sg**	**08 41 22.4**	**-0.1**
SJTE	**Alcalda de S**	**1.04**	**349**	*i*P	**Pn**	**08 41 10.4**	**+0.3**
SJTE				*e*S	**Sg**	**08 41 22.6**	**-0.2**
LOMA	**Loma Larga**	**1.11**	**341**	P	**Pn**	**08 41 12.1**	**+1.0**
LOMA	**Loma Larga**	**1.11**	**341**	*i*P	**Pn**	**08 41 12.2**	**+1.1**
LOMA				*e*S	**Sb**	**08 41 25.7**	**+0.4**
PAVA	**Las Pavas**	**1.12**	**353**	P	**Pn**	**08 41 11.9**	**+0.6**
PAVA	**Las Pavas**	**1.12**	**353**	*i*P	**Pn**	**08 41 11.5**	**+0.2**
PAVA				*e*S	**Sg**	**08 41 25.5**	**-0.1**
LCND	**La Caada**	**1.14**	**51**	P	**Pg**	**08 41 11.3**	**0.0**
LCND	**La Caada**	**1.14**	**51**	*i*P	**Pg**	**08 41 11.5**	**+0.3**
PMON	**Piamonte**	**1.22**	**336**	P	**Pn**	**08 41 13.6**	**+1.0**
PMON				S	**Sb**	**08 41 28.4**	**-0.1**
PMON	**Piamonte**	**1.22**	**336**	*i*P	**Pn**	**08 41 13.3**	**+0.7**
JAYA	**Jayaque - finc**	**1.23**	**329**	P	**Pn**	**08 41 13.8**	**+0.9**
JAYA				S	**Sb**	**08 41 28.8**	**-0.1**
JAYA	**Jayaque - finc**	**1.23**	**329**	*i*P	**Pn**	**08 41 13.7**	**+0.9**
JAYA	**Jayaque - finc**	**1.23**	**329**	*i*P	**Pn**	**08 41 14.2**	**+1.4**
JAYA				*e*S	**Sg**	**08 41 27.9**	**-1.1**
CSGN	**Cosiguina Volc**	**1.27**	**72**	P	**Pn**	**08 41 13.8**	**+0.5**
CSGN				S	**Sb**	**08 41 27.7**	**-2.3**
SBLS	**San Blas**	**1.48**	**327**	*e*S	**Sn**	**08 41 35.9**	**+0.1**
UNIC	**Universidad Ca**	**1.56**	**332**	P	**Pg**	**08 41 19.0**	**-0.3**
UNIC				S	**Sn**	**08 41 37.8**	**+0.1**
NUBE	**Las Nubes**	**1.61**	**324**	P	**Pb**	**08 41 19.6**	**+0.2**
NUBE				S	**Sn**	**08 41 39.1**	**0.0**
NUBE	**Las Nubes**	**1.61**	**324**	*i*P	**Pb**	**08 41 19.6**	**+0.2**
NUBE				*i*S	**Sn**	**08 41 38.2**	**-0.9**
NUBE	**Las Nubes**	**1.61**	**324**	*i*P	**Pg**	**08 41 20.2**	**-0.2**
NUBE				*e*S	**Sn**	**08 41 38.3**	**-0.7**
CRIN	**San Cristobal**	**1.71**	**86**	P	**Pn**	**08 41 20.7**	**+1.3**
CRIN				S	**Sn**	**08 41 40.6**	**-0.9**
FAME	**Alcaldia de Sa**	**1.71**	**317**	P	**Pg**	**08 41 21.8**	**-0.4**
FAME				S	**Sb**	**08 41 42.4**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.72**	**326**	P	**Pg**	**08 41 21.5**	**-0.8**
SLOZ				S	**Sb**	**08 41 42.2**	**-0.5**
MARCA	**Marcala la Paz**	**1.73**	**26**	P	**Pn**	**08 41 20.5**	**+0.9**
MARCA	**Marcala la Paz**	**1.73**	**26**	*i*P	**Pn**	**08 41 20.5**	**+0.9**
MTO3	**Montecristo**	**1.88**	**343**	P	**Pb**	**08 41 23.3**	**-0.7**
SARH	**Santa Rosa de**	**2.17**	**1**	*i*P	**Pn**	**08 41 27.4**	**+1.7**

IDC ***18*** *08:54:24.8±20.0,23°.68S×179°.87E,h614km±218km, mb3.1/4,mbtmp4.1/4,Error ellipse: s-maj=140.5km s-min=32.5km az=55.0*

ISC 18 08:54:22.9±1.3,23°.6S±0°.3×180°.0E±0°.2,h600km,n9, σ1°05/8,mb3.9/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**09 00 25.9**	**+0.4**
	2.1nm,0.7s,baz=96,slow=10,SNR=6.0 2.1nm,0.7s						
ASAR	**Alice Springs**	**42.08**	**260**	P	**P**	**09 01 24.1**	**+0.1**
	2.4nm,0.5s,baz=104,slow=7.5,SNR=52 2.4nm,0.5s						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**09 01 25.9**	**-0.7**
	2.5nm,0.4s,baz=102,slow=8.0,SNR=51 2.5nm,0.4s						
QSPA	**South Pole Qui**	**66.53**	**180**	P	**P**	**09 04 14.1**	**-0.2**
	0.6nm,0.7s,baz=45,slow=1.4,SNR=5.2 0.6nm,0.7s						
MKAR	**Makanchi Array**	**111.91**	**313**	PKiKP	**PKiKP**	**09 11 48.8**	**-1.8**
	0.2nm,0.5s,baz=94,slow=2.2,SNR=2.0						
HFS	**Hagfors**	**142.20**	**349**	PKhKP	PKPpre	09 12 44.4	
	1.9nm,0.3s,baz=37,slow=3.6,SNR=23						
AKASG	**Malin Array Be**	**144.67**	**328**	PKP	**PKPdf**	**09 12 52.9**	**+0.9**
	1.3nm,0.5s,baz=45,slow=4.2,SNR=6.4						
BRTR	**Keskin Array B**	**147.35**	**308**	PKPbc	**PKPbc**	**09 13 01.2**	**+0.7**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=1.6						
EKA	**Eskdalemuir Ar**	**148.17**	**3**	PKPbc	**PKPbc**	**09 13 02.3**	**+0.4**
	0.3nm,0.4s,baz=2.2,slow=2.8,SNR=5.2						

KRSC ***18*** *08:55:58.8±1.2,54°.19N×162°.52E,h43km±16km,Ml3.9*

MOS ***18*** *08:56:00.9±0.6,54°.24N×162°.49E,h47km,mb4.2/4,Error ellipse: s-maj=7.2km s-min=4.9km az=83.7*

IDC ***18*** *08:56:07.3±2.4,54°.26N×161°.90E,h94km±22km,mb3.2/10, mbtmp3.5/12,MS2.0/1,Error ellipse: s-maj=23.9km s-min=19.0km az=147.0*

ISC 18 08:55:59.4±1.5,54°.19N±0°.03×162°.55E±0°.04,h20km±11km, n106,σ1°33/171,mb3.7/14,1D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.61**	**308**	PN	**Pb**	**08 56 11.2**	**-0.1**
MKZ				S	**Sb**	**08 56 18.6**	**-0.8**
MKZ	**Mys Kozlova**	**0.61**	**308**	*e*P	**Pb**	**08 56 11.3**	**-0.1**
MKZ				*e*S	**Sb**	**08 56 18.7**	**-0.8**
TUMD	**Tumrok D**	**1.61**	**310**	PN	**Pn**	**08 56 25.9**	**-0.8**
TUMD				S	**Sn**	**

KOZ	**Kozyrevsk**	**2.42 322**	*e*P		**Pn**	**08 56 38.6 +0.7**
KOZ			eS		**Sn**	**08 57 08.4 +1.5**
UGLR	**Uglovaya**	**2.42 248**	PN		**Pn**	**08 56 39.3 +1.4**
UGLR			S		**Sn**	**08 57 08.0 +1.0**
UGLR	**Uglovaya**	**2.42 248**	*e*P		**Pn**	**08 56 39.3 +1.4**
UGLR			eS		**Sn**	**08 57 08.1 +1.0**
KRER	**Koryakskii**	**2.43 250**	PN		**Pn**	**08 56 39.5 +1.5**
KRER			S		**Sn**	**08 57 07.9 +0.7**
KRER	**Koryakskii**	**2.43 250**	*e*P		**Pn**	**08 56 39.5 +1.5**
KRER			eS		**Sn**	**08 57 08.0 +0.7**
AVH	**Avacha**	**2.45 249**	PN		**Pn**	**08 56 39.9 +1.7**
AVH			S		**Sn**	**08 57 08.9 +1.4**
AVH	**Avacha**	**2.45 249**	*e*P		**Pn**	**08 56 39.9 +1.7**
AVH			eS		**Sn**	**08 57 08.9 +1.4**
KRX	**Arik**	**2.46 252**	PN		**Pn**	**08 56 39.7 +1.3**
KRX			S		**Sn**	**08 57 08.8 +0.9**
KRX	**Arik**	**2.46 252**	*e*P		**Pn**	**08 56 39.8 +1.3**
KRX			eS		**Sn**	**08 57 08.9 +0.9**
SMKR	**Semkarok**	**2.48 346**	PN		**Pn**	**08 56 39.8 +1.2**
SMKR			S		**Sn**	**08 57 09.1 +0.8**
SMKR	**Semkarok**	**2.48 346**	*e*P		**Pn**	**08 56 39.8 +1.2**
SMKR			eS		**Sn**	**08 57 09.1 +0.8**
KOK	**Koryaka**	**2.49 250**	PN		**Pn**	**08 56 40.3 +1.5**
KOK			S		**Sn**	**08 57 10.1 +1.4**
KOK	**Koryaka**	**2.49 250**	*e*P		**Pn**	**08 56 40.4 +1.5**
KOK			eS		**Sn**	**08 57 10.1 +1.4**
DALK	**Dalny**	**2.54 244**	PN		**Pn**	**08 56 40.4 +1.0**
DALK			S		**Sn**	**08 57 09.5 -0.2**
DALK	**Dalny**	**2.54 244**	*e*P		**Pn**	**08 56 40.4 +1.0**
DALK			eS		**Sn**	**08 57 09.5 -0.2**
PET	**Petropavlovsk**	**2.60 245**	*e*PN		**Pn**	**08 56 41.5 +1.3**
PET			eS		**Sn**	**08 57 10.9 -0.2**
PET			smax		smax	
	comp=N,244nm,0.8s					
PET			smax		smax	
	comp=E,208nm,0.5s					
PET	**Petropavlovsk**	**2.60 245**	*e*P		**Pn**	**08 56 41.3 +1.1**
PET			eS		**Sn**	**08 57 10.9 -0.2**
INSR	**Institute**	**2.61 246**	PN		**Pn**	**08 56 41.1 +0.8**
INSR			S		**Sn**	**08 57 11.9 +0.6**
INSR	**Institute**	**2.61 246**	*e*P		**Pn**	**08 56 41.1 +0.8**
INSR			eS		**Sn**	**08 57 12.0 +0.6**
SRDR	**Sredinnyy**	**2.68 324**	PN		**Pn**	**08 56 41.6 +0.2**
SRDR	**Sredinnyy**	**2.68 324**	*e*P		**Pn**	**08 56 41.7 +0.2**
GNL	**Ganaly**	**2.77 262**	PN		**Pn**	**08 56 44.2 +1.6**
GNL			S		**Sn**	**08 57 15.2 -0.3**
GNL	**Ganaly**	**2.77 262**	*e*P		**Pn**	**08 56 44.3 +1.6**
GNL			eS		**Sn**	**08 57 15.3 -0.3**
KRMR	**Karymshinskiy**	**2.97 245**	PN		**Pn**	**08 56 46.5 +1.2**
KRMR			S		**Sn**	**08 57 20.9 +0.6**
KRMR	**Karymshinskiy**	**2.97 245**	*e*P		**Pn**	**08 56 46.5 +1.2**
KRMR			eS		**Sn**	**08 57 20.9 +0.6**
RUS	**Russkaya**	**2.99 236**	PN		**Pn**	**08 56 46.2 +0.6**
RUS			S		**Sn**	**08 57 19.9 -1.0**
RUS	**Russkaya**	**2.99 236**	*e*P		**Pn**	**08 56 46.3 +0.6**
RUS			eS		**Sn**	**08 57 19.9 -1.0**
PEA0B	**Petropavlovsk-**	**3.08 251**	*d i*PN		**Pn**	**08 56 48.7 +1.8**
PEA0B			*i* S		**Sn**	**08 57 25.3 +2.1**
PETK	**Petropavlovsk-**	**3.08 251**	P		**Pn**	**08 56 48.4 +1.5**
	comp=E,17nm,0.5s,baz=65,slow=16,SNR=34					
PETK			S		**Sn**	**08 57 23.2 0.0**
	comp=E,20nm,0.6s,baz=63,slow=10,SNR=4.0					
PETK			LR		LR	08 57 39.5
	comp=E,27nm,21.5s,baz=16,slow=34					
MTVR	**Mutnovka**	**3.13 239**	PN		**Pn**	**08 56 49.2 +1.6**
MTVR			S		**Sn**	**08 57 25.0 +0.6**
MTVR	**Mutnovka**	**3.13 239**	*e*P		**Pn**	**08 56 49.3 +1.6**
MTVR			eS		**Sn**	**08 57 25.1 +0.6**
GRL	**Gorelyy**	**3.15 240**	PN		**Pn**	**08 56 49.5 +1.7**
GRL	**Gorelyy**	**3.15 240**	*e*P		**Pn**	**08 56 49.6 +1.7**
ASAK	**Asacha**	**3.33 239**	PN		**Pn**	**08 56 52.4 +2.1**
ASAK			S		**Sn**	**08 57 31.1 +1.9**
ASAK	**Asacha**	**3.33 239**	*e*P		**Pn**	**08 56 52.4 +2.1**
ASAK			eS		**Sn**	**08 57 31.2 +1.9**
APC	**Apacha**	**3.46 251**	PN		**Pn**	**08 56 53.5 +1.5**
APC			S		**Sn**	**08 57 34.2 +1.9**
APC	**Apacha**	**3.46 251**	*e*P		**Pn**	**08 56 53.6 +1.5**
APC			eS		**Sn**	**08 57 34.3 +1.9**
KDTR	**Khodutka, Kamc**	**3.60 230**	PN		**Pn**	**08 56 55.1 +1.1**
KDTR			S		**Sn**	**08 57 34.9 -1.0**
KDTR	**Khodutka, Kamc**	**3.60 230**	*e*P		**Pn**	**08 56 55.1 +1.1**
KDTR			eS		**Sn**	**08 57 34.9 -1.0**
SHEM	**Shemya Is, Ala**	**7.05 97**	P		**Pn**	**08 57 44.6 +3.3**
	comp=E,11nm,0.6s,baz=275,slow=11,SNR=1.7					
SHEM			S		**Sn**	**08 59 01.5 +0.8**
	comp=E,20nm,1.0s,baz=288,slow=19,SNR=1.6					
MA2	**Magadan**	**8.41 315**	P		**Pn**	**08 58 02.7 +2.8**
	comp=E,2.6nm,0.4s,baz=153,slow=18,SNR=1.5					
ERM	**Erimo**	**17.71 234**	*i* P		Pn	08 59 56.6 -7.9
MAJO	**Matsushiro**	**24.38 234**	*i* P		P	09 01 05.0 -11
MAJO			pmax		pmax	
	comp=Z,4.0nm,1.2s					
MJAR	**Matsushiro Arr**	**24.38 234**	P		**P**	**09 01 12.4 -3.6**
	comp=Z,0.3nm,0.4s,baz=34,slow=6.6,SNR=1.7					
	comp=Z,0.3nm,0.4s					
ILAR	**Eielson Array**	**27.00 47**	P		**P**	**09 01 41.6 +2.1**
	comp=Z,0.1nm,0.5s,baz=270,slow=8.9,SNR=2.3					
	comp=Z,0.1nm,0.5s					
H11N2	**WAKE ISLAND Hy**	**34.56 173**	T		T	09 40 05.9
	baz=355,slow=76,SNR=46					
H11N3	**WAKE ISLAND Hy**	**34.57 173**	T		T	09 40 07.0
	baz=355,slow=76,SNR=64					
H11N1	**WAKE ISLAND Hy**	**34.58 173**	T		T	09 40 07.5
	baz=355,slow=76,SNR=49					
ULN	**Ulaanbaatar**	**34.68 283**	*i* P		**P**	**09 02 51.4 +3.9**
ULN			pmax		pmax	
	comp=Z,1.0nm,1.6s					
H11S1	**WAKE ISLAND Hy**	**35.76 173**	T		T	09 41 43.9
	baz=353					
H11S3	**WAKE ISLAND Hy**	**35.77 173**	T		T	09 41 41.2
	baz=353					
H11S2	**WAKE ISLAND Hy**	**35.77 173**	T		T	09 41 43.1
	baz=353					
KURK	**Kurchatov**	**48.39 302**	P		**P**	**09 04 37.2 -2.3**
KURBB	**Kurchatov Arra**	**48.49 302**	P		**P**	**09 04 37.2 -3.1**
	comp=Z,0.4nm,0.5s,baz=54,slow=7.6,SNR=4.2					
	comp=Z,0.4nm,0.5s					
MKAR	**Makanchi Array**	**48.99 296**	P		**P**	**09 04 40.4 -3.8**
	comp=Z,0.2nm,0.4s,baz=47,slow=9.3,SNR=2.2					
	comp=Z,0.2nm,0.4s					
ARTI	**Arti**	**53.67 318**	*i* P		P	09 05 24.9 +5.8
ARTI			pmax		pmax	
	comp=Z,5.0nm,1.8s					
NVAR	**Mina Array Bea**	**54.00 72**	P		**P**	**09 05 24.9 +2.8**
	comp=Z,0.2nm,0.6s,baz=321,slow=10.0,SNR=2.0					
	comp=Z,0.2nm,0.6s					
FINES	**FINESS Array B**	**59.68 337**	P		**P**	**09 06 00.4 -1.3**
	comp=Z,2.1nm,0.6s,baz=26,slow=9.2,SNR=14					
	comp=Z,2.1nm,0.6s					
OBN	**Obninsk**	**62.37 328**	*e*P		P	09 06 28.2 +8.2
OBN			*e**PP		PcP	09 06 45.5 -14
OBN			*e*			09 07 03.6
OBN			pmax		pmax	
	comp=Z,3.0nm,0.7s					
OBN			MLR		MLR	
	comp=Z,123nm,6.0s					
NOA	**NORSAR Array B**	**62.88 345**	P		**P**	**09 06 21.2 -2.2**
	comp=Z,0.4nm,0.7s,baz=8.3,slow=3.3,SNR=3.4					
	comp=Z,0.4nm,0.7s					
HFS	**Hagfors**	**63.34 343**	P		**P**	**09 06 24.5 -1.9**
	comp=Z,1.3nm,0.6s,baz=35,slow=5.3,SNR=5.1					
	comp=Z,1.3nm,0.6s					
TXAR	**Lajitas Array**	**68.87 69**	P		**P**	**09 07 03.5 +0.9**
	comp=Z,0.3nm,0.5s,baz=318,slow=6.3,SNR=5.1					
	comp=Z,0.3nm,0.5s					
ASAR	**Alice Springs**	**81.38 206**	P		**P**	**09 08 14.4 0.0**
	comp=Z,0.2nm,0.7s,baz=22,slow=6.3,SNR=1.2					
	comp=Z,0.2nm,0.7s					

*IDC **18** 09:10:10.5±0.7,20°.81S×169°.29E, h0km, mb4.1/13, mbtmp4.1/14, ML3.9/1, MS3.6/8, Error ellipse: s-maj=25.9km s-min=18.3km az=138.0*
*NEIC **18** 09:10:12.6±1.8,20°.96S±0°.06×169°.14E±0°.09, h10km±1km, mb4.4/20, Error ellipse: s-maj=15.1km s-min=9.0km az=118.0*
*NOU **18** 09:10:12.8,20°.83S×169°.09E, h0km, MLv4.8/11, Vanuatu Islands*
*BGR **18** 09:10:17.6,20°.38S×169°.52E, h33km, Ms4.0*
ISC 18 09:10:14.6±0.5,20°.92S±0°.07×169°.14E±0°.09, h25km, n90, σ0°84/87, mb4.2/21, MS3.7/6, 2C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.18**	**242**	P	**Pn**	**09 10 35.4**	**-0.1**
MARNC	**Mare, Loyalty**	**1.18**	**242**		**Pn**	**09 10 35.3**	**-0.1**
MARNC				Sn	**Sn**	**09 10 48.7**	**-2.0**
YATNC	**Mamie plateau,**	**2.38**	**241**	P	**Pn**	**09 10 51.7**	**-0.4**
OUENC	**Ouen Island, N**	**2.61**	**235**	P	**Pn**	**09 10 56.6**	**+1.4**
OUENC	**Ouen Island, N**	**2.61**	**235**		**Pn**	**09 10 55.4**	**+0.3**
DZM	**Mont Dzumac**	**2.76**	**245**	Pn	**Pn**	**09 10 57.8**	**+0.4**
	17nm,0.3s,baz=74,slow=18,SNR=149						
DZM				LR	LR	09 11 18.3	
	comp=Z,66nm,20.5s,baz=102,slow=23						
DZM				Sn	**Sn**	**09 11 27.7**	**-2.3**
	259nm,0.3s,baz=107,slow=17,SNR=14						
	58nm,0.4s						
ONTNC	**Ouen Toro**	**2.85**	**241**	P	**Pn**	**09 11 00.2**	**+1.6**
ONTNC	**Ouen Toro**	**2.85**	**241**		**Pn**	**09 10 59.7**	**+1.1**
NOUC	**Port Laguerre**	**2.89**	**246**	P	**Pn**	**09 11 00.1**	**+1.0**
RTV	**Rentapao**	**3.19**	**348**	P	**Pn**	**09 11 04.1**	**+0.9**
DVP	**Devils Point**	**3.31**	**344**	P	**Pn**	**09 11 04.5**	**-0.3**
KOUNC	**Koumac, New Ca**	**4.56**	**274**	P	**Pn**	**09 11 23.5**	**+1.5**
KOUNC	**Koumac, New Ca**	**4.56**	**274**		**Pn**	**09 11 22.6**	**+0.6**
MSVF	**Nonsavu**	**8.99**	**71**	LR	LR	09 15 22.0	
	comp=Z,330nm,19.1s,baz=273,slow=35						
EIDS	**Eidsvold**	**17.19**	**252**	P	**Pn**	**09 14 12.6**	**-0.5**
URZ	**Urewera**	**18.60**	**160**	LR	LR	09 20 05.4	
	comp=Z,97nm,18.6s,baz=336,slow=32						
CTA	**Charters Tower**	**21.45**	**268**	P	**P**	**09 15 03.1**	**+1.9**
	4.9nm,0.8s,baz=78,slow=13,SNR=4.4						
CTA				LR	LR	09 22 09.7	
	comp=Z,146nm,19.1s,baz=268,slow=33						
	4.9nm,0.8s						
STKA	**Stephens Creek**	**26.91**	**240**	P	**P**	**09 15 56.4**	**+2.6**
	1.2nm,0.1s,baz=64,slow=16,SNR=3.5						
	1.2nm,0.7s						
WB0	**Warramunga Arr**	**32.57**	**266**	P	**P**	**09 16 43.8**	**-0.3**
WB0				IAmb	IAmb	09 16 45.4	
	comp=Z,4.4nm,1.1s						
WRAB	**Tennant Creek**	**32.58**	**265**	P	**P**	**09 16 42.7**	**-1.6**
WRA	**Warramunga Arr**	**32.59**	**265**	P	**P**	**09 16 44.5**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=98,slow=8.0,SNR=1.2						
	comp=Z,1.3nm,1.0s						
WRA	**Warramunga Arr**	**32.59**	**265**	P	**P**	**09 16 43.9**	**-0.5**
AS31	**Alice Springs**	**32.67**	**259**	P	**P**	**09 16 44.2**	**-0.8**
ASAR	**Alice Springs**	**32.67**	**259**	P	**P**	**09 16 45.4**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=89,slow=8.7,SNR=12						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**32.67**	**259**	P	**P**	**09 16 43.8**	**-1.3**
MTN	**Manton Dam**	**37.17**	**276**	P	**P**	**09 17 23.8**	**-0.1**
MTN				IAmb	IAmb	09 17 37.4	
	comp=Z,3.5nm,1.1s						
KNRA	**Kununurra**	**38.62**	**271**	P	**P**	**09 17 34.4**	**-1.7**
KNRA				IAmb	IAmb	09 18 02.4	
	comp=Z,2.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.01**	**266**	P	**P**	**09 17 56.2**	**+0.2**
MJAR	**Matsushiro Arr**	**64.20**	**333**	P	**P**	**09 20 46.7**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=153,slow=8.2,SNR=5.3						
	comp=Z,1.6nm,0.8s						
MJAR	**Matsushiro Arr**	**64.20**	**333**	P	**P**	**09 20 47.6**	**+0.3**
MJAR				IAmb	IAmb	09 20 48.5	
	comp=Z,1.5nm,0.9s						
QSPA	**South Pole Qui**	**69.14**	**180**	P	**P**	**09 21 19.5**	**+0.8**
	comp=Z,3.4nm,1.0s,baz=351,slow=3.0,SNR=7.9						
QSPA				LR	LR	09 48 53.4	
	comp=Z,54nm,18.7s,baz=338,slow=34						
	comp=Z,3.4nm,1.0s						
QSPA	**South Pole Qui**	**69.14**	**180**	P	**P**	**09 21 19.2**	**+0.5**
QSPA				IAmb	IAmb	09 21 37.9	
	comp=Z,5.5nm,1.1s						
JKA	**Kamikawa-asahi**	**69.14**	**340**	P	**P**	**09 21 19.8**	**+1.1**
ASAJ	**Asahikawa**	**69.14**	**340**	LR	LR	09 48 27.5	
	comp=Z,52nm,19.7s,baz=176,slow=33						
YSS	**Yuzhno-Sakhali**	**71.64**	**341**	P	**P**	**09 21 34.3**	**+0.5**
KIWB	**Kanaga Island**	**73.45**	**9**	P	**P**	**09 21 44.1**	**-0.4**
GSTR	**Great Sitkin T**	**73.85**	**9**	P	**P**	**09 21 47.1**	**+0.2**
PEA0B	**Petropavlovsk-**	**74.39**	**353**	P	**P**	**09 21 50.2**	**+0.2**
PEA0B				IAmb	IAmb	09 22 07.8	
	comp=Z,5.6nm,1.1s						
PETK	**Petropavlovsk-**	**74.39**	**353**	P	**P**	**09 21 49.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=160,slow=5.6,SNR=4.6						
	comp=Z,1.6nm,0.7s						
PETK	**Petropavlovsk-**	**74.39**	**353**	P	**P**	**09 21 50.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**79.11**	**295**	P	**P**	**09 22 18.8**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=116,slow=5.6,SNR=8.3						
	comp=Z,1.0nm,0.3s						
SDPT	**Sand Point**	**80.26**	**17**	P	**P**	**09 22 22.0**	**-0.8**
BELA	**Belgrano 2**	**80.44**	**175**	P	**P**	**09 22 23.6**	**-0.1**
BELA				IAmb	IAmb	09 22 24.8	
	comp=Z,8.5nm,1.0s						
MA2	**Magadan**	**81.61**	**351**	LR	LR	09 56 05.0	
	comp=Z,31nm,18.2s,baz=216,slow=34						
M16K	**Timber Creek**	**85.62**	**15**	P	**P**	**09 22 51.1**	**+0.6**
M16K				IAmb	IAmb	09 22 53.6	
	comp=Z,4.2nm,0.9s						
TROLL	**Troll, Antarti**	**86.86**	**184**	⇑P	**P**	**09 22 57.0**	**+0.1**
	comp=Z,281nm,0.6s						
SNAA	**Sanae**	**87.48**	**183**	P	**P**	**09 23 00.3**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=168,slow=7.1,SNR=4.3						
	comp=Z,1.7nm,0.9s						
SNAA	**Sanae**	**87.48**	**183**	P	**P**	**09 22 59.4**	**-0.5**
SNAA				IAmb	IAmb	09 23 14.7	
	comp=Z,2.8nm,1.0s						
VNA2	**Neumayer--Watz**	**88.37**	**181**	⇑P	**P**	**09 23 04.0**	**0.0**
	comp=Z,4.7nm,0.5s,baz=174,slow=4.9						
SONM	**Songino Array**	**88.51**	**323**	P	**P**	**09 23 04.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=152,slow=6.5,SNR=5.3						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**88.51**	**323**	P	**P**	**09 23 04.9**	**-0.1**
SONM				IAmb	IAmb	09 23 06.5	
	comp=Z,1.4nm,0.8s						
VNA1	**Neumayer--Stat**	**88.66**	**181**	P	**P**	**09 23 05.7**	**+0.4**
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**89.98**	**49**	P	**P**	**09 23 11.9**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=244,slow=6.9,SNR=7.4						
NVAR				LR	LR	09 56 02.6	
	comp=Z,27nm,19.1s,baz=174,slow=31						
	comp=Z,0.9nm,0.8s						
NVAR	**Mina Array Bea**	**89.98**	**49**	P	**P**	**09 23 12.0**	**-0.3**
ILAR	**Eielson Array**	**91.86**	**17**	P	**P**	**09 23 18.4**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=238,slow=5.1,SNR=7.9						
ILAR				LR	LR	10 00 43.7	
	comp=Z,30nm,18.7s,baz=83,slow=33						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**97.64**	**62**	P	**P**	**09 23 46.9**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=259,slow=3.0,SNR=4.2						
	comp=Z,0.4nm,0.9s						
ARCES	**ARCESS Array B**	**126.66**	**345**	PKP	**PKPdf**	**09 29 14.1**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=39,slow=2.2,SNR=5.7						
FINES	**FINESS Array B**	**132.10**	**337**	PKP	**PKPdf**	**09 29 25.2**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=36,slow=5.2,SNR=5.2						
FLTG	**Flechtingen**	**144.28**	**337**	*e*PKPbc	**PKPab**	**09 29 45.9**	**-0.2**
	baz=38,slow=3.8						
BRG	**Berggiesshubel**	**144.33**	**333**	*e*PKPbc	**PKPab**	**09 29 46.5**	**+0.1**
	baz=38,slow=3.8						
BRG	**Berggiesshubel**	**144.33**	**333**	*i* P	PKPbc	09 29 46.9	+0.2
BRG				Amp		09 29 47.6	
	comp=Z,6.1nm,0.6s						
CLL	**Collm**	**144.39**	**334**	*e*PKPbc	**PKPab**	**09 29 46.7**	**+0.1**
	baz=38,slow=3.8						
CLL	**Collm**	**144.39**	**334**	*i* PKPbc	**PKPab**	**09 29 46.7**	**+0.1**
	comp=Z,7.0nm,0.6s						
NEUB	**Neuenburg**	**144.96**	**335**	*e*PKPbc	**PKPab**	**09 29 48.9**	**+0.2**
	baz=38,slow=3.8						
CLZ	**Clausthal**	**144.99**	**337**	*e*PKPbc	**PKPab**	**09 29 49.0**	**+0.2**
	baz=38,slow=3.8						
EKA	**Eskdalemuir Ar**	**145.16**	**352**	PKPbc	**PKPbc**	**09 29 48.2**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=10,slow=2.0,SNR=41						
TANN	**Tannenbergstha**	**145.30**	**334**	*e*PKPbc	**PKPbc**	**09 29 50.2**	**+0.3**
	baz=38,slow=3.8						
PLN	**Plauen**	**145.37**	**334**	*e*PKPbc	**PKPbc**	**09 29 50.3**	**+0.2**
	baz=38,slow=3.8						
GTTG	**Gottingen**	**145.38**	**337**	*e*PKPbc	**PKPbc**	**09 29 50.3**	**+0.2**
	baz=38,slow=3.8						
RONA	**Rosalia, Austr**	**145.46**	**327**	*e*PKP	**PKPab**	**09 29 51.0**	**+0.3**
	comp=Z,4.2nm,0.8s						
MOX	**Moxa**	**145.47**	**335**	*e*PKPbc	**PKPbc**	**09 29 50.4**	**0.0**
	baz=38,slow=3.8						
MOX				eL	L	10 35 42.1	
	comp=Z,26nm,20.2s						
IBBN	**Ibbenburen**	**145.51**	**340**	*e*PKPbc	**PKPdf**	**09 29 50.4**	**0.0**
	baz=38,slow=3.8						
CONA	**Conrad Observa**	**145.52**	**328**	*e*PKP	**PKPab**	**09 29 51.3**	**+0.3**
	comp=Z,6.5nm,0.8s						
ROTZ	**Rotzenmuhle**	**145.90**	**333**	*e*PKPbc	**PKPbc**	**09 29 51.9**	**+0.2**
	baz=38,slow=3.8						
GEC2	**GERESS Array S**	**145.92**	**331**	*e*PKPbc	**PKPdf**	**09 29 52.0**	**+0.7**
	baz=38,slow=3.8						
GERES	**GERESS Array B**	**145.92**	**331**	PKPbc	**PKPdf**	**09 29 51.7**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=25,slow=2.7,SNR=23						
GERES	**GERESS Array B**	**145.92**	**331**		**PKPab**	**09 29 52.7**	**+0.2**
ARSA	**Arzberg**	**146.15**	**327**	*e*PKP	**PKPab**	**09 29 53.6**	**+0.3**
	comp=Z,1.2nm,0.6s						
MOA	**Molln**	**146.36**	**329**	*e*PKP	**PKPbc**	**09 29 53.9**	**+0.6**
	comp=Z,2.0nm,0.6s						
GRF	**Grafenberg Arr**	**146.36**	**334**	*e*PKPbc	**PKPbc**	**09 29 53.4**	**+0.2**
	baz=38,slow=3.8						
GRF				*e*L	L	10 32 19.4	
	comp=Z,26nm,18.5s						
SESA	**Seetaler Alpe,**	**146.72**	**328**	*e*PKP	**PKPdf**	**09 29 54.0**	**+1.1**
	comp=Z,7.6nm,0.8s						
LESA	**Schwarzleotal**	**147.42**	**330**	*e*PKP	**PKPbc**	**09 29 55.7**	**-0.6**
	comp=Z,3.0nm,0.9s						
ABTA	**Abfaltersbach**	**147.98**	**329**	*i* PKP	**PKPbc**	**09 29 57.1**	**-0.8**
	comp=Z,2.3nm,0.6s						
WTTA	**Wattenberg**	**148.02**	**331**	*i* PKP	**PKPbc**	**09 29 57.9**	**-0.2**
	comp=Z,2.5nm,0.7s						
SQTA	**Sankt Quirin**	**148.25**	**331**	*e*PKP	**PKPbc**	**09 29 58.4**	**-0.2**
	comp=Z,2.4nm,0.7s						
BFO	**Black Forest**	**148.61**	**335**	*e*PKPbc	**PKPab**	**09 30 03.1**	**+0.1**
	baz=38,slow=3.8						
FETA	**Feichten**	**148.62**	**331**	*e*PKP	**PKPbc**	**09 29 59.2**	**-0.4**
	comp=Z,2.7nm,0.8s						
ESDC	**Sonseca Array**	**160.40**	**344**	PKPab	**PKPab**	**09 30 52.3**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=20,slow=3.4,SNR=7.1						
ESDC	**Sonseca Array**	**160.40**	**344**		**PKPab**	**09 30 52.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**165.73**	**239**	PKPab	**PKPab**	**09 31 15.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=113,slow=4.6,SNR=2.4						

*NNC **18** 10:14:28.4±2.0,40°.97N×79°.94E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=15.3km s-min=12.7km az=54.0*
*SOME **18** 10:14:28.0,40°.88N×79°.88E, h10km*
*KRNET **18** 10:14:30.1±0.1,40°.80N×79°.65E, mb2.8*
ISC 18 10:14:28.1±3.0,40°.9N±0°.1×80°.00E±0°.08, h2km±14km, n15, σ1°13/25, 10C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.84**	**297**	⇓*i*P	**Pn**	**10 15 01.2**	**+0.1**
TARG				⇓*e*S	**Sn**	**10 15 24.1**	**-1.1**
PRZ	**Przheval'sk**	**1.97**	**323**	⇑*e*P	**Pg**	**10 15 06.0**	**+0.1**
PRZ				⇑*e*S	**Sg**	**10 15 32.1**	**+0.6**
SHLS	**Shalkode**	**2.28**	**350**	Pg	**Pb**	**10 15 08.7**	**-1.2**
	14nm,0.1s						
SHLS				Lg	Lg	10 15 39.1	
	25nm,0.2s						
SHLS	**Shalkode**	**2.28**	**350**	*e*P	**Pb**	**10 15 08.7**	**-1.2**
	14nm,0.1s						
SHLS				*e*S	**Sb**	**10 15 39.1**	**+0.5**
	25nm,0.2s						
KDJ	**Kajisay**	**2.44**	**301**	⇑*e*P	**Pn**	**10 15 10.6**	**+1.5**
KDJ				⇑*e*S	**Sn**	**10 15 40.1**	**+0.4**
PDGK	**Podgornoye**	**2.44**	**351**	⇑Pg	**Pb**	**10 15 11.0**	**-1.8**
	1.1nm,0.3s						
PDGK				⇑Lg	Lg	10 15 44.3	
	5.0nm,0.5s						
SATY	**Saty**	**2.45**	**331**	Pg	**Pb**	**10 15 12.0**	**-0.9**
	4.0nm,0.3s						
SATY				Lg	Lg	10 15 44.7	
	11nm,0.4s						
SATY	**Saty**	**2.45**	**331**	*e*P	**Pb**	**10 15 12.0**	**-0.9**
	4.0nm,0.3s						
SATY				*e*S	**Sb**	**10 15 44.7**	**+1.0**
	11nm,0.4s						
ANVS	**Anan'yevo**	**2.56**	**318**	⇑*e*P	**Pb**	**10 15 13.8**	**-1.0**
ANVS				⇑*e*S	**Sb**	**10 15 45.0**	**-1.7**
KPKS	**Kokpek**	**2.73**	**339**	Pg	**Pb**	**10 15 16.4**	**-1.3**
	0.3nm,0.2s						
KPKS				Lg	Lg	10 15 52.3	
	10nm,0.3s						
KPKS	**Kokpek**	**2.73**	**339**	*e*P	**Pb**	**10 15 16.4**	**-1.3**
	0.3nm,0

1.9nm,0.5s,baz=118,slow=8.3,SNR=9.2
1.9nm,0.5s
WRA Warramunga Arr 43.70 167 P **P** **10 57 52.6 +0.5**
1.4nm,0.7s,baz=346,slow=8.5,SNR=3.1
1.4nm,0.7s
KURBB Kurchatov Arra 45.23 319 P **P** **10 58 05.3 +1.3**
0.4nm,0.2s,baz=110,slow=8.6,SNR=2.9
0.4nm,0.2s
ASAR Alice Springs 47.24 169 P **P** **10 58 21.1 +0.9**
0.2nm,0.5s,baz=347,slow=8.9,SNR=4.5
0.2nm,0.5s
BVAR Borovoye Array 50.77 321 P **P** **10 58 48.1 +1.2**
0.8nm,0.6s,baz=100,slow=8.1,SNR=2.0
0.8nm,0.6s
ILAR Eielson Array 68.60 27 P **P** **11 00 48.6 -0.9**
0.2nm,0.7s,baz=257,slow=6.1,SNR=1.8
0.2nm,0.7s
BRTR Keskin Array B 76.65 308 P **P** **11 01 39.1 +1.0**
0.3nm,0.3s,baz=67,slow=3.7,SNR=2.2
0.3nm,0.3s

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*IDC **18** 10:59:45.7±1.1, 16°.05N×95°.13W, h0km, mb3.7/9, mbtmp3.7/10, ML3.1/2, MS3.2/6, Error ellipse: s-maj=20.1km s-min=12.7km az=96.0*
*MEX **18** 10:59:47.6±0.7, 15°.85N×95°.11W, h17km±10km, MD4.6*
*NEIC **18** 10:59:49.9±1.7, 16°.03N±0°.05×95°.21W±0°.04, h35km±2km, mb4.2/119, Md4.6/154(MEX), Error ellipse: s-maj=8.6km s-min=6.3km az=175.0*
ISC 18 10:59:46.7±2.5, 15°.91N±0°.04×95°.16W±0°.03, h17km±16km, n249, σ2°19/340, mb4.2/36, MS3.2/4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.93**	**262**	*eP*			**Pb**	**11 00 02.9**	**-1.5**
HUIG				*eS*			**Sb**	**11 00 14.3**	**-2.0**
HUIG	**Huatulco**	**0.93**	**262**				**Pb**	**11 00 02.9**	**-1.5**
HUIG							**Sb**	**11 00 14.3**	**-2.0**
CMIG	**Matias Romero**	**1.21**	**13**	Pg			**Pn**	**11 00 06.9**	**-2.0**
	294nm,0.3s,baz=196,slow=12,SNR=2094								
CMIG				Lg			Lg	11 00 20.8	
	2μm,0.3s,baz=105,slow=17,SNR=70								
CMIG	**Matias Romero**	**1.21**	**13**	*eP*			**Pn**	**11 00 06.9**	**-2.0**
CMIG				*eS*			**Sb**	**11 00 21.6**	**-3.0**
CMIG	**Matias Romero**	**1.21**	**13**				**Pn**	**11 00 06.9**	**-2.0**
CMIG							**Sb**	**11 00 21.6**	**-3.0**
CARR	**Arriaga**	**1.25**	**74**	*eP*			**Pn**	**11 00 08.2**	**-1.2**
CARR				*eS*			**Sb**	**11 00 24.3**	**-1.3**
OXLC	**Oaxaca**	**1.88**	**308**	*eP*			**Pn**	**11 00 17.6**	**-0.7**
OXLC				*i S*			**Sn**	**11 00 40.3**	**-1.5**
OXLC	**Oaxaca**	**1.88**	**308**				**Pn**	**11 00 17.6**	**-0.7**
OXLC							**Sn**	**11 00 40.3**	**-1.5**
OXBJ	**Oaxaca**	**1.90**	**308**	*eP*			**Pn**	**11 00 18.2**	**-0.3**
OXBJ				*i S*			**Sn**	**11 00 41.0**	**-1.2**
OXBJ	**Oaxaca**	**1.90**	**308**				**Pn**	**11 00 18.2**	**-0.3**
OXBJ							**Sn**	**11 00 41.0**	**-1.2**
NEUV	**Arroyo Zacate**	**1.90**	**341**	*eP*			**Pn**	**11 00 17.0**	**-1.5**
NEUV				*eS*			**Sn**	**11 00 39.8**	**-2.2**
NEUV	**Arroyo Zacate**	**1.90**	**341**				**Pn**	**11 00 17.0**	**-1.5**
NEUV							**Sn**	**11 00 39.6**	**-2.2**
OXIG	**Oaxaca**	**1.91**	**308**				**Pn**	**11 00 18.0**	**-0.7**
OXIG							**Sn**	**11 00 41.3**	**-1.1**
VHO	**Vista Hermosa**	**1.91**	**308**	*eP*			**Pn**	**11 00 18.0**	**-0.7**
VHO				*i S*			**Sn**	**11 00 41.3**	**-1.1**
PEIG	**Puerto Escondi**	**1.92**	**273**	*eP*			**Pn**	**11 00 17.0**	**-1.6**
PEIG				*eS*			**Sn**	**11 00 42.2**	**-0.2**
PEIG	**Puerto Escondi**	**1.92**	**273**				**Pn**	**11 00 17.0**	**-1.6**
PEIG							**Sn**	**11 00 42.2**	**-0.2**
TGIG		**2.14**	**66**	*eP*			**Pn**	**11 00 23.1**	**+1.3**
TGIG				*eS*			**Sn**	**11 00 49.0**	**+1.0**
TGIG		**2.14**	**66**				**Pn**	**11 00 23.1**	**+1.3**
TGIG							**Sn**	**11 00 49.0**	**+1.0**
MIHL	**Minatitlan**	**2.15**	**16**	*eP*			**Pn**	**11 00 22.0**	**+0.1**
MIHL				*eS*			**Sn**	**11 00 46.5**	**-1.8**
MIHL	**Minatitlan**	**2.15**	**16**				**Pn**	**11 00 22.0**	**+0.1**
MIHL							**Sn**	**11 00 46.5**	**-1.8**
YOIG	**Yosondua**	**2.48**	**293**	*eP*			**Pn**	**11 00 27.2**	**+0.5**
YOIG				*eS*			**Sn**	**11 00 57.7**	**+1.0**
YOIG	**Yosondua**	**2.48**	**293**				**Pn**	**11 00 27.2**	**+0.5**
YOIG							**Sn**	**11 00 57.7**	**+1.0**
TXIG	**Tlaxiaco**	**2.84**	**299**	*eP*			**Pn**	**11 00 33.3**	**+1.7**
TXIG				*eS*			**Sn**	**11 01 07.0**	**+1.4**
TXIG	**Tlaxiaco**	**2.84**	**299**				**Pn**	**11 00 33.3**	**+1.7**
TXIG							**Sn**	**11 01 07.0**	**+1.4**
TOIG	**Toxpalan**	**2.84**	**320**	*eP*			**Pn**	**11 00 33.1**	**+1.6**
TOIG				*eS*			**Sb**	**11 01 09.0**	**-2.7**
TOIG	**Toxpalan**	**2.84**	**320**				**Pn**	**11 00 33.1**	**+1.6**
TOIG							**Sb**	**11 01 09.0**	**-2.7**
PATR	**El Naranjo**	**2.93**	**105**	*eP*			**Pn**	**11 00 33.3**	**+0.6**
PATR				*eS*			**Sn**	**11 01 07.4**	**-0.3**
PATR	**El Naranjo**	**2.93**	**105**				**Pn**	**11 00 33.3**	**+0.6**
PATR							**Sn**	**11 01 07.4**	**-0.3**
PAVE	**Pavencul**	**2.96**	**103**	*eP*			**Pn**	**11 00 34.4**	**+1.1**
PAVE				*eS*			**Sn**	**11 01 08.0**	**-0.5**
PAVE	**Pavencul**	**2.96**	**103**				**Pn**	**11 00 34.4**	**+1.1**
PAVE							**Sn**	**11 01 08.0**	**-0.5**
THIG		**2.96**	**109**	*eP*			**Pn**	**11 00 31.4**	**-1.6**
THIG				*eS*			**Sn**	**11 01 05.3**	**-2.9**
THIG		**2.96**	**109**				**Pn**	**11 00 31.4**	**-1.6**
THIG							**Sn**	**11 01 05.3**	**-2.9**
CHUJ	**Union Juarez**	**3.05**	**105**	*eP*			**Pn**	**11 00 35.5**	**+1.0**
CHUJ				*eS*			**Sn**	**11 01 10.6**	**-0.2**
HLIG	**Huajuapan de L**	**3.17**	**307**	*eP*			**Pn**	**11 00 37.5**	**+1.4**
HLIG				*eS*			**Sb**	**11 01 18.6**	**-2.8**
HLIG	**Huajuapan de L**	**3.17**	**307**				**Pn**	**11 00 37.5**	**+1.4**
HLIG							**Sb**	**11 01 18.6**	**-2.8**
TPIG	**Tehuac#an**	**3.27**	**320**	*eP*			**Pn**	**11 00 39.1**	**+1.7**
TPIG				*eS*			**Sn**	**11 01 18.4**	**+2.3**
TPIG	**Tehuac#an**	**3.27**	**320**				**Pn**	**11 00 39.1**	**+1.7**
TPIG							**Sn**	**11 01 18.4**	**+2.3**
FTIG	**Fresnillo de T**	**3.48**	**305**	*eP*			**Pn**	**11 00 42.6**	**+2.3**
FTIG				*eS*			**Sn**	**11 01 20.2**	**-0.9**
FTIG	**Fresnillo de T**	**3.48**	**305**				**Pn**	**11 00 42.6**	**+2.3**
FTIG							**Sn**	**11 01 20.2**	**-0.9**
HUEH	**Huehuetenango**	**3.57**	**99**	*eP*			**Pn**	**11 00 39.7**	**-1.9**
HUEH				*eS*			**Sn**	**11 01 18.4**	**-5.2**
HUEH	**Huehuetenango**	**3.57**	**99**				**Pn**	**11 00 44.0**	**+2.4**
MGIG	**Malinaltepec**	**3.58**	**292**	*eP*			**Pn**	**11 00 42.3**	**+0.5**
MGIG				*eS*			**Sn**	**11 01 23.4**	**-0.5**
MGIG	**Malinaltepec**	**3.58**	**292**				**Pn**	**11 00 42.3**	**+0.5**
MGIG							**Sn**	**11 01 23.4**	**-0.5**
RTAL	**Retalhuleu**	**3.61**	**112**	*eP*			**Pn**	**11 00 43.2**	**+1.2**
RTAL				*eS*			**Sn**	**11 01 25.3**	**+0.9**
RTAL	**Retalhuleu**	**3.61**	**112**				**Pn**	**11 00 43.3**	**+1.3**
TLIG	**Tlapa**	**3.66**	**297**	*eP*			**Pn**	**11 00 43.1**	**+0.4**
TLIG				*eS*			**Sn**	**11 01 25.1**	**-0.5**
TLIG	**Tlapa**	**3.66**	**297**				**Pn**	**11 00 43.1**	**+0.4**
TLIG							**Sn**	**11 01 25.1**	**-0.5**
HMTT	**Tlapaneco**	**3.76**	**301**	*eP*			**Pn**	**11 00 45.5**	**+1.4**
HMTT				*eS*			**Sn**	**11 01 30.0**	**+1.9**
HMTT	**Tlapaneco**	**3.76**	**301**				**Pn**	**11 00 45.5**	**+1.4**
HMTT							**Sn**	**11 01 30.0**	**+1.9**
JAUV	**Jalcomulco**	**3.78**	**336**	*eP*			**Pn**	**11 00 42.3**	**-2.1**
JAUV				*eS*			**Sn**	**11 01 27.9**	**-0.7**
JAUV	**Jalcomulco**	**3.78**	**336**				**Pn**	**11 00 42.3**	**-2.1**
JAUV							**Sn**	**11 01 27.9**	**-0.7**
CRIG	**Cruz Grande**	**3.90**	**283**	*eP*			**Pn**	**11 00 45.4**	**-0.6**
CRIG				*eS*			**Sn**	**11 01 27.0**	**-4.5**
CRIG	**Cruz Grande**	**3.90**	**283**				**Pn**	**11 00 45.4**	**-0.6**
CRIG							**Sn**	**11 01 27.0**	**-4.5**
LVIG	**Laguna Verde**	**3.98**	**343**	*eP*			**Pn**	**11 00 45.5**	**-1.5**
LVIG				*eS*			**Sn**	**11 01 29.1**	**-4.3**
LVIG	**Laguna Verde**	**3.98**	**343**				**Pn**	**11 00 45.5**	**-1.5**
LVIG							**Sn**	**11 01 29.1**	**-4.3**
PHPU	**Puebla**	**4.24**	**318**	*eP*			**Pn**	**11 00 52.0**	**+1.1**
PHPU				*eS*			**Sn**	**11 01 42.0**	**+1.8**
PHPU	**Puebla**	**4.24**	**318**				**Pn**	**11 00 52.0**	**+1.1**
PHPU							**Sn**	**11 01 42.0**	**+1.8**
PPAX	**Atlixo**	**4.32**	**314**	*eP*			**Pn**	**11 00 55.1**	**+3.1**
PPAX				*eS*			**Sn**	**11 01 39.9**	**-2.3**
DAIG	**Los Arroyos**	**4.45**	**285**	*eP*			**Pn**	**11 00 53.4**	**-0.1**
DAIG				*eS*			**Sn**	**11 01 39.8**	**-5.2**
DAIG	**Los Arroyos**	**4.45**	**285**				**Pn**	**11 00 53.4**	**-0.1**
DAIG							**Sn**	**11 01 39.8**	**-5.2**
PBCV	**Popocatepetl**	**4.46**	**314**	*eP*			**Pn**	**11 00 56.9**	**+2.9**
PBCV				*eS*			**Sn**	**11 01 44.5**	**-1.3**
PPSX	**Xalitzintla**	**4.50**	**315**	*eP*			**Pn**	**11 00 58.2**	**+3.8**
PPSX				*eS*			**Sn**	**11 01 47.4**	**+0.7**
PPCU	**Popocatapetl**	**4.52**	**313**	*eP*			**Pn**	**11 00 59.0**	**+4.1**
PPCU				*eS*			**Sn**	**11 01 45.2**	**-2.2**
PBXN	**Popocatepetl**	**4.55**	**313**	*eP*			**Pn**	**11 00 59.6**	**+4.3**
PBXN				*eS*			**Sn**	**11 01 46.9**	**-1.2**
APG	**El Apazote**	**4.61**	**101**	Pn			**Pn**	**11 00 57.3**	**+1.3**
	0.6nm,0.3s,baz=206,slow=17,SNR=21								
APG				Sn			**Sn**	**11 01 51.5**	**+2.2**
	0.8nm,0.3s,baz=71,slow=21,SNR=4.4								
AMVM	**AMECAMECA**	**4.72**	**313**	*eS*			**Sn**	**11 01 54.1**	**+2.1**
AMVM	**AMECAMECA**	**4.72**	**313**				**Sn**	**11 01 54.1**	**+2.1**
MEIG	**Mezcala**	**4.72**	**296**	*eP*			**Pn**	**11 00 58.9**	**+1.6**
MEIG				*eS*			**Sn**	**11 01 52.1**	**+0.4**
MEIG	**Mezcala**	**4.72**	**296**				**Pn**	**11 00 58.9**	**+1.6**
MEIG							**Sn**	**11 01 52.1**	**+0.4**
YAIG	**Yautepec**	**4.75**	**309**	*eP*			**Pn**	**11 01 00.6**	**+2.8**
YAIG				*eS*			**Sn**	**11 01 53.5**	**+0.9**
YAIG	**Yautepec**	**4.75**	**309**				**Pn**	**11 01 00.6**	**+2.8**
YAIG							**Sn**	**11 01 53.5**	**+0.9**
CXUV	**Coxquihui**	**4.83**	**332**	*eP*			**Pn**	**11 00 58.1**	**-0.8**
CXUV				*eS*			**Sn**	**11 01 54.8**	**+0.3**
CXUV	**Coxquihui**	**4.83**	**332**				**Pn**	**11 00 58.1**	**-0.8**
CXUV							**Sn**	**11 01 54.8**	**+0.3**
PLIG	**Platanillo**	**4.83**	**301**	*eP*			**Pn**	**11 01 00.9**	**+2.1**
PLIG				*eS*			**Sn**	**11 01 56.8**	**+2.2**
PLIG	**Platanillo**	**4.83**	**301**				**Pn**	**11 01 00.9**	**+2.1**
PLIG							**Sn**	**11 01 56.8**	**+2.2**
SCIG	**Sabancuy**	**4.86**	**51**	*eP*			**Pn**	**11 00 59.6**	**+0.4**
SCIG				*eS*			**Sn**	**11 01 52.6**	**-2.5**
SCIG	**Sabancuy**	**4.86**	**51**				**Pn**	**11 00 59.6**	**+0.4**
SCIG							**Sn**	**11 01 52.6**	**-2.5**
MPVM	**San Francisco**	**4.92**	**312**	*eP*			**Pn**	**11 01 00.6**	**+0.4**
MPVM				*eS*			**Sn**	**11 01 56.6**	**-0.4**
MPVM	**San Francisco**	**4.92**	**312**				**Pn**	**11 01 00.6**	**+0.4**
MPVM							**Sn**	**11 01 56.6**	**-0.4**
THVM	**De Xico**	**4.97**	**314**	*eP*			**Pn**	**11 00 59.6**	**-1.3**
THVM				*eS*			**Sn**	**11 01 54.0**	**-4.2**
THVM	**De Xico**	**4.97**	**314**				**Pn**	**11 00 59.6**	**-1.3**
THVM							**Sn**	**11 01 54.0**	**-4.2**
CAIG	**El Cayaco**	**5.03**	**284**	*eP*			**Pn**	**11 01 01.4**	**-0.2**
CAIG				*eS*			**Sn**	**11 01 52.8**	**-6.5**
CAIG	**El Cayaco**	**5.03**	**284**				**Pn**	**11 01 01.4**	**-0.2**
CAIG							**Sn**	**11 01 52.8**	**-6.5**
TLVM	**San Miguel Top**	**5.03**	**311**	*eP*			**Pn**	**11 01 00.7**	**-1.1**
TLVM				*eS*			**Sn**	**11 01 54.0**	**-5.8**
TLVM	**San Miguel Top**	**5.03**	**311**				**Pn**	**11 01 00.7**	**-1.1**
TLVM							**Sn**	**11 01 54.0**	**-5.8**
XCVM	**Xochimilco**	**5.03**	**312**	*eP*			**Pn**	**11 01 02.7**	**+0.9**
XCVM				*eS*			**Sn**	**11 02 00.3**	**+0.6**
XCVM	**Xochimilco**	**5.03**	**312**				**Pn**	**11 01 02.7**	**+0.9**
XCVM							**Sn**	**11 02 00.3**	**+0.6**
CNCY	**Coyoacan**	**5.12**	**312**	*eS*			**Sn**	**11 02 01.1**	**-0.7**
UNM	**Universidad Na**	**5.13**	**312**	*eP*			**Pn**	**11 00 59.4**	**-3.7**
UNM				*eS*			**Sn**	**11 02 06.6**	**+4.5**
UNM	**Universidad Na**	**5.13**	**312**	Pn			**Pn**	**11 00 59.8**	**-3.3**
CUP5	**Mexico City**	**5.13**	**312**	*eS*			**Sn**	**11 02 04.7**	**+2.6**
CUP5	**Mexico City**	**5.13**	**312**				**Sn**	**11 02 04.7**	**+2.6**
MAVM	**Malinalco, Edo**	**5.13**	**307**	*eP*			**Pn**	**11 01 04.6**	**+1.5**
MAVM				*eS*			**Sn**	**11 02 05.0**	**+2.8**
MAVM	**Malinalco, Edo**	**5.13**	**307**				**Pn**	**11 01 04.6**	**+1.5**
MAVM							**Sn**	**11 02 05.0**	**+2.8**
PBVM	**Pinon**	**5.13**	**314**	*eP*			Pn	11 01 08.0 +5.1	
PBVM				*eS*			**Sn**	**11 02 05.6**	**+3.8**
PBVM	**Pinon**	**5.13**	**314**				Pn	11 01 08.0 +5.1	
PBVM							**Sn**	**11 02 05.6**	**+3.8**
VTVM	**Tizayuca**	**5.16**	**319**	*eP*			Pn	11 01 08.9 +5.3	
VTVM				*eS*			**Sn**	**11 02 02.1**	**-0.8**
VTVM	**Tizayuca**	**5.16**	**319**				Pn	11 01 08.9 +5.3	
VTVM							**Sn**	**11 02 02.1**	**-0.8**
PETF	**Flores**	**5.18**	**78**	Pn			**Pn**	**11 01 05.6**	**+2.0**
AOVM	**Tlapan**	**5.19**	**311**	*eP*			**Pn**	**11 01 06.5**	**+2.4**
AOVM				*eS*			**Sn**	**11 02 04.4**	**+0.5**
AOVM	**Tlapan**	**5.19**	**311**				**Pn**	**11 01 06.5**	**+2.4**
AOVM							**Sn**	**11 02 04.4**	**+0.5**
MHVM	**Bosque de Chap**	**5.20**	**313**	*eP*			**Pn**	**11 01 04.3**	**+0.2**
MHVM				*eS*			**Sn**	**11 02 01.8**	**-2.1**
MHVM	**Bosque de Chap**	**5.20**	**313**				**Pn**	**11 01 04.3**	**+0.2**
MHVM							**Sn**	**11 02 01.8**	**-2.1**
INVM	**La Marquesa**	**5.25**	**311**	*eP*			**Pn**	**11 01 06.6**	**+1.8**
INVM				*eS*			**Sn**	**11 02 09.3**	**+4.1**
INVM	**La Marquesa**	**5.25**	**311**				**Pn**	**11 01 06.6**	**+1.8**
INVM							**Sn**	**11 02 09.3**	**+4.1**
APVM	**Azcapotzalco**	**5.25**	**313**	*eP*			**Pn**	**11 01 09.2**	**+4.4**
APVM				*eS*			**Sn**	**11 02 02.9**	**-2.3**
APVM	**Azcapotzalco**	**5.25**	**313**				**Pn**	**11 01 09.2**	**+4.4**
APVM							**Sn**	**11 02 02.9**	**-2.3**
PTVM	**Pico Tres Padr**	**5.26**	**315**	*eP*			**Pn**	**11 01 06.3**	**+1.5**
PTVM				*eS*			**Sn**	**11 02 06.5**	**+1.2**
PTVM	**Pico Tres Padr**	**5.26**	**315**				**Pn**	**11 01 06.3**	**+1.5**
PTVM							**Sn**	**11 02 06.5**	**+1.2**
AZVM	**Cuida Lopez Ma**	**5.37**	**314**	*eP*			**Pn**	**11 01 10.6**	**+4.2**
AZVM				*eS*			**Sn**	**11 02 12.4**	**+4.3**
AZVM	**Cuida Lopez Ma**	**5.37**	**314**				**Pn**	**11 01 10.6**	**+4.2**
AZVM							**Sn**	**11 02 12.4**	**+4.3**
TOVM	**TOLUCA**	**5.46**	**309**	*eP*			**Pn**	**11 01 08.7**	**+0.9**
TOVM				*eS*			**Sn**	**11 02 08.6**	**-1.8**
TOVM	**TOLUCA**	**5.46**	**309**				**Pn**	**11 01 08.7**	**+0.9**
TOVM							**Sn**	**11 02 08.6**	**-1.8**
ARIG	**Puente Sto Nin**	**5.50**	**296**	*eP*			**Pn**	**11 01 09.8**	**+1.9**
ARIG				*eS*			**Sn**	**11 02 11.6**	**+0.8**
ARIG	**Puente Sto Nin**	**5.50**	**296**				**Pn**	**11 01 09.8**	**+1.9**
ARIG							**Sn**	**11 02 11.6**	**+0.8**
DHIG	**Demacu**	**5.72**	**320**				**Pn**	**11 01 15.1**	**+3.9**
DHIG							**Sn**	**11 02 18.8**	**+2.2**
DEIG	**Demacu**	**5.72**	**320**	*eP*			**Pn**	**11 01 15.1**	**+3.9**
DEIG				*eS*			**Sn**	**11 02 18.8**	**+2.2**
ESQI	**Esquipulas**	**5.77**	**103**				**Pn**	**11 01 14.7**	**+2.9**
MTO3	**Montecristo**	**5.79**	**104**				**Pn**	**11 01 14.9**	**+2.7**
ATVM	**ATLACOMULCO**	**5.88**	**311**	*eP*			**Pn**	**11 01 13.8**	**+0.3**
ATVM				*eS*			**Sn**	**11 02 23.2**	**+2.4**
ATVM	**ATLACOMULCO**	**5.88**	**311**				**Pn**	**11 01 13.8**	**+0.3**
ATVM							**Sn**	**11 02 23.2**	**+2.4**
ZIIG	**Zihuatanejo**	**6.27**	**287**	*eP*			**Pn**	**11 01 19.7**	**+1.1**
ZIIG				*eS*			**Sn**	**11 02 28.4**	**-1.6**
ZIIG	**Zihuatanejo**	**6.27**	**287**				**Pn**	**11 01 19.7**	**+1.1**
ZIIG							**Sn**	**11 02 28.4**	**-1.6**
CTUV	**Llano Grande**	**6.31**	**332**	*eP*			**Pn**	**11 01 18.9**	**-0.2**
CTUV				*eS*			**Sn**	**11 02 33.7**	**+2.8**
CTUV	**Llano Grande**	**6.31**	**332**				**Pn**	**11 01 18.9**	**-0.2**
CTUV							**Sn**	**11 02 33.7**	**+2.8**
MOIG	**Morelia**	**6.86**	**304**	*eP*			**Pn**	**11 01 23.0**	**-3.9**
MOIG				*eS*			**Sn**	**11 02 41.6**	**-3.2**
MOIG	**Morelia**	**6.86**	**304**				**Pn**	**11 01 23.0**	**-3.9**
MOIG							**Sn**	**11 02 41.6**	**-3.2**
MYIG	**Merida**	**7.19**	**45**	*eP*			**Pn**	**11 01 33.3**	**+2.1**
MYIG				*eS*			**Sn**	**11 02 47.1**	**-5.4**
MYIG	**Merida**	**7.19**	**45**				**Pn**	**11 01 33.3**	**+2.1**
MYIG							**Sn**	**11 02 47.1**	**-5.4**
RPIG	**Rio Verde**	**7.50**	**323**	*eP*			**Pn**	**11 01 36.9**	**+1.4**
RPIG				*eS*			**Sn**	**11 02 59.9**	**-0.4**
RPIG	**Rio Verde**	**7.50**	**323**				**Pn**	**11 01 36.9**	**+1.4**
RPIG							**Sn**	**11 02 59.9**	**-0.4**
TEIG	**Tepich**	**7.83**	**56**	*eP*			**Pn**	**11 01 39.8**	**-0.1**
TEIG				*eS*			**Sn**	**11 03 00.8**	**-7.5**
TEIG	**Tepich**	**7.83**	**56**				**Pn**	**11 01 40.0**	**+0.1**
GTIG	**Gomez Farias**	**8.06**	**333**	*eP*			**Pn**	**11 01 45.0**	**+1.8**
GTIG				*eS*			**Sn**	**11 03 16.1**	**+2.0**
GTIG	**Gomez Farias**	**8.06**	**333**				**Pn**	**11 01 45.0**	**+1.8**
GTIG							**Sn**	**11 03 16.1**	**+2.0**
MMIG	**Aquila**	**8.18**	**288**	*eP*			**Pn**	**11 01 48.5**	**+3.7**
MMIG				*eS*			**Sn**	**11 03 18.9**	**+2.0**
MMIG	**Aquila**	**8.18**	**288**				**Pn**	**11 01 48.5**	**+3.7**
MMIG							**Sn**	**11 03 18.9**	**+2.0**
HERN	**Volcan Telica**	**8.71**	**111**	Pn			**Pn**	**11 01 54.5**	**+2.4**
INCO	**Volcan de Coli**	**8.82**	**295**	*eP*			**Pn**	**11 01 56.1**	**+2.3**
INCO				*eS*			**Sn**	**11 03 37.2**	**+4.1**
CDAR	**Ciudad de Arme**	**8.97**	**291**	*eS*			**Sn**	**11 03 39.5**	**+3.1**
CEGR	**Campo Tres**	**8.99**	**294**	*eP*			**Pn**	**11 01 58.9**	**+2.8**
CEGR				*eS*			**Sn**	**11 03 40.7**	**+3.6**
CEGR	**Campo Tres**	**8.99**	**294**				**Pn**	**11 01 58.9**	**+2.8**
CEGR							**Sn**	**11 03 40.7**	**+3.6**
BOAB	**BOACO BROADBAN**	**9.82**	**109**	Pn			**Pn**	**11 02 09.3**	**+1.9**
JTS	**Las Juntas de**	**11.40**	**118**	Pn			**Pn**	**11 02 32.9**	**+3.9**
	0.8nm,0.3s,baz=321,slow=19,SNR=2.9								
JTS				LR			LR	11 06 34.3	
	comp=Z,100nm,21.2s,baz=293,slow=36								
JTS	**Las Juntas de**	**11.40**	**118**	Pn			**Pn**	**11 02 33.5**	**+4.5**
833A	**Chaparral WMA,**	**12.96**	**343**				**Pn**	**11 02 50.0**	**-0.3**
735A	**Kenedy**	**13.12**	**350**	Pn			**Pn**	**11 02 52.2**	**-0.2**
SOR	**Soroa**	**13.35**	**57**	Pn			**Pn**	**11 02 56.5**	**+0.8**
HNDO	**Hondo**	**14.08**	**345**				**Pn**	**11 03 04.9**	**-0.7**
HNVL	**Huntsville, TX**	**14.79**	**359**	Pn			**Pn**	**11 03 14.8**	**-0.3**
435B	**Jarrell**	**14.97**	**352**				**Pn**	**11 03 16.9**	**-0.9**
JCT	**Junction City**	**15.12**	**344**				**Pn**	**11 03 18.0**	**-1.7**
TXAR	**Lajitas Array**	**15.49**	**331**		Pn		**Pn**	**11 03 25.6**	**+0.9**
	baz=153,slow=14,SNR=17								
	1.6nm,0.9s								
TXAR	**Lajitas Array**	**15.49**	**331**				**Pn**	**11 03 22.9**	**-1.8**
TX31	**Lajitas Ar. Si**	**15.49**	**331**				**Pn**	**11 03 23.0**	**-1.7**
BRDY	**Brady**	**15.71**	**348**				**Pn**	**11 03 25.7**	**-1.7**
BRDY					IAmb		IAmb	11 03 37.7	
	comp=Z,12nm,1.1s								
NATX	**Nacogdoches**	**15.79**	**2**		Pn		**Pn**	**11 03 27.1**	**-1.3**
NATX					IAmb		IAmb	11 03 41.0	
	comp=Z,11nm,0.7s								
OZNA	**Ozona**	**15.91**	**341**				**Pn**	**11 03 29.4**	**-0.7**
OZNA					IAmb		IAmb	11 03 37.1	
	comp=Z,20nm,1.4s								
WHTX	**Lake Whitney,**	**16.15**	**353**				**Pn**	**11 03 31.6**	**-1.5**
WHTX					IAmb		IAmb	11 03 38.2	
	comp=Z,17nm,0.6s								
ALPN	**Alpine**	**16.37**	**333**				**Pn**	**11 03 34.6**	**-1.4**
LPIG	**La Paz**	**16.40**	**302**	LR			LR	11 09 53.9	
	comp=Z,32nm,21.0s,baz=150,slow=37								
TPB05	**Hovey Rd**	**16.71**	**335**		IAmb		IAmb	11 03 43.2	
	comp=Z,7.0nm,0.9s								
TREL	**Terrell**	**16.77**	**357**		P		**Pn**	**11 03 41.7**	**+0.7**
TREL					IAmb		IAmb	11 03 46.5	
	comp=Z,17nm,0.7s								
SGCY	**Sterling City**	**16.84**	**342**		P		**Pn**	**11 03 41.6**	**-0.3**
SGCY					IAmb		IAmb	11 03 48.7	
	comp=Z,27nm,1.4s								
MNHN	**Monahans**	**16.86**	**337**		P		**Pn**	**11 03 42.5**	**+0.3**
TPB01	**Permian Basin**	**16.92**	**334**		P		**Pn**	**11 03 43.6**	**+0.7**
TPB01					IAmb		IAmb	11 03 49.6	
	comp=Z,19nm,1.4s								
PLPT	**Palo Pinto**	**17.07**	**351**				**Pn**	**11 03 45.2**	**+0.4**
PLPT					IAmb		IAmb	11 03 49.9	
	com

NV11	**Mina Array Sit**	**30.21**	**322**	IAmb	IAmb	11 06 04.6	
	comp=Z,6.2nm,1.1s						
ELK	**Elko**	**30.27**	**329**	LR	LR	11 20 05.9	
	comp=Z,51nm,20.2s,baz=170,slow=40						
NVAR	**Mina Array Bea**	**30.29**	**322**	P	**P**	**11 05 58.5**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=134,slow=9.3,SNR=17						
NVAR				LR	LR	11 17 27.0	
	comp=Z,57nm,20.7s,baz=181,slow=35						
	comp=Z,1.7nm,0.7s						
NVAR	**Mina Array Bea**	**30.29**	**322**	P	**P**	**11 05 59.9**	**+2.5**
DLMT	**Dillon**	**32.83**	**337**	IAmb	IAmb	11 06 26.1	
	comp=Z,3.1nm,0.8s						
J08A	**Circle Bar Ran**	**33.82**	**329**	IAmb	IAmb	11 06 34.7	
	comp=Z,4.2nm,0.9s						
PLID	**Pearl Lake**	**33.98**	**333**	P	**P**	**11 06 28.6**	**-1.2**
PLID				IAmb	IAmb	11 06 35.5	
	comp=Z,1.8nm,0.8s						
LYMT	**Lyon Mountain**	**34.09**	**339**	P	**P**	**11 06 28.8**	**-1.9**
YBH	**Yreka Blue Hor**	**35.00**	**323**	LR	LR	11 21 37.6	
	comp=Z,63nm,20.7s,baz=150,slow=38						
LPAZ	**La Paz**	**41.65**	**139**	P	**P**	**11 07 38.3**	**+3.0**
	comp=Z,0.5nm,0.7s,baz=301,slow=12,SNR=2.2						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**48.51**	**348**	P	**P**	**11 08 28.2**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=158,slow=7.3,SNR=12						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**59.90**	**337**	P	**P**	**11 09 52.4**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=150,slow=5.6,SNR=6.3						
	comp=Z,1.4nm,0.9s						
ESDC	**Sonseca Array**	**80.93**	**51**	P	**P**	**11 12 01.3**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=287,slow=5.3,SNR=4.7						
	comp=Z,0.7nm,0.9s						
NOA	**NORSAR Array B**	**83.92**	**28**	P	**P**	**11 12 16.4**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=293,slow=7.0,SNR=2.1						
	comp=Z,0.8nm,0.9s						
HHC	**Hu-ho-hao-te**	**118.33**	**337**	*e*P	**PKPdf**	**11 18 33.3**	**-0.5**
PZH	**PanZhiHua**	**134.76**	**338**	PKP	**PKPdf**	**11 19 04.6**	**-1.0**

*OSPL **18** 11:09:48.8±1.2,18°.45N×70°.74W,h5km±8km,ML2.0, Presumed earthquake*
*SDD **18** 11:09:55.5±2.9,18°.91N×71°.74W,h6km±20km,MD3.0, ML1.7,MW1.8,Presumed earthquake*
ISC 18 11:09:45.6±2.3,18°.51N±0°.06×70°.7W±0°.1,h10km,n9, σ1s87/13,7C,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**0.75**	**309**	*i*P	**Pn**	**11 10 05.3**	**+2.9**
SDDR				⇑*i*S	**Sg**	**11 10 08.1**	**-1.8**
SDDR				IAML		11 10 15.4	
	comp=N,16nm,0.5s						
SDDR	**Presa de Saban**	**0.75**	**309**	*e*S	**Sb**	**11 10 11.6**	**+0.5**
SDDR				IAML		11 10 13.6	
	comp=Z,387nm,0.1s						
LONE3	**El Aguacate, B**	**0.75**	**277**	*i*P	**Pg**	**11 10 00.5**	**+0.3**
LONE3				*e*S	**Sg**	**11 10 09.1**	**-1.0**
LONE3				IAML		11 10 11.0	
	comp=Z,23nm,0.7s						
LODU1	**El Espartillar**	**0.78**	**259**	*i*P	**Pg**	**11 10 01.7**	**+1.0**
LODU1				*e*S	**Sg**	**11 10 11.3**	**+0.6**
LODU1				IAML		11 10 11.7	
	comp=Z,36nm,1.9s						
REDR	**Restauracion**	**0.94**	**314**	⇑*i*P	**Pg**	**11 10 02.1**	**-1.7**
REDR				⇑*i*S	Sg	11 10 07.0	-9.1
REDR				IAML		11 10 11.8	
	comp=N,62nm,0.2s						
LOBH	**Bahia de las A**	**1.12**	**235**	*i*P	**Pb**	**11 10 06.8**	**-0.4**
LOBH				*e*S	**Sg**	**11 10 20.6**	**-1.2**
LOBH				IAML		11 10 22.1	
	comp=Z,40nm,2.3s						
HATOM	**Hato Mayor del**	**1.25**	**77**	⇑*i*P	Pg	11 10 31.0	+21
HATOM				IAML		11 11 10.7	
	comp=N,15nm,2.1s						
LOPP1	**Punta Rusia, P**	**1.43**	**340**	*i*P	**Pb**	**11 10 13.9**	**+1.6**
LOPP1				*e*S	**Sg**	**11 10 32.8**	**+1.3**
LOPP1				IAML		11 10 35.0	
	comp=Z,29nm,1.3s						
MCDR	**Montecristi**	**1.66**	**326**	⇑*i*P	**Pn**	**11 10 11.4**	**-3.4**
MCDR				⇑*i*S	Sn	11 10 27.1	-9.1
MCDR				IAML		11 10 36.1	
	comp=N,53nm,1.4s						

*IDC **18** 11:13:16.7±0.9,2°.45S×17°.48W,h0km,mb4.0/13, mbtmp4.0/14,ML3.8/1,Error ellipse: s-maj=27.7km s-min=22.4km az=113.0*
ISC 18 11:13:18.1±0.8,2°.5S±0°.2×17°.5W±0°.2,h10km,n21, σ0s77/14,mb4.2/12,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.14**	**151**	T	T	11 21 06.0	
	baz=329,slow=72,SNR=52						
H10N3	**ASCENSION HYDR**	**6.14**	**151**	T	T	11 21 03.7	
	baz=329,slow=72,SNR=47						
H10N1	**ASCENSION HYDR**	**6.16**	**151**	T	T	11 21 08.9	
	baz=329,slow=72,SNR=47						
H10S3	**ASCENSION HYDR**	**7.06**	**156**	T	T	11 22 12.7	
	baz=244,slow=74						
H10S2	**ASCENSION HYDR**	**7.08**	**156**	T	T	11 22 11.8	
	baz=336,slow=74						
RCBR	**Riachuelo**	**18.64**	**259**	P	**P**	**11 17 34.8**	**-1.4**
	0.3nm,0.3s,baz=88,slow=20,SNR=5.9						
	1.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**24.57**	**50**	P	**P**	**11 18 37.8**	**-0.8**
	4.8nm,0.9s,baz=234,slow=11,SNR=16						
	4.8nm,0.9s						
ESDC	**Sonseca Array**	**43.73**	**15**	P	**P**	**11 21 24.3**	**+0.6**
	0.8nm,1.0s,baz=216,slow=7.7,SNR=4.7						
	0.8nm,1.0s						
BOSA	**Boshof**	**48.32**	**127**	P	**P**	**11 22 00.2**	**0.0**
	4.7nm,0.7s,baz=296,slow=7.4,SNR=11						
	4.7nm,0.7s						
GERES	**GERESS Array B**	**57.82**	**24**	P	**P**	**11 23 10.0**	**+0.1**
	1.1nm,0.8s,baz=193,slow=5.5,SNR=5.8						
	1.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**58.78**	**10**	P	**P**	**11 23 15.7**	**-0.7**
	0.9nm,0.7s,baz=171,slow=9.3,SNR=2.0						
	0.9nm,0.7s						
BRTR	**Keskin Array B**	**62.85**	**42**	P	**P**	**11 23 44.3**	**-0.3**
	0.5nm,0.3s,baz=251,slow=7.6,SNR=4.3						
	0.5nm,0.3s						
AKASG	**Malin Array Be**	**66.26**	**30**	P	**P**	**11 24 05.9**	**-0.5**
	0.2nm,0.3s,baz=239,slow=6.4,SNR=4.0						
	0.2nm,0.3s						
HFS	**Hagfors**	**66.99**	**16**	P	**P**	**11 24 10.4**	**-0.5**
	1.2nm,0.7s,baz=218,slow=9.0,SNR=2.2						
	1.2nm,0.7s						
NOA	**NORSAR Array B**	**67.09**	**15**	P	**P**	**11 24 12.0**	**+0.4**
	0.5nm,0.8s,baz=198,slow=8.5,SNR=2.6						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**71.91**	**20**	P	**P**	**11 24 42.0**	**+0.7**
	2.0nm,0.5s,baz=209,slow=4.4,SNR=22						
	2.0nm,0.5s						
ARCES	**ARCESS Array B**	**77.46**	**14**	P	**P**	**11 25 13.8**	**+0.4**
	2.0nm,1.0s,baz=224,slow=3.3,SNR=6.4						
	2.0nm,1.0s						
QSPA	**South Pole Qui**	**87.64**	**180**	P	**P**	**11 26 07.1**	**+0.4**
	1.7nm,0.9s,baz=154,slow=2.3,SNR=4.0						
	1.7nm,0.9s						
TXAR	**Lajitas Array**	**87.82**	**299**	P	**P**	**11 26 09.6**	**+1.3**
	1.3nm,1.0s,baz=120,slow=6.4,SNR=9.5						
	1.3nm,1.0s						
ASAR	**Alice Springs**	**141.96**	**135**	PKhKP	PKPpre	11 32 45.5	
	1.0nm,0.7s,baz=219,slow=1.9,SNR=2.2						
WRA	**Warramunga Arr**	**144.53**	**130**	PKP	PKPbc	11 32 54.4	-0.1
	2.1nm,0.6s,baz=234,slow=2.6,SNR=1.8						

*IDC **18** 11:14:42.9±6.3,16°.93S×71°.70W,h111km±40km,mb3.2/4, mbtmp3.7/5,Error ellipse: s-maj=102.3km s-min=32.0km az=14.0*
ISC 18 11:14:42.2±2.5,16°.8S±0°.6×71°.8W±0°.1,h10km,n6, σ0s59/7,mb3.4/3,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.54**	**82**	P	**Pn**	**11 15 36.5**	**+0.6**
	61nm,0.4s,baz=257,slow=9.3,SNR=716						
LPAZ				S	**Sn**	**11 16 16.9**	**-0.2**
	8.0nm,0.6s,baz=256,slow=12,SNR=1.4						
TXAR	**Lajitas Array**	**55.28**	**326**	P	**P**	**11 24 05.8**	**+0.3**
	0.3nm,0.7s,baz=148,slow=7.4,SNR=3.2						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.45**	**72**	P	**P**	**11 26 32.0**	**-0.7**
	0.2nm,0.3s,baz=252,slow=5.6,SNR=6.9						
	0.2nm,0.3s						
ESDC	**Sonseca Array**	**84.49**	**46**	P	**P**	**11 27 03.8**	**-0.3**
	0.2nm,0.7s,baz=232,slow=4.6,SNR=1.4						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	**85.93**	**342**	P	**P**	**11 27 10.5**	**-0.1**
	0.4nm,0.6s,baz=137,slow=4.9,SNR=8.8						
	0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**147.00**	**312**	PKPbc	**PKPdf**	**11 34 12.1**	**+0.5**
	1.0nm,0.8s,baz=80,slow=1.5,SNR=5.0						

*CATAC **18** 11:15:11.9±1.2,6°.N±6°.×7°.8W±°,h9km±9km,M4.0/12, MLv4.0/12,Error ellipse: s-maj=14.5km s-min=5.3km az=36.6,confirmed*
*RSNC **18** 11:15:12.2±0.0,6°.N±1°.×7°.8W±°,h4km±2km,M3.4,mB4.7, mb4.4,ML3.0,MLv4.0,Mw(mB)3.9*
*IDC **18** 11:15:13.7±1.9,6°.77N×77°.63W,h0km,mb3.5/6, mbtmp3.6/10,ML2.7/4,MS3.4/3,Error ellipse: s-maj=55.9km s-min=17.8km az=21.0*
ISC 18 11:15:10.9±1.5,6°.30N±0°.03×77°.82W±0°.04,h1km±10km, n48,σ2s00/75,mb3.6/6,Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	**0.41**	**100**	P	**Pg**	**11 15 20.0**	**+1.1**
SOLC				S	**Sg**	**11 15 24.7**	**+0.4**
PTAC	**Punta Ardita,**	**0.84**	**1**	P	**Pb**	**11 15 27.9**	**-0.5**
PTAC				S	**Sg**	**11 15 38.6**	**+0.5**
PIZC	**Pizarro, Choco**	**1.40**	**161**	P	**Pb**	**11 15 37.5**	**-0.4**
PIZC				S	**Sn**	**11 15 54.7**	**-2.0**
CBOC	**Ciudad Bolivar**	**1.85**	**103**	P	**Pn**	**11 15 42.0**	**-1.9**
CBOC				S	**Sn**	**11 16 07.4**	**-0.6**
APAC	**Apartado, Choc**	**2.01**	**38**	P	**Pn**	**11 15 46.2**	**+0.2**
APAC				S	**Sb**	**11 16 14.0**	**+0.1**
PLMC	**San Jos del P**	**2.06**	**132**	P	**Pn**	**11 15 44.8**	**-2.0**
PLMC				S	**Sn**	**11 16 13.0**	**-0.1**
GUY2C	**Guyana, Caldas**	**2.67**	**113**	P	**Pn**	**11 15 55.1**	**-0.3**
GUY2C				S	**Sn**	**11 16 30.6**	**+2.0**
UREC	**San Jos de Ur**	**2.69**	**57**	P	**Pn**	**11 15 55.2**	**-0.2**
UREC				S	**Sn**	**11 16 29.0**	**+0.4**
AZU	**Azuero**	**2.85**	**302**	P	**Pn**	**11 15 57.8**	**+0.2**
AZU				S	**Sn**	**11 16 29.7**	**-2.9**
LCBC	**Los crdobas,**	**2.92**	**29**	P	**Pn**	**11 16 00.3**	**+1.8**
LCBC				S	**Sb**	**11 16 36.7**	**-3.4**
JAMC	**Jamundi, Valle**	**3.27**	**159**	P	**Pn**	**11 16 03.6**	**+0.1**
JAMC				S	**Sn**	**11 16 42.7**	**-0.4**
PNME	**Penonome**	**3.30**	**311**	P	**Pn**	**11 16 00.6**	**-3.2**
PNME				S	**Sn**	**11 16 41.4**	**-2.3**
PTBC	**PUERTO BERRIO,**	**3.35**	**86**	P	**Pn**	**11 16 04.9**	**+0.5**
PTBC				S	**Sb**	**11 16 48.9**	**-3.6**
BCIP	**Isla Barro Col**	**3.48**	**325**	P	**Pn**	**11 16 05.1**	**-1.1**
BCIP				S	**Sn**	**11 16 47.4**	**-0.7**
BCIP	**Isla Barro Col**	**3.48**	**325**	P	**Pn**	**11 16 04.9**	**-1.3**
BCIP				S	**Sn**	**11 16 45.3**	**-2.8**
GMAL	**Guarumal, Vera**	**3.69**	**293**	P	**Pn**	**11 16 10.5**	**+1.4**
GMAL				S	**Sn**	**11 16 51.3**	**-1.9**
ROSC	**El Rosal**	**3.77**	**112**	Pn	**Pn**	**11 16 14.3**	**+3.8**
	4.2nm,0.3s,baz=312,slow=24,SNR=6.7						
ROSC				Sn	**Sb**	**11 17 01.4**	**-3.6**
	3.2nm,0.3s,baz=323,slow=17,SNR=3.8						
	22nm,0.5s						
ROSC	**El Rosal**	**3.77**	**112**	P	**Pb**	**11 16 14.6**	**-4.0**
SPBC	**San Pablo de B**	**3.78**	**100**	P	**Pn**	**11 16 10.3**	**-0.1**
SPBC				S	**Sn**	**11 16 59.0**	**+3.3**
PRAC	**Prado**	**3.89**	**131**	P	**Pn**	**11 16 14.6**	**+2.7**
PRAC	**Prado**	**3.89**	**131**	P	**Pn**	**11 16 14.3**	**+2.4**
PRAC				S	**Sn**	**11 17 01.3**	**+3.1**
POPC	**Popayan, Colom**	**3.90**	**163**	P	**Pn**	**11 16 13.2**	**+1.0**
POPC				S	**Sn**	**11 16 58.5**	**-0.3**
BRJC	**Barrancabermej**	**4.10**	**80**	P	**Pn**	**11 16 16.2**	**+1.4**
BRJC				S	**Sn**	**11 17 07.7**	**+4.2**
CVER	**Cruz Verde, Cu**	**4.12**	**115**	P	**Pn**	**11 16 17.9**	**+2.4**
CVER				S	**Sn**	**11 17 08.7**	**+4.0**
BBAC	**Balboa, Cauca**	**4.29**	**172**	P	**Pn**	**11 16 17.9**	**+0.4**
CHIC	**Chingaza**	**4.39**	**112**	P	**Pn**	**11 16 20.1**	**+1.0**
SJCC	**San Jacinto, C**	**4.43**	**36**	P	**Pn**	**11 16 20.4**	**+1.1**
SJCC	**San Jacinto, C**	**4.43**	**36**	P	**Pn**	**11 16 18.9**	**-0.4**
SJCC				S	**Sn**	**11 17 09.2**	**-2.4**
BARC	**Barichara**	**4.62**	**86**	P	**Pn**	**11 16 22.9**	**+0.8**
BARC				S	**Sn**	**11 17 19.4**	**+2.9**
GARC	**Garzon, Huila**	**4.70**	**150**	P	**Pn**	**11 16 25.7**	**+2.5**
GARC				S	**Sn**	**11 17 20.0**	**+1.6**
RUSC	**La Rusia**	**4.73**	**95**	P	**Pn**	**11 16 25.1**	**+1.3**
RUSC	**La Rusia**	**4.73**	**95**	P	**Pn**	**11 16 23.5**	**-0.3**
OCAC	**Ocana**	**4.86**	**66**	P	**Pn**	**11 16 25.4**	**0.0**
OCAC				S	**Sn**	**11 17 24.5**	**+2.1**
FLOC	**Florencia**	**5.16**	**155**	P	**Pn**	**11 16 30.3**	**+1.0**
	0.1nm313nm18nm,0.7s						
PAMC	**Pamplona, Colo**	**5.19**	**78**	P	**Pn**	**11 16 29.7**	**-0.4**
MACC	**Macarena, Meta**	**5.72**	**136**	P	**Pn**	**11 16 37.8**	**+0.8**
	1pm27nm,0.7s						
OTAV	**Otavalo**	**6.05**	**186**	P	**Pn**	**11 16 43.6**	**+1.6**
SDV	**Santo Domingo**	**7.57**	**70**	Pn	**Pn**	**11 17 02.7**	**0.0**
	1.3nm,0.3s,baz=297,slow=9.5,SNR=15						
SDV				Sn	**Sn**	**11 18 25.5**	**-3.8**
	0.7nm,0.3s,baz=56,slow=18,SNR=1.2						
SDV				LR	LR	11 20 07.8	
	comp=Z,377nm,19.1s,baz=240,slow=41						
	16nm,0.6s						
URIC	**Uribia, Colomb**	**7.87**	**47**	P	**Pn**	**11 17 06.0**	**-0.6**
JTS	**Las Juntas de**	**8.10**	**300**	Pn	**Pn**	**11 17 11.7**	**+2.0**
	0.6nm,0.3s,baz=74,slow=9.4,SNR=6.3						
JTS				Sn	**Sn**	**11 18 45.5**	**+3.5**
	0.5nm,0.3s,baz=139,slow=8.1,SNR=1.3						
JTS				LR	LR	11 20 25.9	
	comp=Z,158nm,20.5s,baz=76,slow=39						
	6.4nm,0.7s						
TEIG	**Tepich**	**17.17**	**325**	Pn	**P**	**11 19 11.9**	**-2.0**
	baz=52,slow=24,SNR=10						
	0.2nm,0.7s						
MDP	**Montagnes des**	**25.08**	**91**	LR	LR	11 30 37.0	
	comp=Z,108nm,18.0s,baz=325,slow=37						
PDAR	**Pinedale Array**	**45.87**	**327**	P	**P**	**11 23 36.6**	**+1.4**
	0.2nm,0.7s,baz=142,slow=8.1,SNR=1.8						
	0.2nm,0.7s						
NVAR	**Mina Array Bea**	**48.60**	**317**	P	**P**	**11 23 58.6**	**+2.0**
	0.3nm,0.6s,baz=130,slow=5.5,SNR=2.3						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**62.22**	**342**	P	**P**	**11 25 34.0**	**+0.1**
	0.6nm,0.8s,baz=132,slow=6.8,SNR=6.4						
	0.6nm,0.8s						
ESDC	**Sonseca Array**	**73.58**	**51**	P	**P**	**11 26 45.7**	**-0.4**
	1.3nm,1.0s,baz=276,slow=7.4,SNR=6.4						
	1.3nm,1.0s						
ILAR	**Eielson Array**	**75.48**	**336**	P	**P**	**11 26 56.7**	**+0.2**
	0.4nm,0.9s,baz=98,slow=3.7,SNR=3.0						
	0.4nm,0.9s						
GERES	**GERESS Array B**	**86.31**	**41**	P	**P**	**11 27 55.6**	**+0.8**
	0.4nm,0.7s,baz=268,slow=2.7,SNR=3.0						
	0.4nm,0.7s						

*IDC **18** 11:19:21.1±0.7,13°.44S×111°.62W,h0km,mb4.1/20, mbtmp4.1/20,MS4.7/44,Error ellipse: s-maj=24.9km s-min=15.4km az=71.0*
*GFZ **18** 11:19:22.1±0.4,13°.5S±5°.×11°.2W±°,h10km,M4.5/31, mb4.5/31,Error ellipse: s-maj=20.0km s-min=6.8km az=61.9,confirmed*
*NEIC **18** 11:19:23.8±1.3,13°.5S±0°.1×111°.7W±0°.2,h10km±1km, mb4.9/283,Error ellipse: s-maj=27.4km s-min=20.4km az=262.0*
*BJI **18** 11:19:24.0,13°.50S×111°.70W,h10km,mB5.0/1,Ms5.5/6, Ms7 5.3/7*
*GCMT **18** 11:19:26.8±0.1,13°.45S±0°.01×111°.69W±0°.01,h15km, MW5.4/158,Moment Tensor Solution. s113,c190; s158,c305; Duration: 1s2 Moment tensor: Scale 1017 Nm; Mrr~0.09±.02; Mθθ0.21±.02; Mϕϕ~0.11±.02; Mrθ~0.23±.04; Mθϕ 1.38±.01; Mϕr0.03±.05; Best double couple: M0 1.40900×1017 NP1:ϕs183.00000°,δ80.00000°, λ-178.00000°. NP2:ϕs93.00000°,δ88.00000°, λ-10.00000°. Principal axes: T 1.4510, Plg6.0000°, Azm139.0000°; N -0.0840, Plg80.0000°, Azm264.0000°; P -1.3670, Plg8.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 11:19:21.8±0.5,13°.49S±0°.09×111°.81W±0°.08,h10km, n276,σ1s30/124,mb4.9/148,MS4.8/50,2C-1D,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**13.77**	**171**	LR	LR	11 26 35.8	
	comp=Z,5μm,18.6s,baz=348,slow=32						
TAOE	**Nuku Hiva Isla**	**28.17**	**276**	*e*P	**P**	**11 25 11.9**	**-2.9**
	71nm,23.4s						
TAOE				*e*S	**S**	**11 29 57.3**	**-3.3**
	165nm,24.3s						
TAOE				*e*LQ	LQ	11 31 11.0	
	2μm,23.8s						
TAOE				*e*LR	LR	11 32 20.7	
	2μm,24.0s						
TAOE				*e*T	T	11 54 40.9	
	26nm,0.3s						
ATAH	**Atahualpa**	**33.45**	**83**	P	**P**	**11 26 01.0**	**-0.9**
	7.1nm,0.9s,baz=172,slow=3.5,SNR=4.1						
ATAH				LR	LR	11 36 31.3	
	comp=Z,2μm,18.6s,baz=258,slow=31						
	7.1nm,0.9s						
NNA	**Nana**	**34.12**	**92**	LR	LR	11 36 40.0	
	comp=Z,794nm,19.0s,baz=256,slow=31						
CMIG	**Matias Romero**	**34.68**	**29**	P	**P**	**11 26 12.3**	**+0.4**
	5.5nm,0.9s,baz=236,slow=9.5,SNR=4.0						
CMIG				LR	LR	11 37 23.4	
	comp=Z,2μm,20.0s,baz=218,slow=31						
	5.5nm,0.9s						
APG	**El Apazote**	**35.32**	**37**	P	**P**	**11 26 17.6**	**-0.1**
	0.4nm,0.7s,baz=154,slow=10,SNR=4.5						
APG				LR	LR	11 37 48.4	
	comp=Z,74nm,19.4s,baz=258,slow=32						
	0.4nm,0.7s						
MTO3	**Montecristo**	**35.52**	**40**	P	**P**	**11 26 20.0**	**+0.5**
JTS	**Las Juntas de**	**35.62**	**50**	LR	LR	11 37 04.9	
	comp=Z,2μm,21.8s,baz=231,slow=30						
H03N2	**Juan Fernandez**	**35.88**	**129**	T	T	12 04 16.0	
	baz=300,slow=76,SNR=238						
H03N3	**Juan Fernandez**	**35.90**	**129**	T	T	12 04 17.0	
	baz=300,slow=76,SNR=331						
H03N1	**Juan Fernandez**	**35.90**	**129**	T	T	12 04 17.3	
	baz=300,slow=76,SNR=363						
PPT	**Papeete**	**36.57**	**259**	LR	LR	11 37 56.5	
	comp=Z,222nm,19.4s,baz=86,slow=30						
PPT2	**Papeete2**	**36.57**	**259**	*e*S	**S**	**11 32 12.0**	**+0.7**
	133nm,26.8s						
PPT2				*e*LQ	LQ	11 34 51.9	
	3μm,32.8s						
PPT2				*e*LR	LR	11 36 13.3	
	1μm,31.5s						
PPT2				*e*LR	LR	11 36 20.2	
	2μm,28.5s						
ZAIG	**Zacatecas**	**37.15**	**14**	P	**P**	**11 26 32.3**	**-1.1**
PETF	**Flores**	**37.18**	**36**	P	**P**	**11 26 34.3**	**+0.9**
LPIG	**La Paz**	**37.39**	**2**	LR	LR	11 38 00.6	
	comp=Z,2μm,20.6s,baz=187,slow=30						
CZSB	**Cruzeiro do Su**	**38.83**	**86**	P	**P**	**11 26 46.9**	**-0.5**
CZSB				IAmb	IAmb	11 27 01.8	
	comp=Z,13nm,0.7s						
PB12	**IPOC Station P**	**40.12**	**103**		**P**	**11 26 58.5**	**+0.2**
PB12	**IPOC Station P**	**40.12**	**103**	P	**P**	**11 26 56.0**	**-2.3**
PB05	**IPOC Station P**	**40.50**	**109**		**P**	**11 27 01.4**	**-0.1**
PB05	**IPOC Station P**	**40.50**	**109**	P	**P**	**11 26 58.2**	**-3.2**
PB14	**IPOC Station P**	**40.53**	**112**	P	**P**	**11 27 01.8**	**-0.1**
HPIG		**40.62**	**8**		**P**	**11 27 04.0**	**+1.7**
HPIG		**40.62**	**8**	P	**P**	**11 27 01.7**	**-0.6**
PB02	**IPOC Station P**	**40.65**	**107**	P	**P**	**11 27 03.1**	**+0.5**
PB02	**IPOC Station P**	**40.65**	**107**	P	**P**	**11 27 01.5**	**-1.2**
PB07	**IPOC Station P**	**40.69**	**108**		**P**	**11 27 03.1**	**0.0**
PB07				IAmb	IAmb	11 27 05.1	
	comp=Z,26nm,1.2s						
PB07	**IPOC Station P**	**40.69**	**108**	P	**P**	**11 26 59.6**	**-3.4**
TEIG	**Tepich**	**40.72**	**35**		**P**	**11 27 03.8**	**+0.8**
TEIG				IAmb	IAmb	11 27 05.1	
	comp=Z,24nm,0.8s						
TEIG	**Tepich**	**40.72**	**35**	P	**P**	**11 27 00.5**	**-2.5**
PB11	**IPOC Station P**	**40.79**	**105**	P	**P**	**11 27 04.5**	**+0.6**
PB11	**IPOC Station P**	**40.79**	**105**	P	**P**	**11 27 01.6**	**-2.3**
PB03	**IPOC Station P**	**40.84**	**108**	P	**P**	**11 27 04.3**	**0.0**
PB16	**IPOC Station P**	**40.90**	**102**		**P**	**11 27 05.2**	**-0.1**
PB16	**IPOC Station P**	**40.90**	**102**	P	**P**	**11 27 04.1**	**-1.2**
PB01	**IPOC Station P**	**41.01**	**107**	P	**P**	**11 27 04.4**	**-1.2**
GO01	**Chusmiza**	**41.22**	**104**	P	**P**	**11 27 06.4**	**-1.4**
GO01	**Chusmiza**	**41.22**	**104**	P	**P**	**11 27 05.3**	**-2.5**
PB08	**IPOC Station P**	**41.28**	**105**	P	**P**	**11 27 06.1**	**-2.1**
PB09	**IPOC Station P**	**41.29**	**108**	P	**P**	**11 27 06.0**	**-2.0**
AC05	**El Transito**	**41.41**	**118**		**P**	**11 27 07.7**	**-1.1**
AC05				IAmb	IAmb	11 27 28.4	
	comp=Z,24nm,1.2s						
AC05	**El Transito**	**41.41**	**118**	P	**P**	**11 27 07.0**	**-1.9**
ROSC	**El Rosal**	**41.43**	**66**	LR	LR	11 40 47.5	
	comp=Z,331nm,18.7s,baz=246,slow=31						
AC02	**Maricunga**	**42.01**	**115**		**P**	**11 27 14.1**	**-0.2**
AC02	**Maricunga**	**42.01**	**115**	P	**P**	**11 27 11.3**	**-2.9**
LPAZ	**La Paz**	**42.25**	**99**	P	**P**	**11 27 16.6**	**+0.2**
	comp=Z,7.9nm,1.1s,baz=274,slow=5.8,SNR=19						
LPAZ				LR	LR	11 40 47.3	
	comp=Z,1μm,20.4s,baz=259,slow=31						
	comp=Z,7.9nm,1.1s						
LPAZ	**La Paz**	**42.25**	**99**		**P**	**11 27 16.6**	**+0.2**
LPAZ				IAmb	IAmb	11 27 22.1	
	comp=Z,24nm

comp=Z,905nm,18.4s,baz=188,slow=32
comp=Z,0.9nm,0.7s

ANMO	Albuquerque	48.43	6	P		P	11 28 05.6	+1.0
ANMO	Albuquerque	48.43	6	P		P	11 28 04.8	+0.1
GSC	Goldstone, Bar	48.75	355	IAmb		IAmb	11 28 18.2	
	comp=Z,13nm,1.6s							
SIV	San Ignacio	49.04	100	LR		LR	11 44 56.5	
	comp=Z,1μm,22.0s,baz=280,slow=31							
QSM	Queen of Sheba	49.41	355	P		P	11 28 13.3	+1.3
QSM				IAmb		IAmb	11 28 16.6	
	comp=Z,22nm,1.8s							
WMOK	Wichita Mounta	49.53	14	IAmb		IAmb	11 28 33.0	
	comp=Z,19nm,1.8s							
WMOK	Wichita Mounta	49.53	14	P		P	11 28 12.1	-0.8
KNB	Kanab	50.24	359			P	11 28 20.2	+1.8
KNB				IAmb		IAmb	11 28 53.4	
	comp=Z,24nm,1.7s							
MVCO	Mesa Verde	50.52	3	IAmb		IAmb	11 28 33.3	
	comp=Z,21nm,1.4s							
MVCO	Mesa Verde	50.52	3	P		P	11 28 20.5	-0.1
PKCU	Pink Cliffs	50.66	359	IAmb		IAmb	11 28 35.4	
	comp=Z,39nm,1.7s							
MIAR	Mount Ida	50.81	19	IAmb		IAmb	11 28 33.3	
	comp=Z,15nm,1.2s							
MIAR	Mount Ida	50.81	19	P		P	11 28 21.7	-0.9
T25A	Trinidad	50.83	8	IAmb		IAmb	11 28 35.5	
	comp=Z,18nm,1.6s							
PTLB	Pontes e Lacer	50.94	99	IAmb		IAmb	11 28 25.0	
	comp=Z,21nm,1.2s							
X40A	Basin Creek Fa	51.00	20	IAmb		IAmb	11 28 35.9	
	comp=Z,29nm,1.6s							
SDCO	Great Sand Dun	51.30	6	IAmb		IAmb	11 28 39.2	
	comp=Z,17nm,1.4s							
TUL3	Leonard	51.41	17	IAmb		IAmb	11 28 30.1	
	comp=Z,37nm,1.6s							
UALR	University of	51.43	21	IAmb		IAmb	11 28 38.2	
	comp=Z,35nm,1.5s							
PV13	Radium Mtn., P	51.45	3	IAmb		IAmb	11 28 37.4	
	comp=Z,19nm,1.8s							
PV02	Paradox Valley	51.50	3	IAmb		IAmb	11 28 37.7	
	comp=Z,24nm,1.5s							
PV18	Skein Mesa, Pa	51.53	3	IAmb		IAmb	11 29 00.7	
	comp=Z,43nm,1.9s							
TPH	Tonopah	51.54	355	IAmb		IAmb	11 28 34.1	
	comp=Z,15nm,1.3s							
PV19	Morning Glory	51.59	3	IAmb		IAmb	11 28 54.4	
	comp=Z,37nm,1.8s							
PV10	Paradox Valley	51.65	3	IAmb		IAmb	11 28 40.2	
	comp=Z,16nm,1.3s							
LRAL	Lakeview Retre	51.98	27	IAmb		IAmb	11 28 38.7	
	comp=Z,16nm,1.1s							
NVAR	Mina Array Bea	52.00	354	P		P	11 28 33.6	+1.9
	comp=Z,2.3nm,0.7s,baz=181,slow=10,SNR=4.3							
NVAR				LR		LR	11 45 27.4	
	comp=Z,1μm,21.5s,baz=174,slow=30							
	comp=Z,3nm,0.7s							
NVAR	Mina Array Bea	52.00	354	P		P	11 28 33.1	+1.5
Q16A	Castle Valley	52.13	1	IAmb		IAmb	11 28 45.4	
	comp=Z,23nm,1.8s							
OXF	Oxford	52.27	23	IAmb		IAmb	11 28 35.7	
	comp=Z,21nm,1.0s							
HHAR	Hobbs	52.30	18	IAmb		IAmb	11 28 36.4	
	comp=Z,22nm,1.6s							
CPUP	Villa Florida	52.45	113	P		P	11 28 34.4	-0.8
	comp=Z,3.0nm,1.0s,baz=257,slow=9.6,SNR=3.9							
CPUP				LR		LR	11 46 25.4	
	comp=Z,1μm,21.8s,baz=264,slow=31							
	comp=Z,3.0nm,1.0s							
FCAR	Ozark Folk Cen	52.52	20	IAmb		IAmb	11 28 45.0	
	comp=Z,29nm,1.8s							
152A	Waverly Hall	52.70	29	IAmb		IAmb	11 28 40.2	
	comp=Z,22nm,1.2s							
AFDM	Forest Hills D	52.86	351	IAmb		IAmb	11 28 59.5	
	comp=Z,22nm,1.9s							
LCAR	Lake Charles	53.01	21	IAmb		IAmb	11 28 49.7	
	comp=Z,25nm,1.3s							
X48A	Hartselle	53.17	26	IAmb		IAmb	11 28 43.2	
	comp=Z,41nm,1.9s							
BOAV	Boa Vista	53.26	77	P		P	11 28 40.9	-0.3
BOAV				IAmb		IAmb	11 30 08.8	
	comp=Z,19nm,1.8s							
USHA	Ushuaia	53.27	150	LR		LR	11 46 17.8	
	comp=Z,3μm,20.1s,baz=348,slow=30							
ISCO	Idaho Springs	53.32	6	P		P	11 28 41.0	-0.5
DUG	Dugway, Tooele	53.41	359	P		P	11 28 42.0	0.0
S39A	Bolivar	53.79	18	IAmb		IAmb	11 28 59.5	
	comp=Z,9.7nm,1.1s							
FPAL	Fort Paine	53.86	27	IAmb		IAmb	11 28 52.0	
	comp=Z,8.9nm,1.0s							
T42A	Van Buren	53.90	21	IAmb		IAmb	11 28 48.5	
	comp=Z,34nm,1.9s							
GOGA	Godfrey	53.91	29	IAmb		IAmb	11 28 47.7	
	comp=Z,9.1nm,0.9s							
GOGA	Godfrey	53.91	29	P		P	11 28 44.5	-1.0
Y52A	Lilburn	54.00	29	IAmb		IAmb	11 28 48.5	
	comp=Z,25nm,1.3s							
ELK	Elko	54.05	357	P		P	11 28 46.4	-0.4
	comp=Z,0.4nm,0.4s,baz=158,slow=13,SNR=3.3							
	comp=Z,0.4nm,0.4s							
SWET	Sewanee	54.30	26	IAmb		IAmb	11 28 55.1	
	comp=Z,12nm,0.9s							
WVT	Waverly	54.30	24	P		P	11 28 49.4	+1.0
WVT	Waverly	54.30	24	P		P	11 28 47.3	-1.1
TCUT	Toone Canyon	54.33	0	IAmb		IAmb	11 28 59.5	
	comp=Z,8.8nm,1.0s							
V48A	Smith Brothers	54.37	25	IAmb		IAmb	11 28 59.0	
	comp=Z,22nm,1.3s							
W50A	Signal Mountai	54.55	27	IAmb		IAmb	11 28 56.9	
	comp=Z,11nm,1.1s							
R40A	Maddies Statio	54.66	19	IAmb		IAmb	11 29 12.9	
	comp=Z,18nm,1.5s							
CLDB	Colider	54.72	94	P		P	11 28 51.0	-1.0
CCM	Cathedral Cave	54.78	20	P		P	11 28 52.0	+0.2
CCM				IAmb		IAmb	11 29 01.8	
	comp=Z,9.8nm,1.0s							
CCM	Cathedral Cave	54.78	20	P		P	11 28 50.5	-1.3
HWUT	Hardware Ranch	54.81	0	P		P	11 28 52.8	+0.5
CLTN	Cedars of Leba	54.87	25	IAmb		IAmb	11 28 55.5	
	comp=Z,19nm,1.9s							
SJG	San Juan	54.90	56	LR		LR	11 47 52.3	
	comp=Z,356nm,20.2s,baz=223,slow=31							
W52A	Murphy	55.08	28	IAmb		IAmb	11 29 04.8	
	comp=Z,20nm,1.2s							
CPCT	Cooper Cave	55.11	27	IAmb		IAmb	11 29 03.9	
	comp=Z,20nm,1.5s							
HODGE	Hodges	55.15	30	IAmb		IAmb	11 28 57.0	
	comp=Z,16nm,1.4s							
BG3	Lake Jocassee	55.45	29	IAmb		IAmb	11 29 03.8	
	comp=Z,16nm,1.1s							
U49A	Red Boiling Sp	55.46	25	IAmb		IAmb	11 29 06.2	
	comp=Z,32nm,1.7s							
TKL	Tuckaleechee C	55.62	28	IAmb		IAmb	11 29 08.0	
	comp=Z,14nm,1.3s							
JSC	Jenkinsville	55.68	31	IAmb		IAmb	11 29 05.4	
	comp=Z,14nm,1.1s							
PAULI	Pauline	55.85	30	IAmb		IAmb	11 29 05.6	
	comp=Z,22nm,1.5s							
YBH	Yreka Blue Hor	55.85	350	P		P	11 29 00.5	+0.8
	comp=Z,1.6nm,0.8s,baz=295,slow=9.1,SNR=3.0							
YBH				LR		LR	11 47 10.3	
	comp=Z,2μm,21.5s,baz=174,slow=30							
	comp=Z,1.6nm,0.8s							
P40A	Paris	55.87	18	IAmb		IAmb	11 29 09.6	
	comp=Z,18nm,1.4s							
WVOR	Wild Horse Val	55.99	354	IAmb		IAmb	11 29 13.9	
	comp=Z,18nm,1.6s							
WVOR	Wild Horse Val	55.99	354	P		P	11 29 02.2	+1.5
PDAR	Pinedale Array	56.01	2	P		P	11 29 00.9	0.0
	comp=Z,1.1nm,0.5s,baz=163,slow=7.5,SNR=15							
PDAR				LR		LR	11 49 24.9	
	comp=Z,435nm,18.7s,baz=178,slow=32							
	comp=Z,1.1nm,0.5s							
V53A	Saluda	56.06	28	IAmb		IAmb	11 29 08.0	
	comp=Z,15nm,1.0s							
K22A	Casper	56.07	5	IAmb		IAmb	11 29 14.5	
	comp=Z,12nm,1.0s							
CPSB	Cacapava Do Su	56.12	118	IAmb		IAmb	11 29 03.0	
	comp=Z,19nm,1.2s							
KMSC	Kings Mountain	56.34	30	IAmb		IAmb	11 29 09.7	
	comp=Z,12nm,1.2s							
BIRD	Birdtown, Kers	56.37	31	IAmb		IAmb	11 29 05.0	
	comp=Z,11nm,1.0s							
TZTN	Tazewell	56.45	27	IAmb		IAmb	11 29 06.1	
	comp=Z,12nm,1.1s							
TZTN	Tazewell	56.45	27	P		P	11 29 02.5	-1.4
WCI	Wyandotte Cave	56.73	24	P		P	11 29 06.1	+0.2
WCI				IAmb		IAmb	11 29 14.8	
	comp=Z,38nm,1.9s							

WCI	Wyandotte Cave	56.73	24	P		P	11 29 06.5	+0.7
HLID	Hailey	56.82	358	P		P	11 29 08.2	+1.6
J08A	Circle Bar Ran	56.89	354	IAmb		IAmb	11 29 20.4	
	comp=Z,13nm,1.2s							
V55A	Taylorsville	56.97	30	IAmb		IAmb	11 29 14.3	
	comp=Z,15nm,1.1s							
U54A	Nelsons Funny	57.22	29	IAmb		IAmb	11 29 12.9	
	comp=Z,11nm,1.0s							
FLWY	Flagg Ranch	57.30	1	IAmb		IAmb	11 29 22.1	
	comp=Z,28nm,1.5s							
R50A	Paris	57.57	25	IAmb		IAmb	11 29 17.7	
	comp=Z,15nm,1.1s							
U56A	King	57.76	30	IAmb		IAmb	11 29 16.3	
	comp=Z,19nm,1.3s							
RSSD	Black Hills	57.77	7	P		P	11 29 14.3	+1.0
V58A	Windy Hill, Pi	57.95	31	IAmb		IAmb	11 29 18.3	
	comp=Z,23nm,1.6s							
AFI	Afiamalu	58.12	262	LR		LR	11 48 47.9	
	comp=Z,338nm,19.3s,baz=99,slow=30							
P48A	Milroy	58.13	24	IAmb		IAmb	11 29 21.4	
	comp=Z,11nm,1.1s							
BLA	Blacksburg	58.44	29	IAmb		IAmb	11 29 24.6	
	comp=Z,20nm,1.1s							
ECSD	EROS Data Cent	58.61	13	IAmb		IAmb	11 29 28.2	
	comp=Z,20nm,1.9s							
ECSD	EROS Data Cent	58.61	13	P		P	11 29 18.1	-0.9
Q54A	Coxs Mills	59.68	28	IAmb		IAmb	11 29 33.2	
	comp=Z,12nm,1.1s							
O53A	New Philadelph	60.55	27	IAmb		IAmb	11 29 39.0	
	comp=Z,14nm,1.0s							
N51A	Ashland	60.60	25	P		P	11 29 33.2	+0.4
N53A	Lisbon	61.16	26			P	11 29 37.2	+0.5
EGMT	Eagleton	61.26	2			P	11 29 37.9	+0.7
EGMT				IAmb		IAmb	11 29 45.3	
	comp=Z,12nm,1.1s							
MDP	Montagnes des	61.57	77	LR		LR	11 52 54.9	
	comp=Z,498nm,18.7s,baz=265,slow=33							
BDFB	Brasilia	61.58	101	P		P	11 29 38.8	-1.3
	comp=Z,6.0nm,1.0s,baz=259,slow=7.2,SNR=4.5							
BDFB				LR		LR	11 54 16.9	
	comp=Z,357nm,18.5s,baz=258,slow=34							
	comp=Z,6.0nm,1.0s							
NEW	Newport	61.65	356	LR		LR	11 51 29.0	
	comp=Z,497nm,21.5s,baz=172,slow=31							
N58A	Sunbury	63.07	29	IAmb		IAmb	11 29 50.9	
	comp=Z,12nm,1.0s							
M57A	Sunshine Farm,	63.26	29	IAmb		IAmb	11 29 57.7	
	comp=Z,11nm,1.0s							
BINY	Binghamton	64.47	29	P		P	11 29 57.1	-1.5
ULM	Lac du Bonnet	64.99	11	P		P	11 30 01.1	-0.7
	comp=Z,1.3nm,0.6s,baz=236,slow=7.3,SNR=2.0							
ULM				LR		LR	11 55 28.9	
	comp=Z,340nm,19.7s,baz=199,slow=33							
	comp=Z,1.3nm,0.6s							
SADO	Sadowa	65.12	25	LR		LR	11 57 47.6	
	comp=Z,637nm,18.2s,baz=240,slow=36							
SADO	Sadowa	65.12	25	IAmb		IAmb	11 30 09.5	
	comp=Z,15nm,1.1s							
J59A	Piesco	66.14	29	IAmb		IAmb	11 30 16.2	
	comp=Z,15nm,1.1s							
CFNY	Clifton-Fine,	66.42	28	IAmb		IAmb	11 30 18.2	
	comp=Z,17nm,1.3s							
NCB	Newcomb	66.66	29	IAmb		IAmb	11 30 19.0	
	comp=Z,17nm,1.2s							
URZ	Urewera	66.97	234	LR		LR	11 54 19.8	
	comp=Z,630nm,18.1s,baz=45,slow=31							
LONY	Lake Ozonia	66.99	28	IAmb		IAmb	11 30 21.7	
	comp=Z,12nm,1.2s							
MSVF	Nonsavu	67.35	256	LR		LR	11 52 19.1	
	comp=Z,482nm,21.9s,baz=115,slow=29							
VLDQ	Val d'Or	68.52	24	IAmb		IAmb	11 30 31.0	
	comp=Z,19nm,1.4s							
LDAQ	Lac Daran	71.03	28	IAmb		IAmb	11 30 47.0	
	comp=Z,20nm,1.3s							
RPZ	Rata Peaks	71.54	228	LR		LR	11 54 43.4	
	comp=Z,248nm,21.5s,baz=78,slow=30							
DLBC	Dease Lake	73.20	350	LR		LR	11 57 41.1	
	comp=Z,468nm,19.4s,baz=134,slow=31							
BELA	Belgrano 2	74.21	168	P		P	11 31 00.1	+1.6
YKAW1	Yellowknife Wh	75.75	359	P		P	11 31 08.1	+0.7
YKA	Yellowknife Ar	75.77	359	P		P	11 31 07.8	+0.4
	comp=Z,0.7nm,0.8s,baz=177,slow=5.5,SNR=7.4							
YKA				LR		LR	12 01 32.1	
	comp=Z,913nm,18.2s,baz=176,slow=33							
	comp=Z,0.7nm,0.8s							
YKA	Yellowknife Ar	75.77	359	P		P	11 31 08.0	+0.5
VNDA	Vanda	76.13	193	LR		LR	11 57 50.1	
	comp=Z,325nm,19.7s,baz=87,slow=30							
QSPA	South Pole Qui	76.62	180	P		P	11 31 14.8	+2.1
	comp=Z,6.8nm,0.8s,baz=146,slow=1.7,SNR=28							
	comp=Z,6.8nm,0.8s							
QSPA	South Pole Qui	76.62	180	P		P	11 31 15.0	+2.4
QSPA				IAmb		IAmb	11 31 38.3	
	comp=Z,17nm,1.2s							
SCHQ	Schefferville	77.93	25	P		P	11 31 20.4	+0.5
	comp=Z,9.3nm,0.8s,baz=225,slow=2.9,SNR=14							
SCHQ				LR		LR	12 04 41.1	
	comp=Z,530nm,18.3s,baz=227,slow=35							
	comp=Z,9.3nm,0.8s							
SCHQ	Schefferville	77.93	25	IAmb		IAmb	11 31 27.0	
	comp=Z,18nm,1.1s							
KDAK	Kodiak Island	78.52	339	LR		LR	11 57 17.0	
	comp=Z,913nm,21.4s,baz=134,slow=29							
L29M	L29M	79.04	348	IAmb		IAmb	11 33 20.0	
	comp=Z,13nm,1.4s							
BCAR	Beaver Creek A	79.78	347	P		P	11 31 30.8	+0.9
SKT	Skwentna	81.43	342	IAmb		IAmb	11 31 44.7	
	comp=Z,17nm,1.2s							
VNA1	Neumayer--Stat	81.81	161	⇑P		P	11 31 41.7	+1.0
	comp=Z,4.6nm,1.1s							
O16K	Kokwok River B	81.81	338	P		P	11 31 40.8	0.0
O16K				IAmb		IAmb	11 31 46.3	
	comp=Z,12nm,1.4s							
N18K	Kilae Creek	81.82	340	IAmb		IAmb	11 31 45.7	
	comp=Z,17nm,1.5s							
VNA2	Neumayer--Watz	82.00	161	P		P	11 31 42.1	+0.3
M19K	Big River Lodg	82.24	341	IAmb		IAmb	11 32 32.8	
	comp=Z,11nm,0.8s							
ILAR	Eielson Array	82.42	346	P		P	11 31 44.5	+0.5
	comp=Z,0.4nm,0.6s,baz=145,slow=4.9,SNR=5.0							
ILAR				LR		LR	12 01 23.5	
	comp=Z,266nm,19.5s,baz=108,slow=31							
	comp=Z,0.4nm,0.6s							
H27K	Steamboat Moun	82.50	348	IAmb		IAmb	11 33 09.4	
	comp=Z,23nm,1.9s							
CCB	Clear Creek Bu	82.55	345	IAmb		IAmb	11 31 51.6	
	comp=Z,15nm,1.7s							
L19K	White Mountain	82.60	341	IAmb		IAmb	11 32 32.8	
	comp=Z,6.6nm,0.9s							
NEA2	Nenana	82.82	345	IAmb		IAmb	11 31 53.2	
	comp=Z,11nm,1.2s							
INK	Iniik	83.06	352	P		P	11 31 47.4	+0.3
	comp=Z,2.7nm,0.9s,baz=239,slow=6.6,SNR=2.8							
INK				LR		LR	12 04 09.0	
	comp=Z,580nm,18.8s,baz=151,slow=32							
	comp=Z,2.7nm,0.9s							
SNAA	Sanae	83.12	162	P		P	11 31 47.9	+0.2
	comp=Z,1.5nm,0.8s,baz=263,slow=5.5,SNR=4.3							
SNAA				LR		LR	12 01 44.6	
	comp=Z,590nm,21.4s,baz=261,slow=31							
	comp=Z,1.5nm,0.8s							
SNAA	Sanae	83.12	162	P		P	11 31 49.7	+2.0
SNAA	Sanae	83.12	162	P		P	11 31 45.7	-2.0
K20K	Telida	83.24	342	IAmb		IAmb	11 31 54.1	
	comp=Z,9.3nm,1.2s							
MLY	Manley	83.60	344	IAmb		IAmb	11 31 59.3	
	comp=Z,8.7nm,1.2s							
L16K	Owhat River	83.78	339	IAmb		IAmb	11 31 56.6	
	comp=Z,9.5nm,1.3s							
FRB	Frobisher Bay	83.83	18	LR		LR	12 07 52.6	
	comp=Z,384nm,20.0s,baz=226,slow=35							
J20K	Nowinta River	83.88	343	IAmb		IAmb	11 31 56.2	
	comp=Z,10.0nm,1.4s							
I21K	Tanana	84.05	344	IAmb		IAmb	11 32 48.0	
	comp=Z,8.3nm,1.1s							
K17K	Iditarod	84.09	340	IAmb		IAmb	11 31 56.1	
	comp=Z,7.8nm,1.0s							
J18K	Innoko River	84.12	341	P		P	11 31 53.4	+0.7
J18K				IAmb		IAmb	11 31 59.3	
	comp=Z,6.7nm,1.2s							
G24K	Hadweenzic Riv	84.16	347	IAmb		IAmb	11 32 03.2	
	comp=Z,16nm,1.4s							
F26K	Sheenjek River	84.28	348	IAmb		IAmb	11 32 04.5	
	comp=Z,16nm,1.6s							
H22K	Ishtalitna Cre	84.45	345	IAmb		IAmb	11 32 22.9	
	comp=Z,7.2nm,1.1s							
F25K	Christian Rive	84.50	348	IAmb		IAmb	11 32 02.4	
	comp=Z,9.5nm,1.4s							

TROLL	Troll, Antarti	84.51	163	⇑P		P	11 31 56.6	+1.7
	comp=Z,150nm,1.2s							
COLD	Coldfoot	85.22	346	IAmb		IAmb	11 32 13.0	
	comp=Z,6.0nm,1.0s							
E24K	Your Creek	85.51	347	IAmb		IAmb	11 32 51.5	
	comp=Z,8.1nm,1.4s							
H19K	Roundabout Mou	85.55	343	IAmb		IAmb	11 32 07.2	
	comp=Z,11nm,1.1s							
A36M	Sachs Harbour	85.75	356	IAmb		IAmb	11 32 04.0	
	comp=Z,7.9nm,0.8s							
HNR	Honiara	86.15	261	LR		LR	12 03 25.6	
	comp=Z,10nm,19.8s,baz=204,slow=31							
G19K	Purcell Mounta	86.17	343	IAmb		IAmb	11 32 57.8	
	comp=Z,12nm,1.4s							
H11S2	WAKE ISLAND Hy	86.35	290	T		T	13 07 35.1	
	baz=106,slow=75,SNR=262							
H11S1	WAKE ISLAND Hy	86.36	290	T		T	13 07 31.0	
	baz=106,slow=75,SNR=145							
H11S3	WAKE ISLAND Hy	86.37	290	T		T	13 07 33.0	
	baz=106,slow=75,SNR=114							
H11N3	WAKE ISLAND Hy	86.49	291	T		T	13 07 41.3	
	baz=106,slow=75,SNR=30							
H11N1	WAKE ISLAND Hy	86.51	291	T		T	13 07 43.3	
	baz=106,slow=75,SNR=13							
H11N2	WAKE ISLAND Hy	86.51	291	T		T	13 07 45.4	
	baz=106,slow=75,SNR=33							
RES	Resolute Bay	88.63	4	LR		LR	12 09 08.0	
	comp=Z,468nm,18.7s,baz=216,slow=34							
ELIB	Princess Elisa	89.71	167	*d*P		P	11 32 20.7	+0.6
SHEM	Shemya Is, Ala	91.25	324	LR		LR	12 03 58.1	
	comp=Z,649nm,21.9s,baz=116,slow=29							
SFJD	Kangerlussuaq	91.65	20	LR		LR	12 12 04.7	
	comp=Z,583nm,20.4s,baz=240,slow=35							
STKA	Stephens Creek	96.58	235	LR		LR	12 08 20.2	
	comp=Z,478nm,21.4s,baz=88,slow=30							
MAW	Mawson	99.04	178	LR		LR	12 13 28.3	
	comp=Z,454nm,20.1s,baz=176,slow=33							
NKC	Novy Kostel	121.96	39	AMS		AMS	12 22 50.0	
	comp=Z,300nm,20.6s							
HSKC	Hora Svate Kat	122.43	38	AMS		AMS	12 23 20.0	
	comp=Z,300nm,18.5s							
PRU	Pruhonice	123.31	38	AMS		AMS	12 23 50.0	
	comp=Z,300nm,17.6s							
NJ2	Nanjing	130.24	301	*e*PKP		PKiKP	11 38 34.3	+0.6
AKASG	Malin Array Be	131.29	32	PKP		PKPdf	11 38 34.1	-0.1
	comp=Z,1.0nm,0.6s,baz=299,slow=2.0,SNR=4.0							
HHC	Hu-ho-hao-te	133.42	314	*e*PKP		PKPdf	11 38 36.3	-2.5
BRTR	Keskin Array B	139.94	43	PKhKP		PKPpre	11 38 48.0	
	comp=Z,0.5nm,0.3s,baz=117,slow=1.4,SNR=6.2							
BVAR	Borovoye Array	140.52	358	PKP		PKPdf	11 38 51.7	+0.3
	comp=Z,1.8nm,0.8s,baz=333,slow=1.7,SNR=5.8							
KURBB	Kurchatov Arra	142.02	349	PKhKP		PKPpre	11 38 48.6	
	comp=Z,0.3nm,0.3s,baz=325,slow=5.8,SNR=1.9							
KURBB				PKP		PKPdf	11 38 54.7	+0.6
	comp=Z,0.4nm,0.3s,baz=19,slow=3.0,SNR=5.6							
KBZ	Khabaz	142.87	31	PKhKP		PKPpre	11 38 53.0	
	comp=Z,1.7nm,0.9s,baz=309,slow=1.9,SNR=4.3							
CD2	Chengdu	142.99	304	PKP		PKPdf	11 38 56.5	-0.1
MKAR	Makanchi Array	144.75	343	PKP		PKPab	11 38 57.9	0.0
	comp=Z,2.6nm,1.0s,baz=40,slow=4.0,SNR=12							
MAKZ	Makanchi	144.82	343	PKPdf		PKPab	11 38 57.9	-0.3
WMQ	Urumqi	145.45	335	*e*PKPbc		PKPdf	11 39 01.1	+0.6
WMQ				PKPab		sPKPab	11 39 04.6	+1.0
WMQ				L		L		
	comp=Z,410nm,20.3s							
WMQ				L		L		
	comp=Z,470nm,21.7s							
WMQ				L		L		
	comp=Z,690nm,22.9s							
KMI2	Kunming	145.49	295	PKPbc		PKPbc	11 39 02.1	+0.7
KMI2				L		L		
	comp=Z,320nm,19.7s							
PZH	PanZhiHua	146.03	298	PKPbc		PKPdf	11 39 02.4	+0.3
GNI	Garni	146.40	33	PKPbc		PKPab	11 39 04.8	+0.3
CMAR	Chiang Mai Arr	150.05	284	PKPbc		PKiKP	11 39 15.4	+0.9
	comp=Z,2.4nm,0.9s,baz=85,slow=1.0,SNR=14							
CMAR	Chiang Mai Arr	150.05	284			PKiKP	11 39 15.7	+1.1

NOU ***18*** *11:20:25.3, 10.51S×161.25E, h0km, mb4.8/15, Solomon Islands*
IDC ***18*** *11:20:29.1±2.3, 10.43S×161.26E, h69km±18km, mb3.8/14, mbtmp4.1/16, MS3.3/3, Error ellipse: s-maj=21.4km s-min=14.0km az=86.0*
NEIC ***18*** *11:20:29.2±1.2, 10.3S±0.1×161.3E±0.1, h66km±8km, mb4.5/23, Error ellipse: s-maj=19.2km s-min=10.9km az=52.0*

ISC 18 11:20:27.0±0.5, 10.47S±0.05×161.38E±0.05, h50km, n63, σ1°39/62, mb4.4/24, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HURO	Huro Makira	0.51	90	P		Pn	11 20 37.4	-1.0
HURO	Huro Makira	0.51	90	S		Sn	11 20 45.8

PETK	**Petropavlovsk-**	**63.40**	**358**	P	**P**	**11 30 50.8**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=116,slow=6.9,SNR=4.3						
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**63.40**	**358**	P	**P**	**11 30 49.8**	**-1.4**
ADK	**Adak**	**64.92**	**15**	P	**P**	**11 31 01.4**	**+0.3**
ADK				IAmb	IAmb	11 31 18.8	
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**67.04**	**180**	P	**P**	**11 31 14.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=7.2,slow=6.5,SNR=4.0						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**67.04**	**180**	P	**P**	**11 31 15.8**	**+1.3**
VNDA				IAmb	IAmb	11 31 28.5	
	comp=Z,4.9nm,1.3s						
LVA	**Lava Point**	**70.04**	**20**	P	**P**	**11 31 32.1**	**-1.4**
AKUT	**Akutan**	**70.10**	**20**	P	**P**	**11 31 33.2**	**-0.6**
SONM	**Songino Array**	**75.71**	**325**	P	**P**	**11 32 07.0**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=138,slow=5.2,SNR=9.6						
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**75.71**	**325**	P	**P**	**11 32 06.7**	**-0.7**
N15K	**Kwethluk River**	**76.80**	**19**	P	**P**	**11 32 13.9**	**+0.7**
N15K				IAmb	IAmb	11 32 15.7	
	comp=Z,4.2nm,0.8s						
OHAK	**Old Harbor**	**77.02**	**23**	P	**P**	**11 32 14.9**	**+0.5**
OHAK				IAmb	IAmb	11 32 56.3	
	comp=Z,15nm,1.4s						
KDAK	**Kodiak Island**	**77.68**	**23**	P	**P**	**11 32 18.5**	**+0.4**
L16K	**Owhat River**	**78.19**	**18**	P	**P**	**11 32 21.7**	**+0.9**
L16K				IAmb	IAmb	11 32 22.0	
	comp=Z,3.2nm,0.8s						
QSPA	**South Pole Qui**	**79.53**	**180**	P	**P**	**11 32 28.7**	**+0.3**
	comp=Z,2.4nm,1.0s,baz=71,slow=4.9,SNR=1.3						
	comp=Z,2.4nm,1.0s						
QSPA	**South Pole Qui**	**79.53**	**180**	P	**P**	**11 32 29.2**	**+0.8**
QSPA				IAmb	IAmb	11 32 44.1	
	comp=Z,11nm,1.5s						
CAST	**Castle Rocks**	**81.77**	**19**	P	**P**	**11 32 40.1**	**-0.1**
CAST				IAmb	IAmb	11 32 40.9	
	comp=Z,6.2nm,0.8s						
IMAR	**Indian Mountai**	**83.07**	**17**	P	**P**	**11 32 47.1**	**+0.2**
IL31		**84.37**	**20**	P	**P**	**11 32 53.0**	**-0.5**
IL31				IAmb	IAmb	11 32 56.6	
	comp=Z,5.0nm,1.2s						
ILAR	**Eielson Array**	**84.37**	**20**	P	**P**	**11 32 53.4**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=247,slow=5.0,SNR=8.5						
	comp=Z,0.9nm,0.7s						
NVAR	**Mina Array Bea**	**88.95**	**51**	P	**P**	**11 33 17.9**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=236,slow=6.4,SNR=5.7						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**90.19**	**318**	P	**P**	**11 33 20.9**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=89,slow=7.6,SNR=3.7						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**90.19**	**318**	P	**P**	**11 33 21.1**	**-1.1**
YKA	**Yellowknife Ar**	**96.44**	**28**	P	**P**	**11 33 50.0**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=262,slow=4.8,SNR=15						
	comp=Z,0.7nm,0.5s						
YKAW1	**Yellowknife Wh**	**96.50**	**28**	P	**P**	**11 33 49.7**	**-1.1**
YKAW1				IAmb	IAmb	11 33 50.8	
	comp=Z,1.2nm,0.7s						

HEL 18 11:30:06.4±0.3, 67°56N×30°65E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OLKF	**Oulanka, Finla**	**1.34**	**202**	PG	Pg	11 30 30.6	-1.5
	baz=24						
OLKF				smax	smax	11 30 46.8	
	comp=Z,10.0nm,0.2s						
OLKF				SN	Sb	11 30 50.1	0.0
KU6	**Riekki**	**1.57**	**191**	PG	Pn	11 30 34.7	-0.9
KU6				smax	smax	11 30 53.6	
	comp=Z,2.5nm,0.2s						
KU6				SN	Sn	11 30 56.5	0.0
RNF	**Rovaniemi**	**2.05**	**244**	PB	Pn	11 30 42.0	-0.1
RNF				SB	Sn	11 31 09.4	+1.0
KU1	**Kurvinen**	**2.06**	**193**	PG	Pn	11 30 43.0	+0.9
RANF	**Ranua**	**2.18**	**226**	PB	Pn	11 30 44.1	+0.2
	baz=43						
RANF				SB	Sn	11 31 12.6	+1.1
KEV	**Kevo**	**2.58**	**330**	*e*P	Pn	11 30 49.3	+0.1
KEV	**Kevo**	**2.58**	**330**	PN	Pn	11 30 49.2	0.0
KEV				SB	Sb	11 31 23.5	-2.0
KLF	**Kolari**	**2.60**	**266**	PN	Pn	11 30 48.5	-1.2
KLF				smax	smax	11 31 23.1	
	comp=Z,3.7nm,0.2s						
KLF				SN	Sn	11 31 23.4	+1.5
ARA0	**ARCESS Array S**	**2.74**	**319**	*e*P	Pn	11 30 51.1	-0.5
ARA0	**ARCESS Array S**	**2.74**	**319**	PN	Pn	11 30 51.4	-0.2
ARA0				SG	Sb	11 31 30.6	+0.4
HEF	**Hetta**	**2.77**	**291**	PN	Pn	11 30 51.8	-0.2
HEF				SN	Sn	11 31 27.3	+1.3
HEF				smax	smax	11 31 27.8	
	comp=Z,2.6nm,0.2s						
TOF	**Tornio**	**2.91**	**242**	smax	smax	11 31 31.9	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sb	11 31 37.3	+2.1
KTK1	**Kautokeino**	**3.12**	**301**	PB	Pb	11 31 01.2	-1.5
LANU	**Lannavaara**	**3.32**	**282**	PN	Pn	11 30 59.8	+0.2
ERTU	**Ertsjaerv**	**3.47**	**257**	PN	Pn	11 31 00.9	-0.6
ERTU				SN	Sn	11 31 44.6	+1.4

KOLA 18 11:31:00.1, 67°52N×30°53E, h0km, ML2.0, Error ellipse: s-maj=4.8km s-min=2.8km az=40.0, Kovdor City, Mines, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.95**	**84**	P	Pg	11 31 17.3	-0.9
APA0				S	Sg	11 31 29.6	-0.9
APA	**Apatity**	**1.11**	**86**	S	Sg	11 31 34.4	-1.2
KVDA	**Kovda**	**1.24**	**131**	P	Pg	11 31 22.0	-1.8
KVDA				S	Sg	11 31 38.1	-1.7
LVZ	**Lovozero**	**1.62**	**75**	S	Sn	11 31 49.8	-1.6
TERR	**Teriberka**	**2.39**	**43**	S	Sn	11 32 09.2	-1.2
VADS	**Vadso**	**2.65**	**351**	P	Pn	11 31 43.7	-0.2
VADS				S	Sn	11 32 14.8	-1.8
ARCES	**ARCESS Array B**	**2.74**	**320**	S	Sn	11 32 18.6	-0.3

KOLA 18 11:31:43.0±0.3, 67°48N±0°04×30°40E±0°09, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**1.00**	**81**	P	Pg	11 32 01.7	-0.5
APA0				S	Sg	11 32 15.0	-0.2
KVDA	**Kovda**	**1.25**	**128**	P	Pg	11 32 06.0	-0.9
KVDA				S	Sg	11 32 22.7	-0.3
LVZ	**Lovozero**	**1.68**	**73**	S	Sn	11 32 34.6	-1.2
TERR	**Teriberka**	**2.46**	**43**	S	Sn	11 32 55.6	+0.6
VADS	**Vadso**	**2.68**	**352**	S	Sn	11 33 00.3	-0.2
ARCES	**ARCESS Array B**	**2.74**	**321**	P	Pn	11 32 28.6	+0.3
ARCES				S	Sn	11 33 02.5	+0.5
FAUS	**Fauske**	**5.82**	**276**	S	Sn	11 34 14.0	-3.8

IDC ***18*** *11:52:57.7±1.0, 2°32S×139°65E, h0km, mb3.7/5, mbtmp3.7/6, ML3.7/1, MS4.4/5, Error ellipse: s-maj=25.1km s-min=11.3km az=15.0*

DJA ***18*** *11:53:03.3±0.5, 2°S±3°×14°0E±°, h11km±4km, M4.2/7, mB5.1/1, mb4.3/3, MLv4.1/7, Mw(mB)4.4/1*

ISC 18 11:53:00.5±0.8, 2°19S±0°07×139°84E±0°05, h10km, n23, σ2s16/21, mb4.0/5, MS4.5/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.52**	**141**	P	**Pb**	**11 53 13.0**	**+1.2**
GENI				S	**Sb**	**11 53 19.2**	**-0.3**
GENI	**Genyem**	**0.52**	**141**	P	**Pb**	**11 53 13.1**	**+1.2**
GENI				S	**Sb**	**11 53 21.6**	**+2.1**
JAY	**Jayapura**	**0.93**	**111**	Pg	**Pg**	**11 53 19.1**	**+0.7**
	87nm,0.3s,baz=252,slow=9.9,SNR=626						
JAY				Lg	Lg	11 53 32.5	
	182nm,0.3s,baz=74,slow=18,SNR=15						
JAY	**Jayapura**	**0.93**	**111**	P	**Pg**	**11 53 19.1**	**+0.7**
JAY				S	**Sb**	**11 53 31.7**	**+0.5**
JAY	**Jayapura**	**0.93**	**111**	P	**Pg**	**11 53 18.9**	**+0.5**
WAMI	**Wamena**	**2.03**	**214**	P	**Pn**	**11 53 36.7**	**+1.9**
WAMI				S	**Sb**	**11 54 03.4**	**+0.6**
WAMI	**Wamena**	**2.03**	**214**	P	**Pn**	**11 53 36.6**	**+1.8**
WAMI				S	**Sb**	**11 54 02.9**	**+0.1**
SRPI	**Serui, Papua**	**3.61**	**275**	P	**Pn**	**11 53 59.8**	**+3.3**
SRPI	**Serui, Papua**	**3.61**	**275**	P	**Pn**	**11 53 57.8**	**+1.3**
BAKI	**Biak**	**3.86**	**285**	P	Pn	11 53 58.2	-1.7
BAKI	**Biak**	**3.86**	**285**	P	Pn	11 53 58.4	-1.5
FAKI	**Fak Fak**	**7.61**	**264**	P	**Pn**	**11 54 56.4**	**+4.8**
	60nm,1.3s						
SIJI	**Sorong**	**8.67**	**279**	P	**Pn**	**11 55 08.4**	**+2.3**
WRA	**Warramunga Arr**	**18.45**	**197**	P	**Pn**	**11 57 12.8**	**-3.7**
	0.3nm,0.3s,baz=17,slow=12,SNR=5.4						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**22.11**	**195**	P	**P**	**11 57 53.1**	**-3.2**
	0.3nm,0.5s,baz=21,slow=11,SNR=9.1						
	0.3nm,0.5s						
NWAO	**Narrogin (SRO)**	**37.22**	**212**	LR	LR	12 17 27.6	
	comp=Z,315nm,22.0s,baz=86,slow=40						
USRK	**Ussuriysk Ar.**	**46.71**	**352**	LR	LR	12 17 25.6	
	comp=Z,292nm,21.1s,baz=73,slow=31						
TLY	**Talaya**	**61.81**	**335**	LR	LR	12 32 47.3	
	comp=Z,297nm,18.9s,baz=37,slow=39						
MKAR	**Makanchi Array**	**70.07**	**322**	P	**P**	**12 04 12.2**	**-0.7**
	0.9nm,0.7s,baz=115,slow=8.1,SNR=7.8						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**72.06**	**329**	P	P	12 04 23.3	-1.4
	0.6nm,0.5s,baz=116,slow=6.6,SNR=2.3						
ZALV				LR	LR	12 36 51.8	
	comp=Z,355nm,19.2s,baz=52,slow=36						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**73.95**	**324**	LR	LR	12 39 22.5	
	comp=Z,374nm,19.6s,baz=196,slow=38						
BVAR	**Borovoye Array**	**79.53**	**325**	P	**P**	**12 05 06.6**	**-1.0**
	0.7nm,0.4s,baz=116,slow=6.6,SNR=2.0						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**84.89**	**24**	P	**P**	**12 05 34.4**	**-1.1**
	0.8nm,1.0s,baz=256,slow=5.5,SNR=4.4						
	0.8nm,1.0s						

NOU ***18*** *12:00:18.8, 32°67S×175°14W, h41km, mb4.9/12, South of Kermadec Islands*

IDC ***18*** *12:00:44.4±0.4, 33°35S×178°02W, h0km, mb4.7/18, mbtmp4.7/23, ML4.4/5, MS4.1/26, Error ellipse: s-maj=16.5km s-min=13.2km az=104.0*

MOS ***18*** *12:00:45.5±0.8, 33°28S×177°99W, h12km, mb5.3/13, Error ellipse: s-maj=13.9km s-min=9.7km az=98.8*

WEL ***18*** *12:00:46.0±0.8, 33°S±9°×17°9W±2°2, h12km, M5.1/19, mB5.4/14, ML5.6/19, MLv5.6/19, Mw(mB)4.9/14, Error ellipse: s-maj=31.3km s-min=4.0km az=111.3*

NEIC ***18*** *12:00:46.4±1.1, 33°37S±0°04×177°8W±0°2, h10km±1km, mb5.2/104, Mww5.0/10, Error ellipse: s-maj=22.5km s-min=5.3km az=78.0*

GCMT ***18*** *12:00:48.4±0.3, 33°34S±0°03×177°58W±0°02, h12km, MW4.9/98, Moment Tensor Solution. s33,c37; s98,c141; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.80±.09; Mθθ=0.27±.09; Mϕϕ3.07±.07; Mrθ=0.40±.39; Mϕθ0.81±.08; Mϕr0.53±.28; Best double couple: Mo3.10900×10^16 NP1:ϕ=25.00000°, δ42.00000°, λ=73.00000°. NP2: ϕ=182.00000°, δ50.00000°, λ=105.00000°. Principal axes: T 3.2860, Plg4.0000°, Azm282.0000°; N -0.3580, Plg11.0000°, Azm192.0000°; P -2.9320, Plg78.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***18*** *12:00:49.4, 33°04S×176°93W, h52km, mB5.3/7, mb5.2/13, Ms5.1/5, Ms7 4.7/6*

ISC 18 12:00:49.0±0.6, 33°44S±0°04×177°89W±0°06, h31km±3km, h31km:pP-P, n399, σ1s72/376, mb5.2/75, MS4.2/27, 10C-15D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.16**	**360**	P	Pn	12 01 44.4	-5.9
GLKZ				S	**Sn**	**12 02 29.1**	**-8.8**
RAO	**Raoul Island**	**4.17**	**360**	Pn	**Pn**	**12 01 47.9**	**-2.6**
	83nm,0.3s,baz=201,slow=23,SNR=2.0						
RAO				Sn	**Sn**	**12 02 34.6**	**-3.5**
	583nm,0.3s,baz=89,slow=18,SNR=5.5						
RAO				LR	LR	12 04 02.5	
	comp=Z,639nm,19.1s,baz=149,slow=48						
	319nm,0.2s						
RAO	**Raoul Island**	**4.17**	**360**	Pn	Pn	12 01 44.9	-5.6
MXZ	**Matakaoa Point**	**5.16**	**216**	P	**Pn**	**12 02 02.7**	**-1.3**
MXZ	**Matakaoa Point**	**5.16**	**216**	P	**Pn**	**12 02 02.9**	**-1.1**
MXZ				S	**Sn**	**12 02 59.6**	**-2.8**
WMGZ	**Waiomatatini S**	**5.31**	**214**	P	**Pn**	**12 02 04.6**	**-1.5**
WMGZ				S	**Sn**	**12 03 07.2**	**+1.1**
PKGZ	**Pakihiroa**	**5.51**	**215**	P	**Pn**	**12 02 07.4**	**-1.4**
PKGZ				S	**Sn**	**12 03 11.5**	**+0.4**
HAZ	**Te Kaha**	**5.57**	**218**	P	**Pn**	**12 02 08.4**	**-1.2**
HAZ				S	**Sn**	**12 03 13.4**	**+0.8**
PUZ	**Puketiti**	**5.59**	**213**	P	**Pn**	**12 02 07.2**	**-2.7**
PUZ				S	**Sn**	**12 03 11.7**	**-1.4**
RUGZ	**Raukumara Rang**	**5.78**	**217**	P	**Pn**	**12 02 11.1**	**-1.6**
RUGZ				S	**Sn**	**12 03 15.9**	**-2.1**
TWGZ	**Tauwhareparae**	**5.80**	**214**	P	**Pn**	**12 02 11.4**	**-1.5**
TWGZ				S	**Sn**	**12 03 17.1**	**-1.3**
CNGZ	**Carnagh Statio**	**5.95**	**211**	P	**Pn**	**12 02 13.1**	**-1.8**
TKGZ	**Te Karaka**	**6.07**	**214**	P	**Pn**	**12 02 14.5**	**-2.1**
TKGZ				S	**Sn**	**12 03 21.8**	**-3.1**
MWZ	**Matawai**	**6.14**	**216**	P	**Pn**	**12 02 14.7**	**-2.8**
MWZ				S	**Sn**	**12 03 24.3**	**-2.4**
GRZ	**Great Barrier**	**6.15**	**241**	P	**Pn**	**12 02 20.0**	**+2.4**
URZ	**Urewera**	**6.30**	**219**	Pn	**Pn**	**12 02 17.4**	**-2.2**
	4.0nm,0.3s,baz=271,slow=2.7,SNR=30						
URZ				Sn	**Sn**	**12 03 28.4**	**-2.1**
	60nm,0.3s,baz=183,slow=23,SNR=34						
	25nm,0.3s						
URZ	**Urewera**	**6.30**	**219**	P	**Pn**	**12 02 18.1**	**-1.5**
URZ	**Urewera**	**6.30**	**219**	P	**Pn**	**12 02 17.5**	**-2.2**
URZ				S	**Sn**	**12 03 27.9**	**-2.6**
RAGZ	**Rawiri**	**6.32**	**216**	P	**Pn**	**12 02 17.6**	**-2.5**
RIGZ	**Rimuhau**	**6.33**	**213**	P	**Pn**	**12 02 17.2**	**-2.9**
RIGZ				S	**Sn**	**12 03 30.7**	**-0.7**
TGRZ	**Tauranga**	**6.41**	**226**	P	**Pn**	**12 02 21.2**	**0.0**
PRGZ	**Paritu Road**	**6.46**	**211**	P	**Pn**	**12 02 19.0**	**-2.8**
OMRZ	**Omania**	**6.59**	**223**	P	**Pn**	**12 02 23.6**	**-0.2**
TARZ	**Mount Tarawera**	**6.61**	**222**	P	**Pn**	**12 02 26.8**	**+2.8**
KARZ	**Kaharoa**	**6.61**	**225**	P	**Pn**	**12 02 23.8**	**-0.2**
KNZ	**Kokohu**	**6.63**	**211**	P	**Pn**	**12 02 20.5**	**-3.6**
RTZ	**Ruatahuna**	**6.63**	**217**	P	**Pn**	**12 02 22.1**	**-2.2**
MHGZ	**Mahia Peninsul**	**6.64**	**210**	P	**Pn**	**12 02 20.9**	**-3.5**
MUGZ	**Murupara**	**6.64**	**219**	P	**Pn**	**12 02 23.9**	**-0.4**
MUGZ				S	**Sn**	**12 03 36.2**	**-2.7**
RRRZ	**Republican Roa**	**6.68**	**221**	P	**Pn**	**12 02 26.1**	**+1.3**
NGRZ	**Ngongotaha**	**6.70**	**224**	P	**Pn**	**12 02 27.0**	**+1.8**
HLRZ	**Highlands Stat**	**6.71**	**223**	P	**Pn**	**12 02 27.2**	**+1.9**
RAHZ	**Arahi**	**6.81**	**215**	P	**Pn**	**12 02 25.6**	**-1.1**
HRRZ	**Handcock Road**	**6.84**	**222**	P	**Pn**	**12 02 27.3**	**+0.2**
PRRZ	**Plateau Road**	**6.86**	**221**	P	**Pn**	**12 02 27.3**	**0.0**
WHHZ	**Waihua**	**6.87**	**214**	P	**Pn**	**12 02 25.9**	**-1.6**
MTHZ	**Maungataniwha**	**6.88**	**217**	P	**Pn**	**12 02 26.0**	**-1.7**
ALRZ	**Allen Road**	**6.93**	**221**	P	**Pn**	**12 02 28.6**	**+0.3**
MRHZ	**Matea Rd**	**7.09**	**219**	P	**Pn**	**12 02 28.8**	**-1.8**
NMHZ	**Naumai**	**7.09**	**216**	P	**Pn**	**12 02 29.4**	**-1.2**
ARHZ	**Aropaoanui**	**7.13**	**214**	P	**Pn**	**12 02 28.6**	**-2.4**
TLZ	**Tolley Road**	**7.23**	**226**	P	**Pn**	**12 02 34.0**	**+1.5**
OUZ	**Omahuta**	**7.27**	**253**	P	**Pn**	**12 02 35.7**	**+2.7**
OUZ	**Omahuta**	**7.27**	**253**	P	**Pn**	**12 02 35.6**	**+2.7**
BKZ	**Black Stump Fm**	**7.30**	**217**	P	**Pn**	**12 02 31.8**	**-1.6**
CKHZ	**Cape Kidnapper**	**7.41**	**212**	P	**Pn**	**12 02 31.9**	**-3.1**
MCHZ	**McNeill Hill**	**7.42**	**215**	P	**Pn**	**12 02 32.7**	**-2.3**
KAHZ	**Kahuranaki**	**7.61**	**212**	P	**Pn**	**12 02 33.5**	**-4.2**
TMVZ	**Te Maari**	**7.67**	**221**	P	**Pn**	**12 02 38.2**	**-0.4**
NTVZ	**North Tongarir**	**7.68**	**221**	P	**Pn**	**12 02 37.8**	**-0.9**
ETVZ	**East Tongariro**	**7.69**	**220**	P	**Pn**	**12 02 38.2**	**-0.6**
KRHZ	**Kereru**	**7.73**	**215**	P	**Pn**	**12 02 36.3**	**-3.0**
OTVZ	**Oturere**	**7.73**	**220**	P	**Pn**	**12 02 39.2**	**-0.3**
SNVZ	**South Ngauruho**	**7.76**	**220**	P	**Pn**	**12 02 42.2**	**+2.3**
BHHZ	**Black Hill Sta**	**7.76**	**217**	P	**Pn**	**12 02 37.1**	**-2.7**
HIZ	**Hauiti**	**7.76**	**227**	P	**Pn**	**12 02 40.1**	**+0.3**
HIZ	**Hauiti**	**7.76**	**227**	P	**Pn**	**12 02 41.8**	**+2.0**
TUVZ	**Tukino**	**7.81**	**220**	P	**Pn**	**12 02 41.7**	**+1.1**
PXZ	**Pawanui**	**7.81**	**211**	P	**Pn**	**12 02 35.7**	**-4.8**
COVZ	**Chateau Observ**	**7.82**	**221**	P	Pn	12 02 46.1	+5.4
FWVZ	**Far West T-bar**	**7.86**	**220**	P	**Pn**	**12 02 41.1**	**-0.2**
WHVZ	**Whangaehu Hut**	**7.86**	**220**	P	**Pn**	**12 02 40.7**	**-0.5**
MOVZ	**Moawhango**	**7.86**	**219**	P	**Pn**	**12 02 38.6**	**-2.5**
MAVZ	**Matarangi**	**7.86**	**220**	P	**Pn**	**12 02 41.0**	**-0.4**
WNVZ	**Wahianoa**	**7.88**	**220**	P	**Pn**	**12 02 40.6**	**-1.0**
MTVZ	**Mangateitei**	**7.99**	**220**	P	**Pn**	**12 02 41.3**	**-1.7**
PNHZ	**Pukenui**	**8.02**	**215**	P	**Pn**	**12 02 39.1**	**-4.2**
WPHZ	**Waipukurau**	**8.03**	**213**	P	**Pn**	**12 02 39.5**	**-4.0**
PRHZ	**Porangahau**	**8.11**	**211**	P	**Pn**	**12 02 40.0**	**-4.5**
TSZ	**Takapari Road**	**8.25**	**215**	P	**Pn**	**12 02 43.3**	**-3.2**
WAZ	**Wanganui**	**8.52**	**220**	P	**Pn**	**12 02 49.5**	**-0.7**
POWZ	**Post Office Ro**	**8.60**	**214**	P	**Pn**	**12 02 49.1**	**-2.1**
BFZ	**Birch Farm**	**8.62**	**211**	P	**Pn**	**12 02 46.8**	**-4.7**
BFZ	**Birch Farm**	**8.62**	**211**	P	Pn	12 02 45.9	-5.6
MRZ	**Mangatainoka R**	**8.90**	**214**	P	Pn	12 02 50.2	-5.2
HOWZ	**Holdsworth Sta**	**9.12**	**213**	P	**Pn**	**12 02 53.6**	**-4.7**
TMWZ	**Te Maipa**	**9.12**	**211**	P	**Pn**	**12 02 55.3**	**-3.1**
OGWZ	**Otaki Gorge**	**9.22**	**215**	P	**Pn**	**12 02 55.2**	**-4.5**
MTW	**Mount Morrison**	**9.33**	**212**	P	Pn	12 02 55.9	-5.4
KIW	**Kapiti Island**	**9.38**	**216**	P	**Pn**	**12 02 58.8**	**-3.1**
CAW	**Cannon Point**	**9.49**	**214**	P	**Pn**	**12 03 00.1**	**-3.4**
SNZO	**South Karori**	**9.82**	**215**	P	**Pn**	**12 03 05.6**	**-2.3**
TCW	**Tory Channel**	**9.95**	**217**	P	**Pn**	**12 03 05.7**	**-4.0**
TCW				S	**Sn**	**12 04 52.4**	**-7.9**
QRZ	**Quartz Range**	**10.62**	**223**	P	**Pn**	**12 03 16.8**	**-2.1**
KHZ	**Kahutara**	**11.23**	**215**	P	**Pn**	**12 03 23.7**	**-3.5**
RPZ	**Rata Peaks**	**13.41**	**217**	Pn	**Pn**	**12 03 54.5**	**-2.5**
	0.4nm,0.3s,baz=82,slow=2.1,SNR=11						
RPZ				Sn	Sn	12 06 11.4	-14
	1.6nm,0.3s,baz=313,slow=22,SNR=14						
	1.5nm,0.4s						
RPZ	**Rata Peaks**	**13.41**	**217**	P	**Pn**	**12 03 54.2**	**-2.8**
ODZ	**Otahua Downs**	**14.59**	**214**	P	Pn	12 04 07.6	-5.5
JCZ	**Jackson Bay**	**14.84**	**220**	P	**Pn**	**12 04 12.6**	**-4.0**
MSVF	**Nonsavu**	**16.06**	**346**	Pn	**Pn**	**12 04 30.2**	**-2.4**
	0.2nm,0.3s,baz=164,slow=14,SNR=7.4						
	4.4nm,0.7s						
MSVF	**Nonsavu**	**16.06**	**346**	P	**Pn**	**12 04 30.3**	**-2.3**
MSVF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MSVF	**Nonsavu**	**16.06**	**346**	Pn	**Pn**	**12 04 30.3**	**-2.3**
MARNC	**Mare, Loyalty**	**17.24**	**310**		**P**	**12 04 48.4**	**-0.3**
OUENC	**Ouen Island, N**	**17.37**	**305**		**P**	**12 04 52.0**	**+1.9**
DZM	**Mont Dzumac**	**17.88**	**305**	P	**Pn**	**12 04 51.8**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=128,slow=16,SNR=9.9						
	comp=Z,5.0nm,0.9s						
RAR	**Rarotonga**	**20.14**	**57**	LR	LR	12 13 24.3	
	comp=Z,316nm,18.4s,baz=234,slow=38						
AFI	**Afiamalu**	**20.22**	**17**	P	**P**	**12 05 21.1**	**-0.3**
	comp=Z,90nm,1.1s,baz=211,slow=12,SNR=5.5						
	comp=Z,90nm,1.1s						
AFI	**Afiamalu**	**20.22**	**17**	P	**P**	**12 05 18.2**	**-3.3**
AFI				IAmb	IAmb	12 05 23.7	
	comp=Z,118nm,1.1s						
KOUNC	**Koumac, New Ca**	**20.38**	**305**	P	**P**	**12 05 23.1**	**-0.1**
KOUNC				IAmb	IAmb	12 05 30.8	
	comp=Z,178nm,1.7s						
EIDS	**Eidsvold**	**28.13**	**278**		**P**	**12 06 38.5**	**+0.2**
PAE	**Paea**	**29.85**	**65**	*e*T	T	12 38 23.4	
	comp=Z,11nm,0.3s						
PPT2	**Papeete2**	**29.90**	**65**	*e*S	S	12 12 01.6	+12
	comp=Z,653nm,24.8s						
PPT2				*e*LR	LR	12 14 12.0	
	comp=Z,649nm,29.5s						
PPT2				*e*LR	LR	12 14 18.7	
	comp=Z,842nm,26.8s						
PPT2				*e*T	T	12 38 26.7	
	comp=Z,3.0nm,0.3s						
STKA	**Stephens Creek**	**34.00**	**261**	P	**P**	**12 07 29.1**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=108,slow=13,SNR=4.2						
STKA				LR	LR	12 21 35.7	
	comp=Z,755nm,18.1s,baz=74,slow=37						
	comp=Z,3.2nm,0.8s						
STKA	**Stephens Creek**	**34.00**	**261**	*i* P	**P**	**12 07 31.6**	**+1.7**
CTA	**Charters Tower**	**34.49**	**284**	P	**P**	**12 07 33.3**	**-1.0**
	comp=Z,4.6nm,0.5s,baz=118,slow=9.2,SNR=14						
CTA				LR	LR	12 21 13.7	
	comp=Z,351nm,18.1s,baz=106,slow=36						
	comp=Z,4.6nm,0.5s						
CTAO	**Charters Tower**	**34.49**	**284**	P	**P**	**12 07 34.0**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,27nm,1.3s						
CTAO	**Charters Tower**

SNAA Sanae 75.13 178 P **P** 12 12 28.1 +0.5
comp=Z,12nm,0.9s,baz=198,slow=6.4,SNR=28
SNAA Sanae 75.13 178 ⇓*i*P **P** 12 12 27.9 +0.3
SNAA *i* *PP **pwP** 12 12 46.1 +0.8
SNAA pmax pmax
comp=Z,21nm,1.0s
SNAA Sanae 75.13 178 P **P** 12 12 28.2 +0.6
SNAA IAmb IAmb 12 12 59.4
comp=Z,28nm,1.2s
AY03 Cochrane 75.45 137 P **P** 12 12 30.4 +0.6
AY03 IAmb IAmb 12 12 32.3
comp=Z,26nm,1.1s
VNA2 Neumayer--Watz 75.71 177 ⇓P **P** 12 12 31.4 +0.5
comp=Z,30nm,0.7s,baz=179,slow=5.6
VNA2 pP **PcP** 12 12 43.0 -0.5
comp=Z,14nm,0.7s,baz=169,slow=6.0
VNA2 ⇑sP **pwP** 12 12 48.8 +0.2
comp=Z,18nm,0.7s,baz=173,slow=4.1
NVL N'lazarevskaya 75.86 183 *e*P **P** 12 12 31.1 -0.6
NVL *e*S **S** 12 22 09.7 -1.8
NVL *e*SS **SS** 12 27 05.7 +2.9
NVL pmax pmax
comp=Z,9.0nm,0.9s
VNA1 Neumayer--Stat 75.94 176 ⇓P **P** 12 12 32.8 +0.6
comp=Z,30nm,0.9s
VNA1 ⇑sP **pwP** 12 12 50.4 +0.5
comp=Z,23nm,1.0s
LL02 Futaleuf 78.17 134 P **P** 12 12 45.5 +0.3
H03S2 Juan Fernandez 78.72 123 T T 13 41 57.0
baz=236,slow=74,SNR=6.7
H03S1 Juan Fernandez 78.73 123 T T 13 41 54.6
baz=236,slow=74,SNR=5.5
H03S3 Juan Fernandez 78.74 123 T T 13 41 47.0
baz=236,slow=74,SNR=6.0
H03N3 Juan Fernandez 78.93 123 T T 13 41 56.1
baz=239,slow=72,SNR=5.9
H03N2 Juan Fernandez 78.93 123 T T 13 42 02.3
baz=239,slow=72,SNR=5.7
H03N1 Juan Fernandez 78.94 123 T T 13 42 00.8
baz=239,slow=72,SNR=8.9
MJAR Matsushiro Arr 80.79 326 P **P** 12 12 59.0 -0.4
comp=Z,3.1nm,1.1s,baz=161,slow=6.1,SNR=5.8
comp=Z,3.1nm,1.1s
MJAR Matsushiro Arr 80.79 326 P **P** 12 13 00.3 +0.9
MJAR pmax pmax
comp=Z,13nm,1.9s
MJAR Matsushiro Arr 80.79 326 P **P** 12 13 00.3 +0.9
MT13 San Alfonso 84.69 127 IAmb IAmb 12 13 21.9
comp=Z,17nm,0.8s
JKA Kamikawa-asahi 85.17 333 P **P** 12 13 22.4 +0.6
JKA IAmb IAmb 12 13 24.5
comp=Z,18nm,1.0s
ASAJ Asahikawa 85.17 333 P **P** 12 13 22.4 +0.6
ASAJ pmax pmax
comp=Z,19nm,1.0s
LPIG La Paz 86.06 58 LR LR 12 43 10.0
comp=Z,125nm,19.7s,baz=218,slow=30
KSRS Korea Array 86.72 320 P **P** 12 13 29.2 -0.4
comp=Z,1.5nm,0.9s,baz=142,slow=6.9,SNR=6.0
comp=Z,1.5nm,0.9s
CO01 Juntas del Tor 87.08 124 IAmb IAmb 12 13 51.1
comp=Z,22nm,1.5s
ZON Zonda 87.10 126 IAmb IAmb 12 13 33.7
comp=Z,26nm,1.2s
PKD Bear Valley Ra 87.39 43 IAmb IAmb 12 13 35.1
comp=Z,26nm,1.2s
ESJX Sierra Juarez 87.42 49 IAmb IAmb 12 13 35.2
comp=Z,11nm,1.1s
YSS Yuzhno-Sakhali 87.52 334 *e*P **P** 12 13 34.3 +1.1
YSS *e*S **S** 12 24 08.5 -3.5
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,200nm,16.0s
YSS MLR MLR
comp=N,100nm,18.0s
YSS MLR MLR
comp=E,200nm,16.0s
YSS Yuzhno-Sakhali 87.52 334 P **P** 12 13 33.9 +0.7
ELS Elsinore Mount 87.62 47 IAmb IAmb 12 13 36.3
comp=Z,9.6nm,1.1s
MWC Mount Wilson 87.64 46 IAmb IAmb 12 13 36.2
comp=Z,13nm,1.2s
BFSC Mount Baldy Ra 87.89 46 IAmb IAmb 12 13 37.4
comp=Z,17nm,1.2s
BORC Borrego Spring 87.98 47 IAmb IAmb 12 13 38.1
comp=Z,13nm,1.3s
DNR Dunn Ranch,Anz 88.06 47 IAmb IAmb 12 13 38.7
comp=Z,19nm,1.1s
PFO Pinyon Flats O 88.19 47 LR LR 12 47 57.7
comp=Z,114nm,18.0s,baz=230,slow=32
PFO Pinyon Flats O 88.19 47 P **P** 12 13 37.2 +0.2
PFO pmax pmax
comp=Z,12nm,1.3s
PFO Pinyon Flats O 88.19 47 P **P** 12 13 37.2 +0.2
PFO IAmb IAmb 12 13 39.3
comp=Z,12nm,1.2s
PMD Palm Desert 88.27 47 IAmb IAmb 12 13 39.4
comp=Z,11nm,1.2s
NJ2 Nanjing 88.29 311 *e*P **P** 12 13 39.4 +2.1
NJ2 pmax pmax
comp=Z,12nm,0.5s
ISA Isabella, Lake 88.39 45 IAmb IAmb 12 13 40.1
comp=Z,19nm,1.1s
LRMC Laurel Mtn Rad 88.73 45 IAmb IAmb 12 13 41.6
comp=Z,12nm,0.9s
BELC Belle Mtn. Jos 88.74 47 IAmb IAmb 12 13 42.0
comp=Z,18nm,1.2s
PEA0B Petropavlovsk- 88.77 346*d* *i*P **P** 12 13 39.5 +0.4
PETK Petropavlovsk- 88.77 346 P **P** 12 13 39.1 0.0
comp=Z,15nm,1.1s,baz=96,slow=6.6,SNR=12
comp=Z,15nm,1.1s
PETK Petropavlovsk- 88.77 346 P **P** 12 13 39.3 +0.2
PETK Petropavlovsk- 88.77 346 P **P** 12 13 39.3 +0.2
BC3 Big Chuckawall 88.84 48 IAmb IAmb 12 13 42.8
comp=Z,23nm,1.4s
CCCA Chr Cary lake 88.95 45 IAmb IAmb 12 13 42.7
comp=Z,16nm,1.1s
CMB Columbia Colle 88.95 42 P **P** 12 13 40.5 +0.1
CMB pmax pmax
comp=Z,20nm,1.3s
CMB Columbia Colle 88.95 42 P **P** 12 13 40.5 +0.1
CMB IAmb IAmb 12 13 42.1
comp=Z,20nm,1.3s
GSC Goldstone, Bar 89.13 46 IAmb IAmb 12 13 43.5
comp=Z,15nm,1.1s
QSM Queen of Sheba 89.54 45 IAmb IAmb 12 13 45.2
comp=Z,14nm,1.1s
SDPT Sand Point 89.68 10 P **P** 12 13 43.9 +0.7
USA0B Ussuriysk Arra 89.74 326 *e*P **P** 12 13 44.5 +0.7
USRK Ussuriysk Ar. 89.74 326 P **P** 12 13 44.2 +0.4
comp=Z,7.5nm,0.9s,baz=108,slow=4.2,SNR=8.9
comp=Z,7.5nm,0.9s
USRK Ussuriysk Ar. 89.74 326 P **P** 12 13 43.5 -0.3
O03E Paynes Creek 89.80 39 P **P** 12 13 44.4 +0.1
O03E IAmb IAmb 12 13 45.8
comp=Z,19nm,1.2s
WAKR Walker 89.81 42 IAmb IAmb 12 13 46.7
comp=Z,24nm,1.3s
MTPC Mountain Pass 90.00 46 IAmb IAmb 12 13 48.1
comp=Z,18nm,1.2s
MPK Martis Peak 90.04 41 IAmb IAmb 12 13 47.6
comp=Z,24nm,1.2s
PNTR Pine Nut 90.13 41 IAmb IAmb 12 13 47.9
comp=Z,13nm,1.0s
YBH Yreka Blue Hor 90.36 38 P **P** 12 13 47.9 +0.9
comp=Z,7.1nm,1.1s,baz=195,slow=9.9,SNR=4.0
YBH LR LR 12 52 01.6
comp=Z,41nm,18.1s,baz=243,slow=34
comp=Z,7.1nm,1.1s
NVAR Mina Array Bea 90.40 43 P **P** 12 13 48.2 +0.9
comp=Z,4.1nm,0.8s,baz=218,slow=8.3,SNR=14
comp=Z,4.1nm,0.8s
Y14A Wickenburg 90.55 49 IAmb IAmb 12 13 50.4
comp=Z,11nm,1.0s
W13A Hualapai Mount 90.77 47 IAmb IAmb 12 13 51.6
comp=Z,8.2nm,1.0s
TPH Tonopah 90.77 43 IAmb IAmb 12 13 50.9
comp=Z,10nm,1.0s
TYV Tymovskoe 90.86 336 *e*P **P** 12 13 50.1 +1.2
TYV pmax pmax
comp=Z,18nm,1.3s
TYV pmax pmax
comp=Z,100nm,5.1s
TUC Tucson 90.93 51 P **P** 12 13 49.8 0.0
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC Tucson 90.93 51 P **P** 12 13 49.8 0.0
TUC IAmb IAmb 12 13 52.7
comp=Z,9.8nm,1.2s
MDJ Mudanjiang 91.17 325 P **P** 12 13 51.6 +1.1
MDJ pmax pmax
comp=Z,11nm,1.1s
X16A Lo Mia Camp, P 91.85 49 IAmb IAmb 12 13 56.9
comp=Z,10nm,1.0s
PB03 IPOC Station P 92.11 118 P **P** 12 13 55.7 0.0
PB03 IAmb IAmb 12 13 57.7
comp=Z,20nm,1.5s
NNA Nana 92.50 106 LR LR 12 48 43.0
comp=Z,157nm,18.5s,baz=234,slow=31
NNA Nana 92.50 106 *e*P **P** 12 13 59.1 +1.6
NNA pmax pmax
comp=Z,20nm,1.1s
CN2 Changchun 92.61 323 *e*P **P** 12 13 57.8 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.7s
U15A North Rim 92.61 47 IAmb IAmb 12 14 00.4
comp=Z,8.1nm,1.1s
KNB Kanab 92.67 47 IAmb IAmb 12 14 00.3
comp=Z,8.7nm,1.1s
BNX BinXian 93.05 325 ⇑P **P** 12 13 59.0 -0.1
BNX pmax pmax
comp=Z,3.0nm,0.9s
PB11 IPOC Station P 93.56 116 P **P** 12 14 02.0 -0.5
PB11 IAmb IAmb 12 14 04.3
comp=Z,15nm,1.0s
CMIG Matias Romero 93.60 72 LR LR 12 48 48.7
comp=Z,55nm,18.7s,baz=224,slow=31
ELK Elko 93.71 43 P **P** 12 14 02.8 +0.2
comp=Z,1.2nm,0.8s,baz=239,slow=4.5,SNR=3.7
ELK LR LR 12 53 12.8
comp=Z,113nm,18.3s,baz=264,slow=34
comp=Z,1.2nm,0.8s
J08A Circle Bar Ran 93.72 39 IAmb IAmb 12 14 04.1
comp=Z,10nm,1.1s
G06A Carlson Farm, 93.93 37 IAmb IAmb 12 14 04.9
comp=Z,17nm,1.3s
TXAR Lajitas Array 93.94 57 P **P** 12 14 04.4 +0.6
comp=Z,1.2nm,0.9s,baz=212,slow=7.5,SNR=7.7
TXAR LR LR 12 47 27.5
comp=Z,93nm,19.6s,baz=280,slow=30
comp=Z,1.2nm,0.9s
TXAR Lajitas Array 93.94 57 P **P** 12 14 03.7 -0.1
ATAH Atahualpa 93.97 101 LR LR 12 49 49.3
comp=Z,67nm,18.1s,baz=233,slow=31
N15K Kwethluk River 94.41 9 P **P** 12 14 05.7 +0.6
N15K IAmb IAmb 12 14 07.2
comp=Z,7.0nm,1.1s
CMAR Chiang Mai Arr 94.49 289 PP **PP** 12 17 50.2 -4.4
comp=Z,0.2nm,0.2s,baz=142,slow=6.4,SNR=4.4
CMAR Chiang Mai Arr 94.49 289*c* *e*P **P** 12 14 07.0 +0.5
CMAR pmax pmax
comp=Z,1.0nm,0.7s
PB16 IPOC Station P 94.53 115 P **P** 12 14 07.0 -0.5
PB16 IAmb IAmb 12 14 09.6
comp=Z,10nm,1.1s
ANMO Albuquerque 95.39 51 LR LR 12 52 30.4
comp=Z,91nm,18.1s,baz=261,slow=32
ANMO Albuquerque 95.39 51*c* *i*P **P** 12 14 11.1 +0.6
ANMO pmax pmax
comp=Z,2.0nm,1.1s
PLID Pearl Lake 96.20 39 IAmb IAmb 12 14 15.0
comp=Z,6.5nm,1.0s
PZH PanZhiHua 96.78 297 P **P** 12 14 18.8 +1.9
LPAZ La Paz 96.81 114 LR LR 12 49 46.1
comp=Z,50nm,20.7s,baz=220,slow=30
NEW Newport 97.77 36 LR LR 12 53 59.1
comp=Z,75nm,18.5s,baz=192,slow=33
CD2 Chengdu 97.78 302 *e*P Pdif 12 14 22.0 +0.8
JTS Las Juntas de 98.02 83 LR LR 12 51 10.5
comp=Z,69nm,18.4s,baz=240,slow=31
CPUP Villa Florida 98.02 129 LR LR 12 52 05.0
comp=Z,72nm,18.9s,baz=254,slow=31
HHC Hu-ho-hao-te 98.40 314 *e*P Pdif 12 14 26.5 +2.6
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,65nm,4.0s
BTO2 Baotou 99.36 313 *e*P **Pdif** 12 14 30.1 +1.9
BTO2 pmax pmax
comp=Z,12nm,0.6s
BTO2 pmax pmax
comp=Z,160nm,5.3s
LZH Lanzhou 100.60 306 *e*P **Pdif** 12 14 44.4 +11
LZH pP pwP 12 14 50.9 -0.8
LZH pmax pmax
comp=Z,14nm,1.2s
SONM Songino Array 105.44 317 PKKPab PKKPab 12 30 47.9 -0.6
comp=Z,0.4nm,0.5s,baz=270,slow=3.0,SNR=5.3
YKA Yellowknife Ar 108.13 26 PKiKP **PKiKP** 12 19 12.7 -0.1
comp=Z,0.7nm,0.7s,baz=239,slow=2.1,SNR=7.4
WMQ Urumqi 115.15 307 *e*PKP **PKPdf** 12 19 26.9 0.0
WMQ L L
comp=Z,250nm,24.3s
DGZ Jazzator, Alta 117.48 313 ⇑*i*PKIKP **PKPdf** 12 19 30.1 -1.2
ZSN Zaisan 118.32 310 *e*PKIKP **PKPdf** 12 19 32.5 -0.2
ZSN Zaisan 118.32 310 *e*PKP **PKPdf** 12 19 32.6 -0.2
MK31 Makanchi Array 119.77 309 ⇑*i*PKIKP **PKPdf** 12 19 35.4 -0.2
MKAR Makanchi Array 119.77 309 PKP **PKPdf** 12 19 35.3 -0.3
comp=Z,2.0nm,0.9s,baz=90,slow=2.4,SNR=6.3
MKAR PKKPab **PKKPbc** 12 29 46.7 +0.7
comp=Z,0.3nm,0.6s,baz=262,slow=5.4,SNR=3.9
MKAR Makanchi Array 119.77 309 **PKPdf** 12 19 35.2 -0.4
MAKZ Makanchi 119.98 309 PKIKP **PKPdf** 12 19 34.7 -1.3
MAKZ Makanchi 119.98 309 **PKPdf** 12 19 34.7 -1.3
ZALV Zalesovo Beam 120.34 317 PKP **PKPdf** 12 19 35.7 -0.7
comp=Z,0.6nm,0.5s,baz=106,slow=4.7,SNR=3.7
SHLS Shalkode 120.52 304 *e*PKIKP **PKPdf** 12 19 36.1 -1.2
SHLS Shalkode 120.52 304 *e*PKP **PKPdf** 12 19 36.2 -1.2
UZB Uzunbulak 120.82 304 *e*PKIKP **PKPdf** 12 19 37.4 -0.5
UZB Uzunbulak 120.82 304 *e*PKP **PKPdf** 12 19 37.4 -0.5
KPKS Kokpek 121.15 304 *e*PKIKP **PKPdf** 12 19 38.0 -0.5
KPKS Kokpek 121.15 304 *e*PKP **PKPdf** 12 19 38.0 -0.5
SATY Saty 121.22 304 *e*PKIKP **PKPdf** 12 19 38.1 -0.6
SATY Saty 121.22 304 *e*PKP **PKPdf** 12 19 38.1 -0.6
TDK Taldyqorghan 121.81 306 *e*PKIKP **PKPdf** 12 19 39.3 -0.3
TDK Taldyqorghan 121.81 306 *e*PKP **PKPdf** 12 19 39.3 -0.3
MDOK Medeo 122.20 303 *e*PKIKP **PKPdf** 12 19 39.9 -0.7
MDOK *e* 12 21 15.3
MDOK Medeo 122.20 303 *e*PKP **PKPdf** 12 19 40.0 -0.7
MDOK *e*PP **PP** 12 21 15.4 -1.2
TNSS Tian-Shan 122.23 303 *e*PKIKP **PKPdf** 12 19 40.1 -0.9
TNSS Tian-Shan 122.23 303 *e*PKP **PKPdf** 12 19 40.1 -0.9
NRIK Noril'sk 122.43 335 *i*PKIKP **PKPdf** 12 19 40.2 +0.2
KURK Kurchatov 123.19 312 ⇑*i*PKIKP **PKPdf** 12 19 42.2 +0.2
KURK Kurchatov 123.19 312 **PKPdf** 12 19 41.2 -0.8
KURBB Kurchatov Arra 123.22 312 PKP **PKPdf** 12 19 41.7 -0.4
comp=Z,4.9nm,0.9s,baz=104,slow=2.0,SNR=21
AAK Ala-Archa 123.84 302 *i*PKIKP **PKiKP** 12 19 44.2 +0.2
SGDS Sogindy 123.97 303 *e*PKP **PKPdf** 12 19 43.5 -0.4
SGDS *e*PP **PP** 12 21 27.0 -1.4
G62A West of Eustis 124.35 55 **PKPdf** 12 19 44.6 +0.2
BTLS Baital 124.80 305 *e*PKIKP **PKPdf** 12 19 44.9 -0.4
BTLS Baital 124.80 305 *e*PKP **PKPdf** 12 19 44.9 -0.4
DZA Taraz 126.16 302 *e*PKIKP **PKPdf** 12 19 47.5 -0.5
DZA Taraz 126.16 302 *e*PKP **PKPdf** 12 19 47.5 -0.5
G65A Princeton 126.38 55 **PKPdf** 12 19 48.5 +0.2
CHGR Chuyangaron 126.62 296 *i*PKIKP **PKPdf** 12 19 48.4 -0.7
KK31 Karatay Array 126.79 302 PKIKP **PKiKP** 12 19 50.0 +0.3
KK31 Karatay Array 126.79 302 **PKiKP** 12 19 50.0 +0.3
KKAR Karatay Array 126.79 302 PKIKP **PKPdf** 12 19 49.4 +0.2
KKAR Karatay Array 126.79 302 **PKPdf** 12 19 49.4 +0.2
IUG luzhnay 126.90 300 *e*PKIKP **PKPdf** 12 19 49.0 -0.6
IUG luzhnay 126.90 300 *e*PKP **PKPdf** 12 19 49.0 -0.6
CHM Chimkent 127.25 301 *e*PKIKP **PKPdf** 12 19 49.6 -0.5
CHM Chimkent 127.25 301 *e*PKP **PKPdf** 12 19 49.7 -0.5
BRLS Boroldaу 127.25 302 *e*PKIKP **PKPdf** 12 19 49.7 -0.4
BRLS Boroldaу 127.25 302 *e*PKP **PKPdf** 12 19 49.7 -0.4
BATG Bathurst New B 127.83 53 **PKPdf** 12 19 51.1 0.0
SCHQ Schefferville 128.40 44 PKP **PKPdf** 12 19 51.7 -0.2
comp=Z,8.2nm,1.0s,baz=346,slow=1.6,SNR=7.7
SCHQ Schefferville 128.40 44 **PKPdf** 12 19 52.2 +0.4
BVAR Borovoye Array 128.61 314 PKP **PKPdf** 12 19 52.7 +0.3
comp=Z,9nm,0.7s,baz=93,slow=3.0,SNR=13
BORK Borovoye 128.66 314 PKIKP **PKiKP** 12 19 53.3 +0.2
BORK Borovoye 128.66 314 **PKiKP** 12 19 53.3 +0.2
ARTI Arti 135.56 319 *i*PKIKP **PKiKP** 12 20 06.8 -0.1
ARTI 12 22 40.6
ARTI Arti 135.56 319 **PKPdf** 12 20 06.3 +0.9
ARCES ARCESS Array B 141.56 347 PKhKP PKPpre 12 20 02.8
comp=Z,0.5nm,0.4s,baz=118,slow=26,SNR=5.9
BELG Belogornoye 142.42 314 ⇓*i*PKIKP **PKiKP** 12 20 21.8 +0.8
KLMR Klimovskoe 143.46 330 *e*PKHKP PKPpre 12 20 15.7
KLMR pmax pmax
comp=Z,17nm,1.2s
GNI Garni 145.47 294 *i*PKIKP **PKPab** 12 20 24.6 +0.3
GNI Garni 145.47 294 **PKPab** 12 20 24.4 +0.2
VRH Novokhopyorsk 146.26 314 *e*PKP2 **PKPdf** 12 20 25.4 +0.7
VRH pmax pmax
comp=Z,59nm,1.0s
GOF Gofitskoye 146.58 303*c* *e*PKP2 **PKPab** 12 20 27.9 -0.2
GEVA Gevas 146.66 290 PKPbc **PKPbc** 12 20 27.6 -0.1
KBZ Khabaz 146.80 300 PKPbc **PKPbc** 12 20 27.8 +0.1
comp=Z,7.3nm,0.9s,baz=156,slow=1.1,SNR=12
KBZ Khabaz 146.80 300 *i*PKP2 **PKPbc** 12 20 28.1 +0.4
MOS Moscow 146.85 323 *i*PKP2 **PKPbc** 12 20 27.9 +0.5
MOS *e* 12 23 50.0
MOS pmax pmax
comp=Z,39nm,0.7s
KIV Kislovodsk 146.94 301 *e*PKP2 **PKPbc** 12 20 28.9 +0.7
KIV pmax pmax
comp=Z,9.0nm,1.1s
SHA1 Shidzhatmaz 146.97 300*d* *i*PKP2 **PKPbc** 12 20 28.2 -0.3
LPSR Galich'ya Gora 147.45 317 *e*PKP2 **PKPbc** 12 20 29.6 +0.4
LPSR pmax pmax
comp=Z,51nm,1.1s
VORR Voronezh 147.62 315 *e*PKP2 **PKPbc** 12 20 30.1 +0.4
VORR pmax pmax
comp=Z,48nm,1.2s
OBN Obninsk 147.67 323 *i*PKP2 **PKPbc** 12 20 30.7 +1.0
OBN *e* 12 23 54.7
OBN *e*PPP PPP 12 27 12.5
OBN pmax pmax
comp=Z,18nm,1.0s
VSR Storozhevoye 147.79 315 *e*PKP2 **PKPbc** 12 20 30.1 -0.1
VSR pmax pmax
comp=Z,43nm,1.2s
VORD Divnogorie 147.80 314 *e*PKP2 **PKPbc** 12 20 28.9 -1.3
VORD pmax pmax
comp=Z,30nm,1.0s
FINES FINESS Array B 148.01 338 PKPbc **PKPbc** 12 20 30.9 +0.5
comp=Z,30nm,0.9s,baz=83,slow=4.4,SNR=61
FINES FINESS Array B 148.01 338 **PKPbc** 12 20 30.2 -0.2
SOC Sochi 149.11 300 *i*PKP2 **PKiKP** 12 20 35.6 +0.5
SOC *e* 12 24 04.8
SOC *e*PPP PPP 12 27 24.8
SOC *e*SS SS 12 43 16.4 +0.4
VSU Vasula 150.01 334 ⇓*i*PKHKP PKPpre 12 20 34.8
NB2 NORSAR Subarra 151.76 351 PKP **PKPbc** 12 20 40.0 +0.3
comp=Z,3.5nm,0.7s,baz=17,slow=2.6
NOA NORSAR Array B 151.76 351 PKPbc **PKPbc** 12 20 39.6 -0.1
comp=Z,9.7nm,1.0s,baz=14,slow=3.7,SNR=18
NOA PKPab **PKPab** 12 20 48.5 -0.1
comp=Z,5.2nm,0.9s,baz=18,slow=3.2,SNR=10.0
MMAI Mount Meron Ar 152.21 278 PKPbc **PKiKP** 12 20 42.5 +0.5
comp=Z,6.2nm,0.7s,baz=48,slow=6.8,SNR=6.8
MNK Minsk 152.21 327 *i*PKiKP **PKiKP** 12 20 41.5 +0.3
comp=E,21nm,0.8s
MNK *i*PKiKP **PKiKP** 12 20 41.5 +0.3
comp=N,16nm,0.7s
MNK *i*PKiKP **PKiKP** 12 20 41.5 +0.3
comp=Z,29nm,1.0s,baz=51
MNK *i*pPKiKP **sPKPab** 12 20 57.5 -3.5
MNK *i*sPKiKP **pPKPab** 12 21 03.1 +4.9
MNK *i*PP **PP** 12 24 23.8 +0.9
MNK *i*PPP PPP 12 27 49.7
MNK *i*SKKS 12 36 25.5
MNK *i*SS SS 12 43 50.1 +1.2
MNK *i*SSS SSS 12 49 35.0
MNK Minsk 152.21 327 *i*PKIKP **PKiKP** 12 20 41.4 +0.3
MNK *i* 12 24 23.7
MNK *i*PPP PPP 12 27 49.7
MNK *i*SS SS 12 43 50.1 +1.1
MNK *i*SSS SSS 12 49 35.0
MNK pmax pmax
comp=E,21nm,0.8s
MNK pmax pmax
comp=Z,29nm,1.0s
MNK pmax pmax
comp=N,16nm,0.7s
HFS Hagfors 152.23 348 PKP **PKPdf** 12 20 32.8 -1.2
comp=N,4.2nm,1.1s,baz=279,slow=12,SNR=3.0
HFS PKPbc **PKPbc** 12 20 40.5 -0.2
comp=N,10.0nm,0.8s,baz=96,slow=1.5,SNR=14
HFS PKPab **PKPab** 12 20 49.6 -1.0
comp=N,6.5nm,0.8s,baz=141,slow=2.8,SNR=5.9
BNN Bunyan 152.33 291 **PKiKP** 12 20 42.6 +0.5
NACGM Naroch 152.45 329 *e*PKiKP **PKiKP** 12 20 41.9 +0.3
comp=Z,63nm,1.0s,baz=49
DBIC Dimbokro 152.59 165 PKPbc **PKiKP** 12 20 43.3 +0.1
comp=Z,14nm,0.9s,baz=162,slow=4.3,SNR=9.0
DBIC Dimbokro 152.59 165 **PKiKP** 12 20 43.6 +0.4
AKASG Malin Array Be 153.71 319 PKPbc **PKPbc** 12 20 44.1 -0.2
comp=Z,3.5nm,0.8s,baz=71,slow=2.3,SNR=8.7
AKASG PKPab **PKPab** 12 20 56.6 -0.5
comp=Z,4.7nm,0.9s,baz=49,slow=3.6,SNR=12
AKASG Malin Array Be 153.71 319*c* *i*PKIKP **PKPbc** 12 20 43.2 -1.1
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 153.71 319 **PKPab** 12 20 57.4 +0.2
AKBB Malin Array Si 153.71 319*d* *i*PKIKP **PKPbc** 12 20 43.8 -0.5
AKBB Malin Array Si 153.71 319 **PKiKP** 12 20 44.6 +0.3
BRTR Keskin Array B 154.00 293 PKPbc **PKPbc** 12 20 45.3 -0.2
comp=Z,1.5nm,0.7s,baz=134,slow=3.6,SNR=6.9
BRTR PKPab **PKPab** 12 20 56.4 -2.7
comp=Z,3.1nm,1.0s,baz=126,slow=2.1,SNR=8.1
BURAR Bucovina Array 157.55 316 PKPab **PKPab** 12 21 14.5 +0.6
KOLS Kolonicke sedl 158.42 322 *e*PKP2 **PKPab** 12 21 16.6 -0.9
KOLS Kolonicke sedl 158.42 322 *e*PKP **PKPab** 12 21 16.6 -0.9
STHS Stebnicka Huta 158.63 324 *e*PKP2 **PKPab** 12 21 18.9 +0.5
STHS Stebnicka Huta 158.63 324 *e*PKP **PKPab** 12 21 18.9 +0.5
BSEG Bad Segeberg 158.69 347 *e*PKPab **PKPab** 12 21 18.3 -0.1
baz=26,slow=3.9
KECS Kecovo 159.62 323 *e*PKP2 **PKPab** 12 21 22.5 -0.2
KECS Kecovo 159.62 323 *e*PKP **PKPab** 12 21 22.5 -0.2
LANS Liptovska Anna 159.67 326 *e*PKP2 **PKPab** 12 21 22.1 -0.8
LANS Liptovska Anna 159.67 326 *e*PKP **PKPab** 12 21 22.1 -0.8
TORD Torodi Ar. Bea 159.80 179 PKP **PKPdf** 12 20 45.9 +0.5
comp=Z,1.1nm,1.0s,baz=143,slow=4.2,SNR=4.6
TORD PKPab **PKPab** 12 21 23.6 -0.5
comp=Z,7.2nm,1.0s,baz=176,slow=4.2,SNR=17
STEB Steborice 159.86 330 *e*PKPAB **PKPab** 12 21 23.6 0.0
FLTG Flechtingen 160.00 343 *e*PKPab **PKPab** 12 21 23.8 -0.2
baz=26,slow=3.9
RETH Rethem/Aller, 160.01 347 *e*PKPab **PKPab** 12 21 23.9 -0.2
baz=26,slow=3.9
MORC Moravsky Berou 160.07 330 *e*PKP **PKPab** 12 21 24.0 -0.6
DPC Dobruska-Polom 160.12 332 *e*PKP2 **PKPab** 12 21 24.9 +0.1
DPC Dobruska-Polom 160.12 332 *e*PKPAB **PKPab** 12 21 24.9 +0.1
CLL Collm 160.45 339 *e*PKIKP **PKPdf** 12 20 47.0 +2.1
CLL *i* 12 21 26.0
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 160.45 339 *e*PKPdf **PKPdf** 12 20 47.0 +2.1
CLL *i*PKPab **PKPab** 12 21 26.0 -0.1
comp=Z,14nm,1.0s
BRG Berggiesshubel 160.54 337 *e*PKPab **PKPab** 12 21 26.8 +0.3
baz=26,slow=3.9
BRG Berggiesshubel 160.54 337 *e*PKPab **PKPab** 12 21 26.7 +0.2
BRG Amp 12 21 28.2
comp=Z,9.7nm,1.1s
BRG pPKPab **sPKPab** 12 21 39.1 +2.6
BRG Amp 12 21 42.8
comp=Z,4.3nm,1.0s
IBBN Ibbenburen 160.70 349 *e*PKPab **PKPab** 12 21 27.0 -0.1
baz=26,slow=3.9
JAVC Velka Javorina 160.70 328 *e*PKP **PKPab** 12 21 28.6 +1.2
VRAC Vranov 160.83 330 *e*PKP **PKPab** 12 21 28.1 +0.2
KRUC Moravsky 161.10 330 *e*PKP **PKPab** 12 21 29.2 +0.1
MODS Modra-Piesok 161.24 327 *e*PKP2 **PKPab** 12 21 30.0 +0.3
MODS Modra-Piesok 161.24 327 *e*PKP **PKPab** 12 21 30.0 +0.3
TANN Tannenbergstha 161.40 339 *e*PKPab **PKPab** 12 21 30.3 -0.1
baz=26,slow=3.9
PLN Plauen 161.43 340 *e*PKPab **PKPab** 12 21 30.3 -0.1
baz=26,slow=3.9
MOX Moxa 161.44 341 *e*PKPab **PKPab** 12 21 30.6 +0.1
baz=26,slow=3.9
MOX *e*L L 13 28 26.2
comp=Z,70nm,21.9s
ROTZ Rotzenmuhle 162.05 338 *e*PKPab **PKPab** 12 21 33.9 +0.8
baz=26,slow=3.9
CKRC Cesky Krumlov 162.13 333 *e*PKP2 **PKPab** 12 21 33.6 0.0
CKRC Cesky Krumlov 162.13 333 *e*PKPAB **PKPab** 12 21 33.6 0.0
KHC Kasperske Hory 162.14 335 *e*PKP2 **PKPab** 12 21 33.3 -0.4

KHC	Kasperske Hory	162.14	335	*e*PKPAB	PKPab	12 21 33.3	-0.4
KHC				*ex*	x	12 21 45.0	
KHC	Kasperske Hory	162.14	335		PKPab	12 21 34.2	+0.5
RONA	Rosalia, Austr	162.18	327	*e*PKP	PKPab	12 21 34.5	+0.6
	comp=Z,12nm,1.3s						
CONA	Conrad Observa	162.20	328	*e*PKP	PKPab	12 21 33.9	-0.1
	comp=Z,6.4nm,1.1s						
GEC2	GERESS Array S	162.34	334	*e*PKPab	PKPab	12 21 34.6	0.0
	baz=26,slow=3.9						
GEC2				*e*L	L	13 27 04.8	
	comp=Z,88nm,19.4s						
GERES	GERESS Array B	162.34	334	PKP	PKPdf	12 20 46.7	-0.5
	comp=Z,0.2nm,0.4s,baz=191,slow=1.4,SNR=3.8						
GERES				PKPab	PKPab	12 21 34.9	+0.3
	comp=Z,3.7nm,1.0s,baz=43,slow=2.5,SNR=15						
WET	Wettzell	162.38	336	*e*PKPab	PKPab	12 21 35.3	+0.6
	baz=26,slow=3.9						
GRF	Grafenberg Arr	162.41	340	*e*PKPab	PKPab	12 21 35.5	+0.8
	baz=26,slow=3.9						
ARSA	Arzberg	162.86	328	*e*PKP	PKPab	12 21 36.9	+0.1
	comp=Z,1.9nm,0.8s						
MOA	Molln	162.93	331	*e*PKP	PKPab	12 21 37.3	+0.2
	comp=Z,2.7nm,1.0s						
BMRD	Maredsous	163.03	354	*d*PKPdf	PKPdf	12 20 47.7	+0.1
BMRD				*d*PKP	PKPab	12 21 35.7	-1.7
BMRD				*dp*PKP	sPKPab	12 21 47.0	-0.4
DOU	Dourbes	163.25	354	*d*PKP	PKPab	12 21 39.7	+1.4
BIOA	Bad Ischl, Aus	163.31	332	*e*PKP	PKPab	12 21 39.3	+0.5
	comp=Z,5.4nm,0.9s						
SESA	Seetaler Alpe,	163.39	329	*e*PKP	PKPab	12 21 39.2	-0.2
	comp=Z,20nm,0.9s						
SOKA	Soboth	163.52	327	*e*PKP	PKPab	12 21 39.7	-0.1
	comp=Z,6.5nm,1.1s						
RJOB	Jochberg	163.60	334	*e*PKPab	PKPab	12 21 40.7	+0.6
	baz=26,slow=3.9						
FUR	Furstenfeldbru	163.75	338	*e*PKPab	PKPab	12 21 41.4	+0.6
	baz=26,slow=3.9						
LESA	Schwarzleotal	163.90	333	*e*PKP	PKPab	12 21 41.0	-0.5
	comp=Z,6.0nm,1.3s						
WATA	Walderalm	164.38	335	*e*PKP	PKPab	12 21 43.8	+0.2
	comp=Z,2.4nm,0.7s						
BFO	Black Forest	164.41	344	*e*PKPab	PKPab	12 21 43.7	+0.2
	baz=26,slow=3.9						
WTTA	Wattenberg	164.41	335	*e*PKP	PKPab	12 21 43.9	+0.1
	comp=Z,3.9nm,0.8s						
RETA	Reutte	164.51	338	*e*PKP	PKPab	12 21 44.7	+0.6
	comp=Z,7.4nm,0.9s						
ABTA	Abfaltersbach	164.53	332	*e*PKP	PKPab	12 21 43.4	-0.9
	comp=Z,7.7nm,1.0s						
MOTA	Moosalm	164.53	337	*e*PKP	PKPab	12 21 44.7	+0.4
	comp=Z,13nm,1.3s						
SQTA	Sankt Quirin	164.60	336	*e*PKP	PKPab	12 21 44.9	+0.3
	comp=Z,10nm,1.2s						
FETA	Feichten	164.94	337	*e*PKP	PKPab	12 21 46.4	+0.3
	comp=Z,11nm,1.2s						
DAVA	Damuels	164.96	339	*e*PKP	PKPab	12 21 46.6	+0.4
	comp=Z,5.4nm,0.8s						
ESDC	Sonseca Array	172.09	36	PKP	PKPdf	12 20 55.0	+0.4
	comp=Z,0.2nm,0.4s,baz=360,slow=4.3,SNR=2.4						
ESDC				PKPab	PKPab	12 22 19.0	+1.2
	comp=Z,1.1nm,0.8s,baz=338,slow=5.2,SNR=5.8						

IDC ***18*** *12:02:48.3±0.7,8.75S×109.46W,h0km,mb4.1/14, mbtmp4.1/14,MS4.3/46,Error ellipse: s-maj=32.4km s-min=15.6km az=67.0*

GFZ ***18*** *12:02:49.6±0.5,9.S±6.×11.0W±.,h10km,M4.5/27, mb4.5/27*

NEIC ***18*** *12:02:50.7±1.6,8.9S±0.1×109.6W±0.2,h10km±1km, mb4.9/277,Error ellipse: s-maj=27.4km s-min=17.7km az=253.0*

BJI ***18*** *12:02:50.0,9.00S×109.70W,h10km,Ms5.3/2,Ms7 5.0/2*

GCMT ***18*** *12:02:52.7±0.2,8.91S±0.01×109.52W±0.01,h12km, MW5.0/129,Moment Tensor Solution. s59,c81; s129,c202; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.47±.08; Mθθ1.26±.08; Mϕϕ-0.78±.09; Mrθ0.75±.22; Mθϕ4.13±.06; Mϕr0.41±.21; Best double couple: Mo4.32700×10¹⁶ NP1:ϕs7.00000°,δ82.00000°, λ175.00000°. NP2:ϕs97.00000°,δ85.00000°,λ8.00000°. Principal axes: T 4.6350, Plg9.0000°, Azm322.0000°; N -0.6100, Plg80.0000°, Azm128.0000°; P -4.0200, Plg2.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 12:02:51.1±0.4,8.90S±0.08×109.57W±0.10,h20km,n510, σ0s88/357,mb4.8/136,MS4.3/45,2C,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	18.14	179			LR	LR	12 11 59.3	
	comp=Z,1μm,19.2s,baz=358,slow=30								
CMIG	Matias Romero	29.62	29			LR	LR	12 18 06.4	
	comp=Z,602nm,20.5s,baz=220,slow=31								
TAOE	Nuku Hiva Isla	30.21	268	*e*	LR	LR	LR	12 16 50.7	
	142nm,22.8s								
APG	El Apazote	30.37	39			LR	LR	12 18 39.9	
	comp=Z,84nm,20.1s,baz=262,slow=32								
MTO3	Montecristo	30.62	41			P	P	12 09 05.1	+0.6
MTO3						IAmb	IAmb	12 09 07.8	
	comp=Z,22nm,1.4s								
ATAH	Atahualpa	30.92	89			LR	LR	12 18 42.3	
	comp=Z,359nm,18.6s,baz=265,slow=31								
JTS	Las Juntas de	31.04	53			LR	LR	12 18 26.0	
	comp=Z,1μm,21.6s,baz=243,slow=30								
JTS	Las Juntas de	31.04	53			P	P	12 09 08.4	+0.5
BOAB	BOACO BROADBA	31.84	49			P	P	12 09 15.7	+0.8
BOAB	BOACO BROADBA	31.84	49			P	P	12 09 13.7	-1.3
BRU2	Volcan	32.03	57			P	P	12 09 17.7	+0.9
ZAIG	Zacatecas	32.21	12			P	P	12 09 18.1	-0.3
OTAV	Otavalo	32.30	75			P	P	12 09 19.6	0.0
NNA	Nana	32.32	98			LR	LR	12 18 52.9	
	comp=Z,304nm,19.6s,baz=272,slow=30								
SLBS	Sierra La Lagu	32.38	359			P	P	12 09 19.5	-0.2
LPIG	La Paz	32.80	359			LR	LR	12 19 16.9	
	comp=Z,605nm,20.6s,baz=180,slow=30								
TEIG	Tepich	35.73	36			P	P	12 09 49.4	+0.7
TEIG						IAmb	IAmb	12 09 50.8	
	comp=Z,32nm,1.4s								
HPIG		35.82	6			P	P	12 09 50.1	+0.5
CZSB	Cruzeiro do Su	36.49	91			P	P	12 09 55.3	-0.1
CZSB	Cruzeiro do Su	36.49	91	*e*	P	P	P	12 09 56.4	+1.0
H03N2	Juan Fernandez	37.33	135			T	T	12 49 31.7	
	baz=308,slow=77,SNR=595								
H03N3	Juan Fernandez	37.35	135			T	T	12 49 34.9	
	baz=308,slow=77,SNR=699								
H03N1	Juan Fernandez	37.35	135			T	T	12 49 33.1	
	baz=308,slow=77,SNR=902								
ROSC	El Rosal	37.70	70			LR	LR	12 22 38.2	
	comp=Z,263nm,19.5s,baz=256,slow=32								
TX31	Lajitas Ar. Si	38.43	8			P	P	12 10 12.3	+0.7
TXAR	Lajitas Array	38.43	8			P	P	12 10 11.1	-0.5
	comp=Z,1.0nm,0.9s,baz=193,slow=9.0,SNR=7.4								
TXAR						PcP	PcP	12 12 25.4	+0.4
	comp=Z,0.9nm,0.9s,baz=192,slow=4.9,SNR=5.9								
TXAR						LR	LR	12 22 57.1	
	comp=Z,301nm,20.7s,baz=186,slow=32								
	comp=Z,1.0nm,0.9s								
TXAR	Lajitas Array	38.43	8			P	P	12 10 12.5	+0.9
TXAR						PcP	PcP	12 12 25.3	+0.4
SAND	Sanderson	39.28	10				P	12 10 19.3	+0.6
ALPN	Alpine	39.46	8				P	12 10 21.3	+1.0
VHRN	Van Horn	39.70	6				P	12 10 23.4	+1.1
PPT	Papeete	39.81	253			LR	LR	12 22 44.7	
	comp=Z,397nm,18.5s,baz=94,slow=30								
PPT2	Papeete2	39.82	253	*e*		LQ	LQ	12 19 32.6	
	comp=Z,2μm,29.2s								
PPT2				*e*		LR	LR	12 21 06.3	
	comp=Z,758nm,27.8s								
PPT2				*e*		LR	LR	12 21 13.1	
	comp=Z,1μm,26.2s								
PB16	IPOC Station P	39.97	108				P	12 10 25.0	-0.3
PB16	IPOC Station P	39.97	108		P		P	12 10 25.0	-0.3
TPB05	Hovey Rd	40.04	8		P		P	12 10 26.0	+1.0
TPB05					IAmb		IAmb	12 10 27.7	
	comp=Z,23nm,1.8s								
319A	Douglas	40.04	0		P		P	12 10 26.0	+0.9
PB01	IPOC Station P	40.44	112		P		P	12 10 28.7	+0.1
MNHN	Monahans	40.53	9		P		P	12 10 30.3	+1.1
MNTX	Cornudas Mount	40.56	5				P	12 10 30.0	+0.7
MNTX	Cornudas Mount	40.56	5		P		P	12 10 28.4	-1.0
PB08	IPOC Station P	40.59	111		P		P	12 10 30.4	+0.3
PB08	IPOC Station P	40.59	111		P		P	12 10 29.5	-0.7
TPB28		40.62	7		P		P	12 10 31.0	+1.0
TPB28					IAmb		IAmb	12 10 32.2	
	comp=Z,12nm,1.3s								
PB09	IPOC Station P	40.82	113		P		P	12 10 32.7	+0.8
PB09	IPOC Station P	40.82	113		P		P	12 10 33.0	+1.1
TPB11	China Draw	40.94	7		P		P	12 10 32.3	-0.3
LPAZ	La Paz	41.05	105		P		P	12 10 34.4	+0.1
	comp=Z,4.5nm,0.9s,baz=299,slow=7.2,SNR=15								
LPAZ					LR		LR	12 23 53.7	
	comp=Z,434nm,19.1s,baz=263,slow=31								
	comp=Z,4.5nm,0.9s								
LPAZ	La Paz	41.05	105		P		P	12 10 33.2	-1.1
LPAZ	La Paz	41.05	105	*e*	P		P	12 10 35.1	+0.9
LPAZ	La Paz	41.05	105		P		P	12 10 33.8	-0.5
ESJX	Sierra Juarez	41.12	352		P		P	12 10 35.2	+1.0
ESJX					IAmb		IAmb	12 10 37.2	
	comp=Z,32nm,1.7s								
BRDY	Brady	41.22	14				P	12 10 35.3	+0.6
121A	Cookes Peak, D	41.23	2				P	12 10 36.1	+1.1
121A					IAmb		IAmb	12 10 39.0	
	comp=Z,39nm,1.8s								
113A	Mohawk Valley,	41.62	355		IAmb		IAmb	12 10 40.9	
	comp=Z,51nm,1.9s								
YUH	Yuha Desert	41.75	352		P		P	12 10 40.6	+1.5
YUH					IAmb		IAmb	12 10 42.0	
	comp=Z,36nm,1.6s								
AC05	El Transito	41.88	124		P		P	12 10 40.0	-0.4
AC05					IAmb		IAmb	12 10 44.1	
	comp=Z,25nm,1.2s								
AC05	El Transito	41.88	124		P		P	12 10 40.6	+0.2
BAR	Barrett	41.89	351		P		P	12 10 41.6	+1.3
BAR					IAmb		IAmb	12 10 43.0	
	comp=Z,22nm,1.4s								
AC02	Maricunga	42.19	120		P		P	12 10 44.0	+0.5
AC02					IAmb		IAmb	12 10 46.7	
	comp=Z,60nm,2.0s								
AC02	Maricunga	42.19	120		P		P	12 10 43.6	+0.2
BORC	Borrego Spring	42.43	351		P		P	12 10 45.7	+1.1
SDV	Santo Domingo	42.62	67		LR		LR	12 25 45.6	
	comp=Z,263nm,19.8s,baz=238,slow=32								
BC3	Big Chuckawall	42.68	353		IAmb		IAmb	12 10 49.6	
	comp=Z,38nm,1.8s								
DNR	Dunn Ranch,Anz	42.76	351		IAmb		IAmb	12 10 50.3	
	comp=Z,58nm,1.7s								
PFO	Pinyon Flats O	42.77	352		LR		LR	12 24 09.6	
	comp=Z,715nm,19.8s,baz=185,slow=30								
X18A	Snowflake	43.19	360		IAmb		IAmb	12 11 04.7	
	comp=Z,36nm,2.0s								
BFSC	Mount Baldy Ra	43.58	350		IAmb		IAmb	12 11 06.3	
	comp=Z,37nm,1.6s								
MWC	Mount Wilson	43.63	350		IAmb		IAmb	12 10 57.3	
	comp=Z,32nm,1.4s								
ANMO	Albuquerque	43.70	4		LR		LR	12 26 07.2	
	comp=Z,312nm,19.2s,baz=188,slow=32								
ANMO	Albuquerque	43.70	4		P		P	12 10 54.8	-0.3
ANMO	Albuquerque	43.70	4		P		P	12 10 54.0	-1.1
WTFS	Witchita Falls	43.72	13		IAmb		IAmb	12 11 03.2	
	comp=Z,20nm,1.1s								
MT13	San Alfonso	43.76	130		P		P	12 10 55.9	+0.2
MT13					IAmb		IAmb	12 11 06.1	
	comp=Z,23nm,1.1s								
W13A	Hualapai Mount	43.94	355		IAmb		IAmb	12 11 00.3	
	comp=Z,32nm,1.6s								
SALTA		43.95	116		P		P	12 10 56.6	-1.1
CFA	Coronel Fontan	44.51	126		P		P	12 11 01.4	-0.1
	comp=Z,2.0nm,0.8s,baz=293,slow=7.6,SNR=7.7								
CFA					LR		LR	12 24 58.0	
	comp=Z,330nm,18.9s,baz=298,slow=30								
	comp=Z,2.0nm,0.8s								
WMOK	Wichita Mounta	44.58	13		P		P	12 11 01.0	-1.0
CCCA	Chr Cany lake	44.79	351		IAmb		IAmb	12 11 18.5	
	comp=Z,21nm,1.4s								
ISA	Isabella, Lake,	45.11	350		IAmb		IAmb	12 11 14.1	
	comp=Z,20nm,1.7s								
QSM	Queen of Sheba	45.15	352		IAmb		IAmb	12 11 09.2	
	comp=Z,17nm,1.4s								
U15A	North Rim	45.15	357		IAmb		IAmb	12 11 11.2	
	comp=Z,22nm,2.0s								
FURC	Furnace Creek,	45.64	352		IAmb		IAmb	12 11 13.2	
	comp=Z,17nm,1.4s								
MIAR	Mount Ida	45.78	19		P		P	12 11 12.2	+0.7
LCMT	Little Creek M	45.79	356		IAmb		IAmb	12 11 14.8	
	comp=Z,17nm,1.7s								
CWC	Cottonwood Cre	45.80	350		IAmb		IAmb	12 11 24.2	
	comp=Z,23nm,1.9s								
MVCO	Mesa Verde	45.87	1		IAmb		IAmb	12 11 14.9	
	comp=Z,31nm,1.7s								
MVCO	Mesa Verde	45.87	1		P		P	12 11 12.2	-0.3
WCT	Wildcat Mounta	45.92	352		IAmb		IAmb	12 11 25.3	
	comp=Z,12nm,1.3s								
X40A	Basin Creek Fa	45.97	19		IAmb		IAmb	12 11 41.2	
	comp=Z,19nm,1.7s								
TPNV	Topoah Spring	46.03	353		IAmb		IAmb	12 11 25.6	
	comp=Z,16nm,1.4s								
PRN	Pahroc Range	46.34	354		IAmb		IAmb	12 11 21.6	
	comp=Z,23nm,1.5s								
SZCU	Shurtz Canyon	46.36	356		IAmb		IAmb	12 11 20.7	
	comp=Z,27nm,2.0s								
S22A	4UR Ranch, Cre	46.47	3		IAmb		IAmb	12 11 30.4	
	comp=Z,12nm,1.4s								
SDCO	Great Sand Dun	46.55	4		IAmb		IAmb	12 11 30.1	
	comp=Z,15nm,1.5s								
HMU	Henry Mountain	46.60	359		IAmb		IAmb	12 11 20.4	
	comp=Z,23nm,1.7s								
MTPU	Mount Pierson	46.76	357		IAmb		IAmb	12 11 32.7	
	comp=Z,25nm,1.9s								
PV01	Paradox Valley	46.79	1		IAmb		IAmb	12 11 31.8	
	comp=Z,17nm,1.8s								
LRAL	Lakeview Retre	46.91	26		IAmb		IAmb	12 11 26.9	
	comp=Z,8.9nm,1.1s								
LL02	Futaleuf	47.44	143		IAmb		IAmb	12 12 47.0	
	comp=Z,36nm,0.9s								
LL02	Futaleuf	47.44	143		P		P	12 11 24.4	-0.1
FCAR	Ozark Folk Cen	47.48	19		IAmb		IAmb	12 11 30.9	
	comp=Z,12nm,1.5s								
Q16A	Castle Valley	47.59	358		IAmb		IAmb	12 11 29.7	
	comp=Z,14nm,1.6s								
SRU	San Rafael Swe	47.77	359		IAmb		IAmb	12 11 40.3	
	comp=Z,11nm,1.4s								
NVAR	Mina Array Bea	47.78	351		P		P	12 11 26.9	-0.4
	comp=Z,4.7nm,1.0s,baz=177,slow=9.9,SNR=28								
NVAR					PcP		PcP	12 12 57.0	+0.7
	comp=Z,0.3nm,0.7s,baz=189,slow=3.1,SNR=2.0								
NVAR					LR		LR	12 27 06.0	
	comp=Z,645nm,19.7s,baz=176,slow=31								
	comp=Z,4.7nm,1.0s								
SIV	San Ignacio	47.79	103		LR		LR	12 28 35.8	
	comp=Z,260nm,20.5s,baz=292,slow=32								
Y49A	Blount Mountai	47.87	26		IAmb		IAmb	12 11 34.1	
	comp=Z,9.6nm,1.0s								
TMUT	Trail Mountain	47.97	358		IAmb		IAmb	12 11 41.5	
	comp=Z,18nm,1.7s								
LCAR	Lake Charles	47.97	20		IAmb		IAmb	12 11 34.9	
	comp=Z,14nm,1.1s								
X48A	Hartselle	48.11	25		IAmb		IAmb	12 11 35.6	
	comp=Z,10nm,1.2s								
P17A	Butcher Ranch,	48.13	359		IAmb		IAmb	12 11 43.2	
	comp=Z,11nm,1.3s								
P18A	Preston Nutter	48.28	359		IAmb		IAmb	12 11 46.1	
	comp=Z,11nm,1.3s								
BBSD	Serra de San D	48.30	105	*e*	P		P	12 11 31.2	-0.3
KVN	Kaiserville	48.35	351		IAmb		IAmb	12 11 34.8	
	comp=Z,14nm,1.7s								
ISCO	Idaho Springs	48.59	4		P		P	12 11 34.2	+0.5
VILB	Vilhena	48.59	99	*e*	P		P	12 11 33.8	0.0
PNTR	Pine Nut	48.64	350		IAmb		IAmb	12 11 53.9	
	comp=Z,9.4nm,0.9s								
O20A	White River Ci	48.80	1		IAmb		IAmb	12 11 51.2	
	comp=Z,15nm,1.4s								
FPAL	Fort Paine	48.80	26		IAmb		IAmb	12 11 41.1	
	comp=Z,11nm,1.1s								
GOGA	Godfrey	48.85	29		IAmb		IAmb	12 11 42.1	
	comp=Z,16nm,1.1s								
GOGA	Godfrey	48.85	29		P		P	12 11 36.5	+1.1
MACA	Manacapuru-AM	48.92	86	*e*	P		P	12 11 35.1	-1.2
MPK	Martis Peak	48.92	349		IAmb		IAmb	12 11 44.3	
	comp=Z,21nm,1.3s								
DUG	Dugway, Tooele	48.93	357		P		P	12 11 35.6	-0.5
Y52A	Lilburn	48.94	28		IAmb		IAmb	12 11 42.8	
	comp=Z,18nm,1.1s								
BSUT	Blindstream Ca	49.20	359		IAmb		IAmb	12 11 42.9	
	comp=Z,19nm,1.8s								
PAHR	Pah Rah Range	49.20	350		IAmb		IAmb	12 11 41.3	
	comp=Z,25nm,1.8s								
RDMU	Red Mountain	49.22	0		IAmb		IAmb	12 11 50.4	
	comp=Z,30nm,1.9s								
SWET	Sewanee	49.23	26		IAmb		IAmb	12 11 44.3	
	comp=Z,8.7nm,0.9s								
WVT	Waverly	49.24	23		P		P	12 11 38.2	-0.1
WVT	Waverly	49.24	23		P		P	12 11 38.3	-0.1
V48A	Smith Brothers	49.31	25		IAmb		IAmb	12 11 44.7	
	comp=Z,8.2nm,1.0s								
ORV	Oroville	49.46	348		IAmb		IAmb	12 11 43.0	
	comp=Z,16nm,1.6s								
BEKR	Beckworth	49.53	349		IAmb		IAmb	12 11 49.3	
	comp=Z,14nm,1.5s								
PTLB	Pontes e Lacer	49.64	103		IAmb		IAmb	12 11 43.5	
	comp=Z,20nm,1.4s								
PTLB	Pontes e Lacer	49.64	103	*e*	P		P	12 11 41.9	+0.1
ELK	Elko	49.67	354		P		P	12 11 41.7	-0.1
	comp=Z,0.4nm,0.6s,baz=165,slow=6.7,SNR=8.7								
	comp=Z,0.4nm,0.6s								
ELK	Elko	49.67	354		IAmb		IAmb	12 11 46.0	
	comp=Z,22nm,1.9s								
CCM	Cathedral Cave	49.74	19		P		P	12 11 42.1	-0.1
CCM	Cathedral Cave	49.74	19		P		P	12 11 42.3	+0.1
RAR	Rarotonga	49.80	250		LR		LR	12 27 26.1	
	comp=Z,198nm,19.4s,baz=110,slow=30								
W52A	Murphy	50.02	28		IAmb		IAmb	12 11 51.3	
	comp=Z,17nm,1.1s								
CPCT	Cooper Cave	50.05	27		IAmb		IAmb	12 11 51.1	
	comp=Z,19nm,1.3s								
HODGE	Hodges	50.10	30		IAmb		IAmb	12 11 48.5	
	comp=Z,34nm,1.7s								
UUPR	Uluau, UPR, P	50.16	57		P		P	12 11 45.0	-0.7
T47A	Sharon Grove	50.27	23		IAmb		IAmb	12 11 52.0	
	comp=Z,14nm,1.0s								
HWUT	Hardware Ranch	50.28	358		P		P	12 11 46.1	-0.4
BG3	Lake Jocassee	50.40	29		IAmb		IAmb	12 11 53.6	
	comp=Z,22nm,1.2s								
U49A	Red Boiling Sp	50.40	25		IAmb		IAmb	12 11 57.2	
	comp=Z,24nm,1.8s								
TKL	Tuckaleechee C	50.55	27		LR		LR	12 33 04.9	
	comp=Z,121nm,18.1s,baz=196,slow=36								
TKL	Tuckaleechee C	50.55	27		IAmb		IAmb	12 11 54.2	
	comp=Z,14nm,1.1s								
SJG	San Juan	50.57	58		LR		LR	12 30 25.7	
	comp=Z,174nm,20.3s,baz=255,slow=33								
V53A	Saluda	51.01	28		IAmb		IAmb	12 11 58.5	
	comp=Z,18nm,1.1s								
COIM	Forte Coimbra	51.16	108	*e*	P		P	12 11 52.9	-0.3
Q44A	Meyer Farm, Va	51.26	21		IAmb		IAmb	12 11 59.8	
	comp=Z,25nm,1.1s								
TZTN	Tazewell	51.39	27		IAmb		IAmb	12 12 01.2	
	comp=Z,17nm,1.1s								
TZTN	Tazewell	51.39	27		P		P	12 11 54.3	-0.4
PDAR	Pinedale Array	51.41	0		P		P	12 11 54.4	-0.6
	comp=Z,0.6nm,0.7s,baz=177,slow=5.9,SNR=5.8								
PDAR					LR		LR	12 30 53.9	
	comp=Z,341nm,18.4s,baz=175,slow=33								
	comp=Z,0.6nm,0.7s								
PDAR	Pinedale Array	51.41	0		P		P	12 11 54.2	-0.8
OLIL	Oliney	51.43	21		IAmb		IAmb	12 12 00.9	
	comp=Z,20nm,0.9s								
WCI	Wyandotte Cave	51.67	23		P		P	12 11 54.6	-2.0
WVOR	Wild Horse Val	51.75	351		IAmb		IAmb	12 12 01.4	
	comp=Z,35nm,1.9s								
WVOR	Wild Horse Val	51.75	351		P		P	12 11 55.2	-2.2
YBH	Yreka Blue Hor	51.80	347		LR		LR	12 28 57.2	
	comp=Z,422nm,20.0s,baz=170,slow=30								
V55A	Taylorsville	51.91	29		IAmb		IAmb	12 12 04.5	
	comp=Z,23nm,1.2s								
R49A	Shelbyville	52.17	24		IAmb		IAmb	12 12 05.8	
	comp=Z,14nm,1.1s								
CPUP	Villa Florida	52.36	116		P		P	12 12 01.7	-0.4
	comp=Z,2.9nm,1.0s,baz=279,slow=10,SNR=4.5								
CPUP					LR		LR	12 30 05.2	
	comp=Z,391nm,21.6s,baz=256,slow=31								
	comp=Z,2.9nm,1.0s								
CPUP	Villa Florida	52.36	116		IAmb		IAmb	12 12 03.3	
	comp=Z,30nm,1.9s								
HLID	Hailey	52.39	356		P		P	12 12 02.1	-0.1
K05A	Summer Lake	52.40	349		IAmb		IAmb	12 12 20.8	
	comp=Z,30nm,1.4s								
R50A	Paris	52.51	25		IAmb		IAmb	12 12 08.1	
	comp=Z,12nm,1.1s								
CLDB	Colider	52.96	97	*e*	P		P	12 12 06.2	-0.5
CLDB	Colider	52.96	97		P		P	12 12 05.3	-1.5
SALV	Santo Antonio	52.96	103	*e*	P		P	12 12 07.1	+0.4
RSSD	Black Hills	53.00	5		P		P	12 12 06.7	-0.1
RSSD	Black Hills	53.00	5		P		P	12 12 07.2	+0.4
P48A	Milroy	53.07	23		IAmb		IAmb	12 12 11.8	
	comp=Z,14nm,1.1s		

HYT	Haines Junctio baz=151	72.91 346	P	P	12 14 20.4 +1.6
PINM	Pinnacle baz=148	72.97 344	P	P	12 14 20.9 +1.8
N31M	Braeburn, Yuko baz=153	73.10 347	P	P	12 14 21.1 +1.3
YUK6	Outpost Mounta baz=150	73.22 346	P	P	12 14 21.6 +0.8
MMPY	Sheldon Lake, baz=158	73.24 350	P	P	12 14 21.7 +1.1
N30M	Aishikik Lake baz=152	73.37 347	P	P	12 14 23.1 +1.7
M31M	Drury Creek, Y baz=154	73.45 348	P	P	12 14 23.1 +1.2
O28M	Mount Upton baz=148	73.53 345	P	P	12 14 23.7 +1.1
YUK4	Talbot Arm baz=150	73.64 346	P	P	12 14 24.4 +1.3
BRWY	Burwash Landin baz=150	73.75 346	P	P	12 14 24.8 +1.1
YUK8	Steele Glacier baz=149	73.86 345	P	P	12 14 24.7 +0.2
KAIM	Kayak Island baz=144	74.00 343	P	P	12 14 26.5 +1.5
Q23K	Middleton Isla baz=142	74.19 341	P	P	12 14 27.3 +1.2
CRQE	Cirque baz=146	74.29 344	P	P	12 14 27.8 +0.9
M30M	Minto, Yukon baz=152	74.30 347	P	P	12 14 27.7 +0.9
YUK3	Moose Creek baz=148	74.45 345	P	P	12 14 28.1 +0.1
M29M	Somme Creek baz=150	74.55 347	P	P	12 14 28.9 +0.5
MCARA	McCarthy VSAT baz=146	74.80 344	P	P	12 14 30.1 +0.5
SII	Sitkinak Islan baz=134	74.84 336	P	P	12 14 30.9 +0.9
EYAK	Cordova Ski Ar baz=143	74.89 342	P	P	12 14 31.6 +1.4
BMRM	Bremner River baz=144	74.89 343	P	P	12 14 31.6 +1.3
CHIR	Chirikof Islan baz=133	74.92 335	P	P	12 14 31.6 +1.1
OHAK	Old Harbor baz=135	74.95 337	P	P	12 14 31.8 +1.2
P23K	Montague Islan baz=141	74.97 341	P	P	12 14 32.1 +1.4
L29M	L29M baz=151	75.06 347	P	P	12 14 32.6 +1.4
KDAK	Kodiak Island comp=Z,535nm,18.1s,baz=157,slow=30	75.09 338	LR	LR	12 40 45.5
KDAK	Kodiak Island baz=136	75.09 338	P	P	12 14 32.7 +1.3
BVCY	Beaver Creek baz=148	75.10 346	P	P	12 14 32.8 +1.4
M27K	Edge Creek, AK baz=147	75.31 345	P	P	12 14 33.7 +1.0
N25K	Chitina, Valde baz=144	75.41 344	P	P	12 14 34.7 +1.3
GLI	Glacier Island baz=142	75.56 342	P	P	12 14 35.2 +1.2
K29M	Barlow Dome baz=152	75.57 348	P	P	12 14 35.4 +1.2
KLU	Klutina baz=143	75.70 343	P	P	12 14 35.8 +0.9
SEW	Seward baz=139	75.71 341	P	P	12 14 36.5 +1.6
BRSE	Bradley Lake S baz=138	75.86 340	P	P	12 14 37.6 +1.8
L27K	Beaver Creek, baz=147	75.89 345	P	P	12 14 37.4 +1.4
PWL	Port Wells baz=140	75.93 342	P	P	12 14 37.7 +1.5
CHNA	Chernabura Isl baz=129	75.99 333	P	P	12 14 37.6 +1.0
O22K	Cooper Landing baz=139	76.08 341	P	P	12 14 37.5 +0.5
HOM	Homer baz=137	76.11 339	P	P	12 14 38.1 +0.9
DAWY	Dawson baz=150	76.17 347	P	P	12 14 38.9 +1.3
HARP	HAARP baz=144	76.21 344	P	P	12 14 38.4 +0.6
RPZ	Rata Peaks comp=Z,72nm,20.4s,baz=36,slow=31	76.24 227	LR	LR	12 41 53.1
M24K	Tolsona, Glenn baz=143	76.26 343	P	P	12 14 37.9 -0.2
SCM	Sheep Creek Mo baz=142	76.38 343	P	P	12 14 39.3 +0.5
KNK	Knik Glacier baz=140	76.39 342	P	P	12 14 39.8 +1.0
CHGN	Chignik baz=130	76.41 334	P	P	12 14 39.5 +0.5
R17L	Mt. Peulik Vol baz=132	76.44 336	P	P	12 14 39.3 +0.2
RC01	Rabbit Creek A baz=139	76.55 341	P	P	12 14 39.9 +0.2
I30M	Mount Dempster baz=153	76.56 349	P	P	12 14 40.4 +0.6
Q18K	Katmai Hardscr baz=134	76.61 337	P	P	12 14 40.3 +0.1
SML	Sawmill baz=141	76.66 342	P	P	12 14 40.4 +0.1
P19K	Oil Pt baz=136	76.66 339	P	P	12 14 40.6 +0.2
Q17K	Contact Creek baz=133	76.68 337	P	P	12 14 40.6 0.0
H31M	Peel River baz=155	76.71 350	P	P	12 14 41.2 +0.6
SDPT	Sand Point baz=128	76.71 333	P	P	12 14 40.7 0.0
PMR	Palmer comp=Z,15nm,1.2s	76.74 342	IAmb	IAmb	12 14 52.8
PMR	Palmer baz=140	76.74 342	P	P	12 14 41.4 +0.7
PAX	Paxson baz=144	76.76 344	P	P	12 14 41.7 +0.7
O20K	Slope Mountain baz=136	76.76 339	P	P	12 14 41.4 +0.4
S14K	Fog Glacier baz=129	76.89 334	P	P	12 14 42.2 +0.3
WAT6	Susitna Watana baz=141	77.09 343	P	P	12 14 43.2 +0.3
M22K	Willow baz=139	77.17 342	P	P	12 14 43.4 +0.3
SCRK	Sand Creek baz=145	77.19 345	P	P	12 14 43.1 -0.3
P18K	Big Mountain, baz=134	77.21 338	P	P	12 14 43.4 0.0
RIDG	Independent Ri baz=144	77.22 345	P	P	12 14 43.8 +0.3
Q16K	King Salmon baz=132	77.26 337	P	P	12 14 43.9 +0.3
DHY	Denali Highway baz=142	77.37 343	P	P	12 14 45.1 +0.6
O19K	Port Alsworth baz=135	77.44 339	P	P	12 14 45.5 +0.9
I28M	Miner Creek baz=149	77.49 348	P	P	12 14 45.1 +0.1
K24K	Donnelly Dome baz=143	77.51 344	P	P	12 14 46.1 +1.0
WAT1	Susitna Watana baz=141	77.52 343	P	P	12 14 45.9 +0.8
O18K	Koktuh Hills baz=134	77.52 338	P	P	12 14 44.8 -0.4
P17K	Kvichak River baz=132	77.53 337	P	P	12 14 45.2 0.0
EPYK	Eagle Plains baz=153,SNR=5.1	77.65 349	P	P	12 14 46.5 +0.7
CUT	Chulitna baz=139	77.71 342	P	P	12 14 46.9 +0.8
G31M	Satah River baz=155	77.72 350	P	P	12 14 47.1 +1.0
SKT	Skwentna comp=Z,11nm,1.2s	77.78 341	IAmb	IAmb	12 14 49.5
SKT	Skwentna baz=138	77.78 341	P	P	12 14 47.6 +1.0
H29M	Whitestone baz=151,SNR=5.5	77.83 348	P	P	12 14 47.0 +0.1
N19K	Bonanza Creek baz=135	77.93 339	P	P	12 14 47.4 -0.2
L22K	Petersville comp=Z,13nm,1.0s	77.95 342	IAmb	IAmb	12 14 49.0
L22K	Petersville baz=138	77.95 342	P	P	12 14 48.4 +0.8
I27K	Kandik River baz=148	77.98 347	P	P	12 14 48.0 +0.3
P16K	Nushagak River baz=131	78.02 337	P	P	12 14 47.9 0.0
RND	Reindeer comp=Z,11nm,1.1s	78.05 343	IAmb	IAmb	12 14 49.5
J25K	Salcha River, comp=Z,12nm,1.2s	78.06 345	IAmb	IAmb	12 15 20.4
J25K	Salcha River, baz=144	78.06 345	P	P	12 14 48.3 +0.1
I26K	Coal Creek Min baz=146	78.09 346	P	P	12 14 48.4 +0.2
O17K	Koliganek Bris baz=132	78.16 338	P	P	12 14 48.2 -0.6
BELA	Belgrano 2	78.21 168	P	P	12 14 48.1 -0.7
BELA	comp=Z,26nm,1.8s		IAmb	IAmb	12 15 03.8
M20K	Styx River baz=136	78.23 341	P	P	12 14 49.6 +0.4
HDA	Hardin Lake baz=142	78.31 344	P	P	12 14 49.2 -0.3
MCK	McKinley baz=140	78.32 343	P	P	12 14 49.9 +0.3
N18K	Kilae Creek baz=133	78.33 339	P	P	12 14 49.7 0.0
G29M	Pine Creek baz=151	78.38 349	P	P	12 14 50.2 +0.3
O16K	Kokwok River B comp=Z,18nm,1.2s	78.42 337	IAmb	IAmb	12 14 51.2
O16K	Kokwok River B baz=131	78.42 337	P	P	12 14 50.2 0.0
H27K	Steamboat Moun baz=148	78.50 347	P	P	12 14 50.5 -0.1
TRF	Thorofare Moun comp=Z,24nm,1.5s	78.50 343	IAmb	IAmb	12 15 12.9
TRF	Thorofare Moun baz=139	78.50 343	P	P	12 14 50.5 -0.2
ILAR	Eielson Array comp=Z,1.3nm,0.9s,baz=166,slow=6.4,SNR=7.3	78.58 345	P	P	12 14 50.5 -0.4
ILAR	comp=Z,189nm,19.2s,baz=108,slow=30 comp=Z,1.3nm,0.9s		LR	LR	12 42 28.6
ILAR	Eielson Array	78.58 345	P	P	12 14 50.7 -0.3
F30M	Barrier River baz=154	78.60 350	P	P	12 14 51.2 +0.1
WRH	Wood River Hil comp=Z,12nm,1.0s	78.66 344	IAmb	IAmb	12 14 52.6
M19K	Big River Lodg baz=135	78.67 340	P	P	12 14 52.2 +0.7
PPLA	Purkeypile baz=137	78.67 342	P	P	12 14 51.7 0.0
N17K	Nushagak Hills comp=Z,15nm,1.3s	78.70 338	IAmb	IAmb	12 14 53.1
N17K	Nushagak Hills baz=132,SNR=5.4	78.70 338	P	P	12 14 51.6 -0.1
C36M	Paulatuk baz=166	78.71 355	P	P	12 14 51.5 -0.1
UNV	Unalaska Valle baz=122	78.71 330	P	P	12 14 51.7 -0.2
FRB	Frobisher Bay comp=Z,205nm,18.4s,baz=207,slow=34	78.82 17	LR	LR	12 48 05.2
PRP	Porcupine Dome baz=144	78.83 346	P	P	12 14 52.3 -0.2
O15K	Ungalikthiuk R baz=129	78.83 336	P	P	12 14 51.9 -0.5
INK	Inuvik comp=Z,2.4nm,1.0s,baz=125,slow=6.7,SNR=3.5	78.86 351	P	P	12 14 52.0 -0.4
INK	comp=Z,355nm,20.6s,baz=142,slow=33 comp=Z,2.4nm,1.0s		LR	LR	12 45 45.4
INK	Inuvik comp=Z,11nm,1.3s	78.86 351	IAmb	IAmb	12 16 31.2
INK	Inuvik baz=156	78.86 351	P	P	12 14 53.0 +0.6
M18K	Stony River baz=133	78.87 339	P	P	12 14 52.5 -0.1
COLA	College baz=142	78.91 344	P	P	12 14 53.2 +0.4
G27K	Doyon Strip baz=148	79.02 348	P	P	12 14 54.1 +0.7
CAST	Castle Rocks comp=Z,13nm,1.2s	79.02 342	IAmb	IAmb	12 14 54.4
CAST	Castle Rocks baz=137,SNR=6.8	79.02 342	P	P	12 14 53.5 0.0
L19K	White Mountain comp=Z,9.9nm,1.0s	79.02 340	IAmb	IAmb	12 14 54.2
L19K	White Mountain baz=134,SNR=5.9	79.02 340	P	P	12 14 53.3 -0.2
NEA2	Nenana baz=140	79.03 344	P	P	12 14 53.9 +0.4
N16K	Nishlik Lake baz=131	79.26 338	P	P	12 14 55.0 +0.2
F28M	Old Crow baz=150	79.34 349	P	P	12 14 55.6 +0.4
M17K	Holitna River baz=132	79.38 339	P	P	12 14 55.9 +0.5
CHUM	Lake Minchumin baz=137	79.43 342	P	P	12 14 56.0 +0.4
O14K	Tigyukauivet M baz=128	79.46 336	P	P	12 14 55.9 0.0
I23K	Minto, Yukon-K comp=Z,14nm,1.3s	79.53 344	IAmb	IAmb	12 16 33.1
I23K	Minto, Yukon-K baz=140,SNR=5.1	79.53 344	P	P	12 14 57.2 +1.1
N15K	Kwethluk River baz=129	79.57 337	P	P	12 14 56.5 0.0
K20K	Telida comp=Z,14nm,1.0s	79.59 341	IAmb	IAmb	12 14 57.2
K20K	Telida baz=135,SNR=12	79.59 341	P	P	12 14 56.2 -0.3
G26K	Porcupine Rive comp=Z,17nm,1.5s	79.60 347	IAmb	IAmb	12 16 15.9
G26K	Porcupine Rive baz=146	79.60 347	P	P	12 14 57.4 +0.9
E29M	Blow River baz=152	79.66 350	P	P	12 14 57.5 +0.7
L18K	Granite Mounta baz=133	79.67 340	P	P	12 14 57.1 +0.1
H24K	Noodor Dome baz=142	79.68 345	P	P	12 14 57.8 +0.7
M16K	Timber Creek baz=130	79.69 338	P	P	12 14 57.2 +0.2
MLY	Manley comp=Z,17nm,1.6s	79.83 344	IAmb	IAmb	12 15 10.3
MLY	Manley baz=139	79.83 344	P	P	12 14 58.7 +0.8
G25K	Bearman Lake baz=143	79.98 346	P	P	12 14 59.3 +0.7
N14K	Kuskukwak Cree baz=128	80.04 336	P	P	12 14 59.4 +0.4
H23K	Yukon River baz=140	80.10 344	P	P	12 14 59.6 +0.3
M15K	Kasigluk River baz=129	80.13 337	P	P	12 14 59.4 -0.1
E28M	Babbage River baz=150	80.14 349	P	P	12 14 59.5 +0.1
L17K	Donlin baz=131	80.17 339	P	P	12 15 00.2 +0.5
E27K	Colleen River baz=148	80.17 348	P	P	12 15 00.4 +0.7
J20K	Nowinta River baz=135	80.20 342	P	P	12 15 00.3 +0.5
G24K	Hadweenzic Riv comp=Z,16nm,1.3s	80.26 346	IAmb	IAmb	12 16 33.9
G24K	Hadweenzic Riv baz=142,SNR=5.6	80.26 346	P	P	12 15 00.9 +0.8
I21K	Tanana comp=Z,17nm,1.5s	80.29 343	IAmb	IAmb	12 15 22.5
I21K	Tanana baz=138,SNR=6.3	80.29 343	P	P	12 15 01.2 +1.0
F26K	Sheenjek River baz=145,SNR=5.3	80.29 347	P	P	12 15 01.5 +1.2
L16K	Owhat River comp=Z,11nm,1.1s	80.32 338	IAmb	IAmb	12 15 07.5
L16K	Owhat River baz=130	80.32 338	P	P	12 15 00.8 +0.3
J18K	Innoko River baz=133	80.52 340	P	P	12 15 02.0 +0.4
J19K	Poorman baz=134	80.53 341	P	P	12 15 02.4 +0.8
F25K	Christian Rive baz=144,SNR=6.7	80.54 347	P	P	12 15 03.1 +1.4
K17K	Iditarod comp=Z,13nm,1.1s	80.56 339	IAmb	IAmb	12 15 03.1
K17K	Iditarod baz=131	80.56 339	P	P	12 15 02.5 +0.7
D28M	Stokes Point baz=151	80.63 350	P	P	12 15 03.1 +1.2
H22K	Ishtalitna Cre baz=138,SNR=6.7	80.65 344	P	P	12 15 03.2 +1.0
M14K	Bethel comp=Z,17nm,1.1s	80.66 337	IAmb	IAmb	12 15 03.7
M14K	Bethel baz=128	80.66 337	P	P	12 15 03.2 +0.9
I20K	Naaghedeneel baz=135	80.74 342	P	P	12 15 03.2 +0.5
H21K	Melozitna Rive comp=Z,10nm,1.2s	80.87 343	IAmb	IAmb	12 15 04.6
H21K	Melozitna Rive baz=137,SNR=5.5	80.87 343	P	P	12 15 04.2 +0.8
G23K	Bananza Creek baz=140	80.91 345	P	P	12 15 04.2 +0.6
E25K	Arctic Village comp=Z,12nm,1.4s	80.95 347	IAmb	IAmb	12 17 04.3
E25K	Arctic Village baz=144	80.95 347	P	P	12 15 05.0 +1.2
D27M	Malcolm River baz=149	80.96 349	P	P	12 15 05.1 +1.2
M13K	Dall Lake baz=126	81.00 336	P	P	12 15 05.0 +0.9
F24K	Squaw Lake baz=142	81.00 346	P	P	12 15 05.2 +1.1
L15K	Ungalak Mounta baz=128	81.05 338	P	P	12 15 05.2 +0.8
DZM	Mont Dzumac comp=Z,126nm,21.2s,baz=284,slow=29	81.17 249	LR	LR	12 42 01.8
QSPA	South Pole Qui comp=Z,8.7nm,1.0s,baz=110,slow=2.2,SNR=9.1	81.18 180	P	P	12 15 06.4 +1.0
QSPA	comp=Z,131nm,21.3s,baz=88,slow=30 comp=Z,8.7nm,1.0s		LR	LR	12 44 00.5
QSPA	South Pole Qui	81.18 180	P	P	12 15 06.3 +1.0
J17K	VABM Dome comp=Z,14nm,1.2s	81.27 340	IAmb	IAmb	12 15 07.6
J17K	VABM Dome baz=131	81.27 340	P	P	12 15 06.2 +0.6
L14K	Kuka Creek baz=127	81.30 337	P	P	12 15 05.9 +0.2
COLD	Coldfoot comp=Z,9.2nm,1.0s	81.35 345	IAmb	IAmb	12 15 08.2
COLD	Coldfoot baz=140,SNR=8.1	81.35 345	P	P	12 15 06.8 +0.9
H20K	Anotleneega Mo baz=135	81.36 343	P	P	12 15 06.3 +0.3
A36M	Sachs Harbour comp=Z,7.0nm,0.9s	81.37 355	IAmb	IAmb	12 15 14.4
A36M	Sachs Harbour baz=164	81.37 355	P	P	12 15 07.9 +2.0
IMAR	Indian Mountai	81.38 343	P	P	12 15 05.5 -0.6
K15K	Wolf Creek Mou baz=128	81.44 338	P	P	12 15 08.0 +1.5
GCSA	Galena City Sc baz=133,SNR=6.7	81.45 341	P	P	12 15 07.7 +1.3
G22K	Bettles baz=138	81.45 345	P	P	12 15 07.9 +1.4
E24K	Your Creek baz=141	81.58 346	P	P	12 15 08.6 +1.4
G21K	Allakaket baz=136	81.69 344	P	P	12 15 08.8 +1.0
J16K	Anvik River baz=129	81.73 339	P	P	12 15 08.8 +0.8
E23K	Chandalar comp=Z,8.5nm,1.0s	81.84 346	IAmb	IAmb	12 15 16.7
E23K	Chandalar baz=140	81.84 346	P	P	12 15 09.6 +1.0
H19K	Roundabout Mou comp=Z,12nm,1.1s	81.85 342	IAmb	IAmb	12 15 10.5
H19K	Roundabout Mou baz=133,SNR=6.0	81.85 342	P	P	12 15 09.7 +1.1
F22K	John River baz=138	82.06 345	P	P	12 15 11.0 +1.3
D25K	Kavik River baz=143	82.10 348	P	P	12 15 11.2 +1.3
M11K	Mekoryuk baz=124	82.15 335	P	P	12 15 10.5 +0.3
H18K	Honhosa River baz=132	82.19 341	P	P	12 15 11.0 +0.6
F21K	Alatna River baz=136	82.20 344	P	P	12 15 11.2 +0.8
TOLK	Toolik Lake Re baz=140	82.28 346	P	P	12 15 12.2 +1.4
C26K	Camden Bay baz=145	82.28 348	P	P	12 15 12.0 +1.3
K13K	Kusilvak Mount baz=125	82.41 337	P	P	12 15 12.6 +1.1
E22K	Anaktuvuk Pass baz=138	82.44 345	P	P	12 15 13.0 +1.3
G19K	Purcell Mounta comp=Z,8.7nm,1.1s	82.47 342	IAmb	IAmb	12 15 29.9
G19K	Purcell Mounta baz=133	82.47 342	P	P	12 15 13.2 +1.4
J14K	Nanvaranak Lak baz=126	82.47 338	P	P	12 15 13.3 +1.5
D24K	Happy Valley baz=141	82.50 347	P	P	12 15 13.1 +1.2
H17K	Granite Mounta baz=130	82.55 341	P	P	12 15 13.4 +1.2
F20K	Avaraart Lake baz=134	82.69 343	P	P	12 15 14.3 +1.4
G18K	Tagagawik baz=131	82.78 342	P	P	12 15 15.1 +1.6
D23K	Nanushuk River baz=139	82.79 346	P	P	12 15 15.1 +1.6
F19K	Shaleruckik Mo comp=Z,11nm,1.4s	83.14 343	IAmb	IAmb	12 15 37.5
F19K	Shaleruckik Mo baz=132	83.14 343	P	P	12 15 16.5 +1.2
H16K	Elim baz=128	83.14 340	P	P	12 15 16.4 +1.1
G17K	Kiwalik Mounta baz=129	83.15 341	P	P	12 15 16.6 +1.3
E21K	Killik River baz=136	83.21 345	P	P	12 15 16.6 +1.0
E19K	Redstone River baz=133	83.40 343	P	P	12 15 18.2 +1.5
C23K	Itkillik River baz=139	83.43 347	P	P	12 15 17.8 +1.1
F18K	Selawik baz=130	83.54 342	P	P	12 15 18.2 +0.9
G16K	Koyuk River baz=128	83.64 340	P	P	12 15 19.5 +1.6
E20K	Nigu River baz=134	83.67 344	P	P	12 15 19.3 +1.2
RES	Resolute Bay comp=Z,371nm,18.7s,baz=200,slow=34	83.92 4	LR	LR	12 50 37.2
C21K	Knifeblade Rid baz=135	83.93 345	P	P	12 15 20.8 +1.4
F17K	Baldwin Pennin baz=129	83.94 342	P	P	12 15 20.7 +1.4
D20K	Etivluk River baz=134	84.09 344	P	P	12 15 21.8 +1.6
ANM	Nome baz=125	84.19 339	P	P	12 15 21.6 +0.9
B21K	Ikpikpuk River baz=135	84.22 346	P	P	12 15 21.8 +1.0
D19K	Kuna River baz=132	84.35 344	P	P	12 15 22.7 +1.2
E18K	Tukpahlearik C baz=130	84.36 342	P	P	12 15 22.5 +1.0
E17K	Hotham Inlet baz=128	84.52 342	P	P	12 15 23.4 +1.1
F15K	North Star Dit baz=126	84.60 340	P	P	12 15 23.8 +1.1
F14K	Arctic Creek baz=124	85.04 339	P	P	12 15 26.0 +1.0
B20K	Meade River baz=133	85.13 345	P	P	12 15 26.7 +1.4
C19K	Lookout Ridge baz=131	85.16 344	P	P	12 15 26.3 +0.7
D17K	Noatak River baz=127	85.28 342	P	P	12 15 26.7 +0.6
C18K	Utukok River baz=129	85.31 343	P	P	12 15 26.5 +0.1
VNA1	Neumayer--Stat comp=Z,12nm,1.0s	85.40 161 ⇑P		P	12 15 27.0 +0.3
RDOG	Red Dog Mine baz=127	85.44 342	P	P	12 15 27.4 +0.4
VNA2	Neumayer--Watz comp=Z,6.0nm,1.0s,baz=258,slow=5.1	85.61 161 ⇑P		P	12 15 27.6 -0.3
TNA	Tin City baz=123	85.64 339	P	P	12 15 29.0 +1.1
GAMB	Gambell baz=119	86.12 337	P	P	12 15 31.2 +0.9
A19K	Wainwright baz=129	86.27 345	P	P	12 15 32.0 +1.1
C16K	Lisburne Hills baz=125	86.31 342	P	P	12 15 32.6 +1.4
SFJD	Kangerlussuaq	86.61 20	LR	LR	12 54 01.9

comp=Z,150nm,18.6s,baz=234,slow=36
SNAA Sanae 86.81 162 P **P** 12 15 36.0 +2.2
comp=Z,3.0nm,1.0s,baz=228,slow=5.7,SNR=3.7
comp=Z,3.0nm,1.0s
SNAA Sanae 86.81 162 IAmb IAmb 12 15 45.4
comp=Z,8.4nm,1.1s
H11S2 WAKE ISLAND Hy 86.90 289 T T 13 51 33.9
baz=101,slow=74,SNR=443
H11S1 WAKE ISLAND Hy 86.91 289 T T 13 51 36.4
baz=101,slow=74,SNR=405
H11S3 WAKE ISLAND Hy 86.92 289 T T 13 51 36.6
baz=101,slow=74,SNR=471
H11N3 WAKE ISLAND Hy 86.93 290 T T 13 51 38.0
baz=102,slow=74,SNR=33
H11N2 WAKE ISLAND Hy 86.94 290 T T 13 51 40.0
baz=102,slow=74,SNR=42
H11N1 WAKE ISLAND Hy 86.95 290 T T 13 51 41.1
baz=102,slow=74,SNR=43
SHEM Shemya Is, Ala 88.85 324 LR LR 12 46 20.7
comp=Z,356nm,22.0s,baz=118,slow=29
SUMG Summit 92.87 17 P **P** 12 16 02.5 -0.1
BORG Borgarnes 97.23 26 LR LR 12 59 14.0
comp=Z,91nm,18.7s,baz=285,slow=35
PETK Petropavlovsk- 98.68 322 LR LR 12 52 06.6
comp=Z,290nm,21.7s,baz=118,slow=30
NJ2 Nanjing 129.64 304 *e*PKP **PKPdf** 12 21 58.8 -0.6
SONM Songino Array 130.72 329 PKP **PKPdf** 12 22 00.5 -0.6
comp=Z,1.8nm,1.0s,baz=40,slow=2.5,SNR=5.6
SONM Songino Array 130.72 329 **PKPdf** 12 22 00.7 -0.5
HHC Hu-ho-hao-te 131.66 318 *e*PKP **PKPdf** 12 21 59.0 -4.1
ZALV Zalesovo Beam 133.60 348 PKP **PKPdf** 12 22 05.5 -0.7
comp=Z,0.3nm,0.4s,baz=27,slow=7.1,SNR=1.8
ZALV Zalesovo Beam 133.60 348 **PKPdf** 12 22 04.9 -1.3
BVAR Borovoye Array 136.00 0 PKP **PKPdf** 12 22 11.3 +0.6
comp=Z,1.0nm,0.5s,baz=349,slow=2.9,SNR=4.1
KURBB Kurchatov Arra 137.86 352 PKP **PKPdf** 12 22 14.0 -0.2
comp=Z,0.6nm,0.3s,baz=354,slow=1.8,SNR=1.7
ZSN Zaisan 139.66 345 *e*PKP **PKPdf** 12 22 17.7 0.0
ZSN *e*PP **PP** 12 25 13.1 +1.1
GTA2 Gaotai 139.81 324 PKP **PKiKP** 12 22 19.4 -1.4
MKAR Makanchi Array 140.90 347 PKP **PKPdf** 12 22 19.4 -0.6
comp=Z,1.2nm,0.9s,baz=28,slow=2.9,SNR=4.9
WMQ Urumqi 142.09 340 *e*PKP **PKPdf** 12 22 22.5 +0.2
BTLS Baital 143.85 356 *e*PKP **PKPdf** 12 22 25.2 -0.1
KPKS Kokpek 144.81 350 *e*PKP **PKPdf** 12 22 26.8 -0.3
SHLS Shalkode 144.97 348 *e*PKP **PKPbc** 12 22 26.7 +0.1
UZB Uzynbulak 145.06 349 *e*PKP **PKPab** 12 22 27.1 +0.1
SATY Saty 145.26 350 *e*PKP **PKPbc** 12 22 27.4 -0.2
KMI2 Kunming 145.26 302 PKPbc **PKPdf** 12 22 28.3 -0.3
MDOK Medeo 145.38 351 *e*PKP **PKPbc** 12 22 27.7 -0.3
MDOK *e*PP **PP** 12 25 47.9 +1.3
SGDS Sogindy 145.38 355 *e*PKP **PKPbc** 12 22 27.7 -0.2
SLVN Son La 145.48 295 PKPdf **PKPab** 12 22 28.7 -0.4
TNSS Tian-Shan 145.51 352 *e*PKP **PKPdf** 12 22 27.9 -0.8
PZH PanZhiHua 145.55 305 PKPbc **PKPdf** 12 22 28.5 -0.4
KK31 Karatay Array 145.93 360 PKPdf **PKPdf** 12 22 29.0 +0.1
KKAR Karatay Array 145.93 360 PKPdf **PKPbc** 12 22 29.4 -0.2
BRLS Borolday 145.99 1 *e*PKP **PKPdf** 12 22 29.2 +0.1
DZA Taraz 146.13 359 *e*PKP **PKPdf** 12 22 28.9 -0.3
KDJ Kajisay 146.37 351 PKPdf **PKPbc** 12 22 30.7 -0.4
IUG Iuzhnay 146.88 1 *e*PKP **PKPdf** 12 22 30.4 -0.3
KSH2 Kashi 149.53 352 PKPbc **PKiKP** 12 22 40.4 -0.4
CMAR Chiang Mai Arr 150.75 292 PKP **PKPdf** 12 22 37.6 +0.1
comp=Z,0.4nm,0.5s,baz=52,slow=0.9,SNR=4.2
CMAR PKPbc **PKiKP** 12 22 43.8 +0.1
comp=Z,4.7nm,0.8s,baz=66,slow=1.0,SNR=32
CMAR Chiang Mai Arr 150.75 292 PKPbc **PKiKP** 12 22 43.1 -0.5

*IDC **18** 12:06:40.2±0.7,6˚.36S×70˚.78E,h0km,mb3.9/16, mbtmp3.9/17,ML3.6/1,MS3.7/2,Error ellipse: s-maj=24.5km s-min=17.9km az=65.0*
*NEIC **18** 12:06:41.9±0.9,6˚.4S±0˚.1×70˚.9E±0˚.1,h10km±1km, mb4.5/23,Error ellipse: s-maj=19.5km s-min=14.7km az=226.0*

ISC 18 12:06:41.4±0.5,**6˚.37S**±0˚.09×**70˚.83E**±0˚.09,**h10km,n82,**
σ0s64/76,mb4.4/43,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**1.92**	**123**	Pn	**Pn**	**Pn**	**12 07 13.5**	**-0.7**
PALK	**Pallekele**	**16.76**	**36**	Pn	**Pn**	**Pn**	**12 10 36.3**	**-0.1**
	0.2nm,0.3s,baz=207,slow=16,SNR=1.1							
PALK				Sn		Sn	12 13 29.1	-14
	0.3nm,0.3s,baz=129,slow=14,SNR=1.8							
PALK				LR		LR	12 15 51.2	
	comp=Z,146nm,18.9s,baz=249,slow=33							
	2.8nm,0.7s							
PALK	**Pallekele**	**16.76**	**36**	Pn	**Pn**		**12 10 35.6**	**-0.8**
HYB	**Hyderabad**	**24.84**	**18**	*e*P	**P**		**12 12 04.0**	**-0.2**
HYB				*e*S	**S**		**12 16 28.1**	**+1.0**
LODK	**Lodwar**	**36.72**	**284**	P	**P**		**12 13 48.0**	**-1.3**
CM31	**Chiang Mai Arr**	**37.12**	**48**	P	**P**		**12 13 51.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**37.12**	**48**	P	**P**		**12 13 52.1**	**-0.3**
	0.2nm,0.3s,baz=249,slow=9.4,SNR=4.1							
	0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**37.12**	**48**	P	**P**		**12 13 51.1**	**-1.4**
LSZ	**Lusaka**	**42.73**	**254**	P	**P**		**12 14 39.1**	**-0.3**
LSZ				IAmb	IAmb		12 14 41.4	
	comp=Z,9.0nm,1.2s							
H04N2	**CROZET ISLANDS**	**42.92**	**199**	T	T		13 00 26.4	
	baz=30,slow=75,SNR=149							
H04N1	**CROZET ISLANDS**	**42.93**	**199**	T	T		13 00 27.4	
	baz=30,slow=75,SNR=150							
H04N3	**CROZET ISLANDS**	**42.94**	**199**	T	T		13 00 26.1	
	baz=30,slow=75,SNR=148							
H01W3	**Cape Leeuwin H**	**48.91**	**132**	T	T		13 07 57.0	
	baz=296,slow=75,SNR=68							
H01W2	**Cape Leeuwin H**	**48.91**	**132**	T	T		13 07 49.7	
	baz=296,slow=75,SNR=83							
H01W1	**Cape Leeuwin H**	**48.92**	**132**	T	T		13 07 50.7	
	baz=296,slow=75,SNR=107							
MKAR	**Makanchi Array**	**53.90**	**10**	P	**P**		**12 16 05.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=188,slow=7.4,SNR=4.0							
	comp=Z,0.4nm,0.6s							
MKAR	**Makanchi Array**	**53.90**	**10**	P	**P**		**12 16 05.0**	**0.0**
KBZ	**Khabaz**	**55.90**	**336**	P	**P**		**12 16 19.8**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=102,slow=6.7,SNR=4.9							
	comp=Z,0.8nm,0.4s							
AB31	**Akbulak array**	**56.20**	**351**			**P**	**12 16 21.9**	**+0.3**
AB31					IAmb	IAmb	12 16 32.6	
	comp=Z,4.0nm,1.1s							
ABKAR	**Akbulak array**	**56.20**	**351**			**P**	**12 16 21.7**	**+0.2**
KURBB	**Kurchatov Arra**	**57.15**	**6**	P	**P**	**P**	**12 16 28.6**	**+0.4**
	comp=Z,1.2nm,0.2s,baz=199,slow=7.2,SNR=4.6							
	comp=Z,1.2nm,0.2s							
KURK	**Kurchatov**	**57.25**	**6**	P	**P**	**P**	**12 16 28.9**	**0.0**
KURK					IAmb	IAmb	12 16 39.6	
	comp=Z,3.6nm,0.8s							
BRTR	**Keskin Array B**	**57.28**	**326**	P	**P**	**P**	**12 16 29.9**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=101,slow=7.8,SNR=1.6							
	comp=Z,0.6nm,0.8s							
BRTR	**Keskin Array B**	**57.28**	**326**	P	**P**	**P**	**12 16 29.0**	**-0.6**
BVAR	**Borovoye Array**	**59.17**	**360**	P	**P**	**P**	**12 16 43.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=179,slow=6.5,SNR=2.2							
	comp=Z,0.6nm,0.5s							
ZAA0	**Zalesovo Array**	**61.24**	**9**	P	**P**	**P**	**12 16 56.0**	**-0.5**
ZAA0					IAmb	IAmb	12 17 06.2	
	comp=Z,5.7nm,1.4s							
ZALV	**Zalesovo Beam**	**61.24**	**9**	P	**P**	**P**	**12 16 56.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=216,slow=7.3,SNR=5.7							
	comp=Z,1.3nm,0.7s							
ZALV	**Zalesovo Beam**	**61.24**	**9**	P	**P**	**P**	**12 16 56.3**	**-0.1**
SONM	**Songino Array**	**62.40**	**26**	P	**P**	**P**	**12 17 05.4**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=222,slow=6.7,SNR=6.0							
	comp=Z,1.4nm,0.7s							
SONM	**Songino Array**	**62.40**	**26**	P	**P**	**P**	**12 17 04.7**	**0.0**
SONM					IAmb	IAmb	12 17 17.8	
	comp=Z,3.3nm,1.2s							
ASAR	**Alice Springs**	**62.83**	**113**	P	**P**	**P**	**12 17 08.5**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=284,slow=5.4,SNR=4.9							
	comp=Z,2.8nm,0.6s							
ASAR	**Alice Springs**	**62.83**	**113**	P	**P**	**P**	**12 17 06.9**	**-1.1**
AS31	**Alice Springs**	**62.83**	**113**	P	**P**	**P**	**12 17 06.6**	**-1.4**
WRA	**Warramunga Arr**	**62.98**	**109**	P	**P**	**P**	**12 17 09.7**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=283,slow=6.7,SNR=10							
	comp=Z,4.2nm,0.8s							
WRA	**Warramunga Arr**	**62.98**	**109**	P	**P**	**P**	**12 17 09.4**	**+0.5**
WRAB	**Tennant Creek**	**62.98**	**109**	P	**P**	**P**	**12 17 08.1**	**-0.8**
WB0	**Warramunga Arr**	**63.02**	**109**	P	**P**	**P**	**12 17 09.5**	**+0.3**
WR8	**Warramunga Arr**	**63.13**	**109**	P	**P**	**P**	**12 17 10.2**	**+0.3**
CASY	**Casey**	**65.79**	**164**	P	**P**	**P**	**12 17 27.1**	**+0.6**
CASY					IAmb	IAmb	12 17 44.7	
	comp=Z,7.8nm,1.4s							
AKASG	**Malin Array Be**	**67.20**	**333**	P	**P**	**P**	**12 17 34.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=116,slow=5.6,SNR=2.1							
	comp=Z,0.4nm,0.5s							
AKBB	**Malin Array Si**	**67.20**	**333**	P	**P**	**P**	**12 17 35.7**	**+0.1**
AKBB					IAmb	IAmb	12 17 40.6	
	comp=Z,2.5nm,0.8s							
KIEV	**Kiev**	**67.20**	**333**	P	**P**	**P**	**12 17 35.5**	**-0.2**
KIEV					IAmb	IAmb	12 17 40.6	
	comp=Z,2.1nm,0.8s							
KSAR	**Wonju Array Be**	**68.69**	**46**	P	**P**	**P**	**12 17 45.1**	**-0.3**
KS19	**Wonju Array Si**	**68.70**	**46**	P	**P**	**P**	**12 17 45.1**	**-0.3**
HILR	**Hailar Array B**	**70.02**	**31**	P	**P**	**P**	**12 17 54.8**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=206,slow=9.9,SNR=4.3							
	comp=Z,0.7nm,0.4s							
ABTA	**Abfaltersbach**	**73.80**	**322**	*i* P	**P**		**12 18 16.4**	**+0.2**
	comp=Z,2.9nm,0.6s							
LESA	**Schwarzleotal**	**74.02**	**323**	*e*P	**P**		**12 18 17.2**	**-0.4**
	comp=Z,4.2nm,1.1s							
GERES	**GERESS Array B**	**74.12**	**325**	P	**P**		**12 18 18.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=100,slow=7.1,SNR=1.9							
	comp=Z,0.2nm,0.5s							
WTTA	**Wattenberg**	**74.57**	**323**	*e*P	**P**		**12 18 20.9**	**0.0**
	comp=Z,6.2nm,0.7s							
WATA	**Walderalm**	**74.64**	**323**	*e*P	**P**		**12 18 21.0**	**-0.2**
	comp=Z,6.0nm,1.1s							
SQTA	**Sankt Quirin**	**74.81**	**322**	*e*P	**P**		**12 18 22.2**	**0.0**
	comp=Z,6.7nm,0.7s							
MOTA	**Moosalm**	**74.93**	**323**	*e*P	**P**		**12 18 22.7**	**-0.2**
	comp=Z,8.5nm,0.9s							
BRG	**Berggiesshubel**	**75.00**	**327**	*e*P	**P**		**12 18 23.9**	**+0.8**
	comp=Z,3.7nm,1.1s,baz=118,slow=5.5							
FETA	**Feichten**	**75.01**	**322**	*e*P	**P**		**12 18 23.6**	**+0.2**
	comp=Z,1.6nm,0.8s							
FUORN	**Ofenpass-Fuorn**	**75.12**	**322**			**P**	**12 18 24.2**	**+0.1**
FUORN					IAmb	IAmb	12 18 25.4	
	comp=Z,6.2nm,0.9s							
RETA	**Reutte**	**75.20**	**323**	*e*P	**P**		**12 18 24.4**	**+0.1**
	comp=Z,3.7nm,0.7s							
ROTZ	**Rotzenmuhle**	**75.42**	**325**	*e*P	**P**		**12 18 26.0**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=118,slow=5.5							
TUE	**Stuetta**	**75.62**	**321**	P	**P**		**12 18 26.5**	**-0.4**
TUE					IAmb	IAmb	12 18 27.7	
	comp=Z,3.5nm,0.8s							
DAVA	**Damuels**	**75.65**	**322**	*e*P	**P**		**12 18 27.4**	**+0.4**
	comp=Z,10nm,0.8s							
CLL	**Collm**	**75.73**	**327**	P	**P**		**12 18 27.7**	**+0.5**
CLL					IAmb	IAmb	12 18 28.8	
	comp=Z,6.2nm,1.0s							
CLL	**Collm**	**75.73**	**327**	*e*P	**P**		**12 18 27.9**	**+0.7**
	comp=Z,6.1nm,1.0s,baz=118,slow=5.5							
CLL	**Collm**	**75.73**	**327**	*i* P	**P**		**12 18 27.7**	**+0.5**
	comp=Z,7.0nm,1.0s							
CLL				*ex*	x		12 18 36.0	
PLN	**Plauen**	**75.80**	**326**	*e*P	**P**		**12 18 29.7**	**+2.1**
	comp=Z,1.1nm,1.0s,baz=118,slow=5.5							
GRF	**Grafenberg Arr**	**75.95**	**325**	*e*P	**P**		**12 18 29.0**	**+0.5**
	comp=Z,9.2nm,0.9s,baz=118,slow=5.5							
GRF				*e*L	L		13 05 32.5	
	comp=Z,122nm,19.4s							
MOX	**Moxa**	**76.18**	**326**	*e*P	**P**		**12 18 30.4**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=118,slow=5.5							
MOX				*e*L	L		13 04 39.4	
	comp=Z,77nm,20.5s							
SENIN	**Lac Senin/Sane**	**76.86**	**320**			**P**	**12 18 34.3**	**+0.3**
FLTG	**Flechtingen**	**77.19**	**327**	*e*P		**P**	**12 18 35.6**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=118,slow=5.5							
CLZ	**Clausthal**	**77.43**	**326**	*e*P		**P**	**12 18 37.5**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=118,slow=5.5							
TNS	**Taunus Mts**	**77.79**	**324**	*e*P		**P**	**12 18 39.4**	**+0.5**
	comp=Z,8.4nm,1.2s,baz=118,slow=5.5							
MD01	**Midelt array s**	**81.45**	**304**	P		**P**	**12 18 59.5**	**+0.1**
ESDC	**Sonseca Array**	**82.46**	**311**	P		**P**	**12 19 04.5**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=85,slow=4.2,SNR=14							
	comp=Z,2.1nm,0.9s							
QSPA	**South Pole Qui**	**83.65**	**180**	P		**P**	**12 19 10.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=272,slow=1.2,SNR=7.8							
	comp=Z,0.9nm,0.7s							
QSPA	**South Pole Qui**	**83.65**	**180**	P		**P**	**12 19 10.7**	**+0.5**
QSPA					IAmb	IAmb	12 19 43.0	
	comp=Z,4.8nm,1.4s							
VNDA	**Vanda**	**84.05**	**167**	P		**P**	**12 19 12.8**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=260,slow=6.4,SNR=3.6							
	comp=Z,0.9nm,0.9s							
VNDA	**Vanda**	**84.05**	**167**	P		**P**	**12 19 12.8**	**+1.0**
VNDA					IAmb	IAmb	12 19 29.5	
	comp=Z,2.4nm,1.3s							
JMIC	**Jan Mayen**	**92.51**	**341**	LR	LR		13 01 34.9	
	comp=Z,62nm,19.1s,baz=218,slow=36							
YKA	**Yellowknife Ar**	**123.85**	**3**	PKP		**PKPdf**	**12 25 38.8**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=355,slow=2.2,SNR=5.1							
PDAR	**Pinedale Array**	**143.75**	**0**	PKP		**PKPdf**	**12 26 16.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=56,slow=2.7,SNR=5.0							
ROSC	**El Rosal**	**145.28**	**269**	PKPbc		**PKPab**	**12 26 20.9**	**0.0**
	comp=Z,10nm,0.5s,baz=137,slow=12,SNR=5.2							
ELK	**Elko**	**145.34**	**8**	PKPbc		**PKPdf**	**12 26 20.3**	**0.0**
	comp=Z,1.7nm,0.9s,baz=30,slow=4.2,SNR=6.0							
NVAR	**Mina Array Bea**	**147.03**	**13**	PKPbc		**PKPab**	**12 26 26.0**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=298,slow=0.9,SNR=12							
TXAR	**Lajitas Array**	**156.57**	**348**	PKPab		**PKPab**	**12 27 06.8**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=23,slow=2.7,SNR=14							

*ANF **18** 12:10:38.9±0.2,58˚.33N×133˚.46W,h0km,ML3.5/28,Error ellipse: s-maj=1.9km s-min=1.6km az=59.0*
*PGC **18** 12:10:39.9,58˚.34N×133˚.47W,h5km,ML3.4/19, ML3.2(NEIC),55km east of Juneau, Alaska, Usa Southeastern Alaska*
*AEIC **18** 12:10:39.3±1.1,58˚.34N±0˚.02×133˚.46W±0˚.03,h1km±6km, Error ellipse: s-maj=3.2km s-min=1.1km az=137.0*
*NEIC **18** 12:10:39.1±1.1,58˚.35N±0˚.02×133˚.43W±0˚.03,h5km±2km, ML3.2/57,ML3.0(AEIC),Error ellipse: s-maj=3.8km s-min=3.0km az=155.0*

ISC 18 12:10:38.7±1.1,**58˚.35N**±0˚.02×**133˚.46W**±0˚.02,**h2km**±10km,
n129,σ1s00/164,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.49**	**262**	P	**Pg**		**12 10 48.0**	**-0.1**
JIS	**Juneau Island**	**0.49**	**262**	S	**Sg**		**12 10 55.2**	**+0.8**
JIS	**Juneau Island**	**0.49**	**262**		**Pg**		**12 10 48.5**	**+0.4**
JIS					**Sg**		**12 10 55.3**	**+0.8**
R32K	**Eaglecrest**	**0.56**	**263**		**Pg**		**12 10 49.8**	**+0.3**
R32K				Sg	**Sg**		**12 10 57.4**	**+0.7**
R32K	**Eaglecrest**	**0.56**	**263**	P	**Pg**		**12 10 49.2**	**-0.2**
	baz=83,SNR=9.4							
R32K				S	**Sg**		**12 10 57.3**	**+0.5**
	baz=83							
BESE	**Bessie Mountai**	**0.77**	**288**	P	**Pg**		**12 10 53.3**	**-0.1**
BESE	**Bessie Mountai**	**0.77**	**288**	Pg	**Pg**		**12 10 53.5**	**+0.1**
Q32M	**Nakina River**	**0.88**	**45**	P	**Pg**		**12 10 55.6**	**+0.2**
Q32M	**Nakina River**	**0.88**	**45**	Pg	**Pg**		**12 10 55.4**	**-0.1**
Q32M				Sg	**Sg**		**12 11 05.6**	**-1.2**
Q32M	**Nakina River**	**0.88**	**45**	P	**Pg**		**12 10 55.7**	**+0.2**
	baz=225,SNR=58							
Q32M				S	**Sg**		**12 11 07.4**	**+0.6**
	baz=225							
S32K	**Killisnoo**	**1.06**	**215**			**Pb**	**12 10 59.4**	**-0.4**
S32K				Sg		**Sb**	**12 11 13.2**	**-0.8**
S32K	**Killisnoo**	**1.06**	**215**	P		**Pb**	**12 10 59.3**	**-0.4**
	baz=34,SNR=46							
S32K				Sb		**Sn**	**12 11 15.0**	**-0.8**
	baz=34							
R31K	**City Hall, Gus**	**1.20**	**274**	P		**Pn**	**12 11 01.7**	**-0.8**
R31K				S		**Sb**	**12 11 17.5**	**-0.5**
R31K	**City Hall, Gus**	**1.20**	**274**			**Pg**	**12 11 02.4**	**+0.7**
R31K						**Sn**	**12 11 19.8**	**+0.5**
R31K	**City Hall, Gus**	**1.20**	**274**	P		**Pn**	**12 11 01.2**	**-1.2**
	baz=93,SNR=7.8							
R31K				S		**Sg**	**12 11 17.8**	**+0.6**
	baz=93							
P32M	**Atlin**	**1.25**	**354**	P		**Pn**	**12 11 02.1**	**-1.1**
P32M				S		**Sg**	**12 11 19.6**	**+0.6**
P32M	**Atlin**	**1.25**	**354**			**Pn**	**12 11 02.4**	**-0.8**
P32M	**Atlin**	**1.25**	**354**	P		**Pn**	**12 11 02.3**	**-1.0**
	baz=174,SNR=70							
P32M				S		**Sn**	**12 11 20.5**	**-0.2**
	baz=174							
S34M	**Telegraph Cree**	**1.31**	**108**	P		**Pn**	**12 11 03.2**	**-0.7**
S34M				S		**Sg**	**12 11 20.9**	**+0.2**
S34M	**Telegraph Cree**	**1.31**	**108**			**Pn**	**12 11 03.1**	**-0.9**
S34M				Sg		**Sb**	**12 11 20.2**	**-1.0**
S34M				IAML			12 11 26.6	
	comp=E,601nm,0.9s							
S34M				IAML			12 11 27.4	
	comp=N,422nm,1.1s							
S34M	**Telegraph Cree**	**1.31**	**108**	P		**Pn**	**12 11 03.1**	**-0.9**
	baz=290,SNR=119							
S34M				S		**Sg**	**12 11 21.7**	**+0.9**
	baz=290							
SKAG	**Skagway**	**1.48**	**320**	P		**Pn**	**12 11 06.2**	**-0.1**
SKAG	**Skagway**	**1.48**	**320**	S		**Sg**	**12 11 28.0**	**+1.9**
SKAG	**Skagway**	**1.48**	**320**			**Pb**	**12 11 06.3**	**-0.5**
SKAG				IAML			12 11 29.5	
	comp=N,215nm,0.9s							
SKAG				IAML			12 11 35.0	
	comp=E,288nm,1.0s							
SKAG	**Skagway**	**1.48**	**320**	P		**Pn**	**12 11 06.1**	**-0.1**
	baz=138,SNR=56							
SKAG				S		**Sg**	**12 11 26.9**	**+0.8**
	baz=138							
S31K	**Pelican**	**1.52**	**256**			**Sb**	**12 11 26.8**	**-0.4**
S31K	**Pelican**	**1.52**	**256**	Pn		**Pn**	**12 11 06.4**	**-0.4**
S31K	**Pelican**	**1.52**	**256**	IAML			12 11 34.4	
	comp=E,161nm,0.8s							
S31K				IAML			12 11 35.2	
	comp=N,150nm,1.0s							
S31K	**Pelican**	**1.52**	**256**	P		**Pn**	**12 11 06.2**	**-0.6**
	baz=74							
S31K				S		**Sg**	**12 11 27.5**	**0.0**
	baz=74							
T33K	**Petersburg**	**1.56**	**170**	Pn		**Pb**	**12 11 07.7**	**-0.6**
T33K				Sn		**Sg**	**12 11 28.3**	**-0.5**
T33K	**Petersburg**	**1.56**	**170**			**Pb**	**12 11 07.6**	**-0.6**
T33K						**Sg**	**12 11 29.5**	**+0.7**
T33K	**Petersburg**	**1.56**	**170**	P		**Pb**	**12 11 07.7**	**-0.6**
	baz=350,SNR=12							
T33K				S		**Sg**	**12 11 29.6**	**+0.8**
	baz=350							
SIT	**Sitka**	**1.64**	**218**	P		**Pn**	**12 11 08.3**	**-0.1**
SIT	**Sitka**	**1.64**	**218**	S		**Sg**	**12 11 30.7**	**-0.5**
SIT	**Sitka**	**1.64**	**218**			**Pb**	**12 11 08.6**	**-0.9**
SIT				IAML			12 11 37.9	
	comp=N,211nm,1.1s							
SIT	**Sitka**	**1.64**	**218**	P		**Pb**	**12 11 08.4**	**-1.1**
	baz=37							
SIT				S		**Sb**	**12 11 30.2**	**-0.3**
	baz=37							
R33M	**Jennings River**	**1.67**	**50**	Pn		**Pb**	**12 11 09.1**	**-1.0**
R33M				Sn		**Sg**	**12 11 32.8**	**+0.5**
R33M	**Jennings River**	**1.67**	**50**			**Pb**	**12 11 09.6**	**-0.5**
R33M	**Jennings River**	**1.67**	**50**	IAML			12 11 36.2	
	comp=E,330nm,0.8s							
R33M				IAML			12 11 36.2	
	comp=N,375nm,0.9s							
R33M	**Jennings River**	**1.67**	**50**	P		**Pb**	**12 11 09.4**	**-0.8**
	baz=232,SNR=77							
R33M				S		**Sg**	**12 11 32.6**	**+0.4**
	baz=232							
DLBC	**Dease Lake**	**1.81**	**86**	Pn		**Pb**	**12 11 11.3**	**-1.2**
DLBC	**Dease Lake**	**1.81**	**86**			**Pb**	**12 11 11.5**	**-1.0**
DLBC	**Dease Lake**	**1.81**	**86**	P		**Pn**	**12 11 11.0**	**+0.1**
	baz=268,SNR=83							
DLBC				Sb		**Sg**	**12 11 37.8**	**+1.1**
	baz=268							
PLBC	**Pleasant Camp**	**1.87**	**308**	Pn		**Pn**	**12 11 11.9**	**+0.2**
PLBC	**Pleasant Camp**	**1.87**	**308**			**Pb**	**12 11 13.2**	**-0.4**
PLBC	**Pleasant Camp**	**1.87**	**308**	P		**Pn**	**12 11 12.2**	**+0.5**
	baz=125							
PLBC				Sb		**Sg**	**12 11 38.7**	**-0.1**
	baz=125							
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn		**Pn**	**12 11 12.7**	**+0.5**
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn		**Pn**	**12 11 12.4**	**+0.3**
P33M				IAML			12 11 41.0	
	comp=N,123nm,0.8s							
P33M	**Teslin, Yukon**	**1.90**	**10**	P		**Pn**	**12 11 12.6**	**+0.4**
	baz=190,SNR=48							
P33M				S		**Sb**	**12 11 38.4**	**+0.2**
	baz=190							
WRAK	**Wrangell Islan**	**2.03**	**162**	Pn		**Pn**	**12 11 13.9**	**+0.2**
WRAK	**Wrangell Islan**	**2.03**	**162**	Pn		**Pn**	**12 11 13.4**	**-0.4**
WRAK				IAML			12 11 45.1	
	comp=N,158nm,0.8s							
WRAK				IAML			12 11 48.9	
	comp=N,226nm,0.7s							
WRAK	**Wrangell Islan**	**2.03**	**162**	P		**Pn**	**12 11 13.9**	**+0.2**
	baz=343,SNR=15							
WRAK				S		**Sb**	**12 11 40.9**	**-0.8**
	baz=343							
T35M

O29M	**Mount Kennedy**	**3.27**	**309**	Pn	**Pn**	**12 11 31.1**	**0.0**
O29M				IAML		12 12 35.4	
	comp=N,81nm,0.9s						
O29M	**Mount Kennedy**	**3.27**	**309**	P	**Pn**	**12 11 32.3**	**+1.2**
	baz=125						
O29M				Sb	**Sg**	**12 12 21.2**	**-2.5**
	baz=125						
N31M	**Braeburn, Yuko**	**3.36**	**341**	Pn	**Pn**	**12 11 32.9**	**+0.7**
N31M	**Braeburn, Yuko**	**3.36**	**341**	P	**Pn**	**12 11 33.2**	**+1.0**
	baz=159,SNR=16						
YUK5	**Granite Creek**	**3.57**	**323**	Pn	**Pn**	**12 11 36.4**	**+1.2**
YUK5				Sg	**Sg**	**12 12 30.4**	**-2.9**
YUK6	**Outpost Mounta**	**3.60**	**318**	P	**Pn**	**12 11 36.5**	**+0.9**
	baz=134						
N30M	**Aishikik Lake**	**3.62**	**331**	Pn	**Pn**	**12 11 36.5**	**+0.8**
N30M				Sg	**Sg**	**12 12 31.6**	**-3.1**
N30M	**Aishikik Lake**	**3.62**	**331**	IAML		12 12 39.5	
	comp=N,64nm,0.7s						
N30M				IAML		12 12 45.7	
	comp=E,71nm,1.4s						
N30M	**Aishikik Lake**	**3.62**	**331**	P	**Pn**	**12 11 36.6**	**+0.8**
	baz=148,SNR=9.2						
M31M	**Drury Creek, Y**	**3.90**	**354**	IAML		12 12 57.4	
	comp=N,39nm,1.0s						
M31M	**Drury Creek, Y**	**3.90**	**354**	P	**Pn**	**12 11 41.1**	**+1.6**
	baz=173,SNR=18						
YUK4	**Talbot Arm**	**3.98**	**321**	Pg	**Pb**	**12 11 50.9**	**+1.3**
YUK4				Sg	**Sg**	**12 12 44.3**	**-2.3**
YUK4	**Talbot Arm**	**3.98**	**321**	P	**Pn**	**12 11 42.3**	**+1.4**
	baz=138						
O28M	**Mount Upton**	**4.20**	**308**	Pg	**Pb**	**12 11 54.5**	**+1.1**
O28M	**Mount Upton**	**4.20**	**308**	Pb	**Pb**	**12 11 54.4**	**+1.1**
	baz=122						
YUK8	**Steele Glacier**	**4.34**	**315**	Pb	**Pb**	**12 11 56.2**	**+0.5**
	baz=130						
MMPY	**Sheldon Lake,**	**4.42**	**13**	Pn	**Pn**	**12 11 46.6**	**-0.1**
MMPY				IAML		12 13 09.8	
	comp=N,30nm,1.1s						
M30M	**Minto, Yukon**	**4.55**	**340**	Pn	**Pn**	**12 11 48.4**	**-0.1**
M30M	**Minto, Yukon**	**4.55**	**340**	P	**Pn**	**12 11 48.9**	**+0.4**
	baz=157,SNR=7.0						
M29M	**Somme Creek**	**4.80**	**331**	Pn	**Pn**	**12 11 52.2**	**+0.2**
L29M	**L29M**	**5.30**	**336**	Pn	**Pn**	**12 11 59.2**	**+0.4**
L29M	**L29M**	**5.30**	**336**	P	**Pn**	**12 11 59.2**	**+0.4**
	baz=152,SNR=9.4						
K29M	**Barlow Dome**	**5.85**	**342**	Pn	**Pn**	**12 12 07.2**	**+0.8**
K29M	**Barlow Dome**	**5.85**	**342**	P	**Pn**	**12 12 07.2**	**+0.8**
	baz=159,SNR=6.9						
BCAR	**Beaver Creek A**	**6.25**	**323**	Pn	**Pn**	**12 12 12.4**	**+0.6**
L27K	**Beaver Creek,**	**6.26**	**323**	Pn	**Pn**	**12 12 13.9**	**+1.9**
J30M	**Hart River**	**6.40**	**349**	P	**Pn**	**12 12 14.8**	**+0.8**
	baz=166,SNR=14						
I30M	**Mount Dempster**	**7.04**	**350**	Pn	**Pn**	**12 12 24.7**	**+2.0**
I30M	**Mount Dempster**	**7.04**	**350**	P	**Pn**	**12 12 24.1**	**+1.5**
	baz=167,SNR=36						
H31M	**Peel River**	**7.50**	**357**	Pn	**Pn**	**12 12 30.0**	**+1.1**
H31M	**Peel River**	**7.50**	**357**	P	**Pn**	**12 12 29.8**	**+0.9**
	baz=176,SNR=24						
EPYK	**Eagle Plains**	**8.19**	**351**	Pn	**Pn**	**12 12 39.9**	**+1.4**
EPYK	**Eagle Plains**	**8.19**	**351**	P	**Pn**	**12 12 39.8**	**+1.4**
	baz=168						
H29M	**Whitestone**	**8.22**	**346**	Pn	**Pn**	**12 12 40.5**	**+1.7**
H29M	**Whitestone**	**8.22**	**346**	Pn	**Pn**	**12 12 39.6**	**+0.8**
H29M	**Whitestone**	**8.22**	**346**	P	**Pn**	**12 12 40.3**	**+1.5**
	baz=162						
I26K	**Coal Creek Min**	**8.34**	**331**	P	**Pn**	**12 12 41.9**	**+1.4**
	baz=142						
G31M	**Satah River**	**8.62**	**358**	Pn	**Pn**	**12 12 45.6**	**+1.5**
G31M	**Satah River**	**8.62**	**358**	Pn	**Pn**	**12 12 45.6**	**+1.5**
G31M	**Satah River**	**8.62**	**358**	P	**Pn**	**12 12 45.4**	**+1.3**
	baz=177						
G29M	**Pine Creek**	**8.85**	**348**	Pn	**Pn**	**12 12 48.6**	**+1.3**
G29M	**Pine Creek**	**8.85**	**348**	Pn	**Pn**	**12 12 48.7**	**+1.4**
F30M	**Barrier River**	**9.36**	**355**	Pn	**Pn**	**12 12 56.1**	**+1.7**
F30M	**Barrier River**	**9.36**	**355**	P	**Pn**	**12 12 55.9**	**+1.5**
	baz=172						
L22K	**Petersville**	**9.51**	**303**	P	**Pn**	**12 12 58.2**	**+1.7**
	baz=108						
F26K	**Sheenjek River**	**10.54**	**337**	Pn	**Pn**	**12 13 10.9**	**+0.4**

*IDC **18** 12:20:19.4±2.4, 12°.83N×143°.73E, h69^{km}±22^{km}, mb3.6/11, mbtmp3.8/11, Error ellipse: s-maj=30.2km s-min=25.0km az=130.0*

ISC 18 12:20:17.6±0.9, 12°.8N±0°.2×143°.5E±0°.1, h50^{km}, n18, σ1$43/13, mb3.8/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.54**	**58**	P	**Pn**	**12 20 42.0**	**-0.7**
	73nm,0.3s,baz=274,slow=0.7,SNR=20						
GUMO				S	**Sn**	**12 21 04.8**	**+3.1**
	262nm,0.5s,baz=24,slow=22,SNR=19						
H11S3	**WAKE ISLAND Hy**	**23.01**	**73**	T	T	12 49 11.6	
	baz=254						
H11S1	**WAKE ISLAND Hy**	**23.03**	**73**	T	T	12 49 13.5	
	baz=254						
H11S2	**WAKE ISLAND Hy**	**23.03**	**73**	T	T	12 49 10.6	
	baz=254						
H11N1	**WAKE ISLAND Hy**	**23.46**	**70**	T	T	12 49 57.3	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**23.47**	**70**	T	T	12 49 57.1	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**23.48**	**70**	T	T	12 49 56.5	
	baz=255						
ASAR	**Alice Springs**	**37.41**	**195**	P	**P**	**12 27 26.8**	**+0.7**
	0.3nm,0.8s,baz=16,slow=10,SNR=4.6						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.22**	**283**	P	**P**	**12 28 15.9**	**+1.6**
	0.5nm,0.3s,baz=90,slow=9.2,SNR=2.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**61.17**	**317**	P	**P**	**12 30 28.4**	**+1.2**
	0.2nm,0.5s,baz=94,slow=6.5,SNR=2.3						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**64.40**	**320**	P	**P**	**12 30 48.8**	**+0.3**
	1.0nm,0.7s,baz=104,slow=6.8,SNR=12						
	1.0nm,0.7s						
BVAR	**Borovoye Array**	**69.76**	**322**	P	**P**	**12 31 22.3**	**-0.2**
	0.4nm,0.3s,baz=116,slow=9.8,SNR=1.5						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**69.86**	**25**	P	**P**	**12 31 21.2**	**-1.7**
	0.6nm,0.8s,baz=263,slow=6.8,SNR=1.7						
	0.6nm,0.8s						
YKA	**Yellowknife Ar**	**84.19**	**27**	P	**P**	**12 32 42.9**	**-0.5**
	0.4nm,0.5s,baz=288,slow=5.2,SNR=7.7						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**87.45**	**342**	P	**P**	**12 32 59.3**	**-0.1**
	1.7nm,0.9s,baz=36,slow=6.3,SNR=3.6						
	1.7nm,0.9s						
NVAR	**Mina Array Bea**	**88.45**	**51**	P	**P**	**12 33 04.2**	**-1.0**
	0.5nm,0.6s,baz=265,slow=7.2,SNR=5.8						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**91.34**	**335**	P	**P**	**12 33 16.5**	**-1.3**
	0.9nm,0.8s,baz=106,slow=4.5,SNR=4.2						
	0.9nm,0.8s						
AKASG	**Malin Array Be**	**94.92**	**324**	P	**P**	**12 33 34.5**	**0.0**
	0.8nm,0.6s,baz=44,slow=4.1,SNR=4.8						
	0.8nm,0.6s						

*JMA **18** 12:24:01.1±0.3, 24°.N±1°.1×122°.4E±0°.5, h17^{km}±4^{km}, MV2.7/11, NW OFF ISHIGAKIJIMA IS*
*TAP **18** 12:24:02.2, 24°.06N×122°.42E, h25^{km}, ML3.2, C*

ISC 18 12:24:00.4±1.0, 23°.95N±0°.02×122°.45E±0°.02, h15^{km}±8^{km}, n101, σ0$84/170, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.21**	**326**	*i* P	**Pb**	**12 24 06.8**	**+1.1**
EOS4				S	**Sg**	**12 24 10.4**	**+2.5**
EOS3	**EOS3**	**0.35**	**341**	*i* P	**Pb**	**12 24 09.3**	**+0.9**
EOS3				S	**Sb**	**12 24 14.7**	**+1.0**
EOS2	**EOS2**	**0.51**	**337**	P	**Pn**	**12 24 12.0**	**-1.0**
EOS2				S	**Sb**	**12 24 18.8**	**+0.7**
JYNG	**Yonagunijimaku**	**0.68**	**42**	P	**Pn**	**12 24 14.6**	**-0.9**
YOJ	**Yonaguni jima**	**0.73**	**45**	*i* P	**Pn**	**12 24 15.5**	**-0.7**
YOJ				eS	**Sb**	**12 24 24.2**	**-0.4**
YOJ	**Yonaguni jima**	**0.73**	**45**	P	**Pn**	**12 24 15.6**	**-0.7**
EAHA	**Aohua**	**0.75**	**301**	eP	**Pb**	**12 24 15.6**	**+0.4**
EAHA				S	**Sn**	**12 24 26.8**	**-0.7**
TEYL	**Yanliau Villag**	**0.78**	**264**	eP	**Pb**	**12 24 16.5**	**+0.8**
TEYL				eS	**Sb**	**12 24 27.5**	**+1.4**
ETL	**Fush Village**	**0.78**	**286**	eP	**Pn**	**12 24 16.8**	**-0.2**
EWUT	**Wuta**	**0.78**	**309**	eP	**Pb**	**12 24 15.8**	**0.0**
EWUT				S	**Sb**	**12 24 26.4**	**+0.1**
TWD	**Chiawan**	**0.79**	**280**	eP	**Pb**	**12 24 15.8**	**-0.1**
TWD				S	**Sb**	**12 24 26.4**	**+0.1**
ENA	**Nanau**	**0.80**	**307**	eP	**Pg**	**12 24 14.2**	**-1.8**
ENA				eS	**Sg**	**12 24 24.9**	**-1.6**
NACB	**Ninganchiao**	**0.81**	**286**	eP	**Pb**	**12 24 16.4**	**+0.2**
NACB				S	**Sb**	**12 24 27.7**	**+0.8**
SHUL	**Shoufeng**	**0.82**	**259**	P	**Pb**	**12 24 16.9**	**+0.5**
SHUL				*i* S	**Sb**	**12 24 28.6**	**+1.2**
TWC	**Suao**	**0.85**	**320**	*i* P	**Pb**	**12 24 16.6**	**-0.3**
TWC				S	**Sg**	**12 24 27.0**	**-1.2**
ETM	**Tongmen**	**0.87**	**271**	P	**Pg**	**12 24 16.9**	**-0.5**
ETM				S	**Sg**	**12 24 28.5**	**-0.3**
ETLH	**Xiulin Townshi**	**0.92**	**286**	eP	**Pg**	**12 24 18.0**	**-0.2**
ETLH				eS	**Sg**	**12 24 30.2**	**0.0**
LXIB	**Xiulin Townshi**	**0.95**	**275**	eP	**Pg**	**12 24 18.6**	**-0.2**
LXIB				eS	**Sg**	**12 24 31.1**	**-0.2**
NDS	**Dongshan**	**0.95**	**316**	eP	**Pb**	**12 24 18.8**	**+0.2**
NDS				S	**Sg**	**12 24 30.0**	**-1.3**
WARBT	**Fenglin Townsh**	**1.00**	**257**	*i* P	**Pg**	**12 24 18.9**	**-0.8**
WARBT				eS	**Sg**	**12 24 31.3**	**-1.4**
EGS		**1.01**	**332**	eP	**Pn**	**12 24 20.4**	**+0.4**
LATG	**Datong**	**1.02**	**305**	eP	**Pn**	**12 24 20.4**	**0.0**
LATG				S	**Sn**	**12 24 34.1**	**-0.4**
HGSD	**Ruisui**	**1.04**	**244**	eP	**Pb**	**12 24 20.0**	**-0.2**
TWE	**Neicheng**	**1.05**	**317**	eP	**Pn**	**12 24 20.7**	**+0.1**
TWE				eS	**Sb**	**12 24 33.9**	**+0.1**
NDT	**Datong Townshi**	**1.07**	**308**	P	**Pn**	**12 24 21.2**	**+0.3**
NDT				S	**Sb**	**12 24 35.0**	**+0.5**
NNSB	**Datong**	**1.08**	**296**	eP	**Pg**	**12 24 21.0**	**-0.3**
NNSB				eS	**Sg**	**12 24 35.0**	**-0.5**
NNS	**Nan Shan**	**1.09**	**297**	eP	**Pb**	**12 24 21.2**	**0.0**
NNS				eS	**Sb**	**12 24 35.8**	**+0.5**
WHF	**Hehuan Shan**	**1.10**	**280**	eP	**Pg**	**12 24 20.9**	**-0.5**
EHYH	**Wanrong**	**1.10**	**246**	eP	**Pb**	**12 24 20.9**	**-0.4**
EHYH				eS	**Sb**	**12 24 35.6**	**+0.1**
ECBN	**Changbin**	**1.11**	**236**	eS	**Sb**	**12 24 35.1**	**-0.4**
FUSB	**Fushanzhiwuyua**	**1.12**	**316**	P	**Pn**	**12 24 22.0**	**+0.3**
FUSB				S	**Sn**	**12 24 36.8**	**-0.2**
TWB1	**Santiao Chiao**	**1.13**	**339**	eP	**Pn**	**12 24 21.9**	**+0.1**
TWB1				eS	**Sg**	**12 24 36.3**	**-0.8**
OWD	**Renai**	**1.16**	**270**	eP	**Pb**	**12 24 22.0**	**-0.3**
OWD				S	**Sb**	**12 24 36.4**	**-0.8**
TIPB	**Shuangxi**	**1.16**	**331**	*i* P	**Pg**	**12 24 22.4**	**-0.5**
TIPB				eS	**Sb**	**12 24 36.7**	**-0.5**
YULB	**Yu-li**	**1.19**	**242**	eP	**Pn**	**12 24 22.3**	**-0.3**
YULB				eS	**Sb**	**12 24 36.9**	**-1.0**
NWLT	**Wulai**	**1.19**	**314**	P	**Pg**	**12 24 23.2**	**-0.2**
NWLT				eS	**Sn**	**12 24 38.7**	**+0.1**
TWT	**Tachien**	**1.20**	**285**	P	**Pn**	**12 24 23.1**	**+0.3**
TWT				S	**Sb**	**12 24 38.4**	**+0.1**
TWF1	**Yuli**	**1.21**	**241**	eP	**Pn**	**12 24 22.9**	**0.0**
TWF1				eS	**Sb**	**12 24 38.2**	**-0.3**
VWDT	**VWDT**	**1.21**	**261**	P	**Pn**	**12 24 23.0**	**+0.2**
VWDT				eS	**Sb**	**12 24 38.3**	**-0.2**
YHNB	**Yeheng**	**1.21**	**307**	*i* P	**Pg**	**12 24 23.2**	**-0.5**
YHNB				eS	**Sg**	**12 24 39.2**	**-0.4**
TDCB	**Techi**	**1.21**	**285**	eP	**Pn**	**12 24 23.0**	**0.0**
TDCB				eS	**Sb**	**12 24 39.2**	**+0.4**
WUSB	**Renai**	**1.22**	**272**	eP	**Pn**	**12 24 22.4**	**-0.6**
WUSB				eS	**Sb**	**12 24 38.9**	**+0.1**
CHKH	**Chenggong**	**1.22**	**232**	eP	**Pn**	**12 24 22.9**	**-0.1**
CHKH				eS	**Sb**	**12 24 36.7**	**-2.2**
NSK	**Sanguang**	**1.23**	**306**	eP	**Pb**	**12 24 23.3**	**-0.1**
NSK				eS	**Sb**	**12 24 39.3**	**+0.2**
IRIF	**Iriomote-Funau**	**1.23**	**72**	P	**Pg**	**12 24 24.8**	**+0.6**
IRIF				eS	**Sn**	**12 24 41.6**	**+2.0**
SXI1	**Grass Mountain**	**1.25**	**336**	eP	**Pb**	**12 24 23.6**	**-0.3**
SXI1				eS	**Sn**	**12 24 40.8**	**+0.7**
NWF	**Wu-fen Shan**	**1.27**	**332**	eP	**Pn**	**12 24 22.9**	**-0.9**
WFSB	**Wu-fen Shan**	**1.27**	**332**	eP	**Pn**	**12 24 23.3**	**-0.3**
WFSB				eS	**Sg**	**12 24 41.8**	**+0.3**
TWA	**Mucha**	**1.29**	**323**	eP	**Pg**	**12 24 25.7**	**+0.4**
TWA				eS	**Sg**	**12 24 42.2**	**0.0**
FULB	**Fuli**	**1.29**	**235**	eP	**Pn**	**12 24 23.5**	**-0.6**
CHKT	**Chengkung**	**1.30**	**230**	eP	**Pn**	**12 24 23.0**	**-1.1**
CHKT				eS	**Sb**	**12 24 38.8**	**-2.4**
NHDH	**Xindian Distri**	**1.31**	**320**	eP	**Pg**	**12 24 25.2**	**-0.5**
TNOU	**National Taiwa**	**1.34**	**333**	eP	**Pg**	**12 24 25.7**	**-0.6**
TNOU				eS	**Sb**	**12 24 41.8**	**-0.5**
SSLB	**Suanglung**	**1.37**	**264**	eP	**Pb**	**12 24 26.2**	**+0.3**
NFF	**Wufeng Townshi**	**1.39**	**300**	eP	**Pn**	**12 24 25.8**	**+0.4**
WCS	**Beigang Elemen**	**1.41**	**275**	eP	**Pn**	**12 24 25.9**	**+0.4**
WHP	**Taichung City**	**1.41**	**284**	eP	**Pg**	**12 24 27.1**	**-0.5**
ECS	**Chishang**	**1.41**	**233**	eP	**Pn**	**12 24 26.2**	**+0.6**
ECS				eS	**Sn**	**12 24 44.0**	**0.0**
SMLT	**Sun Moon Lake**	**1.42**	**268**	eP	**Pb**	**12 24 27.1**	**+0.3**
SMLT				eS	**Sn**	**12 24 43.9**	**-0.4**
KSHI	**Guanxi Townshi**	**1.42**	**306**	eP	**Pg**	**12 24 27.3**	**-0.5**
YM01	**YM01**	**1.43**	**326**	eP	**Pb**	**12 24 26.4**	**-0.5**
TYC	**Yuchr**	**1.45**	**269**	eP	**Pg**	**12 24 28.7**	**+0.3**
JKRS	**Kuro-shima**	**1.46**	**78**	eS	**Sg**	**12 24 47.8**	**+0.3**
ZUZH	**Zhuzihu**	**1.46**	**326**	eP	**Pb**	**12 24 27.5**	**+0.1**
LIOB	**Emei**	**1.48**	**298**	eP	**Pg**	**12 24 28.1**	**-0.7**
LIOB				eS	**Sg**	**12 24 47.1**	**-0.9**
TWS1	**Kuangyinshan**	**1.48**	**321**	eP	**Pn**	**12 24 27.0**	**+0.4**
WHYT	**Xinyi Township**	**1.48**	**260**	P	**Pn**	**12 24 27.3**	**+0.7**
WHYT				eS	**Sn**	**12 24 46.1**	**+0.4**
NSTT	**Nanjuang**	**1.48**	**298**	eP	**Pb**	**12 24 28.1**	**+0.3**
NSTT				S	**Sb**	**12 24 46.7**	**+0.3**
ELDTW	**Lidau**	**1.51**	**240**	eP	**Pn**	**12 24 26.8**	**-0.3**
TWY	**Chenhua**	**1.53**	**330**	eP	**Pb**	**12 24 28.3**	**-0.2**
ALS	**Alishan**	**1.56**	**254**	eP	**Pn**	**12 24 28.3**	**+0.3**
ALS				eS	**Sn**	**12 24 48.3**	**+0.1**
WJS	**Zhushan**	**1.58**	**266**	eP	**Pb**	**12 24 28.6**	**+0.3**
JIJ	**Ishigaki jima**	**1.60**	**75**	P	**Pb**	**12 24 29.3**	**-0.5**
JIJ				eS	**Sb**	**12 24 50.1**	**+0.2**
WNT	**Mingjian**	**1.61**	**268**	eP	**Pb**	**12 24 30.5**	**+0.6**
WNT				eS	**Sn**	**12 24 50.1**	**+1.2**
CHN5	**Tsauling**	**1.66**	**258**	eP	**Pb**	**12 24 30.6**	**-0.1**
CHN5				eS	**Sn**	**12 24 51.1**	**+1.0**
TWGBT	**Beinan**	**1.69**	**228**	eP	**Pn**	**12 24 29.2**	**-0.2**
TWGBT				eS	**Sn**	**12 24 49.3**	**-1.5**
TWG	**Pinlang**	**1.69**	**229**	eP	**Pn**	**12 24 29.1**	**-0.3**
TWG				eS	**Sn**	**12 24 49.0**	**-1.8**
WCHH	**Zhanghua**	**1.73**	**275**	eP	**Pb**	**12 24 32.1**	**+0.2**
WCHH				S	**Sb**	**12 24 54.1**	**+0.6**
WCKO	**Fanlu**	**1.76**	**254**	eP	**Pb**	**12 24 32.5**	**0.0**
WCKO				eS	**Sn**	**12 24 54.1**	**+1.4**
WDLH	**Douliu**	**1.77**	**262**	eP	**Pb**	**12 24 33.4**	**+0.9**
WDLH				eS	**Sg**	**12 24 56.9**	**-0.4**
TPUB	**Ta-pu**	**1.79**	**249**	eP	**Pb**	**12 24 32.6**	**-0.3**
TPUB				eS	**Sn**	**12 24 54.6**	**+1.4**
CHN4	**Tsaushan**	**1.80**	**251**	eP	**Pb**	**12 24 33.2**	**+0.1**
CHN4				eS	**Sb**	**12 24 55.5**	**-0.1**
JISG	**Ishigakijimahi**	**1.82**	**69**	eP	**Pb**	**12 24 32.3**	**-1.1**
JISG				eS	**Sn**	**12 24 54.6**	**+0.7**
WTP	**Ta-pu**	**1.82**	**248**	eP	**Pb**	**12 24 33.0**	**-0.5**
WTP				eS	**Sn**	**12 24 55.9**	**+1.8**
RLNB	**Erlin**	**1.91**	**269**	eP	**Pb**	**12 24 34.0**	**-1.0**
RLNB				eS	**Sn**	**12 24 58.1**	**+1.8**
SGST	**Jiashian**	**1.92**	**244**	eP	**Pb**	**12 24 35.4**	**+0.3**
CHN1	**Nanshi**	**1.92**	**247**	eP	**Pb**	**12 24 34.9**	**-0.2**
CHN1				eS	**Sb**	**12 24 59.4**	**+0.5**
TWK	**Hsinying**	**1.92**	**250**	eP	**Pb**	**12 24 35.1**	**-0.1**
TWK				eS	**Sb**	**12 24 59.0**	**0.0**
ECL	**Taimali**	**1.92**	**226**	eP	**Pn**	**12 24 33.2**	**+0.6**
SSD	**Sandimen**	**2.05**	**235**	eP	**Pb**	**12 24 36.5**	**-0.9**
SSD				eS	**Sn**	**12 25 02.0**	**+2.2**
WSL	**Shuilin Townsh**	**2.08**	**259**	eP	**Pn**	**12 24 35.9**	**+1.2**
MASBT	**Mashibuluo**	**2.13**	**232**	eP	**Pn**	**12 24 36.9**	**+1.3**
MASBT				eS	**Sb**	**12 25 04.7**	**-0.5**
CHN8	**Yiju**	**2.13**	**254**	eP	**Pn**	**12 24 37.2**	**+1.6**
EAST	**Anshuo**	**2.14**	**224**	eP	**Pn**	**12 24 37.6**	**+1.9**
SCZT	**Fangliau**	**2.30**	**227**	P	**Pn**	**12 24 40.1**	**+2.3**
SCZT				eS	**Sn**	**12 25 08.4**	**+2.5**
TSCK	**Chigu Township**	**2.31**	**250**	eP	**Pn**	**12 24 38.8**	**+0.8**
SMST	**Manzhou Townsh**	**2.43**	**218**	eP	**Pn**	**12 24 41.4**	**+1.8**
PHUB	**P'eng-hu**	**2.67**	**261**	eP	**Pn**	**12 24 42.7**	**-0.2**
PHUB				eS	**Sn**	**12 25 15.0**	**0.0**
VCHM	**Qimei**	**2.86**	**256**	eP	**Pn**	**12 24 46.8**	**+1.2**
VCHM				eS	**Sn**	**12 25 19.4**	**-0.4**
VWUC	**VWUC**	**2.92**	**291**	eP	**Pn**	**12 24 46.1**	**-0.2**
PTMZ	**Houxiangcun**	**3.22**	**290**	eP	**Pn**	**12 24 50.1**	**-0.3**

*ANF **18** 12:25:02.7±0.1, 58°.33N×133°.47W, h0^{km}, ML3.4/28, Error ellipse: s-maj=1.5km s-min=1.0km az=89.0*
*NEIC **18** 12:25:02.9±1.0, 58°.36N±0°.02×133°.45W±0°.05, h5^{km}±2^{km}, ML3.2/50, ML3.0(AEIC), Error ellipse: s-maj=4.2km s-min=3.0km az=285.0*
*AEIC **18** 12:25:02.8±1.1, 58°.35N±0°.02×133°.45W±0°.05, h0^{km}±6^{km}, Error ellipse: s-maj=4.1km s-min=1.8km az=123.0*
*PGC **18** 12:25:03.4±0.1, 58°.31N×133°.48W, h0^{km}, ML3.3/17, 54km east of Juneau, Alaska, Usa Southeastern Alaska*
*IDC **18** 12:25:04.3±1.2, 58°.29N×133°.28W, h0^{km}, mb2.9/1, mbtmp3.2/5, ML2.7/4, Error ellipse: s-maj=13.1km s-min=10.9km az=45.0*

ISC 18 12:25:03.4±0.7, 58°.32N±0°.02×133°.44W±0°.02, h10^{km}, n112, σ1$22/147, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.50**	**265**		**Pg**	**12 25 12.2**	**-1.0**
JIS					**Sg**	**12 25 18.8**	**-0.9**
R32K	**Eaglecrest**	**0.57**	**266**		**Pg**	**12 25 13.6**	**-1.0**
R32K					**Sg**	**12 25 21.0**	**-1.1**
R32K	**Eaglecrest**	**0.57**	**266**	P	**Pg**	**12 25 13.4**	**-1.1**
	baz=82,SNR=12						
R32K				S	**Sg**	**12 25 20.9**	**-1.1**
	baz=82						
BESE	**Bessie Mountai**	**0.79**	**290**	P	**Pg**	**12 25 17.2**	**-1.4**
BESE	**Bessie Mountai**	**0.79**	**290**		**Pg**	**12 25 17.2**	**-1.4**
Q32M	**Nakina River**	**0.88**	**43**	P	**Pg**	**12 25 19.6**	**-0.8**
Q32M				S	**Sb**	**12 25 32.7**	**-0.1**
Q32M	**Nakina River**	**0.88**	**43**		**Pg**	**12 25 19.7**	**-0.8**
Q32M				IAML		12 25 39.2	
	comp=N,339nm,0.8s						
Q32M	**Nakina River**	**0.88**	**43**	P	**Pg**	**12 25 19.6**	**-0.8**
	baz=225,SNR=65						
Q32M				S	**Sb**	**12 25 32.0**	**-0.9**
	baz=225						
S32K	**Killisnoo**	**1.05**	**216**		**Sb**	**12 25 37.5**	**+0.1**
S32K	**Killisnoo**	**1.05**	**216**		**Pg**	**12 25 23.2**	**-0.4**
S32K	**Killisnoo**	**1.05**	**216**	P	**Pg**	**12 25 22.9**	**-0.7**
	baz=34,SNR=19						
S32K				S	**Sb**	**12 25 37.3**	**0.0**
	baz=34						
R31K	**City Hall, Gus**	**1.22**	**275**	P	**Pn**	**12 25 25.3**	**-1.1**
R31K				S	**Sb**	**12 25 40.2**	**-2.0**
R31K	**City Hall, Gus**	**1.22**	**275**		**Pn**	**12 25 25.4**	**-1.0**
R31K					**Sb**	**12 25 41.6**	**-0.6**
R31K	**City Hall, Gus**	**1.22**	**275**	P	**Pn**	**12 25 25.4**	**-1.0**
	baz=92						
R31K				S	**Sb**	**12 25 41.6**	**-0.6**
	baz=92						
P32M	**Atlin**	**1.28**	**354**	P	**Pn**	**12 25 26.0**	**-1.4**
P32M	**Atlin**	**1.28**	**354**	Pg	**Pn**	**12 25 26.1**	**-1.3**
P32M					**Sb**	**12 25 42.7**	**-1.4**
P32M				IAML		12 25 50.4	
	comp=E,181nm,0.8s						
P32M	**Atlin**	**1.28**	**354**	P	**Pn**	**12 25 26.0**	**-1.4**
	baz=174,SNR=67						
P32M				S	**Sg**	**12 25 43.9**	**-0.7**
	baz=174						
S34M	**Telegraph Cree**	**1.29**	**108**	P	**Pn**	**12 25 26.7**	**-0.7**
S34M	**Telegraph Cree**	**1.29**	**108**	Sn	**Sg**	**12 25 45.2**	**+0.4**
S34M	**Telegraph Cree**	**1.29**	**108**	P	**Pn**	**12 25 27.0**	**-0.4**
	baz=290,SNR=104						
S34M				S	**Sg**	**12 25 45.5**	**+0.6**
	baz=290						
SKAG	**Skagway**	**1.51**	**320**		**Pn**	**12 25 30.0**	**-0.4**
SKAG				IAML		12 25 54.8	
	comp=N,196nm,0.6s						
SKAG				IAML		12 25 58.8	
	comp=E,173nm,1.0s						
SKAG	**Skagway**	**1.51**	**320**	P	**Pn**	**12 25 30.0**	**-0.4**
	baz=138,SNR=27						
SKAG				S

P30M	**Million Dollar**	**2.56**	**316**		**Pn**	**12 25 45.6**	**+0.7**
P30M	**Million Dollar**	**2.56**	**316**	IAML		12 26 25.8	
	comp=E,88nm,1.1s						
P30M				IAML		12 26 37.3	
	comp=N,98nm,1.1s						
P30M	**Million Dollar**	**2.56**	**316**	P	**Pn**	**12 25 46.2**	**+1.2**
	baz=133						
P29M	**Windy Craggy**	**2.59**	**302**	P	**Pn**	**12 25 45.9**	**+0.6**
	baz=118,SNR=6.6						
P29M				Sb	**Sb**	**12 26 23.3**	**+1.7**
	baz=118						
O30N	**Mendenhall**	**2.80**	**332**	Pn	**Pn**	**12 25 49.0**	**+0.7**
O30N	**Mendenhall**	**2.80**	**332**	IAML		12 26 43.5	
	comp=N,74nm,1.1s						
O30N				IAML		12 26 45.4	
	comp=E,108nm,1.0s						
O30N	**Mendenhall**	**2.80**	**332**	P	**Pn**	**12 25 48.5**	**+0.2**
	baz=150,SNR=16						
O30N				Sb	**Sb**	**12 26 29.8**	**+1.8**
	baz=150						
N32M	**Quiet Lake**	**2.84**	**3**	Pn	**Pn**	**12 25 47.7**	**-1.2**
N32M	**Quiet Lake**	**2.84**	**3**	P	**Pn**	**12 25 49.6**	**+0.7**
	baz=184						
N32M				Sb	**Sg**	**12 26 31.6**	**-3.1**
	baz=184						
CRAG	**Craig**	**2.87**	**176**	P	**Pn**	**12 25 49.6**	**+0.5**
	baz=357						
WTLY	**Watson Lake, Y**	**2.99**	**51**	Sg	**Sg**	**12 26 36.8**	**-2.4**
WTLY	**Watson Lake, Y**	**2.99**	**51**	Sb	**Sg**	**12 26 37.3**	**-1.9**
	baz=235						
V35K	**Ketchikan**	**3.16**	**161**	Sb	**Sg**	**12 26 41.8**	**-3.1**
	baz=342						
HYT	**Haines Junctio**	**3.25**	**322**	Pn	**Pn**	**12 25 55.6**	**+1.1**
HYT				Pg	**Pb**	**12 26 02.0**	**+0.7**
HYT	**Haines Junctio**	**3.25**	**322**	Pn	**Pn**	**12 25 55.1**	**+0.6**
HYT				IAML		12 26 49.7	
	comp=E,79nm,1.2s						
HYT	**Haines Junctio**	**3.25**	**322**	Sb	**Sb**	**12 26 43.4**	**+2.4**
	baz=139						
O29M	**Mount Kennedy**	**3.30**	**309**	Pg	**Pb**	**12 26 01.8**	**-0.2**
O29M	**Mount Kennedy**	**3.30**	**309**	Pb	**Pb**	**12 26 01.6**	**-0.4**
	baz=124						
O29M				Sb	**Sg**	**12 26 45.3**	**-4.0**
	baz=124						
N31M	**Braeburn, Yuko**	**3.39**	**341**	Pn	**Pn**	**12 25 57.0**	**+0.7**
N31M				Sg	**Sg**	**12 26 48.5**	**-3.5**
N31M	**Braeburn, Yuko**	**3.39**	**341**	Pn	**Pn**	**12 25 56.3**	**0.0**
N31M	**Braeburn, Yuko**	**3.39**	**341**	P	**Pn**	**12 25 57.0**	**+0.7**
	baz=158,SNR=9.6						
N31M				S	**Sn**	**12 26 38.6**	**+2.0**
	baz=158						
YUK5	**Granite Creek**	**3.60**	**323**	Pg	**Pb**	**12 26 07.8**	**+0.6**
YUK5				Sg	**Sb**	**12 26 54.0**	**+3.1**
N30M	**Aishikik Lake**	**3.65**	**331**	Pn	**Pn**	**12 26 00.8**	**+0.9**
N30M				Sg	**Sb**	**12 26 55.3**	**+3.2**
N30M	**Aishikik Lake**	**3.65**	**331**	Pn	**Pn**	**12 26 00.6**	**+0.7**
N30M				IAML		12 27 19.5	
	comp=N,50nm,1.1s						
N30M	**Aishikik Lake**	**3.65**	**331**	P	**Pn**	**12 26 00.4**	**+0.5**
	baz=148,SNR=6.4						
N30M				Sb	**Sb**	**12 26 55.5**	**+3.3**
	baz=148						
M31M	**Drury Creek, Y**	**3.92**	**353**	Pn	**Pn**	**12 26 04.0**	**+0.3**
M31M				IAML		12 27 10.4	
	comp=E,49nm,1.1s						
M31M				IAML		12 27 20.5	
	comp=N,42nm,0.9s						
M31M	**Drury Creek, Y**	**3.92**	**353**	P	**Pn**	**12 26 04.9**	**+1.2**
	baz=173,SNR=12						
YUK4	**Talbot Arm**	**4.01**	**321**	Pn	**Pn**	**12 26 06.3**	**+1.2**
YUK4	**Talbot Arm**	**4.01**	**321**	Pb	**Pb**	**12 26 14.5**	**+0.3**
	baz=138						
O28M	**Mount Upton**	**4.23**	**308**	Pg	**Pb**	**12 26 18.5**	**+0.6**
O28M	**Mount Upton**	**4.23**	**308**	Pb	**Pb**	**12 26 17.5**	**-0.4**
	baz=122						
YUK8	**Steele Glacier**	**4.36**	**316**	Pg	**Pb**	**12 26 21.5**	**+1.2**
YUK8	**Steele Glacier**	**4.36**	**316**	Pb	**Pb**	**12 26 20.5**	**+0.3**
	baz=130						
MMPY	**Sheldon Lake,**	**4.44**	**13**	Pn	**Pn**	**12 26 11.9**	**+1.0**
MMPY	**Sheldon Lake,**	**4.44**	**13**	Pn	**Pn**	**12 26 10.6**	**-0.2**
MMPY	**Sheldon Lake,**	**4.44**	**13**	P	**Pn**	**12 26 12.2**	**+1.4**
	baz=195						
M30M	**Minto, Yukon**	**4.58**	**340**		**Pn**	**12 26 13.2**	**+0.5**
M30M				IAML		12 27 37.4	
	comp=N,28nm,1.2s						
M30M	**Minto, Yukon**	**4.58**	**340**	P	**Pn**	**12 26 12.8**	**+0.1**
	baz=157						
M29M	**Somme Creek**	**4.83**	**331**	Pn	**Pn**	**12 26 16.5**	**+0.4**
M29M	**Somme Creek**	**4.83**	**331**	P	**Pn**	**12 26 17.3**	**+1.1**
	baz=147						
L29M	**L29M**	**5.33**	**336**	P	**Pn**	**12 26 23.2**	**+0.3**
	baz=152						
K29M	**Barlow Dome**	**5.88**	**342**	P	**Pn**	**12 26 31.4**	**+0.7**
	baz=158						
BCAR	**Beaver Creek A**	**6.28**	**323**	Pn	**Pn**	**12 26 36.5**	**+0.5**
J30M	**Hart River**	**6.43**	**349**	P	**Pn**	**12 26 39.0**	**+0.9**
	baz=166						
DAWY	**Dawson**	**6.44**	**336**	Pn	**Pn**	**12 26 37.7**	**-0.5**
BBB	**Bella Bella**	**6.86**	**151**	Pn	**Pn**	**12 26 46.2**	**+2.3**
	comp=N,0.3nm,0.3s,baz=329,slow=12,SNR=1.6						
BBB				Sn	**Sn**	**12 28 03.1**	**+1.2**
	comp=N,0.1nm,0.3s,baz=352,slow=10,SNR=1.6						
BBB				Lg	Lg	12 28 37.2	
	comp=N,0.1nm,0.3s,baz=16,slow=15,SNR=3.9						
	comp=N,4.6nm,0.9s						
I30M	**Mount Dempster**	**7.06**	**350**	P	**Pn**	**12 26 49.0**	**+2.2**
	baz=167,SNR=32						
H31M	**Peel River**	**7.52**	**357**	P	**Pn**	**12 26 54.3**	**+1.2**
	baz=176,SNR=9.5						
I28M	**Miner Creek**	**7.78**	**340**	P	**Pn**	**12 26 57.7**	**+1.1**
	baz=154						
EPYK	**Eagle Plains**	**8.22**	**351**	P	**Pn**	**12 27 03.2**	**+0.7**
	baz=168,SNR=9.5						
ILAR	**Eielson Array**	**9.10**	**321**	Pn	**Pn**	**12 27 17.8**	**+3.2**
	baz=133,slow=12,SNR=3.2						
ILAR				Pg		12 27 44.6	
	baz=128,slow=16,SNR=4.9						
ILAR				Lg	Lg	12 29 48.0	
	comp=N,0.1nm,0.3s,baz=119,slow=27,SNR=8.6						
	comp=N,0.3nm,0.9s						
F30M	**Barrier River**	**9.38**	**354**	P	**Pn**	**12 27 19.1**	**+0.6**
	baz=172						
HOM	**Homer**	**9.49**	**286**	P	**Pn**	**12 27 21.1**	**+1.2**
	baz=90						
L22K	**Petersville**	**9.54**	**303**	P	**Pn**	**12 27 22.6**	**+1.9**
	baz=108						
INK	**Inuvik**	**10.03**	**360**	Pn	**Pn**	**12 27 27.8**	**+0.6**
	comp=N,0.1nm,0.3s,baz=186,slow=9.8,SNR=3.6						
	comp=N,5.2nm,1.0s						
INK	**Inuvik**	**10.03**	**360**	P	**Pn**	**12 27 28.2**	**+1.0**
	baz=180						
YKA	**Yellowknife Ar**	**10.19**	**58**	Pn	**Pn**	**12 27 29.0**	**-0.5**
	baz=255,slow=12,SNR=4.7						
YKA				Lg	Lg	12 30 20.3	
	baz=255,slow=30,SNR=5.5						
	comp=N,0.4nm,0.8s						
NVAR	**Mina Array Bea**	**22.20**	**147**	P	**P**	**12 30 01.3**	**+1.4**
	comp=N,0.4nm,0.8s,baz=347,slow=8.2,SNR=3.8						
	comp=N,0.4nm,0.8s						

*NEIC **18** 12:30:47.2±1.7,23°.93N±0°.04×122°.43E±0°.03,h21km±4km, mb4.4/17,Error ellipse: s-maj=5.9km s-min=3.3km az=154.0*

*NIED **18** 12:30:48.2,23°.95N×122°.42E,h19km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.49; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.58; $M_{r\theta}$1.50; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.78; Fault plane solution: $M_0$1.91000×10^{15} NP1: ϕ_s305.00000°,δ21.00000°,λ152.00000°. NP2: ϕ_s61.00000°,δ80.00000°,λ71.00000°.*

*TAP **18** 12:30:49.0,24°.04N×122°.40E,h26km,ML4.5,C*

*JMA **18** 12:30:48.2±0.3,24°.N±1°×122°.4E±0°.5,h19km±4km, MD4.2/15,MV4.0/15,NW OFF ISHIGAKIJIMA IS*

*IDC **18** 12:30:53.8±4.7,24°.18N×122°.72E,h82km±42km,mb3.7/20, mbtmp4.0/21,ML4.0/1,MS3.9/6,Error ellipse: s-maj=25.7km s-min=13.2km az=66.0*

ISC 18 12:30:47.6±0.8,**23°.94N**±0°.02×**122°.45E**±0°.02,**h29**km±6km, **n235,**σ1**^{s}08**/358,**mb4.3**/28,**MS4.0**/6,**1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.22**	**326**	*i* P	**Pb**	**12 30 53.6**	**+0.1**
EOS4				*i* S	**Sb**	**12 30 57.1**	**-0.5**
EOS3	**EOS3**	**0.37**	**340**	*i* P	**Pn**	**12 30 56.1**	**-0.7**
EOS3				*i* S	**Sn**	**12 31 01.5**	**-1.5**
EOS2	**EOS2**	**0.52**	**337**	*i* P	**Pn**	**12 30 58.8**	**-0.1**
EOS2				S	**Sn**	**12 31 06.2**	**-0.5**
JYNG	**Yonagunijimaku**	**0.68**	**41**	P	**Pn**	**12 31 01.5**	**+0.2**
JYNG				A	A	12 31 01.5	
	comp=N,16nm,1.9s,comp=E,25nm,0.9s						
JYNG				*e*S	**Sn**	**12 31 09.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.73**	**44**	P	**Pn**	**12 31 02.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.73**	**44**		**Pn**	**12 31 02.2**	**+0.3**
YOJ				Sg	**Sn**	**12 31 11.2**	**-0.9**
YOJ	**Yonaguni jima**	**0.73**	**44**	*i* P	**Pn**	**12 31 02.4**	**+0.5**
YOJ				S	**Sn**	**12 31 11.3**	**-0.9**
YOJ	**Yonaguni jima**	**0.73**	**44**	P	**Pn**	**12 31 02.4**	**+0.5**
YOJ				A	A	12 31 02.4	
	comp=N,16nm,1.4s,comp=E,16nm,3.2s						
YOJ				*e*S	**Sn**	**12 31 11.4**	**-0.7**
EHP	**Heping Village**	**0.75**	**300**	*e*P	**Pb**	**12 31 01.0**	**-1.1**
EAHA	**Aohua**	**0.76**	**301**	*e*P	**Pn**	**12 31 02.5**	**+0.1**
EAHA				*e*S	**Sn**	**12 31 12.6**	**-0.2**
HWA	**Hwalien**	**0.78**	**273**	*e*P	**Pn**	**12 31 03.2**	**+0.6**
HWA				*e*S	**Sn**	**12 31 14.0**	**+0.7**
TEYL	**Yanliau Villag**	**0.79**	**265**	*e*P	**Pn**	**12 31 03.1**	**+0.4**
TEYL				*e*S	**Sn**	**12 31 13.8**	**+0.4**
ETL	**Fush Village**	**0.79**	**286**	*e*P	**Pn**	**12 31 03.2**	**+0.5**
EWUT	**Wuta**	**0.80**	**310**	*e*P	**Pn**	**12 31 02.6**	**-0.3**
EWUT				*e*S	**Sn**	**12 31 13.0**	**-0.7**
TWD	**Chiawan**	**0.80**	**280**	*i* P	**Pn**	**12 31 02.8**	**-0.1**
TWD				*e*S	**Sn**	**12 31 13.4**	**-0.3**
ENA	**Nanau**	**0.81**	**307**	*e*P	**Pb**	**12 31 01.3**	**-1.9**
ENA				*e*S	**Sb**	**12 31 10.8**	**-3.0**
NACB	**Ninganchiao**	**0.82**	**287**	P	**Pn**	**12 31 03.0**	**-0.2**
NACB	**Ninganchiao**	**0.82**	**287**		**Pn**	**12 31 03.1**	**0.0**
NACB				Sg	**Sb**	**12 31 12.2**	**-1.7**
NACB	**Ninganchiao**	**0.82**	**287**	*e*P	**Pn**	**12 31 03.2**	**0.0**
SHUL	**Shoufeng**	**0.83**	**260**	*i* P	**Pn**	**12 31 03.6**	**+0.4**
SHUL				*e*S	**Sn**	**12 31 14.9**	**+0.4**
ESAO	**Su ao**	**0.84**	**319**	*e*P	**Pn**	**12 31 03.4**	**-0.1**
TEGC	**Jichi Village**	**0.87**	**255**	P	**Pn**	**12 31 04.4**	**+0.6**
TEGC				S	**Sn**	**12 31 15.7**	**+0.3**
TWC	**Suao**	**0.87**	**321**	*i* P	**Pn**	**12 31 03.4**	**-0.4**
TWC				S	**Sb**	**12 31 13.9**	**-1.4**
ETM	**Tongmen**	**0.88**	**272**	P	**Pn**	**12 31 04.0**	**0.0**
ETM				*i* S	**Sb**	**12 31 15.3**	**-0.4**
ETLH	**Xiulin Townshi**	**0.93**	**287**	P	**Pn**	**12 31 04.8**	**+0.1**
ETLH				*e*S	**Sn**	**12 31 17.4**	**+0.3**
LXIB	**Xiulin Townshi**	**0.95**	**275**	*i* P	**Pn**	**12 31 05.4**	**+0.2**
LXIB				*e*S	**Sn**	**12 31 18.4**	**+0.5**
NDS	**Dongshan**	**0.96**	**316**	*e*P	**Pn**	**12 31 05.6**	**+0.4**
NDS				*e*S	**Sn**	**12 31 17.6**	**-0.3**
WARBT	**Fenglin Townsh**	**1.00**	**258**	*i* P	**Pn**	**12 31 05.7**	**0.0**
WARBT				S	**Sb**	**12 31 18.3**	**-0.9**
EGS		**1.02**	**332**	*e*P	**Pn**	**12 31 06.7**	**+0.7**
EGS				*e*S	**Sn**	**12 31 19.6**	**+0.3**
LATG	**Datong**	**1.03**	**305**	*e*P	**Pn**	**12 31 07.1**	**+0.8**
HGSD	**Ruisui**	**1.04**	**245**	*i* P	**Pn**	**12 31 06.7**	**+0.5**
HGSD				*e*S	**Sb**	**12 31 19.8**	**-0.5**
ILA	**Ilan**	**1.04**	**322**	*e*P	**Pn**	**12 31 07.3**	**+1.1**
ILA				*e*S	**Sn**	**12 31 20.6**	**+0.7**
TWE	**Neicheng**	**1.06**	**318**	*e*P	**Pn**	**12 31 07.2**	**+0.7**
TWE				*e*S	**Sb**	**12 31 19.4**	**-1.4**
NTC	**Toucheng**	**1.07**	**328**	*e*P	**Pn**	**12 31 08.2**	**+1.5**
NDT	**Datong Townshi**	**1.08**	**308**	*e*P	**Pb**	**12 31 08.0**	**+0.3**
NDT				*e*S	**Sn**	**12 31 21.6**	**+0.7**
NNSB	**Datong**	**1.09**	**297**	*e*P	**Pb**	**12 31 07.8**	**-0.2**
NNSB				*e*S	**Sn**	**12 31 20.8**	**+0.6**
NNS	**Nan Shan**	**1.10**	**297**	*i* P	**Pb**	**12 31 07.9**	**-0.3**
NNS				*e*S	**Sn**	**12 31 22.0**	**+0.4**
WHF	**Hehuan Shan**	**1.10**	**281**	P	**Pn**	**12 31 07.5**	**0.0**
WHF				*e*S	**Sb**	**12 31 21.9**	**-0.7**
ECBN	**Changbin**	**1.11**	**236**	*e*P	**Pb**	**12 31 08.0**	**-0.1**
ECBN				S	**Sb**	**12 31 21.6**	**-0.6**
EHYH	**Wanrong**	**1.11**	**247**	*e*P	**Pb**	**12 31 08.1**	**0.0**
EHYH				*i* S	**Sn**	**12 31 22.3**	**+0.9**
EHY	**Hungye**	**1.12**	**248**	*e*P	**Pb**	**12 31 08.1**	**-0.3**
EHY				*e*S	**Sn**	**12 31 22.5**	**+0.7**
FUSB	**Fushanzhiwuyua**	**1.14**	**316**	*e*P	**Pb**	**12 31 08.9**	**+0.2**
FUSB				*e*S	**Sn**	**12 31 23.8**	**+1.5**
TWB1	**Santiao Chiao**	**1.15**	**338**	P	**Pb**	**12 31 08.4**	**-0.4**
OWD	**Renai**	**1.17**	**271**	*i* P	**Pb**	**12 31 08.7**	**-0.5**
OWD				*e*S	**Sb**	**12 31 23.2**	**-0.8**
TIPB	**Shuangxi**	**1.18**	**331**	P	**Pb**	**12 31 09.2**	**-0.2**
TIPB				*e*S	**Sn**	**12 31 23.5**	**+0.2**
YULB	**Yu-li**	**1.19**	**243**	P	**Pb**	**12 31 08.8**	**-0.7**
YULB	**Yu-li**	**1.19**	**243**	S	**Sn**	**12 31 24.3**	**+0.8**
YULB	**Yu-li**	**1.19**	**243**		**Pb**	**12 31 08.9**	**-0.6**
YULB					**Sn**	**12 31 23.9**	**+0.4**
YULB	**Yu-li**	**1.19**	**243**	*i* P	**Pb**	**12 31 09.1**	**-0.5**
YULB				S	**Sn**	**12 31 24.0**	**+0.4**
NWLT	**Wulai**	**1.20**	**314**	*e*P	**Pb**	**12 31 09.5**	**-0.3**
NWLT				*e*S	**Sn**	**12 31 26.5**	**+2.7**
TWT	**Tachien**	**1.21**	**285**	*e*P	**Pb**	**12 31 10.2**	**+0.3**
TWT				*e*S	**Sn**	**12 31 24.9**	**+0.7**
TWF1	**Yuli**	**1.21**	**241**	*i* P	**Pb**	**12 31 09.5**	**-0.4**
TWF1				*i* S	**Sn**	**12 31 25.2**	**+1.2**
VWDT	**VWDT**	**1.21**	**262**	*i* P	**Pb**	**12 31 09.8**	**-0.2**
VWDT				*e*S	**Sn**	**12 31 24.6**	**+0.6**
CHKH	**Chenggong**	**1.22**	**233**	*e*P	**Pb**	**12 31 09.0**	**-1.0**
CHKH				*e*S	**Sb**	**12 31 23.3**	**-2.1**
WUSB	**Renai**	**1.22**	**273**	*e*P	**Pb**	**12 31 09.7**	**-0.5**
WUSB				S	**Sn**	**12 31 25.8**	**+1.3**
TDCB	**Techi**	**1.22**	**285**	*e*P	**Pb**	**12 31 10.2**	**0.0**
TDCB				*e*S	**Sn**	**12 31 25.4**	**+0.9**
YHNB	**Yeheng**	**1.22**	**307**	P	**Pb**	**12 31 09.8**	**-0.3**
YHNB	**Yeheng**	**1.22**	**307**		**Pb**	**12 31 09.9**	**-0.3**
YHNB				Sn	**Sn**	**12 31 25.2**	**+0.8**
YHNB	**Yeheng**	**1.22**	**307**	*e*P	**Pb**	**12 31 10.1**	**-0.1**
YHNB				*e*S	**Sn**	**12 31 26.3**	**+1.9**
IRIF	**Iriomote-Funau**	**1.23**	**71**	P	**Pb**	**12 31 11.1**	**+0.9**
IRIF				A	A	12 31 11.1	
	comp=N,8.0nm,0.8s,comp=E,13nm,1.2s						
IRIF				*e*S	**Sn**	**12 31 27.8**	**+3.3**
NSK	**Sanguang**	**1.24**	**307**	P	**Pb**	**12 31 10.0**	**-0.4**
NSK				*e*S	**Sn**	**12 31 25.2**	**+0.4**
HATJ	**Hateruma jima**	**1.24**	**84**	P	**Pb**	**12 31 11.3**	**+0.9**
HATJ				A	A	12 31 11.3	
	comp=N,12nm,1.5s,comp=E,7.0nm,1.2s						
HATJ				*e*S	**Sn**	**12 31 28.3**	**+3.5**
SXI1	**Grass Mountain**	**1.27**	**336**	*e*P	**Pb**	**12 31 10.3**	**-0.6**
NWF	**Wu-fen Shan**	**1.28**	**332**	*e*P	**Pb**	**12 31 10.7**	**-0.5**
NWF				*e*S	**Sb**	**12 31 28.4**	**+1.1**
WFSB	**Wu-fen Shan**	**1.28**	**332**	P	**Pb**	**12 31 10.4**	**-0.7**
WFSB				S	**Sb**	**12 31 28.6**	**+1.3**
FULB	**Fuli**	**1.29**	**236**	*e*P	**Pb**	**12 31 10.2**	**-1.1**
FULB				S	**Sn**	**12 31 26.5**	**+0.4**
CHKT	**Chengkung**	**1.30**	**230**	*i* P	**Pn**	**12 31 10.0**	**+0.2**
CHKT				S	**Sn**	**12 31 25.3**	**-0.9**
TWA	**Mucha**	**1.30**	**323**	*e*P	**Pb**	**12 31 12.0**	**+0.5**
TWA				*e*S	**Sb**	**12 31 28.8**	**+0.9**
NHDH	**Xindian Distri**	**1.32**	**321**	*e*P	**Pb**	**12 31 12.6**	**+0.8**
NHDH				*e*S	**Sb**	**12 31 29.7**	**+1.3**
TATO	**Taipei**	**1.36**	**320**	P	**Pb**	**12 31 12.4**	**+0.1**
TATO	**Taipei**	**1.36**	**320**		**Pb**	**12 31 12.3**	**-0.1**
TNOU	**National Taiwa**	**1.36**	**333**	*e*P	**Pb**	**12 31 11.3**	**-1.0**
TNOU				*e*S	**Sb**	**12 31 29.6**	**+0.2**
SSLB	**Suanglung**	**1.38**	**264**	P	**Pb**	**12 31 11.9**	**-0.9**
SSLB	**Suanglung**	**1.38**	**264**	S	**Sb**	**12 31 29.8**	**-0.2**
SSLB	**Suanglung**	**1.38**	**264**		**Pb**	**12 31 11.8**	**-1.0**
SSLB	**Suanglung**	**1.38**	**264**	*e*P	**Pb**	**12 31 13.1**	**+0.4**
SSLB				*e*S	**Sn**	**12 31 28.7**	**+0.4**
EHD	**Haiduan**	**1.39**	**236**	*e*P	**Pb**	**12 31 11.9**	**-1.0**
EHD				*e*S	**Sn**	**12 31 28.5**	**+0.1**
TAP	**Taipei**	**1.40**	**322**	*e*P	**Pb**	**12 31 13.8**	**+0.8**
TAP				*e*S	**Sb**	**12 31 31.9**	**+1.5**
NFF	**Wufeng Townshi**	**1.40**	**300**	*e*P	**Pb**	**12 31 12.9**	**-0.2**
NFF				*e*S	**Sb**	**12 31 30.6**	**-0.1**
ECS	**Chishang**	**1.41**	**234**	*e*P	**Pb**	**12 31 12.5**	**-0.7**
ECS				S	**Sb**	**12 31 31.0**	**+0.2**
WCS	**Beigang Elemen**	**1.41**	**275**	*e*P	**Pb**	**12 31 12.8**	**-0.6**
WHP	**Taichung City**	**1.42**	**284**	*e*P	**Pb**	**12 31 13.2**	**-0.2**
WHP				*e*S	**Sb**	**12 31 31.5**	**+0.3**
SMLT	**Sun Moon Lake**	**1.42**	**268**	*i* P	**Pb**	**12 31 12.8**	**-0.7**
SMLT				S	**Sb**	**12 31 30.4**	**-0.9**
KSHI	**Guanxi Townshi**	**1.43**	**306**	*i* P	**Pb**	**12 31 13.8**	**+0.1**
KSHI				*e*S	**Sb**	**12 31 31.6**	**+0.1**
YM01	**YM01**	**1.45**	**326**	*e*P	**Pb**	**12 31 13.6**	**-0.4**
JKRS	**Kuro-shima**	**1.45**	**78**	P	**Pb**	**12 31 14.5**	**+0.5**
JKRS				A	A	12 31 14.5	
	comp=N,10.0nm,2.0s,comp=E,9.0nm,1.6s						
JKRS				*e*S	**Sb**	**12 31 34.6**	**+2.5**
TYC	**Yuchr**	**1.46**	**269**	*e*P	**Pb**	**12 31 13.3**	**-0.7**
YM08	**YM08**	**1.47**	**328**	*e*P	**Pb**	**12 31 14.1**	**-0.2**
ZUZH	**Zhuzihu**	**1.47**	**326**	*e*P	**Pb**	**12 31 13.3**	**-1.0**
ZUZH				*e*S	**Sb**	**12 31 32.1**	**-0.6**
WHYT	**Xinyi Township**	**1.48**	**261**	*i* P	**Pb**	**12 31 14.2**	**-0.4**
WHYT				S	**Sb**	**12 31 32.1**	**-0.9**
LIOB	**Emei**	**1.49**	**299**	*i* P	**Pb**	**12 31 14.7**	**+0.1**
LIOB				*e*S	**Sb**	**12 31 33.9**	**+0.8**
NSTT	**Nanjuang**	**1.49**	**298**	*i* P	**Pb**	**12 31 14.6**	**-0.1**
NSTT				S	**Pb**	**12 31 33.4**	**+0.1**
TWS1	**Kuangyinshan**	**1.49**	**321**	*e*P	**Pb**	**12 31 14.6**	**-0.1**
TWS1				*e*S	**Sb**	**12 31 33.8**	**+0.6**
ANP	**Anpu**	**1.50**	**326**	*e*P	**Pb**	**12 31 14.2**	**-0.8**
ANP				*e*S	**Sn**	**12 31 31.9**	**+0.4**
ELDTW	**Lidau**	**1.51**	**241**	*e*P	**Pb**	**12 31 13.7**	**-1.4**
ELDTW				S	**Sn**	**12 31 31.8**	**+0.2**
NTST	**Danshui**	**1.52**	**323**	*e*P	**Pb**	**12 31 14.3**	**-0.9**
TWY	**Chenhua**	**1.54**	**330**	*e*P	**Pb**	**12 31 15.8**	**+0.3**
TWY				*e*S	**Sb**	**12 31 35.5**	**+0.9**
NCUH	**Zhongli**	**1.54**	**312**	*e*P	**Pb**	**12 31 15.0**	**-0.6**
ALS	**Alishan**	**1.57**	**255**	P	**Pb**	**12 31 15.7**	**-0.4**
ALS				S	**Sb**	**12 31 34.8**	**-0.9**
WJS	**Zhushan**	**1.58**	**266**	*e*P	**Pb**	**12 31 16.6**	**+0.4**
SBCB	**Hsinchu**	**1.58**	**303**	*e*P	**Pb**	**12 31 16.1**	**-0.2**
JIJ	**Ishigaki jima**	**1.60**	**74**	P	**Pb**	**12 31 15.8**	**-0.8**
JIJ				S	**Sb**	**12 31 36.4**	**+0.1**
HSN	**Hsinchu**	**1.60**	**303**	*e*P	**Pb**	**12 31 15.8**	**-0.8**
WNT	**Mingjian**	**1.62**	**268**	P	**Pb**	**12 31 17.0**	**+0.2**
WNT				*e*S	**Sb**	**12 31 37.2**	**+0.4**
TCU	**Taichung**	**1.64**	**278**	*e*P	**Pb**	**12 31 17.3**	**+0.2**
TCU				*e*S	**Sb**	**12 31 38.4**	**+1.0**
CHN5	**Tsauling**	**1.66**	**259**	P	**Pb**	**12 31 17.4**	**-0.2**
CHN5				S	**Sb**	**12 31 38.0**	**-0.1**
TTN	**Taitung**	**1.68**	**226**	*e*P	**Pb**	**12 31 16.8**	**-1.1**
TTN				*e*S	**Sb**	**12 31 38.9**	**+0.3**
TWGBT	**Beinan**	**1.68**	**229**	P	**Pn**	**12 31 15.7**	**+0.6**
TWGBT	**Beinan**	**1.68**	**229**	P	**Pn**	**12 31 15.8**	**+0.7**
TWGBT				*e*S	**Sn**	**12 31 36.2**	**+0.5**
TWG	**Pinlang**	**1.69**	**229**	Pn	**Pn**	**12 31 15.7**	**+0.6**
TWG	**Pinlang**	**1.69**	**229**	*e*P	**Pn**	**12 31 15.7**	**+0.6**
TWG				*e*S	**Sn**	**12 31 36.0**	**+0.3**
WDJ	**Dajia District**	**1.71**	**284**	*e*P	**Pb**	**12 31 17.7**	**-0.5**
WDJ				*e*S	**Sb**	**12 31 39.4**	**+0.1**
STYH	**Taoyuan**	**1.72**	**244**	P	**Pb**	**12 31 17.5**	**-1.0**
STYH				*e*S	**Sb**	**12 31 38.8**	**-0.9**
PCYT	**Pengchaiyu**	**1.72**	**348**	*e*P	**Pb**	**12 31 16.7**	**-1.9**
WCHH	**Zhanghua**	**1.74**	**275**	*e*P	**Pb**	**12 31 18.5**	**-0.3**
WCHH				*e*S	**Sb**	**12 31 40.6**	**+0.3**
WCH1	**Changhua City**	**1.75**	**275**	*e*P	**Pb**	**12 31 18.8**	**-0.2**
WCH1				*e*S	**Sb**	**12 31 41.6**	**+1.1**
WCKO	**Fanlu**	**1.77**	**254**	P	**Pb**	**12 31 19.4**	**+0.1**
WCKO				*e*S	**Sb**	**12 31 41.3**	**+0.2**
WDLH	**Douliu**	**1.77**	**262**	P	**Pb**	**12 31 19.2**	**-0.2**
WDLH				*e*S	**Sb**	**12 31 42.8**	**+1.6**
TPUB	**Ta-pu**	**1.79**	**250**	P	**Pb**	**12 31 19.1**	**-0.6**
TPUB	**Ta-pu**	**1.79**	**250**	Pn	**Pn**	**12 31 17.6**	**+1.1**
TPUB	**Ta-pu**	**1.

JOW	**Kunigami**	**6.00**	**60**	Pn		**Pn**	**12 32 14.8**	**+0.4**
JMZ	**Minamidaito 2**	**8.18**	**75**	Pn		**Pn**	**12 32 44.4**	**0.0**
KSAR	**Wonju Array Be**	**14.24**	**18**	Pn		**Pn**	**12 34 05.7**	**-1.6**
KSRS	**Korea Array**	**14.27**	**18**	P		**Pn**	**12 34 08.4**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=199,slow=12,SNR=26							
	comp=Z,0.8nm,0.7s							
KS19	**Wonju Array Si**	**14.29**	**18**	Pn		**Pn**	**12 34 07.2**	**-0.8**
LZH	**Lanzhou**	**20.11**	**311**	*eP*		Pn	12 35 22.9	+1.6
LZH				sP		pwP	12 35 30.8	+0.3
LZH				pmax		pmax		
	comp=Z,9.0nm,1.2s							
LZDM	**Lanzhou Array**	**20.15**	**311**	P		Pn	12 35 22.6	+0.7
	comp=Z,1.4nm,0.4s,baz=150,slow=15,SNR=1.4							
	comp=Z,1.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**22.57**	**261**	P		**P**	**12 35 49.1**	**+3.4**
	comp=Z,0.7nm,0.3s,baz=79,slow=10,SNR=4.9							
	comp=Z,0.7nm,0.3s							
SONM	**Songino Array**	**27.05**	**336**	P		**P**	**12 36 27.5**	**-0.1**
	comp=Z,4.6nm,0.9s,baz=151,slow=9.5,SNR=18							
	comp=Z,4.6nm,0.9s							
SONM	**Songino Array**	**27.05**	**336**			**P**	**12 36 27.8**	**+0.2**
MKAR	**Makanchi Array**	**39.32**	**316**	P		**P**	**12 38 14.9**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=103,slow=10,SNR=26							
MKAR				PcP		**PcP**	**12 40 21.2**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=129,slow=4.6,SNR=1.8							
	comp=Z,2.4nm,0.5s							
MKAR	**Makanchi Array**	**39.32**	**316**			**P**	**12 38 14.7**	**+0.6**
MAKZ	**Makanchi**	**39.53**	**316**			**P**	**12 38 16.3**	**+0.5**
MAKZ				IAmb		IAmb	12 38 17.7	
	comp=Z,6.2nm,1.0s							
KNRA	**Kununurra**	**39.85**	**170**	P		**P**	**12 38 20.3**	**+1.6**
KNRA				IAmb		IAmb	12 38 57.7	
	comp=Z,11nm,1.4s							
PDGK	**Podgornoye**	**40.14**	**310**			**P**	**12 38 22.5**	**+1.4**
MA2	**Magadan**	**40.78**	**22**	LR		LR	12 58 05.1	
	comp=Z,116nm,18.0s,baz=68,slow=40							
PMG	**Port Moresby**	**41.00**	**141**	LR		LR	12 53 33.4	
	comp=Z,102nm,20.7s,baz=281,slow=33							
ZAA0	**Zalesovo Array**	**41.08**	**327**			**P**	**12 38 28.6**	**+0.1**
ZAA0				IAmb		IAmb	12 38 28.8	
	comp=Z,4.5nm,0.7s							
ZALV	**Zalesovo Beam**	**41.08**	**327**	P		**P**	**12 38 28.3**	**-0.3**
	comp=Z,4.8nm,0.5s,baz=118,slow=8.2,SNR=26							
	comp=Z,4.8nm,0.5s							
ZALV	**Zalesovo Beam**	**41.08**	**327**	P		**P**	**12 38 28.4**	**-0.1**
NRN	**Naryn**	**42.27**	**306**			**P**	**12 38 39.0**	**+0.2**
NRN				IAmb		IAmb	12 38 42.0	
	comp=Z,5.5nm,0.8s							
KSH2	**Kashi**	**42.27**	**302**	P		**P**	**12 38 40.9**	**+2.2**
KSH2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KURK	**Kurchatov**	**43.02**	**320**	P		**P**	**12 38 44.6**	**+0.2**
KURBB	**Kurchatov Arra**	**43.04**	**320**	P		**P**	**12 38 44.8**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=111,slow=8.3,SNR=19							
	comp=Z,1.8nm,0.6s							
WB0	**Warramunga Arr**	**44.97**	**164**	P		**P**	**12 39 01.8**	**+1.4**
WB0				IAmb		IAmb	12 39 40.5	
	comp=Z,7.5nm,1.4s							
WRA	**Warramunga Arr**	**45.13**	**164**	P		**P**	**12 39 03.3**	**+1.7**
	comp=Z,3.0nm,0.7s,baz=345,slow=8.6,SNR=6.5							
	comp=Z,3.0nm,0.7s							
WRA	**Warramunga Arr**	**45.13**	**164**	P		**P**	**12 39 00.1**	**-1.5**
WR8	**Warramunga Arr**	**45.18**	**164**	P		**P**	**12 39 04.0**	**+2.0**
WR8				IAmb		IAmb	12 39 31.6	
	comp=Z,15nm,1.4s							
KK31	**Karatay Array**	**46.54**	**307**			**P**	**12 39 11.3**	**-1.3**
KKAR	**Karatay Array**	**46.54**	**307**			**P**	**12 39 11.8**	**-0.8**
TIXI	**Tiksi**	**47.88**	**3**	LR		LR	13 03 45.4	
	comp=Z,173nm,18.3s,baz=130,slow=41							
BVAR	**Borovoye Array**	**48.60**	**321**	P		**P**	**12 39 28.8**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=110,slow=9.3,SNR=12							
BVAR				PcP		**PcP**	**12 40 53.8**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=93,slow=5.8,SNR=2.0							
	comp=Z,2.2nm,0.5s							
AS31	**Alice Springs**	**48.61**	**166**	P		**P**	**12 39 28.4**	**-0.4**
ASAR	**Alice Springs**	**48.61**	**166**	P		**P**	**12 39 30.9**	**+2.1**
	comp=Z,1.7nm,0.8s,baz=342,slow=6.9,SNR=24							
ASAR				LR		LR	13 01 17.1	
	comp=Z,217nm,19.6s,baz=16,slow=37							
	comp=Z,1.7nm,0.8s							
ASAR	**Alice Springs**	**48.61**	**166**	P		**P**	**12 39 28.7**	**-0.1**
BORK	**Borovoye**	**48.65**	**321**			**P**	**12 39 29.4**	**+0.6**
BORK				IAmb		IAmb	12 39 30.8	
	comp=Z,2.7nm,0.6s							
AB31	**Akbulak array**	**54.44**	**314**			**P**	**12 40 12.6**	**+0.4**
AB31				IAmb		IAmb	12 40 14.7	
	comp=Z,3.8nm,0.7s							
ABKAR	**Akbulak array**	**54.44**	**314**			**P**	**12 40 13.1**	**+0.9**
ARTI	**Arti**	**56.09**	**323**	P		**P**	**12 40 23.4**	**-0.6**
NWAO	**Narrogin (SRO)**	**56.77**	**185**	LR		LR	13 04 01.8	
	comp=Z,103nm,18.8s,baz=10,slow=35							
STKA	**Stephens Creek**	**58.44**	**161**	P		**P**	**12 40 42.3**	**+1.5**
	comp=Z,2.0nm,0.8s,baz=324,slow=14,SNR=1.8							
	comp=Z,2.0nm,0.8s							
KBZ	**Khabaz**	**66.54**	**309**	P		**P**	**12 41 35.7**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=118,slow=6.1,SNR=6.2							
	comp=Z,2.0nm,0.8s							
OBN	**Obninsk**	**68.41**	**322**	LR		LR	13 13 06.0	
	comp=Z,91nm,20.0s,baz=200,slow=37							
ILAR	**Eielson Array**	**68.90**	**27**	P		**P**	**12 41 46.6**	**-2.8**
	comp=Z,0.2nm,0.6s,baz=264,slow=7.5,SNR=2.1							
	comp=Z,0.2nm,0.6s							
SPITS	**Spitsbergen Ar**	**69.97**	**348**	P		**P**	**12 41 54.7**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=76,slow=7.0,SNR=4.9							
	comp=Z,1.4nm,0.5s							
ARCES	**ARCESS Array B**	**70.20**	**338**	P		**P**	**12 41 56.9**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=121,slow=14,SNR=6.5							
	comp=Z,1.1nm,0.8s							
BCAR	**Beaver Creek A**	**71.50**	**29**	P		**P**	**12 42 07.0**	**+1.6**
FINES	**FINESS Array B**	**72.24**	**330**	P		**P**	**12 42 09.9**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=48,slow=5.7,SNR=9.3							
	comp=Z,1.2nm,0.6s							
FINES	**FINESS Array B**	**72.24**	**330**	P		**P**	**12 42 09.6**	**-0.2**
AKASG	**Malin Array Be**	**73.82**	**319**	P		**P**	**12 42 19.3**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=0.0,slow=0.0,SNR=4.0							
	comp=Z,0.2nm,0.4s							
BR131	**Keskin Array S**	**74.25**	**307**	P		**P**	**12 42 22.3**	**0.0**
BR131				IAmb		IAmb	12 42 24.3	
	comp=Z,3.9nm,0.9s							
BRTR	**Keskin Array B**	**74.25**	**307**	P		**P**	**12 42 22.9**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=99,slow=5.5,SNR=12							
	comp=Z,2.5nm,0.8s							
BRTR	**Keskin Array B**	**74.25**	**307**			**P**	**12 42 22.4**	**+0.1**
NOA	**NORSAR Array B**	**78.98**	**332**	P		**P**	**12 42 47.8**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=68,slow=4.8,SNR=2.9							
	comp=Z,0.4nm,0.5s							
YKA	**Yellowknife Ar**	**82.74**	**23**	P		**P**	**12 43 05.8**	**-2.7**
	comp=Z,0.2nm,0.6s,baz=310,slow=3.9,SNR=2.8							
	comp=Z,0.2nm,0.6s							
GERES	**GERESS Array B**	**83.77**	**321**	P		**P**	**12 43 13.3**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=57,slow=7.2,SNR=3.0							
	comp=Z,0.5nm,0.7s							

*IDC **18** 12:45:46.3±4.7, 37.°18N×72.°03E, h136km±34km, mb3.3/10, mbtmp3.9/16, MS3.9/1, Error ellipse: s-maj=40.7km s-min=19.6km az=167.0*
*NNC **18** 12:45:49.9±7.1, 37.°77N×71.°59E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=55.7km s-min=41.8km az=168.0*
*NEIC **18** 12:45:49.2±0.9, 37.°30N±0.°05×71.°9E±0.°1, h157km±4km, mb3.9/11, Error ellipse: s-maj=12.4km s-min=7.0km az=89.0*

ISC 18 12:45:47.6±0.6, 37°28N±0°05×71°92E±0°05, h150km, n71, σ1s90/83, mb3.8/17, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**				**Pn**	**12 46 11.3**	**+2.8**
MANEM					**Sn**	**12 46 27.5**	**+2.9**
GAR	**Garm**	**2.13**	**324**	Pn	**Pn**	**12 46 26.2**	**+1.8**
GAR				Sn	**Sn**	**12 46 52.8**	**+0.2**
DRK	**Karamyk**	**2.19**	**358**	Pn	**Pn**	**12 46 27.9**	**+2.5**
DRK				Sn	**Sn**	**12 46 55.2**	**+0.8**
CHGR	**Chuyangaron**	**2.57**	**303**	Pn	**Pn**	**12 46 31.3**	**+1.6**
BTK	**Batken**	**2.90**	**343**		**Pn**	**12 46 36.3**	**+2.6**
SHAA	**Shahritus**	**3.03**	**276**		**Pn**	**12 46 37.2**	**+1.8**
KSH2	**Kashi**	**3.42**	**56**	Pn	**Pn**	**12 46 43.6**	**+3.1**
KSH2				Sn	**Sn**	**12 47 23.3**	**+1.8**
KSH2				smax	smax		
	comp=N,710nm,0.6s						
KSH2				smax	smax		
	comp=E,860nm,0.6s						
KBL	**Kabul**	**3.59**	**221**		**Pn**	**12 46 44.7**	**+1.8**
NIL	**Nilore**	**3.79**	**163**		**Pn**	**12 46 47.2**	**+2.1**
JMU	**Jammu**	**5.09**	**151**	*eP*	**Pn**	**12 47 03.1**	**+0.8**
JMU				*eS*	**Sn**	**12 47 59.5**	**-1.0**
JMU				IAML		12 48 01.6	
	comp=E,287nm,0.5s						
JMU				IAML		12 48 04.5	
	comp=N,94nm,0.5s						
NRN	**Naryn**	**5.21**	**36**		**Pn**	**12 47 03.9**	**-0.2**
UCH	**Uchtor**	**5.33**	**21**	P	**Pn**	**12 47 07.1**	**+1.4**
	SNR=87						
EKS2	**Erkin-Say**	**5.56**	**14**	P	**Pn**	**12 47 10.5**	**+2.0**
	SNR=10						
TSSA	**Tissa**	**5.63**	**141**	*eP*	**Pn**	**12 47 10.3**	**+0.7**
TSSA				*eS*	**Sn**	**12 48 09.9**	**-3.8**
TSSA				IAML		12 48 15.0	
	comp=E,86nm,0.2s						
TSSA				IAML		12 48 15.0	
	comp=N,208nm,0.2s						
AAK	**Ala-Archa**	**5.70**	**20**	P	**Pn**	**12 47 10.8**	**+0.4**
	comp=N,21nm,0.3s,baz=201,slow=7.4,SNR=31						
AAK				S	**Sn**	**12 48 14.3**	**-0.8**
	comp=N,18nm,0.5s,baz=328,slow=20,SNR=19						
AAK	**Ala-Archa**	**5.70**	**20**	P	**Pn**	**12 47 12.3**	**+1.9**
	SNR=6.7						
AAK	**Ala-Archa**	**5.70**	**20**	⇓P	**Pn**	**12 47 11.3**	**+0.9**
	comp=N,4.8nm,0.4s						
AAK				⇑S	**Sn**	**12 48 13.1**	**-2.0**
	comp=N,80nm,1.1s						
AAK	**Ala-Archa**	**5.70**	**20**	Pn	**Pn**	**12 47 11.1**	**+0.7**
THN	**Thein Dam**	**5.77**	**146**	*eP*	**Pn**	**12 47 12.9**	**+1.5**
THN				*eS*	**Sn**	**12 48 14.3**	**-2.5**
THN				IAML		12 48 18.2	
	comp=E,164nm,0.4s						
THN				IAML		12 48 19.5	
	comp=N,180nm,0.5s						
KK31	**Karatay Array**	**5.91**	**350**	P	**Pn**	**12 47 14.1**	**+1.0**
	comp=N,4.4nm,0.3s,baz=159,slow=11,SNR=89						
KK31				⇑S	**Sn**	**12 48 17.0**	**-3.0**
	comp=N,77nm,0.5s,baz=173,slow=24,SNR=4.9						
KK31	**Karatay Array**	**5.91**	**350**		**Pn**	**12 47 14.4**	**+1.4**
KKAR	**Karatay Array**	**5.91**	**350**		**Pn**	**12 47 14.3**	**+1.2**
BOOM	**Boomskoye usch**	**6.05**	**30**		**Pn**	**12 47 16.1**	**+1.0**
CHMS	**Chumysh**	**6.11**	**20**	P	**Pn**	**12 47 17.3**	**+1.6**
	SNR=13						
DHRM	**DHARAMSHALA**	**6.18**	**143**	*eP*	**Pn**	**12 47 17.6**	**+0.6**
DHRM				*eS*	**Sn**	**12 48 23.7**	**-3.2**
DHRM				IAML		12 48 28.0	
	comp=E,205nm,0.4s						
DHRM				IAML		12 48 28.5	
	comp=N,231nm,0.4s						
TLWR	**Talawar**	**6.27**	**147**	*eS*	**Sn**	**12 48 26.3**	**-2.4**
TKM2	**Tokmak 2**	**6.30**	**25**	P	**Pn**	**12 47 19.8**	**+1.4**
	SNR=11						
KDJ	**Kajisay**	**6.32**	**38**	Pn	**Pn**	**12 47 19.7**	**+1.1**
TARG	**Taragay, Kyrgy**	**6.36**	**44**		**Pn**	**12 47 20.5**	**+1.1**
WUS	**Wushi**	**6.88**	**53**		**Pn**	**12 47 27.1**	**+0.9**
BHK	**Bhakra**	**6.94**	**147**	*ex*	x	12 48 12.2	
BHK				*ex*	x	12 48 42.4	
BHK				IAML		12 48 43.2	
	comp=E,54nm,0.5s						
KLP	**Kalpa**	**7.76**	**136**	*eP*	**Pn**	**12 47 40.5**	**+2.3**
KLP				*eS*	**Sn**	**12 48 59.8**	**-5.2**
KLP				IAML		12 49 03.0	
	comp=N,71nm,0.6s						
KLP				IAML		12 49 04.0	
	comp=E,65nm,0.3s						
PDGK	**Podgornoye**	**8.36**	**41**		**Pn**	**12 47 46.1**	**+0.2**
MAKZ	**Makanchi**	**12.09**	**35**		**Pn**	**12 48 34.5**	**-0.5**
MKAR	**Makanchi Array**	**12.23**	**36**	P	**Pn**	**12 48 36.8**	**0.0**
	comp=E,0.9nm,0.6s,baz=223,slow=10.0,SNR=8.7						
MKAR	**Makanchi Array**	**12.23**	**36**		**Pn**	**12 48 36.0**	**-0.7**
KURBB	**Kurchatov Arra**	**14.15**	**17**	P	**P**	**12 49 02.0**	**-2.2**
	comp=E,3.2nm,0.7s,baz=208,slow=10,SNR=4.5						
AB31	**Akbulak array**	**14.78**	**328**	P	**P**	**12 49 10.3**	**-0.9**
	comp=E,0.8nm,0.4s,baz=136,slow=13,SNR=38						
AB31				⇑S	**Sn**	**12 51 48.2**	**-4.9**
	comp=E,2.7nm,0.5s,baz=154,slow=21,SNR=12						
AB31	**Akbulak array**	**14.78**	**328**		**P**	**12 49 10.3**	**-0.9**
ABKAR	**Akbulak array**	**14.78**	**328**		**P**	**12 49 10.8**	**-0.4**
BVAR	**Borovoye Array**	**15.78**	**357**	P	**P**	**12 49 21.1**	**-1.1**
	comp=E,4.3nm,0.5s,baz=162,slow=13,SNR=18						
BORK	**Borovoye**	**15.80**	**356**		**P**	**12 49 21.8**	**-0.7**
BORK				IAmb	IAmb	12 49 23.4	
	comp=Z,4.3nm,0.7s						
AKTO	**Aktyubinsk**	**16.49**	**327**	P	**Pn**	**12 49 31.7**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=163,slow=10,SNR=4.4						
AKTO				S	**S**	**12 52 27.0**	**-6.2**
	comp=Z,2.8nm,0.5s,baz=70,slow=14,SNR=6.1						
AKTO	**Aktyubinsk**	**16.49**	**327**	⇑P	**Pn**	**12 49 31.2**	**+1.1**
	comp=Z,1.0nm,0.6s						
AKTO				⇑S	**S**	**12 52 32.1**	**-1.1**
	comp=Z,5.2nm,1.3s						
ZAA0	**Zalesovo Array**	**18.90**	**24**		**Pn**	**12 49 57.8**	**-0.9**
ZALV	**Zalesovo Beam**	**18.90**	**24**	P	**Pn**	**12 49 57.6**	**-1.1**
	comp=Z,8.0nm,0.3s,baz=212,slow=9.9,SNR=45						
ZALV	**Zalesovo Beam**	**18.90**	**24**		**Pn**	**12 49 57.1**	**-1.5**
GTA2	**Gaotai**	**21.91**	**76**	*eP*	**P**	**12 50 31.6**	**+2.7**
GTA2				pP	pP	12 50 38.3	-19
GTA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**25.57**	**83**	*eP*	**P**	**12 51 02.8**	**0.0**
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**27.29**	**56**	P	**P**	**12 51 17.9**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=257,slow=8.8,SNR=5.2						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**27.29**	**56**	P	**P**	**12 51 18.2**	**+0.1**
BRTR	**Keskin Array B**	**29.90**	**287**	P	**P**	**12 51 43.2**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=83,slow=11,SNR=2.2						
	comp=Z,0.4nm,0.4s						
NRIK	**Noril'sk**	**33.23**	**10**	LR	LR	13 08 48.0	
	comp=Z,184nm,19.9s,baz=54,slow=42						
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**12 52 44.3**	**0.0**
	comp=Z,0.9nm,0.6s,baz=108,slow=13,SNR=4.6						
	comp=Z,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**40.70**	**337**	P	**P**	**12 53 14.7**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=108,slow=7.8,SNR=3.7						
	comp=Z,0.8nm,0.6s						
HFS	**Hagfors**	**42.91**	**321**	P	**P**	**12 53 32.6**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=125,slow=7.8,SNR=4.4						
	comp=Z,1.5nm,0.7s						
NB2	**NORSAR Subarra**	**44.20**	**322**	P	P	12 53 48.5	+7.1
	comp=Z,0.6nm,0.5s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.20**	**322**	P	**P**	**12 53 43.1**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=106,slow=6.9,SNR=1.9						
	comp=Z,0.5nm,0.8s						
ESDC	**Sonseca Array**	**57.74**	**298**	P	**P**	**12 55 23.9**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=54,slow=7.3,SNR=1.9						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**66.47**	**269**	P	**P**	**12 56 21.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=51,slow=5.2,SNR=4.7						
	comp=Z,0.4nm,0.5s						
D19K	**Kuna River**	**68.17**	**18**	P	**P**	**12 56 32.3**	**+1.1**
IMAR	**Indian Mountai**	**71.20**	**18**	P	**P**	**12 56 50.3**	**+0.6**
G24K	**Hadweenzic Riv**	**72.05**	**15**	P	**P**	**12 56 56.5**	**+1.7**
G24K				IAmb	IAmb	12 57 25.9	
	comp=Z,5.0nm,1.5s						
ILAR	**Eielson Array**	**73.82**	**16**	P	**P**	**12 57 05.5**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=338,slow=5.6,SNR=4.5						
	comp=Z,0.4nm,0.9s						
H29M	**Whitestone**	**74.21**	**12**	P	**P**	**12 57 09.4**	**+1.9**
H29M				IAmb	IAmb	12 57 12.7	
	comp=Z,5.0nm,1.4s						
I28M	**Miner Creek**	**74.64**	**13**	P	**P**	**12 57 11.1**	**+1.1**
I28M				IAmb	IAmb	12 57 34.0	
	comp=Z,2.8nm,1.4s						
SCRK	**Sand Creek**	**75.15**	**16**	P	**P**	**12 57 13.8**	**+0.8**
SCRK				IAmb	IAmb	12 57 19.5	
	comp=Z,2.6nm,1.4s						
H31M	**Peel River**	**75.24**	**11**	P	**P**	**12 57 14.6**	**+1.2**
H31M				IAmb	IAmb	12 57 15.9	
	comp=Z,6.5nm,1.5s						
YKAW3	**Yellowknife Wh**	**80.36**	**3**	P	**P**	**12 57 43.0**	**+1.3**
YKA	**Yellowknife Ar**	**80.43**	**3**	P	**P**	**12 57 43.2**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=353,slow=5.5,SNR=9.8						
	comp=Z,0.6nm,0.6s						
YKAW1	**Yellowknife Wh**	**80.44**	**3**	P	**P**	**12 57 43.5**	**+1.3**
YKAW1				IAmb	IAmb	12 58 13.8	
	comp=Z,3.3nm,1.4s						

*HEL **18** 12:49:27.7±0.3, 68.°08N×33.°60E, h0km, ML1.6, Explosion*
*BER **18** 12:49:27.9±1.3, 67.°95N×33.°96E, h0km, Suspected explosion*
*KOLA **18** 12:49:29.0±0.3, 68.°06N±0.°01×33.°39E±0.°05, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*IDC **18** 12:49:33.2±2.8, 68.°14N×32.°85E, h0km, mbtmp2.6/2, ML1.9/2, Error ellipse: s-maj=31.2km s-min=12.5km az=68.0*

ISC 18 12:49:28.5±0.8, 68°07N±0°03×33°52E±0°03, h0km, n28, σ1s10/44, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.46**	**111**	P	**Pb**	**12 49 39.0**	**-0.5**
LVZ				S	**Sg**	**12 49 44.9**	**+1.6**
LVZ	**Lovozero**	**0.46**	**111**	PG	**Pb**	**12 49 39.5**	**0.0**
LVZ				SG	**Sg**	**12 49 41.2**	**-2.0**
APA	**Apatity**	**0.50**	**185**	P	**Pg**	**12 49 38.8**	**+0.7**
APA				S	**Sg**	**12 49 45.1**	**+0.5**
APA0	**Apatity Array**	**0.51**	**204**	P	**Pg**	**12 49 38.3**	**+0.2**
APA0				S	**Sg**	**12 49 44.5**	**-0.1**
TERR	**Teriberka**	**1.28**	**26**	P	**Pg**	**12 49 52.9**	**-0.1**
TERR				S	**Sb**	**12 50 10.6**	**+0.3**
KVDA	**Kovda**	**1.41**	**191**	P	**Pn**	**12 49 54.9**	**-0.4**
KVDA				S	**Sg**	**12 50 13.2**	**-0.3**
RAJF	**Raja-Jooseppi**	**1.98**	**284**	PG	**Pn**	**12 50 03.6**	**+0.3**
RAJF				SG	**Sn**	**12 50 28.2**	**-0.5**
OLKF	**Oulanka, Finla**	**2.38**	**224**	PG	**Pn**	**12 50 10.1**	**+1.5**
OLKF				smax	smax	12 50 39.0	
	comp=Z,2.2nm,0.2s						
KU6	**Riekki**	**2.50**	**216**	PG	**Pn**	**12 50 12.0**	**+1.7**
KU6				smax	smax	12 50 42.3	
	comp=Z,2.0nm,0.2s						
KU6				SG	**Sb**	**12 50 46.1**	**+0.7**
VADS	**Vadso**	**2.54**	**326**	*eP*	**Pn**	**12 50 11.6**	**+0.6**
VADS				*eS*	**Sn**	**12 50 42.2**	**-0.4**
VADS	**Vadso**	**2.54**	**326**	P	**Pn**	**12 50 11.4**	**+0.4**
KEV	**Kevo**	**2.90**	**309**	*eP*	**Pn**	**12 50 16.6**	**+0.8**
KEV				*eS*	**Sn**	**12 50 52.7**	**+1.3**
KEV	**Kevo**	**2.90**	**309**	PB	**Pn**	**12 50 17.1**	**+1.2**
KEV				SB	**Sb**	**12 50 55.2**	**-1.8**
KU1	**Kurvinen**	**2.96**	**214**	PG	**Pb**	**12 50 21.0**	**-1.1**
ARA0	**ARCESS Array S**	**3.26**	**301**	*eP*	**Pn**	**12 50 21.2**	**+0.3**
ARA0	**ARCESS Array S**	**3.26**	**301**	PB	**Pn**	**12 50 21.3**	**+0.5**
ARA0				SG	**Sb**	**12 51 08.0**	**+0.5**
ARCES	**ARCESS Array B**	**3.26**	**301**	Pn	**Pn**	**12 50 21.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=117,slow=14,SNR=27						
ARCES				Pg	**Pb**	**12 50 27.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=116,slow=17,SNR=10						
ARCES				Lg	Lg	12 51 06.6	
	comp=Z,0.5nm,0.3s,baz=111,slow=24,SNR=7.3						
	comp=Z,0.8nm,0.4s						
ARCES	**ARCESS Array B**	**3.26**	**301**	P	**Pn**	**12 50 21.0**	**+0.2**
ARCES				S	**Sn**	**12 50 58.4**	**-2.0**
RANF	**Ranua**	**3.35**	**235**	PN	**Pn**	**12 50 22.3**	**+0.3**
	baz=51						
HEF	**Hetta**	**3.69**	**280**	*eP*	**Pn**	**12 50 26.1**	**-0.6**
HEF	**Hetta**	**3.69**	**280**	PN	**Pn**	**12 50 26.2**	**-0.4**
	baz=90						
HEF				SN	**Sn**	**12 51 09.1**	**-1.7**
KLF	**Kolari**	**3.75**	**262**	PG	**Pb**	**12 50 35.8**	**+0.4**
	baz=71						
KTK1	**Kautokeino**	**3.90**	**289**	PN	**Pn**	**12 50 29.7**	**+0.2**
KTK1				SG	**Sb**	**12 51 27.9**	**+2.3**
TOF	**Tornio**	**4.11**	**245**	SN	**Sn**	**12 51 18.8**	**-2.4**
LAU	**Lannavaara**	**4.32**	**275**	PN	**Pn**	**12 50 34.8**	**-0.6**
ERTU	**Ertsjaerv**	**4.64**	**256**	PN	**Pn**	**12 50 39.5**	**-0.3**
ERTU				SN	**Sn**	**12 51 32.3**	**-2.0**
I37NO	**I37NO**	**5.56**	**287**	I	I	13 21 40.0	
	baz=93,slow=322,SNR=7.3						
FINES	**FINESS Array B**	**7.37**	**209**	Pn	**Pn**	**12 51 18.6**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=1.2						
FINES				Lg	Lg	12 53 23.3	
	comp=Z,0.1nm,0.3s,baz=20,slow=29,SNR=2.4						
	comp=Z,0.6nm,0.8s						

*NNC **18** 12:51:03.8±1.2, 42.°19N×76.°25E, h0km, mb3.1, mpv2.8, Error ellipse: s-

ARXS Arharly 2.33 30 Pg Pb 12 51 46.2 +0.5
11nm,0.3s
ARXS Lg Lg 12 52 17.0
7.5nm,0.5s
ARXS Arharly 2.33 30 *eP* Pb 12 51 46.2 +0.5
11nm,0.3s
ARXS *eS* Sg 12 52 17.4 -1.1
7.6nm,0.5s
PDGK Podgornoye 2.66 64 ⇓Lg Lg 12 52 26.5
4.2nm,0.5s

WEL ***18*** *13:38:02.6±0.5,33°S±5°×17°9W±1°0,h12km,M5.4/20, mB5.7/13,ML5.2/21,MLv5.8/20,Mw(mB)5.2/13, Error ellipse: s-maj=14.1km s-min=4.5km az=110.4*
NEIC ***18*** *13:38:03.3±2.1,32°36S±0°06×179°9E±0°1,h198km±5km, mb4.7/38, Error ellipse: s-maj=17.0km s-min=8.2km az=90.0*
GFZ ***18*** *13:38:03.0±0.4,33°S±3°×18°0W±°,h205km,M4.8/18, mb4.9/18*
NOU ***18*** *13:38:05.1,32°73S×179°94W,h236km,mb4.9/52,South of Kermadec Islands*
IDC ***18*** *13:38:09.5±1.9,32°31S×179°89E,h258km±17km, mb4.1/16,mbtmp4.8/18, Error ellipse: s-maj=11.9km s-min=10.1km az=30.0*
ISC 18 13:38:02.5±0.3,32°47S±0°04×179°86W±0°05,h200km, n306,σ1§96/291,mb4.7/38,1C-4D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.60**	**28**	P	**Pn**	**13 38 58.3**	**-1.1**
GLKZ				S	**Sn**	**13 39 40.9**	**-3.0**
RAO	**Raoul Island**	**3.61**	**28**	P	**Pn**	**13 39 00.1**	**+0.6**
	328nm,0.4s,baz=52,slow=21,SNR=1.9						
RAO				S	**Sn**	**13 39 43.0**	**-1.2**
	731nm,0.3s,baz=272,slow=22,SNR=4.8						
RAO	**Raoul Island**	**3.61**	**28**	Pn	**Pn**	**13 38 59.8**	**+0.3**
MXZ	**Matakaoa Point**	**5.30**	**196**	P	**Pn**	**13 39 20.5**	**-0.2**
MXZ	**Matakaoa Point**	**5.30**	**196**	S	**Sn**	**13 40 22.3**	**-0.2**
MXZ	**Matakaoa Point**	**5.30**	**196**		**Pn**	**13 39 21.3**	**+0.7**
MXZ	**Matakaoa Point**	**5.30**	**196**	P	**Pn**	**13 39 21.2**	**+0.5**
MXZ				S	**Sn**	**13 40 20.8**	**-1.7**
GRZ	**Great Barrier**	**5.41**	**224**	P	Pn	13 39 27.0	+5.0
WMGZ	**Waiomatatini S**	**5.53**	**194**	P	Pn	13 39 28.4	+4.8
WIZ	**White Island**	**5.60**	**205**	P	Pn	13 39 30.0	+5.6
HAZ	**Te Kaha**	**5.62**	**199**	P	**Pn**	**13 39 26.5**	**+1.8**
HAZ				S	**Sn**	**13 40 30.8**	**+1.0**
MYRZ	**Mayor Island**	**5.77**	**213**	P	Pn	13 39 34.2	+7.4
PUZ	**Puketiti**	**5.80**	**195**	P	**Pn**	**13 39 27.2**	**0.0**
PUZ				S	**Sn**	**13 40 34.1**	**0.0**
RUGZ	**Raukumara Rang**	**5.84**	**199**	P	**Pn**	**13 39 28.5**	**+0.7**
RUGZ				S	**Sn**	**13 40 33.6**	**-1.7**
WCZ	**Waipu Caves**	**5.92**	**233**	P	Pn	13 39 33.7	+5.1
TWGZ	**Tauwhareparae**	**5.96**	**197**	P	**Pn**	**13 39 30.0**	**+0.7**
TWGZ				S	**Sn**	**13 40 39.8**	**+1.9**
WHRZ	**Whale Island**	**5.97**	**205**	P	Pn	13 39 35.9	+6.6
OUZ	**Omahuta**	**6.10**	**241**	P	**Pn**	**13 39 34.6**	**+3.7**
OUZ	**Omahuta**	**6.10**	**241**	S	**Sn**	**13 40 41.7**	**+0.8**
OUZ	**Omahuta**	**6.10**	**241**	P	**Pn**	**13 39 34.8**	**+3.9**
OUZ	**Omahuta**	**6.10**	**241**	P	Pn	**13 39 34.0**	**+3.1**
TGRZ	**Tauranga**	**6.14**	**210**	P	Pn	13 39 36.2	+4.8
MKAZ	**Moumakai**	**6.18**	**220**	P	**Pn**	**13 39 36.6**	**+4.6**
MARZ	**Manawahe**	**6.19**	**206**	P	**Pn**	**13 39 36.0**	**+3.9**
CNGZ	**Carnagh Statio**	**6.21**	**194**	P	**Pn**	**13 39 34.4**	**+2.0**
MWZ	**Matawai**	**6.23**	**199**	P	**Pn**	**13 39 32.9**	**+0.2**
TKGZ	**Te Karaka**	**6.25**	**197**	P	**Pn**	**13 39 32.5**	**-0.3**
EDRZ	**Edgecumbe**	**6.28**	**205**	P	**Pn**	**13 39 37.8**	**+4.5**
URZ	**Urewera**	**6.29**	**202**	P	**Pn**	**13 39 33.7**	**+0.3**
	194nm,0.3s,baz=256,slow=3.9,SNR=130						
URZ				S	**Sn**	**13 40 43.8**	**-1.6**
	225nm,0.3s,baz=359,slow=22,SNR=6.4						
URZ	**Urewera**	**6.29**	**202**	P	**Pn**	**13 39 33.8**	**+0.4**
URZ	**Urewera**	**6.29**	**202**	S	**Sn**	**13 40 43.8**	**-1.6**
URZ	**Urewera**	**6.29**	**202**	P	**Pn**	**13 39 33.5**	**+0.1**
URZ	**Urewera**	**6.29**	**202**	P	**Pn**	**13 39 32.9**	**-0.4**
KARZ	**Kaharoa**	**6.39**	**209**	P	Pn	13 39 39.9	+5.2
RAGZ	**Rawiri**	**6.41**	**199**	P	**Pn**	**13 39 36.1**	**+1.0**
OMRZ	**Omania**	**6.42**	**208**	P	Pn	13 39 40.0	+4.9
TARZ	**Mount Tarawera**	**6.48**	**206**	P	Pn	13 39 41.1	+5.2
TOZ	**Tahuroa Road**	**6.48**	**215**		**Pn**	**13 39 38.7**	**+2.8**
TOZ	**Tahuroa Road**	**6.48**	**215**	P	**Pn**	**13 39 40.2**	**+4.3**
NGRZ	**Ngongotaha**	**6.49**	**209**	P	Pn	13 39 41.8	+5.8
RIGZ	**Rimuhau**	**6.52**	**197**	P	**Pn**	**13 39 35.6**	**-0.8**
UTUZ	**Utuhina**	**6.52**	**207**	P	**Pn**	13 39 44.8	+8.0
HLRZ	**Highlands Stat**	**6.55**	**207**	P	**Pn**	**13 39 40.9**	**+4.1**
RRRZ	**Republican Roa**	**6.56**	**206**	P	**Pn**	**13 39 40.8**	**+3.8**
MUGZ	**Murupara**	**6.60**	**204**	P	**Pn**	**13 39 39.9**	**+2.5**
RTZ	**Ruatahuna**	**6.65**	**202**		**Pn**	**13 39 36.9**	**-1.3**
RTZ	**Ruatahuna**	**6.65**	**202**	P	**Pn**	**13 39 37.3**	**-0.9**
HRRZ	**Handcock Road**	**6.70**	**207**	P	Pn	13 39 43.5	+4.8
PRGZ	**Paritu Road**	**6.70**	**195**	P	**Pn**	**13 39 39.9**	**+1.2**
PRRZ	**Plateau Road**	**6.75**	**206**	P	**Pn**	**13 39 42.6**	**+3.3**
ALRZ	**Allen Road**	**6.82**	**206**	P	**Pn**	**13 39 40.9**	**+0.6**
KNZ	**Kokohu**	**6.84**	**196**	P	**Pn**	**13 39 40.8**	**+0.2**
WPRZ	**Whakapapatarin**	**6.86**	**207**	P	**Pn**	**13 39 45.1**	**+4.3**
RAHZ	**Arahi**	**6.90**	**200**	P	**Pn**	**13 39 41.2**	**-0.1**
MHGZ	**Mahia Peninsul**	**6.91**	**195**	P	**Pn**	**13 39 41.8**	**+0.3**
MTHZ	**Maungataniwha**	**6.91**	**202**	P	**Pn**	**13 39 42.7**	**+1.1**
TLZ	**Tolley Road**	**6.95**	**211**	P	**Pn**	**13 39 46.4**	**+4.3**
KUTZ	**Kaahu Road**	**6.96**	**209**	P	**Pn**	**13 39 46.1**	**+3.9**
MRHZ	**Matea Rd**	**7.04**	**204**	P	**Pn**	**13 39 45.4**	**+2.2**
WHTZ	**Whakaora**	**7.06**	**208**	P	**Pn**	**13 39 48.0**	**+4.5**
NMHZ	**Naumai**	**7.15**	**201**	P	**Pn**	**13 39 45.6**	**+1.0**
WATZ	**Wairara**	**7.19**	**209**	P	**Pn**	**13 39 49.1**	**+4.0**
HATZ	**Hinemaiaia**	**7.21**	**206**	P	**Pn**	**13 39 48.5**	**+3.2**
ARHZ	**Aropaoanui**	**7.25**	**200**	P	**Pn**	**13 39 45.8**	**0.0**
BKZ	**Black Stump Fm**	**7.31**	**203**	P	**Pn**	**13 39 46.4**	**-0.3**
BKZ	**Black Stump Fm**	**7.31**	**203**	S	**Sn**	**13 41 07.5**	**-2.1**
BKZ	**Black Stump Fm**	**7.31**	**203**	P	**Pn**	**13 39 47.5**	**+0.8**
HIZ	**Hauiti**	**7.41**	**214**	P	**Pn**	**13 39 50.5**	**+2.5**
HIZ	**Hauiti**	**7.41**	**214**	S	**Sn**	**13 41 10.4**	**-1.5**
HIZ	**Hauiti**	**7.41**	**214**	Pn	**Pn**	**13 39 51.5**	**+3.5**
HIZ	**Hauiti**	**7.41**	**214**	P	Pn	13 39 53.1	+5.1
HIZ	**Hauiti**	**7.41**	**214**	P	**Pn**	**13 39 51.0**	**+3.0**
KATZ	**Kakaramea**	**7.43**	**208**	P	**Pn**	**13 39 52.1**	**+3.7**
MCHZ	**McNeill Hill**	**7.50**	**201**	P	**Pn**	**13 39 49.0**	**-0.1**
CKHZ	**Cape Kidnapper**	**7.59**	**198**	P	**Pn**	**13 39 52.2**	**+1.9**
WTVZ	**West Tongariro**	**7.59**	**208**	P	**Pn**	**13 39 52.7**	**+2.3**
TWVZ	**Taurewa**	**7.62**	**209**	P	**Pn**	**13 39 53.5**	**+2.8**
NGZ	**Ngauruhoe**	**7.64**	**208**	P	**Pn**	**13 39 54.1**	**+3.0**
COVZ	**Chateau Observ**	**7.69**	**208**	P	**Pn**	**13 39 54.5**	**+2.9**
TUVZ	**Tukino**	**7.70**	**207**	P	**Pn**	**13 39 52.7**	**+0.9**
FWVZ	**Far West T-bar**	**7.73**	**207**	P	**Pn**	**13 39 53.7**	**+1.3**
MAVZ	**Matarangi**	**7.74**	**207**	P	**Pn**	**13 39 54.5**	**+2.0**
WHVZ	**Whangaehu Hut**	**7.74**	**207**	P	**Pn**	**13 39 54.1**	**+1.6**
TRVZ	**Turoa**	**7.77**	**207**	P	**Pn**	**13 39 55.3**	**+2.5**
WNVZ	**Wahianoa**	**7.77**	**207**	P	**Pn**	**13 39 54.1**	**+1.3**
KAHZ	**Kahuranaki**	**7.77**	**199**	P	**Pn**	**13 39 52.0**	**-0.8**
MOVZ	**Moawhango**	**7.79**	**206**	P	**Pn**	**13 39 53.3**	**+0.4**
MTVZ	**Mangateitei**	**7.87**	**207**	P	**Pn**	**13 39 56.5**	**+2.4**
PXZ	**Pawanui**	**8.00**	**198**	P	**Pn**	**13 39 54.0**	**-1.6**
WPHZ	**Waipukurau**	**8.15**	**200**	P	**Pn**	**13 39 56.3**	**-1.3**
PRHZ	**Porangahau**	**8.28**	**199**	P	**Pn**	**13 39 58.3**	**-1.0**
ANWZ	**Angora Road**	**8.51**	**199**	P	**Pn**	**13 40 02.8**	**+0.6**
POWZ	**Post Office Ro**	**8.66**	**203**	P	**Pn**	**13 40 03.9**	**-0.2**
PRWZ	**Pori Road**	**8.74**	**201**	P	**Pn**	**13 40 05.7**	**+0.4**
BFZ	**Birch Farm**	**8.78**	**200**	P	**Pn**	**13 40 03.6**	**-2.1**
BFZ	**Birch Farm**	**8.78**	**200**	S	**Sn**	**13 41 40.1**	**-4.1**
BFZ	**Birch Farm**	**8.78**	**200**	P	**Pn**	**13 40 04.7**	**-1.0**
TIWZ	**Tintock**	**8.97**	**201**	P	**Pn**	**13 40 07.9**	**-0.4**
CPWZ	**Castlepoint**	**9.00**	**199**	P	**Pn**	**13 40 09.4**	**+0.8**
SNZO	**South Karori**	**9.84**	**205**	P	**Pn**	**13 40 17.3**	**-2.2**
SNZO	**South Karori**	**9.84**	**205**	S	**Sn**	**13 42 04.0**	**-5.4**
SNZO	**South Karori**	**9.84**	**205**	P	**Pn**	**13 40 17.4**	**-2.1**
NNZ	**Nelson**	**10.27**	**210**		**Pn**	**13 40 22.9**	**-2.2**
QRZ	**Quartz Range**	**10.34**	**214**	P	**Pn**	**13 40 25.1**	**-0.9**
QRZ	**Quartz Range**	**10.34**	**214**	S	**Sn**	**13 42 16.3**	**-5.0**
QRZ	**Quartz Range**	**10.34**	**214**	P	**Pn**	**13 40 25.5**	**-0.5**
BSWZ	**Blackbirch Sta**	**10.50**	**207**		**Pn**	**13 40 26.2**	**-1.8**
MRNZ	**Matariki Terra**	**10.69**	**211**		**Pn**	**13 40 28.7**	**-1.8**
KHZ	**Kahutara**	**11.23**	**206**	P	**Pn**	**13 40 33.8**	**-3.6**
KHZ	**Kahutara**	**11.23**	**206**	P	**Pn**	**13 40 33.5**	**-3.8**
CTZ	**Chatham Island**	**11.54**	**168**	P	**P**	**13 40 47.1**	**+0.3**
CTZ				S	**Sn**	**13 42 47.9**	**-1.9**
RPZ	**Rata Peaks**	**13.30**	**210**	P	**Pn**	**13 41 00.9**	**-2.8**
	4.4nm,0.3s,baz=30,slow=0.7,SNR=43						
RPZ				S	S	13 43 18.7	-13
	15nm,0.4s,baz=66,slow=16,SNR=13						
RPZ	**Rata Peaks**	**13.30**	**210**	P	**Pn**	**13 41 00.7**	**-3.0**
RPZ	**Rata Peaks**	**13.30**	**210**	P	**Pn**	**13 41 00.2**	**-3.4**
ODZ	**Otahua Downs**	**14.57**	**208**	P	**Pn**	**13 41 17.1**	**-2.1**
ODZ	**Otahua Downs**	**14.57**	**208**	P	**Pn**	**13 41 16.8**	**-2.5**
JCZ	**Jackson Bay**	**14.60**	**214**	P	**Pn**	**13 41 18.0**	**-1.8**
MSVF	**Nonsavu**	**14.79**	**352**	P	**P**	**13 41 23.2**	**0.0**
	94nm,0.8s,baz=156,slow=8.1,SNR=66						
MSVF	**Nonsavu**	**14.79**	**352**	P	**P**	**13 41 22.8**	**-0.4**
MSVF	**Nonsavu**	**14.79**	**352**	P	**Pn**	**13 41 21.9**	**-0.4**
MSVF	**Nonsavu**	**14.79**	**352**	P	**P**	**13 41 23.1**	**-0.1**
WKZ	**Wanaka**	**15.07**	**212**	IAmb	IAmb	13 41 50.5	
	comp=Z,31nm,0.9s						
MARNC	**Mare, Loyalty**	**15.35**	**312**	P	**P**	**13 41 32.1**	**+2.8**
OUENC	**Ouen Island, N**	**15.46**	**307**	P	**P**	**13 41 32.9**	**+2.4**
YATNC	**Mamie plateau,**	**15.67**	**308**	P	**Pn**	**13 41 35.1**	**+2.1**
ONTNC	**Ouen Toro**	**15.80**	**306**	P	**Pn**	**13 41 36.7**	**+2.3**
MLZ	**Mavora Lakes**	**15.89**	**212**	P	**P**	**13 41 32.5**	**-2.6**
MLZ				IAmb	IAmb	13 41 46.1	
	comp=Z,54nm,1.5s						
DZM	**Mont Dzumac**	**15.96**	**307**	P	**Pn**	**13 41 37.3**	**+0.7**
	comp=Z,40nm,0.8s,baz=132,slow=8.6,SNR=31						
NOUC	**Port Laguerre**	**16.04**	**307**	P	**Pn**	**13 41 39.2**	**+1.8**
SYZ	**Scrubby Hill**	**16.39**	**208**	P	**P**	**13 41 38.6**	**-1.9**
RTV	**Rentapao**	**18.03**	**321**	P	**Pn**	**13 42 00.7**	**-0.2**
DVP	**Devils Point**	**19.21**	**321**	P	**Pn**	**13 42 02.2**	**-0.8**
AFI	**Afiamalu**	**19.89**	**24**	S	**S**	**13 45 41.4**	**-10**
	comp=Z,21nm,0.4s,baz=152,slow=10,SNR=6.0						
ARMA	**Armidale**	**24.38**	**267**	P	**P**	**13 43 05.1**	**+2.6**
CAN	**Canberra**	**25.95**	**255**	P	**P**	**13 43 15.6**	**-1.0**
EIDS	**Eidsvold**	**26.34**	**278**	P	**P**	**13 43 20.8**	**+0.6**
TAU	**Tasmania Unive**	**27.83**	**239**	P	**P**	**13 43 31.9**	**-1.2**
CMSA	**Cobar Meteorol**	**29.15**	**262**	P	**P**	**13 43 45.8**	**+0.7**
HNR	**Honiara**	**29.57**	**316**	P	**P**	**13 43 48.2**	**-0.5**
HNR	**Honiara**	**29.57**	**316**	P	**P**	**13 43 46.7**	**-2.1**
HNR	**Honiara**	**29.57**	**316**	P	**P**	**13 43 48.2**	**-0.5**
SAVO	**Savo Central**	**29.87**	**316**	P	**P**	**13 43 52.0**	**+0.5**
TATA	**Tatamba Isabel**	**30.49**	**317**	P	**P**	**13 43 54.7**	**-2.2**
QLP	**Quilpie**	**31.68**	**271**	P	**P**	**13 44 07.7**	**+0.4**
STKA	**Stephens Creek**	**32.51**	**260**	P	**P**	**13 44 14.8**	**+0.4**
	comp=Z,2.0nm,0.4s,baz=96,slow=9.1,SNR=8.3						
	comp=Z,2.0nm,0.4s						
STKA	**Stephens Creek**	**32.51**	**260**	P	**P**	**13 44 14.7**	**+0.2**
CTAO	**Charters Tower**	**32.65**	**284**	P	**P**	**13 44 16.8**	**+1.0**
CTAO	**Charters Tower**	**32.65**	**284**	P	**P**	**13 44 15.6**	**-0.2**
CTAO				IAmb	IAmb	13 44 20.9	
	comp=Z,10nm,0.5s						
CTAO	**Charters Tower**	**32.65**	**284**	P	**P**	**13 44 16.1**	**+0.3**
MTSU	**Mount Surprise**	**35.20**	**285**	P	**P**	**13 44 39.1**	**+1.3**
BBOO	**Buckleboo**	**36.92**	**257**	P	**P**	**13 44 52.0**	**-0.1**
PMG	**Port Moresby**	**38.14**	**300**	P	**P**	**13 45 03.2**	**+0.6**
PMG	**Port Moresby**	**38.14**	**300**	P	**P**	**13 45 02.2**	**-0.4**
COEN	**Coen**	**38.39**	**290**	P	**P**	**13 45 04.4**	**-0.2**
RABL	**Rabaul**	**38.43**	**311**	P	**P**	**13 45 03.1**	**-1.9**
AS31	**Alice Springs**	**41.46**	**270**		**P**	**13 45 29.0**	**-1.0**
ASAR	**Alice Springs**	**41.46**	**270**	P	**P**	**13 45 29.9**	**0.0**
	comp=Z,8.2nm,0.5s,baz=105,slow=7.5,SNR=24						
ASAR				ScP	**ScP**	**13 50 49.0**	**-5.7**
	comp=Z,0.7nm,0.6s,baz=97,slow=3.9,SNR=4.3						
ASAR				S	**S**	**13 51 24.4**	**-5.9**
	comp=Z,1.4nm,0.7s,baz=105,slow=15,SNR=6.7						
	comp=Z,8.2nm,0.5s						
ASAR	**Alice Springs**	**41.46**	**270**	P	**P**	**13 45 28.3**	**-1.6**
WR8	**Warramunga Ar**	**42.50**	**275**		**P**	**13 45 37.0**	**-1.4**
WR8				IAmb	IAmb	13 45 44.2	
	comp=Z,44nm,1.3s						
WRAB	**Tennant Creek**	**42.64**	**275**	P	**P**	**13 45 39.0**	**-0.5**
WRAB	**Tennant Creek**	**42.64**	**275**	P	**P**	**13 45 39.2**	**-0.2**
WRA	**Warramunga Ar**	**42.64**	**275**	P	**P**	**13 45 39.1**	**-0.3**
	comp=Z,12nm,0.3s,baz=114,slow=7.9,SNR=40						
WRA				S	**S**	**13 51 42.2**	**-5.4**
	comp=Z,2.9nm,1.0s,baz=117,slow=14,SNR=4.6						
	comp=Z,12nm,0.3s						
WRA	**Warramunga Arr**	**42.64**	**275**	P	**P**	**13 45 38.1**	**-1.4**
WB0	**Warramunga Arr**	**42.68**	**276**	P	**P**	**13 45 39.4**	**-0.4**
WB0				IAmb	IAmb	13 45 40.2	
	comp=Z,20nm,0.5s						
FORT	**Forrest**	**44.02**	**258**	P	**P**	**13 45 49.9**	**-0.4**
FORT				IAmb	IAmb	13 45 52.0	
	comp=Z,9.3nm,0.7s						
PATS	**Pohnpei**	**44.27**	**328**	P	**P**	**13 45 53.0**	**+0.6**
VNDA	**Vanda**	**45.89**	**185**	P	**P**	**13 46 06.7**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=85,slow=11,SNR=13						
	comp=Z,0.4nm,0.3s						
VNDA	**Vanda**	**45.89**	**185**	P	**P**	**13 46 06.7**	**+2.3**
JAY	**Jayapura**	**47.50**	**301**	P	**P**	**13 46 17.4**	**-0.4**
	comp=Z,23nm,0.4s,baz=184,slow=11,SNR=25						
	comp=Z,23nm,0.4s						
GENI	**Genyem**	**47.84**	**300**	P	**P**	**13 46 20.4**	**+0.1**
MTN	**Manton Dam**	**48.79**	**282**	P	**P**	**13 46 26.9**	**-0.6**
KNRA	**Kununurra**	**49.33**	**277**	P	**P**	**13 46 31.3**	**-0.3**
KNRA				IAmb	IAmb	13 46 32.4	
	comp=Z,17nm,1.1s						
JOHN	**Johnston Islan**	**49.91**	**13**	P	**P**	**13 46 37.6**	**+1.8**
FITZ	**Fitzroy Crossi**	**50.81**	**273**	P	**P**	**13 46 42.6**	**-0.2**
	comp=Z,9.0nm,0.6s,baz=141,slow=7.3,SNR=6.9						
	comp=Z,9.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.81**	**273**	P	**P**	**13 46 42.2**	**-0.5**
CASY	**Casey**	**52.57**	**209**		**P**	**13 46 54.1**	**-1.0**
FAKI	**Fak Fak**	**53.62**	**293**	P	**P**	**13 47 02.9**	**-0.6**
FAKI	**Fak Fak**	**53.62**	**293**	P	**P**	**13 47 01.8**	**-1.7**
SIJI	**Sorong**	**55.67**	**294**	P	**P**	**13 47 17.9**	**-0.4**
	comp=Z,13nm,0.7s,baz=100,slow=6.1,SNR=8.0						
	comp=Z,13nm,0.7s						
KIP	**Kipapa**	**57.52**	**24**	P	**P**	**13 47 33.6**	**+2.6**
KIP	**Kipapa**	**57.52**	**24**	P	**P**	**13 47 33.2**	**+2.2**
QSPA	**South Pole Qui**	**57.55**	**180**	P	**P**	**13 47 34.4**	**+2.8**
	comp=Z,19nm,0.7s,baz=346,slow=0.7,SNR=158						
	comp=Z,19nm,0.7s						
QSPA	**South Pole Qui**	**57.65**	**180**	P	**P**	**13 47 34.4**	**+2.8**
QSPA				IAmb	IAmb	13 47 35.2	
	comp=Z,18nm,0.7s						
TOLI2	**Tolitoli**	**65.13**	**289**	P	**P**	**13 48 20.6**	**-1.7**
TOLI2	**Tolitoli**	**65.13**	**289**	P	**P**	**13 48 20.6**	**-1.7**
TOLI2				IAmb	IAmb	13 48 22.4	
	comp=Z,5.5nm,0.9s						
BELA	**Belgrano 2**	**67.95**	**173**	P	**P**	**13 48 40.6**	**+1.4**
SZP	**Santa**	**75.70**	**302**	P	**P**	**13 49 26.7**	**+0.6**
	comp=Z,72nm,1.3s						
TROLL	**Troll, Antarti**	**75.80**	**181**	⇓P	**P**	**13 49 27.4**	**+1.3**
	comp=Z,153nm,0.4s						
SNAA	**Sanae**	**76.13**	**179**	⇓P	**P**	**13 49 28.7**	**+0.8**
	comp=Z,117nm,0.9s						
SNAA	**Sanae**	**76.13**	**179**	P	**P**	**13 49 28.5**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=205,slow=6.0,SNR=10						
	comp=Z,2.9nm,0.6s						
SNAA	**Sanae**	**76.13**	**179**		**P**	**13 49 28.6**	**+0.7**
SNAA				IAmb	IAmb	13 49 30.2	
	comp=Z,11nm,1.3s						
SNAA	**Sanae**	**76.13**	**179**	P	**P**	**13 49 28.2**	**+0.4**
VNA2	**Neumayer--Watz**	**76.76**	**177**	⇓P	**P**	**13 49 32.9**	**+1.6**
	comp=Z,10nm,0.5s,baz=185,slow=5.6						
VNA2				⇑S	**S**	**13 59 01.2**	**-0.1**
	comp=N,2.6nm,1.2s,baz=165,slow=7.2						
VNA2	**Neumayer--Watz**	**76.76**	**177**	P	**P**	**13 49 32.2**	**+0.9**
VNA1	**Neumayer--Stat**	**77.00**	**177**	⇓P	**P**	**13 49 34.3**	**+1.7**
	comp=Z,14nm,1.0s						
MJAR	**Mausihiro Arr**	**79.06**	**327**	P	**P**	**13 49 42.8**	**-1.6**
	comp=Z,4.0nm,0.9s,baz=158,slow=5.1,SNR=11						
	comp=Z,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	**79.06**	**327**		**P**	**13 49 44.0**	**-0.4**
H03S2	**Juan Fernandez**	**80.64**	**124**	T	T	15 19 14.3	
	baz=236,slow=74,SNR=2.6						
H03S1	**Juan Fernandez**	**80.65**	**124**	T	T	15 19 13.9	
	baz=236,slow=74,SNR=6.1						
H03S3	**Juan Fernandez**	**80.66**	**124**	T	T	15 19 15.3	
	baz=236,slow=74,SNR=5.6						
H03N3	**Juan Fernandez**	**80.85**	**124**	T	T	15 19 19.3	
	baz=239,slow=72,SNR=5.1						
H03N2	**Juan Fernandez**	**80.85**	**124**	T	T	15 19 25.0	
	baz=239,slow=72,SNR=4.8						
H03N1	**Juan Fernandez**	**80.87**	**124**	T	T	15 19 24.7	
	baz=239,slow=72,SNR=6.2						
PLCA	**Paso Flores**	**82.25**	**134**	P	**P**	**13 50 04.0**	**+2.4**
	comp=Z,2.5nm,0.5s,baz=239,slow=5.1,SNR=13						
	comp=Z,2.5nm,0.5s						
AMKA	**Amchitka**	**83.48**	**359**	IAmb	IAmb	13 50 08.3	
	comp=Z,11nm,0.7s						
JKA	**Kamikawa-asahi**	**83.56**	**334**	IAmb	IAmb	13 50 13.8	
	comp=Z,11nm,1.0s						
KIWB	**Kanaga Island**	**83.99**	**2**		**P**	**13 50 09.9**	**+0.1**
ADK	**Adak**	**84.03**	**2**	P	**P**	**13 50 09.5**	**-0.5**
ADK	**Adak**	**84.03**	**2**		**P**	**13 50 09.7**	**-0.3**
ADK	**Adak**	**84.03**	**2**	P	**P**	**13 50 10.0**	**+0.1**
ATKA	**Atka Island**	**84.45**	**4**	P	**P**	**13 50 11.6**	**-0.5**
KSRS	**Korea Array**	**84.91**	**321**	P	**P**	**13 50 14.3**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=140,slow=5.3,SNR=15						
	comp=Z,3.2nm,0.7s						
YSS	**Yuzhno-Sakhali**	**85.93**	**335**		**P**	**13 50 20.7**	**+1.2**
YSS				IAmb	IAmb	13 50 21.8	
	comp=Z,17nm,0.8s						
YSS	**Yuzhno-Sakhali**	**85.93**	**335**	P	**P**	**13 50 21.3**	**+1.8**
NJ2	**Nanjing**	**86.40**	**312**	*eP*	**P**	**13 50 23.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,25nm,0.5s						
UNV	**Unalaska Valle**	**86.73**	**8**	P	**P**	**13 50 23.0**	**-0.2**
PETK	**Petropavlovsk-**	**87.43**	**347**	P	**P**	**13 50 26.7**	**0.0**
	comp=Z,18nm,0.8s,baz=117,slow=5.8,SNR=41						
	comp=Z,18nm,0.8s						
PETK	**Petropavlovsk-**	**87.43**	**347**		**P**	**13 50 26.8**	**+0.1**
USRK	**Ussuriysk Ar.**	**88.02**	**328**	P	**P**	**13 50 30.6**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=166,slow=7.7,SNR=4.1						
	comp=Z,1.7nm,0.6s						
BELC	**Belle Mtn. Jos**	**89.31**	**48**		**P**	**13 50 38.1**	**+1.9**
BELC				IAmb	IAmb	13 50 39.5	
	comp=Z,8.0nm,0.8s						
CHGN	**Chignik**	**90.28**	**12**		**P**	**13 50 40.0**	**+0.1**
PNTR	**Pine Nut**	**90.53**	**43**	P	**P**	**13 50 43.4**	**+1.5**
PNTR				IAmb	IAmb	13 50 44.2	
	comp=Z,4.7nm,0.8s						
NVAR	**Mina Array Bea**	**90.83**	**44**	P	**P**	**13 50 44.6**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=222,slow=7.9,SNR=20						
	comp=Z,2.1nm,0.7s						
NVAR	**Mina Array Bea**	**90.83**	**44**	P	**P**	**13 50 45.1**	**+1.9**
TPNV	**Topopah Spring**	**91.08**	**46**	IAmb	IAmb	13 50 47.1	
	comp=Z,2.9nm,0.8s						
AC02	**Maricunga**	**91.58**	**123**	P	**P**	**13 50 50.0**	**+2.5**
AC02				IAmb	IAmb	13 50 52.4	
	comp=Z,4.8nm,1.1s						
WIFE	**Three Sisters-**	**92.73**	**38**		**P**	**13 50 53.5**	**+1.6**
WIFE				IAmb	IAmb	13 50 54.7	
	comp=Z,8.5nm,0.8s						
PINE	**Pine Mountain**	**93.00**	**38**	P	**P**	**13 50 54.9**	**+1.7**
PINE				IAmb	IAmb	13 50 55.7	
	comp=Z,8.4nm,0.8s						
N15K	**Kwethluk River**	**93.72**

BRG	**Berggiesshubel**	**158.98**	**335**	*e*PKPab	**PKPab**	**13 58 13.1**	**-0.4**
BRG				Amp		13 58 13.9	
	comp=Z,4.1nm,0.9s						
MODS	**Modra-Piesok**	**159.51**	**326**	*e*PKP	PKPdf	13 57 45.4	+8.7
MODS				*e*		13 58 17.6	
TORD	**Torodi Ar. Bea**	**160.72**	**185**	PKPab	**PKPab**	**13 58 22.9**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=183,slow=4.2,SNR=6.9						
GERES	**GERESS Array B**	**160.72**	**332**	PKPab	**PKPab**	**13 58 20.6**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=83,slow=4.2,SNR=4.0						
ESDC	**Sonseca Array**	**172.08**	**24**	PKP	**PKPdf**	**13 57 47.6**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=5.5,slow=1.7,SNR=8.2						
ESDC				PKPab	**PKPab**	**13 59 12.4**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=345,slow=4.6,SNR=5.5						
ESDC	**Sonseca Array**	**172.08**	**24**		**PKPdf**	**13 57 47.9**	**+0.7**

IDC ***18*** *13:39:32.5±1.0, 7.°32S×123.°62E, h540km±12km, mb3.3/16, mbtmp4.4/22, Error ellipse: s-maj=17.7km s-min=7.5km az=72.0*
NEIC ***18*** *13:39:33.6±1.1, 7.°3S±0.°1×123.°6E±0.°2, h559km±11km, mb4.3/12, Error ellipse: s-maj=22.3km s-min=15.1km az=70.0*
DJA ***18*** *13:39:34.1±0.4, 7.°S±3.°×12.°4E±.°, h534km±5km, M4.2/26, mB4.6/9, mb4.5/15, MLv4.5/26, Mw(mB)3.9/9*

ISC 18 13:39:32.8±0.4, 7.°44S±0.°05×123.°57E±0.°08, h550km, n69, σ1s28/82, mb3.9/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.77**	**228**		**P**	**13 40 42.1**	**+0.5**
MMRI	**Maumere**	**1.77**	**228**	P	**P**	**13 40 41.9**	**+0.4**
SOEI	**Soe**	**2.40**	**163**		**P**	**13 40 46.2**	**+1.7**
SOEI	**Soe**	**2.40**	**163**	P	**P**	**13 40 45.4**	**+0.8**
SOEI				S	**S**	**13 41 43.6**	**+0.7**
BATI	**Baumata**	**2.75**	**178**	P	**P**	**13 40 44.8**	**-1.6**
	282nm,0.4s,baz=23,slow=0.6,SNR=65						
BATI				S	**S**	**13 41 41.2**	**-5.1**
	757nm,0.6s,baz=49,slow=0.8,SNR=6.9						
BATI	**Baumata**	**2.75**	**178**	P	**P**	**13 40 44.5**	**-1.9**
BATI				S	**S**	**13 41 44.6**	**-1.6**
KDI	**Kendari**	**3.59**	**345**	P	**P**	**13 40 52.7**	**+0.9**
KDI				S	**S**	**13 41 56.2**	**+0.2**
LBFI	**Labuhan Bajo,**	**3.79**	**254**	P	**P**	**13 40 52.5**	**-0.6**
WSI	**Waingapu**	**3.92**	**235**	P	**P**	**13 40 53.5**	**-0.6**
WSI				S	**S**	**13 41 58.5**	**-1.8**
KAPI	**Kappang**	**4.50**	**302**	P	**P**	**13 41 00.1**	**+1.6**
	23nm,0.5s,baz=140,slow=3.0,SNR=8.1						
KAPI				S	**S**	**13 42 07.6**	**-0.8**
	17nm,0.5s,baz=229,slow=23,SNR=8.7						
KAPI	**Kappang**	**4.50**	**302**		**P**	**13 41 01.0**	**+2.5**
KAPI	**Kappang**	**4.50**	**302**	P	**P**	**13 40 59.9**	**+1.3**
PLAI	**Plampang**	**5.90**	**256**	P	**P**	**13 41 10.0**	**-0.5**
	1.1nm112nm,0.6s						
MMSI	**Mamuju**	**6.62**	**315**	P	**P**	**13 41 18.8**	**+1.5**
	0.5nm1µm141nm,0.7s						
PCI	**Palu**	**7.49**	**330**	P	**P**	**13 41 26.9**	**+1.3**
SAUI	**Saumlaki**	**7.68**	**95**		**P**	**13 41 27.2**	**-0.3**
KHKI	**Kahang-Kahang**	**7.94**	**263**	P	**P**	**13 41 30.8**	**+0.8**
	0.3nm68nm,0.7s						
GTOI	**Gorontalo**	**8.05**	**356**	P	**P**	**13 41 32.5**	**+1.4**
	855nm99nm,0.9s						
TOLI2	**Tolitoli**	**8.94**	**342**		**P**	**13 41 39.7**	**-0.4**
MTN	**Manton Dam**	**9.18**	**126**		**P**	**13 41 43.1**	**+0.7**
JAGI	**Jajag, Banyuwa**	**9.38**	**263**		**P**	**13 41 43.8**	**-0.7**
JAGI	**Jajag, Banyuwa**	**9.38**	**263**	P	**P**	**13 41 44.0**	**-0.5**
KNRA	**Kununurra**	**9.63**	**149**	P	**P**	**13 41 48.5**	**+1.5**
SIJI	**Sorong**	**10.08**	**50**	P	**P**	**13 41 51.0**	**-0.6**
	5.2nm,0.4s,baz=199,slow=16,SNR=4.7						
FITZ	**Fitzroy Crossi**	**10.78**	**169**	P	**P**	**13 42 00.0**	**+1.3**
	33nm,0.3s,baz=17,slow=9.5,SNR=394						
FITZ				S	**S**	**13 43 57.0**	**-1.7**
	10nm,0.5s,baz=29,slow=22,SNR=8.5						
FITZ	**Fitzroy Crossi**	**10.78**	**169**	P	**P**	**13 42 00.3**	**+1.6**
BBJI	**Bungbulang**	**15.78**	**269**		**P**	**13 42 49.5**	**-1.0**
LEM	**Lembang**	**15.84**	**271**	P	**P**	**13 42 51.2**	**+0.1**
	30nm,0.5s,baz=341,slow=6.2,SNR=6.1						
WB0	**Warramunga Arr**	**16.14**	**140**		**P**	**13 42 53.8**	**+0.1**
WRA	**Warramunga Arr**	**16.14**	**141**	P	**P**	**13 42 54.7**	**+0.1**
	7.5nm,0.4s,baz=312,slow=12,SNR=60						
WRA	**Warramunga Arr**	**16.23**	**141**		**P**	**13 42 54.5**	**-0.1**
WRAB	**Tennant Creek**	**16.23**	**141**	P	**P**	**13 42 55.0**	**+0.5**
WRAB				IAmb	IAmb	13 42 56.0	
	comp=Z,17nm,0.6s						
WR8	**Warramunga Arr**	**16.34**	**141**		**P**	**13 42 56.0**	**+0.4**
AS31	**Alice Springs**	**18.94**	**150**		**P**	**13 43 21.2**	**+1.9**
AS31				IAmb	IAmb	13 43 27.4	
	comp=Z,5.5nm,0.5s						
ASAR	**Alice Springs**	**18.94**	**150**	P	**P**	**13 43 20.9**	**+1.6**
	comp=Z,9.1nm,0.4s,baz=321,slow=8.3,SNR=90						
ASAR				S	**S**	**13 46 24.8**	**+1.5**
	comp=Z,3.9nm,0.8s,baz=340,slow=21,SNR=5.8						
ASAR	**Alice Springs**	**18.94**	**150**		**P**	**13 43 20.4**	**+1.1**
BBOO	**Buckleboo**	**27.78**	**157**	P	**P**	**13 44 39.2**	**+1.2**
BBOO				IAmb	IAmb	13 44 58.8	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**29.55**	**148**	P	**P**	**13 44 54.5**	**+1.2**
	comp=Z,5.0nm,0.5s,baz=324,slow=8.0,SNR=6.4						
STKA				S	**S**	**13 49 05.4**	**-4.6**
	comp=Z,3.2nm,0.6s,baz=72,slow=19,SNR=4.1						
	comp=Z,5.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**35.39**	**317**	P	**P**	**13 45 43.3**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=145,slow=6.7,SNR=27						
CMAR				PcP	**PcP**	**13 47 58.5**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=157,slow=2.8,SNR=4.1						
	comp=Z,3.7nm,0.7s						
CHTO	**Chiang Mai**	**35.64**	**317**	P	**P**	**13 45 44.9**	**-0.2**
CHTO				IAmb	IAmb	13 45 46.0	
	comp=Z,5.9nm,0.6s						
KSRS	**Korea Array**	**44.85**	**5**	P	**P**	**13 46 57.5**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=177,slow=8.8,SNR=5.4						
KSRS				PcP	**PcP**	**13 48 28.0**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=187,slow=4.3,SNR=4.5						
	comp=Z,0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**45.86**	**16**	P	**P**	**13 47 04.5**	**-1.5**
	comp=Z,2.8nm,0.8s,baz=192,slow=8.0,SNR=12						
	comp=Z,2.8nm,0.8s						
MJAR	**Matsushiro Arr**	**45.86**	**16**	P	**P**	**13 47 04.6**	**-1.5**
USRK	**Ussuriysk Ar.**	**51.96**	**8**	P	**P**	**13 47 50.1**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=202,slow=7.1,SNR=5.5						
	comp=Z,2.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.96**	**8**	P	**P**	**13 47 50.9**	**-0.1**
RPZ	**Rata Peaks**	**54.93**	**139**	P	**P**	**13 48 13.0**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=279,slow=2.6,SNR=7.5						
	comp=Z,2.3nm,0.6s						
HILR	**Hailar Array B**	**56.86**	**357**	P	**P**	**13 48 25.1**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=167,slow=7.1,SNR=2.1						
	comp=Z,2.0nm,0.4s						
SONM	**Songino Array**	**57.09**	**346**	P	**P**	**13 48 27.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=182,slow=5.2,SNR=4.6						
	comp=Z,0.7nm,0.6s						
HEH	**HeiHe**	**57.56**	**3**	*e*P	**P**	**13 48 29.8**	**-0.2**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**65.26**	**330**	P	**P**	**13 49 20.3**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=133,slow=7.6,SNR=30						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**65.26**	**330**		**P**	**13 49 19.9**	**-0.5**
PETK	**Petropavlovsk-**	**66.91**	**22**	P	**P**	**13 49 30.6**	**0.0**
	comp=Z,2.3nm,0.6s,baz=216,slow=2.4,SNR=15						
	comp=Z,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.31**	**337**	P	**P**	**13 49 44.1**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=138,slow=5.1,SNR=3.8						
	comp=Z,1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**69.69**	**331**	P	**P**	**13 49 47.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=144,slow=5.1,SNR=8.2						
	comp=Z,0.5nm,0.5s						
MAW	**Mawson**	**72.25**	**201**	P	**P**	**13 50 03.5**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=87,slow=5.7,SNR=2.6						
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**72.25**	**201**	P	**P**	**13 50 03.6**	**+1.4**
VNDA	**Vanda**	**72.84**	**172**	P	**P**	**13 50 06.5**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=330,slow=7.5,SNR=12						
	comp=Z,1.5nm,0.6s						
VNDA	**Vanda**	**72.84**	**172**	P	**P**	**13 50 06.4**	**+1.0**
VNDA				IAmb	IAmb	13 50 07.4	
	comp=Z,2.5nm,0.9s						
NRIK	**Noril'sk**	**80.54**	**348**	P	**P**	**13 50 47.5**	**0.0**
	comp=Z,1.4nm,0.4s,baz=135,slow=4.3,SNR=3.6						
	comp=Z,1.4nm,0.4s						
QSPA	**South Pole Qui**	**82.54**	**180**	P	**P**	**13 50 58.7**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=182,slow=1.4,SNR=6.2						
	comp=Z,1.8nm,0.5s						
QSPA	**South Pole Qui**	**82.54**	**180**	P	**P**	**13 50 58.7**	**+0.6**
QSPA				IAmb	IAmb	13 50 59.3	
	comp=Z,4.5nm,0.9s						
YKA	**Yellowknife Ar**	**110.90**	**25**	PKiKP	**PKiKP**	**13 57 02.7**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=305,slow=1.9,SNR=4.8						
NVAR	**Mina Array Bea**	**116.54**	**51**	PKP	**PKiKP**	**13 57 15.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=255,slow=3.9,SNR=4.8						
PDAR	**Pinedale Array**	**121.69**	**44**	PKP	**PKiKP**	**13 57 24.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=135,slow=1.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**122.63**	**281**	PKP	**PKiKP**	**13 57 27.1**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=64,slow=1.6,SNR=9.1						
TXAR	**Lajitas Array**	**130.59**	**58**	PKP	**PKiKP**	**13 57 42.5**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=233,slow=2.5,SNR=6.4						
TXAR				SKPbc	**SKPab**	**14 00 15.4**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=270,slow=1.3,SNR=4.3						
CPUP	**Villa Florida**	**146.42**	**179**	PKPbc	**PKPbc**	**13 58 13.7**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=108,slow=3.2,SNR=9.1						
LPAZ	**La Paz**	**153.73**	**154**	PKPbc	**PKiKP**	**13 58 33.3**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=207,slow=2.3,SNR=5.2						
LPAZ				PKPab	**PKPab**	**13 58 48.0**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=241,slow=2.0,SNR=9.8						
SIV	**San Ignacio**	**156.27**	**169**	PKPab	**PKPab**	**13 58 58.3**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=146,slow=4.9,SNR=7.9						

IDC ***18*** *14:05:50.8±1.3, 56.°53N×33.°95W, h0km, mb3.5/6, mbtmp3.5/6, MS3.3/4, Error ellipse: s-maj=39.6km s-min=26.6km az=17.0*

ISC 18 14:05:52.3±1.1, 56.°5N±0.°2×33.°9W±0.°2, h10km, n10, σ1s03/6, mb3.6/5, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRB	**Frobisher Bay**	**18.48**	**307**	LR	LR	14 15 57.6	
	comp=Z,23nm,18.6s,baz=98,slow=33						
SCHQ	**Schefferville**	**18.53**	**279**	LR	LR	14 15 33.0	
	comp=Z,50nm,21.7s,baz=96,slow=31						
YKA	**Yellowknife Ar**	**38.83**	**313**	P	**P**	**14 13 15.5**	**-1.3**
	0.4nm,0.6s,baz=60,slow=8.7,SNR=4.9						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**48.73**	**328**	P	**P**	**14 14 36.9**	**+0.4**
	0.6nm,0.9s,baz=40,slow=6.4,SNR=5.9						
	0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**51.19**	**133**	P	**P**	**14 14 55.1**	**-0.5**
	0.7nm,0.9s,baz=332,slow=7.7,SNR=3.0						
	0.7nm,0.9s						
TEIG	**Tepich**	**53.88**	**251**	LR	LR	14 37 49.8	
	comp=Z,46nm,21.5s,baz=68,slow=36						
TXAR	**Lajitas Array**	**55.01**	**271**	P	**P**	**14 15 24.7**	**+0.9**
	0.2nm,0.9s,baz=64,slow=5.7,SNR=3.4						
	0.2nm,0.9s						
KURBB	**Kurchatov Arra**	**59.55**	**43**	P	**P**	**14 15 55.9**	**+0.4**
	0.8nm,0.9s,baz=323,slow=7.3,SNR=5.2						
	0.8nm,0.9s						
MKAR	**Makanchi Array**	**64.11**	**43**	P	**P**	**14 16 26.6**	**+0.3**
	0.4nm,0.7s,baz=318,slow=5.2,SNR=4.0						
	0.4nm,0.7s						
BDFB	**Brasília**	**72.86**	**194**	LR	LR	14 42 54.4	
	comp=Z,90nm,18.9s,baz=68,slow=30						

IDC ***18*** *14:17:32.8±0.7, 56.°51N×34.°38W, h0km, mb3.8/13, mbtmp3.8/15, ML3.2/2, MS3.5/33, Error ellipse: s-maj=21.3km s-min=15.1km az=1.0*
NEIC ***18*** *14:17:35.0±1.8, 56.°5N±0.°2×34.°25W±0.°07, h10km±1km, mb4.4/21, Error ellipse: s-maj=28.1km s-min=6.7km az=179.0*

ISC 18 14:17:36.4±0.6, 56.°6N±0.°1×34.°31W±0.°07, h22km, n71, σ0s86/44, mb4.3/23, MS3.5/29, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**10.37**	**32**	LR	LR	14 22 54.6	
	comp=Z,305nm,19.6s,baz=242,slow=31						
SFJD	**Kangerlussuaq**	**12.95**	**330**	LR	LR	14 24 48.7	
	comp=Z,70nm,18.5s,baz=144,slow=34						
ILULI	**Ilulissat**	**14.74**	**336**	Pn	**Pn**	**14 21 01.5**	**-1.7**
H07S1	**FLORES T-PHASE**	**17.31**	**172**	T	T	14 38 00.1	
	SNR=4.6						
EKA	**Eskdalemuir Ar**	**17.42**	**81**	P	**P**	**14 21 38.2**	**-0.7**
	baz=284,slow=10						
	1.5nm,0.7s						
FRB	**Frobisher Bay**	**18.30**	**307**	LR	LR	14 27 36.7	
	comp=Z,19nm,18.2s,baz=95,slow=33						
SCHQ	**Schefferville**	**18.32**	**278**	P	**Pn**	**14 21 49.0**	**+0.2**
	0.2nm,0.3s,baz=95,slow=5.4,SNR=7.0						
SCHQ				LR	LR	14 27 44.9	
	comp=Z,123nm,18.9s,baz=94,slow=34						
	5.5nm,0.8s						
SCHQ	**Schefferville**	**18.32**	**278**	P	**Pn**	**14 21 49.9**	**+1.1**
BATG	**Bathurst New B**	**21.50**	**258**		**P**	**14 22 23.6**	**+0.2**
BATG				IAmb	IAmb	14 22 29.4	
	comp=Z,13nm,1.1s						
D62A	**Allapoint, All**	**23.24**	**261**		**P**	**14 22 40.8**	**-1.0**
D62A				IAmb	IAmb	14 22 50.9	
	comp=Z,11nm,1.2s						
GGN	**Saint George**	**23.28**	**254**	P	**P**	**14 22 42.8**	**+0.6**
GGN				IAmb	IAmb	14 22 48.9	
	comp=Z,9.3nm,0.9s						
F64A	**Sherman**	**23.61**	**258**	P	**P**	**14 22 45.5**	**-0.1**
F64A				IAmb	IAmb	14 22 49.3	
	comp=Z,10nm,0.9s						
NOA	**NORSAR Array B**	**23.62**	**60**	P	**P**	**14 22 46.4**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=282,slow=9.4,SNR=2.6						
NOA				LR	LR	14 30 15.5	
	comp=Z,62nm,20.0s,baz=275,slow=32						
	comp=Z,0.9nm,0.9s						
HFS	**Hagfors**	**25.00**	**62**	LR	LR	14 31 18.9	
	comp=Z,106nm,18.0s,baz=330,slow=33						
G62A	**West of Eustis**	**25.20**	**259**		**P**	**14 22 59.6**	**-0.6**
ESDC	**Sonseca Array**	**26.07**	**117**	P	**P**	**14 23 08.1**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=322,slow=9.7,SNR=4.1						
ESDC				LR	LR	14 31 36.3	
	comp=Z,50nm,18.1s,baz=304,slow=32						
	comp=Z,0.4nm,0.7s						
DAVOX	**Davos/Dischmat**	**28.63**	**91**	LR	LR	14 34 50.1	
	comp=Z,192nm,18.3s,baz=273,slow=36						
ARCES	**ARCESS Array B**	**28.66**	**39**	LR	LR	14 32 57.4	
	comp=Z,76nm,18.2s,baz=240,slow=32						
GERES	**GERESS Array B**	**29.56**	**84**	LR	LR	14 35 14.3	
	comp=Z,83nm,18.2s,baz=289,slow=36						
SADO	**Sadowa**	**30.21**	**266**	LR	LR	14 34 46.0	
	comp=Z,152nm,19.1s,baz=143,slow=34						
BLKN	**Baker Lake**	**30.24**	**310**		**P**	**14 23 46.3**	**+1.2**
FINES	**FINESS Array B**	**30.48**	**55**	LR	LR	14 34 17.4	
	comp=Z,67nm,18.5s,baz=274,slow=33						
VRAC	**Vranov**	**30.89**	**82**	LR	LR	14 36 10.8	
	comp=Z,113nm,18.7s,baz=292,slow=36						
P53A	**Whipple**	**35.00**	**261**	P	**P**	**14 24 28.2**	**+1.3**
ULM	**Lac du Bonnet**	**36.12**	**287**	LR	LR	14 38 45.8	
	comp=Z,75nm,18.2s,baz=318,slow=35						
AKASG	**Main Array Be**	**36.91**	**71**	LR	LR	14 39 35.7	
	comp=Z,43nm,19.1s,baz=357,slow=36						
S51A	**Beattyville**	**37.52**	**261**	P	**P**	**14 24 49.8**	**+1.3**
S51A				IAmb	IAmb	14 24 56.5	
	comp=Z,11nm,1.4s						
MLR	**Muntele Rosu**	**38.27**	**80**	LR	LR	14 41 10.4	
	comp=Z,118nm,18.4s,baz=336,slow=37						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**14 24 57.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=60,slow=9.0,SNR=8.1						
YKA				PcP	**PcP**	**14 27 08.6**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=64,slow=3.1,SNR=4.3						
YKA				LR	LR	14 39 10.8	
	comp=Z,34nm,20.4s,baz=22,slow=34						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**14 24 57.0**	**-0.8**
TKL	**Tuckaleechee C**	**39.07**	**259**	LR	LR	14 40 21.4	
	comp=Z,134nm,18.1s,baz=36,slow=35						
Q44A	**Meyer Farm, Va**	**39.61**	**267**	P	**P**	**14 25 05.9**	**-0.1**
CCM	**Cathedral Cave**	**41.44**	**268**	P	**P**	**14 25 21.0**	**-0.1**
T42A	**Van Buren**	**42.09**	**267**	P	**P**	**14 25 27.0**	**+0.5**
LCAR	**Lake Charles**	**42.82**	**266**	P	**P**	**14 25 32.0**	**-0.4**
X40A	**Basin Creek Fa**	**44.91**	**266**	P	**P**	**14 25 49.4**	**+0.1**
SJG	**San Juan**	**45.20**	**225**	LR	LR	14 40 38.3	
	comp=Z,23nm,21.9s,baz=84,slow=31						
MIAR	**Mount Ida**	**45.28**	**267**	P	**P**	**14 25 52.4**	**+0.2**
MIAR				IAmb	IAmb	14 25 57.3	
	comp=Z,3.4nm,0.9s						
BRTR	**Keskin Array B**	**46.34**	**81**	P	**P**	**14 26 01.8**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=303,slow=6.3,SNR=4.5						
BRTR				LR	LR	14 47 47.0	
	comp=Z,21nm,18.3s,baz=4.0,slow=39						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**46.34**	**81**	P	**P**	**14 26 01.9**	**+1.3**
DAWY	**Dawson**	**46.80**	**324**	P	**P**	**14 26 05.5**	**+1.7**
DAWY				IAmb	IAmb	14 26 11.2	
	comp=Z,5.2nm,1.2s						
DLBC	**Dease Lake**	**47.22**	**315**	LR	LR	14 45 30.0	
	comp=Z,50nm,19.0s,baz=24,slow=36						
BOZ	**Bozeman (W)**	**47.29**	**291**	P	**P**	**14 26 08.9**	**+0.9**
BOZ				IAmb	IAmb	14 26 10.9	
	comp=Z,3.8nm,1.1s						
ARTI	**Arti**	**47.34**	**49**	LR	LR	14 45 02.6	
	comp=Z,45nm,18.4s,baz=138,slow=35						
NRIK	**Noril'sk**	**47.56**	**24**	LR	LR	14 46 58.0	
	comp=Z,46nm,18.6s,baz=198,slow=37						
PDAR	**Pinedale Array**	**48.15**	**287**	P	**P**	**14 26 14.1**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=79,slow=7.9,SNR=5.9						
PDAR				LR	LR	14 44 36.0	
	comp=Z,47nm,20.3s,baz=34,slow=34						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**48.15**	**287**	P	**P**	**14 26 14.4**	**-0.4**
NEW	**Newport**	**48.25**	**297**	LR	LR	14 45 33.7	
	comp=Z,67nm,19.6s,baz=30,slow=35						
SCRK	**Sand Creek**	**48.31**	**326**		**P**	**14 26 17.0**	**+1.3**
SCRK				IAmb	IAmb	14 27 00.7	
	comp=Z,4.9nm,1.0s						
ILAR	**Eielson Array**	**48.60**	**328**	P	**P**	**14 26 18.6**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=32,slow=5.1,SNR=8.6						
	comp=Z,1.3nm,1.0s						
ILAR	**Eielson Array**	**48.60**	**328**	P	**P**	**14 26 18.8**	**+1.1**
BCYI	**Bear Canyon**	**49.09**	**291**	P	**P**	**14 26 22.9**	**+0.9**
BCYI				IAmb	IAmb	14 26 26.4	
	comp=Z,2.9nm,1.1s						
HLID	**Hailey**	**50.13**	**291**	P	**P**	**14 26 29.6**	**-0.3**
AKTO	**Aktyubinsk**	**51.26**	**55**	LR	LR	14 47 57.8	
	comp=Z,46nm,18.9s,baz=337,slow=36						
TORD	**Torodi Ar. Bea**	**51.35**	**133**	P	**P**	**14 26 38.5**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=346,slow=8.5,SNR=8.5						
	comp=Z,1.4nm,0.8s						
GNI	**Garni**	**52.02**	**73**	LR	LR	14 49 22.8	
	comp=Z,28nm,18.5s,baz=74,slow=37						
ANMO	**Albuquerque**	**52.10**	**278**	LR	LR	14 48 02.8	
	comp=Z,91nm,18.4s,baz=39,slow=35						
ELK	**Elko**	**52.57**	**289**	LR	LR	14 48 05.4	
	comp=Z,47nm,18.9s,baz=28,slow=35						
BVAR	**Borovoye Array**	**54.63**	**46**	P	**P**	**14 27 02.8**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=315,slow=8.1,SNR=12						
	comp=Z,2.2nm,0.7s						
TXAR	**Lajitas Array**	**54.81**	**271**	P	**P**	**14 27 03.6**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=54,slow=6.4,SNR=3.5						
	comp=Z,0.3nm,0.8s						
YBH	**Yreka Blue Hor**	**55.68**	**295**	LR	LR	14 50 21.0	
	comp=Z,62nm,18.1s,baz=26,slow=35						
NVAR	**Mina Array Bea**	**55.88**	**289**	LR	LR	14 49 58.6	
	comp=Z,56nm,20.3s,baz=16,slow=35						
KURK	**Kurchatov**	**59.62**	**43**	P	**P**	**14 27 38.0**	**-0.2**
KURK				IAmb	IAmb	14 27 39.2	
	comp=Z,1.9nm,0.7s						
KURBB	**Kurchatov Arra**	**59.66**	**43**	P	**P**	**14 27 38.3**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=325,slow=7.1,SNR=22						
	comp=Z,1.7nm,0.6s						
CMIG	**Matias Romero**	**59.77**	**255**	LR	LR	14 53 59.7	
	comp=Z,43nm,18.2s,baz=1.5,slow=37						
MKAR	**Makanchi Array**	**64.23**	**43**	P	**P**	**14 28 09.1**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=334,slow=6.2,SNR=20						
	comp=Z,1.7nm,0.6s						
SONM	**Songino Array**	**70.93**	**27**	P	**P**	**14 28 52.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=325,slow=9.3,SNR=4.0						
	comp=Z,0.5nm,0.8s						
ATAH	**Atahualpa**	**73.03**	**226**	LR	LR	15 00 42.6	
	comp=Z,28nm,20.7s,baz=79,slow=36						
LPAZ	**La Paz**	**77.90**	**213**	P	**P**	**14 29 33.0**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=355,slow=8.7,SNR=8.1						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**146.03**	**20**	PKPbc	**PKPbc**	**14 37 13.2**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=349,slow=2.3,SNR=9.4		

MKAR	Makanchi Array	25.30	342	P	P	15 06 58.2	-0.9
	comp=E,0.5nm,0.7s,baz=156,slow=9.3,SNR=6.2						
	comp=E,0.5nm,0.7s						
SONM	Songino Array	26.77	20	P	P	15 07 12.1	-0.4
	comp=E,0.2nm,0.4s,baz=196,slow=10,SNR=1.6						
	comp=E,0.2nm,0.4s						
WRA	Warramunga Arr	58.49	134	P	P	15 11 28.9	+0.3
	comp=E,0.5nm,0.6s,baz=320,slow=7.4,SNR=8.9						
	comp=E,0.5nm,0.6s						
ASAR	Alice Springs	60.88	137	P	P	15 11 45.8	+0.8
	comp=E,0.8nm,0.5s,baz=318,slow=6.7,SNR=25						
	comp=E,0.8nm,0.5s						

IDC ***18*** *15:03:34.7±1.0, 3.16N×129.35E, h0km, mb3.6/7, mbtmp3.7/8, ML3.1/1, Error ellipse: s-maj=52.7km s-min=16.2km az=75.0*

ISC 18 15:03:39.6±1.0, 3.2N±0.1×129.5E±0.3, h35km, n14, σ0.61/9, mb3.8/7, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.37	156	Pn	Pn	15 04 44.6	+1.1
	0.9nm,0.3s,baz=335,slow=17,SNR=12						
SIJI				Sn	Sn	15 05 32.3	-0.9
	1.4nm,0.3s,baz=314,slow=23,SNR=9.2						
	3.3nm,0.4s						
FITZ	Fitzroy Crossi	21.45	190	P	P	15 08 24.8	-0.3
	1.0nm,0.8s,baz=17,slow=14,SNR=1.3						
	1.0nm,0.8s						
WRA	Warramunga Arr	23.44	168	P	P	15 08 45.6	-0.2
	1.1nm,0.4s,baz=347,slow=10,SNR=26						
	1.1nm,0.4s						
ASAR	Alice Springs	27.00	171	P	P	15 09 18.3	-0.1
	0.3nm,0.8s,baz=356,slow=7.7,SNR=6.1						
	0.3nm,0.8s						
MJAR	Matsushiro Arr	34.19	13	P	P	15 10 21.5	-0.3
	0.8nm,0.7s,baz=194,slow=10,SNR=4.7						
	0.8nm,0.7s						
H11S3	WAKE ISLAND Hy	39.46	65	T	T	15 53 23.4	
	baz=252,slow=74,SNR=4.7						
H11S2	WAKE ISLAND Hy	39.48	65	T	T	15 53 25.1	
	baz=252,slow=74						
H11S1	WAKE ISLAND Hy	39.48	64	T	T	15 53 23.1	
	baz=252						
H11N1	WAKE ISLAND Hy	40.03	63	T	T	15 54 09.1	
	baz=250						
H11N2	WAKE ISLAND Hy	40.05	63	T	T	15 54 09.1	
	baz=250						
H11N3	WAKE ISLAND Hy	40.05	63	T	T	15 54 05.9	
	baz=250						
MKAR	Makanchi Array	59.62	324	P	P	15 13 40.3	+0.1
	0.9nm,0.4s,baz=115,slow=8.1,SNR=16						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	63.73	327	P	P	15 14 07.6	-0.1
	0.5nm,0.5s,baz=124,slow=6.0,SNR=9.0						
	0.5nm,0.5s						
BVAR	Borovoye Array	69.32	326	P	P	15 14 43.6	+0.2
	0.6nm,0.6s,baz=105,slow=11,SNR=3.7						
	0.6nm,0.6s						

PRE ***18*** *15:23:19.0±0.7, 17.62S×26.33E, h5km, ML3.1, Presumed earthquake*

BGSI ***18*** *15:23:35.1±1.9, 18.39S×26.33E, h26km±46km, ML3.1, Presumed earthquake*

ISC 18 15:23:31.0±1.3, 18.36S±0.08×26.34E±0.07, h10km, n13, σ2.53/23, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSANE	Kasane	1.26	296	*i* P	Pg	15 23 56.2	+1.1
KSANE				*i* S	Sb	15 24 10.7	-0.5
KSANE				IAML		15 24 20.4	
	comp=N,256nm,0.2s						
SOOWA	Sowa	2.19	183	*i* P	Pn	15 24 08.9	+1.3
KHWEE	KHWEE	3.66	193	*i* P	Pn	15 24 29.0	+1.1
KHWEE				*i* S	Sn	15 25 09.3	-1.9
KHWEE				IAML		15 25 30.4	
	comp=N,517nm,0.4s						
LPHEP	Lephephe	5.00	185	*i* P	Pn	15 24 46.0	-0.3
LPHEP				*i* S	Sn	15 25 38.3	-5.8
LPHEP				IAML		15 26 07.0	
	comp=E,42nm,0.6s						
QNGWA	Qangwa	5.03	256	*i* P	Pn	15 24 46.5	-0.1
MUSN	Musina, Limpop	5.11	140	*e*P	Pn	15 24 45.4	-2.3
MUSN				*e*S	Sn	15 25 49.1	+2.2
MUSN				IAML		15 26 01.2	
	comp=Z,27nm,0.4s						
KDWAN	Kaudwane	5.23	197	*i* P	Pn	15 24 49.5	0.0
KDWAN				*i* S	Sn	15 25 44.8	-5.2
KDWAN				IAML		15 26 18.0	
	comp=E,43nm,0.6s						
LEPH	Lephalale, Lim	5.63	166	*e*P	Pn	15 24 54.6	-0.4
LEPH				*e*S	Sn	15 26 03.5	+3.7
LEPH				IAML		15 26 23.6	
	comp=Z,43nm,0.5s						
SKOMA	Sekoma	6.52	200	*i* P	Pn	15 25 05.7	-1.4
LBTB	Lobatse	6.66	186	*e*P	Pn	15 25 08.5	-0.5
LBTB				*e*S	Sn	15 26 29.3	+4.2
LBTB				IAML		15 26 55.7	
	comp=Z,19nm,0.6s						
MOPA	Mopani	6.97	138	*e*P	Pn	15 25 11.1	-2.1
MOPA				*e*S	Sn	15 26 31.9	-0.7
MOPA				IAML		15 27 10.4	
	comp=Z,43nm,0.5s						
PILG	Pilgrimsrest,	7.69	149	*e*P	Pn	15 25 22.2	-1.2
PILG				*e*S	Sn	15 26 52.4	+1.7
PILG				IAML		15 27 31.9	
	comp=Z,19nm,0.5s						
BOSA	Boshof	10.25	185	*e*P	Pn	15 25 58.6	+0.2
BOSA				*e*S	Sn	15 27 55.8	+2.3
BOSA				IAML		15 27 56.4	
	comp=Z,1.4nm,0.5s						

LDG ***18*** *15:26:44.5±0.1, 42.92N×5.98W, h2km, Ml2.9/19, Error ellipse: s-maj=1.7km s-min=1.3km az=139.0*

SFS ***18*** *15:26:44.8, 43.00N×6.05W, h21km, ML3.3/10, ML3.6/10, MLv3.6/8*

MDD ***18*** *15:26:44.2±0.2, 42.87N×5.95W, h0km, mb_Lg3.0/64, Error ellipse: s-maj=1.5km s-min=1.2km az=147.0*

INMG ***18*** *15:26:45.5±1.6, 42.95N×5.96W, h20km±2km, ML2.7, Error ellipse: s-maj=2.1km s-min=1.5km az=127.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Oviedo (ESP)*

ISC 18 15:26:43.6±1.2, 42.94N±0.02×5.95W±0.02, h17km±9km, n87, σ2.34/185, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EARI	Arriondas	0.66	56	Pg	Pb	15 26 56.4	-0.3
EARI				Sg	Sb	15 27 05.9	+0.3
EARI				*i* lVmb_Lg		15 27 07.9	
EPON	Pontenova	0.96	295	Pg	Pb	15 27 02.5	+0.6
EPON				Sg	Sg	15 27 15.7	+0.9
EPON				*i* lVmb_Lg		15 27 18.5	
ECAL	Calabor	1.15	211	Pg	Pn	15 27 05.6	+0.6
ECAL				Sg	Sb	15 27 20.1	+0.3
ECAL	Calabor	1.15	211	Pg	Pn	15 27 05.5	+0.4
ECAL				Sg	Sb	15 27 19.5	-0.3
ECAL				*i* lVmb_Lg		15 27 23.8	
PBRG	Braganca	1.27	208	*e*P	Pn	15 27 07.6	+0.9
PBRG				*e*S	Sn	15 27 24.0	+0.6
PBRG				*i* IAML		15 27 25.5	
PBRG				*i* IAML		15 27 26.1	
PBRG				*i* IAML		15 27 26.5	
ALT03	Santillana del	1.41	71	Pg	Pb	15 27 10.4	+0.9
ALT03				Sg	Sg	15 27 29.9	+0.7
ALT01	Santillana del	1.41	71	Pg	Pb	15 27 10.6	+1.1
ALT01				Sg	Sg	15 27 29.7	+0.4
ALT02	Santillana del	1.41	71	Pg	Pb	15 27 10.5	+0.9
ALT02				Sg	Sg	15 27 30.0	+0.7
ALT04	Santillana del	1.41	71	Pg	Pb	15 27 10.1	+0.5
ALT04				Sg	Sg	15 27 29.6	+0.4
EAGO	Agolada(Pontev	1.57	266	Pg	Pn	15 27 11.6	+0.7
EAGO				Sg	Sb	15 27 34.2	+2.2
EAGO				*i* lVmb_Lg		15 27 35.2	
EJUZ	Juzbado, Salam	1.85	178	Pg	Pn	15 27 16.1	+1.5
EJUZ				Sg	Sb	15 27 40.9	+1.0
ELAN	Lanestosa	1.87	80	Pn	Pn	15 27 16.8	+1.9
ELAN				Sn	Sb	15 27 40.5	0.0
ELAN				*i* lVmb_Lg		15 27 46.2	
ELOB	Lobios	1.89	236	Pn	Pn	15 27 16.0	+0.7
ELOB				Pg	Pb	15 27 18.5	+0.7
ELOB				Sn	Sn	15 27 39.7	+1.0
ELOB				Sg	Sb	15 27 43.3	+2.1
ELOB				*i* lVmb_Lg		15 27 46.2	
STS	Santiago	1.91	269	Pg	Pb	15 27 19.3	+1.3
STS				Sg	Sg	15 27 44.3	-0.8
MVO	Moncorvo	1.94	205	*e*Pn	Pn	15 27 16.3	+0.3
MVO				*e*Sg	Sb	15 27 45.0	+2.4
MVO				*i* IAML		15 27 46.9	
MVO				*i* IAML		15 27 52.1	
MVO				*i* IAML		15 27 52.2	
PCAB	Cabril	1.96	232	*e*Pn	Pn	15 27 16.7	+0.4
PCAB				*e*Sg	Sb	15 27 45.7	+2.5
PCAB				*i* IAML		15 27 46.7	
PCAB				*i* IAML		15 27 46.8	
PCAB				*i* IAML		15 27 48.4	
PGAV	Gavieira, Arco	1.97	241	*e*Pn	Pn	15 27 16.6	+0.3
PGAV				*e*Pg	Pb	15 27 20.3	+1.2
PGAV				*e*Sn	Sn	15 27 40.9	+0.2
PGAV				*e*Sg	Sb	15 27 46.0	+2.6
PGAV				*i* IAML		15 27 48.9	
PGAV				*i* IAML		15 27 49.4	
PGAV				*i* IAML		15 27 49.8	
POLO	Lamas de Olo	2.08	222	*e*Pn	Pn	15 27 18.1	+0.3
POLO				*e*Sg	Sb	15 27 48.5	+2.0
POLO				*i* IAML		15 27 50.1	
POLO				*i* IAML		15 27 50.1	
POLO				*i* IAML		15 27 55.1	
PVRL	Vila Real	2.11	219	*e*Pg	Pb	15 27 23.4	+1.9
PVRL				*e*Sg	Sb	15 27 50.1	+2.6
PVRL				*i* IAML		15 27 51.3	
PVRL				*i* IAML		15 27 52.2	
PVRL				*i* IAML		15 27 54.3	
EZAM	Zamans	2.17	250	Pn	Pn	15 27 19.5	+0.5
EZAM				Sn	Sn	15 27 46.4	+0.8
EZAM				*i* lVmb_Lg		15 27 54.7	
EMAZ	Mazaricos	2.22	271	Pn	Pn	15 27 20.1	+0.4
EMAZ				Sn	Sn	15 27 47.6	+0.9
EMAZ				*i* lVmb_Lg		15 28 01.9	
PVIS	Viseu	2.65	214	*e*Pg	Pb	15 27 33.7	+3.0
PVIS				*e*Sg	Sb	15 28 06.9	+4.0
GUD	Guadarrama	2.66	149	Pn	Pn	15 27 26.6	+0.7
GUD				Pg	Pb	15 27 32.4	+1.5
GUD				Sn	Sn	15 27 56.9	-0.8
GUD				Sg	Sb	15 28 06.2	+3.0
GUD				*i* lVmb_Lg		15 28 08.8	
MTE	Manteigas	2.80	206	*e*Sg	Sb	15 28 11.4	+4.1
MTE				*i* IAML		15 28 13.9	
MTE				*i* IAML		15 28 15.7	
MTE				*i* IAML		15 28 15.8	
EPLA	Plasencia	2.87	182	Pn	Pn	15 27 29.4	+0.7
EPLA				Pg	Pb	15 27 35.9	+1.5
EPLA				Sg	Sb	15 28 13.5	+4.2
EPLA				*i* lVmb_Lg		15 28 17.1	
ATANC	Embalse El Ata	3.00	127	Sg	Sb	15 28 18.0	+4.8
EARA	Aranguren	3.22	91	Pn	Pn	15 27 34.5	+1.0
EARA				*i* lVmb_Lg		15 28 53.4	
YEBES	Yebes (Guadala	3.23	137	Pg	Pg	15 27 44.2	-1.2
YEBES				Sg	Sg	15 28 25.7	-1.5
YEBES				*i* lVmb_Lg		15 28 33.7	
EALK	Alkurruntz	3.27	83	Pn	Pn	15 27 35.7	+1.5
EALK				Sn	Sn	15 28 12.9	+0.1
EALK				*i* lVmb_Lg		15 28 34.0	
PCBR	Castelo Branco	3.30	201	*e*Pn	Pn	15 27 35.0	+0.5
PCBR				*e*Sn	Sn	15 28 12.6	-0.7
PCBR				*e*Sg	Sg	15 28 27.3	-2.2
PCBR				*i* IAML		15 28 28.9	
PCBR				*i* IAML		15 28 29.3	
PCBR				*i* IAML		15 28 33.7	
UCM	Universidad Co	3.32	141	Pn	Pn	15 27 35.3	+0.5
UCM				Sn	Sn	15 28 13.8	-0.2
UCM				Sg	Sb	15 28 27.1	+4.9
EORO	Oroz-Betelu	3.41	89	Pn	Pn	15 27 37.0	+0.9
EORO				Sn	Sn	15 28 17.1	+0.9
EORO				*i* lVmb_Lg		15 28 28.3	
PCAS	Casmilo, Conde	3.46	214	*e*Pn	Pn	15 27 38.3	+1.6
PCAS				*e*Sn	Sn	15 28 16.9	-0.3
PCAS				*e*Sg	Sg	15 28 32.3	-2.4
PCAS				*i* IAML		15 28 35.5	
PCAS				*i* IAML		15 28 35.6	
PCAS				*i* IAML		15 28 37.4	
SJPF	Ste Jean	3.47	85	*e*Pn	Pn	15 27 39.4	+2.5
SJPF				*e*Sn	Sn	15 28 17.3	-0.4
	4.5nm,0.4s						
ESBB	Sonseca Array	3.59	155	Pn	Pn	15 27 39.1	+0.5
ESBB				Pg	Pb	15 27 49.1	+2.5
ESBB				Sn	Sn	15 28 19.5	-1.0
ESBB				Sg	Sg	15 28 36.6	-2.2
ESDC	Sonseca Array	3.59	155	Pn	Pn	15 27 38.5	0.0
ESDC				Pg	Pb	15 27 50.6	+4.0
ESDC				Sn	Sn	15 28 19.7	-0.8
ESDC				Sg	Sg	15 28 36.4	-2.4
ESDC				*i* lVmb_Lg		15 28 39.3	
PAB	San Pablo	3.60	160	Pn	Pn	15 27 38.7	0.0
PAB				Pg	Pb	15 27 48.7	+1.9
PAB				Sn	Sn	15 28 20.3	-0.5
PAB				Sg	Sg	15 28 36.8	-2.3
PAB				Sg	Sb	15 28 36.9	+6.7
PAB				*i* lVmb_Lg		15 28 39.2	
ETOR	Torete	3.60	125	Pn	Pn	15 27 39.2	+0.8
ETOR				Pg	Pb	15 27 48.8	+2.0
ETOR				Sg	Sg	15 28 37.3	-1.8
ETOR				*i* lVmb_Lg		15 28 41.3	
PMRV	Marv??o	3.67	198	*e*Pn	Pn	15 27 40.7	+1.0
PMRV				*e*Sn	Sn	15 28 21.1	-1.4
PMRV				*e*Sg	Sg	15 28 38.5	-2.9
PMRV				*i* IAML		15 28 42.2	
PMRV				*i* IAML		15 28 43.9	
PMRV				*i* IAML		15 28 44.3	
PSARD	Sardoal	3.72	207	*e*Pn	Pn	15 27 41.0	+0.6
PSARD				*e*Sn	Sn	15 28 23.0	-0.9
PSARD				*e*Sg	Sg	15 28 40.1	-3.1
PSARD				*i* IAML		15 28 44.5	
PSARD				*i* IAML		15 28 47.8	
PSARD				*i* IAML		15 28 54.7	
ETSF	Etsaut	3.96	89	*e*Pn	Pn	15 27 45.2	+1.5
ETSF				*e*Sn	Sn	15 28 27.8	-2.1
	0.9nm,0.2s						
PMTG	Montargil	4.23	205	*e*Pn	Pn	15 27 47.3	0.0
PMTG				*e*Sn	Sn	15 28 34.6	-1.6
PMTG				*e*Sg	Sg	15 28 55.3	-4.0
PMTG				*i* IAML		15 29 05.0	
PMTG				*i* IAML		15 29 05.2	
PMTG				*i* IAML		15 29 06.8	
ESAC	San Caprasio	4.24	105	Pn	Pn	15 27 48.7	+1.2
ESAC				Sn	Sn	15 28 34.9	-1.8
ESAC				*i* lVmb_Lg		15 29 07.9	
PESTR	Estremoz	4.25	198	Pn	Pn	15 27 47.4	-0.2
PESTR				Sg	Sb	15 28 53.6	+4.6
PESTR	Estremoz	4.25	198	*e*Pn	Pn	15 27 48.8	+1.2
PESTR				*e*Sg	Sg	15 28 56.5	-3.5
PESTR				*i* IAML		15 29 01.7	
PESTR				*i* IAML		15 29 02.8	
PESTR				*i* IAML		15 29 03.6	
EBAD	Badajoz	4.25	191	Pn	Pn	15 27 47.9	+0.2
EBAD				Sn	Sn	15 28 35.3	-1.5
EBAD	Badajoz	4.25	191	Pn	Pn	15 27 48.5	+0.9
EBAD				Sn	Sn	15 28 35.8	-1.1
EBAD				Sg	Sg	15 28 57.3	-2.8
EBAD				*i* lVmb_Lg		15 29 03.2	
PARRA	Arraiolos	4.41	202	*e*Pn	Pn	15 27 51.0	+1.2
PARRA				*e*Sg	Sb	15 28 60.0	+6.4
PARRA				*i* IAML		15 29 06.1	
PARRA				*i* IAML		15 29 06.6	
PARRA				*i* IAML		15 29 07.5	
PSIM	Granatula de C	4.43	157	Pn	Pn	15 27 50.6	+0.3
PSIM				Sn	Sn	15 28 39.7	-1.8
PSIM				Sg	Sg	15 29 03.4	-2.6
ECHI	Chisagues Biel	4.53	91	Pn	Pn	15 27 52.9	+1.3
ECHI				Sn	Sn	15 28 43.2	-0.8
ECHI				*i* lVmb_Lg		15 28 50.2	
EPF	Esparros	4.62	87	*e*Pn	Pn	15 27 55.2	+2.5
EPF				*e*Sn	Sn	15 28 46.6	+0.6
	0.9nm,0.1s						
EVO	Evora	4.67	200	Pn	Pn	15 27 53.8	+0.4
EVO				Sn	Sn	15 28 44.9	-2.3
EVO	Evora	4.67	200	*e*Pn	Pn	15 27 54.0	+0.6
EVO				*e*Sg	Sg	15 29 09.8	-3.7
EVO				*i* IAML		15 29 18.3	
EVO				*i* IAML		15 29 18.8	
EVO				*i* IAML		15 29 21.3	
PMAFR	Mafra	4.71	213	Pn	Pn	15 27 54.6	+0.7
MOE	Montemor	4.77	203	*e*Sg	Sg	15 29 11.7	-4.9
MOE				*i* IAML		15 29 16.2	
MOE				*i* IAML		15 29 17.3	
MOE				*i* IAML		15 29 17.5	
PBAR	Barrancos	4.83	190	Pn	Pn	15 27 56.9	+1.3
PBAR	Barrancos	4.83	190	*e*Pn	Pn	15 27 57.1	+1.6
PBAR				*e*Sn	Sn	15 28 50.0	-1.1
PBAR				*e*Sg	Sg	15 29 14.3	-4.2
PBAR				*i* IAML		15 29 18.1	
PBAR				*i* IAML		15 29 18.2	
PBAR				*i* IAML		15 29 22.3	
EMOS	Mosqueruela	4.84	120	Pn	Pn	15 27 57.1	+1.1
EMOS				Sn	Sn	15 28 50.3	-1.4
EMOS				*i* lVmb_Lg		15 29 12.7	
ECAB	El Cabril	4.87	175	Pn	Pn	15 27 56.3	+0.1
ECAB				Sn	Sn	15 28 50.4	-1.9
ECAB	El Cabril	4.87	175	Pn	Pn	15 27 56.7	+0.5
ECAB				Sn	Sn	15 28 50.1	-2.2
ECAB				Sg	Sg	15 29 16.2	-3.8
ECAB				*i* lVmb_Lg		15 29 21.5	
EADA	Adamuz	4.88	167	Pn	Pn	15 27 56.2	-0.1
EADA	Adamuz	4.88	167	Sg	Sg	15 29 17.1	-3.1
EADA				*i* lVmb_Lg		15 29 32.2	
LFF	La Frestale	5.23	65	*e*Pn	Pn	15 28 02.2	+1.1
LFF				*e*Sn	Sn	15 28 58.9	-2.1
	6.7nm,0.3s						
PLOUS	Minas do Lousa	5.25	202	*e*Pn	Pn	15 28 01.9	+0.6
PLOUS				*e*Sn	Sn	15 29 00.1	-1.3
PLOUS				*i* IAML		15 29 31.5	
PLOUS				*i* IAML		15 29 36.5	
PLOUS				*i* IAML		15 29 41.5	
QUIF	Quistinic	5.35	21	*e*Pn	Pn	15 28 02.5	-0.2
QUIF				*e*Sn	Sn	15 28 58.6	-5.4
	3.3nm,0.2s						
ETOB	Tobarra	5.44	141	Pn	Pn	15 28 04.7	+0.8
ETOB				Sg	Sg	15 29 32.1	-6.0
ETOB	Tobarra	5.44	141	Pn	Pn	15 28 04.8	+0.8
ETOB				Sn	Sn	15 29 04.6	-1.6
ETOB				Sg	Sg	15 29 35.4	-2.7
ETOB				*i* lVmb_Lg		15 29 45.5	
EPOB	Poblet	5.46	104	Pn	Pn	15 28 04.6	+0.2
EPOB				Sn	Sn	15 29 04.2	-2.6
EPOB				*i* lVmb_Lg		15 29 32.1	
MFF	Saint Martin d	5.53	46	*e*Pn	Pn	15 28 06.6	+1.5
MFF				*e*Sn	Sn	15 29 02.4	-5.8
	2.7nm,0.3s						
EQES	Quesada	5.58	156	Sg	Sg	15 29 40.2	-2.5
EQES				*i* lVmb_Lg		15 29 47.1	
PVAQ	Vaqueiros	5.69	194	*e*Sn	Sn	15 29 10.4	-1.9
PVAQ				*e*Sg	Sg	15 29 41.7	-4.4
PVAQ				*i* IAML		15 29 47.1	
PVAQ				*i* IAML		15 29 50.7	
PVAQ				*i* IAML		15 29 51.8	
ROSF	Rostrenen	5.72	18	*e*Pn	Pn	15 28 08.7	+0.9
ROSF				*e*Sn	Sn	15 29 08.0	-5.0
	4.0nm,0.3s						
SGMF	Saint Gilles	5.83	23	*e*Pn	Pn	15 28 09.6	+0.3
SGMF				*e*Sn	Sn	15 29 10.5	-5.2
	1.7nm,0.3s						
RJF	Les Rejaudoux	5.88	64	*e*Pn	Pn	15 28 10.7	+0.8
RJF				*e*Sn	Sn	15 29 14.3	-2.6
PBDV	Barranco-do-Ve	5.88	196	*e*Sg	Sg	15 29 49.3	-3.1
PBDV				*i* IAML		15 29 52.6	
PBDV				*i* IAML		15 30 01.4	
MTLF	Montolieu	5.99	83	*e*Pn	Pn	15 28 12.6	+1.0
MTLF				*e*Sn	Sn	15 29 19.5	-0.3
	2.2nm,0.4s						
CAF	Calviac	6.12	68	*e*Pn	Pn	15 28 14.5	+1.1
CAF				*e*Sn	Sn	15 29 20.3	-2.7
	2.3nm,0.2s						
GRR	Gorron	6.52	31	*e*Pn	Pn	15 28 19.4	+0.7
GRR				*e*Sn	Sn	15 29 27.8	-4.8
	2.3nm,0.3s						
TCF	Toulx Ste Croi	6.72	57	*e*Sn	Sn	15 29 33.2	-4.5
	2.0nm,0.2s						
EIBI	Ibiza	6.76	123	Pn	Pn	15 28 22.8	+0.7
EIBI				*i* lVmb_Lg		15 30 04.5	
FLN	La Foliniere	6.97	31	*e*Pn	Pn	15 28 26.2	+1.3
FLN				*e*Sn	Sn	15 29 37.6	-6.1
	1.5nm,0.4s						
LDF	La Druitiere	6.97	34	*e*Pn	Pn	15 28 24.0	-1.0
LDF				*e*Sn	Sn	15 29 39.0	-4.9
	0.6nm,0.1s						
LASF	Ste Croix	7.22	78	*e*Pn	Pn	15 28 29.1	+0.6
LASF				*e*Sn	Sn	15 29 47.5	-2.6
	1.3nm,0.3s						
BGF	Bois d'Agland	7.24	57	*e*Sn	Sn	15 29 46.5	-3.9
	1.9nm,0.1s						
AVF	Avril sur Loir	7.65	57	*e*Sn	Sn	15 29 55.2	-5.4
	0.8nm,0.2s						
SMF	Signal de Mont	7.89	59	*e*Sn	Sn	15 30 03.9	-2.6
	1.0nm,0.3s						
VIVF	Saint-Julien-l	7.91	72	*e*Pn	Pn	15 28 38.6	+0.7
VIVF				*e*Sn	Sn	15 30 03.2	-3.9
	3.7nm,0.5s						

IPGP ***18*** *15:32:35.0, 15.28S×172.65W, h15km, Mw6.1, Fault plane solution: NP1:φs137.00000°, δ30.00000°, λ42.00000°. NP2:φs9.00000°, δ70.00000°, λ113.00000°.*

ISC-PP ***18*** *15:32:36, 15.26S×172.69W, h18km±1km, Mwppsm6.6, Moment Tensor Solution. s27 Moment tensor: Scale 10^18Nm; Mrr0.19±.11; Mθθ0.28±.18; Mϕϕ-0.80±.16; Mrθ0.23±.22; Mϕθ0.26±.20; Mrϕ0.05±.13; Fault plane solution: M08.61000×10^18 NP1:φs32.70000°, δ72.20000°, λ137.30000°. NP2:φs138.40000°, δ49.80000°, λ23.50000°.*

NEIC ***18*** *15:32:36.5, 15.23S×172.70W, h12km*

NEIC ***18*** *15:32:36.9, 15.25S×172.67W, h14km*

NEIC ***18*** *15:32:36.8±2.2, 15.26S±0.06×172.69W±0.07, h12km±1km, mb5.9/110, Ms_20 6.1/768, Mwb6.0/184, Mww6.1/52, Error ellipse: s-maj=13.1km s-min=9.2km az=124.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.60; Mθθ0.39; Mϕϕ-1.00; Mrθ0.44; Mϕθ0.04; Mrϕ0.53; Fault plane solution: M01.11000×10^18 NP1:φs27.73000°, δ69.18000°, λ123.27000°. NP2:φs146.17000°, δ38.60000°, λ34.72000°. Principal axes: T 1.0533, Plg54.0000°, Azm338.0000°; N 0.1116, Plg31.0000°, Azm195.0000°; P -1.1649, Plg18.0000°, Azm94.0000°;*

BJI ***18*** *15:32:37.0, 15.35S×172.85W, h10km, mB6.4/78, mb5.8/72, Ms6.2/92, Ms7 6.0/88*

IDC ***18*** *15:32:37.9±0.3, 15.34S×173.15W, h0km, mb5.4/31, mbtmp5.4/31, MS6.0/67, Error ellipse: s-maj=14.0km s-min=11.6km az=162.0*

MOS ***18*** *15:32:38.8±1.2, 15.29S×173.29W, h10km, mb5.9/42, MS6.0/43, Error ellipse: s-maj

cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC **18** *15:32:49.8, 15°.23S×172°.70W, h12km, Moment Tensor Solution. Duration: 5s6 Moment tensor: Scale 10^{18}Nm; M_{rr}1.38; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-1.70; $M_{r\theta}$0.62; $M_{\theta\phi}$0.42; $M_{r\phi}$0.19; Fault plane solution: $M_0$1.75000×10^{18} NP1: ϕ_s144.39000°, δ49.64000°, λ53.88000°. NP2:ϕ_s12.80000°, δ52.01000°, λ124.74000°. Principal axes: T 1.7055, Plg63.0000°, Azm346.0000°; N 0.0847, Plg27.0000°, Azm170.0000°; P -1.7903, Plg1.0000°, Azm79.0000°;*
ISC 18 15:32:39.7±0.4, 15°.50S±0'.04×173°.00W±0'.04, h17km±1km, h17km:pP-P, n1777, σ1956/1667, mb5.7/254, MS6.1/504, 159C-88D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.97**	**37**	Pn		Pn	15 33 05.6	-6.9
	316nm,0.3s,baz=5.1,slow=6.8,SNR=40							
AFI				Sn		Sn	15 33 23.8	-13
	3μm,0.3s,baz=225,slow=23,SNR=15							
AFI				LR		LR	15 33 40.7	
	comp=Z,72μm,21.9s,baz=226,slow=32							
AFI	**Afiamalu**	**1.97**	**37**	Pn		Pn	15 33 03.7	-8.8
AFI				Sn		Sn	15 33 24.7	-12
AFI	**Afiamalu**	**1.97**	**37**	P		Pn	15 33 05.0	-7.5
AFI				S		Sn	15 33 23.4	-13
AFI				T		T	15 35 37.3	
NIUE	**Niue**	**4.61**	**141**			**Pn**	**15 33 47.6**	**-1.1**
NIUE	**Niue**	**4.61**	**141**	P		**Pn**	**15 33 47.6**	**-1.1**
NIUE				S		**Sn**	**15 34 37.1**	**-4.7**
NIUE				T		T	15 38 19.5	
FUTU	**Fugatoga**	**5.09**	**283**	P		**Pn**	**15 33 56.6**	**+1.2**
	3μm,1.0s							
FUTU	**Fugatoga**	**5.09**	**283**			**Pn**	**15 33 56.6**	**+1.2**
FUTU	**Fugatoga**	**5.09**	**283**	P		**Pn**	**15 33 57.7**	**+2.3**
FUTU	**Fugatoga**	**5.09**	**283**	P		**Pn**	**15 33 57.6**	**+2.3**
MSVF	**Nonsavu**	**8.87**	**254**	Pn		Pn	15 34 55.9	+8.6
	7.2nm,0.3s,baz=95,slow=11,SNR=176							
MSVF				LR		LR	15 37 44.4	
	comp=Z,198μm,18.6s,baz=99,slow=35							
MSVF	**Nonsavu**	**8.87**	**254**	⇓P		Pn	15 34 55.1	+7.9
FUNA	**Funafuti**	**10.31**	**311**	P		**Pn**	**15 35 09.4**	**+2.4**
FUNA	**Funafuti**	**10.31**	**311**	P		**Pn**	**15 35 09.5**	**+2.4**
RAR	**Rarotonga**	**13.77**	**116**	Pn		Pn	15 35 50.0	-4.4
	11nm,0.3s,baz=262,slow=7.5,SNR=57							
RAR				Sn		Sn	15 38 10.0	-17
	4.5nm,0.3s,baz=281,slow=7.2,SNR=2.7							
RAR				LR		LR	15 39 44.9	
	comp=Z,74μm,21.3s,baz=310,slow=31							
RAR	**Rarotonga**	**13.77**	**116**	Pn		Pn	15 35 50.1	-4.3
RAR	**Rarotonga**	**13.77**	**116**	P		**Pn**	**15 35 50.7**	**-3.7**
RAR	**Rarotonga**	**13.77**	**116**	⇑P		Pn	15 35 50.0	-4.3
RAO	**Raoul Island**	**14.42**	**198**	Sn		**Sn**	**15 38 40.5**	**-2.3**
	47nm,0.3s,baz=287,slow=22,SNR=4.3							
RAO				LR		LR	15 40 28.1	
	comp=Z,32μm,19.8s,baz=25,slow=32							
RTV	**Rentapao**	**17.95**	**260**	P		**P**	**15 36 49.4**	**+0.2**
	1μm,2.1s							
RTV	**Rentapao**	**17.95**	**260**	P		**P**	**15 36 52.2**	**+3.0**
DVP	**Devils Point**	**18.17**	**260**	P		**P**	**15 36 52.4**	**+0.8**
	8μm,1.5s							
MARNC	**Mare, Loyalty**	**18.95**	**249**	P		**Pn**	**15 37 00.5**	**-0.3**
	4μm,1.4s							
MARNC	**Mare, Loyalty**	**18.95**	**249**			**P**	**15 36 57.7**	**-2.4**
MARNC	**Mare, Loyalty**	**18.95**	**249**	⇑P		**P**	**15 36 59.9**	**-0.3**
YATNC	**Mamie plateau,**	**20.12**	**248**	P		**P**	**15 37 12.7**	**-0.3**
	464nm,1.3s							
YATNC	**Mamie plateau,**	**20.12**	**248**	P		**P**	**15 37 12.1**	**-0.9**
OUENC	**Ouen Island, N**	**20.26**	**247**	P		Pn	15 37 15.9	-0.6
	994nm,1.2s							
OUENC	**Ouen Island, N**	**20.26**	**247**			**P**	**15 37 14.2**	**-0.3**
OUENC	**Ouen Island, N**	**20.26**	**247**	P		**P**	**15 37 14.4**	**-0.1**
DZM	**Mont Dzumac**	**20.52**	**248**	P		**P**	**15 37 17.3**	**-0.1**
	154nm,1.0s,baz=86,slow=16,SNR=20							
DZM				LR		LR	15 43 55.6	
	comp=Z,59μm,20.7s,baz=80,slow=33							
	154nm,1.0s							
ONTNC	**Ouen Toro**	**20.58**	**248**	P		**P**	**15 37 18.8**	**+0.9**
	666nm,1.3s							
ONTNC	**Ouen Toro**	**20.58**	**248**			**P**	**15 37 17.4**	**-0.5**
ONTNC					IAmb	IAmb	15 37 36.5	
	comp=Z,1μm,1.3s							
ONTNC	**Ouen Toro**	**20.58**	**248**	P		**P**	**15 37 17.9**	**0.0**
ONTNC	**Ouen Toro**	**20.58**	**248**	⇑P		**P**	**15 37 17.9**	**0.0**
NOUC	**Port Laguerre**	**20.66**	**248**	P		**P**	**15 37 17.9**	**-0.9**
KOUNC	**Koumac, New Ca**	**22.17**	**254**			**P**	**15 37 34.9**	**-0.2**
KOUNC					IAmb	IAmb	15 37 51.7	
	comp=Z,793nm,1.4s							
KOUNC	**Koumac, New Ca**	**22.17**	**254**	P		**P**	**15 37 34.9**	**-0.2**
KOUNC	**Koumac, New Ca**	**22.17**	**254**	⇑P		**P**	**15 37 34.8**	**-0.4**
PAE	**Paea**	**22.54**	**99**	*e*P		**P**	**15 37 39.7**	**+0.6**
	comp=Z,874nm,1.3s							
PAE				*e*LR		LR	15 42 52.9	
	comp=Z,67μm,23.7s							
PAE				*e*T		T	16 00 20.9	
	comp=Z,78nm,0.4s							
PPT	**Papeete**	**22.54**	**99**	P		**P**	**15 37 41.5**	**+2.3**
	comp=Z,295nm,1.1s,baz=328,slow=2.4,SNR=12							
PPT				LR		LR	15 43 55.6	
	comp=Z,34μm,21.8s,baz=266,slow=30							
	comp=Z,295nm,1.1s							
PPT2	**Papeete2**	**22.54**	**99**	*e*P		**P**	**15 37 39.7**	**+0.5**
	comp=Z,451nm,1.3s							
PPT2				*e*S		**S**	**15 41 37.5**	**-8.5**
	comp=Z,101μm,28.8s							
PPT2				*e*LR		LR	15 42 49.1	
	comp=Z,113μm,25.8s							
PPT2				*e*LR		LR	15 42 56.0	
	comp=Z,87μm,28.2s							
PPT2				*e*T		T	16 00 20.8	
	comp=Z,23nm,0.4s							
PPTF	**Pamatai, Papee**	**22.55**	**99**	P		**P**	**15 37 40.6**	**+1.3**
	comp=Z,531nm,1.4s							
PPTF	**Pamatai, Papee**	**22.55**	**99**	P		**P**	**15 37 33.8**	**-5.5**
PPTF					IAmb	IAmb	15 37 42.5	
	comp=Z,811nm,1.3s							
PPTF	**Pamatai, Papee**	**22.55**	**99**	P		**P**	**15 37 40.1**	**+0.8**
PPTF	**Pamatai, Papee**	**22.55**	**99**	P		**P**	**15 37 39.6**	**+0.3**
TIAR	**Tiarei**	**22.76**	**98**	*e*P		**P**	**15 37 41.8**	**+0.3**
	comp=Z,800nm,1.0s							
TIAR				*e*LR		LR	15 42 59.2	
	comp=Z,133μm,23.8s							
TIAR				*e*T		T	16 00 43.4	
	comp=Z,318nm,0.3s							
TVO	**Taravao**	**22.86**	**99**	*e*P		**P**	**15 37 43.5**	**+0.9**
	comp=Z,1μm,1.4s							
TVO				*e*LR		LR	15 43 01.5	
	comp=Z,54μm,23.8s							
TVO				*e*T		T	16 00 49.2	
	comp=Z,39nm,0.4s							
OUZ	**Omahuta**	**23.03**	**209**		IAMs_20	IAMs_20	15 47 11.2	
	comp=Z,61μm,18.0s							
OUZ	**Omahuta**	**23.03**	**209**	P		**P**	**15 37 48.5**	**+4.5**
OUZ	**Omahuta**	**23.03**	**209**	⇓P		**P**	**15 37 47.5**	**+3.4**
XMAS	**Kiritimati**	**23.25**	**43**	P		**P**	**15 37 48.9**	**+2.4**
	comp=Z,215nm,1.7s							
XMAS	**Kiritimati**	**23.25**	**43**	P		**P**	**15 37 48.2**	**+1.7**
WMGZ	**Waiomatatini S**	**23.50**	**197**	P		**P**	**15 37 52.9**	**+4.2**
HAZ	**Te Kaha**	**23.62**	**198**	P		**P**	**15 37 53.5**	**+3.5**
WIAZ	**Waiheke Island**	**23.69**	**204**	P		**P**	**15 37 53.8**	**+3.1**
MBAZ	**Motutapu North**	**23.76**	**205**	P		**P**	**15 37 55.5**	**+4.2**
PUZ	**Puketiti**	**23.77**	**197**	P		**P**	**15 37 54.6**	**+3.1**
RUGZ	**Raukumara Rang**	**23.85**	**198**	P		**P**	**15 37 56.0**	**+3.7**
RVAZ	**Riverhead Bore**	**23.89**	**205**	P		**P**	**15 37 56.1**	**+3.5**
HBAZ	**Herne Bay Bore**	**23.90**	**205**	P		**P**	**15 37 56.7**	**+4.0**
ETAZ	**East Tamaki Re**	**23.91**	**204**	P		**P**	**15 37 56.2**	**+3.4**
MKAZ	**Moumakai**	**23.95**	**204**	P		**P**	**15 37 56.2**	**+3.0**
AWAZ	**Awhitu Peninsu**	**24.12**	**205**	P		**P**	**15 37 57.9**	**+3.1**
PMOR	**Pomariorio Ree**	**24.22**	**92**	*e*P		**P**	**15 37 55.3**	**-0.5**
	comp=Z,1μm,1.2s							
PMOR				*e*LR		LR	15 43 38.3	
	comp=Z,80μm,23.8s							
PMOR				*e*T		T	16 02 28.9	
	comp=Z,11nm,0.3s							
MWZ	**Matawai**	**24.23**	**198**	P		**P**	**15 37 58.5**	**+2.6**
URZ	**Urewera**	**24.29**	**199**	P		**P**	**15 37 56.7**	**+0.4**
	comp=Z,208nm,0.7s							
URZ	**Urewera**	**24.29**	**199**	P		**P**	**15 37 56.5**	**+0.2**
URZ	**Urewera**	**24.29**	**199**	⇓P		**P**	**15 37 56.8**	**+0.4**
URZ	**Urewera**	**24.29**	**199**	P		**P**	**15 37 56.5**	**+0.2**
VAH	**Vaihoa**	**24.46**	**93**	*e*P		**P**	**15 37 56.6**	**-1.4**
	comp=Z,724nm,1.4s							
VAH				*e*LR		LR	15 43 44.9	
	comp=Z,93μm,23.9s							
VAH				*e*T		T	16 02 52.3	
	comp=Z,21nm,0.3s							
RTZ	**Ruatahuna**	**24.66**	**199**			**P**	**15 38 00.6**	**+0.9**
RTZ					IAMs_20	IAMs_20	15 48 12.6	
	comp=Z,40μm,18.0s							
HURO	**Huro Makira**	**24.96**	**279**	P		**P**	**15 38 03.3**	**+0.7**
	comp=Z,86nm,1.4s							
HIZ	**Hauiti**	**25.30**	**203**	P		**P**	**15 38 06.0**	**+0.6**
BKZ	**Black Stump Fm**	**25.32**	**199**	P		**P**	**15 38 06.2**	**+0.6**
	comp=Z,47nm,0.9s							
BKZ	**Black Stump Fm**	**25.32**	**199**	P		**P**	**15 38 06.7**	**+1.1**
BKZ	**Black Stump Fm**	**25.32**	**199**	P		**P**	**15 38 05.3**	**-0.4**
BFZ	**Birch Farm**	**26.78**	**198**	P		**P**	**15 38 20.0**	**+1.2**
	comp=Z,242nm,1.1s							
BFZ	**Birch Farm**	**26.78**	**198**	P		**P**	**15 38 18.7**	**-0.1**
BFZ					IAmb	IAmb	15 38 22.4	
	comp=Z,217nm,1.0s							
BFZ	**Birch Farm**	**26.78**	**198**	P		**P**	**15 38 19.3**	**+0.5**
MRZ	**Mangatainoka R**	**26.97**	**199**			**P**	**15 38 20.5**	**0.0**
MRZ					IAmb	IAmb	15 38 23.1	
	comp=Z,200nm,1.3s							
HNR	**Honiara**	**27.08**	**280**	LR		LR	15 47 24.6	
	comp=Z,3μm,19.0s,baz=204,slow=33							
HNR	**Honiara**	**27.08**	**280**	P		**P**	**15 38 21.1**	**-0.7**
	comp=Z,195nm,1.2s							
HNR	**Honiara**	**27.08**	**280**		IAMs_20	IAMs_20	15 47 03.6	
	comp=Z,42μm,20.0s							
HNR	**Honiara**	**27.08**	**280**	P		**P**	**15 38 20.0**	**-1.8**
SAVO	**Savo Central**	**27.29**	**280**	P		**P**	**15 38 24.0**	**+0.3**
	comp=Z,200nm,1.3s							
SAVO	**Savo Central**	**27.29**	**280**	P		**P**	**15 38 23.1**	**-0.6**
TATA	**Tatamba Isabel**	**27.51**	**282**	P		**P**	**15 38 24.7**	**-1.0**
	comp=Z,122nm,1.3s							
TATA	**Tatamba Isabel**	**27.51**	**282**	P		**P**	**15 38 25.1**	**-0.6**
MSWZ	**Moikau Station**	**27.76**	**199**	P		**P**	**15 38 27.2**	**-0.4**
SNZO	**South Karori**	**27.84**	**200**	P		**P**	**15 38 29.1**	**+0.8**
	comp=Z,76nm,1.1s							
SNZO	**South Karori**	**27.84**	**200**	P		**P**	**15 38 28.3**	**0.0**
SNZO					IAmb	IAmb	15 38 59.1	
	comp=Z,206nm,1.3s							
SNZO	**South Karori**	**27.84**	**200**		IAMs_20	IAMs_20	15 49 29.7	
	comp=Z,34μm,19.0s							
SNZO	**South Karori**	**27.84**	**200**	P		**P**	**15 38 31.5**	**+3.3**
PLWZ	**Palliser**	**27.89**	**199**	P		**P**	**15 38 27.9**	**-1.0**
QRZ	**Quartz Range**	**28.20**	**204**	P		**P**	**15 38 31.5**	**0.0**
CTZ	**Chatham Island**	**28.31**	**186**	P		**P**	**15 38 33.9**	**+1.4**
	comp=Z,149nm,1.4s							
THZ	**Tophouse**	**28.86**	**202**	P		**P**	**15 38 35.7**	**-1.8**
THZ					IAmb	IAmb	15 39 02.8	
	comp=Z,175nm,1.5s							
KHZ	**Kahutara**	**29.22**	**201**			**P**	**15 38 40.5**	**0.0**
KHZ	**Kahutara**	**29.22**	**201**	⇑P		**P**	**15 38 41.4**	**+0.8**
KHZ	**Kahutara**	**29.22**	**201**	P		**P**	**15 38 39.1**	**-1.5**
DSZ	**Denniston Nort**	**29.26**	**204**	P		**P**	**15 38 40.9**	**-0.1**
DSZ					IAmb	IAmb	15 38 43.9	
	comp=Z,399nm,1.2s							
DSZ					IAMs_20	IAMs_20	15 50 01.8	
	comp=Z,31nm,18.0s							
GVZ	**Greta Valley S**	**29.88**	**201**	P		**P**	**15 38 46.7**	**+0.3**
GVZ					IAmb	IAmb	15 39 01.1	
	comp=Z,147nm,1.0s							
LTZ	**Lake Taylor**	**29.98**	**202**			**P**	**15 38 46.7**	**-0.8**
LTZ					IAmb	IAmb	15 38 54.1	
	comp=Z,153nm,1.0s							
LHI	**Lord Howe Isla**	**30.06**	**233**	P		**P**	**15 38 47.1**	**-1.0**
	comp=Z,160nm,1.5s,comp=Z,0.0nm							
INZ	**Inchbonnie**	**30.24**	**203**		IAmb	IAmb	15 38 50.9	
	comp=Z,211nm,1.0s							
INZ					IAMs_20	IAMs_20	15 50 43.6	
	comp=Z,35μm,20.0s							
OXZ	**Oxford**	**30.54**	**202**		IAmb	IAmb	15 39 01.3	
	comp=Z,198nm,0.8s							
FOZ	**Fox Glacier**	**31.56**	**204**		IAmb	IAmb	15 39 09.0	
	comp=Z,209nm,1.1s							
FOZ					IAMs_20	IAMs_20	15 51 30.5	
	comp=Z,34μm,18.0s							
LBZ	**Lake Benmore**	**32.13**	**203**		IAMs_20	IAMs_20	15 52 11.7	
	comp=Z,41μm,19.0s							
JCZ	**Jackson Bay**	**32.42**	**205**	P		**P**	**15 39 08.0**	**-0.9**
	comp=Z,315nm,1.1s							
ODZ	**Otahua Downs**	**32.53**	**202**		IAmb	IAmb	15 39 11.4	
	comp=Z,122nm,1.3s							
ODZ					IAMs_20	IAMs_20	15 53 36.1	
	comp=Z,28μm,18.0s							
ODZ	**Otahua Downs**	**32.53**	**202**	⇓P		**P**	**15 39 10.5**	**+0.7**
ODZ	**Otahua Downs**	**32.53**	**202**	P		**P**	**15 39 09.6**	**-0.1**
TAOE	**Nuku Hiva Isla**	**32.75**	**82**	*e*P		P	15 39 00.9	-11
	comp=Z,2μm,26.2s							
TAOE					*e*PP	**PnPn**	**15 40 19.1**	**-1.4**
	comp=Z,3μm,26.2s							
TAOE					*e*S	S	15 44 15.9	-13
	comp=Z,4μm,25.2s							
TAOE					*e*LQ	LQ	15 46 05.9	
	comp=Z,8μm,25.4s							
TAOE					*e*LR	LR	15 47 33.3	
	comp=Z,72μm,27.2s							
TAOE					*e*T	T	16 13 24.2	
	comp=Z,140nm,0.2s							
WKZ	**Wanaka**	**32.95**	**204**		IAmb	IAmb	15 39 30.3	
	comp=Z,98nm,0.9s							
AUBSH	**Beerwah State**	**33.60**	**245**	P		**P**	**15 39 19.3**	**-0.1**
	comp=Z,79nm,1.5s							
MLZ	**Mava Lakes**	**33.76**	**204**		IAmb	IAmb	15 39 32.6	
	comp=Z,255nm,1.1s							
DCZ	**Deep Cove**	**34.23**	**205**		IAmb	IAmb	15 39 33.4	
	comp=Z,134nm,1.0s							
WHZ	**Wether Hill Ro**	**34.26**	**204**		IAmb	IAmb	15 39 31.5	
	comp=Z,356nm,1.4s							
SYZ	**Scrubby Hill**	**34.35**	**202**	P		**P**	**15 39 27.4**	**+1.8**
	comp=Z,209nm,1.2s							
AUTOO	**Toowoomba Stat**	**34.61**	**244**	P		**P**	**15 39 27.2**	**-1.0**
	comp=Z,284nm,1.5s							
EIDS	**Eidsvold**	**34.97**	**248**	P		**P**	**15 39 29.0**	**-2.3**
	comp=Z,34nm,0.9s,comp=Z,0.0nm							
EIDS	**Eidsvold**	**34.97**	**248**			**P**	**15 39 29.8**	**-1.5**
EIDS	**Eidsvold**	**34.97**	**248**	⇓P		**P**	**15 39 29.8**	**-1.5**
EIDS	**Eidsvold**	**34.97**	**248**	P		**P**	**15 39 30.0**	**-1.2**
PYZ	**Puysegur Point**	**34.99**	**205**	P		**P**	**15 39 32.7**	**+1.6**
	comp=Z,102nm,1.0s							
AUNRC	**North Rockhamp**	**35.20**	**251**	P		**P**	**15 39 32.8**	**-0.4**
	comp=Z,27nm,1.4s							
ARMA	**Armidale**	**35.62**	**239**	P		**P**	**15 39 35.5**	**-1.5**
	comp=Z,79nm,1.8s,comp=Z,0.0nm							
ARMA	**Armidale**	**35.62**	**239**			**P**	**15 39 36.2**	**-0.8**
ARMA					IAmb	IAmb	15 39 39.7	
	comp=Z,271nm,1.8s							
ARMA	**Armidale**	**35.62**	**239**	P		**P**	**15 39 36.6**	**-0.4**
ARMA	**Armidale**	**35.62**	**239**	⇑P		**P**	**15 39 36.4**	**-0.6**
ARMA	**Armidale**	**35.62**	**239**	P		**P**	**15 39 36.6**	**-0.4**
PATS	**Pohnpei**	**36.06**	**306**	P		**P**	**15 39 40.3**	**-0.4**
	comp=Z,292nm,1.4s,comp=Z,0.0nm							
PATS	**Pohnpei**	**36.06**	**306**	P		**P**	**15 39 41.6**	**+0.9**
	comp=Z,314nm,1.4s							
PATS	**Pohnpei**	**36.06**	**306**		IAMs_20	IAMs_20	15 50 16.6	
	comp=Z,34μm,21.0s							
PATS	**Pohnpei**	**36.06**	**306**	P		**P**	**15 39 39.8**	**-1.0**
KRVT	**Keravat (AS076**	**36.14**	**284**	LR		LR	15 52 58.9	
	comp=Z,2μm,20.0s,baz=55,slow=34							
AUPHS	**Peel High Scho**	**36.43**	**238**	P		**P**	**15 39 42.9**	**-0.9**
	comp=Z,133nm,1.6s							
AUKHS	**Kincumber High**	**36.79**	**234**	P		**P**	**15 39 47.9**	**+1.2**
	comp=Z,213nm,1.4s							
AUAYR	**Ayr State High**	**37.91**	**258**	P		**P**	**15 39 57.1**	**+0.6**
	comp=Z,39nm,1.1s							
AUUHS	**Ulladulla High**	**38.17**	**232**	P		**P**	**15 39 59.4**	**+1.0**
	comp=Z,97nm,1.8s							
AULRC	**Lightning Ridg**	**38.45**	**242**	P		**P**	**15 40 00.3**	**-0.5**
	comp=Z,149nm,1.4s							
AUDCS	**Dubbo College**	**38.60**	**237**	P		**P**	**15 40 01.3**	**-0.8**
	comp=Z,100nm,1.4s							
KHLU	**Kahalu`u**	**38.72**	**26**	P		**P**	**15 40 02.4**	**-0.8**
CNB	**Canberra Magne**	**39.00**	**233**	P		**P**	**15 40 03.6**	**-1.9**
	comp=Z,4.4nm,1.5s,comp=Z,0.0nm							
CTA	**Charters Tower**	**39.00**	**257**	P		**P**	**15 40 03.3**	**-2.3**
	comp=Z,16nm,1.2s							
CTA	**Charters Tower**	**39.00**	**257**	LR		LR	15 54 36.1	
	comp=Z,28μm,18.1s,baz=84,slow=34							
CTAO	**Charters Tower**	**39.00**	**257**	P		**P**	**15 40 05.2**	**-0.5**
	comp=Z,15nm,1.2s							
CTAO	**Charters Tower**	**39.00**	**257**			**P**	**15 40 03.7**	**-2.0**
CTAO	**Charters Tower**	**39.00**	**257**		IAMs_20	IAMs_20	15 54 24.7	
	comp=Z,27nm,18.0s							
CTAO	**Charters Tower**	**39.00**	**257**	P		**P**	**15 40 04.1**	**-1.6**
POHA	**Pohakuloa**	**39.02**	**27**	P		**P**	**15 40 06.6**	**+0.7**
	comp=Z,65nm,1.4s							
POHA	**Pohakuloa**	**39.02**	**27**	P		**P**	**15 40 06.8**	**+0.8**
AUDAR	**Daramalan Coll**	**39.15**	**233**	P		**P**	**15 40 06.2**	**-0.5**
	comp=Z,137nm,1.5s							
AUMHS	**Melrose High S**	**39.22**	**233**	P		**P**	**15 40 06.9**	**-0.5**
	comp=Z,152nm,1.6s							
H11S2	**WAKE ISLAND Hy**	**39.25**	**329**	T		T	16 20 42.5	
	baz=146,slow=76,SNR=100							
H11S3	**WAKE ISLAND Hy**	**39.26**	**329**	T		T	16 20 52.5	
	baz=146,slow=76,SNR=92							
H11S1	**WAKE ISLAND Hy**	**39.27**	**329**	T		T	16 20 34.3	
	baz=146,slow=76,SNR=52							
AUMTS	**Mt Stromlo**	**39.28**	**233**	P		**P**	**15 40 07.4**	**-0.4**
	comp=Z,137nm,1.5s							
CAN	**Canberra**	**39.28**	**233**	P		**P**	**15 40 07.3**	**-0.6**
	comp=Z,189nm,1.5s							
CAN	**Canberra**	**39.28**	**233**			**P**	**15 40 07.2**	**-0.6**
CAN					IAmb	IAmb	15 40 08.9	
	comp=Z,446nm,1.8s							
CAN	**Canberra**	**39.28**	**233**	⇑P		**P**	**15 40 07.2**	**-0.6**
CAN	**Canberra**	**39.28**	**233**	P		**P**	**15 40 07.5**	**-0.4**
PMG	**Port Moresby**	**39.33**	**274**	LR		LR	15 54 40.6	
	comp=Z,15μm,18.8s,baz=65,slow=34							
PMG	**Port Moresby**	**39.33**	**274**	P		**P**	**15 40 08.5**	**+0.1**
	comp=Z,127nm,1.4s							
PMG	**Port Moresby**	**39.33**	**274**	⇑P	*i*	**P**	**15 40 08.6**	**+0.1**
PMG					pmax	pmax		
	comp=Z,134nm,1.2s							
PMG					MLR	MLR		
	comp=Z,8μm,16.0s							
PMG	**Port Moresby**	**39.33**	**274**	P		**P**	**15 40 07.4**	**-1.0**
PMG					IAmb	IAmb	15 40 15.1	
	comp=Z,247nm,1.4s							
PMG	**Port Moresby**	**39.33**	**274**	⇑P		**P**	**15 40 08.5**	**+0.1**
PMG	**Port Moresby**	**39.33**	**274**	P		**P**	**15 40 08.0**	**-0.4**
	comp=Z,4μmcomp=Z,127nm,1.4s							
PMG	**Port Moresby**	**39.33**	**274**	P		**P**	**15 40 08.7**	**+0.2**
KEKH	**Kekaha**	**39.46**	**20**	P		**P**	**15 40 09.7**	**+0.4**
KIP	**Kipapa**	**39.53**	**22**	P		**P**	**15 40 10.9**	**+1.0**
	comp=Z,66nm,1.1s							
KIP	**Kipapa**	**39.53**	**22**	*c* *i*P		**P**	**15 40 10.0**	**+0.1**
KIP					pmax	pmax		
	comp=Z,185nm,1.2s							
KHLH	**Kahului Airpor**	**39.66**	**25**	P		**P**	**15 40 11.9**	**+0.9**
MILA	**Mila**	**39.79**	**230**	P		**P**	**15 40 10.8**	**-1.3**
	comp=Z,18nm,1.6s							
WAKE	**Wake Island**	**39.95**	**329**	P		**P**	**15 40 13.7**	**+0.3**
	comp=Z,452nm,1.7s							
WAKE	**Wake Island**	**39.95**	**329**	⇑P		**P**	**15 40 13.2**	**-0.2**
WAKE	**Wake Island**	**39.95**	**329**	P		**P**	**15 40 13.5**	**+0.1**
AUSMG	**Snowy Mountain**	**39.96**	**231**	P		**P**	**15 40 13.7**	**+0.1**
	comp=Z,126nm,1.5s							
H11N3	**WAKE ISLAND Hy**	**40.19**	**330**	T		T	16 22 43.4	
	baz=150,slow=76,SNR=29							
H11N1	**WAKE ISLAND Hy**	**40.20**	**330**	T		T	16 23 02.5	
	baz=150,slow=76,SNR=26							
H11N2	**WAKE ISLAND Hy**	**40.21**	**330**	T		T	16 22 47.6	
	baz=150,slow=76,SNR=34							
CMSA	**Cobar Meteorol**	**40.84**	**240**	P		**P**	**15 40 18.1**	**-2.7**
	comp=Z,159nm,1.6s,comp=Z,0.0nm							
CMSA	**Cobar Meteorol**	**40.84**	**240**	P		**P**	**15 40 19.9**	**-0.9**
MTSU	**Mount Surprise**	**40.88**	**260**	P		**P**	**15 40 20.3**	**-1.0**
	comp=Z,105nm,0.9s							
MTSU	**Mount Surprise**	**40.88**	**260**	P		**P**	**15 40 20.8**	**-0.6**
QLP	**Quilpie**	**41.24**	**247**	P		**P**	**15 40 22.1**	**-2.0**
	comp=Z,180nm,1.3s							
QLP	**Quilpie**	**41.24**	**247**	⇑P		**P**	**15 40 22.1**	**-2.0**
QLP	**Quilpie**	**41.24**	**247**	P		**P**	**15 40 23.0**	**-1.1**
COEN	**Coen**	**42.37**	**266**	P		**P**	**15 40 31.9**	**-1.6**
	comp=Z,122nm,1.3s							
TOO	**Toolangi**	**42.70**	**231**	P		**P**	**15 40 34.4**	**-1.6**
	comp=Z,59n

FAKI Fak Fak 55.31 277 P **P** **15 42 14.4 +1.4**
comp=Z,72nm,1.2s
WRKA Warakurna 55.53 250 P **P** **15 42 11.8 -2.7**
comp=Z,109nm,1.3s,comp=Z,0.0nm
FORT Forrest 55.72 243 P **P** **15 42 14.1 -1.6**
comp=Z,99nm,1.4s,comp=Z,0.0nm
FORT Forrest 55.72 243 P **P** **15 42 14.2 -1.6**
FORT IAmb IAmb 15 42 17.4
comp=Z,271nm,1.6s
KNRA Kununurra 55.94 261 P **P** **15 42 15.3 -2.1**
comp=Z,46nm,0.8s,comp=Z,0.0nm
KNRA Kununurra 55.94 261 P **P** **15 42 14.9 -2.6**
SIJI Sorong 56.86 279 P **P** **15 42 23.4 -0.7**
comp=Z,128nm,1.0s,baz=82,slow=6.4,SNR=41
SIJI LR LR 16 05 37.9
comp=Z,17µm,20.9s,baz=119,slow=35
comp=Z,128nm,1.0s
FITZ Fitzroy Crossi 58.57 258 P **P** **15 42 34.4 -1.6**
comp=Z,8.1nm,1.1s
FITZ Fitzroy Crossi 58.57 258 LR LR 16 05 56.9
comp=Z,36µm,20.2s,baz=100,slow=34
FITZ Fitzroy Crossi 58.57 258 P **P** **15 42 34.5 -1.6**
FITZ Fitzroy Crossi 58.57 258 P **P** **15 42 35.4 -0.7**
RPN Rapa Nui 59.89 113 LR LR 16 01 56.8
comp=Z,11µm,21.9s,baz=272,slow=29
JCJ Chichijima 60.70 314 P **P** **15 42 49.1 -1.5**
comp=Z,68nm,0.8s,baz=108,slow=6.2,SNR=7.0
JCJ LR LR 16 04 11.5
comp=Z,16µm,21.2s,baz=135,slow=31
comp=Z,68nm,0.8s
JCJ Chichijima 60.70 314 P **P** **15 42 50.4 -0.2**
KMBL Kambalda 61.02 243 P **P** **15 42 51.1 -1.7**
comp=Z,35nm,1.5s,comp=Z,0.0nm
TNTI Ternate 61.07 280 P **P** **15 42 54.6 +1.3**
comp=Z,95nm,1.6s
TNTI Ternate 61.07 280 P **P** **15 42 52.7 -0.6**
SOEI Soe 61.31 267 P **P** **15 42 55.4 +0.3**
comp=Z,274nm,1.2s
SOEI Soe 61.31 267 P **P** **15 42 55.6 +0.5**
SOEI Soe 61.31 267 P **P** **15 42 54.8 -0.3**
SOEI IAMs_20 IAMs_20 16 07 10.2
comp=Z,12µm,21.0s
SOEI Soe 61.31 267 ⇑P **P** **15 42 55.4 +0.3**
SOEI Soe 61.31 267 P **P** **15 42 55.7 +0.5**
SANI Sanana 61.56 276 P **P** **15 42 58.3 +1.7**
comp=Z,99nm,1.2s
SANI Sanana 61.56 276 P **P** **15 42 55.4 -1.2**
SANI Sanana 61.56 276 P **P** **15 42 56.1 -0.6**
BATI Baumata 61.80 267 P **P** **15 42 58.5 +0.2**
comp=Z,26nm,0.6s,baz=103,slow=4.5,SNR=3.1
BATI LR LR 16 07 55.2
comp=Z,20µm,21.1s,baz=118,slow=34
comp=Z,26nm,0.6s
SBA Scott Base 63.18 185 P **P** **15 43 10.6 +4.2**
SBA pmax pmax
comp=Z,267nm,1.6s
SBA MLR MLR
comp=Z,6µm,18.0s
SBA Scott Base 63.18 185 P **P** **15 43 10.6 +4.2**
VNDA Vanda 63.32 186 P **P** **15 43 09.6 +2.2**
comp=Z,22nm,1.1s,baz=7.6,slow=6.6,SNR=62
comp=Z,22nm,1.1s
VNDA Vanda 63.32 186 P **P** **15 43 10.6 +3.3**
VNDA pmax pmax
comp=Z,104nm,1.3s
VNDA Vanda 63.32 186 P **P** **15 43 10.6 +3.3**
VNDA IAmb IAmb 15 43 16.6
comp=Z,104nm,1.3s
MMRI Maumere 63.51 268 P **P** **15 43 10.9 +1.2**
comp=Z,192nm,1.8s
MMRI Maumere 63.51 268 P **P** **15 43 07.1 -2.6**
MBWA Marble Bar 63.71 254 P **P** **15 43 08.6 -2.3**
comp=Z,56nm,1.1s,comp=Z,0.0nm
MBWA Marble Bar 63.71 254 P **P** **15 43 10.1 -0.8**
comp=Z,20nm,1.0s
MBWA Marble Bar 63.71 254 P **P** **15 43 10.0 -0.8**
MBWA IAmb IAmb 15 43 12.6
comp=Z,73nm,1.2s
MBWA Marble Bar 63.71 254 IAMs_20 IAMs_20 16 08 54.4
comp=Z,13µm,19.0s
MBWA Marble Bar 63.71 254 ⇑P **P** **15 43 09.8 -1.1**
MBWA Marble Bar 63.71 254 P **P** **15 43 09.8 -1.1**
MBWA Marble Bar 63.71 254 P **P** **15 43 10.1 -0.8**
MEEK Meekatharra 64.14 248 P **P** **15 43 11.9 -1.8**
comp=Z,104nm,1.7s,comp=Z,0.0nm
MEEK Meekatharra 64.14 248 P **P** **15 43 12.6 -1.1**
KLBR Kellerberrin 64.54 242 P **P** **15 43 14.8 -1.4**
comp=Z,295nm,1.1s
KLBR Kellerberrin 64.54 242 P **P** **15 43 16.1 -0.1**
DAV Davao City (W) 64.84 286 LR LR 16 10 05.5
comp=Z,9µm,18.7s,baz=87,slow=35
DAV Davao City (W) 64.84 286 P **P** **15 43 17.0 -1.4**
NWAO Narrogin (SRO) 64.91 241 P **P** **15 43 17.9 -0.7**
comp=Z,117nm,1.8s,comp=Z,0.0nm
NWAO Narrogin (SRO) 64.91 241 LR LR 16 10 59.3
comp=Z,9µm,18.6s,baz=82,slow=36
NWAO Narrogin (SRO) 64.91 241 P **P** **15 43 18.9 +0.3**
comp=Z,67nm,1.8s
LUWI Luwuk 64.92 276 P **P** **15 43 20.1 +1.1**
comp=Z,136nm,1.2s
LUWI Luwuk 64.92 276 P **P** **15 43 19.0 +0.1**
LUWI Luwuk 64.92 276 P **P** **15 43 19.1 +0.1**
RKGY Rocky Gully 65.05 239 P **P** **15 43 18.7 -0.8**
comp=Z,158nm,1.4s,comp=Z,0.0nm
BLDU Ballidu 65.49 243 P **P** **15 43 21.1 -1.4**
comp=Z,93nm,1.8s
BLDU Ballidu 65.49 243 P **P** **15 43 22.1 -0.3**
MUN Mundaring 65.83 242 P **P** **15 43 23.8 -0.8**
comp=Z,109nm,1.4s,comp=Z,0.0nm
JHJ2 Mitsune 66.08 318 P **P** **15 43 26.7 +0.7**
comp=Z,902nm,1.4s
JHJ2 Mitsune 66.08 318 P **P** **15 43 24.0 -2.0**
JHJ2 Mitsune 66.08 318 P **P** **15 43 26.8 +0.7**
JHJ Hachijo jima 2 66.11 318 LR LR 16 06 23.4
comp=Z,6µm,22.0s,baz=112,slow=31
MORW Morawa 66.19 245 P **P** **15 43 25.9 -1.0**
comp=Z,79nm,1.9s,comp=Z,0.0nm
MORW Morawa 66.19 245 P **P** **15 43 26.0 -1.0**
MORW IAmb IAmb 15 43 29.1
comp=Z,165nm,1.4s
MORW Morawa 66.19 245 ⇑P **P** **15 43 26.4 -0.6**
MORW Morawa 66.19 245 P **P** **15 43 26.7 -0.3**
KAPI Kappang 66.77 271 P **P** **15 43 31.6 +0.8**
comp=Z,14nm,0.9s,baz=104,slow=3.3,SNR=5.8
KAPI LR LR 16 10 05.9
comp=Z,5µm,21.2s,baz=100,slow=34
comp=Z,14nm,0.9s
KAPI Kappang 66.77 271 P **P** **15 43 32.1 +1.2**
comp=Z,19nm,1.3s
KAPI Kappang 66.77 271 P **P** **15 43 29.9 -1.0**
KAPI Kappang 66.77 271 P **P** **15 43 30.2 -0.6**
KAPI Kappang 66.77 271 P **P** **15 43 30.3 -0.6**
AMKA Amchitka 66.93 355 P **P** **15 43 28.2 -2.9**
AMKA IAmb IAmb 15 43 43.4
comp=Z,69nm,1.2s
KIWB Kanaga Island 67.17 357 P **P** **15 43 32.4 -0.2**
ADK Adak 67.17 358 P **P** **15 43 31.6 -1.0**
comp=Z,49nm,1.4s
ADK Adak 67.17 358 P **P** **15 43 31.5 -1.0**
ADK Adak 67.17 358 ⇑P **P** **15 43 31.9 -0.7**
ADK Adak 67.17 358 P **P** **15 43 32.2 -0.4**
ATKA Atka Island 67.43 359 P **P** **15 43 33.7 -0.4**
comp=Z,201nm,1.3s
ATKA Atka Island 67.43 359 P **P** **15 43 33.2 -0.9**
ATKA Atka Island 67.43 359 ⇑P **P** **15 43 33.4 -0.8**
TOLI2 Tolitoli 67.45 278 P **P** **15 43 34.4 -0.8**
comp=Z,30nm,1.5s
TOLI2 Tolitoli 67.45 278 P **P** **15 43 34.1 -1.1**
TOLI2 Tolitoli 67.45 278 P **P** **15 43 34.2 -1.1**
PLAI Plampang 67.77 267 P **P** **15 43 38.3 +1.1**
comp=Z,106nm,0.9s
PLAI Plampang 67.77 267 P **P** **15 43 36.0 -1.2**
JYT Yasato 67.84 320 P **P** **15 43 37.6 +0.5**
JOD2 Odawara 2 67.91 319 P **P** **15 43 37.5 -0.1**
JSG Sagara 68.11 318 P **P** **15 43 39.7 +0.8**
comp=Z,584nm,1.5s
JSG Sagara 68.11 318 P **P** **15 43 39.2 +0.3**
JRY Ryogami san 68.50 320 P **P** **15 43 41.9 +0.5**
JMM Marumori 68.55 322 P **P** **15 43 41.7 +0.2**
SHEM Shemya Is, Ala 68.86 352 LR LR 16 08 09.1
comp=Z,16µm,20.2s,baz=178,slow=31
SMY Shemya 68.86 352 P **P** **15 43 42.2 -0.9**
comp=Z,235nm,1.5s
SMY Shemya 68.86 352 P **P** **15 43 41.1 -2.0**
SMY pmax pmax
comp=Z,651nm,1.6s
SMY Shemya 68.86 352 P **P** **15 43 41.1 -2.0**
SMY Shemya 68.86 352 ⇑P **P** **15 43 41.3 -1.8**
JGF Kuroka 69.22 318 P **P** **15 43 46.3 +0.4**
comp=Z,179nm,1.9s
JGF Kuroka 69.22 318 P **P** **15 43 44.7 -1.1**
JGF Kuroka 69.22 318 ⇑P **P** **15 43 45.9 0.0**
JGF Kuroka 69.22 318 P **P** **15 43 46.2 +0.4**
JGF Kuroka 69.22 318 P **P** **15 43 46.1 +0.3**
MJAR Matsushiro Arr 69.27 320 P **P** **15 43 45.6 -0.6**
comp=Z,109nm,1.2s,baz=156,slow=5.7,SNR=134
MJAR LR LR 16 08 33.9
comp=Z,18µm,21.7s,baz=108,slow=31
comp=Z,109nm,1.2s
MJAR Matsushiro Arr 69.27 320 P **P** **15 43 45.5 -0.6**
MAJO Matsushiro 69.27 320 P **P** **15 43 46.6 +0.5**
comp=Z,207nm,1.7s
MAJO Matsushiro 69.27 320 *c* *i*P **P** **15 43 46.0 -0.2**
MAJO pmax pmax
comp=Z,151nm,1.3s
MAJO Matsushiro 69.27 320 P **P** **15 43 45.9 -0.2**
MAJO Matsushiro 69.27 320 ⇑P **P** **15 43 46.3 +0.2**
MAJO Matsushiro 69.27 320 P **P** **15 43 46.3 +0.2**
MAJO Matsushiro 69.27 320 P **P** **15 43 46.5 +0.3**
MAT Matsushiro 69.27 320 P **P** **15 43 46.2 0.0**
MJB9 Matsu-Tunnel 69.27 320 P **P** **15 43 47.0 +0.8**
INU Inuyama 69.28 318 P **P** **15 43 46.6 +0.4**
comp=Z,147nm,1.9s
INU Inuyama 69.28 318 ⇑P **P** **15 43 46.3 +0.1**
INU Inuyama 69.28 318 P **P** **15 43 46.6 +0.4**
UNV Unalaska Valle 69.29 4 P **P** **15 43 44.8 -0.9**
comp=Z,86nm,1.4s
UNV Unalaska Valle 69.29 4 P **P** **15 43 44.5 -1.2**
UNV IAmb IAmb 15 43 57.3
comp=Z,175nm,1.5s
UNV Unalaska Valle 69.29 4 P **P** **15 43 44.9 -0.9**
baz=186,SNR=9.9
UNV S **S** **15 52 48.8 -2.6**
baz=186
JOM Ohasama 69.33 324 P **P** **15 43 46.7 +0.2**
AKUT Akutan 69.63 5 P **P** **15 43 47.5 -0.4**
comp=Z,120nm,1.7s
AKUT Akutan 69.63 5 ⇑P **P** **15 43 46.8 -1.1**
JGN Niukaw 69.63 319 P **P** **15 43 48.9 +0.5**
JYA Atsumi 69.67 322 P **P** **15 43 49.2 +0.7**
ERM Erimo 70.06 327 *c* *i*P **P** **15 43 51.5 +0.7**
ERM pmax pmax
comp=Z,37nm,1.3s
ERM MLR MLR
comp=Z,9µm,19.0s
ERM Erimo 70.06 327 P **P** **15 43 51.6 +0.8**
ERM S **S** **15 53 05.2 +4.3**
ERM Erimo 70.06 327 P **P** **15 43 52.5 +1.7**
KUR Kuril'sk 70.10 332 *c* *i*P **P** **15 43 51.1 +0.2**
KUR *e*PPP PPP 15 48 07.7
KUR *i* S **S** **15 53 02.8 +1.6**
KUR *e*SS **SS** **15 57 33.6 +2.1**
KUR pmax pmax
comp=Z,406nm,1.4s
KUR pmax pmax
comp=Z,4µm,5.8s
KUR pmax pmax
comp=N,3µm,8.9s
KUR pmax pmax
comp=E,900nm,5.4s
KUR MLR MLR
comp=Z,11µm,17.0s
KUR MLR MLR
comp=N,10µm,15.0s
KUR MLR MLR
comp=E,1µm,11.0s
YUK Yuzh-Kuril'sk 70.14 330 *d* *i*P **P** **15 43 51.0 -0.3**
YUK *i* 15 44 13.0
YUK *e* 15 46 29.2
YUK *e*PPP PPP 15 48 04.5
YUK *i* S **S** **15 53 05.9 +4.1**
YUK *i* 15 53 52.4
YUK pmax pmax
comp=Z,162nm,0.8s
YUK pmax pmax
comp=Z,635nm,2.1s
JWT Wachi 70.30 317 P **P** **15 43 52.9 +0.5**
JTM Tenmabayashi 70.35 325 P **P** **15 43 53.5 +0.9**
comp=Z,269nm,1.9s
JTM Tenmabayashi 70.35 325 P **P** **15 43 50.2 -2.4**
JTM Tenmabayashi 70.35 325 P **P** **15 43 52.0 -0.7**
JMN Monobe 70.41 315 P **P** **15 43 54.2 +1.0**
comp=Z,253nm,1.5s
JMN Monobe 70.41 315 ⇑P **P** **15 43 54.4 +1.1**
JMN Monobe 70.41 315 P **P** **15 43 53.2 0.0**
JMN Monobe 70.41 315 P **P** **15 43 54.4 +1.1**
CASY Casey 70.48 205 P **P** **15 43 54.4 +1.3**
CASY IAmb IAmb 15 43 56.4
comp=Z,161nm,1.5s
CASY Casey 70.48 205 ⇑P **P** **15 43 54.5 +1.3**
CASY Casey 70.48 205 P **P** **15 43 53.7 +0.6**
BKB Balikpapan 70.50 274 P **P** **15 43 55.9 +1.7**
comp=Z,66nm,1.4s
BKB Balikpapan 70.50 274 P **P** **15 43 54.0 -0.2**
FARB Farallon Islan 70.74 40 IAMs_20 IAMs_20 16 09 57.8
comp=Z,12µm,19.0s
HULI Fort Hunter Li 70.84 42 IAMs_20 IAMs_20 16 09 51.4
comp=Z,13µm,19.0s
JOW Kunigami 70.86 306 LR LR 16 09 09.8
comp=Z,13µm,21.8s,baz=103,slow=31
JOW Kunigami 70.86 306 P **P** **15 43 56.8 +0.7**
comp=Z,88nm,2.8s
JOW Kunigami 70.86 306 P **P** **15 43 54.6 -1.5**
JOW IAmb IAmb 15 43 59.2
comp=Z,261nm,1.7s
JOW Kunigami 70.86 306 P **P** **15 43 54.5 -1.5**
FORD Fort Ord Natur 70.89 42 IAMs_20 IAMs_20 16 07 48.8
comp=Z,9µm,20.0s
JAD Aida 70.91 316 P **P** **15 43 57.1 +0.9**
CNBA Chernabura Isl 70.96 8 P **P** **15 43 52.6 -3.5**
CNBA IAmb IAmb 15 43 56.9
comp=Z,216nm,1.6s
CNBA IAMs_20 IAMs_20 16 10 19.4
comp=Z,11µm,20.0s
CHNA Chernabura Isl 70.97 8 P **P** **15 43 55.4 -0.7**
comp=Z,87nm,1.8s
CHNA Chernabura Isl 70.97 8 P **P** **15 43 55.3 -0.8**
baz=193,SNR=6.1
CHNA S **S** **15 53 09.1 -2.0**
baz=193
JRSC Jasper Ridge 71.03 41 IAMs_20 IAMs_20 16 07 53.6
comp=Z,9µm,20.0s
MCCM Marconi Confer 71.09 40 IAMs_20 IAMs_20 16 10 08.2
comp=Z,13µm,19.0s
SAO San Andreas Ge 71.14 42 IAMs_20 IAMs_20 16 07 57.5
comp=Z,11µm,20.0s
SAO San Andreas Ge 71.14 42 ⇑P **P** **15 43 59.3 +1.7**
SKR Severo-Kuril's 71.25 340 *c* *i*P **P** **15 43 57.4 -0.5**
SKR pmax pmax
comp=Z,3.0nm,1.6s
JAGI Jajag, Banyuwa 71.33 266 P **P** **15 44 00.5 +1.2**
comp=Z,141nm,1.1s
JAGI Jajag, Banyuwa 71.33 266 P **P** **15 43 57.3 -2.0**
JAGI IAmb IAmb 15 44 01.3
comp=Z,136nm,1.0s
JAGI Jajag, Banyuwa 71.33 266 ⇑P **P** **15 44 00.4 +1.1**
JAGI Jajag, Banyuwa 71.33 266 P **P** **15 43 57.9 -1.3**
SDPT Sand Point 71.36 8 P **P** **15 43 57.6 -0.8**
comp=Z,204nm,1.4s
SDPT Sand Point 71.36 8 P **P** **15 43 55.2 -3.2**
SDPT Sand Point 71.36 8 P **P** **15 43 57.6 -0.8**
baz=192,SNR=7.6
SDPT S **S** **15 53 12.7 -2.9**
baz=192
JMP Maruseppu 71.36 328 P **P** **15 43 59.5 +0.7**
MHC Mount Hamilton 71.37 41 IAMs_20 IAMs_20 16 08 24.6
comp=Z,9µm,20.0s
JSU Suzuyama 71.59 311 P **P** **15 44 01.0 +0.5**
comp=Z,158nm,1.7s
JSU Suzuyama 71.59 311 ⇑P **P** **15 44 00.7 +0.3**
JSU Suzuyama 71.59 311 P **P** **15 44 00.9 +0.5**
TGY Tagaytay City 71.63 291 LR LR 16 10 39.6
comp=Z,14µm,21.2s,baz=113,slow=32
KCPM Cahto Peak 71.63 38 IAMs_20 IAMs_20 16 10 06.6
comp=Z,13µm,19.0s
JKA Kamikawa-asahi 71.83 328 P **P** **15 44 02.9 +1.4**
ASAJ Asahikawa 71.83 328 LR LR 16 09 21.9
comp=Z,7µm,22.0s,baz=151,slow=31
BAR Barrett 72.05 48 IAMs_20 IAMs_20 16 09 28.6
comp=Z,9µm,19.0s
JCC Jacoby Creek, 72.09 37 IAMs_20 IAMs_20 16 10 31.8
comp=Z,10µm,19.0s
VES Vestal, Richgr 72.14 44 IAMs_20 IAMs_20 16 08 48.0
comp=Z,9µm,20.0s
JNU Nakatsue 72.15 313 LR LR 16 10 23.3
comp=Z,7µm,21.2s,baz=118,slow=32
JNU Nakatsue 72.15 313 P **P** **15 44 03.9 +0.1**
JSH Shimam 72.17 325 P **P** **15 44 04.7 +1.1**
KHMM Horse Mountain 72.31 37 IAMs_20 IAMs_20 16 09 04.3
comp=Z,12µm,20.0s
S14K Fog Glacier 72.40 8 P **P** **15 44 04.4 -0.4**
baz=193,SNR=18
S14K S **S** **15 53 25.5 -2.1**
baz=193
VNFG Fog Glacier, M 72.40 8 IAMs_20 IAMs_20 16 12 29.0
comp=Z,9µm,19.0s
SPIA Saint Paul Isl 72.44 2 P **P** **15 44 04.7 -0.2**
comp=Z,190nm,1.4s
SPIA Saint Paul Isl 72.44 2 P **P** **15 44 04.6 -0.2**
baz=182,SNR=8.0
SPIA S **S** **15 53 27.2 -0.6**
baz=182
KHBM Hayfork Bally 72.47 38 IAMs_20 IAMs_20 16 08 59.6
comp=Z,11µm,20.0s
PET Petropavlovsk 72.49 342 P **P** **15 44 06.3 +1.0**
comp=Z,509nm,1.8s
PET Petropavlovsk 72.49 342 *c* *i*P **P** **15 44 05.3 0.0**
PET *e*S **S** **15 53 27.9 -0.7**
PET *e*PS **PnS** **15 54 14.8 +15**
PET *e*SS **SS** **15 58 06.7 -1.2**
PET pmax pmax
comp=Z,3µm,10.0s
PET pmax pmax
comp=Z,129nm,1.5s
PET pmax pmax
comp=Z,2µm,11.5s
PET MLR MLR
comp=Z,6µm,18.0s
PET MLR MLR
comp=Z,5µm,18.0s
PET Petropavlovsk 72.49 342 P **P** **15 44 01.7 -3.6**
comp=Z,4µmcomp=Z,126nm,1.8s
PET Petropavlovsk 72.49 342 P **P** **15 44 04.9 -0.3**
CHIR Chirikof Islan 72.54 10 P **P** **15 44 05.7 +0.2**
comp=Z,101nm,1.5s
CHIR Chirikof Islan 72.54 10 P **P** **15 44 05.3 -0.2**
baz=197
CHIR S **S** **15 53 28.7 -0.4**
baz=197
CHGN Chignik 72.57 8 P **P** **15 44 04.8 -0.8**
baz=194,SNR=20
CHGN S **S** **15 53 26.5 -2.8**
baz=194
CMB Columbia Colle 72.58 41 IAMs_20 IAMs_20 16 07 49.7
comp=Z,10µm,22.0s
WELL Weller Preserv 72.61 41 IAMs_20 IAMs_20 16 10 48.4
comp=Z,9µm,19.0s
PFO Pinyon Flats O 72.70 47 LR LR 16 10 46.2
comp=Z,14µm,18.5s,baz=242,slow=32
PFO Pinyon Flats O 72.70 47 IAMs_20 IAMs_20 16 10 34.8
comp=Z,13µm,19.0s
LPIG La Paz 72.76 58 P **P** **15 44 08.6 +1.1**
comp=Z,40nm,0.3s,baz=166,slow=1.9,SNR=3.6
LPIG LR LR 16 07 37.8
comp=Z,8µm,21.8s,baz=238,slow=29
comp=Z,40nm,0.3s
ORV Oroville 72.81 39 IAMs_20 IAMs_20 16 11 12.6
comp=Z,9µm,19.0s
PEA0B Petropavlovsk- 72.84 342 *c* *i*P **P** **15 44 07.5 +0.1**
PETK Petropavlovsk- 72.84 342 P **P** **15 44 07.4 0.0**
comp=Z,37nm,0.9s,baz=134,slow=6.6,SNR=50
comp=Z,37nm,0.9s
SLBS Sierra La Lagu 72.88 59 IAMs_20 IAMs_20 16 07 39.6
comp=Z,9µm,22.0s
SLBS Sierra La Lagu 72.88 59 ⇓P P 15 44 14.6 +6.2
SLBS Sierra La Lagu 72.88 59 P **P** **15 44 10.2 +1.9**
O03E Paynes Creek 73.08 39 IAMs_20 IAMs_20 16 11 24.9
comp=Z,10µm,19.0s
M02C Callahan 73.14 37 IAMs_20 IAMs_20 16 09 21.6
comp=Z,10µm,20.0s
BELC Belle Mtn. Jos 73.24 47 IAMs_20 IAMs_20 16 10 42.9
comp=Z,11µm,19.0s
KKM Kota Kinabalu 73.28 281 P **P** **15 44 10.8 -0.2**
comp=Z,54nm,1.7s
KKM Kota Kinabalu 73.28 281 P **P** **15 44 09.1 -1.9**
KKM Kota Kinabalu 73.28 281 ⇑P **P** **15 44 10.5 -0.5**
KKM Kota Kinabalu 73.28 281 P **P** **15 44 10.7 -0.2**
TIN Tinemaha, Big 73.40 43 IAMs_20 IAMs_20 16 08 57.3
comp=Z,12µm,20.0s
BC3 Big Chuckawall 73.44 47 IAMs_20 IAMs_20 16 10 21.2
comp=Z,9µm,19.0s
YBH Yreka Blue Hor 73.44 37 P **P** **15 44 12.0 +0.7**
comp=Z,4.1nm,0.7s,baz=68,slow=2.5,SNR=8.8
YBH LR LR 16 09 52.5
comp=Z,9µm,20.5s,baz=235,slow=30
YBH Yreka Blue Hor 73.44 37 P **P** **15 44 12.0 +0.7**
SII Sitkinak Islan 73.50 11 P **P** **15 44 10.8 -0.4**
comp=Z,113nm,1.4s
SII Sitkinak Islan 73.50 11 IAMs_20 IAMs_20 16 10 46.8
comp=Z,11µm,20.0s
SII Sitkinak Islan 73.50 11 P **P** **15 44 10.9 -0.4**
baz=199,SNR=14
SII S **S** **15 53 39.7 -0.3**
baz=199
GLA Glamis 73.57 48 IAMs_20 IAMs_20 16 09 27.6
comp=Z,8µm,20.0s
HATC Hat Creek Radi 73.61 38 IAMs_20 IAMs_20 16 11 51.8
comp=Z,12µm,19.0s
YSS Yuzhno-Sakhali 73.76 330 P **P** **15 44 13.5 +0.6**
comp=Z,230nm,2.2s
YSS Yuzhno-Sakhali 73.76 330 *c* *i*P **P** **15 44 13.6 +0.6**
YSS pmax pmax
comp=Z,115nm,1.2s
YSS MLR MLR
comp=Z,5µm,19.0s
YSS Yuzhno-Sakhali 73.76 330 IAMs_20 IAMs_20 16 11 09.1
comp=Z,9µm,20.0s
YSS Yuzhno-Sakhali 73.76 330 ⇑P **P** **15 44 13.6 +0.6**
YSS Yuzhno-Sakhali 73.76 330 P **P** **15 44 13.9 +1.0**
IRM Iron Mountain 73.92 47 IAMs_20 IAMs_20 16 11 03.9
comp=Z,11µm,19.0s
JTU Tsushima 73.94 313 P **P** **15 44 15.3 +1.1**
NVAR Mina Array Bea 74.14 42 P **P** **15 44 16.6 +0.9**
comp=Z,5.9nm,0.9s,baz=228,slow=10.0,SNR=18
NVAR LR LR 16 10 18.6
comp=Z,12µm,20.6s,baz=235,slow=30
comp=Z,5.9nm,0.9s
R17L Mt. Peulik Vol 74.16 9 P **P** **15 44 14.8 -0.2**
baz=196,SNR=15
R17L S **SKiKP** **15 53 44.8 +2.5**
baz=196
OHAK Old Harbor 74.28 11 P **P** **15 44 15.5 -0.2**
comp=Z,73nm,1.5s
OHAK Old Harbor 74.28 11 P **P** **15 44 15.6 -0.2**
baz=199,SNR=13
OHAK S **S** **15 53 47.6 -1.1**
baz=199
QSPA South Pole Qui 74.55 180 P **P** **15 44 20.2 +2.7**
comp=Z,86nm,1.0s,baz=42,slow=2.2,SNR=111
QSPA LR LR 16 14 22.3
comp=Z,4µm,18.5s,baz=44,slow=34
comp=Z,86nm,1.0s
TPNV Topopah Spring 74.66 44 ⇑P **P** **15 44 19.6 +0.9**
Q17K Contact Creek 74.84 9 P **P** **15 44 18.5 -0.6**
baz=197
Q17K S **S** **15 53 52.7 -2.5**
baz=197
TWGBT Beinan 74.90 299 P **P** **15 44 20.9 +0.8**
comp=Z,17nm,0.9s
TWG Pinlang 74.91 299 P **P** **15 44 18.8 -1.4**
COR Corvallis 74.94 34 IAMs_20 IAMs_20 16 12 29.1
comp=Z,11µm,19.0s
KDAK Kodiak Island 74.94 11 LR LR 16 10 52.3
comp=Z,8µm,21.0s,baz=204,slow=31
KDAK Kodiak Island 74.94 11 *c* *i*P **P** **15 44 19.4 -0.1**
KDAK pmax pmax
comp=Z,160nm,1.2s
KDAK MLR MLR
comp=Z,8µm,17.0s
KDAK Kodiak Island 74.94 11 IAMs_20 IAMs_20 16 10 19.0
comp=Z,8µm,20.0s
KDAK Kodiak Island 74.94 11 ⇑P **P** **15 44 19.5 -0.1**
KDAK Kodiak Island 74.94 11 P **P** **15 44 19.8 +0.2**
baz=200
KDAK S **S** **15 53 54.4 -1.8**
baz=200
KDAK Kodiak Island 74.94 11 P **P** **15 44 19.8 +0.2**
KDAK pP **PcP** **15 44 30.8 -2.5**

YULB Yu-li 74.96 300 P P 15 44 19.7 -0.8
comp=Z,40nm,1.5s
YULB Yu-li 74.96 300 P P 15 44 19.4 -1.1
NACB Ninganchiao 75.03 301 P P 15 44 20.6 -0.3
comp=Z,73nm,1.4s
NACB Ninganchiao 75.03 301 IAmb IAmb 15 44 22.9
comp=Z,152nm,1.4s
NACB Ninganchiao 75.03 301 P P 15 44 20.2 -0.7
O14K Tigyukauivet M 75.10 6 IAMs_20 IAMs_20 16 11 34.7
comp=Z,10µm,20.0s
O14K Tigyukauivet M 75.10 6 P P 15 44 19.8 -0.7
baz=191,SNR=12
O14K S S 15 53 55.3 -2.5
baz=191
Q16K King Salmon 75.12 9 P P 15 44 20.3 -0.2
baz=196,SNR=12
Q16K S S 15 53 56.8 -1.1
baz=196
O15K Ungalikthiuk R 75.18 7 P 15 44 20.2 -0.7
O15K IAMs_20 IAMs_20 16 10 55.8
comp=Z,10µm,20.0s
O15K Ungalikthiuk R 75.18 7 P P 15 44 20.4 -0.6
baz=193,SNR=31
O15K S S 15 53 57.2 -1.6
baz=193
SMRI Semarang 75.24 267 P P 15 44 23.5 +1.1
comp=Z,90nm,1.5s
SMRI Semarang 75.24 267 P P 15 44 21.7 -0.7
J05D Fort Rock, OR 75.27 36 IAmb IAmb 15 44 26.8
comp=Z,63nm,0.9s
P16K Nushagak River 75.27 8 IAMs_20 IAMs_20 16 13 14.1
comp=Z,8µm,20.0s
P16K Nushagak River 75.27 8 P P 15 44 21.3 -0.2
baz=195,SNR=15
P16K S S 15 53 59.2 -0.5
baz=195
Q18K Katmai Hardscr 75.34 10 P P 15 44 21.3 -0.7
baz=198,SNR=27
Q18K S S 15 53 58.3 -2.5
baz=198
SSLB Suanglung 75.41 300 P P 15 44 23.5 +0.4
comp=Z,31nm,1.6s
SSLB Suanglung 75.41 300 IAMs_20 IAMs_20 16 13 52.1
comp=Z,9µm,20.0s
SSLB Suanglung 75.41 300 P P 15 44 21.0 -2.1
YHNB Yeheng 75.42 301 P P 15 44 23.1 -0.1
comp=Z,85nm,1.4s
YHNB Yeheng 75.42 301 IAmb IAmb 15 44 33.5
comp=Z,102nm,1.2s
YHNB IAMs_20 IAMs_20 16 13 50.4
comp=Z,8µm,20.0s
YHNB Yeheng 75.42 301 P P 15 44 23.6 +0.4
TPUB Ta-pu 75.48 300 P P 15 44 22.2 -1.3
comp=Z,67nm,1.0s
TPUB Ta-pu 75.48 300 P P 15 44 22.1 -1.3
UGL Uglegorsk 75.60 331 *e*P P 15 44 23.8 +0.3
UGL *e*S S 15 54 02.2 -1.6
UGL pmax pmax
comp=Z,4µm,9.8s
UGL pmax pmax
comp=Z,120nm,2.4s
UGL smax smax
comp=E,900nm,8.7s
UGL smax smax
comp=N,4µm,9.6s
P17K Kvichak River 75.65 9 P P 15 44 23.2 -0.3
baz=196,SNR=27
P17K S S 15 54 01.7 -2.1
baz=196
PRN Pahroc Range 75.71 44 ⇑P P 15 44 25.5 +0.9
N14K Kuskokwak Cree 75.72 6 IAMs_20 IAMs_20 16 11 56.0
comp=Z,7µm,20.0s
N14K Kuskokwak Cree 75.72 6 P P 15 44 23.7 -0.2
baz=191
N14K S S 15 54 01.7 -2.9
baz=191
O16K Kokwok River B 75.80 8 IAmb IAmb 15 44 25.1
comp=Z,209nm,1.6s
O16K IAMs_20 IAMs_20 16 15 50.1
comp=Z,9µm,19.0s
O16K Kokwok River B 75.80 8 P P 15 44 23.5 -1.0
baz=194,SNR=42
O16K S S 15 54 03.3 -2.3
baz=194
M11K Mekoryuk 75.82 3 P P 15 44 25.6 +1.1
baz=186,SNR=8.8
M11K S S 15 54 08.2 +2.5
baz=186
P18K Big Mountain, 76.02 9 P P 15 44 25.2 -0.6
baz=197,SNR=44
P18K S S 15 54 06.6 -1.6
baz=197
M13K Dall Lake 76.05 5 P P 15 44 26.6 +0.8
baz=189,SNR=39
M13K S S 15 54 09.3 +1.0
baz=189
O17K Koliganek Bris 76.11 8 P P 15 44 25.7 -0.5
baz=195,SNR=77
O17K S S 15 54 07.7 -1.3
baz=195
N15K Kwethluk River 76.12 7 IAMs_20 IAMs_20 16 11 55.7
comp=Z,11µm,20.0s
N15K Kwethluk River 76.12 7 P P 15 44 26.2 -0.1
baz=192,SNR=15
N15K S S 15 54 08.4 -0.8
baz=192
TUC Tucson 76.15 50 IAMs_20 IAMs_20 16 10 47.1
comp=Z,8µm,20.0s
TUC Tucson 76.15 50 ⇓P P 15 44 27.0 -0.2
TUC Tucson 76.15 50 P P 15 44 28.1 +0.9
WVOR Wild Horse Val 76.27 38 ⇑P P 15 44 28.3 +0.6
WVOR Wild Horse Val 76.27 38 P P 15 44 28.5 +0.8
TJN Taejon 76.33 314 P P 15 44 29.2 +1.2
comp=Z,224nm,2.4s
TJN Taejon 76.33 314 *i*P P 15 44 28.5 +0.5
TJN pmax pmax
comp=Z,2.0nm,1.3s
O18K Koktuh Hills 76.46 9 IAMs_20 IAMs_20 16 12 54.4
comp=Z,8µm,20.0s
O18K Koktuh Hills 76.46 9 P P 15 44 28.2 -0.1
baz=197,SNR=38
O18K S S 15 54 12.0 -1.0
baz=197
NLWA Neilton Lookou 76.48 32 ⇑P P 15 44 29.5 +0.8
KSRS Korea Array 76.50 315 P P 15 44 30.6 +1.6
comp=Z,56nm,1.1s,baz=127,slow=5.8,SNR=142
KSRS LR LR 16 13 11.3
comp=Z,7µm,21.2s,baz=115,slow=32
comp=Z,56nm,1.1s
M14K Bethel 76.50 6 IAMs_20 IAMs_20 16 12 09.9
comp=Z,7µm,20.0s
M14K Bethel 76.50 6 P P 15 44 29.0 +0.6
baz=191,SNR=100
M14K S S 15 54 13.3 +0.1
baz=191
M15K Kasigluk River 76.57 6 P P 15 44 29.1 +0.2
baz=192,SNR=88
M15K S S 15 54 13.9 -0.2
baz=192
N16K Nishlik Lake 76.57 7 P P 15 44 29.0 +0.1
baz=194,SNR=17
N16K S S 15 54 13.7 -0.5
baz=194
P19K Oil Pt 76.59 10 P P 15 44 28.9 -0.1
baz=199,SNR=14
P19K S S 15 54 13.3 -1.0
baz=199
TYV Tymovskoe 76.62 333 *e*P P 15 44 29.5 +0.2
TYV *e*S S 15 54 13.3 -1.6
TYV pmax pmax
comp=Z,139nm,1.5s
TYV pmax pmax
comp=Z,3µm,5.8s
TYV smax smax
comp=N,2µm,8.7s
TYV smax smax
comp=E,2µm,8.7s
N17K Nushagak Hills 76.83 8 P P 15 44 29.9 -0.4
baz=195,SNR=28
N17K S S 15 54 15.3 -1.6
baz=195
CNPM China Poot 76.83 11 IAMs_20 IAMs_20 16 11 50.8
comp=Z,10µm,21.0s
HOM Homer 76.88 11 IAMs_20 IAMs_20 16 14 30.1
comp=Z,8µm,19.0s
HOM Homer 76.88 11 P P 15 44 30.6 0.0
baz=201
HOM S S 15 54 16.6 -0.8
baz=201
O19K Port Alsworth 76.93 9 IAMs_20 IAMs_20 16 12 18.6
comp=Z,8µm,20.0s
O19K Port Alsworth 76.93 9 P P 15 44 30.4 -0.4
baz=198,SNR=24
O19K S S 15 54 17.5 -0.4
baz=198
L14K Kuka Creek 77.02 5 P P 15 44 32.2 +0.9
baz=190,SNR=46
L14K S S 15 54 20.2 +1.3
baz=190
M16K Timber Creek 77.09 7 IAMs_20 IAMs_20 16 12 36.1
comp=Z,9µm,20.0s
M16K Timber Creek 77.09 7 P P 15 44 32.5 +0.8
baz=194,SNR=63
M16K S S 15 54 20.7 +1.0
baz=194
O20K Slope Mountain 77.10 10 P P 15 44 31.6 -0.4
baz=200,SNR=6.5
O20K S S 15 54 19.3 -0.7
baz=200
BRLK Bradley Lake 77.12 11 IAMs_20 IAMs_20 16 11 17.0
comp=Z,8µm,21.0s
BRSE Bradley Lake S 77.12 11 P P 15 44 32.0 0.0
baz=202,SNR=18
BRSE S S 15 54 18.8 -1.3
baz=202
VLA Vladivostok 77.13 322 *d i*P P 15 44 33.5 +1.2
VLA pmax pmax
comp=Z,76nm,1.3s
VLA MLR MLR
comp=Z,7µm,18.0s
N18K Kilae Creek 77.15 9 P P 15 44 32.2 0.0
baz=197,SNR=28
N18K S S 15 54 19.2 -1.3
baz=197
WUAZ Wupatki 77.28 47 IAMs_20 IAMs_20 16 13 08.9
comp=Z,7µm,19.0s
WUAZ Wupatki 77.28 47 ⇑P P 15 44 34.9 +1.3
INCN Inchon 77.39 315 P P 15 44 35.5 +1.4
comp=Z,318nm,1.8s
INCN Inchon 77.39 315 IAMs_20 IAMs_20 16 16 56.5
comp=Z,8µm,20.0s
INCN Inchon 77.39 315 P P 15 44 35.9 +1.8
ELK Elko 77.40 41 LR LR 16 11 38.2
comp=Z,9µm,21.0s,baz=236,slow=30
ELK Elko 77.40 41 IAMs_20 IAMs_20 16 11 16.2
comp=Z,9µm,21.0s
ELK Elko 77.40 41 ⇑P P 15 44 34.8 +0.5
K13K Kusilvak Mount 77.46 4 IAMs_20 IAMs_20 16 15 29.3
comp=Z,8µm,19.0s
K13K Kusilvak Mount 77.46 4 P P 15 44 34.7 +0.9
baz=188,SNR=29
K13K S S 15 54 25.5 +1.9
baz=188
L15K Ungalak Mounta 77.46 6 P P 15 44 34.3 +0.5
baz=191,SNR=76
L15K S S 15 54 24.5 +0.8
baz=191
N19K Bonanza Creek 77.49 9 IAMs_20 IAMs_20 16 15 58.6
comp=Z,9µm,19.0s
N19K Bonanza Creek 77.49 9 P P 15 44 33.7 -0.5
baz=198,SNR=50
N19K S S 15 54 22.5 -1.7
baz=198
PSTR Posyet 77.50 321 *d i*P P 15 44 36.4 +1.9
M17K Holitna River 77.64 8 IAMs_20 IAMs_20 16 12 31.7
comp=Z,8µm,21.0s
M17K Holitna River 77.64 8 P P 15 44 35.6 +0.7
baz=195,SNR=44
M17K S S 15 54 26.5 +0.8
baz=195
L16K Owhat River 77.70 7 IAMs_20 IAMs_20 16 15 49.4
comp=Z,9µm,19.0s
L16K Owhat River 77.70 7 P P 15 44 36.0 +0.9
baz=193,SNR=68
L16K S S 15 54 28.1 +1.8
baz=193
USA0B Ussuriysk Arra 77.70 323 *c i*P P 15 44 36.4 +0.9
USRK Ussuriysk Ar. 77.70 323 P P 15 44 36.2 +0.7
comp=Z,77nm,1.2s,baz=101,slow=3.9,SNR=86
USRK LR LR 16 12 55.1
comp=Z,16µm,21.4s,baz=130,slow=31
comp=Z,77nm,1.2s
SEW Seward 77.71 12 IAMs_20 IAMs_20 16 14 48.1
comp=Z,8µm,19.0s
SEW Seward 77.71 12 P P 15 44 34.8 -0.4
baz=203,SNR=9.9
SEW S S 15 54 24.6 -1.8
baz=203
Q23K Middleton Isla 77.75 14 P P 15 44 35.7 +0.3
baz=206
MID Middleton Isla 77.75 14 IAMs_20 IAMs_20 16 14 46.1
comp=Z,9µm,18.0s
HPIG 77.76 57 P P 15 44 37.8 +1.3
BBB Bella Bella 77.80 26 LR LR 16 13 55.3
comp=Z,3µm,18.5s,baz=233,slow=32
BBB Bella Bella 77.80 26 P P 15 44 35.4 -0.5
BBJI Bungbulang 77.83 266 P P 15 44 37.9 +0.8
comp=Z,65nm,1.0s
BBJI Bungbulang 77.83 266 P P 15 44 37.6 +0.5
QZH2 Quanzhou 77.84 300 ⇑ *i*P P 15 44 36.9 +0.2
QZH2 PP PP 15 47 32.8 +0.1
QZH2 S S 15 54 31.0 +1.8
QZH2 SS SS 15 59 36.8 +6.5
QZH2 pmax pmax
comp=Z,4µm,7.8s
QZH2 L L
comp=Z,850nm,22.7s
QZH2 L L
comp=Z,4µm,23.0s
QZH2 L L
comp=Z,7µm,24.4s
M18K Stony River 77.94 8 P P 15 44 36.4 -0.1
baz=197,SNR=47
M18K S S 15 54 28.2 -0.7
baz=197
CAPN Captain Cook N 78.00 11 P P 15 44 37.9 +1.1
baz=201
CAPN S S 15 54 31.0 +1.5
baz=201
O22K Cooper Landing 78.00 12 P P 15 44 36.9 0.0
baz=203
O22K S S 15 54 29.1 -0.4
baz=203
LEM Lembang 78.01 266 LR LR 16 17 50.1
comp=Z,6µm,20.6s,baz=112,slow=35
P23K Montague Islan 78.03 13 IAMs_20 IAMs_20 16 15 10.5
comp=Z,8µm,19.0s
P23K Montague Islan 78.03 13 P P 15 44 37.0 -0.1
baz=205,SNR=5.5
P23K S S 15 54 28.2 -1.7
baz=205
K15K Wolf Creek Mou 78.06 5 IAMs_20 IAMs_20 16 15 36.1
comp=Z,7µm,19.0s
K15K Wolf Creek Mou 78.06 5 P P 15 44 38.5 +1.3
baz=191,SNR=131
K15K S S 15 54 32.8 +2.6
baz=191
HHU Hamhung 78.07 317 P P 15 44 39.2 +1.5
HHU S S 15 54 33.0 +1.8
HHU AmB
comp=Z,2µm,1.9s
HHU AMS AMS
comp=Z,3µm,18.6s
HAWA Hanford 78.14 35 ⇑P P 15 44 38.5 +0.5
SPCR Spurr Chakacha 78.22 10 P P 15 44 37.4 -0.8
baz=200,SNR=9.2
SPCR S S 15 54 30.3 -1.8
baz=200
SPU Mount Spurr 78.23 10 IAmb IAmb 15 44 38.8
comp=Z,182nm,1.9s
L17K Donlin 78.25 7 P P 15 44 39.7 +1.5
baz=194,SNR=86
L17K S S 15 54 35.7 +3.5
baz=194
CRAG Craig 78.29 22 P P 15 44 39.5 +1.0
baz=219
CRAG S S 15 54 34.6 +1.8
baz=219
HJU Haeju 78.30 315 P P 15 44 40.0 +1.0
HJU S S 15 54 34.5 +0.8
HJU AmB
comp=Z,2µm,1.9s
HJU AMS AMS
comp=Z,8µm,25.8s
SSE Sheshan 78.33 307 P P 15 44 38.3 -1.0
SSE S S 15 54 36.4 +2.1
SSE pmax pmax
comp=Z,15nm,0.9s
SSE pmax pmax
comp=Z,1µm,9.0s
SSE L L
comp=Z,1µm,20.4s
SSE L L
comp=Z,1µm,18.9s
J14K Nanvaranak Lak 78.34 4 IAMs_20 IAMs_20 16 16 25.7
comp=Z,8µm,19.0s
J14K Nanvaranak Lak 78.34 4 P P 15 44 39.3 +0.6
baz=189,SNR=7.3
J14K S S 15 54 34.4 +1.2
baz=189
BMO Blue Mountains 78.47 37 IAMs_20 IAMs_20 16 13 04.5
comp=Z,8µm,20.0s
BMO Blue Mountains 78.47 37 ⇑P P 15 44 40.2 +0.2
MFID Camas Ranch 78.52 39 IAMs_20 IAMs_20 16 15 06.8
comp=Z,7µm,19.0s
L18K Granite Mounta 78.53 8 IAMs_20 IAMs_20 16 13 10.1
comp=Z,8µm,21.0s
L18K Granite Mounta 78.53 8 P P 15 44 40.9 +1.1
baz=196,SNR=121
L18K S S 15 54 36.4 +1.2
baz=196
M19K Big River Lodg 78.54 9 IAMs_20 IAMs_20 16 16 59.8
comp=Z,7µm,19.0s
M19K Big River Lodg 78.54 9 P P 15 44 39.4 -0.4
baz=198
M19K S S 15 54 34.4 -1.0
baz=198
RC01 Rabbit Creek A 78.56 11 P P 15 44 39.8 -0.1
baz=202,SNR=16
RC01 S S 15 54 34.3 -1.3
baz=202
STLK Strandline Lak 78.57 10 IAmb IAmb 15 44 40.5
comp=Z,112nm,1.3s
HIN Hinchinbrook I 78.59 13 IAMs_20 IAMs_20 16 14 21.2
comp=Z,8µm,19.0s
PWL Port Wells 78.62 12 IAMs_20 IAMs_20 16 15 15.3
comp=Z,8µm,19.0s
PWL Port Wells 78.62 12 P P 15 44 39.9 -0.4
baz=204,SNR=25
PWL S S 15 54 34.6 -1.7
baz=204
KAIM Kayak Island 78.64 14 P P 15 44 41.0 +0.5
baz=208,SNR=6.4
DUG Dugway, Tooele 78.67 43 IAMs_20 IAMs_20 16 13 00.7
comp=Z,8µm,20.0s
DUG Dugway, Tooele 78.67 43 ⇑P P 15 44 41.9 +0.7
DUG Dugway, Tooele 78.67 43 P P 15 44 42.0 +0.8
ZAIG Zacatecas 78.70 62 P P 15 44 43.9 +1.9
M20K Styx River 78.72 9 IAmb IAmb 15 44 56.9
comp=Z,115nm,1.4s
M20K IAMs_20 IAMs_20 16 14 53.9
comp=Z,10µm,20.0s
M20K Styx River 78.72 9 P P 15 44 40.2 -0.7
baz=199,SNR=32
M20K S S 15 54 35.8 -1.7
baz=199
V35K Ketchikan 78.73 23 P P 15 44 41.7 +0.7
baz=220
V35K S S 15 54 37.4 -0.1
baz=220
L19K White Mountain 78.74 9 P P 15 44 40.9 -0.1
baz=198,SNR=22
L19K S S 15 54 37.1 -0.4
baz=198
SIT Sitka 78.78 20 P P 15 44 42.2 +1.0
comp=Z,35nm,1.2s
SIT Sitka 78.78 20 P P 15 44 41.5 +0.3
baz=217
SIT S S 15 54 37.5 -0.5
baz=217
PYAG Pyongyang 78.79 316 P P 15 44 43.4 +1.7
PYAG S S 15 54 40.2 +1.3
PYAG AmB
comp=Z,3µm,1.9s
PYAG AMS AMS
comp=Z,2µm,11.5s
U33K Whale Pass 78.79 21 P P 15 44 42.0 +0.7
baz=219
U33K S S 15 54 38.4 +0.2
baz=219
K17K Iditarod 78.81 7 IAMs_20 IAMs_20 16 13 49.7
comp=Z,9µm,20.0s
K17K Iditarod 78.81 7 P P 15 44 42.3 +1.0
baz=194
K17K S S 15 54 41.3 +3.1
baz=194
EYAK Cordova Ski Ar 78.89 13 P P 15 44 41.4 -0.3
comp=Z,7.1nm,1.5s
EYAK Cordova Ski Ar 78.89 13 IAMs_20 IAMs_20 16 15 35.2
comp=Z,10µm,19.0s
EYAK Cordova Ski Ar 78.89 13 P P 15 44 41.7 0.0
baz=206,SNR=11
EYAK S S 15 54 37.1 -2.0
baz=206
GLI Glacier Island 78.90 13 IAMs_20 IAMs_20 16 12 12.8
comp=Z,9µm,21.0s
GLI Glacier Island 78.90 13 P P 15 44 41.5 -0.3
baz=205,SNR=26
GLI S S 15 54 37.8 -1.4
baz=205
FID Port Fidalgo 78.91 13 IAMs_20 IAMs_20 16 12 22.6
comp=Z,8µm,21.0s
GAMB Gambell 79.03 1 ⇑P P 15 44 43.2 +0.8
GAMB Gambell 79.03 1 P P 15 44 43.2 +0.8
baz=181,SNR=9.6
GAMB S S 15 54 41.9 +1.5
baz=181
SKT Skwentna 79.07 10 P P 15 44 39.6 -3.2
SKT IAmb IAmb 15 44 55.0
comp=Z,150nm,1.4s
SKT IAMs_20 IAMs_20 16 12 46.2
comp=Z,10µm,20.0s
SKT Skwentna 79.07 10 P P 15 44 41.5 -1.2
baz=201,SNR=40
SKT S S 15 54 38.5 -2.5
baz=201
KNK Knik Glacier 79.11 12 P P 15 44 42.8 -0.1
baz=204,SNR=16
KNK S S 15 54 39.5 -1.9
baz=204
M22K Willow 79.11 11 IAMs_20 IAMs_20 16 12 45.1
comp=Z,8µm,21.0s
M22K Willow 79.11 11 P P 15 44 42.7 -0.2
baz=202,SNR=33
M22K S S 15 54 40.0 -1.3
baz=202
J16K Anvik River 79.12 6 IAMs_20 IAMs_20 16 13 41.1
comp=Z,8µm,20.0s
J16K Anvik River 79.12 6 P P 15 44 44.4 +1.4
baz=192,SNR=79
J16K S S 15 54 45.9 +4.4
baz=192
EPT El Paso 79.14 53 IAMs_20 IAMs_20 16 12 20.3
comp=Z,9µm,21.0s
PMR Palmer 79.14 11 P P 15 44 42.6 -0.5
comp=Z,131nm,1.4s
PMR Palmer 79.14 11 IAmb IAmb 15 44 44.4
comp=Z,279nm,1.5s
PMR Palmer 79.14 11 P P 15 44 43.2 +0.1
baz=203,SNR=22
PMR S S 15 54 40.6 -1.1
baz=203
S31K Pelican 79.22 19 P P 15 44 44.4 +0.8
baz=216
S31K S S 15 54 43.3 +0.6
baz=216
WRAK Wrangell Islan 79.30 22 P P 15 44 44.8 +0.8
baz=219
WRAK S S 15 54 44.7 +1.1
baz=219
MDJ Mudanjiang 79.34 322 P P 15 44 45.7 +1.1
comp=Z,176nm,2.0s
MDJ Mudanjiang 79.34 322 P P 15 44 45.6 +1.0
MDJ S S 15 54 48.5 +3.9
MDJ sS sS 15 54 54.8 +1.9
MDJ pmax pmax
comp=Z,180nm,2.0s
MDJ pmax pmax
comp=Z,5µm,6.4s
MDJ L L
comp=Z,9µm,22.2s
MDJ L L

	comp=Z,10µm,21.9s								
MDJ					L	L			
	comp=Z,21µm,22.0s								
GHO	**Glory Hole Cre**	**79.35**	**11**		IAMs_20	IAMs_20	16 16 39.4		
	comp=Z,6µm,19.0s								
S32K	**Killisnoo**	**79.36**	**20**		P	**P**	**15 44 44.8**	**+0.4**	
	baz=217,SNR=5.5								
S32K					S	**S**	**15 54 43.8**	**-0.4**	
	baz=217								
PLID	**Pearl Lake**	**79.36**	**37**		IAMs_20	IAMs_20	16 15 11.2		
	comp=Z,11µm,19.0s								
J17K	**VABM Dome**	**79.39**	**6**		IAMs_20	IAMs_20	16 13 48.0		
	comp=Z,8µm,20.0s								
J17K	**VABM Dome**	**79.39**	**6**		P	**P**	**15 44 45.7**	**+1.3**	
	baz=193,SNR=64								
J17K					S	**S**	**15 54 47.3**	**+3.0**	
	baz=193								
T33K	**Petersburg**	**79.39**	**21**		P	**P**	**15 44 45.2**	**+0.6**	
	baz=219								
DIV	**Divide**	**79.41**	**13**		IAMs_20	IAMs_20	16 16 11.8		
	comp=Z,7µm,19.0s								
GRNR	**Gornyy**	**79.42**	**330**	⇑*i*	P	**P**	**15 44 45.6**	**+0.7**	
GRNR					pmax	pmax			
	comp=Z,70nm,1.3s								
HLID	**Hailey**	**79.46**	**39**	⇑	P	**P**	**15 44 46.5**	**+1.0**	
HLID	**Hailey**	**79.46**	**39**		P	**P**	**15 44 46.6**	**+1.0**	
SML	**Sawmill**	**79.49**	**12**		P	**P**	**15 44 44.8**	**-0.3**	
	baz=204,SNR=26								
SML					S	**S**	**15 54 44.6**	**-1.1**	
	baz=204								
BMRM	**Bremner River**	**79.52**	**14**		IAMs_20	IAMs_20	16 15 53.8		
	comp=Z,10µm,19.0s								
BMRM	**Bremner River**	**79.52**	**14**		P	**P**	**15 44 45.3**	**0.0**	
	baz=208,SNR=43								
BMRM					S	**S**	**15 54 44.7**	**-1.3**	
	baz=208								
M23K	**Glacier View**	**79.60**	**12**		P	**P**	**15 44 45.3**	**-0.4**	
	baz=204,SNR=15								
M23K					S	**S**	**15 54 45.8**	**-0.9**	
	baz=204								
CRQE	**Cirque**	**79.68**	**14**		P	**P**	**15 44 46.3**	**+0.1**	
	baz=209,SNR=15								
CRQE					S	**S**	**15 54 46.8**	**-1.0**	
	baz=209								
CUT	**Chulitna**	**79.69**	**11**		IAMs_20	IAMs_20	16 13 46.5		
	comp=Z,10µm,20.0s								
CUT	**Chulitna**	**79.69**	**11**		P	**P**	**15 44 45.8**	**-0.2**	
	baz=202,SNR=29								
CUT					S	**S**	**15 54 46.4**	**-1.0**	
	baz=202								
KLU	**Klutina**	**79.70**	**13**		IAMs_20	IAMs_20	16 11 54.6		
	comp=Z,7µm,20.0s								
KLU	**Klutina**	**79.70**	**13**		P	**P**	**15 44 46.1**	**-0.2**	
	baz=206,SNR=25								
KLU					S	**S**	**15 54 45.7**	**-2.2**	
	baz=206								
I17K	**Unalakleet**	**79.71**	**5**		IAMs_20	IAMs_20	16 14 19.6		
	comp=Z,7µm,20.0s								
I17K	**Unalakleet**	**79.71**	**5**		P	**P**	**15 44 47.6**	**+1.4**	
	baz=192,SNR=16								
I17K					S	**S**	**15 54 51.2**	**+3.6**	
	baz=192								
L22K	**Petersville**	**79.71**	**10**		P	**P**	**15 44 45.6**	**-0.7**	
	baz=201,SNR=73								
L22K					S	**S**	**15 54 44.9**	**-3.0**	
	baz=201								
SCM	**Sheep Creek Mo**	**79.72**	**12**		P	**P**	**15 44 46.2**	**-0.2**	
	baz=205								
SCM					S	**S**	**15 54 47.0**	**-1.0**	
	baz=205								
J18K	**Innoko River**	**79.72**	**7**		IAMs_20	IAMs_20	16 16 42.8		
	comp=Z,7µm,20.0s								
J18K	**Innoko River**	**79.72**	**7**		P	**P**	**15 44 47.0**	**+0.7**	
	baz=196,SNR=129								
J18K					S	**S**	**15 54 50.2**	**+2.3**	
	baz=196								
R31K	**City Hall, Gus**	**79.74**	**19**		P	**P**	**15 44 46.7**	**+0.3**	
	baz=216								
R31K					S	**S**	**15 54 49.6**	**+1.4**	
	baz=216								
U35K	**Hyder**	**79.77**	**23**		P	**P**	**15 44 46.5**	**-0.1**	
	baz=222								
U35K					S	**S**	**15 54 49.7**	**+1.2**	
	baz=222								
PPLA	**Purkeypile**	**79.82**	**10**		IAMs_20	IAMs_20	16 13 51.2		
	comp=Z,9µm,20.0s								
PPLA	**Purkeypile**	**79.82**	**10**		P	**P**	**15 44 45.5**	**-1.5**	
	baz=200,SNR=11								
PPLA					S	**S**	**15 54 44.0**	**-5.2**	
	baz=200								
PCA	**Pinnacle**	**79.83**	**16**		IAMs_20	IAMs_20	16 14 45.6		
	comp=Z,8µm,20.0s								
PINM	**Pinnacle**	**79.83**	**16**		P	**P**	**15 44 47.2**	**+0.1**	
	baz=212,SNR=6.9								
PINM					S	**S**	**15 54 48.9**	**-0.5**	
	baz=212								
MNTX	**Cornudas Mount**	**79.97**	**53**		IAMs_20	IAMs_20	16 12 46.4		
	comp=Z,7µm,20.0s								
MNTX	**Cornudas Mount**	**79.97**	**53**	⇑	P	**P**	**15 44 49.5**	**+1.1**	
MNTX	**Cornudas Mount**	**79.97**	**53**		P	**P**	**15 44 49.7**	**+1.3**	
K20K	**Telida**	**79.97**	**9**		P	**P**	**15 44 47.8**	**+0.1**	
	baz=198								
K20K					S	**S**	**15 54 49.9**	**-0.7**	
	baz=198								
GRNC	**Granite Creek**	**79.99**	**15**		IAMs_20	IAMs_20	16 15 00.8		
	comp=Z,10µm,19.0s								
VRDI	**Verde Repeater**	**80.02**	**14**		IAMs_20	IAMs_20	16 16 27.9		
	comp=Z,9µm,19.0s								
R32K	**Eaglecrest**	**80.02**	**20**		P	**P**	**15 44 48.4**	**+0.4**	
	baz=217								
ANM	**Nome**	**80.03**	**3**		IAMs_20	IAMs_20	16 15 06.4		
	comp=Z,7µm,20.0s								
ANM	**Nome**	**80.03**	**3**		P	**P**	**15 44 48.7**	**+0.8**	
	baz=187								
ANM					S	**S**	**15 54 53.3**	**+2.3**	
	baz=187								
JIS	**Juneau Island**	**80.06**	**20**		P	**P**	**15 44 48.7**	**+0.5**	
	comp=Z,43nm,1.2s								
N25K	**Chitina, Valde**	**80.09**	**13**		P	**P**	**15 44 48.6**	**+0.2**	
	baz=207,SNR=40								
N25K					S	**S**	**15 54 50.0**	**-1.9**	
	baz=207								
GLB	**Gilahina Butte**	**80.12**	**14**		IAMs_20	IAMs_20	16 16 11.7		
	comp=Z,7µm,19.0s								
MVCO	**Mesa Verde**	**80.13**	**47**		IAMs_20	IAMs_20	16 14 15.3		
	comp=Z,9µm,19.0s								
MVCO	**Mesa Verde**	**80.13**	**47**	⇑	P	**P**	**15 44 50.1**	**+0.8**	
MVCO	**Mesa Verde**	**80.13**	**47**		P	**P**	**15 44 50.6**	**+1.2**	
P29M	**Windy Craggy**	**80.14**	**17**		P	**P**	**15 44 49.4**	**+0.7**	
	baz=214,SNR=11								
P29M					S	**S**	**15 54 52.8**	**+0.3**	
	baz=214								
SUJ	**Sinuiju**	**80.16**	**316**		P	**P**	**15 44 50.7**	**+1.5**	
SUJ					AmB				
	comp=Z,2µm,2.0s								
M24K	**Tolsona, Glenn**	**80.20**	**12**		P	**P**	**15 44 49.5**	**+0.5**	
	baz=206,SNR=52								
M24K					S	**S**	**15 54 52.5**	**-0.6**	
	baz=206								
HWUT	**Hardware Ranch**	**80.21**	**42**	⇑	P	**P**	**15 44 50.0**	**+0.4**	
HWUT	**Hardware Ranch**	**80.21**	**42**		P	**P**	**15 44 50.2**	**+0.5**	
MCARA	**McCarthy VSAT**	**80.25**	**14**		IAMs_20	IAMs_20	16 16 17.2		
	comp=Z,8µm,19.0s								
MCARA	**McCarthy VSAT**	**80.25**	**14**		P	**P**	**15 44 49.3**	**+0.2**	
	baz=209,SNR=10.0								
MCARA					S	**S**	**15 54 51.5**	**-2.0**	
	baz=209								
LOGN	**Logan Glacier**	**80.26**	**15**		IAMs_20	IAMs_20	16 14 40.9		
	comp=Z,9µm,19.0s								
BARN	**Barnard Glacie**	**80.30**	**15**		IAMs_20	IAMs_20	16 15 29.9		
	comp=Z,8µm,20.0s								
H16K	**Elim**	**80.31**	**5**		P	**P**	**15 44 50.4**	**+1.0**	
	baz=190,SNR=16								
H16K					S	**S**	**15 54 57.3**	**+3.3**	
	baz=190								
WAT6	**Susitna Watana**	**80.31**	**12**		P	**P**	**15 44 49.5**	**-0.2**	
	baz=204,SNR=68								
WAT6					S	**S**	**15 54 52.7**	**-1.8**	
	baz=204								
CAST	**Castle Rocks**	**80.33**	**9**		P	**P**	**15 44 47.4**	**-2.2**	
CAST					IAMs_20	IAMs_20	16 17 10.6		
	comp=Z,9µm,19.0s								
CAST	**Castle Rocks**	**80.33**	**9**		P	**P**	**15 44 47.9**	**-1.7**	
	baz=200,SNR=48								
CAST					S	**S**	**15 54 50.1**	**-4.2**	
	baz=200								
TXAR	**Lajitas Array**	**80.34**	**56**		P	**P**	**15 44 52.0**	**+1.5**	
	comp=Z,9.2nm,1.2s,baz=224,slow=3.5,SNR=37								
TXAR					PKKPbc	**PKKPbc**	**16 03 34.5**	**+0.7**	
	comp=Z,0.3nm,0.9s,baz=104,slow=5.3,SNR=3.4								
TXAR					LR	LR	16 13 20.5		
	comp=Z,8µm,20.6s,baz=239,slow=30								
	comp=Z,9.2nm,1.2s								
J19K	**Poorman**	**80.37**	**8**		IAMs_20	IAMs_20	16 16 43.9		
	comp=Z,8µm,20.0s								
J19K	**Poorman**	**80.37**	**8**		P	**P**	**15 44 50.6**	**+0.8**	
	baz=197,SNR=85								
J19K					S	**S**	**15 54 57.0**	**+2.3**	
	baz=197								
MA2	**Magadan**	**80.38**	**342**		LR	LR	16 20 20.1		
	comp=Z,6µm,18.6s,baz=140,slow=36								
MA2	**Magadan**	**80.38**	**342**		P	**P**	**15 44 49.6**	**-0.3**	
	comp=Z,118nm,2.9s								
MA2	**Magadan**	**80.38**	**342**	*c i*	P	**P**	**15 44 49.4**	**-0.5**	
MA2				*i*	*PP	**pP**	**15 44 53.6**	**-1.3**	
MA2					pmax	pmax			
	comp=Z,65nm,1.4s								
MA2					MLR	MLR			
	comp=Z,6µm,18.0s								
MA2	**Magadan**	**80.38**	**342**		IAMs_20	IAMs_20	16 19 50.0		
	comp=Z,6µm,19.0s								
MA2	**Magadan**	**80.38**	**342**	⇑	P	**P**	**15 44 49.6**	**-0.3**	
MA2	**Magadan**	**80.38**	**342**		P	**P**	**15 44 47.4**	**-2.5**	
	comp=Z,4µmcomp=Z,116nm,2.9s								
MA2	**Magadan**	**80.38**	**342**		P	**P**	**15 44 49.9**	**0.0**	
WAT1	**Susitna Watana**	**80.39**	**11**		P	**P**	**15 44 49.7**	**-0.2**	
	baz=204								
WAT1					S	**S**	**15 54 53.5**	**-1.5**	
	baz=204								
PLBC	**Pleasant Camp**	**80.40**	**18**		P	**P**	**15 44 50.7**	**+0.7**	
	baz=215,SNR=15								
PLBC					S	**S**	**15 54 55.8**	**+0.7**	
	baz=215								
UNM	**Universidad Na**	**80.42**	**67**		IAMs_20	IAMs_20	16 12 29.0		
	comp=Z,10µm,20.0s								
O28M	**Mount Upton**	**80.43**	**16**		IAMs_20	IAMs_20	16 14 46.2		
	comp=Z,10µm,20.0s								
O28M	**Mount Upton**	**80.43**	**16**		P	**P**	**15 44 50.6**	**+0.1**	
	baz=212,SNR=15								
O28M					S	**S**	**15 54 54.8**	**-1.2**	
	baz=212								
O29M	**Mount Kennedy**	**80.46**	**17**		IAMs_20	IAMs_20	16 16 00.1		
	comp=Z,8µm,19.0s								
O29M	**Mount Kennedy**	**80.46**	**17**		P	**P**	**15 44 51.1**	**+0.6**	
	baz=213,SNR=17								
O29M					S	**S**	**15 54 56.6**	**+0.6**	
	baz=213								
T35M	**Bob Quinn**	**80.48**	**22**		IAMs_20	IAMs_20	16 15 01.2		
	comp=Z,7µm,20.0s								
T35M	**Bob Quinn**	**80.48**	**22**		P	**P**	**15 44 51.3**	**+0.8**	
	baz=221,SNR=7.6								
T35M					S	**S**	**15 54 58.8**	**+2.6**	
	baz=221								
NJ2	**Nanjing**	**80.54**	**307**	⇑	P	**P**	**15 44 51.3**	**-0.1**	
NJ2					pP	**pP**	**15 44 56.6**	**+0.2**	
NJ2					S	**SKSac**	**15 55 02.3**	**-6.8**	
NJ2					pmax	pmax			
	comp=Z,110nm,1.4s								
NJ2					pmax	pmax			
	comp=Z,3µm,4.3s								
NJ2					L	L			
	comp=Z,8µm,20.4s								
NJ2					L	L			
	comp=Z,12µm,18.5s								
NJ2					L	L			
	comp=Z,15µm,22.8s								
G15K	**Niukluk**	**80.54**	**4**		P	**P**	**15 44 51.4**	**+0.7**	
	baz=188,SNR=28								
G15K					S	**S**	**15 54 58.1**	**+1.8**	
	baz=188								
ALQ	**Albuquerque**	**80.57**	**50**		IAMs_20	IAMs_20	16 16 08.2		
	comp=Z,7µm,18.0s								
ALQ	**Albuquerque**	**80.57**	**50**		IAMs_20	IAMs_20	16 16 08.2		
	comp=Z,7µm,18.0s								
ANMO	**Albuquerque**	**80.57**	**50**		LR	LR	16 15 43.5		
	comp=Z,6µm,18.1s,baz=238,slow=32								
ANMO	**Albuquerque**	**80.57**	**50**	*c i*	P	**P**	**15 44 52.9**	**+1.1**	
ANMO					pmax	pmax			
	comp=Z,9.0nm,1.1s								
ANMO					MLR	MLR			
	comp=Z,5µm,16.0s								
ANMO	**Albuquerque**	**80.57**	**50**		IAMs_20	IAMs_20	16 16 08.0		
	comp=Z,7µm,18.0s								
ANMO	**Albuquerque**	**80.57**	**50**	⇑	P	**P**	**15 44 52.9**	**+1.1**	
ANMO	**Albuquerque**	**80.57**	**50**		P	**P**	**15 44 53.2**	**+1.4**	
NEW	**Newport**	**80.57**	**34**		LR	LR	16 16 06.7		
	comp=Z,8µm,18.6s,baz=230,slow=32								
NEW	**Newport**	**80.57**	**34**		IAMs_20	IAMs_20	16 15 55.1		
	comp=Z,8µm,19.0s								
NEW	**Newport**	**80.57**	**34**	⇑	P	**P**	**15 44 51.1**	**-0.2**	
NEW	**Newport**	**80.57**	**34**		P	**P**	**15 44 51.2**	**0.0**	
HKPS	**Hong Kong Po S**	**80.62**	**296**		IAMs_20	IAMs_20	16 15 54.9		
	comp=Z,8µm,20.0s								
KTH	**Kantishna Hill**	**80.64**	**10**		IAmb	IAmb	15 45 03.9		
	comp=Z,224nm,1.3s								
KTH					IAMs_20	IAMs_20	16 13 56.8		
	comp=Z,12µm,21.0s								
TRF	**Thorofare Moun**	**80.65**	**10**		IAmb	IAmb	15 45 04.7		
	comp=Z,294nm,1.4s								
TRF	**Thorofare Moun**	**80.65**	**10**		P	**P**	**15 44 51.1**	**-0.4**	
	baz=202,SNR=21								
TRF					S	**S**	**15 54 55.6**	**-2.4**	
	baz=202								
HARP	**HAARP**	**80.67**	**13**		P	**P**	**15 44 51.7**	**+0.3**	
	baz=207,SNR=11								
HARP					S	**S**	**15 54 57.6**	**-0.4**	
	baz=207								
SKAG	**Skagway**	**80.71**	**18**		P	**P**	**15 44 52.1**	**+0.4**	
	comp=Z,62nm,1.3s								
SKAG	**Skagway**	**80.71**	**18**	⇑	P	**P**	**15 44 52.6**	**+1.0**	
SKAG	**Skagway**	**80.71**	**18**		P	**P**	**15 44 52.7**	**+1.0**	
	baz=216,SNR=11								
SKAG					S	**S**	**15 54 59.8**	**+1.4**	
	baz=216								
CHUM	**Lake Minchumin**	**80.73**	**9**		P	**P**	**15 44 50.8**	**-0.9**	
	baz=200,SNR=63								
CHUM					S	**S**	**15 54 54.7**	**-3.7**	
	baz=200								
J20K	**Nowinta River**	**80.74**	**8**		P	**P**	**15 44 48.3**	**-3.5**	
J20K	**Nowinta River**	**80.74**	**8**		P	**P**	**15 44 52.2**	**+0.5**	
	baz=198,SNR=171								
J20K					S	**S**	**15 54 59.0**	**+0.4**	
	baz=198								
P30M	**Million Dollar**	**80.77**	**17**		P	**P**	**15 44 52.9**	**+0.8**	
	baz=215								
P30M					S	**S**	**15 55 00.1**	**+1.0**	
	baz=215								
H17K	**Granite Mounta**	**80.81**	**6**		IAMs_20	IAMs_20	16 14 33.7		
	comp=Z,7µm,20.0s								
H17K	**Granite Mounta**	**80.81**	**6**		P	**P**	**15 44 52.6**	**+0.6**	
	baz=192,SNR=32								
H17K					S	**S**	**15 55 01.9**	**+2.6**	
	baz=192								
DHY	**Denali Highway**	**80.83**	**12**		P	**P**	**15 44 52.2**	**-0.3**	
	baz=205,SNR=54								
DHY					S	**S**	**15 54 58.4**	**-1.5**	
	baz=205								
RND	**Reindeer**	**80.86**	**11**		IAMs_20	IAMs_20	16 15 04.5		
	comp=Z,9µm,20.0s								
S34M	**Telegraph Cree**	**80.87**	**21**		P	**P**	**15 44 53.3**	**+0.7**	
	baz=220,SNR=16								
S34M					S	**S**	**15 55 01.3**	**+1.1**	
	baz=220								
F14K	**Arctic Creek**	**80.89**	**3**		P	**P**	**15 44 53.2**	**+0.8**	
	baz=186,SNR=9.4								
F14K					S	**S**	**15 55 02.9**	**+2.9**	
	baz=186								
TNA	**Tin City**	**80.91**	**2**		P	**P**	**15 44 53.4**	**+0.8**	
	baz=185,SNR=7.5								
TNA					S	**S**	**15 55 03.0**	**+2.8**	
	baz=185								
GCSA	**Galena City Sc**	**80.94**	**7**		P	**P**	**15 44 53.7**	**+0.9**	
	baz=195,SNR=43								
GCSA					S	**S**	**15 55 03.6**	**+3.1**	
	baz=195								
YUK8	**Steele Glacier**	**80.97**	**16**		P	**P**	**15 44 53.7**	**+0.3**	
	baz=212,SNR=19								
YUK8					S	**S**	**15 55 01.4**	**-0.2**	
	baz=212								
G16K	**Koyuk River**	**81.05**	**4**		IAMs_20	IAMs_20	16 18 38.2		
	comp=Z,7µm,20.0s								
G16K	**Koyuk River**	**81.05**	**4**		P	**P**	**15 44 54.2**	**+0.9**	
	baz=190,SNR=14								
G16K					S	**S**	**15 55 04.8**	**+3.1**	
	baz=190								
YUK6	**Outpost Mounta**	**81.06**	**16**		P	**P**	**15 44 54.3**	**+0.5**	
	baz=213,SNR=15								
YUK6					S	**S**	**15 55 03.1**	**+0.6**	
	baz=213								
AHID	**Auburn Hatcher**	**81.10**	**41**		IAMs_20	IAMs_20	16 16 38.0		
	comp=Z,7µm,19.0s								
AHID	**Auburn Hatcher**	**81.10**	**41**	⇑	P	**P**	**15 44 55.0**	**+0.6**	
AHID	**Auburn Hatcher**	**81.10**	**41**		P	**P**	**15 44 55.1**	**+0.6**	
PAX	**Paxson**	**81.12**	**12**		P	**P**	**15 44 53.5**	**-0.4**	
	baz=206,SNR=56								
PAX					S	**S**	**15 55 01.0**	**-1.8**	
	baz=206								
MCK	**McKinley**	**81.15**	**11**		IAMs_20	IAMs_20	16 14 11.1		
	comp=Z,9µm,21.0s								
MCK	**McKinley**	**81.15**	**11**		P	**P**	**15 44 53.7**	**-0.2**	
	baz=203,SNR=66								
MCK					S	**S**	**15 55 01.1**	**-1.8**	
	baz=203								
M26K	**Nabesna, AK**	**81.15**	**14**		IAMs_20	IAMs_20	16 16 58.9		
	comp=Z,7µm,19.0s								
M26K	**Nabesna, AK**	**81.15**	**14**		P	**P**	**15 44 54.2**	**+0.1**	
	baz=209,SNR=92								
M26K					S	**S**	**15 55 02.4**	**-0.7**	
	baz=209								
H18K	**Honhosa River**	**81.17**	**6**		IAMs_20	IAMs_20	16 15 14.6		
	comp=Z,9µm,20.0s								
H18K	**Honhosa River**	**81.17**	**6**		P	**P**	**15 44 54.4**	**+0.3**	
	baz=194								
H18K					S	**S**	**15 55 04.8**	**+1.8**	
	baz=194								
HYT	**Haines Junctio**	**81.19**	**17**		P	**P**	**15 44 55.0**	**+0.6**	
	baz=214,SNR=27								
HYT					S	**S**	**15 55 03.4**	**-0.3**	
	baz=214								
F15K	**North Star Dit**	**81.21**	**3**		IAMs_20	IAMs_20	16 16 21.5		
	comp=Z,7µm,20.0s								
F15K	**North Star Dit**	**81.21**	**3**		P	**P**	**15 44 54.9**	**+0.7**	
	baz=188,SNR=10								
F15K					S	**S**	**15 55 05.8**	**+2.5**	
	baz=188								
YUK3	**Moose Creek**	**81.21**	**15**		P	**P**	**15 44 54.5**	**-0.1**	
	baz=211,SNR=54								
YUK3					S	**S**	**15 55 02.9**	**-1.1**	
	baz=211								
BRWY	**Burwash Landin**	**81.23**	**16**		P	**P**	**15 44 54.8**	**+0.2**	
	baz=213								
BRWY					S	**S**	**15 55 03.6**	**-0.3**	
	baz=213								
BNX	**BinXian**	**81.25**	**322**	⇑	P	**P**	**15 44 55.1**	**+0.2**	
BNX					pP	**PcP**	**15 45 00.9**	**-0.2**	
BNX					PP	**PP**	**15 47 58.9**	**-1.8**	
BNX					S	**S**	**15 55 04.3**	**-0.3**	
BNX					SS	**SS**	**16 00 21.8**	**+1.1**	
BNX					pmax	pmax			
	comp=Z,140nm,1.6s								
BNX					pmax	pmax			
	comp=Z,3µm,8.7s								
BNX					L	L			
	comp=Z,6µm,21.7s								
BNX					L	L			
	comp=Z,9µm,20.6s								
BNX					L	L			
	comp=Z,16µm,20.1s								
Q32M	**Nakina River**	**81.29**	**20**		P	**P**	**15 44 55.4**	**+0.4**	
	baz=219,SNR=9.0								
Q32M					S	**S**	**15 55 04.5**	**-0.4**	
	baz=219								
I20K	**Naaghedeneel**	**81.29**	**8**		IAMs_20	IAMs_20	16 14 46.1		
	comp=Z,7µm,21.0s								
I20K	**Naaghedeneel**	**81.29**	**8**		P	**P**	**15 44 55.3**	**+0.7**	
	baz=198,SNR=31								
I20K					S	**S**	**15 55 05.0**	**+0.8**	
	baz=198								
G17K	**Kiwalik Mounta**	**81.30**	**5**		P	**P**	**15 44 55.3**	**+0.6**	
	baz=192,SNR=22								
G17K					S	**S**	**15 55 06.5**	**+2.2**	
	baz=192								
P32M	**Atlin**	**81.32**	**19**		P	**P**	**15 44 55.5**	**+0.5**	
	baz=218,SNR=8.1								
P32M					S	**S**	**15 55 05.7**	**+0.9**	
	baz=218								
YUK4	**Talbot Arm**	**81.32**	**16**		P	**P**	**15 44 55.9**	**+0.8**	
	baz=213,SNR=14								
YUK4					S	**S**	**15 55 05.4**	**+0.3**	
	baz=213								
M27K	**Edge Creek, AK**	**81.37**	**14**		IAMs_20	IAMs_20	16 16 44.7		
	comp=Z,10µm,19.0s								
M27K	**Edge Creek, AK**	**81.37**	**14**		P	**P**	**15 44 55.8**	**+0.5**	
	baz=210,SNR=92								
M27K					S	**S**	**15 55 05.6**	**+0.1**	
	baz=210								
CN2	**Changchun**	**81.41**	**320**	*e*	P	**P**	**15 44 56.6**	**+0.8**	
CN2					PP	**PP**	**15 48 00.1**	**-2.0**	
CN2				*e*	S	**S**	**15 55 07.3**	**+0.9**	
CN2					pmax	pmax			
	comp=Z,160nm,1.3s								
CN2					pmax	pmax			
	comp=Z,4µm,8.0s								
CN2					L	L			
	comp=Z,2µm,18.0s								
CN2					L	L			
	comp=Z,8µm,18.0s								
CN2					L	L			
	comp=Z,8µm,19.0s								
MENT	**Mentasta**	**81.46**	**13**		P	**P**	**15 44 55.6**	**-0.1**	
	comp=Z,88nm,1.6s								
DLMT	**Dillon**	**81.52**	**38**		IAMs_20	IAMs_20	16 16 30.3		
	comp=Z,10µm,19.0s								
GZH2	**Guangzhou**	**81.53**	**297**	⇑*i*	P	**P**	**15 44 57.5**	**+0.7**	
GZH2					PP	**PP**	**15 48 02.8**	**-0.7**	
GZH2					S	**SKSac**	**15 55 10.6**	**-5.6**	
GZH2					pmax	pmax			
	comp=Z,3µm,7.6s								
GZH2					L	L			
	comp=Z,2µm,19.5s								
GZH2					L	L			
	comp=Z,5µm,21.5s								
GZH2					L	L			
	comp=Z,7µm,24.8s								
MSO	**Missoula**	**81.53**	**37**		IAMs_20	IAMs_20	16 14 10.4		
	comp=Z,8µm,20.0s								
DL2	**Dalian**	**81.53**	**314**		P	**P**	**15 44 57.8**	**+1.3**	
DL2					PP	**PP**	**15 48 01.8**	**-1.4**	
DL2					S	**SKSac**	**15 55 14.9**	**-0.7**	
DL2					SS	**SS**	**16 00 29.8**	**+4.7**	
DL2					pmax	pmax			
	comp=Z,290nm,1.

baz=211
O20A White River Ci 81.68 44 IAMs_20 IAMs_20 16 14 36.3
comp=Z,10µm,20.0s
H19K Roundabout Mou 81.75 7 IAMs_20 IAMs_20 16 15 21.4
comp=Z,8µm,20.0s
H19K Roundabout Mou 81.75 7 P P 15 44 57.9 +0.8
baz=196,SNR=84
H19K S SKSac 15 55 12.2 -3.6
baz=196
K24K Donnelly Dome 81.81 12 IAMs_20 IAMs_20 16 16 48.4
comp=Z,7µm,20.0s
K24K Donnelly Dome 81.81 12 P P 15 44 57.6 +0.1
baz=206,SNR=60
K24K S S 15 55 09.2 -0.6
baz=206
WHY Whitehorse 81.81 18 P P 15 44 58.1 +0.4
baz=217,SNR=14
WHY S S 15 55 10.6 +0.6
baz=217
N30M Aishikik Lake 81.83 17 IAMs_20 IAMs_20 16 15 30.3
comp=Z,6µm,19.0s
N30M Aishikik Lake 81.83 17 P P 15 44 58.0 +0.3
baz=214,SNR=18
N30M S S 15 55 09.1 -1.1
baz=214
G18K Tagagawik 81.87 6 IAMs_20 IAMs_20 16 16 16.6
comp=Z,7µm,20.0s
G18K Tagagawik 81.87 6 P P 15 44 58.0 +0.3
baz=194,SNR=60
G18K S S 15 55 11.4 +1.2
baz=194
H20K Anotleneega Mo 81.90 8 P P 15 44 58.6 +0.7
baz=197,SNR=64
H20K S S 15 55 12.6 +2.0
baz=197
NEA2 Nenana 81.92 10 IAmb IAmb 15 44 58.0
comp=Z,102nm,1.4s
NEA2 Nenana 81.92 10 P P 15 44 57.1 -0.9
baz=203,SNR=42
NEA2 S S 15 55 08.1 -2.7
baz=203
RIDG Independent Ri 81.94 12 IAMs_20 IAMs_20 16 16 31.8
comp=Z,8µm,20.0s
RIDG Independent Ri 81.94 12 P P 15 44 58.1 -0.1
baz=207,SNR=65
RIDG S S 15 55 09.8 -1.3
baz=207
WRH Wood River Hil 81.98 11 IAMs_20 IAMs_20 16 15 29.0
comp=Z,7µm,20.0s
L27K Beaver Creek, 81.99 14 IAMs_20 IAMs_20 16 17 43.2
comp=Z,8µm,19.0s
L27K Beaver Creek, 81.99 14 P P 15 44 58.6 +0.1
baz=210,SNR=46
L27K S S 15 55 11.6 -0.1
baz=210
I21K Tanana 82.00 9 IAMs_20 IAMs_20 16 19 25.9
comp=Z,6µm,19.0s
I21K Tanana 82.00 9 P P 15 44 58.2 -0.2
baz=200,SNR=50
I21K S S 15 55 09.2 -2.4
baz=200
MLY Manley 82.05 9 IAmb IAmb 15 44 59.6
comp=Z,159nm,1.4s
MLY Manley 82.05 9 P P 15 44 58.2 -0.6
baz=201,SNR=93
MLY S S 15 55 09.2 -3.0
baz=201
R33M Jennings River 82.05 20 P P 15 44 59.5 +0.5
baz=220,SNR=22
R33M S S 15 55 10.8 -1.8
baz=220
BW06 Boulder Array 82.08 42 ⇑P P 15 44 59.0 -0.6
PDAR Pinedale Array 82.08 42 P P 15 44 59.8 +0.1
comp=Z,4.6nm,0.8s,baz=241,slow=3.1,SNR=52
PDAR PKKPbc **PKKPbc** 16 03 30.5 -0.2
comp=Z,0.3nm,0.3s,baz=107,slow=3.6,SNR=6.7
PDAR LR LR 16 17 23.9
comp=Z,8µm,18.5s,baz=232,slow=33
comp=Z,4.6nm,0.8s
P33M Teslin, Yukon 82.08 19 P P 15 44 59.1 +0.1
baz=219,SNR=11
P33M S S 15 55 12.5 -0.4
baz=219
HDA Harding Lake 82.13 11 P P 15 44 58.8 -0.3
baz=205,SNR=60
HDA S S 15 55 11.0 -1.9
baz=205
F17K Baldwin Pennin 82.17 5 IAMs_20 IAMs_20 16 17 36.8
comp=Z,7µm,20.0s
F17K Baldwin Pennin 82.17 5 P P 15 45 00.1 +0.8
baz=191,SNR=28
F17K S SKSac 15 55 15.3 -3.4
baz=191
CCB Clear Creek Bu 82.19 11 IAMs_20 IAMs_20 16 14 21.6
comp=Z,7µm,21.0s
N31M Braeburn, Yuko 82.22 17 IAMs_20 IAMs_20 16 20 47.5
comp=Z,7µm,18.0s
N31M Braeburn, Yuko 82.22 17 P P 15 45 00.2 +0.5
baz=216,SNR=23
N31M S S 15 55 14.2 +0.1
baz=216
BOZ Bozeman (W) 82.23 38 IAMs_20 IAMs_20 16 15 16.9
comp=Z,8µm,20.0s
G19K Purcell Mounta 82.27 6 IAMs_20 IAMs_20 16 15 17.2
comp=Z,8µm,21.0s
G19K Purcell Mounta 82.27 6 P P 15 45 00.6 +0.7
baz=195,SNR=54
G19K S SKSac 15 55 16.0 -3.5
baz=195
M29M Somme Creek 82.28 15 IAMs_20 IAMs_20 16 16 26.4
comp=Z,10µm,20.0s
M29M Somme Creek 82.28 15 P P 15 45 00.2 +0.1
baz=213,SNR=37
M29M S S 15 55 13.5 -1.3
baz=213
SCRK Sand Creek 82.32 12 IAMs_20 IAMs_20 16 17 58.0
comp=Z,6µm,19.0s
SCRK Sand Creek 82.32 12 P P 15 45 00.3 +0.1
baz=208,SNR=103
SCRK S S 15 55 15.0 -0.2
baz=208
H21K Melozitna Rive 82.34 8 IAMs_20 IAMs_20 16 14 56.8
comp=Z,6µm,20.0s
H21K Melozitna Rive 82.34 8 P P 15 45 00.8 +0.6
baz=199,SNR=92
H21K S S 15 55 15.1 0.0
baz=199
DLV Lat 82.34 285 P P 15 45 02.4 +0.8
comp=Z,53nm,1.5s
DLV Lat 82.34 285 P P 15 45 02.7 +1.1
I23K Minto, Yukon-K 82.38 10 P P 15 45 00.2 -0.2
baz=203,SNR=111
I23K S S 15 55 12.4 -3.1
baz=203
COLA College 82.39 11 P P 15 44 59.6 -0.8
comp=Z,139nm,1.3s
COLA College 82.39 11 *c i*P P 15 44 59.9 -0.5
COLA pmax pmax
comp=Z,181nm,1.1s
COLA MLR MLR
comp=Z,3µm,18.0s
COLA College 82.39 11 IAMs_20 IAMs_20 16 14 59.9
comp=Z,9µm,21.0s
COLA College 82.39 11 ⇑P P 15 45 00.1 -0.3
COLA College 82.39 11 P P 15 44 60.0 -0.5
COLA College 82.39 11 P P 15 45 00.3 -0.1
baz=204
COLA S S 15 55 12.8 -2.7
baz=204
COLA College 82.39 11 P P 15 45 00.2 -0.1
F18K Selawik 82.46 5 P P 15 45 01.1 +0.3
baz=193,SNR=29
F18K S SKSac 15 55 17.8 -2.8
baz=193
ILAR Eielson Array 82.47 11 P P 15 45 00.2 -0.6
comp=Z,52nm,1.1s,baz=209,slow=5.4,SNR=121
ILAR PKPPKP **P'P'df** 16 11 34.0 +5.7
comp=Z,0.9nm,1.1s,baz=351,slow=1.8,SNR=4.7
ILAR LR LR 16 18 29.2
comp=Z,5µm,18.9s,baz=194,slow=33
comp=Z,52nm,1.1s
ILAR Eielson Array 82.47 11 P P 15 44 59.3 -1.6
SDCO Great Sand Dun 82.49 48 IAMs_20 IAMs_20 16 15 31.9
comp=Z,6µm,19.0s
SDCO Great Sand Dun 82.49 48 ⇑P P 15 45 02.9 +0.8
J25K Salcha River, 82.61 12 P P 15 45 01.7 0.0
baz=206,SNR=115
J25K S S 15 55 16.3 -1.8
baz=206
POKR Poker Plat Res 82.68 11 P P 15 45 01.9 -0.1
baz=204
POKR S S 15 55 16.6 -2.0
baz=204
SEY Seymchan 82.72 345 LR LR 16 16 56.4
comp=Z,11µm,20.8s,baz=160,slow=32
SEY Seymchan 82.72 345 *c i*P P 15 45 02.0 -0.2
SEY pmax pmax
comp=Z,81nm,1.4s
N32M Quiet Lake 82.74 18 P P 15 45 03.0 +0.5
baz=218
N32M S S 15 55 19.6 +0.2
baz=218
E17K Hotham Inlet 82.76 4 P P 15 45 03.0 +0.7
baz=190,SNR=42
E17K S SKSac 15 55 21.0 -1.6
baz=190
H22K Ishtalitna Cre 82.76 9 P P 15 45 02.5 +0.1
baz=201,SNR=84
H22K S S 15 55 18.5 -0.9
baz=201
K27K Chicken 82.78 13 IAMs_20 IAMs_20 16 17 52.0
comp=Z,8µm,19.0s
M30M Minto, Yukon 82.83 16 IAMs_20 IAMs_20 16 16 12.7
comp=Z,10µm,19.0s
M30M Minto, Yukon 82.83 16 P P 15 45 02.8 -0.1
baz=215,SNR=32
M30M S S 15 55 18.8 -1.5
baz=215
F19K Shaleruckik Mo 82.87 6 IAMs_20 IAMs_20 16 16 58.1
comp=Z,6µm,20.0s
F19K Shaleruckik Mo 82.87 6 P P 15 45 03.3 +0.4
baz=194,SNR=62
F19K S SKSac 15 55 21.6 -1.8
baz=194
L29M L29M 82.93 15 IAMs_20 IAMs_20 16 16 37.3
comp=Z,11µm,20.0s
L29M L29M 82.93 15 P P 15 45 04.0 +0.6
baz=213,SNR=77
L29M S S 15 55 20.0 -1.3
baz=213
H23K Yukon River 82.98 10 IAMs_20 IAMs_20 16 17 58.7
comp=Z,9µm,20.0s
H23K Yukon River 82.98 10 P P 15 45 03.2 -0.3
baz=202
H23K S S 15 55 19.4 -2.2
baz=202
G21K Allakaket 83.06 8 P P 15 45 04.6 +0.7
baz=199
G21K S SKSac 15 55 24.4 -0.3
baz=199
E18K Tukpahlearik C 83.19 5 P P 15 45 05.4 +0.8
baz=192
E18K S SKSac 15 55 25.1 -0.4
baz=192
M31M Drury Creek, Y 83.19 17 IAMs_20 IAMs_20 16 17 55.1
comp=Z,8µm,19.0s
M31M Drury Creek, Y 83.19 17 P P 15 45 04.6 -0.1
baz=217,SNR=30
M31M S S 15 55 22.5 -1.4
baz=217
H24K Noor Dome 83.27 10 IAmb IAmb 15 45 08.6
comp=Z,104nm,1.9s
H24K Noodor Dome 83.27 10 P P 15 45 04.2 -0.9
baz=204,SNR=25
H24K S S 15 55 21.7 -2.9
baz=204
D17K Noatak River 83.28 4 P P 15 45 05.9 +0.9
baz=189,SNR=25
D17K S S 15 55 27.4 +2.9
baz=189
F20K Avaraart Lake 83.30 7 IAMs_20 IAMs_20 16 16 32.3
comp=Z,8µm,20.0s
F20K Avaraart Lake 83.30 7 P P 15 45 05.7 +0.6
baz=196,SNR=40
F20K S SKSac 15 55 25.6 -0.5
baz=196
QIZ Qiongzhong 83.31 292 P P 15 45 04.9 -1.3
QIZ PP PP 15 48 15.5 -2.7
QIZ S SKSac 15 55 26.9 -1.4
QIZ pmax pmax
comp=Z,3µm,8.3s
QIZ L L
comp=Z,750nm,13.4s
QIZ L L
comp=Z,4µm,17.4s
QIZ L L
comp=Z,6µm,21.3s
ISCO Idaho Springs 83.32 46 IAMs_20 IAMs_20 16 17 17.8
comp=Z,9µm,19.0s
ISCO Idaho Springs 83.32 46 ⇑P P 15 45 07.0 +0.7
ISCO Idaho Springs 83.32 46 P P 15 45 07.3 +1.1
WTLY Watson Lake, Y 83.32 21 P P 15 45 05.9 +0.4
baz=222
WTLY S S 15 55 24.5 -0.9
baz=222
PRP Porcupine Dome 83.39 11 IAMs_20 IAMs_20 16 19 41.4
comp=Z,7µm,19.0s
PRP Porcupine Dome 83.39 11 P P 15 45 06.1 +0.2
baz=206,SNR=41
PRP S S 15 55 23.8 -2.3
baz=206
DAWY Dawson 83.42 14 P P 15 45 06.4 +0.5
baz=212,SNR=47
DAWY S SKSac 15 55 26.0 -1.2
baz=212
RLMT Red Lodge 83.42 40 ⇑P P 15 45 06.8 +0.2
WHN Wuhan 83.47 304 ⇑P P 15 45 07.6 +0.8
WHN sP sP 15 45 13.0 -0.7
WHN PP PP 15 48 23.1 +3.8
WHN S SKSac 15 55 28.4 -0.5
WHN pmax pmax
comp=Z,340nm,2.0s
WHN pmax pmax
comp=Z,6µm,7.7s
WHN L L
comp=Z,9µm,23.4s
WHN L L
comp=Z,9µm,18.3s
WHN L L
comp=Z,18µm,19.7s
E19K Redstone River 83.53 6 IAMs_20 IAMs_20 16 16 08.9
comp=Z,8µm,21.0s
E19K Redstone River 83.53 6 P P 15 45 07.1 +0.8
baz=195
E19K S SKSac 15 55 27.7 -0.1
baz=195
CMIG Matias Romero 83.55 70 LR LR 16 14 06.6
comp=Z,10µm,20.5s,baz=248,slow=30
TIA Tai'an 83.57 310 P P 15 45 08.3 +1.1
TIA S S 15 55 31.5 +2.7
TIA pmax pmax
comp=Z,93nm,1.3s
TIA pmax pmax
comp=Z,4µm,5.9s
TIA L L
comp=Z,3µm,19.6s
TIA L L
comp=Z,5µm,19.6s
TIA L L
comp=Z,9µm,21.6s
RDOG Red Dog Mine 83.64 4 IAMs_20 IAMs_20 16 21 44.9
comp=Z,6µm,19.0s
RDOG Red Dog Mine 83.64 4 P P 15 45 07.6 +0.7
baz=189,SNR=8.7
RDOG S S 15 55 29.9 +1.7
baz=189
I26K Coal Creek Min 83.67 12 P P 15 45 07.7 +0.6
baz=209
I26K S S 15 55 28.8 +0.2
baz=209
K29M Barlow Dome 83.69 15 IAMs_20 IAMs_20 16 16 22.5
comp=Z,9µm,20.0s
K29M Barlow Dome 83.69 15 P P 15 45 08.0 +0.6
baz=214,SNR=62
K29M S S 15 55 28.4 -0.7
baz=214
HEH HeiHe 83.71 326 *e*P P 15 45 07.5 -0.1
HEH sP sP 15 45 13.8 -0.7
HEH SKS SKSac 15 55 23.8 -5.8
HEH S S 15 55 31.6 +2.1
HEH pmax pmax
comp=Z,120nm,1.8s
HEH pmax pmax
comp=Z,4µm,8.4s
HEH L L
comp=Z,3µm,19.3s
HEH L L
comp=Z,3µm,20.8s
HEH L L
comp=Z,5µm,17.9s
G22K Bettles 83.71 8 P P 15 45 08.1 +0.9
baz=200,SNR=92
G22K S S 15 55 30.4 +1.6
baz=200
C16K Lisburne Hills 83.73 3 P P 15 45 08.0 +0.7
baz=187,SNR=7.8
C16K S S 15 55 31.2 +2.2
baz=187
G23K Bananza Creek 83.73 9 P P 15 45 07.8 +0.4
baz=202,SNR=87
G23K S S 15 55 29.3 +0.1
baz=202
F21K Alatna River 83.73 8 IAMs_20 IAMs_20 16 19 16.7
comp=Z,7µm,20.0s
F21K Alatna River 83.73 8 P P 15 45 07.9 +0.5
baz=199,SNR=61
F21K S S 15 55 29.7 +0.5
baz=199
CNSH ChangSha 83.76 301 P P 15 45 09.3 +0.9
CNSH S S 15 55 37.8 +6.8
CNSH L L
comp=Z,3µm,19.8s
CNSH L L
comp=Z,3µm,18.8s
CNSH L L
comp=Z,5µm,19.9s
LIRD Liard River Hi 83.76 22 P P 15 45 08.0 +0.4
baz=225,SNR=11
LIRD S SKSac 15 55 27.7 -1.8
baz=225
BELA Belgrano 2 83.84 172 IAmb IAmb 15 45 21.9
comp=Z,112nm,1.3s
JCT Junction City 83.88 56 IAMs_20 IAMs_20 16 15 30.9
comp=Z,7µm,20.0s
MYKOM Kota Tinggi 83.88 274 P P 15 45 09.9 +0.6
comp=Z,50nm,1.5s
MYKOM Kota Tinggi 83.88 274 IAmb IAmb 15 45 10.4
comp=Z,71nm,1.3s
MYKOM Kota Tinggi 83.88 274 P P 15 45 09.7 +0.4
PMSA Palmer Station 83.93 156 LR LR 16 17 08.9
comp=Z,8µm,18.2s,baz=241,slow=32
PMSA Palmer Station 83.93 156 IAMs_20 IAMs_20 16 13 53.3
comp=Z,7µm,20.0s
PMSA Palmer Station 83.93 156 *e*P P 15 45 12.7 +4.2
K22A Casper 83.99 43 P P 15 45 05.3 -4.2
K22A IAmb IAmb 15 45 22.7
comp=Z,206nm,1.5s
J29N Klondike Camp 84.03 14 IAMs_20 IAMs_20 16 18 36.9
comp=Z,10µm,20.0s
J29N Klondike Camp 84.03 14 P P 15 45 10.0 +1.0
baz=213,SNR=6.4
J29N S S 15 55 32.9 +0.5
baz=213
C17K DeLong Mountai 84.05 4 P P 15 45 09.7 +0.7
baz=189,SNR=5.6
C17K S S 15 55 33.2 +0.9
baz=189
AMTX Amarillo 84.10 52 ⇑P P 15 45 10.8 +0.7
G24K Hadweenzic Riv 84.12 10 P P 15 45 08.7 -0.7
baz=204,SNR=8.9
G24K S S 15 55 31.7 -1.4
baz=204
F22K John River 84.17 8 P P 15 45 10.3 +0.7
baz=200,SNR=41
F22K S S 15 55 34.2 +0.7
baz=200
COLD Coldfoot 84.18 9 P P 15 45 10.7 +1.1
baz=202
COLD S S 15 55 35.5 +1.9
baz=202
I27K Kandik River 84.25 13 IAMs_20 IAMs_20 16 16 55.8
comp=Z,7µm,20.0s
I27K Kandik River 84.25 13 P P 15 45 10.5 +0.5
baz=210,SNR=79
I27K S S 15 55 35.0 +0.5
baz=210
MG05 Puerto Natales 84.35 142 IAMs_20 IAMs_20 16 23 00.8
comp=Z,5µm,18.0s
C18K Utukok River 84.35 4 P P 15 45 11.1 +0.6
baz=191,SNR=15
C18K S S 15 55 36.2 +0.8
baz=191
E20K Nigu River 84.41 6 P P 15 45 11.8 +0.9
baz=196
E20K S S 15 55 36.9 +0.9
baz=196
G25K Bearman Lake 84.41 10 P P 15 45 10.7 -0.1
baz=206,SNR=18
G25K S S 15 55 36.7 +0.8
baz=206
MMPY Sheldon Lake, 84.42 18 P P 15 45 11.7 +0.6
baz=220,SNR=42
MMPY S S 15 55 35.7 -0.7
baz=220
D19K Kuna River 84.45 5 IAMs_20 IAMs_20 16 18 31.3
comp=Z,9µm,20.0s
D19K Kuna River 84.45 5 P P 15 45 11.7 +0.7
baz=194
D19K S S 15 55 36.9 +0.5
baz=194
I28M Miner Creek 84.47 13 P P 15 45 11.3 0.0
baz=212,SNR=60
I28M S S 15 55 36.0 -0.9
baz=212
EGMT Eagleton 84.57 37 IAMs_20 IAMs_20 16 16 59.0
comp=Z,8µm,20.0s
J30M Hart River 84.59 15 P P 15 45 12.3 +0.3
baz=215,SNR=56
J30M S S 15 55 37.0 -1.2
baz=215
BILL Bilibino 84.66 352 *c i*P P 15 45 12.0 0.0
BILL pmax pmax
comp=Z,43nm,1.4s
BILL Bilibino 84.66 352 IAMs_20 IAMs_20 16 16 57.8
comp=Z,8µm,20.0s
GO10 Punta Arenas 84.73 144 IAMs_20 IAMs_20 16 22 20.1
comp=Z,9µm,18.0s
F24K Squaw Lake 84.80 9 IAMs_20 IAMs_20 16 16 37.8
comp=Z,10µm,21.0s
F24K Squaw Lake 84.80 9 P P 15 45 13.7 +0.8
baz=204,SNR=61
F24K S S 15 55 40.3 +0.4
baz=204
D20K Etivluk River 84.81 6 IAMs_20 IAMs_20 16 17 21.7
comp=Z,8µm,20.0s
D20K Etivluk River 84.81 6 P P 15 45 13.6 +0.8
baz=196
D20K S S 15 55 40.4 +0.4
baz=196
H27K Steamboat Moun 84.81 12 IAMs_20 IAMs_20 16 19 27.7
comp=Z,6µm,19.0s
H27K Steamboat Moun 84.81 12 P P 15 45 13.7 +0.8
baz=210,SNR=115
H27K S S 15 55 39.7 -0.3
baz=210
E22K Anaktuvuk Pass 84.81 8 IAMs_20 IAMs_20 16 16 48.1
comp=Z,10µm,21.0s
E22K Anaktuvuk Pass 84.81 8 P P 15 45 13.6 +0.7
baz=200
E22K S S 15 55 39.3 -0.7
baz=200
H03S2 Juan Fernandez 84.82 124 T T 17 19 12.5
baz=252,slow=75,SNR=17
E21K Killik River 84.83 7 IAMs_20 IAMs_20 16 17 40.9
comp=Z,7µm,20.0s
E21K Killik River 84.83 7 P P 15 45 13.3 +0.3
baz=198,SNR=74
E21K S S 15 55 39.9 -0.3
baz=198
H03S1 Juan Fernandez 84.84 124 T T 17 19 40.0
baz=252,slow=75,SNR=15
H03S3 Juan Fernandez 84.84 124 T T 17 19 26.2
baz=252,slow=75,SNR=14
GULI GuiLin 84.90 298 P P 15 45 13.1 -1.2
GULI S S 15 55 45.3 +2.7
GULI pmax pmax
comp=Z,3µm,8.6s
GULI L L
comp=Z,3µm,21.0s
GULI L L
comp=Z,2µm,23.0s
GULI L L
comp=Z,4µm,21.2s
735A Kenedy 84.91 58 IAMs_20 IAMs_20 16 15 19.3

	comp=Z,7µm,20.0s								
C19K	**Lookout Ridge**	**84.92**	**5**	IAMs_20	IAMs_20	16 17 20.4			
	comp=Z,8µm,20.0s								
C19K	**Lookout Ridge**	**84.92**	**5**	P	**P**	**15 45 14.3**	**+0.9**		
	baz=193								
C19K				S	**S**	**15 55 42.0**	**+0.9**		
	baz=193								
H03N2	**Juan Fernandez**	**84.92**	**123**	T	T	17 19 28.9			
	baz=243,slow=74								
H03N3	**Juan Fernandez**	**84.92**	**123**	T	T	17 19 42.3			
	baz=243,slow=74								
H03N1	**Juan Fernandez**	**84.94**	**123**	T	T	17 19 15.5			
	baz=243								
G26K	**Porcupine Rive**	**85.00**	**11**	IAMs_20	IAMs_20	16 20 39.8			
	comp=Z,7µm,19.0s								
G26K	**Porcupine Rive**	**85.00**	**11**	P	**P**	**15 45 14.7**	**+1.0**		
	baz=208,SNR=137								
G26K				S	**S**	**15 55 43.0**	**+1.2**		
	baz=208								
KOTAN	**Kotaneelee Air**	**85.01**	**22**	P	**P**	**15 45 14.3**	**+0.4**		
	baz=227,SNR=9.8								
KOTAN				S	**S**	**15 55 41.1**	**-1.1**		
	baz=227								
E23K	**Chandalar**	**85.04**	**9**	P	**P**	**15 45 14.8**	**+0.8**		
	baz=202,SNR=73								
E23K				S	**S**	**15 55 43.6**	**+1.2**		
	baz=202								
I30M	**Mount Dempster**	**85.11**	**15**	IAMs_20	IAMs_20	16 19 13.5			
	comp=Z,9µm,19.0s								
I30M	**Mount Dempster**	**85.11**	**15**	P	**P**	**15 45 14.7**	**+0.2**		
	baz=215,SNR=115								
I30M				S	**S**	**15 55 42.7**	**-0.6**		
	baz=215								
E24K	**Your Creek**	**85.22**	**9**	IAMs_20	IAMs_20	16 16 52.9			
	comp=Z,8µm,21.0s								
E24K	**Your Creek**	**85.22**	**9**	P	**P**	**15 45 15.8**	**+0.8**		
	baz=203,SNR=60								
E24K				S	**S**	**15 55 46.0**	**+1.8**		
	baz=203								
F25K	**Christian Rive**	**85.24**	**10**	IAMs_20	IAMs_20	16 16 48.3			
	comp=Z,11µm,21.0s								
F25K	**Christian Rive**	**85.24**	**10**	P	**P**	**15 45 16.1**	**+1.0**		
	baz=206,SNR=75								
F25K				S	**S**	**15 55 46.5**	**+2.2**		
	baz=206								
G27K	**Doyon Strip**	**85.28**	**12**	IAMs_20	IAMs_20	16 16 18.3			
	comp=Z,7µm,21.0s								
G27K	**Doyon Strip**	**85.28**	**12**	P	**P**	**15 45 16.1**	**+0.9**		
	baz=210,SNR=82								
G27K				S	**S**	**15 55 46.7**	**+2.0**		
	baz=210								
C21K	**Knifeblade Rid**	**85.42**	**6**	P	**P**	**15 45 16.8**	**+0.9**		
	baz=197,SNR=39								
C21K				S	**S**	**15 55 47.0**	**+1.0**		
	baz=197								
H29M	**Whitestone**	**85.47**	**13**	IAMs_20	IAMs_20	16 19 44.2			
	comp=Z,8µm,19.0s								
H29M	**Whitestone**	**85.47**	**13**	P	**P**	**15 45 16.5**	**+0.3**		
	baz=213,SNR=103								
H29M				S	**S**	**15 55 47.0**	**+0.4**		
	baz=213								
TOLK	**Toolik Lake Re**	**85.59**	**8**	P	**P**	**15 45 17.3**	**+0.5**		
	baz=202,SNR=46								
TOLK				S	**S**	**15 55 48.6**	**+0.9**		
	baz=202								
F26K	**Sheenjek River**	**85.59**	**11**	IAMs_20	IAMs_20	16 17 19.6			
	comp=Z,7µm,21.0s								
F26K	**Sheenjek River**	**85.59**	**11**	P	**P**	**15 45 18.1**	**+1.3**		
	baz=208,SNR=86								
F26K				S	**S**	**15 55 50.1**	**+2.4**		
	baz=208								
USHA	**Ushuaia**	**85.62**	**146**	LR	LR	16 14 59.3			
	comp=Z,15µm,20.7s,baz=247,slow=30								
AY03	**Cochrane**	**85.65**	**138**	IAMs_20	IAMs_20	16 14 56.8			
	comp=Z,8µm,20.0s								
ZEA	**Zeya**	**85.71**	**329**	*e*P	**P**	**15 45 17.8**	**+0.2**		
ZEA				*e*S	**S**	**15 55 51.6**	**+2.3**		
ZEA				pmax	pmax				
	comp=E,10.0nm,0.9s								
ZEA				pmax	pmax				
	comp=N,20nm,1.3s								
ZEA				pmax	pmax				
	comp=Z,70nm,1.5s								
ZEA				pmax	pmax				
	comp=E,500nm,9.6s								
ZEA				pmax	pmax				
	comp=N,300nm,10.6s								
ZEA				pmax	pmax				
	comp=Z,2µm,8.0s								
ZEA				smax	smax				
	comp=N,2µm,14.6s								
E25K	**Arctic Village**	**85.73**	**10**	P	**P**	**15 45 18.5**	**+1.1**		
	baz=206,SNR=72								
E25K				S	**S**	**15 55 50.5**	**+1.5**		
	baz=206								
D23K	**Nanushuk River**	**85.74**	**8**	IAMs_20	IAMs_20	16 20 23.7			
	comp=Z,9µm,20.0s								
D23K	**Nanushuk River**	**85.74**	**8**	P	**P**	**15 45 18.3**	**+0.9**		
	baz=201,SNR=43								
D23K				S	**S**	**15 55 50.8**	**+1.8**		
	baz=201								
BJI2	**Beijing**	**85.82**	**313**	P	**P**	**15 45 19.6**	**+1.1**		
BJI2				sP	**pwP**	**15 45 26.3**	**+0.7**		
BJI2				SKS	**SKSac**	**15 55 42.1**	**-1.5**		
BJI2				pmax	pmax				
	comp=Z,110nm,1.6s								
BJI2				pmax	pmax				
	comp=Z,2µm,4.7s								
BJI2				L	L				
	comp=Z,1µm,18.6s								
BJI2				L	L				
	comp=Z,1µm,19.8s								
BJI2				L	L				
	comp=Z,3µm,25.0s								
BJT	**Baijiatuan**	**85.82**	**313**	P	**P**	**15 45 19.9**	**+1.4**		
	comp=Z,236nm,1.8s								
HNS	**HongShan**	**85.82**	**310**	⇑P	**P**	**15 45 19.9**	**+1.4**		
HNS				S	**S**	**15 55 55.9**	**+4.8**		
HNS				pmax	pmax				
	comp=Z,180nm,1.7s								
HNS				L	L				
	comp=Z,2µm,20.4s								
HNS				L	L				
	comp=Z,3µm,22.2s								
HNS				L	L				
	comp=Z,6µm,22.3s								
B21K	**Ikpikpuk River**	**85.89**	**6**	IAMs_20	IAMs_20	16 18 37.8			
	comp=Z,9µm,20.0s								
B21K	**Ikpikpuk River**	**85.89**	**6**	P	**P**	**15 45 18.7**	**+0.6**		
	baz=197,SNR=14								
B21K				S	**S**	**15 55 51.3**	**+0.9**		
	baz=197								
A19K	**Wainwright**	**85.89**	**4**	P	**P**	**15 45 18.7**	**+0.6**		
	baz=191								
A19K				S	**S**	**15 55 51.6**	**+1.2**		
	baz=191								
MG02	**Cerro Sombrero**	**85.90**	**144**	IAMs_20	IAMs_20	16 14 41.0			
	comp=Z,7µm,20.0s								
EPYK	**Eagle Plains**	**85.97**	**14**	IAMs_20	IAMs_20	16 19 50.3			
	comp=Z,7µm,19.0s								
EPYK	**Eagle Plains**	**85.97**	**14**	P	**P**	**15 45 18.9**	**+0.2**		
	baz=215,SNR=57								
EPYK				S	**S**	**15 55 50.7**	**-0.8**		
	baz=215								
B20K	**Meade River**	**86.01**	**5**	IAMs_20	IAMs_20	16 19 53.1			
	comp=Z,7µm,20.0s								
B20K	**Meade River**	**86.01**	**5**	P	**P**	**15 45 19.5**	**+0.8**		
	baz=195,SNR=10								
B20K				S	**S**	**15 55 52.1**	**+0.6**		
	baz=195								
H31M	**Peel River**	**86.08**	**15**	IAmb	IAmb	15 45 31.8			
	comp=Z,213nm,1.5s								
H31M	**Peel River**	**86.08**	**15**	P	**P**	**15 45 18.9**	**-0.3**		
	baz=217,SNR=35								
H31M				S	**S**	**15 55 51.6**	**-1.0**		
	baz=217								
G29M	**Pine Creek**	**86.13**	**13**	IAMs_20	IAMs_20	16 17 53.6			
	comp=Z,6µm,20.0s								
G29M	**Pine Creek**	**86.13**	**13**	P	**P**	**15 45 19.6**	**+0.2**		
	baz=213,SNR=40								
G29M				S	**S**	**15 55 52.9**	**-0.1**		
	baz=213								
D24K	**Happy Valley**	**86.17**	**8**	P	**P**	**15 45 20.4**	**+0.8**		
	baz=203								
D24K				S	**S**	**15 55 54.4**	**+1.2**		
	baz=203								
BKNI	**Bangkinang**	**86.20**	**271**	P	**P**	**15 45 21.7**	**+0.7**		
WMOK	**Wichita Mounta**	**86.25**	**53**	IAMs_20	IAMs_20	16 19 18.6			
	comp=Z,7µm,19.0s								
RSSD	**Black Hills**	**86.27**	**42**	IAMs_20	IAMs_20	16 22 16.9			
	comp=Z,6µm,18.0s								
OGNE	**Ogallala**	**86.28**	**46**	IAMs_20	IAMs_20	16 24 14.2			
	comp=Z,8µm,18.0s								
WHTX	**Lake Whitney,**	**86.30**	**56**	IAMs_20	IAMs_20	16 16 38.0			
	comp=Z,9µm,21.0s								
F28M	**Old Crow**	**86.33**	**12**	IAMs_20	IAMs_20	16 18 23.0			
	comp=Z,8µm,20.0s								
F28M	**Old Crow**	**86.33**	**12**	P	**P**	**15 45 20.9**	**+0.4**		
	baz=212,SNR=24								
F28M				S	**S**	**15 55 56.2**	**+1.2**		
	baz=212								
LL07	**Hotel Espejo d**	**86.41**	**133**	IAMs_20	IAMs_20	16 14 58.4			
	comp=Z,10µm,21.0s								
LYN	**LuoYang**	**86.43**	**307**	P	**P**	**15 45 22.6**	**+0.9**		
LYN				pP	PcP	15 45 24.4	+0.3		
LYN				S	**S**	**15 55 52.5**	**-4.7**		
LYN				sS	ScS	15 56 05.6	-0.1		
LYN				pmax	pmax				
	comp=Z,140nm,1.6s								
LYN				pmax	pmax				
	comp=Z,4µm,8.5s								
LYN				L	L				
	comp=Z,7µm,18.9s								
LYN				L	L				
	comp=Z,7µm,19.2s								
LYN				L	L				
	comp=Z,11µm,19.2s								
E27K	**Coleen River**	**86.49**	**11**	IAMs_20	IAMs_20	16 21 45.3			
	comp=Z,6µm,19.0s								
E27K	**Coleen River**	**86.49**	**11**	P	**P**	**15 45 22.3**	**+1.0**		
	baz=210,SNR=54								
E27K				S	**S**	**15 55 58.0**	**+1.5**		
	baz=210								
COYC	**Coyhaique**	**86.51**	**136**	IAMs_20	IAMs_20	16 14 20.5			
	comp=Z,10µm,22.0s								
C23K	**Itkillik River**	**86.56**	**8**	IAMs_20	IAMs_20	16 17 56.4			
	comp=Z,10µm,21.0s								
C23K	**Itkillik River**	**86.56**	**8**	P	**P**	**15 45 22.4**	**+0.9**		
	baz=201,SNR=19								
C23K				S	**S**	**15 55 57.5**	**+0.5**		
	baz=201								
G30M	**tAoh Zraii Nji**	**86.59**	**14**	IAMs_20	IAMs_20	16 20 35.6			
	comp=Z,7µm,19.0s								
G30M	**tAoh Zraii Nji**	**86.59**	**14**	P	**P**	**15 45 21.8**	**+0.1**		
	baz=215,SNR=87								
G30M				S	**S**	**15 55 56.8**	**-0.7**		
	baz=215								
D25K	**Kavik River**	**86.68**	**9**	IAMs_20	IAMs_20	16 20 46.5			
	comp=Z,9µm,20.0s								
D25K	**Kavik River**	**86.68**	**9**	P	**P**	**15 45 22.2**	**0.0**		
	baz=205,SNR=18								
D25K				S	**S**	**15 55 58.1**	**-0.2**		
	baz=205								
B22K	**Teshekpuk Lake**	**86.70**	**7**	IAMs_20	IAMs_20	16 25 46.3			
	comp=Z,8µm,19.0s								
B22K	**Teshekpuk Lake**	**86.70**	**7**	P	**P**	**15 45 22.6**	**+0.4**		
	baz=199								
B22K				S	**S**	**15 55 58.9**	**+0.5**		
	baz=199								
HKT	**Hockley**	**86.90**	**58**	IAMs_20	IAMs_20	16 17 05.1			
	comp=Z,7µm,21.0s								
OK038	**West end E0370**	**86.92**	**51**	IAMs_20	IAMs_20	16 19 17.3			
	comp=Z,9µm,19.0s								
Z35A	**Perchaven, San**	**86.93**	**54**	IAMs_20	IAMs_20	16 16 58.6			
	comp=Z,10µm,20.0s								
COCO	**West Island**	**86.97**	**258**	IAMs_20	IAMs_20	16 20 02.5			
	comp=Z,9µm,21.0s								
G31M	**Satah River**	**87.00**	**14**	IAMs_20	IAMs_20	16 19 07.3			
	comp=Z,9µm,19.0s								
G31M	**Satah River**	**87.00**	**14**	P	**P**	**15 45 23.7**	**+0.1**		
	baz=217,SNR=53								
G31M				S	**S**	**15 56 00.2**	**-1.0**		
	baz=217								
A22K	**Sinclair Lake**	**87.17**	**6**	P	**P**	**15 45 24.7**	**+0.3**		
	baz=197								
A22K				S	**S**	**15 56 03.4**	**+0.6**		
	baz=197								
F30M	**Barrier River**	**87.20**	**13**	P	**P**	**15 45 24.6**	**0.0**		
	baz=215,SNR=17								
F30M				S	**S**	**15 56 02.3**	**-1.1**		
	baz=215								
E28M	**Babbage River**	**87.24**	**12**	IAMs_20	IAMs_20	16 21 05.2			
	comp=Z,8µm,19.0s								
E28M	**Babbage River**	**87.24**	**12**	P	**P**	**15 45 25.2**	**+0.3**		
	baz=212,SNR=21								
E28M				S	**S**	**15 56 04.4**	**+0.6**		
	baz=212								
A21K	**Barrow**	**87.33**	**5**	P	**P**	**15 45 25.1**	**-0.1**		
	baz=196								
A21K				S	**S**	**15 56 03.5**	**-0.8**		
	baz=196								
WRGLY	**Wrigley**	**87.33**	**20**	P	**P**	**15 45 25.8**	**+0.4**		
	baz=227,SNR=15								
WRGLY				S	**S**	**15 56 02.5**	**-2.2**		
	baz=227								
LR04	**Corral**	**87.35**	**131**	IAMs_20	IAMs_20	16 14 10.0			
	comp=Z,7µm,21.0s								
C27K	**Jago River**	**87.38**	**10**	IAmb	IAmb	15 45 27.8			
	comp=Z,115nm,1.8s								
C27K				IAMs_20	IAMs_20	16 18 18.9			
	comp=Z,10µm,21.0s								
C27K	**Jago River**	**87.38**	**10**	P	**P**	**15 45 26.0**	**+0.6**		
	baz=208								
C27K				S	**S**	**15 56 04.8**	**-0.2**		
	baz=208								
E29M	**Blow River**	**87.39**	**12**	IAmb	IAmb	15 45 27.2			
	comp=Z,98nm,1.6s								
E29M				IAMs_20	IAMs_20	16 18 56.0			
	comp=Z,8µm,20.0s								
E29M	**Blow River**	**87.39**	**12**	P	**P**	**15 45 25.4**	**-0.1**		
	baz=213,SNR=24								
E29M				S	**S**	**15 56 04.7**	**-0.5**		
	baz=213								
LL02	**Futaleuf**	**87.43**	**134**	IAMs_20	IAMs_20	16 15 22.6			
	comp=Z,9µm,20.0s								
C26K	**Camden Bay**	**87.44**	**9**	P	**P**	**15 45 26.9**	**+1.2**		
	baz=207								
C26K				S	**S**	**15 56 06.6**	**+1.0**		
	baz=207								
XLT	**XiLinHaoTe**	**87.46**	**317**	*e*P	**P**	**15 45 27.6**	**+1.0**		
XLT				sP	pwP	15 45 34.3	+0.6		
XLT				PP	**PP**	**15 48 48.8**	**-2.8**		
XLT				SKS	**SKSac**	**15 55 51.6**	**-2.2**		
XLT				pmax	pmax				
	comp=Z,180nm,1.5s								
XLT				pmax	pmax				
	comp=Z,3µm,6.6s								
XLT				L	L				
	comp=Z,4µm,20.0s								
XLT				L	L				
	comp=Z,5µm,20.5s								
HIA	**Hailar**	**87.51**	**323**	P	**P**	**15 45 27.4**	**+0.8**		
	comp=Z,118nm,2.1s								
D27M	**Malcolm River**	**87.52**	**11**	IAMs_20	IAMs_20	16 22 27.6			
	comp=Z,6µm,19.0s								
D27M	**Malcolm River**	**87.52**	**11**	P	**P**	**15 45 27.1**	**+0.8**		
	baz=210,SNR=10								
D27M				S	**S**	**15 56 07.2**	**+0.6**		
	baz=210								
F31M	**Tsiigehtchic**	**87.53**	**14**	IAMs_20	IAMs_20	16 20 56.6			
	comp=Z,9µm,19.0s								
F31M	**Tsiigehtchic**	**87.53**	**14**	P	**P**	**15 45 26.4**	**+0.2**		
	baz=217,SNR=20								
F31M				S	**S**	**15 56 04.9**	**-1.5**		
	baz=217								
TIY	**Taiyuan**	**87.61**	**310**	*e*P	**P**	**15 45 29.0**	**+1.6**		
TIY				PP	**PP**	**15 48 50.0**	**-2.9**		
TIY				SKS	**SKSac**	**15 55 57.6**	**+2.6**		
TIY				S	**SKKSac**	**15 56 05.8**	**+1.3**		
TIY				pmax	pmax				
	comp=Z,120nm,1.3s								
TIY				pmax	pmax				
	comp=Z,3µm,8.5s								
TIY				L	L				
	comp=Z,3µm,22.0s								
TIY				L	L				
	comp=Z,3µm,22.0s								
TIY				L	L				
	comp=Z,4µm,19.9s								
HILR	**Hailar Array B**	**87.64**	**323**	P	**P**	**15 45 27.3**	**+0.1**		
	comp=Z,45nm,1.0s,baz=128,slow=9.6,SNR=60								
HILR				LR	LR	16 18 44.1			
	comp=Z,12µm,22.0s,baz=90,slow=32								
	comp=Z,45nm,1.0s								
OK029	**Liberty Lake**	**87.65**	**52**	IAMs_20	IAMs_20	16 17 11.5			
	comp=Z,9µm,21.0s								
R32A	**Long Quarter,**	**87.66**	**49**	IAMs_20	IAMs_20	16 18 07.9			
	comp=Z,7µm,20.0s								
MAW	**Mawson**	**87.82**	**199**	P	**P**	**15 45 29.3**	**+1.5**		
	comp=Z,71nm,1.1s,baz=118,slow=5.9,SNR=58								
MAW				LR	LR	16 24 42.4			
	comp=Z,10µm,18.8s,baz=116,slow=36								
	comp=Z,71nm,1.1s								
MAW	**Mawson**	**87.82**	**199**	P	**P**	**15 45 29.8**	**+2.0**		
MAW				pmax	pmax				
	comp=Z,37nm,1.3s								
MAW	**Mawson**	**87.82**	**199**	P	**P**	**15 45 29.8**	**+2.0**		
KULM	**Kulim**	**87.90**	**276**	P	**P**	**15 45 30.2**	**+1.0**		
	comp=Z,34nm,1.4s								
D28M	**Stokes Point**	**88.01**	**12**	P	**P**	**15 45 29.0**	**+0.6**		
	baz=213								
D28M				S	**S**	**15 56 11.1**	**+0.2**		
	baz=213								
OK052	**Battle Ridge R**	**88.21**	**52**	IAMs_20	IAMs_20	16 17 39.5			
	comp=Z,9µm,22.0s								
INK	**Inuvik**	**88.27**	**14**	LR	LR	16 22 54.5			
	comp=Z,4µm,18.0s,baz=214,slow=34								
INK	**Inuvik**	**88.27**	**14**	P	**P**	**15 45 29.8**	**+0.1**		
	baz=218,SNR=28								
INK				S	**S**	**15 56 12.1**	**-1.3**		
	baz=218								
LR05	**Currie**	**88.27**	**131**	IAMs_20	IAMs_20	16 15 15.5			
	comp=Z,6µm,22.0s								
GYA	**Guiyang**	**88.44**	**298**	⇑P	**P**	**15 45 32.8**	**+1.1**		
GYA				S	S	15 56 06.9	-10		
GYA				pmax	pmax				
	comp=Z,34nm,1.3s								
GYA				pmax	pmax				
	comp=Z,3µm,6.2s								
GYA				L	L				
	comp=Z,2µm,18.4s								
GYA				L	L				
	comp=Z,1µm,16.7s								
GYA				L	L				
	comp=Z,3µm,20.7s								
NATX	**Nacogdoches**	**88.46**	**57**	IAMs_20	IAMs_20	16 20 19.1			
	comp=Z,7µm,19.0s								
T35A	**Sooner Cattle**	**88.75**	**51**	IAMs_20	IAMs_20	16 17 25.8			
	comp=Z,9µm,21.0s								
GO06	**Curarrehue**	**88.87**	**131**	IAMs_20	IAMs_20	16 15 11.3			
	comp=Z,8µm,21.0s								
PSI	**Prapat**	**88.89**	**273**	P	**P**	**15 45 33.5**	**-0.6**		
	comp=Z,70nm,1.5s								
TUL3	**Leonard**	**88.95**	**52**	IAMs_20	IAMs_20	16 21 22.1			
	comp=Z,7µm,18.0s								
XAN	**Xi'an**	**89.01**	**306**	⇑P	**P**	**15 45 34.9**	**+0.8**		
XAN				pP	pP	15 45 39.5	+0.3		
XAN				sP	pwP	15 45 42.8	+1.6		
XAN				SKS	**SKSac**	**15 56 04.8**	**+1.4**		
XAN				S	**ScS**	**15 56 24.8**	**-2.4**		
XAN				pmax	pmax				
	comp=Z,92nm,1.8s								
XAN				pmax	pmax				
	comp=Z,3µm,7.2s								
XAN				L	L				
	comp=Z,5µm,19.2s								
XAN				L	L				
	comp=Z,4µm,22.0s								
XAN				L	L				
	comp=Z,5µm,20.6s								
PLCA	**Paso Flores**	**89.16**	**132**	P	**P**	**15 45 37.5**	**+2.7**		
	comp=Z,15nm,1.3s,baz=273,slow=6.3,SNR=4.8								
PLCA				LR	LR	16 16 45.1			
	comp=Z,9µm,20.8s,baz=258,slow=30								
	comp=Z,15nm,1.3s								
PLCA	**Paso Flores**	**89.16**	**132**	P	**P**	**15 45 37.5**	**+2.7**		
PLCA	**Paso Flores**	**89.16**	**132**	*e*P	**P**	**15 45 38.1**	**+3.3**		
SLVN	**Son La**	**89.32**	**292**	P	**P**	**15 45 37.5**	**+1.7**		
	comp=Z,24nm,1.1s								
YAK	**Yakutsk**	**89.36**	**337**	LR	LR	16 19 38.0			
	comp=Z,4µm,21.5s,baz=124,slow=32								
YAK	**Yakutsk**	**89.36**	**337**	*c i*P	**P**	**15 45 33.8**	**-1.2**		
YAK				*e**PP	**sP**	**15 45 42.0**	**+0.1**		
YAK				*e*S	**SKSac**	**15 56 00.6**	**-3.4**		
YAK				*e**SS	**SKKSac**	**15 56 17.6**	**+1.3**		
YAK				*e*SSS	SSS	16 05 46.8			
YAK				pmax	pmax				
	comp=Z,45nm,1.4s								
YAK				pmax	pmax				
	comp=N,7.0nm,1.5s								
YAK				pmax	pmax				
	comp=E,18nm,1.4s								
YAK				pmax	pmax				
	comp=Z,1µm,8.4s								
YAK				pmax	pmax				
	comp=E,266nm,4.3s								
YAK				pmax	pmax				
	comp=N,190nm,3.9s								
YAK				smax	smax				
	comp=E,911nm,10.4s								
YAK				smax	smax				
	comp=N,488nm,7.4s								
YAK				MLR	MLR				
	comp=Z,3µm,23.0s								
YAK				MLR	MLR				
	comp=N,2µm,18.0s								
HHC	**Hu-ho-hao-te**	**89.38**	**313**	⇑*i*P	**P**	**15 45 37.4**	**+1.6**		
HHC				pmax	pmax				
	comp=N,210nm,1.5s								
HHC				pmax	pmax				
	comp=N,440nm,5.9s								
HHC				L	L				
	comp=N,1µm,18.5s								
HHC				L	L				
	comp=N,2µm,20.2s								
HHC				L	L				
	comp=N,4µm,19.6s								
KSU1	**Kansas State U**	**89.44**	**49**	IAMs_20	IAMs_20	16 18 52.9			
	comp=Z,7µm,21.0s								
TGUH	**Tegucigalpa,Un**	**89.67**	**75**	IAMs_20	IAMs_20	16 15 57.5			
	comp=Z,8µm,22.0s								
GSI	**Gunungsitoli**	**89.79**	**271**	P	**P**	**15 45 39.4**	**+1.2**		
	comp=Z,165nm,1.5s								
GSI	**Gunungsitoli**	**89.79**	**271**	P	**P**	**15 45 39.2**	**+1.0**		
GSI				IAMs_20	IAMs_20	16 25 02.6			
	comp=Z,9µm,22.0s								
YKA	**Yellowknife Ar**	**90.03**	**23**	P	**P**	**15 45 38.3**	**+0.2**		
	comp=Z,13nm,1.0s,baz=238,slow=4.3,SNR=97								
YKA				LR	LR	16 19 37.3			
	comp=Z,5µm,20.5s,baz=230,slow=31								
	comp=Z,13nm,1.0s								
ML02	**Panimavida**	**90.16**	**127**	IAMs_20	IAMs_20	16 16 14.1			
	comp=Z,8µm,21.0s								
U38A	**Gravette**	**90.20**	**52**	IAMs_20	IAMs_20	16 24 19.2			
	comp=Z,6µm,18.0s								
MIAR	**Mount Ida**	**90.22**	**54**	IAMs_20	IAMs_20	16 19 23.6			
	comp=Z,7µm,20.0s								
BTO2	**Baotou**	**90.54**	**312**	*e*P	**P**	**15 45 42.3**	**+1.1**		
BTO2				S	**S**	**15 56 41.3**	**+5.1**		
BTO2				pmax	pmax				
	comp=Z,350nm,1.4s								
BTO2				pmax	pmax				
	comp=Z,7µm,8.6s								
BTO2				L	L				
	comp=Z,3µm,19.6s								
BTO2				L	L				
	comp=Z,3µm,16.1s								
BTO2				L	L				
	comp=Z,9µm,18.0s								
L34A	**Svendsen Farm,**	**90.60**	**47**	IAMs_20	IAMs_20	16 21 10.6			
	comp=Z,8µm,20.0s								
MDND	**Maddock**	**90.61**	**40**	IAMs_20	IAMs_20	16 19 19.8	

comp=Z,2µm,8.6s
KMI2 L L
comp=Z,2µm,21.0s
KMI2 L L
comp=Z,2µm,25.2s
KMI2 L L
comp=Z,5µm,35.3s
HDC Heredia 91.56 80 IAMs_20 IAMs_20 16 18 21.2
comp=Z,6µm,20.0s
MT16 CCHEN 91.63 125 IAMs_20 IAMs_20 16 16 27.9
comp=Z,10µm,21.0s
CO06 Fray Jorge 91.65 122 IAMs_20 IAMs_20 16 18 04.1
comp=Z,5µm,20.0s
MT13 San Alfonso 91.71 126 IAMs_20 IAMs_20 16 16 53.1
comp=Z,8µm,20.0s
P38A Dawn 91.86 49 IAMs_20 IAMs_20 16 20 28.1
comp=Z,7µm,20.0s
ELIB Princess Elisa 92.07 185 *d*P **P 15 45 49.8 +1.9**
comp=Z,94nm,1.2s
CD2 Chengdu 92.20 301 P **P 15 45 46.6 -2.4**
CD2 SKS **SKSac 15 56 17.3 -4.7**
CD2 S **S 15 56 50.0 -1.5**
CD2 pmax pmax
comp=Z,2µm,7.8s
CD2 L L
comp=Z,6µm,23.0s
CD2 L L
comp=Z,7µm,23.0s
CD2 L L
comp=Z,6µm,20.6s
CO03 El Pedregal 92.36 123 IAMs_20 IAMs_20 16 17 05.1
comp=Z,9µm,22.0s
N38A Joes South For 92.45 48 IAMs_20 IAMs_20 16 22 13.5
comp=Z,6µm,19.0s
GO04 Tololo Observa 92.50 122 IAMs_20 IAMs_20 16 17 46.5
comp=Z,7µm,20.0s
ATAH Atahualpa 92.52 98 LR LR 16 18 14.4
comp=Z,15µm,19.7s,baz=255,slow=30
SYO Syowa Base 92.58 191 ⇑*i*P **P 15 45 51.2 +1.2**
SYO Syowa Base 92.58 191 ⇓*i*P P 15 45 55.2 +5.2
SYO Syowa Base 92.58 191 ⇓*e*P P 15 45 59.2 +9.2
TROLL Troll, Antarti 92.65 179 ⇑P **P 15 45 52.4 +1.9**
comp=Z,1µm,0.9s
TROLL ⇓SKSac **SKSac 15 56 25.9 +2.6**
TROLL ⇑S **ScS 15 57 00.3 +3.8**
NNA Nana 92.65 103 LR LR 16 17 51.4
comp=Z,4µm,21.4s,baz=246,slow=29
PZH PanZhiHua 92.67 297 P **P 15 45 49.6 -1.8**
PZH SKS **SKSac 15 56 25.6 +0.7**
PZH S **S 15 56 52.9 -3.1**
PZH SS **SS 16 03 06.6 -2.4**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,2µm,8.6s
PZH L L
comp=Z,2µm,19.9s
PZH L L
comp=Z,4µm,19.8s
PZH L L
comp=Z,5µm,20.8s
SNAA Sanae 92.79 177 ⇑P **P 15 45 52.9 +1.9**
comp=Z,472nm,1.1s
SNAA ⇓SKSac **SKSac 15 56 26.2 +2.2**
SNAA ⇓S **ScS 15 56 59.8 +2.4**
SNAA Sanae 92.79 177 P **P 15 45 52.5 +1.4**
comp=Z,30nm,1.2s,baz=203,slow=4.2,SNR=24
SNAA LR LR 16 23 14.7
comp=Z,7µm,20.1s,baz=210,slow=33
comp=Z,30nm,1.2s
SNAA Sanae 92.79 177*c i*P **P 15 45 53.0 +1.9**
SNAA pmax pmax
comp=Z,25nm,1.2s
SNAA MLR MLR
comp=Z,6µm,17.0s
SNAA Sanae 92.79 177 P **P 15 45 51.2 +0.1**
SNAA IAmb IAmb 15 46 05.0
comp=Z,116nm,1.4s
SNAA IAMs_20 IAMs_20 16 23 13.3
comp=Z,6µm,20.0s
SCIA State Center 92.81 47 IAMs_20 IAMs_20 16 23 10.0
comp=Z,7µm,19.0s
T42A Van Buren 92.90 52 IAMs_20 IAMs_20 16 24 18.6
comp=Z,6µm,19.0s
A36M Sachs Harbour 92.91 13 IAMs_20 IAMs_20 16 22 18.7
comp=Z,6µm,20.0s
A36M Sachs Harbour 92.91 13 P **P 15 45 51.6 +0.3**
baz=225
A36M S **S 15 56 53.8 -2.1**
baz=225
P40A Paris 92.92 50 IAMs_20 IAMs_20 16 19 57.2
comp=Z,8µm,22.0s
CMAR Chiang Mai Arr 93.02 288 P **P 15 45 53.9 +0.9**
comp=Z,8.3nm,1.0s,baz=94,slow=2.8,SNR=42
CMAR LR LR 16 22 44.8
comp=Z,4µm,22.0s,baz=105,slow=32
comp=Z,8.3nm,1.0s
CMAR Chiang Mai Arr 93.02 288*i* P **P 15 45 54.2 +1.2**
CMAR pmax pmax
comp=Z,7.0nm,1.0s
CHTO Chiang Mai 93.11 289 P **P 15 45 53.9 +0.5**
comp=Z,11nm,1.0s
CHTO Chiang Mai 93.11 289 P **P 15 45 54.2 +0.8**
AGMN Agassiz Nation 93.11 41 IAmb IAmb 15 46 04.6
comp=Z,79nm,1.4s
VNA2 Neumayer--Watz 93.22 175 ⇑P **P 15 45 55.2 +2.2**
comp=Z,32nm,0.8s,baz=194,slow=3.6
VNA2 ⇓SKSac **SKSac 15 56 27.4 +1.1**
slow=4.7
VNA2 ⇑S **ScS 15 57 04.6 +3.7**
slow=4.2
I37A Lemond, Waseca 93.34 45 IAMs_20 IAMs_20 16 23 34.0
comp=Z,7µm,19.0s
VNA1 Neumayer--Stat 93.42 175 ⇑P **P 15 45 56.1 +2.3**
comp=Z,85nm,1.0s
LZH Lanzhou 93.60 306 P **P 15 45 56.8 +1.3**
LZH sP pwP 15 46 05.3 +2.6
LZH SKS **SKSac 15 56 30.3 +0.5**
LZH S **ScS 15 57 09.5 +4.0**
LZH pmax pmax
comp=Z,69nm,1.2s
LZH pmax pmax
comp=Z,2µm,5.2s
LZH L L
comp=Z,3µm,18.7s
LZH L L
comp=Z,4µm,19.1s
LZH L L
comp=Z,6µm,20.1s
LZDM Lanzhou Array 93.68 306 P **P 15 45 56.8 +0.7**
comp=Z,7.3nm,0.7s,baz=104,slow=6.3,SNR=12
comp=Z,7.3nm,0.7s
ULM Lac du Bonnet 93.77 39 P **P 15 45 55.2 -0.5**
comp=Z,18nm,1.2s,baz=245,slow=5.2,SNR=17
ULM LR LR 16 24 22.4
comp=Z,11µm,18.5s,baz=252,slow=33
comp=Z,18nm,1.2s
NVL N'lazarevskaya 93.89 182 *e*P **P 15 45 53.9 -2.1**
NVL *e* 15 49 50.9
NVL *e*S **SKSac 15 56 27.6 -2.2**
NVL pmax pmax
comp=Z,35nm,1.1s
NVL MLR MLR
comp=Z,2µm,16.0s
CFA Coronel Fontan 94.07 124 LR LR 16 18 35.6
comp=Z,6µm,20.9s,baz=246,slow=29
N41A Harden Midland 94.15 49 IAMs_20 IAMs_20 16 22 47.5
comp=Z,7µm,20.0s
BOD Bodaibo 94.22 329 *e*P **P 15 45 57.4 -0.2**
BOD pmax pmax
comp=Z,53nm,1.8s
L40A Anamosa 94.28 48 IAMs_20 IAMs_20 16 22 09.8
comp=Z,5µm,20.0s
OTAV Otavalo 94.44 91 P P 15 46 06.3 +6.0
S44A Carbondale 94.49 52 IAMs_20 IAMs_20 16 27 08.7
comp=Z,5µm,18.0s
PB14 IPOC Station P 94.66 117 P **P 15 46 05.4 +4.4**
ULN Ulaanbaatar 94.77 318*c i*P **P 15 46 01.3 +0.7**
ULN pmax pmax
comp=Z,52nm,1.3s
ULN MLR MLR
comp=Z,4µm,19.0s
ULN Ulaanbaatar 94.77 318 IAMs_20 IAMs_20 16 22 17.3
comp=Z,7µm,22.0s
P43A Skaggs, Pawnee 94.83 50 IAMs_20 IAMs_20 16 23 16.5
comp=Z,8µm,20.0s
TNCH TengChong 95.08 294 ⇓P **P 15 45 59.3 -3.3**
TNCH pP PcP 15 46 04.3 +1.4
TNCH PP **PP 15 49 50.1 -2.4**
TNCH SKS **SKSac 15 56 32.0 -6.3**
TNCH S **S 15 57 11.6 -5.8**
TNCH sS pS 15 57 23.9 -0.1
TNCH pmax pmax
comp=Z,47nm,1.4s
TNCH pmax pmax
comp=Z,2µm,9.1s
TNCH L L
comp=Z,1µm,19.1s
TNCH L L
comp=Z,2µm,20.4s
TNCH L L
comp=Z,5µm,18.6s
WVT Waverly 95.17 54 IAMs_20 IAMs_20 16 22 05.8
comp=Z,9µm,20.0s
SONM Songino Array 95.18 318 P **P 15 46 02.2 -0.3**
comp=Z,14nm,1.2s,baz=124,slow=2.3,SNR=49
SONM PP **PP 15 49 50.4 -2.3**
comp=Z,18nm,1.4s,baz=131,slow=2.2,SNR=9.4
SONM LR LR 16 23 49.2
comp=Z,7µm,21.9s,baz=114,slow=32
comp=Z,14nm,1.2s
SONM Songino Array 95.18 318 P **P 15 46 00.0 -2.4**
TIXI Tiksi 95.20 344 LR LR 16 24 23.5
comp=Z,7µm,21.2s,baz=138,slow=33
TIXI Tiksi 95.20 344*c i*P **P 15 46 01.8 0.0**
TIXI *i* *PP **pP 15 46 05.2 -1.7**
TIXI pmax pmax
comp=Z,20nm,1.0s
TIXI MLR MLR
comp=Z,4µm,18.0s
TIXI Tiksi 95.20 344 IAMs_20 IAMs_20 16 24 12.2
comp=Z,8µm,21.0s
JFWS Jewell Farm 95.21 47 IAMs_20 IAMs_20 16 23 37.4
comp=Z,7µm,20.0s
I40A Norwalk 95.22 46 IAMs_20 IAMs_20 16 23 17.8
comp=Z,7µm,20.0s
X48A Hartselle 95.35 56 IAMs_20 IAMs_20 16 21 59.7
comp=Z,8µm,21.0s
L42A Oliver, Polo 95.37 48 IAMs_20 IAMs_20 16 25 56.8
comp=Z,5µm,19.0s
EYMN Ely 95.78 42 IAMs_20 IAMs_20 16 23 32.6
comp=Z,8µm,20.0s
V48A Smith Brothers 95.86 55 IAMs_20 IAMs_20 16 24 25.1
comp=Z,8µm,20.0s
G40A Rib Lake 95.89 45 IAMs_20 IAMs_20 16 23 07.5
comp=Z,8µm,21.0s
TRQA Tornquist 96.31 132 IAMs_20 IAMs_20 16 20 16.4
comp=Z,6µm,21.0s
TRQA Tornquist 96.31 132 P P 15 46 14.1 +6.2
M44A Midewin, Midew 96.38 49 IAMs_20 IAMs_20 16 24 42.5
comp=Z,8µm,19.0s
I42A Draeger Farm, 96.41 46 IAMs_20 IAMs_20 16 23 46.2
comp=Z,8µm,20.0s
K43A Burlington 96.51 48 IAMs_20 IAMs_20 16 23 37.9
comp=Z,5µm,20.0s
PB12 IPOC Station P 96.67 111 IAMs_20 IAMs_20 16 21 16.2
comp=Z,8µm,19.0s
L44A Lake County Fo 96.67 48 IAMs_20 IAMs_20 16 28 13.3
comp=Z,5µm,19.0s
AP01 Chacalluta 96.74 111 IAMs_20 IAMs_20 16 18 41.9
comp=Z,7µm,22.0s
152A Waverly Hall 96.79 58 IAMs_20 IAMs_20 16 24 17.9
comp=Z,5µm,21.0s
SFIN Lafayette 96.82 50 IAMs_20 IAMs_20 16 23 21.2
comp=Z,7µm,20.0s
U49A Red Boiling Sp 96.87 54 IAMs_20 IAMs_20 16 24 46.6
comp=Z,8µm,20.0s
WCI Wyandotte Cave 96.89 52 IAMs_20 IAMs_20 16 23 11.2
comp=Z,7µm,21.0s
W50A Signal Mountai 96.92 56 IAMs_20 IAMs_20 16 24 19.2
comp=Z,5µm,21.0s
X51A Calhoun 97.13 56 IAMs_20 IAMs_20 16 23 37.8
comp=Z,8µm,21.0s
AF01 San Pedro de A 97.14 116 IAMs_20 IAMs_20 16 21 17.9
comp=Z,5µm,19.0s
PB08 IPOC Station P 97.23 113 IAMs_20 IAMs_20 16 20 12.0
comp=Z,7µm,21.0s
H43A Windswept, Lux 97.35 46 IAMs_20 IAMs_20 16 24 52.1
comp=Z,7µm,20.0s
FCC Fort Churchill 97.47 31 IAmb IAmb 15 46 13.4
comp=Z,47nm,1.6s
PB16 IPOC Station P 97.50 111 IAMs_20 IAMs_20 16 21 44.1
comp=Z,7µm,20.0s
GTA2 Gaotai 97.61 309 P Pdif 15 46 14.3 +0.5
GTA2 pP pwP 15 46 21.6 +0.8
GTA2 PP **PP 15 50 09.0 -2.6**
GTA2 SKS **SKSac 15 56 51.8 +1.0**
GTA2 S **S 15 57 34.8 -3.7**
GTA2 pmax pmax
comp=Z,30nm,1.9s
GTA2 pmax pmax
comp=Z,1µm,10.0s
GTA2 L L
comp=Z,3µm,21.6s
GTA2 L L
comp=Z,7µm,22.7s
GTA2 L L
comp=Z,11µm,22.0s
Y52A Lilburn 97.61 57 IAMs_20 IAMs_20 16 24 26.4
comp=Z,8µm,20.0s
IRK Irkutsk 97.73 322 *e*P **P 15 46 12.1 -1.7**
IRK *e*S **S 15 57 41.3 +2.6**
IRK pmax pmax
comp=Z,107nm,2.2s
R49A Shelbyville 97.76 53 IAMs_20 IAMs_20 16 23 38.3
comp=Z,8µm,21.0s
PB18 Visviri 97.77 111 IAMs_20 IAMs_20 16 21 35.1
comp=Z,5µm,20.0s
P48A Milroy 97.84 51 IAMs_20 IAMs_20 16 26 48.4
comp=Z,7µm,18.0s
TLY Talaya 97.96 321 LR LR 16 28 26.7
comp=Z,7µm,19.1s,baz=94,slow=34
TLY Talaya 97.96 321*c i*P **P 15 46 14.8 0.0**
TLY pmax pmax
comp=Z,22nm,1.1s
TLY MLR MLR
comp=Z,4µm,18.0s
N47A Urbana 97.97 50 IAMs_20 IAMs_20 16 24 06.8
comp=Z,8µm,21.0s
GOGA Godfrey 97.98 58 IAMs_20 IAMs_20 16 28 48.5
comp=Z,5µm,18.0s
W52A Murphy 98.00 56 IAMs_20 IAMs_20 16 23 41.7
comp=Z,6µm,21.0s
154A Montrose 98.10 58 IAMs_20 IAMs_20 16 23 57.6
comp=Z,6µm,22.0s
TKL Tuckaleechee C 98.25 55 LR LR 16 24 13.5
comp=Z,6µm,20.6s,baz=258,slow=32
BLKN Baker Lake 98.31 25 IAmb IAmb 15 46 16.9
comp=Z,68nm,1.5s
I45A Fountain 98.32 47 IAMs_20 IAMs_20 16 24 43.8
comp=Z,8µm,20.0s
R50A Paris 98.41 53 IAMs_20 IAMs_20 16 23 48.4
comp=Z,8µm,21.0s
S51A Beattyville 98.83 53 IAMs_20 IAMs_20 16 24 10.6
comp=Z,8µm,20.0s
V53A Saluda 99.01 56 IAMs_20 IAMs_20 16 24 15.6
comp=Z,6µm,21.0s
060A Indiantown 99.18 64 IAMs_20 IAMs_20 16 25 36.7
comp=Z,5µm,20.0s
Q51A Peebles 99.32 52 IAMs_20 IAMs_20 16 23 45.5
comp=Z,6µm,22.0s
LPAZ La Paz 99.41 110 P **Pdif 15 46 25.7 +2.8**
comp=Z,3.9nm,1.1s,baz=299,slow=4.3,SNR=7.5
LPAZ LR LR 16 21 56.2
comp=Z,3µm,21.9s,baz=262,slow=30
comp=Z,3.9nm,1.1s
LPAZ La Paz 99.41 110 P **Pdif 15 46 26.0 +3.1**
LPAZ La Paz 99.41 110 *e*P **Pdif 15 46 26.4 +3.5**
MOY Mondy 99.56 321 *e*P **Pdif 15 46 22.3 +0.2**
MOY pmax pmax
comp=Z,54nm,2.3s
ROSC El Rosal 99.62 88 LR LR 16 22 07.6
comp=Z,5µm,20.6s,baz=240,slow=30
AAM Ann Arbor 99.78 49 IAMs_20 IAMs_20 16 28 37.5
comp=Z,6µm,18.0s
M50A Fremont 100.04 50 IAMs_20 IAMs_20 16 25 59.5
comp=Z,8µm,20.0s
KMSC Kings Mountain 100.08 56 IAMs_20 IAMs_20 16 25 30.4
comp=Z,7µm,22.0s
Q52A Bidwell 100.13 52 IAMs_20 IAMs_20 16 26 03.0
comp=Z,6µm,20.0s
V55A Taylorsville 100.32 56 IAMs_20 IAMs_20 16 25 29.3
comp=Z,7µm,20.0s
NHSC New Hope 100.61 59 IAMs_20 IAMs_20 16 29 06.1
comp=Z,4µm,19.0s
Y57A Sumter 100.62 58 IAMs_20 IAMs_20 16 27 44.2
comp=Z,7µm,20.0s
S54A Dingess, Beckl 100.63 54 IAMs_20 IAMs_20 16 24 36.5
comp=Z,8µm,22.0s
O52A Adamsville 100.69 51 IAMs_20 IAMs_20 16 28 00.6
comp=Z,6µm,19.0s
I49A Point Hope 100.70 47 IAMs_20 IAMs_20 16 26 07.9
comp=Z,6µm,20.0s
GOMU GeErMu 100.72 305 P **Pdif 15 46 25.0 -3.0**
GOMU SS SS 16 05 00.0 -2.9
GOMU pmax pmax
comp=Z,9.0nm,0.8s
GOMU L L
comp=Z,1µm,20.6s
GOMU L L
comp=Z,2µm,20.0s
P53A Whipple 100.90 52 IAMs_20 IAMs_20 16 27 34.4
comp=Z,7µm,20.0s
U56A King 101.08 55 IAMs_20 IAMs_20 16 25 30.3
comp=Z,8µm,21.0s
Y58A Scranton 101.19 58 IAMs_20 IAMs_20 16 28 21.3
comp=Z,6µm,20.0s
Q54A Coxs Mills 101.23 53 IAMs_20 IAMs_20 16 25 47.1
comp=Z,6µm,21.0s
X58A Rowland 101.58 57 IAMs_20 IAMs_20 16 28 56.6
comp=Z,7µm,19.0s
O54A Avella 101.80 51 IAMs_20 IAMs_20 16 28 54.0
comp=Z,7µm,19.0s
V58A Windy Hill, Pi 101.99 56 IAMs_20 IAMs_20 16 25 26.4
comp=Z,6µm,22.0s
W59A Clinton 102.41 57 IAMs_20 IAMs_20 16 27 30.7
comp=Z,5µm,20.0s
ERPA Erie 102.42 50 IAMs_20 IAMs_20 16 29 25.4
comp=Z,5µm,19.0s
Q56A Snyder Ridge, 102.50 53 IAMs_20 IAMs_20 16 26 57.8
comp=Z,6µm,21.0s
R58B Mineral 103.33 54 IAMs_20 IAMs_20 16 26 40.9
comp=Z,8µm,22.0s
T59A Double "B" Far 103.43 55 IAMs_20 IAMs_20 16 27 24.5
comp=Z,8µm,21.0s
V61A Roper 104.02 56 IAMs_20 IAMs_20 16 26 48.2
comp=Z,6µm,22.0s
M57A Sunshine Farm, 104.42 51 IAMs_20 IAMs_20 16 28 27.3
comp=Z,6µm,20.0s
S61A Accomac 105.02 55 IAMs_20 IAMs_20 16 27 52.5
comp=Z,6µm,20.0s
K57A Scipio Center 105.05 49 IAMs_20 IAMs_20 16 28 55.1
comp=Z,7µm,20.0s
J57A Williamstown 105.51 49 IAMs_20 IAMs_20 16 27 29.2
comp=Z,7µm,22.0s
J59A Piesco 106.60 49 IAMs_20 IAMs_20 16 28 44.9
comp=Z,6µm,21.0s
LONY Lake Ozonia 106.66 48 IAMs_20 IAMs_20 16 28 56.4
comp=Z,6µm,21.0s
WMQ Urumqi 107.23 312 Pdif **Pdif 15 46 56.8 +0.5**
WMQ PP **PP 15 51 28.3 +4.7**
WMQ SKS **SKSac 15 57 37.8 +1.9**
WMQ PPMZ
comp=Z,1µm,5.9s
WMQ L L
comp=Z,2µm,18.7s
WMQ L L
comp=Z,1µm,22.5s
WMQ L L
comp=Z,2µm,24.1s
NRIK Noril'sk 107.73 338 PKiKP **PKiKP 15 51 07.0 +1.6**
comp=Z,1.4nm,0.5s,baz=166,slow=1.5,SNR=3.8
J61A Chester 108.01 49 IAMs_20 IAMs_20 16 29 06.0
comp=Z,5µm,21.0s
HNH Hanover 108.23 49 IAMs_20 IAMs_20 16 29 34.8
comp=Z,6µm,21.0s
ZSN Zaisan 109.43 315 *e*PKiKP **PKiKP 15 51 09.3 -0.1**
ZALV Zalesovo Beam 109.54 322 Pdiff **Pdif 15 47 06.0 -0.3**
comp=Z,1.1nm,0.7s,baz=73,slow=5.0,SNR=11
ZALV PKiKP **PKiKP 15 51 09.9 +0.7**
comp=Z,1.6nm,0.7s,baz=130,slow=1.2,SNR=5.3
ZALV PP **PP 15 51 35.0 -5.0**
comp=Z,1.0nm,0.7s,baz=238,slow=2.8,SNR=4.3
G62A West of Eustis 109.57 47 IAMs_20 IAMs_20 16 33 20.2
comp=Z,6µm,19.0s
SJG San Juan 110.35 76 IAMs_20 IAMs_20 16 30 10.6
comp=Z,4µm,20.0s
PKME Peaks-Kenny Pk 110.45 47 IAMs_20 IAMs_20 16 34 16.5
comp=Z,7µm,20.0s
F64A Sherman 111.12 46 IAMs_20 IAMs_20 16 33 12.2
comp=Z,6µm,21.0s
MK31 Makanchi Array 111.17 315*c i*PKiKP **PKiKP 15 51 12.0 -0.7**
MKAR Makanchi Array 111.17 315 Pdiff **Pdif 15 47 13.8 0.0**
comp=Z,1.8nm,1.1s,baz=104,slow=3.1,SNR=9.1
MKAR PKiKP **PKiKP 15 51 12.4 -0.3**
comp=Z,2.3nm,0.8s,baz=64,slow=2.8,SNR=12
MKAR PP PP 15 51 43.3 -8.9
comp=Z,2.2nm,1.0s,baz=98,slow=6.2,SNR=3.8
MKAR PKKPbc **PKKPbc 16 02 10.8 +0.6**
comp=Z,0.7nm,1.1s,baz=304,slow=2.2,SNR=3.5
MAKZ Makanchi 111.39 315 ⇓PKiKP **PKiKP 15 51 12.9 -0.2**
MAKZ Makanchi 111.39 315 IAMs_20 IAMs_20 16 32 44.3
comp=Z,4µm,22.0s
HYB Hyderabad 111.74 283 *e*Pdif **Pdif 15 47 14.0 -2.9**
HYB *e*SKSac **SKSac 15 57 51.5 -4.4**
SABA Saba 112.99 77 IAMs_20 IAMs_20 16 29 55.7
comp=Z,5µm,22.0s
SHLS Shalkode 113.18 311 *i*PKiKP **PKiKP 15 51 15.7 -1.0**
SHLS Shalkode 113.18 311 *e*PKiKP **PKiKP 15 51 15.7 -1.0**
SEUS St. Eustatius 113.22 77 IAMs_20 IAMs_20 16 30 02.7
comp=Z,4µm,22.0s
SMRT St. Maarten 113.22 77 IAMs_20 IAMs_20 16 36 47.7
comp=Z,4µm,19.0s
KURK Kurchatov 113.47 319 *i*PKiKP **PKiKP 15 51 17.1 +0.3**
UZB Uzynbulak 113.50 311 *i*PKiKP **PKiKP 15 51 16.9 -0.5**
UZB Uzynbulak 113.50 311 *e*PKiKP **PKiKP 15 51 16.9 -0.5**
KURBB Kurchatov Arra 113.54 319 Pdiff **Pdif 15 47 24.1 -0.1**
comp=Z,0.6nm,0.8s,baz=88,slow=3.9,SNR=11
KURBB PKiKP **PKiKP 15 51 17.1 +0.2**
comp=Z,5.4nm,1.1s,baz=88,slow=1.7,SNR=18
KURBB PP **PP 15 52 04.3 -4.5**
comp=Z,25nm,1.4s,baz=87,slow=7.7,SNR=12
KURBB PKKPbc **PKKPbc 16 02 03.0 +0.6**
comp=Z,0.7nm,1.0s,baz=251,slow=4.0,SNR=4.3
TDK Taldyqorghan 113.91 313 *e*PKiKP **PKiKP 15 51 17.7 -0.2**
TDK Taldyqorghan 113.91 313 *e*PKP **PKiKP 15 51 17.7 -0.2**
SATY Saty 113.96 311 *e*PKiKP **PKiKP 15 51 17.9 -0.3**
SATY Saty 113.96 311 *e*PKP **PKiKP 15 51 17.9 -0.3**
CBE Ff, Capester 114.27 79 IAMs_20 IAMs_20 16 32 16.7
comp=Z,4µm,21.0s
MAGL Barre de l'Ile 114.56 79 IAMs_20 IAMs_20 16 32 24.4
comp=Z,4µm,21.0s
MPOM Morne Pois Mar 114.69 81 IAMs_20 IAMs_20 16 31 16.2
comp=Z,4µm,21.0s
MDOK Medeo 114.95 311 *e*PKiKP PKPdf 15 51 19.7 -0.4
MDOK Medeo 114.95 311 *e*PKP PKPdf 15 51 19.7 -0.4
TNSS Tian-Shan 115.03 311 *e*PKiKP **PKiKP 15 51 19.9 -0.7**
TNSS Tian-Shan 115.03 311 *e*PKP **PKiKP 15 51 19.9 -0.7**
AAA Alma-Ata 115.04 311 *e*PKP **PKiKP 15 51 19.9 -0.3**
KSH2 Kashi 116.17 306 PKP **PKiKP 15 51 22.9 +0.3**
KSH2 PPMZ
comp=Z,1µm,8.5s
KSH2 L L
comp=Z,2µm,19.2s
KSH2 L L
comp=Z,4µm,20.7s
KSH2 L L
comp=Z,4µm,20.5s
SFJD Kangerlussuaq 116.56 22 IAMs_20 IAMs_20 16 34 44.5
comp=Z,4µm,20.0s
SGDS Sogindy 116.70 311 *e*PKP **PKPdf 15 51 23.1 -0.3**
AAK Ala-Archa 116.85 310 PKP **PKiKP 15 51 24.0 +0.2**
comp=Z,1.2nm,0.3s,baz=261,slow=1.6,SNR=8.2
AAK PP PP 15 52 24.2 -8.4
comp=Z,1.1nm,0.3s,baz=90,slow=7.8,SNR=4.0
AAK Ala-Archa 116.85 310 IAMs_20 IAMs_20 16 40 53.9
comp=Z,4µm,20.0s
BVAR Borovoye Array 118.20 322 PKP **PKiKP 15 51 26.3 +0.4**
comp=Z,5.6nm,0.7s,baz=64,slow=3.4,SNR=22
BVAR PP **PP 15 52 34.1 -7.3**
comp=Z,7.1nm,1.0s,baz=86,slow=4.8,SNR=8.0
BORK Borovoye 118.24 322*c i*PKiKP **PKPdf 15 51 25.8 -0.1**
BORK MLR MLR
comp=Z,6µm,19.0s
DZA Taraz 119.15 311 *e*PKiKP **PKPdf 15 51 27.7 -0.3**
DZA Taraz 119.15 311 *e*PKP **PKPdf 15 51 27.8 -0.3**
NTVB Natividade 119.49 113 PKP **PKPdf 15 51 28.5 -1.0**
IVI Ivigtut 119.93 27 IAMs_20 IAMs_20 16 40 04.6
comp=Z,5µm,19.0s
IUG luzhnay 120.18 310 *e*PKiKP **PKPdf 15 51 29.7 -0.5**
IUG luzhnay 120.18 310 *e*PKP **PKPdf 15 51 29.8 -0.5**

BRLS	**Borolday**	**120.22 311**	*e*PKIKP	**PKPdf**	**15 51 30.1**	**0.0**		
BRLS	**Borolday**	**120.22 311**	*e*PKP	**PKPdf**	**15 51 30.2**	**0.0**		
CHM	**Chimkent**	**120.48 310**	*e*PKIKP	**PKPdf**	**15 51 30.3**	**-0.3**		
CHM	**Chimkent**	**120.48 310**	*e*PKP	**PKPdf**	**15 51 30.4**	**-0.3**		
SMTB	**Santa Maria do**	**120.75 110**	PKP	**PKPdf**	**15 51 31.1**	**-0.9**		
CHGR	**Chuyangaron**	**121.19 306***c*	*i*PKIKP	**PKiKP**	**15 51 32.7**	**+0.4**		
CHGR			MLR	MLR				
	comp=Z,3μm,20.0s							
SDBA	**SAO DESIDERIO**	**121.62 115**	PKP	**PKiKP**	**15 51 34.4**	**+0.5**		
SJMB	**Sao Joao De Ma**	**121.64 124**	PKP	**PKPdf**	**15 51 33.6**	**0.0**		
PAL01	**Palmeiras do T**	**121.65 108**	PKP	**PKiKP**	**15 51 34.9**	**+1.0**		
ANGG	**Ammassalik, Gr**	**121.76 20**	IAMs_20	IAMs_20	16 41 17.1			
	comp=Z,5μm,20.0s							
ARTI	**Arti**	**123.74 328**	*i* PKIKP	**PKiKP**	**15 51 36.7**	**0.0**		
ARTI					15 53 16.7			
ARTI					15 58 40.9			
ARTI			SP	SP	16 03 07.4	-6.3		
ARTI			MLR	MLR				
	comp=Z,9μm,22.0s							
FOMA	**Nahampoana Res**	**123.99 225**	IAMs_20	IAMs_20	16 37 15.7			
	comp=Z,5μm,19.0s							
KEV	**Kevo**	**124.35 352**	IAMs_20	IAMs_20	16 45 53.8			
	comp=Z,5μm,21.0s							
ARCES	**ARCESS Array B**	**124.76 352**	PKP	**PKiKP**	**15 51 38.5**	**+0.1**		
	comp=Z,9.4nm,1.0s,baz=355,slow=2.7,SNR=8.3							
APA	**Apatity**	**125.22 348**	||*i*PKIKP	**PKPdf**	**15 51 37.1**	**-1.8**		
APA			pmax	pmax				
	comp=Z,10.0nm,1.1s							
APA			MLR	MLR				
	comp=Z,6μm,21.1s							
VOI	**Vohitsoka**	**126.12 227**	IAMs_20	IAMs_20	16 44 38.5			
	comp=Z,5μm,18.0s							
KIRV	**Kirov**	**126.80 334***c*	*i*PKIKP	**PKPdf**	**15 51 42.3**	**+0.1**		
ADZR	**Andozero**	**127.04 343**	*e*PKIKP	**PKPdf**	**15 51 37.6**	**-4.9**		
ADZR			pmax	pmax				
	comp=Z,52nm,1.5s							
BORG	**Borgarnes**	**127.15 15**	IAMs_20	IAMs_20	16 44 02.8			
	comp=Z,4μm,20.0s							
ABPO	**Ambohimpanom**	**127.62 230**	IAMs_20	IAMs_20	16 43 22.7			
	comp=Z,5μm,20.0s							
MSEY	**Mahe Island**	**127.99 251**	IAMs_20	IAMs_20	16 44 37.6			
	comp=Z,5μm,19.0s							
KLMR	**Klimovskoe**	**129.02 340**	*e*PKIKP	**PKPdf**	**15 51 45.2**	**-1.1**		
KLMR			*e*		15 53 52.6			
KLMR			SP	SP	16 04 00.0	+0.7		
KLMR			pmax	pmax				
	comp=Z,90nm,1.5s							
BELG	**Belogornoye**	**131.17 328***c*	*i*PKIKP	**PKPdf**	**15 51 50.9**	**+0.2**		
FINES	**FINESS Array B**	**132.12 348**	PKhKP	PKPpre	15 51 41.6			
	comp=Z,1.4nm,1.0s,baz=116,slow=8.7,SNR=3.8							
FINES			PKP	**PKPdf**	**15 51 52.4**	**+0.1**		
	comp=Z,3.5nm,0.8s,baz=333,slow=6.4,SNR=11							
BOSA	**Boshof**	**132.72 202**	PKP	**PKiKP**	**15 51 55.8**	**0.0**		
	comp=Z,7.3nm,1.1s,baz=129,slow=6.6,SNR=4.5							
UOSS	**Minazif**	**133.10 290**	PKP	**PKPdf**	**15 51 54.8**	**-0.4**		
MOS	**Moscow**	**133.49 337**	*i* PKIKP	**PKiKP**	**15 51 56.7**	**+0.5**		
MOS			*e*		15 54 22.0			
MOS			*e*PPP	PPP	15 57 17.5			
MOS			*e*		15 59 06.2			
MOS			*e*PS	PS	16 04 40.6	-1.1		
MOS			*e*SS	SS	16 12 03.7	-2.9		
MOS			pmax	pmax				
	comp=Z,113nm,1.8s							
MOS			pmax	pmax				
	comp=Z,300nm,1.8s							
OBN	**Obninsk**	**134.36 337***c*	*i*PKIKP	**PKPdf**	**15 51 56.8**	**+0.2**		
OBN			*e*PPP	PPP	15 57 22.6			
OBN			*e*		15 59 07.0			
OBN			*e*SS	SS	16 12 20.6	+3.6		
OBN			pmax	pmax				
	comp=Z,21nm,1.0s							
OBN			MLR	MLR				
	comp=Z,4μm,20.0s							
OBN	**Obninsk**	**134.36 337**	IAMs_20	IAMs_20	16 52 11.5			
	comp=Z,5μm,20.0s							
NB2	**NORSAR Subarra**	**134.42 357**	PKPdf	**PKPdf**	**15 51 56.7**	**0.0**		
	comp=Z,106nm,2.5s,baz=14,slow=1.8							
NB2	**NORSAR Subarra**	**134.42 357**	PKPdf	**PKPdf**	**15 51 56.7**	**0.0**		
NOA	**NORSAR Array B**	**134.42 357**	PKP	**PKPdf**	**15 51 57.2**	**+0.6**		
	comp=Z,2.3nm,0.9s,baz=14,slow=4.1,SNR=5.3							
VRH	**Novokhopyorsk**	**134.83 330**	*e*PKIKP	**PKPdf**	**15 51 57.6**	**0.0**		
VRH			pmax	pmax				
	comp=Z,10.0nm,1.1s							
VRH			MLR	MLR				
	comp=Z,6μm,22.0s							
HFS	**Hagfors**	**135.17 355**	PKhKP	PKPpre	15 51 53.0			
	comp=Z,5.2nm,0.9s,baz=57,slow=5.5,SNR=4.4							
LPSR	**Galich'ya Gora**	**135.20 333**	*e*PKIKP	**PKPdf**	**15 51 56.9**	**-1.4**		
LPSR			*e*		15 54 29.5			
LPSR			pmax	pmax				
	comp=Z,10.0nm,1.1s							
LPSR			MLR	MLR				
	comp=Z,5μm,21.0s							
VORR	**Voronezh**	**135.71 332**	*e*PKIKP	**PKPdf**	**15 51 57.6**	**-1.7**		
VORR			pmax	pmax				
	comp=Z,10.0nm,1.1s							
KONO	**Kongsberg**	**135.88 358**	IAMs_20	IAMs_20	16 59 25.1			
	comp=Z,3μm,19.0s							
MAK	**Makhachkala**	**135.93 317**	*i* P	**Pdif**	**15 49 00.8**	**-3.1**		
MAK			*i*		15 51 58.5			
MAK			*e*		15 54 37.0			
MAK			*e*PPP	PPP	15 57 35.4			
MAK			*e*		15 59 10.8			
MAK			*e*SS	SS	16 12 29.6	-7.6		
MAK			*e*SSS	SSS	16 17 39.6			
MAK			pmax	pmax				
	comp=Z,93nm,1.2s							
VSR	**Storozhevoye**	**136.04 331**	*e*PKIKP	**PKPdf**	**15 51 59.6**	**-0.3**		
VSR			*e*		15 54 34.3			
VSR			pmax	pmax				
	comp=Z,10.0nm,1.2s							
VSR			MLR	MLR				
	comp=Z,5μm,20.0s							
VORD	**Divnogorie**	**136.15 331**	*e*PKIKP	**PKPdf**	**15 51 59.4**	**-0.7**		
VORD			pmax	pmax				
	comp=Z,10.0nm,1.1s							
AKT	**Akhty**	**136.41 315**	*e*PKIKP	**PKPdf**	**15 52 00.6**	**-0.5**		
AKT			*e*		15 54 38.3			
AKT			*e*PPP	PPP	15 57 38.0			
AKT			*e*		15 59 13.7			
AKT			*e*PS	PS	16 04 59.9	-7.7		
AKT			*e*SS	SS	16 12 45.1	+1.8		
AKT			pmax	pmax				
	comp=Z,65nm,1.5s							
AKT			MLR	MLR				
	comp=Z,6μm,19.0s							
GOF	**Gofitskoye**	**137.72 322***ce*	PKIKP	**PKPdf**	**15 52 03.9**	**+0.7**		
MNK	**Minsk**	**137.83 342**	*i* PKiKP	**PKiKP**	**15 52 04.8**	**-0.3**		
MNK			*i* PKiKP	**PKiKP**	**15 52 04.8**	**-0.3**		
	comp=E,25nm,1.1s							
MNK			*i* PKiKP	**PKiKP**	**15 52 04.8**	**-0.3**		
	comp=N,18nm,1.0s							
MNK			*i* PKiKP	**PKiKP**	**15 52 04.8**	**-0.3**		
	comp=Z,37nm,1.2s,baz=31							
MNK			*i* PP	**PP**	**15 54 50.2**	**+0.4**		
MNK			*i* PPP	PPP	15 57 50.2			
MNK			*i* SKS	**SKSdf**	**15 59 08.7**	**-4.3**		
MNK			*i* SKKS	**SKKSdf**	**16 08 47.0**	**-3.0**		
MNK			*i* SS	**SS**	**16 13 02.5**	**+4.2**		
MNK			*i* SSS	SSS	16 18 10.0			
MNK			*i* LRM	MLR	16 51 59.0			
	comp=E,4μm,21.3s							
MNK			*i* LRM	MLR	16 52 10.5			
	comp=Z,6μm,21.2s							
MNK			*i* LRM	MLR	16 53 31.4			
	comp=N,3μm,19.7s							
MNK	**Minsk**	**137.83 342**	*i* PKIKP	**PKiKP**	**15 52 04.8**	**-0.3**		
MNK			*i*		15 54 50.1			
MNK			*i* PPP	PPP	15 57 50.1			
MNK			*i*		15 59 08.7			
MNK			*i* SS	SS	16 13 02.4	+4.1		
MNK			*i* SSS	SSS	16 18 09.9			
MNK			pmax	pmax				
	comp=E,25nm,1.1s							
MNK			pmax	pmax				
	comp=Z,37nm,1.2s							
MNK			pmax	pmax				
	comp=N,18nm,1.0s							
MNK			MLR	MLR				
	comp=E,4μm,21.0s							
MNK			MLR	MLR				
	comp=Z,6μm,21.0s							
MNK			MLR	MLR				
	comp=N,3μm,20.0s							
KBZ	**Khabaz**	**138.51 320**	PKP	**PKPdf**	**15 52 03.9**	**-0.8**		
	comp=N,1.9nm,0.9s,baz=78,slow=3.1,SNR=6.9							
KBZ			PP	PP	15 54 46.3	-8.4		
	comp=N,4.3nm,1.1s,baz=33,slow=6.8,SNR=4.7							
KBZ	**Khabaz**	**138.51 320**	*i* PKIKP	**PKiKP**	**15 52 06.6**	**-0.2**		
KBZ			MLR	MLR				
	comp=Z,5μm,23.0s							
KIV	**Kislovodsk**	**138.53 321**	*i* PKIKP	**PKPdf**	**15 52 05.5**	**+0.6**		
KIV			*e*		15 54 54.0			
KIV			*e*PPP	PPP	15 57 54.2			
KIV			*e*		15 59 11.4			
KIV			*e*SS	SS	16 13 09.1	+1.0		
KIV			pmax	pmax				
	comp=Z,10.0nm,1.0s							
KIV	**Kislovodsk**	**138.53 321**	PKP	**PKPdf**	**15 52 05.7**	**+0.8**		
ERBR	**Yeremizino-Bor**	**138.84 324**	*i* PKIKP	**PKPdf**	**15 52 04.8**	**-0.5**		
ERBR			pmax	pmax				
	comp=E,69nm,1.6s							
ERBR			MLR	MLR				
	comp=N,4μm,20.0s							
ERBR			MLR	MLR				
	comp=E,6μm,21.0s							
ERBR			MLR	MLR				
	comp=E,4μm,19.0s							
GNI	**Garni**	**139.02 314**	IAMs_20	IAMs_20	16 56 50.5			
	comp=Z,4μm,21.0s							
LABN	**Labinsk**	**139.33 323**	*i* PKIKP	**PKPdf**	**15 52 06.5**	**+0.3**		
LABN			*e*		15 54 56.4			
LABN			pmax	pmax				
	comp=Z,22nm,0.5s							
LABN			MLR	MLR				
	comp=E,6μm,20.0s							
LABN			MLR	MLR				
	comp=Z,8μm,22.0s							
LABN			MLR	MLR				
	comp=N,7μm,20.0s							
EKA	**Eskdalemuir Ar**	**139.48 9**	PKP	**PKPdf**	**15 52 05.2**	**-0.9**		
	comp=N,2.6nm,0.9s,baz=305,slow=2.9,SNR=4.3							
SUW	**Suwalki**	**139.54 345**	*e*PKP	**PKPdf**	**15 51 59.0**	**-7.2**		
SOC	**Sochi**	**140.53 322**	*e*PKHKP	PKPpre	15 52 01.5			
SOC			*e*PPP	PPP	15 58 07.8			
SOC			*e*SS	SS	16 13 35.9	+4.7		
SOC			*e*SSS	SSS	16 18 48.7			
SOC			pmax	pmax				
	comp=Z,15nm,0.8s							
SOC			MLR	MLR				
	comp=Z,5μm,22.0s							
AK03	**Malin Array Si**	**140.56 338**	PKP	**PKPdf**	**15 52 05.0**	**-3.2**		
AKASG	**Malin Array Be**	**140.58 338**	PKP	**PKPdf**	**15 52 06.5**	**-1.8**		
	comp=Z,0.7nm,0.4s,baz=42,slow=3.0,SNR=12							
AKASG			PP	**PP**	**15 54 59.8**	**-7.1**		
	comp=Z,0.1nm,0.3s,baz=36,slow=4.8,SNR=6.1							
AKBB	**Malin Array Si**	**140.58 338**	PKP	**PKPdf**	**15 52 05.2**	**-3.0**		
KIEV	**Kiev**	**140.59 338**	PKP	**PKPdf**	**15 52 05.2**	**-3.1**		
RGN	**Rugen**	**140.73 354**	IAMs_20	IAMs_20	16 58 02.9			
	comp=Z,4μm,20.0s							
GEVA	**Geas**	**141.00 313**		**PKPdf**	**15 52 04.7**	**-5.0**		
ANN	**Anapa**	**141.11 325**	*i* PKIKP	**PKPdf**	**15 52 06.7**	**-2.7**		
ANN			*e*		15 55 09.1			
ANN			pmax	pmax				
	comp=Z,26nm,1.1s							
ANN			MLR	MLR				
	comp=N,6μm,21.0s							
ANN			MLR	MLR				
	comp=Z,3μm,20.0s							
ANN			MLR	MLR				
	comp=E,3μm,21.0s							
GKP	**Gorka Klasztor**	**141.46 350**	*e*PKP	**PKPdf**	**15 52 09.5**	**-0.2**		
BSEG	**Bad Segeberg**	**141.56 357**	*e*L	L	17 00 32.5			
	comp=E,3μm,19.8s							
R9F13	**Warsaw-Wawer**	**141.68 346**	*e*PKP	**PKiKP**	**15 52 11.9**	**-1.1**		
BEL	**Belsk**	**142.12 346**	*e*PKP	**PKPdf**	**15 52 07.5**	**-3.5**		
SIM	**Simferopol'**	**142.78 328**	*e*PKHKP	PKPpre	15 52 01.9			
SIM			pmax	pmax				
	comp=Z,12nm,1.0s							
RETH	**Rethem/Aller,**	**142.80 358**	*e*PKPbc	**PKPdf**	**15 52 08.3**	**-3.8**		
	baz=7.5,slow=3.3							
RAYN	**Ar Rayn**	**142.94 289**	||PKIKP	**PKPdf**	**15 52 11.3**	**-2.1**		
SORM	**Soroca**	**143.00 336**	||P	**PKPdf**	**15 52 09.1**	**-3.6**		
SORM	**Soroca**	**143.00 336**	||PKIKP	**PKPdf**	**15 52 09.1**	**-3.6**		
FLTG	**Flechtingen**	**143.10 356**	*e*PKPbc	PKPbc	15 52 09.1	-0.4		
	baz=7.5,slow=3.3							
IBBN	**Ibbenburen**	**143.28 359**	*e*PKPbc	PKPbc	15 52 10.4	+0.4		
	baz=7.5,slow=3.3							
ASSE	**Asse, Remlinge**	**143.34 356**	*e*PKPbc	PKPbc	15 52 10.1	0.0		
	baz=7.5,slow=3.3							
KWP	**Kalwaria Pacla**	**143.63 343**	*e*PKP	PKPbc	15 52 11.5	+0.4		
CLZ	**Clausthal**	**143.65 356**	*e*PKPbc	PKPbc	15 52 11.0	-0.1		
	baz=7.5,slow=3.3							
CMLA	**Cha da Macela**	**143.72 46**	IAMs_20	IAMs_20	16 53 00.4			
	comp=Z,4μm,19.0s							
OJC	**Ojcow**	**143.85 346**	*e*PKP	PKPab	15 52 11.5	+0.4		
OJC	**Ojcow**	**143.85 346**	PKIKP	PKPab	15 52 10.9	-0.2		
OJC	**Ojcow**	**143.85 346**	PKPdf	PKPab	15 52 10.9	-0.3		
ARPR	**Arapgir-MALATY**	**143.87 317**	IAMs_20	IAMs_20	17 01 01.9			
	comp=Z,3μm,20.0s							
CLL	**Collm**	**143.96 354**	*i* PKIKP	PKPbc	15 52 12.7	+0.7		
CLL			*i*		15 52 17.2			
CLL			pmax	pmax				
	comp=Z,48nm,1.3s							
CLL			MLR	MLR				
	comp=Z,5μm,19.7s							
CLL	**Collm**	**143.96 354**	*e*PKPbc	PKPab	15 52 11.9	+0.4		
	baz=7.5,slow=3.3							
CLL			*e*L	L	16 59 58.2			
	comp=Z,5μm,19.7s							
CLL	**Collm**	**143.96 354**	*i* PKPdf	PKPbc	15 52 12.7	+0.7		
	comp=Z,48nm,1.3s							
CLL			*e*PKPlp		15 52 14.0			
	comp=Z,1μm,18.2s							
CLL			*i* PKiKP	**PKiKP**	**15 52 17.2**	**-0.5**		
CLL			*i* x	x	15 52 23.8			
CLL			*e*PP	**PP**	**15 55 26.0**	**-1.0**		
CLL			*i* x	x	15 55 40.5			
CLL			*e*PPP	PPP	15 58 36.0			
CLL			*e*SKKSac	SKKSac	16 02 20.0	+0.2		
CLL			*e*Sdif	**Sdif**	**16 04 06.0**	**+1.3**		
CLL			*e*PSKS		16 05 36.0			
CLL			*e*PPS	PPS	16 07 54.0			
CLL			*e*x	x	16 09 18.0			
CLL			*e*SS	**SS**	**16 14 06.0**	**-3.5**		
CLL			*e*x	x	16 16 06.0			
CLL			*e*SSS	SSS	16 19 32.0			
CLL			*e*x	x	16 22 18.0			
CLL			AMS	AMS	16 57 00.0			
	comp=N,4μm,21.5s							
CLL			AMS	AMS	16 57 00.0			
	comp=E,2μm,20.1s							
CLL			AMS	AMS	16 59 00.0			
	comp=Z,5μm,19.7s							
KSP	**Ksiaz**	**143.96 350**	*e*PKP	PKPbc	15 52 13.1	+1.0		
GTTG	**Gottingen**	**143.97 357**	*e*PKPbc	PKPbc	15 52 12.2	+0.1		
	baz=7.5,slow=3.3							
TSUM	**Tsumeb**	**143.98 197**	PKPdf	**PKPdf**	**15 52 15.3**	**-0.2**		
BUG	**Bochum--Univer**	**144.15 360**	*e*PKPbc	**PKPab**	**15 52 12.5**	**+0.3**		
	baz=7.5,slow=3.3							
STHS	**Stebnicka Huta**	**144.23 344**	*e*PKIKP	PKPbc	15 52 13.3	+0.3		
STHS	**Stebnicka Huta**	**144.23 344**	*e*PKP	PKPbc	15 52 13.3	+0.3		
CHVC	**Chvalec**	**144.25 350**	AMS	AMS	16 58 40.0			
	comp=Z,5μm,21.0s							
OSTC	**Ostas**	**144.25 350**	*e*PKIKP	PKPbc	15 52 13.9	+0.9		
OSTC			*e*SS	SS	16 14 09.7	-3.3		
OSTC			MLR	MLR				
	comp=Z,5μm,20.9s							
OSTC	**Ostas**	**144.25 350**	*e*PKP	PKPbc	15 52 13.9	+0.9		
OSTC			*e*SS	SS	16 14 09.7	-3.3		
OSTC			AMS	AMS	16 54 20.0			
	comp=Z,5μm,20.9s							
BRG	**Berggiesshubel**	**144.28 352**	*e*PKPbc	**PKPab**	**15 52 13.0**	**+0.3**		
	baz=7.5,slow=3.3							
BRG	**Berggiesshubel**	**144.28 352**	||*e*PKPf		15 52 13.2		
BRG			Amp		15 52 16.2			
	comp=Z,13nm,1.3s							
BRG	**Berggiesshubel**	**144.28 352**	P	**PKiKP**	**15 52 20.4**	**+2.0**		
BRG			Amp		15 52 23.1			
	comp=Z,22nm,1.2s							
BRG	**Berggiesshubel**	**144.28 352**	PP	PP	15 55 25.0	-3.9		
BRG			Amp		15 55 38.5			
	comp=Z,13nm,1.3s							
UPC	**Upice**	**144.33 350**	*e*PKIKP	**PKPdf**	**15 52 16.2**	**+1.2**		
UPC			*e*SS	SS	16 14 10.5	-3.4		
UPC			MLR	MLR				
	comp=Z,5μm,20.8s							
UPC	**Upice**	**144.33 350**	*e*PKP	**PKPdf**	**15 52 16.2**	**+1.2**		
UPC			*e*SS	SS	16 14 10.5	-3.4		
UPC			AMS	AMS	16 58 50.0			
	comp=Z,5μm,20.8s							
RAC	**Raciborz**	**144.33 348**	*e*PKP	**PKPab**	**15 52 13.1**	**+0.2**		
RAC	**Raciborz**	**144.33 348**	*e*PKIKP	**PKPab**	**15 52 13.1**	**+0.2**		
RAC			MLR	MLR				
	comp=Z,6μm,20.9s							
KASTN	**Kahler Asten**	**144.37 358**	*e*PKPbc	**PKPab**	**15 52 13.3**	**+0.2**		
	baz=7.5,slow=3.3							
KOLS	**Kolonicke sedl**	**144.39 343**	*e*PKIKP	**PKPdf**	**15 52 14.5**	**-0.6**		
KOLS	**Kolonicke sedl**	**144.39 343**	*e*PKP	**PKPdf**	**15 52 14.5**	**-0.6**		
DPC	**Dobruska-Polom**	**144.43 350**	*e*PKIKP	PKPbc	15 52 14.5	+0.9		
DPC			MLR	MLR				
	comp=Z,6μm,22.0s							
DPC	**Dobruska-Polom**	**144.43 350**	*e*PKP	PKPbc	15 52 14.5	+0.9		
DPC			AMS	AMS	16 54 30.0			
	comp=Z,6μm,22.0s							
NIE	**Niedzica**	**144.47 345**	*e*PKP	**PKPdf**	**15 52 14.7**	**-0.5**		
KIBK	**Kibwezi**	**144.55 243**	PKP	**PKPdf**	**15 52 17.0**	**+0.5**		
KIBK			PKP	PKPbc	15 52 17.1	+1.9		
STEB	**Steborice**	**144.56 348**	*e*PKP	PKPbc	15 52 14.5	+0.5		
STEB			*ex*	x	15 52 29.0			
OKC	**Ostrava-Krasne**	**144.57 348**	*e*PKIKP	PKPbc	15 52 14.7	+0.7		
OKC			*e*SS	SS	16 14 10.8	-5.9		
OKC			MLR	MLR				
	comp=Z,4μm,19.8s							
OKC	**Ostrava-Krasne**	**144.57 348**	*e*PKP	PKPbc	15 52 14.7	+0.7		
OKC			*e*SS	SS	16 14 10.8	-5.9		
OKC			AMS	AMS	16 55 40.0			
	comp=Z,4μm,19.8s							
RICC	**Richard**	**144.58 352**	AMS	AMS	17 01 20.0			
	comp=Z,5μm,18.6s							
HSKC	**Hora Svate Kat**	**144.60 353**	*e*PKP	**PKiKP**	**15 52 17.6**	**-1.5**		
HSKC			AMS	AMS	17 08 00.0			
	comp=Z,4μm,17.6s							
BURAR	**Bucovina Array**	**144.60 339**	||P	PKPbc	15 52 14.6	+0.3		
BURAR	**Bucovina Array**	**144.60 339**	||PKIKP	PKPbc	15 52 14.6	+0.3		
BURAR	**Bucovina Array**	**144.60 339**	PKPdf	PKPbc	15 52 14.7	+0.4		
KRLC	**Kraliky**	**144.61 349**	*e*PKIKP	PKPbc	15 52 14.7	+0.4		
KRLC	**Kraliky**	**144.61 349**	*e*PKP	PKPbc	15 52 14.7	+0.5		
UBBA	**Unterbreizbach**	**144.69 357**	*e*PKPbc	**PKPab**	**15 52 14.3**	**+0.2**		
	baz=7.5,slow=3.3							
GIRR	**Girov**	**144.69 337**	||P	PKPbc	15 52 14.9	+0.4		
UCC	**Uccle**	**144.73 3**	*d*PKP	**PKPab**	**15 52 13.8**	**-0.5**		
MOX	**Moxa**	**144.75 355**	*e*PKPbc	**PKPab**	**15 52 14.6**	**+0.1**		
	baz=7.5,slow=3.3							
MOX			*e*L	L	17 00 09.2			
	comp=Z,4μm,20.4s							
MORC	**Moravsky Berou**	**144.75 348**	||P	**PKPdf**	**15 52 15.5**	**-0.3**		
MORC	**Moravsky Berou**	**144.75 348**	||PKIKP	**PKPdf**	**15 52 15.5**	**-0.3**		
MORC	**Moravsky Berou**	**144.75 348**	PKPdf	PKPbc	15 52 14.9	+0.2		
MORC	**Moravsky Berou**	**144.75 348**	*e*PKP	PKPbc	15 52 15.1	+0.4		
MORC			*e*		15 52 26.0			
BEBN	**Eben Emael**	**144.78 1**	*d*PKPdf	**PKPab**	**15 52 14.7**	**+0.1**		
BZK	**Bozkurt**	**144.84 324**	||P	**PKPdf**	**15 52 16.4**	**+0.3**		
BIZ	**Bicaz**	**144.85 337**	||P	**PKPdf**	**15 52 16.2**	**+0.2**		
PLN	**Plauen**	**144.86 354**	*e*PKPbc	**PKPab**	**15 52 15.0**	**+0.1**		
	baz=7.5,slow=3.3							
TANN	**Tannenbergstha**	**144.90 354**	*e*PKPbc	**PKPab**	**15 52 15.2**	**+0.1**		
	baz=7.5,slow=3.3							
LANS	**Liptovska Anna**	**144.93 346**	*e*PKIKP	**PKPdf**	**15 52 16.6**	**+0.5**		
LANS	**Liptovska Anna**	**144.93 346**	*e*PKP	**PKPdf**	**15 52 16.6**	**+0.5**		
ATD	**Arta Tunnel**	**144.96 268**	IAMs_20	IAMs_20	16 54 10.4			
	comp=Z,3μm,19.0s							
VLDR	**Vladesti**	**144.96 334**	||P	**PKPdf**	**15 52 16.0**	**-0.2**		
MEM	**Membach**	**144.97 1**	*d*PKP	**PKPab**	**15 52 14.9**	**-0.4**		
BSTI	**Sart Tilman**	**144.99 2**	*d*PKP	**PKPab**	**15 52 15.4**	**+0.1**		
BTNL	**Ternell**	**145.00 1**	*d*PKP	PKPbc	15 52 15.7	+0.3		
TESR	**Tescani**	**145.00 336**	||P	**PKPab**	**15 52 15.4**	**-0.1**		
PRU	**Pruhonice**	**145.06 351**	*e*PKIKP	**PKPdf**	**15 52 16.1**	**-0.1**		
PRU			*e*SS	SS	16 14 19.1	-3.1		
PRU			MLR	MLR				
	comp=Z,7μm,22.3s							
PRU	**Pruhonice**	**145.06 351**	*e*PKP	**PKPdf**	**15 52 16.1**	**-0.1**		
PRU			*e*SKKS		16 02 27.9			
PRU			*e*SS	**SS**	**16 14 19.1**	**-3.1**		
PRU			AMS	AMS	16 54 40.0			
	comp=Z,7μm,22.3s							
GHRR		**145.06 335**	||P	**PKPdf**	**15 52 17.0**	**+0.6**		
NKC	**Novy Kostel**	**145.08 354**	AMS	AMS	17 00 20.0			
	comp=Z,5μm,19.9s							
MAUC	**Maruska**	**145.09 348**	*e*PKP	**PKPdf**	**15 52 16.5**	**+0.2**		
MAUC			*e*SS	SS	16 14 20.2	-2.5		
BMR	**Baia Mare**	**145.13 340**	||P	**PKPdf**	**15 52 16.4**	**0.0**		
BMR	**Baia Mare**	**145.13 340**	||PKIKP	**PKPdf**	**15 52 16.4**	**0.0**		
BCLA	**Clavier**	**145.14 2**	*d*PKP	**PKPbc**	**15 52 15.6**	**-0.3**		
TLCR		**145.16 333**	||P	**PKPdf**	**15 52 17.1**	**+0.6**		
TLCR		**145.16 333**	||PKIKP	**PKPdf**	**15 52 17.1**	**+0.6**		
TATR	**Tatarca

KHC ex x 15 52 29.1
KHC eSKKS 16 02 33.0
KHC ex x 16 05 47.2
KHC eSS SS 16 14 30.8 -2.5
KHC AMS AMS 17 00 10.0
comp=Z,8μm,19.9s
NEHR Nehoiu 146.03 335 ⇓P PKPab 15 52 19.6 +0.2
EFOR EFORIE 146.10 332 ⇓P PKPab 15 52 20.2 +0.6
WET Wettzell 146.10 353 ePKPbc PKPab 15 52 19.5 0.0
baz=7.5,slow=3.3
WET eL L 16 58 55.0
comp=Z,5μm,21.5s
MLR Muntele Rosu 146.12 336 ⇓P PKPab 15 52 20.0 +0.1
MLR Muntele Rosu 146.12 336 ⇓PKP2 PKPab 15 52 20.0 +0.1
MARR Marisel-Cluj 146.13 340 ⇓P PKPbc 15 52 19.5 +0.2
MODS Modra-Piesok 146.14 348 ePKP2 PKPab 15 52 20.2 +0.5
MODS Modra-Piesok 146.14 348 ePKP PKPab 15 52 20.2 +0.5
MODS e 15 54 42.6
MDB Medias 146.16 338 ⇓P PKPab 15 52 20.3 +0.5
MDB Medias 146.16 338 ⇓PKP2 PKPab 15 52 20.3 +0.5
DRGR 146.16 340 ⇓P PKPdf 15 52 18.8 +0.5
DRGR 146.16 340 ⇓PKP2 PKPdf 15 52 18.8 +0.5
CVDA Cernavoda 146.17 332 ⇑P PKPab 15 52 20.9 +1.0
ISR Istrita 146.19 335 ⇓P PKPab 15 52 20.3 +0.2
ISR Istrita 146.19 335 ⇓PKP2 PKPab 15 52 20.3 +0.2
BORR Bors 146.19 342 ⇓P PKPab 15 52 20.4 +0.5
CKRC Cesky Krumlov 146.24 351 ePKP2 PKPbc 15 52 19.5 +0.1
CKRC Cesky Krumlov 146.24 351 ePKP PKPbc 15 52 19.5 +0.1
CKRC eSKKS 16 02 31.4
CKRC AMS AMS 16 55 20.0
comp=Z,6μm,21.9s
AMRR Amara 146.26 333 ⇓P PKPab 15 52 20.9 +0.7
AMRR Amara 146.26 333 ⇓PKP2 PKPab 15 52 20.9 +0.7
GEC2 GERESS Array S 146.30 352 ePKPbc PKPbc 15 52 19.7 +0.1
baz=7.5,slow=3.3
GEC2 eL L 17 01 51.9
comp=Z,6μm,20.2s
GERES GERESS Array B 146.30 352 PKPbc PKPbc 15 52 19.5 -0.2
comp=Z,51nm,1.1s,baz=8.1,slow=1.9,SNR=151
MANR Mangalia 146.32 331 ⇑P PKPab 15 52 20.9 +0.4
ICOR Ion Corvin 146.45 332 ⇑P PKPab 15 52 21.5 +0.5
SRO Srobarova 146.45 346 ePKP2 PKPab 15 52 21.2 +0.4
SRO Srobarova 146.45 346 ePKP PKPab 15 52 21.2 +0.4
BR131 Keskin Array S 146.48 321 PKP2 PKPbc 15 52 21.0 +0.5
BR131 Keskin Array S 146.48 321 PKPdf PKPbc 15 52 21.0 +0.5
BRTR Keskin Array B 146.48 321 PKPbc PKPbc 15 52 20.6 0.0
comp=Z,204nm,1.1s,baz=125,slow=1.7,SNR=181
BRTR Keskin Array B 146.48 321 PKP2 PKPab 15 52 21.6 +0.1
BRTR Keskin Array B 146.48 321 PKPdf PKPab 15 52 21.6 +0.1
VOIR 146.51 337 ⇓P PKPab 15 52 21.3 0.0
VOIR 146.51 337 ⇓PKP2 PKPab 15 52 21.3 0.0
LEHL Lehliu 146.59 334 ⇓P PKPab 15 52 21.6 +0.1
TNR Turnu Rosu 146.62 338 ⇓P PKPbc 15 52 21.1 +0.5
TNR Turnu Rosu 146.62 338 ⇓PKP2 PKPbc 15 52 21.1 +0.5
WINA Alland / Wiene 146.63 349 i PKP PKPdf 15 52 19.9 +0.9
SNR=57
SULR 146.66 335 ⇓P PKPab 15 52 22.2 +0.5
PSN Preselentsi 146.67 332 P PKPdf 15 52 19.9 +0.7
KIRS Kirsehir-Merke 146.67 320 ⇑P PKPbc 15 52 21.1 0.0
ARR Arges 146.73 337 ⇑P PKPbc 15 52 20.6 -0.4
STU Stuttgart 146.77 357 IAMs_20 IAMs_20 16 55 54.2
comp=Z,3μm,20.0s
STU Stuttgart 146.77 357 ePKPbc PKPbc 15 52 21.5 +0.6
baz=7.5,slow=3.3
CONA Conrad Observa 146.85 349 i PKP PKPdf 15 52 19.2 -0.3
comp=Z,3μm,4.4s,SNR=67
DEV Deva 146.90 339 ⇓P PKPbc 15 52 22.1 +0.8
DEV Deva 146.90 339 ⇓PKP2 PKPbc 15 52 22.1 +0.8
SIRR Siria 146.96 341 ⇓P PKPdf 15 52 20.5 +0.9
RONA Rosalia, Austr 146.98 348 i PKP PKPdf 15 52 19.9 +0.3
comp=Z,3μm,4.1s,SNR=65
AMBH Ambrzfalva 147.17 342 ⇑P PKPab 15 52 23.3 -0.4
MOA Molln 147.19 351 i PKP PKPdf 15 52 20.2 +0.2
comp=Z,3μm,4.3s,SNR=52
FUR Furstenfeldbru 147.24 355 ePKPbc PKPbc 15 52 22.9 +0.7
baz=7.5,slow=3.3
FUR eL L 16 59 36.7
comp=Z,5μm,21.2s
BFO Black Forest 147.24 358 IAMs_20 IAMs_20 17 07 10.6
comp=Z,3μm,18.0s
BFO Black Forest 147.24 358 ePKPbc PKPbc 15 52 22.9 +0.7
baz=7.5,slow=3.3
BFO eL L 17 02 43.5
comp=Z,3μm,21.6s
SAHE Sakarya_HENDEK 147.34 325 ⇓P PKPbc 15 52 23.8 +1.0
GZR Gura Zlata 147.37 339 ⇑P PKPbc 15 52 22.8 0.0
GZR Gura Zlata 147.37 339 ⇑PKP2 PKPbc 15 52 22.8 0.0
PRD Provadia 147.37 332 P PKPdf 15 52 21.1 +0.8
ECH Echery 147.38 360 IAMs_20 IAMs_20 16 57 03.8
comp=Z,4μm,21.0s
MDUB Mudurnu 147.41 325 PKPbc PKPab 15 52 24.2 -0.8
BIOA Bad Ischl, Aus 147.44 352 i PKP PKPdf 15 52 20.1 -0.3
comp=Z,2μm,4.9s,SNR=38
RAZG Razgrad 147.45 333 ⇑P PKPbc 15 52 23.8 +0.8
RJOB Jochberg 147.50 353 ePKPbc PKPbc 15 52 23.6 +0.6
baz=7.5,slow=3.3
COPA Copaceanca 147.53 335 ⇑P PKPbc 15 52 23.7 +0.6
BZS Buzias 147.56 341 ⇓P PKPdf 15 52 21.4 +0.8
BZS Buzias 147.56 341 ⇓PKIKP PKPdf 15 52 21.4 +0.8
ARSA Arzberg 147.56 349 i PKP PKPdf 15 52 20.4 -0.2
comp=Z,2μm,5.1s,SNR=53
SILT Sile 147.78 327 ⇓P PKPbc 15 52 24.7 +0.7
LESA Schwarzleotal 147.82 353 i PKP PKPdf 15 52 21.0 -0.1
comp=Z,3μm,5.4s,SNR=40
SESA Seetaler Alpe, 147.86 350 i PKP PKPdf 15 52 20.6 -0.7
comp=Z,2μm,3.2s,SNR=73
MORH Mrgy, Hungar 147.86 345 ⇑P PKPdf 15 52 21.7 +0.7
MORH Mrgy, Hungar 147.86 345 ⇑iP PKPdf 15 52 21.1 0.0
SZH Strazhitsa 147.93 333 P PKPdf 15 52 21.5 +0.2
SZH Strazhitsa 147.93 333 P PKPdf 15 52 21.8 +0.5
HERR Herculane 147.94 339 ⇓P PKPbc 15 52 25.0 +0.8
RETA Reutte 147.95 355 i PKP PKPdf 15 52 20.6 -0.7
comp=Z,524nm,2.3s,SNR=41
VLAD Vladila 147.97 336 ⇓P PKiKP 15 52 26.1 -0.1
WATA Walderalm 148.03 354 i PKP PKPdf 15 52 21.4 -0.1
comp=Z,1μm,3.7s,SNR=20
BEHE Becsehely 148.06 347 ⇑iP PKPdf 15 52 21.9 +0.5
MOTA Moosalm 148.07 355 i PKP PKPdf 15 52 21.7 +0.1
comp=Z,1μm,3.7s,SNR=58
KBA Koelnbreinsper 148.08 352 i PKP PKPdf 15 52 21.3 -0.4
comp=Z,642nm,3.4s,SNR=44
WTTA Wattenberg 148.10 354 i PKP PKPdf 15 52 21.8 +0.1
comp=Z,549nm,2.3s,SNR=44
ASF Jabal al Asfar 148.16 307 P PKiKP 15 52 26.6 -0.5
SQTA Sankt Quirin 148.18 355 i PKP PKPdf 15 52 21.5 -0.2
comp=Z,1μm,3.8s,SNR=38
SOKA Soboth 148.20 349 i PKP PKPdf 15 52 21.3 -0.4
comp=Z,3.2nm,0.5s,SNR=68
DAVA Damuels 148.22 356 i PKP PKPdf 15 52 21.7 -0.1
comp=Z,0.3nm,0.2s,SNR=32
MDVR Moldovita 148.27 340 ⇑P PKPbc 15 52 25.8 +0.6
JMB Yambol 148.30 332 P PKPdf 15 52 22.4 +0.5
JMB Yambol 148.30 332 P PKPdf 15 52 23.0 +1.1
FURI Furi 148.38 262 IAMs_20 IAMs_20 16 51 52.7
comp=Z,4μm,22.0s
PLVB Pleven 148.39 335 ⇑P PKPdf 15 52 23.3 +1.3
FETA Feichten 148.42 355 i PKP PKPdf 15 52 22.4 +0.2
comp=Z,1μm,3.6s,SNR=37
OBKA Obir 148.45 350 i PKP PKPdf 15 52 21.7 -0.5
comp=Z,784nm,3.6s,SNR=11
MYKA Terra Mystica 148.47 351 i PKP PKPdf 15 52 21.9 -0.3
comp=Z,296nm,2.3s,SNR=18
ABTA Abfaltersbach 148.51 353 i PKP PKPdf 15 52 21.8 -0.5
comp=Z,436nm,2.7s,SNR=32
FRGS Fruska Gora 148.52 343 ⇑iP PKPdf 15 52 22.5 +0.3
VALD Valchedram 148.60 337 P PKPdf 15 52 23.7 +1.4
GEM Giv'at Ha'Em 148.65 309 P PKiKP 15 52 28.9 +0.9
HSUJ Al Zarqa 148.74 307 P PKPbc 15 52 27.6 +0.8
MPEP Malo Peshtene 148.77 336 P PKPdf 15 52 23.2 +0.5
FUORN Ofenpass-Fuorn 148.85 356 IAMs_20 IAMs_20 17 02 38.6
comp=Z,4μm,20.0s
LJU Ljubljana 148.90 350 ePKPbc PKPdf 15 52 23.1 +0.3
CRNS Crni Vrh 148.91 350 i PKPbc PKPdf 15 52 22.9 +0.1
MMAI Mount Meron Ar 148.93 309 PKPbc PKPbc 15 52 27.9 +0.6
comp=Z,118nm,1.1s,baz=114,slow=3.7,SNR=39
STAL STALIGIAL 148.96 352 PKPdf 15 52 23.4 +0.4
DIM Dimitrovgrad 149.08 333 P PKPbc 15 52 27.8 +0.5
QRNJ Al-Qirein 149.11 308 P PKiKP 15 52 28.9 0.0
TEKS Tekeris 149.16 342 ⇑iP PKPdf 15 52 23.2 -0.1
BAND Balkesir-Ban 149.17 328 ⇑P PKPbc 15 52 28.1 +0.5
BOJS Bojanci 149.29 349 ePKPbc PKPdf 15 52 24.4 +1.0
CTI Castel Tesino 149.30 354 PKIKP PKPdf 15 52 23.3 -0.3
CTI Castel Tesino 149.30 354 PKPdf 15 52 23.3 -0.3
UJAP Al Uja 149.36 307 P PKiKP 15 52 29.2 -0.2

PLD Plovdiv 149.36 334 P PKPdf 15 52 23.4 -0.3
SALP Salfit 149.52 308 P PKiKP 15 52 30.2 +0.3
KDZ Kurdzhali 149.52 332 P PKPdf 15 52 24.1 +0.2
KDZ Kurdzhali 149.52 332 P PKPdf 15 52 24.2 +0.3
GHAJ Ghor Haditha 149.56 306 IAMs_20 IAMs_20 17 02 02.8
comp=Z,4μm,21.0s
GHAJ Ghor Haditha 149.56 306 P PKPdf 15 52 26.1 +1.9
VTS Vitosha 149.59 336 P PKPdf 15 52 24.7 +0.5
VTS Vitosha 149.59 336 P PKPdf 15 52 24.4 +0.2
BLY Banja Luka 149.60 346 ⇓P PKiKP 15 52 29.6 0.0
BLY Banja Luka 149.60 346 PKPbc 15 52 29.0 +0.5
BLY Banja Luka 149.60 346 ⇑iP PKPdf 15 52 24.2 +0.3
LODK Lodwar 149.62 250 IAMs_20 IAMs_20 16 51 34.7
comp=Z,3μm,22.0s
PLNA Plana 149.64 336 P PKPdf 15 52 23.6 -0.6
LISJ El Lisan 149.65 306 P PKPbc 15 52 26.9 -2.1
MSBI Mazada 149.71 306 P PKPdf 15 52 26.9 +2.4
RZN Rozhen 149.74 333 P PKPdf 15 52 24.2 -0.3
RZN Rozhen 149.74 333 P PKPdf 15 52 24.6 +0.1
ALN Alexandroupoli 149.78 331 P PKPdf 15 52 23.2 -1.1
RDO Rodhopi 149.82 331 P PKPdf 15 52 23.3 -1.1
BBLS Lazi&#263i 149.82 342 ⇑iP PKPdf 15 52 24.8 +0.4
ENEZ Enez 149.85 330 P PKPbc 15 52 27.1 -2.1
HSNJ Maan 149.88 304 P PKPbc 15 52 27.7 -2.1
AMAZ Amatzia 149.96 307 P PKPbc 15 52 29.8 -0.1
SJES Sjenica 150.19 341 ⇑iP PKPdf 15 52 25.3 +0.2
MMB Musomishta 150.28 334 P PKPdf 15 52 24.9 -0.3
MMB Musomishta 150.28 334 P PKPdf 15 52 24.7 -0.5
KKB Krupnik 150.29 335 P PKPdf 15 52 25.2 0.0
KKB Krupnik 150.29 335 P PKPdf 15 52 24.7 -0.4
SMTH Samothraki Isl 150.35 331 P PKPdf 15 52 24.8 -0.5
GADA Gvkgeada 150.39 330 P PKPdf 15 52 24.9 -0.4
NVR Nevrokopi 150.40 334 P PKPdf 15 52 24.9 -0.5
KAVA Kavala 150.40 333 P PKPdf 15 52 24.9 -0.4
EZN Ezine 150.47 329 P PKPdf 15 52 24.9 -0.5
SACV Santiago Islan 150.47 87 IAMs_20 IAMs_20 16 51 34.5
comp=Z,3μm,21.0s
HRFI Mount Harif 150.48 304 P PKPdf 15 52 27.1 +1.3
PGAV Gavieira, Arco 150.52 24 ePKPab PKiKP 15 52 31.6 -0.1
PGAV ePP PP 15 56 05.2 -0.8
PGAV eSS SS 16 15 23.2 -1.3
PGAV eLR LR 16 49 26.5
PGAV i IAMs_20 IAMs_20 16 55 07.6
comp=Z,7μm,20.0s
UPM Unac-Piva 150.57 342 eP PKPbc 15 52 29.3 -1.9
AQBJ Aqaba 150.59 304 P PKPdf 15 52 27.6 +1.6
THAS Thassos island 150.62 332 P PKPdf 15 52 25.1 -0.5
KZIT Kziot 150.63 306 P PKiKP 15 52 32.7 +0.5
EIL Elat 150.69 304 P PKPdf 15 52 28.1 +2.0
KLINJ Klinje 150.70 343 eP PKPdf 15 52 28.2 +2.3
SRS Serrai 150.70 334 P PKPdf 15 52 24.8 -1.0
PCAB Cabril 150.83 23 ePKPab PKPbc 15 52 32.1 +0.5
PRK Paraskevi 150.93 328 P PKPdf 15 52 25.4 -0.8
VAY Valandovo 150.95 335 i P PKPbc 15 52 32.0 +0.1
KNT Kendrikon 150.95 335 P PKPdf 15 52 25.5 -0.7
BRY Bratogost 150.96 342 ⇑iP PKPbc 15 52 31.7 -0.3
LIA Limnos Island 150.97 330 P PKPdf 15 52 25.5 -0.7
SOH Sokhos 151.05 334 P PKPdf 15 52 25.6 -0.8
PTO Porto 151.09 25 ePKPab PKiKP 15 52 33.1 +0.3
BLCB Balcova 151.17 325 P PKiKP 15 52 33.1 -0.8
PDG Podgorica 151.17 341 ⇓P PKPbc 15 52 32.3 0.0
PDG Podgorica 151.17 341 ⇑iP PKPdf 15 52 25.7 -0.7
OUR Ouranopolis 151.17 332 P PKPdf 15 52 25.8 -0.7
TREB Trebinje 151.18 342 eP PKPbc 15 52 32.8 +0.4
POLO Lamas de Olo 151.21 24 ePKPbc PKPdf 15 52 27.6 +0.9
POLO ePKPab PKiKP 15 52 33.6 +0.5
POLO eSS SS 16 15 39.0 +1.7
POLO ePP PP 15 55 57.9 -12
PBRG Braganca 151.22 22 ePKPab PKPbc 15 52 33.0 +0.4
PVRL Vila Real 151.32 24 ePKPab PKiKP 15 52 34.5 +1.2
GRG Griva 151.33 335 P PKPdf 15 52 26.0 -0.8
HORT Hortiatis 151.34 334 P PKPdf 15 52 27.4 +0.5
YER Yerkesik 151.35 323 P PKPdf 15 52 28.4 +1.4
THE Thessaloniki 151.37 334 P PKPbc 15 52 31.1 -1.7
PLG Polygyros 151.38 333 P PKPdf 15 52 29.6 +2.7
DRME Dracevica, Mon 151.41 341 ⇑iP PKPdf 15 52 26.5 -0.4
PHP Peshkopia 151.44 339 P PKPdf 15 52 27.1 +0.1
PAIG Paliouri 151.64 332 P PKPdf 15 52 27.4 +0.2
MVO Moncorvo 151.68 23 ePKPab PKiKP 15 52 34.6 +0.5
MVO eSS SS 16 15 39.0 +1.7
MVO eLR LR 16 48 13.6
MVO i IAMs_20 IAMs_20 16 56 15.1
comp=Z,4μm,20.0s
CHOS Chios island 151.69 327 P PKPdf 15 52 28.6 +1.1
PVIS Viseu 151.73 24 ePKPbc PKPbc 15 52 31.4 -2.4
PVIS ePP PP 15 56 12.6 -0.4
OHR Ohrid 151.81 338 i P PKiKP 15 52 34.9 +0.5
BODT Bodrum 151.96 324 P PKPdf 15 52 29.0 +1.1
LIT Litokhoron 152.01 334 P PKPdf 15 52 27.0 -0.9
PCAS Casmilo, Conde 152.04 26 ePKPbc PKPdf 15 52 31.1 +3.2
PCAS ePKPab PKPbc 15 52 34.7 +0.3
ARG Arkhangelos 152.07 322 P PKPbc 15 52 33.1 -1.5
PMOZ Porto Moniz, M 152.09 48 ePKPdf PKPdf 15 52 23.2 -5.1
PMOZ ePP PP 15 55 34.7 +6.6
PMOZ eSS SS 15 58.7 +15
PMOZ i IAMs_20 IAMs_20 16 53 39.8
comp=Z,4μm,20.0s
KZN Kozani 152.13 335 P PKPdf 15 52 28.5 +0.4
MTE Manteigas 152.14 24 ePKPbc PKPdf 15 52 30.6 +2.5
MTE ePKPab sPKPdf 15 52 35.4 +0.8
MTE eSS SS 16 15 45.7 +3.4
MTE eLR LR 16 50 23.3
MTE i IAMs_20 IAMs_20 16 55 23.5
comp=Z,5μm,20.0s
AOS Alonnisos 152.16 331 P PKPdf 15 52 28.6 +0.5
XOR Xorichti 152.31 332 P PKPdf 15 52 28.7 +0.4
NEO Neokhori 152.35 332 P PKPdf 15 52 28.8 +0.4
PSBE So Bento 152.36 27 ePKPdf PKPdf 15 52 17.1 -11
FUL Funchal 152.40 48 ePKPdf PKPdf 15 52 25.9 -2.7
KYMI Kymi, Euboea I 152.48 330 P PKPdf 15 52 29.0 +0.4
PENT Pentalofos 152.48 336 P PKPdf 15 52 29.0 +0.3
PMPST Porto Santo, M 152.56 46 ePKPdf PKPdf 15 52 24.1 -4.8
PSARD Sardoal 152.56 26 ePKPab PKiKP 15 52 36.5 +0.7
KPRO Kipourio 152.60 336 P PKPdf 15 52 29.2 +0.4
PMAFR Mafra 152.60 28 ePKPbc PKPbc 15 52 33.0 -2.7
PCBR Castelo Branco 152.65 25 ePKPab PKiKP 15 52 36.8 +0.7
THL Klokotos Trika 152.66 334 P PKPdf 15 52 27.8 -0.9
AQU L'Aquila 152.68 350 PKP PKPdf 15 52 28.4 -0.4
AQU L'Aquila 152.68 350 ⇑iP PKPdf 15 52 27.6 -1.2
LIS Lisbon 152.85 28 ePKPdf PKPdf 15 52 27.7 -1.4
LIS IAMs_20 IAMs_20 16 54 24.2
comp=N,5μm,29.9s
LIS Lisbon 152.85 28 ePKIKP PKPdf 15 52 27.7 -1.4
ATAL Atalanti 152.94 332 P PKPdf 15 52 28.3 -0.9
AGG Agios Georgios 152.98 333 P PKPdf 15 52 28.5 -0.8
PMTG Montargil 152.98 27 ePKPbc PKPbc 15 52 33.4 -3.1
LKR Lokris 152.98 332 P PKPdf 15 52 28.5 -0.8
DION Dionisos Attik 153.00 330 P PKPdf 15 52 28.5 -0.9
PMRV Marv??o 153.03 25 ePKPdf PKPdf 15 52 30.1 +0.8
PMRV ePP PP 15 56 19.7 -0.6
PMRV eSS SS 16 15 60.0 +7.9
PMRV eLR LR 16 50 13.5
PMRV i IAMs_20 IAMs_20 17 07 09.0
comp=N,4μm,20.0s
AXAR Agios Charalam 153.04 332 P PKPdf 15 52 28.6 -0.8
PTL Penteli 153.05 330 P PKPdf 15 52 28.7 -0.8
PRMD Pramanda 153.07 335 P PKPdf 15 52 29.3 -0.1
KARP Karpathos 153.09 322 P PKPdf 15 52 29.4 -0.3
KARP Karpathos 153.09 322 IAMs_20 IAMs_20 17 04 25.6
comp=Z,3μm,21.0s
TETR Tetrakomo, Epi 153.15 335 P PKPdf 15 52 29.9 +0.2
ATHU Athens Univers 153.16 330 P PKPdf 15 52 31.1 +1.5
ATH Athens Observa 153.19 330 P PKPdf 15 52 31.0 +1.4
VILL Villia 153.23 331 P PKPdf 15 52 31.3 +1.6
VLY Voula,Athens 153.24 329 P PKPdf 15 52 31.3 +1.6
PARRA Arraiolos 153.27 27 ePKPdf PKPdf 15 52 30.2 +0.5
PARRA ePKPab PKPab 15 52 49.4 +0.4
EVR Evrytania 153.29 334 P PKPdf 15 52 29.9 0.0
IGT Igoumenitsa 153.36 337 P PKPdf 15 52 30.1 +0.3
MOE Montemor 153.38 28 ePKPdf PKPdf 15 52 30.1 +0.2
MOE ePKPab PKPab 15 52 50.0 +0.6
KEK Kerkira 153.41 338 P PKPdf 15 52 30.2 +0.3
PESTR Estremoz 153.42 26 ePKPab PKPab 15 52 50.0 +0.4
THERA Ancient Thera, 153.49 325 P PKPdf 15 52 30.2 +0.1
LTK Loutraki 153.50 331 P PKPdf 15 52 30.3 +0.2
ANX Ano Chora 153.51 333 P PKPdf 15 52 30.3 +0.1
EVO Evora 153.52 27 PKP PKPdf 15 52 31.2 +1.2
EVO Evora 153.52 27 ePKPdf PKPdf 15 52 30.8 +0.8
AMPL Ampelaki 153.54 335 P PKPdf 15 52 30.4 +0.3
KALE Kalithea 153.58 333 P PKPdf 15 52 30.5 +0.2
SERG Sergoula 153.60 333 P PKPdf 15 52 31.5 +1.3

EFP Efpalio 153.66 333 P PKPdf 15 52 30.3 0.0
PVO Paravola 153.66 334 P PKPdf 15 52 30.3 0.0
UCM Universidad Co 153.72 18 PKP PKPdf 15 52 31.9 +1.5
PLOUS Minas do Lousa 153.74 28 ePKPbc PKPdf 15 52 34.0 +3.6
EBAD Badajoz 153.76 25 PKP PKPdf 15 52 31.0 +0.6
GUR Goura 153.86 332 P PKPdf 15 52 30.7 0.0
KLV Kalavryta, Ach 153.86 332 P PKPdf 15 52 30.6 -0.1
LKD2 Lefkada island 153.88 335 P PKPdf 15 52 30.7 +0.1
PLEV Plevrona-Mesol 153.88 334 P PKPdf 15 52 30.7 +0.1
MESJ Messejana 153.99 28 ePKPdf PKPdf 15 52 29.3 -1.5
MESJ eSS SS 16 16 01.3 -1.4
MESJ IAMs_20 IAMs_20 16 53 53.8
comp=Z,5μm,21.9s
MESJ Messejana 153.99 28 ePKPdf PKPdf 15 52 31.3 +0.6
MESJ Messejana 153.99 28 ePKIKP PKPdf 15 52 29.3 -1.5
MESJ eSS SS 16 16 01.3 -1.5
PTEO Sao Teotonio 154.00 29 ePKPbc PKPdf 15 52 35.0 +4.2
PBEJ Beja 154.00 28 ePKPdf PKPdf 15 52 31.5 +0.7
EVGI Lefkada island 154.02 335 P PKPdf 15 52 30.9 +0.1
ESDC Sonseca Array 154.07 20 PKP PKPdf 15 52 31.4 +0.5
comp=Z,1.1nm,0.9s,baz=17,slow=2.2,SNR=8.4
ESDC PKPbc PKiKP 15 52 40.1 +1.1
comp=Z,10nm,1.3s,baz=334,slow=2.1,SNR=12
ESDC PKPab PKPab 15 52 50.9 -1.5
comp=Z,7.3nm,1.1s,baz=327,slow=2.0,SNR=11
AXS Araxos 154.08 333 P PKPdf 15 52 31.0 +0.1
DRO Drossia 154.13 333 P PKPdf 15 52 31.1 +0.1
MORF Marmelete 154.22 30 ePKPdf PKPdf 15 52 29.6 -1.6
MORF eSS SS 16 16 03.5 -1.9
MORF IAMs_20 IAMs_20 17 05 08.2
comp=E,4μm,14.1s
MORF Marmelete 154.22 30 ePKIKP PKPdf 15 52 29.6 -1.6
MORF eSS SS 16 16 03.5 -1.9
PBAR Barrancos 154.24 26 PKP PKPdf 15 52 32.2 +1.1
PBAR Barrancos 154.24 26 ePKPdf PKPdf 15 52 31.5 +0.4
PCVE Castro Verde 154.25 28 PKP PKPdf 15 52 31.9 +0.8
PCVE PKP pPKPdf 15 52 32.5 -3.5
PCVE Castro Verde 154.25 28 ePKPbc PKPdf 15 52 32.4 +1.3
PFVI Vila Bisbo 154.28 30 ePKPdf PKPdf 15 52 31.8 +0.6
VLK Vlachokerasia 154.30 331 P PKPdf 15 52 31.5 -0.1
VLS Valsamata 154.43 335 P PKPdf 15 52 31.5 +0.1
AMT Artemida-Makis 154.48 332 P PKPdf 15 52 31.6 +0.1
VLI Veliai 154.55 329 P PKPdf 15 52 31.7 +0.1
EGRO El Granado 154.58 28 PKP PKPdf 15 52 33.1 +1.5
PVAQ Vaqueiros 154.58 28 ePKPbc PKPdf 15 52 35.9 +4.3
PVAQ ePP PP 15 56 28.1 -1.1
PVAQ eSS SS 16 16 11.1 +2.0
PVAQ eLR LR 16 47 21.4
PVAQ i IAMs_20 IAMs_20 16 54 27.2
comp=E,5μm,22.0s
IDI Anoyia 154.60 324 PKP PKPdf 15 52 32.4 +0.6
IDI Anoyia 154.60 324 P PKPdf 15 52 31.7 -0.1
PBDV Barranco-do-Ve 154.61 29 PKP PKPdf 15 52 33.5 +1.8
PBDV Barranco-do-Ve 154.61 29 ePKPbc PKPdf 15 52 33.4 +1.7
LTHK Lithakia 154.72 334 P PKPdf 15 52 31.8 0.0
EMIN Mina Concepcio 154.73 26 PKP PKPdf 15 52 33.2 +1.4
KTHA Kythira Island 154.85 328 P PKPdf 15 52 32.3 +0.2
VAM Vamos 154.90 325 P PKPdf 15 52 32.3 +0.2
TIP Timpagrande 154.91 342 ⇓P PKPdf 15 52 32.7 +0.6
IMMV Iera Moni Meta 154.97 326 P PKPdf 15 52 32.5 +0.2
ECAB El Cabril 154.98 24 PKP PKPdf 15 52 33.3 +1.1
ECAB PKP pPKPdf 15 52 33.7 -3.4
ECHE Chera 155.00 15 PKP PKPdf 15 52 33.7 +1.5
ANKY Antikythira Is 155.03 327 P PKPdf 15 52 32.5 +0.3
EADA Adamuz 155.21 22 PKP PKPdf 15 52 33.6 +1.1
KNDR Palaiochora Ch 155.34 326 P PKPdf 15 52 33.0 +0.3
ETOS Mallorca 155.55 8 PKP PKPdf 15 52 33.8 +0.9
MAHO Mahon 155.58 5 PKP PKPdf 15 52 33.5 +0.6
ESPR Espera 155.84 26 PKP PKPdf 15 52 35.0 +1.6
EIBI Ibiza 156.04 11 PKP PKPdf 15 52 34.7 +1.2
CNIL Conil 156.18 27 PKP PKPdf 15 52 34.4 +0.7
EMAL Malaga-Limoner 156.51 24 PKP PKPdf 15 52 36.4 +2.2
EMIJ Mijas 156.54 24 PKP PKPdf 15 52 35.1 +0.8
TLOR Lorca, Murcia 156.63 18 PKP PKPdf 15 52 35.9 +1.6
ELGU Los Guajares, 156.71 22 PKP PKPdf 15 52 35.8 +1.2
CART Cartagena 156.88 16 PKP PKPdf 15 52 36.9 +2.2
CART Cartagena 156.88 16 IAMs_20 IAMs_20 17 07 39.5
comp=Z,3μm,19.0s
AVE Averroes 157.99 34 PKP PKPdf 15 52 38.2 +2.0
WMELI Melilla 158.34 23 PKP PKPdf 15 52 37.6 +1.1
IFR Ifrane 158.97 29 PKP PKPdf 15 52 39.5 +1.9
KEST Kesra 159.74 354 PKP PKPdf 15 52 40.2 +1.9
comp=Z,6.4nm,1.1s,baz=180,slow=1.0,SNR=3.7
KEST PKPab PKPab 15 53 17.4 +0.5
comp=Z,11nm,1.1s,baz=343,slow=1.0,SNR=7.8
TIO Tiouine 159.84 38 PKP PKPdf 15 52 40.1 +1.4
DBIC Dimbokro 165.43 126 PKP PKPdf 15 52 44.5 0.0
comp=Z,14nm,1.1s,baz=236,slow=3.8,SNR=3.8
DBIC PKPab PKPab 15 53 43.7 +1.3
comp=Z,11nm,0.9s,baz=247,slow=2.9,SNR=4.3
DBIC Dimbokro 165.43 126 ⇓PKIKP PKPdf 15 52 44.7 +0.3
DBIC Dimbokro 165.43 126 PKP PKPdf 15 52 44.6 +0.2
TORD Torodi Ar. Bea 174.35 114 PKP PKPdf 15 52 48.8 -0.7
comp=Z,12nm,1.2s,baz=318,slow=1.6,SNR=28
TORD PKPab PKPab 15 54 23.0 +1.0
comp=Z,18nm,1.1s,baz=261,slow=3.7,SNR=7.6
TORD PP PP 15 58 15.6 +1.3
comp=Z,6.1nm,1.2s,baz=314,slow=3.7,SNR=4.5

*RSNC **18** 15:35:31.8±0.0, 7°N±1°×7°3W×, h144km±1km, M1.8, ML1.6*
*FUNV **18** 15:35:31.5, 7°.35N×73°.14W, h25km, MW3.0, Presumed earthquake*
ISC 18 15:35:28.9±2.0, **6°.82N**±0°.06×**72°.99W**±0°.06, **h158**km±12km, **n15**, σ1°**85**/26, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**221**	P	Pn	Pn	**15 35 51.1**	**+0.4**
BARC				S	Sn	Sn	**15 36 06.4**	**-0.9**
PAMC	**Pamplona, Colo**	**0.59**	**29**	P	Pn	Pn	**15 35 54.1**	**+1.9**
PAMC				S	Sn	Sn	**15 36 11.2**	**+1.2**
BRJC	**Barrancabermej**	**0.77**	**282**	P	Pn	Pn	**15 35 52.8**	**+0.1**
BRJC				S	Sn	Sn	**15 36 10.3**	**-0.6**
RUSC	**La Rusia**	**0.92**	**186**	P	Pn	Pn	**15 35 55.2**	**+0.8**
RUSC				S	Sn	Sn	**15 36 14.2**	**+0.3**
RUSC	**La Rusia**	**0.92**	**186**	eP	Pn	Pn	**15 35 55.9**	**+1.4**
RUSC				eS	Sn	Sn	**15 36 13.5**	**-0.5**
OCAC	**Ocana**	**1.45**	**347**	P	Pn	Pn	15 36 07.6	+8.9
PTBC	**PUERTO BERRIO,**	**1.49**	**259**	P	Pn	Pn	**15 35 57.8**	**-1.1**
PTBC				S	Sn	Sn	**15 36 18.6**	**-3.4**
SPBC	**San Pablo de B**	**1.58**	**223**	P	Pn	Pn	**15 36 00.2**	**+0.2**
SPBC				S	Sn	Sn	**15 36 21.9**	**-2.1**
NORC	**Norcasia**	**2.25**	**236**	P	Pn	Pn	**15 36 07.3**	**-0.2**
NORC				S	Sn	Sn	**15 36 35.0**	**-2.2**
CHIC	**Chingaza**	**2.30**	**199**	P	Pn	Pn	**15 36 09.4**	**+1.0**
CHIC				S	Sn	Sn	**15 36 38.9**	**0.0**
HELC	**Santa Helena**	**2.60**	**256**	P	Pn	Pn	**15 36 13.3**	**+1.3**
HELC				S	Sn	Sn	**15 36 44.3**	**-1.0**
HELC	**Santa Helena**	**2.60**	**256**	eP	Pn	Pn	**15 36 11.2**	**-0.8**
HELC				eS	Sn	Sn	**15 36 42.4**	**-2.9**
UREC	**San Jos de Ur**	**2.69**	**290**	P	Pn	Pn	**15 36 17.0**	**+4.2**
GUY2C	**Guyana, Caldas**	**2.85**	**236**	P	Pn	Pn	**15 36 17.3**	**+2.1**
GUY2C				S	Sn	Sn	**15 36 53.2**	**+2.3**
SDV	**Santo Domingo**	**3.11**	**48**	eP	Pn	Pn	**15 36 16.2**	**-1.9**
SDV				eS	Sn	Sn	15 36 48.0	-8.3

*SJA **18** 15:43:02.4±0.7, 21°.38S×66°.54W, h270km±7km, ML3.7, MW3.4*
*SCB **18** 15:43:04.2±1.3, 21°.40S×66°.57W, h241km±14km, MB5.2, ML3.9/2, Error ellipse: s-maj=5.9km s-min=4.4km az=0.0*
ISC 18 15:43:05.5±1.2, **21°.32S**±0°.05×**66°.55W**±0°.05, **h219**km, **n36**, σ1**s43**/51, **Southern

GO01	**Chusmiza**	**2.98**	**303**	*eP*	**Pn**	**15 43 57.3**	**+0.8**
GO01				*eS*	**S**	**15 44 38.2**	**+2.2**
GO01				IAML		15 44 44.4	
	comp=Z,57nm,0.1s						
GO01	**Chusmiza**	**2.98**	**303**	P	**Pn**	**15 43 57.5**	**+1.1**
SOEO	**Opoqueri**	**3.02**	**335**	P	**Pn**	**15 43 58.4**	**+1.4**
PB03	**IPOC Station P**	**3.07**	**256**	*eP*	**Pn**	**15 43 57.3**	**+0.2**
PB03				*eS*	**S**	**15 44 36.7**	**-0.6**
PB03				IAML		15 44 37.5	
	comp=Z,89nm,0.3s						
PB02	**IPOC Station P**	**3.12**	**269**	*eP*	**Pn**	**15 43 57.9**	**+0.2**
PB02				*eS*	**S**	**15 44 37.5**	**-0.8**
PB02				IAML		15 44 38.9	
	comp=Z,184nm,0.1s						
PB02	**IPOC Station P**	**3.12**	**269**	P	**Pn**	**15 43 58.0**	**+0.3**
PB02				S	**S**	**15 44 37.5**	**-0.8**
PB02				IAML		15 44 37.7	
	comp=Z,172nm,0.3s						
PB06	**IPOC Station P**	**3.12**	**243**	*eP*	**Pn**	**15 43 57.9**	**+0.2**
PB06				*eS*	**S**	**15 44 38.8**	**+0.3**
PB06				IAML		15 44 39.9	
	comp=Z,44nm,0.3s						
PB06	**IPOC Station P**	**3.12**	**243**	P	**Pn**	**15 43 58.1**	**+0.3**
PB07	**IPOC Station P**	**3.13**	**262**	*eP*	**Pn**	**15 43 58.0**	**+0.1**
PB07				*eS*	**S**	**15 44 38.3**	**-0.4**
PB07				IAML		15 44 40.3	
	comp=Z,78nm,0.1s						
PB11	**IPOC Station P**	**3.30**	**298**	*eP*	**Pn**	**15 44 00.1**	**+0.2**
PB11				*eS*	**S**	**15 44 42.3**	**+0.1**
PB11				IAML		15 44 43.9	
	comp=Z,144nm,0.2s						
PB11	**IPOC Station P**	**3.30**	**298**	P	**Pn**	**15 44 00.1**	**+0.2**
PB11				S	**S**	**15 44 42.1**	**-0.1**
PB11				IAML		15 44 44.2	
	comp=Z,230nm,0.2s						
TA02	**Huaiquique**	**3.51**	**287**	*eP*	**Pn**	**15 44 02.2**	**+0.1**
TA02				*eS*	**S**	**15 44 44.8**	**-1.5**
TA02				IAML		15 44 47.1	
	comp=Z,277nm,0.1s						
PB05	**IPOC Station P**	**3.71**	**245**	*eP*	**Pn**	**15 44 04.5**	**-0.2**
PB05				*eS*	**S**	**15 44 49.2**	**-1.8**
PSGCX	**Pisagua**	**3.77**	**296**	*eP*	**Pn**	**15 44 04.4**	**-0.9**
PSGCX				*eS*	**S**	**15 44 50.0**	**-2.1**
PSGCX				IAML		15 44 52.4	
	comp=Z,51nm,0.1s						
PB16	**IPOC Station P**	**4.07**	**316**	*eP*	**Pn**	**15 44 10.5**	**+1.0**
PB16				*eS*	**S**	**15 44 56.5**	**-3.1**
PB16	**IPOC Station P**	**4.07**	**316**	P	**Pn**	**15 44 10.6**	**+1.0**
PB12	**IPOC Station P**	**4.46**	**307**	*eP*	**Pn**	**15 44 12.9**	**-0.9**
PB12				*eS*	**S**	**15 45 04.5**	**-3.0**
PB12				IAML		15 45 08.2	
	comp=Z,65nm,0.1s						
BBOJ	**La Paz, Jacaqu**	**4.59**	**340**	P	**Pn**	**15 44 17.6**	**+1.7**
SOEJ	**Jacaque**	**4.59**	**340**	P	**Pn**	**15 44 17.0**	**+1.1**
FSA	**Cafayete**	**4.80**	**174**	*eP*	**Pn**	**15 44 19.1**	**+1.1**
PB14	**IPOC Station P**	**4.84**	**226**	*eP*	**Pn**	**15 44 17.2**	**-1.5**
PB14	**IPOC Station P**	**4.84**	**226**	P	**Pn**	**15 44 17.8**	**-0.9**
BBOD	**La Paz, Gloria**	**5.05**	**337**	P	**Pn**	**15 44 22.7**	**+1.1**
LPAZ	**La Paz**	**5.23**	**343**	P	**Pn**	**15 44 25.1**	**+1.2**
BBOB	**La Paz, Bander**	**5.37**	**344**	P	**Pn**	**15 44 26.6**	**+1.0**
BBSD	**Serra de San D**	**6.96**	**55**	P	**Pn**	**15 44 44.8**	**-0.6**
SIV	**San Ignacio**	**7.42**	**45**	P	**Pn**	**15 44 50.8**	**-0.6**

*JMA **18** 15:54:53.1±0.1, 42.°7N±0.°4×145.°5E±0.°8, h32km±1km, MV3.0/36, OFF NEMURO PENINSULA*
*SKHL **18** 15:54:53.3±0.8, 42.°70N×145.°60E, h30km±3km, mb4.0/3*
ISC 18 15:54:53.7±2.4, **42.°7N**±0.°1×**145.°49E**±0.°07, **h31**km±11km, **n13**, σ0°**72**/**22**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.46**	**328**	*i* P	**Pb**	**15 55 03.0**	**-0.4**
JKHN				S	**Sb**	**15 55 11.1**	**+0.9**
AKK	**Akkeshi**	**0.57**	**304**	*eP*	**Pb**	**15 55 04.5**	**-0.8**
AKK				*eS*	**Sb**	**15 55 13.5**	**+0.2**
JAK	**Akkeshi**	**0.66**	**298**	*i* P	**Pb**	**15 55 05.9**	**-0.8**
JAK				S	**Sb**	**15 55 16.3**	**+0.7**
NEM2	**Nemuro 2**	**0.70**	**16**	*i* P	**Pb**	**15 55 07.0**	**-0.4**
NEM2				S	**Sn**	**15 55 17.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.70**	**15**	*i* P	**Pn**	**15 55 06.8**	**-0.6**
NMR				*i* S	**Sn**	**15 55 16.8**	**-0.3**
JNK	**Nakash**	**1.05**	**328**	*i* P	**Pn**	**15 55 11.8**	**-0.4**
JNK				S	**Sn**	**15 55 26.3**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.14**	**342**	P	**Pn**	**15 55 13.8**	**+0.4**
JNSB				S	**Sb**	**15 55 29.8**	**+0.6**
JOB	**Onbets**	**1.23**	**280**	P	**Pn**	**15 55 14.6**	**-0.1**
JOB				S	**Sn**	**15 55 31.4**	**+1.1**
JRA	**Rausu**	**1.27**	**348**	P	**Pn**	**15 55 15.6**	**+0.4**
JRA				*eS*	**Sb**	**15 55 33.3**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**1.37**	**11**	*eP*	**Pn**	**15 55 16.0**	**-0.6**
YUK				AMB	AMB	15 55 17.9	
	50nm,0.4s						
YUK				*eS*	**Sn**	**15 55 32.4**	**-1.2**
YUK				A	A	15 55 37.8	
	240nm,0.5s						
YUK				A	A	15 55 37.8	
	190nm,0.5s						
JAR	**Ashorobuto**	**1.40**	**296**	*i* P	**Pn**	**15 55 16.7**	**-0.3**
SHO	**Shikotan**	**1.53**	**39**	*eP*	Pb	15 55 33.5	+12
SHO				AMB	AMB	15 55 39.0	
	20nm,0.2s						
SHO				*eS*	Sb	15 55 53.6	+13
SHO				A	A	15 55 56.0	
	90nm,0.3s						
SHO				A	A	15 55 56.0	
	60nm,0.3s						
KUR	**Kuril'sk**	**3.06**	**33**	*eP*	**Pn**	**15 55 41.0**	**+1.1**

*GFZ **18** 16:03:02.2±0.3, 15.°5S±6.°×17.°3W±.°, h10km, M4.8/13, mb4.8/13, Error ellipse: s-maj=12.2km s-min=7.8km az=4.4, confirmed*
*NOU **18** 16:03:04.4, 13.°93S×172.°39W, h69km, mb4.9/11, Samoa Islands*
*NEIC **18** 16:03:06.5±2.4, 15.°13S±0.°07×173.°0W±0.°1, h10km±1km, mb4.9/50, Error ellipse: s-maj=20.0km s-min=10.2km az=295.0*
*BJI **18** 16:03:06.0, 14.°80S×173.°10W, h10km, mb5.1/11*
*IDC **18** 16:03:07.4±0.5, 15.°32S×173.°35W, h0km, mb4.2/20, mbtmp4.2/20, MS4.7/2, Error ellipse: s-maj=21.2km s-min=14.0km az=115.0*
ISC 18 16:03:06.5±0.4, **15.°11S**±0.°06×**172.°94W**±0.°07, **h10**km, **n344**, σ2°**64**/**326**, **mb4.8**/**48**, **9C-7D**, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.64**	**44**	Pn	**Pn**	**16 03 33.4**	**-2.1**
	46nm,0.3s,baz=209,slow=5.1,SNR=40						
AFI				Sn	**Sn**	**16 03 51.6**	**-5.1**
	428nm,0.3s,baz=209,slow=21,SNR=11						
AFI	**Afiamalu**	**1.64**	**44**		**Pn**	**16 03 33.3**	**-2.2**
AFI				Sn	**Sn**	**16 03 52.2**	**-4.5**
NIUE	**Niue**	**4.88**	**144**	Pn	**Pn**	**16 04 16.0**	**-4.1**
NIUE	**Niue**	**4.88**	**144**	P	**Pn**	**16 04 18.3**	**-1.9**
FUTU	**Fugatoga**	**5.08**	**278**	P	**Pn**	**16 04 18.9**	**-3.9**
MSVF	**Nonsavu**	**9.03**	**252**	Pn	Pn	16 05 24.4	+7.2
	0.9nm,0.3s,baz=102,slow=14,SNR=29						
MSVF	**Nonsavu**	**9.03**	**252**	P	Pn	16 05 24.6	+7.4
MSVF	**Nonsavu**	**9.03**	**252**		**Pn**	**16 05 21.4**	**+4.2**
RAR	**Rarotonga**	**13.90**	**118**	P	Pn	16 06 18.3	-5.5
MARNC	**Mare, Loyalty**	**19.14**	**248**	P	**Pn**	**16 07 30.9**	**0.0**
MARNC	**Mare, Loyalty**	**19.14**	**248**		**P**	**16 07 28.6**	**-1.5**
YATNC	**Mamie plateau,**	**20.32**	**247**	P	Pn	16 07 45.8	+0.8
OUENC	**Ouen Island, N**	**20.47**	**246**	P	Pn	16 07 48.1	+1.4
OUENC	**Ouen Island, N**	**20.47**	**246**	P	**P**	**16 07 43.5**	**-1.1**
OUENC				IAmb	IAmb	16 07 55.1	
	comp=Z,88nm,1.1s						
DZM	**Mont Dzumac**	**20.72**	**247**	P	**P**	**16 07 44.9**	**-2.5**
	comp=Z,4.2nm,0.9s,baz=74,slow=18						
	comp=Z,4.2nm,0.9s						
ONTNC	**Ouen Toro**	**20.78**	**247**	P	**P**	**16 07 45.6**	**-2.3**
ONTNC				IAmb	IAmb	16 07 59.0	
	comp=Z,66nm,1.0s						
NFK	**Norfolk Island**	**22.46**	**229**	P	**P**	**16 08 05.6**	**-0.3**
PPT	**Papeete**	**22.55**	**99**	LR	LR	16 14 54.0	
	comp=Z,1µm,18.5s,baz=274,slow=31						
PPTF	**Pamatai, Papee**	**22.56**	**100**	P	**P**	**16 08 03.4**	**-3.8**
XMAS	**Kiritimati**	**22.92**	**43**	P	P	16 08 02.8	-8.2
OUZ	**Omahuta**	**23.40**	**209**	P	**P**	**16 08 16.5**	**+0.9**
URZ	**Urewera**	**24.68**	**199**	P	**P**	**16 08 26.8**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=292,slow=5.8,SNR=6.2						
	comp=Z,4.8nm,0.7s						
URZ	**Urewera**	**24.68**	**199**	P	**P**	**16 08 30.9**	**+3.2**
URZ	**Urewera**	**24.68**	**199**	P	**P**	**16 08 28.5**	**+0.8**
TOZ	**Tahuroa Road**	**24.75**	**202**	P	**P**	**16 08 26.8**	**-1.6**
TOZ				IAmb	IAmb	16 08 39.9	
	comp=Z,34nm,1.3s						
HURO	**Huro Makira**	**24.96**	**278**	P	**P**	**16 08 25.2**	**-5.2**
RTZ	**Ruatahuna**	**25.05**	**199**	P	**P**	**16 08 29.4**	**-1.7**
RTZ				IAmb	IAmb	16 08 45.9	
	comp=Z,54nm,1.5s						
HIZ	**Hauiti**	**25.68**	**203**	P	**P**	**16 08 39.5**	**+2.7**
BKZ	**Black Stump Fm**	**25.70**	**199**	P	**P**	**16 08 37.6**	**+0.6**
BFZ	**Birch Farm**	**27.17**	**198**	P	**P**	**16 08 52.1**	**+1.9**
SNZO	**South Karori**	**28.23**	**200**	P	**P**	**16 09 00.3**	**+0.7**
PLWZ	**Palliser**	**28.28**	**199**	P	**P**	**16 08 59.0**	**-1.2**
QRZ	**Quartz Range**	**28.57**	**203**	P	**P**	**16 09 05.6**	**+2.8**
QRZ	**Quartz Range**	**28.57**	**203**	P	**P**	**16 09 00.7**	**-2.1**
KHZ	**Kahutara**	**29.60**	**201**	P	**P**	**16 09 14.4**	**+2.6**
INZ	**Inchbonnie**	**30.62**	**203**	P	**P**	**16 09 19.1**	**-1.7**
RPZ	**Rata Peaks**	**31.62**	**202**	P	**P**	**16 09 28.9**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=327,slow=4.5,SNR=5.7						
	comp=Z,1.5nm,0.7s						
RPZ	**Rata Peaks**	**31.62**	**202**	P	**P**	**16 09 30.5**	**+0.8**
JCZ	**Jackson Bay**	**32.80**	**205**	P	**P**	**16 09 41.0**	**+0.9**
ODZ	**Otahua Downs**	**32.91**	**202**	P	**P**	**16 09 41.5**	**+0.4**
WHZ	**Wether Hill Ro**	**34.64**	**204**	P	**P**	**16 09 55.3**	**-0.7**
EIDS	**Eidsvold**	**35.17**	**247**	P	**P**	**16 09 57.7**	**-3.2**
ARMA	**Armidale**	**35.87**	**239**	P	**P**	**16 10 05.0**	**-2.0**
ARMA				IAmb	IAmb	16 11 21.6	
	comp=Z,31nm,1.6s						
ARMA	**Armidale**	**35.87**	**239**	P	**P**	**16 10 04.1**	**-3.0**
CTAO	**Charters Tower**	**39.14**	**257**	P	**P**	**16 10 32.5**	**-2.2**
CTAO	**Charters Tower**	**39.14**	**257**	P	**P**	**16 10 33.0**	**-1.7**
CAN	**Canberra**	**39.56**	**232**	P	**P**	**16 10 36.5**	**-1.6**
CAN				IAmb	IAmb	16 10 37.9	
	comp=Z,64nm,1.6s						
CAN	**Canberra**	**39.56**	**232**	P	**P**	**16 10 35.9**	**-2.2**
H11N3	**WAKE ISLAND Hy**	**39.88**	**330**	T	T	16 53 27.4	
	baz=150,slow=76,SNR=4.7						
H11N1	**WAKE ISLAND Hy**	**39.89**	**330**	T	T	16 53 06.5	
	baz=150,slow=76,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**39.90**	**330**	T	T	16 53 26.2	
	baz=150,slow=76,SNR=4.8						
MILA	**Mila**	**40.09**	**230**	P	**P**	**16 10 42.6**	**+0.2**
MTSU	**Mount Surprise**	**41.01**	**260**	P	**P**	**16 10 48.5**	**-1.7**
CMSA	**Cobar Meteorol**	**41.09**	**239**	P	**P**	**16 10 48.3**	**-2.4**
QLP	**Quilpie**	**41.44**	**247**	P	**P**	**16 10 50.8**	**-2.9**
COEN	**Coen**	**42.45**	**266**	P	**P**	**16 10 58.9**	**-3.1**
TOO	**Toolangi**	**42.99**	**231**	P	**P**	**16 11 04.8**	**-1.4**
STKA	**Stephens Creek**	**44.57**	**240**	P	**P**	**16 11 17.4**	**-1.5**
	comp=Z,9.5nm,0.9s,baz=62,slow=3.6,SNR=8.0						
	comp=Z,9.5nm,0.9s						
STKA	**Stephens Creek**	**44.57**	**240**	P	**P**	**16 11 16.7**	**-2.2**
INKA	**Innaminka**	**44.67**	**246**	P	**P**	**16 11 18.7**	**-1.1**
MCQ	**Macquarie Isla**	**44.98**	**203**	P	**P**	**16 11 20.3**	**-1.6**
BBOO	**Buckleboo**	**49.34**	**240**	P	**P**	**16 11 53.8**	**-2.5**
WR8	**Warramunga Arr**	**50.19**	**256**	P	**P**	**16 12 00.3**	**-2.7**
WR8				IAmb	IAmb	16 12 05.4	
	comp=Z,32nm,1.8s						
WB0	**Warramunga Arr**	**50.30**	**257**		**P**	**16 12 01.8**	**-2.1**
WB0				IAmb	IAmb	16 12 04.3	
	comp=Z,21nm,1.4s						
WRA	**Warramunga Arr**	**50.34**	**256**	P	**P**	**16 12 02.3**	**-1.8**
	comp=Z,3.6nm,0.6s,baz=92,slow=7.3,SNR=70						
WRA				PcP	**PcP**	**16 13 23.7**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=91,slow=3.3,SNR=1.5						
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**50.34**	**256**	P	**P**	**16 12 01.7**	**-2.4**
AS31	**Alice Springs**	**50.62**	**252**		**P**	**16 12 04.2**	**-2.0**
ASAR	**Alice Springs**	**50.62**	**252**	P	**P**	**16 12 04.4**	**-1.8**
	comp=Z,15nm,0.8s,baz=86,slow=7.8,SNR=141						
ASAR				PcP	**PcP**	**16 13 25.3**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=96,slow=3.6,SNR=1.1						
	comp=Z,15nm,0.8s						
ASAR	**Alice Springs**	**50.62**	**252**		**P**	**16 12 04.2**	**-2.1**
MTN	**Manton Dam**	**54.20**	**265**	P	**P**	**16 12 31.4**	**-1.5**
FORT	**Forrest**	**55.95**	**243**	P	**P**	**16 12 43.4**	**-1.9**
FORT				IAmb	IAmb	16 12 50.1	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**56.05**	**261**	P	**P**	**16 12 43.8**	**-2.4**
KNRA				IAmb	IAmb	16 12 51.8	
	comp=Z,23nm,1.6s						
FITZ	**Fitzroy Crossi**	**58.71**	**258**	P	**P**	**16 13 03.1**	**-1.9**
SOEI	**Soe**	**61.39**	**267**	P	**P**	**16 13 20.4**	**-3.1**
SBA	**Scott Base**	**63.58**	**185**	P	**P**	**16 13 37.8**	**+0.8**
VNDA	**Vanda**	**63.71**	**186**	P	**P**	**16 13 39.1**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=346,slow=6.3,SNR=6.7						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**63.71**	**186**	P	**P**	**16 13 38.5**	**+0.6**
MJAR	**Matsushiro Arr**	**69.00**	**319**	P	**P**	**16 14 14.5**	**+2.0**
	comp=Z,4.5nm,1.0s,baz=153,slow=6.2,SNR=12						
	comp=Z,4.5nm,1.0s						
MJAR	**Matsushiro Arr**	**69.00**	**319**	P	**P**	**16 14 11.1**	**-1.3**
MJAR				IAmb	IAmb	16 14 15.8	
	comp=Z,7.8nm,1.2s						
JOW	**Kunigami**	**70.67**	**306**	LR	LR	16 41 27.7	
	comp=Z,807nm,18.7s,baz=186,slow=33						
SPIA	**Saint Paul Isl**	**72.05**	**2**	P	**P**	**16 14 34.8**	**+4.3**
	baz=183						
CHIR	**Chirikof Islan**	**72.15**	**10**	P	**P**	**16 14 33.7**	**+2.6**
	baz=198						
CHGN	**Chignik**	**72.17**	**8**	P	**P**	**16 14 34.2**	**+3.0**
	baz=195						
PEA0B	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**16 14 33.7**	**+0.4**
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**16 14 36.1**	**+2.9**
	comp=Z,5.0nm,0.9s,baz=116,slow=6.8,SNR=7.3						
	comp=Z,5.0nm,0.9s						
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**16 14 33.7**	**+0.4**
SII	**Sitkinak Islan**	**73.10**	**11**	P	**P**	**16 14 39.3**	**+2.4**
	baz=199						
NVAR	**Mina Array Bea**	**73.81**	**42**	P	P	16 14 47.5	+5.8
	comp=Z,0.4nm,0.6s,baz=243,slow=4.9,SNR=2.0						
	comp=Z,0.4nm,0.6s						
Q17K	**Contact Creek**	**74.44**	**9**	P	**P**	**16 14 47.6**	**+2.8**
	baz=197						
KDAK	**Kodiak Island**	**74.55**	**11**	P	**P**	**16 14 47.6**	**+2.3**
	baz=200						
O15K	**Ungalikthiuk R**	**74.79**	**7**	P	**P**	**16 14 48.5**	**+1.9**
	baz=193						
P16K	**Nushagak River**	**74.88**	**8**	P	**P**	**16 14 49.7**	**+2.6**
	baz=195						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**16 14 49.4**	**+1.7**
	comp=Z,5.4nm,0.9s,baz=336,slow=0.9,SNR=13						
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**16 14 48.5**	**+0.7**
QSPA				IAmb	IAmb	16 14 55.0	
	comp=Z,8.1nm,0.9s						
Q18K	**Katmai Hardscr**	**74.95**	**10**	P	**P**	**16 14 49.7**	**+2.0**
	baz=198						
P17K	**Kvichak River**	**75.25**	**9**	P	**P**	**16 14 50.2**	**+1.0**
P17K	**Kvichak River**	**75.25**	**9**	P	**P**	**16 14 52.1**	**+2.8**
	baz=197						
O16K	**Kokwok River B**	**75.41**	**8**	P	**P**	**16 14 52.6**	**+2.5**
	baz=195						
M11K	**Mekoryuk**	**75.43**	**3**	P	**P**	**16 14 53.3**	**+3.1**
	baz=187						
P18K	**Big Mountain,**	**75.62**	**9**	P	**P**	**16 14 54.3**	**+2.8**
	baz=198						
M13K	**Dall Lake**	**75.66**	**5**	P	**P**	**16 14 55.3**	**+3.7**
	baz=190						
O17K	**Koliganek Bris**	**75.72**	**8**	P	**P**	**16 14 55.1**	**+3.2**
	baz=196						
O18K	**Koktuh Hills**	**76.07**	**9**	P	**P**	**16 14 56.0**	**+2.0**
	baz=198						
M14K	**Bethel**	**76.11**	**6**		**P**	**16 14 55.9**	**+1.8**
M14K	**Bethel**	**76.11**	**6**	P	**P**	**16 14 57.9**	**+3.8**
	baz=191,SNR=9.0						
M15K	**Kasigluk River**	**76.18**	**6**	P	**P**	**16 14 57.8**	**+3.3**
	baz=192,SNR=6.6						
N16K	**Nishlik Lake**	**76.18**	**7**	P	**P**	**16 14 57.4**	**+2.8**
	baz=194						
KSRS	**Korea Array**	**76.26**	**315**	P	**P**	**16 14 58.8**	**+3.3**
	comp=Z,3.4nm,1.0s,baz=124,slow=5.9,SNR=11						
	comp=Z,3.4nm,1.0s						
N17K	**Nushagak Hills**	**76.43**	**8**	P	**P**	**16 14 58.4**	**+2.3**
	baz=196						
L14K	**Kuka Creek**	**76.63**	**5**	P	**P**	**16 15 01.3**	**+4.2**
	baz=190						
M16K	**Timber Creek**	**76.69**	**7**	P	**P**	**16 15 01.1**	**+3.7**
	baz=194						
N18K	**Kilae Creek**	**76.76**	**9**	P	**P**	**16 15 00.3**	**+2.4**
	baz=197						
K13K	**Kusilvak Mount**	**77.06**	**4**	P	**P**	**16 15 03.7**	**+4.2**
	baz=188						
L15K	**Ungalak Mounta**	**77.07**	**6**	P	**P**	**16 15 03.1**	**+3.6**
	baz=192,SNR=7.6						
N19K	**Bonanza Creek**	**77.09**	**9**	P	**P**	**16 15 01.7**	**+1.8**
N19K	**Bonanza Creek**	**77.09**	**9**	P	**P**	**16 15 02.0**	**+2.2**
	baz=198						
M17K	**Holitna River**	**77.24**	**8**	P	**P**	**16 15 04.1**	**+3.5**
	baz=196						
L16K	**Owhat River**	**77.30**	**7**		**P**	**16 15 02.6**	**+1.7**
L16K				IAmb	IAmb	16 15 05.6	
	comp=Z,9.8nm,1.1s						
L16K	**Owhat River**	**77.30**	**7**	P	**P**	**16 15 04.7**	**+3.8**
	baz=193,SNR=8.3						
Q23K	**Middleton Isla**	**77.36**	**14**	P	**P**	**16 15 03.2**	**+2.0**
	baz=206						
USRK	**Ussuriysk Ar.**	**77.42**	**323**	P	**P**	**16 15 04.2**	**+2.3**
	comp=Z,1.3nm,0.9s,baz=86,slow=5.9,SNR=6.3						
	comp=Z,1.3nm,0.9s						
M18K	**Stony River**	**77.55**	**8**	P	**P**	**16 15 05.0**	**+2.7**
	baz=197						
P23K	**Montague Islan**	**77.64**	**13**	P	**P**	**16 15 05.9**	**+3.1**
	baz=205						
K15K	**Wolf Creek Mou**	**77.67**	**5**	P	**P**	**16 15 04.3**	**+1.3**
K15K	**Wolf Creek Mou**	**77.67**	**5**	P	**P**	**16 15 07.3**	**+4.4**
	baz=191,SNR=7.6						
L17K	**Donlin**	**77.85**	**7**	P	**P**	**16 15 08.6**	**+4.6**
	baz=195,SNR=6.5						
J14K	**Nanvaranak Lak**	**77.95**	**4**	P	**P**	**16 15 06.4**	**+1.9**
	baz=189						
L18K	**Granite Mounta**	**78.13**	**8**	P	**P**	**16 15 06.5**	**+1.0**
L18K				IAmb	IAmb	16 15 10.4	
	comp=Z,20nm,1.3s						
L18K	**Granite Mounta**	**78.13**	**8**	P	**P**	**16 15 10.2**	**+4.7**
	baz=196,SNR=8.6						
M19K	**Big River Lodg**	**78.15**	**9**	P	**P**	**16 15 06.4**	**+0.8**
M19K				IAmb	IAmb	16 15 12.2	
	comp=Z,17nm,1.8s						
M19K	**Big River Lodg**	**78.15**	**9**	P	**P**	**16 15 08.2**	**+2.6**
	baz=198						
STLK	**Strandline Lak**	**78.17**	**10**	P	**P**	**16 15 06.4**	**+0.6**
STLK				IAmb	IAmb	16 15 09.0	
	comp=Z,12nm,1.2s						
PWL	**Port Wells**	**78.23**	**12**	P	**P**	**16 15 08.2**	**+2.1**
	baz=204						
M20K	**Styx River**	**78.32**	**9**	P	**P**	**16 15 09.7**	**+3.0**
	baz=200						
L19K	**White Mountain**	**78.35**	**9**	P	**P**	**16 15 09.5**	**+2.7**
	baz=198						
K17K	**Iditarod**	**78.42**	**7**	P	**P**	**16 15 08.1**	**+1.0**
K17K				IAmb	IAmb	16 15 12.0	
	comp=Z,16nm,1.2s						
K17K	**Iditarod**	**78.42**	**7**	P	**P**	**16 15 11.3**	**+4.2**
	baz=195						
EYAK	**Cordova Ski Ar**	**78.50**	**13**	P	**P**	**16 15 10.1**	**+2.5**
	baz=207						
GLI	**Glacier Island**	**78.50**	**13**	P	**P**	**16 15 09.7**	**+2.1**
	baz=206						
GAMB	**Gambell**	**78.64**	**1**	P	**P**	**16 15 09.8**	**+1.5**
	baz=181						
SKT	**Skwentna**	**78.67**	**10**	P	**P**	**16 15 10.7**	**+2.1**
	baz=201						
M22K	**Willow**	**78.71**	**11**	P	**P**	**16 15 11.9**	**+3.2**
	baz=203						
J16K	**Anvik River**	**78.73**	**6**	P	**P**	**16 15 09.1**	**+0.3**
J16K	**Anvik River**	**78.73**	**6**	P	**P**	**16 15 13.3**	**+4.5**
	baz=192,SNR=7.6						
PMR	**Palmer**	**78.75**	**11**	P	**P**	**16 15 11.8**	**+2.9**
	baz=204						
S31K	**Pelican**	**78.83**	**19**	P	**P**	**16 15 11.1**	**+1.6**
	baz=216						
GHO	**Glory Hole Cre**	**78.95**	**11**	P	**P**	**16 15 10.4**	**+0.2**
J17K	**VABM Dome**	**78.99**	**6**	P	**P**	**16 15 13.8**	**+3.6**
	baz=194						
SML	**Sawmill**	**79.10**	**12**	P	**P**	**16 15 14.1**	**+3.2**
	baz=204						
BMRM	**Bremner River**	**79.13**	**14**	P	**P**	**16 15 13.9**	**+2.8**
	baz=208						
CUT	**Chulitna**	**79.29**	**11**	P	**P**	**16 15 14.9**	**+3.0**
	baz=202						
CRQE	**Cirque**	**79.29**	**14**	P	**P**	**16 15 14.4**	**+2.2**
	baz=209						
KLU	**Klutina**	**79.31**	**13**	P	**P**	**16 15 14.7**	**+2.6**
	baz=207						
L22K	**Petersville**	**79.32**	**10**	P	**P**	**16 15 14.4**	**+2.3**
	baz=202						
SCM	**Sheep Creek Mo**	**79.32**	**12**	P	**P**	**16 15 12.8**	**+0.6**
SCM				IAmb	IAmb	16 16 11.7	
	comp=Z,23nm,1.4s						
SCM	**Sheep Creek Mo**	**79.32**	**12**	P	**P**	**16 15 14.6**	**+2.4**
	baz=205						
J18K	**

	baz=216								
BVCY	**Beaver Creek**	**81.27**	**14**	P		**P**		**16 15 25.4**	**+2.8**
	baz=211								
H19K	**Roundabout Mou**	**81.35**	**7**	P		**P**		**16 15 26.5**	**+3.6**
	baz=196,SNR=7.1								
K24K	**Donnelly Dome**	**81.41**	**12**	P		**P**		**16 15 26.4**	**+3.1**
	baz=207								
G18K	**Tagagawik**	**81.47**	**6**	P		**P**		**16 15 27.2**	**+3.7**
	baz=194								
H20K	**Anotleneega Mo**	**81.51**	**8**	P		**P**		**16 15 27.6**	**+3.8**
	baz=198,SNR=5.1								
NEA2	**Nenana**	**81.52**	**10**	P		**P**		**16 15 26.5**	**+2.6**
	baz=203,SNR=6.7								
RIDG	**Independent Ri**	**81.54**	**12**	P		**P**		**16 15 26.7**	**+2.6**
	baz=208								
L27K	**Beaver Creek,**	**81.60**	**14**	P		**P**		**16 15 26.4**	**+2.0**
	baz=210								
I21K	**Tanana**	**81.61**	**9**	P		**P**		**16 15 26.9**	**+2.6**
	baz=201								
MLY	**Manley**	**81.66**	**9**	P		**P**		**16 15 27.0**	**+2.4**
	baz=202,SNR=9.0								
HDA	**Harding Lake**	**81.73**	**11**	P		**P**		**16 15 27.7**	**+2.7**
	baz=205,SNR=9.2								
PDAR	**Pinedale Array**	**81.75**	**42**	P		P		16 15 30.9	+5.0
	comp=Z,0.3nm,0.4s,baz=202,slow=1.6,SNR=4.8								
	comp=Z,0.3nm,0.4s								
F17K	**Baldwin Pennin**	**81.78**	**5**	P		**P**		**16 15 29.2**	**+4.1**
	baz=192								
G19K	**Purcell Mounta**	**81.88**	**6**	P		**P**		**16 15 29.4**	**+3.7**
	baz=196,SNR=7.9								
M29M	**Somme Creek**	**81.89**	**15**	P		**P**		**16 15 28.7**	**+2.6**
	baz=214								
SCRK	**Sand Creek**	**81.93**	**12**	P		**P**		**16 15 28.6**	**+2.4**
	baz=208								
H21K	**Melozitna Rive**	**81.94**	**8**	P		**P**		**16 15 30.2**	**+4.1**
	baz=200,SNR=8.7								
I23K	**Minto, Yukon-K**	**81.99**	**10**	P		**P**		**16 15 29.2**	**+2.9**
	baz=203,SNR=6.9								
COLA	**College**	**81.99**	**11**	P		**P**		**16 15 28.9**	**+2.7**
	baz=204								
F18K	**Selawik**	**82.07**	**5**	P		**P**		**16 15 29.9**	**+3.2**
	baz=193								
ILAR	**Eielson Array**	**82.07**	**11**	P		**P**		**16 15 29.1**	**+2.3**
	comp=Z,1.9nm,0.9s,baz=204,slow=6.3,SNR=14								
	comp=Z,1.9nm,0.9s								
J25K	**Salcha River,**	**82.22**	**12**	P		**P**		**16 15 30.6**	**+2.9**
	baz=207,SNR=9.0								
POKR	**Poker Plat Res**	**82.29**	**11**	P		**P**		**16 15 31.0**	**+3.1**
	baz=205								
N32M	**Quiet Lake**	**82.35**	**18**	P		**P**		**16 15 30.7**	**+2.3**
	baz=219								
E17K	**Hotham Inlet**	**82.36**	**4**	P		**P**		**16 15 31.6**	**+3.4**
	baz=191								
H22K	**Ishtalitna Cre**	**82.37**	**9**	P		**P**		**16 15 31.4**	**+3.1**
	baz=201,SNR=7.7								
M30M	**Minto, Yukon**	**82.44**	**16**	P		**P**		**16 15 31.4**	**+2.6**
	baz=215								
F19K	**Shaleruckik Mo**	**82.47**	**6**	P		**P**		**16 15 32.5**	**+3.7**
	baz=195								
L29M	**L29M**	**82.53**	**15**	P		**P**		**16 15 32.6**	**+3.3**
	baz=214								
H23K	**Yukon River**	**82.58**	**9**	P		**P**		**16 15 32.4**	**+2.9**
	baz=203								
G21K	**Allakaket**	**82.66**	**8**	P		**P**		**16 15 33.3**	**+3.5**
	baz=199								
E18K	**Tukpahlearik C**	**82.79**	**5**	P		**P**		**16 15 34.0**	**+3.5**
	baz=192								
F20K	**Avaraart Lake**	**82.90**	**7**	P		**P**		**16 15 34.4**	**+3.4**
	baz=197								
PRP	**Porcupine Dome**	**83.00**	**11**	P		**P**		**16 15 35.0**	**+3.2**
	baz=207								
DAWY	**Dawson**	**83.03**	**14**	P		**P**		**16 15 34.9**	**+3.0**
	baz=213								
E19K	**Redstone River**	**83.13**	**6**	P		**P**		**16 15 36.1**	**+3.8**
	baz=195								
I26K	**Coal Creek Min**	**83.27**	**12**	P		**P**		**16 15 36.0**	**+3.0**
	baz=209								
K29M	**Barlow Dome**	**83.30**	**15**	P		**P**		**16 15 36.3**	**+3.0**
	baz=214								
WHN	**Wuhan**	**83.30**	**304**	P		**P**		**16 15 32.1**	**-1.8**
G22K	**Bettles**	**83.31**	**8**	P		**P**		**16 15 36.7**	**+3.5**
	baz=201								
G23K	**Bananza Creek**	**83.33**	**9**	P		**P**		**16 15 36.7**	**+3.4**
	baz=202,SNR=6.6								
C16K	**Lisburne Hills**	**83.33**	**3**	P		P		16 15 38.7	+5.5
	baz=188								
F21K	**Alatna River**	**83.33**	**8**	P		**P**		**16 15 36.3**	**+3.0**
	baz=199								
HEH	**HeiHe**	**83.41**	**326**	*e*P		**P**		**16 15 36.9**	**+2.9**
HEH				pmax		pmax			
	comp=Z,5.0nm,1.3s								
G24K	**Hadweenzic Riv**	**83.73**	**10**	P		**P**		**16 15 39.2**	**+3.9**
	baz=205								
F22K	**John River**	**83.77**	**8**	P		**P**		**16 15 39.1**	**+3.6**
	baz=200								
COLD	**Coldfoot**	**83.79**	**9**	P		P		16 15 40.5	+4.9
	baz=202,SNR=8.9								
I27K	**Kandik River**	**83.85**	**13**	P		**P**		**16 15 40.0**	**+3.9**
	baz=210								
C18K	**Utukok River**	**83.95**	**4**	P		**P**		**16 15 38.6**	**+2.1**
	baz=192								
E20K	**Nigu River**	**84.02**	**6**	P		**P**		**16 15 40.7**	**+3.9**
	baz=196								
G25K	**Bearman Lake**	**84.02**	**10**	P		**P**		**16 15 39.9**	**+3.1**
	baz=206								
MMPY	**Sheldon Lake,**	**84.04**	**18**	P		**P**		**16 15 40.3**	**+3.2**
	baz=220								
D19K	**Kuna River**	**84.06**	**5**	P		**P**		**16 15 40.6**	**+3.6**
	baz=194								
I28M	**Miner Creek**	**84.08**	**13**	P		**P**		**16 15 40.3**	**+3.0**
	baz=212								
J30M	**Hart River**	**84.20**	**15**	P		**P**		**16 15 40.2**	**+2.3**
	baz=216								
BELA	**Belgrano 2**	**84.22**	**172**	P		**P**		**16 15 38.8**	**+0.9**
BELA				IAmb		IAmb		16 15 48.5	
	comp=Z,5.9nm,1.1s								
F24K	**Squaw Lake**	**84.41**	**9**	P		**P**		**16 15 42.5**	**+3.7**
	baz=204								
D20K	**Etivluk River**	**84.41**	**6**	P		**P**		**16 15 42.5**	**+3.7**
	baz=196								
E22K	**Anaktuvuk Pass**	**84.41**	**8**	P		**P**		**16 15 42.4**	**+3.5**
	baz=201								
H27K	**Steamboat Moun**	**84.41**	**12**	P		**P**		**16 15 42.4**	**+3.5**
	baz=210,SNR=7.5								
E21K	**Killik River**	**84.44**	**7**	P		**P**		**16 15 42.3**	**+3.4**
	baz=198								
C19K	**Lookout Ridge**	**84.53**	**5**	P		**P**		**16 15 43.6**	**+4.2**
	baz=193								
G26K	**Porcupine Rive**	**84.60**	**11**	P		**P**		**16 15 40.9**	**+1.2**
G26K	**Porcupine Rive**	**84.60**	**11**	P		**P**		**16 15 43.5**	**+3.8**
	baz=208,SNR=12								
E23K	**Chandalar**	**84.64**	**9**	P		**P**		**16 15 43.9**	**+3.8**
	baz=203,SNR=6.2								
I30M	**Mount Dempster**	**84.72**	**15**	P		**P**		**16 15 40.8**	**+0.3**
I30M				IAmb		IAmb		16 15 44.2	
	comp=Z,14nm,1.4s								
I30M	**Mount Dempster**	**84.72**	**15**	P		**P**		**16 15 43.6**	**+3.1**
	baz=215,SNR=7.5								
E24K	**Your Creek**	**84.83**	**9**	P		**P**		**16 15 44.6**	**+3.7**
	baz=204								
F25K	**Christian Rive**	**84.84**	**10**	P		**P**		**16 15 44.5**	**+3.5**
	baz=206								
G27K	**Doyon Strip**	**84.89**	**12**	P		**P**		**16 15 44.4**	**+3.1**
	baz=210								
C21K	**Knifeblade Rid**	**85.03**	**6**	P		**P**		**16 15 45.9**	**+4.0**
	baz=198								
H29M	**Whitestone**	**85.08**	**13**	P		**P**		**16 15 45.5**	**+3.3**
	baz=214,SNR=6.0								
TOLK	**Toolik Lake Re**	**85.19**	**8**	P		**P**		**16 15 46.3**	**+3.5**
	baz=203								
F26K	**Sheenjek River**	**85.20**	**11**	P		**P**		**16 15 46.7**	**+3.9**
	baz=208,SNR=6.9								
E25K	**Arctic Village**	**85.33**	**10**	P		**P**		**16 15 47.1**	**+3.6**
	baz=207,SNR=6.7								
D23K	**Nanushuk River**	**85.34**	**8**	P		**P**		**16 15 47.3**	**+3.9**
	baz=202								
B21K	**Ikpikpuk River**	**85.49**	**6**	P		**P**		**16 15 48.1**	**+4.0**
	baz=198								
A19K	**Wainwright**	**85.50**	**4**	P		P		16 15 49.0	+4.9
	baz=192								
EPYK	**Eagle Plains**	**85.58**	**14**	P		**P**		**16 15 47.7**	**+3.0**
	baz=215								
BJI2	**Beijing**	**85.59**	**313**	P		**P**		**16 15 48.6**	**+3.3**
BJI2				pmax		pmax			
	comp=Z,5.0nm,1.0s								
HNS	**HongShan**	**85.61**	**310**	⇓P		**P**		**16 15 49.4**	**+3.9**
H31M	**Peel River**	**85.69**	**15**	P		**P**		**16 15 48.0**	**+2.7**
	baz=217								
G29M	**Pine Creek**	**85.74**	**13**	P		**P**		**16 15 45.5**	**+0.1**
G29M	**Pine Creek**	**85.74**	**13**	P		**P**		**16 15 48.6**	**+3.1**
	baz=214								
D24K	**Happy Valley**	**85.77**	**8**	P		**P**		**16 15 49.4**	**+3.9**
	baz=203								
F28M	**Old Crow**	**85.94**	**12**	P		**P**		**16 15 49.8**	**+3.4**
	baz=212								
E27K	**Coleen River**	**86.10**	**11**	P		**P**		**16 15 51.0**	**+3.7**
	baz=210								
C23K	**Itkillik River**	**86.17**	**8**	P		**P**		**16 15 51.6**	**+4.1**
	baz=202								
G30M	**tAoh Zraii Nji**	**86.19**	**14**	P		**P**		**16 15 50.7**	**+2.9**
	baz=216								
G31M	**Satah River**	**86.60**	**14**	P		**P**		**16 15 53.0**	**+3.4**
	baz=217								
HILR	**Hailar Array B**	**87.36**	**323**	P		**P**		**16 15 56.4**	**+2.6**
	comp=Z,3.5nm,0.9s,baz=125,slow=7.8,SNR=8.2								
	comp=Z,3.5nm,0.9s								
INK	**Inuvik**	**87.88**	**14**	P		**P**		**16 15 59.2**	**+3.4**
	baz=218								
HHC	**Hu-ho-hao-te**	**89.16**	**313**	*e*P		**P**		**16 16 01.6**	**-1.1**
HHC				pmax		pmax			
	comp=Z,9.0nm,0.6s								
YKA	**Yellowknife Ar**	**89.65**	**23**	P		**P**		**16 16 06.9**	**+2.6**
	comp=Z,1.6nm,0.9s,baz=240,slow=4.2,SNR=11								
	comp=Z,1.6nm,0.9s								
KMI2	**Kunming**	**91.30**	**296**	P		**P**		**16 16 12.3**	**-0.9**
KMI2				pmax		pmax			
	comp=Z,8.0nm,0.6s								
CD2	**Chengdu**	**92.04**	**301**	*e*P		**P**		**16 16 14.0**	**-2.3**
ELIB	**Princess Elisa**	**92.46**	**185**	*d*P		**P**		**16 16 17.6**	**0.0**
	comp=Z,6.4nm,1.0s								
PZH	**PanZhiHua**	**92.54**	**297**	P		**P**		**16 16 17.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**92.95**	**288**	P		**P**		**16 16 20.9**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=79,slow=2.5,SNR=5.5								
	comp=Z,0.4nm,0.4s								
TROLL	**Troll, Antarti**	**93.04**	**179**	⇑P		**P**		**16 16 21.8**	**+1.6**
	comp=Z,118nm,0.7s								
SNAA	**Sanae**	**93.17**	**177**	⇑P		P		16 16 26.6	+5.8
	comp=Z,31nm,0.7s								
SNAA	**Sanae**	**93.17**	**177**	P		**P**		**16 16 22.6**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=157,slow=6.1,SNR=4.1								
	comp=Z,1.5nm,0.7s								
LZH	**Lanzhou**	**93.41**	**306**	*e*P		P		16 16 15.3	-7.3
LZH				sP		PcP		16 16 23.4	+0.2
LZH				pmax		pmax			
	comp=Z,12nm,0.9s								
VNA2	**Neumayer--Watz**	**93.61**	**175**	⇑P		**P**		**16 16 24.3**	**+1.6**
	comp=Z,2.5nm,1.0s,baz=194,slow=2.4								
VNA1	**Neumayer--Stat**	**93.80**	**175**	P		**P**		**16 16 24.6**	**+1.0**
	comp=Z,5.6nm,1.1s								
KURBB	**Kurchatov Arra**	**113.28**	**319**	PP		**PP**		**16 22 33.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=84,slow=7.3,SNR=4.9								
UBBA	**Unterbreizbach**	**144.30**	**357**	*e*L		L		17 29 05.0	
	comp=Z,1μm,18.9s								
MORC	**Moravsky Berou**	**144.38**	**348**	*e*PKIKP		**PKPdf**		**16 22 42.9**	**-0.2**
BIZ	**Bicaz**	**144.51**	**337**	⇑P		**PKPdf**		**16 22 44.6**	**+1.2**
LANS	**Liptovska Anna**	**144.56**	**346**	*e*PKP		**PKiKP**		**16 22 45.4**	**-1.7**
MAUC	**Maruska**	**144.72**	**348**	*e*PKP		**PKiKP**		**16 22 45.6**	**-1.8**
BMRD	**Maredsous**	**144.85**	**3**	*d*PKPdf		**PKPdf**		**16 22 44.2**	**+0.4**
KECS	**Kecovo**	**144.93**	**344**	*e*PKP		**PKiKP**		**16 22 46.7**	**-1.1**
VRAC	**Vranov**	**145.01**	**349**	*e*PKIKP		**PKiKP**		**16 22 46.4**	**-1.6**
JAVC	**Velka Javorina**	**145.23**	**348**	*e*PKIKP		**PKiKP**		**16 22 47.0**	**-1.5**
KRUC	**Moravsky**	**145.28**	**349**	*e*PKIKP		**PKPdf**		**16 22 46.0**	**+1.4**
GRF	**Grafenberg Arr**	**145.34**	**355**	*e*PKPbc		**PKPdf**		**16 22 46.5**	**+1.8**
	baz=7.3,slow=3.0								
GRF				*e*L		L		17 30 23.5	
	comp=Z,1μm,18.9s								
WLF	**Walferdange**	**145.53**	**1**	*d*PKPdf		**PKPdf**		**16 22 44.5**	**-0.6**
DOPR	**Dopca**	**145.60**	**337**	⇑P		**PKPdf**		**16 22 45.1**	**-0.2**
KHC	**Kasperske Hory**	**145.65**	**352**	*e*PKP		**PKiKP**		**16 22 48.4**	**-1.0**
MODS	**Modra-Piesok**	**145.77**	**348**	*e*PKP		**PKiKP**		**16 22 49.6**	**0.0**
MARR	**Marisel-Cluj**	**145.78**	**340**	⇑P		**PKPdf**		**16 22 44.7**	**-1.1**
MLR	**Muntele Rosu**	**145.78**	**336**	⇑P		**PKiKP**		**16 22 49.2**	**-0.7**
GERES	**GERESS Array B**	**145.92**	**352**	PKPbc		**PKiKP**		**16 22 48.7**	**-1.3**
	comp=Z,4.0nm,1.1s,baz=42,slow=2.2,SNR=18								
GERES	**GERESS Array B**	**145.92**	**352**	PKPdf		**PKPab**		**16 22 48.2**	**+1.3**
VOIR		**146.17**	**337**	⇓P		**PKPab**		**16 22 48.6**	**+0.6**
BRTR	**Keskin Array B**	**146.21**	**322**	PKPbc		**PKiKP**		**16 22 49.8**	**-1.2**
	comp=Z,15nm,1.1s,baz=107,slow=1.3,SNR=25								
ARR	**Arges**	**146.39**	**337**	⇑P		**PKPab**		**16 22 49.6**	**+0.8**
CONA	**Conrad Observa**	**146.47**	**349**	*e*PKP		**PKPbc**		**16 22 48.0**	**-0.1**
	comp=Z,1.1nm,0.8s								
RONA	**Rosalia, Austr**	**146.61**	**349**	*e*PKP		**PKPdf**		**16 22 47.5**	**+0.5**
	comp=Z,6.6nm,1.0s								
MOA	**Molln**	**146.81**	**351**	*e*PKP		pPKPdf		16 22 48.3	-0.7
	comp=Z,5.6nm,1.1s								
BIOA	**Bad Ischl, Aus**	**147.06**	**352**	*e*PKP		pPKPdf		16 22 49.1	-0.4
	comp=Z,1.4nm,0.5s								
ARSA	**Arzberg**	**147.19**	**349**	*e*PKP		**PKPbc**		**16 22 50.0**	**-0.2**
	comp=Z,3.2nm,1.1s								
BZS	**Buzias**	**147.21**	**341**	⇓P		**PKPbc**		**16 22 50.5**	**+0.2**
LESA	**Schwarzleotal**	**147.44**	**353**	*e*PKiKP		**PKPbc**		**16 22 50.8**	**-0.2**
	comp=Z,0.7nm,0.5s								
SESA	**Seetaler Alpe,**	**147.48**	**350**	*e*PKiKP		**PKPbc**		**16 22 51.5**	**+0.3**
	comp=Z,13nm,1.3s								
MORH	**Mrgy, Hungar**	**147.50**	**345**	⇓P		**PKiKP**		**16 22 53.2**	**0.0**
RETA	**Reutte**	**147.57**	**355**	*e*PKiKP		**PKPbc**		**16 22 51.4**	**+0.1**
	comp=Z,1.0nm,0.5s								
HERR	**Herculane**	**147.60**	**339**	⇑P		**PKiKP**		**16 22 53.2**	**-0.3**
WATA	**Walderalm**	**147.65**	**354**	*e*PKP		**PKPbc**		**16 22 51.2**	**-0.4**
	comp=Z,0.8nm,0.5s								
MOTA	**Mosalm**	**147.68**	**355**	*e*PKP		**PKPbc**		**16 22 51.1**	**-0.6**
	comp=Z,6.7nm,1.1s								
SQTA	**Sankt Quirin**	**147.80**	**355**	*e*PKiKP		**PKPbc**		**16 22 52.0**	**0.0**
	comp=Z,1.1nm,0.4s								
SOKA	**Soboth**	**147.83**	**350**	*e*PKP		**PKPbc**		**16 22 51.2**	**-0.8**
	comp=Z,4.7nm,1.2s								
DAVA	**Damuels**	**147.83**	**356**	*e*PKP		**PKPbc**		**16 22 51.8**	**-0.3**
	comp=Z,9.2nm,1.2s								
FETA	**Feichten**	**148.03**	**355**	*e*PKiKP		**PKPbc**		**16 22 52.8**	**+0.2**
	comp=Z,4.1nm,1.2s								
OBKA	**Obir**	**148.07**	**350**	*e*pPKP		**PKPbc**		**16 22 53.3**	**+0.6**
	comp=Z,3.3nm,1.0s								
MYKA	**Terra Mystica**	**148.09**	**351**	*e*pPKP		**PKiKP**		**16 22 53.6**	**-0.9**
	comp=Z,2.0nm,0.5s								
ABTA	**Abfaltersbach**	**148.13**	**353**	*e*pPKP		**PKPbc**		**16 22 53.3**	**+0.4**
	comp=Z,5.5nm,1.3s								
MMAI	**Mount Meron Ar**	**148.73**	**310**	PKPbc		**PKiKP**		**16 22 57.2**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=57,slow=5.3,SNR=2.8								
ESDC	**Soufli Array**	**153.69**	**19**	PKPbc		**PKiKP**		**16 23 10.5**	**+4.2**
	comp=Z,0.3nm,0.6s,baz=332,slow=3.7,SNR=2.6								
ESDC				PKPab		**sPKPab**		**16 23 21.9**	**+0.7**
	comp=Z,1.2nm,1.0s,baz=333,slow=2.9,SNR=6.4								

GCG ***18*** *16:05:45.4±2.7, 12.˚62N×86.˚36W, h34km±999km, MD5.1, ML4.9, Presumed earthquake*

IDC ***18*** *16:05:52.1±1.4, 13.˚78N×86.˚33W, h0km, mb3.5/4, mbtmp3.6/7, ML2.5/3, Error ellipse: s-maj=36.4km s-min=22.8km az=38.0*

NEIC ***18*** *16:05:54.7±1.8, 12.˚98N±0.˚07×87.˚37W±0.˚05, h10km±1km, mb4.2/21, Error ellipse: s-maj=13.4km s-min=3.8km az=215.0*

SNET ***18*** *16:05:54.6±3.2, 12.˚94N×87.˚34W, h3km, ML4.4, Presumed earthquake*

UCR ***18*** *16:05:55.0±0.9, 13.˚10N×87.˚26W, h14km±6km, MW4.8, Presumed earthquake*

CATAC ***18*** *16:05:55.0±0.1, 13˚N±1˚×87˚4W±0˚7, h1km, M4.5/60, MLv4.5/60, Error ellipse: s-maj=2.6km s-min=0.9km az=29.6, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.66; Mθθ-2.77; Mφφ4.43; Mrθ1.28; Mθφ-5.52; Mφr0.24; Fault plane solution: Mo6.87535×10^15 NP1: φs287.71442°, δ80.83304°, λ-167.00663°. NP2: φs195.60914°, δ77.17543°, λ-9.40359°. Principal axes: T 7.4439, Plg2.5392°, Azm61.3191°; N -1.3322, Plg74.1440°, Azm322.3364°; P -6.1118, Plg15.6407°, Azm152.0305°; confirmed*

ISC 18 16:05:53.9±0.8, 13.˚00N±0.˚03×87.˚40W±0.˚02, h15km±5km, n175, σ1s58/247, mb4.1/12, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.15**	**260**	P	**Pg**	**16 05 59.0**	**+1.1**
CSGN				S	**Sg**	**16 06 01.5**	**+0.9**
CRIN	**San Cristobal**	**0.46**	**131**	P	**Pb**	**16 06 04.0**	**+0.2**
CRIN				S	**Sg**	**16 06 08.2**	**-1.0**
CRIN	**San Cristobal**	**0.46**	**131**		**Pb**	**16 06 03.9**	**+0.2**
LCND	**La Caada**	**0.56**	**303**	P	**Pn**	**16 06 06.8**	**-0.7**
LCND				S	**Sb**	**16 06 14.9**	**+1.5**
LCND	**La Caada**	**0.56**	**303**	*e*P	**Pn**	**16 06 06.6**	**-0.9**
LCND				*e*S	**Sn**	**16 06 15.7**	**-0.9**
INTP	**Intipuca**	**0.66**	**287**	*e*P	**Pn**	**16 06 08.3**	**-0.5**
INTP				*e*S	**Sb**	**16 06 18.4**	**+2.1**
QUEN	**Al S del Volca**	**0.68**	**127**	P	**Pg**	**16 06 07.3**	**+0.2**
QUEN				S	**Sg**	**16 06 14.7**	**-1.4**
HERN	**Volcan Telica**	**0.68**	**125**	P	**Pg**	**16 06 07.2**	**-0.1**
HERN				S	**Sg**	**16 06 15.3**	**-1.0**
HERN	**Volcan Telica**	**0.68**	**125**		**Pg**	**16 06 07.1**	**-0.1**
HERN	**Volcan Telica**	**0.68**	**125**	*e*P	**Pg**	**16 06 07.1**	**-0.1**
TELN	**Telica**	**0.68**	**125**	P	**Pg**	**16 06 06.9**	**-0.4**
TELN				S	**Sg**	**16 06 15.0**	**-1.4**
HOYN	**Al Sur del Vol**	**0.69**	**126**	P	**Pg**	**16 06 07.3**	**-0.1**
HOYN				S	**Sg**	**16 06 15.6**	**-1.0**
ROCN	**Rota Cerro Neg**	**0.80**	**127**	P	**Pg**	**16 06 09.1**	**-0.5**
ROCN				S	**Sg**	**16 06 18.2**	**-1.9**
AESN	**El Sauce Leon**	**0.85**	**98**	P	**Pb**	**16 06 10.6**	**+0.3**
AESN				S	**Sb**	**16 06 21.4**	**-0.2**
CNGN	**Cerro Negro**	**0.85**	**126**	P	**Pg**	**16 06 10.1**	**-0.3**
CNGN				S	**Sg**	**16 06 19.2**	**-2.4**
CNGA	**Al SSO del Vol**	**0.85**	**126**	P	**Pg**	**16 06 10.2**	**-0.2**
CNGA				S	**Sg**	**16 06 19.4**	**-2.2**
MACN	**El Madrono**	**0.89**	**127**	P	**Pg**	**16 06 10.6**	**-0.6**
MACN				S	**Sg**	**16 06 21.2**	**-1.7**
BLLM	**Bellamira**	**0.92**	**298**	*e*P	**Pn**	**16 06 13.3**	**+0.9**
RANC	**El Ranchito**	**0.96**	**296**	P	**Pn**	**16 06 13.7**	**+0.6**
RANC				S	**Sn**	**16 06 27.5**	**+0.9**
MOM3	**MOM3**	**0.99**	**120**	P	**Pg**	**16 06 12.7**	**-0.4**
MOM3				S	**Sg**	**16 06 25.7**	**-0.4**
PACA	**Pacayal**	**1.01**	**297**	P	**Pn**	**16 06 14.3**	**+0.6**
PACA				S	**Sn**	**16 06 29.0**	**+1.3**
PACA	**Pacayal**	**1.01**	**297**	*e*P	**Pn**	**16 06 14.2**	**+0.6**
PACA				*e*S	**Sn**	**16 06 30.6**	**+2.8**
MOMN	**Momotombo**	**1.03**	**125**	P	**Pg**	**16 06 13.2**	**-0.7**
MOMN				S	**Sg**	**16 06 26.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.05**	**7**	Pn	**Pg**	**16 06 15.2**	**+0.9**
MOM2	**El Cardon**	**1.06**	**122**	P	**Pg**	**16 06 13.8**	**-0.5**
MOM2				S	**Sg**	**16 06 27.5**	**-0.7**
OCON	**Estacion meteo**	**1.09**	**55**	P	**Pn**	**16 06 16.2**	**+1.4**
OCON				S	**Sn**	**16 06 30.5**	**+0.8**
COPN	**Copaltepe**	**1.14**	**136**	P	**Pg**	**16 06 14.7**	**-1.2**
COPN	**Copaltepe**	**1.14**	**136**	*e*P	**Pg**	**16 06 14.4**	**-1.5**
COPN				*e*S	**Sg**	**16 06 30.7**	**-0.1**
TECA	**Tecapa**	**1.18**	**295**	*e*P	**Pn**	**16 06 17.1**	**+1.1**
AMTN	**Mateare**	**1.22**	**129**	P	**Pg**	**16 06 16.5**	**-0.9**
AMTN				S	**Sg**	**16 06 33.2**	**-0.1**
RCFN	**Al S de San Ju**	**1.27**	**66**	P	**Pn**	**16 06 18.9**	**+1.6**
RCFN				S	**Sn**	**16 06 35.6**	**+1.4**
APYN	**Apoyeque**	**1.28**	**127**	P	**Pg**	**16 06 17.6**	**-1.0**
APYN				S	**Sg**	**16 06 34.4**	**-0.9**
PQSS	**Presa 15 de Se**	**1.28**	**299**	P	**Pn**	**16 06 19.1**	**+1.8**
PQSS				S	**Sn**	**16 06 37.6**	**+3.2**
MARCA	**Marcala la Paz**	**1.30**	**332**	P	**Pn**	**16 06 19.7**	**+1.9**
MARCA	**Marcala la Paz**	**1.30**	**332**	*i* P	**Pn**	**16 06 19.2**	**+1.5**
MARCA				*i* S	**Sn**	**16 06 38.5**	**+3.6**
RCON	**San Juan de Ri**	**1.30**	**68**	P	**Pn**	**16 06 19.4**	**+1.6**
RCON				S	**Sn**	**16 06 37.5**	**+2.5**
RCVN	**Varillal2**	**1.31**	**64**	P	**Pn**	**16 06 19.2**	**+1.4**
RCVN				S	**Sn**	**16 06 37.7**	**+2.6**
APQ2	**Apoyeque**	**1.32**	**127**	P	**Pg**	**16 06 18.6**	**-0.8**
APQ2				S	**Sg**	**16 06 36.2**	**-0.4**
RCPN	**Sur Rio San Ju**	**1.38**	**68**	P	**Pb**	**16 06 20.5**	**+1.1**
RCPN				S	**Sn**	**16 06 39.5**	**+2.7**
ABCN	**Banco Central**	**1.38**	**129**	P	**Pn**	**16 06 19.4**	**+0.7**
ABCN				S	**Sg**	**16 06 37.7**	**-0.8**
**AL

BUAI	**Buenos Aires**	**2.93**	**136**	*eP*	**Pn**	**16 06 40.9**	**+0.9**
IZABA	**Izabal, Puerto**	**2.94**	**337**	P	**Pb**	**16 06 44.0**	**-2.1**
IZABA				S	**Sg**	**16 07 23.5**	**-5.0**
LAPC	**Finca la Perla**	**2.94**	**139**	*eP*	**Pn**	**16 06 40.7**	**+0.5**
VORI	**VORI**	**2.96**	**137**	*eP*	**Pn**	**16 06 42.3**	**+1.7**
VRLE	**La Escondida,**	**2.97**	**138**	*eP*	**Pn**	**16 06 41.3**	**+0.6**
GPS3	**Bodega del ICE**	**3.00**	**138**	*eP*	**Pn**	**16 06 41.5**	**+0.5**
GPS2	**Hotel Rincn d**	**3.01**	**138**	*eP*	**Pn**	**16 06 42.7**	**+1.6**
ALIBA	**Liberia Airpor**	**3.01**	**143**	*eP*	**Pn**	**16 06 42.9**	**+1.8**
CLARA	**Aguas Claras**	**3.10**	**135**	*eP*	**Pn**	**16 06 43.2**	**+0.8**
CLARA				*eP*	Pb	16 06 43.2	-5.6
MESS	**Mesas**	**3.12**	**136**	*eP*	**Pn**	**16 06 42.9**	**+0.2**
MESS				*eP*	Pb	16 06 43.2	-5.9
HORNC	**Hornillas**	**3.15**	**136**	*eP*	**Pn**	**16 06 43.6**	**+0.4**
HORNC				*eP*	Pb	16 06 44.0	-5.7
HORNC				*eS*	**Sn**	**16 07 21.2**	**+0.6**
CUI	**Cuipilapa**	**3.20**	**137**	*eP*	**Pn**	**16 06 44.3**	**+0.5**
CUI				*eP*	Pb	16 06 44.7	-5.8
BAGA	**Bagaces**	**3.23**	**139**	*eP*	**Pn**	**16 06 45.0**	**+0.8**
FG16	**Alotenango, Sa**	**3.27**	**293**	*i P*	**Pg**	**16 06 55.8**	**-1.0**
TENO	**El Achiote**	**3.30**	**134**	*eP*	**Pn**	**16 06 46.2**	**+1.1**
FG8	**Yepocapa, Chim**	**3.31**	**292**	*eP*	**Pg**	**16 06 56.4**	**-1.0**
TIMP	**Tierras Morena**	**3.35**	**136**	*eP*	**Pn**	**16 06 46.6**	**+0.7**
JUD3	**Juan Diaz 3**	**3.36**	**147**		**Pn**	**16 06 47.8**	**+1.8**
JUD3	**Juan Diaz 3**	**3.36**	**147**	*eP*	**Pn**	**16 06 46.7**	**+0.7**
QUEB	**Quebradon, Cot**	**3.41**	**134**	*eP*	**Pn**	**16 06 48.0**	**+1.3**
COTE	**Lago Cote**	**3.43**	**135**	*eP*	**Pn**	**16 06 47.6**	**+0.7**
TILA	**Tilaran**	**3.47**	**136**	*eP*	**Pn**	**16 06 48.1**	**+0.7**
APG	**El Apazote**	**3.58**	**304**	Pn	**Pb**	**16 06 57.2**	**+0.1**
	comp=E,0.3nm,0.3s,baz=103,slow=13,SNR=18						
APG				Sn	**Sg**	**16 07 47.5**	**-1.3**
	comp=E,0.8nm,0.3s,baz=183,slow=11,SNR=7.8						
	comp=E,2.3nm,0.6s						
APG	**El Apazote**	**3.58**	**304**	*eP*	**Pb**	**16 06 56.4**	**-0.6**
APG				*eS*	**Sg**	**16 07 47.2**	**-1.7**
JTS	**Las Juntas de**	**3.61**	**138**	Pn	**Pn**	**16 06 50.6**	**+1.2**
	comp=E,40nm,0.4s,baz=324,slow=17,SNR=26						
JTS				Sn	**Sn**	**16 07 32.7**	**+0.9**
	comp=E,25nm,0.3s,baz=83,slow=22,SNR=4.6						
JTS	**Las Juntas de**	**3.61**	**138**	P	**Pn**	**16 06 51.0**	**+1.6**
JTS				S	**Sn**	**16 07 33.8**	**+2.0**
JTS	**Las Juntas de**	**3.61**	**138**		**Pn**	**16 06 50.7**	**+1.3**
JTS	**Las Juntas de**	**3.61**	**138**	*eP*	**Pn**	**16 06 50.1**	**+0.7**
JTS				*eP*	Pb	16 06 50.2	-7.3
CEDE	**Laguna Cedeo**	**3.64**	**133**	*eP*	**Pn**	**16 06 50.6**	**+0.8**
ARE1	**Arenal 1**	**3.65**	**134**	*eP*	**Pn**	**16 06 50.8**	**+0.9**
VARE2	**V. Arenal**	**3.65**	**134**	*eP*	**Pn**	**16 06 51.0**	**+1.0**
NYURE	**Nandayure**	**3.66**	**145**	*eP*	**Pn**	**16 06 53.2**	**+3.2**
LAFE	**Finca La Fe, P**	**4.01**	**142**	*eP*	**Pn**	**16 06 56.2**	**+1.4**
BILN	**Bilwi Airport**	**4.05**	**75**	P	**Pn**	**16 06 57.8**	**+2.3**
STG5	**El Palmar, Qui**	**4.08**	**290**	*i P*	**Pb**	**16 07 05.8**	**+0.2**
STG8	**El Palmar, Qui**	**4.10**	**291**	*i P*	**Pb**	**16 07 05.7**	**-0.2**
TRT2	**Tortugero**	**4.34**	**124**	P	**Pn**	**16 07 01.0**	**+1.7**
TRT2				S	**Sn**	**16 07 53.1**	**+3.4**
TRT2	**Tortugero**	**4.34**	**124**	*eP*	**Pn**	**16 07 01.7**	**+2.4**
RTAL	**Retalhuleu**	**4.44**	**290**	S	**Sn**	**16 07 57.6**	**+5.4**
PETF	**Flores**	**4.56**	**329**	*eP*	**Pb**	**16 07 14.0**	**+0.3**
HUEH	**Huehuetenango**	**4.59**	**305**	*eP*	**Pg**	**16 07 17.5**	**-4.5**
PICV	**PH. Pirrs**	**4.60**	**137**	*eP*	**Pn**	**16 07 06.8**	**+3.8**
VICA	**Volcano Irazu**	**4.60**	**130**	*eP*	**Pn**	**16 07 05.1**	**+1.7**
CVTR	**Volcan Turrial**	**4.64**	**129**	*eP*	**Pn**	**16 07 05.9**	**+2.0**
VTR0	**Volcan Turrial**	**4.64**	**129**	*eP*	**Pn**	**16 07 06.1**	**+2.2**
PIEC	**Cerro El Cedra**	**4.76**	**135**	*eP*	**Pn**	**16 07 07.5**	**+2.0**
PIRO	**Carate, Puerto**	**6.07**	**138**	Pn	**Pn**	**16 07 22.4**	**-0.8**
TEIG	**Tepich**	**7.23**	**353**	Pn	Pn	16 07 29.7	-9.4
	baz=38,slow=20,SNR=4.2						
CMIG	**Matias Romero**	**8.29**	**300**	Pn	Pn	16 08 01.8	+8.1
	comp=E,0.4nm,0.3s,baz=125,slow=9.4,SNR=7.4						
CMIG				Sn	Sn	16 09 38.5	+11
	comp=E,0.8nm,0.3s,baz=277,slow=9.4,SNR=2.6						
	comp=E,7.6nm,0.9s						
ROSC	**El Rosal**	**15.25**	**121**	Pn	**Pn**	**16 09 29.0**	**-0.2**
	comp=E,3.3nm,0.3s,baz=108,slow=6.4,SNR=1.9						
ROSC	**El Rosal**	**15.25**	**121**	Pn	**Pn**	**16 09 23.9**	**-5.4**
SDV	**Santo Domingo**	**16.96**	**102**	Pn	**Pn**	**16 09 50.9**	**-0.2**
HKT	**Hockley**	**18.59**	**336**	P	**Pn**	**16 10 11.5**	**+0.8**
HKT				IAmb	IAmb	16 10 20.1	
	comp=Z,36nm,1.5s						
833A	**Chaparral WMA,**	**18.90**	**326**	P	**P**	**16 10 14.2**	**+0.1**
833A				IAmb	IAmb	16 10 29.6	
	comp=Z,36nm,1.4s						
HNDO	**Hondo**	**19.80**	**328**	P	**P**	**16 10 23.4**	**-0.5**
HNDO				IAmb	IAmb	16 10 28.3	
	comp=Z,6.4nm,0.7s						
JCT	**Junction City**	**20.83**	**329**	P	**P**	**16 10 35.4**	**+0.2**
OXF	**Oxford**	**21.49**	**355**	P	**P**	**16 10 41.2**	**-0.9**
OXF				IAmb	IAmb	16 11 07.0	
	comp=Z,24nm,0.9s						
JSC	**Jenkinsville**	**21.91**	**14**	P	**P**	**16 10 47.8**	**+1.2**
JSC				IAmb	IAmb	16 11 15.6	
	comp=Z,11nm,1.2s						
TXAR	**Lajitas Array**	**22.18**	**320**	P	**P**	**16 10 52.3**	**+2.5**
	comp=Z,3.5nm,0.9s,baz=139,slow=9.8,SNR=26						
	comp=Z,3.5nm,0.9s						
TXAR	**Lajitas Array**	**22.18**	**320**	P	**P**	**16 10 52.5**	**+2.8**
TX31	**Lajitas Ar. Sí**	**22.18**	**320**	P	**P**	**16 10 51.6**	**+1.8**
TX31				IAmb	IAmb	16 10 57.8	
	comp=Z,14nm,1.3s						
CPCT	**Cooper Cave**	**22.50**	**6**	P	**P**	**16 10 54.2**	**+1.2**
CPCT				IAmb	IAmb	16 11 11.2	
	comp=Z,16nm,1.5s						
V48A	**Smith Brothers**	**22.64**	**1**	P	**P**	**16 10 55.1**	**+0.6**
V48A				IAmb	IAmb	16 11 18.0	
	comp=Z,6.8nm,1.1s						
KMSC	**Kings Mountain**	**22.71**	**13**	P	**P**	**16 10 56.4**	**+1.1**
KMSC				IAmb	IAmb	16 11 13.7	
	comp=Z,11nm,1.3s						
TPB01	**Permian Basin**	**23.39**	**322**	P	**P**	**16 11 03.1**	**+0.8**
TUL3	**Leonard**	**24.03**	**343**	P	**P**	**16 11 09.7**	**+1.4**
ANMO	**Albuquerque**	**27.83**	**325**	P	**P**	**16 11 42.3**	**-0.8**
TUC	**Tucson**	**28.78**	**316**	P	**P**	**16 11 52.5**	**+1.0**
TUC				IAmb	IAmb	16 12 01.4	
	comp=Z,4.9nm,1.4s						
LPAZ	**La Paz**	**34.79**	**146**	P	P	16 12 40.9	-4.0
PB14	**IPOC Station P**	**40.92**	**156**	P	**P**	**16 13 34.9**	**-1.4**
PB14				IAmb	IAmb	16 13 54.1	
	comp=Z,6.5nm,1.1s						
YKA	**Yellowknife Ar**	**53.09**	**345**	P	**P**	**16 15 07.5**	**-3.1**
	comp=Z,0.3nm,0.6s,baz=143,slow=7.9,SNR=8.2						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**65.54**	**336**	P	**P**	**16 16 35.7**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=116,slow=7.7,SNR=4.3						
	comp=Z,0.7nm,0.8s						
ESDC	**Sonseca Array**	**76.81**	**52**	P	P	16 17 38.9	-6.6
	comp=Z,0.1nm,0.3s,baz=235,slow=4.1,SNR=2.4						
	comp=Z,0.1nm,0.3s						
HHC	**Hu-ho-hao-te**	**123.61**	**343**	*eP*	**PKPdf**	**16 24 49.3**	**-2.2**
NJ2	**Nanjing**	**128.62**	**331**	*eP*	**PKPdf**	**16 25 02.5**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WRA	**Warramunga Arr**	**139.47**	**255**	PKP	**PKPdf**	**16 25 23.5**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=94,slow=2.2,SNR=6.4						
ASAR	**Alice Springs**	**139.51**	**249**	PKP	**PKPdf**	**16 25 24.1**	**+2.4**
	comp=Z,0.4nm,0.8s,baz=105,slow=1.7,SNR=2.0						
PZH	**PanZhiHua**	**139.74**	**347**	PKP	**PKPdf**	**16 25 23.3**	**+1.0**

*SKHL **18** 16:14:11.0±0.4, 45˚.90N×143˚.70E, h331km±1km, mb3.8/1, msh4.2/1*
*JMA **18** 16:14:11.2±0.3, 46˚N±3˚×14˚3E±˚, h337km, MV2.6/31, NE OFF HOKKAIDO*

ISC 18 16:14:10.6±1.5, 45°.92N±0°.08×143°.6E±0°.1, h330km, n21, σ1°32/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzhno-Sakhali**	**1.17**	**332**	*i P*	**Pn**	**16 14 55.1**	**+0.3**
YSS				AMB	AMB	16 14 55.4	
	10.0nm,0.2s						
YSS				*eS*	**S**	**16 15 29.1**	**-1.1**
YSS				A	A	16 15 30.4	
	20nm,0.6s						
YSS				A	A	16 15 30.4	
	10.0nm,0.6s						
JSE	**Soyaes**	**1.18**	**216**	P	**Pn**	**16 14 56.0**	**+1.0**
JWK2	**Keihoku**	**1.31**	**243**	P	**Pn**	**16 14 56.9**	**+1.3**
JRBN	**Rebuntou**	**1.81**	**255**	P	**Pn**	**16 14 58.6**	**0.0**
JMP	**Maruseppu**	**1.92**	**184**	*eP*	**Pn**	**16 15 01.1**	**+1.6**
ASAJ	**Asahikawa**	**1.93**	**201**	P	**Pn**	**16 15 01.4**	**+1.8**
JSS	**Shosan**	**1.94**	**219**	*eP*	**Pn**	**16 15 01.1**	**+1.5**
JTKR	**Abashiri--Toko**	**1.97**	**172**	*eP*	**Pn**	**16 15 01.8**	**+1.9**
JAR	**Ashorobuto**	**2.63**	**176**	P	**Pn**	**16 15 07.2**	**+2.0**
JFR	**Furan**	**2.84**	**194**	*eP*	**Pn**	**16 15 09.0**	**+1.9**
NMR	**Nemuro--Hokkai**	**2.99**	**148**	*eP*	**Pn**	**16 15 08.5**	**+0.1**
NMR				*eS*	**S**	**16 15 53.5**	**-1.2**
NEM2	**Nemuro 2**	**3.00**	**148**	*eS*	**S**	**16 15 54.9**	**+0.1**
JAK	**Akkeshi**	**3.04**	**164**	P	**Pn**	**16 15 09.6**	**+0.8**
JAK				*eS*	**S**	**16 15 55.7**	**+0.1**
AKK	**Akkeshi**	**3.05**	**162**	*eP*	**Pn**	**16 15 08.9**	**-0.1**
AKK				*eS*	**S**	**16 15 54.2**	**-1.6**
JBT2	**Biratori 2**	**3.26**	**196**	P	**Pn**	**16 15 12.2**	**+1.3**
JCH	**Churui**	**3.31**	**182**	P	**Pn**	**16 15 11.7**	**+0.3**
JCH				*eS*	**S**	**16 15 59.3**	**-1.1**
JEW	**Eniwo**	**3.43**	**207**	P	**Pn**	**16 15 15.2**	**+2.5**
JNBK	**Urakawa-nobuka**	**3.69**	**189**	P	**Pn**	**16 15 15.9**	**+0.7**
JOT	**Ohata**	**4.89**	**203**	P	**Pn**	**16 15 28.0**	**-0.1**
JOT				S	**S**	**16 16 28.6**	**-2.0**
JANG	**Nango**	**5.74**	**196**	*eP*	**Pn**	**16 15 37.9**	**+0.1**
JIW	**Iwasaki**	**5.92**	**207**	*eP*	**Pn**	**16 15 40.2**	**+0.3**

IDC 18 16:14:36.1±4.9, 14°.88S×172°.77W, h0km, mb4.6/2, mbtmp4.6/2, Error ellipse: s-maj=257.4km s-min=18.5km az=144.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.36**	**45**	Pn	Pg	16 15 01.5	-0.8
	26nm,0.3s,baz=244,slow=21,SNR=9.5						
AFI				Sn	Sn	16 15 23.9	+2.6
	80nm,0.3s,baz=58,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**50.56**	**256**	P	P	16 23 36.6	-0.3
	1.8nm,0.5s,baz=91,slow=7.6,SNR=32						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**50.85**	**251**	P	P	16 23 39.0	-0.1
	7.0nm,0.4s,baz=89,slow=7.6,SNR=70						
	7.0nm,0.4s						
BRTR	**Keskin Array B**	**146.13**	**322**	PKPbc	PKPbc	16 34 18.6	-0.2
	1.0nm,0.8s,baz=116,slow=3.4,SNR=5.5						

*IDC **18** 16:23:25.1±2.0, 19˚.15S×169˚.68E, h290km±20km, mb3.5/6, mbtmp4.2/8, Error ellipse: s-maj=33.7km s-min=17.4km az=13.0*
*NOU **18** 16:23:25.2, 19˚.22S×169˚.69E, h259km, MLv4.3/15, Vanuatu Islands*

ISC 18 16:23:23.5±0.8, 19°.31S±0°.07×169°.73E±0°.10, h250km, n22, σ2°.84/22, mb4.0/7, 4C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.95**	**320**	P	**Pn**	**16 24 08.2**	**+2.6**
RTV	**Rentapao**	**1.95**	**320**	S	**S**	**16 24 41.8**	**+3.1**
DVP	**Devils Point**	**2.15**	**317**	P	**Pn**	**16 24 09.6**	**+2.2**
DVP	**Devils Point**	**2.15**	**317**	S	**S**	**16 24 44.3**	**+2.3**
MARNC	**Mare, Loyalty**	**2.69**	**216**	P	**Pn**	**16 24 15.6**	**+2.9**
MARNC	**Mare, Loyalty**	**2.69**	**216**	S	**S**	**16 24 55.2**	**+3.6**
YATNC	**Mamie plateau,**	**3.82**	**224**	P	**Pn**	**16 24 26.8**	**+1.6**
OUENC	**Ouen Island, N**	**4.11**	**221**	P	**Pn**	**16 24 31.7**	**+3.1**
DZM	**Mont Dzumac**	**4.13**	**228**	P	**Pn**	**16 24 32.5**	**+3.6**
	41nm,0.6s,baz=56,slow=18,SNR=65						
NOUC	**Port Laguerre**	**4.25**	**228**	P	**Pn**	**16 24 33.3**	**+3.1**
ONTNC	**Ouen Toro**	**4.28**	**225**	P	**Pn**	**16 24 33.7**	**+3.1**
MSVF	**Nonsavu**	**8.05**	**80**	P	**Pn**	**16 25 19.7**	**+2.2**
	19nm,0.5s,baz=265,slow=13,SNR=43						
URZ	**Urewera**	**19.95**	**163**	P	**P**	**16 27 38.5**	**+1.7**
	4.2nm,0.6s,baz=342,slow=13,SNR=1.7						
	4.2nm,0.6s						
CTA	**Charters Tower**	**22.12**	**264**	P	**P**	**16 27 57.5**	**-1.2**
	1.5nm,0.5s,baz=68,slow=11,SNR=2.1						
	1.5nm,0.5s						
STKA	**Stephens Creek**	**28.20**	**238**	P	**P**	**16 28 52.6**	**-0.7**
	2.0nm,0.5s,baz=58,slow=8.8,SNR=4.7						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**33.31**	**263**	P	**P**	**16 29 35.5**	**-2.7**
	0.7nm,0.5s,baz=98,slow=8.1,SNR=27						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**33.56**	**256**	P	**P**	**16 29 38.5**	**-1.9**
	6.4nm,0.5s,baz=88,slow=8.6,SNR=179						
	6.4nm,0.5s						
QSPA	**South Pole Qui**	**70.75**	**180**	P	**P**	**16 34 10.5**	**-2.0**
	1.3nm,0.8s,baz=315,slow=1.4,SNR=7.9						
	1.3nm,0.8s						
TROLL	**Troll, Antarti**	**88.50**	**184**	⇑P	**P**	**16 35 44.9**	**-2.6**
	comp=Z,109nm,0.5s						
SNAA	**Sanae**	**89.11**	**182**	⇑P	**P**	**16 35 47.4**	**-2.9**
	comp=Z,39nm,0.7s						
VNA2	**Neumayer--Watz**	**89.99**	**181**	⇑P	**P**	**16 35 51.5**	**-2.8**
	comp=Z,1.9nm,0.6s,baz=179,slow=4.1						
VNA1	**Neumayer--Stat**	**90.27**	**181**	⇑P	**P**	**16 35 52.0**	**-3.5**
	comp=Z,1.2nm,0.7s						

*NOU **18** 16:27:49.0, 11˚.20S×166˚.45E, h31km, mb4.9/25, Santa Cruz Islands*
*IDC **18** 16:27:51.6±3.2, 11˚.39S×166˚.25E, h58km±27km, mb4.1/19, mbtmp4.3/21, ML3.8/2, MS4.4/1, Error ellipse: s-maj=21.3km s-min=12.8km az=75.0*
*NEIC **18** 16:27:53.4±1.4, 11˚.40S±0˚.10×166˚.3E±0˚.1, h69km±4km, mb4.5/27, Error ellipse: s-maj=16.0km s-min=13.0km az=49.0*

ISC 18 16:27:50.6±1.2, 11°.41S±0°.07×166°.33E±0°.07, h49km±11km, n127, σ1°25/135, mb4.5/31, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**4.45**	**282**	P	**Pn**	**16 28 54.5**	**-1.1**
NGOA	**Tingoa Renbel**	**6.15**	**268**	P	**Pn**	**16 29 17.2**	**-1.7**
HNR	**Honiara**	**6.58**	**287**	P	**Pn**	**16 29 25.5**	**+0.6**
	2.0nm,0.3s,baz=253,slow=1.5,SNR=46						
HNR				S	**Sn**	**16 30 36.3**	**-2.3**
	3.8nm,0.5s,baz=282,slow=19,SNR=1.0						
	17nm,0.6s						
HNR	**Honiara**	**6.58**	**287**	P	**Pn**	**16 29 25.7**	**+0.9**
HNR	**Honiara**	**6.58**	**287**		**Pn**	**16 29 25.7**	**+0.9**
HNR				Sn	**Sn**	**16 30 37.5**	**-1.1**
SAVO	**Savo Central**	**6.80**	**289**	P	**Pn**	**16 29 28.7**	**+0.9**
SAVO	**Savo Central**	**6.80**	**289**	S	**Sn**	**16 30 44.4**	**+0.4**
TATA	**Tatamba Isabel**	**7.10**	**294**	P	**Pn**	**16 29 32.4**	**+0.5**
KOUNC	**Koumac, New Ca**	**9.30**	**192**	P	**Pn**	**16 30 03.7**	**+1.7**
KOUNC	**Koumac, New Ca**	**9.30**	**192**	Pn	**Pn**	**16 30 05.6**	**+3.5**
MARNC	**Mare, Loyalty**	**10.14**	**171**	Pn	**Pn**	**16 30 15.2**	**+1.6**
DZM	**Mont Dzumac**	**10.60**	**179**	P	**Pn**	**16 30 21.7**	**+1.8**
	0.6nm,0.3s,baz=11,slow=8.6,SNR=18						
DZM				S	**Sn**	**16 32 13.6**	**-3.7**
	2.7nm,0.4s,baz=311,slow=23,SNR=1.1						
	2.2nm,0.4s						
YATNC	**Mamie plateau,**	**10.60**	**177**	P	**Pn**	**16 30 21.5**	**+1.6**
NOUC	**Port Laguerre**	**10.63**	**180**	P	**Pn**	**16 30 23.6**	**+3.4**
MSVF	**Nonsavu**	**12.96**	**120**	P	**P**	**16 31 04.1**	**+2.7**
	26nm,0.9s,baz=283,slow=8.2,SNR=14						
MSVF	**Nonsavu**	**12.96**	**120**	P	**Pn**	**16 30 50.0**	**-2.2**
RABL	**Rabaul**	**15.76**	**296**	Pn	**Pn**	**16 31 29.5**	**+0.1**
RABL				IAmb	IAmb	16 31 49.9	
	comp=Z,24nm,1.0s						
EIDS	**Eidsvold**	**20.02**	**224**		**P**	**16 32 18.0**	**-1.5**
CTA	**Charters Tower**	**21.14**	**243**	P	**P**	**16 32 32.6**	**+1.0**
	comp=Z,10nm,0.8s,baz=75,slow=11,SNR=11						
CTA				LR	LR	16 39 10.3	
	comp=Z,1μm,18.3s,baz=308,slow=32						
	comp=Z,10nm,0.8s						
CTAO	**Charters Tower**	**21.14**	**243**	P	**P**	**16 32 34.3**	**+2.7**
CTAO	**Charters Tower**	**21.14**	**243**		**P**	**16 32 33.3**	**+1.7**
CTAO				IAmb	IAmb	16 32 51.2	
	comp=Z,17nm,1.1s						
GLKZ	**Green Lake**	**23.05**	**143**	P	**P**	**16 32 49.5**	**-2.2**
ARMA	**Armidale**	**23.32**	**214**	P	**P**	**16 32 54.9**	**+0.3**
ARMA				IAmb	IAmb	16 33 18.3	
	comp=Z,17nm,1.0s						
MKAZ	**Moumakai**	**26.79**	**164**	P	**P**	**16 33 27.0**	**+1.1**
JAY	**Jayapura**	**26.91**	**287**	P	**P**	**16 33 26.9**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=135,slow=7.1,SNR=2.2						
	comp=Z,3.8nm,0.7s						
HIZ	**Hauiti**	**28.04**	**166**	P	**P**	**16 33 38.6**	**+1.4**
HAZ	**Te Kaha**	**28.17**	**161**	P	**P**	**16 33 40.1**	**+1.8**
URZ	**Urewera**	**28.42**	**162**	P	**P**	**16 33 41.1**	**+0.5**
	comp=Z,14nm,1.1s,baz=0.0,slow=7.1,SNR=2.5						
	comp=Z,14nm,1.1s						
URZ	**Urewera**	**28.42**	**162**	P	**P**	**16 33 39.9**	**-0.7**
MWZ	**Matawai**	**28.62**	**161**	P	**P**	**16 33 42.9**	**+0.5**
TWGZ	**Tauwhareparae**	**28.62**	**161**	P	**P**	**16 33 43.5**	**+1.1**
RTZ	**Ruatahuna**	**28.71**	**162**	P	**P**	**16 33 43.1**	**-0.1**
TMVZ	**Te Maari**	**28.82**	**165**	P	**P**	**16 33 47.3**	**+3.0**
OTVZ	**Oturere**	**28.86**	**165**	P	**P**	**16 33 46.5**	**+1.9**
MTHZ	**Maungataniwha**	**28.89**	**163**	P	**P**	**16 33 46.5**	**+1.7**
FWVZ	**Far West T-bar**	**28.92**	**165**	P	**P**	**16 33 46.6**	**+1.3**
INKA	**Innaminka**	**28.97**	**232**	P	**P**	**16 33 45.7**	**+0.1**
BKZ	**Black Stump Fm**	**29.08**	**164**	P	**P**	**16 33 48.1**	**+1.6**
BKZ	**Black Stump Fm**	**29.08**	**164**	P	**P**	**16 33 46.1**	**-0.4**
NMHZ	**Naumai**	**29.11**	**163**	P	**P**	**16 33 47.3**	**+0.5**
KRHZ	**Kereru**	**29.49**	**164**	P	**P**	**16 33 49.7**	**-0.4**
PNHZ	**Pukenui**	**29.70**	**165**	P	**P**	**16 33 52.1**	**+0.1**
KAHZ	**Kahuranaki**	**29.77**	**164**	P	**P**	**16 33 53.5**	**+0.9**
QRZ	**Quartz Range**	**29.80**	**171**	P	**P**	**16 33 53.7**	**+0.9**
QRZ	**Quartz Range**	**29.80**	**171**	P	**P**	**16 33 53.5**	**+0.7**
WPHZ	**Waipukurau**	**29.91**	**164**	P	**P**	**16 33 53.4**	**-0.4**
DVHZ	**Dannevirke**	**30.06**	**165**	P	**P**	**16 33 54.4**	**-0.7**
MRZ	**Mangatainoka R**	**30.25**	**166**	P	**P**	**16 33 55.9**	**-0.9**
MRZ	**Mangatainoka R**	**30.25**	**166**	P	**P**	**16 33 56.1**	**-0.7**
OGWZ	**Otaki Gorge**	**30.31**	**167**	P	**P**	**16 33 56.7**	**-0.6**
NNZ	**Nelson**	**30.33**	**169**	P	**P**	**16 33 59.3**	**+1.9**
MRNZ	**Matariki Terra**	**30.40**	**170**	P	**P**	**16 33 59.0**	**+0.9**
BFZ	**Birch Farm**	**30.44**	**165**	P	**P**	**16 33 59.6**	**+1.2**
BFZ	**Birch Farm**	**30.44**	**165**	P	**P**	**16 33 57.7**	**-0.7**
HOWZ	**Holdsworth Sta**	**30.46**	**166**	P	**P**	**16 33 57.8**	**-0.9**
STKA	**Stephens Creek**	**30.58**	**224**	P	**P**	**16 34 00.3**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=45,slow=6.6,SNR=5.1						
STKA				PcP	**PcP**	**16 36 57.5**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=333,slow=4.5,SNR=3.3						
	comp=Z,3.4nm,0.7s						
TUWZ	**Tuamarina**	**30.64**	**169**	P	**P**	**16 34 00.5**	**+0.3**
SNZO	**South Karori**	**30.68**	**168**	P	**P**	**16 34 03.1**	**+2.6**
MTW	**Mount Morrison**	**30.71**	**166**	P	**P**	**16 33 59.5**	**-1.3**
THZ	**Tophouse**	**30.78**	**170**	P	**P**	**16 34 01.8**	**+0.3**
MSWZ	**Moikau Station**	**30.90**	**167**	P	**P**	**16 34 01.3**	**-1.2**
PAWZ	**Paruwai Farm**	**30.90**	**167**	P	**P**	**16 34 01.7**	**-0.9**
TRWZ	**Traveller**	**30.98**	**166**	P	**P**	**16 34 03.0**	**-0.2**
INZ	**Inchbonnie**	**31.51**	**173**	P	**P**	**16 34 08.0**	**+0.2**
KHZ	**Kahutara**	**31.52**	**170**	P	**P**	**16 34 09.7**	**+1.8**
KHZ	**Kahutara**	**31.52**	**170**	P	**P**	**16 34 07.1**	**-0.8**
LTZ	**Lake Taylor**	**31.68**	**172**	P	**P**	**16 34 09.4**	**0.0**
LTZ	**Lake Taylor**	**31.68**	**172**	P	**P**	**16 34 09.0**	**-0.4**
WR8	**Warramunga Arr**	**31.76**	**251**	P	**P**	**16 34 09.1**	**-1.2**
WR8				IAmb	IAmb	16 34 10.6	
	comp=Z,7.7nm,1.1s						
WB0	**Warramunga Arr**	**31.82**	**251**		**P**	**16 34 10.5**	**-0.4**
WRAB	**Tennant Creek**	**31.89**	**251**	P	**P**	**16 34 13.1**	**+1.6**
WRA	**Warramunga Arr**	**31.90**	**251**	P	**P**	**16 34 10.7**	**-1.0**
	comp=Z,6.3nm,0.8s,baz=81,slow=9.0,SNR=37						
WRA				PcP	**PcP**	**16 37 01.0**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=78,slow=3.3,SNR=6.6						
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**31.90**	**251**	P	**P**	**16 34 10.0**	**-1.7**
WRA				PcP	**PcP**	**16 37 01.6**	**+0.1**
GVZ	**Greta Valley S**	**31.97**	**171**

*SNET **18** 16:28:45.0±4.2, 12°.97N×87°.32W, h1km, ML3.8, Presumed earthquake*
*CATAC **18** 16:28:45.4±0.1, 13°N±1°×87°.4W±0°.8, h2km, M3.8/28, MLv3.8/28, Error ellipse: s-maj=3.1km s-min=1.2km az=29.4, confirmed*

ISC 18 16:28:44.7±0.9, **12°.96N**±0°.03×**87°.40W**±0°.02, **h18**km±5km, **n53**, σ0**985**/92, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.15**	**276**	P		**Pg**		**16 28 59.3**	**+0.3**
CSGN				S		**Sg**		**16 29 51.9**	**0.0**
CRIN	**San Cristobal**	**0.43**	**127**	P		**Pb**		**16 28 54.6**	**+0.8**
CRIN				S		**Sb**		**16 28 59.7**	**-0.3**
LCND	**La Caada**	**0.59**	**306**	P		**Pn**		**16 28 57.3**	**-1.0**
LCND				S		**Sb**		**16 29 05.6**	**+1.1**
LCND	**La Caada**	**0.59**	**306**	*eP*		**Pb**		**16 28 57.1**	**+0.7**
LCND				*eP*		**Pn**		**16 28 57.2**	**-1.0**
LCND				*eS*		**Sn**		**16 29 06.2**	**-1.2**
LCND				*eS*		**Sb**		**16 29 06.3**	**+1.8**
QUEN	**Al S del Volca**	**0.65**	**124**	P		**Pg**		**16 28 58.0**	**+0.5**
HERN	**Volcan Telica**	**0.66**	**122**	P		**Pg**		**16 28 58.0**	**+0.3**
HERN				S		**Sg**		**16 29 06.7**	**+0.2**
TELN	**Telica**	**0.66**	**122**	P		**Pb**		**16 28 57.5**	**-0.2**
TELN				S		**Sb**		**16 29 06.3**	**-0.3**
HOYN	**Al Sur del Vol**	**0.67**	**123**	P		**Pg**		**16 28 57.9**	**+0.1**
HOYN				S		**Sg**		**16 29 07.1**	**+0.4**
INTP	**Intipuca**	**0.68**	**290**	*eP*		**Pn**		**16 28 58.8**	**-0.7**
INTP				*eS*		**Sn**		**16 28 59.8**	**-0.7**
ROCN	**Rota Cerro Neg**	**0.78**	**124**	P		**Pg**		**16 28 59.8**	**-0.1**
ROCN				S		**Sg**		**16 29 10.2**	**0.0**
CNGA	**Al SSO del Vol**	**0.82**	**124**	P		**Pg**		**16 29 00.9**	**0.0**
CNGA				S		**Sg**		**16 29 11.8**	**0.0**
CNGN	**Cerro Negro**	**0.82**	**124**	P		**Pg**		**16 29 00.7**	**-0.1**
CNGN				S		**Sg**		**16 29 11.8**	**0.0**
AESN	**El Sauce Leon**	**0.84**	**95**	S		**Sb**		**16 29 11.9**	**0.0**
MACN	**El Madrono**	**0.86**	**125**	P		**Pg**		**16 29 01.3**	**-0.2**
MACN				S		**Sg**		**16 29 13.2**	**+0.2**
LEVN	**Ruinas Leon Vi**	**0.95**	**126**	S		**Sn**		**16 29 15.9**	**-0.3**
MOM3	**MOM3**	**0.97**	**117**	P		**Pb**		**16 29 03.1**	**0.0**
MOM3				S		**Sg**		**16 29 16.5**	**+0.1**
RANC	**El Ranchito**	**0.98**	**299**	P		**Pg**		**16 29 04.3**	**+0.5**
RANC				S		**Sn**		**16 29 18.4**	**+1.0**
MOMN	**Momotombo**	**1.00**	**123**	P		**Pn**		**16 29 03.8**	**-0.1**
MOMN				S		**Sn**		**16 29 17.5**	**-0.2**
PACA	**Pacayal**	**1.03**	**300**	P		**Pg**		**16 29 04.9**	**+0.2**
PACA				S		**Sn**		**16 29 19.4**	**+0.9**
MOM2	**El Cardon**	**1.03**	**120**	P		**Pn**		**16 29 04.3**	**-0.1**
MOM2				S		**Sg**		**16 29 18.6**	**+0.2**
COPN	**Copaltepe**	**1.11**	**134**	P		**Pn**		**16 29 05.2**	**-0.1**
OCON	**Estacion meteo**	**1.12**	**53**	P		**Pn**		**16 29 05.7**	**+0.1**
OCON				S		**Sb**		**16 29 20.4**	**+0.5**
APYN	**Apoyeque**	**1.25**	**125**	S		**Sg**		**16 29 25.0**	**-0.4**
RCFN	**Al S de San Ju**	**1.29**	**64**	P		**Pn**		**16 29 08.3**	**+0.3**
RCFN				S		**Sb**		**16 29 25.4**	**+0.5**
PQSS	**Presa 15 de Se**	**1.31**	**300**	P		**Pg**		**16 29 09.5**	**-0.5**
PQSS				S		**Sg**		**16 29 27.6**	**+0.6**
RCON	**San Juan de Ri**	**1.32**	**67**	P		**Pb**		**16 29 08.8**	**-0.3**
RCON				S		**Sg**		**16 29 27.1**	**-0.4**
RCVN	**Varillal2**	**1.33**	**62**	P		**Pb**		**16 29 08.9**	**-0.3**
RCVN				S		**Sb**		**16 29 27.1**	**+1.1**
MARCA	**Marcala la Paz**	**1.34**	**333**	P		**Pg**		**16 29 10.0**	**-0.6**
MARCA				S		**Sg**		**16 29 28.6**	**+0.5**
TISN	**Laguna Tiscapa**	**1.37**	**126**	P		**Pb**		**16 29 09.9**	**0.0**
WILN	**Americas 2**	**1.43**	**124**	S		**Sg**		**16 29 30.4**	**-0.4**
TECO	**Alcaldia de Te**	**1.46**	**293**	S		**Sg**		**16 29 31.8**	**-0.1**
MAS3	**Al N del Volca**	**1.52**	**128**	P		**Pb**		**16 29 12.1**	**-0.2**
MAS3				S		**Sb**		**16 29 32.1**	**+0.9**
MASN	**Masaya**	**1.56**	**128**	S		**Sb**		**16 29 33.3**	**+0.8**
COEG	**Centro de Oper**	**1.58**	**295**	S		**Sg**		**16 29 35.1**	**-0.7**
PAVA	**Las Pavas**	**1.67**	**297**	S		**Sg**		**16 29 37.7**	**-1.0**
BOAB	**BOACO BROADBAN**	**1.77**	**106**	P		**Pb**		**16 29 15.7**	**-1.0**
BOAB				S		**Sb**		**16 29 38.8**	**+0.3**
LOMA	**Loma Larga**	**1.85**	**292**	S		**Sb**		**16 29 42.5**	**+1.4**
UEES	**Universidad Ev**	**1.94**	**293**	S		**Sb**		**16 29 44.9**	**+1.3**
PMON	**Piamonte**	**2.01**	**292**	P		**Pb**		**16 29 20.1**	**-0.7**
PMON				S		**Sb**		**16 29 46.4**	**+1.0**
PMON	**Piamonte**	**2.01**	**292**	*eP*		**Pg**		**16 29 22.3**	**-1.0**
PMON				*eS*		**Sg**		**16 29 50.3**	**+1.0**
JAYA	**Jayaque - finc**	**2.11**	**289**	P		**Pb**		**16 29 23.4**	**+0.8**
JAYA				S		**Sb**		**16 29 49.9**	**+1.4**
JAYA	**Jayaque - finc**	**2.11**	**289**	*eP*		**Pg**		**16 29 23.9**	**-1.3**
JAYA				*eS*		**Sg**		**16 29 51.9**	**-0.8**
MORN	**Al O del Volca**	**2.22**	**129**	P		**Pb**		**16 29 23.3**	**-1.0**
MORN				S		**Sb**		**16 29 51.8**	**+0.3**
CONN	**Concepcion**	**2.22**	**128**	P		**Pn**		**16 29 22.2**	**+1.5**
CONN				S		**Sb**		**16 29 51.3**	**-0.3**
SARH	**Santa Rosa de**	**2.24**	**324**	S		**Sb**		**16 29 53.4**	**+1.4**
CEVE	**Cerro Verde**	**2.33**	**292**	S		**Sb**		**16 29 56.9**	**+2.0**
SBLS	**San Blas**	**2.33**	**292**	*eP*		**Pb**		**16 29 27.6**	**+1.2**
SBLS				*eS*		**Sg**		**16 29 59.4**	**-0.4**
MTO3	**Montecristo**	**2.38**	**307**	P		**Pb**		**16 29 25.4**	**-1.8**
MTO3				S		**Sb**		**16 29 57.4**	**+1.1**
ACON	**Acoyapa**	**2.39**	**114**	P		**Pn**		**16 29 24.9**	**+1.9**
ACON				S		**Sb**		**16 29 56.6**	**+0.3**
ESQI	**Esquipulas**	**2.47**	**310**	S		**Sb**		**16 30 00.2**	**+1.5**
NUBE	**Las Nubes**	**2.50**	**292**	*eP*		**Pb**		**16 29 29.2**	**+0.1**
NUBE				*eS*		**Sg**		**16 30 03.9**	**-1.2**
CARN	**Rivas**	**2.55**	**134**	P		**Pn**		**16 29 26.9**	**+1.8**
CARN				S		**Sb**		**16 29 58.9**	**-2.0**
FAME	**Alcaldia de Sa**	**2.69**	**289**	P		**Pb**		**16 29 31.5**	**-0.8**
FAME				S		**Sb**		**16 30 04.2**	**-0.9**

*CATAC **18** 16:31:41.8±0.1, 13°N±1°×87°.3W±1°.0, h2km±1km, M3.6/31, MLv3.6/31, Error ellipse: s-maj=3.3km s-min=1.5km az=31.8, confirmed*
*SNET **18** 16:31:45.3±4.2, 13°.07N×87°.49W, h10km, ML3.4, Presumed earthquake*

ISC 18 16:31:40.7±1.1, **12°.99N**±0°.04×**87°.32W**±0°.03, **h6**km±9km, **n39**, σ0**882**/73, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.23**	**266**	P		**Pg**		**16 31 45.6**	**+0.2**
CSGN				S		**Sg**		**16 31 48.3**	**-0.2**
CRIN	**San Cristobal**	**0.39**	**138**	S		**Pb**		**16 31 50.4**	**+0.2**
CRIN				S		**Sb**		**16 31 55.3**	**+1.8**
QUEN	**Al S del Volca**	**0.61**	**131**	P		**Pb**		**16 31 54.1**	**+0.2**
HERN	**Volcan Telica**	**0.61**	**129**	P		**Pb**		**16 31 53.3**	**-0.6**
HERN				S		**Sg**		**16 32 01.7**	**+1.2**
HOYN	**Al Sur del Vol**	**0.62**	**129**	P		**Pg**		**16 31 53.1**	**+0.4**
HOYN				S		**Sg**		**16 32 01.5**	**+0.7**
LCND	**La Caada**	**0.64**	**299**	P		**Pb**		**16 31 55.0**	**+0.6**
LCND	**La Caada**	**0.64**	**299**	*eP*		**Pg**		**16 31 52.8**	**-0.2**
LCND				*eP*		**Pb**		**16 31 53.1**	**-1.3**
LCND				*eS*		**Sg**		**16 32 02.0**	**+0.7**
LCND				*eS*		**Sg**		**16 32 02.1**	**+0.7**
ROCN	**Rota Cerro Neg**	**0.73**	**130**	P		**Pb**		**16 31 55.4**	**-0.6**
ROCN				S		**Sg**		**16 32 05.1**	**+0.7**
INTP	**Intipuca**	**0.74**	**286**	*eP*		**Pg**		**16 31 53.3**	**-1.7**
INTP				*eS*		**Sg**		**16 32 04.8**	**0.0**
AESN	**El Sauce Leon**	**0.77**	**98**	P		**Pn**		**16 31 56.5**	**-1.7**
AESN				S		**Sn**		**16 32 07.6**	**-2.5**
CNGN	**Cerro Negro**	**0.78**	**129**	P		**Pg**		**16 31 56.7**	**-0.1**
CNGN				S		**Sg**		**16 32 06.7**	**+0.8**
CNGA	**Al SSO del Vol**	**0.78**	**129**	P		**Pb**		**16 31 56.6**	**-0.2**
MACN	**El Madrono**	**0.82**	**130**	P		**Pb**		**16 31 57.1**	**-0.4**
MACN				S		**Sb**		**16 32 08.2**	**-0.6**
MOM3	**MOM3**	**0.92**	**121**	P		**Pb**		**16 31 59.2**	**+0.1**
MOM3				S		**Sb**		**16 32 11.8**	**+0.3**
MOMN	**Momotombo**	**0.96**	**127**	P		**Pb**		**16 31 59.6**	**-0.3**
MOMN				S		**Sb**		**16 32 13.0**	**+0.2**
MOM2	**El Cardon**	**0.98**	**124**	P		**Pb**		**16 32 00.3**	**+0.1**
MOM2				S		**Sb**		**16 32 13.5**	**0.0**
OCON	**Estacion meteo**	**1.04**	**52**	P		**Pn**		**16 32 02.4**	**+0.5**
OCON				S		**Sn**		**16 32 16.7**	**-0.1**
COPN	**Copaltepe**	**1.08**	**139**	P		**Pg**		**16 32 01.2**	**-0.2**
PACA	**Pacayal**	**1.09**	**296**	S		**Pg**		**16 32 03.5**	**+0.8**
PACA				S		**Sn**		**16 32 18.4**	**+0.2**
PACA	**Pacayal**	**1.09**	**296**	*eP*		**Pg**		**16 32 00.9**	**-0.7**
AMTN	**Mateare**	**1.15**	**131**	P		**Pb**		**16 32 03.0**	**-0.1**
AMTN				S		**Sb**		**16 32 18.4**	**+0.1**
RCFN	**Al S de San Ju**	**1.20**	**63**	P		**Pn**		**16 32 04.7**	**+0.4**
RCFN				S		**Sn**		**16 32 21.8**	**+0.7**
APYN	**Apoyeque**	**1.21**	**128**	P		**Pb**		**16 32 04.0**	**-0.2**
APYN				S		**Sn**		**16 32 21.0**	**-0.1**
RCON	**San Juan de Ri**	**1.23**	**67**	P		**Pn**		**16 32 05.1**	**+0.3**
RCON				S		**Sn**		**16 32 24.1**	**+2.3**
RCVN	**Varillal2**	**1.24**	**62**	P		**Pn**		**16 32 05.2**	**+0.3**
RCVN				S		**Sn**		**16 32 22.8**	**+0.7**
APQ2	**Apoyeque**	**1.25**	**129**	S		**Sn**		**16 32 21.8**	**-0.2**
ALLN	**Telcor Managua**	**1.32**	**129**	P		**Pn**		**16 32 05.5**	**-0.3**
ALLN				S		**Sb**		**16 32 23.3**	**+0.2**
TISN	**Laguna Tiscapa**	**1.33**	**129**	P		**Pg**		**16 32 05.8**	**-0.4**
MGAN	**Managua**	**1.34**	**129**	P		**Pb**		**16 32 06.2**	**-0.2**
MGAN				S		**Sb**		**16 32 23.9**	**0.0**
MARCA	**Marcala la Paz**	**1.35**	**329**	P		**Pn**		**16 32 07.0**	**+0.6**
MARCA				S		**Sn**		**16 32 25.8**	**+1.1**
PQSS	**Presa 15 de Se**	**1.36**	**298**	P		**Pg**		**16 32 06.3**	**-0.6**
PQSS				S		**Sn**		**16 32 25.8**	**+1.1**
WILN	**Americas 2**	**1.38**	**127**	P		**Pg**		**16 32 06.9**	**-0.4**
WILN				S		**Sn**		**16 32 26.2**	**+1.0**
MAS3	**Al N del Volca**	**1.48**	**131**	P		**Pb**		**16 32 08.3**	**-0.4**
MAS3				S		**Sn**		**16 32 27.7**	**+0.1**
MASN	**Masaya**	**1.52**	**131**	P		**Pn**		**16 32 08.7**	**+0.2**
MASN				S		**Sg**		**16 32 30.0**	**+0.4**
TECO	**Alcaldia de Te**	**1.52**	**291**	P		**Pg**		**16 32 09.9**	**-0.1**
TECO				S		**Sg**		**16 32 29.9**	**+0.2**
COEG	**Centro de Oper**	**1.64**	**292**	P		**Pb**		**16 32 11.3**	**-0.3**
COEG				S		**Sb**		**16 32 32.9**	**+0.3**
BOAB	**BOACO BROADBAN**	**1.70**	**108**	P		**Pg**		**16 32 11.8**	**-1.6**
BOAB				S		**Sg**		**16 32 34.3**	**-1.2**
JAYA	**Jayaque - finc**	**2.17**	**288**	*eP*		**Pb**		**16 32 19.2**	**-1.5**
JAYA				*eS*		**Sb**		**16 32 47.1**	**-0.8**
SBLS	**San Blas**	**2.39**	**291**	*eP*		**Pb**		**16 32 23.4**	**-1.1**
SBLS				*eS*		**Sb**		**16 32 55.5**	**+1.1**

*SKHL **18** 16:35:06.3±0.0, 42°.50N×145°.60E, h33km±7km, mb3.8/3 JMA **18** 16:35:07.7±0.1, 42°.6N±0°.3×145°.5E±0°.7, h31km±1km, MV2.7/35, OFF NEMURO PENINSULA*

ISC 18 16:35:06.8±2.3, **42°.6N**±0°.1×**145°.48E**±0°.06, **h28**km±12km, **n14**, σ0**952**/23, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.53**	**334**	*i* P		**Pn**		**16 35 17.9**	**-0.6**
JKHN				*eS*		**Sb**		**16 35 25.3**	**+0.5**
AKK	**Akkeshi**	**0.62**	**311**	*eP*		**Pn**		**16 35 19.3**	**-0.4**
AKK				*eS*		**Sb**		**16 35 28.3**	**+0.8**
JAK	**Akkeshi**	**0.69**	**304**	*i* P		**Pn**		**16 35 20.7**	**0.0**
JAK				S		**Sn**		**16 35 31.1**	**+0.6**
NEM2	**Nemuro 2**	**0.78**	**14**	P		**Pb**		**16 35 21.8**	**0.0**
NEM2				*eS*		**Sb**		**16 35 31.8**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.78**	**14**	*i* P		**Pb**		**16 35 21.7**	**-0.1**
NMR				*i* S		**Sn**		**16 35 32.5**	**-0.2**
JNK	**Nakash**	**1.12**	**331**	*i* P		**Pn**		**16 35 26.6**	**0.0**
JNK				S		**Sn**		**16 35 41.1**	**-0.1**
JNSB	**Nemuroshibetsu**	**1.21**	**344**	P		**Pb**		**16 35 28.6**	**-0.5**
JNSB				*eS*		**Sb**		**16 35 44.5**	**+0.1**
JOB	**Onbets**	**1.25**	**284**	P		**Pb**		**16 35 29.4**	**-0.2**
JRA	**Rausu**	**1.35**	**349**	*eP*		**Pn**		**16 35 30.2**	**+0.4**
JRA				*eS*		**Sn**		**16 35 47.1**	**+0.3**
JAR	**Ashorobuto**	**1.43**	**299**	P		**Pb**		**16 35 31.5**	**-1.3**
JAR				S		**Sn**		**16 35 49.7**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**1.45**	**11**	*eP*		**Pn**		**16 35 31.1**	**-0.1**
YUK					AMB	AMB		16 35 34.3	
	70nm,0.6s								
YUK				*eS*		**Sn**		**16 35 49.7**	**+0.5**
YUK				A		A		16 35 51.8	
	160nm,0.5s								
YUK				A		A		16 35 51.8	
	170nm,0.5s								
JCH	**Churui**	**1.56**	**271**	P		**Pb**		**16 35 34.9**	**-0.1**
SHO	**Shikotan**	**1.60**	**38**	*eP*		Pb		16 35 49.0	+13
SHO					AMB	AMB		16 35 53.9	
	20nm,0.4s								
SHO				*eS*		Sb		16 36 07.4	+12
SHO				A		A		16 36 11.2	
	20nm,0.3s								
SHO				A		A		16 36 11.2	
	30nm,0.3s								
KUR	**Kuril'sk**	**3.14**	**33**	*eP*		**Pn**		**16 35 54.3**	**-0.1**

IDC 18 16:35:58.0±3.6, **6°.60S×149°.88E, h0km, mb3.5**/2, **mbtmp3.7**/3, **ML1.7**/1, **Error ellipse: s-maj=122.6km s-min=43.9km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.88**	**224**	Pn		**Pn**		**16 37 00.1**	**+1.2**
	4.3nm,0.3s,baz=32,slow=12,SNR=19								
PMG				Sn		Sn		16 37 42.6	-2.5
	16nm,0.3s,baz=146,slow=23,SNR=11								
	14nm,0.3s								
WRA	**Warramunga Arr**	**20.09**	**227**	P		P		16 40 32.7	-0.7
	3.0nm,0.6s,baz=52,slow=11,SNR=31								
	3.0nm,0.6s								
ASAR	**Alice Springs**	**22.88**	**220**	P		P		16 41 02.5	-0.9
	0.9nm,0.8s,baz=55,slow=9.1,SNR=9.3								
	0.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**148.01**	**284**	PKPbc		PKPbc		16 55 46.6	+0.1
	0.6nm,0.6s,baz=74,slow=3.3,SNR=4.2								

IDC 18 16:50:35.3±3.2, **19°.10S×175°.76W, h0km, mb3.5**/2, **mbtmp3.6**/3, **ML4.5**/1, **Error ellipse: s-maj=104.3km s-min=60.2km az=166.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.04**	**282**	Pn		Pn		16 52 06.0	0.0
	0.4nm,0.3s,baz=163,slow=14,SNR=6.9								
	6.8nm,0.8s								
WRA	**Warramunga Arr**	**46.90**	**260**	P		P		16 59 07.6	-0.4
	0.2nm,0.7s,baz=98,slow=7.2,SNR=7.0								
	0.2nm,0.7s								
ASAR	**Alice Springs**	**46.91**	**255**	P		P		16 59 08.0	+0.1
	1.0nm,0.7s,baz=90,slow=8.6,SNR=15								
	1.0nm,0.7s								
BRTR	**Keskin Array B**	**147.40**	**315**	PKPbc		PKPbc		17 10 20.8	-0.8
	0.4nm,0.5s,baz=45,slow=4.3,SNR=3.5								

*IDC **18** 17:24:21.2±1.1, 5°.60S×147°.05E, h199km±11km, mb3.3/10, mbtmp3.9/14, MS4.0/1, Error ellipse: s-maj=20.0km s-min=8.7km az=103.0*
*NEIC **18** 17:24:22.3±2.2, 5°.58S±0°.06×147°.08E±0°.07, h202km±7km, mb4.1/27, Error ellipse: s-maj=10.2km s-min=8.3km az=106.0*

ISC 18 17:24:21.1±0.4, **5°.56S**±0°.05×**147°.01E**±0°.06, **h195**km, **n55**, σ1**902**/61, **mb3.9**/19, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.51**	**6**			**Pn**		**17 25 17.6**	**+0.9**
PMG	**Port Moresby**	**3.83**	**178**	P		**Pn**		**17 25 20.8**	**+0.3**
	30nm,0.3s,baz=50,slow=10,SNR=102								
PMG				S		**Sn**		**17 26 06.0**	**-1.3**
	68nm,0.6s,baz=208,slow=21,SNR=12								
PMG	**Port Moresby**	**3.83**	**178**			**Pn**		**17 25 20.6**	**0.0**
PMG						**Sn**		**17 26 05.5**	**-1.9**
RABL	**Rabaul**	**5.31**	**75**			**Pn**		**17 25 39.0**	**-0.4**
RABL					Sn	**Sn**		**17 26 40.5**	**-0.7**
JAY	**Jayapura**	**6.98**	**295**	P		**Pn**		**17 26 01.8**	**+0.6**
	3.3nm,0.6s,baz=141,slow=5.4,SNR=8.1								
JAY				S		**Sn**		**17 27 16.8**	**-3.6**
	6.1nm,0.8s,baz=172,slow=18,SNR=2.0								
COEN	**Coen**	**9.16**	**204**			**Pn**		**17 26 28.1**	**-1.5**
COEN					Sn	**Sn**		**17 28 14.1**	**+1.9**
HNR	**Honiara**	**13.39**	**107**			**Pn**		**17 27 24.5**	**+0.7**
CTA	**Charters Tower**	**14.46**	**183**	P		**P**		**17 27 38.4**	**0.0**
	8.6nm,1.1s,baz=4.5,slow=10,SNR=6.3								
CTAO	**Charters Tower**	**14.46**	**183**	P		**P**		**17 27 38.5**	**+0.1**
SAUI	**Saumlaki**	**15.79**	**260**	P		**Pn**		**17 27 55.2**	**+2.0**
PATS	**Pohnpei**	**16.70**	**43**	P		**P**		**17 28 03.4**	**+0.2**
MTN	**Manton Dam**	**17.25**	**244**	P		**P**		**17 28 10.1**	**+0.8**
WR8	**Warramunga Arr**	**18.78**	**219**	P		**P**		**17 28 27.4**	**+1.5**
WRA	**Warramunga Arr**	**18.88**	**220**	P		**P**		**17 28 28.0**	**+1.1**
	1.8nm,0.3s,baz=46,slow=12,SNR=135								
WRA				S		**S**		**17 31 50.1**	**-1.1**
	1.3nm,0.8s,baz=44,slow=21,SNR=5.7								
WRA				PcP		**PcP**		**17 32 44.6**	**-0.2**
	0.4nm,0.5s,baz=28,slow=1.8,SNR=2.2								
WRA	**Warramunga Arr**	**18.88**	**220**	P		**P**		**17 28 26.9**	**0.0**
WRA	**Warramunga Arr**	**18.88**	**220**			**PcP**		**17 32 44.1**	**-0.7**
EIDS	**Eidsvold**	**20.08**	**169**	P		**P**		**17 28 41.0**	**+1.2**
EIDS					IAmb	IAmb		17 28 51.1	
	comp=Z,13nm,1.4s								
KNRA	**Kununurra**	**20.54**	**239**	P		**P**		**17 28 45.4**	**+0.6**
KNRA					IAmb	IAmb		17 28 48.9	
	comp=Z,5.6nm,0.7s								
AS31	**Alice Springs**	**21.99**	**214**	P		**P**		**17 29 01.0**	**+1.3**
AS31					IAmb	IAmb		17 29 06.3	
	comp=Z,2.7nm,0.8s								
ASAR	**Alice Springs**	**21.99**	**214**	P		**P**		**17 29 01.0**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=51,slow=8.7,SNR=48								
ASAR				S		**S**		**17 32 48.0**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=32,slow=22,SNR=14								
	comp=Z,2.1nm,0.5s								
ASAR	**Alice Springs**	**21.99**	**214**	P		**P**		**17 29 00.4**	**+0.7**
INKA	**Innaminka**	**22.85**	**194**	P		**P**		**17 29 08.3**	**+0.8**
INKA					IAmb	IAmb		17 29 11.0	
	comp=Z,2.1nm,0.6s								
SOEI	**Soe**	**22.92**	**258**	P		**P**		**17 29 08.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.31**	**237**	P		**P**		**17 29 21.7**	**+0.8**
FITZ					IAmb	IAmb		17 29 24.2	
	comp=Z,1.8nm,0.5s								
ARMA	**Armidale**	**25.11**	**171**	P		**P**		**17 29 29.2**	**+1.0**
ARMA					IAmb	IAmb		17 29 36.6	
	comp=Z,8.6nm,1.2s								
CAN	**Canberra**	**29.68**	**177**	P		**P**		**17 30 07.7**	**-1.0**
MORW	**Morawa**	**37.47**	**228**	P		**P**		**17 31 16.3**	**+0.2**
YHNB	**Yeheng**	**39.06**	**321**	P		**P**		**17 31 30.3**	**+0.9**
BBJI	**Bungbulang**	**39.14**	**265**	P		**P**		**17 31 31.3**	**+1.0**
KSRS	**Korea Array**	**46.35**	**339**	P		**P**		**17 32 27.6**	**0.0**
	comp=Z,0.9nm,0.7s,baz=150,slow=8.7,SNR=5.4								
	comp=Z,0.9nm,0.7s								
RAR	**Rarotonga**	**53.79**	**112**	LR		LR		17 53 57.9	
	comp=Z,142nm,19.3s,baz=288,slow=33								
PEA0B	**Petropavlovsk-**	**59.14**	**7**	P		**P**		**17 34 01.3**	**+0.2**
PETK	**Petropavlovsk-**	**59.14**	**7**	P		**P**		**17 34 01.4**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=158,slow=5.6,SNR=12								
	comp=Z,0.8nm,0.4s								
HILR	**Hailar Array B**	**59.79**	**340**	P		**P**		**17 34 06.1**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=138,slow=8.4,SNR=2.1								
	comp=Z,0.7nm,0.4s								
SONM	**Songino Array**	**64.03**	**331**	P		**P**		**17 34 34.7**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=140,slow=9.4,SNR=4.3								
	comp=Z,0.5nm,0.5s								
SONM	**Songino Array**	**64.03**	**331**	IAmb		IAmb		17 34 35.1	
	comp=Z,2.2nm,1.4s								
KIWB	**Kanaga Island**	**64.85**	**24**	P		**P**		**17 34 39.1**	**0.0**
VNDA	**Vanda**	**72.35**	**177**	P		**P**		**17 35 25.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=327,slow=6.8,SNR=6.0								
	comp=Z,0.5nm,0.6s								
VNDA	**Vanda**	**72.35**	**177**	P		**P**		**17 35 25.6**	**+0.5**
SBA	**Scott Base**	**72.99**	**176**	P		**P**		**17 35 30.0**	**+1.1**
O14K	**Tigyukauivet M**	**76.45**	**25**	P		**P**		**17 35 48.8**	**-0.3**
O14K					IAmb	IAmb		17 36 01.3	
	comp=Z,6.5nm,1.2s								
MKAR	**Makanchi Array**	**77.17**	**320**	P		**P**		**17 35 52.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=97,slow=8.7,SNR=4.2								
	comp=Z,0.3nm,0.6s								
MKAR	**Makanchi Array**	**77.17**	**320**	P		**P**		**17 35 52.9**	**-0.4**
K15K	**Wolf Creek Mou**	**78.18**	**22**	P		**P**		**17 35 58.9**	**+0.3**
K15K					IAmb	IAmb		17 36 06.7	
	comp=Z,8.2nm,1.3s								
ZALV	**Zalesovo Beam**	**78.65**	**328**	P		**P**

ML3.8(NAO), Confirmed Earthquake
*FCIAR **18** 17:33:27.0, 84.28N×8.90E, h10km, station OMEGA has station magnitude of 3.80*
ISC 18 17:33:19.7±0.6, **84.60N**±0.06×**3.83E**±0.05, **h10**km, **n74**, σ**25**°**08**/81, **mb4.1**/18, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NOR	**Nord**	**3.86**	**230**	*eP*		**Pn**	**17 34 22.3**	**+3.2**
NOR	**Nord**	**3.86**	**230**	*eP*		**Pn**	**17 34 21.7**	**+2.7**
NOR				*eS*		**Sn**	**17 35 05.1**	**+0.7**
NOR	**Nord**	**3.86**	**230**	*i P*		**Pn**	**17 34 22.0**	**+3.0**
NOR				*i* S		**Sn**	**17 35 06.1**	**+1.8**
NOR				IAML			17 35 27.6	
	comp=Z,1.8nm,0.7s							
KBS	**Kingsbay**	**5.82**	**164**	*eP*		**Pn**	**17 34 46.0**	**+0.2**
KBS				IAML			17 34 47.6	
	comp=Z,28nm,0.2s							
KBS				*eS*		**Sn**	**17 35 48.9**	**-3.5**
KBS	**Kingsbay**	**5.82**	**164**			**Pn**	**17 34 45.4**	**-0.4**
KBS				Sn		**Sn**	**17 35 48.8**	**-3.7**
OMEGA	**Omega**	**6.54**	**101**	*eP*		**Pn**	**17 34 55.2**	**-0.5**
OMEGA				*eS*		**Sn**	**17 36 04.8**	**-5.5**
	comp=Z,44nm,0.4s							
SPA0	**Spitsbergen Ar**	**6.70**	**157**	Pn		**Pn**	**17 34 58.2**	**+0.3**
	baz=1.0,slow=14							
SPA0	**Spitsbergen Ar**	**6.70**	**157**	Pn		**Pn**	**17 34 58.2**	**+0.3**
SPA0	**Spitsbergen Ar**	**6.70**	**157**	*eP*		**Pn**	**17 34 58.1**	**+0.1**
SPA0				*eS*		**Sn**	**17 36 09.0**	**-5.1**
SPITS	**Spitsbergen Ar**	**6.70**	**157**	Pn		**Pn**	**17 34 58.1**	**+0.1**
	baz=0.5,slow=9.3							
SPITS				Sn		**Sn**	**17 36 09.8**	**-4.3**
	baz=30,slow=20							
	comp=Z,3.3nm,0.3s							
SPB2	**Spitsbergen Ar**	**6.70**	**157**			**Pn**	**17 34 58.0**	**0.0**
BRBB	**Barentsburg B**	**6.71**	**161**	Pn		**Pn**	**17 34 59.0**	**+1.0**
BRBB	**Barentsburg B**	**6.71**	**161**	*eP*		**Pn**	**17 34 58.7**	**+0.6**
HSPB	**Hornsund (broa**	**7.84**	**160**	*eP*		**Pn**	**17 35 14.9**	**+1.4**
HSPB				IAML			17 35 16.6	
	comp=Z,5.5nm,0.3s							
HOPEN	**Hopen**	**8.73**	**146**	*eP*		**Pn**	**17 35 26.9**	**+1.2**
HOPEN	**Hopen**	**8.73**	**146**	*eP*		Pn	17 35 19.5	-6.2
HOPEN				*eS*		Sn	17 36 52.9	-11
NEEM	**North Greenlan**	**10.48**	**260**	*i P*		**Pn**	**17 35 47.3**	**-2.7**
NEEM				*i* S		**Sn**	**17 37 40.3**	**-7.1**
NEEM				IAML			17 37 49.5	
	comp=Z,2.9nm,0.7s							
TULEG	**Thule**	**12.99**	**276**	Pn		**Pn**	**17 36 20.0**	**-3.9**
TULEG	**Thule**	**12.99**	**276**	*i* P		**Pn**	**17 36 21.2**	**-2.7**
SUMG	**Summit**	**13.98**	**237**			**Pn**	**17 36 35.0**	**-2.9**
SUMG	**Summit**	**13.98**	**237**	*i* P		**Pn**	**17 36 38.5**	**+0.6**
VADS	**Vadso**	**15.27**	**146**	P		**Pn**	**17 36 54.3**	**-0.6**
VADS	**Vadso**	**15.27**	**146**	P		**Pn**	**17 36 54.3**	**-0.6**
KEV	**Kevo**	**15.52**	**149**	P		**Pn**	**17 36 58.4**	**+0.3**
KEV	**Kevo**	**15.52**	**149**	P		**Pn**	**17 36 58.4**	**+0.3**
KEV	**Kevo**	**15.52**	**149**	Pn		**Pn**	**17 36 56.7**	**-1.5**
KEV				IAmb		IAmb	17 37 24.4	
	comp=Z,24nm,1.4s							
ARA0	**ARCESS Array S**	**15.66**	**151**	Pn		**Pn**	**17 36 59.4**	**-0.7**
	baz=359,slow=12							
ARA0	**ARCESS Array S**	**15.66**	**151**	Pn		**Pn**	**17 36 59.4**	**-0.7**
ARCES	**ARCESS Array B**	**15.66**	**151**	Pn		**Pn**	**17 36 59.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=360,slow=11,SNR=12							
	comp=Z,1.0nm,0.3s							
ARCES	**ARCESS Array B**	**15.66**	**151**			**Pn**	**17 36 58.0**	**-2.1**
ARCES				IAmb		IAmb	17 37 18.7	
	comp=Z,16nm,1.5s							
RES	**Resolute Bay**	**17.08**	**297**	Pn		**Pn**	**17 37 15.6**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=19,slow=13,SNR=10							
RES	**Resolute Bay**	**17.08**	**297**			**Pn**	**17 37 15.0**	**-3.0**
RES				IAmb		IAmb	17 37 48.3	
	comp=Z,23nm,1.2s							
APA0	**Apatity Array**	**17.97**	**143**	P		**P**	**17 37 30.5**	**+0.8**
	baz=356,slow=16							
APA0	**Apatity Array**	**17.97**	**143**	P		**P**	**17 37 30.5**	**+0.8**
NB201	**NORSAR Array S**	**23.73**	**171**	P		**P**	**17 38 32.1**	**+0.6**
NOA	**NORSAR Array B**	**23.74**	**171**	P		**P**	**17 38 34.6**	**+3.0**
	comp=Z,1.2nm,0.8s,baz=357,slow=9.2,SNR=4.4							
	comp=Z,1.2nm,0.8s							
FIA0	**FINESS Array S**	**23.77**	**153**	P		**P**	**17 38 34.5**	**+2.7**
	baz=351,slow=14							
FIA0	**FINESS Array S**	**23.77**	**153**	P		**P**	**17 38 34.5**	**+2.7**
FINES	**FINESS Array B**	**23.77**	**153**	P		**P**	**17 38 33.9**	**+2.2**
	comp=Z,1.5nm,0.7s,baz=331,slow=12,SNR=5.0							
	comp=Z,1.5nm,0.7s							
FINES	**FINESS Array B**	**23.77**	**153**	P		**P**	**17 38 31.0**	**-0.8**
C36M	**Paulatuk**	**24.48**	**318**	P		**P**	**17 38 37.7**	**-0.6**
C36M				IAmb		IAmb	17 38 39.9	
	comp=Z,3.8nm,0.7s							
HFS	**Hagfors**	**24.70**	**168**	P		**P**	**17 38 42.7**	**+2.3**
	comp=Z,2.0nm,0.8s,baz=12,slow=7.6,SNR=4.4							
	comp=Z,2.0nm,0.8s							
D25K	**Kavik River**	**25.66**	**336**	P		**P**	**17 38 48.8**	**-0.3**
IVI	**Ivigtut**	**25.94**	**241**	P		**P**	**17 38 50.6**	**-1.0**
IVI				IAmb		IAmb	17 39 32.0	
	comp=Z,7.2nm,1.0s							
INK	**Inuvik**	**26.07**	**325**	P		**P**	**17 38 52.2**	**-0.5**
D23K	**Nanushuk River**	**26.17**	**339**	P		**P**	**17 38 54.4**	**+0.7**
E29M	**Blow River**	**26.22**	**329**	P		**P**	**17 38 54.3**	**+0.2**
D20K	**Etivluk River**	**26.60**	**344**	P		**P**	**17 38 58.3**	**+0.8**
G24K	**Hadweenzic Riv**	**28.32**	**336**	P		**P**	**17 39 11.9**	**-1.0**
G24K				IAmb		IAmb	17 39 25.8	
	comp=Z,5.1nm,1.4s							
FYU	**Fort Yukon**	**28.37**	**334**	P		**P**	**17 39 12.1**	**-1.2**
FYU				IAmb		IAmb	17 39 49.6	
	comp=Z,3.5nm,1.0s							
F17K	**Baldwin Pennin**	**28.98**	**348**	P		**P**	**17 39 18.4**	**-0.3**
F17K				IAmb		IAmb	17 39 58.5	
	comp=Z,7.1nm,1.1s							
I28M	**Miner Creek**	**29.25**	**330**	P		**P**	**17 39 21.8**	**+0.5**
I28M				IAmb		IAmb	17 39 29.1	
	comp=Z,4.8nm,1.5s							
I30M	**Mount Dempster**	**29.29**	**327**	P		**P**	**17 39 21.9**	**+0.2**
J30M	**Hart River**	**29.94**	**326**	P		**P**	**17 39 27.4**	**-0.1**
H18K	**Honhosa River**	**30.21**	**345**	P		**P**	**17 39 30.6**	**+0.8**
ILAR	**Eielson Array**	**30.23**	**335**	P		**P**	**17 39 31.5**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=359,slow=5.4,SNR=8.0							
	comp=Z,0.7nm,0.9s							
ILAR	**Eielson Array**	**30.23**	**335**	P		**P**	**17 39 30.7**	**+0.8**
J17K	**VABM Dome**	**31.99**	**346**	P		**P**	**17 39 45.9**	**+0.6**
M17K	**Holitna River**	**33.95**	**344**	P		**P**	**17 40 03.6**	**+1.1**
M17K				IAmb		IAmb	17 40 05.0	
	comp=Z,3.0nm,0.8s							
P33M	**Teslin, Yukon**	**34.09**	**322**	P		**P**	**17 40 04.0**	**+0.2**
P33M				IAmb		IAmb	17 40 26.0	
	comp=Z,3.2nm,1.1s							
M16K	**Timber Creek**	**34.37**	**345**	P		**P**	**17 40 07.4**	**+1.3**
M16K				IAmb		IAmb	17 40 10.9	
	comp=Z,3.8nm,0.8s							
AKASG	**Malin Array Be**	**34.64**	**151**	P		**P**	**17 40 10.6**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=355,slow=8.6,SNR=2.1							
	comp=Z,0.2nm,0.3s							
N17K	**Nushagak Hills**	**34.82**	**344**	P		**P**	**17 40 11.4**	**+1.4**
N17K				IAmb		IAmb	17 40 14.7	
	comp=Z,3.2nm,0.8s							
GERES	**GERESS Array B**	**36.00**	**169**	P		**P**	**17 40 24.5**	**+4.1**
	comp=Z,0.2nm,0.5s,baz=357,slow=8.8,SNR=2.5							
	comp=Z,0.2nm,0.5s							
GERES	**GERESS Array B**	**36.00**	**169**	P		**P**	**17 40 21.1**	**+0.7**
R32K	**Eaglecrest**	**36.12**	**323**	P		**P**	**17 40 19.5**	**-1.7**
MAKZ	**Makanchi**	**42.53**	**96**			**P**	**17 41 14.8**	**-0.1**
MKAR	**Makanchi Array**	**42.58**	**96**	P		**P**	**17 41 16.7**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=353,slow=8.7,SNR=5.1							
	comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	**42.58**	**96**	P		**P**	**17 41 14.8**	**-0.5**
R61A	**Willards**	**51.03**	**263**	P		**P**	**17 42 19.7**	**-1.7**
PNTR	**Pine Nut**	**54.23**	**307**	P		**P**	**17 42 45.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**71.51**	**182**	P		**P**	**17 44 42.6**	**+2.3**
	comp=Z,0.6nm,0.6s,baz=358,slow=7.3,SNR=3.4							
	comp=Z,0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**72.23**	**83**	P		**P**	**17 44 45.7**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=348,slow=7.9,SNR=5.1							
	comp=Z,0.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**72.23**	**83**	P		**P**	**17 44 45.4**	**+0.9**

*NEIC **18** 17:41:34.0±1.7, 18.7S±0.1×177.5W±0.1, h623km±10km, mb4.2/40, Error ellipse: s-maj=19.7km s-min=17.2km az=129.0*
*IDC **18** 17:41:34.3±1.4, 18.71S×177.65W, h617km±17km, mb3.5/10, mbtmp4.5/13, Error ellipse: s-maj=20.5km s-min=18.8km az=48.0*
ISC 18 17:41:33.8±0.8, **18.65**±0.1×**177.57W**±0.09, **h624**km±10km, **n59**, σ**0**°**90**/65, **mb4.3**/27, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.25**	**281**	P		**P**	**17 43 03.5**	**+0.6**
	21nm,0.8s,baz=160,slow=7.8,SNR=21							
MSVF	**Nonsavu**	**4.25**	**281**	P		**P**	**17 43 02.5**	**-0.5**
NIUE	**Niue**	**7.25**	**95**	P		**P**	**17 43 27.3**	**+0.1**
AFI	**Afiamalu**	**7.27**	**51**	P		**P**	**17 43 27.8**	**+0.3**
	44nm,1.0s,baz=242,slow=2.8,SNR=5.6							
AFI	**Afiamalu**	**7.27**	**51**	P		**P**	**17 43 27.2**	**-0.3**
OUENC	**Ouen Island, N**	**15.08**	**253**	P		**P**	**17 44 41.2**	**-0.6**
OUENC				IAmb		IAmb	17 44 44.4	
	comp=Z,16nm,1.0s							
DZM	**Mont Dzumac**	**15.38**	**254**	P		**P**	**17 44 45.3**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=97,slow=22,SNR=11							
URZ	**Urewera**	**20.11**	**192**	P		**P**	**17 45 26.6**	**-0.6**
	comp=Z,4.8nm,0.4s,baz=54,slow=8.7,SNR=9.9							
	comp=Z,4.8nm,0.4s							
RTZ	**Ruatahuna**	**20.48**	**192**	P		**P**	**17 45 29.4**	**-1.3**
MRZ	**Mangatainoka R**	**22.74**	**194**	P		**P**	**17 45 49.0**	**-1.7**
MRNZ	**Matariki Terra**	**24.16**	**198**	P		**P**	**17 46 03.4**	**+0.1**
LTZ	**Lake Taylor**	**25.58**	**198**	P		**P**	**17 46 14.4**	**-1.3**
WKZ	**Wanaka**	**28.43**	**200**	P		**P**	**17 46 40.0**	**-0.6**
EIDS	**Eidsvold**	**29.78**	**251**	P		**P**	**17 46 52.6**	**+0.1**
EIDS				IAmb		IAmb	17 46 57.2	
	comp=Z,15nm,1.4s							
ARMA	**Armidale**	**30.29**	**241**	P		**P**	**17 46 57.3**	**+0.5**
ARMA				IAmb		IAmb	17 46 58.5	
	comp=Z,6.7nm,1.0s							
CAN	**Canberra**	**33.92**	**234**	P		**P**	**17 47 27.8**	**+0.5**
CAN				IAmb		IAmb	17 47 40.9	
	comp=Z,14nm,1.2s							
CTA	**Charters Tower**	**34.12**	**261**	P		**P**	**17 47 29.2**	**0.0**
	comp=Z,9.1nm,0.6s,baz=94,slow=10,SNR=24							
	comp=Z,9.1nm,0.6s							
CTAO	**Charters Tower**	**34.12**	**261**	P		**P**	**17 47 28.9**	**-0.3**
PMG	**Port Moresby**	**35.36**	**280**	P		**P**	**17 47 40.7**	**+1.1**
	comp=Z,16nm,0.8s,baz=101,slow=16,SNR=3.6							
	comp=Z,16nm,0.8s							
PMG	**Port Moresby**	**35.36**	**280**	P		**P**	**17 47 39.6**	**+0.1**
TOO	**Toolangi**	**37.35**	**232**	P		**P**	**17 47 56.4**	**+0.9**
TOO				IAmb		IAmb	17 48 01.2	
	comp=Z,6.8nm,1.3s							
COEN	**Coen**	**37.91**	**271**	P		**P**	**17 48 00.3**	**0.0**
STKA	**Stephens Creek**	**38.99**	**242**	P		**P**	**17 48 09.5**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=85,slow=7.3,SNR=7.8							
	comp=Z,2.5nm,0.5s							
INKA	**Innaminka**	**39.22**	**249**	P		**P**	**17 48 11.4**	**+0.7**
INKA				IAmb		IAmb	17 48 15.2	
	comp=Z,6.8nm,1.2s							
BBOO	**Buckleboo**	**43.77**	**242**	P		**P**	**17 48 46.3**	**+0.1**
JAY	**Jayapura**	**43.87**	**286**	P		**P**	**17 48 48.2**	**+0.9**
	comp=Z,14nm,0.7s,baz=136,slow=5.0,SNR=24							
	comp=Z,14nm,0.7s							
WB0	**Warramunga Arr**	**45.26**	**260**	P		**P**	**17 48 56.3**	**-1.6**
WB0				PcP		**PcP**	**17 50 24.4**	**+0.3**
WRA	**Warramunga Arr**	**45.29**	**260**	P		**P**	**17 48 57.7**	**-0.3**
	comp=Z,5.1nm,0.4s,baz=97,slow=7.4,SNR=250							
WRA				PcP		**PcP**	**17 50 25.0**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=93,slow=3.5,SNR=2.4							
	comp=Z,5.1nm,0.4s							
WRA	**Warramunga Arr**	**45.29**	**260**	P		**P**	**17 48 57.6**	**-0.5**
WRA				PcP		**PcP**	**17 50 24.1**	**-0.1**
AS31	**Alice Springs**	**45.37**	**255**	P		**P**	**17 48 58.3**	**-0.4**
AS31				PcP		**PcP**	**17 50 24.3**	**-0.1**
ASAR	**Alice Springs**	**45.37**	**255**	P		**P**	**17 48 58.6**	**-0.1**
	comp=Z,10nm,0.7s,baz=86,slow=8.2,SNR=292							
ASAR				PcP		**PcP**	**17 50 25.1**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=104,slow=4.0,SNR=4.8							
	comp=Z,10nm,0.7s							
ASAR	**Alice Springs**	**45.37**	**255**	P		**P**	**17 48 58.1**	**-0.5**
ASAR						**PcP**	**17 50 24.1**	**-0.3**
DPSS	**Saipan**	**49.34**	**311**	P		**P**	**17 49 27.5**	**-0.7**
MTN	**Manton Dam**	**49.58**	**269**	P		**P**	**17 49 29.6**	**-0.4**
FORT	**Forrest**	**50.43**	**245**	P		**P**	**17 49 35.6**	**-0.4**
FORT				IAmb		IAmb	17 49 45.7	
	comp=Z,9.7nm,1.1s							
KNRA	**Kununurra**	**51.21**	**265**	P		**P**	**17 49 41.5**	**-0.3**
KNRA				IAmb		IAmb	17 49 42.3	
	comp=Z,5.5nm,0.7s							
FAKI	**Fak Fak**	**51.50**	**281**	P		**P**	**17 49 44.1**	**+0.2**
SIJI	**Sorong**	**53.17**	**283**	P		**P**	**17 49 56.0**	**+0.2**
	comp=Z,9.2nm,0.4s,baz=113,slow=5.1,SNR=8.4							
	comp=Z,9.2nm,0.4s							
FITZ	**Fitzroy Crossi**	**53.70**	**261**	P		**P**	**17 49 59.4**	**0.0**
SOEI	**Soe**	**56.87**	**270**	P		**P**	**17 50 22.5**	**+0.9**
MBWA	**Marble Bar**	**58.67**	**256**	P		**P**	**17 50 32.8**	**-0.8**
MBWA				IAmb		IAmb	17 50 41.5	
	comp=Z,38nm,1.4s							
KKM	**Kota Kinabalu**	**69.69**	**284**	P		**P**	**17 51 42.1**	**-1.1**
KKM				IAmb		IAmb	17 51 54.6	
	comp=Z,12nm,1.1s							
KIWB	**Kanaga Island**	**70.17**	**0**	P		**P**	**17 51 45.8**	**+0.7**
KIWB				IAmb		IAmb	17 51 48.8	
	comp=Z,15nm,1.4s							
ADK	**Adak**	**70.21**	**1**	P		**P**	**17 51 45.3**	**+0.1**
ADK				IAmb		IAmb	17 51 54.4	
	comp=Z,13nm,1.1s							
QSPA	**South Pole Qui**	**71.44**	**180**	P		**P**	**17 51 54.5**	**+2.0**
	comp=Z,1.7nm,1.2s,baz=209,slow=0.7,SNR=1.4							
	comp=Z,1.7nm,1.2s							
QSPA	**South Pole Qui**	**71.44**	**180**	P		**P**	**17 51 53.6**	**+1.1**
SSLB	**Suanglung**	**73.29**	**303**	P		**P**	**17 52 03.1**	**-0.7**
SSLB				IAmb		IAmb	17 52 13.0	
	comp=Z,17nm,1.4s							
TPUB	**Ta-pu**	**73.31**	**302**	P		**P**	**17 52 02.7**	**-1.1**
OHAK	**Old Harbor**	**78.24**	**13**	P		**P**	**17 52 31.4**	**+1.2**
P17K	**Kvichak River**	**79.45**	**11**	P		**P**	**17 52 36.6**	**+0.2**
P17K				IAmb		IAmb	17 52 38.9	
	comp=Z,13nm,1.3s							
N15K	**Kwethluk River**	**79.78**	**9**	P		**P**	**17 52 39.8**	**+1.5**
M16K	**Timber Creek**	**80.77**	**9**	P		**P**	**17 52 45.6**	**+2.2**
M16K				IAmb		IAmb	17 53 03.8	
	comp=Z,6.7nm,1.4s							
K15K	**Wolf Creek Mou**	**81.64**	**8**	P		**P**	**17 52 50.0**	**+2.3**
K15K				IAmb		IAmb	17 53 08.5	
	comp=Z,12nm,1.4s							
FID	**Port Fidalgo**	**82.97**	**15**	P		**P**	**17 52 54.4**	**-0.1**
FID				IAmb		IAmb	17 52 57.8	
	comp=Z,18nm,1.4s							
CAST	**Castle Rocks**	**84.17**	**11**	P		**P**	**17 53 00.4**	**0.0**
TRF	**Thorofare Moun**	**84.54**	**12**	P		**P**	**17 53 02.0**	**-0.3**
TRF				IAmb		IAmb	17 53 03.0	
	comp=Z,4.5nm,1.2s							
ILAR	**Eielson Array**	**86.40**	**13**	P		**P**	**17 53 12.7**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=215,slow=6.2,SNR=2.5							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**86.40**	**13**	P		**P**	**17 53 10.9**	**0.0**
WMOK	**Wichita Mounta**	**91.62**	**54**	P		**P**	**17 53 34.3**	**-1.7**
WMOK				IAmb		IAmb	17 53 42.2	
	comp=Z,1.9nm,0.9s							

*TRN **18** 17:56:30.0, 11.01N×61.95W, h100km, MD3.0, North of the Paria peninsula.*
*FUNV **18** 17:56:45.0, 10.98N×62.30W, h25km, MW3.6, Presumed earthquake*
ISC 18 17:56:46.1±4.6, **11.0N**±0.1×**61.9W**±0.4, **h101**km±29km, **n9**, σ**0**°**38**/17, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.47**	**135**	*eP*		**Pn**	**17 57 02.4**	**+0.7**
DMDM				*eS*		**Sn**	**17 57 13.0**	**-0.5**
PSMG	**Mucurapo Girls**	**0.50**	**135**	*eS*		**Sn**	**17 57 13.6**	**-0.3**
TRN	**Trinidad (W)**	**0.61**	**128**	*eP*		**Pn**	**17 57 02.7**	**-0.1**
TRN				*eS*		**Sn**	**17 57 15.2**	**-0.1**
TRN	**Trinidad (W)**	**0.61**	**128**	*eP*		**Pn**	**17 57 03.2**	**+0.3**
TRN				*eS*		**Sn**	**17 57 15.0**	**-0.4**
GRFF	**Grenada Fort F**	**1.03**	**8**	*eP*		**Pn**	**17 57 06.7**	**-0.3**
GRFF				*eS*		**Sn**	**17 57 22.6**	**0.0**
GRGR	**Grenville**	**1.12**	**12**	*eP*		**Pn**	**17 57 07.8**	**-0.2**
GRGR				*eS*		**Sn**	**17 57 25.0**	**+0.5**
GRGR	**Grenville**	**1.12**	**12**	*eP*		**Pn**	**17 57 07.7**	**-0.3**
GRGR				*eS*		**Sn**	**17 57 25.0**	**+0.5**
GCMP	**Grenada, Carri**	**1.52**	**17**	*eP*		**Pn**	**17 57 12.4**	**-0.2**
GCMP				*eS*		**Sn**	**17 57 33.0**	**+0.2**
GCMP	**Grenada, Carri**	**1.52**	**17**	*eP*		**Pn**	**17 57 12.7**	**0.0**
GCMP				*eS*		**Sn**	**17 57 33.0**	**+0.2**

*SFS **18** 17:57:43.0, 36.40N×9.96W, h38km, mb4.0/4, ML3.5/20, ML3.6/20, MLv3.4/16*
*MDD **18** 17:57:42.2±0.5, 36.38N×10.03W, h38km, mb_Lg3.5/43, Error ellipse: s-maj=3.9km s-min=2.9km az=69.0*
*CNRM **18** 17:57:43.0, 36.42N×9.57W, h107km, ML2.9*
*IGIL **18** 17:57:44.9, 36.42N×9.90W, h31km, ML2.6*
*INMG **18** 17:57:44.1±1.2, 36.42N×9.93W, h31km±35km, ML2.8, Error ellipse: s-maj=3.2km s-min=1.8km az=78.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
ISC 18 17:57:40.8±1.6, **36.39N**±0.05×**9.93W**±0.07, **h35**km, **n104**, σ**1**°**86**/187, **6C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.16**	**50**	Pn		**Pn**	**17 58 02.3**	**+1.9**
PFVI				Sn		**Sn**	**17 58 15.5**	**+0.4**
PFVI	**Vila Bisbo**	**1.16**	**50**	*i P*		**Pn**	**17 58 02.4**	**+1.9**
PFVI				*eS*		**Sn**	**17 58 15.9**	**+0.8**
PFVI				*i* IAML			17 58 16.1	
PFVI				*i* IAML			17 58 17.5	
PFVI				*i* IAML			17 58 17.5	
PLAGO	**Lagos**	**1.22**	**54**	*eP*		**Pn**	**17 58 03.5**	**+2.1**
PLAGO				*eS*		**Sn**	**17 58 17.7**	**+1.0**
PALJ	**Aljezur**	**1.30**	**44**	*eP*		**Pn**	**17 58 04.4**	**+2.0**
PALJ				*eS*		**Sn**	**17 58 19.4**	**+0.8**
PALJ				*i* IAML			17 58 19.9	
PALJ				*i* IAML			17 58 20.4	
PALJ				*i* IAML			17 58 20.5	
MORF	**Marmelete**	**1.37**	**48**	*eP*		**Pn**	**17 58 05.5**	**+1.9**
MORF				*eS*		**Sn**	**17 58 20.3**	**-0.2**
MORF				IAML			17 58 23.7	
	comp=E,168nm,0.3s							
PTEO	**Sao Teotonio**	**1.50**	**40**	*eP*		**Pn**	**17 58 07.1**	**+1.8**
PTEO				*eS*		**Sn**	**17 58 24.4**	**+0.7**
PTEO				*i* IAML			17 58 24.9	
PTEO				*i* IAML			17 58 25.2	
PTEO				*i* IAML			17 58 25.8	
PSINE	**Sines**	**1.78**	**28**	*eP*		**Pn**	**17 58 10.9**	**+1.8**
PSINE				*eS*		**Sn**	**17 58 30.9**	**+0.4**
PSINE				*i* IAML			17 58 31.4	
PSINE				*i* IAML			17 58 31.6	
PSINE				*i* IAML			17 58 31.7	
PBDV	**Barranco-do-Ve**	**1.82**	**61**	Pn		**Pn**	**17 58 11.8**	**+2.2**
PBDV				Sn		**Sn**	**17 58 31.7**	**+0.2**
PBDV	**Barranco-do-Ve**	**1.82**	**61**	*i P*		**Pn**	**17 58 11.8**	**+2.2**
PBDV				*eS*		**Sn**	**17 58 31.9**	**+0.5**
PBDV				*i* IAML			17 58 35.0	
PBDV				*i* IAML			17 58 35.5	
PBDV				*i* IAML			17 58 36.1	
PCVE	**Castro Verde**	**1.96**	**50**	Pn		**Pn**	**17 58 13.8**	**+2.2**
PCVE				Sn		**Sn**	**17 58 35.6**	**+0.8**
PCVE	**Castro Verde**	**1.96**	**50**	*eP*		**Pn**	**17 58 13.7**	**+2.2**
PCVE				*eS*		**Sn**	**17 58 35.7**	**+0.8**
PCVE				*i* IAML			17 58 37.1	
PCVE				*i* IAML			17 58 37.4	
PCVE				*i* IAML			17 58 50.2	
MESJ	**Messejana**	**1.99**	**43**	*eP*		**Pn**	**17 58 13.8**	**+1.8**
MESJ				*eS*		**Sn**	**17 58 35.2**	**-0.5**
MESJ				IAML			17 58 36.9	
	comp=N,22nm,0.2s							
MESJ	**Messejana**	**1.99**	**43**	*eP*		**Pn**	**17 58 13.8**	**+1.8**
MESJ				*eS*		**Sn**	**17 58 36.2**	**+0.5**
MESJ				*i* IAML			17 58 36.9	
MESJ				*i* IAML			17 58 37.4	
MESJ				*i* IAML			17 58 39.8	
PLOUS	**Minas do Lousa**	**2.03**	**36**	*i P*		**Pn**	**17 58 14.1**	**+1.5**
PLOUS				*eS*		**Sn**	**17 58 36.6**	**-0.1**
PLOUS				*i* IAML			17 58 38.4	
PLOUS				*i* IAML			17 58 38.4	
PLOUS				*i* IAML			17 58 39.3	
PVAQ	**Vaqueiros**	**2.04**	**60**	*iP*		**Pn**	**17 58 14.8**	**+2.1**
PVAQ				*eS*		**Sn**	**17 58 37.5**	**+0.5**
PVAQ				*i* IA

PSBE	**So Bento**	**3.25**	**16**	*eP*	**Pn**	**17 58 31.0**	**+1.7**
PSBE				*eS*	**Sn**	**17 59 05.9**	**-0.8**
PSBE				*i* IAML		17 59 09.0	
PSBE				*i* IAML		17 59 09.3	
PSBE				*i* IAML		17 59 15.9	
EBAD	**Badajoz**	**3.31**	**44**	Pn	**Pn**	**17 58 31.3**	**+1.2**
EBAD				Sn	**Sn**	**17 59 07.8**	**-0.4**
EBAD	**Badajoz**	**3.31**	**44**	Pn	**Pn**	**17 58 31.3**	**+1.2**
EBAD				Sn	**Sn**	**17 59 07.5**	**-0.6**
EBAD				*i* IVmb_Lg		17 59 10.5	
ESPR	**Espera**	**3.31**	**81**	Pn	**Pn**	**17 58 32.6**	**+2.5**
ESPR				Sn	**Sn**	**17 59 08.4**	**+0.1**
ESPR	**Espera**	**3.31**	**81**	Pn	**Pn**	**17 58 32.4**	**+2.3**
ESPR				Sn	**Sn**	**17 59 08.5**	**+0.2**
ESPR				*i* IVmb_Lg		17 59 10.1	
PSARD	**Sardoal**	**3.50**	**23**	*eP*	**Pn**	**17 58 34.2**	**+1.5**
PSARD				*eS*	**Sn**	**17 59 11.5**	**-1.3**
PSARD				*i* IAML		17 59 14.1	
PSARD				*i* IAML		17 59 14.9	
PSARD				*i* IAML		17 59 15.2	
EJIF	**Jimena Fronter**	**3.60**	**88**	Sn	**Sn**	**17 59 14.7**	**-0.7**
PMRV	**Marv??o**	**3.64**	**33**	*eP*	**Pn**	**17 58 36.1**	**+1.5**
PMRV				*eS*	**Sn**	**17 59 14.7**	**-1.6**
PMRV				*i* IAML		17 59 17.0	
PMRV				*i* IAML		17 59 17.1	
PMRV				*i* IAML		17 59 17.8	
AVE	**Averroes**	**3.71**	**145**	Pn	**Pn**	**17 58 37.9**	**+2.2**
AVE				Sn	**Sn**	**17 59 17.6**	**-0.6**
SMIR	**Smir Dam**	**3.75**	**100**	P	**Pn**	**17 58 36.4**	**+0.2**
SMIR				S	**Sn**	**17 59 13.9**	**-5.3**
PCAS	**Casmilo, Conde**	**3.83**	**17**	*eP*	**Pn**	**17 58 38.9**	**+1.6**
PCAS				*eS*	**Sn**	**17 59 20.1**	**-0.9**
PCAS				*i* IAML		17 59 21.9	
PCAS				*i* IAML		17 59 22.5	
PCAS				*i* IAML		17 59 24.0	
PCBR	**Castelo Branco**	**3.95**	**29**	*eP*	**Pn**	**17 58 40.8**	**+1.9**
PCBR				*eS*	**Sn**	**17 59 22.9**	**-1.1**
PCBR				*i* IAML		17 59 24.6	
PCBR				*i* IAML		17 59 24.9	
PCBR				*i* IAML		17 59 26.4	
ECAB	**El Cabril**	**3.97**	**64**	Pn	**Pn**	**17 58 41.0**	**+1.7**
ECAB				Sn	**Sn**	**17 59 23.3**	**-1.4**
ECAB	**El Cabril**	**3.97**	**64**	Pn	**Pn**	**17 58 41.0**	**+1.7**
ECAB				Sn	**Sn**	**17 59 23.6**	**-1.0**
ECAB				*i* IVmb_Lg		17 59 25.5	
ZHG	**ZHG**	**3.99**	**136**	P	**Pn**	**17 58 41.1**	**+1.5**
EMIJ	**Mijas**	**4.16**	**86**	Pn	**Pn**	**17 58 44.5**	**+2.6**
EMIJ				Sn	**Sn**	**17 59 26.7**	**-2.6**
EMIJ	**Mijas**	**4.16**	**86**	Pn	**Pn**	**17 58 43.9**	**+2.0**
EMIJ				Sn	**Sn**	**17 59 28.3**	**-0.9**
EMIJ				*i* IVmb_Lg		17 59 32.1	
MTE	**Manteigas**	**4.42**	**24**	*eP*	**Pn**	**17 58 47.0**	**+1.6**
MTE				*eS*	**Sn**	**17 59 34.8**	**-0.9**
MTE				*i* IAML		17 59 36.9	
MTE				*i* IAML		17 59 37.1	
MTE				*i* IAML		17 59 38.1	
PVIS	**Viseu**	**4.60**	**20**	*eP*	**Pn**	**17 58 50.0**	**+2.0**
PVIS				*eS*	**Sn**	**17 59 38.3**	**-1.9**
EADA	**Adamuz**	**4.62**	**66**	Pn	**Pn**	**17 58 49.9**	**+1.7**
EADA				Sn	**Sn**	**17 59 39.8**	**-0.9**
EADA	**Adamuz**	**4.62**	**66**	Pn	**Pn**	**17 58 50.2**	**+2.0**
EADA				Sn	**Sn**	**17 59 38.7**	**-1.9**
EADA				*i* IVmb_Lg		17 59 43.0	
EGOR	**Sierra Gorda,**	**4.73**	**80**	Pn	**Pn**	**17 58 51.6**	**+1.8**
EGOR				Sn	**Sn**	**17 59 41.9**	**-1.5**
EGOR				*i* IVmb_Lg		17 59 45.8	
EPLA	**Plasencia**	**4.76**	**38**	Pn	**Pn**	**17 58 51.2**	**+1.1**
EPLA				Sn	**Sn**	**17 59 42.5**	**-1.5**
EPLA				*i* IVmb_Lg		17 59 44.3	
IFR	**Ifrane**	**4.88**	**125**	Pn	**Pn**	**17 58 53.2**	**+1.3**
IFR				Sn	**Sn**	**17 59 44.6**	**-2.5**
ELGU	**Los Guajares,**	**5.09**	**83**	Pn	**Pn**	**17 58 56.4**	**+1.7**
ELGU				Sn	**Sn**	**17 59 50.1**	**-2.2**
ELGU				*i* IVmb_Lg		17 59 59.5	
PVRL	**Vila Real**	**5.17**	**19**	*eP*	**Pn**	**17 58 57.1**	**+1.3**
PVRL				*eS*	**Sn**	**17 59 51.3**	**-3.0**
PVRL				*i* IAML		17 59 54.6	
PVRL				*i* IAML		17 59 54.8	
PVRL				*i* IAML		17 59 54.9	
POLO	**Lamas de Olo**	**5.25**	**18**	*eP*	**Pn**	**17 58 58.0**	**+1.2**
POLO				*eS*	**Sn**	**17 59 52.9**	**-3.3**
POLO				*i* IAML		17 59 56.7	
POLO				*i* IAML		17 59 57.2	
POLO				*i* IAML		17 59 57.9	
MVO	**Moncorvo**	**5.28**	**25**	*eP*	**Pn**	**17 58 58.5**	**+1.3**
MVO				*eS*	**Sn**	**17 59 54.1**	**-2.8**
MVO				*i* IAML		17 59 56.4	
MVO				*i* IAML		17 59 56.8	
MVO				*i* IAML		17 59 57.0	
AKLM	**AKL**	**5.30**	**109**	P	Pn	17 58 54.6	-2.9
PAB	**San Pablo**	**5.42**	**53**	Pn	**Pn**	**17 59 00.8**	**+1.6**
PAB				Sn	**Sn**	**17 59 57.9**	**-2.5**
PAB				*i* IVmb_Lg		18 00 01.1	
OUK	**Oukaimeden**	**5.45**	**161**	P	**Pn**	**17 58 59.9**	**0.0**
PSIM	**Granatula de C**	**5.47**	**62**	Pn	**Pn**	**17 59 01.5**	**+1.7**
PSIM				Sn	**Sn**	**17 59 59.4**	**-2.1**
TISM	**Timmit**	**5.49**	**147**	P	Pn	17 58 58.8	-1.2
PCAB	**Cabril**	**5.51**	**15**	*eP*	**Pn**	**17 59 01.2**	**+0.8**
PCAB				*eS*	**Sn**	**18 00 00.0**	**-2.6**
PCAB				*i* IAML		18 00 02.2	
PCAB				*i* IAML		18 00 03.4	
PCAB				*i* IAML		18 00 04.4	
MD31	**MD31**	**5.53**	**128**	P	**Pn**	**17 59 01.0**	**+0.4**
EJUZ	**Juzbado, Salam**	**5.65**	**33**	Sn	**Sn**	**18 00 04.0**	**-2.1**
MDT	**Midelt**	**5.66**	**128**	P	**Pn**	**17 59 04.2**	**+1.7**
ELOB	**Lobios**	**5.66**	**14**	Pn	**Pn**	**17 59 03.0**	**+0.6**
ELOB				Sn	**Sn**	**18 00 03.3**	**-2.9**
ELOB				*i* IVmb_Lg		18 00 06.9	
EQES	**Quesada**	**5.66**	**74**	Pn	**Pn**	**17 59 04.0**	**+1.4**
EQES				Sn	**Sn**	**18 00 04.6**	**-1.7**
EQES				*i* IVmb_Lg		18 00 08.6	
EBER	**Berja**	**5.69**	**83**	*i* IVmb_Lg		17 59 57.5	
EBER				Sn	**Sn**	**18 00 05.4**	**-1.6**
PGAV	**Gavieira, Arco**	**5.71**	**13**	*eP*	**Pn**	**17 59 04.2**	**+1.0**
PGAV				*eS*	**Sn**	**18 00 04.4**	**-3.2**
PGAV				*i* IAML		18 00 06.1	
PGAV				*i* IAML		18 00 08.9	
PGAV				*i* IAML		18 00 09.3	
ESDC	**Sonseca Array**	**5.74**	**53**	Pn	**Pn**	**17 59 05.2**	**+1.6**
ESDC				Sn	**Sn**	**18 00 06.3**	**-1.9**
ESDC				*i* IVmb_Lg		18 00 15.8	
ESBB	**Sonseca Array**	**5.74**	**53**	Pn	**Pn**	**17 59 05.2**	**+1.6**
ESBB				Sn	**Sn**	**18 00 06.3**	**-1.9**
TIO	**Tiouine**	**5.89**	**157**	Pn	**Pn**	**17 59 07.4**	**+1.7**
TIO				Sn	**Sn**	**18 00 09.7**	**-2.3**
TIO	**Tiouine**	**5.89**	**157**	P	**Pn**	**17 59 07.8**	**+2.1**
PBRG	**Braganca**	**5.95**	**24**	*eP*	**Pn**	**17 59 07.9**	**+1.5**
PBRG				*eS*	**Sn**	**18 00 09.9**	**-3.4**
PBRG				*i* IAML		18 00 12.5	
PBRG				*i* IAML		18 00 13.6	
PBRG				*i* IAML		18 00 14.0	
OUZM	**OUZ**	**6.07**	**153**	P	**Pn**	**17 59 09.8**	**+1.6**
ECAL	**Calabor**	**6.07**	**23**	Pn	**Pn**	**17 59 09.6**	**+1.4**
ECAL				Sn	**Sn**	**18 00 13.8**	**-2.6**
ECAL	**Calabor**	**6.07**	**23**	Pn	**Pn**	**17 59 09.4**	**+1.3**
ECAL				Sn	**Sn**	**18 00 12.7**	**-3.7**
ECAL				*i* IVmb_Lg		18 00 16.0	
GUD	**Guadarrama**	**6.21**	**45**	Pn	**Pn**	**17 59 11.7**	**+1.6**
GUD				Sn	**Sn**	**18 00 16.7**	**-3.1**
GUD				*i* IVmb_Lg		18 00 20.0	
UCM	**Universidad Co**	**6.55**	**51**	Pn	**Pn**	**17 59 16.7**	**+2.0**
UCM				Sn	**Sn**	**18 00 25.8**	**-2.3**
EAGO	**Agolada(Pontev**	**6.56**	**12**	Pn	**Pn**	**17 59 15.3**	**+0.5**
EAGO				Sn	**Sn**	**18 00 24.3**	**-4.1**
EAGO				*i* IVmb_Lg		18 00 33.1	
EMAZ	**Mazaricos**	**6.59**	**6**	Pn	**Pn**	**17 59 15.1**	**-0.1**
EMAZ				Sn	**Sn**	**18 00 24.6**	**-4.5**
EMAZ				*i* IVmb_Lg		18 00 35.4	
ELOR	**Lorca, Murcia**	**6.67**	**77**	Sn	**Sn**	**18 00 28.3**	**-2.7**
EZAR	**Zarzadilla de**	**6.75**	**75**	Pn	**Pn**	**17 59 19.4**	**+2.0**
EZAR				*i* IVmb_Lg		18 00 35.2	
YEBES	**Yebes (Guadala**	**6.77**	**50**	Pn	**Pn**	**17 59 19.5**	**+1.8**
YEBES				*i* IVmb_Lg		18 00 43.8	
ETOB	**Tobarra**	**7.03**	**69**	Pn	**Pn**	**17 59 22.8**	**+1.5**
ETOB				Sn	**Sn**	**18 00 38.0**	**-2.1**
ETOB	**Tobarra**	**7.03**	**69**	Pn	**Pn**	**17 59 22.6**	**+1.3**
ETOB				Sn	**Sn**	**18 00 37.3**	**-2.7**
ETOB				*i* IVmb_Lg		18 00 41.6	
EMUR	**La Murta**	**7.09**	**76**	Sn	**Sn**	**18 00 38.8**	**-2.7**
EMUR				*i* IVmb_Lg		18 00 51.9	
EPON	**Pontenova**	**7.25**	**16**	Pn	**Pn**	**17 59 25.6**	**+1.3**
EPON				Sn	**Sn**	**18 00 40.8**	**-4.5**
EPON				*i* IVmb_Lg		18 01 00.0	
EVIV	**Cofrentes, Val**	**7.54**	**65**	Sn	**Sn**	**18 00 49.1**	**-3.5**
EVIV				*i* IVmb_Lg		18 01 01.3	
ETOR	**Torete**	**7.59**	**52**	Pn	**Pn**	**17 59 30.6**	**+1.6**
ETOR				Sn	**Sn**	**18 00 49.7**	**-4.0**
ETOR				*i* IVmb_Lg		18 01 01.9	
EARI	**Arriondas**	**7.80**	**26**	Sn	**Sn**	**18 00 54.7**	**-4.2**
EARI				*i* IVmb_Lg		18 01 16.8	
EMOS	**Mosqueruela**	**8.42**	**59**	Pn	**Pn**	**17 59 42.7**	**+2.3**
EMOS				Sn	**Sn**	**18 01 09.2**	**-5.1**
EMOS				*i* IVmb_Lg		18 01 30.9	

*IDC **18** 18:11:20.4±1.7,22°.27S×179°.35W,h540km±16km,mb3.3/9, mbtmp4.2/10,Error ellipse: s-maj=20.5km s-min=17.5km az=153.0*

ISC 18 18:11:23.3±0.7,22°.3S±0°.1×179°.5W±0°.1,h579km,n43, σ2°26/41,mb3.8/10,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
MSVF	**Nonsavu**	**5.09**	**332**	P	P	18 12 50.7	-5.1
	15nm,0.5s,baz=168,slow=23,SNR=45						
MSVF				S	**S**	**18 14 05.4**	**-5.9**
	6.9nm,1.0s,baz=163,slow=20,SNR=1.7						
AFI	**Afiamalu**	**11.10**	**43**	P	P	18 13 43.7	-9.2
	37nm,0.6s,baz=132,slow=2.4,SNR=6.6						
AFI				S	S	18 15 39.7	-16
	30nm,0.8s,baz=18,slow=19,SNR=2.1						
GRZ	**Great Barrier**	**14.59**	**196**	P	**P**	**18 14 24.3**	**-3.7**
WCZ	**Waipu Caves**	**14.62**	**200**	P	**P**	**18 14 26.8**	**-1.5**
WIAZ	**Waiheke Island**	**15.19**	**197**	P	**P**	**18 14 31.5**	**-2.2**
MXZ	**Matakaoa Point**	**15.34**	**187**	P	**P**	**18 14 37.1**	**+1.9**
ETAZ	**East Tamaki Re**	**15.39**	**197**	P	**P**	**18 14 33.9**	**-1.8**
MKAZ	**Moumakai**	**15.47**	**196**	P	**P**	**18 14 34.2**	**-2.2**
AWAZ	**Awhitu Peninsu**	**15.58**	**198**	P	**P**	**18 14 35.4**	**-2.0**
HAZ	**Te Kaha**	**15.59**	**188**	P	**P**	**18 14 33.9**	**-3.7**
RUGZ	**Raukumara Rang**	**15.81**	**188**	P	**P**	**18 14 37.0**	**-2.8**
PUZ	**Puketiti**	**15.85**	**187**	P	**P**	**18 14 38.7**	**-1.4**
TWGZ	**Tauwhareparae**	**15.98**	**187**	P	**P**	**18 14 38.8**	**-2.5**
TOZ	**Tahuroa Road**	**15.98**	**195**	P	**P**	**18 14 39.3**	**-2.0**
URZ	**Urewera**	**16.18**	**190**	P	**P**	**18 14 38.2**	**-4.9**
	4.8nm,0.3s,baz=270,slow=2.6,SNR=18						
URZ	**Urewera**	**16.18**	**190**	P	**P**	**18 14 38.6**	**-4.5**
MWZ	**Matawai**	**16.20**	**188**	P	**P**	**18 14 39.7**	**-3.6**
TLZ	**Tolley Road**	**16.55**	**194**	P	**P**	**18 14 44.8**	**-1.7**
RTZ	**Ruatahuna**	**16.55**	**190**	P	**P**	**18 14 42.3**	**-4.3**
CTA	**Charters Tower**	**31.98**	**267**	P	**P**	**18 17 03.8**	**+0.6**
	3.2nm,0.5s,baz=97,slow=9.1,SNR=11						
	3.2nm,0.5s						
ASAR	**Alice Springs**	**42.79**	**259**	P	**P**	**18 18 31.7**	**+0.4**
	2.2nm,0.8s,baz=88,slow=8.5,SNR=23						
ASAR				PcP	**PcP**	**18 20 09.7**	**+0.5**
	0.6nm,0.6s,baz=106,slow=4.1,SNR=6.9						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**43.01**	**264**	P	**P**	**18 18 33.0**	**0.0**
	1.4nm,0.6s,baz=93,slow=8.3,SNR=39						
	1.4nm,0.6s						
JAY	**Jayapura**	**43.35**	**291**	P	**P**	**18 18 36.2**	**+0.5**
	4.4nm,0.7s,baz=71,slow=7.1,SNR=4.4						
	4.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.44**	**264**	P	**P**	**18 19 36.9**	**+0.7**
	2.1nm,0.7s,baz=84,slow=6.3,SNR=11						
	2.1nm,0.7s						
SIJI	**Sorong**	**52.40**	**287**	P	**P**	**18 19 43.6**	**+0.5**
	6.5nm,0.8s,baz=106,slow=9.0,SNR=4.1						
	6.5nm,0.8s						
QSPA	**South Pole Qui**	**67.79**	**180**	P	**P**	**18 21 24.6**	**+0.6**
	2.6nm,0.7s,baz=290,slow=0.8,SNR=16						
	2.6nm,0.7s						
TROLL	**Troll, Antarti**	**85.94**	**181**	⇑P	**P**	**18 23 02.4**	**-0.2**
	comp=Z,81nm,0.5s						
VNA2	**Neumayer--Watz**	**86.87**	**177**	⇑P	**P**	**18 23 06.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=186,slow=4.8						
TXAR	**Lajitas Array**	**89.18**	**58**	P	**P**	**18 23 18.5**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=190,slow=6.4,SNR=5.5						
	comp=Z,0.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.42**	**290**	P	**P**	**18 23 22.3**	**+2.7**
	comp=Z,0.8nm,0.8s,baz=138,slow=3.2,SNR=7.4						
	comp=Z,0.8nm,0.8s						
OPO	**Ambohidratompo**	**118.91**	**232**	PKP	**PKiKP**	**18 29 08.2**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=133,slow=6.5,SNR=1.7						
BVAR	**Borovoye Array**	**119.54**	**319**	PKP	**PKPdf**	**18 29 07.8**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=149,slow=1.8,SNR=5.1						
ARCES	**ARCESS Array B**	**130.41**	**349**	PKP	**PKiKP**	**18 29 28.7**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=28,slow=2.9,SNR=5.0						
FINES	**FINESS Array B**	**137.07**	**342**	PKP	**PKPdf**	**18 29 40.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=211,slow=3.3,SNR=3.5						
HFS	**Hagfors**	**141.06**	**350**	PKhKP	PKPpre	18 29 42.1	
	comp=Z,0.6nm,0.4s,baz=56,slow=3.7,SNR=7.7						
AKASG	**Malin Array Be**	**143.86**	**329**	PKP	PKPbc	18 29 52.2	-0.2
	comp=Z,0.8nm,0.4s,baz=43,slow=4.0,SNR=9.2						
EKA	**Eskdalemuir Ar**	**146.89**	**4**	PKPbc	**PKPbc**	**18 30 01.1**	**0.0**
	comp=Z,0.4nm,0.4s,baz=7.3,slow=3.7,SNR=5.6						
BRTR	**Keskin Array B**	**146.96**	**309**	PKPbc	**PKPbc**	**18 30 02.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=131,slow=6.7,SNR=4.3						
MMAI	**Mount Meron Ar**	**147.44**	**297**	PKPbc	**PKiKP**	**18 30 04.7**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=65,slow=6.5,SNR=5.1						
CLL	**Collm**	**149.45**	**345**	*i* PKPbc	**PKPbc**	**18 30 08.1**	**+0.6**
	comp=Z,6.0nm,1.0s						
CLL				*i* x	x	18 30 15.0	
BRG	**Berggiesshubel**	**149.60**	**343**	*i* P	**PKiKP**	**18 30 09.0**	**+0.4**
BRG				Amp		18 30 09.6	
	comp=Z,3.7nm,0.7s						
GERES	**GERESS Array B**	**151.50**	**342**	PKPbc	**PKiKP**	**18 30 13.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=8.5,slow=2.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**170.84**	**187**	PKPab	**PKPab**	**18 31 49.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=173,slow=5.1,SNR=1.1						

*IDC **18** 18:12:21.5±1.4,9°.50S×66°.77E,h0km,mb3.7/9, mbtmp3.7/9,MS4.7/1,Error ellipse: s-maj=42.7km s-min=24.3km az=47.0*

ISC 18 18:12:24.1±1.4,9°.5S±0°.3×66°.8E±0°.2,h15km,n15, σ0°54/11,mb3.8/9,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
KMBO	**Kilima Mbogo**	**30.53**	**284**	LR	LR	18 28 37.9	
	comp=Z,1μm,20.9s,baz=300,slow=32						
CMAR	**Chiang Mai Arr**	**42.17**	**49**	P	**P**	**18 20 17.0**	**+0.5**
	0.5nm,0.4s,baz=242,slow=9.1,SNR=6.1						
	0.5nm,0.4s						
H01W3	**Cape Leeuwin H**	**50.01**	**128**	T	T	19 15 02.5	
	baz=289,slow=75,SNR=89						
H01W2	**Cape Leeuwin H**	**50.01**	**128**	T	T	19 15 02.9	
	baz=289,slow=75,SNR=87						
H01W1	**Cape Leeuwin H**	**50.02**	**128**	T	T	19 15 03.8	
	baz=289,slow=75,SNR=77						
MKAR	**Makanchi Array**	**57.72**	**13**	P	**P**	**18 22 13.9**	**-0.3**
	0.6nm,0.8s,baz=203,slow=9.1,SNR=6.2						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**60.73**	**9**	P	**P**	**18 22 34.8**	**-0.2**
	1.2nm,0.8s,baz=208,slow=7.0,SNR=12						
	1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**65.02**	**12**	P	**P**	**18 23 02.5**	**-0.9**
	0.9nm,0.6s,baz=198,slow=9.3,SNR=4.3						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**65.35**	**112**	P	**P**	**18 23 06.1**	**-0.2**
	0.8nm,0.9s,baz=280,slow=6.0,SNR=9.8						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**65.80**	**108**	P	**P**	**18 23 09.2**	**-0.1**
	0.7nm,0.9s,baz=276,slow=6.0,SNR=4.7						
	0.7nm,0.9s						
SONM	**Songino Array**	**66.98**	**28**	P	**P**	**18 23 16.7**	**+0.3**
	0.9nm,0.7s,baz=218,slow=6.9,SNR=7.6						
	0.9nm,0.7s						
AKASG	**Malin Array Be**	**68.23**	**335**	P	**P**	**18 23 23.4**	**-0.6**
	0.2nm,0.3s,baz=117,slow=5.4,SNR=6.0						
	0.2nm,0.3s						
ESDC	**Sonseca Array**	**81.55**	**313**	P	**P**	**18 24 42.2**	**+0.7**
	0.6nm,0.9s,baz=88,slow=3.7,SNR=4.1						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**146.70**	**355**	PKPbc	**PKPdf**	**18 32 04.6**	**+0.2**
	0.5nm,0.4s,baz=100,slow=3.3,SNR=4.9						
NVAR	**Mina Array Bea**	**150.82**	**8**	PKPbc	**PKiKP**	**18 32 17.1**	**-0.2**
	1.2nm,0.8s,baz=254,slow=0.8,SNR=4.8						

*MAN **18** 18:36:10.0,12°.94N×125°.81E,h9km,MS4.3*
*IDC **18** 18:37:29.8±2.3,4°.06N×128°.45E,h0km,mb3.5/4, mbtmp3.6/4,Error ellipse: s-maj=117.9km s-min=26.4km az=72.0*

ISC 18 18:36:12.2±1.6,12°.75N±0°.08×125°.77E±0°.09,h10km,n12, σ1°55/19,mb3.4/3,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.76**	**206**	*eP*	**Pn**	**18 36 42.6**	**-0.2**
PLP				*eS*	**Sn**	**18 37 04.5**	**-0.7**
MMPH	**Masbate**	**2.13**	**260**	*i* P	**Pn**	**18 36 48.3**	**+0.3**
MMPH				*i* S	**Sn**	**18 37 15.3**	**+0.8**
MSLP	**Maasin**	**2.75**	**199**	*eP*	**Pb**	**18 37 00.2**	**-1.3**
MSLP				*i* S	**Sn**	**18 37 27.8**	**-2.0**
SCPH	**Surigao**	**2.96**	**185**	*eP*	**Pn**	**18 37 00.1**	**+0.8**
SCPH				*eS*	**Sn**	**18 37 38.1**	**+3.1**
LLP	**Lapu-Lapu**	**3.00**	**216**	*eP*	**Pn**	**18 37 00.2**	**+0.3**
LLP				*i* S	**Sb**	**18 37 41.8**	**-0.7**
GQP	**Guinayangan**	**3.44**	**290**	*eP*	**Pn**	**18 37 05.8**	**0.0**
JAP	**San Jose, Anti**	**4.24**	**242**	*eP*	**Pn**	**18 37 20.1**	**+3.1**
CGP	**Cagayan de Oro**	**4.40**	**194**	*eP*	**Pn**	**18 37 21.6**	**+2.5**
CGP				*eS*	**Sn**	**18 38 10.3**	**-0.1**
BIPH	**Bislig**	**4.57**	**173**	*eP*	**Pn**	**18 37 22.3**	**+0.8**
BIPH				*eS*	**Sn**	**18 38 14.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.65**	**180**	P	**P**	**18 42 27.3**	**+0.3**
	3.0nm,0.6s,baz=9.6,slow=7.4,SNR=11						
	3.0nm,0.6s						
WRA	**Warramunga Arr**	**33.56**	**165**	P	**P**	**18 42 50.9**	**-1.7**
	0.4nm,0.8s,baz=348,slow=8.7,SNR=2.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**37.05**	**168**	P	**P**	**18 43 23.8**	**+1.1**
	0.2nm,0.4s,baz=349,slow=7.3,SNR=12						
	0.2nm,0.4s						

*BJI **18** 18:38:19.8,21°.51N×97°.14E,h26km,mB4.7/5,mb4.4/31, ML4.3/5,Ms4.1/9,Ms7 3.8/6*
*MOS **18** 18:38:19.2±1.1,21°.81N×97°.06E,h10km,mb4.4/15,Error ellipse: s-maj=17.2km s-min=7.5km az=112.7*
*IDC **18** 18:38:19.5±0.6,21°.79N×97°.01E,h0km,mb4.1/23, mbtmp4.1/25,ML4.6/2,MS2.7/1,Error ellipse: s-maj=21.6km s-min=10.9km az=59.0*
*NEIC **18** 18:38:20.6±1.7,21°.79N±0°.04×97°.02E±0°.05,h12km±4km, mb4.5/110,Error ellipse: s-maj=6.7km s-min=6.0km az=112.0*
*BKK **18** 18:38:21.7±0.4,22°.N±4°.×9°.7E±°.,h10km,M4.9/24, MLv4.9/24*
*GFZ **18** 18:38:24.5±0.2,22°.N±2°.×9°.7E±°.,h30km,M4.5/23, mb4.5/23*
*NDI **18** 18:38:24.7±1.9,21°.75N×96°.96E,h10km,ML3.5,MW4.3, Presumed earthquake*

ISC 18 18:38:23.6±0.3,21°.73N±0°.04×97°.03E±0°.05,h35km,n228, σ1°66/197,mb4.5/91,5C-7D,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPW	**Naypyitaw**	**2.12**	**203**	P	**Pn**	**18 38 58.6**	**+2.1**
CMAI	**Chiengmai2**	**2.60**	**133**	P	**Pn**	**18 39 03.4**	**0.0**
CHTO	**Chiang Mai**	**3.42**	**148**	P	**Pn**	**18 39 14.9**	**+0.4**
CHTO	**Chiang Mai**	**3.42**	**148**		**Pn**	**18 39 14.9**	**+0.4**
CHTO	**Chiang Mai**	**3.42**	**148**	P	**Pn**	**18 39 15.1**	**+0.6**
MORE	**Moreh**	**3.54**	**315**		**Pn**	**18 39 16.8**	**+0.6**
TNCH	**TengChong**	**3.55**	**22**	Pn	**Pn**	**18 39 16.0**	**-0.5**
TNCH				Pg		18 39 28.4	
TNCH				Sn	**Sn**	**18 39 59.1**	**+1.7**
TNCH				Sg		18 40 14.4	
TNCH				SMN			
	3μm,0.6s						
TNCH				SME			
	2μm,0.7s						
MHMT	**Maesarieng**	**3.64**	**166**	P	Pn	18 39 22.7	+5.2
CM15	**Chiang Mai Arr**	**3.72**	**151**	P	**Pn**	**18 39 19.7**	**+1.1**
CM31	**Chiang Mai Arr**	**3.72**	**151**	P	**Pn**	**18 39 20.0**	**+1.3**
CM31	**Chiang Mai Arr**	**3.72**	**151**		**Pn**	**18 39 19.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**3.72**	**151**	Pn	**Pn**	**18 39 19.4**	**+0.8**
	14nm,0.3s,baz=330,slow=14,SNR=102						
CM

GSI Gunungsitoli 20.31 178 P Pn 18 42 57.1 -1.9
GSI IAmb IAmb 18 43 01.4
comp=Z,35nm,1.2s
GSI Gunungsitoli 20.31 178 P Pn 18 42 58.3 -0.7
MALK Mahakanadarawa 20.69 233 P Pn 18 43 03.3 -0.1
PALK Pallekele 21.33 230 P **P** **18 43 06.7 -1.1**
HNS HongShan 21.85 41 ⇓P **P** **18 43 14.5 +1.3**
HNS pmax pmax
comp=Z,23nm,0.9s
NJ2 Nanjing 21.97 58 *e*P **P** **18 43 15.3 +0.8**
NJ2 pmax pmax
comp=Z,13nm,0.5s
SSLB Suanglung 22.15 80 P **P** **18 43 17.9 +1.3**
TWG Pinlang 22.27 83 P **P** **18 43 17.1 -0.7**
TWG Pinlang 22.27 83 P **P** **18 43 19.1 +1.2**
HHC Hu-ho-hao-te 22.69 30 *e*P **P** **18 43 20.8 -1.5**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,110nm,5.6s
HHC L L
comp=Z,200nm,12.8s
HHC L L
comp=Z,240nm,14.9s
HHC L L
comp=Z,200nm,16.0s
NACB Ninganchiao 22.74 79 P **P** **18 43 20.4 -2.5**
NACB IAmb IAmb 18 43 27.0
comp=Z,23nm,1.2s
NACB Ninganchiao 22.74 79 P **P** **18 43 24.1 +1.2**
WMQ Urumqi 23.35 343 *e*P **P** **18 43 28.9 0.0**
NIL Nilore 24.11 305 P **P** **18 43 34.4 -1.8**
NIL IAmb IAmb 18 44 18.8
comp=Z,7.8nm,0.7s
KKM Kota Kinabalu 24.24 127 P **P** **18 43 36.0 -1.6**
KKM IAmb IAmb 18 43 42.1
comp=Z,18nm,1.1s
KKM Kota Kinabalu 24.24 127 P **P** **18 43 38.4 +0.8**
BJT Baijiatuau 24.44 37 **P** **18 43 38.2 -0.9**
BJT IAmb IAmb 18 43 44.5
comp=Z,8.3nm,0.7s
BJT Baijiatuau 24.44 37 P **P** **18 43 41.4 +2.3**
BJI2 Beijing 24.45 37 P **P** **18 43 41.3 +2.1**
BJI2 pmax pmax
comp=Z,4.0nm,0.7s
PPSI Pulau Pagai 24.52 173 P **P** **18 43 40.3 +0.3**
WUS Wushi 24.56 326 P **P** **18 43 39.1 -1.3**
WUS IAmb IAmb 18 43 44.7
comp=Z,8.9nm,0.8s
WUS Wushi 24.56 326 P **P** **18 43 41.9 +1.5**
KSH2 Kashi 25.27 318 P **P** **18 43 48.0 +1.2**
KSH2 pmax pmax
comp=Z,10.0nm,0.7s
TARG Taragay, Kyrgy 25.68 325 P **P** **18 43 49.0 -1.8**
TARG Taragay, Kyrgy 25.68 325 P **P** **18 43 52.6 +1.8**
ASAI AK-SAY(Kyrgyzs 25.82 322 P **P** **18 43 53.2 +1.2**
PRZ Przheval'sk 25.91 327 P **P** **18 43 51.5 -1.2**
PRZ Przheval'sk 25.91 327 P **P** **18 43 54.7 +2.0**
PDGK Podgornoye 26.02 330 P **P** **18 43 52.9 -0.7**
KDJ Kajisay 26.29 325 P **P** **18 43 54.8 -1.3**
KDJ IAmb IAmb 18 44 00.3
comp=Z,8.9nm,0.8s
NRN Naryn 26.46 323 P **P** **18 43 57.2 -0.6**
SONM Songino Array 27.11 14 P **P** **18 44 04.4 +1.1**
comp=Z,0.7nm,0.9s,baz=186,slow=7.6,SNR=4.9
comp=Z,0.7nm,0.9s
SONM Songino Array 27.11 14 P **P** **18 44 02.0 -1.3**
ULN Ulaanbaatar 27.29 15 *i*P **P** **18 44 06.0 +1.0**
HMDM Hanimaadhoo 27.42 241 P **P** **18 44 05.3 -1.0**
HMDM Hanimaadhoo 27.42 241 P **P** **18 44 08.8 +2.6**
MK31 Makanchi Array 27.71 338*c i*P **P** **18 44 09.7 +1.1**
MKAR Makanchi Array 27.71 338 P **P** **18 44 10.0 +1.3**
comp=Z,1.1nm,0.8s,baz=143,slow=10,SNR=9.8
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 27.71 338 *i*P **P** **18 44 10.0 +1.3**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 27.71 338 P **P** **18 44 07.6 -1.1**
MKAR Makanchi Array 27.71 338 P **PcP** **18 47 26.6 +1.7**
comp=Z,0.9nm,0.9s,baz=104,slow=6.1,SNR=4.2
MAKZ Makanchi 27.84 338 P **P** **18 44 08.9 -0.8**
MAKZ Makanchi 27.84 338 P **P** **18 44 11.6 +1.9**
AAK Ala-Archa 28.10 323 *i*P **P** **18 44 12.9 +0.6**
AAK Ala-Archa 28.10 323 P **P** **18 44 11.6 -0.7**
AAK Ala-Archa 28.10 323 P **P** **18 44 13.9 +1.6**
GAR Garm 28.61 313 P **P** **18 44 15.9 -1.0**
GAR IAmb IAmb 18 44 40.0
comp=Z,10nm,0.9s
GAR Garm 28.61 313 P **P** **18 44 17.7 +0.8**
BTK Batken 28.81 315 P **P** **18 44 18.1 -0.5**
DGZ Jazzator, Alta 28.93 347 *i*P **P** **18 44 18.6 -1.0**
ARK Arkit 29.05 319 P **P** **18 44 22.5 +1.8**
SHAA Shahritus 29.51 309 P **P** **18 44 23.8 -0.9**
SHAA IAmb IAmb 18 44 31.1
comp=Z,9.9nm,0.9s
KK31 Karatay Array 30.69 320 P **P** **18 44 33.6 -1.5**
KKAR Karatay Array 30.69 320 P **P** **18 44 33.3 -1.7**
KS19 Wonju Array Si 30.90 53 P **P** **18 44 34.3 -2.6**
KS19 IAmb IAmb 18 44 35.0
comp=Z,8.6nm,1.0s
JMZ Minamidaito 2 31.50 76 P **P** **18 44 40.8 -1.6**
KURBB Kurchatov Arra 32.28 338 P **P** **18 44 50.0 +1.1**
comp=Z,2.1nm,0.8s,baz=148,slow=8.4,SNR=25
comp=Z,2.1nm,0.8s
KURK Kurchatov 32.33 338 ⇓*i*P **P** **18 44 50.9 +1.5**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 32.33 338 **P** **18 44 48.0 -1.4**
KURK Kurchatov 32.33 338 P **P** **18 44 49.6 +0.3**
HILR Hailar Array B 33.08 27 P **P** **18 44 57.2 +1.2**
comp=Z,0.5nm,0.4s,baz=210,slow=8.6,SNR=6.5
comp=Z,0.5nm,0.4s
ZAA0 Zalesovo Array 33.48 347 P **P** **18 44 58.0 -1.4**
ZALV Zalesovo Beam 33.48 347 P **P** **18 45 01.1 +1.8**
comp=Z,0.9nm,0.4s,baz=161,slow=9.4,SNR=10
comp=Z,0.9nm,0.4s
ZALV Zalesovo Beam 33.48 347 **P** **18 44 58.5 -0.9**
BNX BinXian 34.46 39 ⇓P **P** **18 45 08.5 +0.5**
BNX pmax pmax
comp=Z,4.0nm,0.5s
USRK Ussuriysk Ar. 36.50 44 P **P** **18 45 26.2 +0.7**
comp=Z,1.5nm,0.6s,baz=252,slow=7.4,SNR=2.9
comp=Z,1.5nm,0.6s
USRK Ussuriysk Ar. 36.50 44 P **P** **18 45 25.3 -0.3**
BVAR Borovoye Array 37.31 333 P **P** **18 45 32.8 +0.5**
comp=Z,2.4nm,0.8s,baz=120,slow=8.8,SNR=7.7
comp=Z,2.4nm,0.8s
BORK Borovoye 37.35 333⇑*i*P **P** **18 45 32.5 -0.2**
BORK *i* *PP **pP** **18 45 36.4 -6.8**
BORK pmax pmax
comp=Z,3.0nm,1.0s
BORK Borovoye 37.35 333 P **P** **18 45 32.1 -0.6**
DGAR Diego Garcia 37.69 222 P **P** **18 45 34.9 -1.0**
JGF Kuroka 37.72 60 P **P** **18 45 35.3 -0.8**
JGF IAmb IAmb 18 45 38.4
comp=Z,8.7nm,0.8s
MJB9 Matsu-Tunnel 38.57 58 P **P** **18 45 43.1 -0.1**
MJB9 IAmb IAmb 18 45 45.5
comp=Z,6.7nm,0.8s
MAJO Matsushiro 38.57 58 P **P** **18 45 43.1 -0.1**
MAJO IAmb IAmb 18 45 45.5
comp=Z,6.9nm,0.8s
MJAR Matsushiro Ar 38.57 58 P **P** **18 45 43.7 +0.4**
comp=Z,3.2nm,0.8s,baz=270,slow=10,SNR=17
comp=Z,3.2nm,0.8s
MJAR Matsushiro Arr 38.57 58 IAmb IAmb 18 45 46.4
comp=Z,2.6nm,1.1s
JHJ2 Mitsune 39.39 64 P **P** **18 45 49.4 -0.7**
AB31 Akbulak array 40.18 322 **P** **18 45 55.1 -1.3**
ABKAR Akbulak array 40.18 322 P **P** **18 45 56.1 -0.3**
SOEI Soe 41.16 137 P **P** **18 46 04.1 -0.9**
ERM Erimo 43.47 51 P **P** **18 46 23.9 +0.5**
JKA Kamikawa-asahi 43.60 48 P **P** **18 46 22.8 -1.6**
JKA IAmb IAmb 18 46 24.4
comp=Z,22nm,1.5s
SAUI Saumlaki 44.75 128 P **P** **18 46 33.2 -0.8**
ARTI Arti 44.78 330*d i*P **P** **18 46 36.2 +2.5**
ARTI 18 48 15.9
ARTI S **S** **18 53 14.0 +5.6**
ARTI SS **SS** **18 56 32.5 +2.7**
ARTI pmax pmax
comp=Z,3.0nm,1.2s
YAK Yakutsk 46.07 21 P **P** **18 46 43.4 -0.4**
comp=Z,5.2nm,0.6s,baz=44,slow=2.9,SNR=4.9
comp=Z,5.2nm,0.6s
YAK Yakutsk 46.07 21 *e*P **P** **18 46 41.8 -2.0**
YAK *i* *PP pP 18 46 45.6 -8.8
YAK pmax pmax
comp=Z,4.0nm,0.8s
YAK Yakutsk 46.07 21 P **P** **18 46 43.1 -0.7**
BUJR Buynaksk 46.39 309 *e*P **P** **18 46 43.8 -2.9**
BUJR *e*S pP 18 46 49.1 -8.3
BUJR pmax pmax
comp=Z,34nm,0.3s
ARKR Arakani 46.43 309 *e*P **P** **18 46 44.5 -2.6**
ARKR *e*S **pP** **18 46 50.1 -7.7**
ARKR pmax pmax
comp=Z,13nm,0.5s
KRNR Karanay 46.54 309 *e*P P 18 46 41.1 -6.9
KRNR *e*S pP 18 46 44.1 -15
KRNR pmax pmax
comp=Z,3.0nm,0.4s
UNCR Uncukul 46.60 309 *e*P P 18 46 41.3 -7.1
UNCR *e*S pP 18 46 44.6 -14
UNCR pmax pmax
comp=Z,2.0nm,0.4s
DBC Dubki 46.63 309 *e*P P 18 46 40.0 -8.6
DBC *e*S pP 18 46 42.6 -17
DBC pmax pmax
comp=Z,5.0nm,0.7s
MTN Manton Dam 47.97 133 P **P** **18 46 57.9 -1.3**
MTN IAmb IAmb 18 47 15.0
comp=Z,7.7nm,1.4s
MBWA Marble Bar 48.05 151 P **P** **18 46 59.1 -0.6**
MSEY Mahe Island 48.42 242 P **P** **18 47 01.6 -1.3**
KNRA Kununurra 48.48 137 P **P** **18 47 02.1 -1.0**
KNRA IAmb IAmb 18 47 10.0
comp=Z,7.3nm,1.1s
FITZ Fitzroy Crossi 48.49 143 P **P** **18 47 04.6 +1.4**
comp=Z,2.7nm,0.9s,baz=330,slow=6.5,SNR=4.4
comp=Z,2.7nm,0.9s
FITZ Fitzroy Crossi 48.49 143 P **P** **18 47 02.2 -1.0**
KIV Kislovodsk 49.76 310 *e*P **P** **18 47 15.0 +2.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
MA2 Magadan 53.36 31 P **P** **18 47 40.3 +0.9**
comp=Z,5.8nm,0.8s,baz=267,slow=8.6,SNR=3.6
comp=Z,5.8nm,0.8s
WB0 Warramunga Arr 55.09 136 P **P** **18 47 52.6 +0.1**
WB0 IAmb IAmb 18 47 55.7
comp=Z,4.8nm,0.8s
WRA Warramunga Arr 55.19 136 P **P** **18 47 54.5 +1.3**
comp=Z,3.6nm,0.8s,baz=323,slow=7.6,SNR=27
comp=Z,3.6nm,0.8s
WRA Warramunga Arr 55.19 136 **P** **18 47 53.5 +0.3**
WRAB Tennant Creek 55.19 136 *i* P **P** **18 47 55.0 +1.8**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WR8 Warramunga Arr 55.30 136 **P** **18 47 54.4 +0.3**
OBN Obninsk 55.62 323 *e*P **P** **18 47 57.1 +1.3**
OBN *e* 18 48 57.3
OBN pmax pmax
comp=Z,2.0nm,0.8s
BR131 Keskin Array S 56.26 304 *i* P **P** **18 48 00.3 -0.6**
AS31 Alice Springs 57.66 139 P **P** **18 48 11.4 +0.7**
ASAR Alice Springs 57.66 139 P **P** **18 48 12.3 +1.6**
comp=Z,1.2nm,0.5s,baz=320,slow=7.0,SNR=36
comp=Z,1.2nm,0.5s
ASAR Alice Springs 57.66 139 P **P** **18 48 11.7 +1.0**
AKASG Malin Array Be 59.51 317 P **P** **18 48 22.4 -0.8**
comp=Z,0.7nm,0.6s,baz=82,slow=6.6,SNR=6.2
comp=Z,0.7nm,0.6s
AKASG Malin Array Be 59.51 317*ce*P **P** **18 48 23.1 -0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 59.51 317 IAmb IAmb 18 48 26.4
comp=Z,2.0nm,1.1s
AKBB Malin Array Si 59.51 317*ce*P **P** **18 48 22.7 -0.6**
AKBB pmax pmax
comp=Z,2.0nm,0.9s
VRI Vrincioaia 61.16 311 P **P** **18 48 36.4 +1.6**
MLR Muntele Rosu 61.73 311 **P** **18 48 38.7 0.0**
MLR Muntele Rosu 61.73 311 P **P** **18 48 40.5 +1.8**
FINES FINESS Array B 62.05 329 P **P** **18 48 40.7 +0.3**
comp=Z,1.5nm,0.8s,baz=90,slow=7.6,SNR=5.0
comp=Z,1.5nm,0.8s
FINES FINESS Array B 62.05 329*ce*P **P** **18 48 41.2 +0.8**
FINES pmax pmax
comp=Z,1.0nm,0.7s
BURAR Bucovina Array 62.13 313 P **P** **18 48 41.1 -0.2**
BUR08 Bucovina Ar. S 62.14 313 P **P** **18 48 41.4 -0.1**
ARCES ARCESS Array B 63.37 338 P **P** **18 48 50.1 +1.0**
comp=Z,1.6nm,0.8s,baz=71,slow=7.8,SNR=4.4
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 63.37 338 P **P** **18 48 49.1 +0.1**
CTAO Charters Tower 63.57 127 P **P** **18 48 51.1 0.0**
KOLS Kolonicke sedl 64.03 315 *e*P **P** **18 48 56.4 +2.6**
KOLS Kolonicke sedl 64.03 315 *e*P **P** **18 48 56.4 +2.6**
INKA Innaminka 64.84 137 P **P** **18 49 00.7 +1.5**
INKA IAmb IAmb 18 49 21.1
comp=Z,8.1nm,1.5s
MODS Modra-Piesok 67.38 315 *e*P **P** **18 49 18.5 +3.1**
MODS Modra-Piesok 67.38 315 *e*P **P** **18 49 18.5 +3.1**
HFS Hagfors 68.12 328 P **P** **18 49 20.3 +0.5**
comp=Z,1.6nm,0.7s,baz=121,slow=5.7,SNR=4.0
comp=Z,1.6nm,0.7s
STKA Stephens Creek 68.28 140 P **P** **18 49 23.9 +2.7**
comp=Z,2.5nm,0.7s,baz=313,slow=4.4,SNR=3.8
comp=Z,2.5nm,0.7s
NOA NORSAR Array B 69.23 329 P **P** **18 49 27.9 +1.1**
comp=Z,0.9nm,0.8s,baz=82,slow=6.2,SNR=3.3
comp=Z,0.9nm,0.8s
NC204 NORSAR Array S 69.42 329 P **P** **18 49 28.9 +0.9**
GERES GERESS Array B 69.65 316 P **P** **18 49 30.6 +0.9**
comp=Z,0.9nm,0.7s,baz=77,slow=5.8,SNR=12
comp=Z,0.9nm,0.7s
GERES GERESS Array B 69.65 316 P **P** **18 49 29.8 +0.1**
EIDS Eidsvold 70.31 129 P **P** **18 49 35.1 +1.2**
F15K North Star Dit 73.77 25 P **P** **18 49 54.8 +0.8**
WLF Walferdange 74.30 318 *d*P **P** **18 49 57.2 -0.3**
SENIN Lac Senin/Sane 74.42 314 P **P** **18 49 57.6 -0.9**
C19K Lookout Ridge 74.55 21 P **P** **18 49 58.4 -0.2**
C19K IAmb IAmb 18 50 05.9
comp=Z,10nm,1.3s
F17K Baldwin Pennin 74.86 24 P **P** **18 49 59.2 -1.1**
BMRD Maredsous 74.99 318 *d*P **P** **18 50 01.3 -0.1**
D19K Kuna River 75.27 22 P **P** **18 50 02.4 -0.3**
D19K IAmb IAmb 18 50 04.7
comp=Z,8.2nm,1.2s
D20K Etivluk River 75.69 21 P **P** **18 50 04.3 -0.8**
D20K IAmb IAmb 18 50 06.7
comp=Z,3.2nm,0.8s
E19K Redstone River 75.97 22 P **P** **18 50 07.0 +0.3**
E19K IAmb IAmb 18 50 08.4
comp=Z,3.5nm,0.9s
RUSF Rustrel 76.32 312 P **P** **18 50 11.6 +2.4**
H18K Honhosa River 76.43 25 P **P** **18 50 09.4 0.0**
E21K Killik River 76.69 21 IAmb IAmb 18 50 12.4
comp=Z,3.6nm,0.9s
H19K Roundabout Mou 77.02 24 IAmb IAmb 18 50 16.0
comp=Z,5.2nm,0.9s
F21K Alatna River 77.39 22 IAmb IAmb 18 50 16.4
comp=Z,4.2nm,1.0s
K17K Iditarod 77.39 27 **P** **18 50 15.8 +0.9**
N15K Kwethluk River 77.57 30 IAmb IAmb 18 50 19.4
comp=Z,3.9nm,0.9s
EKA Eskdalemuir Ar 77.99 325 P **P** **18 50 19.7 +1.4**
comp=Z,1.9nm,0.8s,baz=56,slow=5.2,SNR=2.8
comp=Z,1.9nm,0.8s
H21K Melozitna River 78.33 23 IAmb IAmb 18 50 22.1
comp=Z,4.5nm,0.8s
D25K Kavik River 78.68 19 IAmb IAmb 18 50 26.2
comp=Z,5.2nm,0.9s
O16K Kokwok River B 78.72 30 **P** **18 50 23.2 +0.9**
O16K IAmb IAmb 18 50 25.5
comp=Z,4.5nm,0.8s
H22K Ishtalitna Cre 78.75 23 IAmb IAmb 18 50 26.2
comp=Z,4.0nm,0.9s
I21K Tanana 78.86 24 IAmb IAmb 18 50 26.7
comp=Z,4.0nm,0.9s
N18K Kilae Creek 79.28 29 IAmb IAmb 18 50 27.3
comp=Z,4.2nm,0.6s
MLY Manley 79.39 24 IAmb IAmb 18 50 29.4
comp=Z,3.4nm,0.8s
CAST Castle Rocks 79.65 25 IAmb IAmb 18 50 29.3
comp=Z,4.6nm,0.9s
N19K Bonanza Creek 79.84 28 IAmb IAmb 18 50 30.6
comp=Z,5.5nm,0.7s
M20K Styx River 79.94 27 IAmb IAmb 18 50 32.3
comp=Z,5.0nm,0.7s
O18K Koktuh Hills 79.94 29 IAmb IAmb 18 50 31.0
comp=Z,6.7nm,0.8s
MCK McKinley 80.72 24 IAmb IAmb 18 50 36.9
comp=Z,4.7nm,0.8s
G26K Porcupine Rive 80.80 20 IAmb IAmb 18 50 37.3
comp=Z,3.7nm,0.9s
ILAR Eielson Array 80.94 23 P **P** **18 50 34.0 -0.2**
comp=Z,0.6nm,0.8s,baz=299,slow=5.9,SNR=5.3
comp=Z,0.6nm,0.8s
SUMG Summit 81.30 348 **P** **18 50 36.7 +0.2**
SUMG IAmb IAmb 18 50 39.3
comp=Z,4.3nm,0.9s
H27K Steamboat Moun 81.95 20 IAmb IAmb 18 50 42.0
comp=Z,3.9nm,0.8s
RIDG Independent Ri 82.25 23 IAmb IAmb 18 50 43.0
comp=Z,3.6nm,0.9s
I27K Kandik River 82.30 21 IAmb IAmb 18 50 46.2
comp=Z,3.4nm,1.0s
I28M Miner Creek 82.95 21 IAmb IAmb 18 50 49.4
comp=Z,2.7nm,0.8s
G30M tAoh Zraii Nji 83.12 19 IAmb IAmb 18 50 49.6
comp=Z,3.8nm,0.8s
EPYK Eagle Plains 83.38 19 IAmb IAmb 18 50 49.8
comp=Z,3.3nm,0.7s
L27K Beaver Creek, 83.76 23 IAmb IAmb 18 50 51.2
comp=Z,1.9nm,0.8s
BCAR Beaver Creek A 83.77 23 P **P** **18 50 50.4 +1.3**
I30M Mount Dempster 84.24 20 IAmb IAmb 18 50 53.4
comp=Z,2.2nm,0.8s
H31M Peel River 84.48 19 IAmb IAmb 18 50 54.1
comp=Z,3.6nm,0.8s
K29M Barlow Dome 84.78 21 IAmb IAmb 18 50 57.3
comp=Z,2.4nm,0.8s
M29M Somme Creek 85.36 23 IAmb IAmb 18 51 01.5
comp=Z,5.1nm,0.9s
TORD Torodi Ar. Bea 90.06 284 P **P** **18 51 21.9 +1.4**
comp=Z,0.8nm,1.0s,baz=109,slow=2.9,SNR=4.0
comp=Z,0.8nm,1.0s
TORD Torodi Ar. Bea 90.06 284 P **P** **18 51 18.7 -1.8**
TORD IAmb IAmb 18 51 29.9
comp=Z,4.4nm,1.2s
TXAR Lajitas Array 125.45 22 PKP **PKiKP** **18 57 22.9 +0.7**
comp=Z,0.2nm,0.5s,baz=147,slow=0.7,SNR=3.6

NNC 18 18:39:56.8±1.6, 38.72N×76.56E, h0km, mb3.7, mpv3.3, 6C, Error ellipse: s-maj=11.5km s-min=8.6km az=153.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.22**	**339**	⇑Pg		Pb	18 41 14.7	+2.8
AAK	3.3nm,0.7s			⇑Lg		Lg	18 42 11.9	
TNSS	18nm,1.1s **Tian-Shan**	**4.32**	**4**	Pg		Pb	18 41 14.8	+1.0
TNSS	1.4nm,0.5s			Lg		Lg	18 42 13.6	
MDOK	3.9nm,0.4s **Medeo**	**4.46**	**5**	Pg		Pb	18 41 17.0	+1.1
MDOK	7.0nm,0.3s			Lg		Lg	18 42 18.4	
SATY	15nm,0.4s **Saty**	**4.56**	**17**	Pg		Pb	18 41 19.6	+1.9
SATY	5.1nm,0.3s			Lg		Lg	18 42 21.7	
MRKS	11nm,0.4s **Merke**	**4.75**	**329**	Pg		Pb	18 41 23.4	+2.4
MRKS	1.6nm,0.6s			Lg		Lg	18 42 28.3	
UZB	13nm,0.5s **Uzynbulak**	**4.80**	**22**	Pg		Pb	18 41 24.8	+2.9
UZB	4.1nm,0.9s			Lg		Lg	18 42 30.9	
KURS	7.0nm,0.5s **Kuram**	**4.92**	**14**	Pg		Pg	18 41 28.6	-2.4
KURS	1.5nm,0.3s			Lg		Lg	18 42 37.7	
SGDS	6.5nm,0.6s **Sogindy**	**4.95**	**343**	Pg		Pb	18 41 26.5	+2.2
SGDS	1.7nm,0.4s			Lg		Lg	18 42 34.4	
KPKS	6.5nm,0.6s **Kokpek**	**5.01**	**18**	Pg		Pb	18 41 27.2	+1.9
KPKS	0.3nm,0.3s			Lg		Lg	18 42 34.8	
KRBS	5.4nm,0.5s **Karabastau**	**5.02**	**353**	Pg		Pb	18 41 27.2	+1.8
KRBS	2.4nm,0.4s			Lg		Lg	18 42 34.8	
PDGK	9.8nm,0.7s **Podgornoye**	**5.11**	**25**	⇑Pg		Pb	18 41 29.1	+1.9
PDGK	3.8nm,0.6s			⇑Lg		Lg	18 42 38.9	
ARXS	12nm,1.0s **Arharly**	**5.57**	**9**	Pg		Pb	18 41 37.8	+2.9
ARXS	3.0nm,0.5s			Lg		Lg	18 42 52.9	
KNOS	6.7nm,0.4s **Konyrlen**	**5.97**	**18**	Pg		Pg	18 41 46.8	-4.3
KNOS	1.5nm,0.5s			Lg		Lg	18 43 08.4	
KK31	2.1nm,0.7s **Karatay Array**	**6.34**	**316**	⇑Pn		Pn	18 41 32.4	+1.0
KK31	0.3nm,0.5s,baz=127,slow=13,SNR=4.0 2.1nm,0.5s,baz=125,slow=28,SNR=4.8			⇑Lg		Lg	18 43 17.0	

*IDC **18** 18:44:56.5±3.9, 15.46S×172.62W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=146.5km s-min=23.8km az=133.0*

*NEIC **18** 18:44:58.1±2.3, 15.23S±0.06×172.51W±0.07, h10km±1km, mb4.4/12, Error ellipse: s-maj=11.5km s-min=8.6km az=239.0*

ISC 18 18:45:01.8±0.7, **15.24S**±0.07×**172.5W**±0.1, **h35km, n24,** σ1§**64/22, mb4.3/8, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.51**	**28**	Pn		**Pn**	**18 45 26.3**	**-0.2**
AFI	26nm,0.3s,baz=90,slow=20,SNR=32			Sn		**Sn**	**18 45 43.4**	**-1.5**
AFI	190nm,0.3s,baz=61,slow=22,SNR=13 **Afiamalu**	**1.51**	**28**			**Pn**	**18 45 25.4**	**-1.1**
NIUE	**Niue**	**4.54**	**147**	Pn		**Pn**	**18 46 06.7**	**-1.5**
MARNC	**Mare, Loyalty**	**19.47**	**249**	P		**P**	**18 49 26.0**	**+0.2**
OUENC	**Ouen Island, N**	**20.79**	**247**	P		**P**	**18 49 41.8**	**+1.7**
OUENC	comp=Z,15nm,0.8s			IAmb		IAmb	18 49 44.1	
TOZ	**Tahuroa Road**	**24.79**	**203**	P		**P**	**18 50 21.1**	**+0.7**
TOZ	comp=Z,12nm,1.2s			IAmb		IAmb	18 50 45.5	
LTZ	**Lake Taylor**	**30.39**	**202**	P		**P**	**18 51 10.5**	**-0.2**
INZ	**Inchbonnie**	**30.66**	**204**	P		**P**	**18 51 12.4**	**-0.6**
MLZ	**Mavora Lakes**	**34.18**	**205**	P		**P**	**18 51 43.1**	**-0.8**
H11S2	**WAKE ISLAND Hy** baz=146,slow=74	**39.28**	**328**	T		T	19 34 36.3	
H11S3	**WAKE ISLAND Hy** baz=146	**39.29**	**328**	T		T	19 34 29.9	
H11S1	**WAKE ISLAND Hy** baz=146,slow=74	**39.29**	**328**	T		T	19 34 32.0	
COEN	**Coen**	**42.84**	**266**	P		**P**	**18 52 55.7**	**-1.3**
COEN	comp=Z,8.4nm,0.9s			IAmb		IAmb	18 53 39.4	
WR8	**Warramunga Arr**	**50.56**	**257**	P		**P**	**18 53 55.9**	**-1.5**
WR8	comp=Z,10nm,1.4s			IAmb		IAmb	18 54 00.1	
WRA	**Warramunga Arr** comp=Z,0.5nm,0.6s,baz=92,slow=6.7,SNR=13 comp=Z,0.5nm,0.6s	**50.71**	**257**	P		**P**	**18 53 56.8**	**-1.8**
WRA	**Warramunga Arr**	**50.71**	**257**	P		**P**	**18 53 56.0**	**-2.6**
AS31	**Alice Springs**	**50.97**	**252**			**P**	**18 53 58.5**	**-2.0**
ASAR	**Alice Springs** comp=Z,2.5nm,0.7s,baz=87,slow=8.0,SNR=36 comp=Z,2.5nm,0.7s	**50.97**	**252**	P		**P**	**18 53 58.5**	**-2.0**
ASAR	**Alice Springs**	**50.97**	**252**	P		**P**	**18 53 57.9**	**-2.6**
SBA	**Scott Base**	**63.48**	**185**	P		**P**	**18 55 29.9**	**+2.0**
SBA	comp=Z,3.1nm,1.2s			IAmb		IAmb	18 55 49.0	
PETK	**Petropavlovsk-** comp=Z,2.7nm,0.8s,baz=128,slow=9.6,SNR=4.7 comp=Z,2.7nm,0.8s	**72.75**	**342**	P		**P**	**18 56 28.5**	**+2.3**

QSPA	**South Pole Qui**	**74.80**	**180**	P	**P**		18 56 40.1	+1.7
QSPA				IAmb	IAmb		18 57 18.3	
	comp=Z,5.8nm,1.4s							
GERES	**GERESS Array B**	**146.10**	**353**	PKPbc	**PKPab**		19 04 39.4	+0.4
	comp=Z,0.7nm,1.0s,baz=345,slow=1.5,SNR=4.4							
BRTR	**Keskin Array B**	**146.57**	**322**	PKPbc	**PKPbc**		19 04 40.2	+0.1
	comp=Z,1.3nm,0.9s,baz=98,slow=2.5,SNR=7.0							

IDC ***18*** *18:54:26.1±1.1,37.°38N×74.°50E, h0km, mb3.7/9, mbtmp3.8/14, ML3.2/5, MS3.5/2, Error ellipse: s-maj=21.4km s-min=19.2km az=57.0*
NNC ***18*** *18:54:31.7±2.3,37.°74N×74.°86E, h0km±9km, mb4.1, mpv3.8, Error ellipse: s-maj=15.3km s-min=12.1km az=16.0*

ISC 18 18:54:29.9±1.0**, 37°57N**±0°.08×**74°74E**±0°.06**, h10**km**, n36, σ2s04/37, mb3.8/9, 5C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH2	**Kashi**	**1.70**	**22**	Pn	**Pn**		**18 54 58.8**	**-1.0**
KSH2				Sn	**Sg**		**18 55 23.1**	**-1.5**
KSH2				smax	smax			
	comp=N,460nm,0.8s							
KSH2				smax	smax			
	comp=E,740nm,0.9s							
AAK	**Ala-Archa**	**5.06**	**358**	Pn	Pn		18 55 50.4	+4.4
	comp=E,1.2nm,0.3s,baz=181,slow=12,SNR=9.6							
AAK				Pg	**Pb**		**18 56 00.8**	**+2.1**
	comp=E,1.0nm,0.3s,baz=211,slow=17,SNR=8.2							
AAK				LR	LR		18 58 01.9	
	comp=E,134nm,19.5s,baz=196,slow=41 comp=E,5.6nm,0.5s							
AAK	**Ala-Archa**	**5.06**	**358**	⇑Pn	**Pn**		**18 55 47.5**	**+1.6**
AAK	comp=E,12nm,1.1s			⇑Pg	**Pg**		**18 56 02.9**	**-3.9**
AAK	comp=E,24nm,0.8s			⇓Lg	Lg		18 57 09.6	
	comp=E,28nm,1.1s							
MRKS	**Merke**	**5.30**	**348**	Pg	**Pb**		**18 56 05.6**	**+3.0**
MRKS	comp=E,16nm,0.4s			Lg	Lg		18 57 17.9	
	comp=E,27nm,0.7s							
KST	**Kastek**	**5.54**	**9**	Pg	**Pb**		**18 56 09.9**	**+3.1**
KST	comp=E,7.9nm,0.4s			Lg	Lg		18 57 24.9	
	comp=E,34nm,0.6s							
TNSS	**Tian-Shan**	**5.71**	**16**	Pg	**Pb**		**18 56 12.2**	**+2.3**
TNSS	comp=E,1.0nm,0.3s			Lg	Lg		18 57 28.9	
	comp=E,7.2nm,0.6s							
MDOK	**Medeo**	**5.86**	**17**	Pg	**Pb**		**18 56 14.3**	**+2.2**
MDOK	comp=E,12nm,0.6s			Lg	Lg		18 57 31.7	
	comp=E,27nm,0.9s							
SGDS	**Sogindy**	**5.88**	**359**	Pg	**Pb**		**18 56 14.8**	**+2.4**
SGDS	comp=E,8.8nm,0.5s			Lg	Lg		18 57 33.1	
	comp=E,19nm,1.4s							
SATY	**Saty**	**6.16**	**26**	Pg	**Pb**		**18 56 19.9**	**+2.7**
SATY	comp=E,15nm,0.8s			Lg	Lg		18 57 41.9	
	comp=E,43nm,0.9s							
KRBS	**Karabastau**	**6.16**	**6**	Pg	**Pb**		**18 56 20.8**	**+3.5**
KRBS	comp=E,4.5nm,0.4s			Lg	Lg		18 57 44.9	
	comp=E,18nm,0.7s							
KTBS	**Karatobe**	**6.31**	**13**	Pg	**Pb**		**18 56 21.5**	**+1.7**
KTBS	comp=E,0.3nm,0.4s			Lg	Lg		18 57 45.4	
	comp=E,24nm,0.5s							
KK31	**Karatay Array**	**6.40**	**331**	Pn	**Pn**		**18 56 05.8**	**+1.6**
	comp=E,8.3nm,0.5s,baz=137,slow=13,SNR=115							
KK31				⇑Sn	**Sn**		**18 57 18.1**	**+0.8**
	comp=E,10nm,0.5s,baz=156,slow=23,SNR=7.3							
KK31				⇓Lg	Lg		18 57 52.6	
	comp=E,23nm,0.9s							
UZB	**Uzynbulak**	**6.46**	**29**	Pg	Pb		18 56 25.9	+3.5
	comp=E,4.8nm,0.4s							
UZB				Lg	Lg		18 57 52.4	
	comp=E,20nm,1.0s							
KURS	**Kuram**	**6.46**	**23**	Pg	**Pb**		**18 56 22.4**	**0.0**
KURS	comp=E,4.7nm,0.5s			Lg	Lg		18 57 47.4	
	comp=E,24nm,0.7s							
KPKS	**Kokpek**	**6.61**	**26**	Pg	**Pb**		**18 56 27.5**	**+2.6**
KPKS	comp=E,0.6nm,0.7s			Lg	Lg		18 57 55.8	
	comp=E,18nm,0.8s							
BRLS	**Borolday**	**6.62**	**327**	Pg	**Pb**		**18 56 28.5**	**+3.5**
	comp=E,6.4nm,0.3s							
BRLS				Lg	Lg		18 57 56.9	
	comp=E,16nm,0.9s							
PDGK	**Podgornoye**	**6.80**	**31**	⇑Pn	**Pn**		**18 56 11.9**	**+2.2**
	comp=E,9.5nm,0.8s							
PDGK				⇑Lg	Lg		18 57 56.5	
	comp=E,42nm,0.9s							
MKAR	**Makanchi Array**	**10.78**	**29**	Pn	**Pn**		**18 57 05.5**	**+1.3**
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=7.8 comp=E,0.9nm,0.6s							
WMQ	**Urumqi**	**11.64**	**54**	*e*P	**Pn**		**18 57 18.8**	**+2.7**
WMQ				S	**Sn**		**18 59 27.8**	**+1.7**
WMQ				pmax	pmax			
	comp=E,8.0nm,0.9s							
WMQ				LR	LR			
	comp=E,79nm,22.3s							
KURBB	**Kurchatov Arra**	**13.33**	**11**	Pn	**Pn**		**18 57 38.6**	**-0.3**
KURBB	baz=197,slow=12,SNR=11			Lg	Lg		19 01 28.6	
	baz=217,slow=29,SNR=5.6 comp=Z,2.3nm,1.0s							
BVAR	**Borovoye Array**	**15.75**	**350**	Pn	**Pn**		**18 58 11.4**	**-0.2**
	baz=154,slow=14,SNR=3.8							
AKTO	**Aktyubinsk**	**17.56**	**322**	P	**Pn**		**18 58 33.1**	**-1.5**
	comp=E,0.3nm,0.3s,baz=110,slow=7.6,SNR=7.1 comp=E,3.8nm,0.7s							
ZALV	**Zalesovo Beam**	**17.79**	**20**	P	**P**		**18 58 37.4**	**-0.8**
	comp=E,0.5nm,0.3s,baz=206,slow=9.9,SNR=24 comp=E,2.10nm,0.9s							
GTA2	**Gaotai**	**19.65**	**77**	*e*P	**Pn**		**18 59 00.8**	**+0.5**
GTA2				pP	sP		18 59 05.3	+0.6
GTA2				pmax	pmax			
	comp=E,4.0nm,0.9s							
ARTI	**Arti**	**21.78**	**335**	P	**P**		**18 59 20.4**	**-1.2**
	comp=E,3.1nm,0.7s,baz=155,slow=8.4,SNR=5.5 comp=Z,3.1nm,0.7s							
SONM	**Songino Array**	**25.26**	**56**	P	**P**		**18 59 56.2**	**0.0**
	comp=E,1.4nm,0.7s,baz=249,slow=9.0,SNR=9.8 comp=Z,1.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**28.48**	**125**	P	**P**		**19 00 24.0**	**-1.3**
	comp=E,0.8nm,0.7s,baz=304,slow=10,SNR=7.7 comp=Z,0.8nm,0.7s							
FINES	**FINESS Array B**	**38.31**	**324**	P	**P**		**19 01 48.3**	**-2.0**
	comp=E,0.3nm,0.5s,baz=112,slow=9.5,SNR=7.3 comp=Z,0.3nm,0.5s							
HEH	**HeiHe**	**39.21**	**54**	*e*P	**P**		**19 02 00.0**	**+2.0**
HEH				pmax	pmax			
	comp=Z,3.0nm,1.0s							
ARCES	**ARCESS Array B**	**41.34**	**336**	P	**P**		**19 02 14.7**	**-0.7**
	comp=E,1.3nm,0.7s,baz=104,slow=8.9,SNR=9.2 comp=Z,1.3nm,0.7s							
HFS	**Hagfors**	**44.10**	**321**	P	**P**		**19 02 35.9**	**-2.0**
	comp=E,0.5nm,0.4s,baz=80,slow=12,SNR=2.0 comp=Z,0.5nm,0.4s							
CLL	**Collm**	**44.86**	**308**	*i* P	**P**		**19 02 44.1**	**0.0**
NOA	**NORSAR Array B**	**45.35**	**322**	P	**P**		**19 02 46.3**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=100,slow=4.3,SNR=1.5 comp=Z,0.4nm,0.8s							
JOW	**Kunigami**	**46.01**	**87**	LR	LR		19 26 03.7	
	comp=Z,183nm,18.9s,baz=186,slow=41							
TORD	**Torodi Ar. Bea**	**68.72**	**270**	P	P		19 05 29.7	-4.4
	comp=Z,0.5nm,0.6s,baz=50,slow=5.8,SNR=5.0 comp=Z,0.5nm,0.6s							
ILAR	**Eielson Array**	**72.90**	**17**	P	**P**		**19 05 58.1**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=320,slow=6.6,SNR=6.7 comp=Z,0.7nm,0.9s							

IDC 18 19:10:13.4±19.0**, 16°29S×174°18W, h0km, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=371.6km s-min=164.1km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.72**	**258**	P	P		19 17 31.2	0.0
	1.4nm,0.6s,baz=56,slow=11,SNR=1.7 1.4nm,0.6s							

STKA	**Stephens Creek**	**42.95**	**241**	P	P		19 18 15.0	+0.6
	2.4nm,0.9s,baz=73,slow=11,SNR=4.9 2.4nm,0.9s							
WRA	**Warramunga Arr**	**48.92**	**258**	P	P		19 19 01.5	-0.2
	0.8nm,0.5s,baz=96,slow=6.7,SNR=2.8 0.8nm,0.5s							
ASAR	**Alice Springs**	**49.13**	**253**	P	P		19 19 02.4	-0.9
	7.2nm,0.6s,baz=88,slow=8.4,SNR=124 7.2nm,0.6s							
FITZ	**Fitzroy Crossi**	**57.30**	**259**	P	P		19 20 04.0	+0.4
	2.3nm,1.0s,baz=90,slow=5.1,SNR=1.7 2.3nm,1.0s							

IDC ***18*** *19:12:23.4±2.2,6.°36S×129.°68E, h126km±26km, mb3.2/1, mbtmp3.6/6, Error ellipse: s-maj=29.9km s-min=18.9km az=112.0*

ISC 18 19:12:22.1±0.9**, 6°51S**±0°.06×**129°9E**±0°.1**, h146**km**, n6, σ3s74/11, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.76**	**13**	P	**Pn**		**19 13 45.8**	**+0.2**
	2.8nm,0.3s,baz=190,slow=17,SNR=26							
SIJI				S	**Sn**		**19 14 46.4**	**-4.5**
	6.9nm,0.2s,baz=245,slow=23,SNR=11							
BATI	**Baumata**	**7.21**	**239**	P	**Pn**		**19 14 06.0**	**+0.9**
	6.0nm,0.4s,baz=95,slow=12,SNR=2.0							
BATI				S	**Sn**		**19 15 23.6**	**-2.1**
	3.6nm,0.3s,baz=148,slow=23,SNR=1.8							
FITZ	**Fitzroy Crossi**	**12.26**	**200**	P	**Pn**		**19 15 14.0**	**+2.0**
	0.8nm,0.4s,baz=19,slow=10,SNR=20							
FITZ				S	**Sn**		**19 17 21.6**	**-5.8**
	1.6nm,0.3s,baz=323,slow=22,SNR=8.4							
WRA	**Warramunga Arr**	**14.03**	**163**	P	**P**		**19 15 38.6**	**+0.7**
	0.2nm,0.3s,baz=340,slow=13,SNR=15							
WRA				S	**Sn**		**19 18 05.8**	**-4.3**
	0.6nm,0.3s,baz=332,slow=23,SNR=9.7							
ASAR	**Alice Springs**	**17.48**	**168**	P	**Pn**		**19 16 22.1**	**+4.9**
	0.2nm,0.3s,baz=349,slow=12,SNR=6.4							
ASAR				S	**S**		**19 19 29.2**	**-1.6**
	1.5nm,1.1s,baz=346,slow=26,SNR=4.0							
MKAR	**Makanchi Array**	**67.78**	**327**	P	**P**		**19 23 05.8**	**+1.6**
	0.3nm,0.5s,baz=110,slow=7.3,SNR=5.4 0.3nm,0.5s							

IDC ***18*** *19:27:23.7±0.9,15.°04S×173.°07W, h0km, mb3.8/7, mbtmp3.8/8, ML4.3/1, MS3.4/4, Error ellipse: s-maj=37.7km s-min=17.8km az=142.0*
NEIC ***18*** *19:27:24.5±0.9,15.°22S×172.°7W±0.°1, h16km±4km, mb4.3/9, Error ellipse: s-maj=19.3km s-min=8.7km az=112.0*

ISC 18 19:27:23.5±0.6**, 15°29S**±0°.06×**172°73W**±0°.09**, h10**km**, n36, σ1s96/31, mb4.1/9, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.65**	**34**	Pn	**Pn**		**19 27 52.5**	**-0.1**
	20nm,0.3s,baz=327,slow=1.7,SNR=21							
AFI				Sn	**Sn**		**19 28 10.2**	**-3.7**
	148nm,0.3s,baz=230,slow=23,SNR=18							
AFI				LR	LR		19 28 28.0	
	comp=Z,152nm,20.1s,baz=259,slow=38							
AFI	**Afiamalu**	**1.65**	**34**		**Pn**		**19 27 52.2**	**-0.4**
AFI				Sn	**Sn**		**19 28 10.5**	**-3.4**
NIUE	**Niue**	**4.62**	**145**	Pn	**Pn**		**19 28 34.3**	**+0.9**
NIUE				Sn	**Sn**		**19 29 21.5**	**-5.7**
MSVF	**Nonsavu**	**9.17**	**253**	Pn	**Pn**		**19 29 33.5**	**-2.5**
	0.1nm,0.3s,baz=126,slow=15,SNR=1.2							
MSVF				LR	LR		19 32 32.5	
	comp=Z,153nm,18.6s,baz=69,slow=35 2.2nm,0.8s							
RAR	**Rarotonga**	**13.64**	**118**	LR	LR		19 35 10.7	
	comp=Z,136nm,20.4s,baz=282,slow=33							
MARNC	**Mare, Loyalty**	**19.26**	**248**		**P**		**19 31 48.0**	**-0.4**
OUENC	**Ouen Island, N**	**20.58**	**247**	P	**P**		**19 32 02.4**	**-0.4**
OUENC				IAmb	IAmb		19 32 23.5	
	comp=Z,20nm,1.1s							
DZM	**Mont Dzumac**	**20.84**	**248**	P	**P**		**19 32 04.5**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=99,slow=19,SNR=1.3 comp=Z,4.0nm,0.9s							
PPT	**Papeete**	**22.32**	**99**	LR	LR		19 39 01.1	
	comp=Z,46nm,19.6s,baz=267,slow=31							
QRZ	**Quartz Range**	**28.49**	**204**	P	**P**		**19 33 18.9**	**0.0**
TUWZ	**Tuamarina**	**28.50**	**201**	P	**P**		**19 33 18.9**	**0.0**
H11S2	**WAKE ISLAND Hy**	**39.20**	**328**	T	T		20 16 51.7	
	baz=147,slow=75,SNR=4.9							
H11S3	**WAKE ISLAND Hy**	**39.22**	**328**	T	T		20 16 51.1	
	baz=147,slow=75,SNR=3.1							
H11S1	**WAKE ISLAND Hy**	**39.22**	**328**	T	T		20 16 46.8	
	baz=147,slow=75,SNR=3.7							
H11N3	**WAKE ISLAND Hy**	**40.14**	**329**	T	T		20 17 42.9	
	baz=153,slow=74							
H11N1	**WAKE ISLAND Hy**	**40.14**	**329**	T	T		20 17 58.6	
	baz=153							
H11N2	**WAKE ISLAND Hy**	**40.15**	**329**	T	T		20 17 53.1	
	baz=153,slow=74							
WB0	**Warramunga Arr**	**50.46**	**257**	P	**P**		**19 36 20.9**	**-1.0**
WB0				IAmb	IAmb		19 36 36.0	
	comp=Z,3.5nm,0.9s							
WRA	**Warramunga Arr**	**50.50**	**257**	P	**P**		**19 36 21.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=90,slow=6.8,SNR=16							
WRA				PcP	**PcP**		**19 37 42.4**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=92,slow=3.4,SNR=1.8 comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**50.50**	**257**	P	**P**		**19 36 21.5**	**-0.8**
AS31	**Alice Springs**	**50.76**	**252**	P	**P**		**19 36 23.1**	**-1.1**
ASAR	**Alice Springs**	**50.76**	**252**	P	**P**		**19 36 23.8**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=88,slow=7.6,SNR=21 comp=Z,2.6nm,0.7s							
ASAR	**Alice Springs**	**50.76**	**252**	P	**P**		**19 36 22.1**	**-2.1**
KNRA	**Kununurra**	**56.22**	**261**	P	**P**		**19 37 05.0**	**+0.7**
KNRA				IAmb	IAmb		19 37 17.5	
	comp=Z,7.0nm,1.1s							
SBA	**Scott Base**	**63.42**	**185**	P	**P**		**19 37 52.7**	**-0.1**
SBA				IAmb	IAmb		19 38 03.7	
	comp=Z,0.9nm,0.8s							
JOW	**Kunigami**	**70.94**	**306**	LR	LR		20 05 50.7	
	comp=Z,80nm,19.7s,baz=188,slow=33							
PETK	**Petropavlovsk-**	**72.72**	**342**	P	**P**		**19 38 51.6**	**0.0**
	comp=Z,2.5nm,0.8s,baz=160,slow=5.7,SNR=4.4 comp=Z,2.5nm,0.8s							
PETK	**Petropavlovsk-**	**72.72**	**342**	P	**P**		**19 38 51.3**	**-0.2**
QSPA	**South Pole Qui**	**74.76**	**180**	P	**P**		**19 39 07.1**	**+3.5**
	comp=Z,1.1nm,0.7s,baz=27,slow=0.8,SNR=7.1 comp=Z,1.1nm,0.7s							
QSPA	**South Pole Qui**	**74.76**	**180**	P	**P**		**19 39 04.9**	**+1.2**
QSPA				IAmb	IAmb		19 39 10.4	
	comp=Z,2.8nm,1.0s							
TXAR	**Lajitas Array**	**80.01**	**56**	P	**P**		**19 39 36.7**	**+3.1**
	comp=Z,0.1nm,0.7s,baz=244,slow=4.7,SNR=2.4 comp=Z,0.1nm,0.7s							
ILAR	**Eielson Array**	**82.21**	**11**	P	**P**		**19 39 46.1**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=221,slow=6.5,SNR=4.8 comp=Z,0.2nm,0.6s							
ILAR	**Eielson Array**	**82.21**	**11**	P	**P**		**19 39 43.9**	**-0.5**
IMAR	**Indian Mountai**	**82.27**	**8**	P	**P**		**19 39 44.6**	**-0.1**
GERES	**GERESS Array B**	**146.12**	**352**	PKPbc	**PKPdf**		**19 47 04.4**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=31,slow=2.3,SNR=4.7							
BRTR	**Keskin Array B**	**146.47**	**322**	PKPbc	**PKPbc**		**19 47 06.1**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=123,slow=3.4,SNR=7.6							

IDC ***18*** *19:33:54.3±12.0,1.°55N×99.°20E, h135km±111km, mb3.6/12, mbtmp4.0/13, ML3.5/1, Error ellipse: s-maj=75.4km s-min=14.2km az=57.0*
NEIC ***18*** *19:33:59.0±1.4,1.°76N±0.°06×99.°43E±0.°06, h172km±7km, mb4.0/17, Error ellipse: s-maj=10.1km s-min=8.5km az=224.0*
DJA ***18*** *19:34:00.2±0.3,2.°N±3.°×9.°9E±.°, h157km±3km, M4.1/22, mb4.1/4, mB5.0/1, MLv4.0/22, Mw(mB)4.4/1*

ISC 18 19:33:58.6±0.6**, 1.77N**±0°.06×**99°43E**±0°.05**, h172**km**, n55, σ0s77/53, mb3.8/20, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RPSI	**Rantau Prapat**	**1.05**	**331**		**Pn**		**19 34 26.2**	**+0.3**
RPSI				Sn	**Sn**		**19 34 46.5**	**-0.6**
PSI	**Prapat**	**1.15**	**334**	P	**Pn**		**19 34 26.2**	**-0.7**
PSI				S	**Sn**		**19 34 46.8**	**-1.9**
GSI	**Gunungsitoli**	**1.91**	**256**		**Pn**		**19 34 34.5**	**+0.3**
GSI				Sn	**Sn**		**19 34 59.9**	**-1.9**
GSI	**Gunungsitoli**	**1.91**	**256**	P	**Pn**		**19 34 34.6**	**+0.4**
GSI				S	**Sn**		**19 35 00.4**	**-1.3**

BKNI	**Bangkinang**	**2.15**	**132**	Pn	**Pn**		**19 34 36.8**	**0.0**
PPI	**Padang Panjang**	**2.41**	**156**	P	**Pn**		**19 34 40.5**	**+0.7**
TPTI		**2.70**	**303**	P	**Pn**		**19 34 43.7**	**+0.5**
SNSI	**Sinabang, Aceh**	**3.17**	**282**	P	**Pn**		**19 34 49.2**	**+0.2**
KULM	**Kulim**	**3.70**	**19**		**Pn**		**19 34 55.7**	**-0.1**
LHMI	**Lhok Sumawe**	**4.24**	**324**	Pn	**Pn**		**19 35 01.7**	**-0.9**
MYKOM	**Kota Tinggi**	**4.41**	**90**	Pn	**Pn**		**19 35 05.3**	**+0.5**
BSI	**Banda Aceh**	**5.55**	**312**	P	**Pn**		**19 35 19.7**	**+0.1**
	2µm23nm,0.8s							
MNAI	**Manna**	**7.03**	**150**	Pn	**Pn**		**19 35 37.5**	**-1.7**
CMAR	**Chiang Mai Arr**	**16.59**	**358**	P	**P**		**19 37 40.5**	**-0.5**
	0.1nm,0.3s,baz=188,slow=11,SNR=7.0 0.6nm,0.7s							
KKM	**Kota Kinabalu**	**17.27**	**75**	P	**P**		**19 37 49.0**	**+0.4**
PALK	**Pallekele**	**19.45**	**287**	P	**P**		**19 38 13.7**	**+1.4**
PALK				IAmb	IAmb		19 38 35.0	
	comp=Z,15nm,1.1s							
TOLI2	**Tolitoli**	**21.35**	**91**	P	**P**		**19 38 32.6**	**+0.1**
TOLI2				IAmb	IAmb		19 38 34.6	
	comp=Z,4.5nm,0.9s							
MORE	**Moreh**	**22.88**	**348**	P	**P**		**19 38 47.0**	**-0.5**
MORE				IAmb	IAmb		19 38 51.4	
	comp=Z,3.5nm,0.4s							
H08S2	**Diego Garcia H**	**28.45**	**250**	T	T		20 07 49.0	
	baz=72,slow=76,SNR=10							
H08S3	**Diego Garcia H**	**28.46**	**251**	T	T		20 07 26.4	
	baz=72,slow=76,SNR=13							
H08S1	**Diego Garcia H**	**28.47**	**250**	T	T		20 07 17.1	
	baz=72,slow=76,SNR=11							
FITZ	**Fitzroy Crossi**	**32.49**	**129**	P	**P**		**19 40 13.1**	**0.0**
FITZ				IAmb	IAmb		19 40 18.0	
	comp=Z,1.9nm,1.3s							
KNRA	**Kununurra**	**33.78**	**122**	P	**P**		**19 40 23.3**	**-1.1**
KNRA				IAmb	IAmb		19 40 37.3	
	comp=Z,7.3nm,1.2s							
WB0	**Warramunga Arr**	**40.43**	**124**	P	**P**		**19 41 19.9**	**-0.5**
WRA	**Warramunga Arr**	**40.47**	**124**	P	**P**		**19 41 20.5**	**-0.3**
	comp=Z,3.5nm,0.4s,baz=302,slow=9.1,SNR=73 comp=Z,3.5nm,0.4s							
WRA	**Warramunga Arr**	**40.47**	**124**	P	**P**		**19 41 20.1**	**-0.6**
AS31	**Alice Springs**	**41.98**	**129**	P	**P**		**19 41 32.2**	**-1.0**
ASAR	**Alice Springs**	**41.98**	**129**	P	**P**		**19 41 32.7**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=299,slow=7.5,SNR=15 comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**41.98**	**129**	P	**P**		**19 41 33.1**	**-0.1**
SONM	**Songino Array**	**46.28**	**6**	P	**P**		**19 42 08.1**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=191,slow=9.0,SNR=4.4 comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**47.27**	**344**	P	**P**		**19 42 15.8**	**+1.2**
	comp=Z,4.3nm,0.4s,baz=157,slow=8.7,SNR=91 comp=Z,4.3nm,0.4s							
MKAR	**Makanchi Array**	**47.27**	**344**		**P**		**19 42 15.4**	**+0.8**
MAKZ	**Makanchi**	**47.37**	**344**		**P**		**19 42 16.1**	**+0.8**
MAKZ				IAmb	IAmb		19 42 17.1	
	comp=Z,3.6nm,0.6s							
KK31	**Karatay Array**	**48.58**	**332**	P	**P**		**19 42 24.9**	**+0.2**
KK31				IAmb	IAmb		19 42 55.3	
	comp=Z,3.1nm,1.4s							
KKAR	**Karatay Array**	**48.58**	**332**	P	**P**		**19 42 25.0**	**+0.3**
KURBB	**Kurchatov Arra**	**51.80**	**343**	P	**P**		**19 42 49.7**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=161,slow=7.3,SNR=19 comp=Z,1.6nm,0.6s							
KURK	**Kurchatov**	**51.86**	**343**	P	**P**		**19 42 49.3**	**+0.1**
KURK				IAmb	IAmb		19 42 51.0	
	comp=Z,2.1nm,0.8s							
ZAA0	**Zalesovo Array**	**53.39**	**349**		**P**		**19 42 59.9**	**-0.4**
ZALV	**Zalesovo Beam**	**53.39**	**349**	P	**P**		**19 43 00.7**	**+0.4**
	comp=Z,4.3nm,0.6s,baz=181,slow=6.1,SNR=22 comp=Z,4.3nm,0.6s							
ZALV	**Zalesovo Beam**	**53.39**	**349**		**P**		**19 42 60.0**	**-0.3**
BVAR	**Borovoye Array**	**56.48**	**339**	P	**P**		**19 43 22.5**	**0.0**
	comp=Z,0.8nm,0.5s,baz=134,slow=8.3,SNR=5.0 comp=Z,0.8nm,0.5s							
AB31	**Akbulak array**	**58.09**	**331**	P	**P**		**19 43 33.2**	**-0.7**
AB31				IAmb	IAmb		19 43 34.9	
	comp=Z,1.1nm,0.8s							
ABKAR	**Akbulak array**	**58.09**	**331**	P	**P**		**19 43 33.1**	**-0.8**
H04N2	**CROZET ISLANDS**	**63.51**	**215**	T	T		20 51 41.4	
	baz=54							
H04N1	**CROZET ISLANDS**	**63.52**	**215**	T	T		20 51 48.5	
	baz=54,slow=75							
H04N3	**CROZET ISLANDS**	**63.52**	**215**	T	T		20 52 02.6	
	baz=54,slow=75							
BRTR	**Keskin Array B**	**70.39**	**312**	P	**P**		**19 44 54.0**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=145,slow=5.3,SNR=4.0 comp=Z,0.5nm,0.5s							
BRTR	**Keskin Array B**	**70.39**	**312**	P	**P**		**19 44 53.5**	**-0.8**
BURAR	**Bucovina Array**	**78.08**	**318**	P	**P**		**19 45 39.6**	**+1.0**
BUR08	**Bucovina Ar. S**	**78.10**	**318**	P	**P**		**19 45 39.8**	**+1.1**
FINES	**FINESS Array B**	**80.54**	**332**	P	**P**		**19 45 51.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=94,slow=4.6,SNR=13 comp=Z,0.6nm,0.4s							
FINES	**FINESS Array B**	**80.54**	**332**	P	**P**		**19 45 51.0**	**-0.4**
ARCES	**ARCESS Array B**	**82.76**	**340**	P	**P**		**19 46 03.4**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=54,slow=6.2,SNR=3.7 comp=Z,1.6nm,0.9s							
GERES	**GERESS Array B**	**85.86**	**319**	P	**P**		**19 46 19.4**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=90,slow=3.9,SNR=2.1 comp=Z,0.1nm,0.6s							
HFS	**Hagfors**	**86.35**	**330**	P	**P**		**19 46 21.1**	**0.0**
	comp=Z,0.7nm,0.4s,baz=104,slow=6.1,SNR=8.9 comp=Z,0

comp=Z,32nm,1.2s
TOZ Tahuroa Road 17.08 195 P P 19 42 06.3 +2.5
URZ Urewera 17.26 190 P P 19 42 03.8 -1.8
comp=Z,30nm,0.3s,baz=249,slow=2.6,SNR=69
URZ S S 19 44 48.8 -6.3
comp=Z,8.2nm,0.5s,baz=172,slow=22,SNR=8.6
URZ Urewera 17.26 190 P P 19 42 04.1 -1.4
URZ Urewera 17.26 190 P P 19 42 03.7 -1.8
URZ S S 19 44 48.0 -7.1
URZ Urewera 17.26 190 P P 19 42 04.6 -1.0
MWZ Matawai 17.27 189 P P 19 42 05.1 -0.6
CNGZ Carnagh Statio 17.33 187 P P 19 42 06.6 +0.4
TKGZ Te Karaka 17.33 188 P P 19 42 06.7 +0.5
RIGZ Rimuhau 17.61 188 P P 19 42 09.0 +0.3
HIZ Hauiti 17.98 196 P P 19 42 14.4 +2.3
BKZ Black Stump Fm 18.25 191 P P 19 42 13.5 -1.1
TMVZ Te Maari 18.36 193 P P 19 42 15.7 0.0
TUVZ Tukino 18.51 193 P P 19 42 16.8 -0.3
WNVZ Wahianoa 18.58 193 P P 19 42 16.8 -1.0
BFZ Birch Farm 19.77 191 P P 19 42 27.2 -1.1
MRZ Mangatainoka R 19.87 192 P P 19 42 27.8 -1.5
SNZO South Karori 20.68 193 P P 19 42 35.2 -1.1
QRZ Quartz Range 20.77 198 P P 19 42 38.3 +1.0
QRZ Quartz Range 20.77 198 P P 19 42 37.1 -0.2
TKNZ Takaka Hill 20.84 197 P P 19 42 37.8 -0.2
KHZ Kahutara 21.99 195 P P 19 42 47.5 -0.7
KHZ Kahutara 21.99 195 P P 19 42 47.2 -0.9
HNR Honiara 23.34 297 P P 19 42 59.9 -0.7
comp=Z,1.7nm,0.5s,baz=208,slow=2.5,SNR=5.7
HNR Honiara 23.34 297 P P 19 42 59.2 -1.3
HNR Honiara 23.34 297 P P 19 42 59.3 -1.3
RPZ Rata Peaks 23.86 198 P P 19 43 04.9 +0.2
TATA Tatamba Isabel 24.04 299 P P 19 43 06.5 -0.2
JCZ Jackson Bay 24.89 201 P P 19 43 14.7 +0.8
ODZ Otahua Downs 25.19 197 P P 19 43 16.6 +0.1
ODZ Otahua Downs 25.19 197 P P 19 43 17.8 +1.3
EIDS Eidsvold 27.66 256 P P 19 43 38.8 +0.4
EIDS Eidsvold 27.66 256 P P 19 43 38.9 +0.4
ARMA Armidale 27.82 245 P P 19 43 40.5 +0.6
ARMA Armidale 27.82 245 P P 19 43 39.4 -0.5
PPTF Pamatai, Papee 28.07 88 P P 19 43 40.9 -1.2
CAN Canberra 31.24 236 P P 19 44 09.6 +0.4
CAN IAmb IAmb 19 44 21.9
comp=Z,20nm,1.2s
CAN Canberra 31.24 236 P P 19 44 10.2 +1.1
CTA Charters Tower 32.41 266 P P 19 44 19.9 +0.7
comp=Z,20nm,0.5s,baz=91,slow=10.0,SNR=20
comp=Z,20nm,0.5s
CTAO Charters Tower 32.41 266 P P 19 44 20.1 +0.9
CTAO Charters Tower 32.41 266 P P 19 44 19.9 +0.7
CTAO Charters Tower 32.41 266 P P 19 44 20.2 +0.9
RABL Rabaul 32.66 297 P P 19 44 21.1 -0.3
CMSA Cobar Meteorol 33.04 245 P P 19 44 25.0 +0.7
QLP Quilpie 33.86 254 P P 19 44 31.6 +0.2
PMG Port Moresby 34.53 285 P P 19 44 37.6 +0.6
PMG Port Moresby 34.53 285 P P 19 44 36.1 -0.9
PMG Port Moresby 34.53 285 P P 19 44 37.6 +0.6
comp=Z,62nm,0.8s
PMG Port Moresby 34.53 285 P P 19 44 37.7 +0.7
MTSU Mount Surprise 34.54 269 P P 19 44 38.2 +1.1
TOO Toolangi 34.63 234 P P 19 44 38.1 +0.6
PATS Pohnpei 35.65 319 P P 19 44 46.8 +0.5
STKA Stephens Creek 36.54 245 P P 19 44 54.2 +0.8
comp=Z,3.9nm,0.6s,baz=88,slow=11,SNR=8.6
comp=Z,3.9nm,0.6s
STKA Stephens Creek 36.54 245 P P 19 44 54.2 +0.8
COEN Coen 36.62 275 P P 19 44 54.4 +0.2
COEN IAmb IAmb 19 44 56.1
comp=Z,13nm,0.8s
COEN Coen 36.62 275 P P 19 44 54.4 +0.2
MANU Manus Island 37.84 296 P P 19 45 04.7 +0.5
MANU IAmb IAmb 19 45 06.3
comp=Z,19nm,0.7s
BBOO Buckleboo 41.30 244 P P 19 45 31.4 -0.2
BBOO IAmb IAmb 19 45 35.5
comp=Z,47nm,1.4s
AS31 Alice Springs 43.35 258 P 19 45 48.0 +0.2
ASAR Alice Springs 43.35 258 P P 19 45 47.3 -0.5
comp=Z,9.4nm,0.7s,baz=97,slow=7.8,SNR=149
ASAR PcP PcP 19 47 22.6 0.0
comp=Z,1.2nm,0.6s,baz=95,slow=3.9,SNR=4.4
ASAR ScP ScP 19 50 17.6 +0.2
comp=Z,1.8nm,0.8s,baz=100,slow=4.0,SNR=7.1
ASAR S S 19 51 29.6 -3.8
comp=Z,5.1nm,0.7s,baz=94,slow=16,SNR=22
comp=Z,9.4nm,0.7s
ASAR Alice Springs 43.35 258 P P 19 45 47.5 -0.3
ASAR ScP 19 50 17.8 +0.4
WB0 Warramunga Arr 43.47 263 P 19 45 48.6 -0.1
WB0 IAmb IAmb 19 45 49.2
comp=Z,17nm,0.6s
WRAB Tennant Creek 43.48 263 P P 19 45 48.4 -0.3
WRAB Tennant Creek 43.48 263 P P 19 45 48.5 -0.3
WRA Warramunga Arr 43.49 263 P P 19 45 48.3 -0.6
comp=Z,10nm,0.7s,baz=97,slow=7.6,SNR=210
WRA ScP ScP 19 50 18.0 +0.1
comp=Z,0.5nm,0.7s,baz=100,slow=3.5,SNR=4.5
WRA S S 19 51 30.5 -4.8
comp=Z,1.4nm,0.8s,baz=99,slow=14,SNR=7.8
comp=Z,10nm,0.7s
WRA Warramunga Arr 43.49 263 P 19 45 48.1 -0.8
GENI Genyem 43.76 290 P P 19 45 51.2 +0.2
GENI Genyem 43.76 290 P P 19 45 51.6 +0.6
SRPI Serui, Papua 47.56 288 P P 19 46 20.3 +0.5
comp=Z,42nm,0.8s
BAKI Biak 47.99 289 P P 19 46 24.9 +1.9
comp=Z,63nm,0.8s
FORT Forrest 48.06 247 P P 19 46 23.0 -0.3
FORT IAmb IAmb 19 46 42.0
comp=Z,23nm,1.4s
MTN Manton Dam 48.15 272 P 19 46 23.4 -0.8
MTN IAmb IAmb 19 46 24.4
comp=Z,7.8nm,0.6s
KNRA Kununurra 49.59 267 P 19 46 34.1 -0.7
KNRA IAmb IAmb 19 46 35.3
comp=Z,9.7nm,0.6s
FAKI Fak Fak 50.68 284 P P 19 46 42.4 -0.3
FAKI IAmb IAmb 19 46 45.9
comp=Z,50nm,1.2s
FITZ Fitzroy Crossi 51.92 263 S S 19 53 28.6 -2.2
comp=Z,1.1nm,0.8s,baz=156,slow=20,SNR=1.3
FITZ Fitzroy Crossi 51.92 263 P P 19 46 51.8 +0.2
SOEI Soe 55.51 273 P P 19 47 18.5 +1.5
SOEI Soe 55.51 273 P 19 47 17.8 +0.8
SOEI Soe 55.51 273 P P 19 47 17.9 +0.9
TNTI Ternate 56.67 286 P P 19 47 25.2 +0.3
TNTI Ternate 56.67 286 P 19 47 23.9 -1.0
TNTI IAmb IAmb 19 47 25.9
comp=Z,33nm,1.0s
TNTI Ternate 56.67 286 P P 19 47 25.1 +0.3
MBWA Marble Bar 56.69 258 P P 19 47 24.1 -0.8
SBA Scott Base 57.06 184 P P 19 47 29.0 +2.5
SBA IAmb IAmb 19 47 30.8
comp=Z,28nm,1.0s
VNDA Vanda 57.08 185 P P 19 47 28.2 +1.6
comp=Z,4.3nm,0.5s,baz=358,slow=7.1,SNR=45
comp=Z,4.3nm,0.5s
VNDA Vanda 57.08 185 P 19 47 28.5 +2.0
MMRI Maumere 57.77 273 P P 19 47 30.7 -1.6
MMRI IAmb IAmb 19 47 49.5
comp=Z,27nm,1.0s
JCJ Chichijima 60.95 320 P P 19 47 52.4 -0.8
TOLI2 Tolitoli 62.77 283 P P 19 48 04.9 -0.3
TOLI2 Tolitoli 62.77 283 P 19 48 04.4 -0.8
TOLI2 IAmb IAmb 19 48 07.4
comp=Z,10nm,0.6s
TOLI2 Tolitoli 62.77 283 P P 19 48 05.0 -0.3
CASY Casey 62.85 205 P 19 48 05.1 +0.2
CASY IAmb IAmb 19 48 06.6
comp=Z,26nm,1.1s
CASY Casey 62.85 205 P P 19 48 05.8 +1.0
MYLDM Lahad Datu 66.55 286 P P 19 48 29.2 +0.3
JHJ2 Mitsune 66.79 323 P P 19 48 29.9 -0.1
QSPA South Pole Qui 68.82 180 P P 19 48 43.4 +1.4
comp=Z,33nm,0.9s,baz=20,slow=0.5,SNR=202
comp=Z,33nm,0.9s
QSPA South Pole Qui 68.82 180 P 19 48 43.3 +1.3
QSPA South Pole Qui 68.82 180 P P 19 48 43.7 +1.7
KKM Kota Kinabalu 68.97 286 P P 19 48 43.5 -0.3
JOW Kunigami 69.87 311 P P 19 48 48.5 -0.3
JGF Kuroka 69.99 323 P P 19 48 48.7 -0.7
JGF IAmb IAmb 19 48 51.4
comp=Z,15nm,1.2s
MJAR Matsushiro Arr 70.22 325 P P 19 48 50.3 -0.3
comp=Z,8.5nm,0.6s,baz=162,slow=5.5,SNR=48
comp=Z,8.5nm,0.6s
MJAR Matsushiro Arr 70.22 325 P 19 48 50.1 -0.5
MAJO Matsushiro 70.22 325 P P 19 48 50.7 +0.1
MAJO Matsushiro 70.22 325 P P 19 48 50.3 -0.3
MAJO IAmb IAmb 19 48 51.4
comp=Z,16nm,1.0s
MAJO Matsushiro 70.22 325 P P 19 48 50.8 +0.1
JMN Monobe 70.69 320 P P 19 48 52.8 -0.6
JMN IAmb IAmb 19 48 55.3
comp=Z,23nm,1.1s
JSU Suzuyama 71.34 316 P P 19 48 56.7 -0.6
JSU IAmb IAmb 19 48 58.5
comp=Z,18nm,0.9s
JTM Tenmabayashi 71.98 329 P P 19 49 00.6 -0.2
AMKA Amchitka 72.33 359 P 19 49 01.3 -1.1
AMKA IAmb IAmb 19 49 02.9
comp=Z,15nm,0.7s
ADK Adak 72.85 2 P P 19 49 05.6 +0.1
ADK Adak 72.85 2 P 19 49 04.8 -0.6
ADK Adak 72.85 2 P P 19 49 05.2 -0.2
TWG Pinlang 72.93 303 P P 19 49 04.9 -1.8
TWG IAmb IAmb 19 49 06.0
comp=Z,19nm,0.6s
GSTR Great Sitkin T 73.08 2 P P 19 49 06.3 -0.5
GSTR IAmb IAmb 19 49 11.8
comp=Z,32nm,1.0s
ATKA Atka Island 73.26 3 P P 19 49 07.5 -0.3
ATKA Atka Island 73.26 3 P 19 49 07.1 -0.7
ATKA IAmb IAmb 19 49 08.2
comp=Z,29nm,0.9s
TPUB Ta-pu 73.53 304 P P 19 49 09.0 -1.1
TPUB Ta-pu 73.53 304 P P 19 49 08.6 -1.5
SSLB Suanglung 73.54 304 P P 19 49 09.5 -0.6
SSLB Suanglung 73.54 304 P P 19 49 08.8 -1.3
SSLB IAmb IAmb 19 49 09.9
comp=Z,18nm,0.7s
JKA Kamikawa-asahi 73.90 332 P 19 49 12.5 +0.9
JKA IAmb IAmb 19 49 13.9
comp=Z,12nm,0.7s
UNV Unalaska Valle 75.57 8 P P 19 49 21.2 +0.5
baz=192
PEA0B Petropavlovsk- 76.74 346 P P 19 49 26.9 -0.3
PEA0B IAmb IAmb 19 49 28.3
comp=Z,41nm,1.4s
PETK Petropavlovsk- 76.74 346 P P 19 49 27.2 0.0
comp=Z,10nm,0.7s,baz=131,slow=5.0,SNR=19
comp=Z,10nm,0.7s
PETK Petropavlovsk- 76.74 346 P 19 49 27.1 -0.1
KSRS Korea Array 76.78 319 P P 19 49 28.1 +0.4
comp=Z,1.4nm,0.7s,baz=127,slow=6.0,SNR=6.1
comp=Z,1.4nm,0.7s
CNBA Chernabura Isl 77.58 11 P P 19 49 31.1 -0.6
CNBA IAmb IAmb 19 49 56.5
comp=Z,15nm,0.9s
CHNA Chernabura Isl 77.60 11 P P 19 49 32.6 +0.9
baz=198
SDPT Sand Point 77.93 11 P P 19 49 33.9 +0.4
baz=198
SMAI San Martin Ant 78.27 159 P 19 49 35.8 +0.5
SPIA Saint Paul Isl 78.48 5 P P 19 49 36.9 +0.5
baz=188
BELA Belgrano 2 78.94 173 P 19 49 38.8 0.0
BELA IAmb IAmb 19 49 40.1
comp=Z,26nm,0.9s
S14K Fog Glacier 78.98 11 P P 19 49 39.5 +0.2
baz=198
VNFG Fog Glacier, M 78.98 11 P P 19 49 38.8 -0.4
VNFG IAmb IAmb 19 49 40.4
comp=Z,34nm,0.9s
USA0B Ussuriysk Arra 79.02 326 P 19 49 38.9 -0.7
USRK Ussuriysk Ar. 79.02 326 P P 19 49 39.5 0.0
comp=Z,7.1nm,0.8s,baz=110,slow=2.8,SNR=12
comp=Z,7.1nm,0.8s
USRK Ussuriysk Ar. 79.02 326 P 19 49 39.4 -0.1
CHGN Chignik 79.21 12 P P 19 49 40.4 +0.1
baz=200
CHIR Chirikof Islan 79.32 13 P P 19 49 40.4 -0.5
baz=202
NJ2 Nanjing 79.58 310 eP P 19 49 43.8 +1.0
NJ2 pmax pmax
comp=Z,17nm,0.5s
SII Sitkinak Islan 80.31 14 P P 19 49 46.3 +0.2
SII IAmb IAmb 19 49 48.6
comp=Z,17nm,1.0s
SII Sitkinak Islan 80.31 14 P P 19 49 46.4 +0.3
baz=203
MAW Mawson 80.51 200 P P 19 49 47.7 +0.6
comp=Z,5.3nm,0.9s,baz=111,slow=4.7,SNR=8.5
comp=Z,5.3nm,0.9s
MAW Mawson 80.51 200 P P 19 49 47.0 -0.1
MDJ Mudanjiang 80.55 326 P P 19 49 48.6 +1.0
MDJ Mudanjiang 80.55 326 P P 19 49 48.9 +1.3
MDJ pmax pmax
comp=Z,10.0nm,0.8s
R17L Mt. Peulik Vol 80.85 12 P P 19 49 49.2 +0.3
baz=201
PMSA Palmer Station 81.00 157 P P 19 49 50.5 +0.8
PMSA IAmb IAmb 19 49 51.8
comp=Z,25nm,0.8s
OHAK Old Harbor 81.12 14 P P 19 49 50.6 +0.5
baz=204
Q17K Contact Creek 81.53 12 P P 19 49 52.4 0.0
baz=202
O14K Tigyukauivet M 81.54 9 P P 19 49 52.1 -0.2
O14K Tigyukauivet M 81.54 9 P P 19 49 52.7 +0.4
baz=197
O15K Ungalikthiuk R 81.69 10 P P 19 49 52.7 -0.4
baz=198
Q16K King Salmon 81.77 12 P P 19 49 53.6 +0.2
baz=201
KDAK Kodiak Island 81.79 14 P P 19 49 53.7 +0.1
baz=205
P16K Nushagak River 81.86 11 P P 19 49 54.5 +0.6
baz=200
M11K Mekoryuk 82.02 6 P P 19 49 54.8 +0.1
baz=192
Q18K Katmai Hardscr 82.06 12 P P 19 49 55.2 +0.1
baz=202
N14K Kuskokwak Cree 82.13 9 P 19 49 55.3 +0.1
N14K IAmb IAmb 19 49 57.0
comp=Z,32nm,1.0s
N14K Kuskokwak Cree 82.13 9 P P 19 49 55.8 +0.6
baz=196,SNR=5.5
CN2 Changchun 82.28 323 eP P 19 49 57.3 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.7s
P17K Kvichak River 82.30 12 P P 19 49 55.8 -0.3
P17K Kvichak River 82.30 12 P P 19 49 55.9 -0.2
baz=201
O16K Kokwok River B 82.37 11 P 19 49 55.8 -0.8
O16K Kokwok River B 82.37 11 P P 19 49 55.7 -0.8
baz=200
M13K Dall Lake 82.38 8 P P 19 49 56.9 +0.5
baz=195
BNX BinXian 82.45 325 ⇓P P 19 49 57.3 +0.1
BNX pmax pmax
comp=Z,11nm,0.8s
N15K Kwethluk River 82.60 9 P 19 49 58.6 +1.0
N15K IAmb IAmb 19 49 59.6
comp=Z,23nm,0.8s
N15K Kwethluk River 82.60 9 P P 19 49 58.2 +0.6
baz=198,SNR=18
P18K Big Mountain, 82.71 12 P P 19 49 58.3 0.0
baz=202
O17K Koliganek Bris 82.72 11 P P 19 49 58.4 +0.1
baz=201
KULM Kulim 82.86 278 P P 19 49 59.5 -0.6
KULM IAmb IAmb 19 50 20.1
comp=Z,25nm,1.5s
M14K Bethel 82.89 8 P P 19 49 59.4 +0.4
baz=196
M15K Kasigluk River 83.01 9 P P 19 49 59.8 +0.2
baz=197,SNR=9.3
N16K Nishlik Lake 83.09 10 P P 19 50 00.6 +0.4
baz=199,SNR=13
O18K Koktuh Hills 83.14 12 P P 19 50 00.6 +0.2
baz=202
L14K Kuka Creek 83.36 8 P P 19 50 01.3 0.0
baz=195
M16K Timber Creek 83.58 10 P P 19 50 03.1 +0.6
baz=199,SNR=5.3
K13K Kusilvak Mount 83.70 7 P P 19 50 03.7 +0.6
baz=194
N18K Kilae Creek 83.78 11 P P 19 50 03.8 +0.3
baz=202
L15K Ungalak Mounta 83.84 8 P P 19 50 04.2 +0.5
baz=196
O20K Slope Mountain 83.87 13 P P 19 50 03.9 -0.2
baz=205
BRSE Bradley Lake S 83.97 14 P P 19 50 04.1 -0.4
baz=206
L16K Owhat River 84.16 9 P P 19 50 05.3 0.0
baz=198
N19K Bonanza Creek 84.17 12 P P 19 50 04.7 -0.9
baz=203
M17K Holitna River 84.19 10 P P 19 50 05.3 -0.2
baz=200
GSI Gunungsitoli 84.25 274 P P 19 50 07.6 +0.6
ESPZ Base Esperanza 84.34 157 P P 19 50 06.5 +0.1
K15K Wolf Creek Mou 84.43 8 P P 19 50 07.2 +0.6
baz=196
M18K Stony River 84.55 11 P P 19 50 08.0 +0.7
baz=202
SEW Seward 84.59 14 P P 19 50 08.3 +0.8
baz=208
L17K Donlin 84.74 10 P P 19 50 09.4 +1.2
baz=199
P23K Montague Islan 84.99 15 P P 19 50 09.8 +0.4
baz=209
L18K Granite Mounta 85.08 10 P P 19 50 10.0 +0.2
baz=201
M19K Big River Lodg 85.19 11 P P 19 50 10.3 -0.1
baz=203
K17K Iditarod 85.29 9 P P 19 50 11.8 +1.0
baz=199
HNS HongShan 85.30 313 ⇑P P 19 50 12.8 +1.4
L19K White Mountain 85.37 11 P P 19 50 11.4 +0.2
baz=202
RC01 Rabbit Creek A 85.41 14 P P 19 50 11.9 +0.5
baz=207
M20K Styx River 85.41 12 P P 19 50 11.2 -0.4
baz=204
HEH HeiHe 85.42 329 eP P 19 50 12.1 +0.4
HEH pmax pmax
comp=Z,10.0nm,0.6s
J16K Anvik River 85.50 8 P P 19 50 11.9 +0.1
baz=197
PWL Port Wells 85.52 15 P P 19 50 11.8 -0.2
baz=208
ELIB Princess Elisa 85.78 187 dP P 19 50 13.4 0.0
comp=Z,21nm,0.8s
CRAG Craig 85.82 24 P P 19 50 13.0 -0.4
baz=222
J17K VABM Dome 85.82 9 P P 19 50 12.6 -0.8
baz=199
GLI Glacier Island 85.83 15 P P 19 50 13.2 -0.2
baz=210
EYAK Cordova Ski Ar 85.88 16 P P 19 50 13.7 +0.1
baz=211
KNK Knik Glacier 85.98 14 P P 19 50 14.5 +0.3
baz=208
PMR Palmer 85.99 14 P P 19 50 14.4 +0.3
baz=208
I17K Unalakleet 86.07 8 P P 19 50 15.0 +0.5
baz=197
ANM Nome 86.20 6 P P 19 50 14.8 -0.3
baz=193
SIT Sitka 86.20 22 P P 19 50 15.3 +0.1
baz=220
J18K Innoko River 86.25 10 P P 19 50 15.2 -0.1
baz=201
SML Sawmill 86.36 14 P P 19 50 15.5 -0.5
baz=208
CUT Chulitna 86.47 13 P P 19 50 16.2 -0.1
baz=207
L22K Petersville 86.47 13 P P 19 50 16.1 -0.4
baz=206
M23K Glacier View 86.48 14 P P 19 50 16.5 0.0
baz=209
PPLA Purkeypile 86.52 12 P P 19 50 16.6 -0.2
baz=205
BMRM Bremner River 86.53 16 P P 19 50 16.9 +0.1
baz=212
S31K Pelican 86.58 21 P P 19 50 16.4 -0.5
baz=219
K20K Telida 86.59 11 P P 19 50 17.1 +0.1
baz=203
SCM Sheep Creek Mo 86.61 14 P P 19 50 17.5 +0.3
SCM Sheep Creek Mo 86.61 14 P P 19 50 17.5 +0.3
baz=209,SNR=7.4
KLU Klutina 86.65 15 P P 19 50 17.6 +0.2
baz=211
CRQE Cirque 86.75 17 P P 19 50 18.0 0.0
baz=213
WRAK Wrangell Islan 86.81 24 P P 19 50 17.8 -0.3
baz=223
J19K Poorman 86.92 10 P P 19 50 18.5 0.0
baz=202
TROLL Troll, Antarti 86.98 181 ⇑P P 19 50 18.8 -0.2
comp=Z,394nm,0.5s
F14K Arctic Creek 87.00 5 P P 19 50 18.8 -0.1
baz=192
PINM Pinnacle 87.01 18 P P 19 50 18.7 -0.4
baz=216
CAST Castle Rocks 87.02 12 P P 19 50 17.6 -1.4
CAST IAmb IAmb 19 50 19.0
comp=Z,7.8nm,0.6s
CAST Castle Rocks 87.02 12 P P 19 50 18.3 -0.7
baz=205
N25K Chitina, Valde 87.08 16 P P 19 50 19.4 0.0
baz=212,SNR=5.9
M24K Tolsona, Glenn 87.12 15 P P 19 50 19.6 0.0
baz=210
GLB Gilahina Butte 87.14 16 P P 19 50 19.6 -0.1
GLB IAmb IAmb 19 50 20.7
comp=Z,6.3nm,0.7s
WAT6 Susitna Watana 87.17 14 P P 19 50 20.1 +0.2
baz=209,SNR=8.3
H17K Granite Mounta 87.18 8 P P 19 50 19.7 0.0
baz=198
WAT1 Susitna Watana 87.21 14 P P 19 50 20.2 +0.3
baz=208
SNAA Sanae 87.29 179 ⇑P P 19 50 19.9 -0.4
comp=Z,61nm,0.4s
SNAA Sanae 87.29 179 P P 19 50 20.0 -0.4
comp=Z,2.6nm,0.5s,baz=192,slow=10,SNR=14
comp=Z,2.6nm,0.5s
SNAA Sanae 87.29 179 P 19 50 19.4 -1.0
MCARA McCarthy VSAT 87.30 16 P P 19 50 20.4 +0.1
baz=213
G16K Koyuk River 87.32 7 P P 19 50 20.3 +0.1
baz=196
J20K Nowinta River 87.34 11 P P 19 50 20.6 +0.2
baz=203
F15K North Star Dit 87.39 6 P P 19 50 20.9 +0.3
baz=193
TRF Thorofare Moun 87.40 13 P 19 50 20.3 -0.7
TRF IAmb IAmb 19 50 21.6
comp=Z,14nm,0.8s
TRF Thorofare Moun 87.40 13 P P 19 50 20.9 -0.1
baz=207
GCSA Galena City Sc 87.42 9 P P 19 50 21.3 +0.5
baz=201
O28M Mount Upton 87.58 18 P P 19 50 21.6 -0.4
baz=216
HARP HAARP 87.62 15 P P 19 50 22.3 +0.5
baz=211
O29M Mount Kennedy 87.67 19 P P 19 50 22.1 -0.2
baz=217
DHY Denali Highway 87.69 14 P P 19 50 22.1 -0.2
baz=209
PLBC Pleasant Camp 87.70 20 P P 19 50 22.5 +0.3
baz=219
I20K Naaghedeneel 87.85 10 P P 19 50 23.4 +0.6
baz=203
VNA2 Neumayer--Watz 87.89 177 ⇑P P 19 50 23.0 -0.1
comp=Z,16nm,0.8s,baz=177,slow=4.1
VNA2 Neumayer--Watz 87.89 177 P P 19 50 23.1 0.0
MCK McKinley 87.93 13 P P 19 50 22.8 -0.5
baz=208
P30M Million Dollar 88.03 20 P P 19 50 24.3 +0.5
baz=219
PAX Paxson 88.03 15 P P 19 50 22.8 -1.0
baz=211
SKAG Skagway 88.04 21 P P 19 50 24.1 +0.3
baz=220
YUK8 Steele Glacier 88.11 18 P P 19 50 24.4 -0.1
baz=216,SNR=5.8
VNA1 Neumayer--Stat 88.12 177 ⇑P P 19 50 24.2 0.0
comp=Z,22nm,0.8s
M26K Nabesna, AK 88.16 16 P P 19 50 23.9 -0.5
baz=213
H19K Roundabout Mou 88.22 9 P P 19 50 24.2 -0.3

baz=201
YUK6 Outpost Mounta 88.25 19 P **P** 19 50 24.7 -0.4
baz=217
G18K Tagagawik 88.26 8 P **P** 19 50 24.2 -0.5
baz=199
YUK3 Moose Creek 88.32 17 P **P** 19 50 25.6 +0.2
baz=216,SNR=8.6
TXAR Lajitas Array 88.32 58 P **P** 19 50 27.4 +1.4
comp=Z,0.9nm,0.8s,baz=216,slow=5.6,SNR=11
comp=Z,0.9nm,0.8s
TXAR Lajitas Array 88.32 58 P **P** 19 50 26.9 +0.9
BRWY Burwash Landin 88.39 18 P **P** 19 50 26.0 +0.5
baz=217
HYT Haines Junctio 88.41 19 P **P** 19 50 25.8 +0.1
baz=218
M27K Edge Creek, AK 88.41 16 P **P** 19 50 25.6 0.0
M27K IAmb IAmb 19 50 27.5
comp=Z,12nm,1.3s
M27K Edge Creek, AK 88.41 16 P **P** 19 50 25.8 +0.1
baz=214
H20K Anotleneega Mo 88.43 10 P **P** 19 50 25.6 0.0
baz=202
F17K Baldwin Pennin 88.46 7 P **P** 19 50 25.6 +0.1
baz=197
YUK4 Talbot Arm 88.48 18 P **P** 19 50 26.4 +0.3
baz=217
I21K Tanana 88.64 11 P **P** 19 50 26.5 +0.1
baz=205
NEA2 Nenana 88.66 12 P **P** 19 50 26.2 -0.4
baz=208
P32M Atlin 88.68 21 P **P** 19 50 26.4 -0.5
baz=222
K24K Donnelly Dome 88.68 14 P **P** 19 50 27.6 +0.8
baz=211
G19K Purcell Mounta 88.71 9 P **P** 19 50 27.1 +0.3
baz=200
BVCY Beaver Creek 88.73 17 P **P** 19 50 27.4 +0.3
baz=215
MLY Manley 88.73 12 P **P** 19 50 26.2 -0.7
MLY Manley 88.73 12 P **P** 19 50 26.3 -0.7
baz=206
RIDG Independent Ri 88.84 15 P **P** 19 50 28.0 +0.5
baz=212
HILR Hailar Array B 88.88 325 P **P** 19 50 27.5 -0.5
comp=Z,1.5nm,0.5s,baz=126,slow=6.4,SNR=10
comp=Z,1.5nm,0.5s
HDA Harding Lake 88.94 13 P **P** 19 50 28.0 +0.1
baz=210
L27K Beaver Creek, 89.01 16 P **P** 19 50 28.1 -0.2
baz=214
E17K Hotham Inlet 89.01 7 P **P** 19 50 28.0 -0.1
baz=196
N30M Aishikik Lake 89.04 19 P **P** 19 50 28.6 +0.1
baz=219
IMAR Indian Mountai 89.07 10 P **P** 19 50 28.4 -0.1
I23K Minto, Yukon-K 89.10 12 P **P** 19 50 28.5 -0.1
baz=208
WHY Whitehorse 89.10 20 P **P** 19 50 28.4 -0.5
baz=220
SCRK Sand Creek 89.24 15 P **P** 19 50 28.8 -0.7
baz=212
F19K Shaleruckik Mo 89.26 8 P **P** 19 50 29.4 +0.1
baz=200
ILAR Eielson Array 89.27 13 P **P** 19 50 28.8 -0.6
comp=Z,1.8nm,0.6s,baz=218,slow=5.1,SNR=17
comp=Z,1.8nm,0.6s
H22K Ishtalitna Cre 89.39 11 P **P** 19 50 29.7 -0.3
baz=206
CMAR Chiang Mai Arr 89.40 290 P **P** 19 50 31.3 +0.2
comp=Z,3.1nm,0.9s,baz=114,slow=4.2,SNR=22
comp=Z,3.1nm,0.9s
M29M Somme Creek 89.42 18 P **P** 19 50 30.3 0.0
baz=217
P33M Teslin, Yukon 89.44 21 P **P** 19 50 30.1 -0.3
baz=222
POKR Poker Plat Res 89.46 13 P **P** 19 50 30.0 -0.4
baz=209
J25K Salcha River, 89.47 14 P **P** 19 50 30.3 -0.1
baz=211
E18K Tukpahlearik C 89.47 7 P **P** 19 50 30.9 +0.6
baz=197
D17K Noatak River 89.48 6 P **P** 19 50 30.2 -0.1
baz=195
PLCA Paso Flores 89.50 134 P **P** 19 50 32.4 +1.1
comp=Z,4.5nm,0.7s,baz=239,slow=5.0,SNR=11
comp=Z,4.5nm,0.7s
PLCA Paso Flores 89.50 134 **P** 19 50 32.1 +0.8
PLCA IAmb IAmb 19 50 33.7
comp=Z,5.7nm,0.8s
CHTO Chiang Mai 89.54 290 P **P** 19 50 32.5 +0.7
CHTO Chiang Mai 89.54 290 **P** 19 50 32.5 +0.7
CHTO IAmb IAmb 19 50 33.9
comp=Z,3.4nm,0.7s
CHTO Chiang Mai 89.54 290 P **P** 19 50 33.1 +1.3
CHTO Chiang Mai 89.54 290 P **P** 19 50 31.3 -0.5
G21K Allakaket 89.60 10 P **P** 19 50 31.2 +0.3
baz=204
H23K Yukon River 89.67 12 P **P** 19 50 31.3 0.0
baz=207
F20K Avaraart Lake 89.75 9 P **P** 19 50 31.3 -0.2
baz=202
E19K Redstone River 89.92 8 P **P** 19 50 32.2 -0.2
baz=200
M30M Minto, Yukon 90.00 18 P **P** 19 50 32.4 -0.5
baz=219
L29M L29M 90.04 17 P **P** 19 50 33.1 0.0
baz=218
PZH PanZhiHua 90.16 298 P **P** 19 50 35.5 +0.9
C17K DeLong Mountai 90.22 6 P **P** 19 50 33.7 -0.1
baz=195
F21K Alatna River 90.25 10 P **P** 19 50 33.6 -0.3
baz=204
G22K Bettles 90.30 11 P **P** 19 50 33.9 -0.2
baz=206
G23K Bananza Creek 90.37 11 P **P** 19 50 34.6 +0.1
baz=207
M31M Drury Creek, Y 90.43 19 P **P** 19 50 34.7 -0.2
baz=221
DAWY Dawson 90.46 16 P **P** 19 50 34.9 -0.2
baz=216
F22K John River 90.72 10 P **P** 19 50 36.3 +0.2
baz=205
K29M Barlow Dome 90.79 17 P **P** 19 50 36.8 +0.2
baz=218
D19K Kuna River 90.79 8 P **P** 19 50 36.5 +0.1
baz=200
COLD Coldfoot 90.80 11 P **P** 19 50 36.9 +0.5
baz=207
E20K Nigu River 90.82 8 P **P** 19 50 37.2 +0.6
baz=201
I27K Kandik River 91.17 15 P **P** 19 50 38.5 +0.3
baz=214
D20K Etivluk River 91.19 8 P **P** 19 50 38.6 +0.3
baz=201
C19K Lookout Ridge 91.20 7 P **P** 19 50 38.8 +0.4
baz=198
I28M Miner Creek 91.44 15 P **P** 19 50 39.2 -0.4
I28M Miner Creek 91.44 15 P **P** 19 50 39.2 -0.4
baz=216
G26K Porcupine Rive 91.81 13 P **P** 19 50 41.5 +0.4
baz=213
C21K Knifeblade Rid 91.85 8 P **P** 19 50 41.3 +0.1
baz=202
I30M Mount Dempster 92.18 17 P **P** 19 50 43.2 +0.2
baz=219
LZH Lanzhou 92.42 308 *e*P **P** 19 50 45.4 +0.6
LZH pP pwP 19 52 59.8 +1.3
LZH Lanzhou 92.42 308 S **S** 20 01 04.3 +6.4
LZH Lanzhou 92.42 308 sS sS 20 04 54.5 +4.5
LZH pmax pmax
comp=Z,11nm,1.0s
H29M Whitestone 92.45 15 P **P** 19 50 44.3 +0.2
baz=218
EPYK Eagle Plains 92.98 16 P **P** 19 50 46.7 +0.1
baz=219
G29M Pine Creek 93.08 15 P **P** 19 50 46.8 -0.2
baz=218
G30M tAoh Zraii Nji 93.58 16 P **P** 19 50 49.7 +0.4
baz=219
SONM Songino Array 95.65 319 P **P** 19 50 59.4 +0.2
comp=Z,0.3nm,0.5s,baz=130,slow=6.0,SNR=3.0
comp=Z,0.3nm,0.5s
MKAR Makanchi Array 110.97 313 PKKPbc PKKPbc 20 07 01.6 -1.0
comp=Z,0.7nm,0.8s,baz=299,slow=3.5,SNR=6.4
KURBB Kurchatov Arra 113.90 317 PP **PP** 19 57 10.2 -3.7
comp=Z,0.5nm,0.8s,baz=91,slow=7.0,SNR=4.9
KURBB SKP **SKPdf** 19 58 45.1 -2.1
comp=Z,0.1nm,0.3s,baz=106,slow=1.9,SNR=5.3

KURBB PKKPbc **PKKPbc** **20 06 52.0 -1.1**
comp=Z,0.7nm,1.0s,baz=268,slow=3.7,SNR=5.4
BVAR Borovoye Array 118.99 320 PKP **PKPdf** **19 56 16.8 -1.1**
comp=Z,0.8nm,0.3s,baz=103,slow=2.7,SNR=7.8
BVAR SKP **SKPdf** **19 58 56.0 -1.1**
comp=Z,1.3nm,0.8s,baz=132,slow=2.2,SNR=3.5
BOSA Boshof 125.13 206 PKP **PKPdf** **19 56 30.8 +0.1**
comp=Z,2.8nm,1.0s,baz=186,slow=9.2,SNR=2.1
BOSA Boshof 125.13 206 PKPdf **PKPdf** **19 56 30.6 -0.2**
ARCES ARCESS Array B 129.47 349 PKP **PKPdf** **19 56 37.1 -0.4**
comp=Z,0.3nm,0.4s,baz=15,slow=1.4,SNR=7.9
ARCES PP **PP** **19 58 59.4 +2.6**
comp=Z,9.5nm,0.9s,baz=33,slow=4.6,SNR=16
BELG Belogornoye 132.58 323 SKPbc **SKPbc** **19 59 12.3 -3.2**
comp=Z,15nm,0.9s,baz=24,slow=3.4,SNR=6.9
FINES FINESS Array B 136.19 343 PKhKP PKPpre 19 56 47.0
comp=Z,0.6nm,0.5s,baz=64,slow=4.4,SNR=1.7
FINES SKPbc **SKPbc** **19 59 25.3 -1.3**
comp=Z,3.1nm,0.6s,baz=39,slow=3.0,SNR=8.8
NOA NORSAR Array B 139.59 352 SKPbc **SKPbc** **19 59 34.0 -2.3**
comp=Z,0.5nm,0.8s,baz=16,slow=4.5,SNR=3.3
HFS Hagfors 140.11 350 PKhKP PKPpre 19 56 50.5
comp=Z,0.9nm,0.3s,baz=83,slow=3.4,SNR=13
LODK Lodwar 142.11 247 **PKPdf** **19 56 59.9 -2.7**
AK03 Malin Array Si 143.14 330 PKP PKPab 19 57 00.4 -0.9
AKASG Malin Array Be 143.16 330 PKP PKPab 19 57 00.8 -0.5
comp=Z,12nm,0.5s,baz=44,slow=4.3,SNR=62
AKASG SKPbc **SKPbc** **19 59 42.1 -3.4**
comp=Z,0.7nm,0.5s,baz=58,slow=1.7,SNR=5.4
AKASG Malin Array Be 143.16 330 PKPab 19 57 00.6 -0.7
AKBB Malin Array Si 143.16 330 PKPab 19 57 00.2 -1.1
AKBB Malin Array Si 143.16 330 PKP PKPab 19 57 00.6 -0.7
AK23 Malin Array Si 143.16 330 PKP PKPab 19 57 00.6 -0.7
SUW Suwalki 143.16 338 PKPab 19 57 00.7 -0.5
AK01 Malin Array Si 143.17 330 PKP PKPab 19 57 00.6 -0.8
AK04 Malin Array Si 143.17 330 PKP PKPab 19 57 00.6 -0.8
KIEV Kiev 143.17 330 ⇓P PKPab 19 57 00.1 -1.2
KIEV Kiev 143.17 330 PKP PKPab 19 57 00.6 -0.8
AK09 Malin Array Si 143.19 330 PKP PKPab 19 57 00.7 -0.7
AK08 Malin Array Si 143.19 330 PKP PKPab 19 57 00.7 -0.7
AK22 Malin Array Si 143.19 330 PKP PKPab 19 57 00.7 -0.7
AK21 Malin Array Si 143.19 330 PKP PKPab 19 57 00.7 -0.8
AK02 Malin Array Si 143.20 330 PKP PKPab 19 57 00.7 -0.8
AK11 Malin Array Si 143.20 330 PKP PKPab 19 57 00.7 -0.8
AK15 Malin Array Si 143.21 330 PKP PKPab 19 57 00.7 -0.8
AK10 Malin Array Si 143.22 330 PKP PKPab 19 57 00.7 -0.9
AK18 Malin Array Si 143.22 330 PKP PKPab 19 57 00.8 -0.8
AK05 Malin Array Si 143.22 330 PKP PKPab 19 57 00.8 -0.8
AK19 Malin Array Si 143.25 330 PKP PKPab 19 57 00.8 -0.9
AK06 Malin Array Si 143.25 330 PKP PKPab 19 57 00.9 -0.8
MI28 Mi28,Pidlybu 143.72 331 PKP PKPbc 19 57 01.7 -1.7
RNPP8 Varash 144.21 333 PKP PKPbc 19 57 04.2 -0.7
RNPP5 Staryi Chortor 144.28 333 PKP PKPbc 19 57 04.4 -0.7
LUBAR Lubar, Ukraine 144.38 330 PKP **PKPdf** **19 57 04.1 -1.3**
SORM Soroca 145.29 327 ⇓P **PKPdf** **19 57 07.3 +0.3**
EKA Eskdalemuir Ar 145.83 4 PKPbc **PKPbc** **19 57 09.1 -0.5**
comp=Z,2.1nm,0.6s,baz=346,slow=3.3,SNR=8.2
BRTR Keskin Array B 146.57 311 PKPbc **PKPbc** **19 57 12.1 -0.2**
comp=Z,1.7nm,0.7s,baz=125,slow=2.7,SNR=4.4
BRTR Keskin Array B 146.57 311 **PKPbc** **19 57 11.2 -1.2**
TLCR 146.90 323 ⇑P **PKPdf** **19 57 11.1 +1.3**
GIRR Girov 147.02 327 ⇓P **PKPbc** **19 57 13.2 +0.1**
GHRR 147.13 325 ⇓P **PKPbc** **19 57 12.8 -0.6**
BURAR Bucovina Array 147.19 329 ⇑P **PKiKP** **19 57 14.9 -0.4**
BIZ Bicaz 147.23 327 ⇑P **PKPbc** **19 57 14.1 +0.5**
TESR Tescani 147.24 326 ⇑P **PKPbc** **19 57 13.3 -0.3**
TPGR Topolog 147.32 323 ⇑P **PKPbc** **19 57 13.2 -0.7**
KOLS Kolonicke sedl 147.54 333 *e*PKP **PKPbc** **19 57 15.1 +0.7**
KOLS *e* 19 57 18.8
VRI Vrincioaia 147.62 325 ⇑P **PKPbc** **19 57 14.5 -0.2**
PLOR Plostina 147.67 325 ⇓P **PKPbc** **19 57 14.9 +0.1**
COVR Voineasa-Covas 147.91 326 ⇓P **PKPbc** **19 57 15.1 -0.3**
FLTG Flechtingen 147.96 348 *e*PKPbc **PKPbc** **19 57 15.1 -0.2**
baz=20,slow=2.4
ARCR ARCALIA 147.98 329 ⇓P **PKiKP** **19 57 18.3 +1.5**
BOSR Bodos 148.04 327 ⇑P **PKPbc** **19 57 15.2 -0.6**
DOPR Dopca 148.25 327 ⇑P **PKiKP** **19 57 17.2 -0.3**
MLR Muntele Rosu 148.28 326 PKPbc **PKPbc** **19 57 15.7 -0.8**
comp=Z,2.2nm,0.7s,baz=290,slow=13.3,SNR=4.6
MLR Muntele Rosu 148.28 326 **PKPbc** **19 57 14.7 -1.8**
OSTC Ostas 148.37 341⇑ *e*PKP **PKiKP** **19 57 17.3 -0.2**
OSTC *e*PKPAB **PKPab** **19 57 22.5 +0.5**
OSTC *ep*PKP **pPKPab** **19 59 42.4 +8.2**
CHVC Chvalec 148.39 341 *e*PKPAB **PKPab** **19 57 22.7 +0.6**
STEB Steborice 148.41 339⇑ *e*PKP **PKPbc** **19 57 17.0 +0.5**
STEB *e*PKPAB **PKPab** **19 57 22.8 +0.6**
STEB *ex* x 19 57 30.3
LANS Liptovska Anna 148.47 336 *e*PKP **PKiKP** **19 57 18.0 +0.2**
LANS *e* 19 57 24.2
DPC Dobruska-Polom 148.52 341⇑ *e*PKP **PKPbc** **19 57 17.3 +0.5**
DPC *e*PKPAB **PKPab** **19 57 23.2 +0.5**
DPC *ep*PKP **pPKPab** **19 59 42.4 +7.7**
CLL Collm 148.54 345 *e*PKPbc **PKPbc** **19 57 16.8 +0.1**
baz=20,slow=2.4
CLL *e*PKPab **PKPab** **19 57 22.7 0.0**
baz=18,slow=4.2
CLL Collm 148.54 345 *i* PKPbc **PKPbc** **19 57 16.9 +0.1**
comp=Z,5.0nm,1.0s
CLL *i* PKPab **PKPab** **19 57 22.5 -0.2**
comp=Z,5.0nm,0.8s
CLL *e*(pPKPab) 19 59 41.0
IBBN Ibbenburen 148.55 352 *e*PKPab **PKPab** **19 57 22.6 0.0**
baz=18,slow=4.2
CLZ Clausthal 148.59 349 *e*PKPbc **PKPbc** **19 57 17.2 +0.3**
baz=20,slow=2.4
KRLC Kraliky 148.62 340⇑ *e*PKP **PKPbc** **19 57 17.3 +0.2**
KRLC *e*PKPAB **PKPab** **19 57 23.5 +0.4**
MORC Moravsky Berou 148.63 339 *e*PKP **PKPbc** **19 57 16.8 -0.3**
BRG Berggiesshubel 148.71 344 *e*PKPbc **PKPbc** **19 57 17.4 +0.2**
baz=20,slow=2.4
BRG *e*PKPab **PKPab** **19 57 23.5 +0.1**
baz=18,slow=4.2
BRG Berggiesshubel 148.71 344⇑ *e*PKPb 19 57 17.4
BRG Amp 19 57 18.0
comp=Z,2.2nm,0.8s
BRG PKPab **PKPab** **19 57 23.5 +0.1**
BRG Amp 19 57 24.2
comp=Z,2.9nm,0.8s
BRG pPKP pPKPab 19 59 41.3 +5.9
BRG Amp 19 59 42.3
comp=Z,3.3nm,1.1s
MAUC Maruska 148.88 338 *e*PKPDF **PKiKP** **19 57 18.6 0.0**
GTTG Gottingen 148.95 349 *e*PKPab **PKPab** **19 57 24.6 +0.3**
baz=18,slow=4.2
ARR Arges 149.05 327 ⇓P **PKiKP** **19 57 19.8 +0.7**
PRU Pruhonice 149.36 343⇑ *e*PKP **PKPbc** **19 57 18.7 -0.1**
PRU *ex* x 19 57 42.2
PRU *ex* x 19 57 42.4
JAVC Velka Javorina 149.37 338 *e*PKP **PKiKP** **19 57 20.3 +0.6**
MOX Moxa 149.48 347 *e*PKPbc **PKPbc** **19 57 19.0 -0.1**
baz=20,slow=2.4
MOX *e*PKPab **PKPab** **19 57 26.5 0.0**
baz=18,slow=4.2
TANN Tannenbergstha 149.50 345 *e*PKPbc **PKPbc** **19 57 19.3 +0.1**
baz=20,slow=2.4
TANN *e*PKPab **PKPab** **19 57 26.8 0.0**
baz=18,slow=4.2
PLN Plauen 149.51 346 *e*PKPbc **PKPbc** **19 57 19.3 +0.1**
baz=20,slow=2.4
KASTN Kahler Asten 149.53 351 *e*PKPbc **PKPbc** **19 57 19.3 +0.1**
baz=20,slow=2.4
KASTN *e*PKPab **PKPab** **19 57 26.5 -0.3**
baz=18,slow=4.2
KRUC Moravsky 149.62 340 *e*PKP **PKPbc** **19 57 19.7 +0.3**
MODS Modra-Piesok 149.92 338 *e* **PKPab** **19 57 29.5 +1.0**
MODS Modra-Piesok 149.92 338 *e*PKP **PKiKP** **19 57 21.0 +0.2**
ZVC Zvikov 149.95 343⇑ *e*PKP **PKiKP** **19 57 20.7 -0.1**
ZVC *e*PKPAB **PKPab** **19 57 28.8 +0.2**
ZVC *ex* x 19 57 41.8
BAND Balkesir-Ban 150.05 316 ⇑P **PKPbc** **19 57 18.1 -2.6**
ROTZ Rotzenmuhle 150.17 345 *e*PKPbc **PKPbc** **19 57 20.7 0.0**
baz=20,slow=2.4
ROTZ *e*PKPab **PKPab** **19 57 29.9 +0.4**
baz=18,slow=4.2
KHC Kasperske Hory 150.40 343⇑ *e*PKP **PKPbc** **19 57 21.5 +0.2**
KHC *e*PKPAB **PKPab** **19 57 31.3 +0.8**
KHC *ex* x 19 57 43.9
KHC *ep*PKP **pPKPab** **19 59 51.7 +10**
KHC Kasperske Hory 150.40 343 **PKPbc** **19 57 19.7 -1.6**
MEM Membach 150.43 353 *d*PKP **PKPab** **19 57 28.0 -2.5**
GRF Grafenberg Arr 150.46 346 *e*PKPab **PKPab** **19 57 31.1 +0.4**
baz=18,slow=4.2
CKRC Cesky Krumlov 150.48 342 *e*PKPAB **PKPbc** **19 57 21.7 +0.2**

CKRC *ex* x 19 57 38.4
CKRC *ep*PKP **pPKPab** **19 59 47.2 +4.6**
TNS Taunus Mts 150.48 350 *e*PKPbc **PKPbc** **19 57 21.7 +0.3**
baz=20,slow=2.4
TNS *e*PKPab **PKPab** **19 57 31.0 +0.1**
baz=18,slow=4.2
WET Wettzell 150.57 344 *e*PKPab **PKPab** **19 57 31.3 +0.1**
baz=18,slow=4.2
GEC2 GERESS Array S 150.63 343 *e*PKPbc **PKPbc** **19 57 21.8 -0.1**
baz=20,slow=2.4
GEC2 *e*PKPab **PKPab** **19 57 31.3 -0.2**
baz=18,slow=4.2
GERES GERESS Array B 150.63 343 PKPbc **PKPbc** **19 57 21.8 -0.1**
comp=Z,1.3nm,0.7s,baz=5.7,slow=1.3,SNR=14
GERES PKPab **PKPab** **19 57 31.4 -0.2**
comp=Z,0.8nm,0.7s,baz=25,slow=3.5,SNR=8.5
GERES SKP **SKPdf** **19 59 48.0 -5.0**
comp=Z,0.9nm,0.8s,baz=348,slow=1.9,SNR=5.9
GERES GERESS Array B 150.63 343 **PKPbc** **19 57 20.6 -1.3**
BCLA Clavier 150.69 354 *d*PKP **PKPab** **19 57 31.5 -0.1**
CONA Conrad Observa 150.78 339 *e*PKiKP **PKPbc** **19 57 22.2 -0.1**
comp=Z,3.0nm,1.0s
CONA *e*PKP **PKPab** **19 57 32.0 -0.2**
comp=Z,3.7nm,0.7s
CONA *e*SKP **SKPdf** **19 59 48.5 -4.7**
comp=Z,0.2nm,0.5s
RONA Rosalia, Austr 150.84 338 *e*PKiKP **PKPbc** **19 57 22.2 -0.2**
comp=Z,3.0nm,0.5s
RONA *e*PKP **PKPab** **19 57 31.9 -0.6**
comp=Z,6.8nm,1.1s
RONA *e*SKP **SKPdf** **19 59 48.6 -4.6**
comp=Z,4.1nm,1.6s
BMRD Maredsous 150.85 355 *d*PKP **PKPab** **19 57 31.9 -0.3**
WLF Walferdange 151.34 353 *e*PKPbc **PKiKP** **19 57 24.3 +0.7**
baz=20,slow=2.4
WLF *e*PKPab **PKPab** **19 57 34.8 +0.4**
baz=18,slow=4.2
MOA Molln 151.36 341 *e*PKP **PKPab** **19 57 33.7 -0.9**
comp=Z,3.2nm,0.9s
ARSA Arzberg 151.49 339 *e*PKP **PKPbc** **19 57 22.7 -1.2**
comp=Z,1.9nm,1.0s
BIOA Bad Ischl, Aus 151.69 342 *e*PKP **PKPab** **19 57 35.4 -0.7**
comp=Z,0.2nm,0.3s
RJOB Jochberg 151.89 343 *e*PKPab **PKPab** **19 57 37.7 +0.8**
baz=18,slow=4.2
SESA Seetaler Alpe, 151.92 340 *e*PKP **PKPab** **19 57 37.0 -0.2**
comp=Z,8.5nm,0.6s
LESA Schwarzleotal 152.21 343 *e*PKP **PKPab** **19 57 37.5 -0.8**
comp=Z,3.8nm,1.4s
LESA *e*SKP **SKPdf** **19 59 50.7 -4.5**
comp=Z,1.1nm,0.5s
KBA Koelnbreinsper 152.33 342 *e*PKP **PKPab** **19 57 38.5 -0.4**
comp=Z,0.1nm,0.3s
KBA *e*SKP **SKPdf** **19 59 50.2 -5.3**
comp=Z,0.6nm,0.5s
BFO Black Forest 152.33 349 *e*PKPbc **PKiKP** **19 57 25.8 +0.1**
baz=20,slow=2.4
BFO *e*PKPab **PKPab** **19 57 38.4 -0.3**
baz=18,slow=4.2
OBKA Obir 152.46 339 *e*PKP **PKPab** **19 57 38.6 -0.8**
comp=Z,5.6nm,1.2s
WATA Walderalm 152.58 344 *e*PKP **PKPab** **19 57 39.7 -0.2**
comp=Z,0.2nm,0.3s
WTTA Wattenberg 152.63 344 *e*PKP **PKPab** **19 57 39.9 -0.3**
comp=Z,1.7nm,0.6s
RETA Reutte 152.64 345 *e*PKP **PKPab** **19 57 39.5 -0.6**
comp=Z,2.4nm,0.7s
MOTA Moosalm 152.69 345 *e*PKP **PKPab** **19 57 40.0 -0.4**
comp=Z,5.0nm,1.2s
SQTA Sankt Quirin 152.78 345 *e*PKP **PKPab** **19 57 40.1 -0.7**
comp=Z,2.9nm,0.8s
ABTA Abfaltersbach 152.87 342 *e*PKP **PKPab** **19 57 40.1 -1.0**
comp=Z,2.2nm,0.6s
DAVA Damuels 153.03 346 *e*PKP **PKPab** **19 57 41.0 -0.9**
comp=Z,4.1nm,0.8s
FETA Feichten 153.08 345 *e*PKP **PKPab** **19 57 41.6 -0.5**
comp=Z,5.3nm,1.4s
FUORN Ofenpass-Fuorn 153.57 345 **PKPbc** **19 57 28.0 -0.7**
ESDC Sonseca Array 161.17 12 PKPab **PKPab** **19 58 15.6 -1.7**
comp=Z,1.2nm,0.9s,baz=335,slow=4.3,SNR=6.7
KEST Kesra 163.79 335 PKPab **PKPab** **19 58 28.4 -0.6**
comp=Z,2.0nm,0.7s,baz=162,slow=3.3,SNR=4.6
DBIC Dimbokro 164.47 158 PKPab **PKPab** **19 58 32.5 +0.2**
comp=Z,2.7nm,0.8s,baz=179,slow=16,SNR=1.7
TORD Torodi Ar. Bea 171.91 185 PKP **PKPdf** **19 57 36.7 -1.6**
comp=Z,1.1nm,0.9s,baz=88,slow=0.5,SNR=6.4
TORD PKPab **PKPab** **19 59 04.4 -0.7**
comp=Z,2.0nm,0.7s,baz=173,slow=4.0,SNR=9.0

ISK ***18*** *19:52:55.5,38.24N×38.74E,h5km,ML3.8/18*
AFAD ***18*** *19:52:56.5,38.25N×38.76E,h13km±1km,MW3.7*
IDC ***18*** *19:52:57.9±0.9,38.29N×38.70E,h0km,mb3.6/7,*
mbtmp3.6/13,ML3.3/6,MS3.1/6,Error ellipse:
s-maj=16.1km s-min=10.0km az=163.0
NEIC ***18*** *19:52:57.5±2.0,38.22N±0.04×38.73E±0.05,h6km±6km,*
mb4.0/5,Error ellipse: s-maj=5.8km s-min=5.1km az=96.0

ISC 18 19:52:57.4±0.9,38.25N±0.02×38.76E±0.02,h9km±6km,
n119,σ1§58/131,mb3.8/8,1C-1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MDYL	**Doganyol-Malat**	**0.23**	**73**	Pg	**Pb**	**19 53 02.6**	**+0.4**
MAYA	**Malatya/Merkez**	**0.27**	**287**	P	**Pg**	**19 53 02.7**	**-0.3**
MAYA				S	**Sg**	**19 53 06.3**	**-0.4**
MAYA				IAML		19 53 07.0	
	comp=N,2μm,0.2s						
MAYA				IAML		19 53 08.0	
	comp=E,1μm,0.5s						
ESGZ	**Sivrice-Elazig**	**0.30**	**52**	Pg	**Pg**	**19 53 02.8**	**-0.7**
ELZG	**Elazig**	**0.31**	**35**	P	**Pg**	**19 53 02.9**	**-0.8**
ELZG				S	**Sg**	**19 53 06.9**	**-0.9**
ELZG				IAML		19 53 08.0	
	comp=E,2μm,0.5s						
NARI	**Adyaman-Kaht**	**0.36**	**180**	P	**Pg**	**19 53 04.1**	**-0.5**
CNGT	**ngs**	**0.43**	**94**	P	**Pg**	**19 53 04.5**	**-1.3**
SVRC	**Sivrice-ELAZID**	**0.45**	**73**	Pg	**Pg**	**19 53 05.3**	**-1.0**
SVRC				Sg	**Sb**	**19 53 13.4**	**-1.1**
ESIJ	**Sivrice-Elazig**	**0.48**	**65**	Pg	**Pg**	**19 53 06.4**	**-0.4**
ESIJ				Sg	**Sb**	**19 53 14.3**	**-1.0**
ELZ	**Elazig**	**0.57**	**38**	P	**Pg**	**19 53 07.3**	**-1.1**
ELZ				S	**Sb**	**19 53 15.8**	**-2.0**
ELZ				IAML		19 53 16.0	
	comp=N,1μm,0.4s						
ELZ				IAML		19 53 17.0	
	comp=E,5μm,0.4s						
AZEY	**Adyaman-Merk**	**0.59**	**223**	P	**Pb**	**19 53 08.6**	**-1.4**
AKCD	**Akcadag**	**0.66**	**275**	P	**Pg**	**19 53 09.5**	**-0.7**
AKCD				S	**Sb**	**19 53 19.1**	**-1.4**
AKCD				IAML		19 53 22.0	
	comp=E,4μm,0.4s						
HANM	**anlurfa/Hi**	**0.67**	**172**	P	**Pb**	**19 53 09.9**	**-1.4**
MDNT	**Maden**	**0.74**	**78**	P	**Pg**	**19 53 10.8**	**-0.9**
URFA	**Urfa**	**0.81**	**176**	Pg	**Pg**	**19 53 11.3**	**-1.6**
URFA				Sg	**Sn**	**19 53 24.7**	**-2.4**
ATAB	**Bozova**	**0.86**	**205**	P	**Pg**	**19 53 12.7**	**-1.2**
MCKZ	**Bingol**	**0.89**	**11**	P	**Pg**	**19 53 13.7**	**-0.8**
MCKZ				S	**Sb**	**19 53 25.8**	**-1.4**
MCKZ				IAML		19 53 26.0	
	comp=E,2μm,0.5s						
MCKZ				IAML		19 53 27.0	
	comp=N,1μm,0.5s						
HEKM	**Malatya_Hekimh**	**0.89**	**316**	P	**Pg**	**19 53 13.6**	**-1.0**
ARPR	**Arapgir-MALATY**	**0.91**	**339**	Pg	**Pg**	**19 53 13.9**	**-1.0**
ARPR				Sg	**Sn**	**19 53 27.8**	**-2.0**
ARPR	**Arapgir-MALATY**	**0.91**	**339**	Pg	**Pg**	**19 53 14.0**	**-0.9**
ARPR				Sg	**Sn**	**19 53 27.5**	**-2.3**
KOVA	**Elazig, Kovanc**	**0.95**	**61**	P	**Pg**	**19 53 14.3**	**-1.3**
AKCA	**Adyaman/G¶**	**0.96**	**242**	P	**Pb**	**19 53 15.3**	**-0.9**
TNCL	**Tunceli-Merkez**	**1.06**	**35**	P	**Pb**	**19 53 16.2**	**-1.8**
SANL	**SANLIURFA_Merk**	**1.09**	**170**	P	**Pn**	**19 53 17.9**	**-0.9**
DIYA	**Diyarbakir**	**1.12**	**106**	P	**Pg**	**19 53 18.1**	**-0.8**
DYBB	**Diyarbakir**	**1.13**	**105**	Pn	**Pg**	**19 53 18.5**	**-0.6**
DYBB				Sn	**Sn**	**19 53 35.4**	**+0.3**
MDIV		**1.21**	**333**	P	**Pb**	**19 53 19.4**	**-1.1**
ILIC	**ilic-Erzincan**	**1.21**	**353**	Pn	**Pg**	**19 53 19.7**	**-1.1**
GZT	**Gaziantep**	**1.30**	**227**	P	**Pg**	**19 53 21.8**	**-0.5**
MAYK		**1.35**	**68**	P	**Pb**	**19 53 21.8**	**-1.1**
SURC	**SANLIURFA_SURC**	**1.37**	**185**	P	**Pg**	**19 53 23.5**	**-0.2**
NZIP	**Nizip/Gaziante**	**1.48**	**216**	P	**Pb**	**19 53 24.1**	**-1.0**
KHMN	**Narli-Kahraman**	**1.53**	**237**	Pn	**Pb**	**19 53 25.0**	**-0.9**
KHMN	**Narli-Kahraman**	**1.53**	**237**	P	**Pb**	**19 53 24.5**	**-1.4**
KHMN				P	**Pg**	**19 53 24.9**	**-1.9**
ERZN	**Erzincan**	**1.54**	**29**	Pn	**Pb**	**19 53 25.4**	**-0.7**

KAHM	**Kahramanmaras,**	**1.58**	**243**	P	**Pb**	**19 53 25.3**	**-1.5**
KAHM				IAML		19 53 55.0	
	comp=N,720nm,0.9s						
GAZ	**Gaziantep**	**1.63**	**229**	Pn	**Pb**	**19 53 26.6**	**-1.1**
GAZ	**Gaziantep**	**1.63**	**229**		**Pn**	**19 53 25.7**	**-0.6**
EUZM	**Uzumlu**	**1.63**	**26**	P	**Pb**	**19 53 26.9**	**-0.9**
KMRS	**Kahramanmaras**	**1.65**	**244**	Pn	**Pb**	**19 53 26.9**	**-1.0**
BNGB	**Bingl**	**1.68**	**63**	Pn	**Pb**	**19 53 27.6**	**-0.9**
CUZAR	**Zara_SIVAS**	**1.81**	**335**	P	**Pg**	**19 53 30.7**	**-1.5**
YEDI	**Yedisu-Bingol**	**1.83**	**49**	Pn	**Pb**	**19 53 29.7**	**-1.5**
SARI	**SarD1z-Kayseri**	**1.85**	**276**	Pn	**Pb**	**19 53 29.6**	**-1.9**
CUAYA	**Sivas-Altinyay**	**1.87**	**304**	P	**Pb**	**19 53 30.6**	**-1.2**
CUAYA				S	**Sg**	**19 53 57.3**	**-0.4**
CUAYA				IAML		19 54 02.0	
	comp=N,414nm,0.8s						
SLHN	**Bingol, Solhan**	**1.91**	**67**	P	**Pb**	**19 53 31.4**	**-1.1**
SVAN	**Silvan-Diyarba**	**1.93**	**92**	Pn	**Pb**	**19 53 30.3**	**-2.4**
SVAN	**Silvan-Diyarba**	**1.93**	**92**	P	**Pn**	**19 53 29.9**	**-0.5**
KELT	**Kelkit**	**1.94**	**11**	P	**Pb**	**19 53 32.1**	**-1.0**
KAMA	**Osmaniye**	**1.97**	**238**	P	**Pn**	**19 53 30.6**	**-0.3**
KUZU	**Kuzuini**	**1.99**	**223**	P	**Pb**	**19 53 31.7**	**-2.0**
SUSE	**Susehri**	**2.01**	**348**	P	**Pg**	**19 53 34.3**	**-1.6**
BTMN	**Batman**	**2.01**	**99**	P	**Pb**	**19 53 32.3**	**-1.9**
BTMN				S	**Sb**	**19 53 57.3**	**-2.1**
BTMN				IAML		19 54 02.0	
	comp=N,919nm,0.4s						
ANDN	**Andirin**	**2.02**	**252**	P	**Pb**	**19 53 32.8**	**-1.5**
SCER	**sogukcermik**	**2.05**	**322**	P	**Pb**	**19 53 33.4**	**-1.6**
ALUC	**Giresun/Alucra**	**2.10**	**0**	P	**Pb**	**19 53 34.7**	**-1.0**
SAIM	**ADANA**	**2.13**	**264**	P	**Pb**	**19 53 33.9**	**-2.3**
SAIM				S	**Sb**	**19 54 02.7**	**0.0**
SAIM				IAML		19 54 17.0	
	comp=N,443nm,0.5s						
MUSM	**Mu-Merkez**	**2.21**	**77**	P	**Pn**	**19 53 33.9**	**-0.5**
KOPT	**Kop Dagi**	**2.23**	**37**		**Pb**	**19 53 35.5**	**-2.5**
KOPT	**Kop Dagi**	**2.23**	**37**	P	**Pb**	**19 53 36.6**	**-1.4**
MIDY	**Mardin/Midyat-**	**2.25**	**111**	P	**Pn**	**19 53 35.0**	**+0.1**
VRTB	**Varto-Mus**	**2.30**	**66**	Pn	**Pb**	**19 53 36.6**	**-2.5**
VRTB	**Varto-Mus**	**2.30**	**66**	P	**Pg**	**19 53 41.0**	**-0.5**
BAYB	**BAYBURT**	**2.32**	**30**	P	**Pb**	**19 53 38.8**	**-0.8**
BNN	**Bunyan**	**2.36**	**286**		**Pb**	**19 53 37.5**	**-2.7**
SRTM	**Siirt_Merkez**	**2.51**	**95**	P	**Pb**	**19 53 39.3**	**-3.3**
GUNE	**Kayseri**	**2.54**	**286**	P	**Pg**	**19 53 44.2**	**-1.9**
BLIS	**Bitlis-Merkez**	**2.65**	**85**	P	**Pb**	**19 53 41.5**	**-3.5**
BLIS				S	**Sb**	**19 54 14.7**	**-3.0**
BLIS				IAML		19 54 33.0	
	comp=N,286nm,0.6s						
KRIK	**Erzurum-spir**	**2.68**	**38**	P	**Pn**	**19 53 41.5**	**+0.6**
TOKA	**Tokat**	**2.73**	**320**		**Pb**	**19 53 42.7**	**-3.7**
TOKA	**Tokat**	**2.73**	**320**	P	**Pb**	**19 53 43.1**	**-3.2**
HACI	**Hacifakili, Ak**	**2.77**	**303**	P	**Pn**	**19 53 43.1**	**+1.1**
ORDU	**Ordu-Boztepe**	**2.83**	**346**	P	**Pb**	**19 53 44.8**	**-3.3**
KTUT	**Trabzon**	**2.85**	**16**	⇑P	**Pg**	**19 53 50.9**	**-1.1**
KTUT	**Trabzon**	**2.85**	**16**	Pn	**Pn**	**19 53 43.9**	**+0.9**
ERBA	**Erbaa**	**2.88**	**328**	P	**Pb**	**19 53 45.9**	**-3.2**
KOPR	**Koprukoy-ERZUR**	**2.97**	**53**	Pn	**Pn**	**19 53 45.9**	**+1.0**
GEVA	**Gevas**	**3.38**	**88**		**Pn**	**19 53 51.6**	**+1.1**
GEVA				Sn	**Sn**	**19 54 33.1**	**+2.2**
KIRS	**Kirsehir-Merke**	**3.89**	**285**	⇓P	**Pg**	**19 54 10.7**	**-1.2**
BEIL	**Beino**	**4.24**	**210**	*eP*	**Pn**	**19 54 02.6**	**+0.5**
BR131	**Keskin Array S**	**4.25**	**292**		**Pn**	**19 54 04.3**	**+1.8**
BRTR	**Keskin Array B**	**4.25**	**292**	Pn	**Pn**	**19 54 04.3**	**+1.8**
	0.8nm,0.3s,baz=110,slow=12,SNR=27						
BRTR				Lg	Lg	19 55 12.4	
	0.5nm,0.3s,baz=108,slow=19,SNR=6.5						
BRTR				LR	LR	19 55 59.6	
	comp=Z,213nm,18.9s,baz=93,slow=43 4.7nm,0.6s						
BRTR	**Keskin Array B**	**4.25**	**292**		**Pn**	**19 54 03.7**	**+1.2**
HWQ	**Hawqa**	**4.56**	**211**	*eP*	**Pn**	**19 54 07.4**	**+0.7**
ZAHL	**Zahle**	**4.96**	**209**	*eP*	**Pn**	**19 54 13.1**	**+1.0**
BHL	**Bhannes**	**5.01**	**211**	*eP*	**Pn**	**19 54 13.8**	**+1.0**
GNI	**Garni**	**5.02**	**66**	Pn	Pn	19 54 17.7	+4.6
	0.6nm,0.3s,baz=18,slow=21,SNR=1.8						
GNI				Pg	**Pg**	**19 54 30.1**	**-3.5**
	0.9nm,0.3s,baz=261,slow=19,SNR=6.8 1.8nm,0.4s						
GNI	**Garni**	**5.02**	**66**		**Pn**	**19 54 14.1**	**+1.1**
CY604	**RAF Akrotiri,**	**5.19**	**223**	Pn	**Pn**	**19 54 14.8**	**-0.1**
DQRL	**Deir Qamar**	**5.22**	**211**	*eP*	**Pn**	**19 54 16.2**	**+1.0**
RCY	**Rachaya**	**5.30**	**207**	*eP*	**Pn**	**19 54 18.2**	**+1.4**
QRWL	**Qaraoun**	**5.31**	**209**	*eP*	**Pn**	**19 54 19.2**	**+2.3**
SHBL	**Chebaa**	**5.47**	**208**	*eP*	**Pn**	**19 54 20.7**	**+1.5**
MMAI	**Mount Meron Ar**	**5.89**	**209**	Pn	**Pn**	**19 54 26.6**	**+1.7**
	1.7nm,0.3s,baz=40,slow=14,SNR=9.1						
MMAI				LR	LR	19 56 59.1	
	comp=Z,97nm,19.4s,baz=354,slow=41 1.7nm,0.5s						
CHRG	**Chargali**	**6.23**	**47**	P	**Pn**	**19 54 32.6**	**+2.9**
ASF	**Jabal al Asfar**	**6.25**	**195**	Pn	**Pn**	**19 54 30.9**	**+1.1**
	0.3nm,0.3s,baz=115,slow=24,SNR=11						
ASF				Lg	Lg	19 56 15.8	
	3.6nm,0.3s,baz=247,slow=22,SNR=7.3						
ASF				LR	LR	19 57 17.5	
	comp=Z,83nm,18.4s,baz=26,slow=41 1.2nm,0.4s						
KBZ	**Khabaz**	**6.31**	**28**	Pn	**Pn**	**19 54 32.8**	**+2.3**
	0.1nm,0.3s,baz=56,slow=11,SNR=1.9						
KBZ				Lg	Lg	19 56 19.1	
	0.1nm,0.3s,baz=33,slow=12,SNR=1.9						
KBZ				LR	LR	19 57 20.4	
	comp=Z,67nm,20.6s,baz=90,slow=42 0.6nm,0.4s						
GHAJ	**Ghor Haditha**	**7.41**	**202**	Pn	**Pn**	**19 54 45.1**	**-0.5**
EIL	**Elat**	**9.12**	**201**	Lg	Lg	19 57 53.1	
	0.3nm,0.3s,baz=11,slow=16,SNR=4.3						
AB31	**Akbulak array**	**18.78**	**47**	P	**Pn**	**19 57 17.5**	**+0.2**
ABKAR	**Akbulak array**	**18.78**	**47**	P	**Pn**	**19 57 16.9**	**-0.4**
VRAC	**Vranov**	**19.38**	**312**	P	**Pn**	**19 57 25.9**	**+1.4**
	0.2nm,0.3s,baz=32,slow=1.9,SNR=6.7 3.9nm,0.5s						
GEC2	**GERESS Array S**	**20.93**	**308**	P	**P**	**19 57 38.9**	**-1.5**
GEC2				IAmb	IAmb	19 57 43.6	
	comp=Z,4.1nm,0.9s						
GERES	**GERESS Array B**	**20.93**	**308**	P	Pn	19 57 42.1	-0.8
	comp=Z,2.2nm,0.8s,baz=116,slow=9.1,SNR=19 comp=Z,2.2nm,0.8s						
GERES	**GERESS Array B**	**20.93**	**308**	P	**P**	**19 57 39.6**	**-0.8**
TEOL	**Teolo**	**21.34**	**298**	P	**P**	**19 57 43.6**	**-1.1**
ARTI	**Arti**	**22.36**	**29**	P	**P**	**19 57 58.8**	**+3.3**
	comp=Z,1.3nm,0.5s,baz=210,slow=8.1,SNR=3.3 comp=Z,1.3nm,0.5s						
KEST	**Kesra**	**23.59**	**273**	P	**P**	**19 58 08.5**	**0.0**
KEST				IAmb	IAmb	19 58 08.6	
	comp=Z,9.6nm,1.3s						
KK31	**Karatay Array**	**24.48**	**68**	P	**P**	**19 58 17.4**	**+0.7**
KK31				IAmb	IAmb	19 58 23.8	
	comp=Z,2.9nm,0.9s						
KKAR	**Karatay Array**	**24.48**	**68**	P	**P**	**19 58 17.4**	**+0.7**
FINES	**FINESS Array B**	**24.53**	**345**	P	**P**	**19 58 18.7**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=150,slow=9.5,SNR=3.9 comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**30.60**	**53**	P	**P**	**19 59 13.0**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=266,slow=9.1,SNR=5.9 comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**32.85**	**61**	P	**P**	**19 59 33.6**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=271,slow=7.1,SNR=10.0 comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**32.85**	**61**	P	**P**	**19 59 31.0**	**-0.3**
ESDC	**Sonseca Array**	**33.02**	**286**	P	**P**	**19 59 34.1**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=74,slow=8.3,SNR=4.2 comp=Z,0.5nm,0.7s						
MBAR	**Mbarara**	**39.36**	**193**	LR	LR	20 17 44.2	
	comp=Z,76nm,18.9s,baz=106,slow=38						
TORD	**Torodi Ar. Bea**	**41.29**	**243**	P	P	20 00 46.7	+3.4
	comp=Z,0.5nm,0.8s,baz=56,slow=6.5,SNR=2.6 comp=Z,0.5nm,0.8s						
PZH	**PanZhiHua**	**53.55**	**83**	P	**P**	**20 02 20.4**	**+1.6**
HHC	**Hu-ho-hao-te**	**54.67**	**63**	*eP*	**P**	**20 02 26.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
YAK	**Yakutsk**	**57.47**	**34**	LR	LR	20 33 00.4	
	comp=Z,43nm,18.3s,baz=244,slow=42						

CATAC 18 19:54:45.5, 12°2N±0°9 × 87°7W±0°9, h30km±614km, M3.8/36, MLv3.8/36, 7C-4D, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.78**	**50**	P	Pb	19 55 00.8	+0.2
CRIN				S	Sn	19 55 11.3	+0.1

QUEN	**Al S del Volca**	**0.88**	**64**	⇑P	Pn	19 55 01.0	-0.9
QUEN				S	Sn	19 55 13.0	-0.8
HOYN	**Al Sur del Vol**	**0.91**	**64**	⇑P	Pn	19 55 01.2	-1.1
HOYN				S	Sn	19 55 13.2	-1.2
HERN	**Volcan Telica**	**0.91**	**63**	P	Pn	19 55 01.3	-1.0
HERN				S	Sn	19 55 13.3	-1.1
ROCN	**Rota Cerro Neg**	**0.95**	**70**	⇑P	Pn	19 55 01.7	-1.2
ROCN				S	Sn	19 55 14.7	-0.7
CNGA	**Al SSO del Vol**	**0.98**	**72**	⇑P	Pn	19 55 02.2	-1.2
CNGN	**Cerro Negro**	**0.99**	**72**	⇓P	Pn	19 55 02.2	-1.2
CNGN				S	Sn	19 55 15.5	-0.9
COPN	**Copaltepe**	**1.05**	**91**	⇓P	Pn	19 55 03.2	-1.0
MOMN	**Momotombo**	**1.12**	**79**	P	Pn	19 55 04.1	-1.0
MOMN				S	Sn	19 55 18.3	-1.3
MOM3	**MOM3**	**1.16**	**74**	⇓P	Pn	19 55 04.8	-0.9
MOM3				S	Sn	19 55 20.0	-0.6
MOM2	**El Cardon**	**1.17**	**78**	⇓P	Pn	19 55 05.0	-0.9
MOM2				S	Sn	19 55 20.2	-0.7
APYN	**Apoyeque**	**1.28**	**88**	P	Pn	19 55 06.7	-0.7
APYN				S	Sn	19 55 22.4	-1.2
AESN	**El Sauce Leon**	**1.29**	**58**	P	Pn	19 55 06.7	-0.8
AESN				S	Sn	19 55 22.0	-1.9
ABCN	**Banco Central**	**1.32**	**93**	P	Pn	19 55 07.2	-0.7
ABCN				S	Sn	19 55 23.6	-1.0
TISN	**Laguna Tiscapa**	**1.36**	**92**	⇑P	Pn	19 55 07.8	-0.7
RANC	**El Ranchito**	**1.37**	**334**	⇑P	Pn	19 55 07.8	-1.0
MGAN	**Managua**	**1.38**	**92**	P	Pn	19 55 08.0	-0.8
MGAN				S	Sn	19 55 25.1	-1.0
PACA	**Pacayal**	**1.42**	**333**	⇑P	Pn	19 55 08.3	-1.1
WILN	**Americas 2**	**1.44**	**91**	P	Pn	19 55 08.9	-0.6
WILN				S	Sn	19 55 26.8	-0.7
AERN	**Aeropuerto Man**	**1.46**	**92**	P	Pn	19 55 08.9	-0.9
AERN				S	Sn	19 55 26.6	-1.3
MAS3	**Al N del Volca**	**1.46**	**97**	P	Pn	19 55 09.1	-0.8
MAS3				S	Sn	19 55 26.6	-1.5
MASN	**Masaya**	**1.49**	**98**	P	Pn	19 55 09.4	-0.9
MASN				S	Sn	19 55 27.4	-1.4
NADN	**Granada**	**1.66**	**105**	P	Pn	19 55 11.6	-0.9
NADN				S	Sn	19 55 31.1	-1.7
PQSS	**Presa 15 de Se**	**1.67**	**328**	P	Pn	19 55 12.0	-0.7
PQSS				S	Sn	19 55 32.4	-0.7
TECO	**Alcaldia de Te**	**1.72**	**321**	P	Pn	19 55 12.3	-1.2
TECO				S	Sn	19 55 31.9	-2.5
SCLA	**Alcaldia de Sa**	**1.82**	**325**	P	Pn	19 55 14.9	0.0
SCLA				S	Sn	19 55 36.2	-0.8
OCON	**Estacion meteo**	**1.83**	**39**	P	Pn	19 55 13.9	-1.1
OCON				S	Sn	19 55 35.4	-1.8
COEG	**Centro de Oper**	**1.85**	**320**	P	Pn	19 55 15.9	+0.6
COEG				S	Sn	19 55 35.4	-2.2
RCFN	**Al S de San Ju**	**1.94**	**47**	P	Pn	19 55 15.7	-0.9
RCFN				S	Sn	19 55 38.5	-1.5
RCON	**San Juan de Ri**	**1.95**	**49**	P	Pn	19 55 16.3	-0.4
RCON				S	Sn	19 55 39.2	-1.0
PAVA	**Las Pavas**	**1.95**	**321**	P	Pn	19 55 16.9	+0.2
BOAB	**BOACO BROADBAN**	**1.96**	**82**	P	Pn	19 55 15.7	-1.1
MARCA	**Marcala la Paz**	**1.98**	**349**	P	Pn	19 55 16.6	-0.6
MARCA				S	Sn	19 55 41.0	0.0
RCVN	**Varillal2**	**1.99**	**46**	P	Pn	19 55 16.3	-0.9
RCVN				S	Sn	19 55 39.7	-1.5
RCPN	**Sur Rio San Ju**	**2.02**	**49**	P	Pn	19 55 16.9	-0.7
LOMA	**Loma Larga**	**2.06**	**315**	P	Pn	19 55 18.0	-0.2
MORN	**Al O del Volca**	**2.07**	**108**	P	Pn	19 55 17.7	-0.6
CONN	**Concepcion**	**2.09**	**107**	P	Pn	19 55 17.5	-1.0
CONN				S	Sn	19 55 41.3	-2.2
OMEN	**Al SSO del Vol**	**2.10**	**109**	P	Pn	19 55 18.3	-0.4
OMEN				S	Sn	19 55 41.4	-2.6
PMON	**Piamonte**	**2.21**	**313**	P	Pn	19 55 20.3	+0.1
PMON				S	Sn	19 55 44.6	-2.0
JAYA	**Jayaque - finc**	**2.27**	**310**	P	Pn	19 55 21.9	+0.8
JAYA				S	Sn	19 55 46.0	-2.1
CARN	**Rivas**	**2.32**	**115**	P	Pn	19 55 20.3	-1.4
CARN				S	Sn	19 55 47.0	-2.3
CEVE	**Cerro Verde**	**2.51**	**310**	P	Pn	19 55 24.7	+0.2
CEVE				S	Sn	19 55 54.6	+0.4
NUBE	**Las Nubes**	**2.67**	**310**	P	Pn	19 55 26.4	-0.3
NUBE				S	Sn	19 55 56.0	-2.1
FAME	**Alcaldia de Sa**	**2.82**	**306**	P	Pn	19 55 28.0	-0.5
FAME				S	Sn	19 55 58.4	-3.1
JTS	**Las Juntas de**	**3.26**	**125**	P	Pn	19 55 34.4	-0.3
JTS				S	Sn	19 56 10.0	-2.6

*IDC **18** 20:06:46.8±1.9, 37°.41N × 74°.65E, h0km, mb3.8/5, mbtmp3.7/11, ML2.9/6, MS3.0/1, Error ellipse: s-maj=28.1km s-min=25.0km az=100.0*
*NNC **18** 20:06:54.1±2.7, 37°.79N × 74°.70E, h5km±10km, mb3.9, mpv3.6, Error ellipse: s-maj=19.5km s-min=13.0km az=41.0*

ISC 18 20:06:49.9±2.1, 37°.5N±0°.2 × 74°.6E±0°.1, h10km, n20, σ2°53/19, mb3.6/5, 5C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.15**	**359**	Pn	**Pn**	**20 08 11.3**	**+4.1**
	0.7nm,0.3s,baz=182,slow=14,SNR=6.0						
AAK				Pg	**Pb**	**20 08 22.6**	**+2.5**
	1.1nm,0.3s,baz=165,slow=12,SNR=9.9						
AAK				Lg	Lg	20 09 31.2	
	0.6nm,0.3s,baz=272,slow=17,SNR=3.7 2.4nm,0.4s						
AAK	**Ala-Archa**	**5.15**	**359**	⇓Pn	**Pn**	**20 08 08.6**	**+1.5**
	9.7nm,0.8s						
AAK				⇑Lg	Lg	20 09 29.8	
	25nm,1.4s						
MRKS	**Merke**	**5.36**	**349**	Pg	**Pg**	**20 08 28.1**	**-4.4**
	8.1nm,0.5s						
MRKS				Lg	Lg	20 09 38.8	
	7.3nm,0.4s						
KST	**Kastek**	**5.65**	**10**	Pg	**Pb**	**20 08 32.0**	**+3.3**
	7.2nm,0.7s						
KST				Lg	Lg	20 09 43.2	
	15nm,0.7s						
SGDS	**Sogindy**	**5.96**	**0**	Pg	**Pb**	**20 08 36.4**	**+2.5**
	4.8nm,0.9s						
SGDS				Lg	Lg	20 09 52.2	
	6.7nm,0.9s						
KRBS	**Karabastau**	**6.26**	**7**	Pg	**Pb**	**20 08 42.5**	**+3.5**
	3.0nm,0.4s						
KRBS				Lg	Lg	20 10 04.7	
	8.9nm,0.5s						
KTBS	**Karatobe**	**6.42**	**14**	Pg	**Pb**	**20 08 43.6**	**+1.9**
	0.3nm,0.5s						
KTBS				Lg	Lg	20 10 05.8	
	15nm,0.6s						
KK31	**Karatay Array**	**6.42**	**332**	⇑Pn	**Pn**	**20 08 25.7**	**+1.2**
	3.5nm,0.4s,baz=138,slow=13,SNR=71						
KK31				⇑Sn	**Sn**	**20 09 38.3**	**+0.5**
	4.3nm,0.5s,baz=161,slow=26,SNR=4.0						
KK31				⇓Lg	Lg	20 10 08.9	
	8.7nm,0.8s						
PDGK	**Podgornoye**	**6.93**	**31**	⇑Pn	**Pn**	**20 08 32.2**	**+0.6**
	6.6nm,1.1s						
PDGK				⇑Lg	Lg	20 10 25.6	
	27nm,1.1s						
MKAR	**Makanchi Array**	**10.91**	**29**	Pn	**Pn**	**20 09 27.0**	**+1.0**
	0.1nm,0.3s,baz=203,slow=11,SNR=4.3						
MKAR				Lg	Lg	20 12 29.6	
	baz=252,slow=32,SNR=1.7 0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**13.43**	**11**	Pn	**Pn**	**20 09 59.4**	**-1.0**
	baz=198,slow=12,SNR=4.7						
KURBB				Lg	Lg	20 13 51.4	
	baz=198,slow=27,SNR=4.8 1.2nm,1.0s						
BVAR	**Borovoye Array**	**15.82**	**351**	Pn	**Pn**	**20 10 28.7**	**-3.8**
	0.1nm,0.3s,baz=156,slow=11,SNR=8.2 0.8nm,0.6s						
AKTO	**Aktyubinsk**	**17.56**	**323**	P	**Pn**	**20 10 55.3**	**+0.8**
	0.1nm,0.3s,baz=120,slow=7.9,SNR=5.7 1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**17.91**	**20**	P	**Pn**	**20 10 56.7**	**-2.3**
	0.1nm,0.3s,baz=202,slow=11,SNR=12 3.4nm,0.9s						
SONM	**Songino Array**	**25.41**	**56**	P	**P**	**20 12 17.0**	**-0.6**
	0.9nm,0.7s,baz=260,slow=9.7,SNR=7.4 0.9nm,0.7s						
FINES	**FINESS Array B**	**38.32**	**325**	P	**P**	**20 14 09.9**	**-0.5**
	1.0nm,0.8s,baz=108,slow=8.6,SNR=7.2 1.0nm,0.8s						
ARCES	**ARCESS Array B**	**41.37**	**336**	P	P	20 14 32.9	-2.7
	1.4nm,0.9s,baz=112,slow=8.9,SNR=3.9 1.4nm,0.9s						

HFS	**Hagfors**	**44.09**	**321**	P	**P**	**20 14 57.9**	**0.0**
	3.3nm,1.1s,baz=90,slow=8.6,SNR=2.6 3.3nm,1.1s						
GERES	**GERESS Array B**	**44.72**	**305**	LR	LR	20 36 32.3	
	comp=Z,16nm,19.6s,baz=285,slow=40						
ILAR	**Eielson Array**	**73.02**	**17**	P	P	20 18 16.8	-2.6
	0.5nm,0.8s,baz=313,slow=4.9,SNR=4.5 0.5nm,0.8s						

*NDI **18** 20:36:52.4±1.6, 30°.29N × 96°.22E, h38km±999km, ML3.3, MW3.9, Presumed earthquake*
*IDC **18** 20:36:54.5±1.1, 30°.02N × 95°.01E, h0km, mb3.6/7, mbtmp3.5/10, ML3.5/3, Error ellipse: s-maj=53.7km s-min=17.2km az=60.0*

ISC 18 20:36:59.5±0.9, 30°.09N±0°.07 × 95°.5E±0°.1, h35km, n14, σ2°27/17, mb3.6/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAWA	**Tawang**	**4.06**	**233**	*eP*	**Pn**	**20 38 00.0**	**+0.6**
TAWA				*eS*	**Sn**	**20 38 48.8**	**+2.9**
TAWA				IAML		20 38 54.2	
	comp=N,123nm,0.6s						
TAWA				IAML		20 38 54.6	
	comp=E,87nm,0.6s						
KOHI	**KOHIMA**	**4.53**	**196**	*eP*	**Pn**	**20 38 03.2**	**-2.5**
KOHI				*i* x	x	20 38 17.9	
KOHI				*eS*	**Sn**	**20 38 56.3**	**-1.0**
KOHI				*ex*	x	20 39 12.7	
KOHI				IAML		20 39 21.3	
	comp=E,102nm,0.2s						
KOHI				IAML		20 39 28.2	
	comp=E,134nm,0.2s						
GUWA	**GUWAHATI**	**5.15**	**222**	*i* x	x	20 38 21.7	
GUWA				*eS*	**Sn**	**20 39 14.8**	**+2.5**
GUWA				IAML		20 39 23.6	
	comp=E,16nm,0.7s						
IMP	**Imphal**	**5.42**	**195**	*eP*	**Pn**	**20 38 15.6**	**-2.4**
IMP				*i* x	x	20 38 32.5	
IMP				*eS*	**Sn**	**20 39 15.0**	**-4.2**
IMP				IAML		20 39 15.7	
	comp=N,14nm,0.9s						
IMP				*ex*	x	20 39 40.0	
CMAR	**Chiang Mai Arr**	**11.99**	**164**	Pn	**Pn**	**20 39 49.5**	**+1.5**
	comp=N,0.1nm,0.3s,baz=330,slow=12,SNR=5.0 comp=N,0.2nm,0.3s						
MKAR	**Makanchi Array**	**19.59**	**332**	P	**P**	**20 41 23.1**	**-1.4**
	comp=N,0.1nm,0.3s,baz=144,slow=10,SNR=5.3 comp=N,0.4nm,0.8s						
SONM	**Songino Array**	**19.60**	**22**	P	**Pn**	**20 41 28.0**	**+1.8**
	comp=N,0.1nm,0.3s,baz=203,slow=11,SNR=3.6 comp=N,0.7nm,0.8s						
AAK	**Ala-Archa**	**20.99**	**312**	P	**P**	**20 41 37.4**	**-2.5**
	comp=N,1.4nm,0.4s,baz=28,slow=17,SNR=3.8 comp=N,1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**24.14**	**333**	P	**P**	**20 42 10.8**	**-1.2**
	comp=N,0.8nm,0.7s,baz=147,slow=10,SNR=8.7 comp=N,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**25.07**	**345**	P	**P**	**20 42 19.7**	**-0.8**
	comp=N,1.0nm,0.6s,baz=162,slow=10,SNR=5.9 comp=N,1.0nm,0.6s						
BVAR	**Borovoye Array**	**29.36**	**328**	P	**P**	**20 42 56.9**	**-2.1**
	comp=N,1.0nm,0.8s,baz=133,slow=10,SNR=5.8 comp=N,1.0nm,0.8s						
FINES	**FINESS Array B**	**54.29**	**326**	P	**P**	**20 46 20.8**	**-1.1**
	comp=N,0.8nm,0.8s,baz=104,slow=4.4,SNR=3.9 comp=N,0.8nm,0.8s						
WRA	**Warramunga Arr**	**62.22**	**138**	P	**P**	**20 47 19.2**	**+1.5**
	comp=N,0.3nm,0.8s,baz=317,slow=7.6,SNR=1.3 comp=N,0.3nm,0.8s						
ASAR	**Alice Springs**	**64.92**	**141**	P	**P**	**20 47 37.5**	**+1.8**
	comp=N,0.5nm,0.7s,baz=324,slow=6.6,SNR=5.2 comp=N,0.5nm,0.7s						

*IDC **18** 21:14:19.8±2.7, 11°.74N × 143°.70E, h0km, mb3.7/3, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=205.2km s-min=22.9km az=116.0*
*NEIC **18** 21:14:21.3±1.0, 11°.8N±0°.1 × 143°.8E±0°.3, h10km±1km, mb4.1/6, Error ellipse: s-maj=58.3km s-min=6.8km az=291.0*

ISC 18 21:14:20.8±0.9, 11°.8N±0°.2 × 143°.7E±0°.3, h10km, n14, σ0°66/17, mb3.9/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.12**	**31**	Pn	**Pn**	**21 14 57.4**	**+1.1**
	29nm,0.3s,baz=292,slow=1.0,SNR=15						
GUMO				Sn	**Sn**	**21 15 22.6**	**0.0**
	54nm,0.3s,baz=234,slow=23,SNR=15 61nm,0.3s						
GUMO	**Guam**	**2.12**	**31**	

BTK Batken 4.71 0 PN Pn 21 15 56.9 +2.1
BTK Batken 4.71 0 Pn 21 15 56.9 +2.1
BTK Batken 4.71 0 P Pn 21 15 57.2 +2.4
THN Thein Dam 5.05 124 eP Pn 21 16 01.4 +2.1
THN eS Sn 21 16 57.4 +1.0
THN IAML 21 17 01.0
comp=E,1µm,0.3s
TSSA Tissa 5.11 118 eP Pn 21 16 01.5 +1.2
TSSA eS Sn 21 16 59.4 +1.4
TSSA eS 21 16 59.5
KSH2 Kashi 5.39 44 P Pn 21 16 07.5 +3.5
KSH2 S Sn 21 17 07.5 +2.7
KSH2 SMN
comp=E,370nm,0.5s
KSH2 SME
comp=E,180nm,0.4s
OHH Osh 5.41 16 P Pn 21 16 05.0 +0.6
TLWR Talawar 5.48 127 eP Pn 21 16 06.7 +1.5
TLWR eS Sn 21 17 05.9 -1.0
TLWR eS 21 17 07.8
SRGN SRI GANGA NAGA 6.00 153 eP Pn 21 16 12.9 +0.5
SRGN eS Sn 21 17 18.9 -0.8
SRGN eS 21 17 19.2
BHK Bhakra 6.12 128 eP Pn 21 16 15.1 +1.1
BHK eS Sn 21 17 23.1 +0.6
ARSB Arslanbob 6.22 15 PN Pn 21 16 15.6 +0.2
ARSB Arslanbob 6.22 15 Pn 21 16 15.6 +0.2
ARK Arkit 6.51 8 P Pn 21 16 19.7 +0.3
IUG luzhnay 6.82 355 ePN Pn 21 16 23.6 0.0
IUG luzhnay 6.82 355 eP Pn 21 16 23.6 0.0
IUG eS Sn 21 17 38.9 -0.9
CHM Chimkent 7.03 353 ePN Pn 21 16 26.5 +0.1
CHM Chimkent 7.03 353 eP Pn 21 16 26.5 +0.1
CHM eS Sn 21 17 44.3 -0.5
HRA Herat 7.08 265 Pn 21 16 27.8 +0.6
KLP Kalpa 7.31 119 eP Pn 21 16 29.5 -0.9
KLP eS Sn 21 17 48.5 -3.6
NRN Naryn 7.33 32 P Pn 21 16 31.2 +0.4
NRN Naryn 7.33 32 Pn 21 16 31.2 +0.4
UCH Uchtor 7.47 22 P Pn 21 16 33.7 +0.9
SNR=44
DZA Taraz 7.55 3 eP Pn 21 16 33.3 -0.2
DZA eS Sn 21 17 56.6 -1.0
DZA Taraz 7.55 3 eP Pn 21 16 33.4 -0.2
DZA eS Sn 21 17 56.6 -1.0
BKNR BIKANER 7.60 163 eP Pn 21 16 32.5 -1.7
BKNR eS Sn 21 17 52.6 -6.3
EKS2 Erkin-Say 7.67 17 P Pn 21 16 36.2 +0.9
SNR=56
BRLS Boroldoy 7.71 355 eP Pn 21 16 31.9 -3.8
BRLS Boroldoy 7.71 355 eP Pn 21 16 31.9 -3.8
KK31 Karatay Array 7.76 359 ⇑P Pn 21 16 36.2 -0.1
comp=E,26nm,0.3s,baz=187,slow=13,SNR=808
KK31 ⇓S Sn 21 18 00.1 -2.5
comp=E,130nm,0.7s,baz=195,slow=27,SNR=9.2
KK31 Karatay Array 7.76 359 P Pn 21 16 36.4 +0.1
KK31 Karatay Array 7.76 359 Pn 21 16 36.4 +0.1
KKAR Karatay Array 7.76 359 P Pn 21 16 36.1 -0.2
KKAR Karatay Array 7.76 359 Pn 21 16 36.1 -0.2
AAK Ala-Archa 7.84 21 P Pn 21 16 39.2 +1.6
comp=E,26nm,0.3s,baz=204,slow=8.6,SNR=41
AAK S Sn 21 18 04.0 -0.8
comp=E,52nm,0.7s,baz=17,slow=22,SNR=6.3
AAK Ala-Archa 7.84 21 P Pn 21 16 38.8 +1.3
SNR=32
AAK Ala-Archa 7.84 21 ⇓P Pn 21 16 38.4 +0.8
comp=E,26nm,0.7s
AAK ⇑S Sn 21 18 01.7 -3.1
comp=E,107nm,1.1s
AAK Ala-Archa 7.84 21 Pn 21 16 38.5 +1.0
AAK Ala-Archa 7.84 21 P Pn 21 16 38.9 +1.3
UTK UTTARKASHI 7.91 123 eP Pn 21 16 39.5 +1.0
UTK eS Sn 21 18 02.7 -3.8
FRU1 Bishkek 8.04 21 P Pn 21 16 41.2 +1.0
FRU1 Bishkek 8.04 21 Pn 21 16 41.2 +1.0
ULHL Ulahol 8.11 30 P Pn 21 16 42.8 +1.6
SNR=14
BOOM Boomskoye usch 8.19 28 P Pn 21 16 42.8 +0.4
BOOM Boomskoye usch 8.19 28 Pn 21 16 42.8 +0.4
BOOM Boomskoye usch 8.19 28 P Pn 21 16 43.3 +0.9
CHMS Chumysh 8.25 21 P Pn 21 16 43.7 +0.7
SNR=56
JASL Jaisalmer 8.39 179 eP Pn 21 16 44.2 -0.8
JASL eS Sn 21 18 14.4 -3.8
KDJ Kajisay 8.42 34 P Pn 21 16 46.0 +0.4
KDJ Kajisay 8.42 34 Pn Pn 21 16 46.0 +0.4
TARG Taragay, Kyrgy 8.42 39 P Pn 21 16 45.3 -0.5
TARG Taragay, Kyrgy 8.42 39 Pn 21 16 45.3 -0.5
TARG Taragay, Kyrgy 8.42 39 P Pn 21 16 45.8 +0.1
USP Ospenovka 8.43 19 P Pn 21 16 45.9 +0.5
SNR=73
TKM2 Tokmak 2 8.44 25 P Pn 21 16 46.7 +0.9
SNR=39
NDI New Delhi 8.59 139 eP Pn 21 16 47.8 0.0
NDI eS Sn 21 18 18.5 -4.7
NPLP NPLP New Delhi 8.61 139 eP Pn 21 16 47.9 -0.1
NPLP eS Sn 21 18 19.0 -4.4
NPLP eS 21 18 19.2
SGDS Sogindy 8.63 19 eP Pn 21 16 48.1 -0.2
SGDS eS Sn 21 18 23.2 -0.9
LDR Lodi Road 8.67 139 eP Pn 21 16 50.7 +1.9
LDR eS Sn 21 18 21.4 -3.7
LDR eS 21 18 21.6
AYAN Aya Nagar 8.71 140 eS Sn 21 18 22.6 -3.3
JMIU JAMIA UNIVERSI 8.72 139 eP Pn 21 16 51.8 +2.2
JMIU eS Sn 21 18 22.8 -3.6
JMIU eS 21 18 23.4
JOSI Joshimath 8.78 120 eP Pn 21 16 51.8 +1.2
JOSI eS Sn 21 18 25.2 -2.9
BISR Bishrakh 8.80 138 eS Sn 21 18 25.4 -2.8
WUS Wushi 8.84 46 Pn 21 16 52.1 +0.9
SONA Sohna 8.86 141 eP Pn 21 16 51.5 0.0
SONA ex x 21 18 23.0
TNSS Tian-Shan 9.05 30 eP Pn 21 16 54.0 -0.3
TNSS Tian-Shan 9.05 30 eP Pn 21 16 54.1 -0.3
AAA Alma-Ata 9.18 29 eP Pn 21 16 55.9 +0.1
AAA Alma-Ata 9.18 29 eP Pn 21 16 56.0 +0.1
MDOK Medeo 9.20 30 eP Pn 21 16 56.0 -0.1
MDOK Medeo 9.20 30 eP Pn 21 16 56.1 -0.1
PRZ Przheval'sk 9.28 37 P Pn 21 16 57.6 +0.4
PRZ Przheval'sk 9.28 37 Pn 21 16 57.6 +0.4
PRZ Przheval'sk 9.28 37 P Pn 21 16 58.6 +1.3
AJM Ajmer 9.48 159 eP Pn 21 16 59.3 -0.6
AJM ex x 21 18 32.2
AJM eS Sn 21 18 34.6
KUU Kurty 9.56 25 eP Pn 21 17 00.5 -0.3
KUU Kurty 9.56 25 eP Pn 21 17 00.6 -0.3
SATY Saty 9.71 35 eP Pn 21 17 02.9 -0.2
SATY Saty 9.71 35 eP Pn 21 17 03.0 -0.2
PTH Pithoragarh 9.81 123 eP Pn 21 17 03.2 -1.3
PTH eP 21 17 03.9
PTH eS Sn 21 18 47.2 -5.9
LGTI Lohaghat 9.85 124 eP Pn 21 17 04.4 -0.6
LGTI eS Sn 21 18 48.4 -5.7
UZB Uzynbulak 10.08 37 eP Pn 21 17 08.1 0.0
UZB Uzynbulak 10.08 37 eP Pn 21 17 08.2 0.0
KPKS Kokpek 10.16 35 eP Pn 21 17 08.9 -0.2
KPKS Kokpek 10.16 35 eP Pn 21 17 09.0 -0.2
SHLS Shalkode 10.30 38 eP Pn 21 17 14.2 +3.1
SHLS Shalkode 10.30 38 eP Pn 21 17 14.2 +3.1
PDGK Podgornoye 10.44 38 ⇑P Pn 21 17 11.9 -1.1
comp=E,30nm,0.9s
PDGK ⇑S Sn 21 19 07.2 -1.2
comp=E,33nm,1.1s
PDGK Podgornoye 10.44 38 P Pn 21 17 13.0 0.0
PDGK Podgornoye 10.44 38 Pn 21 17 13.0 0.0
UDPR Udaipur 11.02 166 eP Pn 21 17 20.4 -0.5
UDPR IAmb IAmb 21 17 22.0
comp=Z,30nm,0.5s
UDPR eS Sn 21 19 16.4 -6.1
UDPR eS 21 19 17.1
TDK Taldyqorghan 11.27 29 eP Pn 21 17 23.9 -0.3
TDK Taldyqorghan 11.27 29 eP Pn 21 17 24.0 -0.3
JHNI Jhansi 11.94 143 eP Pn 21 17 31.0 -2.5
JHNI eS Sn 21 19 37.2 -7.8
GUNA GUNA 12.07 150 eP Pn 21 17 32.5 -2.7
GUNA IAmb IAmb 21 17 34.3
comp=Z,72nm,0.3s
GUNA eS Sn 21 19 38.3 -10
GUNA eS S 21 19 38.9 -34
GUNA IAML 21 19 41.5
comp=E,107nm,0.1s
BHUJ Bhuj 12.08 185 eP Pn 21 17 33.1 -2.3
BHUJ ex x 21 19 41.7
BHPL Bhopal 13.37 153 eP Pn 21 17 50.0 -2.8
BHPL ex x 21 20 12.3
MAKZ Makanchi 14.22 33 ⇑P Pn 21 18 02.1 -1.7
comp=E,14nm,0.9s
MAKZ Makanchi 14.22 33 P Pn 21 18 02.2 -1.6
MAKZ Makanchi 14.22 33 Pn Pn 21 18 02.2 -1.6
MAKZ Makanchi 14.22 33 P Pn 21 18 02.3 -1.5
MK31 Makanchi Array 14.35 34 ⇓P Pn 21 18 04.5 -1.0
comp=E,5.3nm,0.8s,baz=219,slow=14,SNR=43
MK31 Makanchi Array 14.35 34 *c iP* Pn 21 18 04.6 -1.0
MKAR Makanchi Array 14.35 34 P Pn 21 18 05.4 -0.1
comp=E,1.8nm,0.7s,baz=216,slow=12,SNR=12
MKAR Makanchi Array 14.35 34 Pn 21 18 04.6 -0.9
EVN Everest 15.50 114 Pn Pn 21 18 17.9 -3.2
EVN Everest 15.50 114 P Pn 21 18 17.4 -3.7
WMQ Urumqi 15.53 52 eP P 21 18 22.3 -1.4
WMQ S Sn 21 21 05.9 -6.1
WMQ pmax pmax
comp=E,7.0nm,0.9s
WMQ pmax pmax
comp=E,60nm,6.7s
WMQ L L
comp=E,71nm,18.5s
AKL Akola 15.58 158 eP Pn 21 18 20.2 -1.3
AKL IAmb IAmb 21 18 22.7
comp=Z,48nm,0.3s
AKL ex x 21 21 03.8
NGP Nagpur 15.88 151 eP Pn 21 18 23.3 -2.0
NGP IAmb IAmb 21 18 26.5
comp=Z,9.4nm,0.7s
NGP ex x 21 21 09.8
AB31 Akbulak array 16.03 334 ⇓P Pn 21 18 25.2 -1.8
comp=Z,52nm,0.4s,baz=150,slow=12,SNR=1771
AB31 S Sn 21 21 16.2 -7.6
comp=Z,24nm,0.7s,baz=149,slow=23,SNR=8.7
AB31 Akbulak array 16.03 334 Pn 21 18 25.5 -1.5
ABKAR Akbulak array 16.03 334 Pn 21 18 25.3 -1.6
ZSN Zaisan 16.04 37 eP Pn 21 18 27.0 -0.1
ZSN Zaisan 16.04 37 eP Pn 21 18 27.1 -0.1
KURBB Kurchatov Arra 16.28 18 P Pn 21 18 29.6 -0.4
comp=Z,6.6nm,0.8s,baz=208,slow=10,SNR=37
KURBB LR LR 21 24 39.1
comp=Z,98nm,20.1s,baz=192,slow=36
GAYA Gaya 16.31 126 ex x 21 18 27.8
GAYA ex x 21 21 19.0
KURK Kurchatov 16.39 18 ⇑P Pn 21 18 30.3 -1.2
comp=Z,7.0nm,0.9s
KURK Kurchatov 16.39 18 *c iP* Pn 21 18 31.6 +0.2
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURK Kurchatov 16.39 18 P Pn 21 18 30.6 -0.9
KURK Kurchatov 16.39 18 P Pn 21 18 32.1 +0.7
BLSP Bilaspur 16.53 140 eP Pn 21 18 32.4 -1.1
BLSP ex x 21 21 24.3
BLSP ex x 21 21 24.7
BOK Bokaro 17.44 127 eP P 21 18 46.2 +1.3
BOK ex x 21 21 47.3
BVAR Borovoye Array 17.68 359 P P 21 18 46.1 -1.3
comp=Z,13nm,0.7s,baz=165,slow=12,SNR=30
BORK Borovoye 17.71 359 ⇓*iP* P 21 18 46.6 -1.0
BORK pmax pmax
comp=Z,21nm,1.0s
BORK Borovoye 17.71 359 P P 21 18 46.1 -1.5
BORK IAmb IAmb 21 19 17.6
comp=Z,25nm,0.9s
AKTO Aktyubinsk 17.71 332 P P 21 18 47.2 -0.5
comp=Z,70nm,0.9s,baz=148,slow=11,SNR=73
AKTO S Sn 21 21 52.6 -12
comp=Z,31nm,0.9s,baz=176,slow=9.9,SNR=6.5
AKTO LR LR 21 25 56.0
comp=Z,165nm,19.2s,baz=113,slow=38
AKTO Aktyubinsk 17.71 332 ⇓P P 21 18 46.4 -1.3
comp=Z,72nm,1.1s
AKTO ⇑S Sn 21 21 57.1 -7.3
comp=Z,14nm,0.8s
LSA Lhasa 18.07 102 P P 21 18 49.8 -2.5
LSA pmax pmax
comp=Z,17nm,0.8s
LSA Lhasa 18.07 102 P P 21 18 49.8 -2.5
DGZ Jazzator, Alta 18.82 35 ⇓*iP* P 21 18 59.8 -0.3
DGZ pmax pmax
comp=Z,8.0nm,0.9s
AKT Akhty 19.05 296 eP Pn 21 19 03.5 -0.6
AKT eS Sn 21 22 36.4 -0.6
AKT pmax pmax
comp=Z,12nm,0.9s
AKT MLR MLR
comp=Z,73nm,9.0s
HYB Hyderabad 19.15 157 eP P 21 19 02.8 -0.9
HYB eS S 21 22 38.1 +1.0
MAK Makhachkala 19.55 300 *c iP* Pn 21 19 11.0 +1.2
MAK eS Sn 21 22 50.2 +1.4
MAK pmax pmax
comp=Z,19nm,0.5s
MAK MLR MLR
comp=Z,89nm,13.0s
TAWA Tawang 19.55 107 eP P 21 19 07.5 -1.0
TAWA IAmb IAmb 21 19 12.7
comp=Z,21nm,0.7s
TAWA *i* x x 21 19 27.3
TAWA ex x 21 19 38.1
RAGD RAYAGADA 19.56 142 eP Pn 21 19 09.6 -0.6
BWNR Bhubaneshwar 20.03 135 eP Pn 21 19 15.1 -0.6
GUWA GUWAHATI 20.12 111 eP P 21 19 15.0 +0.8
GUWA IAmb IAmb 21 19 16.5
comp=Z,17nm,1.1s
SHL Shillong 20.60 112 P P 21 19 18.7 -0.9
SHL pmax pmax
comp=Z,31nm,0.8s
SHL Shillong 20.60 112 P P 21 19 18.7 -0.9
SHL IAmb IAmb 21 19 55.0
comp=Z,31nm,0.8s
SHL Shillong 20.60 112 eP P 21 19 20.4 +0.7
ZAA0 Zalesovo Array 21.05 24 P P 21 19 22.2 -1.7
ZAA0 IAmb IAmb 21 19 41.2
comp=Z,36nm,1.1s
ZALV Zalesovo Beam 21.05 24 P P 21 19 23.4 -0.5
comp=Z,6.6nm,0.3s,baz=224,slow=11,SNR=56
ZALV S S 21 23 10.1 -4.0
comp=Z,1.3nm,0.7s,baz=219,slow=16,SNR=1.7
ZALV ScP ScP 21 26 57.2 -1.1
comp=Z,0.5nm,0.6s,baz=137,slow=34,SNR=3.6
ZALV LR LR 21 28 04.7
comp=Z,76nm,21.9s,baz=181,slow=38
comp=Z,6.6nm,0.3s
ZALV Zalesovo Beam 21.05 24 P 21 19 23.0 -0.9
GNI Garni 21.11 291 P P 21 19 24.4 -0.6
comp=Z,26nm,0.9s,baz=123,slow=2.7,SNR=13
GNI LR LR 21 29 47.3
comp=Z,44nm,19.2s,baz=106,slow=43
comp=Z,26nm,0.9s
GNI Garni 21.11 291 *i* P P 21 19 27.0 +2.0
GNI pmax pmax
comp=Z,30nm,1.0s
GNI Garni 21.11 291 P P 21 19 24.7 -0.3
GNI Garni 21.11 291 P P 21 19 27.5 +2.5
comp=Z,730nmcomp=Z,48nm,1.1s
GNI Garni 21.11 291 P P 21 19 28.0 +3.0
HAKT HAKKARI 21.86 284 P P 21 19 36.2 +3.1
DIGO Kars 22.18 291 P P 21 19 40.3 +3.9
KOHI KOHIMA 22.22 109 eP P 21 19 38.0 +1.0
KOHI IAmb IAmb 21 19 42.2
comp=Z,20nm,0.7s
GEVA Gevas 22.36 286 P P 21 19 37.4 -0.9
IMP Imphal 22.57 111 eP P 21 19 42.2 +1.6
IMP IAmb IAmb 21 19 44.3
comp=Z,20nm,1.0s
IMP *i* x x 21 20 08.8
ARTI Arti 22.68 342 LR LR 21 29 39.2
comp=Z,137nm,19.8s,baz=146,slow=39
ARTI Arti 22.68 342 *c iP* P 21 19 41.4 0.0
ARTI 21 20 04.4
ARTI S S 21 23 44.5 +0.3
ARTI SS SnSn 21 24 23.0 +2.3
ARTI pmax pmax
comp=Z,28nm,1.2s
ARTI Arti 22.68 342 P P 21 19 40.9 -0.6
ARTI IAmb IAmb 21 20 08.0
comp=Z,24nm,0.7s
EPOS Posof 22.77 294 P P 21 19 46.5 +3.8
KBZ Khabaz 23.00 300 P P 21 19 44.0 -0.8
comp=Z,5.4nm,0.9s,baz=125,slow=6.4,SNR=12
KBZ LR LR 21 31 52.4
comp=Z,31nm,19.1s,baz=96,slow=45
comp=Z,5.4nm,0.9s
KBZ Khabaz 23.00 300 ⇑*iP* P 21 19 44.9 +0.1
KBZ pmax pmax
comp=Z,7.0nm,0.9s
MORE Moreh 23.16 112 P P 21 19 46.0 -0.6
MORE IAmb IAmb 21 20 14.7
comp=Z,21nm,0.7s
SHA1 Shidzhatmaz 23.17 300 ⇓*iP* P 21 19 46.7 0.0
KVAR Kislovodsk Arr 23.19 300 LR LR 21 31 10.2
comp=Z,36nm,19.8s,baz=284,slow=42
KIV Kislovodsk 23.19 300 *eP* P 21 19 47.8 +1.0
KIV *eS* S 21 23 54.1 +1.2
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,22nm,14.0s
KIV Kislovodsk 23.19 300 P P 21 19 44.4 -2.5
KIV Kislovodsk 23.19 300 P P 21 19 48.7 +1.9
KIV Kislovodsk 23.19 300 P P 21 19 47.8 +1.0
GTA2 Gaotai 23.34 71 P P 21 19 50.3 +2.0
GTA2 pP pP 21 20 03.1 -1.7
GTA2 pmax pmax
comp=Z,53nm,0.8s
BELG Belogornoye 23.70 323 *c iP* P 21 19 50.7 -0.4
BELG pmax pmax
comp=Z,5.0nm,0.8s
KOPT Kop Dagi 24.36 290 P P 21 19 56.1 -1.5
RAYN Ar Rayn 24.89 249 P P 21 20 02.7 +0.4
RAYN pmax pmax
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 24.89 249 P P 21 20 02.7 +0.4
RAYN Ar Rayn 24.89 249 P P 21 20 05.4 +3.0
KOD Kodaikanal 25.73 165 eP P 21 20 09.6 -0.6
KOD IAmb IAmb 21 20 13.7
comp=Z,25nm,1.1s
TNCH TengChong 26.01 106 P P 21 20 13.6 +1.0
TNCH pP pP 21 20 32.8 +2.7
TNCH PP PnPn 21 20 59.3 +5.1
TNCH S S 21 24 36.4 -2.0
TNCH SS SnSn 21 25 53.1 +11
TNCH pmax pmax
comp=Z,15nm,1.1s
TNCH pmax pmax
comp=Z,86nm,3.8s
TNCH L L
comp=Z,110nm,8.4s
TNCH L L
comp=Z,180nm,8.0s
TNCH L L
comp=Z,210nm,10.8s
ARPR Arapgir-MALATY 26.03 288 P P 21 20 11.2 -1.5
ARPR IAmb IAmb 21 20 55.6
comp=Z,13nm,0.9s
ARPR Arapgir-MALATY 26.03 288 P P 21 20 15.3 +2.7
LZH Lanzhou 26.79 79 eP P 21 20 22.1 +2.5
LZH pP pP 21 20 39.3 +1.9
LZH pmax pmax
comp=Z,13nm,1.0s
NPW Naypyitaw 27.20 118 P P 21 20 23.8 +0.6
KIRV Kirov 27.21 335 LR LR 21 31 57.1
comp=Z,74nm,20.7s,baz=136,slow=38
KIRV Kirov 27.21 335 ⇓*iP* P 21 20 23.5 +0.7
VORR Voronezh 27.83 316 P P 21 20 33.3 +4.8
VORR pmax pmax
comp=Z,15nm,0.8s
PZH PanZhiHua 27.89 100 P P 21 20 31.5 +2.0
ZAK Zakamensk 27.90 47 eP P 21 20 32.9 +3.7
ZAK pmax pmax
comp=Z,5.0nm,1.6s
ASF Jabal al Asfar 28.27 273 LR LR 21 34 14.8
comp=Z,56nm,19.1s,baz=26,slow=41
TLY Talaya 28.58 45 LR LR 21 32 39.6
comp=Z,74nm,20.2s,baz=232,slow=38
SONM Songino Array 29.15 54 P P 21 20 42.0 +1.5
comp=Z,0.7nm,0.9s,baz=259,slow=8.8,SNR=5.3
comp=Z,0.7nm,0.9s
SONM Songino Array 29.15 54 P P 21 20 42.0 +1.5
SONM Songino Array 29.15 54 P P 21 20 40.4 -0.1
MMAI Mount Meron Ar 29.27 276 P P 21 20 43.4 +1.9
comp=Z,0.8nm,0.6s,baz=64,slow=9.8,SNR=2.4
MMAI LR LR 21 34 03.4
comp=Z,43nm,20.5s,baz=55,slow=40
comp=Z,0.8nm,0.6s
KMI2 Kunming 29.31 101 P P 21 20 46.5 +4.3
KMI2 pmax pmax
comp=Z,9.0nm,0.6s
BR131 Keskin Array S 29.64 290 ⇓*iP* P 21 20 46.1 +1.2
BR131 *i* *PP pP 21 21 03.7 +0.6
BR131 Keskin Array S 29.64 290 P P 21 20 43.8 -1.0
BRTR Keskin Array B 29.64 290 P P 21 20 46.0 +1.2
comp=Z,1.5nm,0.8s,baz=89,slow=9.5,SNR=12
BRTR LR LR 21 35 47.4
comp=Z,28nm,21.3s,baz=122,slow=43
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 29.64 290 P P 21 20 44.3 -0.6
CY604 RAF Akrotiri, 29.68 279 P P 21 20 44.1 -0.6
CY604 IAmb IAmb 21 20 49.2
comp=Z,15nm,1.2s
CHTO Chiang Mai 29.85 116 P P 21 20 46.2 -0.5
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 29.85 116 P P 21 20 46.2 -0.5
CM31 Chiang Mai Arr 30.08 117 P P 21 20 48.5 -0.3
CM31 IAmb IAmb 21 21 23.7
comp=Z,9.4nm,1.1s
CMAR Chiang Mai Arr 30.08 117 P P 21 20 50.5 +1.8
comp=Z,1.9nm,0.8s,baz=297,slow=8.5,SNR=16
CMAR PcP PcP 21 23 48.0 -1.0
comp=Z,0.3nm,0.3s,baz=338,slow=2.7,SNR=4.3
CMAR ScP ScP 21 27 26.4 +1.6
comp=Z,1.4nm,0.9s,baz=295,slow=4.5,SNR=6.1
CMAR LR LR 21 34 14.6
comp=Z,62nm,19.0s,baz=305,slow=39
comp=Z,1.9nm,0.8s
CMAR Chiang Mai Arr 30.08 117 P P 21 20 49.0 +0.3
CMAR 21 23 49.1
CMAR Chiang Mai Arr 30.08 117 P P 21 20 49.0 +0.3
CMAR PcP PcP 21 23 49.1 +0.1
EIL Elat 30.63 270 LR LR 21 35 21.5
comp=Z,48nm,19.0s,baz=90,slow=40
OBN Obninsk 30.71 321 LR LR 21 34 42.7
comp=Z,104nm,21.5s,baz=227,slow=39
OBN Obninsk 30.71 321 *eP* P 21 20 54.0 +0.1
OBN *e**PP pP 21 21 12.6 +0.1
OBN *e* 21 21 56.6
OBN *e* 21 23 50.3
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 30.71 321 P P 21 20 53.0 -1.0
XAN Xi'an 31.26 81 P P 21 20 58.8 -0.4
XAN pP sP 21 21 22.0 -4.2
XAN pmax pmax
comp=Z,4.0nm,1.1s
HHC Hu-ho-hao-te 32.35 68 eP P 21 21 10.8 +2.1
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,66nm,4.0s
KLMR Klimovskoe 32.41 332 eP P 21 21 07.5 -1.3
KLMR *e**PP pP 21 21 24.6 -2.8
KLMR *e*SP sP 21 21 36.1 -0.3
KLMR pmax pmax
comp=Z,11nm,1.3s
ELL Elmali 32.90 285 P P 21 21 13.1 -0.5
ELL pmax pmax
comp=Z,12nm,1.0s
ELL Elmali 32.90 285 P P 21 21 13.1 -0.5
ELL IAmb IAmb 21 21 43.6
comp=Z,12nm,1.0s
AK10 Malin Array Si 33.51 310 P P 21 21 18.5 0.0
AK10 pP pP 21 21 37.1 +0.1
AK07 Malin Array Si 33.53 310 P P 21 21 18.5 -0.2
AK07 pP pP 21 21 36.9 -0.3
AK06 Malin Array Si 33.54 310 P P 21 21 18.4 -0.4
AK06 pP pP 21 21 37.3 0.0
AK05 Malin Array Si 33.54 310 P P 21 21 18.4 -0.4
AKASG Malin Array Be 33.55 310 P P 21 21 18.7 -0.1
comp=Z,1.1nm,0.6s,baz=83,slow=7.3,SNR=8.6
AKASG LR LR 21 35 59.2
comp=Z,63nm,19.7s,baz=74,slow=38
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 33.55 310 *i* P P 21 21 18.7 -0.1
AKASG pmax pmax

comp=Z,3.0nm,0.7s
AKBB Malin Array Si 33.55 310 P P 21 21 18.3 -0.5
AKBB pmax pmax
comp=Z,9.0nm,1.4s
AKBB Malin Array Si 33.55 310 P P 21 21 18.3 -0.5
AKBB IAmb IAmb 21 21 37.0
comp=Z,8.9nm,1.4s
HNS HongShan 35.20 73 ⇑P P 21 21 35.4 +2.2
MLR Muntele Rosu 35.20 301 LR LR 21 38 52.3
comp=Z,81nm,19.2s,baz=83,slow=41
MLR Muntele Rosu 35.20 301 P P 21 21 34.3 +0.9
MLR pmax pmax
comp=Z,15nm,0.8s
MLR Muntele Rosu 35.20 301 P P 21 21 34.3 +0.9
MLR Muntele Rosu 35.20 301 P P 21 21 35.3 +1.9
comp=Z,21nm,0.8s
MLR Muntele Rosu 35.20 301 P P 21 21 35.6 +2.2
NRIK Noril'sk 35.30 10 P P 21 21 34.6 +0.9
comp=Z,7.1nm,0.7s,baz=184,slow=9.4,SNR=6.8
NRIK LR LR 21 38 38.4
comp=Z,64nm,18.5s,baz=196,slow=41
comp=Z,7.1nm,0.7s
NRIK Noril'sk 35.30 10 P P 21 21 33.7 0.0
NRIK IAmb IAmb 21 21 35.5
comp=Z,9.6nm,0.8s
BURAR Bucovina Array 35.78 304 P 21 21 38.6 +0.3
BURAR IAmb IAmb 21 21 40.0
comp=Z,4.2nm,0.7s
BUR08 Bucovina Ar. S 35.79 304 P P 21 21 38.1 -0.3
VOIR 35.83 301 P P 21 21 40.1 +1.4
ARR Arges 36.13 300 P P 21 21 42.5 +1.2
LOT Lotru 36.73 301 P P 21 21 47.8 +1.3
KWP Kalwaria Pacla 37.56 307 P P 21 21 54.5 +1.2
comp=Z,14nm,1.0s
KOLS Kolonicke sedl 37.81 306 *e*P P 21 21 55.1 -0.3
KOLS *e* 21 23 28.0
KOLS Kolonicke sedl 37.81 306 *e*P P 21 21 55.1 -0.3
KOLS *e*PP **PnPn** 21 23 28.0 +3.3
FIA1 FINESS Array S 38.35 327 P P 21 21 59.0 -0.7
FIA1 IAmb IAmb 21 22 34.5
comp=Z,11nm,0.9s
FINES FINESS Array B 38.35 327 P P 21 21 59.5 -0.2
comp=Z,4.3nm,0.9s,baz=117,slow=9.1,SNR=14
FINES LR LR 21 38 59.9
comp=Z,114nm,20.8s,baz=94,slow=38
comp=Z,4.3nm,0.9s
FINES FINESS Array B 38.35 327 *i*P P 21 22 00.4 +0.7
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 38.35 327 P P 21 21 59.0 -0.8
NIE Niedzica 39.12 307 P P 21 22 07.6 +1.2
comp=Z,2.6nm,1.1s
PSZ Piszkesteto 39.37 305 P P 21 22 08.2 -0.4
PSZ pmax pmax
comp=Z,4.0nm,1.1s
PSZ Piszkesteto 39.37 305 P P 21 22 08.2 -0.4
OJC Ojcow 39.47 308 P P 21 22 08.4 -0.9
OJC Ojcow 39.47 308 P P 21 22 08.4 -0.9
NJ2 Nanjing 39.83 81 *e*P P 21 22 12.0 -0.4
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
KULM Kulim 40.65 130 P P 21 22 19.1 -0.3
KULM IAmb IAmb 21 22 57.2
comp=Z,18nm,1.3s
MAUC Maruska 40.73 307 *e*P P 21 22 20.8 +1.0
MORC Moravsky Berou 40.92 308 P P 21 22 20.8 -0.5
MORC pmax pmax
comp=Z,2.0nm,0.8s
MORC Moravsky Berou 40.92 308 P P 21 22 20.8 -0.5
SMOL Smolenice 41.01 306 *e*P P 21 22 23.4 +1.4
VADS Vadso 41.34 340 *e*P P 21 22 24.9 +0.6
VADS IAmb IAmb 21 22 26.5
comp=Z,112nm,1.9s
VRAC Vranov 41.54 307 LR LR 21 41 18.0
comp=Z,41nm,18.5s,baz=88,slow=38
PSI Prapat 41.58 135 P P 21 22 24.9 -2.3
DPC Dobruska-Polom 41.70 308 *e*P P 21 22 27.9 +0.2
DPC Dobruska-Polom 41.70 308 *e*P P 21 22 27.9 +0.2
DPC Dobruska-Polom 41.70 308 P P 21 22 28.4 +0.7
comp=Z,3.5nm,1.3s
DPC pP **pP** 21 22 48.1 +1.4
comp=Z,3.5nm,1.3s
RONA Rosalia, Austr 41.80 304 *e*P P 21 22 29.4 +0.8
comp=Z,1.9nm,0.7s
KEV Kevo 41.81 339 P P 21 22 27.3 -0.9
KEV pmax pmax
comp=Z,11nm,1.1s
KEV Kevo 41.81 339 P P 21 22 27.3 -0.9
KEV IAmb IAmb 21 22 29.3
comp=Z,11nm,1.1s
CHVC Chvalec 41.87 309 *e*P P 21 22 30.5 +1.4
CHVC Chvalec 41.87 309 *e*P P 21 22 30.5 +1.4
GSI Gunungsitoli 42.05 138 P P 21 22 30.9 +0.1
CONA Conrad Observa 42.08 305 *e*P P 21 22 32.0 +1.1
comp=Z,4.1nm,0.9s
ARA0 ARCESS Array S 42.15 338 *e*P P 21 22 31.1 +0.1
ARA0 IAmb IAmb 21 22 34.8
comp=Z,129nm,2.1s
ARCES ARCESS Array B 42.15 338 P P 21 22 31.2 +0.2
comp=Z,4.8nm,0.7s,baz=109,slow=8.2,SNR=19
ARCES LR LR 21 39 26.7
comp=Z,89nm,18.2s,baz=123,slow=35
comp=Z,4.8nm,0.7s
ARCES ARCESS Array B 42.15 338 P P 21 22 30.5 -0.6
ARSA Arzberg 42.36 304 *e*P P 21 22 33.9 +0.9
comp=Z,0.4nm,0.5s
KTK1 Kautokeino 42.61 337 *e*P P 21 22 34.5 -0.3
SOKA Soboth 42.74 303 *e*P P 21 22 37.3 +1.1
comp=Z,4.6nm,0.8s
ZEA Zeya 42.99 47 *e*P P 21 22 41.9 +3.9
SESA Seetaler Alpe, 43.02 304 *e*P P 21 22 39.2 +0.5
comp=Z,6.8nm,0.8s
CKRC Cesky Krumlov 43.06 306 *e*P P 21 22 39.3 +0.5
CKRC Cesky Krumlov 43.06 306 *e*P P 21 22 39.3 +0.5
HEH HeiHe 43.10 52 *e*P P 21 22 41.3 +2.3
ZVC Zvikov 43.10 307 *e*P P 21 22 40.0 +0.9
ZVC *ex* x 21 23 08.1
MOA Molln 43.16 305 *e*P P 21 22 40.3 +0.7
comp=Z,2.9nm,0.8s
BRG Berggiesshubel 43.21 309 *e*P P 21 22 40.5 +0.6
BRG Amp 21 22 41.5
comp=Z,3.4nm,1.0s
BRG pP **pP** 21 23 00.2 +1.2
BRG Amp 21 23 00.6
comp=Z,2.4nm,0.9s
BRG sP **sP** 21 23 10.4 +2.6
BRG Amp 21 23 11.1
comp=Z,3.1nm,0.9s
BRG PP **PP** 21 24 22.4 +1.1
BRG Amp 21 24 25.1
comp=Z,1.5nm,0.8s
GERES GERESS Array B 43.46 306 P P 21 22 42.4 +0.4
comp=Z,0.8nm,0.7s,baz=94,slow=8.0,SNR=8.8
comp=Z,0.8nm,0.7s
GERES GERESS Array B 43.46 306 P P 21 22 41.2 -0.8
KHC Kasperske Hory 43.52 307 *e*P P 21 22 45.9 +3.4
KHC Kasperske Hory 43.52 307 *e*P P 21 22 45.9 +3.4
TRI Trieste 43.72 302 P P 21 22 43.4 -0.6
TRI pmax pmax
comp=Z,7.0nm,0.8s
TRI Trieste 43.72 302 P P 21 22 43.4 -0.6
TRI IAmb IAmb 21 22 44.6
comp=Z,6.5nm,0.8s
JETT Jettan, Norway 43.75 337 *e*P P 21 22 45.0 +1.0
CLL Collm 43.79 310 *e*P P 21 22 44.0 -0.5
CLL *e**SP **sP** 21 23 13.0 +0.5
CLL Collm 43.79 310 *e*P P 21 22 44.0 -0.5
CLL *ex* x 21 23 01.0
CLL *es*P **sP** 21 23 13.0 +0.5
CLL *e*PP **PP** 21 24 28.0 +0.5
CLL *ex* x 21 24 36.0
CLL *es*PP 21 24 56.0
CLL *e*PPP PPP 21 25 05.0
SABO M.te Sabotino 43.80 302 P P 21 22 44.4 -0.4
SABO IAmb IAmb 21 23 19.9
comp=Z,11nm,1.1s
KBA Koelnbreinsper 43.85 304 *e*P P 21 22 45.9 +0.6
comp=Z,2.6nm,0.7s
HFS Hagfors 43.87 323 P P 21 22 44.6 -0.4
comp=Z,2.9nm,0.5s,baz=117,slow=9.0,SNR=12
HFS LR LR 21 42 14.4
comp=Z,63nm,20.6s,baz=88,slow=38
comp=Z,2.9nm,0.5s
TRO Tromso 44.26 337 *e*P P 21 22 48.0 0.0
LESA Schwarzleotal 44.27 304 *e*P P 21 22 48.9 +0.4
comp=Z,0.5nm,0.3s
ROTZ Rotzenmuhle 44.37 308 *e*P P 21 22 50.3 +1.1
comp=Z,0.5nm,1.0s,baz=95,slow=7.1
NEUB Neuenburg 44.56 310 *e*P P 21 22 51.2 +0.5
comp=Z,5.4nm,0.9s,baz=95,slow=7.1
FDMO Fiordimonte 44.61 298 P P 21 22 50.2 -1.0
FDMO IAmb IAmb 21 22 53.5
comp=Z,6.3nm,1.0s
MOX Moxa 44.70 309 *e*P P 21 22 52.7 +0.9
comp=Z,8.4nm,1.6s,baz=95,slow=7.1
MOX *e*L L 21 39 14.3
comp=Z,49nm,22.0s
MOR8 Moi Rana 44.74 331 *e*P P 21 22 51.4 -0.6
FAUS Fauske 44.75 333 *e*P P 21 22 52.1 +0.2
GORT1 Trebel 44.78 312 *e*P P 21 22 54.4 +2.0
comp=Z,27nm,1.9s,baz=95,slow=7.1
FLTG Flechtingen 44.85 311 *e*P P 21 22 52.8 -0.1
comp=Z,3.4nm,0.8s,baz=95,slow=7.1
STEI Steigen 44.93 334 *e*P P 21 22 53.7 +0.3
MURB Monte Urbino 44.97 298 P P 21 22 54.3 +0.1
WTTA Wattenberg 44.99 304 *e*P P 21 22 54.3 -0.1
comp=Z,0.7nm,0.4s
NC602 NORSAR Array S 45.01 323 *e*P P 21 22 55.6 +1.5
GRF Grafenberg Arr 45.02 308 *e*P P 21 22 55.3 +1.0
comp=Z,6.1nm,1.3s,baz=95,slow=7.1
GRF *e*L L 21 45 51.2
comp=Z,43nm,20.8s
YAK Yakutsk 45.02 35 LR LR 21 43 10.5
comp=Z,44nm,18.3s,baz=248,slow=38
WATA Walderalm 45.02 304 *e*P P 21 22 54.5 -0.1
comp=Z,0.1nm,0.3s
CTI Castel Tesino 45.14 303 P P 21 22 54.8 -0.7
CTI pmax pmax
comp=Z,3.0nm,1.0s
CTI Castel Tesino 45.14 303 P P 21 22 54.8 -0.7
NB2 NORSAR Subarra 45.20 324 P P 21 22 54.7 -1.0
comp=Z,5.6nm,1.0s,baz=98,slow=7.9
NB2 NORSAR Subarra 45.20 324 P P 21 22 54.7 -1.0
NOA NORSAR Array B 45.20 324 P P 21 22 55.0 -0.7
comp=Z,1.3nm,0.6s,baz=98,slow=7.9,SNR=12
NOA LR LR 21 42 54.7
comp=Z,58nm,21.3s,baz=105,slow=37
comp=Z,1.3nm,0.6s
NOA NORSAR Array B 45.20 324 P P 21 22 55.0 -0.7
TEOL Teolo 45.23 302 P P 21 22 55.1 -1.0
TEOL IAmb IAmb 21 22 56.8
comp=Z,5.9nm,0.6s
LEIR Leirfjorden 45.25 331 *e*P P 21 22 56.2 +0.3
SQTA Sankt Quirin 45.28 304 *e*P P 21 22 56.3 -0.3
comp=Z,1.7nm,0.5s
VAGH Vaagaholmen 45.34 332 *e*P P 21 22 57.6 +1.0
MOTA Moosalm 45.34 304 *e*P P 21 22 56.6 -0.5
comp=Z,3.0nm,0.6s
BSEG Bad Segeberg 45.36 314 *e*L L 21 45 28.9
comp=Z,32nm,18.6s
MYKOM Kota Tinggi 45.36 130 P P 21 22 58.0 +0.6
MYKOM IAmb IAmb 21 22 59.8
comp=Z,15nm,1.0s
KS19 Wonju Array Si 45.38 70 P P 21 22 58.4 +1.0
KS19 IAmb IAmb 21 23 00.1
comp=Z,16nm,1.2s
CLZ Clausthal 45.40 311 *e*P P 21 22 57.9 +0.5
comp=Z,9.3nm,1.5s,baz=95,slow=7.1
KSAR Wonju Array Be 45.41 70 P P 21 22 58.5 +0.9
KSAR Wonju Array Be 45.41 70 P P 21 22 58.5 +0.9
KSRS Korea Array 45.44 70 P P 21 22 58.8 +1.0
comp=Z,1.6nm,0.4s,baz=272,slow=7.2,SNR=20
comp=Z,1.6nm,0.4s
LOF Lofoten 45.60 334 *e*P P 21 23 00.9 +2.2
LODK Lodwar 45.63 234 P P 21 22 59.6 0.0
FETA Feichen 45.64 304 *e*P P 21 22 59.2 -0.3
comp=Z,3.0nm,1.1s
KONO Kongsberg 45.88 322 P P 21 23 00.5 -0.5
KONO pmax pmax
comp=Z,20nm,1.4s
KONO Kongsberg 45.88 322 P P 21 23 00.5 -0.5
KONO IAmb IAmb 21 23 07.3
comp=Z,20nm,1.4s
FUORN Ofenpass-Fuorn 46.01 303 P P 21 23 01.8 -0.8
DAVA Damuels 46.17 304 *e*P P 21 23 03.8 +0.1
comp=Z,5.7nm,0.6s
DAVOX Davos/Dischmat 46.25 304 LR LR 21 48 43.0
comp=Z,24nm,19.1s,baz=82,slow=44
BFO Black Forest 47.06 306 *e*L L 21 42 13.8
comp=Z,43nm,18.5s
SENIN Lac Senin/Sane 48.07 304 P 21 23 17.9 -0.7
SENIN IAmb IAmb 21 23 19.1
comp=Z,4.7nm,0.8s
SPITS Spitsbergen Ar 48.58 347 P P 21 23 23.1 +1.3
comp=Z,3.0nm,0.7s,baz=116,slow=13,SNR=4.3
SPITS LR LR 21 47 42.2
comp=Z,52nm,18.5s,baz=118,slow=41
comp=Z,3.0nm,0.7s
KEST Kesra 49.24 289 P P 21 23 28.2 +0.7
comp=Z,5.4nm,1.1s,baz=282,slow=13,SNR=4.2
comp=Z,5.4nm,1.1s
KEST Kesra 49.24 289 P P 21 23 27.1 -0.4
KEST IAmb IAmb 21 23 45.6
comp=Z,11nm,1.2s
SSB Saint Sauveur 50.18 303 P P 21 23 34.1 -0.4
SSB pmax pmax
comp=Z,5.0nm,1.1s
SSB Saint Sauveur 50.18 303 P P 21 23 34.1 -0.4
SSB IAmb IAmb 21 24 00.4
comp=Z,5.2nm,1.1s
CORI Orista 52.78 299 P P 21 23 53.6 -0.3
EKA Eskdalemuir Ar 53.00 317 P P 21 23 54.4 -0.8
comp=Z,0.7nm,0.6s,baz=73,slow=7.1,SNR=4.6
comp=Z,0.7nm,0.6s
MJAR Mashiro Arr 53.55 68 P P 21 23 59.8 +0.2
comp=Z,1.7nm,0.9s,baz=297,slow=8.6,SNR=5.6
comp=Z,1.7nm,0.9s
ASAJ Asahikawa 54.32 57 LR LR 21 49 34.2
comp=Z,64nm,18.7s,baz=255,slow=38
LEM Lembang 54.43 133 LR LR 21 50 35.7
comp=Z,122nm,18.1s,baz=167,slow=40
DAV Davao City (W) 57.44 106 LR LR 21 49 55.0
comp=Z,67nm,19.1s,baz=183,slow=37
ESBB Sonseca Array 57.84 298 P P 21 24 29.4 -1.0
ESBB IAmb IAmb 21 25 01.2
comp=Z,11nm,1.5s
ESDC Sonseca Array 57.84 298 P P 21 24 30.4 0.0
comp=Z,1.1nm,0.7s,baz=53,slow=7.2,SNR=14
ESDC LR LR 21 55 03.3
comp=Z,24nm,19.4s,baz=90,slow=42
comp=Z,1.1nm,0.7s
ESDC Sonseca Array 57.84 298 P P 21 24 29.1 -1.3
ESDC IAmb IAmb 21 24 54.0
comp=Z,7.8nm,1.3s
MMSI Mamuju 58.79 120 P P 21 24 30.1 -7.0
BORG Borgarnes 59.52 330 LR LR 21 53 21.2
comp=Z,20nm,18.2s,baz=84,slow=39
PETK Petropavlovsk- 60.93 44 LR LR 21 51 17.4
comp=Z,27nm,19.5s,baz=278,slow=36
SUMG Summit 62.10 341 P P 21 24 59.0 -0.4
SUMG pmax pmax
comp=Z,8.0nm,0.9s
SUMG Summit 62.10 341 P P 21 24 59.0 -0.4
LSZ Lusaka 64.52 226 LR LR 21 54 39.6
comp=Z,55nm,19.9s,baz=142,slow=37
TORD Torodi Ar. Bea 65.52 269 P P 21 25 21.5 -0.7
comp=Z,1.2nm,0.3s,baz=47,slow=6.3,SNR=38
comp=Z,1.2nm,0.3s
TORD Torodi Ar. Bea 65.52 269 P P 21 25 20.8 -1.4
SOEI Soe 67.51 121 P P 21 25 34.8 -0.2
SFJD Kangerlussuaq 68.77 339 LR LR 21 56 08.1
comp=Z,50nm,18.6s,baz=44,slow=36
C19K Lookout Ridge 69.49 17 P P 21 25 46.4 -0.1
C23K Itkillik River 70.89 14 P P 21 25 55.2 +0.3
G19K Purcell Mounta 72.36 18 P P 21 26 03.8 -0.1
G19K IAmb IAmb 21 26 23.6
comp=Z,6.5nm,0.9s
POGA Pongola 72.45 216 P P 21 26 04.8 -0.1
POGA IAmb IAmb 21 26 07.4
comp=Z,8.8nm,0.9s
H19K Roundabout Mou 73.01 19 P P 21 26 07.5 -0.1
H19K IAmb IAmb 21 26 27.6
comp=Z,5.2nm,1.0s
IMAR Indian Mountai 73.33 17 P P 21 26 09.2 -0.4
G23K Bananza Creek 73.60 16 P P 21 26 11.0 -0.2
G23K IAmb IAmb 21 26 31.4
comp=Z,5.7nm,1.0s
LBTB Lobatse 73.70 222 P P 21 26 12.9 +0.5
LBTB pmax pmax
comp=Z,4.0nm,0.8s
LBTB Lobatse 73.70 222 P P 21 26 12.9 +0.5
LBTB IAmb IAmb 21 26 40.6
comp=Z,4.2nm,0.8s
E27K Coleen River 73.98 12 P P 21 26 13.5 +0.1
E27K IAmb IAmb 21 26 33.9
comp=Z,6.9nm,0.9s
TSUM Tsumeb 74.06 232 P P 21 26 15.4 +0.8
TSUM IAmb IAmb 21 26 42.5
comp=Z,7.2nm,1.3s
FITZ Fitzroy Crossi 74.35 126 P P 21 26 16.4 +0.3
comp=Z,2.8nm,0.9s,baz=318,slow=6.6,SNR=3.1
comp=Z,2.8nm,0.9s
FITZ Fitzroy Crossi 74.35 126 P P 21 26 15.8 -0.3
DBIC Dimbokro 74.46 267 P P 21 26 16.9 0.0
comp=Z,4.1nm,0.9s,baz=78,slow=8.6,SNR=2.0
comp=Z,4.1nm,0.9s
DBIC Dimbokro 74.46 267 P P 21 26 17.0 0.0
DBIC Dimbokro 74.46 267 P P 21 26 16.6 -0.4
DBIC IAmb IAmb 21 26 55.6
comp=Z,12nm,1.2s
MTN Manton Dam 74.50 118 P P 21 26 17.1 0.0
KNRA Kununurra 74.76 122 P P 21 26 18.7 +0.2
KNRA IAmb IAmb 21 26 20.3
comp=Z,6.0nm,0.8s
INK Inuvik 75.08 9 P P 21 26 19.2 -0.5
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 75.08 9 P P 21 26 19.2 -0.5
INK IAmb IAmb 21 26 40.0
comp=Z,8.7nm,0.9s
CAST Castle Rocks 75.84 18 P P 21 26 24.0 -0.2
ILAR Eielson Array 75.94 16 P P 21 26 24.1 -0.6
comp=Z,1.0nm,0.8s,baz=315,slow=4.8,SNR=10.0
ILAR LR LR 22 06 35.7
comp=Z,32nm,18.6s,baz=247,slow=41
comp=Z,1.0nm,0.8s
ILAR Eielson Array 75.94 16 P P 21 26 23.9 -0.9
FRB Frobisher Bay 76.11 343 LR LR 22 01 50.4
comp=Z,19nm,19.4s,baz=68,slow=37
BOSA Boshof 76.75 220 P P 21 26 29.9 +0.1
comp=Z,2.5nm,0.7s,baz=11,slow=3.1,SNR=7.7
comp=Z,2.5nm,0.7s
BOSA Boshof 76.75 220 P P 21 26 30.1 +0.2
BOSA pmax pmax
comp=Z,13nm,1.4s
BOSA Boshof 76.75 220 P P 21 26 30.1 +0.2
BOSA IAmb IAmb 21 27 04.5
comp=Z,13nm,1.4s
MORW Morawa 76.97 140 P P 21 26 30.1 -0.8
DHY Denali Highway 77.29 17 P P 21 26 32.2 -0.3
DHY IAmb IAmb 21 26 33.8
comp=Z,4.4nm,0.8s
BCAR Beaver Creek A 78.53 14 P P 21 26 39.4 +0.1
WB0 Warramunga Arr 81.45 121 P P 21 26 55.0 -0.6
WB0 IAmb IAmb 21 27 04.0
comp=Z,8.9nm,1.3s
WRA Warramunga Arr 81.53 122 P P 21 26 56.1 +0.1
comp=Z,3.5nm,0.8s,baz=323,slow=4.9,SNR=34
comp=Z,3.5nm,0.8s
WRA Warramunga Arr 81.53 122 P P 21 26 55.1 -0.9
WRAB Tennant Creek 81.53 122 ⇑*i*P P 21 26 56.4 +0.4
WRAB pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 82.41 3 P P 21 26 59.5 -0.5
comp=Z,0.3nm,0.3s,baz=355,slow=5.3,SNR=2.6
YKA LR LR 22 06 32.4
comp=Z,22nm,19.9s,baz=254,slow=38
comp=Z,0.3nm,0.3s
SCHQ Schefferville 83.09 337 LR LR 22 03 07.3
comp=Z,42nm,20.1s,baz=82,slow=35
AS31 Alice Springs 83.74 125 P P 21 27 06.6 -0.9
ASAR Alice Springs 83.74 125 P P 21 27 07.5 0.0
comp=Z,2.7nm,0.8s,baz=311,slow=4.8,SNR=25
comp=Z,2.7nm,0.8s
ASAR Alice Springs 83.74 125 P P 21 27 06.6 -0.8
DLBC Dease Lake 84.97 11 LR LR 22 09 51.9
comp=Z,29nm,18.7s,baz=302,slow=39
CTA Charters Tower 90.22 115 P P 21 27 39.1 +0.1
comp=Z,4.8nm,0.8s,baz=216,slow=4.7,SNR=4.8
comp=Z,4.8nm,0.8s
ULM Lac du Bonnet 93.97 351 LR LR 22 14 21.2
comp=Z,29nm,18.2s,baz=358,slow=38
NEW Newport 96.47 5 LR LR 22 14 42.3
comp=Z,17nm,20.0s,baz=34,slow=37
QSPA South Pole Qui 125.14 180 PKP **PKiKP 21 33 37.6 -0.1**
comp=Z,0.9nm,0.7s,baz=245,slow=3.1,SNR=6.2
QSPA South Pole Qui 125.14 180 PKPdf 21 33 37.2 -0.1
CFA Coronel Fontan 145.78 264 PKPbc **PKPab 21 34 17.9 +0.2**
comp=Z,0.6nm,0.4s,baz=96,slow=6.9,SNR=3.6
PLCA Paso Flores 149.25 248 PKPbc **PKPbc 21 34 26.1 -0.4**
comp=Z,2.4nm,1.1s,baz=104,slow=4.2,SNR=1.7

*IDC **18**21:21:02.6±1.1,11°.94N×95°.32E,h0km,mb3.7/9, mbtmp3.6/10,ML3.4/1,MS3.2/1,Error ellipse: s-maj=41.0km s-min=20.6km az=51.0*
*BKK **18**21:21:05.6±1.1,12°N×9°.5E±1°.1,h28km±20km,M3.8/11, mb3.9/4,mbB4.1/3,Mjma3.6/11,ML4.0/11,MLv3.8/11, Mw(mB)3.2/3*
ISC 18 21:21:07.3±0.9,11°.84N±0°.08×95°.4E±0°.1,h35km,n14, σ1s32/16,mb3.8/9,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RNTT	**Ranong**	**3.86**	**129**	P	**Pn**	**21 22 02.0**	**-2.2**
RNTT				S	**Sn**	**21 22 46.8**	**-1.5**
PHET	**Kaeng Krachan**	**4.24**	**75**	P	**Pn**	**21 22 09.7**	**+0.3**
KHLT	**Khaolaem Dam**	**4.25**	**46**	P	**Pn**	**21 22 08.9**	**-0.7**
KHLT				S	**Sn**	**21 22 58.9**	**+0.9**
UTHA	**Uthaitani**	**5.37**	**46**	P	**Pn**	**21 22 24.5**	**-0.5**
	76nm5.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**7.40**	**27**	Pn	**Pn**	**21 22 50.8**	**-2.1**
	0.2nm,0.3s,baz=207,slow=14,SNR=1.6						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**36.57**	**345**	P	**P**	**21 28 08.4**	**-1.4**
	0.3nm,0.8s,baz=170,slow=8.3,SNR=1.6						
MKAR				LR	LR	21 45 11.8	
	comp=Z,36nm,18.5s,baz=137,slow=40						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**41.08**	**344**	P	**P**	**21 28 47.5**	**+0.1**
	0.7nm,0.8s,baz=155,slow=7.1,SNR=4.6						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**49.64**	**129**	P	**P**	**21 29 57.2**	**+1.4**
	1.3nm,0.8s,baz=303,slow=7.5,SNR=5.6						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**51.58**	**133**	P	**P**	**21 30 12.0**	**+1.6**
	0.7nm,0.7s,baz=310,slow=6.6,SNR=4.9						
	0.7nm,0.7s						
BRTR	**Keskin Array B**	**60.88**	**309**	P	**P**	**21 31 17.6**	**+0.8**
	0.5nm,0.5s,baz=121,slow=8.3,SNR=4.5						
	0.5nm,0.5s						
PETK	**Petropavlovsk-**	**64.07**	**36**	P	**P**	**21 31 38.9**	**+1.3**
	0.6nm,0.3s,baz=209,slow=6.0,SNR=4.1						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**69.84**	**331**	P	**P**	**21 32 13.4**	**-0.8**
	0.5nm,0.5s,baz=91,slow=8.3,SNR=5.3						
	0.5nm,0.5s						
HFS	**Hagfors**	**75.70**	**329**	P	**P**	**21 32 48.7**	**-0.3**
	0.5nm,0.6s,baz=122,slow=7.0,SNR=0.9						
	0.5nm,0.6s						
GERES	**GERESS Array B**	**75.75**	**318**	P	**P**	**21 32 49.0**	**-0.7**
	0.2nm,0.5s,baz=75,slow=6.9,SNR=2.6						
	0.2nm,0.5s						

*IDC **18**21:21:08.6±33.0,22°.13S×178°.84W,h419km±316km, mb3.1/7,mbtmp3.9/7,Error ellipse: s-maj=216.9km s-min=40.1km az=47.0*
ISC 18 21:21:08.2±6.4,22°.3S±0°.9×178°.9W±0°.6,h400km,n7, σ0s81/7,mb3.3/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**32.49**	**267**	P	**P**	**21 27 04.9**	**+1.2**
	2.4nm,0.6s,baz=80,slow=11,SNR=1.8						
	2.4nm,0.6s						
STKA	**Stephens Creek**	**36.23**	**246**	P	**P**	**21 27 35.3**	**0.0**
	1.2nm,0.5s,baz=100,slow=14,SNR=3.5						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**43.28**	**259**	P	**P**	**21 28 32.3**	**-0.4**
	0.7nm,0.6s,baz=96,slow=7.5,SNR=7.8						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**43.52**	**264**	P	**P**	**21 28 33.7**	**-0.9**
	0.6nm,0.5s,baz=96,slow=8.4,SNR=11						
	0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.95**	**264**	P	**P**	**21 29 38.1**	**-0.3**
	1.2nm,0.7s,baz=111,slow=8.3,SNR=1.7						
	1.2nm,0.7s						

VNDA Vanda 56.01 185 P P 21 30 06.3 -0.2
0.4nm,0.5s,baz=0.0,slow=2.0,SNR=5.6
0.4nm,0.5s
QSPA South Pole Qui 67.74 180 P P 21 31 24.3 +0.3
1.4nm,0.8s,baz=14,slow=1.4,SNR=7.0
1.4nm,0.8s

*CATAC **18** 21:30:06.3±0.8, 7°N±3″×7°3W±°, h144km±7km, M3.8/7, MLv3.8/7, Error ellipse: s-maj=11.0km s-min=5.4km az=91.5, confirmed*
*RSNC **18** 21:30:06.4±0.0, 7°N±1″×7°3W±°, h146km±1km, M3.4, mB4.8, mb3.8, ML3.1, Mw(mB)4.0*
*FUNV **18** 21:30:08.0, 7°14N×73°16W, h10km, MW3.5, Presumed earthquake*
ISC 18 21:30:03.9±1.3, **6°85N**±0°03×**73°11W**±0°04, **h158**km±7km, **n40**, σ1§51/80, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**196**	P			**Pn**	**21 30 26.1**	**+0.5**
BARC				S			**Sn**	**21 30 41.4**	**-0.8**
PAMC	**Pamplona, Colo**	**0.63**	**40**	P			**Pn**	**21 30 29.0**	**+1.6**
PAMC				S			**Sn**	**21 30 46.2**	**+0.8**
BRJC	**Barrancabermej**	**0.64**	**281**	P			**Pn**	**21 30 27.8**	**+0.9**
BRJC				S			**Sn**	**21 30 45.0**	**+0.5**
RUSC	**La Rusia**	**0.95**	**179**	P			**Pn**	**21 30 30.1**	**+0.4**
RUSC				S			**Sn**	**21 30 48.9**	**-0.4**
RUSC	**La Rusia**	**0.95**	**179**	P			**Pn**	**21 30 30.0**	**+0.4**
RUSC				S			**Sn**	**21 30 48.8**	**-0.6**
RUSC	**La Rusia**	**0.95**	**179**	*eP*			**Pn**	**21 30 30.2**	**+0.6**
RUSC				*eS*			**Sn**	**21 30 47.1**	**-2.2**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P			**Pn**	**21 30 32.7**	**-0.1**
PTBC				S			**Sn**	**21 30 53.6**	**-1.4**
OCAC	**Ocana**	**1.40**	**351**	P			**Pn**	**21 30 34.4**	**+1.2**
OCAC				S			**Sn**	**21 30 56.1**	**+0.3**
SPBC	**San Pablo de B**	**1.53**	**219**	P			**Pn**	**21 30 35.0**	**+0.5**
SPBC				S			**Sn**	**21 30 56.8**	**-1.2**
NORC	**Norcasia**	**2.17**	**234**	P			**Pn**	**21 30 41.9**	**+0.4**
NORC				S			**Sn**	**21 31 09.7**	**-0.9**
CHIC	**Chingaza**	**2.29**	**196**	P			**Pn**	**21 30 44.2**	**+0.8**
CHIC				S			**Sn**	**21 31 13.7**	**-0.1**
ROSC	**El Rosal**	**2.33**	**211**	P			**Pn**	**21 30 45.9**	**+2.1**
ROSC				S			**Sn**	**21 31 16.2**	**+1.6**
HELC	**Santa Helena**	**2.49**	**255**	P			**Pn**	**21 30 46.0**	**+0.3**
HELC				S			**Sn**	**21 31 15.8**	**-2.2**
HELC	**Santa Helena**	**2.49**	**255**	P			**Pn**	**21 30 45.9**	**+0.2**
HELC				S			**Sn**	**21 31 18.5**	**+0.6**
HELC	**Santa Helena**	**2.49**	**255**	*eP*			**Pn**	**21 30 47.8**	**+2.1**
HELC				*eS*			**Sn**	**21 31 19.2**	**+1.3**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P			**Pn**	**21 30 47.5**	**+1.5**
CVER				S			**Sn**	**21 31 19.1**	**+0.6**
UREC	**San Jos de Ur**	**2.57**	**291**	P			**Pn**	**21 30 46.5**	**+0.3**
UREC				S			**Sn**	**21 31 16.7**	**-2.3**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	P			**Pn**	**21 30 50.2**	**+1.0**
GUY2C				S			**Sn**	**21 31 23.5**	**-0.6**
VILC	**Villavicencio,**	**2.78**	**192**	P			**Pn**	**21 30 49.4**	**+0.4**
VILC				S			**Sn**	**21 31 23.2**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.81**	**160**	P			**Pn**	**21 30 49.3**	**+0.1**
PTGC				S			**Sn**	**21 31 22.5**	**-1.8**
CBOC	**Ciudad Bolivar**	**3.05**	**251**	P			**Pn**	**21 30 53.6**	**+1.2**
CBOC				S			**Sn**	**21 31 29.4**	**-0.5**
DBBC	**Dabeiba**	**3.08**	**273**	P			**Pn**	**21 30 53.5**	**+0.8**
DBBC				S			**Sn**	**21 31 29.3**	**-1.3**
SDV	**Santo Domingo**	**3.18**	**50**	*eP*			**Pn**	**21 30 55.8**	**+1.8**
SDV				*eS*			**Sn**	**21 31 30.2**	**-2.6**
ARGC	**Ariguani, Magd**	**3.19**	**339**	P			**Pn**	**21 30 56.2**	**+2.2**
ARGC				S			**Sn**	**21 31 35.2**	**+2.2**
PRAC	**Prado**	**3.58**	**210**	P			**Pn**	**21 30 59.9**	**+0.8**
PRAC				S			**Sn**	**21 31 41.8**	**-0.2**
PRAC	**Prado**	**3.58**	**210**	P			**Pn**	**21 30 59.6**	**+0.5**
PRAC				S			**Sn**	**21 31 41.4**	**-0.6**
APAC	**Apartado, Choc**	**3.60**	**287**	P			**Pn**	**21 30 59.8**	**+0.6**
APAC				S			**Sn**	**21 31 41.3**	**-0.9**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P			**Pn**	**21 31 00.2**	**+0.7**
ORTC				S			**Sn**	**21 31 43.1**	**+0.4**
SJCC	**San Jacinto, C**	**3.66**	**326**	P			**Pn**	**21 31 01.1**	**+1.1**
SJCC				S			**Sn**	**21 31 41.5**	**-2.1**
SJCC	**San Jacinto, C**	**3.66**	**326**	P			**Pn**	**21 31 01.6**	**+1.6**
SJCC				S			**Sn**	**21 31 41.2**	**-2.4**
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*			**Pn**	**21 31 00.5**	**+0.5**
SJCC				*eS*			**Sn**	**21 31 38.7**	**+5.0**
PLMC	**San Jos del P**	**3.70**	**239**	P			**Pn**	**21 31 01.7**	**+1.1**
PLMC				S			**Sn**	**21 31 43.1**	**-1.6**
LCBC	**Los crdobas,**	**3.80**	**302**	P			**Pn**	**21 31 03.0**	**+1.3**
LCBC				S			**Sn**	**21 31 48.4**	**+1.7**
GUVC	**San Jose del G**	**4.30**	**174**	P			**Pn**	**21 31 08.8**	**+0.4**
GUVC				S			**Sn**	**21 31 58.8**	**+0.1**
SMRC	**Santa Marta, M**	**4.42**	**346**	P			**Pn**	**21 31 11.3**	**+1.4**
SMRC				S			**Sn**	**21 31 59.2**	**-2.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	P			**Pn**	**21 31 16.6**	**-0.2**
URIC				S			**Sn**	**21 32 14.0**	**+0.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*			**Pn**	**21 31 16.5**	**-0.2**
URIC				*eS*			**Sn**	**21 32 08.2**	**-5.5**
JAMC	**Jamundi, Valle**	**5.07**	**225**	P			**Pn**	**21 31 18.6**	**0.0**
JAMC	602nm12nm,0.6s			S			**Sn**	**21 32 16.9**	**0.0**
	602nm12nm,0.6s								
GARC	**Garzon, Huila**	**5.21**	**207**	P			**Pn**	**21 31 20.0**	**-0.5**
GARC				S			**Sn**	**21 32 16.8**	**-3.5**
POPC	**Popayan, Colom**	**5.57**	**220**	P			**Pn**	**21 31 25.4**	**+0.2**
	5.6nm,0.6s								
POPC				S			**Sn**	**21 32 28.4**	**-0.4**
	5.6nm,0.6s								

*MAN **18** 21:30:16.0, 3°62N×126°94E, h29km, MS3.2*
*NEIC **18** 21:30:21.2±0.7, 4°10N±0°02×126°68E±0°08, h46km±9km, mb4.3/14, Error ellipse: s-maj=12.3km s-min=2.7km az=96.0*
*IDC **18** 21:30:22.2±1.8, 4°01N×126°66E, h60km±21km, mb3.6/9, mbtmp4.0/12, ML4.1/3, MS3.1/1, Error ellipse: s-maj=49.4km s-min=10.2km az=68.0*
ISC 18 21:30:21.0±0.5, **4°00N**±0°05×**126°68E**±0°08, **h45**km, **n39, σ1§28/41, mb4.1/14, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.70**	**320**	*i* P			**Pn**	**21 31 02.1**	**+0.1**
GSPH				*e*S			**Sn**	**21 31 35.0**	**+1.6**
DAV	**Davao City (W)**	**3.24**	**340**	P			**Pn**	**21 31 08.5**	**-0.8**
	11nm,0.3s,baz=257,slow=13,SNR=1.4								
DAV				S			**Sn**	**21 31 49.2**	**+2.5**
	91nm,0.3s,baz=226,slow=20,SNR=4.1								
	42nm,0.3s								
DAV	**Davao City (W)**	**3.24**	**340**				**Pn**	**21 31 08.7**	**-0.6**
TNTI	**Ternate**	**3.28**	**168**		Pn		**Pn**	**21 31 11.5**	**+1.5**
BIPH	**Bislig**	**4.17**	**356**	*eP*			**Pn**	**21 31 26.1**	**+4.0**
BIPH				*eS*			Sn	21 32 26.2	+17
CGP	**Cagayan de Oro**	**4.84**	**336**	*eP*			**Pn**	**21 31 33.9**	**+2.5**
CGP				*eS*			Sn	21 32 44.3	+18
LUWI	**Luwuk**	**6.36**	**218**		Pn		**Pn**	**21 31 53.3**	**+1.1**
TOLI2	**Tolitoli**	**6.56**	**244**				**Pn**	**21 31 55.3**	**+0.4**
SIJI	**Sorong**	**6.66**	**136**	P			**Pn**	**21 31 56.7**	**+0.3**
	3.1nm,0.3s,baz=335,slow=14,SNR=12								
SIJI				S			**Sn**	**21 33 08.8**	**-2.3**
	2.5nm,0.4s,baz=240,slow=22,SNR=1.3								
	8.8nm,0.4s								
FAKI	**Fak Fak**	**8.85**	**141**		Pn		**Pn**	**21 32 26.2**	**-0.1**
BATI	**Baumata**	**14.43**	**192**	P			**Pn**	**21 33 43.5**	**+0.8**
	1.9nm,0.3s,baz=352,slow=15,SNR=1.6								
	4.5nm,0.3s								
KNRA	**Kununurra**	**19.66**	**174**				**P**	**21 34 47.1**	**+0.8**
KNRA						IAmb	IAmb	21 35 13.4	
	comp=Z,8.9nm,1.1s								
YULB	**Yu-li**	**19.97**	**345**	P			**P**	**21 34 48.3**	**-1.3**
YULB						IAmb	IAmb	21 34 49.5	
	comp=Z,18nm,1.2s								
TPUB	**Ta-pu**	**20.06**	**344**	P			**P**	**21 34 49.1**	**-1.5**
TPUB						IAmb	IAmb	21 35 16.2	
	comp=Z,24nm,1.0s								
FITZ	**Fitzroy Crossi**	**21.99**	**183**	P			**P**	**21 35 11.8**	**+0.4**
	comp=Z,1.8nm,0.4s,baz=25,slow=9.8,SNR=16								
	comp=Z,1.8nm,0.4s								
FITZ	**Fitzroy Crossi**	**21.99**	**183**	P			**P**	**21 35 11.0**	**-0.4**
JOW	**Kunigami**	**22.75**	**4**	LR			LR	21 43 42.5	
	comp=Z,48nm,21.3s,baz=208,slow=35								
WB0	**Warramunga Arr**	**24.81**	**162**	P			**P**	**21 35 38.9**	**-0.1**
WB0						IAmb	IAmb	21 35 54.2	
	comp=Z,9.6nm,1.2s								
WRA	**Warramunga Arr**	**24.96**	**163**	P			**P**	**21 35 40.4**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=343,slow=10,SNR=34								
	comp=Z,2.5nm,0.7s								
WRA	**Warramunga Arr**	**24.96**	**163**	P			**P**	**21 35 39.2**	**-1.2**
AS31	**Alice Springs**	**28.39**	**166**	P			**P**	**21 36 10.8**	**-0.5**
ASAR	**Alice Springs**	**28.39**	**166**	P			**P**	**21 36 11.8**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=345,slow=7.6,SNR=16								
	comp=Z,0.5nm,0.5s								
ASAR	**Alice Springs**	**28.39**	**166**	P			**P**	**21 36 11.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**30.70**	**300**	P			**P**	**21 36 31.2**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=106,slow=7.3,SNR=4.6								
	comp=Z,0.4nm,0.4s								
BBOO	**Buckleboo**	**37.68**	**167**	P			**P**	**21 37 32.2**	**+0.1**
STKA	**Stephens Creek**	**38.40**	**159**	P			**P**	**21 37 38.2**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=339,slow=9.5,SNR=6.3								
	comp=Z,1.8nm,0.5s								
ARMA	**Armidale**	**41.72**	**147**	P			**P**	**21 38 06.7**	**+0.8**
ARMA						IAmb	IAmb	21 38 26.0	
	comp=Z,17nm,1.5s								
EVN	**Everest**	**44.79**	**306**	P			**P**	**21 38 29.8**	**-1.6**
SONM	**Songino Array**	**47.02**	**341**	P			**P**	**21 38 48.8**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=142,slow=7.3,SNR=1.6								
	comp=Z,0.4nm,0.8s								
MKAR	**Makanchi Array**	**57.30**	**325**	P			**P**	**21 40 03.6**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=118,slow=7.6,SNR=12								
	comp=Z,0.5nm,0.5s								
MKAR	**Makanchi Array**	**57.30**	**325**	P			**P**	**21 40 03.2**	**-1.2**
MAKZ	**Makanchi**	**57.49**	**325**	P			**P**	**21 40 04.7**	**-1.0**
MAKZ						IAmb	IAmb	21 40 24.1	
	comp=Z,4.7nm,1.4s								
ZALV	**Zalesovo Beam**	**60.32**	**333**	P			**P**	**21 40 23.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=121,slow=5.6,SNR=2.1								
	comp=Z,0.3nm,0.3s								
ZALV	**Zalesovo Beam**	**60.32**	**333**	P			**P**	**21 40 24.1**	**-1.0**
KURBB	**Kurchatov Arra**	**61.48**	**327**	P			**P**	**21 40 32.2**	**-0.9**
	comp=Z,1.2nm,0.2s,baz=133,slow=7.7,SNR=1.6								
	comp=Z,1.2nm,0.2s								
ABKAR	**Akbulak array**	**71.91**	**321**	P			**P**	**21 41 38.6**	**-0.9**
H19K	**Roundabout Mou**	**80.94**	**24**	P			**P**	**21 42 29.8**	**-0.5**
H19K						IAmb	IAmb	21 42 43.7	
	comp=Z,3.3nm,1.1s								
SBA	**Scott Base**	**84.61**	**172**	P			**P**	**21 42 49.8**	**+0.6**
SBA						IAmb	IAmb	21 42 57.4	
	comp=Z,3.4nm,1.4s								
QSPA	**South Pole Qui**	**93.91**	**180**				**P**	**21 43 34.9**	**+1.2**

*SJA **18** 21:37:38.3±0.8, 31°47S×69°22W, h118km±3km, ML3.9, MW3.9*
*NEIC **18** 21:37:39.1±2.1, 31°49S±0°05×69°24W±0°04, h111km±5km, mb4.4/9, Error ellipse: s-maj=7.9km s-min=4.8km az=201.0*
*IDC **18** 21:37:39.1±1.2, 31°48S×69°17W, h112km±9km, mb3.5/6, mbtmp3.8/10, Error ellipse: s-maj=28.7km s-min=17.5km az=94.0*
ISC 18 21:37:38.5±0.6, **31°47S**±0°03×**69°21W**±0°03, **h113**km±4km, **n107**, σ1§39/139, **mb4.3**/10, **2C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.33**	**193**	*eP*			**Pn**	**21 37 56.0**	**+0.8**
RTLS				*eS*			**Sn**	**21 38 08.8**	**+1.0**
RTLS						IAML		21 38 09.6	
	comp=Z,5μm,0.4s								
ZON	**Zonda**	**0.46**	**99**	*eP*			**Pn**	**21 37 56.0**	**+0.5**
ZON				*eS*			**Sn**	**21 38 10.1**	**+1.7**
ZON						IAML		21 38 11.7	
	comp=Z,2μm,0.3s								
ZON	**Zonda**	**0.46**	**99**				**Pn**	**21 37 56.6**	**+1.1**
ZON						Sn	**Sn**	**21 38 09.4**	**+1.0**
SJA	**San Juan**	**0.56**	**96**	*eP*			**Pn**	**21 37 57.5**	**+1.3**
SJA				*eS*			**Sn**	**21 38 11.0**	**+1.5**
SJA						IAML		21 38 12.0	
	comp=Z,4μm,0.3s								
RTLL	**Cerro Villicun**	**0.64**	**77**	*eP*			**Pn**	**21 37 57.7**	**+0.8**
RTLL				*eS*			**Sn**	**21 38 11.7**	**+1.1**
RTLL						IAML		21 38 12.6	
	comp=Z,4μm,0.4s								
CFA	**Coronel Fontan**	**0.84**	**99**	P			**Pn**	**21 37 59.1**	**+0.7**
	comp=Z,152nm,0.3s,baz=288,slow=7.1,SNR=829								
CFA				S			**Sn**	**21 38 14.1**	**+0.5**
	comp=Z,852nm,0.3s,baz=132,slow=23,SNR=35								
CFA	**Coronel Fontan**	**0.84**	**99**	*eP*			**Pn**	**21 37 58.9**	**+0.4**
CFA						IAML		21 38 16.1	
	comp=Z,2μm,0.2s								
ACCO	**Cerro Coronel**	**0.89**	**8**	*eP*			Pn	21 37 54.5	-4.8
ACCO						IAML		21 38 19.6	
	comp=Z,2μm,0.3s								
ACDV	**Cuesta del Vie**	**1.30**	**3**	*eP*			**Pn**	**21 38 04.9**	**+1.5**
ACDV						IAML		21 38 26.9	
	comp=Z,681nm,1.3s								
AROD	**Rodeo**	**1.32**	**350**	*eP*			**Pn**	**21 38 05.2**	**+1.4**
ARCO	**CERRO ARCO**	**1.39**	**170**	*eP*			**Pn**	**21 38 06.0**	**+1.6**
ARCO				*eS*			**Sn**	**21 38 26.9**	**+2.9**
ARCO						IAML		21 38 28.0	
	comp=Z,3μm,0.6s								
CO03	**El Pedregal**	**1.42**	**296**	*eP*			**Pn**	**21 38 05.4**	**+0.8**
CO03				*eS*			**Sn**	**21 38 25.9**	**+1.4**
CO03						IAML		21 38 26.6	
	comp=Z,3μm,0.4s								
CO03	**El Pedregal**	**1.42**	**296**				**Pn**	**21 38 05.5**	**+0.8**
CO03						Sn	**Sn**	**21 38 25.3**	**+0.8**
CO02	**Combarbal**	**1.56**	**279**	*eP*			**Pn**	**21 38 06.9**	**+0.6**
CO02				*eS*			**Sn**	**21 38 28.8**	**+1.4**
CO02						IAML		21 38 30.2	
	comp=Z,2μm,0.4s								
CO02	**Combarbal**	**1.56**	**279**				**Pn**	**21 38 06.8**	**+0.5**
CO04	**Los Peladeros**	**1.61**	**249**				**Pn**	**21 38 07.2**	**+0.1**
AAGR	**Agrelo**	**1.64**	**169**	*eP*			**Pn**	**21 38 08.8**	**+1.4**
AAGR				*eS*			**Sn**	**21 38 31.3**	**+2.0**
AAGR						IAML		21 38 44.7	
	comp=Z,706nm,0.5s								
CO01	**Juntas del Tor**	**1.67**	**333**	*eP*			**Pn**	**21 38 09.2**	**+1.3**
CO01				*eS*			**Sn**	**21 38 32.8**	**+2.6**
CO01						IAML		21 38 35.0	
	comp=Z,580nm,0.4s								
CO01	**Juntas del Tor**	**1.67**	**333**				**Pn**	**21 38 09.6**	**+1.8**
AVFE	**Valle Fertil**	**1.71**	**62**	*eP*			**Pn**	**21 38 09.2**	**+1.1**
AVFE				*eS*			**Sn**	**21 38 32.2**	**+1.6**
AVFE						IAML		21 38 33.4	
	comp=Z,624nm,0.3s								
VA03	**San Esteban**	**1.72**	**221**	*eP*			**Pn**	**21 38 08.9**	**+0.6**
VA03				*eS*			**Sn**	**21 38 33.4**	**+2.4**
VA03						IAML		21 38 36.5	
	comp=Z,549nm,0.9s								
VA03	**San Esteban**	**1.72**	**221**				**Pn**	**21 38 09.5**	**+1.2**
GO04	**Tololo Observa**	**1.88**	**313**	*eP*			**Pn**	**21 38 10.7**	**+0.2**
GO04				*eS*			**Sn**	**21 38 35.6**	**+0.9**
GO04						IAML		21 38 37.1	
	comp=Z,1μm,0.8s								
GO04	**Tololo Observa**	**1.88**	**313**				**Pn**	**21 38 10.6**	**+0.2**
ACAN	**Cantantal**	**1.90**	**115**	*eP*			**Pn**	**21 38 11.3**	**+0.9**
ACAN						IAML		21 38 37.5	
	comp=Z,3μm,0.3s								
AVIZ	**Vizcacheras**	**2.08**	**164**	*eP*			**Pn**	**21 38 14.5**	**+1.7**
AVIZ				*eS*			**Sn**	**21 38 40.4**	**+1.5**
PEL	**Peldehue**	**2.08**	**216**	*eP*			**Pn**	**21 38 13.9**	**+1.2**
PEL				*eS*			**Sn**	**21 38 41.4**	**+2.4**
PEL	**Peldehue**	**2.08**	**216**				**Pn**	**21 38 13.6**	**+0.9**
CO06	**Fray Jorge**	**2.23**	**290**				**Pn**	**21 38 13.4**	**-1.1**
MT16	**CCHEN**	**2.24**	**209**				**Pn**	**21 38 16.0**	**+1.2**
MT03	**Universidad Ad**	**2.30**	**208**	*eP*			**Pn**	**21 38 16.4**	**+0.8**
MT03				*eS*			**Sn**	**21 38 46.5**	**+2.7**
MT03						IAML		21 38 48.4	
	comp=Z,510nm,0.5s								
MT03	**Universidad Ad**	**2.30**	**208**				**Pn**	**21 38 16.7**	**+1.2**
MT05	**Renca**	**2.31**	**214**	*eP*			**Pn**	**21 38 16.0**	**+0.4**
MT05				*eS*			**Sn**	**21 38 46.5**	**+2.4**
MT05						IAML		21 38 49.6	
	comp=Z,319nm,0.5s								
MT05	**Renca**	**2.31**	**214**				**Pn**	**21 38 16.4**	**+0.8**
MT02	**Curacav**	**2.42**	**222**	*eP*			**Pn**	**21 38 16.9**	**0.0**
MT02				*eS*			**Sn**	**21 38 47.0**	**+0.6**
MT02	**Curacav**	**2.42**	**222**				**Pn**	**21 38 17.0**	**0.0**
MT13	**San Alfonso**	**2.44**	**202**	*eP*			**Pn**	**21 38 18.9**	**+1.5**
MT13				*eS*			**Sn**	**21 38 45.6**	**-1.6**
MT13						IAML		21 38 54.3	
	comp=Z,188nm,0.3s								
MT13	**San Alfonso**	**2.44**	**202**				**Pn**	**21 38 19.0**	**+1.5**
MT09	**Talagante**	**2.74**	**213**				**Pn**	**21 38 21.2**	**-0.1**
LCO	**Las Campanas**	**2.77**	**332**	*eP*			**Pn**	**21 38 22.2**	**+0.3**
LCO				*eS*			**Sn**	**21 38 54.4**	**-0.8**
LCO						IAML		21 38 54.5	
	comp=Z,839nm,0.6s								
LCO	**Las Campanas**	**2.77**	**332**				**Pn**	**21 38 22.0**	**+0.1**
BO04	**La Punta**	**2.77**	**205**				**Pn**	**21 38 22.5**	**+0.8**
AC05	**El Transito**	**2.78**	**340**	*eP*			**Pn**	**21 38 22.5**	**+0.6**
AC05				*eS*			**Sn**	**21 38 56.0**	**+0.7**
AC05						IAML		21 38 57.1	
	comp=Z,387nm,0.7s								
AC05	**El Transito**	**2.78**	**340**				**Pn**	**21 38 23.3**	**+1.4**
ACLC	**CERRO LA CRUZ**	**2.82**	**44**	*eP*			**Pn**	**21 38 23.5**	**+1.1**
ACLC				*eS*			Sn	21 39 12.0	+16
ACLC						IAML		21 39 25.2	
	comp=Z,228nm,0.8s								
VCA	**Vinchina**	**2.86**	**18**	*eP*			**Pn**	**21 38 23.8**	**+0.8**
VCA				*eS*			**Sn**	**21 39 01.6**	**+4.4**
VCA						IAML		21 39 05.6	
	comp=Z,393nm,0.3s								
MT01	**Popeta**	**2.94**	**215**	*eP*			**Pn**	**21 38 23.1**	**-0.7**
MT01				*eS*			**Sn**	**21 39 02.1**	**+3.4**
MT01	**Popeta**	**2.94**	**215**				**Pn**	**21 38 23.1**	**-0.7**
VA05	**Santo Domingo**	**2.98**	**222**				**Pn**	**21 38 23.5**	**-0.8**
MRA	**San Martin**	**3.12**	**109**	*eP*			**Pn**	**21 38 25.4**	**-0.8**
MRA				*eS*			**Sn**	**21 39 02.5**	**-0.5**
MRA						IAML		21 39 24.3	
	comp=Z,271nm,0.5s								
BO01	**Tunca**	**3.31**	**208**	*eP*			**Pn**	**21 38 28.1**	**-0.6**
BO01	**Tunca**	**3.31**	**208**	Pn			**Pn**	**21 38 28.2**	**-0.5**
BO02	**Sierra Bellavi**	**3.56**	**201**	*eP*			**Pn**	**21 38 32.4**	**+0.2**
BO02				*eS*			**Sn**	**21 39 17.1**	**+3.5**
BO02						IAML		21 39 17.9	
	comp=Z,80nm,0.4s								
BO02	**Sierra Bellavi**	**3.56**	**201**				**Pn**	**21 38 31.9**	**-0.2**
AC04	**Llanos de Chal**	**3.64**	**333**				**Pn**	**21 38 32.3**	**-0.8**
TINO	**Tinogasta**	**3.69**	**23**	*eP*			**Pn**	**21 38 35.3**	**+1.4**
TINO				*eS*			Sn	21 38 59.0	-18
TINO						IAML		21 39 23.6	
	comp=Z,140nm,0.6s								
TCA	**Tanti**	**3.95**	**89**	*eP*			**Pn**	**21 38 37.7**	**+0.4**
TCA				*eS*			**Sn**	**21 39 21.7**	**-1.1**
TCA						IAML		21 39 38.9	
	comp=Z,213nm,0.6s								
GO03	**Copiapo**	**3.97**	**347**	*eP*			**Pn**	**21 38 37.7**	**+0.2**
GO03				*eS*			**Sn**	**21 39 23.9**	**+0.6**
GO03						IAML		21 39 26.1	
	comp=Z,136nm,0.5s								
GO03	**Copiapo**	**3.97**	**347**				**Pn**	**21 38 37.4**	**-0.2**
GO05	**Hualane**	**4.20**	**212**	Pn			**Pn**	**21 38 38.2**	**-2.4**
AC02	**Maricunga**	**4.62**	**1**	*eP*			**Pn**	**21 38 47.2**	**+0.4**
AC02				*eS*			**Sn**	**21 39 38.7**	**-1.0**
AC02						IAML		21 39 45.0	
	comp=Z,45nm,0.2s								
AC02	**Maricunga**	**4.62**	**1**				**Pn**	**21 38 47.4**	**+0.6**
ML02	**Panimavida**	**4.66**	**203**				**Pn**	**21 38 44.9**	**-1.8**
AC01	**Pan de Azucar**	**5.44**	**347**				**Pn**	**21 38 55.8**	**-1.6**
BI02	**San Fabin de**	**5.45**	**198**	Pn			**Pn**	**21 38 55.7**	**-1.8**
PB14	**IPOC Station P**	**6.90**	**351**				**Pn**	**21 39 14.4**	**-3.1**
GO06	**Curarrehue**	**8.30**	**192**	Pn			**Pn**	**21 39 34.1**	**-2.0**
TRQA	**Tornquist**	**8.86**	**140**				**Pn**	**21 39 43.2**	**-0.4**
PLCA	**Paso Flores**	**9.30**	**186**	P			**Pn**	**21 39 48.9**	**-0.8**
	comp=Z,2.7nm,1.1s,baz=354,slow=16,SNR=3.2								
PLCA				S			**Sn**	**21 41 30.2**	**-2.3**
	comp=Z,1.4nm,0.7s,baz=101,slow=20,SNR=1.6								
PLCA	**Paso Flores**	**9.30**	**186**	Pn			**Pn**	**21 39 47.7**	**-1.9**
PB03	**IPOC Station P**	**9.40**	**357**	Pn			Pn	21 39 46.3	-4.8
PB07	**IPOC Station P**	**9.72**	**356**	Pn			**Pn**	**21 39 52.3**	**-3.3**
CPUP	**Villa Florida**	**11.60**	**67**	P			**Pn**	**21 40 19.2**	**-1.4**
	comp=Z,1.2nm,0.8s,baz=308,slow=17,SNR=1.9								
CPUP				S	

EGOR	**Sierra Gorda,**	**0.84**	**358**	P	**Pb**	**21 57 17.3**	**-1.3**
EGOR	**Sierra Gorda,**	**0.84**	**358**	Pg	**Pb**	**21 57 17.4**	**-1.3**
EGOR				Sg	**Sb**	**21 57 29.4**	**-0.8**
EGOR	**Sierra Gorda,**	**0.84**	**358**	Pg	**Pb**	**21 57 17.5**	**-1.1**
EGOR				Sg	**Sb**	**21 57 29.0**	**-1.1**
EGOR				*i* lVmb_Lg		21 57 32.9	
EALB	**Alboran**	**0.90**	**111**	Pg	**Pb**	**21 57 20.1**	**+0.7**
EALB				Sg	**Sb**	**21 57 32.5**	**+0.9**
EALB	**Alboran**	**0.90**	**111**	Pg	**Pb**	**21 57 20.2**	**+0.7**
EALB				Sg	**Sb**	**21 57 32.2**	**+0.6**
EALB				*i* lVmb_Lg		21 57 33.4	
PALE	**Palemas**	**1.05**	**174**	P	**Pn**	**21 57 22.5**	**-0.1**
PALE				S	**Sg**	**21 57 36.3**	**+0.9**
EQUE	**Quentar**	**1.07**	**28**	Pg	**Pb**	**21 57 22.3**	**-0.1**
EQUE				Sg	**Sb**	**21 57 35.6**	**-1.0**
EQUE				*i* lVmb_Lg		21 57 39.5	
EQTA	**Presa de Quent**	**1.07**	**28**	Pg	**Pb**	**21 57 22.9**	**+0.5**
EQTA				Sg	**Sb**	**21 57 35.3**	**-1.3**
EBER	**Berja**	**1.14**	**56**	P	**Pn**	**21 57 23.1**	**-1.0**
EBER	**Berja**	**1.14**	**56**	Pg	**Pn**	**21 57 23.4**	**-0.7**
EBER				Sg	**Sb**	**21 57 38.9**	**+0.1**
EBER	**Berja**	**1.14**	**56**	Pg	**Pn**	**21 57 23.2**	**-0.9**
EBER				Sg	**Sb**	**21 57 38.5**	**-0.3**
EBER				*i* lVmb_Lg		21 57 40.5	
EJIF	**Jimena Fronter**	**1.14**	**280**	Pg	**Pn**	**21 57 22.1**	**-1.8**
EJIF				Sg	**Sg**	**21 57 39.0**	**+0.7**
ESPR	**Espera**	**1.56**	**293**	Pn	**Pg**	**21 57 32.0**	**+0.5**
ESPR	**Espera**	**1.56**	**293**	Pg	**Pg**	**21 57 32.5**	**+1.0**
ESPR				Sg	**Sg**	**21 57 52.8**	**+1.2**
ESPR				*i* lVmb_Lg		21 57 56.9	
ENIJ	**Nijar**	**1.66**	**64**	P	**Pn**	**21 57 31.1**	**+0.1**
ENIJ	**Nijar**	**1.66**	**64**	Pn	**Pn**	**21 57 31.1**	**+0.1**
ENIJ				Sn	**Sn**	**21 57 51.6**	**-1.0**
ENIJ	**Nijar**	**1.66**	**64**	Pn	**Pn**	**21 57 31.3**	**+0.3**
ENIJ				Sn	**Sn**	**21 57 51.5**	**-1.0**
ENIJ				*i* lVmb_Lg		21 57 53.6	
EQES	**Quesada**	**1.73**	**27**	Pg	**Pb**	**21 57 34.5**	**+0.8**
EQES				Sg	**Sb**	**21 57 56.2**	**+0.5**
EQES				*i* lVmb_Lg		21 58 02.4	
AKLM	**AKL**	**1.76**	**174**	P	**Pn**	**21 57 33.0**	**+0.5**
AKLM				S	**Sb**	**21 57 56.0**	**-0.5**
EADA	**Adamuz**	**1.94**	**348**	Pn	**Pn**	**21 57 36.1**	**+1.1**
EADA				Sg	**Sg**	**21 58 04.6**	**+0.6**
EADA	**Adamuz**	**1.94**	**348**	Pn	**Pn**	**21 57 36.2**	**+1.3**
EADA				Pg	**Pb**	**21 57 38.5**	**+1.3**
EADA				Sg	**Sg**	**21 58 04.6**	**+0.6**
EADA				*i* lVmb_Lg		21 58 05.2	
ECAB	**El Cabril**	**2.10**	**330**	Pn	**Pn**	**21 57 37.6**	**+0.4**
ECAB				Sn	**Sn**	**21 58 04.5**	**+1.0**
ECAB				Sg	**Sg**	**21 58 08.8**	**-0.3**
ECAB	**El Cabril**	**2.10**	**330**	Pg	**Pb**	**21 57 40.6**	**+0.6**
ECAB				Sg	**Sb**	**21 58 08.6**	**+2.3**
ECAB				*i* lVmb_Lg		21 58 16.6	
EZAR	**Zarzadilla de**	**2.49**	**49**	Pn	**Pn**	**21 57 45.3**	**+2.8**
EZAR				Sn	**Sn**	**21 58 14.4**	**+1.2**
EZAR				*i* lVmb_Lg		21 58 20.9	
PSIM	**Granatula de C**	**2.56**	**6**	Pn	**Pb**	**21 57 46.7**	**-1.2**
PSIM				Pg	**Pg**	**21 57 49.9**	**-0.8**
PSIM				Sn	**Sn**	**21 58 17.5**	**+2.6**
EMIN	**Mina Concepcio**	**2.57**	**307**	Pn	**Pn**	**21 57 44.3**	**+0.8**
EMIN				Sn	**Sn**	**21 58 13.0**	**-1.9**
EMIN	**Mina Concepcio**	**2.57**	**307**	Pn	**Pn**	**21 57 44.3**	**+0.8**
EMIN				*i* lVmb_Lg		21 57 59.9	
EMIN				Sn	**Sn**	**21 58 13.4**	**-1.5**
EMUR	**La Murta**	**2.76**	**54**	Pn	**Pn**	**21 57 47.5**	**+1.3**
EMUR				*i* lVmb_Lg		21 58 02.5	
EMUR				Sn	**Sn**	**21 58 18.2**	**-1.5**
CART	**Cartagena**	**2.79**	**61**	Sn	**Sn**	**21 58 19.2**	**-1.2**
EGRO	**El Granado**	**3.01**	**296**	Pn	**Pn**	**21 57 50.8**	**+1.2**
EGRO				Sn	**Sn**	**21 58 24.5**	**-1.4**
EGRO	**El Granado**	**3.01**	**296**	Pn	**Pn**	**21 57 50.8**	**+1.2**
EGRO				*i* lVmb_Lg		21 58 20.1	
EGRO				Sn	**Sn**	**21 58 24.7**	**-1.2**
PBAR	**Barrancos**	**3.04**	**310**	*e*P	**Pn**	**21 57 51.2**	**+1.2**
PBAR				*e*S	**Sn**	**21 58 25.9**	**-0.7**
PBAR				*i* IAML		21 58 27.2	
PBAR				*i* IAML		21 58 27.9	
PBAR				*i* IAML		21 58 29.3	
ETOB	**Tobarra**	**3.11**	**39**	Pn	**Pb**	**21 57 56.0**	**-1.2**
ETOB				*i* lVmb_Lg		21 58 24.6	
ETOB				Sn	**Sn**	**21 58 30.7**	**+2.2**
PVAQ	**Vaqueiros**	**3.14**	**292**	*e*P	**Pn**	**21 57 51.6**	**+0.2**
PVAQ				*e*S	**Sn**	**21 58 27.6**	**-1.4**
PVAQ				*i* IAML		21 58 29.5	
PVAQ				*i* IAML		21 58 30.6	
PVAQ				*i* IAML		21 58 32.9	
PVAQ	**Vaqueiros**	**3.14**	**292**	P	**Pn**	**21 57 51.3**	**-0.1**
PVAQ				S	**Sn**	**21 58 27.6**	**-1.4**
PBDV	**Barranco-do-Ve**	**3.25**	**289**	*e*S	**Sn**	**21 58 30.6**	**-1.3**
PBDV				*i* IAML		21 58 35.5	
PBDV				*i* IAML		21 58 38.5	
PAB	**San Pablo**	**3.28**	**356**	Pn	**Pn**	**21 57 54.8**	**+1.4**
PAB				Sn	**Sn**	**21 58 30.2**	**-2.5**
PAB				*i* lVmb_Lg		21 58 56.8	
EBAD	**Badajoz**	**3.41**	**318**	Pn	**Pn**	**21 57 56.5**	**+1.3**
EBAD				Sn	**Sn**	**21 58 34.9**	**-1.0**
EBAD	**Badajoz**	**3.41**	**318**	Pn	**Pn**	**21 57 56.4**	**+1.2**
EBAD				Sn	**Sn**	**21 58 35.3**	**-0.6**
EBAD				*i* lVmb_Lg		21 58 41.9	
MD31	**MD31**	**3.44**	**190**	P	**Pn**	**21 57 57.2**	**+1.6**
MD31				S	**Sn**	**21 58 35.3**	**-1.2**
PCVE	**Castro Verde**	**3.46**	**294**	Pn	**Pn**	**21 57 56.8**	**+1.0**
PCVE				Sn	**Sn**	**21 58 37.2**	**+0.3**
PCVE	**Castro Verde**	**3.46**	**294**	*e*P	**Pn**	**21 57 56.9**	**+1.2**
PCVE				*e*S	**Sn**	**21 58 35.6**	**-1.3**
PCVE				*i* IAML		21 58 38.3	
PCVE				*i* IAML		21 58 40.5	
PCVE				*i* IAML		21 58 44.1	
MDT	**Midelt**	**3.47**	**187**	P	**Pn**	**21 57 57.6**	**+1.6**
MDT				S	**Sn**	**21 58 35.5**	**-1.9**
ZHG	**ZHG**	**3.52**	**218**	P	**Pn**	**21 57 56.7**	**+0.1**
ZHG				S	**Sn**	**21 58 35.8**	**-2.7**
MESJ	**Messejana**	**3.67**	**297**	*e*P	**Pn**	**21 58 00.1**	**+1.4**
MESJ				*e*S	**Sn**	**21 58 41.9**	**-0.3**
MESJ				*i* IAML		21 58 51.3	
MESJ				*i* IAML		21 58 53.0	
MESJ				*i* IAML		21 58 54.8	
PESTR	**Estremoz**	**3.82**	**314**	*e*P	**Pn**	**21 58 02.5**	**+1.8**
PESTR				*e*S	**Sn**	**21 58 44.8**	**-0.9**
PESTR				*i* IAML		21 58 47.8	
PESTR				*i* IAML		21 58 48.3	
PESTR	**Estremoz**	**3.82**	**314**	P	**Pn**	**21 58 01.9**	**+1.2**
PESTR				S	**Sn**	**21 58 44.4**	**-1.4**
EVO	**Evora**	**3.87**	**307**	*e*P	**Pn**	**21 58 02.6**	**+1.2**
EVO				*e*S	**Sn**	**21 58 45.3**	**-1.8**
PLOUS	**Minas do Lousa**	**3.90**	**298**	*e*P	**Pn**	**21 58 03.2**	**+1.4**
PLOUS				*e*S	**Sn**	**21 58 47.0**	**-0.7**
PLOUS				*i* IAML		21 59 01.3	
PLOUS				*i* IAML		21 59 03.4	
PTEO	**Sao Teotonio**	**3.94**	**290**	*e*P	**Pn**	**21 58 04.5**	**+2.2**
PTEO				*e*S	**Sn**	**21 58 49.5**	**+0.7**
PARRA	**Arraiolos**	**4.05**	**310**	*e*P	**Pn**	**21 58 05.2**	**+1.3**
PARRA				*e*S	**Sn**	**21 58 50.1**	**-1.5**
PARRA				*i* IAML		21 58 52.4	
PARRA				*i* IAML		21 58 52.9	
MOE	**Montemor**	**4.08**	**305**	*e*P	**Pn**	**21 58 06.5**	**+2.1**
MOE				*e*S	**Sn**	**21 58 51.2**	**-1.1**
MOE				*i* IAML		21 58 53.6	
MOE				*i* IAML		21 58 55.6	
MOE				*i* IAML		21 58 56.0	
PMRV	**Marv??o**	**4.11**	**321**	*e*P	**Pn**	**21 58 06.3**	**+1.6**
PMRV				*e*S	**Sn**	**21 58 52.2**	**-0.7**
PMTG	**Montargil**	**4.32**	**312**	*e*P	**Pn**	**21 58 09.1**	**+1.5**
PMTG				*e*S	**Sn**	**21 58 57.1**	**-1.1**
PMTG				*i* IAML		21 58 58.2	
PMTG				*i* IAML		21 59 01.3	
PCBR	**Castelo Branco**	**4.47**	**324**	*e*P	**Pn**	**21 58 11.3**	**+1.7**
PSARD	**Sardoal**	**4.64**	**317**	*e*P	**Pn**	**21 58 13.4**	**+1.4**
PSARD				*e*S	**Sn**	**21 59 03.5**	**-2.6**
PSARD				*i* IAML		21 59 05.1	
PSARD				*i* IAML		21 59 05.3	
PSARD				*i* IAML		21 59 07.9	
PMAFR	**Mafra**	**4.93**	**305**	*e*P	**Pn**	**21 58 18.8**	**+2.8**
PSBE	**So Bento**	**4.95**	**312**	*e*P	**Pn**	**21 58 18.3**	**+2.0**
PCAS	**Casmilo, Conde**	**5.14**	**319**	*e*P	**Pn**	**21 58 18.9**	**0.0**
MVO	**Moncorvo**	**5.41**	**336**	*e*P	**Pn**	**21 58 24.3**	**+1.7**
POLO	**Lamas de Olo**	**5.87**	**331**	*e*P	**Pn**	**21 58 31.6**	**+2.6**
PCAB	**Cabril**	**6.25**	**332**	*e*P	**Pn**	**21 58 36.8**	**+2.7**
PGAV	**Gavieira, Arco**	**6.56**	**331**	*e*P	**Pn**	**21 58 41.5**	**+3.1**

IDC 18 22:11:18.8±3.1,**6°04**S×**133°35**E,**h0**km,**mb3.2/1, mbtmp3.4/5,ML3.3/4,Error ellipse: s-maj=118.2km s-min=26.1km az=82.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.54**	**338**	Pn	Pn	22 12 43.2	+0.6
	1.3nm,0.3s,baz=174,slow=19,SNR=24						
SIJI				Sn	Sn	22 13 39.9	-7.3
	3.2nm,0.3s,baz=194,slow=22,SNR=15						
	2.9nm,0.2s						
WRA	**Warramunga Arr**	**13.85**	**176**	Pn	Pn	22 14 35.9	-0.7
	0.1nm,0.3s,baz=352,slow=14,SNR=10						
WRA				Sn	Sn	22 17 02.0	-9.4
	0.1nm,0.3s,baz=356,slow=24,SNR=5.3						
	0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**14.15**	**211**	Pn	Pn	22 14 41.6	+0.9
	0.1nm,0.3s,baz=24,slow=12,SNR=6.4						
FITZ				Sn	Sn	22 17 13.6	-5.0
	0.2nm,0.3s,baz=334,slow=22,SNR=1.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.53**	**178**	P	Pn	22 15 25.3	+0.4
	0.1nm,0.3s,baz=357,slow=14,SNR=8.9						
	1.0nm,1.1s						
MKAR	**Makanchi Array**	**69.30**	**325**	P	P	22 22 27.8	-0.3
	0.2nm,0.7s,baz=111,slow=7.9,SNR=1.3						
	0.2nm,0.7s						

*RSNC **18** 22:21:45.3±0.0,7°N±1°×7°3W±°,h147**km**±1**km**,M2.1,ML1.8*
*FUNV **18** 22:21:46.7,7.°15N×73.°24W,h0**km**,MW3.1,Presumed earthquake*
ISC 18 22:21:44.7±1.5,**6°88N**±0°04×**73°16W**±0°05,**h148**km±9km, **n19**,σ1**°28**/37,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**185**	P	**Pn**	**22 22 05.1**	**-0.2**
BARC				S	**Sn**	**22 22 20.5**	**-0.5**
BRJC	**Barrancabermej**	**0.59**	**280**	P	**Pn**	**22 22 06.8**	**+0.5**
BRJC				S	**Sn**	**22 22 23.7**	**+0.9**
PAMC	**Pamplona, Colo**	**0.65**	**44**	P	**Pn**	**22 22 08.1**	**+0.8**
PAMC				S	**Sn**	**22 22 25.2**	**+0.8**
RUSC	**La Rusia**	**0.98**	**176**	P	**Pn**	**22 22 09.1**	**-0.7**
RUSC				S	**Sn**	**22 22 28.0**	**-0.8**
RUSC	**La Rusia**	**0.98**	**176**	*e*P	**Pn**	**22 22 09.0**	**-0.7**
RUSC				*e*S	**Sn**	**22 22 27.8**	**-1.0**
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	P	**Pn**	**22 22 11.6**	**-0.8**
PTBC				S	**Sn**	**22 22 33.1**	**-0.5**
OCAC	**Ocana**	**1.36**	**353**	P	**Pn**	**22 22 13.5**	**+0.6**
OCAC				S	**Sn**	**22 22 35.4**	**+0.9**
SPBC	**San Pablo de B**	**1.52**	**217**	P	**Pn**	**22 22 14.0**	**-0.4**
SPBC				S	**Sn**	**22 22 36.4**	**-0.8**
NORC	**Norcasia**	**2.14**	**233**	P	**Pn**	**22 22 21.1**	**-0.4**
NORC				S	**Sn**	**22 22 50.0**	**+0.2**
CHIC	**Chingaza**	**2.30**	**194**	P	**Pn**	**22 22 23.4**	**-0.4**
CHIC				S	**Sn**	**22 22 52.6**	**-1.2**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**22 22 25.0**	**+0.9**
ROSC				S	**Sn**	**22 22 55.7**	**+1.4**
HELC	**Santa Helena**	**2.45**	**254**	P	**Pn**	**22 22 27.0**	**+1.5**
HELC				S	**Sn**	**22 22 55.6**	**-1.3**
HELC	**Santa Helena**	**2.45**	**254**	*e*P	**Pn**	**22 22 27.6**	**+2.1**
HELC				*e*S	**Sn**	**22 22 58.2**	**+1.4**
CVER	**Cruz Verde, Cu**	**2.51**	**201**	P	**Pn**	**22 22 26.4**	**0.0**
GUY2C	**Guyana, Caldas**	**2.74**	**233**	P	**Pn**	**22 22 30.3**	**+1.1**
GUY2C				S	**Sn**	**22 23 05.1**	**+1.6**
SDV	**Santo Domingo**	**3.20**	**51**	*e*P	**Pn**	**22 22 36.2**	**+1.4**
SDV				*e*S	**Sn**	**22 23 12.8**	**-0.6**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**22 22 39.4**	**-0.1**
PRAC				S	**Sn**	**22 23 20.9**	**-1.2**
ORTC	**Ortega, Tolima**	**3.61**	**215**	P	**Pn**	**22 22 40.5**	**+0.6**
ORTC				S	**Sn**	**22 23 22.8**	**+0.1**
SJCC	**San Jacinto, C**	**3.61**	**326**	*e*P	**Pn**	**22 22 39.5**	**-0.4**
SJCC				*e*S	**Sn**	**22 23 17.9**	**-4.8**

*AFAD **18** 22:44:51.5,36.°33N×31.°55E,h43**km**,ML2.6*
*ISK **18** 22:44:51.2,36.°19N×31.°45E,h26**km**,ML2.9/22*
*NIC **18** 22:44:52.9,36.°12N×31.°67E,h38**km**±3**km**,Ml2.7/8*
ISC 18 22:44:52.6±1.2,**36°24N**±0°03×**31°55E**±0°03,**h50**km±13km, **n53**,σ1**°63**/77,**4C**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALAN	**Alanya-ANTALYA**	**0.50**	**51**	Pg	**Pn**	**22 45 03.9**	**0.0**
ALAN				Sg	**Sn**	**22 45 13.1**	**+1.1**
GAZI	**Gazipasa**	**0.62**	**90**	Pg	**Pn**	**22 45 05.5**	**+0.1**
GAZI				Sg	**Sn**	**22 45 16.2**	**+1.6**
GAZI	**Gazipasa**	**0.62**	**90**	P	**Pn**	**22 45 04.4**	**-0.9**
GAZI				S	**Sn**	**22 45 15.0**	**+0.4**
GAZI				IAML		22 45 18.0	
	comp=E,436nm,0.3s						
GAZI				IAML		22 45 19.0	
	comp=N,504nm,0.4s						
GAZI	**Gazipasa**	**0.62**	**90**	P	**Pn**	**22 45 05.2**	**-0.1**
GAZI				S	**Sn**	**22 45 14.1**	**-0.5**
GAZI				IAML		22 45 18.0	
	comp=E,476nm,0.3s						
GAZI				IAML		22 45 19.0	
	comp=N,490nm,0.3s						
KEPZ	**Antalya-Kepez**	**0.66**	**4**	P	**Pn**	**22 45 05.7**	**-0.3**
KEPZ				S	**Sn**	**22 45 13.5**	**-2.0**
KEPZ				IAML		22 45 15.0	
	comp=E,128nm,0.5s						
KEPZ				IAML		22 45 16.0	
	comp=N,196nm,0.2s						
KEMT	**Kemer-ANTALYA**	**0.88**	**295**	Pg	**Pn**	**22 45 07.6**	**-1.1**
ANTB	**Antalya**	**0.97**	**313**	Pg	**Pn**	**22 45 09.7**	**-0.3**
ANTB				Sg	**Sn**	**22 45 22.6**	**-0.2**
AKUM	**Antalya-Kumluc**	**0.98**	**275**	P	**Pn**	**22 45 10.3**	**+0.3**
AKUM				S	**Sn**	**22 45 26.9**	**+4.1**
AKUM				IAML		22 45 30.0	
	comp=N,205nm,0.4s						
HDMB	**Hadim**	**1.04**	**46**	Pn	**Pn**	**22 45 11.6**	**+0.5**
BOZY	**Bozyazi-Mersin**	**1.16**	**96**	Pn	**Pn**	**22 45 13.7**	**+1.2**
ERMK	**Ermenek**	**1.17**	**70**	P	**Pn**	**22 45 14.5**	**+1.7**
SEYD	**Seydisehir-KON**	**1.19**	**11**	Pn	**Pn**	**22 45 13.5**	**+0.5**
SEDI	**Konya, Seydise**	**1.22**	**8**	P	**Pn**	**22 45 13.8**	**+0.4**
SEDI				S	**Sn**	**22 45 28.9**	**0.0**
SEDI				IAML		22 45 31.0	
	comp=N,119nm,0.6s						
SEDI				IAML		22 45 31.0	
	comp=E,195nm,0.7s						
KORT	**Korkueli**	**1.23**	**309**	Pn	**Pn**	**22 45 11.8**	**-1.7**
KORT	**Korkueli**	**1.23**	**309**	P	**Pn**	**22 45 11.5**	**-2.0**
BUCA	**Burdur, Bucak-**	**1.34**	**324**	P	**Pn**	**22 45 14.6**	**-0.5**
BERE	**Bereket-Mersin**	**1.36**	**85**	Pn	**Pn**	**22 45 16.3**	**+1.0**
AKMS	**Akamas**	**1.38**	**152**	*i*P	**Pn**	**22 45 14.4**	**-1.0**
AKMS				S	**Sn**	**22 45 29.8**	**-2.8**
AKMS				AML	AML	22 45 41.3	
	0.6nm,0.4s						
AKMS				AML	AML	22 45 42.1	
	0.5nm,0.3s						
ALFC	**Alefka**	**1.38**	**141**	*i*P	**Pn**	**22 45 14.1**	**-1.4**
ALFC				S	**Sn**	**22 45 29.8**	**-2.8**
ALFC				AML	AML	22 45 41.6	
	0.7nm,0.3s						
ALFC				AML	AML	22 45 42.3	
	0.5nm,0.3s						
ELL	**Elmali**	**1.42**	**291**	Pn	**Pn**	**22 45 15.3**	**-0.8**
ELL	**Elmali**	**1.42**	**291**	P	**Pn**	**22 45 17.3**	**+1.3**
ELL				S	**Sn**	**22 45 37.9**	**+4.3**
KKBE	**Karaman, Kazim**	**1.48**	**48**	P	**Pn**	**22 45 17.9**	**+0.9**
KKBE				S	**Sn**	**22 45 35.3**	**0.0**
KKBE				IAML		22 45 42.0	
	comp=E,100nm,0.4s						
YORU	**Yoruktepe-Mers**	**1.50**	**93**	Pn	**Pn**	**22 45 18.1**	**+0.9**
TEVE	**Tevekalti-Mers**	**1.54**	**82**	Pn	**Pn**	**22 45 19.4**	**+1.7**
AKAS	**Kas**	**1.57**	**270**	Pn	**Pn**	**22 45 17.1**	**-1.1**
AKAS	**Kas**	**1.57**	**270**	P	**Pn**	**22 45 16.9**	**-1.3**
GULN	**MERSIN_Gulnar**	**1.61**	**91**	P	**Pn**	**22 45 19.8**	**+1.2**
GULN				S	**Sn**	**22 45 38.4**	**+0.1**
GULN				IAML		22 45 43.0	
	comp=N,55nm,0.5s						
BECE	**Buyukeceli-Mer**	**1.63**	**92**	Pn	**Pn**	**22 45 20.3**	**+1.4**
KMER	**Konya-Meram**	**1.66**	**23**	P	**Pn**	**22 45 19.4**	**0.0**
KMER				S	**Sn**	**22 45 37.2**	**-2.4**
KRMN	**Karaman**	**1.66**	**55**	Pn	**Pn**	**22 45 20.9**	**+1.5**
TROD	**Troodos**	**1.68**	**140**	P	**Pn**	**22 45 18.3**	**-1.4**
TROD				S	**Sn**	**22 45 37.2**	**-3.0**
TROD				AML	AML	22 45 53.6	
	0.2nm,0.4s						
TROD				AML	AML	22 45 58.6	
	0.2nm,0.6s						
NATA	**Nata**	**1.68**	**150**	P	**Pn**	**22 45 22.5**	**+3.0**
NATA				S	**Sn**	**22 45 42.4**	**+2.5**
NATA				AML	AML	22 45 56.8	
	0.9nm,0.5s						
NATA				AML	AML	22 45 58.7	
	1.0nm,0.4s						
KNIK	**Mula-Seydike**	**1.70**	**291**	P	**Pn**	**22 45 20.1**	**+0.1**
XYLS	**Xyliatos**	**1.73**	**135**	*i*P	**Pn**	**22 45 18.9**	**-1.4**
XYLS				S	**Sn**	**22 45 38.0**	**-3.3**
XYLS				AML	AML	22 45 50.5	
	0.2nm,0.2s						
XYLS				AML	AML	22 45 50.8	
	0.2nm,0.2s						
KEBE	**Keben-Mersin**	**1.76**	**83**	Pn	**Pn**	**22 45 22.0**	**+1.3**
KONT	**Konya--Tatoy**	**1.82**	**21**	Pn	**Pn**	**22 45 22.2**	**+0.7**
KONT	**Konya--Tatoy**	**1.82**	**21**	P	**Pn**	**22 45 22.6**	**+1.1**
BAGO	**Egridir - ISPA**	**1.85**	**341**	P	**Pn**	**22 45 21.0**	**-0.9**
BAGO				S	**Sn**	**22 45 43.6**	**-0.6**
BAGO				IAML		22 45 51.0	
	comp=N,31nm,0.4s						
ATHAL	**Athalassa**	**1.86**	**126**	P	**Pn**	**22 45 21.2**	**-0.8**
ATHAL				S	**Sn**	**22 45 43.4**	**-1.0**
ATHAL				AML	AML	22 45 54.1	
	0.4nm,0.7s						
ATHAL				AML	AML	22 46 08.0	
	0.3nm,1.0s						
DOGA	**KONYA_Doganhis**	**1.86**	**3**	P	**Pn**	**22 45 22.8**	**+0.5**
DOGA				S	**Sn**	**22 45 43.1**	**-1.6**
DOGA				IAML		22 45 47.0	
	comp=N,76nm,0.5s						
DOGA				IAML		22 45 47.0	
	comp=E,47nm,0.7s						
LFK	**Lefkose**	**1.88**	**120**	Pn	**Pn**	**22 45 22.9**	**+0.6**
BRDR	**BURDUR-Merkez**	**1.88**	**321**	P	**Pn**	**22 45 21.8**	**-0.5**
GOLH	**Golhisar**	**1.88**	**302**	P	**Pn**	**22 45 24.2**	**+1.8**
APOL	**The Sanctuary**	**1.90**	**145**	P	**Pn**	**22 45 24.4**	**+1.9**
CAME	**Cameli-Denizli**	**1.94**	**292**	Pn	**Pn**	**22 45 22.7**	**-0.5**
ASGA	**Asgata**	**2.01**	**136**	P	**Pn**	**22 45 25.8**	**+1.8**
ASGA				S	**Sn**	**22 45 52.7**	**+4.8**
ASGA				AML	AML	22 45 59.0	
	0.2nm,0.4s						
ASGA				AML	AML	22 45 59.6	
	0.2nm,0.7s						
YVAC	**Isparta, Yalva**	**2.04**	**353**	P	**Pn**	**22 45 24.1**	**-0.5**
YVAC				S	**Sn**	**22 45 47.6**	**-1.4**
BASM	**Basmaki-Afyon**	**2.06**	**325**	Pn	**Pn**	**22 45 24.6**	**-0.2**
MVOU	**Mavrovouni**	**2.09**	**125**	*i*P	**Pn**	**22 45 23.7**	**-1.5**
MVOU				S	**Sn**	**22 45 47.3**	**-2.7**
MVOU				AML	AML	22 45 60.0	
	0.2nm,0.5s						
MVOU				AML	AML	22 46 00.2	
	0.2nm,0.7s						
EREN	**Erenkoy**	**2.24**	**108**	Pn	**Pn**	**22 45 28.9**	**+1.6**
SDAG	**Sultandagi-AFY**	**2.25**	**347**	Pn	**Pn**	**22 45 27.4**	**-0.1**
ALIN	**Konya, Altinte**	**2.31**	**27**	P	**Pn**	**22 45 27.7**	**-0.6**
KDHN	**Kadinhani**	**2.32**	**11**	P	**Pn**	**22 45 28.5**	**+0.1**
KDHN				S	**Sn**	**22 45 55.6**	**-0.2**

IDC 18 22:53:53.1±2.6,**15°64S**×**174°18W**,**h138**km±28km, **mb3.4/4,mbtmp3.9/5,Error ellipse: s-maj=39.0km s-min=25.4km az=135.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.89**	**54**	P	Pn	22 54 38.9	+0.1
	94nm,0.5s,baz=250,slow=0.9,SNR=29						
AFI				S	Sn	22 55 10.1	-3.9
	122nm,0.4s,baz=143,slow=22,SNR=12						
WRA	**Warramunga Arr**	**49.05**	**257**	P	P	23 02 26.6	0.0
	0.3nm,0.5s,baz=98,slow=6.0,SNR=15						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**49.32**	**252**	P	P	23 02 28.1	-0.5
	5.2nm,0.4s,baz=88,slow=7.7,SNR=120						
	5.2nm,0.4s						
VNDA	**Vanda**	**63.06**	**186**	P	P	23 04 05.4	+0.2
	0.4nm,0.5s,baz=51,slow=6.5,SNR=5.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**82.83**	**11**	P	P	23 06 01.0	-0.6
	0.2nm,0.5s,baz=210,slow=4.3,SNR=5.2						
	0.2nm,0.5s						
BRTR	**Keskin Array B**	**145.86**	**320**	PKPbc	PKPbc	23 13 16.9	+0.2
	0.6nm,0.7s,baz=4.1,slow=2.0,SNR=3.9						

*J

OWD	**Renai**	**1.85**	**304**	*i* P		**Pb**	**22 55 59.9**	**+0.3**
OWD				*i* S		**Sn**	**22 56 20.2**	**-0.3**
JIJ	**Ishigaki jima**	**1.85**	**39**	P		**Pb**	**22 55 59.6**	**0.0**
WHF	**Hehuan Shan**	**1.89**	**310**	*i* P		**Pb**	**22 56 01.0**	**+0.4**
WHF				S		**Sn**	**22 56 21.9**	**-0.2**
TWC	**Suao**	**1.91**	**331**	*i* P		**Pb**	**22 55 59.8**	**-0.8**
TWC				S		**Sn**	**22 56 22.1**	**+0.3**
TAWH	**Dawu Township**	**1.91**	**252**	P		**Pg**	**22 56 02.3**	**-0.5**
TAWH				S		**Sb**	**22 56 23.5**	**-0.8**
STYH	**Taoyuan**	**1.93**	**277**	*i* P		**Pb**	**22 56 01.8**	**+0.9**
STYH				*i* S		**Sb**	**22 56 24.2**	**-0.7**
EAST	**Anshuo**	**1.93**	**254**	*i* P		**Pb**	**22 56 01.9**	**+0.9**
EAST				S		**Sn**	**22 56 23.5**	**+1.0**
SSLB	**Suanglung**	**1.94**	**296**	*i* P		**Pb**	**22 56 01.3**	**+0.1**
SSLB				*i* S		**Sb**	**22 56 24.3**	**-1.0**
FUSS	**Fushou**	**1.98**	**312**	*i* P		**Pb**	**22 56 02.1**	**+0.2**
FUSS				*i* S		**Sn**	**22 56 24.3**	**+0.4**
WHYT	**Xinyi Township**	**1.99**	**293**	*i* P		**Pb**	**22 56 02.9**	**+0.8**
WHYT				*e*S		**Sb**	**22 56 25.3**	**-1.4**
LATG	**Datong**	**2.01**	**323**	*i* P		**Pb**	**22 56 02.0**	**-0.4**
LATG				*e*S		**Sn**	**22 56 25.1**	**+0.7**
NNSB	**Datong**	**2.01**	**318**	*i* P		**Pb**	**22 56 02.6**	**+0.2**
NNSB				*i* S		**Sn**	**22 56 24.8**	**+0.2**
NNS	**Nan Shan**	**2.02**	**318**	*e*P		**Pb**	**22 56 03.0**	**+0.3**
NNS				*i* S		**Sn**	**22 56 25.4**	**+0.4**
TWT	**Tachien**	**2.03**	**311**	*e*P		**Pb**	**22 56 03.6**	**+0.9**
TWT				*i* S		**Sn**	**22 56 25.5**	**+0.5**
SLIU	**Shizi**	**2.03**	**250**	*i* P		**Pb**	**22 56 03.0**	**+0.3**
SLIU				S		**Sn**	**22 56 25.8**	**+1.0**
SMST	**Manzhou Townsh**	**2.08**	**244**	*i* P		**Pb**	**22 56 03.8**	**+0.4**
SMST				*i* S		**Sn**	**22 56 27.0**	**+1.1**
TYC	**Yuchr**	**2.08**	**298**	P		**Pb**	**22 56 03.6**	**+0.2**
TYC				*e*S		**Sn**	**22 56 27.2**	**+1.3**
MASBT	**Mashibuluo**	**2.08**	**262**	*i* P		**Pb**	**22 56 02.8**	**-0.6**
MASBT				*e*S		**Sb**	**22 56 27.6**	**-1.4**
TPUB	**Ta-pu**	**2.08**	**281**	*i* P		**Pb**	**22 56 04.4**	**+0.8**
TPUB				*e*S		**Sb**	**22 56 28.4**	**-0.9**
WTP	**Ta-pu**	**2.09**	**279**	*i* P		**Pb**	**22 56 05.0**	**+1.3**
WTP				*e*S		**Sb**	**22 56 28.9**	**-0.6**
SGST	**Jiashian**	**2.10**	**275**	*i* P		**Pb**	**22 56 04.2**	**+0.4**
SGST				*e*S		**Sb**	**22 56 28.1**	**-1.6**
WCS	**Beigang Elemen**	**2.11**	**302**	*i* P		**Pb**	**22 56 04.4**	**+0.4**
WCS				*e*S		**Sn**	**22 56 28.1**	**+1.3**
CHN5	**Tsauling**	**2.11**	**289**	*i* P		**Pb**	**22 56 05.2**	**+1.1**
CHN5				*e*S		**Sb**	**22 56 29.2**	**-0.9**
JISG	**Ishigakijimahi**	**2.12**	**39**	P		**Pb**	**22 56 03.3**	**-0.9**
JISG				*e*S		**Sn**	**22 56 27.6**	**+0.5**
CHN4	**Tsaushan**	**2.12**	**282**	*i* P		**Pb**	**22 56 05.7**	**+1.4**
CHN4				*e*S		**Sb**	**22 56 29.5**	**-1.0**
CHN1	**Nanshi**	**2.16**	**277**	*i* P		**Pg**	**22 56 06.6**	**-0.9**
CHN1				S		**Sb**	**22 56 31.5**	**0.0**
FUSB	**Fushanzhiwuyua**	**2.16**	**328**	P		**Pb**	**22 56 06.1**	**+1.2**
FUSB				*e*S		**Sn**	**22 56 29.2**	**+1.1**
YHNB	**Yeheng**	**2.20**	**322**	*i* P		**Pb**	**22 56 05.5**	**-0.1**
YHNB				S		**Sn**	**22 56 29.6**	**+0.5**
TWK	**Hsinying**	**2.21**	**279**	*i* P		**Pb**	**22 56 06.7**	**+1.0**
TWK				S		**Sb**	**22 56 32.3**	**-0.6**
WHP	**Taichung City**	**2.21**	**308**	*i* P		**Pb**	**22 56 06.9**	**+1.2**
WHP				*i* S		**Sb**	**22 56 31.4**	**-1.5**
NSK	**Sanguang**	**2.21**	**322**	P		**Pb**	**22 56 06.2**	**+0.4**
NSK				*e*S		**Sn**	**22 56 28.1**	**-1.3**
NWLT	**Wulai**	**2.22**	**326**	*i* P		**Pb**	**22 56 06.0**	**+0.2**
NWLT				*e*S		**Sn**	**22 56 30.3**	**+0.8**
TIPB	**Shuangxi**	**2.24**	**335**	*i* P		**Pb**	**22 56 06.2**	**0.0**
TIPB				*e*S		**Sn**	**22 56 29.7**	**-0.4**
NFF	**Wufeng Townshi**	**2.32**	**317**	*i* P		**Pb**	**22 56 08.4**	**+0.6**
NFF				*e*S		**Sn**	**22 56 34.3**	**+1.8**
LIOB	**Emei**	**2.40**	**316**	*i* P		**Pb**	**22 56 09.8**	**+0.8**
LIOB				*e*S		**Sb**	**22 56 36.7**	**-1.7**
JTJ	**Tarama**	**2.40**	**44**	P		**Pb**	**22 56 07.6**	**-1.3**

*IDC **18** 23:11:36.2±9.2, 30.°03S×179.°58W, h433km±99km, mb2.8/2, mbtmp4.0/3, Error ellipse: s-maj=91.8km s-min=48.0km az=25.0*

ISC 18 23:11:33.5±1.4, **29.°9S**±0.°1×**179.°4W**±0.°2, **h400**km, **n18,** σ1§**76**/23, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.43**	**65**	P	**Pn**	**23 11 27.7**	**-0.6**
HAZ	**Te Kaha**	**8.20**	**196**	P	**P**	**23 13 32.3**	**+1.5**
HAZ				S	**S**	**23 15 06.2**	**-0.3**
PUZ	**Puketiti**	**8.40**	**193**	P	**P**	**23 13 34.4**	**+1.3**
PUZ				S	**S**	**23 15 07.6**	**-3.2**
RUGZ	**Raukumara Rang**	**8.42**	**196**	P	**P**	**23 13 35.1**	**+1.6**
MWZ	**Matawai**	**8.81**	**196**	P	**P**	**23 13 39.1**	**+1.4**
MWZ				S	**S**	**23 15 17.6**	**-1.9**
URZ	**Urewera**	**8.84**	**198**	P	**P**	**23 13 39.2**	**+1.2**
	42nm,0.5s,baz=314,slow=2.5,SNR=32						
URZ				S	**S**	**23 15 18.3**	**-1.8**
	8.9nm,1.0s,baz=160,slow=20,SNR=1.2						
URZ	**Urewera**	**8.84**	**198**	P	**Pn**	**23 13 37.8**	**-0.2**
URZ				S	**S**	**23 15 16.9**	**-3.3**
RTZ	**Ruatahuna**	**9.21**	**198**	P	**P**	**23 13 43.5**	**+1.2**
SNGZ	**Shannon Statio**	**9.28**	**196**	P	**Pn**	**23 13 44.3**	**+1.3**
RAHZ	**Arahi**	**9.47**	**197**	P	**Pn**	**23 13 46.2**	**+1.0**
RAHZ				S	**S**	**23 15 33.9**	**+0.5**
MTHZ	**Maungataniwha**	**9.47**	**198**	P	**Pn**	**23 13 47.1**	**+1.8**
NMHZ	**Naumai**	**9.71**	**198**	P	**P**	**23 13 48.5**	**+0.7**
HIZ	**Hauiti**	**9.83**	**207**	P	**Pn**	**23 13 53.0**	**+3.6**
OTVZ	**Oturere**	**10.11**	**202**	P	**Pn**	**23 13 53.2**	**+0.4**
NGZ	**Ngauruhoe**	**10.14**	**203**	P	**Pn**	**23 13 53.7**	**+0.5**
ASAR	**Alice Springs**	**41.92**	**267**	P	**P**	**23 18 46.3**	**-0.8**
	0.2nm,0.6s,baz=99,slow=8.2,SNR=2.1 0.2nm,0.6s						
WRA	**Warramunga Arr**	**42.86**	**272**	P	**P**	**23 18 53.4**	**-1.3**
	1.0nm,0.5s,baz=111,slow=7.4,SNR=22 1.0nm,0.5s						
FINES	**FINESS Array B**	**144.24**	**339**	PKP	PKPbc	23 30 20.4	-0.7
	0.9nm,0.8s,baz=67,slow=3.6,SNR=6.4						

*TRN **18** 23:19:00.0, 10.°21N×62.°89W, h106km, MD3.9, Venezuela.*
*FUNV **18** 23:20:47.2, 10.°40N×62.°96W, h10km, MW3.6, Presumed earthquake*

ISC 18 23:20:42.2±3.3, **10.°28N**±0.°07×**63.°16W**±0.°05, **h16**km±25km, **n22,** σ1§**99**/36, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**1.64**	**75**	*e*P	**Pn**	**23 21 11.9**	**+1.7**
DMDM				*e*S	**Sn**	**23 21 30.9**	**0.0**
PSMG	**Mucurapo Girls**	**1.65**	**76**	*e*P	**Pn**	**23 21 11.2**	**+0.8**
PSMG				*e*S	**Sn**	**23 21 30.9**	**-0.3**
TRN	**Trinidad (W)**	**1.77**	**78**	*e*P	**Pn**	**23 21 14.1**	**+2.1**
TRN				*e*S	**Sn**	**23 21 34.7**	**+0.5**
TRN	**Trinidad (W)**	**1.77**	**78**	*e*P	**Pn**	**23 21 13.7**	**+1.6**
TRN				*e*S	**Sn**	**23 21 33.3**	**-0.9**
GRFF	**Grenada Fort F**	**2.25**	**38**	*e*P	**Pb**	**23 21 21.1**	**-1.3**
GRFF				*e*S	**Sn**	**23 21 47.2**	**+1.1**
GRGR	**Grenville**	**2.36**	**39**	*e*P	**Pb**	**23 21 22.5**	**-1.9**
GRGR				*e*S	**Sn**	**23 21 48.4**	**-0.5**
GRGR	**Grenville**	**2.36**	**39**	*e*P	**Pn**	**23 21 23.2**	**+2.0**
GRGR				*e*S	**Sn**	**23 21 49.9**	**+1.0**
GRSS	**Sisters**	**2.52**	**37**	*e*P	**Pn**	**23 21 23.9**	**+1.5**
GRSS				*e*S	**Sn**	**23 21 52.5**	**-0.3**
GCMP	**Grenada, Carri**	**2.78**	**38**	*e*P	**Sn**	**23 21 28.2**	**+2.3**
GCMP				*e*S	**Sn**	**23 21 58.2**	**-0.9**
GCMP	**Grenada, Carri**	**2.78**	**38**	*e*P	**Pn**	**23 21 28.0**	**+2.1**
GCMP				*e*S	**Sn**	**23 21 58.5**	**-0.6**
FUNV	**FUNVISIS**	**3.60**	**273**	*e*P	**Pb**	**23 21 44.7**	**-0.8**
FUNV				*e*S	**Sb**	**23 22 27.0**	**-2.0**
SLAC	**Saint Lucia, A**	**4.22**	**31**	*e*P	**Pn**	**23 21 47.8**	**+1.9**
SLBI	**Saint Lucia, B**	**4.29**	**30**	*e*P	**Pn**	**23 21 49.6**	**+2.8**
SLBI				*e*S	**Sn**	**23 22 33.6**	**-2.9**
BIM	**Bigot**	**4.68**	**26**	*e*P	**Pn**	**23 21 53.8**	**+1.6**
BIM				*e*S	**Sn**	**23 22 43.3**	**-3.0**
BIM	**Bigot**	**4.68**	**26**	*e*P	**Pn**	**23 21 54.1**	**+1.9**
BIM				*e*S	**Sn**	**23 22 45.2**	**-1.1**
BIM	**Bigot**	**4.68**	**26**	*e*S	**Sn**	**23 22 45.2**	**-1.1**
SVN	**Savane Anatole**	**4.94**	**23**	*e*P	**Pn**	**23 21 57.0**	**+1.3**
DSLB	**Salisbury**	**5.40**	**18**	*e*P	**Pn**	**23 22 04.6**	**+2.5**
TBG	**Guadeloupe-3**	**5.74**	**15**	*e*P	**Pn**	**23 22 10.5**	**+3.8**
DHSZ	**Broadband at M**	**6.11**	**13**	*e*P	**Pn**	**23 22 15.5**	**+3.6**
DSDZ	**La Diserade, G**	**6.34**	**19**	*e*P	**Pn**	**23 22 16.7**	**+1.8**
SKI	**Saint Kitts**	**7.03**	**3**	*e*P	**Pn**	**23 22 27.4**	**+2.9**

*MAN **18** 23:28:23.0, 3.°59N×127.°02E, h46km, MS4.1*
*DJA **18** 23:28:24.1±1.4, 4.°1N±14.°×12.°7E±.°, h10km, M4.3/13, mB5.3/2, mb4.4/7, MLv4.3/13, Mw(mB)4.7/2*
*NEIC **18** 23:28:29.7±1.4, 4.°04N±0.°04×126.°78E±0.°08, h55km±8km, mb4.2/24, Error ellipse: s-maj=11.7km s-min=5.0km az=94.0*
*IDC **18** 23:28:30.4±1.8, 4.°07N×126.°86E, h63km±18km, mb3.7/12, mbtmp4.0/14, MS3.4/6, Error ellipse: s-maj=48.5km s-min=9.9km az=67.0*

ISC 18 23:28:27.7±0.5, **3.°98N**±0.°04×**126.°79E**±0.°06, **h36**km, **n73,** σ2§**09**/66, **mb4.2**/20, **MS3.4**/6, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.29**	**257**	P	**Pn**	**23 28 49.9**	**+0.7**
SGSI				S	**Sn**	**23 29 07.5**	**+2.3**
GAMI	**Galela, Maluku**	**2.35**	**155**	P	**Pn**	**23 29 06.0**	**+2.1**
GSPH	**General Santos**	**2.78**	**319**	*i* P	**Pn**	**23 29 10.1**	**+0.2**
GSPH				*i* S	**Sn**	**23 29 43.0**	**+0.8**
MNI	**Manado**	**3.18**	**218**	P	**Pn**	**23 29 18.6**	**+3.3**
TNTI	**Ternate**	**3.24**	**170**	Pn	**Pn**	**23 29 18.2**	**+2.2**
TNTI	**Ternate**	**3.24**	**170**	P	Pn	23 29 21.0	+4.9
DAV	**Davao City (W)**	**3.29**	**339**	P	**Pn**	**23 29 19.8**	**+3.0**
	101nm,0.3s,baz=321,slow=13,SNR=1.4						
DAV				S	**Sn**	**23 29 56.6**	**+1.8**
	192nm,0.3s,baz=127,slow=15,SNR=3.9						
DAV	**Davao City (W)**	**3.29**	**339**		**Pn**	**23 29 18.0**	**+1.2**
DAV				Sn	**Sn**	**23 29 56.5**	**+1.7**
DMPH	**Davao City--Mi**	**3.33**	**338**	*e*P	**Pn**	**23 29 15.4**	**-2.0**
DMPH				*i* S	Sn	23 30 11.3	+16
KCP	**Kidapawan**	**3.45**	**331**	*i* P	**Pn**	**23 29 22.1**	**+3.1**
KCP				*e*S	Sn	23 30 08.2	+9.5
CDOP	**Cateel, Davao**	**3.79**	**355**	*i* P	**Pn**	**23 29 26.5**	**+2.8**
CDOP				*e*S	**Sn**	**23 30 13.9**	**+6.8**
BIPH	**Bislig**	**4.20**	**354**	*e*P	**Pn**	**23 29 31.5**	**+2.2**
BIPH				*e*S	Sn	23 30 28.9	+12
BUKP	**Musuan**	**4.24**	**336**	*e*P	**Pn**	**23 29 33.9**	**+4.1**
BUKP				*e*S	**Sn**	**23 30 26.3**	**+8.2**
CGP	**Cagayan de Oro**	**4.91**	**335**	*e*P	Pn	23 29 46.3	+7.3
CGP				*e*S	Sn	23 30 50.1	+16
GTOI	**Gorontalo**	**5.03**	**229**	P	**Pn**	**23 29 43.3**	**+2.7**
	0.1nm26nm,0.8s						
SANI	**Sanana**	**6.04**	**188**	P	**Pn**	**23 29 55.9**	**+1.3**
LUWI	**Luwuk**	**6.40**	**219**		**Pn**	**23 30 02.0**	**+2.4**
LUWI	**Luwuk**	**6.40**	**219**	P	Pn	23 30 05.9	+6.3
SIJI	**Sorong**	**6.58**	**137**	P	**Pn**	**23 30 04.4**	**+2.4**
	10nm,0.4s,baz=345,slow=11,SNR=5.5						
SIJI				S	**Sn**	**23 31 15.4**	**-0.4**
	3.0nm,0.4s,baz=186,slow=23,SNR=1.1						
SIJI	**Sorong**	**6.58**	**137**	P	**Pn**	**23 30 03.7**	**+1.7**
	0.2nm2µm16nm,0.7s						
TOLI2	**Tolitoli**	**6.64**	**245**		**Pn**	**23 30 04.2**	**+1.3**
MYLDM	**Lahad Datu**	**8.34**	**279**		**Pn**	**23 30 28.8**	**+2.6**
FAKI	**Fak Fak**	**8.76**	**141**	Pn	**Pn**	**23 30 33.4**	**+1.4**
MTN	**Manton Dam**	**17.26**	**166**		**P**	**23 32 27.5**	**+0.2**
KNRA	**Kununurra**	**19.63**	**174**	P	**Pn**	**23 32 54.9**	**0.0**
YULB	**Yu-li**	**20.01**	**345**	P	**P**	**23 32 55.3**	**-2.2**
YULB				IAmb	IAmb	23 32 56.5	
	comp=Z,28nm,1.4s						
TPUB	**Ta-pu**	**20.11**	**343**	P	**P**	**23 32 57.0**	**-1.6**
SSLB	**Suanglung**	**20.48**	**345**	P	**P**	**23 33 00.7**	**-1.9**
SSLB				IAmb	IAmb	23 33 25.5	
	comp=Z,24nm,1.3s						
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P	**P**	**23 33 19.7**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=357,slow=8.6,SNR=12 comp=Z,2.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P	**P**	**23 33 18.6**	**0.0**
WB0	**Warramunga Arr**	**24.76**	**163**	P	**P**	**23 33 46.3**	**+0.1**
WB0				IAmb	IAmb	23 33 51.2	
	comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**24.91**	**163**	P	**P**	**23 33 47.4**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=344,slow=10,SNR=32 comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**24.91**	**163**	P	**P**	**23 33 46.8**	**-0.7**
MBWA	**Marble Bar**	**25.92**	**195**	P	**P**	**23 33 56.3**	**-0.4**
KRVT	**Keravat (AS076**	**26.53**	**108**	LR	LR	23 42 29.0	
	comp=Z,33nm,20.8s,baz=110,slow=32						
AS31	**Alice Springs**	**28.34**	**166**	P	**P**	**23 34 18.1**	**-0.3**
ASAR	**Alice Springs**	**28.34**	**166**	P	**P**	**23 34 19.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=343,slow=7.3,SNR=15 comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**28.34**	**166**	P	**P**	**23 34 18.4**	**0.0**
CMAR	**Chiang Mai Arr**	**30.79**	**300**	P	**P**	**23 34 40.6**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=109,slow=8.3,SNR=8.1 comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**30.94**	**301**	P	**P**	**23 34 41.2**	**-0.4**
MJAR	**Matsushiro Arr**	**34.07**	**17**	LR	LR	23 46 17.1	
	comp=Z,30nm,21.7s,baz=190,slow=31						
BBOO	**Buckleboo**	**37.63**	**167**	P	**P**	**23 35 40.4**	**+1.1**
STKA	**Stephens Creek**	**38.34**	**159**	P	**P**	**23 35 46.0**	**+0.6**
	comp=Z,4.3nm,0.7s,baz=321,slow=8.6,SNR=6.3 comp=Z,4.3nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**41.58**	**67**	T	T	00 20 40.9	
	baz=253						
H11S1	**WAKE ISLAND Hy**	**41.60**	**67**	T	T	00 20 41.1	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**41.60**	**67**	T	T	00 20 42.0	
	baz=253						
ARMA	**Armidale**	**41.65**	**147**	P	**P**	**23 36 13.4**	**+0.5**
H11N1	**WAKE ISLAND Hy**	**42.10**	**65**	T	T	00 21 32.3	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**42.11**	**65**	T	T	00 21 34.1	
	baz=256						
H11N3	**WAKE ISLAND Hy**	**42.12**	**65**	T	T	00 21 33.8	
	baz=256						
SONM	**Songino Array**	**47.08**	**341**	P	**P**	**23 36 56.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=156,slow=10.0,SNR=1.4 comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**47.08**	**341**	P	**P**	**23 36 54.9**	**-1.2**
SONM				IAmb	IAmb	23 37 05.1	
	comp=Z,3.2nm,1.5s						
PETK	**Petropavlovsk-**	**55.18**	**22**	LR	LR	00 01 02.7	
	comp=Z,23nm,20.6s,baz=264,slow=36						
MKAR	**Makanchi Array**	**57.38**	**325**	P	**P**	**23 38 11.8**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=124,slow=8.0,SNR=9.8						
MKAR				LR	LR	00 03 39.4	
	comp=Z,34nm,18.8s,baz=155,slow=37 comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**57.38**	**325**	P	**P**	**23 38 11.4**	**-1.2**
MAKZ	**Makanchi**	**57.57**	**325**	P	**P**	**23 38 12.9**	**-1.0**
MAKZ				IAmb	IAmb	23 38 15.3	
	comp=Z,1.4nm,0.7s						
AAK	**Ala-Archa**	**60.21**	**318**	LR	LR	00 07 16.1	
	comp=Z,69nm,18.0s,baz=174,slow=39						
KURBB	**Kurchatov Arra**	**61.56**	**327**	P	**P**	**23 38 40.5**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=128,slow=6.2,SNR=13 comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**61.56**	**327**	P	**P**	**23 38 40.4**	**-0.8**
BVAR	**Borovoye Array**	**67.14**	**327**	P	**P**	**23 39 17.3**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=139,slow=7.7,SNR=3.8 comp=Z,1.4nm,0.8s						
BORK	**Borovoye**	**67.19**	**327**	P	**P**	**23 39 16.8**	**-1.3**
BORK				IAmb	IAmb	23 39 32.9	
	comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**70.20**	**346**	P	**P**	**23 39 35.3**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=109,slow=7.4,SNR=4.3 comp=Z,0.7nm,0.4s						
NRIK	**Noril'sk**	**70.20**	**346**	P	**P**	**23 39 35.6**	**-1.0**
NRIK				IAmb	IAmb	23 39 43.9	
	comp=Z,2.2nm,0.7s						
AB31	**Akbulak array**	**71.99**	**321**	P	**P**	**23 39 47.5**	**-0.3**
AB31				IAmb	IAmb	23 40 02.8	
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**71.99**	**321**	P	**P**	**23 39 47.4**	**-0.4**
ARTI	**Arti**	**74.84**	**328**	LR	LR	00 13 27.0	
	comp=Z,38nm,18.1s,baz=122,slow=36						
L16K	**Owhat River**	**78.83**	**28**	P	**P**	**23 40 26.8**	**0.0**
L16K				IAmb	IAmb	23 40 50.4	
	comp=Z,6.6nm,1.5s						
M16K	**Timber Creek**	**78.93**	**29**	P	**P**	**23 40 26.3**	**-1.1**
M16K				IAmb	IAmb	23 40 45.8	
	comp=Z,3.5nm,1.1s						
E19K	**Redstone River**	**80.98**	**22**	P	**P**	**23 40 37.0**	**-1.4**
E19K				IAmb	IAmb	23 40 53.0	
	comp=Z,3.1nm,1.1s						
VOI	**Vohitsoka**	**82.22**	**247**	P	**P**	**23 40 43.9**	**-2.1**
VNDA	**Vanda**	**83.67**	**173**	P	**P**	**23 40 52.9**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=299,slow=6.9,SNR=3.7 comp=Z,0.6nm,0.8s						
ARCES	**ARCESS Array B**	**90.23**	**340**	P	**P**	**23 41 23.3**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=74,slow=4.9,SNR=1.8 comp=Z,0.7nm,0.7s						
BURAR	**Bucovina Array**	**94.85**	**318**	P	**P**	**23 41 44.4**	**-1.8**
BURAR				IAmb	IAmb	23 41 47.7	
	comp=Z,1.2nm,1.0s						

*NNC **18** 23:33:51.6±5.0, 37.°59N×73.°69E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=34.9km s-min=32.5km az=152.0*
*IDC **18** 23:34:05.0±5.0, 37.°52N×71.°74E, h78km±44km, mb3.5/10, mbtmp3.8/16, ML3.3/6, Error ellipse: s-maj=38.8km s-min=23.6km az=20.0*

ISC 18 23:34:07.0±1.1, **37.6N**±0.°1×**71.°8E**±0.°1, **h100**km, **n28,** σ1§**70**/29, **mb3.7**/8, **3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.04**	**23**	P	**Pn**	**23 35 22.8**	**+2.1**
	SNR=13						
MRKS	**Merke**	**5.23**	**11**	Pg	**Pn**	**23 35 23.3**	**+0.4**
	3.4nm,0.3s						
MRKS				Lg	Lg	23 36 33.1	
	14nm,0.6s						
EKS2	**Erkin-Say**	**5.25**	**16**	P	**Pn**	**23 35 25.2**	**+2.0**
	SNR=10						
AAK	**Ala-Archa**	**5.41**	**21**	P	**Pn**	**23 35 25.7**	**+0.2**
	1.7nm,0.3s,baz=197,slow=9.6,SNR=10						
AAK				S	**Sn**	**23 36 23.6**	**-2.9**
	3.5nm,0.4s,baz=358,slow=17,SNR=0.9 5.1nm,0.4s						
AAK	**Ala-Archa**	**5.41**	**21**	⇑Pg	**Pn**	**23 35 25.0**	**-0.4**
	7.8nm,0.8s						
AAK				⇓Lg	Lg	23 36 35.0	
	7.7nm,0.8s						
KK31	**Karatay Array**	**5.56**	**350**	⇑Pn	Pn	23 35 22.1	-5.2
	6.1nm,0.4s,baz=180,slow=13,SNR=112						
KK31				⇑Sn	**Sn**	**23 36 33.5**	**+3.5**
	9.9nm,0.7s						
KK31				⇓Lg	Lg	23 37 03.0	
	16nm,0.6s						
BRLS	**Borolday**	**5.61**	**345**	Pg	**Pn**	**23 35 24.6**	**-3.4**
	3.0nm,0.3s						
BRLS				Lg	Lg	23 36 34.7	
	7.5nm,0.3s						
CHMS	**Chumysh**	**5.82**	**22**	P	**Pn**	**23 35 33.0**	**+2.1**
	SNR=6.4						
USP	**Ospenovka**	**6.00**	**19**	P	**Pn**	**23 35 34.8**	**+1.6**
	SNR=8.1						
TKM2	**Tokmak 2**	**6.03**	**27**	P	**Pn**	**23 35 36.0**	**+2.2**
	SNR=12						
SGDS	**Sogindy**	**6.20**	**19**	Pg	**Pn**	**23 35 37.5**	**+1.4**
	6.0nm,0.3s						
SGDS				Lg	Lg	23 36 57.3	
	4.2nm,0.6s						
KST	**Kastek**	**6.27**	**29**	Pg	**Pn**	**23 35 39.2**	**+2.1**
	8.3nm,0.5s						
KST				Lg	Lg	23 36 56.6	
	6.8nm,0.7s						
KRBS	**Karabastau**	**6.74**	**25**	Pg	**Pn**	**23 35 44.1**	**+0.8**
	2.6nm,0.5s						
KRBS				Lg	Lg	23 37 08.2	
	2.1nm,0.6s						
MKAR	**Makanchi Array**	**12.00**	**37**	P	**Pn**	**23 36 56.1**	**+1.5**
	0.1nm,0.3s,baz=227,slow=13,SNR=7.4 0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**13.85**	**18**	P	**Pn**	**23 37 17.6**	**-1.2**
	baz=208,slow=11,SNR=5.1 0.6nm,0.9s						
BVAR	**Borovoye Array**	**15.43**	**357**	P	**Pn**	**23 37 37.7**	**-1.4**
	baz=164,slow=12,SNR=13 2.1nm,0.7s						
AKTO	**Aktyubinsk**	**16.16**	**327**	P	**Pn**	**23 37 46.4**	**-1.8**
	0.9nm,0.3s,baz=140,slow=6.5,SNR=26 12nm,0.8s						
ZALV	**Zalesovo Beam**	**18.62**	**25**	P	**Pn**	**23 38 18.7**	**+0.8**
	1.7nm,0.3s,baz=216,slow=11,SNR=54 9.1nm,0.5s						
ARTI	**Arti**	**20.82**	**339**	P	**P**	**23 38 39.6**	**-0.6**
	1.3nm,0.5s,baz=128,slow=12,SNR=5.1 1.3nm,0.5s						
BELG	**Belogornoye**	**22.45**	**319**	P	**P**	**23 38 56.5**	**-1.1**
	9.4nm,0.6s,baz=45,slow=16,SN

MSVF				S		**S**	**23 48 30.6**	**+1.4**
	25nm,1.1s,baz=266,slow=23,SNR=9.2							
AFI	**Afiamalu**	**6.19**	**73**	P		P	23 47 38.7	-4.7
	82nm,0.9s,baz=109,slow=18,SNR=8.6							
WRA	**Warramunga Arr**	**45.55**	**257**	P		**P**	**23 53 44.7**	**-0.7**
	1.4nm,0.7s,baz=89,slow=6.7,SNR=21							
	1.4nm,0.7s							
ASAR	**Alice Springs**	**45.88**	**252**	P		**P**	**23 53 47.5**	**-0.4**
	7.1nm,0.6s,baz=85,slow=8.0,SNR=113							
	7.1nm,0.6s							
QSPA	**South Pole Qui**	**74.25**	**180**	P		**P**	**23 56 56.4**	**-0.4**
	1.6nm,0.7s,baz=310,slow=0.8,SNR=8.4							
	1.6nm,0.7s							
NVAR	**Mina Array Bea**	**77.56**	**44**	P		**P**	**23 57 16.0**	**+0.2**
	0.6nm,0.7s,baz=245,slow=8.6,SNR=4.0							
	0.6nm,0.7s							
ILAR	**Eielson Array**	**83.72**	**13**	P		**P**	**23 57 47.0**	**-0.1**
	1.3nm,0.9s,baz=231,slow=5.1,SNR=10							
	1.3nm,0.9s							
TXAR	**Lajitas Array**	**84.44**	**58**	P		**P**	**23 57 52.6**	**+1.1**
	1.1nm,0.9s,baz=220,slow=5.7,SNR=7.0							
	1.1nm,0.9s							
BVAR	**Borovoye Array**	**115.52**	**322**	PKP		**PKPdf**	**00 03 54.7**	**-2.1**
	0.5nm,0.5s,baz=98,slow=2.9,SNR=4.1							
BRTR	**Keskin Array B**	**143.62**	**317**	PKP		PKPbc	00 04 49.7	+1.1
	2.0nm,0.8s,baz=82,slow=2.6,SNR=12							
GERES	**GERESS Array B**	**145.69**	**346**	PKPbc		**PKPbc**	**00 04 55.4**	**+0.7**
	0.5nm,0.7s,baz=40,slow=2.3,SNR=6.8							

*IDC **19** 00:13:23.2±0.8, 5.°69S×145.°80E, h0km, mb4.1/12, mbtmp4.2/16, ML3.9/3, MS3.3/7, Error ellipse: s-maj=29.3km s-min=15.7km az=81.0*
*NEIC **19** 00:13:29.9±1.5, 5.°79S±0.°07×145.°8E±0.°1, h47km±7km, mb4.3/25, Error ellipse: s-maj=16.7km s-min=8.0km az=67.0*

ISC 19 00:13:30.2±0.6, 5.°82S±0.°07×145.°73E±0.°09, h50km, n55, σ1ᵗ15/53, mb4.2/21, MS3.3/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.84**	**158**	Pn		**Pn**	**Pn**	**00 14 25.5**	**-1.3**
	33nm,0.4s,baz=54,slow=7.0,SNR=16								
PMG						Sn	**Sn**	**00 15 09.9**	**-0.7**
	24nm,0.3s,baz=323,slow=20,SNR=8.4								
PMG						Lg	Lg	00 15 34.1	
	11nm,0.3s,baz=357,slow=22,SNR=3.2								
PMG						LR	LR	00 16 29.4	
	comp=Z,238nm,19.1s,baz=284,slow=47								
PMG	**Port Moresby**	**3.84**	**158**			**Pn**	**Pn**	**00 14 25.5**	**-1.3**
PMG						Sn	**Sn**	**00 15 10.3**	**-0.3**
JAY	**Jayapura**	**5.99**	**303**	Pn		**Pn**	**Pn**	**00 14 55.0**	**-1.3**
	2.4nm,0.3s,baz=161,slow=11,SNR=11								
JAY						Sn	**Sn**	**00 16 06.8**	**+3.0**
	0.3nm,0.3s,baz=296,slow=22,SNR=1.0								
	6.9nm,0.4s								
KRVT	**Keravat (AS076**	**6.45**	**77**	LR		LR	LR	00 17 24.9	
	comp=Z,77nm,19.9s,baz=241,slow=38								
CTA	**Charters Tower**	**14.20**	**178**	Pn		**Pn**	**Pn**	**00 16 50.0**	**+1.4**
	0.3nm,0.3s,baz=1.1,slow=16,SNR=2.3								
SIJI	**Sorong**	**15.25**	**288**	Pn		**Pn**	**Pn**	**00 17 01.8**	**-0.7**
	0.9nm,0.3s,baz=110,slow=8.5,SNR=4.3								
	4.3nm,0.2s								
MTN	**Manton Dam**	**16.00**	**243**			**Pn**	**Pn**	**00 17 11.3**	**-0.8**
WB0	**Warramunga Arr**	**17.72**	**217**			**Pn**	**Pn**	**00 17 33.2**	**-0.3**
WRA	**Warramunga Arr**	**17.89**	**217**	P		**Pn**	**Pn**	**00 17 33.5**	**-2.0**
	0.3nm,0.3s,baz=42,slow=12,SNR=34								
	7.5nm,0.9s								
WRA	**Warramunga Arr**	**17.89**	**217**	P		**Pn**	**Pn**	**00 17 33.9**	**-1.6**
KNRA	**Kununurra**	**19.32**	**238**				**P**	**00 17 51.4**	**0.0**
KNRA					IAmb		IAmb	00 17 54.4	
	comp=Z,18nm,1.2s								
EIDS	**Eidsvold**	**20.11**	**166**	P		**P**	**P**	**00 17 59.8**	**-0.1**
EIDS					IAmb		IAmb	00 18 04.5	
	comp=Z,13nm,1.2s								
AS31	**Alice Springs**	**21.09**	**211**	P		**P**	**P**	**00 18 11.0**	**+0.5**
ASAR	**Alice Springs**	**21.09**	**211**	P		**P**	**P**	**00 18 10.2**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=30,slow=14,SNR=22								
ASAR					LR		LR	00 26 58.5	
	comp=Z,128nm,21.9s,baz=346,slow=38								
	comp=Z,3.1nm,0.8s								
ASAR	**Alice Springs**	**21.09**	**211**	P		**P**	**P**	**00 18 10.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**23.10**	**236**	LR		LR	LR	00 29 21.4	
	comp=Z,164nm,18.3s,baz=15,slow=41								
FITZ	**Fitzroy Crossi**	**23.10**	**236**	P		**P**	**P**	**00 18 31.8**	**-0.2**
ARMA	**Armidale**	**25.09**	**168**	P		**P**	**P**	**00 18 50.3**	**-0.1**
ARMA					IAmb		IAmb	00 19 16.0	
	comp=Z,16nm,1.4s								
DZM	**Mont Dzumac**	**25.73**	**131**	LR		LR	LR	00 27 32.1	
	comp=Z,97nm,19.6s,baz=150,slow=33								
TOLI2	**Tolitoli**	**25.85**	**285**	P		**P**	**P**	**00 18 57.4**	**+0.1**
STKA	**Stephens Creek**	**26.21**	**188**	P		**P**	**P**	**00 19 00.6**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=329,slow=6.9,SNR=5.6								
STKA					LR		LR	00 29 28.5	
	comp=Z,61nm,18.7s,baz=22,slow=37								
	comp=Z,8.4nm,0.9s								
LEM	**Lembang**	**37.89**	**266**	LR		LR	LR	00 38 40.3	
	comp=Z,86nm,19.0s,baz=343,slow=40								
RTZ	**Ruatahuna**	**43.20**	**144**	P		**P**	**P**	**00 21 27.6**	**+1.0**
CM31	**Chiang Mai Arr**	**52.05**	**299**	P		**P**	**P**	**00 22 34.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**52.05**	**299**	P		**P**	**P**	**00 22 34.8**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=121,slow=5.9,SNR=13								
	comp=Z,2.3nm,0.6s								
CMAR	**Chiang Mai Arr**	**52.05**	**299**	P		**P**	**P**	**00 22 34.0**	**-1.4**
PETK	**Petropavlovsk-**	**59.57**	**8**	P		**P**	**P**	**00 23 28.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=196,slow=6.8,SNR=2.3								
	comp=Z,0.8nm,0.5s								
EVN	**Everest**	**65.96**	**304**	P		**P**	**P**	**00 24 14.3**	**+1.9**
VNDA	**Vanda**	**72.17**	**176**	P		**P**	**P**	**00 24 52.1**	**+2.9**
	comp=Z,0.3nm,0.5s,baz=329,slow=7.0,SNR=2.8								
	comp=Z,0.3nm,0.5s								
MKAR	**Makanchi Array**	**76.56**	**321**	P		**P**	**P**	**00 25 15.7**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=101,slow=6.3,SNR=9.9								
	comp=Z,1.3nm,0.7s								
MKAR	**Makanchi Array**	**76.56**	**321**	P		**P**	**P**	**00 25 14.4**	**-0.9**
MAKZ	**Makanchi**	**76.76**	**321**	P		**P**	**P**	**00 25 15.4**	**-1.0**
MAKZ					IAmb		IAmb	00 25 17.1	
	comp=Z,1.8nm,0.6s								
O14K	**Tigyukauivet M**	**77.22**	**25**	P		**P**	**P**	**00 25 19.1**	**+0.5**
O15K	**Ungalikthiuk R**	**77.78**	**25**	P		**P**	**P**	**00 25 22.7**	**+0.8**
O15K					IAmb		IAmb	00 25 25.5	
	comp=Z,7.0nm,1.5s								
ZALV	**Zalesovo Beam**	**78.19**	**328**	P		**P**	**P**	**00 25 23.6**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=107,slow=5.9,SNR=7.1								
	comp=Z,1.6nm,0.6s								
ZALV	**Zalesovo Beam**	**78.19**	**328**	P		**P**	**P**	**00 25 23.8**	**-0.5**
O16K	**Kokwok River B**	**78.75**	**26**	P		**P**	**P**	**00 25 26.8**	**-0.4**
O16K					IAmb		IAmb	00 25 33.6	
	comp=Z,3.8nm,1.2s								
BOOM	**Boomskoye usch**	**79.25**	**315**	P		**P**	**P**	**00 25 30.9**	**+0.3**
KURBB	**Kurchatov Arra**	**80.33**	**323**	P		**P**	**P**	**00 25 35.8**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=124,slow=4.4,SNR=10								
	comp=Z,0.8nm,0.6s								
G18K	**Tagagawik**	**82.01**	**20**	P		**P**	**P**	**00 25 44.4**	**-0.3**
G18K					IAmb		IAmb	00 25 48.2	
	comp=Z,3.6nm,1.1s								
KKAR	**Karatay Array**	**83.26**	**315**	P		**P**	**P**	**00 25 51.3**	**-0.4**
E19K	**Redstone River**	**83.35**	**19**	P		**P**	**P**	**00 25 51.4**	**-0.1**
E19K					IAmb		IAmb	00 26 01.3	
	comp=Z,2.5nm,1.0s								
QSPA	**South Pole Qui**	**84.15**	**180**	P		**P**	**P**	**00 25 57.4**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=276,slow=1.6,SNR=11								
	comp=Z,0.8nm,0.5s								
QSPA	**South Pole Qui**	**84.15**	**180**	P		**P**	**P**	**00 25 55.0**	**-0.9**
QSPA					IAmb		IAmb	00 26 13.9	
	comp=Z,2.8nm,1.1s								
NRIK	**Noril'sk**	**84.72**	**342**	P		**P**	**P**	**00 25 59.5**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=85,slow=6.9,SNR=4.3								
	comp=Z,1.2nm,0.5s								
NRIK	**Noril'sk**	**84.72**	**342**	P		**P**	**P**	**00 25 58.5**	**+0.1**
NRIK					IAmb		IAmb	00 26 00.9	
	comp=Z,1.9nm,0.8s								
CCB	**Clear Creek Bu**	**85.40**	**23**	P		**P**	**P**	**00 26 02.5**	**+0.5**
CCB					IAmb		IAmb	00 26 07.2	
	comp=Z,1.7nm,0.8s								
ILAR	**Eielson Array**	**85.81**	**23**	P		**P**	**P**	**00 26 01.8**	**-2.2**
	comp=Z,1.0nm,0.8s,baz=252,slow=5.4,SNR=9.2								
	comp=Z,1.0nm,0.8s								
ILAR	**Eielson Array**	**85.81**	**23**	P		**P**	**P**	**00 26 02.2**	**-1.8**
BVAR	**Borovoye Array**	**85.88**	**324**	P		**P**	**P**	**00 26 04.5**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=110,slow=6.7,SNR=13								
	comp=Z,2.8nm,0.6s								
BORK	**Borovoye**	**85.93**	**324**	P		**P**	**P**	**00 26 03.9**	**-0.9**
BORK					IAmb		IAmb	00 26 09.1	
	comp=Z,1.8nm,0.7s								
K29M	**Barlow Dome**	**89.38**	**26**	P		**P**	**P**	**00 26 20.4**	**-0.9**
AB31	**Akbulak array**	**91.62**	**319**	P		**P**	**P**	**00 26 30.2**	**-1.7**
AB31					IAmb		IAmb	00 26 35.2	
	comp=Z,0.9nm,0.7s								
ABKAR	**Akbulak array**	**91.62**	**319**	P		**P**	**P**	**00 26 30.0**	**-1.9**
TORD	**Torodi Ar. Bea**	**143.82**	**284**	PKP		PKPbc	00 32 59.6	+0.8
	comp=Z,0.6nm,0.5s,baz=66,slow=2.9,SNR=7.4								

*SCB **19** 00:20:51.5±1.2, 20.°73S×67.°92W, h166km±12km, ML3.5/3, Error ellipse: s-maj=4.7km s-min=3.9km az=0.0*
*GUC **19** 00:20:53.2±0.7, 20.°75S×68.°07W, h178km±6km, ML3.1*

ISC 19 00:20:50.9±1.8, 20.°74S±0.°05×67.°95W±0.°05, h176km±17km, n24, σ1ᵗ10/39, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.28**	**298**	*eP*		**Pn**	**Pn**	**00 21 22.0**	**+1.0**
PB08				*i*	S	**Sn**	**Sn**	**00 21 44.5**	**+0.4**
PB08					IAML			00 21 47.0	
	comp=E,118nm,0.2s								
PB08	**IPOC Station P**	**1.28**	**298**	P		**Pn**	**Pn**	**00 21 21.7**	**+0.7**
GO01	**Chusmiza**	**1.59**	**312**	*eP*		**Pn**	**Pn**	**00 21 24.8**	**+0.8**
GO01				*i*	S	**Sn**	**Sn**	**00 21 49.6**	**+0.2**
GO01	**Chusmiza**	**1.59**	**312**	P		**Pn**	**Pn**	**00 21 24.8**	**+0.8**
PB09	**IPOC Station P**	**1.60**	**229**	*eP*		**Pn**	**Pn**	**00 21 24.9**	**+1.2**
PB09				*i*	S	**Sn**	**Sn**	**00 21 49.6**	**+0.5**
PB09					IAML			00 21 51.1	
	comp=N,61nm,0.3s								
PB09	**IPOC Station P**	**1.60**	**229**	P		**Pn**	**Pn**	**00 21 24.7**	**+1.0**
PB11	**IPOC Station P**	**1.88**	**301**	*eP*		**Pn**	**Pn**	**00 21 27.1**	**+0.5**
PB11				*i*	S	**Sn**	**Sn**	**00 21 53.4**	**-0.8**
PB11					IAML			00 21 56.3	
	comp=N,291nm,0.4s								
PB11	**IPOC Station P**	**1.88**	**301**	P		**Pn**	**Pn**	**00 21 27.2**	**+0.6**
PB11				S		**Sn**	**Sn**	**00 21 53.8**	**-0.4**
PB11					IAML			00 21 55.5	
	comp=N,244nm,0.2s								
PB02	**IPOC Station P**	**1.91**	**252**	*eP*		**Pn**	**Pn**	**00 21 27.6**	**+0.8**
PB02				*i*	S	**Sn**	**Sn**	**00 21 53.5**	**-1.1**
PB02	**IPOC Station P**	**1.91**	**252**	P		**Pn**	**Pn**	**00 21 27.7**	**+0.8**
PB02				S		**Sn**	**Sn**	**00 21 54.1**	**-0.6**
PB02					IAML			00 21 54.6	
	comp=N,347nm,0.2s								
PB07	**IPOC Station P**	**2.06**	**241**	*eP*		**Pn**	**Pn**	**00 21 29.4**	**+0.9**
PB07				*i*	S	**Sn**	**Sn**	**00 21 56.4**	**-1.3**
PB07					IAML			00 21 58.0	
	comp=N,107nm,0.2s								
TA02	**Huaiquique**	**2.10**	**283**	*eP*		**Pn**	**Pn**	**00 21 29.1**	**+0.3**
TA02				*i*	S	**Sn**	**Sn**	**00 21 56.5**	**-1.7**
PB03	**IPOC Station P**	**2.13**	**232**	*eP*		**Pn**	**Pn**	**00 21 29.9**	**+0.6**
PB03				*i*	S	**Sn**	**Sn**	**00 21 57.9**	**-1.2**
PB03					IAML			00 21 59.0	
	comp=E,126nm,0.3s								
SOEO	**Opoqueri**	**2.17**	**1**	P		**Pn**	**Pn**	**00 21 30.7**	**+0.6**
MOCB	**Mochara**	**2.21**	**104**	P		**Pn**	**Pn**	**00 21 31.4**	**+0.8**
MOCB				S		**Sn**	**Sn**	**00 22 00.5**	**-0.8**
MOCB					IAML			00 22 02.8	
	comp=E,179nm,0.4s								
PSGCX	**Pisagua**	**2.34**	**299**	*eP*		**Pn**	**Pn**	**00 21 31.6**	**-0.1**
PSGCX				*i*	S	**Sn**	**Sn**	**00 22 01.6**	**-1.7**
PB06	**IPOC Station P**	**2.47**	**217**	*eP*		**Pn**	**Pn**	**00 21 34.3**	**+1.1**
PB06				*i*	S	**Sn**	**Sn**	**00 22 05.4**	**-0.7**
PB06					IAML			00 22 06.5	
	comp=E,90nm,0.4s								
PB06	**IPOC Station P**	**2.47**	**217**	P		**Pn**	**Pn**	**00 21 34.3**	**+1.1**
PB16	**IPOC Station P**	**2.81**	**328**	*eP*		**Pn**	**Pn**	**00 21 39.4**	**+1.7**
PB16				*i*	S	**Sn**	**Sn**	**00 22 14.9**	**+0.9**
PB16					IAML			00 22 17.0	
	comp=E,24nm,0.4s								
PB16	**IPOC Station P**	**2.81**	**328**	P		**Pn**	**Pn**	**00 21 38.8**	**+1.1**
PB05	**IPOC Station P**	**2.97**	**225**	*eP*		**Pn**	**Pn**	**00 21 39.9**	**+0.8**
PB05				*i*	S	**Sn**	**Sn**	**00 22 14.5**	**-2.2**
PB05					IAML			00 22 20.5	
	comp=N,29nm,0.1s								
PB14	**IPOC Station P**	**4.48**	**210**	P		**Pn**	**Pn**	**00 21 59.7**	**+1.4**
BBSD	**Serra de San D**	**7.79**	**64**	P		**Pn**	**Pn**	**00 22 39.7**	**-1.8**
SIV	**San Ignacio**	**8.06**	**55**	P		**Pn**	**Pn**	**00 22 43.4**	**-1.7**

*IDC **19** 00:28:06.2±1.1, 31.°77N×131.°82E, h0km, mb3.6/7, mbtmp3.5/11, ML3.4/3, MS2.3/1, Error ellipse: s-maj=38.0km s-min=15.8km az=70.0*
*NIED **19** 00:28:09.8, 31.°90N×131.°97E, h26km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=5.24; Mθθ=1.53; Mϕϕ-6.78; Mrθ=2.35; Mθϕ-3.14; Mϕr=1.80; Fault plane solution: M₀7.34000×10¹⁴ NP1: ϕs=175.00000°, δ=40.00000°, λ=53.00000°. NP2:ϕs=39.00000°, δ=59.00000°, λ=116.00000°.*
*JMA **19** 00:28:09.8±0.1, 31.°9N±0.°2×132.°0E±0.°5, h26km±1km, MV3.9/40, HYUGANADA REGION*
JMA Felt I J1 at HYUGANADA REGION .

ISC 19 00:28:08.9±0.8, 31.°84N±0.°05×132.°02E±0.°05, h20km±4km, n36, σ2ˢ25/38, mb3.7/7, 11D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.57**	**252**	*i*	P	**Pb**	**Pb**	**00 28 20.6**	**+0.2**
JNKG				⇓	S	**Sb**	**Sb**	**00 28 28.2**	**+0.1**
JTSN	**Tsuno**	**0.60**	**313**	⇓	P	**Pb**	**Pb**	**00 28 20.1**	**-0.6**
JTSN				⇓	S	**Sb**	**Sb**	**00 28 27.6**	**-1.1**
JHHC	**Hyugahichiya**	**0.69**	**332**	⇓	P	**Pn**	**Pn**	**00 28 21.7**	**-1.7**
JHHC				⇓	S	**Sb**	**Sb**	**00 28 29.8**	**-1.5**
JNAR	**Kushima--Naru**	**0.71**	**244**	⇓	P	**Pn**	**Pn**	**00 28 23.4**	**-0.3**
JNAR				⇓	S	**Sb**	**Sb**	**00 28 33.2**	**+1.4**
JTZ	**Takazaki**	**0.79**	**275**	⇓	P	**Pn**	**Pn**	**00 28 23.9**	**-1.1**
JTZ				⇓	S	**Sn**	**Sn**	**00 28 33.6**	**-2.6**
JTO	**Tosashimizu**	**1.22**	**33**	⇓	P	**Pn**	**Pn**	**00 28 30.0**	**-0.8**
JZO	**Okuchi**	**1.24**	**284**	*i*	P	**Pn**	**Pn**	**00 28 30.9**	**-0.2**
JIU3	**Izumi3**	**1.24**	**305**	P		**Pn**	**Pn**	**00 28 31.0**	**-0.1**
JUS	**Usuki**	**1.25**	**350**	P		**Pn**	**Pn**	**00 28 31.3**	**+0.1**
JSU	**Suzuyama**	**1.37**	**256**	P		**Pn**	**Pn**	**00 28 32.9**	**0.0**
JSU	**Suzuyama**	**1.37**	**256**	S		**Sb**	**Sb**	**00 28 51.4**	**+0.4**
UWA2	**Uwa jima 2**	**1.47**	**20**	P		**Pn**	**Pn**	**00 28 33.8**	**-0.4**
JNU	**Nakatsue**	**1.60**	**323**	Pn		**Pn**	**Pn**	**00 28 36.7**	**+0.6**
	116nm,0.3s,baz=44,slow=2.3,SNR=267								
JNU						Sn	**Sb**	**00 28 57.9**	**+0.3**
	49nm,0.3s,baz=151,slow=2.8,SNR=6.9								
JMN	**Monobe**	**2.45**	**39**	P		**Pn**	**Pn**	**00 28 49.9**	**+2.1**
JTU	**Tsushima**	**3.46**	**321**	P		**Pn**	**Pn**	**00 29 02.5**	**+0.9**
JTU	**Tsushima**	**3.46**	**321**	S		**Sn**	**Sn**	**00 29 43.5**	**+1.4**
INU	**Inuyama**	**5.45**	**49**	P		**Pn**	**Pn**	**00 29 31.7**	**+2.8**
JGF	**Kuroka**	**5.82**	**48**	P		**Pn**	**Pn**	**00 29 36.7**	**+2.6**
KSRS	**Korea Array**	**6.54**	**330**	Pn		**Pn**	**Pn**	**00 29 44.2**	**+0.3**
	0.5nm,0.3s,baz=147,slow=15,SNR=6.7								
KSRS						Sn	**Sn**	**00 31 05.1**	**+7.3**
	0.1nm,0.3s,baz=73,slow=28,SNR=0.8								
	1.1nm,0.4s								
MAJO	**Matsushiro**	**6.95**	**46**	P		**Pn**	**Pn**	**00 29 51.4**	**+1.8**
MJAR	**Matsushiro Arr**	**6.95**	**46**	Pn		**Pn**	**Pn**	**00 29 51.4**	**+1.8**
	0.1nm,0.3s,baz=245,slow=14,SNR=5.9								
MJAR						Sn	**Sn**	**00 31 00.2**	**-7.8**
	baz=244,slow=17,SNR=1.1								
MJAR					LR		LR	00 32 24.4	
	comp=Z,22nm,18.7s,baz=184,slow=36								
	0.6nm,0.4s								
USRK	**Ussuriysk Ar.**	**12.34**	**360**	Pn		**Pn**	**Pn**	**00 31 04.7**	**+1.3**
	0.2nm,0.3s,baz=153,slow=41,SNR=2.7								
	1.0nm,0.6s								
HILR	**Hailar Array B**	**19.95**	**336**	P		**P**	**P**	**00 32 40.2**	**+0.7**
	baz=139,slow=12								
	0.2nm,0.3s								
SONM	**Songino Array**	**25.18**	**317**	P		**P**	**P**	**00 33 32.3**	**-0.7**
	1.0nm,0.6s,baz=128,slow=9.6,SNR=5.6								
	1.0nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**33.50**	**103**	T		T	T	01 10 36.6	
	baz=298,slow=74,SNR=7.5								
H11N1	**WAKE ISLAND Hy**	**33.50**	**103**	T		T	T	01 10 34.1	
	baz=298,slow=74,SNR=4.8								
H11N3	**WAKE ISLAND Hy**	**33.51**	**103**	T		T	T	01 10 28.6	
	baz=298,slow=74,SNR=9.6								
H11S3	**WAKE ISLAND Hy**	**33.92**	**105**	T		T	T	01 11 21.9	
	baz=303								
H11S1	**WAKE ISLAND Hy**	**33.92**	**105**	T		T	T	01 11 25.1	
	baz=303								
H11S2	**WAKE ISLAND Hy**	**33.94**	**105**	T		T	T	01 11 21.1	
	baz=303								
MKAR	**Makanchi Array**	**40.59**	**306**	P		**P**	**P**	**00 35 45.5**	**-1.6**
	0.2nm,0.6s,baz=89,slow=10,SNR=8.8								
	0.2nm,0.6s								
BVAR	**Borovoye Array**	**48.50**	**315**	P		**P**	**P**	**00 36 48.8**	**-1.3**
	0.5nm,0.6s,baz=101,slow=7.5,SNR=2.2								
	0.5nm,0.6s								
WRA	**Warramunga Arr**	**51.53**	**177**	P		**P**	**P**	**00 37 13.6**	**+0.2**
	0.5nm,0.6s,baz=354,slow=8.1,SNR=6.6								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**55.22**	**178**	P		**P**	**P**	**00 37 40.7**	**+0.2**
	0.5nm,0.7s,baz=13,slow=13,SNR=7.5								
	0.5nm,0.7s								
KBZ	**Khabaz**	**68.22**	**309**	P		**P**	**P**	**00 39 09.8**	**+1.9**
	0.4nm,0.5s,baz=33,slow=2.6,SNR=5.2								
	0.4nm,0.5s								
FINES	**FINESS Array B**	**69.63**	**330**	P		**P**	**P**	**00 39 16.0**	**-0.4**
	1.3nm,0.9s,baz=58,slow=5.2,SNR=3.4								
	1.3nm,0.9s								

*IDC **19** 00:35:25.6±1.2, 62.°29N×155.°44W, h0km, mb3.5/4, mbtmp3.6/7, ML3.7/3, MS3.2/8, Error ellipse: s-maj=23.4km s-min=15.3km az=89.0*
*NEIC **19** 00:35:26.7±1.1, 62.°17N±0.°02×154.°88W±0.°03, h13km, mb3.8/5, ML4.3/206, Mwr3.9/68, ML4.2(AEIC), Error ellipse: s-maj=3.2km s-min=2.3km az=179.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.59; Mθθ=8.28; Mϕϕ-6.69; Mrθ=2.45; Mθϕ-1.61; Mϕr-3.14; Fault plane solution: M₀8.74000×10¹⁴ NP1:ϕs52.27000°, δ61.21000°, λ-172.49000°. NP2:ϕs318.64000°, δ83.42000°, λ-29.00000°. Principal axes: T 9.2008, Plg15.0000°, Azm9.0000°; N -1.0041, Plg60.0000°, Azm127.0000°; P -8.1967, Plg25.0000°, Azm272.0000°;*
*NEIC **19** 00:35:27.1, 62.°17N×154.°88W, h15km*
*AEIC **19** 00:35:27.1±1.1, 62.°15N±0.°03×154.°93W±0.°04, h18km±6km, Error ellipse: s-maj=3.6km s-min=2.8km az=178.0*

ISC 19 00:35:26.9±0.8, 62.°16N±0.°03×154.°91W±0.°03, h17km±5km, n267, σ0ᵗ95/276, mb3.8/5, MS3.5/5, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
L19K	**White Mountain**	**0.03**	**56**			**Pg**	**Pg**	**00 35 30.5**	**+0.4**
L19K						Sg	**Sg**	**00 35 32.8**	**+0.5**
L19K					IAML			00 35 33.2	
	comp=E,112μm,0.4s								
L19K					IAML			00 35 33.3	
	comp=N,141μm,0.3s								
M18K	**Stony River**	**0.80**	**213**			**Pg**	**Pg**	**00 35 41.4**	**-1.2**
M18K							**Sb**	**00 35 53.6**	**+0.8**
L18K	**Granite Mounta**	**0.83**	**275**			**Pn**	**Pn**	**00 35 43.7**	**-0.1**
L18K						Sg	**Sb**	**00 35 54.4**	**+0.6**
M20K	**Styx River**	**0.89**	**108**			**Pg**	**Pg**	**00 35 43.4**	**-0.8**
M20K						Sg	**Sg**	**00 35 54.8**	**-1.1**
K20K	**Telida**	**1.26**	**18**			**Pn**	**Pn**	**00 35 49.7**	**0.0**
K20K							**Sn**	**00 36 06.6**	**+0.4**
K20K					IAML			00 36 09.6	
	comp=N,5μm,0.4s								
K20K					IAML			00 36 15.0	
	comp=E,5μm,1.1s								
SPNN	**North Nagishla**	**1.32**	**126**			**Pn**	**Pn**	**00 35 51.2**	**+0.5**
SPNN							**Pb**	**00 35 51.4**	**+0.1**
N19K	**Bonanza Creek**	**1.37**	**171**			**Pn**	**Pn

comp=E,853nm,1.1s
O16K IAML 00 37 09.9
comp=N,732nm,0.6s
O22K Cooper Landing 3.02 122 Pn 00 36 14.6 +0.8
WAT1 Susitna Watana 3.03 74 Pn 00 36 13.7 -0.3
RND Reindeer 3.05 63 Pn 00 36 14.2 -0.1
RND IAML 00 37 04.2
comp=N,1µm,1.0s
RND IAML 00 37 08.8
comp=E,775nm,1.0s
P17K Kvichak River 3.07 195 Pn 00 36 14.4 -0.2
K15K Wolf Creek Mou 3.10 275 Pn 00 36 15.3 +0.3
BRLK Bradley Lake 3.11 139 Pn 00 36 15.0 -0.1
SML Sawmill 3.13 94 Pn 00 36 16.7 +1.4
SML IAML 00 36 46.4
comp=E,1µm,0.5s
SML IAML 00 37 08.5
comp=N,958nm,0.8s
M15K Kasigluk River 3.14 245 Pn 00 36 15.2 -0.4
I17K Unalakleet 3.15 306 Pn 00 36 16.3 +0.6
I17K IAML 00 37 11.5
comp=N,741nm,0.7s
MCK McKinley 3.15 57 Pn 00 36 16.0 +0.3
MCK IAML 00 37 11.6
comp=E,1µm,0.5s
MCK IAML 00 37 13.6
comp=N,1µm,1.1s
KNK Knik Glacier 3.16 101 Pn 00 36 16.6 +0.9
KNK IAML 00 36 57.2
comp=E,1µm,0.4s
KNK IAML 00 37 07.8
comp=N,813nm,1.0s
BRSE Bradley Lake S 3.17 138 Pn 00 36 16.2 +0.3
BWN Browne 3.19 48 Pn 00 36 16.1 0.0
CNPM China Poot 3.20 144 Pn 00 36 16.6 +0.2
N15K Kwethluk River 3.21 234 Pn 00 36 16.1 -0.4
I21K Tanana 3.30 22 Pn 00 36 17.6 -0.1
I21K IAML 00 37 22.8
comp=N,905nm,1.0s
SEW Seward 3.36 126 Pn 00 36 19.7 +1.2
WAT6 Susitna Watana 3.37 80 Pn 00 36 18.3 -0.5
H18K Honhosa River 3.37 334 Pn 00 36 19.6 +0.9
H18K IAML 00 37 16.9
comp=E,917nm,0.8s
H18K IAML 00 37 16.9
comp=N,835nm,0.8s
M23K Glacier View 3.41 93 Pn 00 36 20.4 +1.2
PWL Port Wells 3.41 110 Pn 00 36 20.1 +0.8
PWL IAML 00 37 12.2
comp=E,492nm,0.6s
PWL IAML 00 37 15.2
comp=N,551nm,0.8s
MLY Manley 3.43 31 Pn 00 36 19.1 -0.5
MLY IAML 00 37 19.6
comp=E,524nm,0.6s
MLY IAML 00 37 22.3
comp=N,788nm,0.9s
H19K Roundabout Mou 3.45 349 Pn 00 36 20.1 +0.4
H19K IAML 00 37 23.4
comp=N,630nm,0.6s
H19K IAML 00 37 23.6
comp=E,675nm,0.5s
P16K Nushagak River 3.49 207 Pn 00 36 20.0 -0.3
Q18K Katmai Hardscr 3.53 181 Pn 00 36 20.8 -0.2
H17K Granite Mounta 3.57 323 Pn 00 36 22.4 +1.0
H17K IAML 00 37 06.9
comp=N,515nm,0.5s
H17K IAML 00 37 29.6
comp=E,913nm,0.8s
NEA2 Nenana 3.59 45 Pn 00 36 20.4 -1.2
NEA2 IAML 00 37 26.9
comp=E,695nm,0.6s
NEA2 IAML 00 37 27.2
comp=N,525nm,0.5s
SCM Sheep Creek Mo 3.59 92 Pn 00 36 23.1 +1.3
SCM 00 36 57.6
comp=N,911nm,0.6s
SCM IAML 00 36 58.0
comp=E,805nm,0.5s
DHY Denali Highway 3.60 72 Pn 00 36 22.1 +0.1
H21K Melozitna Rive 3.63 14 Pn 00 36 22.6 +0.4
H21K IAML 00 37 29.8
comp=N,526nm,0.6s
H21K IAML 00 37 30.3
comp=E,457nm,0.6s
M14K Bethel 3.67 250 Pn 00 36 23.1 +0.4
M14K IAML 00 37 40.5
comp=E,441nm,1.2s
M14K IAML 00 37 42.2
comp=N,522nm,1.8s
KARR Katmai Rainbow 3.68 178 Pn 00 36 23.2 +0.2
KAHG Katmai Hook Gl 3.69 177 Pn 00 36 23.4 +0.4
L14K Kuka Creek 3.79 261 Pn 00 36 25.1 +0.7
L14K IAML 00 37 33.8
comp=E,544nm,1.1s
L14K IAML 00 37 38.0
comp=N,621nm,1.2s
O15K Ungalikthiuk R 3.85 221 Pn 00 36 25.1 -0.1
O15K IAML 00 37 29.5
comp=E,513nm,0.9s
O15K IAML 00 37 32.2
comp=N,518nm,1.1s
WRH Wood River Hil 3.85 50 Pn 00 36 24.6 -0.6
WRH IAML 00 37 34.5
comp=N,498nm,0.6s
WRH IAML 00 37 35.9
comp=E,435nm,0.5s
IM03 3.87 7 Pn 00 36 25.9 +0.5
IMAR Indian Mountai 3.87 7 Pn 00 36 25.8 +0.3
KAKN Katmai Knife C 3.88 181 Pn 00 36 25.6 -0.2
IM01 Indian Mountai 3.88 7 Pn 00 36 25.9 +0.1
I23K Minto, Yukon-K 3.88 37 Pn 00 36 25.2 -0.5
I23K IAML 00 37 31.6
comp=E,729nm,0.5s
I23K IAML 00 37 35.4
comp=N,765nm,0.9s
KABU Katmai Buttres 3.91 183 Pn 00 36 26.1 -0.1
Q17K Contact Creek 3.94 188 Pn 00 36 26.4 -0.2
GLI Glacier Island 3.96 106 Pn 00 36 26.6 -0.1
GLI IAML 00 37 19.0
comp=E,377nm,0.5s
ACHA Angle Creek He 3.97 183 Pn 00 36 26.7 -0.3
N14K Kuskokwak Cree 3.99 239 Pn 00 36 26.9 -0.2
ANCK Angle Creek 3.99 184 Pn 00 36 27.1 -0.2
MGLS Mageik Landsli 4.04 182 Pn 00 36 28.2 +0.2
CCB Clear Creek Bu 4.05 49 Pn 00 36 26.3 -1.7
CCB IAML 00 37 36.8
comp=E,419nm,0.7s
CCB IAML 00 37 39.0
comp=N,529nm,0.5s
H22K Ishtalitna Cre 4.05 21 Pn 00 36 28.2 +0.1
H22K IAML 00 37 41.5
comp=E,305nm,0.9s
J14K Nanvaranak Lak 4.06 282 Pn 00 36 28.2 +0.1
J14K IAML 00 37 43.5
comp=N,296nm,0.9s
J14K IAML 00 37 47.4
comp=E,406nm,0.9s
G18K Tagagawik 4.09 338 Pn 00 36 29.9 +1.3
G18K IAML 00 37 39.4
comp=E,282nm,0.7s
MDM Murphy Dome 4.10 44 Pn 00 36 27.3 -1.4
M24K Tolsona, Glenn 4.10 87 Pn 00 36 29.6 +0.8
G19K Purcell Mounta 4.11 348 Pn 00 36 29.4 +0.6
G19K IAML 00 37 38.6
comp=E,620nm,0.8s
G19K IAML 00 37 39.2
comp=N,362nm,0.7s
KJL Kejulik 4.14 185 Pn 00 36 29.2 0.0
COLA College 4.17 46 P Pn 00 36 30.0 +0.4
COLA College 4.17 46 Pn 00 36 28.4 -1.2
G17K Kiwalik Mounta 4.21 325 Pn 00 36 30.3 +0.2
HDA Harding Lake 4.24 54 Pn 00 36 31.0 +0.3
HDA IAML 00 37 50.9
comp=E,422nm,0.7s
P23K Montague Islan 4.24 117 Pn 00 36 30.8 +0.1
O14K Tigyukauivet M 4.27 230 Pn 00 36 30.7 -0.4
O14K IAML 00 37 54.8
comp=E,373nm,1.1s
O14K IAML 00 37 57.4
comp=N,433nm,0.8s
FID Port Fidalgo 4.29 106 Pn 00 36 30.6 -0.7
KLU Klutina 4.32 95 Pn 00 36 31.8 +0.1
KLU IAML 00 37 15.3
comp=E,551nm,0.3s
PS07 TAPS Pump Stn7 4.32 40 Pn 00 36 31.2 -0.4
PS06 TAPS Pump Stn6 4.35 29 Pn 00 36 31.7 -0.3
PS08 TAPS Pump Stn8 4.36 53 Pn 00 36 30.7 -1.5
H23K Yukon River 4.37 30 Pn 00 36 32.1 -0.3
H23K IAML 00 37 51.2
comp=N,294nm,0.7s
G21K Allakaket 4.41 7 Pn 00 36 33.5 +0.5
G21K IAML 00 37 50.9
comp=N,302nm,0.6s
G21K IAML 00 38 07.2
comp=E,430nm,1.2s
HIN Hinchinbrook I 4.43 110 Pn 00 36 33.6 +0.3
HIN IAML 00 37 50.0
comp=E,243nm,1.4s
M13K Dall Lake 4.43 250 Pn 00 36 33.9 +0.7
M13K IAML 00 37 54.0
comp=E,368nm,1.3s
M13K IAML 00 38 05.0
comp=N,412nm,1.4s
PAX Paxson 4.44 75 Pn 00 36 34.3 +0.8
PAX IAML 00 37 49.6
comp=N,495nm,0.7s
IL31 4.45 50 Pn 00 36 32.4 -1.1
ILAR Eielson Array 4.45 50 Pn Pn 00 36 32.6 -0.9
comp=N,1.3nm,0.3s,baz=242,slow=14,SNR=35
ILAR Lg Lg 00 37 43.8
comp=N,42nm,0.3s,baz=243,slow=29,SNR=16
comp=N,3.7nm,0.4s
ILAR Eielson Array 4.45 50 Pn 00 36 32.4 -1.0
PLK1 Peulik 1 4.46 192 Pn 00 36 33.9 +0.3
POKR Poker Plat Res 4.46 45 Pn 00 36 32.4 -1.2
PLK2 Peulik 2 4.47 190 Pn 00 36 34.0 +0.2
PLK3 Peulik 3 4.54 189 Pn 00 36 34.8 +0.1
KDAK Kodiak Island 4.55 164 Pn Pn 00 36 36.4 +1.5
comp=N,4.9nm,0.3s,baz=351,slow=11,SNR=28
KDAK Sn Sn 00 37 31.2 +4.0
comp=N,3.8nm,0.3s,baz=256,slow=17,SNR=1.1
KDAK Lg Lg 00 37 45.5
comp=N,4.7nm,0.3s,baz=289,slow=23,SNR=8.1
KDAK LR LR 00 38 37.2
comp=N,140nm,19.6s,baz=0.3,slow=40
comp=N,44nm,0.6s
KDAK Kodiak Island 4.55 164 Pn Pn 00 36 35.9 +1.1
HARP HAARP 4.56 83 Pn 00 36 35.5 +1.5
K13K Kusilvak Mount 4.59 271 Pn 00 36 35.6 +0.2
G16K Koyuk River 4.63 318 Pn 00 36 36.8 +0.9
G16K Koyuk River 4.63 318 IAML 00 37 59.4
comp=E,314nm,1.4s
G16K IAML 00 38 00.8
comp=N,316nm,0.8s
EYAK Cordova Ski Ar 4.70 106 P Pn 00 36 37.4 +0.5
EYAK Cordova Ski Ar 4.70 106 Pn Pn 00 36 36.8 -0.1
H24K Noodor Dome 4.81 37 Pn 00 36 37.4 -1.1
H24K IAML 00 38 11.8
comp=E,266nm,0.9s
H24K IAML 00 38 14.5
comp=N,234nm,1.4s
F19K Shaleruckik Mo 4.85 346 Pn 00 36 40.0 +1.1
F19K IAML 00 37 36.0
comp=N,218nm,0.5s
F19K IAML 00 38 14.0
comp=E,187nm,1.0s
RIDG Independent Ri 4.86 67 Pn 00 36 40.1 +1.0
F18K Selawik 4.91 337 Pn 00 36 40.9 +1.2
F20K Avaraart Lake 4.92 356 Pn 00 36 40.9 +1.0
F20K IAML 00 37 37.9
comp=N,339nm,0.4s
F20K IAML 00 37 38.3
comp=E,213nm,0.5s
J25K Salcha River, 4.94 56 Pn 00 36 39.5 -0.9
J25K Salcha River, 4.94 56 IAML 00 38 06.7
comp=E,253nm,0.8s
J25K IAML 00 38 08.8
comp=N,313nm,0.8s
G15K Niukluk 4.97 309 Pn 00 36 41.4 +0.8
G22K Bettles 5.00 16 Pn 00 36 41.5 +0.6
OHAK Old Harbor 5.03 170 P Pn 00 36 42.9 +1.5
comp=N,94nm,0.7s
OHAK Old Harbor 5.03 170 Pn 00 36 42.4 +1.1
G23K Bananza Creek 5.03 23 Pn 00 36 41.6 +0.1
G23K Bananza Creek 5.03 23 IAML 00 38 12.5
comp=E,144nm,1.1s
G23K IAML 00 38 12.5
comp=N,144nm,0.9s
F17K Baldwin Pennin 5.10 330 Pn 00 36 43.8 +1.4
F21K Alatna River 5.12 6 Pn 00 36 43.1 +0.4
F21K IAML 00 38 22.0
comp=E,140nm,0.6s
RAGM Ragged Mountai 5.25 105 Pn Pn 00 36 46.5 +1.9
RAGM IAML 00 37 55.5
comp=E,234nm,0.5s
ANM Nome 5.29 302 Pn Pn 00 36 46.2 +1.2
SCRK Sand Creek 5.29 65 Pn 00 36 45.2 +0.1
SCRK Sand Creek 5.29 65 IAML 00 38 20.3
comp=E,212nm,0.7s
SCRK IAML 00 38 23.4
comp=N,193nm,1.5s
GLB Gilahina Butte 5.32 93 Pn 00 36 46.0 +0.6
GLB Gilahina Butte 5.32 93 IAML 00 37 44.6
comp=N,152nm,0.3s
PRP Porcupine Dome 5.34 47 Pn 00 36 44.8 -1.1
PRP IAML 00 38 19.4
comp=N,211nm,0.6s
PRP IAML 00 38 32.3
comp=E,206nm,0.7s
E19K Redstone River 5.41 350 Pn 00 36 47.8 +1.2
COLD Coldfoot 5.47 20 Pn 00 36 47.5 0.0
F22K John River 5.49 11 Pn 00 36 48.5 +0.8
VRDI Verde Repeater 5.53 95 Pn 00 36 50.5 +2.0
F15K North Star Dit 5.57 314 Pn 00 36 49.9 +1.0
G24K Hadweenzic Riv 5.58 32 Pn 00 36 48.2 -0.7
SII Sitkinak Islan 5.63 176 P Pn 00 36 52.4 +2.6
SII Sitkinak Islan 5.63 176 Pn 00 36 50.9 +1.1
BERG Berg Lake 5.69 103 Pn Pn 00 36 51.8 +1.3
MCARA McCarthy VSAT 5.70 93 Pn 00 36 51.8 +1.2
M11K Mekoryuk 5.73 257 Pn Pn 00 36 52.1 +1.1
E18K Tukpahlearik C 5.81 338 Pn 00 36 53.6 +1.4
CRQM Cirque 5.82 99 Pn 00 36 52.2 -0.2
TGL Tana Glacier 5.96 98 Pn 00 36 55.1 +0.7
PTPK Patty Peak 6.01 94 Pn 00 36 56.1 +1.0
F14K Arctic Creek 6.04 308 Pn 00 36 56.8 +1.4
M27K Edge Creek, AK 6.09 82 Pn 00 36 57.4 +1.3
FYU Fort Yukon 6.09 39 Pn 00 36 55.1 -0.9
BALM Baldy 6.10 95 Pn 00 36 56.7 +0.4
BC01 Beaver Creek A 6.11 76 Pn 00 36 56.9 +0.6
L27K Beaver Creek, 6.11 76 Pn 00 36 56.9 +0.6
K27K Chicken 6.12 67 Pn 00 36 56.8 +0.4
BC03 6.13 76 Pn 00 36 56.9 +0.4
BCAR Beaver Creek A 6.13 76 Pn 00 36 57.0 +0.4
KIAG Kiagna River 6.13 96 Pn 00 36 56.9 +0.2
E22K Anaktuvuk Pass 6.14 11 Pn 00 36 57.9 +1.2
CHGN Chignik 6.15 199 Pn 00 36 58.2 +1.4
F24K Squaw Lake 6.15 26 Pn 00 36 56.7 -0.2
BARK Barkley Ridge 6.24 101 Pn 00 36 57.9 -0.3
E21K Killik River 6.32 3 Pn 00 36 59.9 +0.8
E23K Chandalar 6.33 18 Pn 00 36 59.8 +0.5
VNFG Fog Glacier, M 6.36 204 Pn 00 36 59.8 0.0
CHIR Chirikof Islan 6.37 184 P Pn 00 37 02.3 +2.4
CHIR Chirikof Islan 6.37 184 Pn Pn 00 36 60.0 +0.1
BARN Barnard Glacie 6.42 94 Pn Pn 00 37 01.0 +0.4
GRNC Granite Creek 6.47 97 Pn 00 37 02.0 +0.6
D19K Kuna River 6.50 350 Pn 00 37 03.4 +1.8
E24K Your Creek 6.52 22 Pn 00 37 02.2 +0.2
D17K Noatak River 6.55 332 Pn 00 37 03.0 +0.7
D20K Etivluk River 6.62 355 Pn 00 37 04.5 +1.3
YUK2 White River 6.64 87 Pn 00 37 04.3 +0.6
TNA Tin City 6.68 306 Pn 00 37 05.3 +1.3
F25K Christian Rive 6.72 32 Pn 00 37 04.1 -0.6
G26K Porcupine Rive 6.78 40 Pn 00 37 04.9 -0.5
LOGN Logan Glacier 6.79 95 Pn 00 37 06.0 +0.2
I27K Kandik River 6.80 54 Pn 00 37 06.5 +0.6
YUK3 Moose Creek 6.82 87 Pn 00 37 06.7 +0.4
TOLK Toolik Lake Re 6.87 17 Pn 00 37 08.0 +1.2
BM02 Burnt Mountain 6.90 36 Pn 00 37 06.1 -1.0
C18K Utukok River 7.01 341 Pn 00 37 10.0 +1.3
C21K Knifeblade Rid 7.02 0 Pn 00 37 09.8 +1.0
D23K Nanushuk River 7.05 13 Pn 00 37 10.4 +1.3
H27K Steamboat Moun 7.12 49 Pn 00 37 09.0 -1.2
E25K Arctic Village 7.15 29 Pn 00 37 10.8 +0.2
C17K DeLong Mountai 7.21 335 Pn 00 37 12.1 +0.7
C19K Lookout Ridge 7.23 347 Pn 00 37 12.5 +0.8
DAWY Dawson 7.29 68 Pn 00 37 13.0 +0.5
I28M Miner Creek 7.39 57 Pn 00 37 14.9 +1.0
SDPT Sand Point 7.42 205 P Pn 00 37 18.6 +4.4
B21K Ikpikpuk River 7.49 1 Pn 00 37 15.5 +0.3
PS1A Pavlof South-1 7.63 211 Pn 00 37 16.6 -0.5
M29M Somme Creek 7.67 81 Pn 00 37 18.0 +0.2
CHNA Chernabura Isl 7.75 200 P Pn 00 37 23.0 +4.3
L29M L29M 7.79 76 Pn 00 37 20.2 +0.9
GAMB Gambell 7.82 289 Pn 00 37 19.5 -0.2
C23K Itkillik River 7.90 11 Pn 00 37 21.6 +0.9
B20K Meade River 7.93 354 Pn 00 37 22.1 +0.9
YUK6 Outpost Mounta 8.00 91 Pn 00 37 23.2 +0.9
E27K Coleen River 8.22 37 Pn 00 37 24.4 -0.9
H29M Whitestone 8.27 53 Pn 00 37 25.2 -0.7
F28M Old Crow 8.40 43 Pn 00 37 27.1 -0.6
N30M Aishikik Lake 8.47 87 Pn 00 37 28.3 -0.4
G29M Pine Creek 8.68 49 Pn 00 37 31.2 -0.2
J30M Hart River 8.68 66 Pn 00 37 32.4 +0.8
C27K Jago River 8.76 27 Pn 00 37 32.7 +0.1
C26K Camden Bay 8.77 23 Pn 00 37 33.9 +1.3
I30M Mount Dempster 8.77 61 Pn 00 37 33.8 +1.0
A22K Sinclair Lake 8.88 360 Pn 00 37 34.3 +0.2
EPYK Eagle Plains 8.95 54 Pn 00 37 35.3 +0.1
D27M Malcolm River 9.11 33 Pn 00 37 38.0 +0.5
A21K Barrow 9.22 357 Pn 00 37 39.1 +0.2
E29M Blow River 9.45 41 Pn 00 37 41.4 -0.6
INK Inuvik 10.83 46 Pn Pn 00 38 02.2 +1.4
comp=E,0.5nm,0.3s,baz=245,slow=15,SNR=9.4
INK Lg Lg 00 41 08.2
comp=E,0.2nm,0.3s,baz=296,slow=17,SNR=3.1
INK LR LR 00 42 14.8
comp=E,65nm,18.1s,baz=240,slow=38
comp=E,1.4nm,0.5s
INK Inuvik 10.83 46 Pn 00 38 00.5 -0.4
DLBC Dease Lake 12.85 96 Lg Lg 00 42 18.9
comp=E,0.1nm,0.3s,baz=168,slow=20,SNR=1.8
C36M Paulatuk 14.41 47 Pn Pn 00 38 46.6 -3.1
AMKA Amchitka 17.65 244 Pn Pn 00 39 30.8 -0.8
YKAW3 Yellowknife Wh 18.49 71 P P 00 39 39.5 -2.2
YKAW3 IAmb IAmb 00 39 50.1
comp=Z,5.5nm,1.1s
YKA Yellowknife Ar 18.52 71 P P 00 39 42.4 +0.5
comp=Z,0.8nm,0.6s,baz=286,slow=10,SNR=4.6
YKA LR LR 00 47 18.3
comp=Z,112nm,19.4s,baz=16,slow=38
YKA Yellowknife Ar 18.52 71 P 00 39 39.8 -2.1
YKAW1 Yellowknife Wh 18.57 71 P P 00 39 40.2 -2.4
YKAW1 IAmb IAmb 00 39 51.4
comp=Z,5.5nm,1.1s
EDM Edmonton 23.55 93 P P 00 40 35.1 -0.9
EDM IAmb IAmb 00 40 43.5
comp=Z,5.2nm,0.8s
NEW Newport 25.20 106 LR LR 00 51 05.7
comp=Z,34nm,19.0s,baz=242,slow=37
BLKN Baker Lake 25.79 59 P P 00 40 55.8 -0.7
PDAR Pinedale Array 32.83 105 LR LR 00 56 57.4
comp=Z,19nm,18.3s,baz=344,slow=39
USRK Ussuriysk Ar. 44.63 282 LR LR 01 04 51.7
comp=Z,61nm,18.8s,baz=219,slow=40
SADO Sadowa 45.42 76 LR LR 01 03 39.1
comp=Z,47nm,18.2s,baz=344,slow=37
TXAR Lajitas Array 46.61 110 P P 00 43 56.8 +2.8
comp=Z,0.2nm,0.7s,baz=330,slow=7.7,SNR=5.0
comp=Z,0.2nm,0.7s
TXAR Lajitas Array 46.61 110 P P 00 43 54.2 +0.3
TKL Tuckaleechee C 50.50 87 LR LR 01 06 49.8
comp=Z,51nm,18.1s,baz=338,slow=37
FINES FINESS Array B 56.71 359 P P 00 45 08.6 -0.2
comp=Z,0.8nm,0.8s,baz=344,slow=9.0,SNR=1.7
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 62.17 319 P P 00 45 47.2 +0.5
comp=Z,0.2nm,0.6s,baz=32,slow=5.8,SNR=1.8
comp=Z,0.2nm,0.6s
AKASG Malin Array Be 67.44 357 P P 00 46 21.5 +0.6
comp=Z,0.7nm,0.5s,baz=357,slow=6.6,SNR=4.1
comp=Z,0.7nm,0.5s

*AEIC **19** 00:36:24.2±1.0, 62°.32N±0°.02×149°.09W±0°.05, h50km±6km, Error ellipse: s-maj=3.6km s-min=3.1km az=172.0*
NEIC 19 00:36:23.7±1.2, **62°.28N**±0°.02×**149°.12W**±0°.05, **h39**km±15km, **ML3.4**/28, **ML3.3**(AEIC), **Error ellipse: s-maj=3.8km s-min=2.7km az=71.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHO	**Glory Hole Cre**	**0.52**	**170**		Pn	00 36 34.9	+0.1
GHO					Sn	00 36 43.6	+1.1
GHO				IAML		00 36 45.5	
	comp=N,2µm,0.5s						
CUT	**Chulitna**	**0.55**	**283**		Pn	00 36 35.0	-0.2
CUT					Sn	00 36 44.2	+1.1
WAT7	**Susitna Watana**	**0.56**	**13**		Pn	00 36 34.9	-0.6
WAT7					Sn	00 36 44.5	+0.9
SML	**Sawmill**	**0.60**	**142**		Pn	00 36 35.6	-0.4
SML					Sn	00 36 45.7	+1.2
WAT1	**Susitna Watana**	**0.61**	**25**		Pn	00 36 35.5	-0.5
PMR	**Palmer**	**0.69**	**181**		Pn	00 36 36.5	-0.5
PMR					Sn	00 36 46.9	+0.4
WAT6	**Susitna Watana**	**0.71**	**64**		Pn	00 36 36.9	-0.5
M23K	**Glacier View**	**0.82**	**126**		Pn	00 36 38.5	-0.3
M23K					Sn	00 36 51.0	+1.3
KNK	**Knik Glacier**	**0.93**	**160**		Pn	00 36 40.1	-0.1
KNK					Sn	00 36 53.9	+1.5
SCM	**Sheep Creek Mo**	**0.96**	**117**		Pn	00 36 40.5	-0.2
RND	**Reindeer**	**1.13**	**6**		Pn	00 36 42.7	-0.4
RC01	**Rabbit Creek A**	**1.23**	**194**		Pn	00 36 44.5	+0.1
RC01				IAML		00 36 53.7	
	comp=N,677nm,0.4s						
RC01				IAML		00 37 02.9	
	comp=E,743nm,0.5s						
PWL	**Port Wells**	**1.48**	**165**		Pn	00 36 48.1	+0.3
KLU	**Klutina**	**1.71**	**116**		Pn	00 36 51.0	0.0
GLI	**Glacier Island**	**1.71**	**145**		Pn	00 36 50.8	-0.1
PAX	**Paxson**	**1.82**	**66**		Pn	00 36 53.4	+0.8
DIV	**Divide**	**1.97**	**125**		Pn	00 36 54.4	-0.2
DIV	**Divide**	**1.97**	**125**	IAML		00 37 55.5	
	comp=N,261nm,1.0s						
FID	**Port Fidalgo**	**1.99**	**139**		Pn	00 36 54.6	-0.2
FID	**Port Fidalgo**	**1.99**	**139**	IAML		00 37 43.9	
	comp=E,231nm,0.5s						
PS12	**TAPS Pump St12**	**2.05**	**112**		Pn	00 36 56.3	+0.7

*FUNV **19** 01:13:13.5, 7°.34N×73°.09W, h6km, MW3.1, Presumed earthquake*
*RSNC **19** 01:13:15.9±0.0, 7°.N±1°×7°.3W±°, h147km±1km, M1.9, ML1.6, MLv1.9*
ISC 19 01:13:09.3±1.9, **6°.86N**±0°.06×**72°.93W**±0°.06, **h180**km±12km, **n13**, **σ2°.34**/25, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.37**	**223**	P	**Pn**	**01 13 35.9**	**+2.0**
BARC				S	**Sn**	**01 13 50.6**	**-2.2**
BRJC	**Barrancabermej**	**0.81**	**278**	P	**Pn**	**01 13 36.3**	**+0.6**
BRJC				S	**Sn**	**01 13 53.8**	**-2.2**
RUSC	**La Rusia**	**0.97**	**189**	P	**Pn**	**01 13 39.9**	**+2.5**
RUSC				S	**Sn**	**01 13 58.3**	**-0.8**
RUSC	**La Rusia**	**0.97**	**189**	*eP*	**Pn**	**01 13 39.0**	**+1.6**
RUSC				*eS*	**Sn**	**01 13 58.9**	**-0.2**
OCAC	**Ocana**	**1.42**	**344**	P	**Pn**	**01 13 44.1**	**+3.4**
OCAC				S	**Sn**	**01 14 06.3**	**+1.2**
PTBC	**PUERTO BERRIO,**	**1.55**	**258**	P	**Pn**	**01 13 42.4**	**+0.7**
PTBC				S	**Sn**	**01 14 02.8**	**-4.0**
SPBC	**San Pablo de B**	**1.65**	**223**	P	**Pn**	**01 13 44.5**	**+1.7**
SPBC				S	**Sn**	**01 14 06.3**	**-2.5**
NORC	**Norcasia**	**2.32**	**236**	P	**Pn**	**01 13 50.4**	**+0.5**
NORC				S	**Sn**	**01 14 18.7**	**-2.8**
CHIC	**Chingaza**	**2.36**	**200**	P	**Pn**	**01 13 53.5**	**+2.7**
HELC	**Santa Helena**	**2.67**	**256**	P	**Pn**	**01 13 55.4**	**+1.1**
HELC				S	**Sn**	**01 14 27.7**	**-1.5**
HELC	**Santa Helena**	**2.67**	**256**	*eP*	**Pn**	**01 13 57.2**	**+2.9**
HELC				*eS*	**Sn**	**01 14 28.2**	**-1.0**
GUY2C	**Guyana, Caldas**	**2.92**	**236**	P	**Pn**	**01 13 59.0**	**+1.6**
GUY2C				S	**Sn**	**01 14 32.8**	**-2.0**
SDV	**Santo Domingo**	**3.04**	**48**	*eP*	**Pn**	**01 13 58.9**	**+0.3**
SDV				*eS*	**Sn**	**01 14 32.9**	**-4.1**

*IDC **19** 01:16:34.5±3.7, 5°.72S×150°.18E, h106km±26km, mb3.7/7, mbtmp4.1/9, Error ellipse: s-maj=46.9km s-min=21.6km az=94.0.*
ISC 19 01:16:34.8±1.3, **5°.7S**±0°.1×**150°.0E**±0°.2, **h100**km, **n10**,

σ1ˢ06/11, mb3.9/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.65**	**217**	P	**Pn**	**01 17 43.3**	**+0.5**
	10nm,0.4s,baz=22,slow=6.0,SNR=7.7						
PMG				S	**Sn**	**01 18 34.6**	**-1.1**
	88nm,0.4s,baz=59,slow=15,SNR=12						
CTA	**Charters Tower**	**14.77**	**194**	P	**Pn**	**01 20 00.1**	**+1.5**
	8.4nm,1.1s,baz=25,slow=17,SNR=3.6						
WRA	**Warramunga Arr**	**20.81**	**226**	P	**P**	**01 21 08.4**	**0.0**
	2.3nm,0.4s,baz=50,slow=10,SNR=50						
WRA				ScP	**ScP**	**01 28 39.8**	**-1.6**
	0.7nm,0.8s,baz=49,slow=2.8,SNR=7.7						
	2.3nm,0.4s						
ASAR	**Alice Springs**	**23.67**	**219**	P	**P**	**01 21 37.6**	**+0.2**
	2.1nm,0.6s,baz=54,slow=8.9,SNR=39						
	2.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.81**	**241**	P	**P**	**01 22 06.1**	**+0.2**
	1.9nm,0.3s,baz=59,slow=11,SNR=29						
	1.9nm,0.3s						
STKA	**Stephens Creek**	**27.21**	**196**	P	**P**	**01 22 08.4**	**-0.9**
	2.4nm,0.9s,baz=37,slow=15,SNR=3.8						
	2.4nm,0.9s						
HILR	**Hailar Array B**	**61.00**	**338**	P	P	01 26 37.4	-0.3
	0.7nm,0.4s,baz=142,slow=4.1,SNR=3.5						
	0.7nm,0.4s						
SONM	**Songino Array**	**65.64**	**329**	P	**P**	**01 27 08.7**	**+0.2**
	0.6nm,0.4s,baz=144,slow=6.3,SNR=3.5						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**84.27**	**180**	P	**P**	**01 28 54.2**	**-1.0**
	0.9nm,0.6s,baz=22,slow=8.6,SNR=7.5						
	0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.92**	**286**	PKPbc	**PKPdf**	**01 36 07.0**	**+0.7**
	0.1nm,0.3s,baz=95,slow=2.7,SNR=5.6						

*TEH **19** 01:19:26.1, 38°.32N×46°.37E, h10km±104km, ML2.6, Presumed earthquake*
*AZER **19** 01:19:26.3, 38°.42N×46°.43E, h8km, ml2.4*

ISC 19 01:19:26.1±1.0, 38°.36N±0°.03×46°.39E±0°.02, h7km±10km, n29, σ1ˢ50/49, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITBZ	**Tabriz**	**0.23**	**237**	Pg	**Pg**	**01 19 29.8**	**-0.9**
ITBZ				Sg	**Sg**	**01 19 33.0**	**-0.8**
IHRS	**Heris**	**0.52**	**94**	Pg	**Pb**	**01 19 37.0**	**-0.7**
IHRS				Sg	**Sb**	**01 19 45.3**	**-0.1**
ISHB	**Shabestar**	**0.61**	**263**	Pg	**Pb**	**01 19 39.0**	**-0.3**
IMRD	**Marand**	**0.64**	**304**	Pg	**Pg**	**01 19 39.2**	**+0.7**
ORD	**Ordubad**	**0.65**	**332**	P	**Pb**	**01 19 39.8**	**0.0**
ORD				S	**Sb**	**01 19 49.9**	**+0.8**
IAZR	**Azarshahr**	**0.75**	**206**	Pg	**Pg**	**01 19 41.0**	**+0.3**
NAX	**Nakhchivan**	**1.07**	**320**	P	**Pn**	**01 19 47.7**	**0.0**
NAX				S	**Sn**	**01 20 03.8**	**+1.0**
SBZ	**Shahbuz**	**1.23**	**328**	P	**Pg**	**01 19 50.4**	**+0.7**
SBZ				S	**Sn**	**01 20 07.6**	**+1.0**
IHSH	**Hashtrud**	**1.26**	**146**	Pg	**Pn**	**01 19 49.7**	**-0.7**
GRMI	**Germi**	**1.26**	**69**	Pg	**Pg**	**01 19 50.3**	**0.0**
QRD	**Qoradiz**	**1.32**	**33**	P	**Pg**	**01 19 51.6**	**+0.2**
YRD	**Yardimli**	**1.55**	**68**	P	**Pb**	**01 19 55.5**	**+0.1**
YRD				S	**Sg**	**01 20 18.1**	**+2.0**
LRK	**Lerik**	**1.56**	**79**	P	**Pg**	**01 19 55.8**	**-0.2**
LRK				S	**Sg**	**01 20 18.4**	**+2.2**
BLQ	**Beylaqan**	**1.64**	**33**	P	**Pb**	**01 19 56.3**	**-0.3**
BLQ				S	**Sg**	**01 20 22.3**	**+3.5**
GLBA	**Clilabad**	**1.80**	**60**	S	**Sg**	**01 20 25.1**	**+1.2**
HYR	**Heyderabad**	**1.81**	**319**	P	**Pb**	**01 19 59.9**	**+0.3**
HYR				S	**Sg**	**01 20 26.6**	**+2.2**
AGDM	**Agdam**	**1.83**	**18**	P	**Pb**	**01 19 59.2**	**-0.8**
AGDM				S	**Sg**	**01 20 26.7**	**+1.6**
ASTR	**Astara**	**1.90**	**83**	P	**Pg**	**01 20 02.6**	**+0.1**
ASTR				S	**Sg**	**01 20 29.7**	**+2.7**
LKRN	**Lenkeran, Azer**	**1.91**	**79**	P	**Pg**	**01 20 02.9**	**+0.3**
LKRN				S	**Sg**	**01 20 30.1**	**+2.7**
HAKT	**HAKKARI**	**2.27**	**250**	P	**Pg**	**01 20 10.6**	**+1.0**
HAKT				S	**Sg**	**01 20 38.9**	**-0.1**
GANJ	**Ganja**	**2.29**	**359**	P	**Pb**	**01 20 08.2**	**+0.5**
GANJ				S	**Sg**	**01 20 38.9**	**-0.6**
IGDI	**IGDIR**	**2.35**	**311**	P	**Pb**	**01 20 08.3**	**-0.5**
IGDI				S	**Sg**	**01 20 41.9**	**+0.3**
GDB	**GEDABAY**	**2.41**	**348**	P	**Pg**	**01 20 11.0**	**-1.3**
GDB				S	**Sb**	**01 20 41.5**	**+1.6**
IML	**Ismayilli**	**2.80**	**29**	P	**Pb**	**01 20 16.6**	**+0.1**
QZX	**Qazax, Azerbai**	**2.81**	**344**	P	**Pb**	**01 20 15.9**	**-0.8**
QZX				S	**Sb**	**01 20 50.9**	**-0.3**
SEKA	**Sheki**	**2.91**	**12**	Pg	**Pb**	**01 20 16.8**	**-1.6**
SEKA				Sg	**Sg**	**01 20 57.5**	**-2.3**
PQL	**Pirkuli**	**2.96**	**34**	P	**Pb**	**01 20 17.0**	**-2.4**
PQL				S	**Sb**	**01 20 52.9**	**-2.9**
XNQ	**Khinaliq**	**3.12**	**25**	P	**Pb**	**01 20 18.9**	**-3.1**
XNQ				S	**Sb**	**01 20 57.9**	**-2.4**
SIZA	**Siyzn**	**3.33**	**35**	P	**Pb**	**01 20 23.4**	**-2.2**

TAP 19 01:22:36.5, 23°.52N×121°.86E, h31km±1km, ML2.9, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.35**	**303**	P	Pn	01 22 45.3	-0.1
TEGC				S	Sn	01 22 51.4	+0.1
SHUL	**Shoufeng**	**0.38**	**314**	⇑P	Pn	01 22 45.7	-0.2
SHUL				S	Sn	01 22 52.6	+0.5
HGSD	**Ruisui**	**0.40**	**266**	P	Pb	01 22 45.8	+0.3
HGSD				S	Sn	01 22 52.5	-0.1
TEYL	**Yanliau Villag**	**0.42**	**325**	*e*P	Pn	01 22 46.7	+0.3
TEYL				*e*S	Sn	01 22 53.5	+0.3
ECBN	**Changbin**	**0.43**	**242**	P	Pn	01 22 48.6	+0.1
ECBN				S	Sn	01 22 52.8	-0.4
EHYH	**Wanrong**	**0.47**	**267**	*e*P	Pn	01 22 47.3	+0.2
EHYH				S	Sn	01 22 55.0	+0.6
WARBT	**Fenglin Townsh**	**0.48**	**295**	P	Pn	01 22 47.0	-0.2
WARBT				S	Sn	01 22 54.4	-0.1
HWA	**Hwalien**	**0.51**	**333**	P	Pn	01 22 47.6	0.0
HWA				*e*S	Sn	01 22 56.5	+1.1
YULB	**Yu-li**	**0.53**	**256**	P	Pn	01 22 48.7	+0.8
YULB	**Yu-li**	**0.53**	**256**	P	Pn	01 22 48.0	0.0
YULB				*i* S	Sn	01 22 56.8	+1.0
CHKH	**Chenggong**	**0.54**	**233**	P	Pn	01 22 48.0	0.0
CHKH				S	Sb	01 22 55.0	-0.2
TWF1	**Yuli**	**0.54**	**252**	*i* P	Pn	01 22 48.5	+0.4
TWF1				*i* S	Sn	01 22 56.6	+0.5
ETM	**Tongmen**	**0.56**	**323**	*e*P	Pb	01 22 47.9	0.0
FULB	**Fuli**	**0.61**	**239**	*e*P	Pn	01 22 49.5	+0.5
CHKT	**Chengkung**	**0.62**	**228**	*i* P	Pb	01 22 48.7	-0.2
CHKT				*e*S	Sb	01 22 57.2	-0.2
LXIB	**Xiulin Townshi**	**0.65**	**321**	*e*P	Pb	01 22 49.5	0.0
LXIB				S	Sn	01 22 59.6	+0.7
ETL	**Fush Village**	**0.67**	**341**	*e*P	Pb	01 22 49.8	-0.1
ETL				*e*S	Sn	01 22 59.3	-0.1
NACB	**Ninganchiao**	**0.70**	**340**	P	Pn	01 22 50.0	-0.2
NACB	**Ninganchiao**	**0.70**	**340**	P	Pn	01 22 49.9	-0.3
NACB				*i* S	Sn	01 22 60.0	+0.1
VWDT	**VWDT**	**0.70**	**290**	*e*P	Pb	01 22 51.3	+1.0
EHD	**Haiduan**	**0.70**	**239**	*e*P	Pb	01 22 50.5	+0.1
ECS	**Chishang**	**0.72**	**235**	*e*P	Pb	01 22 51.4	+0.7
ECS				*e*S	Sn	01 23 01.3	+0.7
EOS4	**EOS4**	**0.73**	**35**	*i* P	Pb	01 22 50.8	+0.3
EOS4				*e*S	Sn	01 23 00.5	+0.3
OWD	**Renai**	**0.76**	**305**	*e*P	Pb	01 22 51.9	+0.5
OWD				S	Sn	01 23 02.2	+0.5
ETLH	**Xiulin Townshi**	**0.77**	**333**	P	Pb	01 22 51.4	0.0
ETLH				*i* S	Sn	01 23 01.8	0.0
WUSB	**Renai**	**0.83**	**305**	*e*P	Pb	01 22 53.0	+0.5
WHF	**Hehuan Shan**	**0.83**	**319**	P	Pb	01 22 52.7	0.0
ELDTW	**Lidau**	**0.84**	**247**	*e*P	Pb	01 22 53.0	+0.2
EOS3	**EOS3**	**0.87**	**29**	*e*P	Pb	01 22 53.4	+0.3
EOS3				S	Sb	01 23 05.0	+0.7
SSLB	**Suanglung**	**0.87**	**288**	P	Pb	01 22 55.8	+2.6
ENA	**Nanau**	**0.91**	**353**	P	Pn	01 22 52.2	-0.9
EWUT	**Wuta**	**0.93**	**355**	*e*P	Pb	01 22 54.1	0.0
EOS2	**EOS2**	**0.96**	**21**	*e*P	Pb	01 22 55.3	+0.8
TWT	**Tachien**	**0.96**	**320**	*e*P	Pb	01 22 55.7	+0.9
TDCB	**Techi**	**0.97**	**319**	*e*P	Pb	01 22 55.8	+0.8
LATG	**Datong**	**1.06**	**343**	*e*P	Pb	01 22 56.4	0.0
LATG				S	Sn	01 23 09.2	+0.2
NDS	**Dongshan**	**1.12**	**353**	*e*P	Pb	01 22 57.5	+0.2
NDS				*e*S	Sb	01 23 11.7	+0.2
YHNB	**Yeheng**	**1.23**	**339**	P	Pb	01 22 59.2	0.0
WTCT	**Ta-ch'eng**	**1.49**	**284**	*e*P	Pb	01 23 02.7	-0.8
WTCT				*e*S	Sn	01 23 20.4	+1.0

TAP 19 01:22:46.2, 23°.64N×120°.76E, h15km, ML2.8, 5C-3D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	**Tsauling**	**0.09**	**240**	⇑*i*P	Pg	01 22 49.6	+0.1
CHN5				*i* S	Sg	01 22 52.0	+0.4
WHYT	**Xinyi Township**	**0.10**	**57**	*i* P	Pb	01 22 49.9	-0.1
WHYT				*i* S	Sb	01 22 52.5	+0.1
ALS	**Alishan**	**0.14**	**162**	⇓*i*P	Pb	01 22 50.8	+0.1
ALS				*i* S	Sb	01 22 54.1	+0.4
WDLH	**Douliu**	**0.21**	**283**	*e*P	Pg	01 22 51.1	+0.1
WDLH				*e*S	Sb	01 22 55.6	+0.1
WDL	**Douliou City**	**0.22**	**290**	*e*P	Pg	01 22 51.2	+0.1
WDL				*e*S	Sb	01 22 56.4	+0.7
SSLB	**Suanglung**	**0.23**	**51**	P	Pg	01 22 51.7	+0.3
SSLB	**Suanglung**	**0.23**	**51**	⇑P	Pg	01 22 51.7	+0.3
WNT	**Mingjian**	**0.25**	**344**	⇑P	Pb	01 22 52.4	0.0
WNT				S	Sb	01 22 56.8	+0.2
WCKO	**Fanlu**	**0.25**	**215**	⇓*i*P	Pb	01 22 52.5	-0.1
WCKO				S	Sb	01 22 56.8	+0.2
SMLT	**Sun Moon Lake**	**0.27**	**28**	⇑*i*P	Pb	01 22 52.8	-0.1
SMLT				*i* S	Sb	01 22 57.9	+0.4
TYC	**Yuchr**	**0.28**	**19**	P	Pb	01 22 52.8	-0.1
TYC				S	Sb	01 22 57.9	+0.5
CHN4	**Tsaushan**	**0.33**	**208**	P	Pb	01 22 54.0	+0.2
CHN4				S	Sb	01 22 60.0	+1.1
CHY	**Chiayi**	**0.34**	**245**	*i* P	Pb	01 22 54.0	+0.1
CHY				*i* S	Sb	01 23 00.1	+0.9
TPUB	**Ta-pu**	**0.36**	**199**	P	Pb	01 22 54.1	-0.3
TPUB				S	Sb	01 23 00.5	+0.6
VWDT	**VWDT**	**0.37**	**72**	P	Pb	01 22 54.8	+0.4
VWDT				S	Sb	01 23 01.0	+1.0
WTP	**Ta-pu**	**0.41**	**199**	⇑*i*P	Pb	01 22 55.1	-0.2
WTP				*i* S	Sb	01 23 01.5	0.0
WRL	**Guolierlin Hig**	**0.44**	**307**	P	Pb	01 22 55.5	-0.1
WRL				*e*S	Sb	01 23 01.9	-0.1
WCS	**Beigang Elemen**	**0.44**	**18**	*e*P	Pb	01 22 55.5	-0.2
WCS				*e*S	Sb	01 23 01.9	-0.2
RLNB	**Erlin**	**0.44**	**304**	P	Pb	01 22 55.6	-0.1
RLNB				S	Sb	01 23 03.0	+0.8
TWK	**Hsinying**	**0.45**	**214**	⇓P	Pb	01 22 55.8	0.0
TWK				S	Sb	01 23 03.0	+0.6
STYH	**Taoyuan**	**0.47**	**178**	*e*P	Pg	01 22 55.9	+0.3
STYH				*e*S	Sb	01 23 03.0	+0.1
WCH1	**Changhua City**	**0.47**	**336**	*e*S	Sb	01 23 03.8	+0.8
WCHH	**Zhanghua**	**0.47**	**337**	P	Pb	01 22 56.3	0.0
WCHH				*e*S	Sb	01 23 04.1	+1.0
WUSB	**Renai**	**0.48**	**43**	P	Pb	01 22 56.3	-0.2
OWD	**Renai**	**0.49**	**51**	P	Pb	01 22 56.6	-0.1
WTCT	**Ta-ch'eng**	**0.49**	**297**	P	Pg	01 22 56.2	+0.2
WTCT				S	Sb	01 23 03.9	+0.3
WSF	**Szhu**	**0.49**	**270**	*i* P	Pg	01 22 56.2	+0.2
WSF				*i* S	Sb	01 23 04.0	+0.3
CHN1	**Nanshi**	**0.50**	**205**	*i* P	Pb	01 22 56.7	0.0
CHN1				*i* S	Sb	01 23 04.5	+0.6
WSL	**Shuilin Townsh**	**0.50**	**257**	P	Pb	01 22 56.8	+0.1
WSL				S	Sb	01 23 05.1	+1.2
ELDTW	**Lidau**	**0.51**	**152**	*i* P	Pb	01 22 57.1	+0.2
ELDTW				*i* S	Sb	01 23 04.1	-0.1
TCU	**Taichung**	**0.51**	**351**	*e*P	Pb	01 22 56.8	-0.1
TCU				*i* S	Sb	01 23 05.0	+0.8
YULB	**Yu-li**	**0.55**	**117**	*e*S	Sb	01 23 05.3	-0.1
EHYH	**Wanrong**	**0.56**	**105**	*e*S	Sb	01 23 07.0	+1.5
TWF1	**Yuli**	**0.57**	**120**	*e*S	Sn	01 23 07.7	-1.3
SGST	**Jiashian**	**0.58**	**196**	P	Pg	01 22 57.5	-0.1
SGST				S	Sb	01 23 06.4	+0.3
CHN8	**Yiju**	**0.58**	**240**	S	Sn	01 23 07.8	-1.4
EHD	**Haiduan**	**0.64**	**140**	*e*P	Pn	01 23 00.9	+0.1
SLGT	**Liugui**	**0.65**	**189**	*e*P	Pb	01 22 59.4	+0.1
SLGT				*e*S	Sn	01 23 10.1	-0.9
WHP	**Taichung City**	**0.66**	**15**	P	Pg	01 22 59.0	-0.2
WHP				S	Sb	01 23 05.1	+1.1
FULB	**Fuli**	**0.66**	**132**	*e*P	Pg	01 22 58.0	-1.2
WHF	**Hehuan Shan**	**0.68**	**43**	P	Pb	01 23 00.4	+0.3
SCLT	**Jiali**	**0.70**	**228**	S	Sn	01 23 11.9	-0.1
LXIB	**Xiulin Townshi**	**0.71**	**58**	*e*S	Sb	01 23 10.9	+0.9
TDCB	**Techi**	**0.71**	**31**	*e*P	Pg	01 23 00.1	0.0
WDJ	**Dajia District**	**0.71**	**351**	*e*S	Sn	01 23 11.7	-0.8
TWT	**Tachien**	**0.72**	**32**	*e*P	Pg	01 23 00.4	+0.1
ETM	**Tongmen**	**0.74**	**64**	*e*P	Pn	01 23 01.8	-0.5
ETM				*e*S	Sn	01 23 12.2	-1.1
TWGBT	**Beinan**	**0.87**	**160**	P	Pn	01 23 03.8	-0.2
TWGBT	**Beinan**	**0.87**	**160**	*e*P	Pn	01 23 03.7	-0.3

FUNV 19 01:34:52.9, 8°.52N×73°.65W, h35km, MW3.4, Presumed earthquake, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**2.67**	**168**	*e*P	Pn	01 35 33.0	-0.9
RUSC				*e*S	Sn	01 36 01.7	-3.6
HELC	**Santa Helena**	**2.97**	**219**	*e*P	Pn	01 35 36.6	-1.3
HELC				*e*S	Sn	01 36 09.0	-3.6
SDV	**Santo Domingo**	**3.00**	**83**	*e*P	Pn	01 35 37.1	-1.2
SDV				*e*S	Sn	01 36 10.1	-3.1

RSNC 19 01:35:26.4±0.0, 7°N±1°×7°4W±°, h110km±2km, M1.8, ML1.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.39**	**85**	P	Pn	01 35 42.3	-0.6
BARC				S	Sn	01 35 54.4	-0.8
BRJC	**Barrancabermej**	**0.45**	**337**	P	Pn	01 35 42.4	-0.5
BRJC				S	Sn	01 35 55.3	0.0
VMM09	**Lebrija**	**0.63**	**26**	P	Pn	01 35 43.8	-0.6
VMM09				S	Sn	01 35 57.4	-0.4
RUSC	**La Rusia**	**0.82**	**144**	P	Pn	01 35 45.6	-0.8
RUSC				S	Sn	01 36 00.0	-1.4
PTBC	**PUERTO BERRIO,**	**0.88**	**269**	P	Pn	01 35 45.1	-1.3
PTBC				S	Sn	01 36 00.0	-1.5
SPBC	**San Pablo de B**	**1.03**	**209**	P	Pn	01 35 47.2	-0.8
SPBC				S	Sn	01 36 03.8	-0.6
NORC	**Norcasia**	**1.63**	**233**	P	Pn	01 35 54.3	-0.5
NORC				S	Sn	01 36 15.3	-1.1
OCAC	**Ocana**	**1.69**	**8**	P	Pn	01 35 54.4	-1.3
OCAC				S	Sn	01 36 16.9	-1.0
CHIC	**Chingaza**	**1.93**	**185**	P	Pn	01 35 57.6	-1.3
CHIC				S	Sn	01 36 23.7	+0.1
HELC	**Santa Helena**	**1.98**	**259**	P	Pn	01 35 59.0	-0.5
HELC				S	Sn	01 36 23.4	-1.3
GUY2C	**Guyana, Caldas**	**2.23**	**233**	P	Pn	01 36 02.3	-0.4
GUY2C				S	Sn	01 36 28.9	-1.6
UREC	**San Jos de Ur**	**2.28**	**301**	P	Pn	01 36 01.5	-1.5
UREC				S	Sn	01 36 29.4	-1.6
CBOC	**Ciudad Bolivar**	**2.52**	**254**	P	Pn	01 36 06.3	0.0
CBOC				S	Sn	01 36 36.7	-0.3

*GII **19** 01:41:19.4±0.0, 34°.135N±0°.003×26°.867E±0°.001, h0km, Mws3.3, confirmed*
*NIC **19** 01:41:26.9, 34°.16N×27°.10E, h32km±42km, Ml2.7/10*
*ISK **19** 01:41:27.3, 34°.44N×27°.11E, h86km, ML2.9/14*
*ATH **19** 01:41:35.6, 34°.82N×26°.65E, h31km±2km, ML2.2/6, Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*

ISC 19 01:41:24.6±1.5, 34°.23N±0°.05×27°.14E±0°.04, h13km±11km, n37, σ1ˢ99/48, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.17**	**320**	Pg	**Pg**	**01 41 47.2**	**+0.1**
ZKR	**Zakros**	**1.17**	**320**	P	**Pg**	**01 41 47.4**	**+0.3**
ZKR				S	**Sg**	**01 42 02.5**	**+0.2**
ZKR				AML	AML	01 42 14.8	
	0.2nm,0.5s						
ZKR				AML	AML	01 42 16.4	
	0.1nm,0.7s						
ZKR	**Zakros**	**1.17**	**320**	P	**Pg**	**01 41 45.5**	**-1.5**
ZKR				S	Sg	01 41 52.6	-10
KARP	**Karpathos**	**1.32**	**1**	Pn	**Pg**	**01 41 48.9**	**-1.1**
KARP	**Karpathos**	**1.32**	**1**	P	**Pg**	**01 41 49.9**	**-0.1**
KARP				S	**Sg**	**01 42 07.5**	**+0.4**
KARP				AML	AML	01 42 24.9	
	0.3nm,0.6s						
KARP				AML	AML	01 42 29.5	
	0.3nm,0.7s						
KARP	**Karpathos**	**1.32**	**1**	P	**Pb**	**01 41 51.9**	**+2.7**
KARP				S	**Sg**	**01 42 02.6**	**-4.5**
NPS	**Neapolis**	**1.63**	**310**	P	**Pn**	**01 41 53.1**	**+0.1**
NPS				S	Sn	01 42 05.8	-7.9
SIVA	**Sivas**	**2.08**	**293**	P	**Pn**	**01 42 00.9**	**+1.8**
IDI	**Anoyia**	**2.13**	**300**	P	**Pn**	**01 42 00.8**	**+0.9**
IDI				S	Sn	01 42 19.4	-6.9
ARG	**Arkhangelos**	**2.14**	**22**	Pn	**Pn**	**01 42 00.0**	**0.0**
ARG				Sn	**Sn**	**01 42 24.2**	**-2.2**
ARG	**Arkhangelos**	**2.14**	**22**	P	**Pn**	**01 42 02.3**	**+2.2**
ARG				S	**Sn**	**01 42 28.8**	**+2.4**
ARG				AML	AML	01 42 30.1	
	0.1nm,0.3s						
ARG				AML	AML	01 42 34.0	
	0.1nm,0.5s						
DAT	**Datca**	**2.52**	**8**	Pn	**Pn**	**01 42 05.0**	**-0.3**
DAT				Sn	**Sn**	**01 42 32.6**	**-3.4**
THERA	**Ancient Thera,**	**2.53**	**328**	P	**Pn**	**01 42 04.8**	**-0.6**
THERA				S	Sn	01 42 27.9	-8.2
TURN	**Turunc**	**2.70**	**19**	Pn	**Pn**	**01 42 07.8**	**+0.2**
BODT	**Bodrum**	**2.83**	**3**	Pn	**Pn**	**01 42 09.3**	**-0.2**
AKAS	**Kas**	**2.84**	**45**	Pn	**Pn**	**01 42 10.6**	**+0.9**
DALY	**Dalyan (Mula)**	**2.86**	**25**	Pn	**Pn**	**01 42 10.0**	**+0.1**
YER	**Yerkesik**	**3.05**	**17**	Pn	**Pn**	**01 42 12.5**	**0.0**
KNDR	**Palaiochora Ch**	**3.06**	**290**	Pn	**Pn**	**01 42 14.0**	**+1.3**
CAME	**Cameli-Denizli**	**3.23**	**32**	Pn	**Pn**	**01 42 15.1**	**0.0**
GCAM	**G?zelcaml?**	**3.47**	**1**	Pn	**Pn**	**01 42 17.3**	**-0.9**
OSC1	**CSNet OBS 1**	**3.52**	**101**	P	**Pn**	**01 42 20.8**	**+1.9**
OSC1				AML	AML	01 42 58.4	
OSC1				S	**Sn**	**01 43 01.3**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**3.76**	**9**	Pn	**Pn**	**01 42 22.6**	**+0.2**
KTHA	**Kythira Island**	**3.90**	**302**	Pn	**Pn**	**01 42 24.8**	**+0.6**
AKMS	**Akamas**	**4.36**	**78**	P	**Pn**	**01 42 31.8**	**+1.3**
AKMS				S	**Sn**	**01 43 21.1**	**+0.1**
AKMS				AML	AML	01 43 26.1	
AKMS				AML	AML	01 43 27.7	
ALFC	**Alefka**	**4.59**	**77**	P	**Pn**	**01 42 35.0**	**+1.3**
ALFC				S	**Sn**	**01 43 26.5**	**-0.4**
ALFC				AML	AML	01 43 30.0	
ALFC				AML	AML	01 43 31.4	
TROD	**Troodos**	**4.78**	**80**	P	**Pn**	**01 42 37.6**	**+1.1**
TROD				S	**Sn**	**01 43 33.2**	**+1.4**
TROD				AML	AML	01 43 41.3	
TROD				AML	AML	01 43 46.4	
XYLS	**Xyliatos**	**4.94**	**79**	P	**Pn**	**01 42 40.2**	**+1.8**
XYLS				S	**Sn**	**01 43 37.0**	**+1.5**
XYLS				AML	AML	01 43 38.9	
XYLS				AML	AML	01 43 40.1	
ASGA	**Asgata**	**5.07**	**82**	P	**Pn**	**01 42 42.1**	**+1.8**
ASGA				AML	AML	01 43 30.9	
ASGA				AML	AML	01 43 35.1	
MVOU	**Mavrovouni**	**5.41**	**80**	P	**Pn**	**01 42 47.9**	**+3.0**
MVOU				AML	AML	01 43 26.1	
MVOU				AML	AML	01 43 26.7	
	0.1nm,0.2s						
KZIT	**Kziot**	**6.96**	**116**	P	Pn	01 43 02.2	-4.0
KZIT				S	**Sn**	**01 44 22.3**	**-3.0**
AMAZ	**Amatzia**	**7.07**	**110**	P	Pn	01 43 03.8	-3.9
AMAZ				S	**Sn**	**01 44 25.5**	**-2.5**
RMNI	**Mount Ramon**	**7.39**	**117**	P	Pn	01 43 07.6	-4.6
RMNI				S	**Sn**	**01 44 32.4**	**-3.5**
MSBI	**Mazada**	**7.51**	**111**	P	Pn	01 43 09.2	-4.5
MSBI				S	**Sn**	**01 44 35.3**	**-3.3**
GHAJ	**Ghor Haditha**	**7.67**	**110**	P	Pn	01 43 11.4	-4.5
GHAJ				S	**Sn**	**01 44 39.6**	**-3.1**
HRFI	**Mount Harif**	**7.89**	**120**	P	Pn	01 43 14.8	-4.2
HRFI				S	**Sn**	**01 44 44.8**	**-3.5**
EIL	**Elat**	**8.04**	**122**	P	Pn	01 43 16.4	-4.7
EIL				S	**Sn**	**01 44 47.7**	**-4.2**

*IDC **19** 01:41:41.0±0.5, 9°.65N×138°.29E, h0km, mb4.3/19, mbtmp4.3/19, MS3.4/11, Error ellipse: s-maj=23.8km s-min=13.1km az=81.0*
*DJA **19** 01:41:43.4±0.8, 10°.N±7°×13°.8E±°, h10km, M4.9/12, mb4.7/12, mB5.5/6, Mw(mB)5.0/6, MwMwp5.7/1, Mwp5.8/1*
*NEIC **19** 01:41:43.7±1.9, 9°.59N±0°.07×138°.4E±0°.1, h10km±1km, mb4.8/139, Error ellipse: s-maj=19.6km s-min=8.2km az=60.0*

ISC 19 01:41:43.1±0.4, 9°.61N±0°.05×138°.36E±0°.09, h10km, n356, σ0ˢ80/281, mb4.8/91, MS3.4/9, 1C-1D, Western Caroline Islands

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

HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,92nm,4.7s
HHC L L
comp=Z,100nm,13.8s
HHC L L
comp=Z,110nm,13.0s
HHC L L
comp=Z,98nm,14.1s
CMAR Chiang Mai Arr 39.16 287 P **P** **01 49 11.3 -0.2**
comp=Z,4.5nm,0.6s,baz=99,slow=7.2,SNR=22
CMAR PcP **PcP** **01 51 20.4 -0.7**
comp=Z,1.0nm,0.3s,baz=114,slow=2.9,SNR=4.3
CMAR LR LR 02 04 04.3
comp=Z,34nm,20.7s,baz=120,slow=34
comp=Z,4.5nm,0.6s
LZH Lanzhou 40.94 316 *e*P P 01 49 21.4 -4.8
LZH sP pP 01 49 28.0 -0.9
LZH pmax pmax
comp=Z,14nm,1.0s
LZH LR LR
comp=N,130nm,14.4s
LZH LR LR
comp=E,150nm,13.1s
LZH LR LR
comp=Z,140nm,14.4s
STKA Stephens Creek 41.37 176 P **P** **01 49 28.5 -1.0**
comp=Z,2.7nm,0.5s,baz=353,slow=9.7,SNR=6.3
comp=Z,2.7nm,0.5s
HEH HeiHe 41.52 349 *e*P **P** **01 49 30.0 -0.6**
HILR Hailar Array B 42.73 342 P **P** **01 49 39.6 -1.0**
comp=Z,1.4nm,0.6s,baz=137,slow=13,SNR=6.6
comp=Z,1.4nm,0.6s
SONM Songino Array 46.67 331 P **P** **01 50 11.5 -0.6**
comp=Z,2.6nm,0.6s,baz=139,slow=7.8,SNR=12
SONM PcP **PcP** **01 51 45.0 -0.7**
comp=Z,0.9nm,0.7s,baz=145,slow=2.2,SNR=2.3
comp=Z,2.6nm,0.6s
SONM Songino Array 46.67 331 P **P** **01 50 12.4 +0.3**
NWAO Narrogin (SRO) 46.85 205 P **P** **01 50 12.2 -1.3**
EVN Everest 51.69 298 **P** **01 50 50.7 -0.8**
EVN IAmb IAmb 01 50 58.0
comp=Z,6.7nm,0.6s
SHEM Shemya Is, Ala 51.80 27 LR LR 02 10 21.9
comp=Z,23nm,20.7s,baz=150,slow=33
SEY Seynchan 54.19 8 P **P** **01 51 08.4 -0.1**
comp=Z,9.2nm,0.9s,baz=166,slow=6.2,SNR=7.5
comp=Z,9.2nm,0.9s
KIWB Kanaga Island 55.50 32 P **P** **01 51 18.6 +0.4**
KIWB IAmb IAmb 01 51 36.7
comp=Z,14nm,1.0s
ATKA Atka Island 57.24 33 P **P** **01 51 30.7 +0.1**
MKAR Makanchi Array 60.08 319 P **P** **01 51 49.6 -1.0**
comp=Z,0.4nm,0.6s,baz=98,slow=8.7,SNR=4.8
comp=Z,0.4nm,0.6s
MRZ Mangatainoka R 60.68 148 P **P** **01 51 54.5 -0.1**
ZALV Zalesovo Beam 61.30 327 P **P** **01 51 57.3 -1.4**
comp=Z,0.8nm,0.6s,baz=94,slow=7.9,SNR=4.1
comp=Z,0.8nm,0.6s
SPIA Saint Paul Isl 61.69 29 P **P** **01 52 01.8 +0.5**
baz=241
UNV Unalaska Valle 62.12 33 P **P** **01 52 04.6 +0.4**
baz=246
LVA Lava Point 62.50 33 P **P** **01 52 06.8 -0.1**
KURK Kurchatov 63.64 322 **P** **01 52 12.8 -1.6**
KURK IAmb IAmb 01 52 16.2
comp=Z,3.4nm,0.7s
KURBB Kurchatov Arra 63.67 322 P **P** **01 52 13.2 -1.4**
comp=Z,1.6nm,0.8s,baz=106,slow=6.5,SNR=17
comp=Z,1.6nm,0.8s
GAMB Gambell 64.50 22 P **P** **01 52 20.2 +0.5**
baz=237
SDPT Sand Point 65.94 33 P **P** **01 52 29.6 +0.3**
baz=251
CHNA Chernabura Isl 66.25 34 P **P** **01 52 31.8 +0.5**
baz=252
M13K Dall Lake 66.35 27 **P** **01 52 32.9 +1.1**
M13K Dall Lake 66.35 27 P **P** **01 52 32.4 +0.6**
baz=246
K13K Kusilvak Mount 66.41 26 P **P** **01 52 32.8 +0.6**
baz=244
S14K Fog Glacier 66.73 32 P **P** **01 52 34.5 0.0**
baz=252
TNA Tin City 66.82 21 P **P** **01 52 35.1 +0.3**
baz=240
O14K Tigyukauivet M 66.88 29 P **P** **01 52 35.6 +0.3**
baz=249
N14K Kuskokwak Cree 66.92 28 **P** **01 52 36.0 +0.5**
N14K Kuskokwak Cree 66.92 28 P **P** **01 52 35.9 +0.5**
baz=248
L14K Kuka Creek 67.02 27 P **P** **01 52 36.8 +0.7**
baz=247
M14K Bethel 67.11 27 P **P** **01 52 37.1 +0.4**
M14K Bethel 67.11 27 P **P** **01 52 37.1 +0.4**
baz=248,SNR=5.1
J14K Nanvaranak Lak 67.22 25 P **P** **01 52 37.8 +0.4**
baz=245
F14K Arctic Creek 67.36 22 P **P** **01 52 38.9 +0.6**
baz=241
O15K Ungalikthiuk R 67.54 29 IAmb IAmb 01 52 40.6
comp=Z,5.8nm,0.7s
O15K Ungalikthiuk R 67.54 29 P **P** **01 52 39.8 +0.3**
baz=250
M15K Kasigluk River 67.67 28 P **P** **01 52 40.6 +0.3**
baz=249
L15K Ungalak Mounta 67.68 27 P **P** **01 52 40.6 +0.3**
baz=248
N15K Kwethluk River 67.76 28 **P** **01 52 41.5 +0.5**
N15K IAmb IAmb 01 52 42.3
comp=Z,6.5nm,0.9s
N15K Kwethluk River 67.76 28 P **P** **01 52 41.4 +0.5**
baz=250,SNR=5.1
K15K Wolf Creek Mou 67.89 26 P **P** **01 52 42.3 +0.6**
baz=247
G15K Niukluk 67.99 23 P **P** **01 52 42.8 +0.5**
baz=244
F15K North Star Dit 68.08 22 P **P** **01 52 43.5 +0.6**
baz=243
P16K Nushagak River 68.39 30 P **P** **01 52 45.3 +0.5**
baz=252
N16K Nishlik Lake 68.48 28 P **P** **01 52 46.0 +0.5**
baz=251
O16K Kokwok River B 68.52 29 IAmb IAmb 01 52 46.8
comp=Z,5.8nm,0.8s
O16K Kokwok River B 68.52 29 P **P** **01 52 45.9 +0.3**
baz=252,SNR=8.5
H16K Elim 68.54 23 P **P** **01 52 46.0 +0.3**
baz=246
M16K Timber Creek 68.58 28 IAmb IAmb 01 52 47.4
comp=Z,6.5nm,0.9s
M16K Timber Creek 68.58 28 P **P** **01 52 46.3 +0.3**
baz=250
L16K Owhat River 68.58 27 **P** **01 52 46.4 +0.4**
L16K IAmb IAmb 01 52 47.1
comp=Z,17nm,1.4s
L16K Owhat River 68.58 27 P **P** **01 52 46.3 +0.4**
baz=250,SNR=7.3
J16K Anvik River 68.67 25 P **P** **01 52 47.1 +0.6**
baz=248
CHIR Chirikof Islan 68.71 34 P **P** **01 52 47.3 +0.4**
baz=255
R17L Mt. Peulik Vol 68.80 32 P **P** **01 52 47.6 +0.1**
baz=254
I17K Unalakleet 68.86 25 P **P** **01 52 47.9 +0.3**
baz=248
C16K Lisburne Hills 69.04 19 P **P** **01 52 49.4 +0.7**
baz=241
O17K Koliganek Bris 69.05 29 P **P** **01 52 49.5 +0.6**
baz=252,SNR=12
BVAR Borovoye Array 69.17 323 P **P** **01 52 49.2 -0.7**
comp=Z,1.7nm,0.6s,baz=101,slow=7.9,SNR=9.7
comp=Z,1.7nm,0.6s
P17K Kvichak River 69.20 30 P **P** **01 52 50.0 +0.2**
baz=253
BORK Borovoye 69.21 323 **P** **01 52 49.4 -0.7**
BORK IAmb IAmb 01 52 59.9
comp=Z,2.8nm,0.6s
Q17K Contact Creek 69.22 31 P **P** **01 52 50.8 +0.7**
baz=254
N17K Nushagak Hills 69.24 28 IAmb IAmb 01 52 51.5
comp=Z,4.0nm,0.7s
N17K Nushagak Hills 69.24 28 P **P** **01 52 51.1 +1.0**
baz=252
L17K Donlin 69.25 27 P **P** **01 52 51.1 +1.0**
baz=250,SNR=6.8
J17K VABM Dome 69.35 25 P **P** **01 52 51.7 +0.9**
baz=249

M17K Holitna River 69.40 28 **P** **01 52 52.1 +1.0**
M17K Holitna River 69.40 28 P **P** **01 52 51.9 +0.8**
baz=252,SNR=8.0
K17K Iditarod 69.45 26 **P** **01 52 52.4 +1.1**
K17K Iditarod 69.45 26 P **P** **01 52 52.2 +0.8**
baz=250,SNR=5.6
G17K Kiwalik Mounta 69.50 23 P **P** **01 52 52.4 +0.8**
baz=247,SNR=6.2
D17K Noatak River 69.54 20 P **P** **01 52 52.4 +0.6**
baz=244
H17K Granite Mounta 69.57 24 IAmb IAmb 01 52 53.7
comp=Z,9.2nm,0.8s
H17K Granite Mounta 69.57 24 P **P** **01 52 52.8 +0.7**
baz=248
F17K Baldwin Pennin 69.65 22 P **P** **01 52 53.2 +0.6**
baz=246
SII Sitkinak Islan 69.67 33 P **P** **01 52 53.2 +0.3**
baz=256
E17K Hotham Inlet 69.71 21 P **P** **01 52 53.6 +0.8**
baz=245
Q18K Katmai Hardscr 69.77 31 P **P** **01 52 53.5 0.0**
baz=255
C17K DeLong Mountai 69.85 20 P **P** **01 52 54.5 +0.8**
baz=244
P18K Big Mountain, 69.85 30 P **P** **01 52 54.2 +0.2**
baz=254
N18K Kilae Creek 69.90 29 IAmb IAmb 01 52 55.5
comp=Z,5.8nm,0.8s
N18K Kilae Creek 69.90 29 P **P** **01 52 54.9 +0.7**
baz=253,SNR=5.2
O18K Koktuh Hills 69.99 29 IAmb IAmb 01 52 56.2
comp=Z,8.6nm,0.7s
O18K Koktuh Hills 69.99 29 P **P** **01 52 55.5 +0.7**
baz=254
L18K Granite Mounta 69.99 27 IAmb IAmb 01 52 56.2
comp=Z,4.8nm,0.8s
L18K Grite Mounta 69.99 27 P **P** **01 52 55.5 +0.7**
baz=252
M18K Stony River 70.16 28 P **P** **01 52 56.6 +0.8**
baz=253,SNR=5.3
H18K Honhosa River 70.27 24 P **P** **01 52 56.6 +0.2**
baz=249
E18K Tukpahlearik C 70.28 21 P **P** **01 52 57.0 +0.5**
baz=246,SNR=5.5
OHAK Old Harbor 70.30 32 P **P** **01 52 56.9 +0.2**
baz=257
F18K Selawik 70.31 22 P **P** **01 52 56.9 +0.4**
baz=248
J18K Innoko River 70.37 26 P **P** **01 52 57.6 +0.5**
baz=252
G18K Tagagawik 70.42 23 IAmb IAmb 01 52 58.5
comp=Z,5.7nm,0.8s
G18K Tagagawik 70.42 23 P **P** **01 52 57.4 +0.1**
baz=249,SNR=5.2
C18K Utukok River 70.58 20 P **P** **01 52 58.2 -0.1**
baz=245
N19K Bonanza Creek 70.60 29 P **P** **01 52 59.3 +0.7**
baz=254,SNR=7.8
GCSA Galena City Sc 70.72 24 P **P** **01 52 59.8 +0.7**
baz=251
KDAK Kodiak Island 70.80 32 P **P** **01 53 00.3 +0.5**
baz=257
L19K White Mountain 70.80 27 IAmb IAmb 01 53 02.0
comp=Z,20nm,1.6s
L19K White Mountain 70.80 27 P **P** **01 53 00.3 +0.5**
baz=254,SNR=9.2
P19K Oil Pt 70.91 30 P **P** **01 53 00.9 +0.5**
baz=256
J19K Poorman 71.00 25 IAmb IAmb 01 53 02.5
comp=Z,9.6nm,0.9s
J19K Poorman 71.00 25 P **P** **01 53 01.6 +0.7**
baz=252,SNR=9.7
F19K Shaleruckik Mo 71.09 22 P **P** **01 53 01.9 +0.6**
baz=249
G19K Purcell Mounta 71.11 23 P **P** **01 53 02.1 +0.6**
baz=250,SNR=14
H19K Roundabout Mou 71.15 24 IAmb IAmb 01 53 03.4
comp=Z,9.9nm,0.8s
H19K Roundabout Mou 71.15 24 P **P** **01 53 02.4 +0.7**
baz=251,SNR=8.6
C19K Lookout Ridge 71.30 20 P **P** **01 53 03.4 +0.7**
baz=247
O20K Slope Mountain 71.31 30 P **P** **01 53 03.4 +0.6**
baz=256
K20K Telida 71.48 26 IAmb IAmb 01 53 05.8
comp=Z,10nm,1.1s
K20K Telida 71.48 26 P **P** **01 53 04.6 +0.8**
baz=254,SNR=8.8
E19K Redstone River 71.50 22 IAmb IAmb 01 53 05.2
comp=Z,8.6nm,0.8s
E19K Redstone River 71.50 22 P **P** **01 53 04.5 +0.6**
baz=250,SNR=7.9
M20K Styx River 71.51 28 IAmb IAmb 01 53 05.8
comp=Z,7.5nm,0.7s
M20K Styx River 71.51 28 P **P** **01 53 04.9 +0.8**
baz=255,SNR=11
D19K Kuna River 71.56 20 IAmb IAmb 01 53 05.4
comp=Z,11nm,0.8s
D19K Kuna River 71.56 20 P **P** **01 53 04.7 +0.4**
baz=248,SNR=5.0
J20K Nowinta River 71.67 25 IAmb IAmb 01 53 06.8
comp=Z,9.3nm,0.8s
J20K Nowinta River 71.67 25 P **P** **01 53 05.9 +1.0**
baz=254,SNR=12
HOM Homer 71.69 30 P **P** **01 53 06.1 +1.0**
baz=257
I20K Naaghedeneel 71.71 25 P **P** **01 53 05.8 +0.6**
baz=253
H20K Anotleneega Mo 71.76 24 P **P** **01 53 06.1 +0.6**
baz=252,SNR=10.0
F20K Avaaart Lake 71.92 22 P **P** **01 53 06.8 +0.5**
baz=251
STLK Strandline Lak 72.01 28 IAmb IAmb 01 53 07.5
comp=Z,4.4nm,0.7s
E20K Nigu River 72.15 21 P **P** **01 53 08.2 +0.4**
baz=250,SNR=5.7
BRSE Bradley Lake S 72.16 30 P **P** **01 53 07.6 -0.3**
baz=258
D20K Etivluk River 72.16 20 P **P** **01 53 08.1 +0.3**
baz=250,SNR=8.3
PPLA Purkeypile 72.18 27 P **P** **01 53 08.5 +0.3**
baz=256
SKT Skwentna 72.26 28 IAmb IAmb 01 53 09.3
comp=Z,5.5nm,0.9s
SKT Skwentna 72.26 28 P **P** **01 53 08.6 0.0**
baz=257,SNR=5.9
CAST Castle Rocks 72.36 26 IAmb IAmb 01 53 10.2
comp=Z,9.4nm,0.7s
CAST Castle Rocks 72.36 26 P **P** **01 53 09.3 +0.2**
baz=256,SNR=16
CHUM Lake Minchumin 72.37 26 P **P** **01 53 09.6 +0.5**
baz=256
B20K Meade River 72.43 19 P **P** **01 53 09.7 +0.4**
baz=249
G21K Allakaket 72.59 23 P **P** **01 53 10.8 +0.4**
baz=254,SNR=5.2
H21K Melozitna River 72.63 24 IAmb IAmb 01 53 11.8
comp=Z,5.2nm,0.6s
H21K Melozitna Rive 72.63 24 P **P** **01 53 11.2 +0.5**
baz=254,SNR=11
L22K Petersville 72.73 27 P **P** **01 53 11.0 -0.4**
baz=257,SNR=20
F21K Alatna River 72.81 22 P **P** **01 53 11.7 0.0**
baz=253
I21K Tanana 72.84 24 IAmb IAmb 01 53 13.6
comp=Z,9.3nm,0.9s
I21K Tanana 72.84 24 P **P** **01 53 12.6 +0.8**
baz=255,SNR=13
KTH Kantishna Hill 72.90 26 IAmb IAmb 01 53 13.2
comp=Z,8.2nm,0.8s
RC01 Rabbit Creek A 72.92 29 P **P** **01 53 12.1 -0.3**
baz=259,SNR=5.1
C21K Knifeblade Rid 72.93 20 P **P** **01 53 12.4 +0.1**
baz=252
CUT Chulitna 72.94 27 P **P** **01 53 12.7 +0.2**
baz=256
E21K Killik River 72.99 21 P **P** **01 53 13.2 +0.5**
baz=252
B21K Ikpikpuk River 73.13 20 P **P** **01 53 13.9 +0.4**
baz=252
TRF Thorofare Moun 73.15 26 IAmb IAmb 01 53 14.3
comp=Z,10nm,0.8s
TRF Thorofare Moun 73.15 26 P **P** **01 53 13.5 -0.5**
baz=258,SNR=7.7
H22K Ishtalitna Cre 73.26 24 P **P** **01 53 15.0 +0.6**
baz=256
PMR Palmer 73.30 28 P **P** **01 53 14.0 -0.6**
baz=259,SNR=14

MLY Manley 73.31 25 IAmb IAmb 01 53 16.0
comp=Z,7.0nm,0.8s
MLY Manley 73.31 25 P **P** **01 53 15.1 +0.3**
baz=257,SNR=12
F22K John River 73.37 22 P **P** **01 53 15.7 +0.7**
baz=254
GHO Glory Hole Cre 73.43 28 IAmb IAmb 01 53 16.5
comp=Z,13nm,0.8s
A22K Sinclair Lake 73.46 18 P **P** **01 53 15.8 +0.4**
baz=251
G22K Bettles 73.47 23 P **P** **01 53 15.8 +0.2**
baz=255
PWL Port Wells 73.54 29 P **P** **01 53 16.2 0.0**
baz=260,SNR=11
KNK Knik Glacier 73.58 29 P **P** **01 53 16.4 0.0**
baz=260
E22K Anaktuvuk Pass 73.67 21 P **P** **01 53 17.2 +0.4**
baz=255
SML Sawmill 73.71 28 P **P** **01 53 17.2 0.0**
baz=260,SNR=10
B22K Teshekpuk Lake 73.75 19 P **P** **01 53 17.4 +0.2**
baz=252
RND Reindeer 73.77 27 IAmb IAmb 01 53 18.4
comp=Z,11nm,0.9s
WAT1 Susitna Watana 73.80 27 P **P** **01 53 17.6 0.0**
baz=259
MCK McKinley 73.80 26 P **P** **01 53 17.5 -0.1**
baz=259,SNR=10
P23K Montague Islan 73.86 30 P **P** **01 53 18.4 +0.4**
baz=261
I23K Minto, Yukon-K 73.91 25 IAmb IAmb 01 53 19.5
comp=Z,4.9nm,0.8s
I23K Minto, Yukon-K 73.91 25 P **P** **01 53 18.6 +0.4**
baz=258,SNR=6.1
NEA2 Nenana 73.92 25 P **P** **01 53 18.7 +0.4**
baz=258
H23K Yukon River 73.98 24 P **P** **01 53 18.9 +0.3**
baz=258
G23K Bananza Creek 73.99 23 IAmb IAmb 01 53 20.3
comp=Z,5.2nm,0.8s
G23K Bananza Creek 73.99 23 P **P** **01 53 19.4 +0.7**
baz=257,SNR=8.3
COLD Coldfoot 74.04 23 IAmb IAmb 01 53 20.4
comp=Z,6.2nm,0.8s
COLD Coldfoot 74.04 23 P **P** **01 53 19.4 +0.5**
baz=256,SNR=8.8
WAT6 Susitna Watana 74.12 28 P **P** **01 53 19.5 -0.2**
baz=260,SNR=14
GLI Glacier Island 74.15 29 P **P** **01 53 19.6 0.0**
baz=261
SCM Sheep Creek Mo 74.19 28 P **P** **01 53 20.2 +0.3**
baz=261,SNR=12
D23K Nanushuk River 74.29 21 P **P** **01 53 21.1 +0.8**
baz=256
Q23K Middleton Isla 74.31 31 P **P** **01 53 21.0 +0.5**
baz=262
DHY Denali Highway 74.37 27 IAmb IAmb 01 53 22.2
comp=Z,6.8nm,0.9s
DHY Denali Highway 74.37 27 P **P** **01 53 21.4 +0.3**
baz=260,SNR=8.9
E23K Chandalar 74.45 22 IAmb IAmb 01 53 23.2
comp=Z,9.4nm,1.0s
E23K Chandalar 74.45 22 P **P** **01 53 22.3 +0.9**
baz=257,SNR=5.2
C23K Itkillik River 74.53 20 IAmb IAmb 01 53 22.9
comp=Z,7.2nm,0.9s
C23K Itkillik River 74.53 20 P **P** **01 53 22.0 +0.3**
baz=255
TOLK Toolik Lake Re 74.60 21 P **P** **01 53 22.7 +0.4**
baz=257
H24K Noodor Dome 74.65 24 P **P** **01 53 23.3 +0.7**
baz=259,SNR=5.8
EYAK Cordova Ski Ar 74.75 30 P **P** **01 53 23.6 +0.4**
baz=262
M24K Tolsona, Glenn 74.77 28 IAmb IAmb 01 53 24.9
comp=Z,15nm,0.9s
M24K Tolsona, Glenn 74.77 28 P **P** **01 53 23.8 +0.5**
baz=262
KLU Klutina 74.80 29 P **P** **01 53 23.7 +0.2**
baz=262,SNR=9.4
E24K Your Creek 74.87 22 P **P** **01 53 24.2 +0.4**
baz=258
ILAR Eielson Array 74.87 25 P P 01 53 22.6 -1.2
comp=Z,2.8nm,0.6s,baz=246,slow=5.9,SNR=27
comp=Z,2.8nm,0.6s
ILAR Eielson Array 74.87 25 P **P** **01 53 22.9 -1.0**
F24K Squaw Lake 74.98 22 P **P** **01 53 24.8 +0.4**
baz=259
G24K Hadweenzic Riv 74.98 23 P **P** **01 53 24.8 +0.3**
baz=259
D24K Happy Valley 74.98 21 IAmb IAmb 01 55 36.1
comp=Z,9.4nm,0.6s
D24K Happy Valley 74.98 21 P **P** **01 53 24.8 +0.5**
baz=257
K24K Donnelly Dome 75.20 26 IAmb IAmb 01 53 25.9
comp=Z,6.2nm,0.8s
K24K Donnelly Dome 75.20 26 P **P** **01 53 25.8 +0.1**
baz=262
PAX Paxson 75.21 27 IAmb IAmb 01 53 26.9
comp=Z,6.7nm,0.8s
PAX Paxson 75.21 27 P **P** **01 53 25.9 0.0**
baz=262,SNR=9.8
AB31 Akbulak array 75.22 318 P **P** **01 53 25.4 -0.7**
ABKAR Akbulak array 75.22 318 P **P** **01 53 24.9 -1.2**
HARP HAARP 75.28 28 P **P** **01 53 26.6 +0.3**
baz=262
BMRM Bremner River 75.36 29 P **P** **01 53 27.0 +0.2**
baz=263,SNR=5.9
N25K Chitina, Valde 75.44 29 P **P** **01 53 27.5 +0.2**
baz=263
J25K Salcha River, 75.49 26 P **P** **01 53 27.6 +0.1**
baz=262
G25K Bearman Lake 75.53 23 P **P** **01 53 28.0 +0.5**
baz=260
PRP Porcupine Dome 75.56 25 P **P** **01 53 28.3 +0.3**
baz=261
RIDG Independent Ri 75.60 27 IAmb IAmb 01 53 29.3
comp=Z,18nm,1.4s
RIDG Independent Ri 75.60 27 P **P** **01 53 27.8 -0.3**
baz=262
GLB Gilahina Butte 75.80 29 IAmb IAmb 01 53 30.5
comp=Z,10nm,0.9s
F25K Christian Rive 75.84 23 P **P** **01 53 30.0 +0.6**
baz=261,SNR=8.0
D25K Kavik River 75.87 21 P **P** **01 53 29.9 +0.4**
baz=260
VRDI Verde Repeater 75.95 29 IAmb IAmb 01 53 31.2
comp=Z,8.9nm,0.6s
E25K Arctic Village 75.95 22 IAmb IAmb 01 53 31.8
comp=Z,6.1nm,0.9s
E25K Arctic Village 75.95 22 P **P** **01 53 30.7 +0.7**
baz=261
SCRK Sand Creek 76.00 26 P **P** **01 53 30.7 +0.2**
baz=263
CRQM Cirque 76.06 30 IAmb IAmb 01 53 32.8
comp=Z,15nm,1.0s
CRQE Cirque 76.08 30 P **P** **01 53 31.2 +0.3**
baz=265
MCARA McCarthy VSAT 76.17 29 P **P** **01 53 31.7 +0.4**
baz=265
L26K Log Cabin Wild 76.18 27 IAmb IAmb 01 53 32.6
comp=Z,5.4nm,0.8s
L26K Log Cabin Wild 76.18 27 P **P** **01 53 32.3 +0.9**
baz=264
M26K Nabesna, AK 76.28 28 P **P** **01 53 32.7 +0.7**
baz=264
F26K Sheenjek River 76.42 23 IAmb IAmb 01 53 34.4
comp=Z,7.7nm,0.8s
F26K Sheenjek River 76.42 23 P **P** **01 53 33.6 +0.9**
baz=262,SNR=12
G26K Porcupine Rive 76.46 23 P **P** **01 53 33.4 +0.5**
baz=263
M27K Edge Creek, AK 76.80 28 IAmb IAmb 01 53 36.5
comp=Z,9.3nm,0.9s
M27K Edge Creek, AK 76.80 28 P **P** **01 53 35.4 +0.3**
baz=265,SNR=5.9
C27K Jago River 76.85 21 P **P** **01 53 35.3 +0.3**
baz=262
K27K Chicken 76.85 26 IAmb IAmb 01 53 37.0
comp=Z,6.5nm,1.1s
L27K Beaver Creek, 76.88 27 P **P** **01 53 35.7 +0.4**
baz=265
I27K Kandik River 77.19 25 IAmb IAmb 01 53 38.7
comp=Z,7.4nm,1.0s
I27K Kandik River 77.19 25 P **P** **01 53 37.2 +0.2**
baz=265,SNR=7.2
BVCY Beaver Creek 77.27 28 P **P** **01 53 38.1 +0.5**
baz=266

*KRSC **19** 01:47:14.1±1.2,53°.05N×154°.33E,h512km±14km,Ml4.2*
*MOS **19** 01:47:14.2±0.7,53°.00N×154°.30E,h520km,mb3.9/7,Error ellipse: s-maj=10.1km s-min=6.9km az=61.1*
*IDC **19** 01:47:15.9±0.6,53°.10N×153°.78E,h487km±8km, mb3.4/17, mbtmp4.3/24, Error ellipse: s-maj=10.5km s-min=8.9km az=147.0*
*NEIC **19** 01:47:16.3±1.1,53°.09N±0°.10×153°.7E±0°.2,h489km±4km, mb4.2/45, Error ellipse: s-maj=15.0km s-min=13.2km az=143.0*

ISC 19 01:47:15.8±0.5,53°.08N±0°.05×154°.01E±0°.05,h495km±5km, n195,σ1§61/244,mb4.0/39,8D,Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**1.86**	**115**	P	**P**	**01 48 20.2**	**+0.5**
MIPR				S	**S**	**01 49 12.5**	**+0.7**
MIPR	**Malaya Ipel'ka**	**1.86**	**115**	*eP*	**P**	**01 48 20.2**	**+0.5**
MIPR				*eS*	**S**	**01 49 12.5**	**+0.7**
APC	**Apacha**	**1.91**	**93**	P	**P**	**01 48 20.1**	**+0.2**
APC				S	**S**	**01 49 12.0**	**-0.1**
APC	**Apacha**	**1.91**	**93**	*eP*	**P**	**01 48 20.1**	**+0.2**
APC				*eS*	**S**	**01 49 12.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**2.23**	**88**	*d iP*	**P**	**01 48 21.8**	**+0.3**
PEA0B				*i* S	**S**	**01 49 15.5**	**+0.3**
PEA0B	**Petropavlovsk-**	**2.23**	**88**		**P**	**01 48 21.8**	**+0.3**
PETK	**Petropavlovsk-**	**2.23**	**88**	P	**P**	**01 48 21.8**	**+0.3**
	39nm,0.4s,baz=334,slow=1.3,SNR=33						
PETK				S	**S**	**01 49 15.2**	**0.0**
	8.6nm,0.8s,baz=315,slow=15,SNR=1.0						
GNL	**Ganaly**	**2.44**	**74**	P	**P**	**01 48 23.7**	**+0.9**
GNL				S	**S**	**01 49 16.8**	**-0.7**
GNL	**Ganaly**	**2.44**	**74**	*eP*	**P**	**01 48 23.8**	**+0.9**
GNL				*eS*	**S**	**01 49 16.9**	**-0.7**
ASAK	**Asacha**	**2.47**	**105**	P	**P**	**01 48 23.3**	**+0.3**
ASAK				S	**S**	**01 49 16.9**	**-0.9**
ASAK	**Asacha**	**2.47**	**105**	*eP*	**P**	**01 48 23.3**	**+0.3**
ASAK				*eS*	**S**	**01 49 16.9**	**-0.9**
KRMR	**Karymshinskiy**	**2.51**	**94**	P	**P**	**01 48 23.1**	**0.0**
KRMR				S	**S**	**01 49 17.3**	**-0.7**
KRMR	**Karymshinskiy**	**2.51**	**94**	*eP*	**P**	**01 48 23.2**	**0.0**
KRMR				*eS*	**S**	**01 49 17.4**	**-0.7**
GRL	**Gorelyy**	**2.52**	**100**	P	**P**	**01 48 23.9**	**+0.5**
GRL	**Gorelyy**	**2.52**	**100**	*eP*	**P**	**01 48 24.0**	**+0.5**
MTVR	**Mutnovka**	**2.60**	**102**	P	**P**	**01 48 23.8**	**-0.1**
MTVR				S	**S**	**01 49 19.4**	**0.0**
MTVR	**Mutnovka**	**2.60**	**102**	*eP*	**P**	**01 48 23.9**	**-0.1**
MTVR				*eS*	**S**	**01 49 19.4**	**0.0**
INSR	**Institute**	**2.77**	**88**	P	**P**	**01 48 25.2**	**+0.5**
INSR	**Institute**	**2.77**	**88**	*eP*	**P**	**01 48 25.3**	**+0.5**
KOK	**Koryaka**	**2.79**	**84**	P	**P**	**01 48 25.7**	**+0.7**
KOK	**Koryaka**	**2.79**	**84**	*eP*	**P**	**01 48 25.8**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.80**	**115**	P	**P**	**01 48 23.4**	**-1.5**
KDTR				S	**S**	**01 49 16.5**	**-4.8**
KDTR	**Khodutka, Kamc**	**2.80**	**115**	*eP*	**P**	**01 48 23.4**	**-1.5**
KDTR				*eS*	**S**	**01 49 16.6**	**-4.8**
KRX	**Arik**	**2.80**	**82**	P	**P**	**01 48 25.4**	**+0.3**
KRX	**Arik**	**2.80**	**82**	*eP*	**P**	**01 48 25.4**	**+0.3**
PET	**Petropavlovsk**	**2.80**	**89**	*d iP*	**P**	**01 48 24.8**	**-0.1**
PET				*i* S	**S**	**01 49 20.1**	**-1.3**
PET	**Petropavlovsk**	**2.80**	**89**	P	**P**	**01 48 24.9**	**0.0**
PET	**Petropavlovsk**	**2.80**	**89**	*eP*	**P**	**01 48 24.8**	**-0.1**
PET				*eS*	**S**	**01 49 19.8**	**-1.5**
RUS	**Russkaya**	**2.81**	**102**	P	**P**	**01 48 24.0**	**-1.0**
RUS				S	**S**	**01 49 17.7**	**-3.8**
RUS	**Russkaya**	**2.81**	**102**	*eP*	**P**	**01 48 24.1**	**-1.0**
RUS				*eS*	**S**	**01 49 17.8**	**-3.8**
AVH	**Avacha**	**2.85**	**84**	P	**P**	**01 48 25.9**	**+0.5**
AVH	**Avacha**	**2.85**	**84**	*eP*	**P**	**01 48 25.9**	**+0.5**
KRER	**Koryakskii**	**2.86**	**84**	P	**P**	**01 48 26.1**	**+0.5**
KRER				S	**S**	**01 49 20.0**	**-2.5**
KRER	**Koryakskii**	**2.86**	**84**	*eP*	**P**	**01 48 26.1**	**+0.5**
KRER				*eS*	**S**	**01 49 20.1**	**-2.5**
DALK	**Dalny**	**2.87**	**89**	P	**P**	**01 48 25.0**	**-0.3**
DALK				S	**S**	**01 49 19.6**	**-2.5**
DALK	**Dalny**	**2.87**	**89**	*eP*	**P**	**01 48 25.1**	**-0.3**
DALK				*eS*	**S**	**01 49 19.7**	**-2.5**
SMAR	**Somma**	**2.89**	**84**	P	**P**	**01 48 26.2**	**+0.4**
SMAR				S	**S**	**01 49 21.6**	**-1.3**
SMAR	**Somma**	**2.89**	**84**	*eP*	**P**	**01 48 26.2**	**+0.4**
SMAR				*eS*	**S**	**01 49 21.6**	**-1.3**
UGLR	**Uglovaya**	**2.90**	**86**	P	**P**	**01 48 26.3**	**+0.6**
UGLR				S	**S**	**01 49 21.5**	**-1.3**
UGLR	**Uglovaya**	**2.90**	**86**	*eP*	**P**	**01 48 26.3**	**+0.6**
UGLR				*eS*	**S**	**01 49 21.5**	**-1.3**
SDLR	**Sedlovina**	**2.94**	**84**	P	**P**	**01 48 26.0**	**0.0**
SDLR				S	**S**	**01 49 21.4**	**-2.6**
SDLR	**Sedlovina**	**2.94**	**84**	*eP*	**P**	**01 48 26.0**	**0.0**
SDLR				*eS*	**S**	**01 49 20.8**	**-2.6**
KII	**Karymskiy**	**3.38**	**71**	P	**P**	**01 48 29.5**	**+0.5**
KII	**Karymskiy**	**3.38**	**71**	*eP*	**P**	**01 48 29.5**	**+0.5**
SPN	**Mys Shipunski**	**3.63**	**87**	P	**P**	**01 48 30.2**	**-0.6**
SPN				S	**S**	**01 49 26.9**	**-5.1**
SPN	**Mys Shipunski**	**3.63**	**87**	*eP*	**P**	**01 48 30.2**	**-0.6**
SPN				*eS*	**S**	**01 49 27.0**	**-5.1**
TUMR	**Tumrok**	**4.23**	**56**	P	**P**	**01 48 36.1**	**+0.4**
TUMR	**Tumrok**	**4.23**	**56**	*eP*	**P**	**01 48 36.1**	**+0.4**
KMNR	**Kamenistaya**	**4.52**	**51**	P	**P**	**01 48 38.6**	**+0.5**
KMNR	**Kamenistaya**	**4.52**	**51**	*eP*	**P**	**01 48 38.7**	**+0.5**
KOZ	**Kozyrevsk**	**4.53**	**46**	P	**P**	**01 48 38.8**	**+0.6**
KOZ	**Kozyrevsk**	**4.53**	**46**	*eP*	**P**	**01 48 38.8**	**+0.6**
KPT	**Kopyto**	**4.63**	**49**	P	**P**	**01 48 38.9**	**-0.2**
KPT	**Kopyto**	**4.63**	**49**	*eP*	**P**	**01 48 39.0**	**-0.2**
SRDR	**Sredinnyy**	**4.63**	**43**	P	**P**	**01 48 39.8**	**+0.7**
SRDR	**Sredinnyy**	**4.63**	**43**	*eP*	**P**	**01 48 39.8**	**+0.7**
KIRR	**Kirishev**	**4.68**	**50**	P	**P**	**01 48 39.3**	**-0.3**
KIRR	**Kirishev**	**4.68**	**50**	*eP*	**P**	**01 48 39.3**	**-0.3**
BZMR	**Bezymyannaya**	**4.74**	**50**	P	**P**	**01 48 40.3**	**+0.2**
BZMR	**Bezymyannaya**	**4.74**	**50**	*eP*	**P**	**01 48 40.3**	**+0.2**
BZP	**Bezymyannyi-Pe**	**4.75**	**51**	P	**P**	**01 48 40.2**	**0.0**
BZP	**Bezymyannyi-Pe**	**4.75**	**51**	*eP*	**P**	**01 48 40.2**	**0.0**
BZWR	**Bezymyannyi-We**	**4.76**	**50**	P	**P**	**01 48 40.7**	**+0.4**
BZWR	**Bezymyannyi-We**	**4.76**	**50**	*eP*	**P**	**01 48 40.7**	**+0.4**
MKZ	**Mys Kozlova**	**4.81**	**69**	P	**P**	**01 48 38.7**	**-1.9**
MKZ				S	**S**	**01 49 43.3**	**-6.6**
MKZ	**Mys Kozlova**	**4.81**	**69**	*eP*	**P**	**01 48 38.7**	**-1.9**
MKZ				*eS*	**S**	**01 49 43.4**	**-6.6**
BZGR	**Bezymyannyi-Gr**	**4.84**	**51**	P	**P**	**01 48 40.9**	**0.0**
BZGR	**Bezymyannyi-Gr**	**4.84**	**51**	*eP*	**P**	**01 48 41.0**	**0.0**
ZLN	**Zelenaya**	**4.93**	**51**	P	**P**	**01 48 42.4**	**+0.7**
ZLN	**Zelenaya**	**4.93**	**51**	*eP*	**P**	**01 48 42.5**	**+0.7**
TIGL	**Tigil**	**5.39**	**28**	P	**P**	**01 48 46.9**	**+1.1**
TIGL	**Tigil**	**5.39**	**28**	*eP*	**P**	**01 48 46.9**	**+1.1**
SMKR	**Semkarok**	**5.56**	**48**	P	**P**	**01 48 47.0**	**-0.5**
SMKR	**Semkarok**	**5.56**	**48**	*eP*	**P**	**01 48 47.0**	**-0.5**
KBG	**Krutoberegovo**	**5.96**	**54**	P	**P**	**01 48 49.9**	**-1.4**
KBG	**Krutoberegovo**	**5.96**	**54**	*eP*	**P**	**01 48 50.0**	**-1.4**
KBTR	**Krutoberegovo**	**6.00**	**55**	P	**P**	**01 48 49.6**	**-2.0**
KBTR				S	**S**	**01 50 05.5**	**-4.7**
KBTR	**Krutoberegovo**	**6.00**	**55**	*eP*	**P**	**01 48 49.6**	**-2.0**
KBTR				*eS*	**S**	**01 50 05.5**	**-4.7**
MA2	**Magadan**	**6.76**	**346**	P	**P**	**01 48 59.5**	**+0.4**
	38nm,0.6s,baz=142,slow=6.8,SNR=25						
MA2				S	**S**	**01 50 23.4**	**-0.4**
	7.7nm,0.6s,baz=195,slow=20,SNR=3.9						
MA2	**Magadan**	**6.76**	**346**	P	**P**	**01 48 59.3**	**+0.3**
MA2				S	**S**	**01 50 24.0**	**+0.2**
MA2	**Magadan**	**6.76**	**346**	*eP*	**P**	**01 48 59.4**	**+0.3**
MA2				*eS*	**S**	**01 50 24.1**	**+0.2**
PALN	**Palana**	**6.88**	**27**	P	**P**	**01 49 01.0**	**+0.8**
PALN	**Palana**	**6.88**	**27**	*eP*	**P**	**01 49 01.1**	**+0.8**
BKI	**Bering**	**7.34**	**68**	P	**P**	**01 49 05.9**	**+0.9**
BKI				S	**S**	**01 50 31.9**	**-2.9**
BKI	**Bering**	**7.34**	**68**	*eP*	**P**	**01 49 06.0**	**+0.9**
BKI				*eS*	**S**	**01 50 31.9**	**-2.9**
TYV	**Tymovskoe**	**7.36**	**257**	*eP*	**P**	**01 49 06.7**	**+1.4**
TYV				*eS*	**S**	**01 50 35.0**	**-0.2**
TYV	comp=Z,16nm,0.7s			pmax	pmax		
TYV	comp=Z,100nm,3.7s			smax	smax		
TYV	comp=N,18nm,1.4s			smax	smax		
TYV	comp=E,34nm,1.4s			smax	smax		
TYV	comp=N,400nm,4.0s			smax	smax		
TYV	comp=E,200nm,4.0s						
UGL	**Uglegorsk**	**8.52**	**247**	*eP*	**P**	**01 49 18.6**	**+1.3**
UGL	comp=Z,120nm,0.8s			pmax	pmax		
KUR	**Kuril'sk**	**8.82**	**210**	*eP*	**P**	**01 49 19.2**	**-1.4**
KUR				*eS*	**S**	**01 51 06.6**	**+3.5**
KUR	comp=Z,64nm,0.3s			pmax	pmax		
KUR	comp=N,28nm,0.4s			smax	smax		
YSS	**Yuzhno-Sakhali**	**9.48**	**234**	*K iP*	**P**	**01 49 28.1**	**+0.6**
YSS				*eS*	**S**	**01 51 12.3**	**-3.6**
YSS	comp=Z,30nm,0.6s			pmax	pmax		
YSS	comp=Z,100nm,3.6s			pmax	pmax		
YSS	comp=N,10.0nm,0.7s			smax	smax		
YSS	comp=E,10.0nm,0.4s			smax	smax		
YSS	**Yuzhno-Sakhali**	**9.48**	**234**		**P**	**01 49 28.1**	**+0.6**
YSS	**Yuzhno-Sakhali**	**9.48**	**234**	*eP*	**P**	**01 49 28.2**	**+0.6**
SEY	**Seymchan**	**9.92**	**356**	P	**P**	**01 49 33.4**	**+1.5**
	comp=E,4.6nm,0.3s,baz=163,slow=11,SNR=25						
SEY				S	**S**	**01 51 24.8**	**+0.9**
	comp=E,2.6nm,0.7s,baz=90,slow=20,SNR=2.1						
SHO	**Shikotan**	**10.37**	**210**	*eS*	**S**	**01 51 33.5**	**+0.3**
JKA	**Kamikawa-asahi**	**11.71**	**225**		**P**	**01 49 50.2**	**-1.0**
ASAJ	**Asahikawa**	**11.71**	**225**	P	**P**	**01 49 51.6**	**+0.3**
	comp=E,7.3nm,0.3s,baz=61,slow=4.3,SNR=15						
ERM	**Erimo**	**13.26**	**218**	*d iP*	**P**	**01 50 05.7**	**-1.9**
ERM	**Erimo**	**13.26**	**218**		**P**	**01 50 04.4**	**-3.2**
JTM	**Tenmabayashi**	**15.11**	**221**	P	**P**	**01 50 23.2**	**-4.0**
AMKA	**Amchitka**	**15.57**	**86**		**P**	**01 50 34.0**	**+2.3**
YAK	**Yakutsk**	**15.74**	**314**	P	**P**	**01 50 31.4**	**-2.0**
	comp=E,68nm,0.4s,baz=90,slow=4.2,SNR=22						
YAK				S	**S**	**01 53 12.3**	**-4.2**
	comp=E,8.3nm,0.4s,baz=139,slow=19,SNR=9.2						
YAK	**Yakutsk**	**15.74**	**314**	*eP*	**P**	**01 50 31.6**	**-1.8**
YAK				*eS*	**S**	**01 53 13.5**	**-3.0**
YAK	comp=Z,97nm,1.1s			pmax	pmax		
YAK	comp=N,10.0nm,1.1s			pmax	pmax		
YAK	comp=E,18nm,1.4s			pmax	pmax		
YAK	comp=E,99nm,2.2s			smax	smax		
YAK	comp=N,44nm,1.6s			smax	smax		
YAK	**Yakutsk**	**15.74**	**314**		**P**	**01 50 31.2**	**-2.2**
YAK	**Yakutsk**	**15.74**	**314**	*eP*	**P**	**01 50 31.4**	**-2.0**
HEH	**HeiHe**	**16.70**	**271**	*eP*	**P**	**01 50 41.1**	**-2.6**
HEH	comp=Z,11nm,0.7s			pmax	pmax		
USRK	**Ussuriysk Ar.**	**16.99**	**247**	P	**P**	**01 50 44.0**	**-2.7**
	comp=Z,3.5nm,0.4s,baz=48,slow=13,SNR=10.0						
USRK	**Ussuriysk Ar.**	**16.99**	**247**	P	**P**	**01 50 44.4**	**-2.3**
USRK	**Ussuriysk Ar.**	**16.99**	**247**	P	**P**	**01 50 44.4**	**-2.3**
MDJ	**Mudanjiang**	**18.09**	**252**	P	**P**	**01 50 55.3**	**-1.8**
MDJ	comp=Z,26nm,1.2s			pmax	pmax		
MDJ	**Mudanjiang**	**18.09**	**252**	P	**P**	**01 50 55.5**	**-1.6**
BNX	**BinXian**	**18.73**	**258**	⇓P	**P**	**01 51 01.6**	**-1.3**
BNX	comp=Z,42nm,0.7s			pmax	pmax		
MJB9	**Matsu-Tunnel**	**19.90**	**220**	P	**P**	**01 51 13.4**	**-0.3**
MAJO	**Matsushiro**	**19.90**	**220**	P	**P**	**01 51 13.4**	**-0.3**
MAJO	comp=Z,55nm,0.6s			pmax	pmax		
MAJO	**Matsushiro**	**19.90**	**220**	P	**P**	**01 51 13.4**	**-0.3**
MJAR	**Matsushiro Arr**	**19.90**	**220**	P	**P**	**01 51 13.4**	**-0.3**
	comp=Z,22nm,0.6s,baz=18,slow=9.9,SNR=104						
MJAR	**Matsushiro Arr**	**19.90**	**220**	P	**P**	**01 51 13.7**	**0.0**
MJAR	comp=Z,24nm,0.6s			pmax	pmax		
MJAR	**Matsushiro Arr**	**19.90**	**220**		**P**	**01 51 13.7**	**0.0**
JGF	**Kuroka**	**21.06**	**221**		**P**	**01 51 24.2**	**-0.1**
INU	**Inuyama**	**21.41**	**221**		**P**	**01 51 26.8**	**-0.6**
HILR	**Hailar Array B**	**21.57**	**274**	P	**P**	**01 51 27.6**	**-1.1**
	comp=Z,7.3nm,0.3s,baz=61,slow=10,SNR=40						
	comp=Z,7.3nm,0.3s						
TIXI	**Tiksi**	**21.65**	**339**	P	**P**	**01 51 27.9**	**-1.1**
	comp=Z,8.6nm,0.5s,baz=152,slow=7.2,SNR=7.1						
	comp=Z,8.6nm,0.5s						
TIXI	**Tiksi**	**21.65**	**339**	*i* P	**P**	**01 51 31.4**	**+2.3**
TIXI	comp=Z,8.0nm,0.9s			pmax	pmax		
TIXI	**Tiksi**	**21.65**	**339**	P	**P**	**01 51 28.6**	**-0.4**
HIA	**Hailar**	**21.69**	**274**	P	**P**	**01 51 28.4**	**-1.4**
HIA	comp=Z,12nm,0.5s			pmax	pmax		
HIA	**Hailar**	**21.69**	**274**	P	**P**	**01 51 28.4**	**-1.4**
KSRS	**Korea Array**	**23.92**	**240**	P	**P**	**01 51 49.9**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=42,slow=8.6,SNR=13						
	comp=Z,2.5nm,0.5s						
F17K	**Baldwin Pennin**	**25.51**	**41**	P	**P**	**01 52 05.3**	**+1.8**
E18K	**Tukpahlearik C**	**25.94**	**39**	P	**P**	**01 52 08.5**	**+1.2**
G18K	**Tagagawik**	**26.48**	**43**	P	**P**	**01 52 13.7**	**+1.5**
F19K	**Shineruckik Mo**	**26.94**	**41**	P	**P**	**01 52 17.3**	**+1.2**
H22K	**Ishtalitna Cre**	**29.47**	**43**	P	**P**	**01 52 40.2**	**+1.9**
COLD	**Coldfoot**	**29.93**	**40**	P	**P**	**01 52 43.4**	**+1.1**
SONM	**Songino Array**	**30.30**	**280**	P	**P**	**01 52 45.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=67,slow=9.0,SNR=3.5						
	comp=Z,0.6nm,0.3s						
E24K	**Your Creek**	**30.59**	**39**	P	**P**	**01 52 49.7**	**+1.7**
E24K	comp=Z,5.2nm,0.6s			lAmb	lAmb	01 52 50.3	
HHC	**Hu-ho-hao-te**	**30.98**	**264**	*eP*	**P**	**01 52 51.4**	**-0.4**
HHC	comp=Z,12nm,0.6s			pmax	pmax		
HHC	comp=Z,66nm,4.7s			pmax	pmax		
G24K	**Hadweenzic Riv**	**31.01**	**41**	P	**P**	**01 52 53.6**	**+1.9**
D25K	**Kavik River**	**31.36**	**36**	lAmb	lAmb	01 52 56.5	
	comp=Z,5.5nm,0.7s						
ILAR	**Eielson Array**	**31.43**	**45**	P	**P**	**01 52 56.4**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=279,slow=9.2,SNR=15						
	comp=Z,0.9nm,0.8s						
M27K	**Edge Creek, AK**	**34.07**	**48**	P	**P**	**01 53 20.6**	**+2.7**
F30M	**Barrier River**	**35.42**	**38**	P	**P**	**01 53 30.8**	**+1.9**
F30M	comp=Z,4.6nm,0.8s			lAmb	lAmb	01 53 32.0	
LZH	**Lanzhou**	**38.67**	**264**	*eP*	**P**	**01 53 56.8**	**+0.5**
LZH				sP	sP	01 56 12.4	-8.1
LZH				S	S	01 59 37.1	+20
LZH	comp=Z,22nm,1.0s			pmax	pmax		
LZDM	**Lanzhou Array**	**38.85**	**264**	P	**P**	**01 53 58.4**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=95,slow=7.4,SNR=3.9						
	comp=Z,1.6nm,0.3s						
GTA2	**Gaotai**	**38.93**	**272**	P	**P**	**01 53 58.6**	**+0.3**
GTA2	comp=Z,17nm,0.9s			pmax	pmax		
DGZ	**Jazzator, Alta**	**40.34**	**293**	*i* P	**P**	**01 54 08.4**	**-1.1**
DGZ				*i* *PP	**pP**	**01 55 39.1**	**+0.4**
DGZ	comp=Z,2.0nm,0.9s			pmax	pmax		
WMQ	**Urumqi**	**43.47**	**286**	*eP*	**P**	**01 54 35.3**	**+1.0**
WMQ	comp=Z,14nm,0.9s			pmax	pmax		
KURK	**Kurchatov**	**44.57**	**299**	P	**P**	**01 54 42.7**	**+0.1**
KURK						01 56 14.7	
KURK	**Kurchatov**	**44.57**	**299**	P	**P**	**01 54 42.2**	**-0.3**
KURK	comp=Z,4.7nm,0.8s			lAmb	lAmb	01 54 42.7	
KURBB	**Kurchatov Arra**	**44.67**	**299**	P	**P**	**01 54 42.7**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=63,slow=7.5,SNR=22						
KURBB				PcP	**pP**	**01 56 14.7**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=53,slow=2.6,SNR=5.4						
	comp=Z,2.3nm,0.5s						
MK31	**Makanchi Array**	**44.80**	**292**	*d iP*	**P**	**01 54 43.8**	**-0.7**
MKAR	**Makanchi Array**	**44.80**	**292**	P	**P**	**01 54 43.9**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=57,slow=7.2,SNR=23						
	comp=Z,2.3nm,0.5s						
MAKZ	**Makanchi**	**44.97**	**292**	P	**P**	**01 54 45.1**	**-0.7**
MAKZ	comp=Z,2.0nm,0.7s			pmax	pmax		
MAKZ	**Makanchi**	**44.97**	**292**	P	**P**	**01 54 45.1**	**-0.7**
PZH	**PanZhiHua**	**46.78**	**257**	P	**P**	**01 55 00.3**	**+0.3**
BVAR	**Borovoye Array**	**47.46**	**305**	P	**P**	**01 55 04.0**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=57,slow=7.5,SNR=7.4						
	comp=Z,2.1nm,0.5s						
BORK	**Borovoye**	**47.48**	**305**	*i* P	**P**	**01 55 03.5**	**-1.3**
BORK	comp=Z,1.0nm,0.7s			pmax	pmax		
PDGK	**Podgornoye**	**48.48**	**290**	P	**P**	**01 55 12.6**	**0.0**
RKSR	**Ryazan**	**48.49**	**290**	P	**P**	**01 55 12.8**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=57,slow=7.5,SNR=7.4						
	comp=Z,2.1nm,0.5s						
KSP	**Kasprowy**	**49.01**	**294**	P	**P**	**01 55 15.3**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=57,slow=7.5,SNR=7.4						
	comp=Z,2.1nm,0.5s						
KSP	**Kasprowy**	**49.01**	**294**	*eP*	**P**	**01 55 15.3**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=57,slow=7.5,SNR=7.4						
	comp=Z,2.1nm,0.5s						
KSP	**Kasprowy**	**49.01**	**294**	*eS*	**S

PDGK	**Podgornoye**	**48.48**	**290**	P	**P**	**01 55 12.6**	**0.0**
KDJ	**Kajisay**	**50.56**	**290**	P	**P**	**01 55 27.5**	**-0.5**
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KDJ	**Kajisay**	**50.56**	**290**	P	**P**	**01 55 27.5**	**-0.5**
KDJ				IAmb	IAmb	01 55 28.2	
	comp=Z,7.2nm,1.2s						
BOOM	**Boomskoye usch**	**51.02**	**291**	P	**P**	**01 55 31.3**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,24nm,1.4s						
BOOM	**Boomskoye usch**	**51.02**	**291**	P	**P**	**01 55 31.3**	**-0.1**
BOOM				IAmb	IAmb	01 56 11.6	
	comp=Z,24nm,1.4s						
AAK	**Ala-Archa**	**51.74**	**292**	*d* iP	**P**	**01 55 36.4**	**-0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	**Ala-Archa**	**51.74**	**292**	P	**P**	**01 55 36.3**	**-0.2**
AAK				IAmb	IAmb	01 55 36.6	
	comp=Z,3.9nm,0.5s						
KKAR	**Karatay Array**	**53.63**	**295**	P	**P**	**01 55 49.2**	**-0.7**
KKAR	**Karatay Array**	**53.63**	**295**	P	**P**	**01 55 49.1**	**-0.7**
SUMG	**Summit**	**54.34**	**5**	P	**P**	**01 55 55.4**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**54.34**	**5**		**P**	**01 55 55.4**	**+0.5**
SUMG				IAmb	IAmb	01 56 12.6	
	comp=Z,14nm,1.2s						
CMAR	**Chiang Mai Arr**	**54.63**	**253**	P	**P**	**01 55 57.8**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=21,slow=6.3,SNR=15						
	comp=Z,2.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**54.63**	**253**	P	**P**	**01 55 55.5**	**-1.7**
EVN	**Everest**	**54.63**	**271**	P	**P**	**01 55 57.4**	**-0.5**
EVN				IAmb	IAmb	01 55 58.3	
	comp=Z,6.0nm,0.7s						
K05A	**Summer Lake**	**54.75**	**64**	P	**P**	**01 56 00.9**	**+2.9**
AB31	**Akbulak array**	**54.94**	**307**	P	**P**	**01 55 58.2**	**-0.8**
ABKAR	**Akbulak array**	**54.94**	**307**	P	**P**	**01 55 58.3**	**-0.7**
AKTO	**Aktyubinsk**	**55.05**	**309**	P	**P**	**01 55 58.6**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=66,slow=2.0,SNR=2.1						
	comp=Z,0.9nm,0.4s						
GAR	**Garm**	**56.53**	**292**	P	**P**	**01 56 09.7**	**-0.7**
GAR				IAmb	IAmb	01 56 10.2	
	comp=Z,6.6nm,0.6s						
SIJI	**Sorong**	**57.02**	**207**	P	**P**	**01 56 14.2**	**+0.3**
	comp=Z,2.8nm,0.4s,baz=103,slow=4.5,SNR=3.9						
	comp=Z,2.8nm,0.4s						
NVAR	**Mina Array Bea**	**59.15**	**66**	P	**P**	**01 56 30.3**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=314,slow=6.1,SNR=4.0						
	comp=Z,0.7nm,0.6s						
OBN	**Obninsk**	**60.46**	**324**	*e*P	**P**	**01 56 36.2**	**-0.2**
OBN				*e*		01 57 15.4	
OBN				*e**PP	**pP**	**01 58 17.4**	**+1.3**
OBN				*e*		01 58 59.1	
OBN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PDAR	**Pinedale Array**	**60.67**	**57**	P	**P**	**01 56 40.1**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=321,slow=2.1,SNR=6.4						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**60.67**	**57**	P	**P**	**01 56 39.9**	**+1.5**
GWY	**Greenwater Val**	**61.67**	**67**	P	**P**	**01 56 46.9**	**+1.9**
HMU	**Henry Mountain**	**63.60**	**62**	P	**P**	**01 56 59.7**	**+2.1**
HMU				IAmb	IAmb	01 57 00.2	
	comp=Z,3.5nm,0.7s						
MTN	**Manton Dam**	**68.53**	**204**	P	**P**	**01 57 28.8**	**+0.6**
MTN				IAmb	IAmb	01 57 42.6	
	comp=Z,10nm,1.4s						
KNRA	**Kununurra**	**71.85**	**206**	P	**P**	**01 57 48.4**	**+0.5**
KNRA				IAmb	IAmb	01 58 25.2	
	comp=Z,14nm,1.2s						
TX31	**Lajitas Ar. Si**	**73.96**	**63**	P	**P**	**01 58 02.0**	**+1.9**
TXAR	**Lajitas Array**	**73.96**	**63**	P	**P**	**01 58 01.7**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=298,slow=5.3,SNR=12						
	comp=Z,0.6nm,0.5s						
TXAR	**Lajitas Array**	**73.96**	**63**	P	**P**	**01 58 02.2**	**+2.0**
TXAR	**Lajitas Array**	**73.96**	**63**	P	**P**	**01 58 02.2**	**+2.0**
WR8	**Warramunga Arr**	**74.67**	**199**	P	**P**	**01 58 04.2**	**+0.2**
WR8				IAmb	IAmb	01 58 04.9	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**74.69**	**199**	P	**P**	**01 58 04.3**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=16,slow=6.0,SNR=38						
	comp=Z,4.1nm,0.6s						
WRA	**Warramunga Arr**	**74.69**	**199**	P	**P**	**01 58 03.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**75.01**	**208**	P	**P**	**01 58 06.2**	**+0.3**
AS31	**Alice Springs**	**78.40**	**199**	P	**P**	**01 58 24.6**	**+0.2**
ASAR	**Alice Springs**	**78.40**	**199**	P	**P**	**01 58 25.2**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=12,slow=5.3,SNR=53						
	comp=Z,4.7nm,0.7s						
LPAZ	**La Paz**	**130.69**	**58**	PKP	**PKiKP**	**02 05 31.6**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=334,slow=1.1,SNR=7.5						
QSPA	**South Pole Qui**	**142.82**	**180**	PKhKP	PKPpre	02 05 46.9	
	comp=Z,1.4nm,1.0s,baz=148,slow=1.3,SNR=8.4						
QSPA				PKP	**PKPdf**	**02 05 52.0**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=297,slow=2.3,SNR=2.0						

IDC ***19*** *02:15:10.9±0.3, 10°.84S×93°.67E, h0km, mb5.1/32, mbtmp5.1/33, ML4.6/1, MS4.5/72, Error ellipse: s-maj=13.6km s-min=10.7km az=86.0*

MOS ***19*** *02:15:11.2±0.9, 10°.74S×93°.75E, h10km, mb5.5/73, MS4.7/14, Error ellipse: s-maj=7.4km s-min=4.3km az=106.0*

NEIC ***19*** *02:15:13.3±2.8, 10°.90S±0°.06×93°.87E±0°.08, h10km±1km, mb5.5/143, Ms_20 5.0/280, Mwb5.5/34, Mww5.4/17, Error ellipse: s-maj=13.1km s-min=9.9km az=243.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.02; Mθθ-0.02; Mφφ0.01; Mrθ-1.04; Mθφ-1.71; Mφr-0.34; Fault plane solution: M₀2.03000×10¹⁷ NP1:φs90.70000°, δ85.12000°, λ-149.48000°. NP2:φs357.83000°, δ59.61000°, λ-5.66000°. Principal axes: T 1.8510, Plg17.0000°, Azm220.0000°; N 0.3126, Plg59.0000°, Azm99.0000°; P -2.1636, Plg25.0000°, Azm319.0000°;*

NEIC ***19*** *02:15:13.5, 10°.90S×93°.83E, h10km*

GFZ ***19*** *02:15:13.7±0.2, 11°.5S×9°.4E±°, h10km, M5.4/40, mb5.5/40*

GFZ ***19*** *02:15:13.6, 10°.90S×93°.63E, h11km, Mw5.4/75, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.36; Mθθ-0.06; Mφφ-0.30; Mrθ0.48; Mθφ-1.29; Mφr-0.63; Fault plane solution: M₀1.54904×10¹⁷ NP1: φs181.92164°, δ71.57065°, λ27.69668°. NP2:φs82.49921°, δ63.83526°, λ159.37636°. Principal axes: T 1.6058, Plg32.3671°, Azm44.0835°; N -0.1207, Plg57.1413°, Azm212.9794°; P -1.4852, Plg5.0635°, Azm310.8641°;*

NEIC ***19*** *02:15:14.7, 10°.88S×93°.82E, h18km*

DJA ***19*** *02:15:14.6±0.1, 11°.5±2°×9°.4E±°, h10km, M5.8/129, mB6.2/89, mb5.7/129, Mw(mB)5.9/89, MwMwp5.3/20, Mwp5.5/20*

NEIC ***19*** *02:15:15.1, 10°.88S×93°.93E, h24km, Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10¹⁷Nm; Mrr-0.35; Mθθ0.19; Mφφ0.15; Mrθ-0.42; Mθφ-1.70; Mφr-0.11; Fault plane solution: M₀1.78000×10¹⁷ NP1: φs358.81000°, δ74.42000°, λ-7.57000°. NP2:φs90.86000°, δ82.71000°, λ-164.29000°. Principal axes: T 1.8923, Plg6.0000°, Azm224.0000°; N -0.2623, Plg73.0000°, Azm115.0000°; P -1.6300, Plg16.0000°, Azm316.0000°;*

GCMT ***19*** *02:15:15.3±0.1, 10°.86S±0°.01×93°.67E±0°.01, h22km, MW5.5/158, Moment Tensor Solution. s134,c234; s158,c330; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr0.37±.03; Mθθ-0.15±.02; Mφφ-0.21±.03; Mrθ-0.62±.05; Mθφ-2.44±.02; Mφr-0.05±.05; Best double couple: M₀2.51900×10¹⁷ NP1:φs360.00000°, δ75.00000°, λ2.00000°. NP2:φs269.00000°, δ88.00000°, λ165.00000°. Principal axes: T 2.3410, Plg12.0000°, Azm223.0000°; N 0.3570, Plg75.0000°, Azm81.0000°; P -2.6980, Plg9.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 02:15:11.4±0.4, 10°.85S±0°.03×93°.59E±0°.04, h2km±2km, h3km:pP-P, n1054, σ1°53/905, mb5.3/278, MS4.9/251, 47C-52D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I06AU	**Cocos Islands**	**3.42**	**112**		Pn	**Pn**	**02 16 01.4**	**-4.3**
	baz=291,slow=8.5							
I06AU					Sn	Sn	02 16 35.9	-11
	baz=255,slow=97							
COCO	**West Island**	**3.45**	**113**	P		Pn	02 16 00.8	-5.3
COCO	**West Island**	**3.45**	**113**			Pn	02 16 01.0	-5.1
COCO						Sn	02 16 34.4	-13
COCO	**West Island**	**3.45**	**113**	P		Pn	02 16 00.7	-5.4
COCO	**West Island**	**3.45**	**113**	P		Pn	02 16 01.0	-5.1
EGSI	**Enggano, Bengk**	**10.18**	**58**	P		**Pn**	**02 17 38.2**	**-0.5**
PPSI	**Pulau Pagai**	**10.25**	**39**	P		**Pn**	**02 17 39.9**	**+0.3**
SISI	**Saibi**	**10.92**	**30**	P		**Pn**	**02 17 48.3**	**-0.5**
	7μm862nm,1.2s							
MNAI	**Manna**	**11.30**	**56**	P		**Pn**	**02 17 54.3**	**+0.3**
MNAI	**Manna**	**11.30**	**56**			**Pn**	**02 17 53.3**	**-0.6**
MNAI	**Manna**	**11.30**	**56**	P		**Pn**	**02 17 53.4**	**-0.6**
	11μm34μm2μm,0.8s							
MNAI	**Manna**	**11.30**	**56**	P		**Pn**	**02 17 54.6**	**+0.6**
KSI	**Kapahiang**	**11.44**	**52**	P		**Pn**	**02 17 55.2**	**-0.7**
	2μm,1.0s							
MASI	**Maura Aman, Be**	**11.50**	**49**	P		**Pn**	**02 17 56.4**	**-0.4**
LWLI	**Liwa**	**11.87**	**62**	P		**Pn**	**02 18 01.8**	**-0.2**
PDSI	**Padang**	**12.00**	**35**	P		**Pn**	**02 18 02.6**	**-1.1**
	9μm11μm604nm,1.2s							
PPI	**Padang Panjang**	**12.34**	**34**	P		**Pn**	**02 18 07.8**	**-0.5**
	9μm6μm521nm,1.0s							
KLI	**Kotabumi**	**12.64**	**63**	P		**Pn**	**02 18 16.1**	**+3.7**
	6μm521nm,0.6s							
GSI	**Gunungsitoli**	**12.71**	**18**	P		**Pn**	**02 18 14.7**	**+1.4**
GSI	**Gunungsitoli**	**12.71**	**18**	S		**Sn**	**02 20 33.7**	**-1.8**
GSI	**Gunungsitoli**	**12.71**	**18**			**Pn**	**02 18 12.0**	**-1.3**
GSI	**Gunungsitoli**	**12.71**	**18**	P		**Pn**	**02 18 13.8**	**+0.5**
	4μm294nm,1.6s							
GSI	**Gunungsitoli**	**12.71**	**18**	P		**Pn**	**02 18 12.6**	**-0.7**
MNSI	**Mandailing Nat**	**13.01**	**28**	P		**Pn**	**02 18 17.5**	**+0.1**
	742nm,1.2s							
BKNI	**Bangkinang**	**13.35**	**34**	P		**Pn**	**02 18 23.3**	**+1.3**
BKNI	**Bangkinang**	**13.35**	**34**	S		**Sn**	**02 20 48.0**	**-3.1**
BKNI	**Bangkinang**	**13.35**	**34**			**Pn**	**02 18 21.3**	**-0.7**
BKNI	**Bangkinang**	**13.35**	**34**	P		**Pn**	**02 18 23.6**	**+1.6**
	7μm551nm,1.0s							
BKNI	**Bangkinang**	**13.35**	**34**	P		**Pn**	**02 18 22.7**	**+0.7**
JMBI	**JAMBI**	**13.54**	**48**	P		**Pn**	**02 18 26.6**	**+1.9**
	9μm14μm1μm,0.8s							
PMBI	**Palembang**	**13.60**	**55**	P		**Pn**	**02 18 26.5**	**+1.0**
PMBI	**Palembang**	**13.60**	**55**			**Pn**	**02 18 25.2**	**-0.3**
PMBI	**Palembang**	**13.60**	**55**	P		**Pn**	**02 18 27.1**	**+1.6**
PMBI	**Palembang**	**13.60**	**55**	P		**Pn**	**02 18 26.2**	**+0.7**
BBJI	**Bungbulang**	**14.28**	**78**	P		**Pn**	**02 18 35.5**	**+0.6**
BBJI	**Bungbulang**	**14.28**	**78**			**Pn**	**02 18 33.0**	**-1.9**
BBJI	**Bungbulang**	**14.28**	**78**	P		**Pn**	**02 18 35.0**	**+0.1**
	4μm522nm,0.9s							
BBJI	**Bungbulang**	**14.28**	**78**	P		**Pn**	**02 18 34.7**	**-0.2**
LEM	**Lembang**	**14.42**	**75**	Pn		**Pn**	**02 18 37.4**	**+0.5**
	2.8nm,0.3s,baz=272,slow=6.7,SNR=5.2							
LEM						Sn	Sn	02 21 01.1	-17
	26nm,0.3s,baz=214,slow=18,SNR=6.6							
LEM						LR	LR	02 23 04.0	
	comp=Z,2μm,18.3s,baz=214,slow=33							
	140nm,0.6s							
RPSI	**Rantau Prapat**	**14.46**	**22**			**Pn**	**02 18 37.2**	**-0.1**
TPTI		**14.46**	**14**	P		**Pn**	**02 18 38.3**	**+1.0**
	108nm,1.4s							
PSI	**Prapat**	**14.56**	**22**	P		**Pn**	**02 18 38.7**	**-0.1**
PSI	**Prapat**	**14.56**	**22**	S		**Sn**	**02 21 15.4**	**-5.6**
PSI	**Prapat**	**14.56**	**22**	P		**Pn**	**02 18 37.2**	**-1.6**
PSI	**Prapat**	**14.56**	**22**	P		**Pn**	**02 18 38.0**	**-0.8**
	5μm3μm147nm,1.1s							
DSRI	**Dabo**	**15.01**	**47**	P		**Pn**	**02 18 44.6**	**-0.1**
	5μm6μm400nm,0.6s							
TSI	**Tuntungan**	**15.09**	**19**	P		**P**	**02 18 48.7**	**-2.5**
	88nm,0.9s							
TPI	**Tanjungpandan**	**16.10**	**61**	P		**Pn**	**02 18 59.1**	**0.0**
	4μm4μm295nm,1.3s							
MYKOM	**Kota Tinggi**	**16.18**	**40**	P		**Pn**	**02 19 00.0**	**-0.1**
MYKOM	**Kota Tinggi**	**16.18**	**40**			**Pn**	**02 18 58.6**	**-1.5**
MYKOM					IAmb	IAmb	02 19 04.0	
	comp=Z,667nm,1.8s							
MYKOM	**Kota Tinggi**	**16.18**	**40**	P		**Pn**	**02 18 59.8**	**-0.3**
	comp=Z,5μmcomp=Z,214nm,1.4s							
MYKOM	**Kota Tinggi**	**16.18**	**40**	P		**Pn**	**02 18 59.0**	**-1.1**
LHMI	**Lhok Sumawe**	**16.32**	**12**	P		**Pn**	**02 19 02.8**	**+1.0**
LHMI	**Lhok Sumawe**	**16.32**	**12**			**Pn**	**02 19 02.6**	**+0.8**
LHMI					IAmb	IAmb	02 19 09.1	
	comp=Z,363nm,1.1s							
LHMI	**Lhok Sumawe**	**16.32**	**12**	P		**P**	**02 19 03.6**	**-1.3**
	comp=Z,4μmcomp=Z,350nm,1.1s							
LHMI	**Lhok Sumawe**	**16.32**	**12**	P		**P**	**02 19 04.7**	**-0.1**
BSI	**Banda Aceh**	**16.32**	**6**	P		**Pn**	**02 19 01.9**	**0.0**
	comp=Z,120nm,1.3s							
UGM	**Wanagama**	**16.96**	**82**	P		**P**	**02 19 13.3**	**+1.3**
SMRI	**Semarang**	**17.07**	**79**	P		**P**	**02 19 15.3**	**+2.1**
SMRI	**Semarang**	**17.07**	**79**			**Pn**	**02 19 10.7**	**-0.7**
SMRI	**Semarang**	**17.07**	**79**	P		**P**	**02 19 17.4**	**+4.2**
KULM	**Kulim**	**17.50**	**24**	P		**Pn**	**02 19 16.0**	**-0.8**
KULM	**Kulim**	**17.50**	**24**			**Pn**	**02 19 15.4**	**-1.4**
KULM					IAmb	IAmb	02 19 24.0	
	comp=Z,364nm,1.3s							
KULM	**Kulim**	**17.50**	**24**	P		**Pn**	**02 19 16.5**	**-0.3**
	comp=Z,225nm,1.6s							
KULM	**Kulim**	**17.50**	**24**	P		**Pn**	**02 19 16.0**	**-0.8**
NGJI	**Ngawi**	**17.98**	**80**	P		**P**	**02 19 28.4**	**+5.1**
	comp=Z,206nm,1.2s							
SNJI	**Sawahan-Nganju**	**18.18**	**82**	P		**P**	**02 19 29.0**	**+3.2**
	comp=Z,192nm,0.6s							
JAGI	**Jajag, Banyuwa**	**20.41**	**85**	P		Pn	02 19 54.2	+2.2
JAGI	**Jajag, Banyuwa**	**20.41**	**85**			Pn	02 19 50.9	-1.1
JAGI					IAmb	IAmb	02 19 59.1	
	comp=Z,184nm,0.9s							
JAGI	**Jajag, Banyuwa**	**20.41**	**85**	P		Pn	02 19 52.2	+0.2
	comp=Z,216nm,0.9s							
JAGI	**Jajag, Banyuwa**	**20.41**	**85**	P		Pn	02 19 51.6	-0.4
H08S2	**Diego Garcia H**	**21.06**	**277**	P		**P**	**02 20 00.0**	**+3.3**
	baz=78,slow=12,SNR=24							
H08S2					T	T	02 41 57.3	
	baz=100,slow=73,SNR=3.8							
H08S3	**Diego Garcia H**	**21.07**	**277**	P		**P**	**02 19 59.9**	**+3.0**
	baz=78,slow=12,SNR=46							
H08S3					T	T	02 41 55.5	
	baz=100,slow=73,SNR=2.7							
H08S1	**Diego Garcia H**	**21.08**	**277**	P		**P**	**02 20 00.3**	**+3.3**
	baz=78,slow=12,SNR=13							
H08S1					T	T	02 41 53.1	
	baz=100,slow=73,SNR=2.7							
DGAR	**Diego Garcia**	**21.14**	**277**	*d* iP		**P**	**02 20 01.4**	**+3.5**
DGAR					pmax	pmax		
	comp=Z,802nm,1.7s							
DGAR	**Diego Garcia**	**21.14**	**277**	P		**P**	**02 20 01.0**	**+3.1**
DGAR	**Diego Garcia**	**21.14**	**277**	P		**P**	**02 20 00.9**	**+2.9**
DGAR	**Diego Garcia**	**21.14**	**277**	P		**P**	**02 20 01.6**	**+3.7**
HALK	**Hakmana**	**21.17**	**322**	P		**P**	**02 20 01.1**	**+2.8**
KHKI	**Kahang-Kahang**	**21.85**	**85**	P		**P**	**02 20 10.5**	**+5.0**
	comp=Z,88nm,0.9s							
PALK	**Pallekele**	**22.11**	**324**	LR		LR	02 27 53.9	
	comp=Z,2μm,18.2s,baz=154,slow=34							
PALK	**Pallekele**	**22.11**	**324**	P		**P**	**02 20 10.2**	**+1.9**
PALK					pmax	pmax		
	comp=Z,161nm,1.1s							
PALK					MLR	MLR		
	comp=Z,3μm,18.0s							
PALK	**Pallekele**	**22.11**	**324**	P		**P**	**02 20 09.9**	**+1.6**
PALK				P		**P**	**02 20 09.9**	**+1.6**
PALK	**Pallekele**	**22.11**	**324**			**P**	**02 20 10.2**	**+1.9**
PALK					IAmb	IAmb	02 20 19.6	
	comp=Z,161nm,1.1s							
PALK	**Pallekele**	**22.11**	**324**	P		**P**	**02 20 10.5**	**+2.2**
PALK	**Pallekele**	**22.11**	**324**	P		**P**	**02 20 10.5**	**+2.2**
PBA	**Port Blair**	**22.37**	**358**	P		**P**	**02 20 14.6**	**+3.6**
	SNR=31							
PBA	**Port Blair**	**22.37**	**358**			**P**	**02 20 13.2**	**+2.1**
PBA	**Port Blair**	**22.37**	**358**	P		**P**	**02 20 13.7**	**+2.6**
PBA	**Port Blair**	**22.37**	**358**	*e*P		**P**	**02 20 12.5**	**+1.4**
PBA				*e*S		**S**	**02 24 19.1**	**+1.3**
PBA				*i* x		x	02 29 26.6	
GIRL	**Giralia**	**22.95**	**123**	P		**P**	**02 20 16.8**	**-0.3**
	comp=Z,125nm,1.9s							
MALK	**Mahakanadarawa**	**23.11**	**325**	P		**P**	**02 20 21.2**	**+2.3**
KAAM	**Kaadhehdhoo**	**23.37**	**298**	P		**P**	**02 20 24.4**	**+2.8**
PLAI	**Plampang**	**23.91**	**87**	P		**P**	**02 20 31.5**	**+4.6**
PLAI	**Plampang**	**23.91**	**87**	P		**P**	**02 20 30.3**	**+3.4**
	comp=Z,3μmcomp=Z,202nm,1.2s							
PLAI	**Plampang**	**23.91**	**87**	P		**P**	**02 20 27.3**	**+0.3**
BKB	**Balikpapan**	**25.03**	**69**	P		**P**	**02 20 41.5**	**+4.3**
BKB	**Balikpapan**	**25.03**	**69**			**P**	**02 20 38.6**	**+1.4**
BKB	**Balikpapan**	**25.03**	**69**	P		P	02 20 43.6	+6.4
	comp=Z,5μmcomp=Z,287nm,1.2s							
PMSI	**Majene**	**26.15**	**76**	P		**P**	**02 20 51.2**	**+3.9**
	comp=Z,2μmcomp=Z,191nm,0.9s							
WSI	**Waingapu**	**26.30**	**90**	P		**P**	**02 20 53.5**	**+4.8**
	comp=Z,4μmcomp=Z,261nm,0.9s							
MMSI	**Mamuju**	**26.40**	**74**	P		**P**	**02 20 53.1**	**+3.5**
	comp=Z,2μmcomp=Z,114nm,1.0s							
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 53.2**	**+2.4**
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 49.4**	**-1.5**
KAPI				pmax	pmax			
	comp=Z,37nm,1.0s							
KAPI				MLR	MLR			
	comp=Z,1μm,18.0s							
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 53.1**	**+2.2**
KAPI				P		**P**	**02 20 53.1**	**+2.2**
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 49.4**	**-1.5**
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 53.2**	**+2.4**
KAPI	**Kapang**	**26.54**	**79**	P		**P**	**02 20 49.7**	**-1.1**
MBWA	**Marble Bar**	**27.10**	**115**	P		**P**	**02 20 55.3**	**-0.5**
MBWA	**Marble Bar**	**27.10**	**115**	P		**P**	**02 20 54.5**	**-1.3**
MBWA	**Marble Bar**	**27.10**	**115**	P		**P**	**02 20 54.4**	**-1.4**
MBWA					IAmb	IAmb	02 21 33.2	
	comp=Z,84nm,1.4s							
KKM	**Kota Kinabalu**	**28.09**	**54**	P		P	02 21 09.3	+4.4
KKM	**Kota Kinabalu**	**28.09**	**54**	P		P	02 21 09.8	+4.9
	comp=Z,1μmcomp=Z,58nm,1.4s							
MMRI	**Maumere**	**28.31**	**88**	P		P	02 21 11.6	+4.8
MMRI	**Maumere**	**28.31**	**88**	P		P	02 21 13.1	+6.3
	comp=Z,85nm,0.8s							
MEEK	**Meekatharra**	**28.34**	**127**	P		**P**	**02 21 06.1**	**-0.8**
	comp=Z,63nm,2.0s							
MYLDM	**Lahad Datu**	**29.47**	**59**	P		**P**	**02 21 18.0**	**+1.0**
MYLDM	**Lahad Datu**	**29.47**	**59**	IAmb		IAmb	02 21 34.2	
	comp=Z,42nm,0.9s							
MYLDM	**Lahad Datu**	**29.47**	**59**	P		**P**	**02 21 17.9**	**+0.8**
TOLI2	**Tolitoli**	**29.54**	**68**	P		**P**	**02 21 17.9**	**+0.2**
TOLI2	**Tolitoli**	**29.54**	**68**	P		**P**	**02 21 16.5**	**-1.1**
TOLI2	**Tolitoli**	**29.54**	**68**	P		**P**	**02 21 17.2**	**-0.5**
BATI	**Baumata**	**29.57**	**92**	LR		LR	02 32 38.2	
	comp=Z,2μm,18.7s,baz=22,slow=36							
BATI	**Baumata**	**29.57**	**92**	P		**P**	**02 21 19.3**	**+1.3**
	comp=Z,68nm,1.0s							
KDI	**Kendari**	**29.57**	**79**	P		**P**	**02 21 21.2**	**+3.2**
	comp=Z,2μmcomp=Z,51nm,0.9s							
CM31	**Chiang Mai Arr**	**29.59**	**10**	P		**P**	**02 21 20.0**	**+1.9**
	SNR=17							
CM31	**Chiang Mai Arr**	**29.59**	**10**	P		**P**	**02 21 19.2**	**+1.1**
CMAR	**Chiang Mai Arr**	**29.59**	**10**	P		**P**	**02 21 19.2**	**+1.1**
	comp=Z,16nm,0.9s,baz=202,slow=8.6,SNR=75							
CMAR				PcP		**PcP**	**02 24 23.4**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=208,slow=4.1,SNR=4.4							
CMAR				LR		LR	02 31 29.4	
	comp=Z,1μm,21.3s,baz=210,slow=33							
	comp=Z,16nm,0.9s							
CMAR	**Chiang Mai Arr**	**29.59**	**10**	P		**P**	**02 21 18.5**	**+0.4**
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 22.3**	**+1.1**
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 21.4**	**+0.3**
CHTO				pmax	pmax			
	comp=Z,28nm,1.2s							
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 21.7**	**+0.6**
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 21.4**	**+0.3**
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 22.2**	**+1.1**
CHTO	**Chiang Mai**	**29.94**	**10**	P		**P**	**02 21 22.1**	**+1.0**
SOEI	**Soe**	**30.20**	**91**	P		P	02 21 28.0	+4.3
SOEI	**Soe**	**30.20**	**91**	IAmb		IAmb	02 22 09.7	
	comp=Z,65nm,0.8s							
SOEI	**Soe**	**30.20**	**91**	P		P	02 21 27.7	+4.0
	comp=Z,1μmcomp=Z,75nm,0.9s							
SOEI	**Soe**	**30.20**	**91**	P		**P**	**02 21 24.7**	**+1.0**
H01W3	**Cape Leeuwin H**	**30.38**	**145**	T		T	02 53 09.5	
	baz=319,slow=75,SNR=25							
H01W2	**Cape Leeuwin H**	**30.39**	**145**	T		T	02 53 08.8	
	baz=319,slow=75,SNR=18							
H01W1	**Cape Leeuwin H**	**30.40**	**145**	T		T	02 53 09.8	
	baz=319,slow=75,SNR=18							
KLBR	**Kellerberrin**	**30.42**	**136**	P		**P**	**02 21 24.0**	**-1.3**
	comp=Z,94nm,0.8s							
KLBR	**Kellerberrin**	**30.42**	**136**	P		**P**	**02 21 24.6**	**-0.7**
NPW	**Naypyitaw**	**30.54**	**

comp=Z,126nm,1.2s
GUWA GUWAHATI 36.87 357 *e*P **P** **02 22 21.9 +0.5**
GUWA IAmb IAmb 02 22 24.9
comp=Z,34nm,1.0s
KMI2 Kunming 36.88 14 ⇑P **P** **02 22 23.5 +1.8**
KMI2 S **S** **02 27 59.9 -7.6**
KMI2 pmax pmax
comp=Z,110nm,1.0s
KMI2 pmax pmax
comp=Z,430nm,3.4s
KMI2 L L
comp=Z,1μm,13.0s
KMI2 L L
comp=Z,2μm,12.0s
KMI2 L L
comp=Z,2μm,16.9s
BHPL Bhopal 37.39 335 *e*P **P** **02 22 28.5 +2.5**
FORT Forrest 37.60 127 P **P** **02 22 27.2 -0.5**
comp=Z,49nm,0.7s
FORT Forrest 37.60 127 P **P** **02 22 27.3 -0.4**
FORT IAmb IAmb 02 22 43.1
comp=Z,36nm,0.8s
ALBI Allahabad 37.73 342 *e*P **P** **02 22 30.4 +1.8**
ALBI IAmb IAmb 02 22 32.7
comp=Z,69nm,0.5s
ALBI *i* x x 02 36 46.5
PZH PanZhiHua 37.96 12 P **P** **02 22 32.3 +1.5**
PZH PP **PnPn** **02 24 05.8 +7.0**
PZH S **S** **02 28 24.1 +0.3**
PZH pmax pmax
comp=Z,40nm,1.1s
PZH pmax pmax
comp=Z,300nm,3.8s
PZH L L
comp=Z,1μm,15.1s
PZH L L
comp=Z,2μm,15.9s
PZH L L
comp=Z,1μm,14.1s
KDU Kakadu 38.09 97 P **P** **02 22 33.8 +1.9**
comp=Z,7.5nm,1.5s
GUNA GUNA 38.69 336 *e*P **P** **02 22 38.4 +1.6**
GUNA IAmb IAmb 02 22 39.9
comp=Z,36nm,0.4s
SIJI Sorong 38.72 78 P **P** **02 22 38.9 +1.6**
comp=Z,38nm,1.0s
SZP Santa 38.74 44 P **P** **02 22 39.9 +2.6**
EVN Everest 39.13 350 P **P** **02 22 42.0 +0.8**
GYA Guiyang 39.20 19 ⇑P **P** **02 22 42.9 +1.7**
GYA S **S** **02 28 43.3 +0.8**
GYA pmax pmax
comp=Z,81nm,1.6s
GZH2 Guangzhou 39.51 30 P **P** **02 22 46.1 +2.4**
GZH2 S **S** **02 28 49.1 +2.2**
GZH2 pmax pmax
comp=Z,760nm,4.2s
GZH2 L L
comp=Z,2μm,15.9s
GZH2 L L
comp=Z,2μm,13.3s
GZH2 L L
comp=Z,4μm,17.1s
UDPR Udaipur 40.20 331 *e*P **P** **02 22 52.1 +2.5**
UDPR IAmb IAmb 02 22 53.5
comp=Z,43nm,1.1s
WR1 Warramunga Arr 40.22 108 P **P** **02 22 48.8 -1.1**
comp=Z,29nm,0.8s
WRA Warramunga Arr 40.22 108 P **P** **02 22 48.7 -1.2**
comp=Z,14nm,0.8s,baz=278,slow=9.8,SNR=58
WRA PcP **PcP** **02 24 53.8 -0.3**
comp=Z,7.5nm,1.0s,baz=284,slow=2.5,SNR=3.4
WRA LR LR 02 41 01.6
comp=Z,511nm,18.0s,baz=278,slow=39
comp=Z,14nm,0.8s
WRA Warramunga Arr 40.22 108 P **P** **02 22 48.8 -1.1**
WRA 02 24 53.8
WRA pmax pmax
comp=Z,2.0nm,1.0s
WRA Warramunga Arr 40.22 108 P **P** **02 22 48.8 -1.1**
WRAB Tennant Creek 40.23 108 *d* iP **P** **02 22 48.8 -1.1**
WRAB pmax pmax
comp=Z,28nm,0.7s
WRAB Tennant Creek 40.23 108 P **P** **02 22 48.8 -1.1**
WRAB Tennant Creek 40.23 108 P **P** **02 22 49.5 -0.4**
WB2 Warramunga Arr 40.23 108 P **P** **02 22 48.9 -1.0**
comp=Z,30nm,0.8s
WB9 Warramunga Arr 40.25 108 P **P** **02 22 49.0 -1.0**
comp=Z,33nm,0.6s
WR8 Warramunga Arr 40.38 108 P **P** **02 22 50.5 -0.6**
LSA Lhasa 40.38 357 IAmb IAmb 02 22 58.1
comp=Z,122nm,0.9s
ASAR Alice Springs 40.41 114 P **P** **02 22 50.4 -1.0**
comp=Z,12nm,0.7s,baz=288,slow=8.0,SNR=88
ASAR PcP **PcP** **02 24 54.5 -0.2**
comp=Z,7.2nm,0.9s,baz=287,slow=5.5,SNR=4.2
ASAR LR LR 02 37 46.3
comp=Z,385nm,21.3s,baz=288,slow=34
comp=Z,12nm,0.7s
AS31 Alice Springs 40.41 114 P **P** **02 22 50.4 -1.0**
comp=Z,13nm,0.7s
AS31 Alice Springs 40.41 114 P **P** **02 22 50.3 -1.0**
WR0 Warramunga Arr 40.41 108 P **P** **02 22 50.2 -1.2**
comp=Z,45nm,1.1s
AS09 Alice Springs 40.45 114 P **P** **02 22 50.5 -1.2**
comp=Z,42nm,0.8s
AS17 Alice Springs 40.49 114 P **P** **02 22 51.0 -1.0**
comp=Z,32nm,0.8s
AJM Ajmer 41.38 334 *e*P **P** **02 23 01.5 +2.3**
AJM IAmb IAmb 02 23 02.6
comp=Z,21nm,1.0s
SONA Sohna 42.02 338 *e*P **P** **02 23 06.4 +1.9**
AYAN Aya Nagar 42.22 338 *e*P **P** **02 23 07.7 +1.7**
AYAN IAmb IAmb 02 23 10.0
comp=Z,26nm,0.9s
NPLP NPLP New Delhi 42.34 338 *e*P **P** **02 23 08.6 +1.6**
NPLP *i* x x 02 23 19.7
NDI New Delhi 42.37 338 *e*P **P** **02 23 08.4 +1.1**
NDI IAmb IAmb 02 23 11.8
comp=Z,41nm,0.9s
NDI *i* x x 02 29 28.9
CD2 Chengdu 42.65 13 P **P** **02 23 10.1 +0.5**
CD2 sP pwP 02 23 15.4 -0.3
CD2 S **S** **02 29 33.3 -0.3**
CD2 pmax pmax
comp=Z,240nm,0.9s
CD2 pmax pmax
comp=Z,380nm,4.0s
CD2 L L
comp=Z,2μm,14.2s
CD2 L L
comp=Z,5μm,14.0s
CD2 L L
comp=Z,2μm,12.0s
TPUB Ta-pu 43.04 38 P P 02 23 17.2 +4.4
TPUB Ta-pu 43.04 38 IAmb IAmb 02 23 18.5
comp=Z,65nm,1.1s
TPUB Ta-pu 43.04 38 P **P** **02 23 14.6 +1.8**
CNSH ChangSha 43.08 25 P **P** **02 23 14.3 +1.3**
CNSH S **S** **02 29 41.6 +1.7**
CNSH pmax pmax
comp=Z,32nm,1.3s
CNSH L L
comp=Z,1μm,17.3s
CNSH L L
comp=Z,2μm,15.0s
CNSH L L
comp=Z,2μm,15.0s
QZH2 Quanzhou 43.14 34 ⇓*i*P **P** **02 23 17.6 +4.1**
QZH2 S **S** **02 29 41.8 +1.0**
QZH2 pmax pmax
comp=Z,69nm,0.8s
QZH2 pmax pmax
comp=Z,360nm,4.7s
QZH2 L L
comp=Z,2μm,19.6s
QZH2 L L
comp=Z,1μm,15.8s
QZH2 L L
comp=Z,2μm,14.1s
BAKI Biak 43.30 80 P P 02 23 20.6 +5.5
comp=Z,51nm,0.7s
YULB Yu-li 43.51 38 P **P** **02 23 19.6 +3.0**
YULB Yu-li 43.51 38 P **P** **02 23 16.6 0.0**
YULB Yu-li 43.51 38 P **P** **02 23 17.7 +1.1**
JASL Jaisalmer 43.53 330 *e*P **P** **02 23 19.6 +2.8**
JASL *i* x x 02 25 05.5

SSLB Suanglung 43.60 38 P **P** **02 23 21.2 +3.9**
SSLB Suanglung 43.60 38 P **P** **02 23 15.2 -2.2**
SSLB IAmb IAmb 02 23 30.5
comp=Z,182nm,1.7s
SSLB Suanglung 43.60 38 P **P** **02 23 16.3 -1.0**
ENH Enshi 43.65 20 IAmb IAmb 02 23 30.2
comp=Z,116nm,1.3s
UTK UTTARKASHI 43.83 341 *i* x x 02 40 39.5
NACB Ninganchiao 44.27 38 P **P** **02 23 26.3 +3.6**
NACB Ninganchiao 44.27 38 P **P** **02 23 21.3 -1.4**
NACB IAmb IAmb 02 23 43.3
comp=Z,62nm,1.2s
NACB Ninganchiao 44.27 38 P **P** **02 23 25.9 +3.2**
YHNB Yeheng 44.51 37 P **P** **02 23 28.1 +3.4**
KLP Kalpa 44.63 341 *i* x x 02 41 07.2
QIS Mount Isa 45.20 108 P **P** **02 23 29.8 -0.5**
comp=Z,19nm,1.3s
QIS Mount Isa 45.20 108 P **P** **02 23 31.4 +1.0**
ABPO Ambohimpanom 45.42 254 P **P** **02 23 33.0 +0.8**
ABPO pmax pmax
comp=Z,143nm,1.8s
ABPO Ambohimpanom 45.42 254 P **P** **02 23 33.0 +0.8**
ABPO IAmb IAmb 02 23 34.3
comp=Z,143nm,1.8s
ABPO Ambohimpanom 45.42 254 P **P** **02 23 33.5 +1.2**
HNLY HANLEY 45.57 343 *e*P **P** **02 23 34.2 +0.6**
HNLY IAmb IAmb 02 23 37.2
comp=Z,57nm,0.8s
HNLY *i* x x 02 25 30.2
WHN Wuhan 45.74 25 P **P** **02 23 34.3 +0.1**
WHN PP **PP** **02 25 26.8 +5.4**
WHN S **S** **02 30 21.9 +3.4**
WHN pmax pmax
comp=Z,200nm,1.2s
WHN pmax pmax
comp=Z,920nm,4.8s
WHN L L
comp=Z,4μm,15.3s
WHN L L
comp=Z,6μm,16.1s
WHN L L
comp=Z,5μm,16.6s
VOI Vohitsoka 46.06 250 P **P** **02 23 36.5 -0.7**
VOI Vohitsoka 46.06 250 P **P** **02 23 37.3 +0.1**
VOI Vohitsoka 46.06 250 P **P** **02 23 37.9 +0.6**
FOMA Nahampoana Res 46.29 246 P **P** **02 23 39.4 +0.6**
TSSA Tissa 46.52 340 *e*P **P** **02 23 41.2 +0.6**
TSSA IAmb IAmb 02 23 43.5
comp=Z,108nm,1.0s
TSSA *i* x x 02 23 48.8
TSSA *ex* x x 02 23 58.6
GOMU GeErMu 46.81 1 P **P** **02 23 43.3 +0.3**
GOMU pP pwP 02 23 46.9 -2.3
GOMU S S 02 30 23.5 -11
GOMU pmax pmax
comp=Z,46nm,1.2s
GOMU L L
comp=Z,400nm,14.5s
GOMU L L
comp=Z,350nm,13.3s
AUJCS Jamestown Cent 46.83 126 P P 02 23 49.3 +6.3
DQM DQM 46.85 311 P **P** **02 23 44.2 +1.0**
JLN Jalan Bani Buh 46.90 314 P **P** **02 23 43.9 +0.4**
GENI Genyem 46.92 83 P P 02 23 48.2 +4.3
GENI Genyem 46.92 83 P P 02 23 48.0 +4.1
comp=Z,89nm,1.0s
GENI Genyem 46.92 83 P **P** **02 23 47.2 +3.2**
XAN Xi'an 46.96 17 P **P** **02 23 43.8 -0.1**
XAN pP pwP 02 23 48.1 -1.9
XAN PP **PP** **02 25 37.4 +3.0**
XAN S **S** **02 30 34.3 -1.8**
XAN sS pS 02 30 42.8 +7.9
XAN pmax pmax
comp=Z,69nm,1.0s
XAN pmax pmax
comp=Z,690nm,3.7s
XAN L L
comp=Z,2μm,13.1s
XAN L L
comp=Z,1μm,11.7s
XAN L L
comp=Z,2μm,14.4s
HTT Hallett 47.15 126 P **P** **02 23 46.9 +1.4**
comp=Z,12nm,1.2s
MHTO MHTO 47.19 312 P **P** **02 23 46.2 +0.4**
INKA Innaminka 47.26 118 P **P** **02 23 44.5 -1.8**
WBK Wadi Bani Khal 47.50 315 P **P** **02 23 48.9 +0.6**
LZDM Lanzhou Array 47.52 11 P **P** **02 23 48.2 -0.3**
comp=Z,28nm,0.8s,baz=188,slow=9.0,SNR=16
LZDM LR LR 02 45 09.9
comp=Z,674nm,19.2s,baz=220,slow=38
comp=Z,28nm,0.8s
DMTO DMTO 47.56 306 P **P** **02 23 50.0 +1.2**
LZH Lanzhou 47.67 11 P **P** **02 23 49.8 +0.2**
LZH pP pwP 02 23 54.3 -1.4
LZH S **S** **02 30 43.9 -2.5**
LZH pmax pmax
comp=Z,81nm,1.2s
LZH L L
comp=Z,1μm,16.5s
LZH L L
comp=Z,940nm,14.1s
LZH L L
comp=Z,1μm,17.3s
WSAR Wadi Sarin 48.15 315 P **P** **02 23 53.4 +0.1**
NIL Nilore 48.30 337 P **P** **02 23 54.7 +0.4**
NIL pmax pmax
comp=Z,72nm,0.9s
NIL MLR MLR
comp=Z,600nm,19.0s
NIL Nilore 48.30 337 P **P** **02 23 55.0 +0.7**
NIL Nilore 48.30 337 P **P** **02 23 54.7 +0.4**
NIL Nilore 48.30 337 P **P** **02 23 54.8 +0.5**
SMDO Samad 48.44 314 P **P** **02 23 54.6 -1.0**
COEN Coen 48.46 99 P P 02 24 00.0 +4.1
comp=Z,25nm,1.0s
COEN Coen 48.46 99 P **P** **02 23 56.9 +1.0**
COEN IAmb IAmb 02 24 00.6
comp=Z,27nm,1.1s
LYN LuoYang 48.57 21 ⇓P P 02 24 01.3 +5.0
LYN sP pwP 02 24 08.5 +6.0
LYN PP **PP** **02 25 53.8 +4.4**
LYN S **S** **02 30 59.3 +0.4**
LYN sS pS 02 31 07.1 +9.4
LYN pmax pmax
comp=Z,130nm,1.0s
LYN pmax pmax
comp=Z,660nm,5.9s
LYN L L
comp=Z,2μm,13.7s
LYN L L
comp=Z,2μm,14.7s
LYN L L
comp=Z,2μm,14.4s
WHFO Wadi Hawf 48.61 306 P **P** **02 23 56.9 0.0**
BIDO Bidbid 48.68 315 P **P** **02 23 58.4 +1.0**
SNR=6.7
BSY Bisya 48.84 313 P **P** **02 23 59.6 +0.9**
STKA Stephens Creek 48.89 123 P **P** **02 23 58.8 -0.2**
comp=Z,149nm,0.7s
STKA Stephens Creek 48.89 123 P **P** **02 23 58.3 -0.7**
comp=Z,18nm,0.6s,baz=289,slow=7.8,SNR=12
STKA LR LR 02 44 55.5
comp=Z,889nm,18.5s,baz=278,slow=36
comp=Z,18nm,0.6s
STKA Stephens Creek 48.89 123 *d* iP **P** **02 23 58.0 -1.0**
STKA *i* *PP **pwP** **02 24 02.8 -2.4**
STKA Stephens Creek 48.89 123 P **P** **02 23 58.6 -0.3**
NJ2 Nanjing 49.03 29 ⇓P P 02 24 04.3 +4.4
NJ2 pP pwP 02 24 06.6 +0.6
NJ2 sP pP 02 24 12.3 +13
NJ2 S **S** **02 31 09.3 +3.9**
NJ2 pmax pmax
comp=Z,120nm,0.9s
NJ2 pmax pmax
comp=Z,2μm,8.5s
NJ2 L L
comp=Z,3μm,19.0s
NJ2 L L
comp=Z,4μm,18.9s
NJ2 L L
comp=Z,4μm,23.7s
HOQ Hoqain 49.29 314 P **P** **02 24 03.1 +1.0**
SNR=6.1
SSE Sheshan 49.40 32 P **P** **02 24 02.9 +0.1**

SSE S **S** **02 31 11.9 +1.2**
SSE pmax pmax
comp=Z,17nm,0.7s
SSE pmax pmax
comp=Z,240nm,4.7s
SSE L L
comp=Z,870nm,19.8s
SSE L L
comp=Z,740nm,19.6s
MTSU Mount Surprise 49.52 105 P **P** **02 24 04.8 +0.8**
comp=Z,26nm,0.8s
MTSU Mount Surprise 49.52 105 P **P** **02 24 04.6 +0.6**
ARQ Araqi 49.70 313 P **P** **02 24 06.1 +0.8**
H04N2 CROZET ISLANDS 49.95 217 T T 03 17 52.9
baz=59,slow=74,SNR=2.9
H04N1 CROZET ISLANDS 49.96 217 T T 03 18 05.6
baz=59,slow=74,SNR=3.5
H04N3 CROZET ISLANDS 49.96 217 T T 03 18 03.0
baz=59,slow=74,SNR=3.0
QLP Quilpie 50.13 116 P **P** **02 24 08.6 +0.1**
comp=Z,99nm,1.9s
QLP Quilpie 50.13 116 P **P** **02 24 08.8 +0.3**
SOHO SOHO 50.19 314 P **P** **02 24 09.4 +0.5**
H04S1 CROZET ISLANDS 50.23 216 T T 03 18 35.0
baz=68
H04S3 CROZET ISLANDS 50.25 216 T T 03 18 28.8
baz=68
H04S2 CROZET ISLANDS 50.25 216 T T 03 18 42.8
baz=68
JOW Kunigami 50.37 41 LR LR 02 43 53.2
comp=Z,282nm,22.0s,baz=173,slow=34
GTA2 Gaotai 50.40 6 P **P** **02 24 10.8 +0.4**
GTA2 pP pwP 02 24 15.0 -1.5
GTA2 S **S** **02 31 23.8 -0.9**
GTA2 pmax pmax
comp=Z,57nm,1.0s
GTA2 pmax pmax
comp=Z,320nm,5.5s
GTA2 L L
comp=Z,630nm,15.5s
GTA2 L L
comp=Z,960nm,15.5s
GTA2 L L
comp=Z,730nm,13.4s
ALNE Al Ain 50.70 314 P **P** **02 24 14.5 +1.7**
KBL Kabul 50.79 334 P **P** **02 24 13.4 -0.1**
KBL pmax pmax
comp=Z,38nm,1.2s
KBL Kabul 50.79 334 P **P** **02 24 13.7 +0.1**
SNR=15
KBL Kabul 50.79 334 P **P** **02 24 13.4 -0.1**
KBL IAmb IAmb 02 24 15.3
comp=Z,37nm,1.1s
KBL Kabul 50.79 334 P **P** **02 24 14.1 +0.6**
ASHO Ashiyiah 50.88 314 P **P** **02 24 14.4 +0.2**
HATD Hatta, Dubai 50.91 315 P **P** **02 24 15.0 +0.6**
HATD P **P** **02 24 15.0 +0.6**
UOSS Minazif 50.94 315 P **P** **02 24 15.6 +1.1**
MASF Masafi 51.24 315 P **P** **02 24 17.5 +0.6**
NAZ Nazwa, Dubai 51.35 314 P **P** **02 24 17.9 +0.3**
ASUD Al Ashush, Dub 51.35 314 P **P** **02 24 18.5 +0.9**
CTAO Charters Tower 51.40 107 P **P** **02 24 18.5 +0.3**
TIY Taiyuan 51.43 19 *e*P **P** **02 24 22.4 +4.3**
TIY S **S** **02 31 36.1 -2.8**
TIY pmax pmax
comp=Z,290nm,4.7s
TIY L L
comp=Z,2μm,15.1s
TIY L L
comp=Z,980nm,19.2s
TIY L L
comp=Z,2μm,15.8s
MZR Muzera 51.71 311 P **P** **02 24 22.4 +2.0**
TIA Tai'an 51.80 24 P **P** **02 24 20.4 -0.4**
TIA pP **pwP** **02 24 24.8 -2.2**
TIA sP pP 02 24 31.1 +11
TIA SS **SS** **02 35 20.1 -0.7**
TIA pmax pmax
comp=Z,22nm,1.0s
TIA L L
comp=Z,920nm,17.2s
TIA L L
comp=Z,940nm,13.2s
TIA L L
comp=Z,1μm,15.2s
HNS HongShan 51.92 21 ⇑P **P** **02 24 22.3 +0.6**
HNS PP **PP** **02 26 23.8 +4.0**
HNS S **S** **02 31 46.8 +1.3**
HNS pmax pmax
comp=Z,170nm,1.1s
HNS L L
comp=Z,930nm,14.3s
HNS L L
comp=Z,860nm,15.6s
HNS L L
comp=Z,1μm,15.9s
CMSA Cobar Meteorol 52.22 122 P **P** **02 24 23.4 -0.8**
comp=Z,48nm,0.8s
CMSA Cobar Meteorol 52.22 122 P **P** **02 24 23.7 -0.5**
MANEM Manem 52.34 338 IAmb IAmb 02 24 59.8
comp=Z,100nm,1.2s
KSH2 Kashi 52.49 342 P **P** **02 24 26.5 +0.4**
KSH2 pP pwP 02 24 31.3 -1.0
KSH2 sP pP 02 24 37.6 +13
KSH2 S **S** **02 31 47.8 -5.8**
KSH2 pmax pmax
comp=Z,62nm,1.3s
KSH2 L L
comp=Z,900nm,24.4s
KSH2 L L
comp=Z,1μm,16.5s
KSH2 L L
comp=Z,1μm,19.6s
PMG Port Moresby 52.70 94 P P 02 24 32.7 +4.8
WUS Wushi 53.46 347 IAmb IAmb 02 24 38.8
comp=Z,95nm,1.1s
BTO2 Baotou 53.50 15 *e*P **P** **02 24 34.0 +0.5**
BTO2 pP **pwP** **02 24 38.3 -1.3**
BTO2 S **S** **02 32 07.8 +0.6**
BTO2 SS **SS** **02 35 44.4 -3.3**
BTO2 pmax pmax
comp=Z,96nm,1.1s
BTO2 pmax pmax
comp=Z,1μm,4.1s
BTO2 L L
comp=Z,2μm,13.5s
BTO2 L L
comp=Z,3μm,14.5s
BTO2 L L
comp=Z,3μm,15.5s
SHAA Shahritus 53.75 335 IAmb IAmb 02 24 37.0
comp=Z,351nm,1.2s
HRA Herat 53.93 328 IAmb IAmb 02 24 38.7
comp=Z,54nm,1.2s
HHC Hu-ho-hao-te 54.05 17 *e*P **P** **02 24 38.8 +1.3**
HHC pP pwP 02 24 43.0 -0.7
HHC S **S** **02 32 13.4 -1.3**
HHC sS pS 02 32 20.5 +7.1
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,450nm,3.7s
HHC L L
comp=Z,1μm,16.1s
HHC L L
comp=Z,1μm,16.7s
HHC L L
comp=Z,1μm,16.1s
GAR Garm 54.13 338 P **P** **02 24 37.9 -0.2**
CHGR Chuyangaron 54.27 336 *d* iP **P** **02 24 38.8 -0.3**
CHGR pmax pmax
comp=Z,136nm,1.2s
TARG Taragay, Kyrgy 54.30 345 IAmb IAmb 02 24 42.0
comp=Z,95nm,1.2s
TARG Taragay, Kyrgy 54.30 345 P **P** **02 24 40.4 +0.8**
NRN Naryn 54.49 344 IAmb IAmb 02 24 43.2
comp=Z,66nm,1.3s
WMQ Urumqi 54.67 355 ⇓P **P** **02 24 42.5 +0.6**
WMQ pP pwP 02 24 47.0 -1.0
WMQ sP pP 02 24 51.0 +10
WMQ S **S** **02 32 21.8 -1.0**
WMQ pmax pmax
comp=Z,74nm,1.3s
WMQ pmax pmax
comp=Z,310nm,3.7s

WMQ L L
comp=Z,530nm,17.5s
WMQ L L
comp=Z,710nm,16.1s
WMQ L L
comp=Z,470nm,17.5s
BJI2 Beijing 54.77 21 P **P** **02 24 43.3 +0.7**
BJI2 S **S** **02 32 26.0 +1.8**
BJI2 pmax pmax
comp=Z,18nm,0.9s
BJI2 L L
comp=Z,410nm,14.8s
BJI2 L L
comp=Z,420nm,15.0s
BJI2 L L
comp=Z,550nm,14.1s
AUDCS Dubbo College 54.81 122 P P 02 24 49.4 +6.2
JSU Suzuyama 54.97 39 P **P** **02 24 47.7 +3.5**
JSU Suzuyama 54.97 39 IAmb IAmb 02 24 48.8
comp=Z,81nm,1.0s
ATD Arta Tunnel 55.10 292 LR LR 02 44 50.8
comp=Z,7.8nm,19.1s,baz=109,slow=32
SHLS Shalkode 55.27 347*d iP* **P** **02 24 46.4 +0.1**
SHLS *eS* **S** **02 32 29.6 -1.4**
SHLS pmax pmax
comp=Z,87nm,1.6s
SHLS Shalkode 55.27 347⇓ *iP* **P** **02 24 46.5 +0.1**
comp=Z,87nm,1.6s
SHLS *eS* **S** **02 32 29.7 -1.4**
UZB Uzynbulak 55.36 347*d iP* **P** **02 24 47.5 +0.5**
UZB *eS* **S** **02 32 31.9 -0.4**
UZB pmax pmax
comp=Z,36nm,1.2s
UZB Uzynbulak 55.36 347⇓ *iP* **P** **02 24 47.6 +0.5**
comp=Z,36nm,1.2s
UZB *eS* **S** **02 32 31.9 -0.4**
SATY Saty 55.41 347*d iP* **P** **02 24 48.1 +0.7**
SATY *eS* **S** **02 32 32.9 -0.1**
SATY pmax pmax
comp=Z,59nm,1.0s
SATY Saty 55.41 347⇓ *iP* **P** **02 24 48.1 +0.7**
comp=Z,59nm,1.0s
SATY *eS* **S** **02 32 32.9 -0.1**
PDGK Podgornoye 55.43 348 P **P** **02 24 46.8 -0.7**
UCH Uchtor 55.64 343 P **P** **02 24 50.4 +0.9**
SNR=26
CAN Canberra 55.69 125 P **P** **02 24 49.6 +0.1**
comp=Z,24nm,1.9s
KPKS Kokpek 55.74 347 *eP* **P** **02 24 50.1 +0.5**
KPKS *eS* **S** **02 32 36.8 -0.4**
KPKS Kokpek 55.74 347 *eP* **P** **02 24 50.2 +0.5**
KPKS *eS* **S** **02 32 36.9 -0.4**
TNSS Tian-Shan 55.74 345 *eP* **P** **02 24 50.3 +0.4**
TNSS Tian-Shan 55.74 345 *eP* **P** **02 24 50.5 +0.4**
KIBK Kibwezi 55.74 275 P **P** **02 24 51.7 +1.5**
KIBK Kibwezi 55.74 275 P **P** **02 24 51.8 +1.5**
MDOK Medeo 55.84 345 *eP* **P** **02 24 51.1 +0.7**
MDOK *eS* **S** **02 32 38.5 -0.1**
MDOK Medeo 55.84 345 *eP* **P** **02 24 51.2 +0.7**
MDOK *eS* **S** **02 32 38.6 -0.1**
AAA Alma-Ata 55.91 345 *eP* **P** **02 24 51.6 +0.7**
AAA pmax pmax
comp=Z,60nm,1.0s
AAA Alma-Ata 55.91 345 *eP* **P** **02 24 51.6 +0.7**
comp=Z,60nm,1.0s
KBK Karagaybulak 55.91 343 P **P** **02 24 52.4 +1.4**
SNR=17
DL2 Dalian 55.98 26 P **P** **02 24 52.1 +0.8**
DL2 S **S** **02 32 41.5 +1.2**
DL2 pmax pmax
comp=Z,120nm,1.1s
DL2 pmax pmax
comp=Z,770nm,3.8s
DL2 L L
comp=Z,1μm,15.9s
DL2 L L
comp=Z,1μm,17.6s
DL2 L L
comp=Z,1μm,16.6s
TKM2 Tokmak 2 55.98 344 P **P** **02 24 52.5 +0.9**
SNR=67
AAK Ala-Archa 56.03 343 LR LR 02 49 45.7
comp=Z,565nm,18.9s,baz=167,slow=37
AAK Ala-Archa 56.03 343 P **P** **02 24 53.0 +1.2**
SNR=14
AAK Ala-Archa 56.03 343*d iP* **P** **02 24 53.0 +1.2**
AAK pmax pmax
comp=Z,54nm,1.3s
AAK Ala-Archa 56.03 343 P **P** **02 24 52.9 +1.1**
AAK Ala-Archa 56.03 343 P **P** **02 24 52.8 +1.1**
AAK IAmb IAmb 02 24 54.5
comp=Z,53nm,1.2s
EIDS Eidsvold 56.13 113 P **P** **02 24 52.4 -0.4**
comp=Z,22nm,2.2s
FRU1 Bishkek 56.15 343 IAmb IAmb 02 24 58.9
comp=Z,97nm,1.4s
EKS2 Erkin-Say 56.26 343 P **P** **02 24 54.8 +1.4**
SNR=22
CHMS Chumysh 56.29 343 P **P** **02 24 54.2 +0.7**
SNR=31
JNU Nakatsue 56.34 38 LR LR 02 48 48.2
comp=Z,562nm,19.7s,baz=235,slow=36
CASY Casey 56.55 172 P **P** **02 24 54.6 -0.4**
CASY IAmb IAmb 02 24 55.9
comp=Z,47nm,1.4s
USP Ospenovka 56.60 343 P **P** **02 24 56.5 +0.7**
SNR=69
TJN Taejon 56.73 32 P **P** **02 25 00.8 +4.1**
TJN Taejon 56.73 32 *i P* **P** **02 24 55.8 -0.9**
SGDS Sogindy 56.74 344⇓ *iP* **P** **02 24 57.7 +0.9**
comp=Z,44nm,1.5s
SGDS *eS* **S** **02 32 50.7 +0.2**
KMBO Kilima Mbogo 56.77 276 P **P** **02 24 58.8 +1.0**
baz=134,slow=7.8
KMBO Kilima Mbogo 56.77 276*c iP* **P** **02 24 59.3 +1.5**
ARMA Armidale 57.09 119 P **P** **02 25 02.0 +2.4**
comp=Z,16nm,1.7s
ARMA Armidale 57.09 119 P **P** **02 25 02.1 +2.4**
DZA Taraz 57.23 341 *eP* **P** **02 25 00.7 +0.5**
DZA Taraz 57.23 341 *eP* **P** **02 25 00.7 +0.5**
TDK Taldyqorghan 57.26 347 *eP* **P** **02 25 00.5 +0.2**
TDK pmax pmax
comp=Z,69nm,1.3s
TDK Taldyqorghan 57.26 347 *eP* **P** **02 25 00.6 +0.2**
comp=Z,68nm,1.3s
CHM Chimkent 57.30 339 *eP* **P** **02 25 01.6 +0.9**
CHM Chimkent 57.30 339 *eP* **P** **02 25 01.6 +0.9**
KK31 Karatay Array 57.68 340 *i P* **P** **02 25 03.2 -0.2**
KK31 Karatay Array 57.68 340 IAmb IAmb 02 25 05.4
comp=Z,77nm,1.2s
KKAR Karatay Array 57.68 340 P **P** **02 25 03.5 +0.1**
KKAR Karatay Array 57.68 340 P **P** **02 25 03.5 +0.1**
KSAR Wonju Array Be 57.81 32 P **P** **02 25 03.8 -0.5**
KSAR Wonju Array Be 57.81 32 P **P** **02 25 03.8 -0.5**
KSRS Korea Array 57.84 32 P **P** **02 25 04.2 -0.4**
comp=Z,23nm,1.1s,baz=223,slow=7.3,SNR=36
KSRS LR LR 02 51 10.2
comp=Z,644nm,18.5s,baz=220,slow=37
comp=Z,23nm,1.1s
KS19 Wonju Array Si 57.84 32 IAmb IAmb 02 25 09.8
comp=Z,52nm,1.0s
FURI Furi 58.05 288 IAMs_20 IAMs_20 02 43 40.8
comp=Z,816nm,19.0s
RAYN Ar Rayn 58.12 306 P **P** **02 25 06.9 0.0**
RAYN Ar Rayn 58.12 306 P **P** **02 25 06.9 0.0**
RAYN Ar Rayn 58.12 306 P **P** **02 25 06.4 -0.5**
XLT XiLinHaoTe 58.20 19 *eP* **P** **02 25 07.6 +0.5**
XLT pP pwP 02 25 12.0 -1.3
XLT S **S** **02 33 07.4 -2.3**
XLT sS pS 02 33 18.8 +10
XLT pmax pmax
comp=Z,13nm,0.9s
XLT pmax pmax
comp=Z,310nm,3.6s
XLT L L
comp=Z,83nm,13.4s
XLT L L
comp=Z,570nm,13.3s
XLT L L
comp=Z,940nm,14.2s
MK31 Makanchi Array 58.26 351*d iP* **P** **02 25 06.7 -0.7**
MKAR Makanchi Array 58.26 351 P **P** **02 25 06.8 -0.7**
comp=Z,18nm,1.1s,baz=159,slow=7.3,SNR=50
MKAR LR LR 02 50 50.0
comp=Z,555nm,20.0s,baz=161,slow=37
comp=Z,18nm,1.1s
MAKZ Makanchi 58.33 351 P **P** **02 25 07.4 -0.5**
MAKZ pmax pmax
comp=Z,27nm,1.1s
MAKZ MLR MLR
comp=Z,800nm,20.0s
MAKZ Makanchi 58.33 351 P **P** **02 25 07.3 -0.5**
MAKZ IAmb IAmb 02 25 13.2
comp=Z,27nm,1.1s
MAKZ IAMs_20 IAMs_20 02 50 28.7
comp=Z,802nm,20.0s
BTLS Baital 58.37 344 *eP* **P** **02 25 08.8 +0.7**
BTLS Baital 58.37 344 *eP* **P** **02 25 08.9 +0.8**
ZSN Zaisan 58.55 353*d iP* **P** **02 25 09.9 +0.5**
ZSN Zaisan 58.55 353⇓ *iP* **P** **02 25 10.0 +0.5**
JMN Monobe 58.59 39 P **P** **02 25 13.8 +3.8**
JMN Monobe 58.59 39 IAmb IAmb 02 25 17.1
comp=Z,69nm,1.1s
SNY Shenyang 59.23 26 P **P** **02 25 14.3 +0.2**
SNY S **S** **02 33 20.8 -2.1**
SNY pmax pmax
comp=Z,13nm,0.6s
SNY L L
comp=Z,990nm,18.3s
SNY L L
comp=Z,800nm,16.9s
SNY L L
comp=Z,1μm,16.7s
SONM Songino Array 59.52 10 P **P** **02 25 16.1 -0.2**
comp=Z,22nm,0.9s,baz=194,slow=8.2,SNR=66
SONM LR LR 02 50 44.0
comp=Z,628nm,22.0s,baz=190,slow=36
comp=Z,22nm,0.9s
SONM Songino Array 59.52 10 P **P** **02 25 16.1 -0.2**
SONM IAmb IAmb 02 25 21.6
comp=Z,52nm,1.0s
LODK Lodwar 59.65 280 P **P** **02 25 19.6 +1.8**
LODK Lodwar 59.65 280 P **P** **02 25 19.7 +1.9**
ULN Ulaanbaatar 59.66 10*c iP* **P** **02 25 17.1 -0.2**
ULN *i* *PP **pwP** **02 25 21.1 -2.3**
ULN Ulaanbaatar 59.66 10 P **P** **02 25 16.3 -0.9**
ULN Ulaanbaatar 59.66 10 P **P** **02 25 16.9 -0.3**
ULN IAmb IAmb 02 25 22.4
comp=Z,39nm,1.1s
ULN Ulaanbaatar 59.66 10 P **P** **02 25 17.2 -0.1**
comp=Z,2μmcomp=Z,148nm,1.2s
POGA Pongola 60.18 245 P **P** **02 25 22.2 +1.0**
POGA Pongola 60.18 245 P **P** **02 25 22.1 +1.0**
MAW Mawson 60.24 193 P **P** **02 25 20.3 -0.5**
comp=Z,9.2nm,1.8s
MAW Mawson 60.24 193 P **P** **02 25 20.7 -0.1**
comp=Z,24nm,0.8s,baz=32,slow=6.9,SNR=56
MAW LR LR 02 45 42.4
comp=Z,301nm,21.2s,baz=34,slow=30
MAW PKP2bc 02 54 55.5
comp=Z,5.6nm,1.1s,baz=6.2,slow=4.3,SNR=4.6
comp=Z,24nm,0.8s
MAW Mawson 60.24 193 P **P** **02 25 21.2 +0.4**
MAW pmax pmax
comp=Z,6.0nm,0.8s
MAW Mawson 60.24 193 P **P** **02 25 21.1 +0.4**
JCJ Chichijima 60.36 50 LR LR 02 48 34.4
comp=Z,104nm,21.4s,baz=234,slow=33
DGZ Jazzator, Alta 60.53 355*d iP* **P** **02 25 23.3 +0.1**
DGZ pmax pmax
comp=Z,32nm,1.2s
KNGR Kungurtug, Tuv 61.29 3*d iP* **P** **02 25 28.5 +0.2**
KNGR pmax pmax
comp=Z,23nm,1.3s
ZAK Zakamensk 61.56 7 *eP* **P** **02 25 29.1 -1.0**
ZAK pmax pmax
comp=Z,16nm,1.3s
INU Inuyama 61.61 40 P **P** **02 25 34.0 +3.4**
CN2 Changchun 61.63 26 P **P** **02 25 30.6 0.0**
CN2 S **S** **02 33 49.1 -4.6**
CN2 SS **SS** **02 37 52.3 -3.0**
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,380nm,4.0s
CN2 L L
comp=Z,810nm,19.0s
CN2 L L
comp=Z,920nm,19.0s
CN2 L L
comp=Z,710nm,21.0s
JGF Kuroka 61.98 40 IAmb IAmb 02 25 37.5
comp=Z,41nm,0.8s
JHJ Hachijo jima 2 62.03 43 LR LR 02 50 25.9
comp=Z,263nm,20.7s,baz=106,slow=34
SEM Semipalatinsk 62.10 350 *eP* **P** **02 25 33.7 -0.2**
SEM pmax pmax
comp=Z,41nm,0.9s
SEM Semipalatinsk 62.10 350 *eP* **P** **02 25 33.8 -0.2**
comp=Z,41nm,0.9s
MOY Mondy 62.59 5 *eP* **P** **02 25 36.4 -0.6**
MOY pmax pmax
comp=Z,43nm,2.3s
KURBB Kurchatov Arra 62.61 349 P **P** **02 25 36.9 0.0**
comp=Z,59nm,0.9s,baz=173,slow=6.2,SNR=241
KURBB LR LR 02 52 15.1
comp=Z,549nm,21.2s,baz=174,slow=36
KURBB PKP2bc P'P'df 02 54 48.0 +11
comp=Z,0.7nm,0.2s,baz=329,slow=2.1,SNR=4.4
comp=Z,59nm,0.9s
KURBB Kurchatov Arra 62.61 349 P **P** **02 25 35.3 -1.7**
KURK Kurchatov 62.68 349 P **P** **02 25 37.5 +0.1**
KURK pmax pmax
comp=Z,149nm,1.2s
KURK Kurchatov 62.68 349 P **P** **02 25 37.5 +0.1**
KURK Kurchatov 62.68 349 P **P** **02 25 37.5 +0.1**
TLY Talaya 62.88 7 LR LR 02 54 49.6
comp=Z,354nm,20.0s,baz=168,slow=38
TLY Talaya 62.88 7*c* eP **P** **02 25 39.3 +0.5**
TLY *i* *PP **pwP** **02 25 43.2 -1.7**
TLY pmax pmax
comp=Z,32nm,1.0s
TLY Talaya 62.88 7 P **P** **02 25 38.7 -0.1**
TLY Talaya 62.88 7 P **P** **02 25 38.3 -0.5**
TLY IAmb IAmb 02 25 44.5
comp=Z,24nm,1.0s
MATP Matopo 63.07 253 LR LR 02 49 59.4
comp=Z,527nm,18.0s,baz=102,slow=33
MAJO Matsushiro 63.11 39 P **P** **02 25 40.5 -0.2**
MAJO pmax pmax
comp=Z,29nm,1.1s
MAJO MLR MLR
comp=Z,500nm,19.0s
MAJO Matsushiro 63.11 39 P **P** **02 25 40.5 -0.2**
MAJO IAmb IAmb 02 25 46.6
comp=Z,29nm,1.1s
MJAR Matsushiro Arr 63.11 39 P **P** **02 25 39.5 -1.2**
comp=Z,18nm,0.9s,baz=221,slow=6.7,SNR=20
MJAR LR LR 02 54 16.4
comp=Z,427nm,18.9s,baz=234,slow=37
MJAR PKPPKP **P'P'bc** **02 54 41.9 -3.7**
comp=Z,0.3nm,0.3s,baz=64,slow=2.9,SNR=4.1
comp=Z,18nm,0.9s
MJAR Matsushiro Arr 63.11 39 P **P** **02 25 39.5 -1.2**
MJAR IAmb IAmb 02 25 45.0
comp=Z,25nm,1.0s
MJB9 Matsu-Tunnel 63.11 39 IAmb IAmb 02 25 46.5
comp=Z,28nm,1.1s
PSTR Posyet 63.20 30 *eP* **P** **02 25 40.0 -1.1**
MBAR Mbarara 63.25 275 LR LR 02 49 34.5
comp=Z,126nm,19.7s,baz=104,slow=33
MBAR Mbarara 63.25 275 P **P** **02 25 43.4 +1.1**
IRK Irkutsk 63.51 7 *eP* **P** **02 25 42.2 -0.8**
IRK pmax pmax
comp=Z,72nm,1.4s
LEPH Lephalale, Lim 63.64 249 *eP* **P** **02 25 47.9 +3.3**
LSZ Lusaka 63.67 258 LR LR 02 47 28.4
comp=Z,818nm,21.6s,baz=100,slow=30
LSZ Lusaka 63.67 258 P **P** **02 25 45.9 +1.0**
LSZ pmax pmax
comp=Z,77nm,1.3s
LSZ Lusaka 63.67 258 P **P** **02 25 45.4 +0.5**
LSZ Lusaka 63.67 258 P **P** **02 25 45.9 +1.0**
LSZ Lusaka 63.67 258 P **P** **02 25 45.7 +0.8**
WDLM Western Deep L 63.98 246 *eP* P 02 26 02.1 +15
BNX BinXian 64.02 26 ⇓P **P** **02 25 46.5 +0.1**
BNX PP **PP** **02 28 08.1 +0.7**
BNX S **S** **02 34 24.3 +0.7**
BNX sS pS 02 34 32.3 +10
BNX SS **SS** **02 38 35.3 +2.7**
BNX pmax pmax
comp=Z,97nm,1.1s
BNX pmax pmax
comp=Z,210nm,5.2s
BNX L L
comp=Z,540nm,13.6s
BNX L L
comp=Z,560nm,14.6s
BNX L L
comp=Z,620nm,14.3s
VLA Vladivostok 64.08 30 *eP* **P** **02 25 45.6 -1.3**
VLA pmax pmax
comp=Z,89nm,1.1s
MDJ Mudanjiang 64.11 28 IAMs_20 IAMs_20 02 52 58.4
comp=Z,845nm,21.0s
MDJ Mudanjiang 64.11 28 P **P** **02 25 48.9 +1.8**
MDJ pP pwP 02 25 51.6 -1.6
MDJ S **S** **02 34 29.6 +4.9**
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,360nm,5.1s
MDJ L L
comp=Z,1μm,18.6s
MDJ L L
comp=Z,1μm,15.1s
MDJ L L
comp=Z,1μm,20.6s
HIA Hailar 64.13 19 IAMs_20 IAMs_20 02 55 43.8
comp=Z,795nm,19.0s
HILR Hailar Array B 64.39 19 P **P** **02 25 48.4 -0.4**
comp=Z,8.8nm,0.7s,baz=189,slow=8.8,SNR=12
HILR PKP2bc **P'P'bc** **02 54 43.1 +2.5**
comp=Z,0.4nm,0.3s,baz=355,slow=1.8,SNR=3.9
comp=Z,8.8nm,0.7s
USA0B Ussuriysk Arra 64.92 30*c iP* **P** **02 25 52.1 -0.3**
USRK Ussuriysk Ar. 64.92 30 P **P** **02 25 52.5 +0.1**
comp=Z,23nm,0.8s,baz=221,slow=4.3,SNR=24
USRK LR LR 02 54 03.2
comp=Z,482nm,20.7s,baz=223,slow=36
comp=Z,23nm,0.8s
ZAA0 Zalesovo Array 64.97 354 P **P** **02 25 52.1 -0.4**
ZALV Zalesovo Beam 64.97 354 P **P** **02 25 52.0 -0.5**
comp=Z,37nm,0.7s,baz=175,slow=4.8,SNR=179
ZALV LR LR 02 57 55.1
comp=Z,420nm,18.1s,baz=179,slow=40
comp=Z,37nm,0.7s
ZALV Zalesovo Beam 64.97 354 P **P** **02 25 52.1 -0.4**
ZALV Zalesovo Beam 64.97 354 P **P** **02 25 52.1 -0.4**
GRHM Grahamstown, E 65.11 238 P **P** **02 25 55.1 +1.1**
SAVO Savo Central 65.12 95 P P 02 25 59.1 +4.7
LBTB Lobatse 65.63 247 LR LR 02 48 60.0
comp=Z,314nm,21.4s,baz=91,slow=31
LBTB Lobatse 65.63 247 IAmb IAmb 02 25 59.0
comp=Z,32nm,1.1s
LBTB Lobatse 65.63 247 *eP* **P** **02 25 53.5 -4.1**
LBTB Lobatse 65.63 247 P **P** **02 25 58.5 +0.9**
BOSA Boshof 65.92 244 P **P** **02 25 59.5 +0.1**
comp=Z,39nm,0.8s,baz=96,slow=5.8,SNR=100
BOSA LR LR 02 51 05.9
comp=Z,779nm,18.1s,baz=88,slow=33
comp=Z,39nm,0.8s
BOSA Boshof 65.92 244 IAmb IAmb 02 26 00.4
comp=Z,42nm,0.8s
BOSA Boshof 65.92 244 *eP* **P** **02 26 04.2 +4.7**
BOSA Boshof 65.92 244 P **P** **02 25 59.8 +0.3**
BVAR Borovoye Array 66.65 345 P **P** **02 26 03.1 -0.3**
comp=Z,19nm,0.9s,baz=152,slow=6.7,SNR=27
comp=Z,19nm,0.9s
BORK Borovoye 66.69 345 P **P** **02 26 03.4 -0.2**
BORK pmax pmax
comp=Z,25nm,0.9s
BORK Borovoye 66.69 345 P **P** **02 26 03.4 -0.2**
BORK IAmb IAmb 02 26 08.7
comp=Z,25nm,0.9s
BORK IAMs_20 IAMs_20 02 54 18.5
comp=Z,908nm,20.0s
AB31 Akbulak array 66.76 337 *i P* **P** **02 26 03.6 -0.6**
AB31 Akbulak array 66.76 337 P **P** **02 26 04.4 +0.2**
ABKAR Akbulak array 66.76 337 P **P** **02 26 04.5 +0.3**
AKT Akhty 67.00 324 *eP* **P** **02 26 06.4 +0.4**
AKT *e* 02 26 33.7
AKT *e* 02 28 33.5
AKT *eS* **S** **02 34 57.3 -3.3**
AKT *e* 02 36 03.6
AKT pmax pmax
comp=Z,47nm,1.0s
CKGRV CKGRV 67.44 251 P **P** **02 26 10.1 +0.8**
HEH HeiHe 67.63 23 *eP* **P** **02 26 08.6 -1.1**
HEH pP **pwP** **02 26 13.3 -2.5**
HEH S **S** **02 35 03.9 -3.7**
HEH SS **SS** **02 39 25.3 -3.4**
HEH pmax pmax
comp=Z,26nm,1.1s
HEH L L
comp=Z,910nm,15.9s
HEH L L
comp=Z,340nm,13.9s
HEH L L
comp=Z,1μm,17.0s
GNI Garni 67.95 321*c eP* **P** **02 26 12.9 +0.8**
GNI pmax pmax
comp=Z,44nm,1.2s
GNI Garni 67.95 321 P **P** **02 26 14.0 +1.9**
GNI Garni 67.95 321 P **P** **02 26 12.5 +0.4**
GNI IAmb IAmb 02 26 28.2
comp=Z,54nm,1.2s
GNI Garni 67.95 321 P **P** **02 26 12.5 +0.4**
comp=Z,457nmcomp=Z,37nm,1.4s
BRAK Brakfontein 68.00 240 *eP* **P** **02 26 15.2 +2.5**
MAK Makhachkala 68.09 325 *eP* **P** **02 26 09.6 -3.1**
MAK *e*PPP PPP 02 30 17.6
MAK *eS* **S** **02 35 08.0 -5.2**
MAK *e*SS **SS** **02 39 35.4 -0.6**
MAK pmax pmax
comp=Z,28nm,0.4s
AKTO Aktyubinsk 68.46 336 LR LR 02 58 51.6
comp=Z,235nm,18.1s,baz=87,slow=38
AKTO Aktyubinsk 68.46 336 P **P** **02 26 13.1 -1.8**
GRAN Grantham 68.62 240 *eP* **P** **02 26 16.0 -0.5**
ASF Jabal al Asfar 69.00 311 LR LR 02 55 01.6
comp=Z,602nm,19.5s,baz=27,slow=35
ASF Jabal al Asfar 69.00 311 P **P** **02 26 21.0 +2.2**
FRAZ Fraserburg 69.27 240 *eP* **P** **02 26 17.1 -3.5**
EIL Elat 69.34 307 LR LR 02 54 53.8
comp=Z,393nm,18.1s,baz=126,slow=34
EIL Elat 69.34 307 P **P** **02 26 22.8 +2.0**
HRFI Mount Harif 69.43 308 P **P** **02 26 23.3 +1.9**
ERM Erimo 69.51 37*c iP* **P** **02 26 21.2 -0.3**
ERM pmax pmax
comp=Z,46nm,1.1s
GHAJ Ghor Haditha 69.60 309 IAmb IAmb 02 26 45.5
comp=Z,31nm,0.9s
GHAJ IAMs_20 IAMs_20 02 52 05.2
comp=Z,562nm,19.0s
GHAJ Ghor Haditha 69.60 309 P **P** **02 26 24.8 +2.5**
SUR Sutherland 69.77 239 LR LR 02 52 41.1
comp=Z,351nm,18.6s,baz=88,slow=32
SUR Sutherland 69.77 239 P **P** **02 26 24.8 +1.0**
SUR Sutherland 69.77 239 P **P** **02 26 25.1 +1.4**
SUR Sutherland 69.77 239 P **P** **02 26 25.4 +1.6**
QRNJ Al-Qirein 70.06 310 P **P** **02 26 28.4 +3.2**
KZIT Kziot 70.31 308 P **P** **02 26 28.9 +2.1**
ZEA Zeya 70.41 20 *eP* **P** **02 26 26.5 -0.3**
ZEA *e* 02 29 03.9
ZEA *e* 02 35 36.0
ZEA pmax pmax
comp=Z,100nm,3.8s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA MLR MLR
comp=E,300nm,14.0s
ZEA MLR MLR
comp=Z,500nm,15.0s
BOD Bodaibo 70.44 11 *eP* **P** **02 26 25.8 -1.2**
BOD pmax pmax
comp=Z,96nm,1.0s
ASAJ Asahikawa 70.46 35 LR LR 02 56 45.1
comp=Z,277nm,20.5s,baz=202,slow=35
MMAI Mount Meron Ar 70.51 311 P **P** **02 26 27.7 -0.3**
comp=Z,3.1nm,0.7s,baz=179,slow=12,SNR=5.4
MMAI LR LR 02 55 50.1
comp=Z,510nm,19.4s,baz=116,slow=35
comp=Z,3.1nm,0.7s
KOPT Kop Dagi 70.53 319 P **P** **02 26 28.5 +0.2**
KOPT IAmb IAmb 02 27 11.1
comp=Z,39nm,1.2s

NCK	**Nalchik**	**70.65**	**324**	⇓	*i*	P	**P**	**02 26 29.1**	**+0.5**
NCK	comp=Z,40nm,1.7s					pmax	pmax		
BATM	**Batumi**	**70.67**	**321**	⇑		P	**P**	**02 26 29.1**	**+0.3**
BATM	**Batumi**	**70.67**	**321**			P	**P**	**02 26 29.0**	**+0.3**
KBZ	**Khabaz**	**71.20**	**324**			P	**P**	**02 26 32.5**	**+0.6**
KBZ	comp=Z,23nm,0.9s,baz=129,slow=4.3,SNR=38					LR	LR	03 00 17.7	
	comp=Z,290nm,19.2s,baz=122,slow=38								
	comp=Z,23nm,0.9s								
SHA1	**Shidzhatmaz**	**71.34**	**324**	*d*	*i*	P	**P**	**02 26 33.4**	**+0.3**
ARPR	**Arapgir-MALATY**	**71.44**	**318**			IAmb	IAmb	02 26 40.5	
	comp=Z,46nm,1.3s								
KVAR	**Kislovodsk Arr**	**71.45**	**324**			LR	LR	03 01 57.6	
	comp=Z,104nm,18.4s,baz=114,slow=39								
KIV	**Kislovodsk**	**71.45**	**324**	⇑		P	**P**	**02 26 32.9**	**-0.7**
KIV	**Kislovodsk**	**71.45**	**324**		*eP*		**P**	**02 26 34.1**	**+0.5**
KIV					*e*			02 29 07.3	
KIV					*e*	PPP	PPP	02 30 55.9	
KIV					*eS*		**S**	**02 35 52.7**	**-0.4**
KIV					*eSS*		**SS**	**02 40 28.9**	**+0.8**
KIV	comp=Z,37nm,1.1s					pmax	pmax		
KIV	comp=Z,39nm,3.9s					pmax	pmax		
KIV	comp=Z,208nm,18.0s					MLR	MLR		
KIV	**Kislovodsk**	**71.45**	**324**			P	**P**	**02 26 34.1**	**+0.5**
KIV	**Kislovodsk**	**71.45**	**324**			P	**P**	**02 26 33.8**	**+0.3**
KIV	comp=Z,74nm,1.3s					IAmb	IAmb	02 26 39.9	
KIV	**Kislovodsk**	**71.45**	**324**			P	**P**	**02 26 34.4**	**+0.8**
	comp=Z,443nmcomp=Z,32nm,1.0s								
GRNR	**Gornyy**	**71.76**	**27**	⇑	*iP*		**P**	**02 26 34.9**	**-0.2**
GRNR	comp=Z,9.0nm,0.9s					pmax	pmax		
GRNR	comp=E,310nm,15.0s					MLR	MLR		
GRNR	comp=N,340nm,14.0s					MLR	MLR		
GRNR	comp=Z,460nm,15.0s					MLR	MLR		
GOF	**Gofitskoye**	**71.91**	**325**		*ceP*		**P**	**02 26 35.7**	**-0.5**
YSS	**Yuzhno-Sakhali**	**72.31**	**33**		*ceP*		**P**	**02 26 38.1**	**-0.4**
YSS	comp=Z,73nm,1.2s					pmax	pmax		
YSS	**Yuzhno-Sakhali**	**72.31**	**33**			P	**P**	**02 26 41.8**	**+3.2**
YSS	comp=Z,87nm,1.3s					IAmb	IAmb	02 26 43.9	
SVE	**Sverdlovsk**	**72.72**	**342**		*eP*		**P**	**02 26 41.3**	**+0.5**
SVE					*eS*		**S**	**02 36 06.6**	**-0.3**
SVE	comp=Z,75nm,1.1s					pmax	pmax		
SVE	comp=Z,573nm,18.0s					MLR	MLR		
VSLR	**Vesyoloye**	**72.74**	**322**		*i*	P	**P**	**02 26 42.1**	**+0.9**
VSLR	comp=Z,50nm,1.2s					pmax	pmax		
LBZ	**Lake Benmore**	**72.92**	**133**			P	**P**	**02 26 41.9**	**-0.5**
SOC	**Sochi**	**73.00**	**322**		*eP*		**P**	**02 26 40.0**	**-2.7**
SOC					*e*			02 29 28.4	
SOC					*e*	PPP	PPP	02 31 06.7	
SOC					*eS*		**S**	**02 36 05.0**	**-5.6**
SOC	comp=Z,17nm,0.8s					pmax	pmax		
ARTI	**Arti**	**73.08**	**340**			LR	LR	03 00 14.1	
	comp=Z,474nm,18.4s,baz=142,slow=37								
ARTI	**Arti**	**73.08**	**340**		*ceP*		**P**	**02 26 42.9**	**0.0**
ARTI	comp=Z,42nm,1.1s					pmax	pmax		
ARTI	**Arti**	**73.08**	**340**			P	**P**	**02 26 42.8**	**-0.1**
ARTI	comp=Z,38nm,1.0s					IAmb	IAmb	02 26 48.2	
UGL	**Uglegorsk**	**73.30**	**31**		*eP*		P	02 26 49.3	+5.0
UGL					*eS*		**SKiKP**	**02 36 18.9**	**+1.7**
UGL	comp=Z,60nm,0.8s					pmax	pmax		
TSUM	**Tsumeb**	**73.40**	**253**			LR	LR	02 55 02.1	
	comp=Z,744nm,19.2s,baz=129,slow=32								
TSUM	**Tsumeb**	**73.40**	**253**			P	**P**	**02 26 46.5**	**+0.7**
TSUM	**Tsumeb**	**73.40**	**253**			P	**P**	**02 26 46.5**	**+0.7**
WIN	**Windhoek**	**73.53**	**250**			P	**P**	**02 26 47.6**	**+1.0**
RPZ	**Rata Peaks**	**73.54**	**132**			LR	LR	02 58 46.0	
	comp=Z,80nm,18.4s,baz=252,slow=36								
ELIB	**Princess Elisa**	**73.67**	**198**		*dP*		**P**	**02 26 47.0**	**+0.6**
	comp=Z,30nm,0.8s								
DSZ	**Denniston Nort**	**74.09**	**130**			P	**P**	**02 26 49.0**	**-0.3**
BELG	**Belogornoye**	**74.30**	**333**			LR	LR	03 02 10.6	
	comp=Z,341nm,19.2s,baz=106,slow=38								
BELG	**Belogornoye**	**74.30**	**333**	*d*	*iP*		**P**	**02 26 49.5**	**-0.6**
BELG	comp=Z,18nm,1.0s					pmax	pmax		
LTZ	**Lake Taylor**	**74.42**	**131**			P	**P**	**02 26 49.7**	**-1.5**
KIRS	**Kirsehir-Merke**	**74.44**	**316**	⇓		P	**P**	**02 26 51.4**	**0.0**
TYV	**Tymovskoe**	**74.74**	**30**		*eP*		P	02 26 57.7	+5.0
TYV	comp=Z,30nm,1.3s					pmax	pmax		
TYV	comp=Z,500nm,3.5s					pmax	pmax		
VNDA	**Vanda**	**74.83**	**168**			P	**P**	**02 26 52.5**	**-0.4**
	comp=Z,17nm,0.7s,baz=290,slow=6.9,SNR=92								
VNDA	comp=Z,580nm,22.0s,baz=294,slow=31					LR	LR	02 53 53.3	
	comp=Z,17nm,0.7s								
VNDA	**Vanda**	**74.83**	**168**			P	**P**	**02 26 52.5**	**-0.4**
BR104	**Keskin Array S**	**74.90**	**316**			P	**P**	**02 26 55.0**	**+0.9**
	comp=Z,116nmcomp=Z,13nm,0.8s								
BR131	**Keskin Array S**	**74.91**	**316**			P	**P**	**02 26 54.2**	**0.0**
BR131	comp=Z,14nm,0.9s					pmax	pmax		
BR131	**Keskin Array S**	**74.91**	**316**			P	**P**	**02 26 53.7**	**-0.5**
	SNR=7.5								
BR131	**Keskin Array S**	**74.91**	**316**			P	**P**	**02 26 54.2**	**0.0**
BRTR	**Keskin Array B**	**74.91**	**316**			P	**P**	**02 26 53.9**	**-0.3**
	comp=Z,9.7nm,0.9s,baz=134,slow=7.1,SNR=25								
BRTR	comp=Z,227nm,20.4s,baz=96,slow=36					LR	LR	03 00 29.0	
	comp=Z,9.7nm,0.9s								
BRTR	**Keskin Array B**	**74.91**	**316**			P	**P**	**02 26 53.5**	**-0.7**
BR105	**Keskin Array S**	**74.92**	**316**			P	**P**	**02 26 54.9**	**+0.7**
	comp=Z,116nmcomp=Z,15nm,1.0s								
BR106	**Keskin Array S**	**74.93**	**316**			P	**P**	**02 26 54.9**	**+0.6**
	comp=Z,103nmcomp=Z,13nm,0.8s								
ANN	**Anapa**	**75.04**	**322**		*eP*		**P**	**02 26 54.8**	**+0.2**
ANN					*e*	*PP	**pwP**	**02 26 59.6**	**-1.1**
ANN					*eS*		**S**	**02 36 32.9**	**-0.6**
ANN	comp=Z,19nm,0.8s					pmax	pmax		
SBA	**Scott Base**	**75.94**	**168**			P	**P**	**02 26 59.9**	**+0.7**
SBA	comp=Z,66nm,1.6s					pmax	pmax		
SBA	**Scott Base**	**75.94**	**168**			P	**P**	**02 26 59.9**	**+0.7**
SBA	comp=Z,66nm,1.6s					IAmb	IAmb	02 27 08.6	
ELL	**Elmali**	**76.21**	**312**			IAmb	IAmb	02 27 38.3	
	comp=Z,74nm,1.5s								
VRH	**Novokhopyorsk**	**76.33**	**329**		*eP*		**P**	**02 27 01.0**	**-0.8**
VRH	comp=Z,39nm,1.0s					pmax	pmax		
WAZ	**Wanganui**	**76.56**	**128**			P	**P**	**02 27 03.5**	**-0.1**
MDUB	**Mudurnu**	**76.92**	**316**			IAmb	IAmb	02 27 07.4	
	comp=Z,51nm,1.0s								
FWVZ	**Far West T-bar**	**77.03**	**128**			P	**P**	**02 27 05.3**	**-1.2**
WNVZ	**Wahianoa**	**77.06**	**128**			P	**P**	**02 27 07.0**	**+0.4**
WTVZ	**West Tongariro**	**77.06**	**128**			P	**P**	**02 27 05.9**	**-0.7**
NGZ	**Ngauruhoe**	**77.07**	**128**			P	**P**	**02 27 06.7**	**0.0**
SNVZ	**South Ngauruho**	**77.10**	**128**			P	**P**	**02 27 06.8**	**-0.1**
NVL	**N'lazarevskaya**	**77.11**	**200**		*eP*		**P**	**02 27 05.5**	**-0.5**
NVL					*e*			02 30 00.7	
NVL					*e*	PPP	PPP	02 31 50.9	
NVL					*eS*		**S**	**02 36 52.4**	**-3.2**
NVL	comp=Z,18nm,0.8s					pmax	pmax		
NVL	comp=Z,346nm,16.0s					MLR	MLR		
OTVZ	**Oturere**	**77.12**	**128**			P	**P**	**02 27 06.7**	**-0.3**
SIM	**Simferopol'**	**77.14**	**321**		*eP*		**P**	**02 27 07.5**	**+0.9**
SIM						S	**S**	**02 36 52.0**	**-4.6**
SIM	comp=Z,25nm,1.0s					pmax	pmax		
SIM	comp=E,100nm,9.0s					smax	smax		
BHHZ	**Black Hill Sta**	**77.41**	**128**			P	**P**	**02 27 07.1**	**-1.3**
VORD	**Divnogorie**	**77.43**	**328**		*eP*		**P**	**02 27 05.8**	**-2.2**
VORD						pmax	pmax		
	comp=Z,30nm,1.0s								
DVHZ	**Dannevirke**	**77.44**	**129**			P	**P**	**02 27 07.1**	**-1.4**
BFZ	**Birch Farm**	**77.47**	**129**			P	**P**	**02 27 08.2**	**-0.5**
PNHZ	**Pukenui**	**77.48**	**129**			P	**P**	**02 27 12.2**	**+3.4**
VSR	**Storozhevoye**	**77.64**	**328**		*eP*		**P**	**02 27 08.1**	**-1.1**
VSR	comp=Z,38nm,1.1s					pmax	pmax		
BKZ	**Black Stump Fm**	**77.76**	**128**			P	**P**	**02 27 09.1**	**-1.3**
PRHZ	**Porangahau**	**77.80**	**129**			P	P	02 27 14.6	+4.1
VORR	**Voronezh**	**77.88**	**329**		*eP*		**P**	**02 27 10.3**	**-0.2**
VORR	comp=Z,34nm,1.1s					pmax	pmax		
KIRV	**Kirov**	**77.89**	**338**			LR	LR	03 04 05.3	
	comp=Z,248nm,18.8s,baz=137,slow=38								
KIRV	**Kirov**	**77.89**	**338**	*d*	*iP*		**P**	**02 27 10.5**	**+0.1**
YAK	**Yakutsk**	**77.92**	**16**			LR	LR	03 04 12.1	
	comp=Z,851nm,18.1s,baz=212,slow=38								
YAK	**Yakutsk**	**77.92**	**16**	*c*	*iP*		**P**	**02 27 08.5**	**-2.0**
YAK	comp=Z,50nm,1.0s					pmax	pmax		
YLV	**Yalova**	**78.21**	**316**			P	**P**	**02 27 13.1**	**+0.4**
	comp=Z,391nmcomp=Z,36nm,1.0s								
URZ	**Urewera**	**78.31**	**127**			LR	LR	03 02 05.3	
	comp=Z,518nm,18.4s,baz=293,slow=36								
LPSR	**Galich'ya Gora**	**78.56**	**329**		*eP*		**P**	**02 27 13.8**	**-0.5**
LPSR	comp=Z,45nm,1.0s					pmax	pmax		
BALB	**Balikesir**	**78.86**	**314**			IAmb	IAmb	02 27 41.5	
	comp=Z,34nm,1.2s								
QSPA	**South Pole Qui**	**79.18**	**180**			P	**P**	**02 27 17.6**	**-0.1**
	comp=Z,41nm,1.1s,baz=289,slow=1.3,SNR=69								
QSPA	comp=Z,1µm,18.9s,baz=306,slow=33					LR	LR	02 58 26.6	
	comp=Z,41nm,1.1s								
QSPA	**South Pole Qui**	**79.18**	**180**			P	**P**	**02 27 17.6**	**-0.1**
QSPA	comp=Z,98nm,1.4s					IAmb	IAmb	02 27 19.1	
IDI	**Anoyia**	**79.38**	**309**			LR	LR	03 02 18.5	
	comp=Z,65nm,20.9s,baz=108,slow=36								
IDI	**Anoyia**	**79.38**	**309**			IAmb	IAmb	02 27 53.0	
	comp=Z,33nm,1.1s								
NE56	**Odesa**	**79.94**	**322**			P	**P**	**02 27 22.8**	**+0.8**
TROLL	**Troll, Antarti**	**80.09**	**198**	⇑		P	**P**	**02 27 23.1**	**+0.5**
	comp=Z,1µm,0.9s								
NRIK	**Noril'sk**	**80.10**	**358**			P	**P**	**02 27 22.1**	**-0.3**
	comp=Z,24nm,0.7s,baz=164,slow=4.5,SNR=24								
NRIK	comp=Z,402nm,22.0s,baz=184,slow=36					LR	LR	03 03 19.0	
	comp=Z,24nm,0.7s								
PURM	**Purcari**	**80.50**	**321**	⇑		P	**P**	**02 27 24.6**	**-0.4**
PURM	**Purcari**	**80.50**	**321**			P	**P**	**02 27 25.0**	**0.0**
	comp=Z,41nm,0.9s								
TPGR	**Topolog**	**80.68**	**319**	⇑		P	**P**	**02 27 27.1**	**+1.0**
TLBR	**Topalu**	**80.79**	**319**	⇓		P	**P**	**02 27 26.5**	**-0.1**
MOS	**Moscow**	**80.98**	**332**		*eP*		**P**	**02 27 27.6**	**+0.2**
MOS					*e*			02 30 33.2	
MOS					*eS*		**S**	**02 37 34.3**	**-2.9**
MOS	comp=Z,55nm,1.1s					pmax	pmax		
CFR	**Carcaliu**	**81.00**	**319**	⇓		P	**P**	**02 27 27.8**	**0.0**
CFR	**Carcaliu**	**81.00**	**319**			P	**P**	**02 27 27.7**	**0.0**
OBN	**Obninsk**	**81.13**	**331**			LR	LR	03 05 04.5	
	comp=Z,396nm,20.8s,baz=174,slow=37								
OBN	**Obninsk**	**81.13**	**331**	*c*	*eP*		**P**	**02 27 28.4**	**+0.2**
OBN					*e*	*PP	**PcP**	**02 27 32.2**	**-2.3**
OBN					*e*	*SP	**pwP**	**02 27 35.6**	**+1.3**
OBN					*e*			02 30 33.4	
OBN					*e*	PPP	PPP	02 32 25.5	
OBN	comp=Z,35nm,1.3s					pmax	pmax		
OBN	comp=Z,310nm,20.0s					MLR	MLR		
OBN	**Obninsk**	**81.13**	**331**			P	**P**	**02 27 26.4**	**-1.8**
OBN	**Obninsk**	**81.13**	**331**			P	**P**	**02 27 28.7**	**+0.5**
	comp=Z,665nmcomp=Z,37nm,1.5s								
SCTR	**Scanteiesti**	**81.30**	**320**	⇑		P	**P**	**02 27 29.3**	**0.0**
VLDR	**Vladesti**	**81.32**	**320**	⇑		P	**P**	**02 27 30.0**	**+0.6**
RAZG	**Razgrad**	**81.39**	**317**	⇓		P	**P**	**02 27 29.6**	**-0.3**
MSVF	**Nonsavu**	**81.55**	**106**			LR	LR	03 04 32.8	
	comp=Z,405nm,18.5s,baz=252,slow=36								
SKR	**Severo-Kuril's**	**81.72**	**35**		*eP*		**P**	**02 27 30.7**	**-0.7**
SKR					*eS*		S	02 37 34.5	-10
SKR	comp=Z,100nm,3.6s					pmax	pmax		
SKR	comp=Z,300nm,17.0s					MLR	MLR		
SNAA	**Sanae**	**81.80**	**199**	⇑		P	**P**	**02 27 32.2**	**+0.6**
	comp=Z,302nm,0.9s								
SNAA	**Sanae**	**81.80**	**199**			P	**P**	**02 27 32.3**	**+0.6**
	comp=Z,14nm,0.9s,baz=109,slow=5.1,SNR=27								
SNAA	comp=Z,0.6nm,0.4s,baz=226,slow=7.0,SNR=3.9					PKKPbc	**PKKPbc**	**02 46 05.2**	**-0.4**
SNAA	comp=Z,170nm,18.0s,baz=260,slow=32					LR	LR	02 59 17.4	
	comp=Z,14nm,0.9s								
SNAA	**Sanae**	**81.80**	**199**	*c*	*iP*		**P**	**02 27 32.3**	**+0.6**
SNAA	comp=Z,24nm,1.0s					pmax	pmax		
PETR	**Petresti**	**81.81**	**320**	⇑		P	P	02 27 43.1	+11
GHRR		**81.83**	**320**	⇑		P	**P**	**02 27 33.3**	**+1.1**
GHRR		**81.83**	**320**			P	**P**	**02 27 32.8**	**+0.7**
ISR	**Istrita**	**82.00**	**319**			P	**P**	**02 27 33.7**	**+0.6**
	comp=Z,34nm,1.0s								
SGRR	**Singureni**	**82.01**	**318**	⇓		P	**P**	**02 27 33.0**	**-0.1**
SORM	**Soroca**	**82.14**	**322**	⇑		P	**P**	**02 27 33.4**	**-0.3**
SORM	**Soroca**	**82.14**	**322**			P	**P**	**02 27 33.7**	**0.0**
SORM	**Soroca**	**82.14**	**322**			P	**P**	**02 27 33.7**	**0.0**
	comp=Z,24nm,1.2s								
SAHR	**Sahastru**	**82.16**	**319**	⇓		P	**P**	**02 27 34.9**	**+1.0**
VRI	**Vrincioaia**	**82.19**	**320**	⇓		P	**P**	**02 27 34.5**	**+0.4**
VRI	**Vrincioaia**	**82.19**	**320**			P	**P**	**02 27 34.4**	**+0.4**
VRI	**Vrincioaia**	**82.19**	**320**			P	**P**	**02 27 34.0**	**0.0**
	comp=Z,550nmcomp=Z,48nm,1.2s								
ZIMR		**82.19**	**317**	⇑		P	**P**	**02 27 35.2**	**+1.1**
ZIMR		**82.19**	**317**			P	**P**	**02 27 35.1**	**+1.1**
PLOR	**Plostina**	**82.23**	**320**	⇓		P	**P**	**02 27 35.6**	**+1.2**
PLOR	**Plostina**	**82.23**	**320**			P	**P**	**02 27 35.5**	**+1.2**
NEHR	**Nehoiu**	**82.28**	**319**	⇓		P	**P**	**02 27 35.3**	**+0.7**
TESR	**Tescani**	**82.50**	**320**	⇑		P	**P**	**02 27 35.8**	**+0.1**
TESR	**Tescani**	**82.50**	**320**			P	**P**	**02 27 35.7**	**+0.1**
	comp=Z,22nm,1.2s								
COVR	**Voineasa-Covas**	**82.51**	**319**	⇑		P	**P**	**02 27 36.0**	**+0.3**
MLR	**Muntele Rosu**	**82.54**	**319**	⇑		P	**P**	**02 27 36.7**	**+0.7**
MLR	**Muntele Rosu**	**82.54**	**319**			P	**P**	**02 27 36.1**	**+0.1**
MLR	**Muntele Rosu**	**82.54**	**319**			IAmb	IAmb	02 27 42.0	
MLR	comp=Z,55nm,1.1s					IAMs_20	IAMs_20	03 10 21.8	
	comp=Z,469nm,19.0s								
MLR	**Muntele Rosu**	**82.54**	**319**			P	**P**	**02 27 35.9**	**-0.1**
	comp=Z,622nmcomp=Z,52nm,1.2s								
PLVB	**Pleven**	**82.59**	**317**	⇑		P	**P**	**02 27 36.5**	**+0.3**
ONER	**Barai Valea Uz**	**82.59**	**320**	⇑		P	**P**	**02 27 36.6**	**+0.5**
AK09	**Malin Array Si**	**82.69**	**325**			P	**P**	**02 27 36.5**	**0.0**
AK10	**Malin Array Si**	**82.70**	**325**			P	**P**	**02 27 36.2**	**-0.4**
AK07	**Malin Array Si**	**82.71**	**325**			P	**P**	**02 27 36.2**	**-0.4**
AK08	**Malin Array Si**	**82.72**	**325**			P	**P**	**02 27 36.3**	**-0.3**
AK06	**Malin Array Si**	**82.73**	**325**			P	**P**	**02 27 36.3**	**-0.4**
AK05	**Malin Array Si**	**82.74**	**325**			P	**P**	**02 27 36.4**	**-0.4**
AK02	**Malin Array Si**	**82.76**	**325**			P	**P**	**02 27 36.5**	**-0.3**
AKASG	**Malin Array Be**	**82.77**	**325**			P	**P**	**02 27 36.2**	**-0.6**
AKASG	comp=Z,8.0nm,1.0s,baz=103,slow=4.0,SNR=24					LR	LR	03 06 22.0	
	comp=Z,297nm,21.6s,baz=108,slow=37								
	comp=Z,8.0nm,1.0s								
AKASG	**Malin Array Be**	**82.77**	**325**			P	**P**	**02 27 35.5**	**-1.4**
AKBB	**Malin Array Si**	**82.77**	**325**	⇑	*iP*		**P**	**02 27 36.1**	**-0.8**
AKBB	comp=Z,24nm,1.3s					pmax	pmax		
AKBB	**Malin Array Si**	**82.77**	**325**			P	**P**	**02 27 35.0**	**-1.8**
AKBB	comp=Z,26nm,1.3s					IAmb	IAmb	02 27 42.1	
AKBB	**Malin Array Si**	**82.77**	**325**			P	**P**	**02 27 36.6**	**-0.3**
AK01	**Malin Array Si**	**82.77**	**325**			P	**P**	**02 27 36.4**	**-0.5**
KIEV	**Kiev**	**82.77**	**325**	⇑		P	**P**	**02 27 36.4**	**-0.6**
KIEV	**Kiev**	**82.77**	**325**			P	**P**	**02 27 36.3**	**-0.6**
KIEV	**Kiev**	**82.77**	**325**			P	**P**	**02 27 34.9**	**-2.0**
KIEV	comp=Z,26nm,1.4s					IAmb	IAmb	02 27 42.1	
KIEV	**Kiev**	**82.77**	**325**			P	**P**	**02 27 36.3**	**-0.6**
	comp=Z,53nm,0.8s								
GIRR	**Girov**	**82.78**	**321**	⇑		P	**P**	**02 27 37.6**	**+0.5**
AK03	**Malin Array Si**	**82.78**	**325**			P	**P**	**02 27 36.2**	**-0.8**
AK12	**Malin Array Si**	**82.78**	**325**			P	**P**	**02 27 36.2**	**-0.8**
AK11	**Malin Array Si**	**82.79**	**325**			P	**P**	**02 27 36.3**	**-0.7**
AK14	**Malin Array Si**	**82.80**	**325**			P	**P**	**02 27 36.3**	**-0.8**
AK04	**Malin Array Si**	**82.81**	**325**			P	**P**	**02 27 36.4**	**-0.7**
AK13	**Malin Array Si**	**82.82**	**325**			P	**P**	**02 27 36.4**	**-0.8**
AK16	**Malin Array Si**	**82.82**	**325**			P	**P**	**02 27 36.4**	**-0.8**
AK15	**Malin Array Si**	**82.82**	**325**			P	**P**	**02 27 36.4**	**-0.8**
AK23	**Malin Array Si**	**82.85**	**325**			P	**P**	**02 27 36.6**	**-0.7**
AK17	**Malin Array Si**	**82.85**	**325**			P	**P**	**02 27 36.6**	**-0.7**
AK18	**Malin Array Si**	**82.86**	**325**			P	**P**	**02 27 36.7**	**-0.7**
AK22	**Malin Array Si**	**82.88**	**325**			P	**P**	**02 27 36.8**	**-0.7**
AK19	**Malin Array Si**	**82.89**	**325**			P	**P**	**02 27 37.1**	**-0.5**
AK21	**Malin Array Si**	**82.90**	**325**			P	**P**	**02 27 37.1**	**-0.5**
AK20	**Malin Array Si**	**82.91**	**325**			P	**P**	**02 27 37.1**	**-0.5**
VLAD	**Vladila**	**82.97**	**317**	⇓		P	**P**	**02 27 37.8**	**-0.3**
BIZ	**Bicaz**	**83.02**	**320**	⇑		P	**P**	**02 27 38.3**	**0.0**
DOPR	**Dopca**	**83.08**	**319**	⇓		P	**P**	**02 27 38.7**	**0.0**
VOIR		**83.09**	**319**	⇑		P	**P**	**02 27 38.6**	**-0.2**
VOIR		**83.09**	**319**			P	**P**	**02 27 38.6**	**-0.2**
VOIR		**83.09**	**319**			P	**P**	**02 27 38.3**	**-0.6**
	comp=Z,10nm,1.8s								
PRAR	**RASCA**	**83.11**	**321**	⇓		P	**P**	**02 27 38.8**	**0.0**
KLMR	**Klimovskoe**	**83.16**	**336**		*eP*		**P**	**02 27 38.1**	**-0.6**
KLMR					*e*			02 30 47.2	
KLMR	comp=Z,46nm,1.3s					pmax	pmax		
KLMR	comp=Z,316nm,18.0s					MLR	MLR		
VAY	**Valandovo**	**83.24**	**314**		*i*	P	**P**	**02 27 41.0**	**+1.4**
LUBAR	**Lubar, Ukraine**	**83.27**	**324**			P	**P**	**02 27 39.0**	**-0.5**
VNA2	**Neumayer--Watz**	**83.39**	**199**	⇑		P	**P**	**02 27 40.4**	**+0.5**
	comp=Z,11nm,0.6s,baz=86,slow=4.8								
MI29	**MI29, Kamyanyy**	**83.43**	**324**			P	**P**	**02 27 39.5**	**-0.8**
	comp=Z,129nm,1.4s								
KMPD	**K-Podol'skiy**	**83.46**	**322**			P	**P**	**02 27 40.1**	**-0.4**
RAO	**Raoul Island**	**83.48**	**118**			LR	LR	03 02 58.5	
	comp=Z,264nm,19.4s,baz=258,slow=34								
MA2	**Magadan**	**83.68**	**25**			LR	LR	03 08 13.6	
	comp=Z,381nm,18.9s,baz=233,slow=38								
MA2	**Magadan**	**83.68**	**25**			P	**P**	**02 27 41.3**	**-0.1**
MA2	comp=Z,80nm,1.0s					pmax	pmax		
MA2	comp=Z,500nm,19.0s					MLR	MLR		
MA2	**Magadan**	**83.68**	**25**			P	**P**	**02 27 41.3**	**-0.1**
MA2						IAMs_20	IAMs_20	03 07 51.6	
	comp=Z,487nm,19.0s								
PEA0B	**Petropavlovsk-**	**83.72**	**33**		*eP*		**P**	**02 27 40.1**	**-1.7**
PETK	**Petropavlovsk-**	**83.72**	**33**			P	**P**	**02 27 40.7**	**-1.1**
	comp=Z,11nm,0.9s,baz=222,slow=2.0,SNR=6.6								
PETK						LR	LR	03 06 36.7	
	comp=Z,276nm,19.5s,baz=249,slow=37								
	comp=Z,11nm,0.9s								
PETK	**Petropavlovsk-**	**83.72**	**33**			P	**P**	**02 27 39.8**	**-2.0**
VNA1	**Neumayer--Stat**	**83.74**	**199**	⇑		P	**P**	**02 27 42.4**	**+0.8**
	comp=Z,27nm,1.0s								
MI28	**Mi28,Pidlybu**	**83.75**	**324**			P	**P**	**02 27 41.5**	**-0.5**
MDB	**Medias**	**83.80**	**319**	⇑		P	**P**	**02 27 42.2**	**-0.2**
MDB	**Medias**	**83.80**	**319**			P	**P**	**02 27 42.2**	**-0.2**
BURAR	**Bucovina Array**	**83.84**	**321**	⇓		P	**P**	**02 27 43.5**	**+0.8**
BURAR	**Bucovina Array**	**83.84**	**321**			P	**P**	**02 27 43.5**	**+0.8**
BURAR	**Bucovina Array**	**83.84**	**321**			P	**P**	**02 27 42.6**	**-0.1**
BUR08	**Bucovina Ar. S**	**83.86**	**321**			P	**P**	**02 27 43.4**	**+0.6**
BUR08	comp=Z,26nm,1.5s					IAmb	IAmb	02 28 04.9	
PET	**Petropavlovsk**	**84.19**	**33**		*i*	P	**P**	**02 27 43.4**	**-0.8**
PET	comp=Z,42nm,1.1s					pmax	pmax		
PET	**Petropavlovsk**	**84.19**	**33**			P	**P**	**02 27 46.9**	**+2.7**
PET	comp=Z,44nm,1.1s					IAmb	IAmb	02 27 48.6	
PET	**Petropavlovsk**	**84.19**	**33**			P	**P**	**02 27 43.2**	**-1.0**
	comp=Z,37nm,1.1s								
OHR	**Ohrid**	**84.43**	**314**		*i*	P	P	02 27 38.9	-6.8
CJR	**Cluj-Napoca**	**84.52**	**319**	⇓		P	**P**	**02 27 47.1**	**+1.0**
CJR	**Cluj-Napoca**	**84.52**	**319**			P	**P**	**02 27 47.0**	**+1.0**
HERR	**Herculane**	**84.61**	**317**	⇓		P	**P**	**02 27 46.5**	**0.0**
DEV	**Deva**	**84.66**	**319**	⇓		P	**P**	**02 27 47.5**	**+0.8**
DEV	**Deva**	**84.66**

SRO	**Srobarova**	**88.27**	**319**	*e*P		**P**	**02 28 05.8**	**+1.4**
SRO	comp=Z,6.0nm,0.9s			pmax		pmax		
SRO	**Srobarova**	**88.27**	**319**	*e*P		**P**	**02 28 05.8**	**+1.4**
MPLH	**Magyarpolny**	**88.58**	**319**	P		**P**	**02 28 06.7**	**+0.8**
	comp=Z,49nm,1.2s							
JAVC	**Velka Javorina**	**89.00**	**320**	*e*P		**P**	**02 28 07.7**	**-0.2**
SMOL	**Smolenice**	**89.05**	**320**	*e*P		**P**	**02 28 09.7**	**+1.6**
SMOL	comp=Z,5.0nm,1.2s			pmax		pmax		
FINES	**FINESS Array B**	**89.05**	**334**	P		**P**	**02 28 08.0**	**+0.2**
FINES	comp=Z,9.3nm,0.8s,baz=108,slow=6.2,SNR=19			LR		LR	03 11 59.8	
	comp=Z,180nm,18.0s,baz=110,slow=38							
FINES	comp=Z,9.3nm,0.8s **FINESS Array B**	**89.05**	**334**	*i* P		**P**	**02 28 08.0**	**+0.2**
FINES	comp=Z,9.0nm,0.8s			pmax		pmax		
MAUC	**Maruska**	**89.06**	**321**	*e*P		**P**	**02 28 08.2**	**0.0**
MODS	**Modra-Piesok**	**89.11**	**320**	*e*P		**P**	**02 28 09.4**	**+1.0**
MODS	comp=Z,27nm,1.0s			pmax		pmax		
MODS	**Modra-Piesok**	**89.11**	**320**	*e*P		**P**	**02 28 09.3**	**+0.9**
APA	**Apatity**	**89.15**	**341**	*e*P		**P**	**02 28 09.4**	**+1.3**
APA				*e*			02 31 38.1	
APA	comp=Z,8.0nm,1.2s			pmax		pmax		
APA	comp=Z,568nm,5.2s			MLR		MLR		
KOGS	**Kog**	**89.21**	**318**	*i* P		**P**	**02 28 10.4**	**+1.5**
MORC	**Moravsky Berou**	**89.36**	**321**	⇩P		**P**	**02 28 10.1**	**+0.5**
MORC	**Moravsky Berou**	**89.36**	**321**	P		**P**	**02 28 10.1**	**+0.5**
MORC	**Moravsky Berou**	**89.36**	**321**	*e*P		**P**	**02 28 09.7**	**+0.1**
RONA	**Rosalia, Austr**	**89.54**	**319**	*e*P		**P**	**02 28 11.4**	**+0.9**
	comp=Z,13nm,1.3s,SNR=5.4							
WINA	**Alland / Wiene**	**89.80**	**319**	*e*P		**P**	**02 28 11.9**	**+0.3**
	comp=Z,4.2nm,1.1s							
VRAC	**Vranov**	**89.81**	**320**	LR		LR	03 11 17.5	
	comp=Z,170nm,19.8s,baz=90,slow=38							
VRAC	**Vranov**	**89.81**	**320**	*e*P		**P**	**02 28 12.1**	**+0.4**
KRUC	**Moravsky**	**89.86**	**320**	*e*P		**P**	**02 28 12.9**	**+1.0**
CONA	**Conrad Observa**	**89.88**	**319**	*e*P		**P**	**02 28 13.5**	**+1.4**
	comp=Z,9.6nm,1.3s,SNR=5.6							
ARSA	**Arzberg**	**89.92**	**318**	IAmb		IAmb	02 28 18.4	
	comp=Z,15nm,1.0s							
ARSA	**Arzberg**	**89.92**	**318**	*e*P		**P**	**02 28 13.0**	**+0.8**
	comp=Z,4.8nm,0.6s,SNR=18							
KRLC	**Kraliky**	**89.92**	**321**	*e*P		**P**	**02 28 12.6**	**+0.4**
KRLC				*e*			02 28 16.7	
KRLC	**Kraliky**	**89.92**	**321**	*e*P		**P**	**02 28 12.6**	**+0.4**
KRLC				*e*pP		**pwP**	**02 28 16.7**	**-1.6**
PERS	**Pernice**	**90.01**	**318**	*i* P		**P**	**02 28 13.4**	**+0.7**
SOKA	**Soboth**	**90.08**	**318**	*e*P		**P**	**02 28 13.5**	**+0.4**
	comp=Z,14nm,1.1s,SNR=14							
DPC	**Dobruska-Polom**	**90.28**	**321**	*e*P		**P**	**02 28 14.5**	**+0.6**
DPC				*e*			02 28 19.1	
DPC	**Dobruska-Polom**	**90.28**	**321**	*e*P		**P**	**02 28 14.5**	**+0.6**
DPC				*e*pP		**pwP**	**02 28 19.1**	**-0.9**
DPC	**Dobruska-Polom**	**90.28**	**321**	P		**P**	**02 28 14.3**	**+0.4**
	comp=Z,17nm,1.1s							
OBKA	**Obir**	**90.36**	**317**	*e*P		**P**	**02 28 15.0**	**+0.7**
	comp=Z,5.0nm,1.2s							
OSTC	**Ostas**	**90.40**	**322**	*e*P		**P**	**02 28 15.5**	**+1.1**
OSTC				*e*			02 28 20.0	
OSTC	**Ostas**	**90.40**	**322**	*e*P		**P**	**02 28 15.5**	**+1.1**
OSTC				*e*pP		**pwP**	**02 28 20.0**	**-0.5**
NRCA	**Norcia**	**90.41**	**313**	IAmb		IAmb	02 28 26.9	
	comp=Z,19nm,1.0s							
KSP	**Ksiaz**	**90.44**	**322**	*e*P		P	02 28 20.5	+6.0
KSP	**Ksiaz**	**90.44**	**322**	P		**P**	**02 28 15.0**	**+0.5**
	comp=Z,9.8nm,1.1s							
SESA	**Seetaler Alpe,**	**90.51**	**318**	*e*P		**P**	**02 28 15.5**	**+0.3**
	comp=Z,7.5nm,0.7s,SNR=7.3							
CHVC	**Chvalec**	**90.51**	**322**	*e*P		**P**	**02 28 14.9**	**0.0**
CHVC	**Chvalec**	**90.51**	**322**	*e*P		**P**	**02 28 14.9**	**0.0**
UPC	**Upice**	**90.52**	**321**	*e*P		**P**	**02 28 15.9**	**+1.0**
GKP	**Gorka Klasztor**	**90.59**	**324**	*e*P		**P**	**02 28 19.0**	**+3.9**
MOA	**Molln**	**90.90**	**319**	*e*P		**P**	**02 28 17.2**	**+0.5**
	comp=Z,3.3nm,1.1s							
MYKA	**Terra Mystica**	**90.99**	**317**	*e*P		**P**	**02 28 18.0**	**+0.7**
	comp=Z,1.9nm,0.5s							
CKRC	**Cesky Krumlov**	**91.12**	**319**	*e*P		**P**	**02 28 18.3**	**+0.5**
CKRC				*e*			02 28 22.8	
CKRC	**Cesky Krumlov**	**91.12**	**319**	*e*P		**P**	**02 28 18.3**	**+0.5**
CKRC				*e*pP		**pwP**	**02 28 22.8**	**-1.1**
CKRC				*ex*		x	02 28 29.5	
BIOA	**Bad Ischl, Aus**	**91.27**	**318**	*e*P		**P**	**02 28 18.8**	**+0.3**
	comp=Z,4.2nm,1.1s							
PRU	**Pruhonice**	**91.28**	**321**	*e*P		**P**	**02 28 19.1**	**+0.6**
PRU	**Pruhonice**	**91.28**	**321**	*e*P		**P**	**02 28 19.1**	**+0.6**
KBA	**Koelnbreinsper**	**91.30**	**318**	*e*P		**P**	**02 28 19.5**	**+0.7**
	comp=Z,2.6nm,0.9s							
GEC2	**GERESS Array S**	**91.52**	**319**	IAmb		IAmb	02 28 25.5	
	comp=Z,13nm,1.0s							
GEC2	**GERESS Array S**	**91.52**	**319**	*e*P		**P**	**02 28 20.3**	**+0.5**
	comp=Z,12nm,1.1s,baz=103,slow=4.2							
GEC2				*e*L		L	03 14 11.5	
	comp=Z,220nm,19.8s							
GERES	**GERESS Array B**	**91.52**	**319**	P		**P**	**02 28 19.9**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=131,slow=3.7,SNR=45							
GERES				LR		LR	03 10 21.7	
	comp=Z,101nm,21.3s,baz=90,slow=36							
	comp=Z,5.4nm,0.8s							
GERES	**GERESS Array B**	**91.52**	**319**	P		**P**	**02 28 20.1**	**+0.4**
GERES	**GERESS Array B**	**91.52**	**319**	P		**P**	**02 28 20.1**	**+0.4**
STAL	**STALIGIAL**	**91.53**	**317**	IAmb		IAmb	02 28 57.4	
	comp=Z,17nm,1.2s							
KEST	**Kesra**	**91.64**	**306**	P		**P**	**02 28 21.2**	**+0.6**
	comp=Z,16nm,1.0s,baz=13,slow=2.0,SNR=14							
KEST				LR		LR	03 10 26.7	
	comp=Z,117nm,18.5s,baz=19,slow=36							
	comp=Z,16nm,1.0s							
KEST	**Kesra**	**91.64**	**306**	P		**P**	**02 28 21.7**	**+1.1**
KEST	**Kesra**	**91.64**	**306**	IAmb		IAmb	02 28 27.6	
	comp=Z,22nm,1.0s							
KHC	**Kasperske Hory**	**91.67**	**320** ⇧	*i* P		**P**	**02 28 20.9**	**+0.6**
KHC				pmax		pmax		
	comp=Z,13nm,1.3s							
KHC	**Kasperske Hory**	**91.67**	**320**	*e*P		**P**	**02 28 20.0**	**-0.3**
KHC	**Kasperske Hory**	**91.67**	**320**	P		**P**	**02 28 20.8**	**+0.5**
ABTA	**Abfaltersbach**	**91.78**	**317**	*e*P		**P**	**02 28 21.3**	**+0.3**
	comp=Z,3.9nm,1.3s							
RJOB	**Jochberg**	**91.83**	**318**	*e*P		**P**	**02 28 21.6**	**+0.5**
	comp=Z,3.2nm,1.0s,baz=103,slow=4.2							
LESA	**Schwarzleotal**	**91.83**	**318**	*e*P		**P**	**02 28 20.1**	**-1.1**
	comp=Z,1.8nm,0.5s							
AFI	**Afiamalu**	**91.86**	**104**	LR		LR	03 08 59.3	
	comp=Z,58nm,18.6s,baz=247,slow=35							
BRG	**Berggiesshubel**	**91.88**	**321**	*e*P		**P**	**02 28 22.1**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=103,slow=4.2							
BRG	**Berggiesshubel**	**91.88**	**321**	*e*P		**P**	**02 28 22.3**	**+1.0**
BRG				Amp			02 28 23.0	
	comp=Z,1.8nm,0.8s							
BRG	**Berggiesshubel**	**91.88**	**321**	P		P	02 28 26.1	+4.8
BRG				Amp			02 28 28.1	
	comp=Z,3.5nm,0.9s							
BRG				PP		**PP**	**02 32 01.1**	**+0.6**
BRG				Amp			02 32 13.7	
	comp=Z,4.2nm,1.2s							
BRG	**Berggiesshubel**	**91.88**	**321**	S		**S**	**02 39 27.0**	**+3.5**
BRG	**Berggiesshubel**	**91.88**	**321**	PS		PS	02 40 37.0	+3.6
WET	**Wettzell**	**92.11**	**320**	*e*P		**P**	**02 28 23.0**	**+0.6**
	comp=Z,8.5nm,1.1s,baz=103,slow=4.2							
WET				*e*L		L	03 10 49.9	
	comp=Z,212nm,20.6s							
WTTA	**Wattenberg**	**92.48**	**318**	*e*P		**P**	**02 28 24.2**	**-0.2**
	comp=Z,4.3nm,1.3s							
WATA	**Walderalm**	**92.54**	**318**	*e*P		**P**	**02 28 24.3**	**-0.2**
	comp=Z,1.4nm,0.7s							
CLL	**Collm**	**92.56**	**322**	*i* P		**P**	**02 28 24.6**	**+0.3**
CLL				*i*			02 28 28.8	
CLL				*e*			02 28 56.0	
CLL				*e*S		**S**	**02 39 29.0**	**-0.6**
CLL	comp=Z,4.0nm,1.0s			pmax		pmax		
CLL	**Collm**	**92.56**	**322**	*e*P		**P**	**02 28 24.7**	**+0.3**
	comp=Z,3.9nm,1.0s,baz=103,slow=4.2							
CLL				*e*L		L	03 12 38.3	
	comp=Z,176nm,21.6s							
CLL	**Collm**	**92.56**	**322**	*i* P		**P**	**02 28 24.6**	**+0.3**
	comp=Z,4.0nm,1.0s							
CLL				*i* x		x	02 28 28.8	
CLL				*e*PP		**PP**	**02 32 06.0**	**+0.2**
CLL				*e*PPP		PPP	02 34 06.0	
CLL				*e*SKSac		**SKSac**	**02 38 56.0**	**-2.9**
CLL				*e*S		**S**	**02 39 29.0**	**-0.6**
CLL				*e*PS		PnS	02 40 45.0	+2.9
CLL				*e*SS		**SS**	**02 45 36.0**	**-5.5**
CLL				*ex*		x	02 46 44.0	
CLL				*e*SSS		SSS	02 49 12.0	
CLL				*e*(SSSS)			02 53 24.0	
ARCES	**ARCESS Array B**	**92.64**	**341**	P		**P**	**02 28 24.5**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=104,slow=5.1,SNR=16							
ARCES				PP		**PP**	**02 32 04.7**	**-1.3**
	comp=Z,3.5nm,1.1s,baz=132,slow=5.1,SNR=4.0							
ARCES				LR		LR	03 12 02.6	
	comp=Z,300nm,18.2s,baz=115,slow=37							
	comp=Z,8.3nm,0.8s							
ARCES	**ARCESS Array B**	**92.64**	**341**	P		**P**	**02 28 24.8**	**+0.4**
ARCES				pmax		pmax		
	comp=Z,19nm,1.0s							
ARCES	**ARCESS Array B**	**92.64**	**341**	P		**P**	**02 28 24.8**	**+0.4**
ARCES				IAmb		IAmb	02 28 30.2	
	comp=Z,19nm,0.9s							
SQTA	**Sankt Quirin**	**92.75**	**317**	*e*P		**P**	**02 28 25.4**	**-0.1**
	comp=Z,1.4nm,0.6s							
MOTA	**Moosalm**	**92.85**	**318**	*e*P		**P**	**02 28 25.9**	**-0.1**
	comp=Z,3.3nm,1.0s							
SHEM	**Shemya Is, Ala**	**92.86**	**37**	LR		LR	03 13 49.0	
	comp=Z,72nm,18.4s,baz=286,slow=38							
FUR	**Furstenfeldbru**	**92.92**	**318**	*e*L		L	03 15 05.9	
	comp=Z,273nm,18.1s							
FETA	**Feichten**	**93.03**	**317**	*e*P		**P**	**02 28 27.0**	**+0.2**
	comp=Z,4.8nm,1.2s							
RETA	**Reute**	**93.11**	**318**	*e*P		**P**	**02 28 27.3**	**+0.2**
	comp=Z,1.7nm,0.5s							
MOX	**Moxa**	**93.26**	**321**	*e*P		**P**	**02 28 27.8**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=103,slow=4.2							
MOX				*e*L		L	03 11 03.9	
	comp=Z,189nm,20.5s							
NEUB	**Neuenburg**	**93.29**	**321**	*e*P		**P**	**02 28 28.0**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=103,slow=4.2							
GRA1	**Grafenberg Arr**	**93.30**	**320**	IAmb		IAmb	03 15 24.9	
	comp=Z,358nm,19.0s							
GRF	**Grafenberg Arr**	**93.30**	**320**	*e*P		**P**	**02 28 27.9**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=103,slow=4.2							
GRF				*e*L		L	03 15 16.6	
	comp=Z,256nm,18.7s							
GRFO	**Grafenberg**	**93.30**	**320**	IAmb		IAmb	03 15 25.9	
	comp=Z,350nm,19.0s							
DAVOX	**Davos/Dischmat**	**93.55**	**317**	LR		LR	03 14 29.6	
	comp=Z,76nm,18.3s,baz=84,slow=38							
BILL	**Bilibino**	**93.63**	**21**	IAmb		IAmb	03 11 01.3	
	comp=Z,630nm,21.0s							
DAVA	**Damuels**	**93.65**	**317**	*e*P		**P**	**02 28 30.8**	**+1.1**
	comp=Z,8.4nm,1.2s							
TORD	**Torodi Ar. Bea**	**94.24**	**283**	P		**P**	**02 28 33.2**	**+0.3**
	comp=Z,14nm,1.0s,baz=83,slow=5.1,SNR=43							
TORD				LR		LR	03 06 46.5	
	comp=Z,155nm,21.7s,baz=120,slow=33							
	comp=Z,14nm,1.0s							
TORD	**Torodi Ar. Bea**	**94.24**	**283**	IAmb		IAmb	02 30 13.2	
	comp=Z,12nm,0.6s							
HFS	**Hagfors**	**94.34**	**330**	P		**P**	**02 28 31.7**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=16,slow=7.7,SNR=4.6							
HFS				LR		LR	03 13 36.4	
	comp=Z,264nm,20.0s,baz=96,slow=37							
	comp=Z,2.1nm,0.8s							
BSEG	**Bad Segeberg**	**94.75**	**324**	*e*L		L	03 13 04.1	
	comp=Z,131nm,20.7s							
BFO	**Black Forest**	**94.88**	**318**	*e*L		L	03 14 02.3	
	comp=Z,205nm,18.1s							
TNS	**Taunus Mts**	**95.16**	**320**	*e*L		L	03 14 34.8	
	comp=Z,202nm,19.2s							
NOA	**NORSAR Array B**	**95.73**	**331**	P		**P**	**02 28 38.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=93,slow=16,SNR=2.4							
NOA				PP		**PP**	**02 32 30.2**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=95,slow=7.5,SNR=4.8							
NOA				LR		LR	03 13 58.5	
	comp=Z,336nm,19.4s,baz=85,slow=37							
	comp=Z,0.4nm,0.6s							
SPITS	**Spitsbergen Ar**	**97.94**	**348**	LR		LR	03 16 21.5	
	comp=Z,390nm,20.6s,baz=104,slow=38							
DBIC	**Dimbokro**	**99.49**	**275**	LR		LR	03 12 52.3	
	comp=Z,133nm,18.2s,baz=112,slow=35							
GAMB	**Gambell**	**101.73**	**27**	IAmb		IAmb	03 17 01.3	
	comp=Z,366nm,20.0s							
ESDC	**Sonseca Array**	**102.62**	**308**	PP		**PP**	**02 33 21.6**	**-2.0**
	comp=Z,3.4nm,1.2s,baz=84,slow=7.2,SNR=6.6							
F15K	**North Star Dit**	**104.66**	**25**	IAmb		IAmb	03 18 18.8	
	comp=Z,363nm,20.0s							
RDOG	**Red Dog Mine**	**105.04**	**22**	IAmb		IAmb	03 16 23.9	
	comp=Z,378nm,20.0s							
F17K	**Baldwin Pennin**	**105.93**	**24**	IAmb		IAmb	03 22 25.4	
	comp=Z,338nm,18.0s							
I17K	**Unalakleet**	**106.58**	**26**	IAmb		IAmb	03 19 59.6	
	comp=Z,287nm,18.0s							
D19K	**Kuparuk River**	**106.71**	**21**	IAmb		IAmb	03 26 17.1	
	comp=Z,344nm,18.0s							
J16K	**Anvik River**	**106.72**	**27**	IAmb		IAmb	03 16 31.3	
	comp=Z,343nm,21.0s							
H17K	**Granite Mounta**	**106.74**	**25**	IAmb		IAmb	03 22 53.7	
	comp=Z,325nm,19.0s							
G18K	**Tagagawik**	**107.07**	**24**	IAmb		IAmb	03 19 43.5	
	comp=Z,479nm,20.0s							
D20K	**Etivluk River**	**107.19**	**21**	IAmb		IAmb	03 16 48.8	
	comp=Z,455nm,19.0s							
F19K	**Shaleruckik Mo**	**107.21**	**23**	IAmb		IAmb	03 17 17.4	
	comp=Z,323nm,22.0s							
B21K	**Ikpikpuk River**	**107.63**	**20**	IAmb		IAmb	03 26 21.5	
	comp=Z,438nm,18.0s							
G19K	**Purcell Mounta**	**107.64**	**24**	IAmb		IAmb	03 21 07.6	
	comp=Z,325nm,21.0s							
H19K	**Roundabout Mou**	**108.04**	**24**	IAmb		IAmb	03 20 13.2	
	comp=Z,319nm,21.0s							
E21K	**Killik River**	**108.20**	**21**	IAmb		IAmb	03 24 05.4	
	comp=Z,417nm,19.0s							
J18K	**Innoko River**	**108.41**	**26**	IAmb		IAmb	03 26 40.8	
	comp=Z,300nm,19.0s							
L18K	**Granite Mounta**	**108.69**	**28**	IAmb		IAmb	03 26 07.3	
	comp=Z,320nm,19.0s							
J19K	**Poorman**	**108.76**	**26**	IAmb		IAmb	03 22 34.0	
	comp=Z,259nm,18.0s							
I20K	**Naaghedeneel**	**109.03**	**25**	IAmb		IAmb	03 24 42.3	
	comp=Z,292nm,18.0s							
E22K	**Anaktuvuk Pass**	**109.06**	**21**	IAmb		IAmb	03 19 28.1	
	comp=Z,395nm,20.0s							
D23K	**Nanushuk River**	**109.17**	**20**	IAmb		IAmb	03 18 27.0	
	comp=Z,448nm,19.0s							
K20K	**Telida**	**109.59**	**26**	IAmb		IAmb	03 28 42.0	
	comp=Z,355nm,18.0s							
COLD	**Coldfoot**	**109.95**	**22**	IAmb		IAmb	03 25 34.5	
	comp=Z,432nm,19.0s							
N19K	**Bonanza Creek**	**110.05**	**29**	IAmb		IAmb	03 23 04.1	
	comp=Z,312nm,19.0s							
G23K	**Bananza Creek**	**110.19**	**22**	IAmb		IAmb	03 22 46.1	
	comp=Z,294nm,20.0s							
D25K	**Kavik River**	**110.45**	**19**	IAmb		IAmb	03 27 32.1	
	comp=Z,306nm,19.0s							
PPLA	**Purkeypile**	**110.54**	**26**	IAmb		IAmb	03 26 56.1	
	comp=Z,287nm,18.0s							
F24K	**Squaw Lake**	**110.67**	**21**	IAmb		IAmb	03 28 08.8	
	comp=Z,405nm,19.0s							
NEEM	**North Greenlan**	**110.96**	**352**	*i* P		**PKiKP**	**02 33 45.2**	**-0.8**
NEEM				IAmb		IAmb	02 33 48.7	
	comp=Z,7.9nm,1.1s							
I23K	**Minto, Yukon-K**	**110.99**	**24**	IAmb		IAmb	03 22 14.2	
	comp=Z,325nm,21.0s							
G24K	**Hadweenzic Riv**	**111.14**	**22**	IAmb		IAmb	03 27 56.1	
	comp=Z,372nm,18.0s							
C27K	**Jago River**	**111.16**	**18**	IAmb		IAmb	03 24 32.9	
	comp=Z,413nm,20.0s							
L22K	**Petersville**	**111.27**	**27**	IAmb		IAmb	03 27 35.5	
	comp=Z,363nm,19.0s							
F25K	**Christian Rive**	**111.43**	**21**	IAmb		IAmb	03 25 35.9	
	comp=Z,445nm,20.0s							
PPT2	**Papeete2**	**111.52**	**114**	*e*SS		SS	02 50 07.5	+2.2
	comp=Z,431nm,26.8s							
PPT2				*e*LR		LR	03 06 49.8	
	comp=Z,682nm,28.2s							
PPT2				*e*LR		LR	03 06 52.1	
	comp=Z,550nm,40.5s							
COLA	**College**	**111.69**	**24**	IAmb		IAmb	03 24 53.6	
	comp=Z,277nm,18.0s							
FYU	**Fort Yukon**	**112.01**	**22**	IAmb		IAmb	03 21 24.2	
	comp=Z,302nm,20.0s							
ILAR	**Eielson Array**	**112.11**	**24**	PKiKP		**PKiKP**	**02 33 45.9**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=303,slow=4.1,SNR=5.7							
ILAR				PP		**PP**	**02 34 32.7**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=286,slow=5.1,SNR=4.2							
ILAR				PKKPbc		**PKKPbc**	**02 44 40.0**	**-2.0**
	comp=Z,1.0nm,0.9s,baz=133,slow=2.4,SNR=8.1							
E27K	**Coleen River**	**112.52**	**19**	IAmb		IAmb	03 25 48.8	
	comp=Z,294nm,19.0s							
G27K	**Doyon Strip**	**113.17**	**21**	IAMs_20		IAMs_20	03 26 05.9	
	comp=Z,298nm,18.0s							
H27K	**Steamboat Moun**	**113.49**	**21**	IAMs_20		IAMs_20	03 27 19.4	
	comp=Z,335nm,21.0s							
SCRK	**Sand Creek**	**113.59**	**24**	IAMs_20		IAMs_20	03 29 09.8	
	comp=Z,277nm,21.0s							
E29M	**Blow River**	**113.60**	**18**	IAMs_20		IAMs_20	03 29 35.2	
	comp=Z,344nm,19.0s							
TULEG	**Thule**	**113.65**	**356**	IAMs_20		IAMs_20	03 18 20.7	
	comp=Z,335nm,18.0s							
I27K	**Kandik River**	**113.76**	**22**	IAMs_20		IAMs_20	03 26 31.5	
	comp=Z,332nm,20.0s							
L26K	**Log Cabin Wild**	**114.25**	**25**	IAMs_20		IAMs_20	03 21 28.4	
	comp=Z,299nm,21.0s							
K27K	**Chicken**	**114.32**	**24**	IAMs_20		IAMs_20	03 30 55.1	
	comp=Z,264nm,19.0s							
I28M	**Miner Creek**	**114.45**	**22**	IAMs_20		IAMs_20	03 22 58.6	
	comp=Z,354nm,19.0s							
F30M	**Barrier River**	**114.69**	**19**	IAMs_20		IAMs_20	03 28 52.2	
	comp=Z,395nm,19.0s							
G30M	**tAoh Zraii Nji**	**114.91**	**19**	IAMs_20		IAMs_20	03 30 20.0	
	comp=Z,331nm,18.0s							
INK	**Inuvik**	**114.97**	**17**	PKP		**PKiKP**	**02 33 52.1**	**-1.3**
	comp=Z,5.8nm,1.0s,baz=70,slow=1.8,SNR=5.3							
EPYK	**Eagle Plains**	**115.09**	**20**	IAMs_20		IAMs_20	03 33 48.6	
	comp=Z,290nm,18.0s							
G31M	**Satah River**	**115.57**	**19**			**PKiKP**	**02 33 54.1**	**-0.6**
G31M				IAMs_20		IAMs_20	03 21 44.5	
	comp=Z,296nm,22.0s							
J29N	**Klondike Camp**	**115.59**	**22**	IAMs_20		IAMs_20	03 26 50.7	
	comp=Z,287nm,22.0s							
I30M	**Mount Dempster**	**115.84**	**21**	IAMs_20		IAMs_20	03 23 43.4	
	comp=Z,338nm,22.0s							
K29M	**Barlow Dome**	**116.17**	**23**	IAMs_20		IAMs_20	03 26 33.0	
	comp=Z,311nm,19.0s							
H31M	**Peel River**	**116.21**	**20**	IAMs_20		IAMs_20	03 28 29.2	
	comp=Z,279nm,19.0s							
J30M	**Hart River**	**116.21**	**22**			**PKiKP**	**02 33 54.7**	**-1.5**
J30M				IAMs_20		IAMs_20	03 26 22.3	
	comp=Z,309nm,20.0s							
LOGN	**Logan Glacier**	**116.22**	**26**	IAMs_20		IAMs_20	03 23 20.4	
	comp=Z,293nm,20.0s							
HYT	**Haines Junctio**	**117.73**	**26**			**PKPdf**	**02 33 58.3**	**-0.9**
ILON	**Igloolik, Nuna**	**121.46**	**358**			**PKPdf**	**02 34 04.9**	**-1.0**
NRS	**Narsarsuaq**	**121.54**	**338**	IAMs_20		IAMs_20	03 30 13.9	
	comp=Z,276nm,18.0s							
DLBC	**Dease Lake**	**122.22**	**25**	PKP		**PKPdf**	**02 34 05.9**	**-1.9**
	comp=Z,3.3nm,0.8s,baz=252,slow=9.0,SNR=3.8							
TAOE	**Nuku Hiva Isla**	**123.07**	**108**	*e*SS		SS	02 52 46.2	+10
	comp=Z,371nm,27.8s							
TAOE				*e*LR		LR	03 12 09.5	
	comp=Z,269nm,27.7s							
YKA	**Yellowknife Ar**	**124.58**	**15**	PKP		**PKPdf**	**02 34 10.8**	**-1.3**
	comp=Z,4.6nm,1.0s,baz=331,slow=2.3,SNR=7.9							
YKA				PP		**PP**	**02 35 59.4**	**+1.1**
	comp=Z,1.6nm,1.0s,baz=325,slow=5.8,SNR=4.7							
YKA	**Yellowknife Ar**	**124.58**	**15***c*	*i* PKIKP		**PKiKP**	**02 34 14.5**	**+2.1**
YKA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
BSFB	**Barra de Sao F**	**126.26**	**237**	*e*P		**PKPdf**	**02 34 15.8**	**-0.9**
GUA01	**Guaratinga, BA**	**126.45**	**240**	*e*P		**PKiKP**	**02 34 17.1**	**-0.5**
PLCA	**Paso Flores**	**126.62**	**195**	PKP		**PKPdf**	**02 34 15.2**	**-1.7**
	comp=Z,4.5nm,1.1s,baz=35,slow=8.0,SNR=4.3							
CMC01	**Camacan, BA**	**126.76**	**242**	*e*P		**PKiKP**	**02 34 17.9**	**-0.3**
ANCO	**Parque Anchore**	**127.62**	**210**	*e*P		**PKiKP**	**02 34 19.3**	**-0.2**
NBTA	**Tacaratu-PE**	**127.37**	**249**	*e*P		**PKiKP**	**02 34 20.4**	**-0.2**
ARCA	**Araçaí, MG**	**128.15**	**239**	*e*P		**PK

S22A	**4UR Ranch, Cre**	**147.54**	**31**	IAMs_20	IAMs_20	03 46 06.7		
	comp=Z,252nm,20.0s							
L56A	**Greenwood**	**147.88**	**348**	IAMs_20	IAMs_20	03 49 14.8		
	comp=Z,248nm,20.0s							
SDCO	**Great Sand Dun**	**148.20**	**29**	IAMs_20	IAMs_20	03 46 21.1		
	comp=Z,223nm,21.0s							
K43A	**Burlington**	**148.22**	**3**	IAMs_20	IAMs_20	03 49 25.8		
	comp=Z,255nm,19.0s							
KSCO	**Kaye Shedlock'**	**148.44**	**25**	IAMs_20	IAMs_20	03 48 48.6		
	comp=Z,221nm,19.0s							
AAM	**Ann Arbor**	**148.57**	**356**	IAMs_20	IAMs_20	03 51 56.0		
	comp=Z,256nm,19.0s							
L40A	**Anamosa**	**148.62**	**7**	IAMs_20	IAMs_20	03 49 42.0		
	comp=Z,237nm,19.0s							
L44A	**Lake County Fo**	**148.76**	**2**	IAMs_20	IAMs_20	03 46 56.2		
	comp=Z,294nm,21.0s							
N58A	**Sunbury**	**148.93**	**346**	IAMs_20	IAMs_20	03 46 38.8		
	comp=Z,267nm,19.0s							
TUC	**Tucson**	**149.00**	**43**	PKP2	**PKiKP**	**02 35 02.5**	**-0.6**	
TUC	**Tucson**	**149.00**	**43**		**PKiKP**	**02 35 02.5**	**-0.6**	
M52A	**Chesterland**	**149.11**	**353**	IAMs_20	IAMs_20	03 46 04.5		
	comp=Z,288nm,22.0s							
M44A	**Midewin, Midew**	**149.55**	**2**	IAMs_20	IAMs_20	03 45 13.9		
	comp=Z,256nm,20.0s							
N38A	**Joes South For**	**149.57**	**10**	IAMs_20	IAMs_20	03 48 03.9		
	comp=Z,225nm,21.0s							
N53A	**Liebon**	**149.76**	**352**	IAMs_20	IAMs_20	03 46 13.9		
	comp=Z,267nm,22.0s							
N51A	**Ashland**	**149.84**	**354**	IAMs_20	IAMs_20	03 47 00.7		
	comp=Z,215nm,19.0s							
ANMO	**Albuquerque**	**149.85**	**34**	PKHKP	PKPpre	02 34 59.5		
ANMO	**Albuquerque**	**149.85**	**34**		**PKPdf**	**02 34 59.5**	**+0.2**	
R32A	**Long Quarter,**	**150.42**	**20**	IAMs_20	IAMs_20	03 49 51.9		
	comp=Z,274nm,22.0s							
RTBA	**Rita Blanca**	**150.55**	**27**		**PKPbc**	**02 35 03.9**	**-1.6**	
SFIN	**Lafayette**	**150.58**	**1**	IAMs_20	IAMs_20	03 45 28.5		
	comp=Z,218nm,20.0s							
P38A	**Dawn**	**150.65**	**11**	IAMs_20	IAMs_20	03 47 06.4		
	comp=Z,249nm,20.0s							
BBSR	**BB Station**	**150.69**	**320**		**PKPbc**	**02 35 05.0**	**-0.7**	
O48B	**Farmland**	**150.69**	**358**	IAMs_20	IAMs_20	03 50 25.6		
	comp=Z,253nm,20.0s							
MCWV	**Mont Chateau**	**150.72**	**350**		**PKPbc**	**02 35 04.8**	**-0.8**	
MCWV				IAMs_20	IAMs_20	03 43 13.6		
	comp=Z,275nm,21.0s							
O49A	**Covington**	**150.72**	**357**	IAMs_20	IAMs_20	03 47 35.6		
	comp=Z,268nm,20.0s							
MACA	**Manacapuru-AM**	**150.86**	**243**	*eP*	**PKPdf**	**02 35 03.1**	**+2.0**	
P40A	**Paris**	**151.00**	**9**	IAMs_20	IAMs_20	03 52 39.8		
	comp=Z,243nm,19.0s							
P53A	**Whipple**	**151.13**	**352**	IAMs_20	IAMs_20	03 48 29.2		
	comp=Z,262nm,20.0s							
P48A	**Milroy**	**151.49**	**358**	IAMs_20	IAMs_20	03 45 23.8		
	comp=Z,235nm,18.0s							
Q51A	**Peebles**	**151.81**	**355**	IAMs_20	IAMs_20	03 43 37.6		
	comp=Z,272nm,22.0s							
R40A	**Maddies Statio**	**152.17**	**10**	IAMs_20	IAMs_20	03 49 21.9		
	comp=Z,268nm,20.0s							
T35A	**Sooner Cattle**	**152.49**	**18**	IAMs_20	IAMs_20	03 55 55.9		
	comp=Z,245nm,18.0s							
S39A	**Bolivar**	**152.56**	**12**	IAMs_20	IAMs_20	03 48 46.9		
	comp=Z,252nm,20.0s							
CCM	**Cathedral Cave**	**152.56**	**8**	PKIKP	**PKPdf**	**02 35 02.2**	**-0.8**	
CCM	**Cathedral Cave**	**152.56**	**8**		**PKPdf**	**02 35 02.2**	**-0.8**	
CCM	**Cathedral Cave**	**152.56**	**8**	IAMs_20	IAMs_20	03 48 31.3		
	comp=Z,247nm,20.0s							
R50A	**Paris**	**152.62**	**356**	IAMs_20	IAMs_20	03 53 02.9		
	comp=Z,206nm,21.0s							
R49A	**Shelbyville**	**152.65**	**358**	IAMs_20	IAMs_20	03 48 19.6		
	comp=Z,215nm,19.0s							
WCI	**Wyandotte Cave**	**152.74**	**360**	PKIKP	**PKPbc**	**02 35 09.0**	**-1.3**	
WCI	**Wyandotte Cave**	**152.74**	**360**		**PKPbc**	**02 35 09.0**	**-1.3**	
BOAV	**Boa Vista**	**152.97**	**254**	*eP*	**PKPdf**	**02 35 04.3**	**0.0**	
TUL3	**Leonard**	**153.64**	**17**	IAMs_20	IAMs_20	03 49 18.2		
	comp=Z,254nm,21.0s							
T50A	**Nancy**	**153.90**	**357**	IAMs_20	IAMs_20	03 45 40.8		
	comp=Z,237nm,21.0s							
T47A	**Sharon Grove**	**153.97**	**1**	IAMs_20	IAMs_20	03 50 36.0		
	comp=Z,209nm,21.0s							
V55A	**Taylorsville**	**154.66**	**350**	IAMs_20	IAMs_20	03 47 39.0		
	comp=Z,265nm,20.0s							
WVT	**Waverly**	**154.80**	**3**	PKIKP	**PKPdf**	**02 35 05.1**	**-1.1**	
WVT	**Waverly**	**154.80**	**3**		**PKPdf**	**02 35 05.1**	**-1.1**	
WVT	**Waverly**	**154.80**	**3**	IAMs_20	IAMs_20	03 51 22.9		
	comp=Z,205nm,18.0s							
SVN	**Savane Anatole**	**155.08**	**282**	IAMs_20	IAMs_20	04 00 07.7		
	comp=Z,237nm,20.0s							
TXAR	**Lajitas Array**	**155.55**	**39**	PKP	**PKPdf**	**02 35 07.2**	**-0.4**	
	comp=Z,2.7nm,1.0s,baz=219,slow=1.6,SNR=13							
TXAR				PKPab	**PKPab**	**02 35 33.4**	**+0.1**	
	comp=Z,18nm,1.0s,baz=256,slow=1.8,SNR=19							
TXAR	**Lajitas Array**	**155.55**	**39**		**PKPdf**	**02 35 06.5**	**-1.1**	
W50A	**Signal Mountai**	**155.74**	**358**	IAMs_20	IAMs_20	03 48 27.3		
	comp=Z,274nm,22.0s							
X51A	**Calhoun**	**156.35**	**357**	IAMs_20	IAMs_20	03 52 24.6		
	comp=Z,252nm,20.0s							
JCT	**Junction City**	**156.84**	**31**	IAMs_20	IAMs_20	03 56 08.8		
	comp=Z,238nm,19.0s							
Y52A	**Lilburn**	**156.99**	**355**	IAMs_20	IAMs_20	03 51 22.8		
	comp=Z,245nm,20.0s							
CZSB	**Cruzeiro do Su**	**157.05**	**217**	*eP*	**PKPdf**	**02 35 09.8**	**-0.1**	
GOGA	**Godfrey**	**157.38**	**354**	IAMs_20	IAMs_20	03 47 50.4		
	comp=Z,202nm,21.0s							
Z47A	**Carrollton**	**157.70**	**4**	IAMs_20	IAMs_20	03 54 38.7		
	comp=Z,226nm,19.0s							
LRAL	**Lakeview Retre**	**157.91**	**1**	IAMs_20	IAMs_20	03 54 55.1		
	comp=Z,221nm,20.0s							
154A	**Montrose**	**158.13**	**353**	IAMs_20	IAMs_20	03 56 32.2		
	comp=Z,211nm,20.0s							
152A	**Waverly Hall**	**158.23**	**356**	IAMs_20	IAMs_20	03 47 53.4		
	comp=Z,244nm,22.0s							
HKT	**Hockley**	**159.06**	**23**	IAMs_20	IAMs_20	03 58 33.3		
	comp=Z,237nm,21.0s							
ROSC	**El Rosal**	**166.62**	**244**	PKP	**PKPdf**	**02 35 19.7**	**-0.5**	
	comp=Z,4.0nm,0.4s,baz=43,slow=8.0,SNR=4.4							
ROSC				PKPab	**PKPab**	**02 36 22.4**	**0.0**	
	comp=Z,3.2nm,0.3s,baz=132,slow=10,SNR=5.4							
OTAV	**Otavalo**	**166.82**	**217**	*eP*	**PKPdf**	**02 35 20.2**	**-0.3**	

AUST 19 02:24:30.9±0.7, 28°S±5°×12°0E±°, h0km, mb4.0/1, ML2.8/10, Error ellipse: s-maj=15.5km s-min=5.4km az=52.1, confirmed, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEEK	**Meekatharra**	**1.66**	**310**	P	Pn	02 24 59.3	-2.0
MEEK				S	Sg	02 25 24.3	0.0
KANBL	**Kanowna Belle,**	**3.18**	**155**	P	Pn	02 25 21.3	-0.9
KANBL				S	Sn	02 26 03.0	+2.1
BCON	**Beacon, Wester**	**3.28**	**217**	P	Pn	02 25 23.7	0.0
WATNG	**Watoning, WA**	**3.41**	**208**	P	Pn	02 25 24.6	-0.8
MORW	**Morawa**	**3.77**	**248**	P	Pn	02 25 30.7	+0.4
KORDA	**Koorda, Wester**	**3.85**	**214**	P	Pn	02 25 31.4	0.0
KORDA				S	Sn	02 26 17.3	-0.1
KMBL	**Kambalda**	**3.98**	**157**	P	Pn	02 25 32.9	-0.3
KMBL				S	Sn	02 26 19.8	-0.8
BLDU	**Ballidu**	**4.10**	**224**	P	Pn	02 25 34.1	-0.8
BLDU				S	Sn	02 26 23.8	+0.3
KLBR	**Kellerberrin**	**4.34**	**207**	P	Pn	02 25 38.1	-0.1
MUN	**Mundaring**	**5.39**	**217**	P	Pn	02 25 52.2	-0.4
	comp=Z,26nm,1.6s,comp=Z,0.1nm						

*AEIC **19** 02:25:51.9±1.4, 58°.35N±0°.02×133°.50W±0°.03, h4km±6km, Error ellipse: s-maj=3.4km s-min=1.7km az=154.0*
*NEIC **19** 02:25:51.9±1.4, 58°.35N±0°.02×133°.50W±0°.04, h5km±2km, ML2.6/44, ML2.2(AEIC), Error ellipse: s-maj=4.0km s-min=3.0km az=141.0*
*PGC **19** 02:25:53.3, 58°.39N×133°.48W, h5km, ML2.5/7, ML2.6(NEIC), 55km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 19 02:25:51.5±1.2, 58°.35N±0°.03×133°.48W±0°.03, h5km±11km, n40, σ0°71/45, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.48**	**262**		**Pg**	**02 26 00.9**	**+0.1**
JIS					**Sg**	**02 26 07.6**	**+0.5**
R32K	**Eaglecrest**	**0.55**	**263**		**Pg**	**02 26 02.3**	**+0.1**
R32K					**Sg**	**02 26 09.9**	**+0.6**
BESE	**Bessie Mountai**	**0.76**	**288**	P	**Pg**	**02 26 06.0**	**-0.1**
BESE	**Bessie Mountai**	**0.76**	**288**		**Pg**	**02 26 05.8**	**-0.3**
BESE	**Bessie Mountai**	**0.76**	**288**		**Sg**	**02 26 16.6**	**+0.7**
Q32M	**Nakina River**	**0.88**	**45**	P	**Pg**	**02 26 08.5**	**+0.1**
Q32M	**Nakina River**	**0.88**	**45**		**Sb**	**02 26 21.6**	**0.0**
S32K	**Killisnoo**	**1.06**	**214**		**Pb**	**02 26 12.3**	**0.0**
S32K				IAML		02 26 36.9	
	comp=N,76nm,0.4s						
S32K	**Killisnoo**	**1.06**	**214**		**Sb**	**02 26 26.5**	**+0.1**
R31K	**City Hall, Gus**	**1.19**	**274**	S	**Sn**	**02 26 30.8**	**-0.6**
P32M	**Atlin**	**1.25**	**354**	P	**Pn**	**02 26 15.0**	**-0.7**
P32M	**Atlin**	**1.25**	**354**		**Pn**	**02 26 15.2**	**-0.6**
P32M				IAML		02 26 42.9	
	comp=E,80nm,0.5s						
P32M	**Atlin**	**1.25**	**354**		**Sn**	**02 26 33.7**	**+0.6**
S34M	**Telegraph Cree**	**1.32**	**108**	P	**Pb**	**02 26 17.1**	**+0.4**
S34M	**Telegraph Cree**	**1.32**	**108**		**Pn**	**02 26 16.2**	**-0.4**
SKAG	**Skagway**	**1.47**	**320**		**Pn**	**02 26 18.7**	**0.0**
SKAG				IAML		02 26 49.8	
	comp=N,69nm,0.5s						
SKAG				IAML		02 26 54.0	
	comp=E,77nm,0.7s						
S31K	**Pelican**	**1.51**	**256**		**Pn**	**02 26 19.4**	**+0.2**
S31K					**Sg**	**02 26 39.9**	**-0.1**
SIT	**Sitka**	**1.63**	**218**	Pn	**Pn**	**02 26 21.0**	**+0.2**
SIT				IAML		02 26 57.0	
	comp=N,42nm,1.1s						
R33M	**Jennings River**	**1.68**	**50**	Pn	**Pn**	**02 26 22.0**	**+0.4**
R33M				Sn	**Sb**	**02 26 44.4**	**0.0**
R33M	**Jennings River**	**1.68**	**50**		**Pb**	**02 26 22.9**	**-0.1**
R33M				IAML		02 26 57.8	
	comp=E,67nm,0.8s						
DLBC	**Dease Lake**	**1.82**	**86**	Pn	**Pb**	**02 26 25.6**	**+0.3**
DLBC				Sn	**Sb**	**02 26 49.1**	**+0.6**
DLBC	**Dease Lake**	**1.82**	**86**		**Pb**	**02 26 24.6**	**-0.7**
PLBC	**Pleasant Camp**	**1.87**	**308**	Pn	**Pb**	**02 26 25.3**	**-0.8**
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn	**Pn**	**02 26 25.2**	**+0.6**
P33M	**Teslin, Yukon**	**1.90**	**10**		**Pn**	**02 26 24.7**	**0.0**
P33M				IAML		02 27 01.7	
	comp=N,45nm,0.8s						
P33M				IAML		02 27 02.8	
	comp=E,38nm,0.6s						
WRAK	**Wrangell Islan**	**2.03**	**162**		**Pn**	**02 26 26.4**	**+0.1**
WRAK				IAML		02 27 07.0	
	comp=E,47nm,0.7s						
T35M	**Bob Quinn**	**2.21**	**127**		**Pb**	**02 26 30.9**	**-1.1**
T35M				IAML		02 27 12.2	
	comp=N,44nm,0.8s						
T35M				IAML		02 27 16.5	
	comp=E,41nm,0.9s						
U33K	**Whale Pass**	**2.25**	**175**		**Pn**	**02 26 29.1**	**-0.2**
U33K	**Whale Pass**	**2.25**	**175**	IAML		02 27 16.0	
	comp=N,22nm,0.9s						
U33K				IAML		02 27 19.4	
	comp=E,21nm,0.9s						
WHY	**Whitehorse**	**2.43**	**343**		**Pn**	**02 26 32.5**	**+0.6**
WHY				IAML		02 27 19.7	
	comp=N,35nm,0.9s						
O30N	**Mendenhall**	**2.77**	**332**	Pn	**Pn**	**02 26 37.6**	**+1.0**
O30N				Sg	**Sg**	**02 27 18.4**	**-2.0**
O30N	**Mendenhall**	**2.77**	**332**		**Pn**	**02 26 37.3**	**+0.7**
O30N				IAML		02 27 28.4	
	comp=N,24nm,0.8s						
O30N				IAML		02 27 36.7	
	comp=E,28nm,1.0s						
CRAG	**Craig**	**2.89**	**176**	Pn	**Pn**	**02 26 38.1**	**-0.1**
CRAG				IAML		02 27 35.7	
	comp=N,11nm,0.9s						
CRAG				IAML		02 27 37.0	
	comp=E,11nm,1.1s						
HYT	**Haines Junctio**	**3.22**	**322**		**Pn**	**02 26 44.4**	**+1.6**
HYT				IAML		02 27 46.7	
	comp=E,21nm,1.0s						
N31M	**Braeburn, Yuko**	**3.35**	**341**		**Pn**	**02 26 44.5**	**-0.1**
N30M	**Aishikik Lake**	**3.61**	**331**		**Pn**	**02 26 48.4**	**+0.2**
N30M				IAML		02 27 57.2	
	comp=N,15nm,0.8s						
N30M				IAML		02 28 02.3	
	comp=E,15nm,0.7s						
M31M	**Drury Creek, Y**	**3.89**	**354**		**Pn**	**02 26 54.1**	**+2.1**
M31M				IAML		02 28 17.1	
	comp=N,10nm,1.1s						
M30M	**Minto, Yukon**	**4.55**	**340**	Pn	**Pn**	**02 27 01.8**	**+0.7**
L29M	**L29M**	**5.29**	**336**	Pn	**Pn**	**02 27 10.2**	**-1.0**

*TRN **19** 02:31:10.0, 10°.88N×62°.01W, h88km, MD3.2, North of the Paria peninsula.*
*FUNV **19** 02:31:22.6, 10°.93N×62°.18W, h28km, MW3.5, Presumed earthquake*

ISC 19 02:31:22.0±4.5, 10°.9N±0°.1×62°.0W±0°.3, h88km±26km, n11, σ0°46/21, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.47**	**117**	*eP*	**Pn**	**02 31 36.5**	**+0.2**
DMDM				*eS*	**Sn**	**02 31 46.3**	**-0.6**
PSMG	**Mucurapo Girls**	**0.50**	**119**	*eP*	**Pn**	**02 31 36.7**	**+0.2**
PSMG				*eS*	**Sn**	**02 31 46.9**	**-0.4**
TRN	**Trinidad (W)**	**0.62**	**115**	*eP*	**Pn**	**02 31 37.8**	**+0.2**
TRN				*eS*	**Sn**	**02 31 49.3**	**+0.2**
TRN	**Trinidad (W)**	**0.62**	**115**	*iP*	**Pn**	**02 31 37.8**	**+0.2**
TRN				*eS*	**Sn**	**02 31 48.9**	**-0.3**
GRFF	**Grenada Fort F**	**1.15**	**12**	*eP*	**Pn**	**02 31 43.1**	**-0.3**
GRFF				*eS*	**Sn**	**02 31 59.6**	**+0.2**
GRGR	**Grenville**	**1.25**	**14**	*eP*	**Pn**	**02 31 44.5**	**0.0**
GRGR				*eS*	**Sn**	**02 32 01.2**	**-0.4**
GRGR	**Grenville**	**1.25**	**14**	*eP*	**Pn**	**02 31 44.5**	**0.0**
GRGR				*eS*	**Sn**	**02 32 02.2**	**+0.6**
GRSS	**Sisters**	**1.42**	**14**	*eP*	**Pn**	**02 31 46.8**	**+0.2**
GRSS				*eS*	**Sn**	**02 32 05.8**	**+0.4**
GCMP	**Grenada, Carri**	**1.65**	**19**	*eP*	**Pn**	**02 31 50.2**	**+0.6**
GCMP				*eS*	**Sn**	**02 32 10.2**	**-0.4**
GCMP	**Grenada, Carri**	**1.65**	**19**	*eP*	**Pn**	**02 31 49.7**	**+0.1**
GCMP				*eS*	**Sn**	**02 32 11.1**	**+0.5**
SLBI	**Saint Lucia, B**	**3.24**	**17**	*eS*	**Sn**	**02 32 47.3**	**-1.1**

KRSC 19 02:42:32.6±1.6, 55°.36N×166°.75E, h32km±10km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.47**	**251**	*i P*	Pn	02 42 43.7	+0.7
BKI				*eS*	Sb	02 42 49.8	-0.4
KBTR	**Krutoberegovo**	**2.38**	**293**	*eP*	Pn	02 43 10.9	+1.7
MKZ	**Mys Kozlova**	**3.00**	**257**	*eP*	Pn	02 43 21.2	+3.4
MKZ				*eS*	Sn	02 43 55.8	+3.1
SMKR	**Semkarok**	**3.21**	**295**	*eP*	Pn	02 43 22.9	+2.1
ZLN	**Zelenaya**	**3.43**	**284**	*eP*	Pb	02 43 28.3	-4.3
KLY	**Klyuchi**	**3.57**	**288**	*eS*	Sn	02 44 09.9	+3.4
TUMD	**Tumrok D**	**3.63**	**270**	*eS*	Sn	02 44 13.6	+5.3
KIRR	**Kirishev**	**3.68**	**282**	*eP*	Pn	02 43 31.1	+3.8
KMNR	**Kamenistaya**	**3.72**	**279**	*eP*	Pn	02 43 32.6	+4.8
TUMR	**Tumrok**	**3.77**	**272**	*eP*	Pn	02 43 32.9	+4.4
TUMR				*eS*	Sb	02 44 18.3	-5.4
SPN	**Mys Shipunski**	**4.55**	**243**	*eP*	Pn	02 43 44.5	+5.4
NLC	**Nalytchevo**	**4.86**	**246**	*eS*	Sn	02 44 42.5	+4.0
SDLR	**Sedlovina**	**5.05**	**249**	*eP*	Pn	02 43 51.0	+4.9
SMAR	**Somma**	**5.11**	**249**	*eP*	Pn	02 43 51.8	+4.8
KRER	**Koryakskii**	**5.11**	**250**	*eP*	Pn	02 43 51.9	+4.8
UGLR	**Uglovaya**	**5.12**	**248**	*eP*	Pn	02 43 50.9	+3.9
AVH	**Avacha**	**5.14**	**249**	*eP*	Pn	02 43 52.5	+5.3
KRX	**Arik**	**5.14**	**250**	*eP*	Pn	02 43 52.0	+4.6
KOK	**Koryaka**	**5.18**	**250**	*eP*	Pn	02 43 52.7	+4.8
GNL	**Ganaly**	**5.39**	**256**	*eP*	Pn	02 43 55.9	+5.1
RUS	**Russkaya**	**5.68**	**242**	*eP*	Pn	02 43 59.0	+4.3
MTVR	**Mutnovka**	**5.82**	**244**	*eP*	Pn	02 44 00.8	+4.1
MTVR				*eS*	Sn	02 45 06.7	+4.3
ASAK	**Asacha**	**6.02**	**244**	*eP*	Pn	02 44 05.4	+6.0

*IDC **19** 02:46:40.6±0.8, 0°.59S×20°.20W, h0km, mb3.9/14, mbtmp3.9/15, ML4.4/1, MS3.7/2, Error ellipse: s-maj=28.1km s-min=17.2km az=140.0*
*NEIC **19** 02:46:42.0±1.3, 0°.6S±0°.1×20°.3W±0°.1, h10km±1km, mb4.5/10, Error ellipse: s-maj=21.3km s-min=15.4km az=239.0*

ISC 19 02:46:42.7±0.5, 0°.67S±0°.09×20°.27W±0°.08, h18km, n38, σ1°10/31, mb4.1/15, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.15**	**141**	T	T	02 58 24.1	
	baz=320,slow=74,SNR=75						
H10N3	**ASCENSION HYDR**	**9.15**	**141**	T	T	02 58 37.1	
	baz=320,slow=74,SNR=83						
H10N1	**ASCENSION HYDR**	**9.17**	**141**	T	T	02 58 35.6	
	baz=320,slow=74,SNR=105						
ASCN	**Ascension**	**9.31**	**141**		**Pn**	**02 48 55.7**	**-0.6**
H10S3	**ASCENSION HYDR**	**9.95**	**146**	T	T	02 59 42.2	
	baz=324,slow=74,SNR=868						
H10S2	**ASCENSION HYDR**	**9.96**	**146**	T	T	02 59 48.7	
	baz=256,slow=74,SNR=799						
SACV	**Santiago Islan**	**15.88**	**348**	Pn	**Pn**	**02 50 24.8**	**-0.8**
SACV				IAmb	IAmb	02 50 41.4	
	comp=Z,46nm,1.2s						
RCBR	**Riachuelo**	**16.43**	**251**	Pn	**Pn**	**02 50 30.1**	**-2.4**
	comp=Z,1.1nm,0.3s,baz=84,slow=20,SNR=17						
RCBR				Sn	Sn	02 53 20.0	-15
	comp=Z,0.3nm,0.3s,baz=344,slow=23,SNR=7.9						
RCBR	**Riachuelo**	**16.43**	**251**		**Pn**	**02 50 29.8**	**-2.8**
RCBR				IAmb	IAmb	02 50 34.1	
	comp=Z,43nm,1.3s						
DBIC	**Dimbokro**	**17.02**	**64**	Pn	**Pn**	**02 50 40.0**	**0.0**
	comp=Z,1.3nm,0.3s,baz=260,slow=13,SNR=14						
DBIC				Sn	Sn	02 53 32.4	-17
	comp=Z,0.9nm,0.3s,baz=175,slow=12,SNR=3.7						
	comp=Z,3.5nm,0.3s						
DBIC	**Dimbokro**	**17.02**	**64**		**Pn**	**02 50 39.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**25.74**	**57**	P	**P**	**02 52 13.1**	**+0.5**
	comp=Z,8.0nm,1.0s,baz=243,slow=8.6,SNR=23						
	comp=Z,8.0nm,1.0s						
BDFB	**Brasilia**	**31.16**	**240**	P	**P**	**02 53 03.1**	**+2.0**
	comp=Z,0.9nm,0.5s,baz=85,slow=11,SNR=3.5						
	comp=Z,0.9nm,0.5s						
MDT	**Midelt**	**36.43**	**23**	P	**P**	**02 53 47.0**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=196,slow=9.6,SNR=1.1						
	comp=Z,1.6nm,0.8s						
ESDC	**Sonseca Array**	**42.83**	**19**	P	**P**	**02 54 40.0**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=212,slow=7.5,SNR=8.8						
	comp=Z,1.3nm,0.9s						
LPAZ	**La Paz**	**49.65**	**249**	P	**P**	**02 55 35.1**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=92,slow=5.3,SNR=8.0						
	comp=Z,1.0nm,0.7s						
LPAZ	**La Paz**	**49.65**	**249**	P	**P**	**02 55 34.0**	**-0.5**
LPAZ				IAmb	IAmb	02 55 48.7	
	comp=Z,2.9nm,0.8s						
SUR	**Sutherland**	**49.91**	**133**	LR	LR	03 12 56.4	
	comp=Z,75nm,18.5s,baz=80,slow=32						
LBTB	**Lobatse**	**50.46**	**122**	P	**P**	**02 55 40.4**	**+0.5**
LBTB				IAmb	IAmb	02 55 41.5	
	comp=Z,15nm,1.4s						
MATP	**Matopo**	**51.53**	**116**	LR	LR	03 14 27.3	
	comp=Z,69nm,20.4s,baz=360,slow=32						
BOSA	**Boshof**	**51.58**	**127**	P	**P**	**02 55 47.9**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=282,slow=9.6,SNR=4.0						
	comp=Z,3.5nm,0.9s						
BOSA	**Boshof**	**51.58**	**127**	P	**P**	**02 55 48.3**	**-0.1**
BOSA				IAmb	IAmb	02 56 18.3	
	comp=Z,13nm,1.5s						
GERES	**GERESS Array B**	**57.37**	**26**	P	**P**	**02 56 29.6**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=224,slow=3.7,SNR=7.4						
	comp=Z,0.6nm,0.8s						
BATG	**Bathurst New B**	**62.21**	**327**	P	**P**	**02 57 03.7**	**+0.4**
BRTR	**Keskin Array B**	**63.45**	**44**	P	**P**	**02 57 11.4**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=234,slow=9.4,SNR=6.2						
	comp=Z,1.3nm,0.8s						
I62A	**Tamworth**	**63.48**	**321**	P	**P**	**02 57 12.4**	**+0.6**
NOA	**NORSAR Array B**	**66.11**	**16**	P	**P**	**02 57 28.1**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=216,slow=6.4,SNR=3.4						
	comp=Z,1.3nm,0.9s						
AKASG	**Malin Array Be**	**66.16**	**32**	P	**P**	**02 57 28.3**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=240,slow=7.1,SNR=1.8						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**71.24**	**22**	P	**P**	**02 58 02.5**	**+1.9**
	comp=Z,1.6nm,1.0s,baz=203,slow=9.0,SNR=2.4						
	comp=Z,1.6nm,1.0s						
FINES	**FINESS Array B**	**71.24**	**22**	P	**P**	**02 58 00.2**	**-0.4**
KBZ	**Khabaz**	**71.38**	**43**	P	**P**	**02 58 01.6**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=252,slow=3.2,SNR=4.0						
	comp=Z,2.1nm,1.0s						
O48B	**Farmland**	**71.50**	**313**	P	**P**	**02 58 02.3**	**-0.3**
O48B				IAmb	IAmb	02 58 19.4	
	comp=Z,3.5nm,0.7s						
ECSD	**EROS Data Cent**	**80.61**	**314**	P	**P**	**02 58

MSWZ **Moikau Station** 28.91 167 P P 02 53 36.9 -0.2
PLWZ **Palliser** 29.06 167 P P 02 53 37.8 -0.6
INZ **Inchbonnie** 29.57 174 P P 02 53 44.0 +1.1
LTZ **Lake Taylor** 29.73 172 P P 02 53 45.2 +0.9
STKA **Stephens Creek** 29.85 227 P P 02 53 45.8 +0.4
comp=Z,45nm,0.6s,baz=48,slow=8.0,SNR=100
STKA PcP PcP 02 56 44.5 +0.1
comp=Z,12nm,0.7s,baz=87,slow=3.9,SNR=9.4
comp=Z,45nm,0.6s
STKA **Stephens Creek** 29.85 227 P P 02 53 45.8 +0.4
FOZ **Fox Glacier** 30.23 176 P P 02 53 49.9 +1.3
OXZ **Oxford** 30.24 173 P P 02 53 49.0 +0.3
RPZ **Rata Peaks** 30.52 174 P P 02 53 52.0 +0.9
comp=Z,9.2nm,0.7s,baz=358,slow=3.1,SNR=20
comp=Z,9.2nm,0.7s
TOO **Toolangi** 30.94 215 IAmb IAmb 02 53 56.6
comp=Z,11nm,0.8s
WR8 **Warramunga Arr** 31.92 254 P P 02 54 02.6 -1.2
WR8 IAmb IAmb 02 54 03.6
comp=Z,5.2nm,0.9s
WRA **Warramunga Arr** 32.07 254 P P 02 54 04.2 -1.0
comp=Z,6.8nm,0.8s,baz=84,slow=9.0,SNR=43
WRA PcP PcP 02 56 50.4 -0.2
comp=Z,2.5nm,1.0s,baz=80,slow=2.3,SNR=6.2
WRA PKiKP PKiKP 03 04 17.1 -1.6
comp=Z,0.2nm,0.6s,baz=18,slow=0.2,SNR=7.4
comp=Z,6.8nm,0.8s
WRA **Warramunga Arr** 32.07 254 P P 02 54 03.8 -1.4
AS31 **Alice Springs** 33.08 247 P P 02 54 12.7 -1.3
AS31 IAmb IAmb 02 54 13.4
comp=Z,3.9nm,0.6s
ASAR **Alice Springs** 33.09 247 P P 02 54 12.8 -1.2
comp=Z,8.4nm,0.5s,baz=75,slow=9.1,SNR=260
ASAR PcP PcP 02 56 52.7 -0.7
comp=Z,3.8nm,0.8s,baz=86,slow=2.6,SNR=11
ASAR ScP ScP 03 00 19.3 -2.2
comp=Z,1.2nm,1.0s,baz=79,slow=4.4,SNR=2.6
ASAR PKiKP PKiKP 03 04 17.4 -1.9
comp=Z,0.3nm,0.6s,baz=96,slow=1.7,SNR=5.0
ASAR LR LR 03 06 04.7
comp=Z,108nm,18.2s,baz=6.5,slow=33
comp=Z,8.4nm,0.5s
ASAR **Alice Springs** 33.09 247 P P 02 54 12.3 -1.6
BBOO **Buckleboo** 34.38 230 P P 02 54 24.8 -0.1
MTN **Manton Dam** 35.05 267 IAmb IAmb 02 55 08.8
comp=Z,11nm,1.4s
KNRA **Kununurra** 37.19 262 P P 02 54 48.8 -0.3
SIJI **Sorong** 37.59 286 P P 02 54 52.9 +0.4
comp=Z,19nm,1.2s
FITZ **Fitzroy Crossi** 40.17 258 P P 02 55 13.4 -0.5
comp=Z,5.2nm,0.7s,baz=58,slow=7.5,SNR=12
comp=Z,5.2nm,0.7s
BATI **Baumata** 42.63 269 P P 02 55 32.6 -1.4
comp=Z,12nm,0.3s,baz=167,slow=0.8,SNR=4.1
comp=Z,12nm,0.3s
MBWA **Marble Bar** 45.81 253 P 02 55 59.4 +0.2
MBWA **Marble Bar** 45.81 253 P P 02 55 58.7 -0.5
MEEK **Meekatharra** 47.23 246 P P 02 56 08.5 -1.7
TOLI2 **Tolitoli** 48.12 284 P 02 56 15.7 -1.5
TOLI2 IAmb IAmb 02 56 17.0
comp=Z,14nm,1.0s
TOLI2 **Tolitoli** 48.12 284 P P 02 56 14.2 -3.0
NWAO **Narrogin (SRO)** 49.39 238 P P 02 56 25.6 -0.9
comp=Z,16nm,0.6s,baz=87,slow=7.6,SNR=14
comp=Z,16nm,0.6s
MORW **Morawa** 49.78 243 P P 02 56 29.2 -0.4
SNJI **Sawahan-Nganju** 54.62 270 P P 02 57 06.7 +1.0
comp=Z,37nm,1.0s
JMN **Monobe** 56.47 327 P P 02 57 17.6 -0.7
MJAR **Matsushiro Arr** 56.57 332 P P 02 57 18.5 -0.4
comp=Z,3.7nm,0.6s,baz=163,slow=8.7,SNR=0.8
comp=Z,3.7nm,0.6s
MJAR **Matsushiro Arr** 56.57 332 IAmb IAmb 02 57 19.4
comp=Z,6.2nm,0.8s
JKA **Kamikawa-asahi** 61.34 340 P P 02 57 52.7 +1.1
JKA IAmb IAmb 02 57 53.4
comp=Z,7.8nm,0.8s
KSRS **Korea Array** 62.47 325 P P 02 57 59.6 +0.3
comp=Z,3.8nm,0.8s,baz=132,slow=6.5,SNR=11
comp=Z,3.8nm,0.8s
VNDA **Vanda** 64.30 181 P P 02 58 11.2 +0.4
comp=Z,3.9nm,0.6s,baz=358,slow=7.4,SNR=31
comp=Z,3.9nm,0.6s
VNDA **Vanda** 64.30 181 P P 02 58 11.3 +0.6
VNDA IAmb IAmb 02 58 12.6
comp=Z,6.4nm,0.8s
NJ2 **Nanjing** 64.55 315 eP P 02 58 15.3 +2.2
NJ2 pmax pmax
comp=Z,18nm,0.6s
SBA **Scott Base** 64.58 180 P P 02 58 14.1 +1.6
SBA IAmb IAmb 02 58 14.6
comp=Z,12nm,0.9s
CASY **Casey** 64.81 202 P P 02 58 13.8 -0.4
CASY IAmb IAmb 02 58 14.2
comp=Z,8.3nm,0.7s
CASY **Casey** 64.81 202 P P 02 58 13.0 -1.2
AMKA **Amchitka** 65.25 8 P P 02 58 18.1 +0.9
AMKA IAmb IAmb 02 58 19.3
comp=Z,7.7nm,1.0s
USA0B **Ussuriysk Arra** 65.54 333 P P 02 58 19.1 -0.1
USA0B IAmb IAmb 02 58 21.4
comp=Z,9.9nm,0.9s
USRK **Ussuriysk Ar.** 65.54 333 P P 02 58 20.6 +1.4
comp=Z,4.9nm,0.7s,baz=156,slow=7.2,SNR=11
comp=Z,4.9nm,0.7s
USRK **Ussuriysk Ar.** 65.54 333 P 02 58 19.4 +0.2
KIWB **Kanaga Island** 66.28 11 P P 02 58 24.9 +1.2
KIWB IAmb IAmb 02 58 25.9
comp=Z,11nm,0.8s
ADK **Adak** 66.40 11 P P 02 58 24.9 +0.4
ADK IAmb IAmb 02 58 26.1
comp=Z,14nm,1.1s
PET **Petropavlovsk** 66.44 354 P P 02 58 25.4 +0.7
comp=Z,23nm,1.4s
PETK **Petropavlovsk-** 66.61 354 P P 02 58 26.7 +0.9
comp=Z,10nm,0.7s,baz=146,slow=5.6,SNR=21
comp=Z,10nm,0.7s
MDJ **Mudanjiang** 66.95 332 P P 02 58 29.3 +1.2
MDJ pmax pmax
comp=Z,12nm,1.1s
CN2 **Changchun** 68.34 329 P P 02 58 37.1 +0.2
CN2 pP pwP 02 59 22.4 +5.0
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KULM **Kulim** 68.53 281 P P 02 58 38.3 -0.4
KULM IAmb IAmb 02 58 39.5
comp=Z,16nm,1.1s
BNX **BinXian** 68.81 331 ⇓P P 02 58 40.1 +0.4
BNX pmax pmax
comp=Z,8.0nm,0.7s
RPSI **Rantau Prapat** 69.49 278 P P 02 58 44.1 -0.5
PSI **Prapat** 69.51 278 P P 02 58 43.5 -1.4
comp=Z,25nm,0.9s
LYN **LuoYang** 70.37 314 P P 02 58 50.3 +0.7
LYN pmax pmax
comp=Z,18nm,0.9s
GSI **Gunungsitoli** 70.44 276 P P 02 58 49.8 -0.7
HNS **HongShan** 70.44 318 ⇑P P 02 58 50.4 +0.5
HNS pmax pmax
comp=Z,12nm,1.1s
BJI2 **Beijing** 71.05 321 P P 02 58 53.4 -0.2
BJI2 pmax pmax
comp=Z,4.0nm,1.2s
HEH **HeiHe** 72.20 334 eP P 02 59 00.9 +0.7
HEH pmax pmax
comp=Z,7.0nm,1.0s
XAN **Xi'an** 72.62 312 P P 02 59 03.1 0.0
XAN pmax pmax
comp=Z,13nm,1.2s
KMI2 **Kunming** 73.44 302 ⇑P P 02 59 09.3 +1.0
BSI **Banda Aceh** 73.71 280 P P 02 59 08.8 -1.1
comp=Z,24nm,0.8s
CMAR **Chiang Mai Arr** 74.24 294 P P 02 59 13.6 +0.7
comp=Z,8.5nm,0.8s,baz=123,slow=4.4,SNR=46
comp=Z,8.5nm,0.8s
CMAR **Chiang Mai Arr** 74.24 294 P P 02 59 13.4 +0.6
CHTO **Chiang Mai** 74.36 294 P P 02 59 13.9 +0.3
CHTO IAmb IAmb 02 59 15.0
comp=Z,17nm,1.1s
CHTO **Chiang Mai** 74.36 294 P P 02 59 13.8 +0.3
comp=Z,15nm,1.4s
CHTO **Chiang Mai** 74.36 294 P P 02 59 13.3 -0.3
HHC **Hu-ho-hao-te** 74.40 319 eP P 02 59 15.4 +1.9
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,78nm,5.0s
PZH **PanZhiHua** 74.81 302 P P 02 59 17.3 +1.2
HILR **Hailar Array B** 75.16 330 P P 02 59 18.2 +0.7
comp=Z,3.1nm,0.6s,baz=131,slow=8.1,SNR=11
comp=Z,3.1nm,0.6s
QSPA **South Pole Qui** 76.74 180 P P 02 59 26.7 +0.3
comp=Z,33nm,0.9s,baz=342,slow=0.4,SNR=153
comp=Z,33nm,0.9s
QSPA **South Pole Qui** 76.74 180 P P 02 59 26.7 +0.3
R17L **Mt. Peulik Vol** 76.79 19 P P 02 59 25.9 -0.6
baz=217
O15K **Ungalikthiuk R** 77.02 17 P P 02 59 27.1 -0.7
baz=213
N14K **Kuskokwak Cree** 77.16 16 P P 02 59 28.7 +0.3
baz=211
NPW **Naypyitaw** 77.18 294 P P 02 59 29.3 -0.2
LZH **Lanzhou** 77.25 312 eP P 02 59 31.0 +1.2
LZH pP pP 03 00 16.4 +5.1
LZH sP sP 03 00 28.8 -0.6
LZH pmax pmax
comp=Z,19nm,1.0s
Q17K **Contact Creek** 77.45 19 P P 02 59 30.3 0.0
baz=217
OHAK **Old Harbor** 77.49 21 P P 02 59 30.3 0.0
baz=220
Q16K **King Salmon** 77.54 18 P P 02 59 30.9 +0.2
baz=216
ACHA **Angle Creek He** 77.59 19 P P 02 59 30.9 -0.1
ACHA IAmb IAmb 02 59 31.8
comp=Z,6.0nm,1.1s
N15K **Kwethluk River** 77.79 16 IAmb IAmb 02 59 34.0
comp=Z,7.0nm,0.9s
N15K **Kwethluk River** 77.79 16 P P 02 59 32.1 +0.1
baz=213
M14K **Bethel** 77.80 15 P P 02 59 32.4 +0.4
baz=211
O16K **Kokwok River B** 77.86 17 P P 02 59 32.3 -0.1
baz=215
P17K **Kvichak River** 78.03 18 P P 02 59 33.5 +0.2
baz=216
Q18K **Katmai Hardscr** 78.04 19 P P 02 59 33.4 -0.1
baz=218,SNR=7.8
M15K **Kasigluk River** 78.07 16 P P 02 59 33.8 +0.2
baz=212
L14K **Kuka Creek** 78.13 14 IAmb IAmb 02 59 35.7
comp=Z,21nm,1.5s
L14K **Kuka Creek** 78.13 14 P P 02 59 34.5 +0.7
baz=210
KDAK **Kodiak Island** 78.17 21 P P 02 59 34.1 0.0
baz=220
K13K **Kusilvak Mount** 78.19 13 P P 02 59 33.9 -0.2
baz=208
O17K **Koliganek Bris** 78.30 18 P P 02 59 34.3 -0.5
baz=216
N16K **Nishlik Lake** 78.40 16 P P 02 59 35.7 +0.2
baz=214
GAMB **Gambell** 78.53 9 P P 02 59 36.3 +0.4
baz=201
P18K **Big Mountain,** 78.56 19 P P 02 59 36.3 0.0
baz=217
L15K **Ungalak Mounta** 78.71 15 P P 02 59 37.3 +0.3
baz=211
M16K **Timber Creek** 78.81 16 IAmb IAmb 02 59 39.2
comp=Z,7.5nm,0.7s
M16K **Timber Creek** 78.81 16 P P 02 59 38.2 +0.6
baz=214,SNR=8.2
N17K **Nushagak Hills** 78.89 17 P P 02 59 39.0 +0.9
baz=215
O18K **Koktuh Hills** 78.93 18 P P 02 59 38.8 +0.4
baz=217
J14K **Nanvaranak Lak** 79.16 13 P P 02 59 40.1 +0.7
baz=209
K15K **Wolf Creek Mou** 79.23 14 IAmb IAmb 02 59 42.6
comp=Z,12nm,0.7s
K15K **Wolf Creek Mou** 79.23 14 P P 02 59 40.4 +0.5
baz=211
L16K **Owhat River** 79.25 15 P P 02 59 40.5 +0.5
baz=213
N18K **Kilae Creek** 79.39 18 P P 02 59 41.3 +0.5
baz=217
P19K **Oil Pt** 79.39 19 P P 02 59 41.6 +0.7
baz=219
M17K **Holitna River** 79.54 16 P P 02 59 42.5 +0.9
baz=215
L17K **Donlin** 79.91 16 P P 02 59 44.1 +0.6
baz=214
HOM **Homer** 79.92 20 P P 02 59 44.9 +1.3
baz=221
N19K **Bonanza Creek** 79.92 18 P P 02 59 45.0 +1.3
baz=218
O20K **Slope Mountain** 79.92 19 P P 02 59 44.6 +0.9
baz=220
M18K **Stuy River** 80.06 17 P P 02 59 45.5 +1.1
baz=217
J16K **Anvik River** 80.30 14 P P 02 59 47.2 +1.6
baz=212
ANM **Nome** 80.38 12 P P 02 59 47.1 +1.1
baz=207
K17K **Iditarod** 80.39 15 P P 02 59 47.1 +1.0
baz=214
L18K **Granite Mounta** 80.41 16 P P 02 59 47.6 +1.4
baz=216
YAK **Yakutsk** 80.61 343 P P 02 59 47.4 +0.1
comp=Z,25nm,0.7s,baz=135,slow=2.2,SNR=8.9
comp=Z,25nm,0.7s
YAK **Yakutsk** 80.61 343 P P 02 59 47.2 0.0
YAK **Yakutsk** 80.61 343 P P 02 59 47.6 +0.3
J17K **VABM Dome** 80.77 15 P P 02 59 49.1 +1.0
baz=213
I17K **Unalakleet** 80.79 14 P P 02 59 49.9 +1.7
baz=212
TNA **Tin City** 80.81 10 P P 02 59 49.5 +1.3
baz=205
ULN **Ulaanbaatar** 80.89 324 P P 02 59 49.6 +0.3
ULN IAmb IAmb 02 59 50.9
comp=Z,13nm,1.2s
ULN **Ulaanbaatar** 80.89 324 P P 02 59 49.6 +0.3
comp=Z,39nm,1.3s
ULN **Ulaanbaatar** 80.89 324 P P 02 59 49.9 +0.6
L19K **White Mountain** 80.89 17 P P 02 59 50.7 +1.8
baz=217
SEW **Seward** 80.98 20 P P 02 59 50.7 +1.4
baz=223
F14K **Arctic Creek** 81.02 11 P P 02 59 51.1 +1.7
baz=206
G15K **Niukluk** 81.03 12 P P 02 59 50.8 +1.4
baz=208
H16K **Elim** 81.09 13 P P 02 59 51.3 +1.5
baz=210
M20K **Styx River** 81.16 18 P P 02 59 50.9 +0.6
baz=219
O22K **Cooper Landing** 81.17 20 P P 02 59 51.6 +1.3
baz=222
SONM **Songino Array** 81.26 324 P P 02 59 50.8 -0.4
comp=Z,2.1nm,0.8s,baz=139,slow=5.4,SNR=11
comp=Z,2.1nm,0.8s
SONM **Songino Array** 81.26 324 P P 02 59 51.2 0.0
J18K **Innoko River** 81.42 16 P P 02 59 52.5 +1.0
baz=216,SNR=7.2
F15K **North Star Dit** 81.54 11 P P 02 59 53.4 +1.2
baz=208
Q23K **Middleton Isla** 81.59 22 P P 02 59 53.4 +1.0
baz=226
P23K **Montague Islan** 81.62 21 P P 02 59 53.6 +1.0
baz=225
RC01 **Rabbit Creek A** 81.62 20 P P 02 59 53.2 +0.6
baz=222
GTA2 **Gaotai** 81.64 314 eP P 02 59 54.5 +1.1
GTA2 pmax pmax
comp=Z,13nm,1.7s
SKT **Skwentna** 81.72 18 P P 02 59 54.2 +1.0
baz=221
G16K **Koyuk River** 81.73 12 P P 02 59 53.9 +0.8
baz=210
H17K **Granite Mounta** 81.87 14 P P 02 59 54.4 +0.5
baz=212
PWL **Port Wells** 81.92 20 IAmb IAmb 02 59 56.7
comp=Z,12nm,0.9s
PWL **Port Wells** 81.92 20 P P 02 59 53.7 -0.5
baz=224
K20K **Telida** 82.05 17 P P 02 59 55.1 +0.2
baz=218
J19K **Poorman** 82.14 16 P P 02 59 55.2 -0.1
baz=217
G17K **Kiwalik Mounta** 82.18 13 P P 02 59 55.8 +0.3
baz=212
PMR **Palmer** 82.19 19 P P 02 59 56.3 +0.7
baz=223
PPLA **Purkeypile** 82.23 18 P P 02 59 56.1 +0.2
baz=220
KNK **Knik Glacier** 82.28 20 P P 02 59 56.4 +0.3
baz=224
GLI **Glacier Island** 82.35 21 P P 02 59 56.8 +0.3
baz=225
L22K **Petersville** 82.37 18 P P 02 59 56.7 +0.2
baz=221
H18K **Honhosa River** 82.41 14 P P 02 59 57.1 +0.5
baz=214
CUT **Chulitna** 82.43 19 P P 02 59 57.3 +0.5
baz=222
GCSA **Galena City Sc** 82.43 15 P P 02 59 56.9 +0.2
baz=215
EYAK **Cordova Ski Ar** 82.59 21 P P 02 59 58.2 +0.6
baz=226
SML **Sawmill** 82.61 20 P P 02 59 58.1 +0.2
baz=224
KAIM **Kayak Island** 82.64 22 P P 02 59 57.8 -0.2
baz=227
CAST **Castle Rocks** 82.66 17 IAmb IAmb 02 59 59.8
comp=Z,6.0nm,0.8s
CAST **Castle Rocks** 82.66 17 P P 02 59 58.2 +0.2
baz=220
J20K **Nowinta River** 82.68 16 P P 02 59 58.1 0.0
baz=218
M23K **Glacier View** 82.80 20 P P 02 59 59.5 +0.7
baz=224
F17K **Baldwin Pennin** 82.86 12 P P 02 59 59.2 +0.3
baz=211
CHUM **Lake Minchumin** 82.95 17 P P 03 00 00.0 +0.6
baz=220
G18K **Tagagawik** 82.96 13 P P 02 59 59.5 0.0
baz=214
I20K **Naaghedeneel** 83.08 16 P P 03 00 00.5 +0.4
baz=218
MAW **Mawson** 83.17 202 P P 03 00 00.8 +0.1
comp=Z,9.1nm,0.6s,baz=117,slow=5.9,SNR=23
comp=Z,9.1nm,0.6s
MAW **Mawson** 83.17 202 P P 03 00 00.4 -0.2
MAW **Mawson** 83.17 202 P P 03 00 00.9 +0.3
H19K **Roundabout Mou** 83.17 14 P P 03 00 00.1 -0.4
baz=216
KLU **Klutina** 83.19 21 P P 03 00 01.0 +0.2
baz=226
TRF **Thorofare Moun** 83.21 18 P P 03 00 01.0 0.0
baz=222
WAT1 **Susitna Watana** 83.28 19 P P 03 00 01.5 +0.2
baz=223
BMRM **Bremner River** 83.29 22 P P 03 00 01.7 +0.4
baz=227
E17K **Hotham Inlet** 83.30 12 P P 03 00 01.9 +0.7
baz=210
F18K **Selawik** 83.34 13 P P 03 00 02.1 +0.7
baz=213
WAT6 **Susitna Watana** 83.36 19 P P 03 00 02.3 +0.5
baz=224
G19K **Purcell Mounta** 83.53 14 IAmb IAmb 03 00 05.4
comp=Z,3.9nm,0.7s
G19K **Purcell Mounta** 83.53 14 P P 03 00 03.1 +0.7
baz=215
H20K **Anotleneega Mo** 83.53 15 P P 03 00 03.3 +0.9
baz=217
M24K **Tolsona, Glenn** 83.53 20 P P 03 00 03.3 +0.7
baz=226
D17K **Noatak River** 83.60 11 P P 03 00 03.6 +0.9
baz=209
CRQE **Cirque** 83.69 22 P P 03 00 04.1 +0.6
baz=228
C16K **Lisburne Hills** 83.71 10 P P 03 00 03.8 +0.6
baz=207
N25K **Chitina, Valde** 83.73 21 P P 03 00 04.4 +0.8
baz=227
MCK **McKinley** 83.83 18 IAmb IAmb 03 00 04.9
comp=Z,6.9nm,1.0s
MCK **McKinley** 83.83 18 P P 03 00 04.9 +0.9
baz=223
DHY **Denali Highway** 83.83 19 IAmb IAmb 03 00 08.5
comp=Z,3.0nm,0.5s
DHY **Denali Highway** 83.83 19 P P 03 00 04.6 +0.4
baz=224
E18K **Tukpahlearik C** 83.84 12 P P 03 00 05.1 +1.1
baz=212
RDOG **Red Dog Mine** 83.94 11 P P 03 00 05.2 +0.8
baz=209
F19K **Shaleruckik Mo** 83.94 13 P P 03 00 05.3 +0.8
baz=214
I21K **Tanana** 84.05 16 IAmb IAmb 03 00 06.3
comp=Z,6.6nm,0.8s
I21K **Tanana** 84.05 16 P P 03 00 05.7 +0.7
baz=220,SNR=10
HARP **HAARP** 84.08 20 P P 03 00 05.8 +0.5
baz=226
MCARA **McCarthy VSAT** 84.14 22 P P 03 00 06.1 +0.5
baz=228
H21K **Melozitna Rive** 84.20 16 P P 03 00 06.2 +0.4
baz=219
IMAR **Indian Mountai** 84.21 15 P P 03 00 06.7 +0.8
C17K **DeLong Mountai** 84.26 11 P P 03 00 06.4 +0.3
baz=209
MLY **Manley** 84.27 17 P P 03 00 06.0 -0.3
baz=221,SNR=10
PINM **Pinnacle** 84.34 24 P P 03 00 06.8 +0.1
baz=231
PAX **Paxson** 84.37 20 P P 03 00 06.8 0.0
baz=226
NEA2 **Nenana** 84.42 17 P P 03 00 07.2 +0.2
baz=223,SNR=5.4
YBH **Yreka Blue Hor** 84.49 45 P P 03 00 09.7 +1.7
comp=Z,2.0nm,1.0s,baz=263,slow=22,SNR=2.1
comp=Z,2.0nm,1.0s
YBH **Yreka Blue Hor** 84.49 45 IAmb IAmb 03 00 39.5
comp=Z,9.2nm,1.4s
E19K **Redstone River** 84.58 13 IAmb IAmb 03 00 11.9
comp=Z,3.5nm,0.8s
E19K **Redstone River** 84.58 13 P P 03 00 09.0 +1.3
baz=215
F20K **Avaraart Lake** 84.58 14 P P 03 00 09.0 +1.4
baz=216
SIT **Sitka** 84.59 28 P P 03 00 08.8 +0.9
baz=236
WRH **Wood River Hil** 84.62 18 IAmb IAmb 03 00 08.0
comp=Z,5.2nm,0.6s
G21K **Allakaket** 84.69 15 P P 03 00 08.8 +0.5
baz=218
S31K **Pelican** 84.71 27 P P 03 00 08.8 +0.4
baz=235
TLY **Talaya** 84.72 326 P P 03 00 08.0 -0.8
comp=Z,4.5nm,0.7s,baz=274,slow=2.9,SNR=5.5
TLY LR LR 03 38 18.9
comp=Z,36nm,18.4s,baz=202,slow=36
comp=Z,4.5nm,0.7s
TLY **Talaya** 84.72 326 IAmb IAmb 03 00 09.5
comp=Z,7.9nm,0.9s
CRAG **Craig** 84.74 30 P P 03 00 09.0 +0.3
baz=238
I23K **Minto, Yukon-K** 84.75 17 P P 03 00 09.4 +0.9
baz=222
H22K **Ishtalitna Cre** 84.76 16 IAmb IAmb 03 00 09.9
comp=Z,4.8nm,0.9s
H22K **Ishtalitna Cre** 84.76 16 P P 03 00 09.3 +0.7
baz=220,SNR=9.9
C18K **Utukok River** 84.78 11 P P 03 00 09.4 +0.7
baz=211
O28M **Mount Upton** 84.79 23 P P 03 00 09.5 +0.2
baz=231
M26K **Nabesna, AK** 84.82 21 P P 03 00 09.2 +0.1
baz=228
CCB **Clear Creek Bu** 84.83 18 IAmb IAmb 03 00 09.8
comp=Z,5.3nm,0.6s
K24K **Donnelly Dome** 84.86 19 P P 03 00 09.6 +0.4
baz=226
HDA **Harding Lake** 84.92 18 IAmb IAmb 03 00 09.9
comp=Z,8.3nm,0.5s
HDA **Harding Lake** 84.92 18 P P 03 00 09.0 -0.5
baz=225,SNR=12
COLA **College** 84.98 18 P P 03 00 09.4 -0.3
COLA pP pP 03 00 51.9 +0.2
P29M **Windy Craggy** 85.06 25 P P 03 00 10.2 0.0
baz=233
RIDG **Independent Ri** 85.11 19 P P 03 00 10.8 +0.4
baz=227
L26K **Log Cabin Wild** 85.12 20 P P 03 00 10.8 +0.3
baz=228
O29M **Mount Kennedy** 85.13 24 P P 03 00 11.1 +0.4
baz=233
S32K **Killisnoo** 85.16 27 P P 03 00 10.5 -0.2
baz=236

M27K	Edge Creek, AK	85.19	21	P	P	03 00 11.4	+0.4	
	baz=229							
IL31		85.20	18	IAmb	IAmb	03 00 11.3		
	comp=Z,6.2nm,0.8s							
ILAR	Eielson Array	85.20	18	P	P	03 00 10.3	-0.5	
	comp=Z,4.8nm,0.6s,baz=242,slow=5.1,SNR=148							
ILAR				PKKPbc	PKKPdf	03 18 14.7	+3.2	
	comp=Z,0.5nm,0.8s,baz=3.4,slow=1.8,SNR=5.1							
	comp=Z,4.8nm,0.6s							
H23K	Yukon River	85.20	16	P	P	03 00 11.7	+0.9	
	baz=222							
D19K	Kuna River	85.25	12	P	P	03 00 11.5	+0.5	
	baz=214							
F21K	Alatna River	85.25	14	P	P	03 00 11.9	+0.8	
	baz=218							
YUK8	Steele Glacier	85.27	23	P	P	03 00 11.4	-0.2	
	baz=231							
POKR	Poker Plat Res	85.28	18	P	P	03 00 11.2	0.0	
	baz=224							
V35K	Ketchikan	85.40	30	P	P	03 00 11.8	-0.2	
	baz=239							
E20K	Nigu River	85.46	13	P	P	03 00 12.2	+0.1	
	baz=216							
G22K	Bettles	85.51	15	P	P	03 00 12.6	+0.3	
	baz=220							
J25K	Salcha River,	85.55	19	IAmb	IAmb	03 00 14.8		
	comp=Z,6.5nm,0.6s							
J25K	Salcha River,	85.55	19	P	P	03 00 13.2	+0.5	
	baz=226,SNR=21							
SCRK	Sand Creek	85.55	19	P	P	03 00 13.2	+0.5	
	baz=227,SNR=7.4							
YUK6	Outpost Mounta	85.60	23	P	P	03 00 13.5	+0.3	
	baz=233							
BRWY	Burwash Landin	85.60	23	P	P	03 00 13.5	+0.5	
	baz=232							
WRAK	Wrangell Islan	85.62	29	P	P	03 00 13.7	+0.6	
	baz=238							
R32K	Eaglecrest	85.63	27	P	P	03 00 13.9	+0.8	
	baz=236							
P30M	Million Dollar	85.66	25	P	P	03 00 14.0	+0.7	
	baz=234							
L27K	Beaver Creek,	85.67	21	P	P	03 00 13.7	+0.5	
	baz=229							
H24K	Noodor Dome	85.68	17	P	P	03 00 13.8	+0.6	
	baz=224							
G23K	Bananza Creek	85.73	16	IAmb	IAmb	03 00 15.9		
	comp=Z,3.6nm,0.6s							
G23K	Bananza Creek	85.73	16	P	P	03 00 14.3	+0.8	
	baz=222							
YUK4	Talbot Arm	85.74	23	P	P	03 00 14.7	+0.9	
	baz=232							
D20K	Etivluk River	85.75	13	IAmb	IAmb	03 00 16.5		
	comp=Z,12nm,0.9s							
D20K	Etivluk River	85.75	13	P	P	03 00 14.5	+1.0	
	baz=215							
F22K	John River	85.79	15	P	P	03 00 14.3	+0.5	
	baz=220							
HYT	Haines Junctio	85.86	24	P	P	03 00 14.9	+0.5	
	baz=234							
SKAG	Skagway	85.95	26	P	P	03 00 15.1	+0.5	
	baz=236							
COLD	Coldfoot	86.08	15	P	P	03 00 15.9	+0.8	
	baz=222							
E21K	Killik River	86.10	13	P	P	03 00 16.0	+0.8	
	baz=218							
PRP	Porcupine Dome	86.14	18	P	P	03 00 15.7	+0.1	
	baz=226							
A19K	Wainwright	86.14	10	P	P	03 00 16.6	+1.3	
	baz=211							
E22K	Anaktuvuk Pass	86.37	14	P	P	03 00 17.7	+1.2	
	baz=220							
O30N	Mendenhall	86.39	24	P	P	03 00 18.0	+1.1	
	baz=235							
N30M	Aishikik Lake	86.40	23	P	P	03 00 17.8	+0.9	
	baz=234							
G24K	Hadweenzic Riv	86.42	16	P	P	03 00 17.7	+1.0	
	baz=224							
NVAR	Mina Array Bea	86.44	49	P	P	03 00 18.9	+1.1	
	comp=Z,0.2nm,0.5s,baz=232,slow=3.5,SNR=1.9							
NVAR				PKKPbc	PKKPbc	03 18 12.9	-2.3	
	comp=Z,0.7nm,0.4s,baz=188,slow=14,SNR=6.2							
M29M	Somme Creek	86.48	22	P	P	03 00 18.4	+1.1	
	baz=232							
C21K	Knifeblade Rid	86.50	13	P	P	03 00 17.9	+0.8	
	baz=217							
B20K	Meade River	86.70	12	P	P	03 00 18.9	+0.8	
	baz=215							
P32M	Atlin	86.71	26	P	P	03 00 19.1	+0.6	
	baz=237							
WHY	Whitehorse	86.82	25	P	P	03 00 20.3	+1.3	
	baz=236							
G25K	Bearman Lake	86.84	17	P	P	03 00 20.3	+1.4	
	baz=225							
E23K	Chandalar	86.85	15	P	P	03 00 20.0	+1.1	
	baz=222							
F24K	Squaw Lake	86.90	16	P	P	03 00 20.7	+1.6	
	baz=224							
T35M	Bob Quinn	86.90	29	P	P	03 00 20.4	+1.1	
	baz=240							
B21K	Ikpikpuk River	86.91	13	IAmb	IAmb	03 00 22.2		
	comp=Z,7.6nm,0.7s							
B21K	Ikpikpuk River	86.91	13	P	P	03 00 20.3	+1.3	
	baz=217							
N31M	Braeburn, Yuko	86.93	24	P	P	03 00 20.8	+1.3	
	baz=235							
S34M	Telegraph Cree	86.96	28	P	P	03 00 20.9	+1.3	
	baz=239							
L29M	L29M	87.00	22	P	P	03 00 21.1	+1.4	
	baz=233							
DAWY	Dawson	87.15	21	P	P	03 00 21.8	+1.4	
	baz=232							
E24K	Your Creek	87.15	15	P	P	03 00 21.8	+1.4	
	baz=223							
M30M	Minto, Yukon	87.18	23	P	P	03 00 21.8	+1.2	
	baz=234							
D23K	Nanushuk River	87.27	14	IAmb	IAmb	03 00 24.4		
	comp=Z,7.5nm,0.9s							
D23K	Nanushuk River	87.27	14	P	P	03 00 22.0	+1.2	
	baz=221							
TOLK	Toolik Lake Re	87.30	15	P	P	03 00 22.3	+1.2	
	baz=222							
I27K	Kandik River	87.39	19	P	P	03 00 22.7	+1.2	
	baz=230							
F25K	Christian Rive	87.56	16	P	P	03 00 23.7	+1.4	
	baz=226							
G26K	Porcupine Rive	87.64	17	P	P	03 00 24.0	+1.4	
	baz=228							
B22K	Teshekpuk Lake	87.73	12	P	P	03 00 24.3	+1.3	
	baz=218							
DLBC	Dease Lake	87.73	28	P	P	03 00 24.2	+0.9	
	baz=240							
R33M	Jennings River	87.79	27	P	P	03 00 24.3	+0.6	
	baz=239							
EVN	Everest	87.80	299	P	P	03 00 23.8	-1.3	
H27K	Steamboat Moun	87.83	18	P	P	03 00 24.6	+0.9	
	baz=230							
I28M	Miner Creek	87.83	19	P	P	03 00 24.4	+0.6	
	baz=231							
D24K	Happy Valley	87.86	14	P	P	03 00 24.5	+0.8	
	baz=223							
E25K	Arctic Village	87.95	16	P	P	03 00 25.5	+1.4	
	baz=226							
C23K	Itkillik River	87.95	13	P	P	03 00 24.8	+0.7	
	baz=221							
F26K	Sheenjek River	88.04	17	P	P	03 00 25.5	+1.0	
	baz=227							
G27K	Doyon Strip	88.17	18	P	P	03 00 25.9	+0.7	
	baz=230							
J30M	Hart River	88.52	21	P	P	03 00 27.3	+0.3	
	baz=234							
D25K	Kavik River	88.59	15	P	P	03 00 27.6	+0.5	
	baz=225							
H29M	Whitestone	88.82	19	P	P	03 00 28.4	+0.1	
	baz=232							
I30M	Mount Dempster	88.88	21	P	P	03 00 28.8	+0.1	
	baz=234							
E27K	Coleen River	89.09	17	P	P	03 00 29.2	-0.3	
	baz=230							
F28M	Old Crow	89.22	18	P	P	03 00 29.8	-0.3	
	baz=231							
G29M	Pine Creek	89.35	19	P	P	03 00 30.7	0.0	
	baz=233							
C26K	Camden Bay	89.37	15	P	P	03 00 30.5	-0.2	
	baz=226							
EPYK	Eagle Plains	89.44	20	P	P	03 00 31.2	0.0	
	baz=234							
C27K	Jago River	89.47	15	P	P	03 00 30.8	-0.4	
	baz=228							

E28M	Babbage River	89.94	17	P	P	03 00 33.5	0.0	
	baz=231							
D27M	Malcolm River	89.95	16	P	P	03 00 33.6	+0.1	
	baz=230							
G30M	tAoh Zraii Nji	89.96	19	P	P	03 00 33.5	-0.2	
	baz=234							
E29M	Blow River	90.29	18	P	P	03 00 35.5	+0.5	
	baz=233							
F30M	Barrier River	90.47	19	P	P	03 00 36.8	+0.9	
	baz=235							
NEW	Newport	90.55	40	LR	LR	03 34 58.9		
	comp=Z,116nm,21.2s,baz=344,slow=31							
G31M	Satah River	90.56	20	P	P	03 00 37.2	+1.0	
	baz=236							
INK	Inuvik	91.57	19	P	P	03 00 42.3	+1.4	
	baz=237							
ELIB	Princess Elisa	91.61	191	*d*P	P	03 00 40.7	-0.8	
	comp=Z,4.4nm,1.1s							
TROLL	Troll, Antarti	94.29	185	⇑P	P	03 00 53.1	-0.6	
	comp=Z,397nm,0.7s							
SNAA	Sanae	94.98	183	P	P	03 00 55.9	-1.0	
	comp=Z,5.4nm,1.1s,baz=201,slow=7.3,SNR=5.4							
	comp=Z,5.4nm,1.1s							
SNAA	Sanae	94.98	183	P	P	03 00 56.1	-0.8	
SNAA	Sanae	94.98	183	P	P	03 00 56.4	-0.5	
SNAA				pP	pP	03 01 40.4	+0.9	
C36M	Paulatuk	95.08	19	P	P	03 00 58.4	+1.3	
	baz=246							
TXAR	Lajitas Array	95.71	61	P	P	03 01 02.5	+1.5	
	comp=Z,0.3nm,0.8s,baz=15,slow=5.2,SNR=3.2							
	comp=Z,0.3nm,0.8s							
VNA2	Neumayer--Watz	95.92	182	⇑P	P	03 01 00.1	-1.0	
	comp=Z,5.1nm,0.6s,baz=179,slow=4.3							
VNA2	Neumayer--Watz	95.92	182	P	P	03 01 00.6	-0.4	
MKAR	Makanchi Array	96.07	317	P	P	03 01 02.1	0.0	
	comp=Z,3.3nm,0.6s,baz=93,slow=6.4,SNR=23							
	comp=Z,3.3nm,0.6s							
MKAR	Makanchi Array	96.07	317	P	P	03 01 01.6	-0.6	
ZALV	Zalesovo Beam	96.15	324	P	P	03 01 01.2	-1.1	
	comp=Z,2.5nm,0.6s,baz=108,slow=4.8,SNR=12							
	comp=Z,2.5nm,0.6s							
VNA1	Neumayer--Stat	96.22	182	⇑P	P	03 01 02.0	-0.3	
	comp=Z,3.3nm,0.7s							
MAKZ	Makanchi	96.28	316	P	P	03 01 02.9	-0.2	
YKA	Yellowknife Ar	96.33	27	P	P	03 01 03.0	+0.1	
	comp=Z,3.4nm,0.5s,baz=248,slow=4.3,SNR=2.3							
	comp=Z,0.4nm,0.5s							
NRIK	Noril'sk	98.68	339	P	P	03 01 12.8	-0.5	
	comp=Z,5.9nm,0.6s,baz=84,slow=7.9,SNR=4.4							
	comp=Z,5.9nm,0.6s							
KURK	Kurchatov	99.21	320		Pdif	03 01 15.6	-0.5	
KURK	Kurchatov	99.21	320	IAmb	IAmb	03 01 25.8		
	comp=Z,0.8nm,0.8s							
KURBB	Kurchatov Arra	99.25	320	P	Pdif	03 01 15.6	-0.7	
	comp=Z,0.6nm,0.2s,baz=89,slow=4.4,SNR=2.5							
	comp=Z,0.6nm,0.2s							
BVAR	Borovoye Array	104.53	322	Pdiff	Pdif	03 01 39.1	-0.7	
	comp=Z,0.6nm,0.3s,baz=101,slow=2.9,SNR=2.5							
LPAZ	La Paz	117.98	117	PKP	PKPdf	03 06 21.8	-0.4	
	comp=Z,0.6nm,0.7s,baz=212,slow=2.5,SNR=2.7							
ARA0	ARCESS Array S	118.82	346	*e*	PKPdf	03 06 21.0	-0.5	
ARCES	ARCESS Array B	118.82	346	PKP	PKPdf	03 06 21.0	-0.5	
	comp=Z,6.1nm,0.4s,baz=76,slow=2.0,SNR=100							
ARCES				PKKPbc	PKKPab	03 16 36.2	-3.3	
	comp=Z,1.1nm,0.6s,baz=174,slow=1.1,SNR=6.3							
ARCES	ARCESS Array B	118.82	346		PKPdf	03 06 20.9	-0.5	
KTK1	Kautokeino	119.76	346	*e*	PKPdf	03 06 22.4	-0.9	
JETT	Jettan, Norway	119.98	347	*e*	PKPdf	03 06 23.1	-0.7	
JETT				IAmb	IAmb	03 06 23.7		
	comp=Z,5.3nm,0.8s							
TRO	Tromso	120.23	348	*e*P	PKPdf	03 06 23.3	-0.8	
TRO				IAmb	IAmb	03 06 24.1		
	comp=Z,8.9nm,0.8s							
SCHQ	Schefferville	121.17	33	PKKPbc	PKKPbc	03 16 28.9	-2.1	
	comp=Z,1.1nm,0.6s,baz=50,slow=6.5,SNR=4.9							
JNE	Jan Mayen East	122.25	358	*e*P	PKPdf	03 06 25.7	-2.3	
STEI	Steigen	122.40	348	*e*P	PKPdf	03 06 27.6	-0.8	
STEI				IAmb	IAmb	03 06 29.0		
	comp=Z,16nm,1.0s							
FAUS	Fauske	122.86	347	*e*P	PKPdf	03 06 28.4	-0.8	
KBZ	Khabaz	123.66	314	PKP	PKPdf	03 06 31.4	-0.1	
	comp=Z,1.1nm,0.6s,baz=203,slow=7.0,SNR=4.6							
KIV	Kislovodsk	123.75	314	PKP	PKiKP	03 06 32.2	+0.1	
VAGH	Vaagaholmen	123.83	348	*e*P	PKPdf	03 06 30.6	-0.5	
KONS	Konsvik	124.06	348	*e*P	PKPdf	03 06 31.5	-0.1	
KONS				IAmb	IAmb	03 06 32.6		
	comp=Z,71nm,1.6s							
STOK	Stokkvaagen	124.22	348	*e*P	PKPdf	03 06 31.8	-0.1	
STOK				IAmb	IAmb	03 06 31.9		
	comp=Z,14nm,0.7s							
FINES	FINESS Array B	124.33	339	PKP	PKPdf	03 06 31.9	-0.4	
	comp=Z,3.0nm,0.5s,baz=41,slow=1.8,SNR=44							
BOSA	Boshof	124.38	221	PKP	PKPdf	03 06 33.5	-0.1	
	comp=Z,7.5nm,0.8s,baz=103,slow=2.3,SNR=12							
LEIR	Leirfjorden	124.39	348	*e*P	PKPdf	03 06 31.9	-0.4	
NSS	Namsos	126.01	347	*e*P	PKPdf	03 06 35.0	-0.4	
MOL	Molde	128.67	348	*e*P	PKiKP	03 06 41.1	-0.1	
MOL				IAmb	IAmb	03 06 44.1		
	comp=Z,70nm,1.6s							
NB2	NORSAR Subarra	129.20	345	PKPdf	PKPdf	03 06 41.4	-0.2	
	comp=Z,1.1nm,0.4s,baz=31,slow=1.9							
NOA	NORSAR Array B	129.20	345	PKP	PKPdf	03 06 41.6	0.0	
	comp=Z,2.8nm,0.7s,baz=31,slow=2.0,SNR=15							
HFS	Hagfors	129.31	343	PKP	PKPdf	03 06 41.2	-0.6	
	comp=Z,2.0nm,0.5s,baz=64,slow=3.4,SNR=10							
NC602	NORSAR Array S	129.38	345	*e*P	PKPdf	03 06 42.0	+0.1	
AK03	Malin Array Si	129.45	327	PKP	PKPdf	03 06 42.5	+0.2	
AKASG	Malin Array Be	129.46	326	PKP	PKPdf	03 06 42.0	-0.4	
	comp=Z,2.0nm,0.5s,baz=60,slow=1.9,SNR=8.2							
AKBB	Malin Array Si	129.46	326	PKP	PKiKP	03 06 42.6	-0.5	
AK01	Malin Array Si	129.47	326	PKP	PKiKP	03 06 42.7	-0.4	
KIEV	Kiev	129.47	326	PKP	PKiKP	03 06 42.6	-0.5	
AK09	Malin Array Si	129.48	326	PKP	PKiKP	03 06 42.7	-0.5	
AK10	Malin Array Si	129.50	326	PKP	PKiKP	03 06 42.7	-0.5	
AK05	Malin Array Si	129.52	326	PKP	PKiKP	03 06 42.7	-0.5	
AK21	Malin Array Si	129.52	327	PKP	PKiKP	03 06 42.7	-0.5	
AK18	Malin Array Si	129.54	327	PKP	PKiKP	03 06 42.7	-0.6	
AK06	Malin Array Si	129.54	326	PKP	PKiKP	03 06 42.8	-0.5	
LUBAR	Lubar, Ukraine	130.68	326	PKP	PKiKP	03 06 45.0	-0.6	
RNPP9	Sopachiv	130.80	329	PKP	PKiKP	03 06 45.2	-0.6	
KONO	Kongsberg	130.81	345	*e*P	PKiKP	03 06 45.5	-0.1	
RNPP5	Staryi Chortor	130.91	329	PKP	PKiKP	03 06 45.5	-0.5	
BRTR	Keskin Array B	131.46	312	PKP	PKPdf	03 06 45.9	-0.9	
	comp=Z,0.5nm,0.6s,baz=132,slow=4.7,SNR=4.8							
KOLS	Kolonicke sedl	134.16	328	*e*PKP	PKiKP	03 06 52.2	-0.5	
LANS	Liptovska Anna	135.42	330	*e*PKP	PKiKP	03 06 55.1	-0.2	
BSEG	Bad Segeberg	135.50	341	*e*PKPdf	PKPdf	03 06 54.0	+0.3	
	baz=37,slow=1.4							
MORC	Moravsky Berou	135.90	332	*e*PKP	PKPdf	03 06 54.7	+0.1	
OSTC	Ostas	135.93	334	*e*PKPDF	PKiKP	03 06 55.3	-1.0	
GORT1	Trebel	135.95	339	*e*PKPdf	PKPdf	03 06 54.8	+0.4	
	baz=37,slow=1.4							
KRLC	Kraliky	136.03	333	*e*PKPDF	PKiKP	03 06 56.2	-0.3	
DPC	Dobruska-Polom	136.03	333	*e*PKPDF	PKiKP	03 06 55.6	-0.9	
MAUC	Maruska	136.06	331	*e*PKPDF	PKPdf	03 06 55.5	+0.6	
JAVC	Velka Javorina	136.48	331	*e*PKP	PKPdf	03 06 56.3	+0.5	
FLTG	Flechtingen	136.52	339	*e*PKPdf	PKPdf	03 06 55.3	-0.3	
	baz=37,slow=1.4							
VRAC	Vranov	136.67	332	PKP	PKPdf	03 06 55.2	-0.8	
	comp=Z,0.9nm,0.5s,baz=114,slow=1.7,SNR=2.3							
VRAC	Vranov	136.67	332	*e*PKP	PKPdf	03 06 55.9	-0.1	
CLL	Collm	136.68	336	*e*PKPdf	PKPdf	03 06 56.0	0.0	
	baz=37,slow=1.4							
CLL	Collm	136.68	336	*i* PKPdf	PKPdf	03 06 55.9	0.0	
CLL				*i* PKiKP	PKiKP	03 06 57.5	-0.2	
	comp=Z,5.0nm,0.9s							
CLL				*i* SKPdf	SKPdf	03 10 13.8	-1.0	
RETH	Rethem/Aller,	136.82	340	*e*PKPdf	PKPdf	03 06 56.2	+0.1	
	baz=37,slow=1.4							
KRUC	Moravsky	136.94	332	*e*PKP	PKPdf	03 06 56.5	0.0	
MODS	Modra-Piesok	137.01	331	*e*PKP	PKiKP	03 06 57.6	-0.9	
PRU	Pruhonice	137.07	334	*e*PKPDF	PKiKP	03 06 58.4	-0.2	
CLZ	Clausthal	137.22	339	*e*PKPdf	PKPdf	03 06 57.1	+0.1	
	baz=37,slow=1.4							
EKA	Eskdalemuir Ar	137.36	352	PKP	PKPdf	03 06 56.0	-1.0	
	comp=Z,0.5nm,0.4s,baz=10.0,slow=2.3,SNR=7.4							
TANN	Tannenbergstha	137.60	336	*e*PKPdf	PKPdf	03 06 57.7	-0.1	
	baz=37,slow=1.4							
ZVC	Zvikov	137.64	334	*e*PKPDF	PKPdf	03 06 58.1	+0.3	
PLN	Plauen	137.66	336	*e*PKPdf	PKPdf	03 06 57.9	+0.1	
	baz=37,slow=1.4							
IBBN	Ibbenburen	137.70	341	*e*PKPdf	PKPdf	03 06 57.7	0.0	
	baz=37,slow=1.4							
MOX	Moxa	137.74	337	*e*L	L	04 11 14.3		
	comp=Z,40nm,18.8s							
WINA	Alland / Wiene	137.77	331	*e*PKP	PKPdf	03 06 58.4	+0.3	

	comp=Z,3.7nm,0.7s							
RONA	Rosalia, Austr	137.95	331	*e*PKP	PKPdf	03 06 58.8	+0.3	
	comp=Z,7.7nm,1.3s							
CONA	Conrad Observa	138.00	331	*e*PKP	PKPdf	03 06 58.0	-0.6	
	comp=Z,3.4nm,0.7s							
CKRC	Cesky Krumlov	138.05	333	*e*PKPDF	PKPdf	03 06 59.0	+0.4	
KHC	Kasperske Hory	138.13	334	*e*PKPDF	PKPdf	03 06 58.6	-0.2	
ROTZ	Rotzenmuhle	138.21	336	*e*PKPdf	PKPdf	03 06 58.6	-0.2	
	baz=37,slow=1.4							
GEC2	GERESS Array S	138.30	334	*e*PKPdf	PKPdf	03 06 59.0	-0.1	
	baz=37,slow=1.4							
GERES	GERESS Array B	138.30	334	PKhKP	PKPpre	03 06 49.0		
	comp=Z,0.2nm,0.5s,baz=25,slow=3.5,SNR=4.0							
GERES				PKP	PKPdf	03 06 57.7	-1.5	
	comp=Z,2.5nm,0.9s,baz=68,slow=0.7,SNR=17							
GERES				SKP	SKPbc	03 10 15.1	-2.4	
	comp=Z,1.0nm,0.8s,baz=57,slow=3.6,SNR=10							
GERES	GERESS Array B	138.30	334		PKPdf	03 06 58.9	-0.3	
WET	Wettzell	138.42	335	*e*PKPdf	PKPdf	03 06 59.1	-0.1	
	baz=37,slow=1.4							
KASTN	Kahler Asten	138.43	340	*e*PKPdf	PKPdf	03 06 59.1	-0.1	
	baz=37,slow=1.4							
BUG	Bochum--Univer	138.60	341	*e*PKPdf	PKPdf	03 06 59.3	-0.1	
	baz=37,slow=1.4							
ARSA	Arzberg	138.64	331	*e*PKP	PKPdf	03 06 59.5	-0.3	
	comp=Z,2.4nm,1.0s							
GRF	Grafenberg Arr	138.66	336	*e*PKPdf	PKPdf	03 06 59.7	0.0	
	baz=37,slow=1.4							
GRF				*e*L	L	04 21 36.3		
	comp=Z,35nm,22.0s							
GRB4	Grafenberg Arr	138.70	336	*e*PKPdf	PKPdf	03 06 58.6	-1.1	
	baz=37,slow=1.4							
BIOA	Bad Ischl, Aus	139.19	333	*e*PKP	PKPdf	03 07 00.4	-0.3	
	comp=Z,0.9nm,0.5s							
SESA	Seetaler Alpe,	139.19	331	*e*PKP	PKPdf	03 07 00.2	-0.8	
	comp=Z,9.6nm,1.2s							
TNS	Taunus Mts	139.25	339	*e*PKPdf	PKPdf	03 07 00.9	+0.1	
	baz=37,slow=1.4							
SOKA	Soboth	139.28	330	*e*PKP	PKPdf	03 07 00.0	-1.0	
	comp=Z,0.6nm,0.6s							
MEM	Membach	139.72	341	*d*PKP	PKPdf	03 07 01.6	0.0	
MEM				*d*PKiKP	PKiKP	03 07 03.8	-0.1	
KBA	Koelnbreinsper	139.78	332	*e*PKP	PKPdf	03 07 00.9	-1.1	
	comp=Z,1.0nm,0.6s							
LESA	Schwarzleotal	139.82	333	*e*PKP	PKPdf	03 07 01.2	-0.8	
	comp=Z,2.0nm,0.6s							
BMRD	Maredsous	140.37	342	*d*PKP	PKPdf	03 07 03.3	+0.6	
BMRD				*d*PKiKP	PKiKP	03 07 05.6	+0.3	
WATA	Walderalm	140.37	334	*e*PKP	PKPdf	03 07 02.2	-0.8	
	comp=Z,1.2nm,0.6s							
WTTA	Wattenberg	140.40	334	*e*PKP	PKPdf	03 07 02.3	-0.9	
	comp=Z,0.5nm,0.4s							
ABTA	Abfaltersbach	140.41	332	*e*PKP	PKPdf	03 07 02.4	-0.6	
	comp=Z,3.0nm,1.0s							
WLF	Walferdange	140.50	341	*d*PKiKP	PKiKP	03 07 06.4	+0.8	
MOTA	Moosalm	140.56	334	*e*PKP	PKPdf	03 07 03.3	-0.1	
	comp=Z,2.6nm,0.9s							
RETA	Reutte	140.59	335	*e*PKP	PKPdf	03 07 03.3	-0.1	
	comp=Z,2.8nm,1.1s							
DOU	Dourbes	140.60	342	*d*PKP	PKPdf	03 07 02.7	-0.4	
SQTA	Sankt Quirin	140.62	334	*e*PKP	PKPdf	03 07 03.3	-0.1	
	comp=Z,1.4nm,0.6s							
FETA	Feichten	140.98	334	*e*PKP	PKPdf	03 07 03.4	-0.7	
	comp=Z,1.6nm,1.0s							
DAVOX	Davos/Dischmat	141.52	335	PKhKP	PKPpre	03 07 00.0		
	comp=Z,2.1nm,0.5s,baz=6.6,slow=2.5,SNR=8.5							
VAE	Valguarnera	145.76	320	PKPbc	PKPdf	03 07 11.4	-1.3	
	comp=Z,5.2nm,0.8s,baz=63,slow=2.3,SNR=2.5							
KEST	Kesra	150.00	322	PKPbc	PKPbc	03 07 24.6	-0.3	
	comp=Z,13nm,0.7s,baz=16,slow=1.4,SNR=20							
KEST	Kesra	150.00	322		PKiKP	03 07 25.1	-0.6	
PBRG	Braganca	151.08	350	*e*PKPdf	PKPbc	03 07 27.1	-0.1	
PGAV	Gavieira, Arco	151.14	353	*e*PKPdf	PKPbc	03 07 27.5	+0.1	
PCAB	Cabril	151.36	352	*e*PKPdf	PKiKP	03 07 28.1	-0.2	
POLO	Lamas de Olo	151.66	352	*e*PKPdf	PKiKP	03 07 29.1	+0.1	
PVRL	Vila Real	151.75	352	*e*PKPdf	PKiKP	03 07 29.0	-0.1	
MVO	Moncorvo	151.75	351	*e*PKPdf	PKiKP	03 07 29.4	+0.3	
PTO	Porto	152.00	353	*e*PKPdf	PKiKP	03 07 29.5	0.0	
PVIS

PRGZ	**Paritu Road**	**7.94 205**	P	**Pn**	**02 52 41.6**	**-0.1**
PRGZ			S	**Sn**	**02 54 10.0**	**-0.8**
TARZ	**Mount Tarawera**	**7.95 214**	P	**Pn**	**02 52 45.3**	**+3.4**
OUZ	**Omahuta**	**7.95 242**	P	**Pn**	**02 52 45.5**	**+3.7**
OUZ	**Omahuta**	**7.95 242**	P	**Pn**	**02 52 42.8**	**+0.9**
MUGZ	**Murupara**	**8.02 212**	P	**Pn**	**02 52 43.7**	**+1.0**
MUGZ			S	**Sn**	**02 54 11.9**	**-0.7**
RRRZ	**Republican Roa**	**8.03 214**	P	**Pn**	**02 52 45.7**	**+2.9**
SNGZ	**Shannon Statio**	**8.03 208**	P	**Pn**	**02 52 42.6**	**-0.3**
SNGZ			S	**Sn**	**02 54 11.0**	**-1.9**
RTZ	**Ruatahuna**	**8.04 211**	Pn	**Pn**	**02 52 42.6**	**-0.4**
TOZ	**Tahuroa Road**	**8.09 221**	P	**Pn**	**02 52 47.5**	**+3.8**
KNZ	**Kokohu**	**8.11 206**	P	**Pn**	**02 52 43.0**	**-1.0**
MHGZ	**Mahia Peninsul**	**8.14 204**	P	**Pn**	**02 52 43.6**	**-0.8**
MHGZ			S	**Sn**	**02 54 15.8**	**+0.2**
RAHZ	**Arahi**	**8.25 209**	P	**Pn**	**02 52 45.2**	**-0.7**
RAHZ			S	**Sn**	**02 54 16.1**	**-2.1**
ALRZ	**Allen Road**	**8.28 214**	P	**Pn**	**02 52 47.5**	**+1.2**
MTHZ	**Maungataniwha**	**8.30 210**	P	**Pn**	**02 52 46.5**	**0.0**
WHHZ	**Waihua**	**8.32 208**	P	**Pn**	**02 52 46.5**	**-0.4**
WHHZ			S	**Sn**	**02 54 19.9**	**-0.3**
MRHZ	**Matea Rd**	**8.47 212**	P	**Pn**	**02 52 50.0**	**+1.1**
TLZ	**Tolley Road**	**8.51 218**	P	**Pn**	**02 52 53.0**	**+3.6**
ARHZ	**Aropaoanui**	**8.58 208**	P	**Pn**	**02 52 49.5**	**-0.9**
ARHZ			S	**Sn**	**02 54 25.0**	**-1.4**
BKZ	**Black Stump Fm**	**8.71 211**	P	**Pn**	**02 52 51.0**	**-1.2**
KWHZ	**Kaweka Forest**	**8.95 210**	P	**Pn**	**02 52 53.9**	**-1.7**
HIZ	**Hauiti**	**9.01 220**	P	**Pn**	**02 53 00.3**	**+4.1**
HIZ	**Hauiti**	**9.01 220**	P	**Pn**	**02 52 54.9**	**-1.3**
NTVZ	**North Tongarir**	**9.03 214**	P	**Pn**	**02 52 57.1**	**+0.5**
TMVZ	**Te Maari**	**9.03 214**	P	**Pn**	**02 52 56.8**	**+0.2**
ETVZ	**East Tongariro**	**9.04 214**	P	**Pn**	**02 52 58.0**	**+1.1**
KRVZ	**Karewarewa**	**9.04 214**	P	**Pn**	**02 52 58.3**	**+1.5**
WTVZ	**West Tongariro**	**9.08 215**	P	**Pn**	**02 52 58.7**	**+1.3**
KAHZ	**Kahuranaki**	**9.08 207**	P	**Pn**	**02 52 55.0**	**-2.4**
OTVZ	**Oturere**	**9.08 214**	P	**Pn**	**02 52 57.0**	**-0.4**
SNVZ	**South Ngauruho**	**9.11 214**	P	**Pn**	**02 52 57.5**	**-0.4**
TWVZ	**Taurewa**	**9.12 215**	P	**Pn**	**02 52 59.1**	**+1.2**
NGZ	**Ngauruhoe**	**9.12 214**	P	**Pn**	**02 52 59.1**	**+1.1**
BHHZ	**Black Hill Sta**	**9.16 211**	P	**Pn**	**02 52 56.9**	**-1.5**
FWVZ	**Far West T-bar**	**9.21 214**	P	**Pn**	**02 53 00.1**	**+0.8**
WHVZ	**Whangaehu Hut**	**9.21 214**	P	**Pn**	**02 53 00.1**	**+0.7**
MAVZ	**Matarangi**	**9.21 214**	P	**Pn**	**02 53 00.3**	**+0.9**
MOVZ	**Moawhango**	**9.23 213**	P	**Pn**	**02 52 59.0**	**-0.5**
WNVZ	**Wahianoa**	**9.24 214**	P	**Pn**	**02 52 59.7**	**0.0**
PXZ	**Pawanui**	**9.29 206**	P	**Pn**	**02 52 59.1**	**-1.1**
PNHZ	**Pukenui**	**9.46 209**	P	**Pn**	**02 52 59.3**	**-3.2**
PRHZ	**Porangahau**	**9.58 206**	P	**Pn**	**02 53 01.2**	**-3.0**
TSZ	**Takapari Road**	**9.68 210**	P	**Pn**	**02 53 04.6**	**-0.9**
WAZ	**Wanganui**	**9.87 214**	P	**Pn**	**02 53 08.2**	**0.0**
BFZ	**Birch Farm**	**10.09 207**	P	**Pn**	**02 53 07.8**	**-3.3**
BFZ	**Birch Farm**	**10.09 207**	P	**Pn**	**02 53 08.6**	**-2.5**
MRZ	**Mangatainoka R**	**10.34 209**	P	**Pn**	**02 53 10.4**	**-4.1**
TMWZ	**Te Maipa**	**10.59 207**	P	**Pn**	**02 53 15.0**	**-3.1**
PAWZ	**Paruwai Farm**	**11.01 208**	P	**Pn**	**02 53 20.2**	**-3.5**
MSWZ	**Moikau Station**	**11.11 208**	P	**Pn**	**02 53 21.8**	**-3.2**
SNZO	**South Karori**	**11.25 210**	P	**Pn**	**02 53 24.8**	**-2.2**
QRZ	**Quartz Range**	**11.91 218**	P	**Pn**	**02 53 34.1**	**-2.0**
KHZ	**Kahutara**	**12.65 211**	P	**Pn**	**02 53 42.5**	**-3.7**
MSVF	**Nonsavu**	**14.48 344**	Pn	**Pn**	**02 54 09.2**	**-2.1**
	0.7nm,0.3s,baz=126,slow=20,SNR=2.6 1.3nm,0.4s					
NIUE	**Niue**	**14.51 31**	P	**Pn**	**02 54 10.9**	**-0.8**
ARMA	**Armidale**	**26.17 265**	P	**P**	**02 56 21.6**	**+1.2**
ARMA			IAmb	IAmb	02 56 28.7	
	comp=Z,7.1nm,0.9s					
ARMA	**Armidale**	**26.17 265**	P	**P**	**02 56 18.2**	**-2.3**
CTA	**Charters Tower**	**34.20 281**	P	**P**	**02 57 31.3**	**-0.3**
	comp=Z,7.0nm,0.7s,baz=103,slow=9.9,SNR=9.0 comp=Z,7.0nm,0.7s					
CTAO	**Charters Tower**	**34.20 281**	P	**P**	**02 57 31.8**	**+0.2**
CTAO			IAmb	IAmb	02 57 32.4	
	comp=Z,9.4nm,0.9s					
CTAO	**Charters Tower**	**34.20 281**	P	**P**	**02 57 30.4**	**-1.1**
STKA	**Stephens Creek**	**34.35 259**	P	**P**	**02 57 33.1**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=104,slow=12,SNR=4.0 comp=Z,3.2nm,0.8s					
STKA	**Stephens Creek**	**34.35 259**	P	**P**	**02 57 31.9**	**-0.9**
INKA	**Innaminka**	**36.05 266**	P	**P**	**02 57 46.6**	**-0.8**
INKA			IAmb	IAmb	02 57 48.7	
	comp=Z,4.0nm,1.0s					
MTSU	**Mount Surprise**	**36.73 283**	P	**P**	**02 57 52.3**	**-1.0**
BBOO	**Buckleboo**	**38.77 256**	P	**P**	**02 58 08.5**	**-1.9**
BBOO	**Buckleboo**	**38.77 256**	P	**P**	**02 58 08.6**	**-1.9**
AS31	**Alice Springs**	**43.21 268**	P	**P**	**02 58 45.4**	**-1.8**
ASAR	**Alice Springs**	**43.22 268**	P	**P**	**02 58 45.2**	**-1.9**
	comp=Z,6.5nm,0.5s,baz=107,slow=7.2,SNR=70 comp=Z,6.5nm,0.5s					
ASAR	**Alice Springs**	**43.22 268**	P	**P**	**02 58 44.9**	**-2.3**
WR0	**Warramunga Arr**	**44.15 274**	P	**P**	**02 58 52.6**	**-2.1**
WR0			IAmb	IAmb	02 58 53.5	
	comp=Z,9.7nm,0.6s					
WR8	**Warramunga Arr**	**44.19 274**		**P**	**02 58 53.0**	**-2.0**
WRAB	**Tennant Creek**	**44.32 273**	P	**P**	**02 58 54.0**	**-2.1**
WRA	**Warramunga Arr**	**44.33 273**	P	**P**	**02 58 54.2**	**-1.9**
	comp=Z,13nm,0.5s,baz=114,slow=7.9,SNR=123 comp=Z,13nm,0.5s					
MTN	**Manton Dam**	**50.37 280**	P	**P**	**02 59 41.3**	**-1.9**
MTN			IAmb	IAmb	02 59 44.6	
	comp=Z,2.7nm,0.6s					
KNRA	**Kununurra**	**50.98 275**	P	**P**	**02 59 46.0**	**-1.8**
KNRA			IAmb	IAmb	03 00 26.2	
	comp=Z,10nm,1.1s					
FITZ	**Fitzroy Crossi**	**52.53 271**	P	**P**	**02 59 56.9**	**-2.4**
CASY	**Casey**	**54.00 208**	P	**P**	**03 00 10.3**	**+0.8**
CASY			IAmb	IAmb	03 00 11.5	
	comp=Z,6.0nm,1.1s					
MORW	**Morawa**	**56.30 254**	P	**P**	**03 00 24.3**	**-2.4**
MAW	**Mawson**	**71.08 201**	P	**P**	**03 02 06.6**	**+3.2**
	comp=Z,1.1nm,0.4s,baz=64,slow=6.2,SNR=2.4 comp=Z,1.1nm,0.4s					
MAW	**Mawson**	**71.08 201**	P	**P**	**03 02 05.0**	**+1.6**
TROLL	**Troll, Antarti**	**76.49 180**	⇑P	**P**	**03 02 39.2**	**+3.9**
	comp=Z,197nm,0.4s					
SNAA	**Sanae**	**76.77 178**	P	P	03 02 41.8	+5.0
	comp=Z,4.2nm,0.5s,baz=201,slow=8.6,SNR=14 comp=Z,4.2nm,0.5s					
VNA2	**Neumayer--Watz**	**77.35 177**	⇑P	**P**	**03 02 44.1**	**+4.0**
	comp=Z,4.2nm,0.8s,baz=165,slow=5.2					
VNA2			⇑pP	**sP**	**03 02 49.0**	**+0.8**
	comp=Z,17nm,0.6s,baz=170,slow=5.6					
H03S2	**Juan Fernandez**	**79.57 123**	T	T	04 31 43.6	
	baz=237,slow=74,SNR=57					
H03S1	**Juan Fernandez**	**79.58 123**	T	T	04 31 43.0	
	baz=237,slow=74,SNR=50					
H03S3	**Juan Fernandez**	**79.59 123**	T	T	04 31 33.5	
	baz=237,slow=74,SNR=83					
H03N3	**Juan Fernandez**	**79.77 123**	T	T	04 31 48.3	
	baz=241,slow=72,SNR=66					
H03N2	**Juan Fernandez**	**79.77 123**	T	T	04 31 51.9	
	baz=241,slow=72,SNR=37					
H03N1	**Juan Fernandez**	**79.78 123**	T	T	04 31 47.3	
	baz=241,slow=72,SNR=117					
NJ2	**Nanjing**	**87.27 311**	*e*P	**P**	**03 03 33.3**	**+1.0**
NJ2			pmax	pmax		
	comp=Z,19nm,0.6s					
PZH	**PanZhiHua**	**96.09 297**	P	**P**	**03 04 13.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**97.31 314**	*e*P	Pdif	03 04 20.1	+1.2
HHC			pmax	pmax		
	comp=Z,9.0nm,0.6s					
HHC			pmax	pmax		
	comp=Z,50nm,4.9s					
LZH	**Lanzhou**	**99.67 306**	*e*P	**Pdif**	**03 04 32.6**	**+3.0**
LZH			pP	sP	03 04 39.8	+1.7
LZH			pmax	pmax		
	comp=Z,16nm,1.0s					
ARCES	**ARCESS Array B**	**139.97 348**	PKP	**PKiKP**	**03 10 16.2**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=12,slow=2.5,SNR=2.3					
FIA1	**FINESS Array S**	**146.49 339**		**PKPbc**	**03 10 26.1**	**-0.1**
FINES	**FINESS Array B**	**146.50 339**	PKPbc	**PKPbc**	**03 10 26.6**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=52,slow=4.5,SNR=26					
FINES	**FINESS Array B**	**146.50 339**		**PKPbc**	**03 10 26.0**	**-0.2**
NC303	**NORSAR Array S**	**149.94 351**		**PKPbc**	**03 10 36.0**	**+0.7**
NB2	**NORSAR Subarra**	**150.14 351**	PKP	**PKiKP**	**03 10 36.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6					
NOA	**NORSAR Array B**	**150.14 351**	PKPbc	**PKiKP**	**03 10 36.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=17,slow=4.2,SNR=4.3					
HFS	**Hagfors**	**150.63 348**	PKP	**PKPdf**	**03 10 32.7**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=90,slow=2.9,SNR=1.9					
HFS			PKPbc	**PKiKP**	**03 10 37.7**	**0.0**
	comp=Z,0.6nm,0.3s,baz=90,slow=0.1,SNR=9.6					
MMAI	**Mount Meron Ar**	**151.99 281**	PKPbc	**PKPbc**	**03 10 40.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=54,slow=5.7,SNR=1.4					
BRTR	**Keskin Array B**	**153.38 296**	PKPbc	**PKiKP**	**03 10 45.3**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=126,slow=3.3,SNR=5.4					
BRTR	**Keskin Array B**	**153.38 296**		**PKPbc**	**03 10 42.4**	**-1.7**
TORD	**Torodi Ar. Bea**	**161.45 178**	PKPab	**PKPab**	**03 11 34.5**	**+3.3**
	comp=Z,1.7nm,0.5s,baz=179,slow=3.6,SNR=13					

IDC ***19*** *02:57:56.7±396.0,* **38.41N×13.93E, h0km, Error ellipse: s-maj=165.7km s-min=97.3km az=64.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**4.50**	**236**	I	I	03 29 40.0	
	0.5nm,0.8s,baz=55,slow=313,SNR=14						
I26DE	**FREYUNG INFRAS**	**10.44**	**359**	I	I	04 01 30.0	
	baz=180,slow=320,SNR=2.1						
I42PT	**GRACIOSA ISLAN**	**32.51**	**284**	I	I	06 11 50.0	
	baz=80,slow=314,SNR=1.3						

IDC ***19*** *03:07:26.9±0.7, 66.23N×18.63W, h0km, mb3.6/14, mbtmp3.6/18, ML3.3/4, MS3.6/4, Error ellipse: s-maj=17.9km s-min=14.1km az=11.0*
REY ***19*** *03:07:27.5, 66.25N×18.39W, h10km*
DNK ***19*** *03:07:29.5±3.4, 66.43N×18.06W, h0km±242km, ML2.4, Presumed earthquake*

ISC 19 03:07:27.6±1.0, 66.24N±0.03×18.35W±0.02, h7km±7km, n63, σ1°46/88, mb3.7/18, MS3.5/4, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBRE	**Brettingsstaoi**	**0.21**	**122**	P	**Pg**	**03 07 32.2**	**+0.4**
IBRE				S	**Sg**	**03 07 35.9**	**+1.2**
ISG	**Siglufjorour**	**0.25**	**246**	P	**Pg**	**03 07 32.3**	**-0.3**
ISIG				S	**Sg**	**03 07 35.9**	**-0.1**
IHLA	**Hella**	**0.29**	**183**	P	**Pg**	**03 07 33.4**	**0.0**
IHLA				S	**Sg**	**03 07 37.6**	**+0.4**
IGRI	**Grimsey**	**0.34**	**24**	P	**Pg**	**03 07 33.7**	**-0.5**
IGRI				S	**Sg**	**03 07 38.4**	**-0.2**
IGRA	**Granastaoir**	**0.45**	**135**	P	**Pg**	**03 07 36.0**	**-0.3**
IGRA				S	**Sg**	**03 07 42.2**	**0.0**
IHED	**Heoinshofoi**	**0.45**	**110**	P	**Pg**	**03 07 36.0**	**-0.3**
IHED				S	**Sg**	**03 07 42.7**	**+0.4**
IDIM	**Dimmadalss**	**0.64**	**115**	S	**Sg**	**03 07 48.6**	**+0.4**
ISKI	**Skildingahlsh**	**0.65**	**124**	P	**Pg**	**03 07 39.1**	**-1.1**
ISKI				S	**Sg**	**03 07 48.1**	**-0.6**
IHRN	**Hraun**	**0.73**	**261**	P	**Pg**	**03 07 40.0**	**-1.7**
IHRN				S	**Sg**	**03 07 49.7**	**-1.4**
ILEI	**Leirhofn**	**0.77**	**76**	P	**Pg**	**03 07 40.6**	**-1.8**
ILEI				S	**Sg**	**03 07 52.2**	**-0.2**
IGHA	**Grjothals**	**0.80**	**119**	P	**Pg**	**03 07 41.5**	**-1.3**
IGHA				S	**Sg**	**03 07 52.6**	**-0.6**
IKVO	**Krokottuvotn**	**0.80**	**130**	P	**Pg**	**03 07 41.6**	**-1.4**
IKVO				S	**Sg**	**03 07 52.2**	**-1.1**
IGIL	**Gilhagi**	**0.83**	**100**	P	**Pg**	**03 07 41.7**	**-1.9**
IGIL				S	**Sg**	**03 07 53.4**	**-0.9**
IREN	**Reynihlio**	**0.84**	**134**	P	**Pg**	**03 07 42.3**	**-1.4**
IREN				S	**Sg**	**03 07 53.4**	**-1.1**
IMEL	**Melhnausar**	**0.96**	**133**	P	**Pg**	**03 07 44.4**	**-1.7**
IMEL				S	**Sg**	**03 07 57.6**	**-1.0**
ISVA	**Svartarkot**	**1.01**	**153**	P	**Pg**	**03 07 45.3**	**-1.7**
ISVA				S	**Sg**	**03 07 58.8**	**-1.3**
IGRS	**Grimsstaoir**	**1.09**	**122**	P	**Pg**	**03 07 46.4**	**-2.2**
IGRS				S	**Sg**	**03 08 01.0**	**-1.7**
IASK	**Askja**	**1.38**	**148**	P	**Pn**	**03 07 51.1**	**-2.2**
IASK				S	**Sb**	**03 08 10.1**	**-1.6**
THOR	**Thorvaldshraun**	**1.48**	**151**	P	**Pn**	**03 07 52.6**	**-2.0**
THOR				S	**Sn**	**03 08 12.4**	**-1.9**
ISTE	**Stelbrattur**	**1.48**	**202**	P	**Pn**	**03 07 53.0**	**-1.7**
ISTE				S	**Sn**	**03 08 11.8**	**-2.6**
IDYN	**Dyngjuhals**	**1.51**	**164**	P	**Pn**	**03 07 53.3**	**-1.8**
IDYN				S	**Sn**	**03 08 13.2**	**-1.8**
IMKO	**Mokollar**	**1.52**	**146**	P	**Pn**	**03 07 52.9**	**-2.2**
IMKO				S	**Sn**	**03 08 13.2**	**-1.9**
IVON	**Vonarskard**	**1.59**	**171**	P	**Pn**	**03 07 54.5**	**-1.7**
IVON				S	**Sn**	**03 08 15.4**	**-1.5**
IKIS	**Kista**	**1.60**	**168**	P	**Pn**	**03 07 54.9**	**-1.5**
IKRE	**Kreppuhraun**	**1.67**	**150**	P	**Pn**	**03 07 55.2**	**-2.1**
IKRE				S	**Sn**	**03 08 17.3**	**-1.7**
ISKR	**Skrokkalda**	**1.68**	**180**	P	**Pn**	**03 07 56.1**	**-1.3**
ISKR				S	**Sn**	**03 08 17.2**	**-2.0**
BORG	**Borgarnes**	**1.94**	**221**	Pn	**Pn**	**03 07 59.4**	**-1.5**
	94nm,0.3s,baz=42,slow=13,SNR=517						
BORG				Sn	**Sn**		
	269nm,0.3s,baz=17,slow=19,SNR=95						
SCO	**Scoresbysund**	**4.47**	**344**	*i* P	**Pn**	**03 08 33.5**	**-2.2**
SCO				*e*S	**Sn**	**03 09 24.9**	**-2.8**
SCO				IAML		03 09 33.5	
	comp=Z,18nm,0.6s						
SOEG	**Soedalen**	**5.43**	**297**	*i* P	**Pn**	**03 08 51.8**	**+3.0**
DBG	**Daneborg**	**8.14**	**356**	*e*P	**Pn**	**03 09 23.4**	**-2.5**
SUMG	**Summit**	**9.47**	**321**	*i* P	**Pn**	**03 09 42.6**	**-1.8**
DAG	**Danmarks Havn**	**10.59**	**360**	*i* P	**Pn**	**03 09 58.2**	**-1.3**
EKA	**Eskdalemuir Ar**	**13.16**	**139**	Pn	**Pn**	**03 10 36.9**	**+2.2**
	baz=329,slow=13 comp=Z,1.2nm,0.8s						
NOA	**NORSAR Array B**	**14.03**	**98**	Pn	**Pn**	**03 10 48.9**	**+2.4**
	baz=310,slow=12,SNR=3.7 comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**16.55**	**59**	Pn	**Pn**	**03 11 19.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=281,slow=9.1,SNR=7.4 comp=Z,2.7nm,0.7s						
FINES	**FINESS Array B**	**19.81**	**83**	P	**Pn**	**03 11 59.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=307,slow=8.8,SNR=4.6						
FINES				PcP	**PcP**	**03 16 16.1**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=308,slow=6.8,SNR=2.0 comp=Z,1.4nm,0.6s						
CLL	**Collm**	**21.74**	**118**	*e*P	**P**	**03 12 20.0**	**+0.9**
CLL				*i* x	x	03 12 25.3	
	comp=Z,5.0nm,1.1s						
CLL				*e*PP	**PnPn**	**03 12 40.0**	**+0.2**
BRG	**Berggiesshubel**	**22.43**	**117**	*e*P	**P**	**03 12 29.0**	**+2.4**
BRG				Amp		03 12 31.0	
	comp=Z,1.7nm,1.0s						
GERES	**GERESS Array B**	**24.05**	**121**	P	**P**	**03 12 44.4**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=322,slow=8.5,SNR=10 comp=Z,1.1nm,0.8s						
DAVOX	**Davos/Dischmat**	**24.57**	**129**	P	**P**	**03 12 48.7**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=288,slow=12,SNR=4.2 comp=Z,2.4nm,0.9s						
WATA	**Walderalm**	**24.63**	**125**	*e*pP	**P**	**03 12 49.6**	**+1.1**
	comp=Z,3.8nm,1.1s						
MORC	**Moravsky Berou**	**24.65**	**114**	*e*P	**P**	**03 12 48.9**	**+0.4**
VRAC	**Vranov**	**24.69**	**116**	P	**P**	**03 12 48.8**	**0.0**
	comp=Z,1.9nm,0.9s,baz=305,slow=10,SNR=3.3 comp=Z,1.9nm,0.9s						
VRAC	**Vranov**	**24.69**	**116**	*e*P	**P**	**03 12 49.0**	**+0.2**
WTTA	**Wattenberg**	**24.71**	**125**	*e*P	**P**	**03 12 49.3**	**+0.1**
	comp=Z,4.7nm,1.2s						
KRUC	**Moravsky**	**24.82**	**117**	*e*P	**P**	**03 12 49.5**	**-0.5**
CONA	**Conrad Observa**	**25.59**	**119**	*e*P	**P**	**03 12 57.2**	**+0.2**
	comp=Z,4.3nm,1.2s						
SESA	**Seetaler Alpe,**	**25.83**	**122**	*e*P	**P**	**03 13 00.3**	**+0.9**
	comp=Z,6.9nm,1.1s						
RONA	**Rosalia, Austr**	**25.93**	**119**	*e*pP	**P**	**03 13 00.8**	**+0.7**
	comp=Z,3.4nm,1.1s						
ESDC	**Sonseca Array**	**27.84**	**156**	P	**P**	**03 13 18.5**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=345,slow=8.2,SNR=2.6						
ESDC				LR	LR	03 23 25.4	
	comp=Z,121nm,20.3s,baz=76,slow=34 comp=Z,0.3nm,0.8s						
AKASG	**Malin Array Be**	**28.43**	**100**	LR	LR	03 23 50.1	
	comp=Z,85nm,18.9s,baz=36,slow=34						
ARTI	**Arti**	**35.76**	**68**	LR	LR	03 27 59.8	
	comp=Z,92nm,19.5s,baz=316,slow=34						
YKA	**Yellowknife Ar**	**37.89**	**311**	P	**P**	**03 14 43.7**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=46,slow=8.9,SNR=2.4 comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**39.25**	**106**	P	**P**	**03 14 58.4**	**+1.9**
	comp=Z,0.9nm,0.7s,baz=1.1,slow=6.2,SNR=4.0 comp=Z,0.9nm,0.7s						
KBZ	**Khabaz**	**39.55**	**94**	P	**P**	**03 15 01.2**	**+2.4**
	comp=Z,1.0nm,0.6s,baz=316,slow=9.4,SNR=2.6 comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**42.78**	**63**	P	**P**	**03 15 25.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=306,slow=12,SNR=3.7 comp=Z,0.6nm,0.5s						
GNI	**Garni**	**43.30**	**95**	LR	LR	03 33 31.6	
	comp=Z,58nm,18.5s,baz=16,slow=36						
ILAR	**Eielson Array**	**44.13**	**331**	P	**P**	**03 15 37.1**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=32,slow=7.2,SNR=4.5 comp=Z,0.3nm,0.9s						
KURBB	**Kurchatov Arra**	**47.64**	**59**	P	**P**	**03 16 05.0**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=325,slow=7.2,SNR=2.6 comp=Z,1.6nm,0.3s						
MKAR	**Makanchi Array**	**52.20**	**59**	P	**P**	**03 16 38.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=343,slow=1.3,SNR=3.8 comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**52.25**	**291**	P	**P**	**03 16 38.9**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=59,slow=5.7,SNR=4.9 comp=Z,0.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**54.73**	**156**	P	**P**	**03 16 58.4**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=338,slow=3.4,SNR=1.2 comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**61.67**	**279**	P	**P**	**03 17 45.5**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=40,slow=6.4,SNR=2.2 comp=Z,0.2nm,0.7s						

IDC ***19*** *03:12:38.5±1.9, 30.44S×178.60W, h115km±18km, mb3.4/3, mbtmp3.8/3, Error ellipse: s-maj=32.3km s-min=27.8km az=140.0*

ISC 19 03:12:39.2±1.1, 30.3S±0.2×178.7W±0.2, h124km, n8, σ0°81/9, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.19**	**32**	P	**Pn**	**03 13 03.5**	**0.0**
	123nm,0.2s,baz=198,slow=20,SNR=1.4						
RAO				S	**Sn**	**03 13 22.7**	**+0.8**
	408nm,0.3s,baz=197,slow=19,SNR=4.1						
ASAR	**Alice Springs**	**42.55**	**267**	P	**P**	**03 20 23.4**	**+0.5**
	0.3nm,0.5s,baz=105,slow=7.3,SNR=5.3 0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.53**	**272**	P	**P**	**03 20 31.4**	**+0.5**
	0.6nm,0.3s,baz=110,slow=8.1,SNR=23 0.6nm,0.3s						
QSPA	**South Pole Qui**	**59.84**	**180**	P	**P**	**03 22 31.8**	**+0.4**
	1.0nm,0.7s,baz=45,slow=4.3,SNR=5.6 1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**120.59**	**314**	PKP	**PKPdf**	**03 31 14.9**	**-0.9**
	0.1nm,0.4s,baz=102,slow=2.3,SNR=2.2						
FINES	**FINESS Array B**	**144.82**	**340**	PKPbc	**PKPbc**	**03 31 58.9**	**-1.2**
	0.6nm,0.4s,baz=29,slow=3.2,SNR=16						
NOA	**NORSAR Array B**	**148.53**	**351**	PKPbc	**PKPbc**	**03 32 10.1**	**-0.7**
	0.2nm,0.5s,baz=3.5,slow=3.7,SNR=1.6						
HFS	**Hagfors**	**149.00**	**348**	PKPbc	**PKiKP**	**03 32 13.3**	**+0.2**
	1.3nm,0.7s,baz=29,slow=3.3,SNR=2.2						

IDC ***19*** *03:15:12.6±1.0, 36.25N×141.95E, h0km, mb3.8/12, mbtmp3.9/17, ML3.4/5, MS2.9/3, Error ellipse: s-maj=22.0km s-min=17.4km az=101.0*
NIED ***19*** *03:15:17.1, 36.31N×141.79E, h56km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.63; Mθθ-0.86; Mφφ-2.77; Mrθ0.99; Mrφ-1.93; Mθφ3.27; Fault plane solution: Mo5.11000×10¹⁴ NP1: φs223.00000°, δs25.00000°, λ110.00000°. NP2: φs22.00000°, δs66.00000°, λs81.00000°.*
JMA ***19*** *03:15:17.1±0.2, 36.3N±0.4×14.2E±°, h56km±4km, MV3.7/40, FAR E OFF IBARAKI PREF*

ISC 19 03:15:15.2±0.7, 36.17N±0.05×141.99E±0.07, h23km, n42, σ1°85/40, mb3.9/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**1.14**	**279**	P	**Pn**	**03 15 35.0**	**-0.8**
JIHU	**Itakohorinouch**	**1.20**	**261**	P	**Pb**	**03 15 37.0**	**-0.2**
JHO	**Hitachi**	**1.23**	**292**	P	**Pn**	**03 15 35.4**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.33**	**315**	P	**Pn**	**03 15 36.7**	**-1.8**
ONAJ				*e*S	**Sn**	**03 15 51.1**	**-4.5**
JFK	**Kawauchi**	**1.49**	**324**	*e*P	**Pn**	**03 15 39.1**	**-1.5**
BSO1	**Boso 1**	**1.72**	**209

az=79.0
*GFZ **19** 03:41:45.1±0.1, 7°S±2°×12°6E±°, h441km±3km, M4.2/25, mb4.2/25, Error ellipse: s-maj=5.3km s-min=4.6km az=108.8, confirmed*
*DJA **19** 03:41:46.0±0.6, 7°S±4°×12°7E±°, h432km±11km, M4.6/19, mb4.5/8, mB4.7/3, MLv4.7/19, Mw(mB)3.9/3*
*NEIC **19** 03:41:46.1±1.8, 6°82S±0°08×126°5E±0°.1, h434km±7km, mb4.4/30, Error ellipse: s-maj=15.9km s-min=11.6km az=90.0*

ISC 19 03:41:46.4±0.4, **6°88S**±0°05×**126°49E**±0°06, **h450**km, **n122**, σ1§**46**/129, **mb4.3**/34, **1C**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.60**	**28**	P	**P**	**03 42 56.8**	**-1.4**
SOEI	**Soe**	**3.60**	**217**		**P**	**03 42 58.1**	**-0.2**
SOEI	**Soe**	**3.60**	**217**	P	**P**	**03 42 57.8**	**-0.5**
SOEI	**Soe**	**3.60**	**217**	P	**P**	**03 42 57.2**	**-1.1**
NLAI	**Namlea**	**3.67**	**10**	P	**P**	**03 42 57.9**	**-0.8**
KRAI	**Karang Ratu**	**4.01**	**28**	P	**P**	**03 42 59.2**	**-2.5**
BNDI	**Bandanaira**	**4.13**	**56**	P	**P**	**03 43 01.0**	**-1.7**
BNDI	**Bandanaira**	**4.13**	**56**	P	**P**	**03 43 00.5**	**-2.2**
MSAI	**Masohi**	**4.27**	**35**	P	**P**	**03 43 00.7**	**-3.3**
BATI	**Baumata**	**4.33**	**220**	P	**P**	**03 43 01.1**	**-3.4**
	666nm,0.4s,baz=74,slow=0.9,SNR=76						
BATI				S	**S**	**03 44 02.5**	**-5.6**
	238nm,0.4s,baz=38,slow=19,SNR=9.5						
BATI	**Baumata**	**4.33**	**220**	P	**P**	**03 43 00.5**	**-4.0**
BATI	**Baumata**	**4.33**	**220**	P	**P**	**03 43 00.8**	**-3.7**
MMRI	**Maumere**	**4.56**	**247**		**P**	**03 43 05.3**	**-1.3**
MMRI	**Maumere**	**4.56**	**247**	P	**P**	**03 43 04.9**	**-1.7**
MMRI	**Maumere**	**4.56**	**247**	P	**P**	**03 43 04.5**	**-2.1**
SANI	**Sanana**	**4.82**	**354**	P	**P**	**03 43 06.9**	**-2.2**
SANI	**Sanana**	**4.82**	**354**	P	**P**	**03 43 06.6**	**-2.5**
BSSI	**Bau Bau, Buton**	**6.00**	**277**	P	**P**	**03 43 20.1**	**-0.7**
WSI	**Waingapu**	**6.72**	**245**	P	**P**	**03 43 28.5**	**+0.3**
	176nm,0.6s						
LBFI	**Labuhan Bajo,**	**6.73**	**256**	P	**P**	**03 43 26.8**	**-1.5**
KAPI	**Kappang**	**6.95**	**285**	P	**P**	**03 43 28.5**	**-2.2**
	6.3nm,0.4s,baz=181,slow=16,SNR=7.8						
KAPI	**Kappang**	**6.95**	**285**		**P**	**03 43 30.9**	**+0.3**
KAPI	**Kappang**	**6.95**	**285**	P	**P**	**03 43 30.5**	**-0.1**
FAKI	**Fak Fak**	**6.96**	**56**		**P**	**03 43 28.2**	**-2.5**
FAKI	**Fak Fak**	**6.96**	**56**	P	**P**	**03 43 29.1**	**-1.6**
	0.5nm3um81nm,0.8s						
FAKI	**Fak Fak**	**6.96**	**56**	P	**P**	**03 43 27.7**	**-3.0**
MTN	**Manton Dam**	**7.49**	**143**		**P**	**03 43 36.5**	**+0.2**
MTN	**Manton Dam**	**7.49**	**143**	P	**P**	**03 43 35.9**	**-0.4**
WBSI	**Waikabubak, Su**	**7.54**	**248**	P	**P**	**03 43 36.2**	**-0.7**
SIJI	**Sorong**	**7.64**	**39**	P	**P**	**03 43 37.2**	**-0.8**
	51nm,0.6s,baz=286,slow=6.5,SNR=20						
SIJI				S	**S**	**03 45 05.6**	**-3.9**
	11nm,0.5s,baz=249,slow=23,SNR=1.7						
SIJI	**Sorong**	**7.64**	**39**	P	**P**	**03 43 36.4**	**-1.6**
SWI	**Sorong**	**7.64**	**39**	P	**P**	**03 43 36.2**	**-1.8**
TNTI	**Ternate**	**7.65**	**7**	P	**P**	**03 43 36.1**	**-2.0**
DBNI	**Kabupaten Domp**	**8.26**	**258**	P	**P**	**03 43 42.9**	**-1.7**
PLAI	**Plampang**	**8.84**	**257**	P	**P**	**03 43 50.1**	**-0.9**
KNRA	**Kununurra**	**9.02**	**166**		**P**	**03 43 53.7**	**+0.8**
MPSI	**Mapaga**	**9.73**	**317**	P	**P**	**03 43 59.4**	**-1.2**
TOLI2	**Tolitoli**	**9.77**	**324**		**P**	**03 44 01.2**	**+0.1**
TOLI2	**Tolitoli**	**9.77**	**324**	P	**P**	**03 44 00.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**11.18**	**184**	P	**P**	**03 44 16.8**	**+0.4**
	14nm,0.5s,baz=19,slow=9.4,SNR=105						
FITZ				S	**S**	**03 46 18.2**	**-1.9**
	13nm,0.8s,baz=298,slow=18,SNR=9.1						
FITZ	**Fitzroy Crossi**	**11.18**	**184**		**P**	**03 44 16.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.18**	**184**	P	**P**	**03 44 16.5**	**+0.1**
JAY	**Jayapura**	**14.82**	**74**	P	**P**	**03 44 56.2**	**+0.4**
	2.9nm,0.5s,baz=214,slow=11,SNR=1.9						
WRAB	**Tennant Creek**	**15.06**	**150**	P	**P**	**03 44 57.8**	**-0.4**
WRA	**Warramunga Ar**	**15.06**	**150**	P	**P**	**03 44 58.2**	**0.0**
	16nm,0.7s,baz=326,slow=11,SNR=143						
WRA				S	**S**	**03 47 35.0**	**-1.8**
	3.5nm,0.8s,baz=325,slow=18,SNR=8.8						
WRA	**Warramunga Ar**	**15.06**	**150**	P	**P**	**03 44 57.2**	**-1.0**
WR8	**Warramunga Arr**	**15.15**	**150**		**P**	**03 44 59.2**	**+0.1**
MBWA	**Marble Bar**	**15.63**	**204**	P	**P**	**03 45 04.3**	**+0.1**
MBWA				IAmb	IAmb	03 45 16.9	
	comp=Z,17nm,0.8s						
MBWA	**Marble Bar**	**15.63**	**204**	P	**P**	**03 45 02.6**	**-1.6**
CTJI	**Waduk Cacaban**	**17.18**	**269**	P	**P**	**03 45 20.2**	**-0.5**
COEN	**Coen**	**17.85**	**115**	P	**P**	**03 45 26.4**	**-1.3**
AS31	**Alice Springs**	**18.15**	**158**		**P**	**03 45 31.0**	**+0.3**
AS31				IAmb	IAmb	03 45 33.0	
	comp=Z,7.0nm,0.9s						
ASAR	**Alice Springs**	**18.15**	**158**	P	**P**	**03 45 31.0**	**+0.3**
	comp=Z,17nm,0.7s,baz=348,slow=15,SNR=122						
ASAR				S	**S**	**03 48 36.6**	**+2.0**
	comp=Z,8.3nm,0.9s,baz=342,slow=18,SNR=15						
ASAR				ScP	**ScP**	**03 52 33.2**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=344,slow=2.0,SNR=6.4						
ASAR	**Alice Springs**	**18.15**	**158**		**P**	**03 45 31.0**	**+0.3**
QIS	**Mount Isa**	**18.61**	**138**	P	**P**	**03 45 34.8**	**-0.4**
MEEK	**Meekatharra**	**21.03**	**200**	P	**P**	**03 45 57.5**	**+0.3**
MDSI	**Maura Dua**	**22.32**	**275**	P	**P**	**03 46 06.8**	**-2.2**
FORT	**Forrest**	**23.82**	**177**	P	**P**	**03 46 22.9**	**+0.7**
FORT				IAmb	IAmb	03 46 23.7	
	comp=Z,8.8nm,0.7s						
MORW	**Morawa**	**24.17**	**203**	P	**P**	**03 46 25.3**	**-0.2**
MORW				IAmb	IAmb	03 46 52.4	
	comp=Z,25nm,1.5s						
SZP	**Santa**	**24.99**	**346**	P	**P**	**03 46 31.8**	**-1.1**
BLDU	**Ballidu**	**25.33**	**200**	P	**P**	**03 46 36.1**	**+0.4**
QLP	**Quilpie**	**25.87**	**141**	P	**P**	**03 46 39.9**	**-0.7**
KLR	**Kellerberrin**	**25.91**	**197**	P	**P**	**03 46 40.4**	**-0.7**
BBOO	**Buckleboo**	**27.30**	**162**	P	**P**	**03 46 53.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.31**	**197**	P	**P**	**03 46 54.2**	**+1.0**
STKA	**Stephens Creek**	**28.59**	**152**	P	**P**	**03 47 05.8**	**+1.2**
	comp=Z,11nm,0.8s,baz=323,slow=8.9,SNR=14						
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	**28.59**	**152**	P	**P**	**03 47 05.6**	**+1.1**
STKA				pP	**pP**	**03 48 22.2**	**-1.1**
CMSA	**Cobar Meteorol**	**30.40**	**146**	P	**P**	**03 47 21.6**	**+1.3**
TPUB	**Ta-pu**	**30.54**	**349**	P	**P**	**03 47 19.5**	**-2.0**
TPUB				IAmb	IAmb	03 47 20.7	
	comp=Z,12nm,0.7s						
TPUB	**Ta-pu**	**30.54**	**349**	P	**P**	**03 47 19.0**	**-2.5**
SSLB	**Suanglung**	**30.95**	**350**	P	**P**	**03 47 23.8**	**-1.4**
ARMA	**Armidale**	**33.24**	**138**	P	**P**	**03 47 43.5**	**-1.4**
CAN	**Canberra**	**35.06**	**147**	P	**P**	**03 48 01.9**	**+1.8**
CAN				IAmb	IAmb	03 48 45.2	
	comp=Z,27nm,1.4s						
CMAR	**Chiang Mai Arr**	**37.04**	**313**	P	**P**	**03 48 17.3**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=144,slow=7.4,SNR=7.2						
CMAR				ScP	**ScP**	**03 53 31.5**	**+1.5**
	comp=Z,1.6nm,0.3s,baz=155,slow=3.4,SNR=4.4						
	comp=Z,0.8nm,0.3s						
WHN	**Wuhan**	**38.99**	**343**	⇑P	**P**	**03 48 33.3**	**+0.8**
WHN				pmax	pmax		
	comp=Z,46nm,0.7s						
PZH	**PanZhiHua**	**40.95**	**325**	P	**P**	**03 48 50.6**	**+1.9**
KSAR	**Wonju Array Be**	**44.11**	**2**	P	**P**	**03 49 12.0**	**-1.2**
KSRS	**Korea Array**	**44.12**	**2**	P	**P**	**03 49 13.9**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=182,slow=9.3,SNR=14						
	comp=Z,2.3nm,0.5s						
KS19	**Wonju Array Si**	**44.17**	**2**	P	**P**	**03 49 14.0**	**+0.3**
KS19				IAmb	IAmb	03 49 38.7	
	comp=Z,12nm,1.2s						
MJAR	**Matsushiro Arr**	**44.57**	**13**	P	**P**	**03 49 16.2**	**-0.6**
	comp=Z,8.7nm,0.8s,baz=190,slow=8.7,SNR=31						
	comp=Z,8.7nm,0.8s						
MJAR	**Matsushiro Arr**	**44.57**	**13**		**P**	**03 49 16.0**	**-0.9**
MAJO	**Matsushiro**	**44.57**	**13**	P	**P**	**03 49 16.0**	**-0.9**
MAJO				IAmb	IAmb	03 49 17.0	
	comp=Z,11nm,0.8s						
MJB9	**Matsu-Tunnel**	**44.57**	**13**	P	**P**	**03 49 16.2**	**-0.7**
MJB9				IAmb	IAmb	03 49 17.0	
	comp=Z,10nm,0.8s						
LZDM	**Lanzhou Array**	**47.69**	**335**	P	**P**	**03 49 41.6**	**+0.5**
	comp=Z,4.5nm,0.3s,baz=183,slow=12,SNR=6.7						
	comp=Z,4.5nm,0.3s						
HHC	**Hu-ho-hao-te**	**49.44**	**345**	eP	P	03 49 56.8	+2.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,66nm,4.5s						
USA0B	**Ussuriysk Arra**	**51.08**	**5**	P	**P**	**03 50 05.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**51.08**	**5**	P	**P**	**03 50 06.3**	**+0.5**
	comp=Z,6.7nm,0.7s,baz=198,slow=8.7,SNR=14						
	comp=Z,6.7nm,0.7s						
JKA	**Kamikawa-asahi**	**52.81**	**15**	P	**P**	**03 50 18.4**	**+0.1**
HILR	**Hailar Array B**	**56.51**	**355**	P	**P**	**03 50 45.5**	**+1.1**
	comp=Z,3.0nm,0.6s,baz=185,slow=8.9,SNR=13						
	comp=Z,3.0nm,0.6s						
HEH	**HeiHe**	**56.90**	**1**	eP	**P**	**03 50 47.5**	**+0.5**
HEH				pmax	pmax		
	comp=Z,14nm,0.6s						
SONM	**Songino Array**	**57.29**	**344**	P	**P**	**03 50 50.7**	**+0.7**
	comp=Z,6.9nm,0.9s,baz=164,slow=7.5,SNR=23						
	comp=Z,6.9nm,0.9s						
SONM	**Songino Array**	**57.29**	**344**		**P**	**03 50 50.2**	**+0.3**
SONM				IAmb	IAmb	03 50 51.6	
	comp=Z,7.4nm,1.0s						
CASY	**Casey**	**60.33**	**187**	P	**P**	**03 51 10.8**	**+0.8**
WMQ	**Urumqi**	**61.44**	**329**	eP	**P**	**03 51 18.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**64.53**	**312**	P	**P**	**03 51 38.5**	**+0.5**
PEA0B	**Petropavlovsk-**	**65.35**	**20**	P	**P**	**03 51 44.3**	**+1.5**
PEA0B				IAmb	IAmb	03 51 44.9	
	comp=Z,8.6nm,0.7s						
PETK	**Petropavlovsk-**	**65.35**	**20**	P	**P**	**03 51 44.1**	**+1.3**
	comp=Z,5.6nm,0.6s,baz=201,slow=4.4,SNR=14						
	comp=Z,5.6nm,0.6s						
PETK	**Petropavlovsk-**	**65.35**	**20**	P	**P**	**03 51 44.5**	**+1.7**
KSH2	**Kashi**	**65.67**	**319**	P	**P**	**03 51 46.0**	**+0.7**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**03 51 49.2**	**+0.5**
	comp=Z,6.9nm,0.8s,baz=126,slow=7.7,SNR=47						
	comp=Z,6.9nm,0.8s						
BOOM	**Boomskoye usch**	**67.26**	**322**	P	**P**	**03 51 55.7**	**+0.5**
BOOM				IAmb	IAmb	03 51 59.0	
	comp=Z,18nm,1.4s						
ZAA0	**Zalesovo Array**	**69.97**	**335**		**P**	**03 52 11.3**	**+0.1**
ZALV	**Zalesovo Beam**	**69.97**	**335**	P	**P**	**03 52 10.9**	**-0.3**
	comp=Z,14nm,0.6s,baz=131,slow=4.9,SNR=64						
	comp=Z,14nm,0.6s						
ZALV	**Zalesovo Beam**	**69.97**	**335**		**P**	**03 52 11.2**	**+0.1**
KURBB	**Kurchatov Arra**	**70.62**	**330**	P	**P**	**03 52 15.6**	**+0.5**
	comp=Z,7.1nm,0.7s,baz=133,slow=5.0,SNR=72						
	comp=Z,7.1nm,0.7s						
KURK	**Kurchatov**	**70.63**	**330**		**P**	**03 52 15.7**	**+0.5**
KURK				IAmb	IAmb	03 52 16.4	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**73.01**	**172**	P	**P**	**03 52 29.3**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=316,slow=6.2,SNR=6.3						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**73.01**	**172**	P	**P**	**03 52 29.3**	**+0.6**
KIWB	**Kanaga Island**	**75.65**	**32**	P	**P**	**03 52 45.2**	**+1.1**
KIWB				IAmb	IAmb	03 52 46.2	
	comp=Z,11nm,0.9s						
BVAR	**Borovoye Array**	**76.13**	**329**	P	**P**	**03 52 47.4**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=131,slow=6.7,SNR=13						
	comp=Z,4.9nm,0.7s						
VOI	**Vohitsoka**	**77.93**	**249**	P	**P**	**03 52 58.5**	**+1.0**
AB31	**Akbulak array**	**80.27**	**322**	P	**P**	**03 53 08.7**	**-0.5**
ABKAR	**Akbulak array**	**80.27**	**322**	P	**P**	**03 53 08.7**	**-0.4**
LVA	**Lava Point**	**82.68**	**33**	P	**P**	**03 53 21.9**	**+0.4**
QSPA	**South Pole Qui**	**83.10**	**180**	P	**P**	**03 53 24.1**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=267,slow=0.9,SNR=15						
	comp=Z,1.1nm,0.6s						
O14K	**Tigyukauivet M**	**86.94**	**29**	P	**P**	**03 53 42.8**	**+0.6**
O14K				IAmb	IAmb	03 53 43.8	
	comp=Z,3.1nm,0.8s						
E19K	**Redstone River**	**91.09**	**22**	P	**P**	**03 54 02.1**	**+0.7**
E19K				IAmb	IAmb	03 54 02.6	
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array**	**94.73**	**25**	P	**P**	**03 54 17.1**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=252,slow=4.4,SNR=5.3						
	comp=Z,0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**125.36**	**281**	PKP	**PKiKP**	**03 59 56.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=126,slow=0.7,SNR=2.0						
TXAR	**Lajitas Array**	**127.84**	**58**	PKP	**PKiKP**	**04 00 01.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=260,slow=2.3,SNR=2.6						
CPUP	**Villa Florida**	**146.78**	**174**	PKPbc	**PKPab**	**04 00 38.0**	**-2.2**
	comp=Z,0.9nm,0.6s,baz=258,slow=6.4,SNR=3.2						
LPAZ	**La Paz**	**152.81**	**148**	PKPbc	**PKiKP**	**04 00 54.8**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=164,slow=9.7,SNR=1.9						

*TRN **19** 03:50:40.7, 11°38N×61°38W, h25km, MD3.6, North of Trinidad.*
*FUNV **19** 03:50:41.1, 11°37N×61°58W, h30km, MW3.4, Presumed earthquake*

ISC 19 03:50:41.0±1.3, **11°38N**±0°02×**61°43W**±0°08, **h27**km±14km, **n20**, σ0§**77**/34, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.69**	**190**	eP	**Pn**	**03 50 54.5**	**-0.4**
DMDM				eS	**Sn**	**03 51 04.8**	**+0.1**
PSMG	**Mucurapo Girls**	**0.71**	**188**	eP	**Pn**	**03 50 55.0**	**-0.2**
PSMG				eS	**Sn**	**03 51 05.3**	**0.0**
TRN	**Trinidad (W)**	**0.72**	**178**	eP	**Pn**	**03 50 55.8**	**+0.3**
TRN				eS	**Sn**	**03 51 05.6**	**-0.1**
TRN	**Trinidad (W)**	**0.72**	**178**	eP	**Pb**	**03 50 55.0**	**-0.1**
TRN				eS	**Sn**	**03 51 05.4**	**-0.2**
GRFF	**Grenada Fort F**	**0.73**	**336**	eP	**Pb**	**03 50 55.0**	**-0.1**
GRFF				eS	**Sn**	**03 51 06.2**	**+0.3**
GRGR	**Grenville**	**0.78**	**344**	eP	**Pn**	**03 50 55.9**	**-0.3**
GRGR				eS	**Sn**	**03 51 06.7**	**-0.4**
GRGR	**Grenville**	**0.78**	**344**	eP	**Pb**	**03 50 55.8**	**-0.1**
GRGR				eS	**Sn**	**03 51 08.2**	**+1.1**
GRSS	**Sisters**	**0.93**	**349**	eP	**Pn**	**03 50 58.0**	**-0.4**
GRSS				eS	**Sn**	**03 51 11.4**	**+0.6**
GCMP	**Grenada, Carri**	**1.10**	**0**	eP	**Pn**	**03 51 00.6**	**-0.1**
GCMP				eS	**Sb**	**03 51 15.4**	**+0.1**
GCMP	**Grenada, Carri**	**1.10**	**0**	eP	**Pn**	**03 51 00.2**	**-0.4**
GCMP				eS	**Sn**	**03 51 15.1**	**+0.1**
BBGH	**Gun Hill**	**2.53**	**46**	eP	**Pn**	**03 51 20.8**	**+0.4**
BBGH				eS	**Sn**	**03 51 50.7**	**+0.3**
SLAC	**Saint Lucia, A**	**2.56**	**12**	eP	**Pn**	**03 51 21.2**	**+0.5**
SLCP	**Castries, St.**	**2.65**	**9**	eS	**Sn**	**03 51 52.5**	**-0.7**
SLBI	**Saint Lucia, B**	**2.67**	**10**	eP	**Pn**	**03 51 22.4**	**+0.2**
SLBI				eS	**Sn**	**03 51 53.8**	**+0.1**
BIM	**Bigot**	**3.14**	**6**	eP	**Pn**	**03 51 27.4**	**-1.3**
BIM				eS	**Sn**	**03 52 02.9**	**-2.6**
BIM	**Bigot**	**3.14**	**6**	eP	**Pn**	**03 51 28.4**	**-0.3**
BIM				eS	**Sn**	**03 52 04.3**	**-1.1**
DSLB	**Salisbury**	**4.04**	**0**	eP	**Pn**	**03 51 41.7**	**+0.6**
TBG	**Guadaloupe-3**	**4.45**	**357**	eP	**Pn**	**03 51 48.1**	**+1.4**
MAGL	**Barre de l'Ile**	**4.55**	**2**	eP	**Pn**	**03 51 48.8**	**+0.7**
ANWB	**Willy Bob**	**6.26**	**357**	eP	**Pn**	**03 52 13.0**	**+1.3**

IDC 19 03:55:08.9±1.6, **2°86S**×**139°15E**, **h0**km, **mb3.1**/2, **mbtmp3.2**/3, **ML3.3/1**, **Error ellipse: s-maj=33.8km s-min=15.0km az=161.0**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.59**	**78**	Pg	Pn	03 55 37.6	-0.8
	baz=234,slow=8.9						
JAY				Lg	Lg	03 55 59.5	
	baz=324,slow=19						
WRA	**Warramunga Ar**	**17.62**	**195**	P	Pn	03 59 16.5	+0.5
	0.1nm,0.3s,baz=17,slow=12,SNR=6.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.30**	**193**	P	P	03 59 56.6	-0.7
	0.3nm,0.7s,baz=16,slow=10.0,SNR=5.7						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**70.17**	**322**	P	P	04 06 23.8	+0.3
	0.1nm,0.4s,baz=108,slow=7.3,SNR=1.4						
	0.1nm,0.4s						

*RSNC **19** 04:17:11.0±0.0, 7°N±1°×7°3W±°, h148km±1km, M2.4, ML2.1*
*FUNV **19** 04:17:12.1, 7°19N×73°28W, h7km, MW2.9, Presumed earthquake*

ISC 19 04:17:09.0±1.5, **6°91N**±0°04×**73°17W**±0°05, **h158**km±9km, **n19**, σ1§**57**/38, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.32**	**182**	P	**Pn**	**04 17 30.9**	**+0.1**
BARC				S	**Sn**	**04 17 45.9**	**-1.6**
BRJC	**Barrancabermej**	**0.57**	**276**	P	**Pn**	**04 17 32.5**	**+0.9**
BRJC				S	**Sn**	**04 17 49.5**	**+0.7**
PAMC	**Pamplona, Colo**	**0.63**	**48**	P	**Pn**	**04 17 33.8**	**+1.3**
PAMC				S	**Sn**	**04 17 51.1**	**+0.7**
RUSC	**La Rusia**	**1.02**	**175**	P	**Pn**	**04 17 35.0**	**-0.2**
RUSC				S	**Sn**	**04 17 53.7**	**-1.6**
RUSC	**La Rusia**	**1.02**	**175**	eP	**Pn**	**04 17 35.0**	**-0.2**
RUSC				eS	**Sn**	**04 17 53.2**	**-2.1**
OCAC	**Ocana**	**1.32**	**354**	P	**Pn**	**04 17 39.0**	**+1.4**
OCAC				S	**Sn**	**04 18 00.9**	**+1.3**
PTBC	**PUERTO BERRIO,**	**1.33**	**254**	P	**Pn**	**04 17 37.4**	**-0.1**
PTBC				S	**Sn**	**04 17 58.8**	**-0.5**
SPBC	**San Pablo de B**	**1.54**	**216**	P	**Pn**	**04 17 39.7**	**0.0**
SPBC				S	**Sn**	**04 18 02.1**	**-1.2**
NORC	**Norcasia**	**2.16**	**232**	P	**Pn**	**04 17 46.8**	**+0.3**
NORC				S	**Sn**	**04 18 14.3**	**-1.1**
ROSC	**El Rosal**	**2.36**	**209**	P	**Pn**	**04 17 50.1**	**+0.9**
ROSC				S	**Sn**	**04 18 20.5**	**+0.3**
CVER	**Cruz Verde, Cu**	**2.54**	**201**	P	**Pn**	**04 17 52.1**	**+0.6**
CVER				S	**Sn**	**04 18 26.4**	**+2.1**
GUY2C	**Guyana, Caldas**	**2.75**	**233**	P	**Pn**	**04 17 56.0**	**+1.9**
GUY2C				S	**Sn**	**04 18 29.7**	**+0.8**
VILC	**Villavicencio,**	**2.83**	**191**	P	**Pn**	**04 17 54.4**	**-0.3**
VILC				S	**Sn**	**04 18 29.2**	**-1.0**
CBOC	**Ciudad Bolivar**	**3.01**	**250**	P	**Pn**	**04 17 58.5**	**+1.5**
CBOC				S	**Sn**	**04 18 33.7**	**-0.4**
SDV	**Santo Domingo**	**3.19**	**52**	eP	**Pn**	**04 18 00.8**	**+1.5**
SDV				eS	**Sn**	**04 18 36.9**	**-1.2**
APAC	**Apartado, Choc**	**3.52**	**286**	P	**Pn**	**04 18 04.2**	**+0.9**
APAC				S	**Sn**	**04 18 45.6**	**+0.2**
SJCC	**San Jacinto, C**	**3.57**	**326**	P	**Pn**	**04 18 05.0**	**+1.0**
SJCC				S	**Sn**	**04 18 45.4**	**-1.3**
SJCC	**San Jacinto, C**	**3.57**	**326**	eP	**Pn**	**04 18 03.6**	**-0.3**
SJCC				eS	**Sn**	**04 18 40.3**	**-6.4**
PRAC	**Prado**	**3.61**	**208**	P	**Pn**	**04 18 04.6**	**+0.1**
PRAC				S	**Sn**	**04 18 46.6**	**-1.0**

*SNET **19** 04:46:20.0±1.0, 13°73N×89°28W, h4km±2km, MD2.1, ML1.6, Presumed earthquake*
*CATAC **19** 04:46:20.6±0.4, 14°N±2°×8°9W±°, h5km±1km, M2.0/8, MLv2.0/8, Error ellipse: s-maj=4.0km s-min=2.9km az=7.1, confirmed*
*GCG **19** 04:46:20.2±0.8, 13°74N×89°31W, h11km±8km, MD3.4, Presumed earthquake*

ISC 19 04:46:20.5±1.0, **13°74N**±0°03×**89°29W**±0°02, **h5**km±5km, **n21**, σ0§**66**/35, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOQS	**Boqueron**	**0.01**	**120**	eP	**Pg**	**04 46 21.8**	**+0.1**
BOQS				eS	**Sg**	**04 46 22.8**	**+0.2**
BOQS				IAML		04 46 23.4	
	comp=Z,718nm,0.1s						
PIC2	**El Picacho**	**0.03**	**83**	eP	**Pg**	**04 46 22.0**	**+0.1**
PMON	**Piamonte**	**0.04**	**220**	P	**Pg**	**04 46 22.0**	**+0.2**
PMON	**Piamonte**	**0.04**	**220**	eP	**Pg**	**04 46 21.9**	**+0.2**
PMON				eS	**Sg**	**04 46 23.0**	**+0.4**
UEES	**Universidad Ev**	**0.06**	**116**	P	**Pg**	**04 46 22.1**	**+0.1**
UEES	**Universidad Ev**	**0.06**	**116**	eP	**Pg**	**04 46 22.1**	**+0.1**
UEES				eS	**Sg**	**04 46 23.0**	**+0.2**
SEMO	**Seminario San**	**0.07**	**120**	P	**Pg**	**04 46 22.4**	**+0.2**
SEMO				S	**Sg**	**04 46 24.3**	**+0.8**
LOMA	**Loma Larga**	**0.15**	**130**	P	**Pg**	**04 46 23.8**	**+0.2**
LOMA	**Loma Larga**	**0.15**	**130**	eP	**Pg**	**04 46 23.8**	**+0.2**
LOMA				eS	**Sg**	**04 46 26.4**	**+0.8**
JAYA	**Jayaque - finc**	**0.18**	**241**	P	**Pg**	**04 46 24.4**	**+0.4**
JAYA				S	**Sg**	**04 46 27.5**	**+1.1**
JAYA	**Jayaque - finc**	**0.18**	**241**	*i* P	**Pg**	**04 46 24.4**	**+0.4**
JAYA				*i* S	**Sg**	**04 46 26.8**	**+0.3**
JAYA	**Jayaque - finc**	**0.18**	**241**	eP	**Pg**	**04 46 24.5**	**+0.4**
JAYA				eS	**Sg**	**04 46 27.5**	**+1.1**
JAYA				IAML		04 46 27.7	
	comp=Z,286nm,0.2s						
LALI	**Alcalda de L**	**0.25**	**187**	*i* P	**Pg**	**04 46 25.5**	**+0.1**
CEVE	**Cerro Verde**	**0.34**	**285**	P	**Pb**	**04 46 28.0**	**-1.1**
CEVE	**Cerro Ver

comp=Z,11nm,18.5s,baz=152,slow=32
UOSS Minazif 11.05 12 Sn Sn 04 58 40.8 -14
UOSS Minazif 11.05 12 P **Pn** **04 56 53.4 +2.4**
RAYN Ar Rayn 12.13 322 Pn **Pn** **04 57 02.1 -3.7**
RAYN Ar Rayn 12.13 322 P **Pn** **04 57 08.9 +3.1**
AQBJ Aqaba 23.18 315 P **P** **04 59 25.4 +5.7**
5µm36nm,0.4s
EIL Elat 23.21 315 P **P** **04 59 21.9 +1.8**
8.0nm,0.3s,baz=145,slow=2.9,SNR=36
EIL LR LR 05 07 42.0
comp=Z,119nm,18.7s,baz=82,slow=35
8.0nm,0.3s
EIL Elat 23.21 315 P **P** **04 59 23.5 +3.5**
480nm24nm,0.6s
EIL Elat 23.21 315 P **P** **04 59 20.0 0.0**
HRFI Mount Harif 23.38 316 P **P** **04 59 25.0 +3.3**
30nm,1.1s
HRFI Mount Harif 23.38 316 P **P** **04 59 22.8 +1.0**
KAAM Kaadhehdhoo 23.43 124 P P 04 59 07.4 -15
ASF Jabal al Asfar 23.62 322 P **P** **04 59 25.6 +1.4**
4.7nm,0.9s,baz=114,slow=3.4,SNR=6.5
ASF LR LR 05 08 58.2
comp=Z,127nm,20.4s,baz=206,slow=38
4.7nm,0.9s
ASF Jabal al Asfar 23.62 322 P **P** **04 59 26.6 +2.4**
67nm,1.0s
HYB Hyderabad 24.18 79 *e*P **P** **04 59 28.7 -1.0**
HYB *e*S **S** **05 03 47.3 -0.8**
KZIT Kziot 24.35 317 P **P** **04 59 34.0 +3.0**
55nm,0.8s
KZIT Kziot 24.35 317 P **P** **04 59 31.0 0.0**
KBL Kabul 24.65 32 P **P** **04 59 33.2 -0.7**
MMLI Mount Malkishu 24.70 321 P **P** **04 59 35.3 +1.1**
HAKT HAKKARI 24.98 341 P **P** **04 59 37.0 +0.1**
GEM Giv'at Ha'Em 25.09 322 P **P** **04 59 37.9 +0.2**
MMC4 Mount Meron ar 25.09 322 P **P** **04 59 39.0 +1.2**
MMC5 Mount Meron ar 25.10 322 P **P** **04 59 38.7 +0.8**
MMA0B Mount Meron ar 25.11 322 P **P** **04 59 38.9 +0.9**
MMAI Mount Meron Ar 25.11 322 P **P** **04 59 39.1 +1.2**
4.8nm,0.8s,baz=60,slow=7.0,SNR=8.5
MMAI LR LR 05 09 30.1
comp=Z,91nm,18.6s,baz=132,slow=36
4.8nm,0.8s
GEVA Gevas 25.88 341 **P** **04 59 46.6 +1.6**
GEVA IAmb IAmb 04 59 58.9
comp=Z,22nm,1.2s
GNI Garni 27.10 345 P **P** **04 59 56.7 +0.7**
comp=Z,2.8nm,0.4s,baz=146,slow=3.6,SNR=4.0
GNI LR LR 05 12 31.6
comp=Z,99nm,18.2s,baz=143,slow=41
comp=Z,2.8nm,0.4s
GNI Garni 27.10 345 P **P** **04 59 56.2 +0.2**
GNI IAmb IAmb 05 00 04.8
comp=Z,11nm,0.9s
GNI Garni 27.10 345 P **P** **04 59 56.4 +0.4**
ANDN Andirin 28.00 330 P **P** **05 00 04.7 +0.7**
KOPT Kop Dagi 28.28 338 **P** **05 00 06.0 -0.7**
KOPT IAmb IAmb 05 00 12.4
comp=Z,11nm,1.0s
ARPR Arapgir-MALATY 28.32 334 P **P** **05 00 07.0 +0.1**
ARPR IAmb IAmb 05 00 10.8
comp=Z,11nm,1.2s
ARPR Arapgir-MALATY 28.32 334 P **P** **05 00 07.7 +0.7**
GAR Garm 28.83 28 P **P** **05 00 10.2 -1.2**
KELT Kelkit 28.86 337 P **P** **05 00 12.6 +0.9**
BTK Batken 29.92 27 P **P** **05 00 20.2 -0.9**
AKAS Kas 30.81 320 P **P** **05 00 27.9 -1.2**
KBZ Khabaz 30.93 345 P **P** **05 00 30.0 +0.3**
comp=Z,2.1nm,1.0s,baz=157,slow=6.9,SNR=4.2
KBZ LR LR 05 14 52.4
comp=Z,94nm,20.4s,baz=162,slow=40
comp=Z,2.1nm,1.0s
ELL Elmali 30.95 321 P **P** **05 00 31.9 +1.6**
BR131 Keskin Array S 30.99 329 P **P** **05 00 30.3 -0.3**
BR131 IAmb IAmb 05 00 38.6
comp=Z,7.3nm,1.3s
BRTR Keskin Array B 30.99 329 P **P** **05 00 31.5 +0.9**
comp=Z,1.5nm,1.0s,baz=141,slow=12,SNR=7.4
BRTR LR LR 05 13 18.2
comp=Z,46nm,18.2s,baz=141,slow=37
comp=Z,1.5nm,1.0s
BRTR Keskin Array B 30.99 329 P **P** **05 00 30.5 -0.1**
KVAR Kislovodsk Arr 31.20 345 LR LR 05 15 53.5
comp=Z,94nm,19.1s,baz=54,slow=42
KSH2 Kashi 31.55 34 P **P** **05 00 36.5 +1.0**
KSH2 pmax pmax
comp=Z,4.0nm,0.8s
ASAI AK-SAY(Kyrgyzs 33.34 32 P **P** **05 00 47.8 -3.6**
IDI Anoyia 33.38 314 P **P** **05 00 51.9 +0.4**
comp=Z,13nm,0.8s,baz=34,slow=6.0,SNR=5.5
comp=Z,13nm,0.8s
IDI Anoyia 33.38 314 P **P** **05 00 52.9 +1.4**
GVD Gavdhos 33.71 313 P **P** **05 00 52.1 -2.2**
IMMV Iera Moni Meta 34.10 314 P **P** **05 00 57.0 -0.7**
RER Riviere de l'E 35.10 177 P P 05 00 50.2 -16
AB31 Akbulak array 35.43 7 **P** **05 01 08.7 -0.4**
AB31 IAmb IAmb 05 01 10.1
comp=Z,5.1nm,0.9s
ABKAR Akbulak array 35.43 7 **P** **05 01 08.6 -0.4**
AKTO Aktyubinsk 36.41 5 P **P** **05 01 16.0 -1.4**
comp=Z,2.1nm,0.7s,baz=208,slow=8.7,SNR=6.3
AKTO LR LR 05 19 32.2
comp=Z,80nm,18.2s,baz=190,slow=42
comp=Z,2.1nm,0.7s
PDGK Podgornoye 36.60 32 P **P** **05 01 18.7 -0.7**
LSZ Lusaka 38.55 222 LR LR 05 15 50.2
comp=Z,91nm,21.2s,baz=344,slow=34
VRI Vrincioaia 38.95 330 P **P** **05 01 38.7 -0.3**
MLR Muntele Rosu 39.08 329 P **P** **05 01 40.7 +0.5**
comp=Z,2.7nm,0.9s,baz=97,slow=8.1,SNR=3.3
MLR LR LR 05 20 01.8
comp=Z,60nm,18.1s,baz=178,slow=40
comp=Z,2.7nm,0.9s
TESR Tescani 39.45 330 P **P** **05 01 42.8 -0.3**
ARR Arges 39.66 328 P **P** **05 01 44.5 -0.5**
MKAR Makanchi Array 40.45 31 P **P** **05 01 51.0 -0.5**
comp=Z,1.2nm,0.7s,baz=213,slow=6.3,SNR=11
MKAR LR LR 05 20 16.9
comp=Z,36nm,18.5s,baz=212,slow=39
comp=Z,1.2nm,0.7s
BURAR Bucovina Array 40.93 331 P **P** **05 01 55.5 0.0**
BUR08 Bucovina Ar. S 40.96 331 P **P** **05 01 56.7 +0.9**
BVAR Borovoye Array 41.05 15 P **P** **05 01 55.8 -0.5**
comp=Z,5.6nm,0.7s,baz=193,slow=5.8,SNR=21
comp=Z,5.6nm,0.7s
BORK Borovoye 41.05 15 **P** **05 01 54.9 -1.4**
WMQ Urumqi 41.50 38 *e*P **P** **05 02 01.4 +1.2**
WMQ pmax pmax
comp=Z,11nm,0.7s
AKASG Malin Array Be 41.53 337 P **P** **05 02 00.3 +0.1**
comp=Z,1.9nm,0.7s,baz=140,slow=7.5,SNR=13
AKASG LR LR 05 23 55.4
comp=Z,33nm,18.6s,baz=166,slow=43
comp=Z,1.9nm,0.7s
AKBB Malin Array Si 41.53 337 P **P** **05 01 59.6 -0.7**
KIEV Kiev 41.53 337 **P** **05 02 00.6 +0.3**
KIEV Kiev 41.53 337 P **P** **05 01 59.3 -0.9**
DRGR 41.61 328 P **P** **05 02 00.6 -0.5**
KURBB Kurchatov Arra 41.64 24 P **P** **05 01 59.9 -1.3**
comp=Z,2.0nm,0.9s,baz=224,slow=8.1,SNR=14
comp=Z,2.0nm,0.9s
BMR Baia Mare 41.80 329 P **P** **05 02 01.9 -0.6**
ARTI Arti 42.36 4 P **P** **05 02 07.0 0.0**
comp=Z,1.8nm,0.7s,baz=198,slow=13,SNR=2.1
ARTI LR LR 05 21 43.5
comp=Z,66nm,20.3s,baz=188,slow=39
comp=Z,1.8nm,0.7s
TRPA Tarpa 42.59 329 P **P** **05 02 08.4 -0.5**
CMAR Chiang Mai Arr 43.61 78 P **P** **05 02 16.6 -1.1**
comp=Z,0.8nm,0.2s,baz=275,slow=8.6,SNR=9.2
CMAR LR LR 05 20 10.0
comp=Z,36nm,19.4s,baz=250,slow=36
comp=Z,0.8nm,0.2s
KIRV Kirov 44.52 357 LR LR 05 25 00.3
comp=Z,45nm,18.2s,baz=197,slow=42
MNK Minsk 45.06 339 *i* P **P** **05 02 28.6 -0.2**
comp=E,8.0nm,1.0s
MNK *i* P **P** **05 02 28.6 -0.2**
comp=N,13nm,0.8s
MNK *i* P **P** **05 02 28.6 -0.2**
comp=Z,7.0nm,0.7s,baz=143
MNK *i* PP **PP** **05 04 13.3 -0.8**
MNK *i* PPP PPP 05 04 50.5
MNK *i* S **S** **05 09 06.7 -0.9**
MNK *i* SS **SS** **05 12 28.8 -0.8**
MNK *i* SSS SSS 05 13 11.9
MNK *i* LR LR 05 21 22.5
KEST Kesra 45.12 307 P **P** **05 02 29.7 +0.1**
comp=Z,12nm,1.0s,baz=130,slow=1.6,SNR=9.3
KEST LR LR 05 21 56.6
comp=Z,35nm,18.3s,baz=358,slow=37
comp=Z,12nm,1.0s
KEST Kesra 45.12 307 P **P** **05 02 31.0 +1.4**
MODS Modra-Piesok 45.47 326 *e*P **P** **05 02 33.4 +1.3**
JAVC Velka Javorina 45.55 327 *e*P **P** **05 02 34.5 +1.7**
NACGM Narooch 45.77 339 *e*P **P** **05 02 34.5 +0.1**
comp=N,12nm,1.1s
ARSA Arzberg 45.80 324 *e*P **P** **05 02 35.6 +0.9**
comp=N,2.7nm,1.1s
CONA Conrad Observa 45.98 325 *e*P **P** **05 02 36.7 +0.4**
comp=N,7.5nm,1.3s
MORC Moravsky Berou 46.17 328 IAmb IAmb 05 02 39.4
comp=Z,5.5nm,1.1s
MORC Moravsky Berou 46.17 328 *e*P **P** **05 02 37.9 +0.2**
MORC Moravsky Berou 46.17 328 P **P** **05 02 37.0 -0.7**
KRUC Moravsky 46.34 327 *e*P **P** **05 02 39.1 +0.1**
VRAC Vranov 46.38 327 LR LR 05 23 44.4
comp=Z,27nm,20.0s,baz=104,slow=38
PZH PanZhiHua 46.51 67 P **P** **05 02 44.8 +4.0**
ZALV Zalesovo Beam 46.68 25 P **P** **05 02 40.4 -1.1**
comp=Z,4.4nm,1.0s,baz=243,slow=6.5,SNR=12
ZALV PcP **PcP** **05 04 13.8 -1.3**
comp=Z,0.4nm,0.4s,baz=220,slow=1.1,SNR=1.4
ZALV LR LR 05 24 09.0
comp=Z,28nm,20.7s,baz=184,slow=39
comp=Z,4.4nm,1.0s
ZALV Zalesovo Beam 46.68 25 P **P** **05 02 39.6 -1.9**
MOA Molln 46.84 324 *e*P **P** **05 02 43.2 +0.3**
comp=Z,2.7nm,0.9s
KBA Koelnbreinsper 46.97 323 *e*P **P** **05 02 44.3 +0.2**
comp=Z,3.2nm,1.1s
ZCCA Zocca 47.12 318 P **P** **05 02 47.8 +2.5**
TEOL Teolo 47.14 320 P **P** **05 02 44.8 -0.5**
TEOL IAmb IAmb 05 02 46.6
comp=Z,7.8nm,0.9s
DPC Dobruska-Polom 47.14 328 P **P** **05 02 44.7 -0.6**
LESA Schwarzeotal 47.53 323 *e*P **P** **05 02 49.1 +0.7**
comp=Z,2.2nm,0.7s
LBTB Lobatse 47.54 215 LR LR 05 23 14.5
comp=Z,39nm,18.0s,baz=45,slow=37
GERES GERESS Array B 47.69 325 P **P** **05 02 49.3 -0.4**
comp=Z,0.7nm,1.0s,baz=134,slow=7.6,SNR=5.2
GERES LR LR 05 26 50.1
comp=Z,24nm,18.9s,baz=102,slow=41
comp=Z,0.7nm,1.0s
WTTA Wattenberg 48.07 322 *e*P **P** **05 02 52.6 -0.1**
comp=Z,4.9nm,1.0s
WATA Walderalm 48.14 322 *e*P **P** **05 02 53.1 -0.1**
comp=Z,3.0nm,1.1s
SQTA Sankt Quirin 48.30 322 *e*P **P** **05 02 54.9 +0.5**
comp=Z,2.2nm,0.5s
MOTA Moosalm 48.42 322 *e*P **P** **05 02 55.1 -0.3**
comp=Z,10nm,1.6s
FETA Feichten 48.49 322 *e*P **P** **05 02 56.0 0.0**
comp=Z,2.8nm,1.1s
TSUM Tsumeb 48.55 228 LR LR 05 24 25.5
comp=Z,96nm,19.6s,baz=325,slow=37
RETA Reutte 48.70 322 *e*P **P** **05 02 56.7 -0.7**
comp=Z,4.5nm,1.0s
DAVOX Davos/Dischmat 48.90 321 P **P** **05 02 59.6 +0.5**
comp=Z,1.4nm,0.6s,baz=125,slow=9.0,SNR=3.8
DAVOX LR LR 05 24 53.5
comp=Z,39nm,20.7s,baz=85,slow=38
comp=Z,1.4nm,0.6s
DAVA Damuels 49.13 321 *e*P **P** **05 03 00.7 -0.2**
comp=Z,4.8nm,1.1s
SLIT Slitere, Latvi 49.47 338 P **P** **05 03 01.4 -1.7**
LZH Lanzhou 49.83 55 *e*P **P** **05 03 08.9 +2.5**
LZH sP pwP 05 03 18.4 +5.9
LZH pmax pmax
comp=Z,15nm,1.0s
TORD Torodi Ar. Bea 50.42 276 P **P** **05 03 11.9 +0.9**
comp=Z,3.8nm,0.8s,baz=82,slow=7.4,SNR=19
TORD PcP **PcP** **05 04 29.4 0.0**
comp=Z,0.5nm,0.8s,baz=80,slow=4.6,SNR=1.2
comp=Z,3.8nm,0.8s
TORD Torodi Ar. Bea 50.42 276 IAmb IAmb 05 03 19.0
comp=Z,4.8nm,1.1s
BFO Black Forest 50.54 322 P **P** **05 03 12.2 +0.9**
BFO IAmb IAmb 05 03 12.6
comp=Z,4.5nm,1.0s
BOSA Boshof 50.58 213 P **P** **05 03 11.9 0.0**
comp=Z,1.7nm,1.0s,baz=62,slow=9.3,SNR=3.2
comp=Z,1.7nm,1.0s
BOSA Boshof 50.58 213 IAmb IAmb 05 03 21.1
comp=Z,7.8nm,1.1s
FIA1 FINESS Array S 51.27 343 P **P** **05 03 15.3 -1.3**
FINES FINESS Array B 51.27 343 P **P** **05 03 16.1 -0.5**
comp=Z,2.3nm,0.7s,baz=125,slow=12,SNR=14
FINES LR LR 05 28 15.5
comp=Z,20nm,18.4s,baz=152,slow=40
comp=Z,2.3nm,0.7s
SSB Saint Sauveur 51.69 317 P **P** **05 03 19.5 -0.6**
SSB IAmb IAmb 05 03 20.9
comp=Z,7.9nm,1.1s
SSB Saint Sauveur 51.69 317 P **P** **05 03 17.8 -2.4**
HFS Hagfors 54.42 337 P **P** **05 03 39.2 -0.7**
comp=Z,4.7nm,0.8s,baz=139,slow=7.3,SNR=8.8
HFS LR LR 05 28 57.3
comp=Z,25nm,18.1s,baz=122,slow=38
comp=Z,4.7nm,0.8s
TLY Talaya 54.70 36 LR LR 05 31 52.1
comp=Z,27nm,18.4s,baz=209,slow=41
SONM Songino Array 54.92 41 P **P** **05 03 44.1 +0.1**
comp=Z,2.8nm,0.8s,baz=243,slow=6.4,SNR=13
comp=Z,2.8nm,0.8s
SONM Songino Array 54.92 41 IAmb IAmb 05 03 45.2
comp=Z,3.5nm,1.0s
SUR Sutherland 55.89 214 LR LR 05 28 09.3
comp=Z,32nm,19.5s,baz=108,slow=36
NB2 NORSAR Subarra 55.94 337 P **P** **05 03 49.7 -1.3**
comp=Z,4.2nm,0.7s,baz=122,slow=7.4
NOA NORSAR Array B 55.94 337 P **P** **05 03 49.6 -1.4**
comp=Z,1.9nm,1.0s,baz=121,slow=7.5,SNR=5.6
NOA LR LR 05 32 22.1
comp=Z,31nm,18.7s,baz=95,slow=41
comp=Z,1.9nm,1.0s
MD01 Midelt array s 56.05 300 P **P** **05 03 52.8 +0.5**
ESBB Sonseca Array 56.29 308 IAmb IAmb 05 03 54.8
comp=Z,5.7nm,0.8s
ESDC Sonseca Array 56.29 308 P **P** **05 03 54.0 +0.1**
comp=Z,4.9nm,0.8s,baz=86,slow=6.3,SNR=44
comp=Z,4.9nm,0.8s
ESDC Sonseca Array 56.29 308 P **P** **05 03 54.0 +0.1**
HHC Hu-ho-hao-te 56.72 50 *e*P **P** **05 03 59.3 +2.3**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,52nm,4.4s
HHC LR LR
comp=N,82nm,12.0s
HHC LR LR
comp=E,98nm,12.0s
HHC LR LR
comp=Z,73nm,12.0s
DBIC Dimbokro 57.90 269 P **P** **05 04 05.1 -0.5**
comp=Z,2.3nm,0.7s,baz=262,slow=17,SNR=1.6
comp=Z,2.3nm,0.7s
ARCES ARCESS Array B 58.16 349 P **P** **05 04 05.4 -1.1**
comp=Z,2.1nm,0.9s,baz=157,slow=6.6,SNR=4.2
ARCES LR LR 05 34 36.6
comp=Z,48nm,18.6s,baz=174,slow=42
comp=Z,2.1nm,0.9s
ARCES ARCESS Array B 58.16 349 IAmb IAmb 05 04 07.7
comp=Z,6.8nm,1.2s
NRIK Noril'sk 59.19 13 P **P** **05 04 13.3 -0.3**
comp=Z,1.2nm,0.4s,baz=114,slow=6.8,SNR=3.7
NRIK LR LR 05 33 54.6
comp=Z,69nm,18.8s,baz=196,slow=40
comp=Z,1.2nm,0.4s
NRIK Noril'sk 59.19 13 IAmb IAmb 05 04 13.7
comp=Z,3.2nm,0.9s
EKA Eskdalemuir Ar 59.86 326 P **P** **05 04 17.6 -0.9**
comp=Z,1.9nm,0.7s,baz=125,slow=7.2,SNR=5.9
comp=Z,1.9nm,0.7s
NJ2 Nanjing 61.74 61 *e*P **P** **05 04 34.8 +3.0**
NJ2 pmax pmax
comp=Z,22nm,0.5s
HILR Hailar Array B 63.91 42 P **P** **05 04 45.1 -0.9**
comp=Z,2.1nm,0.6s,baz=256,slow=5.6,SNR=7.0
comp=Z,2.1nm,0.6s
SPITS Spitsbergen Ar 66.67 352 P **P** **05 05 03.4 +0.1**
comp=Z,11nm,1.1s,baz=152,slow=3.7,SNR=2.4
SPITS LR LR 05 37 04.8
comp=Z,23nm,19.6s,baz=128,slow=39
comp=Z,11nm,1.1s
HEH HeiHe 68.91 41 *e*P **P** **05 05 17.3 -0.6**
HEH pmax pmax
comp=Z,8.0nm,0.8s
KSRS Korea Array 69.15 55 P **P** **05 05 18.1 -1.6**
comp=Z,1.7nm,0.7s,baz=263,slow=6.8,SNR=6.1
comp=Z,1.7nm,0.7s
BORG Borgarnes 70.94 334 LR LR 05 37 56.7
comp=Z,24nm,21.9s,baz=325,slow=37
H01W3 Cape Leeuwin H 75.22 132 T T 06 27 51.0
baz=301,slow=75,SNR=20
H01W2 Cape Leeuwin H 75.22 132 T T 06 27 51.5
baz=301,slow=75,SNR=27
H01W1 Cape Leeuwin H 75.24 132 T T 06 27 52.3
baz=301,slow=75,SNR=22
SUMG Summit 77.28 342 P **P** **05 06 06.2 -1.3**
SUMG Summit 77.28 342 P **P** **05 06 05.3 -2.2**
MJAR Matsushiro Arr 77.43 55 P **P** **05 06 08.2 -0.4**
comp=Z,0.4nm,0.4s,baz=197,slow=1.3,SNR=4.0
comp=Z,0.4nm,0.4s
WRA Warramunga Arr 86.24 112 P **P** **05 06 54.8 -0.4**
comp=Z,1.9nm,0.7s,baz=297,slow=3.9,SNR=22
comp=Z,1.9nm,0.7s
WRA Warramunga Arr 86.24 112 P **P** **05 06 55.0 -0.3**
WR8 Warramunga Arr 86.39 111 P **P** **05 06 55.1 -0.8**
WR8 IAmb IAmb 05 07 02.4
comp=Z,5.7nm,1.1s
ASAR Alice Springs 86.91 115 P **P** **05 06 58.0 -0.5**
comp=Z,1.8nm,0.8s,baz=291,slow=4.5,SNR=16
comp=Z,1.8nm,0.8s
ILAR Eielson Array 99.83 9 LR LR 05 57 41.9
comp=Z,23nm,19.9s,baz=288,slow=38
NVAR Mina Array Bea 127.20 352 PKP **PKiKP** **05 13 19.5 +0.8**
comp=Z,1.4nm,1.0s,baz=36,slow=1.5,SNR=6.2
TXAR Lajitas Array 131.58 333 PKP **PKPdf** **05 13 27.0 +0.3**
comp=Z,0.3nm,0.7s,baz=90,slow=2.5,SNR=4.4

IDC ***19*** *04:55:56.5±1.1,21.1°N×94.4°E, h0km, mb3.6/4, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=84.6km s-min=13.4km az=36.0*
BKK ***19*** *04:56:02.9±1.3,20.2°N±4.4°×9.4°E±°, h15km±13km, M3.8/14, mB4.5/6, mb3.9/6, Mjma3.5/14, MLv3.9/10, Mw(mB)3.6/6*
ISC 19 04:55:56.8±0.9, 20.6N±0.2×94.2E±0.1, h10km, n13, σ2.5s65/16, mb3.6/4, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**3.12**	**311**	Pn	**Pn**		**04 56 45.1**	**-1.0**
	33nm,0.3s,baz=82,slow=19,SNR=1.9							
BRDH				Sn	**Sn**		**04 57 23.9**	**+0.5**
	17nm,0.3s,baz=105,slow=20,SNR=1.2							
BRDH				Lg	Lg		04 57 32.4	
	35nm,0.3s,baz=86,slow=19,SNR=1.8							
	64nm,0.3s							
MHMT	**Maesarieng**	**4.30**	**124**	P	**Pb**		**04 57 09.6**	**-2.9**
CMAI	**Chiengmai2**	**4.61**	**98**	P	**Pb**		**04 57 16.6**	**-1.3**
CHTO	**Chiang Mai**	**4.83**	**111**	P	**Pb**		**04 57 18.1**	**-3.5**
	0.1nm0.2nm9.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**4.98**	**115**	Pn	**Pn**		**04 57 12.9**	**+1.3**
	0.5nm,0.3s,baz=304,slow=14,SNR=1.2							
CMAR				Pg	**Pb**		**04 57 23.0**	**-1.1**
	0.7nm,0.3s,baz=284,slow=15,SNR=9.3							
CMAR				Sn	**Sn**		**04 58 10.3**	**+0.9**
	0.8nm,0.3s,baz=300,slow=15,SNR=6.8							
CMAR				Lg	Lg		04 58 35.5	
	1.2nm,0.3s,baz=310,slow=14,SNR=4.4							
	0.6nm,0.3s							
CM02	**Chiang Mai Arr**	**4.99**	**115**	P	**Pb**		**04 57 20.0**	**-4.3**
CM05	**Chiang Mai Arr**	**5.01**	**116**	P	**Pb**		**04 57 21.4**	**-3.2**
	0.1nm7.2nm,0.7s							
CM09	**Chiang Mai Arr**	**5.03**	**115**	P	**Pb**		**04 57 21.3**	**-3.6**
	0.1nm0.1nm133nm9.1nm,0.7s							
CM04	**Chiang Mai Arr**	**5.04**	**115**	P	**Pb**		**04 57 21.6**	**-3.5**
	0.1nm0.0nm128nm6.7nm,0.7s							
WRA	**Warramunga Arr**	**56.31**	**133**	P	**P**		**05 05 39.9**	**+1.8**
	0.3nm,0.7s,baz=319,slow=7.7,SNR=5.9							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**58.62**	**137**	P	**P**		**05 05 56.9**	**+2.5**
	0.4nm,0.7s,baz=314,slow=6.8,SNR=4.6							
	0.4nm,0.7s							
HFS	**Hagfors**	**67.62**	**328**	P	**P**		**05 06 54.0**	**+0.4**
	1.3nm,0.8s,baz=98,slow=4.5,SNR=2.5							
	1.3nm,0.8s							
GERES	**GERESS Array B**	**68.57**	**316**	P	**P**		**05 07 00.3**	**+0.4**
	0.3nm,0.6s,baz=79,slow=6.9,SNR=5.1							
	0.3nm,0.6s							

IDC ***19*** *04:56:43.7±1.9,41.55N×19.51E, h0km, mb3.5/3, mbtmp3.4/7, ML2.8/3, Error ellipse: s-maj=25.9km s-min=18.4km az=6.0*
RHSSO ***19*** *04:56:45.6±0.7,41.45N×19.47E, h5km±2km, ML3.2/7*
BEO ***19*** *04:56:45.2±0.5,41.44N×19.58E, h6km±2km, ML3.0/18*
TIR ***19*** *04:56:45.5,41.50N×19.48E, h23km±7km, Ml3.2/5*
SOF ***19*** *04:56:46.9,41.6N±0.2×19.7E±0.5, h5km±83km, MD3.1/4*
PDG ***19*** *04:56:50.5±0.3,41.80N×19.51E, h10km±1km, ML2.9/13, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*
ISC 19 04:56:45.5±1.0, 41.53N±0.02×19.51E±0.02, h9km±8km, n96, σ1.918/159, 27C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**125**	Pg	**Pg**		**04 56 52.3**	**+0.4**
TIR				AML	AML		04 56 57.1	
	12nm,0.3s							
TIR				Sg	**Sg**		**04 56 57.6**	**+1.4**
ULC	**Ulcinj**	**0.47**	**335**	↓*i*Pg	**Pg**		**04 56 55.2**	**+0.5**
ULC				*i* Sg	**Sg**		**04 57 00.1**	**-0.9**
SDA	**Shkodra**	**0.52**	**359**	Pg	**Pg**		**04 56 56.0**	**+0.5**
SDA				Sg	**Sb**		**04 57 05.9**	**+1.6**
SDA				AML	AML		04 57 08.1	
	3.0nm,0.3s							
DRME	**Dracevica, Mon**	**0.70**	**340**	↓*i*Pg	**Pg**		**04 56 58.8**	**-0.1**
DRME				*e*Sg	**Sb**		**04 57 10.8**	**+1.3**
DRME	**Dracevica, Mon**	**0.70**	**340**	↓*i*Pg	**Pg**		**04 56 59.2**	**+0.3**
DRME				*i* Sg	**Sg**		**04 57 07.5**	**-0.5**
PHP	**Peshkopia**	**0.71**	**77**	Pg	**Pg**		**04 56 59.1**	**-0.2**
PHP				Sg	**Sb**		**04 57 10.6**	**+0.5**
PHP				AML	AML		04 57 16.1	
	3.2nm,0.8s							
BUM	**Brajici-Budva**	**0.90**	**329**	↑*i*Pg	**Pb**		**04 57 03.4**	**+0.2**
BUM				*i* Sg	**Sb**		**04 57 14.8**	**-0.5**
PDG	**Podgorica**	**0.92**	**348**	↓P	**Pg**		**04 57 02.9**	**-0.2**
PDG				↑S	**Sn**		**04 57 17.3**	**-0.5**
PDG	**Podgorica**	**0.92**	**348**	Pg	**Pg**		**04 57 02.9**	**-0.2**
PDG				Sg	**Sb**		**04 57 16.9**	**+1.1**
PDG	**Podgorica**	**0.92**	**348**	*e*Pg	**Pg**		**04 57 02.6**	**-0.5**
PDG				*e*Sg	**Sn**		**04 57 18.4**	**+0.6**
PDG	**Podgorica**	**0.92**	**348**	↑*i*Pg	**Pg**		**04 57 02.6**	**-0.5**
PDG				*e*Sg	**Sb**		**04 57 16.9**	**+1.1**
PDG	**Podgorica**	**0.92**	**348**	↑*i*Pg	**Pg**		**04 57 02.6**	**-0.5**
PDG				*i* Sg	**Sg**		**04 57 13.8**	**-1.2**
OHR	**Ohrid**	**1.06**	**113**	*i* Pn	**Pg**		**04 57 05.1**	**-0.7**
OHR				*i* Sn	**Sn**		**04 57 23.0**	**+1.6**
VLO	**Vlora**	**1.06**	**181**	Pg	**Pn**		**04 57 07.1**	**+0.6**
VLO				Sg	**Sb**		**04 57 21.6**	**+1.6**
VLO				AML	AML		04 57 27.5	
	5.8nm,0.3s							
CEME	**Cevo**	**1.10**	**337**	↓*i*Pg	**Pg**		**04 57 06.7**	**0.0**
CEME				*i* Sg	**Sg**		**04 57 20.5**	**-0.6**
PVY	**Plav**	**1.11**	**17**	↑*i*Pg	**Pg**		**04 57 06.0**	**-0.8**
PVY				*i* Sg	**Sg**		**04 57 19.5**	**-1.8**
HCY	**Herceg Novi**	**1.19**	**321**	↑*i*Pg	**Pb**		**04 57 08.3**	**+0.2**
HCY				*e*Sg	**Sn**		**04 57 24.6**	**0.0**
HCY	**Herceg Novi**	**1.19**	**321**	↓*i*Pg	**Pn**		**04 57 08.8**	**+0.6**
HCY				*i* Sg	**Sn**		**04 57 24.5**	**0.0**
NKME	**Niksic**	**1.30**	**342**	↑*i*Pg	**Pn**		**04 57 10.0**	**+0.1**
NKME				*i* Sg	**Sg**		**04 57 26.4**	**-0.9**
KOME	**Kolasin**	**1.32**	**0**	↓*i*Pg	**Pn**		**04 57 10.4**	**+0.3**
KOME				*i* Sg	**Sg**		**04 57 26.5**	**-1.4**
KBN	**Korca**	**1.33**	**133**	Pg	**Pb**		**04 57 11.0**	**+0.4**
KBN				Sg	**Sg**		**04 57 28.5**	**+0.4**
IVA	**Berane**	**1.37**	**12**	↑*i*Pg	**Pn**		**04 57 11.0**	**+0.2**
IVA				*i* Sg	**Sg**		**04 57 29.3**	**-0.2**
TREB	**Trebinje**	**1.47**	**324**	*e*Pg	**Pb**		**04 57 13.2**	**+0.3**
TREB				*e*Sg	**Sg**		**04 57 34.1**	**+1.5**
TREB	**Trebinje**	**1.47**	**324**	↑*i*Pn	**Pb**		**04 57 13.1**	**+0.2**
TREB				*e*Sn	**Sg**		**04 57 33.0**	**+0.4**
DBRK	**Dubrovnik**	**1.52**	**319**	*e*Pg	**Pg**		**04 57 14.4**	**-0.3**
DBRK				Sg	**Sg**		**04 57 34.4**	**0.0**
BRY	**Bratogost**	**1.55**	**333**	*e*Pn	**Pb**		**04 57 14.4**	**+0.1**
BRY				*e*Sn	**Sg**		**04 57 35.7**	**+0.5**

BRY	**Bratogost**	**1.55**	**333**	⇓*i*Pg		**Pb**	**04 57 14.5**	**+0.1**
BRY				*i* Sg		**Sg**	**04 57 35.6**	**+0.4**
SRN	**Sarande**	**1.69**	**167**	Pg		**Pn**	**04 57 15.2**	**+0.1**
SRN				Sg		**Sg**	**04 57 40.1**	**+0.3**
UPM	**Unac-Piva**	**1.73**	**345**	⇑*i*Pn		**Pb**	**04 57 17.0**	**-0.5**
UPM				*e*Sn		**Sg**	**04 57 40.6**	**-0.5**
UPM	**Unac-Piva**	**1.73**	**345**	⇑*i*Pg		**Pb**	**04 57 17.0**	**-0.5**
UPM				*i* Sg		**Sb**	**04 57 39.9**	**+0.5**
SJES	**Sjenica**	**1.76**	**11**	*e*Pg		**Pb**	**04 57 17.8**	**-0.2**
SJES				*e*Sg		**Sg**	**04 57 43.1**	**+1.0**
SJES	**Sjenica**	**1.76**	**11**	⇑*i*Pn		**Pb**	**04 57 17.8**	**-0.2**
SJES				*e*Sn		**Sg**	**04 57 41.6**	**-0.5**
KLINJ	**Klinje**	**1.77**	**338**	*e*Pn		**Pn**	**04 57 17.5**	**+1.1**
KLINJ				*e*Sn		**Sb**	**04 57 41.2**	**+0.6**
PLE	**Pljevlja**	**1.80**	**357**	⇓*i*Pg		**Pb**	**04 57 19.1**	**+0.5**
PLE				*i* Sg		**Sb**	**04 57 40.9**	**-0.4**
STON	**Ston**	**1.90**	**315**	*e*Pn		**Pb**	**04 57 19.5**	**-0.7**
STON				Sn		**Sb**	**04 57 43.9**	**-0.1**
STON	**Ston**	**1.90**	**315**	*e*Pn		**Pb**	**04 57 20.4**	**+0.2**
STON				*e*Sn		**Sg**	**04 57 45.6**	**-0.8**
NOCI	**Noci**	**1.99**	**249**	Pn		**Pn**	**04 57 20.1**	**+0.8**
NOCI				Sn		**Sb**	**04 57 47.5**	**+0.8**
NOCI				AML		AML	04 57 59.1	
	0.8nm,0.3s							
IGT	**Igoumenitsa**	**2.09**	**162**	Pn		**Pn**	**04 57 21.3**	**+0.6**
IGT				Sn		**Sn**	**04 57 45.0**	**-1.9**
IVAS	**Ivanjica**	**2.10**	**13**	*e*Pn		**Pn**	**04 57 22.1**	**+1.3**
IVAS				*e*Sn		**Sb**	**04 57 50.0**	**+0.1**
BARS	**Barje**	**2.14**	**52**	*e*Pn		**Pn**	**04 57 21.8**	**+0.4**
BARS				*e*Sn		**Sn**	**04 57 49.2**	**+1.1**
GOCS	**Kraljevo Serbi**	**2.27**	**26**	*e*Pn		**Pn**	**04 57 25.0**	**+1.8**
GOCS				*e*Sn		**Sn**	**04 57 52.9**	**+1.7**
MATE	**Matera**	**2.30**	**248**	⇑P		**Pn**	**04 57 23.9**	**+0.4**
MATE				⇑S		**Sn**	**04 57 53.1**	**+1.3**
LSTV	**Lastovo**	**2.31**	**303**	*e*Pn		**Pn**	**04 57 23.1**	**-0.5**
VAY	**Valandovo**	**2.31**	**94**	*i* Pn		**Pn**	**04 57 24.6**	**+0.9**
VAY				*i* Sn		**Sn**	**04 57 54.1**	**+1.9**
BBLS	**Lazi&#263i**	**2.33**	**358**	*e*Pn		**Pn**	**04 57 25.3**	**+1.2**
BBLS				*e*Sn		**Sn**	**04 57 54.7**	**+1.8**
BBLS	**Lazi&#263i**	**2.33**	**358**	⇑*i*Pn		**Pn**	**04 57 25.0**	**+0.9**
BBLS				*e*Sn		**Sb**	**04 57 55.7**	**-1.0**
BOSS	**Bosilegrad**	**2.41**	**66**	*e*Pn		**Pn**	**04 57 26.0**	**+0.9**
BOSS				*e*Sn		**Sn**	**04 57 55.1**	**+0.3**
GRUS	**Gruza**	**2.52**	**20**	*e*Pn		**Pn**	**04 57 28.2**	**+1.7**
GRUS				*e*Sn		**Sn**	**04 57 58.9**	**+1.6**
DIVS	**Divibare**	**2.59**	**8**	*e*Pn		**Pn**	**04 57 28.3**	**+0.7**
RICI	**Ricice**	**2.63**	**319**	*e*Pn		**Pn**	**04 57 28.7**	**+0.5**
KKB	**Krupnik**	**2.73**	**82**	P		**Pn**	**04 57 30.1**	**+1.3**
TRUS	**Trudelj**	**2.77**	**13**	*e*Pn		**Sn**	**04 57 31.3**	**+1.3**
TRUS				*e*Sn		**Sn**	**04 58 06.5**	**+3.0**
ZAPS	**Zavoj**	**2.90**	**52**	*e*Pn		**Pn**	**04 57 33.1**	**+1.3**
ZAPS				*e*Sn		**Sn**	**04 58 07.5**	**+0.8**
VTS	**Vitosha**	**2.98**	**67**	P		**Pn**	**04 57 34.2**	**+1.2**
VTS				S		**Sn**	**04 58 09.4**	**+0.5**
TEKS	**Tekeris**	**3.02**	**0**	*e*Pn		**Pn**	**04 57 34.1**	**+0.7**
TEKS				*e*Sn		**Sn**	**04 58 12.0**	**+2.4**
TEKS	**Tekeris**	**3.02**	**0**	⇑*i*Pn		**Pn**	**04 57 34.7**	**+1.3**
TEKS				*e*Sn		**Sn**	**04 58 12.4**	**+2.8**
ZAGS	**Zajecar**	**3.04**	**40**	*e*Pn		**Pn**	**04 57 34.8**	**+1.1**
ZAGS				*e*Sn		**Sn**	**04 58 10.4**	**+0.3**
PLNA	**Plana**	**3.07**	**71**	P		**Pn**	**04 57 36.6**	**+2.4**
BLSH	**Balsha**	**3.10**	**63**	P		**Pn**	**04 57 37.5**	**+2.9**
BORS2	**Bor- Borsko je**	**3.15**	**35**	*e*Pn		**Pn**	**04 57 35.0**	**-0.3**
BORS2				*e*Sn		**Sn**	**04 58 12.0**	**-1.0**
TIP	**Timpagrande**	**3.15**	**223**	⇓P		**Pn**	**04 57 34.3**	**-1.0**
KUBS	**Kucevo**	**3.29**	**28**	*e*Pn		**Sn**	**04 57 36.6**	**-0.5**
KUBS				*e*Sn		**Sn**	**04 58 15.8**	**-0.5**
KIJV	**Kijevo**	**3.37**	**318**	*e*Pn		**Pn**	**04 57 39.1**	**+0.9**
ZIRJ	**Zirje**	**3.56**	**308**	*e*Pn		**Pn**	**04 57 41.2**	**+0.4**
MPEP	**Malo Peshtene**	**3.62**	**58**	P		**Pb**	**04 57 47.7**	**-1.9**
MDVR	**Moldovita**	**3.62**	**26**	⇑P		**Pn**	**04 57 43.0**	**+1.2**
FRGS	**Fruska Gora**	**3.63**	**3**	*e*Pn		**Pn**	**04 57 42.0**	**+0.2**
FRGS				*e*Sn		**Sn**	**04 58 26.2**	**+1.4**
FRGS	**Fruska Gora**	**3.63**	**3**	⇑*i*Pn		**Pn**	**04 57 44.1**	**+2.3**
FRGS				*e*Sn		**Sn**	**04 58 27.0**	**+2.2**
BLY	**Banja Luka**	**3.64**	**333**	*e*Pn		**Pn**	**04 57 43.9**	**+2.0**
BLY				*e*Sn		**Sn**	**04 58 28.2**	**+3.3**
BLY	**Banja Luka**	**3.64**	**333**	⇑*i*Pn		**Pn**	**04 57 43.4**	**+1.5**
BLY				*e*Sn		**Sn**	**04 58 26.9**	**+2.0**
MORI	**Morici**	**3.65**	**311**	*i* Pn		**Pn**	**04 57 42.8**	**+0.8**
VRSS	**Vrsac**	**3.83**	**20**	*e*Pn		**Pn**	**04 57 45.5**	**+1.0**
VRSS				*e*Sn		**Sn**	**04 58 29.7**	**+0.1**
RZN	**Rozhen**	**3.92**	**86**	P		**Pn**	**04 57 46.2**	**+1.8**
HERR	**Herculane**	**3.96**	**31**	⇑P		**Pn**	**04 57 47.4**	**+1.0**
DUGI	**Dugi Otok**	**4.10**	**308**	*e*Pn		**Pn**	**04 57 48.0**	**-0.2**
VIRC	**Vir**	**4.28**	**312**	⇑P		**Pn**	**04 57 51.5**	**+0.8**
BZS	**Buzias**	**4.36**	**20**	⇑P		**Pn**	**04 57 52.9**	**+1.1**
GZR	**Gura Zlata**	**4.53**	**31**	⇑P		**Pn**	**04 57 56.2**	**+1.9**
NVLJ	**Novalja**	**4.55**	**313**	*e*Pn		**Pn**	**04 57 55.0**	**+0.5**
AQU	**L'Aquila**	**4.63**	**282**	*e*Pn		**Pn**	**04 57 55.8**	**+0.2**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn		**Pn**	**04 57 58.2**	**+1.4**
MORH				*e*Sn		**Sn**	**04 58 53.1**	**+1.4**
SIRR	**Siria**	**4.98**	**17**	⇑P		**Pn**	**04 58 00.1**	**-0.3**
BEHE	**Becsehely**	**5.32**	**339**	*e*Sn		**Sn**	**04 59 05.8**	**-0.5**
ARR	**Arges**	**5.35**	**42**	⇑P		**Pn**	**04 58 07.2**	**+1.7**
VOIR		**5.61**	**44**	⇑P		**Pn**	**04 58 10.2**	**+1.1**
DRGR		**5.74**	**23**	⇑P		**Pn**	**04 58 11.5**	**+0.6**
MARR	**Marisel-Cluj**	**5.76**	**26**	⇑P		**Pn**	**04 58 12.1**	**+0.9**
MLR	**Muntele Rosu**	**6.13**	**48**	Pn		**Pn**	**04 58 19.4**	**+3.2**
	0.3nm,0.3s,baz=279,slow=22,SNR=4.8							
MLR				Sn		**Sn**	**04 59 25.6**	**-0.8**
	0.4nm,0.3s,baz=270,slow=20,SNR=4.8							
	1.3nm,0.4s							
OBKA	**Obir**	**6.13**	**326**	*e*Pn		**Pn**	**04 58 16.3**	**+0.1**
	0.1nm,0.2s							
IDI	**Anoyia**	**7.53**	**144**	Pn		**Pn**	**04 58 34.5**	**-0.9**
	5.2nm,1.0s,baz=335,slow=13,SNR=1.8							
IDI				Sn		**Sn**	**04 59 57.8**	**-3.1**
	0.5nm,0.3s,baz=326,slow=5.5,SNR=3.2							
KOLS	**Kolonicke sedl**	**7.65**	**14**	*e*PN		**Pn**	**04 58 39.9**	**+2.8**
GERES	**GERESS Array B**	**8.38**	**333**	Pn		**Pn**	**04 58 47.3**	**+0.2**
	baz=160,slow=12,SNR=4.5							
	0.1nm,0.3s							
DAVOX	**Davos/Dischmat**	**8.68**	**310**	Pn		**Pn**	**04 58 51.5**	**+0.2**
	0.2nm,0.3s,baz=117,slow=9.0,SNR=2.2							
	0.5nm,0.3s							
FINES	**FINESS Array B**	**20.33**	**9**	P		**P**	**05 01 20.9**	**-0.7**
	0.8nm,0.6s,baz=195,slow=9.9,SNR=6.9							
	0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**44.10**	**51**	P		**P**	**05 04 52.2**	**-1.4**
	0.3nm,0.4s,baz=268,slow=7.2,SNR=1.6							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**44.28**	**61**	P		**P**	**05 04 54.2**	**-1.1**
	0.9nm,0.7s,baz=291,slow=7.4,SNR=5.4							
	0.9nm,0.7s							

*RSNC **19** 06:09:04.0±0.0,7°N±1°×7°3W±°, h143km±2km, M2.1, ML1.8*
*FUNV **19** 06:09:04.8, 7°.17N×73°.17W, h0km, MW3.1, Presumed earthquake*
ISC 19 06:09:02.0±1.6,**6°.88N**±0°.04×**73°.14W**±0°.05,**h154**km±10km,
n15,σ1°**30**/29,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**189**	P	**Pn**	**06 09 23.4**	**+0.1**
BARC				S	**Sn**	**06 09 38.2**	**-1.3**
BRJC	**Barrancabermej**	**0.61**	**279**	P	**Pn**	**06 09 25.6**	**+1.3**
BRJC				S	**Sn**	**06 09 42.1**	**+0.7**
PAMC	**Pamplona, Colo**	**0.63**	**43**	P	**Pn**	**06 09 26.3**	**+1.2**
PAMC				S	**Sn**	**06 09 42.9**	**+0.2**
RUSC	**La Rusia**	**0.98**	**177**	P	**Pn**	**06 09 27.4**	**-0.2**
RUSC				S	**Sn**	**06 09 45.9**	**-1.1**
RUSC	**La Rusia**	**0.98**	**177**	*e*P	**Pn**	**06 09 28.1**	**+0.5**
RUSC				*e*S	**Sn**	**06 09 46.0**	**-1.1**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**06 09 30.2**	**-0.2**
PTBC				S	**Sn**	**06 09 51.3**	**-0.8**
OCAC	**Ocana**	**1.36**	**353**	P	**Pn**	**06 09 31.6**	**+0.9**
OCAC				S	**Sn**	**06 09 53.5**	**+0.8**
SPBC	**San Pablo de B**	**1.53**	**217**	P	**Pn**	**06 09 32.4**	**+0.1**
SPBC				S	**Sn**	**06 09 53.7**	**-1.8**
NORC	**Norcasia**	**2.16**	**233**	P	**Pn**	**06 09 37.9**	**-1.4**
NORC				S	**Sn**	**06 10 07.8**	**-0.2**
UREC	**San Jos de Ur**	**2.53**	**290**	P	Pn	06 09 48.5	+4.8
UREC				S	**Sn**	**06 10 15.2**	**-0.6**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	**06 09 48.2**	**+1.3**
GUY2C				S	**Sn**	**06 10 23.1**	**+1.5**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	**Pn**	**06 09 51.9**	**+1.9**
CBOC				S	**Sn**	**06 10 26.7**	**-0.5**
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**06 09 52.7**	**+0.6**
SDV				*e*S	**Sn**	**06 10 29.9**	**-1.0**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**06 09 57.8**	**+0.7**
PRAC				S	**Sn**	**06 10 40.2**	**+0.2**
SJCC	**San Jacinto, C**	**3.62**	**326**	*e*P	**Pn**	**06 09 57.9**	**+0.5**
SJCC				*e*S	**Sn**	**06 10 36.5**	**-4.1**

*IGQ **19** 06:11:01.7±0.3,2°S±2°×8°1W±°, h2km, M3.7/21, Mjma3.6/21, ML3.9/21, MLv3.5/21, Ms(BB)3.7/17*
*RSNC **19** 06:11:03.1±1.1,2°S±9°×8°1W±°, h0km, M3.2, mb4.0, ML2.7*
ISC 19 06:10:59.9±1.2,**1°.87S**±0°.03×**80°.47W**±0°.03,**h7**km±11km,
n64,σ1°**40**/73,**5C-8D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLP	**Puerto Lpez**	**0.44**	**316**	⇓P	**Pg**	**06 11 09.0**	**+0.5**
PPLP				⇓P	**Pg**	**06 11 09.0**	**+0.5**
PPLP				S	**Sg**	**06 11 13.8**	**-0.5**
PPLP				S	**Sg**	**06 11 13.8**	**-0.5**
JIPI	**JIPIJAPA**	**0.51**	**350**	⇓P	**Pb**	**06 11 11.3**	**+0.1**
JIPI				S	**Sb**	**06 11 18.1**	**-0.7**
AC07	**Ecuador-Guayaq**	**0.56**	**120**	P	**Pn**	**06 11 14.6**	**+0.2**
AC07				S	**Sn**	**06 11 23.5**	**-0.5**
GYE3	**Ecuador-Guayaq**	**0.64**	**117**	⇑P	**Pn**	**06 11 14.6**	**-0.7**
GYE3				S	**Sn**	**06 11 24.1**	**-1.8**
ISPT	**Isla de la Pla**	**0.85**	**315**	⇓P	**Pg**	**06 11 15.2**	**-1.0**
AMNT	**Manta-Manabi**	**0.96**	**344**	P	**Pn**	**06 11 20.0**	**+0.2**
ABAB	**Ecuador-Univer**	**0.96**	**86**	P	**Pn**	**06 11 20.1**	**+0.3**
ISPG	**Isla Puna-Puer**	**1.14**	**165**	P	**Pn**	**06 11 25.9**	**+3.6**
PECV	**Mancha de Ca P**	**1.16**	**21**	P	**Pb**	**06 11 19.8**	**-2.5**
ABH2	**Ecuador-Univer**	**1.20**	**3**	P	**Pg**	**06 11 25.8**	**+2.9**
AQUE	**Quevedo**	**1.27**	**50**	⇑P	**Pg**	**06 11 24.8**	**+0.5**
CHSH	**Refugio Sur-Vo**	**1.64**	**77**	⇓P	**Pg**	**06 11 31.8**	**+0.4**
TAMH	**Tambohuasha Ch**	**1.72**	**79**	P	**Pb**	**06 11 32.6**	**+0.5**
IGUA	**Igualata**	**1.87**	**78**	P	**Pg**	**06 11 35.5**	**-0.2**
AAM2	**Ambato 2 (Merc**	**1.95**	**72**	P	**Pg**	**06 11 37.2**	**-0.1**
BPAT	**Tungurahua Vol**	**2.07**	**80**	P	**Pb**	**06 11 38.6**	**+0.6**
ILLI	**Illinizas Sur**	**2.08**	**57**	⇑P	**Pb**	**06 11 37.2**	**-1.1**
SANGA	**Volcan Sangay**	**2.10**	**95**	P	**Pb**	**06 11 38.7**	**0.0**
SRAM	**San Ramn-Vol**	**2.20**	**60**	P	**Pb**	**06 11 40.6**	**+0.3**
BRRN	**Barrancas-Volc**	**2.27**	**62**	⇓P	**Pb**	**06 11 41.1**	**-0.4**
SLOR	**San Lorenzo -**	**2.27**	**60**	P	**Pb**	**06 11 41.3**	**-0.2**
BNAS	**Cotopaxi Volca**	**2.31**	**59**	P	**Pb**	**06 11 41.9**	**-0.4**
SUCR	**Mariscal Sucre**	**2.32**	**58**	P	**Pb**	**06 11 42.3**	**-0.1**
VCES	**Cotopaxi**	**2.33**	**63**	P	**Pb**	**06 11 43.1**	**+0.5**
NAS2	**Nasa**	**2.34**	**59**	P	**Pb**	**06 11 43.3**	**+0.5**
BRSF	**Cotopaxi Volca**	**2.35**	**60**	P	**Pb**	**06 11 43.4**	**+0.4**
BV15	**Puerto Quito-O**	**2.37**	**32**	P	**Pn**	**06 11 39.7**	**+0.6**
PIAT	**Ana Tenorio**	**2.37**	**69**	⇓P	**Pb**	**06 11 43.3**	**+0.2**
PIAT	**Ana Tenorio**	**2.37**	**69**	P	**Pb**	**06 11 43.2**	**0.0**
PIAT				S	**Sb**	**06 12 12.1**	**-0.7**
BVC2	**Cotopaxi Volca**	**2.38**	**60**	⇑P	**Pb**	**06 11 43.9**	**+0.4**
BTAM	**Cotopaxi Volca**	**2.38**	**60**	P	**Pb**	**06 11 43.3**	**-0.2**
VC1	**Cotopaxi 1**	**2.40**	**60**	⇑P	**Pb**	**06 11 43.8**	**+0.1**
TAMB	**Tambo**	**2.40**	**61**	P	**Pb**	**06 11 43.6**	**-0.2**
PITA	**Cotopaxi Volc**	**2.42**	**57**	P	**Pb**	**06 11 43.9**	**-0.1**
TOMA	**Boca Toma-Volc**	**2.45**	**56**	P	**Pb**	**06 11 44.3**	**-0.2**
PUYO	**Puyo, Santa Ro**	**2.47**	**81**	P	**Pg**	**06 11 46.3**	**-1.0**
JUA2	**San Juan 2**	**2.48**	**49**	P	**Pb**	**06 11 44.2**	**-0.9**
TERV	**Terraza Guagua**	**2.51**	**48**	P	**Pb**	**06 11 45.4**	**-0.3**
MCRA	**Macar, Loja**	**2.54**	**168**	P	**Pb**	**06 11 44.8**	**-1.1**
TING	**Casa Alexandra**	**2.56**	**52**	P	**Pg**	**06 11 49.5**	**+0.5**
CIVI	**Edificio de In**	**2.57**	**50**	P	**Pb**	**06 11 45.5**	**-1.1**
YANA	**Yana**	**2.57**	**40**	P	**Pn**	**06 11 44.5**	**+2.1**
ANTM	**Antisana-La Mi**	**2.60**	**60**	P	**Pb**	**06 11 46.1**	**-1.2**
ANTS	**Antisana-Sarah**	**2.67**	**59**	P	**Pb**	**06 11 48.2**	**-0.2**
ANTI	**Antisana**	**2.70**	**59**	P	**Pb**	**06 11 48.5**	**-0.5**
PAC1	**Pacto, Paraso**	**2.70**	**38**	P	**Pn**	**06 11 44.2**	**+0.3**
PAC1	**Pacto, Paraso**	**2.70**	**38**	P	**Pn**	**06 11 44.0**	**0.0**
PAC1				S	**Sb**	**06 12 20.7**	**-1.5**
PUEM	**Granja Avicola**	**2.71**	**51**	P	**Pb**	**06 11 49.1**	**+0.1**
PULU	**Pululahua**	**2.72**	**46**	P	**Pn**	**06 11 46.4**	**+2.0**
PKYU	**Pakayacu**	**2.88**	**86**	⇓P	**Pb**	**06 11 51.3**	**-0.4**
OTAV	**Otavalo**	**2.91**	**44**	P	**Pn**	**06 11 48.8**	**+1.8**
OTAV				S	**Sn**	**06 12 23.1**	**+0.6**
CUSE	**Cuicocha Este**	**2.99**	**44**	P	**Pn**	**06 11 50.7**	**+2.5**
CUSE	**Cuicocha Este**	**2.99**	**44**	P	**Pn**	**06 11 50.1**	**+1.9**
CUIC	**Cuicocha-Domo**	**3.02**	**44**	P	**Pn**	**06 11 51.2**	**+2.7**
URCU	**Urcuqui**	**3.18**	**44**	P	**Pb**	**06 11 55.0**	**-2.1**
CHMA	**Chilma**	**3.62**	**42**	P	**Pn**	**06 11 59.6**	**+2.8**
CHL1	**Volcn Chiles**	**3.65**	**44**	P	**Pb**	**06 12 01.6**	**-3.5**
ECEN	**Cerro Negro**	**3.66**	**43**	P	**Pb**	**06 12 04.4**	**-0.9**
CHL2	**Volcn Chiles**	**3.68**	**44**	P	**Pb**	**06 12 01.6**	**+3.8**
CASC	**Dorado de Casc**	**3.71**	**58**	P	**Pb**	**06 12 03.4**	**-2.5**
CMBC	**Cumbal**	**3.84**	**43**	P	**Pb**	**06 12 07.7**	**-0.6**
BBAC	**Balboa, Cauca**	**5.03**	**40**	P	**Pn**	**06 12 18.2**	**+2.2**
POPC	**Popayan, Colom**	**5.79**	**41**	P	**Pn**	**06 12 29.2**	**+2.7**
	6.6nm,0.6s						
JAMC	**Jamundi, Valle**	**6.31**	**37**	P	**Pn**	**06 12 34.9**	**+1.2**

*IDC **19** 06:22:55.3±3.3,35°.56N×77°.31E, h0km, mb3.9/4, mbtmp3.9/9, ML3.3/5, Error ellipse: s-maj=52.7km s-min=30.8km az=2.0*
ISC 19 06:23:00.1±0.7,**35°.91N**±0°.04×**77°.58E**±0°.07,**h10**km,**n23**,
σ2°**39**/33,**mb3.9**/3,**2C-1D**,**Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**2.94**	**232**	*e*S	**Sn**	**06 24 22.4**	**0.0**
TSSA	**Tissa**	**3.28**	**202**	*e*P	**Pn**	**06 23 55.4**	**+3.6**
TSSA				*e*S	**Sn**	**06 24 31.7**	**+0.7**
TSSA				IAML		06 24 34.3	
	comp=E,172nm,0.3s						
TSSA				IAML		06 24 37.9	
	comp=E,206nm,0.4s						
HNLY	**HANLEY**	**3.33**	**159**	*e*P	**Pb**	**06 23 57.3**	**-2.2**
KSH2	**Kashi**	**3.61**	**334**	Pn	**Pb**	**06 24 02.3**	**-1.7**
KSH2				Sn	**Sn**	**06 24 38.1**	**-0.8**
KSH2				smax	smax		
	comp=N,180nm,1.2s						
KSH2				smax	smax		
	comp=E,130nm,1.1s						
THN	**Thein Dam**	**3.77**	**204**	*e*P	**Pn**	**06 24 01.6**	**+3.3**
THN				*e*S	**Sn**	**06 24 41.3**	**-1.6**
DHRM	**DHARAMSHALA**	**3.80**	**197**	*e*P	**Pn**	**06 24 02.8**	**+3.9**
DHRM				*e*S	**Sn**	**06 24 44.3**	**+0.5**
DHRM				IAML		06 24 47.9	
	comp=E,119nm,0.2s						
DHRM				IAML		06 24 48.3	
	comp=N,122nm,0.2s						
JMU	**Jammu**	**3.86**	**217**	*e*P	**Pn**	**06 24 02.9**	**+3.3**
JMU				*e*S	**Sn**	**06 24 42.7**	**-2.3**
JMU				IAML		06 24 45.1	
	comp=N,117nm,0.3s						
JMU				IAML		06 24 45.3	
	comp=E,114nm,0.3s						
TLWR	**Talawar**	**4.17**	**199**	*e*P	**Pn**	**06 24 07.2**	**+3.4**
TLWR				*e*S	**Sn**	**06 24 52.0**	**-0.5**
KLP	**Kalpa**	**4.40**	**173**	*e*P	**Pn**	**06 24 10.6**	**+3.3**
KLP				*e*S	**Sn**	**06 24 56.8**	**-1.9**
BHK	**Bhakra**	**4.61**	**193**	*e*P	**Pn**	**06 24 11.9**	**+2.1**
BHK				*e*S	**Sn**	**06 24 58.9**	**-4.6**
UTK	**UTTARKASHI**	**5.21**	**172**	*e*P	**Pn**	**06 24 20.7**	**+2.5**
UTK				IAML		06 25 17.8	
	comp=E,164nm,0.3s						
UTK				IAML		06 25 26.6	
	comp=E,133nm,0.3s						
AAK	**Ala-Archa**	**7.13**	**341**	Pn	**Pn**	**06 24 48.0**	**+3.4**
	comp=E,0.3nm,0.3s,baz=217,slow=10,SNR=1.4						
	comp=E,1.1nm,0.3s						
AAK	**Ala-Archa**	**7.13**	**341**	⇑P	**Pg**	**06 25 16.3**	**-0.3**
	comp=E,1.1nm,0.5s						
AAK				⇓S	**Sg**	**06 26 47.9**	**-1.1**
	comp=E,6.6nm,0.8s						
KUDL	**Kundal**	**7.79**	**187**	*ex*	**Pn**	**06 24 54.2**	**+0.7**
KUDL				*ex*	x	06 26 12.9	
KUDL				IAML		06 26 15.6	
	comp=E,20nm,0.2s						
KUDL				IAML		06 26 16.5	
	comp=N,24nm,0.2s						
KK31	**Karatay Array**	**9.02**	**325**	P	Pn	06 25 16.0	+5.6
	comp=N,0.6nm,0.3s,baz=140,slow=12,SNR=13						
KK31				⇑S	**Sn**	**06 26 52.1**	**0.0**
	comp=N,1.7nm,0.5s,baz=170,slow=28,SNR=6.7						
MKAR	**Makanchi Array**	**11.44**	**17**	Pn	**Pn**	**06 25 47.9**	**+4.4**
	comp=N,0.9nm,0.3s,baz=201,slow=13,SNR=39						
MKAR				Sn	**Sn**	**06 27 50.4**	**-0.8**
	comp=N,0.4nm,0.3s,baz=198,slow=21,SNR=10						
	comp=N,1.9nm,0.4s						
KURBB	**Kurchatov Arra**	**14.72**	**2**	Pn	**Pn**	**06 26 28.8**	**+0.4**
	comp=N,0.1nm,0.3s,baz=193,slow=11,SNR=2.8						
	comp=N,0.9nm,0.2s						
BVAR	**Borovoye Array**	**17.85**	**346**	P	**P**	**06 27 09.8**	**+0.7**
	baz=144,slow=10,SNR=21						
	comp=N,4.4nm,0.7s						
ZALV	**Zalesovo Beam**	**18.73**	**13**	P	**P**	**06 27 18.8**	**0.0**
	comp=N,0.3nm,0.3s,baz=185,slow=14,SNR=8.1						
	comp=N,1.4nm,0.6s						
AKTO	**Aktyubinsk**	**20.27**	**322**	P	**P**	**06 27 34.3**	**-1.3**
	comp=N,2.7nm,0.6s,baz=120,slow=9.4,SNR=5.2						
	comp=N,2.7nm,0.6s						
SONM	**Songino Array**	**24.39**	**52**	P	**P**	**06 28 19.1**	**+0.4**
	comp=N,2.1nm,0.8s,baz=246,slow=9.8,SNR=13						
	comp=N,2.1nm,0.8s						
FINES	**FINESS Array B**	**40.98**	**325**	P	**P**	**06 30 40.6**	**-2.2**
	comp=N,1.3nm,0.5s,baz=110,slow=8.9,SNR=19						
	comp=N,1.3nm,0.5s						
HFS	**Hagfors**	**46.82**	**322**	P	**P**	**06 31 27.4**	**-2.3**
	comp=N,1.3nm,0.8s,baz=82,slow=10,SNR=1.7						
	comp=N,1.3nm,0.8s						

*FUNV **19** 06:46:28.9, 7°.25N×72°.39W, h10km, MW3.1, Presumed earthquake*
*RSNC **19** 06:46:32.5±0.0,7°N±2°×7°3W±°, h151km±2km, M1.9, ML1.7*
ISC 19 06:46:30.8±2.4,**6°.85N**±0°.05×**73°.08W**±0°.09,**h158**km±15km,
n13,σ1°**47**/24,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**202**	P	**Pn**	**06 46 52.6**	**0.0**
BARC				S	**Sn**	**06 47 08.5**	**-0.6**
PAMC	**Pamplona, Colo**	**0.62**	**38**	P	**Pn**	**06 46 55.4**	**+1.1**
PAMC				S	**Sn**	**06 47 13.0**	**+0.8**
BRJC	**Barrancabermej**	**0.67**	**281**	P	**Pn**	**06 46 54.4**	**+0.4**
BRJC				S	**Sn**	**06 47 11.9**	**+0.3**
RUSC	**La Rusia**	**0.95**	**180**	P	**Pn**	**06 46 56.5**	**0.0**
RUSC				S	**Sn**	**06 47 15.7**	**-0.5**
RUSC	**La Rusia**	**0.95**	**180**	*e*P	**Pn**	**06 46 55.7**	**-0.9**
RUSC				*e*S	**Sn**	**06 47 15.2**	**-1.0**
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	P	**Pn**	**06 46 59.2**	**-0.8**
PTBC				S	**Sn**	**06 47 20.8**	**-1.6**
OCAC	**Ocana**	**1.40

FUL	Funchal	2.80	173	eS		Sb	07 09 34.6	-1.5		
CGOR	Puntagorda, La	6.66	185	S		Sn	07 11 02.8	-2.8		
CROM	Garafia, La Pa	6.67	184	S		Sn	07 11 02.2	-4.0		
CPUN	Puntallana, La	6.69	183	S		Sn	07 11 03.4	-2.9		
CMIR	El Paso, La Pa	6.73	184	P		Pn	07 09 54.0	+3.3		
CMIR				S		Sn	07 11 02.8	-4.8		
TBT	Taburiente	6.75	185	S		Sn	07 11 02.4	-5.5		
CENR	El Paso, La Pa	6.80	184	S		Sn	07 11 06.4	-2.9		
CVIE	Villa de Mazo,	6.83	184	S		Sn	07 11 06.8	-3.3		
CJED	Jedey, El Paso	6.85	184	S		Sn	07 11 07.3	-3.1		
PFVI	Vila Bisbo	7.06	74	eP		Pn	07 09 59.4	+4.3		
PFVI				eS		Sn	07 11 14.8	-0.5		
CNOR	Icod de los Vi	7.12	175	S		Sn	07 11 14.3	-2.8		
CDOS	Garachico, Isl	7.13	176	S		Sn	07 11 16.7	-0.8		
GUIA	Guia de Isora,	7.18	176	S		Sn	07 11 18.5	-0.2		
CCHO	La Orotava (Te	7.21	176	P		Pn	07 09 59.0	+1.6		
CCHO				⇑iVmb_VC			07 10 07.9			
	253nm,SNR=1.1									
CCHO				S		Sn	07 11 17.7	-1.7		
MORF	Marmelete	7.23	72	eS		Sn	07 11 21.4	+1.8		
PTEO	Sao Teotonio	7.23	71	eP		Pn	07 10 00.9	+3.6		
PTEO				eS		Sn	07 11 18.2	-1.4		
PMAFR	Mafra	7.31	59	eS		Sn	07 11 10.6	-11		
PLOUS	Minas do Lousa	7.59	67	eP		Pn	07 10 06.3	+4.0		
PLOUS				eS		Sn	07 11 26.9	-1.5		
CGIN	Giniginamar, F	7.71	158	S		Sn	07 11 31.2	-0.3		
CLUM	San Bartolome	7.72	169	P		Pn	07 10 06.0	+1.8		
CLUM				⇑iVmb_VC			07 10 10.2			
	827nm,SNR=1.3									
CLUM				S		Sn	07 11 34.6	+2.8		
PCVE	Castro Verde	7.78	71	eP		Pn	07 10 09.8	+4.8		
PCVE				eS		Sn	07 11 33.0	0.0		
PBDV	Barranco-do-Ve	7.78	74	eP		Pn	07 10 09.8	+4.8		
PBDV				eS		Sn	07 11 36.6	+3.5		
MOE	Montemor	7.80	64	eP		Pn	07 10 09.2	+3.9		
MOE				eS		Sn	07 11 31.3	-2.4		
PSBE	So Bento	7.90	56	eS		Sn	07 11 34.3	-1.8		
PVAQ	Vaqueiros	7.98	73	eP		Pn	07 10 12.1	+4.4		
PVAQ				eS		Sn	07 11 37.3	-0.6		
PVAQ	Vaqueiros	7.98	73	P		Pn	07 10 10.1	+2.4		
PVAQ				Sn		Sn	07 11 37.4	-0.6		
EVO	Evora	8.05	65	eP		Pb	07 10 31.3	0.0		
EVO				eS		Sn	07 11 36.0	-3.9		
PMTG	Montargil	8.10	61	eP		Pn	07 09 59.7	-10		
PMTG				eS		Sn	07 11 37.1	-3.9		
PARRA	Arraiolos	8.13	63	eP		Pn	07 10 11.4	+1.6		
PARRA				eS		Sn	07 11 38.4	-3.5		
SRHM	Skhour des Reh	8.36	108	P		Pn	07 10 14.7	+1.8		
SRHM				Sn		Sn	07 11 46.0	-1.4		
PCAS	Casmilo, Conde	8.36	54	eS		Sn	07 11 43.4	-4.0		
PSARD	Sardoal	8.37	58	eP		Pn	07 10 17.4	+4.3		
PSARD				eS		Sn	07 11 43.6	-4.1		
PESTR	Estremoz	8.48	63	eS		Sn	07 11 46.9	-3.5		
PESTR	Estremoz	8.48	63	P		Pn	07 10 19.0	+4.4		
PESTR				Sn		Sn	07 11 50.4	0.0		
PBAR	Barrancos	8.68	69	eP		Pn	07 10 22.8	+5.5		
PBAR				eS		Sn	07 11 53.5	-1.7		
PMRV	Marv??o	8.84	60	eS		Sn	07 11 54.3	-4.8		
EBAD	Badajoz	8.87	65	P		Pn	07 10 21.9	+2.0		
EBAD				⇑iVmb_VC			07 10 25.6			
	87nm,SNR=1.6									
EBAD				S		Sn	07 11 56.9	-2.9		
ZHG	ZHG	9.03	100	P		Pn	07 10 23.7	+1.5		
ZHG				Sn		Sn	07 12 01.4	-2.6		
PVIS	Viseu	9.10	52	eS		Sn	07 12 00.1	-5.6		
POLO	Lamas de Olo	9.53	49	eS		Sn	07 12 07.0	-9.4		
TIO	Tiouine	9.54	115	P		Pn	07 10 32.6	+3.3		
TIO				Sn		Sn	07 12 16.4	-0.2		
PGAV	Gavieira, Arco	9.61	45	eP		Pn	07 10 32.5	+2.3		
PGAV				eS		Sn	07 12 09.0	-9.2		
ELOB	Lobios	9.67	46	P		Pn	07 10 31.4	+0.4		
ELOB				⇑iVmb_VC			07 10 40.3			
	168nm,SNR=1.6									
ELOB				S		Sn	07 12 12.2	-7.4		
TISM	Timmit	9.79	109	P		Pn	07 10 35.0	+2.5		
TISM				S		Sn	07 12 20.9	-1.6		
MVO	Moncorvo	9.90	52	eS		Sn	07 12 16.1	-9.1		
ECAB	El Cabril	9.90	71	P		Pn	07 10 37.4	+3.3		
ECAB				⇑iVmb_VC			07 10 47.1			
	44nm,SNR=1.2									
ECAB				S		Sn	07 12 23.8	-1.4		
EMAZ	Mazaricos	9.90	38	S		Sn	07 12 13.1	-12		
OUZM	OUZ	9.92	114	P		Pn	07 10 35.5	+1.0		
OUZM				Sn		Sn	07 12 24.5	-1.5		
EMIJ	Mijas	10.22	80	S		Sn	07 12 34.8	+1.7		
EAGO	Agolada(Pontev	10.26	41	P		Pn	07 10 38.0	-1.0		
EAGO				⇑iVmb_VC			07 10 48.0			
	159nm,SNR=1.2									
EAGO				S		Sn	07 12 25.1	-9.0		
ECAL	Calabor	10.51	49	P		Pn	07 10 43.2	+0.8		
ECAL				⇑iVmb_VC			07 10 46.3			
	245nm,SNR=1.6									
ECAL				S		Sn	07 12 30.8	-9.4		
MD31	MD31	10.71	100	P		Pn	07 10 48.7	+3.4		
MD31				Sn		Sn	07 12 43.5	-1.7		
MDT	Midelt	10.85	100	P		Pn	07 10 49.6	+2.5		
MDT				Sn		Sn	07 12 47.1	-1.5		

FUNV ***19*** *07:17:39.6, 7.43N×72.11W, h35km, MW2.5, Presumed earthquake*

RSNC ***19*** *07:17:44.8±0.0, 7.1N±2.×7.3W±., h147km±2km, M1.8, ML1.6*

ISC 19 07:17:43.3±1.8**, 6.88N**±0.04×**73.21W**±0.07**, h154**km±11km**, n12**, σ1.8**22**/22**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.29	175	P	Pn	07 18 04.8	+0.1
BARC				S	Sn	07 18 19.9	-1.1
BRJC	Barrancabermej	0.54	280	P	Pn	07 18 06.4	+1.0
BRJC				S	Sn	07 18 23.4	+1.2
PAMC	Pamplona, Colo	0.68	48	P	Pn	07 18 07.7	+0.9
PAMC				S	Sn	07 18 24.6	0.0
RUSC	La Rusia	0.99	173	P	Pn	07 18 08.9	-0.2
RUSC				S	Sn	07 18 27.6	-1.1
RUSC	La Rusia	0.99	173	eP	Pn	07 18 08.0	-1.1
RUSC				eS	Sn	07 18 28.0	-0.7
PTBC	PUERTO BERRIO,	1.28	255	P	Pn	07 18 11.5	+0.4
PTBC				S	Sn	07 18 31.4	-1.0
OCAC	Ocana	1.35	355	P	Pn	07 18 12.7	+0.8
OCAC				S	Sn	07 18 34.7	+0.7
SPBC	San Pablo de B	1.49	215	P	Pn	07 18 13.7	-0.4
SPBC				S	Sn	07 18 35.8	-0.5
SDV	Santo Domingo	3.24	52	eS	Pn	07 18 34.6	+0.5
PRAC	Prado	3.56	208	P	Pn	07 18 39.6	+1.5
PRAC				S	Sn	07 19 20.9	+0.2
SJCC	San Jacinto, C	3.57	327	P	Pn	07 18 38.9	+0.6
SJCC				S	Sn	07 19 20.1	-0.9
SJCC	San Jacinto, C	3.57	327	eS	Sn	07 19 17.3	-3.6

IDC ***19*** *07:25:12.3±3.6, 0.02S×18.06W, h0km, mb3.6/2, mbtmp3.9/3, ML4.2/1, MS3.3/9, Error ellipse: s-maj=80.6km s-min=28.4km az=92.0*

NEIC ***19*** *07:25:13.8±1.3, 0.0S±0.2×18.0W±0.1, h10km±2km, mb4.1/10, Error ellipse: s-maj=31.5km s-min=14.2km az=158.0*

ISC 19 07:25:14.9±0.7**, 0.02S**±0.10×**18.05W**±0.10**, h23**km**, n29, σ0.69/21, mb4.0/5, MS3.2/8, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.53	156	Pn	Pn	07 27 16.5	-0.4
	baz=333,slow=13						
H10N2				T	T	07 35 42.2	
	baz=334,slow=73,SNR=50						
H10N3	ASCENSION HYDR	8.54	156	Pn	Pn	07 27 16.8	-0.1
	baz=333,slow=13						
H10N3				T	T	07 35 42.2	
	baz=334,slow=73,SNR=284						
H10N1	ASCENSION HYDR	8.55	156	Pn	Pn	07 27 17.0	-0.1
	baz=333,slow=13						
H10N1				T	T	07 35 42.9	
	baz=334,slow=73,SNR=404						
H10S3	ASCENSION HYDR	9.49	159	Pn	Pn	07 27 31.1	+1.0
	baz=26,slow=74						
H10S3				T	T	07 36 54.6	
	baz=243,slow=74,SNR=59						
H10S2	ASCENSION HYDR	9.51	159	Pn	Pn	07 27 31.1	+0.8
	baz=194,slow=74						
H10S2				T	T	07 36 54.4	
	baz=337,slow=74,SNR=64						
DBIC	Dimbokro	14.74	63	Pn	Pn	07 28 42.1	-0.1
	1.1nm,0.3s,baz=263,slow=16,SNR=11						
DBIC				LR	LR	07 33 40.3	
	comp=Z,117nm,18.0s,baz=241,slow=34						
	2.5nm,0.3s						
DBIC	Dimbokro	14.74	63		Pn	07 28 41.8	-0.4
ACRG	Accra	18.68	72	P	P	07 29 30.6	-1.0
ACRG				IAmb	IAmb	07 29 41.1	
	comp=Z,19nm,1.1s						
RCBR	Riachuelo	18.73	252	P	P	07 29 31.8	-0.6
RCBR				IAmb	IAmb	07 29 44.4	
	comp=Z,13nm,1.0s						
TORD	Torodi Ar. Bea	23.54	55	P	P	07 30 24.8	+1.1
	comp=Z,5.3nm,1.1s,baz=246,slow=11,SNR=11						
	comp=Z,5.3nm,1.1s						
TORD	Torodi Ar. Bea	23.54	55	P	P	07 30 23.9	+0.2
MDP	Montagnes des	34.92	279	LR	LR	07 43 00.5	
	comp=Z,35nm,19.9s,baz=78,slow=31						
MD31	MD31	35.03	20	P	P	07 32 07.2	+1.1
MD01	Midelt array s	35.03	20	P	P	07 32 07.2	+1.0
MDT	Midelt	35.03	20	LR	LR	07 45 44.2	
	comp=Z,46nm,19.5s,baz=200,slow=35						
PESTR	Estremoz	39.87	13	P	P	07 32 46.6	-0.3
PESTR				IAmb	IAmb	07 32 52.7	
	comp=Z,3.8nm,1.0s						
MTE	Manteigas	41.35	12	P	P	07 32 59.1	-0.1
BOAV	Boa Vista	42.53	274	P	P	07 33 08.8	-0.4
BOAV				IAmb	IAmb	07 33 09.7	
	comp=Z,3.0nm,1.0s						
VILB	Vilhena	43.71	251	P	P	07 33 19.2	+0.4
VILB				IAmb	IAmb	07 33 38.0	
	comp=Z,3.2nm,1.1s						
KEST	Kesra	43.76	33	P	P	07 33 18.6	-0.3
KEST				IAmb	IAmb	07 33 28.1	
	comp=Z,3.5nm,1.0s						
CPUP	Villa Florida	45.99	232	LR	LR	07 50 10.9	
	comp=Z,29nm,19.1s,baz=75,slow=33						
LBTB	Lobatse	48.95	124	P	P	07 33 59.7	-0.2
LPAZ	La Paz	51.95	249	LR	LR	07 55 34.6	
	comp=Z,25nm,18.5s,baz=62,slow=35						
GERES	GERESS Array B	55.84	25	P	P	07 34 51.5	+0.9
	comp=Z,0.1nm,0.3s,baz=227,slow=7.1,SNR=3.8						
	comp=Z,0.1nm,0.3s						
GERES	GERESS Array B	55.84	25	P	P	07 34 50.1	-0.6
VRAC	Vranov	57.44	26	LR	LR	07 59 31.1	
	comp=Z,18nm,20.3s,baz=146,slow=36						
BRTR	Keskin Array B	61.45	44	LR	LR	08 06 08.8	
	comp=Z,18nm,18.2s,baz=129,slow=40						
JTS	Las Juntas de	67.30	281	LR	LR	08 05 56.9	
	comp=Z,15nm,19.3s,baz=37,slow=36						
FINES	FINESS Array B	69.84	21	LR	LR	08 06 39.5	
	comp=Z,28nm,19.2s,baz=119,slow=36						

BGR ***19*** *07:44:46.9, 44.91N×148.16E, h33km, mb4.7, Ms3.5*

GFZ ***19*** *07:44:49.6±0.5, 45°N±7°×14°8E±°, h89km, M4.7/39, mb4.7/39*

SKHL ***19*** *07:44:51.4±0.4, 44.40N×148.20E, h110km±7km, mb5.5/4, msh6.2/5*

MOS ***19*** *07:44:51.5±1.0, 44.82N×147.89E, h98km, mb4.7/35, Error ellipse: s-maj=7.6km s-min=6.1km az=99.6*

NEIC ***19*** *07:44:51.8±1.2, 44.77N±0.09×147.89E±0.05, h88km±8km, mb4.4/89, Error ellipse: s-maj=13.3km s-min=4.8km az=176.0*

IDC ***19*** *07:44:54.0±2.2, 44.79N×147.93E, h112km±18km, mb4.0/26, mbtmp4.3/33, MS2.7/7, Error ellipse: s-maj=19.0km s-min=11.3km az=160.0*

NIED ***19*** *07:44:53.4, 44.27N×148.05E, h114km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.04; Mθθ2.39; Mφφ-2.43; Mrθ1.82; Mθφ1.13; Mφr2.27; Fault plane solution: M₀3.93000×10¹⁵ NP1: φs124.00000°, δ43.00000°, λ1.00000°. NP2:φs33.00000°, δ89.00000°, λ133.00000°.*

JMA ***19*** *07:44:53.4±0.4, 44°N±2°×14°8E±°, h114km, MV4.5/33, SE OFF ETOROFU*

ISC 19 07:44:52.3±0.6**, 44.55N**±0.05×**148.05E**±0.05**, h109**km±3km**, h108**km**:pP-P, n589, σ1.910/596, mb4.4**/144**, 15C-19D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.70	349	c iPN	Pn	07 45 11.1	+0.7
KUR				pmax	pmax		
	comp=Z,584nm,0.6s						
KUR	Kuril'sk	0.70	349	i P	Pn	07 45 11.4	+1.0
KUR				AMB	AMB	07 45 14.3	
	comp=Z,770nm,0.3s						
KUR				i S	Sn	07 45 25.2	+1.1
KUR				A	A	07 45 27.3	
	comp=Z,6μm,0.4s						
KUR				A	A	07 45 27.3	
	comp=Z,7μm,0.4s						
REI	Reidovoe	0.72	358	eP	Pn	07 45 11.7	+1.1
REI				AMB	AMB	07 45 12.5	
	comp=Z,240nm,0.2s						
REI				eS	Sn	07 45 25.7	+1.3
REI				A	A	07 45 26.5	
	comp=Z,2μm,0.2s						
REI				A	A	07 45 26.5	
	comp=Z,2μm,0.2s						
SHO	Shikotan	1.11	233	eP	Pn	07 45 27.5	+13
SHO				AMB	AMB	07 45 28.5	
	comp=Z,2μm,0.4s						
SHO				eS	Sn	07 45 42.8	+12
SHO				A	A	07 45 44.0	
	comp=Z,7μm,0.4s						
SHO				A	A	07 45 44.0	
	comp=Z,6μm,0.4s						
YUK	Yuzh-Kuril'sk	1.65	253	d iPN	Pn	07 45 21.5	+0.7
YUK	Yuzh-Kuril'sk	1.65	253	i P	Pn	07 45 21.5	+0.7
YUK				AMB	AMB	07 45 22.6	
	comp=Z,4μm,0.4s						
YUK				i S	Sn	07 45 42.6	+0.1
YUK				A	A	07 45 45.6	
	comp=Z,2μm,0.5s						
YUK				A	A	07 45 45.6	
	comp=Z,5μm,0.5s						
NEM2	Nemuro 2	2.04	235	P	Pn	07 45 25.4	-0.3
NEM2				S	Sn	07 45 49.3	-1.9
NMR	Nemuro--Hokkai	2.05	236	⇓iPN	Pn	07 45 25.4	-0.4
NMR				i S	Sn	07 45 49.2	-2.1
NMR	Nemuro--Hokkai	2.05	236	i P	Pn	07 45 25.4	-0.4
NMR				i S	Sn	07 45 49.2	-2.1
RUSJ	Misakicho	2.06	259	⇓iPN	Pn	07 45 26.9	+1.0
RUSJ				i S	Sn	07 45 55.3	+3.7
JRA	Rausu	2.19	255	P	Pn	07 45 28.6	+1.1
JRA				eS	Sn	07 45 56.4	+1.8
JNSB	Nemuroshibetsu	2.32	252	i P	Pn	07 45 30.6	+1.4
JNSB				A	A	07 45 30.6	
	comp=N,6.0nm,1.8s,comp=E,3.0nm,3.3s						
JKHN	Kushirohamanak	2.55	236	i P	Pn	07 45 32.2	-0.1
JKHN				S	Sn	07 46 01.1	-1.9
JNK	Nakash	2.58	249	P	Pn	07 45 33.7	+1.0
AKK	Akkeshi	2.78	238	eP	Pn	07 45 34.9	-0.4
JAK	Akkeshi	2.88	239	P	Pn	07 45 36.4	-0.2
JAK				S	Sn	07 46 08.5	-2.2
JTKR	Abashiri--Toko	3.03	260	P	Pn	07 45 39.8	+1.3
JAR	Ashorobuto	3.33	249	eP	Pn	07 45 43.7	+1.0
JAR				eS	Sn	07 46 22.9	+1.3
JKK2	Kamakawa 2	3.87	262	P	Pn	07 45 51.4	+1.6
JCH	Churui	3.91	242	P	Pn	07 45 50.2	-0.2
JCH				S	Sn	07 46 33.3	-2.1
JSE	Soyaes	3.91	278	P	Pn	07 45 52.0	+1.6
JKA	Kamikawa-asahi	3.93	266		Pn	07 45 52.8	+2.2
JKA	Kamikawa-asahi	3.93	266	P	Pn	07 45 52.6	+2.0
ASAJ	Asahikawa	3.94	266	P	Pn	07 45 52.7	+2.0
	comp=E,56nm,0.4s,baz=51,slow=22,SNR=166						
ASAJ				LR	LR	07 47 34.4	
	comp=E,169nm,21.9s,baz=131,slow=41						
ASAJ	Asahikawa	3.94	266	PN	Pn	07 45 52.8	+2.1
ERM	Erimo	4.38	236	d iPN	Pn	07 45 57.4	+0.8
ERM	Erimo	4.38	236		Pn	07 45 57.5	+0.9
ERM				Sn	Sn	07 46 46.8	+0.3
ERM	Erimo	4.38	236	P	Pn	07 45 58.2	+1.6
YSS	Yuzhno-Sakhali	4.42	305	K iPN	Pn	07 45 58.8	+1.7
YSS				pmax	pmax		
	comp=Z,100nm,4.1s						
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS	Yuzhno-Sakhali	4.42	305	P	Pn	07 45 53.4	-3.7
YSS	Yuzhno-Sakhali	4.42	305	P	Pn	07 45 57.9	+0.7
YSS	Yuzhno-Sakhali	4.42	305	eP	Pn	07 45 59.0	+1.9
YSS				eS	Sn	07 46 49.4	+1.9
JWK2	Keihoku	4.43	282	P	Pn	07 46 00.1	+2.7
JNBK	Urakawa-nobuka	4.47	241	eP	Pn	07 45 57.1	-0.8
JHR	Hokuryu	4.62	262	P	Pn	07 46 02.2	+2.3
JRBN	Rebuntou	5.03	282	P	Pn	07 46 07.0	+1.7
JEW	Eniwo	5.08	253	P	Pn	07 46 07.8	+1.7
JTM	Tenmabayashi	6.37	236		Pn	07 46 22.6	-1.0
TYV	Tymovskoe	7.29	332	ePN	Pn	07 46 37.5	+1.5
TYV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,4.5s						
TYV	Tymovskoe	7.29	332	eP	Pn	07 46 37.4	+1.5
SKR	Severo-Kuril's	8.21	39	⇑ePN	Pn	07 46 48.4	0.0
SKR	Severo-Kuril's	8.21	39	eP	Pn	07 46 48.3	-0.1
PEA0B	Petropavlovsk-	10.66	33	⇓ePN	Pn	07 47 19.4	-2.3
PEA0B	Petropavlovsk-	10.66	33	Pn	Pn	07 47 19.1	-2.5
PETK	Petropavlovsk-	10.66	33	P	Pn	07 47 21.0	-0.7
	comp=Z,3.8nm,0.5s,baz=198,slow=8.5,SNR=13						
PETK	Petropavlovsk-	10.66	33		Pn	07 47 19.6	-2.1
MJAR	Matsushiro Arr	10.95	226	P	Pn	07 47 23.9	-1.8
	comp=Z,5.7nm,0.8s,baz=29,slow=13,SNR=25						
MJAR	Matsushiro Arr	10.95	226	PN	Pn	07 47 25.6	-0.1
MJAR	Matsushiro Arr	10.95	226	Pn	Pn	07 47 25.6	-0.1
MJB9	Matsu-Tunnel	10.95	226		Pn	07 47 24.1	-1.6
MAJO	Matsushiro	10.95	226	PN	Pn	07 47 24.1	-1.6
MAJO	Matsushiro	10.95	226		Pn	07 47 24.1	-1.6
MAJO	Matsushiro	10.95	226	P	Pn	07 47 23.1	-2.6
USRK	Ussuriysk Ar.	11.50	274	P	Pn	07 47 32.8	-0.3
	comp=Z,14nm,0.8s,baz=90,slow=12,SNR=16						
USRK				LR	LR	07 52 10.2	
	comp=Z,44nm,19.1s,baz=171,slow=38						
USRK	Ussuriysk Ar.	11.50	274		Pn	07 47 31.8	-1.3
USA0B	Ussuriysk Arra	11.50	274	c iPN	Pn	07 47 33.4	+0.4
USA0B	Ussuriysk Arra	11.50	274	Pn	Pn	07 47 32.0	-1.0
INU	Inuyama	12.48	226	Pn	Pn	07 47 44.6	-1.4
PSTR	Posyet	12.65	267	⇑ePN	Pn	07 47 47.9	-0.2
PSTR	Posyet	12.65	267	eP	Pn	07 47 47.9	-0.2
HEH	HeiHe	15.07	300	eP	P	07 48 21.0	-1.0
MA2	Magadan	15.14	5	P	Pn	07 48 20.0	-0.1
	comp=Z,9.4nm,0.7s,baz=191,slow=9.3,SNR=5.3						
MA2	Magadan	15.14	5	⇑eP	P	07 48 21.9	-0.8
ZEA	Zeya	16.37	312	eP	P	07 48 37.0	+0.7
KSRS	Korea Array	16.74	252	P	P	07 48 40.6	+0.1
	comp=Z,1.7nm,0.8s,baz=59,slow=15,SNR=4.1						
KSRS				LR	LR	07 55 10.8	
	comp=Z,10nm,20.3s,baz=245,slow=37						
SEY	Seymchan	18.59	6	P	P	07 48 59.6	-1.0
	comp=Z,3.0nm,0.6s,baz=180,slow=8.9,SNR=8.7						
SEY	Seymchan	18.59	6	⇑eP	P	07 49 00.5	-0.1
SEY				pmax	pmax		
	comp=Z,13nm,1.3s						
SHEM	Shemya Is, Ala	18.98	55	LR	LR	07 56 29.4	
	comp=Z,11nm,20.1s,baz=254,slow=37						
HILR	Hailar Array B	19.86	295	P	P	07 49 13.9	-0.7
	comp=Z,1.0nm,0.3s,baz=101,slow=15,SNR=5.1						
YAK	Yakutsk	20.54	335	P	P	07 49 19.8	-1.8
	comp=Z,36nm,0.4s,baz=332,slow=1.4,SNR=15						
YAK				LR	LR	07 56 49.1	
	comp=Z,37nm,18.2s,baz=146,slow=35						
	comp=Z,36nm,0.4s						
YAK	Yakutsk	20.54	335	eP	P	07 49 18.8	-2.9
YAK				eS	S	07 52 58.0	-7.1
YAK				e		07 53 28.2	
YAK				e*SS	sS	07 53 35.1	-3.7
YAK				e		08 00 37.4	
YAK				pmax	pmax		
	comp=Z,61nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.6s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				smax	smax		
	comp=N,50nm,2.6s						
YAK				smax	smax		
	comp=E,39nm,3.0s						
YAK	Yakutsk	20.54	335		P	07 49 19.5	-2.2
YAK	Yakutsk	20.54	335	P	P	07 49 19.3	-2.4
AMKA	Amchitka	21.90	61	P	P	07 49 37.4	+1.0
KIWB	Kanaga Island	24.14	60	P	P	07 49 58.7	+0.8
ADK	Adak	24.43	60	P	P	07 50 02.2	+1.7
ADK				pmax	pmax		
	comp=Z,14nm,1.2s						
ADK	Adak	24.43	60	P	P	07 50 02.2	+1.7
ADK				IAmb	IAmb	07 50 30.4	
	comp=Z,14nm,1.2s						
GSTR	Great Sitkin T	24.83	59	P	P	07 50 05.1	+0.9
ATKA	Atka Island	25.98	59	P	P	07 50 15.2	+0.6
HHC	Hu-ho-hao-te	26.92	275	eP	P	07 50 24.9	+1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,87nm,5.1s						
ULN	Ulaanbaatar	28.33	291	c iP	P	07 50 36.1	+0.3
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	Ulaanbaatar	28.33	291	P	P	07 50 35.9	+0.1
ULN				IAmb	IAmb	07 50 37.1	
	comp=Z,5.3nm,0.7s						
ULN	Ulaanbaatar	28.33	291	P	P	07 50 36.3	+0.5
ULN	Ulaanbaatar	28.33	291	eP	P	07 50 36.1	+0.3
TIXI	Tiksi	28.72	347	⇓eP	P	07 50 37.7	-1.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	28.72	347	P	P	07 50 37.2	-1.5
TIXI	Tiksi	28.72	347	eP	P	07 50 37.7	-1.1
SONM	Songino Array	28.77

comp=Z,3.0nm,0.7s
SDPT **Sand Point** 34.08 53 P P 07 51 26.2 +0.2
baz=274
N15K **Kwethluk River** 34.29 44 P P 07 51 27.9 +0.1
baz=267
D17K **Noatak River** 34.34 31 P P 07 51 27.5 -0.6
baz=253
J16K **Anvik River** 34.37 39 P P 07 51 27.3 -1.0
baz=262
O15K **Ungalikthiuk R** 34.38 46 P P 07 51 28.7 +0.2
baz=269
LZH **Lanzhou** 34.40 271 *e*P P 07 51 30.5 +1.4
LZH pmax pmax
comp=Z,18nm,1.4s
I17K **Unalakleet** 34.42 38 P P 07 51 28.9 +0.1
baz=261
C17K **DeLong Mountai** 34.55 29 P P 07 51 29.8 -0.1
baz=252
S14K **Fog Glacier** 34.55 51 P P 07 51 30.4 +0.2
baz=273
LZDM **Lanzhou Array** 34.56 271 P P 07 51 32.4 +1.6
comp=Z,2.1nm,0.3s,baz=143,slow=3.0,SNR=4.5
comp=Z,2.1nm,0.3s
F17K **Baldwin Pennin** 34.70 33 P P 07 51 31.3 +0.1
baz=257
L16K **Owhat River** 34.70 42 P P 07 51 32.0 +0.8
baz=265
G17K **Kiwalik Mounta** 34.73 35 P P 07 51 32.1 +0.6
baz=259
M16K **Timber Creek** 34.90 43 P P 07 51 33.7 +0.8
baz=267
H17K **Granite Mounta** 34.93 36 P P 07 51 33.3 +0.1
baz=260
N16K **Nishlik Lake** 34.96 44 P P 07 51 33.8 +0.3
baz=268
J17K **VABM Dome** 35.06 39 P P 07 51 34.7 +0.3
baz=263
E18K **Tukpahlearik C** 35.18 32 P P 07 51 35.4 0.0
baz=256
CHGN **Chignik** 35.19 51 P P 07 51 36.2 +0.8
baz=274
O16K **Kokwok River B** 35.27 45 P P 07 51 37.6 +1.4
baz=270
L17K **Donlin** 35.29 41 P P 07 51 36.5 +0.1
baz=266
C18K **Utukok River** 35.30 29 P P 07 51 37.0 +0.6
C18K **Utukok River** 35.30 29 P P 07 51 36.8 +0.5
baz=254
K17K **Iditarod** 35.34 40 P P 07 51 37.0 +0.2
baz=265
F18K **Selawik** 35.36 33 P P 07 51 37.3 +0.5
baz=258
H18K **Honhosa River** 35.61 36 P P 07 51 40.6 +1.5
H18K IAmb IAmb 07 51 42.9
comp=Z,6.6nm,0.8s
H18K **Honhosa River** 35.61 36 P P 07 51 39.5 +0.4
baz=262
G18K **Tagagawik** 35.62 34 P P 07 51 40.7 +1.6
G18K IAmb IAmb 07 51 44.3
comp=Z,4.0nm,0.7s
G18K **Tagagawik** 35.62 34 P P 07 51 39.3 +0.2
baz=260
M17K **Holitna River** 35.65 42 P P 07 51 41.8 +2.4
M17K IAmb IAmb 07 51 42.4
comp=Z,5.1nm,0.9s
M17K **Holitna River** 35.65 42 P P 07 51 40.0 +0.6
baz=268
N17K **Nushagak Hills** 35.74 44 P P 07 51 41.0 +0.8
baz=269
A19K **Wainwright** 35.81 27 P P 07 51 40.1 -0.5
baz=252
GTA2 **Gaotai** 35.81 279 *e*P P 07 51 42.6 +1.4
GTA2 pmax pmax
comp=Z,10.0nm,1.3s
C19K **Lookout Ridge** 35.98 29 P P 07 51 42.2 0.0
baz=255
Q16K **King Salmon** 36.02 47 P P 07 51 42.7 +0.1
baz=272
L18K **Granite Mounta** 36.05 41 P P 07 51 43.7 +0.9
baz=267
P17K **Kvichak River** 36.12 46 P P 07 51 43.7 +0.3
baz=272
J18K **Innoko River** 36.12 39 P P 07 51 43.7 +0.3
baz=266
F19K **Shaleruckik Mo** 36.14 33 P P 07 51 43.5 +0.1
F19K IAmb IAmb 07 51 49.1
comp=Z,3.4nm,0.6s
F19K **Shaleruckik Mo** 36.14 33 P P 07 51 43.6 +0.2
baz=260
GCSA **Galena City Sc** 36.18 37 P P 07 51 43.7 -0.2
baz=264
R17L **Mt. Peulik Vol** 36.23 49 P P 07 51 44.2 -0.2
baz=274
G19K **Purcell Mounta** 36.29 34 P P 07 51 44.6 -0.2
baz=261
D19K **Kuna River** 36.35 30 P 07 51 45.7 +0.3
D19K **Kuna River** 36.35 30 P P 07 51 45.5 +0.1
baz=257,SNR=6.9
N18K **Kilae Creek** 36.39 43 P P 07 51 46.4 +0.7
baz=270
M18K **Stony River** 36.43 42 P P 07 51 46.4 +0.4
baz=269
Q17K **Contact Creek** 36.44 48 P P 07 51 46.5 +0.1
baz=273
E19K **Redstone River** 36.46 32 IAmb IAmb 07 51 52.6
comp=Z,9.1nm,0.8s
E19K **Redstone River** 36.46 32 P P 07 51 46.4 +0.1
baz=260
H19K **Roundabout Mou** 36.46 35 P P 07 51 46.4 +0.1
baz=263
J19K **Poorman** 36.65 38 P P 07 51 48.6 +0.7
baz=266
CHIR **Chirikof Islan** 36.79 52 P P 07 51 49.7 +0.5
baz=277
D20K **Etivluk River** 36.94 30 IAmb IAmb 07 51 52.0
comp=Z,11nm,1.1s
D20K **Etivluk River** 36.94 30 P P 07 51 50.4 +0.1
baz=258,SNR=7.3
F20K **Avaraart Lake** 36.97 33 P P 07 51 50.3 -0.2
baz=262
E20K **Nigu River** 37.00 31 P P 07 51 51.1 +0.2
baz=260,SNR=7.7
B20K **Meade River** 37.04 28 P P 07 51 51.1 +0.1
baz=256
H20K **Anotleneega Mo** 37.11 35 P P 07 51 52.0 +0.3
baz=264
K20K **Telida** 37.31 39 P P 07 51 53.6 +0.1
baz=268
J20K **Nowinta River** 37.31 38 P 07 51 53.9 +0.5
J20K IAmb IAmb 07 51 55.6
comp=Z,3.1nm,0.8s
J20K **Nowinta River** 37.31 38 P P 07 51 53.6 +0.1
baz=267,SNR=5.2
IMAR **Indian Mountai** 37.62 35 P P 07 51 56.0 -0.1
C21K **Knifeblade Rid** 37.67 29 P P 07 51 56.3 -0.2
baz=260
M20K **Styx River** 37.72 41 P P 07 51 57.2 +0.2
baz=271
G21K **Allakaket** 37.77 34 P 07 51 58.1 +0.8
G21K IAmb IAmb 07 52 04.7
comp=Z,4.8nm,0.8s
G21K **Allakaket** 37.77 34 P P 07 51 57.7 +0.3
baz=264
B21K **Ikpikpuk River** 37.82 29 P P 07 51 57.5 -0.2
baz=259
E21K **Killik River** 37.84 31 P P 07 51 57.9 0.0
baz=262
F21K **Alatna River** 37.86 33 P P 07 51 58.2 +0.1
baz=264
OHAK **Old Harbor** 37.92 49 P P 07 51 59.6 +1.0
baz=277
H21K **Melozitna Rive** 37.98 35 IAmb IAmb 07 52 06.2
comp=Z,2.5nm,0.7s
H21K **Melozitna Rive** 37.98 35 P P 07 51 59.7 +0.6
baz=266
CHUM **Lake Minchumin** 38.11 38 P P 07 52 01.0 +0.8
baz=269
PPLA **Purkeypile** 38.15 40 P P 07 52 01.4 +0.7
baz=270
CAST **Castle Rocks** 38.20 39 P P 07 52 01.7 +0.7
baz=270
I21K **Tanana** 38.30 36 P P 07 52 01.8 +0.1
baz=268
F22K **John River** 38.39 32 P P 07 52 02.8 +0.3
baz=264
H22K **Ishtalitna Cre** 38.58 35 P 07 52 04.5 +0.2
H22K IAmb IAmb 07 52 11.5
comp=Z,3.0nm,0.8s
H22K **Ishtalitna Cre** 38.58 35 P P 07 52 04.4 +0.2
baz=267
E22K **Anaktuvuk Pass** 38.60 31 P P 07 52 04.4 +0.1
baz=264
G22K **Bettles** 38.60 33 P P 07 52 04.7 +0.5
baz=266
L22K **Petersville** 38.81 40 P P 07 52 06.8 +0.6
baz=272
MLY **Manley** 38.82 36 P 07 52 06.4 +0.2
MLY **Manley** 38.82 36 P P 07 52 06.6 +0.4
baz=269
NRIK **Noril'sk** 38.87 331 P P 07 52 05.2 -1.3
comp=Z,1.6nm,0.4s,baz=84,slow=8.9,SNR=3.8
comp=Z,1.6nm,0.4s
NRIK **Noril'sk** 38.87 331 IAmb IAmb 07 52 05.2
comp=Z,3.6nm,0.8s
NRIK P P 07 52 05.5 -0.9
TRF **Thorofare Moun** 39.01 39 P P 07 52 08.2 +0.2
baz=271
D23K **Nanushuk River** 39.10 30 P P 07 52 09.2 +0.8
baz=264
COLD **Coldfoot** 39.13 33 P P 07 52 09.3 +0.6
baz=267
G23K **Bananza Creek** 39.17 34 P 07 52 09.6 +0.5
G23K **Bananza Creek** 39.17 34 P P 07 52 09.7 +0.6
baz=268
C23K **Itkillik River** 39.23 29 P 07 52 10.1 +0.6
C23K IAmb IAmb 07 52 10.7
comp=Z,7.6nm,0.8s
C23K **Itkillik River** 39.23 29 P P 07 52 09.5 0.0
baz=263
H23K **Yukon River** 39.34 35 P P 07 52 11.4 +1.0
baz=269
RC01 **Rabbit Creek A** 39.38 43 P P 07 52 11.5 +0.6
baz=275
I23K **Minto, Yukon-K** 39.40 36 P P 07 52 11.0 +0.1
baz=270
E23K **Chandalar** 39.41 32 P 07 52 11.7 +0.6
E23K IAmb IAmb 07 52 14.3
comp=Z,5.1nm,0.7s
E23K **Chandalar** 39.41 32 P P 07 52 12.0 +0.8
baz=266,SNR=9.2
TOLK **Toolik Lake Re** 39.47 31 P P 07 52 11.9 +0.3
baz=266
NEA2 **Nenana** 39.53 37 P P 07 52 12.4 +0.4
baz=271,SNR=7.2
MCK **McKinley** 39.61 38 P P 07 52 13.2 +0.5
baz=272
PMR **Palmer** 39.63 42 P P 07 52 13.1 +0.2
baz=275
D24K **Happy Valley** 39.78 30 P P 07 52 14.5 +0.5
baz=266
E24K **Your Creek** 39.84 32 P P 07 52 15.1 +0.5
baz=267
SML **Sawmill** 39.99 41 P P 07 52 16.6 +0.6
baz=275
H24K **Noodor Dome** 40.02 35 P 07 52 17.7 +1.5
H24K **Noodor Dome** 40.02 35 P P 07 52 16.4 +0.3
baz=271
F24K **Squaw Lake** 40.04 33 IAmb IAmb 07 52 21.5
comp=Z,6.7nm,1.4s
F24K **Squaw Lake** 40.04 33 P P 07 52 16.5 +0.2
baz=269
COLA **College** 40.05 37⇑ *i*P P 07 52 17.3 +1.0
COLA pmax pmax
comp=Z,5.0nm,0.9s
G24K **Hadweenzic Riv** 40.19 34 IAmb IAmb 07 52 19.7
comp=Z,4.0nm,0.8s
G24K **Hadweenzic Riv** 40.19 34 P P 07 52 18.2 +0.7
baz=270,SNR=8.9
POKR **Poker Plat Res** 40.22 36 P P 07 52 17.5 -0.2
baz=272
DHY **Denali Highway** 40.34 39 P P 07 52 18.5 -0.4
baz=274
HDA **Harding Lake** 40.45 37 P P 07 52 19.8 +0.1
baz=273
ILAR **Eielson Array** 40.46 37 P P 07 52 20.1 +0.4
comp=Z,1.3nm,0.6s,baz=257,slow=5.4,SNR=18
comp=Z,1.3nm,0.6s
ILAR **Eielson Array** 40.46 37 P P 07 52 20.0 +0.3
SCM **Sheep Creek Mo** 40.47 41 P P 07 52 20.2 +0.3
baz=276
DGZ **Jazzator, Alta** 40.58 300⇓ *i*P P 07 52 22.6 +1.5
DGZ pmax pmax
comp=Z,3.0nm,0.8s
P23K **Montague Islan** 40.64 44 P P 07 52 21.9 +0.7
baz=278
D25K **Kavik River** 40.67 30 P P 07 52 21.4 0.0
baz=268
GLI **Glacier Island** 40.68 43 P P 07 52 21.7 +0.2
baz=277
G25K **Bearman Lake** 40.73 34 P P 07 52 23.0 +1.1
baz=271
F25K **Christian Rive** 40.90 32 P P 07 52 23.5 +0.1
baz=270
E25K **Arctic Village** 40.93 32 IAmb IAmb 07 52 50.6
comp=Z,7.5nm,1.5s
E25K **Arctic Village** 40.93 32 P P 07 52 23.6 0.0
baz=270
M24K **Tolsona, Glenn** 40.98 41 P P 07 52 24.7 +0.6
baz=276
K24K **Donnelly Dome** 41.00 38 P P 07 52 24.3 +0.1
baz=275
PRP **Porcupine Dome** 41.00 36 P P 07 52 24.9 +0.5
PRP IAmb IAmb 07 52 26.3
comp=Z,3.9nm,0.7s
PRP **Porcupine Dome** 41.00 36 P P 07 52 25.4 +1.1
baz=273,SNR=7.3
ZALV **Zalesovo Beam** 41.04 307 P P 07 52 25.0 +0.4
comp=Z,1.3nm,0.3s,baz=76,slow=6.3,SNR=8.4
ZALV PcP PcP 07 54 22.6 +0.3
comp=Z,2.0nm,0.5s,baz=95,slow=1.9,SNR=8.3
comp=Z,1.3nm,0.3s
ZALV **Zalesovo Beam** 41.04 307 P 07 52 23.9 -0.6
J25K **Salcha River,** 41.12 37 P P 07 52 25.7 +0.5
baz=274
PZH **PanZhiHua** 41.16 260 P P 07 52 27.8 +1.8
KLU **Klutina** 41.17 42 P P 07 52 26.2 +0.5
baz=277
PAX **Paxson** 41.22 39 P P 07 52 26.4 +0.3
baz=276
Q23K **Middleton Isla** 41.25 45 P P 07 52 26.6 +0.4
baz=279
EYAK **Cordova Ski Ar** 41.38 43 P P 07 52 28.1 +0.9
baz=279
HARP **HAARP** 41.42 40 P P 07 52 28.2 +0.5
baz=277
RIDG **Independent Ri** 41.42 38 P P 07 52 28.3 +0.7
baz=276
F26K **Sheenjek River** 41.47 32 P P 07 52 28.9 +0.9
baz=272,SNR=7.4
C27K **Jago River** 41.61 29 P P 07 52 29.8 +0.8
baz=270,SNR=8.4
G26K **Porcupine Rive** 41.64 33 P P 07 52 29.7 +0.4
baz=273
SCRK **Sand Creek** 41.78 38 P P 07 52 30.6 0.0
baz=276
BMRM **Bremner River** 41.87 42 P P 07 52 32.3 +0.9
baz=279
I26K **Coal Creek Min** 42.01 36 P P 07 52 33.2 +0.9
baz=275
WMQ **Urumqi** 42.41 291 *e*P P 07 52 37.3 +1.3
WMQ pP pP 07 52 58.8 -2.1
WMQ pmax pmax
comp=Z,19nm,0.9s
E27K **Coleen River** 42.42 31 P P 07 52 35.7 +0.1
baz=274
M26K **Nabesna, AK** 42.42 40 P P 07 52 38.0 +2.2
M26K IAmb IAmb 07 52 39.0
comp=Z,5.0nm,1.0s
M26K **Nabesna, AK** 42.42 40 P P 07 52 36.4 +0.6
baz=279,SNR=5.1
G27K **Doyon Strip** 42.49 34 P P 07 52 37.0 +0.7
baz=275
MCARA **McCarthy VSAT** 42.56 42 P P 07 52 37.5 +0.6
baz=280
D27M **Malcolm River** 42.59 30 P P 07 52 37.6 +0.4
baz=273
H27K **Steamboat Moun** 42.59 34 IAmb IAmb 07 52 40.0
comp=Z,7.8nm,1.4s
H27K **Steamboat Moun** 42.59 34 P P 07 52 37.8 +0.7
baz=276,SNR=5.0
I27K **Kandik River** 42.62 35 P P 07 52 36.8 -0.6
baz=276
L27K **Beaver Creek,** 42.85 39 IAmb IAmb 07 52 42.3
comp=Z,3.8nm,0.8s
L27K **Beaver Creek,** 42.85 39 P P 07 52 39.9 +0.7
baz=279,SNR=10
BCAR **Beaver Creek A** 42.87 39 P 07 52 40.8 +1.4
M27K **Edge Creek, AK** 42.94 40 P P 07 52 42.2 +2.1
M27K **Edge Creek, AK** 42.94 40 P P 07 52 40.6 +0.5
baz=280
F28M **Old Crow** 43.11 32 P P 07 52 41.7 +0.4
baz=276
E28M **Babbage River** 43.15 31 IAmb IAmb 07 52 44.0
comp=Z,3.0nm,0.6s
E28M **Babbage River** 43.15 31 P P 07 52 41.8 +0.3
baz=275
I28M **Miner Creek** 43.33 35 P 07 52 43.8 +0.6
I28M IAmb IAmb 07 52 45.3
comp=Z,5.0nm,0.7s
I28M **Miner Creek** 43.33 35 P P 07 52 43.3 +0.2
baz=278,SNR=9.6
BVCY **Beaver Creek** 43.40 40 P P 07 52 43.9 +0.2
baz=280
YUK3 **Moose Creek** 43.70 41 P P 07 52 46.4 0.0
baz=281
E29M **Blow River** 43.77 31 IAmb IAmb 07 52 50.6
comp=Z,3.9nm,0.8s
E29M **Blow River** 43.77 31 P P 07 52 46.5 0.0
baz=277,SNR=6.8
DAWY **Dawson** 43.77 37 P P 07 52 47.4 +0.8
DAWY **Dawson** 43.77 37 P P 07 52 46.7 0.0
baz=280
H29M **Whitestone** 43.86 34 P P 07 52 47.2 -0.1
baz=278
G29M **Pine Creek** 43.90 33 IAmb IAmb 07 52 50.3
comp=Z,7.2nm,0.9s
G29M **Pine Creek** 43.90 33 P P 07 52 48.3 +0.7
baz=278,SNR=6.6
O28M **Mount Upton** 44.03 42 P P 07 52 49.4 +0.3
baz=283
YUK8 **Steele Glacier** 44.13 41 P P 07 52 50.0 +0.2
baz=282
PINM **Pinnacle** 44.15 43 P P 07 52 50.4 +0.6
baz=283
J29N **Klondike Camp** 44.21 37 P P 07 52 50.6 +0.4
baz=280
M29M **Somme Creek** 44.49 40 P P 07 52 52.5 0.0
baz=282
EPYK **Eagle Plains** 44.50 34 IAmb IAmb 07 52 55.8
comp=Z,5.4nm,0.8s
EPYK **Eagle Plains** 44.50 34 P P 07 52 52.7 +0.3
baz=280
L29M **L29M** 44.50 39 IAmb IAmb 07 53 20.3
comp=Z,9.0nm,1.5s
G30M **tAoh Zraii Nji** 44.60 33 IAmb IAmb 07 52 57.3
comp=Z,5.1nm,0.8s
G30M **tAoh Zraii Nji** 44.60 33 P P 07 52 52.9 -0.3
baz=280,SNR=6.4
K29M **Barlow Dome** 44.62 37 P P 07 52 53.5 -0.1
baz=282
F30M **Barrier River** 44.66 32 IAmb IAmb 07 52 57.5
comp=Z,10nm,0.8s
F30M **Barrier River** 44.66 32 P P 07 52 53.7 +0.1
baz=279,SNR=9.5
MK31 **Makanchi Array** 44.79 297 *c i*P P 07 52 55.1 +0.1
MKAR **Makanchi Array** 44.79 297 P P 07 52 55.2 +0.2
comp=Z,18nm,0.7s,baz=76,slow=8.3,SNR=148
MKAR PcP PcP 07 54 35.4 +0.3
comp=Z,1.1nm,0.6s,baz=67,slow=3.5,SNR=3.4
comp=Z,18nm,0.7s
MKAR **Makanchi Array** 44.79 297 P 07 52 55.0 +0.1
I30M **Mount Dempster** 44.84 35 IAmb IAmb 07 52 57.3
comp=Z,5.7nm,0.8s
I30M **Mount Dempster** 44.84 35 P P 07 52 55.2 0.0
baz=281,SNR=10
YUK6 **Outpost Mounta** 44.87 42 P P 07 52 55.4 -0.2
baz=284
MAKZ **Makanchi** 44.98 297 P P 07 52 56.0 -0.5
MAKZ pmax pmax
comp=Z,17nm,0.7s
MAKZ **Makanchi** 44.98 297 P 07 52 56.0 -0.5
MAKZ **Makanchi** 44.98 297 P P 07 52 56.9 +0.4
J30M **Hart River** 44.99 36 P P 07 52 55.9 -0.6
baz=282
M30M **Minto, Yukon** 45.22 39 P P 07 52 57.7 -0.4
baz=284
HYT **Haines Junctio** 45.30 42 P P 07 53 00.2 +1.3
HYT IAmb IAmb 07 53 02.7
comp=Z,6.1nm,0.9s
HYT **Haines Junctio** 45.30 42 P P 07 52 58.8 -0.1
baz=285
N30M **Aishikik Lake** 45.34 41 P P 07 52 59.3 +0.1
baz=284
G31M **Satah River** 45.36 33 P 07 52 59.4 +0.3
G31M IAmb IAmb 07 53 00.8
comp=Z,5.1nm,0.8s
G31M **Satah River** 45.36 33 P P 07 52 59.0 -0.1
baz=281
INK **Inuvik** 45.39 31 P P 07 53 00.6 +1.3
INK pmax pmax
comp=Z,3.0nm,0.5s
INK **Inuvik** 45.39 31 P 07 53 00.6 +1.3
INK IAmb IAmb 07 53 01.8
comp=Z,3.2nm,0.5s
INK **Inuvik** 45.39 31 P P 07 52 59.3 0.0
baz=281,SNR=5.7
F31M **Tsiigehtchic** 45.47 32 P P 07 53 00.1 +0.1
baz=281
P29M **Windy Craggy** 45.49 43 P P 07 53 00.7 +0.3
baz=286
H31M **Peel River** 45.56 34 P 07 53 02.3 +1.5
H31M IAmb IAmb 07 53 04.7
comp=Z,5.4nm,0.8s
H31M **Peel River** 45.56 34 P P 07 53 00.5 -0.3
baz=282
KURK **Kurchatov** 45.62 304 P P 07 53 01.2 -0.2
KURK 07 54 38.4
KURK **Kurchatov** 45.62 304 P 07 53 00.5 -1.0
KURK IAmb IAmb 07 53 02.4
comp=Z,8.3nm,1.1s
KURK **Kurchatov** 45.62 304 P P 07 53 00.6 -0.9
KURK **Kurchatov** 45.62 304 *e*P P 07 53 01.2 -0.2
KURBB **Kurchatov Arra** 45.71 304 P P 07 53 01.1 -1.0
comp=Z,4.0nm,0.7s,baz=72,slow=8.9,SNR=30
KURBB PcP PcP 07 54 38.4 +0.2
comp=Z,1.5nm,0.7s,baz=73,slow=3.5,SNR=11
comp=Z,4.0nm,0.7s
P30M **Million Dollar** 45.74 42 P P 07 53 02.6 +0.2
baz=286
N31M **Braeburn, Yuko** 45.94 40 P P 07 53 04.0 +0.1
baz=285
O30N **Mendenhall** 45.99 41 P P 07 53 04.1 -0.1
baz=286
PLBC **Pleasant Camp** 46.22 43 P P 07 53 06.2 +0.2
baz=287
M31M **Drury Creek, Y** 46.39 39 P P 07 53 07.3 0.0
baz=286
S31K **Pelican** 46.72 45 P P 07 53 10.1 +0.2
baz=288
N32M **Quiet Lake** 47.29 40 P P 07 53 14.0 -0.4
baz=288
P32M **Atlin** 47.47 43 P P 07 53 15.7 -0.1
baz=288
SIT **Sitka** 47.48 46 P P 07 53 15.6 -0.2
baz=290
R32K **Eaglecrest** 47.49 44 P P 07 53 15.6 -0.3
baz=289
MMPY **Sheldon Lake,** 47.67 38 P P 07 53 17.0 -0.3
baz=288
P33M **Teslin, Yukon** 47.70 42 P P 07 53 17.4 -0.2
baz=289
S32K **Killisnoo** 47.72 45 P P 07 53 17.8 +0.1
baz=290
PDGK **Podgornoye** 48.03 294 P P 07 53 19.7 -0.8
PDGK **Podgornoye** 48.03 294 P P 07 53 19.7 -0.8
CHTO **Chiang Mai** 48.12 254 P P 07 53 21.9 +0.6
CHTO pmax pmax
comp=Z,6.0nm,1.4s
CHTO **Chiang Mai** 48.12 254 P P 07 53 21.9 +0.6
CHTO IAmb IAmb 07 53 23.6
comp=Z,5.8nm,1.4s
CMAR **Chiang Mai Arr** 48.37 254 P P 07 53 24.4 +1.2
comp=Z,0.7nm,0.3s,baz=45,slow=8.3,SNR=4.2
CMAR LR LR 08 16 44.7
comp=Z,14nm,18.7s,baz=235,slow=40
comp=Z,0.7nm,0.3s
CMAR **Chiang Mai Arr** 48.37 254 *i* P P 07 53 25.1 +1.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR **Chiang Mai Arr** 48.37 254 P P 07 53 23.8 +0.6
Q32M **Nakina River** 48.37 43 P P 07 53 22.3 -0.6
baz=290
C36M **Paulatuk** 48.47 28 P P 07 53 23.5 +0.2

C36M IAmb IAmb 07 53 24.7
comp=Z,5.0nm,0.5s
C36M Paulatuk 48.47 28 P **P** **07 53 22.6 -0.7**
baz=288
R33M Jennings River 48.85 42 P **P** **07 53 25.4 -1.1**
baz=291
U33K Whale Pass 48.95 47 P **P** **07 53 26.2 -0.9**
baz=292
WUS Wushi 49.19 292 P **P** **07 53 29.8 +0.4**
CRAG Craig 49.19 48 P **P** **07 53 27.7 -1.2**
baz=292
WRAK Wrangell Islan 49.24 46 P **P** **07 53 28.1 -1.2**
baz=292
BVAR Borovoye Array 49.50 309 P **P** **07 53 31.0 -0.4**
comp=Z,0.9nm,0.3s,baz=68,slow=9.7,SNR=5.0
comp=Z,0.9nm,0.3s
DLBC Dease Lake 49.65 43 P **P** **07 53 31.1 -1.5**
baz=292
V35K Ketchikan 50.04 47 P **P** **07 53 34.0 -1.3**
baz=294
BOOM Boomskoye usch 50.73 295 P **P** **07 53 42.6 +1.6**
EVN Everest 50.92 273 P **P** **07 53 43.4 +0.3**
EVN Everest 50.92 273 P **P** **07 53 44.5 +1.3**
ASAI AK-SAY(Kyrgyzs 51.11 293 P **P** **07 53 45.2 +1.1**
AAK Ala-Archa 51.60 295*d* *i*P **P** **07 53 48.4 +0.9**
AAK pmax pmax
comp=Z,11nm,1.1s
AAK Ala-Archa 51.60 295 **P** **07 53 47.7 +0.2**
AAK Ala-Archa 51.60 295 P **P** **07 53 48.6 +1.1**
AAK Ala-Archa 51.60 295 *e*P **P** **07 53 48.4 +0.9**
KSH2 Kashi 52.63 291 P **P** **07 53 56.9 +1.7**
KSH2 pmax pmax
comp=Z,4.0nm,0.5s
ARK Arkit 53.65 296 P **P** **07 54 02.7 +0.1**
KK31 Karatay Array 53.91 298 P **P** **07 54 04.2 -0.2**
KK31 pmax pmax
comp=Z,14nm,1.0s
KK31 Karatay Array 53.91 298 **P** **07 54 04.2 -0.2**
KKAR Karatay Array 53.91 298 P **P** **07 54 04.3 0.0**
KKAR Karatay Array 53.91 298 **P** **07 54 04.3 0.0**
SPA0 Spitsbergen Ar 54.12 349 *e*P P 07 53 59.2 -6.1
ARTI Arti 54.31 317*d* *i*P **P** **07 54 05.6 -1.4**
ARTI pmax pmax
comp=Z,14nm,1.1s
ARTI Arti 54.31 317 **P** **07 54 05.1 -1.9**
YKA Yellowknife Ar 54.78 34 P **P** **07 54 10.5 +0.2**
comp=Z,1.2nm,0.7s,baz=303,slow=6.5,SNR=4.9
comp=Z,1.2nm,0.7s
BTK Batken 55.29 294 IAmb IAmb 07 54 16.3
comp=Z,7.4nm,1.0s
BTK Batken 55.29 294 P **P** **07 54 15.1 +0.7**
GAR Garm 56.18 294 P **P** **07 54 21.5 +0.7**
AB31 Akbulak array 57.07 309 **P** **07 54 26.5 -0.3**
AB31 IAmb IAmb 07 54 27.6
comp=Z,4.4nm,0.8s
ABKAR Akbulak array 57.07 309 **P** **07 54 26.3 -0.5**
CHGR Chuyangaron 57.13 294⇓ *i*P **P** **07 54 27.9 +0.4**
CHGR pmax pmax
comp=Z,27nm,0.9s
CHGR Chuyangaron 57.13 294 **P** **07 54 27.5 0.0**
NIL Nilore 57.18 287 P **P** **07 54 28.4 +0.5**
NIL pmax pmax
comp=Z,14nm,1.1s
NIL Nilore 57.18 287 **P** **07 54 28.4 +0.5**
NIL Nilore 57.18 287 P **P** **07 54 28.6 +0.8**
SHAA Shahritus 58.41 293 **P** **07 54 37.0 +0.5**
SHAA IAmb IAmb 07 54 38.9
comp=Z,14nm,1.2s
ARA0 ARCESS Array S 58.72 340 *e*P **P** **07 54 36.9 -1.2**
ARCES ARCESS Array B 58.72 340 P **P** **07 54 36.2 -1.8**
comp=Z,0.8nm,0.3s,baz=48,slow=7.5,SNR=19
comp=Z,0.8nm,0.3s
ARCES ARCESS Array B 58.72 340 P **P** **07 54 37.0 -1.1**
ARCES pmax pmax
comp=Z,11nm,1.3s
ARCES ARCESS Array B 58.72 340 P **P** **07 54 37.0 -1.1**
KTK1 Kautokeino 59.66 340 *e*P **P** **07 54 43.9 -0.7**
JETT Jettan, Norway 59.93 341 *e*P **P** **07 54 45.3 -1.1**
KLMR Klimovskoe 60.11 328 *e*P **P** **07 54 45.0 -2.7**
KLMR *e**PP **pP** **07 55 14.2 +0.1**
KLMR pmax pmax
comp=Z,13nm,1.4s
TRO Tromso 60.20 342 *e*P **P** **07 54 47.0 -1.2**
BLKN Baker Lake 60.47 27 P **P** **07 54 50.4 +0.4**
BLKN IAmb IAmb 07 54 50.9
comp=Z,5.7nm,0.8s
ILON Igloolik, Nuna 60.63 18 P **P** **07 54 50.9 -0.2**
FAUS Fauske 62.81 341 *e*P **P** **07 55 04.8 -0.9**
FAUS IAmb IAmb 07 55 05.1
comp=Z,18nm,1.0s
SUMG Summit 63.09 2 P **P** **07 55 07.6 -0.4**
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 63.09 2 **P** **07 55 07.6 -0.4**
SUMG Summit 63.09 2 P **P** **07 55 07.5 -0.4**
JNW Jan Mayen West 63.50 352 *e*P **P** **07 55 10.8 +0.6**
MOR8 Moi Rana 63.99 341 *e*P **P** **07 55 11.0 -2.6**
MOR8 IAmb IAmb 07 55 12.2
comp=Z,14nm,0.8s
STOK Stokkvaagen 64.19 342 *e*P **P** **07 55 14.1 -0.7**
LEIR Leirfjorden 64.35 341 *e*P **P** **07 55 14.6 -1.3**
FIA1 FINESS Array S 64.45 333 **P** **07 55 15.2 -1.4**
FINES FINESS Array B 64.46 333 P **P** **07 55 15.4 -1.2**
comp=Z,18nm,0.7s,baz=39,slow=7.8,SNR=133
comp=Z,18nm,0.7s
OBN Obninsk 65.05 324 *e*P **P** **07 55 20.1 -0.5**
OBN *e**PP **pP** **07 55 46.8 -0.6**
OBN *e* 07 55 51.8
OBN *e**SP **sP** **07 56 00.3 +1.0**
OBN *e* 07 57 44.7
OBN *e*S **S** **08 03 54.5 +0.6**
OBN *e*SS **SS** **08 08 01.2 -5.8**
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,26nm,17.0s
OBN Obninsk 65.05 324 *e*P **P** **07 55 20.1 -0.5**
VRH Novokhopyorsk 65.36 318 *e*P **P** **07 55 22.3 -0.3**
VRH pmax pmax
comp=Z,11nm,1.1s
WRA Warramunga Arr 65.39 194 P **P** **07 55 23.9 +0.8**
comp=Z,0.4nm,0.8s,baz=10,slow=6.3,SNR=2.5
comp=Z,0.4nm,0.8s
LPSR Galich'ya Gora 65.72 321 *e*P **P** **07 55 25.0 0.0**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
ARBE Arbavere 65.99 332 P **P** **07 55 25.6 -0.9**
VORR Voronezh 66.22 320 P **P** **07 55 28.0 -0.2**
VORR pmax pmax
comp=Z,16nm,1.2s
VSU Vasula 66.46 331⇓ *e*P **P** **07 55 27.0 -2.5**
VSU pmax pmax
comp=Z,7.0nm,0.7s
VSR Storozhevoye 66.55 320 *e*P **P** **07 55 30.0 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s
NVAR Mina Array Bea 66.61 59 P **P** **07 55 32.8 +1.6**
comp=Z,0.6nm,0.5s,baz=290,slow=7.7,SNR=7.7
comp=Z,0.6nm,0.5s
MOL Molde 68.65 342 *e*P **P** **07 55 43.5 +0.2**
DOMB Dombas 68.76 341 *e*P **P** **07 55 44.0 0.0**
NC405 NORSAR Array S 68.90 339 P **P** **07 55 44.7 -0.2**
NC405 IAmb IAmb 07 55 45.7
comp=Z,11nm,1.0s
PDAR Pinedale Array 68.90 50 P **P** **07 55 46.5 +1.0**
comp=Z,0.3nm,0.5s,baz=268,slow=2.3,SNR=4.6
comp=Z,0.3nm,0.5s
MNK Minsk 69.00 327 *i* P **P** **07 55 46.3 +0.7**
MNK *i* P **P** **07 55 46.3 +0.7**
comp=N,8.0nm,0.7s
MNK *i* P **P** **07 55 46.3 +0.7**
comp=Z,19nm,0.8s,baz=41
MNK *i* pP **pP** **07 56 13.9 +1.2**
MNK *i* sP **sP** **07 56 25.9 +1.4**
MNK *i* PP **PP** **07 58 19.5 +0.8**
MNK *i* PPP PPP 08 00 01.7
MNK *i* S **S** **08 04 43.5 +2.1**
MNK *i* SS **SKSac** **08 05 31.3 -3.6**
MNK *i* SS **SS** **08 09 15.0 +6.9**
MNK *i* SSS SSS 08 12 30.5
MNK *i* LR LR 08 26 23.7
MNK Minsk 69.00 327 *i* P **P** **07 55 46.2 +0.7**
MNK *i* *PP **pP** **07 56 13.9 +1.2**
MNK *i* *SP **sP** **07 56 25.9 +1.4**
MNK *i* 07 58 19.5
MNK *i* PPP PPP 08 00 01.7
MNK *i* S **S** **08 04 43.5 +2.1**
MNK *i* *SS **SKSac** **08 05 31.2 -3.6**
MNK *i* SS **SS** **08 09 14.9 +6.9**
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=N,8.0nm,0.7s
MNK pmax pmax
comp=E,13nm,0.7s
NB201 NORSAR Array S 69.06 339 P **P** **07 55 45.6 -0.3**
NB2 NORSAR Subarra 69.09 339 P **P** **07 55 45.3 -0.8**
comp=Z,2.1nm,0.4s,baz=30,slow=6.5
NB2 NORSAR Subarra 69.09 339 P **P** **07 55 45.3 -0.8**
NOA NORSAR Array B 69.09 339 P **P** **07 55 45.2 -0.8**
comp=Z,1.6nm,0.4s,baz=40,slow=7.7,SNR=57
NOA LR LR 08 29 42.6
comp=Z,5.7nm,18.0s,baz=90,slow=39
comp=Z,1.6nm,0.4s
HFS Hagfors 69.20 337 P **P** **07 55 46.0 -0.7**
comp=Z,4.7nm,0.3s,baz=31,slow=4.3,SNR=68
comp=Z,4.7nm,0.3s
NC602 NORSAR Array S 69.27 339 *e*P **P** **07 55 46.3 -0.8**
NCK Nalchik 69.54 311⇓ *e*P **P** **07 55 51.3 +2.2**
NCK pmax pmax
comp=Z,12nm,0.5s
KIV Kislovodsk 69.71 312 *e*P **P** **07 55 51.5 +1.2**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV Kislovodsk 69.71 312 P **P** **07 55 51.6 +1.2**
comp=Z,26nm,0.9s
KIV Kislovodsk 69.71 312 P **P** **07 55 51.9 +1.6**
KIV Kislovodsk 69.71 312 *e*P **P** **07 55 51.5 +1.2**
KBZ Khabaz 69.75 312 P **P** **07 55 51.6 +1.2**
comp=Z,9.2nm,0.9s,baz=65,slow=2.3,SNR=24
comp=Z,9.2nm,0.9s
SHA1 Shidzhatmaz 69.87 312*de*P **P** **07 55 52.9 +1.4**
GNI Garni 71.16 308⇓ *e*P **P** **07 55 59.9 +0.6**
GNI pmax pmax
comp=Z,16nm,1.6s
AK03 Malin Array Si 71.30 324 P **P** **07 55 58.9 -0.8**
AK23 Malin Array Si 71.31 324 P **P** **07 55 59.6 -0.2**
AKASG Malin Array Be 71.32 324 P **P** **07 55 59.1 -0.7**
comp=Z,12nm,0.7s,baz=38,slow=6.2,SNR=54
comp=Z,12nm,0.7s
AKASG Malin Array Be 71.32 324 P **P** **07 55 59.9 +0.1**
AKASG pmax pmax
comp=Z,8.0nm,1.2s
AKASG Malin Array Be 71.32 324 P **P** **07 55 59.9 +0.1**
AKASG IAmb IAmb 07 56 00.5
comp=Z,8.3nm,1.1s
AKBB Malin Array Si 71.32 324 P **P** **07 55 59.8 0.0**
AKBB pmax pmax
comp=Z,21nm,0.9s
AKBB Malin Array Si 71.32 324 **P** **07 55 59.8 0.0**
KIEV Kiev 71.33 324 P **P** **07 55 59.2 -0.6**
comp=Z,94nm,1.0s
KIEV Kiev 71.33 324 P **P** **07 55 59.4 -0.5**
AK16 Malin Array Si 71.39 324 P **P** **07 55 59.4 -0.8**
VSLR Vesyoloye 71.45 313⇓ *i*P **P** **07 56 02.9 +2.2**
VSLR pmax pmax
comp=Z,26nm,0.9s
MI28 MI28,Pidlybu 71.79 325 P **P** **07 56 01.4 -1.2**
RNPP9 Sopachiv 72.14 326 P **P** **07 56 04.6 -0.1**
RNPP8 Varash 72.21 326 P **P** **07 56 05.1 0.0**
LUBAR Lubar, Ukraine 72.52 324 P **P** **07 56 06.5 -0.5**
BAL3X Bal3x, Balta 73.24 322 P **P** **07 56 10.4 -0.9**
SORM Soroca 73.63 323 P **P** **07 56 13.0 -0.6**
comp=Z,25μmcomp=Z,23nm,1.0s
BEL Belsk 73.76 329 P **P** **07 56 14.5 +0.3**
KMPD K-Podol'skiy 74.11 324 P **P** **07 56 15.0 -1.3**
OJC Ojcow 75.44 329 P **P** **07 56 24.1 +0.1**
comp=Z,14nm,1.2s
OJC Ojcow 75.44 329 P **P** **07 56 24.3 +0.3**
ARPR Arapgir-MALATY 75.44 311 P **P** **07 56 25.3 +0.8**
BSEG Bad Segeberg 75.47 336 *e*P **P** **07 56 24.5 +0.4**
comp=Z,7.2nm,1.1s,baz=30,slow=5.5
BSEG Bad Segeberg 75.47 336 P **P** **07 56 24.8 +0.8**
KOLS Kolonicke sedl 75.53 326 *e*P **P** **07 56 25.3 +0.8**
KOLS pmax pmax
comp=Z,7.0nm,1.0s
KOLS Kolonicke sedl 75.53 326 P **P** **07 56 25.3 +0.8**
KOLS Kolonicke sedl 75.53 326 *e*P **P** **07 56 25.3 +0.8**
TESR Tescani 75.62 323 P **P** **07 56 25.1 0.0**
comp=Z,11nm,1.2s
TESR Tescani 75.62 323 P **P** **07 56 24.7 -0.5**
RUE Ruedersdorf 75.65 333 *e*P **P** **07 56 25.5 +0.4**
comp=Z,12nm,0.6s,baz=30,slow=5.5
NIE Niedzica 75.90 328 P **P** **07 56 27.5 +0.8**
comp=Z,4.7nm,1.1s
GORT1 Trebel 75.99 335 *e*P **P** **07 56 27.7 +0.7**
comp=Z,17nm,1.1s,baz=30,slow=5.5
TRPA Tarpa 76.06 326 P **P** **07 56 28.3 +0.8**
KSP Ksiaz 76.19 331 P **P** **07 56 28.4 +0.2**
comp=Z,11nm,1.1s
STEB Steborice 76.42 330 *e*P **P** **07 56 30.1 +0.5**
LANS Liptovska Anna 76.44 328 *e*P **P** **07 56 31.5 +1.8**
LANS pmax pmax
comp=Z,6.0nm,1.1s
LANS Liptovska Anna 76.44 328 *e*P **P** **07 56 31.5 +1.8**
OSTC Ostas 76.45 331 *e*P **P** **07 56 29.6 -0.2**
OSTC Ostas 76.45 331 *e*P **P** **07 56 29.6 -0.2**
CHVC Chvalec 76.48 331 *e*P **P** **07 56 30.7 +0.7**
CHVC Chvalec 76.48 331 *e*P **P** **07 56 30.7 +0.7**
FLTG Flechtingen 76.58 334 *e*P **P** **07 56 30.2 -0.2**
comp=Z,12nm,0.9s,baz=30,slow=5.5
DPC Dobruska-Polom 76.59 331 *e*P **P** **07 56 31.0 +0.5**
DPC Dobruska-Polom 76.59 331 *e*P **P** **07 56 31.0 +0.5**
DPC Dobruska-Polom 76.59 331 P **P** **07 56 31.1 +0.5**
comp=Z,7.7nm,1.4s
DPC Dobruska-Polom 76.59 331 P **P** **07 56 31.4 +0.8**
MORC Moravsky Berou 76.63 330 *e*P **P** **07 56 30.7 -0.1**
MORC Moravsky Berou 76.63 330 P **P** **07 56 31.2 +0.4**
SCHQ Schefferville 76.65 20 P **P** **07 56 31.1 +0.3**
comp=Z,1.3nm,0.4s,baz=359,slow=5.4,SNR=5.3
comp=Z,1.3nm,0.4s
SCHQ Schefferville 76.65 20 P **P** **07 56 31.3 +0.5**
SCHQ IAmb IAmb 07 56 32.4
comp=Z,7.6nm,1.4s
KRLC Kraliky 76.66 330 *e*P **P** **07 56 31.1 +0.1**
KRLC Kraliky 76.66 330 *e*P **P** **07 56 31.1 +0.1**
KRLC Kraliky 76.66 330 P **P** **07 56 31.1 +0.1**
MLR Muntele Rosu 76.73 322 P **P** **07 56 32.5 +1.0**
MLR pmax pmax
comp=Z,4.0nm,0.9s
MLR Muntele Rosu 76.73 322 P **P** **07 56 32.5 +1.0**
MLR IAmb IAmb 07 56 33.0
comp=Z,3.8nm,0.9s
RETH Rethem/Aller, 76.79 336 *e*P **P** **07 56 31.9 +0.3**
comp=Z,13nm,1.1s,baz=30,slow=5.5
RETH Rethem/Aller, 76.79 336 P **P** **07 56 32.2 +0.7**
CLL Collm 76.90 333⇑ *i*P **P** **07 56 32.0 -0.2**
CLL pmax pmax
comp=Z,15nm,0.9s
CLL Collm 76.90 333 *e*P **P** **07 56 32.0 -0.2**
comp=Z,13nm,0.8s,baz=30,slow=5.5
CLL Collm 76.90 333 P **P** **07 56 32.0 -0.2**
comp=Z,16nm,0.9s
CLL Collm 76.90 333⇑ *i*P **P** **07 56 32.0 -0.2**
comp=Z,15nm,0.9s
ASSE Asse, Remlinge 76.93 335 *e*P **P** **07 56 32.5 +0.3**
comp=Z,5.9nm,1.0s,baz=30,slow=5.5
BRG Berggiesshubel 76.96 332 *e*P **P** **07 56 32.6 +0.1**
comp=Z,8.7nm,1.3s,baz=30,slow=5.5
BRG Berggiesshubel 76.96 332 P **P** **07 56 33.0 +0.4**
BRG Berggiesshubel 76.96 332 *e*P **P** **07 56 32.8 +0.2**
BRG Amp 07 56 34.3
comp=Z,6.0nm,1.1s
VOIR 77.16 323 P **P** **07 56 34.2 +0.3**
comp=Z,4.8nm,0.9s
VOIR 77.16 323 P **P** **07 56 35.0 +1.1**
CLZ Clausthal 77.27 335 *e*P **P** **07 56 34.9 +0.5**
comp=Z,6.5nm,0.9s,baz=30,slow=5.5
CLZ Clausthal 77.27 335 P **P** **07 56 35.2 +0.9**
JAVC Velka Javorina 77.35 329 *e*P **P** **07 56 36.0 +1.1**
JAVC Velka Javorina 77.35 329 P **P** **07 56 34.6 -0.3**
HSKC Hora Svate Kat 77.36 332 P **P** **07 56 35.0 +0.1**
VRAC Vranov 77.36 330 *e*P **P** **07 56 35.2 +0.3**
VRAC Vranov 77.36 330 P **P** **07 56 34.6 -0.3**
ARR Arges 77.39 323 P **P** **07 56 36.2 +1.0**
BR131 Keskin Array S 77.46 314⇓ *i*P **P** **07 56 36.6 +0.8**
BRTR Keskin Array B 77.46 314 P **P** **07 56 36.5 +0.8**
comp=Z,1.3nm,0.4s,baz=68,slow=2.6,SNR=11
comp=Z,1.3nm,0.4s
BRTR Keskin Array B 77.46 314 P **P** **07 56 37.0 +1.2**
BRTR Keskin Array B 77.46 314 P **P** **07 56 37.0 +1.2**
BR104 Keskin Array S 77.47 314 P **P** **07 56 35.9 +0.1**
comp=Z,3.4nm,1.0s
PRU Pruhonice 77.51 331 *e*P **P** **07 56 35.1 -0.6**
PRU Pruhonice 77.51 331 *e*P **P** **07 56 35.1 -0.6**
PRU Pruhonice 77.51 331 P **P** **07 56 36.2 +0.5**
EKA Eskdalemuir Ar 77.54 344 P **P** **07 56 35.9 +0.2**
comp=Z,0.8nm,0.3s,baz=18,slow=5.1,SNR=13
comp=Z,0.8nm,0.3s
IBBN Ibbenburen 77.64 336 *e*P **P** **07 56 36.5 +0.2**
comp=Z,7.2nm,0.8s,baz=30,slow=5.5
KRUC Moravsky 77.64 330 *e*P **P** **07 56 36.4 0.0**
KRUC Moravsky 77.64 330 P **P** **07 56 36.6 +0.2**
GTTG Gottingen 77.66 335 *e*P **P** **07 56 36.9 +0.4**
comp=Z,7.0nm,0.8s,baz=30,slow=5.5
SMOL Smolenice 77.72 329 *e*P **P** **07 56 38.8 +1.9**
SMOL pmax pmax
comp=Z,18nm,2.5s
PLN Plauen 77.88 333 *e*P **P** **07 56 38.0 +0.3**
comp=Z,1.3nm,0.9s,baz=30,slow=5.5
MODS Modra-Piesok 77.90 329 *e*P **P** **07 56 38.7 +0.8**
MODS pmax pmax
comp=Z,12nm,1.4s
MODS Modra-Piesok 77.90 329 *e*P **P** **07 56 38.7 +0.8**
MOX Moxa 77.92 333 *e*P **P** **07 56 37.9 -0.1**
comp=Z,6.1nm,1.0s,baz=30,slow=5.5
MOX *e*L L 08 38 47.9
comp=Z,24nm,19.1s
MOX Moxa 77.92 333 P **P** **07 56 38.0 0.0**
SRO Srobarova 77.97 328 *e*P **P** **07 56 39.6 +1.3**
SRO Srobarova 77.97 328 *e*P **P** **07 56 39.6 +1.3**
ZVC Zvikov 78.10 331 *e*P **P** **07 56 39.7 +0.7**
KKUL Konya-Kulu 78.24 314 P **P** **07 56 40.9 +0.9**
KASTN Kahler Asten 78.42 335 *e*P **P** **07 56 40.9 +0.1**
comp=Z,5.2nm,1.0s,baz=30,slow=5.5
BZS Buzias 78.47 325 P **P** **07 56 41.3 +0.3**
ROTZ Rotzenmuhle 78.49 333 *e*P **P** **07 56 41.6 +0.5**
comp=Z,1.7nm,1.2s,baz=30,slow=5.5
BUG Bochum--Univer 78.55 336 *e*P **P** **07 56 41.4 0.0**
comp=Z,1.1nm,1.5s,baz=30,slow=5.5
WINA Alland / Wiene 78.56 329 *i* P **P** **07 56 42.4 +0.9**
comp=Z,1.5nm,0.4s
KHC Kasperske Hory 78.57 331*ce*P **P** **07 56 42.2 +0.6**
KHC pmax pmax
comp=Z,10.0nm,1.6s
KHC Kasperske Hory 78.57 331 *e*P **P** **07 56 41.6 0.0**
KHC Kasperske Hory 78.57 331 P **P** **07 56 42.0 +0.4**
KHC Kasperske Hory 78.57 331 P **P** **07 56 42.1 +0.4**
CKRC Cesky Krumlov 78.58 331 *e*P **P** **07 56 42.2 +0.5**
CKRC Cesky Krumlov 78.58 331 *e*P **P** **07 56 42.2 +0.5**
GEC2 GERESS Array S 78.77 331 *e*P **P** **07 56 43.0 +0.2**
comp=Z,1.4nm,0.7s,baz=30,slow=5.5
GERES GERESS Array B 78.77 331 P **P** **07 56 43.0 +0.2**
comp=Z,1.2nm,0.5s,baz=36,slow=5.6,SNR=17
comp=Z,1.2nm,0.5s
GERES GERESS Array B 78.77 331 P **P** **07 56 43.3 +0.5**
GERES GERESS Array B 78.77 331 P **P** **07 56 43.3 +0.5**
CONA Conrad Observa 78.79 329 *i* P **P** **07 56 43.2 +0.3**
comp=Z,1.5nm,0.6s
WET Wettzell 78.80 332 *e*P **P** **07 56 43.4 +0.5**
comp=Z,8.0nm,1.3s,baz=30,slow=5.5
WET Wettzell 78.80 332 P **P** **07 56 41.5 -1.3**
RONA Rosalia, Austr 78.82 329 *e*P **P** **07 56 44.1 +1.1**
comp=Z,2.4nm,0.7s
GRA1 Grafenberg Arr 78.87 333 P **P** **07 56 43.7 +0.5**
GRF Grafenberg Arr 78.87 333 *e*P **P** **07 56 43.8 +0.6**
comp=Z,7.9nm,0.7s,baz=30,slow=5.5
GRF *e*L L 08 26 04.8
comp=Z,24nm,21.1s
GRFO Grafenberg 78.88 333 P **P** **07 56 43.7 +0.4**
GRB3 Grafenberg Arr 78.98 333 P **P** **07 56 44.8 +1.0**
GRC3 Grafenberg Arr 79.45 332 P **P** **07 56 46.4 +0.1**
ARSA Arzberg 79.48 329 *e*P **P** **07 56 48.3 +1.7**
comp=Z,7.7nm,0.4s
SESA Seetaler Alpe, 79.94 330 *e*P **P** **07 56 49.5 +0.1**
comp=Z,6.0nm,0.7s,SNR=5.6
SOKA Soboth 80.15 329 *i* P **P** **07 56 50.4 +0.2**
comp=Z,2.5nm,0.8s,SNR=5.9
LESA Schwarzleotal 80.35 331 *e*P **P** **07 56 51.6 +0.3**
comp=Z,2.3nm,0.7s
KBA Koelnbreinsper 80.41 330 *e*P **P** **07 56 52.2 +0.4**
comp=Z,3.0nm,0.7s
KBA Koelnbreinsper 80.41 330 P **P** **07 56 52.7 +0.9**
MYKA Terra Mystica 80.69 330 *e*P **P** **07 56 52.7 -0.4**
comp=Z,1.1nm,0.5s
WATA Walderalm 80.80 332 *e*P **P** **07 56 53.9 +0.1**
comp=Z,3.4nm,0.7s
WTTA Wattenberg 80.84 332 *e*P **P** **07 56 54.3 +0.2**
comp=Z,3.4nm,0.8s
MOTA Moosalm 80.95 332 *e*P **P** **07 56 54.7 +0.1**
comp=Z,3.4nm,0.8s
BFO Black Forest 80.99 334 *e*P **P** **07 56 54.6 -0.1**
comp=Z,36nm,2.2s,baz=30,slow=5.5
SQTA Sankt Quirin 81.02 332 *e*P **P** **07 56 55.1 +0.2**
comp=Z,2.7nm,0.7s
FETA Feichten 81.36 332 *e*P **P** **07 56 58.5 +1.6**
comp=Z,1.4nm,0.7s
MMAI Mount Meron Ar 81.50 308 P **P** **07 56 59.2 +1.5**
comp=Z,2.4nm,0.6s,baz=76,slow=14,SNR=5.4
comp=Z,2.4nm,0.6s
TXAR Lajitas Array 81.67 57 P **P** **07 56 59.9 +1.2**
comp=Z,0.4nm,0.5s,baz=288,slow=3.9,SNR=17
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 81.67 57 P **P** **07 57 00.0 +1.3**
TXAR Lajitas Array 81.67 57 P **P** **07 56 60.0 +1.3**
HRFI Mount Harif 83.93 307 P **P** **07 57 10.9 +0.7**
H03N2 Juan Fernandez 142.31 89 T T 10 43 42.9
baz=304,slow=77,SNR=5.3
H03N3 Juan Fernandez 142.33 89 T T 10 43 46.9
baz=304,slow=77,SNR=4.9
H03N1 Juan Fernandez 142.33 89 T T 10 43 44.8
baz=304,slow=77,SNR=5.1
NVL N'lazarevskaya 146.17 204 *e*PKHKP PKPpre 08 04 07.7
NVL pmax pmax
comp=Z,6.0nm,0.8s
TROLL Troll, Antarti 147.96 199⇑ PKPdf **PKPbc** **08 04 24.2 +0.6**
comp=Z,38nm,0.4s
VNA2 Neumayer--Watz 150.93 196⇓ PKPdf **PKiKP** **08 04 31.6 +0.2**
comp=Z,2.1nm,0.7s,baz=113,slow=1.7

IDC ***19*** *08:06:00.5±2.1,26.°10N×143.°07E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=83.5km s-min=18.3km az=70.0*
JMA ***19*** *08:06:03.4±0.2,26.°1N±0.°5×143.°0E±0.°7,h16km±2km, MV3.5/17,NEAR CHICHIJIMA ISLAND*
ISC 19 08:06:02.6±1.3,26°29N±0.°09×143°19E±0.°09,h10km,n15,
σ2s17/15,mb3.6/4,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**0.97**	**291**	*e*P	**Pg**		**08 06 20.7**	**-0.6**
JHH2				*e*S	**Sg**		**08 06 33.0**	**-1.1**
JCJ	**Chichijima**	**1.21**	**312**	Pn	**Pb**		**08 06 25.2**	**-0.4**
	29nm,0.3s,baz=253,slow=22,SNR=27							
JCJ				Sn	**Sg**		**08 06 44.0**	**+2.4**
	90nm,0.3s,baz=101,slow=23,SNR=27							
CBIJ	**Chichi jima**	**1.21**	**312**	*e*P	**Pb**		**08 06 26.2**	**+0.6**
CBIJ				S	**Sb**		**08 06 41.9**	**+0.6**
JHO	**Hitachi**	**10.53**	**348**	*e*S	**Sn**		**08 10 28.8**	**-2.9**
ONAJ	**Iwakimizuishiy**	**10.97**	**350**	*e*S	**Sn**		**08 10 39.3**	**-3.2**
JFFD	**Fukushimafurud**	**11.00**	**349**	*e*S	**Sn**		**08 10 39.8**	**-3.3**
JMM	**Marumori**	**11.72**	**351**	*e*P	**Pn**		**08 08 52.7**	**+2.9**
JMM				*e*S	**Sn**		**08 10 59.3**	**-1.5**
JIKH	**Ishinomakikobu**	**12.08**	**353**	*e*S	**Sn**		**08 11 07.2**	**-2.3**
H11N2	**WAKE ISLAND Hy**	**22.75**	**102**	T	T		08 34 52.8	
	baz=290,slow=75,SNR=4.6							
H11N1	**WAKE ISLAND Hy**	**22.75**	**102**	T	T		08 34 57.0	
	baz=290,slow=75,SNR=4.3							
H11N3	**WAKE ISLAND Hy**	**22.77**	**102**	T	T		08 34 59.2	
	baz=290,slow=75,SNR=5.1							
WRA	**Warramunga Arr**	**46.75**	**191**	P	P		08 14 29.1	-3.1
	1.0nm,0.6s,baz=11,slow=8.5,SNR=12							
	1.0nm,0.6s							
ASAR	**Alice Springs**	**50.47**	**191**	P	**P**		**08 14 59.7**	**-1.1**
	0.2nm,0.7s,baz=10,slow=6.3,SNR=1.8							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**54.25**	**315**	P	**P**		**08 15 29.9**	**+1.4**
	0.2nm,0.5s,baz=95,slow=8.4,SNR=4.1							
	0.2nm,0.5s							
FINES	**FINESS Array B**	**79.06**	**334**	P	**P**		**08 18 06.6**	**-0.2**
	0.4nm,0.4s,baz=76,slow=4.4,SNR=9.3							
	0.4nm,0.4s							

*TAP **19** 08:26:57.8,24°.80N×122°.06E,h95km,ML3.7,B*
*JMA **19** 08:26:57.5±0.3,25°.N±1°.×122°.1E±0°.6,h96km±2km, MV2.3/16,TAIWAN REGION*
ISC 19 08:26:57.1±1.3,**24°.82N**±0°.03×**122°.07E**±0°.02,**h101**km±5km, **n130,**σ0**884**/232,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.12**	**282**	P	**Pn**	**08 27 11.3**	**+0.2**
EGS				*e*S	**Sn**	**08 27 20.0**	**-1.7**
TWB1	**Santiao Chiao**	**0.20**	**340**	*i* P	**Pn**	**08 27 11.6**	**+0.2**
TWB1				*i* S	**Sn**	**08 27 21.4**	**-0.6**
NTC	**Toucheng**	**0.22**	**280**	*i* S	**Sn**	**08 27 22.0**	**-0.2**
TIPB	**Shuangxi**	**0.27**	**305**	*i* P	**Pn**	**08 27 11.8**	**+0.1**
TIPB				*i* S	**Sn**	**08 27 21.7**	**-0.9**
TWC	**Suao**	**0.29**	**223**	*i* P	**Pn**	**08 27 11.8**	**+0.1**
TWC				S	**Sn**	**08 27 20.9**	**-1.8**
ILA	**Ilan**	**0.29**	**260**	P	**Pn**	**08 27 12.1**	**+0.4**
ILA				S	**Sn**	**08 27 22.7**	**0.0**
ESAO	**Su ao**	**0.32**	**220**	P	**Pn**	**08 27 12.1**	**+0.3**
ESAO				S	**Sn**	**08 27 22.5**	**-0.4**
SXI1	**Grass Mountain**	**0.32**	**328**	*i* P	**Pn**	**08 27 12.0**	**0.0**
SXI1				S	**Sn**	**08 27 22.3**	**-0.8**
NWF	**Wu-fen Shan**	**0.36**	**314**	*i* P	**Pn**	**08 27 12.4**	**+0.2**
NWF				S	**Sn**	**08 27 22.8**	**-0.8**
WFSB	**Wu-fen Shan**	**0.36**	**314**	P	**Pn**	**08 27 12.3**	**+0.3**
WFSB				S	**Sn**	**08 27 22.7**	**-0.6**
NDS	**Dongshan**	**0.37**	**240**	P	**Pn**	**08 27 12.7**	**+0.5**
NDS				S	**Sn**	**08 27 23.1**	**-0.3**
TWE	**Neicheng**	**0.38**	**255**	P	**Pn**	**08 27 12.5**	**+0.3**
TWE				S	**Sn**	**08 27 23.2**	**-0.3**
TNOU	**National Taiwa**	**0.42**	**321**	*i* P	**Pn**	**08 27 12.6**	**+0.1**
TNOU				*i* S	**Sn**	**08 27 23.3**	**-0.7**
EOS2	**EOS2**	**0.43**	**159**	*e*P	**Pn**	**08 27 13.1**	**+0.8**
EOS2				*e*S	**Sn**	**08 27 25.1**	**+1.4**
FUSB	**Fushanzhiwuyua**	**0.44**	**262**	*i* P	**Pn**	**08 27 12.8**	**+0.2**
FUSB				S	**Sn**	**08 27 24.3**	**0.0**
EWUT	**Wuta**	**0.45**	**215**	*i* P	**Pn**	**08 27 13.1**	**+0.4**
EWUT				S	**Sn**	**08 27 24.7**	**+0.4**
TWA	**Mucha**	**0.47**	**290**	*i* P	**Pn**	**08 27 12.7**	**0.0**
TWA				*i* S	**Sn**	**08 27 23.6**	**-0.9**
ENA	**Nanau**	**0.49**	**217**	*e*P	**Pn**	**08 27 11.8**	**-1.1**
ENA				S	**Sn**	**08 27 23.5**	**-0.9**
NHY	**Taipei**	**0.50**	**296**	P	**Pn**	**08 27 13.2**	**+0.3**
NHY				S	**Sn**	**08 27 24.6**	**-0.3**
NHDH	**Xindian Distri**	**0.51**	**286**	*i* P	**Pn**	**08 27 13.2**	**+0.2**
NHDH				S	**Sn**	**08 27 24.2**	**-0.8**
NWLT	**Wulai**	**0.51**	**266**	P	**Pn**	**08 27 13.2**	**+0.1**
NWLT				S	**Sn**	**08 27 24.3**	**-0.8**
NDT	**Datong Townshi**	**0.55**	**247**	*i* P	**Pn**	**08 27 14.2**	**+0.8**
NDT				S	**Sn**	**08 27 25.7**	**+0.2**
YM01	**YM01**	**0.56**	**306**	*i* P	**Pn**	**08 27 13.5**	**+0.1**
YM01				S	**Sn**	**08 27 24.8**	**-0.9**
LATG	**Datong**	**0.57**	**240**	*i* P	**Pn**	**08 27 14.4**	**+0.8**
LATG				S	**Sn**	**08 27 27.0**	**+1.0**
YM08	**YM08**	**0.57**	**311**	P	**Pn**	**08 27 13.4**	**-0.1**
YM08				S	**Sn**	**08 27 24.5**	**-1.3**
EAHA	**Aohua**	**0.57**	**211**	P	**Pn**	**08 27 13.5**	**0.0**
EAHA				S	**Sn**	**08 27 26.1**	**+0.3**
EOS3	**EOS3**	**0.58**	**157**	*e*P	**Pn**	**08 27 14.4**	**+1.0**
EOS3				*e*S	**Sn**	**08 27 27.2**	**+1.6**
ZUZH	**Zhuzihu**	**0.58**	**306**	P	**Pn**	**08 27 13.7**	**+0.1**
ZUZH				S	**Sn**	**08 27 24.9**	**-1.2**
TWY	**Chenhua**	**0.62**	**317**	*i* P	**Pn**	**08 27 14.3**	**+0.4**
TWY				S	**Sn**	**08 27 26.2**	**-0.3**
YHNB	**Yeheng**	**0.65**	**257**	*i* P	**Pn**	**08 27 14.5**	**+0.3**
YHNB				S	**Sn**	**08 27 26.9**	**-0.2**
TWS1	**Kuangyinshan**	**0.65**	**296**	P	**Pn**	**08 27 14.8**	**+0.7**
TWS1				S	**Sn**	**08 27 26.9**	**-0.1**
NTST	**Danshui**	**0.66**	**302**	P	**Pn**	**08 27 14.8**	**+0.6**
NTST				S	**Sn**	**08 27 26.8**	**-0.2**
NSK	**Sanguang**	**0.66**	**258**	*i* P	**Pn**	**08 27 14.5**	**+0.2**
NSK				S	**Sn**	**08 27 26.9**	**-0.3**
EOS4	**EOS4**	**0.73**	**162**	*e*P	**Pn**	**08 27 14.7**	**+0.3**
EOS4				*e*S	**Sn**	**08 27 27.3**	**-0.2**
NNSB	**Datong**	**0.73**	**238**	*i* P	**Pn**	**08 27 15.7**	**+0.6**
NNSB				S	**Sn**	**08 27 28.7**	**+0.2**
NNS	**Nan Shan**	**0.73**	**239**	P	**Pn**	**08 27 15.8**	**+0.8**
ETL	**Fush Village**	**0.77**	**212**	P	**Pn**	**08 27 15.1**	**-0.2**
ETL				*e*S	**Sn**	**08 27 29.1**	**+0.1**
NACB	**Ninganchiao**	**0.77**	**214**	*i* P	**Pn**	**08 27 15.0**	**-0.3**
NACB				*i* S	**Sn**	**08 27 28.1**	**-0.8**
PCYT	**Pengchaiyu**	**0.81**	**0**	*i* P	**Pn**	**08 27 16.2**	**+0.6**
PCYT				S	**Sn**	**08 27 29.9**	**+0.4**
ETLH	**Xiulin Townshi**	**0.81**	**221**	*i* P	**Pn**	**08 27 15.7**	**0.0**
ETLH				S	**Sn**	**08 27 29.1**	**-0.6**
KSHI	**Guanxi Townshi**	**0.81**	**267**	*i* P	**Pn**	**08 27 16.2**	**+0.6**
KSHI				S	**Sn**	**08 27 30.1**	**+0.6**
NCUH	**Zhongli**	**0.81**	**281**	*i* P	**Pn**	**08 27 16.2**	**+0.6**
NCUH				S	**Sn**	**08 27 30.2**	**+0.5**
TWD	**Chiawan**	**0.85**	**210**	*i* P	**Pn**	**08 27 15.8**	**-0.2**
TWD				S	**Sn**	**08 27 29.3**	**-0.9**
JYNG	**Yonagunijimaku**	**0.88**	**114**	P	**Pn**	**08 27 16.7**	**+0.4**
JYNG				*e*S	**Sn**	**08 27 31.1**	**+0.4**
NFF	**Wufeng Townshi**	**0.88**	**258**	*i* P	**Pn**	**08 27 16.6**	**+0.2**
NFF				S	**Sn**	**08 27 30.5**	**-0.5**
YOJ	**Yonaguni jima**	**0.93**	**112**	*i* P	**Pn**	**08 27 17.2**	**+0.4**
YOJ				S	**Sn**	**08 27 31.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.93**	**112**	*e*P	**Pn**	**08 27 17.0**	**+0.2**
YOJ				*e*S	**Sn**	**08 27 31.7**	**0.0**
HWA	**Hwalien**	**0.94**	**207**	P	**Pn**	**08 27 17.1**	**+0.2**
HWA				S	**Sn**	**08 27 32.0**	**+0.2**
LIOB	**Emei**	**0.97**	**260**	P	**Pn**	**08 27 17.6**	**+0.4**
LIOB				S	**Sn**	**08 27 32.8**	**+0.3**
SBCB	**Hsinchu**	**0.98**	**269**	*i* P	**Pn**	**08 27 18.0**	**+0.6**
SBCB				S	**Sn**	**08 27 33.3**	**+0.6**
NSTT	**Nanjuang**	**0.99**	**259**	*i* P	**Pn**	**08 27 17.7**	**+0.3**
NSTT				*i* S	**Sn**	**08 27 32.6**	**-0.2**
TWT	**Tachien**	**0.99**	**235**	P	**Pn**	**08 27 18.8**	**+1.2**
TWT				S	**Sn**	**08 27 33.9**	**+0.8**
WHF	**Hehuan Shan**	**0.99**	**228**	P	**Pn**	**08 27 18.5**	**+0.5**
WHF				S	**Sn**	**08 27 33.7**	**+0.1**
LXIB	**Xiulin Townshi**	**0.99**	**217**	*i* P	**Pn**	**08 27 17.2**	**-0.4**
LXIB				S	**Sn**	**08 27 33.0**	**-0.1**
HSN	**Hsinchu**	**1.00**	**269**	*i* P	**Pn**	**08 27 17.7**	**+0.2**
HSN				*i* S	**Sn**	**08 27 32.6**	**-0.3**
ETM	**Tongmen**	**1.00**	**212**	*i* P	**Pn**	**08 27 17.1**	**-0.4**
ETM				*i* S	**Sn**	**08 27 31.5**	**-1.5**
TDCB	**Techi**	**1.00**	**236**	*i* P	**Pn**	**08 27 18.6**	**+0.9**
TDCB				S	**Sn**	**08 27 33.5**	**+0.3**
TEYL	**Yanliau Villag**	**1.04**	**204**	P	**Pn**	**08 27 18.0**	**0.0**
TEYL				S	**Sn**	**08 27 33.6**	**-0.1**
SHUL	**Shoufeng**	**1.12**	**204**	*i* P	**Pn**	**08 27 19.1**	**+0.1**
SHUL				S	**Sn**	**08 27 35.5**	**+0.1**
WHP	**Taichung City**	**1.15**	**242**	*i* P	**Pn**	**08 27 20.2**	**+0.9**
WHP				*i* S	**Sn**	**08 27 36.3**	**+0.1**
OWD	**Renai**	**1.18**	**224**	P	**Pn**	**08 27 20.1**	**+0.4**
OWD				S	**Sn**	**08 27 36.8**	**-0.1**
NMLH	**Miaoli**	**1.19**	**257**	S	**Sn**	**08 27 37.0**	**+0.2**
WUSB	**Renai**	**1.19**	**227**	P	**Pn**	**08 27 20.7**	**+0.8**
WUSB				S	**Sn**	**08 27 37.5**	**+0.4**
TEGC	**Jichi Village**	**1.20**	**204**	*e*P	**Pn**	**08 27 18.7**	**-1.1**
TEGC				S	**Sn**	**08 27 37.7**	**+0.7**
WARBT	**Fenglin Townsh**	**1.26**	**210**	*i* P	**Pn**	**08 27 19.5**	**-1.0**
WARBT				S	**Sn**	**08 27 36.1**	**-2.2**
TWQ1	**Liyutan**	**1.27**	**249**	*i* P	**Pn**	**08 27 21.1**	**+0.5**
TWQ1				S	**Sn**	**08 27 38.0**	**-0.4**
WCS	**Beigang Elemen**	**1.30**	**234**	*i* P	**Pn**	**08 27 21.7**	**+0.8**
WCS				S	**Sn**	**08 27 39.4**	**+0.4**
VWDT	**VWDT**	**1.35**	**219**	P	**Pn**	**08 27 22.3**	**+0.7**
VWDT				S	**Sn**	**08 27 40.3**	**+0.2**
WDJ	**Dajia District**	**1.38**	**250**	*i* P	**Pn**	**08 27 22.6**	**+0.7**
WDJ				S	**Sn**	**08 27 41.2**	**+0.5**
SMLT	**Sun Moon Lake**	**1.41**	**229**	P	**Pn**	**08 27 23.4**	**+0.9**
SMLT				S	**Sn**	**08 27 43.0**	**+1.4**
TYC	**Yuchr**	**1.43**	**231**	*i* P	**Pn**	**08 27 23.3**	**+0.8**
TYC				S	**Sn**	**08 27 42.4**	**+0.7**
TCU	**Taichung**	**1.43**	**242**	P	**Pn**	**08 27 23.1**	**+0.6**
TCU				S	**Sn**	**08 27 42.2**	**+0.4**
SSLB	**Suanglung**	**1.44**	**225**	P	**Pn**	**08 27 23.7**	**+1.0**
SSLB				S	**Sn**	**08 27 43.0**	**+0.8**
HGSD	**Ruisui**	**1.45**	**204**	P	**Pn**	**08 27 22.9**	**+0.1**
HGSD				S	**Sn**	**08 27 42.5**	**+0.3**
EHY	**Hungye**	**1.47**	**208**	*e*P	**Pn**	**08 27 23.7**	**+0.6**
EHYH	**Wanrong**	**1.47**	**207**	P	**Pn**	**08 27 22.7**	**-0.4**
EHYH				*e*S	**Sn**	**08 27 41.3**	**-1.5**
WCHH	**Zhanghua**	**1.56**	**242**	*i* P	**Pn**	**08 27 24.4**	**+0.4**
WCHH				S	**Sn**	**08 27 44.0**	**-0.6**
WNT	**Mingjian**	**1.57**	**234**	P	**Pn**	**08 27 25.1**	**+0.8**
WNT				*e*S	**Sn**	**08 27 45.4**	**+0.5**
WCH1	**Changhua City**	**1.57**	**242**	P	**Pn**	**08 27 25.1**	**+0.9**
WCH1				*e*S	**Sn**	**08 27 45.5**	**+0.6**
WHYT	**Xinyi Township**	**1.57**	**225**	P	**Pn**	**08 27 25.4**	**+1.1**
WHYT				S	**Sn**	**08 27 46.3**	**+1.3**
WJS	**Zhushan**	**1.57**	**231**	*i* P	**Pn**	**08 27 25.0**	**+0.7**
WJS				S	**Sn**	**08 27 45.6**	**+0.6**
YULB	**Yu-li**	**1.58**	**206**	*e*P	**Pn**	**08 27 23.7**	**-0.7**
YULB				S	**Sn**	**08 27 43.4**	**-1.8**
IRIF	**Iriomote-Funau**	**1.59**	**107**	*e*S	**Sn**	**08 27 44.5**	**-0.8**
ECBN	**Changbin**	**1.60**	**201**	P	**Pn**	**08 27 24.5**	**-0.1**
ECBN				S	**Sn**	**08 27 44.4**	**-1.1**
CHKH	**Chenggong**	**1.73**	**201**	P	**Pn**	**08 27 26.1**	**-0.2**
CHKH				*e*S	**Sn**	**08 27 47.1**	**-1.4**
ALS	**Alishan**	**1.74**	**222**	P	**Pn**	**08 27 27.7**	**+1.1**
ALS				*i* S	**Sn**	**08 27 50.5**	**+1.4**
CHN5	**Tsauling**	**1.76**	**226**	P	**Pn**	**08 27 27.6**	**+0.9**
CHN5				S	**Sn**	**08 27 50.3**	**+1.1**
HATJ	**Hateruma jima**	**1.76**	**115**	*e*S	**Sn**	**08 27 48.9**	**-0.2**
FULB	**Fuli**	**1.76**	**204**	*e*S	**Sn**	**08 27 49.4**	**+0.3**
WGK	**Gukeng**	**1.78**	**231**	P	**Pn**	**08 27 27.9**	**+1.1**
WGK				S	**Sn**	**08 27 51.0**	**+1.5**
WRL	**Guolierlin Hig**	**1.79**	**240**	P	**Pn**	**08 27 27.3**	**+0.3**
WRL				S	**Sn**	**08 27 49.0**	**-0.8**
WDLH	**Douliu**	**1.79**	**231**	P	**Pn**	**08 27 27.8**	**+0.8**
RLNB	**Erlin**	**1.81**	**240**	P	**Pn**	**08 27 27.7**	**+0.5**
RLNB				S	**Sn**	**08 27 50.4**	**+0.2**
CHKT	**Chengkung**	**1.83**	**201**	*e*S	**Sn**	**08 27 49.0**	**-1.6**
JKRS	**Kuro-shima**	**1.86**	**108**	*e*S	**Sn**	**08 27 51.5**	**+0.1**
ECS	**Chishang**	**1.88**	**204**	*e*P	**Pn**	**08 27 27.6**	**-0.7**
ECS				S	**Sn**	**08 27 51.0**	**-0.9**
ELDTW	**Lidau**	**1.88**	**211**	P	**Pn**	**08 27 29.0**	**+0.6**
ELDTW				*e*S	**Sn**	**08 27 51.6**	**-0.5**
WCKO	**Fanlu**	**1.92**	**224**	*e*S	**Sn**	**08 27 54.1**	**+1.5**
JIJ	**Ishigaki jima**	**1.94**	**103**	*e*P	**Pn**	**08 27 29.5**	**+0.6**
JIJ				*e*S	**Sn**	**08 27 52.8**	**-0.5**
CHY	**Chiayi**	**1.99**	**229**	*e*P	**Pn**	**08 27 30.2**	**+0.6**
TPUB	**Ta-pu**	**2.00**	**221**	P	**Pn**	**08 27 30.8**	**+1.0**
TPUB				*e*S	**Sn**	**08 27 55.2**	**+0.5**
STYH	**Taoyuan**	**2.02**	**216**	S	**Sn**	**08 27 56.4**	**+1.3**
WTP	**Ta-pu**	**2.05**	**221**	*e*P	**Pn**	**08 27 31.4**	**+1.0**
WSF	**Szhu**	**2.05**	**235**	*e*S	**Sn**	**08 27 56.5**	**+0.7**
JISG	**Ishigakijimahi**	**2.06**	**96**	*e*S	**Sn**	**08 27 55.9**	**+0.1**
TWK	**Hsinying**	**2.11**	**223**	*e*P	**Pn**	**08 27 31.9**	**+0.7**
TWK				*e*S	**Sn**	**08 27 58.2**	**+0.9**
WSL	**Shuilin Townsh**	**2.12**	**233**	P	**Pn**	**08 27 31.6**	**+0.4**
WSL				*e*S	**Sn**	**08 27 57.2**	**-0.1**
CHN1	**Nanshi**	**2.15**	**221**	P	**Pn**	**08 27 32.4**	**+0.7**
CHN1				S	**Sn**	**08 27 58.9**	**+0.8**
TWG	**Pinlang**	**2.19**	**205**	*e*P	**Pn**	**08 27 31.6**	**-0.5**
TWG				*e*S	**Sn**	**08 27 56.7**	**-2.2**
TWGBT	**Beinan**	**2.19**	**205**	P	**Pn**	**08 27 31.6**	**-0.6**
TWGBT				S	**Sn**	**08 27 57.7**	**-1.3**
SGST	**Jiashian**	**2.20**	**218**	*e*S	**Sn**	**08 27 59.6**	**+0.4**
CHN8	**Yiju**	**2.24**	**230**	S	**Sn**	**08 28 01.1**	**+0.9**
SCLT	**Jiali**	**2.37**	**227**	*e*S	**Sn**	**08 28 04.0**	**+0.9**
VWUC	**VWUC**	**2.38**	**275**	*e*P	**Pn**	**08 27 34.5**	**-0.2**
VWUC				*e*S	**Sn**	**08 28 01.7**	**-1.7**
JTJ	**Tarama**	**2.40**	**94**	*e*S	**Sn**	**08 28 04.4**	**+0.5**
ECL	**Taimali**	**2.44**	**205**	*e*S	**Sn**	**08 28 02.7**	**-2.0**
SSD	**Sandimen**	**2.45**	**213**	*e*P	**Pn**	**08 27 37.3**	**+1.7**
SSD				*e*S	**Sn**	**08 28 06.4**	**+1.4**
TSCK	**Chigu Township**	**2.46**	**228**	*e*S	**Sn**	**08 28 05.2**	**0.0**
MASBT	**Mashibuluo**	**2.56**	**211**	P	**Pn**	**08 27 38.2**	**+1.2**
MASBT				S	**Sn**	**08 28 08.1**	**+0.4**
SNJT	**Kaohsiung City**	**2.60**	**218**	*e*S	**Sn**	**08 28 03.8**	**-0.2**
PNG	**Penghu**	**2.61**	**242**	*e*S	**Sn**	**08 28 06.8**	**-2.1**
PHUB	**P'eng-hu**	**2.62**	**241**	P	**Pn**	**08 27 37.3**	**-0.5**
PHUB				S	**Sn**	**08 28 07.2**	**-1.9**
PTMZ	**Houxiangcun**	**2.68**	**275**	*e*P	**Pn**	**08 27 38.5**	**-0.1**
WDGT	**Dungji**	**2.69**	**235**	*e*P	**Pn**	**08 27 38.4**	**-0.3**
WDGT				*e*S	**Sn**	**08 28 09.9**	**-0.9**
WSSB	**Gushan**	**2.73**	**218**	*e*P	**Pn**	**08 27 39.1**	**-0.1**
WSSB				*e*S	**Sn**	**08 28 11.7**	**0.0**
SCZT	**Fangliau**	**2.77**	**209**	*e*S	**Sn**	**08 28 13.9**	**+1.2**
LYUB	**Lan-yu**	**2.84**	**189**	*e*S	**Sn**	**08 28 10.1**	**-4.2**
JIRJ	**Irabujima**	**2.84**	**89**	*e*S	**Sn**	**08 28 14.4**	**+0.1**
VCHM	**Qimei**	**2.90**	**237**	*e*P	**Pn**	**08 27 41.1**	**-0.3**
VCHM				S	**Sn**	**08 28 14.1**	**-1.5**
SMST	**Manzhou Townsh**	**3.00**	**202**	*e*P	**Pn**	**08 27 44.2**	**+1.3**
SMST				*e*S	**Sn**	**08 28 17.1**	**-1.2**

*TEH **19** 08:28:56.0,38°.33N×46°.41E,h2km±472km,ML2.8, Presumed earthquake*
*AZER **19** 08:28:56.2,38°.43N×46°.38E,h2km,ml2.8*
ISC 19 08:28:56.9±1.1,**38°.26N**±0°.04×**46°.29E**±0°.03,**h11**km±9km, **n25,**σ1**909/42,Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITBZ	**Tabriz**	**0.12**	**255**	Pg	**Pg**	**08 29 00.8**	**+0.8**
ISHB	**Shabestar**	**0.53**	**272**	Pg	**Pn**	**08 29 09.8**	**-0.8**
IHRS	**Heris**	**0.59**	**84**	Pg	**Pg**	**08 29 07.8**	**-0.7**
IAZR	**Azarshahr**	**0.64**	**203**	Pg	**Pn**	**08 29 12.3**	**+0.2**
IMRD	**Marand**	**0.65**	**314**	Pg	**Pb**	**08 29 10.1**	**-0.2**
ORD	**Ordubad**	**0.70**	**341**	P	**Pb**	**08 29 10.6**	**-0.6**
ORD				S	**Sb**	**08 29 28.5**	**-0.5**
NAX	**Nakhchivan**	**1.10**	**326**	P	**Pn**	**08 29 18.5**	**+0.1**
NAX				S	**Sn**	**08 29 34.4**	**+0.8**
ISRB	**Sarab**	**1.17**	**112**	Pg	**Pb**	**08 29 18.6**	**-0.6**
IHSH	**Hashtrud**	**1.23**	**141**	Pg	**Pn**	**08 29 20.6**	**+0.3**
SBZ	**Shahbuz**	**1.27**	**333**	P	**Pg**	**08 29 21.0**	**-0.3**
SBZ				S	**Sn**	**08 29 38.1**	**+0.3**
GRMI	**Germi**	**1.37**	**66**	Pg	**Pn**	**08 29 21.2**	**-0.8**
QRD	**Qoradiz**	**1.44**	**34**	P	**Pn**	**08 29 22.8**	**-0.1**
QRD				S	**Sn**	**08 29 42.3**	**+0.4**
LRK	**Lerik**	**1.65**	**76**	P	**Pb**	**08 29 26.9**	**-0.5**
LRK				S	**Sg**	**08 29 49.5**	**-0.5**
YRD	**Yardimli**	**1.66**	**66**	P	**Pn**	**08 29 26.6**	**+0.5**
YRD				S	**Sb**	**08 29 49.0**	**+0.4**
HYR	**Heyderabad**	**1.84**	**323**	P	**Pg**	**08 29 31.5**	**-0.6**
HYR				S	**Sg**	**08 29 56.9**	**+0.9**
GLBA	**Clilabad**	**1.91**	**59**	P	**Pb**	**08 29 32.0**	**+0.3**
GLBA				S	**Sg**	**08 29 58.2**	**-0.2**
AGDM	**Agdam**	**1.95**	**19**	P	**Pn**	**08 29 30.9**	**+0.9**
AGDM				S	**Sb**	**08 29 56.7**	**-0.1**
ASTR	**Astara**	**1.98**	**81**	P	**Pb**	**08 29 33.4**	**+0.4**
ASTR				S	**Sg**	**08 30 00.4**	**-0.2**
LKRN	**Lenkeran, Azer**	**2.00**	**76**	P	**Pg**	**08 29 34.1**	**-1.1**
LKRN				S	**Sg**	**08 30 00.9**	**-0.3**
BRDA	**Brd**	**2.11**	**19**	P	**Pb**	**08 29 34.0**	**-1.1**
BRDA				S	**Sb**	**08 30 01.1**	**-0.3**
ZRD	**Zardab**	**2.28**	**28**	P	**Pb**	**08 29 37.1**	**-1.0**
ZRD				S	**Sb**	**08 30 06.5**	**+0.2**
GANJ	**Ganja**	**2.38**	**1**	P	**Pb**	**08 29 38.4**	**-1.3**
GANJ				S	**Sb**	**08 30 09.7**	**+0.5**
GDB	**GEDABAY**	**2.49**	**351**	P	**Pb**	**08 29 40.4**	**-1.4**
GDB				S	**Sb**	**08 30 13.6**	**+1.1**
QZX	**Qazax, Azerbai**	**2.88**	**346**	P	**Pb**	**08 29 45.7**	**-2.6**
QZX				S	**Sb**	**08 30 22.0**	**-1.5**
SEKA	**Sheki**	**3.02**	**13**	P	**Pn**	**08 29 47.6**	**+2.8**
SEKA				S	**Sn**	**08 30 24.4**	**+3.4**

*IDC **19** 08:38:11.6±0.7,15°.13S×173°.61W,h0km,mb4.1/10, mbtmp4.1/11,ML5.3/1,MS3.4/25,Error ellipse: s-maj=29.0km s-min=17.0km az=130.0*
*NEIC **19** 08:38:13.3±2.0,15°.11S±0°.09×173°.5W±0°.1,h10km±4km, mb4.3/17,Error ellipse: s-maj=17.8km s-min=10.1km az=127.0*
ISC 19 08:38:15.7±0.5,**15°.10S**±0°.09×**173°.42W**±0°.08,**h30**km,**n60,** σ1**935/35,mb4.3/19,MS3.5/21,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.98**	**54**	Pn	**Pn**	**08 38 47.6**	**+0.4**
	896nm,0.3s,baz=187,slow=2.1,SNR=558						
AFI				Sn	**Sn**	**08 39 07.7**	**-3.5**
	2μm,0.3s,baz=53,slow=23,SNR=41						
AFI				LR	LR	08 39 31.2	
	comp=Z,417nm,21.0s,baz=178,slow=37 2μm,0.3s						
NIUE	**Niue**	**5.17**	**140**		**Pn**	**08 39 31.2**	**0.0**
MSVF	**Nonsavu**	**8.60**	**251**	Pn	**Pn**	**08 40 19.2**	**+1.0**
	0.2nm,0.3s,baz=100,slow=13,SNR=8.8						
MSVF				LR	LR	08 43 18.8	
	comp=Z,261nm,20.4s,baz=89,slow=36						
RAR	**Rarotonga**	**14.32**	**117**	LR	LR	08 45 20.9	
	comp=Z,31nm,22.0s,baz=220,slow=30						
RAO	**Raoul Island**	**14.69**	**196**	LR	LR	08 45 59.4	
	comp=Z,55nm,18.5s,baz=120,slow=32						
MARNC	**Mare, Loyalty**	**18.72**	**247**	P	**Pn**	**08 42 31.9**	**-0.6**
OUENC	**Ouen Island, N**	**20.05**	**246**	P	**Pn**	**08 42 47.0**	**-1.5**
OUENC				IAmb	IAmb	08 43 12.1	
	comp=Z,22nm,1.1s						
DZM	**Mont Dzumac**	**20.30**	**247**	LR	LR	08 49 33.5	
	comp=Z,88nm,19.4s,baz=42,slow=34						
URZ	**Urewera**	**24.54**	**198**	LR	LR	08 51 30.8	
	comp=Z,126nm,21.9s,baz=5.5,slow=33						
RPZ	**Rata Peaks**	**31.45**	**202**	LR	LR	08 56 03.4	
	comp=Z,49nm,18.7s,baz=264,slow=34						
EIDS	**Eidsvold**	**34.74**	**247**	P	**P**	**08 45 02.1**	**-1.4**
ARMA	**Armidale**	**35.48**	**238**	P	**P**	**08 45 09.0**	**-1.0**
ARMA				IAmb	IAmb	08 45 14.7	
	comp=Z,6.7nm,1.1s						
CTA	**Charters Tower**	**38.69**	**257**	LR	LR	08 59 28.1	
	comp=Z,68nm,18.1s,baz=237,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.70**	**329**	T	T	09 26 25.7	
	baz=146,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**38.71**	**329**	T	T	09 26 26.8	
	baz=146,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**38.72**	**329**	T	T	09 26 22.6	
	baz=146,slow=76,SNR=10						
CAN	**Canberra**	**39.20**	**232**	P	**P**	**08 45 39.8**	**-1.5**
CAN				IAmb	IAmb	08 45 47.9	
	comp=Z,12nm,1.1s						
H11N3	**WAKE ISLAND Hy**	**39.64**	**330**	T	T	09 27 27.8	
	baz=147,slow=76,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**39.65**	**330**	T	T	09 27 30.5	
	baz=147,slow=76,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**39.66**	**330**	T	T	09 27 19.4	
	baz=147,slow=76,SNR=7.9						
COEN	**Coen**	**41.99**	**266**	P	**P**	**08 46 05.8**	**+1.2**
TOO	**Toolangi**	**42.64**	**230**	P	**P**	**08 46 08.3**	**-1.3**
TOO				IAmb	IAmb	08 46 29.1	
	comp=Z,4.6nm,1.1s						
STKA	**Stephens Creek**	**44.17**	**240**	P	**P**	**08 46 21.2**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=90,slow=6.0,SNR=3.3 comp=Z,2.9nm,0.8s						
WR8	**Warramunga Arr**	**49.74**	**257**	P	**P**	**08 47 04.5**	**-1.2**
WR8				IAmb	IAmb	08 47 05.2	
	comp=Z,2.9nm,0.9s						
WB0	**Warramunga Arr**	**49.85**	**257**	P	**P**	**08 47 04.8**	**-1.8**
WB0				IAmb	IAmb	08 47 23.5	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**49.90**	**257**	P	**P**	**08 47 05.3**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=90,slow=7.4,SNR=28 comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**49.90**	**257**	P	**P**	**08 47 04.9**	**-2.0**
AS31	**Alice Springs**	**50.19**	**252**		**P**	**08 47 07.4**	**-1.8**
AS31				IAmb	IAmb	08 47 08.2	
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**

SJCC	**San Jacinto, C**	**3.66 326**	P	Pn	08 57 28.9	-1.3
SJCC			S	**Sn**	**08 58 10.8**	**-2.7**
SJCC	**San Jacinto, C**	**3.66 326**	*eP*	Pn	08 57 24.4	-5.7
SJCC			*eS*	Sn	08 58 06.8	-6.7

*IDC **19** 08:56:56.8±0.9, 5°.29N×126°.42E, h0km, mb4.0/8, mbtmp4.0/8, MS3.4/6, Error ellipse: s-maj=38.3km s-min=16.3km az=74.0*
*MAN **19** 08:57:00.0, 4°.80N×126°.27E, h76km, MS4.3*
*DJA **19** 08:57:04.8±0.5, 5°.N±4°×12°.6E±°, h121km±11km, M4.5/12, mb4.6/8, mB4.9/6, MLv4.6/12, Mw(mB)4.2/6*
*NEIC **19** 08:57:05.2±0.9, 5°.21N±0°.04×126°.26E±0°.10, h66km±8km, mb4.3/28, Error ellipse: s-maj=14.5km s-min=4.4km az=72.0*

ISC 19 08:57:06.9±0.9, **5°.20N**±0°.04×**126°.13E**±0°.06, **h87**km±9km, **n74**, σ1s**67**/72, **mb4.1**/23, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.47 307**		*i* P		**Pn**	**08 57 30.1**	**-2.0**
GSPH				*i* S		**Sn**	**08 57 49.3**	**-2.0**
SGSI	**Sangihe**	**1.62 202**		P		**Pn**	**08 57 35.0**	**+1.0**
SGSI				S		**Sn**	**08 57 57.4**	**+2.8**
DAV	**Davao City (W)**	**1.94 344**		Pn		Pn	08 57 32.4	-5.8
	58nm,0.3s,baz=96,slow=6.3,SNR=4.4							
DAV				Sn		**Sn**	**08 58 00.8**	**-1.2**
	143nm,0.3s,baz=265,slow=17,SNR=7.7							
DAV	**Davao City (W)**	**1.94 344**				**Pn**	**08 57 35.9**	**-2.3**
DAV	**Davao City (W)**	**1.94 344**		P		**Pn**	**08 57 36.8**	**-1.4**
DMPH	**Davao City--Mi**	**1.97 342**		*eP*		**Pn**	**08 57 37.3**	**-1.3**
DMPH				*i* S		**Sn**	**08 58 06.8**	**+4.1**
KCP	**Kidapawan**	**2.07 330**		*eP*		**Pn**	**08 57 41.1**	**+1.1**
KCP				*i* S		**Sn**	**08 58 08.2**	**+3.0**
CDOP	**Cateel, Davao**	**2.59 7**		*eP*		Pn	08 57 48.6	+1.8
CDOP				*i* S		**Sn**	**08 58 21.1**	**+3.6**
CTBH	**Cotabato--PC H**	**2.74 317**		*i* P		**Pn**	**08 57 48.4**	**-0.5**
BUKP	**Musuan**	**2.86 338**		*i* P		**Pn**	**08 57 51.2**	**+0.6**
BUKP				*i* S		**Sn**	**08 58 20.6**	**-3.6**
BIPH	**Bislig**	**2.97 5**		*eP*		Pn	08 57 55.1	+3.1
BIPH				*eS*		**Sn**	**08 58 29.7**	**+2.9**
MNI	**Manado**	**3.94 199**		P		**Pn**	**08 58 06.3**	**+1.1**
DCPH	**Dipolog City**	**4.34 321**		*i* P		**Pn**	**08 58 12.7**	**+2.1**
DCPH				*i* S		Sn	08 59 11.8	+12
ZCP	**Zamboanga City**	**4.38 293**		*eP*		**Pn**	**08 58 11.4**	**+0.3**
ZCP				*eS*		**Sn**	**08 58 58.1**	**-2.8**
TNTI	**Ternate**	**4.57 164**				**Pn**	**08 58 11.6**	**-2.1**
TNTI	**Ternate**	**4.57 164**		P		**Pn**	**08 58 12.4**	**-1.3**
TBP	**Tagbilaran**	**5.00 333**		*eP*		**Pn**	**08 58 19.4**	**-0.1**
GTOI	**Gorontalo**	**5.50 215**		P		**Pn**	**08 58 25.2**	**-1.1**
	0.4nm1µm104nm,0.9s							
TOLI2	**Tolitoli**	**6.70 233**				**Pn**	**08 58 41.6**	**-1.1**
LUWI	**Luwuk**	**7.05 208**				**Pn**	**08 58 47.7**	**+0.3**
LUWI	**Luwuk**	**7.05 208**		P		**Pn**	**08 58 50.4**	**+3.0**
SANI	**Sanana**	**7.20 181**		P		**Pn**	**08 58 47.0**	**-2.6**
	0.2nm1µm43nm,1.0s							
MYLDM	**Lahad Datu**	**7.59 270**				**Pn**	**08 58 54.7**	**-0.2**
MTN	**Manton Dam**	**18.60 165**		P		**P**	**09 01 16.6**	**-0.9**
GUMO	**Guam**	**20.27 64**		LR		LR	09 08 05.4	
	comp=Z,33nm,20.0s,baz=276,slow=34							
KNRA	**Kununurra**	**20.91 173**				**P**	**09 01 41.8**	**-0.7**
KNRA				IAmb		IAmb	09 01 42.5	
	comp=Z,11nm,0.6s							
MYKOM	**Kota Tinggi**	**22.49 262**				**P**	**09 02 00.7**	**+1.3**
MYKOM				IAmb		IAmb	09 02 02.8	
	comp=Z,27nm,1.4s							
FITZ	**Fitzroy Crossi**	**23.16 181**				**P**	**09 02 04.8**	**-1.2**
COEN	**Coen**	**25.47 139**		P		**P**	**09 02 27.0**	**-0.1**
COEN				IAmb		IAmb	09 02 32.9	
	comp=Z,11nm,0.8s							
WB0	**Warramunga Arr**	**26.11 162**				**P**	**09 02 32.6**	**-0.2**
WRAB	**Tennant Creek**	**26.25 162**		P		**P**	**09 02 33.3**	**-0.9**
WRAB				IAmb		IAmb	09 02 58.0	
	comp=Z,7.0nm,1.1s							
WRA	**Warramunga Arr**	**26.26 162**		P		**P**	**09 02 34.9**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=340,slow=10,SNR=57							
	comp=Z,2.4nm,0.5s							
WRA	**Warramunga Arr**	**26.26 162**		P		**P**	**09 02 32.3**	**-1.9**
WR8	**Warramunga Arr**	**26.32 162**				**P**	**09 02 33.6**	**-1.1**
WR8				IAmb		IAmb	09 02 40.3	
	comp=Z,3.5nm,0.7s							
RPSI	**Rantau Prapat**	**27.25 266**		P		**P**	**09 02 44.1**	**+1.0**
RPSI				IAmb		IAmb	09 02 45.1	
	comp=Z,6.3nm,1.1s							
RABL	**Rabaul**	**27.63 109**		P		**P**	**09 02 45.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**29.63 299**		P		**P**	**09 03 05.2**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=110,slow=8.6,SNR=4.3							
	comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**29.63 299**		P		**P**	**09 03 03.9**	**-0.4**
AS31	**Alice Springs**	**29.68 165**		P		**P**	**09 03 03.8**	**-0.9**
ASAR	**Alice Springs**	**29.68 165**		P		**P**	**09 03 03.5**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=345,slow=7.0,SNR=33							
	comp=Z,1.1nm,0.5s							
ASAR	**Alice Springs**	**29.68 165**		P		**P**	**09 03 02.4**	**-2.3**
CHTO	**Chiang Mai**	**29.77 299**		P		**P**	**09 03 06.0**	**+0.4**
PZH	**PanZhiHua**	**31.48 315**		P		**P**	**09 03 23.8**	**+3.1**
CTA	**Charters Tower**	**31.99 142**		LR		LR	09 17 30.6	
	comp=Z,63nm,18.5s,baz=230,slow=39							
MJAR	**Matsushiro Arr**	**33.11 18**		P		**P**	**09 03 33.9**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=198,slow=7.7,SNR=2.6							
	comp=Z,0.7nm,0.7s							
MJAR	**Matsushiro Arr**	**33.11 18**		P		**P**	**09 03 33.0**	**-1.7**
FORT	**Forrest**	**35.82 177**		P		**P**	**09 03 57.3**	**-0.8**
LZH	**Lanzhou**	**36.94 329**		*eP*		P	09 04 18.4	+11
LZH				pP		pP	09 04 22.8	-4.3
LZH				pmax		pmax		
	comp=Z,17nm,1.5s							
HHC	**Hu-ho-hao-te**	**37.82 342**		*eP*		**P**	**09 04 18.4**	**+3.3**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,49nm,5.0s							
NWAO	**Narrogin (SRO)**	**38.84 192**				**P**	**09 04 22.1**	**-1.6**
EIDS	**Eidsvold**	**38.88 143**		P		**P**	**09 04 22.7**	**-1.3**
EIDS				IAmb		IAmb	09 04 23.8	
	comp=Z,4.2nm,0.8s							
BBOO	**Buckleboo**	**38.96 167**		P		**P**	**09 04 24.1**	**-0.5**
STKA	**Stephens Creek**	**39.71 159**		P		**P**	**09 04 31.6**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=345,slow=10,SNR=4.5							
	comp=Z,3.3nm,0.7s							
GTA2	**Gaotai**	**41.62 329**		*eP*		P	09 04 42.4	-4.3
GTA2				pP		sP	09 05 10.3	-5.6
GTA2				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ARMA	**Armidale**	**43.02 147**		P		**P**	**09 04 57.3**	**-0.8**
ARMA				IAmb		IAmb	09 05 21.3	
	comp=Z,8.2nm,1.1s							
EVN	**Everest**	**43.64 306**				**P**	**09 05 04.6**	**+0.7**
DZM	**Mont Dzumac**	**47.88 126**		LR		LR	09 23 45.8	
	comp=Z,44nm,20.9s,baz=269,slow=34							
TLY	**Talaya**	**49.95 342**		LR		LR	09 27 20.7	
	comp=Z,53nm,18.6s,baz=186,slow=36							
PETK	**Petropavlovsk-**	**54.31 23**		P		**P**	**09 06 23.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=237,slow=8.0,SNR=3.8							
	comp=Z,0.9nm,0.8s							
PETK	**Petropavlovsk-**	**54.31 23**		P		**P**	**09 06 23.5**	**-0.7**
MKAR	**Makanchi Array**	**56.01 325**		P		**P**	**09 06 39.0**	**+2.4**
	comp=Z,1.9nm,0.5s,baz=136,slow=7.0,SNR=1.2							
	comp=Z,1.9nm,0.5s							
MKAR	**Makanchi Array**	**56.01 325**		P		**P**	**09 06 36.4**	**-0.3**
KURK	**Kurchatov**	**60.19 327**		P		**P**	**09 07 06.9**	**+1.3**
GSTR	**Great Sitkin T**	**66.54 35**		P		**P**	**09 07 47.2**	**-0.4**
ATKA	**Atka Island**	**67.64 35**				**P**	**09 07 54.0**	**-0.5**
L14K	**Kuka Creek**	**76.49 28**		P		**P**	**09 08 46.9**	**-0.2**
L14K				IAmb		IAmb	09 09 13.6	
	comp=Z,3.0nm,0.9s							
O14K	**Tigyukauivet M**	**76.69 30**		P		**P**	**09 08 48.5**	**+0.1**
O14K				IAmb		IAmb	09 08 57.3	
	comp=Z,3.3nm,1.1s							
O16K	**Kokwok River B**	**78.35 30**		P		**P**	**09 08 57.3**	**-0.3**
O16K				IAmb		IAmb	09 09 26.2	
	comp=Z,3.2nm,1.1s							
C19K	**Lookout Ridge**	**79.58 21**		P		**P**	**09 09 05.3**	**+1.1**
C19K				IAmb		IAmb	09 09 30.2	
	comp=Z,5.5nm,0.8s							
G19K	**Purcell Mounta**	**79.93 24**		P		**P**	**09 09 06.4**	**+0.3**
G19K				IAmb		IAmb	09 09 30.3	
	comp=Z,3.5nm,1.1s							
KDAK	**Kodiak Island**	**80.98 32**		LR		LR	09 40 09.9	
	comp=Z,21nm,21.0s,baz=236,slow=32							
IMAR	**Indian Mountai**	**81.25 24**		P		**P**	**09 09 13.5**	**+0.3**
ILAR	**Eielson Array**	**84.04 25**		P		**P**	**09 09 26.5**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=262,slow=5.3,SNR=4.9							
	comp=Z,0.5nm,0.8s							
OBN	**Obninsk**	**85.52 325**		LR		LR	09 48 17.6	
	comp=Z,35nm,20.8s,baz=321,slow=36							

*IDC **19** 08:58:00.8±2.3, 18°.80N×67°.69W, h0km, mb3.4/4, mbtmp3.4/4, MS3.5/1, Error ellipse: s-maj=72.9km s-min=34.5km az=176.0*
*RSPR **19** 08:58:02.8, 19°.18N×67°.75W, h46km±12km, MD3.7/22*
*SDD **19** 08:58:03.4±2.4, 18°.99N×67°.67W, h0km±8km, MD3.4, ML3.6, MW3.8, Presumed earthquake*
*OSPL **19** 08:58:03.6±2.3, 19°.01N×67°.66W, h0km±20km, ML3.9, Presumed earthquake*
*NEIC **19** 08:58:04.5±1.7, 18°.96N±0°.08×67°.70W±0°.03, h35km±2km, ML3.8/39, Md3.7/22(RSPR), Error ellipse: s-maj=13.1km s-min=4.6km az=185.0*

ISC 19 08:58:01.7±1.3, **19°.04N**±0°.04×**67°.69W**±0°.02, **h9**km±9km, **n86**, σ1s**35**/109, **mb3.5**/4, **29C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.68 163**				**Pg**	**08 58 14.9**	**+0.1**
IDE	**Isla Desecheo**	**0.68 163**		⇓*eP*		**Pg**	**08 58 14.9**	**+0.1**
AGPR	**Aguadilla, PR**	**0.79 136**				**Pg**	**08 58 16.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.79 136**		⇑*iP*		**Pg**	**08 58 17.0**	**+0.1**
AGPR	**Aguadilla, PR**	**0.79 136**		⇓*eP*		**Pg**	**08 58 16.9**	**0.0**
PCDR	**Punta Cana, DR**	**0.84 232**				**Pb**	**08 58 18.3**	**-0.3**
PCDR					Sn	**Sb**	**08 58 29.0**	**-0.9**
PCDR					IAML		08 58 33.2	
	comp=N,5µm,0.8s							
PCDR	**Punta Cana, DR**	**0.84 232**		⇑*iP*		**Pg**	**08 58 18.1**	**+0.2**
PCDR				⇑*iS*		**Sg**	**08 58 28.9**	**0.0**
PCDR					IAML		08 58 35.8	
	comp=N,2µm,0.6s							
PCDR	**Punta Cana, DR**	**0.84 232**		*i* P		**Pb**	**08 58 18.2**	**-0.3**
PCDR				*eS*		**Sb**	**08 58 29.6**	**-0.2**
PCDR					IAML		08 58 35.2	
	comp=Z,2µm,0.8s							
PCDR	**Punta Cana, DR**	**0.84 232**		⇓*iP*		**Pb**	**08 58 18.4**	**0.0**
PCDR				*eS*		**Sb**	**08 58 29.8**	**-0.1**
PRSN	**Puerto Rico Se**	**0.96 148**				**Pb**	**08 58 19.8**	**-0.8**
PRSN	**Puerto Rico Se**	**0.96 148**				**Sn**	**08 58 33.9**	**-1.4**
PRSN	**Puerto Rico Se**	**0.96 148**		IAML			08 58 38.6	
	comp=Z,5µm,0.3s							
PRSN					IAML		08 58 44.4	
	comp=Z,7µm,0.3s							
PRSN	**Puerto Rico Se**	**0.96 148**		⇑*iP*		**Pb**	**08 58 20.2**	**-0.5**
PRSN				⇑*iS*		**Sb**	**08 58 32.2**	**-1.2**
PRSN					IAML		08 58 44.4	
	comp=N,4µm,0.2s							
PRSN	**Puerto Rico Se**	**0.96 148**		⇑*eP*		**Pb**	**08 58 19.9**	**-0.7**
LSP	**Las Mesas**	**1.03 146**				**Pb**	**08 58 21.1**	**-0.7**
LSP						**Sn**	**08 58 35.9**	**-1.0**
LSP	**Las Mesas**	**1.03 146**		⇓*eP*		**Pb**	**08 58 21.1**	**-0.7**
LSP				*eS*		**Sn**	**08 58 35.9**	**-1.0**
HIDR	**Higuey Centro**	**1.07 246**		⇑*iP*		**Pb**	**08 58 21.4**	**-1.0**
HIDR				⇑*iS*		**Sb**	**08 58 35.5**	**-1.1**
HIDR					IAML		08 58 36.0	
	comp=N,3µm,0.5s							
AOPR	**Arecibo Observ**	**1.12 128**				**Pb**	**08 58 22.0**	**-1.3**
AOPR	**Arecibo Observ**	**1.12 128**				**Sn**	**08 58 38.2**	**-0.9**
AOPR	**Arecibo Observ**	**1.12 128**		IAML			08 58 44.6	
	comp=N,4µm,0.3s							
AOPR					IAML		08 58 46.7	
	comp=N,2µm,0.3s							
AOPR	**Arecibo Observ**	**1.12 128**		⇑*iP*		**Pb**	**08 58 21.9**	**-1.3**
AOPR				⇓*iS*		**Sb**	**08 58 37.3**	**-0.7**
AOPR					IAML		08 58 46.6	
	comp=N,2µm,0.4s							
AOPR	**Arecibo Observ**	**1.12 128**		⇓*eP*		**Pb**	**08 58 22.4**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.16 152**				**Pb**	**08 58 23.4**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.16 152**				**Sn**	**08 58 41.1**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.16 152**		IAML			08 58 45.3	
	comp=N,2µm,0.8s							
CRPR					IAML		08 58 46.8	
	comp=N,2µm,1.1s							
CRPR	**Cabo Rojo, PR**	**1.16 152**		⇓*eP*		**Pb**	**08 58 23.0**	**-1.0**
UUPR	**Utuado, UPR, P**	**1.20 130**				**Pn**	**08 58 23.7**	**-1.1**
UUPR	**Utuado, UPR, P**	**1.20 130**				**Sn**	**08 58 40.0**	**-1.2**
UUPR	**Utuado, UPR, P**	**1.20 130**		IAML			08 58 43.3	
	comp=N,10µm,0.4s							
UUPR					IAML		08 58 53.9	
	comp=N,8µm,0.4s							
UUPR	**Utuado, UPR, P**	**1.20 130**		⇑*iP*		**Pn**	**08 58 23.7**	**-1.1**
MLPR	**Magueyes Islan**	**1.22 150**				**Pn**	**08 58 23.9**	**-1.1**
MLPR	**Magueyes Islan**	**1.22 150**				**Sg**	**08 58 41.3**	**+0.2**
MLPR	**Magueyes Islan**	**1.22 150**		IAML			08 58 44.4	
	comp=N,2µm,0.9s							
MLPR					IAML		08 58 46.8	
	comp=N,941nm,0.5s							
MLPR	**Magueyes Islan**	**1.22 150**		⇑*iP*		**Pn**	**08 58 24.1**	**-0.9**
MLPR				⇑*iS*		**Sg**	**08 58 41.3**	**+0.2**
MLPR					IAML		08 58 46.7	
	comp=N,338nm,0.3s							
MLPR	**Magueyes Islan**	**1.22 150**		⇑*eP*		**Pn**	**08 58 24.0**	**-1.1**
EMPR	**Esperanza - Ma**	**1.23 117**				**Pn**	**08 58 24.5**	**-0.6**
EMPR						**Sn**	**08 58 40.8**	**-1.0**
EMPR	**Esperanza - Ma**	**1.23 117**		⇓*eP*		**Pn**	**08 58 24.5**	**-0.6**
EMPR				*eS*		**Sn**	**08 58 40.8**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.30 144**				**Pn**	**08 58 25.8**	**-0.4**
GBPR						**Sg**	**08 58 43.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.30 144**		⇓*eP*		**Pn**	**08 58 25.8**	**-0.4**
GBPR				*eS*		**Sg**	**08 58 43.6**	**-0.1**
CELP	**Cerrillos**	**1.42 132**				**Pn**	**08 58 27.2**	**-0.6**
CELP					IAML		08 58 49.6	
	comp=N,1µm,0.4s							
CELP					IAML		08 58 53.2	
	comp=N,1µm,0.4s							
CELP	**Cerrillos**	**1.42 132**				**Sb**	**08 58 45.9**	**-0.8**
CELP	**Cerrillos**	**1.42 132**		⇑*iP*		**Pn**	**08 58 27.2**	**-0.6**
CELP				⇑*iS*		**Sn**	**08 58 45.5**	**-1.1**
CELP					IAML		08 58 53.0	
	comp=E,381nm,0.4s							
CELP	**Cerrillos**	**1.42 132**		⇓*iP*		**Pn**	**08 58 27.2**	**-0.6**
OBIP	**Obispado Ponce**	**1.42 134**				**Pn**	**08 58 27.0**	**-0.8**
OBIP	**Obispado Ponce**	**1.42 134**				**Sb**	**08 58 46.5**	**-0.3**
OBIP	**Obispado Ponce**	**1.42 134**		*i* P		**Pn**	**08 58 27.0**	**-0.8**
OBIP				*eS*		**Sb**	**08 58 46.4**	**-0.3**
OBIP					IAML		08 58 52.3	
	comp=Z,3µm,0.3s							
OBIP	**Obispado Ponce**	**1.42 134**		⇑*eP*		**Pn**	**08 58 27.1**	**-0.8**
OBIP				*eS*		**Sb**	**08 58 46.5**	**-0.3**
SMDR	**Samana, DR**	**1.44 280**		⇑*iP*		**Pn**	**08 58 28.1**	**+0.1**
SMDR				⇑*iS*		**Sg**	**08 58 49.5**	**+1.3**
SMDR					IAML		08 58 53.6	
	comp=N,781nm,0.3s							
ECPR	**Experimental S**	**1.44 119**				**Pn**	**08 58 27.1**	**-0.9**
ECPR					IAML		08 58 52.6	
	comp=N,2µm,0.2s							
ECPR	**Experimental S**	**1.44 119**				**Sb**	**08 58 46.6**	**-0.7**
ECPR	**Experimental S**	**1.44 119**		⇑*iP*		**Pn**	**08 58 27.0**	**-1.0**
DR12	**Loma Pena Alta**	**1.62 262**				**Pn**	**08 58 30.9**	**+0.2**
HATOM	**Hato Mayor del**	**1.62 262**		⇑*iP*		**Pn**	**08 58 30.4**	**-0.2**
HATOM				⇑*iS*		**Sb**	**08 58 52.6**	**+0.1**
HATOM					IAML		08 58 56.5	
	comp=N,1µm,0.9s							
SJG	**San Juan**	**1.72 122**				**Pn**	**08 58 31.7**	**-0.2**
SJG					IAML		08 58 59.6	
	comp=N,723nm,0.6s							
SJG					IAML		08 58 59.9	
	comp=N,1µm,0.3s							
SJG	**San Juan**	**1.72 122**		⇑*iP*		**Pn**	**08 58 31.7**	**-0.2**
SJG				⇑*iS*		**Sb**	**08 58 54.6**	**-0.8**
SJG	**San Juan**	**1.72 122**		*i* P		**Pn**	**08 58 32.3**	**+0.4**
SJG				*eS*		**Sb**	**08 58 54.6**	**-0.8**
SJG	**San Juan**	**1.72 122**		⇑*eP*		**Pn**	**08 58 31.9**	**0.0**
IGPR	**InterUniversit**	**1.84 125**				**Pn**	**08 58 33.5**	**0.0**
IGPR						**Sb**	**08 58 57.5**	**-1.2**
IGPR	**InterUniversit**	**1.84 125**		⇑*eP*		**Pn**	**08 58 33.5**	**0.0**
PDPR	**Patillas Dam,**	**1.88 122**				**Pn**	**08 58 33.8**	**-0.2**
PDPR	**Patillas Dam,**	**1.88 122**				**Sn**	**08 58 57.6**	**-0.2**
PDPR	**Patillas Dam,**	**1.88 122**		IAML			08 59 02.0	
	comp=N,473nm,0.6s							
PDPR					IAML		08 59 02.2	
	comp=N,412nm,0.6s							
PDPR	**Patillas Dam,**	**1.88 122**		⇑*eP*		**Pn**	**08 58 34.0**	**0.0**
HUMP	**Col San Antoni**	**1.96 117**				**Pn**	**08 58 35.1**	**-0.1**
HUMP	**Col San Antoni**	**1.96 117**				**Sb**	**08 59 01.0**	**-1.1**
HUMP	**Col San Antoni**	**1.96 117**		IAML			08 59 05.6	
	comp=N,392nm,0.5s							
HUMP					IAML		08 59 06.3	
	comp=N,443nm,0.4s							
HUMP	**Col San Antoni**	**1.96 117**		⇑*eP*		**Pn**	**08 58 34.9**	**-0.2**
SDD	**Santo Domingo**	**2.19 255**		⇑*iP*		**Pb**	**08 58 41.0**	**-0.5**
SDD				⇑*iS*		**Sn**	**08 59 06.2**	**+0.7**
SDD				IAML			08 59 12.2	
	comp=N,422nm,1.2s							
SDD	**Santo Domingo**	**2.19 255**		*i* P		**Pb**	**08 58 41.5**	**0.0**
SDD				IAML			08 59 12.8	
	comp=Z,3µm,0.4s							
SDDR	**Presa de Saban**	**3.41 270**				**Pn**	**08 58 57.5**	**+2.3**
SDDR	**Presa de Saban**	**3.41 270**		*i* P		**Pn**	**08 58 57.8**	**+2.6**
SDDR	**Presa de Saban**	**3.41 270**		*eP*		**Pn**	**08 58 58.0**	**+2.8**
SDDR				*eS*		**Sb**	**08 59 40.7**	**-3.2**
LOPP1	**Punta Rusia, P**	**3.41 284**		*i* P		**Pn**	**08 58 56.5**	**+1.3**
LOPP1				IAML			08 59 57.0	
	comp=Z,229nm,0.7s							
GRTK	**Grand Turk**	**4.07 308**		⇓*iP*		**Pn**	**08 59 05.4**	**+1.2**
GRTK				*eS*		**Sn**	**08 59 51.0**	**-1.0**
GRTK				IAML			08 59 58.1	
	comp=Z,77nm,1.6s							
GRTK	**Grand Turk**	**4.07 308**		*eP*		**Pn**	**08 59 03.2**	**-1.0**
GRTK				*eS*		**Sn**	**08 59 50.9**	**-1.0**
MASC	**Masc**	**6.27 281**		*eP*		**Pn**	**08 59 32.7**	**-1.8**
MASC				*eS*		**Sn**	**09 00 43.3**	**-3.0**
QMBU	**Quimbuelo**	**6.81 281**		*eP*		**Pn**	**08 59 40.4**	**-1.6**
QMBU				*eS*		**Sn**	**09 00 55.9**	**-3.8**
MOAC	**Moa**	**7.03 284**		*eP*		**Pn**	**08 59 42.2**	**-2.8**
MOAC				*eS*		**Sn**	**09 01 00.4**	**-4.7**
NMDO	**Nuevo Mundo**	**7.04 284**		*eP*		**Pn**	**08 59 42.2**	**-2.7**
NMDO				*eS*		**Sn**	**09 01 00.1**	**-5.0**
GTBY	**Guantanamo Bay**	**7.06 278**		*eP*		**Pn**	**08 59 44.0**	**-1.3**
GTBY				*eS*		**Sn**	**09 01 03.3**	**-2.4**
NNA	**Nana**	**32.12 197**		LR		LR	09 18 58.6	
	comp=Z,80nm,19.9s,baz=24,slow=39							
TXAR	**Lajitas Array**	**34.27 294**		P		**P**	**09 04 50.7**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=116,slow=9.7,SNR=6.5							
	comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**47.77 305**		P		**P**	**09 06 41.3**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=104,slow=6.3,SNR=3.8							
	comp=Z,0.2nm,0.5s							
ESDC	**Sonseca Array**	**58.04 55**		P		**P**	**09 07 57.4**	**+2.1**
	comp=Z,0.7nm,1.0s,baz=272,slow=8.3,SNR=3.6							
	comp=Z,0.7nm,1.0s							
ILAR	**Eielson Array**	**68.35 333**		P		**P**	**09 09 03.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=100,slow=5.3,SNR=3.3							
	comp=Z,0.2nm,0.6s							
ASAR	**Alice Springs**	**159.38 253**		PKPab		**PKPab**	**09 18 38.4**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=105,slow=4.7,SNR=4.3							

*IDC **19** 09:02:18.2±0.9, 41°.81N×81°.98E, h0km, mb3.8/6, mbtmp3.7/12, ML3.2/6, MS4.2/1, Error ellipse: s-maj=18.6km s-min=13.0km az=67.0*
*SOME **19** 09:02:20.9, 42°.00N×81°.90E, h10km*
*NNC **19** 09:02:22.1±1.3, 41°.91N×81°.83E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=9.3km s-min=6.2km az=156.0*

ISC 19 09:02:21.2±0.8, **41°.99N**±0°.05×**81°.85E**±0°.03, **h10**km, **n62**, σ2s**73**/84, **mb3.7**/5, **16C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.83 323**		Pg		**Pg**	**09 02 55.9**	**-0.4**
	95nm,0.1s							
KTMS				Lg		Lg	09 03 21.6	
	258nm,0.5s							
KTMS	**Ketmen**	**1.83 323**		*eP*		**Pg**	**09 02 56.0**	**-0.4**
	95nm,0.1s							
KTMS				*eS*		**Sg**	**09 03 21.6**	**+1.5**
	258nm,0.5s							
SHLS	**Shalkode**	**2.

TDK					Lg	Lg	09 04 27.6		
	276nm,0.9s								
TDK	**Taldyqorghan**	**3.92**	**321**	*eP*	**Pg**	**Pg**	**09 03 34.9**	**-1.4**	
	158nm,0.8s								
TDK					*e*S	**Sg**	**09 04 27.6**	**+0.5**	
	276nm,0.9s								
IZV	**Izvestkoviy**	**4.01**	**287**	Pg	**Pb**	**Pb**	**09 03 33.4**	**+1.4**	
	25nm,0.6s								
IZV					Lg	Lg	09 04 25.3		
	106nm,0.8s								
IZV	**Izvestkoviy**	**4.01**	**287**	*eP*	**Pb**	**Pb**	**09 03 33.5**	**+1.4**	
	25nm,0.6s								
IZV					*e*S	**Sb**	**09 04 25.3**	**+4.6**	
	106nm,0.8s								
KUU	**Kurty**	**4.47**	**297**	Pg	**Pg**	**Pg**	**09 03 43.7**	**-3.2**	
	18nm,0.6s								
KUU					Lg	Lg	09 04 42.8		
	97nm,0.7s								
KUU	**Kurty**	**4.47**	**297**	*eP*	**Pg**	**Pg**	**09 03 43.6**	**-3.2**	
	18nm,0.6s								
KUU					*e*S	**Sg**	**09 04 42.8**	**-2.0**	
	97nm,0.7s								
KST	**Kastek**	**4.48**	**286**	Pg	**Pb**	**Pb**	**09 03 43.4**	**+3.3**	
	28nm,0.5s								
KST					Lg	Lg	09 04 42.9		
	51nm,0.8s								
KST	**Kastek**	**4.48**	**286**	*eP*	**Pb**	**Pb**	**09 03 43.4**	**+3.3**	
	28nm,0.5s								
KST					*e*S	**Sg**	**09 04 42.9**	**-2.1**	
	51nm,0.8s								
MK31	**Makanchi Array**	**4.82**	**4**	⇑Pn	**Pn**	**Pn**	**09 03 36.4**	**+2.6**	
	1.1nm,0.2s,baz=190,slow=13,SNR=195								
MK31				⇑Pg	**Pg**	**Pg**	**09 03 51.2**	**-2.2**	
	3.9nm,0.3s,baz=182,slow=13,SNR=12								
MK31				⇑Sn	**Sn**	**Sn**	**09 04 34.7**	**+5.0**	
	7.6nm,0.5s,baz=187,slow=24,SNR=5.4								
MK31				⇓Lg	Lg	Lg	09 04 59.5		
	22nm,0.6s,baz=181,slow=28,SNR=5.0								
MKAR	**Makanchi Array**	**4.82**	**4**	Pn	**Pn**	**Pn**	**09 03 36.7**	**+2.9**	
	4.3nm,0.3s,baz=188,slow=13,SNR=71								
MKAR				Sn	**Sn**	**Sn**	**09 04 35.6**	**+5.9**	
	11nm,0.3s,baz=182,slow=25,SNR=11								
MKAR				Lg	Lg	Lg	09 04 55.0		
	13nm,0.3s,baz=182,slow=30,SNR=6.4								
	5.7nm,0.3s								
MAKZ	**Makanchi**	**4.82**	**1**	⇑Pn	**Pn**	**Pn**	**09 03 36.7**	**+2.8**	
	12nm,0.5s								
MAKZ				⇑Sn	**Sb**	**Sb**	**09 04 36.9**	**-7.0**	
	18nm,0.4s								
MAKZ				⇑Lg	Lg	Lg	09 04 59.7		
	48nm,0.8s								
KRBS	**Karabastau**	**4.85**	**293**	Pg	**Pb**	**Pb**	**09 03 50.3**	**+4.0**	
	6.3nm,0.5s								
KRBS					Lg	Lg	09 04 54.2		
	31nm,0.6s								
KRBS	**Karabastau**	**4.85**	**293**	*eP*	**Pb**	**Pb**	**09 03 50.3**	**+4.0**	
	6.3nm,0.5s								
KRBS					*e*S	**Sg**	**09 04 54.2**	**-2.8**	
	31nm,0.6s								
AAK	**Ala-Archa**	**5.49**	**279**	Pn	**Pn**	**Pn**	**09 03 47.2**	**+4.0**	
	1.0nm,0.3s,baz=88,slow=12,SNR=2.6								
AAK				Lg	Lg	Lg	09 05 15.3		
	1.8nm,0.3s,baz=323,slow=20,SNR=2.2								
	2.6nm,0.3s								
AAK	**Ala-Archa**	**5.49**	**279**	⇑Pg	**Pg**	**Pg**	**09 04 03.8**	**-2.7**	
	14nm,0.9s								
AAK				⇑Lg	Lg	Lg	09 05 18.7		
	19nm,0.8s								
SGDS	**Sogindy**	**5.52**	**288**	Pg	**Pg**	**Pg**	**09 04 03.4**	**-3.5**	
	9.1nm,0.8s								
SGDS					Lg	Lg	09 05 16.6		
	20nm,0.6s								
KSH2	**Kashi**	**5.56**	**241**	Pn	**Pn**	**Pn**	**09 03 45.8**	**+1.6**	
KSH2				Sn	**Sn**	**Sn**	**09 04 52.4**	**+4.1**	
KSH2				smax	smax				
	comp=N,54nm,0.9s								
KSH2				smax	smax				
	comp=E,95nm,0.6s								
MRKS	**Merke**	**6.43**	**280**	Pg	**Pg**	**Pg**	**09 04 20.3**	**-4.1**	
	comp=E,10nm,0.7s								
MRKS					Lg	Lg	09 05 45.6		
	comp=E,10nm,0.7s								
MRKS	**Merke**	**6.43**	**280**	*eP*	**Pg**	**Pg**	**09 04 20.3**	**-4.1**	
	comp=E,10nm,0.7s								
MRKS					*e*S	**Sg**	**09 05 45.6**	**-2.1**	
	comp=E,10nm,0.7s								
BTLS	**Baital**	**6.44**	**301**	Pg	Pg	Pg	09 04 20.1	-4.4	
	comp=E,11nm,0.6s								
BTLS					Lg	Lg	09 05 45.5		
	comp=E,20nm,1.0s								
BTLS	**Baital**	**6.44**	**301**	*eP*	Pg	Pg	09 04 20.1	-4.4	
	comp=E,11nm,0.6s								
BTLS					*e*S	**Sg**	**09 05 45.5**	**-2.5**	
	comp=E,20nm,1.0s								
KK31	**Karatay Array**	**8.45**	**281**	⇑Pg	Pg	Pg	09 04 56.8	-6.1	
	comp=E,2.2nm,0.6s,baz=86,slow=16,SNR=5.8								
KK31				⇑Lg	Lg	Lg	09 06 50.8		
	comp=E,7.8nm,0.8s,baz=83,slow=27,SNR=4.7								
KURBB	**Kurchatov Arra**	**8.94**	**346**	Pn	**Pn**	**Pn**	**09 04 32.1**	**+1.8**	
	comp=E,0.2nm,0.3s,baz=172,slow=12,SNR=7.2								
KURBB				Lg	Lg	Lg	09 07 09.0		
	comp=E,0.2nm,0.3s,baz=163,slow=35,SNR=4.7								
	comp=E,0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**8.94**	**346**	⇓Pn	**Pn**	**Pn**	**09 04 33.5**	**+3.2**	
	comp=E,4.4nm,0.5s								
KURBB				⇑Sn	**Sn**	**Sn**	**09 06 18.4**	**+7.4**	
	comp=E,30nm,0.6s								
KURBB				⇓Lg	Lg	Lg	09 07 10.5		
	comp=E,52nm,0.7s								
KURK	**Kurchatov**	**9.01**	**347**	⇑Pn	**Pn**	**Pn**	**09 04 34.6**	**+3.3**	
	comp=E,1.0nm,0.5s								
KURK				⇑Sn	**Sn**	**Sn**	**09 06 20.3**	**+7.5**	
	comp=E,5.2nm,0.7s								
KURK				⇑Lg	Lg	Lg	09 07 13.4		
	comp=E,11nm,0.6s								
ZALV	**Zalesovo Beam**	**12.13**	**8**	Pn	**Pn**	**Pn**	**09 05 14.7**	**+0.7**	
	comp=E,0.3nm,0.3s,baz=188,slow=14,SNR=6.2								
ZALV				Lg	Lg	Lg	09 08 46.1		
	comp=E,0.1nm,0.3s,baz=189,slow=26,SNR=5.0								
	comp=E,1.0nm,0.3s								
BVAR	**Borovoye Array**	**13.47**	**329**	Pn	**Pn**	**Pn**	**09 05 32.0**	**-0.2**	
	comp=E,0.1nm,0.3s,baz=122,slow=10,SNR=3.5								
	comp=E,0.4nm,0.4s								
SONM	**Songino Array**	**18.30**	**63**	P	**Pn**	**Pn**	**09 06 32.6**	**-2.7**	
	baz=260,slow=12,SNR=4.4								
	comp=E,1.0nm,0.8s								
ARTI	**Arti**	**20.90**	**322**	P	Pn	Pn	09 07 05.3	-0.7	
	comp=E,5.0nm,0.7s,baz=130,slow=3.7,SNR=7.2								
	comp=E,5.0nm,0.7s								
CN2	**Changchun**	**31.72**	**72**	P	**P**	**P**	**09 08 46.3**	**+1.2**	
CN2				S	**S**	**S**	**09 13 54.9**	**+0.3**	
CN2				pmax	pmax				
	comp=Z,10.0nm,0.7s								
FINES	**FINESS Array B**	**38.19**	**320**	P	**P**	**P**	**09 09 40.4**	**-0.2**	
	comp=Z,0.7nm,0.7s,baz=110,slow=11,SNR=3.8								
	comp=Z,0.7nm,0.7s								
NB2	**NORSAR Subarra**	**45.37**	**320**	P	**P**	**P**	**09 10 38.5**	**-0.9**	
	comp=Z,0.2nm,0.3s,baz=82,slow=7.9								
NOA	**NORSAR Array B**	**45.37**	**320**	P	**P**	**P**	**09 10 38.9**	**-0.6**	
	comp=Z,0.4nm,0.5s,baz=80,slow=8.0,SNR=3.9								
	comp=Z,0.4nm,0.5s								
LEM	**Lembang**	**53.98**	**148**	LR	LR	LR	09 38 31.0		
	comp=Z,220nm,21.8s,baz=168,slow=40								
TORD	**Torodi Ar. Bea**	**74.05**	**273**	P	**P**	**P**	**09 13 55.6**	**-2.0**	
	comp=Z,0.6nm,0.7s,baz=39,slow=4.9,SNR=3.6								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**78.40**	**130**	P	**P**	**P**	**09 14 20.1**	**-2.0**	
	comp=Z,0.8nm,0.7s,baz=328,slow=5.1,SNR=13								
	comp=Z,0.8nm,0.7s								
ASAR	**Alice Springs**	**81.12**	**133**	P	**P**	**P**	**09 14 34.5**	**-2.3**	
	comp=Z,0.5nm,0.6s,baz=322,slow=5.1,SNR=11								
	comp=Z,0.5nm,0.6s								

*VIE **19** 09:04:18.5±0.8, 43.02N×18.20E, h8km, mb2.6/8, ml2.4/6, ms3.1/3, Error ellipse: s-maj=20.0km s-min=6.3km az=57.0*
92 km S of Sarajevo
*RHSSO **19** 09:04:30.6±0.6, 43.66N×17.01E, h6km±2km, ML2.5/7*
*BEO **19** 09:04:31.5±0.5, 43.74N×17.25E, h12km±3km, ML2.3/10*

ISC 19 09:04:31.1±1.0, 43.68N±0.02×17.26E±0.02, h9km±8km, n45, σ1°10/79, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RICI	**Ricice**	**0.21**	**206**	*e*Pg	**Pg**	**Pg**	**09 04 36.0**	**+0.6**
RICI				Sg	**Sg**	**Sg**	**09 04 39.2**	**+0.9**
MAKA	**Makarska**	**0.43**	**204**	*e*Pg	**Pg**	**Pg**	**09 04 39.1**	**-0.4**
MAKA				Sg	**Sb**	**Sb**	**09 04 45.5**	**-1.9**
KIJV	**Kijevo**	**0.70**	**298**	*e*Pg	**Pg**	**Pg**	**09 04 43.9**	**-0.7**
KIJV				Sg	**Sg**	**Sg**	**09 04 54.1**	**+0.4**
STON	**Ston**	**0.87**	**158**	*i* Pg	**Pg**	**Pg**	**09 04 47.2**	**-0.7**
STON				Sg	**Sb**	**Sb**	**09 05 00.4**	**+0.3**
STON	**Ston**	**0.87**	**158**	*e*Pg	**Pg**	**Pg**	**09 04 47.2**	**-0.7**
STON				*e*Sg	**Sn**	**Sn**	**09 05 01.3**	**-1.0**
LSTV	**Lastovo**	**0.95**	**196**	*e*Pg	**Pg**	**Pg**	**09 04 48.2**	**-1.2**
LSTV				Sg	**Sb**	**Sb**	**09 05 02.1**	**-0.2**
BLY	**Banja Luka**	**1.07**	**357**	*e*Pg	**Pg**	**Pg**	**09 04 51.0**	**-0.7**
BLY				*e*Sg	**Sb**	**Sb**	**09 05 06.0**	**+0.1**
BLY	**Banja Luka**	**1.07**	**357**	⇑*i* Pg	**Pg**	**Pg**	**09 04 51.0**	**-0.7**
BLY				*e*Sg	**Sg**	**Sg**	**09 05 05.8**	**+0.2**
KLINJ	**Klinje**	**1.09**	**117**	*e*Pg	**Pn**	**Pn**	**09 04 52.6**	**-0.1**
KLINJ				*e*Sg	**Sn**	**Sn**	**09 05 09.7**	**+1.7**
MORI	**Morici**	**1.14**	**280**	*e*Pg	**Pg**	**Pg**	**09 04 52.3**	**-0.7**
MORI				Sg	**Sb**	**Sb**	**09 05 07.4**	**-0.4**
ZIRJ	**Zirje**	**1.17**	**269**	*e*Pg	**Pg**	**Pg**	**09 04 52.4**	**-1.2**
DBRK	**Dubrovnik**	**1.20**	**147**	*e*Pn	**Pn**	**Pn**	**09 04 53.6**	**-0.5**
DBRK				Sg	**Sn**	**Sn**	**09 05 11.5**	**+1.0**
BRY	**Bratogost**	**1.22**	**129**	*e*Pg	**Pn**	**Pn**	**09 04 55.1**	**+0.6**
BRY				*e*Sg	**Sn**	**Sn**	**09 05 14.6**	**+3.5**
TREB	**Trebinje**	**1.25**	**140**	⇓*i* Pg	**Pb**	**Pb**	**09 04 54.3**	**-0.6**
TREB				*e*Sg	**Sn**	**Sn**	**09 05 13.6**	**+1.8**
UPM	**Unac-Piva**	**1.29**	**111**	*e*Pg	**Pg**	**Pg**	**09 04 56.4**	**+0.4**
UPM				*e*Sg	**Sn**	**Sn**	**09 05 16.9**	**+3.9**
UDBI	**Udbina**	**1.37**	**309**	*i* Pn	**Pg**	**Pg**	**09 04 57.5**	**+0.1**
UDBI				Sg	**Sg**	**Sg**	**09 05 16.3**	**+1.1**
HCY	**Herceg Novi**	**1.53**	**143**	*e*Pn	**Pg**	**Pg**	**09 04 59.9**	**-0.6**
HCY				*e*Sn	**Sg**	**Sg**	**09 05 21.5**	**+1.2**
BBLS	**Lazi&#263i**	**1.57**	**82**	*e*Pg	**Pb**	**Pb**	**09 04 59.8**	**-0.5**
BBLS				*e*Sg	**Sg**	**Sg**	**09 05 21.5**	**0.0**
BBLS	**Lazi&#263i**	**1.57**	**82**	*e*Pn	**Pb**	**Pb**	**09 05 01.2**	**0.0**
BBLS				*e*Sn	**Sg**	**Sg**	**09 05 24.2**	**+2.7**
DUGI	**Dugi Otok**	**1.62**	**282**	*e*Pn	**Pn**	**Pn**	**09 05 00.0**	**+0.1**
DUGI				Sn	**Sb**	**Sb**	**09 05 21.5**	**-0.3**
PLIT	**Plitvice**	**1.68**	**316**	*e*Pn	**Pb**	**Pb**	**09 05 01.5**	**-0.7**
PLIT				Sn	**Sb**	**Sb**	**09 05 23.4**	**0.0**
VIRC	**Vir**	**1.70**	**292**	*e*Pn	**Pb**	**Pb**	**09 05 01.6**	**-0.9**
VIRC				Sn	**Sb**	**Sb**	**09 05 23.4**	**-0.7**
TEKS	**Tekeris**	**1.85**	**61**	*e*Pn	**Pn**	**Pn**	**09 05 02.1**	**-1.0**
TEKS				*e*Sn	**Sn**	**Sn**	**09 05 24.5**	**-2.1**
TEKS	**Tekeris**	**1.85**	**61**	*e*Pn	**Pb**	**Pb**	**09 05 05.2**	**0.0**
TEKS				*e*Sn	**Sg**	**Sg**	**09 05 30.9**	**+0.2**
PDG	**Podgorica**	**1.93**	**130**	*e*Pn	**Pn**	**Pn**	**09 05 04.4**	**+0.4**
PDG				*e*Sn	**Sb**	**Sb**	**09 05 30.6**	**+0.1**
PDG	**Podgorica**	**1.93**	**130**	*e*Pn	**Pb**	**Pb**	**09 05 06.1**	**-0.3**
PDG				*e*Sn	**Sg**	**Sg**	**09 05 31.6**	**-1.4**
NVLJ	**Novalja**	**1.93**	**298**	*e*Pn	**Pn**	**Pn**	**09 05 04.8**	**+0.7**
NVLJ				Sn	**Sb**	**Sb**	**09 05 29.8**	**-0.8**
SJES	**Sjenica**	**2.02**	**101**	*e*Pn	**Pn**	**Pn**	**09 05 05.3**	**-0.2**
SJES				*e*Sn	**Sb**	**Sb**	**09 05 32.2**	**-1.2**
SJES	**Sjenica**	**2.02**	**101**	*e*Pn	**Pb**	**Pb**	**09 05 07.4**	**-0.7**
SJES				*e*Sn	**Sg**	**Sg**	**09 05 35.6**	**-0.5**
DRME	**Dracevica, Mon**	**2.06**	**136**	*e*Pn	**Pb**	**Pb**	**09 05 07.7**	**-0.9**
DRME				*e*Sn	**Sb**	**Sb**	**09 05 34.2**	**-0.1**
IVAS	**Ivanjica**	**2.11**	**92**	*e*Pn	**Pn**	**Pn**	**09 05 05.9**	**-0.7**
IVAS				*e*Sn	**Sn**	**Sn**	**09 05 34.0**	**+1.1**
TRUS	**Trudelj**	**2.34**	**76**	*e*Pn	**Pn**	**Pn**	**09 05 08.8**	**-0.9**
FRGS	**Fruska Gora**	**2.35**	**50**	*e*Pn	**Pb**	**Pb**	**09 05 12.3**	**-1.4**
FRGS				*e*Sn	**Sb**	**Sb**	**09 05 42.6**	**-0.2**
GRUS	**Gruza**	**2.51**	**84**	*e*Pn	**Pn**	**Pn**	**09 05 12.6**	**+0.5**
GRUS				*e*Sn	**Sn**	**Sn**	**09 05 41.9**	**-1.0**
GOCS	**Kraljevo Serbi**	**2.63**	**91**	*e*Sn	**Sn**	**Sn**	**09 05 46.6**	**+0.7**
MORH	**Mrgy, Hungar**	**2.72**	**21**	*e*Pn	**Pn**	**Pn**	**09 05 15.4**	**+0.5**
MORH				*e*Sn	**Sn**	**Sn**	**09 05 49.3**	**+1.4**
SOKA	**Soboth**	**3.38**	**333**	*e*Pn	**Pn**	**Pn**	**09 05 24.3**	**+0.1**
	0.5nm,0.3s							
OBKA	**Obir**	**3.42**	**327**	*e*Pn	**Pn**	**Pn**	**09 05 25.1**	**+0.5**
	1.7nm,0.4s							
ARSA	**Arzberg**	**3.77**	**342**	*i* Pn	**Pn**	**Pn**	**09 05 29.1**	**-0.3**
	4.0nm,0.3s							
MYKA	**Terra Mystica**	**3.90**	**320**	*e*Sn	**Sb**	**Sb**	**09 06 29.5**	**+2.0**
	1.1nm,0.3s							
CONA	**Conrad Observa**	**4.36**	**348**	*e*Pn	**Pn**	**Pn**	**09 05 36.3**	**-1.3**
	0.6nm,0.3s							
ABTA	**Abfaltersbach**	**4.54**	**314**	*i* Pn	**Pn**	**Pn**	**09 05 40.4**	**+0.3**
	0.3nm,0.2s							
ABTA				*e*Sn	**Sb**	**Sb**	**09 06 45.5**	**-0.4**
	1.1nm,0.4s							
MOA	**Molln**	**4.66**	**334**	*e*Pn	**Pn**	**Pn**	**09 05 42.3**	**+0.6**
	0.2nm,0.1s							
LESA	**Schwarzleotal**	**4.94**	**321**	*i* Pn	**Pn**	**Pn**	**09 05 46.8**	**+1.3**
	0.6nm,0.1s							
WTTA	**Wattenberg**	**5.33**	**314**	*i* Pn	**Pn**	**Pn**	**09 05 52.2**	**+1.2**
	2.1nm,0.2s							

*IDC **19** 09:27:43.7±2.3, 24.40S×179.85W, h484km±36km, mb3.1/4, mbtmp4.0/6, Error ellipse: s-maj=43.7km s-min=24.8km az=53.0*

ISC 19 09:27:43.7±1.8, 24.4S±0.1×179.7W±0.3, h500km, n6, σ0°91/7, mb3.6/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.90**	**342**	P	**P**	**P**	**09 29 28.8**	**-0.2**
	4.0nm,0.4s,baz=167,slow=9.6,SNR=19							
URZ	**Urewera**	**14.12**	**190**	P	**P**	**P**	**09 30 43.2**	**-1.3**
	4.5nm,0.5s,baz=276,slow=1.5,SNR=6.7							
URZ				S	**S**	**S**	**09 33 14.0**	**+0.4**
	8.0nm,0.7s,baz=75,slow=18,SNR=6.5							
STKA	**Stephens Creek**	**34.78**	**249**	P	**P**	**P**	**09 33 52.1**	**+0.4**
	4.1nm,1.0s,baz=80,slow=6.1,SNR=4.4							
	4.1nm,1.0s							
ASAR	**Alice Springs**	**42.20**	**261**	P	**P**	**P**	**09 34 52.5**	**+0.2**
	0.6nm,0.5s,baz=103,slow=7.3,SNR=13							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**42.62**	**267**	P	**P**	**P**	**09 34 55.3**	**-0.3**
	1.4nm,0.5s,baz=104,slow=7.8,SNR=35							
	1.4nm,0.5s							
QSPA	**South Pole Qui**	**65.74**	**180**	P	**P**	**P**	**09 37 39.3**	**+1.0**
	0.9nm,0.8s,baz=120,slow=0.7,SNR=5.5							
	0.9nm,0.8s							

*IDC **19** 09:31:04.8±0.7, 1.64N×88.89W, h0km, mb3.9/11, mbtmp3.9/12, ML2.7/1, MS3.2/12, Error ellipse: s-maj=37.3km s-min=16.2km az=53.0*
*NEIC **19** 09:31:07.3±1.1, 1.7N±0.1×88.9W±0.1, h10km±2km, mb4.3/14, Error ellipse: s-maj=23.7km s-min=15.5km az=244.0*

ISC 19 09:31:06.5±0.7, 1.67N±0.10×88.9W±0.1, h10km, n48, σ0°70/40, mb4.1/18, MS3.1/7, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JUD3	**Juan Diaz 3**	**9.08**	**22**	Pn	**Pn**	**Pn**	**09 33 17.2**	**-0.6**
JTS	**Las Juntas de**	**9.42**	**25**	LR	LR	LR	09 36 12.3	
	comp=Z,140nm,20.6s,baz=264,slow=33							
CARN	**Rivas**	**10.03**	**19**	Pn	**Pn**	**Pn**	**09 33 30.2**	**-0.5**
OTAV	**Otavalo**	**10.56**	**98**	Pn	**Pn**	**Pn**	**09 33 39.4**	**+1.1**
SLOR	**San Lorenzo -**	**10.69**	**103**	Pn	**Pn**	**Pn**	**09 33 40.5**	**+0.4**
CRIN	**San Cristobal**	**11.11**	**9**	Pn	**Pn**	**Pn**	**09 33 44.8**	**-0.8**
BOAB	**BOACO BROADBAN**	**11.18**	**17**	Pn	**Pn**	**Pn**	**09 33 47.5**	**+1.0**
ATAH	**Atahualpa**	**13.66**	**130**	LR	LR	LR	09 38 50.0	
	comp=Z,112nm,18.3s,baz=311,slow=34							
ROSC	**El Rosal**	**14.90**	**77**	LR	LR	LR	09 39 41.0	
	comp=Z,220nm,19.9s,baz=239,slow=35							
CMIG	**Matias Romero**	**16.41**	**339**	LR	LR	LR	09 38 33.7	
	comp=Z,11nm,21.5s,baz=165,slow=27							
CZSB	**Cruzeiro do Su**	**18.67**	**120**	P	**P**	**P**	**09 35 25.0**	**+0.1**
SDV	**Santo Domingo**	**19.55**	**68**	P	**Pn**	**Pn**	**09 35 35.9**	**-0.1**
	0.2nm,0.3s,baz=269,slow=14,SNR=3.9							
SDV				LR	LR	LR	09 42 27.4	
	comp=Z,48nm,20.3s,baz=250,slow=35							
	3.8nm,0.9s							
SDV	**Santo Domingo**	**19.55**	**68**	P	**Pn**	**Pn**	**09 35 35.9**	**-0.1**
SDV				IAmb	IAmb	IAmb	09 35 40.3	
	comp=Z,5.7nm,1.1s							
LPAZ	**La Paz**	**27.20**	**132**	P	**P**	**P**	**09 36 51.5**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=347,slow=12,SNR=11							
LPAZ				LR	LR	LR	09 47 10.8	
	comp=Z,51nm,20.4s,baz=278,slow=36							
	comp=Z,1.7nm,0.7s							
LPAZ	**La Paz**	**27.20**	**132**		**P**	**P**	**09 36 51.0**	**-0.3**
SJG	**San Juan**	**27.68**	**52**	LR	LR	LR	09 47 28.5	
	comp=Z,28nm,20.3s,baz=252,slow=36							
TXAR	**Lajitas Array**	**30.89**	**334**	P	**P**	**P**	**09 37 24.9**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=155,slow=9.4,SNR=8.8							
TXAR				LR	LR	LR	09 48 08.6	
	comp=Z,33nm,18.5s,baz=93,slow=33							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**30.89**	**334**	P	**P**	**P**	**09 37 24.0**	**+0.6**

MIAR	**Mount Ida**	**32.99**	**353**			**P**	**09 37 41.9**	**+0.2**	
MIAR					IAmb	IAmb	09 37 43.0		
	comp=Z,3.9nm,1.1s								
RPN	**Rapa Nui**	**34.74**	**213**	LR	LR	LR	09 48 23.2		
	comp=Z,42nm,18.9s,baz=91,slow=30								
MDP	**Montagnes des**	**36.36**	**84**	LR	LR	LR	09 51 21.6		
	comp=Z,34nm,21.8s,baz=214,slow=34								
Q51A	**Peebles**	**37.52**	**7**	P		**P**	**09 38 20.7**	**0.0**	
CPUP	**Villa Florida**	**41.29**	**135**	P		**P**	**09 38 51.9**	**-0.5**	
	comp=Z,1.5nm,0.9s,baz=316,slow=5.4,SNR=3.7								
	comp=Z,1.5nm,0.9s								
ECSD	**EROS Data Cent**	**42.44**	**352**			**P**	**09 39 01.2**	**-0.3**	
ECSD					IAmb	IAmb	09 39 06.3		
	comp=Z,4.7nm,0.9s								
BDFB	**Brasilia**	**43.93**	**115**	LR	LR	LR	09 57 44.8		
	comp=Z,105nm,18.0s,baz=134,slow=36								
PDAR	**Pinedale Array**	**44.89**	**338**	P		**P**	**09 39 21.8**	**+0.2**	
	comp=Z,0.5nm,0.6s,baz=118,slow=8.6,SNR=6.0								
	comp=Z,0.5nm,0.6s								
NVAR	**Mina Array Bea**	**45.41**	**327**	P		**P**	**09 39 26.5**	**+0.7**	
	comp=Z,2.1nm,0.9s,baz=148,slow=7.7,SNR=13								
NVAR					PcP	**PcP**	**09 41 05.4**	**+0.4**	
	comp=Z,0.6nm,0.6s,baz=130,slow=3.4,SNR=6.6								
	comp=Z,2.1nm,0.9s								
ELK	**Elko**	**45.61**	**332**	P		**P**	**09 39 28.4**	**+1.1**	
	comp=Z,0.3nm,0.4s,baz=170,slow=2.6,SNR=4.8								
	comp=Z,0.3nm,0.4s								
SNOW	**Snow King Moun**	**45.94**	**338**	P		**P**	**09 39 29.8**	**-0.1**	
SNOW					IAmb	IAmb	09 39 36.4		
	comp=Z,4.1nm,0.9s								
GCMT	**Greycliff**	**47.57**	**340**	P		**P**	**09 39 42.5**	**0.0**	
BOZ	**Bozeman (W)**	**48.09**	**339**	P		**P**	**09 39 47.0**	**+0.5**	
BOZ					IAmb	IAmb	09 39 48.7		
	comp=Z,5.2nm,1.5s								
J08A	**Circle Bar Ran**	**49.16**	**332**	P		**P**	**09 39 54.3**	**-0.5**	
J08A					IAmb	IAmb	09 39 56.8		
	comp=Z,4.2nm,1.2s								
YBH	**Yreka Blue Hor**	**50.14**	**327**	P		**P**	**09 40 01.6**	**-0.6**	
	comp=Z,1.4nm,0.8s,baz=201,slow=12,SNR=2.2								
	comp=Z,1.4nm,0.8s								
PPT	**Papeete**	**62.71**	**249**	LR	LR	LR	10 01 56.3		
	comp=Z,46nm,19.8s,baz=58,slow=30								
YKA	**Yellowknife Ar**	**63.65**	**347**	P		**P**	**09 41 37.3**	**-0.3**	
	comp=Z,0.8nm,0.7s,baz=144,slow=7.0,SNR=4.4								
	comp=Z,0.8nm,0.7s								
K27K	**Chicken**	**73.15**	**338**	P		**P**	**09 42 37.9**	**+0.8**	
K27K					IAmb	IAmb	09 42 38.6		
	comp=Z,2.0nm,0.9s								
I27K	**Kandik River**	**73.86**	**340**	P		**P**	**09 42 41.4**	**+0.1**	
ILAR	**Eielson Array**	**75.32**	**338**	P		**P**	**09 42 49.6**	**-0.1**	
	comp=Z,0.8nm,0.7s,baz=144,slow=4.5,SNR=12								

	comp=Z,2.3nm,0.7s							
MKAR	Makanchi Array	51.68	323	P	P	09 55 19.0	0.0	
PDGK	Podgornoye	51.87	317	P	P	09 55 20.3	-0.3	
TARG	Taragay, Kyrgy	52.39	315	P	P	09 55 23.9	-0.9	
ZALV	Zalesovo Beam	54.24	331	P	P	09 55 36.6	-1.1	
	comp=Z,1.4nm,0.6s,baz=106,slow=7.2,SNR=7.5 comp=Z,1.4nm,0.6s							
ZALV	Zalesovo Beam	54.24	331	P	P	09 55 37.4	-0.3	
KURK	Kurchatov	55.70	325	P	P	09 55 48.1	-0.2	
KURK				IAmb	IAmb	09 55 49.1		
	comp=Z,4.2nm,1.0s							
KURBB	Kurchatov Arra	55.71	325	P	P	09 55 48.3	-0.1	
	comp=Z,1.1nm,0.7s,baz=128,slow=7.1,SNR=9.3 comp=Z,1.1nm,0.7s							
BVAR	Borovoye Array	61.30	325	P	P	09 56 27.7	+0.3	
	comp=Z,1.0nm,0.6s,baz=123,slow=10,SNR=3.6 comp=Z,1.0nm,0.6s							
BELG	Belogornoye	74.66	321	LR	LR	10 32 53.9		
	comp=Z,110nm,18.4s,baz=96,slow=38							
ARCES	ARCESS Array B	83.78	340	P	P	09 58 41.0	0.0	
	comp=Z,2.9nm,1.0s,baz=82,slow=6.3,SNR=9.3 comp=Z,2.9nm,1.0s							
FINES	FINESS Array B	85.50	332	P	P	09 58 49.0	-0.8	
	comp=Z,1.3nm,0.8s,baz=74,slow=5.0,SNR=9.4 comp=Z,1.3nm,0.8s							

IDC ***19*** *09:47:14.4±7.3,56.7°S×26.3°W,h90km±69km,mb3.9/6, mbtmp4.1/7,ML3.9/1,Error ellipse: s-maj=24.8km s-min=18.4km az=60.0*

NEIC ***19*** *09:47:16.4±1.4,56.8°S±0.1×26.5°W±0.2,h109km±7km, mb4.6/23,Error ellipse: s-maj=15.5km s-min=14.1km az=52.0*

ISC 19 09:47:14.3±0.5,56.66°S±0.08×26.45°W±0.08,h88km,n43, σ1♀39/37,mb4.6/12,1C-1D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.18	288	Pn	Pn	09 48 45.9	+3.0
ORCD	Orcadas	10.34	239	Pn	Pn	09 49 39.6	+0.2
VNA2	Neumayer--Watz	16.47	158	P	P	09 51 03.4	+2.6
	comp=Z,0.8nm,0.2s,baz=310,slow=12						
VNA2				⇑S	Sn	09 53 48.4	-13
	comp=E,0.6nm,0.2s,baz=298,slow=22						
ESPZ	Base Esperanza	16.55	233		P	09 51 01.6	-0.1
ESPZ				IAmb	IAmb	09 51 26.1	
	comp=Z,32nm,1.5s						
SNAA	Sanae	18.02	156	⇓P	Pn	09 51 24.4	+5.9
	comp=Z,29nm,0.3s						
SNAA	Sanae	18.02	156	P	Pn	09 51 18.1	-0.4
	comp=Z,0.4nm,0.3s,baz=311,slow=14,SNR=7.2 comp=Z,0.6nm,0.4s						
SNAA	Sanae	18.02	156	P	P	09 51 17.4	-0.5
EFI	East Falkland	19.06	272	P	P	09 51 29.8	+0.5
EFI				IAmb	IAmb	09 52 05.9	
	comp=Z,54nm,1.2s						
TROLL	Troll, Antarti	19.52	153	P	Pn	09 51 42.9	+6.6
	comp=Z,16nm,0.2s						
PMSA	Palmer Station	19.82	230	P	P	09 51 37.6	+0.2
PMSA				IAmb	IAmb	09 51 43.9	
	comp=Z,48nm,1.2s						
SMAI	San Martin Ant	21.57	222	P	P	09 51 55.6	-0.6
MG02	Cerro Sombrero	24.70	261	P	P	09 52 25.5	-1.3
MG05	Puerto Natales	27.00	261	P	P	09 52 46.3	-1.2
MG05				IAmb	IAmb	09 52 57.1	
	comp=Z,20nm,1.1s						
TRQA	Tornquist	29.94	293	P	P	09 53 12.7	-1.1
QSPA	South Pole Qui	33.59	180	P	P	09 53 45.0	-0.7
	comp=Z,1.5nm,0.7s,baz=194,slow=0.8,SNR=20 comp=Z,1.5nm,0.7s						
QSPA	South Pole Qui	33.59	180	P	P	09 53 44.9	-0.7
QSPA				IAmb	IAmb	09 53 59.7	
	comp=Z,7.6nm,1.4s						
ITAB	Concordia	34.65	317	P	P	09 53 55.5	+0.5
CPUP	Villa Florida	37.52	311	P	P	09 54 19.4	-0.1
	comp=Z,3.6nm,0.8s,baz=193,slow=19,SNR=10 comp=Z,3.6nm,0.8s						
CPUP	Villa Florida	37.52	311	P	P	09 54 20.1	+0.6
CPUP				IAmb	IAmb	09 54 20.3	
	comp=Z,4.5nm,0.9s						
MT02	Curacav	38.37	288	P	P	09 54 25.2	-1.4
BOSA	Boshof	45.73	75	P	P	09 55 25.8	-0.8
	comp=Z,3.4nm,0.9s,baz=174,slow=7.6,SNR=4.0 comp=Z,3.4nm,0.9s						
BOSA	Boshof	45.73	75	P	P	09 55 25.7	-0.9
BOSA				IAmb	IAmb	09 55 51.0	
	comp=Z,21nm,1.5s						
VNDA	Vanda	45.98	183	P	P	09 55 27.4	-0.4
	comp=Z,0.5nm,0.6s,baz=185,slow=8.6,SNR=2.2 comp=Z,0.5nm,0.6s						
VNDA	Vanda	45.98	183	P	P	09 55 27.5	-0.4
PTLB	Pontes e Lacer	48.02	316	P	P	09 55 44.3	-0.1
PTLB				IAmb	IAmb	09 55 46.1	
	comp=Z,4.0nm,1.0s						
H10S2	ASCENSION HYDR	48.47	16	T	T	10 48 36.0	
	baz=32,slow=74,SNR=12						
H10S3	ASCENSION HYDR	48.48	16	T	T	10 48 34.6	
	baz=188,slow=74,SNR=13						
LBTB	Lobatse	48.80	72	P	P	09 55 50.0	-0.5
LBTB				IAmb	IAmb	09 55 51.2	
	comp=Z,10nm,1.3s						
H10N1	ASCENSION HYDR	49.59	16	T	T	10 50 08.7	
	baz=188,slow=75,SNR=6.1						
H10N3	ASCENSION HYDR	49.59	16	T	T	10 50 05.2	
	baz=188,slow=75,SNR=16						
H10N2	ASCENSION HYDR	49.61	16	T	T	10 50 01.8	
	baz=188,slow=75,SNR=8.4						
POGA	Pongola	50.20	80	P	P	09 56 00.3	-0.6
POGA				IAmb	IAmb	09 56 27.2	
	comp=Z,14nm,1.3s						
LPAZ	La Paz	51.06	305	P	P	09 56 08.9	+0.6
	comp=Z,13nm,0.4s,baz=122,slow=4.4,SNR=172						
LPAZ	La Paz	51.06	305	P	P	09 56 08.7	+0.4
CASY	Casey	53.20	160	P	P	09 56 22.6	-0.1
CASY				IAmb	IAmb	09 56 31.5	
	comp=Z,9.2nm,1.4s						
CZSB	Cruzeiro do Su	60.67	305	P	P	09 57 15.0	-1.2
CZSB				IAmb	IAmb	09 57 15.4	
	comp=Z,6.2nm,0.6s						
DBIC	Dimbokro	65.56	24	P	P	09 57 48.3	0.0
	comp=Z,2.5nm,0.4s,baz=216,slow=6.6,SNR=4.6 comp=Z,2.5nm,0.4s						
DBIC	Dimbokro	65.56	24	P	P	09 57 48.9	+0.5
DBIC				IAmb	IAmb	09 58 17.1	
	comp=Z,24nm,1.5s						
TORD	Torodi Ar. Bea	73.39	29	P	P	09 58 36.9	+0.4
	comp=Z,2.9nm,0.7s,baz=198,slow=6.6,SNR=14 comp=Z,2.9nm,0.7s						
TORD	Torodi Ar. Bea	73.39	29	P	P	09 58 36.5	0.0
BFZ	Birch Farm	81.14	197	P	P	09 59 19.4	-0.3
SONM	Songino Array	150.35	87	PKPbc	PKPbc	10 06 53.6	-0.9
	comp=Z,2.3nm,0.6s,baz=228,slow=1.9,SNR=10						
ILAR	Eielson Array	150.83	311	PKPbc	PKPbc	10 06 54.8	-0.1
	comp=Z,0.2nm,0.3s,baz=128,slow=2.9,SNR=5.4						

IDC ***19*** *09:58:09.0±1.3,8.56N×70.52W,h0km,mb3.6/1, mbtmp4.1/3,ML3.4/2,MS3.2/1,Error ellipse: s-maj=43.9km s-min=7.8km az=75.0*

FUNV ***19*** *09:58:09.7,8.59N×70.69W,h2km,MW3.8,Presumed earthquake*

RSNC ***19*** *09:58:10.0±1.0,9°N±3°×7°1W±°,h19km±16km,M3.6,mb4.4, mB5.0,ML3.2,Mw(mB)4.4,MwMwp5.4,Mwp5.6*

ISC 19 09:58:08.3±0.8,8.55N±0.05×70.74W±0.06,h7km,n31, σ1♀80/39,Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDV	Santo Domingo	0.34	17	Pg	Pg	09 58 15.1	-0.1
	1μm,0.3s,baz=191,slow=8.4						
SDV				Lg	Lg	09 58 20.8	
	2μm,0.3s,baz=92,slow=23,SNR=40						
SDV	Santo Domingo	0.34	17	eP	Pg	09 58 15.3	+0.1
SDV				eS	Sg	09 58 20.0	+0.2
PAMC	Pamplona, Colo	2.29	238	P	Pn	09 58 46.8	-0.2
PAMC				S	Sn	09 59 18.4	+2.7
OCAC	Ocana	2.58	263	P	Pn	09 58 50.7	+0.1
OCAC				S	Sn	09 59 23.0	+0.7
BARC	Barichara	3.11	231	P	Pn	09 58 58.9	+0.8
BARC				S	Sn	09 59 33.4	-2.3
BARC				S	Sb	09 59 36.2	-6.3
URIC	Uribia, Colomb	3.36	339	P	Pn	09 59 00.7	-0.6
URIC	Uribia, Colomb	3.36	339	eP	Pn	09 59 02.1	+0.7
URIC				eS	Sn	09 59 40.5	-1.0
BRJC	Barrancabermej	3.37	242	P	Pn	09 59 00.2	-1.2
RUSC	La Rusia	3.52	222	P	Pn	09 59 04.4	+0.4
RUSC	La Rusia	3.52	222	eP	Pn	09 59 05.0	+1.0
RUSC				eS	Sn	09 59 46.3	+0.1
PTBC	PUERTO BERRIO,	4.20	242	P	Pn	09 59 11.5	-1.3
FUNV	FUNVISIS	4.31	64	eP	Pn	09 59 14.5	0.0
FUNV				eS	Sn	10 00 01.9	-3.2
SPBC	San Pablo de B	4.39	229	P	Pn	09 59 15.7	+0.1
SJCC	San Jacinto, C	4.59	287	P	Pn	09 59 19.4	+1.2
SJCC	San Jacinto, C	4.59	287	eP	Pn	09 59 19.2	+1.0
SJCC				eS	Sn	10 00 10.3	-1.5
URCC	San Jos de Ur	4.82	261	P	Pn	09 59 21.9	+0.5
CHIC	Chingaza	4.91	218	P	Pn	09 59 23.1	+0.2
ROSC	El Rosal	5.13	224	Pn	Pn	09 59 28.4	+2.4
	5.3nm,0.3s,baz=90,slow=9.5,SNR=21 14nm,0.3s						
ROSC	El Rosal	5.13	224	P	Pn	09 59 28.3	+2.3
	463nm37nm,0.5s						
CVER	Cruz Verde, Cu	5.20	220	P	Pn	09 59 28.8	+1.7
VILC	Villavicencio,	5.30	214	P	Pn	09 59 27.9	-0.3
GUY2C	Guyana, Caldas	5.66	235	P	Pn	09 59 34.3	+0.9
	375nm26nm,0.7s						
APAC	Apartado, Choc	5.82	264	P	Pn	09 59 36.0	+0.8
	18nm,0.4s						
CBOC	Ciudad Bolivar	5.88	243	P	Pn	09 59 34.6	-1.5
	6.7nm,0.6s						
PRAC	Prado	6.34	221	P	Pn	09 59 41.8	-0.5
	636nm31nm,0.8s						
GARC	Garzon, Huila	7.90	217	P	Pn	10 00 02.7	-1.3
SJG	San Juan	10.49	25	Pn	Pn	10 00 38.9	-0.4
	2.5nm,0.3s,baz=199,slow=14,SNR=10.0 9.4nm,0.5s						
LPAZ	La Paz	24.82	174	P	P	10 03 35.4	+3.4
	1.2nm,0.8s,baz=341,slow=12,SNR=5.3 1.2nm,0.8s						
SCHQ	Schefferville	46.26	3	LR	LR	10 28 11.5	
	comp=Z,24nm,18.1s,baz=60,slow=39						
ASAR	Alice Springs	152.03	235	PKPbc	PKPbc	10 18 06.5	+1.1
	0.6nm,0.9s,baz=126,slow=2.6,SNR=4.8						
WRA	Warramunga Arr	153.23	242	PKPbc	PKiKP	10 18 11.1	+2.9
	0.2nm,0.5s,baz=108,slow=2.5,SNR=0.9						

NCEDC ***19*** *10:07:44.5±1.2,38.046N±0.009×118.73W±0.01, h6km±3km,Error ellipse: s-maj=1.6km s-min=1.2km az=125.0*

REN ***19*** *10:07:44.7±1.2,38.041N±0.009×118.74W±0.01, h5km±3km,Error ellipse: s-maj=1.5km s-min=1.2km az=124.0*

NEIC 19 10:07:44.8±1.2,38.039N±0.008×118.73W±0.01, h8km±4km,ML3.4/120,ML3.5/64(NCEDC),ML3.8/16(REN), Error ellipse: s-maj=1.5km s-min=1.1km az=115.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHV	Little Huntoon	0.28	40		Pg	10 07 50.3	+0.1
LHV					Sg	10 07 54.8	+0.9
LHV	Little Huntoon	0.28	40	IAML		10 07 56.4	
	comp=N,15μm,0.7s						
LHV				IAML		10 07 57.5	
	comp=E,20μm,0.5s						
MLHM	Little Hot Cre	0.37	191		Pg	10 07 52.3	+0.3
MRCM	Red Rock Canyo	0.41	154		Pg	10 07 52.8	0.0
MCSM	Casa Diablo Ho	0.41	200		Pg	10 07 52.9	+0.1
MEMM	East Mammoth H	0.41	204		Pg	10 07 52.9	+0.1
MDRNC	Doe Ridge	0.41	192		Pg	10 07 53.0	+0.2
MDCM	Deadman Creek	0.41	217		Pg	10 07 52.7	-0.2
MCBM	Casa Benchmark	0.42	199		Pg	10 07 53.0	+0.1
MCBM					Sg	10 07 58.2	-0.2
MLAC	Mammoth, Mammo	0.42	192		Pg	10 07 53.0	+0.1
MLAC	Mammoth, Mammo	0.42	192		Sg	10 07 57.8	-0.6
MMLB	Mammoth Lakes	0.43	208		Pg	10 07 53.3	+0.1
MMLB					Sb	10 08 00.4	-1.1
MGPM	Gravel Pit	0.43	198		Pg	10 07 53.5	+0.2
MDYM	Dry Creek	0.44	211		Pg	10 07 53.6	+0.1
MDYM					Sg	10 08 00.2	+1.0
MCMM	Convict Lake	0.44	195		Pg	10 07 53.4	0.0
MLCM	Laurel Creek C	0.45	199		Pg	10 07 53.6	0.0
MCVM	Convict Lake	0.46	190		Pg	10 07 53.7	0.0
MLIM	Lincoln Peak	0.46	210		Pg	10 07 53.8	0.0
MLIM	Lincoln Peak	0.46	210		Pg	10 07 54.0	+0.2
MINS	Minaret Summit	0.47	214		Pg	10 07 53.7	-0.2
NV08	Mina Array Sit	0.49	41		Pg	10 07 54.2	-0.1
NV08					Sg	10 08 01.2	+0.5
MMPM	Mammoth Pass	0.49	209		Pg	10 07 54.2	-0.1
MMPM	Mammoth Pass	0.49	209		Pg	10 07 54.1	-0.1
MDPB	Devils Postpil	0.49	214		Pg	10 07 54.2	-0.1
MDPB	Devils Postpil	0.49	214		Sg	10 08 01.1	+0.3
MDPB	Devils Postpil	0.49	214	IAML		10 08 01.3	
	comp=E,4μm,0.6s						
MDPB				IAML		10 08 01.6	
	comp=N,2μm,0.4s						
NV09	Mina Array Sit	0.50	38		Pg	10 07 54.5	0.0
NV09					Sg	10 08 01.7	+0.5
NV07	Mina Array Sit	0.51	43		Pg	10 07 54.5	-0.1
NV07					Sg	10 08 02.0	+0.7
NV04	Mina Array Sit	0.51	41		Pg	10 07 54.6	0.0
NV04					Sb	10 08 02.7	-1.1
NV01	Mina Array Sit	0.51	41		Pg	10 07 54.7	-0.1
NV01					Sg	10 08 01.5	-0.1
NVAR	Mina Array Bea	0.51	41		Pg	10 07 54.4	-0.3
NV03	Mina Array Sit	0.52	41		Pg	10 07 54.8	-0.1
NV03					Sg	10 08 01.8	+0.2
NV02	Mina Array Sit	0.52	40		Pg	10 07 54.8	-0.1
NV02					Sg	10 08 02.2	+0.5
NV06	Mina Array Sit	0.52	43		Pg	10 07 54.9	0.0
NV06					Sg	10 08 02.4	+0.6
NV05	Mina Array Sit	0.53	40		Pg	10 07 55.0	-0.1
NV05					Sg	10 08 02.8	+0.6
MCDM	Chidago Canyon	0.54	155		Pg	10 07 55.5	+0.3
COLR	Columbus	0.54	79		Pg	10 07 55.4	+0.1
NV11	Mina Array Sit	0.60	49		Pg	10 07 56.2	-0.1
NV11					Sg	10 08 04.5	+0.2
NV11	Mina Array Sit	0.60	49	IAML		10 08 04.9	
	comp=N,2μm,0.5s						
NV11				IAML		10 08 06.2	
	comp=E,1μm,0.5s						
WAKR	Walker	0.72	310		Pg	10 07 58.5	-0.2
WAKR				IAML		10 08 09.1	
	comp=N,1μm,0.6s						
WAKR				IAML		10 08 09.8	
	comp=E,1μm,0.6s						
WAKR	Walker	0.72	310		Sg	10 08 08.4	+0.2
KCC	Kaiser Creek	0.85	213		Pg	10 08 00.7	-0.5
KCC					Sg	10 08 12.0	-0.2
DSP	Deep Springs	0.90	138		Pg	10 08 01.8	-0.2
DSP					Sg	10 08 14.2	+0.5
EBP	Ebbets Pass	1.01	303		Pg	10 08 03.5	-0.6
EBP					Sg	10 08 17.1	-0.1
TIN	Tinemaha, Big	1.06	158		Pg	10 08 04.9	-0.2
TIN	Tinemaha, Big	1.06	158	IAML		10 08 31.2	
	comp=N,1μm,0.8s						
KVN	Kaiserville	1.12	26		Pg	10 08 05.5	-0.9
LCH	Last Change Ra	1.18	133		Pn	10 08 08.0	+0.2
BUCR	Buckhorn Ranch	1.18	252		Pg	10 08 06.2	-1.3
TPH	Tonopah	1.19	88		Pg	10 08 07.1	-0.5
TPH	Tonopah	1.19	88	IAML		10 08 27.3	
	comp=N,891nm,0.9s						
TPH				IAML		10 08 30.0	
	comp=E,1μm,0.7s						
PNTR	Pine Nut	1.25	327		Pg	10 08 07.9	-0.9
FRI	Friant	1.30	217		Pn	10 08 08.7	-0.6
CMB	Columbia Colle	1.31	270		Pn	10 08 08.3	-1.1
CMB				IAML		10 08 32.3	
	comp=N,745nm,0.6s						
GMN	Gold Mountain	1.38	122		Pn	10 08 10.8	+0.2
GMN	Gold Mountain	1.38	122	IAML		10 08 33.2	
	comp=N,767nm,0.6s						
GMN				IAML		10 08 37.1	
	comp=E,603nm,0.6s						
LEGD	La Grand CA	1.40	234		Pn	10 08 10.3	-0.2
Q09A	Carvers	1.45	56		Pn	10 08 11.6	+0.1
KARE	Kearney REC, C	1.57	203		Pb	10 08 13.5	-0.5
MPK	Martis Peak	1.62	321		Pn	10 08 14.4	+0.6
MPK				IAML		10 08 41.6	
	comp=E,914nm,1.2s						
WELL	Weller Preserv	1.62	285		Pn	10 08 14.1	+0.4
WELL	Weller Preserv	1.62	285	IAML		10 08 36.9	
	comp=N,604nm,0.2s						
WELL				IAML		10 08 42.0	
	comp=E,644nm,0.3s						
CGO	Cerro Gordo	1.66	153		Pn	10 08 15.1	+0.6
CWC	Cottonwood Cre	1.68	162		Pb	10 08 15.6	-0.4
PAHR	Pah Rah Range	1.74	343		Pn	10 08 15.9	+0.4
PAHR				IAML		10 08 42.7	
	comp=E,280nm,0.5s						
PAHR				IAML		10 08 42.7	
	comp=N,376nm,0.8s						
VOG	Valley Oaks Go	1.79	197		Pb	10 08 17.8	-0.1
DONR	Donner Summit	1.81	317		Pb	10 08 18.2	-0.1
SPG2	Springville 2	1.83	181		Pb	10 08 18.2	-0.4
PEAR	Peavine Mounta	1.84	329		Pb	10 08 17.9	-0.9
YUBA	Cisco Grove, Y	1.92	313		Pb	10 08 19.8	-0.4
DAC	Darwin (Calif)	1.98	152		Pb	10 08 21.4	+0.2
AFDM	Forest Hills D	1.98	298		Pn	10 08 19.4	+0.7
AFDM	Forest Hills D	1.98	298	IAML		10 08 49.1	
	comp=E,442nm,0.7s						
LOY	Loyalton	2.00	324		Pb	10 08 22.0	+0.5
MFS	McCloud Flat S	2.04	160		Pn	10 08 20.4	+0.8
WCT	Wildcat Mounta	2.09	126		Pn	10 08 20.6	+0.4
WCT	Wildcat Mounta	2.09	126	IAML		10 08 53.5	
	comp=E,576nm,0.6s						
WCT				IAML		10 08 54.2	
	comp=N,517nm,0.7s						
MTOS	Mt Oso, Westle	2.13	256		Pn	10 08 21.9	+1.3
BMSM	Mercy Hot Spri	2.15	231		Pb	10 08 23.4	-0.5
FURC	Furnace Creek,	2.16	136		Pn	10 08 21.4	+0.3
FURC				IAML		10 08 59.3	
	comp=N,529nm,0.6s						
SLD	San Luis Dam	2.20	245		Pb	10 08 23.5	-1.3
MPMC	Manual Prospec	2.21	153	Pn	Pn	10 08 23.0	+1.0
BEKR	Beckworth	2.22	326		Pn	10 08 22.8	+0.6
BEKR				IAML		10 08 56.9	
	comp=E,227nm,0.6s						
CSTL	Corral Hollow	2.23	261		Pn	10 08 23.5	+1.5
HPCM	Pacheco Lake	2.25	245		Pb	10 08 24.2	-1.5
TPNV	Topopah Spring	2.25	118		Pn	10 08 23.1	+0.6
TPNV	Topopah Spring	2.25	118	IAML		10 09 03.6	
	comp=E,323nm,0.6s						
BABI	Panoche/Babies	2.28	229		Pb	10 08 25.4	-0.7
PACP	Pacheco Peak	2.28	244		Pb	10 08 25.4	-0.9
WNMM	Nine Mile Cany	2.29	163		Pb	10 08 26.6	+0.3
WASM	Alta Sierra Ca	2.30	177		Pb	10 08 26.6	0.0
BBGB	Big Mountain B	2.35	232		Pn	10 08 25.2	+1.4
GHS	Gilroy Hot Spr	2.36	247		Pn	10 08 25.4	+1.5
SDH	Striped Hills	2.36	125		Pn	10 08 24.9	+0.9
HFEM	San Felipe	2.37	244		Pb	10 08 26.3	-1.4
WORM	Onyx Ranch	2.37	170		Pb	10 08 27.2	-0.6
AVNL	Avenal, CA USA	2.38	212		Pn	10 08 25.7	+1.7
ISA	Isabella, Lake	2.38	175		Pn	10 08 26.0	+1.8
ISA				IAML		10 09 00.5	
	comp=N,228nm,0.5s						
ISA				IAML		10 09 02.9	
	comp=E,215nm,0.6s						
S11A	Rachel	2.39	99		Pn	10 08 24.3	-0.1
CPY	CP-1	2.40	117		Pn	10 08 25.1	+0.6
MHC	Mount Hamilton	2.41	254		Pn	10 08 25.2	+0.5
MHC				IAML		10 09 02.6	
	comp=E,318nm,0.6s						
WENL	Wente Vineyard	2.43	261		Pb	10 08 28.9	+0.1
LRV	Little Rabbit	2.44	229		Pg	10 08 30.4	-1.0
BVL	Bear Valley	2.45	234		Pb	10 08 27.5	-1.5
PMPB	Monarch Peak	2.46	223	Pn	Pn	10 08 25.8	+0.5
CADM	Anderson Res.	2.46	250		Pb	10 08 27.9	-1.3
PSMM	Smith Mountain	2.47	218		Pn	10 08 27.4	+2.0
SRTC	Snort	2.47	161		Pb	10 08 30.2	+0.7
GWY	Greenwater Val	2.48	138		Pn	10 08 25.8	+0.2
GWY	Greenwater Val	2.48	138	IAML		10 09 09.3	
	comp=E,165nm,0.9s						
BDM	Black Diamond	2.48	269		Pb	10 08 28.1	-1.5
BJOM	Mount Johnson	2.50	236		Pn	10 08 27.1	+1.5
MHR	Mount Hamilton	2.50	255		Pn	10 08 27.4	+1.7
CALM	Calaveras Res.	2.50	257		Pn	10 08 27.3	+1.5
SAO	San Andreas Ge	2.51	240	Pn	Pn	10 08 26.3	+0.4
TRC	Taylor Ranch	2.51	214		Pn	10 08 27.7	+1.7
CSR	Chase Ranch	2.51	245		Pn	10 08 27.9	+2.0
AMDNV	Amargosa	2.52	128		Pn	10 08 27.0	+1.0
OHCM	Honcut	2.52	302		Pn	10 08 26.5	+0.6
RUSS	Russell Ranch	2.52	283		Pb	10 08 30.0	-0.3
HSFM	Saint Francis	2.52	242		Pb	10 08 29.5	-0.8
PKD	Bear Valley Ra	2.54	215		Pb	10 08 29.1	-1.6
PKD	Bear Valley Ra	2.54	215	IAML		10 09 08.1	
	comp=N,126nm,0.6s						
PKD				IAML		10 09 22.2	
	comp=E,127nm,1.1s						
FRP	Fremont Peak	2.54	241		Pn	10 08 27.8	+1.4
FRP	Fremont Peak	2.54	241		Pb	10 08 28.6	-2.1
QSM	Queen of Sheba	2.55	144		Pn	10 08 26.7	+0.3
QSM				IAML		10 09 10.1	
	comp=N,137nm,1.1s						
QSM				IAML		10 09 10.9	
	comp=E,157nm,1.4s						
GHIB	Gold Hill	2.56	211		Pn	10 08 27.9	+1.3
NADM	Allendale	2.59	280		Pb	10 08 30.9	-0.5
OSTM	Stimpson Lane	2.61	302		Pb	10 08 31.5	-0.2
ORV	Oroville	2.64	306		Pb	10 08 32.1	-0.2
ORV	Oroville	2.64	306	IAML		10 09 08.4	
	comp=N,153nm,0.4s						
ORV				IAML		10 09 09.1	
	comp=E,146nm,0.6s						
BMN	Battle Mountai	2.66	26		Pn	10 08 27.8	-0.3
BMN				IAML		10 09 09.8	
	comp=E,200nm,0.6s						
BMN				IAML		10 09 11.6	
	comp=N,212nm,0.5s						
BPCNC	Pine Canyon	2.73	239		Pb	10 08 32.0	-1.9
OSUM	Sutter Buttes	2.74	298		Pb	10 08 34.6	+0.6
PCCM	Crazy Canyon	2.75	226		Pb	10 08 32.5	-1.7
TSCN	Private Proper	2.81	208		Pb	10 08 33.2	-2.0
HULI	Fort Hunter Li	2.84	226	Pn

IDC ***19*** *10:09:53.0±0.9, 33.°02S×68.°48W, h0km, mb3.9/5, mbtmp3.7/8, ML3.7/3, MS3.2/3, Error ellipse: s-maj=31.2km s-min=13.4km az=96.0*

SJA ***19*** *10:09:53.1±0.7, 33.°19S×68.°32W, h25km±3km, ML4.1, MW4.1*

NEIC ***19*** *10:09:57.1±2.1, 32.°89S±0.°04×68.°17W±0.°04, h10km±1km, mb4.3/7, Error ellipse: s-maj=7.0km s-min=5.3km az=213.0*

ISC 19 10:09:54.1±1.3, **33.°01S**±0.°04×**68.°27W**±0.°03, **h3**km±9km, **n72**, σ1°56/87, **mb4.1**/7, **Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAGR	**Agrelo**	**0.48**	**261**	*e*P		**Pg**	**10 10 00.6**	**-2.7**
AAGR				*e*S		**Sg**	**10 10 06.0**	**-3.5**
ARCO	**CERRO ARCO**	**0.58**	**286**	*e*P		**Pg**	**10 10 05.9**	**+0.5**
ARCO				*e*S		**Sg**	**10 10 15.2**	**+2.3**
ACAN	**Cantantal**	**1.17**	**51**	*e*P		**Pn**	**10 10 18.8**	**+1.4**
ACAN				IAML			10 10 40.1	
	comp=Z,13μm,0.5s							
AUSP	**Uspallata**	**1.23**	**309**	*e*P		**Pn**	**10 10 17.3**	**-1.1**
CFA	**Coronel Fontan**	**1.40**	**1**	Pg		**Pn**	**10 10 20.2**	**-0.3**
	comp=Z,38nm,0.3s,baz=181,slow=17,SNR=1178							
CFA				Lg		Lg	10 10 37.4	
	comp=Z,209nm,0.3s,baz=250,slow=12,SNR=34							
RTLS	**Leoncito**	**1.49**	**324**	*e*P		**Pn**	**10 10 21.9**	**-0.1**
RTLS				IAML			10 10 46.9	
	comp=Z,2μm,0.4s							
ZON	**Zonda**	**1.50**	**346**	*e*P		**Pn**	**10 10 21.8**	**-0.2**
ZON				IAML			10 10 49.4	
	comp=Z,1μm,0.4s							
ZON	**Zonda**	**1.50**	**346**			**Pn**	**10 10 21.8**	**-0.2**
ZON				Sn		**Sn**	**10 10 39.5**	**-2.5**
RTLL	**Cerro Villicun**	**1.68**	**354**	*e*P		**Pn**	**10 10 25.3**	**+0.8**
RTLL				IAML			10 11 01.1	
	comp=Z,2μm,0.6s							
MT13	**San Alfonso**	**1.84**	**246**			**Pg**	**10 10 29.8**	**+0.4**
MT13				Sn		**Sg**	**10 10 54.2**	**+0.9**
MT16	**CCHEN**	**1.94**	**257**			**Pb**	**10 10 30.9**	**+0.9**
MT16				Sn		**Sg**	**10 10 56.5**	**+0.1**
VA03	**San Esteban**	**1.94**	**277**	*e*P		**Pb**	**10 10 30.4**	**+0.3**
VA03				IAML			10 10 58.3	
	comp=Z,2μm,0.7s							
VA03	**San Esteban**	**1.94**	**277**			**Pb**	**10 10 30.6**	**+0.5**
VA03				Sn		**Sb**	**10 10 55.3**	**+0.6**
MT03	**Universidad Ad**	**1.94**	**255**			**Pg**	**10 10 31.4**	**+0.1**
MT03				Sn		**Sg**	**10 10 57.4**	**+0.9**
PEL	**Peldehue**	**2.03**	**266**	*e*P		**Pn**	**10 10 27.1**	**-2.2**
PEL				*e*P		**Pb**	**10 10 32.5**	**+0.8**
PEL				*e*S		**Sb**	**10 10 59.3**	**+1.9**
PEL	**Peldehue**	**2.03**	**266**			**Pb**	**10 10 32.1**	**+0.4**
PEL				Sn		**Sb**	**10 10 58.0**	**+0.6**
MT05	**Renca**	**2.11**	**259**			**Pb**	**10 10 34.2**	**+1.2**
BO04	**La Punta**	**2.19**	**243**			**Pg**	**10 10 36.0**	**-0.1**
BO04				Sn		**Sg**	**10 11 04.4**	**0.0**
MRA	**San Martin**	**2.23**	**75**	*e*P		**Pn**	**10 10 32.5**	**+0.5**
MRA				*e*S		**Sb**	**10 11 01.1**	**-2.0**
MRA				IAML			10 11 09.0	
	comp=Z,884nm,0.6s							
MT09	**Talagante**	**2.40**	**251**			**Pb**	**10 10 38.7**	**+0.7**
MT02	**Curacav**	**2.42**	**263**			**Pb**	**10 10 38.3**	**0.0**
AVFE	**Valle Fertil**	**2.44**	**17**	*e*P		**Pn**	**10 10 36.8**	**+1.8**
AVFE				*e*S		**Sb**	**10 11 09.8**	**+0.5**
AVFE				IAML			10 11 10.7	
	comp=Z,771nm,0.3s							
CO04	**Los Peladeros**	**2.48**	**292**			**Pb**	**10 10 39.4**	**-0.2**
ACCO	**Cerro Coronel**	**2.51**	**344**	*e*P		**Pn**	**10 10 38.2**	**+2.1**
ACCO				*e*S		**Sb**	**10 11 11.4**	**+0.1**
ACCO				IAML			10 11 22.7	
	comp=Z,499nm,0.8s							
MT01	**Popeta**	**2.64**	**250**			**Pb**	**10 10 41.6**	**-0.4**
BO01	**Tunca**	**2.72**	**239**			**Pb**	**10 10 43.4**	**-0.1**
BO02	**Sierra Bellavi**	**2.75**	**229**			**Pb**	**10 10 44.7**	**+0.8**
VA05	**Santo Domingo**	**2.88**	**256**			**Pb**	**10 10 44.6**	**-1.5**
ACDV	**Cuesta del Vie**	**2.92**	**345**	*e*P		**Pn**	**10 10 41.6**	**-0.1**
ACDV				*e*S		**Sn**	**10 11 18.1**	**+0.8**
ACDV				IAML			10 11 33.7	
	comp=Z,401nm,0.9s							
CO02	**Combarbal**	**2.94**	**307**			**Pn**	**10 10 44.1**	**+2.4**
CO03	**El Pedregal**	**2.99**	**316**			**Pn**	**10 10 44.9**	**+2.5**
AROD	**Rodeo**	**3.02**	**340**	*e*P		**Pn**	**10 10 45.2**	**+2.2**
AROD				*e*S		**Sn**	**10 11 22.1**	**+2.3**
CO01	**Juntas del Tor**	**3.40**	**332**			**Pn**	**10 10 51.4**	**+3.1**
TCA	**Tanti**	**3.53**	**63**	*e*P		**Pn**	**10 10 52.4**	**+2.4**
TCA				IAML			10 11 52.4	
	comp=Z,418nm,0.6s							
GO04	**Tololo Observa**	**3.56**	**322**			**Pn**	**10 10 52.6**	**+2.1**
GO05	**Hualane**	**3.64**	**236**			**Pb**	**10 10 55.1**	**-4.0**
ACLC	**CERRO LA CRUZ**	**3.75**	**18**	*e*P		**Pn**	**10 10 55.1**	**+2.1**
ACLC				*e*S		**Sg**	**10 11 52.4**	**-2.1**
ACLC				IAML			10 11 59.2	
	comp=Z,317nm,0.6s							
ML02	**Panimavida**	**3.79**	**223**			**Pn**	**10 10 56.7**	**+3.4**
VCA	**Vinchina**	**4.26**	**1**	*e*P		**Pn**	**10 11 02.1**	**+2.1**
VCA				IAML			10 12 16.7	
	comp=Z,323nm,0.5s							
BI02	**San Fabin de**	**4.40**	**213**			Pb	10 11 06.3	-5.9
LCO	**Las Campanas**	**4.50**	**332**			**Pn**	**10 11 04.3**	**+0.9**
AC05	**El Transito**	**4.50**	**337**			**Pn**	**10 11 05.5**	**+2.2**
TINO	**Tinogasta**	**4.97**	**7**	*e*P		**Pn**	**10 11 12.5**	**+2.8**
TINO				IAML			10 12 53.0	
	comp=Z,129nm,0.9s							
AC04	**Llanos de Chal**	**5.37**	**332**			**Pn**	**10 11 16.2**	**+1.1**
GO03	**Copiapo**	**5.66**	**342**	Pn		**Pn**	**10 11 20.9**	**+1.7**
AC02	**Maricunga**	**6.20**	**353**			**Pn**	**10 11 29.0**	**+2.0**
TRQA	**Tornquist**	**7.18**	**136**			**Pn**	**10 11 42.9**	**+2.9**
PB05	**IPOC Station P**	**10.26**	**350**	Pn		**Pn**	**10 12 23.9**	**+1.6**
CPUP	**Villa Florida**	**11.61**	**58**	Pn		**Pn**	**10 12 42.8**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=4.5							
CPUP				Lg		Lg	10 16 09.5	
	comp=Z,0.3nm,0.3s,baz=323,slow=16,SNR=4.6							
CPUP				LR		LR	10 17 33.1	
	comp=Z,76nm,18.4s,baz=256,slow=39							
	comp=Z,0.5nm,0.3s							
CPUP	**Villa Florida**	**11.61**	**58**			**Pn**	**10 12 40.9**	**+0.3**
PB16	**IPOC Station P**	**14.66**	**355**	Pn		**Pn**	**10 13 23.0**	**+0.1**
LPAZ	**La Paz**	**16.65**	**0**	Pn		**Pn**	**10 13 49.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=167,slow=9.9,SNR=4.0							
LPAZ				LR		LR	10 20 51.8	
	comp=Z,53nm,18.1s,baz=152,slow=40							
	comp=Z,1.5nm,0.8s							
LPAZ	**La Paz**	**16.65**	**0**			**Pn**	**10 13 49.0**	**-0.1**
SIV	**San Ignacio**	**18.15**	**23**	P		**P**	**10 14 08.1**	**+0.4**
	baz=206,slow=16,SNR=2.4							
	comp=Z,0.5nm,0.5s							
SPB	**Sao Paulo**	**20.57**	**68**	P		**P**	**10 14 33.5**	**-0.6**
SPB				IAmb		IAmb	10 14 47.0	
	comp=Z,13nm,1.2s							
SNAA	**Sanae**	**51.33**	**158**	P		**P**	**10 19 00.7**	**+1.4**
SNAA	**Sanae**	**51.33**	**158**	P		**P**	**10 18 57.6**	**-1.7**
	comp=Z,2.9nm,0.9s,baz=284,slow=8.3,SNR=6.6							
	comp=Z,2.9nm,0.9s							
TROLL	**Troll, Antarti**	**53.04**	**158**	P		**P**	**10 19 13.3**	**+1.1**
QSPA	**South Pole Qui**	**57.23**	**180**	P		**P**	**10 19 43.2**	**+0.7**
	comp=Z,1.7nm,1.0s,baz=100,slow=4.4,SNR=3.0							
	comp=Z,1.7nm,1.0s							
QSPA	**South Pole Qui**	**57.23**	**180**	P		**P**	**10 19 43.8**	**+1.3**
QSPA				IAmb		IAmb	10 19 49.7	
	comp=Z,3.9nm,1.4s							
HNDO	**Hondo**	**68.79**	**331**	P		**P**	**10 20 59.4**	**-0.2**
HNDO				IAmb		IAmb	10 21 00.1	
	comp=Z,2.2nm,0.8s							
TXAR	**Lajitas Array**	**70.50**	**328**	P		**P**	**10 21 09.1**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=154,slow=7.2,SNR=4.6							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**70.50**	**328**	P		**P**	**10 21 09.2**	**-1.0**
WVT	**Waverly**	**71.17**	**343**	P		**P**	**10 21 12.8**	**-1.2**
APMT	**Aspermont**	**72.48**	**332**	P		**P**	**10 21 21.3**	**-0.6**
APMT				IAmb		IAmb	10 21 21.8	
	comp=Z,2.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**80.92**	**68**	P		**P**	**10 22 09.4**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=262,slow=4.7,SNR=6.6							
	comp=Z,1.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**80.92**	**68**	P		**P**	**10 22 10.0**	**-0.1**
TORD				IAmb		IAmb	10 22 17.9	
	comp=Z,1.2nm,0.8s							
PDAR	**Pinedale Array**	**84.37**	**331**	P		**P**	**10 22 26.1**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=149,slow=6.5,SNR=4.3							
	comp=Z,0.3nm,0.6s							
FRB	**Frobisher Bay**	**96.43**	**360**	LR		LR	11 11 16.4	
	comp=Z,18nm,18.4s,baz=324,slow=38							
KURBB	**Kurchatov Arra**	**149.98**	**44**	PKPbc		**PKiKP**	**10 29 46.0**	**-0.4**
	comp=Z,3.4nm,0.2s,baz=300,slow=3.2,SNR=6.2							
ZALV	**Zalesovo Beam**	**151.67**	**34**	PKPbc		**PKiKP**	**10 29 49.1**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=310,slow=3.5,SNR=16							
MKAR	**Makanchi Array**	**153.73**	**50**	PKPbc		**PKPbc**	**10 29 53.5**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=237,slow=3.6,SNR=4.5							

NDI ***19*** *10:15:44.4±2.7, 30.°64N×95.°11E, h10km, mb4.8, ML4.1, MW4.5, Presumed earthquake*

MOS ***19*** *10:15:45.5±0.9, 30.°36N×94.°88E, h11km, mb5.2/65, Error ellipse: s-maj=6.2km s-min=3.1km az=124.7*

IDC ***19*** *10:15:45.3±0.5, 30.°33N×94.°88E, h0km, mb4.6/29, mbtmp4.7/34, ML4.5/5, MS3.5/25, Error ellipse: s-maj=14.5km s-min=10.8km az=35.0*

BJI ***19*** *10:15:46.6, 30.°36N×94.°90E, h6km, mB4.7/15, mb4.6/56, ML4.3/8, Ms4.3/55, Ms7 4.2/51*

NEIC ***19*** *10:15:47.7±1.2, 30.°41N±0.°07×94.°86E±0.°08, h10km±1km, mb5.0/116, Error ellipse: s-maj=13.2km s-min=10.7km az=29.0*

GFZ ***19*** *10:15:48.6±0.2, 30.°N±3.°×9.°5E±.°, h10km, M4.7/23, mb5.0/23*

BGR ***19*** *10:15:49.9, 29.°52N×94.°52E, h33km, mb5.0, Ms3.5*

ISC 19 10:15:49.3±0.9, **30.°41N**±0.°04×**94.°85E**±0.°03, **h22**km±8km, **n847**, σ1°02/851, **mb4.9**/199, **MS3.5**/30, **49C-31D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**3.19**	**164**	*ex*		x	10 16 14.9	
LKP				*e*S		**Sn**	**10 17 15.4**	**-0.1**
LSA	**Lhasa**	**3.28**	**258**	P		**Pn**	**10 16 41.0**	**+1.1**
LSA	**Lhasa**	**3.28**	**258**	Pn		**Pn**	**10 16 41.0**	**+1.1**
TAWA	**Tawang**	**3.83**	**224**	*e*P		**Pn**	**10 16 49.7**	**+2.3**
TAWA				*i* x		x	10 16 58.1	
TAWA				IAML			10 17 02.2	
	comp=N,574nm,0.8s							
TAWA				IAML			10 17 03.1	
	comp=E,632nm,1.0s							
TAWA				*e*S		**Sn**	**10 17 34.0**	**+2.0**
TAWA				IAML			10 17 53.6	
	comp=E,528nm,0.9s							
TAWA				IAML			10 17 54.1	
	comp=N,536nm,1.0s							
KOHI	**KOHIMA**	**4.72**	**188**	*e*P		**Pn**	**10 16 59.2**	**-0.1**
KOHI				*i* x		x	10 17 12.3	
KOHI				*ex*		x	10 17 49.8	
KOHI				*ex*		x	10 18 17.3	
KOHI				IAML			10 18 31.2	
	comp=N,434nm,1.1s							
KOHI				IAML			10 18 31.4	
	comp=E,654nm,1.5s							
SHL	**Shillong**	**5.49**	**209**	P		**Pn**	**10 17 09.4**	**-0.6**
SHL	**Shillong**	**5.49**	**209**			**Pn**	**10 17 09.4**	**-0.6**
SHL	**Shillong**	**5.49**	**209**	*e*P		**Pn**	**10 17 09.5**	**-0.6**
SHL				*i* x		x	10 17 27.3	
SHL				*e*S		**Sn**	**10 18 11.6**	**-1.0**
SHL				*i* x		x	10 18 37.5	
IMP	**Imphal**	**5.62**	**188**	*e*P		**Pn**	**10 17 11.6**	**-0.1**
IMP				*ex*		x	10 17 35.8	
IMP				*i* x		x	10 17 36.4	
GOMU	**GeErMu**	**5.77**	**360**	Pn		**Pn**	**10 17 14.9**	**+0.9**
GOMU				Sn		**Sn**	**10 18 20.3**	**+0.6**
MORE	**Moreh**	**6.17**	**185**			**Pn**	**10 17 18.4**	**-0.7**
TNCH	**TengChong**	**6.27**	**148**	Pn		**Pn**	**10 17 21.3**	**+0.6**
TNCH				Sn		**Sn**	**10 18 33.1**	**+1.3**
TNCH				SMN				
	comp=E,410nm,1.4s							
TNCH				SME				
	comp=E,420nm,1.5s							
TNCH				L	L			
	comp=E,2μm,5.6s							
TNCH				L	L			
	comp=E,2μm,5.2s							
TNCH				L	L			
	comp=E,860nm,8.1s							
PZH	**PanZhiHua**	**7.21**	**121**	Pn		**Pn**	**10 17 35.8**	**+2.3**
PZH				Sn		**Sn**	**10 18 56.3**	**+1.5**
PZH				L	L			
	comp=E,2μm,8.2s							
PZH				L	L			
	comp=E,2μm,7.8s							
PZH				L	L			
	comp=E,1μm,7.7s							
EVN	**Everest**	**7.43**	**253**			**Pn**	**10 17 37.1**	**0.0**
EVN	**Everest**	**7.43**	**253**	P		**Pn**	**10 17 37.8**	**+0.6**
BRDH	**Bariadhala**	**8.22**	**201**	Pn		**Pn**	**10 17 45.6**	**-1.7**
	comp=E,48nm,0.3s,baz=73,slow=9.1,SNR=4.8							
	comp=E,106nm,0.4s							
KMI2	**Kunming**	**8.74**	**125**	P		**Pn**	**10 17 55.5**	**+0.9**
KMI2				S		**Sn**	**10 19 37.0**	**+4.4**
KMI2				pmax	pmax			
	comp=E,17nm,1.1s							
KMI2				L	L			
	comp=E,2μm,4.7s							
KMI2				L	L			
	comp=E,1μm,5.4s							
KMI2				L	L			
	comp=E,860nm,8.3s							
LZDM	**Lanzhou Array**	**9.25**	**51**	Pn		**Pn**	**10 18 00.8**	**-0.8**
	baz=231,slow=9.4							
	comp=E,16nm,0.6s							
LZH	**Lanzhou**	**9.42**	**51**	*e*P		**Pn**	**10 18 04.6**	**+0.7**
LZH				sP			10 18 10.8	
LZH				pmax	pmax			
	comp=E,40nm,0.8s							
LZH				L	L			
	comp=E,1μm,6.0s							
LZH				L	L			
	comp=E,1μm,6.0s							
LZH				L	L			
	comp=E,1μm,8.6s							
GTA2	**Gaotai**	**9.91**	**23**	*e*P		**Pn**	**10 18 10.3**	**-0.2**
GTA2				pP			10 18 14.8	
GTA2				pmax	pmax			
	comp=E,4.0nm,0.8s							
GTA2				L	L			
	comp=E,770nm,9.3s							
GTA2				L	L			
	comp=E,650nm,7.6s							
GTA2				L	L			
	comp=E,890nm,9.3s							
NPW	**Naypyitaw**	**10.65**	**173**	P		**Pn**	**10 18 19.5**	**-1.2**
GYA	**Guiyang**	**11.12**	**108**	⇓P		**Pn**	**10 18 27.9**	**+0.8**
GYA				pmax	pmax			
	comp=E,100nm,1.1s							
CHTO	**Chiang Mai**	**12.13**	**161**	P		**Pn**	**10 18 42.5**	**+1.6**
CHTO	**Chiang Mai**	**12.13**	**161**	P		**Pn**	**10 18 40.4**	**-0.5**
CHTO	**Chiang Mai**	**12.13**	**161**			**Pn**	**10 18 40.4**	**-0.5**
CHTO	**Chiang Mai**	**12.13**	**161**	P		**Pn**	**10 18 41.2**	**+0.3**
CHTO	**Chiang Mai**	**12.13**	**161**	P		**Pn**	**10 18 41.5**	**+0.6**
SLVN	**Son La**	**12.17**	**136**	P		**Pn**	**10 18 43.9**	**+2.5**
XAN	**Xi'an**	**12.45**	**69**	P		**Pn**	**10 18 43.1**	**-2.2**
XAN				pmax	pmax			
	comp=E,7.0nm,1.4s							
XAN				L	L			
	comp=E,640nm,6.5s							
XAN				L	L			
	comp=E,810nm,7.2s							
XAN				L	L			
	comp=E,630nm,6.2s							
CM31	**Chiang Mai Arr**	**12.47**	**162**	Pn		**Pn**	**10 18 45.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**12.47**	**162**	Pn		**Pn**	**10 18 44.1**	**-1.4**
	comp=E,1.1nm,0.3s,baz=332,slow=12,SNR=46							
	comp=E,9.4nm,0.9s							
CMAR	**Chiang Mai Arr**	**12.47**	**162**	P		**Pn**	**10 18 45.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**12.47**	**162**			**Pn**	**10 18 45.3**	**-0.2**
ENH	**Enshi**	**12.65**	**87**	P		Pn	10 18 52.9	+4.9
ENH	**Enshi**	**12.65**	**87**	Pn		**Pn**	**10 18 47.1**	**-0.9**
HNLY	**HANLEY**	**13.74**	**284**	*ex*		x	10 19 06.1	
WMQ	**Urumqi**	**14.54**	**339**	*e*P		**Pn**	**10 19 13.3**	**-0.5**
WMQ				pP		P	10 19 22.1	+1.9
WMQ				sP			10 19 26.8	
WMQ				pmax	pmax			
	comp=E,12nm,0.7s							
WMQ				pmax	pmax			
	comp=E,67nm,3.7s							
WMQ				L	L			
	comp=E,570nm,9.1s							
WMQ				L	L			
	comp=E,440nm,11.7s							
RAGD	**RAYAGADA**	**15.17**	**225**	*ex*		x	10 19 20.2	
LYN	**LuoYang**	**15.43**	**70**	P		**Pn**	**10 19 21.6**	**-4.0**
LYN				sP		P	10 19 30.3	+0.3
LYN				pmax	pmax			
	comp=E,11nm,0.8s							
LYN				L	L			
	comp=E,460nm,6.9s							
LYN				L	L			
	comp=E,350nm,8.9s							
LYN				L	L			
	comp=E,660nm,10.2s							
BTO2	**Baotou**	**15.97**	**46**	*e*P		**Pn**	**10 19 31.1**	**-1.6**
BTO2				pP		**P**	**10 19 35.3**	**-0.9**
BTO2				S		**Sn**	**10 22 28.0**	**-1.2**
BTO2				pmax	pmax			
	comp=E,32nm,0.7s							
BTO2				pmax	pmax			
	comp=E,270nm,4.1s							
BTO2				L	L			
	comp=E,730nm,9.0s							
BTO2				L	L			
	comp=E,660nm,8.2s							
BTO2				L	L			
	comp=E,1μm,11.2s							
THN	**Thein Dam**	**16.42**	**282**	*e*P		**Pn**	**10 19 36.9**	**-1.6**
THN				IAmb		IAmb	10 19 39.1	
	comp=Z,33nm,1.1s							
THN				*i* x		x	10 19 42.0	
WUS	**Wushi**	**16.61**	**315**	Pn		**Pn**	**10 19 40.1**	**-0.8**
WHN	**Wuhan**	**16.82**	**85**	⇑P		**Pn**	**10 19 42.8**	**-0.6**
WHN				pP		**pP**	**10 19 51.5**	**-1.3**
WHN				pmax	pmax			
	comp=Z,130nm,0.9s							
WHN				L	L			
	comp=Z,2μm,10.5s							
WHN				L	L			
	comp=Z,960nm,8.9s							
WHN				L	L			
	comp=Z,2μm,10.0s							
NGP	**Nagpur**	**16.93**	**241**	*e*P		**P**	**10 19 46.8**	**0.0**
NGP				IAmb		IAmb	10 19 47.6	
	comp=Z,33nm,0.8s							
HHC	**Hu-ho-hao-te**	**17.09**	**48**	*e*P		**P**	**10 19 49.1**	**+0.5**
HHC				pmax	pmax			
	comp=Z,21nm,0.8s							
HHC				pmax	pmax			
	comp=Z,61nm,3.7s							
HHC				L	L			
	comp=Z,410nm,10.2s							
HHC				L	L			
	comp=Z,230nm,10.2s							
HHC				L	L			
	comp=Z,390nm,11.0s							
SHLS	**Shalkode**	**17.68**	**320**	*e*P		**Pn**	**10 19 52.2**	**-2.0**
SHLS	**Shalkode**	**17.68**	**320**	*e*P		**Pn**	**10 19 52.2**	**-2.0**
QIZ	**Qiongzhong**	**17.70**	**126**	P		**P**	**10 19 55.3**	**0.0**
QIZ				S		**S**	**10 23 14.8**	**-3.3**
QIZ				L	L			
	comp=Z,210nm,6.3s							
QIZ				L	L			
	comp=Z,370nm,6.7s							
QIZ				L	L			
	comp=Z,540nm,8.9s							
PDGK	**Podgornoye**	**17.77**	**321**	P		**Pn**	**10 19 55.0**	**-0.4**
PDGK	**Podgornoye**	**17.77**	**321**	P		**Pn**	**10 19 55.0**	**-0.4**
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**Pn**	**10 19 54.6**	**-1.2**
TARG				pmax	pmax			
	comp=Z,108nm,1.1s							
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**Pn**	**10 19 54.6**	**-1.2**
TARG				IAmb		IAmb	10 20 05.2	
	comp=Z,108nm,1.1s							
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**P**	**10 19 59.8**	**+3.3**
PRZ	**Przheval'sk**	**17.86**	**317**	P		**Pn**	**10 19 56.3**	**-0.2**
PRZ				pmax	pmax			
	comp=Z,220nm,1.2s							
PRZ	**Przheval'sk**	**17.86**	**317**	P		**Pn**	**10 19 56.3**	**-0.2**
PRZ				IAmb		IAmb	10 20 02.5	
	comp=Z,220nm,1.2s							
PRZ	**Przheval'sk**	**17.86**	**317**	P		**P**	**10 19 58.9**	**+1.7**
HNS	**HongShan**	**17.88**	**62**	⇑P		**Pn**	**10 19 56.3**	**-0.3**
HNS				pmax	pmax			
	comp=Z,22nm,1.0s							
HNS				L	L			
	comp=Z,300nm,8.8s							
HNS				L	L			
	comp=Z,320nm,12.0s							
HNS				L	L			
	comp=Z,430nm,11.9s							
UZB	**Uzynbulak**	**17.91**	**320**	*e*P		**P**	**10 19 58.0**	**+0.4**
UZB	**Uzynbulak**	**17.91**	**320**	*e*P		**P**	**10 19 58.1**	**+0.4**
KSH2	**Kashi**	**18.05**	**304**	P		**Pn**	**10 19 58.8**	**-0.1**
KSH2				pmax	pmax			
	comp=Z,24nm,1.0s							
KSH2				pmax	pmax			
	comp=Z,150nm,7.2s							
KSH2				L	L			
	comp=Z,870nm,18.6s							
KSH2				L	L			
	comp=Z,450nm,21.6s							
ASAI	**AK-SAY(Kyrgyzs**	**18.18**	**310**	P		**P**	**10 20 01.3**	**+0.5**
SATY	**Saty**	**18.21**	**318**	*e*P		**P**	**10 20 01.4**	**+0.6**
SATY	**Saty**	**18.21**	**318**	*e*P		**P**	**10 20 01.5**	**+0.6**
AJM	**Ajmer**	**18.22**	**262**	*e*P		**Pn**	**10 19 59.3**	**-1.6**
AJM				IAmb		IAmb	10 20 03.3	
	comp=Z,141nm,1.3s							
KPKS	**Kokpek**	**18.31**	**320**	*e*P		**P**	**10 20 02.5**	**+0.6**
KPKS	**Kokpek**	**18.31**	**320**	*e*P		**P**	**10 20 02.5**	**+0.6**
NIL	**Nilore**	**18.59**	**286**	P		**P**	**10 20 02.9**	**-2.2**
NIL				pmax	pmax			
	comp=Z,393nm,1.9s							
NIL	**Nilore**	**18.59**	**286**			**P**	**10 20 02.9**	**-2.2**
NIL	**Nilore**	**18.59**	**286**	P		**P**	**10 20 02.6**	**-2.5**
ZSN	**Zaisan**	**18.68**	**338**	*e*P		**Pn**	**10 20 06.7**	**+0.4**
ZSN	**Zaisan**	**18.68**	**338**	*e*P		**Pn**	**10 20 06.8**	**+0.4**
MK31	**Makanchi Array**	**19.04**	**333**	*c* iP		**P**	**10 20 08.9**	**-0.9**
MKAR	**Makanchi Array**	**19.04**	**333**	P		**P**	**10 20 09.1**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=143,slow=12,SNR=68							
MKAR				LR		LR	10 28 01.5	
	comp=Z,72nm,19.7s,baz=146,slow=38							
	comp=Z,13nm,0.8s							
MKAR	**Makanchi Array**	**19.04**	**333**	P		**P**	**10 20 08.8**	**-1.0**
**TNSS

comp=Z,74nm,1.2s
KUU Kurty 19.91 318 *e*P **Pn 10 20 20.6 -0.6**
comp=Z,74nm,1.2s
DGZ Jazzator, Alta 20.07 346⇓*e*P **P 10 20 22.1 +0.9**
DGZ pmax pmax
comp=Z,45nm,1.1s
UCH Uchtor 20.13 311 P Pn 10 20 24.0 -0.2
SNR=15
KNGR Kungurtug, Tuv 20.27 5⇓*e*P Pn 10 20 25.3 -0.1
AAK Ala-Archa 20.35 312 P Pn 10 20 25.7 -0.7
comp=Z,140nm,1.2s,baz=125,slow=6.7,SNR=29
comp=Z,140nm,1.2s
AAK Ala-Archa 20.35 312 P Pn 10 20 26.6 +0.1
SNR=42
AAK Ala-Archa 20.35 312*de*P Pn 10 20 26.0 -0.5
AAK pmax pmax
comp=Z,159nm,1.2s
AAK Ala-Archa 20.35 312 P **P 10 20 24.4 0.0**
AAK IAmb IAmb 10 20 31.1
comp=Z,127nm,1.1s
AAK Ala-Archa 20.35 312 P Pn 10 20 26.8 +0.3
FRU1 Bishkek 20.35 313 P **P 10 20 24.3 0.0**
FRU1 pmax pmax
comp=Z,92nm,1.1s
FRU1 Bishkek 20.35 313 P **P 10 20 24.3 0.0**
FRU1 IAmb IAmb 10 20 28.1
comp=Z,92nm,1.1s
CHMS Chumysh 20.37 314 P Pn 10 20 25.6 -1.0
SNR=20
MANEM Manem 20.46 297 **P 10 20 26.6 +0.9**
MANEM IAmb IAmb 10 20 30.2
comp=Z,163nm,1.2s
NJ2 Nanjing 20.59 79 *e*P Pn 10 20 28.4 -0.7
NJ2 pmax pmax
comp=Z,68nm,1.0s
USP Ospenovka 20.67 314 P Pn 10 20 29.0 -1.1
SNR=11
SGDS Sogindy 20.68 315 *e*P **P 10 20 28.7 +0.8**
ARSB Arslanbob 20.74 308 P **P 10 20 28.4 -0.2**
ARSB pmax pmax
comp=Z,66nm,1.2s
ARSB Arslanbob 20.74 308 P **P 10 20 28.4 -0.2**
ARSB IAmb IAmb 10 20 31.6
comp=Z,66nm,1.2s
EKS2 Erkin-Say 20.82 312 P Pn 10 20 31.3 -0.6
SNR=19
ZAK Zakamensk 20.93 15 *e*P **P 10 20 30.6 +0.1**
ZAK pmax pmax
comp=Z,42nm,1.1s
XLT XiLinHaoTe 21.55 45 *e*P **P 10 20 38.1 +0.9**
XLT pP pP 10 20 41.6 -3.2
XLT S Sn 10 24 40.8 -2.9
XLT pmax pmax
comp=Z,19nm,1.2s
XLT pmax pmax
comp=Z,120nm,4.2s
XLT L L
comp=Z,260nm,8.0s
XLT L L
comp=Z,250nm,8.4s
MOY Mondy 21.72 10 *e*P **P 10 20 40.4 +1.4**
MOY pmax pmax
comp=Z,40nm,1.2s
BTK Batken 21.80 303 P **P 10 20 39.6 -0.4**
BTK pmax pmax
comp=Z,165nm,1.3s
BTK Batken 21.80 303 **P 10 20 39.6 -0.4**
GAR Garm 21.86 300 **P 10 20 40.0 -0.7**
GAR Garm 21.86 300 P **P 10 20 40.3 -0.4**
BTLS Baital 21.91 318 *e*P **P 10 20 41.7 +0.7**
BTLS Baital 21.91 318 *e*P **P 10 20 41.8 +0.7**
KBL Kabul 22.14 287 P **P 10 20 43.4 -0.3**
KBL pmax pmax
comp=Z,207nm,1.3s
KBL Kabul 22.14 287 P **P 10 20 43.4 -0.3**
KBL Kabul 22.14 287 P **P 10 20 44.2 +0.5**
TLY Talaya 22.23 15 LR LR 10 30 06.1
comp=Z,142nm,20.3s,baz=192,slow=39
TLY Talaya 22.23 15⇓*e*P **P 10 20 47.2 +2.8**
TLY pmax pmax
comp=Z,14nm,0.8s
DLV Lat 22.31 143 P **P 10 20 45.1 -0.5**
DZA Taraz 22.52 310 *e*P **P 10 20 48.5 +0.9**
DZA Taraz 22.52 310 *e*P **P 10 20 48.6 +0.9**
CHGR Chuyangaron 22.65 298*d i*P **P 10 20 48.6 -0.5**
CHGR pmax pmax
comp=Z,407nm,1.0s
CHGR Chuyangaron 22.65 298 **P 10 20 48.0 -1.1**
IUG Iuzhnay 23.10 307 *e*P **P 10 20 54.5 +0.8**
IUG Iuzhnay 23.10 307 *e*P **P 10 20 54.6 +0.8**
KK31 Karatay Array 23.16 310 *i*P **P 10 20 54.8 +0.6**
KK31 Karatay Array 23.16 310 **P 10 20 54.4 +0.2**
KK31 IAmb IAmb 10 20 57.3
comp=Z,49nm,1.3s
KKAR Karatay Array 23.16 310 P **P 10 20 54.5 +0.3**
KKAR Karatay Array 23.16 310 P **P 10 20 54.5 +0.3**
SHAA Shahritus 23.23 295 **P 10 20 53.7 -1.4**
SHAA IAmb IAmb 10 20 58.0
comp=Z,146nm,1.1s
CHM Chimkent 23.46 307 *e*P **P 10 20 58.3 +1.1**
CHM Chimkent 23.46 307 *e*P **P 10 20 58.4 +1.1**
DL2 Dalian 23.54 62 *e*P **P 10 20 54.6 -3.4**
DL2 *e*S **S 10 25 10.1 -0.7**
DL2 pmax pmax
comp=Z,22nm,0.9s
DL2 L L
comp=Z,600nm,15.2s
DL2 L L
comp=Z,810nm,15.0s
DL2 L L
comp=Z,590nm,12.0s
BRLS Borolday 23.58 309 *e*P **P 10 20 59.2 +0.8**
BRLS Borolday 23.58 309 *e*P **P 10 20 59.2 +0.8**
KURBB Kurchatov Arra 23.60 333 P **P 10 20 58.0 -0.4**
comp=Z,35nm,1.0s,baz=143,slow=10.0,SNR=91
KURBB PcP **PcP 10 24 43.3 +0.4**
comp=Z,2.9nm,1.0s,baz=133,slow=1.3,SNR=4.7
KURBB LR LR 10 31 20.2
comp=Z,97nm,19.0s,baz=191,slow=40
comp=Z,35nm,1.0s
KURK Kurchatov 23.64 334*d i*P **P 10 20 58.0 -0.8**
KURK pmax pmax
comp=Z,44nm,1.0s
KURK Kurchatov 23.64 334 **P 10 20 58.0 -0.8**
KURK IAmb IAmb 10 21 00.9
comp=Z,41nm,1.1s
KURK Kurchatov 23.64 334 P **P 10 20 58.6 -0.2**
SSLB Suanglung 24.13 100 P **P 10 21 06.1 +2.3**
NACB Ninganchiao 24.53 98 P **P 10 21 09.9 +2.5**
NACB Ninganchiao 24.53 98 P **P 10 21 06.1 -1.4**
NACB IAmb IAmb 10 21 11.0
comp=Z,37nm,1.1s
NACB Ninganchiao 24.53 98 P **P 10 21 09.3 +1.8**
ZAA0 Zalesovo Array 24.62 346 **P 10 21 07.4 -0.5**
ZALV Zalesovo Beam 24.62 346 P **P 10 21 08.0 +0.1**
comp=Z,12nm,0.8s,baz=162,slow=9.7,SNR=44
ZALV PcP **PcP 10 24 45.6 +0.5**
comp=Z,0.4nm,0.3s,baz=208,slow=8.4,SNR=3.7
ZALV LR LR 10 32 36.8
comp=Z,33nm,19.8s,baz=256,slow=41
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 24.62 346 P **P 10 21 07.6 -0.3**
KULM Kulim 25.58 167 P **P 10 21 17.0 +0.1**
KULM Kulim 25.58 167 P **P 10 21 15.8 -1.1**
KULM IAmb IAmb 10 21 18.8
comp=Z,46nm,1.2s
KULM Kulim 25.58 167 P **P 10 21 16.7 -0.2**
comp=Z,34nm,1.2s
MALK Mahakanadarawa 25.67 214 P **P 10 21 18.3 +0.6**
KOD Kodaikanal 25.79 223 *ex* x 10 21 19.2
KOD IAmb IAmb 10 21 22.3
comp=Z,34nm,0.9s
HIA Hailar 26.63 38 P **P 10 21 29.1 +2.8**
HIA Hailar 26.63 38 P **P 10 21 26.1 -0.2**
HIA pmax pmax
comp=Z,21nm,0.9s
HIA Hailar 26.63 38 P **P 10 21 26.1 -0.2**
HIA IAmb IAmb 10 21 32.1
comp=Z,21nm,0.9s
HILR Hailar Array B 26.81 37 P **P 10 21 28.6 +0.8**
comp=Z,18nm,1.0s,baz=201,slow=7.9,SNR=10
comp=Z,18nm,1.0s
HRA Herat 27.75 287 **P 10 21 35.9 -0.7**
KSRS Korea Array 28.23 67 P **P 10 21 39.0 -1.6**
comp=Z,2.3nm,1.1s,baz=266,slow=8.8,SNR=4.1
KSRS LR LR 10 33 42.4
comp=Z,80nm,18.2s,baz=245,slow=38
comp=Z,2.3nm,1.1s
BVAR Borovoye Array 28.79 329 P **P 10 21 46.0 +0.5**
comp=Z,18nm,0.9s,baz=126,slow=7.3,SNR=27
BVAR PcP **PcP 10 24 55.3 +0.4**
comp=Z,2.8nm,0.8s,baz=107,slow=4.8,SNR=5.0
comp=Z,18nm,0.9s
BORK Borovoye 28.84 329 P **P 10 21 45.6 -0.3**
BORK 10 24 55.4
BORK pmax pmax
comp=Z,30nm,0.9s
BORK Borovoye 28.84 329 P **P 10 21 45.6 -0.3**
BORK IAmb IAmb 10 21 48.7
comp=Z,30nm,0.9s
BORK PcP **PcP 10 24 55.4 +0.3**
TGY Tagaytay City 28.98 118 LR LR 10 34 13.0
comp=Z,124nm,19.1s,baz=190,slow=38
GSI Gunungsitoli 29.06 174 P **P 10 21 47.2 -1.0**
GSI IAmb IAmb 10 21 51.1
comp=Z,26nm,0.8s
BNX BinXian 29.60 50 ⇓P **P 10 21 53.8 +1.0**
BNX pmax pmax
comp=Z,11nm,0.9s
JNU Nakatsue 30.66 75 LR LR 10 34 32.1
comp=Z,112nm,21.5s,baz=257,slow=37
HEH HeiHe 31.40 42 *e*P **P 10 22 09.8 +1.2**
HEH pmax pmax
comp=Z,9.0nm,1.0s
HEH L L
comp=Z,180nm,8.4s
HEH L L
comp=Z,190nm,10.0s
HEH L L
comp=Z,240nm,9.6s
VLA Vladivostok 32.01 56⇑*e*P **P 10 22 15.0 +1.0**
VLA pmax pmax
comp=Z,18nm,0.9s
USA0B Ussuriysk Arra 32.30 54⇓*e*P **P 10 22 17.3 +0.7**
USA0B Ussuriysk Arra 32.30 54 P **P 10 22 16.8 +0.2**
USRK Ussuriysk Ar. 32.30 54 P **P 10 22 16.4 -0.2**
comp=Z,2.8nm,0.9s,baz=261,slow=6.5,SNR=7.3
USRK LR LR 10 36 19.1
comp=Z,118nm,18.6s,baz=220,slow=38
comp=Z,2.8nm,0.9s
USRK Ussuriysk Ar. 32.30 54 P **P 10 22 16.6 0.0**
USRK Ussuriysk Ar. 32.30 54 P **P 10 22 16.6 0.0**
AB31 Akbulak array 32.36 316 *i*P **P 10 22 17.8 +0.8**
AB31 Akbulak array 32.36 316 **P 10 22 16.8 -0.2**
ABKAR Akbulak array 32.36 316 P **P 10 22 17.1 +0.1**
ZEA Zeya 33.02 36 *e*P **P 10 22 24.2 +1.4**
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA MLR MLR
comp=E,200nm,10.0s
ZEA MLR MLR
comp=N,100nm,12.0s
ZEA MLR MLR
comp=Z,200nm,10.0s
AKTO Aktyubinsk 33.96 317 P **P 10 22 31.1 +0.1**
SVE Sverdlovsk 35.56 328 *e*P **P 10 22 46.1 +1.4**
SVE pmax pmax
comp=Z,52nm,1.1s
ARTI Arti 36.39 326*d i*P **P 10 22 52.4 +0.6**
ARTI 10 24 12.1
ARTI 10 25 15.9
ARTI S **S 10 28 30.4 -1.5**
ARTI SS **SnSn 10 30 51.8 -8.3**
ARTI pmax pmax
comp=Z,20nm,0.7s
ARTI Arti 36.39 326 P **P 10 22 51.9 +0.1**
ARTI IAmb IAmb 10 22 53.9
comp=Z,24nm,0.6s
MJB9 Matsu-Tunnel 36.44 69 P **P 10 22 52.3 -0.3**
MAJO Matsushiro 36.44 69*d i*P **P 10 22 53.3 +0.7**
MAJO pmax pmax
comp=Z,4.0nm,0.9s
MAJO Matsushiro 36.44 69 P **P 10 22 52.6 0.0**
MJAR Matsushiro Arr 36.45 69 P **P 10 22 51.9 -0.8**
comp=Z,3.4nm,0.9s,baz=271,slow=8.6,SNR=11
MJAR PcP **PcP 10 25 16.8 +0.4**
comp=Z,1.5nm,0.9s,baz=283,slow=1.1,SNR=4.9
MJAR LR LR 10 37 34.1
comp=Z,30nm,21.0s,baz=292,slow=36
comp=Z,3.4nm,0.9s
MJAR Matsushiro Arr 36.45 69 P **P 10 22 52.0 -0.6**
TOLI2 Tolitoli 38.14 135 P **P 10 23 06.2 -0.9**
YAK Yakutsk 38.88 25 LR LR 10 40 28.8
comp=Z,179nm,20.0s,baz=182,slow=38
YAK Yakutsk 38.88 25*c i*P **P 10 23 12.9 +0.2**
YAK pmax pmax
comp=Z,35nm,0.9s
YAK Yakutsk 38.88 25 P **P 10 23 12.9 +0.2**
YAK IAmb IAmb 10 23 13.8
comp=Z,31nm,0.9s
YAK Yakutsk 38.88 25 P **P 10 23 13.1 +0.3**
NRIK Noril'sk 39.20 356 P **P 10 23 15.8 +0.4**
comp=Z,12nm,1.1s,baz=160,slow=6.2,SNR=11
comp=Z,12nm,1.1s
NRIK Noril'sk 39.20 356 P **P 10 23 14.9 -0.4**
AKT Akhty 39.28 300 *e*P **P 10 23 17.2 +0.6**
AKT *e*S **S 10 29 16.2 -0.1**
AKT pmax pmax
comp=Z,26nm,0.8s
ASAJ Asahikawa 39.84 56 LR LR 10 40 46.9
comp=Z,110nm,18.9s,baz=261,slow=38
ASAJ Asahikawa 39.84 56 P **P 10 23 21.2 +0.1**
ASAJ pmax pmax
comp=Z,22nm,1.1s
JKA Kamikawa-asahi 39.85 56 P **P 10 23 21.2 +0.1**
JKA Kamikawa-asahi 39.85 56 P **P 10 23 21.4 +0.3**
MMSI Mamuju 40.14 141 P **P 10 23 25.8 +2.0**
comp=Z,22nm,0.9s
YSS Yuzhno-Sakhali 40.21 52 P **P 10 23 25.3 +1.2**
YSS Yuzhno-Sakhali 40.21 52 *e*P **P 10 23 25.1 +1.0**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,100nm,3.7s
YSS MLR MLR
comp=Z,100nm,14.0s
YSS MLR MLR
comp=E,100nm,13.0s
YSS Yuzhno-Sakhali 40.21 52 P **P 10 23 24.1 0.0**
YSS IAmb IAmb 10 23 26.4
comp=Z,41nm,1.1s
YSS Yuzhno-Sakhali 40.21 52 P **P 10 23 25.4 +1.2**
BELG Belogornoye 40.75 316*c i*P **P 10 23 29.1 +0.6**
BELG pmax pmax
comp=Z,7.0nm,1.1s
TYV Tymovskoe 40.77 46 *e*P **P 10 23 29.4 +0.7**
TYV pmax pmax
comp=Z,8.0nm,1.0s
TYV pmax pmax
comp=Z,100nm,4.7s
GNI Garni 41.57 298 LR LR 10 43 18.3
comp=Z,31nm,19.6s,baz=107,slow=40
GNI Garni 41.57 298*d i*P **P 10 23 37.4 +1.8**
GNI pmax pmax
comp=Z,48nm,1.3s
GNI Garni 41.57 298 P **P 10 23 35.4 -0.2**
GNI IAmb IAmb 10 23 40.4
comp=Z,49nm,1.2s
GNI Garni 41.57 298 P **P 10 23 37.9 +2.3**
KIRV Kirov 41.70 326*d i*P **P 10 23 37.0 +0.8**
NCK Nalchik 42.36 303⇓*i*P **P 10 23 43.1 +1.2**
NCK pmax pmax
comp=Z,35nm,1.2s
HAKT HAKKARI 42.57 294 P **P 10 23 45.3 +1.4**
GOF Gofitskoye 42.78 305*ce*P P 10 23 40.5 -4.8
KBZ Khabaz 42.87 303 P **P 10 23 46.4 +0.5**
comp=Z,4.3nm,0.8s,baz=114,slow=4.8,SNR=12
comp=Z,4.3nm,0.8s
KBZ Khabaz 42.87 303⇑*i*P **P 10 23 48.4 +2.5**
KBZ pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 43.02 303⇓P **P 10 23 48.5 +1.1**
KIV Kislovodsk 43.02 303 *e*P **P 10 23 48.4 +1.1**
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,21nm,16.0s
KIV Kislovodsk 43.02 303 P **P 10 23 47.9 +0.5**
KIV Kislovodsk 43.02 303 P **P 10 23 46.8 -0.5**
comp=Z,385nmcomp=Z,34nm,1.1s
KIV Kislovodsk 43.02 303 P **P 10 23 48.7 +1.3**
EPOS Posof 43.04 300 P **P 10 23 49.9 +2.4**
SHA1 Shidzhatmaz 43.04 303*ce*P **P 10 23 49.0 +1.3**
BATM Batumi 43.81 300⇑P **P 10 23 54.4 +0.8**
BATM Batumi 43.81 300 P **P 10 23 54.3 +0.8**
VRH Novokhopyorsk 44.14 314 *e*P **P 10 23 56.5 +0.4**
VRH pmax pmax
comp=Z,37nm,1.1s
RAYN Ar Rayn 44.23 273 P **P 10 23 56.3 -1.0**
RAYN pmax pmax
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 44.23 273 P **P 10 23 56.3 -1.0**
RAYN Ar Rayn 44.23 273 P **P 10 23 56.9 -0.3**
LABN Labinsk 44.43 304 *e*P **P 10 23 58.7 +0.2**
LABN *e*S **S 10 30 32.1 0.0**
LABN pmax pmax
comp=Z,34nm,0.8s
ERBR Yeremizino-Bor 44.60 306 *e*P **P 10 24 00.1 +0.2**
ERBR *e*S **S 10 30 34.3 -0.3**
ERBR pmax pmax
comp=Z,26nm,0.8s
VSLR Vesyoloye 44.95 303⇓*e*P **P 10 24 04.1 +1.4**
VSLR pmax pmax
comp=Z,80nm,1.1s
SOC Sochi 45.18 303 *e*P **P 10 24 02.6 -1.9**
SOC *e* 10 25 50.5
SOC *e*PPP PPP 10 26 30.0
SOC *e*S **S 10 30 38.8 -4.2**
SOC *e*SS **ScS 10 33 57.3 -2.9**
SOC *e*SSS SSS 10 35 02.8
SOC pmax pmax
comp=Z,38nm,1.0s
TIXI Tiksi 45.21 14 LR LR 10 43 48.6
comp=Z,46nm,20.4s,baz=224,slow=37
TIXI Tiksi 45.21 14⇑*e*P **P 10 24 04.0 -0.3**
TIXI pmax pmax
comp=Z,10.0nm,1.1s
TIXI Tiksi 45.21 14 P **P 10 24 03.9 -0.3**
VSR Storozhevoye 45.74 314 *e*P **P 10 24 08.9 +0.1**
VSR pmax pmax
comp=Z,36nm,1.1s
VORR Voronezh 45.76 314 *e*P **P 10 24 09.6 +0.7**
VORR pmax pmax
comp=Z,42nm,1.1s
LPSR Galich'ya Gora 46.02 315 *e*P **P 10 24 11.8 +0.8**
LPSR pmax pmax
comp=Z,61nm,1.1s
ARPR Arapgir-MALATY 46.59 297 P **P 10 24 16.2 +0.4**
ARPR Arapgir-MALATY 46.59 297 P **P 10 24 17.9 +2.0**
ANN Anapa 46.77 305 *e*P **P 10 24 17.4 +0.4**
ANN *e*S **S 10 31 05.8 0.0**
ANN pmax pmax
comp=Z,68nm,1.0s
MA2 Magadan 47.16 35 LR LR 10 46 11.7
comp=Z,33nm,19.9s,baz=269,slow=39
MA2 Magadan 47.16 35⇑*e*P **P 10 24 19.9 0.0**
MA2 pmax pmax
comp=Z,31nm,1.9s
MOS Moscow 47.17 320 *e*P **P 10 24 20.6 +0.7**
MOS pmax pmax
comp=Z,95nm,1.1s
MOS pmax pmax
comp=Z,100nm,1.0s
KLMR Klimovskoe 47.17 327 *e*P **P 10 24 18.0 -1.9**
KLMR *e* 10 26 08.9
KLMR pmax pmax
comp=Z,85nm,1.3s
OBN Obninsk 47.69 319⇓*i*P **P 10 24 23.7 -0.3**
OBN *e* 10 25 53.4
OBN *e* 10 26 16.4
OBN *e*PPP PPP 10 27 02.5
OBN pmax pmax
comp=Z,31nm,1.3s
OBN MLR MLR
comp=Z,72nm,17.0s
OBN Obninsk 47.69 319 P **P 10 24 24.0 +0.1**
OBN Obninsk 47.69 319 P **P 10 24 24.1 +0.1**
comp=Z,43nm,1.0s
TOKA Tokat 47.85 299 P **P 10 24 25.9 +0.3**
BNN Bunyan 48.54 297 P **P 10 24 31.0 -0.1**
SEY Seymchan 48.70 31⇑*i*P **P 10 24 33.0 +1.3**
SEY pmax pmax
comp=Z,10.0nm,1.5s
SOEI Soe 48.93 140 P **P 10 24 34.6 +0.4**
SOEI Soe 48.93 140 P **P 10 24 32.7 -1.4**
SOEI Soe 48.93 140 P **P 10 24 33.2 -1.0**
ASF Jabal al Asfar 49.03 288 LR LR 10 48 20.6
comp=Z,50nm,18.2s,baz=26,slow=40
BZK Bozkurt 49.50 301⇓P **P 10 24 38.9 +0.7**
KIRS Kirsehir-Merke 49.98 297⇑P **P 10 24 42.7 +0.7**
MMAI Mount Meron Ar 50.05 289 P **P 10 24 43.4 +0.8**
comp=Z,0.6nm,0.3s,baz=175,slow=19,SNR=4.6
comp=Z,0.6nm,0.3s
BR131 Keskin Array S 50.10 298*ce*P **P 10 24 43.2 +0.3**
BR131 Keskin Array S 50.10 298 **P 10 24 41.9 -1.0**
BRTR Keskin Array B 50.10 298 P **P 10 24 42.2 -0.7**
comp=Z,8.2nm,1.1s,baz=116,slow=5.6,SNR=21
comp=Z,8.2nm,1.1s
BRTR Keskin Array B 50.10 298 *i*P **P 10 24 43.2 +0.3**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR Keskin Array B 50.10 298 **P 10 24 42.4 -0.6**
BR104 Keskin Array S 50.10 298 P **P 10 24 41.5 -1.4**
comp=Z,67nmcomp=Z,6.0nm,1.3s
BR106 Keskin Array S 50.11 298 P **P 10 24 42.3 -0.7**
comp=Z,56nmcomp=Z,8.0nm,1.1s
BR105 Keskin Array S 50.12 298 P **P 10 24 41.9 -1.2**
comp=Z,72nmcomp=Z,8.8nm,1.1s
PEA0B Petropavlovsk- 50.24 44*de*P **P 10 24 43.7 0.0**
PETK Petropavlovsk- 50.24 44 P **P 10 24 43.1 -0.6**
comp=Z,7.8nm,1.0s,baz=259,slow=1.5,SNR=11
PETK LR LR 10 47 29.3
comp=Z,37nm,19.2s,baz=252,slow=38
comp=Z,7.8nm,1.0s
PETK Petropavlovsk- 50.24 44 P **P 10 24 43.6 -0.1**
PETK Petropavlovsk- 50.24 44 P **P 10 24 43.5 -0.1**
LVZ Lovozero 51.05 335⇑*e*P **P 10 24 49.0 -0.5**
LVZ pmax pmax
comp=Z,31nm,1.2s
NE56 Odesa 51.21 307 P **P 10 24 50.0 -1.0**
EIL Elat 51.31 285 LR LR 10 51 36.7
comp=Z,56nm,18.2s,baz=84,slow=42
APA Apatity 51.42 334 *e*P **P 10 24 51.6 -0.7**
APA *e* 10 26 06.0
APA *e* 10 26 52.9
APA pmax pmax
comp=Z,4.0nm,1.0s
APA MLR MLR
comp=Z,209nm,5.5s
MDUB Mudurnu 51.82 300 **P 10 24 55.5 -0.3**
AK09 Malin Array Si 51.98 313 P **P 10 24 55.9 -0.8**
AK08 Malin Array Si 52.00 313 P **P 10 24 55.8 -1.1**
AK10 Malin Array Si 52.01 313 P **P 10 24 55.9 -1.0**
SAHE Sakarya_HENDEK 52.01 300⇑P **P 10 24 57.5 +0.3**
AK03 Malin Array Si 52.02 313 P **P 10 24 56.1 -0.9**
AKASG Malin Array Be 52.02 313 P **P 10 24 56.7 -0.2**
comp=Z,22nm,1.0s,baz=82,slow=6.5,SNR=54
comp=Z,22nm,1.0s
AKASG Malin Array Be 52.02 313 P **P 10 24 56.8 -0.2**
AKASG pmax pmax
comp=Z,12nm,1.2s
AKASG Malin Array Be 52.02 313 P **P 10 24 56.8 -0.2**
AKBB Malin Array Si 52.02 313*d i*P **P 10 24 56.7 -0.3**
AKBB pmax pmax
comp=Z,48nm,1.1s
AKBB Malin Array Si 52.02 313 **P 10 24 56.6 -0.4**
AKBB Malin Array Si 52.02 313 P **P 10 24 56.0 -1.0**
KIEV Kiev 52.03 313⇑P **P 10 24 57.1 +0.1**
KIEV Kiev 52.03 313 P **P 10 24 57.1 +0.1**
KIEV Kiev 52.03 313 P **P 10 24 56.0 -1.0**
comp=Z,142nm,1.1s
AK05 Malin Array Si 52.03 313 P **P 10 24 56.3 -0.8**
AK07 Malin Array Si 52.04 313 P **P 10 24 56.2 -0.9**
AK06 Malin Array Si 52.04 313 P **P 10 24 56.2 -1.0**
MNK Minsk 52.68 318 *i*P **P 10 25 03.1 +1.2**
comp=E,6.0nm,0.8s
MNK *i*P **P 10 25 03.1 +1.2**
comp=N,30nm,1.1s
MNK *i*P **P 10 25 03.1 +1.2**
comp=Z,27nm,0.9s,baz=89
MNK *i*PP **PP 10 27 02.6 +1.8**
MNK *i*PPP PPP 10 28 07.3
MNK *i*S **S 10 32 32.1 +3.9**
MNK *i*SS **SS 10 36 10.1 +3.8**
MNK *i*SSS SSS 10 37 51.6

MNK *i* LR LR 10 47 18.1
MNK *i* LRM MLR 10 49 03.0
comp=Z,36nm,13.7s
MNK Minsk 52.68 318 *d i* P P **10 25 03.0 +1.2**
SORM Soroca 52.79 310 ⇓P P **10 25 02.4 -0.3**
SORM Soroca 52.79 310 P P **10 25 02.4 -0.3**
SORM Soroca 52.79 310 P P **10 25 01.9 -0.8**
MI28 Mi28,Pidlybu 52.98 313 P P **10 25 02.9 -1.3**
LUBAR Lubar, Ukraine 53.01 312 P P **10 25 03.3 -1.1**
TPGR Topolog 53.15 305 ⇑P P **10 25 05.4 -0.1**
YLV Yalova 53.17 300 P P **10 25 04.7 -1.1**
comp=Z,14nm,0.9s
VLDR Vladesti 53.25 307 ⇑P P **10 25 07.2 +1.0**
VSU Vasula 53.29 323 *d i* P P **10 25 05.6 -0.7**
VSU pmax pmax
comp=Z,48nm,1.2s
CFR Carcaliu 53.30 306 ⇑P P **10 25 07.1 +0.5**
CFR Carcaliu 53.30 306 P P **10 25 07.0 +0.5**
ELL Elmali 53.56 295 P P **10 25 08.1 -0.7**
ELL pmax pmax
comp=Z,41nm,0.8s
ELL Elmali 53.56 295 P **10 25 08.1 -0.7**
FIA1 FINESS Array S 53.70 326 P P **10 25 09.6 +0.4**
FIA1 IAmb IAmb 10 25 10.6
comp=Z,23nm,1.4s
FINES FINESS Array B 53.70 326 P P **10 25 08.5 -0.8**
comp=Z,4.0nm,0.6s,baz=99,slow=6.1,SNR=26
comp=Z,4.0nm,0.6s
FINES FINESS Array B 53.70 326 P P **10 25 09.4 +0.2**
FINES FINESS Array B 53.70 326 P **10 25 09.4 +0.2**
KMPD K-Podol'skiy 54.00 310 P P **10 25 10.4 -1.2**
RNPP9 Sopachiv 54.06 314 P P **10 25 11.6 -0.4**
RNPP5 Staryi Chortor 54.08 314 P P **10 25 11.5 -0.7**
RNPP8 Varash 54.09 314 P P **10 25 11.4 -0.9**
TESR Tescani 54.14 308 ⇑P P **10 25 13.2 +0.5**
TESR Tescani 54.14 308 P P **10 25 12.2 -0.5**
comp=Z,11nm,1.2s
KEV Kevo 54.16 337 P P **10 25 12.2 -0.2**
KEV pmax pmax
comp=Z,49nm,1.7s
KEV Kevo 54.16 337 P P **10 25 12.2 -0.2**
VRI Vrincioaia 54.18 307 ⇑P P **10 25 14.3 +1.2**
VRI Vrincioaia 54.18 307 P P **10 25 14.2 +1.2**
VRI Vrincioaia 54.18 307 P P **10 25 11.8 -1.2**
comp=Z,416nmcomp=Z,40nm,1.3s
SAHR Sahastru 54.23 307 ⇓P P **10 25 14.8 +1.3**
PLOR Plostina 54.23 307 ⇑P P **10 25 14.9 +1.4**
PLOR Plostina 54.23 307 P P **10 25 14.8 +1.4**
ONER Baraj Valea Uz 54.34 308 ⇑P P **10 25 15.4 +1.2**
ISR Istrita 54.42 306 P P **10 25 14.4 -0.5**
comp=Z,4μmcomp=Z,62nm,1.3s
BIZ Bicaz 54.45 308 ⇑P P **10 25 15.7 +0.7**
BALB Balikesir 54.48 299 P P **10 25 14.9 -0.4**
BALB IAmb IAmb 10 25 17.2
comp=Z,27nm,1.0s
COVR Voineasa-Covas 54.54 307 ⇓P P **10 25 17.0 +1.3**
NEHR Nehoiu 54.55 306 ⇓P P **10 25 17.3 +1.6**
ARCES ARCESS Array B 54.64 336 P P **10 25 15.3 -0.7**
comp=Z,7.6nm,1.1s,baz=57,slow=8.8,SNR=6.8
ARCES PcP **PcP** **10 26 19.9 +1.2**
comp=Z,1.0nm,0.6s,baz=104,slow=5.1,SNR=4.1
ARCES LR LR 10 51 20.0
comp=Z,53nm,18.5s,baz=81,slow=39
comp=Z,7.6nm,1.1s
ARCES ARCESS Array B 54.64 336 P P **10 25 16.3 +0.3**
ARCES IAmb IAmb 10 27 04.9
comp=Z,20nm,1.6s
MLR Muntele Rosu 54.78 307 ⇓P P **10 25 18.9 +1.4**
MLR Muntele Rosu 54.78 307 P P **10 25 18.9 +1.4**
MLR Muntele Rosu 54.78 307 P **10 25 17.8 +0.2**
MLR Muntele Rosu 54.78 307 P P **10 25 16.6 -1.0**
comp=Z,384nmcomp=Z,47nm,1.2s
BURAR Bucovina Array 54.95 309 ⇑P P **10 25 19.1 +0.3**
BURAR Bucovina Array 54.95 309 P P **10 25 19.0 +0.3**
BURAR Bucovina Array 54.95 309 P **10 25 18.7 0.0**
BUR08 Bucovina Ar. S 54.95 309 P P **10 25 18.5 -0.3**
DOPR Dopca 55.09 307 ⇑P P **10 25 19.4 -0.2**
BILL Bilíbino 55.23 26 ⇑ *i* P P **10 25 21.1 +0.8**
BILL pmax pmax
comp=Z,13nm,1.3s
VOIR 55.41 307 ⇑P P **10 25 22.4 +0.4**
VOIR 55.41 307 P P **10 25 22.4 +0.4**
VOIR 55.41 307 P P **10 25 20.0 -2.0**
comp=Z,5.5nm,1.2s
SUW Suwalki 55.46 317 *e*P P **10 25 22.6 +0.5**
SUW Suwalki 55.46 317 P P **10 25 21.7 -0.5**
SUW Suwalki 55.46 317 P P **10 25 21.7 -0.5**
ALN Alexandroupoli 55.58 301 P P **10 25 22.7 -0.5**
ALN pmax pmax
comp=Z,43nm,1.2s
ALN Alexandroupoli 55.58 301 P P **10 25 22.7 -0.5**
EZN Ezine 55.61 300 P P **10 25 23.0 -0.4**
comp=Z,22nm,1.2s
ARCR ARCALIA 55.61 309 ⇑P P **10 25 24.6 +1.3**
ARR Arges 55.71 307 ⇑P P **10 25 24.8 +0.6**
RDO Rodhopi 55.90 301 P **10 25 25.5 0.0**
RDO IAmb IAmb 10 25 28.4
comp=Z,22nm,1.1s
TNR Turnu Rosu 55.91 307 ⇑P P **10 25 26.7 +1.1**
TNR Turnu Rosu 55.91 307 P P **10 25 26.7 +1.1**
BMR Baia Mare 56.09 310 ⇑P P **10 25 27.9 +1.1**
BMR Baia Mare 56.09 310 P P **10 25 27.9 +1.1**
CJR Cluj-Napoca 56.18 308 ⇑P P **10 25 28.1 +0.6**
CJR Cluj-Napoca 56.18 308 P P **10 25 28.1 +0.6**
KNRA Kununurra 56.27 140 P **10 25 27.9 -0.4**
KNRA IAmb IAmb 10 25 29.7
comp=Z,11nm,0.9s
KWP Kalwaria Pacla 56.30 312 *e*P P **10 25 29.5 +1.3**
MARR Marisel-Cluj 56.51 308 ⇑P P **10 25 30.4 +0.4**
KOLS Kolonicke sedl 56.69 311 *e*P P **10 25 31.3 +0.3**
KOLS pmax pmax
comp=Z,7.0nm,0.8s
KOLS Kolonicke sedl 56.69 311 *e*P P **10 25 31.3 +0.3**
DRGR 56.77 309 ⇑P P **10 25 32.0 +0.2**
DRGR 56.77 309 P P **10 25 31.9 +0.2**
BEL Belsk 57.17 315 *e*P P **10 25 35.5 +1.2**
SIRR Siria 57.58 308 ⇑P P **10 25 38.4 +1.0**
BZS Buzias 57.74 307 ⇑P P **10 25 39.0 +0.4**
BZS Buzias 57.74 307 P P **10 25 38.9 +0.4**
MDVR Moldovita 57.85 306 ⇑P P **10 25 40.2 +0.8**
NIE Niedzica 57.88 312 *e*P P **10 25 41.4 +2.0**
NIE Niedzica 57.88 312 P P **10 25 39.6 +0.1**
comp=Z,4.5nm,1.3s
VAY Valandovo 58.04 302 *i* P P **10 25 40.0 -0.6**
OJC Ojcow 58.05 313 *e*P P **10 25 41.8 +1.2**
OJC Ojcow 58.05 313 P P **10 25 40.3 -0.3**
OJC Ojcow 58.05 313 P **10 25 40.3 -0.3**
OJC Ojcow 58.05 313 P P **10 25 39.6 -1.0**
comp=Z,16nm,1.4s
LIT Litokhoron 58.40 301 P P **10 25 42.4 -0.9**
LIT pmax pmax
comp=Z,30nm,1.2s
LIT Litokhoron 58.40 301 P **10 25 42.4 -0.9**
LIT IAmb IAmb 10 25 43.9
comp=Z,30nm,1.2s
PSZ Piszkesteto 58.43 310 P P **10 25 43.4 0.0**
PSZ pmax pmax
comp=Z,6.0nm,0.9s
PSZ Piszkesteto 58.43 310 P **10 25 43.4 0.0**
OHR Ohrid 59.38 302 *i* P P 10 25 37.2 -13
MAUC Maruska 59.47 312 *e*P P **10 25 51.4 +0.8**
SRO Srobarova 59.49 310 *e*P P **10 25 52.4 +1.7**
SRO pmax pmax
comp=Z,14nm,1.2s
SRO Srobarova 59.49 310 *e*P P **10 25 52.4 +1.7**
MORC Moravsky Berou 59.57 313 ⇑P P **10 25 52.3 +1.1**
MORC Moravsky Berou 59.57 313 P P **10 25 52.3 +1.1**
MORC Moravsky Berou 59.57 313 P **10 25 51.5 +0.3**
MORC Moravsky Berou 59.57 313 *e*P P **10 25 51.5 +0.3**
MORH Mrgy, Hungar 59.64 309 ⇑P P **10 25 52.0 +0.3**
MORH Mrgy, Hungar 59.64 309 P P **10 25 50.6 -1.1**
comp=Z,9.9nm,1.3s
JAVC Velka Javorina 59.68 312 *e*P P **10 25 52.9 +0.9**
HFS Hagfors 59.83 325 P P **10 25 52.7 -0.1**
comp=Z,14nm,1.1s,baz=72,slow=6.4,SNR=12
comp=Z,14nm,1.1s
KRLC Kraliky 59.98 313 *e*P P **10 25 54.6 +0.5**
KRLC Kraliky 59.98 313 *e*P P **10 25 54.6 +0.5**
MODS Modra-Piesok 60.04 311 *e*P P **10 25 54.6 +0.1**
MODS pmax pmax
comp=Z,21nm,1.3s
MODS Modra-Piesok 60.04 311 *e*P P **10 25 54.6 +0.1**
KSP Ksiaz 60.12 314 *e*P P **10 25 56.4 +1.4**
KSP Ksiaz 60.12 314 P P **10 25 55.4 +0.4**
comp=Z,10nm,1.5s
SHEM Shemya Is, Ala 60.14 44 LR LR 10 53 28.3
comp=Z,34nm,19.6s,baz=252,slow=38
MPLH Magyarpolny 60.15 310 P P **10 25 54.9 -0.3**
comp=Z,34nm,1.2s
DPC Dobruska-Polom 60.21 314 *e*P P **10 25 56.6 +1.0**
DPC *e* 10 25 56.7
DPC Dobruska-Polom 60.21 314 *e*P P **10 25 56.6 +1.0**
DPC Dobruska-Polom 60.21 314 P P **10 25 55.5 -0.1**
comp=Z,11nm,1.3s
OSTC Ostas 60.23 314 *e*P P **10 25 56.6 +0.9**
OSTC Ostas 60.23 314 *e*P P **10 25 56.6 +0.9**
VRAC Vranov 60.27 312 LR LR 10 56 33.5
comp=Z,26nm,18.2s,baz=65,slow=41
VRAC Vranov 60.27 312 ⇑P P **10 25 56.5 +0.4**
VRAC Vranov 60.27 312 P P **10 25 56.4 +0.4**
VRAC Vranov 60.27 312 *e*P P **10 25 56.8 +0.8**
CHVC Chvalec 60.32 314 *e*P P **10 25 57.3 +0.9**
CHVC Chvalec 60.32 314 *e*P P **10 25 57.3 +0.9**
UPC Upice 60.37 314 *e*P P **10 25 57.5 +0.8**
UPC Upice 60.37 314 *e*P P **10 25 57.5 +0.8**
KRUC Moravsky 60.45 312 *e*P P **10 25 57.7 +0.4**
NC405 NORSAR Array S 60.63 326 P P **10 25 57.8 -0.5**
NC405 IAmb IAmb 10 26 00.0
comp=Z,14nm,0.8s
RONA Rosalia, Austr 60.84 311 *e*P P **10 26 00.3 +0.3**
comp=Z,10nm,1.0s,SNR=6.9
NB2 NORSAR Subarra 60.88 326 P P **10 25 59.6 -0.4**
comp=Z,10nm,0.8s,baz=80,slow=6.9
NOA NORSAR Array B 60.88 326 P P **10 25 59.8 -0.3**
comp=Z,13nm,1.0s,baz=79,slow=6.8,SNR=17
comp=Z,13nm,1.0s
CONA Conrad Observa 61.07 311 *e*P P **10 26 01.9 +0.3**
comp=Z,9.9nm,0.9s,SNR=18
PRU Pruhonice 61.41 314 *e*P P **10 26 03.9 +0.2**
PRU Pruhonice 61.41 314 *e*P P **10 26 03.9 +0.2**
ARSA Arzberg 61.46 310 P **10 26 04.0 -0.2**
ARSA Arzberg 61.46 310 *e*P P **10 26 04.2 0.0**
comp=Z,8.6nm,1.4s,SNR=8.0
BRG Berggiesshubel 61.56 315 *e*P P **10 26 05.6 +0.8**
comp=Z,7.1nm,1.0s,baz=74,slow=6.6
BRG Berggiesshubel 61.56 315 ⇑ *i* P P **10 26 05.7 +1.0**
BRG Amp 10 26 06.9
comp=Z,7.0nm,1.0s
CKRC Cesky Krumlov 61.85 312 *e*P P **10 26 07.6 +0.9**
CKRC Cesky Krumlov 61.85 312 *e*P P **10 26 07.6 +0.9**
PERS Pernice 61.89 310 *i* P P **10 26 07.5 +0.4**
SOKA Soboth 61.94 310 *e*P P **10 26 07.4 0.0**
comp=Z,12nm,1.3s,SNR=13
HSKC Hora Svate Kat 61.94 314 *e*P P **10 26 08.2 +0.8**
CLL Collm 62.03 315 *i* P P **10 26 08.3 +0.4**
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 62.03 315 *e*L L 10 56 36.0
comp=Z,35nm,20.9s
CLL Collm 62.03 315 *i* P P **10 26 08.3 +0.4**
comp=Z,8.0nm,1.2s
CLL *i* PP **PP** **10 28 25.0 +0.8**
LODK Lodwar 62.11 257 P P **10 26 08.1 -1.0**
LODK IAmb IAmb 10 26 09.9
comp=Z,7.1nm,1.0s
MOA Molln 62.13 311 *i* P P **10 26 08.8 +0.2**
comp=Z,8.6nm,1.2s,SNR=5.5
SESA Seetaler Alpe, 62.13 310 *i* P P **10 26 08.9 0.0**
comp=Z,3nm,1.2s,SNR=7.7
GEC2 GERESS Array S 62.23 312 P **10 26 09.7 +0.3**
GEC2 IAmb IAmb 10 26 11.6
comp=Z,10nm,1.0s
GEC2 GERESS Array S 62.23 312 *e*P P **10 26 09.9 +0.5**
comp=Z,11nm,1.0s,baz=74,slow=6.6
GERES GERESS Array B 62.23 312 P P **10 26 08.8 -0.6**
comp=Z,2.8nm,0.7s,baz=73,slow=4.5,SNR=40
comp=Z,2.8nm,0.7s
GERES GERESS Array B 62.23 312 P P **10 26 08.7 -0.8**
KHC Kasperske Hory 62.23 313 ⇓ *e*P P **10 26 10.0 +0.7**
KHC pmax pmax
comp=Z,6.0nm,1.4s
KHC Kasperske Hory 62.23 313 *e*P P **10 26 10.0 +0.7**
KHC Kasperske Hory 62.23 313 P **10 26 09.5 +0.1**
KHC Kasperske Hory 62.23 313 P P **10 26 08.9 -0.5**
comp=Z,4.1nm,1.2s
OBKA Obir 62.30 310 *e*P P **10 26 10.3 +0.3**
comp=Z,9.0nm,1.4s
BIOA Bad Ischl, Aus 62.58 311 *e*P P **10 26 12.1 +0.4**
comp=Z,3.6nm,0.9s
TANN Tannenbergstha 62.59 314 *e*P P **10 26 12.4 +0.6**
comp=Z,11nm,1.2s,baz=74,slow=6.6
CEY Cerknica 62.60 309 *i* P P **10 26 11.6 -0.2**
GORT1 Trebel 62.62 317 *e*P P **10 26 13.0 +1.4**
comp=Z,15nm,1.1s,baz=74,slow=6.6
WET Wettzell 62.67 313 *e*P P **10 26 12.9 +0.6**
comp=Z,12nm,1.3s,baz=74,slow=6.6
WET *e*L L 10 55 26.6
comp=Z,26nm,21.4s
WB0 Warramunga Arr 62.74 138 P **10 26 11.8 -1.2**
WB0 IAmb IAmb 10 26 13.6
comp=Z,17nm,1.3s
PLN Plauen 62.76 315 *e*P P **10 26 13.5 +0.7**
comp=Z,2.9nm,1.2s,baz=74,slow=6.6
NEUB Neuenburg 62.80 315 *e*P P **10 26 13.8 +0.8**
comp=Z,7.9nm,0.7s,baz=74,slow=6.6
FLTG Flechtingen 62.83 317 *e*P P **10 26 13.6 +0.4**
comp=Z,10nm,1.1s,baz=74,slow=6.6
WRAB Tennant Creek 62.84 138 P P **10 26 15.3 +1.6**
WRAB Tennant Creek 62.84 138 ⇑ *i* P P **10 26 13.2 -0.5**
WRAB pmax pmax
comp=Z,12nm,1.3s
WRA Warramunga Arr 62.84 138 P P **10 26 12.2 -1.5**
comp=Z,3.9nm,0.8s,baz=324,slow=8.2,SNR=28
comp=Z,3.9nm,0.8s
WRA Warramunga Arr 62.84 138 *i* P P **10 26 13.1 -0.6**
WRA pmax pmax
comp=Z,4.0nm,0.8s
TIP Timpagrande 62.91 301 P **10 26 13.3 -0.8**
TIP IAmb IAmb 10 26 15.5
comp=Z,13nm,1.1s
TIP Timpagrande 62.91 301 P P **10 26 13.3 -0.8**
comp=Z,9.7nm,1.1s
CADS Cadrg 62.92 310 *e*P P **10 26 13.8 -0.3**
ROTZ Rotzenmuhle 62.92 314 *e*P P **10 26 15.1 +1.2**
comp=Z,5.1nm,1.2s,baz=74,slow=6.6
KBA Koelnbreinsper 62.94 311 *e*P P **10 26 14.0 -0.3**
comp=Z,4.9nm,0.9s,SNR=7.1
BSEG Bad Segeberg 62.94 319 *e*P P **10 26 15.4 +1.5**
comp=Z,8.2nm,1.0s,baz=74,slow=6.6
PRED Cave del Predi 62.98 310 P **10 26 13.6 -0.8**
MOX Moxa 63.05 315 *e*P P **10 26 15.5 +0.8**
comp=Z,7.4nm,1.2s,baz=74,slow=6.6
MOX *e*L L 10 55 05.6
comp=Z,28nm,20.1s
TRI Trieste 63.05 309 P P **10 26 14.8 0.0**
TRI pmax pmax
comp=Z,29nm,0.9s
TRI Trieste 63.05 309 P P **10 26 14.8 0.0**
SABO M.te Sabotino 63.09 309 P P **10 26 14.3 -0.8**
SABO IAmb IAmb 10 26 17.4
comp=Z,13nm,1.1s
RJOB Jochberg 63.11 311 *e*P P **10 26 16.1 +0.8**
comp=Z,5.4nm,1.0s,baz=74,slow=6.6
LESA Schwarzleotal 63.28 311 *e*P P **10 26 16.2 -0.2**
comp=Z,16nm,1.1s,SNR=17
CLZ Clausthal 63.47 316 *e*P P **10 26 18.6 +1.1**
comp=Z,20nm,1.1s,baz=74,slow=6.6
GRA1 Grafenberg Arr 63.56 314 P **10 26 18.8 +0.6**
GRA1 IAmb IAmb 10 26 20.7
comp=Z,19nm,1.3s
GRF Grafenberg Arr 63.56 314 P P **10 26 18.8 +0.6**
GRF pmax pmax
comp=Z,19nm,1.3s
GRF Grafenberg Arr 63.56 314 *e*P P **10 26 19.2 +1.0**
comp=Z,22nm,1.4s,baz=74,slow=6.6
GRF *e*L L 10 55 54.1
comp=Z,34nm,20.2s
ABTA Abfaltersbach 63.58 310 *e*P P **10 26 17.8 -0.7**
comp=Z,3.5nm,0.7s,SNR=6.5
AMKA Amchitka 63.59 44 P P **10 26 18.0 -0.2**
AMKA IAmb IAmb 10 26 18.9
comp=Z,7.8nm,0.8s
STAL STALIGIAL 63.60 310 P P **10 26 17.9 -0.6**
STAL IAmb IAmb 10 26 19.7
comp=Z,16nm,1.0s
GTTG Gottingen 63.80 316 *e*P P **10 26 20.6 +1.0**
comp=Z,6.9nm,0.6s,baz=74,slow=6.6
RETH Rethem/Aller, 63.82 318 *e*P P **10 26 20.6 +0.9**
comp=Z,17nm,1.6s,baz=74,slow=6.6
CEL Celeste 63.84 301 P **10 26 19.3 -0.9**
CEL Celeste 63.84 301 P P **10 26 19.3 -0.9**
comp=Z,453nmcomp=Z,52nm,1.1s
PMG Port Moresby 63.94 120 ⇑ *e*P P **10 26 21.1 +0.1**
PMG pmax pmax
comp=Z,43nm,1.1s
FUR Furstenfeldbru 63.97 312 *e*P P **10 26 22.1 +1.3**
comp=Z,46nm,1.1s,baz=74,slow=6.6
WTTA Wattenberg 64.00 311 *e*P P **10 26 20.7 -0.6**
comp=Z,6.4nm,0.9s,SNR=5.4
WATA Walderalm 64.02 311 *e*P P **10 26 21.3 -0.1**
comp=Z,5.7nm,1.0s
INTR Introdacqua 64.08 305 P **10 26 21.4 -0.4**
INTR IAmb IAmb 10 26 30.4
comp=Z,19nm,1.2s
SQTA Sankt Quirin 64.29 311 *e*P P **10 26 22.6 -0.6**
comp=Z,7.5nm,1.0s,SNR=6.4
AQU L'Aquila 64.32 306 P P **10 26 22.1 -1.2**
AQU pmax pmax
comp=Z,24nm,1.2s
AQU L'Aquila 64.32 306 P P **10 26 22.1 -1.2**
AQU L'Aquila 64.32 306 P P **10 26 22.3 -1.0**
comp=Z,13nm,1.0s
MOTA Moosalm 64.32 311 *e*P P **10 26 22.7 -0.7**
comp=Z,12nm,1.0s,SNR=9.7
CTI Castel Tesino 64.36 310 P P **10 26 22.9 -0.7**
CTI pmax pmax
comp=Z,9.0nm,1.1s
CTI Castel Tesino 64.36 310 P **10 26 22.9 -0.7**
CTI IAmb IAmb 10 26 24.5
comp=Z,8.5nm,1.1s
NRCA Norcia 64.37 306 P P **10 26 23.5 -0.2**
NRCA IAmb IAmb 10 26 27.2
comp=Z,9.3nm,1.1s
TEOL Teolo 64.56 309 P P **10 26 24.5 -0.3**
GAMB Gambell 64.65 29 P P **10 26 24.9 0.0**
baz=287
FETA Feichten 64.67 311 *e*P P **10 26 25.0 -0.6**
comp=Z,12nm,1.1s,SNR=13
CESX Cesi 64.81 306 P **10 26 25.8 -0.7**
CESX IAmb IAmb 10 26 27.5
comp=Z,11nm,1.1s
KASTN Kahler Asten 64.83 316 *e*P P **10 26 27.5 +1.0**
comp=Z,7.9nm,1.4s,baz=74,slow=6.6
IBBN Ibbenburen 64.88 317 *e*P P **10 26 28.1 +1.4**
comp=Z,12nm,1.1s,baz=74,slow=6.6
FUORN Ofenpass-Fuorn 65.10 311 P **10 26 27.9 -0.7**
STU Stuttgart 65.10 313 P P **10 26 28.6 +0.4**
STU pmax pmax
comp=Z,14nm,0.9s
STU Stuttgart 65.10 313 P P **10 26 28.6 +0.4**
STU IAmb IAmb 10 26 31.0
comp=Z,14nm,0.9s
STU Stuttgart 65.10 313 *e*P P **10 26 29.2 +1.0**
comp=Z,34nm,0.9s,baz=74,slow=6.6
TNS Taunus Mts 65.11 315 *e*P P **10 26 28.2 -0.2**
comp=Z,9.0nm,1.1s,baz=74,slow=6.6
DAVA Damuels 65.13 312 *e*P P **10 26 28.4 -0.3**
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 65.30 311 LR LR 10 58 34.4
comp=Z,30nm,20.3s,baz=266,slow=39
BUG Bochum--Univer 65.44 317 *e*P P **10 26 31.5 +1.2**
comp=Z,10nm,1.0s,baz=74,slow=6.6
AS31 Alice Springs 65.54 141 P **10 26 30.4 -1.0**
ASAR Alice Springs 65.54 141 P P **10 26 29.9 -1.4**
comp=Z,5.4nm,0.8s,baz=320,slow=5.1,SNR=34
comp=Z,5.4nm,0.8s
ASAR Alice Springs 65.54 141 P P **10 26 31.0 -0.3**
ASAR Alice Springs 65.54 141 P **10 26 31.0 -0.3**
TNA Tin City 65.62 27 P P **10 26 31.0 -0.2**
baz=290
C16K Lisburne Hills 65.63 24 P P **10 26 31.3 0.0**
baz=291
TUE Stuetta 65.74 311 P **10 26 31.6 -1.1**
TUE IAmb IAmb 10 26 41.5
comp=Z,9.2nm,0.9s
TUE Stuetta 65.74 311 P P **10 26 31.4 -1.3**
comp=Z,50nm,1.0s
BFO Black Forest 65.79 313 P P **10 26 32.6 -0.1**
BFO pmax pmax
comp=Z,12nm,1.1s
BFO Black Forest 65.79 313 P P **10 26 32.6 -0.1**
BFO IAmb IAmb 10 26 34.4
comp=Z,12nm,1.1s
BFO Black Forest 65.79 313 *e*P P **10 26 33.3 +0.6**
comp=Z,13nm,1.2s,baz=74,slow=6.6
F14K Arctic Creek 66.27 27 P P **10 26 35.4 -0.1**
baz=291
C17K DeLong Mountai 66.30 23 P P **10 26 35.8 +0.2**
baz=293
A19K Wainwright 66.30 21 P P **10 26 35.3 -0.3**
baz=294
ECH Echery 66.56 313 P P **10 26 36.9 -0.8**
ECH pmax pmax
comp=Z,10.0nm,1.2s
ECH Echery 66.56 313 P **10 26 36.9 -0.8**
ECH IAmb IAmb 10 26 39.8
comp=Z,10nm,1.2s
D17K Noatak River 66.63 24 P P **10 26 37.5 -0.3**
baz=293,SNR=5.1
WLF Walferdange 66.69 315 P P **10 26 39.1 +0.6**
WLF pmax pmax
comp=Z,33nm,1.1s
WLF Walferdange 66.69 315 P **10 26 39.1 +0.6**
WLF Walferdange 66.69 315 *d*P P **10 26 39.5 +1.0**
comp=Z,17nm,1.1s
WLF Walferdange 66.69 315 *e*P P **10 26 39.8 +1.3**
comp=Z,31nm,1.1s,baz=74,slow=6.6
F15K North Star Dit 66.83 26 P **10 26 38.6 -0.5**
F15K IAmb IAmb 10 26 41.9
comp=Z,20nm,1.1s
F15K North Star Dit 66.83 26 P P **10 26 39.1 0.0**
baz=292,SNR=5.3
C18K Utukok River 66.90 23 P P **10 26 39.6 0.0**
baz=294
SENIN Lac Senin/Sane 67.11 311 P **10 26 41.5 +0.1**
SENIN IAmb IAmb 10 26 43.0
comp=Z,8.3nm,0.9s
C19K Lookout Ridge 67.23 22 P P **10 26 41.5 -0.1**
baz=296
BMRD Maredsous 67.31 316 *d*P P **10 26 42.8 +0.5**
comp=Z,4.6nm,1.0s
E17K Hotham Inlet 67.33 24 P P **10 26 42.2 0.0**
baz=294
G15K Niukluk 67.35 27 P P **10 26 42.4 +0.1**
baz=293
DOU Dourbes 67.49 316 *d*P P **10 26 42.9 -0.6**
comp=Z,5.3nm,1.2s
B20K Meade River 67.59 21 P P **10 26 44.0 +0.2**
baz=297
E18K Tukpahlearik C 67.62 24 P P **10 26 44.2 +0.2**
baz=295
F17K Baldwin Pennin 67.80 25 P P **10 26 45.5 +0.4**
baz=295
G16K Koyuk River 67.83 26 P P **10 26 45.5 +0.1**
baz=295
D19K Kuna River 67.98 22 P P **10 26 46.8 +0.4**
baz=297
MBAR Mbarara 68.17 256 *c e*P P **10 26 48.8 +0.3**
MBAR pmax pmax
comp=Z,12nm,1.3s
H16K Elim 68.20 27 P P **10 26 47.9 +0.2**
baz=295
M11K Mekoryuk 68.26 32 P P **10 26 48.4 +0.3**
baz=293
F18K Selawik 68.31 24 P P **10 26 48.5 +0.1**
baz=296
K13K Kusilvak Mount 68.33 30 P P **10 26 48.5 0.0**
baz=294
D20K Etivluk River 68.37 22 P P **10 26 49.5 +0.7**
baz=298,SNR=11
G17K Kiwalik Mounta 68.43 26 P P **10 26 49.6 +0.4**
baz=296
J14K Nanvaranak Lak 68.46 29 P P **10 26 49.7 +0.3**
baz=294
B22K Teshekpuk Lake 68.55 20 P P **10 26 50.2 +0.4**
baz=300
B21K Ikpikpuk River 68.56 21 P P **10 26 50.4 +0.6**
baz=300
E20K Nigu River 68.73 22 P P **10 26 51.6 +0.5**
baz=299,SNR=11
C21K Knifeblade Rid 68.73 21 P P **10 26 51.9 +0.9**
baz=300,SNR=6.6
E19K Redstone River 68.76 23 P P **10 26 52.1 +0.9**
baz=298,SNR=5.5
F19K Shaleruckik Mo 68.87 24 P P **10 26 52.4 +0.6**
baz=298,SNR=7.1

H17K	Granite Mounta	68.96	26	P		P		10 26 53.4	+0.9
	baz=297,SNR=8.7								
G18K	Tagagawik	68.99	25	P		P		10 26 53.0	+0.3
	baz=298								
I17K	Unalakleet	69.13	27	P		P		10 26 53.9	+0.4
	baz=296								
E21K	Killik River	69.35	22	P		P		10 26 55.2	+0.4
	baz=301								
L14K	Kuka Creek	69.43	30	P		P		10 26 55.9	+0.5
	baz=296								
J16K	Anvik River	69.44	28	P		P		10 26 56.2	+0.8
	baz=297,SNR=11								
G19K	Purcell Mounta	69.44	24			P		10 26 55.5	+0.1
G19K					IAmb	IAmb		10 26 58.0	
	comp=Z,16nm,1.2s								
G19K	Purcell Mounta	69.44	24	P		P		10 26 56.3	+0.8
	baz=299,SNR=7.4								
H18K	Honhosa River	69.45	26	P		P		10 26 55.4	-0.2
H18K					IAmb	IAmb		10 26 57.4	
	comp=Z,14nm,1.1s								
H18K	Honhosa River	69.45	26	P		P		10 26 56.2	+0.7
	baz=298,SNR=6.2								
F20K	Avaraart Lake	69.47	23	P		P		10 26 56.1	+0.6
	baz=300								
K15K	Wolf Creek Mou	69.50	29	P		P		10 26 56.5	+0.7
	baz=296								
M13K	Dall Lake	69.54	31	P		P		10 26 57.2	+1.1
	baz=296								
C23K	Itkillik River	69.63	20	P		P		10 26 57.5	+1.0
	baz=303								
KEST	Kesra	69.64	300	P		P		10 26 56.7	-0.6
	comp=Z,18nm,1.1s,baz=57,slow=3.5,SNR=8.9								
	comp=Z,18nm,1.1s								
L15K	Ungalak Mounta	69.80	30	P		P		10 26 58.5	+0.8
	baz=297								
EKA	Eskdalmuir Ar	69.84	323	P		P		10 26 57.4	-0.7
	comp=Z,5.4nm,0.9s,baz=63,slow=6.2,SNR=7.5								
	comp=Z,5.4nm,0.9s								
H19K	Roundabout Mou	69.97	25	P		P		10 26 60.0	+1.3
	baz=299,SNR=17								
J17K	VABM Dome	70.00	27	P		P		10 26 59.7	+0.8
	baz=298,SNR=7.3								
M14K	Bethel	70.00	31	P		P		10 26 59.8	+0.9
	baz=296,SNR=9.2								
D23K	Nanushuk River	70.09	20	P		P		10 27 00.4	+1.0
	baz=303,SNR=14								
F21K	Alatna River	70.14	23	P		P		10 27 00.7	+0.9
	baz=301								
GCSA	Galena City Sc	70.20	26	P		P		10 27 00.8	+0.7
	baz=299,SNR=15								
F22K	John River	70.42	22	P		P		10 27 02.0	+0.6
	baz=302								
NEEM	North Greenlan	70.43	353	*i* P		P		10 27 01.5	-0.2
NEEM					IAmb	IAmb		10 27 03.4	
	comp=Z,11nm,0.6s								
CTAO	Charters Tower	70.45	129	P		P		10 27 02.4	+0.1
CTAO	Charters Tower	70.45	129	P		P		10 27 01.1	-1.2
CTAO					pmax	pmax			
	comp=Z,14nm,1.3s								
CTAO	Charters Tower	70.45	129	P		P		10 27 01.1	-1.2
CTAO					IAmb	IAmb		10 27 03.5	
	comp=Z,13nm,1.2s								
N14K	Kuskokwak Cree	70.50	31	P		P		10 27 02.6	+0.6
	baz=297,SNR=5.6								
G21K	Allakaket	70.50	23	P		P		10 27 02.6	+0.6
	baz=302,SNR=6.0								
D24K	Happy Valley	70.54	20	P		P		10 27 02.5	+0.4
	baz=305								
H20K	Anotleneega Mo	70.55	25	P		P		10 27 03.1	+0.8
	baz=301,SNR=11								
M15K	Kasigluk River	70.59	30	P		P		10 27 03.1	+0.5
	baz=298,SNR=14								
TOLK	Toolik Lake Re	70.61	21	P		P		10 27 03.3	+0.7
	baz=304,SNR=12								
L16K	Owhat River	70.63	29	P		P		10 27 03.5	+0.7
	baz=298								
K17K	Iditarod	70.63	28	P		P		10 27 03.7	+0.9
	baz=299,SNR=21								
IMAR	Indian Mountai	70.70	24	P		P		10 27 03.2	0.0
UNV	Unalaska Valle	70.81	38	P		P		10 27 04.6	+0.7
	baz=295								
J18K	Innoko River	70.89	27			P		10 27 04.6	+0.2
J18K					IAmb	IAmb		10 27 06.9	
	comp=Z,19nm,1.1s								
J18K	Innoko River	70.89	27	P		P		10 27 05.2	+0.8
	baz=300,SNR=19								
L17K	Donlin	70.92	28	P		P		10 27 05.5	+1.0
	baz=299,SNR=10								
E23K	Chandalar	70.93	21	P		P		10 27 05.1	+0.5
	baz=304,SNR=10.0								
O14K	Tigyukauivet M	71.00	32	P		P		10 27 05.4	+0.4
	baz=298								
J19K	Poorman	71.05	26	P		P		10 27 06.3	+1.0
	baz=301,SNR=25								
I20K	Naaghedeneel	71.06	25	P		P		10 27 06.4	+1.1
	baz=301								
N15K	Kwethluk River	71.10	31			P		10 27 06.1	+0.5
N15K					IAmb	IAmb		10 27 08.4	
	comp=Z,18nm,1.1s								
N15K	Kwethluk River	71.10	31	P		P		10 27 06.7	+1.0
	baz=298,SNR=8.3								
D25K	Kavik River	71.15	19	P		P		10 27 06.1	+0.2
D25K					IAmb	IAmb		10 27 08.6	
	comp=Z,14nm,1.1s								
D25K	Kavik River	71.15	19	P		P		10 27 06.8	+0.9
	baz=307,SNR=17								
M16K	Timber Creek	71.18	30	P		P		10 27 06.9	+0.8
	baz=299,SNR=11								
H21K	Melozitna Rive	71.20	24	P		P		10 27 07.5	+1.2
	baz=302,SNR=15								
COLD	Coldfoot	71.21	22	P		P		10 27 07.0	+0.7
	baz=304,SNR=9.7								
E24K	Your Creek	71.26	21			P		10 27 07.0	+0.4
E24K					IAmb	IAmb		10 27 08.9	
	comp=Z,13nm,0.9s								
E24K	Your Creek	71.26	21	P		P		10 27 07.5	+0.9
	baz=305,SNR=17								
J20K	Nowinta River	71.51	26			P		10 27 09.0	+0.9
J20K					IAmb	IAmb		10 27 11.2	
	comp=Z,21nm,1.2s								
J20K	Nowinta River	71.51	26	P		P		10 27 09.2	+1.2
	baz=302,SNR=16								
N16K	Nishlik Lake	71.53	30	P		P		10 27 09.2	+0.9
	baz=299,SNR=6.1								
L18K	Granite Mounta	71.53	28	P		P		10 27 09.3	+1.0
	baz=300,SNR=7.0								
G23K	Bananza Creek	71.56	22	P		P		10 27 09.1	+0.7
	baz=304,SNR=7.2								
H22K	Ishtalitna Cre	71.57	23	P		P		10 27 09.6	+1.1
	baz=304,SNR=6.9								
M17K	Holitna River	71.64	29	P		P		10 27 09.4	+0.5
	baz=300,SNR=9.4								
O15K	Ungalikthiuk R	71.69	32	P		P		10 27 09.7	+0.4
	baz=299,SNR=6.2								
C27K	Jago River	71.70	18	P		P		10 27 10.3	+1.2
	baz=309,SNR=22								
I21K	Tanana	71.75	24	P		P		10 27 10.4	+0.9
	baz=303,SNR=12								
F24K	Squaw Lake	71.78	21	P		P		10 27 10.8	+1.1
	baz=306,SNR=5.8								
K20K	Telida	71.97	26	P		P		10 27 12.2	+1.3
	baz=302,SNR=12								
E25K	Arctic Village	72.12	20	P		P		10 27 12.5	+0.8
	baz=308,SNR=12								
N17K	Nushagak Hills	72.18	30	P		P		10 27 13.0	+0.8
	baz=300								
H23K	Yukon River	72.23	23	P		P		10 27 13.7	+1.2
	baz=305								
M18K	Stony River	72.26	28	P		P		10 27 13.8	+1.1
	baz=301,SNR=7.7								
O16K	Kokwok River B	72.26	31			P		10 27 13.5	+0.9
O16K					IAmb	IAmb		10 27 15.4	
	comp=Z,18nm,1.1s								
O16K	Kokwok River B	72.26	31	P		P		10 27 13.5	+0.9
	baz=300,SNR=13								
MLY	Manley	72.27	24	P		P		10 27 13.5	+0.8
	baz=304,SNR=14								
L19K	White Mountain	72.29	28	P		P		10 27 14.0	+1.2
	baz=302,SNR=15								
CHUM	Lake Minchumin	72.35	25	P		P		10 27 14.0	+0.9
	baz=303								
G24K	Hadweenzic Riv	72.39	22	P		P		10 27 14.1	+0.8
	baz=307,SNR=7.4								
F25K	Christian Rive	72.42	20	P		P		10 27 14.3	+0.7
	baz=308,SNR=17								
SUMG	Summit	72.44	347	P		P		10 27 13.9	-0.1
SUMG					pmax	pmax			
	comp=Z,10.0nm,1.0s								
SUMG	Summit	72.44	347	P		P		10 27 13.9	-0.1
SUMG					IAmb	IAmb		10 27 15.9	
	comp=Z,9.6nm,1.0s								
SUMG	Summit	72.44	347	*i* P		P		10 27 13.0	-1.0
SUMG					IAmb	IAmb		10 27 15.6	
	comp=Z,9.6nm,1.0s								
INKA	Innaminka	72.56	138			P		10 27 15.0	+0.2
O17K	Koliganek Bris	72.60	30	P		P		10 27 15.3	+0.6
	baz=301								
M19K	Big River Lodg	72.62	28	P		P		10 27 15.4	+0.6
	baz=302								
N18K	Kilae Creek	72.65	29	P		P		10 27 15.5	+0.5
	baz=301,SNR=9.2								
I23K	Minto, Yukon-K	72.68	23	P		P		10 27 16.1	+1.1
	baz=306,SNR=7.4								
CAST	Castle Rocks	72.69	26	P		P		10 27 16.3	+1.1
	baz=304								
D27M	Malcolm River	72.69	18	P		P		10 27 16.2	+1.1
	baz=312,SNR=11								
H24K	Noodor Dome	72.78	23	P		P		10 27 16.4	+0.7
	baz=306								
G25K	Bearman Lake	72.79	21	P		P		10 27 16.7	+1.1
	baz=308,SNR=6.8								
F26K	Sheenjek River	72.80	20	P		P		10 27 16.7	+0.9
	baz=309,SNR=6.9								
PPLA	Purkeypile	72.94	26	P		P		10 27 17.5	+0.7
	baz=304,SNR=12								
NEA2	Nenana	73.11	24	P		P		10 27 18.4	+0.7
	baz=306,SNR=15								
M20K	Styx River	73.14	27	P		P		10 27 18.5	+0.6
	baz=303,SNR=13								
P17K	Kvichak River	73.19	31	P		P		10 27 19.2	+1.0
	baz=301								
D28M	Stokes Point	73.22	17	P		P		10 27 18.3	+0.2
	baz=313								
E27K	Coleen River	73.22	19	P		P		10 27 18.9	+0.7
	baz=311,SNR=18								
S14K	Fog Glacier	73.23	34	P		P		10 27 19.0	+0.4
	baz=300								
SDPT	Sand Point	73.24	35	P		P		10 27 19.2	+0.7
	baz=299								
TRF	Thorofare Moun	73.34	25	P		P		10 27 20.0	+0.8
	baz=305								
POKR	Poker Plat Res	73.36	23	P		P		10 27 19.6	+0.5
	baz=307								
Q16K	King Kialmon	73.36	31	P		P		10 27 19.5	+0.3
	baz=301								
COLA	College	73.36	23	P		P		10 27 21.1	+2.0
COLA	College	73.36	23*c*	*i* P		P		10 27 19.4	+0.3
COLA					pmax	pmax			
	comp=Z,20nm,1.0s								
COLA	College	73.36	23	P		P		10 27 18.8	-0.3
COLA					IAmb	IAmb		10 27 20.8	
	comp=Z,15nm,0.8s								
COLA	College	73.36	23	P		P		10 27 19.2	+0.1
	baz=307								
O18K	Koktuh Hills	73.38	30	P		P		10 27 20.1	+0.8
	baz=302								
G26K	Porcupine Rive	73.39	21	P		P		10 27 20.6	+1.4
	baz=310,SNR=18								
E28M	Babbage River	73.50	18	P		P		10 27 21.0	+1.1
	baz=313,SNR=19								
O19K	Port Alsworth	73.57	29	P		P		10 27 21.3	+0.9
	baz=303								
P18K	Big Mountain,	73.61	30	P		P		10 27 20.7	0.0
	baz=302								
MCK	McKinley	73.67	25	P		P		10 27 21.1	+0.1
	baz=306								
KULLO	Kullorsuaq	73.67	352	*i* P		P		10 27 20.2	-0.5
KULLO					IAmb	IAmb		10 27 21.8	
	comp=Z,14nm,1.0s								
L22K	Petersville	73.69	26	P		P		10 27 21.2	+0.1
	baz=305,SNR=19								
SKT	Skwentna	73.71	27	P		P		10 27 21.2	-0.1
	baz=304,SNR=11								
PRP	Porcupine Dome	73.75	22	P		P		10 27 21.6	+0.1
	baz=309,SNR=12								
ILAR	Eielson Array	73.75	23	P		P		10 27 20.4	-1.0
	comp=Z,6.7nm,1.0s,baz=297,slow=5.1,SNR=41								
ILAR					PP	PP		10 30 10.5	+5.0
	comp=Z,0.7nm,0.9s,baz=295,slow=6.4,SNR=4.6								
ILAR					LR	LR		11 02 44.2	
	comp=Z,43nm,18.9s,baz=252,slow=38								
	comp=Z,6.7nm,1.0s								
Q17K	Contact Creek	73.92	31	P		P		10 27 22.2	-0.4
	baz=302								
CHNA	Chernabura Isl	73.94	35	P		P		10 27 22.3	-0.3
	baz=300								
CUT	Chulitna	73.95	26	P		P		10 27 22.6	0.0
	baz=305								
HDA	Harding Lake	73.96	23	P		P		10 27 22.8	+0.2
	baz=308								
R17L	Mt. Peulik Vol	74.04	32	P		P		10 27 23.3	0.0
	baz=302								
F28M	Old Crow	74.09	19	P		P		10 27 23.6	+0.3
	baz=313,SNR=13								
E29M	Blow River	74.09	18	P		P		10 27 23.8	+0.4
	baz=314,SNR=14								
Q18K	Katmai Hardscr	74.11	31	P		P		10 27 23.5	-0.2
	baz=303								
G27K	Doyon Strip	74.12	20	P		P		10 27 24.2	+0.6
	baz=312,SNR=16								
A36M	Sachs Harbour	74.15	12	P		P		10 27 23.9	+0.3
	baz=325								
P19K	Oil Pt	74.33	29	P		P		10 27 24.9	0.0
	baz=304								
O20K	Slope Mountain	74.34	29	P		P		10 27 25.2	+0.2
	baz=304								
WAT1	Susitna Watana	74.34	25	P		P		10 27 25.0	0.0
	baz=307								
J25K	Salcha River,	74.37	23	P		P		10 27 25.2	+0.1
	baz=309,SNR=6.4								
M22K	Wiseman	74.39	27	P		P		10 27 25.1	-0.1
	baz=306,SNR=8.0								
H27K	Steamboat Moun	74.54	20	P		P		10 27 27.1	+1.1
	baz=312,SNR=36								
CAPN	Captain Cook N	74.55	28	P		P		10 27 26.3	+0.2
	baz=305								
DHY	Denali Highway	74.62	25	P		P		10 27 26.8	+0.1
	baz=308,SNR=6.4								
I26K	Coal Creek Min	74.65	22	P		P		10 27 27.2	+0.5
	baz=311								
K24K	Donnelly Dome	74.74	24	P		P		10 27 27.2	0.0
	baz=309,SNR=11								
WAT6	Susitna Watana	74.79	25	P		P		10 27 27.9	+0.2
	baz=307,SNR=6.3								
PMR	Palmer	74.86	26	P		P		10 27 29.5	+1.6
PMR	Palmer	74.86	26	P		P		10 27 28.2	+0.3
	baz=306,SNR=13								
RC01	Rabbit Creek A	74.93	27	P		P		10 27 28.4	0.0
	baz=306								
I27K	Kandik River	74.93	21	P		P		10 27 29.1	+0.7
	baz=312,SNR=26								
HOM	Homer	74.99	29	P		P		10 27 28.7	0.0
	baz=305								
SML	Sawmill	75.04	26	P		P		10 27 29.5	+0.4
	baz=307,SNR=14								
G29M	Pine Creek	75.10	19	P		P		10 27 29.6	+0.4
	baz=315,SNR=10								
RIDG	Independent Ri	75.10	23	P		P		10 27 29.1	-0.2
	baz=310,SNR=12								
F30M	Barrier River	75.21	18	P		P		10 27 30.4	+0.5
	baz=316,SNR=11								
KNK	Knik Glacier	75.23	26	P		P		10 27 30.6	+0.5
	baz=307								
SCRK	Sand Creek	75.24	23	P		P		10 27 30.6	+0.4
	baz=310,SNR=25								
INK	Inuvik	75.27	17	P		P		10 27 30.7	+0.6
	comp=Z,15nm,1.1s,baz=316,slow=7.7,SNR=17								
	comp=Z,15nm,1.1s								
INK	Inuvik	75.27	17			P		10 27 30.7	+0.6
INK					IAmb	IAmb		10 27 32.5	
	comp=Z,22nm,1.2s								
INK	Inuvik	75.27	17	P		P		10 27 30.9	+0.7
	baz=318,SNR=17								
M23K	Glacier View	75.28	26	P		P		10 27 30.1	-0.2
	baz=308								
O22K	Cooper Landing	75.29	28	P		P		10 27 30.1	-0.3
	baz=306								
BRSE	Bradley Lake S	75.31	28	P		P		10 27 30.4	-0.2
	baz=306								
CHIR	Chirikof Islan	75.36	33	P		P		10 27 30.7	-0.2
	baz=303								
PAX	Paxson	75.37	24	P		P		10 27 30.6	-0.3
	baz=309,SNR=6.0								
SCM	Sheep Creek Mo	75.40	26	P		P		10 27 31.2	0.0
	baz=308,SNR=6.6								
H29M	Whitestone	75.48	20	P		P		10 27 31.7	+0.3
	baz=314,SNR=16								
G30M	tAoh Zraii Nji	75.55	18			P		10 27 32.4	+0.5
G30M	tAoh Zraii Nji	75.55	18	P		P		10 27 31.7	-0.1
	baz=316,SNR=35								
I28M	Miner Creek	75.56	21	P		P		10 27 31.9	-0.1
	baz=313,SNR=15								
PWL	Port Wells	75.61	27	P		P		10 27 32.0	-0.3
	baz=307								
SII	Sitkinak Islan	75.62	32	P		P		10 27 32.0	-0.5
	baz=304								
SEW	Seward	75.63	28	P		P		10 27 32.0	-0.3
	baz=307								
KDAK	Kodiak Island	75.66	31	LR		LR		11 03 36.2	
	comp=Z,62nm,18.4s,baz=256,slow=38								
KDAK	Kodiak Island	75.66	31	P		P		10 27 31.9	-0.6
	baz=305								
M24K	Tolsona, Glenn	75.66	25	P		P		10 27 31.8	-0.8
	baz=309,SNR=6.3								
OHAK	Old Harbor	75.66	31	P		P		10 27 32.6	+0.1
	baz=304								
HARP	HAARP	75.84	25	P		P		10 27 33.1	-0.5
	baz=310								
EPYK	Eagle Plains	75.85	19	P		P		10 27 33.0	-0.6
	baz=316,SNR=10								
F31M	Tsiigehtchic	75.86	17	P		P		10 27 33.4	-0.2
	baz=318								
GLI	Glacier Island	76.08	26	P		P		10 27 35.1	+0.2
	baz=308								
G31M	Satah River	76.11	18	P		P		10 27 35.4	+0.4
	baz=318,SNR=12								
KLU	Klutina	76.14	26	P		P		10 27 35.6	+0.3
	baz=309,SNR=11								
STKA	Stephens Creek	76.18	140	P		P		10 27 35.5	-0.3
	comp=Z,7.0nm,1.0s,baz=336,slow=6.4,SNR=4.3								
	comp=Z,7.0nm,1.0s								
P23K	Montague Islan	76.51	27	P		P		10 27 37.6	+0.2
	baz=308								
N25K	Chitina, Valde	76.56	25	P		P		10 27 38.0	+0.3
	baz=310,SNR=8.4								
C36M	Paulatuk	76.56	13	P		P		10 27 37.7	+0.3
	baz=326								
L27K	Beaver Creek,	76.57	23	P		P		10 27 38.6	+0.8
	baz=312,SNR=17								
BCAR	Beaver Creek A	76.58	23			P		10 27 39.2	+1.4
M26K	Nabesna, AK	76.61	24	P		P		10 27 38.5	+0.5
	baz=311								
DAWY	Dawson	76.68	22	P		P		10 27 38.7	+0.4
	baz=314,SNR=9.6								
I30M	Mount Dempster	76.78	20	P		P		10 27 39.4	+0.4
	baz=316,SNR=21								
J29N	Klondike Camp	76.78	21	P		P		10 27 39.3	+0.4
	baz=315								
EYAK	Cordova Ski Ar	76.80	26	P		P		10 27 39.6	+0.6
	baz=309								
H31M	Peel River	76.92	19			P		10 27 39.9	+0.2
H31M	Peel River	76.92	19	P		P		10 27 40.0	+0.4
	baz=318,SNR=26								
GLB	Gilahina Butte	76.95	25			P		10 27 41.0	+1.1
BMRM	Bremner River	76.97	26	P		P		10 27 40.4	+0.4
BMRM					IAmb	IAmb		10 27 42.5	
	comp=Z,22nm,1.2s								
BMRM	Bremner River	76.97	26	P		P		10 27 40.8	+0.8
	baz=310,SNR=7.6								
M27K	Edge Creek, AK	77.03	24	P		P		10 27 41.3	+0.8
	baz=312,SNR=15								
J30M	Hart River	77.26	20	P		P		10 27 42.1	+0.4
	baz=316,SNR=9.4								
MCARA	McCarthy VSAT	77.27	25	P		P		10 27 41.9	+0.2
	baz=311								
Q23K	Middleton Isla	77.28	27	P		P		10 27 42.4	+0.7
	baz=309								
BVCY	Beaver Creek	77.34	23	P		P		10 27 42.4	+0.4
	baz=313,SNR=7.0								
ESDC	Sonseca Array	77.40	309	P		P		10 27 42.4	-0.5
	comp=Z,8.2nm,1.1s,baz=46,slow=6.1,SNR=30								
ESDC					PP	PP		10 30 33.4	-3.6
	comp=Z,0.5nm,0.9s,baz=59,slow=12,SNR=4.1								
	comp=Z,8.2nm,1.1s								
K29M	Barlow Dome	77.42	21	P		P		10 27 43.3	+0.7
	baz=316,SNR=16								
CRQE	Cirque	77.67	25	P		P		10 27 44.6	+0.6
	baz=312								
KAIM	Kayak Island	77.71	26	P		P		10 27 45.1	+0.9
	baz=311								
PAB	San Pablo	77.72	309	P		P		10 27 44.0	-0.7
PAB					pmax	pmax			
	comp=Z,17nm,1.4s								
PAB	San Pablo	77.72	309	P		P		10 27 44.0	-0.7
PAB					IAmb	IAmb		10 27 48.6	
	comp=Z,17nm,1.4s								
L29M	L29M	77.76	22	P		P		10 27 45.1	+0.7
	baz=315,SNR=8.6								
YUK3	Moose Creek	77.92	24	P		P		10 27 45.0	-0.5
	baz=313								
M29M	Somme Creek	78.12	22			P		10 27 46.5	0.0
M29M	Somme Creek	78.12	22	P		P		10 27 46.1	-0.5
	baz=315,SNR=6.4								
PBRG	Braganca	78.19	312	*e*P		P		10 27 48.1	+0.9
YUK8	Steele Glacier	78.50	24	P		P		10 27 48.1	-0.7
	baz=314								
LSZ	Lusaka	78.56	245	P		P		10 27 48.5	-1.1
LSZ					pmax	pmax			
	comp=Z,30nm,1.4s								
LSZ	Lusaka	78.56	245	P		P		10 27 48.5	-1.1
LSZ					IAmb	IAmb		10 27 50.6	
	comp=Z,30nm,1.4s								
M30M	Minto, Yukon	78.57	22	P		P		10 27 48.7	-0.2
	baz=316								
BRWY	Burwash Landin	78.69	23	P		P		10 27 49.4	-0.2
	baz=315								
MVO	Moncorvo	78.70	311	*e*P		P		10 27 50.6	+0.6
MVO				*i* IAmb		IAmb		10 27 51.7	
	comp=Z,25nm,1.4s								
O28M	Mount Upton	78.70	24	P		P		10 27 49.6	-0.4
	baz=314								
YUK4	Talbot Arm	78.84	23	P		P		10 27 49.9	-0.7
	baz=315								
PGAV	Gavieira, Arco	79.09	312	*e*P		P		10 27 53.4	+1.2
PGAV				*i* IAmb		IAmb		10 28 04.9	
	comp=Z,46nm,1.5s								
PINM	Pinnacle	79.15	25	P		P		10 27 51.8	-0.4
	baz=314								
YUK6	Outpost Mounta	79.22	23	P		P		10 27 52.1	-0.6
	baz=315								
N30M	Aishikik Lake	79.28	23	P		P		10 27 52.2	-0.7
	baz=316								
MTE	Manteigas	79.42	311	*e*P		P		10 27 54.2	+0.1
MTE				*i* IAmb		IAmb		10 27 57.9	
	comp=Z,23nm,1.4s								
PVIS	Viseu	79.49	311	*e*P		P		10 27 55.5	+1.1
HYT	Haines Junctio	79.60	23	P		P		10 27 53.9	-0.8
	baz=316,SNR=5.7								
M31M	Drury

	baz=320									
PBEJ	Beja	80.86	309	*e*P		P		10 28 04.3	+2.6	
PLBC	Pleasant Camp baz=317	80.99	24	P		P		10 28 02.3	+0.3	
MESJ	Messejana	81.20	309	*e*P		P		10 28 05.7	+2.1	
PLOUS	Minas do Lousa	81.23	309	*e*P		P		10 28 05.7	+2.0	
MD01	Midelt array s	81.33	303	P		P		10 28 03.8	-0.7	
SKAG	Skagway	81.34	23	P		P		10 28 06.1	+2.2	
SKAG	Skagway baz=318	81.34	23	P		P		10 28 04.0	+0.2	
P33M	Teslin, Yukon baz=320	81.61	22	P		P		10 28 05.1	-0.3	
P32M	Atlin baz=319	81.79	23	P		P		10 28 06.1	-0.3	
WRGLY	Wrigley baz=327	81.83	16	P		P		10 28 06.2	-0.2	
R31K	City Hall, Gus baz=318	81.98	24	P		P		10 28 07.2	-0.1	
S31K	Pelican baz=317	82.13	25	P		P		10 28 08.0	-0.1	
R32K	Eaglecrest baz=319	82.51	24	P		P		10 28 10.1	0.0	
Q32M	Nakina River baz=320	82.75	23	P		P		10 28 11.3	-0.3	
R33M	Jennings River baz=321	82.84	22	P		P		10 28 11.5	-0.5	
WTLY	Watson Lake, Y baz=323	82.94	20	P		P		10 28 12.2	-0.2	
S32K	Killisnoo baz=319	83.10	24	P		P		10 28 12.9	-0.2	
SIT	Sitka baz=318	83.14	25	P		P		10 28 13.0	-0.3	
DLBC	Dease Lake comp=Z,50nm,18.9s,baz=262,slow=38	83.89	22	LR		LR		11 09 11.8		
DLBC	Dease Lake baz=322	83.89	22	P		P		10 28 16.8	-0.5	
S34M	Telegraph Cree baz=321	83.94	23	P		P		10 28 17.0	-0.4	
T33K	Petersburg baz=320	84.17	24	P		P		10 28 18.3	-0.3	
KOTAN	Kotaneelee Air baz=327	84.29	18	P		P		10 28 18.9	-0.3	
LIRD	Liard River Hi baz=325	84.31	20	P		P		10 28 18.9	-0.4	
YKA	Yellowknife Ar comp=Z,3.8nm,1.1s,baz=339,slow=4.2,SNR=7.1 comp=Z,3.8nm,1.1s	84.44	13	P		P		10 28 20.2	+0.3	
U33K	Whale Pass baz=320	84.65	25	P		P		10 28 20.7	-0.3	
WRAK	Wrangell Islan baz=320	84.69	24	P		P		10 28 20.9	-0.4	
T35M	Bob Quinn baz=322	84.97	23	P		P		10 28 22.0	-0.7	
CRAG	Craig baz=320	85.14	25	P		P		10 28 23.2	-0.4	
V35K	Ketchikan baz=321	85.80	25	P		P		10 28 26.3	-0.5	
TORD	Torodi Ar. Bea comp=Z,12nm,1.1s,baz=56,slow=4.4,SNR=25	86.13	283	P		P		10 28 29.5	+0.3	
TORD				PP		PP		10 31 50.5	+0.9	
	comp=Z,4.6nm,1.2s,baz=52,slow=6.5,SNR=5.9 comp=Z,12nm,1.1s									
TORD	Torodi Ar. Bea	86.13	283	P		P		10 28 28.1	-1.1	
TORD				IAmb		IAmb		10 28 31.0		
	comp=Z,10nm,1.1s									
LBTB	Lobatse	86.22	238	P		P		10 28 28.3	-1.2	
LBTB				pmax		pmax				
	comp=Z,36nm,1.2s									
LBTB	Lobatse	86.22	238			P		10 28 28.2	-1.2	
TXAR	Lajitas Array comp=Z,1.0nm,0.9s,baz=185,slow=0.7,SNR=7.8	118.02	18	PKP		PKPdf		10 34 34.1	-0.9	
QSPA	South Pole Qui comp=Z,3.5nm,1.1s,baz=270,slow=1.6,SNR=4.1	120.20	180	PKP		PKPdf		10 34 36.6	-1.1	

IDC ***19*** *10:40:12.3±1.6,12˚.13N×87˚.18W,h0km,mb3.8/6, mbtmp3.7/7,ML2.4/2,MS2.7/4,Error ellipse: s-maj=46.5km s-min=19.4km az=42.0*

CATAC ***19*** *10:40:12.6±0.4,12˚.2N×8˚.8W±˚,h14km±3km,M4.2/36, mb5.2/1,mB5.3/1,MLv3.7/36,Mw(mB)4.8/1,Error ellipse: s-maj=4.4km s-min=2.6km az=11.9,confirmed*

NEIC ***19*** *10:40:12.7±1.4,11˚.65N±0˚.06×87˚.56W±0˚.07,h10km±2km, mb4.2/16,Error ellipse: s-maj=11.8km s-min=9.1km az=228.0*

UCR ***19*** *10:40:23.0±1.2,10˚.50N×87˚.31W,h1km±577km,MW4.3, Presumed earthquake*

ISC 19 10:40:07.7±1.4,**11˚.28N**±0˚.04×**87˚.66W**±0˚.03,**h11**km±10km, **n112,**σ1°**49**/135,**mb4.2**/13,**MS2.8**/3,**17C-3D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	1.38	49	⇑P		Pg	10 40 34.7	+0.5
MACN	El Madrono	1.52	39	⇑P		Pb	10 40 36.2	+0.1
MACN				S		Sn	10 40 53.9	-1.0
ROCN	Rota Cerro Neg	1.52	36	⇑P		Pn	10 40 34.5	-0.5
ROCN				S		Sn	10 40 53.4	-1.6
QUEN	Al S del Volca	1.53	31	⇑P		Pb	10 40 36.2	0.0
QUEN				S		Sn	10 40 53.2	-1.8
CNGA	Al SSO del Vol	1.53	38	P		Pb	10 40 36.2	0.0
CNGA				S		Sn	10 40 53.9	-1.2
CRIN	San Cristobal	1.53	23	⇑P		Pb	10 40 35.8	-0.5
CRIN				S		Sn	10 40 52.5	-2.7
CRIN	San Cristobal	1.53	23			Pn	10 40 35.3	+0.1
CNGN	Cerro Negro	1.54	38	⇑P		Pb	10 40 36.2	-0.1
CNGN				S		Sn	10 40 53.8	-1.5
HOYN	Al Sur del Vol	1.54	32	P		Pb	10 40 36.2	-0.3
HOYN				S		Sn	10 40 53.4	-2.1
TELN	Telica	1.55	32	P		Pb	10 40 36.0	-0.5
TELN				S		Sn	10 40 53.6	-1.9
HERN	Volcan Telica	1.55	31	⇑P		Pn	10 40 35.9	+0.4
HERN				S		Sn	10 40 54.0	-1.7
HERN	Volcan Telica	1.55	31			Pn	10 40 35.3	-0.1
MOMN	Momotombo	1.57	44	P		Pb	10 40 37.0	+0.1
MOMN				S		Sn	10 40 55.3	-0.8
APQ2	Apoyeque	1.59	55	P		Pg	10 40 38.0	-0.4
TISN	Laguna Tiscapa	1.61	58	⇑P		Pg	10 40 38.4	-0.3
MOM2	El Cardon	1.63	45	⇑P		Pb	10 40 37.9	0.0
MOM2				S		Sn	10 40 57.3	-0.1
MGAN	Managua	1.63	58	P		Pg	10 40 39.2	+0.2
MGAN				S		Sb	10 40 58.7	+0.2
MGAN	Managua	1.63	58			Pb	10 40 38.0	+0.1
MAS3	Al N del Volca	1.63	63	S		Sg	10 40 59.7	-0.6
MOM3	MOM3	1.66	42	⇑P		Pb	10 40 38.0	-0.3
MOM3				S		Sn	10 40 57.4	-0.8
WILN	Americas 2	1.69	59	⇑P		Pg	10 40 39.5	-0.6
WILN				S		Sb	10 41 01.0	+0.8
CSGN	Cosiguina Volc	1.69	3	⇑P		Pn	10 40 37.1	-0.3
CSGN				S		Sn	10 40 55.6	-3.4
CNCH	Conchagua	1.99	355	⇑P		Pn	10 40 41.1	-0.4
CNCH				S		Sn	10 41 03.1	-3.5
CONN	Concepcion	2.02	82	P		Pg	10 40 45.5	-0.9
LCND	La Caada	2.03	354	P		Pn	10 40 42.0	0.0
CARN	Rivas	2.10	92	P		Pg	10 40 47.5	-0.5
CARN				S		Sg	10 41 15.6	+0.3
CARN	Rivas	2.10	92	Pn		Pb	10 40 46.6	+0.7
LIMN	Finca el Limon	2.18	35	⇓P		Pn	10 40 44.9	+0.8
LIMN				S		Sn	10 41 10.5	-0.6
RANC	El Ranchito	2.23	344	P		Pn	10 40 44.7	-0.2
PACA	Pacayal	2.27	343	⇑P		Pn	10 40 45.1	-0.3
PACA				S		Sn	10 41 10.6	-2.9
BOAB	BOACO BROADBAN	2.27	59	⇑P		Pb	10 40 47.1	-1.7
BOAB				S		Sb	10 41 15.5	-1.5
BOAB	BOACO BROADBAN	2.27	59			Pn	10 40 46.9	+1.6
JUD3	Juan Diaz 3	2.36	118			Pg	10 40 52.1	-1.0
OCON	Estacion meteo	2.61	26	⇓P		Pn	10 40 51.0	+1.0
COEG	Centro de Oper	2.61	333	S		Sn	10 41 19.2	-2.7
SCLA	Alcaldia de Sa	2.62	337	P		Pn	10 40 51.0	+0.8
RCON	San Juan de Ri	2.64	34	P		Pn	10 40 52.1	+1.6
RCON				S		Sn	10 41 21.6	-1.0
RCVN	Varillal2	2.70	32	P		Pn	10 40 53.0	+1.6
RCPN	Sur Rio San Ju	2.71	34	⇓P		Pn	10 40 53.0	+1.6
PAVA	Las Pavas	2.72	333	P		Pn	10 40 52.6	+1.0
PAVA				S		Sn	10 41 22.9	-1.7
JTS	Las Juntas de 4.2nm,0.3s,baz=298,slow=23,SNR=15	2.84	110	Pn		Pb	10 40 59.9	+1.4
JTS				Sn		Sb	10 41 33.8	+0.5
	9.6nm,0.3s,baz=274,slow=21,SNR=8.6							
JTS				LR		LR	10 41 44.2	
	comp=Z,30nm,22.0s,baz=271,slow=32 7.6nm,0.3s							
JTS	Las Juntas de	2.84	110			Pb	10 40 59.3	+0.8
JTS	Las Juntas de	2.84	110	*e*P		Pb	10 40 59.6	+1.1
JTS				*e*S		Sb	10 41 33.1	-0.2
MARCA	Marcala la Paz	2.88	353	⇑P		Pn	10 40 54.4	+0.5
MARCA				S		Sn	10 41 26.6	-2.1
PMON	Piamonte	2.91	326	P		Pn	10 40 55.2	+1.0
PMON				S		Sn	10 41 28.2	-1.1
JAYA	Jayaque - finc	2.94	324	P		Pn	10 40 55.7	+1.1
JAYA				S		Sn	10 41 25.7	-4.3
VARE2	V. Arenal	3.00	105	*e*P		Pb	10 41 02.8	+1.5
ARE1	Arenal 1	3.00	105	*e*P		Pb	10 41 01.7	+0.3
LAFE	Finca La Fe, P	3.07	118	*e*P		Pb	10 41 02.4	-0.2
NUBE	Las Nubes	3.33	322	P		Pn	10 41 00.8	+0.8
FAME	Alcaldia de Sa	3.43	318	P		Pn	10 41 02.7	+1.4
ATEO	Atenas	3.47	112	*e*P		Pb	10 41 11.4	+2.0
MTO3	Montecristo	3.52	332	P		Pn	10 41 03.9	+1.2
MTO3	Montecristo	3.52	332			Pn	10 41 03.5	+0.9
PURI	Puriscal	3.59	113	*e*P		Pb	10 41 12.8	+1.4
SARH	Santa Rosa de	3.64	343	P		Pn	10 41 04.6	+0.4
ESQI	Esquipulas	3.65	333			Pn	10 41 05.4	+1.0
HDC	Heredia	3.71	110			Pb	10 41 09.9	-3.6
SIUN	Universidad Ur	3.72	49	Pn		Pn	10 41 06.1	+0.9
DOMI	Santo Domingo	3.74	110	*e*P		Pb	10 41 15.2	+1.3
ACOS	Acosta	3.74	113	*e*P		Pb	10 41 14.1	+0.1
PICV	PH. Pirrs	3.78	115	*e*P		Pb	10 41 14.8	+0.1
ECI	Escuela Centro	3.79	110	*e*P		Pb	10 41 15.7	+0.9
CORON	Coronado	3.82	110	*e*P		Pb	10 41 16.7	+1.3
CVIMO	Finca Echandi	3.86	108	*e*P		Pg	10 41 21.5	-0.3
ABE2	San Pablo	3.88	113	*e*P		Pb	10 41 16.0	-0.4
PITB	Pirrs, San	3.92	114	*e*P		Pb	10 41 16.3	-0.8
RAZU	San Marcos de	3.92	114	*e*P		Pb	10 41 16.2	-0.9
VICA	Volcano Irazu	3.96	109	*e*P		Pb	10 41 19.2	+1.2
PIEC	Cerro El Cedra	4.00	114	*e*P		Pb	10 41 17.4	-1.0
REPA	Paraso	4.00	111	*e*P		Pb	10 41 17.7	-0.7
PCAYA	Pacayas	4.02	109	*e*P		Pb	10 41 19.2	+0.4
CVTQ	Turrialba Volc	4.03	108	*e*P		Pb	10 41 18.3	-0.8
CVTR	Volcan Turrial	4.03	108	*e*P		Pb	10 41 19.4	+0.3
VTCV	VTCV, Calle Va	4.08	108	*e*P		Pb	10 41 19.6	-0.1
ABRB	Las Abras (San	4.08	108	*e*P		Pb	10 41 20.4	+0.6
VINA	Juan Vinas	4.09	109	*e*P		Pb	10 41 19.5	-0.4
VERB	Verbena	4.12	108	*e*P		Pb	10 41 20.6	+0.2
RESJ	San Isidro (Tu	4.14	107	*e*P		Pb	10 41 21.2	+0.4
EDPE	Pejibaye, P	4.54	117	*e*P		Pb	10 41 25.3	-2.3
APG	El Apazote baz=139,slow=20,SNR=2.3	4.60	324	Pn		Pn	10 41 20.1	+2.6
APG				Sn		Sn	10 42 09.4	-1.8
	0.1nm,0.3s,baz=110,slow=12,SNR=4.7							
FIMO	Fila Mora	4.81	118	*e*P		Pb	10 41 29.3	-2.9
RTAL	Retalhuleu	5.09	310	Pn		Pn	10 41 26.6	+2.6
PIRO	Carate, Puerto	5.13	123	⇑P		Pb	10 41 33.1	-4.6
PIRO	Carate, Puerto	5.13	123			Pb	10 41 31.9	-5.6
PIRO	Carate, Puerto	5.13	123	*e*P		Pb	10 41 33.0	-4.6
BRU2	Volcan	5.48	116			Pb	10 41 36.7	-7.0
CAMR	Camarioca	13.16	26	Pn		Pn	10 43 13.9	-0.9
HBVL	Hebbronville	18.81	328	P		Pn	10 44 29.1	+1.0
833A	Chaparral WMA,	20.21	329	P		Pn	10 44 44.3	-0.4
152A	Waverly Hall	21.46	7	P		P	10 44 57.1	+0.8
152A	comp=Z,9.0nm,0.8s			IAmb		IAmb	10 45 01.3	
LRAL	Lakeview Retre	21.66	2			P	10 44 60.0	+1.5
Z47A	Carrollton	21.82	359	P		P	10 45 01.7	+1.5
Z47A	comp=Z,7.0nm,1.0s			IAmb		IAmb	10 45 04.0	
SJG	San Juan comp=Z,16nm,18.6s,baz=274,slow=37	21.87	69	LR		LR	10 53 23.8	
GOGA	Godfrey	22.36	9	P		P	10 45 07.4	+1.4
GOGA	comp=Z,8.2nm,0.9s			IAmb		IAmb	10 45 09.7	
Z41A	Richland Creek	22.38	349	P		P	10 45 06.7	+0.5
Y52A	Lilburn	22.72	8			P	10 45 10.8	+0.9
Y52A	comp=Z,7.3nm,0.9s			IAmb		IAmb	10 45 12.9	
TX31	Lajitas Ar. Si	23.36	323			P	10 45 18.5	+1.9
TXAR	Lajitas Array comp=Z,0.8nm,0.6s,baz=138,slow=9.6,SNR=26 comp=Z,0.8nm,0.6s	23.36	323	P		P	10 45 19.3	+2.7
TXAR	Lajitas Array	23.36	323			P	10 45 18.9	+2.4
UALR	University of	23.77	350	P		P	10 45 21.0	+0.6
UALR	comp=Z,8.3nm,1.2s			IAmb		IAmb	10 45 21.5	
MIAR	Mount Ida	23.78	348			P	10 45 20.9	+0.3
W50A	Signal Mountai	23.91	5	P		P	10 45 22.3	+0.5
TKL	Tuckaleechee C comp=Z,5.9nm,0.8s,baz=177,slow=12,SNR=8.9	24.52	8	P		P	10 45 26.4	-1.1
TKL	comp=Z,29nm,18.6s,baz=153,slow=36 comp=Z,5.9nm,0.8s			LR		LR	10 54 13.8	
TKL	Tuckaleechee C	24.52	8			P	10 45 27.8	+0.3
TKL	comp=Z,8.8nm,0.9s			IAmb		IAmb	10 45 30.6	
LPAZ	La Paz	33.52	144	P		P	10 46 54.6	+6.2
LPAZ	comp=Z,3.9nm,1.4s			IAmb		IAmb	10 47 37.4	
PDAR	Pinedale Array comp=Z,0.2nm,0.5s,baz=172,slow=5.7,SNR=3.0 comp=Z,0.2nm,0.5s	36.71	333	P		P	10 47 15.8	+0.6
G62A	West of Eustis	36.87	20	P		P	10 47 16.9	+0.6
G62A	comp=Z,4.2nm,0.7s			IAmb		IAmb	10 47 18.8	
NVAR	Mina Array Bea comp=Z,0.4nm,0.7s,baz=148,slow=7.8,SNR=3.7 comp=Z,0.4nm,0.7s	38.45	320	P		P	10 47 33.8	+3.8
ULM	Lac du Bonnet comp=Z,1.6nm,0.6s,baz=164,slow=12,SNR=4.0	39.44	352	P		P	10 47 36.4	-1.5
ULM	comp=Z,30nm,19.1s,baz=52,slow=39 comp=Z,1.6nm,0.6s			LR		LR	11 05 34.4	
SCHQ	Schefferville comp=Z,2.2nm,0.5s,baz=218,slow=7.5,SNR=17 comp=Z,2.2nm,0.5s	46.45	16	P		P	10 48 33.2	-1.5
CMAR	Chiang Mai Arr comp=Z,1.4nm,0.9s,baz=331,slow=3.3,SNR=8.5	149.74	347	PKPbc		PKPab	11 00 02.6	-1.2

IDC ***19*** *11:11:22.4±1.6,2˚.42N×128˚.59E,h238km±16km,mb3.2/9, mbtmp3.9/11,Error ellipse: s-maj=28.2km s-min=10.8km az=77.0*

DJA ***19*** *11:11:22.5±0.6,3˚.5±5˚×12˚.8E±˚,h214km±4km,M4.2/11, mB4.9/3,mb4.4/7,MLv4.2/11,Mw(mB)4.2/3*

ISC 19 11:11:23.2±0.7,**2˚.34N**±0˚.07×**128˚.38E**±0˚.09,**h250**km,**n17,** σ1°**92**/22,**mb3.5**/8,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.85	213	P		Pn	11 12 03.6	-0.8
TNTI				S		S	11 12 35.4	-1.5
SIJI	Sorong	4.30	138	P		Pn	11 12 29.7	-0.8
	22nm,0.4s,baz=331,slow=18,SNR=13							
SANI	Sanana	4.97	209	P		Pn	11 12 37.8	-0.8
SANI				S		S	11 13 33.7	-5.0
GTOI	Gorontalo	5.62	253	P		Pn	11 12 48.0	+1.3
	0.3nm1µm59nm,0.6s							
KCP	Kidapawan	5.68	325	*i* P		Pn	11 12 46.4	-1.1
BIPH	Bislig	6.15	341	*e*P		Pn	11 12 49.9	-3.3
BIPH				*e*S		S	11 13 07.4	-58
LUWI	Luwuk 59nm,0.7s	6.53	239	P		Pn	11 12 59.1	+1.1
BATI	Baumata 14nm,0.4s,baz=134,slow=23,SNR=2.1	13.31	201	P		P	11 14 24.6	+0.1
FITZ	Fitzroy Crossi 1.7nm,0.5s,baz=9.0,slow=9.1,SNR=12 1.7nm,0.5s	20.48	187	P		P	11 15 42.9	+0.5
WRA	Warramunga Arr 2.5nm,0.6s,baz=343,slow=9.3,SNR=73	22.90	165	P		P	11 16 05.8	+0.2
WRA	0.4nm,0.8s,baz=337,slow=18,SNR=2.5 2.5nm,0.6s			S		S	11 19 58.0	+1.6
ASAR	Alice Springs 1.3nm,0.5s,baz=349,slow=8.5,SNR=42	26.40	169	P		P	11 16 38.2	+1.1
ASAR				PcP		PcP	11 19 57.5	+1.7
	0.2nm,0.5s,baz=347,slow=2.5,SNR=2.0							
ASAR				ScP		ScP	11 23 14.7	+2.8
	0.3nm,0.7s,baz=332,slow=2.2,SNR=2.0 1.3nm,0.5s							
CMAR	Chiang Mai Arr 0.5nm,0.3s,baz=115,slow=9.2,SNR=1.5 0.5nm,0.3s	32.99	301	P		P	11 17 36.6	+1.4
MJAR	Matsushiro Arr 1.0nm,0.8s,baz=183,slow=11,SNR=5.2 1.0nm,0.8s	35.23	14	P		P	11 17 52.1	-2.1
STKA	Stephens Creek 1.2nm,0.3s,baz=332,slow=8.0,SNR=5.2 1.2nm,0.3s	36.27	161	P		P	11 18 03.4	+0.5
MKAR	Makanchi Array 0.2nm,0.5s,baz=126,slow=7.4,SNR=2.5 0.2nm,0.5s	59.63	325	P		P	11 21 01.2	+0.1
KURBB	Kurchatov Arra 0.4nm,0.4s,baz=122,slow=5.6,SNR=4.5 0.4nm,0.4s	63.79	327	P		P	11 21 30.6	+1.8
ILAR	Eielson Array 0.1nm,0.4s,baz=281,slow=6.1,SNR=1.6 0.1nm,0.4s	85.65	25	P		P	11 23 32.9	-0.6

TEH ***19*** *11:40:30.6,27˚.95N×54˚.89E,h5km,ML3.4, Presumed earthquake*

IDC ***19*** *11:40:30.2±2.8,28˚.08N×54˚.69E,h0km,mb3.5/6, mbtmp3.5/6,Error ellipse: s-maj=61.5km s-min=29.2km az=158.0*

ISC 19 11:40:33.6±0.9,**27˚.93N**±0˚.07×**54˚.86E**±0˚.06,**h26**km,**n18,** σ1°**44**/18,**mb3.5**/5,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHRM	Jahrom	1.27	297	Pg	Pb	11 40 57.0	0.0
GENO	Geno	1.28	114	Pg	Pn	11 40 56.4	+0.4
KHL1	Khalili_Fars	1.42	258	Pg	Pb	11 41 00.3	+0.9
IBND	Bandar-abas	1.56	108	Pg	Pn	11 41 00.2	+0.4
LMD1	Lamerd	1.62	249	Pg	Pb	11 41 04.8	+1.9
QIR1	Qir	1.69	289	Pg	Pn	11 41 02.8	+1.2
NGRK	Negar Kerman	2.37	43	Pn	Pn	11 41 11.9	+0.8
KHNJ	Kahnooj	2.52	89	Pn	Pn	11 41 13.8	+1.0
KRBR	Kerman	2.63	39	Pn	Pn	11 41 16.6	+1.8
KHGB	Koh Gabri	2.81	30	Pn	Pn	11 41 19.0	+1.8
KBAM	BAM	3.38	68	Pn	Pn	11 41 26.5	+1.7
IBAF	Bafgh	3.69	9	Pn	Pn	11 41 30.4	+1.2
BRTR	Keskin Array B 0.9nm,0.9s,baz=118,slow=12,SNR=5.5 0.9nm,0.9s	21.14	309	P	P	11 45 15.2	-1.5
MKAR	Makanchi Array 0.3nm,0.7s,baz=233,slow=8.9,SNR=2.1 0.3nm,0.7s	28.58	41	P	P	11 46 28.5	+1.0
ZALV	Zalesovo Beam 0.5nm,0.5s,baz=243,slow=9.5,SNR=2.4 0.5nm,0.5s	34.00	32	P	P	11 47 14.5	-0.6
FINES	FINESS Array B 0.3nm,0.4s,baz=141,slow=9.2,SNR=4.2 0.3nm,0.4s	38.62	338	P	P	11 47 54.2	-0.2
HFS	Hagfors 1.0nm,0.7s,baz=121,slow=7.6,SNR=1.7 1.0nm,0.7s	42.54	331	P	P	11 48 24.0	-2.8
TORD	Torodi Ar. Bea 0.5nm,0.5s,baz=55,slow=5.6,SNR=4.8 0.5nm,0.5s	51.54	265	P	P	11 49 37.2	-0.5

IDC ***19*** *11:41:34.5±1.9,8˚.30S×116˚.71E,h0km,mb3.7/4, mbtmp3.8/6,ML3.7/2,Error ellipse: s-maj=54.8km s-min=24.3km az=61.0*

DJA ***19*** *11:41:40.2±1.9,8˚.5±20˚×11˚.7E±˚,h16km±17km,M3.9/6, MLv3.9/6*

ISC 19 11:41:40.7±0.9,**8˚.29S**±0˚.07×**117˚.06E**±0˚.05,**h35**km,**n11,** σ1°**49**/13,**mb3.6**/3,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.89	127	P	Pn	11 41 56.3	-0.4
KHKI	Kahang-Kahang	1.44	267	P	Pn	11 42 05.4	+1.1
IGBI	Denpasar	1.97	254	P	Pn	11 42 13.2	+1.6
LBFI	Labuhan Bajo,	2.80	94	P	Pn	11 42 24.3	+1.2
JAGI	Jajag, Banyuwa	2.89	266	P	Pn	11 42 23.1	-1.1
KAPI	Kappang 6.2nm,0.3s,baz=231,slow=5.1,SNR=13	4.21	40	Pn	Pn	11 42 43.5	+1.1
KAPI				Sn	Sn	11 43 29.2	-1.2
	5.4nm,0.3s,baz=229,slow=20,SNR=7.8 18nm,0.2s						
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=321,slow=14,SNR=6.9	12.83	140	Pn	Pn	11 44 41.3	+0.6
FITZ				Sn	Sn	11 47 00.0	-2.4
	0.1nm,0.3s,baz=280,slow=19,SNR=1.4 1.2nm,0.7s						
WRA	Warramunga Arr 2.9nm,0.4s,baz=301,slow=12,SNR=117 2.9nm,0.4s	20.34	127	P	P	11 46 14.9	+0.7
ASAR	Alice Springs 0.9nm,0.7s,baz=311,slow=10,SNR=26 0.9nm,0.7s	22.23	135	P	P	11 46 35.6	+1.1
STKA	Stephens Creek 1.2nm,0.5s,baz=309,slow=6.5,SNR=3.7 1.2nm,0.5s	32.73	139	P	P	11 48 11.4	+1.2
MKAR	Makanchi Array 0.4nm,0.8s,baz=147,slow=8.2,SNR=3.1 0.4nm,0.8s	62.97	334	P	P	11 52 02.0	-1.9

IDC ***19*** *11:42:19.2±1.9,8˚.06S×117˚.09E,h0km,mb3.7/4, mbtmp3.7/6,ML3.6/2,Error ellipse: s-maj=58.0km s-min=24.8km az=61.0*

ISC 19 11:42:20.8±1.6,**8˚.1S**±0˚.1×**117˚.1E**±0˚.2,**h10**km,**n6,** σ0°**38**/6, **mb3.5**/3,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang 3.3nm,0.3s,baz=225,slow=2.9,SNR=2.0 14nm,0.5s	3.98	41	Pn	Pn	11 43 21.9	-0.1
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=318,slow=12,SNR=1.7 0.7nm,0.4s	12.98	141	Pn	Pn	11 45 25.1	-0.2
WRA	Warramunga Arr 3.1nm,0.4s,baz=301,slow=12,SNR=14 3.1nm,0.4s	20.44	127	P	P	11 46 59.0	+0.5
ASAR	Alice Springs 0.9nm,0.7s,baz=312,slow=9.6,SNR=6.5 0.9nm,0.7s	22.36	136	P	P	11 47 19.0	-0.2
STKA	Stephens Creek 1.3nm,0.5s,baz=307,slow=18,SNR=1.4 1.3nm,0.5s	32.87	140	P	P	11 48 55.2	+0.2
MKAR	Makanchi Array 0.2nm,0.6s,baz=145,slow=5.3,SNR=1.9 0.2nm,0.6s	62.78	334	P	P	11 52 46.4	0.0

IDC ***19*** *11:50:04.6±1.1,55˚.4S×28˚.46W,h0km,mb3.7/3, mbtmp3.8/4,ML4.3/1,Error ellipse: s-maj=49.4km s-min=27.1km az=75.0*

ISC 19 11:50:10.8±1.1,**55˚.5S**±0˚.2×**28˚.4W**±0˚.3,**h45**km,**n11,** σ0°**64**/8,**3D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA2	Neumayer--Watz comp=Z,2.0nm,0.7s,baz=314,slow=13	17.99	158	⇓P	P	11 54 16.8	-0.4
SNAA	Sanae comp=Z,62nm,0.4s

ARMEC				S		**Sg**	**12 00 25.6**	**-1.6**	
ORTC	**Ortega, Tolima**	**1.25**	**92**	P		**Pg**	**12 00 16.8**	**-1.0**	
ORTC				S		**Sg**	**12 00 31.9**	**-2.3**	
PIZC	**Pizarro, Choco**	**1.32**	**320**	P		**Pn**	**12 00 21.2**	**+3.0**	
PIZC				S		**Sn**	**12 00 41.0**	**+5.2**	
POPC	**Popayan, Colom**	**1.41**	**187**	P		**Pn**	**12 00 19.4**	**-0.1**	
POPC				S		**Sg**	**12 00 37.4**	**-1.8**	
PRAC	**Prado**	**1.63**	**98**	P		**Pn**	**12 00 22.8**	**+0.4**	
PRAC				S		**Sn**	**12 00 42.8**	**-0.6**	
GUY2C	**Guyana, Caldas**	**1.70**	**42**	P		**Pn**	**12 00 23.7**	**-0.1**	
GUY2C				S		**Sn**	**12 00 44.9**	**-0.9**	
GR1C	**Gorgona, Isla**	**1.91**	**241**	P		**Pn**	**12 00 27.5**	**+1.3**	
GR1C				S		**Sn**	**12 00 49.9**	**-0.4**	
CBOC	**Ciudad Bolivar**	**1.97**	**14**	P		**Pn**	**12 00 28.4**	**+1.2**	
CBOC				S		**Sn**	**12 00 52.3**	**+0.4**	
GARC	**Garzon, Huila**	**2.02**	**150**	P		**Pn**	**12 00 30.4**	**+2.4**	
GARC				S		**Sn**	**12 00 56.0**	**+2.7**	
BBAC	**Balboa, Cauca**	**2.05**	**201**	P		**Pb**	**12 00 31.1**	**-0.1**	
BBAC				S		**Sg**	**12 01 00.6**	**+0.8**	
ROSC	**El Rosal**	**2.35**	**68**	Pn		**Pn**	**12 00 34.9**	**+2.3**	
	42nm,0.3s,baz=301,slow=9.8,SNR=47								
ROSC				Sn		**Sn**	**12 01 05.8**	**+4.1**	
	26nm,0.3s,baz=197,slow=19,SNR=4.8								
	115nm,0.4s								
ROSC	**El Rosal**	**2.35**	**68**	P		**Pn**	**12 00 34.9**	**+2.3**	
ROSC				S		**Sn**	**12 01 05.3**	**+3.6**	
CRUC	**La Cruz**	**2.41**	**191**	P		**Pg**	**12 00 39.8**	**-0.1**	
CRUC				S		**Sg**	**12 01 13.3**	**+2.1**	
CVER	**Cruz Verde, Cu**	**2.49**	**77**	P		**Pn**	**12 00 36.7**	**+2.1**	
CVER				S		**Sn**	**12 01 08.5**	**+3.3**	
VILC	**Villavicencio,**	**2.81**	**87**	P		**Pn**	**12 00 40.7**	**+2.0**	
VILC				S		**Sb**	**12 01 20.1**	**+1.7**	
CHIC	**Chingaza**	**2.84**	**76**	P		**Pn**	**12 00 41.9**	**+2.4**	
SPBC	**San Pablo de B**	**2.96**	**55**	P		**Pn**	**12 00 44.1**	**+3.4**	
PTBC	**PUERTO BERRIO,**	**3.28**	**38**	P		**Pn**	**12 00 47.8**	**+2.6**	
PTBC				S		**Sb**	**12 01 29.8**	**-2.3**	
UREC	**San Jos de Ur**	**3.90**	**14**	P		**Pn**	**12 00 56.1**	**+2.4**	
RUSC	**La Rusia**	**3.92**	**60**	P		**Pn**	**12 00 56.8**	**+2.5**	
APAC	**Apartado, Choc**	**3.93**	**359**	P		**Pn**	**12 00 55.7**	**+1.7**	
APAC				S		**Sn**	**12 01 43.8**	**+3.7**	
OTAV	**Otavalo**	**4.17**	**208**	P		**Pn**	**12 00 59.7**	**+2.0**	
OTAV				S		**Sn**	**12 01 45.2**	**-1.5**	
BARC	**Barichara**	**4.22**	**51**	P		**Pn**	**12 01 00.7**	**+2.4**	
BARC				S		**Sn**	**12 01 52.6**	**+4.9**	
PAC1	**Pacto, Paraso**	**4.31**	**212**	P		**Pn**	**12 01 01.5**	**+2.0**	
PTGC	**Puerto Gaitan,**	**4.36**	**87**	P		**Pn**	**12 01 01.5**	**+1.5**	
PAMC	**Pamplona, Colo**	**5.07**	**48**	P		**Pn**	**12 01 14.0**	**+3.9**	
	6µm17nm,1.8s								
OCAC	**Ocana**	**5.31**	**36**	P		**Pn**	**12 01 15.8**	**+2.6**	
AZU	**Azuero**	**5.35**	**316**	P		**Pn**	**12 01 13.6**	**0.0**	
JTS	**Las Juntas de**	**10.49**	**307**	LR		LR	12 05 42.4		
	comp=Z,14nm,19.9s,baz=142,slow=34								
LPAZ	**La Paz**	**21.74**	**158**	P		**P**	**12 04 47.7**	**+1.7**	
	0.4nm,0.4s,baz=333,slow=6.8,SNR=1.9								
	0.4nm,0.4s								
SCHQ	**Schefferville**	**51.33**	**7**	LR		LR	12 31 53.9		
	comp=Z,17nm,19.0s,baz=26,slow=38								
YKA	**Yellowknife Ar**	**64.85**	**342**	P		**P**	**12 10 30.9**	**-1.6**	
	0.6nm,0.7s,baz=133,slow=7.3,SNR=2.5								
	0.6nm,0.7s								
ESDC	**Sonseca Array**	**74.07**	**50**	P		**P**	**12 11 28.4**	**-1.7**	
	0.2nm,0.7s,baz=258,slow=4.6,SNR=1.7								
	0.2nm,0.7s								
TORD	**Torodi Ar. Bea**	**77.63**	**77**	P		P	12 11 47.5	-3.4	
	0.2nm,0.5s,baz=283,slow=5.6,SNR=1.3								
ILAR	**Eielson Array**	**78.15**	**336**	P		**P**	**12 11 50.5**	**-2.3**	
	0.3nm,0.6s,baz=117,slow=3.5,SNR=2.7								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**144.71**	**233**	PKP		**PKPab**	**12 19 28.4**	**-1.9**	
	0.4nm,0.5s,baz=110,slow=3.6,SNR=24								
WRA	**Warramunga Arr**	**146.00**	**240**	PKPbc		**PKPdf**	**12 19 33.8**	**-0.1**	
	0.5nm,0.9s,baz=110,slow=2.6,SNR=2.5								

IDC ***19*** *12:01:23.6±0.5,36˚.27N×141˚.15E,h0km,mb4.2/25, mbtmp4.2/30,ML3.9/5,MS3.6/36,Error ellipse: s-maj=14.1km s-min=11.6km az=107.0*

JMA ***19*** *12:01:29.1±0.2,36˚.3N±0˚.4×14˚1E±˚,h48km±2km, MD4.3/39,MV4.1/39,E OFF IBARAKI PREF*

JMA Felt II J1 at E OFF IBARAKI PREF .

NIED ***19*** *12:01:29.1,36˚.31N×141˚.08E,h48km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.96; Mθθ-0.43; Mφφ-1.53; Mrθ1.70; Mθφ-0.90; Mφr4.17; Fault plane solution: M₀4.93000×10¹⁵ NP1: φs216.00000°,δ12.00000°,λ103.00000°. NP2: φs23.00000°,δ78.00000°,λ87.00000°.*

MOS ***19*** *12:01:30.4±0.8,36˚.75N×141˚.01E,h36km,mb4.7/30 Error ellipse: s-maj=8.2km s-min=5.2km az=103.3*

NEIC ***19*** *12:01:32.7,36˚.46N×140˚.98E,h53km*

NEIC ***19*** *12:01:32.2±1.1,36˚.45N±0˚.07×141˚.0E±0˚.1,h49km±6km, mb4.6/46,Mwr4.3/14,Error ellipse: s-maj=13.1km s-min=8.9km az=123.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.38; Mθθ2.52; Mφφ-2.14; Mrθ0.86; Mθφ0.46; Mφr2.05; Fault plane solution: M₀3.27000×10¹⁵ NP1:φs220.84000°,δ82.53000°, λ-138.92000°. NP2:φs124.38000°,δ49.34000°, λ-9.87000°. Principal axes: T 2.9904, Plg22.0000°, Azm346.0000°; N 0.5040, Plg48.0000°, Azm229.0000°; P -3.4944, Plg34.0000°, Azm91.0000°;*

GFZ ***19*** *12:01:33.8±0.5,37˚N±7˚×14˚1E±˚,h42km,M4.8/24, mb4.8/24*

BGR ***19*** *12:01:33.9,37˚.26N×141˚.72E,h30km,mb4.5,Ms3.7*

ISC 19 12:01:29.9±0.5,36˚.32N±0˚.04×141˚.18E±0˚.05,h35km±1km, h36km:pP-P,n469,σ1§26/466,mb4.5/98,MS3.7/41, 23C-32D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.48**	**272**	⇓*i*P	**Pn**	**12 01 39.2**	**-1.1**
JHYU				A	A	12 01 39.2	
	comp=N,38nm,0.5s,comp=E,23nm,0.9s						
JHYU				⇓S	**Sn**	**12 01 46.1**	**-1.4**
JHO	**Hitachi**	**0.57**	**300**	⇓*i*P	**Pn**	**12 01 40.1**	**-1.5**
JHU	**Itakohorinouch**	**0.64**	**236**	⇓*i*P	**Pn**	**12 01 41.7**	**-0.7**
JIHU				A	A	12 01 41.7	
	comp=N,73nm,1.0s,comp=E,53nm,2.1s						
JIHU				⇓*e*S	**Sn**	**12 01 50.5**	**-0.9**
JCAJ	**Choshiashikaji**	**0.66**	**204**	A	A	12 01 41.6	
	comp=N,14nm,1.0s,comp=E,45nm,0.6s						
JYT	**Yasato**	**0.80**	**263**	⇓P	**Pn**	**12 01 43.0**	**-1.8**
ONAJ	**Iwakimizuishiy**	**0.84**	**338**	⇓P	**Pn**	**12 01 44.1**	**-1.2**
ONAJ				A	A	12 01 44.1	
	comp=N,12nm,0.3s,comp=E,18nm,0.4s						
ONAJ				⇓*e*S	**Sn**	**12 01 54.3**	**-2.1**
JSMT	**Sammumatsuo**	**0.90**	**221**	A	A	12 01 44.7	
	comp=N,18nm,1.2s,comp=E,21nm,1.6s						
JFFD	**Fukushimafurud**	**0.91**	**327**	A	A	12 01 45.3	
	comp=N,8.0nm,2.7s,comp=E,8.0nm,0.6s						
JFK	**Kawauchi**	**1.07**	**347**	⇓*i*P	**Pn**	**12 01 47.3**	**-1.1**
JFK				A	A	12 01 47.3	
	comp=N,3.0nm,2.9s,comp=E,5.0nm,1.6s						
JFK				⇓*e*S	**Sn**	**12 02 00.2**	**-1.9**
JSB	**Shiboa**	**1.20**	**303**	A	A	12 01 49.0	
	comp=N,17nm,3.4s,comp=E,16nm,2.1s						
JCCN	**Chibachonan**	**1.21**	**220**	A	A	12 01 49.1	
	comp=N,18nm,2.7s,comp=E,14nm,1.9s						
I30JP	**ISUMI INFRASON**	**1.23**	**215**	Pn	**Pn**	**12 01 48.6**	**-2.1**
	baz=50,slow=13						
I30JP				Sn	**Sn**	**12 02 01.7**	**-4.4**
	baz=52,slow=17						
JAG	**Ashikaga**	**1.40**	**275**	⇓*i*P	**Pn**	**12 01 51.5**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.41**	**331**	*i*P	**Pn**	**12 01 53.2**	**+0.1**
JOTO				A	A	12 01 53.2	
	comp=N,50nm,1.2s,comp=E,34nm,1.0s						
JOTO				*e*S	**Sn**	**12 02 10.0**	**-0.4**
JMST	**Minamisoumatoc**	**1.42**	**351**	A	A	12 01 53.0	
	comp=N,7.0nm,0.4s,comp=E,11nm,0.6s						
JMM	**Marumori**	**1.57**	**349**	⇓P	**Pn**	**12 01 54.7**	**-0.6**
JMM				⇓*e*S	**Sn**	**12 02 13.5**	**-0.9**
JFY	**Yanaizu**	**1.60**	**313**	⇓P	**Pn**	**12 01 55.5**	**-0.3**
BSO3	**Boso 3**	**1.61**	**200**	P	**Pn**	**12 01 56.2**	**+0.6**
JKT	**Katashina**	**1.62**	**286**	⇓P	**Pn**	**12 01 55.4**	**-0.6**
JYAR	**Yonezawaarcadi**	**1.79**	**333**	A	A	12 01 58.0	
	comp=N,16nm,1.1s,comp=E,12nm,1.0s						
MJAR	**Matsushiro Arr**	**2.41**	**276**	Pn	**Pn**	**12 02 05.3**	**-1.6**
	comp=E,9.5nm,0.3s,baz=114,slow=8.9,SNR=632						
MJAR				Sn	**Sn**	**12 02 35.2**	**+0.1**
	comp=E,4.2nm,0.3s,baz=89,slow=15,SNR=3.1						
MJAR				LR	LR	12 03 20.8	
	comp=E,1µm,19.6s,baz=88,slow=49						
	comp=E,72nm,0.5s						
MJAR	**Matsushiro Arr**	**2.41**	**276**	Pn	**Pn**	**12 02 06.9**	**+0.1**
MAJO	**Matsushiro**	**2.41**	**276**	P	**Pn**	**12 02 06.9**	**+0.1**
MAJO	**Matsushiro**	**2.41**	**276**	*d*iP	**Pn**	**12 02 07.0**	**+0.1**
MAJO	**Matsushiro**	**2.41**	**276**		**Pn**	**12 02 06.6**	**-0.2**
MAJO	**Matsushiro**	**2.41**	**276**	P	**Pn**	**12 02 07.1**	**+0.2**
MJB9	**Matsu-Tunnel**	**2.41**	**276**		**Pn**	**12 02 06.8**	**-0.1**
JSG	**Sagara**	**2.95**	**237**	P	**Pn**	**12 02 17.0**	**+2.8**
JSG	**Sagara**	**2.95**	**237**	Pn	**Pn**	**12 02 16.8**	**+2.6**
JSG	**Sagara**	**2.95**	**237**	P	**Pn**	**12 02 17.1**	**+2.9**
JGF	**Kuroka**	**3.19**	**258**	P	**Pn**	**12 02 18.8**	**+1.3**
JGF	**Kuroka**	**3.19**	**258**		**Pn**	**12 02 18.2**	**+0.6**
JGF	**Kuroka**	**3.19**	**258**	P	**Pn**	**12 02 18.9**	**+1.4**
JHJ2	**Mitsune**	**3.40**	**200**	Pn	**Pn**	**12 02 22.4**	**+2.0**
JHJ	**Hachijo jima 2**	**3.40**	**200**	Pn	**Pn**	**12 02 18.7**	**-1.7**
	comp=E,34nm,0.3s,baz=66,slow=19,SNR=16						
JHJ				Sn	**Sn**	**12 02 57.3**	**-2.2**
	comp=E,56nm,0.3s,baz=49,slow=19,SNR=6.1						
	comp=E,74nm,0.3s						
INU	**Inuyama**	**3.52**	**255**	P	**Pn**	**12 02 23.3**	**+1.2**
INU	**Inuyama**	**3.52**	**255**		**Pn**	**12 02 23.1**	**+1.0**
INU	**Inuyama**	**3.52**	**255**	P	**Pn**	**12 02 23.7**	**+1.6**
JTM	**Tenmabayashi**	**4.46**	**359**		**Pn**	**12 02 35.5**	**+0.5**
JTM	**Tenmabayashi**	**4.46**	**359**	P	**Pn**	**12 02 35.1**	**+0.1**
ERM	**Erimo**	**5.89**	**15**	P	**Pn**	**12 02 53.6**	**-1.0**
ERM	**Erimo**	**5.89**	**15**	*de*P	**Pn**	**12 02 53.4**	**-1.2**
ERM	**Erimo**	**5.89**	**15**	Pn	**Pn**	**12 02 53.4**	**-1.2**
JEM	**Erimo**	**5.89**	**14**	P	**Pn**	**12 02 53.5**	**-1.1**
JMN	**Monobe**	**6.53**	**249**	P	**Pn**	**12 03 04.9**	**+1.4**
JMN	**Monobe**	**6.53**	**249**	Pn	**Pn**	**12 03 04.8**	**+1.4**
NMR	**Nemuro--Hokkai**	**7.86**	**25**	⇓*i*P	**Pn**	**12 03 18.7**	**-2.9**
NMR				*i*S	**Sn**	**12 04 41.3**	**-7.9**
ASAJ	**Asahikawa**	**7.86**	**7**	Pn	**Pn**	**12 03 20.6**	**-1.1**
	comp=E,3.0nm,0.3s,baz=171,slow=16,SNR=42						
ASAJ				Sn	**Sn**	**12 04 48.1**	**-1.2**
	comp=E,2.0nm,0.3s,baz=131,slow=19,SNR=8.0						
	comp=E,10nm,0.5s						
ASAJ	**Asahikawa**	**7.86**	**7**	P	**Pn**	**12 03 21.3**	**-0.4**
JKA	**Kamikawa-asahi**	**7.86**	**7**	Pn	**Pn**	**12 03 21.3**	**-0.4**
JKA	**Kamikawa-asahi**	**7.86**	**7**	P	**Pn**	**12 03 20.0**	**-1.6**
RUSJ	**Misakicho**	**8.37**	**21**	*e*P	**Pn**	**12 03 27.2**	**-1.4**
RUSJ				*e*S	**Sn**	**12 04 57.2**	**-4.6**
YUK	**Yuzh-Kuril'sk**	**8.49**	**23**	*d*iP	**Pn**	**12 03 28.6**	**-1.7**
YUK				*i*S	**Sn**	**12 04 59.0**	**-5.9**
YUK				pmax	pmax		
	comp=Z,70nm,0.3s						
YUK				pmax	pmax		
	comp=E,9.0nm,0.1s						
YUK				smax	smax		
	comp=N,424nm,0.6s						
YUK				smax	smax		
	comp=E,260nm,0.4s						
JNU	**Nakatsue**	**9.06**	**252**	Pn	**Pn**	**12 03 36.7**	**-1.5**
	comp=E,0.3nm,0.3s,baz=68,slow=5.4,SNR=5.4						
	comp=E,12nm,0.9s						
JCJ	**Chichijima**	**9.24**	**174**	Pn	Pn	12 03 36.5	-4.2
	comp=E,7.5nm,0.3s,baz=323,slow=20,SNR=2.0						
JCJ				Sn	Sn	12 05 09.8	-14
	comp=E,3.4nm,0.3s,baz=32,slow=7.1,SNR=1.8						
	comp=E,22nm,0.3s						
VLA	**Vladivostok**	**9.86**	**316**	⇓*e*P	**Pn**	**12 03 46.7**	**-2.4**
KUR	**Kuril'sk**	**10.24**	**28**	P	**Pn**	**12 03 53.0**	**-1.2**
KUR				*e*S	Sn	12 05 38.2	-9.5
KUR				pmax	pmax		
	comp=Z,28nm,0.6s						
KUR				smax	smax		
	comp=N,57nm,0.3s						
KUR				smax	smax		
	comp=E,22nm,0.2s						
USA0B	**Ussuriysk Arra**	**10.54**	**321**	P	**Pn**	**12 04 00.1**	**+1.7**
USA0B	**Ussuriysk Arra**	**10.54**	**321**		**Pn**	**12 04 00.1**	**+1.7**
USRK	**Ussuriysk Ar.**	**10.54**	**321**	Pn	**Pn**	**12 04 00.7**	**+2.4**
	comp=E,0.8nm,0.3s,baz=136,slow=12,SNR=12						
USRK				LR	LR	12 07 54.9	
	comp=E,295nm,18.4s,baz=152,slow=37						
USRK	**Ussuriysk Ar.**	**10.54**	**321**	P	**Pn**	**12 03 59.8**	**+1.4**
USRK	**Ussuriysk Ar.**	**10.54**	**321**		**Pn**	**12 03 59.8**	**+1.4**
KSRS	**Korea Array**	**10.68**	**280**	Pn	**Pn**	**12 04 01.0**	**+0.7**
	comp=E,0.2nm,0.3s,baz=95,slow=14,SNR=14						
KSRS				LR	LR	12 07 54.4	
	comp=E,318nm,20.1s,baz=85,slow=37						
YSS	**Yuzhno-Sakhali**	**10.69**	**6**	*e*P	**Pn**	**12 03 58.6**	**-1.8**
YSS				*e*S	**Sn**	**12 05 54.0**	**-4.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				smax	smax		
	comp=N,10.0nm,0.9s						
YSS				smax	smax		
	comp=E,10µm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=N,100nm,16.0s						
YSS				MLR	MLR		
	comp=E,100nm,16.6s						
YSS	**Yuzhno-Sakhali**	**10.69**	**6**		**Pn**	**12 03 59.0**	**-1.4**
YSS	**Yuzhno-Sakhali**	**10.69**	**6**	P	**Pn**	**12 03 58.9**	**-1.5**
TJN	**Taejon**	**11.15**	**274**	P	**Pn**	**12 04 08.5**	**+1.8**
TJN	**Taejon**	**11.15**	**274**	Pn	**Pn**	**12 04 08.5**	**+1.8**
MDJ	**Mudanjiang**	**12.09**	**317**	P	**Pn**	**12 04 21.3**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
MDJ	**Mudanjiang**	**12.09**	**317**		**Pn**	**12 04 19.8**	**+0.1**
TYV	**Tymovskoe**	**14.57**	**4**	*e*P	**Pn**	**12 04 49.9**	**-3.5**
TYV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HEH	**HeiHe**	**17.11**	**329**	*e*P	**Pn**	**12 05 26.4**	**+0.2**
HEH				LR	LR		
	comp=N,140nm,12.1s						
HEH				LR	LR		
	comp=E,130nm,11.6s						
HEH				LR	LR		
	comp=Z,210nm,15.7s						
NJ2	**Nanjing**	**18.95**	**264**	*e*P	**Pn**	**12 05 48.6**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
ZEA	**Zeya**	**19.94**	**335**	*e*P	**Pn**	**12 06 02.4**	**+1.9**
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,100nm,17.0s						
BJI2	**Beijing**	**19.99**	**288**	P	**P**	**12 05 59.8**	**+0.5**
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PETK	**Petropavlovsk-**	**20.39**	**29**	P	**P**	**12 06 02.0**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=210,slow=8.3,SNR=3.8						
PETK				LR	LR	12 14 00.4	
	comp=Z,33nm,20.2s,baz=229,slow=37						
	comp=Z,0.8nm,0.4s						
PETK	**Petropavlovsk-**	**20.39**	**29**	P	**P**	**12 06 02.0**	**-1.6**
HILR	**Hailar Array B**	**20.43**	**317**	P	**P**	**12 06 01.0**	**-3.1**
	comp=Z,2.4nm,0.5s,baz=120,slow=14,SNR=6.0						
	comp=Z,2.4nm,0.5s						
HNS	**HongShan**	**21.19**	**281**	⇑P	**P**	**12 06 09.3**	**-3.0**
HNS				S	**S**	**12 10 00.4**	**-5.6**
HNS				pmax	pmax		
	comp=Z,20nm,1.1s						
HNS				LR	LR		
	comp=E,190nm,18.3s						
HNS				LR	LR		
	comp=Z,230nm,17.5s						
TWG	**Pinlang**	**22.01**	**238**	P	**P**	**12 06 21.0**	**-0.1**
TWG				IAmb	IAmb	12 06 53.6	
	comp=Z,18nm,1.0s						
GUMO	**Guam**	**22.88**	**171**	LR	LR	12 14 03.2	
	comp=Z,49nm,21.7s,baz=2.5,slow=33						
WHN	**Wuhan**	**23.08**	**263**	P	**P**	**12 06 32.8**	**+0.3**
LYN	**LuoYang**	**23.43**	**274**	P	**P**	**12 06 31.8**	**-4.1**
LYN				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC	**Hu-ho-hao-te**	**23.53**	**290**	*e*P	**P**	**12 06 35.3**	**-1.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,36nm,4.9s						
HHC				LR	LR		
	comp=N,110nm,13.9s						
HHC				LR	LR		
	comp=E,160nm,13.3s						
HHC				LR	LR		
	comp=Z,100nm,13.8s						
MA2	**Magadan**	**24.09**	**12**	LR	LR	12 16 15.9	
	comp=Z,54nm,18.6s,baz=96,slow=37						
MA2	**Magadan**	**24.09**	**12**	⇓*e*P	**P**	**12 06 39.2**	**-2.6**
MA2				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN	**Xi'an**	**26.40**	**275**	P	**P**	**12 07 02.4**	**-0.8**
XAN				sP	sP	12 07 19.4	+2.0
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				LR	LR		
	comp=N,190nm,11.7s						
XAN				LR	LR		
	comp=E,120nm,11.7s						
XAN				LR	LR		
	comp=Z,280nm,14.4s						
YAK	**Yakutsk**	**26.72**	**348**	LR	LR	12 18 04.5	
	comp=Z,103nm,18.2s,baz=177,slow=37						
YAK	**Yakutsk**	**26.72**	**348**	*e*P	**P**	**12 07 04.8**	**-0.9**
YAK				*e**PP	**pP**	**12 07 14.3**	**-1.3**
YAK				*e*		12 07 46.6	
YAK				*e*PPP	PPP	12 07 59.2	
YAK				*e*		12 10 27.0	
YAK				*e*S	**S**	**12 11 38.7**	**0.0**
YAK				*e**SS	**sS**	**12 11 56.7**	**+1.9**
YAK				*e*SS	**SnSn**	**12 12 46.0**	**+2.2**
YAK				*e*SSS	SSS	12 13 01.2	
YAK				*e*		12 17 53.5	
YAK				pmax	pmax		
	comp=Z,48nm,1.6s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=N,50nm,4.3s						
YAK				pmax	pmax		
	comp=E,44nm,5.3s						
YAK				smax	smax		
	comp=E,59nm,5.6s						
YAK				smax	smax		
	comp=N,50nm,4.3s						
YAK	**Yakutsk**	**26.72**	**348**	P	**P**	**12 07 04.1**	**-1.6**
YAK				IAmb	IAmb	12 07 06.5	
	comp=Z,34nm,0.9s						
YAK	**Yakutsk**	**26.72**	**348**	P	**P**	**12 07 05.0**	**-0.7**
SEY	**Seymchan**	**27.52**	**11**	⇓*e*P	**P**	**12 07 13.6**	**+0.7**
SEY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.61**	**305**	*c i*P	**P**	**12 07 12.6**	**-1.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.61**	**305**		**P**	**12 07 12.4**	**-1.6**
ULN	**Ulaanbaatar**	**27.61**	**305**	P	**P**	**12 07 10.9**	**-3.1**
H11N2	**WAKE ISLAND Hy**	**27.95**	**119**	T	T	12 36 53.6	
	baz=313,slow=75,SNR=176						
H11N1	**WAKE ISLAND Hy**	**27.96**	**119**	T	T	12 36 57.1	
	baz=313,slow=75,SNR=191						
H11N3	**WAKE ISLAND Hy**	**27.97**	**119**	T	T	12 36 57.9	
	baz=313,slow=75,SNR=158						
SONM	**Songino Array**	**28.03**	**305**	P	**P**	**12 07 16.5**	**-1.3**
	comp=Z,5.3nm,0.8s,baz=106,slow=8.3,SNR=18						
SONM				PcP	**PcP**	**12 10 30.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=90,slow=4.3,SNR=2.3						
SONM				LR	LR	12 18 32.3	
	comp=Z,160nm,20.0s,baz=81,slow=37						
	comp=Z,5.3nm,0.8s						
SONM	**Songino Array**	**28.03**	**305**	P	**P**	**12 07 16.4**	**-1.3**
SHEM	**Shemya Is, Ala**	**28.30**	**44**	LR	LR	12 16 11.7	
	comp=Z,39nm,21.4s,baz=288,slow=31						
H11S1	**WAKE ISLAND Hy**	**28.64**	**121**	T	T	12 37 39.1	
	baz=314,slow=75,SNR=395						
H11S3	**WAKE ISLAND Hy**	**28.64**	**122**	T	T	12 37 34.7	
	baz=314,slow=75,SNR=328						
H11S2	**WAKE ISLAND Hy**	**28.66**	**121**	T	T	12 37 41.0	
	baz=314,slow=75,SNR=282						
LZH	**Lanzhou**	**30.01**	**281**	*e*P	**P**	**12 07 37.8**	**+2.3**
LZH				sP	sP	12 07 52.0	+2.4
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				LR	LR		
	comp=N,120nm,14.3s						
LZH				LR	LR		
	comp=E,240nm,13.7s						
LZH				LR	LR		
	comp=Z,290nm,16.1s						
ZAK	**Zakamensk**	**30.57**	**309**	*e*P	**P**	**12 07 38.1**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TLY	**Talaya**	**30.66**	**312**	⇓*e*P	**P**	**12 07 40.8**	**-0.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA2	**Gaotai**	**32.63**	**288**	*e*P	**P**	**12 07 57.3**	**-1.2**
GTA2				pP	pP	12 08 07.5	-1.0
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KNGR	**Kungurtug, Tuv**	**34.23**	**309**	⇑*e*P	**P**	**12 08 12.4**	**+0.1**
KNGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL	**Bilibino**	**34.76**	**16**	⇓*e*P	**P**	**12 08 17.1**	**+0.6**
BILL				pmax	pmax		
	comp=Z,18nm,2.5s						
PZH	**PanZhiHua**	**34.85**	**265**	P	**P**	**12 08 18.4**	**+0.5**
TIXI	**

MAKZ **Makanchi** 44.55 303 P 12 09 37.4 -0.9
MAKZ **Makanchi** 44.55 303 P P 12 09 36.3 -1.9
M16K **Timber Creek** 44.55 37 P P 12 09 38.4 +0.4
baz=265
N16K **Nishlik Lake** 44.60 38 P P 12 09 39.4 +1.0
baz=266
J17K **VABM Dome** 44.78 34 P P 12 09 41.0 +1.3
J17K IAmb IAmb 12 09 43.1
comp=Z,7.6nm,1.1s
J17K **VABM Dome** 44.78 34 P P 12 09 40.5 +0.8
baz=262
O16K **Kokwok River B** 44.88 39 P P 12 09 40.9 +0.4
baz=267
E18K **Tukpahlearik C** 44.91 28 P P 12 09 41.4 +0.7
baz=257
L17K **Donlin** 44.98 35 P P 12 09 42.2 +0.8
baz=264
C18K **Utukok River** 45.00 26 P P 12 09 42.0 +0.5
baz=255
K17K **Iditarod** 45.04 35 P P 12 09 42.4 +0.5
K17K IAmb IAmb 12 09 45.2
comp=Z,6.7nm,0.9s
K17K **Iditarod** 45.04 35 P P 12 09 42.8 +0.9
baz=264
M17K **Holitna River** 45.32 36 P P 12 09 45.0 +0.9
baz=266
G18K **Tagagawik** 45.35 30 P P 12 09 45.3 +1.0
G18K **Tagagawik** 45.35 30 P P 12 09 44.7 +0.4
baz=260
N17K **Nushagak Hills** 45.38 38 P P 12 09 45.4 +0.7
baz=267
A19K **Wainwright** 45.47 24 P P 12 09 45.6 +0.5
baz=254
C19K **Lookout Ridge** 45.68 26 P P 12 09 45.9 -0.9
baz=256
L18K **Granite Mounta** 45.74 35 P P 12 09 47.6 +0.2
baz=266
F19K **Shaleruckik Mo** 45.87 29 P P 12 09 48.3 -0.1
baz=260
G19K **Purcell Mounta** 46.03 30 P P 12 09 49.2 -0.4
baz=262
D19K **Kuna River** 46.06 27 P P 12 09 49.3 -0.6
baz=258
M18K **Stony River** 46.10 36 P P 12 09 50.6 +0.4
baz=267
CHIR **Chirikof Islan** 46.18 44 P P 12 09 51.0 0.0
baz=273
E19K **Redstone River** 46.19 28 P P 12 09 52.0 +1.1
E19K IAmb IAmb 12 09 53.1
comp=Z,6.3nm,0.8s
E19K **Redstone River** 46.19 28 P P 12 09 50.7 -0.1
baz=260
H19K **Roundabout Mou** 46.20 31 P 12 09 51.8 +0.9
H19K IAmb IAmb 12 09 53.3
comp=Z,7.7nm,0.9s
H19K **Roundabout Mou** 46.20 31 P P 12 09 50.8 -0.1
baz=263
KURK **Kurchatov** 46.23 309 P P 12 09 50.7 -0.7
KURK 12 11 25.5
KURK **Kurchatov** 46.23 309 P 12 09 50.4 -1.0
KURK **Kurchatov** 46.23 309 P P 12 09 49.8 -1.6
EVN **Everest** 46.27 276 P P 12 09 52.2 -0.6
EVN IAmb IAmb 12 09 53.6
comp=Z,16nm,1.1s
EVN **Everest** 46.27 276 P P 12 09 52.3 -0.6
KURBB **Kurchatov Arra** 46.29 308 P P 12 09 50.7 -1.2
comp=Z,16nm,0.6s,baz=84,slow=7.8,SNR=167
KURBB PcP PcP 12 11 25.5 -1.3
comp=Z,0.9nm,0.7s,baz=71,slow=5.0,SNR=2.0
comp=Z,16nm,0.6s
J19K **Poorman** 46.38 33 P 12 09 53.1 +0.7
J19K IAmb IAmb 12 09 54.5
comp=Z,5.6nm,1.0s
J19K **Poorman** 46.38 33 P P 12 09 52.6 +0.2
baz=265
L19K **White Mountain** 46.60 35 P P 12 09 54.9 +0.7
baz=267
D20K **Etivluk River** 46.64 26 P P 12 09 54.3 -0.1
baz=260
F20K **Avaraart Lake** 46.70 29 P P 12 09 54.6 -0.2
baz=262
E20K **Nigu River** 46.72 27 P P 12 09 54.5 -0.6
baz=260
H20K **Anotleneega Mo** 46.84 31 P P 12 09 56.3 +0.3
baz=264
I20K **Naaghedeneel** 46.95 32 P P 12 09 57.7 +0.9
baz=265
PDGK **Podgornoye** 46.95 298 P P 12 09 55.9 -1.4
PDGK **Podgornoye** 46.95 298 P P 12 09 55.9 -1.4
K20K **Telida** 47.02 34 P 12 09 58.6 +1.1
K20K **Telida** 47.02 34 P P 12 09 58.2 +0.8
baz=267
J20K **Nowinta River** 47.04 33 P 12 09 58.7 +1.1
J20K **Nowinta River** 47.04 33 P P 12 09 58.8 +1.2
baz=266
C21K **Knifeblade Rid** 47.37 26 P P 12 10 01.3 +1.2
baz=261
G21K **Allakaket** 47.51 30 P P 12 10 02.7 +1.5
baz=265
B21K **Ikpikpuk River** 47.51 25 P P 12 10 01.6 +0.5
B21K IAmb IAmb 12 10 03.6
comp=Z,13nm,1.1s
B21K **Ikpikpuk River** 47.51 25 P P 12 10 01.9 +0.8
baz=261
E21K **Killik River** 47.56 27 P P 12 10 03.1 +1.5
baz=262
F21K **Alatna River** 47.59 29 P P 12 10 02.8 +1.0
baz=264
WUS **Wushi** 47.67 296 P P 12 10 01.8 -1.1
H21K **Melozitna Rive** 47.72 31 P P 12 10 03.5 +0.7
baz=266
KDAK **Kodiak Island** 47.75 41 LR LR 12 29 48.1
comp=Z,36nm,21.7s,baz=239,slow=36
CAST **Castle Rocks** 47.92 34 P P 12 10 05.8 +1.3
baz=269
B22K **Teshekpuk Lake** 48.03 24 P P 12 10 06.3 +1.2
baz=261
I21K **Tanana** 48.03 31 P P 12 10 06.4 +1.2
baz=267
SKT **Skwentna** 48.16 36 P P 12 10 07.1 +0.8
baz=270
H22K **Ishtalitna Cre** 48.32 31 P P 12 10 08.6 +1.1
baz=267
G22K **Bettles** 48.33 29 P P 12 10 08.6 +1.0
baz=266
L22K **Petersville** 48.51 35 P P 12 10 10.4 +1.3
baz=271
MLY **Manley** 48.55 32 P P 12 10 10.5 +1.2
baz=268
TARG **Taragay, Kyrgy** 48.55 297 P P 12 10 10.4 +0.3
TARG pmax pmax
comp=Z,14nm,0.8s
TARG **Taragay, Kyrgy** 48.55 297 P P 12 10 10.4 +0.3
TARG **Taragay, Kyrgy** 48.55 297 P P 12 10 09.0 -1.1
COLD **Coldfoot** 48.86 29 P P 12 10 12.2 +0.6
baz=267
G23K **Bananza Creek** 48.91 29 P P 12 10 13.1 +1.0
baz=268
C23K **Itkillik River** 48.92 25 P P 12 10 12.7 +0.7
baz=264
H23K **Yukon River** 49.07 31 P P 12 10 14.8 +1.5
H23K IAmb IAmb 12 10 16.2
comp=Z,3.6nm,0.8s
H23K **Yukon River** 49.07 31 P P 12 10 13.8 +0.5
baz=269
E23K **Chandalar** 49.13 28 P P 12 10 14.2 +0.4
baz=267,SNR=7.9
I23K **Minto, Yukon-K** 49.14 32 P P 12 10 14.5 +0.7
baz=270
TOLK **Toolik Lake Re** 49.19 27 P P 12 10 14.0 -0.2
baz=266
NEA2 **Nenana** 49.26 32 P P 12 10 15.3 +0.6
NEA2 IAmb IAmb 12 10 17.6
comp=Z,6.0nm,1.1s
NEA2 **Nenana** 49.26 32 P P 12 10 15.2 +0.5
baz=270
PMR **Palmer** 49.31 36 P P 12 10 15.2 +0.2
baz=273
MCK **McKinley** 49.33 33 P P 12 10 15.3 0.0
baz=271
D24K **Happy Valley** 49.49 26 P P 12 10 16.8 +0.4
D24K IAmb IAmb 12 10 18.7
comp=Z,5.2nm,0.8s
D24K **Happy Valley** 49.49 26 P P 12 10 16.5 +0.1
baz=267
E24K **Your Creek** 49.56 28 P P 12 10 17.8 +0.7
baz=268

SML **Sawmill** 49.67 36 P P 12 10 18.7 +0.7
baz=274
ASAI **AK-SAY(Kyrgyzs** 49.71 296 P P 12 10 17.4 -1.4
H24K **Noodor Dome** 49.76 31 P P 12 10 19.9 +1.4
baz=270
F24K **Squaw Lake** 49.77 28 P P 12 10 19.5 +0.9
baz=269
WAT6 **Susitna Watana** 49.91 35 P P 12 10 20.2 +0.3
baz=273
G24K **Hadweenzic Riv** 49.92 30 P 12 10 21.1 +1.4
G24K **Hadweenzic Riv** 49.92 30 P P 12 10 20.6 +0.8
baz=270
POKR **Poker Plat Res** 49.95 32 P P 12 10 20.6 +0.6
baz=271
HDA **Harding Lake** 50.18 33 P P 12 10 22.0 +0.2
baz=272
ILAR **Eielson Array** 50.19 32 P P 12 10 21.8 0.0
comp=Z,2.8nm,0.8s,baz=271,slow=7.5,SNR=27
comp=Z,2.8nm,0.8s
D25K **Kavik River** 50.37 26 P P 12 10 23.1 0.0
baz=269,SNR=5.6
G25K **Bearman Lake** 50.47 29 P P 12 10 24.7 +0.9
baz=271
F25K **Christian Rive** 50.63 28 P P 12 10 26.2 +1.1
F25K **Christian Rive** 50.63 28 P P 12 10 25.2 0.0
baz=271
E25K **Arctic Village** 50.65 28 P P 12 10 25.8 +0.5
baz=271
AAK **Ala-Archa** 50.66 299 P P 12 10 25.5 -0.4
comp=Z,2.8nm,0.7s,baz=14,slow=4.2,SNR=3.7
AAK LR LR 12 32 58.2
comp=Z,184nm,19.7s,baz=106,slow=37
comp=Z,2.8nm,0.7s
M24K **Tolsona, Glenn** 50.67 35 P P 12 10 26.2 +0.7
baz=275
K24K **Donnelly Dome** 50.73 33 P P 12 10 26.3 +0.4
baz=274
PRP **Porcupine Dome** 50.74 31 P P 12 10 26.7 +0.6
baz=273
KLU **Klutina** 50.85 36 P P 12 10 27.1 +0.2
baz=276
J25K **Salcha River,** 50.85 32 P P 12 10 26.8 0.0
baz=274
BVAR **Borovoye Array** 50.91 313 P P 12 10 26.5 -0.9
comp=Z,4.4nm,0.6s,baz=79,slow=7.5,SNR=17
comp=Z,4.4nm,0.6s
KSH2 **Kashi** 50.95 294 P P 12 10 28.3 +0.2
KSH2 sP sP 12 10 50.3 +7.7
KSH2 pmax pmax
comp=Z,7.0nm,0.9s
BORK **Borovoye** 50.95 313 P P 12 10 26.4 -1.3
BORK pmax pmax
comp=Z,5.0nm,0.8s
BORK **Borovoye** 50.95 313 P 12 10 26.4 -1.3
BORK IAmb IAmb 12 10 28.4
comp=Z,5.3nm,0.8s
HARP **HAARP** 51.12 35 P P 12 10 29.7 +0.8
baz=276
RIDG **Independent Ri** 51.14 33 P P 12 10 30.0 +1.0
baz=275
F26K **Sheenjek River** 51.20 28 P P 12 10 31.1 +1.7
F26K IAmb IAmb 12 10 32.6
comp=Z,6.3nm,1.0s
F26K **Sheenjek River** 51.20 28 P P 12 10 30.3 +0.9
baz=272,SNR=9.6
G26K **Porcupine Rive** 51.37 29 P P 12 10 31.5 +0.8
baz=273
N25K **Chitina, Valde** 51.47 36 P P 12 10 32.3 +0.8
baz=277
SCRK **Sand Creek** 51.50 33 P P 12 10 32.3 +0.5
baz=275
M26K **Nabesna, AK** 52.12 35 P P 12 10 37.6 +1.2
baz=278
E27K **Coleen River** 52.14 27 P P 12 10 37.5 +1.1
baz=274
G27K **Doyon Strip** 52.22 29 P P 12 10 38.1 +1.1
baz=275
MCARA **McCarthy VSAT** 52.24 36 P P 12 10 38.7 +1.4
baz=278
D27M **Malcolm River** 52.30 26 P P 12 10 38.1 +0.5
baz=274
H27K **Steamboat Moun** 52.33 30 P P 12 10 38.0 +0.2
baz=276
I27K **Kandik River** 52.35 31 P P 12 10 38.6 +0.5
baz=276
L27K **Beaver Creek,** 52.57 34 P P 12 10 40.1 +0.4
baz=278
M27K **Edge Creek, AK** 52.64 35 P P 12 10 40.6 +0.3
baz=278
ARK **Arkit** 52.71 299 P P 12 10 39.8 -1.3
F28M **Old Crow** 52.84 28 P P 12 10 42.5 +1.0
baz=276
E28M **Babbage River** 52.86 27 P P 12 10 42.1 +0.4
baz=276
I28M **Miner Creek** 53.07 31 P P 12 10 43.6 +0.2
baz=278,SNR=6.4
BVCY **Beaver Creek** 53.10 35 P P 12 10 44.2 +0.6
baz=279
GSI **Gunungsitoli** 53.28 239 P P 12 10 44.5 -1.0
KKAR **Karatay Array** 53.32 300 P P 12 10 44.8 -0.7
KKAR **Karatay Array** 53.32 300 P 12 10 44.8 -0.7
YUK3 **Moose Creek** 53.39 35 P P 12 10 46.4 +0.4
baz=280
E29M **Blow River** 53.49 27 P P 12 10 46.6 +0.3
baz=277,SNR=6.1
DAWY **Dawson** 53.50 33 P P 12 10 46.6 +0.1
baz=279
H29M **Whitestone** 53.60 30 P P 12 10 47.5 +0.3
baz=279
G29M **Pine Creek** 53.64 29 P P 12 10 48.1 +0.6
baz=278,SNR=10
L29M **L29M** 54.22 34 P 12 10 52.4 +0.6
L29M IAmb IAmb 12 10 55.5
comp=Z,5.5nm,1.0s
L29M **L29M** 54.22 34 P P 12 10 52.4 +0.6
baz=281,SNR=5.3
EPYK **Eagle Plains** 54.23 29 P P 12 10 52.2 +0.4
baz=280,SNR=8.7
G30M **tAoh Zraii Nji** 54.33 29 P P 12 10 53.1 +0.6
baz=280
K29M **Barlow Dome** 54.35 33 P P 12 10 53.4 +0.6
baz=281,SNR=5.2
F30M **Barrier River** 54.39 28 P P 12 10 53.8 +0.9
baz=280,SNR=5.9
I30M **Mount Dempster** 54.58 31 P 12 10 54.9 +0.4
I30M IAmb IAmb 12 10 57.0
comp=Z,7.4nm,0.9s
I30M **Mount Dempster** 54.58 31 P P 12 10 55.2 +0.7
baz=281,SNR=14
O29M **Mount Kennedy** 54.58 37 P P 12 10 55.1 +0.6
baz=283
J30M **Hart River** 54.72 32 P P 12 10 55.9 +0.4
baz=282
GAR **Garm** 54.84 296 P 12 10 55.5 -1.2
GAR **Garm** 54.84 296 P P 12 10 56.5 -0.2
M30M **Minto, Yukon** 54.93 34 P P 12 10 57.5 +0.6
baz=282
HYT **Haines Junctio** 54.98 36 P P 12 10 58.3 +0.9
baz=283
N30M **Aishikik Lake** 55.03 35 P P 12 10 57.8 0.0
baz=283
G31M **Satah River** 55.09 29 P P 12 10 58.0 +0.1
baz=282
INK **Inuvik** 55.10 27 P P 12 10 58.6 +0.6
baz=281
P29M **Windy Craggy** 55.14 38 P P 12 10 59.1 +0.6
baz=284
F31M **Tsiigehtchic** 55.19 28 P P 12 10 59.2 +0.5
baz=282
H31M **Peel River** 55.29 30 P P 12 11 00.4 +0.9
baz=282,SNR=8.3
P30M **Million Dollar** 55.41 37 P P 12 11 01.4 +1.0
baz=284
CHGR **Chuyangaron** 55.80 296 ⇑ *e*P P 12 11 03.0 -0.7
CHGR pmax pmax
comp=Z,47nm,0.9s
CHGR **Chuyangaron** 55.80 296 P P 12 11 02.6 -1.1
CHGR **Chuyangaron** 55.80 296 P P 12 11 03.2 -0.5
CTA **Charters Tower** 56.31 174 LR LR 12 34 33.7
comp=Z,24nm,20.1s,baz=280,slow=35
WRA **Warramunga Arr** 56.33 188 P P 12 11 04.1 -3.3
comp=Z,2.1nm,0.9s,baz=6.0,slow=7.1,SNR=15
comp=Z,2.1nm,0.9s
ARTI **Arti** 56.88 319 *c* iP P 12 11 10.0 -0.9
ARTI pmax pmax
comp=Z,14nm,0.8s
ARTI **Arti** 56.88 319 P 12 11 09.8 -1.1

SHAA **Shahritus** 56.97 295 P 12 11 11.2 -0.8
SHAA IAmb IAmb 12 11 12.9
comp=Z,29nm,0.9s
S32K **Killisnoo** 57.31 40 P P 12 11 15.2 +1.3
baz=288
P33M **Teslin, Yukon** 57.38 36 P P 12 11 15.4 +0.9
baz=287
ABKAR **Akbulak array** 58.26 310 P 12 11 19.7 -1.0
ASAR **Alice Springs** 60.06 188 P P 12 11 32.3 -1.1
comp=Z,1.3nm,0.8s,baz=11,slow=7.3,SNR=13
comp=Z,1.3nm,0.8s
KIRV **Kirov** 60.70 323 *c* iP P 12 11 36.8 -0.6
HSPB **Hornsund (broa** 62.10 348 P P 12 11 47.0 +0.4
BBB **Bella Bella** 62.70 44 LR LR 12 35 54.0
comp=Z,24nm,20.8s,baz=194,slow=33
MSVF **Nonsavu** 64.07 141 LR LR 12 34 04.2
comp=Z,64nm,20.2s,baz=329,slow=31
BELG **Belogornoye** 64.19 317 ⇓ *e*P LR LR 12 42 28.6
comp=Z,118nm,20.0s,baz=120,slow=38
BELG **Belogornoye** 64.19 317 ⇓ *e*P P 12 12 00.3 -0.5
BELG pmax pmax
comp=Z,2.0nm,0.7s
YKA **Yellowknife Ar** 64.52 30 P P 12 12 03.4 +0.7
comp=Z,1.2nm,0.8s,baz=302,slow=6.8,SNR=4.2
comp=Z,1.2nm,0.8s
YKA **Yellowknife Ar** 64.52 30 *i* P P 12 12 04.4 +1.6
ARCES **ARCESS Array B** 64.59 339 P P 12 12 02.5 -0.7
comp=Z,1.0nm,0.8s,baz=52,slow=5.8,SNR=2.1
comp=Z,1.0nm,0.8s
AFI **Afiamalu** 66.83 129 LR LR 12 37 41.5
comp=Z,30nm,19.5s,baz=66,slow=33
OBN **Obninsk** 68.55 323 ⇓ *e*P P 12 12 30.2 +1.5
OBN *e**PP sP 12 12 43.7 +0.3
OBN *e* 12 12 54.1
OBN *e*PPP PPP 12 16 38.2
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,47nm,16.0s
FINES **FINESS Array B** 69.36 332 P P 12 12 32.4 -1.1
comp=Z,5.3nm,0.8s,baz=45,slow=7.2,SNR=18
comp=Z,5.3nm,0.8s
FINES **FINESS Array B** 69.36 332 *i* P P 12 12 33.0 -0.6
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES **FINESS Array B** 69.36 332 P P 12 12 32.6 -1.0
BLKN **Baker Lake** 70.12 23 P P 12 12 38.5 +0.3
BLKN IAmb IAmb 12 12 39.5
comp=Z,7.3nm,0.9s
VSU **Vasula** 70.97 330 ⇓ *i*P P 12 12 42.2 -1.3
VSU pmax pmax
comp=Z,12nm,1.0s
KBZ **Khabaz** 71.22 311 P P 12 12 44.4 -0.8
comp=Z,4.2nm,0.9s,baz=55,slow=3.9,SNR=7.9
KBZ LR LR 12 45 56.9
comp=Z,44nm,20.4s,baz=84,slow=38
comp=Z,4.2nm,0.9s
KBZ **Khabaz** 71.22 311 *c* eP P 12 12 44.9 -0.4
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV **Kislovodsk** 71.23 311 *e*P P 12 12 45.9 +0.4
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,35nm,17.0s
KIV **Kislovodsk** 71.23 311 P P 12 12 45.9 +0.4
comp=Z,12nm,0.8s
SHA1 **Shidzhatmaz** 71.37 311 ⇓ *e*P P 12 12 45.8 -0.7
SUMG **Summit** 71.39 360 P P 12 12 45.4 -1.0
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG **Summit** 71.39 360 P P 12 12 45.4 -1.0
SUMG IAmb IAmb 12 13 01.1
comp=Z,5.5nm,0.9s
GNI **Garni** 71.98 307 LR LR 12 46 39.6
comp=Z,51nm,18.9s,baz=58,slow=38
GNI **Garni** 71.98 307 ⇓ *e*P P 12 12 51.4 +1.2
GNI pmax pmax
comp=Z,13nm,1.6s
MNK **Minsk** 72.98 326 *i* P P 12 12 55.5 -0.1
comp=Z,12nm,0.9s,baz=51
MNK *i* pP **sP** 12 13 09.4 -0.9
MNK *i* sP **PcP** 12 13 15.7 +3.2
MNK *i* PP **PP** 12 15 37.4 -0.3
MNK *i* PPP PPP 12 17 21.9
MNK *i* S **S** 12 22 17.5 -2.3
MNK *i* sS sS 12 22 46.2 +8.6
MNK *i* SS **SS** 12 26 58.5 -1.2
MNK *i* SSS SSS 12 30 19.2
MNK *i* LR LR 12 45 34.0
MNK *i* LRM MLR 12 47 25.6
comp=Z,29nm,20.2s
MNK **Minsk** 72.98 326 *i* P P 12 12 55.5 -0.1
MNK *i* *PP **sP** 12 13 09.4 -0.9
MNK *i* *SP **PcP** 12 13 15.6 +3.2
MNK *i* 12 15 37.3
MNK *i* PPP PPP 12 17 21.8
MNK *i* S **S** 12 22 17.4 -2.3
MNK *i* *SS sS 12 22 46.2 +8.6
MNK *i* SS **SS** 12 26 58.5 -1.2
MNK pmax pmax
comp=Z,12nm,0.9s
MNK MLR MLR
comp=Z,29nm,20.0s
HFS **Hagfors** 74.66 336 P P 12 13 04.4 -0.9
comp=Z,3.2nm,0.8s,baz=60,slow=3.5,SNR=5.5
HFS LR LR 12 48 41.1
comp=Z,68nm,18.2s,baz=45,slow=38
comp=Z,3.2nm,0.8s
AKASG **Malin Array Be** 74.75 322 P P 12 13 04.8 -1.2
comp=Z,3.2nm,0.6s,baz=48,slow=6.1,SNR=17
AKASG LR LR 12 48 36.7
comp=Z,72nm,19.0s,baz=48,slow=38
comp=Z,3.2nm,0.6s
AKASG **Malin Array Be** 74.75 322 *i* P P 12 13 05.0 -1.0
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB **Malin Array Si** 74.75 322 ⇑ *e*P P 12 13 05.0 -1.0
AKBB pmax pmax
comp=Z,7.0nm,0.9s
KIEV **Kiev** 74.76 322 ⇑ P P 12 13 05.0 -1.0
KIEV **Kiev** 74.76 322 P P 12 13 04.8 -1.3
comp=Z,32nm,0.7s
KIEV **Kiev** 74.76 322 P P 12 13 05.2 -0.9
NB2 **NORSAR Subarra** 74.77 337 P P 12 13 05.1 -0.9
comp=Z,1.6nm,0.7s,baz=40,slow=6.2
NOA **NORSAR Array B** 74.77 337 P P 12 13 05.1 -0.9
comp=Z,3.5nm,0.8s,baz=39,slow=5.9,SNR=11
NOA LR LR 12 49 07.1
comp=Z,59nm,19.4s,baz=80,slow=38
comp=Z,3.5nm,0.8s
KVN **Kaiserville** 75.34 52 P P 12 13 10.4 +0.5
KVN pmax pmax
comp=Z,3.0nm,1.1s
KVN **Kaiserville** 75.34 52 P P 12 13 10.4 +0.5
NVAR **Mina Array Bea** 75.56 53 P P 12 13 11.3 0.0
comp=Z,1.1nm,0.9s,baz=300,slow=5.9,SNR=4.5
NVAR LR LR 12 40 08.5
comp=Z,11nm,20.6s,baz=336,slow=31
comp=Z,1.1nm,0.9s
RNPP8 **Varash** 75.96 324 P P 12 13 12.3 -0.7
LUBAR **Lubar, Ukraine** 75.97 322 P P 12 13 12.2 -0.9
RNPP5 **Staryi Chortor** 76.02 324 P P 12 13 12.6 -0.7
ARPR **Arapgir-MALATY** 76.67 309 P P 12 13 18.1 +0.7
SORM **Soroca** 76.82 321 ⇑ P P 12 13 16.8 -1.1
SORM **Soroca** 76.82 321 P P 12 13 16.8 -1.1
comp=Z,9.5nm,0.9s
KMPD **K-Podol'skiy** 77.50 322 P P 12 13 19.8 -1.9
TPNV **Topopah Spring** 77.75 53 P P 12 13 24.6 +1.0
TPNV pmax pmax
comp=Z,5.0nm,1.3s
TPNV **Topopah Spring** 77.75 53 P P 12 13 24.6 +1.0
PDAR **Pinedale Array** 78.30 45 P P 12 13 26.5 -0.1
comp=Z,0.5nm,0.6s,baz=308,slow=4.1,SNR=6.5
comp=Z,0.5nm,0.6s
BUR08 **Bucovina Ar. S** 78.74 322 P P 12 13 28.3 -0.5
BUR08 IAmb IAmb 12 13 42.8
comp=Z,10nm,1.5s
BURAR **Bucovina Array** 78.75 322 ⇑ P P 12 13 28.7 -0.2
BURAR **Bucovina Array** 78.75 322 P P 12 13 27.2 -1.7
BIZ **Bicaz** 78.76 321 ⇑ P P 12 13 29.2 +0.5
TESR **Tescani** 78.76 320 ⇑ P P 12 13 28.4 -0.4
TESR **Tescani** 78.76 320 P P 12 13 28.1 -0.7
comp=Z,475nmcomp=Z,10nm,0.9s
VRI **Vrincioaia** 79.15 320 ⇑ P P 12 13 30.8 -0.1
VRI **Vrincioaia** 79.15 320 P P 12 13 30.4 -0.5

comp=Z,4.9nm,1.1s
BR131 Keskin Array S 79.18 312 ⇓ *e*P **P 12 13 30.8 -0.6**
BRTR Keskin Array B 79.18 312 P **P 12 13 30.6 -0.8**
comp=Z,1.9nm,1.0s,baz=87,slow=4.7,SNR=9.2
comp=Z,1.9nm,1.0s
BRTR Keskin Array B 79.18 312 *i* P **P 12 13 31.6 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BR104 Keskin Array S 79.19 312 P **P 12 13 31.2 -0.3**
comp=Z,3.4nm,1.1s
KOLS Kolonicke sedl 79.29 324 *e*P **P 12 13 31.7 +0.1**
KOLS Kolonicke sedl 79.29 324 *e*P **P 12 13 31.7 +0.1**
OJC Ojcow 79.52 326 P **P 12 13 32.5 -0.4**
OJC Ojcow 79.52 326 **P 12 13 32.5 -0.4**
OJC Ojcow 79.52 326 P **P 12 13 32.4 -0.4**
comp=Z,9.1nm,1.1s
OJC Ojcow 79.52 326 P **P 12 13 32.8 -0.1**
OJC pP **pP 12 13 45.1 +1.4**
ARCR ARCALIA 79.54 322 ⇑P **P 12 13 33.6 +0.6**
PFO Pinyon Flats O 79.59 56 LR LR 12 41 41.8
comp=Z,35nm,19.7s,baz=228,slow=30
TRPA Tarpa 79.72 323 P **P 12 13 34.2 +0.2**
TRPA pP **pP 12 13 46.5 +1.8**
DOPR Dopca 79.77 320 ⇑P **P 12 13 35.3 +1.0**
MLR Muntele Rosu 79.81 320 LR LR 12 52 06.3
comp=Z,81nm,18.8s,baz=90,slow=38
NIE Niedzica 79.87 325 P **P 12 13 35.1 +0.3**
comp=Z,2.5nm,1.0s
RAR Rarotonga 79.90 126 LR LR 12 48 29.6
comp=Z,26nm,18.1s,baz=279,slow=35
KKUL Konya-Kulu 79.96 311 P **P 12 13 35.6 0.0**
KKUL pP **pP 12 13 47.8 +1.5**
DRGR 80.56 322 ⇑P **P 12 13 38.5 -0.1**
ARR Arges 80.57 320 ⇑P **P 12 13 39.4 +0.7**
ARR Arges 80.57 320 P **P 12 13 39.2 +0.4**
KSP Ksiaz 80.61 328 P **P 12 13 38.3 -0.4**
comp=Z,8.3nm,0.9s
BSEG Bad Segeberg 80.61 333 *e*P **P 12 13 38.2 -0.4**
comp=Z,2.9nm,0.9s,baz=38,slow=5.2
BSEG *e*L L 12 54 29.5
comp=Z,15nm,22.0s
STEB Steborice 80.63 327 *e*P **P 12 13 38.7 -0.2**
RAYN Ar Rayn 80.75 292 P **P 12 13 38.7 -1.3**
RAYN pmax pmax
comp=Z,5.0nm,0.9s
RAYN Ar Rayn 80.75 292 P **P 12 13 38.7 -1.3**
RAYN IAmb IAmb 12 13 40.2
comp=Z,5.2nm,0.9s
MORC Moravsky Berou 80.85 327 ⇓P **P 12 13 39.8 -0.3**
MORC Moravsky Berou 80.85 327 *e*P **P 12 13 39.6 -0.5**
DPC Dobruska-Polom 80.96 328 *e*P **P 12 13 41.0 +0.3**
DPC Dobruska-Polom 80.96 328 *e*P **P 12 13 41.0 +0.3**
DPC Dobruska-Polom 80.96 328 P **P 12 13 40.4 -0.3**
comp=Z,4.9nm,1.3s
DPC Dobruska-Polom 80.96 328 P **P 12 13 41.0 +0.3**
KRLC Kraliky 80.96 327 *e*P **P 12 13 39.9 -0.8**
KRLC Kraliky 80.96 327 *e*P **P 12 13 39.9 -0.8**
PSZ Piszkesteto 81.13 324 ⇓P **P 12 13 42.3 +0.6**
PSZ Piszkesteto 81.13 324 P **P 12 13 41.2 -0.5**
URZ Urewera 81.31 152 LR LR 12 47 46.9
comp=Z,41nm,18.4s,baz=284,slow=34
PV23 Carpenter Rdg 81.35 48 P **P 12 13 43.6 +0.3**
PV10 Paradox Valley 81.38 48 P **P 12 13 43.8 +0.4**
PV20 West Nyswonger 81.45 48 P **P 12 13 43.3 -0.4**
FLTG Flechtingen 81.52 332 *e*P **P 12 13 42.6 -0.9**
comp=Z,6.2nm,0.8s,baz=38,slow=5.2
PV05 Paradox Valley 81.54 49 P **P**
PV05 IAmb IAmb 12 13 59.0
comp=Z,19nm,1.4s
BRG Berggiesshubel 81.57 329 *e*P **P 12 13 43.3 -0.5**
comp=Z,4.1nm,1.0s,baz=38,slow=5.2
BRG Berggiesshubel 81.57 329 P **P 12 13 43.7 -0.1**
BRG Berggiesshubel 81.57 329 *e*P **P 12 13 43.5 -0.3**
BRG Amp 12 13 44.4
comp=Z,2.9nm,0.8s
BRG pP **pP 12 13 54.9 +0.2**
BRG Amp 12 13 56.8
comp=Z,2.2nm,0.8s
VRAC Vranov 81.61 327 LR LR 12 52 47.5
comp=Z,35nm,19.8s,baz=62,slow=38
VRAC Vranov 81.61 327 *e*P **P 12 13 43.8 -0.3**
CLL Collm 81.62 330 *i* P **P 12 13 43.3 -0.8**
CLL *i* *PP **pP 12 13 56.1 +1.2**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 81.62 330 *e*P **P 12 13 43.3 -0.8**
comp=Z,5.6nm,0.9s,baz=38,slow=5.2
CLL *e*L L 12 56 43.7
comp=Z,35nm,20.3s
CLL Collm 81.62 330 P **P 12 13 43.6 -0.5**
comp=Z,6.5nm,0.9s
CLL Collm 81.62 330 *i* P **P 12 13 43.3 -0.8**
comp=Z,7.0nm,0.9s
CLL *i* PcP **PcP 12 13 48.8 -1.1**
CLL *i* pP **pP 12 13 56.1 +1.2**
comp=Z,10.0nm,1.2s
KRUC Moravsky 81.89 327 *e*P **P 12 13 45.0 -0.5**
KRUC Moravsky 81.89 327 P **P 12 13 45.5 -0.1**
RETH Rethem/Aller, 81.91 333 *e*P **P 12 13 45.0 -0.5**
comp=Z,5.4nm,1.0s,baz=38,slow=5.2
HSKC Hora Svate Kat 81.98 329 *e*P **P 12 13 45.5 -0.6**
HSKC Hora Svate Kat 81.98 329 P **P 12 13 45.9 -0.1**
PRU Pruhonice 81.99 328 *e*P **P 12 13 45.9 -0.2**
PRU Pruhonice 81.99 328 *e*P **P 12 13 45.9 -0.2**
PRU Pruhonice 81.99 328 P **P 12 13 46.1 0.0**
MODS Modra-Piesok 82.00 326 *e*P **P 12 13 46.9 +0.7**
MODS Modra-Piesok 82.00 326 *e*P **P 12 13 46.9 +0.7**
MMAI Mount Meron Ar 82.22 305 LR LR 12 52 54.6
comp=Z,63nm,18.2s,baz=64,slow=38
CLZ Clausthal 82.24 332 *e*P **P 12 13 46.9 -0.5**
comp=Z,11nm,1.3s,baz=38,slow=5.2
MDVR Moldovita 82.47 321 ⇑P **P 12 13 48.1 -0.6**
TANN Tannenbergstha 82.53 330 *e*P **P 12 13 48.2 -0.7**
comp=Z,1.4nm,0.9s,baz=38,slow=5.2
MOX Moxa 82.69 330 *e*P **P 12 13 49.1 -0.6**
comp=Z,2.2nm,0.8s,baz=38,slow=5.2
MOX *e*L L 12 56 09.9
comp=Z,37nm,20.5s
CKRC Cesky Krumlov 82.97 328 *e*P **P 12 13 51.0 -0.3**
CKRC Cesky Krumlov 82.97 328 *e*P **P 12 13 51.0 -0.3**
KHC Kasperske Hory 83.05 328 ⇑ *i*P **P 12 13 51.3 -0.4**
KHC pmax pmax
comp=Z,4.0nm,0.9s
KHC Kasperske Hory 83.05 328 *e*P **P 12 13 51.1 -0.6**
KHC Kasperske Hory 83.05 328 P **P 12 13 51.4 -0.2**
comp=Z,5.7nm,1.0s
KHC Kasperske Hory 83.05 328 P **P 12 13 51.5 -0.2**
ROTZ Rotzenmuhle 83.13 329 *e*P **P 12 13 51.9 -0.1**
comp=Z,2.0nm,1.4s,baz=38,slow=5.2
GEC2 GERESS Array S 83.22 328 *e*P **P 12 13 51.8 -0.8**
comp=Z,2.2nm,0.8s,baz=38,slow=5.2
GERES GERESS Array B 83.22 328 P **P 12 13 51.6 -1.0**
comp=Z,1.6nm,0.7s,baz=34,slow=5.6,SNR=16
comp=Z,1.6nm,0.7s
GERES GERESS Array B 83.22 328 P **P 12 13 51.8 -0.8**
GERES GERESS Array B 83.22 328 P **P 12 13 51.8 -0.8**
WET Wettzell 83.33 329 *e*P **P 12 13 52.6 -0.5**
comp=Z,1.9nm,0.8s,baz=38,slow=5.2
WET *e*L L 12 54 12.4
comp=Z,57nm,18.9s
EZN Ezine 83.41 315 P **P 12 13 53.0 -0.6**
comp=Z,9µmcomp=Z,46nm,0.6s
GRA3 Grafenberg Arr 83.50 330 *e*P **P 12 13 54.0 +0.1**
GRF Grafenberg Arr 83.59 330 *e*P **P 12 13 54.5 +0.1**
comp=Z,9.0nm,0.9s,baz=38,slow=5.2
GRF *e*sP **pP 12 14 06.8 +1.5**
GRF *e*L L 12 54 39.0
comp=Z,39nm,18.3s
EKA Eskdalemuir Ar 83.74 340 P **P 12 13 54.1 -0.9**
comp=Z,1.3nm,0.7s,baz=26,slow=5.5,SNR=4.6
comp=Z,1.3nm,0.7s
PMOR Pomariorio Ree 84.07 113 *e*T T 13 46 37.1
comp=Z,3.3nm,0.2s
TNS Taunus Mts 84.26 332 *e*L L 12 57 00.7
comp=Z,30nm,19.6s
RJOB Jochberg 84.45 328 *e*P **P 12 13 58.7 -0.2**
comp=Z,2.1nm,1.0s,baz=38,slow=5.2
PPT Papeete 84.48 116 LR LR 12 41 46.3
comp=Z,34nm,21.5s,baz=315,slow=29
PPT2 Papeete2 84.50 116 *e*LR LR 12 40 35.4
comp=Z,60nm,24.5s
EIL Elat 84.61 303 LR LR 12 56 31.5
comp=Z,47nm,19.4s,baz=44,slow=39
FUR Furstenfeldbru 84.76 329 *e*L L 12 58 36.6
comp=Z,35nm,18.4s

ANMO Albuquerque 85.19 50 P **P 12 14 07.4 +4.3**
PDG Podgorica 85.40 321 **P 12 14 02.7 -0.9**
PDG Podgorica 85.40 321 P **P 12 14 03.4 -0.3**
BFO Black Forest 85.83 331 P **P 12 14 05.0 -0.8**
BFO pmax pmax
comp=Z,6.0nm,0.7s
BFO Black Forest 85.83 331 **P 12 14 05.0 -0.8**
BFO IAmb IAmb 12 14 05.7
comp=Z,5.7nm,0.7s
BFO Black Forest 85.83 331 *e*P **P 12 14 05.0 -0.8**
comp=Z,5.3nm,0.8s,baz=38,slow=5.2
BFO *e*L L 12 59 44.7
comp=Z,27nm,18.3s
TAOE Nuku Hiva Isla 86.18 104 *e*LR LR 12 41 27.5
comp=Z,54nm,22.8s
DAVOX Davos/Dischmat 86.44 329 LR LR 12 56 01.0
comp=Z,31nm,19.0s,baz=214,slow=38
TXAR Lajitas Array 90.70 52 P **P 12 14 29.3 -0.1**
comp=Z,0.5nm,0.8s,baz=312,slow=4.5,SNR=6.7
comp=Z,0.5nm,0.8s
ESDC Sonseca Array 97.84 334 LR LR 13 03 31.6
comp=Z,49nm,18.7s,baz=36,slow=38
TORD Torodi Ar. Bea 117.70 314 PKP **PKPdf 12 20 11.2 -1.7**
comp=Z,0.3nm,0.5s,baz=7.4,slow=3.1,SNR=2.2
QSPA South Pole Qui 126.07 180 PKP **PKPdf 12 20 26.1 -1.3**
comp=Z,1.6nm,1.0s,baz=0.0,slow=1.0,SNR=3.7
H03N2 Juan Fernandez 147.13 97 T T 15 05 52.4
baz=291,slow=76,SNR=41
H03N3 Juan Fernandez 147.14 97 T T 15 05 52.1
baz=291,slow=76,SNR=34
H03N1 Juan Fernandez 147.15 97 T T 15 05 55.1
baz=291,slow=76,SNR=29
LPAZ La Paz 147.21 60 PKPbc **PKPbc 12 21 09.9 -0.7**
comp=Z,1.8nm,0.8s,baz=338,slow=5.4,SNR=7.4

*IDC **19** 12:01:54.0±1.1, 35.69N×82.47E, h0km, mb3.4/5, mbtmp3.5/9, ML2.9/4, MS3.2/1, Error ellipse: s-maj=35.4km s-min=18.5km az=70.0*
ISC 19 12:01:59.1±1.0, 35.8N±0.1×82.5E±0.2, h35km, n11, σ1s59/10, mb3.4/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**9.26**	**320**	Lg	Lg	12 06 48.4	
	0.3nm,0.3s,baz=220,slow=16,SNR=1.7						
MKAR	**Makanchi Array**	**11.03**	**359**	Pn	**Pn**	**12 04 34.7**	**+0.4**
	0.5nm,0.3s,baz=183,slow=13,SNR=20						
MKAR				Sn	**Sn**	**12 06 37.2**	**+0.9**
	0.2nm,0.3s,baz=179,slow=23,SNR=4.2						
MKAR				Lg	Lg	12 07 49.4	
	0.1nm,0.3s,baz=184,slow=29,SNR=1.4						
	1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**15.14**	**350**	Pn	**Pn**	**12 05 26.7**	**-3.4**
	baz=170,slow=11,SNR=5.6						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**18.26**	**4**	P	**P**	**12 06 08.0**	**-1.4**
	0.1nm,0.3s,baz=186,slow=12,SNR=4.5						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**19.27**	**337**	P	**Pn**	**12 06 21.2**	**-0.5**
	baz=149,slow=14,SNR=5.8						
	1.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**22.55**	**136**	P	**P**	**12 06 55.5**	**-0.7**
	0.5nm,0.7s,baz=314,slow=11,SNR=4.7						
	0.5nm,0.7s						
KSRS	**Korea Array**	**36.24**	**74**	LR	LR	12 27 12.6	
	comp=Z,32nm,18.1s,baz=215,slow=42						
GERES	**GERESS Array B**	**50.87**	**307**	P	**P**	**12 10 57.6**	**+1.1**
	0.6nm,0.8s,baz=75,slow=6.9,SNR=4.8						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**72.62**	**20**	P	**P**	**12 13 22.7**	**+0.2**
	0.3nm,0.8s,baz=321,slow=6.5,SNR=2.3						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**74.00**	**130**	P	**P**	**12 13 32.2**	**+0.9**
	0.2nm,0.4s,baz=315,slow=7.2,SNR=2.3						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**75.04**	**276**	P	**P**	**12 13 36.9**	**-0.6**
	0.6nm,1.0s,baz=56,slow=4.8,SNR=3.0						
	0.6nm,1.0s						

IDC 19 12:25:04.3±2.0, 5.92S×130.71E, h0km, mb3.4/2, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=111.3km s-min=30.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.38**	**166**	Pn	Pn	12 28 30.0	+0.7
	0.5nm,0.3s,baz=346,slow=12,SNR=18						
WRA				Sn	Sn	12 30 52.5	-17
	0.3nm,0.3s,baz=336,slow=23,SNR=5.3						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**17.91**	**170**	P	Pn	12 29 14.4	-0.6
	0.2nm,0.3s,baz=343,slow=10,SNR=32						
ASAR				S	Sn	12 32 20.7	-15
	0.3nm,0.5s,baz=349,slow=35,SNR=2.4						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**67.72**	**326**	P	P	12 36 03.9	+0.2
	0.2nm,0.5s,baz=117,slow=8.3,SNR=2.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**71.97**	**328**	P	P	12 36 29.7	0.0
	0.1nm,0.3s,baz=135,slow=6.8,SNR=1.5						
	0.1nm,0.3s						

*GUC **19** 12:28:44.2±0.6, 20.89S×68.95W, h106km±3km, ML3.3*
*IDC **19** 12:28:45.0±5.3, 20.97S×68.55W, h101km±57km, mb3.4/2, mbtmp3.6/3, Error ellipse: s-maj=117.3km s-min=41.7km az=112.0*
ISC 19 12:28:43.9±0.9, 20.87S±0.03×68.98W±0.10, h109km±8km, n17, σ1s74/29, 9C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.74**	**347**	⇓ *i*P	**Pn**	**12 29 03.0**	**+0.1**
PB08				*i* S	**Sn**	**12 29 17.1**	**-0.1**
PB08				IAML		12 29 17.9	
	comp=E,1µm,0.3s						
PB09	**IPOC Station P**	**0.96**	**195**	⇑ *i*P	**Pn**	**12 29 04.5**	**-0.2**
PB09				*i* S	**Sn**	**12 29 20.3**	**-0.1**
PB02	**IPOC Station P**	**0.97**	**242**	⇑ *i*P	**Pn**	**12 29 04.5**	**-0.3**
PB02				*i* S	**Sn**	**12 29 20.1**	**-0.4**
PB02				IAML		12 29 22.3	
	comp=E,1µm,0.4s						
PB07	**IPOC Station P**	**1.20**	**225**	⇑ *i*P	**Pn**	**12 29 06.9**	**-0.4**
PB07				*i* S	**Sn**	**12 29 24.7**	**-0.5**
PB07				IAML		12 29 26.8	
	comp=E,921nm,0.3s						
GO01	**Chusmiza**	**1.21**	**350**	⇑ *i*P	**Pn**	**12 29 07.9**	**+0.1**
GO01				*i* S	**Sn**	**12 29 26.2**	**+0.5**
TA02	**Huaiquique**	**1.23**	**299**	*i* P	**Pn**	**12 29 07.5**	**0.0**
PB11	**IPOC Station P**	**1.27**	**330**	⇑ *i*P	**Pn**	**12 29 08.1**	**0.0**
PB11				*i* S	**Sn**	**12 29 26.5**	**0.0**
PB11				IAML		12 29 28.8	
	comp=E,635nm,0.2s						
PB03	**IPOC Station P**	**1.38**	**211**	⇑ *i*P	**Pn**	**12 29 09.0**	**-0.4**
PB03				*i* S	**Sn**	**12 29 27.8**	**-0.8**
PB03				IAML		12 29 29.9	
	comp=E,399nm,0.4s						
PSGCX	**Pisagua**	**1.66**	**319**	⇑ *i*P	**Pn**	**12 29 12.4**	**-0.3**
PSGCX				*i* S	**Sn**	**12 29 34.0**	**-0.5**
PB06	**IPOC Station P**	**1.91**	**197**	⇑ *i*P	**Pn**	**12 29 15.3**	**-0.5**
PB06				*i* S	**Sn**	**12 29 40.0**	**-0.2**
PB06				IAML		12 29 43.8	
	comp=E,173nm,0.4s						
PB05	**IPOC Station P**	**2.28**	**210**	*i* P	**Pn**	**12 29 19.6**	**-0.9**
PB05				*i* S	**Sn**	**12 29 46.2**	**-2.3**
PB16	**IPOC Station P**	**2.57**	**349**	⇑ *i*P	**Pn**	**12 29 25.7**	**+0.9**
PB12	**IPOC Station P**	**2.58**	**330**	⇑ *i*P	**Pn**	**12 29 23.5**	**-0.9**
PB12				*i* S	**Sn**	**12 29 55.1**	**-0.4**
LPAZ	**La Paz**	**4.62**	**10**	P	**Pn**	**12 29 54.0**	**+1.8**
	comp=E,2.6nm,0.3s,baz=189,slow=14,SNR=36						
LPAZ				S	**Sn**	**12 30 37.5**	**-7.7**
	comp=E,1.7nm,0.7s,baz=242,slow=4.6,SNR=1.2						
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**12 39 40.8**	**+1.4**
	comp=E,1.5nm,1.0s,baz=144,slow=5.8,SNR=2.3						
	comp=E,1.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**77.20**	**70**	P	**P**	**12 40 26.5**	**+0.1**
	comp=E,0.3nm,0.7s,baz=256,slow=5.8,SNR=4.0						
	comp=E,0.3nm,0.7s						
MKAR	**Makanchi Array**	**145.16**	**35**	PKPbc	**PKPdf**	**12 48 09.2**	**+0.6**
	comp=E,0.5nm,0.6s,baz=305,slow=3.0,SNR=5.8						

*IDC **19** 12:48:28.4±1.4, 10.74N×92.95E, h0km, mb3.6/7, mbtmp3.6/8, ML4.3/1, Error ellipse: s-maj=48.0km s-min=20.0km az=61.0*
*BKK **19** 12:48:37.0±0.5, 11.1N±4.4×93.2E±.1, h10km, M3.8/13, mB4.4/7, mb4.0/13, Mjma3.5/13, MLv4.0/5, Mw(mB)3.6/7*
ISC 19 12:48:36.6±1.2, 11.1N±0.1×93.2E±0.2, h54km, n21, σ1s70/18, mb3.6/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RNTT	**Ranong**	**5.50**	**107**	P	**Pn**	**12 49 58.6**	**+2.7**
	0.1nm0.3nm30nm,0.8s						
UTHA	**Uthaitani**	**7.59**	**53**	P	**Pn**	**12 50 24.3**	**-0.4**
CM05	**Chiang Mai Arr**	**9.21**	**37**	P	**Pn**	**12 50 46.3**	**-0.6**
CM04	**Chiang Mai Arr**	**9.23**	**37**	P	**Pn**	**12 50 45.1**	**-2.0**
	0.0nm99nm6.0nm,0.8s						
CM01	**Chiang Mai Arr**	**9.23**	**37**	P	**Pn**	**12 50 45.3**	**-1.9**
	0.0nm4.2nm,1.1s						
CM02	**Chiang Mai Arr**	**9.24**	**37**	P	**Pn**	**12 50 46.5**	**-0.7**
	0.0nm3.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**9.25**	**37**	Pn	**Pn**	**12 50 47.3**	**-0.1**
	0.8nm,0.3s,baz=218,slow=13,SNR=14						
	1.3nm,0.3s						
CM09	**Chiang Mai Arr**	**9.27**	**37**	P	**Pn**	**12 50 45.8**	**-1.9**
	0.0nm97nm4.3nm,0.5s						
CHTO	**Chiang Mai**	**9.54**	**35**	P	**Pn**	**12 50 49.2**	**-2.1**
LAMP	**Lampang**	**9.72**	**39**	P	**Pn**	**12 50 52.8**	**-1.0**
	6.0nm,0.7s						
H08S3	**Diego Garcia H**	**27.70**	**229**	T	T	13 22 55.3	
	baz=47,slow=74,SNR=7.0						
H08S2	**Diego Garcia H**	**27.70**	**229**	T	T	13 22 42.7	
	baz=47,slow=74,SNR=2.4						
H08S1	**Diego Carcia H**	**27.71**	**229**	T	T	13 22 57.0	
	baz=47						
MKAR	**Makanchi Array**	**36.80**	**348**	P	**P**	**12 55 39.5**	**+0.3**
	0.3nm,0.8s,baz=163,slow=8.4,SNR=2.9						
	0.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**43.21**	**132**	P	**P**	**12 56 31.5**	**-1.1**
	3.0nm,1.2s,baz=307,slow=5.1,SNR=1.8						
	3.0nm,1.2s						
ZALV	**Zalesovo Beam**	**43.30**	**353**	P	**P**	**12 56 35.5**	**+2.6**
	0.3nm,0.4s,baz=171,slow=10,SNR=1.0						
	0.3nm,0.4s						
MJAR	**Matsushiro Arr**	**47.83**	**50**	P	**P**	**12 57 10.9**	**+1.8**
	0.3nm,0.4s,baz=267,slow=8.4,SNR=4.0						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**50.92**	**127**	P	**P**	**12 57 30.8**	**-1.9**
	0.5nm,0.4s,baz=302,slow=7.5,SNR=19						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**52.71**	**131**	P	**P**	**12 57 45.4**	**-0.7**
	0.3nm,0.5s,baz=307,slow=7.8,SNR=7.7						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**69.47**	**332**	P	**P**	**12 59 39.1**	**+0.1**
	0.6nm,0.8s,baz=117,slow=8.0,SNR=4.5						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**136.70**	**22**	PKP	**PKPdf**	**13 07 52.1**	**-1.7**
	0.1nm,0.7s,baz=338,slow=2.6,SNR=3.4						

*KRNET **19** 12:50:36.0±0.1, 40.63N×72.60E, h15km, mb2.5*
ISC 19 12:50:36.0±1.0, 40.63N±0.03×72.60E±0.04, h9km±14km, n9, σ0s84/16, 11C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.17**	**126**	⇑ *i*P	**Pg**	**12 50 39.4**	**-0.3**
OHH				⇑ *i*S	**Sg**	**12 50 42.2**	**-0.1**
SFK	**Sufi-Kurgan**	**0.92**	**131**	⇑ *i*P	**Pb**	**12 50 53.7**	**-0.6**
SFK				⇑ *i*S	**Sg**	**12 51 06.9**	**+1.1**
ARK	**Arkit**	**1.27**	**338**	⇓ *i*P	**Pg**	**12 51 00.2**	**-0.2**
ARK				⇓ *i*S	**Sg**	**12 51 17.7**	**+0.8**
DRK	**Karamyk**	**1.30**	**209**	⇓ *e*P	**Pg**	**12 51 00.8**	**-0.2**
DRK				⇓ *i*S	**Sg**	**12 51 19.1**	**+1.2**
TRKS	**Terek-Say**	**1.43**	**310**	⇑ *i*P	**Pb**	**12 51 02.0**	**-0.9**
TRKS				⇑ *i*S	**Sb**	**12 51 20.8**	**-0.5**
BTK	**Batken**	**1.48**	**248**	⇑ *i*P	**Pg**	**12 51 03.9**	**-0.5**
BTK				⇑ *i*S	**Sg**	**12 51 24.2**	**+0.7**
MNAS	**Manas**	**1.86**	**358**	⇓ *i*P	**Pg**	**12 51 10.7**	**-1.1**
MNAS				⇓ *i*S	**Sg**	**12 51 36.2**	**+0.3**
AAK	**Ala-Archa**	**2.46**	**35**	⇑ Pn	**Pg**	**12 51 23.6**	**+0.4**
	0.8nm,0.5s						
AAK				⇓ Lg	Lg	12 51 58.6	
	1.8nm,0.5s						
KK31	**Karatay Array**	**2.93**	**328**	⇑ Pn	**Pb**	**12 51 29.5**	**+1.2**
	0.2nm,0.4s						
KK31				⇑ Lg	Lg	12 52 08.8	
	0.3nm,0.2s,baz=137,slow=29,SNR=4.3						

*MAN **19** 12:55:57.0, 4.98N×126.59E, h15km, MS3.9*
*IDC **19** 12:56:14.5±12.0, 5.18N×125.83E, h183km±118km, mb3.0/7, mbtmp3.5/7, Error ellipse: s-maj=134.5km s-min=20.8km az=66.0*
ISC 19 12:55:52.7±1.0, 5.81N±0.07×127.6E±0.1, h10km, n15, σ2s56/20, mb3.7/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	**2.29**	**329**	*i* P	**Pg**	**12 56 38.8**	**+2.2**
CDOP				*i* S	**Sg**	**12 57 08.3**	**+2.1**
DMPH	**Davao City--Mi**	**2.45**	**301**	*e*P	Pn	12 56 23.5	-9.3
DMPH				*i* S	**Sn**	**12 57 03.8**	**+0.9**
BIPH	**Bislig**	**2.67**	**332**	*e*P	Pg	12 56 47.8	+3.8
BIPH				*e*S	**Sb**	**12 57 14.5**	**+1.0**
GSPH	**General Santos**	**2.67**	**276**	*i* P	Pn	12 56 28.1	-7.8
GSPH				*i* S	Sn	12 56 48.8	-20
KCP	**Kidapawan**	**2.78**	**296**	*e*P	**Pn**	**12 56 36.6**	**-0.8**
KCP				*i* S	**Sb**	**12 57 14.2**	**-2.6**
BUKP	**Musuan**	**3.27**	**309**	*i* P	**Pb**	**12 56 51.4**	**+0.5**
BUKP				*e*S	**Sb**	**12 57 29.7**	**-1.0**
TSSP	**Tandag City**	**3.51**	**336**	*e*P	**Pg**	**12 56 59.9**	**-0.1**
TSSP				*e*S	**Sb**	**12 57 33.4**	**-4.2**
PLP	**Palo**	**5.93**	**334**	*e*P	**Pb**	**12 57 33.1**	**-3.1**
PLP				*e*S	**Sn**	**12 58 34.0**	**+5.3**
FITZ	**Fitzroy Crossi**	**23.84**	**185**	P	**P**	**13 01 04.4**	**-1.8**
	0.8nm,0.4s,baz=3.4,slow=10,SNR=6.5						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**26.43**	**166**	P	**P**	**13 01 33.5**	**+3.6**
	0.4nm,0.8s,baz=342,slow=9.8,SNR=5.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**29.93**	**168**	P	**P**	**13 02 04.4**	**+3.2**
	0.1nm,0.6s,baz=346,slow=8.7,SNR=1.1						
ASAR				PcP	**PcP**	**13 05 02.9**	**-1.1**
	0.1nm,0.7s,baz=349,slow=2.6,SNR=1.3						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**56.38**	**324**	P	**P**	**13 05 33.6**	**-0.7**
	0.3nm,0.4s,baz=114,slow=7.9,SNR=5.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**60.49**	**326**	P	**P**	**13 06 02.5**	**-0.4**
	0.3nm,0.5s,baz=126,slow=6.7,SNR=2.4						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**66.08**	**326**	P	**P**	**13 06 37.2**	**-2.7**
	0.2nm,0.3s,baz=98,slow=6.0,SNR=1.6						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**90.43**	**332**	P	**P**	**13 08 54.1**	**-0.3**
	1.2nm,0.9s,baz=65,slow=3.7,SNR=3.4						
	1.2nm,0.9s						

*BGSI **19** 12:57:55.4±1.6, 24.94S×22.71E, h0km±88km, ML2.1, Presumed earthquake*
PRE 19 12:58:25.2±0.9, 24.19S×24.97E, h0km, ML1.7, Suspected explosion, Botswana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

BOSA				IAML			13 00 30.0		
	comp=Z,1.8nm,0.3s								
SNKL	**Senekal, Frees**	**4.78**	**149**	*e*P		Pn	12 59 40.5	+1.8	
SNKL				*e*S		Sn	13 00 34.3	-0.6	
SNKL				IAML			13 00 46.9		
	comp=Z,2.5nm,0.5s								

*SJA **19** 13:00:05.7±0.6, 18°.78S×68°.15W, h234km±5km, ML4.3, MW4.1*

*NEIC **19** 13:00:06.7±1.1, 18°.78S±0°.05×67°.86W±0°.08, h193km±5km, mb4.6/296, Error ellipse: s-maj=10.9km s-min=7.9km az=98.0*

*SCB **19** 13:00:06.7±1.7, 18°.79S×67°.91W, h198km±16km, MB6.7, ML4.5/4, Error ellipse: s-maj=5.5km s-min=3.0km az=1.0*

*VAO **19** 13:00:07.5±0.3, 18°.73S×67°.72W, h200km, mb4.5, Presumed earthquake*

*GFZ **19** 13:00:07.7±0.3, 19°S±3'×6°8W±', h198km±4km, M4.4/9, mb4.4/9*

*IDC **19** 13:00:07.0±0.9, 18°.70S×67°.72W, h197km±7km, mb4.1/14, mbtmp4.7/19, Error ellipse: s-maj=14.2km s-min=9.1km az=45.0*

*GUC **19** 13:00:08.1±0.7, 18°.83S×68°.18W, h222km±4km, ML4.6*

ISC 19 13:00:06.4±0.5, **18°.78S**±0°.03×**67°.87W**±0°.04, **h197**km±5km, **n392**, σ1§11/332, **mb4.6**/151, **12C, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SOEO	**Opoqueri**	**0.22**	**357**	P		**Pn**	**13 00 33.5**	**+0.4**	
GO01	**Chusmiza**	**1.53**	**234**	*e*P		**Pn**	**13 00 42.1**	**+1.4**	
GO01				*e*S		**Sn**	**13 01 11.7**	**+4.5**	
GO01	**Chusmiza**	**1.53**	**234**	*e*P		**Pn**	**13 00 41.8**	**+1.1**	
GO01				IAML			13 01 12.3		
	comp=E,2μm,0.3s								
GO01	**Chusmiza**	**1.53**	**234**			**Pn**	**13 00 41.6**	**+1.0**	
GO01				Sn		**Sn**	**13 01 07.1**	**-0.1**	
GO01	**Chusmiza**	**1.53**	**234**	P		**Pn**	**13 00 41.2**	**+0.5**	
GO01	**Chusmiza**	**1.53**	**234**	P		**Pn**	**13 00 41.9**	**+1.2**	
PB16	**IPOC Station P**	**1.61**	**286**	*e*P		**Pn**	**13 00 42.2**	**+0.7**	
PB16	**IPOC Station P**	**1.61**	**286**	*i*P		**Pn**	**13 00 43.0**	**+1.4**	
PB16				*e*S		**Sn**	**13 01 10.7**	**+2.0**	
PB16	**IPOC Station P**	**1.61**	**286**			**Pn**	**13 00 42.5**	**+1.0**	
PB16	**IPOC Station P**	**1.61**	**286**	P		**Pn**	**13 00 41.8**	**+0.3**	
PB16	**IPOC Station P**	**1.61**	**286**	P		**Pn**	**13 00 43.1**	**+1.6**	
PB08	**IPOC Station P**	**1.81**	**222**	*e*P		**Pn**	**13 00 44.5**	**+1.2**	
PB08				*e*S		**Sn**	**13 01 13.3**	**+1.4**	
PB08				IAML			13 01 15.5		
	comp=Z,588nm,0.2s								
PB08	**IPOC Station P**	**1.81**	**222**	*e*P		**Pn**	**13 00 44.4**	**+1.2**	
PB08				IAML			13 01 16.7		
	comp=N,1μm,0.3s								
PB08	**IPOC Station P**	**1.81**	**222**			**Pn**	**13 00 44.3**	**+1.0**	
PB08	**IPOC Station P**	**1.81**	**222**	P		**Pn**	**13 00 44.3**	**+1.0**	
PB08	**IPOC Station P**	**1.81**	**222**	P		**Pn**	**13 00 44.5**	**+1.2**	
BBOJ	**La Paz, Jacaqu**	**1.82**	**350**	P		**Pn**	**13 00 44.8**	**+1.3**	
SOEJ	**Jacaque**	**1.82**	**350**	P		**Pn**	**13 00 44.9**	**+1.4**	
PB18	**Visviri**	**1.93**	**308**	*e*P		**Pn**	**13 00 46.9**	**+2.3**	
PB18	**Visviri**	**1.93**	**308**			**Pn**	**13 00 47.0**	**+2.4**	
PB18	**Visviri**	**1.93**	**308**	P		**Pn**	**13 00 47.3**	**+2.7**	
PB11	**IPOC Station P**	**1.94**	**240**	*e*P		**Pn**	**13 00 44.5**	**+0.1**	
PB11				*e*P			13 00 44.6		
PB11				*e*S		**Sn**	**13 01 13.6**	**-0.2**	
PB11				IAML			13 01 14.5		
	comp=Z,1μm,0.2s								
PB11	**IPOC Station P**	**1.94**	**240**	*i*P		**Pn**	**13 00 44.5**	**+0.1**	
PB11				*e*S		**Sn**	**13 01 12.9**	**-0.9**	
PB11				IAML			13 01 15.3		
	comp=E,3μm,0.2s								
PB11	**IPOC Station P**	**1.94**	**240**			**Pn**	**13 00 44.4**	**+0.1**	
PB11	**IPOC Station P**	**1.94**	**240**	P		**Pn**	**13 00 44.0**	**-0.3**	
PB11				S		**Sn**	**13 01 12.9**	**-0.9**	
PB11				IAML			13 01 13.8		
	comp=E,2μm,0.3s								
PB11	**IPOC Station P**	**1.94**	**240**	P		**Pn**	**13 00 44.6**	**+0.2**	
PX02	**IPOC Station P**	**2.21**	**265**	*e*P		**Pn**	**13 00 46.0**	**-1.0**	
PX02				*e*S		**Sn**	**13 01 16.3**	**-2.2**	
PX02				IAML			13 01 16.9		
	comp=N,1μm,0.5s								
BBOD	**La Paz, Gloria**	**2.24**	**342**	P		**Pn**	**13 00 48.7**	**+0.8**	
PSGCX	**Pisagua**	**2.28**	**249**	*e*P		**Pn**	**13 00 47.2**	**-0.6**	
PSGCX				*e*S		**Sn**	**13 01 18.8**	**-1.1**	
PSGCX				IAML			13 01 21.1		
	comp=Z,735nm,0.4s								
PSGCX	**Pisagua**	**2.28**	**249**	*e*P		**Pn**	**13 00 47.1**	**-0.6**	
PSGCX				*e*S		**Sn**	**13 01 17.1**	**-2.8**	
PSGCX	**Pisagua**	**2.28**	**249**			**Pn**	**13 00 46.8**	**-0.9**	
PSGCX	**Pisagua**	**2.28**	**249**	P		**Pn**	**13 00 47.2**	**-0.6**	
PB12	**IPOC Station P**	**2.33**	**274**	*e*P		**Pn**	**13 00 47.9**	**-0.4**	
PB12				*e*S		**Sn**	**13 01 20.0**	**-1.0**	
PB12				IAML			13 01 20.8		
	comp=Z,2μm,0.4s								
PB12	**IPOC Station P**	**2.33**	**274**	*i*P		**Pn**	**13 00 48.0**	**-0.4**	
PB12				*e*S		**Sn**	**13 01 18.6**	**-2.3**	
PB12				IAML			13 01 20.8		
	comp=N,4μm,0.3s								
PB12	**IPOC Station P**	**2.33**	**274**			**Pn**	**13 00 47.9**	**-0.4**	
PB12	**IPOC Station P**	**2.33**	**274**	P		**Pn**	**13 00 48.1**	**-0.3**	
AP01	**Chacalluta**	**2.38**	**279**	*e*P		**Pn**	**13 00 48.2**	**-0.5**	
AP01				*e*S		**Sn**	**13 01 22.1**	**+0.5**	
AP01				IAML			13 01 23.4		
	comp=Z,2μm,0.2s								
AP01	**Chacalluta**	**2.38**	**279**	*e*P		**Pn**	**13 00 48.8**	**+0.1**	
AP01	**Chacalluta**	**2.38**	**279**			**Pn**	**13 00 48.8**	**+0.1**	
AP01	**Chacalluta**	**2.38**	**279**	P		**Pn**	**13 00 48.9**	**+0.1**	
LPAZ	**La Paz**	**2.49**	**354**	P		**Pn**	**13 00 52.4**	**+1.6**	
	comp=Z,1μm,0.3s,baz=159,slow=5.2,SNR=8126								
LPAZ				S		**Sn**	**13 01 25.1**	**-0.1**	
	comp=Z,327nm,0.6s,baz=276,slow=20,SNR=9.8								
LPAZ	**La Paz**	**2.49**	**354**	*e*P		**Pn**	**13 00 52.5**	**+1.8**	
LPAZ				*e*S		**Sn**	**13 01 27.7**	**+2.5**	
LPAZ	**La Paz**	**2.49**	**354**	P		**Pn**	**13 00 52.0**	**+1.2**	
LPAZ	**La Paz**	**2.49**	**354**	*e*P		**Pn**	**13 00 52.0**	**+1.2**	
LPAZ				*e*S		**Sn**	**13 01 25.9**	**+0.7**	
LPAZ	**La Paz**	**2.49**	**354**	P		**Pn**	**13 00 52.6**	**+1.8**	
AOEA	**Aiquile**	**2.58**	**77**	P		**Pn**	**13 00 52.6**	**+1.3**	
AOEA	**Aiquile**	**2.58**	**77**	P		**Pn**	**13 00 53.2**	**+1.9**	
TA02	**Huaiquique**	**2.59**	**235**	*e*P		**Pn**	**13 00 51.1**	**-0.1**	
TA02				*e*S		**Sn**	**13 01 24.3**	**-1.9**	
TA02				IAML			13 01 26.7		
	comp=Z,965nm,0.1s								
TA02	**Huaiquique**	**2.59**	**235**	*e*P		**Pn**	**13 00 50.6**	**-0.5**	
TA02				*e*S		**Sn**	**13 01 23.2**	**-3.0**	
TA02	**Huaiquique**	**2.59**	**235**	P		**Pn**	**13 00 50.7**	**-0.5**	
I08BO	**LAS PEÑAS INFR** baz=180,slow=42	**2.61**	**348**	P		**Pn**	**13 00 54.0**	**+2.0**	
BBOB	**La Paz, Bander**	**2.64**	**355**	P		**Pn**	**13 00 53.4**	**+1.1**	
PB01	**IPOC Station P**	**2.71**	**214**	*e*P		**Pn**	**13 00 53.3**	**+0.6**	
PB01				*e*S		**Sn**	**13 01 28.3**	**-0.6**	
PB01				IAML			13 01 31.1		
	comp=Z,602nm,0.3s								
PB01	**IPOC Station P**	**2.71**	**214**	*e*P		**Pn**	**13 00 53.0**	**+0.3**	
PB01				IAML			13 01 30.1		
	comp=E,2μm,0.3s								
PB01	**IPOC Station P**	**2.71**	**214**			**Pn**	**13 00 53.2**	**+0.6**	
PB01	**IPOC Station P**	**2.71**	**214**	P		**Pn**	**13 00 53.3**	**+0.6**	
PB01				S		**Sn**	**13 01 27.6**	**-1.3**	
PB01				IAML			13 01 29.5		
	comp=E,1μm,0.5s								
PB01	**IPOC Station P**	**2.71**	**214**	P		**Pn**	**13 00 53.6**	**+0.9**	
PB02	**IPOC Station P**	**3.16**	**217**	*e*P		**Pn**	**13 00 58.2**	**+0.3**	
PB02				*e*S		**Sn**	**13 01 36.6**	**-1.6**	
PB02				IAML			13 01 42.5		
	comp=Z,934nm,0.2s								
PB02	**IPOC Station P**	**3.16**	**217**	*e*P		**Pn**	**13 00 58.4**	**+0.4**	
PB02				IAML			13 01 46.2		
	comp=E,1μm,0.4s								
PB02	**IPOC Station P**	**3.16**	**217**			**Pn**	**13 00 58.3**	**+0.3**	
PB02	**IPOC Station P**	**3.16**	**217**	P		**Pn**	**13 00 58.4**	**+0.4**	
PB02				S		**Sn**	**13 01 36.7**	**-1.6**	
PB02				IAML			13 01 37.6		
	comp=E,1μm,0.4s								
PB02	**IPOC Station P**	**3.16**	**217**	P		**Pn**	**13 00 58.8**	**+0.9**	
MOCB	**Mochara**	**3.23**	**140**	P		**Pn**	**13 01 00.4**	**+1.2**	
MOCB				S		**Sn**	**13 01 40.6**	**+0.2**	
MOCB				IAML			13 01 45.1		
	comp=E,689nm,0.8s								
PB09	**IPOC Station P**	**3.26**	**203**	*e*P		**Pn**	**13 01 00.6**	**+1.4**	
PB09				*e*S		**Sn**	**13 01 41.0**	**+0.4**	
PB09				IAML			13 01 45.8		
	comp=Z,448nm,0.3s								
PB09	**IPOC Station P**	**3.26**	**203**	*e*P		**Pn**	**13 01 00.4**	**+1.1**	
PB09	**IPOC Station P**	**3.26**	**203**			**Pn**	**13 00 59.6**	**+0.4**	
PB09	**IPOC Station P**	**3.26**	**203**	P		**Pn**	**13 01 00.5**	**+1.3**	
PB09	**IPOC Station P**	**3.26**	**203**	P		**Pn**	**13 01 02.3**	**+3.1**	
PB07	**IPOC Station P**	**3.49**	**212**	*e*P		**Pn**	**13 01 02.1**	**+0.1**	
PB07				*e*S		**Sn**	**13 01 43.6**	**-1.9**	
PB07				IAML			13 01 54.8		
	comp=Z,431nm,0.3s								
PB07	**IPOC Station P**	**3.49**	**212**	*e*P		**Pn**	**13 01 02.0**	**+0.1**	
PB07	**IPOC Station P**	**3.49**	**212**			**Pn**	**13 01 02.0**	**+0.1**	
PB07	**IPOC Station P**	**3.49**	**212**	P		**Pn**	**13 01 03.0**	**+1.1**	
PB03	**IPOC Station P**	**3.70**	**208**	*e*P		**Pn**	**13 01 04.6**	**+0.1**	
PB03				*e*S		**Sn**	**13 01 47.9**	**-2.2**	
PB03				*e*S			13 01 48.2		
PB03				IAML			13 01 51.5		
	comp=Z,358nm,0.3s								
PB03	**IPOC Station P**	**3.70**	**208**	*e*P		**Pn**	**13 01 04.8**	**+0.3**	
PB03	**IPOC Station P**	**3.70**	**208**			**Pn**	**13 01 04.2**	**-0.3**	
PB03	**IPOC Station P**	**3.70**	**208**	P		**Pn**	**13 01 05.3**	**+0.7**	
YJA	**Yavi**	**4.04**	**147**	*e*P		**Pn**	**13 01 10.6**	**+1.6**	
YJA	**Yavi**	**4.04**	**147**	P		**Pn**	**13 01 10.6**	**+1.6**	
AOVT	**TarijaAcel**	**4.04**	**133**	P		**Pn**	**13 01 10.6**	**+1.7**	
AF01	**San Pedro de A**	**4.16**	**184**	*e*P		**Pn**	**13 01 12.6**	**+2.2**	
AF01				*e*S		**Sn**	**13 02 00.9**	**+0.1**	
AF01				IAML			13 02 24.4		
	comp=Z,223nm,0.7s								
PB06	**IPOC Station P**	**4.22**	**202**	*e*P		**Pn**	**13 01 11.4**	**+0.4**	
PB06				*e*S		**Sn**	**13 01 59.7**	**-2.1**	
PB06				IAML			13 02 05.4		
	comp=Z,234nm,0.4s								
PB06	**IPOC Station P**	**4.22**	**202**	*e*P		**Pn**	**13 01 11.4**	**+0.4**	
PB06	**IPOC Station P**	**4.22**	**202**			**Pn**	**13 01 10.7**	**-0.3**	
PB06	**IPOC Station P**	**4.22**	**202**	P		**Pn**	**13 01 12.2**	**+1.2**	
PB06	**IPOC Station P**	**4.22**	**202**	P		**Pn**	**13 01 11.6**	**+0.6**	
PB05	**IPOC Station P**	**4.60**	**208**	*e*P		**Pn**	**13 01 14.9**	**-0.9**	
PB05				IAML			13 02 15.6		
	comp=Z,127nm,0.6s								
PB05	**IPOC Station P**	**4.60**	**208**			**Pn**	**13 01 15.1**	**-0.7**	
PB05	**IPOC Station P**	**4.60**	**208**	P		**Pn**	**13 01 15.7**	**-0.1**	
SALTA		**5.60**	**166**	P		**Pn**	**13 01 30.5**	**+1.5**	
SIV	**San Ignacio**	**7.06**	**72**	P		**Pn**	**13 01 46.3**	**-1.3**	
	comp=Z,30nm,0.3s,baz=258,slow=11,SNR=184								
SIV				S		**Sn**	**13 03 04.3**	**-3.5**	
	comp=Z,5.5nm,0.3s,baz=230,slow=13,SNR=4.2								
SIV	**San Ignacio**	**7.06**	**68**	P		**Pn**	**13 01 46.0**	**-1.6**	
BBSD	**Serra de San D**	**7.09**	**78**	P		**Pn**	**13 01 46.6**	**-1.3**	
BBSD	**Serra de San D**	**7.09**	**78**	*e*P		**Pn**	**13 01 46.8**	**-1.1**	
BBSD				*e*S		**Sn**	**13 03 04.6**	**-3.8**	
AC02	**Maricunga**	**8.10**	**188**			**Pn**	**13 02 00.3**	**-1.2**	
AC02	**Maricunga**	**8.10**	**188**	P		**Pn**	**13 02 00.5**	**-1.0**	
PTLB	**Pontes e Lacer**	**8.99**	**70**			**Pn**	**13 02 12.1**	**-0.5**	
PTLB	**Pontes e Lacer**	**8.99**	**70**	*e*P		**Pn**	**13 02 12.0**	**-0.5**	
PTLB				*e*S		**Sn**	**13 03 50.2**	**-3.1**	
VILB	**Vilhena**	**9.38**	**53**	P		**Pn**	**13 02 17.2**	**-0.6**	
VILB	**Vilhena**	**9.38**	**53**	*e*P		**Pn**	**13 02 17.4**	**-0.4**	
COIM	**Forte Coimbra**	**9.59**	**98**	*e*P		**Pn**	**13 02 18.4**	**-2.0**	
MURT	**Porto Murtinho**	**10.05**	**108**	*e*P		**Pn**	**13 02 25.4**	**-1.0**	
NNA	**Nana**	**10.97**	**307**	P		**Pn**	**13 02 38.0**	**-0.4**	
	comp=Z,62nm,0.3s,baz=143,slow=12,SNR=39								
NNA				S		Sn	13 04 28.8	-12	
	comp=Z,29nm,0.6s,baz=246,slow=21,SNR=7.2								
NNA	**Nana**	**10.97**	**307**			**Pn**	**13 02 37.5**	**-0.9**	
NNA	**Nana**	**10.97**	**307**	P		**Pn**	**13 02 38.5**	**+0.1**	
CO01	**Juntas del Tor**	**11.33**	**190**	P		**Pn**	**13 02 44.6**	**+1.5**	
CZSB	**Cruzeiro do Su**	**11.95**	**336**	*e*P		**Pn**	**13 02 51.2**	**+0.4**	
SALV	**Santo Antonio**	**11.98**	**78**	*e*P		**Pn**	**13 02 50.5**	**-0.7**	
CPUP	**Villa Florida**	**12.30**	**130**	P		**Pn**	**13 02 54.0**	**-1.2**	
	comp=Z,6.1nm,0.8s,baz=301,slow=13,SNR=18								
CPUP	**Villa Florida**	**12.30**	**130**			**Pn**	**13 02 54.2**	**-1.0**	
CPUP	**Villa Florida**	**12.30**	**130**	*e*P		**Pn**	**13 02 54.8**	**-0.4**	
CPUP	**Villa Florida**	**12.30**	**130**	P		**Pn**	**13 02 54.8**	**-0.4**	
PP1B	**Ponte de Pedra**	**12.41**	**87**	*e*P		**Pn**	**13 02 54.3**	**-2.4**	
SJPY	**San Joaquin**	**12.55**	**122**	*e*P		**Pn**	**13 02 58.7**	**+0.3**	
AMBA	**Amambai (Brazi**	**12.73**	**111**	*e*P		**Pn**	**13 03 00.9**	**+0.2**	
ZON	**Zonda**	**12.73**	**183**	P		**P**	**13 03 03.5**	**-1.0**	
CFA	**Coronel Fontan**	**12.77**	**181**	P		**Pn**	**13 02 59.7**	**-1.5**	
	comp=Z,3.8nm,0.4s,baz=9.8,slow=11,SNR=36								
CFA				S		Sn	13 05 11.8	-12	
	comp=Z,4.0nm,0.4s,baz=246,slow=21,SNR=6.6								
CLDB	**Colider**	**14.07**	**58**	*e*P		**Pn**	**13 03 17.8**	**+0.3**	
VA03	**San Esteban**	**14.13**	**189**	Pn		**Pn**	**13 03 16.6**	**-1.6**	
VA03	**San Esteban**	**14.13**	**189**	P		**Pn**	**13 03 19.1**	**+0.9**	
MT02	**Curacav**	**14.71**	**191**	Pn		**Pn**	**13 03 24.9**	**-0.3**	
MT05	**Renca**	**14.78**	**189**	P		**Pn**	**13 03 26.8**	**+0.7**	
TRCB	**Terra Rica**	**14.80**	**108**	*e*P		**Pn**	**13 03 26.7**	**+0.2**	
MT03	**Universidad Ad**	**14.84**	**189**			**Pn**	**13 03 27.2**	**+0.3**	
MT13	**San Alfonso**	**15.06**	**188**	P		**P**	**13 03 30.4**	**+0.2**	
MT13				IAmb		IAmb	13 03 34.3		
	comp=Z,45nm,1.1s								
MT01	**Popeta**	**15.32**	**191**	P		**Pn**	**13 03 32.9**	**+0.2**	
MT01				IAmb		IAmb	13 03 35.9		
	comp=Z,34nm,1.1s								
BO04	**La Punta**	**15.34**	**189**			**Pn**	**13 03 32.7**	**-0.3**	
BO04				IAmb		IAmb	13 03 36.9		
	comp=Z,51nm,1.2s								
PSAL	**Palomas, Salto**	**15.37**	**145**	*e*P		**Pn**	**13 03 33.2**	**-0.1**	
ATAH	**Atahualpa**	**15.45**	**317**	P		**P**	**13 03 36.5**	**+1.4**	
	comp=Z,6.1nm,0.7s,baz=192,slow=6.0,SNR=9.1								
TEFE	**Tefe**	**15.51**	**12**	*e*P		**Pn**	**13 03 34.7**	**-0.4**	
ARAG	**Araguaiana, MT**	**15.64**	**81**	*e*P		**Pn**	**13 03 35.7**	**-1.1**	
PTGB	**Pitanga**	**15.82**	**115**	*e*P		**Pn**	**13 03 39.7**	**+0.7**	
BO02	**Sierra Bellavi**	**16.16**	**189**			**Pn**	**13 03 43.0**	**+0.1**	
BO02				IAmb		IAmb	13 03 46.1		
	comp=Z,35nm,0.8s								
BO02	**Sierra Bellavi**	**16.16**	**189**	P		**Pn**	**13 03 43.8**	**+1.0**	
LDASE	**Londrina, Braz**	**16.29**	**109**	*e*P		**P**	**13 03 44.5**	**+0.6**	
ITAB	**Concordia**	**16.75**	**123**	P		**P**	**13 03 49.4**	**+0.6**	
ITAB	**Concordia**	**16.75**	**123**	*e*P		**P**	**13 03 48.9**	**+0.1**	
NPGB	**Novo Progresso**	**16.86**	**48**	*e*P		**P**	**13 03 50.3**	**+0.1**	
MACA	**Manacapuru-AM**	**17.04**	**25**	*e*P		**P**	**13 03 52.8**	**+0.6**	
ML02	**Panimavida**	**17.20**	**190**	P		**P**	**13 03 54.1**	**+0.3**	
ML02				IAmb		IAmb	13 04 29.3		
	comp=Z,61nm,1.4s								
SNDB	**Serra Nova Dou**	**17.35**	**69**	*e*P		**P**	**13 03 55.9**	**+0.4**	
H03N1	**Juan Fernandez** baz=28,slow=74	**17.63**	**212**	T		T	13 23 00.4		
H03N2	**Juan Fernandez** baz=28,slow=74	**17.64**	**212**	T		T	13 22 42.9		
H03N3	**Juan Fernandez** baz=28	**17.64**	**212**	T		T	13 23 01.6		
ANCO	**Parque Anchore**	**17.78**	**152**	*e*P		**P**	**13 03 59.8**	**-0.2**	
BB19B	**Bebedouro**	**18.33**	**100**	*e*P		**P**	**13 04 06.1**	**-0.1**	
SGC2	**Sao Gabriel da**	**18.53**	**3**	*e*P		**P**	**13 04 06.8**	**-1.6**	
MCRA	**Macar, Loja**	**18.56**	**319**	P		**P**	**13 04 09.4**	**+0.6**	
	comp=Z,644nmcomp=Z,85nm,0.7s								
ITTB	**Itaituba**	**18.60**	**41**	*e*P		**P**	**13 04 08.9**	**-0.2**	
IPMB	**Ipameri, GO**	**18.68**	**91**	*e*P		**P**	**13 04 09.7**	**-0.4**	
CNLB	**Canela**	**18.73**	**127**	*e*P		**P**	**13 04 09.2**	**-1.2**	
BDFB	**Brasilia**	**19.23**	**84**	P		**P**	**13 04 15.9**	**-0.1**	
	comp=Z,26nm,0.4s,baz=256,slow=7.1,SNR=40								
BDFB	**Brasilia**	**19.23**	**84**			**P**	**13 04 16.0**	**0.0**	
RCLB	**Rio Claro- Sao**	**19.38**	**104**	*e*P		**P**	**13 04 17.0**	**-0.6**	
SPB	**Sao Paulo**	**19.65**	**108**	*e*P		**P**	**13 04 18.9**	**-1.4**	
SPB	**Sao Paulo**	**19.65**	**108**	P		**P**	**13 04 19.8**	**-0.6**	
TRQA	**Tornquist**	**19.88**	**166**			**P**	**13 04 22.5**	**-0.3**	
PET01	**Itanhaem-SP**	**19.92**	**110**	*e*P		**P**	**13 04 22.3**	**-1.0**	
VAO	**Valinhos**	**19.98**	**106**			**P**	**13 04 23.2**	**-0.8**	
VAO	**Valinhos**	**19.98**	**106**	*e*P		**P**	**13 04 22.9**	**-1.1**	
CANS	**Sao Roque de M**	**20.30**	**98**	*e*P		**P**	**13 04 26.5**	**-1.0**	
PMNB	**Patos De Minas**	**20.31**	**93**	*e*P		**P**	**13 04 27.3**	**-0.4**	
PIAT	**Ana Tenorio**	**20.40**	**329**	P		**P**	**13 04 30.2**	**+1.3**	
	comp=Z,23nm,0.8s								
SLOR	**San Lorenzo -**	**20.75**	**329**	IAmb		IAmb	13 04 39.8		
	comp=Z,23nm,0.7s								
GO06	**Curarrehue**	**20.96**	**188**			**P**	**13 04 34.5**	**+0.2**	
GO06				IAmb		IAmb	13 04 41.9		
	comp=Z,14nm,0.7s								
GO06	**Curarrehue**	**20.96**	**188**	P		**P**	**13 04 35.2**	**+0.9**	
OTAV	**Otavalo**	**21.57**	**330**	P		**P**	**13 04 40.9**	**-0.4**	
OTAV	**Otavalo**	**21.57**	**330**	P		**P**	**13 04 42.6**	**+1.3**	
	comp=Z,10nm,0.8s								
OTAV	**Otavalo**	**21.57**	**330**	*e*P		**P**	**13 04 42.2**	**+1.0**	
OTAV	**Otavalo**	**21.57**	**330**	P		**P**	**13 04 43.9**	**+2.7**	
PRPB	**Paraupebas**	**21.60**	**57**	*e*P		**P**	**13 04 40.3**	**-0.8**	
FLOC	**Florencia**	**21.63**	**338**	P		**P**	**13 04 40.7**	**-0.8**	
	comp=Z,240nmcomp=Z,22nm,0.9s								
BSCB	**Bom Sucesso**	**21.83**	**100**	*e*P		**P**	**13 04 41.6**	**-1.9**	
SMTB	**Santa Maria do**	**22.00**	**66**	*e*P		**P**	**13 04 45.3**	**+0.2**	
BOAV	**Boa Vista**	**22.25**	**20**	*e*P		**P**	**13 04 47.3**	**-0.2**	
BBAC	**Balboa, Cauca**	**22.63**	**335**	P		**P**	**13 04 52.4**	**+1.2**	
	comp=Z,1μmcomp=Z,24nm,0.9s								
JANB	**Januaria**	**22.84**	**84**	*e*P		**P**	**13 04 51.8**	**-1.1**	
POPC	**Popayan, Colom**	**22.89**	**337**	P		**P**	**13 04 53.5**	**0.0**	
	comp=Z,14nm,1.3s								
DIAM	**Diamantina, MG**	**22.95**	**93**	*e*P		**P**	**13 04 53.5**	**-0.5**	
SDBA	**SAO DESIDERIO**	**23.00**	**77**	*e*P		**P**	**13 04 53.6**	**-0.8**	
PRAC	**Prado**	**23.39**	**342**	P		**P**	**13 04 56.9**	**-0.9**	
	comp=Z,8.6nm,1.0s								
VILC	**Villavicencio,**	**23.46**	**345**	P		**P**	**13 04 58.2**	**-0.3**	
JAMC	**Jamundi, Valle**	**23.51**	**337**	P		**P**	**13 04 58.0**	**-1.1**	
	comp=Z,12nm,0.6s								
ORTC	**Ortega, Tolima**	**23.69**	**341**	P		**P**	**13 04 59.9**	**-0.6**	
	comp=Z,23nm,0.9s								
CHIC	**Chingaza**	**23.97**	**345**	P		**P**	**13 05 03.5**	**0.0**	
	comp=Z,48nm,0.5s								
DUB01	**Friburgo-RJ**	**24.11**	**102**	*e*P		**P**	**13 05 04.3**	**-0.1**	
ROSC	**El Rosal**	**24.32**	**344**	P		**P**	**13 05 06.8**	**+0.2**	
	comp=Z,14nm,0.4s,baz=279,slow=21,SNR=6.2								
	comp=Z,14nm,0.4s								
ROSC	**El Rosal**	**24.32**	**344**			**P**	**13 05 06.7**	**0.0**	
ARCA	**Araşuai, MG**	**24.74**	**90**	*e*P		**P**	**13 05 10.0**	**-0.1**	
CAM01	**Campos-RJ**	**24.76**	**101**	*e*P		**P**	**13 05 10.0**	**-0.2**	
GUY2C	**Guyana, Caldas**	**24.97**	**342**	P		**P**	**13 05 11.8**	**-0.8**	
	comp=Z,25nm,0.6s								
SPBC	**San Pablo de B**	**25.04**	**345**	P		**P**	**13 05 11.9**	**-0.9**	
	comp=Z,468nmcomp=Z,21nm,0.8s								
RUSC	**La Rusia**	**25.05**	**348**	P		**P**	**13 05 12.5**	**-0.9**	
	comp=Z,737nmcomp=Z,64nm,1.3s								
NORC	**Norcasia**	**25.15**	**343**	P		**P**	**13 05 12.8**	**-1.0**	
	comp=Z,331nmcomp=Z,36nm,0.8s								
SJMB	**Sao Joao De Ma**	**25.27**	**94**	*e*P		**P**	**13 05 14.3**	**-0.5**	
BSFB	**Barra de Sao F**	**25.58**	**95**	*e*P		**P**	**13 05 17.0**	**-0.6**	
BARC	**Barichara**	**25.75**	**348**	P		**P**	**13 05 17.5**	**-1.9**	
	comp=Z,634nmcomp=Z,66nm,0.9s								
CBOC	**Ciudad Bolivar**	**25.77**	**341**	P		**P**	**13 05 18.2**	**-1.3**	
	comp=Z,397nmcomp=Z,17nm,0.5s								
HELC	**Sant

comp=Z,4.8nm,0.8s
BLOK Blackwell 61.80 333 P P 13 10 04.7 +0.2
P40A Paris 62.25 339 IAmb IAmb 13 10 08.0
comp=Z,11nm,0.7s
AMTX Amarillo 62.29 329 IAmb IAmb 13 10 10.7
comp=Z,6.5nm,0.7s
VNA1 Neumayer--Stat 62.52 161 ⇑P **P 13 10 10.1 +1.4**
comp=Z,6.2nm,0.9s
NCB Newcomb 62.71 355 P P **13 10 10.3 -0.1**
NCB IAmb IAmb 13 10 43.4
comp=Z,9.2nm,1.4s
P38A Dawn 62.85 338 P **P 13 10 11.0 -0.3**
VNA2 Neumayer--Watz 62.89 161 ⇑P **P 13 10 12.1 +0.9**
comp=Z,7.9nm,1.0s,baz=292,slow=7.1
CFNY Clifton-Fine, 62.98 354 P **P 13 10 11.9 -0.2**
CFNY IAmb IAmb 13 10 12.8
comp=Z,7.0nm,0.9s
EMMW East Machias 63.18 0 P **P 13 10 13.4 0.0**
EMMW IAmb IAmb 13 10 21.7
comp=Z,13nm,1.2s
121A Cookes Peak, D 63.73 323 IAmb IAmb 13 10 19.9
comp=Z,6.3nm,0.8s
319A Douglas 63.77 321 IAmb IAmb 13 10 19.8
comp=Z,12nm,0.8s
R32A Long Quarter, 63.84 333 P **P 13 10 18.2 +0.3**
SNAA Sanae 64.53 161 ⇑P **P 13 10 22.8 +0.7**
comp=Z,76nm,0.6s
SNAA Sanae 64.53 161 P **P 13 10 22.2 +0.2**
comp=Z,3.7nm,0.6s,baz=268,slow=5.7,SNR=12
comp=Z,3.7nm,0.6s
SNAA Sanae 64.53 161 P 13 10 22.5 +0.5
ANMO Albuquerque 64.79 326 P 13 10 24.7 +0.3
D62A Allapoint, All 65.56 359 P 13 10 28.6 -0.1
D62A IAmb IAmb 13 10 29.2
comp=Z,4.0nm,0.6s
TROLL Troll, Antarti 66.24 161 ⇑P **P 13 10 34.2 +1.1**
comp=Z,364nm,0.5s
SDCO Great Sand Dun 66.44 328 IAmb IAmb 13 10 37.0
comp=Z,8.2nm,0.8s
W18A Petrified Fore 66.72 323 IAmb IAmb 13 10 40.0
comp=Z,6.3nm,0.7s
DBIC Dimbokro 67.04 74 P **P 13 10 37.7 -1.2**
comp=Z,6.2nm,0.5s,baz=246,slow=6.4,SNR=11
comp=Z,6.2nm,0.5s
DBIC Dimbokro 67.04 74 IAmb IAmb 13 11 18.2
comp=Z,25nm,1.5s
ECSD EROS Data Cent 67.56 338 P 13 10 41.0 -0.6
ECSD IAmb IAmb 13 10 41.8
comp=Z,5.5nm,0.6s
MVCO Mesa Verde 67.58 326 IAmb IAmb 13 10 44.2
comp=Z,7.4nm,0.9s
WUAZ Wupatki 67.94 323 IAmb IAmb 13 10 47.0
comp=Z,9.5nm,0.9s
PV01 Paradox Valley 68.31 326 IAmb IAmb 13 10 49.0
comp=Z,6.5nm,0.8s
PV15 Paradox Valley 68.41 327 IAmb IAmb 13 10 49.9
comp=Z,13nm,0.9s
PV02 Paradox Valley 68.45 326 IAmb IAmb 13 10 50.6
comp=Z,6.5nm,0.8s
PV23 Carpenter Ridg 68.77 326 IAmb IAmb 13 11 11.2
comp=Z,12nm,1.4s
U15A North Rim 69.11 323 IAmb IAmb 13 10 54.7
comp=Z,8.2nm,0.8s
F33A 5 Mile Ranch, 69.29 339 IAmb IAmb 13 10 52.1
comp=Z,7.2nm,0.7s
O20A White River Oi 69.64 328 IAmb IAmb 13 10 57.0
comp=Z,12nm,0.9s
PMD Palm Desert 69.69 318 P P 13 10 55.4 +0.5
EYMN Ely 69.72 343 P P 13 10 54.1 -0.7
EYMN IAmb IAmb 13 10 54.8
comp=Z,6.5nm,0.7s
KNB Kanab 69.83 323 IAmb IAmb 13 10 59.1
comp=Z,20nm,0.9s
SRU San Rafael Swe 70.06 326 P P 13 10 58.0 +0.6
SRU IAmb IAmb 13 10 59.4
comp=Z,8.0nm,0.8s
Q16A Castle Valley 70.26 325 IAmb IAmb 13 11 01.3
comp=Z,5.2nm,0.7s
P18A Preston Nutter 70.29 326 IAmb IAmb 13 11 01.3
comp=Z,11nm,0.7s
P17A Butcher Ranch, 70.44 326 IAmb IAmb 13 11 01.8
comp=Z,12nm,0.9s
CCUT Cedar City 70.51 323 IAmb IAmb 13 11 03.4
comp=Z,6.0nm,0.8s
RDMU Red Mountain 70.64 328 IAmb IAmb 13 11 02.7
comp=Z,9.2nm,0.7s
K22A Casper 70.74 331 IAmb IAmb 13 11 03.2
comp=Z,5.7nm,0.6s
RSSD Black Hills 70.80 333 P 13 11 02.4 +0.6
RSSD IAmb IAmb 13 11 03.6
comp=Z,7.6nm,0.9s
GSC Goldstone, Bar 71.03 319 IAmb IAmb 13 11 06.0
comp=Z,11nm,1.4s
BSUT Blindstream Ca 71.22 327 IAmb IAmb 13 11 06.9
comp=Z,9.0nm,0.8s
MPU Maple Canyon 71.30 326 IAmb IAmb 13 11 07.2
comp=Z,6.8nm,0.8s
AGMN Agassiz Nation 71.31 341 IAmb IAmb 13 11 05.0
comp=Z,13nm,0.7s
QSPA South Pole Qui 71.40 180 P **P 13 11 06.4 +1.4**
comp=Z,3.4nm,0.6s,baz=130,slow=0.2,SNR=40
comp=Z,3.4nm,0.6s
QSPA South Pole Qui 71.40 180 P **P 13 11 06.4 +1.4**
PSUT Pine Spring 71.47 324 IAmb IAmb 13 11 08.6
comp=Z,8.6nm,0.7s
QSM Queen of Sheba 71.51 320 P **P 13 11 06.4 +0.5**
CCCA Chr Cany lake 71.53 319 IAmb IAmb 13 11 09.0
comp=Z,13nm,0.6s
GWY Greenwater Val 71.53 320 IAmb IAmb 13 11 08.7
comp=Z,6.4nm,0.7s
TPNV Topopah Spring 71.78 321 IAmb IAmb 13 11 10.8
comp=Z,16nm,1.2s
FURC Furnace Creek, 71.83 320 IAmb IAmb 13 11 10.9
comp=Z,10nm,0.8s
WCT Wildcat Mounta 71.91 321 IAmb IAmb 13 11 11.6
comp=Z,9.2nm,1.0s
PDAR Pinedale Array 72.27 329 P **P 13 11 13.3 +0.7**
comp=Z,1.4nm,0.5s,baz=123,slow=8.0,SNR=18
comp=Z,1.4nm,0.5s
PDAR Pinedale Array 72.27 329 P **P 13 11 10.6 0.0**
HWUT Hardware Ranch 72.42 327 P 13 11 11.8 +0.4
BGU Big Grassy Mou 72.70 326 IAmb IAmb 13 11 15.2
comp=Z,8.2nm,0.9s
VES Vestal, Richgr 72.80 318 P **P 13 11 14.0 +0.4**
VES IAmb IAmb 13 11 16.2
comp=Z,15nm,0.9s
ULM Lac du Bonnet 73.04 342 P **P 13 11 14.3 -0.3**
comp=Z,18nm,0.4s,baz=146,slow=7.1,SNR=28
comp=Z,18nm,0.4s
TPH Tonopah 73.11 321 IAmb IAmb 13 11 18.8
comp=Z,10nm,1.3s
SCHQ Schefferville 73.32 1 P **P 13 11 15.4 -0.7**
comp=Z,3.8nm,0.6s,baz=183,slow=4.1,SNR=8.7
comp=Z,3.8nm,0.6s
SCHQ Schefferville 73.32 1 P **P 13 11 15.7 -0.4**
SCHQ IAmb IAmb 13 11 42.6
comp=Z,15nm,1.5s
FLWY Flagg Ranch 73.81 329 IAmb IAmb 13 11 22.1
comp=Z,12nm,0.8s
RLMT Red Lodge 73.91 331 IAmb IAmb 13 11 21.9
comp=Z,6.0nm,0.7s
NVAR Mina Array Bea 73.98 321 P **P 13 11 22.3 +1.6**
comp=Z,2.4nm,0.8s,baz=159,slow=6.2,SNR=19
comp=Z,2.4nm,0.8s
LKWY Lake 74.02 330 IAmb IAmb 13 11 24.2
comp=Z,9.2nm,0.8s
YNE Yellowstone No 74.17 330 P **P 13 11 21.8 +0.2**
YNE IAmb IAmb 13 11 23.8
comp=Z,15nm,0.7s
YMR Madison River 74.37 330 IAmb IAmb 13 11 26.4
comp=Z,12nm,0.8s
YHB Horse Butte 74.54 330 IAmb IAmb 13 11 26.5
comp=Z,8.0nm,0.7s
PNTR Pine Nut 75.18 321 IAmb IAmb 13 11 30.5
comp=Z,7.8nm,0.8s
HLID Hailey 75.29 327 IAmb IAmb 13 11 30.9
comp=Z,6.2nm,0.8s
PAHR Pah Rah Range 75.45 321 IAmb IAmb 13 11 31.9
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 75.53 71 P **P 13 11 28.9 -0.9**
comp=Z,8.2nm,0.6s,baz=253,slow=5.2,SNR=38
comp=Z,8.2nm,0.6s
TORD Torodi Ar. Bea 75.53 71 IAmb IAmb 13 11 31.8
comp=Z,4.8nm,0.5s
DLMT Dillon 75.66 329 P 13 11 30.8 +0.7
MFID Camas Ranch 75.92 326 IAmb IAmb 13 11 35.0
comp=Z,7.8nm,0.9s
EGMT Eagleton 76.33 333 IAmb IAmb 13 11 35.3
comp=Z,6.0nm,0.8s
ORV Oroville 76.62 320 IAmb IAmb 13 11 38.2
comp=Z,8.8nm,1.1s
PLID Pearl Lake 77.17 327 IAmb IAmb 13 11 40.8
comp=Z,8.2nm,0.8s
BMO Blue Mountains 77.68 326 IAmb IAmb 13 11 43.7
comp=Z,8.6nm,0.8s
K05A Summer Lake 78.25 323 IAmb IAmb 13 11 47.7
comp=Z,13nm,1.0s
KHBM Hayfork Bally 78.34 320 IAmb IAmb 13 11 47.7
comp=Z,9.8nm,0.8s
L04D Klamath Falls 78.75 322 P **P 13 11 48.1 +0.8**
L04D IAmb IAmb 13 11 53.7
comp=Z,10nm,1.2s
PINE Pine Mountain 78.95 324 IAmb IAmb 13 11 51.5
comp=Z,8.7nm,0.9s
LDM Libby Dam 79.18 330 P **P 13 11 50.5 +1.1**
LDM IAmb IAmb 13 11 51.5
comp=Z,9.1nm,0.9s
MD01 Midelt array s 79.18 50 P **P 13 11 50.8 +0.9**
I05D Terrebonne, OR 79.52 324 IAmb IAmb 13 11 53.9
comp=Z,12nm,0.6s
WIFE Three Sisters- 79.61 324 IAmb IAmb 13 11 54.7
comp=Z,14nm,1.0s
VNDA Vanda 79.68 190 P **P 13 11 48.8 -2.9**
comp=Z,0.6nm,0.5s,baz=4.6,slow=15,SNR=8.5
TSUM Tsumeb 79.89 107 P 13 11 54.5 +0.5
TSUM IAmb IAmb 13 11 55.8
comp=Z,12nm,0.8s
FCC Fort Churchill 80.22 346 P **P 13 11 55.1 +0.5**
FCC IAmb IAmb 13 11 55.6
comp=Z,8.4nm,0.6s
LTY Liberty 81.03 327 P **P 13 12 00.2 +0.8**
LTY IAmb IAmb 13 12 01.5
comp=Z,18nm,1.4s
D05A Enumclaw 81.68 326 IAmb IAmb 13 12 05.1
comp=Z,12nm,0.9s
EDM Edmonton 81.73 334 IAmb IAmb 13 12 03.6
comp=Z,12nm,0.7s
GNW Green Mountain 82.36 326 P **P 13 12 07.1 +0.9**
ESDC Sonseca Array 83.22 44 P **P 13 12 12.0 +1.1**
comp=Z,1.0nm,0.8s,baz=250,slow=5.7,SNR=11
comp=Z,1.0nm,0.8s
PGC Sidney 83.36 327 P **P 13 12 12.0 +0.8**
PGC IAmb IAmb 13 12 29.4
comp=Z,14nm,1.2s
BOSA Boshof 83.86 118 P **P 13 12 14.9 +0.3**
comp=Z,2.0nm,0.4s,baz=238,slow=3.1,SNR=8.0
comp=Z,2.0nm,0.4s
BOSA Boshof 83.86 118 P **P 13 12 14.8 +0.3**
LBTB Lobatse 85.27 115 P **P 13 12 21.9 +0.2**
MAW Mawson 86.64 163 P **P 13 12 28.6 +1.3**
comp=Z,1.2nm,0.8s,baz=146,slow=19,SNR=1.9
comp=Z,1.2nm,0.8s
ILON Igloolik, Nuna 88.47 355 P **P 13 12 36.2 +0.4**
ILON IAmb IAmb 13 12 36.7
comp=Z,4.9nm,0.7s
YKA Yellowknife Ar 88.96 340 P **P 13 12 38.8 +0.5**
comp=Z,5.4nm,0.5s,baz=133,slow=4.8,SNR=45
comp=Z,5.4nm,0.5s
YKAW3 Yellowknife Wh 89.02 340 P **P 13 12 39.0 +0.5**
YKAW3 IAmb IAmb 13 12 39.9
comp=Z,7.8nm,0.9s
H11S2 WAKE ISLAND Hyl 28.46 279 T T 15 38 59.3
baz=100,slow=74,SNR=10
H11S1 WAKE ISLAND Hyl 28.47 279 T T 15 38 55.4
baz=100,slow=74,SNR=6.1
H11S3 WAKE ISLAND Hyl 28.48 279 T T 15 39 00.4
baz=100,slow=74,SNR=5.6
ASAR Alice Springs 132.76 208 PKP **PKPdf 13 18 59.2 +0.5**
comp=Z,0.3nm,0.5s,baz=138,slow=1.6,SNR=12
ASAR SKPbc **SKPbc 13 22 07.5 -0.3**
comp=Z,2.2nm,1.1s,baz=178,slow=5.2,SNR=5.3
BVAR Borovoye Array 133.00 33 SKPbc **SKPbc 13 22 05.9 -1.6**
comp=Z,0.4nm,0.5s,baz=346,slow=3.0,SNR=2.0
WRA Warramunga Arr 135.78 211 PKP **PKPdf 13 19 04.4 -0.1**
comp=Z,0.4nm,0.4s,baz=149,slow=1.8,SNR=10
WRA SKPbc **SKPbc 13 22 18.0 +0.4**
comp=Z,0.3nm,0.6s,baz=151,slow=2.2,SNR=2.1
ZALV Zalesovo Beam 139.09 24 PKP **PKPdf 13 19 10.6 +1.2**
comp=Z,0.3nm,0.3s,baz=282,slow=2.8,SNR=2.2
ZALV SKPbc **SKPbc 13 22 25.4 -0.6**
comp=Z,1.1nm,0.6s,baz=316,slow=6.2,SNR=5.1
MKAR Makanchi Array 142.86 34 PKP **PKPdf 13 19 16.3 -0.2**
comp=Z,0.3nm,0.5s,baz=318,slow=1.6,SNR=3.8
MKAR SKPbc **SKPbc 13 22 36.2 +0.1**
comp=Z,0.6nm,0.7s,baz=342,slow=1.9,SNR=6.3
HEH HeiHe 146.31 342 *eP* **PKPbc 13 19 24.1 +0.3**
HEH pmax pmax
comp=Z,10.0nm,0.7s
HILR Hailar Array B 148.69 350 PKPbc **PKPbc 13 19 30.9 +0.6**
comp=Z,3.6nm,0.5s,baz=67,slow=5.3,SNR=5.0
USRK Ussuriysk Ar. 149.68 331 PKPbc **PKPbc 13 19 33.7 +0.9**
comp=Z,3.6nm,0.7s,baz=310,slow=1.9,SNR=6.2
BNX BinXian 150.28 338 ⇑P **PKPbc 13 19 34.4 +0.1**
BNX pmax pmax
comp=Z,6.0nm,0.7s
SONM Songino Array 150.65 8 PKPbc **PKPbc 13 19 35.9 +0.6**
comp=Z,1.9nm,0.6s,baz=270,slow=1.2,SNR=13
SONM PKPab **PKPab 13 19 42.4 -0.3**
comp=Z,0.6nm,0.5s,baz=294,slow=1.1,SNR=3.5
MJAR Matsushiro Arr 151.04 313 PKPbc **PKPbc 13 19 36.5 +0.1**
comp=Z,2.3nm,0.8s,baz=75,slow=1.7,SNR=10
MJAR PKPab **PKPab 13 19 44.9 +0.2**
comp=Z,2.0nm,0.7s,baz=77,slow=3.2,SNR=4.2
MJAR Matsushiro Arr 151.04 313 PKPbc 13 19 36.1 -0.3
SIJI Sorong 152.89 226 PKPbc **PKiKP 13 19 42.2 +0.8**
comp=Z,1.6nm,0.4s,baz=173,slow=23,SNR=1.4
HHC Hu-ho-hao-te 158.00 1 *eP* **PKPdf 13 19 36.1 -3.9**
LZH Lanzhou 161.27 21 *eP* PKP **PKPdf 13 19 43.8 -0.2**
PZH PanZhiHua 167.72 49 PKP **PKPdf 13 19 48.6 -1.2**

KRSC 19 13:02:41.0±2.0, 49°.82N×157°.06E, h41km±27km, MI4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.05**	**325**	*eP*	Pn	13 02 59.0	-0.3
SKR				*eS*	Sn	13 03 11.5	-1.3
PAU	**Pauzhetka**	**1.66**	**355**	*eP*	Pn	13 03 09.5	+1.9
PAU				*eS*	Sn	13 03 29.5	+1.9
KDTR	**Khodutka, Kamc**	**2.09**	**18**	*eP*	Pn	13 03 16.3	+2.7
KDTR				*eS*	Sn	13 03 41.8	+3.4
MIPR	**Malaya Ipel'ka**	**2.47**	**356**	*eP*	Pn	13 03 20.9	+2.2
ASAK	**Asacha**	**2.62**	**11**	*eP*	Pn	13 03 24.3	+3.4
MTVR	**Mutnovka**	**2.76**	**14**	*eP*	Pn	13 03 26.1	+3.2
MTVR				*eS*	Sn	13 03 59.2	+4.2
RUS	**Russkaya**	**2.77**	**19**	*eP*	Pn	13 03 25.5	+2.6
RUS				*eS*	Sn	13 03 58.5	+3.4
GRL	**Gorelyy**	**2.81**	**13**	*eP*	Pn	13 03 26.8	+3.3
KRMR	**Karymshinskiy**	**3.09**	**12**	*eP*	Pn	13 03 31.4	+4.2
KRMR				*eS*	Sn	13 04 08.1	+5.2
APC	**Apacha**	**3.11**	**1**	*eP*	Pn	13 03 30.3	+2.8
PET	**Petropavlovsk**	**3.36**	**17**	*eP*	Pn	13 03 34.6	+3.7
PET				*eS*	Sn	13 04 14.4	+4.9
DALK	**Dalny**	**3.39**	**18**	*eP*	Pn	13 03 34.8	+3.5
DALK				*eS*	Sn	13 04 14.7	+4.6
AVH	**Avacha**	**3.61**	**16**	*eP*	Pn	13 03 39.9	+5.4
KOK	**Koryaka**	**3.61**	**15**	*eP*	Pn	13 03 39.6	+5.0
SMAR	**Somma**	**3.62**	**17**	*eP*	Pn	13 03 39.6	+4.9
KRER	**Koryakskii**	**3.65**	**16**	*eP*	Pn	13 03 40.0	+4.9
SDLR	**Sedlovina**	**3.65**	**18**	*eP*	Pn	13 03 38.8	+3.8
KRX	**Arik**	**3.68**	**15**	*eP*	Pn	13 03 40.1	+4.6
SPN	**Mys Shipunski**	**3.77**	**28**	*eP*	Pn	13 03 41.1	+4.5
SPN				*eS*	Sn	13 04 25.2	+5.5
GNL	**Ganaly**	**3.92**	**8**	*eP*	Pn	13 03 42.8	+4.0
KII	**Karymskiy**	**4.47**	**18**	*eP*	Pn	13 03 51.1	+4.8
MKZ	**Mys Kozlova**	**5.54**	**29**	*eP*	Pn	13 04 04.0	+3.1
TUMR	**Tumrok**	**5.79**	**18**	*eP*	Pn	13 04 10.3	+6.0
KBTR	**Krutoberegovo**	**7.28**	**26**	*eP*	Pn	13 04 28.0	+3.2

IDC ***19*** *13:04:21.6±2.6, 6°.01N×126°.67E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=249.2km s-min=23.9km az=67.0*
MAN ***19*** *13:04:40.0, 5°.86N×127°.55E, h143km, MS3.0*
ISC 19 13:04:41.2±1.4, 5°.70N±0°.10×127°.3E±0°.2, h150km, n8, σ0s85/8, mb3.4/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	**2.22**	**339**	*i* P	**Pn**	**13 05 19.9**	**+0.9**
CDOP				*eS*	**Sn**	**13 05 46.8**	**-1.2**
GSPH	**General Santos**	**2.32**	**280**	*i* P	Pn	13 05 41.4	+21
GSPH				*i* S	**Sn**	**13 05 50.1**	**-0.2**
BIPH	**Bislig**	**2.62**	**340**	*e*P	**Pn**	**13 05 24.2**	**+0.4**
BIPH				*e*S	**Sn**	**13 05 57.0**	**+0.2**
TSSP	**Tandag City**	**3.48**	**343**	*e*P	**Pn**	**13 05 34.6**	**-0.1**
TSSP				*e*S	Sn	13 06 02.9	-13
WRA	**Warramunga Arr**	**26.42**	**165**	P	**P**	**13 10 04.9**	**+0.8**
	0.3nm,1.0s,baz=344,slow=9.0,SNR=1.1						
	0.3nm,1.0s						
ASAR	**Alice Springs**	**29.91**	**168**	P	**P**	**13 10 34.4**	**-0.7**
	0.4nm,0.9s,baz=341,slow=8.5,SNR=2.8						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**56.25**	**324**	P	P	13 13 59.9	-6.1
	0.3nm,0.4s,baz=116,slow=8.3,SNR=6.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**60.38**	**327**	P	P	13 14 28.2	-6.2
	0.5nm,0.6s,baz=123,slow=7.2,SNR=6.7						
	0.5nm,0.6s						

DJA 19 13:16:54.2±0.3, 3°S±3°×14°0E±°, h45km±8km, M4.2/8, mB5.1/1, mb4.3/3, MLv4.1/8, Mw(mB)4.4/1, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.62**	**79**	P	Pn	13 17 07.8	+1.1
GENI				S	Sn	13 17 18.8	+3.1
JAY	**Jayapura**	**1.16**	**80**	P	Pn	13 17 13.4	-0.7
JAY				S	Sn	13 17 29.1	+0.3
WAMI	**Wamena**	**1.44**	**216**	P	Pn	13 17 18.5	+0.6
WAMI				S	Sn	13 17 37.5	+1.9
SRPI	**Serui, Papua**	**3.42**	**284**	P	Pn	13 17 44.7	-0.4
SRPI				S	Sn	13 18 24.1	-0.3
FAKI	**Fak Fak**	**7.30**	**268**	P	Pn	13 18 38.0	-0.4
	0.1nm21nm,1.1s						

IDC ***19*** *13:34:34.5±0.8, 46°.22S×95°.55E, h0km, mb4.0/10, mbtmp4.0/10, MS4.0/25, Error ellipse: s-maj=25.5km s-min=17.4km az=124.0*
NEIC ***19*** *13:34:36.0±1.1, 46°.2S±0°.1×95°.5E±0°.2, h10km±1km, mb4.3/12, Error ellipse: s-maj=24.9km s-min=20.0km az=303.0*
GCMT ***19*** *13:34:40.0±0.4, 46°.52S±0°.02×95°.90E±0°.03, h15km±1km, MW4.8/84, Moment Tensor Solution. s8,c9; s84,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.16±.09; $M_{\theta\theta}$-1.56±.08; $M_{\phi\phi}$1.72±.10; $M_{r\theta}$-1.22±.35; $M_{r\phi}$-0.71±.07; $M_{\theta\phi}$-0.08±.26; Best double couple: Mw2.12700×10^{16} NP1:ϕ_S29.00000°, δ66.00000°, λ-17.00000°. NP2: ϕ_S126.00000°, δ74.00000°, λ-155.00000°. Principal axes: T 1.8820, Plg6.0000°, Azm256.0000°; N 0.4910, Plg61.0000°, Azm156.0000°; P -2.3710, Plg29.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 13:34:36.6±0.7, 46°.2S±0°.1×95°.6E±0°.1, h14km, n51, σ1s24/29, mb4.2/15, MS4.1/25, 2C, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**18.04**	**58**	T	T	13 57 08.0	
	baz=224,slow=74,SNR=163						
H01W3	**Cape Leeuwin H**	**18.05**	**58**	T	T	13 57 08.9	
	baz=224,slow=74,SNR=251						
H01W1	**Cape Leeuwin H**	**18.05**	**58**	T	T	13 57 09.2	
	baz=224,slow=74,SNR=206						
NWAO	**Narrogin (SRO)**	**21.25**	**59**	LR	LR	13 45 37.9	
	comp=Z,592nm,19.7s,baz=250,slow=31						
CASY	**Casey**	**21.63**	**164**	P	**P**	**13 39 25.7**	**-0.3**
CASY				IAmb	IAmb	13 39 31.3	
	comp=Z,13nm,1.0s						
MAW	**Mawson**	**27.29**	**207**	P	**P**	**13 40 20.3**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=64,slow=15,SNR=4.4						
MAW				LR	LR	13 47 48.1	
	comp=Z,101nm,19.3s,baz=60,slow=29						
	comp=Z,3.7nm,0.9s						
MAW	**Mawson**	**27.29**	**207**	P	**P**	**13 40 17.1**	**-3.1**
FITZ	**Fitzroy Crossi**	**37.47**	**52**	LR	LR	13 56 25.7	
	comp=Z,196nm,18.0s,baz=220,slow=35						
STKA	**Stephens Creek**	**37.97**	**84**	P	**P**	**13 41 54.3**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=154,slow=4.9,SNR=3.5						
STKA				LR	LR	13 54 18.4	
	comp=Z,323nm,21.1s,baz=210,slow=31						
	comp=Z,3.9nm,0.9s						
ASAR	**Alice Springs**	**38.13**	**67**	P	**P**	**13 41 55.0**	**-0.4**
	comp=Z,1.4nm,1.0s,baz=220,slow=5.8,SNR=6.7						
ASAR				LR	LR	13 55 12.7	
	comp=Z,292nm,21.0s,baz=230,slow=32						
	comp=Z,1.4nm,1.0s						
ASAR	**Alice Springs**	**38.13**	**67**	P	**P**	**13 41 55.3**	**0.0**
AS31	**Alice Springs**	**38.13**	**67**	P	**P**	**13 41 55.6**	**+0.2**
INKA	**Innaminka**	**39.91**	**78**	P	**P**	**13 42 09.1**	**-1.0**
INKA				IAmb	IAmb	13 42 48.7	
	comp=Z,7.7nm,1.4s						
VNDA	**Vanda**	**40.24**	**162**	P	**P**	**13 42 11.7**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=280,slow=9.6,SNR=8.6						
VNDA				LR	LR	13 57 32.2	
	comp=Z,324nm,18.3s,baz=281,slow=34						
	comp=Z,1.8nm,1.0s						
VNDA	**Vanda**	**40.24**	**162**	P	**P**	**13 42 11.3**	**-1.0**
LEM	**Lembang**	**40.62**	**19**	LR	LR	13 55 43.8	
	comp=Z,110nm,21.0s,baz=182,slow=31						
WRA	**Warramunga Arr**	**41.13**	**64**	P	**P**	**13 42 20.4**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=221,slow=8.2,SNR=12						
	comp=Z,2.4nm,0.9s						
WR8	**Warramunga Arr**	**41.22**	**64**	P	**P**	**13 42 21.1**	**+0.1**
WR8				IAmb	IAmb	13 42 31.5	
	comp=Z,9.2nm,1.2s						
WB0	**Warramunga Arr**	**41.29**	**63**	P	**P**	**13 42 22.4**	**+0.7**
SBA	**Scott Base**	**41.33**	**162**	P	**P**	**13 42 21.7**	**+0.4**
SBA				IAmb	IAmb	13 42 24.2	
	comp=Z,3.2nm,1.1s						
H08S2	**Diego Garcia H**	**43.27**	**325**	T	T	14 29 24.5	
	baz=156,slow=76,SNR=13						
H08S1	**Diego Carcia H**	**43.28**	**325**	T	T	14 29 16.5	
	baz=156,slow=76,SNR=17						
H08S3	**Diego Garcia H**	**43.29**	**325**	T	T	14 29 22.2	
	baz=156,slow=76,SNR=28						
QSPA	**South Pole Qui**	**43.91**	**180**	P	**P**	**13 42 42.8**	**+0.2**
	comp=Z,3.1nm,1.0s,baz=276,slow=1.8,SNR=7.2						
QSPA				LR	LR	13 59 43.8	
	comp=Z,314nm,18.6s,baz=314,slow=34						
	comp=Z,3.1nm,1.0s						
QSPA	**South Pole Qui**	**43.91**	**180**	P	**P**	**13 42 42.5**	**-0.1**
QSPA				IAmb	IAmb	13 42 46.5	
	comp=Z,8.6nm,1.3s						
TROLL	**Troll, Antarti**	**47.72**	**205**	⇑P	**P**	**13 43 12.8**	**+0.3**
	comp=Z,229nm,0.8s						
EIDS	**Eidsvold**	**48.52**	**84**	P	**P**	**13 43 18.7**	**-0.5**
CTA	**Charters Tower**	**48.76**	**75**	LR	LR	14 02 39.9	
	comp=Z,181nm,18.3s,baz=243,slow=35						
SNAA	**Sanae**	**49.40**	**204**	P	**P**	**13 43 29.4**	**+4.0**
	comp=Z,74nm,0.8s						
SNAA	**Sanae**	**49.40**	**204**	P	**P**	**13 43 25.2**	**-0.2**
	comp=Z,3.9nm,1.0s,baz=162,slow=7.3,SNR=8.0						
SNAA				LR	LR	14 01 06.1	
	comp=Z,169nm,20.8s,baz=112,slow=32						
	comp=Z,3.9nm,1.0s						
SNAA	**Sanae**	**49.40**	**204**	P	**P**	**13 43 27.6**	**+2.2**
SNAA				IAmb	IAmb	13 43 31.2	
	comp=Z,3.5nm,0.9s						
VNA2	**Neumayer--Watz**	**51.05**	**204**	⇑P	**P**	**13 43 39.1**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=112,slow=7.9						
RPZ	**Rata Peaks**	**51.54**	**116**	LR	LR	14 01 08.8	
	comp=Z,44nm,18.9s,baz=266,slow=31						
BSWZ	**Blackbirch Sta**	**54.37**	**116**	P	**P**	**13 44 02.9**	**+0.2**
BOSA	**Boshof**	**56.74**	**262**	LR	LR	14 03 20.3	
	comp=Z,203nm,20.7s,baz=183,slow=30						
PMG	**Port Moresby**	**57.15**	**67**	P	**P**	**13 44 23.0**	**+0.1**
SUR	**Sutherland**	**57.45**	**256**	LR	LR	14 04 36.9	
	comp=Z,170nm,18.0s,baz=141,slow=31						
URZ	**Urewera**	**58.38**	**114**	LR	LR	14 05 39.8	
	comp=Z,121nm,18.1s,baz=244,slow=32						
JAY	**Jayapura**	**58.63**	**56**	LR	LR	14 09 13.2	
	comp=Z,292nm,19.8s,baz=228,slow=36						
LBTB	**Lobatse**	**58.78**	**265**	LR	LR	14 05 10.9	
	comp=Z,144nm,19.0s,baz=136,slow=31						
MATP	**Matopo**	**59.78**	**271**	P	**P**	**13 44 40.8**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=119,slow=7.3,SNR=4.3						
MATP				LR	LR	14 06 08.7	
	comp=Z,268nm,19.0s,baz=112,slow=32						
	comp=Z,3.5nm,1.0s						
LSZ	**Lusaka**	**63.51**	**275**	LR	LR	14

comp=Z,129nm,18.0s,baz=142,slow=33
CMAR Chiang Mai Arr 64.46 4 P P 13 45 11.9 -0.7
comp=Z,0.9nm,0.8s,baz=198,slow=5.4,SNR=8.8
CMAR LR LR 14 08 50.8
comp=Z,125nm,20.9s,baz=180,slow=32
comp=Z,0.9nm,0.8s
TSUM Tsumeb 68.17 265 LR LR 14 10 07.9
comp=Z,122nm,20.8s,baz=152,slow=31
PMSA Palmer Station 68.19 189 LR LR 14 13 17.2
comp=Z,63nm,20.2s,baz=158,slow=34
MBAR Mbarara 72.38 288 LR LR 14 14 16.0
comp=Z,118nm,18.5s,baz=108,slow=33
AFI Afiamalu 81.91 102 LR LR 14 15 29.7
comp=Z,44nm,20.9s,baz=210,slow=30
MKAR Makanchi Array 93.38 351 P **P 13 47 51.0 +0.2**
comp=Z,0.2nm,0.7s,baz=180,slow=3.7,SNR=2.4
MKAR LR LR 14 28 05.9
comp=Z,63nm,19.2s,baz=150,slow=34
comp=Z,0.2nm,0.7s
MKAR Makanchi Array 93.38 351 P **P 13 47 50.6 -0.1**
TLY Talaya 97.78 5 LR LR 14 33 03.9
comp=Z,25nm,18.6s,baz=174,slow=36
ESDC Sonseca Array 123.13 295 PKP **PKiKP 13 53 34.5 +1.9**
comp=Z,0.9nm,1.1s,baz=180,slow=1.3,SNR=4.1

*IDC **19** 13:40:56.5±2.0, 7°.20S×129°.64E, h137km±17km, mb3.5/6, mbtmp4.0/11, Error ellipse: s-maj=34.4km s-min=18.0km az=88.0*
*NEIC **19** 13:40:57.1±1.7, 7°.07S±0°.06×129°.47E±0°.09, h135km±6km, mb4.0/13, Error ellipse: s-maj=12.5km s-min=8.8km az=73.0*
*DJA **19** 13:41:00.0±0.2, 7°.5S±4°×12°9E±°, h51km±55km, M4.2/12, mB4.6/3, mb4.0/6, MLv4.4/12, Mw(mB)3.8/3*
ISC 19 13:40:56.9±0.6, 7°.04S±0°.06×129°.49E±0°.06, h139km, n42, σ1s86/46, mb3.8/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.03**	**118**	Pn	**Pn**	**13 41 32.8**	**+1.2**
SAUI	**Saumlaki**	**2.03**	**118**	P	**Pn**	**13 41 32.9**	**+1.2**
SAUI				S	**Sn**	**13 41 59.8**	**+1.5**
BNDI	**Bandanaira**	**2.54**	**9**	P	**Pn**	**13 41 37.7**	**-0.2**
FAKI	**Fak Fak**	**4.93**	**34**	Pn	**Pn**	**13 42 09.1**	**-0.2**
FAKI	**Fak Fak**	**4.93**	**34**	P	**Pn**	**13 42 08.9**	**-0.3**
SOEI	**Soe**	**5.83**	**242**	Pn	**Pn**	**13 42 20.7**	**-0.6**
SOEI	**Soe**	**5.83**	**242**	P	**Pn**	**13 42 24.7**	**+3.4**
	24nm,0.9s						
SOEI				S	**Sn**	**13 43 29.4**	**+2.2**
	24nm,0.9s						
MTN	**Manton Dam**	**5.99**	**164**		**Pn**	**13 42 22.6**	**-0.8**
SIJI	**Sorong**	**6.38**	**16**	P	**Pn**	**13 42 29.4**	**+0.8**
	5.2nm,0.2s,baz=128,slow=3.8,SNR=34						
SIJI				S	**Sn**	**13 43 36.1**	**-4.3**
	11nm,0.3s,baz=328,slow=21,SNR=12						
SIJI	**Sorong**	**6.38**	**16**	P	**Pn**	**13 42 29.1**	**+0.4**
BATI	**Baumata**	**6.56**	**241**	P	**Pn**	**13 42 30.6**	**-0.5**
	16nm,0.5s,baz=332,slow=12,SNR=2.0						
BATI				S	**Sn**	**13 43 41.9**	**-2.8**
	40nm,0.4s,baz=173,slow=22,SNR=8.8						
KNRA	**Kununurra**	**8.61**	**185**		**Pn**	**13 42 57.3**	**-1.2**
BAKI	**Biak**	**8.79**	**49**	P	**Pn**	**13 43 04.3**	**+3.3**
FITZ	**Fitzroy Crossi**	**11.61**	**198**	P	**Pn**	**13 43 36.4**	**-2.1**
	1.2nm,0.3s,baz=25,slow=10,SNR=23						
FITZ				S	Sn	13 45 34.9	-12
	8.4nm,0.3s,baz=168,slow=20,SNR=11						
WB0	**Warramunga Arr**	**13.52**	**160**		**Pn**	**13 43 59.1**	**-4.1**
WRA	**Warramunga Arr**	**13.66**	**160**	P	**Pn**	**13 44 01.5**	**-3.5**
	2.0nm,0.3s,baz=338,slow=13,SNR=41						
WRA				S	Sn	13 46 22.0	-14
	3.5nm,0.4s,baz=335,slow=22,SNR=8.9						
WRA	**Warramunga Arr**	**13.66**	**160**		**Pn**	**13 44 01.0**	**-4.0**
WRA					Sn	13 46 22.3	-14
WR8	**Warramunga Arr**	**13.73**	**160**		**Pn**	**13 44 02.3**	**-3.6**
AS31	**Alice Springs**	**17.07**	**166**	P	**P**	**13 44 46.4**	**-0.4**
ASAR	**Alice Springs**	**17.07**	**166**	P	**P**	**13 44 46.3**	**-0.5**
	1.1nm,0.4s,baz=340,slow=9.0,SNR=58						
ASAR				S	S	13 47 46.5	-11
	0.8nm,0.4s,baz=352,slow=26,SNR=4.4						
ASAR				ScP	**ScP**	**13 52 44.3**	**-2.2**
	0.6nm,0.6s,baz=2.8,slow=1.8,SNR=4.9						
ASAR	**Alice Springs**	**17.07**	**166**	P	**P**	**13 44 46.9**	**+0.1**
UGM	**Wanagama**	**18.82**	**266**	P	**P**	**13 45 06.5**	**+0.4**
INKA	**Innaminka**	**23.19**	**154**	P	**P**	**13 45 51.1**	**-0.3**
INKA				IAmb	IAmb	13 45 53.2	
	comp=Z,2.8nm,0.8s						
FORT	**Forrest**	**23.66**	**183**	P	**P**	**13 45 56.5**	**+0.8**
FORT				IAmb	IAmb	13 46 23.2	
	comp=Z,7.8nm,1.1s						
BBOO	**Buckleboo**	**26.36**	**167**	P	**P**	**13 46 20.1**	**-0.1**
MNAI	**Manna**	**26.53**	**274**	P	**P**	**13 46 22.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**39.37**	**310**	P	**P**	**13 48 14.9**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=125,slow=8.9,SNR=4.7						
	comp=Z,0.6nm,0.5s						
MAJO	**Matsushiro**	**44.12**	**10**	P	**P**	**13 48 50.6**	**-0.8**
MAJO				IAmb	IAmb	13 48 52.3	
	comp=Z,3.8nm,1.1s						
MJB9	**Matsu-Tunnel**	**44.12**	**10**	P	**P**	**13 48 50.5**	**-0.9**
MJB9				IAmb	IAmb	13 48 52.3	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**58.32**	**342**	P	**P**	**13 50 38.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=123,slow=7.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**58.32**	**342**	IAmb	IAmb	13 50 39.4	
	comp=Z,1.1nm,1.2s						
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**13 51 42.9**	**+2.0**
	comp=Z,1.7nm,0.4s,baz=114,slow=8.5,SNR=34						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**13 51 42.4**	**+1.5**
ZAA0	**Zalesovo Array**	**71.39**	**334**	P	**P**	**13 52 02.0**	**+0.3**
ZAA0				IAmb	IAmb	13 52 02.8	
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**71.39**	**334**	P	**P**	**13 52 02.1**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=134,slow=4.3,SNR=4.1						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**71.39**	**334**	P	**P**	**13 52 01.9**	**+0.2**
KURBB	**Kurchatov Arra**	**72.28**	**329**	P	**P**	**13 52 08.1**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=130,slow=4.9,SNR=11						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**72.29**	**329**	P	**P**	**13 52 07.6**	**+0.6**
BVAR	**Borovoye Array**	**77.83**	**328**	P	**P**	**13 52 40.1**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=259,slow=38,SNR=3.1						
	comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**82.22**	**322**	P	**P**	**13 53 03.5**	**+0.9**
AB31				IAmb	IAmb	13 53 29.6	
	comp=Z,2.1nm,1.4s						
ABKAR	**Akbulak array**	**82.22**	**322**	P	**P**	**13 53 03.5**	**+0.9**
K20K	**Telida**	**90.22**	**26**	P	**P**	**13 53 42.1**	**+0.7**
K20K				IAmb	IAmb	13 54 05.6	
	comp=Z,2.8nm,1.2s						

*IDC **19** 13:47:15.7±3.3, 10°.53N×124°.90E, h0km, mb3.6/4, mbtmp3.6/4, MS3.3/5, Error ellipse: s-maj=322.1km s-min=22.8km az=65.0*
*MAN **19** 13:47:15.0, 11°.49N×126°.74E, h25km, MS3.5*
ISC 19 13:47:13.9±1.4, 11°.40N±0°.09×126°.70E±0°.10, h10km, n14, σ2s52/12, mb3.6/4, MS3.6/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.70**	**262**	*e*P	**Pn**	**13 47 43.3**	**-0.4**
PLP				*e*S	**Sn**	**13 48 02.7**	**-2.9**
LLP	**Lapu-Lapu**	**2.89**	**248**	*e*P	**Pn**	**13 47 57.9**	**-2.1**
LLP				*i* S	**Sn**	**13 48 39.4**	**+4.5**
BIPH	**Bislig**	**3.21**	**186**	*e*P	Pn	13 48 10.2	+5.7
BIPH				*e*S	**Sn**	**13 48 39.1**	**-3.8**
CGP	**Cagayan de Oro**	**3.53**	**214**	*e*P	**Pn**	**13 48 11.2**	**+2.3**
CGP				*e*S	**Sn**	**13 48 50.4**	**-0.3**
CDOP	**Cateel, Davao**	**3.60**	**184**	*e*P	**Pn**	**13 48 10.8**	**+1.0**
CDOP				*i* S	Sn	13 48 45.2	-7.2
KAPI	**Kappang**	**17.71**	**203**	LR	LR	13 57 26.2	
	comp=Z,48nm,19.2s,baz=164,slow=38						
MJAR	**Matsushiro Arr**	**27.10**	**21**	LR	LR	14 05 17.3	
	comp=Z,26nm,18.2s,baz=175,slow=38						
WRA	**Warramunga Arr**	**32.04**	**166**	P	**P**	**13 53 40.1**	**-0.8**
	0.5nm,0.7s,baz=342,slow=8.9,SNR=3.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**35.56**	**169**	P	**P**	**13 54 11.6**	**0.0**
	0.3nm,0.4s,baz=350,slow=6.9,SNR=14						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**51.40**	**322**	P	**P**	**13 56 19.0**	**-0.1**
	0.6nm,0.9s,baz=124,slow=6.9,SNR=3.9						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**55.39**	**325**	P	**P**	**13 56 49.8**	**+1.5**
	0.7nm,0.8s,baz=127,slow=6.8,SNR=5.1						
	0.7nm,0.8s						
AKTO	**Aktyubinsk**	**67.73**	**320**	LR	LR	14 31 31.9	
	comp=Z,54nm,19.0s,baz=112,slow=40						
OBN	**Obninsk**	**80.83**	**324**	LR	LR	14 37 38.5	
	comp=Z,58nm,21.3s,baz=160,slow=38						
NOA	**NORSAR Array B**	**91.94**	**334**	LR	LR	14 47 10.1	
	comp=Z,12nm,19.6s,baz=95,slow=39						

*IDC **19** 13:51:40.3±0.8, 2°.07N×126°.51E, h0km, mb3.7/9, mbtmp3.7/9, Error ellipse: s-maj=57.1km s-min=15.9km az=73.0*
*DJA **19** 13:51:43.6±0.2, 2°N±2°×12°7E±°, h10km, M3.9/12, mb4.2/3, MLv3.7/12*
ISC 19 13:51:46.8±0.7, 2°.14N±0°.06×126°.68E±0°.07, h47km, n18, σ1s04/20, mb3.7/8, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.52**	**153**	P	**Pn**	**13 52 09.9**	**-1.7**
TNTI				S	**Sn**	**13 52 31.7**	**+1.5**
SGSI	**Sangihe**	**1.92**	**323**	P	**Pn**	**13 52 15.9**	**-1.1**
SGSI				S	**Sn**	**13 52 41.1**	**+1.1**
MNI	**Manado**	**1.96**	**249**	P	**Pn**	**13 52 16.1**	**-1.5**
MNI				S	**Sn**	**13 52 40.6**	**-0.5**
GTOI	**Gorontalo**	**3.96**	**248**	P	**Pn**	**13 52 44.0**	**-1.0**
LUWI	**Luwuk**	**5.03**	**231**	P	**Pn**	**13 53 01.2**	**+1.5**
KDI	**Kendari**	**7.29**	**214**	P	**Pn**	**13 53 31.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.14**	**183**	P	**P**	**13 56 16.2**	**-0.9**
	2.2nm,0.8s,baz=21,slow=10,SNR=2.1						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**23.20**	**161**	P	**P**	**13 56 48.5**	**-1.3**
	0.8nm,0.4s,baz=339,slow=11,SNR=13						
WRA				PcP	**PcP**	**14 00 37.6**	**+0.7**
	0.5nm,0.9s,baz=339,slow=2.3,SNR=2.1						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**26.60**	**165**	P	**P**	**13 57 20.2**	**-0.6**
	0.4nm,0.5s,baz=346,slow=8.1,SNR=9.4						
ASAR				PcP	**PcP**	**14 00 44.5**	**0.0**
	0.3nm,0.4s,baz=356,slow=2.1,SNR=8.3						
	0.4nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**42.43**	**65**	T	T	14 45 05.3	
	baz=248						
H11S2	**WAKE ISLAND Hy**	**42.45**	**65**	T	T	14 45 07.5	
	baz=248						
H11S1	**WAKE ISLAND Hy**	**42.45**	**65**	T	T	14 45 07.6	
	baz=248						
SONM	**Songino Array**	**48.78**	**342**	P	**P**	**14 00 27.3**	**+0.1**
	0.3nm,0.4s,baz=158,slow=4.7,SNR=1.8						
	0.3nm,0.4s						
PETK	**Petropavlovsk-**	**56.91**	**22**	P	**P**	**14 01 28.1**	**+1.1**
	1.0nm,0.8s,baz=201,slow=4.7,SNR=4.6						
	1.0nm,0.9s						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**14 01 40.4**	**-0.2**
	0.8nm,0.4s,baz=119,slow=8.4,SNR=19						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**63.05**	**328**	P	**P**	**14 02 08.9**	**-0.2**
	1.1nm,0.6s,baz=129,slow=6.1,SNR=26						
	1.1nm,0.6s						
BVAR	**Borovoye Array**	**68.62**	**327**	P	**P**	**14 02 44.7**	**-0.2**
	0.5nm,0.5s,baz=141,slow=9.3,SNR=3.7						
	0.5nm,0.5s						
VNDA	**Vanda**	**81.87**	**173**	P	**P**	**14 04 00.9**	**+0.3**
	0.3nm,0.5s,baz=320,slow=5.4,SNR=1.4						
	0.3nm,0.5s						

IDC 19 13:56:13.9±1.8, 1°.80N×125°.87E, h0km, mb3.3/4, mbtmp3.3/4, MS3.5/1, Error ellipse: s-maj=177.8km s-min=23.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**8.67**	**348**	*e*P	Pn	13 58 21.8	+1.1
WRA	**Warramunga Arr**	**23.16**	**159**	P	P	14 01 21.1	-1.1
	0.7nm,0.8s,baz=338,slow=10,SNR=4.2						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**26.50**	**163**	P	P	14 01 54.0	+0.7
	0.4nm,0.8s,baz=344,slow=7.3,SNR=4.5						
	0.4nm,0.8s						
SONM	**Songino Array**	**48.85**	**343**	LR	LR	14 27 52.4	
	comp=Z,51nm,18.9s,baz=180,slow=39						
MKAR	**Makanchi Array**	**58.65**	**326**	P	P	14 06 13.1	0.0
	0.2nm,0.5s,baz=128,slow=7.9,SNR=4.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**62.90**	**328**	P	P	14 06 41.9	0.0
	0.2nm,0.5s,baz=123,slow=6.7,SNR=2.4						
	0.2nm,0.5s						

*IDC **19** 14:01:20.7±5.2, 3°.37S×101°.52E, h0km, mb3.8/5, mbtmp3.8/5, MS3.1/1, Error ellipse: s-maj=270.9km s-min=21.1km az=52.0*
*DJA **19** 14:01:27.6±0.5, 3°.5S±2°×10°1E±°, h24km±4km, M3.9/18, mb3.8/1, MLv3.9/18*
*NEIC **19** 14:01:28.5±0.9, 3°.2S±0°.3×101°.7E±0°.2, h49km±12km, mb4.1/7, Error ellipse: s-maj=47.3km s-min=8.8km az=219.0*
ISC 19 14:01:27.3±0.8, 3°.40S±0°.09×101°.47E±0°.08, h50km, n36, σ0s80/26, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.15**	**102**	P	**Pn**	**14 01 48.3**	**+1.2**
PPSI	**Pulau Pagai**	**1.59**	**294**	P	**Pn**	**14 01 53.4**	**+0.4**
MNAI	**Manna**	**1.76**	**123**		**Pn**	**14 01 55.5**	**+0.1**
MNAI				Sn	**Sn**	**14 02 15.9**	**-0.9**
MNAI	**Manna**	**1.76**	**123**	P	**Pn**	**14 01 55.7**	**+0.3**
EGSI	**Enggano, Bengk**	**2.10**	**157**	P	**Pn**	**14 02 00.8**	**+0.8**
EGSI				S	**Sn**	**14 02 26.6**	**+1.7**
GSI	**Gunungsitoli**	**6.08**	**320**	Pn	**Pn**	**14 02 55.8**	**+1.0**
GSI	**Gunungsitoli**	**6.08**	**320**	P	**Pn**	**14 02 55.7**	**+1.0**
TPI	**Tanjungpandan**	**6.21**	**84**	P	**Pn**	**14 02 58.1**	**+1.7**
LEM	**Lembang**	**7.01**	**119**	LR	LR	14 06 01.8	
	comp=Z,157nm,21.6s,baz=181,slow=40						
BBJI	**Bungbulang**	**7.36**	**123**	Pn	**Pn**	**14 03 12.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**27.82**	**123**	P	**P**	**14 07 11.9**	**-0.2**
	2.1nm,1.0s,baz=304,slow=7.3,SNR=1.9						
	2.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**27.82**	**123**	IAmb	IAmb	14 07 44.2	
	comp=Z,1.6nm,1.4s						
H08S2	**Diego Garcia H**	**29.14**	**260**	T	T	14 37 13.3	
	baz=84,slow=75,SNR=18						
H08S3	**Diego Garcia H**	**29.15**	**260**	T	T	14 37 08.2	
	baz=84,slow=75,SNR=43						
H08S1	**Diego Garcia H**	**29.16**	**260**	T	T	14 37 16.1	
	baz=84,slow=75,SNR=20						
KNRA	**Kununurra**	**29.50**	**116**	P	**P**	**14 07 25.9**	**-1.2**
KNRA				IAmb	IAmb	14 07 35.0	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**36.01**	**119**	P	**P**	**14 08 23.8**	**-0.1**
WB0				IAmb	IAmb	14 09 06.0	
	comp=Z,5.8nm,1.2s						
WRA	**Warramunga Arr**	**36.02**	**120**	P	**P**	**14 08 23.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=299,slow=7.7,SNR=14						
	comp=Z,0.3nm,0.4s						
WRAB	**Tennant Creek**	**36.03**	**120**	P	**P**	**14 08 24.2**	**+0.1**
WR8	**Warramunga Arr**	**36.17**	**120**	P	**P**	**14 08 24.9**	**-0.4**
WR8				IAmb	IAmb	14 08 48.1	
	comp=Z,7.5nm,1.3s						
AS31	**Alice Springs**	**37.25**	**126**	P	**P**	**14 08 33.9**	**-0.6**
AS31				IAmb	IAmb	14 08 55.0	
	comp=Z,1.5nm,1.3s						
ASAR	**Alice Springs**	**37.25**	**126**	P	**P**	**14 08 34.4**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=297,slow=8.5,SNR=45						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**37.25**	**126**	P	**P**	**14 08 33.7**	**-0.8**
MKAR	**Makanchi Array**	**52.77**	**344**	P	**P**	**14 10 37.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=157,slow=9.3,SNR=9.4						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**52.77**	**344**	P	**P**	**14 10 37.2**	**-0.1**
ZALV	**Zalesovo Beam**	**58.82**	**349**	P	**P**	**14 11 20.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=162,slow=7.9,SNR=3.0						
	comp=Z,0.4nm,0.3s						
H04N2	**CROZET ISLANDS**	**60.56**	**217**	T	T	15 16 41.9	
	baz=60,slow=74,SNR=12						
H04N1	**CROZET ISLANDS**	**60.58**	**217**	T	T	15 16 42.4	
	baz=60,slow=74,SNR=9.3						
H04N3	**CROZET ISLANDS**	**60.58**	**217**	T	T	15 16 41.0	
	baz=60,slow=74,SNR=8.5						
H04S1	**CROZET ISLANDS**	**60.83**	**217**	T	T	15 16 58.6	
	baz=60						
H04S3	**CROZET ISLANDS**	**60.84**	**217**	T	T	15 16 49.0	
	baz=60						
H04S2	**CROZET ISLANDS**	**60.85**	**217**	T	T	15 16 57.4	
	baz=60						
ABKAR	**Akbulak array**	**63.57**	**331**	P	**P**	**14 11 52.1**	**-0.6**
H09N1	**TRISTAN DA CUN**	**106.66**	**230**	T	T	16 13 40.4	
	SNR=4.9						
TXAR	**Lajitas Array**	**144.87**	**40**	PKP	**PKPdf**	**14 20 59.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=275,slow=1.0,SNR=6.7						
TXAR	**Lajitas Array**	**144.87**	**40**		**PKPdf**	**14 20 59.1**	**-0.6**

*IDC **19** 14:05:06.5±1.0, 46°.54S×96°.04E, h0km, mb3.9/7, mbtmp3.9/7, MS3.9/39, Error ellipse: s-maj=38.4km s-min=19.5km az=118.0*
*NEIC **19** 14:05:07.9±1.3, 46°.53S±0°.09×96°.0E±0°.3, h10km±1km, mb4.1/9, Error ellipse: s-maj=33.2km s-min=14.1km az=283.0*
*GCMT **19** 14:05:08.8±0.4, 46°.51S±0°.02×95°.87E±0°.03, h15km±1km, MW4.7/79, Moment Tensor Solution. s8,c8; s79,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.00±.08; $M_{\theta\theta}$-1.21±.07; $M_{\phi\phi}$1.21±.07; $M_{r\theta}$-0.67±.27; $M_{\theta\phi}$-0.81±.07; $M_{\phi r}$0.00±.23; Best double couple: $M_0$1.58900×10^{16} NP1:ϕ26.00000°, δ69.00000°, λ-9.00000°. NP2: ϕ119.00000°, δ81.00000°, λ-159.00000°. Principal axes: T 1.4820, Plg8.0000°, Azm251.0000°; N 0.2150, Plg68.0000°, Azm141.0000°; P -1.6960, Plg21.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 14:05:08.6±0.8, 46°.5S±0°.1×96°.0E±0°.2, h16km, n58, σ0s45/18, mb4.1/9, MS4.0/39, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**17.94**	**56**	T	T	14 27 35.7	
	baz=224,slow=74,SNR=165						
H01W3	**Cape Leeuwin H**	**17.95**	**56**	T	T	14 27 38.4	
	baz=224,slow=74,SNR=220						
H01W1	**Cape Leeuwin H**	**17.96**	**56**	T	T	14 27 35.8	
	baz=224,slow=74,SNR=130						
NWAO	**Narrogin (SRO)**	**21.15**	**58**	LR	LR	14 15 58.0	
	comp=Z,656nm,21.8s,baz=236,slow=31						
CASY	**Casey**	**21.27**	**164**	P	**P**	**14 09 54.2**	**+0.4**
CASY				IAmb	IAmb	14 09 56.1	
	comp=Z,20nm,1.3s						
MAW	**Mawson**	**27.17**	**207**	P	**P**	**14 10 50.7**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=32,slow=12,SNR=3.8						
MAW				LR	LR	14 18 08.0	
	comp=Z,104nm,20.8s,baz=60,slow=29						
	comp=Z,2.9nm,0.9s						
MAW	**Mawson**	**27.17**	**207**	P	**P**	**14 10 50.1**	**-0.8**
MAW				IAmb	IAmb	14 11 05.1	
	comp=Z,1.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**37.42**	**51**	LR	LR	14 25 25.4	
	comp=Z,158nm,20.3s,baz=207,slow=33						
STKA	**Stephens Creek**	**37.70**	**84**	LR	LR	14 25 06.8	
	comp=Z,226nm,21.8s,baz=210,slow=32						
ASAR	**Alice Springs**	**37.97**	**66**	P	**P**	**14 12 26.3**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=216,slow=7.1,SNR=6.0						
ASAR				LR	LR	14 25 32.2	
	comp=Z,310nm,21.8s,baz=248,slow=32						
	comp=Z,0.7nm,0.9s						
AS31	**Alice Springs**	**37.97**	**66**	P	**P**	**14 12 25.5**	**-0.2**
VNDA	**Vanda**	**39.88**	**162**	P	**P**	**14 12 41.3**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=282,slow=8.5,SNR=4.8						
VNDA				LR	LR	14 27 53.0	
	comp=Z,321nm,18.2s,baz=282,slow=34						
	comp=Z,1.4nm,1.0s						
VNDA	**Vanda**	**39.88**	**162**	IAmb	IAmb	14 12 42.9	
	comp=Z,3.4nm,1.2s						
LEM	**Lembang**	**40.79**	**18**	LR	LR	14 28 03.5	
	comp=Z,164nm,18.5s,baz=172,slow=34						
WRA	**Warramunga Arr**	**40.99**	**63**	P	**P**	**14 12 50.2**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=222,slow=8.2,SNR=8.6						
	comp=Z,0.8nm,0.9s						
BATI	**Baumata**	**43.16**	**42**	LR	LR	14 30 11.7	
	comp=Z,290nm,18.5s,baz=174,slow=35						
QSPA	**South Pole Qui**	**43.63**	**180**	P	**P**	**14 13 12.1**	**+0.1**
	comp=Z,3.0nm,1.1s,baz=59,slow=3.2,SNR=3.5						
QSPA				LR	LR	14 30 14.2	
	comp=Z,288nm,18.6s,baz=312,slow=35						
	comp=Z,3.0nm,1.1s						
QSPA	**South Pole Qui**	**43.63**	**180**	P	**P**	**14 13 11.6**	**-0.4**
QSPA				IAmb	IAmb	14 13 15.0	
	comp=Z,4.8nm,1.2s						
H08S2	**Diego Garcia H**	**43.67**	**325**	T	T	14 59 48.7	
	baz=156,slow=76,SNR=15						
H08S1	**Diego Garcia H**	**43.68**	**325**	T	T	14 59 55.5	
	baz=156,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**43.70**	**325**	T	T	14 59 45.5	
	baz=156,slow=76,SNR=38						
FOMA	**Nahampoana Res**	**44.38**	**282**	P	**P**	**14 13 18.6**	**+0.3**
TROLL	**Troll, Antarti**	**47.59**	**205**	P	**P**	**14 13 42.8**	**-0.4**
	comp=Z,234nm,0.8s						
CTA	**Charters Tower**	**48.55**	**75**	LR	LR	14 33 00.2	
	comp=Z,179nm,19.1s,baz=242,slow=34						
SNAA	**Sanae**	**49.27**	**204**	P	**P**	**14 13 56.1**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=129,slow=5.4,SNR=5.4						
SNAA				LR	LR	14 31 36.4	
	comp=Z,158nm,22.0s,baz=42,slow=32						
	comp=Z,2.5nm,0.8s						
SNAA	**Sanae**	**49.27**	**204**	P	**P**	**14 13 56.2**	**+0.1**
SNAA				IAmb	IAmb	14 14 04.8	
	comp=Z,5.0nm,

ESDC Sonseca Array 123.52 294 PKP **PKiKP 14 24 05.1 +0.1**
comp=Z,0.5nm,0.7s,baz=123,slow=6.3,SNR=6.2

JMA 19 14:17:03.7±0.1, 24°.9N±0°.6×123°.4E±0°.2, h21km, MV1.5/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.55**	**217**	*eP*			Pb	14 17 14.4	-0.4
YOJ				*eS*			Sb	14 17 22.0	-0.3
JYNG	**Yonagunijimaku**	**0.60**	**221**	*eP*			Pb	14 17 15.3	-0.2
IRIF	**Iriomote-Funau**	**0.65**	**150**	P			Pb	14 17 16.2	-0.3
IRIF				S			Sb	14 17 25.1	-0.1
JKRS	**Kuro-shima**	**0.88**	**139**	P			Pb	14 17 20.1	-0.2
JKRS				*eS*			Sb	14 17 31.6	+0.1
JIJ	**Ishigaki jima**	**0.88**	**128**	*eS*			Sb	14 17 30.6	-1.0
JISG	**Ishigakijimahi**	**0.91**	**110**	P			Pb	14 17 20.5	-0.3
JISG				*eS*			Sb	14 17 32.2	-0.2
HATJ	**Hateruma jima**	**0.93**	**155**	*eS*			Sb	14 17 33.0	0.0

TAP 19 14:17:57.1, 24°.25N×121°.67E, h15km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**47**	*eP*			Pg	14 18 01.1	+0.8
ETL	**Fush Village**	**0.10**	**206**	*i* P			Pg	14 18 00.7	+0.3
ETL				*i* S			Sg	14 18 03.5	+0.9
EAHA	**Aohua**	**0.10**	**38**	P			Pb	14 18 01.2	+0.4
EAHA				S			Sb	14 18 03.7	+0.5
NACB	**Ninganchiao**	**0.10**	**223**	*i* P			Pb	14 18 00.8	0.0
NACB				*i* S			Sb	14 18 03.5	+0.3
ETLH	**Xiulin Townshi**	**0.18**	**256**	*i* P			Pb	14 18 02.0	-0.1
ETLH				S			Sb	14 18 05.1	-0.4
TWD	**Chiawan**	**0.18**	**202**	*eP*			Pg	14 18 01.6	+0.2
TWD				S			Sg	14 18 04.7	+0.4
ENA	**Nanau**	**0.19**	**20**	*eP*			Pg	14 18 00.7	-0.9
ENA				*eS*			Sg	14 18 04.4	-0.2
EWUT	**Wuta**	**0.22**	**27**	P			Pg	14 18 02.4	+0.3
EWUT				S			Sb	14 18 06.3	-0.3
HWA	**Hwalien**	**0.28**	**192**	P			Pb	14 18 04.0	+0.2
HWA				S			Sb	14 18 08.6	+0.3
LATG	**Datong**	**0.31**	**335**	P			Pb	14 18 04.6	+0.1
LATG				*i* S			Sb	14 18 09.7	+0.3
NNSB	**Datong**	**0.32**	**304**	*i* P			Pb	14 18 04.0	+0.1
NNSB				*i* S			Sb	14 18 09.8	+0.2
NNSH	**Datong**	**0.32**	**304**	P			Pb	14 18 04.6	0.0
NNSH				S			Sb	14 18 09.9	+0.4
ETM	**Tongmen**	**0.33**	**210**	*eP*			Pg	14 18 04.0	+0.2
ETM				*eS*			Sg	14 18 08.7	+0.2
LXIB	**Xiulin Townshi**	**0.33**	**226**	*eP*			Pg	14 18 04.1	+0.1
LXIB				*eS*			Sg	14 18 09.1	+0.4
NNS	**Nan Shan**	**0.33**	**305**	P			Pb	14 18 04.8	0.0
NNS				S			Sb	14 18 10.1	+0.1
ESAO	**Su ao**	**0.36**	**26**	P			Pb	14 18 05.3	+0.1
WHF	**Hehuan Shan**	**0.38**	**254**	*eP*			Pb	14 18 05.7	-0.2
WHF				S			Sb	14 18 12.0	+0.2
NDS	**Dongshan**	**0.39**	**6**	P			Pb	14 18 05.8	+0.2
NDS				S			Sb	14 18 11.7	+0.2
TEYL	**Yanliau Villag**	**0.39**	**190**	P			Pg	14 18 05.2	+0.3
TEYL				S			Sg	14 18 10.7	+0.5
FUSS	**Fushou**	**0.39**	**270**	P			Pb	14 18 06.6	+0.7
FUSS				S			Sb	14 18 11.4	-0.3
TWC	**Suao**	**0.39**	**24**	P			Pb	14 18 05.9	+0.1
TWC				S			Sb	14 18 12.4	+0.7
TWT	**Tachien**	**0.45**	**271**	*eP*			Pn	14 18 08.2	-1.0
TWT				S			Sb	14 18 14.5	+1.0
TDCB	**Techi**	**0.47**	**271**	P			Pb	14 18 07.4	+0.3
TDCB				S			Sb	14 18 13.5	-0.5
SHUL	**Shoufeng**	**0.47**	**192**	P			Pb	14 18 07.2	+0.1
SHUL				S			Sb	14 18 14.6	+0.8
YHNB	**Yeheng**	**0.50**	**327**	*eP*			Pb	14 18 07.9	+0.3
YHNB				*i* S			Sb	14 18 15.3	+0.6
NSK	**Sanguang**	**0.51**	**326**	P			Pb	14 18 08.1	+0.2
NSK				S			Sb	14 18 15.5	+0.4
FUSB	**Fushanzhiwuyua**	**0.51**	**352**	P			Pb	14 18 08.2	+0.3
FUSB				S			Sb	14 18 15.7	+0.5
OWD	**Renai**	**0.54**	**237**	*eP*			Pn	14 18 09.5	-0.9
OWD				S			Sb	14 18 16.6	+0.6
NWLT	**Wulai**	**0.55**	**344**	P			Pb	14 18 08.2	-0.2
NWLT				S			Sb	14 18 16.4	+0.3
WUSB	**Renai**	**0.57**	**243**	*eP*			Pb	14 18 09.6	+0.8
WUSB				S			Sb	14 18 17.2	+0.5
WARBT	**Fenglin Townsh**	**0.59**	**206**	P			Pg	14 18 08.6	-0.1
WARBT				*eS*			Sg	14 18 16.2	-0.4
NFF	**Wufeng Townshi**	**0.63**	**307**	P			Pb	14 18 10.7	+0.8
NFF				S			Sn	14 18 20.0	-1.4
WHP	**Taichung City**	**0.66**	**273**	P			Pb	14 18 11.0	+0.6
WHP				S			Sb	14 18 19.7	+0.2
VWDT	**VWDT**	**0.69**	**225**	P			Pb	14 18 10.9	+0.1
VWDT				S			Sg	14 18 19.5	-0.3
YULB	**Yu-li**	**0.92**	**202**	P			Pn	14 18 15.3	-0.2
YULB				S			Sn	14 18 28.0	-0.5

IDC 19 14:28:49.5±35.0, 17°.41S×179°.69W, h690km±333km, mb2.6/2, mbtmp3.7/2, Error ellipse: s-maj=384.1km s-min=104.9km az=118.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.52**	**259**	P			P	14 35 56.6	0.0
	0.2nm,0.6s,baz=93,slow=6.9,SNR=8.5 0.2nm,0.6s								
ASAR	**Alice Springs**	**43.75**	**254**	P			P	14 35 58.1	-0.2
	2.1nm,0.6s,baz=90,slow=7.8,SNR=99								
ASAR					PcP		PcP	14 37 28.4	-0.2
	0.3nm,0.9s,baz=96,slow=3.5,SNR=2.0 2.1nm,0.6s								
GERES	**GERESS Array B**	**146.80**	**344**	PKPbc			PKPbc	14 47 16.4	-0.6
	0.2nm,0.4s,baz=31,slow=3.1,SNR=3.0								

*RSNC **19** 14:31:33.5±0.0, 7°.1×7°.3W±°, h147km±2km, M2.7, ML2.4*
*FUNV **19** 14:31:34.2, 7°.18N×73°.20W, h2km, MW2.9, Presumed earthquake*
ISC 19 14:31:31.2±1.4, 6°.87N±0°.03×73°.09W±0°.04, h158km±8km, n26, σ1§46/53, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**198**	P			**Pn**	**14 31 53.4**	**+0.3**
BARC				P			**Pn**	**14 31 53.4**	**+0.3**
BARC				S			**Sn**	**14 32 08.4**	**-1.3**
BARC				S				14 32 08.5	
PAMC	**Pamplona, Colo**	**0.61**	**40**	P			**Pn**	**14 31 56.4**	**+1.8**
PAMC				S			**Sn**	**14 32 13.4**	**+0.9**
BRJC	**Barrancabermej**	**0.65**	**279**	P			**Pn**	**14 31 55.1**	**+0.8**
BRJC				S			**Sn**	**14 32 32.3**	**+0.4**
RUSC	**La Rusia**	**0.97**	**179**	P			**Pn**	**14 31 57.4**	**+0.2**
RUSC				S			**Sn**	**14 32 15.6**	**-1.4**
RUSC	**La Rusia**	**0.97**	**179**	*eP*			**Pn**	**14 31 57.5**	**+0.4**
RUSC				*eS*			**Sn**	**14 32 15.7**	**-1.4**
OCAC	**Ocana**	**1.38**	**351**	P			**Pn**	**14 32 01.5**	**+1.2**
OCAC				S			**Sn**	**14 32 23.5**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P			**Pn**	**14 31 59.8**	**-0.6**
PTBC				S			**Sn**	**14 32 21.0**	**-1.7**
SPBC	**San Pablo de B**	**1.56**	**219**	P			**Pn**	**14 32 02.3**	**+0.2**
SPBC				S			**Sn**	**14 32 24.2**	**-1.6**
NORC	**Norcasia**	**2.19**	**234**	P			**Pn**	**14 32 09.7**	**+0.5**
NORC				S			**Sn**	**14 32 37.0**	**-1.4**
CHIC	**Chingaza**	**2.32**	**196**	P			**Pn**	**14 32 11.8**	**+0.8**
CHIC				S			**Sn**	**14 32 40.6**	**-1.1**
ROSC	**El Rosal**	**2.36**	**211**	P			**Pn**	**14 32 13.7**	**+2.2**
ROSC				S			**Sn**	**14 32 43.7**	**+1.2**
HELC	**Santa Helena**	**2.51**	**254**	P			**Pn**	**14 32 15.8**	**+2.5**
HELC				S			**Sn**	**14 32 45.9**	**+0.2**
HELC	**Santa Helena**	**2.51**	**254**	*eP*			**Pn**	**14 32 15.5**	**+2.2**
HELC				*eS*			**Sn**	**14 32 46.3**	**+0.6**
UREC	**San Jos de Ur**	**2.57**	**290**	P			**Pn**	**14 32 14.1**	**+0.5**
UREC				S			**Sn**	**14 32 45.0**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P			**Pn**	**14 32 18.0**	**+1.2**
GUY2C				S			**Sn**	**14 32 51.9**	**-0.1**
VILC	**Villavicencio,**	**2.81**	**192**	P			**Pn**	**14 32 17.0**	**+0.3**
VILC				S			**Sn**	**14 32 50.8**	**-1.1**
PTGC	**Puerto Gaitan,**	**2.82**	**160**	P			**Pn**	**14 32 16.6**	**-0.2**
PTGC				S			**Sn**	**14 32 50.1**	**-1.9**
CBOC	**Ciudad Bolivar**	**3.07**	**251**	P			**Pn**	**14 32 22.0**	**+2.0**
CBOC				S			**Sn**	**14 32 56.8**	**-0.9**
DBBC	**Dabeiba**	**3.10**	**273**	P			**Pn**	**14 32 21.6**	**+1.4**
DBBC				S			**Sn**	**14 32 57.3**	**-0.9**
SDV	**Santo Domingo**	**3.15**	**50**	*eP*			**Pn**	**14 32 22.9**	**+1.8**
SDV				*eS*			**Sn**	**14 32 58.6**	**-1.0**
APAC	**Apartado, Choc**	**3.60**	**287**	P			**Pn**	**14 32 26.4**	**-0.2**
APAC				S			**Sn**	**14 33 10.2**	**+0.6**
PRAC	**Prado**	**3.61**	**210**	P			**Pn**	**14 32 27.2**	**+0.5**
PRAC				S			**Sn**	**14 33 08.6**	**-1.3**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P			**Pn**	**14 32 28.1**	**+1.0**
ORTC				S			**Sn**	**14 33 11.0**	**+0.4**
SJCC	**San Jacinto, C**	**3.65**	**326**	P			**Pn**	**14 32 27.3**	**+0.1**
SJCC				S			**Sn**	**14 33 09.0**	**-1.7**
SJCC	**San Jacinto, C**	**3.65**	**326**	*eP*			**Pn**	**14 32 26.7**	**-0.5**
SJCC				*eS*			**Sn**	**14 33 05.3**	**-5.4**
SMRC	**Santa Marta, M**	**4.41**	**345**	P			**Pn**	**14 32 38.9**	**+1.9**
SMRC				S			**Sn**	**14 33 26.6**	**-1.8**

*IDC **19** 14:38:57.5±1.1, 4°.13S×128°.74E, h0km, mb4.0/5, mbtmp4.0/7, ML3.4/2, Error ellipse: s-maj=47.7km s-min=23.7km az=79.0*
ISC 19 14:39:01.9±0.9, 4°.2S±0°.1×129°.0E±0°.2, h35km, n8, σ0§98/10, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.03**	**34**	Pn			**Pn**	**14 40 01.9**	**+0.7**
	6.3nm,0.3s,baz=40,slow=14,SNR=65								
SIJI					Sn		**Sn**	**14 40 46.8**	**-0.5**
	4.2nm,0.3s,baz=252,slow=23,SNR=8.5 14nm,0.3s								
FITZ	**Fitzroy Crossi**	**14.16**	**193**	Pn			**Pn**	**14 42 19.4**	**-0.7**
	0.1nm,0.3s,baz=21,slow=17,SNR=1.7 1.7nm,1.0s								
WRA	**Warramunga Arr**	**16.44**	**162**	Pn			**Pn**	**14 42 48.7**	**-1.4**
	0.1nm,0.3s,baz=345,slow=13,SNR=8.5								
ASAR	**Alice Springs**	**19.88**	**167**	P			**Pn**	**14 43 33.5**	**+1.4**
	1.1nm,0.4s,baz=347,slow=11,SNR=76								
ASAR					PcP		**PcP**	**14 47 47.1**	**+0.1**
	0.3nm,0.6s,baz=2.2,slow=1.6,SNR=6.3 1.1nm,0.4s								
MKAR	**Makanchi Array**	**65.40**	**327**	P			**P**	**14 49 41.0**	**-0.1**
	1.0nm,0.6s,baz=124,slow=8.2,SNR=16 1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**68.70**	**334**	P			**P**	**14 50 00.7**	**-1.2**
	0.6nm,0.6s,baz=137,slow=6.6,SNR=3.6 0.6nm,0.6s								
KURBB	**Kurchatov Arra**	**69.67**	**328**	P			**P**	**14 50 07.5**	**-0.4**
	1.9nm,0.2s,baz=133,slow=5.6,SNR=7.4 1.9nm,0.2s								
BVAR	**Borovoye Array**	**75.23**	**328**	P			**P**	**14 50 41.0**	**-0.1**
	0.7nm,0.7s,baz=137,slow=5.3,SNR=2.5 0.7nm,0.7s								

*IDC **19** 14:50:11.9±1.4, 21°.13S×179°.21W, h620km±17km, mb3.1/13, mbtmp4.1/15, Error ellipse: s-maj=17.1km s-min=12.5km az=110.0*
*NEIC **19** 14:50:11.0±0.9, 21°.25S±0°.09×179°.1W±0°.1, h614km±7km, mb4.2/61, Error ellipse: s-maj=16.3km s-min=11.5km az=130.0*
ISC 19 14:50:11.0±0.4, 21°.22S±0°.06×179°.04W±0°.08, h619km, n155, σ1§43/138, mb4.1/46, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**321**	P			**P**	**14 51 41.7**	**+0.7**
	107nm,0.5s,baz=278,slow=23,SNR=165								
FUTU	**Fugatoga**	**6.93**		P			**P**	**14 52 01.5**	**+0.1**
RAO	**Raoul Island**	**8.06**	**173**	P			**P**	**14 52 10.7**	**-0.7**
AFI	**Afiamalu**	**10.04**	**45**	P			**P**	**14 52 30.1**	**-0.6**
	17nm,0.5s,baz=263,slow=6.0,SNR=7.6								
AFI					S		**S**	**14 54 22.2**	**-3.1**
	15nm,0.6s,baz=45,slow=20,SNR=1.8								
AFI	**Afiamalu**	**10.04**	**45**	P			**P**	**14 52 29.1**	**-1.6**
AFI	**Afiamalu**	**10.04**	**45**	P			**P**	**14 52 28.6**	**-2.2**
AFI					S		**S**	**14 54 20.1**	**-5.2**
FUNA	**Funafuti**	**12.74**	**352**	P			**P**	**14 52 57.7**	**+0.6**
OUZ	**Omahuta**	**15.38**	**203**	P			**P**	**14 53 24.1**	**+2.4**
WCZ	**Waipu Caves**	**15.77**	**200**	P			**P**	**14 53 27.9**	**+2.7**
MKAZ	**Moumakai**	**16.61**	**196**	P			**P**	**14 53 34.3**	**+1.4**
HAZ	**Te Kaha**	**16.71**	**189**	P			**P**	**14 53 33.3**	**-0.5**
RUGZ	**Raukumara Rang**	**16.93**	**189**	P			**P**	**14 53 35.0**	**-1.0**
TGRZ	**Tauranga**	**16.95**	**193**	P			**P**	**14 53 37.4**	**+1.4**
PUZ	**Puketiti**	**16.95**	**187**	P			**P**	**14 53 36.4**	**+0.3**
TWGZ	**Tauwhareparae**	**17.09**	**188**	P			**P**	**14 53 37.5**	**+0.1**
TOZ	**Tahuroa Road**	**17.12**	**195**	P			**P**	**14 53 39.2**	**+1.7**
URZ	**Urewera**	**17.30**	**190**	P			**P**	**14 53 37.0**	**-2.2**
	12nm,0.3s,baz=247,slow=2.6,SNR=36								
URZ					S		**S**	**14 56 22.3**	**-6.0**
	6.3nm,0.5s,baz=156,slow=21,SNR=14								
URZ	**Urewera**	**17.30**	**190**	P			**P**	**14 53 37.0**	**-2.2**
MWZ	**Matawai**	**17.31**	**189**	P			**P**	**14 53 38.0**	**-1.4**
TKGZ	**Te Karaka**	**17.37**	**188**	P			**P**	**14 53 39.5**	**-0.3**
RIGZ	**Rimuhau**	**17.64**	**188**	P			**P**	**14 53 41.9**	**-0.5**
RTZ	**Ruatahuna**	**17.67**	**190**	P			**P**	**14 53 41.0**	**-1.7**
TLZ	**Tolley Road**	**17.68**	**194**	P			**P**	**14 53 44.3**	**+1.6**
MTHZ	**Maungataniwha**	**17.93**	**191**	P			**P**	**14 53 44.0**	**-0.9**
HIZ	**Hauiti**	**18.02**	**196**	P			**P**	**14 53 46.2**	**+0.4**
HIZ	**Hauiti**	**18.02**	**196**	P			**P**	**14 53 46.2**	**+0.4**
BKZ	**Black Stump Fm**	**18.29**	**191**	P			**P**	**14 53 45.9**	**-2.4**
VRZ	**Vera Road**	**18.62**	**195**	P			**P**	**14 53 54.0**	**+2.8**
TSZ	**Takapari Road**	**19.26**	**192**	P			**P**	**14 53 55.4**	**-1.6**
BFZ	**Birch Farm**	**19.81**	**191**	P			**P**	**14 53 59.2**	**-2.8**
MRZ	**Mangatainoka R**	**19.91**	**192**	P			**P**	**14 54 01.3**	**-1.6**
MRZ	**Mangatainoka R**	**19.91**	**192**	P			**P**	**14 54 01.2**	**-1.7**
TCW	**Tory Channel**	**20.72**	**194**	P			**P**	**14 54 09.1**	**-1.0**
QRZ	**Quartz Range**	**20.82**	**198**	P			**P**	**14 54 11.2**	**+0.2**
TKNZ	**Takaka Hill**	**20.89**	**197**	P			**P**	**14 54 10.6**	**-1.1**
NNZ	**Nelson**	**20.95**	**196**	P			**P**	**14 54 11.4**	**-0.8**
THZ	**Tophouse**	**21.58**	**197**	P			**P**	**14 54 16.3**	**-1.6**
DSZ	**Denniston Nort**	**21.87**	**199**	P			**P**	**14 54 20.1**	**-0.4**
KHZ	**Kahutara**	**22.04**	**195**	P			**P**	**14 54 20.6**	**-1.2**
CTZ	**Chatham Island**	**22.54**	**175**	P			**P**	**14 54 17.3**	**-9.0**
GVZ	**Greta Valley S**	**22.68**	**195**	P			**P**	**14 54 25.6**	**-2.0**
LTZ	**Lake Taylor**	**22.70**	**197**	P			**P**	**14 54 26.1**	**-1.7**
INZ	**Inchbonnie**	**22.88**	**198**	P			**P**	**14 54 28.1**	**-1.2**
INZ	**Inchbonnie**	**22.88**	**198**	P			**P**	**14 54 28.2**	**-1.2**
OXZ	**Oxford**	**23.27**	**197**	P			**P**	**14 54 31.1**	**-1.7**
HNR	**Honiara**	**23.38**	**297**	P			**P**	**14 54 32.9**	**-1.3**
WVZ	**Waitaha Valley**	**23.41**	**199**	P			**P**	**14 54 33.1**	**-0.9**
MQZ	**McQueen's Vall**	**23.47**	**195**	P			**P**	**14 54 33.0**	**-1.6**
MQZ	**McQueen's Vall**	**23.47**	**195**	P			**P**	**14 54 32.9**	**-1.6**
RPZ	**Rata Peaks**	**23.90**	**198**	P			**P**	**14 54 38.5**	**+0.1**
FOZ	**Fox Glacier**	**24.11**	**200**	P			**P**	**14 54 39.1**	**-1.1**
TMZ	**Timaru**	**24.53**	**197**	P			**P**	**14 54 43.5**	**-0.4**
LBZ	**Lake Benmore**	**24.77**	**199**	P			**P**	**14 54 45.0**	**-1.1**
JCZ	**Jackson Bay**	**24.93**	**201**	P			**P**	**14 54 47.2**	**-0.4**
STKA	**Stephens Creek**	**36.60**	**245**	P			**P**	**14 56 26.1**	**-0.9**
	1.7nm,0.4s,baz=86,slow=9.2,SNR=5.5 1.7nm,0.4s								
INKA	**Innaminka**	**37.05**	**252**	P			**P**	**14 56 30.3**	**-0.3**
INKA					IAmb	IAmb		14 56 44.2	
	comp=Z,6.7nm,1.4s								
MANU	**Manus Island**	**37.87**	**296**	P			**P**	**14 56 37.6**	**+0.1**
BBOO	**Buckleboo**	**41.36**	**244**	P			**P**	**14 57 04.7**	**-0.4**
WR8	**Warramunga Arr**	**43.40**	**263**	P			**P**	**14 57 20.3**	**-0.8**
WR8					IAmb	IAmb		14 57 53.9	
	comp=Z,9.8nm,1.5s								
AS31	**Alice Springs**	**43.41**	**258**	P			**P**	**14 57 20.6**	**-0.7**
ASAR	**Alice Springs**	**43.41**	**258**	P			**P**	**14 57 20.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=97,slow=7.7,SNR=38								
ASAR					S		**S**	**15 03 03.0**	**-3.3**
	comp=Z,1.1nm,0.7s,baz=94,slow=16,SNR=9.7 comp=Z,0.9nm,0.6s								
ASAR	**Alice Springs**	**43.41**	**258**	P			**P**	**14 57 20.6**	**-0.7**
WB0	**Warramunga Arr**	**43.53**	**263**	P			**P**	**14 57 21.5**	**-0.6**
WB0					IAmb	IAmb		14 57 30.9	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**43.55**	**263**	P			**P**	**14 57 21.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=97,slow=6.9,SNR=25								
WRA					S		**S**	**15 03 04.5**	**-3.6**
	comp=Z,0.3nm,0.8s,baz=99,slow=14,SNR=2.2 comp=Z,0.4nm,0.3s								
WRA	**Warramunga Arr**	**43.55**	**263**	IAmb		IAmb		14 57 23.9	
	comp=Z,0.1nm,1.2s								
KNRA	**Kununurra**	**49.65**	**267**	P			**P**	**14 58 07.8**	**-0.3**
KNRA					IAmb	IAmb		14 58 28.7	
	comp=Z,18nm,1.4s								
FITZ	**Fitzroy Crossi**	**51.98**	**263**	P			**P**	**14 58 25.0**	**+0.1**
SBA	**Scott Base**	**57.09**	**184**	P			**P**	**14 59 02.1**	**+2.7**
VNDA	**Vanda**	**57.11**	**185**	P			**P**	**14 59 01.7**	**+2.1**
	comp=Z,1.2nm,0.5s,baz=354,slow=6.7,SNR=15 comp=Z,1.2nm,0.5s								
VNDA	**Vanda**	**57.11**	**185**	P			**P**	**14 59 01.4**	**+1.8**
CASY	**Casey**	**62.90**	**205**	P			**P**	**14 59 38.3**	**+0.4**
QSPA	**South Pole Qui**	**68.85**	**180**	P			**P**	**15 00 16.4**	**+1.5**
	comp=Z,4.9nm,0.6s,baz=335,slow=0.4,SNR=41 comp=Z,4.9nm,0.6s								
QSPA	**South Pole Qui**	**68.85**	**180**	P			**P**	**15 00 16.2**	**+1.3**
QSPA					IAmb		IAmb	15 00 17.3	
	comp=Z,9.1nm,1.0s								
JGF	**Kuroka**	**70.00**	**323**	P			**P**	**15 00 22.4**	**+0.3**
JGF					IAmb		IAmb	15 00 32.5	
	comp=Z,16nm,1.5s								
MJAR	**Matsushiro Arr**	**70.22**	**324**	P			**P**	**15 00 23.3**	**0.0**
	comp=Z,1.8nm,0.6s,baz=165,slow=5.2,SNR=11 comp=Z,1.8nm,0.6s								
MJAR	**Matsushiro Arr**	**70.22**	**324**	P			**P**	**15 00 23.5**	**+0.1**
MAJO	**Matsushiro**	**70.22**	**324**	P			**P**	**15 00 23.8**	**+0.4**
MJB9	**Matsu-Tunnel**	**70.23**	**324**	P			**P**	**15 00 23.8**	**+0.4**
ERM	**Erimo**	**71.98**	**331**	P			**P**	**15 00 34.0**	**+0.6**
AMKA	**Amchitka**	**72.30**	**359**	P			**P**	**15 00 35.4**	**+0.4**
AMKA					IAmb		IAmb	15 00 36.3	
	comp=Z,4.8nm,0.9s								
ADK	**Adak**	**72.82**	**2**	P			**P**	**15 00 38.2**	**+0.2**
ADK					IAmb		IAmb	15 00 38.6	
	comp=Z,7.7nm,0.7s								
GSTR	**Great Sitkin T**	**73.05**	**2**	P			**P**	**15 00 39.8**	**+0.5**
ATKA	**Atka Island**	**73.23**	**3**	P			**P**	**15 00 40.4**	**+0.1**
UNV	**Unalaska Valle**	**75.53**	**8**	P			**P**	**15 00 53.2**	**+0.1**
UNV					IAmb		IAmb	15 01 06.8	
	comp=Z,16nm,1.3s								
LVA	**Lava Point**	**75.90**	**8**	P			**P**	**15 00 54.9**	**-0.4**
PEA0B	**Petropavlovsk-**	**76.72**	**346**	P			**P**	**15 01 00.2**	**+0.5**
PEA0B					IAmb		IAmb	15 01 20.8	
	comp=Z,15nm,1.4s								
PETK	**Petropavlovsk-**	**76.72**	**346**	P			**P**	**15 01 00.3**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=140,slow=3.4,SNR=15 comp=Z,3.1nm,0.8s								
SDPT	**Sand Point**	**77.89**	**11**	P			**P**	**15 01 06.3**	**+0.3**
SMAI	**San Martin Ant**	**78.28**	**159**	P			**P**	**15 01 08.8**	**+0.8**
BELA	**Belgrano 2**	**78.97**	**173**	P			**P**	**15 01 11.8**	**+0.3**
BELA					IAmb		IAmb	15 01 12.9	
	comp=Z,4.8nm,0.9s								
CHIR	**Chirikof Islan**	**79.27**	**13**	P			**P**	**15 01 14.4**	**+1.1**
MAW	**Mawson**	**80.56**	**200**	P			**P**	**15 01 20.5**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=219,slow=20,SNR=2.3 comp=Z,1.3nm,0.6s								
MAW	**Mawson**	**80.56**	**200**	IAmb		IAmb		15 01 28.5	
	comp=Z,1.4nm,1.5s								
AFDM	**Forest Hills D**	**80.82**	**42**	P			**P**	**15 01 22.4**	**+0.6**
OHAK	**Old Harbor**	**81.08**	**14**	P			**P**	**15 01 23.9**	**+1.3**
OHAK					IAmb		IAmb	15 01 54.0	
	comp=Z,8.2nm,1.3s								
O14K	**Tigyukauivet M**	**81.50**	**9**	P			**P**	**15 01 25.5**	**+0.8**
O14K					IAmb		IAmb	15 01 25.9	
	comp=Z,4.8nm,1.0s								
O15K	**Ungalikthiuk R**	**81.65**	**10**	P			**P**	**15 01 26.8**	**+1.3**
N14K	**Kuskokwak Cree**	**82.09**	**9**	P			**P**	**15 01 28.7**	**+1.1**
NVAR	**Mina Array Bea**	**82.21**	**44**	P			**P**	**15 01 30.8**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=260,slow=5.2,SNR=2.3 comp=Z,0.4nm,0.5s								
P17K	**Kvichak River**	**82.25**	**12**	P			**P**	**15 01 29.3**	**+0.8**
P17K					IAmb		IAmb	15 01 30.0	
	comp=Z,9.9n

comp=Z,0.6nm,0.6s,baz=83,slow=3.5,SNR=2.1
CLL Collm 148.53 345 *i* PKPbc **PKiKP 15 08 49.8 -0.4**
comp=Z,5.0nm,1.1s
GERES GERESS Array B 150.62 343 PKP **PKPdf 15 08 48.3 +0.2**
comp=Z,0.2nm,0.6s,baz=265,slow=5.5,SNR=2.0
GERES PKPbc **PKiKP 15 08 54.7 0.0**
comp=Z,0.5nm,0.6s,baz=29,slow=3.0,SNR=7.5

SDD ***19*** *14:56:52.8±1.4, 17.°90N×66.°84W, h20km±10km, MD2.8, ML3.2, MW3.4, Presumed earthquake*
RSPR ***19*** *14:56:52.9, 17.°91N×66.°85W, h14km, MD3.6/10*
NEIC ***19*** *14:56:52.3±1.0, 17.°85N±0.°03×66.°840W±0.°009, h10km±1km, ML3.4/37, Md3.6/10(RSPR), Error ellipse: s-maj=4.6km s-min=2.6km az=14.0*
ISC 19 14:56:52.4±1.0, 17.°91N±0.°05×66.°84W±0.°02, h20km±4km, n49, σ0≧61/62, 22C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**327**			**Pg**	**14 56 55.7**	**-0.4**
GBPR						**Sg**	**14 56 58.0**	**-0.7**
GBPR	**Guanica, Bosqu**	**0.08**	**327**	⇑*eP*		**Pg**	**14 56 55.7**	**-0.4**
GBPR				*eS*		**Sg**	**14 56 58.0**	**-0.7**
MLPR	**Magueyes Islan**	**0.21**	**287**			**Pg**	**14 56 57.3**	**-0.3**
MLPR				IAML			14 57 01.2	
	10μm,0.4s							
MLPR				IAML			14 57 01.4	
	5μm,0.2s							
MLPR	**Magueyes Islan**	**0.21**	**287**	⇑*eP*		**Pg**	**14 56 57.4**	**-0.2**
MLPR				⇑*eS*		**Sg**	**14 57 01.1**	**-0.1**
MLPR				IAML			14 57 01.1	
	comp=N,4μm,0.3s							
MLPR	**Magueyes Islan**	**0.21**	**287**	⇓*eP*		**Pg**	**14 56 57.4**	**-0.3**
OBIP	**Obispado Ponce**	**0.26**	**59**			**Pg**	**14 56 58.2**	**-0.2**
OBIP	**Obispado Ponce**	**0.26**	**59**	⇑*eP*		**Pg**	**14 56 58.3**	**-0.1**
OBIP				*eS*		**Sg**	**14 57 02.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.28**	**290**			**Pg**	**14 56 58.4**	**-0.3**
CRPR				IAML			14 57 02.9	
	comp=N,6μm,0.3s							
CRPR				IAML			14 57 03.1	
	comp=N,5μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.28**	**290**	⇑*iP*		**Pg**	**14 56 58.5**	**-0.3**
CELP	**Cerrillos**	**0.29**	**56**			**Pg**	**14 56 58.9**	**-0.1**
CELP				IAML			14 57 04.5	
	comp=N,3μm,0.1s							
CELP	**Cerrillos**	**0.29**	**56**			**Sg**	**14 57 03.9**	**+0.4**
CELP	**Cerrillos**	**0.29**	**56**	⇑*eP*		**Pg**	**14 56 59.0**	**0.0**
CELP				⇑*eS*		**Sg**	**14 57 03.8**	**+0.3**
CELP	**Cerrillos**	**0.29**	**56**	⇑*eP*		**Pg**	**14 56 59.0**	**0.0**
LSP	**Las Mesas**	**0.36**	**318**			**Pg**	**14 57 00.0**	**0.0**
LSP						**Sg**	**14 57 05.7**	**+0.4**
LSP	**Las Mesas**	**0.36**	**318**	⇓*eP*		**Pg**	**14 57 00.0**	**0.0**
LSP				*eS*		**Sg**	**14 57 05.7**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.36**	**18**			**Pg**	**14 56 59.8**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.36**	**18**	⇑*eP*		**Pg**	**14 57 00.0**	**0.0**
PRSN	**Puerto Rico Se**	**0.42**	**316**			**Pg**	**14 57 00.9**	**-0.3**
PRSN				IAML			14 57 08.3	
	comp=N,5μm,0.2s							
PRSN	**Puerto Rico Se**	**0.42**	**316**			**Sg**	**14 57 06.8**	**-0.4**
PRSN	**Puerto Rico Se**	**0.42**	**316**	⇑*eP*		**Pg**	**14 57 01.0**	**-0.2**
PRSN				⇑*eS*		**Sg**	**14 57 06.6**	**-0.5**
PRSN				IAML			14 57 10.9	
	comp=N,4μm,0.3s							
PRSN	**Puerto Rico Se**	**0.42**	**316**	⇑*eP*		**Pg**	**14 57 01.0**	**-0.2**
AOPR	**Arecibo Observ**	**0.44**	**10**			**Pg**	**14 57 01.2**	**-0.4**
AOPR				IAML			14 57 08.9	
	comp=N,4μm,0.3s							
AOPR	**Arecibo Observ**	**0.44**	**10**			**Sg**	**14 57 07.7**	**0.0**
AOPR	**Arecibo Observ**	**0.44**	**10**	⇑*eP*		**Pg**	**14 57 01.4**	**-0.2**
AOPR				⇑*eS*		**Sg**	**14 57 07.9**	**+0.2**
AOPR				IAML			14 57 08.9	
	comp=N,4μm,0.3s							
AOPR	**Arecibo Observ**	**0.44**	**10**	⇑*iP*		**Pg**	**14 57 01.4**	**-0.2**
ECPR	**Experimental S**	**0.61**	**48**	*Pg*		**Pg**	**14 57 03.8**	**-0.7**
ECPR	**Experimental S**	**0.61**	**48**			**Sg**	**14 57 12.0**	**-0.7**
ECPR	**Experimental S**	**0.61**	**48**	IAML			14 57 14.1	
	comp=N,2μm,0.2s							
ECPR				IAML			14 57 14.2	
	comp=N,1μm,0.2s							
ECPR	**Experimental S**	**0.61**	**48**	⇑*eP*		**Pg**	**14 57 04.0**	**-0.5**
AGPR	**Aguadilla, PR**	**0.61**	**335**	*Pg*		**Pg**	**14 57 03.9**	**-0.8**
AGPR	**Aguadilla, PR**	**0.61**	**335**			**Sg**	**14 57 12.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.61**	**335**	⇑*eP*		**Pg**	**14 57 04.3**	**-0.3**
EMPR	**Esperanza - Ma**	**0.63**	**27**			**Pg**	**14 57 05.2**	**+0.2**
EMPR						**Sg**	**14 57 12.7**	**-0.9**
EMPR	**Esperanza - Ma**	**0.63**	**27**	⇑*eP*		**Pg**	**14 57 05.2**	**+0.2**
EMPR				*eS*		**Sg**	**14 57 12.7**	**-0.9**
SJG	**San Juan**	**0.68**	**73**	*Pg*		**Pg**	**14 57 05.1**	**-0.8**
SJG	**San Juan**	**0.68**	**73**	⇓*eP*		**Pg**	**14 57 05.6**	**-0.3**
IGPR	**InterUniversit**	**0.69**	**85**			**Pg**	**14 57 06.1**	**-0.1**
IGPR						**Sg**	**14 57 06.6**	**+0.1**
IGPR	**InterUniversit**	**0.69**	**85**	⇑*eP*		**Pg**	**14 57 06.1**	**-0.1**
IDE	**Isla Desecheo**	**0.77**	**308**			**Pg**	**14 57 06.8**	**-0.8**
IDE						**Sg**	**14 57 16.9**	**-1.0**
IDE	**Isla Desecheo**	**0.77**	**308**	⇑*eP*		**Pg**	**14 57 06.8**	**-0.8**
IDE				*eS*		**Sg**	**14 57 16.9**	**-1.0**
PDPR	**Patillas Dam,**	**0.78**	**82**	*Pg*		**Pg**	**14 57 06.9**	**-0.8**
PDPR	**Patillas Dam,**	**0.78**	**82**	⇑*eP*		**Pg**	**14 57 06.9**	**-0.8**
HUMP	**Col San Antoni**	**0.96**	**76**			**Pb**	**14 57 09.8**	**-0.7**
HUMP				IAML			14 57 26.9	
	comp=N,655nm,0.2s							
HUMP				IAML			14 57 27.4	
	comp=N,599nm,0.2s							
HUMP	**Col San Antoni**	**0.96**	**76**			**Sb**	**14 57 22.4**	**-0.5**
HUMP	**Col San Antoni**	**0.96**	**76**	⇑*eP*		**Pb**	**14 57 20.3**	**+0.9**
PCDR	**Punta Cana, DR**	**1.59**	**292**	Pn		**Pn**	**14 57 20.3**	**+0.9**
PCDR				IAML			14 58 07.5	
	comp=N,241nm,1.4s							
PCDR	**Punta Cana, DR**	**1.59**	**292**	⇑*eP*		**Pn**	**14 57 21.0**	**+1.6**
PCDR				IAML			14 58 06.9	
	comp=N,133nm,1.6s							
DR12	**Loma Pena Alta**	**2.57**	**290**	Pn		**Pn**	**14 57 34.5**	**+1.5**
HATOM	**Hato Mayor del**	**2.57**	**290**	⇑*eP*		**Pn**	**14 57 34.6**	**+1.6**
HATOM				IAML			14 58 17.9	
	comp=N,52nm,1.0s							

IDC ***19*** *15:01:31.1±1.0, 25.°36S×176.°45W, h0km, mb4.2/7, mbtmp4.2/10, ML3.8/3, MS3.0/5, Error ellipse: s-maj=27.5km s-min=26.3km az=163.0*
NEIC ***19*** *15:01:36.8±1.7, 25.°54S±0.°05×176.°2W±0.°1, h35km±1km, mb4.5/23, Error ellipse: s-maj=16.2km s-min=7.7km az=102.0*
ISC 19 15:01:36.6±0.5, 25.°46S±0.°06×176.°31W±0.°09, h36km, n51, σ1≧29/44, mb4.4/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.05**	**200**		Pn	**Pn**	**15 02 38.9**	**+2.8**
	104nm,0.3s,baz=92,slow=21,SNR=2.2							
RAO					LR	LR	15 03 20.2	
	comp=Z,75nm,20.2s,baz=214,slow=27							
RAO					Sn	**Sn**	**15 03 22.1**	**-0.2**
	19nm,0.3s,baz=108,slow=23,SNR=1.1							
RAO	**Raoul Island**	**4.05**	**200**			**Pn**	**15 02 34.3**	**-1.8**
NIUE	**Niue**	**8.66**	**44**		Pn	**Pn**	**15 03 38.8**	**-0.6**
MSVF	**Nonsavu**	**9.29**	**325**		Pn	Pn	15 03 53.0	+4.8
	0.9nm,0.3s,baz=103,slow=21,SNR=7.0							
MSVF					LR	LR	15 06 53.3	
	comp=Z,146nm,22.0s,baz=280,slow=35							
MSVF	**Nonsavu**	**9.29**	**325**			**Pn**	**15 03 50.3**	**+2.1**
AFI	**Afiamalu**	**12.24**	**21**		Pn	**Pn**	**15 04 25.3**	**-3.2**
	1.1nm,0.3s,baz=197,slow=19,SNR=1.8							
AFI					Sn	Sn	15 06 31.0	-13
	0.3nm,0.3s,baz=100,slow=22,SNR=1.1							
	25nm,1.0s							
AFI	**Afiamalu**	**12.24**	**21**			**Pn**	**15 04 26.1**	**-2.4**
URZ	**Urewera**	**13.94**	**202**		Pn	**Pn**	**15 04 51.6**	**+0.1**
	1.0nm,0.3s,baz=250,slow=3.3,SNR=8.5							
URZ					Sn	Sn	15 07 10.6	-14
	0.3nm,0.3s,baz=323,slow=22,SNR=2.3							
	5.5nm,0.9s							
RAR	**Rarotonga**	**15.76**	**78**		Pn	**Pn**	**15 05 16.0**	**+0.1**
	0.9nm,0.3s,baz=57,slow=10,SNR=1.1							
RAR					Sn	Sn	15 07 49.8	-20
	0.8nm,0.3s,baz=103,slow=7.6,SNR=1.8							
RAR					LR	LR	15 09 28.1	
	comp=Z,65nm,21.3s,baz=290,slow=30							
	8.9nm,0.8s							
RAR	**Rarotonga**	**15.76**	**78**	P		**Pn**	**15 05 16.9**	**+1.0**
DZM	**Mont Dzumac**	**16.14**	**278**	LR		LR	15 10 28.9	
	comp=Z,96nm,18.9s,baz=358,slow=34							

CMWZ	**Cape Campbell**	**18.06**	**203**	P		**P**	**15 05 44.6**	**-0.1**
LTZ	**Lake Taylor**	**19.68**	**206**	P		**P**	**15 06 02.0**	**-0.6**
WHZ	**Wether Hill Ro**	**24.00**	**208**	P		**P**	**15 06 48.4**	**+0.6**
WHZ				IAmb		IAmb	15 06 50.6	
	comp=Z,29nm,1.3s							
PPT	**Papeete**	**26.04**	**78**	LR		LR	15 14 23.6	
	comp=Z,42nm,21.2s,baz=294,slow=30							
EIDS	**Eidsvold**	**29.42**	**263**	P		**P**	**15 07 37.4**	**+0.6**
EIDS				IAmb		IAmb	15 07 38.5	
	comp=Z,6.4nm,0.8s							
CTAO	**Charters Tower**	**34.85**	**271**	P		**P**	**15 08 24.9**	**+0.3**
CTAO				IAmb		IAmb	15 08 32.0	
	comp=Z,12nm,1.5s							
STKA	**Stephens Creek**	**37.31**	**250**	P		**P**	**15 08 44.7**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=94,slow=10,SNR=6.3							
	comp=Z,2.2nm,0.7s							
PMG	**Port Moresby**	**38.17**	**288**	P		**P**	**15 08 53.3**	**+0.5**
INKA	**Innaminka**	**38.33**	**257**	P		**P**	**15 08 55.1**	**+1.0**
AS31	**Alice Springs**	**45.11**	**261**	P		**P**	**15 09 48.1**	**-1.6**
AS31				IAmb		IAmb	15 09 50.3	
	comp=Z,1.8nm,0.5s							
ASAR	**Alice Springs**	**45.11**	**261**	P		**P**	**15 09 48.1**	**-1.5**
	comp=Z,3.0nm,0.5s,baz=90,slow=7.0,SNR=107							
	comp=Z,3.0nm,0.5s							
ASAR	**Alice Springs**	**45.11**	**261**	P		**P**	**15 09 47.8**	**-1.9**
WR8	**Warramunga Arr**	**45.51**	**266**	P		**P**	**15 09 51.5**	**-1.4**
WR8				IAmb		IAmb	15 10 08.3	
	comp=Z,9.8nm,1.3s							
WB0	**Warramunga Arr**	**45.66**	**267**	P		**P**	**15 09 53.0**	**-1.0**
WB0				IAmb		IAmb	15 10 16.9	
	comp=Z,3.8nm,1.1s							
WRA	**Warramunga Arr**	**45.66**	**266**	P		**P**	**15 09 51.6**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=104,slow=7.7,SNR=12							
	comp=Z,0.8nm,0.5s							
WRA	**Warramunga Arr**	**45.66**	**266**	IAmb		IAmb	15 09 59.3	
	comp=Z,0.3nm,1.5s							
FORT	**Forrest**	**48.94**	**250**	P		**P**	**15 10 17.4**	**-2.0**
FORT				IAmb		IAmb	15 10 32.3	
	comp=Z,7.8nm,1.0s							
KNRA	**Kununurra**	**52.04**	**270**	P		**P**	**15 10 41.6**	**-1.4**
KNRA				IAmb		IAmb	15 11 08.7	
	comp=Z,16nm,1.5s							
SAUI	**Saumlaki**	**52.74**	**280**	P		**P**	**15 10 48.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**54.06**	**265**	P		**P**	**15 10 57.2**	**-0.6**
CASY	**Casey**	**60.22**	**206**	P		**P**	**15 11 39.7**	**-0.9**
CASY				IAmb		IAmb	15 11 52.1	
	comp=Z,10nm,1.4s							
QSPA	**South Pole Qui**	**64.65**	**180**	P		**P**	**15 12 11.0**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=345,slow=0.6,SNR=16							
	comp=Z,1.6nm,0.6s							
QSPA	**South Pole Qui**	**64.65**	**180**	P		**P**	**15 12 10.6**	**+0.1**
QSPA				IAmb		IAmb	15 12 18.1	
	comp=Z,2.2nm,1.0s							
BBJI	**Bungbulang**	**74.25**	**269**	P		**P**	**15 13 10.9**	**+0.3**
BELA	**Belgrano 2**	**74.47**	**172**	P		**P**	**15 13 11.0**	**+0.2**
BELA				IAmb		IAmb	15 13 54.6	
	comp=Z,5.0nm,1.5s							
ADK	**Adak**	**76.99**	**360**	P		**P**	**15 13 26.6**	**+1.4**
MAW	**Mawson**	**77.46**	**200**	P		**P**	**15 13 28.4**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=11,slow=8.0,SNR=2.4							
	comp=Z,1.4nm,0.5s							
H03S2	**Juan Fernandez**	**81.95**	**124**	T		T	16 44 38.3	
	baz=243,slow=75,SNR=83							
H03S1	**Juan Fernandez**	**81.96**	**124**	T		T	16 44 31.2	
	baz=243,slow=75,SNR=87							
H03S3	**Juan Fernandez**	**81.96**	**124**	T		T	16 44 30.0	
	baz=243,slow=75,SNR=109							
TROLL	**Troll, Antarti**	**82.81**	**180**	P		**P**	**15 13 56.6**	**-0.3**
	comp=Z,56nm,0.5s							
SNAA	**Sanae**	**83.04**	**178**	P		**P**	**15 13 58.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=65,slow=4.4,SNR=3.5							
	comp=Z,1.3nm,0.7s							
SNAA	**Sanae**	**83.04**	**178**	IAmb		IAmb	15 14 02.2	
	comp=Z,4.0nm,1.2s							
VNA2	**Neumayer--Watz**	**83.58**	**176**	P		**P**	**15 14 01.2**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=173,slow=4.3							
O18K	**Koktuh Hills**	**86.74**	**10**	P		**P**	**15 14 17.4**	**+1.1**
O18K				IAmb		IAmb	15 14 25.4	
	comp=Z,5.3nm,1.0s							
CMAR	**Chiang Mai Arr**	**93.20**	**289**	P		**P**	**15 14 48.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=137,slow=2.7,SNR=8.9							
	comp=Z,0.8nm,0.7s							
NB2	**NORSAR Subarra**	**144.05**	**354**	PKP		**PKPdf**	**15 21 06.6**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=7.4,slow=3.5							
NOA	**NORSAR Array B**	**144.05**	**354**	PKP		**PKPdf**	**15 21 06.9**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=6.0,slow=2.3,SNR=5.3							
HFS	**Hagfors**	**144.64**	**351**	PKP		**PKPdf**	**15 21 08.2**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=36,slow=2.8,SNR=10							
BRTR	**Keskin Array B**	**151.18**	**307**	PKPbc		**PKiKP**	**15 21 26.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=94,slow=2.6,SNR=2.6							

IDC ***19*** *15:04:51.1±13.0, 14.°90S×166.°22E, h0km, mb3.8/3, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=233.4km s-min=38.3km az=59.0*
NEIC ***19*** *15:04:52.1±0.3, 14.°87S±0.°04×166.°4E±0.°2, h10km±2km, mb4.2/9, Error ellipse: s-maj=28.0km s-min=5.0km az=99.0*
NOU ***19*** *15:04:54.8, 14.°90S×167.°22E, h92km, MLv4.7/21, Vanuatu Islands*
ISC 19 15:04:51.4±1.4, 14.°8S±0.°1×166.°8E±0.°1, h35km, n26, σ1≧68/27, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.19**	**156**	P		**Pn**	**15 05 40.2**	**+1.2**
DVP	**Devils Point**	**3.19**	**156**	S		**Sn**	**15 06 15.1**	**-0.7**
RTV	**Rentapao**	**3.34**	**153**	P		**Pn**	**15 05 42.2**	**+1.0**
RTV	**Rentapao**	**3.34**	**153**	S		**Sn**	**15 06 18.3**	**-1.4**
KOUNC	**Koumac, New Ca**	**6.21**	**203**	Pn		**Pn**	**15 06 21.2**	**+0.5**
MARNC	**Mare, Loyalty**	**6.74**	**170**	P		**Pn**	**15 06 27.2**	**-0.7**
MARNC	**Mare, Loyalty**	**6.74**	**170**	Pn		**Pn**	**15 06 27.1**	**-0.8**
MARNC						Sn	15 07 34.5	-8.9
YATNC	**Mamie plateau,**	**7.22**	**180**	P		**Pn**	**15 06 34.8**	**+0.3**
DZM	**Mont Dzumac**	**7.24**	**183**	Pn		**Pn**	**15 06 37.4**	**+2.5**
	2.4nm,0.3s,baz=0.0,slow=20,SNR=55							
DZM						Sn	**Sn**	**15 07 57.1**	**+1.2**
	3.4nm,0.3s,baz=156,slow=21,SNR=6.4							
	17nm,0.5s							
NOUC	**Port Laguerre**	**7.28**	**184**	P		**Pn**	**15 06 38.7**	**+3.4**
ONTNC	**Ouen Toro**	**7.48**	**183**	P		**Pn**	**15 06 41.2**	**+3.2**
ONTNC	**Ouen Toro**	**7.48**	**183**	Pn		**Pn**	**15 06 37.4**	**-0.6**
OUENC	**Ouen Island, N**	**7.58**	**180**	P		**Pn**	**15 06 42.7**	**+3.3**
OUENC	**Ouen Island, N**	**7.58**	**180**	Pn		**Pn**	**15 06 41.5**	**+2.1**
EIDS	**Eidsvold**	**18.13**	**232**	Pn		**Pn**	**15 08 57.9**	**-2.7**
EIDS				IAmb		IAmb	15 09 05.3	
	comp=Z,3.3nm,0.6s							
STKA	**Stephens Creek**	**28.63**	**229**	P		**P**	**15 10 45.0**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=72,slow=8.4,SNR=4.7							
	comp=Z,1.7nm,0.6s							
WB0	**Warramunga Arr**	**31.34**	**256**	P		**P**	**15 11 08.1**	**-0.8**
WB0				IAmb		IAmb	15 11 42.1	
	comp=Z,1.5nm,1.5s							
WRAB	**Tennant Creek**	**31.39**	**256**	P		**P**	**15 11 08.5**	**-0.8**
WRAB				IAmb		IAmb	15 11 38.1	
	comp=Z,3.6nm,0.8s							
WRA	**Warramunga Arr**	**31.40**	**256**	P		**P**	**15 11 08.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=83,slow=8.3,SNR=2.1							
	comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**31.40**	**256**	P		**P**	**15 11 08.1**	**-1.3**
AS31	**Alice Springs**	**32.26**	**249**	P		**P**	**15 11 16.3**	**-0.6**
AS31				IAmb		IAmb	15 11 52.5	
	comp=Z,0.9nm,1.1s							
ASAR	**Alice Springs**	**32.26**	**249**	P		**P**	**15 11 16.4**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=76,slow=9.5,SNR=6.1							
	comp=Z,0.7nm,0.5s							
BBOO	**Buckleboo**	**33.21**	**232**	P		**P**	**15 11 24.9**	**-0.2**
DPSS	**Saipan**	**36.38**	**324**	P		**P**	**15 11 54.1**	**+1.5**
KNRA	**Kununurra**	**36.71**	**264**	P		**P**	**15 11 54.1**	**-1.3**
KNRA				IAmb		IAmb	15 12 16.0	
	comp=Z,12nm,1.4s							
FITZ	**Fitzroy Crossi**	**39.59**	**259**	P		**P**	**15 12 19.2**	**-0.5**

BER ***19*** *15:08:28.5±2.8, 81.°00N×3.°40W, h30km±58km, Mw3.5, ML1.5(DNK), Confirmed Earthquake*
ISC 19 15:08:21.1±0.9, 81.°08N±0.°07×3.°83W±0.°05, h10km, n13, σ3≧34/20, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.01**	**291**	*eP*		**Pg**	**15 08 59.6**	**0.0**
NOR	**Nord**	**2.01**	**291**	*iP*		**Pg**	**15 08 59.0**	**-0.6**
NOR				*iS*		**Sg**	**15 09 23.9**	**-1.7**
NOR				IAML			15 09 30.8	
	comp=Z,3.4nm,0.4s							
KBS	**Kingsbay**	**3.49**	**120**	*eP*		**Pn**	**15 09 17.4**	**+2.2**
KBS				IAML			15 09 19.5	
	comp=Z,17nm,0.1s							
KBS				*eS*		**Sn**	**15 09 53.0**	**-3.5**
BRBB	**Barentsburg B**	**4.42**	**123**	*eP*		**Pn**	**15 09 31.5**	**+3.5**
SPA0	**Spitsbergen Ar**	**4.64**	**118**	*eP*		**Pn**	**15 09 34.6**	**+3.5**
SPA0				IAML			15 09 35.6	
	comp=Z,7.7nm,0.4s							
DAG	**Danmarks Havn**	**5.16**	**221**	*eP*		**Pn**	**15 09 41.6**	**+3.3**
DAG				*eS*		**Sn**	**15 10 34.4**	**-3.3**
DAG	**Danmarks Havn**	**5.16**	**221**	*iP*		**Pn**	**15 09 41.4**	**+3.1**
DAG				*eS*		**Sn**	**15 10 36.7**	**-1.0**
DAG				IAML			15 10 42.8	
	comp=Z,1.5nm,0.3s							
HSPB	**Hornsund (broa**	**5.48**	**128**	*eP*		**Pn**	**15 09 45.8**	**+3.3**
DBG	**Daneborg**	**7.60**	**215**	*eP*		**Pn**	**15 10 14.8**	**+3.1**
DBG				*eS*		**Sn**	**15 11 32.6**	**-5.1**
DBG	**Daneborg**	**7.60**	**215**	*iP*		**Pn**	**15 10 14.6**	**+3.0**
DBG				*i* S		**Sn**	**15 11 33.7**	**-4.0**
DBG				IAML			15 11 39.1	
	comp=Z,1.1nm,0.3s							
OMEGA	**Omega**	**7.92**	**66**	*eP*		**Pn**	**15 10 16.7**	**+0.7**
OMEGA				*eS*		**Sn**	**15 11 41.0**	**-4.4**
	comp=Z,15nm,2.2s							
NEEM	**North Greenlan**	**9.25**	**272**	*i* P		**Pn**	**15 10 38.3**	**+3.8**
NEEM				*i* S		Sn	15 12 08.4	-10
NEEM				IAML			15 12 18.4	
	comp=Z,2.0nm,0.3s							
SUMG	**Summit**	**11.32**	**241**	*i* P		**Pn**	**15 11 05.5**	**+2.6**
SUMG				*i*			15 13 02.5	

NEIC ***19*** *15:12:02.8±2.4, 3.°62S±0.°08×144.°26E±0.°04, h10km±1km, mb4.1/20, Error ellipse: s-maj=13.4km s-min=6.4km az=164.0*
IDC ***19*** *15:12:08.7±3.1, 3.°63S×144.°12E, h55km±27km, mb3.6/9, mbtmp3.8/12, ML3.2/2, Error ellipse: s-maj=26.4km s-min=15.4km az=63.0*
ISC 19 15:12:05.6±0.6, 3.°56S±0.°07×144.°21E±0.°07, h31km, n38, σ1≧21/37, mb4.0/15, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.50**	**65**			**Pn**	**15 12 57.7**	**-0.3**
JAY	**Jayapura**	**3.65**	**286**	P		**Pn**	**15 12 60.0**	**-0.1**
	0.7nm,0.3s,baz=184,slow=14,SNR=4.1							
JAY				S		**Sn**	**15 13 43.9**	**+1.8**
	6.5nm,0.7s,baz=120,slow=21,SNR=1.2							
	7.5nm,0.7s							
PMG	**Port Moresby**	**6.51**	**153**	P		**Pn**	**15 13 43.3**	**+3.9**
	20nm,1.0s,baz=220,slow=12,SNR=2.2							
PMG	**Port Moresby**	**6.51**	**153**			**Pn**	**15 13 38.3**	**-1.1**
MTN	**Manton Dam**	**15.88**	**234**	Pn		**Pn**	**15 15 45.1**	**-2.0**
WB0	**Warramunga Arr**	**18.75**	**210**	P		**Pn**	**15 16 22.6**	**-0.1**
WR8	**Warramunga Arr**	**18.85**	**209**	P		**Pn**	**15 16 22.9**	**-1.2**
WR8				IAmb		IAmb	15 16 43.8	
	comp=Z,8.2nm,1.2s							
WRA	**Warramunga Arr**	**18.92**	**210**	P		**P**	**15 16 23.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=9.7							
	comp=Z,1.2nm,0.9s							
KNRA	**Kununurra**	**19.39**	**231**	P		**P**	**15 16 27.3**	**-2.0**
KNRA				IAmb		IAmb	15 16 47.5	
	comp=Z,8.2nm,0.9s							
SOEI	**Soe**	**20.73**	**252**	P		**P**	**15 16 41.4**	**-2.6**
LUWI	**Luwuk**	**21.56**	**276**	P		**P**	**15 16 53.5**	**+0.7**
AS31	**Alice Springs**	**22.33**	**206**	P		**P**	**15 17 00.2**	**-0.8**
ASAR	**Alice Springs**	**22.34**	**206**	P		**P**	**15 17 00.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=35,slow=8.7,SNR=12							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**22.34**	**206**	P		**P**	**15 17 00.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.23**	**230**	P		**P**	**15 17 09.0**

DZM	**Mont Dzumac**	**20.76**	**144**	P		**P**	**15 19 37.8**	**+1.1**
	8.1nm,0.5s,baz=179,slow=16,SNR=18							
DZM				LR		LR	15 25 41.1	
	comp=Z,67nm,19.3s,baz=30,slow=31							
	8.1nm,0.5s							
OUENC	**Ouen Island, N**	**21.26**	**144**	P		**P**	**15 19 42.8**	**+0.8**
OUENC				IAmb		IAmb	15 19 44.1	
	comp=Z,19nm,0.9s							
SIJI	**Sorong**	**22.73**	**281**	P		**P**	**15 19 58.4**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=142,slow=17,SNR=5.8							
	comp=Z,5.6nm,0.6s							
MTN	**Manton Dam**	**23.38**	**250**	P		**P**	**15 20 05.4**	**+1.0**
MTN				IAmb		IAmb	15 20 34.9	
	comp=Z,7.0nm,1.3s							
WB0	**Warramunga Arr**	**23.55**	**231**	P		**P**	**15 20 05.2**	**-0.9**
WB0				IAmb		IAmb	15 20 38.4	
	comp=Z,11nm,1.4s							
WR8	**Warramunga Arr**	**23.57**	**230**	P		**P**	**15 20 05.3**	**-0.9**
WR8				IAmb		IAmb	15 20 16.4	
	comp=Z,4.6nm,0.7s							
WRA	**Warramunga Arr**	**23.69**	**231**	P		**P**	**15 20 06.5**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=54,slow=9.7,SNR=19							
WRA				PcP		**PcP**	**15 23 50.0**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=58,slow=2.6,SNR=5.2							
WRA				ScP		**ScP**	**15 27 23.3**	**-2.7**
	comp=Z,0.5nm,0.8s,baz=57,slow=3.4,SNR=2.4							
	comp=Z,1.7nm,0.6s							
WRA	**Warramunga Arr**	**23.69**	**231**	P		**P**	**15 20 05.1**	**-2.2**
ARMA	**Armidale**	**25.01**	**184**	P		**P**	**15 20 19.0**	**-0.4**
ARMA				IAmb		IAmb	15 20 21.9	
	comp=Z,10nm,0.8s							
AS31	**Alice Springs**	**26.29**	**224**	P		**P**	**15 20 29.8**	**-1.3**
ASAR	**Alice Springs**	**26.30**	**224**	P		**P**	**15 20 30.1**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=56,slow=9.1,SNR=42							
ASAR				ScP		**ScP**	**15 27 31.7**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=47,slow=2.3,SNR=1.7							
ASAR				LR		LR	15 30 15.5	
	comp=Z,86nm,19.1s,baz=356,slow=35							
	comp=Z,0.9nm,0.4s							
ASAR	**Alice Springs**	**26.30**	**224**	P		**P**	**15 20 29.7**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**26.98**	**28**	T		T	15 48 53.6	
	baz=208,slow=76,SNR=7.4							
H11S2	**WAKE ISLAND Hy**	**26.99**	**28**	T		T	15 48 49.4	
	baz=208,slow=76,SNR=10							
H11S1	**WAKE ISLAND Hy**	**27.00**	**28**	T		T	15 49 00.3	
	baz=208,slow=76,SNR=4.2							
STKA	**Stephens Creek**	**28.68**	**202**	P		**P**	**15 20 51.4**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=44,slow=13,SNR=3.6							
	comp=Z,1.9nm,0.7s							
FITZ	**Fitzroy Crossi**	**30.10**	**243**	P		**P**	**15 21 03.9**	**-1.2**
FORT	**Forrest**	**34.88**	**220**	P		**P**	**15 21 46.0**	**-0.7**
FORT				IAmb		IAmb	15 21 47.0	
	comp=Z,9.8nm,1.0s							
HIZ	**Hauiti**	**38.24**	**153**	P		**P**	**15 22 16.0**	**+0.6**
URZ	**Urewera**	**39.12**	**150**	P		**P**	**15 22 22.7**	**0.0**
	comp=Z,7.0nm,0.8s,baz=202,slow=9.2,SNR=2.3							
	comp=Z,7.0nm,0.8s							
MRNZ	**Matariki Terra**	**39.77**	**157**	P		**P**	**15 22 28.7**	**+0.6**
LTZ	**Lake Taylor**	**40.79**	**159**	P		**P**	**15 22 36.4**	**-0.1**
MORW	**Morawa**	**42.62**	**232**	P		**P**	**15 22 51.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**58.82**	**295**	P		**P**	**15 24 53.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=116,slow=4.8,SNR=8.1							
	comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**72.26**	**178**	P		**P**	**15 26 19.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=330,slow=5.8,SNR=15							
	comp=Z,2.5nm,0.8s							
VNDA	**Vanda**	**72.26**	**178**	P		**P**	**15 26 19.6**	**0.0**
VNDA				IAmb		IAmb	15 26 20.7	
	comp=Z,2.5nm,0.8s							
SBA	**Scott Base**	**72.79**	**177**	P		**P**	**15 26 23.8**	**+0.9**
SBA				IAmb		IAmb	15 26 24.6	
	comp=Z,2.1nm,0.9s							
MKAR	**Makanchi Array**	**81.25**	**319**	P		**P**	**15 27 10.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=131,slow=4.4,SNR=4.3							
	comp=Z,0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**82.05**	**326**	P		**P**	**15 27 14.6**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=131,slow=4.4,SNR=2.8							
	comp=Z,0.4nm,0.3s							
BOOM	**Boomskoye usch**	**84.54**	**313**	P		**P**	**15 27 27.4**	**-1.0**
BOOM				IAmb		IAmb	15 27 28.0	
	comp=Z,3.6nm,1.0s							
QSPA	**South Pole Qui**	**84.62**	**180**	P		**P**	**15 27 27.4**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=314,slow=0.6,SNR=34							
	comp=Z,4.7nm,0.7s							
QSPA	**South Pole Qui**	**84.62**	**180**	P		**P**	**15 27 27.5**	**-0.6**
DIB	**Dawson Inlet,**	**84.73**	**35**	P		**P**	**15 27 28.8**	**+0.1**
MAW	**Mawson**	**85.37**	**203**	P		**P**	**15 27 30.8**	**-0.9**
	comp=Z,4.4nm,0.6s,baz=94,slow=5.2,SNR=16							
	comp=Z,4.4nm,0.6s							
MAW	**Mawson**	**85.37**	**203**	P		**P**	**15 27 31.0**	**-0.8**
MAW				IAmb		IAmb	15 27 31.8	
	comp=Z,0.9nm,0.7s							
BVAR	**Borovoye Array**	**90.15**	**323**	P		**P**	**15 27 55.9**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=116,slow=6.6,SNR=4.3							
	comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**151.23**	**288**	PKPbc		**PKPbc**	**15 34 46.8**	**-2.4**
	comp=Z,1.1nm,0.3s,baz=86,slow=2.1,SNR=12							

*IDC **19** 15:15:07.3±2.0, 17°.95S×178°.61W, h608^{km}±19^{km}, mb2.9/8, mbtmp3.8/9, Error ellipse: s-maj=44.9km s-min=18.8km az=141.0*
*NEIC **19** 15:15:07.7±1.3, 17°.79S±0°.08×178°.6W±0°.1, h607^{km}±7^{km}, mb4.0/22, Error ellipse: s-maj=16.9km s-min=10.3km az=73.0*

ISC 19 15:15:06.9±0.6, **17°.8S**±0°.1×**178°.68W**±0°.10, **h600**^{km}, **n39, σ0s83/40, mb3.9**/20, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**3.11**	**271**	P		**P**	**15 16 28.3**	**+1.4**
	7.3nm,0.6s,baz=154,slow=7.2,SNR=11							
MSVF	**Nonsavu**	**3.11**	**271**	P		**P**	**15 16 28.1**	**+1.2**
FUTU	**Fugatoga**	**3.53**	**9**	P		**P**	**15 16 30.4**	**+1.0**
NIUE	**Niue**	**8.40**	**100**	P		**P**	**15 17 10.9**	**+0.8**
MARNC	**Mare, Loyalty**	**13.04**	**252**	P		**P**	**15 17 55.6**	**-0.5**
TOZ	**Tahuroa Road**	**20.48**	**193**	P		**P**	**15 19 05.6**	**+0.8**
PPTF	**Pamatai, Papee**	**27.73**	**94**	P		**P**	**15 20 08.6**	**-0.7**
STKA	**Stephens Creek**	**38.45**	**241**	P		**P**	**15 21 38.6**	**-0.3**
	1.9nm,0.7s,baz=42,slow=7.9,SNR=3.1							
	1.9nm,0.7s							
INKA	**Innaminka**	**38.54**	**248**	P		**P**	**15 21 40.6**	**+0.8**
INKA				IAmb		IAmb	15 21 53.4	
	comp=Z,5.2nm,1.2s							
BBOO	**Buckleboo**	**43.22**	**241**	P		**P**	**15 22 16.3**	**-0.5**
WB0	**Warramunga Arr**	**44.36**	**260**	P		**P**	**15 22 26.2**	**+0.6**
WB0				IAmb		IAmb	15 22 33.0	
	comp=Z,9.9nm,1.2s							
WRA	**Warramunga Arr**	**44.39**	**259**	P		**P**	**15 22 26.3**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=97,slow=7.9,SNR=2.3							
WRA				PcP		**PcP**	**15 23 56.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=104,slow=3.1,SNR=2.0							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	**44.39**	**259**	P		**P**	**15 22 26.0**	**0.0**
AS31	**Alice Springs**	**44.56**	**254**	P		**P**	**15 22 27.4**	**+0.1**
ASAR	**Alice Springs**	**44.56**	**254**	P		**P**	**15 22 27.3**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=88,slow=8.5,SNR=28							
ASAR				PcP		**PcP**	**15 23 55.8**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=92,slow=3.4,SNR=8.7							
	comp=Z,3.2nm,0.6s							
ASAR	**Alice Springs**	**44.56**	**254**	P		**P**	**15 22 26.9**	**-0.4**
MJAR	**Matsushiro Arr**	**67.68**	**323**	P		**P**	**15 25 06.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=142,slow=6.2,SNR=4.0							
	comp=Z,0.8nm,0.7s							
ATKA	**Atka Island**	**69.83**	**3**	P		**P**	**15 25 18.0**	**-0.1**
ATKA				IAmb		IAmb	15 25 53.8	
	comp=Z,9.8nm,1.3s							
PEA0B	**Petropavlovsk-**	**73.53**	**345**	P		**P**	**15 25 40.5**	**+1.0**
PETK	**Petropavlovsk-**	**73.53**	**345**	P		**P**	**15 25 40.7**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=123,slow=4.6,SNR=4.4							
	comp=Z,0.8nm,0.5s							
N15K	**Kwethluk River**	**79.16**	**9**	P		**P**	**15 26 10.8**	**+0.6**
N15K				IAmb		IAmb	15 26 30.6	
	comp=Z,7.8nm,1.4s							
O18K	**Koktuh Hills**	**79.72**	**12**	P		**P**	**15 26 13.3**	**+0.2**
O18K				IAmb		IAmb	15 26 14.1	
	comp=Z,7.8nm,1.1s							
K15K	**Wolf Creek Mou**	**80.99**	**8**	P		**P**	**15 26 20.6**	**+1.0**
K15K				IAmb		IAmb	15 26 35.7	
	comp=Z,6.5nm,1.2s							
J16K	**Anvik River**	**82.07**	**8**	P		**P**	**15 26 25.7**	**+0.6**
GHO	**Glory Hole Cre**	**82.78**	**14**	P		**P**	**15 26 28.6**	**-0.3**
GHO				IAmb		IAmb	15 26 43.7	
	comp=Z,7.5nm,1.2s							
K20K	**Telida**	**83.17**	**11**	P		**P**	**15 26 30.9**	**+0.2**
RND	**Reindeer**	**84.24**	**13**	P		**P**	**15 26 36.1**	**+0.1**
G19K	**Purcell Mounta**	**85.27**	**9**	P		**P**	**15 26 41.4**	**+0.5**
G19K				IAmb		IAmb	15 26 56.4	
	comp=Z,5.2nm,1.3s							
IL31		**85.86**	**13**	P		**P**	**15 26 42.5**	**-1.1**
IL31				IAmb		IAmb	15 27 09.2	
	comp=Z,4.6nm,1.5s							
ILAR	**Eielson Array**	**85.86**	**13**	P		**P**	**15 26 42.9**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=218,slow=5.0,SNR=11							
	comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**86.17**	**58**	P		**P**	**15 26 46.7**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=217,slow=6.1,SNR=7.0							
	comp=Z,0.4nm,0.7s							
TASM	**ASL Pad, Albuq**	**86.24**	**52**	P		**P**	**15 26 45.2**	**-1.3**
TASM				IAmb		IAmb	15 27 23.7	
	comp=Z,2.9nm,1.4s							
E19K	**Redstone River**	**86.49**	**8**	P		**P**	**15 26 46.6**	**0.0**
E19K				IAmb		IAmb	15 27 29.4	
	comp=Z,5.7nm,1.2s							
PDAR	**Pinedale Array**	**87.47**	**44**	P		**P**	**15 26 51.1**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=270,slow=5.0,SNR=1.9							
	comp=Z,0.2nm,0.5s							
F24K	**Squaw Lake**	**88.05**	**11**	P		**P**	**15 26 54.1**	**+0.1**
F24K				IAmb		IAmb	15 27 37.2	
	comp=Z,2.1nm,1.1s							
AKASG	**Malin Array Be**	**140.36**	**332**	PKhKP		PKPpre	15 33 21.9	
	comp=Z,0.3nm,0.3s,baz=38,slow=3.6,SNR=4.1							
BRTR	**Keskin Array B**	**144.53**	**315**	PKP		**PKPab**	**15 33 36.1**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=54,slow=5.9,SNR=3.5							
CLL	**Collm**	**145.32**	**347**	*i* PKPbc		**PKPab**	**15 33 38.5**	**-1.3**
	comp=Z,4.0nm,0.6s							
GERES	**GERESS Array B**	**147.46**	**345**	PKPbc		**PKiKP**	**15 33 44.5**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=16,slow=2.5,SNR=9.1							

*IDC **19** 15:16:18.7±7.9, 39°.04N×142°.41E, h0^{km}, mb3.4/2, mbtmp3.2/3, ML2.1/1, MS3.3/1, Error ellipse: s-maj=177.5km s-min=47.2km az=166.0*
*JMA **19** 15:16:27.3±0.2, 38°.4N±0°.4×142°.2E±0°.8, h32^{km}±1^{km}, MV3.7/38, E OFF MIYAGI PREF*

ISC 19 15:16:26.9±2.5, **38°.43N**±0°.05×**142°.2E**±0°.1, **h27**^{km}±15^{km}, **n20, σ0s71/21, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**0.56**	**258**	*i* P		**Pb**	**15 16 38.3**	**+0.1**
JIKH				S		**Sb**	**15 16 45.6**	**-0.3**
JIO	**Ouri**	**0.65**	**273**	*i* P		**Pb**	**15 16 39.8**	**+0.2**
JIO				S		**Sb**	**15 16 48.2**	**0.0**
JKMT	**Kesennumamotoy**	**0.67**	**305**	⇓*i* P		**Pn**	**15 16 40.2**	**-0.3**
JKMT				⇓S		**Sb**	**15 16 49.1**	**+0.3**
OFUJ	**Ofunato**	**0.76**	**329**	⇓*i* P		**Pn**	**15 16 41.3**	**-0.5**
OFUJ				⇓S		**Sn**	**15 16 51.2**	**-1.2**
JMK	**Ichinoseki**	**0.91**	**305**	*i* P		**Pn**	**15 16 43.9**	**0.0**
JMK				S		**Sn**	**15 16 55.8**	**-0.2**
JOU	**Okura**	**1.18**	**267**	*i* P		**Pn**	**15 16 48.0**	**+0.3**
JOU				S		**Sb**	**15 17 03.5**	**-0.1**
JOM	**Marumori**	**1.22**	**243**	*i* P		**Pn**	**15 16 47.8**	**-0.4**
JOM	**Ohasama**	**1.25**	**327**	⇓*i* P		**Pn**	**15 16 48.9**	**+0.4**
JOM				⇓S		**Sb**	**15 17 05.0**	**-0.4**
JFK	**Kawauchi**	**1.47**	**224**	*i* P		**Pn**	**15 16 50.9**	**-0.7**
JYK	**Kaneyama**	**1.50**	**290**	P		**Pn**	**15 16 52.7**	**+0.8**
MJAR	**Matsushiro Arr**	**3.67**	**240**	Pn		**Pn**	**15 17 23.3**	**+1.4**
	0.1nm,0.3s,baz=50,slow=14,SNR=10							
MJAR				Sn		**Sb**	**15 18 13.6**	**-1.5**
	0.1nm,0.3s,baz=85,slow=24,SNR=1.2							
	0.4nm,0.3s							
JOW	**Kunigami**	**16.43**	**229**	LR		LR	15 26 54.5	
	comp=Z,89nm,19.1s,baz=194,slow=38							
H11N2	**WAKE ISLAND Hy**	**28.39**	**124**	T		T	15 52 36.8	
	baz=316,slow=75,SNR=16							
H11N1	**WAKE ISLAND Hy**	**28.40**	**124**	T		T	15 52 33.8	
	baz=316,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hy**	**28.41**	**124**	T		T	15 52 36.1	
	baz=316,slow=75,SNR=10							
H11S1	**WAKE ISLAND Hy**	**29.15**	**126**	T		T	15 53 32.9	
	baz=318,slow=76,SNR=8.4							
H11S3	**WAKE ISLAND Hy**	**29.16**	**126**	T		T	15 53 33.0	
	baz=318,slow=76,SNR=9.6							
H11S2	**WAKE ISLAND Hy**	**29.17**	**126**	T		T	15 53 33.5	
	baz=318,slow=76,SNR=11							
WRA	**Warramunga Arr**	**58.52**	**189**	P		**P**	**15 26 20.9**	**0.0**
	0.4nm,0.6s,baz=7.1,slow=7.1,SNR=5.1							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**62.25**	**189**	P		**P**	**15 26 47.0**	**+0.8**
	0.2nm,0.7s,baz=20,slow=8.3,SNR=2.1							
	0.2nm,0.7s							

*IDC **19** 15:30:48.8±1.8, 26°.18S×177°.87W, h176^{km}±15^{km}, mb3.2/6, mbtmp3.9/9, Error ellipse: s-maj=28.8km s-min=17.0km az=72.0*
*NEIC **19** 15:30:48.1±0.5, 26°.23S±0°.09×177°.8W±0°.2, h167^{km}±7^{km}, mb4.0/11, Error ellipse: s-maj=26.8km s-min=12.8km az=83.0*

ISC 19 15:30:50.1±0.8, **26°.29S**±0°.08×**177°.9W**±0°.2, **h200**^{km}, **n30, σ1s77/31, mb3.9**/13, **1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**2.95**	**181**	P		**Pn**	**15 31 37.1**	**-2.1**
	145nm,0.3s,baz=340,slow=22,SNR=4.1							
RAO				S		**Sn**	**15 32 16.9**	**-0.8**
	346nm,0.4s,baz=67,slow=23,SNR=3.7							
RAO	**Raoul Island**	**2.95**	**181**			**Pn**	**15 31 36.2**	**-2.9**
RAO						**Sn**	**15 32 13.5**	**-4.1**
MSVF	**Nonsavu**	**9.31**	**335**	P		**Pn**	**15 32 58.9**	**-1.8**
	11nm,0.8s,baz=137,slow=17,SNR=6.5							
MSVF	**Nonsavu**	**9.31**	**335**			**Pn**	**15 32 58.0**	**-2.7**
URZ	**Urewera**	**12.66**	**198**	S		Sn	15 35 54.4	-10
	4.4nm,0.6s,baz=5.7,slow=17,SNR=1.6							
MARNC	**Mare, Loyalty**	**13.75**	**287**	P		**P**	**15 33 59.3**	**+0.1**
DZM	**Mont Dzumac**	**14.91**	**283**	P		**P**	**15 34 11.0**	**-1.2**
	4.2nm,0.8s,baz=96,slow=22,SNR=1.3							
PLWZ	**Palliser**	**16.26**	**199**	P		**Pn**	**15 34 27.5**	**0.0**
TOO	**Toolangi**	**32.87**	**241**	P		**P**	**15 37 06.0**	**+0.8**
CTAO	**Charters Tower**	**33.47**	**273**	P		**P**	**15 37 11.0**	**+0.3**
CTAO				IAmb		IAmb	15 37 11.8	
	comp=Z,6.3nm,1.1s							
ASAR	**Alice Springs**	**43.59**	**263**	P		**P**	**15 38 36.2**	**+1.3**
	comp=Z,0.8nm,1.1s,baz=96,slow=8.2,SNR=7.2							
	comp=Z,0.8nm,1.1s							
WR8	**Warramunga Arr**	**44.06**	**268**	P		**P**	**15 38 39.1**	**+0.6**
WR8				IAmb		IAmb	15 38 50.9	
	comp=Z,3.9nm,1.1s							
WRAB	**Tennant Creek**	**44.20**	**268**	P		**P**	**15 38 40.1**	**+0.5**
WRAB				IAmb		IAmb	15 38 47.8	
	comp=Z,7.3nm,0.8s							
WRA	**Warramunga Arr**	**44.21**	**268**	P		**P**	**15 38 40.2**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=104,slow=7.7,SNR=5.9							
	comp=Z,0.2nm,0.4s							
WB0	**Warramunga Arr**	**44.21**	**268**	P		**P**	**15 38 40.2**	**+0.5**
WB0				IAmb		IAmb	15 38 53.2	
	comp=Z,7.8nm,1.4s							
VNDA	**Vanda**	**52.18**	**185**	P		**P**	**15 39 41.6**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=73,slow=3.2,SNR=1.4							
	comp=Z,0.2nm,0.5s							
FITZ	**Fitzroy Crossi**	**52.59**	**267**	P		**P**	**15 39 44.4**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=132,slow=12,SNR=2.0							
	comp=Z,1.7nm,0.9s							
FITZ	**Fitzroy Crossi**	**52.59**	**267**	IAmb		IAmb	15 39 46.8	
	comp=Z,3.4nm,1.5s							
QSPA	**South Pole Qui**	**63.80**	**180**	P		**P**	**15 41 02.9**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=186,slow=11,SNR=3.1							
	comp=Z,1.0nm,0.7s							
QSPA	**South Pole Qui**	**63.80**	**180**	P		**P**	**15 41 02.7**	**+1.9**
QSPA				IAmb		IAmb	15 41 03.5	
	comp=Z,2.5nm,1.1s							
BELA	**Belgrano 2**	**73.83**	**172**	P		**P**	**15 42 03.4**	**+1.1**
BELA				IAmb		IAmb	15 42 03.5	
	comp=Z,1.2nm,0.9s							
JMN	**Monobe**	**75.24**	**320**	P		**P**	**15 42 12.6**	**+1.6**
PETK	**Petropavlovsk-**	**81.88**	**345**	P		**P**	**15 42 47.1**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=177,slow=5.4,SNR=4.5							
	comp=Z,2.2nm,0.9s							
PETK	**Petropavlovsk-**	**81.88**	**345**	P		**P**	**15 42 47.3**	**+0.6**
TROLL	**Troll, Antarti**	**81.97**	**180**	P		**P**	**15 42 48.6**	**+1.2**
	comp=Z,73nm,0.4s							
VNA2	**Neumayer--Watz**	**82.82**	**177**	⇓P		**P**	**15 42 51.8**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=170,slow=4.1							
VNA1	**Neumayer--Stat**	**83.05**	**177**	P		**P**	**15 42 54.1**	**+1.4**
	comp=Z,4.1nm,0.8s							
HFS	**Hagfors**	**145.24**	**350**	PKPbc		**PKiKP**	**15 50 03.0**	**-4.3**
	comp=Z,1.5nm,0.7s,baz=75,slow=6.1,SNR=7.7							
AKASG	**Malin Array Be**	**148.01**	**327**	PKPbc		**PKPab**	**15 50 13.4**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=46,slow=4.2,SNR=7.0							
BRTR	**Keskin Array B**	**150.53**	**305**	PKPbc		**PKiKP**	**15 50 19.9**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=84,slow=2.9,SNR=4.3							
BRTR				PKPab		**PKPab**	**15 50 26.5**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=94,slow=3.5,SNR=8.7							

*IDC **19** 15:40:12.5±1.0, 0°.66S×133°.88E, h0^{km}, mb3.9/7, mbtmp3.9/10, ML4.0/3, Error ellipse: s-maj=27.5km s-min=12.5km az=80.0*
*DJA **19** 15:40:14.5±0.5, 1°.S±3°×13°.4E±°, h10^{km}±3^{km}, M4.3/12, mb4.5/7, MLv4.2/12*
*NEIC **19** 15:40:14.1±0.8, 0°.61S±0°.05×133°.86E±0°.09, h10^{km}±1^{km}, mb4.1/17, Error ellipse: s-maj=14.8km s-min=8.0km az=93.0*

ISC 19 15:40:15.2±1.7, **0°.58S**±0°.06×**133°.78E**±0°.04, **h17**^{km}±10^{km}, **n39, σ1s43/43, mb4.1**/12, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MWPI	**Manokwari, Pap**	**0.43**	**144**	P		**Pg**	**15 40 24.6**	**+0.6**
MWPI				S		**Sb**	**15 40 32.0**	**+1.3**
BAKI	**Biak**	**2.40**	**105**	P		**Pn**	**15 40 54.2**	**+0.5**
BAKI				S		**Sn**	**15 41 24.6**	**+1.8**
SIJI	**Sorong**	**2.53**	**263**	Pn		**Pn**	**15 40 56.2**	**+0.6**
	25nm,0.3s,baz=87,slow=3.7,SNR=148							
SIJI				Sn		**Sn**	**15 41 28.5**	**+2.5**
	30nm,0.3s,baz=74,slow=23,SNR=11							
	59nm,0.2s							
SIJI	**Sorong**	**2.53**	**263**	P		**Pn**	**15 40 55.9**	**+0.3**
SIJI				S		**Sn**	**15 41 28.4**	**+2.3**
SRPI	**Serui, Papua**	**2.77**	**118**	P		**Pn**	**15 40 59.2**	**+0.4**
SRPI				S		**Sn**	**15 41 34.4**	**+2.5**
FAKI	**Fak Fak**	**2.79**	**213**			**Pn**	**15 40 59.6**	**+0.5**
FAKI	**Fak Fak**	**2.79**	**213**	P		**Pn**	**15 40 59.3**	**+0.3**
FAKI				S		**Sn**	**15 41 35.3**	**+3.0**
MTN	**Manton Dam**	**12.47**	**192**			**Pn**	**15 43 11.1**	**-0.8**
KNRA	**Kununurra**	**15.80**	**198**			**Pn**	**15 43 54.6**	**-2.4**
KNRA				IAmb		IAmb	15 43 56.5	
	comp=Z,10nm,0.5s							
COEN	**Coen**	**16.22**	**145**			**Pn**	**15 44 02.7**	**+0.2**
COEN				IAmb		IAmb	15 44 23.3	
	comp=Z,8.0nm,0.9s							
WB0	**Warramunga Arr**	**19.08**	**178**	P		**P**	**15 44 35.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**19.16**	**204**	P		**P**	**15 44 36.8**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=38,slow=13,SNR=14							
FITZ				S		Sn	15 47 59.1	-14
	comp=Z,1.1nm,0.7s,baz=165,slow=8.4,SNR=1.4							
	comp=Z,1.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**19.16**	**204**	P		**P**	**15 44 36.5**	**-1.4**
WRA	**Warramunga Arr**	**19.25**	**178**	P		**P**	**15 44 37.6**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=359,slow=12,SNR=16							
WRA				S		**Sn**	**15 48 15.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=354,slow=32,SNR=1.9							
	comp=Z,1.4nm,0.5s							
WRA	**Warramunga Arr**	**19.25**	**178**	P		**P**	**15 44 35.3**	**-3.6**
WR8	**Warramunga Arr**	**19.27**	**178**	P		**P**	**15 44 37.8**	**-1.3**
WR8				IAmb		IAmb	15 44 43.2	
	comp=Z,7.5nm,1.1s							
AS31	**Alice Springs**	**22.95**	**180**	P		**P**	**15 45 17.7**	**-1.1**
ASAR	**Alice Springs**	**22.95**	**180**	P		**P**	**15 45 17.9**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=1.3,slow=12,SNR=26							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**22

PCAN			*e*S	**Sb**	**15 44 11.0**	**-1.2**
PCAN			*i* IAML		15 44 17.3	
PCAN			*i* IAML		15 44 18.4	
PCAN			*i* IAML		15 44 18.8	
PMAN	**Manadas**	**1.96 146**	*e*P	**Pn**	**15 43 46.5**	**+1.2**
PMAN			*e*S	**Sn**	**15 44 09.8**	**+0.2**
PMAN			*i* IAML		15 44 11.4	
PMAN			*i* IAML		15 44 11.4	
PMAN			*i* IAML		15 44 12.8	
PPNO	**Prainha do Nor**	**2.02 151**	*e*P	**Pb**	**15 43 48.2**	**-1.0**
PSBA	**Serra de Santa**	**2.25 131**	*e*P	**Pn**	**15 43 49.6**	**+0.3**
PSBA			*e*S	**Sn**	**15 44 15.5**	**-1.3**
PSBA			*i* IAML		15 44 21.4	
PSBA			*i* IAML		15 44 22.1	
PSBA			*i* IAML		15 44 22.1	
PAGU	**Agualva, Azore**	**2.33 129**	*e*P	**Pn**	**15 43 50.7**	**+0.3**
PAGU			*e*S	**Sn**	**15 44 17.0**	**-1.7**
PAGU			*i* IAML		15 44 18.7	
PAGU			*i* IAML		15 44 19.4	
PAGU			*i* IAML		15 44 21.4	
ADH	**Angra Heroismo**	**2.38 132**	*i* P	**Pn**	**15 43 51.7**	**+0.7**
ADH			*e*S	**Sn**	**15 44 18.8**	**-1.0**
ADH			*i* IAML		15 44 23.4	
ADH			*i* IAML		15 44 23.6	
ADH			*i* IAML		15 44 24.1	
PSCM	**Serra do Cume**	**2.41 129**	*e*P	**Pn**	**15 43 52.1**	**+0.5**
PSCM			*e*S	**Sn**	**15 44 19.9**	**-1.0**
PSCM			*i* IAML		15 44 26.0	
PSCM			*i* IAML		15 44 26.3	
PSCM			*i* IAML		15 44 27.9	
PDA	**Ponta Delgada**	**3.90 129**	*e*P	**Pn**	**15 44 14.0**	**+2.0**
PDA			*e*S	**Sn**	**15 44 59.3**	**+1.7**
PDA			*i* IAML		15 45 01.3	
PDA			*i* IAML		15 45 01.7	
PDA			*i* IAML		15 45 01.7	
PGRON	**Lagoa das Cont**	**4.06 126**	*e*S	**Sn**	**15 44 59.7**	**-1.9**
PGRON			*i* IAML		15 45 06.1	
PGRON			*i* IAML		15 45 06.3	
PGRON			*i* IAML		15 45 06.5	
BART	**Pico Bartolome**	**4.19 125**	*e*P	**Pn**	**15 44 17.1**	**+1.0**
BART			*e*S	**Sn**	**15 45 02.5**	**-2.1**
BART			*i* IAML		15 45 08.6	
BART			*i* IAML		15 45 09.8	
PSMN	**Pico do Norte,**	**4.76 132**	*e*P	**Pn**	**15 44 24.8**	**+1.0**
ESDC	**Sonseca Array**	**19.57 83**	P	**Pn**	**15 47 41.2**	**-0.2**
	baz=303,slow=30,SNR=4.8					
ESDC			LR	LR	15 53 58.9	
	comp=Z,258nm,19.1s,baz=278,slow=33 0.4nm,0.7s					
MDT	**Midelt**	**21.30 103**	LR	LR	15 54 32.2	
	comp=Z,162nm,20.7s,baz=298,slow=32					
BORG	**Borgarnes**	**24.99 8**	LR	LR	15 55 45.1	
	comp=Z,65nm,19.0s,baz=172,slow=30					
SCHQ	**Schefferville**	**28.71 313**	LR	LR	15 59 14.6	
	comp=Z,101nm,19.1s,baz=92,slow=34					
DAVOX	**Davos/Dischmat**	**29.06 64**	LR	LR	15 59 00.9	
	comp=Z,71nm,20.7s,baz=258,slow=33					
SFJD	**Kangerlussuaq**	**29.25 343**	LR	LR	15 58 05.8	
	comp=Z,45nm,19.6s,baz=152,slow=31					
KEST	**Kesra**	**30.78 86**	LR	LR	16 00 49.8	
	comp=Z,106nm,21.3s,baz=347,slow=34					
GERES	**GERESS Array B**	**31.60 60**	LR	LR	16 01 22.4	
	comp=Z,57nm,18.4s,baz=256,slow=34					
NOA	**NORSAR Array B**	**32.37 36**	LR	LR	16 00 58.6	
	comp=Z,30nm,20.2s,baz=255,slow=33					
FRB	**Frobisher Bay**	**32.77 329**	LR	LR	15 59 30.5	
	comp=Z,35nm,21.7s,baz=122,slow=30					
HFS	**Hagfors**	**33.23 39**	LR	LR	16 02 16.1	
	comp=Z,60nm,19.5s,baz=240,slow=34					
VAE	**Valguarnera**	**34.05 80**	LR	LR	16 02 24.4	
	comp=Z,126nm,19.8s,baz=305,slow=34					
SADO	**Sadowa**	**36.41 294**	LR	LR	16 03 54.0	
	comp=Z,196nm,20.9s,baz=169,slow=34					
TORD	**Torodi Ar. Bea**	**38.45 126**	P	**P**	**15 50 36.1**	**+2.1**
	1.3nm,1.0s,baz=307,slow=8.7,SNR=4.8 1.3nm,1.0s					
SJG	**San Juan**	**38.48 246**	LR	LR	16 02 29.0	
	comp=Z,39nm,20.3s,baz=107,slow=30					
FINES	**FINESS Array B**	**39.43 39**	LR	LR	16 05 36.5	
	comp=Z,74nm,19.2s,baz=264,slow=34					
DBIC	**Dimbokro**	**40.08 140**	LR	LR	16 07 09.6	
	comp=Z,90nm,18.0s,baz=320,slow=36					
MLR	**Muntele Rosu**	**40.29 64**	LR	LR	16 05 45.4	
	comp=Z,40nm,21.4s,baz=312,slow=34					
MDP	**Montagnes des**	**40.73 217**	LR	LR	16 03 23.4	
	comp=Z,35nm,21.4s,baz=346,slow=30					
ARCES	**ARCESS Array B**	**40.81 26**	LR	LR	16 05 47.3	
	comp=Z,21nm,21.8s,baz=269,slow=33					
AKASG	**Malin Array Be**	**41.46 55**	P	**P**	**15 50 58.2**	**-0.4**
	0.2nm,0.4s,baz=267,slow=9.1,SNR=1.5					
AKASG			LR	LR	16 07 46.4	
	comp=Z,74nm,18.1s,baz=273,slow=36 0.2nm,0.4s					
TKL	**Tuckaleechee C**	**42.48 282**	LR	LR	16 07 24.0	
	comp=Z,77nm,19.3s,baz=42,slow=34					
ULM	**Lac du Bonnet**	**46.34 306**	LR	LR	16 09 57.5	
	comp=Z,143nm,19.2s,baz=48,slow=35					
BRTR	**Keskin Array B**	**47.44 66**	LR	LR	16 10 55.3	
	comp=Z,22nm,21.4s,baz=298,slow=35					
EIL	**Elat**	**52.83 80**	LR	LR	16 16 09.0	
	comp=Z,28nm,18.1s,baz=278,slow=37					
ASF	**Jabal al Asfar**	**53.06 76**	LR	LR	16 16 11.9	
	comp=Z,26nm,19.3s,baz=31,slow=37					
YKA	**Yellowknife Ar**	**53.10 325**	LR	LR	16 12 27.2	
	comp=Z,30nm,18.9s,baz=20,slow=33					
ROSC	**El Rosal**	**53.49 241**	LR	LR	16 13 18.4	
	comp=Z,87nm,20.2s,baz=71,slow=34					
GNI	**Garni**	**55.06 64**	LR	LR	16 18 11.1	
	comp=Z,28nm,18.1s,baz=314,slow=38					
ARTI	**Arti**	**56.59 42**	LR	LR	16 16 31.5	
	comp=Z,49nm,18.0s,baz=224,slow=35					
JTS	**Las Juntas de**	**57.22 255**	LR	LR	16 13 40.7	
	comp=Z,48nm,21.2s,baz=46,slow=32					
PDAR	**Pinedale Array**	**57.80 301**	P	**P**	**15 53 02.9**	**-0.7**
	0.2nm,0.6s,baz=69,slow=8.3,SNR=5.1					
PDAR			LR	LR	16 17 46.0	
	comp=Z,61nm,18.6s,baz=49,slow=36 0.2nm,0.6s					
ANMO	**Albuquerque**	**59.41 292**	LR	LR	16 18 17.0	
	comp=Z,58nm,18.5s,baz=52,slow=36					
NEW	**Newport**	**59.99 310**	LR	LR	16 18 25.7	
	comp=Z,85nm,18.3s,baz=64,slow=35					
TXAR	**Lajitas Array**	**60.26 285**	P	**P**	**15 53 19.3**	**-1.3**
	0.6nm,0.7s,baz=39,slow=7.1,SNR=7.5					
TXAR			LR	LR	16 20 04.1	
	comp=Z,52nm,18.5s,baz=50,slow=37 0.6nm,0.7s					
CMIG	**Matias Romero**	**60.47 268**	LR	LR	16 16 38.5	
	comp=Z,62nm,21.2s,baz=6.5,slow=33					
DLBC	**Dease Lake**	**61.71 324**	LR	LR	16 17 54.6	
	comp=Z,19nm,19.5s,baz=56,slow=34					
BBB	**Bella Bella**	**64.11 317**	LR	LR	16 20 59.1	
	comp=Z,43nm,19.5s,baz=62,slow=36					
ATAH	**Atahualpa**	**65.17 235**	LR	LR	16 20 18.6	
	comp=Z,47nm,20.2s,baz=13,slow=34					
NVAR	**Mina Array Bea**	**65.73 301**	LR	LR	16 22 58.5	
	comp=Z,57nm,18.1s,baz=141,slow=36					
YBH	**Yreka Blue Hor**	**66.75 306**	LR	LR	16 21 55.7	
	comp=Z,62nm,20.2s,baz=37,slow=35					
LPAZ	**La Paz**	**66.75 221**	P	**P**	**15 54 04.1**	**0.0**
	1.2nm,0.9s,baz=68,slow=7.1,SNR=4.1					
LPAZ			LR	LR	16 19 23.9	
	comp=Z,36nm,22.0s,baz=52,slow=32 1.2nm,0.9s					
PFO	**Pinyon Flats O**	**67.14 295**	LR	LR	16 23 06.3	
	comp=Z,49nm,18.1s,baz=80,slow=36					
LPIG	**La Paz**	**68.09 284**	LR	LR	16 22 12.1	
	comp=Z,47nm,21.6s,baz=48,slow=34					
MBAR	**Mbarara**	**68.09 111**	LR	LR	16 22 17.8	
	comp=Z,45nm,20.6s,baz=12,slow=34					
KURBB	**Kurchatov Arra**	**69.80 40**	P	**P**	**15 54 23.4**	**+1.2**
	0.9nm,1.0s,baz=304,slow=6.6,SNR=4.9 0.9nm,1.0s					
TSUM	**Tsumeb**	**73.62 134**	LR	LR	16 24 50.1	
	comp=Z,37nm,21.0s,baz=331,slow=34					
MKAR	**Makanchi Array**	**74.19 42**	P	**P**	**15 54 49.5**	**+0.9**
	0.3nm,0.8s,baz=286,slow=5.9,SNR=3.7					
MKAR			LR	LR	16 27 11.2	
	comp=Z,43nm,19.8s,baz=289,slow=36 0.3nm,0.8s					
LSZ	**Lusaka**	**76.92 123**	LR	LR	16 28 03.8	
	comp=Z,66nm,20.4s,baz=250,slow=35					
LBTB	**Lobatse**	**82.73 131**	LR	LR	16 29 32.1	
	comp=Z,39nm,20.9s,baz=340,slow=34					
BOSA	**Boshof**	**85.32 134**	LR	LR	16 32 01.1	
	comp=Z,47nm,20.2s,baz=354,slow=34					
SUR	**Sutherland**	**85.96 139**	LR	LR	16 32 55.2	
	comp=Z,37nm,18.2s,baz=330,slow=35					

*NEIC **19** 16:01:15.1±1.4, 11°.08S±0°.10×166°.5E±0°.1, h123km±2km, mb4.1/16, Error ellipse: s-maj=19.8km s-min=13.8km az=78.0*
*IDC **19** 16:01:19.2±3.3, 11°.28S×166°.51E, h170km±28km, mb3.3/6, mbtmp3.8/7, Error ellipse: s-maj=26.0km s-min=25.7km az=16.0*

ISC 19 16:01:17.1±0.7, **11°.18S**±0°.09×**166°.57E**±0°.09, **h146**km, **n27,** σ1**33**/28, **mb3.9**/14, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.74**	**284**	P	**Pn**	**16 02 53.7**	**0.0**
	1.8nm,0.7s,baz=261,slow=2.3,SNR=4.4						
HNR				S	**Sn**	**16 04 13.6**	**+4.2**
	1.2nm,0.8s,baz=38,slow=4.5,SNR=1.6						
HNR	**Honiara**	**6.74**	**284**		**Pn**	**16 02 49.9**	**-3.8**
DZM	**Mont Dzumac**	**10.83**	**181**	P	**Pn**	**16 03 49.3**	**+1.0**
	4.6nm,0.8s,baz=96,slow=9.4,SNR=3.2						
PATS	**Pohnpei**	**19.69**	**335**	Pn	**P**	**16 05 35.1**	**0.0**
EIDS	**Eidsvold**	**20.35**	**224**	P	**P**	**16 05 41.8**	**-0.4**
EIDS				IAmb	IAmb	16 06 17.8	
	comp=Z,17nm,1.5s						
COEN	**Coen**	**23.00**	**261**	P	**P**	**16 06 09.1**	**-0.3**
COEN				IAmb	IAmb	16 06 33.4	
	comp=Z,14nm,1.2s						
INKA	**Innaminka**	**29.30**	**232**	P	**P**	**16 07 06.0**	**+0.2**
INKA				IAmb	IAmb	16 07 33.3	
	comp=Z,4.5nm,1.4s						
LTZ	**Lake Taylor**	**31.87**	**172**	P	**P**	**16 07 28.5**	**+0.1**
WRA	**Warramunga Arr**	**32.20**	**250**	P	**P**	**16 07 30.2**	**-1.4**
	comp=Z,1.6nm,1.0s,baz=82,slow=9.2,SNR=5.7 comp=Z,1.6nm,1.0s						
WRA	**Warramunga Arr**	**32.20**	**250**	P	**P**	**16 07 30.0**	**-1.6**
AS31	**Alice Springs**	**33.45**	**244**	P	**P**	**16 07 42.7**	**+0.2**
ASAR	**Alice Springs**	**33.46**	**244**	P	**P**	**16 07 41.0**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=66,slow=10,SNR=9.6 comp=Z,0.3nm,0.7s						
BBOO	**Buckleboo**	**35.33**	**228**	P	**P**	**16 07 58.3**	**-0.2**
JKA	**Kamikawa-asahi**	**59.19**	**340**	P	**P**	**16 11 03.1**	**+0.4**
JKA				IAmb	IAmb	16 11 04.2	
	comp=Z,2.4nm,1.0s						
VNDA	**Vanda**	**66.37**	**181**	P	**P**	**16 11 50.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**72.91**	**293**	P	**P**	**16 12 31.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=106,slow=5.7,SNR=4.2 comp=Z,0.8nm,0.3s						
QSPA	**South Pole Qui**	**78.83**	**180**	P	**P**	**16 13 03.5**	**-0.2**
QSPA				IAmb	IAmb	16 13 35.2	
	comp=Z,2.5nm,1.5s						
L19K	**White Mountain**	**79.06**	**17**	P	**P**	**16 13 05.5**	**+0.7**
L19K				IAmb	IAmb	16 13 06.8	
	comp=Z,2.5nm,1.0s						
E19K	**Redstone River**	**82.67**	**13**	P	**P**	**16 13 24.0**	**+0.2**
E19K				IAmb	IAmb	16 13 32.7	
	comp=Z,5.2nm,1.3s						
CCB	**Clear Creek Bu**	**83.02**	**18**	P	**P**	**16 13 25.9**	**+0.3**
CCB				IAmb	IAmb	16 13 26.1	
	comp=Z,1.7nm,1.0s						
ILAR	**Eielson Array**	**83.38**	**18**	P	**P**	**16 13 26.7**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=239,slow=4.9,SNR=5.3 comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**83.38**	**18**	P	**P**	**16 13 27.3**	**-0.2**
J25K	**Salcha River,**	**83.75**	**19**	P	**P**	**16 13 29.8**	**+0.3**
J25K				IAmb	IAmb	16 13 30.9	
	comp=Z,2.6nm,0.9s						
NVAR	**Mina Array Bea**	**85.49**	**50**	P	**P**	**16 13 39.9**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=243,slow=4.8,SNR=1.9 comp=Z,0.2nm,0.6s						
N32M	**Quiet Lake**	**86.16**	**25**	P	**P**	**16 13 41.9**	**+0.3**
MKAR	**Makanchi Array**	**94.17**	**317**	P	**P**	**16 14 18.5**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=116,slow=6.0,SNR=7.7 comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**94.17**	**317**	P	**P**	**16 14 18.7**	**-0.7**

*IDC **19** 16:03:20.8±1.1, 0°.67S×135°.75E, h0km, mb3.8/4, mbtmp3.7/8, ML3.5/4, MS2.7/3, Error ellipse: s-maj=29.1km s-min=21.9km az=81.0*
*DJA **19** 16:03:22.4±0.5, 1°.5±4°×13°.6E±°, h10km, M4.4/7, mb4.5/3, MLv4.4/7*
*NEIC **19** 16:03:25.6±1.3, 0°.84S±0°.10×135°.78E±0°.07, h22km±8km, mb4.0/10, Error ellipse: s-maj=14.4km s-min=10.0km az=203.0*

ISC 19 16:03:24.1±0.8, **0°.63S**±0°.08×**135°.80E**±0°.05, **h29**km, **n28,** σ1**93**/31, **mb3.9**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**0.64**	**151**	P	**Pn**	**16 03 37.0**	**-0.2**
BAKI				S	**Sn**	**16 03 46.9**	**+0.6**
SRPI	**Serui, Papua**	**1.31**	**160**	P	**Pn**	**16 03 46.6**	**+0.2**
SRPI				S	**Sb**	**16 04 06.4**	**+2.0**
MWPI	**Manokwari, Pap**	**1.78**	**260**	P	**Pn**	**16 03 52.6**	**-0.3**
MWPI				S	**Sb**	**16 04 17.5**	**-0.5**
FAKI	**Fak Fak**	**4.21**	**237**	Pn	**Pn**	**16 04 27.1**	**+0.7**
FAKI	**Fak Fak**	**4.21**	**237**	P	**Pn**	**16 04 27.5**	**+1.1**
SIJI	**Sorong**	**4.54**	**267**	Pn	**Pn**	**16 04 31.6**	**+0.8**
	0.6nm,0.3s,baz=135,slow=24,SNR=11						
SIJI				Sn	**Sn**	**16 05 19.1**	**-3.5**
	1.0nm,0.3s,baz=238,slow=23,SNR=2.0						
SIJI				LR	LR	16 06 10.3	
	comp=Z,117nm,18.2s,baz=36,slow=38 4.9nm,0.6s						
JAY	**Jayapura**	**5.25**	**111**	Pn	**Pn**	**16 04 40.2**	**-0.6**
	0.6nm,0.3s,baz=227,slow=12,SNR=6.3						
JAY				Sn	**Sn**	**16 05 33.1**	**-7.3**
	0.5nm,0.3s,baz=12,slow=6.4,SNR=1.5						
JAY				LR	LR	16 07 06.5	
	comp=Z,77nm,21.0s,baz=32,slow=43 9.2nm,0.9s						
JAY	**Jayapura**	**5.25**	**111**	P	**Pn**	**16 04 41.2**	**+0.5**
	9.8nm,1.4s						
DAV	**Davao City (W)**	**12.74**	**307**	LR	LR	16 10 34.0	
	comp=Z,31nm,19.1s,baz=156,slow=34						
MTN	**Manton Dam**	**12.98**	**201**	Pn	**Pn**	**16 06 26.3**	**-0.4**
TOLI2	**Tolitoli**	**15.11**	**277**	P	**P**	**16 07 01.8**	**+1.2**
TOLI2				IAmb	IAmb	16 07 02.4	
	comp=Z,5.2nm,0.7s						
KNRA	**Kununurra**	**16.48**	**205**		**Pn**	**16 07 12.0**	**-1.4**
KNRA				IAmb	IAmb	16 07 13.1	
	comp=Z,11nm,0.8s						
RABL	**Rabaul**	**16.73**	**102**	P	**P**	**16 07 19.7**	**+1.1**
RABL				IAmb	IAmb	16 07 28.0	
	comp=Z,14nm,0.6s						
WB0	**Warramunga Arr**	**19.07**	**184**	P	**P**	**16 07 43.5**	**-0.9**
WB0				IAmb	IAmb	16 08 11.3	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**19.24**	**184**	P	**P**	**16 07 46.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=1.4,slow=12,SNR=7.3 comp=Z,1.4nm,0.7s						
WR8	**Warramunga Arr**	**19.25**	**184**	P	**P**	**16 07 45.8**	**-0.5**
WR8				IAmb	IAmb	16 07 51.1	
	comp=Z,4.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.02**	**209**	P	**P**	**16 07 54.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=30,slow=11,SNR=13 comp=Z,2.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.02**	**209**	P	**P**	**16 07 54.4**	**-0.4**
KKM	**Kota Kinabalu**	**20.64**	**289**	P	Pn	16 08 03.4	-0.7
AS31	**Alice Springs**	**22.97**	**184**	P	**P**	**16 08 24.2**	**-2.3**
ASAR	**Alice Springs**	**22.97**	**184**	P	**P**	**16 08 27.1**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=11,slow=10,SNR=23 comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**22.97**	**184**	P	**P**	**16 08 23.9**	**-2.6**
INKA	**Innaminka**	**27.37**	**170**	P	**P**	**16 09 06.9**	**0.0**
INKA				IAmb	IAmb	16 09 10.1	
	comp=Z,5.6nm,1.5s						
FORT	**Forrest**	**30.87**	**193**	P	**P**	**16 09 38.2**	**+0.2**
STKA	**Stephens Creek**	**31.56**	**171**	P	**P**	**16 09 44.4**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=344,slow=6.7,SNR=4.0 comp=Z,3.2nm,0.7s						
KURBB	**Kurchatov Arra**	**70.37**	**325**	P	**P**	**16 14 35.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=116,slow=6.2,SNR=5.6 comp=Z,0.2nm,0.3s						
ILAR	**Eielson Array**	**85.17**	**25**	P	**P**	**16 16 01.0**	**+3.6**
	comp=Z,0.4nm,0.8s,baz=262,slow=5.3,SNR=3.0 comp=Z,0.4nm,0.8s						
LPAZ	**La Paz**	**151.01**	**127**	PKPbc	**PKiKP**	**16 23 17.2**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=277,slow=2.4,SNR=3.6						

*TEH **19** 16:04:22.9, 35°.04N×45°.59E, h8km±70km, ML3.5, Presumed earthquake*
*ISN **19** 16:04:27.2±1.9, 35°.05N×45°.59E, h8km, ML3.6, Presumed earthquake*

ISC 19 16:04:26.6±1.3, **35°.10N**±0°.05×**45°.83E**±0°.07, **h10**km, **n10,** σ1**43**/13, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.61**	**131**	Pg	**Pg**	**16 04 37.2**	**-1.3**
IDHR				Sg	**Sb**	**16 04 49.2**	**+0.9**
IGHG	**Ghaleghazi**	**0.98**	**142**	Pg	**Pg**	**16 04 44.1**	**-1.5**
SNJK	**Sanadaj _Korde**	**1.07**	**72**	Pg	**Pg**	**16 04 47.1**	**-0.2**
KCHF	**Cheshme Sefid,**	**1.29**	**129**	Pg	**Pn**	**16 04 49.8**	**-1.2**
SNQR	**Sonqor, Kerman**	**1.50**	**99**	Pg	**Pn**	**16 04 54.3**	**+0.5**
ILBA	**Ilam Banvizeh**	**1.51**	**168**	Pg	**Pn**	**16 04 51.8**	**-2.0**
MAHB	**Mahabad**	**1.66**	**357**	Pg	**Pn**	**16 04 55.3**	**-0.8**
BHD	**Baghdad**	**2.19**	**214**	*i* P	**Pn**	**16 05 03.0**	**0.0**
	baz=29						
BHD				*i* S	**Sn**	**16 05 31.0**	**+0.8**
BHD				IAML		16 05 31.7	
	comp=N,686nm,0.6s						
BHD				IAML		16 05 32.2	
	comp=E,629nm,0.6s						
RAFI	**Al-Rafai**	**3.38**	**176**	*i* P	**Pn**	**16 05 20.2**	**+0.7**
RAFI				*i* S	**Sn**	**16 06 02.5**	**+2.9**
AMIS	**Naft Sefid**	**4.48**	**139**	Pn	**Pn**	**16 05 34.4**	**-0.3**

*IDC **19** 16:10:18.0±1.1, 5°.90S×105°.55E, h0km, mb3.9/7, mbtmp4.0/8, ML4.9/1, Error ellipse: s-maj=53.5km s-min=21.2km az=41.0*
*NEIC **19** 16:10:31.8±0.6, 5°.6S±0°.1×105°.93E±0°.09, h103km±8km, mb4.1/13, Error ellipse: s-maj=18.2km s-min=9.0km az=218.0*
*DJA **19** 16:10:34.8±0.2, 6°.5±4°×10°.6E±°, h113km±3km, M4.2/33, mB5.0/4, mb4.4/6, MLv4.0/33, Mw(mB)4.4/4*

ISC 19 16:10:31.4±0.6, **5°.72S**±0°.10×**105°.89E**±0°.07, **h100**km, **n34,** σ2**07**/36, **mb4.0**/13, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**2.04**	**123**	P	**Pn**	**16 11 07.7**	**+3.1**
LEM				S	**Sn**	**16 11 33.9**	**+3.9**
BBJI	**Bungbulang**	**2.46**	**135**		**Pn**	**16 11 11.1**	**+1.0**
BBJI	**Bungbulang**	**2.46**	**135**	P	**Pn**	**16 11 11.6**	**+1.5**
BBJI				S	**Sn**	**16 11 41.1**	**+1.4**
MNAI	**Manna**	**3.22**	**295**	Pn	**Pn**	**16 11 19.9**	**-0.2**
MNAI	**Manna**	**3.22**	**295**	P	Pn	16 11 25.7	+5.6
MNAI				S	**Sn**	**16 12 02.8**	**+5.1**
TPI	**Tanjungpandan**	**3.43**	**31**	P	Pn	16 11 31.4	+8.5
EGSI	**Enggano, Bengk**	**3.62**	**276**	P	**Pn**	**16 11 28.7**	**+3.3**
EGSI				S	**Sn**	**16 12 06.5**	**-0.7**
KSI	**Kapahiang**	**3.88**	**302**	P	Pn	16 11 35.1	+6.1
KSI				S	**Sn**	**16 12 20.1**	**+6.5**
UGM	**Wanagama**	**5.09**	**116**	Pn	**Pn**	**16 11 45.2**	**-0.2**
UGM	**Wanagama**	**5.09**	**116**	P	**Pn**	**16 11 48.7**	**+3.3**
	122nm,1.5s						
GSI	**Gunungsitoli**	**10.85**	**310**	Pn	**Pn**	**16 13 03.4**	**-0.3**
COCO	**West Island**	**11.02**	**234**	Pn	**Pn**	**16 13 07.3**	**+1.3**
BATI	**Baumata**	**18.15**	**105**	P	**P**	**16 14 35.0**	**-1.2**
	3.7nm,0.3s,baz=161,slow=20,SNR=2.0 10.0nm,0.3s						
GIRL	**Giralia**	**18.66**	**155**	Pn	**Pn**	**16 14 44.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**22.88**	**124**	P	**P**	**16 15 25.4**	**-1.2**
	0.9nm,0.4s,baz=324,slow=8.7,SNR=1.4 0.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.88**	**124**	P	**P**	**16 15 26.2**	**-0.4**
KNRA	**Kununurra**	**24.53**	**116**	P	**P**	**16 15 41.2**	**-0.6**
KNRA				IAmb	IAmb	16 16 03.8	
	comp=Z,8.0nm,1.1s						
MORW	**Morawa**	**25.13**	**159**	P	**P**	**16 15 45.7**	**-1.5**
MTN	**Manton Dam**	**25.88**	**108**	P	**P**	**16 15 53.6**	**-0.6**
MTN				IAmb	IAmb	16 16 01.8	
	comp=Z,7.2nm,1.4s						
WB0	**Warramunga Arr**	**31.03**	**119**	P	**P**	**16 16 39.6**	**-0.3**
WRA	**Warramunga Arr**	**31.06**	**120**	P	**P**	**16 16 39.5**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=290,slow=9.8,SNR=5.7 comp=Z,2.9nm,1.0s						
WR8	**Warramunga Arr**	**31.20**	**120**	P	**P**	**16 16 40.7**	**-0.7**
WR8				IAmb	IAmb	16 16 42.1	
	comp=Z,4.2nm,1.1s						
AS31	**Alice Springs**	**32.33**	**126**	P	**P**	**16 16 50.6**	**-0.7**
ASAR	**Alice Springs**	**32.33**	**126**	P	**P**	**16 16 50.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=297,slow=8.6,SNR=16 comp=Z,0.8nm,0.5s						
INKA	**Innaminka**	**39.68**	**128**	P	**P**	**16 17 53.6**	**-0.4**
INKA				IAmb	IAmb	16 18 31.9	
	comp=Z,6.1nm,1.5s						
STKA	**Stephens Creek**	**42.31**	**132**	P	**P**	**16 18 15.1**	**-0.4**
	comp=Z,4.7nm,0.4s,baz=307,slow=7.6,SNR=8.1 comp=Z,4.7nm,0.4s						
MKAR	**Makanchi Array**	**56.32**	**341**	P	**P**	**16 20 00.8**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=156,slow=9.4,SNR=2.6 comp=Z,0.2nm,0.5s						
AB31	**Akbulak array**	**67.75**	**329**	P	**P**	**16 21 17.0**	**-1.2**
AB31				IAmb	IAmb	16 21 32.9	
	comp=Z,2.8nm,1.4s						
ABKAR	**Akbulak array**	**67.75**	**329**	P	**P**	**16 21 16.9**	**-1.4**
BRTR	**Keskin Array B**	**80.16**	**312**	P	**P**	**16 22 30.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=134,slow=5.2,SNR=4.0 comp=Z,0.6nm,0.6

TUVZ	**Tukino**	**0.68**	**189**	P		**Pn**	**16 28 49.0**	**+1.2**	
FWVZ	**Far West T-bar**	**0.69**	**195**	P		**Pn**	**16 28 48.9**	**+0.9**	
MAVZ	**Matarangi**	**0.70**	**195**	P		**Pn**	**16 28 49.1**	**+1.0**	
WHVZ	**Whangaehu Hut**	**0.70**	**193**	P		**Pn**	**16 28 49.0**	**+1.0**	
TRVZ	**Turoa**	**0.73**	**195**	P		**Pn**	**16 28 49.4**	**+1.3**	
HIZ	**Hauiti**	**0.73**	**276**	P		**Pn**	**16 28 48.8**	**+0.9**	
HIZ	**Hauiti**	**0.73**	**276**	S		**Sn**	**16 29 08.3**	**-0.8**	
HIZ	**Hauiti**	**0.73**	**276**	P		**Pn**	**16 28 48.9**	**+1.0**	
WNVZ	**Wahianoa**	**0.75**	**191**	P		**Pn**	**16 28 49.4**	**+1.2**	
KMRZ	**Kaimai**	**0.76**	**9**	P		**Pn**	**16 28 48.9**	**+0.8**	
PKVZ	**Pokaka**	**0.78**	**206**	P		**Pn**	**16 28 49.4**	**+1.2**	
MUGZ	**Murupara**	**0.78**	**82**	P		**Pn**	**16 28 48.6**	**+0.4**	
BKZ	**Black Stump Fm**	**0.79**	**136**	P		**Pn**	**16 28 49.1**	**+0.8**	
BKZ	**Black Stump Fm**	**0.79**	**136**	P		**Sn**	**16 29 08.9**	**-1.0**	
MOVZ	**Moawhango**	**0.81**	**182**	P		**Pn**	**16 28 49.4**	**+1.0**	
MTVZ	**Mangateitei**	**0.83**	**197**	P		**Pn**	**16 28 49.9**	**+1.3**	
MTHZ	**Maungataniwha**	**0.86**	**108**	P		**Pn**	**16 28 49.7**	**+1.0**	
TOZ	**Tahuroa Road**	**0.89**	**345**	P		**Pn**	**16 28 49.7**	**+0.9**	
EDRZ	**Edgecumbe**	**0.89**	**57**	P		**Pn**	**16 28 49.3**	**+0.3**	
MARZ	**Manawahe**	**0.93**	**49**	P		**Pn**	**16 28 49.7**	**+0.6**	
RTZ	**Ruatahuna**	**0.94**	**92**	P		**Pn**	**16 28 49.9**	**+0.7**	
TGRZ	**Tauranga**	**0.94**	**24**	P		**Pn**	**16 28 49.9**	**+0.7**	
NMHZ	**Naumai**	**0.94**	**123**	P		**Pn**	**16 28 51.1**	**+1.9**	
NMHZ				S		**Sn**	**16 29 12.0**	**+0.5**	
VRZ	**Vera Road**	**0.96**	**236**	P		**Pn**	**16 28 50.5**	**+1.3**	
RAHZ	**Arahi**	**1.07**	**108**	P		**Pn**	**16 28 51.5**	**+1.5**	
URZ	**Urewera**	**1.09**	**73**	P		**Pn**	**16 28 50.2**	**0.0**	
URZ	**Urewera**	**1.09**	**73**	S		**Sn**	**16 29 11.0**	**-2.2**	
URZ	**Urewera**	**1.09**	**73**	P		**Pn**	**16 28 50.4**	**+0.2**	
MCHZ	**McNeill Hill**	**1.11**	**140**	P		**Pn**	**16 28 52.4**	**+2.1**	
KRHZ	**Kereru**	**1.14**	**157**	P		**Pn**	**16 28 52.1**	**+1.5**	
ARHZ	**Aropaoanui**	**1.16**	**126**	P		**Pn**	**16 28 52.4**	**+1.8**	
WHHZ	**Waihua**	**1.23**	**114**	P		**Pn**	**16 28 52.8**	**+1.6**	
SNGZ	**Shannon Statio**	**1.23**	**99**	P		**Pn**	**16 28 52.5**	**+1.2**	
RAGZ	**Rawiri**	**1.28**	**86**	P		**Pn**	**16 28 52.6**	**+0.8**	
WAZ	**Wanganui**	**1.32**	**208**	P		**Pn**	**16 28 53.4**	**+1.4**	
PNHZ	**Pukenui**	**1.36**	**166**	P		**Pn**	**16 28 53.7**	**+1.3**	
DREZ	**Durham Road**	**1.37**	**244**	P		**Pn**	**16 28 54.0**	**+1.5**	
LREZ	**Lake Rotokare**	**1.38**	**231**	P		**Pn**	**16 28 54.4**	**+1.9**	
MWZ	**Matawai**	**1.39**	**80**	P		**Pn**	**16 28 53.3**	**+0.6**	
CKHZ	**Cape Kidnapper**	**1.46**	**137**	P		**Pn**	**16 28 55.2**	**+2.0**	
KAHZ	**Kahuranaki**	**1.47**	**145**	P		**Pn**	**16 28 55.2**	**+1.9**	
TSZ	**Takapari Road**	**1.47**	**175**	P		**Pn**	**16 28 54.7**	**+1.4**	
PREZ	**Palmer Road**	**1.47**	**239**	P		**Pn**	**16 28 55.1**	**+1.7**	
NEZ	**North Egmont**	**1.48**	**242**	P		**Pn**	**16 28 55.3**	**+1.8**	
KNZ	**Kokohu**	**1.54**	**107**	P		**Pn**	**16 28 55.2**	**+1.3**	
RIGZ	**Rimuhau**	**1.55**	**95**	P		**Pn**	**16 28 55.4**	**+1.3**	
WPHZ	**Waipukurau**	**1.55**	**161**	P		**Pn**	**16 28 55.6**	**+1.5**	
MKAZ	**Moumakai**	**1.57**	**341**	P		**Pn**	**16 28 55.1**	**+0.9**	
RUGZ	**Raukumara Rang**	**1.61**	**68**	P		**Pn**	**16 28 54.5**	**-0.3**	
TKGZ	**Te Karaka**	**1.62**	**85**	P		**Pn**	**16 28 55.9**	**+1.2**	
OHWZ	**Ohakea**	**1.65**	**193**	P		**Pn**	**16 28 56.7**	**+1.8**	
PXZ	**Pawanui**	**1.66**	**150**	P		**Pn**	**16 28 56.5**	**+1.5**	
PRGZ	**Paritu Road**	**1.67**	**102**	P		**Pn**	**16 28 56.5**	**+1.3**	
DVHZ	**Dannevirke**	**1.73**	**170**	P		**Pn**	**16 28 56.8**	**+1.1**	
MHGZ	**Mahia Peninsul**	**1.75**	**109**	P		**Pn**	**16 28 57.6**	**+1.6**	
ETAZ	**East Tamaki Re**	**1.77**	**337**	P		**Pn**	**16 28 57.1**	**+0.8**	
TWGZ	**Tauwhareparae**	**1.77**	**77**	P		**Pn**	**16 28 57.3**	**+1.1**	
AWAZ	**Awhitu Peninsu**	**1.78**	**329**	P		**Pn**	**16 28 57.3**	**+1.1**	
HAZ	**Te Kaha**	**1.78**	**63**	P		**Pn**	**16 28 56.1**	**-0.2**	
PRHZ	**Porangahau**	**1.79**	**159**	P		**Pn**	**16 28 57.7**	**+1.4**	
POWZ	**Post Office Ro**	**1.80**	**180**	P		**Pn**	**16 28 57.4**	**+1.0**	
WIAZ	**Waiheke Island**	**1.87**	**344**	P		**Pn**	**16 28 58.1**	**+0.9**	
CNGZ	**Carnagh Statio**	**1.90**	**87**	P		**Pn**	**16 28 59.1**	**+1.6**	
HBAZ	**Herne Bay Bore**	**1.93**	**334**	P		**Pn**	**16 28 58.9**	**+1.1**	
ANWZ	**Angora Road**	**1.94**	**164**	P		**Pn**	**16 28 59.2**	**+1.4**	
MBAZ	**Motutapu North**	**1.95**	**339**	P		**Pn**	**16 28 58.9**	**+0.9**	
PRWZ	**Pori Road**	**1.96**	**176**	P		**Pn**	**16 28 59.3**	**+1.3**	
PUZ	**Puketiti**	**2.01**	**76**	P		**Pn**	**16 28 59.1**	**+0.4**	
RVAZ	**Riverhead Bore**	**2.06**	**332**	P		**Pn**	**16 29 00.1**	**+1.0**	
MRZ	**Mangatainoka R**	**2.07**	**184**	P		**Pn**	**16 28 60.0**	**+0.8**	
BFZ	**Birch Farm**	**2.12**	**170**	P		**Pn**	**16 29 00.5**	**+0.9**	
BFZ	**Birch Farm**	**2.12**	**170**	S		**Sn**	**16 29 29.2**	**-1.2**	
BFZ	**Birch Farm**	**2.12**	**170**	P		**Pn**	**16 29 00.6**	**+0.9**	
TIWZ	**Tintock**	**2.18**	**178**	P		**Pn**	**16 29 01.3**	**+0.9**	
MXZ	**Matakaoa Point**	**2.24**	**63**	P		**Pn**	**16 29 02.9**	**+1.8**	
MXZ	**Matakaoa Point**	**2.24**	**63**	S		**Sn**	**16 29 31.5**	**-1.1**	
OGWZ	**Otaki Gorge**	**2.27**	**192**	P		**Pn**	**16 29 02.2**	**+0.9**	
HOWZ	**Holdsworth Sta**	**2.31**	**185**	P		**Pn**	**16 29 02.4**	**+0.6**	
MTW	**Mount Morrison**	**2.57**	**185**	P		**Pn**	**16 29 05.0**	**+0.3**	
SNZO	**South Karori**	**2.84**	**197**	P		**Pn**	**16 29 07.9**	**+0.1**	
SNZO	**South Karori**	**2.84**	**197**	P		**Sn**	**16 29 42.5**	**-2.4**	
QRZ	**Quartz Range**	**3.36**	**227**	P		**Pn**	**16 29 14.6**	**+0.6**	
QRZ	**Quartz Range**	**3.36**	**227**	S		**Sn**	**16 29 54.0**	**-2.0**	
OUZ	**Omahuta**	**3.86**	**135**	P		**Pn**	**16 29 21.3**	**+1.8**	
KHZ	**Kahutara**	**4.18**	**203**	P		**Pn**	**16 29 24.4**	**+0.2**	
ODZ	**Otahua Downs**	**7.50**	**209**	P		**Pn**	**16 30 07.9**	**+0.8**	

*SKHL **19** 16:44:42.0±0.4, 44˚.90N×152˚.20E, h46km±6km, mb4.5/4*
*IDC **19** 16:44:46.1±1.5, 46˚.62N×150˚.99E, h0km, mb3.6/9, mbtmp3.6/13, ML3.1/4, MS3.1/4, Error ellipse: s-maj=34.8km s-min=21.1km az=135.0*

ISC 19 16:44:41.1±1.5, 45˚.3N±0˚.2×152˚.2E±0˚.1, h35km, n28, σ1§51/20, mb3.5/9, MS2.9/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
REI	**Reidovoe**	**2.97**	**271**	*eP*		**Pn**	**16 45 26.5**	**+0.8**
REI				AMB		AMB	16 45 30.2	
	70nm,0.5s							
REI				*eS*		**Sn**	**16 45 59.9**	**-0.2**
REI				A		A	16 46 14.1	
	60nm,0.2s							
REI				A		A	16 46 14.1	
	60nm,0.2s							
KUR	**Kuril'sk**	**3.08**	**270**	*i* P		**Pn**	**16 45 28.1**	**+0.9**
KUR				AMB		AMB	16 45 38.8	
	50nm,0.3s							
KUR				*i* S		**Sn**	**16 46 03.0**	**+0.3**
KUR				A		A	16 46 15.8	
	170nm,0.4s							
KUR				A		A	16 46 15.8	
	190nm,0.4s							
SHO	**Shikotan**	**4.12**	**251**	*eP*		Pn	16 45 53.7	+12
SHO				AMB		AMB	16 46 01.1	
	20nm,0.2s							
SHO				*eS*		Sn	16 46 38.5	+10
SHO				A		A	16 46 46.1	
	40nm,0.3s							
SHO				A		A	16 46 46.1	
	50nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**4.72**	**257**	*i* P		**Pn**	**16 45 50.1**	**+0.4**
YUK				AMB		AMB	16 45 54.3	
	40nm,0.3s							
YUK				*eS*		**Sn**	**16 46 40.7**	**-2.4**
YUK				A		A	16 46 54.4	
	130nm,0.5s							
YUK				A		A	16 46 54.4	
	90nm,0.5s							
NMR	**Nemuro--Hokkai**	**5.05**	**250**	*i* P		**Pn**	**16 45 53.2**	**-1.0**
NMR				*i* S		**Sn**	**16 46 48.2**	**-3.1**
AKK	**Akkeshi**	**5.79**	**249**	*eP*		**Pn**	**16 46 03.5**	**-0.9**
ASAJ	**Asahikawa**	**6.97**	**264**	Pn		**Pn**	**16 46 23.4**	**+2.8**
	1.2nm,0.3s,baz=66,slow=20,SNR=16 3.9nm,0.6s							
PETK	**Petropavlovsk-**	**8.58**	**23**	Pn		**Pn**	**16 46 41.9**	**-0.8**
	0.1nm,0.3s,baz=178,slow=14,SNR=8.1 0.8nm,0.8s							
MJAR	**Matsushiro Arr**	**13.74**	**235**	Pn		**P**	**16 48 04.0**	**+2.7**
	baz=38,slow=9.1,SNR=5.8 1.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**14.43**	**273**	Pn		**Pn**	**16 48 01.1**	**-1.5**
	0.2nm,0.3s,baz=78,slow=9.9,SNR=7.2 0.9nm,0.6s							
YAK	**Yakutsk**	**21.23**	**330**	LR		LR	16 57 31.5	
	comp=Z,38nm,18.7s,baz=208,slow=39							
H11N2	**WAKE ISLAND Hy**	**28.26**	**150**	T		T	17 21 17.4	
	baz=338,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**28.27**	**150**	T		T	17 21 24.5	
	baz=338,slow=75,SNR=9.3							
H11N3	**WAKE ISLAND Hy**	**28.27**	**150**	T		T	17 21 19.9	
	baz=338,slow=75,SNR=7.9							
TIXI	**Tiksi**	**28.68**	**345**	LR		LR	17 02 08.8	
	comp=Z,28nm,18.6s,baz=230,slow=38							
H11S1	**WAKE ISLAND Hy**	**29.32**	**151**	T		T	17 22 34.5	
	baz=339,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**29.33**	**151**	T		T	17 22 44.7	
	baz=339,slow=76,SNR=7.3							
H11S2	**WAKE ISLAND Hy**	**29.34**	**151**	T		T	17 22 35.5	
	baz=339,slow=76,SNR=9.9							
SONM	**Songino Array**	**31.25**	**291**	P		**P**	**16 50 57.4**	**0.0**
	0.3nm,0.3s,baz=82,slow=10,SNR=2.0 0.3nm,0.3s							
ILAR	**Eielson Array**	**38.06**	**37**	P		P	16 52 03.3	+7.5
	0.2nm,0.5s,baz=263,slow=7.4,SNR=1.7 0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**42.97**	**307**	LR		LR	17 10 36.1	
	comp=Z,17nm,18.9s,baz=84,slow=37							
MKAR	**Makanchi Array**	**47.06**	**298**	P		**P**	**16 53 08.8**	**-0.3**
	0.2nm,0.4s,baz=71,slow=5.3,SNR=5.7							
MKAR				LR		LR	17 14 01.2	
	comp=Z,61nm,18.3s,baz=142,slow=38 0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**47.75**	**304**	P		**P**	**16 53 13.5**	**-0.8**
	0.3nm,0.6s,baz=71,slow=8.7,SNR=4.0 0.3nm,0.6s							
ARCES	**ARCESS Array B**	**59.01**	**341**	P		**P**	**16 54 37.2**	**+0.5**
	1.8nm,0.9s,baz=46,slow=7.2,SNR=3.6 1.8nm,0.9s							
FINES	**FINESS Array B**	**65.08**	**335**	P		**P**	**16 55 17.0**	**-0.4**
	1.0nm,0.5s,baz=25,slow=8.5,SNR=11 1.0nm,0.5s							
HFS	**Hagfors**	**69.58**	**339**	P		**P**	**16 55 45.4**	**-0.6**
	0.7nm,0.5s,baz=56,slow=9.0,SNR=4.4 0.7nm,0.5s							
ASAR	**Alice Springs**	**70.65**	**198**	P		P	16 56 09.0	+16
	0.3nm,0.9s,baz=9.5,slow=6.4,SNR=1.7 0.3nm,0.9s							
AKASG	**Malin Array Be**	**72.39**	**326**	P		**P**	**16 56 03.0**	**-0.2**
	0.5nm,0.4s,baz=39,slow=6.5,SNR=4.1 0.5nm,0.4s							

*SJA **19** 16:52:49.4±0.5, 20˚.24S×70˚.12W, h87km, ML4.6, MW4.5*
*IDC **19** 16:52:51.0±2.7, 20˚.19S×69˚.93W, h69km±24km, mb3.9/12, mbtmp4.2/15, MS3.4/10, Error ellipse: s-maj=20.0km s-min=15.6km az=71.0*
*NEIC **19** 16:52:51, 20˚.29S×70˚.15W, h67km*
*NEIC **19** 16:52:51.1±2.2, 20˚.31S±0˚.04×70˚.15W±0˚.07, h68km±5km, mb4.6/87, Mwr4.5/25, Mwr4.8(GUC), Error ellipse: s-maj=9.2km s-min=5.7km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.30; $M_{\theta\theta}$=0.16; $M_{\phi\phi}$=0.13; $M_{r\theta}$=0.86; $M_{r\phi}$=2.42; $M_{\theta\phi}$=-7.70; Fault plane solution: M_0=8.12000×10^{15} NP1:∅=355.64000°, δ=89.74000°, λ=-107.18000°. NP2:∅=264.79000°, δ=17.19000°, λ=-0.89000°. Principal axes: T 7.7971, Plg42.0000°, Azm102.0000°; N 0.6119, Plg17.0000°, Azm356.0000°; P -8.4090, Plg43.0000°, Azm249.0000°;*
*GFZ **19** 16:52:51.5±0.2, 20˚.5S±2˚×7˚.0W±˚, h74km, M4.9/11, mb4.6/11*
*GUC **19** 16:52:52.3±0.6, 20˚.26S×70˚.06W, h77km±2km, ML4.7*
*VAO **19** 16:52:58.6±0.5, 20˚.03S×69˚.29W, h100km±2km, mb4.7, Presumed earthquake*

ISC 19 16:52:51.0±0.6, 20˚.26S±0˚.03×70˚.13W±0˚.05, h75km±4km, n220, σ1§30/201, mb4.5/49, 7C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.02**	**192**	*eP*		**Pn**	**16 53 02.4**	**+0.6**
TA02	**Huaiquique**	**0.02**	**192**	*eP*		**Sn**	**16 53 02.8**	**+1.0**
TA02				*eS*		**Sn**	**16 53 10.7**	**+1.0**
TA02	**Huaiquique**	**0.02**	**192**	P		**Pn**	**16 53 03.0**	**+1.2**
PSGCX	**Pisagua**	**0.66**	**0**	*eP*		**Pn**	**16 53 06.0**	**+0.1**
PSGCX				IAML			16 53 19.1	
	comp=Z,13µm,0.6s							
PSGCX	**Pisagua**	**0.66**	**0**	*i*/*eP*		**Pn**	**16 53 06.7**	**+0.8**
PSGCX				*eS*		**Sn**	**16 53 17.6**	**+0.7**
PSGCX	**Pisagua**	**0.66**	**0**			**Pn**	**16 53 06.9**	**+1.0**
PSGCX	**Pisagua**	**0.66**	**0**	P		**Pn**	**16 53 06.9**	**+1.0**
PB11	**IPOC Station P**	**0.66**	**42**	*eP*		**Pn**	**16 53 06.0**	**0.0**
PB11				*eS*		**Sn**	**16 53 18.7**	**+1.5**
PB11				IAML			16 53 19.0	
	comp=Z,17µm,0.4s							
PB11	**IPOC Station P**	**0.66**	**42**	*i*/*eP*		**Pn**	**16 53 06.7**	**+0.7**
PB11				*eS*		**Sn**	**16 53 17.8**	**+0.6**
PB11				IAML			16 53 18.7	
	comp=N,83µm,0.2s							
PB11	**IPOC Station P**	**0.66**	**42**			**Pn**	**16 53 06.8**	**+0.7**
PB11	**IPOC Station P**	**0.66**	**42**	P		**Pn**	**16 53 06.8**	**+0.7**
PB08	**IPOC Station P**	**0.92**	**83**	*eP*		**Pn**	**16 53 09.4**	**+0.2**
PB08				*eS*		**Sn**	**16 53 23.8**	**+1.1**
PB08				IAML			16 53 25.6	
	comp=Z,20µm,0.1s							
PB08	**IPOC Station P**	**0.92**	**83**	*i*/*eP*		**Pn**	**16 53 10.2**	**+1.0**
PB08				*eS*		**Sn**	**16 53 23.0**	**+0.3**
PB08				IAML			16 53 24.3	
	comp=N,31µm,0.3s							
PB08	**IPOC Station P**	**0.92**	**83**			**Pn**	**16 53 10.2**	**+1.0**
PB08	**IPOC Station P**	**0.92**	**83**	P		**Pn**	**16 53 10.1**	**+1.0**
PB01	**IPOC Station P**	**0.99**	**143**	*eP*		**Pn**	**16 53 09.8**	**+0.1**
PB01				IAML			16 53 28.3	
	comp=Z,11µm,0.2s							
PB01	**IPOC Station P**	**0.99**	**143**	*i*/*eP*		**Pn**	**16 53 10.5**	**+0.8**
PB01				*eS*		**Sn**	**16 53 23.6**	**0.0**
PB01				IAML			16 53 24.6	
	comp=N,55µm,0.3s							
PB01	**IPOC Station P**	**0.99**	**143**			**Pn**	**16 53 10.1**	**+0.4**
PB01	**IPOC Station P**	**0.99**	**143**	P		**Pn**	**16 53 10.6**	**+0.8**
GO01	**Chusmiza**	**1.05**	**57**	*eP*		**Pn**	**16 53 10.9**	**0.0**
GO01				IAML			16 53 27.4	
	comp=Z,23µm,0.3s							
GO01	**Chusmiza**	**1.05**	**57**	*eP*		**Pn**	**16 53 11.6**	**+0.7**
GO01				*eS*		**Sn**	**16 53 26.8**	**+1.0**
GO01	**Chusmiza**	**1.05**	**57**			**Pn**	**16 53 11.9**	**+0.9**
GO01	**Chusmiza**	**1.05**	**57**	P		**Pn**	**16 53 11.8**	**+0.9**
PB02	**IPOC Station P**	**1.08**	**168**	*eP*		**Pn**	**16 53 11.3**	**+0.4**
PB02				IAML			16 53 28.9	
	comp=Z,17µm,0.4s							
PB02	**IPOC Station P**	**1.08**	**168**	*eP*		**Pn**	**16 53 11.7**	**+0.9**
PB02				IAML			16 53 30.9	
	comp=E,25µm,0.3s							
PB02	**IPOC Station P**	**1.08**	**168**			**Pn**	**16 53 10.9**	**0.0**
PB02	**IPOC Station P**	**1.08**	**168**	P		**Pn**	**16 53 12.3**	**+1.4**
PX02	**IPOC Station P**	**1.29**	**357**	*eP*		**Pn**	**16 53 13.4**	**-0.1**
PB07	**IPOC Station P**	**1.48**	**171**	*eP*		**Pn**	**16 53 16.4**	**+0.4**
PB07				*eS*		**Sn**	**16 53 36.1**	**+1.2**
PB07				IAML			16 53 39.9	
	comp=Z,6µm,0.4s							
PB07	**IPOC Station P**	**1.48**	**171**	*i*/*eP*		**Pn**	**16 53 16.9**	**+0.8**
PB07				IAML			16 53 40.9	
	comp=E,11µm,0.4s							
PB07	**IPOC Station P**	**1.48**	**171**			**Pn**	**16 53 16.9**	**+0.8**
PB07	**IPOC Station P**	**1.48**	**171**	P		**Pn**	**16 53 17.2**	**+1.1**
PB12	**IPOC Station P**	**1.64**	**353**	*i*/*eP*		**Pn**	**16 53 18.9**	**+0.8**
PB12				*eS*		**Sn**	**16 53 38.5**	**-0.1**
PB12				IAML			16 53 40.1	
	comp=E,18µm,0.6s							
PB12	**IPOC Station P**	**1.64**	**353**			**Pn**	**16 53 19.0**	**+0.9**
PB12	**IPOC Station P**	**1.64**	**353**	P		**Pn**	**16 53 19.1**	**+1.0**
PB09	**IPOC Station P**	**1.74**	**152**	*eP*		**Pn**	**16 53 20.1**	**+0.6**
PB09				*eS*		**Sn**	**16 53 42.4**	**+1.4**
PB09				IAML			16 53 49.0	
	comp=Z,8µm,0.5s							
PB09	**IPOC Station P**	**1.74**	**152**	*eP*		**Pn**	**16 53 20.8**	**+1.3**
PB09				IAML			16 53 48.1	
	comp=N,8µm,0.6s							
PB09	**IPOC Station P**	**1.74**	**152**			**Pn**	**16 53 20.8**	**+1.3**
PB09	**IPOC Station P**	**1.74**	**152**	P		**Pn**	**16 53 21.0**	**+1.5**
PB03	**IPOC Station P**	**1.82**	**169**	*eP*		**Pn**	**16 53 20.7**	**+0.2**
PB03				*eS*		**Sn**	**16 53 45.8**	**+2.9**
PB03				IAML			16 53 49.4	
	comp=Z,5µm,0.4s							
PB03	**IPOC Station P**	**1.82**	**169**	*i*/*eP*		**Pn**	**16 53 21.3**	**+0.8**
PB03	**IPOC Station P**	**1.82**	**169**			**Pn**	**16 53 21.3**	**+0.8**
PB03	**IPOC Station P**	**1.82**	**169**	P		**Pn**	**16 53 21.5**	**+1.0**
AP01	**Chacalluta**	**1.89**	**354**	*eP*		**Pn**	**16 53 22.1**	**+0.9**
AP01				IAML			16 53 52.0	
	comp=Z,6µm,0.5s							
AP01	**Chacalluta**	**1.89**	**354**	*eP*		**Pn**	**16 53 22.1**	**+0.9**
AP01				IAML			16 53 47.2	
	comp=E,12µm,0.2s							
AP01	**Chacalluta**	**1.89**	**354**			**Pn**	**16 53 22.1**	**+0.9**
AP01	**Chacalluta**	**1.89**	**354**	P		**Pn**	**16 53 22.5**	**+1.3**
PB16	**IPOC Station P**	**2.00**	**17**	*eP*		**Pn**	**16 53 21.9**	**-1.3**
PB16				*eS*		**Sn**	**16 53 50.2**	**+2.5**
PB16				IAML			16 53 52.1	
	comp=Z,3µm,0.5s							
PB16	**IPOC Station P**	**2.00**	**17**	*i*/*eP*		**Pn**	**16 53 24.6**	**+1.4**
PB16				IAML			16 53 52.9	
	comp=E,5µm,0.5s							
PB16	**IPOC Station P**	**2.00**	**17**			**Pn**	**16 53 24.7**	**+1.4**
PB16	**IPOC Station P**	**2.00**	**17**	P		**Pn**	**16 53 24.9**	**+1.6**
PB06	**IPOC Station P**	**2.49**	**168**	*eP*		**Pn**	**16 53 29.3**	**-0.2**
PB06				IAML			16 54 10.9	
	comp=Z,2µm,0.6s							
PB06	**IPOC Station P**	**2.49**	**168**	*i*/*eP*		**Pn**	**16 53 29.7**	**+0.2**
PB06	**IPOC Station P**	**2.49**	**168**			**Pn**	**16 53 29.7**	**+0.2**
PB06	**IPOC Station P**	**2.49**	**168**	P		**Pn**	**16 53 29.0**	**-0.5**
PB05	**IPOC Station P**	**2.59**	**182**	*eP*		**Pn**	**16 53 30.9**	**+0.1**
PB05				*eS*		Sn	16 53 52.5	-8.7
PB05				IAML			16 53 52.9	
	comp=Z,1µm,0.6s							
PB05	**IPOC Station P**	**2.59**	**182**	IAML			16 54 29.3	
	comp=E,2µm,0.5s							
PB05	**IPOC Station P**	**2.59**	**182**			**Pn**	**16 53 30.6**	**-0.1**
PB05	**IPOC Station P**	**2.59**	**182**	P		**Pn**	**16 53 30.6**	**-0.1**
PB18	**Visviri**	**2.72**	**13**	*i*/*eP*		**Pn**	**16 53 37.0**	**+4.0**
PB18	**Visviri**	**2.72**	**13**	P		**Pn**	**16 53 34.5**	**+1.6**
AF01	**San Pedro de A**	**3.24**	**146**	*eP*		**Pn**	**16 53 41.9**	**+2.1**
AF01				IAML			16 54 55.7	
	comp=Z,5µm,0.6s							
AF01	**San Pedro de A**	**3.24**	**146**	*eP*		**Pn**	**16 53 41.8**	**+2.1**
AF01	**San Pedro de A**	**3.24**	**146**			**Pn**	**16 53 41.6**	**+1.9**
PB14	**IPOC Station P**	**4.36**	**183**	*eP*		**Pn**	**16 53 53.8**	**-1.3**
PB14				IAML			16 55 16.6	
	comp=Z,300nm,0.5s							
PB14	**IPOC Station P**	**4.36**	**183**	*eP*		**Pn**	**16 53 53.6**	**-1.4**
PB14	**IPOC Station P**	**4.36**	**183**			**Pn**	**16 53 53.7**	**-1.3**
PB14	**IPOC Station P**	**4.36**	**183**	P		**Pn**	**16 53 53.4**	**-1.6**
LPAZ	**La Paz**	**4.38**	**26**	P		**Pn**	**16 53 58.9**	**+3.2**
	comp=Z,15nm,0.4s,baz=169,slow=2.8,SNR=79							
LPAZ				LR		LR	16 55 47.3	
	comp=Z,295nm,18.3s,baz=228,slow=42							
LPAZ	**La Paz**	**4.38**	**26**			**Pn**	**16 53 57.7**	**+2.1**
LPAZ	**La Paz**	**4.38**	**26**	*eP*		**Pn**	**16 53 57.6**	**+2.0**
SALTA		**5.28**	**139**	P		**Pn**	**16 54 08.5**	**+0.7**
AC01	**Pan de Azucar**	**5.88**	**184**			**Pn**	**16 54 13.4**	**-2.1**
AC01	**Pan de Azucar**	**5.88**	**184**	P		**Pn**	**16 54 14.1**	**-1.5**
AC02	**Maricunga**	**6.61**	**172**			**Pn**	**16 54 25.4**	**-0.6**
AC02	**Maricunga**	**6.61**	**172**	P		**Pn**	**16 54 25.0**	**-1.0**
AC05	**El Transito**	**8.54**	**181**			**Pn**	**16 54 49.5**	**-2.5**
AC05	**El Transito**	**8.54**	**181**	P		**Pn**	**16 54 49.2**	**-2.8**
BBSD	**Serra de San D**	**9.52**	**73**	*eP*		**Pn**	**16 55 02.3**	**-3.0**
BBSD				*eS*		Sn	16 56 37.1	-14
SIV	**San Ignacio**	**9.60**	**65**	P		**Pn**	**16 55 04.5**	**-1.9**
	comp=Z,21nm,0.5s,baz=251,slow=11,SNR=124							
SIV				S		Sn	16 56 41.4	-11
	comp=Z,6.3nm,0.7s,baz=278,slow=17,SNR=1.0							
NNA	**Nana**	**10.45**	**321**	P		**Pn**	**16 55 19.0**	**+1.0**
	comp=Z,7.0nm,0.7s,baz=193,slow=6.6,SNR=3.6							
NNA				S		**Sn**	**16 57 09.6**	**-3.8**
	comp=Z,13nm,0.6s,baz=230,slow=13,SNR=2.9		

SN07	**Snyder 07**	**60.64**	**330**	P		**P**	**17 02 54.7 +0.5**
VHRN	**Van Horn**	**60.81**	**326**			**P**	**17 02 56.3 +0.8**
VHRN				IAmb		IAmb	17 02 57.3
	comp=Z,4.4nm,0.9s						
TPB28		**61.25**	**327**	IAmb		IAmb	17 03 01.0
	comp=Z,7.8nm,1.4s						
S39A	**Bolivar**	**61.63**	**339**	P		**P**	**17 03 00.9 +0.1**
MNTX	**Cornudas Mount**	**61.73**	**326**			**P**	**17 03 01.9 +0.3**
MNTX				IAmb		IAmb	17 03 02.7
	comp=Z,3.0nm,0.8s						
MNTX	**Cornudas Mount**	**61.73**	**326**	P		**P**	**17 03 00.9 -0.6**
VNA1	**Neumayer--Stat**	**61.83**	**161**	P		**P**	**17 03 03.1 +1.4**
R40A	**Maddies Statio**	**61.84**	**340**	P		**P**	**17 03 02.0 -0.1**
R40A				IAmb		IAmb	17 03 02.6
	comp=Z,3.9nm,0.7s						
VNA2	**Neumayer--Watz**	**62.20**	**161**	⇑P		**P**	**17 03 05.2 +1.0**
	comp=Z,4.3nm,1.0s,baz=294,slow=7.8						
VNA2	**Neumayer--Watz**	**62.20**	**161**	P		**P**	**17 03 05.7 +1.5**
P40A	**Paris**	**62.91**	**341**	P		**P**	**17 03 09.2 0.0**
P40A				IAmb		IAmb	17 03 09.8
	comp=Z,3.9nm,0.7s						
SNAA	**Sanae**	**63.82**	**161**	⇑P		**P**	**17 03 16.0 +1.0**
	comp=Z,105nm,0.8s						
SNAA	**Sanae**	**63.82**	**161**	P		**P**	**17 03 15.3 +0.3**
	comp=Z,5.4nm,0.9s,baz=292,slow=5.1,SNR=11						
	comp=Z,5.4nm,0.9s						
SNAA	**Sanae**	**63.82**	**161**			**P**	**17 03 16.0 +1.0**
SNAA				IAmb		IAmb	17 03 36.9
	comp=Z,6.8nm,1.0s						
SNAA	**Sanae**	**63.82**	**161**	P		**P**	**17 03 14.8 -0.2**
TROLL	**Troll, Antarti**	**65.54**	**161**	⇑P		**P**	**17 03 27.5 +1.2**
	comp=Z,104nm,0.6s						
SDCO	**Great Sand Dun**	**66.60**	**330**	IAmb		IAmb	17 03 57.2
	comp=Z,4.9nm,1.1s						
BATG	**Bathurst New B**	**67.31**	**3**	P		**P**	**17 03 38.6 +1.0**
BATG				IAmb		IAmb	17 04 03.2
	comp=Z,7.5nm,1.2s						
WUAZ	**Wupatki**	**67.86**	**325**	IAmb		IAmb	17 03 45.3
	comp=Z,4.3nm,0.9s						
IRM	**Iron Mountain**	**69.02**	**321**	IAmb		IAmb	17 03 52.0
	comp=Z,7.3nm,1.2s						
HMU	**Henry Mountain**	**69.34**	**327**	IAmb		IAmb	17 03 54.2
	comp=Z,5.0nm,1.0s						
DBIC	**Dimbokro**	**69.49**	**74**	P		**P**	**17 03 50.6 -1.3**
	comp=Z,4.3nm,0.7s,baz=220,slow=5.5,SNR=3.8						
DBIC				LR		LR	17 33 56.9
	comp=Z,50nm,18.3s,baz=136,slow=36						
	comp=Z,4.3nm,0.7s						
DBIC	**Dimbokro**	**69.49**	**74**	P		**P**	**17 03 50.9 -1.1**
ICQ	**Pointe Anglais**	**69.51**	**2**	P		**P**	**17 03 52.1 +0.9**
ICQ				IAmb		IAmb	17 03 54.8
	comp=Z,13nm,1.3s						
KNB	**Kanab**	**69.75**	**325**	IAmb		IAmb	17 03 57.1
	comp=Z,12nm,1.2s						
QSPA	**South Pole Qui**	**69.93**	**180**	P		**P**	**17 03 55.2 +1.3**
	comp=Z,1.5nm,0.6s,baz=318,slow=2.0,SNR=17						
	comp=Z,1.5nm,0.6s						
QSPA	**South Pole Qui**	**69.93**	**180**	P		**P**	**17 03 54.5 +0.5**
QSPA				IAmb		IAmb	17 04 35.7
	comp=Z,10nm,1.4s						
SRU	**San Rafael Swe**	**70.12**	**328**	IAmb		IAmb	17 03 58.0
	comp=Z,4.1nm,0.8s						
MTPU	**Mount Pierson**	**70.17**	**326**	IAmb		IAmb	17 04 20.3
	comp=Z,5.8nm,1.3s						
Q16A	**Castle Valley**	**70.30**	**327**	IAmb		IAmb	17 04 21.6
	comp=Z,6.5nm,1.3s						
P18A	**Preston Nutter**	**70.37**	**328**	IAmb		IAmb	17 04 00.0
	comp=Z,4.5nm,0.9s						
P17A	**Butcher Ranch,**	**70.50**	**328**	IAmb		IAmb	17 04 22.4
	comp=Z,8.9nm,1.1s						
CCCA	**Chr Cany lake**	**71.28**	**321**	IAmb		IAmb	17 04 05.9
	comp=Z,7.5nm,0.9s						
BSUT	**Blindstream Ca**	**71.32**	**328**	P		**P**	**17 04 03.8 +0.8**
FURC	**Furnace Creek,**	**71.64**	**322**	IAmb		IAmb	17 04 08.0
	comp=Z,8.0nm,1.0s						
WCT	**Wildcat Mounta**	**71.72**	**322**	IAmb		IAmb	17 04 08.9
	comp=Z,5.5nm,1.1s						
DUG	**Dugway, Tooele**	**72.10**	**327**	P		**P**	**17 04 08.7 +1.3**
CWC	**Cottonwood Cre**	**72.33**	**321**	IAmb		IAmb	17 04 12.2
	comp=Z,6.5nm,1.4s						
PDAR	**Pinedale Array**	**72.47**	**331**	P		**P**	**17 04 10.2 +0.6**
	comp=Z,0.3nm,0.6s,baz=123,slow=7.3,SNR=5.0						
	comp=Z,0.3nm,0.6s						
MDPB	**Devils Postpil**	**73.72**	**321**	IAmb		IAmb	17 05 04.1
	comp=Z,3.4nm,0.7s						
FLWY	**Flagg Ranch**	**74.02**	**331**	P		**P**	**17 04 19.2 +0.5**
FLWY				IAmb		IAmb	17 04 21.7
	comp=Z,5.5nm,0.8s						
YNE	**Yellowstone No**	**74.42**	**332**	IAmb		IAmb	17 04 23.6
	comp=Z,6.2nm,0.8s						
YHL	**Hebgen Lake**	**74.83**	**331**	IAmb		IAmb	17 04 26.8
	comp=Z,8.3nm,1.5s						
GCMT	**Greycliff**	**74.89**	**333**	P		**P**	**17 04 24.5 +0.8**
PAHR	**Pah Rah Range**	**75.30**	**323**	IAmb		IAmb	17 04 29.5
	comp=Z,6.8nm,0.9s						
HLID	**Hailey**	**75.39**	**328**	P		**P**	**17 04 27.4 +0.8**
VNDA	**Vanda**	**77.87**	**190**	P		**P**	**17 04 41.5 +1.6**
	comp=Z,0.4nm,0.7s,baz=95,slow=1.7,SNR=2.6						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.02**	**71**	P		**P**	**17 04 40.9 -1.0**
	comp=Z,9.9nm,0.8s,baz=253,slow=5.2,SNR=39						
	comp=Z,9.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.02**	**71**	IAmb		IAmb	17 04 41.8
	comp=Z,8.8nm,0.9s						
I07A	**Izee**	**78.35**	**326**	P		**P**	**17 04 44.6 +1.4**
I02E	**Swisshome, OR**	**80.70**	**324**	P		**P**	**17 04 57.1 +1.3**
TSUM	**Tsumeb**	**81.49**	**107**	P		**P**	**17 05 01.3 +0.4**
TSUM	**Tsumeb**	**81.49**	**107**	P		**P**	**17 05 01.8 +0.9**
MDT	**Midelt**	**81.84**	**51**	LR		LR	17 40 07.7
	comp=Z,18nm,19.4s,baz=244,slow=35						
BOSA	**Boshof**	**85.04**	**119**	P		**P**	**17 05 19.9 +0.9**
	comp=Z,3.3nm,0.9s,baz=265,slow=3.5,SNR=5.6						
	comp=Z,3.3nm,0.9s						
BOSA	**Boshof**	**85.04**	**119**	P		**P**	**17 05 20.1 +1.2**
BOSA				IAmb		IAmb	17 05 20.6
	comp=Z,6.2nm,1.1s						
TAM	**Tamanrasset**	**85.29**	**64**	P		**P**	**17 05 20.8 +0.7**
TAM	**Tamanrasset**	**85.29**	**64**	P		**P**	**17 05 21.1 +0.9**
ESDC	**Sonseca Array**	**85.76**	**45**	P		**P**	**17 05 22.4 +0.4**
	comp=Z,0.8nm,0.9s,baz=255,slow=5.0,SNR=4.7						
	comp=Z,0.8nm,0.9s						
ESDC	**Sonseca Array**	**85.76**	**45**	IAmb		IAmb	17 05 37.8
	comp=Z,7.3nm,1.1s						
LBTB	**Lobatse**	**86.57**	**115**	LR		LR	17 40 33.1
	comp=Z,24nm,20.0s,baz=184,slow=33						
LBTB	**Lobatse**	**86.57**	**115**	P		**P**	**17 05 27.2 +0.6**
LBTB				IAmb		IAmb	17 05 50.8
	comp=Z,11nm,1.5s						
YKA	**Yellowknife Ar**	**89.64**	**341**	P		**P**	**17 05 40.7 +0.7**
	comp=Z,2.4nm,0.8s,baz=136,slow=4.8,SNR=12						
	comp=Z,2.4nm,0.8s						
YKAW3	**Yellowknife Wh**	**89.70**	**341**	P		**P**	**17 05 40.4 +0.2**
YKAW3				IAmb		IAmb	17 06 14.5
	comp=Z,4.1nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**126.58**	**278**	T		T	19 31 17.8
	baz=102,slow=74,SNR=45						
H11S1	**WAKE ISLAND Hy**	**126.59**	**278**	T		T	19 31 17.6
	baz=102,slow=74,SNR=54						
H11S3	**WAKE ISLAND Hy**	**126.60**	**278**	T		T	19 31 18.6
	baz=102,slow=74,SNR=47						
H11N3	**WAKE ISLAND Hy**	**126.63**	**280**	T		T	19 31 22.3
	baz=102,slow=75,SNR=304						
H11N2	**WAKE ISLAND Hy**	**126.65**	**280**	T		T	19 31 23.3
	baz=102,slow=75,SNR=232						
H11N1	**WAKE ISLAND Hy**	**126.65**	**280**	T		T	19 31 21.4
	baz=102,slow=75,SNR=26						
ASAR	**Alice Springs**	**130.46**	**209**	PKP		**PKPdf**	**17 11 54.2 +0.5**
	comp=Z,0.4nm,0.9s,baz=118,slow=1.6,SNR=6.6						
KURK	**Kurchatov**	**140.89**	**32**			**PKPdf**	**17 12 12.6 +0.5**
KURBB	**Kurchatov Arra**	**140.91**	**32**	PKP		**PKPdf**	**17 12 12.6 +0.5**
	comp=Z,0.3nm,0.4s,baz=308,slow=2.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**141.29**	**24**	PKP		**PKPdf**	**17 12 14.1 +1.4**
	comp=Z,0.3nm,0.3s,baz=282,slow=2.9,SNR=3.5						
KSH2	**Kashi**	**145.03**	**50**	PKPbc		**PKPdf**	**17 12 21.1 +1.1**
KSH2				pPKP		pPKPdf	17 12 41.8 0.0
MKAR	**Makanchi Array**	**145.27**	**34**	PKPbc		**PKPdf**	**17 12 20.4 +0.3**
	comp=Z,4.2nm,0.8s,baz=324,slow=4.0,SNR=42						
MKAR	**Makanchi Array**	**145.27**	**34**			**PKPab**	**17 12 20.2 +0.1**
HEH	**HeiHe**	**146.99**	**339**	*e*P		**PKPdf**	**17 12 22.8 0.0**
WMQ	**Urumqi**	**150.09**	**33**	*e*PKPbc		**PKPdf**	**17 12 28.4 +0.3**
WMQ				LR		LR	
	comp=N,170nm,15.9s						
WMQ				LR		LR	
	comp=E,210nm,19.3s						
WMQ				LR		LR	
	comp=Z,120nm,24.1s						
MJAR	**Matsushiro Arr**	**150.41**	**309**	PKPbc		**PKiKP**	**17 12 35.2 +0.3**
	comp=Z,1.4nm,0.7s,baz=80,slow=2.5,SNR=7.5						
HHC	**Hu-ho-hao-te**	**159.42**	**356**	*e*P		**PKPdf**	**17 12 36.8 -4.3**
PZH	**PanZhiHua**	**170.28**	**49**	PKP		**PKPdf**	**17 12 50.3 -0.6**

*IDC **19** 17:04:28.3±2.0, 15.°54S×174.°31W, h0km, mb3.7/5, mbtmp3.7/6, ML4.1/1, MS3.8/33, Error ellipse: s-maj=117.6km s-min=24.5km az=153.0*
*GCMT **19** 17:04:34.0±0.4, 15.°18S±0.°03×174.°53W±0.°02, h19km±2km, MW4.7/70, Moment Tensor Solution. s12,c13; s70,c92; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.20±.10; Mθθ-0.47±.09; Mφφ0.66±.07; Mrθ-0.13±.18; Mrφ1.44±.07; Mθφ0.10±.15; Best double couple: M0 1.5580×10^16^ NP1:ϕs79.00000°,δ85.00000°,λ-5.00000°. NP2: ϕs170.00000°,δ85.00000°,λ-175.00000°. Principal axes: T 1.6460, Plg0.0000°, Azm304.0000°; N -0.1760, Plg83.0000°, Azm213.0000°; P -1.4700, Plg7.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 19 17:04:29.8±1.1, 15.°5S±0.°3×174.°2W±0.°2, h10km, n55, σ1°9 35/10, mb3.5/5, MS3.9/31, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
AFI	**Afiamalu**	**2.80**	**56**	Pn		**Pn**	**17 05 14.5**	**-0.2**
	27nm,0.3s,baz=174,slow=8.1,SNR=15							
AFI				Sn		**Sn**	**17 05 46.9**	**-1.8**
	11nm,0.3s,baz=314,slow=21,SNR=5.6							
	58nm,0.3s							
MSVF	**Nonsavu**	**7.79**	**252**	LR		LR	17 08 37.9	
	comp=Z,500nm,18.3s,baz=36,slow=33							
RAO	**Raoul Island**	**14.11**	**194**	LR		LR	17 12 31.3	
	comp=Z,626nm,19.0s,baz=38,slow=34							
RAR	**Rarotonga**	**14.78**	**115**	LR		LR	17 12 38.1	
	comp=Z,391nm,20.9s,baz=289,slow=33							
PAE	**Paea**	**23.65**	**99**	*e*T		T	17 34 39.7	
	14nm,0.2s							
PPT	**Papeete**	**23.65**	**98**	LR		LR	17 17 19.5	
	comp=Z,103nm,18.4s,baz=282,slow=32							
PPT2	**Papeete2**	**23.65**	**98**	*e*S		**S**	**17 13 56.6**	**0.0**
	624nm,25.0s							
PPT2				*e*LR		LR	17 15 21.3	
	344nm,26.8s							
PPT2				*e*LR		LR	17 15 27.6	
	205nm,29.5s							
PPT2				*e*T		T	17 34 35.8	
	2.0nm,0.2s							
TIAR	**Tiarei**	**23.87**	**98**	*e*T		T	17 34 54.5	
	70nm,0.1s							
TVO	**Taravao**	**23.96**	**99**	*e*T		T	17 35 03.8	
	3.3nm,0.2s							
PMOR	**Pomariorio Ree**	**25.34**	**92**	*e*T		T	17 36 59.3	
	4.4nm,0.2s							
HNR	**Honiara**	**25.98**	**280**	LR		LR	17 18 52.3	
	comp=Z,11nm,18.1s,baz=210,slow=33							
TAOE	**Nuku Hiva Isla**	**33.86**	**83**	*e*LR		LR	17 20 10.8	
	67nm,24.6s							
TAOE				*e*T		T	17 47 22.6	
	28nm,0.2s							
KRVT	**Keravat (AS076**	**35.06**	**285**	LR		LR	17 23 58.7	
	comp=Z,31nm,21.6s,baz=86,slow=34							
PMG	**Port Moresby**	**38.21**	**274**	LR		LR	17 25 31.6	
	comp=Z,181nm,18.6s,baz=108,slow=33							
H11S2	**WAKE ISLAND Hy**	**38.69**	**330**	T		T	17 52 19.1	
	baz=149,slow=76,SNR=182							
H11S3	**WAKE ISLAND Hy**	**38.70**	**330**	T		T	17 52 20.1	
	baz=149,slow=76,SNR=97							
H11S1	**WAKE ISLAND Hy**	**38.71**	**330**	T		T	17 52 20.5	
	baz=149,slow=76,SNR=119							
H11N3	**WAKE ISLAND Hy**	**39.65**	**331**	T		T	17 53 34.2	
	baz=151,slow=76,SNR=94							
H11N1	**WAKE ISLAND Hy**	**39.66**	**331**	T		T	17 53 34.7	
	baz=151,slow=76,SNR=186							
H11N2	**WAKE ISLAND Hy**	**39.67**	**331**	T		T	17 53 35.5	
	baz=151,slow=76,SNR=98							
ASAR	**Alice Springs**	**49.38**	**252**	P		**P**	**17 13 18.7**	**-1.4**
	2.3nm,0.8s,baz=92,slow=7.8,SNR=13							
ASAR				LR		LR	17 32 33.5	
	comp=Z,143nm,18.8s,baz=111,slow=34							
	2.3nm,0.8s							
GUMO	**Guam**	**49.78**	**303**	LR		LR	17 31 03.6	
	comp=Z,70nm,20.0s,baz=122,slow=32							
JCJ	**Chichijima**	**59.91**	**315**	LR		LR	17 36 02.6	
	comp=Z,128nm,20.3s,baz=156,slow=32							
BATI	**Baumata**	**60.68**	**267**	LR		LR	17 39 21.1	
	comp=Z,187nm,18.6s,baz=183,slow=35							
DAV	**Davao City (W)**	**63.76**	**286**	LR		LR	17 40 39.9	
	comp=Z,60nm,19.1s,baz=116,slow=34							
KAPI	**Kappang**	**65.65**	**271**	LR		LR	17 41 31.0	
	comp=Z,50nm,20.1s,baz=112,slow=34							
SHEM	**Shemya Is, Ala**	**68.71**	**352**	LR		LR	17 37 51.7	
	comp=Z,66nm,21.9s,baz=142,slow=29							
PFO	**Pinyon Flats O**	**73.53**	**47**	LR		LR	17 42 16.3	
	comp=Z,109nm,18.6s,baz=222,slow=31							
LPIG	**La Paz**	**73.72**	**59**	LR		LR	17 40 33.0	
	comp=Z,61nm,18.9s,baz=232,slow=29							
YBH	**Yreka Blue Hor**	**74.13**	**37**	LR		LR	17 40 38.0	
	comp=Z,85nm,21.9s,baz=224,slow=29							
QSPA	**South Pole Qui**	**74.53**	**180**	LR		LR	17 44 48.4	
	comp=Z,49nm,20.0s,baz=236,slow=32							
NVAR	**Mina Array Bea**	**74.90**	**42**	P		**P**	**17 16 13.9**	**+2.5**
	0.4nm,0.8s,baz=253,slow=9.3,SNR=5.3							
NVAR				LR		LR	17 45 51.6	
	comp=Z,62nm,18.4s,baz=258,slow=33							
	0.4nm,0.8s							
KDAK	**Kodiak Island**	**75.18**	**12**	LR		LR	17 42 34.3	
	comp=Z,72nm,20.5s,baz=186,slow=30							
NEW	**Newport**	**81.21**	**35**	LR		LR	17 45 43.9	
	comp=Z,69nm,19.6s,baz=158,slow=30							
TXAR	**Lajitas Array**	**81.28**	**56**	P		**P**	**17 16 47.5**	**+0.7**
	0.4nm,0.9s,baz=197,slow=3.9,SNR=4.7							
TXAR				LR		LR	17 45 03.2	
	comp=Z,64nm,22.0s,baz=228,slow=30							
	0.4nm,0.9s							
ANMO	**Albuquerque**	**81.43**	**50**	LR		LR	17 47 06.8	
	comp=Z,96nm,18.9s,baz=228,slow=31							
ILAR	**Eielson Array**	**82.70**	**11**	P		**P**	**17 16 53.5**	**+0.2**
	0.3nm,0.8s,baz=225,slow=5.8,SNR=4.7							
ILAR				LR		LR	17 45 48.0	
	comp=Z,37nm,21.2s,baz=237,slow=30							
	0.3nm,0.8s							
PDAR	**Pinedale Array**	**82.84**	**42**	P		**P**	**17 16 55.5**	**+0.6**
	0.7nm,0.7s,baz=202,slow=3.2,SNR=6.4							
PDAR				LR		LR	17 49 34.7	
	comp=Z,31nm,18.0s,baz=214,slow=33							
	0.7nm,0.7s							
PMSA	**Palmer Station**	**84.37**	**156**	LR		LR	17 45 32.2	
	comp=Z,26nm,21.2s,baz=256,slow=29							
H03S2	**Juan Fernandez**	**85.75**	**124**	T		T	18 52 35.4	
	baz=251,slow=75,SNR=14							
H03S1	**Juan Fernandez**	**85.76**	**124**	T		T	18 52 36.1	
	baz=251,slow=75,SNR=12							
H03S3	**Juan Fernandez**	**85.77**	**124**	T		T	18 52 35.5	
	baz=251,slow=75,SNR=13							
H03N2	**Juan Fernandez**	**85.85**	**123**	T		T	18 52 36.1	
	baz=257,slow=73,SNR=4.3							
H03N3	**Juan Fernandez**	**85.86**	**123**	T		T	18 52 37.5	
	baz=257,slow=73,SNR=3.5							
H03N1	**Juan Fernandez**	**85.87**	**123**	T		T	18 52 37.2	
	baz=257,slow=73,SNR=3.6							
MAW	**Mawson**	**87.45**	**199**	LR		LR	17 54 19.7	
	comp=Z,56nm,18.2s,baz=96,slow=34							
INK	**Inuvik**	**88.55**	**14**	LR		LR	17 50 34.6	
	comp=Z,35nm,19.2s,baz=336,slow=31							
PLCA	**Paso Flores**	**89.98**	**132**	LR		LR	17 48 58.5	
	comp=Z,71nm,20.9s,baz=248,slow=30							
YKA	**Yellowknife Ar**	**90.49**	**24**	LR		LR	17 51 13.0	
	comp=Z,57nm,19.9s,baz=248,slow=31							
CMAR	**Chiang Mai Arr**	**91.95**	**288**	LR		LR	17 53 29.3	
	comp=Z,37nm,21.7s,baz=75,slow=32							
SNAA	**Sanae**	**92.83**	**177**	LR		LR	17 59 10.3	
	comp=Z,24nm,18.0s,baz=138,slow=35							
ULM	**Lac du Bonnet**	**94.48**	**39**	LR		LR	17 55 45.6	
	comp=Z,80nm,18.2s,baz=215,slow=32							
TKL	**Tuckaleechee C**	**99.18**	**56**	LR		LR	17 56 27.3	
	comp=Z,57nm,20.5s,baz=224,slow=31							
BRTR	**Keskin Array B**	**145.78**	**320**	PKPbc		**PKPdf**	**17 24 08.7**	**-0.6**
	1.6nm,1.1s,baz=96,slow=4.5,SNR=3.8							
GERES	**GERESS Array B**	**146.14**	**351**	PKPbc		**PKPdf**	**17 24 09.5**	**0.0**
	0.8nm,1.0s,baz=8.5,slow=2.7,SNR=7.0							

*FUNV **19** 17:08:16.3, 11.°24N×73.°70W, h4km, MW3.0, Presumed earthquake*

*RSNC **19** 17:08:18.2±0.0, 11.°N±1.°×7.°4W±.°, h3km±2km, M2.5, ML2.1*
ISC 19 17:08:16.0±2.4, 11.°13N±0.°06×73.°64W±0.°04, h2km±19km, n14, σ1°9 51/27, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
SMRC	**Santa Marta, M**	**0.57**	**273**	P		**Pb**	**17 08 28.8**	**+0.1**
SMRC				S		**Sb**	**17 08 36.8**	**-0.5**
ARGC	**Ariguani, Magd**	**1.40**	**205**	P		**Pn**	**17 08 41.7**	**-0.8**
ARGC				S		**Sb**	**17 08 59.0**	**-2.1**
URIC	**Uribia, Colomb**	**1.72**	**71**	P		**Pn**	**17 08 47.4**	**+0.5**
URIC				S		**Sg**	**17 09 11.6**	**+0.4**
URIC	**Uribia, Colomb**	**1.72**	**71**	*e*P		**Pn**	**17 08 46.7**	**-0.2**
URIC				*e*S		**Sn**	**17 09 09.4**	**-0.1**
SJCC	**San Jacinto, C**	**1.94**	**231**	P		**Pn**	**17 08 50.3**	**+0.1**
SJCC				S		**Sn**	**17 09 16.6**	**+1.4**
SJCC	**San Jacinto, C**	**1.94**	**231**	*e*P		**Pn**	**17 08 50.3**	**+0.1**
SJCC				*e*S		**Sn**	**17 09 14.8**	**-0.4**
OCAC	**Ocana**	**2.89**	**174**	P		**Pn**	**17 09 03.3**	**0.0**
OCAC				S		**Sn**	**17 09 37.1**	**-1.6**
SDV	**Santo Domingo**	**3.71**	**127**	*e*P		**Pn**	**17 09 14.8**	**+0.3**
SDV				*e*S		**Sn**	**17 09 58.4**	**-0.7**
URBC	**San Jos de Ur**	**3.84**	**209**	P		**Pn**	**17 09 16.4**	**+0.2**
UREC				S		**Sn**	**17 09 59.4**	**-2.5**
PAMC	**Pamplona, Colo**	**3.88**	**166**	P		**Pn**	**17 09 16.8**	**-0.4**
PAMC				S		**Sn**	**17 10 02.3**	**-1.3**
BRJC	**Barrancabermej**	**4.13**	**181**	P		**Pn**	**17 09 21.2**	**+1.0**
BRJC				S		**Sn**	**17 10 11.9**	**+2.8**
BARC	**Barichara**	**4.53**	**174**	P		**Pn**	**17 09 26.8**	**+0.9**
BARC				S		**Sn**	**17 10 21.5**	**+2.1**
PTBC	**PUERTO BERRIO,**	**4.63**	**190**	P		**Pn**	**17 09 28.6**	**+1.5**
PTBC				S		**Sn**	**17 10 25.5**	**+4.0**
RUSC	**La Rusia**	**5.23**	**174**	*e*P		**Pn**	**17 09 35.1**	**-0.7**

IDC 19 17:08:20.6±2.2, 29.°36N×141.°19E, h0km, mb3.5/2, mbtmp3.5/5, ML2.8/3, MS2.5/1, Error ellipse: s-maj=122.4km s-min=23.5km az=77.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
JCJ	**Chichijima**	**2.42**	**158**	Pn		Pn	17 09 01.5	0.0
	2.4nm,0.3s,baz=275,slow=19,SNR=1.5							
JCJ				Sn		Sn	17 09 28.6	-3.3
	11nm,0.3s,baz=233,slow=21,SNR=3.7							
	27nm,0.8s							
JHJ	**Hachijo jima 2**	**3.94**	**343**	Pn		Pn	17 09 21.7	-0.5
	2.4nm,0.3s,baz=77,slow=21,SNR=1.5							
JHJ				Sn		Sn	17 10 03.5	-5.7
	8.7nm,0.3s,baz=72,slow=19,SNR=1.5							
	82nm,0.8s							
MJAR	**Matsushiro Arr**	**7.58**	**342**	Pn		Pn	17 10 12.5	+0.1
	0.1nm,0.3s,baz=161,slow=11,SNR=5.9							
MJAR				LR		LR	17 12 55.8	
	comp=Z,35nm,18.8s,baz=196,slow=36							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**49.46**	**188**	P		P	17 17 11.5	-1.1
	1.3nm,0.7s,baz=7.8,slow=7.7,SNR=3.4							
	1.3nm,0.7s							
ASAR	**Alice Springs**	**53.19**	**188**	P		P	17 17 41.2	+0.6
	0.2nm,0.8s,baz=8.1,slow=7.0,SNR=6.2							
	0.2nm,0.8s							

*IDC **19** 17:10:03.0±1.6, 62.°30S×163.°91E, h0km, mb3.8/4, mbtmp3.8/5, ML3.2/1, MS3.8/12, Error ellipse: s-maj=79.5km s-min=24.9km az=71.0*
ISC 19 17:10:04.4±1.4, 62.°3S±0.°2×164.°0E±0.°4, h10km, n21, σ1°9 68/6, mb3.8/4, MS3.9/10, 2C, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
VNDA	**Vanda**	**15.31**	**182**	Pn		**Pn**	**17 13 39.9**	**-0.2**
	0.1nm,0.3s,baz=356,slow=12,SNR=7.4							
VNDA				LR		LR	17 18 36.3	
	comp=Z,567nm,20.7s,baz=6.0,slow=34							
	1.9nm,1.0s							
RPZ	**Rata Peaks**	**19.08**	**16**	LR		LR	17 20 49.2	
	comp=Z,128nm,20.9s,baz=98,slow=34							
QSPA	**South Pole Qui**	**27.79**	**180**	P		**P**	**17 15 53.0**	**-0.3**
	1.5nm,1.1s,baz=353,slow=2.6,SNR=4.3							
QSPA				LR		LR	17 25 57.2	
	comp=Z,265nm,18.0s,baz=26,slow=34							
	1.5nm,1.1s							
MAW	**Mawson**	**38.54**	**217**	LR		LR	17 33 05.2	
	comp=Z,122nm,18.2s,baz=120,slow=36							
H01W1	**Cape Leeuwin

IGIL				S		Sg	17 22 16.7	-1.4
IREN	**Reynihlio**	**0.84**	**134**	P		Pg	17 22 05.6	-1.7
IREN				S		Sg	17 22 17.0	-1.4
IMEL	**Melhnausar**	**0.97**	**133**	P		Pg	17 22 07.7	-2.0
ISVA	**Svartarkot**	**1.01**	**153**	P		Pg	17 22 08.6	-2.0
ISVA				S		Sg	17 22 22.0	-1.8
IGRS	**Grimsstaoir**	**1.10**	**122**	P		Pg	17 22 09.6	-2.6
IGRS				S		Sg	17 22 24.6	-1.9
IASK	**Askja**	**1.39**	**148**	P		Pn	17 22 14.5	-1.6
IASK				S		Sb	17 22 32.8	-1.6
THOR	**Thorvaldshraun**	**1.49**	**151**	P		Pn	17 22 15.8	-1.6
IDYN	**Dyngjuhals**	**1.51**	**164**	P		Pn	17 22 16.5	-1.4
IMKO	**Mokollar**	**1.52**	**146**	P		Pn	17 22 16.2	-1.6
IVON	**Vonarskard**	**1.59**	**171**	P		Pn	17 22 17.8	-1.1
IKIS	**Kista**	**1.61**	**168**	P		Pn	17 22 18.2	-1.0
IKRE	**Kreppuhraun**	**1.68**	**150**	P		Pn	17 22 18.4	-1.7
IVSH	**V-Sauoahnukur**	**1.81**	**141**	P		Pn	17 22 20.2	-1.6
IBJK	**Bruarjokull**	**1.90**	**159**	P		Pn	17 22 22.0	-1.2
IASB	**sbjarnarstai**	**1.94**	**221**	P		Pn	17 22 22.7	-0.9
BORG	**Borgarnes**	**1.94**	**221**	Pn		Pn	17 22 22.7	-0.9
	278nm,0.3s,baz=27,slow=6.9,SNR=646							
BORG				Sn		Sn	**17 22 47.8**	**0.0**
	109nm,0.3s,baz=68,slow=23,SNR=22							
BORG				LR		LR	17 23 12.9	
	comp=Z,367nm,18.1s,baz=7.1,slow=45							
IGYG	**Gygjarholskot**	**2.12**	**203**	P		Pn	**17 22 25.2**	**-0.8**
IKSK	**Karasker**	**2.23**	**158**	P		Pn	**17 22 26.6**	**-1.1**
IHES	**Hestalda**	**2.26**	**194**	P		Pn	**17 22 27.8**	**-0.2**
IFED	**Fedgar**	**2.29**	**195**	P		Pn	**17 22 28.4**	**-0.1**
IKAL	**Kalfafell**	**2.32**	**173**	P		Pn	**17 22 28.6**	**-0.1**
IHAU	**Haukadalur**	**2.38**	**197**	P		Pn	**17 22 29.6**	**-0.1**
IMJO	**Mjoaskard**	**2.38**	**194**	P		Pn	**17 22 29.6**	**-0.1**
IKVI	**Kvisker**	**2.41**	**159**	P		Pn	**17 22 29.3**	**-0.7**
IMOR	**Morastadir**	**2.41**	**218**	P		Pn	**17 22 29.2**	**-0.9**
ISAU	**Saurbar**	**2.42**	**202**	P		Pn	**17 22 29.5**	**-0.7**
IFAG	**Fagurholsmyri**	**2.48**	**162**	P		Pn	**17 22 31.0**	**0.0**
IEDA	**Engidalur**	**2.52**	**212**	P		Pn	**17 22 30.9**	**-0.6**
IKAS	**Kald??rsel**	**2.67**	**215**	P		Pn	**17 22 33.1**	**-0.5**
IKRI	**Krysuvik**	**2.85**	**215**	P		Pn	**17 22 35.8**	**-0.3**
SCO	**Scoresbysund**	**4.47**	**344**	*i* P		Pn	**17 22 56.8**	**-1.4**
SCO				*i* S		Sn	**17 23 47.4**	**-2.5**
SCO				IAML			17 23 54.0	
	comp=Z,12nm,0.9s							
SOEG	**Soedalen**	**5.43**	**297**	*i* P		Pn	**17 23 12.4**	**+0.9**
SOEG				*i* S		Sn	**17 24 09.7**	**-3.9**
SOEG				IAML			17 25 04.1	
	comp=Z,56nm,0.6s							
DBG	**Daneborg**	**8.13**	**356**	*i* P		Pn	**17 23 52.5**	**+4.0**
DBG				*i* S		Sn	**17 25 17.1**	**-3.0**
DBG				IAML			17 25 41.3	
	comp=Z,3.2nm,0.8s							
SUMG	**Summit**	**9.46**	**321**	*i* P		Pn	**17 24 06.7**	**-0.4**
SFJD	**Kangerlussuaq**	**12.76**	**288**	LR		LR	17 29 05.0	
	comp=Z,56nm,19.1s,baz=64,slow=34							
EKA	**Eskdalemuir Ar**	**13.17**	**139**	Pn		Pn	**17 25 00.0**	**+2.6**
	baz=4.5,slow=10.0							
	comp=Z,1.5nm,0.9s							
NOA	**NORSAR Array B**	**14.03**	**98**	Pn		Pn	**17 25 12.3**	**+3.1**
	baz=320,slow=21,SNR=1.6							
	comp=Z,0.2nm,0.4s							
HFS	**Hagfors**	**15.56**	**98**	Pn		P	**17 25 32.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=321,slow=14,SNR=4.5							
HFS				LR		LR	17 31 10.0	
	comp=Z,32nm,18.9s,baz=322,slow=36							
	comp=Z,1.0nm,0.7s							
SPITS	**Spitsbergen Ar**	**15.58**	**26**	Pn		P	**17 25 33.3**	**-0.8**
	baz=232,slow=14							
	comp=Z,2.5nm,0.8s							
ARCES	**ARCESS Array B**	**16.55**	**59**	Pn		P	**17 25 45.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=269,slow=10,SNR=5.5							
ARCES				LR		LR	17 30 43.4	
	comp=Z,64nm,20.3s,baz=290,slow=32							
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**19.81**	**83**	P		Pn	**17 26 22.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=9.4,SNR=8.3							
FINES				LR		LR	17 32 46.8	
	comp=Z,45nm,18.1s,baz=342,slow=33							
	comp=Z,1.0nm,0.7s							
CLL	**Collm**	**21.74**	**118**	*eP*		P	**17 26 42.0**	**+0.3**
CLL				*ex*		x	17 26 47.0	
GERES	**GERESS Array B**	**24.05**	**121**	P		P	**17 27 08.1**	**+2.5**
	comp=Z,0.4nm,0.7s,baz=328,slow=9.9,SNR=3.9							
	comp=Z,0.4nm,0.7s							
VRAC	**Vranov**	**24.69**	**116**	LR		LR	17 36 25.1	
	comp=Z,30nm,20.8s,baz=300,slow=35							
RES	**Resolute Bay**	**24.98**	**322**	LR		LR	17 36 00.5	
	comp=Z,48nm,20.2s,baz=12,slow=34							
NRIK	**Noril'sk**	**35.38**	**36**	LR		LR	17 44 37.5	
	comp=Z,26nm,19.5s,baz=160,slow=39							
ARTI	**Arti**	**35.76**	**68**	LR		LR	17 42 02.1	
	comp=Z,63nm,20.0s,baz=278,slow=34							
YKA	**Yellowknife Ar**	**37.88**	**311**	P		P	**17 29 07.3**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=48,slow=8.0,SNR=3.9							
	comp=Z,0.5nm,0.7s							
GNI	**Garni**	**43.31**	**95**	LR		LR	17 48 01.7	
	comp=Z,22nm,18.8s,baz=54,slow=36							
ILAR	**Eielson Array**	**44.12**	**331**	P		P	**17 29 58.7**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=29,slow=7.3,SNR=5.2							
	comp=Z,0.2nm,0.8s							
KURBB	**Kurchatov Array**	**47.64**	**59**	P		P	**17 30 27.2**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=326,slow=7.2,SNR=4.1							
	comp=Z,0.6nm,0.5s							
YAK	**Yakutsk**	**49.90**	**19**	LR		LR	17 52 30.8	
	comp=Z,25nm,19.0s,baz=179,slow=37							
MKAR	**Makanchi Array**	**52.21**	**59**	P		P	**17 31 01.9**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=334,slow=5.8,SNR=4.6							
	comp=Z,0.3nm,0.5s							
PDAR	**Pinedale Array**	**52.25**	**291**	P		P	**17 31 01.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=31,slow=11,SNR=4.1							
	comp=Z,0.2nm,0.3s							
TLY	**Talaya**	**54.43**	**40**	LR		LR	17 58 00.8	
	comp=Z,43nm,19.3s,baz=146,slow=40							

IDC 19 17:32:34.6±3.8, 5°.19S×148°.84E, h126km±47km, mb3.0/3, mbtmp3.6/4, Error ellipse: s-maj=141.1km s-min=27.4km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.51**	**202**	P	Pn	17 33 40.3	-0.7
	22nm,0.4s,baz=338,slow=5.2,SNR=24						
PMG				S	Sn	17 34 33.8	+1.1
	33nm,0.5s,baz=63,slow=11,SNR=7.9						
WRA	**Warramunga Arr**	**20.35**	**223**	P	P	17 37 01.6	+0.4
	0.6nm,0.4s,baz=46,slow=10,SNR=2.2						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**23.34**	**217**	P	P	17 37 31.4	-0.3
	0.2nm,0.4s,baz=53,slow=9.0,SNR=17						
	0.2nm,0.4s						
PETK	**Petropavlovsk-**	**58.56**	**6**	P	P	17 42 17.9	+0.1
	1.1nm,0.8s,baz=192,slow=7.0,SNR=4.3						
	1.1nm,0.8s						

*RSNC **19** 17:33:22.2±0.5,5°N±3°×8°3W±°, h0km, M3.8, mB4.7, mb3.8, ML2.9, Mw(mB)4.0*
*UCR **19** 17:33:25.9±0.7,4°.96N×82°.39W, h20km±999km, MW3.6, Presumed earthquake*

ISC 19 17:33:22.3±1.1, 4°.75N±0°.06×82°.71W±0°.07, h10km, n41, σ1°98/48, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**3.33**	**26**	P	Pn	17 34 13.2	-1.4
GMAL				S	Sn	**17 34 50.8**	**-3.5**
PTPA	**Petro Terminal**	**3.43**	**357**	*eP*	Pn	17 34 15.5	-0.5
PTPA				*eS*	Sn	**17 34 54.9**	**-1.8**
PIRO	**Carate, Puerto**	**3.69**	**350**	*eP*	Pn	17 34 18.3	-1.2
AZU	**Azuero**	**3.87**	**39**	P	Pn	**17 34 22.3**	**+0.3**
BRU2	**Volcan**	**4.02**	**0**	*eP*	Pn	17 34 24.2	0.0
RBALA	**Bur**	**4.14**	**8**	*eP*	Pn	**17 34 26.5**	**+0.8**
ALCO	**Alturas Coton,**	**4.18**	**358**	*eP*	Pn	17 34 26.8	+0.5
FIMO	**Fila Mora**	**4.26**	**351**	*eP*	Pn	**17 34 28.3**	**+0.8**
EDPE	**Pejibaye, P**	**4.47**	**349**	*eP*	Pn	17 34 30.6	+0.4
DRK0	**Durika**	**4.52**	**353**	*eP*	Pn	17 34 20.7	-10
GR1C	**Gorgona, Isla**	**4.85**	**111**	P	Pn	17 34 35.7	+0.2
GR1C				S	Sn	**17 35 27.4**	**-4.3**
GR1C	**Gorgona, Isla**	**4.85**	**111**	P	Pn	17 34 35.6	+0.1
GR1C				S	Pn	**17 34 37.3**	**+1.8**
PICV	**PH. Pirrs**	**5.07**	**343**	*eP*	Pn	**17 34 38.7**	**+0.2**
ABE2	**San Pablo**	**5.10**	**345**	*eP*	Pn	**17 34 39.5**	**+0.3**
ACOS	**Acosta**	**5.22**	**344**	*eP*	Pn	**17 34 40.9**	**+0.2**
BCIP	**Isla Barro Col**	**5.23**	**33**	P	Pn	**17 34 42.0**	**+1.3**
	36nm,1.8s						
VTCV	**VTCV, Calle Va**	**5.30**	**349**	*eP*	Pn	**17 34 43.3**	**+1.5**
ABRB	**Las Abras (San**	**5.32**	**349**	*eP*	Pn	**17 34 43.8**	**+1.7**
VICA	**Volcano Irazu**	**5.32**	**348**	*eP*	Pn	**17 34 43.5**	**+1.1**
CVTQ	**Turrialba Volc**	**5.33**	**349**	*eP*	Pn	**17 34 43.7**	**+1.4**
VTR0	**Volcan Turrial**	**5.34**	**349**	*eP*	Pn	**17 34 44.2**	**+1.6**
CVTR	**Volcan Turrial**	**5.34**	**349**	*eP*	Pn	**17 34 44.1**	**+1.5**
PTAC	**Punta Ardita,**	**5.42**	**64**	P	Pn	**17 34 45.3**	**+1.9**
PTAC				S	Sn	**17 35 41.5**	**-4.4**
VBV1	**V. Barva**	**5.51**	**346**	*eP*	Pn	**17 34 45.5**	**+0.7**
JTS	**Las Juntas de**	**5.94**	**338**	P	Pn	**17 34 51.3**	**+0.8**
JTS				S	Sn	**17 35 57.3**	**-1.4**
JTS	**Las Juntas de**	**5.94**	**338**	*eP*	Pn	**17 34 51.0**	**+0.5**
ARE1	**Arenal 1**	**6.02**	**341**	*eP*	Pn	**17 34 53.9**	**+2.4**
JUD3	**Juan Diaz 3**	**6.07**	**333**	*eP*	Pn	**17 34 52.6**	**+0.3**
BBAC	**Balboa, Cauca**	**6.09**	**116**	P	Pn	**17 34 54.0**	**+1.3**
	592nm5.4nm,1.6s						
BBAC				S	Sn	**17 36 01.6**	**-0.9**
	592nm5.4nm,1.6s						
BBAC	**Balboa, Cauca**	**6.09**	**116**	P	Pn	**17 34 53.6**	**+0.9**
OTAV	**Otavalo**	**6.18**	**136**	P	Pn	**17 34 55.4**	**+1.3**
	4.6nm,1.4s						
JAMC	**Jamundi, Valle**	**6.21**	**104**	P	Pn	**17 34 56.4**	**+2.1**
	8.3nm,0.7s						
JAMC				S	Sn	**17 36 01.4**	**-4.2**
	8.3nm,0.7s						
JAMC	**Jamundi, Valle**	**6.21**	**104**	P	Pn	**17 34 56.3**	**+2.0**
POPC	**Popayan, Colom**	**6.41**	**110**	P	Pn	**17 34 58.0**	**+0.9**
POPC				S	Sn	**17 36 07.7**	**-2.8**
POPC	**Popayan, Colom**	**6.41**	**110**	P	Pn	**17 34 58.3**	**+1.2**
PPLP	**Puerto Lpez**	**6.54**	**163**	P	Pn	**17 34 59.5**	**+0.7**
APAC	**Apartado, Choc**	**6.85**	**62**	P	Pn	17 35 08.1	+5.2
APAC				S	Sn	**17 36 23.1**	**+2.1**
GUY2C	**Guyana, Caldas**	**7.33**	**86**	P	Pn	**17 35 13.3**	**+3.3**
FLOC	**Florencia**	**7.71**	**114**	P	Pn	**17 35 17.3**	**+2.5**
PRAC	**Prado**	**7.87**	**97**	P	Pn	17 35 22.9	+5.9
PRAC	**Prado**	**7.87**	**97**	P	Pn	**17 35 21.7**	**+4.7**

*TEH **19** 17:44:47.6,26°.91N×56°.25E, h10km±129km, ML2.5, Presumed earthquake*
*DSN **19** 17:44:48.0±0.7,26°.99N×56°.40E, h5km±3km, ML2.2/8, Error ellipse: s-maj=19.5km s-min=4.3km az=100.0*

ISC 19 17:44:49.8±1.2, 26°.94N±0°.04×56°.23E±0°.09, h10km, n11, σ0°72/15, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.46**	**354**	Pg	Pg	**17 44 58.4**	**-0.5**
IBND	**Bandar-abas**	**0.58**	**28**	Pg	Pg	**17 45 00.0**	**-1.0**
SHME	**Shamm**	**0.89**	**185**	P	Pg	**17 45 06.4**	**-0.5**
SHME				S	Sb	**17 45 20.1**	**+0.9**
BANOM	**Banah**	**1.01**	**176**	P	Pg	**17 45 08.6**	**-0.7**
BANOM				⇓S	Sb	**17 45 23.8**	**+0.9**
MSFE	**Esma-Masafi**	**1.57**	**182**	P	Pn	**17 45 17.7**	**-0.1**
MSFE				S	Sb	**17 45 39.7**	**+0.7**
MDH	**Madha**	**1.63**	**178**	P	Pn	**17 45 17.9**	**-0.7**
KHNJ	**Kahnooj**	**1.65**	**52**	Pg	Pn	**17 45 18.8**	**+0.9**
KHNJ				Sg	Sg	**17 45 43.1**	**+0.1**
JASK	**Jask - Hormozg**	**1.81**	**126**	Pg	Pn	**17 45 20.8**	**-0.3**
UOSS	**Minazif**	**1.98**	**181**	P	Pn	**17 45 23.0**	**-0.5**
HATD	**Hatta, Dubai**	**2.11**	**182**	P	Pn	**17 45 25.2**	**0.0**
ASHO	**Ashiyiah**	**2.25**	**184**	P	Pn	**17 45 27.7**	**+0.6**

*SJA **19** 17:51:50.4±0.7, 36°.74S×73°.92W, h12km±4km, ML3.7, MW3.7*
*GUC **19** 17:51:57.0±0.6, 36°.87S×73°.53W, h18km±3km, ML3.7*

ISC 19 17:51:54.5±1.9, 36°.84S±0°.03×73°.67W±0°.07, h10km±10km, n44, σ1°50/67, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.40**	**77**	*eP*	Pg	**17 52 02.2**	**-0.1**
BI05				IAML		17 52 11.6	
	comp=Z,3μm,0.1s						
BI05	**Punta Hualpn**	**0.40**	**77⇓**	*eP*	Pg	**17 52 02.8**	**+0.5**
BI05				*eS*	Sg	**17 52 07.4**	**-0.2**
BI05				IAML		17 52 08.6	
	comp=N,20μm,0.2s						
CCSP	**San Pedro de C**	**0.45**	**91⇑**	*eP*	Pg	**17 52 03.5**	**+0.2**
CCSP				*eS*	Sg	**17 52 08.6**	**-0.7**
CCSP				IAML		17 52 10.2	
	comp=E,8μm,0.2s						
CCSP				IAML		17 52 11.9	
	comp=N,8μm,0.4s						
BI04	**Isla Mocha**	**1.58**	**186**	*eP*	Pn	**17 52 22.9**	**+0.3**
BI04				*eS*	Sn	**17 52 42.8**	**-0.3**
BI04				IAML		17 52 54.3	
	comp=N,1μm,0.3s						
BI02	**San Fabin de**	**1.93**	**86**	*eP*	Pn	**17 52 26.8**	**-0.8**
BI02				IAML		17 53 01.2	
	comp=Z,413nm,0.5s						
BI02	**San Fabin de**	**1.93**	**86**	*eP*	Pn	**17 52 27.0**	**-0.5**
BI02				*eS*	Sn	**17 52 50.1**	**-1.8**
BI02				IAML		17 52 55.3	
	comp=N,1μm,0.6s						
LC02	**Puerto Saavedr**	**1.96**	**173**	*eP*	Pn	**17 52 29.9**	**+2.0**
ML02	**Panimavida**	**2.11**	**60**	*eP*	Pn	**17 52 29.7**	**-0.2**
ML02				*eS*	Sb	**17 52 59.5**	**+0.3**
ML02				IAML		17 53 05.5	
	comp=Z,563nm,0.5s						
ML02	**Panimavida**	**2.11**	**60**	*eP*	Pn	**17 52 30.4**	**+0.5**
ML02				*eS*	Sn	**17 52 56.2**	**0.0**
ML02				IAML		17 53 02.0	
	comp=E,2μm,0.4s						
GO05	**Hualane**	**2.31**	**38**	*eP*	Pn	17 52 28.0	-4.6
GO05				*eP*	Pb	17 52 32.3	-3.9
GO05				*eS*	Sn	**17 53 01.4**	**+0.3**
GO05				IAML		17 53 12.5	
	comp=Z,274nm,0.7s						
GO05	**Hualane**	**2.31**	**38**	*eP*	Pn	**17 52 32.1**	**-0.6**
GO05				*eS*	Sn	**17 53 02.1**	**+1.0**
GO05				IAML		17 53 13.6	
	comp=N,471nm,0.4s						
BO03	**Pichilemu**	**2.72**	**31**	*eP*	Pn	**17 52 38.4**	**+0.2**
BO03				*eS*	Sn	**17 53 08.1**	**-3.0**
BO03				IAML		17 53 29.5	
	comp=E,318nm,0.6s						
LR03	**Panguipulli**	**2.98**	**160**	*eP*	Pn	**17 52 42.9**	**+1.1**
LR03				*eS*	Sb	**17 53 21.2**	**-2.9**
LR03				IAML		17 53 37.2	
	comp=Z,338nm,0.4s						
LR03	**Panguipulli**	**2.98**	**160**	*eP*	Pn	**17 52 42.9**	**+1.1**
LR03				*eS*	Sn	**17 53 15.3**	**-2.3**
LR04	**Corral**	**3.04**	**176**	*eP*	Pn	**17 52 42.7**	**-0.1**
BO02	**Sierra Bellavi**	**3.11**	**50**	*eP*	Pn	**17 52 43.9**	**+0.2**
BO02				*eS*	Sn	**17 53 22.9**	**+1.9**
BO02				IAML		17 53 31.0	
	comp=Z,289nm,0.5s						
BO02	**Sierra Bellavi**	**3.11**	**50**	*eP*	Pn	**17 52 44.4**	**+0.7**
BO02				*eS*	Sb	**17 53 25.0**	**-3.0**
BO01	**Tunca**	**3.22**	**42**	*eP*	Pn	**17 52 45.0**	**-0.2**
BO01				*eS*	Sn	**17 53 25.6**	**+2.0**
BO01				IAML		17 53 39.0	
	comp=Z,134nm,0.5s						
BO01	**Tunca**	**3.22**	**42**	*eP*	Pn	**17 52 45.5**	**+0.3**
GO06	**Curarrehue**	**3.24**	**148**	*eP*	Pn	**17 52 46.7**	**+1.1**
GO06				*eS*	Sb	**17 53 28.0**	**-3.9**
GO06				IAML		17 53 37.7	
	comp=Z,110nm,0.8s						
GO06	**Curarrehue**	**3.24**	**148**	*eP*	Pn	**17 52 46.7**	**+1.1**
GO06				*eS*	Sn	**17 53 24.7**	**+0.4**
GO06				IAML		17 53 39.5	
	comp=N,149nm,0.9s						
MT01	**Popeta**	**3.56**	**34**	*eP*	Pn	**17 52 49.1**	**-0.8**
MT01				*eS*	Sb	**17 53 38.5**	**-2.5**
MT01				IAML		17 53 51.1	
	comp=Z,95nm,1.2s						
MT01	**Popeta**	**3.56**	**34**	*eP*	Pn	**17 52 49.3**	**-0.6**
VA05	**Santo Domingo**	**3.59**	**29**	*eP*	Pn	**17 52 49.6**	**-0.7**
EDS3	**Malargue**	**3.61**	**74**	*eP*	Pn	**17 52 52.9**	**+2.2**
LR05	**Currie**	**3.63**	**159**	*eP*	Pn	**17 52 52.3**	**+1.5**
MT09	**Talagante**	**3.76**	**36**	*eP*	Pn	**17 52 52.3**	**-0.4**
BO04	**La Punta**	**3.78**	**42**	*eP*	Pn	**17 52 52.5**	**-0.4**
MT12	**Pirque**	**4.01**	**40**	*eP*	Pn	**17 52 56.3**	**+0.2**
LMEL	**Las Melosas**	**4.11**	**45**	*eP*	Pn	**17 52 57.5**	**-0.1**
MT02	**Curacav**	**4.13**	**31**	*eP*	Pn	**17 52 56.8**	**-0.9**
MT02				IAML		17 54 15.8	
	comp=Z,56nm,0.6s						
MT02	**Curacav**	**4.13**	**31**	*eP*	Pn	**17 52 56.8**	**-0.9**
MT15	**Las Vizcachas**	**4.14**	**40**	*eP*	Pn	**17 52 57.7**	**-0.2**
MT13	**San Alfonso**	**4.14**	**43**	*eP*	Pn	**17 52 57.9**	**-0.1**
MT13				*eS*	Sb	**17 53 58.4**	**+0.5**
MT13				IAML		17 54 12.3	
	comp=Z,102nm,1.0s						
MT13	**San Alfonso**	**4.14**	**43**	*eP*	Pn	**17 52 57.9**	**-0.1**
MT05	**Renca**	**4.19**	**36**	*eP*	Pn	**17 52 57.9**	**-0.7**
MT05				*eS*	Sb	**17 53 58.8**	**-0.4**
MT05				IAML		17 54 13.0	
	comp=Z,93nm,0.8s						
MT05	**Renca**	**4.19**	**36**	*eP*	Pn	**17 52 58.4**	**-0.2**
MT16	**CCHEN**	**4.27**	**38**	*eP*	Pn	**17 52 59.4**	**-0.2**
MT14	**Cerro Cal¡n**	**4.29**	**38**	*eP*	Pn	**17 52 59.6**	**-0.3**
MT10	**Hacienda Santa**	**4.39**	**37**	*eP*	Pn	**17 53 01.1**	**-0.3**
PEL	**Peldehue**	**4.42**	**34**	*eP*	Pn	**17 53 02.1**	**+0.4**
PEL				*eS*	Sn	**17 53 52.8**	**-0.6**
ROCH	**El Roble**	**4.43**	**30⇓**	*eP*	Pn	**17 53 01.7**	**-0.4**
ROCH				*eP*	Pn	**17 53 01.6**	**-0.4**
PLCA	**Paso Flores**	**4.59**	**149**	*eP*	Pn	**17 53 05.4**	**+1.3**
PLCA				*eS*	Sb	**17 54 14.2**	**+3.6**
PLCA				IAML		17 54 31.0	
	comp=Z,26nm,3.2s						
VA03	**San Esteban**	**4.80**	**33**	*eP*	Pn	**17 53 06.7**	**-0.4**
VA03				*eS*	Sn	**17 54 03.4**	**+0.6**
VA03				*eS*	Sb	**17 54 22.9**	**+6.1**
VA03				IAML		17 54 30.9	
	comp=Z,102nm,0.9s						

*GFZ **19** 18:02:40.9±0.4, 37°N±4°×14°3E±°, h10km, M4.3/30, mb4.6/30*
*BJI **19** 18:02:43.4, 36°.84N×141°.69E, h11km, mB4.7/10, mb4.6/53, Ms4.3/36, Ms7 4.2/35*
*MOS **19** 18:02:43.9±0.9, 36°.90N×141°.97E, h19km, mb4.8/36, MS4.1/7, Error ellipse: s-maj=8.8km s-min=5.4km az=106.6*
*JMA **19** 18:02:44.0±0.3, 36°.7N±0°.6×14°2E±°, h39km, MD4.6/37, MV4.3/37, E OFF FUKUSHIMA PREF*
*NIED **19** 18:02:44.0, 36°.67N×142°.06E, h39km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}2.86; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-2.90; $M_{r\theta}$1.28; $M_{\theta\phi}$-1.84; $M_{\phi r}$4.37; Fault plane solution: $M_0$5.64000×10¹⁵ NP1: ϕ_s219.00000°, δ19.00000°, λ110.00000°. NP2: ϕ_s17.00000°, δ72.00000°, λ83.00000°.*
*NEIC **19** 18:02:44.7±1.8, 36°.72N±0°.07×142°.1E±0°.1, h18km±5km, mb4.7/19 Error ellipse: s-maj=13.3km s-min=8.7km az=123.0*
*IDC **19** 18:02:46.3±2.8, 36°.57N×142°.01E, h36km±22km, mb3.9/20, mbtmp4.2/28, ML3.7/7, MS3.8/48, Error ellipse: s-maj=17.0km s-min=13.5km az=91.0*
*BGR **19** 18:02:51.7, 37°.23N×141°.32E, h33km, mb4.5, Ms4.0*

ISC 19 18:02:43.9±0.4, 36°.72N±0°.04×142°.08E±0°.05, h19km, n291, σ1°54/268, mb4.6/86, MS4.0/61, 18C-12D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.10**	**291**	⇓P	Pn	**18 03 03.1**	**-1.2**
JFK	**Kawauchi**	**1.16**	**304**	P	Pn	**18 03 04.2**	**-1.0**
JFK				A	A	18 03 04.2	
	comp=N,4.0nm,3.3s,comp=E,4.0nm,2.7s						
JHO	**Hitachi**	**1.22**	**265**	⇓P	Pn	**18 03 04.6**	**-1.4**
JHYU	**Hitachinakayam**	**1.26**	**253**	P	Pn	**18 03 05.4**	**-1.1**
JHYU				A	A	18 03 05.4	
	comp=N,10.0nm,1.6s,comp=E,16nm,4.2s						
JHYU				S	Sn	**18 03 21.7**	**-1.2**
JFFD	**Fukushimafurud**	**1.27**	**287**	⇓P	Pn	**18 03 05.5**	**-1.2**
JMST	**Minamisoumatoc**	**1.39**	**317**	A	A	18 03 07.8	
	comp=N,5.0nm,1.1s,comp=E,6.0nm,1.4s						
JCAJ	**Choshiashikaji**	**1.40**	**225**	A	A	18 03 07.2	
	comp=N,12nm,2.4s,comp=E,8.0nm,1.4s						
JIHU	**Itakohorinouch**	**1.46**	**240**	A	A	18 03 08.1	
	comp=N,37nm,2.2s,comp=E,51nm,1.8s						
JMM	**Marumori**	**1.54**	**318**	⇓P	Pn	**18 03 10.1**	**-0.2**
JYT	**Yasato**	**1.60**	**253**	Pn	Pn	**18 03 11.3**	**+0.2**
JOTO	**OTAMA OYAMA**	**1.63**	**302**	P	Pn	**18 03 12.0**	**+0.4**
JOTO				A	A	18 03 12.0	
	comp=N,16nm,1.1s,comp=E,13nm,0.9s						
JSMT	**Sammumatsuo**	**1.70**	**231**	A	A	18 03 11.5	
	comp=N,22nm,1.9s,comp=E,16nm,2.5s						
JSB	**Shiboa**	**1.75**	**279**	A	A	18 03 12.7	
	comp=N,15nm,1.4s,comp=E,20nm,3.8s						
JIO	**Ouri**	**1.83**	**342**	P	Pn	**18 03 14.6**	**+0.3**
JIO				*eS*	Sn	**18 03 37.7**	**+0.8**
JYAR	**Yonezawaarcadi**	**1.95**	**308**	A	A	18

JNU LR LR 18 09 04.2
comp=E,358nm,18.3s,baz=64,slow=39
comp=E,7.3nm,1.0s
YSS Yuzhno-Sakhali 10.24 3 *e*P **Pn 18 05 09.5 -0.2**
YSS *e*S **Sn 18 06 59.9 -4.0**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS smax smax
comp=N,10.0nm,1.3s
YSS smax smax
comp=E,10.0nm,1.3s
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=E,400nm,15.0s
YSS Yuzhno-Sakhali 10.24 3 Pn **Pn 18 05 09.8 +0.1**
YSS Yuzhno-Sakhali 10.24 3 P **Pn 18 05 08.8 -1.0**
USRK Ussuriysk Ar. 10.71 317 Pn **Pn 18 05 19.2 +3.0**
comp=E,0.4nm,0.3s,baz=124,slow=12,SNR=13
USRK LR LR 18 09 17.4
comp=E,738nm,18.0s,baz=137,slow=36
comp=E,2.6nm,0.7s
USRK Ussuriysk Ar. 10.71 317 Pn 18 05 17.4 +1.2
KSRS Korea Array 11.34 278 Pn **Pn 18 05 25.7 +0.9**
comp=E,0.1nm,0.3s,baz=93,slow=13,SNR=9.3
KSRS LR LR 18 09 39.2
comp=E,714nm,18.9s,baz=80,slow=36
comp=E,5.2nm,1.0s
MDJ Mudanjiang 12.32 314 P **Pn 18 05 42.6 +4.3**
MDJ S **Sn 18 08 00.5 +5.4**
MDJ pmax pmax
comp=E,5.0nm,1.2s
MDJ L L
comp=E,470nm,16.8s
MDJ L L
comp=E,310nm,19.2s
MDJ L L
comp=E,730nm,19.2s
MDJ Mudanjiang 12.32 314 P **Pn 18 05 41.8 +3.5**
TYV Tymovskoe 14.15 1 *e*P **P 18 06 09.2 -1.4**
TYV pmax pmax
comp=Z,7.0nm,0.8s
TYV pmax pmax
comp=Z,100nm,5.1s
BNX BinXian 14.24 314 ⇓P **Pn 18 06 03.4 -1.0**
BNX pmax pmax
comp=Z,10.0nm,1.0s
HEH HeiHe 17.17 327 *e*P **Pn 18 06 40.8 -1.8**
HEH pmax pmax
comp=Z,3.0nm,0.7s
HEH L L
comp=Z,300nm,15.0s
HEH L L
comp=Z,320nm,13.7s
HEH L L
comp=Z,470nm,14.8s
SSE Sheshan 18.22 258 P **Pn 18 06 55.3 -0.3**
SSE S **Sn 18 10 17.1 -1.4**
SSE pmax pmax
comp=Z,4.0nm,0.5s
SSE pmax pmax
comp=Z,94nm,6.0s
SSE L L
comp=Z,200nm,14.6s
SSE L L
comp=Z,270nm,14.7s
PEA0B Petropavlovsk- 19.70 29⇓*e*P **Pn 18 07 13.9 +0.5**
PETK Petropavlovsk- 19.70 29 P **Pn 18 07 14.1 +0.7**
comp=E,4.7nm,1.1s,baz=190,slow=7.4,SNR=5.1
PETK LR LR 18 14 57.8
comp=E,66nm,21.2s,baz=209,slow=37
NJ2 Nanjing 19.71 263 *e*P **Pn 18 07 13.3 -0.4**
NJ2 pmax pmax
comp=Z,16nm,0.7s
NJ2 L L
comp=Z,710nm,14.7s
NJ2 L L
comp=Z,1μm,14.3s
NJ2 L L
comp=Z,2μm,14.2s
ZEA Zeya 19.90 333 *e*P **P 18 07 13.6 -0.5**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=Z,200nm,13.0s
PET Petropavlovsk 20.01 30 P **P 18 07 13.0 -2.3**
PET lAmb lAmb 18 07 20.8
comp=Z,22nm,1.2s
BJI2 Beijing 20.56 287 P **P 18 07 22.0 +0.6**
BJI2 pmax pmax
comp=Z,4.0nm,0.8s
BJI2 L L
comp=Z,110nm,13.5s
BJI2 L L
comp=Z,120nm,15.1s
BJT Baijiatuau 20.56 287 P Pn 18 07 22.9 -0.7
HILR Hailar Array B 20.64 315 P **P 18 07 18.9 -3.4**
comp=Z,3.4nm,0.8s,baz=125,slow=7.2,SNR=1.8
XLT XiLinHaoTe 21.03 298 *e*P **P 18 07 23.3 -3.3**
XLT pmax pmax
comp=Z,8.0nm,0.9s
XLT pmax pmax
comp=Z,82nm,5.1s
XLT L L
comp=Z,510nm,16.5s
XLT L L
comp=Z,600nm,15.9s
HNS HongShan 21.83 280 ⇑P **P 18 07 32.8 -2.3**
HNS S **S 18 11 26.8 -8.8**
HNS pmax pmax
comp=Z,25nm,0.9s
HNS L L
comp=Z,120nm,13.5s
HNS L L
comp=Z,530nm,15.9s
HNS L L
comp=Z,570nm,14.3s
GUMO Guam 23.17 173 LR LR 18 16 54.4
comp=Z,33nm,21.0s,baz=14,slow=37
MA2 Magadan 23.55 11 LR LR 18 16 32.6
comp=Z,45nm,21.4s,baz=184,slow=35
MA2 Magadan 23.55 11⇓*e*P **P 18 07 54.1 +1.2**
MA2 pmax pmax
comp=Z,12nm,1.0s
WHN Wuhan 23.85 263 P **P 18 07 55.6 -0.4**
WHN L L
comp=Z,1μm,12.9s
HHC Hu-ho-hao-te 24.08 289 *e*P **P 18 07 58.6 +0.4**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,54nm,3.8s
HHC L L
comp=Z,270nm,12.6s
HHC L L
comp=Z,220nm,12.2s
HHC L L
comp=Z,170nm,12.7s
LYN LuoYang 24.12 274 P **P 18 07 58.5 0.0**
LYN pmax pmax
comp=Z,28nm,0.9s
LYN L L
comp=Z,330nm,13.1s
LYN L L
comp=Z,520nm,16.6s
LYN L L
comp=Z,790nm,17.8s
CNSH ChangSha 25.95 259 P **P 18 08 15.8 +0.6**
CNSH pmax pmax
comp=Z,20nm,1.1s
YAK Yakutsk 26.50 347 LR LR 18 20 47.4
comp=Z,57nm,18.7s,baz=150,slow=41
YAK Yakutsk 26.50 347 *e*P **P 18 08 20.0 +0.3**
YAK *e**PP **pwP 18 08 28.0 0.0**
YAK *e*PPP PPP 18 09 08.4
YAK *e* 18 11 42.5
YAK *e*S **S 18 12 51.2 -1.4**
YAK *e*SS **SnSn 18 13 53.7 -0.7**
YAK *e* 18 19 11.9
YAK pmax pmax
comp=Z,54nm,1.3s
YAK pmax pmax
comp=N,12nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK pmax pmax
comp=Z,115nm,6.4s
YAK pmax pmax
comp=N,61nm,5.5s
YAK pmax pmax
comp=E,47nm,5.2s
YAK smax smax
comp=E,40nm,4.1s
YAK smax smax
comp=N,47nm,4.4s
YAK MLR MLR
comp=Z,466nm,24.0s
YAK MLR MLR
comp=N,144nm,13.0s
YAK MLR MLR
comp=E,50nm,16.0s
YAK Yakutsk 26.50 347 P 18 08 20.5 +0.8
YAK Yakutsk 26.50 347 P **P 18 08 20.4 +0.6**
SEY Seymchan 27.00 10⇓*i*P **P 18 08 26.5 +2.2**
SEY pmax pmax
comp=Z,12nm,1.3s
XAN Xi'an 27.09 274 P **P 18 08 25.3 -0.2**
XAN pmax pmax
XAN comp=Z,12nm,1.4s L L
XAN comp=Z,260nm,14.7s L L
XAN comp=Z,260nm,17.2s L L
XAN comp=Z,260nm,15.8s L L
SHEM Shemya Is, Ala 27.52 44 LR LR 18 16 52.4
comp=Z,61nm,20.4s,baz=280,slow=31
H11N2 WAKE ISLAND Hy 27.53 121 T T 18 38 05.4
baz=313,slow=75,SNR=46
H11N1 WAKE ISLAND Hy 27.53 121 T T 18 38 03.1
baz=313,slow=75,SNR=62
H11N3 WAKE ISLAND Hy 27.54 121 T T 18 37 52.1
baz=313,slow=75,SNR=40
ENH Enshi 27.84 266 P **P 18 08 32.1 -0.1**
ENH lAmb lAmb 18 08 32.6
comp=Z,27nm,0.9s
ENH Enshi 27.84 266 P **P 18 08 31.5 -0.8**
ULN Ulaanbaatar 27.97 305*c i*P **P 18 08 34.3 +0.9**
ULN pmax pmax
comp=Z,15nm,1.1s
ULN Ulaanbaatar 27.97 305 P **P 18 08 33.4 -0.1**
SONM Songino Array 28.41 304 P **P 18 08 37.9 +0.7**
comp=Z,12nm,0.8s,baz=105,slow=9.1,SNR=64
SONM LR LR 18 20 17.7
comp=Z,197nm,18.1s,baz=116,slow=37
comp=Z,12nm,0.8s
SONM Songino Array 28.41 304 P 18 08 37.4 +0.2
SONM lAmb lAmb 18 08 39.1
comp=Z,15nm,0.9s
LZH Lanzhou 30.65 280 *e*P **P 18 08 57.1 -0.2**
LZH pP pP 18 09 01.9 -0.4
LZH pmax pmax
comp=Z,20nm,1.1s
LZH L L
comp=Z,290nm,14.1s
LZH L L
comp=Z,590nm,16.1s
LZH L L
comp=Z,760nm,17.3s
LZDM Lanzhou Array 30.80 280 LR LR 18 22 19.3
comp=Z,350nm,18.0s,baz=205,slow=38
ZAK Zakamensk 30.88 309 *e*P **P 18 08 58.9 -0.2**
ZAK pmax pmax
comp=Z,6.0nm,1.6s
TLY Talaya 30.94 311 LR LR 18 22 00.6
comp=Z,227nm,19.5s,baz=110,slow=37
TLY Talaya 30.94 311*ce*P **P 18 09 00.4 +0.9**
TLY pmax pmax
comp=Z,5.0nm,0.9s
TLY Talaya 30.94 311 P **P 18 09 00.8 +1.3**
CD2 Chengdu 32.21 271 P **P 18 09 10.9 0.0**
CD2 S **S 18 14 23.3 +0.2**
CD2 pmax pmax
comp=Z,190nm,7.0s
CD2 L L
comp=Z,340nm,10.8s
CD2 L L
comp=Z,440nm,15.2s
CD2 L L
comp=Z,550nm,15.1s
ADK Adak 32.68 49 P **P 18 09 10.9 -3.9**
DAV Davao City (W) 33.13 211 LR LR 18 22 51.7
comp=Z,47nm,20.6s,baz=46,slow=37
GTA2 Gaotai 33.20 288 *e*P **P 18 09 20.1 +0.5**
GTA2 pP pwP 18 09 28.1 +0.2
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 L L
comp=Z,270nm,15.1s
GTA2 L L
comp=Z,170nm,13.4s
GTA2 L L
comp=Z,200nm,12.7s
KNGR Kungurtug, Tuv 34.56 308⇑*e*P **P 18 09 32.8 +1.6**
KNGR pmax pmax
comp=Z,11nm,1.3s
KMI2 Kunming 35.43 262 P **P 18 09 40.1 +0.9**
KMI2 sP pwP 18 09 49.6 +2.2
KMI2 pmax pmax
comp=Z,11nm,1.3s
KMI2 L L
comp=Z,130nm,16.1s
KMI2 L L
comp=Z,240nm,14.4s
KMI2 L L
comp=Z,220nm,18.2s
PZH PanZhiHua 35.61 265 P **P 18 09 42.8 +2.3**
TIXI Tiksi 35.67 353 LR LR 18 26 49.5
comp=Z,66nm,18.6s,baz=174,slow=40
TIXI Tiksi 35.67 353⇓*e*P **P 18 09 41.2 +0.8**
TIXI pmax pmax
comp=Z,7.0nm,1.5s
GOMU GeErMu 37.72 284 P **P 18 09 58.6 -0.1**
GOMU pP pP 18 10 02.1 -1.8
GOMU sP sP 18 10 04.1 -1.8
GOMU pmax pmax
comp=Z,22nm,1.1s
SIJI Sorong 38.72 197 LR LR 18 22 33.2
comp=Z,78nm,20.7s,baz=86,slow=31
TNCH TengChong 38.86 265 P **P 18 10 08.5 +0.2**
TNCH pmax pmax
comp=Z,13nm,0.3s
TNCH pmax pmax
comp=Z,100nm,2.9s
DGZ Jazzator, Alta 41.01 306*c i*P **P 18 10 27.4 +1.6**
DGZ pmax pmax
comp=Z,16nm,0.8s
WMQ Urumqi 41.46 297 *e*P **P 18 10 32.0 +2.5**
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ pmax pmax
comp=Z,93nm,3.7s
WMQ L L
comp=Z,150nm,15.7s
WMQ L L
comp=Z,210nm,15.7s
WMQ L L
comp=Z,120nm,16.3s
CHTO Chiang Mai 41.74 257 P **P 18 10 31.6 -0.4**
CMAR Chiang Mai Arr 41.94 256 P **P 18 10 34.0 +0.5**
comp=Z,1.2nm,0.8s,baz=45,slow=7.8,SNR=10
CMAR LR LR 18 29 53.7
comp=Z,79nm,18.9s,baz=55,slow=39
comp=Z,1.2nm,0.8s
CMAR Chiang Mai Arr 41.94 256 *i* P **P 18 10 35.2 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 42.52 313 P **P 18 10 38.2 +0.3**
comp=Z,8.2nm,0.9s,baz=93,slow=6.1,SNR=30
ZALV LR LR 18 28 59.1
comp=Z,167nm,19.5s,baz=98,slow=37
comp=Z,8.2nm,0.9s
ZALV Zalesovo Beam 42.52 313 *i* P **P 18 10 38.7 +0.8**
ZALV pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 42.77 276 P **P 18 10 40.1 -0.7**
LSA pmax pmax
comp=Z,8.0nm,1.1s
LSA Lhasa 42.77 276 P **P 18 10 40.1 -0.7**
LSA Lhasa 42.77 276 P **P 18 10 41.7 +0.9**
NPW Naypyitaw 43.41 260 P **P 18 10 46.2 +0.7**
NRIK Noril'sk 43.78 335 P **P 18 10 47.9 +0.1**
comp=Z,2.7nm,0.6s,baz=107,slow=8.2,SNR=3.8
NRIK LR LR 18 30 17.9
comp=Z,208nm,18.3s,baz=92,slow=38
comp=Z,2.7nm,0.6s
NRIK Noril'sk 43.78 335⇑*e*P **P 18 10 49.7 +1.9**
NRIK pmax pmax
comp=Z,10.0nm,1.8s
MK31 Makanchi Array 44.74 302*c i*P **P 18 10 56.2 +0.3**
MKAR Makanchi Array 44.74 302 P **P 18 10 56.4 +0.4**
comp=Z,4.6nm,0.9s,baz=89,slow=9.1,SNR=41
MKAR LR LR 18 30 07.3
comp=Z,98nm,19.7s,baz=83,slow=37
comp=Z,4.6nm,0.9s
MKAR Makanchi Array 44.74 302 P 18 10 55.5 -0.4
MAKZ Makanchi 44.95 303 P **P 18 10 56.7 -0.9**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 44.95 303 P 18 10 56.7 -0.9
MAKZ lAmb lAmb 18 11 11.1
comp=Z,5.8nm,0.9s
MAKZ Makanchi 44.95 303 P **P 18 10 58.2 +0.6**
KURK Kurchatov 46.55 308 P **P 18 11 10.9 +0.8**
KURK Kurchatov 46.55 308 P 18 11 10.3 +0.2
KURK lAmb lAmb 18 11 11.8
comp=Z,10nm,0.8s
KURK Kurchatov 46.55 308 P **P 18 11 10.4 +0.3**
KURBB Kurchatov Arra 46.62 308 P **P 18 11 10.9 +0.3**
comp=Z,7.2nm,0.9s,baz=83,slow=8.3,SNR=55
KURBB LR LR 18 31 29.5
comp=Z,212nm,18.8s,baz=177,slow=37
comp=Z,7.2nm,0.9s
EVN Everest 46.95 276 P **P 18 11 13.8 -0.6**
KDAK Kodiak Island 46.98 42 LR LR 18 33 54.5
comp=Z,20nm,18.7s,baz=234,slow=40
WUS Wushi 48.15 296 P **P 18 11 23.8 +0.8**
WUS Wushi 48.15 296 P **P 18 11 24.6 +1.7**
C23K Itkillik River 48.25 25 P **P 18 11 24.5 +1.4**
C23K lAmb lAmb 18 11 44.7
comp=Z,15nm,1.4s
TARG Taragay, Kyrgy 49.02 297 P **P 18 11 31.4 +1.5**
ILAR Eielson Array 49.47 32 P **P 18 11 34.0 +1.5**
comp=Z,0.7nm,0.7s,baz=268,slow=6.5,SNR=8.2
comp=Z,0.7nm,0.7s
ILAR Eielson Array 49.47 32 P **P 18 11 31.8 -0.7**
AAK Ala-Archa 51.11 299 LR LR 18 34 38.3
comp=Z,400nm,19.1s,baz=74,slow=37
AAK Ala-Archa 51.11 299⇓*e*P **P 18 11 45.7 +0.2**
AAK pmax pmax
comp=Z,5.0nm,1.1s
BVAR Borovoye Array 51.18 313 P **P 18 11 45.5 -0.1**
comp=Z,2.3nm,0.8s,baz=79,slow=9.2,SNR=7.1
comp=Z,2.3nm,0.8s
KSH2 Kashi 51.44 294 P **P 18 11 49.6 +1.6**
KSH2 pmax pmax
comp=Z,5.0nm,1.3s
ARK Arkit 53.16 299 P **P 18 12 02.0 +1.4**
GSI Gunungsitoli 54.10 240 P **P 18 12 07.5 -0.2**
INK Inuvik 54.42 27 LR LR 18 36 30.5
comp=Z,26nm,21.8s,baz=192,slow=37
GAR Garm 55.32 296 P **P 18 12 17.5 +1.0**
SVE Sverdlovsk 55.74 319 *e*P **P 18 12 20.4 +1.4**
SVE pmax pmax
comp=Z,16nm,1.1s
SVE MLR MLR
comp=Z,259nm,18.0s
CHGR Chuyangaron 56.28 296*ce*P **P 18 12 24.0 +0.6**
CHGR pmax pmax
comp=Z,50nm,1.0s
CHGR Chuyangaron 56.28 296 P 18 12 24.0 +0.6
FITZ Fitzroy Crossi 56.69 199 P **P 18 12 23.8 -2.3**
comp=Z,2.6nm,0.9s,baz=160,slow=12,SNR=1.9
comp=Z,2.6nm,0.9s
WRAB Tennant Creek 56.82 189⇓*e*P **P 18 12 30.9 +3.9**
WRAB pmax pmax
comp=Z,24nm,2.2s
WRA Warramunga Arr 56.83 189 P **P 18 12 26.1 -1.1**
comp=Z,2.2nm,1.0s,baz=3.1,slow=7.2,SNR=2.7
comp=Z,2.2nm,1.0s
WRA Warramunga Arr 56.83 189 P **P 18 12 25.7 -1.4**
ARTI Arti 57.06 319 LR LR 18 39 18.7
comp=Z,172nm,18.1s,baz=71,slow=38
ARTI Arti 57.06 319*c i*P **P 18 12 28.2 -0.2**
ARTI 18 13 22.4
ARTI S **S 18 20 20.0 -2.0**
ARTI SS **SS 18 24 04.1 -6.1**
ARTI pmax pmax
comp=Z,13nm,1.0s
ARTI Arti 57.06 319 P **P 18 12 29.1 +0.7**
AB31 Akbulak array 58.55 310 lAmb lAmb 18 12 40.2
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 58.55 310 P 18 12 38.0 -1.0
AKTO Aktyubinsk 59.28 312 LR LR 18 39 34.9
comp=Z,156nm,18.5s,baz=192,slow=37
ASAR Alice Springs 60.55 189 P **P 18 12 52.0 -1.0**
comp=Z,0.9nm,0.8s,baz=12,slow=8.4,SNR=5.5
ASAR LR LR 18 38 04.0
comp=Z,48nm,20.1s,baz=320,slow=35
comp=Z,0.9nm,0.8s
ASAR Alice Springs 60.55 189 P **P 18 12 53.4 +0.4**
ASAR Alice Springs 60.55 189 P **P 18 12 53.4 +0.4**
KIRV Kirov 60.82 323 LR LR 18 41 41.6
comp=Z,75nm,18.2s,baz=71,slow=38
KIRV Kirov 60.82 323*c i*P **P 18 12 55.2 +0.7**
SPITS Spitsbergen Ar 60.94 349 LR LR 18 43 12.0
comp=Z,79nm,18.1s,baz=56,slow=40
KLMR Klimovskoe 64.31 328 *e*P **P 18 13 19.3 +1.6**
KLMR *e* 18 13 53.1
KLMR pmax pmax
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 64.48 340 LR LR 18 45 34.3
comp=Z,83nm,18.4s,baz=44,slow=40
AFI Afiamalu 66.52 130 LR LR 18 37 36.1
comp=Z,47nm,21.6s,baz=30,slow=31
VRH Novokhopyorsk 68.17 318 *e*P **P 18 13 42.4 -0.3**
VRH pmax pmax
comp=Z,9.0nm,0.8s
OBN Obninsk 68.67 324⇑*e*P **P 18 13 46.1 +0.4**
OBN *e* 18 14 10.9
OBN *e* 18 16 18.3
OBN PPP PPP 18 17 57.4
OBN pmax pmax
comp=Z,7.0nm,0.8s
OBN MLR MLR
comp=Z,76nm,14.0s
LPSR Galich'ya Gora 68.89 320 *e*P **P 18 13 46.7 -0.4**
LPSR pmax pmax
comp=Z,16nm,1.2s
MAK Makhachkala 69.07 308 *e*P **P 18 13 49.1 +0.7**
MAK *e* 18 16 21.1
MAK *e*S **S 18 22 52.7 0.0**
MAK pmax pmax
comp=Z,211nm,1.0s
MAK MLR MLR
comp=Z,142nm,18.0s
VORR Voronezh 69.25 320 *e*P **P 18 13 48.2 -1.2**
VORR pmax pmax
comp=Z,27nm,0.4s
FINES FINESS Array B 69.34 333 P **P 18 13 50.5 +0.7**
comp=Z,2.8nm,0.8s,baz=69,slow=6.3,SNR=9.6
FINES LR LR 18 46 37.5
comp=Z,114nm,18.3s,baz=40,slow=38
comp=Z,2.8nm,0.8s
FINES FINESS Array B 69.34 333 *i* P **P 18 13 50.7 +0.9**
FINES pmax pmax
comp=Z,3.0nm,0.8s
VSR Storozhevoye 69.52 319 *e*P **P 18 13 50.4 -0.7**
VSR pmax pmax
comp=Z,5.0nm,0.4s
AKT Akhty 69.70 307 *e*P **P 18 13 52.8 +0.3**
AKT *e* 18 14 16.3
AKT pmax pmax
comp=Z,5.0nm,1.0s
AKT MLR MLR
comp=Z,244nm,17.0s
VSU Vasula 71.00 330⇑*e*P **P 18 13 59.8 -0.1**
VSU pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 71.51 311 P **P 18 14 04.1 +0.8**
comp=Z,4.7nm,0.9s,baz=21,slow=2.9,SNR=8.9
KBZ LR LR 18 49 52.8
comp=Z,101nm,18.2s,baz=48,slow=40
comp=Z,4.7nm,0.9s
KBZ Khabaz 71.51 311*ce*P **P 18 14 04.3 +1.0**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KIV Kislovodsk 71.52 311 *e*P **P 18 14 04.2 +0.7**
KIV pmax pmax

KIV MLR MLR
comp=Z,59nm,18.0s
KIV Kislovodsk 71.52 311 P **P** 18 14 04.7 +1.2
comp=Z,11nm,1.1s
KIV Kislovodsk 71.52 311 P **P** 18 14 05.1 +1.5
SHA1 Shidzhatmaz 71.65 311 *ceP* **P** 18 14 05.3 +0.8
GNI Garni 72.32 307 LR LR 18 48 12.5
comp=Z,55nm,19.8s,baz=86,slow=38
EPOS Posof 72.85 309 P **P** 18 14 12.5 +0.9
MNK Minsk 73.05 326 *i* P **P** 18 14 13.9 +1.5
comp=Z,12nm,0.7s,baz=50
MNK *i* PP **PP** 18 16 56.2 +1.7
MNK *i* PPP PPP 18 18 41.0
MNK *i* S **S** 18 23 38.7 +0.3
MNK *i* SS SS 18 28 07.1 -11
MNK *i* SSS SSS 18 31 41.5
MNK *i* LQ LQ 18 41 24.8
MNK *i* LR LR 18 46 57.9
MNK *i* LRM MLR 18 49 40.6
comp=Z,98nm,15.7s
MNK Minsk 73.05 326 *i* P **P** 18 14 13.9 +1.5
MNK *i* 18 16 56.2
MNK *i* PPP PPP 18 18 40.9
MNK *i* S **S** 18 23 38.7 +0.3
MNK pmax pmax
comp=Z,12nm,0.7s
MNK MLR MLR
comp=Z,98nm,16.0s
NACGM Naroch 73.28 327 *e*P **P** 18 14 15.2 +1.5
comp=Z,8.0nm,0.8s,baz=50
VSLR Vesyoloye 73.39 312 *e*P **P** 18 14 16.1 +1.5
VSLR pmax pmax
comp=Z,12nm,0.9s
HFS Hagfors 74.59 336 P **P** 18 14 21.5 +0.2
comp=Z,2.9nm,0.9s,baz=56,slow=7.9,SNR=4.7
HFS LR LR 18 49 58.3
comp=Z,170nm,19.7s,baz=32,slow=38
comp=Z,2.9nm,0.9s
NB2 NORSAR Subarra 74.68 338 P **P** 18 14 22.4 +0.5
comp=Z,0.8nm,0.7s,baz=36,slow=5.9
NOA NORSAR Array B 74.68 338 P **P** 18 14 22.1 +0.2
comp=Z,1.5nm,0.8s,baz=38,slow=5.8,SNR=5.7
NOA LR LR 18 49 39.4
comp=Z,107nm,21.4s,baz=50,slow=38
comp=Z,1.5nm,0.8s
AK03 Malin Array Si 74.86 323 P **P** 18 14 23.6 +0.6
AK03 pP **pwP** 18 14 31.4 -0.3
AKASG Malin Array Be 74.87 323 P **P** 18 14 23.3 +0.2
comp=Z,2.4nm,0.6s,baz=48,slow=5.8,SNR=17
AKASG LR LR 18 50 20.0
comp=Z,110nm,18.0s,baz=44,slow=38
comp=Z,2.4nm,0.6s
AKASG Malin Array Be 74.87 323 *i* P **P** 18 14 23.5 +0.4
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 74.87 323 *ce*P **P** 18 14 23.5 +0.4
AKBB pmax pmax
comp=Z,8.0nm,1.0s
AKBB Malin Array Si 74.87 323 P **P** 18 14 23.2 +0.1
AKBB IAmb IAmb 18 14 24.5
comp=Z,6.8nm,0.9s
AKBB Malin Array Si 74.87 323 P **P** 18 14 23.5 +0.4
AKBB pP **pwP** 18 14 31.4 -0.4
AK01 Malin Array Si 74.89 323 P **P** 18 14 23.6 +0.5
KIEV Kiev 74.89 323 P **P** 18 14 23.7 +0.6
AK04 Malin Array Si 74.89 323 P **P** 18 14 23.8 +0.6
AK22 Malin Array Si 74.91 323 P **P** 18 14 23.7 +0.4
AK02 Malin Array Si 74.91 323 P **P** 18 14 23.8 +0.5
FXWY Fox Creek 76.12 46 P **P** 18 14 32.5 +1.7
PDAR Pinedale Array 77.50 46 P **P** 18 14 40.9 +2.3
comp=Z,0.2nm,0.4s,baz=242,slow=3.2,SNR=4.0
comp=Z,0.2nm,0.4s
KWP Kalwaria Pacla 78.70 325 *eP* **P** 18 14 46.3 +1.6
PFO Pinyon Flats O 78.77 56 LR LR 18 41 48.5
comp=Z,46nm,21.0s,baz=235,slow=30
BURAR Bucovina Array 78.89 322 **P** 18 14 45.9 -0.1
KOLS Kolonicke sedl 79.39 324 *eP* **P** 18 14 50.2 +1.7
KOLS Kolonicke sedl 79.39 324 *eP* **P** 18 14 50.2 +1.7
BRTR Keskin Array B 79.46 312 P **P** 18 14 50.0 +0.7
comp=Z,1.8nm,0.9s,baz=144,slow=4.4,SNR=7.5
comp=Z,1.8nm,0.9s
BRTR Keskin Array B 79.46 312 *i* P **P** 18 14 50.5 +1.2
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BR106 Keskin Array S 79.47 312 P **P** 18 14 50.0 +0.7
comp=Z,2.2nm,1.0s
BR104 Keskin Array S 79.47 312 P **P** 18 14 49.8 +0.5
comp=Z,31nmcomp=Z,3.9nm,1.0s
BR105 Keskin Array S 79.48 312 P **P** 18 14 49.7 +0.3
comp=Z,3.3nm,1.1s
RAR Rarotonga 79.54 126 LR LR 18 45 49.1
comp=Z,81nm,19.2s,baz=290,slow=32
OJC Ojcow 79.60 326 *eP* **P** 18 14 51.4 +1.8
OJC Ojcow 79.60 326 P **P** 18 14 50.9 +1.3
TRPA Tarpa 79.83 324 P **P** 18 14 52.4 +1.5
NIE Niedzica 79.95 326 *eP* **P** 18 14 53.3 +1.7
MLR Muntele Rosu 79.97 320 LR LR 18 53 36.4
comp=Z,144nm,18.2s,baz=50,slow=38
KKUL Konya-Kulu 80.24 312 P **P** 18 14 54.4 +0.9
BSEG Bad Segeberg 80.58 333 *eP* **P** 18 14 56.0 +1.2
BSEG *eL* L 18 51 30.9
comp=Z,43nm,20.4s
KSP Ksiaz 80.65 329 *eP* **P** 18 14 57.2 +1.9
MORC Moravsky Berou 80.91 327 *eP* **P** 18 14 57.5 +0.7
DPC Dobruska-Polom 81.01 328 P **P** 18 14 58.4 +1.1
comp=Z,3.3nm,1.3s
URZ Urewera 81.32 153 LR LR 18 45 19.5
comp=Z,50nm,21.1s,baz=290,slow=31
FLTG Flechtingen 81.52 332 *eP* **P** 18 15 00.3 +0.5
comp=Z,7.3nm,1.2s,baz=38,slow=5.2
JAVC Velka Javorina 81.54 327 *eP* **P** 18 15 02.1 +2.0
BRG Berggiesshubel 81.59 330 *eP* **P** 18 15 01.3 +0.9
comp=Z,2.6nm,1.0s,baz=38,slow=5.2
BRG Berggiesshubel 81.59 330 *eP* **P** 18 15 00.1 -0.2
BRG Amp 18 15 02.4
comp=Z,2.6nm,0.9s
CLL Collm 81.64 330 *i* P **P** 18 15 01.2 +0.7
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 81.64 330 *eP* **P** 18 15 01.2 +0.7
comp=Z,5.0nm,1.1s,baz=38,slow=5.2
CLL *eL* L 18 54 16.4
comp=Z,71nm,18.7s
CLL Collm 81.64 330 P **P** 18 15 01.3 +0.7
comp=Z,3.9nm,0.9s
CLL Collm 81.64 330 *i* P **P** 18 15 01.2 +0.7
comp=Z,5.0nm,1.0s
VRAC Vranov 81.67 327 LR LR 18 55 05.7
comp=Z,91nm,18.1s,baz=48,slow=38
VRAC Vranov 81.67 327 *eP* **P** 18 15 01.8 +1.0
RETH Rethem/Aller, 81.88 333 *eP* **P** 18 15 03.3 +1.5
comp=Z,15nm,1.5s,baz=38,slow=5.2
KRUC Moravsky 81.95 327 *eP* **P** 18 15 03.1 +0.9
KRUC Moravsky 81.95 327 P **P** 18 15 02.9 +0.6
ASF Jabal al Asfar 82.13 304 LR LR 18 55 11.5
comp=Z,46nm,18.5s,baz=26,slow=38
CLZ Clausthal 82.23 332 P **P** 18 15 03.1 -0.6
MOX Moxa 82.70 331 *eL* L 18 56 55.3
comp=Z,55nm,18.1s
IBBN Ibbenburen 82.81 334 *eP* **P** 18 15 07.8 +1.2
comp=Z,8.9nm,1.1s,baz=38,slow=5.2
MPLH Magyarpolny 82.86 326 P **P** 18 15 07.8 +0.8
comp=Z,9.2nm,1.1s
MORH Mrgy, Hungar 83.05 324 P **P** 18 15 08.4 +0.4
comp=Z,1.4nm,1.5s
KHC Kasperske Hory 83.09 329 P **P** 18 15 09.1 +0.9
KHC pmax pmax
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 83.09 329 P **P** 18 15 09.1 +0.9
KHC IAmb IAmb 18 15 10.3
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 83.09 329 P **P** 18 15 09.3 +1.1
comp=Z,3.7nm,1.4s
KHC Kasperske Hory 83.09 329 P **P** 18 15 08.9 +0.6
ROTZ Rotzenmuhle 83.16 330 *eP* **P** 18 15 09.7 +1.2
comp=Z,1.2nm,1.4s,baz=38,slow=5.2
RDO Rodhopi 83.16 317 P **P** 18 15 09.2 +0.5
RDO IAmb IAmb 18 15 10.9
comp=Z,6.8nm,1.1s
RDO Rodhopi 83.16 317 P **P** 18 15 09.5 +0.9
GEC2 GERESS Array S 83.26 329 *eP* **P** 18 15 09.7 +0.6
comp=Z,2.5nm,1.2s,baz=38,slow=5.2
GERES GERESS Array B 83.26 329 P **P** 18 15 09.2 0.0
comp=Z,0.8nm,0.8s,baz=30,slow=3.7,SNR=10.0
comp=Z,0.8nm,0.8s
WET Wettzell 83.37 329 *e*P **P** 18 15 10.6 +0.9
comp=Z,3.0nm,1.3s,baz=38,slow=5.2
WET *eL* L 18 55 24.5
comp=Z,121nm,18.3s
PMOR Pomariorio Ree 83.56 114 *e*T T 19 47 18.6
comp=Z,1.6nm,0.2s
EKA Eskdalemuir Ar 83.61 341 LR LR 18 55 36.3
comp=Z,88nm,19.8s,baz=1.5,slow=38
GRF Grafenberg Arr 83.61 330 *eP* **P** 18 15 11.7 +0.8
comp=Z,7.8nm,1.1s,baz=38,slow=5.2
GRF *eL* L 18 57 03.3
comp=Z,51nm,19.2s
PPT2 Papeete2 84.03 117 *e*LR LR 18 41 34.3
comp=Z,59nm,21.5s
PPT2 *e*LR LR 18 41 36.1
comp=Z,132nm,27.0s
TNS Taunus Mts 84.25 332 *eL* L 18 56 30.0
comp=Z,70nm,20.3s
KNT Kendrikon 84.58 319 P **P** 18 15 16.9 +1.0
HRFI Mount Harif 84.71 304 P **P** 18 15 18.1 +1.2
FUR Furstenfeldbru 84.80 329 *eP* **P** 18 15 18.3 +1.4
comp=Z,8.1nm,0.5s,baz=38,slow=5.2
FUR *eL* L 18 56 17.1
comp=Z,127nm,18.3s
EIL Elat 85.00 303 LR LR 18 56 45.3
comp=Z,70nm,19.1s,baz=92,slow=38
SCHQ Schefferville 85.49 16 LR LR 18 56 35.8
comp=Z,32nm,18.8s,baz=24,slow=38
BMRD Maredsous 85.53 334 *dP* **P** 18 15 21.0 +0.5
TAOE Nuku Hiva Isla 85.57 104 *e*LR LR 18 42 20.1
comp=Z,121nm,23.6s
BFO Black Forest 85.84 331 P **P** 18 15 22.0 -0.1
BFO pmax pmax
comp=Z,13nm,1.5s
BFO Black Forest 85.84 331 **P** 18 15 22.0 -0.1
BFO IAmb IAmb 18 15 24.2
comp=Z,13nm,1.5s
BFO Black Forest 85.84 331 *eP* **P** 18 15 22.8 +0.6
comp=Z,8.6nm,1.2s,baz=38,slow=5.2
BFO *eL* L 18 58 54.7
comp=Z,55nm,18.7s
FUORN Ofenpass-Fuorn 86.44 329 P **P** 18 15 25.4 -0.1
DAVOX Davos/Dischmat 86.47 329 LR LR 18 57 31.3
comp=Z,114nm,18.6s,baz=80,slow=38
TXAR Lajitas Array 89.89 53 P **P** 18 15 43.5 +1.5
comp=Z,0.2nm,0.8s,baz=304,slow=3.2,SNR=5.4
comp=Z,0.2nm,0.8s
SADO Sadowa 90.72 28 LR LR 19 00 55.6
comp=Z,12nm,19.0s,baz=272,slow=38
ESDC Sonseca Array 97.81 334 LR LR 19 05 18.9
comp=Z,83nm,19.4s,baz=22,slow=38
LPAZ La Paz 146.38 61 PKPbc **PKPdf** 18 22 23.8 +0.3
comp=Z,0.6nm,0.6s,baz=304,slow=1.5,SNR=5.0

*IDC **19** 18:04:11.1±0.8,2°.69S×138°.99E, h0km, mb3.7/9, mbtmp3.9/12, ML4.1/3, MS3.2/4, Error ellipse: s-maj=18.6km s-min=17.9km az=170.0*
*DJA **19** 18:04:16.3±0.2,3°.5±2°×13°.9E±°, h10km, M4.3/11, mB4.8/1, mb4.4/5, MLv4.2/11, Mw(mB)4.1/1*
ISC 19 18:04:16.8±0.7, 2.84S±0.10×139.04E±0.05, h35km, n22, σ1s38/26, mb3.7/8, MS3.2/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.16**	**78**	P		**Pn**	**18 04 37.4**	**+1.0**
GENI				S		**Sn**	**18 04 52.7**	**+1.7**
JAY	**Jayapura**	**1.70**	**79**	Pn		**Pn**	**18 04 43.6**	**-0.3**
	10nm,0.3s,baz=248,slow=12,SNR=59							
JAY				Sn		**Sn**	**18 05 05.4**	**+0.9**
	28nm,0.3s,baz=155,slow=20,SNR=12							
JAY	**Jayapura**	**1.70**	**79**	P		**Pn**	**18 04 44.2**	**+0.3**
JAY				S		**Sn**	**18 05 06.4**	**+1.9**
SRPI	**Serui, Papua**	**2.96**	**289**	P		**Pn**	**18 05 01.7**	**+0.5**
SRPI				S		**Sn**	**18 05 37.8**	**+2.3**
BAKI	**Biak**	**3.35**	**299**	P		**Pn**	**18 05 08.7**	**+2.0**
BAKI				S		**Sn**	**18 05 46.9**	**+1.6**
MWPI	**Manokwari, Pap**	**5.34**	**291**	P		**Pn**	**18 05 34.8**	**+0.8**
	0.2nm18nm,0.6s							
FAKI	**Fak Fak**	**6.78**	**269**	P		**Pn**	**18 05 54.8**	**+1.0**
	31nm,1.0s							
SIJI	**Sorong**	**8.01**	**284**	Pn		**Pn**	**18 06 09.4**	**-1.3**
	1.8nm,0.3s,baz=157,slow=23,SNR=17							
SIJI				Sn		**Sn**	**18 07 37.9**	**-2.3**
	0.3nm,0.3s,baz=293,slow=21,SNR=2.1							
SIJI				LR		LR	18 10 04.6	
	comp=Z,100nm,18.3s,baz=90,slow=45							
	3.2nm,0.3s							
SIJI	**Sorong**	**8.01**	**284**	P		**Pn**	**18 06 12.6**	**+1.9**
BATI	**Baumata**	**16.93**	**244**	Pn		**Pn**	**18 08 11.9**	**+0.7**
	1.4nm,0.3s,baz=130,slow=21,SNR=2.3							
	8.0nm,0.6s							
WRA	**Warramunga Arr**	**17.61**	**195**	P		**Pn**	**18 08 19.5**	**-0.1**
	0.6nm,0.3s,baz=16,slow=13,SNR=10.0							
	0.9nm,0.3s							
FITZ	**Fitzroy Crossi**	**20.06**	**220**	P		**P**	**18 08 46.2**	**-1.0**
	3.2nm,1.0s,baz=126,slow=8.8,SNR=7.4							
FITZ				LR		LR	18 17 41.4	
	comp=Z,109nm,20.0s,baz=333,slow=40							
	3.2nm,1.0s							
ASAR	**Alice Springs**	**21.30**	**193**	P		**P**	**18 09 00.3**	**-0.2**
	0.8nm,0.7s,baz=13,slow=11,SNR=19							
	0.8nm,0.7s							
JCJ	**Chichijima**	**29.91**	**6**	LR		LR	18 19 14.2	
	comp=Z,41nm,20.9s,baz=233,slow=30							
ASAJ	**Asahikawa**	**46.85**	**4**	LR		LR	18 32 40.2	
	comp=Z,29nm,19.0s,baz=184,slow=37							
MKAR	**Makanchi Array**	**70.09**	**322**	P		**P**	**18 15 24.7**	**-0.7**
	0.8nm,0.5s,baz=102,slow=8.7,SNR=15							
	0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**72.21**	**330**	P		**P**	**18 15 36.7**	**-1.4**
	0.4nm,0.5s,baz=122,slow=7.0,SNR=2.3							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**74.02**	**325**	P		**P**	**18 15 48.0**	**-0.9**
	0.3nm,0.8s,baz=112,slow=4.7,SNR=3.4							
	0.3nm,0.8s							
VNDA	**Vanda**	**75.63**	**175**	P		**P**	**18 15 58.9**	**+1.2**
	0.5nm,0.7s,baz=308,slow=5.6,SNR=3.8							
	0.5nm,0.7s							
BVAR	**Borovoye Array**	**79.60**	**325**	P		**P**	**18 16 19.0**	**-1.4**
	0.5nm,0.5s,baz=123,slow=9.3,SNR=3.5							
	0.5nm,0.5s							
ILAR	**Eielson Array**	**85.81**	**24**	P		**P**	**18 16 50.7**	**-1.7**
	0.8nm,0.6s,baz=270,slow=5.4,SNR=9.1							
	0.8nm,0.6s							
QSPA	**South Pole Qui**	**87.11**	**180**	P		**P**	**18 16 59.5**	**+0.6**
	1.4nm,0.9s,baz=275,slow=2.2,SNR=8.0							
	1.4nm,0.9s							

*IDC **19** 18:17:24.7±5.5, 15°.37S×167°.77E, h135km±42km, mb3.8/7, mbtmp4.2/8, Error ellipse: s-maj=40.3km s-min=22.5km az=37.0*
*NOU **19** 18:17:24.9, 15°.37S×167°.89E, h153km, MLv4.7/15, Vanuatu Islands*
ISC 19 18:17:26.0±1.2, 15.4S±0.1×167.9E±0.2, h150km, n19, σ0s87/20, mb4.1/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.33**	**172**	P		**Pn**	**18 18 04.8**	**-0.2**
MARNC	**Mare, Loyalty**	**6.04**	**178**	P		**Pn**	**18 18 51.3**	**-2.0**
KOUNC	**Koumac, New Ca**	**6.13**	**213**	P		**Pn**	**18 18 54.1**	**-0.4**
YATNC	**Mamie plateau,**	**6.68**	**188**	P		**Pn**	**18 19 00.6**	**-1.2**
DZM	**Mont Dzumac**	**6.76**	**191**	P		**Pn**	**18 19 02.3**	**-0.7**
	21nm,0.5s,baz=65,slow=9.7,SNR=110							
NOUC	**Port Laguerre**	**6.82**	**192**	P		**Pn**	**18 19 03.8**	**+0.2**
ONTNC	**Ouen Toro**	**6.99**	**191**	P		**Pn**	**18 19 06.3**	**+0.4**
OUENC	**Ouen Island, N**	**7.04**	**188**	P		**Pn**	**18 19 07.2**	**+0.6**
CTA	**Charters Tower**	**21.08**	**254**	P		**P**	**18 21 59.3**	**+0.7**
	4.4nm,0.9s,baz=72,slow=12,SNR=5.5							
	4.4nm,0.9s							
STKA	**Stephens Creek**	**28.99**	**231**	P		**P**	**18 23 12.4**	**+0.7**
	5.1nm,0.6s,baz=36,slow=9.2,SNR=15							
	5.1nm,0.6s							
WRA	**Warramunga Arr**	**32.21**	**257**	P		**P**	**18 23 38.4**	**-1.8**
	1.7nm,0.6s,baz=80,slow=6.0,SNR=6.6							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**32.96**	**250**	P		**P**	**18 23 45.8**	**-0.9**
	2.9nm,0.6s,baz=78,slow=8.9,SNR=74							
ASAR				PcP		**PcP**	**18 26 27.9**	**+0.5**
	0.7nm,0.8s,baz=79,slow=2.6,SNR=7.3							
	2.9nm,0.6s							
VNDA	**Vanda**	**62.20**	**181**	P		**P**	**18 27 31.8**	**+0.7**
	1.0nm,0.5s,baz=355,slow=8.6,SNR=13							
	1.0nm,0.5s							
QSPA	**South Pole Qui**	**74.62**	**180**	P		**P**	**18 28 49.3**	**+0.7**
	4.3nm,0.8s,baz=275,slow=0.7,SNR=29							
	4.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**75.73**	**294**	P		**P**	**18 28 55.6**	**-0.1**
	0.2nm,0.4s,baz=119,slow=6.6,SNR=1.8							
	0.2nm,0.4s							
TROLL	**Troll, Antarti**	**92.23**	**185**	P		**P**	**18 30 18.9**	**+0.2**
	comp=Z,84nm,0.4s							
VNA2	**Neumayer--Watz**	**93.82**	**182**	P		**P**	**18 30 25.7**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=179,slow=5.5							
ARCES	**ARCESS Array B**	**121.05**	**345**	PKP		**PKiKP**	**18 36 00.3**	**0.0**
	comp=Z,0.6nm,0.5s,baz=79,slow=2.6,SNR=8.8							
FINES	**FINESS Array B**	**126.56**	**338**	PKP		**PKiKP**	**18 36 11.0**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=329,slow=6.7,SNR=4.0							

*IDC **19** 18:42:49.1±1.9, 6°.21S×130°.31E, h85km±19km, mb3.7/2, mbtmp3.9/7, Error ellipse: s-maj=31.4km s-min=13.2km az=109.0*
ISC 19 18:42:47.0±0.9, 6.47S±0.06×130.6E±0.1, h90km, n7, σ3s34/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.61**	**7**	P		**Pn**	**18 44 09.0**	**+1.0**
	10nm,0.2s,baz=196,slow=14,SNR=13							
SIJI				S		**Sn**	**18 45 07.3**	**-3.8**
	25nm,0.2s,baz=73,slow=23,SNR=21							
BATI	**Baumata**	**7.76**	**241**	P		**Pn**	**18 44 39.3**	**+1.9**
	5.7nm,0.3s,baz=295,slow=0.7,SNR=6.3							
BATI				S		**Sn**	**18 46 04.2**	**+0.4**
	6.4nm,0.3s,baz=14,slow=23,SNR=5.9							
FITZ	**Fitzroy Crossi**	**12.51**	**202**	P		**P**	**18 45 45.1**	**-4.8**
	2.7nm,0.3s,baz=32,slow=12,SNR=5.6							
FITZ				S		**Sn**	**18 47 57.2**	**-2.2**
	1.6nm,0.5s,baz=176,slow=13,SNR=1.9							
WRA	**Warramunga Arr**	**13.89**	**165**	P		**P**	**18 46 05.5**	**+0.3**
	1.0nm,0.8s,baz=338,slow=15,SNR=7.6							
WRA				S		**Sn**	**18 48 29.1**	**-3.8**
	1.4nm,0.4s,baz=343,slow=20,SNR=8.8							
ASAR	**Alice Springs**	**17.40**	**170**	P		**Pn**	**18 46 50.1**	**+5.9**
	0.7nm,0.6s,baz=339,slow=8.8,SNR=15							
ASAR				S		**Sn**	**18 49 56.0**	**-1.7**
	0.6nm,0.6s,baz=353,slow=26,SNR=7.8							
MKAR	**Makanchi Array**	**68.09**	**326**	P		**P**	**18 53 38.2**	**+1.0**
	1.6nm,0.6s,baz=120,slow=8.2,SNR=20							
	1.6nm,0.6s							
ZALV	**Zalesovo Beam**	**71.36**	**333**	P		**P**	**18 53 57.0**	**-0.1**
	0.4nm,0.5s,baz=149,slow=4.2,SNR=3.9							
	0.4nm,0.5s							

*IDC **19** 18:47:09.7±2.3, 6°.31S×130°.13E, h100km±27km, mb3.5/1, mbtmp4.1/6, MS3.4/1, Error ellipse: s-maj=41.3km s-min=21.2km az=95.0*
ISC 19 18:47:08.6±1.1, 6.24S±0.09×130.1E±0.1, h100km, n7, σ2s76/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.46**	**12**	P		**Pn**	**18 48 29.4**	**+1.7**
	14nm,0.3s,baz=66,slow=6.7,SNR=60							
SIJI				S		**Sn**	**18 49 25.1**	**-4.1**
	18nm,0.2s,baz=226,slow=23,SNR=7.0							
BATI	**Baumata**	**7.49**	**238**	P		**Pn**	**18 48 56.9**	**+1.6**
	5.8nm,0.3s,baz=152,slow=4.0,SNR=9.7							
BATI				S		**Sn**	**18 50 15.4**	**-3.3**
	14nm,0.4s,baz=123,slow=22,SNR=4.7							
FITZ	**Fitzroy Crossi**	**12.57**	**200**	P		**Pn**	**18 50 04.3**	**+0.4**
	2.5nm,0.3s,baz=14,slow=12,SNR=7.4							
FITZ				S		Sn	18 52 12.7	-9.4
	2.4nm,0.3s,baz=180,slow=9.2,SNR=3.7							
WRA	**Warramunga Arr**	**14.23**	**164**	P		**Pn**	**18 50 24.1**	**-1.6**
	1.3nm,0.3s,baz=343,slow=13,SNR=8.3							
WRA				S		Sn	18 52 49.0	-14
	0.9nm,0.3s,baz=348,slow=24,SNR=5.9							
ASAR	**Alice Springs**	**17.71**	**168**	P		**Pn**	**18 51 09.2**	**+0.3**
	1.9nm,0.5s,baz=345,slow=9.5,SNR=12							
ASAR				S		Sn	18 54 12.5	-14
	0.1nm,0.3s,baz=220,slow=41,SNR=1.9							
SONM	**Songino Array**	**57.76**	**341**	LR		LR	19 26 23.2	
	comp=Z,29nm,18.0s,baz=208,slow=41							
MKAR	**Makanchi Array**	**67.65**	**327**	P		**P**	**18 57 56.5**	**+1.5**
	0.7nm,0.6s,baz=121,slow=8.3,SNR=10							
	0.7nm,0.6s							

*NIED **19** 19:14:51.0, 32°.16N×137°.71E, h411km, MW4.3, Moment Tension Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.46; $M_{\theta\theta}$1.24; $M_{\phi\phi}$-2.70; $M_{r\theta}$-0.74; $M_{\theta\phi}$-0.81; $M_{\phi r}$-1.69; Fault plane solution: M_o2.90000×10^{15} NP1: ϕ_s341.00000°, δ31.00000°, λ46.00000°. NP2: ϕ_s210.00000°, δ68.00000°, λ113.00000°.*
*JMA **19** 19:14:51.0±0.4, 32°.1N±2°×13°.8E±°, h411km±4km, MV3.8/36, FAR S OFF TOKAI DISTRICT*
*IDC **19** 19:14:52.4±0.9, 32°.16N×137°.56E, h392km±9km, mb3.5/26, mbtmp4.3/32, Error ellipse: s-maj=12.7km s-min=7.6km az=77.0*
*NEIC **19** 19:14:52.4±1.7, 32°.13N±0°.09×137°.7E±0°.1, h392km±8km, mb3.9/25, Error ellipse: s-maj=14.5km s-min=13.6km az=93.0*
*GFZ **19** 19:14:52.8±0.5, 32°.N±7°×13°.8E±°, h394km±4km, M4.2/16, mb4.2/16, confirmed*
ISC 19 19:14:52.3±0.4, 32.11N±0.05×137.76E±0.05, h400km, n137, σ1s61/154, mb3.9/42, 2C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**1.71**	**332**	P		**Pn**	**19 15 46.5**	**+0.3**
TTO3	**TONANKAI O.B.S**	**1.77**	**350**	P		**Pn**	**19 15 47.5**	**+0.8**
TTO4	**TONANKAI O.B.S**	**1.90**	**355**	P		**Pn**	**19 15 47.6**	**+0.3**
JHJ	**Hachijo jima 2**	**1.99**	**59**	P		**Pn**	**19 15 48.5**	**+0.3**
	98nm,0.4s,baz=58,slow=3.8,SNR=25							
JHJ				S		**S**	**19 16 27.1**	**-6.2**
	124nm,0.3s,baz=88,slow=21,SNR=6.7							
JHJ2	**Mitsune**	**2.01**	**60**	P		**Pn**	**19 15 48.5**	**+0.2**
JHJ2	**Mitsune**	**2.01**	**60**	Pn		**Pn**	**19 15 48.4**	**+0.1**
JHJ2	**Mitsune**	**2.01**	**60**	P		**Pn**	**19 15 48.3**	**+0.1**
JIE	**Ise**	**2.44**	**339**	*i* P		**Pn**	**19 15 50.6**	**-0.5**
JIE				*e*S		**S**	**19 16 36.7**	**-2.0**
JTNC	**Tanabenakahech**	**2.48**	**314**	P		**Pn**	**19 15 50.5**	**-1.0**
JTNC				S		**S**	**19 16 36.6**	**-2.7**
JSG	**Sagara**	**2.58**	**8**			**Pn**	**19 15 51.3**	**-0.9**
JSG	**Sagara**	**2.58**	**8**	P		**Pn**	**19 15 51.9**	**-0.3**
JWY	**Kouya**	**2.78**	**320**	P		**Pn**	**19 15 53.2**	**-0.6**
JWY				S		**S**	**19 16 40.7**	**-2.9**
JAI	**Aioi**	**3.25**	**302**	P		**Pn**	**19 15 56.7**	**-0.9**
JAI				S		**S**	**19 16 47.0**	**-3.4**
INU	**Inuyama**	**3.29**	**349**	P		**Pn**	**19 15 57.5**	**-0.3**
INU	**Inuyama**	**3.29**	**349**			**Pn**	**19 15 57.5**	**-0.3**
INU	**Inuyama**	**3.29**	**349**	P		**Pn**	**19 15 57.6**	**-0.3**
JOD2	**Odawara 2**	**3.34**	**19**	P		**Pn**	**19 15 57.6**	**-0.7**
JOD2				*e*S		**S**	**19 16 50.2**	**-1.6**
JYN	**Shimob**	**3.44**	**11**	P		**Pn**	**19 15 59.1**	**-0.2**
JYN				*e*S		**S**	**19 16 53.0**	**-0.6**
JGF	**Kuroka**	**3.50**	**355**	P		**Pn**	**19 15 59.5**	**-0.2**
JGF	**Kuroka**	**3.50**	**355**			**Pn**	**19 15 59.1**	**-0.7**
JGF	**Kuroka**	**3.50**	**355**	P		**Pn**	**19 15 59.4**	**-0.4**
JYTA	**Yamagatataniai**	**3.58**	**347**	P		**Pn**	**19 15 59.9**	**-0.5**
JMN	**Monobe**	**3.64**	**297**	P		**Pn**	**19 16 00.4**	**-0.6**
JMN	**Monobe**	**3.64**	**297**			**Pn**	**19 16 00.5**	**-0.6**
JMN	**Monobe**	**3.64**	**297**	P		**Pn**	**19 16 00.7**	**-0.3**
JMN	**Monobe**	**3.64**	**297**	*i* P		**Pn**	**19 16 00.5**	**-0.5**
JMN				S		**S**	**19 16 54.2**	**-2.6**
BSO1	**Boso 1**	**3.70**	**46**	P	

CBIJ				*eS*		**S**	19 17 41.0	-5.8	
JCJ	**Chichijima**	**6.31**	**141**	P		**Pn**	19 16 25.5	-2.9	
	45nm,0.3s,baz=1.0,slow=19,SNR=17								
JCJ				S		**S**	19 17 39.7	-7.1	
	200nm,0.3s,baz=157,slow=23,SNR=15								
JCJ	**Chichijima**	**6.31**	**141**	P		**Pn**	19 16 27.3	-1.2	
JCJ	**Chichijima**	**6.31**	**141**			**S**	19 17 40.3	-6.5	
JTU	**Tsushima**	**7.40**	**291**	P		**Pn**	19 16 39.7	-0.7	
JTM	**Tenmabayashi**	**9.06**	**16**	P		**P**	19 16 58.7	-0.6	
JTM	**Tenmabayashi**	**9.06**	**16**			**P**	19 16 58.4	-0.9	
JTM	**Tenmabayashi**	**9.06**	**16**	P		**P**	19 16 58.8	-0.6	
TJN	**Taejon**	**9.60**	**299**	P		**P**	19 17 05.3	0.0	
KSRS	**Korea Array**	**9.68**	**306**	P		**P**	19 17 05.5	-0.8	
	7.7nm,0.5s,baz=119,slow=11,SNR=36								
JOW	**Kunigami**	**9.79**	**240**	P		**Pn**	19 17 08.6	+0.6	
INCN	**Inchon**	**10.60**	**303**	P		**P**	19 17 16.6	+0.1	
INCN	**Inchon**	**10.60**	**303**	P		**P**	19 17 15.9	-0.6	
INCN	**Inchon**	**10.60**	**303**	P		**P**	19 17 16.7	+0.2	
ERM	**Erimo**	**10.78**	**22**	P		**Pn**	19 17 18.9	-0.3	
ERM	**Erimo**	**10.78**	**22**	P		**Pn**	19 17 19.0	-0.2	
ERM	**Erimo**	**10.78**	**22**	P		**Pn**	19 17 19.8	+0.6	
JEM	**Erimo**	**10.79**	**22**	P		**Pn**	19 17 18.9	-0.4	
ASAJ	**Asahikawa**	**12.57**	**16**	P		**Pn**	19 17 40.0	0.0	
	8.8nm,0.4s,baz=224,slow=12,SNR=49								
JKA	**Kamikawa-asahi**	**12.57**	**16**			**P**	19 17 38.9	+0.7	
JKA	**Kamikawa-asahi**	**12.57**	**16**	P		**Pn**	19 17 39.5	-0.4	
USRK	**Ussuriysk Ar.**	**12.89**	**341**	P		**P**	19 17 40.8	-0.8	
	3.0nm,0.6s,baz=139,slow=9.6,SNR=5.9								
YOJ	**Yonaguni jima**	**15.05**	**243**	P		**P**	19 18 05.1	-0.3	
YOJ	**Yonaguni jima**	**15.05**	**243**	P		**P**	19 18 04.4	-1.0	
YSS	**Yuzhno-Sakhali**	**15.31**	**13**	P		**P**	19 18 09.1	+1.1	
BNX	**BinXian**	**15.79**	**332**	⇑P		**P**	19 18 12.4	-0.8	
BNX				pmax		pmax			
	comp=Z,20nm,0.8s								
YULB	**Yu-li**	**16.94**	**243**	P		**P**	19 18 24.0	-1.8	
YULB				IAmb		IAmb	19 18 59.1		
	comp=Z,17nm,1.3s								
BJT	**Baijiatuan**	**19.12**	**300**			**P**	19 18 45.4	-3.1	
BJT	**Baijiatuan**	**19.12**	**300**	P		**P**	19 18 45.9	-2.5	
HEH	**HeiHe**	**19.69**	**340**	*eP*		**P**	19 18 53.8	+0.1	
HEH				pmax		pmax			
	comp=Z,7.0nm,1.1s								
WHN	**Wuhan**	**20.05**	**272**	⇑P		**P**	19 18 56.8	-0.4	
WHN				pmax		pmax			
	comp=Z,76nm,1.1s								
XLT	**XiLinHaoTe**	**20.68**	**311**	*eP*		**P**	19 19 02.8	-0.1	
XLT				pmax		pmax			
	comp=Z,19nm,0.7s								
XLT				pmax		pmax			
	comp=Z,59nm,8.7s								
HILR	**Hailar Array B**	**22.02**	**328**	P		**P**	19 19 14.4	-0.7	
	comp=Z,4.1nm,0.4s,baz=132,slow=9.9,SNR=9.3								
	comp=Z,4.1nm,0.4s								
HHC	**Hu-ho-hao-te**	**22.73**	**300**	*eP*		**P**	19 19 22.3	+0.7	
HHC				pmax		pmax			
	comp=Z,11nm,0.7s								
HHC				pmax		pmax			
	comp=Z,40nm,4.7s								
ULN	**Ulaanbaatar**	**28.06**	**313**	P		**P**	19 20 09.5	+0.4	
SONM	**Songino Array**	**28.46**	**313**	P		**P**	19 20 12.4	-0.1	
	comp=Z,2.0nm,0.5s,baz=119,slow=8.4,SNR=18								
SONM				ScP		**ScP**	19 26 16.9	+1.7	
	comp=Z,0.4nm,0.5s,baz=162,slow=1.5,SNR=4.1								
	comp=Z,2.0nm,0.5s								
SONM	**Songino Array**	**28.46**	**313**			**P**	19 20 11.8	-0.7	
SONM				IAmb		IAmb	19 20 20.6		
	comp=Z,3.8nm,0.8s								
SONM				ScP		**ScP**	19 26 16.5	+1.4	
GTA2	**Gaotai**	**31.51**	**294**	P		**P**	19 20 38.3	-1.0	
GTA2				pP		pP	19 21 06.1	-47	
GTA2				ScP		**ScP**	19 26 21.0	-4.3	
GTA2				pmax		pmax			
	comp=Z,11nm,0.8s								
PZH	**PanZhiHua**	**31.80**	**269**	P		**P**	19 20 42.8	+0.9	
SIJI	**Sorong**	**33.37**	**192**	P		**P**	19 20 55.4	0.0	
	comp=Z,4.4nm,0.7s,baz=346,slow=12,SNR=2.9								
	comp=Z,4.4nm,0.7s								
GOMU	**GeErMu**	**35.56**	**289**	P		**P**	19 21 13.1	-1.0	
GOMU				pP		pP	19 21 16.5	-72	
GOMU				pmax		pmax			
	comp=Z,20nm,0.7s								
CHTO	**Chiang Mai**	**37.26**	**259**	P		**P**	19 21 27.1	-0.9	
CMAR	**Chiang Mai Arr**	**37.43**	**258**	P		**P**	19 21 28.9	-0.6	
	comp=Z,0.7nm,0.8s,baz=49,slow=8.0,SNR=7.1								
CMAR				ScP		**S**	19 26 49.1	+1.2	
	comp=Z,0.3nm,0.5s,baz=33,slow=4.2,SNR=4.1								
	comp=Z,0.7nm,0.8s								
NPW	**Naypyitaw**	**39.16**	**262**	P		**P**	19 21 43.7	+0.1	
LSA	**Lhasa**	**39.82**	**279**	P		**P**	19 21 49.9	+0.4	
WMQ	**Urumqi**	**40.59**	**301**	*eP*		**P**	19 21 55.8	+0.7	
WMQ				S		**S**	19 27 36.5	+2.2	
WMQ				pmax		pmax			
	comp=Z,13nm,1.3s								
ZALV	**Zalesovo Beam**	**43.20**	**316**	P		**P**	19 22 14.4	-1.2	
	comp=Z,1.6nm,0.4s,baz=90,slow=7.6,SNR=14								
	comp=Z,1.6nm,0.4s								
MKAR	**Makanchi Array**	**44.36**	**306**	P		**P**	19 22 24.3	-0.6	
	comp=Z,3.3nm,0.5s,baz=86,slow=9.5,SNR=58								
MKAR				ScP		**ScP**	19 27 14.3	+0.4	
	comp=Z,0.6nm,0.6s,baz=86,slow=5.6,SNR=7.5								
	comp=Z,3.3nm,0.5s								
MKAR	**Makanchi Array**	**44.36**	**306**			**P**	19 22 23.5	-1.4	
MKAR				ScP		**ScP**	19 27 14.3	+0.4	
MAKZ	**Makanchi**	**44.58**	**306**			**P**	19 22 25.6	-1.0	
MAKZ				IAmb		IAmb	19 22 26.6		
	comp=Z,5.8nm,0.5s								
MAKZ	**Makanchi**	**44.58**	**306**	P		**P**	19 22 26.4	-0.2	
MTN	**Manton Dam**	**45.15**	**189**			**P**	19 22 31.4	+0.1	
PDGK	**Podgornoye**	**46.57**	**301**	P		**P**	19 22 41.0	-1.2	
KURK	**Kurchatov**	**46.76**	**311**			**P**	19 22 41.3	-2.0	
KURK				IAmb		IAmb	19 22 43.6		
	comp=Z,5.5nm,0.8s								
KURK	**Kurchatov**	**46.76**	**311**	P		**P**	19 22 42.7	-0.5	
KURBB	**Kurchatov Arra**	**46.81**	**311**	P		**P**	19 22 42.9	-0.8	
	comp=Z,3.1nm,0.5s,baz=91,slow=9.5,SNR=78								
	comp=Z,3.1nm,0.5s								
WUS	**Wushi**	**47.05**	**298**	P		**P**	19 22 45.9	0.0	
TARG	**Taragay, Kyrgy**	**48.02**	**299**	P		**P**	19 22 54.1	+0.6	
KNRA	**Kununurra**	**48.29**	**192**	P		**P**	19 22 56.0	+0.7	
O15K	**Ungalikthiuk R**	**49.02**	**37**	P		**P**	19 23 01.6	+1.3	
O15K				IAmb		IAmb	19 23 03.1		
	comp=Z,8.3nm,1.0s								
ASAI	**AK-SAY(Kyrgyzs**	**49.11**	**299**	P		**P**	19 22 59.8	-1.8	
KSH2	**Kashi**	**50.17**	**296**	P		**P**	19 23 09.8	+0.4	
KSH2				pmax		pmax			
	comp=Z,6.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**51.26**	**195**	P		**P**	19 23 17.6	+0.4	
	comp=Z,3.5nm,0.5s,baz=8.2,slow=6.8,SNR=18								
	comp=Z,3.5nm,0.5s								
BVAR	**Borovoye Array**	**51.77**	**315**	P		**P**	19 23 20.3	-0.4	
	comp=Z,2.6nm,0.5s,baz=98,slow=7.2,SNR=14								
	comp=Z,2.6nm,0.5s								
WRA	**Warramunga Arr**	**51.86**	**184**	P		**P**	19 23 22.2	+0.5	
	comp=Z,5.3nm,0.3s,baz=0.2,slow=7.6,SNR=110								
WRA				PcP		**PcP**	19 24 30.2	+2.0	
	comp=Z,1.4nm,0.5s,baz=357,slow=4.1,SNR=6.9								
	comp=Z,5.3nm,0.3s								
WRA	**Warramunga Arr**	**51.86**	**184**	P		**P**	19 23 21.1	-0.6	
K20K	**Telida**	**52.09**	**32**	IAmb		IAmb	19 23 26.2		
	comp=Z,3.3nm,0.8s								
QIS	**Mount Isa**	**52.40**	**178**	P		**P**	19 23 26.8	+1.2	
CTA	**Charters Tower**	**52.54**	**170**	P		**P**	19 23 28.1	+1.5	
	comp=Z,4.2nm,0.8s,baz=358,slow=12,SNR=4.1								
	comp=Z,4.2nm,0.8s								
KKAR	**Karatay Array**	**53.09**	**302**	P		**P**	19 23 29.9	-0.6	
H22K	**Ishtalitna Cre**	**53.38**	**29**	IAmb		IAmb	19 23 35.6		
	comp=Z,3.2nm,0.7s								
NIL	**Nilore**	**53.38**	**290**	P		**P**	19 23 33.1	+0.3	
GAR	**Garm**	**54.18**	**297**	P		**P**	19 23 37.9	-0.6	
NEA2	**Nenana**	**54.32**	**31**	IAmb		IAmb	19 23 41.7		
	comp=Z,4.7nm,1.0s								
ILAR	**Eielson Array**	**55.26**	**30**	P		**P**	19 23 46.1	+0.6	
	comp=Z,0.8nm,0.6s,baz=276,slow=5.9,SNR=12								
	comp=Z,0.8nm,0.6s								
ILAR	**Eielson Array**	**55.26**	**30**	P		**P**	19 23 45.8	+0.4	
AS31	**Alice Springs**	**55.58**	**184**	P		**P**	19 23 49.3	+1.0	
AS31				IAmb		IAmb	19 23 51.0		
	comp=Z,3.2nm,0.5s								
ASAR	**Alice Springs**	**55.58**	**184**	P		**P**	19 23 49.4	+1.1	
	comp=Z,3.3nm,0.7s,baz=12,slow=13,SNR=55								
	comp=Z,3.3nm,0.7s								
ASAR	**Alice Springs**	**55.58**	**184**	P		**P**	19 23 49.0	+0.7	
F25K	**Christian Rive**	**55.67**	**27**	P		**P**	19 23 50.0	+1.6	
E28M	**Babbage River**	**57.89**	**25**	P		**P**	19 24 05.5	+1.8	
E28M				IAmb		IAmb	19 24 07.1		
	comp=Z,5.3nm,1.4s								
ABKAR	**Akbulak array**	**58.87**	**312**	P		**P**	19 24 09.7	-1.0	
EPYK	**Eagle Plains**	**59.28**	**28**	IAmb		IAmb	19 24 16.1		
	comp=Z,6.8nm,0.8s								
G30M	**tAoh Zraii Nji**	**59.37**	**27**	P		**P**	19 24 15.4	+1.5	
G30M				IAmb		IAmb	19 24 16.5		
	comp=Z,6.2nm,1.1s								
INKA	**Innaminka**	**59.59**	**177**	IAmb		IAmb	19 24 18.4		
	comp=Z,7.3nm,1.1s								
STKA	**Stephens Creek**	**63.74**	**176**	P		**P**	19 24 44.9	+1.8	
	comp=Z,5.4nm,0.7s,baz=335,slow=6.7,SNR=7.3								
	comp=Z,5.4nm,0.7s								
NWAO	**Narrogin (SRO)**	**67.53**	**199**	P		**P**	19 25 07.8	+0.8	
	comp=Z,4.7nm,0.6s,baz=21,slow=8.7,SNR=2.0								
	comp=Z,4.7nm,0.6s								
ARCES	**ARCESS Array B**	**67.53**	**339**	P		**P**	19 25 07.1	+0.6	
	comp=Z,1.9nm,0.8s,baz=67,slow=9.3,SNR=7.5								
	comp=Z,1.9nm,0.8s								
YKA	**Yellowknife Ar**	**69.57**	**28**	P		**P**	19 25 20.2	+1.2	
	comp=Z,0.9nm,0.6s,baz=302,slow=6.5,SNR=4.1								
	comp=Z,0.9nm,0.6s								
FINES	**FINESS Array B**	**71.74**	**332**	P		**P**	19 25 31.8	-0.2	
	comp=Z,1.8nm,0.4s,baz=63,slow=5.3,SNR=40								
	comp=Z,1.8nm,0.4s								
KBZ	**Khabaz**	**71.80**	**311**	P		**P**	19 25 33.6	+0.9	
	comp=Z,1.9nm,0.7s,baz=86,slow=4.1,SNR=6.7								
	comp=Z,1.9nm,0.7s								
AKASG	**Malin Array Be**	**76.31**	**322**	P		**P**	19 25 57.8	-0.5	
	comp=Z,0.6nm,0.4s,baz=52,slow=5.9,SNR=4.7								
	comp=Z,0.6nm,0.4s								
HFS	**Hagfors**	**77.29**	**335**	P		**P**	19 26 03.3	-0.2	
	comp=Z,1.0nm,0.8s,baz=9.5,slow=3.5,SNR=1.7								
	comp=Z,1.0nm,0.8s								
NOA	**NORSAR Array B**	**77.51**	**336**	P		**P**	19 26 04.3	-0.6	
	comp=Z,0.3nm,0.5s,baz=46,slow=5.5,SNR=3.7								
	comp=Z,0.3nm,0.5s								
BRTR	**Keskin Array B**	**79.80**	**311**	P		**P**	19 26 17.3	-0.4	
	comp=Z,0.5nm,0.7s,baz=19,slow=6.6,SNR=2.7								
	comp=Z,0.5nm,0.7s								
NVAR	**Mina Array Bea**	**80.39**	**51**	P		**P**	19 26 22.5	+1.5	
	comp=Z,1.1nm,0.8s,baz=299,slow=4.9,SNR=4.3								
	comp=Z,1.1nm,0.8s								
PDAR	**Pinedale Array**	**83.29**	**43**	P		**P**	19 26 37.6	+1.8	
	comp=Z,0.7nm,0.7s,baz=11,slow=1.5,SNR=7.2								
	comp=Z,0.7nm,0.7s								
TXAR	**Lajitas Array**	**95.55**	**50**	P		**P**	19 27 35.3	+1.8	
	comp=Z,0.5nm,0.7s,baz=290,slow=3.2,SNR=6.3								
	comp=Z,0.5nm,0.7s								
QSPA	**South Pole Qui**	**121.86**	**180**	PKP		**PKiKP**	19 32 59.6	+0.6	
	comp=Z,1.0nm,0.6s,baz=325,slow=0.2,SNR=12								
QSPA	**South Pole Qui**	**121.86**	**180**	PKPdf		**PKiKP**	19 32 59.5	+0.5	

*ANF **19** 19:23:30.6±0.1,58.33°N×133.40°W,h0km,ML3.5/29,Error ellipse: s-maj=1.7km s-min=1.3km az=117.0*
*AEIC **19** 19:23:31.4±1.0,58.34°N±0.02°×133.48°W±0.01°,h2km±6km, Error ellipse: s-maj=2.6km s-min=0.8km az=197.0*
*NEIC **19** 19:23:31.1±0.8,58.33°N±0.02°×133.45°W±0.03°,h2km±7km, ML3.1/50,ML2.9(AEIC),Error ellipse: s-maj=2.7km s-min=2.4km az=167.0*

ISC 19 19:23:30.9±1.1,58.33°N±0.02°×133.46°W±0.02°,h4km±10km, n92,σ1°11°/110,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.49**	**264**	P		**P**	**Pg**	**19 23 40.5**	**+0.3**
JIS	**Juneau Island**	**0.49**	**264**	S		**S**	**Sg**	**19 23 47.4**	**+0.8**
JIS	**Juneau Island**	**0.49**	**264**			**P**	**Pg**	**19 23 40.5**	**+0.3**
JIS						**S**	**Sg**	**19 23 47.2**	**+0.6**
R32K	**Eaglecrest**	**0.56**	**265**			**P**	**Pg**	**19 23 41.9**	**+0.3**
R32K						**S**	**Sg**	**19 23 49.5**	**+0.6**
R32K	**Eaglecrest**	**0.56**	**265**	IAML				19 23 50.5	
R32K	comp=N,224nm,0.6s			IAML				19 23 59.0	
	comp=E,130nm,0.7s								
R32K	**Eaglecrest**	**0.56**	**265**	P		**Pg**		**19 23 41.8**	**+0.1**
R32K	baz=82			S		**Sg**		**19 23 49.2**	**+0.3**
	baz=82								
BESE	**Bessie Mountai**	**0.77**	**290**			**Pg**		**19 23 45.5**	**-0.2**
BESE	**Bessie Mountai**	**0.77**	**290**			**Sg**		**19 23 55.8**	**0.0**
Q32M	**Nakina River**	**0.89**	**44**			**Pg**		**19 23 48.0**	**+0.1**
Q32M	**Nakina River**	**0.89**	**44**	P		**Pg**		**19 23 48.0**	**+0.1**
Q32M	baz=226,SNR=77			S		**Sg**		**19 23 58.8**	**-0.6**
	baz=226								
S32K	**Killisnoo**	**1.05**	**215**			**Sn**		**19 24 06.7**	**-0.6**
S32K	**Killisnoo**	**1.05**	**215**			**Pn**		**19 23 51.5**	**-0.8**
S32K	**Killisnoo**	**1.05**	**215**	P		**Pb**		**19 23 51.3**	**-0.2**
S32K	baz=33			S		**Sn**		**19 24 06.6**	**-0.6**
	baz=33								
R31K	**City Hall, Gus**	**1.20**	**275**			**Sn**		**19 24 11.9**	**+0.8**
R31K	**City Hall, Gus**	**1.20**	**275**	S		**Sn**		**19 24 10.8**	**-0.3**
	baz=92								
P32M	**Atlin**	**1.27**	**354**			**Pn**		**19 23 54.4**	**-1.1**
P32M				IAML				19 24 14.3	
	comp=E,245nm,0.5s								
P32M	**Atlin**	**1.27**	**354**			**Sn**		**19 24 13.1**	**+0.1**
P32M	**Atlin**	**1.27**	**354**	P		**Pn**		**19 23 54.4**	**-1.1**
P32M	baz=174,SNR=64			S		**Sn**		**19 24 12.7**	**-0.2**
	baz=174								
S34M	**Telegraph Cree**	**1.31**	**108**			**Pn**		**19 23 55.2**	**-0.6**
S34M				IAML				19 24 16.1	
	comp=N,397nm,0.8s								
S34M				IAML				19 24 18.6	
	comp=E,495nm,0.8s								
S34M	**Telegraph Cree**	**1.31**	**108**			**Sg**		**19 24 15.0**	**+2.2**
S34M	**Telegraph Cree**	**1.31**	**108**	P		**Pn**		**19 23 55.1**	**-0.8**
S34M	baz=290,SNR=102			S		**Sg**		**19 24 12.9**	**+0.1**
	baz=290								
SKAG	**Skagway**	**1.49**	**320**	P		**Pb**		**19 23 58.4**	**-0.7**
SKAG	**Skagway**	**1.49**	**320**	S		**Sg**		**19 24 19.3**	**+0.5**
SKAG	**Skagway**	**1.49**	**320**			**Pn**		**19 23 58.2**	**-0.2**
SKAG						**Sg**		**19 24 18.6**	**-0.2**
SKAG	**Skagway**	**1.49**	**320**	IAML				19 24 21.5	
SKAG	comp=N,182nm,0.6s			IAML				19 24 25.6	
	comp=E,195nm,1.0s								
SKAG	**Skagway**	**1.49**	**320**	P		**Pn**		**19 23 58.1**	**-0.2**
SKAG	baz=139,SNR=26			S		**Sg**		**19 24 18.8**	**0.0**
	baz=139								
S31K	**Pelican**	**1.51**	**257**			**Pb**		**19 23 58.6**	**-0.9**
S31K						**Sg**		**19 24 19.6**	**+0.1**
S31K	**Pelican**	**1.51**	**257**	IAML				19 24 26.3	
	comp=E,163nm,0.8s								
S31K	**Pelican**	**1.51**	**257**	P		**Pn**		**19 23 58.4**	**-0.3**
S31K	baz=74			S		**Sg**		**19 24 19.6**	**+0.1**
	baz=74								
T33K	**Petersburg**	**1.54**	**170**			**Pb**		**19 23 59.3**	**-0.7**
T33K	**Petersburg**	**1.54**	**170**	Sb		**Sg**		**19 24 21.4**	**+1.0**
	baz=350								
SIT	**Sitka**	**1.62**	**219**	P		**Pb**		**19 24 00.4**	**-0.9**
SIT	**Sitka**	**1.62**	**219**	P		**Sg**		**19 24 23.1**	**+0.2**
SIT	**Sitka**	**1.62**	**219**			**Pb**		**19 24 00.4**	**-0.9**
SIT	**Sitka**	**1.62**	**219**	IAML				19 24 24.6	
SIT	comp=E,113nm,0.5s			IAML				19 24 25.6	
	comp=N,164nm,0.6s								
SIT	**Sitka**	**1.62**	**219**	P		**Pb**		**19 24 00.4**	**-0.9**
SIT	baz=37			S		**Sg**		**19 24 22.6**	**-0.3**
	baz=37								
R33M	**Jennings River**	**1.68**	**49**			**Pb**		**19 24 01.8**	**-0.6**
R33M	**Jennings River**	**1.68**	**49**	IAML				19 24 28.2	
R33M	comp=E,319nm,0.7s			IAML				19 24 28.2	
	comp=N,334nm,0.9s								
R33M	**Jennings River**	**1.68**	**49**	P		**Pn**		**19 24 00.7**	**-0.4**
R33M	baz=232,SNR=101			Sb		**Sg**		**19 24 24.7**	**-0.1**
	baz=232								
DLBC	**Dease Lake**	**1.81**	**85**			**Pb**		**19 24 03.5**	**-1.1**
DLBC	**Dease Lake**	**1.81**	**85**	P		**Pn**		**19 24 02.8**	**-0.1**
DLBC	baz=268,SNR=101			Sg		**Sg**		**19 24 29.5**	**+0.4**
	baz=268								
PLBC	**Pleasant Camp**	**1.88**	**308**			**Pb**		**19 24 04.7**	**-1.1**
PLBC						**Sb**		**19 24 29.5**	**-0.1**
PLBC	**Pleasant Camp**	**1.88**	**308**	P		**Pb**		**19 24 04.6**	**-1.1**
PLBC	baz=126,SNR=51			S		**Sg**		**19 24 30.4**	**-1.0**
	baz=126								
P33M	**Teslin, Yukon**	**1.92**	**10**			**Pb**		**19 24 04.8**	**-1.6**
P33M				IAML				19 24 32.9	
	comp=N,102nm,0.8s								
P33M	**Teslin, Yukon**	**1.92**	**10**	P		**Pn**		**19 24 04.5**	**+0.2**
	baz=191,SNR=42								
P33M				S		**Sb**		**19 24 29.8**	**-0.9**
	baz=191								
WRAK	**Wrangell Islan**	**2.01**	**162**	P		**Pn**		**19 24 05.7**	**+0.2**
	baz=343								
WRAK				S		**Sb**		**19 24 32.7**	**-0.5**
	baz=343								
T35M	**Bob Quinn**	**2.19**	**127**			**Pb**		**19 24 09.2**	**-1.8**
T35M	**Bob Quinn**	**2.19**	**127**	P		**Pn**		**19 24 08.1**	**0.0**
T35M	baz=310			Sg		**Sg**		**19 24 42.1**	**+0.8**
	baz=310								
U33K	**Whale Pass**	**2.23**	**175**			**Pn**		**19 24 08.9**	**+0.5**
U33K				IAML				19 24 47.5	
	comp=E,115nm,1.1s								
U33K	**Whale Pass**	**2.23**	**175**	P		**Pn**		**19 24 08.6**	**+0.1**
	baz=355								
U33K				Sb		**Sg**		**19 24 41.7**	**-0.6**
	baz=355								
WHY	**Whitehorse**	**2.45**	**343**			**Pn**		**19 24 12.3**	**+0.7**
WHY				IAML				19 24 50.2	
	comp=E,135nm,0.7s								
WHY				IAML				19 24 57.7	
	comp=N,146nm,1.1s								
WHY	**Whitehorse**	**2.45**	**343**	S		**Sb**		**19 24 44.3**	**-1.7**
	baz=162								
P30M	**Million Dollar**	**2.54**	**316**			**Pn**		**19 24 14.2**	**+1.3**
P30M	**Million Dollar**	**2.54**	**316**	IAML				19 24 53.5	
	comp=E,91nm,1.0s								
P30M				IAML				19 25 02.9	
	comp=N,118nm,1.2s								
P30M	**Million Dollar**	**2.54**	**316**	P		**Pn**		**19 24 13.9**	**+1.0**
	baz=134								
P30M				S		**Sb**		**19 24 47.4**	**-1.3**
	baz=134								
P29M	**Windy Craggy**	**2.57**	**302**			**Pn**		**19 24 14.8**	**+1.5**
P29M				IAML				19 24 55.3	
	comp=E,93nm,0.8s								
P29M	**Windy Craggy**	**2.57**	**302**	P		**Pn**		**19 24 13.6**	**+0.3**
	baz=119,SNR=10								
P29M				S		**Sb**		**19 24 46.7**	**-2.7**
	baz=119								
O30N	**Mendenhall**	**2.79**	**332**			**Pn**		**19 24 17.3**	**+1.0**
O30N				IAML				19 25 04.7	
	comp=N,85nm,0.8s								
O30N				IAML				19 25 13.2	
	comp=E,106nm,1.2s								
O30N	**Mendenhall**	**2.79**	**332**	P		**Pn**		**19 24 17.0**	**+0.7**
	baz=150,SNR=14								
O30N				Sb		**Sg**		**19 24 58.8**	**-1.7**
	baz=150								
N32M	**Quiet Lake**	**2.84**	**4**	Sg		**Sg**		**19 25 05.9**	**+3.9**
	baz=184								
CRAG	**Craig**	**2.87**	**176**	P		**Pn**		**19 24 17.7**	**+0.3**
CRAG	**Craig**	**2.87**	**176**			**Pn**		**19 24 17.9**	**+0.6**
CRAG	**Craig**	**2.87**	**176**	IAML				19 25 07.9	
CRAG	comp=E,47nm,1.1s			IAML				19 25 16.2	
	comp=N,50nm,1.0s								
CRAG	**Craig**	**2.87**	**176**	S		**Sn**		**19 24 53.6**	**+1.3**
	baz=356								
HYT	**Haines Junctio**	**3.24**	**322**			**Pn**		**19 24 23.6**	**+1.1**
HYT	**Haines Junctio**	**3.24**	**322**	IAML				19 25 17.4	
	comp=E,73nm,1.2s								
HYT	**Haines Junctio**	**3.24**	**322**	P		**Pn**		**19 24 23.7**	**+1.1**
	baz=139								
HYT				Sb		**Sg**		**19 25 12.1**	**-2.8**
	baz=139								
O29M	**Mount Kennedy**	**3.28**	**309**	Pb		**Pb**		**19 24 29.7**	**0.0**
	baz=125								
O29M				Sb		**Sg**		**19 25 13.7**	**-2.5**
	baz=125								
N31M	**Braeburn, Yuko**	**3.38**	**341**	P		**Pn**		**19 24 25.5**	**+1.2**
	baz=159,SNR=12								
N31M				S		**Sn**		**19 25 06.5**	**+1.7**
	baz=159								
N31M	**Braeburn,

RUSC S Sn 19 26 47.7 -0.1
RUSC La Rusia 0.89 182 *e*P Pn 19 26 29.0 +0.4
RUSC *e*S Sn 19 26 47.0 -0.8
PTBC PUERTO BERRIO, 1.42 260 P Pn 19 26 31.2 -1.6
PTBC S Sn 19 26 52.7 -2.5
OCAC Ocana 1.46 349 P Pn 19 26 32.9 -0.5
OCAC S Sn 19 26 55.0 -1.3
SPBC San Pablo de B 1.52 222 P Pn 19 26 33.6 -0.3
SPBC S Sn 19 26 56.6 -0.6
NORC Norcasia 2.18 236 P Pn 19 26 40.4 -0.8
NORC S Sn 19 27 08.2 -2.1
CHIC Chingaza 2.25 198 P Pn 19 26 42.8 +0.4
CHIC S Sn 19 27 11.8 -0.6
ROSC El Rosal 2.31 213 P Pn 19 26 44.6 +1.5
8µm,0.4s,baz=21,slow=4.4,SNR=1791
ROSC S Sn 19 27 14.8 +1.2
2µm,0.3s,baz=119,slow=13,SNR=3.7
ROSC El Rosal 2.31 213 Pn 19 26 44.7 +1.6
ROSC El Rosal 2.31 213 P Pn 19 26 44.5 +1.3
ROSC S Sn 19 27 12.4 -1.2
BOG Bogota 2.38 205 P Pn 19 26 44.4 +0.5
BOG S Sn 19 27 16.0 +1.0
CVER Cruz Verde, Cu 2.48 204 P Pn 19 26 46.3 +1.1
CVER S Sn 19 27 17.1 -0.1
HELC Santa Helena 2.54 257 P Pn 19 26 46.1 +0.4
HELC S Sn 19 27 16.7 -1.6
HELC Santa Helena 2.54 257 P Pn 19 26 44.7 -1.1
HELC P 19 26 44.9
HELC S Sn 19 27 16.1 -2.2
HELC S 19 27 16.2
HELC Santa Helena 2.54 257 *e*P Pn 19 26 47.4 +1.6
HELC *e*S Sn 19 27 18.3 0.0
MEDEC Medelln, Ant 2.58 259 P Pn 19 26 45.2 -0.9
MEDEC S Sn 19 27 16.7 -2.2
UREC San Jos de Ur 2.64 291 P Pn 19 26 44.4 -2.3
PTGC Puerto Gaitan, 2.73 160 P Pn 19 26 48.0 +0.1
VILC Villavicencio, 2.74 194 P Pn 19 26 48.1 0.0
VILC S Sn 19 27 22.0 -0.5
GUY2C Guyana, Caldas 2.78 236 P Pn 19 26 48.7 -0.2
CBOC Ciudad Bolivar 3.09 253 P Pn 19 26 52.2 -0.2
CBOC S Sn 19 27 27.9 -2.3
DBBC Dabeiba 3.15 274 P Pn 19 26 52.3 -0.8
SDV Santo Domingo 3.17 49 P Pn 19 26 54.1 +0.5
443nm,0.3s,baz=235,slow=9.4,SNR=742
SDV S Sn 19 27 30.4 -1.8
2µm,0.4s,baz=64,slow=23,SNR=44
SDV Santo Domingo 3.17 49 Pn 19 26 54.5 +1.0
SDV Sn Sn 19 27 32.6 +0.3
SDV Santo Domingo 3.17 49 *e*P Pn 19 26 54.6 +1.1
SDV *e*S Sn 19 27 30.9 -1.3
SDV Santo Domingo 3.17 49 *e*P Pn 19 26 54.3 +0.7
SDV *e*S Sn 19 27 32.1 -0.2
ARGC Ariguani, Magd 3.27 339 P Pn 19 26 54.8 +0.2
ARGC S Sn 19 27 33.2 -1.0
ARMEC Armenia, Quind 3.42 230 P Pn 19 26 57.9 +1.2
PRAC Prado 3.56 211 P Pn 19 26 58.3 -0.1
PRAC S Sn 19 27 41.7 +0.7
PRAC Prado 3.56 211 P Pn 19 26 57.9 -0.5
PRAC S Sn 19 27 39.4 -1.6
ORTC Ortega, Tolima 3.60 218 P Pn 19 26 58.7 -0.2
ORTC S Sn 19 27 41.4 -0.5
APAC Apartado, Choc 3.67 288 P Pn 19 26 58.8 -0.9
SJCC San Jacinto, C 3.74 326 P Pn 19 26 58.7 -1.9
SJCC S Sn 19 27 40.4 -4.7
SJCC San Jacinto, C 3.74 326 *e*P Pn 19 26 58.5 -2.2
SJCC *e*S Sn 19 27 37.6 -7.4
GUVC San Jose del G 4.24 174 P Pn 19 27 06.9 -0.3
SOLC Bahia Solano 4.37 263 P Pn 19 27 08.3 -0.5
SMRC Santa Marta, M 4.50 345 P Pn 19 27 09.3 -1.2
PIZC Pizarro, Choco 4.66 247 P Pn 19 27 12.8 +0.2
PIZC S Sn 19 28 06.4 0.0
MACC Macarena, Meta 4.68 190 P Pn 19 27 11.7 -1.3
BETC Betania 4.73 210 P Pn 19 27 12.6 -1.0
PTAC Punta Ardita, 4.74 275 P Pn 19 27 11.8 -1.9
URI Uribia 4.99 12 P Pn 19 27 15.4 -1.6
URIC Uribia, Colomb 4.99 12 *e*P Pn 19 27 15.3 -1.7
URIC *e*S Sn 19 28 07.6 -6.7
JAMC Jamundi, Valle 5.07 226 P Pn 19 27 17.2 -1.0
2.2nm6µm294nm,0.5s
GARC Garzon, Huila 5.18 208 P Pn 19 27 18.5 -1.3
POPC Popayan, Colom 5.56 221 P Pn 19 27 24.4 -0.3
3µm319nm,0.8s
FLOC Florencia 5.79 207 P Pn 19 27 27.0 -0.6
7µm519nm,1.0s
BBAC Balboa, Cauca 6.32 222 P Pn 19 27 34.2 -0.7
GR1C Gorgona, Isla 6.34 234 P Pn 19 27 33.3 -1.6
PTLC Puerto Leguiza 6.80 195 P Pn 19 27 42.9 +1.8
1µm220nm,0.6s
ZANG Zanguenga, Cho 7.09 288 *e*P Pn 19 27 41.4 -3.5
BCIP Isla Barro Col 7.13 290 P Pn 19 27 42.8 -2.5
BCIP Isla Barro Col 7.13 290 19 27 42.5 -2.9
BCIP Isla Barro Col 7.13 290 *e*P Pn 19 27 41.7 -3.6
BCIP Isla Barro Col 7.13 290 P Pn 19 27 42.8 -2.5
AZU Azuero 7.24 278 P Pn 19 27 44.9 -1.9
3µm188nm,0.4s
AZU Azuero 7.24 278 *e*P Pn 19 27 45.1 -1.7
CASC Dorado de Casc 7.88 213 P Pn 19 27 54.4 -1.1
1µm135nm,1.0s
GMAL Guarumal, Vera 8.18 277 P Pn 19 27 58.4 -1.0
3µm246nm,0.9s
GMAL Guarumal, Vera 8.18 277 *e*P Pn 19 27 59.0 -0.4
CUSE Cuicocha Este 8.37 220 P Pn 19 28 00.9 -1.4
OTAV Otavalo 8.45 220 Pn 19 28 02.5 -0.9
OTAV Otavalo 8.45 220 P Pn 19 28 02.3 -1.2
468nm45nm,0.9s
OTAV Otavalo 8.45 220 *e*P Pn 19 28 01.8 -1.7
OTAV *e*S Sn 19 29 33.9 -3.9
SGC2 Sao Gabriel da 9.18 138 *e*P Pn 19 28 10.4 -2.2
RBALA Bur 9.26 284 *e*P Pn 19 28 11.9 -1.9
PBNVO Pueblo Nuevo, 9.30 284 *e*P Pn 19 28 12.6 -1.7
PBNVO *e*S Sn 19 29 51.3 -6.2
BRU2 Volcan 9.76 282 P Pn 19 28 19.7 -0.8
BRU2 Volcan 9.76 282 Pn 19 28 20.4 -0.1
BRU2 Volcan 9.76 282 *e*P Pn 19 28 19.4 -1.1
BRU2 Volcan 9.76 282 P Pn 19 28 20.6 +0.1
CDTO Canoas 9.90 281 P Pn 19 28 25.0 +2.8
NELY Ciudad Neily 9.98 281 *e*P Pn 19 28 23.3 0.0
EDP2 Potrero Grande 10.27 283 *e*P Pn 19 28 28.4 +1.2
DRK0 Durika 10.39 284 P Pn 19 28 17.4 -11
DRK0 Durika 10.39 284 *e*P Pn 19 28 17.1 -12
PRVC Isla de Provid 10.48 309 P Pn 19 28 26.5 -3.3
EDPE Pejibaye, P 10.68 283 *e*P Pn 19 28 33.5 +0.9
LCOCO El Coco 10.90 288 *e*P Pn 19 28 34.2 -1.2
ABRB Las Abras (San 11.03 288 *e*P Pn 19 28 37.0 -0.3
VTCV VTCV, Calle Va 11.03 287 *e*P Pn 19 28 36.3 -1.0
CVTR Volcan Turrial 11.07 288 *e*P Pn 19 28 36.7 -1.4
VTR0 Volcan Turrial 11.07 288 *e*P Pn 19 28 37.0 -1.0
VICA Volcano Irazu 11.14 287 *e*P Pn 19 28 37.6 -1.4
HDC Heredia 11.40 287 *e*P Pn 19 28 43.0 +0.9
HDC *e*S Sn 19 30 50.8 +2.3
HDC Heredia 11.40 287 P Pn 19 28 43.0 +0.9
VPS8 V Poas 11.57 288 *e*P Pn 19 28 44.1 -0.4
PCJ Portland Cotta 11.60 340 *e*P Pn 19 28 45.9 +1.4
GWJ Greenwich 11.78 343 *i*P Pn 19 28 48.8 +1.9
GWJ ⇑*i*P P 19 28 48.8 -4.9
STH Stony Hill 11.80 342 ⇓*i*P Pn 19 28 48.8 +1.6
STH *i*P Pn 19 28 48.9 +1.6
STH Stony Hill 11.80 342 *i*P Pn 19 28 49.2 +2.0
MCJ Malvern 11.96 338 ⇓*i*P Pn 19 28 51.2 +1.9
BNJ Bonny Gate 12.08 342 *e*P Pn 19 28 52.0 +1.2
TRN Trinidad (W) 12.13 71 *e*P P 19 28 58.5 +0.9
CVJ Coleyville 12.18 339 *i*P Pn 19 28 54.3 +2.2
MTDJ Mount Denham 12.18 339 P Pn 19 28 53.8 +1.7
MTDJ Mount Denham 12.18 339 Pn Pn 19 28 53.0 +0.8
MTDJ Mount Denham 12.18 339 *i*P Pn 19 28 54.8 +2.6
MTDJ IVmB_BB 19 28 55.2
comp=Z,4µm,1.0s
MTDJ IAmb IAmb 19 28 55.3
comp=Z,250nm,0.5s
MTDJ Mount Denham 12.18 339 P Pn 19 28 54.6 +2.5
SDDR Presa de Saban 12.24 8 P Pn 19 28 54.5 +1.6
SDDR Presa de Saban 12.24 8 *i*P Pn 19 28 55.5 +2.6
SDDR Presa de Saban 12.24 8 *i*P P 19 29 00.8 +2.0
SDDR IAmb IAmb 19 29 10.7
comp=Z,84nm,0.7s
SDDR Presa de Saban 12.24 8 P Pn 19 28 53.0 +0.2
JTS Las Juntas de 12.28 287 P Pn 19 28 54.6 +1.2
comp=Z,28nm,0.8s,baz=60,slow=7.0,SNR=15
JTS LR LR 19 33 55.4
comp=Z,95nm,18.1s,baz=94,slow=38
JTS Las Juntas de 12.28 287 P Pn 19 28 54.4 +1.1

JTS Las Juntas de 12.28 287 P Pn 19 28 55.7 +2.4
QUEB Quebradon, Cot 12.31 289 *e*P Pn 19 28 54.3 +0.4
GRFF Grenada Fort F 12.32 64 *e*P P 19 29 00.5 +0.8
GRGR Grenville 12.43 64 *e*P P 19 29 01.9 +1.1
GRGR Grenville 12.43 64 P P 19 28 59.1 -1.8
DR12 Loma Pena Alta 12.45 16 Pn 19 28 53.2 -2.4
GCMP Grenada, Carri 12.78 63 *e*P P 19 29 05.6 +0.8
CELP Cerrillos 12.87 29 Pn 19 28 58.6 -2.4
SJG San Juan 13.11 30 P Pn 19 29 01.0 -3.0
comp=Z,40nm,0.4s,baz=203,slow=17,SNR=36
SJG S Sn 19 31 17.7 -11
comp=Z,22nm,0.8s,baz=357,slow=21,SNR=2.4
SJG San Juan 13.11 30 P Pn 19 29 02.8 -1.2
SJG San Juan 13.11 30 Pn 19 29 01.6 -2.4
SJG San Juan 13.11 30 *e*P Pn 19 29 02.8 -1.2
SJG San Juan 13.11 30 P Pn 19 29 03.2 -0.8
BOAV Boa Vista 13.22 109 Pn 19 29 04.5 -1.0
CONN Concepcion 13.29 292 P P 19 29 12.6 +2.1
RCC Rio Carpintero 13.38 349 *i*P P 19 29 10.8 -0.6
RCC IVmB_BB 19 29 11.4
comp=Z,3µm,1.0s
QMBU Quimbuelo 13.44 353 *i*P P 19 29 11.5 -0.6
QMBU IAmb IAmb 19 29 31.9
comp=Z,59nm,0.7s
BOAB BOACO BROADBAN 13.65 295 Pn 19 29 10.2 -0.7
BOAB BOACO BROADBAN 13.65 295 P Pn 19 29 10.0 -0.9
SLBI Saint Lucia, B 13.88 58 *e*P Pn 19 29 15.6 +1.8
SLAC Saint Lucia, A 13.88 58 *e*P P 19 29 18.6 +1.6
MOAC Moa 13.91 353 IVmB_BB 19 29 20.3
comp=Z,650nm,1.0s
MOAC *i*P P 19 29 21.7 +4.4
MOAC IAmb IAmb 19 29 29.6
comp=Z,66nm,0.7s
BIM Bigot 14.05 56 *e*P P 19 29 22.1 +3.1
BIM Bigot 14.05 56 P P 19 29 19.9 +1.0
FDFM Morne la Roset 14.09 55 Pn 19 29 15.3 -1.2
SVN Savane Anatole 14.14 55 *e*P P 19 29 23.6 +3.6
MPOM Morne Pois Mar 14.19 57 P P 19 29 21.9 +1.5
DSLB Salisbury 14.28 52 *e*P Pn 19 29 20.4 +1.5
HLGC Holguin 14.32 349 *i*P P 19 29 26.9 +5.0
HLGC IAmb IAmb 19 29 29.7
comp=Z,36nm,0.7s
ILAM Ilet Lapin Mar 14.35 55 *e*P P 19 29 23.5 +1.3
ILAM Ilet Lapin Mar 14.35 55 P P 19 29 23.8 +1.6
TBG Guadaloupe-3 14.35 50 *e*P P 19 29 22.0 -0.2
SABA Saba 14.40 41 *e*P P 19 31.4 +8.5
DWS Wesley 14.44 52 *e*P Pn 19 29 20.4 -0.4
MMLZ Guadeloupe Bro 14.45 49 *e*P P 19 29 26.2 +2.9
SEUS St. Eustatius 14.48 42 *e*P P 19 29 29.0 +5.3
LCCY Blossom Villag 14.51 333 *i*P P 19 29 24.9 +0.9
LCCY IAmb IAmb 19 29 26.0
comp=Z,120nm,0.8s
DHSZ Broadband at M 14.52 49 *e*P Pn 19 29 23.3 +1.5
CNGN Cerro Negro 14.60 294 P Pn 19 29 23.2 +0.3
BBGH Gun Hill 14.70 64 *e*P P 19 29 28.5 +2.3
ATAH Atahualpa 14.83 201 P Pn 19 29 26.4 +0.3
comp=Z,6.3nm,0.7s,baz=357,slow=8.6,SNR=5.3
SMRT St. Maarten 14.83 40 *e*P P 19 29 27.1 -0.4
CCCC Cccc 15.04 343 *i*P P 19 29 35.6 +5.8
DSDZ La Diserade, G 15.07 50 *e*P Pn 19 29 29.7 +1.0
GDSD La Dsirade Is 15.07 50 Pn 19 29 27.2 -1.5
ANWB Willy Bob 15.42 44 *e*P Pn 19 29 32.0 -0.9
MGV Manicaragua 16.64 337 *i*P Pn 19 29 57.1 +9.3
MGV IVmB_BB 19 29 57.9
comp=Z,510nm,1.0s
MGV IAmb IAmb 19 29 59.1
comp=Z,22nm,0.4s
APG El Apazote 18.94 297 P P 19 30 12.5 -0.5
comp=Z,2.1nm,0.7s,baz=134,slow=9.5,SNR=18
NNA Nana 19.03 191 P P 19 30 14.1 +0.3
comp=Z,7.3nm,0.6s,baz=7.2,slow=9.2,SNR=4.5
TEIG Tepich 19.91 314 P P 19 30 24.5 +1.3
MDP Montagnes des 20.36 94 P P 19 30 30.2 +2.0
comp=Z,28nm,0.8s,baz=271,slow=11,SNR=23
MDP pP **pP** 19 30 54.2 -1.4
comp=Z,17nm,0.5s,baz=278,slow=15,SNR=5.2
LPAZ La Paz 23.44 168 P P 19 30 59.7 +0.1
comp=Z,4.5nm,0.7s,baz=0.0,slow=6.6,SNR=23
comp=Z,4.5nm,0.7s
LPAZ La Paz 23.44 168 P P 19 30 59.7 +0.1
LPAZ IAmb IAmb 19 31 36.1
comp=Z,10nm,0.8s
LPAZ La Paz 23.44 168 *e*P P 19 30 58.7 -1.0
LPAZ *e*S S 19 35 00.0 -1.9
LPAZ La Paz 23.44 168 P P 19 31 00.0 +0.4
CMIG Matias Romero 23.66 298 LR LR 19 41 37.0
comp=Z,45nm,18.2s,baz=128,slow=39
PB16 IPOC Station P 25.21 172 P P 19 31 14.0 -1.7
SIV San Ignacio 25.55 152 P P 19 31 17.3 -0.9
comp=Z,2.1nm,0.8s,baz=322,slow=9.2,SNR=11
SIV pP **pP** 19 30 50.7 -0.5
comp=Z,6.6nm,0.8s,baz=332,slow=9.4,SNR=8.4
comp=Z,2.1nm,0.8s
PSGCX Pisagua 26.38 174 P P 19 31 24.9 -0.7
PSGCX IAmb IAmb 19 31 57.3
comp=Z,15nm,1.2s
GO01 Chusmiza 26.57 172 P P 19 31 24.8 -2.9
GO01 IAmb IAmb 19 32 05.2
comp=Z,7.5nm,0.6s
PB11 IPOC Station P 26.59 173 P P 19 31 25.5 -2.1
PB11 IAmb IAmb 19 32 04.9
comp=Z,13nm,0.7s
BBSR BB Station 26.61 16 P P 19 31 24.0 -3.5
BBSR IAmb IAmb 19 31 44.0
comp=Z,26nm,1.5s
BBSD Serra de San D 26.81 153 *e*P P 19 31 28.5 -0.9
GOGA Godfrey 28.20 341 P P 19 31 40.3 -1.3
GOGA IAmb IAmb 19 31 44.0
comp=Z,7.4nm,0.8s
GOGA Godfrey 28.20 341 P P 19 31 43.3 +1.7
LRAL Lakeview Retre 29.15 335 P P 19 31 51.4 +1.3
LRAL IAmb IAmb 19 31 52.5
comp=Z,6.3nm,0.8s
KMSC Kings Mountain 29.23 346 IAmb IAmb 19 31 52.8
comp=Z,7.8nm,0.6s
Y49A Blount Mountai 29.64 337 P P 19 31 55.3 +0.9
Y49A IAmb IAmb 19 31 56.7
comp=Z,14nm,0.7s
Z47A Carrollton 29.75 334 P P 19 31 56.3 +0.9
Z47A IAmb IAmb 19 31 57.8
comp=Z,14nm,0.7s
V55A Taylorsville 29.88 347 P P 19 31 58.2 +1.7
V55A IAmb IAmb 19 31 59.0
comp=Z,10nm,0.7s
FPAL Fort Paine 29.95 339 P P 19 31 58.2 +1.0
CPCT Cooper Cave 30.41 341 IAmb IAmb 19 32 03.7
comp=Z,10nm,0.7s
X48A Hartselle 30.41 337 IAmb IAmb 19 32 03.4
comp=Z,14nm,0.7s
W50A Signal Mountai 30.44 340 IAmb IAmb 19 32 04.0
comp=Z,15nm,0.7s
SWET Sewanee 30.67 339 IAmb IAmb 19 32 05.3
comp=Z,4.8nm,0.7s
BLA Blacksburg 31.02 349 IAmb IAmb 19 32 09.0
comp=Z,19nm,1.4s
TZTN Tazewell 31.13 344 IAmb IAmb 19 32 09.9
comp=Z,7.3nm,0.6s
S57A Dark Hollow, R 31.29 351 IAmb IAmb 19 32 10.8
comp=Z,17nm,0.7s
CLTN Cedars of Leba 31.60 339 IAmb IAmb 19 32 13.9
comp=Z,16nm,1.4s
HBVL Hebbronville 31.61 313 IAmb IAmb 19 32 13.0
comp=Z,7.7nm,0.7s
S54A Dingess, Beckl 31.77 348 IAmb IAmb 19 32 15.2
comp=Z,14nm,0.6s
U49A Red Boiling Sp 31.79 340 IAmb IAmb 19 32 15.0
comp=Z,5.7nm,0.7s
T50A Nancy 31.95 342 IAmb IAmb 19 32 17.7
comp=Z,11nm,0.9s
R55A Marlinton 32.00 349 IAmb IAmb 19 32 17.9
comp=Z,11nm,0.7s
S51A Beattyville 32.17 344 IAmb IAmb 19 32 18.9
comp=Z,12nm,0.8s
WVT Waverly 32.19 337 **P** **19 32 17.2 +0.4**
WVT Waverly 32.19 337 P P **19 32 17.8 +1.0**
Q56A Snyder Ridge, 32.58 351 IAmb IAmb 19 32 23.1
comp=Z,9.6nm,0.9s
SDMD Soldier's Deli 32.66 355 IAmb IAmb 19 32 23.3
comp=Z,7.0nm,0.7s
Q54A Coxs Mills 32.81 349 IAmb IAmb 19 32 24.8
comp=Z,12nm,0.8s
X40A Basin Creek Fa 33.06 329 IAmb IAmb 19 32 25.6
comp=Z,4.5nm,0.6s
WUPA West Chester U 33.08 356 IAmb IAmb 19 32 26.9
comp=Z,5.5nm,0.7s

MVL Millersville 33.20 355 IAmb IAmb 19 32 28.4
comp=Z,14nm,0.6s
R49A Shelbyville 33.23 342 IAmb IAmb 19 32 27.8
comp=Z,8.2nm,0.6s
MCWV Mont Chateau 33.29 350 IAmb IAmb 19 32 29.2
comp=Z,13nm,0.8s
BDFB Brasilia 33.34 132 P **P** **19 32 26.9 -0.3**
comp=Z,2.2nm,0.5s,baz=290,slow=12,SNR=4.5
comp=Z,2.2nm,0.5s
P53A Whipple 33.41 348 IAmb IAmb 19 32 30.4
comp=Z,9.7nm,0.9s
NBPS Pedro II - PI 33.45 109 *e*P **P** **19 32 29.0 +0.9**
NBPS *e*pP **pP** **19 32 57.1 -4.6**
WCI Wyandotte Cave 33.52 341 **P** **19 32 29.3 +1.0**
WCI Wyandotte Cave 33.52 341 P P **19 32 29.7 +1.3**
LCAR Lake Charles 33.53 333 IAmb IAmb 19 32 30.0
comp=Z,5.7nm,0.7s
FCAR Ozark Folk Cen 33.83 332 IAmb IAmb 19 32 32.0
comp=Z,8.6nm,0.6s
SDBA SAO DESIDERIO 33.86 124 *e*P **P** **19 32 30.5 -1.1**
N58A Sunbury 34.06 355 IAmb IAmb 19 32 37.1
comp=Z,11nm,0.9s
T42A Van Buren 34.30 334 IAmb IAmb 19 32 36.4
comp=Z,12nm,0.6s
P48A Milroy 34.38 343 IAmb IAmb 19 32 38.7
comp=Z,7.3nm,1.0s
PAMR Moraine State 34.58 351 IAmb IAmb 19 32 40.1
comp=Z,19nm,0.8s
KSCT Kent School, K 34.79 359 IAmb IAmb 19 32 41.5
comp=Z,24nm,1.0s
PLPT Palo Pinto 34.95 321 IAmb IAmb 19 33 17.6
comp=Z,6.5nm,0.8s
HHAR Hobbs 35.03 330 IAmb IAmb 19 32 42.0
comp=Z,5.3nm,0.5s
PAOC Oil Creek Stat 35.08 351 IAmb IAmb 19 32 44.3
comp=Z,17nm,0.9s
CCM Cathedral Cave 35.23 335 **P** **19 32 43.3 +0.3**
CCM Cathedral Cave 35.23 335 P P **19 32 43.6 +0.6**
L59A Walton 35.30 357 IAmb IAmb 19 32 46.7
comp=Z,15nm,0.8s
BINY Binghamton 35.36 356 P **P** **19 32 46.0 +1.8**
N49A Columbus Grove 35.41 345 IAmb IAmb 19 32 46.9
comp=Z,34nm,1.4s
L61B Northampton 35.51 0 IAmb IAmb 19 32 47.5
comp=Z,24nm,1.1s
HRV Adam Dziewonsk 35.59 2 P **P** **19 32 47.6 +1.6**
HRV Adam Dziewonsk 35.59 2 P P **19 32 47.4 +1.3**
K62A Royalston 35.73 1 P P **19 32 48.5 +1.2**
S39A Bolivar 35.85 332 IAmb IAmb 19 32 49.9
comp=Z,6.8nm,0.6s
R40A Maddies Statio 35.87 334 IAmb IAmb 19 32 50.1
comp=Z,8.7nm,0.5s
OK052 Battle Ridge R 36.31 327 IAmb IAmb 19 32 57.5
comp=Z,13nm,0.6s
J61A Chester 36.41 1 IAmb IAmb 19 32 55.7
comp=Z,19nm,0.8s
TXAR Lajitas Array 36.54 312 P **P** **19 32 54.5 +0.1**
comp=Z,1.9nm,0.4s,baz=124,slow=7.7,SNR=32
TXAR pP **pP** **19 33 28.8 +0.8**
comp=Z,0.9nm,0.6s,baz=120,slow=7.4,SNR=2.7
TXAR PcP **PcP** **19 35 16.3 +1.6**
comp=Z,2.0nm,0.6s,baz=137,slow=5.7,SNR=9.5
TXAR ScP **ScP** **19 38 47.9 +1.0**
comp=Z,0.5nm,0.7s,baz=130,slow=6.7,SNR=4.3
comp=Z,1.9nm,0.4s
TXAR Lajitas Array 36.54 312 **P** **19 32 54.2 -0.2**
TXAR **PcP** **19 35 15.6 +0.8**
WN0K Wichita Mounta 36.55 323 P **P** **19 32 54.6 +0.2**
J59A Piesco 36.55 358 IAmb IAmb 19 32 58.2
comp=Z,8.4nm,1.0s
229A Bryant Ranch, 36.70 317 IAmb IAmb 19 32 57.6
comp=Z,7.2nm,0.5s
OK051 E0350 and S346 36.70 327 IAmb IAmb 19 32 57.6
comp=Z,20nm,1.1s
HNH Hanover 36.77 1 IAmb IAmb 19 32 58.5
comp=Z,13nm,0.8s
MNHN Monahans 36.99 315 P **P** **19 32 58.8 +0.6**
NCB Newcomb 37.05 359 IAmb IAmb 19 33 01.6
comp=Z,34nm,1.4s
NBPN Ponto Novo - B 37.10 118 *e*P **P** **19 32 59.2 -0.1**
CFNY Clifton-Fine, 37.27 358 IAmb IAmb 19 33 02.5
comp=Z,9.5nm,0.6s
CO03 El Pedregal 37.48 177 P **P** **19 33 01.9 -0.5**
CO03 IAmb IAmb 19 33 40.6
comp=Z,10nm,1.1s
128A Castleberry Fa 37.55 317 IAmb IAmb 19 33 09.8
comp=Z,7.9nm,0.6s
LONY Lake Ozonia 37.71 358 IAmb IAmb 19 33 06.2
comp=Z,2.2nm,1.3s
WVL Waterville 37.74 4 IAmb IAmb 19 33 07.9
comp=Z,21nm,1.0s
FRNY Flat Rock 37.90 359 IAmb IAmb 19 33 07.9
comp=Z,21nm,1.1s
L42A Oliver, Polo 38.04 340 IAmb IAmb 19 33 07.0
comp=Z,13nm,0.7s
WBO Williamsburg 38.11 357 P **P** **19 33 08.2 +0.9**
G62A West of Eustis 38.34 3 **P** **19 33 10.7 +1.4**
AMTX Amarillo 38.42 321 IAmb IAmb 19 33 46.6
comp=Z,10nm,0.9s
PKME Peaks-Kenny Pk 38.47 4 IAmb IAmb 19 33 12.4
comp=Z,25nm,1.0s
KSU1 Kansas State U 38.55 330 IAmb IAmb 19 33 11.2
comp=Z,13nm,0.6s
MSTX Muleshoe 38.55 319 IAmb IAmb 19 33 18.7
comp=Z,5.4nm,0.7s
L40A Anamosa 38.65 338 IAmb IAmb 19 33 12.1
comp=Z,17nm,0.7s
CO04 Los Peladeros 38.67 177 P **P** **19 33 11.5 -1.0**
CO04 IAmb IAmb 19 33 52.0
comp=Z,16nm,1.1s
MNTX Cornudas Mount 39.04 314 **P** **19 33 16.2 +0.8**
MNTX IAmb IAmb 19 33 17.8
comp=Z,4.3nm,0.6s
MNTX Cornudas Mount 39.04 314 P **P** **19 33 16.0 +0.6**
RCBR Riachuelo 39.13 108 P **P** **19 33 16.2 -0.2**
RCBR IAmb IAmb 19 33 31.9
comp=Z,22nm,1.1s
TRQ Mont Tremblant 39.31 358 IAmb IAmb 19 33 19.4
comp=Z,19nm,1.3s
D62A Allapoint, All 40.29 4 **P** **19 33 26.6 +1.2**
MT09 Talagante 40.39 177 P **P** **19 33 25.9 -0.6**
MT09 IAmb IAmb 19 33 46.2
comp=Z,18nm,1.3s
L34A Svendsen Farm, 40.68 333 IAmb IAmb 19 33 30.0
comp=Z,27nm,0.9s
G40A Rib Lake 41.13 342 IAmb IAmb 19 33 33.5
comp=Z,30nm,1.4s
RIB01 Linhares ES 41.32 129 *e*P **P** **19 33 34.0 -0.3**
ECSD EROS Data Cent 42.21 334 IAmb IAmb 19 33 41.9
comp=Z,7.7nm,0.8s
ECSD EROS Data Cent 42.21 334 P **P** **19 33 40.8 -0.3**
TUC Tucson 43.32 311 P **P** **19 33 51.3 +1.0**
EYMN Ely 43.92 342 P **P** **19 33 55.0 +0.2**
TBO Thunder Bay 43.96 344 IAmb IAmb 19 33 56.0
comp=Z,19nm,0.8s
ISCO Idaho Springs 43.97 323 **P** **19 33 56.9 +1.1**
ISCO Idaho Springs 43.97 323 P **P** **19 33 57.4 +1.7**
DRLN Deer Lake 44.31 15 **P** **19 33 57.5 -0.3**
DRLN IAmb IAmb 19 33 59.3
comp=Z,14nm,0.7s
PV15 Paradox Valley 44.86 320 IAmb IAmb 19 34 05.6
comp=Z,9.6nm,0.8s
PV02 Paradox Valley 44.95 319 IAmb IAmb 19 34 12.2
comp=Z,8.9nm,0.7s
PV13 Radium Mtn., P 44.97 319 IAmb IAmb 19 34 05.6
comp=Z,6.3nm,0.5s
PV18 Skein Mesa, Pa 45.08 319 IAmb IAmb 19 34 14.0
comp=Z,9.6nm,0.7s
AGMN Agassiz Nation 45.68 339 IAmb IAmb 19 34 09.4
comp=Z,18nm,0.6s
AGMN Agassiz Nation 45.68 339 P **P** **19 34 08.8 +0.1**
HMU Henry Mountain 46.11 318 IAmb IAmb 19 34 51.8
comp=Z,17nm,1.2s
EPLO Experimental L 46.14 341 **P** **19 34 12.0 -0.3**
ULM Lac du Bonnet 47.34 340 P **P** **19 34 20.8 -0.8**
comp=Z,23nm,0.6s,baz=142,slow=7.6,SNR=37
comp=Z,23nm,0.6s
PLCA Paso Flores 47.34 177 P **P** **19 34 20.1 -1.7**
comp=Z,2.0nm,0.9s,baz=357,slow=7.9,SNR=6.6
PLCA pP **pP** **19 34 56.8 -1.1**
comp=Z,3.3nm,0.8s,baz=323,slow=6.6,SNR=4.5
PLCA ScP **ScP** **19 39 28.1 -1.6**
comp=Z,2.1nm,0.8s,baz=7.3,slow=8.8,SNR=4.8
comp=Z,2.0nm,0.9s
TCRU Three Creeks R 47.61 318 IAmb IAmb 19 34 42.6
comp=Z,6.7nm,0.6s
PDAR Pinedale Array 48.15 324 P **P** **19 34 28.4 +0.1**

comp=Z,2.1nm,0.6s,baz=126,slow=9.3,SNR=19
PDAR PcP **PcP** **19 35 53.2 -0.1**
comp=Z,1.5nm,0.5s,baz=122,slow=6.9,SNR=4.7
PDAR ScP **ScP** **19 39 32.8 -0.6**
comp=Z,0.7nm,0.7s,baz=118,slow=5.7,SNR=5.0
comp=Z,2.1nm,0.6s
PDAR Pinedale Array 48.15 324 P **P** **19 34 28.7 +0.4**
PDAR PcP **PcP** **19 35 53.7 +0.4**
SCHQ Schefferville 48.16 5 P **P** **19 34 28.4 +0.5**
comp=Z,73nm,0.6s,baz=190,slow=6.7,SNR=165
SCHQ ScP **ScP** **19 39 31.6 -1.2**
comp=Z,5.8nm,0.8s,baz=175,slow=6.1,SNR=7.8
TCUT Toone Canyon 48.30 321 IAmb IAmb 19 34 32.9
comp=Z,11nm,0.6s
HWUT Hardware Ranch 48.67 322 P **P** **19 34 33.0 +0.7**
DUG Dugway, Tooele 48.68 319 P **P** **19 34 33.8 +1.5**
BGU Big Grassy Mou 49.21 320 IAmb IAmb 19 34 38.2
comp=Z,11nm,1.0s
NVAR Mina Array Bea 51.55 315 P **P** **19 34 55.0 +1.0**
comp=Z,0.7nm,0.4s,baz=120,slow=8.8,SNR=6.4
NVAR PcP **PcP** **19 36 06.3 +0.4**
comp=Z,0.5nm,0.4s,baz=103,slow=4.2,SNR=4.3
NVAR LR LR 20 00 23.1
comp=Z,12nm,19.7s,baz=238,slow=40
comp=Z,0.7nm,0.4s
EGMT Eagleton 51.57 329 IAmb IAmb 19 34 55.2
comp=Z,18nm,1.4s
LYMT Lyon Mountain 52.24 327 P **P** **19 34 59.6 +0.6**
MFID Camas Ranch 52.30 321 IAmb IAmb 19 35 01.6
comp=Z,6.1nm,0.8s
FFC Flin Flon 53.14 339 **P** **19 35 04.8 -0.3**
FFC IAmb IAmb 19 35 05.3
comp=Z,7.2nm,0.5s
FFC Flin Flon 53.14 339 P **P** **19 35 05.1 0.0**
FCC Fort Churchill 54.32 347 IAmb IAmb 19 35 14.7
comp=Z,19nm,1.0s
F10A Beach Ranch, E 54.49 323 IAmb IAmb 19 35 22.6
comp=Z,11nm,1.5s
LDM Libby Dam 54.77 327 IAmb IAmb 19 35 18.4
comp=Z,9.1nm,1.2s
G08A Pilot Rock 55.18 322 IAmb IAmb 19 35 22.2
comp=Z,13nm,1.2s
PINE Pine Mountain 55.72 319 **P** **19 35 25.1 +0.8**
PINE IAmb IAmb 19 35 26.6
comp=Z,11nm,0.9s
C09A Chrisman Ranch 56.06 325 IAmb IAmb 19 35 27.6
comp=Z,8.7nm,0.9s
WIFE Three Sisters- 56.41 319 P **P** **19 35 30.3 +1.2**
WIFE IAmb IAmb 19 35 31.4
comp=Z,7.2nm,1.0s
EPH Ephrata 56.60 324 IAmb IAmb 19 35 32.4
comp=Z,13nm,1.1s
HOOD Mount Hood Mea 56.87 321 IAmb IAmb 19 35 35.0
comp=Z,17nm,1.0s
B08A Colville Reser 56.96 325 IAmb IAmb 19 35 33.6
comp=Z,7.3nm,1.1s
LTY Liberty 57.19 323 IAmb IAmb 19 35 35.8
comp=Z,5.8nm,0.8s
IVI Ivigtut 57.39 14 P **P** **19 35 35.6 +0.3**
IVI Ivigtut 57.39 14 *i* P **P** **19 35 35.7 +0.3**
IVI IAmb IAmb 19 35 36.6
comp=Z,22nm,1.0s
NRS Narsarsuaq 58.04 15 P **P** **19 35 40.4 +0.5**
NRS Narsarsuaq 58.04 15 *i* P **P** **19 35 41.0 +1.1**
NRS IAmb IAmb 19 35 41.4
comp=Z,28nm,0.6s
NUUK Nuuk 59.29 11 *i* P **P** **19 35 49.3 +0.8**
NUUK IAmb IAmb 19 35 50.1
comp=Z,38nm,0.8s
LLLB Lillooet 59.53 326 IAmb IAmb 19 35 52.1
comp=Z,6.2nm,0.9s
YKA Yellowknife Ar 63.32 340 P **P** **19 36 15.6 -0.1**
comp=Z,18nm,0.6s,baz=136,slow=6.8,SNR=102
YKA Yellowknife Ar 63.32 340 P **P** **19 36 15.4 -0.3**
ANGG Ammassalik, Gr 63.71 16 *i* P **P** **19 36 17.5 -0.6**
ANGG IAmb IAmb 19 36 18.8
comp=Z,14nm,0.3s
ILULI Ilulissat 63.99 9 *i* P **P** **19 36 19.5 -0.4**
ILULI IAmb IAmb 19 36 20.2
comp=Z,34nm,0.7s
NIAQ Niaqornat 65.11 7 *i* P **P** **19 36 27.5 +0.3**
NIAQ IAmb IAmb 19 36 28.0
comp=Z,24nm,0.9s
SAATT Saattut 65.38 8 *i* P **P** **19 36 28.4 -0.5**
SAATT IAmb IAmb 19 36 29.3
comp=Z,32nm,0.7s
KOTAN Kotaneelee Air 65.51 335 P **P** **19 36 30.4 +0.4**
baz=122
NUUG Nuugaatsiaq 65.86 7 *i* P **P** **19 36 32.1 +0.1**
NUUG IAmb IAmb 19 36 32.7
comp=Z,13nm,0.8s
LIRD Liard River Hi 66.03 333 P **P** **19 36 33.8 +0.5**
baz=120
U35K Hyder 66.31 329 P **P** **19 36 35.4 +0.3**
baz=115
UPNV Upernavik 66.73 5 *i* P **P** **19 36 37.0 -0.5**
UPNV IAmb IAmb 19 36 37.7
comp=Z,8.8nm,0.7s
T35M Bob Quinn 66.87 330 IAmb IAmb 19 36 41.0
comp=Z,9.9nm,0.8s
T35M Bob Quinn 66.87 330 P **P** **19 36 39.8 +1.1**
baz=115
V35K Ketchikan 66.90 328 P **P** **19 36 39.6 +0.7**
baz=113
WRGLY Wrigley 66.96 338 P **P** **19 36 39.2 +0.1**
baz=124,SNR=5.6
DLBC Dease Lake 67.38 331 P **P** **19 36 42.9 +0.9**
baz=116
WTLY Watson Lake, Y 67.57 333 P **P** **19 36 43.8 +0.8**
baz=117
DBIC Dimbokro 67.67 86 P **P** **19 36 43.4 -1.1**
comp=Z,18nm,0.7s,baz=290,slow=6.3,SNR=25
comp=Z,18nm,0.7s
DBIC Dimbokro 67.67 86 P **P** **19 36 43.4 -1.1**
S34M Telegraph Cree 67.69 331 IAmb IAmb 19 36 45.8
comp=Z,10nm,0.8s
S34M Telegraph Cree 67.69 331 P **P** **19 36 44.8 +1.0**
baz=114
WRAK Wrangell Islan 67.70 329 P **P** **19 36 44.7 +0.8**
baz=113
CRAG Craig 67.75 328 P **P** **19 36 44.9 +0.7**
baz=112
U33K Whale Pass 67.99 328 P **P** **19 36 46.3 +0.6**
baz=112
TGTN Hyland Airport 68.00 335 P **P** **19 36 46.9 +1.1**
baz=118
R33M Jennings River 68.24 332 IAmb IAmb 19 36 49.4
comp=Z,8.3nm,0.8s
R33M Jennings River 68.24 332 P **P** **19 36 48.5 +1.1**
baz=115,SNR=5.8
KULLO Kullorsuaq 68.36 5 *i* P **P** **19 36 47.4 -0.3**
KULLO IAmb IAmb 19 36 48.3
comp=Z,21nm,1.0s
Q32M Nakina River 68.67 331 IAmb IAmb 19 36 52.8
comp=Z,8.1nm,0.9s
Q32M Nakina River 68.67 331 P **P** **19 36 51.1 +1.0**
baz=114
SUMG Summit 69.00 11 **P** **19 36 52.5 +0.3**
SUMG Summit 69.00 11 *i* P **P** **19 36 52.6 +0.4**
SUMG IAmb IAmb 19 36 53.3
comp=Z,95nm,0.7s
S32K Killisnoo 69.23 329 P **P** **19 36 54.2 +0.9**
baz=111
P33M Teslin, Yukon 69.42 333 IAmb IAmb 19 36 56.7
comp=Z,6.5nm,0.9s
P33M Teslin, Yukon 69.42 333 P **P** **19 36 55.5 +0.8**
baz=114
SIT Sitka 69.46 329 P **P** **19 36 55.7 +0.9**
baz=110
R32K Eaglecrest 69.49 330 P **P** **19 36 55.9 +0.9**
baz=111
P32M Atlin 69.60 332 P **P** **19 36 56.6 +0.9**
baz=112
ESDC Sonseca Array 69.62 50 P **P** **19 36 54.6 -1.6**
comp=Z,0.6nm,0.5s,baz=262,slow=5.6,SNR=7.5
comp=Z,0.6nm,0.5s
TULEG Thule 69.74 1 P **P** **19 36 55.5 -0.7**
TULEG Thule 69.74 1 *i* P **P** **19 36 56.4 +0.2**
TULEG IAmb IAmb 19 36 58.2
comp=Z,14nm,0.7s
MMPY Sheldon Lake, 69.76 335 P **P** **19 36 57.5 +0.9**
baz=116
R31K City Hall, Gus 70.14 330 P **P** **19 36 59.9 +1.0**
baz=110
S31K Pelican 70.23 330 P **P** **19 37 00.3 +0.8**
baz=110
WHY Whitehorse 70.54 333 P **P** **19 37 02.0 +0.5**
baz=112
C36M Paulatuk 70.64 343 P **P** **19 37 02.9 +1.1**
baz=125
M31M Drury Creek, Y 70.91 334 IAmb IAmb 19 37 05.7
comp=Z,6.4nm,0.7s
M31M Drury Creek, Y 70.91 334 P **P** **19 37 04.8 +1.2**
baz=113,SNR=8.9
O30N Mendenhall 71.14 332 IAmb IAmb 19 37 07.2
comp=Z,14nm,0.8s
O30N Mendenhall 71.14 332 P **P** **19 37 06.4 +1.4**
baz=111,SNR=12
N31M Braeburn, Yuko 71.25 333 P **P** **19 37 07.0 +1.3**
baz=111,SNR=9.0
P30M Million Dollar 71.32 332 P **P** **19 37 07.5 +1.4**
baz=110
P29M Windy Craggy 71.53 331 P **P** **19 37 08.4 +1.1**
baz=109
NEEM North Greenlan 71.57 5 *i* P **P** **19 37 07.6 0.0**
NEEM IAmb IAmb 19 37 09.4
comp=Z,69nm,0.5s
HYT Haines Junctio 71.81 332 P **P** **19 37 10.6 +1.4**
baz=109
N30M Aishikik Lake 71.83 333 IAmb IAmb 19 37 12.1
comp=Z,12nm,1.0s
N30M Aishikik Lake 71.83 333 P **P** **19 37 10.6 +1.4**
baz=110,SNR=8.6
M30M Minto, Yukon 72.09 334 IAmb IAmb 19 37 12.3
comp=Z,18nm,0.8s
M30M Minto, Yukon 72.09 334 P **P** **19 37 11.6 +0.9**
baz=111
O29M Mount Kennedy 72.14 332 P **P** **19 37 12.1 +1.0**
baz=108
YUK6 Outpost Mounta 72.24 332 P **P** **19 37 13.3 +1.4**
baz=109
H31M Peel River 72.33 338 IAmb IAmb 19 37 13.6
comp=Z,9.4nm,0.8s
H31M Peel River 72.33 338 P **P** **19 37 12.8 +0.8**
baz=114,SNR=9.4
A36M Sachs Harbour 72.48 345 P **P** **19 37 12.9 +0.2**
baz=125,SNR=7.3
YUK4 Talbot Arm 72.50 333 P **P** **19 37 13.8 +0.5**
baz=109
J30M Hart River 72.62 336 P **P** **19 37 14.4 +0.5**
baz=112
G31M Satah River 72.76 339 IAmb IAmb 19 37 15.8
comp=Z,9.9nm,0.8s
G31M Satah River 72.76 339 P **P** **19 37 14.8 +0.4**
baz=114,SNR=7.7
M29M Somme Creek 72.77 334 P **P** **19 37 15.1 +0.3**
baz=109
F31M Tsiigehtchic 72.79 339 IAmb IAmb 19 37 15.9
comp=Z,15nm,0.8s
F31M Tsiigehtchic 72.79 339 P **P** **19 37 15.1 +0.5**
baz,SNR=13
K29M Barlow Dome 72.84 335 IAmb IAmb 19 37 16.8
comp=Z,9.2nm,0.8s
K29M Barlow Dome 72.84 335 P **P** **19 37 15.9 +0.7**
baz=110,SNR=13
L29M L29M 72.85 334 P **P** **19 37 15.6 +0.4**
baz=110,SNR=6.4
PINM Pinnacle 72.88 331 P **P** **19 37 16.0 +0.6**
baz=107
I30M Mount Dempster 72.88 337 IAmb IAmb 19 37 17.0
comp=Z,8.9nm,0.8s
I30M Mount Dempster 72.88 337 P **P** **19 37 16.0 +0.6**
baz=112,SNR=19
YUK8 Steele Glacier 73.00 332 P **P** **19 37 16.7 +0.4**
baz=107
O28M Mount Upton 73.04 332 P **P** **19 37 17.1 +0.4**
baz=107
EKA Eskdalemuir Ar 73.05 34 P **P** **19 37 15.7 -0.7**
comp=Z,1.0nm,0.4s,baz=274,slow=3.0,SNR=16
comp=Z,1.0nm,0.4s
INK Inuvik 73.08 340 IAmb IAmb 19 37 17.5
comp=Z,8.7nm,0.7s
INK Inuvik 73.08 340 P **P** **19 37 16.7 +0.4**
baz=115,SNR=12
J29N Klondike Camp 73.34 336 P **P** **19 37 18.4 +0.4**
baz=110
EPYK Eagle Plains 73.44 338 IAmb IAmb 19 37 19.9
comp=Z,31nm,1.5s
EPYK Eagle Plains 73.44 338 P **P** **19 37 18.9 +0.4**
baz=112,SNR=8.2
YUK3 Moose Creek 73.46 333 P **P** **19 37 20.0 +1.0**
baz=107,SNR=15
G30M tAoh Zraii Nji 73.49 339 P **P** **19 37 19.0 +0.2**
baz=112
F30M Barrier River 73.58 339 IAmb IAmb 19 37 20.8
comp=Z,17nm,0.9s
F30M Barrier River 73.58 339 P **P** **19 37 19.8 +0.5**
baz=113,SNR=12
TORD Torodi Ar. Bea 73.67 78 P **P** **19 37 19.0 -1.8**
comp=Z,1.6nm,0.4s,baz=284,slow=6.4,SNR=36
comp=Z,1.6nm,0.4s
DAWY Dawson 73.70 335 P **P** **19 37 20.4 +0.3**
baz=109
BVCY Beaver Creek 73.83 333 P **P** **19 37 21.8 +0.9**
baz=107
DBG Daneborg 73.96 13 *i* P **P** **19 37 21.8 +0.4**
DBG IAmb IAmb 19 37 22.5
comp=Z,13nm,1.0s
H29M Whitestone 74.01 337 IAmb IAmb 19 37 23.3
comp=Z,9.4nm,0.7s
H29M Whitestone 74.01 337 P **P** **19 37 22.5 +0.6**
baz=110,SNR=13
G29M Pine Creek 74.12 338 IAmb IAmb 19 37 23.8
comp=Z,8.2nm,0.6s
G29M Pine Creek 74.12 338 P **P** **19 37 22.9 +0.5**
baz=111,SNR=13
M27K Edge Creek, AK 74.27 333 IAmb IAmb 19 37 25.8
comp=Z,13nm,0.8s
M27K Edge Creek, AK 74.27 333 P **P** **19 37 24.9 +1.4**
baz=106
I28M Miner Creek 74.36 336 IAmb IAmb 19 37 25.4
comp=Z,5.7nm,0.8s
I28M Miner Creek 74.36 336 P **P** **19 37 24.7 +0.7**
baz=108,SNR=12
CRQE Circue 74.41 331 P **P** **19 37 25.3 +0.9**
baz=104
BCAR Beaver Creek A 74.42 334 **P** **19 37 25.2 +0.9**
L27K Beaver Creek, 74.44 334 IAmb IAmb 19 37 26.6
comp=Z,8.9nm,0.9s
L27K Beaver Creek, 74.44 334 P **P** **19 37 25.5 +1.0**
baz=106
MCARA McCarthy VSAT 74.53 332 P **P** **19 37 25.9 +1.0**
baz=104
E29M Blow River 74.61 340 IAmb IAmb 19 37 26.6
comp=Z,17nm,0.7s
E29M Blow River 74.61 340 P **P** **19 37 25.7 +0.5**
baz=111,SNR=29
VRDI Verde Repeater 74.70 332 IAmb IAmb 19 37 29.5
comp=Z,9.7nm,1.0s
M26K Nabesna, AK 74.78 333 P **P** **19 37 26.8 +0.4**
baz=105
K27K Chicken 74.81 335 IAmb IAmb 19 37 28.7
comp=Z,7.2nm,0.9s
GLB Gitaina Butte 74.92 332 IAmb IAmb 19 37 29.3
comp=Z,9.5nm,1.2s
F28M Old Crow 75.04 339 IAmb IAmb 19 37 28.8
comp=Z,5.9nm,0.8s
F28M Old Crow 75.04 339 P **P** **19 37 28.0 +0.2**
baz=109,SNR=12
I27K Kandik River 75.07 336 IAmb IAmb 19 37 29.5
comp=Z,10nm,0.8s
I27K Kandik River 75.07 336 P **P** **19 37 28.6 +0.5**
baz=107,SNR=15
BMRM Bremner River 75.18 331 P **P** **19 37 29.8 +1.0**
baz=103
H27K Steamboat Moun 75.22 337 P **P** **19 37 28.9 0.0**
baz=107,SNR=5.6
D28M Stokes Point 75.23 340 P **P** **19 37 29.2 +0.4**
baz=111
E28M Babbage River 75.25 340 IAmb IAmb 19 37 29.6
comp=Z,7.8nm,0.7s
E28M Babbage River 75.25 340 P **P** **19 37 28.9 -0.1**
baz=110,SNR=18
N25K Chitina, Valde 75.32 332 P **P** **19 37 29.5 -0.1**
baz=103
G27K Doyon Strip 75.44 338 P **P** **19 37 29.8 -0.3**
baz=107,SNR=5.3
SCRK Sand Creek 75.61 335 IAmb IAmb 19 37 33.2
comp=Z,8.3nm,0.9s
SCRK Sand Creek 75.61 335 P **P** **19 37 32.1 +0.9**
baz=104,SNR=12
EYAK Cordova Ski Ar 75.64 331 P **P** **19 37 32.0 +0.8**
baz=102
DAG Danmarks Havn 75.67 11 *i* P **P** **19 37 30.6 -0.6**
DAG IAmb IAmb 19 37 31.4
comp=Z,22nm,0.7s
E27K Coleen River 75.84 339 IAmb IAmb 19 37 33.5
comp=Z,7.2nm,0.7s
E27K Coleen River 75.84 339 P **P** **19 37 32.6 +0.2**
baz=108,SNR=15
KLU Klutina 75.92 332 P **P** **19 37 33.7 +0.7**
baz=102
RIDG Independent Ri 75.92 334 IAmb IAmb 19 37 34.8
comp=Z,14nm,0.8s
RIDG Independent Ri 75.92 334 P **P** **19 37 34.0 +1.0**
baz=103,SNR=12
D27M Malcolm River 75.95 340 P **P** **19 37 33.2 +0.3**
baz=108
PAX Paxson 76.02 333 IAmb IAmb 19 37 35.1
comp=Z,7.3nm,1.0s
PAX Paxson 76.02 333 P **P** **19 37 33.8 +0.2**
baz=103
M24K Tolsona, Glenn 76.16 332 IAmb IAmb 19 37 36.9
comp=Z,21nm,1.0s
M24K Tolsona, Glenn 76.16 332 P **P** **19 37 34.7 +0.4**
baz=102
G26K Porcupine Rive 76.29 338 P **P** **19 37 35.1 +0.3**
baz=105
P23K Montague Islan 76.34 330 P **P** **19 37 35.5 +0.2**
baz=100
K24K Donnelly Dome 76.34 334 IAmb IAmb 19 37 37.0
comp=Z,14nm,0.7s
K24K Donnelly Dome 76.34 334 P **P** **19 37 35.9 +0.6**
baz=103,SNR=6.1
J25K Salcha River, 76.35 335 P **P** **19 37 35.7 +0.4**
baz=103,SNR=9.2
GLI Glacier Island 76.35 331 P **P** **19 37 36.0 +0.7**
baz=101
F26K Sheenjek River 76.62 338 P **P** **19 37 37.5 +0.7**
baz=105,SNR=5.8
PRP Porcupine Dome 76.62 336 IAmb IAmb 19 37 38.1
comp=Z,9.4nm,0.7s
PRP Porcupine Dome 76.62 336 P **P** **19 37 37.2 +0.3**
baz=103,SNR=9.6
SCM Sheep Creek Mo 76.64 332 IAmb IAmb 19 37 38.7
comp=Z,18nm,0.8s
SCM Sheep Creek Mo 76.64 332 P **P** **19 37 37.5 +0.4**
baz=101,SNR=7.2
FYU Fort Yukon 76.75 337 IAmb IAmb 19 37 39.6
comp=Z,9.8nm,1.1s
M23K Glacier View 76.82 332 P **P** **19 37 38.5 +0.6**
baz=100
DHY Denali Highway 76.90 333 P **P** **19 37 38.8 +0.2**
baz=101
PWL Port Wells 76.94 331 P **P** **19 37 38.8 +0.2**
baz=100
WAT6 Susitna Watana 76.97 333 P **P** **19 37 39.3 +0.3**
baz=100,SNR=5.8
HDA Harding Lake 76.97 335 IAmb IAmb 19 37 39.8
comp=Z,10nm,0.8s
HDA Harding Lake 76.97 335 P **P** **19 37 39.0 +0.2**
baz=102,SNR=8.4
C27K Jago River 76.99 340 P **P** **19 37 39.1 +0.4**
baz=106,SNR=7.3
ILAR Eielson Array 77.02 335 P **P** **19 37 39.0 0.0**
comp=Z,2.9nm,0.7s,baz=106,slow=4.6,SNR=32
ILAR pP **pP** **19 38 18.3 +0.8**
comp=Z,1.0nm,0.7s,baz=122,slow=4.1,SNR=2.3
comp=Z,2.9nm,0.7s
ILAR Eielson Array 77.02 335 **P** **19 37 38.5 -0.5**
KNK Knik Glacier 77.10 331 IAmb IAmb 19 37 41.5
comp=Z,13nm,0.8s
KNK Knik Glacier 77.10 331 P **P** **19 37 40.0 +0.5**
baz=100
SML Sawmill 77.10 332 P **P** **19 37 40.2 +0.6**
baz=100
G25K Bearman Lake 77.13 337 P **P** **19 37 40.6 +1.0**
baz=103,SNR=5.7
F25K Christian Rive 77.15 338 P **P** **19 37 40.6 +0.8**
baz=104,SNR=11
E25K Arctic Village 77.25 338 P **P** **19 37 41.1 +0.8**
baz=104,SNR=6.7
POKR Poker Plat Res 77.32 335 P **P** **19 37 41.1 +0.4**
baz=101
WAT1 Susitna Watana 77.38 333 P **P** **19 37 41.4 +0.3**
baz=100
PMR Palmer 77.44 332 IAmb IAmb 19 37 42.6
comp=Z,6.0nm,0.8s
PMR Palmer 77.44 332 P **P** **19 37 41.7 +0.3**
baz=99
C26K Camden Bay 77.47 340 P **P** **19 37 42.3 +0.9**
baz=105,SNR=9.1
H24K Noodor Dome 77.64 336 P **P** **19 37 43.0 +0.4**
baz=101,SNR=8.7
G24K Hadweenzic Riv 77.65 337 IAmb IAmb 19 37 44.5
comp=Z,13nm,1.3s
G24K Hadweenzic Riv 77.65 337 P **P** **19 37 43.3 +0.8**
baz=102,SNR=6.4
RC01 Rabbit Creek A 77.66 331 P **P** **19 37 43.0 +0.4**
baz=98
MCK McKinley 77.70 334 P **P** **19 37 43.4 +0.5**
baz=100
SLKM Skilak Lake 77.81 330 IAmb IAmb 19 37 44.6
comp=Z,11nm,0.8s
D25K Kavik River 77.82 340 IAmb IAmb 19 37 44.8
comp=Z,8.8nm,0.8s
D25K Kavik River 77.82 340 P **P** **19 37 43.9 +0.4**
baz=103,SNR=20
NEA2 Nenana 77.91 335 IAmb IAmb 19 37 45.2
comp=Z,8.5nm,0.8s
NEA2 Nenana 77.91 335 P **P** **19 37 44.3 +0.4**
baz=100,SNR=10
BRSE Bradley Lake S 77.97 330 P **P** **19 37 44.5 +0.1**
baz=97
F24K Squaw Lake 77.98 338 IAmb IAmb 19 37 46.3
comp=Z,5.2nm,0.8s
F24K Squaw Lake 77.98 338 P **P** **19 37 45.2 +0.9**
baz=101,SNR=9.3
I23K Minto, Yukon-K 78.13 335 P **P** **19 37 45.6 +0.5**
baz=100,SNR=8.6
TRF Thorofare Moun 78.26 333 IAmb IAmb 19 37 47.5
comp=Z,8.8nm,0.8s
TRF Thorofare Moun 78.26 333 P **P** **19 37 46.6 +0.4**
baz=98,SNR=7.0
E24K Your Creek 78.31 338 P **P** **19 37 46.9 +0.7**
baz=101
H23K Yukon River 78.31 336 IAmb IAmb 19 37 47.7
comp=Z,5.8nm,0.8s
H23K Yukon River 78.31 336 P **P** **19 37 46.7 +0.6**
baz=100
L22K Petersville 78.35 332 P **P** **19 37 46.6 +0.2**
baz=98
HOM Homer 78.41 329 P **P** **19 37 47.0 +0.3**
baz=96
KTH Kantishna Hill 78.55 333 IAmb IAmb 19 37 48.9
comp=Z,7.7nm,0.9s
SKT Skwentna 78.63 332 IAmb IAmb 19 37 49.3
comp=Z,8.5nm,0.8s
SKT Skwentna 78.63 332 P **P** **19 37 48.1 +0.2**
baz=97,SNR=7.3
NOR Nord 78.63 7 *i* P **P** **19 37 47.6 -0.1**
NOR IAmb IAmb 19 37 48.8
comp=Z,5.9nm,0.9s
D24K Happy Valley 78.64 339 P **P** **19 37 48.5 +0.6**
baz=101
G23K Bananza Creek 78.65 337 IAmb IAmb 19 37 50.1
comp=Z,8.4nm,0.8s
G23K Bananza Creek 78.65 337 P **P** **19 37 48.9 +0.9**
baz=99,SNR=14
MLY Manley 78.68 335 IAmb IAmb 19 37 49.4
comp=Z,4.7nm,0.7s
MLY Manley 78.68 335 P **P** **19 37 48.5 +0.3**
baz=98,SNR=11
KDAK Kodiak Island 78.71 328 P **P** **19 37 48.8 +0.4**
baz=95
E23K Chandalar 78.72 338 P **P** **19 37 49.2 +0.7**
baz=100,SNR=5.1
COLD Coldfoot 78.81 337 IAmb IAmb 19 37 51.0
comp=Z,6.5nm,0.8s
COLD Coldfoot 78.81 337 P **P** **19 37 49.8 +1.0**
baz=99
TOLK Toolik Lake Re 78.81 339 P **P** **19 37 49.1 +0.3**
baz=100
SPCR Spurr Chakacha 78.86 331 P **P** **19 37 49.5 +0.1**
baz=96
O20K Slope Mountain 78.95 330 P **P** **19 37 50.2 +0.3**
baz=96
OHAK Old Harbor 79.04 327 P **P** **19 37 50.4 +0.2**
baz=94
PPLA Purkeypile 79.04 333 P **P** **19 37 50.5 +0.2**
baz=96,SNR=8.3
CAST Castle Rocks 79.06 333 IAmb IAmb 19 37 51.2
comp=Z,11nm,0.8s

CAST	Castle Rocks	79.06	333	P	P	19 37 50.2	-0.1
	baz=97,SNR=14						
H22K	Ishtalitna Cre	79.07	336	P	P	19 37 50.6	+0.3
	baz=98,SNR=5.1						
ILSW	Iliamna Southw	79.20	330	IAmb	IAmb	19 37 52.0	
	comp=Z,11nm,0.8s						
CHUM	Lake Minchumin	79.21	334	P	P	19 37 51.1	+0.1
	baz=97,SNR=12						
P19K	Oil Pt	79.21	329	P	P	19 37 51.1	-0.2
	baz=95						
I21K	Tanana	79.23	335	IAmb	IAmb	19 37 52.6	
	comp=Z,5.5nm,0.8s						
I21K	Tanana	79.23	335	P	P	19 37 51.3	+0.1
	baz=97,SNR=5.4						
D23K	Nanushuk River	79.26	339	P	P	19 37 52.1	+0.9
	baz=99,SNR=5.3						
G22K	Bettles	79.27	337	P	P	19 37 51.8	+0.5
	baz=98						
M20K	Styx River	79.37	332	IAmb	IAmb	19 37 53.0	
	comp=Z,9.1nm,0.7s						
M20K	Styx River	79.37	332	P	P	19 37 52.1	0.0
	baz=96						
C23K	Itkillik River	79.38	340	IAmb	IAmb	19 37 53.6	
	comp=Z,11nm,0.8s						
C23K	Itkillik River	79.38	340	P	P	19 37 52.4	+0.5
	baz=99,SNR=10.0						
AKN	Aaknes	79.38	28	*e*P	P	19 37 52.4	+0.4
E22K	Anaktuvuk Pass	79.55	338	P	P	19 37 53.1	+0.2
	baz=98						
F22K	John River	79.60	337	P	P	19 37 53.7	+0.5
	baz=97,SNR=5.1						
H21K	Melozitna Rive	79.62	336	P	P	19 37 53.5	+0.1
	baz=96						
SKAR	Skarslia	79.88	30	*e*P	P	19 37 55.2	+0.4
N19K	Bonanza Creek	79.93	331	P	P	19 37 54.7	-0.4
	baz=94						
K20K	Telida	79.94	333	IAmb	IAmb	19 37 55.4	
	comp=Z,4.9nm,0.7s						
K20K	Telida	79.94	333	P	P	19 37 55.0	0.0
	baz=95						
G21K	Allakaket	80.00	336	P	P	19 37 56.1	+0.8
	baz=96,SNR=7.8						
J20K	Nowinta River	80.04	334	IAmb	IAmb	19 37 56.5	
	comp=Z,9.9nm,0.6s						
J20K	Nowinta River	80.04	334	P	P	19 37 55.6	0.0
	baz=95,SNR=15						
IMAR	Indian Mountai	80.05	336	P	P	19 37 55.6	0.0
Q18K	Katmai Hardscr	80.05	328	P	P	19 37 55.3	-0.5
	baz=93						
F21K	Alatna River	80.07	337	IAmb	IAmb	19 37 57.7	
	comp=Z,7.5nm,0.8s						
F21K	Alatna River	80.07	337	P	P	19 37 56.4	+0.7
	baz=96,SNR=8.8						
L19K	White Mountain	80.20	332	IAmb	IAmb	19 37 57.3	
	comp=Z,8.6nm,1.0s						
L19K	White Mountain	80.20	332	P	P	19 37 56.4	-0.1
	baz=94,SNR=8.4						
O18K	Koktuh Hills	80.22	330	IAmb	IAmb	19 37 57.2	
	comp=Z,12nm,0.8s						
O18K	Koktuh Hills	80.22	330	P	P	19 37 56.4	-0.3
	baz=93,SNR=6.1						
I20K	Naaghedeneel	80.24	335	P	P	19 37 56.8	+0.3
	baz=95						
DAVA	Damuels	80.25	43	*e*P	P	19 37 56.5	-0.8
	comp=Z,5.8nm,0.6s,SNR=5.8						
E21K	Killik River	80.38	338	P	P	19 37 57.4	0.0
	baz=96						
B22K	Teshekpuk Lake	80.40	340	IAmb	IAmb	19 37 59.0	
	comp=Z,14nm,0.9s						
B22K	Teshekpuk Lake	80.40	340	P	P	19 37 58.0	+0.6
	baz=97						
H20K	Anotleneega Mo	80.47	335	P	P	19 37 58.1	+0.2
	baz=95						
Q17K	Contact Creek	80.49	328	P	P	19 37 57.7	-0.5
	baz=92						
N18K	Kilae Creek	80.61	330	IAmb	IAmb	19 37 59.3	
	comp=Z,12nm,0.8s						
N18K	Kilae Creek	80.61	330	P	P	19 37 58.4	-0.3
	baz=93,SNR=6.3						
M18K	Stony River	80.62	331	P	P	19 37 58.7	0.0
	baz=93,SNR=6.8						
J19K	Poorman	80.68	334	P	P	19 37 59.2	+0.2
	baz=94,SNR=5.0						
R17L	Mt. Peulik Vol	80.72	327	P	P	19 37 59.3	0.0
	baz=92						
B21K	Ikpikpuk River	80.73	339	IAmb	IAmb	19 38 00.6	
	comp=Z,14nm,0.8s						
B21K	Ikpikpuk River	80.73	339	P	P	19 37 59.9	+0.8
	baz=96,SNR=7.5						
C21K	Knifeblade Rid	80.75	339	P	P	19 37 59.7	+0.5
	baz=95						
P17K	Kvichak River	80.82	329	P	P	19 37 59.7	-0.1
	baz=92						
FETA	Feichten	80.83	44	*e*P	P	19 37 59.5	-0.8
	comp=Z,3.2nm,0.8s,SNR=5.0						
Q16K	King Salmon	80.91	328	P	P	19 38 00.3	0.0
	baz=92						
F20K	Avaraart Lake	80.93	337	P	P	19 38 00.4	+0.2
	baz=94						
A22K	Sinclair Lake	80.99	341	P	P	19 38 00.4	0.0
	baz=95						
L18K	Granite Mounta	81.06	332	P	P	19 38 00.9	-0.2
	baz=92						
MOTA	Moosalm	81.09	43	*e*P	P	19 38 00.9	-0.8
	comp=Z,1.0nm,0.4s						
NBO00	NORSAR Array S	81.11	29	IAmb	IAmb	19 38 02.9	
	comp=Z,9.3nm,0.8s						
H19K	Roundabout Mou	81.12	335	IAmb	IAmb	19 38 02.8	
	comp=Z,8.9nm,1.2s						
H19K	Roundabout Mou	81.12	335	P	P	19 38 01.2	-0.1
	baz=93						
J18K	Innoko River	81.13	333	P	P	19 38 01.2	-0.2
	baz=93						
SQTA	Sankt Quirin	81.16	43	*e*P	P	19 38 01.1	-1.0
	comp=Z,0.7nm,0.3s						
O17K	Koliganek Bris	81.17	329	P	P	19 38 01.3	-0.3
	baz=92						
E20K	Nigu River	81.19	338	P	P	19 38 02.7	+1.0
	baz=94,SNR=16						
N17K	Nushagak Hills	81.24	330	P	P	19 38 01.9	-0.1
	baz=92						
GCSA	Galena City Sc	81.26	334	P	P	19 38 02.7	+0.7
	baz=93						
NB2	NORSAR Subarra	81.32	29	P	P	19 38 02.4	-0.1
	comp=Z,3.1nm,0.6s,baz=268,slow=5.6						
NB2	NORSAR Subarra	81.32	29	P	P	19 38 02.4	-0.1
NOA	NORSAR Array B	81.32	29	P	P	19 38 02.7	+0.2
	comp=Z,3.4nm,0.6s,baz=268,slow=5.3,SNR=24						
	comp=Z,3.4nm,0.6s						
D20K	Etivluk River	81.37	338	IAmb	IAmb	19 38 04.0	
	comp=Z,6.9nm,0.8s						
D20K	Etivluk River	81.37	338	P	P	19 38 03.2	+0.6
	baz=94						
M17K	Holitna River	81.39	331	P	P	19 38 02.9	+0.1
	baz=92						
G19K	Purcell Mounta	81.42	336		P	19 38 03.2	+0.4
G19K				IAmb	IAmb	19 38 04.2	
	comp=Z,5.3nm,0.7s						
G19K	Purcell Mounta	81.42	336	P	P	19 38 03.2	+0.4
	baz=93,SNR=6.4						
WTTA	Wattenberg	81.45	43	*i* P	P	19 38 02.8	-0.9
	comp=Z,0.6nm,0.4s						
NC602	NORSAR Array S	81.47	30	*e*P	P	19 38 03.8	+0.6
E19K	Redstone River	81.54	337	IAmb	IAmb	19 38 04.8	
	comp=Z,7.3nm,0.7s						
E19K	Redstone River	81.54	337	P	P	19 38 04.0	+0.6
	baz=93,SNR=5.4						
P16K	Nushagak River	81.62	329	P	P	19 38 03.7	-0.3
	baz=91						
B20K	Meade River	81.64	340	P	P	19 38 04.4	+0.5
	baz=93						
O16K	Kokwok River B	81.68	329	P	P	19 38 04.0	-0.3
	baz=91						
F19K	Shaleruckik Mo	81.72	337	P	P	19 38 04.7	+0.3
	baz=92						
NSS	Namsos	81.77	26	*e*P	P	19 38 05.4	+0.8
L17K	Donlin	81.82	332	P	P	19 38 05.4	+0.4
	baz=91,SNR=6.6						
CHGN	Chignik	81.82	326	P	P	19 38 05.2	+0.1
	baz=90						
K17K	Iditarod	81.83	332	IAmb	IAmb	19 38 06.4	
	comp=Z,7.8nm,0.7s						
K17K	Iditarod	81.83	332	P	P	19 38 05.4	+0.3
	baz=91						
H18K	Honhosa River	81.91	335	P	P	19 38 06.4	+1.0
	baz=91						
D19K	Kuna River	81.91	338	IAmb	IAmb	19 38 07.4	
	comp=Z,13nm,0.8s						
D19K	Kuna River	81.91	338	P	P	19 38 06.6	+1.1
	baz=92,SNR=5.6						
G18K	Tagagawik	82.05	336	P	P	19 38 06.9	+0.7
	baz=91						
ABTA	Abfaltersbach	82.06	44	*i* P	P	19 38 06.1	-0.6
	comp=Z,1.0nm,0.4s,SNR=5.7						
M16K	Timber Creek	82.12	331	P	P	19 38 07.0	+0.4
	baz=90						
LESA	Schwarzleotal	82.16	43	*e*P	P	19 38 06.5	-0.7
	comp=Z,2.0nm,0.5s						
J17K	VABM Dome	82.19	333	P	P	19 38 07.3	+0.3
	baz=90						
LEIR	Leirfjorden	82.28	24	*e*P	P	19 38 08.5	+1.2
LEIR				IAmb	IAmb	19 38 08.7	
	comp=Z,6.5nm,0.9s						
VAGH	Vaagaholmen	82.35	24	*e*P	P	19 38 08.5	+0.9
L16K	Owhat River	82.37	331	P	P	19 38 08.5	+0.7
	baz=90						
KBS	Kingsbay	82.41	11	*e*P	P	19 38 08.9	+1.1
KBS				IAmb	IAmb	19 38 09.5	
	comp=Z,20nm,1.0s						
S14K	Fog Glacier	82.46	326	P	P	19 38 08.6	+0.1
	baz=89						
F18K	Selawik	82.46	336	P	P	19 38 08.8	+0.6
	baz=90						
C19K	Lookout Ridge	82.46	339	P	P	19 38 09.3	+1.0
	baz=91						
LOF	Lofoten	82.47	22	*e*P	P	19 38 10.1	+1.8
LOF				IAmb	IAmb	19 38 12.0	
	comp=Z,37nm,1.3s						
CHNA	Chernabura Isl	82.50	324	P	P	19 38 09.1	+0.4
	baz=89						
HFS	Hagfors	82.53	30	P	P	19 38 08.0	-0.8
	comp=Z,2.4nm,0.6s,baz=230,slow=3.7,SNR=9.5						
	comp=Z,2.4nm,0.6s						
O15K	Ungalikthiuk R	82.56	329	P	P	19 38 09.6	+0.6
	baz=89						
H17K	Granite Mounta	82.56	335	P	P	19 38 09.7	+0.8
	baz=90						
KBA	Koelnbreinsper	82.62	43	*e*P	P	19 38 08.9	-0.8
	comp=Z,2.9nm,1.0s						
N15K	Kwethluk River	82.69	330	P	P	19 38 10.1	+0.5
	baz=89						
KHC	Kasperske Hory	82.71	41	*e*P	P	19 38 08.7	-1.3
BIOA	Bad Ischl, Aus	82.80	43	*e*P	P	19 38 09.8	-0.7
	comp=Z,3.4nm,0.9s						
GERES	GERESS Array B	82.80	42	P	P	19 38 09.4	-1.1
	comp=Z,2.5nm,0.6s,baz=259,slow=4.3,SNR=39						
	comp=Z,2.5nm,0.6s						
GERES	GERESS Array B	82.80	42	P	P	19 38 09.6	-0.9
E18K	Tukpahlearik C	82.84	337	P	P	19 38 11.0	+0.8
	baz=90						
MYKA	Terra Mystica	82.84	44	*i* P	P	19 38 10.3	-0.5
	comp=Z,2.5nm,0.4s						
G17K	Kiwalik Mounta	82.87	335	P	P	19 38 11.3	+0.9
	baz=89						
J16K	Anvik River	82.88	333	P	P	19 38 11.5	+1.0
	baz=89						
I17K	Unalakleet	82.91	334	P	P	19 38 12.0	+1.3
	baz=89						
M15K	Kasigluk River	82.97	330	P	P	19 38 11.7	+0.7
	baz=89						
A19K	Wainwright	82.99	340	P	P	19 38 11.8	+0.9
	baz=90						
RICC	Richard	82.99	40	*e*P	P	19 38 12.5	+1.2
SDPT	Sand Point	83.00	325	P	P	19 38 11.4	+0.1
	baz=88						
C18K	Utukok River	83.05	338	P	P	19 38 11.7	+0.3
	baz=89						
ZVC	Zvikov	83.10	41	*e*P	P	19 38 12.3	+0.4
F17K	Baldwin Pennin	83.10	336	P	P	19 38 12.2	+0.6
	baz=89						
STEI	Steigen	83.11	22	*e*P	P	19 38 12.2	+0.7
STEI				IAmb	IAmb	19 38 13.0	
	comp=Z,12nm,0.9s						
FAUS	Fauske	83.14	23	*e*P	P	19 38 12.6	+0.9
FAUS				IAmb	IAmb	19 38 13.2	
	comp=Z,50nm,1.9s						
MOA	Molln	83.21	43	*e*P	P	19 38 11.4	-1.2
	comp=Z,1.2nm,0.4s						
SPA0	Spitsbergen Ar	83.28	12	*e*P	P	19 38 12.8	+0.4
SPA0				IAmb	IAmb	19 38 14.2	
	comp=Z,29nm,1.1s						
SPITS	Spitsbergen Ar	83.28	12	P	P	19 38 12.3	0.0
	comp=Z,10.0nm,0.7s,baz=174,slow=2.9,SNR=11						
	comp=Z,10.0nm,0.7s						
PRU	Pruhonice	83.30	40	*e*P	P	19 38 13.3	+0.4
O14K	Tigyukauivet M	83.30	329	P	P	19 38 13.1	+0.4
	baz=88						
E17K	Hotham Inlet	83.32	337	P	P	19 38 13.4	+0.8
	baz=88,SNR=6.1						
L15K	Ungalak Mounta	83.33	331	P	P	19 38 13.7	+0.8
	baz=88						
K15K	Wolf Creek Mou	83.33	332	P	P	19 38 13.7	+0.8
	baz=87						
SESA	Seetaler Alpe,	83.45	43	*e*P	P	19 38 12.6	-1.4
	comp=Z,0.9nm,0.4s						
OBKA	Obir	83.47	44	*e*P	P	19 38 13.2	-0.8
	comp=Z,0.4nm,0.2s						
H16K	Elim	83.57	334	P	P	19 38 14.9	+0.9
	baz=88						
G16K	Koyuk River	83.59	335	P	P	19 38 15.0	+1.0
	baz=88						
M14K	Bethel	83.59	330	P	P	19 38 14.8	+0.6
	baz=88						
RDOG	Red Dog Mine	83.70	338	P	P	19 38 15.3	+0.7
	baz=88						
C17K	DeLong Mountai	83.78	338	P	P	19 38 15.8	+0.7
	baz=87						
D17K	Noatak River	83.78	337	P	P	19 38 15.6	+0.6
	baz=87						
L14K	Kuka Creek	83.92	331	P	P	19 38 16.3	+0.5
	baz=87						
ARSA	Arzberg	84.10	43	*e*P	P	19 38 16.0	-1.1
	comp=Z,1.5nm,0.5s						
UPC	Upice	84.22	40	*e*P	P	19 38 17.0	-0.6
J14K	Nanvaranak Lak	84.25	332	P	P	19 38 18.1	+0.6
	baz=86						
CONA	Conrad Observa	84.28	43	*e*P	P	19 38 17.2	-0.8
	comp=Z,1.5nm,0.6s,SNR=5.1						
M13K	Dall Lake	84.30	330	P	P	19 38 18.4	+0.7
	baz=86						
G15K	Niukluk	84.32	335	P	P	19 38 18.9	+1.1
	baz=86						
OSTC	Ostas	84.34	40	*e*P	P	19 38 18.0	-0.2
TRO	Tromso	84.37	21	*e*P	P	19 38 18.8	+0.9
TRO				IAmb	IAmb	19 38 20.1	
	comp=Z,9.5nm,1.0s						
WINA	Alland / Wiene	84.41	42	*e*P	P	19 38 18.0	-0.6
	comp=Z,1.6nm,0.5s						
DPC	Dobruska-Polom	84.42	40	*e*P	P	19 38 18.0	-0.7
DPC	Dobruska-Polom	84.42	40	P	P	19 38 19.8	+1.1
F15K	North Star Dit	84.52	335	P	P	19 38 19.9	+1.1
	baz=86						
KRUC	Moravsky	84.56	41	*e*P	P	19 38 19.3	0.0
RONA	Rosalia, Austr	84.59	43	*e*P	P	19 38 18.9	-0.7
	comp=Z,1.6nm,0.6s						
C16K	Lisburne Hills	84.59	338	P	P	19 38 20.1	+1.0
	baz=85						
VRAC	Vranov	84.67	41	*e*P	P	19 38 19.4	-0.5
KRLC	Kraliky	84.74	40	*e*P	P	19 38 20.7	+0.4
K13K	Kusilvak Mount	84.82	332	P	P	19 38 21.3	+1.0
	baz=85						
JETT	Jettan, Norway	84.90	21	*e*P	P	19 38 21.5	+0.8
JETT				IAmb	IAmb	19 38 23.7	
	comp=Z,13nm,1.0s						
F14K	Arctic Creek	85.24	335	P	P	19 38 23.2	+0.8
	baz=84						
MORC	Moravsky Berou	85.25	41	*e*P	P	19 38 23.4	+0.6
STEB	Steborice	85.39	40	*e*P	P	19 38 23.1	-0.4
MAUC	Maruska	85.47	41	*e*P	P	19 38 24.5	+0.6
OKC	Ostrava-Krasne	85.64	40	*e*P	P	19 38 24.2	-0.5
KTK1	Kautokeino	85.96	21	*e*P	P	19 38 26.3	+0.4
KTK1				IAmb	IAmb	19 38 26.7	
	comp=Z,11nm,0.8s						
UNV	Unalaska Vale	86.61	324	P	P	19 38 29.5	+0.2
	baz=83						
ARA0	ARCESS Array S	86.67	20	*e*P	P	19 38 29.3	0.0
ARA0				IAmb	IAmb	19 38 29.5	
	comp=Z,4.8nm,0.5s						
ARCES	ARCESS Array B	86.67	20	P	P	19 38 29.1	-0.2
	comp=Z,4.9nm,0.6s,baz=272,slow=3.8,SNR=39						
	comp=Z,4.9nm,0.6s						
ARCES	ARCESS Array B	86.67	20	P	P	19 38 29.3	-0.1
ARCES				IAmb	IAmb	19 38 29.7	
	comp=Z,4.5nm,0.7s						
FINES	FINESS Array B	88.43	28	P	P	19 38 37.8	-0.1
	comp=Z,3.3nm,0.9s,baz=286,slow=3.1,SNR=14						
	comp=Z,3.3nm,0.9s						
TROLL	Troll, Antarti	91.99	162	⇑P	P	19 38 53.0	-1.4
	comp=Z,47nm,0.4s						
ZALV	Zalesovo Beam	116.68	14	PKP	PKPdf	19 44 29.0	-0.2
	comp=Z,3.7nm,0.6s,baz=267,slow=2.6,SNR=22						
ZALV	Zalesovo Beam	116.68	14	PKP	PKPdf	19 44 28.9	-0.3
KURBB	Kurchatov Arra	117.76	20	PKP	PKPdf	19 44 30.9	-0.5
	comp=Z,1.4nm,0.3s,baz=321,slow=2.3,SNR=11						
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	19 44 39.9	-0.6
	comp=Z,2.7nm,0.4s,baz=298,slow=2.6,SNR=82						
HILR	Hailar Array B	122.79	350	PKP	PKiKP	19 44 41.7	+0.2
	comp=Z,4.1nm,0.4s,baz=18,slow=1.6,SNR=12						
USRK	Ussuriysk Ar.	124.44	338	PKP	PKPdf	19 44 44.5	+0.1
	comp=Z,2.5nm,0.8s,baz=0.0,slow=1.4,SNR=4.2						
SONM	Songino Array	125.61	0	PKP	PKiKP	19 44 47.1	-0.1
	comp=Z,2.3nm,0.4s,baz=336,slow=1.8,SNR=19						
MJAR	Matsushiro Arr	127.88	328	PKP	PKPdf	19 44 51.1	-0.2
	comp=Z,0.3nm,0.4s,baz=59,slow=1.8,SNR=3.2						
KSRS	Korea Array	131.82	338	PKP	PKPdf	19 44 59.1	+0.4
	comp=Z,0.9nm,0.6s,baz=23,slow=1.9,SNR=2.5						
HHC	Hu-ho-hao-te	132.41	355	*e*P	PKPdf	19 44 59.1	-0.8
GTA2	Gaotai	133.48	8	PKP	PKiKP	19 45 02.8	-0.5
PZH	PanZhiHua	146.52	8	PKPbc	PKPdf	19 45 23.8	-2.1
KMI2	Kunming	147.99	7	PKPbc	PKPdf	19 45 28.3	-0.2
ASAR	Alice Springs	149.15	234	PKP	PKPdf	19 45 30.1	0.0
	comp=Z,5.1nm,0.6s,baz=111,slow=1.7,SNR=30						
ASAR				PKPbc	PKPbc	19 45 33.4	-1.1
	comp=Z,5.3nm,0.6s,baz=118,slow=3.6,SNR=32						
ASAR				pPKPbc	pPKPdf	19 46 13.2	+1.4
	comp=Z,4.7nm,0.7s,baz=122,slow=2.9,SNR=4.4						
ASAR	Alice Springs	149.15	234	PKPdf	PKPdf	19 45 29.7	-0.4
WRA	Warramunga Arr	150.38	241	PKP	PKPdf	19 45 32.4	+0.2
	comp=Z,5.6nm,0.5s,baz=108,slow=2.7,SNR=57						
WRA				PKPbc	PKPbc	19 45 36.9	-0.7
	comp=Z,5.6nm,0.5s,baz=108,slow=2.6,SNR=26						
WRA				pPKPbc	pPKPdf	19 46 16.2	+2.4
	comp=Z,6.7nm,0.6s,baz=109,slow=2.5,SNR=5.0						
WRA	Warramunga Arr	150.38	241	PKPbc	PKPbc	19 45 36.6	-1.0
CMAR	Chiang Mai Arr	153.70	17	PKP	PKPdf	19 45 38.1	+1.0
	comp=Z,2.2nm,0.6s,baz=298,slow=2.3,SNR=20						
CMAR				PKPbc	PKiKP	19 45 45.4	+0.2
	comp=Z,6.9nm,0.5s,baz=324,slow=3.4,SNR=32						
CMAR				PKPab	PKPab	19 45 58.0	-0.1
	comp=Z,1.8nm,0.4s,baz=332,slow=5.3,SNR=7.7						
CMAR	Chiang Mai Arr	153.70	17		PKPdf	19 45 37.7	+0.6

IDC 19 20:32:17.8±8.2, 22°.92N×93°.44E, h0km, mb3.2/4, mbtmp3.2/4, MS3.4/1, Error ellipse: s-maj=664.0km s-min=24.5km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	25.46	342	P	P	20 37 45.8	-1.6
	0.2nm,0.6s,baz=170,slow=8.8,SNR=2.2						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	30.00	341	P	P	20 38 29.7	+1.7
	0.1nm,0.4s,baz=155,slow=6.4,SNR=1.8						
	0.1nm,0.4s						
FITZ	Fitzroy Crossi	51.51	140	LR	LR	21 04 06.4	
	comp=Z,35nm,20.5s,baz=352,slow=37						
WRA	Warramunga Arr	58.38	134	P	P	20 42 14.9	-0.4
	0.3nm,0.8s,baz=320,slow=7.5,SNR=5.3						
	0.3nm,0.8s						
ASAR	Alice Springs	60.76	137	P	P	20 42 32.0	+0.3
	0.2nm,0.4s,baz=314,slow=6.4,SNR=5.5						
	0.2nm,0.4s						

*SNET **19** 20:33:22.3±3.1, 12°.94N×87°.30W, h10km, ML3.5, Presumed earthquake*
*CATAC **19** 20:33:22.5±0.1, 13°.1N±1°.4×87°.4W±0°.9, h3km, M3.6/52, MLv3.6/52, Error ellipse: s-maj=3.1km s-min=1.2km az=30.7, confirmed*

ISC 19 20:33:22.0±1.0, 12°.95N±0°.03×87°.35W±0°.02, h6km±9km, n69, σ0.977/104, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.21	277	P	Pg	20 33 26.4	+0.2
CSGN				S	Sg	20 33 29.7	+0.6
CRIN	San Cristobal	0.38	131	P	Pb	20 33 31.5	+0.2
CRIN				S	Sb	20 33 38.1	+0.6
CNCH	Conchagua	0.57	304	P	Pg	20 33 33.3	+0.1
CNCH	Conchagua	0.57	304	‖ *i* P	Pg	20 33 33.4	+0.3
CNCH				*e*S	Sg	20 33 41.8	+1.1
QUEN	Al S del Volca	0.60	127	P	Pb	20 33 34.5	-0.5
HERN	Volcan Telica	0.61	124	P	Pg	20 33 34.5	+0.8
HERN				S	Sb	20 33 43.5	-0.5
TELN	Telica	0.61	125	P	Pg	20 33 33.8	0.0
TELN				S	Sb	20 33 43.7	-0.4
HOYN	Al Sur del Vol	0.61	125	P	Pb	20 33 34.7	-0.5
HOYN				S	Sb	20 33 43.9	-0.4
TEL3	Telica 3	0.62	128	P	Pb	20 33 35.0	-0.3
LCND	La Caada	0.64	304	P	Pg	20 33 34.3	0.0
LCND	La Caada	0.64	304	‖ *i* P	Pg	20 33 34.3	0.0
ROCN	Rota Cerro Neg	0.73	126	P	Pg	20 33 35.0	-1.1
ROCN				S	Sg	20 33 45.7	+0.2
INTP	Intipuca	0.73	289	*e*P	Pg	20 33 35.9	-0.2
CNGN	Cerro Negro	0.78	125	P	Pg	20 33 37.3	+0.4
CNGN				S	Sb	20 33 48.1	-0.7
CNGA	Al SSO del Vol	0.78	126	P	Pg	20 33 37.5	+0.5
AESN	El Sauce Leon	0.79	95	P	Pb	20 33 38.0	-0.1
AESN				S	Sb	20 33 49.0	-0.1
MOM3	MOM3	0.92	118	P	Pg	20 33 39.9	+0.2
MOM3				S	Sb	20 33 53.5	+0.6
MOMN	Momotombo	0.95	124	P	Pg	20 33 40.6	+0.2
MOMN				S	Sb	20 33 54.0	0.0
LIMN	Finca el Limon	0.96	83	P	Pg	20 33 40.8	+0.3
LIMN				S	Sn	20 33 56.4	+0.2
MOM2	El Cardon	0.98	121	P	Pg	20 33 41.2	+0.3
MOM2				S	Sn	20 33 56.1	-0.6
RANC	El Ranchito	1.04	298	P	Pg	20 33 41.2	-0.7
RANC				S	Sg	20 33 55.4	0.0
COPN	Copaltepe	1.06	136	P	Pg	20 33 41.7	-0.8
OCON	Estacion meteo	1.08	51	P	Pg	20 33 43.1	+0.3
OCON				S	Sb	20 33 58.4	+0.7
PACA	Pacayal	1

UEES	**Universidad Ev**	**1.99**	**293**	P		**Pn**	**20 33 56.5**	**+0.1**
PMON	**Piamonte**	**2.06**	**292**	P		**Pn**	**20 33 58.8**	**+1.4**
PMON				S		**Sn**	**20 34 24.7**	**+1.2**
PMON	**Piamonte**	**2.06**	**292**	*e*P		**Pn**	**20 33 58.5**	**+1.2**
JAYA	**Jayaque - finc**	**2.16**	**289**	P		**Pn**	**20 34 00.2**	**+1.4**
JAYA				S		**Sn**	**20 34 26.8**	**+0.8**
JAYA	**Jayaque - finc**	**2.16**	**289**	*e*P		**Pn**	**20 34 00.1**	**+1.3**
MORN	**Al O del Volca**	**2.17**	**130**	P		**Pn**	**20 33 59.6**	**+0.8**
CONN	**Concepcion**	**2.17**	**129**	P		**Pn**	**20 34 00.1**	**+1.3**
SARH	**Santa Rosa de**	**2.27**	**323**	P		**Pb**	**20 34 02.9**	**-0.7**
ACON	**Acoyapa**	**2.34**	**115**	P		**Pb**	**20 34 03.4**	**-1.2**
CEVE	**Cerro Verde**	**2.38**	**292**	P		**Pn**	**20 34 04.0**	**+2.1**
SBLS	**San Blas**	**2.38**	**292**	*e*P		**Pb**	**20 34 04.4**	**-1.2**
MTO3	**Montecristo**	**2.43**	**307**	P		**Pn**	**20 34 04.1**	**+1.5**
MTO3	**Montecristo**	**2.43**	**307**	*e*P		**Pn**	**20 34 04.5**	**+1.9**
CARN	**Rivas**	**2.50**	**134**	P		**Pn**	**20 34 04.0**	**+0.7**
ESQI	**Esquipulas**	**2.51**	**310**	P		**Pb**	**20 34 06.3**	**-1.4**
NUBE	**Las Nubes**	**2.55**	**292**	P		**Pb**	**20 34 05.8**	**+1.7**
NUBE	**Las Nubes**	**2.55**	**292**	*e*P		**Pn**	**20 34 06.0**	**+1.9**
SIUN	**Universidad Ur**	**2.62**	**73**	P		**Pb**	**20 34 07.7**	**-1.7**
FAME	**Alcaldia de Sa**	**2.75**	**289**	P		**Pn**	**20 34 07.6**	**+0.9**

CATAC ***19*** *20:35:14.8±0.1, 13°N±2°×8°7W±°, h3km±1km, M4.1/42, MLv4.1/42, Error ellipse: s-maj=3.8km s-min=1.6km az=29.9, confirmed*
SNET ***19*** *20:35:14.2±2.4, 12°.96N×87°.35W, h3km, ML4.0, Presumed earthquake*
GCG ***19*** *20:35:15.9±2.3, 12°.66N×87°.27W, h31km±999km, MD4.5, Presumed earthquake*

ISC 19 20:35:13.8±1.0, 12°.91N±0°.03×87°.36W±0°.02, h18km±3km, n80, σ0.97/105, 5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.21**	**289**	P	**Pb**	**20 35 18.6**	**-0.2**
CRIN	**San Cristobal**	**0.36**	**125**	P	**Pn**	**20 35 23.4**	**-0.8**
CRIN				S	**Sn**	**20 35 29.9**	**-1.0**
QUEN	**Al S del Volca**	**0.58**	**122**	P	**Pn**	**20 35 26.8**	**-0.4**
HERN	**Volcan Telica**	**0.59**	**120**	P	**Pn**	**20 35 26.5**	**-0.9**
HERN				S	**Sn**	**20 35 36.0**	**-0.6**
CNCH	**Conchagua**	**0.59**	**308**	S	**Sb**	**20 35 33.9**	**+0.1**
CNCH	**Conchagua**	**0.59**	**308**	‖*i*P	**Pb**	**20 35 25.5**	**-0.2**
TELN	**Telica**	**0.59**	**120**	P	**Pn**	**20 35 25.8**	**-1.6**
TELN				S	**Sn**	**20 35 35.4**	**-1.3**
HOYN	**Al Sur del Vol**	**0.60**	**121**	P	**Pn**	**20 35 26.8**	**-0.7**
HOYN				S	**Sn**	**20 35 35.7**	**-1.0**
TEL3	**Telica 3**	**0.60**	**124**	P	**Pn**	**20 35 27.1**	**-0.3**
LCND	**La Caada**	**0.66**	**308**	P	**Pg**	**20 35 26.4**	**-0.4**
LCND	**La Caada**	**0.66**	**308**	‖*i*P	**Pg**	**20 35 26.4**	**-0.4**
ROCN	**Rota Cerro Neg**	**0.71**	**123**	P	**Pg**	**20 35 27.1**	**-0.7**
ROCN				S	**Sn**	**20 35 38.0**	**-1.4**
INTP	**Intipuca**	**0.74**	**293**	*e*P	**Pg**	**20 35 27.8**	**-0.5**
CNGN	**Cerro Negro**	**0.76**	**122**	P	**Pn**	**20 35 29.5**	**-0.2**
CNGN				S	**Sn**	**20 35 40.1**	**-0.6**
AESN	**El Sauce Leon**	**0.80**	**91**	P	**Pn**	**20 35 30.0**	**-0.1**
MOM3	**MOM3**	**0.91**	**116**	P	**Pn**	**20 35 32.4**	**+0.8**
MOM3				S	**Sn**	**20 35 45.4**	**+1.2**
MOMN	**Momotombo**	**0.94**	**122**	P	**Pn**	**20 35 32.6**	**+0.5**
MOMN				S	**Sn**	**20 35 45.9**	**+0.8**
MOM2	**El Cardon**	**0.97**	**119**	P	**Pg**	**20 35 33.3**	**+0.6**
MOM2				S	**Sn**	**20 35 47.5**	**+1.7**
LIMN	**Finca el Limon**	**0.98**	**81**	P	**Pg**	**20 35 33.3**	**+0.5**
LIMN				S	**Sn**	**20 35 47.6**	**+1.5**
BLLM	**Bellamira**	**1.01**	**302**	*e*P	**Pn**	**20 35 32.6**	**-0.6**
VSM	**San Miguel**	**1.03**	**300**	*e*P	**Pg**	**20 35 33.2**	**-0.7**
COPN	**Copaltepe**	**1.04**	**134**	P	**Pg**	**20 35 33.8**	**-0.1**
RANC	**El Ranchito**	**1.05**	**300**	P	**Pg**	**20 35 33.3**	**-0.9**
RANC				S	**Sg**	**20 35 48.3**	**+0.3**
PACA	**Pacayal**	**1.10**	**301**	S	**Sg**	**20 35 50.7**	**+1.2**
PACA	**Pacayal**	**1.10**	**301**	‖*i*P	**Pg**	**20 35 34.0**	**-1.1**
OCON	**Estacion meteo**	**1.12**	**50**	S	**Sg**	**20 35 50.4**	**+0.3**
AMTN	**Mateare**	**1.12**	**126**	P	**Pg**	**20 35 36.2**	**+0.6**
AMTN				S	**Sg**	**20 35 52.4**	**+2.1**
APYN	**Apoyeque**	**1.19**	**124**	P	**Pg**	**20 35 38.1**	**+1.3**
APQ2	**Apoyeque**	**1.23**	**125**	P	**Pg**	**20 35 37.9**	**+0.4**
TECA	**Tecapa**	**1.26**	**298**	*e*P	**Pb**	**20 35 36.8**	**-0.3**
RCON	**San Juan de Ri**	**1.30**	**64**	P	**Pg**	**20 35 38.6**	**-0.4**
RCON				S	**Sg**	**20 35 57.1**	**+1.0**
TISN	**Laguna Tiscapa**	**1.30**	**125**	P	**Pg**	**20 35 38.9**	**-0.2**
RCVN	**Varillal2**	**1.32**	**59**	P	**Pg**	**20 35 38.6**	**-0.7**
RCVN				S	**Sg**	**20 35 56.6**	**+0.1**
MGAN	**Managua**	**1.32**	**125**	P	**Pg**	**20 35 38.8**	**-0.5**
MGAN				S	**Sg**	**20 35 57.4**	**+0.8**
WILN	**Americas 2**	**1.36**	**123**	P	**Pg**	**20 35 39.9**	**-0.1**
WILN				S	**Sg**	**20 35 59.8**	**+1.9**
PQSS	**Presa 15 de Se**	**1.37**	**301**	P	**Pb**	**20 35 38.6**	**-0.3**
PQSS	**Presa 15 de Se**	**1.37**	**301**	*e*P	**Pb**	**20 35 38.6**	**-0.3**
RCPN	**Sur Rio San Ju**	**1.37**	**63**	P	**Pg**	**20 35 40.0**	**-0.3**
AERN	**Aeropuerto Man**	**1.39**	**123**	P	**Pg**	**20 35 39.7**	**-0.4**
AERN				S	**Sg**	**20 35 59.4**	**+0.8**
MATN	**Matagalpa**	**1.40**	**89**	P	**Pg**	**20 35 40.0**	**-0.7**
MATN				S	**Sg**	**20 35 59.4**	**+0.4**
MARCA	**Marcala la Paz**	**1.41**	**332**	P	**Pb**	**20 35 39.5**	**-0.2**
MARCA	**Marcala la Paz**	**1.41**	**332**	‖*i*P	**Pb**	**20 35 39.4**	**-0.2**
MARCA				*e*S	**Sg**	**20 35 58.5**	**-0.9**
MAS3	**Al N del Volca**	**1.45**	**127**	P	**Pg**	**20 35 40.7**	**-1.0**
TECO	**Alcaldia de Te**	**1.52**	**294**	P	**Pb**	**20 35 41.4**	**-0.1**
TECO	**Alcaldia de Te**	**1.52**	**294**	*e*P	**Pb**	**20 35 41.2**	**-0.3**
COEG	**Centro de Oper**	**1.65**	**296**	P	**Pb**	**20 35 43.2**	**-0.4**
COEG	**Centro de Oper**	**1.65**	**296**	*e*P	**Pb**	**20 35 42.8**	**-0.9**
BOAB	**BOACO BROADBAN**	**1.71**	**105**	P	**Pb**	**20 35 43.7**	**-1.0**
PAVA	**Las Pavas**	**1.74**	**298**	P	**Pb**	**20 35 45.2**	**0.0**
PAVA	**Las Pavas**	**1.74**	**298**	*e*P	**Pb**	**20 35 44.8**	**-0.4**
LFRS	**El Faro**	**1.81**	**293**	*e*P	**Pb**	**20 35 45.6**	**-0.8**
LOMA	**Loma Larga**	**1.91**	**293**	P	**Pb**	**20 35 47.8**	**-0.4**
LALI	**Alcalda de L**	**2.00**	**287**	*e*P	**Pb**	**20 35 49.2**	**-0.4**
LALI				*e*S	**Sb**	**20 36 15.2**	**+1.0**
BOQS	**Boqueron**	**2.05**	**294**	*e*P	**Pb**	**20 35 50.6**	**0.0**
PMON	**Piamonte**	**2.07**	**293**	P	**Pb**	**20 35 50.4**	**-0.4**
PMON	**Piamonte**	**2.07**	**293**	*e*P	**Pb**	**20 35 50.5**	**-0.4**
MORN	**Al O del Volca**	**2.15**	**129**	P	**Pg**	**20 35 52.5**	**-2.5**
CONN	**Concepcion**	**2.15**	**128**	P	**Pb**	**20 35 51.1**	**-1.1**
JAYA	**Jayaque - finc**	**2.17**	**290**	P	**Pb**	**20 35 52.0**	**-0.6**
JAYA	**Jayaque - finc**	**2.17**	**290**	*e*P	**Pb**	**20 35 51.5**	**-1.1**
JAYA				*e*S	**Sb**	**20 36 19.4**	**+0.1**
JAYA	**Jayaque - finc**	**2.17**	**290**	*e*P	**Pb**	**20 35 52.0**	**-0.6**
SARH	**Santa Rosa de**	**2.31**	**324**	P	**Pb**	**20 35 55.0**	**+0.1**
SARH	**Santa Rosa de**	**2.31**	**324**	‖*e*P	**Pb**	**20 35 54.7**	**-0.2**
SARH				*e*S	**Sb**	**20 36 23.3**	**+0.2**
ACON	**Acoyapa**	**2.33**	**113**	P	**Pb**	**20 35 55.3**	**+0.1**
CEVE	**Cerro Verde**	**2.39**	**293**	P	**Pb**	**20 35 56.4**	**-0.1**
CEVE				S	**Sb**	**20 36 25.1**	**-0.6**
CEVE	**Cerro Verde**	**2.39**	**293**	*e*P	**Pb**	**20 35 56.4**	**-0.1**
SBLS	**San Blas**	**2.39**	**293**	*e*P	**Pb**	**20 35 55.6**	**-0.9**
MTO3	**Montecristo**	**2.45**	**308**	P	**Pb**	**20 35 56.5**	**-0.9**
MTO3	**Montecristo**	**2.45**	**308**	*e*P	**Pb**	**20 35 56.5**	**-0.9**
MTO3				*e*S	**Sb**	**20 36 29.5**	**+2.1**
MTO3	**Montecristo**	**2.45**	**308**	*e*P	**Pb**	**20 35 56.6**	**-0.9**
ESQI	**Esquipulas**	**2.54**	**311**	P	**Pb**	**20 35 57.4**	**-1.4**
ESQI	**Esquipulas**	**2.54**	**311**	*e*P	**Pb**	**20 35 58.5**	**-0.4**
ZAFR2	**Estanzuela, Za**	**2.55**	**311**	*e*P	**Pg**	**20 36 05.7**	**+2.9**
ZAFR2				*e*S	Sg	20 36 45.1	+9.1
NUBE	**Las Nubes**	**2.56**	**293**	P	**Pb**	**20 35 58.6**	**-0.7**
NUBE	**Las Nubes**	**2.56**	**293**	*e*P	**Pb**	**20 35 59.0**	**-0.3**
NUBE				*e*S	**Sb**	**20 36 30.9**	**+0.4**
SIUN	**Universidad Ur**	**2.64**	**72**	P	**Pb**	**20 35 59.3**	**-1.3**
FAME	**Alcaldia de Sa**	**2.75**	**290**	P	**Pb**	**20 36 00.5**	**-2.0**
JTS	**Las Juntas de**	**3.51**	**138**	P	**Pn**	**20 36 09.9**	**+2.5**
APG	**El Apazote**	**3.67**	**305**	*e*P	**Pb**	**20 36 15.7**	**-2.5**
APG				*e*S	**Sb**	**20 37 01.6**	**-0.9**
PETF	**Flores**	**4.67**	**329**	*e*P	Pb	20 36 29.6	-5.5

TAP 19 20:43:51.4, 23°.76N×121°.66E, h44km, ML2.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.09**	**288**	P	Pn	20 43 58.5	+0.1
SHUL				S	Sn	20 44 04.5	+1.0
TEYL	**Yanliau Villag**	**0.12**	**332**	*e*P	Pn	20 43 59.1	+0.5
TEYL				*e*S	Sn	20 44 05.7	+2.0
WARBT	**Fenglin Townsh**	**0.25**	**261**	P	Pn	20 43 59.4	-0.2
WARBT				S	Sn	20 44 05.0	-0.4
ETM	**Tongmen**	**0.26**	**323**	*e*P	Pn	20 43 59.7	+0.1
ETM				*e*S	Sn	20 44 05.9	+0.5
TWD	**Chiawan**	**0.33**	**350**	P	Pn	20 44 00.3	0.0
TWD				S	Sn	20 44 07.1	+0.5
HGSD	**Ruisui**	**0.34**	**219**	*e*P	Pn	20 44 00.7	+0.3
HGSD				*e*S	Sn	20 44 09.0	+2.2
LXIB	**Xiulin Townshi**	**0.34**	**319**	P	Pn	20 44 00.5	-0.2
LXIB				*e*S	Sn	20 44 07.4	+0.2
LXIB	**Xiulin Townshi**	**0.34**	**319**	*e*P	Pn	20 44 00.5	-0.1
LXIB				*e*S	Sn	20 44 07.2	+0.1
NACB	**Ninganchiao**	**0.42**	**352**	*e*P	Pn	20 44 01.0	-0.3
NACB				*e*S	Sn	20 44 08.7	+0.3
ETLH	**Xiulin Townshi**	**0.47**	**340**	*e*P	Pn	20 44 02.3	+0.2
ETLH				*e*S	Sn	20 44 08.0	-1.7
VWDT	**VWDT**	**0.47**	**269**	*e*P	Pn	20 44 02.5	+0.5
VWDT				*e*S	Sn	20 44 08.2	-1.3
VWDT	**VWDT**	**0.47**	**269**	P	Pn	20 44 02.8	+0.8
VWDT				S	Sn	20 44 08.5	-1.0

TAP 19 20:43:54.8, 24°.17N×121°.06E, h7km, ML1.3, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDCB	**Techi**	**0.12**	**47**	‖*i*P	Pg	20 43 57.8	+0.2
TDCB				*i* S	Sg	20 43 59.5	0.0
TWT	**Tachien**	**0.13**	**52**	*e*P	Pg	20 43 57.9	+0.1
TWT				*e*S	Sg	20 43 59.4	-0.4
WHP	**Taichung City**	**0.15**	**316**	*i* P	Pg	20 43 58.7	+0.7
WHP				S	Sg	20 44 01.1	+0.9
WCS	**Beigang Elemen**	**0.18**	**230**	*i* P	Pg	20 43 58.9	+0.5
WCS				S	Sg	20 44 01.4	+0.6
DPDB	**Guoxing**	**0.18**	**222**	P	Pg	20 43 59.1	+0.6
DPDB				S	Sg	20 44 01.9	+0.8
WPL	**Puli Township**	**0.18**	**211**	*e*P	Pg	20 43 58.9	+0.4
WPL				*e*S	Sg	20 44 02.0	+1.0
FUSS	**Fushou**	**0.18**	**65**	*e*P	Pg	20 43 59.0	+0.4
FUSS				*e*S	Sg	20 44 02.4	+1.1
WUSB	**Renai**	**0.18**	**163**	*i* P	Pg	20 43 59.0	+0.4
WUSB				S	Sg	20 44 01.3	+0.1
WHF	**Hehuan Shan**	**0.19**	**98**	*e*P	Pg	20 43 59.6	+0.9
WHF				S	Sg	20 44 03.0	+1.4
OWD	**Renai**	**0.24**	**154**	P	Pg	20 44 00.1	+0.5
OWD				*e*S	Sg	20 44 02.9	0.0
SMLT	**Sun Moon Lake**	**0.32**	**207**	P	Pg	20 44 01.7	+0.6
SMLT				*e*S	Sg	20 44 06.7	+1.3
TYC	**Yuchr**	**0.32**	**215**	P	Pg	20 44 01.5	+0.4
TYC				S	Sg	20 44 06.3	+0.8
ETLH	**Xiulin Townshi**	**0.39**	**84**	*e*P	Pg	20 44 03.0	+0.6
NNSB	**Datong**	**0.39**	**49**	P	Pg	20 44 02.6	+0.1
NNSB				S	Sg	20 44 08.9	+1.3
NNS	**Nan Shan**	**0.39**	**47**	*e*P	Pg	20 44 02.8	+0.3
NNS				*e*S	Sg	20 44 07.7	+0.1
SSLB	**Suanglung**	**0.39**	**194**	*i* P	Pg	20 44 02.8	+0.3
SSLB				*e*S	Sg	20 44 07.8	+0.2
NFF	**Wufeng Townshi**	**0.46**	**7**	*e*S	Sg	20 44 10.7	+0.8
LIOB	**Emei**	**0.47**	**355**	*e*P	Pg	20 44 04.6	+0.6
LIOB				*e*S	Sb	20 44 11.7	-1.0
LATG	**Datong**	**0.56**	**49**	*e*P	Pg	20 44 05.2	-0.5
LATG				*e*S	Sg	20 44 12.2	-0.8
NSK	**Sanguang**	**0.57**	**28**	*e*P	Pg	20 44 05.9	0.0
YHNB	**Yeheng**	**0.57**	**30**	*e*P	Pg	20 44 06.0	+0.1
YHNB				*e*S	Sg	20 44 13.4	-0.1

IDC ***19*** *20:45:44.6±1.2, 24°.00N×146°.03E, h0km, mb3.4/9, mbtmp3.5/11, MLS.3.6/2, MS2.6/6, Error ellipse: s-maj=41.6km s-min=18.2km az=81.0*

ISC 19 20:45:46.1±1.0, 24°.2N±0°.1×146°.1E±0°.2, h10km, n15, σ2.33/12, mb3.7/7, MS2.7/4, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.61**	**310**	Pn	**Pn**	**20 46 57.3**	**+1.5**
	12nm,0.3s,baz=278,slow=23,SNR=20						
JCJ				LR	LR	20 47 41.3	
	comp=Z,10nm,21.0s,baz=127,slow=25						
JCJ				Sn	**Sn**	**20 47 48.2**	**-1.2**
	25nm,0.3s,baz=115,slow=22,SNR=4.7						
	25nm,0.3s						
GUMO	**Guam**	**10.58**	**187**	LR	LR	20 51 16.0	
	comp=Z,12nm,21.8s,baz=5.0,slow=32						
MJAR	**Matsushiro Arr**	**14.10**	**333**	Pn	**Pn**	**20 49 07.7**	**+1.8**
	0.1nm,0.3s,baz=158,slow=12,SNR=5.2						
	0.4nm,0.4s						
ASAJ	**Asahikawa**	**20.12**	**353**	P	Pn	20 50 23.2	+1.3
	0.8nm,0.7s,baz=213,slow=17,SNR=1.5						
ASAJ				S	**S**	**20 54 00.5**	**-5.5**
	0.6nm,0.5s,baz=108,slow=28,SNR=1.5						
	0.8nm,0.7s						
KSRS	**Korea Array**	**20.45**	**315**	P	Pn	20 50 24.8	-1.0
	0.6nm,0.5s,baz=122,slow=8.6,SNR=4.2						
KSRS				LR	LR	20 57 21.2	
	comp=Z,22nm,20.5s,baz=250,slow=34						
	0.6nm,0.5s						
PETK	**Petropavlovsk-**	**30.21**	**14**	LR	LR	21 02 06.4	
	comp=Z,21nm,21.5s,baz=188,slow=32						
MA2	**Magadan**	**35.54**	**4**	LR	LR	21 08 10.5	
	comp=Z,14nm,18.9s,baz=358,slow=38						
SONM	**Songino Array**	**39.28**	**317**	P	**P**	**20 53 15.5**	**+0.4**
	0.1nm,0.3s,baz=86,slow=4.5,SNR=2.0						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**45.31**	**196**	P	**P**	**20 54 03.4**	**-0.9**
	0.9nm,0.5s,baz=18,slow=8.8,SNR=20						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**49.00**	**195**	P	**P**	**20 54 31.9**	**-1.1**
	0.7nm,0.6s,baz=15,slow=7.1,SNR=16						
	0.7nm,0.6s						
KDAK	**Kodiak Island**	**54.64**	**35**	LR	LR	21 14 36.7	
	comp=Z,19nm,21.5s,baz=253,slow=32						
MKAR	**Makanchi Array**	**55.08**	**311**	P	**P**	**20 55 18.4**	**+0.1**
	0.1nm,0.4s,baz=96,slow=8.9,SNR=2.0						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**58.62**	**28**	P	**P**	**20 55 44.5**	**+1.5**
	0.3nm,0.6s,baz=269,slow=7.8,SNR=2.9						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**62.60**	**319**	P	**P**	**20 56 10.0**	**-0.4**
	0.3nm,0.3s,baz=94,slow=8.1,SNR=3.5						
BVAR				PcP	**PcP**	**20 56 46.8**	**-2.5**
	0.6nm,0.5s,baz=95,slow=3.3,SNR=3.6						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**82.12**	**335**	P	**P**	**20 58 07.8**	**+1.1**
	0.3nm,0.5s,baz=82,slow=10.0,SNR=4.3						
	0.3nm,0.5s						

CATAC ***19*** *20:49:16.2±0.1, 13°.1N×8°7W±°, h4km±1km, M4.2/36, MLv4.2/36, Error ellipse: s-maj=3.3km s-min=1.5km az=35.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.32; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$0.82; $M_{r\theta}$0.43; $M_{\theta\phi}$-0.75; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.23792×10^{15} NP1: ϕ_s294.44119°, δ87.70765°, λ-147.07537°. NP2: ϕ_s202.95753°, δ57.10506°, λ-2.73038°. Principal axes: T 1.4085, Plg20.8392°, Azm63.8672°; N -0.4933, Plg57.0046°, Azm297.9758°; P -0.9152, Plg24.3502°, Azm163.7871°; confirmed*
SNET ***19*** *20:49:16.3±3.4, 12°.94N×87°.31W, h10km, ML4.0, Presumed earthquake*
GCG ***19*** *20:49:19.0±2.2, 12°.80N×87°.35W, h27km±708km, MD4.6, Presumed earthquake*

ISC 19 20:49:16.0±1.1, 12°.93N±0°.03×87°.37W±0°.02, h7km±9km, n66, σ1.01/100, 4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.39**	**127**	P	**Pb**	**20 49 25.2**	**0.0**
CRIN				S	**Sb**	**20 49 32.2**	**+0.9**
CNCH	**Conchagua**	**0.57**	**307**	P	**Pg**	**20 49 27.0**	**0.0**
CNCH	**Conchagua**	**0.57**	**307**	‖*i*P	**Pg**	**20 49 27.0**	**0.0**
CNCH				*e*S	**Sg**	**20 49 35.4**	**+0.9**
QUEN	**Al S del Volca**	**0.61**	**124**	P	**Pb**	**20 49 28.4**	**-0.5**
HERN	**Volcan Telica**	**0.61**	**122**	P	**Pg**	**20 49 28.4**	**+0.6**
HERN				S	**Sb**	**20 49 37.1**	**-0.8**
TELN	**Telica**	**0.62**	**122**	P	Pn	20 49 37.1	+6.0
HOYN	**Al Sur del Vol**	**0.62**	**122**	P	**Pg**	**20 49 28.4**	**+0.4**
HOYN				S	**Sb**	**20 49 37.4**	**-0.8**
TEL3	**Telica 3**	**0.62**	**125**	P	**Pg**	**20 49 28.6**	**+0.6**
LCND	**La Caada**	**0.63**	**306**	P	Pn	20 49 37.4	+6.0
LCND	**La Caada**	**0.63**	**306**	‖*e*P	**Pg**	**20 49 28.0**	**-0.2**
INTP	**Intipuca**	**0.72**	**291**	*e*P	**Pg**	**20 49 29.5**	**-0.4**
INTP				*e*S	**Sg**	**20 49 39.7**	**+0.4**
ROCN	**Rota Cerro Neg**	**0.73**	**124**	P	**Pg**	**20 49 28.9**	**-1.2**
ROCN				S	**Sg**	**20 49 39.3**	**-0.4**
CNGN	**Cerro Negro**	**0.78**	**123**	P	**Pg**	**20 49 31.3**	**+0.3**
CNGN				S	**Sb**	**20 49 42.4**	**-0.3**
CNGA	**Al SSO del Vol**	**0.78**	**124**	P	**Pg**	**20 49 31.3**	**+0.3**
CNGA				S	**Sb**	**20 49 42.3**	**-0.4**
AESN	**El Sauce Leon**	**0.81**	**93**	P	**Pg**	**20 49 31.9**	**+0.4**
AESN				S	**Sb**	**20 49 43.0**	**-0.4**
MOM3	**MOM3**	**0.93**	**117**	P	**Pg**	**20 49 33.9**	**0.0**
MOM3				S	**Sb**	**20 49 47.3**	**+0.4**
MOMN	**Momotombo**	**0.96**	**123**	P	**Pg**	**20 49 34.3**	**-0.2**
MOMN				S	**Sb**	**20 49 47.7**	**-0.2**
LIMN	**Finca el Limon**	**0.98**	**82**	P	**Pg**	**20 49 34.8**	**-0.1**
LIMN				S	**Sn**	**20 49 49.2**	**-1.2**
MOM2	**El Cardon**	**0.99**	**120**	P	**Pg**	**20 49 35.2**	**+0.1**
MOM2				S	**Sn**	**20 49 49.3**	**-1.2**
RANC	**El Ranchito**	**1.03**	**299**	P	**Pg**	**20 49 35.4**	**-0.3**
RANC				S	**Sg**	**20 49 49.7**	**+0.7**
COPN	**Copaltepe**	**1.06**	**135**	P	**Pg**	**20 49 35.8**	**-0.6**
PACA	**Pacayal**	**1.07**	**300**	P	**Pg**	**20 49 36.2**	**-0.4**
PACA				S	**Sb**	**20 49 51.7**	**+0.5**
PACA	**Pacayal**	**1.07**	**300**	*e*P	**Pg**	**20 49 35.6**	**-1.0**
OCON	**Estacion meteo**	**1.11**	**51**	P	**Pb**	**20 49 37.3**	**-0.2**
OCON				S	**Sg**	**20 49 51.6**	**-0.1**
AMTN	**Mateare**	**1.15**	**127**	P	**Pb**	**20 49 37.9**	**-0.2**
AMTN				S	**Sn**	**20 49 54.2**	**-0.1**
APYN	**Apoyeque**	**1.21**	**125**	P	**Pn**	**20 49 39.2**	**-0.1**
APYN				S	**Sn**	**20 49 55.6**	**-0.4**
TECA	**Tecapa**	**1.24**	**297**	*e*P	**Pn**	**20 49 38.5**	**-1.4**
APQ2	**Apoyeque**	**1.25**	**126**	P	**Pb**	**20 49 39.8**	**-0.1**
APQ2				S	**Sn**	**20 49 57.8**	**+0.9**
RCON	**San Juan de Ri**	**1.30**	**65**	P	**Pb**	**20 49 40.7**	**-0.1**
RCON				S	**Sn**	**20 49 60.0**	**+1.6**
ABCN	**Banco Central**	**1.31**	**128**	P	**Pg**	**20 49 41.0**	**-0.1**
ABCN				S	**Sg**	**20 49 59.7**	**+1.6**
RCVN	**Varillal2**	**1.31**	**60**	P	**Pn**	**20 49 40.4**	**-0.4**
RCVN				S	**Sn**	**20 49 58.1**	**-0.5**
ALLN	**Telcor Managua**	**1.32**	**126**	P	**Pg**	**20 49 41.6**	**+0.3**
TISN	**Laguna Tiscapa**	**1.33**	**126**	P	**Pb**	**20 49 40.8**	**-0.2**
MGAN	**Managua**	**1.34**	**125**	P	**Pb**	**20 49 41.3**	**-0.2**
MGAN				S	**Sg**	**20 49 59.1**	**-0.1**
PQSS	**Presa 15 de Se**	**1.35**	**301**	P	**Pn**	**20 49 40.8**	**-0.4**
PQSS				S	**Sb**	**20 49 59.0**	**-0.1**
RCPN	**Sur Rio San Ju**	**1.37**	**64**	P	**Pg**	**20 49 42.3**	**0.0**
RCPN				S	**Sg**	**20 50 00.5**	**+0.4**
MARCA	**Marcala la Paz**	**1.38**	**332**	P	**Pn**	**20 49 41.1**	**-0.7**
MARCA	**Marcala la Paz**	**1.38**	**332**	‖*e*P	**Pn**	**20 49 41.0**	**-0.8**
MARCA				*e*S	**Sn**	**20 50 00.5**	**+0.1**
WILN	**Americas 2**	**1.38**	**124**	P	**Pn**	**20 49 41.7**	**0.0**
WILN				S	**Sg**	**20 50 01.4**	**+1.0**
MATN	**Matagalpa**	**1.40**	**90**	P	**Pn**	**20 49 41.7**	**-0.4**
MAS3	**Al N del Volca**	**1.47**	**128**	P	**Pn**	**20 49 42.7**	**-0.2**
TECO	**Alcaldia de Te**	**1.50**	**294**	P	**Pn**	**20 49 42.8**	**-0.5**
MASN	**Masaya**	**1.51**	**128**	P	**Pn**	**20 49 43.4**	**-0.1**
COEG	**Centro de Oper**	**1.62**	**295**	P	**Pn**	**20 49 45.0**	**-0.1**
COEG	**Centro de Oper**	**1.62**	**295**	*e*P	**Pn**	**20 49 44.9**	**-0.1**
PAVA	**Las Pavas**	**1.71**	**297**	P	**Pn**	**20 49 46.8**	**+0.5**

ANDN S **Sb** **21 03 24.9 -0.1**
TAHT Tahtakopru-Hat 0.63 172 Pg **Pg** **21 03 14.9 0.0**
TAHT Sg **Sb** **21 03 24.7 -0.4**
CAYT Sariam 0.63 286 P **Pg** **21 03 15.3 +0.3**
CAYT S **Sn** **21 03 28.0 -0.4**
KRTS Karatas 0.71 233 Pg **Pb** **21 03 17.6 +0.2**
KMRS Kahramanmaras 0.83 52 Pg **Pb** **21 03 19.6 +0.1**
KMRS Sg **Sb** **21 03 31.2 +0.3**
KUZU Kuzuini 0.83 105 P **Pb** **21 03 19.6 0.0**
RHAN Hatay/Reyhanl 0.85 150 P **Pb** **21 03 19.4 -0.4**
RHAN S **Sg** **21 03 30.6 +0.4**
RHAN IAML 21 03 32.0
comp=N,1µm,0.4s
RHAN IAML 21 03 33.0
comp=E,1µm,1.0s
KAHM Kahramanmaras, 0.89 54 P **Pb** **21 03 20.8 +0.2**
KAHM S **Sb** **21 03 32.9 +0.2**
KAHM IAML 21 03 36.0
comp=N,831nm,0.6s
KAHM IAML 21 03 36.0
comp=E,618nm,0.6s
GAZ Gaziantep 0.92 79 Pg **Pb** **21 03 21.3 +0.1**
GAZ Sg **Sb** **21 03 34.3 +0.6**
GAZ Gaziantep 0.92 79 P **Pb** **21 03 20.9 -0.3**
GAZ S **Sb** **21 03 34.9 +1.2**
GAZ AML AML 21 03 36.1
1.8nm,0.4s
GAZ AML AML 21 03 37.5
2.3nm,0.4s
KHMN Narli-Kahraman 0.95 65 Pg **Pb** **21 03 21.9 +0.3**
KHMN Sg **Sb** **21 03 34.9 +0.6**
KHMN Narli-Kahraman 0.95 65 P **Pb** **21 03 21.5 -0.1**
KHMN S **Sb** **21 03 33.9 -0.4**
KHMN IAML 21 03 37.0
comp=E,621nm,0.5s
YAYL Yayladag 0.96 179 P **Pn** **21 03 25.0 +2.2**
YAYL S **Sn** **21 03 38.2 +1.4**
SAIM ADANA 0.97 0 P **Pb** **21 03 22.4 +0.3**
GULE Gulek 1.08 286 P **Pg** **21 03 22.7 -0.8**
GULE S **Sn** **21 03 40.8 +1.1**
GULE IAML 21 03 44.0
comp=N,706nm,0.3s
GULE IAML 21 03 44.0
comp=E,988nm,0.4s
CMRD Camardi-Nigde 1.09 308 Pn **Pg** **21 03 23.1 -0.6**
YAHY KAYSERI_Yahyal 1.23 333 P **Pg** **21 03 26.3 -0.2**
GZT Gaziantep 1.24 73 P **Pg** **21 03 26.1 -0.5**
GZT S **Sg** **21 03 42.2 -0.4**
GZT IAML 21 03 45.0
comp=N,574nm,0.7s
GZT IAML 21 03 45.0
comp=E,784nm,0.5s
NZIP Nizip/Gaziante 1.28 88 P **Pg** **21 03 25.7 -1.6**
NZIP IAML 21 03 48.0
comp=E,746nm,0.4s
NZIP IAML 21 03 49.0
comp=N,589nm,0.4s
SARI SarD1z-Kayseri 1.43 11 Pn **Pg** **21 03 30.1 -0.2**
SARI Sn **Sn** **21 03 50.2 +1.7**
NIDE Nigde/Merkez-G 1.44 314 P **Pn** **21 03 28.4 -1.0**
NIDE S **Sn** **21 03 50.7 +2.1**
AKCA Adyaman/G¶ll 1.51 58 P **Pn** **21 03 30.5 +0.2**
AKCA S **Sb** **21 03 49.6 -1.0**
AKCA IAML 21 03 54.0
comp=E,363nm,0.3s
AKCA IAML 21 03 58.0
comp=N,366nm,0.4s
KERG Konya-Eregli 1.61 285 P **Pn** **21 03 31.4 -0.4**
KERG S **Sn** **21 03 53.3 +0.4**
SLFK Silifke-Mersin 1.82 251 Pn **Pn** **21 03 35.3 +0.9**
ATAB Bozova 1.83 74 P **Pn** **21 03 34.2 -0.5**
ATAB IAML 21 04 06.0
comp=N,457nm,0.4s
SILI Silifke-Mersin 1.84 251 Pn **Pn** **21 03 35.6 +0.8**
BNN Bunyan 1.86 354 Pn **Pn** **21 03 36.2 +1.0**
AZEY Adyaman-Merk 1.91 64 P **Pn** **21 03 35.6 -0.2**
GUNE Kayseri 1.93 349 P **Pb** **21 03 39.1 +0.6**
AKCD Akcadag 1.95 48 P **Pn** **21 03 37.0 +0.5**
AKCD S **Sn** **21 04 00.8 -0.6**
AKCD IAML 21 04 10.0
comp=N,202nm,0.3s
CUGUR Gurin_SVAS 1.96 28 P **Pg** **21 03 40.2 -0.3**
KEBE Keben-Mersin 1.98 255 Pn **Pn** **21 03 37.9 +1.2**
GULA Gulagac 1.98 313 Pn **Pn** **21 03 37.7 +0.8**
YESY Yesilyurt 2.02 293 Pn **Pn** **21 03 38.5 +1.2**
SURC SANLIURFA_SURC 2.04 93 P **Pn** **21 03 36.9 -0.6**
SURC IAML 21 04 11.0
comp=N,275nm,0.4s
SURC IAML 21 04 13.0
comp=E,353nm,0.5s
AVNS Nevsehir-Avano 2.05 332 P **Pn** **21 03 39.4 +1.6**
KARG Kargicak-Mersi 2.06 248 Pn **Pn** **21 03 38.9 +1.0**
IKL Isikli 2.07 249 Pn **Pn** **21 03 38.9 +1.0**
TISA Tisan-Mersin 2.10 247 Pn **Pn** **21 03 39.3 +0.9**
YESI Yesilovacik-Me 2.12 248 Pn **Pn** **21 03 39.1 +0.5**
EREN Erenkoy 2.13 227 Pn **Pn** **21 03 39.9 +1.2**
TEVE Tevekalti-Mers 2.19 256 Pn **Pn** **21 03 40.7 +1.0**
BECE Buyukeceli-Mer 2.19 248 Pn **Pn** **21 03 40.4 +0.7**
BECE Buyukeceli-Mer 2.19 248 Pn **Pn** **21 03 40.6 +0.9**
GULN MERSIN_Gulnar 2.20 249 P **Pn** **21 03 40.0 +0.3**
GULN S **Sn** **21 04 04.0 -3.0**
AKK1 Akkuyu-Mersin 2.21 248 Pn **Pn** **21 03 40.9 +1.0**
URFA Urfa 2.23 78 Pn **Pn** **21 03 41.8 +1.5**
KRMN Karaman 2.26 275 Pn **Pn** **21 03 41.8 +1.2**
MAYA Malatya/Merkez 2.29 54 P **Pn** **21 03 41.5 +0.5**
HANM anlurfa/Hi 2.31 75 P **Pn** **21 03 41.0 -0.3**
HANM IAML 21 04 21.0
comp=N,200nm,0.7s
YORU Yoruktepe-Mers 2.31 249 Pn **Pn** **21 03 42.4 +1.1**
NARI Adyaman-Kaht 2.31 67 P **Pn** **21 03 40.2 -1.1**
SANL SANLIURFA_Merk 2.33 85 P **Pb** **21 03 44.2 -1.0**
SANL IAML 21 04 21.0
comp=N,280nm,0.7s
SANL IAML 21 04 21.0
comp=E,172nm,0.4s
BERE Bereket-Mersin 2.38 255 Pn **Pn** **21 03 43.5 +1.1**
HEKM Malatya_Hekimh 2.39 38 P **Pb** **21 03 45.0 -1.4**
BEIL Beino 2.45 178 *eP* **Pn** **21 03 43.7 +0.4**
TEKE Tekeli-Mersin 2.53 251 Pn **Pn** **21 03 45.6 +1.3**
PARAL Paralimni 2.59 220 P **Pn** **21 03 44.0 -1.1**
PARAL S **Sn** **21 04 15.1 -1.8**
PARAL AML AML 21 04 31.7
0.2nm,0.7s
PARAL AML AML 21 04 31.8
0.1nm,1.0s
LFK Lefkose 2.68 231 Pn **Pn** **21 03 45.5 -0.9**
HWQ Hawqa 2.72 182 *eP* **Pn** **21 03 47.8 +0.8**
MVOU Mavrovouni 2.80 226 P **Pn** **21 03 46.4 -1.6**
MVOU S **Sn** **21 04 19.4 -2.6**
MVOU AML AML 21 04 29.7
0.1nm,0.7s
MVOU AML AML 21 04 32.4
0.1nm,0.8s
ATHAL Athalassa 2.86 230 S **Sn** **21 04 20.8 -2.6**
ATHAL AML AML 21 04 39.4
0.2nm,0.7s
ATHAL AML AML 21 04 44.7
0.3nm,0.8s
BHL Bhannes 3.11 187 *eP* **Pn** **21 03 53.4 +1.0**
ZAHL Zahle 3.14 183 *eP* **Pb** **21 03 58.7 -0.3**
XYLS Xyliatos 3.15 232 P **Pn** **21 03 51.1 -1.8**
XYLS S **Sn** **21 04 26.9 -3.9**
XYLS AML AML 21 04 39.8
0.1nm,0.5s
XYLS AML AML 21 04 42.6
0.1nm,0.8s
ASGA Asgata 3.19 227 P **Pn** **21 03 53.3 0.0**
ASGA AML AML 21 04 42.1
0.1nm,0.6s
ASGA AML AML 21 04 44.8
0.1nm,0.8s
TROD Troodos 3.31 233 P **Pn** **21 03 53.6 -1.7**
TROD S **Sn** **21 04 30.6 -4.4**
TROD AML AML 21 04 47.3
0.1nm,0.9s
TROD AML AML 21 04 48.6
0.2nm,1.0s
BRTR Keskin Array B 3.33 326 Pn **Pn** **21 03 56.6 +1.3**
0.8nm,0.3s,baz=161,slow=13,SNR=25
BRTR Lg Lg 21 04 50.0
0.2nm,0.3s,baz=149,slow=17,SNR=3.5
1.9nm,0.4s
ALFC Alefka 3.37 238 P **Pn** **21 03 53.7 -2.1**

ALFC S **Sn** **21 04 32.8 -3.2**
ALFC AML AML 21 04 39.2
0.2nm,0.6s
ALFC AML AML 21 04 44.9
0.1nm,0.4s
QRWL Qaraoun 3.46 185 *eP* **Pn** **21 03 57.9 +0.7**
APOL The Sanctuary 3.50 229 P **Pn** **21 03 57.6 +0.1**
APOL AML AML 21 04 48.0
0.1nm,0.7s
APOL AML AML 21 04 49.9
0.1nm,0.5s
RCY Rachaya 3.50 183 *eP* **Pn** **21 04 01.7 +3.9**
NATA Nata 3.61 233 P **Pn** **21 03 59.3 +0.2**
NATA S **Sn** **21 04 39.6 -2.4**
NATA AML AML 21 04 52.0
0.3nm,1.0s
NATA AML AML 21 04 58.8
0.4nm,0.6s
AKMS Akamas 3.62 238 P **Pn** **21 03 58.7 -0.6**
AKMS S **Sn** **21 04 39.3 -3.0**
AKMS AML AML 21 04 51.9
0.1nm,0.7s
AKMS AML AML 21 04 52.8
0.2nm,0.7s
SHBL Chebaa 3.65 184 *eP* **Pn** **21 04 01.9 +2.0**
MMAI Mount Meron Ar 4.01 188 Pn **Pn** **21 04 04.1 -0.6**
3.3nm,0.3s,baz=354,slow=15,SNR=17
MMAI Sn **Sn** **21 04 54.0 +2.0**
6.4nm,0.3s,baz=357,slow=29,SNR=8.6
0.9nm,0.3s
ASF Jabal al Asfar 4.86 172 Pn **Pn** **21 04 18.6 +2.2**
0.3nm,0.3s,baz=43,slow=8.6,SNR=2.1
ASF Sn **Sn** **21 05 16.1 +3.1**
0.8nm,0.3s,baz=332,slow=16,SNR=4.0
ASF Lg Lg 21 05 38.3
1.6nm,0.3s,baz=101,slow=23,SNR=7.1
0.4nm,0.3s
EIL Elat 7.37 188 Pn **Pn** **21 04 53.1 +2.3**
0.2nm,0.3s,baz=219,slow=16,SNR=1.5
EIL Sn **Sn** **21 06 16.6 +1.9**
baz=54,slow=23
1.4nm,0.7s
IDI Anoyia 9.21 263 Pn **Pn** **21 05 16.7 +0.7**
1.0nm,0.3s,baz=92,slow=14,SNR=10
3.1nm,0.5s
FINES FINESS Array B 25.26 349 P **P** **21 08 30.0 +0.7**
0.5nm,0.5s,baz=157,slow=12,SNR=6.7
0.5nm,0.5s
AAK Ala-Archa 29.86 67 LR LR 21 21 53.4
comp=Z,30nm,19.0s,baz=193,slow=38
ARCES ARCESS Array B 33.10 353 P **P** **21 09 39.7 +0.8**
0.5nm,0.6s,baz=164,slow=9.3,SNR=3.7
0.5nm,0.6s

*JMA **19** 21:06:13.9±0.3,24.0N±0.0×120.6E±1.0,h16km±4km, MV3.6/15,TAIWAN REGION*
*TAP **19** 21:06:14.5,23.95N×120.65E,h26km,ML4.0,B*
ISC 19 21:06:14.9±0.8,23.99N±0.01×120.61E±0.02,h30km±4km, n153,σ0s84/264,25C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WCH1	**Changhua City**	**0.10**	**325**	**⇓***i*P		**Pb**	**21 06 20.0**	**-0.2**
WCH1				*i* S		**Sb**	**21 06 24.4**	**+0.7**
WCHH	**Zhanghua**	**0.10**	**332**	**⇓***i*P		**Pb**	**21 06 19.9**	**-0.2**
WCHH				S		**Sb**	**21 06 24.3**	**+0.5**
WNT1	**Nantou City**	**0.11**	**142**	**⇑***i*P		**Pb**	**21 06 19.4**	**-0.9**
WNT1				S		**Sb**	**21 06 23.1**	**-0.8**
WNT	**Mingjian**	**0.13**	**149**	**⇑***i*P		**Pb**	**21 06 19.6**	**-0.9**
WNT				S		**Sb**	**21 06 23.5**	**-0.7**
TCU	**Taichung**	**0.17**	**22**	**⇓***i*P		**Pb**	**21 06 20.6**	**-0.2**
TCU				*i* S		**Sb**	**21 06 25.2**	**+0.5**
WJS	**Zhushan**	**0.20**	**147**	**⇑***i*P		**Pb**	**21 06 20.2**	**-0.9**
WJS				S		**Sb**	**21 06 24.6**	**-0.7**
WRL	**Guolierlin Hig**	**0.23**	**247**	P		**Pb**	**21 06 21.2**	**-0.2**
WRL				S		**Sb**	**21 06 26.8**	**+1.0**
TYC	**Yuchr**	**0.24**	**111**	**⇑***i*P		**Pb**	**21 06 20.8**	**-0.8**
TYC				*e*S		**Sb**	**21 06 25.4**	**-0.7**
RLNB	**Erlin**	**0.25**	**246**	**⇓**P		**Pb**	**21 06 21.4**	**-0.3**
RLNB				S		**Sb**	**21 06 26.9**	**+0.7**
WDL	**Douliou City**	**0.28**	**193**	**⇑***i*P		**Pb**	**21 06 21.5**	**-0.6**
WDL				S		**Sb**	**21 06 27.2**	**+0.2**
WCS	**Beigang Elemen**	**0.28**	**77**	**⇓***i*P		**Pb**	**21 06 21.3**	**-0.9**
WCS				S		**Sb**	**21 06 26.2**	**-0.8**
SMLT	**Sun Moon Lake**	**0.29**	**112**	**⇓***i*P		**Pb**	**21 06 21.5**	**-0.7**
SMLT				S		**Sb**	**21 06 26.6**	**-0.7**
WDLH	**Douliu**	**0.31**	**192**	**⇑***i*P		**Pb**	**21 06 21.6**	**-0.7**
WDLH				S		**Sb**	**21 06 27.3**	**-0.2**
WTCT	**Ta-ch'eng**	**0.33**	**247**	**⇓***i*P		**Pb**	**21 06 22.3**	**-0.4**
WTCT				*i* S		**Sn**	**21 06 28.8**	**-0.6**
WDJ	**Dajia District**	**0.36**	**5**	**⇓***i*P		**Pb**	**21 06 23.5**	**+0.4**
WDJ				S		**Sn**	**21 06 30.6**	**+0.4**
WHYT	**Xinyi Township**	**0.37**	**143**	**⇑***i*P		**Pb**	**21 06 22.4**	**-1.0**
WHYT				*i* S		**Sb**	**21 06 28.0**	**-1.1**
SSLB	**Suanglung**	**0.38**	**123**	P		**Pb**	**21 06 22.1**	**-1.3**
SSLB	**Suanglung**	**0.38**	**123**	**⇓***i*P		**Pb**	**21 06 22.3**	**-1.2**
SSLB				*i* S		**Sb**	**21 06 27.9**	**-1.3**
TWQ1	**Liyutan**	**0.39**	**23**	**⇑***i*P		**Pb**	**21 06 23.8**	**+0.2**
TWQ1				*i* S		**Sn**	**21 06 30.5**	**-0.4**
CHN5	**Tsauling**	**0.40**	**171**	**⇑***i*P		**Pb**	**21 06 22.8**	**-1.0**
CHN5				*i* S		**Sb**	**21 06 29.0**	**-0.8**
WHP	**Taichung City**	**0.42**	**47**	**⇑***i*P		**Pb**	**21 06 23.8**	**-0.3**
WHP				*e*S		**Sb**	**21 06 30.5**	**0.0**
WUSB	**Renai**	**0.47**	**90**	**⇓***i*P		**Pb**	**21 06 24.1**	**-0.7**
WUSB				*i* S		**Sb**	**21 06 30.9**	**-0.8**
WSF	**Szhu**	**0.50**	**225**	**⇑***i*P		**Pb**	**21 06 24.8**	**-0.6**
WSF				*i* S		**Sb**	**21 06 32.9**	**+0.5**
ALS	**Alishan**	**0.51**	**159**	**⇑***i*P		**Pb**	**21 06 24.8**	**-0.9**
ALS				S		**Sb**	**21 06 32.2**	**-0.9**
CHY	**Chiayi**	**0.52**	**199**	*i* P		**Pb**	**21 06 25.1**	**-0.6**
CHY				*i* S		**Sb**	**21 06 33.5**	**+0.5**
OWD	**Renai**	**0.52**	**94**	**⇓***i*P		**Pb**	**21 06 25.0**	**-0.7**
OWD				S		**Sb**	**21 06 32.4**	**-0.8**
VWDT	**VWDT**	**0.54**	**116**	**⇓***i*P		**Pb**	**21 06 25.4**	**-0.6**
VWDT				S		**Sb**	**21 06 33.1**	**-0.5**
WCKO	**Fanlu**	**0.55**	**180**	**⇑***i*P		**Pb**	**21 06 25.2**	**-1.0**
WCKO				*i* S		**Sb**	**21 06 33.1**	**-0.7**
TDCB	**Techi**	**0.57**	**62**	**⇓***i*P		**Pb**	**21 06 25.9**	**-0.6**
TDCB				S		**Sb**	**21 06 33.7**	**-0.8**
NMLH	**Miaoli**	**0.57**	**17**	P		**Pn**	**21 06 26.9**	**-0.1**
NMLH				S		**Sn**	**21 06 35.7**	**+0.3**
TWT	**Tachien**	**0.58**	**63**	P		**Pb**	**21 06 26.1**	**-0.7**
TWT				S		**Sb**	**21 06 33.8**	**-1.0**
WSL	**Shuilin Townsh**	**0.58**	**217**	P		**Pb**	**21 06 26.2**	**-0.5**
WSL				S		**Sn**	**21 06 35.5**	**-0.2**
WHF	**Hehuan Shan**	**0.62**	**76**	P		**Pb**	**21 06 27.4**	**-0.1**
WHF				*i* S		**Sb**	**21 06 36.4**	**+0.2**
TPUB	**Ta-pu**	**0.69**	**178**	P		**Pb**	**21 06 27.1**	**-1.4**
TPUB	**Ta-pu**	**0.69**	**178**	**⇑***i*P		**Pb**	**21 06 27.3**	**-1.1**
TPUB				*i* S		**Sb**	**21 06 37.0**	**-0.7**
NSTT	**Nanjuang**	**0.73**	**29**	**⇑***i*P		**Pb**	**21 06 28.8**	**-0.3**
NSTT				S		**Sn**	**21 06 39.3**	**-0.1**
TWK	**Hsinying**	**0.73**	**189**	**⇑***i*P		**Pb**	**21 06 28.2**	**-1.0**
TWK				S		**Sb**	**21 06 38.3**	**-0.5**
LXIB	**Xiulin Townshi**	**0.74**	**88**	**⇓**P		**Pb**	**21 06 28.5**	**-0.8**
LXIB				*e*S		**Sb**	**21 06 38.5**	**-0.7**
CHN8	**Yiju**	**0.74**	**210**	**⇑***i*P		**Pb**	**21 06 28.6**	**-0.7**
CHN8				*i* S		**Sn**	**21 06 39.8**	**+0.3**
WTP	**Ta-pu**	**0.74**	**180**	**⇑***i*P		**Pb**	**21 06 28.2**	**-1.1**
WTP				*i* S		**Sb**	**21 06 38.6**	**-0.7**
LIOB	**Emei**	**0.75**	**30**	**⇑***i*P		**Pb**	**21 06 29.1**	**-0.3**
LIOB				*i* S		**Sn**	**21 06 39.9**	**0.0**
WARBT	**Fenglin Townsh**	**0.76**	**111**	**⇓***i*P		**Pb**	**21 06 28.9**	**-0.8**
WARBT				S		**Sb**	**21 06 39.0**	**-0.8**
NFF	**Wufeng Townshi**	**0.79**	**36**	**⇑***i*P		**Pb**	**21 06 29.5**	**-0.6**
NFF				*e*S		**Sb**	**21 06 40.3**	**-0.2**
CHN1	**Nanshi**	**0.81**	**185**	**⇑***i*P		**Pb**	**21 06 29.3**	**-1.1**
CHN1				S		**Sb**	**21 06 40.5**	**-0.5**
ETM	**Tongmen**	**0.81**	**92**	P		**Pb**	**21 06 29.6**	**-0.9**
ETM				*e*S		**Sb**	**21 06 40.6**	**-0.5**
EHY	**Hungye**	**0.81**	**126**	**⇓***i*P		**Pb**	**21 06 29.8**	**-0.7**
EHY				*i* S		**Sb**	**21 06 40.7**	**-0.5**
ETLH	**Xiulin Townshi**	**0.83**	**75**	**⇓**P		**Pb**	**21 06 30.0**	**-0.8**
ETLH				S		**Sb**	**21 06 41.1**	**-0.5**
NNS	**Nan Shan**	**0.83**	**57**	**⇑**P		**Pb**	**21 06 30.0**	**-0.8**
NNS				*i* S		**Sb**	**21 06 40.9**	**-0.9**
NNSB	**Datong**	**0.83**	**58**	P		**Pb**	**21 06 29.9**	**-1.0**
NNSB				*i* S		**Sb**	**21 06 41.0**	**-0.8**
STYH	**Taoyuan**	**0.83**	**169**	P		**Pb**	**21 06 29.6**	**-1.3**
STYH				*i* S		**Sb**	**21 06 40.6**	**-1.1**
EHYH	**Wanrong**	**0.84**	**126**	**⇓***i*P		**Pb**	**21 06 30.1**	**-0.9**

EHYH *i* S **Sb** **21 06 41.2 -0.7**
SBCB Hsinchu 0.87 23 *e*P **Pb** **21 06 31.0 -0.5**
SBCB *e*S **Sn** **21 06 43.6 +0.8**
YULB Yu-li 0.87 133 P **Pb** **21 06 30.1 -1.4**
YULB Yu-li 0.87 133 S **Sb** **21 06 42.2 -0.6**
YULB Yu-li 0.87 133 **⇓***i*P **Pb** **21 06 30.3 -1.2**
YULB S **Sb** **21 06 41.8 -1.0**
HSN Hsinchu 0.87 22 *e*P **Pn** **21 06 31.6 +0.4**
HSN *e*S **Sn** **21 06 45.5 +2.6**
ELDTW Lidau 0.88 155 **⇓**P **Pb** **21 06 30.5 -1.3**
ELDTW S **Sb** **21 06 42.1 -1.1**
HGSD Ruisui 0.90 123 P **Pn** **21 06 31.5 0.0**
HGSD *e*S **Sn** **21 06 45.0 +1.5**
SCLT Jiali 0.90 205 *e*P **Pn** **21 06 31.2 -0.3**
SCLT S **Sn** **21 06 45.0 +1.5**
SHUL Shoufeng 0.90 103 **⇓**P **Pn** **21 06 31.4 -0.1**
SHUL *e*S **Sb** **21 06 43.8 +0.2**
TEGC Jichi Village 0.90 108 P **Pn** **21 06 31.6 +0.1**
SSHA Shanhua 0.90 199 *e*P **Pn** **21 06 31.4 -0.2**
SSHA *e*S **Sn** **21 06 44.8 +1.2**
SGST Jiashian 0.91 181 **⇑***i*P **Pn** **21 06 30.1 -1.6**
SGST *i* S **Sb** **21 06 42.7 -1.1**
TWD Chiawan 0.91 84 *e*P **Pn** **21 06 31.2 -0.4**
TWD *e*S **Sb** **21 06 43.3 -0.5**
HWA Hwalien 0.91 91 P **Pn** **21 06 31.9 +0.2**
HWA *e*S **Sn** **21 06 44.4 +0.6**
TEYL Yanliau Villag 0.91 98 *e*P **Pn** **21 06 31.7 -0.1**
TEYL *e*S **Sn** **21 06 44.8 +0.9**
NACB Ninganchiao 0.92 78 P **Pn** **21 06 31.2 -0.6**
NACB Ninganchiao 0.92 78 **⇓***i*P **Pn** **21 06 31.3 -0.6**
NACB S **Sb** **21 06 43.6 -0.6**
KSHI Guanxi Townshi 0.94 33 P **Pn** **21 06 32.0 -0.1**
KSHI *e*S **Sn** **21 06 45.0 +0.5**
CHN3 Shinhua 0.94 194 *e*P **Pn** **21 06 32.2 +0.2**
CHN3 *e*S **Sn** **21 06 46.2 +1.7**
ETL Fush Village 0.94 80 *e*P **Pn** **21 06 31.6 -0.6**
NSK Sanguang 0.96 45 **⇑***i*P **Pn** **21 06 32.1 -0.4**
NSK *i* S **Sb** **21 06 44.6 -1.0**
TSCK Chigu Township 0.97 210 P **Pn** **21 06 31.9 -0.5**
TSCK S **Sn** **21 06 45.7 +0.5**
YHNB Yeheng 0.97 46 P **Pn** **21 06 32.1 -0.5**
YHNB Yeheng 0.97 46 S **Sb** **21 06 44.8 -1.0**
YHNB Yeheng 0.97 46 **⇑***i*P **Pn** **21 06 32.2 -0.4**
YHNB *i* S **Sb** **21 06 45.0 -0.7**
SLGT Liugui 0.99 178 *e*P **Pn** **21 06 32.6 -0.2**
SLGT *e*S **Sn** **21 06 46.5 +0.6**
LATG Datong 1.00 57 P **Pn** **21 06 32.6 -0.4**
LATG S **Sb** **21 06 45.2 -1.4**
EHD Haiduan 1.00 147 *e*P **Pn** **21 06 32.8 -0.2**
EHD S **Sb** **21 06 45.7 -0.9**
FULB Fuli 1.01 141 *e*P **Pn** **21 06 33.3 +0.2**
FULB *e*S **Sn** **21 06 47.9 +1.6**
TAI1 Yung-k'ang 1.01 200 *e*S **Sn** **21 06 48.0 +1.8**
ECBN Changbin 1.02 131 *e*P **Pn** **21 06 33.7 +0.4**
NDT Datong Townshi 1.02 53 *e*P **Pn** **21 06 33.1 -0.2**
NDT *e*S **Sn** **21 06 47.7 +1.0**
ECS Chishang 1.05 148 *e*P **Pn** **21 06 34.2 +0.5**
ECS *e*S **Sb** **21 06 48.9 +0.8**
PNG Penghu 1.05 247 *e*P **Pn** **21 06 32.8 -0.8**
PNG S **Sb** **21 06 48.1 +0.1**
PHUB P'eng-hu 1.06 244 P **Pn** **21 06 32.6 -1.2**
PHUB *e*S **Sn** **21 06 47.1 -0.4**
CHKH Chenggong 1.07 138 *e*P **Pn** **21 06 34.1 +0.1**
CHKH *e*S **Sb** **21 06 49.6 +1.0**
EAHA Aohua 1.09 72 *e*P **Pn** **21 06 34.3 +0.2**
EAHA *e*S **Sn** **21 06 48.4 +0.2**
NCUH Zhongli 1.10 28 *e*P **Pn** **21 06 34.5 -0.5**
NCUH *e*S **Sb** **21 06 49.5 0.0**
ENA Nanau 1.12 67 *e*P **Pn** **21 06 33.9 -0.7**
ENA *e*S **Sn** **21 06 48.5 -0.5**
CHKT Chengkung 1.13 142 *e*P **Pn** **21 06 35.1 +0.4**
NWLT Wulai 1.13 46 P **Pn** **21 06 34.5 -0.3**
NWLT *e*S **Sn** **21 06 49.1 -0.2**
WDGT Dungji 1.14 230 *e*P **Pn** **21 06 34.6 -0.2**
WDGT *e*S **Sn** **21 06 49.5 +0.2**
EWUT Wuta 1.16 67 *e*P **Pn** **21 06 35.0 -0.1**
EWUT *e*S **Sn** **21 06 50.1 +0.2**
FUSB Fushanzhiwuyua 1.18 49 P **Pn** **21 06 35.2 -0.2**
FUSB *e*S **Sn** **21 06 50.5 0.0**
TWM1 Shoushan 1.18 188 *e*P **Pb** **21 06 36.8 +0.2**
NDS Dongshan 1.20 57 P **Pn** **21 06 35.9 +0.2**
NDS S **Sb** **21 06 52.1 +0.1**
TWE Neicheng 1.21 53 P **Pn** **21 06 36.2 +0.5**
TWE *e*S **Sb** **21 06 52.8 +0.3**
SSD Sandimen 1.24 179 P **Sn** **21 06 53.0 +0.3**
SSD S **Sb** **21 06 53.0 -0.2**
TWG Pinlang 1.24 160 *i* P **Sn** **21 06 36.8 +0.6**
TWG S **Sb** **21 06 53.4 +0.1**
TWGBT Beinan 1.25 160 P **Pn** **21 06 36.7 +0.4**
TWGBT Beinan 1.25 160 P **Pn** **21 06 36.5 +0.2**
TWGBT S **Sb** **21 06 53.3 -0.2**
TATO Taipei 1.27 39 P **Pn** **21 06 36.3 -0.3**
ESAO Su ao 1.27 62 *e*S **Sb** **21 06 54.3 +0.1**
NHDH Xindian Distri 1.28 41 *e*P **Pn** **21 06 36.7 -0.1**
TWC Suao 1.29 61 *e*P **Pn** **21 06 37.7 +0.9**
TWC *e*S **Sb** **21 06 54.2 -0.5**
TAP Taipei 1.32 38 *e*S **Sn** **21 06 54.2 +0.2**
TWA Mucha 1.33 42 *e*P **Pn** **21 06 37.1 -0.3**
TWA *e*S **Sn** **21 06 54.8 +0.7**
TTN Taitung 1.33 158 *e*P **Pb** **21 06 39.5 +0.3**
TTN *e*S **Sb** **21 06 57.9 +2.1**
TWS1 Kuangyinshan 1.33 34 *e*P **Pn** **21 06 37.5 +0.1**
TWS1 *e*S **Sb** **21 06 55.6 +1.2**
VCHM Qimei 1.33 234 *e*P **Pn** **21 06 37.0 -0.5**
VCHM *e*S **Sn** **21 06 55.0 +0.7**
MASBT Mashibuluo 1.37 179 *e*P **Pn** **21 06 38.1 +0.1**
WSSB Gushan 1.38 193 *e*S **Sb** **21 06 59.2 +1.8**
NTST Danshui 1.40 33 *e*S **Sn** **21 06 56.7 +0.9**
ECL Taimali 1.42 167 *e*P **Pn** **21 06 39.4 +0.7**
ECL *e*S **Sn** **21 06 57.8 +1.3**
ZUZH Zhuzihu 1.44 36 P **Pn** **21 06 38.6 -0.5**
ZUZH *e*S **Sn** **21 06 56.8 -0.3**
YM01 YM01 1.45 37 P **Pn** **21 06 38.6 -0.5**
YM01 *e*S **Sn** **21 06 57.2 +0.1**
ANP Anpu 1.45 35 P **Pn** **21 06 38.6 -0.6**
ANP *e*S **Sn** **21 06 57.5 +0.2**
VWUC VWUC 1.45 314 *e*P **Pn** **21 06 38.6 -0.5**
EGS 1.48 55 *e*P **Pn** **21 06 40.0 +0.5**
TIPB Shuangxi 1.48 48 *e*P **Pn** **21 06 39.5 0.0**
YM08 YM08 1.49 37 *e*P **Pn** **21 06 39.4 -0.3**
YM08 *e*S **Sn** **21 06 57.6 -0.6**
EOS2 EOS2 1.54 74 *e*P **Pb** **21 06 42.6 -0.1**
TWY Chenhua 1.56 35 *e*P **Pn** **21 06 40.9 +0.2**
TWY *e*S **Sn** **21 07 01.3 +1.3**
EOS4 EOS4 1.57 85 *e*P **Pn** **21 06 41.9 +1.5**
EOS4 *e*S **Sb** **21 07 01.4 -0.9**
EOS3 EOS3 1.59 79 *e*P **Pn** **21 06 42.4 +1.5**
SXI1 Grass Mountain 1.59 46 *e*P **Pn** **21 06 40.8 -0.4**
SCZT Fangliau 1.61 180 *e*P **Pn** **21 06 41.5 +0.1**
SCZT *e*S **Sn** **21 07 02.3 +1.1**
TWB1 Santiao Chiao 1.61 51 *e*P **Pn** **21 06 40.9 -0.5**
TWB1 *e*S **Sn** **21 07 02.1 +0.9**
EAST Anshuo 1.62 172 *e*P **Pn** **21 06 42.0 +0.5**
TAW Tawu 1.65 171 *e*S **Sn** **21 07 03.2 +1.2**
PTMZ Houxiangcun 1.71 308 *e*P **Pn** **21 06 42.3 -0.4**
SMST Manzhou Townsh 1.97 174 *e*P **Pn** **21 06 45.9 -0.5**
SMST *e*S **Sn** **21 07 11.2 +1.1**
TWKB Hengchun 2.05 175 *e*P **Pn** **21 06 47.5 +0.1**
KNMB Chin-men Tao 2.08 284 *e*P **Pn** **21 06 46.7 +1.1**
PCYT Pengchaiyu 2.10 39 *e*P **Pn** **21 06 47.6 -0.5**
PCYT *e*S **Sn** **21 07 12.7 -0.6**
LAY Lan-yu 2.13 156 *e*P **Pn** **21 06 48.6 +0.1**
LAY *e*S **Sn** **21 07 15.1 +1.1**
LYUB Lan-yu 2.17 155 *e*P **Pn** **21 06 47.2 -1.9**
LYUB *e*S **Sn** **21 07 14.1 -0.9**
JYNG Yonagunijimaku 2.18 77 *e*S **Sn** **21 07 17.3 +2.1**
MATB Ma-tsu 2.23 345 *e*P **Pn** **21 06 49.3 -0.6**
YOJ Yonaguni jima 2.24 77 P **Pn** **21 06 50.9 +0.8**
YOJ Yonaguni jima 2.24 77 *e*P **P

JIJ	Ishigaki jima	3.25	83	P	Pn	21 07 04.8	+0.9
JIJ				eS	Sn	21 07 41.4	-0.2
JISG	Ishigakijimahi	3.43	79	P	Pn	21 07 07.1	+0.8
JISG				eS	Sn	21 07 46.7	+0.7
JIRJ	Irabujima	4.26	78	eS	Sn	21 08 09.4	+2.8
JOW	Kunigami	7.49	66	P	Pn	21 08 01.6	-0.5

SNET ***19*** *21:08:02.6±1.8, 12°.92N×87°.37W, h10km, ML3.4, Presumed earthquake*
CATAC ***19*** *21:08:02.7±0.1, 13°.N±2°×8°.7W±°, h4km±1km, M3.7/46, MLv3.7/46, Error ellipse: s-maj=5.2km s-min=1.8km az=29.4, confirmed*

ISC 19 21:08:02.8±1.0, 12°.92N±0°.04×87°.36W±0°.03, h11km±9km, n52, σ0s75/62, 1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.20	286	P	Pg	21 08 07.5	+0.4
CRIN	San Cristobal	0.38	126	P	Pb	21 08 11.2	-0.3
CNCH	Conchagua	0.58	307	P	Pg	21 08 14.0	-0.2
CNCH	Conchagua	0.58	307	iP	Pg	21 08 13.5	-0.6
QUEN	Al S del Volca	0.60	123	P	Pb	21 08 15.1	-0.2
HERN	Volcan Telica	0.60	121	P	Pg	21 08 14.9	+0.3
HERN				S	Sg	21 08 23.3	+0.8
TELN	Telica	0.61	121	P	Pg	21 08 13.9	-0.8
TELN				S	Sg	21 08 23.2	+0.6
HOYN	Al Sur del Vol	0.61	122	P	Pg	21 08 14.6	-0.2
HOYN				S	Sg	21 08 22.5	-0.4
TEL3	Telica 3	0.61	125	P	Pb	21 08 15.2	-0.4
ROCN	Rota Cerro Neg	0.72	124	P	Pg	21 08 15.6	-1.3
ROCN				S	Sb	21 08 27.0	-0.4
INTP	Intipuca	0.73	292	eP	Pg	21 08 15.8	-1.1
CNGN	Cerro Negro	0.77	123	P	Pg	21 08 17.8	0.0
CNGN				S	Sb	21 08 28.9	+0.1
AESN	El Sauce Leon	0.80	92	P	Pg	21 08 18.1	-0.2
AESN				S	Sg	21 08 29.3	+0.5
MACN	El Madrono	0.81	124	P	Pg	21 08 18.2	-0.3
MOM3	MOM3	0.92	116	P	Pg	21 08 20.6	0.0
MOMN	Momotombo	0.95	122	P	Pg	21 08 20.3	-0.9
LIMN	Finca el Limon	0.98	82	P	Pg	21 08 21.6	-0.1
LIMN				S	Sb	21 08 35.2	+0.4
MOM2	El Cardon	0.98	119	P	Pg	21 08 21.5	-0.3
COPN	Copaltepe	1.05	134	P	Pg	21 08 21.9	-1.2
PACA	Pacayal	1.08	300	P	Pg	21 08 22.9	-0.8
PACA				S	Sb	21 08 38.2	+0.4
PACA	Pacayal	1.08	300	eP	Pg	21 08 22.1	-1.6
OCON	Estacion meteo	1.11	51	P	Pg	21 08 23.5	-0.7
AMTN	Mateare	1.14	127	P	Pg	21 08 24.1	-0.6
APYN	Apoyeque	1.20	125	P	Pg	21 08 24.1	-1.8
APQ2	Apoyeque	1.24	125	P	Pg	21 08 25.9	-0.4
TECA	Tecapa	1.25	297	eP	Pg	21 08 25.1	-1.7
ABCN	Banco Central	1.30	128	P	Pn	21 08 26.7	-0.2
RCON	San Juan de Ri	1.30	64	P	Pn	21 08 27.0	0.0
ALLN	Telcor Managua	1.31	126	P	Pn	21 08 27.0	0.0
RCVN	Varillal2	1.31	60	P	Pn	21 08 26.3	-0.9
TISN	Laguna Tiscapa	1.32	126	P	Pb	21 08 27.7	+0.1
MGAN	Managua	1.33	125	P	Pn	21 08 27.4	+0.1
MGAN				S	Sb	21 08 44.7	-0.2
PQSS	Presa 15 de Se	1.36	301	P	Pb	21 08 28.3	+0.1
RCPN	Sur Rio San Ju	1.37	64	P	Pn	21 08 28.6	+0.6
WILN	Americas 2	1.38	123	P	Pn	21 08 28.3	+0.4
MARCA	Marcala la Paz	1.39	332	P	Pn	21 08 28.1	-0.1
AERN	Aeropuerto Man	1.40	123	P	Pn	21 08 27.9	-0.3
MATN	Matagalpa	1.40	90	P	Pn	21 08 28.7	+0.4
MASN	Masaya	1.50	128	P	Pn	21 08 29.1	-0.6
TECO	Alcaldia de Te	1.51	294	P	Pn	21 08 29.1	-0.7
COEG	Centro de Oper	1.63	295	P	Pn	21 08 31.2	-0.4
BOAB	BOACO BROADBAN	1.72	106	P	Pn	21 08 32.7	0.0
P5NO	Presa 5 de nov	1.72	308	P	Pn	21 08 32.3	-0.4
PAVA	Las Pavas	1.72	297	P	Pn	21 08 33.0	+0.1
LOMA	Loma Larga	1.90	292	P	Pn	21 08 36.2	+0.9
LALI	Alcalda de L	1.99	287	P	Pn	21 08 37.7	+1.3
UEES	Universidad Ev	1.99	294	P	Pn	21 08 38.0	+1.5
UEES				S	Sn	21 09 03.1	+1.6
PMON	Piamonte	2.06	293	P	Pb	21 08 39.3	-0.9
PMON	Piamonte	2.06	293	eP	Pn	21 08 38.9	+1.4
JAYA	Jayaque - finc	2.16	290	P	Pn	21 08 39.2	+0.3
MORN	Al O del Volca	2.16	129	P	Pn	21 08 39.5	+0.7
CONN	Concepcion	2.17	128	P	Pn	21 08 39.5	+0.6

NOU ***19*** *21:42:53.5, 35°.94S×178°.21E, h222km, mb4.0/17, Off E. Coast of N. Island, N.Z.*
WEL ***19*** *21:42:54.9±0.9, 36°.S±7°×17°.8E±°, h191km±12km, M4.3/20, ML4.3/18, MLv4.3/20, Error ellipse: s-maj=12.7km s-min=7.6km az=57.6*

ISC 19 21:42:50.8±2.5, 35°.8S±0°.1×178°.4E±0°.1, h240km±9km, n126, σ1s52/141, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.72	182	P	Pn	21 43 30.2	+0.4
MXZ	Matakaoa Point	1.72	182	S	S	21 43 58.6	-2.1
MXZ	Matakaoa Point	1.72	182	P	Pn	21 43 30.3	+0.4
MXZ				S	S	21 43 57.8	-2.9
HAZ	Te Kaha	1.98	194	P	Pn	21 43 32.9	+0.8
HAZ				S	S	21 44 02.0	-2.7
WMGZ	Waiomatatini S	1.98	179	P	Pn	21 43 33.4	+1.2
WHRZ	Whale Island	2.31	209	P	Pn	21 43 36.1	+0.7
WHRZ				S	S	21 44 07.5	-3.1
TWGZ	Tauwhareparae	2.36	188	P	Pn	21 43 37.4	+1.6
TWGZ				S	S	21 44 11.1	-0.3
GRZ	Great Barrier	2.41	259	P	Pn	21 43 35.1	-1.2
MARZ	Manawahe	2.55	212	P	Pn	21 43 40.0	+2.2
MWZ	Matawai	2.59	195	P	Pn	21 43 39.4	+1.2
MWZ				S	S	21 44 15.0	-0.6
URZ	Urewera	2.62	203	P	Pn	21 43 39.4	+0.9
URZ	Urewera	2.62	203	P	S	21 44 15.5	-0.7
URZ	Urewera	2.62	203	P	Pn	21 43 39.5	+1.0
URZ				S	S	21 44 15.7	-0.5
TKGZ	Te Karaka	2.63	189	P	Pn	21 43 39.9	+1.3
TKGZ				S	S	21 44 14.8	-1.5
CNGZ	Carnagh Statio	2.65	183	P	Pn	21 43 40.7	+2.0
RAGZ	Rawiri	2.77	196	P	Pn	21 43 41.7	+1.6
RAGZ				S	S	21 44 17.7	-1.4
WIAZ	Waiheke Island	2.80	249	P	Pn	21 43 40.5	+0.1
TARZ	Mount Tarawera	2.83	212	P	Pn	21 43 43.6	+2.8
MKAZ	Moumakai	2.89	243	P	Pn	21 43 41.7	+0.3
RIGZ	Rimuhau	2.91	190	P	Pn	21 43 42.9	+1.3
RIGZ				S	S	21 44 20.4	-1.4
MUGZ	Murupara	2.94	206	P	Pn	21 43 43.2	+1.4
MUGZ				S	S	21 44 20.0	-2.3
MBAZ	Motutapu North	2.97	251	P	Pn	21 43 43.2	+0.9
TOZ	Tahuroa Road	2.99	230	P	Pn	21 43 44.2	+1.7
RTZ	Ruatahuna	2.99	202	P	Pn	21 43 43.4	+0.9
RTZ				S	S	21 44 22.4	-1.1
HRRZ	Handcock Road	3.05	213	P	Pn	21 43 46.0	+2.8
SNGZ	Shannon Statio	3.06	196	P	Pn	21 43 44.9	+1.7
SNGZ				S	S	21 44 24.9	+0.3
PRGZ	Paritu Road	3.11	187	P	Pn	21 43 45.1	+1.3
ALRZ	Allen Road	3.17	210	P	Pn	21 43 46.4	+1.9
KNZ	Kokohu	3.23	190	P	Pn	21 43 46.0	+0.9
KNZ				S	S	21 44 27.4	-0.7
RAHZ	Arahi	3.24	198	P	Pn	21 43 46.8	+1.5
RAHZ				S	S	21 44 27.7	-0.7
MTHZ	Maungataniwha	3.25	202	P	Pn	21 43 46.6	+1.2
WCZ	Waipu Caves	3.29	267	P	Pn	21 43 45.7	-0.1
MHGZ	Mahia Peninsul	3.33	186	P	Pn	21 43 47.9	+1.6
WHHZ	Waihua	3.36	196	P	Pn	21 43 48.3	+1.6
WHHZ				S	S	21 44 31.1	+0.3
TLZ	Tolley Road	3.37	222	P	Pn	21 43 50.2	+3.4
MRHZ	Matea Rd	3.38	207	P	Pn	21 43 48.1	+1.2
NMHZ	Naumai	3.49	201	P	Pn	21 43 50.0	+1.8
WATZ	Wairara	3.56	216	P	Pn	21 43 51.7	+2.8
ARHZ	Aropaoanui	3.59	198	P	Pn	21 43 50.6	+1.3
RATZ	Rangitukua	3.67	214	P	Pn	21 43 53.6	+3.3
RITZ	Rihia Road	3.73	212	P	Pn	21 43 53.1	+2.3
KATZ	Kakaramea	3.80	214	P	Pn	21 43 54.6	+2.8
MCHZ	McNeill Hill	3.84	200	P	Pn	21 43 53.9	+1.7
HIZ	Hauiti	3.88	226	P	Pn	21 43 56.1	+3.4
KWHZ	Kaweka Forest	3.91	203	P	Pn	21 43 54.8	+1.8
NTVZ	North Tongarir	3.91	213	P	Pn	21 43 55.1	+2.0
TMVZ	Te Maari	3.91	212	P	Pn	21 43 55.0	+1.9
ETVZ	East Tongariro	3.92	212	P	Pn	21 43 55.1	+1.8
CKHZ	Cape Kidnapper	3.95	195	P	Pn	21 43 55.0	+1.5
OUZ	Omahuta	3.96	278	P	Pn	21 43 53.3	-0.2
OUZ	Omahuta	3.96	278	P	Pn	21 43 53.4	-0.2
WTVZ	West Tongariro	3.96	213	P	Pn	21 43 55.6	+2.0
OTVZ	Oturere	3.96	212	P	Pn	21 43 55.7	+1.9
TWVZ	Taurewa	3.99	215	P	Pn	21 43 56.4	+2.3
SNVZ	South Ngauruho	3.99	212	P	Pn	21 43 56.1	+1.9
NGZ	Ngauruhoe	4.00	213	P	Pn	21 43 56.3	+2.1
TUVZ	Tukino	4.06	212	P	Pn	21 43 56.6	+1.7
BHHZ	Black Hill Sta	4.09	206	P	Pn	21 43 56.0	+0.8
FWVZ	Far West T-bar	4.09	213	P	Pn	21 43 57.0	+1.7
MAVZ	Matarangi	4.10	212	P	Pn	21 43 57.1	+1.6
WHVZ	Whangaehu Hut	4.10	212	P	Pn	21 43 56.9	+1.5
KRHZ	Kereru	4.12	202	P	Pn	21 43 56.5	+0.9
KAHZ	Kahuranaki	4.13	196	P	Pn	21 43 56.9	+1.3
WNVZ	Wahianoa	4.13	212	P	Pn	21 43 57.1	+1.3
MOVZ	Moawhango	4.13	210	P	Pn	21 43 56.5	+0.7
PKVZ	Pokaka	4.21	214	P	Pn	21 43 59.6	+3.0
MTVZ	Mangateitei	4.23	212	P	Pn	21 43 59.1	+2.2
PXZ	Pawahuni	4.36	196	P	Pn	21 43 59.3	+1.0
VRZ	Vera Road	4.37	220	P	Pn	21 44 01.9	+3.4
PNHZ	Pukenui	4.42	202	P	Pn	21 43 59.7	+0.6
WPHZ	Waipukurau	4.49	199	P	Pn	21 44 00.9	+1.0
TSZ	Takapari Road	4.63	204	P	Pn	21 44 02.2	+0.6
PRHZ	Porangahau	4.63	197	P	Pn	21 44 02.5	+0.8
WAZ	Wanganui	4.75	214	P	Pn	21 44 05.5	+2.4
DVHZ	Dannevirke	4.79	201	P	Pn	21 44 03.9	+0.3
NEZ	North Egmont	4.83	224	P	Pn	21 44 08.7	+4.4
ANWZ	Angora Road	4.86	198	P	Pn	21 44 05.5	+1.1
POWZ	Post Office Ro	5.00	204	P	Pn	21 44 06.8	+0.7
PRWZ	Pori Road	5.08	201	P	Pn	21 44 08.0	+0.9
BFZ	Birch Farm	5.12	199	P	Pn	21 44 07.7	0.0
BFZ	Birch Farm	5.12	199	S	S	21 45 07.9	-1.0
BFZ	Birch Farm	5.12	199	P	Pn	21 44 08.1	+0.4
MRZ	Mangatainoka R	5.30	204	P	Pn	21 44 09.7	-0.1
TIWZ	Tintock	5.31	201	P	Pn	21 44 10.6	+0.6
CPWZ	Castlepoint	5.35	198	P	Pn	21 44 12.3	+1.9
HOWZ	Holdsworth Sta	5.53	203	P	Pn	21 44 12.4	-0.4
OGWZ	Otaki Gorge	5.58	206	P	Pn	21 44 13.5	+0.1
TMWZ	Te Maipa	5.62	200	P	Pn	21 44 13.8	0.0
KIW	Kapiti Island	5.71	208	P	Pn	21 44 14.9	-0.1
MTW	Mount Morrison	5.78	202	P	Pn	21 44 15.9	+0.1
TRWZ	Traveller	5.94	200	P	Pn	21 44 17.9	+0.1
PAWZ	Paruwai Farm	6.00	202	P	Pn	21 44 18.2	-0.5
DUWZ	D'Urville Isla	6.07	214	P	Pn	21 44 19.4	-0.2
MSWZ	Moikau Station	6.09	203	P	Pn	21 44 19.0	-0.8
WEL	Wellington	6.13	206	P	Pn	21 44 20.1	-0.2
SNZO	South Karori	6.18	207	P	Pn	21 44 20.2	-0.6
SNZO	South Karori	6.18	207	S	S	21 45 31.0	-1.8
TCW	Tory Channel	6.26	210	P	Pn	21 44 21.1	-0.8
TUWZ	Tuamarina	6.58	211	P	Pn	21 44 25.9	0.0
NNZ	Nelson	6.65	215	P	Pn	21 44 26.6	-0.2
TKNZ	Takaka Hill	6.71	218	P	Pn	21 44 27.5	-0.1
QRZ	Quartz Range	6.78	221	P	Pn	21 44 29.3	+0.8
QRZ	Quartz Range	6.78	221	S	S	21 45 45.1	-1.6
QRZ	Quartz Range	6.78	221	P	Pn	21 44 28.4	-0.1
BSWZ	Blackbirch Sta	6.85	210	P	Pn	21 44 29.6	+0.3
MRNZ	Matariki Terra	7.09	217	P	Pn	21 44 32.4	0.0
THZ	Tophouse	7.30	214	P	Pn	21 44 35.0	-0.2
KHZ	Kahutara	7.57	208	P	Pn	21 44 37.6	-0.9
KHZ	Kahutara	7.57	208	S	S	21 46 02.5	-2.4
KHZ	Kahutara	7.57	208	P	Pn	21 44 37.8	-0.7
DSZ	Denniston Nort	7.82	219	P	Pn	21 44 42.6	+0.8
GVZ	Greta Valley S	8.24	209	P	Pn	21 44 46.6	-0.4
LTZ	Lake Taylor	8.40	212	P	Pn	21 44 48.9	-0.2
OKCZ	Okains Bay	8.88	206	P	Pn	21 44 55.1	0.0
MQZ	McQueen's Vall	9.01	208	P	Pn	21 44 55.6	-1.1
AKCZ	Akaroa Harbour	9.06	206	P	Pn	21 44 57.7	+0.3
MHCZ	Mount Hutt	9.31	212	P	Pn	21 45 01.1	+0.5
RPZ	Rata Peaks	9.68	213	P	Pn	21 45 05.9	+0.6
GCSZ	Gaunt Creek Bo	9.72	217	P	Pn	21 45 07.3	+1.5
ARCZ	Arundel	9.81	212	P	Pn	21 45 07.1	+0.1
FOZ	Fox Glacier	10.13	218	P	Pn	21 45 12.0	+1.0
TMZ	Timaru	10.23	211	P	Pn	21 45 12.3	-0.1
ODZ	Otahua Downs	10.92	210	P	Pn	21 45 22.0	+1.1
ODZ	Otahua Downs	10.92	210	P	Pn	21 45 21.8	+0.9
JCZ	Jackson Bay	11.04	219	P	Pn	21 45 24.3	+1.8
PYZ	Puysegur Point	13.57	217	P	P	21 45 56.2	+1.0

UCR ***19*** *21:48:29.3±1.0, 8°.24N×82°.83W, h26km±4km, MW3.8, Presumed earthquake*
UPA ***19*** *21:48:29.9±0.7, 8°.30N×82°.77W, h10km±5km, ML3.1, MW2.1, Presumed earthquake*

ISC 19 21:48:29.3±1.3, 8°.25N±0°.06×82°.81W±0°.05, h29km±9km, n20, σ0s56/25, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTPA	Petro Terminal	0.08	229	eP	Pb	21 48 34.0	-0.3
PTPA				eS	Sb	21 48 37.9	+0.2
LMNES	Limones	0.16	199	iP	Pb	21 48 34.9	0.0
NELY	Ciudad Neily	0.42	341	eP	Pb	21 48 37.5	-0.9
NELY	Ciudad Neily	0.42	341	iP	Pb	21 48 37.5	-0.9
CLLRA	Cordillera,	0.52	21	iP	Pb	21 48 40.2	0.0
PIRO	Carate, Puerto	0.54	286	eP	Pb	21 48 39.4	-0.9
BRU2	Volcan	0.55	12	eP	Pb	21 48 40.5	-0.2
BRU2				eS	Sb	21 48 48.6	+0.3
BRU2	Volcan	0.55	12	iP	Pb	21 48 40.4	-0.2
BRU2				eS	Sb	21 48 48.6	+0.3
SCLRA	Santa Clara, W	0.58	3	eP	Pb	21 48 41.0	0.0
SCLRA	Santa Clara, W	0.58	3	iP	Pb	21 48 41.1	+0.1
BQTLY	Boquete Panama	0.61	34	eP	Pb	21 48 41.4	-0.2
BQTLY	Boquete Panama	0.61	34	iP	Pb	21 48 41.6	0.0
ALCO	Alturas Coton,	0.69	358	eP	Pb	21 48 42.8	-0.8
PBNVO	Pueblo Nuevo,	0.88	44	eP	Pn	21 48 45.3	-0.5
PBNVO	Pueblo Nuevo,	0.88	44	iP	Pn	21 48 45.2	-0.5
PBNVO				eS	Sb	21 48 57.4	0.0
PBNVO				IAML		21 48 57.8	
	comp=Z,571nm,0.5s						
RBALA	Bur	0.90	46	eP	Pn	21 48 45.9	-0.2
RBALA	Bur	0.90	46	iP	Pn	21 48 45.8	-0.3
RBALA				eS	Sb	21 48 58.2	+0.3
KKNTU	Kakintº	1.15	59	eP	Pn	21 48 49.5	0.0
VTR0	Volcan Turrial	1.99	332	eP	Pn	21 49 01.7	+0.3
VBV1	V. Barva	2.25	326	eP	Pn	21 49 06.4	+1.5

IDC ***19*** *21:56:25.8±1.1, 34°.11N×25°.55E, h0km, mb3.7/13, mbtmp3.7/21, ML3.3/8, MS3.1/4, Error ellipse: s-maj=21.0km s-min=15.4km az=14.0*
ISK ***19*** *21:56:28.9, 34°.18N×25°.65E, h10km, ML3.2/9*
ATH ***19*** *21:56:30.2±0.5, 34°.21N×25°.72E, h10km, ML3.3/12, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
THE ***19*** *21:56:31.9, 34°.N±21°×2°.6E±1°.3, h1km±15km, M3.1/12, MLh3.1/12*
AFAD ***19*** *21:56:37.4, 34°.84N×26°.31E, h6km±5km, ML2.8*

ISC 19 21:56:28.6±1.5, 34°.16N±0°.05×25°.73E±0°.03, h15km±9km, n115, σ2s01/133, mb3.7/12, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	1.03	23	Pg	Pn	21 56 49.3	+0.8
ZKR				Sg	Sn	21 57 04.3	+1.6
ZKR	Zakros	1.03	23	P	Pg	21 56 48.1	-0.5
ZKR	Zakros	1.03	23	P	Pg	21 56 48.3	-0.3
ZKR				S	Sn	21 57 03.3	+0.6
STIA	Sitia Lasithi	1.08	16	P	Pb	21 56 48.8	-0.2
STIA				S	Sn	21 57 04.6	+0.8
SIT2	Siteia	1.09	16	P	Pn	21 56 50.5	+1.2
SIT2				S	Sn	21 57 04.6	+0.6
NPS	Neapolis	1.11	355	P	Pb	21 56 48.9	-0.5
NPS	Neapolis	1.11	355	P	Pb	21 56 49.0	-0.3
NPS				S	Sn	21 57 04.5	0.0
SIVA	Sivas	1.15	319	P	Pb	21 56 49.8	-0.3
SIVA	Sivas	1.15	319	P	Pb	21 56 49.7	-0.3
SIVA				S	Sn	21 57 06.0	+0.7
IACM	Heraklion	1.27	335	P	Pg	21 56 52.7	-0.3
IACM				S	Sn	21 57 09.2	+0.8
IDI	Anoyia	1.32	329	Pn	Pn	21 56 51.9	-0.6
	3.6nm,0.3s,baz=146,slow=16,SNR=22						
IDI	Anoyia	1.32	329	Pn	Pn	21 56 52.7	+0.2
IDI				Sn	Sg	21 57 10.8	-0.5
IDI	Anoyia	1.32	329	P	Pn	21 56 52.2	-0.4
IDI	Anoyia	1.32	329	P	Pg	21 56 53.3	-0.8
IDI				S	Sg	21 57 10.9	-0.4
GVD	Gavdhos	1.52	297	Pn	Pb	21 56 56.0	-0.4
GVD				Sn	Sg	21 57 15.6	-1.9
GVD	Gavdhos	1.52	297	P	Pb	21 56 56.2	-0.2
GVD	Gavdhos	1.52	297	P	Pb	21 56 56.5	+0.1
VAM	Vamos	1.77	315	P	Pb	21 57 00.3	-0.4
VAM	Vamos	1.77	315	P	Pb	21 57 00.2	-0.4
KARP	Karpathos	1.82	40	Pn	Pb	21 57 01.4	-0.1
KARP	Karpathos	1.82	40	P	Pb	21 57 02.5	+1.0
KARP	Karpathos	1.82	40	P	Pb	21 57 02.1	+0.6
KARP	Karpathos	1.82	40	P	Pb	21 57 01.7	+0.1
CHNB	Souda	1.91	315	P	Pb	21 57 02.6	-0.4
IMMV	Iera Moni Meta	1.94	313	Pn	Pb	21 57 02.7	-0.9
IMMV	Iera Moni Meta	1.94	313	P	Pb	21 57 02.3	-1.3
IMMV	Iera Moni Meta	1.94	313	P	Pb	21 57 03.0	-0.6
CHAN	Chania	1.94	315	P	Pb	21 57 02.8	-0.8
KNDR	Palaiochora Ch	2.04	302	Pn	Pn	21 57 02.9	+0.6
KNDR	Palaiochora Ch	2.04	302	P	Pb	21 57 05.3	0.0
KNDR	Palaiochora Ch	2.04	302	P	Pb	21 57 04.3	-1.0
THR6	Thira Island,	2.21	353	P	Pn	21 57 06.0	+1.3
THERA	Ancient Thera,	2.21	355	P	Pn	21 57 05.6	+0.9
THR9	Santorini-Faro	2.21	352	P	Pn	21 57 06.5	+1.8
THR8	Santorini-Mono	2.25	355	P	Pn	21 57 06.9	+1.6
SNT5	Nea Kammeni, S	2.26	353	P	Pb	21 57 09.1	+0.1
SNT5	Nea Kammeni, S	2.26	353	P	Pn	21 57 06.5	+1.3
THR3	Thira Island,	2.26	353	P	Pb	21 57 08.1	-0.9
THR3	Thira Island,	2.26	353	P	Pb	21 57 07.5	-1.6
THR5	Thira Island,	2.27	352	P	Pn	21 57 07.4	+1.9
THR5	Thira Island,	2.27	352	P	Pb	21 57 07.7	-1.6
SAP3	Santorini-Thir	2.29	352	P	Pb	21 57 08.5	-1.1
SAP3	Santorini-Thir	2.29	352	P	Pn	21 57 07.5	+1.7
THR2	Thira island,	2.30	354	P	Pn	21 57 07.2	+1.4
ANKY	Antikythira Is	2.62	311	P	Pn	21 57 11.9	+1.5
MHLO	Agia Marina, M	2.75	337	P	Pn	21 57 13.9	+1.8
ARG	Arkhangelos	2.84	43	Pn	Pn	21 57 16.1	+2.8
ARG	Arkhangelos	2.84	43	P	Pn	21 57 15.4	+2.1
YAZI	Mula-Datşa-	2.88	29	P	Pn	21 57 12.8	-1.1
DAT	Datca	2.98	30	Pn	Pn	21 57 18.0	+2.7
DAT	Datca	2.98	30	P	Pn	21 57 16.8	+1.5
KTHA	Kythira Island	3.02	315	P	Pn	21 57 17.4	+1.6
KTHA	Kythira Island	3.02	315	P	Pn	21 57 17.2	+1.4
BODT	Bodrum	3.17	24	Pn	Pn	21 57 20.1	+2.2
BDRM	Kayabasi	3.22	25	P	Pn	21 57 18.6	0.0
BDRM				S	Sn	21 57 51.7	-4.9
TURN	Turunc	3.32	37	P	Pb	21 57 27.3	+0.2
TURN				S	Sn	21 57 54.5	-4.6
VLI	Veliai	3.42	319	P	Pn	21 57 22.4	+1.0
VLI	Veliai	3.42	319	P	Pn	21 57 22.8	+1.4
DALY	Dalyan (Mula)	3.57	41	P	Pn	21 57 26.8	+3.6
DALY				S	Sn	21 57 54.5	-11
IZZE	Mula-Seydike	3.65	51	P	Pn	21 57 24.6	+0.1
IZZE				S	Sn	21 58 02.7	-4.5
IZZE				IAML		21 58 19.0	
	comp=N,41nm,0.4s						
SABU	Mula-Dalaman	3.75	44	P	Pn	21 57 27.3	+1.5
AKAS	Kas	3.79	56	P	Pn	21 57 27.6	+1.1
AKAS				S	Sn	21 58 07.0	-3.8
AKAS				IAML		21 58 18.0	
	comp=N,54nm,0.8s						
AKAS				IAML		21 58 21.0	
	comp=E,39nm,0.9s						
AYDN	Tasoluk	3.91	26	P	Pn	21 57 30.6	+2.6
KNIK	Mula-Seydike	4.12	48	P	Pn	21 57 33.6	+2.5
KNIK				S	Sn	21 58 14.5	-4.6
CAEL	Denizli, Camel	4.16	44	P	Pn	21 57 35.9	+4.3
CAEL				IAML		21 58 48.0	
	comp=E,45nm,1.1s						
CAEL				IAML		21 59 02.0	
	comp=N,44nm,0.9s						
TAVA	DENIZLI_Tavas	4.19	37	P	Pn	21 57 36.4	+4.4
TAVA				S	Sn	21 58 10.0	-11
ESEN	Aydn-Nazilli	4.21	30	P	Pn	21 57 33.6	+1.5
ESEN				S	Sn	21 58 14.0	-6.9
AKUM	Antalya-Kumluc	4.35	59	P	Pn	21 57 36.6	+2.6
AKUM				IAML		21 59 07.0	
	comp=N,16nm,1.8s						
AKUM				IAML		21 59 32.0	
	comp=E,

0.1nm,0.5s
TORD Torodi Ar. Bea 30.23 232 P **P** 22 02 36.4 -2.3
1.1nm,0.7s,baz=37,slow=8.2,SNR=7.3
1.1nm,0.7s
ARCES ARCESS Array B 35.43 360 P **P** 22 03 22.3 -1.3
0.9nm,0.7s,baz=186,slow=8.5,SNR=7.0
0.9nm,0.7s
BVAR Borovoye Array 36.71 45 P **P** 22 03 35.7 +1.0
0.7nm,0.8s,baz=288,slow=5.9,SNR=3.4
0.7nm,0.8s
KURBB Kurchatov Arra 41.39 50 P **P** 22 04 15.0 +1.0
0.9nm,0.5s,baz=276,slow=8.7,SNR=14
0.9nm,0.5s
MKAR Makanchi Array 43.94 56 P **P** 22 04 35.9 +1.1
1.4nm,0.6s,baz=282,slow=6.1,SNR=22
1.4nm,0.6s
ZALV Zalesovo Beam 45.36 45 P **P** 22 04 46.4 +0.4
0.6nm,0.4s,baz=280,slow=8.9,SNR=4.0
0.6nm,0.4s
SONM Songino Array 59.76 50 P **P** 22 06 33.8 +0.9
0.4nm,0.5s,baz=281,slow=8.6,SNR=2.5
0.4nm,0.5s
USRK Ussuriysk Ar. 77.21 45 P **P** 22 08 21.5 -0.4
1.3nm,0.8s,baz=298,slow=3.1,SNR=2.1
1.3nm,0.8s
ILAR Eielson Array 81.23 357 P **P** 22 08 44.7 +1.3
0.3nm,0.8s,baz=337,slow=3.9,SNR=2.9
0.3nm,0.8s
TGY Tagaytay City 86.43 75 LR LR 22 52 50.6
comp=Z,76nm,18.5s,baz=134,slow=39

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*MAN **19** 21:58:21.0, 20°.27N×122°.05E, h65km, MS3.5*
IDC 19 21:58:17.0±4.1, 20°.69N×122°.05E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=306.7km s-min=29.3km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACPP	**Pamplona Cagay**	**2.31**	**197**	*i* P	Pn	21 58 52.9	-3.5
PACPP				*i* S	Sn	21 59 15.8	-10
MKAR	**Makanchi Array**	**41.44**	**318**	P	P	22 06 05.3	-0.2
	0.3nm,0.8s,baz=116,slow=9.8,SNR=2.3						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**42.13**	**163**	P	P	22 06 10.5	-0.8
	1.0nm,0.7s,baz=343,slow=8.9,SNR=8.3						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**45.57**	**165**	P	P	22 06 39.5	+0.5
	0.4nm,0.4s,baz=352,slow=7.2,SNR=9.9						
	0.4nm,0.4s						

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*NDI **19** 22:09:33.7±0.9, 22°.99N×93°.31E, h10km, ML2.7, MW3.4, Presumed earthquake*
*IDC **19** 22:09:34.1±1.1, 23°.03N×93°.47E, h0km, mb3.4/4, mbtmp3.4/5, ML3.7/1, MS3.4/1, Error ellipse: s-maj=25.9km s-min=20.1km az=28.0*
ISC 19 22:09:40.1±1.0, 23°.13N±0°.07×93°.40E±0°.08, h53km, n11, σ1§97/14, mb3.3/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**1.69**	**255**	Pn	**Pn**	**22 10 05.4**	**-1.8**
	58nm,0.3s,baz=251,slow=21,SNR=6.8						
BRDH				Sn	**Sn**	**22 10 29.4**	**+1.8**
	40nm,0.3s,baz=266,slow=22,SNR=1.8						
IMP	**Imphal**	**1.76**	**16**	*e*P	**Pn**	**22 10 06.8**	**-1.6**
IMP				*e*S	**Sn**	**22 10 31.7**	**+2.0**
IMP				IAML		22 10 41.1	
	comp=E,57nm,1.3s						
IMP				IAML		22 10 43.8	
	comp=N,27nm,0.6s						
KOHI	**KOHIMA**	**2.66**	**14**	*e*P	**Pn**	**22 10 19.1**	**-1.6**
KOHI				*e*S	**Sn**	**22 10 52.5**	**+0.8**
KOHI				IAML		22 11 00.1	
	comp=N,51nm,0.6s						
KOHI				IAML		22 11 09.1	
	comp=N,65nm,1.0s						
MOKO	**MOKOCHONG**	**3.33**	**17**	*e*P	**Pn**	**22 10 28.5**	**-1.4**
MOKO				*e*S	**Sn**	**22 11 07.4**	**-0.9**
MOKO				IAML		22 11 14.3	
	comp=E,37nm,0.1s						
MOKO				IAML		22 11 14.4	
	comp=N,40nm,0.9s						
DHUB	**DHUBRI**	**4.23**	**314**	*e*P	**Pn**	**22 10 38.7**	**-3.4**
CMAR	**Chiang Mai Arr**	**6.96**	**131**	Pn	**Pn**	**22 11 17.0**	**-2.6**
	comp=N,0.4nm,0.3s,baz=305,slow=14,SNR=6.8						
	comp=N,0.5nm,0.3s						
MKAR	**Makanchi Array**	**25.25**	**342**	P	**P**	**22 15 02.8**	**+1.6**
	comp=N,0.4nm,0.6s,baz=156,slow=9.9,SNR=7.1						
	comp=N,0.4nm,0.6s						
SONM	**Songino Array**	**26.75**	**20**	P	**P**	**22 15 16.3**	**+1.5**
	comp=N,0.3nm,0.6s,baz=196,slow=7.1,SNR=2.2						
	comp=N,0.3nm,0.6s						
HILR	**Hailar Array B**	**33.52**	**32**	LR	LR	22 32 55.2	
	comp=N,55nm,19.1s,baz=5.0,slow=42						
WRA	**Warramunga Arr**	**58.55**	**134**	P	**P**	**22 19 31.1**	**-0.4**
	comp=N,0.3nm,0.7s,baz=321,slow=7.4,SNR=6.5						
	comp=N,0.3nm,0.7s						
ASAR	**Alice Springs**	**60.93**	**137**	P	**P**	**22 19 48.9**	**+1.0**
	comp=N,0.4nm,0.4s,baz=317,slow=6.8,SNR=7.4						
	comp=N,0.4nm,0.4s						

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*IDC **19** 22:21:25.8±3.3, 36°.37N×70°.85E, h213km±28km, mb3.3/14, mbtmp3.9/18, Error ellipse: s-maj=22.5km s-min=14.5km az=22.0*
*NEIC **19** 22:21:29.0±1.4, 36°.57N±0°.07×70°.73E±0°.09, h235km±6km, mb4.1/34, Error ellipse: s-maj=10.4km s-min=9.5km az=86.0*
ISC 19 22:21:29.9±0.5, 36°.63N±0°.06×70°.77E±0°.06, h250km, n90, σ1§54/96, mb4.0/30, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	**1.16**	**38**		**Pn**	**22 22 04.2**	**-2.0**
MANEM				Sn	**S**	**22 22 31.6**	**-3.2**
SHAA	**Shahritus**	**2.31**	**294**		**Pn**	**22 22 13.2**	**-2.2**
GAR	**Garm**	**2.39**	**352**		**Pn**	**22 22 14.7**	**-1.5**
CHGR	**Chuyangaron**	**2.39**	**328**		**Pn**	**22 22 14.3**	**-1.8**
KBL	**Kabul**	**2.52**	**214**		**Pn**	**22 22 15.0**	**-2.7**
NIL	**Nilore**	**3.60**	**145**		**Pn**	**22 22 27.3**	**-1.9**
KSH2	**Kashi**	**4.55**	**55**	Pn	**Pn**	**22 22 39.8**	**-0.6**
KSH2				Sn	**S**	**22 23 32.9**	**-3.5**
KSH2				smax	smax		
	comp=N,180nm,0.9s						
KSH2				smax	smax		
	comp=E,90nm,0.6s						
UCH	**Uchtor**	**6.29**	**26**	P	**Pn**	**22 23 01.4**	**-0.7**
	SNR=19						
EKS2	**Erkin-Say**	**6.45**	**20**	P	**Pn**	**22 23 03.1**	**-0.7**
	SNR=47						
KK31	**Karatay Array**	**6.47**	**358**	⇓P	**Pn**	**22 23 02.8**	**-1.0**
	comp=E,5.1nm,0.2s,baz=189,slow=13,SNR=213						
KK31				⇓S	**S**	**22 24 13.4**	**-5.7**
	comp=E,5.3nm,0.3s						
KK31	**Karatay Array**	**6.47**	**358**		**Pn**	**22 23 03.1**	**-0.7**
KKAR	**Karatay Array**	**6.47**	**358**		**Pn**	**22 23 02.8**	**-1.0**
AAK	**Ala-Archa**	**6.65**	**24**	P	**Pn**	**22 23 05.6**	**-0.6**
	comp=E,53nm,0.3s,baz=187,slow=5.0,SNR=81						
AAK				S	**S**	**22 24 19.3**	**-4.2**
	comp=E,21nm,0.5s,baz=340,slow=19,SNR=9.8						
AAK	**Ala-Archa**	**6.65**	**24**	P	**Pn**	**22 23 05.7**	**-0.6**
	SNR=46						
AAK	**Ala-Archa**	**6.65**	**24**	⇓P	**Pn**	**22 23 05.5**	**-0.8**
	comp=E,12nm,0.4s						
AAK				⇑S	**S**	**22 24 19.5**	**-4.0**
	comp=E,16nm,0.7s						
KBK	**Karagaybulak**	**6.82**	**27**	P	**Pn**	**22 23 08.2**	**-0.3**
	SNR=17						
ULHL	**Ulahol**	**7.02**	**35**	P	**Pn**	**22 23 10.4**	**-0.6**
	SNR=6.2						
CHMS	**Chumysh**	**7.06**	**25**	P	**Pn**	**22 23 10.6**	**-0.7**
	SNR=19						
BOOM	**Boomskoye usch**	**7.08**	**33**	Pn	**Pn**	**22 23 11.0**	**-0.7**
USP	**Ospenovka**	**7.22**	**22**	P	**Pn**	**22 23 11.8**	**-1.5**
	SNR=54						
TKM2	**Tokmak 2**	**7.30**	**29**	P	**Pn**	**22 23 13.7**	**-0.7**
	SNR=85						
HRA	**Herat**	**7.30**	**255**	Pn	**Pn**	**22 23 12.3**	**-2.4**
KDJ	**Kajisay**	**7.40**	**40**	Pn	**Pn**	**22 23 14.8**	**-1.0**
TARG	**Taragay, Kyrgy**	**7.46**	**45**		**Pn**	**22 23 15.6**	**-1.2**
WUS	**Wushi**	**8.01**	**53**		**Pn**	**22 23 22.3**	**-1.1**
PRZ	**Przheval'sk**	**8.30**	**43**	Pn	**Pn**	**22 23 26.1**	**-1.0**
PDGK	**Podgornoye**	**9.46**	**42**		**Pn**	**22 23 39.8**	**-1.9**
MAKZ	**Makanchi**	**13.15**	**36**	P	**Pn**	**22 24 26.8**	**-0.9**
MKAR	**Makanchi Array**	**13.29**	**37**	P	**Pn**	**22 24 29.1**	**-0.3**
	comp=E,1.5nm,0.4s,baz=223,slow=12,SNR=33						
MKAR	**Makanchi Array**	**13.29**	**37**	P	**Pn**	**22 24 28.1**	**-1.2**
WMQ	**Urumqi**	**14.77**	**56**	*e*P	**Pn**	**22 24 48.1**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
AB31	**Akbulak array**	**14.88**	**331**	P	**P**	**22 24 47.7**	**-0.5**
ABKAR	**Akbulak array**	**14.88**	**331**	P	**Pn**	**22 24 48.1**	**-0.3**
KURBB	**Kurchatov Arra**	**15.06**	**19**	P	**P**	**22 24 49.5**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=210,slow=11,SNR=10						
KURK	**Kurchatov**	**15.17**	**19**	P	**P**	**22 24 49.5**	**-1.8**
BVAR	**Borovoye Array**	**16.39**	**359**	P	**Pn**	**22 25 07.2**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=156,slow=11,SNR=31						
BORK	**Borovoye**	**16.41**	**359**	P	**Pn**	**22 25 06.8**	**+0.2**
BORK				IAmb	IAmb	22 25 09.3	
	comp=Z,3.2nm,0.5s						
AKTO	**Aktyubinsk**	**16.57**	**330**	P	**Pn**	**22 25 07.9**	**-0.7**
	comp=Z,3.3nm,0.4s,baz=142,slow=9.6,SNR=14						
AKTO				S	**S**	**22 28 07.8**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=15,slow=21,SNR=1.8						
UOSS	**Minazif**	**17.07**	**231**	P	**P**	**22 25 10.6**	**-2.0**
UOSS				IAmb	IAmb	22 25 16.3	
	comp=Z,8.5nm,0.9s						
ZAA0	**Zalesovo Array**	**19.87**	**25**	P	**P**	**22 25 42.8**	**+0.5**
ZALV	**Zalesovo Beam**	**19.87**	**25**	P	**P**	**22 25 43.0**	**+0.7**
	comp=Z,7.8nm,0.5s,baz=220,slow=11,SNR=45						
	comp=Z,7.8nm,0.5s						
ZALV	**Zalesovo Beam**	**19.87**	**25**		**P**	**22 25 42.6**	**+0.3**
ARTI	**Arti**	**21.46**	**341**	P	**P**	**22 26 00.2**	**+1.6**
	comp=Z,2.8nm,0.4s,baz=151,slow=8.1,SNR=8.5						
	comp=Z,2.8nm,0.4s						
ARTI	**Arti**	**21.46**	**341**	P	**P**	**22 25 59.1**	**+0.5**
MORE	**Moreh**	**23.68**	**115**	P	**P**	**22 26 20.2**	**+0.8**
MORE				IAmb	IAmb	22 26 23.2	
	comp=Z,4.5nm,0.5s						
LZH	**Lanzhou**	**26.57**	**81**	*e*P	**P**	**22 26 45.4**	**0.0**
LZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH	**PanZhiHua**	**28.15**	**102**	P	**P**	**22 27 00.6**	**+1.2**
SONM	**Songino Array**	**28.41**	**56**	P	**P**	**22 27 03.2**	**+1.7**
	comp=Z,4.4nm,0.5s,baz=281,slow=10.0,SNR=3.5						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**28.41**	**56**	P	**P**	**22 27 02.6**	**+1.1**
CHTO	**Chiang Mai**	**30.45**	**118**	P	**P**	**22 27 18.8**	**-0.7**
PBA	**Port Blair**	**31.79**	**136**	P	**P**	**22 27 30.3**	**-0.9**
HHC	**Hu-ho-hao-te**	**31.89**	**70**	*e*P	**P**	**22 27 30.9**	**-1.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.1s						
FINES	**FINESS Array B**	**37.27**	**326**	P	**P**	**22 28 18.9**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=117,slow=11,SNR=8.8						
	comp=Z,1.1nm,0.6s						
KEV	**Kevo**	**40.61**	**338**	P	**P**	**22 28 46.6**	**+1.5**
KEV				IAmb	IAmb	22 29 22.5	
	comp=Z,16nm,1.4s						
ARCES	**ARCESS Array B**	**40.95**	**338**	P	**P**	**22 28 49.8**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=111,slow=7.3,SNR=17						
	comp=Z,1.4nm,0.5s						
ARCES	**ARCESS Array B**	**40.95**	**338**	P	**P**	**22 28 49.5**	**+1.6**
HFS	**Hagfors**	**42.85**	**322**	P	**P**	**22 29 04.8**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=101,slow=12,SNR=7.3						
	comp=Z,1.7nm,0.6s						
NC303	**NORSAR Array S**	**44.11**	**323**	P	**P**	**22 29 14.3**	**+1.0**
NB2	**NORSAR Subarra**	**44.16**	**323**	P	**P**	**22 29 14.8**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.16**	**323**	P	**P**	**22 29 14.9**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=97,slow=7.7,SNR=7.8						
	comp=Z,0.8nm,0.6s						
NBO00	**NORSAR Array S**	**44.37**	**323**	P	**P**	**22 29 16.7**	**+1.2**
NBO00				IAmb	IAmb	22 29 33.4	
	comp=Z,18nm,1.4s						
TIXI	**Tiksi**	**45.72**	**22**	P	**P**	**22 29 27.2**	**+1.4**
SPITS	**Spitsbergen Ar**	**47.32**	**347**	P	**P**	**22 29 40.6**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=108,slow=9.8,SNR=6.0						
	comp=Z,0.6nm,0.4s						
ESK	**Eskdalemuir**	**52.09**	**316**	P	**P**	**22 30 15.2**	**+0.9**
PETK	**Petropavlovsk-**	**60.00**	**44**	P	**P**	**22 31 09.8**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=290,slow=6.8,SNR=1.5						
	comp=Z,0.7nm,0.7s						
PETK	**Petropavlovsk-**	**60.00**	**44**	P	**P**	**22 31 11.2**	**+1.1**
TORD	**Torodi Ar. Bea**	**65.53**	**268**	P	**P**	**22 31 46.5**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=52,slow=6.0,SNR=10						
	comp=Z,0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.53**	**268**	P	**P**	**22 31 46.5**	**-0.6**
H27K	**Steamboat Moun**	**74.48**	**13**	P	**P**	**22 32 42.2**	**+1.6**
H27K				IAmb	IAmb	22 33 08.1	
	comp=Z,4.8nm,1.5s						
F31M	**Tsiigehtchic**	**74.59**	**10**	P	**P**	**22 32 43.0**	**+1.9**
F31M				IAmb	IAmb	22 33 09.6	
	comp=Z,5.3nm,1.4s						
ILAR	**Eielson Array**	**74.70**	**16**	P	**P**	**22 32 41.5**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=314,slow=7.6,SNR=3.3						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**74.70**	**16**	P	**P**	**22 32 43.2**	**+1.4**
G31M	**Satah River**	**75.01**	**10**	P	**P**	**22 32 44.1**	**+0.7**
G31M				IAmb	IAmb	22 32 51.8	
	comp=Z,4.5nm,1.2s						
H29M	**Whitestone**	**75.04**	**12**	P	**P**	**22 32 45.0**	**+1.3**
H29M				IAmb	IAmb	22 33 21.9	
	comp=Z,5.2nm,1.3s						
I28M	**Miner Creek**	**75.48**	**13**	P	**P**	**22 32 47.5**	**+1.1**
I28M				IAmb	IAmb	22 33 23.0	
	comp=Z,4.0nm,1.4s						
SCRK	**Sand Creek**	**76.02**	**15**	P	**P**	**22 32 50.3**	**+0.8**
SCRK				IAmb	IAmb	22 33 30.3	
	comp=Z,3.9nm,1.4s						
H31M	**Peel River**	**76.05**	**10**	P	**P**	**22 32 50.3**	**+0.8**
H31M				IAmb	IAmb	22 33 11.6	
	comp=Z,5.7nm,1.4s						
DHY	**Denali Highway**	**76.06**	**17**	P	**P**	**22 32 50.4**	**+0.6**
DHY				IAmb	IAmb	22 33 09.0	
	comp=Z,6.5nm,1.4s						
I30M	**Mount Dempster**	**76.28**	**11**	P	**P**	**22 32 52.0**	**+1.1**
M27K	**Edge Creek, AK**	**77.90**	**15**	P	**P**	**22 33 01.4**	**+1.5**
M27K				IAmb	IAmb	22 33 18.9	
	comp=Z,4.8nm,1.3s						
KAIM	**Kayak Island**	**79.50**	**17**	P	**P**	**22 33 09.2**	**+0.7**
YKAW3	**Yellowknife Wh**	**81.05**	**3**	P	**P**	**22 33 17.6**	**+0.9**
YKAW3				IAmb	IAmb	22 33 57.8	
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	**81.12**	**3**	P	**P**	**22 33 18.3**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=351,slow=5.5,SNR=9.8						
	comp=Z,0.8nm,0.4s						
P33M	**Teslin, Yukon**	**81.57**	**12**	P	**P**	**22 33 21.1**	**+1.6**
P33M				IAmb	IAmb	22 33 36.0	
	comp=Z,3.9nm,1.1s						
NWAO	**Narrogin (SRO)**	**81.69**	**142**	P	**P**	**22 33 21.4**	**+1.1**
WB0	**Warramunga Arr**	**82.14**	**122**	P	**P**	**22 33 24.3**	**+1.3**
WB0				IAmb	IAmb	22 33 27.0	
	comp=Z,5.2nm,1.2s						
WRA	**Warramunga Arr**	**82.22**	**122**	P	**P**	**22 33 22.1**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=324,slow=4.9,SNR=7.0						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**82.22**	**122**	P	**P**	**22 33 22.4**	**-1.1**
WR8	**Warramunga Arr**	**82.34**	**122**	P	**P**	**22 33 23.8**	**-0.3**
WR8				IAmb	IAmb	22 33 28.5	
	comp=Z,6.8nm,1.2s						
ASAR	**Alice Springs**	**84.48**	**125**	P	**P**	**22 33 33.5**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=314,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.6s						

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*IDC **19** 22:41:35.0±2.7, 11°.06N×141°.86E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=126.2km s-min=29.9km az=83.0*
ISC 19 22:41:40.8±3.0, 11°.0N±0°.2×142°.2E±°, h44km, n7, σ0§51/7, mb3.9/7, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.69**	**194**	P	**P**	**22 48 00.5**	**0.0**
	0.4nm,0.6s,baz=12,slow=9.6,SNR=5.4						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**61.40**	**318**	P	**P**	**22 51 52.2**	**-0.4**
	0.1nm,0.4s,baz=110,slow=6.4,SNR=1.7						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**62.09**	**326**	P	**P**	**22 51 57.0**	**0.0**
	0.2nm,0.3s,baz=142,slow=7.3,SNR=1.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.77**	**321**	P	**P**	**22 52 15.2**	**+0.4**
	0.8nm,0.6s,baz=106,slow=6.9,SNR=5.1						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**70.19**	**322**	P	**P**	**22 52 49.7**	**+0.7**
	1.3nm,0.5s,baz=114,slow=8.0,SNR=8.2						
	1.3nm,0.5s						
ARCES	**ARCESS Array B**	**88.61**	**342**	P	**P**	**22 54 29.1**	**+0.1**
	1.4nm,0.9s,baz=61,slow=5.9,SNR=3.8						
	1.4nm,0.9s						
FINES	**FINESS Array B**	**92.25**	**334**	P	**P**	**22 54 45.4**	**-0.6**
	0.2nm,0.4s,baz=46,slow=4.0,SNR=8.5						
	0.2nm,0.4s						

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*IDC **19** 23:07:14.7±2.1, 20°.40S×177°.89W, h529km±21km, mb3.3/13, mbtmp4.2/14, Error ellipse: s-maj=21.0km s-min=15.6km az=100.0*
*NEIC **19** 23:07:16.5±1.6, 20°.5S±0°.1×178°.0W±0°.1, h539km±7km, mb4.2/27, Error ellipse: s-maj=20.1km s-min=15.9km az=150.0*
ISC 19 23:07:15.2±0.5, 20°.30S±0°.09×177°.95W±0°.07, h534km, n76, σ1§24/74, mb4.1/27, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.56**	**303**	P	**P**	**23 08 42.4**	**+1.9**
	18nm,0.6s,baz=138,slow=8.3,SNR=16						
MSVF	**Nonsavu**	**4.56**	**303**	P	**P**	**23 08 43.3**	**+2.8**
NIUE	**Niue**	**7.66**	**82**	P	**P**	**23 09 08.8**	**-0.2**
NIUE				S	**S**	**23 10 46.8**	**+4.3**
AFI	**Afiamalu**	**8.67**	**44**	S	**S**	**23 10 54.8**	**-6.5**
	42nm,0.5s,baz=38,slow=22,SNR=7.7						
MARNC	**Mare, Loyalty**	**13.15**	**262**	P	**P**	**23 10 06.0**	**+0.3**
KOUNC	**Koumac, New Ca**	**16.65**	**266**	P	**P**	**23 10 40.7**	**-0.8**
EIDS	**Eidsvold**	**28.94**	**254**	P	**P**	**23 12 31.4**	**0.0**
EIDS				IAmb	IAmb	23 12 57.8	
	comp=Z,8.4nm,1.4s						
CTAO	**Charters Tower**	**33.55**	**264**	P	**P**	**23 13 11.5**	**+0.5**
TOO	**Toolangi**	**36.05**	**234**	P	**P**	**23 13 30.4**	**-1.2**
TOO				IAmb	IAmb	23 14 02.9	
	comp=Z,7.4nm,1.1s						
STKA	**Stephens Creek**	**37.91**	**244**	P	**P**	**23 13 46.9**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=72,slow=10.0,SNR=5.4						
	comp=Z,3.3nm,0.6s						
BBOO	**Buckleboo**	**42.67**	**243**	P	**P**	**23 14 24.6**	**-0.5**
WR8	**Warramunga Arr**	**44.52**	**262**	P	**P**	**23 14 39.1**	**-0.5**
WR8				IAmb	IAmb	23 14 39.9	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**44.60**	**257**	P	**P**	**23 14 40.1**	**-0.1**
ASAR	**Alice Springs**	**44.61**	**257**	P	**P**	**23 14 40.0**	**-0.3**
	comp=Z,11nm,0.8s,baz=90,slow=8.3,SNR=96						
ASAR				PcP	**PcP**	**23 16 11.2**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=107,slow=3.5,SNR=6.1						
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**44.65**	**262**	P	**P**	**23 14 40.1**	**-0.5**
WB0				IAmb	IAmb	23 14 40.6	
	comp=Z,6.8nm,0.7s						
WRA	**Warramunga Arr**	**44.67**	**262**	P	**P**	**23 14 40.2**	**-0.5**
	comp=Z,4.5nm,0.7s,baz=98,slow=8.6,SNR=51						
	comp=Z,4.5nm,0.7s						
WRA	**Warramunga Arr**	**44.67**	**262**	P	**P**	**23 14 40.1**	**-0.6**
MTN	**Manton Dam**	**49.20**	**270**	P	**P**	**23 15 14.9**	**0.0**
MTN				IAmb	IAmb	23 15 15.0	
	comp=Z,5.0nm,0.7s						
FORT	**Forrest**	**49.41**	**246**	P	**P**	**23 15 15.4**	**-0.9**
FORT				IAmb	IAmb	23 15 16.0	
	comp=Z,6.6nm,0.7s						
KNRA	**Kununurra**	**50.72**	**266**	P	**P**	**23 15 25.8**	**-0.3**
KNRA				IAmb	IAmb	23 15 47.4	
	comp=Z,8.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.10**	**262**	P	**P**	**23 15 43.2**	**+0.1**
MBWA	**Marble Bar**	**57.94**	**257**	P	**P**	**23 16 16.2**	**-0.6**
MBWA				IAmb	IAmb	23 16 32.4	
	comp=Z,33nm,1.4s						
VNDA	**Vanda**	**58.11**	**185**	P	**P**	**23 16 16.9**	**0.0**
	comp=Z,0.6nm,0.7s,baz=307,slow=5.1,SNR=3.0						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**58.11**	**185**	P	**P**	**23 16 17.2**	**+0.2**
NWAO	**Narrogin (SRO)**	**58.50**	**243**	P	**P**	**23 16 19.9**	**-0.5**
CASY	**Casey**	**64.16**	**205**	P	**P**	**23 16 56.0**	**-0.8**
CASY				IAmb	IAmb	23 17 05.9	
	comp=Z,12nm,1.5s						
JYT	**Yasato**	**68.75**	**325**	P	**P**	**23 17 27.1**	**+1.4**
KKM	**Kota Kinabalu**	**69.75**	**285**	P	**P**	**23 17 31.9**	**-0.4**
KKM				IAmb	IAmb	23 17 54.5	
	comp=Z,12nm,1.2s						
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**23 17 31.5**	**0.0**
	comp=Z,3.1nm,0.8s,baz=12,slow=0.8,SNR=13						
	comp=Z,3.1nm,0.8s						
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**23 17 31.2**	**-0.3**
QSPA				IAmb	IAmb	23 17 32.1	
	comp=Z,3.1nm,0.8s						
UGM	**Wanagama**	**70.01**	**269**	P	**P**	**23 17 33.5**	**-0.3**
MJAR	**Matsushiro Arr**	**70.08**	**324**	P	**P**	**23 17 34.0**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=159,slow=5.9,SNR=11						
	comp=Z,3.1nm,0.6s						
MJAR	**Matsushiro Arr**	**70.08**	**324**	P	**P**	**23 17 34.4**	**+0.7**
MJAR				IAmb	IAmb	23 17 34.9	
	comp=Z,2.5nm,0.6s						
KIWB	**Kanaga Island**	**71.85**	**1**	P	**P**	**23 17 43.8**	**+0.2**
KIWB				IAmb	IAmb	23 18 03.4	
	comp=Z,5.4nm,1.1s						
ADK	**Adak**	**71.88**	**1**	P	**P**	**23 17 43.8**	**-0.1**
ADK				IAmb	IAmb	23 18 17.3	
	comp=Z,1.1nm,1.4s						
LVA	**Lava Point**	**74.86**	**7**	P	**P**	**23 18 01.0**	**+0.2**
PETK	**Petropavlovsk-**	**76.

GERES	GERESS Array B	150.02 345		PKPbc	23 26 05.3	-0.1
ELL	Elmali	150.69 310	PKPbc	PKPbc	23 26 07.1	-0.4
RDO	Rodhopi	151.19 321	PKPbc	PKPbc	23 26 07.7	-0.6

CATAC ***19*** *23:23:53.1±0.3, 13°.04N×8°.7W±°, h4km±1km, M3.5/11, MLv3.5/11, Error ellipse: s-maj=5.2km s-min=1.8km az=31.1, confirmed*

SNET ***19*** *23:23:53.4±0.7, 13°.04N×87°.33W, h10km, ML3.4, Presumed earthquake*

ISC 19 23:23:53.2±0.9, 12°.97N±0°.05×87°.37W±0°.04, h11km±10km, n23, σ0°.47/38, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.18**	**272**	**P**	**Pg**	**23 23 56.6**	**-0.6**
CSGN				S	**Sg**	**23 24 00.2**	**+0.3**
CRIN	**San Cristobal**	**0.41**	**130**	**P**	**Pb**	**23 24 02.3**	**-0.3**
CRIN				S	**Sg**	**23 24 08.2**	**+1.2**
CNCH	**Conchagua**	**0.54**	**304**	**P**	**Pg**	**23 24 04.3**	**+0.5**
CNCH				S	**Sg**	**23 24 11.6**	**+0.6**
LCND	**La Caada**	**0.60**	**304**	**P**	**Pg**	**23 24 05.0**	**0.0**
LCND				S	**Sg**	**23 24 13.4**	**+0.5**
LCND	**La Caada**	**0.60**	**304**	*eP*	**Pg**	**23 24 05.5**	**+0.6**
QUEN	**Al S del Volca**	**0.63**	**126**	P	**Pg**	**23 24 05.6**	**+0.1**
QUEN				S	**Sg**	**23 24 14.2**	**+0.3**
HERN	**Volcan Telica**	**0.64**	**124**	**P**	**Pg**	**23 24 05.5**	**-0.1**
HERN				S	**Sg**	**23 24 14.8**	**+0.7**
HOYN	**Al Sur del Vol**	**0.65**	**125**	**P**	**Pg**	**23 24 05.8**	**0.0**
HOYN				S	**Sg**	**23 24 14.7**	**+0.3**
TEL3	**Telica 3**	**0.65**	**127**	P	**Pg**	**23 24 06.0**	**+0.1**
INTP	**Intipuca**	**0.70**	**289**	*eP*	**Pg**	**23 24 06.6**	**-0.2**
CNGA	**Al SSO del Vol**	**0.81**	**126**	**P**	**Pg**	**23 24 08.5**	**-0.3**
CNGN	**Cerro Negro**	**0.81**	**125**	**P**	**Pg**	**23 24 08.7**	**-0.2**
CNGN				S	**Sg**	**23 24 19.5**	**+0.1**
MOM3	**MOM3**	**0.95**	**119**	**P**	**Pg**	**23 24 11.0**	**-0.6**
MOM3				S	**Sg**	**23 24 24.1**	**+0.1**
MOMN	**Momotombo**	**0.99**	**124**	**P**	**Pg**	**23 24 12.2**	**0.0**
MOMN				S	**Sg**	**23 24 25.2**	**0.0**
MOM2	**El Cardon**	**1.02**	**121**	**P**	**Pg**	**23 24 13.0**	**+0.1**
MOM2				S	**Sb**	**23 24 27.2**	**+1.0**
PACA	**Pacayal**	**1.05**	**298**	**P**	**Pg**	**23 24 13.2**	**-0.2**
PACA				S	**Sg**	**23 24 27.4**	**+0.3**
PACA	**Pacayal**	**1.05**	**298**	*eP*	**Pg**	**23 24 13.1**	**-0.4**
OCON	**Estacion meteo**	**1.09**	**53**	**P**	**Pb**	**23 24 14.1**	**-0.1**
OCON				S	**Sb**	**23 24 28.8**	**+0.3**
COPN	**Copaltepe**	**1.10**	**136**	**P**	**Pg**	**23 24 13.7**	**-0.7**
TECA	**Tecapa**	**1.22**	**295**	*eP*	**Pg**	**23 24 15.8**	**-0.8**
RCON	**San Juan de Ri**	**1.29**	**67**	**P**	**Pg**	**23 24 17.6**	**-0.5**
RCVN	**Varillal2**	**1.30**	**62**	**P**	**Pn**	**23 24 17.0**	**-0.5**
RCVN				S	**Sn**	**23 24 35.2**	**+0.2**
MATN	**Matagalpa**	**1.41**	**92**	**P**	**Pn**	**23 24 18.7**	**-0.3**
MATN				S	**Sg**	**23 24 38.6**	**-0.1**

TRN 19 23:28:44.3, 15°.30N×61°.36W, h204km, MD4.0, Near West coast of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSLB	**Salisbury**	**0.15**	**337**	*eP*	Pn	23 29 12.1	+1.1
DWS	**Wesley**	**0.27**	**10**	*eP*	Pn	23 29 11.1	-0.1
DWS				*eS*	S	23 29 33.0	+0.6
SVN	**Savane Anatole**	**0.49**	**158**	*eP*	Pn	23 29 12.5	+0.5
SVN				*eS*	S	23 29 33.9	+0.4
TBG	**Guadaloupe-3**	**0.62**	**333**	*eP*	Pn	23 29 13.2	+0.8
MAGL	**Barre de l'ile**	**0.65**	**7**	*eP*	Pn	23 29 14.3	+1.8
MAGL				*eS*	S	23 29 34.5	-0.1
MMLZ	**Guadeloupe Bro**	**0.80**	**338**	*eP*	Pn	23 29 14.8	+1.6
MMLZ				*eS*	S	23 29 37.1	+1.3
BIM	**Bigot**	**0.83**	**160**	*eP*	Pn	23 29 14.0	+0.5
BIM				*eS*	S	23 29 37.0	+0.9
DHSZ	**Broadband at M**	**1.04**	**338**	*eP*	Pn	23 29 16.4	+1.6
DHSZ				*eS*	S	23 29 39.0	+0.6
DSDZ	**La Diserade, G**	**1.05**	**16**	*eP*	Pn	23 29 16.7	+1.9
DSDZ				*eS*	S	23 29 38.0	-0.4
SLBI	**Saint Lucia, B**	**1.32**	**164**	*eP*	Pn	23 29 17.1	+0.2
SLBI				*eS*	S	23 29 41.3	-0.6
SLCP	**Castries, St.**	**1.33**	**164**	*eP*	Pn	23 29 17.6	+0.7
SLCP				*eS*	S	23 29 42.1	0.0
SLAC	**Saint Lucia, A**	**1.46**	**162**	*eS*	S	23 29 43.4	-0.6
MBWH	**Windy Hill**	**1.64**	**331**	*eP*	Pn	23 29 20.7	+1.1
MBWH				*eS*	S	23 29 47.1	+0.2
ANWB	**Willy Bob**	**2.39**	**350**	*eP*	Pn	23 29 28.6	+1.4
ANWB				*eS*	S	23 29 59.6	-0.7
SKI	**Saint Kitts**	**2.42**	**327**	*eP*	Pn	23 29 29.1	+1.6
SKI				*eS*	S	23 30 00.1	-0.7
BBGH	**Gun Hill**	**2.76**	**141**	*eP*	Pn	23 29 33.2	+1.7
BBGH				*eS*	S	23 30 07.8	0.0
GCMP	**Grenada, Carri**	**2.80**	**181**	*eP*	Pn	23 29 31.7	-0.1
GCMP				*eS*	S	23 30 09.3	+0.9
GRGR	**Grenville**	**3.16**	**185**	*eP*	Pn	23 29 36.5	+0.4
GRGR				*eS*	S	23 30 16.5	+0.4
SMRT	**St. Maarten**	**3.19**	**329**	*eP*	Pn	23 29 36.9	+0.5
SMRT				*eS*	S	23 30 15.8	-1.0
TRN	**Trinidad (W)**	**4.62**	**181**	*eP*	Pn	23 29 55.1	+1.0
TRN				*eS*	S	23 30 45.8	-2.9

ANF ***19*** *23:33:49.2±0.2, 58°.33N×133°.48W, h1km±1km, ML3.1/23, Error ellipse: s-maj=1.2km s-min=1.0km az=90.0*

NEIC ***19*** *23:33:49.8±1.1, 58°.30N±0°.02×133°.46W±0°.02, h5km±2km, ML2.9/54, ML2.5(AEIC), Error ellipse: s-maj=4.1km s-min=3.0km az=358.0*

AEIC ***19*** *23:33:49.6±1.5, 58°.33N±0°.02×133°.46W±0°.02, h2km±6km, Error ellipse: s-maj=3.1km s-min=1.4km az=152.0*

PGC ***19*** *23:33:50.5±0.0, 58°.33N×133°.46W, h1km, MLSn3.0/8, Mw3.6/8, ML3.0(NEIC), 55km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 19 23:33:49.2±1.0, 58°.32N±0°.02×133°.45W±0°.02, h7km±9km, n82, σ0°.96/113, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIS	**Juneau Island**	**0.49**	**265**		**Pg**	**23 33 59.0**	**+0.3**
JIS					**Sg**	**23 34 05.8**	**+0.6**
R32K	**Eaglecrest**	**0.56**	**265**		**Pg**	**23 34 00.2**	**+0.2**
R32K	**Eaglecrest**	**0.56**	**265**	P	**Pg**	**23 33 59.6**	**-0.5**
	baz=84						
R32K				S	**Sg**	**23 34 07.5**	**0.0**
	baz=84						
BESE	**Bessie Mountai**	**0.78**	**290**	P	**Pg**	**23 34 04.0**	**-0.2**
BESE				S	**Sg**	**23 34 14.5**	**+0.1**
BESE	**Bessie Mountai**	**0.78**	**290**		**Pg**	**23 34 04.0**	**-0.2**
BESE				Sg	**Sg**	**23 34 14.6**	**+0.3**
Q32M	**Nakina River**	**0.89**	**44**	P	**Pg**	**23 34 06.4**	**+0.2**
Q32M	**Nakina River**	**0.89**	**44**		**Pg**	**23 34 06.6**	**+0.3**
Q32M				Sg	**Sb**	**23 34 18.8**	**-0.4**
Q32M	**Nakina River**	**0.89**	**44**	P	**Pg**	**23 34 06.3**	**+0.1**
	baz=225,SNR=40						
Q32M				S	**Sb**	**23 34 18.9**	**-0.3**
	baz=225						
S32K	**Killisnoo**	**1.05**	**215**		**Pn**	**23 34 09.8**	**-0.5**
S32K					**Sn**	**23 34 24.7**	**-0.3**
S32K	**Killisnoo**	**1.05**	**215**	IAML		23 34 28.6	
	comp=N,164nm,0.3s						
S32K	**Killisnoo**	**1.05**	**215**	P	**Pg**	**23 34 09.3**	**0.0**
	baz=34						
S32K				Sb	**Sn**	**23 34 25.0**	**0.0**
	baz=34						
R31K	**City Hall, Gus**	**1.21**	**275**		**Sn**	**23 34 29.8**	**+0.7**
R31K	**City Hall, Gus**	**1.21**	**275**	S	**Sn**	**23 34 28.6**	**-0.4**
	baz=93						
P32M	**Atlin**	**1.28**	**354**	P	**Pn**	**23 34 13.0**	**-0.5**
P32M				S	**Sb**	**23 34 30.0**	**-0.3**
P32M	**Atlin**	**1.28**	**354**		**Pn**	**23 34 13.3**	**-0.2**
P32M				Sg	**Sn**	**23 34 31.0**	**+0.1**
P32M				IAML		23 34 35.5	
	comp=E,119nm,0.5s						
P32M	**Atlin**	**1.28**	**354**	P	**Pn**	**23 34 12.9**	**-0.6**
	baz=174,SNR=23						
P32M				S	**Sn**	**23 34 31.3**	**+0.4**
	baz=174						
S34M	**Telegraph Cree**	**1.30**	**108**	P	**Pn**	**23 34 13.4**	**-0.3**
S34M	**Telegraph Cree**	**1.30**	**108**		**Pb**	**23 34 13.7**	**-0.3**
S34M				IAML		23 34 37.3	
	comp=N,295nm,0.4s						
S34M				IAML		23 34 41.8	
	comp=E,289nm,0.2s						
S34M	**Telegraph Cree**	**1.30**	**108**		**Sg**	**23 34 32.7**	**+1.8**
S34M	**Telegraph Cree**	**1.30**	**108**	P	**Pb**	**23 34 13.6**	**-0.3**
	baz=290,SNR=46						
S34M				S	**Sg**	**23 34 32.0**	**+1.1**
	baz=290						
SKAG	**Skagway**	**1.50**	**320**		**Pn**	**23 34 16.6**	**+0.2**
SKAG				Sn	**Sg**	**23 34 38.5**	**+1.2**
SKAG				IAML		23 34 44.1	
	comp=E,161nm,0.5s						
SKAG				IAML		23 34 44.3	
	comp=N,127nm,0.6s						
SKAG	**Skagway**	**1.50**	**320**	P	**Pb**	**23 34 16.8**	**-0.6**
	baz=139						
SKAG				S	**Sg**	**23 34 37.2**	**-0.1**
	baz=139						
S31K	**Pelican**	**1.52**	**257**		**Pb**	**23 34 17.0**	**-0.6**
S31K					**Sg**	**23 34 38.5**	**+0.6**
S31K	**Pelican**	**1.52**	**257**	P	**Pb**	**23 34 17.1**	**-0.5**
	baz=75						
S31K				S	**Sg**	**23 34 37.8**	**-0.1**
	baz=75						
T33K	**Petersburg**	**1.54**	**170**	S	**Sg**	**23 34 39.3**	**+0.8**
	baz=350						
SIT	**Sitka**	**1.62**	**219**		**Pb**	**23 34 18.9**	**-0.4**
SIT				Sn	**Sb**	**23 34 39.6**	**-0.4**
SIT	**Sitka**	**1.62**	**219**	P	**Pb**	**23 34 18.8**	**-0.6**
	baz=37						
SIT				S	**Sg**	**23 34 41.1**	**0.0**
	baz=37						
R33M	**Jennings River**	**1.68**	**49**	Pn	**Pb**	**23 34 19.9**	**-0.5**
R33M				Sn	**Sn**	**23 34 40.5**	**-0.4**
R33M	**Jennings River**	**1.68**	**49**	Pn	**Pb**	**23 34 19.9**	**-0.5**
R33M				Sn	**Sb**	**23 34 41.7**	**-0.2**
R33M	**Jennings River**	**1.68**	**49**	P	**Pb**	**23 34 20.2**	**-0.3**
R33M				Sn	**Sg**	**23 34 43.0**	**-0.1**
R33M				IAML		23 34 45.3	
	comp=N,157nm,0.7s						
R33M				IAML		23 34 47.0	
	comp=E,110nm,0.7s						
R33M	**Jennings River**	**1.68**	**49**	P	**Pb**	**23 34 19.7**	**-0.7**
	baz=232,SNR=70						
R33M				S	**Sg**	**23 34 42.7**	**-0.4**
	baz=232						
DLBC	**Dease Lake**	**1.81**	**85**	Pn	**Pb**	**23 34 21.6**	**-0.9**
DLBC	**Dease Lake**	**1.81**	**85**		**Pb**	**23 34 21.8**	**-0.9**
DLBC	**Dease Lake**	**1.81**	**85**	P	**Pb**	**23 34 21.7**	**-0.9**
	baz=268,SNR=64						
DLBC				Sb	**Sg**	**23 34 48.3**	**+1.1**
	baz=268						
PLBC	**Pleasant Camp**	**1.89**	**308**	Pn	**Pn**	**23 34 22.6**	**+0.8**
PLBC	**Pleasant Camp**	**1.89**	**308**		**Pb**	**23 34 23.5**	**-0.5**
PLBC	**Pleasant Camp**	**1.89**	**308**	Pb	**Pb**	**23 34 23.8**	**-0.2**
	baz=126,SNR=25						
PLBC				Sb	**Sg**	**23 34 49.7**	**-0.2**
	baz=126						
P33M	**Teslin, Yukon**	**1.92**	**9**		**Pn**	**23 34 23.1**	**+0.7**
P33M				Sn	**Sb**	**23 34 48.6**	**-0.1**
P33M				IAML		23 34 54.0	
	comp=E,64nm,0.7s						
P33M				IAML		23 34 56.6	
	comp=N,62nm,0.8s						
P33M	**Teslin, Yukon**	**1.92**	**9**	P	**Pb**	**23 34 23.4**	**-1.2**
	baz=190,SNR=19						
P33M				Sb	**Sg**	**23 34 50.7**	**-0.1**
	baz=190						
WRAK	**Wrangell Islan**	**2.00**	**162**	Pn	**Pn**	**23 34 23.9**	**+0.5**
WRAK	**Wrangell Islan**	**2.00**	**162**		**Pn**	**23 34 23.8**	**+0.5**
WRAK				IAML		23 35 01.9	
	comp=N,112nm,0.6s						
WRAK				IAML		23 35 09.8	
	comp=N,80nm,0.6s						
WRAK	**Wrangell Islan**	**2.00**	**162**	P	**Pn**	**23 34 24.1**	**+0.8**
	baz=343,SNR=14						
WRAK				Sb	**Sg**	**23 34 52.9**	**-0.5**
	baz=343						
T35M	**Bob Quinn**	**2.19**	**127**		**Pn**	**23 34 26.6**	**+0.7**
T35M				IAML		23 35 05.2	
	comp=N,96nm,0.6s						
T35M				IAML		23 35 10.0	
	comp=E,82nm,0.8s						
T35M	**Bob Quinn**	**2.19**	**127**	P	**Pn**	**23 34 27.2**	**+1.3**
	baz=310,SNR=13						
U33K	**Whale Pass**	**2.22**	**175**		**Pb**	**23 34 28.2**	**-1.4**
U33K				IAML		23 35 09.1	
	comp=E,65nm,1.1s						
U33K	**Whale Pass**	**2.22**	**175**	P	**Pn**	**23 34 26.8**	**+0.4**
	baz=356						
U33K				Sb	**Sg**	**23 34 59.4**	**-1.1**
	baz=356						
WHY	**Whitehorse**	**2.45**	**343**	Pn	**Pn**	**23 34 30.5**	**+0.8**
WHY	**Whitehorse**	**2.45**	**343**		**Pn**	**23 34 30.6**	**+0.8**
WHY				IAML		23 35 20.6	
	comp=N,80nm,0.9s						
WHY	**Whitehorse**	**2.45**	**343**	P	**Pn**	**23 34 30.5**	**+0.8**
	baz=162						
WHY				S	**Sb**	**23 35 02.5**	**-1.6**
	baz=162						
P30M	**Million Dollar**	**2.55**	**316**	P	**Pn**	**23 34 31.3**	**+0.4**
	baz=133						
P30M				Sb	**Sb**	**23 35 08.9**	**+2.0**
	baz=133						
P29M	**Windy Craggy**	**2.58**	**302**		**Pn**	**23 34 32.7**	**+1.4**
P29M				IAML		23 35 24.1	
	comp=E,58nm,0.8s						
P29M	**Windy Craggy**	**2.58**	**302**	Pb	**Pb**	**23 34 35.5**	**-0.2**
	baz=119						
O30N	**Mendenhall**	**2.80**	**332**	Pn	**Pn**	**23 34 35.1**	**+0.8**
O30N	**Mendenhall**	**2.80**	**332**		**Pn**	**23 34 35.5**	**+1.2**
O30N				IAML		23 35 20.5	
	comp=E,57nm,0.8s						
O30N				IAML		23 35 25.1	
	comp=N,47nm,0.9s						
O30N	**Mendenhall**	**2.80**	**332**	P	**Pn**	**23 34 35.2**	**+0.8**
	baz=150						
O30N				Sb	**Sg**	**23 35 16.5**	**-2.5**
	baz=150						
CRAG	**Craig**	**2.87**	**176**	Pn	**Pn**	**23 34 35.0**	**-0.3**
CRAG				IAML		23 35 28.5	
	comp=N,26nm,1.0s						
CRAG				IAML		23 35 31.1	
	comp=E,25nm,1.2s						
HYT	**Haines Junctio**	**3.25**	**322**		**Pn**	**23 34 42.0**	**+1.4**
HYT	**Haines Junctio**	**3.25**	**322**	P	**Pn**	**23 34 42.1**	**+1.4**
	baz=139						
O29M	**Mount Kennedy**	**3.29**	**309**		**Pn**	**23 34 41.7**	**+0.4**
O29M				IAML		23 35 44.3	
	comp=N,33nm,0.8s						
O29M	**Mount Kennedy**	**3.29**	**309**	Pb	**Pb**	**23 34 48.4**	**+0.4**
	baz=125,SNR=6.4						
N31M	**Braeburn, Yuko**	**3.38**	**341**		**Pn**	**23 34 44.0**	**+1.6**
N30M	**Aishikik Lake**	**3.64**	**331**	Pn	**Pn**	**23 34 47.4**	**+1.4**
N30M				Sg	**Sg**	**23 35 42.3**	**-3.7**
N30M	**Aishikik Lake**	**3.64**	**331**		**Pn**	**23 34 47.5**	**+1.6**
N30M				IAML		23 35 52.7	
	comp=N,27nm,1.1s						
N30M	**Aishikik Lake**	**3.64**	**331**	P	**Pn**	**23 34 46.9**	**+1.0**
	baz=148						
M31M	**Drury Creek, Y**	**3.92**	**354**		**Pn**	**23 34 51.7**	**+1.9**
M31M				IAML		23 35 59.9	
	comp=N,20nm,0.7s						
O28M	**Mount Upton**	**4.22**	**308**	Pn	**Pn**	**23 34 54.4**	**+0.3**
O28M				IAML		23 36 17.7	
	comp=E,10nm,1.0s						
RUBB	**Prince Rupert**	**4.38**	**155**	Pn	**Pn**	**23 34 56.6**	**+0.6**
MMPY	**Sheldon Lake,**	**4.44**	**13**		**Pn**	**23 34 57.9**	**+1.0**
MMPY				IAML		23 36 33.3	
	comp=E,15nm,1.1s						
M30M	**Minto, Yukon**	**4.58**	**340**	Pn	**Pn**	**23 34 59.7**	**+0.9**
M30M	**Minto, Yukon**	**4.58**	**340**	P	**Pn**	**23 34 59.6**	**+0.8**
	baz=157						
M29M	**Somme Creek**	**4.82**	**331**	Pn	**Pn**	**23 35 03.4**	**+1.1**
M29M	**Somme Creek**	**4.82**	**331**	P	**Pn**	**23 35 03.1**	**+0.9**
	baz=147						
GRNC	**Granite Creek**	**4.87**	**303**	Pn	**Pn**	**23 35 03.8**	**+0.9**
GRNC				IAML		23 37 16.3	
	comp=E,8.3nm,0.6s						
GRNC				IAML		23 37 26.4	
	comp=N,10nm,0.9s						
DIB	**Dawson Inlet,**	**5.16**	**173**	Pn	**Pn**	**23 35 08.1**	**+1.3**
L29M	**L29M**	**5.32**	**336**	Pn	**Pn**	**23 35 09.9**	**+0.9**
L29M	**L29M**	**5.32**	**336**	P	**Pn**	**23 35 09.5**	**+0.5**
	baz=152						
K29M	**Barlow Dome**	**5.88**	**342**	Pn	**Pn**	**23 35 18.1**	**+1.3**
K29M	**Barlow Dome**	**5.88**	**342**	P	**Pn**	**23 35 17.7**	**+1.0**
	baz=159						
J30M	**Hart River**	**6.42**	**349**	Pn	**Pn**	**23 35 25.1**	**+0.9**
I30M	**Mount Dempster**	**7.06**	**350**		**Pn**	**23 35 35.2**	**+2.3**
I30M	**Mount Dempster**	**7.06**	**350**	P	**Pn**	**23 35 34.5**	**+1.5**
	baz=167,SNR=14						
H31M	**Peel River**	**7.52**	**357**		**Pn**	**23 35 41.1**	**+2.0**

DNK ***19*** *23:35:59.4±1.3, 62°.73N×21°.84W, h10km, ML4.3, Presumed earthquake*

REY ***19*** *23:36:12.8, 63°.90N×22°.28W, h6km*

IDC ***19*** *23:36:12.8±0.6, 63°.79N×22°.58W, h0km, mb4.1/19, mbtmp4.1/23, ML2.7/3, MS3.8/66, Error ellipse: s-maj=18.4km s-min=10.7km az=15.0*

MOS ***19*** *23:36:13.2±1.1, 64°.09N×22°.40W, h10km, mb4.7/26, MS4.0/17, Error ellipse: s-maj=16.4km s-min=11.9km az=17.6*

GCMT ***19*** *23:36:14.6±0.3, 63°.86N±0°.02×22°.46W±0°.03, h14km±1km, MW4.7/97, Moment Tensor Solution. s12,c13; s97,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.40±.07; $M_{\theta\theta}$0.14±.05; $M_{\phi\phi}$0.25±.05; $M_{r\theta}$0.40±.12; $M_{\theta\phi}$1.27±.05; $M_{\phi r}$-0.10±.12; Best double couple: $M_0$1.36000×10^{16} NP1:ϕs1.00000°, δ69.00000°, λ-167.00000°. NP2: ϕs266.00000°, δ78.00000°, λ-22.00000°. Principal axes: T 1.4950, Plg6.0000°, Azm315.0000°; N -0.2670, Plg65.0000°, Azm59.0000°; P -1.2260, Plg24.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***19*** *23:36:14.1, 64°.22N×22°.92W, h33km, mb4.5, Ms3.7*

NEIC ***19*** *23:36:14.6±1.3, 64°.07N±0°.05×22°.2W±0°.1, h10km±1km, mb4.5/254, Error ellipse: s-maj=11.3km s-min=6.3km az=117.0*

GFZ ***19*** *23:36:15.8, 63°.98N×22°.13W, h12km, Mw4.8/69, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.36; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$0.28; $M_{r\theta}$-0.05; $M_{\theta\phi}$1.59; $M_{\phi r}$0.16; Fault plane solution: $M_0$1.69154×10^{16} NP1: ϕs351.76706°, δ88.96545°, λ174.10542°. NP2: ϕs81.87387°, δ84.10638°, λ1.04005°. Principal axes: T 1.4795, Plg4.8975°, Azm306.6730°; N 0.3646, Plg84.0156°, Azm161.8475°; P -1.8441, Plg3.4306°, Azm36.9673°;*

INMG ***19*** *23:36:16.0±3.1, 64°.17N×21°.94W, h10km, M4.6, mb4.6, Ms3.7, #DIST_RANGE: DISTANT*

GFZ ***19*** *23:36:16.2±0.3, 64°.N±4°×2°.2W±°, h10km, M4.3/25, mb4.5/25*

ISC 19 23:36:13.7±0.6, 63°.90N±0°.02×22°.19W±0°.02, h7km±3km, n695, σ1°.72/667, mb4.5/207, MS3.9/80, 7C-17D, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKRI	**Krysuvik**	**0.05**	**109**	P	**Pg**	**23 36 14.9**	**-0.4**
IKRI				S	**Sg**	**23 36 16.5**	**0.0**
IVOG	**Vogar**	**0.12**	**310**	P	**Pg**	**23 36 14.9**	**-1.4**
IVOG				S	**Sg**	**23 36 16.7**	**-1.4**
IGRV	**Grindav??k**	**0.12**	**252**	P	**Pg**	**23 36 14.8**	**-1.6**
IGRV				S	**Sg**	**23 36 16.6**	**-1.7**
IKAS	**Kald??rsel**	**0.20**	**49**	P	**Pg**	**23 36 17.3**	**-0.4**
IKAS				S	**Sg**	**23 36 20.9**	**+0.6**
IVOS	**Vogsosar**	**0.22**	**101**	P	**Pg**	**23 36 17.9**	**-0.1**
IVOS				S	**Sg**	**23 36 22.0**	**+1.0**
IRNE	**Reykjanes**	**0.24**	**251**	P	**Pg**	**23 36 16.9**	**-1.6**
IRNE				S	**Sg**	**23 36 20.4**	**-1.4**
INYL	**Nylenda**	**0.26**	**288**	P	**Pg**	**23 36 17.0**	**-1.8**
INYL				S	**Sg**	**23 36 20.2**	**-2.0**
IBJA	**Bjarnastaoir**	**0.39**	**82**	P	**Pg**	**23 36 20.9**	**-0.5**
IBJA				S	**Sg**	**23 36 27.0**	**+0.5**
IEDA	**Engidalur**	**0.40**	**62**	P	**Pg**	**23 36 20.6**	**-0.9**
IEDA				S	**Sg**	**23 36 26.8**	**0.0**
IMOR	**Morastadir**	**0.45**	**25**	P	**Pg**	**23 36 21.0**	**-1.5**
IMOR				S	**Sg**	**23 36 27.2**	**-1.2**
IKRO	**Krokur**	**0.51**	**66**	P	**Pg**	**23 36 22.5**	**-1.1**
IKRO				S	**Sg**	**23 36 30.8**	**+0.4**
ISOL	**Solvholt**	**0.55**	**86**	P	**Pg**	**23 36 23.3**	**-1.0**
ISOL				S	**Sg**	**23 36 31.4**	**-0.1**
IASM	**Asmuli**	**0.70**	**94**	P	**Pg**	**23 36 25.8**	**-1.4**
IASM				S	**Sg**	**23 36 35.9**	**-0.3**
ISAU	**Saurbar**	**0.79**	**82**	P	**Pg**	**23 36 27.2**	**-1.7**
ISAU				S	**Sg**	**23 36 38.4**	**-0.7**
BORG	**Borgarnes**	**0.93**	**23**	Pn	**Pg**	**23 36 28.9**	**-2.7**
	1µm,0.3s,baz=208,slow=8.3,SNR=3414						
BORG				Sn	**Sg**	**23 36 41.9**	**-1.8**
	3µm,0.3s,baz=357,slow=19,SNR=52						
BORG				LR	LR	23 37 03.5	
	comp=Z,3µm,19.2s,baz=21,slow=46						
BORG	**Borgarnes**	**0.93**	**23**		**Pg**	**23 36 28.9**	**-2.7**
BORG				Sg	**Sg**	**23 36 39.7**	**-4.1**
BORG	**Borgarnes**	**0.93**	**23**	P	**Pg**	**23 36 29.0**	**-2.7**
IASB	**sbjarnarstai**	**0.94**	**23**	P	**Pg**	**23 36 28.9**	**-2.8**
IASB				S	**Sg**	**23 36 41.5**	**-2.3**
IGYG	**Gygjarholskot**	**0.95**	**65**	P	**Pg**	**23 36 29.6**	**-2.4**
IGYG				S	**Sg**	**23 36 43.2**	**-1.0**
IVES	**Vestmannaeyjar**	**0.96**	**117**	P	**Pg**	**23 36 29.8**	**-2.4**
IVES				S	**Sg**	**23 36 42.5**	**-2.1**
IVEY	**Vestmannaeyjar**	**0.98**	**118**	P	**Pg**	**23 36 30.0**	**-2.4**
IVEY				S	**Sg**	**23 36 43.3**	**-1.8**
IHAU	**Haukadalur**	**0.98**	**85**	P	**Pg**	**23 36 30.3**	**-2.3**
IHAU				S	**Sg**	**23 36 44.3**	**-1.1**
IBEY	**Bjarnarey**	**0.99**	**116**	P	**Pg**	**23 36 30.3**	**-2.5**
IBEY				S	**Sg**	**23 36 43.9**	**-1.8**
IMID	**Miomork**	**1.05**	**102**	P	**Pg**	**23 36 31.0**	**-2.9**
IMID				S	**Sg**	**23 36 45.5**	**-1.9**
IFED	**Fedgar**	**1.11**	**82**	P	**Pg**	**23 36 32.2**	**-2.8**
IMJO	**Mjoaskard**	**1.11**	**87**	P	**Pg**	**23 36 32.3**	**-2.7**
IMJO				S	**Sg**	**23 36 47.0**	**-2.5**
IESK	**Eystri-Skogar**	**1.27**	**106**	P	**Pn**	**23 36 34.0**	**-3.

SFJD Kangerlussuaq 12.16 297 Pn **Pn** **23 39 05.2 -1.9**
EKB Eskdalemuir 12.83 123 Pn **Pn** **23 39 16.6 +0.2**
ESK Eskdalemuir 12.84 123 **Pn** **23 39 17.2 +0.8**
ESK Eskdalemuir 12.84 123 *e*P **Pn** **23 39 16.2 -0.2**
EKA Eskdalemuir Ar 12.85 123 Pn **Pn** **23 39 16.0 -0.5**
comp=Z,7.4nm,0.6s,baz=318,slow=12,SNR=27
EKA Sn **Sn** **23 41 33.1 -6.3**
baz=308,slow=27
EKA LR LR 23 43 46.1
comp=Z,768nm,18.2s,baz=323,slow=35
NUUK Nuuk 12.89 285 P **Pn** **23 39 19.4 +2.4**
DSB Dublin 13.44 135 Pn **Pn** **23 39 25.7 +1.1**
HLM1 Long Mynd 15.20 130 *e*P **Pn** **23 39 48.6 +0.1**
NC204 NORSAR Array S 15.30 85 **P** **23 39 53.3 -1.4**
MCH1 Michaelchurch 15.59 131 *e*P **Pn** **23 39 54.4 +0.7**
NB2 NORSAR Subarra 15.60 85 P **P** **23 39 58.6 +0.6**
comp=Z,10nm,1.4s,baz=295,slow=11
NOA NORSAR Array B 15.60 85 Pn **Pn** **23 39 55.4 +1.7**
baz=293,slow=11,SNR=3.8
NOA LR LR 23 45 52.7
comp=Z,202nm,18.5s,baz=295,slow=37
KULLO Kullorsuaq 16.05 326 P **Pn** **23 39 59.6 +0.2**
HFS Hagfors 17.10 86 P **P** **23 40 15.2 +0.7**
comp=Z,0.1nm,0.3s,baz=302,slow=9.8,SNR=4.2
HFS LR LR 23 46 49.3
comp=Z,240nm,18.9s,baz=292,slow=37
comp=Z,1.1nm,0.7s
SPITS Spitsbergen Ar 18.40 24 P **P** **23 40 30.7 +1.9**
baz=256,slow=15
comp=Z,4.5nm,0.8s
ARCES ARCESS Array B 19.22 52 P **Pn** **23 40 40.5 +1.7**
comp=Z,5.3nm,0.8s,baz=272,slow=8.9,SNR=11
ARCES LR LR 23 46 47.7
comp=Z,539nm,18.5s,baz=282,slow=33
ARCES ARCESS Array B 19.22 52 **P** **23 40 37.7 -0.2**
UCC Uccle 19.22 121 P **Pn** **23 40 38.7 -0.2**
UCC Uccle 19.22 121 *d*P **Pn** **23 40 39.8 +0.9**
comp=Z,4.8nm,0.8s
WTSB Winterswijk 19.27 115 P **Pn** **23 40 39.8 +0.4**
BSEG Bad Segeberg 19.29 106 *e*P **Pn** **23 40 41.9 +2.2**
comp=Z,6.3nm,0.8s,baz=322,slow=10
BSEG *e*L L 23 47 54.0
comp=Z,135nm,18.5s
BSEG Bad Segeberg 19.29 106 P **Pn** **23 40 40.3 +0.6**
IBBN Ibbenburen 19.40 113 *e*P **Pn** **23 40 44.1 +3.1**
comp=Z,46nm,1.6s,baz=322,slow=10
IBBN Ibbenburen 19.40 113 P **Pn** **23 40 43.8 +2.8**
TULEG Thule 19.43 329 P **P** **23 40 39.4 -0.7**
KEV Kevo 19.72 51 **P** **23 40 42.8 -0.5**
RETH Rethem/Aller, 19.74 110 *e*P **Pn** **23 40 45.4 +0.4**
comp=Z,12nm,1.1s,baz=322,slow=10
RETH Rethem/Aller, 19.74 110 P **Pn** **23 40 46.0 +0.9**
BMRD Maredsous 19.78 121 *d*P **P** **23 40 43.9 -0.2**
comp=Z,16nm,0.8s
BGES Gesves 19.83 120 *d*P **Pn** **23 40 46.5 +0.2**
comp=Z,11nm,0.8s
HGN Heimansgroeve 19.86 118 P **P** **23 40 45.2 +0.2**
BUG Bochum--Univer 19.86 115 *e*P **Pn** **23 40 48.1 +1.6**
comp=Z,40nm,1.3s,baz=322,slow=10
BUG Bochum--Univer 19.86 115 P **Pn** **23 40 47.7 +1.2**
BSTI Sart Tilman 19.86 119 *d*P **Pn** **23 40 47.1 +0.6**
comp=Z,9.2nm,0.7s
DOU Dourbes 19.88 121 *d*P **Pn** **23 40 47.1 +0.3**
comp=Z,12nm,1.2s
BCLA Clavier 19.89 120 *d*P **Pn** **23 40 46.9 +0.1**
comp=Z,6.5nm,0.9s
MEM Membach 20.01 118 *d*P Pn 23 40 48.9 +0.6
comp=Z,16nm,0.9s
MEM Membach 20.01 118 P Pn 23 40 49.3 +1.0
RCHB Rochefort 20.07 120 *d*P Pn 23 40 49.1 +0.1
comp=Z,8.7nm,1.1s
RCHB Rochefort 20.07 120 P Pn 23 40 49.6 +0.6
FRB Frobisher Bay 20.11 291 LR LR 23 47 45.7
comp=Z,410nm,20.5s,baz=76,slow=35
BHOU Houvegnez 20.21 119 *d*P Pn 23 40 51.3 +0.6
comp=Z,18nm,1.1s
GORT1 Trebel 20.38 107 *e*P Pn 23 40 52.3 -0.2
comp=Z,21nm,1.1s,baz=322,slow=10
KASTN Kahler Asten 20.50 114 *e*P Pn 23 40 55.0 +0.8
comp=Z,14nm,0.9s,baz=322,slow=10
ASSE Asse, Remlinge 20.73 109 *e*P Pn 23 40 55.6 -1.1
comp=Z,39nm,1.4s,baz=322,slow=10
CLF Chambon-Foret 20.76 128 **P** **23 40 55.2 +0.4**
CLF Chambon-Foret 20.76 128 P Pn 23 40 57.5 +0.3
WLF Walferdange 20.82 120 P **P** **23 40 54.6 -0.8**
WLF Walferdange 20.82 120 *d*P Pn 23 40 57.3 -0.6
comp=Z,9.4nm,0.9s
WLF Walferdange 20.82 120 P **P** **23 40 55.5 0.0**
CLZ Clausthal 20.82 110 *e*P Pn 23 40 56.7 -1.2
comp=Z,12nm,1.1s,baz=322,slow=10
CLZ Clausthal 20.82 110 P Pn 23 40 56.9 -1.0
FLTG Flechtingen 20.82 108 *e*P Pn 23 40 56.7 -1.2
comp=Z,9.7nm,0.9s,baz=322,slow=10
GTTG Gottingen 20.88 111 *e*P Pn 23 40 57.4 -1.0
comp=Z,14nm,0.9s,baz=322,slow=10
GTTG Gottingen 20.88 111 P Pn 23 40 57.4 -1.0
TNS Taunus Mts 21.27 116 *e*P **P** **23 41 03.0 +2.6**
comp=Z,25nm,0.9s,baz=322,slow=10
TNS *e*L L 23 49 35.9
comp=Z,668nm,18.7s
UBBA Unterbreizbach 21.44 112 *e*P **P** **23 41 03.1 +1.2**
comp=Z,14nm,1.2s,baz=322,slow=10
WIMM Wimmelburg 21.53 109 P **P** **23 41 04.0 +1.0**
POIN Pond Inlet 21.54 318 P **P** **23 41 01.8 -1.1**
POIN IAmb IAmb 23 41 11.2
comp=Z,25nm,1.3s
RUE Ruedersdorf 21.80 105 *e*P **P** **23 41 06.7 +0.9**
comp=Z,27nm,1.1s,baz=322,slow=10
FIA1 FINESS Array S 21.87 74 **P** **23 41 05.3 -1.3**
FINES FINESS Array B 21.87 74 P **P** **23 41 07.2 +0.6**
comp=Z,14nm,1.0s,baz=310,slow=8.9,SNR=29
FINES LR LR 23 49 52.3
comp=Z,221nm,18.6s,baz=293,slow=37
comp=Z,14nm,1.0s
FINES FINESS Array B 21.87 74 **P** **23 41 05.7 -0.9**
NEUB Neuenburg 21.88 109 *e*P **P** **23 41 07.9 +1.1**
comp=Z,39nm,0.8s,baz=322,slow=10
NEUB Neuenburg 21.88 109 P **P** **23 41 09.1 +2.4**
MOX Moxa 22.24 111 *e*P **P** **23 41 12.7 +2.0**
comp=Z,23nm,1.1s,baz=322,slow=10
MOX *e*L L 23 50 29.1
comp=Z,301nm,18.8s
MOX Moxa 22.24 111 P **P** **23 41 13.0 +2.3**
MTSE Matsula 22.27 82 P **P** **23 41 14.3 +3.4**
CLL Collm 22.32 108 *e*P **P** **23 41 12.0 +0.5**
CLL *i* 23 41 15.0
CLL *e*S **S** **23 45 15.0 -1.8**
CLL pmax pmax
comp=Z,28nm,1.6s
CLL Collm 22.32 108 *e*P **P** **23 41 13.5 +2.0**
comp=Z,32nm,1.6s,baz=322,slow=10
CLL *e*L L 23 49 38.5
comp=Z,245nm,21.7s
CLL Collm 22.32 108 *e*P **P** **23 41 12.0 +0.5**
comp=Z,28nm,1.6s
CLL *i* x x 23 41 15.0
CLL *ex* x 23 41 17.0
comp=Z,28nm,1.6s
CLL *e*PP **PnPn** **23 41 34.0 +0.1**
CLL *e*PPP PPP 23 41 43.0
CLL *e*S **S** **23 45 15.0 -1.8**
ECH Echery 22.39 121 **P** **23 41 12.7 +0.5**
ECH Echery 22.39 121 P **P** **23 41 13.4 +1.2**
APA Apatity 22.47 56 *e*P **P** **23 41 14.6 +1.6**
APA pmax pmax
comp=Z,11nm,0.9s
APA MLR MLR
comp=Z,537nm,16.7s
PLN Plauen 22.58 110 *e*P **P** **23 41 15.0 +0.7**
comp=Z,5.3nm,0.8s,baz=322,slow=10
STU Stuttgart 22.72 117 P **P** **23 41 16.3 +0.5**
STU Stuttgart 22.72 117 *e*P **P** **23 41 17.0 +1.1**
comp=Z,101nm,1.1s,baz=322,slow=10
STU Stuttgart 22.72 117 P **P** **23 41 17.0 +1.1**
BFO Black Forest 22.74 119 **P** **23 41 16.0 0.0**
BFO Black Forest 22.74 119 *e*P **P** **23 41 17.2 +1.1**
comp=Z,31nm,1.1s,baz=322,slow=10
BFO *e*L L 23 49 25.2
comp=Z,314nm,21.2s
TANN Tannenbergstha 22.76 110 *e*P **P** **23 41 16.5 +0.2**
comp=Z,33nm,1.3s,baz=322,slow=10
GRA1 Grafenberg Arr 22.81 113 **P** **23 41 16.3 -0.4**
GRA1 IAmb IAmb 23 41 21.7
comp=Z,20nm,1.0s
GRF Grafenberg Arr 22.81 113 *e*P **P** **23 41 18.0 +1.2**
comp=Z,20nm,1.0s,baz=322,slow=10
GRF *e*L L 23 49 41.2
comp=Z,162nm,21.4s
LVZ Lovozero 22.82 55⇑ *e*P **P** **23 41 18.6 +1.8**
LVZ pmax pmax
comp=Z,41nm,2.5s
LVZ Lovozero 22.82 55 P **P** **23 41 16.5 -0.3**
LVZ IAmb IAmb 23 41 36.8
comp=Z,16nm,1.2s
NKC Novy Kostel 22.90 110 *e*P **P** **23 41 18.6 +0.9**
NKC MLR MLR
comp=Z,400nm,12.9s
NKC Novy Kostel 22.90 110 *e*P **P** **23 41 18.6 +0.9**
NKC AMS AMS 23 53 10.0
comp=Z,400nm,12.9s
NKC Novy Kostel 22.90 110 P **P** **23 41 19.1 +1.4**
BRG Berggiesshubel 23.04 107 *e*P **P** **23 41 19.2 +0.1**
comp=Z,22nm,1.1s,baz=322,slow=10
BRG Berggiesshubel 23.04 107 P **P** **23 41 19.7 +0.6**
BRG Berggiesshubel 23.04 107 *e*P **P** **23 41 19.4 +0.3**
BRG Amp 23 41 22.9
comp=Z,13nm,0.8s
BRG Berggiesshubel 23.04 107 P P 23 41 28.4 +9.3
BRG Amp 23 41 31.4
comp=Z,4.9nm,0.9s
BRG Berggiesshubel 23.04 107 S **S** **23 45 35.0 +5.1**
BOURR Bourrignon 23.09 122 P **P** **23 41 22.1 +2.3**
ROTZ Rotzenmuhle 23.16 111 *e*P **P** **23 41 20.8 +0.4**
comp=Z,15nm,1.9s,baz=322,slow=10
SLE Schleitheim 23.27 119 P **P** **23 41 23.6 +2.1**
ILON Igloolik, Nuna 23.39 310 P **P** **23 41 21.0 -1.5**
ILON IAmb IAmb 23 41 31.1
comp=Z,23nm,1.1s
PGAV Gavieira, Arco 23.41 153 *e*P **P** **23 41 25.5 +2.5**
PGAV *i* IAmb IAmb 23 41 40.3
comp=Z,40nm,1.6s
PGAV *e*LR LR 23 47 33.7
PGAV *i* IAMs_20 IAMs_20 23 49 07.6
comp=Z,320nm,20.0s
GIMEL St. Georges / 23.46 124 P **P** **23 41 24.4 +0.9**
VSU Vasula 23.69 80*d**e*P **P** **23 41 26.1 +0.6**
VSU pmax pmax
comp=Z,27nm,1.2s
WET Wettzell 23.92 111 *e*P **P** **23 41 28.1 +0.3**
comp=Z,11nm,0.8s,baz=322,slow=10
WET *e*L L 23 50 37.7
comp=Z,229nm,20.6s
SSB Saint Sauveur 23.93 128 **P** **23 41 28.4 +0.4**
SSB IAmb IAmb 23 41 31.7
comp=Z,14nm,1.1s
PRU Pruhonice 23.96 108 *e*P **P** **23 41 30.2 +2.0**
PRU MLR MLR
comp=Z,300nm,20.5s
PRU Pruhonice 23.96 108 *e*P **P** **23 41 30.2 +2.0**
PRU AMS AMS 23 50 50.0
comp=Z,300nm,20.5s
SENIN Lac Senin/Sane 23.98 123 **P** **23 41 28.3 -0.4**
SENIN IAmb IAmb 23 41 31.9
comp=Z,14nm,0.8s
SCHQ Schefferville 24.00 269 P **P** **23 41 26.7 -1.8**
comp=Z,8.0nm,0.9s,baz=49,slow=7.4,SNR=11
SCHQ LR LR 23 49 11.0
comp=Z,59nm,19.9s,baz=52,slow=33
comp=Z,8.0nm,0.9s
SCHQ Schefferville 24.00 269 **P** **23 41 28.2 -0.4**
SCHQ IAmb IAmb 23 41 30.1
comp=Z,11nm,0.9s
FUR Furstenfeldbru 24.04 115 *e*L L 23 51 19.2
comp=Z,492nm,18.5s
KSP Ksiaz 24.06 105 P **P** **23 41 29.9 +0.7**
comp=Z,21nm,1.0s
CHVC Chvalec 24.15 105 *e*P **P** **23 41 31.7 +1.7**
CHVC MLR MLR
comp=Z,400nm,13.3s
CHVC Chvalec 24.15 105 *e*P **P** **23 41 31.7 +1.7**
CHVC AMS AMS 23 53 30.0
comp=Z,400nm,13.3s
UPC Upice 24.19 106 *e*P **P** **23 41 32.7 +2.3**
UPC MLR MLR
comp=Z,300nm,13.0s
UPC Upice 24.19 106 *e*P **P** **23 41 32.7 +2.3**
UPC AMS AMS 23 53 40.0
comp=Z,300nm,13.0s
DAVA Damuels 24.20 118 *e*P **P** **23 41 31.2 +0.5**
comp=Z,11nm,0.8s,SNR=5.1
KHC Kasperske Hory 24.21 111*c i*P **P** **23 41 31.4 +0.8**
KHC pmax pmax
comp=Z,16nm,0.8s
KHC Kasperske Hory 24.21 111 *e*P **P** **23 41 31.4 +0.8**
KHC AMS AMS 23 53 20.0
comp=Z,400nm,11.3s
KHC Kasperske Hory 24.21 111 **P** **23 41 30.1 -0.5**
KHC IAmb IAmb 23 41 34.2
comp=Z,16nm,0.9s
KHC Kasperske Hory 24.21 111 P **P** **23 41 31.5 +0.8**
comp=Z,21nm,1.2s
KHC Kasperske Hory 24.21 111 P **P** **23 41 31.7 +1.0**
ZVC Zvikov 24.23 109 *e*P **P** **23 41 31.8 +1.0**
ZVC AMS AMS 23 53 20.0
comp=Z,400nm,12.6s
OSTC Ostas 24.24 105 *e*P **P** **23 41 33.7 +2.8**
OSTC MLR MLR
comp=Z,400nm,12.3s
OSTC Ostas 24.24 105 *e*P **P** **23 41 33.7 +2.8**
OSTC AMS AMS 23 53 40.0
comp=Z,400nm,12.3s
RETA Reutte 24.38 117 *e*P **P** **23 41 33.4 +1.2**
comp=Z,11nm,1.3s,SNR=14
MVO Moncorvo 24.43 151 *e*P **P** **23 41 36.7 +3.9**
MVO *i* IAmb IAmb 23 41 37.9
comp=Z,16nm,1.6s
MVO *e*LR LR 23 48 27.3
MVO *i* IAMs_20 IAMs_20 23 50 03.6
comp=Z,278nm,18.0s
DPC Dobruska-Polom 24.44 105 *e*P **P** **23 41 33.6 +0.9**
DPC MLR MLR
comp=Z,300nm,13.8s
DPC Dobruska-Polom 24.44 105 *e*P **P** **23 41 33.6 +0.9**
DPC AMS AMS 23 53 30.0
comp=Z,300nm,13.8s
DPC Dobruska-Polom 24.44 105 P **P** **23 41 33.4 +0.7**
comp=Z,11nm,1.1s
GEC2 GERESS Array S 24.49 111 P **P** **23 41 33.1 -0.2**
GEC2 GERESS Array S 24.49 111 *e*L L 23 50 55.8
comp=Z,248nm,21.2s
GERES GERESS Array B 24.49 111 P **P** **23 41 34.4 +1.2**
comp=Z,0.6nm,0.7s,baz=309,slow=8.4,SNR=9.8
GERES LR LR 23 51 17.2
comp=Z,250nm,20.4s,baz=314,slow=37
comp=Z,0.6nm,0.7s
GERES GERESS Array B 24.49 111 P **P** **23 41 34.2 +1.0**
DAVOX Davos/Dischmat 24.61 119 LR LR 23 50 46.2
comp=Z,307nm,21.6s,baz=312,slow=35
MOTA Moosalm 24.63 116 *e*P **P** **23 41 36.1 +1.5**
comp=Z,15nm,1.3s,SNR=14
TUE Stuetta 24.66 120 **P** **23 41 36.0 +1.0**
TUE Stuetta 24.66 120 P **P** **23 41 36.6 +1.6**
comp=Z,80nm,1.0s
PVIS Viseu 24.69 153 *e*P **P** **23 41 38.3 +3.2**
FETA Feichten 24.75 117 *e*P **P** **23 41 37.4 +1.8**
comp=Z,7.1nm,1.4s
CKRC Cesky Krumlov 24.76 110 *e*P **P** **23 41 37.3 +1.7**
CKRC MLR MLR
comp=Z,300nm,13.3s
CKRC Cesky Krumlov 24.76 110 *e*P **P** **23 41 37.3 +1.7**
CKRC AMS AMS 23 54 00.0
comp=Z,300nm,13.3s
SQTA Sankt Quirin 24.77 116 *e*P **P** **23 41 36.6 +0.7**
comp=Z,15nm,1.3s,SNR=12
WATA Walderalm 24.83 116 *e*P **P** **23 41 37.2 +0.9**
comp=Z,20nm,1.0s,SNR=18
KRLC Kraliky 24.84 105 *e*P **P** **23 41 38.0 +1.6**
KRLC MLR MLR
comp=Z,400nm,11.7s
KRLC Kraliky 24.84 105 *e*P **P** **23 41 38.0 +1.6**
KRLC AMS AMS 23 53 50.0
comp=Z,400nm,11.7s
SUW Suwalki 24.85 92 P **P** **23 41 36.4 0.0**
FUORN Ofenpass-Fuorn 24.90 119 **P** **23 41 38.3 +1.2**
FUORN IAmb IAmb 23 42 06.1
comp=Z,16nm,1.2s
WTTA Wattenberg 24.91 116 *e*P **P** **23 41 38.1 +1.0**
comp=Z,17nm,1.1s,SNR=14
RJOB Jochberg 24.99 114 *e*P **P** **23 41 39.2 +1.4**
comp=Z,19nm,0.8s,baz=322,slow=10
MTE Manteigas 25.06 153 *e*P **P** **23 41 42.2 +3.8**
MTE *i* IAmb IAmb 23 41 43.8
comp=Z,27nm,1.7s
MTE *e*S S 23 46 20.0 +17
MTE *e*LR LR 23 48 25.5
MTE *i* IAMs_20 IAMs_20 23 49 56.1
comp=Z,245nm,22.0s
MTE Manteigas 25.06 153 P **P** **23 41 40.5 +2.0**
LESA Schwarzleotal 25.20 114 *e*P **P** **23 41 40.5 +0.9**
comp=Z,13nm,0.9s,SNR=18
PCAS Casmilo, Conde 25.21 155 *e*P **P** **23 41 44.0 +4.3**
CEST Esterri de Car 25.24 136 **P** **23 41 41.5 +1.4**
VRAC Vranov 25.34 107 LR LR 23 52 02.5
comp=Z,139nm,19.7s,baz=322,slow=37
VRAC Vranov 25.34 107 *e*P **P** **23 41 42.1 +1.3**
STEB Steborice 25.37 104 *e*P **P** **23 41 42.5 +1.4**
BIOA Bad Ischl, Aus 25.37 113 *e*P **P** **23 41 42.5 +1.4**
comp=Z,8.8nm,1.1s
MORC Moravsky Berou 25.39 105 **P** **23 41 42.2 +0.9**
MORC IAmb IAmb 23 41 46.2
comp=Z,14nm,0.9s
MORC Moravsky Berou 25.39 105 *e*P **P** **23 41 42.5 +1.2**
KRUC Moravsky 25.45 107 *e*P **P** **23 41 42.9 +1.1**
MOA Molln 25.50 112 *e*P **P** **23 41 43.7 +1.3**
comp=Z,3.3nm,0.9s
OKC Ostrava-Krasne 25.60 104 *e*P **P** **23 41 47.1 +3.9**
OKC MLR MLR
comp=Z,500nm,13.2s
OKC Ostrava-Krasne 25.60 104 *e*P **P** **23 41 47.1 +3.9**
OKC AMS AMS 23 53 50.0
comp=Z,500nm,13.2s
ABTA Abfaltersbach 25.68 115 *e*P **P** **23 41 45.2 +1.2**
comp=Z,16nm,1.4s,SNR=11
PSARD Sardoal 25.71 154 *e*P **P** **23 41 47.7 +3.4**
PSARD *i* IAmb IAmb 23 41 48.9
comp=Z,25nm,1.9s
KBA Koelnbreinsper 25.75 114 *e*P **P** **23 41 46.3 +1.6**
comp=Z,6.0nm,0.7s,SNR=7.6
MAUC Maruska 25.82 105 *e*P **P** **23 41 48.0 +2.8**
MAUC AMS AMS 23 54 10.0
comp=Z,500nm,13.6s
SALO Salr 25.83 119 **P** **23 41 46.8 +1.5**
NACGM Naroch 25.86 87 *e*P **P** **23 41 46.2 +0.8**
comp=Z,8.0nm,0.9s,baz=310
RES Resolute Bay 25.91 324 LR LR 23 51 51.2
comp=Z,270nm,19.3s,baz=49,slow=36
CTI Castel Tesino 25.91 117 **P** **23 41 47.2 +1.1**
PMRV Marv??o 26.03 153 *e*P **P** **23 41 50.1 +3.0**
PMRV *i* IAmb IAmb 23 41 54.3
comp=Z,20nm,1.5s
PMRV *e*S S 23 46 39.5 +21
PMRV *e*LR LR 23 48 45.2
PMRV *i* IAMs_20 IAMs_20 23 50 23.8
comp=Z,199nm,22.0s
OJC Ojcow 26.03 102 **P** **23 41 47.5 +0.4**
OJC Ojcow 26.03 102 P **P** **23 41 48.2 +1.1**
comp=Z,7.9nm,1.0s
WINA Alland / Wiene 26.05 109 *e*P **P** **23 41 48.7 +1.4**
comp=Z,6.7nm,1.1s
CORI Orista 26.06 136 P **P** **23 41 48.4 +1.0**
CORI IAmb IAmb 23 41 51.2
comp=Z,16nm,1.1s
CONA Conrad Observa 26.10 110 *e*P **P** **23 41 49.0 +1.1**
comp=Z,6.2nm,0.8s,SNR=8.1
STAL STALIGIAL 26.16 116 P **P** **23 41 48.9 +0.6**
PMTG Montargil 26.21 155 *e*P **P** **23 41 54.8 +6.0**
PMTG *i* IAmb IAmb 23 42 09.5
comp=Z,26nm,1.6s
SESA Seetaler Alpe, 26.21 112 *e*P **P** **23 41 50.1 +1.1**
comp=Z,9.1nm,1.0s
MYKA Terra Mystica 26.23 114 *e*P **P** **23 41 50.1 +1.2**
comp=Z,13nm,0.9s,SNR=12
SMOL Smolenice 26.30 107 *e*P **P** **23 41 51.4 +1.8**
SMOL pmax pmax
comp=Z,4.0nm,1.2s
PRED Cave del Predi 26.35 114 **P** **23 41 50.6 +0.5**
MODS Modra-Piesok 26.35 107 *e*P **P** **23 41 53.0 +3.0**
MODS pmax pmax
comp=Z,26nm,1.6s
MODS Modra-Piesok 26.35 107 *e*P **P** **23 41 53.0 +3.0**
RONA Rosalia, Austr 26.46 109 *e*P **P** **23 41 51.9 +0.9**
comp=Z,6.8nm,1.0s,SNR=10
PRMA PARMA 26.47 121 P **P** **23 41 51.7 +0.7**
TEOL Teolo 26.49 118 P **P** **23 41 51.8 +0.6**
PARRA Arraiolos 26.50 155 *e*P **P** **23 41 53.4 +2.1**
PARRA *i* IAmb IAmb 23 41 58.4
comp=Z,19nm,1.6s
ARSA Arzberg 26.50 111 P **P** **23 41 52.6 +1.2**
ARSA IAmb IAmb 23 41 55.0
comp=Z,12nm,1.5s
ARSA Arzberg 26.50 111 *e*P **P** **23 41 52.3 +0.9**
comp=Z,5.8nm,1.5s
PESTR Estremoz 26.53 154 P **P** **23 41 53.4 +1.7**
ESBB Sonseca Array 26.54 147 P **P** **23 41 52.1 +0.3**
ESBB IAmb IAmb 23 41 57.4
comp=Z,17nm,1.4s
ESDC Sonseca Array 26.55 147 P **P** **23 41 52.3 +0.4**
comp=Z,4.1nm,0.7s,baz=342,slow=7.8,SNR=26
ESDC LR LR 23 51 22.9
comp=Z,330nm,20.1s,baz=327,slow=34
comp=Z,4.1nm,0.7s
ESDC Sonseca Array 26.55 147 **P** **23 41 52.3 +0.4**
ESDC IAmb IAmb 23 41 57.7
comp=Z,20nm,1.2s
PAB San Pablo 26.58 148 **P** **23 41 53.4 +1.2**
PAB IAmb IAmb 23 41 58.0
comp=Z,9.2nm,0.8s
EBR Ebro Roquetas 26.65 139 P **P** **23 41 54.7 +2.0**
LANS Liptovska Anna 26.69 104 *e*P **P** **23 41 56.1 +3.0**
LANS pmax pmax
comp=Z,6.0nm,0.8s
LANS Liptovska Anna 26.69 104 *e*P **P** **23 41 56.1 +3.0**
OBKA Obir 26.69 113 *e*P **P** **23 41 53.4 +0.3**
comp=Z,3.1nm,1.0s
SABO M.te Sabotino 26.74 115 **P** **23 41 53.5 0.0**
SOKA Soboth 26.75 112 *e*P **P** **23 41 54.1 +0.3**
comp=Z,4.5nm,1.1s,SNR=6.3
NIE Niedzica 26.85 102 P **P** **23 41 56.7 +2.2**
comp=Z,4.8nm,1.1s
TRI Trieste 27.03 115 P **P** **23 41 55.6 -0.4**
TRI IAmb IAmb 23 42 02.5
comp=Z,9.8nm,1.1s
ZCCA Zocca 27.07 120 P **P** **23 41 57.8 +1.2**
MESJ Messejana 27.41 155 P **P** **23 42 00.2 +0.7**
KWP Kalwaria Pacla 27.73 100 P **P** **23 42 03.7 +1.3**
comp=Z,13nm,1.0s
KLMR Klimovskoe 27.79 68 *e*P **P** **23 42 03.3 +0.5**
KLMR pmax pmax
comp=Z,11nm,1.6s
KLMR MLR MLR
comp=Z,135nm,10.0s
PSZ Piszkesteto 27.81 105 **P** **23 42 03.1 -0.1**
PSZ IAmb IAmb 23 42 06.8
comp=Z,8.1nm,0.9s
PVAQ Vaqueiros 27.92 155 *e*S S 23 47 06.9 +19
PVAQ *e*LR LR 23 49 40.1
PVAQ *i* IAMs_20 IAMs_20 23 51 40.5
comp=Z,147nm,20.0s
KOLS Kolonicke sedl 28.07 101 *e*P **P** **23 42 07.7 +2.3**
KOLS pmax pmax
comp=Z,5.0nm,0.8s
KOLS Kolonicke sedl 28.07 101 *e*P **P** **23 42 07.7 +2.3**
MURB Monte Urbino 28.59 120 P **P** **23 42 10.9 +0.8**
MORH Mrgy, Hungar 28.62 109 P **P** **23 42 11.6 +1.3**
comp=Z,3.0nm,2.0s
CESX Cesi 29.16 120 P **P** **23 42 15.6 +0.4**
NRCA Norcia 29.18 119 P **P** **23 42 16.7 +1.3**
AQU L'Aquila 29.70 119 P **P** **23 42 21.4 +1.5**
AQU IAmb IAmb 23 42 36.7
comp=Z,8.2nm,0.9s
AKASG Malin Array Be 29.82 92 P **P** **23 42 21.3 +0.4**
comp=Z,1.5nm,0.7s,baz=323,slow=9.6,SNR=8.3
AKASG LR LR 23 54 39.4
comp=Z,277nm,18.6s,baz=306,slow=37
comp=Z,1.5nm,0.7s
AKASG Malin Array Be 29.82 92 *i* P **P** **23 42 22.3 +1.4**
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 29.82 92 IAmb IAmb 23 42 25.2
comp=Z,4.5nm,1.4s
AKBB Malin Array Si 29.82 92⇓ *i*P **P** **23 42 21.8 +0.9**
AKBB pmax pmax
comp=Z,6.0nm,1.5s
AKBB Malin Array Si 29.82 92 P **P** **23 42 21.7 +0.9**
AK06 Malin Array Si 29.89 92 P **P** **23 42 21.9 +0.4**
AK10 Malin Array Si 29.90 92 P **P** **23 42 21.6 0.0**
OBN Obninsk 30.02 79⇓ *e*P **P** **23 42 24.4 +1.8**

OBN *e* 23 43 20.0
OBN *e*PPP PPP 23 43 31.2
OBN *e* 23 45 24.1
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,133nm,15.0s
OBN Obninsk 30.02 79 P **P** **23 42 23.2 +0.6**
KMPD K-Podol'skiy 30.17 97 P **P** **23 42 24.7 +0.7**
INTR Introdacqua 30.18 119 P **P** **23 42 25.2 +0.9**
BUR08 Bucovina Ar. S 30.32 100 P **P** **23 42 26.2 +0.8**
BURAR Bucovina Array 30.35 100 P **P** **23 42 26.6 +0.9**
BLKN Baker Lake 30.58 305 P **P** **23 42 27.4 -0.1**
BLKN IAmb IAmb 23 43 05.0
comp=Z,5.8nm,1.1s
PAOL Paolisi 31.28 119 P **P** **23 42 34.5 +0.5**
MLR Muntele Rosu 32.31 102 LR LR 23 57 06.1
comp=Z,270nm,18.7s,baz=342,slow=39
MLR Muntele Rosu 32.31 102 P **P** **23 42 43.5 +0.4**
MLR IAmb IAmb 23 42 46.7
comp=Z,8.0nm,1.4s
LPSR Galich'ya Gora 32.75 81 *e*P **P** **23 42 49.0 +2.3**
LPSR pmax pmax
comp=Z,8.0nm,0.9s
MD01 Midelt array s 32.90 152 **P** **23 42 50.0 +1.7**
MD31 MD31 32.90 152 P **P** **23 42 50.6 +2.3**
MD31 IAmb IAmb 23 42 52.9
comp=Z,8.8nm,0.9s
MDT Midelt 32.98 152 LR LR 23 55 05.6
comp=Z,116nm,21.7s,baz=3.0,slow=34
KIRV Kirov 33.17 65 LR LR 23 55 36.2
comp=Z,165nm,18.2s,baz=311,slow=35
KIRV Kirov 33.17 65⇑ *e*P **P** **23 42 51.1 +0.9**
VORR Voronezh 33.53 82 *e*P **P** **23 42 55.6 +2.1**
VORR pmax pmax
comp=Z,7.0nm,0.4s
TIP Timpagrande 33.73 118 P **P** **23 42 55.5 +0.1**
TIP IAmb IAmb 23 42 60.0
comp=Z,9.8nm,1.4s
VSR Storozhevoye 33.84 82 *e*P **P** **23 42 56.1 -0.1**
VSR pmax pmax
comp=Z,6.0nm,0.7s
VORD Divnogorie 34.07 83 *e*P **P** **23 42 57.8 -0.4**
VORD pmax pmax
comp=Z,7.0nm,0.8s
KEST Kesra 34.09 131 P **P** **23 42 59.4 +0.8**
comp=Z,4.5nm,0.6s,baz=3.1,slow=7.8,SNR=5.6
KEST LR LR 23 56 00.5
comp=Z,226nm,18.7s,baz=353,slow=35
comp=Z,4.5nm,0.6s
KEST Kesra 34.09 131 **P** **23 42 59.6 +1.1**
VAE Valguarnera 34.32 123 LR LR 23 56 18.5
comp=Z,234nm,18.9s,baz=324,slow=35
VRH Novokhopyorsk 34.96 80 *e*P **P** **23 43 07.9 +2.0**
VRH pmax pmax
comp=Z,11nm,0.8s
RDO Rodhopi 35.65 107 **P** **23 43 11.9 0.0**
RDO IAmb IAmb 23 43 15.0
comp=Z,7.3nm,1.1s
ALN Alexandroupoli 36.07 106 P **P** **23 43 16.3 +0.8**
ALN IAmb IAmb 23 43 19.0
comp=Z,6.7nm,0.8s
C36M Paulatuk 36.28 324 P **P** **23 43 14.3 -2.6**
comp=Z,47nm,0.8s,baz=47,slow=8.7,SNR=8.1
BELG Belogornoye 36.65 74⇓ *e*P **P** **23 43 20.7 +0.4**
BELG pmax pmax
comp=Z,2.0nm,1.4s
SADO Sadowa 36.75 266 LR LR 23 56 39.6
comp=Z,88nm,18.8s,baz=42,slow=34
ANN Anapa 37.90 91 *e*P **P** **23 43 30.7 -0.3**
ANN *e**PP **sP** **23 43 34.3 +0.1**
ANN *e*S **S** **23 49 22.1 -0.3**
ANN pmax pmax
comp=Z,13nm,0.8s
ANN MLR MLR
comp=E,259nm,14.0s
ANN MLR MLR
comp=N,469nm,16.0s
ANN MLR MLR
comp=Z,310nm,15.0s
YKAW3 Yellowknife Wh 38.17 312 P **P** **23 43 33.2 +0.1**
YKAW3 IAmb IAmb 23 43 43.8
comp=Z,9.6nm,1.4s
YKAW1 Yellowknife Wh 38.19 311 **P** **23 43 33.7 +0.5**
ARTI Arti 38.22 62 LR LR 23 58 30.4
comp=Z,172nm,19.1s,baz=312,slow=35
YKA Yellowknife Ar 38.22 311 P **P** **23 43 32.4 -1.2**
comp=Z,1.5nm,0.8s,baz=47,slow=8.7,SNR=8.1
YKA LR LR 23 58 58.2
comp=Z,571nm,18.7s,baz=41,slow=36
comp=Z,1.5nm,0.8s
YKA Yellowknife Ar 38.22 311 *i* P **P** **23 43 33.2 -0.3**
YKA pmax pmax
comp=Z,2.0nm,0.8s
NRIK Noril'sk 38.24 33 LR LR 00 00 50.1
comp=Z,60nm,18.6s,baz=327,slow=38
ERBR Yeremizino-Bor 38.54 87 *e*P **P** **23 43 37.2 +0.8**
ERBR *e**PP **sP** **23 43 40.2 +0.6**
ERBR *e*S **S** **23 49 33.5 +1.4**
ERBR pmax pmax
comp=Z,10.0nm,0.9s
ERBR MLR MLR
comp=N,328nm,14.0s
ERBR MLR MLR
comp=Z,278nm,15.0s
ERBR MLR MLR
comp=E,417nm,15.0s
SVE Sverdlovsk 38.78 61 *e*P **P** **23 43 37.4 -0.9**
SVE pmax pmax
comp=Z,41nm,1.2s
SVE MLR MLR
comp=Z,458nm,16.0s
FFC Flin Flon 39.10 295 **P** **23 43 41.3 +0.2**
INK Inuvik 39.41 327 LR LR 00 00 47.6
comp=Z,363nm,18.7s,baz=54,slow=37
INK Inuvik 39.41 327 P **P** **23 43 41.0 -2.4**
INK Inuvik 39.41 327 P **P** **23 43 41.2 -2.2**
baz=40
LABN Labinsk 39.48 88 *e*P **P** **23 43 44.8 +0.5**
LABN *e**PP **sP** **23 43 48.1 +0.6**
LABN *e*S **S** **23 49 47.3 +1.0**
LABN pmax pmax
comp=Z,8.0nm,0.6s
LABN MLR MLR
comp=N,705nm,15.0s
LABN MLR MLR
comp=Z,364nm,17.0s
LABN MLR MLR
comp=E,794nm,14.0s
ULM Lac du Bonnet 39.88 286 P **P** **23 43 46.4 -1.1**
comp=E,5.0nm,0.9s,baz=37,slow=4.6,SNR=3.5
ULM LR LR 23 59 12.4
comp=E,179nm,18.8s,baz=36,slow=35
comp=E,5.0nm,0.9s
ULM Lac du Bonnet 39.88 286 P **P** **23 43 46.8 -0.8**
ULM IAmb IAmb 23 43 48.6
comp=Z,9.8nm,1.2s
F31M Tsiigehtchic 40.12 326 P **P** **23 43 48.5 -0.9**
F31M IAmb IAmb 23 43 59.8
comp=Z,7.8nm,0.9s
F31M Tsiigehtchic 40.12 326 P **P** **23 43 46.9 -2.4**
baz=40
PAMR Moraine State 40.23 264 P **P** **23 43 52.5 +1.9**
PAMR IAmb IAmb 23 43 55.9
comp=Z,21nm,1.4s
BR131 Keskin Array S 40.31 100⇑ *e*P **P** **23 43 54.0 +2.6**
BR131 Keskin Array S 40.31 100 **P** **23 43 52.6 +1.2**
BRTR Keskin Array B 40.31 100 P **P** **23 43 53.8 +2.3**
comp=Z,2.9nm,0.8s,baz=332,slow=6.7,SNR=16
BRTR LR LR 00 02 34.6
comp=Z,73nm,18.8s,baz=324,slow=39
comp=Z,2.9nm,0.8s
BRTR Keskin Array B 40.31 100 *i* P **P** **23 43 54.7 +3.3**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 40.31 100 **P** **23 43 53.1 +1.6**
D27M Malcolm River 40.36 331 P **P** **23 43 47.8 -3.7**
baz=37
E29M Blow River 40.37 329 P **P** **23 43 48.7 -2.7**
baz=38
F30M Barrier River 40.49 327 **P** **23 43 51.6 -0.8**
F30M IAmb IAmb 23 44 03.6
comp=Z,17nm,1.2s
F30M Barrier River 40.49 327 P **P** **23 43 49.9 -2.5**
baz=38
E28M Babbage River 40.56 330 **P** **23 43 52.3 -0.8**
E28M IAmb IAmb 23 44 04.4
comp=Z,5.7nm,0.7s
E28M Babbage River 40.56 330 P **P** **23 43 50.5 -2.6**
baz=37
C27K Jago River 40.62 333 P **P** **23 43 52.6 -0.9**
C27K Jago River 40.62 333 P **P** **23 43 51.3 -2.2**
baz=35
C26K Camden Bay 40.62 333 P **P** **23 43 50.9 -2.6**
baz=35
G31M Satah River 40.66 326 **P** **23 43 52.4 -1.4**
G31M IAmb IAmb 23 44 04.0
comp=Z,10nm,0.9s
G31M Satah River 40.66 326 P **P** **23 43 51.3 -2.4**
baz=39
KIV Kislovodsk 40.89 87 *e*P **P**
KIV pmax pmax **23 43 58.3 +2.2**
comp=Z,3.0nm,1.1s
SHA1 Shidzhatmaz 41.05 88⇓ *e*P **P** **23 44 00.4 +2.8**
G30M tAoh Zraii Nji 41.09 327 **P** **23 43 57.2 -0.2**
G30M tAoh Zraii Nji 41.09 327 P **P** **23 43 55.0 -2.4**
baz=38
KBZ Khabaz 41.16 87 P **P** **23 44 00.4 +2.2**
comp=Z,2.0nm,0.8s,baz=340,slow=5.7,SNR=4.5
KBZ LR LR 00 00 48.6
comp=Z,125nm,21.6s,baz=324,slow=36
comp=Z,2.0nm,0.8s
KBZ Khabaz 41.16 87⇓ *i*P **P** **23 44 01.5 +3.3**
KBZ pmax pmax
comp=Z,4.0nm,1.2s
ELL Elmali 41.19 106 **P** **23 43 59.2 +0.5**
ELL IAmb IAmb 23 44 04.7
comp=Z,7.8nm,1.0s
E27K Coleen River 41.35 330 **P** **23 43 58.7 -0.9**
E27K IAmb IAmb 23 44 11.0
comp=Z,6.0nm,0.8s
E27K Coleen River 41.35 330 P **P** **23 43 56.8 -2.8**
baz=36,SNR=9.1
AGMN Agassiz Nation 41.36 284 **P** **23 43 59.7 0.0**
AGMN IAmb IAmb 23 44 02.3
comp=Z,6.1nm,0.8s
D25K Kavik River 41.41 334 P **P** **23 43 58.9 -1.1**
D25K IAmb IAmb 23 44 02.5
comp=Z,6.8nm,0.9s
D25K Kavik River 41.41 334 P **P** **23 43 57.9 -2.1**
baz=33,SNR=13
F28M Old Crow 41.44 329 P **P** **23 43 58.4 -1.8**
F28M Old Crow 41.44 329 P **P** **23 43 57.8 -2.5**
baz=36
A22K Sinclair Lake 41.50 339 P **P** **23 43 57.8 -2.8**
baz=29
H31M Peel River 41.55 325 **P** **23 44 00.7 -0.5**
H31M Peel River 41.55 325 P **P** **23 43 59.4 -1.8**
baz=38,SNR=7.4
G29M Pine Creek 41.58 328 **P** **23 44 01.0 -0.4**
G29M Pine Creek 41.58 328 P **P** **23 43 59.3 -2.1**
baz=37
EPYK Eagle Plains 41.70 327 P **P** **23 44 02.5 +0.1**
EPYK Eagle Plains 41.70 327 P **P** **23 44 00.9 -1.5**
baz=37
R58B Mineral 41.71 259 P **P** **23 44 04.0 +1.2**
C23K Itkillik River 41.77 336 P **P** **23 44 03.8 +0.9**
C23K Itkillik River 41.77 336 P **P** **23 44 01.3 -1.6**
baz=31
B22K Teshekpuk Lake 41.82 338 P **P** **23 44 01.7 -1.6**
baz=30
D24K Happy Valley 42.02 335 P **P** **23 44 03.5 -1.5**
baz=32
N49A Columbus Grove 42.05 267 P **P** **23 44 05.6 +0.1**
N49A IAmb IAmb 23 44 08.8
comp=Z,7.2nm,0.8s
H29M Whitestone 42.22 327 P **P** **23 44 05.4 -1.2**
baz=36
E25K Arctic Village 42.25 332 P **P** **23 44 06.2 -0.7**
E25K Arctic Village 42.25 332 P **P** **23 44 05.5 -1.4**
baz=33,SNR=6.3
F26K Sheenjek River 42.31 331 P **P** **23 44 05.5 -2.0**
baz=34
S57A Dark Hollow, R 42.35 260 P **P** **23 44 09.3 +1.2**
AKTO Aktyubinsk 42.47 69 LR LR 00 01 34.7
comp=Z,220nm,18.1s,baz=270,slow=36
G27K Doyon Strip 42.50 329 P **P** **23 44 07.7 -1.3**
G27K Doyon Strip 42.50 329 P **P** **23 44 06.8 -2.2**
baz=35
D23K Nanushuk River 42.53 335 **P** **23 44 08.6 -0.5**
D23K IAmb IAmb 23 44 11.8
comp=Z,13nm,1.4s
D23K Nanushuk River 42.53 335 P **P** **23 44 07.3 -1.9**
baz=31
I30M Mount Dempster 42.53 325 P **P** **23 44 08.7 -0.7**
I30M Mount Dempster 42.53 325 P **P** **23 44 07.6 -1.8**
baz=36
TOLK Toolik Lake Re 42.60 335 P **P** **23 44 07.0 -2.8**
baz=31
B21K Ikpikpuk River 42.66 338 P **P** **23 44 07.4 -2.7**
baz=29
F25K Christian Rive 42.71 332 **P** **23 44 09.9 -0.8**
F25K Christian Rive 42.71 332 P **P** **23 44 07.9 -2.8**
baz=33
B20K Meade River 42.73 339 P **P** **23 44 08.3 -2.4**
baz=27
G26K Porcupine Rive 42.85 330 P **P** **23 44 11.5 -0.3**
G26K Porcupine Rive 42.85 330 P **P** **23 44 09.2 -2.6**
baz=34
E24K Your Creek 42.88 334 **P** **23 44 10.9 -1.1**
E24K Your Creek 42.88 334 P **P** **23 44 09.2 -2.8**
baz=31
H27K Steamboat Moun 42.95 329 **P** **23 44 11.6 -1.0**
H27K Steamboat Moun 42.95 329 P **P** **23 44 10.0 -2.6**
baz=34
J30M Hart River 43.04 325 **P** **23 44 12.6 -0.9**
J30M IAmb IAmb 23 44 16.3
comp=Z,9.9nm,1.4s
J30M Hart River 43.04 325 P **P** **23 44 10.6 -2.9**
baz=36,SNR=6.4
KOPT Kop Dagi 43.09 93 P **P** **23 44 15.8 +1.4**
C21K Knifeblade Rid 43.09 337 P **P** **23 44 11.1 -2.6**
baz=28
E23K Chandalar 43.11 334 **P** **23 44 13.2 -0.8**
E23K Chandalar 43.11 334 P **P** **23 44 11.2 -2.8**
baz=31
I28M Miner Creek 43.22 327 P **P** **23 44 12.9 -2.0**
baz=35
F24K Squaw Lake 43.23 333 **P** **23 44 15.0 +0.1**
F24K Squaw Lake 43.23 333 P **P** **23 44 12.5 -2.4**
baz=32
MMPY Sheldon Lake, 43.25 320 **P** **23 44 15.6 +0.5**
MMPY IAmb IAmb 23 44 19.2
comp=Z,7.3nm,1.0s
MMPY Sheldon Lake, 43.25 320 P **P** **23 44 13.8 -1.4**
baz=37,SNR=5.4
TIXI Tiksi 43.28 13 LR LR 00 00 60.0
comp=Z,40nm,19.8s,baz=350,slow=34
MDND Maddock 43.30 287 P **P** **23 44 15.1 -0.5**
E22K Anaktuvuk Pass 43.46 335 P **P** **23 44 15.3 -1.5**
baz=30
I27K Kandik River 43.49 328 P **P** **23 44 16.0 -1.0**
I27K Kandik River 43.49 328 P **P** **23 44 14.7 -2.3**
baz=34
FYU Fort Yukon 43.49 331 P **P** **23 44 16.6 -0.3**
FYU IAmb IAmb 23 44 29.0
comp=Z,8.8nm,0.9s
G25K Bearman Lake 43.51 331 P **P** **23 44 15.4 -1.7**
baz=32
E21K Killik River 43.58 336 P **P** **23 44 15.3 -2.4**
baz=28
P48A Milroy 43.79 267 P **P** **23 44 20.1 +0.5**
P48A IAmb IAmb 23 44 20.4
comp=Z,5.0nm,0.7s
D20K Etivluk River 43.80 338 P **P** **23 44 18.7 -0.7**
D20K IAmb IAmb 23 44 21.8
comp=Z,7.1nm,1.1s
D20K Etivluk River 43.80 338 P **P** **23 44 17.2 -2.2**
baz=27
G24K Hadweenzic Riv 43.85 332 P **P** **23 44 18.4 -1.4**
G24K Hadweenzic Riv 43.85 332 P **P** **23 44 17.3 -2.5**
baz=31
C19K Lookout Ridge 43.92 340 P **P** **23 44 18.7 -1.8**
baz=26
K29M Barlow Dome 43.94 325 **P** **23 44 19.1 -1.6**
K29M Barlow Dome 43.94 325 P **P** **23 44 19.1 -1.6**
baz=35
COLD Coldfoot 43.95 334 P **P** **23 44 18.7 -1.8**
baz=30
F22K John River 44.08 335 P **P** **23 44 20.1 -1.6**
baz=29
E20K Nigu River 44.13 337 P **P** **23 44 20.1 -2.1**
baz=27
AB31 Akbulak array 44.18 69 P **P** **23 44 23.2 +0.6**
ABKAR Akbulak array 44.18 69 P **P** **23 44 22.7 0.0**
DAWY Dawson 44.23 326 P **P** **23 44 21.0 -2.0**
baz=34
D19K Kuna River 44.24 338 P **P** **23 44 21.2 -1.7**
baz=26
G23K Bananza Creek 44.36 333 **P** **23 44 23.5 -0.4**
G23K Bananza Creek 44.36 333 P **P** **23 44 21.6 -2.4**
baz=30
PRP Porcupine Dome 44.45 330 P **P** **23 44 24.2 -0.6**
PRP Porcupine Dome 44.45 330 P **P** **23 44 22.7 -2.1**
baz=32
M31M Drury Creek, Y 44.46 322 P **P** **23 44 24.2 -0.6**
S51A Beattyville 44.48 264 P **P** **23 44 27.0 +1.8**
S51A IAmb IAmb 23 44 34.5
comp=Z,5.8nm,1.2s
F21K Alatna River 44.57 335 **P** **23 44 25.1 -0.6**
F21K IAmb IAmb 23 44 28.4
comp=Z,4.3nm,0.8s
F21K Alatna River 44.57 335 P **P** **23 44 24.2 -1.5**
baz=28
C18K Utukok River 44.58 340 P **P** **23 44 23.3 -2.5**
baz=24
EDM Edmonton 44.67 301 **P** **23 44 26.0 -0.6**
H24K Noodor Dome 44.68 332 **P** **23 44 25.6 -0.9**
H24K Noodor Dome 44.68 332 P **P** **23 44 24.2 -2.4**
baz=31
L29M L29M 44.70 324 P **P** **23 44 26.4 -0.4**
L29M IAmb IAmb 23 44 29.6
comp=Z,4.8nm,0.8s
E28A Huff 44.76 286 P **P** **23 44 26.3 -1.1**
M30M Minto, Yukon 44.80 323 P **P** **23 44 24.6 -2.9**
baz=35
GNI Garni 44.86 89 LR LR 00 04 06.9
comp=Z,120nm,18.4s,baz=336,slow=37
GNI Garni 44.86 89*c**e*P **P** **23 44 28.6 +0.2**
GNI pmax pmax
comp=Z,32nm,1.3s
GNI Garni 44.86 89 pmax pmax
comp=Z,32nm,1.3s
GNI Garni 44.86 89 P **P** **23 44 27.9 -0.5**
GNI Garni 44.86 89 P **P** **23 44 28.3 -0.1**
comp=Z,21nm,1.3s
GNI Garni 44.86 89*c**i*P **P** **23 44 28.4 0.0**
V55A Taylorsville 44.94 260 P **P** **23 44 29.6 +0.8**
V55A IAmb IAmb 23 44 42.4
comp=Z,6.8nm,1.3s
TAM Tamanrasset 45.02 143 **P** **23 44 30.9 +1.0**
E19K Redstone River 45.03 337 P **P** **23 44 28.2 -1.0**
E19K IAmb IAmb 23 44 32.2
comp=Z,6.4nm,0.7s
E19K Redstone River 45.03 337 P **P** **23 44 27.3 -1.9**
baz=26,SNR=8.4
F20K Avaraart Lake 45.13 336 **P** **23 44 29.3 -0.8**
F20K IAmb IAmb 23 44 32.9
comp=Z,7.0nm,0.8s
F20K Avaraart Lake 45.13 336 P **P** **23 44 28.3 -1.7**
baz=27,SNR=12
J25K Salcha River, 45.18 329 P **P** **23 44 29.6 -1.0**
J25K IAmb IAmb 23 44 42.1
comp=Z,4.7nm,0.9s
J25K Salcha River, 45.18 329 P **P** **23 44 28.8 -1.8**
baz=31
G21K Allakaket 45.20 335 **P** **23 44 30.5 -0.1**
G21K Allakaket 45.20 335 P **P** **23 44 28.9 -1.8**
baz=28
ECSD EROS Data Cent 45.26 281 **P** **23 44 30.0 -1.4**
ECSD IAmb IAmb 23 44 34.8
comp=Z,5.0nm,0.9s
H22K Ishtalitna Cre 45.34 333 P **P** **23 44 29.9 -1.9**
baz=29
M29M Somme Creek 45.34 324 **P** **23 44 31.6 -0.3**
M29M Somme Creek 45.34 324 P **P** **23 44 30.3 -1.6**
baz=34,SNR=9.1
BVAR Borovoye Array 45.35 58 P **P** **23 44 34.2 +2.2**
comp=Z,3.7nm,0.7s,baz=329,slow=11,SNR=13
comp=Z,3.7nm,0.7s
IL31 45.38 330 P **P** **23 44 31.8 -0.2**
ILAR Eielson Array 45.38 330 P **P** **23 44 31.8 -0.3**
comp=Z,2.3nm,1.0s,baz=26,slow=7.0,SNR=14
ILAR PcP **PcP** **23 46 10.8 -0.4**
comp=Z,0.7nm,0.7s,baz=350,slow=2.1,SNR=4.8
ILAR LR LR 00 04 43.1
comp=Z,97nm,18.4s,baz=70,slow=38
comp=Z,2.3nm,1.0s
ILAR Eielson Array 45.38 330 **P** **23 44 31.0 -1.1**
RDOG Red Dog Mine 45.39 340 P **P** **23 44 30.2 -1.8**
baz=23
SCRK Sand Creek 45.41 328 P **P** **23 44 30.6 -1.8**
baz=32
N31M Braeburn, Yuko 45.42 322 **P** **23 44 32.3 -0.2**
N31M Braeburn, Yuko 45.42 322 P **P** **23 44 30.8 -1.7**
baz=34
COLA College 45.51 331⇑ *e*P **P** **23 44 32.7 -0.3**
COLA pmax pmax
comp=Z,8.0nm,1.1s
C16K Lisburne Hills 45.53 342 P **P** **23 44 31.6 -1.6**
baz=22
OLIL Olney 45.57 269 P **P** **23 44 34.9 +1.1**
I23K Minto, Yukon-K 45.59 332 P **P** **23 44 33.8 +0.1**
I23K Minto, Yukon-K 45.59 332 P **P** **23 44 31.4 -2.3**
baz=29
E18K Tukpahlearik C 45.62 339 P **P** **23 44 32.1 -1.8**
baz=24
GEVA Gevas 45.62 92 P **P** **23 44 34.7 +0.2**
GEVA IAmb IAmb 23 45 01.5
comp=Z,4.2nm,0.8s
P33M Teslin, Yukon 45.64 319 P **P** **23 44 33.5 -0.7**
P33M IAmb IAmb 23 44 46.7
comp=Z,6.9nm,1.1s
BCAR Beaver Creek A 45.66 326 **P** **23 44 33.4 -0.9**
L27K Beaver Creek, 45.67 326 P **P** **23 44 34.0 -0.4**
L27K IAmb IAmb 23 44 46.7
comp=Z,5.5nm,0.8s
L27K Beaver Creek, 45.67 326 P **P** **23 44 32.3 -2.2**
baz=32
F19K Shaleruckik Mo 45.68 337 **P** **23 44 34.0 -0.4**
F19K IAmb IAmb 23 44 35.4
comp=Z,6.5nm,1.2s
F19K Shaleruckik Mo 45.68 337 P **P** **23 44 31.8 -2.6**
baz=26
HDA Harding Lake 45.71 330 P **P** **23 44 32.7 -2.0**
HDA IAmb IAmb 23 44 38.8
comp=Z,4.1nm,1.0s
HDA Harding Lake 45.71 330 P **P** **23 44 32.2 -2.5**
baz=30
IMAR Indian Mountai 45.72 335 P **P** **23 44 34.1 -0.6**
D17K Noatak River 45.74 340 P **P** **23 44 32.7 -2.1**
baz=23
R33M Jennings River 45.76 317 **P** **23 44 34.9 -0.3**
R33M IAmb IAmb 23 44 38.6
comp=Z,8.7nm,1.1s
N30M Aishikik Lake 45.80 323 P **P** **23 44 35.9 +0.4**
N30M IAmb IAmb 23 44 40.1
comp=Z,6.2nm,1.1s
N30M Aishikik Lake 45.80 323 P **P** **23 44 33.7 -1.8**
baz=34
RIDG Independent Ri 45.81 329 P **P** **23 44 35.4 -0.1**
RIDG Independent Ri 45.81 329 P **P** **23 44 33.5 -2.1**
baz=31
H21K Melozitna Rive 45.83 334 P **P** **23 44 34.7 -0.9**
H21K IAmb IAmb 23 44 37.3
comp=Z,8.6nm,1.2s
H21K Melozitna Rive 45.83 334 P **P** **23 44 33.2 -2.5**
baz=28
WHY Whitehorse 45.86 321 P **P** **23 44 34.9 -1.1**
MLY Manley 45.97 333 **P** **23 44 36.4 -0.4**
MLY Manley 45.97 333 P **P** **23 44 35.1 -1.7**
baz=29
NEA2 Nenana 46.01 331 P **P** **23 44 36.7 -0.3**
NEA2 IAmb IAmb 23 44 48.8
comp=Z,4.3nm,0.8s
NEA2 Nenana 46.01 331 P **P** **23 44 35.4 -1.6**
baz=29
PAULI Pauline 46.07 260 P **P** **23 44 38.7 +0.9**
PAULI IAmb IAmb 23 44 45.0
comp=Z,7.5nm,1.2s
I21K Tanana 46.09 333 P **P** **23 44 35.2 -2.4**
baz=28
O30N Mendenhall 46.10 321 P **P** **23 44 37.4 -0.5**
O30N IAmb IAmb 23 44 39.4
comp=Z,6.9nm,0.9s
O30N Mendenhall 46.10 321 P **P** **23 44 35.4 -2.4**
baz=34
G19K Purcell Mounta 46.19 336 **P** **23 44 37.9 -0.5**

G19K				IAmb	IAmb	23 44 41.3	
	comp=Z,5.2nm,0.9s						
G19K	**Purcell Mounta**	**46.19 336**	P		**P**	**23 44 35.5**	**-2.9**
	baz=26						
F18K	**Selawik**	**46.21 338**	P		**P**	**23 44 35.9**	**-2.7**
	baz=24						
TKL	**Tuckaleechee C**	**46.22 263**	LR		LR	00 02 26.5	
	comp=Z,67nm,18.9s,baz=30,slow=34						
DLBC	**Dease Lake**	**46.26 316**	LR		LR	00 03 51.8	
	comp=Z,122nm,18.5s,baz=48,slow=36						
M27K	**Edge Creek, AK**	**46.28 326**	P		**P**	**23 44 37.2**	**-2.2**
	baz=32						
H20K	**Anotleneega Mo**	**46.37 335**	P		**P**	**23 44 37.5**	**-2.4**
	baz=27,SNR=7.5						
P32M	**Atlin**	**46.41 319**	P		**P**	**23 44 38.5**	**-1.8**
	baz=34						
YUK3	**Moose Creek**	**46.42 325**	P		**P**	**23 44 37.7**	**-2.8**
	baz=32						
HYT	**Haines Junctio**	**46.44 322**			**P**	**23 44 41.0**	**+0.4**
HYT				IAmb	IAmb	23 44 44.1	
	comp=Z,7.3nm,1.0s						
HYT	**Haines Junctio**	**46.44 322**	P		**P**	**23 44 37.7**	**-2.9**
	baz=33						
Q32M	**Nakina River**	**46.50 318**	P		**P**	**23 44 39.4**	**-1.9**
	baz=35						
M26K	**Nabesna, AK**	**46.52 327**	P		**P**	**23 44 40.7**	**-0.4**
M26K				IAmb	IAmb	23 44 42.9	
	comp=Z,6.4nm,1.0s						
M26K	**Nabesna, AK**	**46.52 327**	P		**P**	**23 44 38.4**	**-2.8**
	baz=31						
T47A	**Sharon Grove**	**46.57 267**			**P**	**23 44 41.4**	**-0.4**
SLM	**Saint Louis**	**46.59 271**	P		**P**	**23 44 42.2**	**+0.3**
PAX	**Paxson**	**46.62 328**	P		**P**	**23 44 41.6**	**-0.4**
PAX				IAmb	IAmb	23 44 54.3	
	comp=Z,7.5nm,1.2s						
PAX	**Paxson**	**46.62 328**	P		**P**	**23 44 39.1**	**-2.8**
	baz=30						
H19K	**Roundabout Mou**	**46.63 336**	P		**P**	**23 44 41.7**	**-0.1**
H19K				IAmb	IAmb	23 44 44.9	
	comp=Z,8.4nm,1.2s						
H19K	**Roundabout Mou**	**46.63 336**	P		**P**	**23 44 39.7**	**-2.2**
	baz=26						
YUK8	**Steele Glacier**	**46.66 324**	P		**P**	**23 44 39.8**	**-2.6**
	baz=32						
P40A	**Paris**	**46.66 273**			**P**	**23 44 42.4**	**-0.1**
P40A				IAmb	IAmb	23 44 44.9	
	comp=Z,3.8nm,0.9s						
G18K	**Tagagawik**	**46.69 337**	P		**P**	**23 44 42.3**	**0.0**
G18K				IAmb	IAmb	23 44 45.4	
	comp=Z,4.6nm,0.9s						
G18K	**Tagagawik**	**46.69 337**	P		**P**	**23 44 40.3**	**-2.0**
	baz=25						
MMAI	**Mount Meron Ar**	**46.72 103**	LR		LR	00 06 41.7	
	comp=Z,73nm,18.2s,baz=290,slow=39						
MCK	**McKinley**	**46.73 331**	P		**P**	**23 44 40.4**	**-2.3**
	baz=29						
P30M	**Million Dollar**	**46.88 321**	P		**P**	**23 44 42.0**	**-2.0**
	baz=33						
DHY	**Denali Highway**	**46.97 329**	P		**P**	**23 44 42.4**	**-2.4**
	baz=30						
LAO	**LASA Array**	**46.99 291**	P		**P**	**23 44 45.9**	**+0.9**
FVM	**French Village**	**47.22 271**			**P**	**23 44 46.4**	**-0.4**
PLBC	**Pleasant Camp**	**47.27 321**	P		**P**	**23 44 45.6**	**-1.4**
	baz=33						
TRF	**Thorofare Moun**	**47.27 331**	P		**P**	**23 44 44.6**	**-2.5**
	baz=28						
CHUM	**Lake Minchumin**	**47.31 333**	P		**P**	**23 44 44.7**	**-2.5**
	baz=27						
EGMT	**Eagleton**	**47.37 294**			**P**	**23 44 47.7**	**-0.3**
J20K	**Nowinta River**	**47.41 334**			**P**	**23 44 48.3**	**+0.3**
J20K				IAmb	IAmb	23 44 50.8	
	comp=Z,5.8nm,1.0s						
J20K	**Nowinta River**	**47.41 334**	P		**P**	**23 44 45.6**	**-2.4**
	baz=26						
WAT1	**Susitna Watana**	**47.44 330**	P		**P**	**23 44 45.0**	**-3.4**
	baz=29						
T35M	**Bob Quinn**	**47.52 315**	P		**P**	**23 44 46.7**	**-2.3**
	baz=34						
CCM	**Cathedral Cave**	**47.52 271**			**P**	**23 44 49.5**	**+0.4**
M24K	**Tolsona, Glenn**	**47.53 328**	P		**P**	**23 44 45.6**	**-3.5**
	baz=30						
N25K	**Chitina, Valde**	**47.59 327**	P		**P**	**23 44 47.1**	**-2.5**
	baz=30						
CAST	**Castle Rocks**	**47.68 332**	P		**P**	**23 44 48.2**	**-1.9**
	baz=27						
R40A	**Maddies Statio**	**47.78 273**			**P**	**23 44 50.7**	**-0.5**
R40A				IAmb	IAmb	23 44 52.7	
	comp=Z,4.7nm,1.0s						
H17K	**Granite Mounta**	**47.78 337**	P		**P**	**23 44 48.5**	**-2.4**
	baz=24						
J19K	**Poorman**	**47.87 334**	P		**P**	**23 44 51.2**	**-0.3**
J19K				IAmb	IAmb	23 44 54.5	
	comp=Z,7.3nm,1.4s						
J19K	**Poorman**	**47.87 334**	P		**P**	**23 44 49.6**	**-1.9**
	baz=26						
SCM	**Sheep Creek Mo**	**48.04 329**	P		**P**	**23 44 50.5**	**-2.5**
	baz=29						
ASF	**Jabal al Asfar**	**48.09 102**	LR		LR	00 07 29.0	
	comp=Z,67nm,18.4s,baz=25,slow=39						
K20K	**Telida**	**48.14 333**			**P**	**23 44 53.4**	**-0.2**
K20K	**Telida**	**48.14 333**	P		**P**	**23 44 50.5**	**-3.2**
	baz=26						
BMRM	**Bremner River**	**48.15 326**	P		**P**	**23 44 50.7**	**-3.1**
	baz=30						
PPLA	**Purkeypile**	**48.17 332**	P		**P**	**23 44 51.3**	**-2.7**
	baz=27						
M23K	**Glacier View**	**48.17 329**	P		**P**	**23 44 50.7**	**-3.2**
	baz=29						
T42A	**Van Buren**	**48.30 271**			**P**	**23 44 54.7**	**-0.5**
T42A				IAmb	IAmb	23 44 57.2	
	comp=Z,6.2nm,1.0s						
S39A	**Bolivar**	**48.74 273**	P		**P**	**23 44 57.6**	**-1.0**
SKT	**Skwentna**	**48.85 331**	P		**P**	**23 44 55.2**	**-3.9**
	baz=27						
J17K	**VABM Dome**	**49.05 336**	P		**P**	**23 44 59.9**	**-0.8**
J17K				IAmb	IAmb	23 45 23.0	
	comp=Z,8.9nm,1.4s						
J17K	**VABM Dome**	**49.05 336**	P		**P**	**23 44 57.2**	**-3.5**
	baz=24						
LCAR	**Lake Charles**	**49.13 270**			**P**	**23 45 01.0**	**-0.6**
LCAR				IAmb	IAmb	23 45 03.6	
	comp=Z,3.9nm,0.9s						
LYMT	**Lyon Mountain**	**49.23 295**	P		**P**	**23 45 01.9**	**-0.7**
M20K	**Styx River**	**49.27 332**			**P**	**23 45 00.1**	**-2.4**
STLK	**Strandline Lak**	**49.34 331**	P		**P**	**23 45 02.5**	**-0.5**
STLK				IAmb	IAmb	23 45 05.2	
	comp=Z,7.9nm,1.4s						
L19K	**White Mountain**	**49.36 333**	P		**P**	**23 45 00.2**	**-2.8**
	baz=25						
RLMT	**Red Lodge**	**49.51 292**	P		**P**	**23 45 04.8**	**+0.2**
RLMT				IAmb	IAmb	23 45 14.7	
	comp=Z,7.8nm,1.5s						
L18K	**Granite Mounta**	**49.68 334**	P		**P**	**23 45 02.9**	**-2.6**
	baz=24						
ZALV	**Zalesovo Beam**	**49.69 48**	LR		LR	00 06 48.1	
	comp=Z,75nm,18.9s,baz=338,slow=37						
YNE	**Yellowstone No**	**49.91 292**	P		**P**	**23 45 07.2**	**-0.5**
YNE				IAmb	IAmb	23 45 10.8	
	comp=Z,3.4nm,0.8s						
MSO	**Missoula**	**50.01 296**			**P**	**23 45 06.0**	**-2.3**
MSO				IAmb	IAmb	23 45 11.7	
	comp=Z,11nm,1.4s						
NEW	**Newport**	**50.07 300**	LR		LR	00 05 46.7	
	comp=Z,138nm,19.6s,baz=36,slow=36						
NEW	**Newport**	**50.07 300**	P		**P**	**23 45 09.0**	**+0.2**
BOZ	**Bozeman (W)**	**50.09 294**	P		**P**	**23 45 08.9**	**-0.1**
HHAR	**Hobbs**	**50.19 273**	P		**P**	**23 45 09.5**	**-0.2**
HHAR				IAmb	IAmb	23 45 11.0	
	comp=Z,7.5nm,1.3s						
KURK	**Kurchatov**	**50.24 54**	P		**P**	**23 45 11.7**	**+1.8**
KURBB	**Kurchatov Arra**	**50.29 54**	P		**P**	**23 45 11.7**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=327,slow=6.8,SNR=4.2						
	comp=Z,0.6nm,0.7s						
K15K	**Wolf Creek Mou**	**50.51 337**	P		**P**	**23 45 09.1**	**-2.6**
	baz=22						
YHL	**Hebgen Lake**	**50.52 293**	P		**P**	**23 45 12.7**	**+0.2**
YHL				IAmb	IAmb	23 45 16.5	
	comp=Z,7.9nm,1.2s						
N19K	**Bonanza Creek**	**50.52 332**	P		**P**	**23 45 09.0**	**-3.0**
	baz=25						
M17K	**Holitna River**	**50.58 334**	P		**P**	**23 45 09.8**	**-2.5**
	baz=24						
DLMT	**Dillon**	**50.67 294**			**P**	**23 45 13.5**	**+0.1**
DLMT				IAmb	IAmb	23 45 19.7	
	comp=Z,12nm,1.4s						
L16K	**Owhat River**	**50.68 335**	P		**P**	**23 45 10.2**	**-2.8**
	baz=23						
O20K	**Slope Mountain**	**50.79 331**	P		**P**	**23 45 11.5**	**-2.5**
	baz=26						
BBB	**Bella Bella**	**50.81 310**	LR		LR	00 06 39.8	
	comp=Z,286nm,19.3s,baz=12,slow=36						
YPP	**Pitchstone Pla**	**50.84 292**	P		**P**	**23 45 14.8**	**-0.1**
YPP				IAmb	IAmb	23 45 22.4	
	comp=Z,6.7nm,1.2s						
B08A	**Colville Reser**	**50.84 301**	P		**P**	**23 45 14.2**	**-0.3**
B08A				IAmb	IAmb	23 45 24.0	
	comp=Z,7.5nm,1.2s						
X40A	**Basin Creek Fa**	**51.20 270**	P		**P**	**23 45 16.4**	**-0.9**
X40A				IAmb	IAmb	23 45 19.2	
	comp=Z,5.9nm,0.9s						
MCMT	**McKenzie Canyo**	**51.21 294**	P		**P**	**23 45 18.2**	**+0.6**
K13K	**Kusilvak Mount**	**51.37 338**	P		**P**	**23 45 17.0**	**-1.3**
K13K				IAmb	IAmb	23 45 48.2	
	comp=Z,8.6nm,1.2s						
MIAR	**Mount Ida**	**51.48 271**			**P**	**23 45 18.6**	**-0.8**
MIAR				IAmb	IAmb	23 45 21.6	
	comp=Z,11nm,1.2s						
O18K	**Koktuh Hills**	**51.55 332**	P		**P**	**23 45 16.9**	**-2.7**
	baz=24						
PD31	**Pinedale Array**	**51.56 290**			**P**	**23 45 19.3**	**-0.9**
PD31				IAmb	IAmb	23 45 22.8	
	comp=Z,3.2nm,0.8s						
PDAR	**Pinedale Array**	**51.56 290**	P		**P**	**23 45 19.4**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=56,slow=5.9,SNR=19						
PDAR				LR	LR	00 06 32.0	
	comp=Z,128nm,18.5s,baz=22,slow=35						
	comp=Z,1.9nm,0.6s						
L14K	**Kuka Creek**	**51.60 337**	P		**P**	**23 45 17.1**	**-2.8**
	baz=21						
BCYI	**Bear Canyon**	**51.86 294**	P		**P**	**23 45 21.7**	**-0.7**
F10A	**Beach Ranch, E**	**52.00 298**	P		**P**	**23 45 22.9**	**-0.4**
F10A				IAmb	IAmb	23 45 28.3	
	comp=Z,8.1nm,1.4s						
O17K	**Koliganek Bris**	**52.01 333**	P		**P**	**23 45 19.9**	**-3.1**
	baz=23						
M14K	**Bethel**	**52.02 336**	P		**P**	**23 45 20.4**	**-2.6**
	baz=21						
N15K	**Kwethluk River**	**52.23 335**	P		**P**	**23 45 22.0**	**-2.7**
	baz=22						
PLID	**Pearl Lake**	**52.26 297**			**P**	**23 45 24.5**	**-0.9**
P17K	**Kvichak River**	**52.41 332**	P		**P**	**23 45 23.5**	**-2.5**
	baz=23						
KDAK	**Kodiak Island**	**52.87 329**	LR		LR	00 09 19.2	
	comp=Z,193nm,18.5s,baz=10,slow=38						
BMO	**Blue Mountains**	**52.97 297**	P		**P**	**23 45 28.1**	**-2.3**
BMO				IAmb	IAmb	23 45 32.9	
	comp=Z,10nm,1.2s						
O15K	**Ungalikthiuk R**	**53.10 334**	P		**P**	**23 45 28.3**	**-2.8**
	baz=22						
Q17K	**Contact Creek**	**53.15 331**	P		**P**	**23 45 28.4**	**-3.2**
	baz=23						
HWUT	**Hardware Ranch**	**53.35 291**			**P**	**23 45 32.9**	**-0.6**
HWUT				IAmb	IAmb	23 45 36.4	
	comp=Z,6.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**53.36 151**	P		**P**	**23 45 33.4**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=329,slow=6.8,SNR=10.0						
	comp=Z,1.6nm,0.6s						
KK31	**Karatay Array**	**53.46 66**	P		**P**	**23 45 33.8**	**-0.2**
WMOK	**Wichita Mounta**	**53.62 276**	P		**P**	**23 45 34.7**	**-0.6**
WMOK				IAmb	IAmb	23 45 38.1	
	comp=Z,4.4nm,0.9s						
HVU	**Hansel Valley**	**53.71 292**	P		**P**	**23 45 36.5**	**+0.5**
SPUT	**South Promonto**	**53.97 291**	P		**P**	**23 45 37.3**	**-0.6**
SPUT				IAmb	IAmb	23 45 41.1	
	comp=Z,6.2nm,1.1s						
T25A	**Trinidad**	**54.06 282**	P		**P**	**23 45 38.6**	**-0.1**
T25A				IAmb	IAmb	23 45 46.6	
	comp=Z,4.7nm,1.1s						
SJG	**San Juan**	**54.55 234**	LR		LR	00 04 48.1	
	comp=Z,30nm,21.4s,baz=71,slow=32						
J08A	**Circle Bar Ran**	**54.68 297**			**P**	**23 45 42.3**	**-0.7**
J08A				IAmb	IAmb	23 45 46.3	
	comp=Z,5.3nm,1.0s						
MKAR	**Makanchi Array**	**54.86 54**	P		**P**	**23 45 46.1**	**+1.9**
	comp=Z,1.0nm,1.0s,baz=349,slow=5.6,SNR=4.0						
MKAR				LR	LR	00 09 03.0	
	comp=Z,113nm,18.1s,baz=314,slow=36						
	comp=Z,1.0nm,1.0s						
PV01	**Paradox Valley**	**55.01 286**	P		**P**	**23 45 45.1**	**-0.5**
PV01				IAmb	IAmb	23 45 49.0	
	comp=Z,3.7nm,1.1s						
PLPT	**Palo Pinto**	**55.04 274**			**P**	**23 45 45.0**	**-0.6**
DUG	**Dugway, Tooele**	**55.05 291**			**P**	**23 45 45.2**	**-0.6**
DUG				IAmb	IAmb	23 45 48.4	
	comp=Z,4.0nm,1.1s						
PV13	**Radium Mtn., P**	**55.09 286**	P		**P**	**23 45 45.9**	**-0.3**
PV13				IAmb	IAmb	23 45 49.5	
	comp=Z,4.3nm,1.1s						
PV05	**Paradox Valley**	**55.28 287**	P		**P**	**23 45 46.4**	**-1.2**
PV05				IAmb	IAmb	23 45 50.1	
	comp=Z,3.4nm,0.8s						
AAK	**Ala-Archa**	**55.44 63**	LR		LR	00 11 08.8	
	comp=Z,114nm,19.8s,baz=327,slow=38						
DKNS	**Dickens**	**55.47 277**	P		**P**	**23 45 48.3**	**-0.5**
DKNS				IAmb	IAmb	23 45 51.3	
	comp=Z,4.8nm,0.9s						
ELK	**Elko**	**55.59 293**	LR		LR	00 09 15.4	
	comp=Z,317nm,19.2s,baz=34,slow=36						
ELK	**Elko**	**55.59 293**			**P**	**23 45 49.1**	**-0.7**
ELK				IAmb	IAmb	23 45 54.6	
	comp=Z,4.3nm,0.8s						
BRDY	**Brady**	**56.64 274**			**P**	**23 45 55.9**	**-1.2**
BRDY				IAmb	IAmb	23 45 59.8	
	comp=Z,4.4nm,0.8s						
ANMO	**Albuquerque**	**56.79 282**	LR		LR	00 09 56.5	
	comp=Z,123nm,18.5s,baz=26,slow=36						
PSUT	**Pine Spring**	**56.89 291**			**P**	**23 45 59.4**	**+0.4**
PSUT				IAmb	IAmb	23 46 03.6	
	comp=Z,4.5nm,1.0s						
PKCU	**Pink Cliffs**	**57.17 289**	P		**P**	**23 46 01.5**	**+0.3**
TLY	**Talaya**	**57.28 37**	LR		LR	00 12 03.0	
	comp=Z,66nm,20.2s,baz=315,slow=37						
SZCU	**Shurtz Canyon**	**57.36 289**	P		**P**	**23 46 03.1**	**+0.7**
SZCU				IAmb	IAmb	23 46 08.2	
	comp=Z,8.8nm,1.4s						
CCUT	**Cedar City**	**57.52 290**			**P**	**23 46 03.4**	**-0.1**
CCUT				IAmb	IAmb	23 46 07.2	
	comp=Z,4.1nm,1.2s						
JCT	**Junction City**	**57.69 274**	P		**P**	**23 46 04.4**	**-0.2**
YBH	**Yreka Blue Hor**	**57.71 299**	LR		LR	00 11 01.9	
	comp=Z,142nm,18.6s,baz=10.0,slow=36						
KNB	**Kanab**	**57.74 289**	P		**P**	**23 46 05.6**	**+0.5**
KNB				IAmb	IAmb	23 46 12.6	
	comp=Z,4.0nm,1.1s						
CRNM	**Carthage**	**57.76 282**	P		**P**	**23 46 07.0**	**+1.8**
OZNA	**Ozona**	**57.89 275**	P		**P**	**23 46 05.3**	**-0.7**
LCMT	**Little Creek M**	**57.93 289**	P		**P**	**23 46 06.5**	**+0.2**
LCMT				IAmb	IAmb	23 46 09.4	
	comp=Z,4.2nm,1.2s						
U15A	**North Rim**	**58.02 288**			**P**	**23 46 06.8**	**-0.4**
U15A				IAmb	IAmb	23 46 09.6	
	comp=Z,5.5nm,1.3s						
PAHR	**Pah Rah Range**	**58.14 296**	P		**P**	**23 46 07.5**	**-0.3**
KVN	**Kaiserville**	**58.18 294**			**P**	**23 46 07.5**	**-0.7**
KVN				IAmb	IAmb	23 46 16.6	
	comp=Z,5.0nm,1.1s						
GDL2	**Guadalupe Moun**	**58.22 279**	P		**P**	**23 46 08.6**	**+0.2**
PRN	**Pahroc Range**	**58.34 291**			**P**	**23 46 09.2**	**0.0**
PRN				IAmb	IAmb	23 46 18.0	
	comp=Z,6.8nm,1.2s						
WUAZ	**Wupatki**	**58.41 287**	P		**P**	**23 46 10.0**	**+0.3**
WUAZ				IAmb	IAmb	23 46 16.9	
	comp=Z,5.8nm,1.4s						
DBIC	**Dimbokro**	**58.47 160**	LR		LR	00 11 33.5	
	comp=Z,78nm,18.1s,baz=20,slow=36						
TPH	**Tonopah**	**58.66 293**	P		**P**	**23 46 11.1**	**-0.4**
TPH				IAmb	IAmb	23 46 15.4	
	comp=Z,4.9nm,1.0s						
NV11	**Mina Array Sit**	**58.73 294**	P		**P**	**23 46 12.0**	**0.0**
TPB28		**58.73 279**	P		**P**	**23 46 12.2**	**+0.2**
TPB28				IAmb	IAmb	23 46 36.7	
	comp=Z,2.1nm,0.9s						
NVAR	**Mina Array Bea**	**58.80 294**	P		**P**	**23 46 12.2**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=57,slow=5.5,SNR=6.9						
NVAR				LR	LR	00 11 08.5	
	comp=Z,147nm,19.3s,baz=28,slow=36						
	comp=Z,1.9nm,0.9s						
NVAR	**Mina Array Bea**	**58.80 294**	P		**P**	**23 46 10.8**	**-1.6**
KSH2	**Kashi**	**58.84 64**	P		P	23 46 19.4	+6.7
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MNTX	**Cornudas Mount**	**59.09 279**	P		**P**	**23 46 14.9**	**+0.6**
WAKR	**Walker**	**59.19 295**	P		**P**	**23 46 15.2**	**+0.1**
WAKR				IAmb	IAmb	23 46 26.9	
	comp=Z,5.4nm,1.0s						
TPNV	**Topopah Spring**	**59.23 292**			**P**	**23 46 14.9**	**-0.5**
TPNV				IAmb	IAmb	23 46 18.5	
	comp=Z,3.9nm,0.9s						
WMQ	**Urumqi**	**59.34 52**	*e*P		**P**	**23 46 18.8**	**+2.8**
WMQ				LR	LR		
	comp=N,200nm,14.1s						
WMQ				LR	LR		
	comp=E,300nm,19.3s						
WMQ				LR	LR		
	comp=Z,59nm,19.3s						
KMPM	**Mount Pierce**	**59.38 300**	P		**P**	**23 46 16.2**	**-0.1**
X16A	**Lo Mia Camp, P**	**59.38 286**	P		**P**	**23 46 16.6**	**+0.1**
ALPN	**Alpine**	**59.47 277**	P		**P**	**23 46 17.4**	**+0.3**
SUTB	**Sutter Butte**	**59.50 297**	P		**P**	**23 46 16.9**	**-0.1**
WCT	**Wildcat Mounta**	**59.51 292**			**P**	**23 46 16.8**	**-0.5**
WCT				IAmb	IAmb	23 46 20.2	
	comp=Z,4.0nm,1.1s						
W13A	**Hualapai Mount**	**59.83 289**			**P**	**23 46 20.4**	**+0.7**
W13A				IAmb	IAmb	23 46 22.7	
	comp=Z,3.6nm,1.2s						
DUN6	**Lazy B Ranch**	**59.97 283**	P		**P**	**23 46 21.7**	**+1.2**
MTPC	**Mountain Pass**	**60.19 290**	P		**P**	**23 46 22.6**	**+0.5**
QSM	**Queen of Sheba**	**60.33 291**	P		**P**	**23 46 23.9**	**+1.2**
QSM				IAmb	IAmb	23 46 32.9	
	comp=Z,5.8nm,1.2s						
TXAR	**Lajitas Array**	**60.37 277**	P		**P**	**23 46 22.8**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=64,slow=5.8,SNR=7.1						
TXAR				LR	LR	00 11 46.0	
	comp=Z,74nm,21.2s,baz=38,slow=35						
	comp=Z,1.2nm,1.0s						
TXAR	**Lajitas Array**	**60.37 277**	P		**P**	**23 46 23.9**	**+0.6**
Y14A	**Wickenburg**	**60.45 287**	P		**P**	**23 46 23.2**	**-0.5**
Y14A				IAmb	IAmb	23 46 26.0	
	comp=Z,4.5nm,1.4s						
MPMC	**Manual Prospec**	**60.50 292**			**P**	**23 46 23.8**	**-0.4**
MPMC				IAmb	IAmb	23 46 30.9	
	comp=Z,5.1nm,1.3s						
IRM	**Iron Mountain**	**61.16 289**	P		**P**	**23 46 28.2**	**-0.3**
IRM				IAmb	IAmb	23 46 32.0	
	comp=Z,4.0nm,1.0s						
ISA	**Isabella, Lake**	**61.24 293**	P		**P**	**23 46 28.6**	**-0.5**
ISA				IAmb	IAmb	23 46 32.8	
	comp=Z,5.9nm,1.1s						
BLYC	**Blythe**	**61.26 288**	P		**P**	**23 46 29.6**	**+0.4**
SONM	**Songino Array**	**61.52 37**	P		**P**	**23 46 33.1**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=333,slow=5.0,SNR=5.7						
SONM				LR	LR	00 14 17.9	
	comp=Z,101nm,21.5s,baz=330,slow=37						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**61.52 37**	P		**P**	**23 46 31.1**	**+0.2**
BELC	**Belle Mtn. Jos**	**61.66 290**	P		**P**	**23 46 32.0**	**0.0**
ULN	**Ulaanbaatar**	**61.67 36**	*e*P		**P**	**23 46 31.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.6s						
BC3	**Big Chuckawall**	**61.73 289**	P		**P**	**23 46 31.9**	**-0.5**
PFO	**Pinyon Flats O**	**62.18 290**	LR		LR	00 13 34.5	
	comp=Z,219nm,18.3s,baz=32,slow=36						
BORC	**Borrego Spring**	**62.46 290**	P		**P**	**23 46 35.9**	**-1.4**
MDP	**Montagnes des**	**62.67 215**	LR		LR	00 07 59.7	
	comp=Z,51nm,19.5s,baz=51,slow=30						
PETK	**Petropavlovsk-**	**63.33 0**	LR		LR	00 15 40.7	
	comp=Z,23nm,18.3s,baz=356,slow=37						
SDV	**Santo Domingo**	**64.68 235**	LR		LR	00 10 03.9	
	comp=Z,25nm,21.0s,baz=70,slow=32						
MTO3	**Montecristo**	**67.17 256**	P		**P**	**23 47 08.1**	**-0.3**
CMIG	**Matias Romero**	**67.18 262**	LR		LR	00 17 01.7	
	comp=Z,24nm,19.8s,baz=44,slow=37						
LPIG	**La Paz**	**67.83 279**	LR		LR	00 16 08.3	
	comp=Z,112nm,18.1s,baz=25,slow=35						
JTS	**Las Juntas de**	**69.00 250**	LR		LR	00 16 54.0	
	comp=Z,17nm,18.0s,baz=10,slow=36						
MBAR	**Mbarara**	**75.09 124**	LR		LR	00 22 20.5	
	comp=Z,40nm,18.8s,baz=338,slow=37						
KSRS	**Korea Array**	**76.24 24**	LR		LR	00 24 32.2	
	comp=Z,38nm,19.5s,baz=320,slow=38						
NJ2	**Nanjing**	**79.54 33**	*e*P		**P**	**23 48 18.6**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
PZH	**PanZhiHua**	**79.82 49**	P		**P**	**23 48 22.4**	**-0.2**
BDFB	**Brasilia**	**81.76 205**	LR		LR	00 19 24.1	
	comp=Z,83nm,19.2s,baz=12,slow=32						
CMAR	**Chiang Mai Arr**	**86.27 55**	LR		LR	00 31 14.6	
	comp=Z,41nm,18.3s,baz=265,slow=38						
LPAZ	**La Paz**	**87.39 224**	LR		LR	00 25 19.1	
	comp=Z,24nm,19.9s,baz=46,slow=34						
LSZ	**Lusaka**	**87.85 132**	LR		LR	00 30 08.7	
	comp=Z,130nm,18.7s,baz=334,slow=37						
CPUP	**Villa Florida**	**94.07 211**	LR		LR	00 28 39.3	
	comp=Z,28nm,18.0s,baz=73,slow=34						
TAOE	**Nuku Hiva Isla**	**110.01 292**	*e*LR		LR	00 27 20.0	
	comp=Z,70nm,24.5s						
PPT2	**Papeete2**	**121.71 297**	*e*LR		LR	00 32 37.9	
PPT2	comp=Z,143nm,24.8s						
	comp=Z,112nm,23.0s						
WRA	**Warramunga Arr**	**133.30 31**	PKP		**PKPdf**	**23 55 30.0**	**0.0**
	comp=Z,0.5nm,0.8s,baz=344,slow=2.3,SNR=2.5						
ASAR	**Alice Springs**	**136.78 33**	PKP		**PKiKP**	**23 55 37.3**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=8.5,slow=1.9,SNR=5.0						

NDI ***19*** *23:36:18.8±1.8,31°.95N×95°.20E,h10km,mb4.8,ML3.

TNCH Sg **Sg** **23 39 56.8 -1.0**
TNCH SMN
comp=N,280nm,1.5s
TNCH SME
comp=N,220nm,1.8s
TNCH L L
comp=N,450nm,5.9s
PZH PanZhiHua 7.21 120 Pn **Pn** **23 38 25.4 +1.4**
PZH Sn **Sn** **23 39 43.1 -2.9**
PZH L L
comp=N,880nm,8.8s
PZH L L
comp=N,770nm,7.4s
PZH L L
comp=N,650nm,7.6s
EVN Everest 7.34 253 **Pn** **23 38 25.8 -0.4**
EVN Everest 7.34 253 P **Pn** **23 38 28.9 +2.7**
CD2 Chengdu 7.77 83 Pn **Pn** **23 38 30.5 -1.1**
CD2 Sn **Sn** **23 40 02.5 +2.8**
CD2 L L
comp=N,1μm,8.2s
CD2 L L
comp=N,1μm,6.9s
CD2 L L
comp=N,2μm,8.7s
KMI2 Kunming 8.73 124 P **Pn** **23 38 46.8 +1.8**
KMI2 SMN
comp=N,56nm,1.8s
KMI2 SME
comp=N,37nm,2.7s
KMI2 L L
comp=N,870nm,5.9s
KMI2 L L
comp=N,540nm,5.4s
KMI2 L L
comp=N,380nm,8.3s
LZDM Lanzhou Array 9.37 51 Pn Pn 23 38 51.2 -2.7
baz=194,slow=11
comp=N,1.2nm,0.3s
LZH Lanzhou 9.55 50 *e*P **Pn** **23 38 59.3 +3.2**
LZH sP 23 39 08.8
LZH pmax pmax
comp=N,21nm,1.0s
LZH L L
comp=N,600nm,6.2s
LZH L L
comp=N,570nm,7.2s
LZH L L
comp=N,540nm,8.8s
GTA2 Gaotai 10.04 23 *e*P **Pn** **23 39 03.5 +0.6**
GTA2 pP 23 39 08.0
GTA2 pmax pmax
comp=N,3.0nm,0.8s
GTA2 L L
comp=N,470nm,8.9s
GTA2 L L
comp=N,390nm,7.2s
GTA2 L L
comp=N,460nm,8.9s
NPW Naypyitaw 10.54 173 P **Pn** **23 39 10.1 +0.5**
CHTO Chiang Mai 12.04 161 P **Pn** **23 39 29.8 -0.3**
CHTO Chiang Mai 12.04 161 **Pn** **23 39 29.8 -0.3**
CHTO Chiang Mai 12.04 161 P **Pn** **23 39 32.6 +2.5**
CHTO Chiang Mai 12.04 161 P **Pn** **23 39 31.3 +1.1**
CM31 Chiang Mai Arr 12.38 161 Pn **Pn** **23 39 35.2 +0.4**
CMAR Chiang Mai Arr 12.38 161 Pn **Pn** **23 39 35.5 +0.7**
comp=N,0.7nm,0.3s,baz=333,slow=13,SNR=19
CMAR LR LR 23 44 28.1
comp=N,11nm,19.1s,baz=315,slow=38
comp=N,1.0nm,0.3s
CMAR Chiang Mai Arr 12.38 161 P **Pn** **23 39 35.0 +0.2**
CMAR Chiang Mai Arr 12.38 161 **Pn** **23 39 35.0 +0.2**
XAN Xi'an 12.56 69 P **Pn** **23 39 38.0 +0.8**
XAN pmax pmax
comp=N,6.0nm,1.3s
XAN L L
comp=N,330nm,6.9s
XAN L L
comp=N,490nm,7.6s
XAN L L
comp=N,280nm,9.6s
BWNR Bhubaneshwar 12.86 221 *ex* **Pn** **23 39 40.5 -0.8**
BWNR IAmb IAmb 23 39 46.8
comp=Z,30nm,1.1s
WMQ Urumqi 14.63 339 *e*P **Pn** **23 40 05.0 -0.5**
WMQ sP P 23 40 12.6 +0.7
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ L L
comp=Z,230nm,9.5s
WMQ L L
comp=Z,200nm,7.3s
LYN LuoYang 15.53 70 P **Pn** **23 40 19.0 +1.5**
LYN pmax pmax
comp=Z,12nm,0.7s
LYN L L
comp=Z,180nm,6.5s
LYN L L
comp=Z,310nm,7.8s
LYN L L
comp=Z,320nm,10.6s
TSSA Tissa 16.07 284 *ex* **P** **23 40 28.2 0.0**
BTO2 Baotou 16.10 46 *e*P **Pn** **23 40 26.6 +1.6**
BTO2 pP **P** **23 40 30.1 +1.8**
BTO2 S **Sn** **23 43 27.3 +3.6**
BTO2 pmax pmax
comp=Z,21nm,0.6s
BTO2 pmax pmax
comp=Z,200nm,3.8s
BTO2 L L
comp=Z,420nm,5.9s
BTO2 L L
comp=Z,240nm,6.8s
BTO2 L L
comp=Z,290nm,6.4s
THN Thein Dam 16.38 282 *ex* **P** **23 40 32.2 +0.8**
WUS Wushi 16.64 315 **Pn** **23 40 30.6 -1.2**
WHN Wuhan 16.89 84 P **Pn** **23 40 33.3 -1.7**
WHN pmax pmax
comp=Z,98nm,1.4s
HHC Hu-ho-hao-te 17.22 48 *e*P **Pn** **23 40 39.3 +0.1**
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,89nm,4.7s
HHC L L
comp=Z,190nm,9.6s
HHC L L
comp=Z,160nm,9.4s
HHC L L
comp=Z,210nm,10.2s
QIZ Qiongzhong 17.68 126 P **Pn** **23 40 46.5 +1.6**
QIZ S **Sn** **23 44 06.4 +4.4**
QIZ L L
comp=Z,320nm,9.4s
QIZ L L
comp=Z,240nm,6.4s
QIZ L L
comp=Z,250nm,9.5s
SHLS Shalkode 17.72 321 *e*P **Pn** **23 40 42.5 -2.9**
SHLS Shalkode 17.72 321 *e*P **Pn** **23 40 42.5 -2.9**
TARG Taragay, Kyrgy 17.82 314 P **Pn** **23 40 44.2 -2.6**
TARG pmax pmax
comp=Z,76nm,1.2s
TARG Taragay, Kyrgy 17.82 314 **Pn** **23 40 44.2 -2.6**
TARG Taragay, Kyrgy 17.82 314 P **P** **23 40 50.6 +3.0**
PDGK Podgornoye 17.82 321 P **Pn** **23 40 45.2 -1.4**
PDGK Podgornoye 17.82 321 **Pn** **23 40 45.2 -1.4**
PRZ Przheval'sk 17.90 317 P **Pn** **23 40 47.1 -0.5**
PRZ pmax pmax
comp=Z,174nm,1.2s
PRZ Przheval'sk 17.90 317 **Pn** **23 40 47.1 -0.5**
PRZ IAmb IAmb 23 40 53.4
comp=Z,174nm,1.2s
PRZ Przheval'sk 17.90 317 P **P** **23 40 52.2 +3.9**
UZB Uzynbulak 17.96 320 *e*P **Pn** **23 40 48.1 -0.2**
UZB Uzynbulak 17.96 320 *e*P **Pn** **23 40 48.2 -0.2**
HNS HongShan 18.00 62 ⇑P **Pn** **23 40 48.1 -0.6**
HNS pmax pmax
comp=Z,11nm,1.0s
HNS L L
comp=Z,240nm,9.8s
HNS L L
comp=Z,260nm,11.9s
KSH2 Kashi 18.06 304 P **Pn** **23 40 49.5 -0.2**
KSH2 sP sP 23 40 59.0 +3.4
KSH2 pmax pmax
comp=Z,16nm,1.1s
SATY Saty 18.25 319 *e*P **Pn** **23 40 51.8 -0.1**
SATY Saty 18.25 319 *e*P **Pn** **23 40 51.8 -0.1**
KDJ Kajisay 18.43 315 P **P** **23 40 52.4 -1.7**
KDJ pmax pmax
comp=Z,110nm,1.7s
KDJ Kajisay 18.43 315 P **P** **23 40 52.4 -1.7**
KDJ IAmb IAmb 23 40 59.9
comp=Z,110nm,1.7s
KDJ Kajisay 18.43 315 P **P** **23 40 55.7 +1.7**
NIL Nilore 18.56 286 P **P** **23 40 52.6 -2.8**
NIL pmax pmax
comp=Z,126nm,1.5s
NIL Nilore 18.56 286 **P** **23 40 52.6 -2.8**
NIL IAmb IAmb 23 40 59.7
comp=Z,126nm,1.5s
NIL Nilore 18.56 286 P **P** **23 40 54.3 -1.1**
ZSN Zaisan 18.76 339 *e*P **P** **23 40 57.2 -0.3**
ZSN Zaisan 18.76 339 *e*P **P** **23 40 57.2 -0.3**
NRN Naryn 18.80 311 P **P** **23 40 58.5 +0.1**
NRN pmax pmax
comp=Z,27nm,1.5s
NRN Naryn 18.80 311 P **P** **23 40 58.5 +0.1**
ULHL Ulahol 19.07 314 P **P** **23 41 03.2 +2.0**
SNR=9.3
TNSS Tian-Shan 19.09 317 *e*P **P** **23 41 01.4 -0.2**
TNSS Tian-Shan 19.09 317 *e*P **P** **23 41 01.4 -0.2**
MDOK Medeo 19.10 317 *e*P **P** **23 41 01.5 +0.1**
MDOK Medeo 19.10 317 *e*P **P** **23 41 01.6 +0.1**
MK31 Makanchi Array 19.11 333 *d* iP **P** **23 41 00.7 -0.7**
MKAR Makanchi Array 19.11 333 P **P** **23 41 00.5 -0.9**
comp=Z,0.2nm,0.3s,baz=141,slow=13,SNR=42
comp=Z,4.4nm,0.8s
MKAR Makanchi Array 19.11 333 P **P** **23 41 00.0 -1.4**
MKAR Makanchi Array 19.11 333 **P** **23 41 00.0 -1.4**
AAA Alma-Ata 19.21 317 *e*P **P** **23 41 02.8 +0.3**
AAA Alma-Ata 19.21 317 *e*P **P** **23 41 02.8 +0.3**
MAKZ Makanchi 19.25 333 P **P** **23 41 01.8 -1.1**
MAKZ pmax pmax
comp=Z,25nm,1.1s
MAKZ Makanchi 19.25 333 **P** **23 41 01.8 -1.1**
MAKZ Makanchi 19.25 333 P **P** **23 41 02.8 -0.1**
BOOM Boomskoye usch 19.39 314 P **P** **23 41 04.9 +0.2**
BOOM pmax pmax
comp=Z,33nm,1.0s
BOOM Boomskoye usch 19.39 314 **P** **23 41 04.9 +0.2**
UDPR Udaipur 19.53 258 *e*P P 23 41 00.0 -6.1
TDK Taldyqorghan 19.53 323 *e*P **P** **23 41 05.8 -0.1**
TDK pmax pmax
comp=Z,66nm,1.4s
TDK Taldyqorghan 19.53 323 *e*P **P** **23 41 05.9 -0.1**
comp=Z,66nm,1.4s
HYB Hyderabad 19.57 233 *e*P **P** **23 41 07.8 +1.1**
HYB *e*S S 23 45 00.7 +13
SONM Songino Array 19.67 24 P **P** **23 41 06.6 -1.0**
comp=Z,0.2nm,0.3s,baz=213,slow=9.9,SNR=39
SONM LR LR 23 49 13.4
comp=Z,86nm,18.7s,baz=220,slow=39
comp=Z,10nm,1.0s
SONM Songino Array 19.67 24 P **P** **23 41 06.5 -1.0**
SONM pmax pmax
comp=Z,16nm,1.1s
SONM Songino Array 19.67 24 **P** **23 41 06.5 -1.1**
TKM2 Tokmak 2 19.84 315 P **P** **23 41 11.7 +2.1**
SNR=11
ULN Ulaanbaatar 19.93 25 *c* iP **P** **23 41 10.5 +0.1**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 19.93 25 P **P** **23 41 10.5 +0.1**
comp=Z,39nm,1.2s
ULN Ulaanbaatar 19.93 25 P **P** **23 41 10.6 +0.1**
KUU Kurty 19.95 318 *e*P **P** **23 41 10.7 +0.1**
KUU pmax pmax
comp=Z,88nm,1.3s
KUU Kurty 19.95 318 *e*P **P** **23 41 10.7 +0.1**
comp=Z,88nm,1.3s
BJI2 Beijing 19.97 55 P **P** **23 41 09.6 -1.2**
BJI2 pmax pmax
comp=Z,3.0nm,1.2s
BJI2 L L
comp=Z,240nm,7.8s
BJI2 L L
comp=Z,190nm,7.6s
BJI2 L L
comp=Z,280nm,8.2s
KBK Karagaybulak 20.10 313 P **P** **23 41 14.4 +1.9**
SNR=6.2
DGZ Jazzator, Alta 20.16 346 ⇓ *i* P **P** **23 41 13.6 +0.6**
DGZ pmax pmax
comp=Z,27nm,1.1s
AAK Ala-Archa 20.38 313 P **P** **23 41 17.0 +1.6**
comp=Z,45nm,1.1s,baz=118,slow=8.8,SNR=46
comp=Z,45nm,1.1s
AAK Ala-Archa 20.38 313 P **P** **23 41 18.4 +3.0**
SNR=25
AAK Ala-Archa 20.38 313 ⇑ *i* P **P** **23 41 17.0 +1.6**
AAK pmax pmax
comp=Z,93nm,1.3s
AAK Ala-Archa 20.38 313 **P** **23 41 15.8 +0.4**
AAK IAmb IAmb 23 41 22.6
comp=Z,87nm,1.2s
AAK Ala-Archa 20.38 313 P **P** **23 41 17.3 +1.8**
FRU1 Bishkek 20.38 313 P **P** **23 41 15.8 +0.5**
FRU1 pmax pmax
comp=Z,79nm,1.3s
FRU1 Bishkek 20.38 313 P **P** **23 41 15.8 +0.5**
FRU1 IAmb IAmb 23 41 22.7
comp=Z,78nm,1.3s
KNGR Kungurtug, Tuv 20.39 5 ⇑ *i* P **P** **23 41 16.4 +0.9**
KNGR pmax pmax
comp=Z,27nm,1.7s
CHMS Chumysh 20.40 314 P **P** **23 41 17.0 +1.5**
SNR=13
MANEM Manem 20.45 297 **P** **23 41 16.8 +0.4**
MANEM IAmb IAmb 23 41 21.7
comp=Z,95nm,1.1s
OHH Osh 20.57 306 P **P** **23 41 18.0 +0.5**
NJ2 Nanjing 20.68 79 *e*P **P** **23 41 18.3 -0.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s
USP Ospenovka 20.70 314 P **P** **23 41 19.7 +0.9**
SNR=26
SGDS Sogindy 20.72 315 *e*P **P** **23 41 19.2 +0.2**
ARSB Arslanbob 20.76 308 P **P** **23 41 19.2 -0.4**
ARSB pmax pmax
comp=Z,55nm,1.2s
ARSB Arslanbob 20.76 308 P **P** **23 41 19.2 -0.4**
ARSB IAmb IAmb 23 41 23.0
comp=Z,55nm,1.2s
EKS2 Erkin-Say 20.85 312 P **P** **23 41 21.8 +1.3**
SNR=22
DRK Karamyk 20.91 302 P **P** **23 41 21.8 +0.4**
DRK pmax pmax
comp=Z,57nm,1.1s
DRK Karamyk 20.91 302 P **P** **23 41 21.8 +0.4**
DRK IAmb IAmb 23 41 24.7
comp=Z,57nm,1.1s
ZAK Zakamensk 21.06 15 *e*P **P** **23 41 22.1 -0.6**
ZAK pmax pmax
comp=Z,30nm,1.3s
ARK Arkit 21.66 308 P **P** **23 41 30.2 +1.1**
XLT XiLinHaoTe 21.68 45 *e*P **P** **23 41 28.9 -0.4**
XLT PP **PnPn** **23 41 52.3 +2.3**
XLT pmax pmax
comp=Z,11nm,1.1s
XLT L L
comp=Z,170nm,7.1s
XLT L L
comp=Z,150nm,8.1s
BTK Batken 21.81 303 P **P** **23 41 31.2 +0.4**
BTK pmax pmax
comp=Z,76nm,1.1s
BTK Batken 21.81 303 P **P** **23 41 31.2 +0.4**
BTK IAmb IAmb 23 41 34.6
comp=Z,76nm,1.1s
BTK Batken 21.81 303 P **P** **23 41 31.8 +1.0**
GAR Garm 21.86 300 **P** **23 41 30.5 -1.0**
GAR Garm 21.86 300 P **P** **23 41 30.9 -0.5**
BTLS Baital 21.95 318 *e*P **P** **23 41 32.3 +0.1**
BTLS Baital 21.95 318 *e*P **P** **23 41 32.4 +0.1**
KBL Kabul 22.11 288 P **P** **23 41 34.2 0.0**
KBL pmax pmax
comp=Z,176nm,1.4s
KBL Kabul 22.11 288 **P** **23 41 34.2 0.0**
KBL Kabul 22.11 288 P **P** **23 41 34.6 +0.5**
TLY Talaya 22.36 15 LR LR 23 50 38.7
comp=Z,78nm,19.0s,baz=208,slow=38
TLY Talaya 22.36 15 ⇑ *e*P **P** **23 41 36.8 +0.3**
TLY pmax pmax
comp=Z,12nm,1.3s
TLY Talaya 22.36 15 P **P** **23 41 35.6 -0.9**
TLY Talaya 22.36 15 P **P** **23 41 37.2 +0.7**
DZA Taraz 22.55 310 *e*P **P** **23 41 38.8 +0.2**
DZA pmax pmax
comp=Z,24nm,1.5s
DZA Taraz 22.55 310 *e*P **P** **23 41 38.9 +0.2**
comp=Z,24nm,1.5s
CHGR Chuyangaron 22.65 298 *c* iP **P** **23 41 39.7 -0.1**
CHGR pmax pmax
comp=Z,327nm,1.2s
CHGR Chuyangaron 22.65 298 **P** **23 41 39.5 -0.3**
IRK Irkutsk 23.02 15 *e*P **P** **23 41 43.9 +0.4**
IRK pmax pmax
comp=Z,81nm,2.1s
IUG Iuzhnay 23.11 308 *e*P **P** **23 41 45.1 +0.5**
IUG pmax pmax
comp=Z,29nm,1.4s
IUG Iuzhnay 23.11 308 *e*P **P** **23 41 45.1 +0.5**
comp=Z,29nm,1.4s
KK31 Karatay Array 23.18 310 P **P** **23 41 45.1 -0.1**
KK31 pmax pmax
comp=Z,34nm,1.3s
KK31 Karatay Array 23.18 310 **P** **23 41 45.1 -0.1**
KK31 IAmb IAmb 23 41 48.1
comp=Z,34nm,1.3s
KKAR Karatay Array 23.18 310 P **P** **23 41 44.5 -0.8**
KKAR Karatay Array 23.18 310 **P** **23 41 44.5 -0.8**
SHAA Shahritus 23.22 295 P **P** **23 41 45.1 -0.7**
SHAA IAmb IAmb 23 41 49.4
comp=Z,98nm,1.1s
CHM Chimkent 23.47 308 *e*P **P** **23 41 48.6 +0.4**
CHM Chimkent 23.47 308 *e*P **P** **23 41 48.7 +0.4**
BRLS Boroldoy 23.60 309 *e*P **P** **23 41 49.9 +0.5**
BRLS Boroldoy 23.60 309 *e*P **P** **23 41 49.9 +0.5**
KURBB Kurchatov Arra 23.67 334 P **P** **23 41 48.7 -1.3**
comp=Z,22nm,1.1s,baz=143,slow=10.0,SNR=75
KURBB PcP **PcP** **23 45 34.0 -0.2**
comp=Z,2.0nm,1.0s,baz=160,slow=2.6,SNR=6.5
comp=Z,22nm,1.1s
KURK Kurchatov 23.71 334 P **P** **23 41 48.7 -1.7**
KURK 23 45 34.0
KURK Kurchatov 23.71 334 **P** **23 41 49.2 -1.1**
KURK Kurchatov 23.71 334 P **P** **23 41 50.1 -0.3**
ZAA0 Zalesovo Array 24.72 346 **P** **23 41 59.0 -0.6**
ZALV Zalesovo Beam 24.72 346 P **P** **23 41 58.3 -1.3**
comp=Z,2.7nm,0.6s,baz=153,slow=10.0,SNR=21
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 24.72 346 *i* P **P** **23 41 59.5 -0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.8s
ZALV Zalesovo Beam 24.72 346 **P** **23 41 58.5 -1.2**
KULM Kulim 25.48 166 **P** **23 42 05.8 -1.1**
KULM IAmb IAmb 23 42 10.4
comp=Z,26nm,1.4s
KOD Kodaikanal 25.66 223 *ex* **P** **23 42 07.7 -1.2**
HIA Hailar 26.77 38 P **P** **23 42 17.0 -1.4**
HIA pmax pmax
comp=Z,45nm,1.9s
HIA Hailar 26.77 38 P **P** **23 42 16.9 -1.4**
HIA IAmb IAmb 23 42 21.4
comp=Z,45nm,1.9s
HILR Hailar Array B 26.94 37 P **P** **23 42 18.0 -2.0**
comp=Z,0.5nm,0.3s,baz=187,slow=10,SNR=1.5
comp=Z,0.5nm,0.3s
HRA Herat 27.72 287 **P** **23 42 26.2 -1.0**
CN2 Changchun 27.77 52 P **P** **23 42 27.6 +0.2**
CN2 PP **PnPn** **23 43 16.9 +3.6**
CN2 S **S** **23 47 06.6 -3.5**
CN2 SS **SnSn** **23 48 27.8 +5.4**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 L L
comp=Z,150nm,9.0s
CN2 L L
comp=Z,200nm,9.0s
CN2 L L
comp=Z,170nm,10.0s
KSRS Korea Array 28.33 66 LR LR 23 54 38.2
comp=Z,40nm,18.5s,baz=225,slow=38
BVAR Borovoye Array 28.86 329 P **P** **23 42 38.0 +1.1**
comp=Z,8.7nm,0.9s,baz=133,slow=10,SNR=19
BVAR PcP **PcP** **23 45 47.0 +0.8**
comp=Z,2.1nm,0.9s,baz=108,slow=4.8,SNR=4.8
comp=Z,8.7nm,0.9s
BORK Borovoye 28.90 329 P **P** **23 42 36.7 -0.6**
BORK pmax pmax
comp=Z,21nm,1.1s
BORK Borovoye 28.90 329 **P** **23 42 36.7 -0.6**
BORK IAmb IAmb 23 42 40.1
comp=Z,21nm,1.1s
GSI Gunungsitoli 28.95 174 P **P** **23 42 38.2 +0.1**
MDJ Mudanjiang 30.86 53 P **P** **23 42 55.6 +0.8**
MDJ pmax pmax
comp=Z,18nm,2.0s
HEH HeiHe 31.53 41 *e*P **P** **23 42 59.9 -0.7**
HEH L L
comp=Z,100nm,12.2s
HEH L L
comp=Z,160nm,13.3s
HEH L L
comp=Z,160nm,9.3s
AB31 Akbulak array 32.40 316 **P** **23 43 07.5 -0.7**
ABKAR Akbulak array 32.40 316 **P** **23 43 08.5 +0.3**
USRK Ussuriysk Ar. 32.42 54 LR LR 23 57 10.2
comp=Z,35nm,19.6s,baz=173,slow=38
MYLDM Lahad Datu 33.53 133 P **P** **23 43 18.2 -0.2**
MYLDM IAmb IAmb 23 43 21.3
comp=Z,42nm,1.8s
ARTI Arti 36.45 326 P **P** **23 43 42.6 -0.7**
ARTI Arti 36.45 326 *c e*P **P** **23 43 43.9 +0.7**
ARTI pmax pmax
comp=Z,22nm,1.2s
ARTI Arti 36.45 326 **P** **23 43 42.6 -0.7**
ARTI IAmb IAmb 23 43 45.2
comp=Z,16nm,1.0s
ARTI Arti 36.45 326 pmax pmax
comp=Z,16nm,1.0s
MJAR Matsushiro Arr 36.55 68 P **P** **23 43 43.0 -1.4**
comp=Z,0.5nm,0.3s,baz=276,slow=12,SNR=4.3
comp=Z,0.5nm,0.3s
MJAR Matsushiro Arr 36.55 68 P P 23 43 41.7 -2.7
MJAR pmax pmax
comp=Z,2.0nm,0.8s
MJAR Matsushiro Arr 36.55 68 P P 23 43 41.7 -2.7
AKT Akhty 39.28 300 *e*P **P** **23 44 07.6 +0.1**
AKT *e* 23 45 38.1
AKT *e* 23 46 16.2
AKT pmax pmax
comp=Z,30nm,1.5s
NRIK Noril'sk 39.31 356 P **P** **23 44 07.2 0.0**
comp=Z,4.1nm,0.7s,baz=186,slow=6.0,SNR=8.5
comp=Z,4.1nm,0.7s
NRIK Noril'sk 39.31 356 **P** **23 44 06.6 -0.6**
MAK Makhachkala 39.50 302 *e*P P 23 44 05.5 -3.6
MAK *e*PPP PPP 23 46 01.9
MAK *e*S S 23 50 05.3 -5.9
MAK pmax pmax
comp=Z,130nm,1.1s
MAK MLR MLR
comp=Z,202nm,20.0s
ASAJ Asahikawa 39.97 56 P **P** **23 44 11.8 -1.2**
ASAJ pmax pmax
comp=Z,24nm,1.4s
JKA Kamikawa-asahi 39.97 56 P **P** **23 44 11.8 -1.3**
JKA Kamikawa-asahi 39.97 56 P **P** **23 44 12.8 -0.2**
YSS Yuzhno-Sakhali 40.34 52 *e*P **P** **23 44 16.3 +0.2**
YSS pmax pmax
comp=Z,20nm,0.6s
YSS Yuzhno-Sakhali 40.34 52 P **P** **23 44 15.4 -0.6**
YSS IAmb IAmb 23 44 17.8
comp=Z,15nm,0.6s
BELG Belogornoye 40.79 317 *c* iP **P** **23 44 19.9 +0.2**
BELG pmax pmax
comp=Z,5.0nm,1.1s
KIRV Kirov 41.77 326 *d* iP **P** **23 44 27.0 -0.6**
NCK Nalchik 42.37 303 ⇑ iP **P** **23 44 34.4 +1.6**
NCK pmax pmax
comp=Z,20nm,1.4s
HAKT HAKKARI 42.56 294 P **P** **23 44 35.8 +1.1**

KBZ Khabaz 42.88 303 ⇓ *eP* **P 23 44 37.9 +1.0**
KBZ pmax pmax
comp=Z,6.0nm,1.3s

KIV Kislovodsk 43.03 303 ⇑ P **P 23 44 40.3 +2.0**
KIV Kislovodsk 43.03 303 P **P 23 44 40.3 +2.0**
KIV Kislovodsk 43.03 303 P **P 23 44 38.4 +0.1**
KIV IAmb IAmb 23 44 42.8
comp=Z,28nm,1.1s

KIV Kislovodsk 43.03 303 P **P 23 44 40.6 +2.3**
comp=Z,19nm,1.3s

KIV Kislovodsk 43.03 303 P **P 23 44 40.1 +1.8**
EPOS Posof 43.04 300 P **P 23 44 41.1 +2.7**
SHA1 Shidzhatmaz 43.05 303 *c iP* **P 23 44 39.5 +0.9**
GURO Guroymak-BITLI 43.77 296 P **P 23 44 45.1 +0.7**
GURO IAmb IAmb 23 44 48.8
comp=Z,29nm,1.3s

BATM Batumi 43.81 300 ⇑ P **P 23 44 45.5 +1.0**
BATM Batumi 43.81 300 P **P 23 44 45.5 +1.0**
RAYN Ar Rayn 44.17 274 P **P 23 44 46.6 -1.1**
RAYN pmax pmax
comp=Z,24nm,1.8s

RAYN Ar Rayn 44.17 274 **P 23 44 46.6 -1.1**
RAYN IAmb IAmb 23 44 50.5
comp=Z,24nm,1.8s

RAYN Ar Rayn 44.17 274 P **P 23 44 48.5 +0.8**
VRH Novokhopyorsk 44.17 314 *eP* **P 23 44 48.0 +0.8**
VRH pmax pmax
comp=Z,26nm,0.9s

LABN Labinsk 44.44 304 *eP* **P 23 44 49.4 -0.1**
LABN *e**PP **pP 23 44 52.3 -1.5**
LABN *eS* **S 23 51 24.2 -0.2**
LABN pmax pmax
comp=Z,14nm,0.9s

LABN MLR MLR
comp=E,50nm,9.0s

LABN MLR MLR
comp=N,35nm,10.0s

LABN MLR MLR
comp=Z,128nm,11.0s

ERBR Yeremizino-Bor 44.62 306 *eP* **P 23 44 50.8 -0.1**
ERBR *e**PP **pP 23 44 54.3 -0.8**
ERBR *eS* **S 23 51 27.0 +0.1**
ERBR pmax pmax
comp=Z,21nm,0.9s

VSLR Vesyoloye 44.96 303 *deP* **P 23 44 54.7 +1.0**
VSLR pmax pmax
comp=Z,34nm,0.5s

SOC Sochi 45.19 303 *eP* **P 23 44 55.3 -0.2**
SOC *e* 23 46 43.5
SOC *e*PPP PPP 23 47 19.1
SOC *eS* **S 23 51 35.2 0.0**
SOC *e*SSS SSS 23 55 47.2
SOC pmax pmax
comp=Z,23nm,1.0s

SOC MLR MLR
comp=Z,62nm,11.0s

KTUT Trabzon 45.30 299 ⇑ P **P 23 44 58.2 +1.9**
TIXI Tiksi 45.34 14 ⇑ *iP* **P 23 44 55.5 -0.7**
TIXI pmax pmax
comp=Z,15nm,1.9s

TIXI Tiksi 45.34 14 P **P 23 44 54.8 -1.4**
TIXI IAmb IAmb 23 44 55.8
comp=Z,31nm,2.0s

VORD Divnogorie 45.67 313 *eP* P 23 44 57.1 -2.1
VORD pmax pmax
comp=Z,10.0nm,1.2s

KELT Kelkit 45.76 298 P **P 23 45 01.9 +1.6**
VSR Storozhevoye 45.77 314 *eP* **P 23 44 59.3 -0.7**
VSR pmax pmax
comp=Z,15nm,0.8s

VORR Voronezh 45.79 314 *eP* **P 23 45 00.4 +0.3**
VORR pmax pmax
comp=Z,19nm,0.6s

LPSR Galich'ya Gora 46.06 315 *eP* **P 23 45 02.3 +0.1**
LPSR pmax pmax
comp=Z,23nm,0.8s

ARPR Arapgir-MALATY 46.58 297 P **P 23 45 06.4 -0.4**
ARPR Arapgir-MALATY 46.58 297 P **P 23 45 09.0 +2.3**
ANN Anapa 46.78 305 *eP* **P 23 45 08.2 +0.2**
ANN *e**PP **pP 23 45 11.7 -0.6**
ANN *eS* **S 23 51 58.6 +0.5**
ANN pmax pmax
comp=Z,45nm,0.9s

MOS Moscow 47.21 320 *eP* **P 23 45 12.3 +1.1**
MOS *eS* **S 23 52 09.7 +5.8**
MOS pmax pmax
comp=Z,49nm,0.9s

KLMR Klimovskoe 47.24 327 *eP* P 23 45 09.5 -1.8
KLMR *e* 23 47 00.1
KLMR pmax pmax
comp=Z,43nm,1.1s

OBN Obninsk 47.73 319 *d iP* **P 23 45 15.8 +0.6**
OBN *e* 23 46 46.0
OBN *e* 23 47 07.2
OBN pmax pmax
comp=Z,34nm,1.3s

OBN MLR MLR
comp=Z,37nm,14.0s

OBN Obninsk 47.73 319 P **P 23 45 14.8 -0.5**
GAZ Gaziantep 47.73 294 P **P 23 45 15.0 -0.7**
GAZ IAmb IAmb 23 45 18.2
comp=Z,5.5nm,0.7s

TOKA Tokat 47.85 299 P **P 23 45 15.8 -0.7**
TOKA IAmb IAmb 23 45 20.0
comp=Z,17nm,1.1s

ANDN Andirin 48.35 295 P **P 23 45 21.6 +1.1**
BNN Bunyan 48.54 297 P **P 23 45 22.2 +0.3**
SEY Seymchan 48.84 31 ⇑ *iP* **P 23 45 23.4 -0.3**
SEY pmax pmax
comp=Z,8.0nm,1.4s

BR131 Keskin Array S 50.09 298 ⇑ *iP* **P 23 45 34.7 +0.9**
BR131 Keskin Array S 50.09 298 P **P 23 45 33.2 -0.7**
BRTR Keskin Array B 50.09 298 P **P 23 45 34.1 +0.3**
comp=Z,4.9nm,1.0s,baz=122,slow=4.5,SNR=16
comp=Z,4.9nm,1.0s

BRTR Keskin Array B 50.09 298 P **P 23 45 33.0 -0.8**
GHAJ Ghor Haditha 50.32 287 P **P 23 45 35.0 -0.5**
CY604 RAF Akrotiri, 50.44 291 P **P 23 45 37.2 +1.2**
LVZ Lovozero 51.12 335 *c iP* **P 23 45 41.6 +0.5**
LVZ pmax pmax
comp=Z,13nm,1.2s

EIL Elat 51.27 285 P **P 23 45 42.8 +0.1**
MDUB Mudurnu 51.82 300 **P 23 45 46.4 -0.3**
PURM Purcari 51.95 307 ⇑ P **P 23 45 48.6 +1.2**
AKASG Malin Array Be 52.05 313 P **P 23 45 47.0 -1.2**
comp=Z,10nm,0.9s,baz=83,slow=6.3,SNR=25
comp=Z,10nm,0.9s

AKASG Malin Array Be 52.05 313 *i P* **P 23 45 48.2 +0.1**
AKASG pmax pmax
comp=Z,10.0nm,0.8s

AKASG Malin Array Be 52.05 313 P **P 23 45 47.1 -1.1**
AKBB Malin Array Si 52.05 313 *c iP* **P 23 45 47.5 -0.6**
AKBB pmax pmax
comp=Z,32nm,1.3s

AKBB Malin Array Si 52.05 313 P **P 23 45 47.3 -0.8**
AKBB IAmb IAmb 23 45 50.2
comp=Z,26nm,1.1s

KIEV Kiev 52.06 313 ⇑ P **P 23 45 49.8 +1.5**
KIEV Kiev 52.06 313 P **P 23 45 49.7 +1.5**
MNK Minsk 52.72 318 *i* LQ LQ 00 05 00.6
MNK *i P* **P 23 45 53.6 +0.5**
comp=E,5.0nm,0.9s

MNK *i P* **P 23 45 53.6 +0.5**
comp=N,15nm,1.3s

MNK *i P* **P 23 45 53.6 +0.5**
comp=Z,16nm,1.0s,baz=89

MNK *i* PP **PP 23 47 53.1 +1.0**
MNK *i* PPP PPP 23 48 57.0
MNK *i* S **S 23 53 22.4 +1.6**
MNK *i* S **S 23 53 22.4 +1.6**
MNK *i* SS **SS 23 57 03.0 +3.9**
MNK *i* SSS SSS 23 58 49.5
MNK *i* LR LR 00 08 36.8
MNK Minsk 52.72 318 *i P* **P 23 45 53.6 +0.5**
MNK *i* 23 47 53.0
MNK *i* PPP PPP 23 48 56.9
MNK *i* S **S 23 53 22.4 +1.6**
MNK *i* SS **SS 23 57 02.9 +3.9**
MNK *i* SSS SSS 23 58 49.4
MNK pmax pmax
comp=E,5.0nm,0.9s

MNK pmax pmax
comp=Z,16nm,1.0s

MNK pmax pmax
comp=N,15nm,1.3s

SORM Soroca 52.81 310 ⇑ P **P 23 45 54.1 +0.3**
SORM Soroca 52.81 310 P **P 23 45 54.1 +0.3**
VLDR Vladesti 53.26 307 ⇑ P **P 23 45 58.7 +1.5**
CFR Carcaliu 53.31 306 ⇓ P **P 23 45 58.4 +0.7**
CFR Carcaliu 53.31 306 P **P 23 45 58.3 +0.7**
VSU Vasula 53.34 323 *c iP* **P 23 45 56.3 -1.3**
VSU pmax pmax
comp=Z,28nm,1.2s

ELL Elmali 53.55 295 P **P 23 45 58.9 -0.8**
ELL pmax pmax
comp=Z,48nm,1.1s

ELL Elmali 53.55 295 P **P 23 45 58.9 -0.8**
ICOR Ion Corvin 53.71 305 ⇑ P **P 23 46 01.3 +0.8**
FIA1 FINESS Array S 53.76 326 P **P 23 45 59.9 -0.7**
FINES FINESS Array B 53.76 326 P **P 23 45 59.5 -1.1**
comp=Z,2.1nm,0.6s,baz=93,slow=7.8,SNR=12
comp=Z,2.1nm,0.6s

FINES FINESS Array B 53.76 326 *i P* **P 23 46 01.6 +1.0**
FINES pmax pmax
comp=Z,2.0nm,0.6s

FINES FINESS Array B 53.76 326 **P 23 46 00.1 -0.6**
VRI Vrincioaia 54.20 307 ⇑ P **P 23 46 06.0 +1.9**
VRI Vrincioaia 54.20 307 P **P 23 46 06.0 +1.9**
MANT Manisa 54.21 298 P **P 23 46 03.8 -0.8**
MANT IAmb IAmb 23 46 12.3
comp=Z,8.4nm,0.8s

KEV Kevo 54.24 337 P **P 23 46 03.9 -0.1**
KEV pmax pmax
comp=Z,40nm,1.8s

KEV Kevo 54.24 337 P **P 23 46 03.9 -0.1**
SAHR Sahastru 54.25 307 ⇑ P **P 23 46 05.8 +1.2**
PLOR Plostina 54.25 307 ⇑ P **P 23 46 06.3 +1.8**
PLOR Plostina 54.25 307 P **P 23 46 06.3 +1.8**
ONER Baraj Valea Uz 54.36 308 ⇑ P **P 23 46 06.6 +1.3**
ISR Istrita 54.44 306 ⇑ P **P 23 46 07.8 +1.8**
ISR Istrita 54.44 306 P **P 23 46 07.7 +1.8**
BIZ Bicaz 54.47 308 ⇑ P **P 23 46 07.1 +1.1**
BALB Balikesir 54.48 299 P **P 23 46 05.7 -0.5**
COVR Voineasa-Covas 54.56 307 ⇑ P **P 23 46 08.5 +1.7**
NEHR Nehoiu 54.56 306 ⇑ P **P 23 46 08.7 +1.9**
ARCES ARCESS Array B 54.72 336 P **P 23 46 07.4 -0.1**
comp=Z,3.3nm,1.0s,baz=96,slow=8.3,SNR=5.4
comp=Z,3.3nm,1.0s

ARCES ARCESS Array B 54.72 336 P **P 23 46 07.8 +0.2**
ARCES pmax pmax
comp=Z,13nm,1.5s

ARCES ARCESS Array B 54.72 336 P **P 23 46 07.8 +0.2**
ARCES IAmb IAmb 23 47 10.9
comp=Z,13nm,1.4s

MLR Muntele Rosu 54.80 307 ⇓ P **P 23 46 10.2 +1.6**
MLR Muntele Rosu 54.80 307 P **P 23 46 10.2 +1.6**
MLR Muntele Rosu 54.80 307 P **P 23 46 08.8 +0.1**
BURAR Bucovina Array 54.97 309 ⇑ P **P 23 46 11.3 +1.5**
BURAR Bucovina Array 54.97 309 P **P 23 46 11.3 +1.5**
BURAR Bucovina Array 54.97 309 P **P 23 46 09.6 -0.2**
BUR08 Bucovina Ar. S 54.98 309 P **P 23 46 09.7 -0.2**
DOPR Dopca 55.10 307 ⇑ P **P 23 46 12.0 +1.3**
BILL Bilibino 55.37 26 ⇓ *eP* **P 23 46 11.6 -0.6**
BILL pmax pmax
comp=Z,28nm,3.6s

SUW Suwalki 55.50 317 *eP* **P 23 46 14.3 +0.9**
SUW Suwalki 55.50 317 P **P 23 46 13.3 -0.1**
SUW Suwalki 55.50 317 P **P 23 46 13.2 -0.1**
ALN Alexandroupoli 55.58 301 P **P 23 46 13.7 -0.5**
ALN pmax pmax
comp=Z,19nm,1.1s

ALN Alexandroupoli 55.58 301 P **P 23 46 13.7 -0.5**
ALN IAmb IAmb 23 46 16.3
comp=Z,19nm,1.1s

ARCR ARCALIA 55.63 309 ⇑ P **P 23 46 16.2 +1.7**
RDO Rodhopi 55.90 301 P **P 23 46 16.5 +0.1**
RDO IAmb IAmb 23 46 19.2
comp=Z,21nm,1.3s

TNR Turnu Rosu 55.93 307 ⇑ P **P 23 46 17.3 +0.7**
TNR Turnu Rosu 55.93 307 P **P 23 46 17.3 +0.7**
CJR Cluj-Napoca 56.20 308 ⇑ P **P 23 46 20.2 +1.6**
CJR Cluj-Napoca 56.20 308 P **P 23 46 20.2 +1.6**
KWP Kalwaria Pacla 56.32 312 *eP* **P 23 46 19.1 -0.3**
MARR Marisel-Cluj 56.53 308 ⇑ P **P 23 46 21.7 +0.6**
KOLS Kolonicke sedl 56.71 311 *eP* **P 23 46 23.4 +1.2**
KOLS pmax pmax
comp=Z,3.0nm,0.9s

KOLS Kolonicke sedl 56.71 311 *eP* **P 23 46 23.4 +1.2**
DRGR 56.79 309 ⇑ P **P 23 46 24.1 +1.3**
DRGR 56.79 309 P **P 23 46 24.1 +1.3**
DEV Deva 56.83 308 ⇑ P **P 23 46 23.6 +0.6**
DEV Deva 56.83 308 P **P 23 46 23.6 +0.6**
SIRR Siria 57.60 309 ⇑ P **P 23 46 29.2 +0.7**
BZS Buzias 57.76 307 ⇑ P **P 23 46 31.0 +1.4**
BZS Buzias 57.76 307 P **P 23 46 31.0 +1.4**
MDVR Moldovita 57.87 306 ⇑ P **P 23 46 31.7 +1.2**
NIE Niedzica 57.91 312 *eP* **P 23 46 33.0 +2.4**
OJC Ojcow 58.08 313 P **P 23 46 31.2 -0.6**
OJC Ojcow 58.08 313 P **P 23 46 31.2 -0.6**
PSZ Piszkesteto 58.45 310 P **P 23 46 33.3 -1.2**
PSZ pmax pmax
comp=Z,6.0nm,1.1s

PSZ Piszkesteto 58.45 310 P **P 23 46 33.3 -1.2**
MAUC Maruska 59.50 312 *eP* **P 23 46 42.8 +1.1**
SRO Srobarova 59.52 311 *eP* **P 23 46 43.3 +1.5**
SRO pmax pmax
comp=Z,15nm,1.1s

SRO Srobarova 59.52 311 *eP* **P 23 46 43.3 +1.5**
MORC Moravsky Berou 59.60 313 ⇓ P **P 23 46 43.8 +1.4**
MORC Moravsky Berou 59.60 313 P **P 23 46 43.7 +1.4**
MORC Moravsky Berou 59.60 313 P **P 23 46 42.2 -0.2**
MORC IAmb IAmb 23 46 44.2
comp=Z,18nm,1.6s

MORC Moravsky Berou 59.60 313 *eP* **P 23 46 43.0 +0.6**
MORH Mrgy, Hungar 59.66 309 ⇑ P **P 23 46 43.4 +0.6**
JAVC Velka Javorina 59.71 312 *eP* **P 23 46 43.5 +0.3**
HFS Hagfors 59.89 325 P **P 23 46 43.9 -0.3**
comp=Z,6.3nm,1.0s,baz=76,slow=6.3,SNR=9.4
comp=Z,6.3nm,1.0s

KRLC Kraliky 60.01 313 *eP* **P 23 46 46.2 +0.9**
KRLC Kraliky 60.01 313 *eP* **P 23 46 46.2 +0.9**
KSP Ksiaz 60.16 314 *eP* **P 23 46 46.6 +0.5**
DPC Dobruska-Polom 60.24 314 *eP* **P 23 46 48.9 +2.1**
DPC Dobruska-Polom 60.24 314 *eP* **P 23 46 48.9 +2.1**
OSTC Ostas 60.27 314 *eP* **P 23 46 48.3 +1.4**
OSTC Ostas 60.27 314 *eP* **P 23 46 48.3 +1.4**
VRAC Vranov 60.30 312 ⇑ P **P 23 46 48.6 +1.4**
VRAC Vranov 60.30 312 P **P 23 46 48.6 +1.4**
VRAC Vranov 60.30 312 *eP* **P 23 46 48.1 +0.9**
CHVC Chvalec 60.36 314 *eP* **P 23 46 48.0 +0.4**
CHVC Chvalec 60.36 314 *eP* **P 23 46 48.0 +0.4**
KRUC Moravsky 60.48 312 *eP* **P 23 46 48.5 +0.1**
KEK Kerkira 60.50 301 P **P 23 46 48.9 +0.2**
NC405 NORSAR Array S 60.69 326 P **P 23 46 49.5 -0.1**
NC405 IAmb IAmb 23 46 51.4
comp=Z,12nm,1.0s

NC303 NORSAR Array S 60.84 327 P **P 23 46 49.5 -1.1**
NC602 NORSAR Array S 60.84 326 P **P 23 46 49.8 -0.8**
BEHE Becsehely 60.85 309 P **P 23 46 51.3 +0.3**
BEHE IAmb IAmb 23 48 22.4
comp=Z,5.7nm,0.5s

RONA Rosalia, Austr 60.87 311 *eP* **P 23 46 51.1 -0.1**
comp=Z,11nm,1.3s,SNR=6.2

NB201 NORSAR Array S 60.90 326 P **P 23 46 50.7 -0.4**
NB201 IAmb IAmb 23 46 52.1
comp=Z,10nm,1.1s

WINA Aland / Wiene 60.92 311 *eP* **P 23 46 51.1 -0.3**
comp=Z,9.6nm,1.4s

NB2 NORSAR Subarra 60.94 326 P **P 23 46 49.9 -1.5**
comp=Z,8.8nm,1.0s,baz=80,slow=6.9

NOA NORSAR Array B 60.94 326 P **P 23 46 50.3 -1.1**
comp=Z,4.6nm,0.9s,baz=79,slow=6.8,SNR=15
comp=Z,4.6nm,0.9s

BLY Banja Luka 61.01 307 ⇑ P **P 23 46 52.8 +0.7**
BLY Banja Luka 61.01 307 P **P 23 46 51.9 -0.2**
CONA Conrad Observa 61.10 311 *eP* **P 23 46 52.6 -0.2**
comp=Z,9.7nm,1.0s,SNR=12

NC204 NORSAR Array S 61.12 327 P **P 23 46 52.1 -0.5**
NC204 IAmb IAmb 23 46 54.1
comp=Z,8.2nm,0.8s

NBO00 NORSAR Array S 61.15 326 P **P 23 46 53.0 +0.2**
ARSA Arzberg 61.49 310 P **P 23 46 54.8 -0.5**
ARSA Arzberg 61.49 310 *eP* **P 23 46 55.6 +0.2**
comp=Z,5.6nm,1.1s

BRG Berggiesshubel 61.60 315 *eP* **P 23 46 56.3 +0.3**
comp=Z,4.9nm,1.0s,baz=74,slow=6.7

BRG Berggiesshubel 61.60 315 *eP* **P 23 46 56.2 +0.3**
BRG Amp 23 46 58.3
comp=Z,4.9nm,1.0s

ZVC Zvikov 61.80 313 *eP* **P 23 46 57.8 +0.5**
CKRC Cesky Krumlov 61.88 312 *eP* **P 23 46 59.4 +1.5**
CKRC Cesky Krumlov 61.88 312 *eP* **P 23 46 59.4 +1.5**
CRES Cresnjevec Ost 61.91 309 *i P* **P 23 46 59.7 +1.5**
SOKA Soboth 61.96 310 *eP* **P 23 46 58.3 -0.3**
comp=Z,6.3nm,1.6s,SNR=8.5

LODK Lodwar 62.02 257 P **P 23 46 59.1 -0.3**
CLL Collm 62.07 315 P **P 23 46 58.9 -0.2**
CLL pmax pmax
comp=Z,15nm,1.7s

CLL Collm 62.07 315 P **P 23 46 58.9 -0.2**
CLL IAmb IAmb 23 47 00.4
comp=Z,15nm,1.7s

CLL Collm 62.07 315 *eL* L 00 20 19.2
comp=Z,48nm,20.1s

CLL Collm 62.07 315 *i P* **P 23 46 59.5 +0.4**
comp=Z,9.0nm,1.4s

SESA Seetaler Alpe, 62.15 310 *eP* **P 23 46 59.8 -0.2**
comp=Z,10nm,1.0s,SNR=5.2

MOA Molln 62.16 311 *eP* **P 23 46 59.4 -0.4**
comp=Z,6.1nm,1.4s

GEC2 GERESS Array S 62.26 312 **P 23 47 00.5 -0.1**
GEC2 IAmb IAmb 23 47 03.0
comp=Z,8.5nm,1.1s

GEC2 GERESS Array S 62.26 312 *eP* **P 23 47 01.0 +0.4**
comp=Z,18nm,1.5s,baz=74,slow=6.7

GERES GERESS Array B 62.26 312 P **P 23 47 00.3 -0.2**
comp=Z,1.9nm,0.7s,baz=68,slow=4.6,SNR=30
comp=Z,1.9nm,0.7s

GERES GERESS Array B 62.26 312 P **P 23 47 01.0 +0.4**
GERES GERESS Array B 62.26 312 P **P 23 47 01.0 +0.4**
KHC Kasperske Hory 62.26 313 *eP* **P 23 47 02.4 +1.9**
KHC Kasperske Hory 62.26 313 *eP* **P 23 47 02.4 +1.9**
KHC Kasperske Hory 62.26 313 P **P 23 47 00.6 +0.1**
OBKA Obir 62.33 310 *eP* **P 23 47 00.5 -0.6**
comp=Z,5.3nm,1.5s

CEY Cerknica 62.62 309 *i P* **P 23 47 02.9 -0.1**
TANN Tannenbergstha 62.63 314 *eP* **P 23 47 03.8 +0.9**
comp=Z,4.7nm,1.0s,baz=74,slow=6.7

WB0 Warramunga Arr 62.70 137 P **P 23 47 02.5 -1.2**
WB0 IAmb IAmb 23 47 37.6
comp=Z,16nm,1.6s

WET Wettzell 62.70 313 *eP* **P 23 47 04.0 +0.6**
comp=Z,15nm,1.5s,baz=74,slow=6.7

WET *eL* L 00 22 45.2
comp=Z,49nm,18.3s

PLN Plauen 62.80 315 *eP* **P 23 47 04.8 +0.8**
comp=Z,1.9nm,1.2s,baz=74,slow=6.7

WRA Warramunga Arr 62.80 138 P **P 23 47 03.3 -1.0**
comp=Z,1.9nm,1.1s,baz=325,slow=7.8,SNR=7.8
comp=Z,1.8nm,1.1s

WRA Warramunga Arr 62.80 138 P **P 23 47 04.2 -0.2**
WRA pmax pmax
comp=Z,1.0nm,1.8s

WRA Warramunga Arr 62.80 138 P **P 23 47 04.2 -0.2**
FLTG Flechtingen 62.87 317 *eP* **P 23 47 04.2 -0.2**
comp=Z,12nm,1.4s,baz=74,slow=6.7

TIP Timpagrande 62.91 301 P **P 23 47 03.8 -1.3**
TIP IAmb IAmb 23 47 06.3
comp=Z,7.6nm,1.1s

CADS Cadrg 62.95 310 *i P* **P 23 47 04.6 -0.5**
ROTZ Rotzenmuhle 62.96 314 *eP* **P 23 47 05.6 +0.5**
comp=Z,3.1nm,1.1s,baz=74,slow=6.7

KBA Koelnbreinsper 62.97 311 *eP* **P 23 47 04.5 -0.9**
comp=Z,1.2nm,0.5s

BSEG Bad Segeberg 62.99 319 *eL* L 00 18 47.7
comp=Z,23nm,20.5s

TRI Trieste 63.08 309 P **P 23 47 05.0 -0.9**
TRI Trieste 63.08 309 P **P 23 47 05.0 -0.9**
TRI IAmb IAmb 23 47 07.3
comp=Z,10nm,0.9s

MOX Moxa 63.09 315 *eP* **P 23 47 06.3 +0.3**
comp=Z,6.4nm,1.3s,baz=74,slow=6.7

MOX *eL* L 00 20 57.1
comp=Z,45nm,19.0s

SABO M.te Sabotino 63.11 309 P **P 23 47 05.3 -0.9**
RJOB Jochberg 63.14 311 *eP* **P 23 47 06.7 +0.3**
comp=Z,17nm,2.0s,baz=74,slow=6.7

ASSE Asse, Remlinge 63.26 317 *eP* **P 23 47 07.2 +0.3**
comp=Z,5.5nm,1.4s,baz=74,slow=6.7

LESA Schwarzleotal 63.31 311 *i P* **P 23 47 07.1 -0.4**
comp=Z,0.9nm,0.4s,SNR=12

CLZ Clausthal 63.51 316 *eP* **P 23 47 09.4 +0.6**
comp=Z,12nm,1.1s,baz=74,slow=6.7

GRA1 Grafenberg Arr 63.59 314 P **P 23 47 09.1 -0.3**
GRA1 IAmb IAmb 23 47 12.2
comp=Z,10nm,1.1s

GRF Grafenberg Arr 63.59 314 P **P 23 47 09.1 -0.3**
GRF pmax pmax
comp=Z,10.0nm,1.1s

GRF Grafenberg Arr 63.59 314 *eP* **P 23 47 10.3 +1.0**
comp=Z,9.1nm,1.1s,baz=74,slow=6.7

GRF *eL* L 00 20 05.9
comp=Z,39nm,20.9s

GRFO Grafenberg 63.59 314 P **P 23 47 11.3 +2.0**
GRFO Grafenberg 63.59 314 P **P 23 47 11.3 +2.0**
ABTA Abfaltersbach 63.61 310 *eP* **P 23 47 08.7 -0.9**
comp=Z,4.5nm,1.1s

STAL STALIGIAL 63.62 310 P **P 23 47 08.3 -1.3**
STAL IAmb IAmb 23 47 10.6
comp=Z,9.4nm,1.0s

AMKA Amchitka 63.72 44 **P 23 47 09.0 -1.1**
GTTG Gottingen 63.84 316 *eP* **P 23 47 11.9 +1.0**
comp=Z,20nm,1.6s,baz=74,slow=6.7

CEL Celeste 63.84 301 **P 23 47 11.2 0.0**
FUR Furstenfeldbru 64.00 312 *eP* **P 23 47 12.7 +0.7**
comp=Z,16nm,0.9s,baz=74,slow=6.7

FUR *eL* L 00 22 00.8
comp=Z,48nm,21.6s

UBBA Unterbreizbach 64.02 315 *eP* **P 23 47 13.1 +1.1**
comp=Z,12nm,1.7s,baz=74,slow=6.7

WTTA Wattenberg 64.03 311 *eP* **P 23 47 11.9 -0.6**
comp=Z,7.4nm,1.5s

WATA Walderalm 64.05 311 *eP* **P 23 47 11.8 -0.8**
comp=Z,9.0nm,1.6s

SQTA Sankt Quirin 64.32 311 *eP* **P 23 47 13.7 -0.6**
comp=Z,9.5nm,1.4s

MOTA Moosalm 64.35 311 *eP* **P 23 47 13.6 -1.0**
comp=Z,10nm,1.3s,SNR=7.1

NRCA Norcia 64.39 306 P **P 23 47 14.8 +0.1**
NRCA IAmb IAmb 23 47 16.6
comp=Z,7.3nm,1.1s

CTI Castel Tesino 64.39 310 P **P 23 47 13.8 -0.9**
CTI pmax pmax
comp=Z,16nm,1.6s

CTI Castel Tesino 64.39 310 P **P 23 47 13.8 -0.9**
CTI IAmb IAmb 23 47 15.3
comp=Z,16nm,1.6s

RETA Reutte 64.53 312 *eP* **P 23 47 15.2 -0.4**
comp=Z,10nm,1.2s,SNR=6.4

FETA Feichten 64.69 311 *eP* **P 23 47 16.3 -0.5**
comp=Z,9.2nm,1.5s,SNR=6.1

GAMB Gambell 64.79 29 P **P 23 47 16.4 -0.4**
baz=288

CESX Cesi 64.83 306 P **P 23 47 16.4 -1.2**
CESX IAmb IAmb 23 47 18.9
comp=Z,9.2nm,1.2s

KASTN Kahler Asten 64.87 316 *eP* **P 23 47 19.2 +1.5**
comp=Z,13nm,1.6s,baz=74,slow=6.7

FUORN Ofenpass-Fuorn 65.12 311 P **P 23 47 19.1 -0.6**
FUORN IAmb IAmb 23 47 26.9
comp=Z,22nm,1.9s

STU Stuttgart 65.13 313 P **P 23 47 19.7 +0.3**
STU pmax pmax
comp=Z,10.0nm,1.0s

STU Stuttgart 65.13 313 P **P 23 47 19.7 +0.3**
STU IAmb IAmb 23 47 21.8
comp=Z,9.7nm,1.0s

STU Stuttgart 65.13 313 *eP* **P 23 47 20.3 +0.9**
comp=Z,25nm,1.0s,baz=74,slow=6.7

TNS Taunus Mts 65.15 315 *eP* **P 23 47 21.1 +1.5**
comp=Z,8.7nm,1.2s,baz=74,slow=6.7

TNS *eL* L 00 21 23.2
comp=Z,65nm,19.4s

DAVA Damuels 65.16 312 *eP* **P 23 47 19.4 -0.4**
comp=Z,7.2nm,1.1s

ZCCA Zocca 65.37 308 P **P 23 47 21.3 +0.1**
BUG Bochum--Univer 65.48 317 *eP* **P 23 47 22.3 +0.7**
comp=Z,8.8nm,1.1s,baz=74,slow=6.7

AS31 Alice Springs 65.49 141 P **P 23 47 21.3 -0.7**
ASAR Alice Springs 65.49 141 P **P 23 47 21.2 -0.8**
comp=Z,1.0nm,0.6s,baz=323,slow=6.4,SNR=8.9
comp=Z,1.0nm,0.6s

ASAR Alice Springs 65.49 141 P **P 23 47 21.7 -0.3**

ASAR Alice Springs 65.49 141 P **P** **23 47 21.7 -0.3**
PRMA PARMA 65.69 309 P **P** **23 47 23.4 +0.4**
TNA Tin City 65.76 27 P **P** **23 47 22.7 -0.4**
baz=290
C16K Lisburne Hills 65.76 24 P **P** **23 47 22.6 -0.6**
baz=291
TUE Stuetta 65.77 311 **P** **23 47 22.9 -0.9**
TUE IAmb IAmb 23 47 25.4
comp=Z,5.2nm,0.9s
BFO Black Forest 65.82 313 P **P** **23 47 24.0 +0.1**
BFO pmax pmax
comp=Z,7.0nm,1.1s
BFO Black Forest 65.82 313 P **P** **23 47 24.0 +0.1**
BFO IAmb IAmb 23 47 25.7
comp=Z,6.8nm,1.1s
BFO Black Forest 65.82 313 *e*P **P** **23 47 24.1 +0.1**
comp=Z,7.0nm,1.1s,baz=74,slow=6.7
BFO *e*L L 00 21 32.1
comp=Z,37nm,20.3s
F14K Arctic Creek 66.41 27 P **P** **23 47 26.7 -0.6**
baz=291
C17K DeLong Mountai 66.43 23 P P 23 47 25.5 -2.0
baz=293
BHOU Houvegnez 66.59 316 *d*P **P** **23 47 29.1 +0.3**
ECH Echery 66.60 313 P **P** **23 47 28.6 -0.3**
ECH pmax pmax
comp=Z,3.0nm,1.0s
ECH Echery 66.60 313 P **P** **23 47 28.6 -0.3**
RDOG Red Dog Mine 66.69 24 P **P** **23 47 27.9 -1.2**
baz=293
WLF Walferdange 66.73 315 P **P** **23 47 29.2 -0.5**
WLF pmax pmax
comp=Z,24nm,1.2s
WLF Walferdange 66.73 315 P **P** **23 47 29.1 -0.5**
WLF Walferdange 66.73 315 *d*P **P** **23 47 30.4 +0.7**
comp=Z,9.5nm,1.3s
WLF Walferdange 66.73 315 *e*P **P** **23 47 30.6 +1.0**
comp=Z,26nm,1.2s,baz=74,slow=6.7
D17K Noatak River 66.77 24 P P 23 47 27.4 -2.2
baz=293
F15K North Star Dit 66.97 26 P **P** **23 47 29.7 -1.2**
baz=293
C18K Utukok River 67.03 23 P P 23 47 29.6 -1.7
baz=294
ABPO Ambohimpanom 67.06 229 P **P** **23 47 33.7 +1.4**
ABPO pmax pmax
comp=Z,73nm,1.9s
ABPO Ambohimpanom 67.06 229 P **P** **23 47 33.7 +1.4**
SENIN Lac Senin/Sane 67.14 311 **P** **23 47 32.4 -0.2**
SENIN IAmb IAmb 23 47 33.8
comp=Z,21nm,1.6s
BMRD Maredsous 67.35 316 *d*P **P** **23 47 34.2 +0.6**
comp=Z,4.5nm,1.1s
C19K Lookout Ridge 67.37 22 P **P** **23 47 32.3 -1.1**
baz=296
E17K Hotham Inlet 67.46 24 P **P** **23 47 33.3 -0.7**
baz=294
G15K Niukluk 67.48 27 P **P** **23 47 33.0 -1.2**
baz=293
SPIA Saint Paul Isl 67.67 36 P **P** **23 47 34.1 -1.3**
baz=291
B20K Meade River 67.73 21 P **P** **23 47 35.1 -0.6**
baz=297
E18K Tukpahlearik C 67.75 24 P **P** **23 47 36.3 +0.5**
E18K Tukpahlearik C 67.75 24 P **P** **23 47 34.9 -1.0**
baz=295
F17K Baldwin Pennin 67.94 25 P **P** **23 47 37.1 +0.1**
F17K IAmb IAmb 23 47 39.6
comp=Z,14nm,1.1s
F17K Baldwin Pennin 67.94 25 P **P** **23 47 36.0 -1.0**
baz=295
G16K Koyuk River 67.97 26 P **P** **23 47 36.9 -0.3**
G16K Koyuk River 67.97 26 P **P** **23 47 36.5 -0.7**
baz=295
MBAR Mbarara 68.07 256 P **P** **23 47 38.6 -0.3**
MBAR pmax pmax
comp=Z,9.0nm,1.5s
MBAR Mbarara 68.07 256 P **P** **23 47 38.6 -0.3**
MBAR IAmb IAmb 23 47 39.8
comp=Z,8.9nm,1.5s
D19K Kuna River 68.12 22 **P** **23 47 37.5 -0.8**
D19K IAmb IAmb 23 47 39.8
comp=Z,13nm,1.2s
D19K Kuna River 68.12 22 P **P** **23 47 36.8 -1.4**
baz=297
VSL Villasalto 68.18 304 P **P** **23 47 38.7 -0.4**
VSL IAmb IAmb 23 48 30.3
comp=Z,13nm,1.2s
H16K Elim 68.33 27 P **P** **23 47 38.4 -1.1**
baz=295
M11K Mekoryuk 68.40 32 P **P** **23 47 38.7 -1.3**
baz=293
F18K Selawik 68.45 24 P **P** **23 47 38.8 -1.4**
baz=296
K13K Kusilvak Mount 68.46 30 P **P** **23 47 39.0 -1.3**
baz=294
D20K Etivluk River 68.51 22 P **P** **23 47 40.0 -0.6**
D20K IAmb IAmb 23 47 42.4
comp=Z,14nm,1.2s
D20K Etivluk River 68.51 22 P P 23 47 38.9 -1.7
baz=298
G17K Kiwalik Mounta 68.57 26 P **P** **23 47 39.6 -1.4**
baz=296
J14K Nanvaranak Lak 68.59 29 P **P** **23 47 41.1 -0.1**
J14K IAmb IAmb 23 47 45.0
comp=Z,9.8nm,1.1s
J14K Nanvaranak Lak 68.59 29 P **P** **23 47 39.7 -1.4**
baz=295
B22K Teshekpuk Lake 68.68 20 P **P** **23 47 40.5 -1.1**
baz=300
B21K Ikpikpuk River 68.69 21 P **P** **23 47 40.6 -1.0**
baz=300
E20K Nigu River 68.86 22 P **P** **23 47 41.7 -1.2**
baz=299
C21K Kniveblade Rid 68.87 21 P **P** **23 47 41.7 -1.1**
baz=300
E19K Redstone River 68.90 23 P **P** **23 47 41.7 -1.3**
baz=298
F19K Shaleruckik Mo 69.01 24 P **P** **23 47 42.8 -0.8**
F19K IAmb IAmb 23 47 45.5
comp=Z,8.2nm,1.3s
F19K Shaleruckik Mo 69.01 24 P **P** **23 47 42.3 -1.4**
baz=298
H17K Granite Mounta 69.10 26 P **P** **23 47 44.3 0.0**
H17K Granite Mounta 69.10 26 P **P** **23 47 43.0 -1.3**
baz=297
G18K Tagagawik 69.13 25 P **P** **23 47 43.3 -1.2**
baz=298
I17K Unalakleet 69.27 27 P **P** **23 47 43.9 -1.4**
baz=296
SSB Saint Sauveur 69.33 311 P **P** **23 47 46.0 -0.1**
SSB pmax pmax
comp=Z,3.0nm,0.9s
SSB Saint Sauveur 69.33 311 P **P** **23 47 46.0 -0.1**
E21K Killik River 69.48 22 P **P** **23 47 45.4 -1.3**
baz=301
L14K Kuka Creek 69.56 30 **P** **23 47 46.4 -0.8**
L14K IAmb IAmb 23 47 48.9
comp=Z,8.1nm,1.0s
L14K Kuka Creek 69.56 30 P **P** **23 47 46.2 -1.0**
baz=296
J16K Anvik River 69.58 28 P **P** **23 47 47.1 -0.2**
J16K Anvik River 69.58 28 P **P** **23 47 46.1 -1.2**
baz=297
G19K Purcell Mounta 69.58 24 P **P** **23 47 46.3 -1.0**
G19K IAmb IAmb 23 47 49.4
comp=Z,10nm,1.4s
G19K Purcell Mounta 69.58 24 P **P** **23 47 46.1 -1.1**
baz=299
H18K Honhosa River 69.58 26 P **P** **23 47 46.1 -1.2**
H18K IAmb IAmb 23 47 49.4
comp=Z,8.7nm,1.1s
H18K Honhosa River 69.58 26 P **P** **23 47 46.1 -1.2**
baz=298
F20K Avaraart Lake 69.61 23 P **P** **23 47 47.1 -0.3**
F20K Avaraart Lake 69.61 23 P **P** **23 47 46.0 -1.4**
baz=300
K15K Wolf Creek Mou 69.64 29 P **P** **23 47 47.1 -0.6**
K15K IAmb IAmb 23 47 49.1
comp=Z,11nm,1.2s
K15K Wolf Creek Mou 69.64 29 P **P** **23 47 46.5 -1.2**
baz=296
KEST Kesra 69.64 300 **P** **23 47 47.4 -0.9**
M13K Dall Lake 69.67 31 P P 23 47 46.2 -1.6
baz=296
C23K Itkillik River 69.77 20 P **P** **23 47 47.8 -0.6**

C23K IAmb IAmb 23 47 50.3
comp=Z,16nm,1.1s
C23K Itkillik River 69.77 20 P P 23 47 46.7 -1.6
baz=303
EKA Eskdalemuir Ar 69.90 323 P **P** **23 47 49.3 -0.1**
comp=Z,3.0nm,0.9s,baz=64,slow=5.7,SNR=5.3
comp=Z,3.0nm,0.9s
L15K Ungalaik Mounta 69.93 30 P **P** **23 47 48.2 -1.3**
baz=297
H19K Roundabout Mou 70.11 25 **P** **23 47 49.6 -0.9**
H19K Roundabout Mou 70.11 25 P **P** **23 47 49.7 -0.7**
baz=300,SNR=8.0
J17K VABM Dome 70.14 27 **P** **23 47 49.9 -0.9**
J17K IAmb IAmb 23 47 52.5
comp=Z,13nm,1.1s
J17K VABM Dome 70.14 27 P **P** **23 47 49.4 -1.3**
baz=298
M14K Bethel 70.14 31 P **P** **23 47 50.9 +0.2**
M14K IAmb IAmb 23 47 52.8
comp=Z,12nm,1.1s
M14K Bethel 70.14 31 P **P** **23 47 49.9 -0.9**
baz=297
D23K Nanushuk River 70.23 20 P **P** **23 47 51.5 +0.3**
D23K IAmb IAmb 23 47 53.3
comp=Z,14nm,1.2s
D23K Nanushuk River 70.23 20 P **P** **23 47 50.3 -0.9**
baz=303
F21K Alatna River 70.28 23 **P** **23 47 50.7 -0.9**
F21K IAmb IAmb 23 47 53.1
comp=Z,13nm,1.4s
F21K Alatna River 70.28 23 P **P** **23 47 50.9 -0.7**
baz=302,SNR=6.8
E22K Anaktuvuk Pass 70.33 21 P **P** **23 47 51.5 -0.5**
E22K Anaktuvuk Pass 70.33 21 P **P** **23 47 50.5 -1.4**
baz=303
GCSA Galena City Sc 70.33 26 P **P** **23 47 50.9 -1.0**
baz=299
F22K John River 70.55 22 P **P** **23 47 52.7 -0.6**
baz=302
N14K Kuskokwak Cree 70.64 31 P **P** **23 47 53.8 0.0**
N14K Kuskokwak Cree 70.64 31 P **P** **23 47 53.3 -0.5**
baz=297
G21K Allakaket 70.64 23 P **P** **23 47 53.8 0.0**
G21K Allakaket 70.64 23 P **P** **23 47 53.4 -0.3**
baz=302
D24K Happy Valley 70.67 20 P **P** **23 47 52.7 -1.2**
baz=305
H20K Anotleneega Mo 70.69 24 P **P** **23 47 53.2 -0.9**
baz=301,SNR=5.3
M15K Kasigluk River 70.72 30 P P 23 47 52.7 -1.7
baz=298
TOLK Toolik Lake Re 70.74 20 P **P** **23 47 53.4 -1.1**
baz=304
L16K Owhat River 70.77 29 P **P** **23 47 54.9 +0.3**
L16K IAmb IAmb 23 47 56.9
comp=Z,11nm,1.4s
L16K Owhat River 70.77 29 P **P** **23 47 53.4 -1.2**
baz=298
K17K Iditarod 70.77 28 P **P** **23 47 54.0 -0.7**
K17K Iditarod 70.77 28 P **P** **23 47 53.9 -0.7**
baz=299
IMAR Indian Mountai 70.83 24 P **P** **23 47 54.5 -0.4**
UNV Unalaska Valle 70.94 38 P **P** **23 47 55.5 -0.3**
baz=295
J18K Innoko River 71.03 27 P **P** **23 47 55.9 -0.3**
J18K IAmb IAmb 23 47 58.3
comp=Z,11nm,1.1s
J18K Innoko River 71.03 27 P **P** **23 47 55.3 -0.9**
baz=300
L17K Donlin 71.05 28 P **P** **23 47 55.7 -0.7**
baz=299
E23K Chandalar 71.06 21 P **P** **23 47 56.0 -0.5**
E23K Chandalar 71.06 21 P **P** **23 47 56.1 -0.3**
baz=304
O14K Tigyukauivet M 71.14 32 P **P** **23 47 56.0 -0.9**
baz=298
J19K Poorman 71.18 26 **P** **23 47 56.9 -0.2**
J19K IAmb IAmb 23 47 59.7
comp=Z,12nm,1.1s
J19K Poorman 71.18 26 P **P** **23 47 56.4 -0.7**
baz=301,SNR=8.7
AKUT Akutan 71.21 38 P **P** **23 47 56.5 -0.8**
N15K Kwethluk River 71.23 31 P **P** **23 47 57.1 -0.4**
N15K IAmb IAmb 23 47 59.3
comp=Z,7.3nm,1.0s
N15K Kwethluk River 71.23 31 P **P** **23 47 56.7 -0.8**
baz=298
D25K Kavik River 71.28 19 P **P** **23 47 57.4 -0.3**
D25K IAmb IAmb 23 47 59.4
comp=Z,8.7nm,1.1s
D25K Kavik River 71.28 19 P **P** **23 47 57.0 -0.7**
baz=307
M16K Timber Creek 71.32 30 P **P** **23 47 57.0 -0.9**
baz=299
C26K Camden Bay 71.33 18 P **P** **23 47 57.4 -0.5**
baz=308
H21K Melozitna Rive 71.34 24 P **P** **23 47 57.7 -0.3**
H21K IAmb IAmb 23 47 59.9
comp=Z,10.0nm,1.2s
H21K Melozitna Rive 71.34 24 P **P** **23 47 57.8 -0.3**
baz=302,SNR=6.2
COLD Coldfoot 71.35 22 P **P** **23 47 58.2 +0.1**
COLD Coldfoot 71.35 22 P **P** **23 47 57.2 -0.9**
baz=304
E24K Your Creek 71.40 21 P **P** **23 47 58.3 -0.2**
E24K IAmb IAmb 23 48 00.3
comp=Z,8.1nm,1.1s
E24K Your Creek 71.40 21 P **P** **23 47 57.8 -0.6**
baz=306,SNR=8.2
J20K Nowinta River 71.64 26 **P** **23 47 59.7 -0.2**
J20K IAmb IAmb 23 48 02.6
comp=Z,14nm,1.3s
J20K Nowinta River 71.64 26 P **P** **23 47 59.1 -0.8**
baz=302,SNR=7.2
N16K Nishlik Lake 71.66 30 P **P** **23 47 59.2 -1.0**
baz=299
L18K Granite Mounta 71.67 28 P **P** **23 48 00.7 +0.6**
L18K IAmb IAmb 23 48 01.3
comp=Z,9.3nm,1.4s
L18K Granite Mounta 71.67 28 P **P** **23 47 58.9 -1.1**
baz=300
G23K Bananza Creek 71.70 22 P **P** **23 48 00.2 0.0**
G23K Bananza Creek 71.70 22 P **P** **23 47 59.3 -1.0**
baz=304
H22K Ishtalitna Cre 71.70 23 P **P** **23 47 59.5 -0.7**
baz=304
M17K Holitna River 71.77 29 P **P** **23 48 00.9 +0.2**
M17K Holitna River 71.77 29 P **P** **23 48 00.2 -0.5**
baz=300
O15K Ungalikthiuk R 71.83 32 P **P** **23 48 00.6 -0.4**
O15K IAmb IAmb 23 48 01.9
comp=Z,10nm,1.3s
O15K Ungalikthiuk R 71.83 32 P **P** **23 48 01.0 -0.1**
baz=299
C27K Jago River 71.83 18 P **P** **23 48 00.8 -0.2**
C27K IAmb IAmb 23 48 03.1
comp=Z,15nm,1.1s
C27K Jago River 71.83 18 P **P** **23 48 00.8 -0.2**
baz=309,SNR=12
I21K Tanana 71.89 24 **P** **23 48 00.8 -0.5**
I21K IAmb IAmb 23 48 02.7
comp=Z,13nm,1.5s
I21K Tanana 71.89 24 P **P** **23 48 00.9 -0.4**
baz=303
F24K Squaw Lake 71.91 21 P **P** **23 48 01.2 -0.3**
F24K Squaw Lake 71.91 21 P **P** **23 48 01.0 -0.5**
baz=306
K20K Telida 72.11 26 **P** **23 48 02.6 -0.1**
K20K IAmb IAmb 23 48 04.9
comp=Z,13nm,1.2s
K20K Telida 72.11 26 P **P** **23 48 02.8 +0.1**
baz=302,SNR=5.8
E25K Arctic Village 72.25 20 P **P** **23 48 02.7 -0.8**
E25K IAmb IAmb 23 48 05.4
comp=Z,9.8nm,1.2s
E25K Arctic Village 72.25 20 P **P** **23 48 03.6 +0.1**
baz=308,SNR=6.8
N17K Nushagak Hills 72.32 30 P **P** **23 48 03.9 -0.1**
baz=300
M18K Stony River 72.39 28 P **P** **23 48 04.3 -0.1**
baz=301
O16K Kokwok River B 72.39 31 P **P** **23 48 04.6 +0.2**
O16K IAmb IAmb 23 48 06.2
comp=Z,11nm,1.1s
O16K Kokwok River B 72.39 31 P **P** **23 48 04.0 -0.4**
baz=300
MLY Manley 72.41 24 **P** **23 48 04.3 -0.3**

MLY Manley 72.41 24 P **P** **23 48 04.2 -0.3**
baz=304,SNR=7.0
L19K White Mountain 72.42 27 **P** **23 48 04.1 -0.5**
L19K IAmb IAmb 23 48 06.8
comp=Z,12nm,1.2s
L19K White Mountain 72.42 27 P **P** **23 48 04.7 +0.1**
baz=302,SNR=7.7
CHUM Lake Minchumin 72.48 25 P **P** **23 48 04.7 -0.2**
baz=303
G24K Hadweenzic Riv 72.53 22 P **P** **23 48 04.8 -0.4**
G24K Hadweenzic Riv 72.53 22 P **P** **23 48 05.0 -0.1**
baz=307
SUMG Summit 72.54 347 P **P** **23 48 04.8 -0.8**
SUMG pmax pmax
comp=Z,32nm,2.0s
SUMG Summit 72.54 347 P **P** **23 48 04.8 -0.8**
SUMG IAmb IAmb 23 50 18.4
comp=Z,32nm,2.0s
F25K Christian Rive 72.55 20 P **P** **23 48 05.7 +0.4**
F25K Christian Rive 72.55 20 P **P** **23 48 04.7 -0.6**
baz=308,SNR=8.4
CEST Esterri de Car 72.58 309 P **P** **23 48 05.8 -0.3**
CEST IAmb IAmb 23 48 08.6
comp=Z,16nm,1.2s
P16K Nushagak River 72.72 31 P **P** **23 48 05.9 -0.4**
baz=300
O17K Koliganek Bris 72.74 30 P **P** **23 48 05.9 -0.6**
baz=301
M19K Big River Lodg 72.76 28 P **P** **23 48 06.1 -0.5**
baz=302
N18K Kilae Creek 72.79 29 P **P** **23 48 06.0 -0.8**
baz=301
I23K Minto, Yukon-K 72.82 23 P **P** **23 48 06.7 -0.2**
baz=306
D27M Malcolm River 72.82 18 **P** **23 48 07.3 +0.4**
D27M Malcolm River 72.82 18 P **P** **23 48 05.9 -1.1**
baz=312
CAST Castle Rocks 72.83 26 P **P** **23 48 06.8 -0.2**
baz=304,SNR=8.2
H24K Noodor Dome 72.91 22 P **P** **23 48 07.0 -0.5**
baz=307
G25K Bearman Lake 72.92 21 P **P** **23 48 07.0 -0.4**
baz=308
F26K Sheenjek River 72.94 20 P **P** **23 48 07.6 0.0**
F26K Sheenjek River 72.94 20 P **P** **23 48 07.3 -0.3**
baz=309
PPLA Purkeypile 73.08 26 P **P** **23 48 07.8 -0.9**
PPLA Purkeypile 73.08 26 P **P** **23 48 08.2 -0.4**
baz=304
KTH Kantishna Hill 73.18 25 P **P** **23 48 08.3 -0.9**
KTH IAmb IAmb 23 48 13.6
comp=Z,13nm,1.2s
NEA2 Nenana 73.25 24 P **P** **23 48 08.8 -0.7**
NEA2 IAmb IAmb 23 48 10.8
comp=Z,9.1nm,1.1s
NEA2 Nenana 73.25 24 P **P** **23 48 09.1 -0.4**
baz=306,SNR=5.3
M20K Styx River 73.27 27 **P** **23 48 09.8 +0.1**
M20K IAmb IAmb 23 48 15.8
comp=Z,21nm,1.4s
M20K Styx River 73.27 27 P **P** **23 48 09.3 -0.5**
baz=303
N19K Bonanza Creek 73.30 29 P **P** **23 48 09.5 -0.5**
N19K IAmb IAmb 23 48 20.9
comp=Z,15nm,1.4s
N19K Bonanza Creek 73.30 29 P **P** **23 48 09.5 -0.5**
baz=302
FYU Fort Yukon 73.32 21 P **P** **23 48 10.0 +0.2**
FYU IAmb IAmb 23 48 50.2
comp=Z,29nm,1.8s
D28M Stokes Point 73.35 17 P **P** **23 48 09.4 -0.5**
baz=314
E27K Coleen River 73.35 19 P **P** **23 48 09.7 -0.4**
E27K IAmb IAmb 23 48 12.0
comp=Z,9.1nm,1.1s
E27K Coleen River 73.35 19 P **P** **23 48 09.8 -0.3**
baz=311,SNR=11
S14K Fog Glacier 73.36 34 P **P** **23 48 09.8 -0.6**
baz=300
TRF Thorofare Moun 73.47 25 P **P** **23 48 10.6 -0.5**
baz=305
POKR Poker Plat Res 73.50 23 P **P** **23 48 09.9 -1.1**
baz=307
COLA College 73.50 23 ||*e*P **P** **23 48 10.6 -0.3**
COLA pmax pmax
comp=Z,12nm,1.1s
COLA College 73.50 23 P **P** **23 48 10.3 -0.6**
O18K Koktuh Hills 73.51 30 P **P** **23 48 10.4 -0.7**
baz=302
G26K Porcupine Rive 73.52 21 P **P** **23 48 10.9 0.0**
G26K IAmb IAmb 23 48 13.6
comp=Z,11nm,1.2s
G26K Porcupine Rive 73.52 21 P **P** **23 48 11.0 0.0**
baz=310,SNR=12
E28M Babbage River 73.64 18 P **P** **23 48 10.7 -1.0**
E28M IAmb IAmb 23 48 13.5
comp=Z,12nm,1.1s
E28M Babbage River 73.64 18 P **P** **23 48 11.2 -0.5**
baz=313,SNR=15
P18K Big Mountain, 73.75 30 P **P** **23 48 11.3 -1.2**
baz=302
MCK McKinley 73.80 25 P **P** **23 48 12.3 -0.5**
MCK pmax pmax
comp=Z,10.0nm,1.2s
MCK McKinley 73.80 25 P **P** **23 48 12.3 -0.5**
MCK IAmb IAmb 23 48 14.2
comp=Z,9.6nm,1.2s
MCK McKinley 73.80 25 P **P** **23 48 11.9 -0.9**
baz=306
L22K Petersville 73.83 26 P **P** **23 48 11.5 -1.5**
baz=305,SNR=8.3
SKT Skwentna 73.84 27 P **P** **23 48 12.3 -0.7**
baz=304
PRP Porcupine Dome 73.88 22 P **P** **23 48 12.6 -0.8**
baz=309,SNR=8.5
IL31 73.89 23 P P **23 48 12.1 -1.1**
ILAR Eielson Array 73.89 23 P P **23 48 12.7 -0.6**
comp=Z,3.0nm,1.0s,baz=293,slow=4.8,SNR=22
comp=Z,3.0nm,1.0s
ILAR Eielson Array 73.89 23 P 23 48 11.5 -1.8
RND Reindeer 74.02 25 P **P** **23 48 13.8 -0.4**
RND pmax pmax
comp=Z,8.0nm,1.1s
RND Reindeer 74.02 25 P **P** **23 48 13.8 -0.4**
CHNA Chernabura Isl 74.07 35 P **P** **23 48 13.5 -0.9**
baz=300
HDA Harding Lake 74.09 23 P **P** **23 48 13.5 -0.9**
baz=308
R17L Mt. Peulik Vol 74.18 32 P **P** **23 48 13.6 -1.5**
baz=302
F28M Old Crow 74.22 19 P **P** **23 48 15.2 0.0**
F28M IAmb IAmb 23 48 17.0
comp=Z,8.8nm,1.1s
F28M Old Crow 74.22 19 P **P** **23 48 14.4 -0.7**
baz=313,SNR=11
E29M Blow River 74.22 18 P **P** **23 48 15.3 +0.2**
E29M IAmb IAmb 23 48 17.1
comp=Z,9.0nm,1.1s
E29M Blow River 74.22 18 P **P** **23 48 13.9 -1.2**
baz=314,SNR=11
Q18K Katmai Hardscr 74.25 31 P **P** **23 48 14.2 -1.3**
baz=303
G27K Doyon Strip 74.25 20 P **P** **23 48 14.9 -0.4**
G27K Doyon Strip 74.25 20 P **P** **23 48 14.2 -1.2**
baz=312,SNR=8.1
A36M Sachs Harbour 74.28 12 P **P** **23 48 14.5 -0.8**
baz=325
P19K Oil Pt 74.46 29 P **P** **23 48 15.1 -1.6**
baz=304
O20K Slope Mountain 74.48 29 P **P** **23 48 15.6 -1.2**
baz=304
WAT1 Susitna Watana 74.48 25 P **P** **23 48 15.2 -1.6**
baz=307
J25K Salcha River, 74.50 23 P **P** **23 48 15.8 -1.1**
baz=309
H27K Steamboat Moun 74.68 20 P **P** **23 48 17.7 -0.2**
H27K IAmb IAmb 23 48 20.1
comp=Z,15nm,1.1s
H27K Steamboat Moun 74.68 20 P **P** **23 48 17.0 -0.9**
baz=312,SNR=15
DHY Denali Highway 74.76 25 P **P** **23 48 17.0 -1.5**
baz=308
K24K Donnelly Dome 74.87 24 P P 23 48 17.2 -1.8
baz=309
WAT6 Susitna Watana 74.93 25 P P 23 48 17.5 -2.1
baz=307
PMR Palmer 75.00 26 P **P** **23 48 19.4 -0.3**

PMR					pmax	pmax		
	comp=Z,15nm,1.3s							
PMR	**Palmer**	**75.00**	**26**	P	**P**	**23 48 19.4**	**-0.3**	
PMR				IAmb	IAmb	23 48 21.6		
	comp=Z,15nm,1.3s							
PMR	**Palmer**	**75.00**	**26**	P	**P**	**23 48 18.3**	**-1.3**	
	baz=307							
RC01	**Rabbit Creek A**	**75.06**	**27**	P	**P**	**23 48 19.2**	**-0.9**	
	baz=306							
I27K	**Kandik River**	**75.07**	**21**		**P**	**23 48 20.3**	**+0.1**	
I27K				IAmb	IAmb	23 48 22.5		
	comp=Z,16nm,1.1s							
I27K	**Kandik River**	**75.07**	**21**	P	**P**	**23 48 18.8**	**-1.3**	
	baz=312,SNR=12							
RES	**Resolute Bay**	**75.09**	**3**	P	**P**	**23 48 19.1**	**-0.9**	
RES				pmax	pmax			
	comp=Z,10.0nm,1.0s							
RES	**Resolute Bay**	**75.09**	**3**	P	**P**	**23 48 19.1**	**-0.9**	
RES				IAmb	IAmb	23 49 42.5		
	comp=Z,9.7nm,1.0s							
HOM	**Homer**	**75.13**	**29**	P	**P**	**23 48 19.3**	**-1.2**	
	baz=305							
SML	**Sawmill**	**75.18**	**26**	P	**P**	**23 48 19.4**	**-1.5**	
SML				IAmb	IAmb	23 48 22.1		
	comp=Z,16nm,1.1s							
SML	**Sawmill**	**75.18**	**26**	P	**P**	**23 48 19.9**	**-0.9**	
	baz=307							
G29M	**Pine Creek**	**75.23**	**19**		**P**	**23 48 20.5**	**-0.5**	
G29M	**Pine Creek**	**75.23**	**19**	P	**P**	**23 48 20.2**	**-0.8**	
	baz=315							
RIDG	**Independent Ri**	**75.23**	**23**	P	**P**	**23 48 20.4**	**-0.8**	
RIDG				IAmb	IAmb	23 48 22.5		
	comp=Z,21nm,1.4s							
RIDG	**Independent Ri**	**75.23**	**23**	P	**P**	**23 48 19.8**	**-1.4**	
	baz=310							
F30M	**Barrier River**	**75.34**	**18**	P	**P**	**23 48 21.5**	**-0.1**	
F30M				IAmb	IAmb	23 48 23.5		
	comp=Z,16nm,1.2s							
F30M	**Barrier River**	**75.34**	**18**	P	P	23 48 19.5	-2.1	
	baz=316,SNR=6.2							
KNK	**Knik Glacier**	**75.37**	**26**	P	**P**	**23 48 20.4**	**-1.5**	
	baz=307							
SCRK	**Sand Creek**	**75.37**	**23**		**P**	**23 48 20.8**	**-1.2**	
SCRK	**Sand Creek**	**75.37**	**23**	P	P	23 48 20.3	-1.7	
	baz=310,SNR=7.8							
INK	**Inuvik**	**75.41**	**17**	P	**P**	**23 48 21.6**	**-0.3**	
INK				pmax	pmax			
	comp=Z,8.0nm,1.1s							
INK	**Inuvik**	**75.41**	**17**	P	**P**	**23 48 21.6**	**-0.3**	
INK	**Inuvik**	**75.41**	**17**	P	**P**	**23 48 20.7**	**-1.2**	
	baz=318,SNR=7.4							
M23K	**Glacier View**	**75.41**	**26**	P	**P**	**23 48 20.6**	**-1.5**	
	baz=308							
BRSE	**Bradley Lake S**	**75.45**	**28**	P	**P**	**23 48 20.9**	**-1.5**	
	baz=306							
CHIR	**Chirikof Islan**	**75.49**	**33**	P	**P**	**23 48 21.4**	**-1.3**	
	baz=303							
PAX	**Paxson**	**75.50**	**24**	P	P	23 48 21.1	-1.6	
PAX				pmax	pmax			
	comp=Z,5.0nm,1.2s							
PAX	**Paxson**	**75.50**	**24**	P	P	23 48 21.1	-1.6	
PAX	**Paxson**	**75.50**	**24**	P	**P**	**23 48 21.2**	**-1.6**	
	baz=309							
SCM	**Sheep Creek Mo**	**75.54**	**26**	P	**P**	**23 48 23.1**	**+0.1**	
SCM				pmax	pmax			
	comp=Z,25nm,1.3s							
SCM	**Sheep Creek Mo**	**75.54**	**26**	P	**P**	**23 48 23.1**	**+0.1**	
SCM	**Sheep Creek Mo**	**75.54**	**26**	P	**P**	**23 48 21.7**	**-1.3**	
	baz=308							
H29M	**Whitestone**	**75.62**	**20**	P	**P**	**23 48 22.7**	**-0.5**	
H29M				IAmb	IAmb	23 48 25.3		
	comp=Z,14nm,1.2s							
H29M	**Whitestone**	**75.62**	**20**	P	**P**	**23 48 22.1**	**-1.2**	
	baz=314,SNR=8.7							
G30M	**tAoh Zraii Nji**	**75.68**	**18**	P	**P**	**23 48 23.5**	**-0.1**	
G30M	**tAoh Zraii Nji**	**75.68**	**18**	P	P	23 48 21.6	-2.0	
	baz=316,SNR=13							
I28M	**Miner Creek**	**75.69**	**21**	P	**P**	**23 48 23.0**	**-0.8**	
I28M				IAmb	IAmb	23 48 25.3		
	comp=Z,8.4nm,1.1s							
I28M	**Miner Creek**	**75.69**	**21**	P	P	23 48 21.9	-1.9	
	baz=313,SNR=8.2							
PWL	**Port Wells**	**75.75**	**27**	P	**P**	**23 48 22.6**	**-1.5**	
	baz=307							
SII	**Sitkinak Islan**	**75.76**	**32**	P	**P**	**23 48 22.8**	**-1.4**	
	baz=304							
SEW	**Seward**	**75.76**	**28**	P	**P**	**23 48 22.9**	**-1.2**	
	baz=307							
KDAK	**Kodiak Island**	**75.80**	**31**	P	P	23 48 22.7	-1.6	
	baz=305							
M24K	**Tolsona, Glenn**	**75.80**	**25**	P	**P**	**23 48 22.9**	**-1.5**	
	baz=309							
OHAK	**Old Harbor**	**75.80**	**31**	P	**P**	**23 48 23.1**	**-1.2**	
	baz=304							
EPYK	**Eagle Plains**	**75.98**	**19**	P	**P**	**23 48 25.3**	**0.0**	
EPYK	**Eagle Plains**	**75.98**	**19**	P	P	23 48 23.7	-1.7	
	baz=316							
F31M	**Tsiigehtchic**	**76.00**	**17**	P	**P**	**23 48 24.5**	**-0.8**	
F31M				IAmb	IAmb	23 48 26.6		
	comp=Z,12nm,1.2s							
F31M	**Tsiigehtchic**	**76.00**	**17**	P	P	23 48 23.6	-1.7	
	baz=318							
GLI	**Glacier Island**	**76.22**	**26**	P	**P**	**23 48 25.7**	**-1.0**	
	baz=308							
G31M	**Satah River**	**76.25**	**18**		P	23 48 25.1	-1.7	
G31M				IAmb	IAmb	23 48 27.9		
	comp=Z,12nm,1.1s							
G31M	**Satah River**	**76.25**	**18**	P	**P**	**23 48 25.3**	**-1.4**	
	baz=318,SNR=5.8							
KLU	**Klutina**	**76.28**	**26**	P	**P**	**23 48 25.7**	**-1.5**	
KLU				IAmb	IAmb	23 50 40.6		
	comp=Z,20nm,1.4s							
KLU	**Klutina**	**76.28**	**26**	P	**P**	**23 48 26.6**	**-0.5**	
	baz=309							
FID	**Port Fidalgo**	**76.53**	**26**	P	**P**	**23 48 27.2**	**-1.3**	
DIV	**Divide**	**76.56**	**26**	P	**P**	**23 48 29.0**	**+0.3**	
DIV				IAmb	IAmb	23 48 58.9		
	comp=Z,11nm,1.1s							
P23K	**Montague Islan**	**76.64**	**27**	P	**P**	**23 48 28.0**	**-1.1**	
P23K	**Montague Islan**	**76.64**	**27**	P	**P**	**23 48 28.6**	**-0.6**	
	baz=308							
C36M	**Paulatuk**	**76.69**	**13**	P	**P**	**23 48 28.7**	**-0.5**	
	baz=326							
N25K	**Chitina, Valde**	**76.69**	**25**	P	**P**	**23 48 29.0**	**-0.5**	
	baz=310							
L27K	**Beaver Creek,**	**76.71**	**23**	P	**P**	**23 48 28.5**	**-1.0**	
	baz=312							
BCAR	**Beaver Creek A**	**76.72**	**23**	P	**P**	**23 48 29.1**	**-0.5**	
M26K	**Nabesna, AK**	**76.75**	**24**	P	**P**	**23 48 28.6**	**-1.1**	
	baz=311							
DAWY	**Dawson**	**76.82**	**21**	P	**P**	**23 48 29.1**	**-0.9**	
DAWY	**Dawson**	**76.82**	**21**	P	**P**	**23 48 29.2**	**-0.9**	
	baz=314							
I30M	**Mount Dempster**	**76.91**	**20**	P	**P**	**23 48 29.8**	**-0.9**	
I30M				IAmb	IAmb	23 48 31.9		
	comp=Z,11nm,1.1s							
I30M	**Mount Dempster**	**76.91**	**20**	P	**P**	**23 48 29.9**	**-0.9**	
	baz=316,SNR=15							
J29N	**Klondike Camp**	**76.91**	**21**	P	**P**	**23 48 30.5**	**-0.2**	
J29N	**Klondike Camp**	**76.91**	**21**	P	**P**	**23 48 29.5**	**-1.2**	
	baz=315							
H31M	**Peel River**	**77.06**	**19**		**P**	**23 48 30.7**	**-0.8**	
H31M				IAmb	IAmb	23 48 33.2		
	comp=Z,16nm,1.1s							
H31M	**Peel River**	**77.06**	**19**	P	**P**	**23 48 30.6**	**-0.8**	
	baz=318,SNR=11							
BMRM	**Bremner River**	**77.10**	**26**	P	**P**	**23 48 30.8**	**-1.0**	
	baz=310							
POIN	**Pond Inlet**	**77.16**	**358**	P	**P**	**23 48 31.3**	**-0.5**	
M27K	**Edge Creek, AK**	**77.16**	**24**	P	**P**	**23 48 30.8**	**-1.4**	
M27K				IAmb	IAmb	23 48 35.1		
	comp=Z,10nm,1.3s							
M27K	**Edge Creek, AK**	**77.16**	**24**	P	**P**	**23 48 31.2**	**-1.0**	
	baz=312							
J30M	**Hart River**	**77.39**	**20**		**P**	**23 48 32.7**	**-0.8**	
J30M	**Hart River**	**77.39**	**20**	P	**P**	**23 48 32.5**	**-1.0**	
	baz=316							
MCARA	**McCarthy VSAT**	**77.41**	**25**	P	**P**	**23 48 32.4**	**-1.1**	
	baz=312							
Q23K	**Middleton Isla**	**77.42**	**27**	P	**P**	**23 48 32.9**	**-0.5**	
	baz=309							
ESBB	**Sonseca Array**	**77.42**	**309**	P	**P**	**23 48 34.3**	**+0.3**	
ESBB				IAmb	IAmb	23 48 36.3		
	comp=Z,9.7nm,1.2s							
ESDC	**Sonseca Array**	**77.42**	**309**	P	**P**	**23 48 34.5**	**+0.5**	
	comp=Z,4.3nm,1.1s,baz=54,slow=5.8,SNR=17							
	comp=Z,4.3nm,1.1s							
ESDC	**Sonseca Array**	**77.42**	**309**	P	**P**	**23 48 33.7**	**-0.3**	
K29M	**Barlow Dome**	**77.56**	**21**	P	**P**	**23 48 34.6**	**+0.2**	
K29M	**Barlow Dome**	**77.56**	**21**	P	**P**	**23 48 33.6**	**-0.8**	
	baz=316							
CRQM	**Cirque**	**77.78**	**25**	P	**P**	**23 48 35.5**	**-0.3**	
CRQE	**Cirque**	**77.80**	**25**	P	**P**	**23 48 34.9**	**-0.9**	
	baz=312							
KAIM	**Kayak Island**	**77.85**	**26**	P	**P**	**23 48 34.9**	**-1.0**	
	baz=311							
L29M	**L29M**	**77.89**	**22**	P	**P**	**23 48 34.9**	**-1.3**	
	baz=315							
YUK3	**Moose Creek**	**78.05**	**24**	P	**P**	**23 48 36.3**	**-1.0**	
	baz=314							
TAM	**Tamanrasset**	**78.24**	**290**	P	**P**	**23 48 37.9**	**-1.1**	
TAM				pmax	pmax			
	comp=Z,110nm,0.2s							
TAM	**Tamanrasset**	**78.24**	**290**	P	**P**	**23 48 37.9**	**-1.1**	
M29M	**Somme Creek**	**78.26**	**22**	P	**P**	**23 48 38.5**	**+0.2**	
M29M	**Somme Creek**	**78.26**	**22**	P	**P**	**23 48 37.4**	**-0.9**	
	baz=315							
LSZ	**Lusaka**	**78.44**	**245**	P	**P**	**23 48 38.6**	**-1.4**	
LSZ				pmax	pmax			
	comp=Z,6.0nm,1.0s							
LSZ	**Lusaka**	**78.44**	**245**	P	**P**	**23 48 38.5**	**-1.4**	
YUK8	**Steele Glacier**	**78.63**	**24**	P	**P**	**23 48 39.4**	**-1.2**	
	baz=314							
M30M	**Minto, Yukon**	**78.70**	**22**	P	**P**	**23 48 39.6**	**-1.0**	
	baz=316							
MVO	**Moncorvo**	**78.72**	**311**	*e*P	**P**	**23 48 43.2**	**+2.0**	
MVO				*i* IAmb	IAmb	23 48 44.2		
	comp=Z,18nm,1.9s							
O28M	**Mount Upton**	**78.84**	**24**	P	**P**	**23 48 40.5**	**-1.2**	
	baz=314							
YUK4	**Talbot Arm**	**78.97**	**23**	P	P	23 48 40.8	-1.6	
	baz=315							
PCAB	**Cabril**	**79.09**	**312**	*e*P	**P**	**23 48 44.6**	**+1.4**	
PCAB				*i* IAmb	IAmb	23 48 50.5		
	comp=Z,51nm,1.6s							
YUK6	**Outpost Mounta**	**79.36**	**23**	P	**P**	**23 48 43.2**	**-1.3**	
	baz=315							
N30M	**Aishikik Lake**	**79.42**	**23**	P	**P**	**23 48 43.9**	**-0.7**	
	baz=316							
MTE	**Manteigas**	**79.45**	**311**	*e*P	**P**	**23 48 47.6**	**+2.4**	
MTE				*i* IAmb	IAmb	23 48 48.7		
	comp=Z,21nm,1.7s							
HYT	**Haines Junctio**	**79.73**	**23**	P	**P**	**23 48 45.3**	**-1.2**	
	baz=316							
M31M	**Drury Creek, Y**	**79.74**	**21**	P	**P**	**23 48 45.1**	**-1.2**	
	baz=318							
O29M	**Mount Kennedy**	**79.74**	**24**	P	**P**	**23 48 45.4**	**-1.0**	
	baz=315							
N31M	**Braeburn, Yuko**	**79.83**	**22**	P	**P**	**23 48 46.7**	**-0.1**	
N31M				IAmb	IAmb	23 48 50.1		
	comp=Z,12nm,1.2s							
N31M	**Braeburn, Yuko**	**79.83**	**22**	P	**P**	**23 48 45.8**	**-1.0**	
	baz=317							
PBAR	**Barrancos**	**80.25**	**308**	*e*P	**P**	**23 48 51.1**	**+1.7**	
PBAR				*i* IAmb	IAmb	23 48 52.0		
	comp=Z,21nm,1.5s							
O30N	**Mendenhall**	**80.25**	**23**	P	**P**	**23 48 49.1**	**0.0**	
O30N	**Mendenhall**	**80.25**	**23**	P	**P**	**23 48 47.6**	**-1.5**	
	baz=317							
MMPY	**Sheldon Lake,**	**80.36**	**20**		**P**	**23 48 49.4**	**-0.3**	
MMPY	**Sheldon Lake,**	**80.36**	**20**	P	**P**	**23 48 48.5**	**-1.2**	
	baz=321							
P30M	**Million Dollar**	**80.43**	**23**	P	**P**	**23 48 49.1**	**-1.1**	
	baz=317							
P29M	**Windy Craggy**	**80.52**	**24**	P	**P**	**23 48 49.2**	**-1.4**	
	baz=316							
PARRA	**Arraiolos**	**80.59**	**309**	*e*P	**P**	**23 48 50.0**	**-1.4**	
ILON	**Igloolik, Nuna**	**80.60**	**359**	P	**P**	**23 48 49.9**	**-0.8**	
ILON				IAmb	IAmb	23 48 51.6		
	comp=Z,13nm,1.1s							
WHY	**Whitehorse**	**80.73**	**22**	P	**P**	**23 48 50.8**	**-1.0**	
	baz=318							
PVAQ	**Vaqueiros**	**81.11**	**308**	*e*P	**P**	**23 48 56.0**	**+1.9**	
PLBC	**Pleasant Camp**	**81.12**	**24**	P	**P**	**23 48 52.2**	**-1.5**	
	baz=317							
MD01	**Midelt array s**	**81.34**	**303**	P	**P**	**23 48 55.4**	**-0.2**	
MD31	**MD31**	**81.34**	**303**	P	**P**	**23 48 54.6**	**-0.9**	
P33M	**Teslin, Yukon**	**81.75**	**22**	P	**P**	**23 48 57.2**	**+0.1**	
P33M	**Teslin, Yukon**	**81.75**	**22**	P	**P**	**23 48 55.8**	**-1.3**	
	baz=320							
P32M	**Atlin**	**81.93**	**23**	P	**P**	**23 48 58.2**	**+0.1**	
P32M				IAmb	IAmb	23 49 25.6		
	comp=Z,9.4nm,1.1s							
P32M	**Atlin**	**81.93**	**23**	P	**P**	**23 48 56.8**	**-1.3**	
	baz=319							
WRGLY	**Wrigley**	**81.97**	**16**	P	**P**	**23 48 57.7**	**-0.4**	
WRGLY	**Wrigley**	**81.97**	**16**	P	**P**	**23 48 56.8**	**-1.3**	
	baz=327							
PAF	**Port-aux-Franc**	**82.25**	**196**	P	**P**	**23 49 00.6**	**+1.1**	
PAF				pmax	pmax			
	comp=Z,609nm,1.4s							
PAF	**Port-aux-Franc**	**82.25**	**196**	P	**P**	**23 49 00.6**	**+1.1**	
S31K	**Pelican**	**82.27**	**25**	P	**P**	**23 48 58.8**	**-1.0**	
	baz=317							
R32K	**Eaglecrest**	**82.65**	**24**	P	**P**	**23 49 00.6**	**-1.2**	
	baz=319							
Q32M	**Nakina River**	**82.89**	**22**	P	P	23 49 01.3	-2.0	
	baz=320							
R33M	**Jennings River**	**82.97**	**22**	P	**P**	**23 49 02.2**	**-1.4**	
	baz=322							
S32K	**Killisnoo**	**83.23**	**24**	P	**P**	**23 49 03.8**	**-1.0**	
	baz=319							
SIT	**Sitka**	**83.27**	**25**	P	**P**	**23 49 03.8**	**-1.2**	
	baz=318							
EDA	**Edea**	**83.47**	**271**	P	**P**	**23 49 06.5**	**-0.4**	
KOUNC	**Koumac, New Ca**	**83.77**	**118**	P	**P**	**23 49 07.7**	**-0.5**	
DLBC	**Dease Lake**	**84.03**	**22**	P	**P**	**23 49 07.9**	**-1.1**	
	baz=322							
S34M	**Telegraph Cree**	**84.08**	**23**	P	**P**	**23 49 09.8**	**+0.6**	
S34M				IAmb	IAmb	23 49 14.7		
	comp=Z,15nm,1.4s							
YKA	**Yellowknife Ar**	**84.57**	**13**	P	**P**	**23 49 10.5**	**-1.1**	
	comp=Z,0.9nm,0.8s,baz=341,slow=4.7,SNR=5.0							
	comp=Z,0.9nm,0.8s							
YKA	**Yellowknife Ar**	**84.57**	**13**	*i* P	**P**	**23 49 11.0**	**-0.6**	
YKA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
YKA	**Yellowknife Ar**	**84.57**	**13**	P	P	23 49 10.0	-1.6	
YKAW1	**Yellowknife Wh**	**84.61**	**13**	P	**P**	**23 49 10.9**	**-0.8**	
YKAW1				IAmb	IAmb	23 49 12.1		
	comp=Z,11nm,1.6s							
U33K	**Whale Pass**	**84.78**	**25**	P	**P**	**23 49 11.3**	**-1.4**	
	baz=320							
WRAK	**Wrangell Islan**	**84.83**	**24**	P	**P**	**23 49 12.6**	**-0.3**	
	baz=321							
T35M	**Bob Quinn**	**85.11**	**23**	P	**P**	**23 49 14.0**	**-0.4**	
	baz=322							
CRAG	**Craig**	**85.28**	**25**	P	**P**	**23 49 14.1**	**-1.1**	
	baz=320							
V35K	**Ketchikan**	**85.93**	**25**	P	**P**	**23 49 17.6**	**-0.9**	
	baz=321							
TORD	**Torodi Ar. Bea**	**86.09**	**283**	P	**P**	**23 49 20.0**	**0.0**	
	comp=Z,6.5nm,1.1s,baz=65,slow=3.3,SNR=17							
TORD				PP	**PP**	**23 52 40.6**	**+0.4**	
	comp=Z,1.7nm,1.1s,baz=61,slow=7.0,SNR=5.0							
	comp=Z,6.5nm,1.1s							
TORD	**Torodi Ar. Bea**	**86.09**	**283**	P	**P**	**23 49 18.5**	**-1.6**	
LBTB	**Lobatse**	**86.10**	**238**	P	**P**	**23 49 19.7**	**-0.2**	
LBTB				pmax	pmax			
	comp=Z,19nm,1.2s							
LBTB	**Lobatse**	**86.10**	**238**	P	**P**	**23 49 19.7**	**-0.2**	
DIB	**Dawson Inlet,**	**87.27**	**26**	P	**P**	**23 49 24.2**	**-0.8**	
HG4B	**Hotspring**	**88.46**	**26**	P	**P**	**23 49 30.7**	**-0.2**	
H04A	**Detroit Lake**	**98.12**	**26**		PKKPdf	00 06 45.9	-3.7	
WCT	**Wildcat Mounta**	**107.06**	**26**	PKKPbc	PKKPbc	00 06 22.9	+0.9	
WCT				PKKPab	**PKKPdf**	**00 06 38.2**	**+4.9**	
TXAR	**Lajitas Array**	**118.16**	**18**	PKP	**PKPdf**	**23 55 25.6**	**-0.7**	
	comp=Z,0.2nm,0.6s,baz=349,slow=2.6,SNR=3.5							

*IDC **19** 23:44:18.5±1.2, 35.48N×26.70E, h0km, mb3.3/4, mbtmp3.3/5, ML3.6/1, Error ellipse: s-maj=41.0km s-min=20.7km az=167.0*
*ISK **19** 23:44:20.2, 35.48N×26.67E, h13km, ML2.9/11*
*ATH **19** 23:44:20.3, 35.52N×26.63E, h12km±3km, ML3.3/7, Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **19** 23:44:20.7, 36°N±3'×2°7E±', h3km±4km, M3.2/13, MLh3.2/13*
*AFAD **19** 23:44:24.2, 35.72N×27.02E, h15km±1km, ML2.6*
ISC 19 23:44:20.2±1.0, **35.53N**±0.03×**26.66E**±0.02, **h14**km±8km, **n71**, σ1°**38**/104, **mb3.1**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.41**	**88**	Pg	**Pg**	**23 44 28.7**	**+0.3**
KARP				Sg	**Sb**	**23 44 35.1**	**-0.3**
KARP	**Karpathos**	**0.41**	**88**	P	**Pb**	**23 44 29.1**	**-0.2**
KARP				S	**Sb**	**23 44 35.0**	**-0.3**
KARP	**Karpathos**	**0.41**	**88**	P	**Pb**	**23 44 29.0**	**-0.2**
KARP				S	**Sb**	**23 44 35.0**	**-0.3**
ZKR	**Zakros**	**0.55**	**221**	Pg	**Pg**	**23 44 30.6**	**-0.5**
ZKR				Sg	**Sg**	**23 44 38.7**	**+0.2**
ZKR	**Zakros**	**0.55**	**221**	P	**Pg**	**23 44 30.6**	**-0.5**
ZKR	**Zakros**	**0.55**	**221**	P	**Pg**	**23 44 30.4**	**-0.7**
ZKR				S	**Sg**	**23 44 37.8**	**-0.6**
AGNA	**Agios Nikolaos**	**0.84**	**246**	P	**Pg**	**23 44 36.3**	**-0.3**
AGNA				S	**Sg**	**23 44 46.9**	**-0.8**
NPS	**Neapolis**	**0.90**	**253**	P	**Pg**	**23 44 37.3**	**-0.3**
NPS				S	**Sb**	**23 44 50.0**	**+0.5**
NPS	**Neapolis**	**0.90**	**253**	P	**Pg**	**23 44 37.4**	**-0.3**
NPS				S	**Sg**	**23 44 48.6**	**-0.8**
THERA	**Ancient Thera,**	**1.27**	**311**	P	**Pn**	**23 44 43.8**	**+0.2**
THERA				S	**Sb**	**23 45 00.7**	**+0.4**
THERA	**Ancient Thera,**	**1.27**	**311**	P	**Pn**	**23 44 43.6**	**0.0**
THR8	**Santorini-Mono**	**1.30**	**313**	P	**Pn**	**23 44 44.2**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.31**	**29**	P	**Pn**	**23 44 43.7**	**-0.4**
THR6	**Thira Island,**	**1.31**	**309**	P	**Pn**	**23 44 44.5**	**+0.3**
IACM	**Heraklion**	**1.32**	**261**	P	**Pb**	**23 44 45.1**	**+0.3**
IACM				S	**Sg**	**23 45 03.4**	**+0.6**
IACM	**Heraklion**	**1.32**	**261**	P	**Pn**	**23 44 44.3**	**+0.1**
IACM				S	**Sb**	**23 45 00.9**	**-0.6**
THR9	**Santorini-Faro**	**1.34**	**308**	P	**Pn**	**23 44 45.0**	**+0.5**
SNT5	**Nea Kammeni, S**	**1.35**	**311**	P	**Pb**	**23 44 45.9**	**+0.7**
THR3	**Thira Island,**	**1.35**	**311**	P	**Pn**	**23 44 44.9**	**+0.3**
THR2	**Thira Island,**	**1.35**	**313**	P	**Pn**	**23 44 45.0**	**+0.3**
ARG	**Arkhangelos**	**1.37**	**60**	Pn	**Pb**	**23 44 45.8**	**+0.2**
ARG				Sn	**Sg**	**23 45 04.6**	**+0.2**
ARG	**Arkhangelos**	**1.37**	**60**	P	**Pb**	**23 44 46.1**	**+0.5**
ARG				S	**Sg**	**23 45 04.5**	**+0.2**
ARG	**Arkhangelos**	**1.37**	**60**	P	**Pg**	**23 44 46.2**	**-0.3**
ARG				S	**Sg**	**23 45 03.9**	**-0.5**
SAP3	**Santorini-Thir**	**1.40**	**311**	P	**Pg**	**23 44 46.9**	**-0.1**
SAP3	**Santorini-Thir**	**1.40**	**311**	P	**Pb**	**23 44 46.8**	**+0.7**
DAT	**Datca**	**1.41**	**32**	Pn	**Pn**	**23 44 46.0**	**+0.5**
DAT	**Datca**	**1.41**	**32**	P	**Pn**	**23 44 45.3**	**-0.2**
IDI	**Anoyia**	**1.47**	**261**	Pn	**Pb**	**23 44 47.5**	**+0.2**
IDI	**Anoyia**	**1.47**	**261**	P	**Pn**	**23 44 45.8**	**-0.5**
IDI	**Anoyia**	**1.47**	**261**	P	**Pn**	**23 44 45.8**	**-0.5**
SIVA	**Sivas**	**1.60**	**252**	P	**Pb**	**23 44 49.4**	**-0.2**
SIVA				S	**Sb**	**23 45 10.4**	**+0.8**
SIVA	**Sivas**	**1.60**	**252**	P	**Pb**	**23 44 50.0**	**+0.5**
SIVA				S	**Sn**	**23 45 09.3**	**+0.8**
BODT	**Bodrum**	**1.61**	**19**	Pn	**Pb**	**23 44 49.9**	**+0.1**
BDRM	**Kayabasi**	**1.66**	**22**	P	**Pn**	**23 44 49.4**	**+0.6**
TURN	**Turunc**	**1.78**	**45**	Pn	**Pb**	**23 44 51.9**	**-0.7**
TURN	**Turunc**	**1.78**	**45**	P	**Pn**	**23 44 51.2**	**+0.7**
TURN				S	**Sn**	**23 45 11.0**	**-2.0**
DDIM	**Aydin, Didim**	**1.98**	**13**	P	**Pg**	**23 44 58.3**	**+0.2**
DDIM				S	**Sg**	**23 45 27.0**	**+3.2**
DDIM				IAML		23 45 38.0	
	comp=E,66nm,0.7s						
DDIM				IAML		23 45 51.0	
	comp=N,58nm,1.5s						
VAM	**Vamos**	**2.02**	**267**	P	**Pn**	**23 44 55.2**	**+1.4**
DALY	**Dalyan (Mula)**	**2.06**	**51**	Pn	**Pb**	**23 44 56.1**	**-1.2**
DALY	**Dalyan (Mula)**	**2.06**	**51**	P	**Pb**	**23 44 56.2**	**-1.1**
DALY				S	**Sn**	**23 45 21.5**	**+1.7**
DALY				IAML		23 45 36.0	
	comp=N,55nm,0.5s						
YER	**Yerkesik**	**2.06**	**39**	Pn	**Pb**	**23 44 56.5**	**-1.0**
YER	**Yerkesik**	**2.06**	**39**	P	**Pn**	**23 44 55.7**	**+1.1**
IMMV	**Iera Moni Meta**	**2.19**	**269**	P	**Pn**	**23 44 56.1**	**-0.1**
IMMV	**Iera Moni Meta**	**2.19**	**269**	P	**Pn**	**23 44 55.8**	**-0.4**
GCAM	**G?zelcaml?**	**2.21**	**12**	Pn	**Pb**	**23 44 59.1**	**-0.9**
GVD	**Gavdhos**	**2.22**	**253**	P	**Pb**	**23 45 00.7**	**+0.6**
IZZE	**Mula-Seydike**	**2.27**	**66**	P	**Pn**	**23 44 59.0**	**+1.7**
IZZE				S	**Sn**	**23 45 19.7**	**-5.3**
IZZE				IAML		23 45 32.0	
	comp=E,60nm,0.4s						
IZZE				IAML		23 45 42.0	
	comp=N,103nm,0.7s						
SABU	**Mula-Dalaman**	**2.27**	**55**	P	**Pn**	**23 44 59.0**	**+1.7**
SABU				S	**Sn**	**23 45 26.0**	**+1.0**
AYDN	**Tasoluk**	**2.34**	**24**	P	**Pb**	**23 45 01.7**	**-0.5**
AYDN				S	**Sn**	**23 45 28.5**	**+1.7**
AKAS	**Kas**	**2.49**	**73**	P	**Pn**	**23 45 01.9**	**+1.5**
AKAS				S	**Sn**	**23 45 31.5**	**+0.8**
AKAS				IAML	

MMB	**Musomishta**	**0.57**	**136**	Pg	**Pg**	**23 48 40.0**	**-0.1**
MMB				Sg	**Sg**	**23 48 47.8**	**+0.2**
VTS	**Vitosha**	**0.66**	**1**	Pg	**Pg**	**23 48 41.2**	**-0.6**
VTS				Sg	**Sg**	**23 48 50.2**	**-0.3**
VTS	**Vitosha**	**0.66**	**1**	*e*Pg	**Pg**	**23 48 41.1**	**-0.7**
VTS				*e*Sg	**Sg**	**23 48 50.8**	**+0.3**
BOSS	**Bosilegrad**	**0.77**	**315**	*e*Pg	**Pg**	**23 48 43.4**	**-0.5**
BOSS				*e*Sg	**Sb**	**23 48 55.2**	**-0.1**
VAY	**Valandovo**	**0.80**	**218**	*i* Pg	**Pg**	**23 48 44.3**	**-0.2**
VAY				*i* Sg	**Sg**	**23 48 54.7**	**-0.2**
VAY				*e*Lg	Lg	23 48 55.0	
	comp=E,24nm,0.2s						
VAY				*e*Lg	Lg	23 48 55.6	
	comp=N,20nm,0.4s						
BLSH	**Balsha**	**0.90**	**3**	Pg	**Pb**	**23 48 47.0**	**+0.1**
BLSH				Sg	**Sb**	**23 48 59.3**	**+0.2**
PGB	**Panagyurishte**	**0.90**	**52**	P	**Pg**	**23 48 46.2**	**-0.1**
PGB				Sg	**Sg**	**23 48 58.4**	**+0.4**
TRAN	**Tran**	**0.97**	**334**	P	**Pg**	**23 48 47.8**	**+0.1**
TRAN				Sg	**Sg**	**23 49 00.8**	**+0.4**
PLD	**Plovdiv**	**1.15**	**80**	P	**Pn**	**23 48 51.5**	**0.0**
PLD				S	**Sn**	**23 49 07.5**	**+0.1**
PLD	**Plovdiv**	**1.15**	**80**	*e*Pg	**Pn**	**23 48 51.7**	**+0.2**
PLD				*e*Sg	**Sn**	**23 49 07.2**	**-0.2**
RZN	**Rozhen**	**1.17**	**103**	P	**Pg**	**23 48 51.0**	**-0.4**
RZN				S	**Sn**	**23 49 08.3**	**+0.3**
BARS	**Barje**	**1.35**	**310**	*e*Pg	**Pn**	**23 48 54.0**	**-0.2**
BARS				*e*Sg	**Sb**	**23 49 12.1**	**+0.1**
ZAPS	**Zavoj**	**1.38**	**342**	*e*Pg	**Pg**	**23 48 55.5**	**-0.1**
ZAPS				*e*Sg	**Sg**	**23 49 14.5**	**+0.9**
MPEP	**Malo Peshtene**	**1.45**	**15**	P	**Pb**	**23 48 56.3**	**0.0**
BLKB	**Belogradchik**	**1.71**	**347**	*e*Pg	**Pg**	**23 49 01.4**	**-0.5**
BLKB				*e*Sg	**Sb**	**23 49 22.4**	**0.0**
ZAGS	**Zajecar**	**1.99**	**339**	*e*Pg	**Pb**	**23 49 05.3**	**-0.2**
ZAGS				*e*Sg	**Sb**	**23 49 30.0**	**-0.4**
SELS	**Selova**	**2.00**	**310**	*e*Pn	**Pb**	**23 49 05.7**	**0.0**
SELS				*e*Sn	**Sb**	**23 49 31.8**	**+1.1**

IDC ***19*** *23:48:43.7±0.9,3.˚18S×100.˚23E,h0km,mb4.2/15, mbtmp4.2/16,ML4.6/1,MS3.4/3,Error ellipse: s-maj=37.3km s-min=14.5km az=48.0*

NEIC ***19*** *23:48:44.2±2.0,3.˚39S±0.˚08×100.˚12E±0.˚08,h10km±1km, mb4.5/32,Error ellipse: s-maj=16.1km s-min=10.2km az=226.0*

GFZ ***19*** *23:48:44.1±0.6,3˚S±5˚×10˚0E±˚,h10km,M4.5/13, mb4.5/12,Error ellipse: s-maj=15.2km s-min=5.3km az=49.4,confirmed*

DJA ***19*** *23:48:48.6±0.4,3˚S±2˚×10˚0E±˚,h22km±3km,M4.6/26, mB4.6/1,mb4.5/6,MLv4.6/26,Mw(mB)3.8/1*

ISC 19 23:48:47.5±0.5,3.˚30S±0.˚06×100.˚12E±0.˚06,h35km,n130, σ1§22/118,mb4.5/35,MS3.9/7,1C-1D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.55**	**348**	P	**Pn**	**23 48 57.8**	**-1.1**
PPSI				S	**Sn**	**23 49 06.3**	**-0.5**
PPSI	**Pulau Pagai**	**0.55**	**348**	P	**Pn**	**23 48 56.9**	**-1.9**
KRJI	**Kerinci**	**1.80**	**48**	P	**Pn**	**23 49 14.9**	**-1.3**
MASI	**Maura Aman, Be**	**2.12**	**86**	P	**Pn**	**23 49 20.2**	**-0.3**
UBSI	**University, Be**	**2.19**	**102**	P	**Pn**	**23 49 20.6**	**-0.9**
PDSI	**Padang**	**2.40**	**8**	P	**Pn**	**23 49 22.8**	**-1.6**
KSI	**Kapahiang**	**2.49**	**98**	P	**Pn**	**23 49 27.6**	**+1.9**
PPI	**Padang Panjang**	**2.84**	**6**	P	**Pn**	**23 49 29.8**	**-0.6**
PPI				S	**Sn**	**23 50 02.2**	**-1.2**
MNAI	**Manna**	**3.02**	**110**	Pn	**Pn**	**23 49 31.0**	**-1.9**
MNAI	**Manna**	**3.02**	**110**	P	**Pn**	**23 49 34.5**	**+1.6**
MNAI				S	**Sn**	**23 50 09.8**	**+2.0**
MNAI	**Manna**	**3.02**	**110**	P	**Pn**	**23 49 33.0**	**+0.1**
LHSI	**Lahat**	**3.44**	**99**	P	**Pn**	**23 49 38.6**	**0.0**
BKNI	**Bangkinang**	**3.72**	**14**	Pn	**Pn**	**23 49 42.5**	**0.0**
BKNI	**Bangkinang**	**3.72**	**14**	P	**Pn**	**23 49 42.1**	**-0.4**
BKNI	**Bangkinang**	**3.72**	**14**	P	**Pn**	**23 49 41.1**	**-1.4**
MDSI	**Maura Dua**	**4.21**	**106**	P	**Pn**	**23 49 48.7**	**-0.6**
GSI	**Gunungsitoli**	**5.24**	**331**		**Pn**	**23 50 03.0**	**-0.3**
GSI	**Gunungsitoli** 0.3nm33nm,0.7s	**5.24**	**331**	P	**Pn**	**23 50 06.6**	**+3.2**
GSI	**Gunungsitoli**	**5.24**	**331**	P	**Pn**	**23 50 01.6**	**-1.8**
DSRI	**Dabo**	**5.26**	**58**	P	**Pn**	**23 50 02.3**	**-1.4**
RPSI	**Rantau Prapat**	**6.08**	**349**	Pn	**Pn**	**23 50 15.8**	**+0.8**
MYKOM	**Kota Tinggi**	**6.28**	**36**		**Pn**	**23 50 17.4**	**-0.4**
MYKOM	**Kota Tinggi** 480nm31nm,0.7s	**6.28**	**36**	P	**Pn**	**23 50 17.6**	**-0.2**
MYKOM	**Kota Tinggi**	**6.28**	**36**	P	**Pn**	**23 50 16.9**	**-0.8**
CGJI	**Cibinong**	**6.45**	**121**	P	**Pn**	**23 50 18.5**	**-1.6**
KULM	**Kulim**	**8.55**	**4**	P	**Pn**	**23 50 49.5**	**+0.6**
BBJI	**Bungbulang**	**8.56**	**119**		**Pn**	**23 50 46.7**	**-2.4**
BBJI	**Bungbulang**	**8.56**	**119**	P	**Pn**	**23 50 48.7**	**-0.4**
BBJI	**Bungbulang**	**8.56**	**119**	P	**Pn**	**23 50 47.6**	**-1.5**
PBA	**Port Blair**	**16.57**	**334**		**Pn**	**23 52 38.2**	**-1.4**
PBA				IAmb	IAmb	23 52 46.1	
	comp=Z,26nm,0.8s						
KAPI	**Kappang**	**19.65**	**96**	P	**P**	**23 53 13.2**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=284,slow=12,SNR=3.7 comp=Z,5.0nm,0.3s						
KAPI	**Kappang**	**19.65**	**96**	P	**P**	**23 53 13.4**	**-0.1**
KAPI				IAmb	IAmb	23 53 35.1	
	comp=Z,26nm,1.1s						
KAPI	**Kappang**	**19.65**	**96**	P	**P**	**23 53 13.5**	**-0.1**
MYLDM	**Lahad Datu**	**20.20**	**65**	P	Pn	23 53 20.6	-0.9
TOLI2	**Tolitoli**	**21.11**	**78**	P	**P**	**23 53 27.3**	**-2.1**
TOLI2	**Tolitoli**	**21.11**	**78**	P	**P**	**23 53 29.3**	**-0.1**
CM31	**Chiang Mai Arr**	**21.65**	**357**	P	**P**	**23 53 34.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**21.65**	**357**	P	**P**	**23 53 34.0**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=186,slow=10,SNR=22						
CMAR				LR	LR	00 01 40.4	
	comp=Z,85nm,18.8s,baz=170,slow=36 comp=Z,2.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**21.65**	**357**		**P**	**23 53 33.0**	**-2.2**
CHTO	**Chiang Mai**	**22.01**	**357**	P	**P**	**23 53 38.4**	**-0.5**
CHTO	**Chiang Mai**	**22.01**	**357**	P	**P**	**23 53 39.9**	**+1.0**
MMRI	**Maumere**	**22.62**	**105**	P	**P**	**23 53 44.7**	**-0.9**
MMRI	**Maumere**	**22.62**	**105**	P	**P**	**23 53 46.1**	**+0.5**
SLVN	**Son La**	**24.76**	**8**	P	**P**	**23 54 05.3**	**-0.8**
DAV	**Davao City (W)**	**27.42**	**68**	LR	LR	00 05 19.1	
	comp=Z,49nm,18.8s,baz=203,slow=36						
H08S2	**Diego Garcia H**	**27.83**	**260**	T	T	00 23 42.3	
	baz=82,slow=75,SNR=2555						
H08S3	**Diego Garcia H**	**27.84**	**260**	T	T	00 23 42.4	
	baz=82,slow=75,SNR=3516						
DGAR	**Diego Garcia**	**27.84**	**260**	P	**P**	**23 54 32.3**	**-1.7**
H08S1	**Diego Garcia H**	**27.85**	**260**	T	T	00 23 43.7	
	baz=82,slow=75,SNR=2180						
MORE	**Moreh**	**27.95**	**349**		**P**	**23 54 34.4**	**-0.4**
MORE				IAmb	IAmb	23 54 36.5	
	comp=Z,14nm,0.8s						
HYB	**Hyderabad**	**29.61**	**315**	*e*P	**P**	**23 54 49.7**	**-0.1**
HYB				*e*S	**S**	**23 59 46.5**	**+3.4**
PZH	**PanZhiHua**	**29.67**	**3**	P	**P**	**23 54 53.8**	**+3.5**
EVN	**Everest**	**33.62**	**338**	P	**P**	**23 55 26.0**	**+0.4**
EVN				IAmb	IAmb	23 55 33.5	
	comp=Z,5.8nm,0.7s						
H01W3	**Cape Leeuwin H**	**34.01**	**159**	T	T	00 31 28.4	
	baz=335,slow=76,SNR=226						
H01W2	**Cape Leeuwin H**	**34.02**	**159**	T	T	00 31 31.7	
	baz=335,slow=76,SNR=254						
H01W1	**Cape Leeuwin H**	**34.03**	**159**	T	T	00 31 29.5	
	baz=335,slow=76,SNR=220						
WRA	**Warramunga Arr**	**37.24**	**119**	P	**P**	**23 55 56.3**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=300,slow=8.8,SNR=22 comp=Z,1.3nm,0.4s						
XAN	**Xi'an**	**38.06**	**12**	P	**P**	**23 56 02.0**	**-0.9**
XAN				pmax	pmax		
	comp=Z,20nm,0.6s						
XAN				LR	LR		
	comp=N,160nm,15.1s						
XAN				LR	LR		
	comp=E,150nm,13.7s						
XAN				LR	LR		
	comp=Z,220nm,22.0s						
ASAR	**Alice Springs**	**38.40**	**125**	P	**P**	**23 56 07.0**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=297,slow=8.3,SNR=15 comp=Z,1.4nm,0.4s						
LZH	**Lanzhou**	**39.34**	**5**	*e*P	**P**	**23 56 14.3**	**+0.6**
LZH	**Lanzhou**	**39.34**	**5**	sP	sP	23 56 21.8	-6.1
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
NJ2	**Nanjing**	**39.41**	**25**	*e*P	**P**	**23 56 16.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
GTA2	**Gaotai**	**42.58**	**360**	*e*P	**P**	**23 56 40.6**	**+0.3**
GTA2				pP	pP	23 56 44.5	-6.0
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA2				LR	LR		
	comp=N,190nm,15.1s						
GTA2				LR	LR		
	comp=E,150nm,15.1s						
GTA2				LR	LR		
	comp=Z,170nm,18.6s						
HHC	**Hu-ho-hao-te**	**45.17**	**12**	*e*P	**P**	**23 57 01.9**	**+0.8**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,59nm,5.1s						
HHC				LR	LR		
	comp=N,88nm,9.1s						
HHC				LR	LR		
	comp=E,72nm,10.8s						
HHC				LR	LR		
	comp=Z,100nm,10.3s						
KSH2	**Kashi**	**47.92**	**334**	P	**P**	**23 57 23.3**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSAR	**Wonju Array Be**	**48.05**	**30**	P	**P**	**23 57 22.3**	**-1.2**
STKA	**Stephens Creek**	**48.20**	**131**	P	**P**	**23 57 26.8**	**+1.9**
	comp=Z,1.7nm,0.7s,baz=299,slow=7.4,SNR=3.8 comp=Z,1.7nm,0.7s						
WMQ	**Urumqi**	**48.22**	**348**	⇓P	**P**	**23 57 26.9**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				LR	LR		
	comp=N,200nm,10.7s						
WMQ				LR	LR		
	comp=E,290nm,24.9s						
WMQ				LR	LR		
	comp=Z,110nm,20.1s						
MANEM	**Manem**	**48.47**	**330**		**P**	**23 57 27.9**	**+0.8**
MANEM				IAmb	IAmb	23 57 39.5	
	comp=Z,15nm,0.6s						
TARG	**Taragay, Kyrgy**	**49.20**	**338**	P	**P**	**23 57 33.8**	**+0.9**
PRZ	**Przheval'sk**	**49.64**	**339**	P	**P**	**23 57 36.3**	**+0.4**
PRZ				IAmb	IAmb	23 57 56.5	
	comp=Z,5.8nm,0.7s						
NRN	**Naryn**	**49.65**	**336**	P	**P**	**23 57 36.6**	**+0.4**
NRN				IAmb	IAmb	23 57 45.1	
	comp=Z,6.0nm,1.2s						
KDJ	**Kajisay**	**49.78**	**338**	P	**P**	**23 57 37.5**	**+0.4**
KDJ				IAmb	IAmb	23 57 59.1	
	comp=Z,4.7nm,0.8s						
PDGK	**Podgornoye**	**50.01**	**340**	P	**P**	**23 57 37.8**	**-0.9**
SHAA	**Shahritus**	**50.35**	**327**	P	**P**	**23 57 40.0**	**-1.3**
SHAA				IAmb	IAmb	23 57 52.9	
	comp=Z,10nm,0.7s						
BOOM	**Boomskoye usch**	**50.57**	**337**	P	**P**	**23 57 43.1**	**+0.1**
BTK	**Batken**	**50.84**	**331**	P	**P**	**23 57 45.4**	**+0.5**
BTK				IAmb	IAmb	23 57 57.6	
	comp=Z,7.5nm,1.3s						
ARSB	**Arslanbob**	**50.84**	**334**	P	**P**	**23 57 44.6**	**-0.4**
ARSB				IAmb	IAmb	23 57 58.1	
	comp=Z,5.6nm,0.9s						
SONM	**Songino Array**	**51.22**	**5**	P	**P**	**23 57 48.8**	**+1.1**
	comp=Z,4.2nm,0.7s,baz=190,slow=8.8,SNR=22 comp=Z,4.2nm,0.7s						
SONM	**Songino Array**	**51.22**	**5**		**P**	**23 57 47.6**	**-0.1**
SONM				IAmb	IAmb	23 57 50.6	
	comp=Z,5.3nm,1.0s						
MKAR	**Makanchi Array**	**52.31**	**345**	P	**P**	**23 57 56.7**	**+1.0**
	comp=Z,6.9nm,0.7s,baz=148,slow=8.0,SNR=83 comp=Z,6.9nm,0.7s						
MKAR	**Makanchi Array**	**52.31**	**345**		**P**	**23 57 56.2**	**+0.4**
MAKZ	**Makanchi**	**52.41**	**344**		**P**	**23 57 56.9**	**+0.4**
MAKZ				IAmb	IAmb	23 57 58.7	
	comp=Z,5.8nm,1.1s						
MJAR	**Matsushiro Arr**	**53.21**	**38**	P	**P**	**23 58 01.4**	**-1.2**
MJAR				IAmb	IAmb	23 58 07.8	
	comp=Z,2.2nm,0.4s						
KKAR	**Karatay Array**	**53.36**	**333**	P	**P**	**23 58 04.0**	**+0.5**
BNX	**BinXian**	**54.51**	**23**	⇑P	**P**	**23 58 10.9**	**-1.0**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**55.24**	**28**	P	**P**	**23 58 17.4**	**+0.2**
	comp=Z,6.7nm,0.8s,baz=221,slow=6.3,SNR=12 comp=Z,6.7nm,0.8s						
KURBB	**Kurchatov Arra**	**56.83**	**344**	P	**P**	**23 58 29.1**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=163,slow=6.7,SNR=26 comp=Z,3.3nm,0.9s						
KURK	**Kurchatov**	**56.88**	**344**		**P**	**23 58 28.5**	**-0.2**
KURK				IAmb	IAmb	23 58 30.9	
	comp=Z,5.7nm,0.8s						
TAU	**Tasmania Unive**	**57.51**	**140**	P	**P**	**23 58 31.6**	**-1.8**
ZAA0	**Zalesovo Array**	**58.46**	**349**	P	**P**	**23 58 39.3**	**-0.5**
ZAA0				IAmb	IAmb	23 58 43.9	
	comp=Z,6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**58.46**	**349**	P	**P**	**23 58 40.4**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=172,slow=4.5,SNR=24 comp=Z,5.5nm,0.8s						
ZALV	**Zalesovo Beam**	**58.46**	**349**	P	**P**	**23 58 40.0**	**+0.1**
H04N2	**CROZET ISLANDS** baz=61,slow=76,SNR=1269	**59.83**	**217**	T	T	01 03 56.0	
H04N1	**CROZET ISLANDS** baz=61,slow=76,SNR=614	**59.84**	**217**	T	T	01 03 56.7	
H04N3	**CROZET ISLANDS** baz=61,slow=76,SNR=876	**59.85**	**217**	T	T	01 03 55.9	
H04S1	**CROZET ISLANDS** baz=58,slow=76,SNR=230	**60.11**	**216**	T	T	01 04 15.1	
H04S3	**CROZET ISLANDS** baz=58,slow=76,SNR=405	**60.12**	**216**	T	T	01 04 12.4	
H04S2	**CROZET ISLANDS** baz=58,slow=76,SNR=237	**60.13**	**216**	T	T	01 04 15.0	
BVAR	**Borovoye Array**	**61.44**	**340**	P	**P**	**23 59 00.4**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=139,slow=8.3,SNR=7.7 comp=Z,1.3nm,0.4s						
AB31	**Akbulak array**	**62.84**	**332**	P	**P**	**23 59 09.6**	**-0.1**
AB31				IAmb	IAmb	23 59 11.2	
	comp=Z,4.2nm,0.9s						
ABKAR	**Akbulak array**	**62.84**	**332**	P	**P**	**23 59 09.6**	**-0.1**
KBZ	**Khabaz**	**69.37**	**319**	P	**P**	**23 59 53.8**	**+2.0**
	comp=Z,2.2nm,0.9s,baz=132,slow=5.3,SNR=6.4 comp=Z,2.2nm,0.9s						
BRTR	**Keskin Array B**	**74.29**	**313**	P	**P**	**00 00 22.6**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=136,slow=8.1,SNR=5.2 comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**74.29**	**313**	P	**P**	**00 00 22.2**	**+0.5**
BOSA	**Boshof**	**75.14**	**241**	P	**P**	**00 00 26.0**	**-0.9**
GVZ	**Greta Valley S**	**75.28**	**133**	P	**P**	**00 00 24.6**	**-2.6**
BURAR	**Bucovina Array**	**82.31**	**319**	P	**P**	**00 01 06.2**	**+0.4**
FINES	**FINESS Array B**	**85.31**	**332**	P	**P**	**00 01 22.1**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=119,slow=7.0,SNR=11 comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**85.31**	**332**	P	**P**	**00 01 20.8**	**+0.1**
AFI	**Afiamalu**	**87.38**	**104**	LR	LR	00 43 08.5	
	comp=Z,24nm,18.5s,baz=24,slow=37						
ARCES	**ARCESS Array B**	**87.73**	**340**	P	**P**	**00 01 34.1**	**+1.7**
	comp=Z,1.5nm,0.9s,baz=67,slow=4.1,SNR=4.7 comp=Z,1.5nm,0.9s						
ARCES	**ARCESS Array B**	**87.73**	**340**	P	**P**	**00 01 33.6**	**+1.1**
GERES	**GERESS Array B**	**90.10**	**319**	P	**P**	**00 01 46.3**	**+2.2**
	comp=Z,3.3nm,0.8s,baz=144,slow=3.7,SNR=3.4 comp=Z,0.3nm,0.8s						
ALPN	**Alpine**	**144.93**	**37**	PKPbc	**PKPdf**	**00 08 21.8**	**-0.1**
R50A	**Paris**	**144.95**	**6**	PKPbc	**PKPab**	**00 08 19.7**	**-1.0**
R55A	**Marlinton**	**145.18**	**0**	PKPbc	**PKPdf**	**00 08 22.6**	**+0.5**
SGCY	**Sterling City**	**145.23**	**33**		**PKPdf**	**00 08 23.3**	**+1.0**
TX31	**Lajitas Ar. Si**	**145.65**	**39**		**PKPab**	**00 08 24.0**	**+0.3**
TXAR	**Lajitas Array**	**145.65**	**39**	PKPbc	**PKiKP**	**00 08 25.1**	**-2.1**
	comp=Z,3.8nm,0.7s,baz=297,slow=0.9,SNR=59						
TXAR	**Lajitas Array**	**145.65**	**39**		**PKPab**	**00 08 24.6**	**+0.9**
S57A	**Dark Hollow, R**	**145.70**	**359**		**PKPab**	**00 08 23.6**	**+0.2**
LCAR	**Lake Charles**	**145.77**	**16**		**PKPab**	**00 08 23.8**	**0.0**
T47A	**Sharon Grove**	**145.82**	**10**	PKPdf	**PKPbc**	**00 08 22.8**	**-0.8**
PLPT	**Palo Pinto**	**145.94**	**28**	PKPdf	**PKPab**	**00 08 23.8**	**-0.8**
WVT	**Waverly**	**146.52**	**12**	PKPdf	**PKPab**	**00 08 25.6**	**-1.0**
CLTN	**Cedars of Leba**	**146.83**	**10**	PKPbc	**PKPab**	**00 08 27.1**	**-0.7**
BRDY	**Brady**	**146.84**	**31**		**PKPab**	**00 08 27.2**	**-0.9**
V53A	**Saluda**	**147.68**	**4**	PKPdf	**PKPdf**	**00 08 24.7**	**-1.6**
CPCT	**Cooper Cave**	**147.72**	**7**	PKPbc	**PKiKP**	**00 08 30.3**	**-0.8**

IDC 19 23:56:21.1±6.7,18.˚55S×179.˚76W,h0km,mb4.3/4, mbtmp4.3/5,ML4.8/1,MS3.1/2,Error ellipse: s-maj=139.4km s-min=35.9km az=43.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.95**	**60**	LR	LR	00 00 57.4	
	comp=Z,39nm,19.2s,baz=150,slow=31						
URZ	**Urewera**	**19.82**	**187**	P	P	00 00 53.0	-0.3
	2.7nm,0.3s,baz=45,slow=7.1,SNR=14 6.4nm,0.4s						
URZ	**Urewera**	**19.82**	**187**	P	P	00 00 53.0	-0.3
QRZ	**Quartz Range**	**23.16**	**195**	P	P	00 01 26.6	-2.6
STKA	**Stephens Creek** 1.1nm,0.4s,baz=86,slow=6.9,SNR=3.8 1.1nm,0.4s	**37.20**	**242**	P	P	00 03 34.5	+0.3
WRA	**Warramunga Arr** 3.8nm,0.4s,baz=97,slow=7.3,SNR=66 3.8nm,0.4s	**43.26**	**260**	P	P	00 04 24.4	-0.2
ASAR	**Alice Springs** 6.4nm,0.7s,baz=87,slow=8.2,SNR=85 6.4nm,0.7s	**43.38**	**255**	P	P	00 04 25.2	-0.4
VNDA	**Vanda** 1.1nm,0.8s,baz=67,slow=8.0,SNR=5.1 1.1nm,0.8s	**59.70**	**185**	P	P	00 06 27.1	+0.2
ELK	**Elko** comp=Z,26nm,18.9s,baz=320,slow=32	**84.00**	**44**	LR	LR	00 40 28.7	

IDC 19 23:56:55.2±1.6,34.˚01N×25.˚89E,h0km,mb3.5/4, mbtmp3.4/5,ML2.8/1,MS3.6/5,Error ellipse: s-maj=48.1km s-min=24.5km az=158.0,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GERES	**GERESS Array B** baz=138,slow=12,SNR=5.8 0.3nm,0.6s	**17.38**	**332**	P	Pn	00 00 59.5	+0.3
ESDC	**Sonseca Array** 0.5nm,0.8s,baz=89,slow=8.1,SNR=4.2 0.5nm,0.8s	**24.48**	**292**	P	P	00 02 15.9	-0.2
EKA	**Eskdalemuir Ar** comp=Z,109nm,19.7s,baz=360,slow=38	**29.32**	**325**	LR	LR	00 15 33.5	
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=35,slow=9.4,SNR=2.4	**30.24**	**232**	P	P	00 03 07.9	+0.1
TORD	comp=Z,327nm,21.2s,baz=102,slow=40 0.3nm,0.6s			LR	LR	00 17 21.9	
ARCES	**ARCESS Array B** comp=Z,53nm,18.1s,baz=186,slow=37	**35.58**	**360**	LR	LR	00 18 43.6	
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=280,slow=8.7,SNR=6.8	**41.38**	**50**	P	P	00 04 43.0	0.0
KURBB	comp=Z,74nm,21.4s,baz=174,slow=38 0.5nm,0.5s			LR	LR	00 23 01.0	
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=280,slow=9.7,SNR=8.2 0.6nm,0.6s	**43.91**	**56**	P	P	00 05 03.5	-0.2
TIXI	**Tiksi** comp=Z,49nm,18.8s,baz=239,slow=40	**62.03**	**20**	LR	LR	00 37 44.1	

NEIC ***19*** *23:57:35.7±2.3,18.˚71S±0.˚08×177.˚7W±0.˚1,h598km±7km, mb4.7/42,Error ellipse: s-maj=17.5km s-min=9.3km az=116.0*

IDC ***19*** *23:57:36.2±0.8,18.˚76S×177.˚81W,h609km±9km,mb3.8/11, mbtmp4.7/15,Error ellipse: s-maj=15.6km s-min=9.3km az=147.0*

GFZ ***19*** *23:57:36.6±0.2,19˚S±3˚×17˚8W±˚,h613km,M4.7/24, mb4.7/24*

NOU ***19*** *23:57:37.4,18.˚63S×177.˚80W,h619km,mb4.9/42,Fiji Islands Region*

NEIC ***19*** *23:57:37.4±2.4,18.˚7S±0.˚1×177.˚8W±0.˚1,h622km±8km, mb4.3/260,Error ellipse: s-maj=18.0km s-min=14.8km az=143.0*

ISC 19 23:57:35.5±0.3,18.˚71S±0.˚06×177.˚74W±0.˚05,h600km, n473,σ1§08/477,mb4.3/153,2C-1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 72nm,0.7s,baz=127,slow=8.6,SNR=35	**4.12**	**283**	P	**P**	**23 59 04.1**	**+2.1**
MSVF	12nm,0.8s,baz=153,slow=22,SNR=4.9			S	**S**	**00 00 14.6**	**+2.3**
MSVF	**Nonsavu**	**4.12**	**283**	P	**P**	**23 59 05.1**	**+3.1**
MSVF	**Nonsavu**	**4.12**	**283**	P	**P**	**23 59 05.0**	**+3.1**
MSVF	**Nonsavu**	**4.12**	**283**	P	**P**	**23 59 05.4**	**+3.4**
MSVF	**Nonsavu**	**4.12**	**283**	P	**P**	**23 59 04.4**	**+2.5**
FUTU	**Fugatoga**	**4.40**	**355**	P	**P**	**23 59 06.6**	**+2.7**
FUTU	**Fugatoga**	**4.40**	**355**	P	**P**	**23 59 04.8**	**+0.9**
FUTU	**Fugatoga**	**4.40**	**355**	P	**P**	**23 59 06.4**	**+2.5**
FUTU	**Fugatoga**	**4.40**	**355**	P	**P**	**23 59 06.8**	**+2.9**
NIUE	**Niue**	**7.41**	**94**	P	**P**	**23 59 32.1**	**+2.8**
NIUE	**Niue**	**7.41**	**94**	P	**P**	**23 59 29.5**	**+0.3**
NIUE	**Niue**	**7.41**	**94**	P	**P**	**23 59 32.0**	**+2.7**
NIUE	**Niue**	**7.41**	**94**	P	**P**	**23 59 31.1**	**+1.8**
AFI	**Afiamalu** 40nm,0.5s,baz=314,slow=3.2,SNR=10	**7.46**	**51**	P	**P**	**23 59 30.7**	**+0.8**
AFI	42nm,0.7s,baz=168,slow=23,SNR=4.5			S	**S**	**00 01 01.2**	**-2.3**
AFI	**Afiamalu**	**7.46**	**51**	P	**P**	**23 59 29.1**	**-0.8**
AFI	**Afiamalu**	**7.46**	**51**	P	**P**	**23 59 31.8**	**+1.9**
GLKZ	**Green Lake**	**10.50**	**181**	P	**P**	**23 59 58.8**	**-0.4**
FUNA	**Funafuti**	**10.55**	**343**	P	**P**	**23 59 59.8**	**-0.1**
FUNA	**Funafuti**	**10.55**	**343**	P	**P**	**00 00 00.6**	**+0.7**
FUNA	**Funafuti**	**10.55**	**343**	P	**P**	**23 59 58.9**	**-1.0**
RTV	**Rentapao**	**

TSZ	Takapari Road	21.96	193	P		P	00 01 45.7	-0.9	
BFZ	Birch Farm	22.50	192	P		P	00 01 51.0	-0.4	
BFZ	Birch Farm	22.50	192	P		P	00 01 51.4	0.0	
DUWZ	D'Urville Isla	23.15	196	P		P	00 01 56.5	-0.8	
TRWZ	Traveller	23.30	193	P		P	00 01 59.0	+0.5	
MSWZ	Moikau Station	23.41	193	P		P	00 01 59.4	-0.1	
SNZO	South Karori	23.43	194	P		P	00 01 58.5	-1.1	
PLWZ	Palliser	23.55	193	P		P	00 02 00.3	-0.5	
QRZ	Quartz Range	23.57	199	P		P	00 02 01.0	+0.1	
TKNZ	Takaka Hill	23.63	198	P		P	00 02 01.0	-0.5	
MRNZ	Matariki Terra	24.03	198	P		P	00 02 04.6	-0.3	
THZ	Tophouse	24.32	197	P		P	00 02 08.5	+0.8	
THZ	Tophouse	24.32	197	P		P	00 02 08.1	+0.5	
KHZ	Kahutara	24.76	196	P		P	00 02 10.6	-0.8	
KHZ				IAmb	IAmb		00 02 13.5		
	comp=Z,35nm,1.1s								
KHZ	Kahutara	24.76	196	P		P	00 02 10.6	-0.8	
KHZ	Kahutara	24.76	196	P		P	00 02 09.8	-1.6	
RPZ	Rata Peaks	26.65	198	P		P	00 02 29.6	+1.6	
PPTF	Pamatai, Papee	26.79	92	P		P	00 02 31.1	+1.4	
FOZ	Fox Glacier	26.88	200	P		P	00 02 29.6	-0.3	
MLZ	Mavora Lakes	29.06	201	P		P	00 02 49.1	+0.1	
MLZ				IAmb	IAmb		00 02 51.0		
	comp=Z,23nm,0.7s								
TW1H	Toowoomba 1 Ha	29.15	247	P		P	00 02 50.8	+0.8	
DCZ	Deep Cove	29.48	202	P		P	00 02 53.4	+0.9	
DCZ				IAmb	IAmb		00 03 00.8		
	comp=Z,34nm,1.1s								
WHZ	Wether Hill Ro	29.58	200	P		P	00 02 53.6	+0.2	
EIDS	Eidsvold	29.60	251	P		P	00 02 54.3	+0.4	
EIDS	Eidsvold	29.60	251			P	00 02 54.1	+0.1	
EIDS				IAmb	IAmb		00 02 55.1		
	comp=Z,8.8nm,0.8s								
EIDS	Eidsvold	29.60	251	P		P	00 02 53.6	-0.3	
ARMA	Armidale	30.10	241	P		P	00 02 59.1	+0.8	
ARMA	Armidale	30.10	241	P		P	00 02 58.9	+0.6	
AUPHS	Peel High Scho	30.90	240	P		P	00 03 06.2	+1.2	
AUDCS	Dubbo College	33.06	239	P		P	00 03 24.2	+1.0	
AUMHS	Melrose High S	33.68	234	P		P	00 03 29.5	+1.1	
AUMTS	Mt Stromlo	33.73	234	P		P	00 03 29.7	+0.8	
CAN	Canberra	33.73	234	P		P	00 03 29.7	+0.8	
CAN	Canberra	33.73	234	P		P	00 03 29.7	+0.8	
CAN	Canberra	33.73	234	P		P	00 03 29.4	+0.5	
CTA	Charters Tower	33.95	262	P		P	00 03 31.4	+0.5	
CTAO	Charters Tower	33.95	262	P		P	00 03 31.1	+0.3	
CTAO	Charters Tower	33.95	262	P		P	00 03 31.2	+0.3	
CTAO	Charters Tower	33.95	262	P		P	00 03 31.6	+0.7	
AUSMG	Snowy Mountain	34.42	232	P		P	00 03 35.8	+1.1	
PMG	Port Moresby	35.22	280	P		P	00 03 41.8	+0.3	
PMG	Port Moresby	35.22	280			P	00 03 42.5	+1.1	
PMG	Port Moresby	35.22	280	P		P	00 03 40.7	-0.8	
CMSA	Cobar Meteorol	35.32	242	P		P	00 03 42.9	+0.9	
CMSA	Cobar Meteorol	35.32	242	P		P	00 03 43.1	+1.1	
QLP	Quilpie	35.85	250	P		P	00 03 47.0	+0.5	
QLP	Quilpie	35.85	250	P		P	00 03 47.3	+0.7	
MTSU	Mount Surprise	35.96	265	P		P	00 03 48.2	+0.6	
MTSU	Mount Surprise	35.96	265	P		P	00 03 48.1	+0.6	
JOHN	Johnston Islan	36.14	13	P		P	00 03 47.8	-1.1	
TOO	Toolangi	37.17	232	P		P	00 03 57.5	+0.4	
COEN	Coen	37.75	271	P		P	00 04 02.7	+0.5	
COEN	Coen	37.75	271	P		P	00 04 02.6	+0.5	
COEN	Coen	37.75	271	P		P	00 04 02.4	+0.2	
BRAT	Ballarat	38.33	233	P		P	00 04 08.2	+1.7	
STKA	Stephens Creek	38.81	242	P		P	00 04 11.0	+0.5	
	comp=Z,22nm,0.7s,baz=92,slow=9.4,SNR=28								
	comp=Z,22nm,0.7s								
STKA	Stephens Creek	38.81	242	P		P	00 04 11.5	+1.0	
STKA	Stephens Creek	38.81	242	P		P	00 04 11.8	+1.3	
INKA	Innaminka	39.04	249			P	00 04 13.6	+1.2	
INKA				IAmb	IAmb		00 04 14.8		
	comp=Z,19nm,0.8s								
QIS	Mount Isa	40.13	260	P		P	00 04 21.5	+0.2	
QIS	Mount Isa	40.13	260	P		P	00 04 21.3	0.0	
HTT	Hallett	41.29	240	P		P	00 04 31.0	+0.7	
BBOO	Buckleboo	43.58	242	P		P	00 04 47.1	-1.0	
GENI	Genyem	44.20	286	P		P	00 04 54.2	+1.1	
GENI	Genyem	44.20	286	P		P	00 04 52.9	-0.2	
WR0	Warramunga Arr	44.93	260	P		P	00 04 58.0	-0.6	
WR8	Warramunga Arr	44.97	260	P		P	00 04 58.0	-1.0	
WB0	Warramunga Arr	45.09	260	P		P	00 04 58.6	-1.3	
WB2	Warramunga Arr	45.10	260	P		P	00 04 58.7	-1.3	
WRAB	Tennant Creek	45.11	260	P		P	00 05 00.1	+0.1	
WRAB	Tennant Creek	45.11	260	P		P	00 04 59.8	-0.3	
WRAB	Tennant Creek	45.11	260	P		P	00 04 59.7	-0.3	
WB1	Warramunga Ar.	45.11	260	P		P	00 05 00.1	+0.1	
WRA	Warramunga Arr	45.12	260	P		P	00 04 59.5	-0.6	
	comp=Z,34nm,0.6s,baz=97,slow=7.8,SNR=114								
WRA				PcP		PcP	00 06 27.0	-0.5	
	comp=Z,4.2nm,1.0s,baz=96,slow=2.9,SNR=3.3								
WRA				S		S	00 10 53.5	-3.5	
	comp=Z,1.1nm,1.0s,baz=98,slow=13,SNR=5.2								
	comp=Z,34nm,0.6s								
WRA	Warramunga Arr	45.12	260	P		P	00 04 58.9	-1.2	
AS01	Alice Springs	45.15	255	P		P	00 05 00.4	+0.1	
AS31	Alice Springs	45.19	255			P	00 04 59.9	-0.7	
AS31				IAmb	IAmb		00 05 01.5		
	comp=Z,12nm,0.8s								
AS31	Alice Springs	45.19	255			P	00 04 59.8	-0.8	
AS31				IAmb	IAmb		00 05 01.5		
	comp=Z,12nm,0.8s								
ASAR	Alice Springs	45.19	255	P		P	00 05 00.7	0.0	
	comp=Z,49nm,0.7s,baz=88,slow=8.1,SNR=150								
ASAR				PcP		PcP	00 06 27.4	-0.4	
	comp=Z,3.4nm,0.5s,baz=98,slow=3.7,SNR=5.8								
ASAR				S		S	00 10 55.9	-2.2	
	comp=Z,7.1nm,0.7s,baz=91,slow=16,SNR=30								
	comp=Z,49nm,0.7s								
ASAR	Alice Springs	45.19	255			P	00 04 59.9	-0.7	
ASAR	Alice Springs	45.19	255			P	00 04 59.7	-0.9	
AUALC	St Philip's Co	45.21	255	P		P	00 05 01.9	+1.1	
MTN	Manton Dam	49.41	269			P	00 05 31.8	-0.4	
MTN				IAmb	IAmb		00 05 32.4		
	comp=Z,9.9nm,0.7s								
FORT	Forrest	50.24	245	P		P	00 05 37.3	-0.7	
FORT				IAmb	IAmb		00 05 38.3		
	comp=Z,14nm,0.7s								
KNRA	Kununurra	51.04	265			P	00 05 43.8	-0.2	
FAKI	Fak Fak	51.36	282	P		P	00 05 45.8	-0.6	
FITZ	Fitzroy Crossi	53.53	261	P		P	00 06 01.7	0.0	
SOEI	Soe	56.71	270	P		P	00 06 24.7	+0.7	
SOEI	Soe	56.71	270	P		P	00 06 24.1	+0.1	
SOEI	Soe	56.71	270	P		P	00 06 24.1	+0.1	
MBWA	Marble Bar	58.50	256	P		P	00 06 35.3	-0.6	
MBWA				IAmb	IAmb		00 06 41.1		
	comp=Z,25nm,1.1s								
KLBR	Kellerberrin	59.04	244	P		P	00 06 40.2	+0.8	
KLBR	Kellerberrin	59.04	244	P		P	00 06 38.9	-0.5	
NWAO	Narrogin (SRO)	59.40	242	P		P	00 06 41.1	-0.6	
NWAO				IAmb	IAmb		00 06 50.0		
	comp=Z,26nm,1.4s								
MORW	Morawa	60.74	247	P		P	00 06 49.9	-0.8	
MORW				IAmb	IAmb		00 06 53.0		
	comp=Z,44nm,1.5s								
GIRL	Giralia	63.27	254	P		P	00 07 07.3	+0.2	
KKM	Kota Kinabalu	69.55	284	P		P	00 07 45.8	-0.2	
KKM				IAmb	IAmb		00 07 46.9		
	comp=Z,16nm,0.6s								
AMKA	Amchitka	69.83	358	P		P	00 07 46.0	-0.8	
KIWB	Kanaga Island	70.26	0	P		P	00 07 48.9	-0.3	
ADK	Adak	70.30	1	P		P	00 07 49.0	-0.4	
ADK	Adak	70.30	1	P		P	00 07 49.0	-0.4	
ADK				IAmb	IAmb		00 07 49.5		
	comp=Z,11nm,0.6s								
ADK	Adak	70.30	1	P		P	00 07 48.2	-1.3	
ADK				IAmb	IAmb		00 07 49.6		
	comp=Z,12nm,0.7s								
ADK	Adak	70.30	1	P		P	00 07 48.9	-0.6	
GSTR	Great Sitkin T	70.52	1	P		P	00 07 50.1	-0.7	
GSTR				IAmb	IAmb		00 07 51.6		
	comp=Z,10nm,0.8s								
ATKA	Atka Island	70.68	2	P		P	00 07 52.0	+0.3	
ATKA	Atka Island	70.68	2	P		P	00 07 50.9	-0.8	
ATKA				IAmb	IAmb		00 07 51.7		
	comp=Z,14nm,0.9s								
QSPA	South Pole Qui	71.35	180	P		P	00 07 56.1	+0.4	
	comp=Z,2.6nm,0.9s,baz=254,slow=1.9,SNR=11								
	comp=Z,2.6nm,0.9s								
QSPA	South Pole Qui	71.35	180	P		P	00 07 55.6	-0.1	
SHEM	Shemya Is, Ala	71.49	355	P		P	00 07 55.2	-1.2	
SMY	Shemya	71.49	355	P		P	00 07 55.3	-1.1	
YOJ	Yonaguni jima	71.92	305	P		P	00 07 57.8	-1.8	
YULB	Yu-li	72.74	303	P		P	00 08 02.7	-1.6	
YULB				IAmb	IAmb		00 08 26.1		
	comp=Z,18nm,1.3s								
NACB	Ninganchiao	72.89	304	P		P	00 08 04.0	-1.1	
NACB				IAmb	IAmb		00 08 06.3		
	comp=Z,17nm,1.0s								
UNV	Unalaska Valle	72.90	7	P		P	00 08 03.6	-0.9	
BBJI	Bungbulang	73.11	268	P		P	00 08 05.7	-1.0	
SSLB	Suanglung	73.20	303	P		P	00 08 05.4	-1.6	
SSLB				IAmb	IAmb		00 08 48.6		
	comp=Z,12nm,1.0s								
LVA	Lava Point	73.27	7	P		P	00 08 03.6	-3.0	
AKUT	Akutan	73.28	7	P		P	00 08 05.5	-1.1	
PEA0B	Petropavlovsk-	74.62	345	P		P	00 08 14.4	+0.1	
PEA0B				IAmb	IAmb		00 08 54.6		
	comp=Z,17nm,1.4s								
PETK	Petropavlovsk-	74.62	345	P		P	00 08 14.1	-0.2	
	comp=Z,2.4nm,0.6s,baz=135,slow=6.2,SNR=6.4								
	comp=Z,2.4nm,0.6s								
SDPT	Sand Point	75.22	10	P		P	00 08 16.4	-1.0	
SPIA	Saint Paul Isl	75.86	4	P		P	00 08 21.2	+0.2	
FARB	Farallon Islan	76.12	42	P		P	00 08 23.1	+0.2	
HULI	Fort Hunter Li	76.27	44	P		P	00 08 25.3	+1.5	
HULI				IAmb	IAmb		00 09 03.0		
	comp=Z,25nm,1.4s								
CHGN	Chignik	76.48	11	P		P	00 08 24.3	-0.1	
CHGN				IAmb	IAmb		00 08 27.3		
	comp=Z,11nm,0.8s								
SAO	San Andreas Ge	76.57	43	P		P	00 08 26.3	+0.8	
SAO				IAmb	IAmb		00 08 27.6		
	comp=Z,7.5nm,0.8s								
CHIR	Chirikof Islan	76.57	13	P		P	00 08 24.5	-0.4	
PMPB	Monarch Peak	76.67	44	P		P	00 08 26.8	+0.7	
PMPB				IAmb	IAmb		00 08 28.1		
	comp=Z,5.4nm,0.7s								
KMPM	Mount Pierce	77.10	39	P		P	00 08 30.4	+2.1	
KMRM	Mail Ridge	77.22	39	P		P	00 08 29.6	+0.6	
KMRM				IAmb	IAmb		00 08 31.7		
	comp=Z,17nm,0.9s								
MWC	Mount Wilson	77.41	47	P		P	00 08 30.5	+0.2	
MWC				IAmb	IAmb		00 08 32.0		
	comp=Z,7.2nm,0.6s								
SII	Sitkinak Islan	77.56	13	P		P	00 08 30.1	-0.2	
VES	Vestal, Richgr	77.60	45	P		P	00 08 31.6	+0.6	
VES				IAmb	IAmb		00 08 32.4		
	comp=Z,6.7nm,0.6s								
BFSC	Mount Baldy Ra	77.70	47	P		P	00 08 32.9	+1.1	
O02D	Mt. Diablo Mer	77.75	40	P		P	00 08 33.2	+1.4	
O02D				IAmb	IAmb		00 08 34.6		
	comp=Z,7.5nm,1.0s								
KHBM	Hayfork Bally	77.79	39	P		P	00 08 33.2	+0.9	
KHBM				IAmb	IAmb		00 09 14.5		
	comp=Z,8.4nm,1.2s								
CMB	Columbia Colle	77.99	43			P	00 08 34.1	+0.9	
YUH	Yuha Desert	78.09	49	P		P	00 08 34.6	+0.8	
YUH				IAmb	IAmb		00 09 08.0		
	comp=Z,16nm,1.4s								
OHAK	Old Harbor	78.36	13	P		P	00 08 34.4	-0.2	
SLBS	Sierra La Lagu	78.41	60	P		P	00 08 36.9	+1.2	
SLBS				IAmb	IAmb		00 08 38.4		
	comp=Z,9.5nm,1.1s								
M02C	Callahan	78.46	39	P		P	00 08 37.1	+1.5	
CWC	Cottonwood Cre	78.61	45	P		P	00 08 37.8	+1.1	
MDPB	Devils Postpil	78.61	44	P		P	00 08 38.0	+1.3	
MDPB				IAmb	IAmb		00 08 38.8		
	comp=Z,6.7nm,0.9s								
BELC	Belle Mtn. Jos	78.74	48	P		P	00 08 39.0	+1.6	
BELC				IAmb	IAmb		00 08 39.5		
	comp=Z,4.8nm,0.7s								
YBH	Yreka Blue Hor	78.75	39	P		P	00 08 38.8	+1.7	
M03C	McCloud	78.82	39	P		P	00 08 39.0	+1.4	
M03C				IAmb	IAmb		00 08 39.7		
	comp=Z,13nm,1.0s								
O14K	Tigyukauivet M	78.85	9	P		P	00 08 35.9	-1.3	
O14K				IAmb	IAmb		00 09 14.1		
	comp=Z,9.5nm,1.1s								
ACHA	Angle Creek He	78.86	12	P		P	00 08 37.2	-0.1	
WAKR	Walker	78.87	43	P		P	00 08 39.0	+1.0	
WAKR				IAmb	IAmb		00 08 40.4		
	comp=Z,7.5nm,0.9s								
MPK	Martis Peak	78.95	42	P		P	00 08 38.0	-0.5	
HATC	Hat Creek Radi	78.95	40	P		P	00 08 39.3	+1.1	
HATC				IAmb	IAmb		00 08 40.5		
	comp=Z,11nm,1.0s								
O15K	Ungalikthiuk R	78.99	9	P		P	00 08 37.4	-0.5	
O15K				IAmb	IAmb		00 09 17.6		
	comp=Z,8.3nm,1.2s								
KDAK	Kodiak Island	79.03	13	P		P	00 08 37.8	-0.3	
BEKR	Beckworth	79.07	41			P	00 08 39.6	+0.6	
BEKR				IAmb	IAmb		00 08 41.0		
	comp=Z,7.9nm,1.2s								
PNTR	Pine Nut	79.10	42	P		P	00 08 39.8	+0.5	
PNTR				IAmb	IAmb		00 08 41.4		
	comp=Z,16nm,0.8s								
P16K	Nushagak River	79.14	10	P		P	00 08 38.4	-0.3	
DSP	Deep Springs	79.20	44	P		P	00 08 39.1	-0.4	
L04D	Klamath Falls	79.28	39	P		P	00 08 40.6	+0.6	
L04D				IAmb	IAmb		00 08 41.6		
	comp=Z,11nm,0.8s								
LHV	Little Huntoon	79.33	44	P		P	00 08 41.0	+0.9	
LHV				IAmb	IAmb		00 08 42.7		
	comp=Z,8.6nm,1.1s								
PIX	Pinacate	79.34	51	P		P	00 08 39.0	-1.4	
GWY	Greenwater Val	79.43	46	P		P	00 08 43.4	+2.5	
N14K	Kuskokwak Cree	79.44	8			P	00 08 40.3	+0.2	
BBOR	Butler Butte	79.47	38	P		P	00 08 41.8	+0.8	
I02E	Swisshome, OR	79.56	36	P		P	00 08 41.7	+0.5	
NVAR	Mina Array Bea	79.56	43	P		P	00 08 42.8	+1.1	
	comp=Z,2.8nm,0.7s,baz=228,slow=8.2,SNR=11								
	comp=Z,2.8nm,0.7s								
NVAR	Mina Array Bea	79.56	43	P		P	00 08 43.0	+1.3	
P17K	Kvichak River	79.57	11	P		P	00 08 40.5	-0.4	
I03D	Drain, OR	79.59	37	P		P	00 08 42.5	+1.1	
I03D				IAmb	IAmb		00 09 02.6		
	comp=Z,28nm,1.5s								
PAHR	Pah Rah Range	79.59	42	P		P	00 08 42.9	+1.2	
O16K	Kokwok River B	79.66	10	P		P	00 08 40.3	-1.1	
O16K				IAmb	IAmb		00 08 41.5		
	comp=Z,7.3nm,1.1s								
NV11	Mina Array Sit	79.66	44	P		P	00 08 43.4	+1.3	
WCT	Wildcat Mounta	79.78	46	P		P	00 08 43.8	+1.0	
N15K	Kwethluk River	79.90	9	P		P	00 08 42.9	+0.2	
N15K				IAmb	IAmb		00 08 44.1		
	comp=Z,4.5nm,0.6s								
J04A	Umpqua Nationa	80.02	38	P		P	00 08 45.4	+1.5	
KVN	Kaiserville	80.04	43	P		P	00 08 45.1	+0.9	
BUCK	Buck Mountain	80.10	37	P		P	00 08 45.3	+1.1	
TPNV	Topopah Spring	80.12	46	P		P	00 08 46.1	+1.5	
O18K	Koktuh Hills	80.41	11			P	00 08 45.0	-0.3	
O18K				IAmb	IAmb		00 08 46.0		
	comp=Z,17nm,1.0s								
K05A	Summer Lake	80.42	39	P		P	00 08 47.3	+1.3	
K05A				IAmb	IAmb		00 08 49.0		
	comp=Z,23nm,1.3s								
J05D	Fort Rock, OR	80.56	38	P		P	00 08 47.6	+1.0	
J05D				IAmb	IAmb		00 08 48.9		
	comp=Z,14nm,0.8s								
J05D	Fort Rock, OR	80.56	38	P		P	00 08 48.1	+1.5	
J05D				IAmb	IAmb		00 08 48.9		
	comp=Z,14nm,0.8s								
G03D	McMinnville, O	80.58	36	P		P	00 08 45.6	-0.9	
G03D				IAmb	IAmb		00 09 10.8		
	comp=Z,53nm,1.3s								
WIFE	Three Sisters-	80.68	37	P		P	00 08 48.7	+1.3	
WIFE				IAmb	IAmb		00 08 49.4		
	comp=Z,5.3nm,0.8s								
L14K	Kuka Creek	80.69	7	P		P	00 08 45.7	-0.9	
N17K	Nushagak Hills	80.69	10	P		P	00 08 45.5	-1.2	
W13A	Hualapai Mount	80.80	48	P		P	00 08 49.0	+0.8	
S11A	Rachel	80.83	45	P		P	00 08 48.3	+0.1	
S11A				IAmb	IAmb		00 08 50.1		
	comp=Z,10nm,0.9s								
Y14A	Wickenburg	80.85	50	P		P	00 08 49.0	+0.8	
H04A	Detroit Lake	80.85	37	P		P	00 08 47.1	-1.0	
M16K	Timber Creek	80.88	9	P		P	00 08 48.9	+1.1	
M16K				IAmb	IAmb		00 08 49.9		
	comp=Z,33nm,1.3s								
CNPM	China Poot	80.91	13	P		P	00 08 47.4	-0.5	
PINE	Pine Mountain	81.03	38			P	00 08 49.7	+0.6	
PINE				IAmb	IAmb		00 08 51.5		
	comp=Z,12nm,0.9s								
N18K	Kilae Creek	81.06	11	P		P	00 08 47.4	-1.3	
I05D	Terrebonne, OR	81.13	37	P		P	00 08 50.8	+1.3	
I05D				IAmb	IAmb		00 08 51.5		
	comp=Z,7.0nm,0.9s								
PRN	Pahroc Range	81.18	46			P	00 08 51.6	+1.7	
PRN				IAmb	IAmb		00 08 52.4		
	comp=Z,7.5nm,0.9s								
BMN	Battle Mountai	81.37	42	P		P	00 08 52.0	+1.1	
BMN				IAmb	IAmb		00 08 52.9		
	comp=Z,9.2nm,1.1s								
N19K	Bonanza Creek	81.44	11	P		P	00 08 49.6	-1.0	
N19K				IAmb	IAmb		00 08 51.3		
	comp=Z,9.0nm,1.2s								
HG4B	Hotspring	81.45	27			P	00 08 50.4	-0.4	
L16K	Owhat River	81.47	9	P		P	00 08 50.8	+0.1	
L16K				IAmb	IAmb		00 08 52.4		
	comp=Z,9.8nm,1.1s								
M17K	Holitna River	81.48	10			P	00 08 51.7	+0.9	
WISH	Wishkah	81.50	34	P		P	00 08 52.8	+1.6	
DIB	Dawson Inlet,	81.57	26	P		P	00 08 51.5	+0.1	
DIB				IAmb	IAmb		00 08 52.4		
	comp=Z,14nm,1.2s								
WVOR	Wild Horse Val	81.61	40	P		P	00 08 53.1	+1.0	
WVOR				IAmb	IAmb		00 08 54.2		
	comp=Z,12nm,1.1s								
WVOR	Wild Horse Val	81.61	40	P		P	00 08 52.8	+0.7	
NLWA	Neilton Lookou	81.62	34	P		P	00 08 52.5	+0.7	
NLWA				IAmb	IAmb		00 09 30.8		
	comp=Z,14nm,1.2s								
HOLB	Holberg	81.65	29	P		P	00 08 51.8	-0.1	
TUC	Tucson	81.69	52			P	00 08 54.4	+1.8	
TUC				IAmb	IAmb		00 08 55.6		
	comp=Z,7.8nm,1.2s								
TUC	Tucson	81.69	52	P		P	00 08 53.8	+1.1	
K15K	Wolf Creek Mou	81.75	8			P	00 08 51.1	-1.0	
SLKM	Skilak Lake	82.02	13	P		P	00 08 53.1	-0.5	
I07A	Izee	82.04	38	P		P	00 08 55.3	+1.1	
I07A				IAmb	IAmb		00 08 56.3		
	comp=Z,7.0nm,0.8s								
LCMT	Little Creek M	82.21	47	P		P	00 08 56.0	+0.7	
LCMT				IAmb	IAmb		00 08 57.4		
	comp=Z,4.8nm,0.8s								
B04A	Port Angeles	82.23	33	P		P	00 08 55.5	+0.6	
B04A				IAmb	IAmb		00 09 29.1		
	comp=Z,15nm,1.3s								
J08A	Circle Bar Ran	82.23	39	P		P	00 08 56.2	+1.0	
J08A				IAmb	IAmb		00 08 57.2		
	comp=Z,14nm,1.2s								
GNW	Green Mountain	82.28	34	P		P	00 08 55.4	+0.3	
GNW				IAmb	IAmb		00 08 57.0		
	comp=Z,6.4nm,0.9s								
L18K	Granite Mounta	82.37	10	P		P	00 08 55.3	0.0	
L18K				IAmb	IAmb		00 08 56.9		
	comp=Z,9.2nm,1.0s								
CCUT	Cedar City	82.40	46	P		P	00 08 56.1	-0.2	
M19K	Big River Lodg	82.47	11	P		P	00 08 54.9	-0.9	
KNB	Kanab	82.51	47	P		P	00 08 57.6	+0.8	
PSUT	Pine Spring	82.57	45	P		P	00 08 57.9	+0.8	
STLK	Strandline Lak	82.58	12	P		P	00 08 54.7	-1.7	
STLK				IAmb	IAmb		00 08 56.0		
	comp=Z,4.9nm,0.8s								
U15A	North Rim	82.58	48	P		P	00 08 58.9	+1.6	
U15A				IAmb	IAmb		00 08 59.8		
	comp=Z,7.2nm,0.9s								
K17K	Iditarod	82.60	9	P		P	00 08 56.4	0.0	
PGC	Sidney	82.64	33	P		P	00 08 57.5	+0.6	
L19K	White Mountain	82.65	11	P		P	00 08 56.9	+0.2	
PWL	Port Wells	82.76	14	P		P	00 08 56.6	-0.7	
WUAZ	Wupatki	82.79	49	P		P	00 08 59.3	+1.1	
ELK	Elko	82.81	43			P	00 08 59.1	+0.8	
J16K	Anvik River	82.83	8	P		P	00 08 56.9	-0.6	
J16K				IAmb	IAmb		00 08 57.9		
	comp=Z,7.8nm,1.4s								
KAIM	Kayak Island	82.91	16	P		P	00 08 58.1	+0.1	
G08A	Pilot Rock	83.06	37	P		P	00 08 59.7	+0.4	
GLI	Glacier Island	83.07	15	P		P	00 08 57.8	-1.0	
FID	Port Fidalgo	83.10	15	P		P	00 08 57.2	-1.7	
J17K	VABM Dome	83.14	8	P		P	00 08 58.7	-0.4	
PMR	Palmer	83.23	13	P		P	00 08 58.0	-1.5	
PMR				IAmb	IAmb		00 08 59.8		
	comp=Z,5.5n

M27K				IAmb	IAmb	00 09 12.8	
	comp=Z,6.2nm,1.0s						
BSUT	**Blindstream Ca**	**85.64**	**45**	P	**P**	**00 09 12.8**	**+0.5**
PV19	**Morning Glory**	**85.80**	**47**	P	**P**	**00 09 14.2**	**+1.3**
PV19				IAmb	IAmb	00 09 14.4	
	comp=Z,5.2nm,0.9s						
F17K	**Baldwin Pennin**	**85.80**	**7**	P	**P**	**00 09 10.5**	**-1.4**
F17K				IAmb	IAmb	00 09 12.7	
	comp=Z,7.0nm,0.9s						
PV18	**Skein Mesa, Pa**	**85.82**	**47**	P	**P**	**00 09 13.2**	**+0.2**
BCYI	**Bear Canyon**	**85.83**	**40**	P	**P**	**00 09 14.1**	**+1.2**
PV23	**Carpenter Ridg**	**85.84**	**47**	P	**P**	**00 09 14.2**	**+1.0**
PV23				IAmb	IAmb	00 09 15.2	
	comp=Z,5.0nm,0.8s						
Q32M	**Nakina River**	**85.89**	**22**	P	**P**	**00 09 13.2**	**+0.4**
Q32M				IAmb	IAmb	00 09 20.6	
	comp=Z,4.9nm,1.2s						
TX31	**Lajitas Ar. Si**	**85.89**	**57**	P	**P**	**00 09 15.5**	**+2.1**
TX31				IAmb	IAmb	00 09 16.3	
	comp=Z,4.2nm,0.9s						
TXAR	**Lajitas Array**	**85.89**	**57**	P	**P**	**00 09 15.2**	**+1.8**
	comp=Z,2.7nm,0.8s,baz=218,slow=7.0,SNR=12						
	comp=Z,2.7nm,0.8s						
TXAR	**Lajitas Array**	**85.89**	**57**	P	**P**	**00 09 15.3**	**+1.9**
I21K	**Tanana**	**85.92**	**11**	P	**P**	**00 09 11.5**	**-1.0**
I21K				IAmb	IAmb	00 09 13.6	
	comp=Z,4.4nm,1.2s						
O30N	**Mendenhall**	**86.00**	**19**	P	**P**	**00 09 12.7**	**-0.4**
O30N				IAmb	IAmb	00 09 40.4	
	comp=Z,11nm,1.5s						
MLY	**Manley**	**86.00**	**11**			**00 09 11.6**	**-1.4**
WRH	**Wood River Hil**	**86.01**	**12**	P	**P**	**00 09 12.1**	**-0.9**
WRH				IAmb	IAmb	00 09 13.9	
	comp=Z,12nm,1.3s						
G19K	**Purcell Mounta**	**86.02**	**8**	P	**P**	**00 09 12.3**	**-0.7**
ANMO	**Albuquerque**	**86.10**	**51**	P	**P**	**00 09 15.3**	**+0.9**
HDA	**Harding Lake**	**86.19**	**13**	P	**P**	**00 09 13.2**	**-0.7**
HDA				IAmb	IAmb	00 09 14.1	
	comp=Z,5.3nm,0.6s						
CCB	**Clear Creek Bu**	**86.23**	**12**	P	**P**	**00 09 13.1**	**-0.9**
L27K	**Beaver Creek,**	**86.23**	**16**	P	**P**	**00 09 12.8**	**-1.3**
BCAR	**Beaver Creek A**	**86.25**	**16**	P	**P**	**00 09 14.1**	**-0.1**
ALPN	**Alpine**	**86.33**	**56**		**P**	**00 09 15.7**	**+0.2**
ALPN				IAmb	IAmb	00 09 17.9	
	comp=Z,3.7nm,0.7s						
IMAR	**Indian Mountai**	**86.36**	**10**	P	**P**	**00 09 14.5**	**-0.1**
I23K	**Minto, Yukon-K**	**86.37**	**12**	P	**P**	**00 09 13.1**	**-1.5**
MCMT	**McKenzie Canyo**	**86.44**	**40**	P	**P**	**00 09 17.0**	**+1.2**
SCRK	**Sand Creek**	**86.48**	**14**	P	**P**	**00 09 14.3**	**-1.1**
IL31		**86.53**	**13**	P	**P**	**00 09 15.0**	**-0.4**
IL31				IAmb	IAmb	00 09 15.9	
	comp=Z,2.7nm,0.5s						
ILAR	**Eielson Array**	**86.53**	**13**	P	**P**	**00 09 14.6**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=226,slow=4.9,SNR=37						
	comp=Z,1.8nm,0.6s						
ILAR	**Eielson Array**	**86.53**	**13**	P	**P**	**00 09 14.8**	**-0.6**
F19K	**Shaleruckik Mo**	**86.58**	**8**	P	**P**	**00 09 15.0**	**-0.7**
M29M	**Somme Creek**	**86.62**	**17**	P	**P**	**00 09 16.1**	**0.0**
R33M	**Jennings River**	**86.67**	**22**	P	**P**	**00 09 16.5**	**+0.1**
R33M				IAmb	IAmb	00 09 24.3	
	comp=Z,5.0nm,1.2s						
H22K	**Ishtalitna Cre**	**86.67**	**11**		**P**	**00 09 15.3**	**-0.8**
H22K				IAmb	IAmb	00 09 16.7	
	comp=Z,5.0nm,0.9s						
J25K	**Salcha River,**	**86.71**	**13**	P	**P**	**00 09 15.8**	**-0.6**
J25K				IAmb	IAmb	00 09 16.8	
	comp=Z,3.2nm,0.6s						
E18K	**Tukpahlearik C**	**86.81**	**7**	P	**P**	**00 09 15.8**	**-0.9**
E18K				IAmb	IAmb	00 09 52.1	
	comp=Z,5.4nm,1.1s						
MSO	**Missoula**	**86.82**	**38**	P	**P**	**00 09 17.0**	**-0.4**
DLMT	**Dillon**	**86.86**	**40**		**P**	**00 09 17.9**	**+0.3**
DLMT				IAmb	IAmb	00 09 19.6	
	comp=Z,4.5nm,0.8s						
G21K	**Allakaket**	**86.89**	**9**	P	**P**	**00 09 16.9**	**-0.2**
G21K				IAmb	IAmb	00 09 17.9	
	comp=Z,2.9nm,0.8s						
K27K	**Chicken**	**86.98**	**15**	P	**P**	**00 09 17.4**	**-0.2**
K27K				IAmb	IAmb	00 09 19.1	
	comp=Z,6.8nm,1.3s						
M30M	**Minto, Yukon**	**87.20**	**18**	P	**P**	**00 09 18.9**	**+0.2**
M30M				IAmb	IAmb	00 09 19.8	
	comp=Z,5.2nm,0.8s						
LOHW	**Long Hollow**	**87.23**	**42**	P	**P**	**00 09 19.2**	**-0.4**
E19K	**Redstone River**	**87.25**	**8**	P	**P**	**00 09 18.7**	**-0.1**
E19K				IAmb	IAmb	00 09 19.1	
	comp=Z,3.9nm,0.7s						
L29M	**L29M**	**87.25**	**17**	P	**P**	**00 09 19.5**	**+0.6**
L29M				IAmb	IAmb	00 09 20.6	
	comp=Z,12nm,1.2s						
H24K	**Noodor Dome**	**87.27**	**12**	P	**P**	**00 09 17.5**	**-1.4**
SAND	**Sanderson**	**87.37**	**57**	P	**P**	**00 09 19.0**	**-1.3**
SAND				IAmb	IAmb	00 09 22.2	
	comp=Z,2.8nm,0.7s						
PRP	**Porcupine Dome**	**87.46**	**13**	P	**P**	**00 09 19.7**	**-0.3**
PRP				IAmb	IAmb	00 09 23.0	
	comp=Z,4.7nm,1.2s						
YHL	**Hebgen Lake**	**87.47**	**41**	P	**P**	**00 09 22.3**	**+1.6**
YHL				IAmb	IAmb	00 09 23.4	
	comp=Z,8.2nm,0.9s						
PD31	**Pinedale Array**	**87.50**	**43**		**P**	**00 09 21.2**	**+0.4**
PDAR	**Pinedale Array**	**87.50**	**43**	P	**P**	**00 09 21.4**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=214,slow=2.9,SNR=22						
	comp=Z,1.9nm,0.7s						
PDAR	**Pinedale Array**	**87.50**	**43**	P	**P**	**00 09 21.0**	**+0.2**
F21K	**Alatna River**	**87.55**	**9**	P	**P**	**00 09 20.1**	**-0.1**
G23K	**Bananza Creek**	**87.65**	**11**	P	**P**	**00 09 20.0**	**-0.7**
K29M	**Barlow Dome**	**88.00**	**17**	P	**P**	**00 09 22.5**	**0.0**
K29M				IAmb	IAmb	00 09 24.0	
	comp=Z,5.4nm,1.1s						
COLD	**Coldfoot**	**88.08**	**10**	P	**P**	**00 09 22.8**	**+0.1**
COLD				IAmb	IAmb	00 09 23.9	
	comp=Z,3.5nm,0.8s						
G24K	**Hadweenzic Riv**	**88.11**	**12**	P	**P**	**00 09 22.1**	**-0.7**
D19K	**Kuna River**	**88.12**	**7**	P	**P**	**00 09 22.4**	**-0.5**
D19K				IAmb	IAmb	00 09 32.7	
	comp=Z,8.5nm,1.4s						
I27K	**Kandik River**	**88.40**	**14**	P	**P**	**00 09 24.4**	**+0.1**
I27K				IAmb	IAmb	00 09 35.0	
	comp=Z,4.7nm,1.4s						
FYU	**Fort Yukon**	**88.43**	**12**	P	**P**	**00 09 22.6**	**-1.6**
FYU				IAmb	IAmb	00 09 31.9	
	comp=Z,5.2nm,1.1s						
ELIB	**Princess Elisa**	**88.44**	**186**	*d*P	**P**	**00 09 23.1**	**-1.6**
	comp=Z,6.2nm,0.7s						
D20K	**Etivluk River**	**88.51**	**8**	P	**P**	**00 09 24.6**	**-0.1**
D20K				IAmb	IAmb	00 09 51.7	
	comp=Z,4.3nm,1.1s						
C19K	**Lookout Ridge**	**88.54**	**6**	P	**P**	**00 09 24.6**	**-0.3**
E22K	**Anaktuvuk Pass**	**88.65**	**9**	P	**P**	**00 09 24.9**	**-0.4**
E22K				IAmb	IAmb	00 09 26.2	
	comp=Z,5.7nm,1.1s						
I28M	**Miner Creek**	**88.67**	**15**	P	**P**	**00 09 25.2**	**-0.4**
I28M				IAmb	IAmb	00 09 26.2	
	comp=Z,2.5nm,0.8s						
F24K	**Squaw Lake**	**88.75**	**11**		**P**	**00 09 26.0**	**+0.2**
F24K				IAmb	IAmb	00 09 26.9	
	comp=Z,3.3nm,0.7s						
J30M	**Hart River**	**88.90**	**17**	P	**P**	**00 09 26.7**	**+0.1**
J30M				IAmb	IAmb	00 09 38.8	
	comp=Z,4.8nm,1.5s						
MMPY	**Sheldon Lake,**	**88.91**	**20**	P	**P**	**00 09 27.4**	**+0.8**
MMPY				IAmb	IAmb	00 09 28.2	
	comp=Z,3.6nm,1.1s						
H27K	**Steamboat Moun**	**88.94**	**14**	P	**P**	**00 09 27.6**	**+0.9**
G26K	**Porcupine Rive**	**89.06**	**13**		**P**	**00 09 27.7**	**+0.6**
G26K				IAmb	IAmb	00 09 28.6	
	comp=Z,7.6nm,1.3s						
E24K	**Your Creek**	**89.14**	**11**	P	**P**	**00 09 28.0**	**+0.4**
I30M	**Mount Dempster**	**89.39**	**16**	P	**P**	**00 09 28.9**	**-0.1**
I30M				IAmb	IAmb	00 09 29.8	
	comp=Z,4.2nm,1.0s						
HNDO	**Hondo**	**89.49**	**59**	P	**P**	**00 09 31.6**	**+1.5**
HNDO				IAmb	IAmb	00 09 32.5	
	comp=Z,4.7nm,0.8s						
TROLL	**Troll, Antarti**	**89.51**	**180**	⇑P	**P**	**00 09 29.1**	**-0.5**
	comp=Z,108nm,0.6s						
D23K	**Nanushuk River**	**89.58**	**9**	P	**P**	**00 09 29.9**	**+0.3**
D23K				IAmb	IAmb	00 09 31.4	
	comp=Z,5.5nm,1.0s						
H29M	**Whitestone**	**89.68**	**15**	P	**P**	**00 09 29.5**	**-0.6**
H29M				IAmb	IAmb	00 09 30.6	
	comp=Z,6.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.75**	**289**	P	**P**	**00 09 32.6**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=56,slow=11,SNR=4.3						
	comp=Z,1.8nm,0.3s						
PZH	**PanZhiHua**	**90.09**	**298**	P	**P**	**00 09 33.8**	**+0.7**
EPYK	**Eagle Plains**	**90.21**	**15**	P	**P**	**00 09 32.7**	**+0.1**
EPYK				IAmb	IAmb	00 09 33.0	
	comp=Z,3.1nm,0.7s						
G29M	**Pine Creek**	**90.32**	**15**	P	**P**	**00 09 33.4**	**+0.3**
G29M				IAmb	IAmb	00 09 34.9	
	comp=Z,7.6nm,1.4s						
VNA2	**Neumayer--Watz**	**90.34**	**177**	⇑P	**P**	**00 09 33.4**	**+0.2**
	comp=Z,3.4nm,0.6s,baz=188,slow=4.6						
C23K	**Itkillik River**	**90.38**	**9**	P	**P**	**00 09 32.3**	**-0.9**
C23K				IAmb	IAmb	00 09 36.8	
	comp=Z,4.3nm,1.1s						
H31M	**Peel River**	**90.39**	**16**	P	**P**	**00 09 33.2**	**-0.2**
H31M				IAmb	IAmb	00 09 39.9	
	comp=Z,5.7nm,1.4s						
YAK	**Yakutsk**	**90.56**	**338**	P	**P**	**00 09 35.3**	**+1.1**
E27K	**Coleen River**	**90.56**	**13**	P	**P**	**00 09 34.5**	**+0.3**
VNA1	**Neumayer--Stat**	**90.57**	**177**	P	**P**	**00 09 34.4**	**+0.1**
	comp=Z,3.3nm,0.8s						
D25K	**Kavik River**	**90.61**	**11**	P	**P**	**00 09 34.0**	**-0.4**
G30M	**tAoh Zraii Nji**	**90.81**	**15**	P	**P**	**00 09 34.8**	**-0.6**
G31M	**Satah River**	**91.26**	**16**		**P**	**00 09 36.8**	**-0.5**
E28M	**Babbage River**	**91.34**	**13**	P	**P**	**00 09 38.2**	**+0.4**
C27K	**Jago River**	**91.35**	**11**	P	**P**	**00 09 38.0**	**+0.2**
C27K				IAmb	IAmb	00 09 49.3	
	comp=Z,3.0nm,1.3s						
E29M	**Blow River**	**91.53**	**14**	P	**P**	**00 09 38.5**	**-0.1**
F31M	**Tsiigehtchic**	**91.78**	**16**	P	**P**	**00 09 39.7**	**0.0**
MKAR	**Makanchi Array**	**110.15**	**314**	PKiKP	**PKiKP**	**00 14 58.0**	**-2.0**
	comp=Z,0.2nm,0.7s,baz=220,slow=2.9,SNR=4.1						
KURBB	**Kurchatov Arra**	**112.90**	**318**	PKiKP	**PKiKP**	**00 15 03.2**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=98,slow=2.2,SNR=6.5						
BVAR	**Borovoye Array**	**117.87**	**321**	PKP	**PKPdf**	**00 15 13.5**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=314,slow=0.7,SNR=4.4						
ARCES	**ARCESS Array B**	**127.21**	**350**	PKP	**PKPdf**	**00 15 30.4**	**-1.7**
	comp=Z,1.3nm,0.9s,baz=60,slow=4.3,SNR=3.5						
ARPR	**Arapgir-MALATY**	**142.79**	**311**	PKPdf	**PKPdf**	**00 16 00.8**	**-1.2**
EKA	**Eskdalemuir Ar**	**143.21**	**5**	PKP	PKPab	00 15 59.3	-0.9
	comp=Z,0.7nm,0.6s,baz=329,slow=2.8,SNR=10						
LODK	**Lodwar**	**144.24**	**249**		**PKPdf**	**00 16 05.1**	**0.0**
BNN	**Bunyan**	**144.66**	**312**		PKPbc	00 16 05.9	+0.2
BR131	**Keskin Array S**	**145.80**	**314**		**PKPbc**	**00 16 08.6**	**-0.4**
BRTR	**Keskin Array B**	**145.80**	**314**	PKPbc	**PKPdf**	**00 16 07.4**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=119,slow=4.6,SNR=12						
BRTR	**Keskin Array B**	**145.80**	**314**		**PKPbc**	**00 16 08.6**	**-0.4**
CLL	**Collm**	**146.38**	**348**	*i* PKPbc	**PKPbc**	**00 16 10.1**	**+0.1**
	comp=Z,3.0nm,0.6s						
MMAI	**Mount Meron Ar**	**147.11**	**302**	PKPbc	**PKPbc**	**00 16 13.0**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=54,slow=6.6,SNR=15						
GERES	**GERESS Array B**	**148.55**	**345**	PKPbc	**PKPbc**	**00 16 15.5**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=11,slow=2.7,SNR=8.3						
CONA	**Conrad Observa**	**148.82**	**342**	*i* PKiKP	**PKPbc**	**00 16 16.9**	**+0.4**
	comp=Z,2.4nm,1.0s						
RONA	**Rosalia, Austr**	**148.90**	**342**	*i* PKiKP	**PKPbc**	**00 16 16.9**	**+0.3**
	comp=Z,2.5nm,0.8s						
MOA	**Molln**	**149.33**	**344**	*e*PKiKP	**PKPbc**	**00 16 17.7**	**0.0**
	comp=Z,2.8nm,1.2s						
RDO	**Rodhopi**	**150.06**	**323**		**PKPbc**	**00 16 18.9**	**-0.6**
LESA	**Schwarzleotal**	**150.12**	**346**	*i* PKiKP	**PKPbc**	**00 16 19.6**	**0.0**
	comp=Z,1.6nm,0.6s						
SOKA	**Soboth**	**150.19**	**342**	*e*PKP	**PKPbc**	**00 16 19.1**	**-0.7**
	comp=Z,0.8nm,0.6s						
KBA	**Konlbreinsper**	**150.28**	**345**	*e*PKP	**PKPbc**	**00 16 19.3**	**-0.8**
	comp=Z,0.7nm,0.5s						
WATA	**Walderalm**	**150.45**	**347**	*e*PKiKP	**PKPbc**	**00 16 20.2**	**-0.3**
	comp=Z,1.1nm,0.5s						
RETA	**Reutte**	**150.47**	**348**	*e*PKiKP	**PKiKP**	**00 16 20.9**	**0.0**
	comp=Z,3.4nm,1.4s						
OBKA	**Obir**	**150.49**	**343**	*e*PKiKP	**PKiKP**	**00 16 21.1**	**+0.2**
	comp=Z,0.7nm,0.6s						
WTTA	**Wattenberg**	**150.50**	**347**	*i* PKiKP	**PKPbc**	**00 16 20.2**	**-0.4**
	comp=Z,4.3nm,1.1s						
MOTA	**Moosalm**	**150.54**	**348**	*e*PKiKP	**PKPbc**	**00 16 20.5**	**-0.2**
	comp=Z,1.4nm,0.7s						
SQTA	**Sankt Quirin**	**150.63**	**348**	*i* PKiKP	**PKPbc**	**00 16 20.9**	**0.0**
	comp=Z,1.9nm,0.6s						
ABTA	**Abfaltersbach**	**150.79**	**345**	*i* PKP	**PKPbc**	**00 16 20.2**	**-1.0**
	comp=Z,2.6nm,0.6s						
DAVA	**Damuels**	**150.82**	**349**	*e*PKiKP	**PKPbc**	**00 16 21.4**	**+0.1**
	comp=Z,1.4nm,0.7s						
FETA	**Fehten**	**150.92**	**348**	*i* PKiKP	**PKPbc**	**00 16 21.7**	**+0.2**
	comp=Z,2.8nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**151.40**	**348**		**PKPbc**	**00 16 22.6**	**-0.1**

*SNET **19** 23:58:33.7±2.7, 13.00N×87.32W, h10km, ML3.5, Presumed earthquake*
*CATAC **19** 23:58:33.6±0.1, 13°N±1′×87.4W±0.9, h2km±1km, M3.6/36, MLv3.6/36, Error ellipse: s-maj=3.5km s-min=1.4km az=27.8, confirmed*
*GCG **19** 23:58:35.3±1.9, 13.07N×87.46W, h0km±87km, MD4.6, Presumed earthquake*

ISC 19 23:58:33.4±1.0, 12.98N±0.03×87.36W±0.02, h6km±9km, n53, σ0991/74, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.20**	**270**	P	**Pg**	**23 58 37.3**	**-0.1**
CSGN				S	**Sg**	**23 58 40.0**	**0.0**
CRIN	**San Cristobal**	**0.41**	**133**	P	**Pg**	**23 58 42.5**	**+1.3**
CRIN				S	**Sg**	**23 58 48.7**	**+2.1**
CNCH	**Conchagua**	**0.55**	**303**	P	**Pg**	**23 58 44.5**	**+0.3**
CNCH	**Conchagua**	**0.55**	**303**	*i* P	**Pg**	**23 58 44.4**	**+0.3**
CNCH				*e*S	**Sb**	**23 58 52.9**	**-1.0**
LCND	**La Caada**	**0.62**	**303**	P	**Pg**	**23 58 45.4**	**+0.1**
LCND				S	**Sg**	**23 58 54.0**	**+0.6**
LCND	**La Caada**	**0.62**	**303**	*e*P	**Pg**	**23 58 45.4**	**+0.1**
QUEN	**Al S del Volca**	**0.62**	**128**	P	**Pg**	**23 58 45.9**	**+0.5**
HERN	**Volcan Telica**	**0.63**	**125**	P	**Pg**	**23 58 45.0**	**-0.5**
HOYN	**Al Sur del Vol**	**0.64**	**126**	P	**Pg**	**23 58 45.4**	**-0.3**
TEL3	**Telica 3**	**0.64**	**129**	P	**Pg**	**23 58 46.1**	**+0.4**
INTP	**Intipuca**	**0.72**	**288**	⇑P	**Pg**	**23 58 47.0**	**-0.2**
INTP				*e*S	**Sg**	**23 58 57.0**	**+0.4**
CNGN	**Cerro Negro**	**0.80**	**126**	P	**Pg**	**23 58 48.4**	**-0.3**
CNGN				S	**Sg**	**23 58 59.3**	**+0.3**
CNGA	**Al SSO del Vol**	**0.80**	**127**	P	**Pg**	**23 58 48.4**	**-0.3**
MOM3	**MOM3**	**0.94**	**119**	P	**Pg**	**23 58 51.5**	**0.0**
LIMN	**Finca el Limon**	**0.97**	**85**	P	**Pg**	**23 58 51.9**	**-0.1**
LIMN				S	**Sb**	**23 59 06.6**	**+0.8**
MOMN	**Momotombo**	**0.97**	**125**	P	**Pg**	**23 58 52.2**	**+0.1**
MOMN				S	**Sg**	**23 59 05.1**	**+0.3**
MOM2	**El Cardon**	**1.00**	**122**	P	**Pg**	**23 58 52.8**	**+0.1**
RANC	**El Ranchito**	**1.02**	**297**	P	**Pg**	**23 58 52.3**	**-0.6**
RANC				S	**Sb**	**23 59 06.7**	**-0.5**
PACA	**Pacayal**	**1.06**	**298**	P	**Pg**	**23 58 53.2**	**-0.6**
PACA				S	**Sg**	**23 59 07.6**	**-0.1**
PACA	**Pacayal**	**1.06**	**298**	*e*P	**Pg**	**23 58 53.0**	**-0.9**
OCON	**Estacion meteo**	**1.07**	**53**	P	**Pg**	**23 58 54.3**	**+0.2**
COPN	**Copaltepe**	**1.09**	**137**	P	**Pg**	**23 58 53.1**	**-1.1**
APYN	**Apoyeque**	**1.23**	**127**	P	**Pg**	**23 58 55.9**	**-1.1**
TECA	**Tecapa**	**1.23**	**295**	*e*P	**Pg**	**23 58 55.9**	**-1.2**
APQ2	**Apoyeque**	**1.27**	**127**	P	**Pg**	**23 58 57.0**	**-0.7**
RCON	**San Juan de Ri**	**1.27**	**66**	P	**Pg**	**23 58 57.6**	**-0.3**
RCON				S	**Sb**	**23 59 15.5**	**+0.9**
RCVN	**Varillal2**	**1.28**	**62**	P	**Pg**	**23 58 57.6**	**-0.4**
RCVN				S	**Sg**	**23 59 15.0**	**+0.3**
RCPN	**Sur Rio San Ju**	**1.34**	**66**	P	**Pg**	**23 58 58.9**	**-0.4**
MARCA	**Marcala la Paz**	**1.35**	**331**	P	**Pg**	**23 58 58.4**	**-0.9**
MARCA	**Marcala la Paz**	**1.35**	**331**	*e*P	**Pg**	**23 58 57.8**	**-1.5**
MARCA				*e*S	**Sb**	**23 59 17.0**	**+0.2**
MGAN	**Managua**	**1.36**	**127**	P	**Pn**	**23 58 57.9**	**-1.1**
MGAN				S	**Sg**	**23 59 16.2**	**-1.0**
MATN	**Matagalpa**	**1.40**	**92**	P	**Pn**	**23 58 59.1**	**-0.5**
MATN				S	**Sg**	**23 59 17.9**	**-0.4**
WILN	**Americas 2**	**1.40**	**125**	P	**Pn**	**23 58 58.7**	**-0.8**
MAS3	**Al N del Volca**	**1.49**	**129**	P	**Pn**	**23 59 00.8**	**0.0**
TECO	**Alcaldia de Te**	**1.50**	**292**	P	**Pn**	**23 59 01.5**	**+0.6**
TECO				S	**Sb**	**23 59 19.1**	**-1.9**
SCLA	**Alcaldia de Sa**	**1.52**	**299**	P	**Pn**	**23 59 01.8**	**+0.6**
COEG	**Centro de Oper**	**1.62**	**294**	P	**Pn**	**23 59 02.8**	**+0.2**
P5NO	**Presa 5 de nov**	**1.69**	**307**	P	**Pn**	**23 59 03.0**	**-0.7**
BOAB	**BOACO BROADBAN**	**1.73**	**107**	P	**Pn**	**23 59 03.7**	**-0.4**
BOAB				S	**Sn**	**23 59 26.7**	**+0.3**
LOMA	**Loma Larga**	**1.89**	**291**	P	**Pn**	**23 59 07.3**	**+0.9**
LALI	**Alcalda de L**	**1.98**	**285**	*e*P	**Pn**	**23 59 08.3**	**+0.7**
PMON	**Piamonte**	**2.04**	**291**	P	**Pn**	**23 59 10.0**	**+1.5**
JAYA	**Jayaque - finc**	**2.15**	**289**	P	**Pn**	**23 59 10.9**	**+1.0**
JAYA	**Jayaque - finc**	**2.15**	**289**	*e*P	**Pn**	**23 59 10.4**	**+0.4**
JAYA				*e*S	**Sn**	**23 59 37.8**	**+0.8**
JAYA	**Jayaque - finc**	**2.15**	**289**	*e*P	**Pn**	**23 59 11.0**	**+1.1**
JAYA				*e*S	**Sb**	**23 59 38.8**	**-1.0**
SARH	**Santa Rosa de**	**2.25**	**323**	P	**Pb**	**23 59 13.9**	**-0.7**
SARH				S	**Sn**	**23 59 41.2**	**+1.8**
SARH	**Santa Rosa de**	**2.25**	**323**	*e*P	**Pb**	**23 59 13.6**	**-0.9**
SBLS	**San Blas**	**2.37**	**292**	*e*P	**Pn**	**23 59 14.9**	**+1.9**
MTO3	**Montecristo**	**2.41**	**306**	P	**Pn**	**23 59 15.5**	**+1.9**
MTO3	**Montecristo**	**2.41**	**306**	*e*P	**Pn**	**23 59 13.6**	**-0.1**
MTO3	**Montecristo**	**2.41**	**306**	*e*P	**Pn**	**23 59 15.4**	**+1.9**
NUBE	**Las Nubes**	**2.53**	**292**	P	**Pn**	**23 59 17.3**	**+2.0**
NUBE				S	**Sn**	**23 59 47.7**	**+1.1**
NUBE	**Las Nubes**	**2.53**	**292**	*e*P	**Pn**	**23 59 16.6**	**+1.3**

*RSNC **20** 00:18:09.6±0.0, 7°N±1′×7°3W±°, h142km±1km, M2.7, ML2.4, MLv3.0*
*FUNV **20** 00:18:10.6, 7.17N×73.21W, h5km, MW3.0, Presumed earthquake*

ISC 20 00:18:07.3±1.4, 6.87N±0.03×73.14W±0.04, h154km±8km, n30, σ1943/60, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**189**	P	**Pn**	**00 18 29.0**	**+0.3**
BARC				S	**Sn**	**00 18 43.8**	**-1.1**
BRJC	**Barrancabermej**	**0.61**	**280**	P	**Pn**	**00 18 30.6**	**+0.9**
BRJC				S	**Sn**	**00 18 47.5**	**+0.7**
PAMC	**Pamplona, Colo**	**0.64**	**43**	P	**Pn**	**00 18 31.7**	**+1.2**
PAMC				S	**Sn**	**00 18 48.5**	**+0.4**
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	**00 18 33.0**	**+0.1**
RUSC				S	**Sn**	**00 18 51.5**	**-0.9**
RUSC	**La Rusia**	**0.97**	**177**	*e*P	**Pn**	**00 18 33.0**	**+0.1**
RUSC				*e*S	**Sn**	**00 18 51.3**	**-1.1**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**00 18 35.4**	**-0.3**
PTBC				S	**Sn**	**00 18 56.5**	**-1.0**
OCAC	**Ocana**	**1.37**	**352**	P	**Pn**	**00 18 37.0**	**+0.9**
OCAC				S	**Sn**	**00 18 58.6**	**+0.4**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**00 18 37.6**	**0.0**
SPBC				S	**Sn**	**00 18 58.9**	**-1.9**
NORC	**Norcasia**	**2.16**	**233**	P	**Pn**	**00 18 45.3**	**+0.7**
NORC				S	**Sn**	**00 19 13.5**	**+0.2**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**00 18 47.4**	**+0.6**
CHIC				S	**Sn**	**00 19 16.5**	**-0.6**
ROSC	**El Rosal**	**2.34**	**210**	P	**Pn**	**00 18 48.9**	**+1.8**
ROSC				S	**Sn**	**00 19 17.7**	**0.0**
BOG	**Bogota**	**2.42**	**202**	P	**Pn**	**00 18 49.0**	**+1.0**
BOG				S	**Sn**	**00 19 19.6**	**+0.2**
HELC	**Santa Helena**	**2.47**	**254**	P	**Pn**	**00 18 50.7**	**+2.0**
HELC				S	**Sn**	**00 19 19.7**	**-0.8**
HELC	**Santa Helena**	**2.47**	**254**	*e*P	**Pn**	**00 18 51.4**	**+2.7**
HELC				*e*S	**Sn**	**00 19 21.9**	**+1.4**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**00 18 50.7**	**+1.4**
CVER				S	**Sn**	**00 19 21.5**	**-0.2**
UREC	**San Jos de Ur**	**2.53**	**290**	P	**Pn**	**00 18 48.8**	**-0.3**
UREC				S	**Sn**	**00 19 19.5**	**-1.8**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**00 18 52.8**	**+0.5**
GUY2C				S	**Sn**	**00 19 25.9**	**-1.0**
VILC	**Villavicencio,**	**2.80**	**191**	P	**Pn**	**00 18 53.1**	**+0.6**
VILC				S	**Sn**	**00 19 24.1

BTO2				pP	**pP**	**00 40 38.3**	**-1.1**
BTO2				sP	**sP**	**00 40 42.3**	**+1.0**
BTO2				PP	**PnPn**	**00 40 48.5**	**+8.4**
BTO2				S	**S**	**00 43 34.4**	**-7.6**
BTO2				pmax	pmax		
	comp=Z,16nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,210nm,7.2s						
BTO2				LR	LR		
	comp=N,130nm,4.9s						
BTO2				LR	LR		
	comp=E,120nm,5.7s						
BTO2				LR	LR		
	comp=Z,130nm,6.0s						
WUS	**Wushi**	**16.53**	**314**		**Pn**	**00 40 40.5**	**+0.5**
WUS				IAmb	IAmb	00 40 48.5	
	comp=Z,28nm,1.1s						
PDGK	**Podgornoye**	**17.69**	**320**	Pn	**Pn**	**00 40 52.6**	**-1.9**
TARG	**Taragay, Kyrgy**	**17.71**	**314**		**Pn**	**00 40 54.4**	**-0.6**
TARG				IAmb	IAmb	00 41 06.9	
	comp=Z,12nm,1.2s						
PRZ	**Przheval'sk**	**17.78**	**317**		**Pn**	**00 40 54.9**	**-0.8**
PRZ				IAmb	IAmb	00 41 03.7	
	comp=Z,22nm,1.2s						
KDJ	**Kajisay**	**18.32**	**314**	Pn	**Pn**	**00 40 59.6**	**-2.7**
NRN	**Naryn**	**18.71**	**311**	P	**P**	**00 41 05.0**	**-1.9**
MKAR	**Makanchi Array**	**18.93**	**333**	P	**Pn**	**00 41 10.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=118,slow=9.7,SNR=5.9						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**18.93**	**333**	P	**P**	**00 41 06.6**	**-2.3**
BOOM	**Boomskoye usch**	**19.29**	**313**	P	**P**	**00 41 12.7**	**-0.3**
BOOM				IAmb	IAmb	00 41 26.1	
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**19.41**	**24**	P	**Pn**	**00 41 15.3**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=214,slow=12,SNR=10						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**19.41**	**24**	P	**Pn**	**00 41 14.1**	**-1.3**
AAK	**Ala-Archa**	**20.28**	**312**	P	**P**	**00 41 23.7**	**-0.2**
AAK				IAmb	IAmb	00 41 32.1	
	comp=Z,11nm,1.2s						
ARSB	**Arslanbob**	**20.68**	**307**	P	**P**	**00 41 28.4**	**+0.2**
DRK	**Karamyk**	**20.85**	**302**	P	**P**	**00 41 30.6**	**+0.3**
BTK	**Batken**	**21.75**	**302**	P	**P**	**00 41 39.4**	**-0.3**
BTK				IAmb	IAmb	00 41 50.5	
	comp=Z,8.6nm,1.0s						
GAR	**Garm**	**21.82**	**299**	P	**P**	**00 41 39.1**	**-1.3**
GAR				IAmb	IAmb	00 41 42.5	
	comp=Z,13nm,1.1s						
KBL	**Kabul**	**22.11**	**287**	P	**P**	**00 41 43.7**	**-0.1**
KBL				IAmb	IAmb	00 41 47.1	
	comp=Z,15nm,1.0s						
CHGR	**Chuyangaron**	**22.61**	**298**	P	**P**	**00 41 47.6**	**-1.3**
KK31	**Karatay Array**	**23.09**	**310**	P	**P**	**00 41 54.1**	**+0.2**
KKAR	**Karatay Array**	**23.09**	**310**	P	**P**	**00 41 53.5**	**-0.3**
SHAA	**Shahritus**	**23.20**	**295**	P	**P**	**00 41 54.4**	**-0.6**
SHAA				IAmb	IAmb	00 41 58.9	
	comp=Z,18nm,1.1s						
KURBB	**Kurchatov Arra**	**23.49**	**333**	P	**P**	**00 41 58.5**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=144,slow=10,SNR=14						
	comp=Z,2.1nm,0.8s						
KURK	**Kurchatov**	**23.53**	**334**	P	**P**	**00 41 58.3**	**+0.1**
KURK				IAmb	IAmb	00 42 01.5	
	comp=Z,3.3nm,0.8s						
ZAA0	**Zalesovo Array**	**24.50**	**346**	P	**P**	**00 42 07.0**	**-0.3**
ZALV	**Zalesovo Beam**	**24.50**	**346**	P	**P**	**00 42 09.3**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=163,slow=9.5,SNR=8.9						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**24.50**	**346**	P	**P**	**00 42 07.5**	**+0.3**
CN2	**Changchun**	**27.56**	**53**	*eP*	**P**	**00 42 39.1**	**+4.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BVAR	**Borovoye Array**	**28.69**	**329**	P	**P**	**00 42 45.3**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=132,slow=8.9,SNR=4.1						
	comp=Z,1.7nm,0.9s						
BORK	**Borovoye**	**28.74**	**329**	P	**P**	**00 42 44.7**	**-0.6**
BORK				IAmb	IAmb	00 42 52.0	
	comp=Z,2.0nm,0.8s						
JOW	**Kunigami**	**29.48**	**89**	P	**P**	**00 42 51.6**	**-0.6**
AB31	**Akbulak array**	**32.28**	**315**	P	**P**	**00 43 16.4**	**-0.3**
ABKAR	**Akbulak array**	**32.28**	**315**	P	**P**	**00 43 16.3**	**-0.4**
GURO	**Guroymak-BITLI**	**43.74**	**295**	P	**P**	**00 44 54.4**	**+0.7**
GURO				IAmb	IAmb	00 45 01.2	
	comp=Z,4.7nm,1.3s						
BRTR	**Keskin Array B**	**50.05**	**298**	P	**P**	**00 45 41.9**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=70,slow=8.3,SNR=3.8						
	comp=Z,0.7nm,0.8s						
AKASG	**Malin Array Be**	**51.95**	**313**	P	**P**	**00 45 56.4**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=79,slow=6.5,SNR=2.7						
	comp=Z,0.4nm,0.4s						
MNK	**Minsk**	**52.60**	**317**	*i* P	**P**	**00 46 04.5**	**+2.8**
	comp=E,4.0nm,0.6s						
MNK				*i* P	**P**	**00 46 04.5**	**+2.8**
	comp=N,6.0nm,0.6s						
MNK				*i* P	**P**	**00 46 04.5**	**+2.8**
	comp=Z,6.0nm,0.6s,baz=89						
MNK				*i* PcP	**PcP**	**00 47 13.6**	**+1.9**
MNK				*i* PP	**PP**	**00 48 04.0**	**+3.5**
MNK				*i* PPP	PPP	00 49 08.0	
MNK				*i* LQ	LQ	01 04 35.7	
MNK				*i* LR	LR	01 08 48.5	
MNK				*i* LRM	MLR	01 10 57.5	
	comp=Z,19nm,13.0s						
MNK				*i* LRM	MLR	01 11 05.2	
	comp=E,17nm,14.2s						
MNK				*i* LRM	MLR	01 11 39.8	
	comp=N,15nm,12.7s						
ELL	**Elmali**	**53.53**	**295**	P	**P**	**00 46 08.4**	**-0.6**
FINES	**FINESS Array B**	**53.61**	**326**	P	**P**	**00 46 09.7**	**+0.7**
	comp=N,0.6nm,0.5s,baz=98,slow=5.8,SNR=8.0						
	comp=N,0.6nm,0.5s						
FINES	**FINESS Array B**	**53.61**	**326**	P	**P**	**00 46 09.1**	**+0.1**
MLR	**Muntele Rosu**	**54.72**	**306**	P	**P**	**00 46 17.6**	**+0.1**
MLR				IAmb	IAmb	00 46 23.9	
	comp=Z,4.3nm,1.0s						
BURAR	**Bucovina Array**	**54.88**	**309**	P	**P**	**00 46 17.7**	**-1.0**
BUR08	**Bucovina Ar. S**	**54.89**	**309**	P	**P**	**00 46 17.5**	**-1.2**
BUR08				IAmb	IAmb	00 46 23.0	
	comp=Z,1.9nm,1.1s						
OJC	**Ojcow**	**57.98**	**313**	P	**P**	**00 46 40.4**	**-0.1**
PSZ	**Piszkesteto**	**58.36**	**310**	P	**P**	**00 46 43.0**	**-0.4**
PSZ				IAmb	IAmb	00 47 17.5	
	comp=Z,1.9nm,0.8s						
NOA	**NORSAR Array B**	**60.79**	**326**	P	**P**	**00 46 59.5**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=79,slow=6.9,SNR=4.3						
	comp=Z,0.5nm,0.7s						
GERES	**GERESS Array B**	**62.16**	**312**	P	**P**	**00 47 09.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=72,slow=4.3,SNR=5.4						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**62.16**	**312**	P	**P**	**00 47 09.0**	**-0.4**
WRAB	**Tennant Creek**	**62.92**	**138**	P	**P**	**00 47 15.8**	**+1.2**
ASAR	**Alice Springs**	**65.62**	**141**	P	**P**	**00 47 30.9**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=326,slow=6.5,SNR=4.4						
	comp=Z,0.2nm,0.4s						
ANM	**Nome**	**66.87**	**28**	P	**P**	**00 47 39.3**	**-0.5**
IL31		**73.63**	**23**	P	**P**	**00 48 19.8**	**-1.3**
IL31				IAmb	IAmb	00 48 31.3	
	comp=Z,3.5nm,1.2s						
ILAR	**Eielson Array**	**73.63**	**23**	P	**P**	**00 48 23.2**	**+2.0**
	comp=Z,0.7nm,1.1s,baz=321,slow=6.5,SNR=2.3						
	comp=Z,0.7nm,1.1s						
ILAR	**Eielson Array**	**73.63**	**23**	P	**P**	**00 48 20.4**	**-0.9**
L29M	**L29M**	**77.63**	**22**	P	**P**	**00 48 42.6**	**-1.6**
PAB	**San Pablo**	**77.66**	**309**	P	**P**	**00 48 42.8**	**-2.1**
PAB				IAmb	IAmb	00 49 03.8	
	comp=Z,6.8nm,1.3s						
N30M	**Aishikik Lake**	**79.16**	**23**	P	**P**	**00 48 52.2**	**-0.5**
SFJD	**Kangerlussuaq**	**79.31**	**347**	P	**P**	**00 48 53.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**86.12**	**283**	P	**P**	**00 49 30.3**	**+0.6**
	comp=Z,0.9nm,1.1s,baz=52,slow=6.8,SNR=3.6						
	comp=Z,0.9nm,1.1s						

JMA ***20*** *00:58:35.3±0.1, 42.7N±0.4×145.7E±0.8, h47km±1km, MV3.2/37, OFF NEMURO PENINSULA*

SKHL ***20*** *00:58:36.0±0.7, 42.70N×145.80E, h47km±3km, mb4.4/3*

ISC 20 00:58:35.7±2.3, 42.7N±0.1×145.74E±0.07, h50km, n15, σ0 55/26, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.57**	**312**	*i* P		**Pn**	**00 58 47.4**	**-0.5**
JKHN				*e*S		**Sn**	**00 58 56.1**	**-0.5**
NEM2	**Nemuro 2**	**0.66**	**0**	P		**Pn**	**00 58 48.9**	**-0.1**
NEM2				S		**Sn**	**00 58 58.4**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.67**	**359**	*i* P		**Pn**	**00 58 48.9**	**-0.2**
NMR				*i* S		**Sn**	**00 58 58.4**	**-0.3**
AKK	**Akkeshi**	**0.73**	**296**	*i* P		**Pn**	**00 58 49.4**	**-0.5**
AKK				*i* S		**Sn**	**00 58 59.5**	**-0.7**
JAK	**Akkeshi**	**0.82**	**291**	P		**Pn**	**00 58 50.7**	**-0.4**
JAK				*e*S		**Sn**	**00 59 02.0**	**-0.2**
JNK	**Nakash**	**1.16**	**320**	*e*P		**Pn**	**00 58 55.2**	**-0.4**
JNK				*e*S		**Sn**	**00 59 09.5**	**-0.8**
JNSB	**Nemuroshibetsu**	**1.20**	**334**	P		**Pn**	**00 58 56.3**	**+0.1**
JNSB				S		**Sn**	**00 59 11.5**	**+0.2**
JRA	**Rausu**	**1.32**	**340**	P		**Pn**	**00 58 58.0**	**+0.2**
JRA				S		**Sn**	**00 59 14.8**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**1.34**	**4**	*e*P		**Pn**	**00 58 57.9**	**-0.1**
YUK				AMB	AMB	00 58 59.2		
	160nm,0.4s							
YUK				*i* S		**Sn**	**00 59 13.9**	**-0.7**
YUK				A	A	00 59 15.4		
	270nm,0.3s							
YUK				A	A	00 59 15.4		
	370nm,0.3s							
SHO	**Shikotan**	**1.41**	**34**	*e*P		Pn	00 59 11.9	+13
SHO				AMB	AMB	00 59 14.3		
	50nm,0.2s							
SHO				*e*S		Sn	00 59 28.6	+12
SHO				A	A	00 59 35.4		
	190nm,0.3s							
SHO				A	A	00 59 35.4		
	180nm,0.3s							
JOB	**Onbets**	**1.42**	**279**	P		**Pn**	**00 58 59.0**	**0.0**
JAR	**Ashorobuto**	**1.56**	**293**	P		**Pn**	**00 59 01.1**	**0.0**
JAR				*e*S		**Sn**	**00 59 20.1**	**-0.1**
JCH	**Churui**	**1.76**	**268**	P		**Pn**	**00 59 04.4**	**+0.6**
JTKR	**Abashiri--Toko**	**1.84**	**314**	P		**Pn**	**00 59 06.2**	**+1.3**
JTKR				*e*S		**Sn**	**00 59 28.2**	**+1.2**
KUR	**Kuril'sk**	**2.96**	**31**	*e*P		**Pn**	**00 59 20.3**	**+0.1**
KUR				*i* S		**Sn**	**00 59 54.8**	**+0.3**

CATAC ***20*** *01:50:05.3±0.6, 9.3S±4.4×8.1W±., h39km, M5.6/13, mb5.3/13, mB5.8/9, MLv6.1/2, Mw(mB)5.4/9, MwMwp4.9/2, Mwp5.2/2, Error ellipse: s-maj=16.5km s-min=8.4km az=90.3, confirmed*

MOS ***20*** *01:50:09.6±1.0, 8.26S×79.96W, h36km, mb5.0/19, Error ellipse: s-maj=13.4km s-min=6.9km az=109.6*

NEIC ***20*** *01:50:11.1±2.1, 8.37S±0.06×79.98W±0.05, h32km±4km, mb5.0/379, Mww5.1/13, Error ellipse: s-maj=9.9km s-min=5.3km az=136.0*

VAO ***20*** *01:50:11.1±1.4, 8.27S×79.81W, h32km±10km, mb5.2, Presumed earthquake*

NEIC ***20*** *01:50:11.7, 8.27S×79.86W, h30km, Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^16Nm; Mrr3.34; Mθθ-0.44; Mφφ-2.91; Mrθ0.97; Mrφ0.41; Mθφ-4.80; Fault plane solution: M0 5.84000×10^16 NP1: φs352.19000°, δ16.43000°, λ93.11000°. NP2: φs168.95000°, δ73.60000°, λ89.08000°. Principal axes: T 6.0138, Plg61.0000°, Azm78.0000°; N -0.3750, Plg1.0000°, Azm169.0000°; P -5.6388, Plg29.0000°, Azm260.0000°;*

NEIC ***20*** *01:50:11.3, 8.37S×79.97W, h33km*

IDC ***20*** *01:50:11.3±2.6, 8.29S×79.99W, h40km±21km, mb4.5/25, mbtmp4.6/30, ML3.8/5, MS4.5/55, Error ellipse: s-maj=19.7km s-min=10.3km az=64.0*

GFZ ***20*** *01:50:12.3±0.1, 8.3S×3.8°OW±., h43km, M4.8/59, mb4.9/59*

GCMT ***20*** *01:50:14.1±0.2, 8.29S±0.01×80.19W±0.02, h32km, MW5.2/123, Moment Tensor Solution. s93,c136; s123,c190; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.54±.02; Mθθ-0.01±.01; Mφφ-0.52±.01; Mrθ0.07±.01; Mrφ0.15±.01; Mθφ-0.68±.02; Best double couple: M0 0.87800×10^17 NP1:φs337.00000°, δ20.00000°, λ76.00000°. NP2:φs172.00000°, δ71.00000°, λ95.00000°. Principal axes: T 0.8660, Plg64.0000°, Azm90.0000°; N 0.0220, Plg5.0000°, Azm350.0000°; P -0.8890, Plg25.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 01:50:10.3±0.5, 8.32S±0.04×80.01W±0.05, h29km±3km, h29km:pP-P, n762, σ1§26/601, mb5.0/225, MS4.5/53, 10C-12D, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**1.98**	**54**		Pn	**Pn**	**01 50 44.1**	**+1.8**
	434nm,0.3s,baz=238,slow=4.2,SNR=1085							
ATAH					Sn	**Sb**	**01 51 11.3**	**+0.9**
	1µm,0.3s,baz=46,slow=15,SNR=8.5							
MCRA	**Macar, Loja**	**3.92**	**1**	P		**Pn**	**01 51 09.9**	**+1.2**
MCRA				S		**Sb**	**01 52 06.6**	**+0.8**
NNA	**Nana**	**4.80**	**140**	Pn		**Pn**	**01 51 19.9**	**-0.9**
	34nm,0.3s,baz=310,slow=10,SNR=59							
NNA					Sn	**Sn**	**01 52 13.0**	**-2.4**
	54nm,0.3s,baz=17,slow=8.7,SNR=4.7							
NNA				LR		LR	01 53 23.8	
	comp=Z,9µm,18.4s,baz=308,slow=40							
	159nm,0.4s							
NNA	**Nana**	**4.80**	**140**	P		**Pn**	**01 51 20.1**	**-0.7**
NNA	**Nana**	**4.80**	**140**			**Pn**	**01 51 19.4**	**-1.3**
NNA	**Nana**	**4.80**	**140**	P		**Pn**	**01 51 19.2**	**-1.6**
NNA	**Nana**	**4.80**	**140**	P		**Pn**	**01 51 20.2**	**-0.5**
PPLP	**Puerto Lpez**	**6.77**	**353**	P		**Pn**	**01 51 48.3**	**+0.5**
CHSH	**Refugio Sur-Vo**	**6.87**	**10**	P		**Pn**	**01 51 52.6**	**+2.9**
CHSH				S		Sn	01 53 20.2	+13
PUYO	**Puyo, Santa Ro**	**7.06**	**16**	P		**Pn**	**01 51 53.7**	**+1.8**
PUYO				S		Sb	01 53 26.6	-10
CZSB	**Cruzeiro do Su**	**7.26**	**86**			**Pn**	**01 51 53.4**	**-1.1**
PIAT	**Ana Tenorio**	**7.47**	**14**	P		**Pn**	**01 51 59.7**	**+1.9**
	4µm325nm,0.9s							
VCES	**Cotopaxi**	**7.64**	**12**	P		**Pn**	**01 52 02.6**	**+2.4**
VCES				S		**Sb**	**01 53 53.5**	**+0.3**
SLOR	**San Lorenzo -**	**7.68**	**11**	P		**Pn**	**01 52 03.2**	**+2.5**
SLOR				S		**Sb**	**01 53 49.2**	**-5.3**
SLOR	**San Lorenzo -**	**7.68**	**11**			**Pn**	**01 52 03.0**	**+2.2**
ANTS	**Antisana-Sarah**	**7.98**	**13**	P		**Pn**	**01 52 06.1**	**+1.2**
ANTS				S		Sb	01 53 53.7	-9.4
PULU	**Pululahua**	**8.42**	**10**	P		**Pn**	**01 52 13.5**	**+2.8**
PAC1	**Pacto, Paraso**	**8.61**	**8**	P		**Pn**	**01 52 17.3**	**+4.1**
	4µm233nm,0.5s							
OTAV	**Otavalo**	**8.64**	**10**	P		**Pn**	**01 52 14.6**	**+0.7**
OTAV	**Otavalo**	**8.64**	**10**	Pn		**Pn**	**01 52 14.6**	**+0.7**
OTAV	**Otavalo**	**8.64**	**10**	*e*P		**Pn**	**01 52 12.9**	**-0.9**
OTAV	**Otavalo**	**8.64**	**10**	P		**Pn**	**01 52 15.0**	**+1.2**
CUSE	**Cuicocha Este**	**8.71**	**11**	P		Pn	01 52 20.1	+5.2
	3µm150nm,0.6s							
IMBA	**Imbabura, San**	**8.72**	**12**	P		**Pn**	**01 52 18.8**	**+3.8**
TULM	**Tulcn-Chalpat**	**9.24**	**14**	P		**Pn**	**01 52 24.4**	**+2.3**
TULM				S		Sn	01 54 17.0	+12
TULM	**Tulcn-Chalpat**	**9.24**	**14**	P		**Pn**	**01 52 25.2**	**+3.0**
	3µm326nm,1.0s							
CMBC	**Cumbal**	**9.45**	**13**	P		**Pn**	**01 52 27.6**	**+2.6**
BBAC	**Balboa, Cauca**	**10.63**	**15**	P		**Pn**	**01 52 42.8**	**+1.8**
	889nm45nm,1.1s							
GARC	**Garzon, Huila**	**11.36**	**24**	P		**Pn**	**01 52 49.2**	**-1.8**
PRAC	**Prado**	**13.00**	**23**	P		**Pn**	**01 53 12.3**	**-0.9**
PB18	**Visviri**	**13.79**	**133**	Pn		**Pn**	**01 53 25.6**	**+1.2**
PB18	**Visviri**	**13.79**	**133**	P		**Pn**	**01 53 27.9**	**+3.5**
PB12	**IPOC Station P**	**13.90**	**138**	Pn		**Pn**	**01 53 23.8**	**-1.7**
PB12	**IPOC Station P**	**13.90**	**138**	P		**Pn**	**01 53 29.0**	**+3.4**
LPAZ	**La Paz**	**14.05**	**125**	Pn		**Pn**	**01 53 28.3**	**+0.2**
	0.4nm,0.3s,baz=299,slow=7.5,SNR=21							
LPAZ				LR		LR	02 00 24.8	
	comp=Z,2µm,18.3s,baz=289,slow=44							
	3.8nm,0.6s							
LPAZ	**La Paz**	**14.05**	**125**	Pn		**Pn**	**01 53 27.9**	**-0.1**
LPAZ	**La Paz**	**14.05**	**125**	*e*P		**Pn**	**01 53 25.9**	**-2.2**
LPAZ	**La Paz**	**14.05**	**125**	P		**Pn**	**01 53 29.1**	**+1.1**
ROSC	**El Rosal**	**14.25**	**24**	Pn		**Pn**	**01 53 29.9**	**-0.6**
	2.7nm,0.3s,baz=203,slow=14,SNR=4.9							
ROSC				LR		LR	01 59 05.5	
	comp=Z,4µm,18.5s,baz=199,slow=38							
	1.9nm,0.4s							
ROSC	**El Rosal**	**14.25**	**24**	P		**Pn**	**01 53 33.7**	**+3.1**
ROSC	**El Rosal**	**14.25**	**24**	Pn		**Pn**	**01 53 33.7**	**+3.1**
PB16	**IPOC Station P**	**14.26**	**135**	Pn		**Pn**	**01 53 31.5**	**+0.5**
PB16	**IPOC Station P**	**14.26**	**135**	P		**Pn**	**01 53 30.4**	**-0.5**
PSGCX	**Pisagua**	**14.75**	**141**	Pn		**Pn**	**01 53 38.5**	**+1.3**
HELC	**Santa Helena**	**15.09**	**17**	P		**P**	**01 53 47.9**	**+0.9**
PB11	**IPOC Station P**	**15.17**	**140**	Pn		**Pn**	**01 53 43.1**	**+0.3**
PB11						IAmb	IAmb	01 53 49.8
	comp=Z,90nm,0.9s							

PB11	**IPOC Station P**	**15.17**	**140**	P		**Pn**	**01 53 44.1**	**+1.4**
GO01	**Chusmiza**	**15.40**	**138**	Pn		**Pn**	**01 53 46.3**	**+0.2**
GO01	**Chusmiza**	**15.40**	**138**	P		**Pn**	**01 53 47.4**	**+1.2**
RUSC	**La Rusia**	**15.71**	**26**	P		**P**	**01 53 54.9**	**+0.9**
PB08	**IPOC Station P**	**15.77**	**139**	Pn		**Pn**	**01 53 50.3**	**-0.5**
PB08	**IPOC Station P**	**15.77**	**139**	P		**P**	**01 53 52.7**	**-1.8**
PB02	**IPOC Station P**	**16.20**	**144**	P		**P**	**01 54 00.4**	**+1.5**
PB02				IAmb		IAmb	01 54 01.8	
	comp=Z,147nm,1.4s							
PB02	**IPOC Station P**	**16.20**	**144**	P		**P**	**01 53 59.2**	**+0.3**
PB01	**IPOC Station P**	**16.23**	**142**	Pn		**Pn**	**01 53 55.9**	**-0.6**
PB07	**IPOC Station P**	**16.23**	**142**	P		**P**	**01 53 58.0**	**-0.4**
PB07	**IPOC Station P**	**16.52**	**145**			**Pn**	**01 54 01.0**	**+0.8**
PB07				IAmb		IAmb	01 54 05.5	
	comp=Z,134nm,1.4s							
PB07	**IPOC Station P**	**16.52**	**145**	P		**P**	**01 54 01.5**	**-1.2**
PB03	**IPOC Station P**	**16.85**	**145**			**P**	**01 54 05.1**	**-1.1**
PB03	**IPOC Station P**	**16.85**	**145**	P		**P**	**01 54 05.6**	**-0.7**
PB09	**IPOC Station P**	**16.95**	**143**			**P**	**01 54 06.5**	**-0.8**
PB09				IAmb		IAmb	01 54 11.0	
	comp=Z,116nm,1.0s							
PB09	**IPOC Station P**	**16.95**	**143**	P		**P**	**01 54 07.5**	**+0.2**
CDITO	**Canoas**	**17.02**	**350**	P		**P**	**01 54 09.1**	**+1.1**
BRU2	**Volcan**	**17.20**	**351**	P		**P**	**01 54 10.9**	**+0.7**
BRU2	**Volcan**	**17.20**	**351**			**P**	**01 54 11.6**	**+1.4**
BRU2	**Volcan**	**17.20**	**351**	P		**Pn**	**01 54 10.1**	**+1.3**
PB05	**IPOC Station P**	**17.25**	**148**			**P**	**01 54 10.1**	**-0.6**
PB05	**IPOC Station P**	**17.25**	**148**	P		**Pn**	**01 54 09.6**	**+0.2**
PB06	**IPOC Station P**	**17.47**	**146**			**P**	**01 54 13.3**	**+0.2**
PB06	**IPOC Station P**	**17.47**	**146**	P		**P**	**01 54 12.6**	**-0.6**
DRK0	**Durika**	**17.76**	**349**	P		Pn	01 54 06.7	-9.1
RGM0	**Gandoca**	**17.97**	**352**	P		**Pn**	**01 54 16.0**	**-2.2**
AF01	**San Pedro de A**	**18.46**	**143**	P		**Pn**	**01 54 25.3**	**+0.9**
AF01				IAmb		IAmb	01 54 29.1	
	comp=Z,147nm,0.8s							
PB14	**IPOC Station P**	**18.64**	**152**	P		**Pn**	**01 54 27.6**	**+1.1**
PB14				IAmb		IAmb	01 54 29.1	
	comp=Z,80nm,1.0s							
PB14	**IPOC Station P**	**18.64**	**152**	P		**Pn**	**01 54 27.9**	**+1.4**
HDC	**Heredia**	**18.65**	**347**	P		**Pn**	**01 54 27.5**	**+1.0**
HDC	**Heredia**	**18.65**	**347**	*e*P		**P**	**01 54 26.4**	**+0.2**
TCS1	**Tacares**	**18.73**	**347**	P		Pn	01 54 39.6	+12
CMARA	**Lajas Hojancha**	**19.00**	**343**	P		**P**	**01 54 26.8**	**-3.0**
JTS	**Las Juntas de**	**19.13**	**345**	*i* P		**Pn**	**01 54 34.7**	**+2.5**
JTS				pmax		pmax		
	comp=Z,56nm,1.6s							
JTS	**Las Juntas de**	**19.13**	**345**	P		**Pn**	**01 54 34.8**	**+2.5**
JTS	**Las Juntas de**	**19.13**	**345**	P		**Pn**	**01 54 33.8**	**+1.5**
JTS	**Las Juntas de**	**19.13**	**345**	P		**P**	**01 54 32.3**	**+1.0**
SDV	**Santo Domingo**	**19.47**	**29**	P		**P**	**01 54 34.6**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=220,slow=11,SNR=24							
SDV				LR		LR	02 03 46.6	
	comp=Z,3µm,18.1s,baz=212,slow=42							
	comp=Z,30nm,0.9s							
SDV	**Santo Domingo**	**19.47**	**29**	P		**P**	**01 54 35.8**	**+0.5**
SDV	**Santo Domingo**	**19.47**	**29**	*e*P		**P**	**01 54 34.4**	**-0.8**
AC01	**Pan de Azucar**	**19.86**	**154**			IAmb	IAmb	01 54 44.9
	comp=Z,60nm,1.0s							
AC01	**Pan de Azucar**	**19.86**	**154**	P		**P**	**01 54 39.4**	**+0.1**
MACA	**Manacapuru-AM**	**19.89**	**76**	P		**P**	**01 54 37.7**	**-2.0**
MACA	**Manacapuru-AM**	**19.89**	**76**	*e*P		**P**	**01 54 37.9**	**-1.7**
VILB	**Vilhena**	**20.00**	**105**	P		**P**	**01 54 39.8**	**-1.1**
SIV	**San Ignacio**	**20.01**	**114**	P		**P**	**01 54 39.8**	**-1.2**
	comp=Z,15nm,0.7s,baz=296,slow=9.8,SNR=49							
SIV				LR		LR	02 02 44.4	
	comp=Z,4µm,18.7s,baz=305,slow=38							
	comp=Z,15nm,0.7s							
SALTA		**20.52**	**142**	P		Pn	01 54 48.5	-0.7
BBSD	**Serra de San D**	**20.86**	**117**	*e*P		**P**	**01 54 48.0**	**-2.1**
AC02	**Maricunga**	**21.11**	**152**	P		**P**	**01 54 53.4**	**+0.1**
AC02				IAmb		IAmb	01 54 56.7	
	comp=Z,75nm,0.9s							
AC02	**Maricunga**	**21.11**	**152**	P		**P**	**01 54 53.9**	**+0.6**
GO03	**Copiapo**	**21.29**	**155**	P		**P**	**01 54 55.1**	**+0.4**
BOAB	**BOACO BROADBAN**	**21.38**	**345**	P		**P**	**01 54 56.6**	**+0.9**
BOAB				IAmb		IAmb

DSLB Salisbury 29.94 38 *e*P **P 01 56 15.4 -0.7**
PRPB Parauapebas 30.02 88 *e*P **P 01 56 12.7 -4.3**
DWS Wesley 30.10 38 *e*P P 01 56 04.7 -13
comp=Z,1µm,20.8s,baz=258,slow=37
MDP Montagnes des 30.38 65 LR LR 02 09 06.8
comp=Z,1µm,20.8s,baz=258,slow=37
MAGL Barre de l'ile 30.41 38 *e*P **P 01 56 17.2 -3.1**
PSAL Palomas, Salto 30.82 140 *e*P **P 01 56 23.6 -0.2**
ANWB Willy Bob 31.48 35 x x 02 03 15.5
ANWB Willy Bob 31.48 35 *e*P **P 01 56 28.1 -1.5**
SMTB Santa Maria do 32.06 93 *e*P **P 01 56 34.1 -0.9**
GO06 Curarrehue 32.06 168 P **P 01 56 34.8 0.0**
GO06 IAmb IAmb 01 57 36.1
comp=Z,28nm,1.6s
BDFB Brasilia 32.10 106 P **P 01 56 34.7 -0.7**
comp=Z,13nm,0.7s,baz=264,slow=9.9,SNR=20
BDFB LR LR 02 10 21.4
comp=Z,4µm,18.5s,baz=277,slow=38
comp=Z,13nm,0.7s
BDFB Brasilia 32.10 106 P **P 01 56 34.5 -1.0**
BDFB *PP **pP 01 56 45.4 +1.5**
BDFB pmax pmax
comp=Z,56nm,1.6s
BDFB Brasilia 32.10 106 P **P 01 56 34.5 -1.0**
BDFB pP **pP 01 56 45.4 +1.5**
IPMB Ipameri, GO 32.37 110 *e*P **P 01 56 35.5 -2.3**
ANCO Parque Anchore 32.85 145 *e*P **P 01 56 41.4 -0.1**
PLCA Paso Flores 33.36 167 P **P 01 56 45.6 -0.5**
comp=Z,7.8nm,0.8s,baz=337,slow=12,SNR=22
comp=Z,7.8nm,0.8s
PLCA Paso Flores 33.36 167 IAmb IAmb 01 57 02.5
comp=Z,19nm,1.2s
PLCA Paso Flores 33.36 167 *e*P **P 01 56 46.7 +0.6**
PLCA Paso Flores 33.36 167 P **P 01 56 47.5 +1.3**
PLCA Paso Flores 33.36 167 P **P 01 56 46.9 +0.8**
PLCA PcP **PcP 01 59 27.9 +0.4**
RPN Rapa Nui 33.48 232 LR LR 02 06 36.0
comp=Z,1µm,21.4s,baz=60,slow=29
TRQA Tornquist 33.79 154 P **P 01 56 49.3 -0.6**
TRQA pmax pmax
comp=Z,15nm,0.8s
TRQA Tornquist 33.79 154 P **P 01 56 49.3 -0.6**
TRQA IAmb IAmb 01 56 50.8
comp=Z,15nm,0.8s
SPB Sao Paulo 34.69 120 P **P 01 56 57.0 -0.8**
SPB Sao Paulo 34.69 120 *e*P **P 01 56 57.6 -0.2**
SPB Sao Paulo 34.69 120 P **P 01 56 57.8 0.0**
PET01 Itanhaem-SP 35.08 121 *e*P **P 01 57 00.7 -0.4**
LL02 Futaleuf 35.47 170 P **P 01 57 03.8 -0.4**
JANB Januaria 35.56 104 *e*P **P 01 57 04.2 -1.2**
COYC Coyhaique 37.75 171 IAmb IAmb 01 57 25.4
comp=Z,23nm,0.9s
COYC Coyhaique 37.75 171 P **P 01 57 24.8 +1.2**
ARCA Araşuai, MG 38.03 107 *e*P **P 01 57 25.5 -1.0**
NBPS Pedro II - PI 38.51 87 *e*P **P 01 57 29.8 -0.8**
NBPN Ponto Novo - B 39.32 97 *e*P **P 01 57 36.2 -1.0**
RIB01 Linhares ES 39.90 110 *e*P **P 01 57 41.0 -1.0**
GUA01 Guaratinga, BA 40.05 106 *e*P **P 01 57 42.4 -0.9**
NBMO Morrinhos-CE 40.05 85 *e*P **P 01 57 42.2 -1.2**
CMC01 Camacan, BA 40.19 104 *e*P **P 01 57 44.1 -0.4**
NBIT Itapeh - BA 40.23 103 *e*P **P 01 57 43.8 -1.1**
250A Grady 40.51 352 IAmb IAmb 01 57 54.8
comp=Z,37nm,1.2s
154A Montrose 40.81 356 IAmb IAmb 01 57 56.8
comp=Z,44nm,1.1s
NBMA Muriti-CE 40.86 92 *e*P **P 01 57 49.0 -1.2**
HKT Hockley 40.98 339 *c i*P **P 01 57 51.7 +1.1**
HKT pmax pmax
comp=Z,30nm,1.4s
HKT Hockley 40.98 339 P **P 01 57 51.3 +0.6**
HKT IAmb IAmb 01 58 06.0
comp=Z,82nm,1.8s
HKT Hockley 40.98 339 P **P 01 57 50.7 +0.1**
HKT Hockley 40.98 339 P **P 01 57 52.2 +1.6**
HKT sP **pP 01 57 58.7 -0.5**
GOGA Godfrey 41.62 356 P **P 01 57 55.5 -0.5**
HNDO Hondo 41.95 335 IAmb IAmb 01 58 10.9
comp=Z,23nm,0.9s
Z47A Carrollton 41.99 350 IAmb IAmb 01 58 06.8
comp=Z,25nm,0.8s
143A Socs Landing, 42.21 346 IAmb IAmb 01 58 10.2
comp=Z,37nm,1.0s
NATX Nacogdoches 42.24 341 P **P 01 58 00.6 -0.5**
BBSR BB Station 43.02 19 P **P 01 58 06.2 -1.1**
X48A Hartselle 43.05 351 P **P 01 58 07.0 -0.6**
SAND Sanderson 43.59 332 P **P 01 58 12.1 0.0**
Z38A Mt. Pleasant 43.73 342 IAmb IAmb 01 58 15.3
comp=Z,25nm,0.8s
LPIG La Paz 43.74 318 LR LR 02 12 57.1
comp=Z,158nm,18.3s,baz=167,slow=31
TXAR Lajitas Array 43.82 330 P **P 01 58 14.7 +0.6**
comp=Z,0.8nm,0.8s,baz=154,slow=9.7,SNR=8.3
TXAR LR LR 02 15 56.4
comp=Z,483nm,18.0s,baz=127,slow=35
TXAR Lajitas Array 43.82 330 P **P 01 58 13.9 -0.2**
RCBR Riachuelo 43.83 90 LR LR 02 17 42.3
comp=Z,905nm,19.0s,baz=268,slow=38
TKL Tuckaleechee C 43.88 356 LR LR 02 15 23.7
comp=Z,616nm,21.8s,baz=178,slow=34
V48A Smith Brothers 44.29 352 IAmb IAmb 01 58 24.8
comp=Z,18nm,1.0s
UALR University of 44.42 345 P **P 01 58 17.9 -0.6**
UALR IAmb IAmb 01 58 27.2
comp=Z,32nm,1.0s
PLPT Palo Pinto 44.46 338 IAmb IAmb 01 58 38.9
comp=Z,23nm,1.0s
MIAR Mount Ida 44.52 344 IAmb IAmb 01 58 28.2
comp=Z,22nm,0.9s
MIAR Mount Ida 44.52 344 P **P 01 58 19.9 +0.5**
SGCY Sterling City 44.80 334 IAmb IAmb 01 58 41.3
comp=Z,23nm,1.2s
ABTX Abilene, Hawle 44.81 336 IAmb IAmb 01 58 41.5
comp=Z,25nm,1.0s
WVT Waverly 44.82 351 P **P 01 58 19.7 -2.1**
WVT pmax pmax
comp=Z,10.0nm,1.0s
WVT Waverly 44.82 351 P **P 01 58 19.7 -2.1**
WVT Waverly 44.82 351 P **P 01 58 19.9 -1.8**
WVT Waverly 44.82 351 P **P 01 58 20.3 -1.5**
WVT pP **pP 01 58 26.9 -3.5**
TMB01 Midkiff 45.02 333 IAmb IAmb 01 58 34.5
comp=Z,7.8nm,1.1s
MNHN Monahans 45.05 332 IAmb IAmb 01 58 35.6
comp=Z,16nm,1.0s
T59A Double "B" Far 45.11 3 P **P 01 58 23.4 -0.6**
LOOK Love County 45.12 340 IAmb IAmb 01 58 38.5
comp=Z,27nm,1.0s
WTFS Witchita Falls 45.37 338 IAmb IAmb 01 58 46.5
comp=Z,27nm,1.0s
APMT Aspermont 45.61 336 IAmb IAmb 01 58 48.8
comp=Z,34nm,1.2s
PARMO Parma 45.67 349 P **P 01 58 29.0 +0.5**
PBMO Poplar Bluff 45.91 348 IAmb IAmb 01 58 39.8
comp=Z,17nm,0.9s
POST Post 45.96 335 IAmb IAmb 01 58 42.4
comp=Z,19nm,0.9s
128A Castleberry Fa 46.00 333 P **P 01 58 31.7 +0.3**
W35A Tecumseh 46.08 341 IAmb IAmb 01 58 50.8
comp=Z,28nm,1.0s
TPB28 46.15 331 IAmb IAmb 01 58 44.8
comp=Z,8.9nm,1.1s
DKNS Dickens 46.24 336 IAmb IAmb 01 58 53.6
comp=Z,17nm,1.0s
HHAR Hobbs 46.25 344 IAmb IAmb 01 58 55.4
comp=Z,34nm,1.5s
WMOK Wichita Mounta 46.36 339 P **P 01 58 33.3 -0.7**
WMOK pmax pmax
comp=Z,13nm,1.2s
WMOK Wichita Mounta 46.36 339 P **P 01 58 33.3 -0.7**
WMOK Wichita Mounta 46.36 339 P **P 01 58 34.1 +0.1**
RLO Rose Lookout 46.44 343 IAmb IAmb 01 58 51.5
comp=Z,14nm,1.1s
U38A Gravette 46.52 344 IAmb IAmb 01 58 36.6
comp=Z,17nm,0.8s
S44A Carbondale 46.58 350 IAmb IAmb 01 58 42.5
comp=Z,28nm,1.1s
DEOK Depew 46.59 341 IAmb IAmb 02 00 10.3
comp=Z,13nm,0.8s
MNTX Cornudas Mount 46.60 330 P **P 01 58 36.6 +0.6**
WCI Wyandotte Cave 46.67 353 P **P 01 58 34.7 -1.7**
OK052 Battle Ridge R 46.82 341 IAmb IAmb 02 00 11.2
comp=Z,13nm,0.8s
EFI East Falkland 46.84 161⇓ *e*P **P 01 58 37.8 +0.2**
EFI pmax pmax
comp=Z,90nm,1.3s
FVM French Village 47.07 349 IAmb IAmb 01 58 47.3
comp=Z,25nm,1.2s
OK048 Pawnee Station 47.26 341 IAmb IAmb 01 59 00.7
comp=Z,21nm,1.0s
MSTX Muleshoe 47.27 334 IAmb IAmb 01 58 53.1
comp=Z,25nm,1.1s
OK051 E0350 and S346 47.30 341 IAmb IAmb 01 58 42.4
comp=Z,18nm,0.8s
CCM Cathedral Cave 47.31 348 P **P 01 58 41.0 -0.4**
CCM pmax pmax
comp=Z,38nm,1.0s
CCM Cathedral Cave 47.31 348 P **P 01 58 41.0 -0.4**
CCM Cathedral Cave 47.31 348 P **P 01 58 41.5 +0.2**
CCM pP **pP 01 58 48.8 -1.2**
CCM PcP **PcP 02 00 11.2 -0.9**
T35A Sooner Cattle 47.58 342 P **P 01 58 42.8 -0.8**
Q44A Meyer Farm, Va 47.72 350 IAmb IAmb 01 58 51.6
comp=Z,21nm,0.9s
OK038 West end E0370 47.91 340 IAmb IAmb 01 58 59.3
comp=Z,20nm,0.9s
MVL Millersville 48.19 4 IAmb IAmb 01 58 56.5
comp=Z,22nm,1.3s
ACSO Alum Creek Sta 48.38 357 IAmb IAmb 01 59 01.6
comp=Z,13nm,0.9s
PAGS Pennsylvania G 48.39 3 IAmb IAmb 01 58 57.7
comp=Z,29nm,1.3s
121A Cookes Peak, D 48.49 328 P **P 01 58 51.3 +0.5**
O48B Farmland 48.56 355 IAmb IAmb 01 58 57.7
comp=Z,23nm,1.0s
P40A Paris 48.89 348 IAmb IAmb 01 59 05.3
comp=Z,27nm,1.1s
N58A Sunbury 49.00 3 IAmb IAmb 01 59 01.7
comp=Z,18nm,1.1s
N47A Urbana 49.23 354 IAmb IAmb 01 59 07.4
comp=Z,25nm,1.1s
P38A Dawn 49.32 346 P **P 01 58 56.1 -0.7**
M57A Sunshine Farm, 49.48 3 IAmb IAmb 01 59 05.5
comp=Z,18nm,1.1s
KSU1 Kansas State U 49.63 343 IAmb IAmb 01 59 34.6
comp=Z,18nm,0.9s
R32A Long Quarter, 49.66 341 IAmb IAmb 01 59 11.9
comp=Z,24nm,1.1s
ANMO Albuquerque 49.76 331 LR LR 02 18 49.7
comp=Z,333nm,19.2s,baz=140,slow=34
ANMO Albuquerque 49.76 331⇑ *e*P **P 01 59 01.2 +0.6**
ANMO pmax pmax
comp=Z,14nm,1.4s
ANMO Albuquerque 49.76 331 P **P 01 59 00.5 0.0**
ANMO IAmb IAmb 01 59 19.0
comp=Z,13nm,1.1s
ANMO Albuquerque 49.76 331 P **P 01 59 01.4 +0.8**
ANMO Albuquerque 49.76 331 P **P 01 59 01.4 +0.8**
TUC Tucson 49.94 326 P **P 01 59 02.5 +0.6**
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 49.94 326 P **P 01 59 02.5 +0.6**
TUC Tucson 49.94 326 P **P 01 59 03.0 +1.2**
CBKS Cedar Bluff 50.35 340 IAmb IAmb 01 59 12.7
comp=Z,17nm,1.1s
BINY Binghamton 50.40 4 IAmb IAmb 01 59 12.4
comp=Z,18nm,1.1s
BINY Binghamton 50.40 4 P **P 01 59 04.7 -0.4**
L59A Walton 50.46 5 IAmb IAmb 01 59 19.1
comp=Z,25nm,1.0s
K57A Scipio Center 50.90 3 IAmb IAmb 01 59 16.1
comp=Z,21nm,1.1s
N35A Tabor 51.01 345 P **P 01 59 08.5 -1.2**
N35A IAmb IAmb 01 59 09.9
comp=Z,23nm,0.9s
TRY Troy 51.13 6 IAmb IAmb 01 59 11.8
comp=Z,33nm,1.2s
L40A Anmosa 51.17 349 IAmb IAmb 01 59 18.1
comp=Z,32nm,1.1s
W18A Petrified Fore 51.52 329 IAmb IAmb 01 59 28.1
comp=Z,33nm,1.1s
S22A 4UR Ranch, Cre 52.23 333 P **P 01 59 19.3 +0.1**
HNH Hanover 52.25 7 IAmb IAmb 01 59 19.8
comp=Z,26nm,1.3s
MVCO Mesa Verde 52.56 331 P **P 01 59 21.9 +0.3**
SADO Sadowa 52.84 1 LR LR 02 21 13.6
comp=Z,405nm,21.5s,baz=173,slow=35
I40A Norwalk 52.84 350 IAmb IAmb 01 59 23.1
comp=Z,15nm,0.9s
FRNY Flat Rock 53.22 6 IAmb IAmb 01 59 37.4
comp=Z,12nm,0.9s
PV01 Paradox Valley 53.34 332 IAmb IAmb 01 59 41.5
comp=Z,27nm,1.6s
ISCO Idaho Springs 53.42 336 P **P 01 59 26.8 -1.2**
ISCO pmax pmax
comp=Z,5.0nm,1.1s
ISCO Idaho Springs 53.42 336 P **P 01 59 26.8 -1.2**
ISCO Idaho Springs 53.42 336 P **P 01 59 28.3 +0.3**
PV15 Paradox Valley 53.47 332 IAmb IAmb 01 59 50.8
comp=Z,20nm,1.0s
PV02 Paradox Valley 53.48 332 IAmb IAmb 01 59 45.7
comp=Z,23nm,1.0s
PV13 Radium Mtn., P 53.48 332 IAmb IAmb 01 59 45.6
comp=Z,18nm,1.2s
I37A Lemond, Waseca 53.48 348 IAmb IAmb 01 59 27.3
comp=Z,15nm,1.0s
PV05 Paradox Valley 53.54 332 IAmb IAmb 01 59 41.8
comp=Z,15nm,1.3s
PV03 Paradox Valley 53.56 332 IAmb IAmb 02 00 00.5
comp=Z,15nm,1.3s
PV18 Skein Mesa, Pa 53.59 332 IAmb IAmb 01 59 42.2
comp=Z,25nm,1.3s
PV12 Saucer Basin, 53.59 332 IAmb IAmb 01 59 50.9
comp=Z,22nm,0.9s
PV10 Paradox Valley 53.75 332 IAmb IAmb 01 59 56.1
comp=Z,18nm,1.1s
ECSD EROS Data Cent 53.95 345 P **P 01 59 30.2 -1.2**
ECSD EROS Data Cent 53.95 345 P **P 01 59 30.4 -1.0**
G62A West of Eustis 53.97 8 IAmb IAmb 01 59 33.1
comp=Z,27nm,1.0s
PFO Pinyon Flats O 54.19 322 LR LR 02 18 50.7
comp=Z,210nm,21.0s,baz=160,slow=32
PKME Peaks-Kenny Pk 54.20 9 IAmb IAmb 01 59 34.6
comp=Z,16nm,1.1s
SPMN Marine on St. 54.52 349 IAmb IAmb 01 59 35.4
comp=Z,15nm,0.8s
KNB Kanab 54.58 328 IAmb IAmb 01 59 52.8
comp=Z,20nm,1.3s
PKCU Pink Cliffs 54.63 329 IAmb IAmb 01 59 51.5
comp=Z,18nm,1.0s
O20A White River Ci 54.82 334 IAmb IAmb 01 59 51.1
comp=Z,14nm,1.2s
F64A Sherman 54.94 10 IAmb IAmb 01 59 39.3
comp=Z,17nm,1.2s
SZCU Shurtz Canyon 55.15 328 IAmb IAmb 01 59 54.4
comp=Z,14nm,1.2s
Q16A Castle Valley 55.20 331 IAmb IAmb 01 59 55.1
comp=Z,14nm,1.3s
F33A 5 Mile Ranch, 55.85 346 IAmb IAmb 01 59 45.0
comp=Z,11nm,0.8s
D62A Allapoint, All 56.01 9 IAmb IAmb 01 59 47.5
comp=Z,18nm,1.0s
BSUT Blindstream Ca 56.28 332 IAmb IAmb 02 00 06.7
comp=Z,12nm,1.1s
FURC Furnace Creek, 56.41 325 IAmb IAmb 02 01 28.0
comp=Z,7.6nm,0.6s
RSSD Black Hills 56.54 339 P **P 01 59 50.3 -0.1**
RSSD pmax pmax
comp=Z,10.0nm,1.2s
RSSD Black Hills 56.54 339 P **P 01 59 50.3 -0.1**
RSSD Black Hills 56.54 339 P **P 01 59 50.6 +0.2**
LDAQ Lac Daran 56.57 7 IAmb IAmb 01 59 51.0
comp=Z,28nm,1.1s
BATG Bathurst New B 56.72 11 P **P 01 59 51.0 -0.3**
BATG IAmb IAmb 01 59 52.6
comp=Z,15nm,0.8s
DUG Dugway, Tooele 56.99 330 IAmb IAmb 02 00 08.0
comp=Z,19nm,1.4s
DUG Dugway, Tooele 56.99 330 P **P 01 59 54.4 +0.8**
HWUT Hardware Ranch 57.49 332 IAmb IAmb 02 00 10.5
comp=Z,19nm,1.1s
HWUT Hardware Ranch 57.49 332 P **P 01 59 57.3 +0.2**
PDAR Pinedale Array 57.54 335 P **P 01 59 56.2 -1.2**
comp=Z,1.1nm,0.8s,baz=126,slow=7.5,SNR=10.0
PDAR LR LR 02 26 02.5
comp=Z,136nm,18.1s,baz=142,slow=37
comp=Z,1.1nm,0.8s
PDAR Pinedale Array 57.54 335 P **P 01 59 56.6 -0.9**
AGMN Agassiz Nation 58.08 348 P **P 02 00 00.5 -0.4**
AHID Auburn Hatcher 58.20 333 P **P 02 00 02.3 +0.2**
ECR Eagle Creek 58.55 333 IAmb IAmb 02 00 21.6
comp=Z,16nm,1.0s
NVAR Mina Array Bea 58.59 325 P **P 02 00 05.4 +0.5**
comp=Z,1.5nm,0.8s,baz=138,slow=6.9,SNR=9.8
NVAR LR LR 02 24 35.7
comp=Z,177nm,19.1s,baz=110,slow=35
comp=Z,1.5nm,0.8s
NVAR Mina Array Bea 58.59 325 P **P 02 00 04.4 -0.6**
ELK Elko 58.62 329 P **P 02 00 04.6 -0.4**
comp=Z,2.1nm,0.8s,baz=147,slow=4.8,SNR=9.9
ELK LR LR 02 24 10.9
comp=Z,500nm,18.5s,baz=144,slow=35
comp=Z,2.1nm,0.8s
ELK Elko 58.62 329 P **P 02 00 04.7 -0.4**
ELK **pP 02 00 15.2 +1.2**
ELK IAmb IAmb 02 00 18.4
comp=Z,16nm,1.4s
TAOE Nuku Hiva Isla 59.41 265 *e*P **P 02 00 11.3 +0.4**
comp=Z,75nm,36.1s
TAOE *e*S **S 02 08 13.9 -4.7**
comp=Z,232nm,27.2s
TAOE *e*LR LR 02 17 44.3
comp=Z,923nm,24.5s
YNE Yellowstone No 59.55 336 IAmb IAmb 02 01 35.8
comp=Z,14nm,1.0s
ULM Lac du Bonnet 59.94 348 P **P 02 00 12.6 -1.1**
comp=Z,10nm,0.8s,baz=147,slow=8.3,SNR=16
ULM LR LR 02 27 18.1
comp=Z,110nm,18.1s,baz=138,slow=37
comp=Z,10nm,0.8s
ULM Lac du Bonnet 59.94 348 IAmb IAmb 02 00 13.7
comp=Z,12nm,0.8s
PAHR Pah Rah Range 60.09 326 IAmb IAmb 02 00 27.1
comp=Z,12nm,1.1s
HLID Hailey 60.34 332 P **P 02 00 16.7 -0.2**
BCYI Bear Canyon 60.45 333 IAmb IAmb 02 00 31.1
comp=Z,13nm,1.2s
MCMT McKenzie Canyo 60.61 334 P **P 02 00 18.3 -0.5**
MCMT pP **pP 02 00 29.4 +1.8**
DRLN Deer Lake 60.63 17 P **P 02 00 17.7 -0.7**
BOZ Bozeman (W) 60.70 335 P **P 02 00 18.5 -0.7**
BOZ pmax pmax
comp=Z,12nm,1.4s
BOZ Bozeman (W) 60.70 335 P **P 02 00 18.5 -0.7**
BOZ IAmb IAmb 02 00 32.9
comp=Z,12nm,1.4s
MFID Camas Ranch 60.90 331 IAmb IAmb 02 00 38.1
comp=Z,14nm,1.1s
DLMT Dillon 60.92 334 IAmb IAmb 02 00 44.9
comp=Z,17nm,1.3s
SUTB Sutter Butte 61.14 324 IAmb IAmb 02 00 37.7
comp=Z,15nm,1.1s
ORV Oroville 61.19 324 IAmb IAmb 02 00 35.1
comp=Z,19nm,1.1s
WVOR Wild Horse Val 61.59 328 P **P 02 00 23.8 -1.6**
EGMT Eagleton 61.95 338 P **P 02 00 26.1 -1.4**
EGMT IAmb IAmb 02 00 51.0
comp=Z,11nm,1.0s
I07A Izee 63.21 329 IAmb IAmb 02 01 09.2
comp=Z,36nm,1.9s
YBH Yreka Blue Hor 63.31 325 LR LR 02 27 22.5
comp=Z,176nm,19.4s,baz=144,slow=35
PINE Pine Mountain 63.75 328 P **P 02 00 40.2 +0.4**
G08A Pilot Rock 63.80 330 P **P 02 00 39.8 -0.2**
G08A pP **pP 02 00 50.4 +1.5**
G08A IAmb IAmb 02 00 53.3
comp=Z,25nm,1.6s
SCHQ Schefferville 63.88 8 P **P 02 00 38.8 -1.3**
comp=Z,6.6nm,0.8s,baz=193,slow=6.4,SNR=9.8
SCHQ LR LR 02 28 59.6
comp=Z,178nm,20.9s,baz=195,slow=36
comp=Z,6.6nm,0.8s
SCHQ Schefferville 63.88 8 P **P 02 00 38.9 -1.3**
SCHQ IAmb IAmb 02 00 41.1
comp=Z,12nm,1.1s
NEW Newport 65.14 334 P **P 02 00 47.4 -1.1**
comp=Z,2.2nm,0.9s,baz=141,slow=8.2,SNR=3.8
NEW LR LR 02 30 00.7
comp=Z,145nm,18.0s,baz=138,slow=37
comp=Z,2.2nm,0.9s
NEW Newport 65.14 334 P **P 02 00 48.1 -0.4**
FFC Flin Flon 65.46 346 P **P 02 00 49.5 -0.9**
FFC pmax pmax
comp=Z,5.0nm,1.0s
FFC Flin Flon 65.46 346 P **P 02 00 49.5 -0.9**
FFC Flin Flon 65.46 346 P **P 02 00 48.5 -2.0**
FFC Flin Flon 65.46 346 P **P 02 00 49.9 -0.5**
FFC PcP **PcP 02 01 21.4 -0.8**
FCC Fort Churchill 67.81 352 IAmb IAmb 02 01 05.7
comp=Z,21nm,1.0s
PPT2 Papeete2 68.12 254 *e*LQ LQ 02 18 56.1
comp=Z,148nm,24.8s
PPT2 *e*LR LR 02 21 45.0
comp=Z,1µm,26.2s
PPT2 *e*LR LR 02 21 45.5
comp=Z,838nm,28.5s
PMOZ Porto Moniz, M 72.35 52 *e*LR LR 02 30 12.2
PMOZ *i* IAMs_20 IAMs_20 02 31 37.9
comp=Z,361nm,20.0s
FRB Frobisher Bay 72.38 5 LR LR 02 34 53.0
comp=Z,194nm,20.9s,baz=184,slow=37
BBB Bella Bella 72.92 331 LR LR 02 33 28.7
comp=Z,192nm,19.1s,baz=150,slow=36
PMPST Porto Santo, M 73.12 52 *e*P **P 02 01 36.1 -2.2**
BLKN Baker Lake 73.43 353 IAmb IAmb 02 01 39.4
comp=Z,18nm,1.1s
IVI Ivigtut 73.66 15 P **P 02 01 39.7 -1.1**
IVI IAmb IAmb 02 01 41.7
comp=Z,27nm,1.0s
IVI Ivigtut 73.66 15 P **P 02 01 38.8 -2.1**
IVI Ivigtut 73.66 15 P **P 02 01 40.9 0.0**
IVI Ivigtut 73.66 15 *i* P **P 02 01 39.9 -0.9**
IVI IAmb IAmb 02 01 41.4
comp=Z,26nm,1.0s
NRS Narsarsuaq 74.37 17 *i* P **P 02 01 43.7 -1.4**
NRS IAmb IAmb 02 01 44.9
comp=Z,17nm,0.9s
NUUK Nuuk 75.38 12 P **P 02 01 51.5 +0.7**
YKA Yellowknife Ar 75.46 344 P **P 02 01 50.4 -1.0**
comp=Z,1.8nm,0.8s,baz=141,slow=6.0,SNR=13
YKA LR LR 02 37 35.1
comp=Z,185nm,18.3s,baz=129,slow=38
comp=Z,1.8nm,0.8s
YKA Yellowknife Ar 75.46 344 P **P 02 01 49.8 -1.5**
VNA1 Neumayer--Stat 76.19 161⇑ P **P 02 01 55.7 +0.3**
comp=Z,18nm,0.8s
DBIC Dimbokro 76.39 81 P **P 02 01 57.3 -0.4**
comp=Z,22nm,0.8s,baz=260,slow=5.7,SNR=22
DBIC LR LR 02 33 15.0
comp=Z,1µm,21.5s,baz=272,slow=34
comp=Z,22nm,0.8s
DBIC Dimbokro 76.39 81 P **P 02 01 56.5 -1.2**
DBIC Dimbokro 76.39 81 P **P 02 01 58.1 +0.4**
DBIC Dimbokro 76.39 81 P **P 02 01 58.0 +0.3**
VNA2 Neumayer--Watz 76.53 161⇑ P **P 02 01 57.2 -0.3**
comp=Z,15nm,0.6s,baz=288,slow=5.4
VNA2 Neumayer--Watz 76.53 161 P **P 02 01 57.4 0.0**
LIRD Liard River Hi 76.85 338 P **P 02 01 59.9 +0.6**
baz=133
T35M Bob Quinn 76.92 334 P **P 02 02 00.4 +0.6**
baz=129
CRAG Craig 77.28 332 P **P 02 02 02.3 +0.5**
baz=126
WRAK Wrangell Islan 77.49 333 P **P 02 02 03.8 +0.8**
baz=127
ILON Igloolik, Nuna 77.51 359 IAmb IAmb 02 02 02.4
comp=Z,12nm,0.9s
RAR Rarotonga 77.54 250 LR LR 02 28 01.5
comp=Z,244nm,19.6s,baz=90,slow=29
DLBC Dease Lake 77.74 336 P **P 02 02 04.0 -0.4**
comp=Z,7.8nm,0.9s,baz=140,slow=4.6,SNR=12
DLBC LR LR 02 37 25.1
comp=Z,220nm,18.1s,baz=64,slow=36
comp=Z,7.8nm,0.9s
DLBC Dease Lake 77.74 336 P **P 02 02 05.0 +0.6**
baz=129,SNR=7.8
S34M Telegraph Cree 77.87 335 P **P 02 02 05.6 +0.5**
baz=128
SFJD Kangerlussuaq 78.06 11 LR LR 02 36 25.9
comp=Z,228nm,21.8s,baz=206,slow=36
SNAA Sanae 78.12 162⇑ P **P 02 02 06.3 -0.1**
comp=Z,303nm,0.7s
SNAA Sanae 78.12 162 P **P 02 02 06.0 -0.4**
comp=Z,18nm,0.9s,baz=273,slow=5.4,SNR=38
comp=Z,18nm,0.9s
SNAA Sanae 78.12 162*c i*P **P 02 02 06.3 -0.1**
SNAA pmax pmax
comp=Z,22nm,1.0s
SNAA Sanae 78.12 162 P **P 02 02 06.2 -0.1**
SNAA IAmb IAmb 02 02 07.6
comp=Z,18nm,0.9s

SNAA **Sanae** 78.12 162 P P 02 02 06.6 +0.1
WRGLY **Wrigley** 78.62 341 IAmb IAmb 02 02 24.3
comp=Z,36nm,1.6s
WRGLY **Wrigley** 78.62 341 P P 02 02 09.8 +0.7
baz=136
R33M **Jennings River** 78.73 336 P P 02 02 10.5 +0.5
baz=128,SNR=5.1
Q32M **Nakina River** 78.99 335 IAmb IAmb 02 02 14.8
comp=Z,15nm,1.0s
Q32M **Nakina River** 78.99 335 P P 02 02 12.0 +0.5
baz=127,SNR=6.6
SIT **Sitka** 79.20 333 P P 02 02 13.0 +0.6
baz=124
TROLL **Troll, Antarti** 79.83 162 ⇑P P 02 02 16.0 +0.1
comp=Z,663nm,0.6s
P32M **Atlin** 79.96 335 P P 02 02 16.7 +0.1
baz=126
P33M **Teslin, Yukon** 79.97 336 IAmb IAmb 02 02 28.0
comp=Z,16nm,1.3s
P33M **Teslin, Yukon** 79.97 336 P P 02 02 17.1 +0.5
baz=127
ANGG **Ammassalik, Gr** 80.05 17 IAmb IAmb 02 02 16.9
comp=Z,23nm,1.0s
ANGG **Ammassalik, Gr** 80.05 17 *i* P P 02 02 15.0 -1.8
ANGG IAmb IAmb 02 02 16.5
comp=Z,22nm,1.0s
AVE **Averroes** 80.25 54 P P 02 02 18.2 -0.5
AVE **Averroes** 80.25 54 P P 02 02 19.9 +1.2
MORF **Marmelete** 80.47 50 *eP* P 02 02 19.8 0.0
MORF IAmb IAmb 02 02 21.8
comp=Z,31nm,1.1s
MORF **Marmelete** 80.47 50 *eP* P 02 02 19.8 0.0
PTEO **Sao Teotonio** 80.49 50 *eP* P 02 02 20.4 +0.6
ACRG **Accra** 80.77 83 P P 02 02 21.4 -0.5
ACRG **Accra** 80.77 83 P P 02 02 22.6 +0.7
MMPY **Sheldon Lake,** 80.85 339 P P 02 02 21.5 +0.2
MMPY **Sheldon Lake,** 80.85 339 P P 02 02 21.3 0.0
baz=129
PLOUS **Minas do Lousa** 80.87 49 *eP* P 02 02 22.6 +0.7
PLOUS *i* IAmb IAmb 02 02 25.4
comp=Z,31nm,1.7s
MESJ **Messejana** 80.96 50 *eP* P 02 02 22.2 -0.2
MESJ IAmb IAmb 02 02 24.6
comp=Z,42nm,1.8s
MESJ **Messejana** 80.96 50 *eP* P 02 02 22.2 -0.2
PCVE **Castro Verde** 81.03 50 *eP* P 02 02 23.7 +0.9
PCVE *i* IAmb IAmb 02 02 28.2
comp=Z,27nm,1.8s
PSBE **So Bento** 81.06 48 *eP* P 02 02 23.5 +0.6
WHY **Whitehorse** 81.06 336 P P 02 02 22.4 -0.1
baz=125
MOE **Montemor** 81.07 49 *eP* P 02 02 23.4 +0.4
PVAQ **Vaqueiros** 81.21 50 *eS* SKSac 02 12 40.7 -0.4
PVAQ *eLR* LR 02 30 38.3
PVAQ *i* IAMs_20 IAMs_20 02 37 11.6
comp=Z,452nm,20.0s
SAATT **Saattut** 81.24 9 *i* P P 02 02 22.7 -0.4
SAATT IAmb IAmb 02 02 23.5
comp=Z,8.5nm,0.8s
PBEJ **Beja** 81.28 50 *eP* P 02 02 25.3 +1.2
EVO **Evora** 81.33 49 *eP* P 02 02 25.5 +1.2
PMTG **Montargil** 81.34 48 *eP* P 02 02 24.6 +0.3
PMTG *i* IAmb IAmb 02 02 25.8
comp=Z,21nm,1.0s
PARRA **Arraiolos** 81.39 49 *eP* P 02 02 25.2 +0.5
PSARD **Sardoal** 81.55 48 *eP* P 02 02 25.8 +0.4
O30N **Mendenhall** 81.61 336 IAmb IAmb 02 02 27.2
comp=Z,13nm,1.1s
O30N **Mendenhall** 81.61 336 P P 02 02 25.5 +0.1
baz=124
P30M **Million Dollar** 81.61 335 P P 02 02 25.4 0.0
baz=123
P29M **Windy Craggy** 81.68 334 P P 02 02 26.2 +0.4
baz=122
PTO **Porto** 81.71 46 *eP* P 02 02 26.5 +0.3
M31M **Drury Creek, Y** 81.76 337 P P 02 02 26.4 +0.3
baz=126,SNR=6.1
QSPA **South Pole Qui** 81.79 180 P P 02 02 26.5 +0.1
comp=Z,25nm,0.9s,baz=148,slow=2.6,SNR=56
comp=Z,25nm,0.9s
QSPA **South Pole Qui** 81.79 180 P P 02 02 25.4 -1.0
QSPA **South Pole Qui** 81.79 180 P P 02 02 27.2 +0.7
N31M **Braeburn, Yuko** 81.89 336 IAmb IAmb 02 02 28.4
comp=Z,20nm,0.9s
N31M **Braeburn, Yuko** 81.89 336 P P 02 02 27.2 +0.3
baz=124,SNR=5.2
PMRV **Marv??o** 82.06 48 *e*LR LR 02 31 37.4
PMRV *i* IAMs_20 IAMs_20 02 37 25.0
comp=Z,404nm,18.0s
PVIS **Viseu** 82.09 47 *eP* P 02 02 28.5 +0.2
PCBR **Castelo Branco** 82.12 48 *eP* P 02 02 28.9 +0.5
IFR **Ifrane** 82.14 55 P P 02 02 30.7 +1.7
PGAV **Gavieira, Arco** 82.21 46 *eP* P 02 02 29.4 +0.3
PGAV *e*LR LR 02 32 05.6
PGAV *i* IAMs_20 IAMs_20 02 39 54.0
comp=Z,257nm,18.0s
HYT **Haines Junctio** 82.22 335 P P 02 02 28.9 +0.2
baz=123
MTE **Manteigas** 82.24 47 *eP* P 02 02 29.2 0.0
MTE *i* IAmb IAmb 02 02 30.2
comp=Z,24nm,1.2s
MD01 **Midelt array s** 82.27 55 P P 02 02 29.4 -0.2
PCAB **Cabril** 82.30 46 *eP* P 02 02 29.8 +0.4
PCAB *i* IAmb IAmb 02 02 60.0
comp=Z,36nm,1.8s
POLO **Lamas de Olo** 82.36 46 *eP* P 02 02 30.0 +0.2
MDT **Midelt** 82.38 55 LR LR 02 37 21.8
comp=Z,366nm,19.8s,baz=260,slow=34
PVRL **Vila Real** 82.39 46 *eP* P 02 02 30.0 +0.1
O29M **Mount Kennedy** 82.39 335 P P 02 02 29.7 +0.1
baz=122
UPNV **Upernavik** 82.39 7 *i* P P 02 02 28.4 -0.8
UPNV IAmb IAmb 02 02 31.4
comp=Z,12nm,1.2s
N30M **Aishikik Lake** 82.40 336 IAmb IAmb 02 02 31.5
comp=Z,17nm,0.8s
N30M **Aishikik Lake** 82.40 336 P P 02 02 29.6 +0.1
baz=123,SNR=7.6
YUK6 **Outpost Mounta** 82.64 335 P P 02 02 30.9 -0.1
baz=122
NVL **N'lazarevskaya** 82.82 160 *eP* P 02 02 31.8 +0.3
NVL *e* 02 05 36.7
NVL *eS* S 02 12 53.4 +5.7
NVL pmax pmax
comp=Z,4.0nm,0.6s
MVO **Moncorvo** 82.85 47 *eP* P 02 02 32.9 +0.6
MVO *e*LR LR 02 33 02.1
MVO *i* IAMs_20 IAMs_20 02 36 04.3
comp=Z,230nm,22.0s
M30M **Minto, Yukon** 82.90 337 P P 02 02 32.0 -0.1
baz=124
YUK4 **Talbot Arm** 82.97 335 P P 02 02 32.8 +0.1
baz=122
PBRG **Braganca** 83.25 46 *eP* P 02 02 35.7 +1.4
PBRG *i* IAmb IAmb 02 02 38.1
comp=Z,29nm,1.8s
O28M **Mount Upton** 83.32 335 P P 02 02 34.5 -0.1
baz=120
YUK8 **Steele Glacier** 83.40 335 P P 02 02 35.0 0.0
baz=121
M29M **Somme Creek** 83.48 336 P P 02 02 35.2 +0.1
baz=122,SNR=18
EMAL **Malaga-Limoner** 83.55 52 P P 02 02 37.5 +1.6
L29M **L29M** 83.70 337 P P 02 02 36.3 +0.1
baz=122,SNR=29
J30M **Hart River** 83.84 339 IAmb IAmb 02 02 38.5
comp=Z,13nm,0.9s
J30M **Hart River** 83.84 339 P P 02 02 37.2 +0.2
baz=124,SNR=24
H31M **Peel River** 83.86 340 IAmb IAmb 02 02 38.2
comp=Z,16nm,0.9s
H31M **Peel River** 83.86 340 P P 02 02 37.0 +0.1
baz=126,SNR=12
K29M **Barlow Dome** 83.87 338 IAmb IAmb 02 02 38.2
comp=Z,13nm,0.8s
K29M **Barlow Dome** 83.87 338 P P 02 02 37.0 -0.1
baz=123,SNR=16
TORD **Torodi Ar. Bea** 83.88 76 P P 02 02 37.6 -0.5
comp=Z,21nm,0.9s,baz=261,slow=3.7,SNR=61
TORD LR LR 02 38 46.1
comp=Z,480nm,20.9s,baz=248,slow=35
comp=Z,21nm,0.9s
TORD **Torodi Ar. Bea** 83.88 76 P P 02 02 37.2 -0.8
TORD pP pP 02 02 48.6 +1.4
KULLO **Kullorsuaq** 83.93 6 P P 02 02 37.4 +0.3
YUK3 **Moose Creek** 83.94 335 P P 02 02 37.3 -0.4
baz=120
I30M **Mount Dempster** 84.22 339 P P 02 02 38.8 -0.1
baz=124,SNR=29
VAL **Valentia** 84.31 36 P P 02 02 40.2 +0.8
PAB **San Pablo** 84.35 49 P P 02 02 39.8 -0.3
PAB pmax pmax
comp=Z,17nm,1.0s
PAB **San Pablo** 84.35 49 P P 02 02 39.8 -0.3
PAB IAmb IAmb 02 02 41.1
comp=Z,16nm,1.0s
BVCY **Beaver Creek** 84.42 336 P P 02 02 40.2 +0.3
baz=120
J29N **Klondike Camp** 84.45 338 P P 02 02 40.1 0.0
baz=122
G31M **Satah River** 84.50 341 P P 02 02 40.1 0.0
baz=126,SNR=18
CRQE **Cirque** 84.56 334 P P 02 02 40.3 -0.4
baz=118
F31M **Tsiigehtchic** 84.64 342 P P 02 02 40.4 -0.4
baz=127,SNR=11
ESDC **Sonseca Array** 84.67 49 P P 02 02 41.5 -0.2
comp=Z,8.4nm,0.9s,baz=267,slow=5.2,SNR=46
ESDC LR LR 02 38 29.8
comp=Z,456nm,19.3s,baz=250,slow=34
comp=Z,8.4nm,0.9s
ESDC **Sonseca Array** 84.67 49 P P 02 02 41.4 -0.3
ESBB **Sonseca Array** 84.67 49 IAmb IAmb 02 02 42.7
comp=Z,13nm,1.1s
DAWY **Dawson** 84.69 338 P P 02 02 40.9 -0.3
baz=121,SNR=7.2
BORG **Borgarnes** 84.79 22 P P 02 02 41.9 +0.3
BORG pmax pmax
comp=Z,35nm,0.6s
BORG **Borgarnes** 84.79 22 P P 02 02 41.9 +0.3
BORG **Borgarnes** 84.79 22 P P 02 02 42.8 +1.2
TULEG **Thule** 84.96 3 *i* P P 02 02 40.8 -1.5
TULEG IAmb IAmb 02 02 44.6
comp=Z,9.7nm,0.9s
EPYK **Eagle Plains** 84.98 340 IAmb IAmb 02 02 43.7
comp=Z,11nm,0.9s
EPYK **Eagle Plains** 84.98 340 P P 02 02 42.5 -0.1
baz=124,SNR=11
SUMG **Summit** 85.06 12 P P 02 02 43.2 -0.1
SUMG **Summit** 85.06 12 *i* P P 02 02 43.0 -0.3
SUMG IAmb IAmb 02 02 44.2
comp=Z,23nm,0.9s
INK **Inuvik** 85.10 343 LR LR 02 43 32.9
comp=Z,190nm,19.0s,baz=101,slow=38
INK **Inuvik** 85.10 343 P P 02 02 42.9 -0.1
baz=127,SNR=14
INK **Inuvik** 85.10 343 P P 02 02 43.0 -0.1
BCAR **Beaver Creek A** 85.11 336 P P 02 02 43.1 -0.2
L27K **Beaver Creek,** 85.13 336 P P 02 02 43.6 +0.1
baz=119
G30M **tAoh Zraii Nji** 85.16 341 P P 02 02 43.7 +0.2
baz=124
BMRM **Bremner River** 85.31 334 P P 02 02 44.6 +0.1
baz=116
IGLA **Glengowla, Co** 85.33 35 P P 02 02 44.9 +0.3
F30M **Barrier River** 85.38 341 IAmb IAmb 02 02 44.9
comp=Z,12nm,0.9s
F30M **Barrier River** 85.38 341 P P 02 02 44.5 0.0
baz=125,SNR=9.9
A36M **Sachs Harbour** 85.40 347 P P 02 02 44.4 -0.1
baz=135
H29M **Whitestone** 85.46 340 IAmb IAmb 02 02 46.2
comp=Z,13nm,0.9s
H29M **Whitestone** 85.46 340 P P 02 02 44.9 0.0
baz=122,SNR=12
N25K **Chitina, Valde** 85.59 334 P P 02 02 45.7 -0.1
baz=116
I28M **Miner Creek** 85.60 339 P P 02 02 45.7 -0.1
baz=121,SNR=36
EYAK **Cordova Ski Ar** 85.64 333 P P 02 02 45.8 -0.1
baz=115
G29M **Pine Creek** 85.71 340 P P 02 02 46.2 0.0
baz=123,SNR=19
L26K **Log Cabin Wild** 85.72 336 P P 02 02 45.9 -0.5
L26K IAmb IAmb 02 02 48.2
comp=Z,8.7nm,1.0s
L26K **Log Cabin Wild** 85.72 336 P P 02 02 46.2 -0.1
baz=118
KLU **Klutina** 86.12 334 P P 02 02 48.2 -0.3
baz=115
ELIB **Princess Elisa** 86.26 162 *d*P P 02 02 49.0 -0.1
comp=Z,14nm,0.7s
ELIB *d*pP pP 02 02 59.7 +1.4
ELIB *d*PP PP 02 06 14.1 +4.3
IWEX **Carrickbyrne,** 86.47 36 P P 02 02 50.3 +0.1
E29M **Blow River** 86.48 342 P P 02 02 49.7 -0.2
baz=123,SNR=34
M24K **Tolsona, Glenn** 86.49 334 P P 02 02 50.0 -0.2
baz=115
H27K **Steamboat Moun** 86.56 339 P P 02 02 50.1 -0.4
baz=119,SNR=12
F28M **Old Crow** 86.70 341 IAmb IAmb 02 02 51.6
comp=Z,8.0nm,0.8s
F28M **Old Crow** 86.70 341 P P 02 02 50.6 -0.5
baz=121,SNR=12
I26K **Coal Creek Min** 86.71 338 IAmb IAmb 02 02 51.6
comp=Z,9.7nm,0.8s
I26K **Coal Creek Min** 86.71 338 P P 02 02 50.6 -0.5
baz=118
SCM **Sheep Creek Mo** 86.87 334 P P 02 02 51.6 -0.5
baz=114
G27K **Doyon Strip** 86.89 340 IAmb IAmb 02 02 52.5
comp=Z,5.8nm,0.8s
G27K **Doyon Strip** 86.89 340 P P 02 02 51.5 -0.6
baz=119,SNR=14
E28M **Babbage River** 87.10 342 IAmb IAmb 02 03 08.2
comp=Z,6.9nm,0.8s
E28M **Babbage River** 87.10 342 P P 02 02 52.2 -0.8
baz=121,SNR=10
SEW **Seward** 87.15 332 P P 02 02 52.8 -0.5
baz=112
NEEM **North Greenlan** 87.18 6 *i* P P 02 02 54.0 +0.4
NEEM IAmb IAmb 02 02 56.1
comp=Z,42nm,1.0s
ILTH **Belurgan, Co L** 87.24 35 P P 02 02 53.7 -0.2
D28M **Stokes Point** 87.24 342 P P 02 02 53.5 -0.1
baz=122
WAT6 **Susitna Watana** 87.35 335 P P 02 02 53.9 -0.6
baz=114
E27K **Coleen River** 87.55 341 IAmb IAmb 02 03 11.0
comp=Z,9.3nm,1.0s
E27K **Coleen River** 87.55 341 P P 02 02 55.0 -0.3
baz=119,SNR=14
PMR **Palmer** 87.56 333 P P 02 02 54.9 -0.4
baz=112
BRSE **Bradley Lake S** 87.62 331 P P 02 02 55.2 -0.5
baz=111
SCO **Scoresbysund** 87.67 17 IAmb IAmb 02 02 56.8
comp=Z,10nm,0.8s
SCO **Scoresbysund** 87.67 17 *i* P P 02 02 55.4 -0.2
SCO IAmb IAmb 02 02 56.6
comp=Z,9.1nm,0.7s
G26K **Porcupine Rive** 87.70 339 IAmb IAmb 02 02 56.7
comp=Z,8.6nm,0.8s
G26K **Porcupine Rive** 87.70 339 P P 02 02 55.7 -0.2
baz=117
VNDA **Vanda** 87.78 191 P P 02 02 56.8 +0.6
comp=Z,1.4nm,0.8s,baz=119,slow=2.3,SNR=9.7
VNDA LR LR 02 33 51.4
comp=Z,232nm,21.0s,baz=123,slow=30
comp=Z,1.4nm,0.8s
VNDA **Vanda** 87.78 191 P P 02 02 56.7 +0.5
VNDA **Vanda** 87.78 191 P P 02 02 57.0 +0.8
WAT1 **Susitna Watana** 87.79 335 P P 02 02 56.0 -0.5
baz=113
D27M **Malcolm River** 87.88 342 P P 02 02 56.7 -0.1
baz=120,SNR=17
IL31 87.89 337 IAmb IAmb 02 02 57.3
comp=Z,9.6nm,0.8s
ILAR **Eielson Array** 87.89 337 P P 02 02 55.6 -1.3
comp=Z,6.4nm,0.8s,baz=111,slow=5.0,SNR=50
ILAR LR LR 02 43 17.8
comp=Z,180nm,20.2s,baz=98,slow=36
comp=Z,6.4nm,0.8s
M22K **Willow** 88.06 333 P P 02 02 57.7 0.0
baz=111
F26K **Sheenjek River** 88.17 340 IAmb IAmb 02 02 59.7
comp=Z,9.9nm,0.8s
F26K **Sheenjek River** 88.17 340 P P 02 02 58.1 -0.1
baz=117,SNR=22
CCB **Clear Creek Bu** 88.20 336 IAmb IAmb 02 02 59.4
comp=Z,9.3nm,0.8s
WRH **Wood River Hil** 88.25 336 IAmb IAmb 02 02 59.8
comp=Z,11nm,0.8s
SII **Sitkinak Islan** 88.29 328 P P 02 02 58.7 -0.3
baz=108
COLA **College** 88.31 337 *c* P P 02 02 58.4 -0.4
COLA pmax pmax
comp=Z,16nm,1.0s
COLA **College** 88.31 337 P P 02 02 58.9 +0.1
baz=114
COLA **College** 88.31 337 P P 02 02 59.0 +0.1
G25K **Bearman Lake** 88.44 339 P P 02 02 59.9 +0.5
baz=115,SNR=27
F25K **Christian Rive** 88.63 340 IAmb IAmb 02 03 02.2
comp=Z,9.7nm,0.8s
F25K **Christian Rive** 88.63 340 P P 02 03 00.7 +0.3
baz=116,SNR=27
P19K **Oil Pt** 88.78 331 P P 02 03 00.8 -0.5
baz=109
SPCR **Spurr Chakacha** 88.81 333 P P 02 03 01.1 -0.3
baz=110
E25K **Arctic Village** 88.84 340 P P 02 03 01.9 +0.6
baz=116,SNR=21
G24K **Hadweenzic Riv** 88.91 338 P P 02 03 02.1 +0.5
baz=114,SNR=24
C27K **Jago River** 88.91 342 P P 02 03 02.1 +0.5
baz=117,SNR=20
TAM **Tamanrasset** 89.09 67 P P 02 03 03.9 +0.2
Q18K **Katmai Hardscr** 89.34 330 P P 02 03 03.8 -0.2
baz=107
PPLA **Purkeypile** 89.37 334 P P 02 03 04.0 0.0
baz=110
EKA **Eskdalemuir Ar** 89.39 34 P P 02 03 03.7 -0.4
comp=Z,2.5nm,0.8s,baz=248,slow=4.4,SNR=5.4
comp=Z,2.5nm,0.8s
F24K **Squaw Lake** 89.39 339 IAmb IAmb 02 03 05.7
comp=Z,10nm,0.8s
F24K **Squaw Lake** 89.39 339 P P 02 03 04.4 +0.5
baz=114,SNR=16
C26K **Camden Bay** 89.42 342 P P 02 03 04.6 +0.7
baz=116,SNR=5.7
M20K **Styx River** 89.45 333 P P 02 03 05.0 +0.6
baz=109
D25K **Kavik River** 89.62 341 P P 02 03 05.3 +0.3
baz=115,SNR=23
Q17K **Contact Creek** 89.67 329 P P 02 03 05.4 -0.1
baz=106
AFI **Afianalu** 89.73 256 LR LR 02 33 50.4
comp=Z,170nm,21.5s,baz=79,slow=29
R17L **Mt. Peulik Vol** 89.74 328 P P 02 03 05.9 +0.1
baz=106
E24K **Your Creek** 89.82 340 IAmb IAmb 02 03 07.5
comp=Z,11nm,0.9s
E24K **Your Creek** 89.82 340 P P 02 03 06.3 +0.4
baz=113
G23K **Bananza Creek** 89.85 338 IAmb IAmb 02 03 07.7
comp=Z,13nm,0.9s
G23K **Bananza Creek** 89.85 338 P P 02 03 06.2 +0.1
baz=112,SNR=15
M19K **Big River Lodg** 90.02 333 P P 02 03 06.3 -0.7
baz=108
DBG **Daneborg** 90.16 14 *i* P P 02 03 06.9 -0.5
DBG IAmb IAmb 02 03 08.9
comp=Z,5.2nm,1.1s
Q16K **King Salmon** 90.18 329 P P 02 03 07.6 -0.1
baz=106
E23K **Chandalar** 90.20 339 P P 02 03 07.9 +0.1
baz=112
D24K **Happy Valley** 90.35 341 IAmb IAmb 02 03 21.2
comp=Z,9.1nm,1.1s
D24K **Happy Valley** 90.35 341 P P 02 03 08.6 +0.3
baz=113
G22K **Bettles** 90.47 338 P P 02 03 08.9 0.0
baz=110
CHGN **Chignik** 90.48 327 P P 02 03 08.8 -0.3
baz=104
M18K **Stony River** 90.56 332 P P 02 03 09.3 -0.1
baz=106
O17K **Koliganek Bris** 90.69 330 P P 02 03 09.9 -0.2
baz=105
D23K **Nanushuk River** 90.90 340 IAmb IAmb 02 03 12.0
comp=Z,9.0nm,1.1s
D23K **Nanushuk River** 90.90 340 P P 02 03 11.3 +0.4
baz=111,SNR=5.1
F22K **John River** 90.92 339 P P 02 03 11.4 +0.3
baz=110
N17K **Nushagak Hills** 90.93 331 P P 02 03 11.3 +0.1
baz=105
E22K **Anaktuvuk Pass** 91.00 339 IAmb IAmb 02 03 12.4
comp=Z,6.5nm,0.8s
E22K **Anaktuvuk Pass** 91.00 339 P P 02 03 11.5 +0.1
baz=110
IMAR **Indian Mountai** 91.01 337 P P 02 03 10.5 -1.0
G21K **Allakaket** 91.09 337 IAmb IAmb 02 03 13.0
comp=Z,10.0nm,1.1s
G21K **Allakaket** 91.09 337 P P 02 03 11.9 +0.1
baz=108,SNR=5.6
S14K **Fog Glacier** 91.09 327 P P 02 03 11.9 -0.3
baz=103
C23K **Itkillik River** 91.19 341 P P 02 03 12.5 +0.3
baz=111
M17K **Holitna River** 91.28 332 P P 02 03 12.9 +0.1
baz=105
F21K **Alatna River** 91.30 338 P P 02 03 12.8 -0.1
baz=108
H20K **Anotleneega Mo** 91.31 336 P P 02 03 12.7 -0.1
baz=107,SNR=6.3
SDPT **Sand Point** 91.39 326 P P 02 03 13.4 0.0
baz=102
J18K **Innoko River** 91.50 334 P P 02 03 14.0 +0.2
baz=106
N16K **Nishlik Lake** 91.68 331 P P 02 03 14.8 +0.1
baz=104
DAG **Danmarks Havn** 91.75 12 P P 02 03 14.1 -0.6
DAG **Danmarks Havn** 91.75 12 *i* P P 02 03 13.1 -1.6
DAG IAmb IAmb 02 03 15.0
comp=Z,9.1nm,0.9s
JMIC **Jan Mayen** 91.88 18 LR LR 02 44 05.3
comp=Z,66nm,19.8s,baz=226,slow=35
O15K **Ungalikthiuk R** 91.89 330 P P 02 03 15.7 0.0
baz=103
M16K **Timber Creek** 91.90 331 P P 02 03 15.8 +0.1
baz=104
H19K **Roundabout Mou** 91.95 336 P P 02 03 16.0 +0.3
baz=106
K17K **Iditarod** 92.00 333 P P 02 03 16.3 +0.2
baz=104
F20K **Avaraart Lake** 92.09 338 P P 02 03 16.5 +0.1
baz=106
N15K **Kwethluk River** 92.25 330 P P 02 03 17.3 0.0
baz=103
L16K **Owhat River** 92.30 332 P P 02 03 17.5 0.0
baz=103
C21K **Knifeblade Rid** 92.36 340 P P 02 03 18.0 +0.3
baz=107
G19K **Purcell Mounta** 92.36 337 P P 02 03 17.7 0.0
baz=105
B21K **Ikpikpuk River** 92.44 340 P P 02 03 18.1 +0.1
baz=107
E20K **Nigu River** 92.59 339 P P 02 03 19.0 +0.2
baz=106
H18K **Honhosa River** 92.62 336 IAmb IAmb 02 03 20.4
comp=Z,8.8nm,1.0s
H18K **Honhosa River** 92.62 336 P P 02 03 19.1 +0.1
baz=104
M15K **Kasigluk River** 92.65 331 P P 02 03 19.2 0.0
baz=102
E19K **Redstone River** 92.76 338 IAmb IAmb 02 03 20.2
comp=Z,4.8nm,0.8s
E19K **Redstone River** 92.76 338 P P 02 03 19.4 -0.2
baz=105,SNR=5.8
F19K **Shaleruckik Mo** 92.81 337 P P 02 03 19.9 +0.1
baz=104
UCC **Uccle** 92.83 39 *d*P P 02 03 20.1 -0.1
D20K **Etivluk River** 92.87 339 P P 02 03 20.3 +0.2
baz=105
G18K **Tagagawik** 92.92 336 IAmb IAmb 02 03 21.8
comp=Z,7.8nm,0.9s
G18K **Tagagawik** 92.92 336 P P 02 03 20.7 +0.3
baz=104,SNR=6.3
N14K **Kuskokwak Cree** 92.98 330 P P 02 03 20.9 +0.2
baz=101
BMRD **Maredsous** 93.01 40 *d*P P 02 03 20.6 -0.4
comp=Z,4.8nm,0.0s
J16K **Anvik River** 93.16 333 P P 02 03 21.7 +0.3
baz=102
H17K **Granite Mounta** 93.22 335 P P 02 03 21.9 +0.2
baz=103
L15K **Ungalak Mounta** 93.23 332 P P 02 03 22.0 +0.2
baz=101

M14K	**Bethel**	93.27	331	P		P	02 03 22.3	+0.3
	baz=101							
D19K	**Kuna River**	93.34	339	P		P	02 03 22.5	+0.2
	baz=104							
K15K	**Wolf Creek Mou**	93.37	332	P		P	02 03 22.9	+0.4
	baz=101							
B20K	**Meade River**	93.39	340	P		P	02 03 22.7	+0.4
	baz=105							
F18K	**Selawik**	93.48	337	P		P	02 03 23.1	+0.3
	baz=103							
G17K	**Kiwalik Mounta**	93.64	336	P		P	02 03 23.7	+0.1
	baz=102							
L14K	**Kuka Creek**	93.73	331	P		P	02 03 24.1	+0.1
	baz=100							
WLF	**Walferdange**	93.79	41	*d*P		P	02 03 24.8	+0.1
	comp=Z,5.0nm,1.3s							
WLF	**Walferdange**	93.79	41	*e*P		P	02 03 24.5	-0.2
	comp=Z,6.9nm,0.9s,baz=266,slow=4.2							
M13K	**Dall Lake**	93.89	330	P		P	02 03 25.1	+0.3
	baz=100							
C19K	**Lookout Ridge**	94.01	339	P		P	02 03 25.8	+0.5
	baz=103							
E18K	**Tukpahlearik C**	94.02	338	P		P	02 03 25.9	+0.5
	baz=102							
F17K	**Baldwin Pennin**	94.07	337	P		P	02 03 25.9	+0.4
	baz=101							
ECH	**Echery**	94.25	42	IAmb		IAmb	02 03 27.6	
	comp=Z,8.0nm,1.2s							
ECH	**Echery**	94.25	42	P		P	02 03 25.2	-1.6
KEST	**Kesra**	94.27	55	P		P	02 03 27.6	+0.3
	comp=Z,6.7nm,0.8s,baz=260,slow=4.3,SNR=10							
KEST				LR		LR	02 45 06.1	
	comp=Z,209nm,20.6s,baz=268,slow=35							
	comp=Z,6.7nm,0.8s							
KEST	**Kesra**	94.27	55	IAmb		IAmb	02 03 29.8	
	comp=Z,7.0nm,0.8s							
G16K	**Koyuk River**	94.32	335	P		P	02 03 27.0	+0.3
	baz=100							
J14K	**Nanvaranak Lak**	94.38	333	P		P	02 03 27.4	+0.4
	baz=100							
TSUM	**Tsumeb**	94.39	110	LR		LR	02 44 03.7	
	comp=Z,811nm,19.4s,baz=290,slow=34							
TSUM	**Tsumeb**	94.39	110	P		P	02 03 28.1	-0.3
TSUM	**Tsumeb**	94.39	110	P		P	02 03 28.8	+0.5
E17K	**Hotham Inlet**	94.42	337	P		P	02 03 27.7	+0.5
	baz=101							
SUR	**Sutherland**	94.62	124	LR		LR	02 42 43.0	
	comp=Z,353nm,20.3s,baz=296,slow=33							
BUG	**Bochum--Univer**	94.74	39	*e*P		P	02 03 29.0	0.0
	comp=Z,11nm,1.2s,baz=266,slow=4.2							
URZ	**Urewera**	94.88	230	LR		LR	02 37 08.4	
	comp=Z,657nm,20.1s,baz=142,slow=30							
G15K	**Niukluk**	94.95	335	P		P	02 03 29.9	+0.3
	baz=99							
D17K	**Noatak River**	95.00	338	P		P	02 03 30.4	+0.5
	baz=100							
IBBN	**Ibbenburen**	95.15	38	*e*P		P	02 03 30.9	+0.1
	comp=Z,27nm,1.5s,baz=266,slow=4.2							
C17K	**DeLong Mountai**	95.17	338	P		P	02 03 31.3	+0.7
	baz=99							
TUE	**Stuetta**	95.52	44	P		P	02 03 32.3	-0.7
	comp=Z,16nm,2.6s							
DAVOX	**Davos/Dischmat**	95.91	44	LR		LR	02 47 04.6	
	comp=Z,292nm,18.4s,baz=265,slow=36							
DAVA	**Damuels**	95.97	43	*i* P		P	02 03 34.8	-0.1
	comp=Z,4.4nm,1.2s							
RETH	**Rethem/Aller,**	96.17	38	*e*P		P	02 03 35.9	+0.5
	comp=Z,19nm,1.4s,baz=266,slow=4.2							
GTTG	**Gottingen**	96.43	39	*e*P		P	02 03 36.9	+0.2
	comp=Z,4.6nm,1.0s,baz=266,slow=4.2							
FETA	**Feichten**	96.52	44	*e*P		P	02 03 37.2	-0.2
	comp=Z,3.3nm,1.1s							
RETA	**Reutte**	96.58	43	*e*P		P	02 03 37.1	-0.5
	comp=Z,3.1nm,1.4s							
CLZ	**Clausthal**	96.70	39	*e*P		P	02 03 38.0	0.0
	comp=Z,9.6nm,1.4s,baz=266,slow=4.2							
MOTA	**Moosalm**	96.80	43	*i* P		P	02 03 38.4	-0.3
	comp=Z,3.8nm,1.1s							
BSEG	**Bad Segeberg**	96.84	37	*e*P		P	02 03 38.9	+0.4
	comp=Z,3.2nm,0.9s,baz=266,slow=4.2							
SQTA	**Sankt Quirin**	96.86	43	*i* P		P	02 03 38.8	-0.1
	comp=Z,5.6nm,1.5s							
ASSE	**Asse, Remlinge**	96.91	38	*e*P		P	02 03 37.1	-1.7
	comp=Z,7.0nm,1.4s,baz=266,slow=4.2							
GRF	**Grafenberg Arr**	97.07	41	*e*L		L	02 47 18.0	
	comp=Z,176nm,18.4s							
WATA	**Walderalm**	97.12	43	*i* PcP		Pdif	02 03 40.7	+0.5
	comp=Z,5.0nm,1.4s							
WTTA	**Wattenberg**	97.16	43	*i* PcP		Pdif	02 03 40.9	+0.5
	comp=Z,8.5nm,1.9s							
FLTG	**Flechtingen**	97.28	38	*e*P		P	02 03 40.8	+0.3
	comp=Z,6.9nm,1.2s,baz=266,slow=4.2							
MOX	**Moxa**	97.39	40	*e*P		P	02 03 41.1	0.0
	comp=Z,6.0nm,1.5s,baz=266,slow=4.2							
MOX				*e*L		L	02 46 16.9	
	comp=Z,149nm,20.9s							
ROTZ	**Rotzenmuhle**	97.71	41	*e*P		P	02 03 42.7	+0.2
	comp=Z,1.2nm,1.2s,baz=266,slow=4.2							
ABTA	**Abfaltersbach**	97.72	44	*e*P		P	02 03 42.6	-0.1
	comp=Z,2.1nm,0.7s							
NOA	**NORSAR Array B**	97.80	29	P		P	02 03 42.0	-0.8
	comp=Z,1.0nm,0.9s,baz=267,slow=4.6,SNR=4.5							
NOA				LR		LR	02 47 30.8	
	comp=Z,116nm,19.0s,baz=275,slow=35							
	comp=Z,1.0nm,0.9s							
NOA	**NORSAR Array B**	97.80	29	P		P	02 03 42.0	-0.8
LESA	**Schwarzleotal**	97.87	43	*e*PcP		P	02 03 43.6	+0.1
	comp=Z,1.6nm,0.9s							
TANN	**Tannenbergstha**	97.92	40	*e*P		P	02 03 43.8	+0.3
	comp=Z,6.3nm,1.2s,baz=266,slow=4.2							
TANN	**Tannenbergstha**	97.92	40	P		Pdif	02 03 44.4	+0.8
WET	**Wettzell**	98.11	41	*e*Pdiff		P	02 03 44.6	+0.2
KBA	**Koelnbreinsper**	98.31	44	*e*Pdiff		P	02 03 44.9	-0.7
	comp=Z,2.0nm,1.0s							
CLL	**Collm**	98.31	39	*i* P		Pdif	02 03 45.7	+0.5
CLL	**Collm**	98.31	39	*e*Pdiff		P	02 03 45.4	+0.3
CLL	**Collm**	98.31	39	*i* Pdif		Pdif	02 03 45.7	+0.5
CLL				*e*pPP			02 07 57.0	
CLL				AMS		AMS	02 48 00.0	
	comp=Z,200nm,19.1s							
MYKA	**Terra Mystica**	98.48	44	*e*Pdiff		P	02 03 46.2	0.0
	comp=Z,1.6nm,1.0s							
VAE	**Valgurnera**	98.50	53	LR		LR	02 47 23.9	
	comp=Z,412nm,19.6s,baz=317,slow=35							
BIOA	**Bad Ischl, Aus**	98.54	43	*e*Pdiff		Pdif	02 03 47.0	+0.6
	comp=Z,4.4nm,1.7s							
KHC	**Kasperske Hory**	98.57	42⇑	*e*P		P	02 03 46.4	-0.1
KHC				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KHC	**Kasperske Hory**	98.57	42	IAmb		IAmb	02 04 00.5	
	comp=Z,13nm,2.0s							
GEC2	**GERESS Array S**	98.64	42	*e*Pdiff		P	02 03 46.3	-0.5
GERES	**GERESS Array B**	98.64	42	P		P	02 03 45.8	-1.0
	comp=Z,0.6nm,0.8s,baz=249,slow=5.6,SNR=5.4							
GERES				LR		LR	02 47 50.5	
	comp=Z,144nm,19.7s,baz=266,slow=35							
	comp=Z,0.6nm,0.8s							
GERES	**GERESS Array B**	98.64	42	P		P	02 03 45.6	-1.3
MSVF	**Nonsavu**	98.72	251	LR		LR	02 39 28.9	
	comp=Z,143nm,18.5s,baz=326,slow=30							
BRG	**Berggiesshubel**	98.88	40	*e*Pdiff		P	02 03 48.1	+0.3
MOA	**Molln**	98.97	43	*i* Pdiff		P	02 03 48.3	0.0
	comp=Z,4.6nm,1.2s							
HFS	**Hagfors**	99.00	30	P		Pdif	02 03 47.0	-1.1
	comp=Z,1.2nm,0.8s,baz=261,slow=3.7,SNR=2.6							
HFS				LR		LR	02 44 59.4	
	comp=Z,128nm,21.0s,baz=306,slow=33							
	comp=Z,1.2nm,0.8s							
BOSA	**Boshof**	99.24	121	P		Pdif	02 03 49.7	-0.4
	comp=Z,3.8nm,1.0s,baz=242,slow=4.2,SNR=3.8							
BOSA				LR		LR	02 47 25.4	
	comp=Z,371nm,18.2s,baz=258,slow=35							
	comp=Z,3.8nm,1.0s							
SPITS	**Spitsbergen Ar**	99.40	12	LR		LR	02 52 45.5	
	comp=Z,118nm,18.8s,baz=220,slow=38							
SOKA	**Soboth**	99.44	44	*e*Pdiff		Pdif	02 03 49.8	-0.7
	comp=Z,2.9nm,1.6s							
MAW	**Mawson**	99.77	166	LR		LR	02 46 54.6	
	comp=Z,164nm,19.8s,baz=242,slow=34							
ARSA	**Arzberg**	99.80	43	*e*Pdiff		Pdif	02 03 51.2	-0.8
	comp=Z,5.0nm,1.6s							
CONA	**Conrad Observa**	100.04	43	*e*Pdiff		Pdif	02 03 53.3	+0.2
	comp=Z,2.9nm,1.4s							
RONA	**Rosalia, Austr**	100.33	43	*e*Pdiff		Pdif	02 03 53.9	-0.4
	comp=Z,1.2nm,0.7s							
DPC	**Dobruska-Polom**	100.38	40	P		Pdif	02 03 54.4	-0.1
ARCES	**ARCESS Array B**	103.16	20	*i* P		Pdif	02 04 04.8	-1.6
ARCES	**ARCESS Array B**	103.16	20	Pdif		Pdif	02 04 04.8	-1.6
FINES	**FINESS Array B**	104.94	29	*i* P		Pdif	02 04 14.3	-0.2
FINES	**FINESS Array B**	104.94	29	Pdif		Pdif	02 04 14.3	-0.2
MNK	**Minsk**	107.10	36	*i* P		Pdif	02 04 28.4	+4.2
	comp=E,6.0nm,1.0s							
MNK				*i* P		Pdif	02 04 28.4	+4.2
	comp=N,4.0nm,0.8s							
MNK				*i* P		Pdif	02 04 28.4	+4.2
	comp=Z,4.0nm,0.7s,baz=280							
MNK				*i* PP		PP	02 08 55.6	+4.7
MNK				*i* PPP		PPP	02 11 11.2	
MNK				*i* SKS		SKSdf	02 15 49.5	+6.2
MNK				*i* SS		SS	02 24 05.7	+9.4
MNK				*i* SSS		SSS	02 28 07.3	
MNK				*i* LQ		LQ	02 45 36.0	
MNK				*i* LRM		MLR	02 54 28.9	
	comp=N,132nm,17.8s							
MNK				*i* LRM		MLR	02 54 33.4	
	comp=Z,175nm,18.0s							
MNK				*i* LRM		MLR	02 54 50.5	
	comp=E,110nm,21.3s							
MNK	**Minsk**	107.10	36	*i* P		Pdif	02 04 28.4	+4.2
MNK				*i*			02 08 55.6	
MNK				*i* PPP		PPP	02 11 11.1	
MNK				*i* SS		SS	02 24 05.6	+9.3
MNK				pmax		pmax		
	comp=Z,4.0nm,0.7s							
MNK				pmax		pmax		
	comp=N,4.0nm,0.8s							
MNK				pmax		pmax		
	comp=E,6.0nm,1.0s							
MNK				MLR		MLR		
	comp=N,132nm,18.0s							
MNK				MLR		MLR		
	comp=Z,175nm,18.0s							
MNK				MLR		MLR		
	comp=E,110nm,21.0s							
BRTR	**Keskin Array B**	113.43	50	*i* PKIKP		PKiKP	02 08 47.5	+1.4
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
H11N3	**WAKE ISLAND Hyl**	114.44	288	T		T	04 12 58.9	
	baz=90,slow=74,SNR=43							
H11N2	**WAKE ISLAND Hyl**	114.45	288	T		T	04 13 06.2	
	baz=90,slow=74,SNR=56							
H11N1	**WAKE ISLAND Hyl**	114.45	288	T		T	04 13 01.7	
	baz=90,slow=74,SNR=48							
H11S2	**WAKE ISLAND Hyl**	114.62	286	T		T	04 13 22.9	
	baz=92,slow=75,SNR=33							
H11S1	**WAKE ISLAND Hyl**	114.62	287	T		T	04 13 21.4	
	baz=92,slow=75,SNR=15							
H11S3	**WAKE ISLAND Hyl**	114.63	286	T		T	04 13 23.5	
	baz=92,slow=75,SNR=17							
KIV	**Kislovodsk**	119.04	44	*i* PKIKP		PKPdf	02 08 56.9	+0.2
KIV				pmax		pmax		
	comp=Z,3.0nm,0.9s							
SHA1	**Shidzhatmaz**	119.09	44⇓	*i* PKIKP		PKPdf	02 08 56.3	-0.7
KBZ	**Khabaz**	119.26	44	PKP		PKPdf	02 08 55.9	-1.1
	comp=Z,4.7nm,0.8s,baz=287,slow=1.9,SNR=6.9							
KBZ	**Khabaz**	119.26	44	*d* PKIKP		PKPdf	02 08 56.6	-0.3
NCK	**Nalchik**	119.81	44⇑	*i* PKIKP		PKiKP	02 08 59.6	+1.4
AB31	**Akbulak array**	127.22	32	PKPdf		PKiKP	02 09 12.9	+0.3
ABKAR	**Akbulak array**	127.22	32	PKPdf		PKPdf	02 09 12.7	+0.7
BVAR	**Borovoye Array**	129.36	23	PKP		PKPdf	02 09 16.0	-0.1
	comp=Z,0.7nm,0.4s,baz=323,slow=1.4,SNR=2.5							
ASAR	**Alice Springs**	134.08	225	PKP		PKPdf	02 09 25.6	-0.4
	comp=Z,2.2nm,0.7s,baz=127,slow=2.0,SNR=21							
MAJO	**Matsushiro**	135.34	315⇓	*e*PKIKP		PKPdf	02 09 26.1	-1.8
WRA	**Warramunga Arr**	136.05	230	PKP		PKPdf	02 09 27.1	-2.6
	comp=Z,6.7nm,0.9s,baz=129,slow=1.6,SNR=26							
WRA	**Warramunga Arr**	136.05	230	PKIKP		PKPdf	02 09 29.4	-0.3
WRA	**Warramunga Arr**	136.05	230	PKPdf		PKPdf	02 09 29.4	-0.3
WB0	**Warramunga Arr**	136.11	230	PKPdf		PKPdf	02 09 28.9	-0.9
CN2	**Changchun**	138.25	332	*e*P		PKPdf	02 09 33.4	+0.4
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
AAK	**Ala-Archa**	139.12	29	*de*PKIKP		PKPdf	02 09 34.0	-0.9
KSRS	**Korea Array**	141.52	323	PKhKP		PKPpre	02 09 33.8	
	baz=265,slow=40,SNR=3.2							
KSRS				PKP		PKPdf	02 09 39.6	+0.5
	comp=Z,2.4nm,0.9s,baz=22,slow=0.7,SNR=5.6							
WMQ	**Urumqi**	143.04	15	*e*PKP		PKPdf	02 09 41.5	-0.3
WMQ				LR		LR		
	comp=Z,100nm,23.8s							
FITZ	**Fitzroy Crossi**	143.53	224			PKPab	02 09 39.2	-0.3
DL2	**Dalian**	143.86	331	PKP		PKiKP	02 09 52.3	+5.6
NIL	**Nilore**	144.73	41	PKIKP		PKPab	02 09 43.4	-0.4
NIL	**Nilore**	144.73	41			PKPab	02 09 43.4	-0.4
MBWA	**Marble Bar**	144.87	213			PKPab	02 09 44.1	-0.4
HHC	**Hu-ho-hao-te**	146.00	344	*e*P		PKPdf	02 09 46.1	-1.0
NJ2	**Nanjing**	150.59	326	*e*P		PKPdf	02 09 55.0	+0.4
NJ2				pmax		pmax		
	comp=Z,57nm,1.0s							
PZH	**PanZhiHua**	161.83	355	PKP		PKPdf	02 10 08.4	-1.3
TNCH	**TengChong**	163.32	5	PKP		PKPdf	02 10 07.3	-4.0
TNCH				pPKP		pPKPdf	02 10 21.4	+0.6
TNCH				sPKP		sPKPdf	02 10 29.4	+5.3
TNCH				PKPab		PKPab	02 10 59.9	-1.7
CMAR	**Chiang Mai Arr**	169.87	6	PKP		PKPdf	02 10 16.4	+0.2
	comp=Z,1.1nm,0.3s,baz=282,slow=1.6,SNR=10							
CMAR				PKPab		PKPab	02 11 29.4	-1.1
	comp=Z,3.8nm,0.6s,baz=334,slow=5.5,SNR=17							

CATAC ***20*** *01:50:42.5±0.5, 16˚N±2˚×9˚0W±˚, h4km±4km, M3.1/15, MLv3.1/15, Error ellipse: s-maj=4.3km s-min=3.5km az=98.1, confirmed*
SNET ***20*** *01:50:43.7±2.1, 15˚.73N×90˚.07W, h10km, ML3.3, Presumed earthquake*
GCG ***20*** *01:50:43.3±1.7, 15˚.64N×90˚.08W, h13km±17km, MD4.2, ML3.7, Presumed earthquake*
ISC 20 01:50:42.4±1.2, 15.70N±0˚.03×90˚.11W±0˚.03, h6km±11km, n40, σ1ᵖ14/58, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVCB	**Coban**	0.36	231	IAML		01 51 04.3	
	comp=N,11μm,0.5s						
APG	**El Apazote**	0.77	206	*i* P	Pg	01 50 56.3	-1.0
APG				*i* S	Sg	01 51 04.7	-2.6
PETF	**Flores**	1.23	11	P	Pn	01 51 05.6	-0.6
PETF	**Flores**	1.23	11	*i* P	Pg	01 51 06.7	+0.6
PETF				*i* S	Sn	01 51 22.4	-0.8
PETF				IAML		01 51 28.3	
	comp=E,1μm,0.5s						
PETF	**Flores**	1.23	11	*e*P	Pg	01 51 06.7	+0.6
ZAFR2	**Estanzuela, Za**	1.34	146	*i* P	Pn	01 50 57.7	-10
ESQI	**Esquipulas**	1.36	147	P	Pn	01 51 07.3	-0.7
ESQI				S	Sg	01 51 27.7	+1.6
ESQI	**Esquipulas**	1.36	147	*e*P	Pn	01 51 07.2	-0.8
HUEH	**Huehuetenango**	1.39	254	P	Pg	01 51 09.7	+0.6
HUEH				S	Sg	01 51 29.1	+1.9
HUEH	**Huehuetenango**	1.39	254	*i* P	Pn	01 51 08.0	-0.6
IZABA	**Izabal, Puerto**	1.47	89	P	Pn	01 51 09.0	-0.5
IZABA				S	Sg	01 51 30.9	+1.0
MTO3	**Montecristo**	1.48	151	P	Pn	01 51 09.4	-0.4
MTO3				S	Sn	01 51 29.3	-0.4
MTO3	**Montecristo**	1.48	151	*i* P	Pn	01 51 09.0	-0.9
MTO3	**Montecristo**	1.48	151	*e*P	Pn	01 51 09.1	-0.7
SARH	**Santa Rosa de**	1.60	125	P	Pn	01 51 10.5	-0.8
SARH				S	Sb	01 51 33.6	+0.7
SARH	**Santa Rosa de**	1.60	125	*i* P	Pn	01 51 10.0	-1.3
SARH				*i* S	Sn	01 51 31.1	-1.2
RBDL	**Robledal**	1.63	165	*e*P	Pn	01 51 12.0	+0.2
SLOZ	**Alcaldia de Sa**	1.69	169	P	Pn	01 51 13.2	+0.6
SLOZ				S	Sb	01 51 36.8	+1.1
STG8	**El Palmar, Qui**	1.72	224	*i* P	Pn	01 51 13.9	+0.7
STG5	**El Palmar, Qui**	1.76	223	*i* P	Pn	01 51 13.7	+0.2
UNIC	**Universidad Ca**	1.79	162	P	Pn	01 51 12.9	-1.1
NUBE	**Las Nubes**	1.82	170	P	Pn	01 51 13.9	-0.5
NUBE				S	Sn	01 51 38.8	+1.0
NUBE	**Las Nubes**	1.82	170	*e*P	Pn	01 51 14.9	+0.5
NUBE				*e*S	Sb	01 51 39.4	+0.1
FAME	**Alcaldia de Sa**	1.85	177	P	Pn	01 51 13.9	-0.8
FAME				S	Sb	01 51 40.6	+0.5
LLGN	**La Laguna**	1.90	143	S	Sb	01 51 41.3	-0.4
RTAL	**Retalhuleu**	1.92	233	P	Pb	01 51 17.0	-0.9
RTAL				S	Sg	01 51 45.8	+1.5
PMON	**Piamonte**	2.12	159	P	Pn	01 51 19.1	+0.5
PMON				S	Sb	01 51 48.5	+0.5
PMON	**Piamonte**	2.12	159	*e*P	Pb	01 51 20.2	-1.2
JAYA	**Jayaque - finc**	2.13	162	P	Pn	01 51 18.7	0.0
JAYA				S	Sb	01 51 48.5	+0.1
UEES	**Universidad Ev**	2.15	157	P	Pn	01 51 17.0	-1.9
UEES				S	Sn	01 51 47.1	+1.3
P5NO	**Presa 5 de nov**	2.15	142	P	Pn	01 51 18.7	-0.1
P5NO				S	Sb	01 51 48.6	-0.2
LOMA	**Loma Larga**	2.24	156	P	Pn	01 51 20.8	+0.6
LOMA				S	Sb	01 51 51.5	+0.1
PAVA	**Las Pavas**	2.28	150	P	Pn	01 51 21.3	+0.6
PAVA				S	Sb	01 51 51.5	-1.1
COEG	**Centro de Oper**	2.39	150	P	Pn	01 51 19.5	-2.7
SCLA	**Alcaldia de Sa**	2.40	146	S	Sb	01 51 56.2	+0.4
TECO	**Alcaldia de Te**	2.51	149	P	Pn	01 51 25.6	+1.8
MARCA	**Marcala la Paz**	2.53	127	P	Pn	01 51 25.6	+1.4
MARCA				S	Sb	01 52 02.0	+2.3
PACA	**Pacayal**	2.81	142	P	Pn	01 51 12.1	-16
CNGN	**Cerro Negro**	4.59	133	S	Sn	01 52 47.7	+1.5
TEIG	**Tepich**	4.83	21	P	Pn	01 51 53.4	-2.3
TEIG				S	Sn	01 52 53.3	+1.3

BJI ***20*** *01:59:39.8, 43˚.60N×99˚.88E, h9km, mB4.8/14, mb4.7/46, ML5.0/12, Ms4.7/53, Ms7 4.5/51*
MOS ***20*** *01:59:39.9±0.9, 43˚.62N×99˚.84E, h10km, mb5.0/52, MS4.2/20, Error ellipse: s-maj=5.3km s-min=3.9km az=40.6*
IDC ***20*** *01:59:39.6±0.5, 43˚.55N×99˚.85E, h0km, mb4.4/27, mbtmp4.4/34, ML3.7/6, MS3.9/32, Error ellipse: s-maj=14.4km s-min=9.9km az=29.0*
NEIC ***20*** *01:59:41.6±1.9, 43˚.58N±0˚.04×99˚.88E±0˚.08, h10km±1km, mb4.8/147, Error ellipse: s-maj=11.8km s-min=3.3km az=119.0*
GFZ ***20*** *01:59:42.5±0.2, 44˚N±4˚×10˚E±˚, h10km, M4.6/25, mb4.8/25*
BGR ***20*** *01:59:52.8, 44˚.10N×98˚.87E, h33km, mb4.6, Ms4.1*
ISC 20 01:59:42.0±0.3, 43˚.61N±0˚.03×99˚.85E±0˚.03, h10km, n702, σ1ᵖ34/681, mb4.8/201, MS4.0/48, 42C-31D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA2	**Gaotai**	4.12	181	Pn	Pn	02 00 46.1	+1.0
GTA2				Pg	Pb	02 00 56.4	+1.7
GTA2				Sn	Sn	02 01 34.8	+1.3
GTA2				Sg	Sg	02 01 48.5	-5.9
GTA2				SMN			
	1μm,1.0s						
GTA2				SME			
	3μm,1.1s						
GTA2				L	L		
	comp=N,10μm,6.5s						
GTA2				L	L		
	comp=E,12μm,7.6s						
GTA2				L	L		
	comp=Z,10μm,7.6s						
SONM	**Songino Array**	6.23	45	Pn	Pn	02 01 13.6	-0.4
	13nm,0.3s,baz=225,slow=14,SNR=128						
SONM				Pg	Pb	02 01 34.9	+4.4
	30nm,0.3s,baz=229,slow=17,SNR=19						
SONM				Lg	Lg	02 02 55.1	
	36nm,0.3s,baz=220,slow=31,SNR=3.6						
SONM				LR	LR	02 03 52.7	
	comp=Z,880nm,21.0s,baz=228,slow=40						
	69nm,0.6s						
SONM	**Songino Array**	6.23	45		Pn	02 01 12.8	-1.2
ULN	**Ulaanbaatar**	6.59	47	*d* P	Pn	02 01 18.4	-0.6
ULN	**Ulaanbaatar**	6.59	47	Pn	Pn	02 01 18.2	-0.8
ULN	**Ulaanbaatar**	6.59	47	P	Pn	02 01 18.3	-0.8
ZAK	**Zakamensk**	7.17	18	*e*P	Pn	02 01 27.2	+0.3
ZAK				pmax	pmax		
	comp=Z,234nm,0.8s						
KNGR	**Kungurtug, Tuv**	7.17	348⇓	*e*P	Pn	02 01 26.4	-0.6
BTO2	**Baotou**	7.98	108	*e*P	Pn	02 01 36.5	-1.6
BTO2				SMN			
	comp=Z,1μm,0.6s						
BTO2				SME			
	comp=Z,670nm,0.6s						
MOY	**Mondy**	8.10	5	*e*P	Pn	02 01 40.6	+1.0
MOY				*e*S	Sn	02 03 11.3	+0.1
LZH	**Lanzhou**	8.12	156	*e*P	Pn	02 01 38.8	-1.2
LZH				sP	sPn	02 01 45.5	+1.3
LZH				S	Sn	02 03 11.8	-0.1
LZH				pmax	pmax		
	comp=Z,97nm,0.9s						
LZH				SMN			
	comp=Z,410nm,0.9s						
LZH				SME			
	comp=Z,300nm,1.2s						
LZH				L	L		
	comp=Z,7μm,6.0s						
LZH				L	L		
	comp=Z,2μm,5.3s						
LZH				L	L		
	comp=Z,6μm,8.2s						
LZDM	**Lanzhou Array**	8.20	158	Pn	Pn	02 01 39.4	-1.8
	comp=Z,26nm,0.5s,baz=322,slow=11,SNR=20						
LZDM				Sn	Sn	02 03 11.6	-2.5
	baz=325,slow=13						
LZDM				Lg	Lg	02 03 54.9	
	baz=326,

MKAR Lg Lg 02 06 25.9
comp=Z,0.5nm,0.3s,baz=97,slow=32,SNR=3.6
MKAR LR LR 02 07 52.7
comp=Z,502nm,19.0s,baz=78,slow=38
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 12.79 290 Pn **Pn 02 02 42.4 -1.4**
MAKZ Makanchi 13.00 290 ⇑P **Pn 02 02 45.8 -1.0**
MAKZ Makanchi 13.00 290 Pn **Pn 02 02 45.0 -1.7**
MAKZ Makanchi 13.00 290 P **Pn 02 02 45.7 -1.0**
CD2 Chengdu 13.05 165 P **Pn 02 02 49.0 +1.5**
CD2 S **Sn 02 05 17.1 +4.3**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,140nm,5.1s
CD2 L L
comp=Z,2μm,10.0s
CD2 L L
comp=Z,4μm,11.8s
CD2 L L
comp=Z,3μm,10.2s
LYN LuoYang 13.32 129 P **Pn 02 02 49.5 -1.6**
LYN pmax pmax
comp=Z,26nm,0.5s
LYN L L
comp=Z,2μm,8.6s
LYN L L
comp=Z,3μm,10.7s
LYN L L
comp=Z,2μm,10.3s
ZAA0 Zalesovo Array 14.29 322 Pn **Pn 02 03 03.1 -1.1**
ZALV Zalesovo Beam 14.29 322 Pn **Pn 02 03 04.0 -0.2**
comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=31
ZALV Lg Lg 02 07 15.9
comp=Z,0.3nm,0.3s,baz=113,slow=23,SNR=5.9
ZALV LR LR 02 08 42.6
comp=Z,514nm,21.7s,baz=130,slow=38
comp=Z,8.2nm,0.7s
ZALV Zalesovo Beam 14.29 322 *i*P **Pn 02 03 04.0 -0.2**
ZALV pmax pmax
comp=Z,9.0nm,0.7s
ZALV Zalesovo Beam 14.29 322 Pn **Pn 02 03 02.5 -1.8**
PDGK Podgornoye 14.79 276 P **Pn 02 03 08.1 -3.1**
PDGK Podgornoye 14.79 276 Pn **Pn 02 03 08.1 -3.1**
HIA Hailar 14.82 61 P **Pn 02 03 10.6 -0.9**
HIA Hailar 14.82 61 Pn **Pn 02 03 10.6 -0.9**
SHLS Shalkode 14.84 275 *e*P **Pn 02 03 07.8 -4.0**
SHLS Shalkode 14.84 275 *e*P **Pn 02 03 07.9 -4.0**
HILR Hailar Array B 14.90 60 Pn **Pn 02 03 12.2 -0.4**
baz=243,slow=9.8
HILR Lg Lg 02 07 28.3
baz=255,slow=28
comp=Z,2.0nm,0.5s
TIA Tai'an 15.16 113 P **Pn 02 03 12.4 -3.7**
TIA pmax pmax
comp=Z,11nm,1.9s
TIA L L
comp=Z,440nm,10.0s
TIA L L
comp=Z,950nm,10.0s
TIA L L
comp=Z,1μm,12.7s
KPKS Kokpek 15.35 277 *e*P **Pn 02 03 19.3 +0.6**
KPKS Kokpek 15.35 277 *e*P **Pn 02 03 19.3 +0.6**
ENH Enshi 15.37 147 Pn **Pn 02 03 15.9 -2.9**
ENH IAmb IAmb 02 03 18.2
comp=Z,44nm,1.2s
TDK Taldyqorghan 15.41 283 *e*P **Pn 02 03 20.2 +0.8**
TDK Taldyqorghan 15.41 283 *e*P **Pn 02 03 20.2 +0.8**
WUS Wushi 15.43 268 Pn **Pn 02 03 18.2 -1.6**
LSA Lhasa 15.53 209 P **Pn 02 03 18.4 -3.0**
LSA pmax pmax
comp=Z,15nm,0.7s
LSA Lhasa 15.53 209 Pn **Pn 02 03 18.4 -3.0**
SATY Saty 15.62 275 *e*P **Pn 02 03 22.5 +0.4**
SATY Saty 15.62 275 *e*P **Pn 02 03 22.6 +0.4**
PRZ Przheval'sk 15.72 273 P **Pn 02 03 22.0 -1.6**
PRZ pmax pmax
comp=Z,31nm,1.1s
PRZ Przheval'sk 15.72 273 Pn **Pn 02 03 22.0 -1.6**
PRZ Przheval'sk 15.72 273 P **Pn 02 03 22.2 -1.4**
KURK Kurchatov 16.06 304 P **Pn 02 03 26.1 -1.6**
KURK Kurchatov 16.06 304 Pn **Pn 02 03 24.9 -2.8**
KURK IAmb IAmb 02 03 33.1
comp=Z,151nm,1.6s
KURK Kurchatov 16.06 304 P **Pn 02 03 26.4 -1.3**
KURBB Kurchatov Arra 16.09 303 Pn **Pn 02 03 26.1 -2.0**
comp=Z,0.1nm,0.3s,baz=107,slow=12,SNR=51
KURBB Sn **Sn 02 06 25.6 -0.8**
baz=120,slow=16
KURBB Lg Lg 02 08 11.2
comp=Z,0.1nm,0.3s,baz=101,slow=30,SNR=9.2
KURBB LR LR 02 08 44.2
comp=Z,104nm,20.5s,baz=162,slow=34
comp=Z,10.0nm,0.8s
TARG Taragay, Kyrgy 16.32 271 P **Pn 02 03 29.5 -2.1**
TARG pmax pmax
comp=Z,43nm,1.0s
TARG Taragay, Kyrgy 16.32 271 Pn **Pn 02 03 29.5 -2.1**
TARG Taragay, Kyrgy 16.32 271 P **P 02 03 33.4 -1.1**
MDOK Medeo 16.58 276 *e*P **Pn 02 03 35.3 +0.7**
MDOK Medeo 16.58 276 *e*P **Pn 02 03 35.3 +0.7**
AAA Alma-Ata 16.67 277 *e*P **Pn 02 03 36.3 +0.7**
AAA Alma-Ata 16.67 277 *e*P **Pn 02 03 36.3 +0.7**
TNSS Tian-Shan 16.67 276 *e*P **Pn 02 03 36.2 +0.2**
TNSS Tian-Shan 16.67 276 *e*P **Pn 02 03 36.3 +0.2**
KDJ Kajisay 16.68 273 P **Pn 02 03 33.4 -2.5**
KDJ pmax pmax
comp=Z,25nm,1.1s
KDJ Kajisay 16.68 273 Pn **Pn 02 03 33.4 -2.5**
BOD Bodaibo 16.76 27 *e*P **P 02 03 37.9 -0.9**
BOD pmax pmax
comp=Z,22nm,1.6s
DL2 Dalian 17.02 99 P **P 02 03 44.3 +2.5**
DL2 pmax pmax
comp=Z,41nm,0.9s
DL2 L L
comp=Z,640nm,11.3s
DL2 L L
comp=Z,580nm,11.8s
DL2 L L
comp=Z,700nm,10.7s
PZH PanZhiHua 17.14 174 P **P 02 03 43.6 +0.2**
WHN Wuhan 17.40 134 P **Pn 02 03 44.0 -0.8**
NRN Naryn 17.71 271 P **Pn 02 03 48.6 -0.3**
NRN pmax pmax
comp=Z,10.0nm,1.1s
NRN Naryn 17.71 271 **Pn 02 03 48.6 -0.3**
MOKO MOKOCHONG 17.79 196 *e*P **P 02 03 52.0 +1.5**
MOKO *i* x x 02 11 06.3
GYA Guiyang 17.99 160 P **P 02 03 51.8 -0.9**
GYA pmax pmax
comp=Z,36nm,0.9s
GYA pmax pmax
comp=Z,230nm,3.3s
GYA L L
comp=Z,900nm,12.8s
GYA L L
comp=Z,400nm,9.4s
GYA L L
comp=Z,1μm,12.4s
SGDS Sogindy 18.27 278 *e*P **P 02 03 56.2 +0.4**
FRU1 Bishkek 18.39 276 P **P 02 03 56.5 -0.5**
FRU1 pmax pmax
comp=Z,29nm,0.8s
FRU1 Bishkek 18.39 276 P **P 02 03 56.5 -0.5**
KOHI KOHIMA 18.45 197 *ex* **P 02 03 55.8 -2.1**
KOHI IAmb IAmb 02 03 58.3
comp=Z,18nm,0.9s
KOHI *i* x x 02 11 24.7
BTLS Baital 18.50 283 *e*P **Pn 02 03 58.3 +0.1**
BTLS Baital 18.50 283 *e*P **Pn 02 03 58.4 +0.1**
AAK Ala-Archa 18.52 276 P **P 02 03 57.3 -1.2**
comp=Z,0.3nm,0.3s,baz=98,slow=7.8,SNR=9.8
AAK LR LR 02 12 01.5
comp=Z,527nm,18.8s,baz=82,slow=40
comp=Z,5.2nm,0.6s
AAK Ala-Archa 18.52 276⇓ *e*P **Pn 02 03 59.3 +0.6**
AAK pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 18.52 276 P **P 02 03 57.4 -1.2**
AAK Ala-Archa 18.52 276 P **Pn 02 03 59.4 +0.7**
KMI2 Kunming 18.57 172 P **P 02 03 57.8 -1.5**
KMI2 pP sP 02 04 02.4 -1.4
KMI2 pmax pmax
comp=Z,19nm,0.8s
KMI2 pmax pmax
comp=Z,200nm,5.2s
KMI2 L L
comp=Z,920nm,9.9s
KMI2 L L
comp=Z,410nm,9.3s
KMI2 L L
comp=Z,800nm,10.9s
TNCH TengChong 18.57 184 P **Pn 02 04 00.4 +1.0**
TNCH sP sP 02 04 04.3 +0.5
TNCH PP **PnPn 02 04 18.4 +7.2**
TNCH pmax pmax
comp=Z,38nm,0.8s
KSH2 Kashi 18.74 265 P **P 02 04 00.9 -0.1**
KSH2 pP sP 02 04 05.3 -0.2
KSH2 pmax pmax
comp=Z,6.0nm,0.7s
KSH2 L L
comp=Z,440nm,12.0s
KSH2 L L
comp=Z,430nm,10.0s
KSH2 L L
comp=Z,470nm,10.0s
EVN Everest 18.83 218 P **Pn 02 04 02.7 -0.3**
EVN Everest 18.83 218 P **Pn 02 04 03.9 +0.9**
NJ2 Nanjing 18.88 121 *e*P **Pn 02 04 02.3 -0.7**
NJ2 pmax pmax
comp=Z,46nm,1.1s
SHL Shillong 19.14 202 P **P 02 04 05.3 -0.2**
SHL pmax pmax
comp=Z,15nm,0.8s
SHL Shillong 19.14 202 P **P 02 04 05.2 -0.2**
SHL Shillong 19.14 202 *i* x x 02 11 30.9
DHUB DHUBRI 19.30 208 *ex* **P 02 04 07.0 0.0**
DHUB IAmb IAmb 02 04 11.9
comp=Z,14nm,0.5s
DHUB *i* x x 02 11 18.6
DHUB *i* x x 02 11 45.2
IMP Imphal 19.35 196 *e*P **Pn 02 04 09.3 +0.5**
IMP IAmb IAmb 02 04 12.1
comp=Z,11nm,0.9s
BNX BinXian 19.67 74⇓P **Pn 02 04 13.6 +1.2**
BNX pP **sP 02 04 16.6 +1.0**
BNX sP **pP 02 04 18.0 +3.9**
BNX S **Sn 02 07 56.3 +3.1**
BNX pmax pmax
comp=Z,14nm,1.0s
BNX L L
comp=Z,800nm,8.7s
BNX L L
comp=Z,380nm,7.6s
BNX L L
comp=Z,290nm,6.7s
MORE Moreh 19.86 195 P **Pn 02 04 13.7 -1.0**
MORE IAmb IAmb 02 04 23.0
comp=Z,35nm,1.0s
HEH HeiHe 19.89 61 *e*P **Pn 02 04 14.1 -0.8**
HEH pP **pP 02 04 16.3 -0.1**
HEH S **Sn 02 07 58.4 +0.2**
HEH pmax pmax
comp=Z,54nm,0.8s
HEH L L
comp=Z,640nm,6.3s
HEH L L
comp=Z,510nm,6.4s
HEH L L
comp=Z,720nm,7.0s
ARSB Arslanbob 19.93 273 P **P 02 04 14.2 +0.2**
ARSB pmax pmax
comp=Z,18nm,1.0s
ARSB Arslanbob 19.93 273 P **P 02 04 14.2 +0.2**
OHH Osh 20.30 271 P **P 02 04 18.4 +0.5**
ARK Arkit 20.54 275 P Pn 02 04 22.9 +0.1
ZEA Zeya 20.61 51 *e*P **P 02 04 21.6 +0.5**
ZEA pmax pmax
comp=N,10.0nm,0.2s
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA MLR MLR
comp=E,600nm,10.0s
ZEA MLR MLR
comp=Z,600nm,9.0s
DZA Taraz 20.75 278 *e*P **P 02 04 23.3 +0.5**
DZA Taraz 20.75 278 *e*P **P 02 04 23.4 +0.5**
PTH Pithoragarh 21.02 235 *e*P **P 02 04 27.8 +1.8**
LGTI Lohaghat 21.23 235 *e*P **P 02 04 29.9 +1.7**
KK31 Karatay Array 21.30 279 P **P 02 04 28.6 0.0**
KK31 pmax pmax
comp=Z,106nm,2.0s
KK31 Karatay Array 21.30 279 P **P 02 04 28.6 0.0**
KK31 IAmb IAmb 02 04 33.8
comp=Z,106nm,1.9s
KKAR Karatay Array 21.30 279 P **P 02 04 28.6 0.0**
KKAR Karatay Array 21.30 279 P **P 02 04 28.6 0.0**
MDJ Mudanjiang 21.33 77 P **P 02 04 32.5 +3.6**
MDJ pmax pmax
comp=Z,35nm,2.1s
DRK Karamyk 21.35 269 P **P 02 04 30.5 +0.9**
DRK pmax pmax
comp=Z,31nm,0.8s
DRK Karamyk 21.35 269 P **P 02 04 30.4 +0.9**
DRK IAmb IAmb 02 04 35.4
comp=Z,31nm,0.8s
BVAR Borovoye Array 21.60 306 P **P 02 04 31.2 -0.6**
comp=Z,27nm,0.7s,baz=105,slow=9.7,SNR=86
comp=Z,27nm,0.7s
BORK Borovoye 21.65 306 P **P 02 04 31.3 -1.0**
BORK pmax pmax
comp=Z,60nm,0.9s
BORK Borovoye 21.65 306 P **P 02 04 31.2 -1.0**
BORK IAmb IAmb 02 04 37.6
comp=Z,60nm,0.8s
BRLS Borolday 21.80 279 *e*P **P 02 04 36.4 +2.4**
BRLS pmax pmax
comp=Z,22nm,1.1s
BRLS Borolday 21.80 279 *e*P **P 02 04 36.4 +2.4**
comp=Z,22nm,1.1s
IUG luzhnay 21.85 276 *e*P **P 02 04 35.3 +0.6**
IUG pmax pmax
comp=Z,42nm,0.8s
IUG luzhnay 21.85 276 *e*P **P 02 04 35.3 +0.6**
comp=Z,42nm,0.8s
BTK Batken 21.87 271 P **P 02 04 35.3 +0.3**
BTK pmax pmax
comp=Z,18nm,0.8s
BTK Batken 21.87 271 P **P 02 04 35.2 +0.3**
THN Thein Dam 21.94 248 *e*P **P 02 04 36.4 +0.7**
KSAR Wonju Array Be 22.12 97 P **P 02 04 37.4 -0.1**
KSAR Wonju Array Be 22.12 97 P **P 02 04 37.4 -0.1**
CHM Chimkent 22.12 277 *e*P **P 02 04 38.1 +0.6**
CHM pmax pmax
comp=Z,15nm,0.8s
CHM Chimkent 22.12 277 *e*P **P 02 04 38.1 +0.6**
comp=Z,15nm,0.8s
KSRS Korea Array 22.14 97 P **P 02 04 36.8 -0.9**
comp=Z,18nm,1.1s,baz=289,slow=9.4,SNR=18
KSRS LR LR 02 13 48.0
comp=Z,193nm,19.2s,baz=300,slow=38
comp=Z,18nm,1.1s
MANEM Manem 22.18 264 P **P 02 04 39.3 +0.8**
MANEM IAmb IAmb 02 04 43.3
comp=Z,36nm,0.9s
SLVN Son La 22.47 170 P **P 02 04 41.0 -0.5**
SLVN IAmb IAmb 02 04 45.2
comp=Z,64nm,1.8s
GAR Garm 22.60 268 P **P 02 04 42.0 -0.8**
GAR IAmb IAmb 02 04 45.9
comp=Z,31nm,0.9s
GAR Garm 22.60 268 P **P 02 04 43.4 +0.6**
NIL Nilore 22.95 253 P **P 02 04 45.5 -0.9**
NIL pmax pmax
comp=Z,16nm,0.9s
NIL Nilore 22.95 253 P **P 02 04 45.5 -0.9**
NIL Nilore 22.95 253 P **P 02 04 48.3 +1.9**
USA0B Ussuriysk Arra 23.09 77⇓ *e*P **P 02 04 47.3 -0.4**
USA0B Ussuriysk Arra 23.09 77 P **P 02 04 46.9 -0.8**
USRK Ussuriysk Ar. 23.09 77 P **P 02 04 48.1 +0.4**
comp=Z,12nm,0.8s,baz=263,slow=8.5,SNR=18
USRK LR LR 02 14 18.1
comp=Z,248nm,18.0s,baz=273,slow=38
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 23.09 77 P **P 02 04 47.5 -0.2**
CHGR Chuyangaron 23.57 268⇓ *e*P **P 02 04 53.0 +0.3**
CHGR pmax pmax
comp=Z,40nm,0.8s
CHGR Chuyangaron 23.57 268 P **P 02 04 51.7 -1.0**
AYAN Aya Nagar 23.68 238 *e*P **P 02 04 54.8 +1.1**
AYAN IAmb IAmb 02 04 59.0
comp=Z,33nm,1.2s
SONA Sohna 23.88 238 *e*P **P 02 04 57.5 +1.8**
NPW Naypyitaw 23.97 189 P **P 02 04 57.5 +1.0**
QZH2 Quanzhou 24.12 134 P **P 02 04 59.3 +1.4**
QZH2 S **S 02 09 20.3 +4.7**
QZH2 L L
comp=Z,1μm,9.4s
QZH2 L L
comp=Z,500nm,10.0s
QZH2 L L
comp=Z,1μm,10.9s
CHTO Chiang Mai 24.73 182 P **P 02 05 02.5 -1.1**
CHTO pmax pmax
comp=Z,11nm,1.0s
CHTO Chiang Mai 24.73 182 P **P 02 05 02.5 -1.1**
CHTO Chiang Mai 24.73 182 P **P 02 05 03.4 -0.2**
SHAA Shahritus 24.75 267 P **P 02 05 04.0 +0.3**
SHAA IAmb IAmb 02 05 18.1
comp=Z,44nm,0.8s
JHNI Jhansi 25.06 231 *e*P **P 02 05 06.9 +0.4**
JHNI IAmb IAmb 02 05 10.7
comp=Z,15nm,0.9s
CM31 Chiang Mai Arr 25.09 182 P **P 02 05 06.6 -0.2**
CMAR Chiang Mai Arr 25.09 182 P **P 02 05 06.5 -0.3**
comp=Z,5.4nm,0.6s,baz=355,slow=9.5,SNR=40
CMAR LR LR 02 16 01.2
comp=Z,285nm,19.1s,baz=350,slow=39
comp=Z,5.4nm,0.6s
CMAR Chiang Mai Arr 25.09 182 *i*P **P 02 05 07.0 +0.2**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 25.09 182 P **P 02 05 06.1 -0.6**
YAK Yakutsk 25.41 33 LR LR 02 15 19.9
comp=Z,306nm,18.4s,baz=232,slow=37
YAK Yakutsk 25.41 33 *e*P **P 02 05 09.9 +0.6**
YAK *e**PP **sP 02 05 18.6 +4.6**
YAK *e* 02 05 45.5
YAK *e*PPP PPP 02 05 53.7
YAK *e* 02 08 41.3
YAK *e*S **S 02 09 35.5 -0.3**
YAK *e*SSS SSS 02 10 44.4
YAK *e* 02 16 08.4
YAK pmax pmax
comp=Z,15nm,0.7s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,166nm,4.5s
YAK pmax pmax
comp=E,15nm,1.5s
YAK pmax pmax
comp=N,22nm,1.9s
YAK smax smax
comp=E,75nm,5.0s
YAK smax smax
comp=N,32nm,3.0s
YAK MLR MLR
comp=E,169nm,16.0s
YAK MLR MLR
comp=Z,185nm,13.0s
YAK MLR MLR
comp=N,148nm,16.0s
KBL Kabul 25.46 260 P **P 02 05 10.5 +0.2**
KBL pmax pmax
comp=Z,15nm,0.9s
KBL Kabul 25.46 260 P **P 02 05 10.4 +0.2**
KBL IAmb IAmb 02 05 33.6
comp=Z,15nm,0.9s
KBL Kabul 25.46 260 P **P 02 05 12.7 +2.5**
GRNR Gornyy 25.66 61⇓ *i*P **P 02 05 12.9 +1.2**
GRNR pmax pmax
comp=Z,8.0nm,1.3s
GRNR MLR MLR
comp=E,630nm,21.0s
GRNR MLR MLR
comp=N,140nm,11.0s
GRNR MLR MLR
comp=Z,370nm,11.0s
QIZ Qiongzhong 25.91 158 P **P 02 05 14.4 +0.2**
QIZ S **S 02 09 46.4 +2.1**
QIZ L L
comp=Z,1μm,9.2s
QIZ L L
comp=Z,510nm,8.2s
QIZ L L
comp=Z,2μm,10.0s
SSLB Suanglung 26.31 132 P **P 02 05 17.5 -0.4**
SSLB Suanglung 26.31 132 P **P 02 05 18.2 +0.3**
JNU Nakatsue 26.34 103 LR LR 02 16 00.8
comp=Z,130nm,18.3s,baz=298,slow=37
GUNA GUNA 26.42 232 *e*P **P 02 05 19.6 +0.8**
GUNA IAmb IAmb 02 05 21.1
comp=Z,28nm,0.8s
TPUB Ta-pu 26.53 133 P **P 02 05 19.4 -0.5**
TPUB Ta-pu 26.53 133 P **P 02 05 20.3 +0.5**
NRIK Noril'sk 26.56 350 P **P 02 05 19.1 -0.6**
comp=Z,46nm,1.2s,baz=149,slow=9.3,SNR=13
NRIK LR LR 02 16 22.2
comp=Z,323nm,19.2s,baz=164,slow=38
comp=Z,46nm,1.2s
NRIK Noril'sk 26.56 350*c i*P **P 02 05 19.0 -0.6**
NRIK Noril'sk 26.56 350 P **P 02 05 18.9 -0.8**
NRIK Noril'sk 26.56 350 pmax pmax
comp=Z,49nm,1.1s
YULB Yu-li 26.81 132 P **P 02 05 21.9 -0.5**
YULB IAmb IAmb 02 05 28.3
comp=Z,28nm,0.9s
YULB Yu-li 26.81 132 P **P 02 05 23.9 +1.5**
TWG Pinlang 27.15 133 P **P 02 05 25.1 -0.3**
TWG Pinlang 27.15 133 P **P 02 05 26.1 +0.6**
AB31 Akbulak array 27.84 296 P **P 02 05 30.8 -0.5**
ABKAR Akbulak array 27.84 296 P **P 02 05 30.8 -0.5**
SVE Sverdlovsk 27.93 312 *e*P **P 02 05 32.4 +0.3**
SVE *e*S **S 02 10 17.0 +1.4**
SVE pmax pmax
comp=Z,40nm,1.3s
SVE MLR MLR
comp=Z,547nm,11.0s
JOW Kunigami 28.43 117 LR LR 02 18 10.5
comp=Z,238nm,19.6s,baz=210,slow=39
AKTO Aktyubinsk 29.02 298 LR LR 02 18 31.4
comp=Z,150nm,19.9s,baz=314,slow=39
ARTI Arti 29.08 311 LR LR 02 17 57.7
comp=Z,387nm,18.4s,baz=102,slow=38
ARTI Arti 29.08 311*ce*P **P 02 05 41.9 -0.5**
ARTI pmax pmax
comp=Z,25nm,0.9s
ARTI Arti 29.08 311 P **P 02 05 41.4 -1.0**
ARTI IAmb IAmb 02 05 43.0
comp=Z,22nm,0.8s
TYV Tymovskoe 29.61 61 *e*P **P 02 05 49.5 +2.4**
TYV pmax pmax
comp=Z,100nm,5.1s
TYV pmax pmax
comp=Z,7.0nm,1.0s
AKL Akola 29.75 227 *e*P **P 02 05 49.8 +1.2**
AKL IAmb IAmb 02 05 54.4
comp=Z,22nm,1.0s
MJAR Matsushiro Arr 29.98 90 P **P 02 05 49.2 -1.4**
comp=Z,0.8nm,0.4s,baz=291,slow=7.7,SNR=4.5
MJAR LR LR 02 17 03.6
comp=Z,109nm,18.9s,baz=308,slow=35
comp=Z,0.8nm,0.4s
YSS Yuzhno-Sakhali 30.09 68⇑ *e*P **P 02 05 53.5 +2.1**
YSS pmax pmax
comp=Z,8.0nm,0.9s
ASAJ Asahikawa 30.57 74 LR LR 02 19 35.4
comp=Z,53nm,20.8s,baz=178,slow=39
TIXI Tiksi 31.45 17 LR LR 02 19 09.1
comp=Z,214nm,18.1s,baz=236,slow=37
KIRV Kirov 34.12 314 LR LR 02 21 21.8
comp=Z,596nm,20.6s,baz=97,slow=38
KIRV Kirov 34.12 314*c i*P **P 02 06 26.1 -0.5**
MA2 Magadan 34.44 44 LR LR 02 21 19.3
comp=Z,154nm,21.0s,baz=272,slow=38
BELG Belogornoye 35.33 303*c i*P **P 02 06 36.8 -0.3**
BELG pmax pmax
comp=Z,6.0nm,1.3s
SEY Seymchan 35.58 39⇑ *e*P **P 02 06 39.0 -0.1**
SEY pmax pmax

MAK Makhachkala 37.59 288 eP P 02 06 52.4 -4.1
MAK e 02 08 22.5
MAK eS S 02 12 41.2 -4.5
MAK pmax pmax
comp=Z,142nm,1.4s
MAK MLR MLR
comp=Z,113nm,14.0s
JCJ Chichijima 37.81 102 LR LR 02 22 37.1
comp=Z,55nm,20.3s,baz=75,slow=36
AKT Akhty 37.94 285 eP P 02 07 00.0 +0.3
AKT e 02 09 14.4
AKT pmax pmax
comp=Z,16nm,0.8s
AKT MLR MLR
comp=Z,132nm,11.0s
KOD Kodaikanal 38.52 217 eP P 02 07 05.6 +0.7
KOD IAmb IAmb 02 07 08.1
comp=Z,12nm,0.6s
PEA0B Petropavlovsk- 38.61 55⇑eP P 02 07 06.0 +1.0
PETK Petropavlovsk- 38.61 55 P P 02 07 04.6 -0.4
comp=Z,7.8nm,1.0s,baz=264,slow=3.0,SNR=5.5
comp=Z,7.8nm,1.0s
PETK Petropavlovsk- 38.61 55 P P 02 07 03.8 -1.3
VRH Novokhopyorsk 39.15 302 eP P 02 07 09.3 -0.2
VRH pmax pmax
comp=Z,24nm,0.7s
KLMR Klimovskoe 39.16 318 eP P 02 07 07.7 -1.8
KLMR e 02 08 37.8
KLMR pmax pmax
comp=Z,38nm,1.4s
KLMR MLR MLR
comp=Z,550nm,12.0s
NCK Nalchik 40.09 290⇓eP P 02 07 17.1 -0.4
NCK pmax pmax
comp=Z,6.0nm,0.7s
KBZ Khabaz 40.48 291 P P 02 07 20.1 -0.6
comp=Z,1.8nm,0.7s,baz=83,slow=6.3,SNR=5.0
KBZ LR LR 02 26 46.2
comp=Z,155nm,18.3s,baz=74,slow=40
comp=Z,1.8nm,0.7s
KBZ Khabaz 40.48 291⇓eP P 02 07 20.6 -0.1
KBZ pmax pmax
comp=Z,5.0nm,1.2s
LPSR Galich'ya Gora 40.54 305 eP P 02 07 20.8 -0.2
LPSR pmax pmax
comp=Z,31nm,0.8s
KVAR Kislovodsk Arr 40.54 291 LR LR 02 24 34.1
comp=Z,181nm,20.9s,baz=95,slow=37
GNI Garni 40.55 285 LR LR 02 26 33.6
comp=Z,108nm,18.2s,baz=42,slow=40
GNI Garni 40.55 285 P P 02 07 21.6 +0.1
GNI pmax pmax
comp=Z,13nm,1.0s
GNI Garni 40.55 285 P P 02 07 21.6 +0.1
GNI Garni 40.55 285 P P 02 07 21.2 -0.3
comp=Z,15nm,1.4s
GNI Garni 40.55 285 P P 02 07 24.0 +2.5
KIV Kislovodsk 40.55 291 eP P 02 07 20.8 -0.6
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,80nm,16.0s
KIV Kislovodsk 40.55 291 P P 02 07 20.7 -0.7
KIV Kislovodsk 40.55 291 P P 02 07 20.1 -1.3
comp=Z,7.2nm,1.2s
KIV Kislovodsk 40.55 291 P P 02 07 22.8 +1.4
VORR Voronezh 40.58 303 eP P 02 07 21.3 -0.1
VORR pmax pmax
comp=Z,14nm,0.4s
SHA1 Shidzhatmaz 40.65 291⇑eP P 02 07 22.1 -0.3
MOS Moscow 40.69 310 eP P 02 07 22.2 0.0
MOS e 02 07 29.3
MOS e 02 08 55.2
MOS eS S 02 13 31.2 -0.9
MOS pmax pmax
comp=Z,31nm,0.8s
VORD Divnogorie 40.69 302 eP P 02 07 20.4 -1.9
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 40.71 303 eP P 02 07 22.2 -0.3
VSR pmax pmax
comp=Z,39nm,0.6s
LVZ Lovozero 41.28 329ceP P 02 07 26.3 -0.7
LVZ pmax pmax
comp=Z,15nm,0.8s
LVZ Lovozero 41.28 329 P P 02 07 25.6 -1.4
comp=Z,20nm,1.0s
OBN Obninsk 41.39 309 ⇓P P 02 07 26.7 -1.3
OBN Obninsk 41.39 309ceP P 02 07 27.2 -0.8
OBN pmax pmax
comp=Z,25nm,0.9s
OBN MLR MLR
comp=Z,175nm,15.0s
OBN Obninsk 41.39 309 P P 02 07 27.4 -0.6
OBN Obninsk 41.39 309 P P 02 07 26.8 -1.3
comp=Z,30nm,1.1s
OBN Obninsk 41.39 309 P P 02 07 26.8 -1.3
DIGO Kars 41.40 286 P P 02 07 28.9 +0.3
EPOS Posof 41.42 288 P P 02 07 30.5 +1.9
ERBR Yeremizino-Bor 41.43 294 eP P 02 07 28.6 +0.1
ERBR pmax pmax
comp=Z,26nm,0.8s
ERBR MLR MLR
comp=Z,153nm,14.0s
LABN Labinsk 41.64 293 eP P 02 07 29.8 -0.4
LABN eS S 02 13 46.5 0.0
LABN pmax pmax
comp=Z,20nm,0.6s
LABN MLR MLR
comp=Z,109nm,14.0s
MYLDM Lahad Datu 41.66 151 P P 02 07 31.5 +0.9
MYLDM IAmb IAmb 02 07 37.0
comp=Z,28nm,0.9s
BILL Bilibino 41.74 31⇓iP P 02 07 31.0 +0.2
BILL pmax pmax
comp=Z,10.0nm,0.8s
APA Apatity 41.75 328⇓eP P 02 07 30.0 -0.8
APA e 02 09 07.7
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,363nm,16.1s
GEVA Gevas 42.50 283 P P 02 07 38.6 +1.0
GEVA IAmb IAmb 02 07 40.4
comp=Z,12nm,0.8s
VSLR Vesyoloye 42.52 291⇓eP P 02 07 36.0 -1.5
VSLR pmax pmax
comp=Z,23nm,1.3s
DAV Davao City (W) 42.82 141 LR LR 02 26 00.3
comp=Z,104nm,19.0s,baz=338,slow=37
GURO Guroymak-BITLI 43.12 284 P P 02 07 43.2 +0.6
GURO IAmb IAmb 02 07 45.5
comp=Z,8.0nm,0.6s
ANN Anapa 43.77 294 eP P 02 07 46.9 -0.6
ANN pmax pmax
comp=Z,35nm,1.1s
KELT Kelkit 44.38 287 P P 02 07 54.5 +1.8
ARCES ARCESS Array B 44.57 331 P P 02 07 53.5 -0.1
comp=Z,3.9nm,0.7s,baz=74,slow=9.1,SNR=16
comp=Z,3.9nm,0.7s
ARCES ARCESS Array B 44.57 331 P P 02 07 53.6 -0.1
ARCES pmax pmax
comp=Z,8.0nm,1.0s
ARCES ARCESS Array B 44.57 331 P P 02 07 53.6 0.0
ARPR Arapgir-MALATY 45.48 286 P P 02 08 03.8 +2.4
FIA1 FINESS Array S 45.55 320 P P 02 08 00.7 -0.7
FINES FINESS Array B 45.55 320 P P 02 08 00.4 -1.1
comp=Z,6.3nm,0.8s,baz=76,slow=8.0,SNR=27
FINES LR LR 02 29 45.3
comp=Z,80nm,18.3s,baz=81,slow=40
comp=Z,6.3nm,0.8s
FINES FINESS Array B 45.55 320 *i* P **P 02 08 01.2 -0.3**
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 45.55 320 P P 02 08 00.1 -1.3
VSU Vasula 45.92 316*c i*P **P 02 08 02.8 -1.7**
VSU pmax pmax
comp=Z,18nm,1.0s
VSU Vasula 45.92 316 P P 02 08 03.4 -1.1
ARBE Arbavere 46.06 317 P P 02 08 05.5 -0.1
MNK Minsk 46.41 310 *i* P **P 02 08 08.8 +0.4**
MNK pmax pmax
comp=N,17nm,0.8s
MNK *i* P **P 02 08 08.8 +0.4**
comp=Z,19nm,0.8s,baz=72
MNK *i* PcP **PcP 02 09 42.6 -0.5**
MNK *i* PP **PP 02 09 57.9 +0.7**
MNK *i* PPP PPP 02 10 39.5
MNK *i* S **S 02 14 57.4 +1.5**
MNK *i* ScS **ScS 02 18 04.1 +0.8**
MNK *i* SS **SS 02 18 24.8 +3.6**
MNK *i* SSS SSS 02 19 18.8
MNK *i* LQ LQ 02 24 17.0
MNK *i* LR LR 02 27 06.2
MNK *i* LRM MLR 02 28 13.9
comp=Z,165nm,16.1s
MNK *i* LRM MLR 02 28 22.1
comp=N,158nm,15.8s
MNK *i* LRM MLR 02 29 09.6
comp=E,81nm,14.5s
MNK Minsk 46.41 310 *i* P **P 02 08 08.7 +0.4**
MNK *i* 02 09 42.5
MNK *i* 02 09 57.8
MNK *i* PPP PPP 02 10 39.5
MNK *i* S **S 02 14 57.3 +1.5**
MNK *i* 02 18 04.1
MNK *i* SSS SSS 02 19 18.7
MNK pmax pmax
comp=N,17nm,0.8s
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=E,9.0nm,0.8s
MNK MLR MLR
comp=Z,165nm,16.0s
MNK MLR MLR
comp=N,158nm,16.0s
MNK MLR MLR
comp=E,81nm,15.0s
AK09 Malin Array Si 46.86 305 P P 02 08 11.3 -0.7
AKASG Malin Array Be 46.87 305 P P 02 08 11.2 -0.8
comp=E,7.4nm,0.7s,baz=60,slow=8.2,SNR=23
AKASG LR LR 02 28 31.1
comp=E,241nm,19.2s,baz=77,slow=37
comp=E,7.4nm,0.7s
AKASG Malin Array Be 46.87 305*ce*P **P 02 08 11.6 -0.4**
AKASG pmax pmax
comp=Z,12nm,0.7s
AKASG Malin Array Be 46.87 305 P P 02 08 11.6 -0.4
AKASG IAmb IAmb 02 08 12.9
comp=Z,23nm,1.8s
AKBB Malin Array Si 46.87 305*c i*P **P 02 08 11.6 -0.4**
AKBB pmax pmax
comp=Z,16nm,0.7s
AKBB Malin Array Si 46.87 305 P P 02 08 11.1 -0.9
AKBB Malin Array Si 46.87 305 P P 02 08 11.4 -0.6
KIEV Kiev 46.88 305 ⇑P P 02 08 11.6 -0.5
KIEV Kiev 46.88 305 P P 02 08 12.0 -0.1
KIEV Kiev 46.88 305 P 02 08 12.0 -0.1
KIEV Kiev 46.88 305 P P 02 08 11.4 -0.7
comp=Z,93nm,1.1s
AK10 Malin Array Si 46.89 305 P P 02 08 11.5 -0.7
AK02 Malin Array Si 46.90 305 P P 02 08 11.3 -0.9
AK04 Malin Array Si 46.90 305 P P 02 08 11.6 -0.6
NACGM Naroch 46.90 311 *ce*P **P 02 08 12.1 -0.1**
comp=Z,27nm,0.8s,baz=72
AK23 Malin Array Si 46.91 305 P P 02 08 11.1 -1.2
AK05 Malin Array Si 46.91 305 P P 02 08 11.6 -0.7
AK11 Malin Array Si 46.91 305 P P 02 08 11.5 -0.8
AK12 Malin Array Si 46.93 305 P P 02 08 11.8 -0.7
BAL3X Bal3x, Balta 47.64 301 P P 02 08 18.0 -0.1
MI28 Mi28,Pidlybu 47.71 305 P P 02 08 17.3 -1.3
PURM Purcari 48.02 299 P P 02 08 20.4 -0.6
comp=Z,2µmcomp=Z,47nm,0.7s
LUBAR Lubar, Ukraine 48.03 304 P P 02 08 19.7 -1.3
SORM Soroca 48.34 302 ⇓P P 02 08 22.9 -0.6
SORM Soroca 48.34 302 ⇓P P 02 08 22.9 -0.6
SORM Soroca 48.34 302 P P 02 08 22.8 -0.6
comp=Z,16nm,0.9s
BR131 Keskin Array S 48.44 289⇓eP P 02 08 24.2 -0.3
BR131 Keskin Array S 48.44 289 P P 02 08 23.8 -0.7
BRTR Keskin Array B 48.44 289 P P 02 08 24.9 +0.3
comp=Z,1.7nm,0.8s,baz=71,slow=6.0,SNR=13
BRTR LR LR 02 30 36.3
comp=Z,55nm,20.8s,baz=88,slow=38
comp=Z,1.7nm,0.8s
BRTR Keskin Array B 48.44 289*ce*P **P 02 08 25.2 +0.7**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 48.44 289 P P 02 08 24.3 -0.3
BR105 Keskin Array S 48.45 289 P P 02 08 24.4 -0.3
comp=Z,4.2nm,0.8s
RNPP9 Sopachiv 48.58 307 P P 02 08 24.9 -0.4
KMPD K-Podol'skiy 49.33 303 P P 02 08 29.5 -1.6
CFR Carcaliu 49.68 298 ⇓P P 02 08 33.5 -0.3
CFR Carcaliu 49.68 298 ⇓P P 02 08 33.5 -0.3
GIRR Girov 49.96 301 ⇓P P 02 08 36.3 +0.4
TESR Tescani 50.06 300 ⇑P P 02 08 36.8 +0.1
TESR Tescani 50.06 300 P P 02 08 36.2 -0.5
comp=Z,12nm,1.2s
BIZ Bicaz 50.22 301 ⇑P P 02 08 38.3 +0.5
VRI Vrincioaia 50.28 300 ⇑P P 02 08 37.7 -0.7
VRI Vrincioaia 50.28 300 ⇑P P 02 08 37.7 -0.7
SAHR Sahastru 50.37 299 ⇑P P 02 08 38.8 -0.3
BUR08 Bucovina Ar. S 50.48 302 IAmb IAmb 02 08 41.8
comp=Z,16nm,1.3s
BURAR Bucovina Array 50.48 302 ⇑P P 02 08 40.1 +0.1
BURAR Bucovina Array 50.48 302 ⇑P P 02 08 40.1 +0.1
BURAR Bucovina Array 50.48 302 P P 02 08 39.5 -0.5
BURAR IAmb IAmb 02 08 41.6
comp=Z,6.5nm,0.8s
MMAI Mount Meron Ar 50.51 281 P P 02 08 40.9 +0.5
comp=Z,1.9nm,0.7s,baz=58,slow=8.0,SNR=1.8
comp=Z,1.9nm,0.7s
TURR Turia 50.65 300 ⇑P P 02 08 41.0 -0.1
BOSR Bodos 50.86 300 ⇑P P 02 08 43.6 +0.8
MLR Muntele Rosu 50.94 299 ⇓P P 02 08 43.7 +0.2
MLR Muntele Rosu 50.94 299 ⇓P P 02 08 43.7 +0.2
MLR Muntele Rosu 50.94 299 IAmb IAmb 02 08 46.1
comp=Z,15nm,1.6s
MLR Muntele Rosu 50.94 299 P P 02 08 43.5 0.0
comp=Z,5.4nm,1.3s
DOPR Dopca 51.08 300 ⇑P P 02 08 45.5 +1.0
KWP Kalwaria Pacla 51.15 306 P P 02 08 44.5 -0.4
comp=Z,576nmcomp=Z,53nm,0.8s
ARCR ARCALIA 51.24 302 ⇑P P 02 08 44.8 -0.8
KOLS Kolonicke sedl 51.70 305 *eP* **P 02 08 49.6 +0.6**
KOLS pmax pmax
comp=Z,9.0nm,0.7s
KOLS Kolonicke sedl 51.70 305 *eP* **P 02 08 49.6 +0.6**
HFS Hagfors 51.73 320 P P 02 08 48.3 -0.7
comp=Z,9.1nm,0.7s,baz=64,slow=6.8,SNR=25
comp=Z,9.1nm,0.7s
AMKA Amchitka 51.76 52 P P 02 08 49.1 -0.2
CJR Cluj-Napoca 51.87 302 ⇑P P 02 08 51.5 +1.2
CJR Cluj-Napoca 51.87 302 ⇑P P 02 08 51.5 +1.2
C16K Lisburne Hills 52.03 28 P P 02 08 49.0 -2.1
baz=293
MARR Marisel-Cluj 52.18 302 ⇑P P 02 08 53.4 +0.7
BLEU Blekinge 52.21 315 *i* P **P 02 08 51.7 -1.0**
NC405 NORSAR Array S 52.24 322 P P 02 08 52.0 -0.9
NC405 IAmb IAmb 02 08 53.2
comp=Z,9.4nm,0.8s
LOT Lotru 52.33 300 ⇓P P 02 08 54.4 +0.5
DRGR 52.38 302 ⇑P P 02 08 54.4 +0.2
DRGR 52.38 302 ⇑P P 02 08 54.4 +0.2
NB2 NORSAR Subarra 52.49 322 P P 02 08 53.5 -1.3
comp=Z,2.3nm,0.7s,baz=68,slow=7.9
NOA NORSAR Array B 52.49 322 P P 02 08 53.8 -1.0
comp=Z,3.6nm,0.8s,baz=68,slow=7.4,SNR=18
NOA LR LR 02 32 42.7
comp=Z,151nm,19.0s,baz=275,slow=38
comp=Z,3.6nm,0.8s
NC204 NORSAR Array S 52.60 323 P P 02 08 54.3 -1.3
NC204 IAmb IAmb 02 08 55.8
comp=Z,9.2nm,0.9s
OJC Ojcow 52.60 307 P P 02 08 54.9 -0.8
comp=Z,22nm,0.8s
A19K Wainwright 52.61 25 P P 02 08 54.1 -1.3
baz=296
NIE Niedzica 52.66 306 P P 02 08 56.1 -0.1
comp=Z,113nmcomp=Z,6.5nm,0.9s
C17K DeLong Mountai 52.68 27 P P 02 08 54.0 -2.0
baz=295
NBO00 NORSAR Array S 52.69 322 P P 02 08 54.5 -1.7
NBO00 IAmb IAmb 02 08 56.2
comp=Z,6.3nm,0.8s
F14K Arctic Creek 52.81 32 P P 02 08 55.3 -1.7
baz=294
RDOG Red Dog Mine 52.95 28 P P 02 08 56.1 -1.9
baz=295
GZR Gura Zlata 52.97 301 ⇓P P 02 08 59.0 +0.4
GZR Gura Zlata 52.97 301 ⇓P P 02 08 59.0 +0.4
D17K Noatak River 53.04 28 P P 02 08 57.4 -1.3
baz=296
DEL Delary 53.13 316 *i* P **P 02 08 58.6 -0.8**
BSD Bornholm Skovb 53.17 314 *i* P **P 02 08 58.9 -0.9**
BSD IAmb IAmb 02 08 59.5
comp=Z,9.7nm,0.7s
C18K Utukok River 53.26 27 IAmb IAmb 02 09 05.2
comp=Z,9.8nm,0.8s
C18K Utukok River 53.26 27 P P 02 08 59.4 -0.9
baz=296
SIRR Siria 53.26 302 ⇑P P 02 09 01.3 +0.7
LANS Liptovska Anna 53.27 306 *eP* **P 02 09 01.6 +0.9**
LANS pmax pmax
comp=Z,2.0nm,0.8s
LANS Liptovska Anna 53.27 306 *eP* **P 02 09 01.6 +0.9**
STRU Stroemstad 53.34 320 *i* P **P 02 09 00.0 -0.9**
HERR Herculane 53.44 300 ⇑P P 02 09 02.3 +0.4
ANM Nome 53.57 32 P P 02 09 01.5 -1.1
baz=296
C19K Lookout Ridge 53.57 26 P P 02 09 01.8 -0.8
baz=297
PSZ Piszkesteto 53.57 305 P P 02 09 03.1 +0.1
PSZ pmax pmax
comp=Z,7.0nm,1.1s
PSZ Piszkesteto 53.57 305 P P 02 09 03.0 +0.1
BZS Buzias 53.59 301 ⇑P P 02 09 03.2 +0.2
BZS Buzias 53.59 301 ⇑P P 02 09 03.2 +0.2
ONAU Onsala 53.70 318 *i* P **P 02 09 02.7 -0.9**
LUNU Lund 53.70 315 *i* P **P 02 09 03.0 -0.7**
BJUU Bjuv 53.73 316 *i* P **P 02 09 03.8 -0.1**
OKC Ostrava-Krasne 53.73 307 AMS AMS 02 32 00.0
comp=Z,200nm,9.1s
E17K Hotham Inlet 53.75 29 P P 02 09 02.9 -0.9
baz=297
G15K Niukluk 53.89 32 P P 02 09 03.9 -1.1
baz=297
B20K Meade River 53.89 25 P P 02 09 03.2 -1.7
baz=299
MDVR Moldovita 53.93 300 ⇑P P 02 09 05.6 0.0
E18K Tukpahlearik C 54.02 28 IAmb IAmb 02 09 10.6
comp=Z,5.0nm,0.8s
E18K Tukpahlearik C 54.02 28 P P 02 09 05.0 -0.8
baz=298
MORC Moravsky Berou 54.10 308 ⇑P P 02 09 07.2 +0.4
MORC Moravsky Berou 54.10 308 ⇑P P 02 09 07.2 +0.4
MORC Moravsky Berou 54.10 308 IAmb IAmb 02 09 08.1
comp=Z,8.2nm,0.8s
MORC Moravsky Berou 54.10 308 *eP* **P 02 09 06.8 0.0**
F17K Baldwin Pennin 54.25 29 P P 02 09 06.4 -1.1
F17K Baldwin Pennin 54.25 29 P P 02 09 06.7 -0.8
baz=298
KSP Ksiaz 54.32 309 P P 02 09 08.4 +0.1
comp=Z,10nm,0.9s
D19K Kuna River 54.33 26 P P 02 09 07.8 -0.3
baz=299,SNR=11
G16K Koyuk River 54.34 31 P P 02 09 07.2 -0.9
baz=298
KRLC Kraliky 54.40 308 *eP* **P 02 09 09.4 +0.4**
KRLC MLR MLR
comp=Z,300nm,15.0s
KRLC Kraliky 54.40 308 *eP* **P 02 09 09.4 +0.4**
KRLC AMS AMS 02 32 40.0
comp=Z,300nm,15.0s
JAVC Velka Javorina 54.45 306 *eP* **P 02 09 10.5 +1.1**
OSTC Ostas 54.50 309 *eP* **P 02 09 10.6 +1.0**
OSTC MLR MLR
comp=Z,300nm,8.8s
OSTC Ostas 54.50 309 *eP* **P 02 09 10.6 +1.0**
OSTC AMS AMS 02 32 40.0
comp=Z,300nm,8.8s
DPC Dobruska-Polom 54.53 309 *eP* **P 02 09 10.8 +0.9**
DPC MLR MLR
comp=Z,200nm,11.6s
DPC Dobruska-Polom 54.53 309 *eP* **P 02 09 10.8 +0.9**
DPC AMS AMS 02 32 30.0
comp=Z,200nm,11.6s
DPC Dobruska-Polom 54.53 309 P P 02 09 09.9 0.0
comp=Z,16nm,0.8s
SRO Srobarova 54.56 305 *eP* **P 02 09 11.3 +1.2**
SRO pmax pmax
comp=Z,11nm,0.7s
SRO Srobarova 54.56 305 *eP* **P 02 09 11.3 +1.2**
CHVC Chvalec 54.58 309 AMS AMS 02 32 40.0
comp=Z,200nm,10.8s
UPC Upice 54.64 309 *eP* **P 02 09 11.4 +0.8**
UPC MLR MLR
comp=Z,300nm,10.0s
UPC Upice 54.64 309 *eP* **P 02 09 11.4 +0.8**
UPC AMS AMS 02 32 40.0
comp=Z,300nm,10.0s
D20K Etivluk River 54.70 26 P P 02 09 10.2 -0.7
baz=300,SNR=21
F18K Selawik 54.74 29 P P 02 09 10.2 -0.8
baz=299
H16K Elim 54.74 31 P P 02 09 10.0 -1.1
baz=298
SMOL Smolenice 54.76 306 *eP* **P 02 09 12.3 +0.8**
SMOL pmax pmax
comp=Z,2.0nm,0.8s
B22K Teshekpuk Lake 54.83 23 P P 02 09 10.8 -0.8
baz=302
B21K Ikpikpuk River 54.85 24 IAmb IAmb 02 09 16.0
comp=Z,12nm,0.8s
B21K Ikpikpuk River 54.85 24 P P 02 09 11.5 -0.4
baz=301
VRAC Vranov 54.87 307 *eP* **P 02 09 12.5 +0.2**
MODS Modra-Piesok 54.91 306 *eP* **P 02 09 13.6 +0.9**
MODS pmax pmax
comp=Z,15nm,1.4s
MODS Modra-Piesok 54.91 306 *eP* **P 02 09 13.6 +0.9**
G17K Kiwalik Mounta 54.92 30 P P 02 09 12.3 -0.1
baz=299
C21K Knifeblade Rid 55.05 25 P P 02 09 13.0 -0.3
baz=301,SNR=20
K13K Kusilvak Mount 55.06 35 P P 02 09 12.9 -0.5
baz=298
E20K Nigu River 55.07 26 P P 02 09 12.8 -0.7
baz=301,SNR=11
KRUC Moravsky 55.10 307 *eP* **P 02 09 14.4 +0.4**
J14K Nanvaranak Lak 55.12 34 P P 02 09 13.1 -0.8
baz=298
M11K Mekoryuk 55.13 37 P P 02 09 12.7 -1.3
baz=298
MORH Mrgy, Hungar 55.13 303 ⇑P P 02 09 14.4 +0.1
MORH Mrgy, Hungar 55.13 303 P P 02 09 13.8 -0.4
comp=Z,13nm,0.9s
E19K Redstone River 55.14 27 P P 02 09 13.9 -0.1
E19K Redstone River 55.14 27 P P 02 09 13.0 -1.0
baz=300,SNR=24
F19K Shaleruckik Mo 55.27 28 IAmb IAmb 02 09 19.8
comp=Z,11nm,0.8s
F19K Shaleruckik Mo 55.27 28 P P 02 09 13.5 -1.4
baz=300,SNR=13
MPLH Magyarpolny 55.33 305 P P 02 09 14.5 -1.2
comp=Z,30nm,1.1s
G18K Tagagawik 55.44 29 P P 02 09 15.1 -1.1
baz=300
H17K Granite Mounta 55.47 31 P P 02 09 16.6 +0.2
H17K IAmb IAmb 02 09 21.6
comp=Z,11nm,0.8s
H17K Granite Mounta 55.47 31 P P 02 09 14.9 -1.5
baz=300,SNR=7.2
BRG Berggiesshubel 55.63 310 *eP* **P 02 09 17.5 -0.2**
comp=Z,6.1nm,0.9s,baz=59,slow=7.1
BRG Berggiesshubel 55.63 310 *i* P **P 02 09 18.0 +0.3**
BRG Amp 02 09 18.8
comp=Z,6.1nm,0.9s
E21K Killik River 55.67 25 P P 02 09 17.2 -0.7
baz=302
I17K Unalakleet 55.70 32 P P 02 09 16.7 -1.3
baz=300
PRU Pruhonice 55.72 309 *eP* **P 02 09 18.9 +0.5**
PRU MLR MLR
comp=Z,200nm,13.3s
PRU Pruhonice 55.72 309 *eP* **P 02 09 18.9 +0.5**
PRU AMS AMS 02 33 20.0
comp=Z,200nm,13.3s
WINA Alland / Wiene 55.75 306 *i* pP **P 02 09 19.6 +1.0**
SNR=7.3
RONA Rosalia, Austr 55.81 306 *i* pP **P 02 09 20.3 +1.1**

comp=Z,9.6nm,0.9s,SNR=8.0
F20K Avaraart Lake 55.85 27 P P 02 09 17.9 -1.2
baz=302
G19K Purcell Mounta 55.86 29 P P 02 09 18.0 -1.2
baz=301
C23K Itkillik River 55.91 23 P P 02 09 20.0 +0.5
C23K IAmb IAmb 02 09 23.5
comp=Z,9.2nm,0.7s
C23K Itkillik River 55.91 23 P P 02 09 18.6 -0.8
baz=304
H18K Honhosa River 55.92 30 IAmb IAmb 02 09 24.3
comp=Z,6.6nm,0.8s
H18K Honhosa River 55.92 30 P P 02 09 18.7 -1.0
baz=301
CLL Collm 55.94 311 *i* P P 02 09 19.6 -0.3
CLL *i* 02 09 22.4
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 55.94 311 *e*P P 02 09 19.7 -0.2
comp=Z,7.9nm,0.7s,baz=59,slow=7.1
CLL *e*L L 02 34 19.8
comp=Z,159nm,18.6s
CLL Collm 55.94 311 P P 02 09 18.7 -1.2
comp=Z,12nm,0.8s
CLL Collm 55.94 311 *i* P P 02 09 19.6 -0.3
comp=Z,8.0nm,0.8s
CLL *i* x x 02 09 22.4
CLL *e*PP PP 02 11 23.0 -1.3
CLL AMS AMS 02 34 00.0
comp=Z,200nm,18.5s
CONA Conrad Observa 55.96 306 *i* pP P 02 09 21.4 +1.2
comp=Z,20nm,0.7s,SNR=19
J16K Anvik River 56.03 33 IAmb IAmb 02 09 26.0
comp=Z,6.4nm,0.7s
J16K Anvik River 56.03 33 P P 02 09 19.6 -0.9
baz=300
BSEG Bad Segeberg 56.10 315 *e*P P 02 09 21.5 +0.5
comp=Z,5.2nm,0.8s,baz=59,slow=7.1
BSEG *e*L L 02 34 37.0
comp=Z,205nm,19.1s
K15K Wolf Creek Mou 56.17 34 IAmb IAmb 02 09 42.4
comp=Z,21nm,1.6s
K15K Wolf Creek Mou 56.17 34 P P 02 09 20.0 -1.5
baz=300
L14K Kuka Creek 56.17 35 P P 02 09 20.6 -0.8
baz=300
ZVC Zvikov 56.18 308 *e*P P 02 09 22.4 +0.7
ZVC AMS AMS 02 33 50.0
comp=Z,300nm,13.8s
M13K Dall Lake 56.35 36 P P 02 09 21.1 -1.6
baz=300
D23K Nanushuk River 56.39 24 P P 02 09 23.3 +0.4
D23K Nanushuk River 56.39 24 P P 02 09 22.1 -0.8
baz=305
FLTG Flechtingen 56.40 313 *e*P P 02 09 22.2 -1.0
comp=Z,7.9nm,0.8s,baz=59,slow=7.1
H19K Roundabout Mou 56.41 29 IAmb IAmb 02 09 28.3
comp=Z,9.6nm,0.8s
H19K Roundabout Mou 56.41 29 P P 02 09 22.2 -0.9
baz=302,SNR=11
CKRC Cesky Krumlov 56.42 308 *e*P P 02 09 24.2 +0.7
CKRC MLR MLR
comp=Z,200nm,17.1s
CKRC Cesky Krumlov 56.42 308 *e*P P 02 09 24.2 +0.7
CKRC AMS AMS 02 34 00.0
comp=Z,200nm,17.1s
ARSA Arzberg 56.49 306 *i* P P 02 09 23.9 -0.1
comp=Z,3.4nm,0.6s
F21K Alatna River 56.50 27 P P 02 09 22.7 -1.0
baz=303
L15K Ungalak Mounta 56.50 34 P P 02 09 22.8 -1.0
baz=301
E22K Anaktuvuk Pass 56.52 25 P P 02 09 23.4 -0.5
baz=304
NEUB Neuenburg 56.66 311 *e*P P 02 09 25.0 -0.1
comp=Z,9.3nm,0.8s,baz=59,slow=7.1
TANN Tannenbergstha 56.67 310 *e*P P 02 09 25.3 0.0
comp=Z,4.3nm,1.1s,baz=59,slow=7.1
KHC Kasperske Hory 56.68 308 *e*P P 02 09 25.8 +0.4
KHC MLR MLR
comp=Z,300nm,9.0s
KHC Kasperske Hory 56.68 308 *e*P P 02 09 25.8 +0.4
KHC AMS AMS 02 34 00.0
comp=Z,300nm,9.0s
KHC Kasperske Hory 56.68 308 IAmb IAmb 02 09 26.6
comp=Z,4.6nm,0.7s
KHC Kasperske Hory 56.68 308 P P 02 09 24.3 -1.1
comp=Z,7.0nm,0.9s
F22K John River 56.76 26 P P 02 09 24.3 -1.3
baz=304
GEC2 GERESS Array S 56.76 308 *e*P P 02 09 26.0 0.0
comp=Z,3.0nm,0.9s,baz=59,slow=7.1
GEC2 *e*L L 02 34 32.9
comp=Z,172nm,20.2s
GERES GERESS Array B 56.76 308 P P 02 09 25.8 -0.2
comp=Z,1.7nm,0.7s,baz=63,slow=6.1,SNR=18
comp=Z,1.7nm,0.7s
GERES GERESS Array B 56.76 308 P P 02 09 25.3 -0.7
NKC Novy Kostel 56.77 310 AMS AMS 02 34 00.0
comp=Z,300nm,12.1s
M14K Bethel 56.77 36 P P 02 09 24.8 -1.0
baz=301
PLN Plauen 56.81 310 *e*P P 02 09 25.8 -0.4
comp=Z,1.5nm,0.9s,baz=59,slow=7.1
D24K Happy Valley 56.82 23 P P 02 09 25.0 -1.0
baz=306
G21K Allakaket 56.88 27 IAmb IAmb 02 09 31.0
comp=Z,5.7nm,0.8s
G21K Allakaket 56.88 27 P P 02 09 25.7 -0.8
baz=304
GROS Grobnik 56.90 305 *e*P P 02 09 26.5 -0.5
MOA Molln 56.93 307 *i* pP P 02 09 27.8 +0.6
comp=Z,7.6nm,0.9s,SNR=6.4
H20K Anotleneega Mo 56.98 29 P P 02 09 26.5 -0.7
baz=303,SNR=5.1
MOX Moxa 57.03 311 *e*P P 02 09 27.6 -0.1
comp=Z,4.7nm,0.9s,baz=59,slow=7.1
MOX *e*L L 02 35 59.1
comp=Z,86nm,21.9s
PERS Pernice 57.04 305 *i* P P 02 09 27.9 -0.1
SOKA Soboth 57.07 305 *i* P P 02 09 28.1 -0.1
comp=Z,8.8nm,0.7s,SNR=12
WET Wettzell 57.07 309 *e*P P 02 09 28.4 +0.2
comp=Z,5.8nm,0.8s,baz=59,slow=7.1
WET *e*L L 02 34 43.5
comp=Z,208nm,18.4s
CLZ Clausthal 57.10 312 *e*P P 02 09 28.6 +0.3
baz=59,slow=7.1
ROTZ Rotzenmuhle 57.14 310 *e*P P 02 09 28.9 +0.4
comp=Z,1.0nm,0.8s,baz=59,slow=7.1
RETH Rethem/Aller, 57.19 314 *e*P P 02 09 28.5 -0.3
comp=Z,12nm,1.3s,baz=59,slow=7.1
K17K Iditarod 57.23 32 P P 02 09 28.9 0.0
K17K IAmb IAmb 02 09 34.5
comp=Z,6.8nm,0.8s
K17K Iditarod 57.23 32 P P 02 09 28.2 -0.8
baz=302
E23K Chandalar 57.23 25 IAmb IAmb 02 09 34.4
comp=Z,7.5nm,0.8s
E23K Chandalar 57.23 25 P P 02 09 27.8 -1.2
baz=306,SNR=12
CRES Cresnjevec Ost 57.25 304 *e*P P 02 09 29.0 -0.4
L16K Owhat River 57.30 34 P P 02 09 28.5 -1.0
baz=302
G22K Bettles 57.30 26 P P 02 09 28.8 -0.6
baz=305
N14K Kuskokwak Cree 57.32 36 P P 02 09 28.2 -1.4
baz=301
M15K Kasigluk River 57.34 35 P P 02 09 28.2 -1.6
baz=302
BIOA Bad Ischl, Aus 57.37 307 *i* pP P 02 09 31.1 +0.8
comp=Z,7.3nm,0.7s,SNR=6.5
D25K Kavik River 57.42 23 IAmb IAmb 02 09 35.0
comp=Z,25nm,1.8s
D25K Kavik River 57.42 23 P P 02 09 29.0 -1.3
baz=308
J18K Innoko River 57.43 31 P P 02 09 28.6 -1.8
baz=303,SNR=6.5
OBKA Obir 57.44 305 *i* pP P 02 09 31.1 +0.2
comp=Z,9.3nm,0.7s,SNR=8.4
C26K Camden Bay 57.45 22 P P 02 09 29.3 -1.1
baz=309
GTTG Gottingen 57.47 312 *e*P P 02 09 31.5 +0.6
comp=Z,15nm,0.7s,baz=59,slow=7.1
I20K Naaghedeneel 57.51 29 P P 02 09 29.5 -1.4
baz=304
E24K Your Creek 57.56 24 P P 02 09 30.3 -1.1
baz=307

GRF Grafenberg Arr 57.73 310 *e*P P 02 09 33.1 +0.4
comp=Z,15nm,0.8s,baz=59,slow=7.1
GRF *e*L L 02 36 31.3
comp=Z,103nm,19.5s
GRFO Grafenberg 57.73 310 P P 02 09 32.7 0.0
GRFO pmax pmax
comp=Z,13nm,0.8s
GRFO Grafenberg 57.73 310 P P 02 09 32.6 0.0
GRFO IAmb IAmb 02 09 34.1
comp=Z,12nm,0.8s
RJOB Jochberg 57.84 307 *e*P P 02 09 34.2 +0.6
comp=Z,4.9nm,0.9s,baz=59,slow=7.1
O14K Tigyukauivet M 57.85 37 P P 02 09 33.0 -0.4
baz=302
KBA Koelnbreinsper 57.86 306 *i* pP P 02 09 34.5 +0.6
comp=Z,8.1nm,0.6s,SNR=12
N15K Kwethluk River 57.87 36 P P 02 09 32.7 -0.8
baz=302
M16K Timber Creek 57.88 34 P P 02 09 33.0 -0.6
baz=303
G23K Bananza Creek 57.91 26 P P 02 09 32.2 -1.5
baz=306
MYKA Terra Mystica 57.92 306 *e*pP P 02 09 34.2 +0.1
comp=Z,4.7nm,0.8s
C27K Jago River 57.96 22 IAmb IAmb 02 09 39.1
comp=Z,26nm,1.6s
C27K Jago River 57.96 22 P P 02 09 33.3 -0.7
baz=310,SNR=8.0
LESA Schwarzleotal 58.07 307 *i* pP P 02 09 35.9 +0.7
comp=Z,8.3nm,0.9s,SNR=9.1
F24K Squaw Lake 58.08 25 IAmb IAmb 02 09 40.3
comp=Z,6.7nm,0.7s
F24K Squaw Lake 58.08 25 P P 02 09 34.2 -0.7
baz=308,SNR=9.1
IBBN Ibbenburen 58.25 314 *e*P P 02 09 36.5 +0.2
comp=Z,9.2nm,0.8s,baz=59,slow=7.1
N16K Nishlik Lake 58.26 35 P P 02 09 35.3 -0.9
baz=303
SABO M.te Sabotino 58.28 305 IAmb IAmb 02 09 36.7
comp=Z,8.1nm,0.8s
M17K Holitna River 58.29 33 P P 02 09 36.1 -0.3
baz=304
E25K Arctic Village 58.40 24 P P 02 09 36.4 -0.7
baz=309
KASTN Kahler Asten 58.48 312 *e*P P 02 09 37.9 -0.1
comp=Z,4.6nm,0.8s,baz=59,slow=7.1
FUR Furstenfeldbru 58.49 308 *e*P P 02 09 38.7 +0.6
comp=Z,17nm,0.9s,baz=59,slow=7.1
FUR *e*L L 02 35 37.5
comp=Z,158nm,18.1s
ABTA Abfaltersbach 58.52 306 *i* P P 02 09 37.3 -1.1
comp=Z,8.1nm,0.8s,SNR=6.7
O15K Ungalikthiuk R 58.52 36 P P 02 09 36.8 -1.2
baz=303
STAL STALIGIAL 58.66 306 IAmb IAmb 02 09 39.4
comp=Z,11nm,0.7s
F25K Christian Rive 58.71 24 P P 02 09 39.0 -0.4
F25K Christian Rive 58.71 24 P P 02 09 38.6 -0.8
baz=309,SNR=24
G24K Hadweenzic Riv 58.72 25 IAmb IAmb 02 09 44.6
comp=Z,9.4nm,0.7s
G24K Hadweenzic Riv 58.72 25 P P 02 09 38.4 -0.9
baz=308,SNR=14
WATA Walderalm 58.75 307 *i* pP P 02 09 40.2 +0.1
comp=Z,7.8nm,0.7s
WTTA Wattenberg 58.76 307 *i* pP P 02 09 40.7 +0.5
comp=Z,15nm,0.6s,SNR=6.7
M18K Stony River 58.88 33 P P 02 09 39.2 -1.4
baz=305
N17K Nushagak Hills 58.88 34 P P 02 09 40.0 -0.6
baz=304
D27M Malcolm River 58.94 21 IAmb IAmb 02 09 45.7
comp=Z,11nm,0.8s
D27M Malcolm River 58.94 21 P P 02 09 40.4 -0.5
baz=312,SNR=6.9
BUG Bochum--Univer 58.96 313 *e*P P 02 09 41.5 +0.3
comp=Z,11nm,0.9s,baz=59,slow=7.1
TNS Taunus Mts 58.98 311 *e*P P 02 09 41.5 0.0
comp=Z,8.1nm,1.2s,baz=59,slow=7.1
TNS *e*L L 02 36 05.4
comp=Z,155nm,20.1s
MOTA Moosalm 59.02 308 *i* pP P 02 09 42.2 +0.2
comp=Z,11nm,0.7s,SNR=7.3
O16K Kowok River B 59.03 35 P P 02 09 40.5 -1.1
baz=304
SQTA Sankt Quirin 59.03 307 *i* pP P 02 09 42.2 +0.2
comp=Z,15nm,0.6s,SNR=15
F26K Sheenjek River 59.09 24 P P 02 09 40.0 -2.0
baz=310
G25K Bearman Lake 59.10 25 P P 02 09 40.4 -1.6
baz=309,SNR=13
RETA Reutte 59.14 308 *i* pP P 02 09 43.1 +0.4
comp=Z,7.8nm,0.7s,SNR=7.4
M19K Big River Lodg 59.20 32 P P 02 09 41.2 -1.6
baz=306
O17K Koliganek Bris 59.34 35 P P 02 09 42.4 -1.3
baz=305
CTI Castel Tesino 59.40 306 IAmb IAmb 02 09 44.5
comp=Z,5.8nm,0.7s
FETA Feichten 59.41 307 *i* pP P 02 09 44.6 -0.1
comp=Z,6.2nm,0.8s,SNR=6.2
PPLA Purkeypile 59.44 30 P P 02 09 43.0 -1.6
baz=307
D28M Stokes Point 59.46 21 P P 02 09 44.1 -0.3
baz=314
E27K Coleen River 59.48 22 P P 02 09 44.1 -0.6
E27K Coleen River 59.48 22 P P 02 09 43.9 -0.7
baz=312,SNR=21
G26K Porcupine Rive 59.68 24 P P 02 09 45.1 -0.9
baz=311
M20K Styx River 59.69 32 P P 02 09 45.7 -0.6
baz=306
COLA College 59.74 27 *c e*P P 02 09 46.9 +0.5
COLA pmax pmax
comp=Z,10.0nm,0.8s
DAVA Damuels 59.76 308 *e*P P 02 09 46.8 -0.2
comp=Z,4.0nm,0.9s
E28M Babbage River 59.76 21 P P 02 09 45.7 -0.8
baz=314,SNR=18
TEOL Teolo 59.76 305 P P 02 09 45.8 -1.1
CCB Clear Creek Bu 59.90 27 IAmb IAmb 02 09 52.0
comp=Z,23nm,1.8s
TIP Timpagrande 59.98 297 IAmb IAmb 02 09 56.5
comp=Z,11nm,1.2s
TIP Timpagrande 59.98 297 P P 02 09 47.1 -1.5
comp=Z,6.9nm,1.2s
BFO Black Forest 60.06 310 *e*P P 02 09 48.5 -0.5
comp=Z,3.2nm,0.9s,baz=59,slow=7.1
BFO *e*L L 02 38 01.0
comp=Z,121nm,21.4s
MEM Membach 60.08 313 *d*P P 02 09 49.1 +0.1
comp=Z,8.8nm,1.0s
IL31 60.13 27 P P 02 09 48.4 -0.6
IL31 IAmb IAmb 02 09 53.8
comp=Z,4.2nm,0.7s
ILAR Eielson Array 60.13 27 P P 02 09 48.9 -0.2
comp=Z,2.9nm,0.7s,baz=297,slow=5.7,SNR=25
comp=Z,2.9nm,0.7s
ILAR Eielson Array 60.13 27 P P 02 09 48.5 -0.6
S14K Fog Glacier 60.26 39 P P 02 09 48.9 -1.4
baz=305
E29M Blow River 60.34 21 P P 02 09 49.2 -1.3
baz=315,SNR=40
P18K Big Mountain, 60.34 35 P P 02 09 49.5 -1.2
baz=306
AQU L'Aquila 60.35 302 P P 02 09 50.4 -0.7
AQU pmax pmax
comp=Z,10.0nm,0.8s
AQU L'Aquila 60.35 302 P P 02 09 50.4 -0.7
AQU IAmb IAmb 02 09 52.4
comp=Z,9.7nm,0.8s
AQU L'Aquila 60.35 302 P P 02 09 49.7 -1.4
comp=Z,13nm,0.9s
F28M Old Crow 60.35 22 P P 02 09 50.5 -0.1
F28M IAmb IAmb 02 09 55.2
comp=Z,7.3nm,0.7s
F28M Old Crow 60.35 22 P P 02 09 49.2 -1.4
baz=314,SNR=14
SDPT Sand Point 60.36 40 P P 02 09 49.5 -1.3
baz=305
MURB Monte Urbino 60.39 303 P P 02 09 51.5 +0.1
G27K Doyon Strip 60.40 24 P P 02 09 51.0 0.0
G27K IAmb IAmb 02 09 55.9
comp=Z,5.7nm,0.8s
G27K Doyon Strip 60.40 24 P P 02 09 49.8 -1.2
baz=313,SNR=17
A36M Sachs Harbour 60.41 15 P P 02 09 50.3 -0.6
baz=324

TUE Stuetta 60.51 307 P P 02 09 51.9 -0.4
TUE IAmb IAmb 02 09 52.7
comp=Z,5.5nm,0.9s
TUE Stuetta 60.51 307 P P 02 09 50.6 -1.7
comp=Z,28nm,1.3s
WLF Walferdange 60.53 312 *d*P P 02 09 50.7 -1.4
BCLA Clavier 60.56 313 *d*P P 02 09 52.1 -0.2
comp=Z,4.2nm,0.9s
CESX Cesi 60.72 302 IAmb IAmb 02 09 54.2
comp=Z,8.0nm,0.8s
ZCCA Zocca 60.72 305 IAmb IAmb 02 10 03.4
comp=Z,11nm,0.8s
Q17K Contact Creek 60.73 36 P P 02 09 52.5 -0.9
baz=306
CHGN Chignik 60.77 39 P P 02 09 52.1 -1.4
baz=305
WAT1 Susitna Watana 60.80 29 P P 02 09 52.0 -1.8
baz=309
H27K Steamboat Moun 60.84 24 IAmb IAmb 02 09 59.5
comp=Z,8.4nm,0.8s
H27K Steamboat Moun 60.84 24 P P 02 09 52.2 -1.8
baz=313,SNR=15
UCC Uccle 60.85 314 *d*P P 02 09 54.2 0.0
comp=Z,5.3nm,0.8s
Q18K Katmai Hardscr 60.87 35 P P 02 09 52.8 -1.6
baz=307
R17L Mt. Peulik Vol 60.90 37 P P 02 09 52.2 -2.3
baz=306
BMRD Maredsous 60.91 313 *d*P P 02 09 54.5 -0.2
comp=Z,5.9nm,0.9s
I26K Coal Creek Min 60.97 25 P P 02 09 52.7 -2.2
baz=312
P19K Oil Pt 61.00 34 P P 02 09 53.1 -2.1
baz=307
CHNA Chernabura Isl 61.08 41 P P 02 09 53.8 -1.9
baz=305
DOU Dourbes 61.12 313 *d*P P 02 09 55.9 -0.2
comp=Z,3.2nm,0.8s
WAT6 Susitna Watana 61.24 29 P P 02 09 55.2 -1.7
baz=310
G29M Pine Creek 61.36 22 P P 02 09 55.5 -2.0
baz=316,SNR=15
PMR Palmer 61.37 31 P P 02 09 56.0 -1.6
baz=309
F30M Barrier River 61.45 21 P P 02 09 56.5 -1.6
baz=317
INK Inuvik 61.51 20 IAmb IAmb 02 10 02.9
comp=Z,10nm,0.8s
INK Inuvik 61.51 20 P P 02 09 56.9 -1.6
baz=318,SNR=10
SENIN Lac Senin/Sane 61.74 308 P P 02 09 59.6 -1.0
SENIN IAmb IAmb 02 10 03.4
comp=Z,4.7nm,0.7s
H29M Whitestone 61.76 23 IAmb IAmb 02 10 04.8
comp=Z,22nm,1.8s
H29M Whitestone 61.76 23 P P 02 09 59.1 -1.1
baz=316
G30M tAoh Zraii Nji 61.80 22 IAmb IAmb 02 10 05.7
comp=Z,21nm,1.8s
G30M tAoh Zraii Nji 61.80 22 P P 02 09 58.6 -1.9
baz=317
I28M Miner Creek 61.85 24 IAmb IAmb 02 10 05.3
comp=Z,4.4nm,0.8s
I28M Miner Creek 61.85 24 P P 02 09 59.0 -2.0
baz=315
O22K Cooper Landing 61.86 32 P P 02 09 59.9 -1.0
baz=310
SCM Sheep Creek Mo 61.88 30 P P 02 09 59.6 -1.5
baz=311
EKA Eskdalemuir Ar 61.92 321 P P 02 10 00.4 -1.0
comp=Z,1.1nm,0.6s,baz=55,slow=6.2,SNR=4.0
comp=Z,1.1nm,0.6s
BRSE Bradley Lake S 61.94 33 P P 02 10 00.1 -1.4
baz=309
F31M Tsiigehtchic 62.11 21 P P 02 10 00.8 -1.7
baz=319
M24K Tolsona, Glenn 62.11 29 P P 02 10 00.2 -2.5
baz=311
EPYK Eagle Plains 62.11 22 IAmb IAmb 02 10 06.7
comp=Z,9.6nm,0.8s
EPYK Eagle Plains 62.11 22 P P 02 10 00.8 -1.8
baz=317,SNR=8.0
PWL Port Wells 62.14 31 P P 02 10 00.9 -2.0
baz=310
SEW Seward 62.20 32 P P 02 10 01.6 -1.6
baz=310
CHIR Chirikof Islan 62.31 38 P P 02 10 02.1 -1.9
baz=308
G31M Satah River 62.36 21 P P 02 10 01.9 -2.3
baz=318,SNR=11
KDAK Kodiak Island 62.42 35 P P 02 10 02.7 -2.0
baz=309
OHAK Old Harbor 62.47 36 P P 02 10 03.1 -1.9
baz=308
SII Sitkinak Islan 62.50 37 P P 02 10 04.2 -1.1
baz=308
GLI Glacier Island 62.59 30 P P 02 10 04.5 -1.3
baz=311
KLU Klutina 62.61 30 P P 02 10 04.1 -2.0
baz=312
C36M Paulatuk 62.80 16 P P 02 10 05.6 -1.5
baz=326
L27K Beaver Creek, 62.94 27 P P 02 10 06.5 -1.7
baz=314
DAWY Dawson 63.00 25 P P 02 10 07.9 -0.7
baz=316
I30M Mount Dempster 63.05 23 P P 02 10 08.1 -0.9
baz=317,SNR=38
H31M Peel River 63.18 22 IAmb IAmb 02 10 10.2
comp=Z,9.4nm,1.1s
H31M Peel River 63.18 22 P P 02 10 09.1 -0.7
baz=319,SNR=5.2
EYAK Cordova Ski Ar 63.30 30 P P 02 10 09.3 -1.2
baz=312
BMRM Bremner River 63.43 29 P P 02 10 10.4 -1.1
baz=313
J30M Hart River 63.54 24 P P 02 10 10.9 -1.4
J30M IAmb IAmb 02 10 16.6
comp=Z,6.1nm,0.8s
J30M Hart River 63.54 24 P P 02 10 11.5 -0.8
baz=318,SNR=5.6
K29M Barlow Dome 63.73 25 P P 02 10 12.4 -1.1
baz=317,SNR=13
L29M L29M 64.08 25 P P 02 10 14.2 -1.6
baz=317
CRQE Cirque 64.12 29 P P 02 10 14.9 -1.2
baz=314
KAIM Kayak Island 64.21 30 P P 02 10 15.0 -1.6
baz=313
YUK3 Moose Creek 64.30 27 P P 02 10 15.2 -2.1
baz=316
M29M Somme Creek 64.47 26 IAmb IAmb 02 10 24.8
comp=Z,11nm,1.2s
M29M Somme Creek 64.47 26 P P 02 10 16.9 -1.4
baz=317
YUK8 Steele Glacier 64.88 27 P P 02 10 19.4 -1.9
baz=316
M30M Minto, Yukon 64.89 25 P P 02 10 20.1 -0.9
baz=318
O28M Mount Upton 65.11 28 P P 02 10 21.2 -1.5
baz=316
PINM Pinnacle 65.58 28 P P 02 10 23.3 -2.3
baz=316
YUK6 Outpost Mounta 65.60 27 P P 02 10 23.9 -1.9
baz=317
N30M Aishikik Lake 65.63 26 P P 02 10 24.5 -1.4
baz=318
M31M Drury Creek, Y 65.91 25 P P 02 10 25.8 -1.8
baz=320
HYT Haines Junctio 65.97 27 P P 02 10 26.1 -2.1
baz=318
O29M Mount Kennedy 66.00 28 P P 02 10 26.0 -2.4
baz=317
N31M Braeburn, Yuko 66.03 26 P P 02 10 27.4 -1.0
baz=319
O30N Mendenhall 66.47 26 IAmb IAmb 02 10 36.1
comp=Z,9.5nm,1.1s
O30N Mendenhall 66.47 26 P P 02 10 30.2 -1.0
baz=319
MMPY Sheldon Lake, 66.51 23 IAmb IAmb 02 10 36.5
comp=Z,5.5nm,0.9s
MMPY Sheldon Lake, 66.51 23 P P 02 10 29.6 -1.8
baz=322
P30M Million Dollar 66.68 27 P P 02 10 31.0 -1.6
baz=319
P29M Windy Craggy 66.78 28 P P 02 10 31.6 -1.7
baz=318
WHY Whitehorse 66.94 26 P P 02 10 32.1 -2.3

	baz=320								
PLBC	**Pleasant Camp**	**67.38**	**27**	P		**P**	**02 10 35.2**	**-1.7**
	baz=319								
SKAG	**Skagway**	**67.72**	**27**	P		**P**	**02 10 37.3**	**-1.8**
	baz=320								
P33M	**Teslin, Yukon**	**67.94**	**25**	P		**P**	**02 10 39.0**	**-1.7**
	baz=322								
WRGLY	**Wrigley**	**68.07**	**20**	P		**P**	**02 10 39.3**	**-2.0**
	baz=328								
P32M	**Atlin**	**68.14**	**26**	P		**P**	**02 10 40.1**	**-1.7**
	baz=321								
Q32M	**Nakina River**	**69.10**	**26**	P		**P**	**02 10 46.1**	**-1.9**
	baz=322								
R33M	**Jennings River**	**69.16**	**25**	IAmb		IAmb	02 10 49.5		
	comp=Z,5.2nm,0.8s								
R33M	**Jennings River**	**69.16**	**25**	P		**P**	**02 10 46.0**	**-2.3**
	baz=323								
SIT	**Sitka**	**69.57**	**29**	P		**P**	**02 10 48.6**	**-2.0**
	baz=320								
DLBC	**Dease Lake**	**70.22**	**25**	P		**P**	**02 10 52.9**	**-1.9**
	baz=324								
YKA	**Yellowknife Ar**	**70.69**	**16**	P		**P**	**02 10 57.0**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=335,slow=5.8,SNR=16								
	comp=Z,2.6nm,0.6s								
YKA	**Yellowknife Ar**	**70.69**	**16**	*i* P		**P**	**02 10 57.0**	**-0.5**
YKA				pmax		pmax			
	comp=Z,3.0nm,0.6s								
YKA	**Yellowknife Ar**	**70.69**	**16**	P		**P**	**02 10 55.8**	**-1.7**
WRA	**Warramunga Arr**	**70.72**	**146**	P		**P**	**02 10 56.5**	**-1.6**
	comp=Z,3.8nm,0.7s,baz=341,slow=6.5,SNR=18								
	comp=Z,3.8nm,0.7s								
YKAW1	**Yellowknife Wh**	**70.72**	**16**	P		**P**	**02 10 56.8**	**-0.9**
YKAW1				IAmb		IAmb	02 11 01.8		
	comp=Z,15nm,1.6s								
WR8	**Warramunga Arr**	**70.80**	**146**	P		**P**	**02 10 56.5**	**-2.1**
WRAK	**Wrangell Islan**	**71.09**	**28**	P		**P**	**02 10 58.5**	**-1.5**
	baz=323								
T35M	**Bob Quinn**	**71.33**	**26**	P		**P**	**02 10 59.7**	**-1.8**
	baz=324								
CRAG	**Craig**	**71.58**	**29**	P		**P**	**02 11 00.8**	**-2.2**
	baz=322								
ESDC	**Sonseca Array**	**72.35**	**308**	P		**P**	**02 11 07.8**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=47,slow=5.9,SNR=18								
ESDC				PP		**PP**	**02 13 48.5**	**+0.1**	
	comp=Z,1.1nm,1.0s,baz=43,slow=8.9,SNR=4.1								
	comp=Z,2.0nm,0.7s								
ESDC	**Sonseca Array**	**72.35**	**308**	P		**P**	**02 11 07.6**	**-0.4**
AS31	**Alice Springs**	**73.89**	**148**	P		**P**	**02 11 15.5**	**-1.5**
ASAR	**Alice Springs**	**73.89**	**148**	P		**P**	**02 11 15.9**	**-1.1**
	comp=Z,5.7nm,0.6s,baz=340,slow=6.2,SNR=29								
	comp=Z,5.7nm,0.6s								
ASAR	**Alice Springs**	**73.89**	**148**	P		**P**	**02 11 16.0**	**-1.1**
MD01	**Midelt array s**	**77.46**	**303**	P		**P**	**02 11 37.3**	**-0.5**
FFC	**Flin Flon**	**80.28**	**13**	P		**P**	**02 11 51.8**	**-0.9**
FFC				pmax		pmax			
	comp=Z,4.0nm,0.8s								
FFC	**Flin Flon**	**80.28**	**13**	P		**P**	**02 11 51.8**	**-0.9**
SCHQ	**Schefferville**	**81.28**	**352**	P		**P**	**02 11 57.0**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=30,slow=8.9,SNR=3.9								
	comp=Z,1.6nm,0.7s								
SCHQ	**Schefferville**	**81.28**	**352**	P		**P**	**02 11 56.7**	**-1.3**
SCHQ				IAmb		IAmb	02 12 59.0		
	comp=Z,9.6nm,1.4s								
STKA	**Stephens Creek**	**84.27**	**145**	P		**P**	**02 12 11.4**	**-2.2**
	comp=Z,4.5nm,0.7s,baz=334,slow=6.2,SNR=5.9								
STKA				LR		LR	02 53 14.3		
	comp=Z,127nm,19.4s,baz=195,slow=38								
	comp=Z,4.5nm,0.7s								
PLID	**Pearl Lake**	**86.09**	**25**	IAmb		IAmb	02 12 28.2		
	comp=Z,15nm,1.8s								
TORD	**Torodi Ar. Bea**	**86.85**	**285**	P		**P**	**02 12 26.1**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=35,slow=3.0,SNR=10								
	comp=Z,2.2nm,0.9s								
PDAR	**Pinedale Array**	**90.05**	**21**	P		**P**	**02 12 41.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=40,slow=2.5,SNR=6.1								
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	**90.05**	**21**	P		**P**	**02 12 40.3**	**-1.8**
RSSD	**Black Hills**	**90.08**	**17**	P		**P**	**02 12 41.3**	**-0.9**
RSSD				pmax		pmax			
	comp=Z,5.0nm,1.1s								
RSSD	**Black Hills**	**90.08**	**17**	P		**P**	**02 12 41.3**	**-0.9**
RSSD				IAmb		IAmb	02 12 47.0		
	comp=Z,5.2nm,1.1s								
NVAR	**Mina Array Bea**	**91.32**	**29**	P		**P**	**02 12 49.5**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=318,slow=3.3,SNR=7.0								
	comp=Z,0.9nm,0.7s								
SADO	**Sadowa**	**92.00**	**359**	LR		LR	02 55 06.5		
	comp=Z,60nm,18.8s,baz=24,slow=36								
LPAZ	**La Paz**	**150.91**	**336**	PKPbc		**PKPbc**	**02 19 33.8**	**-2.1**
	comp=Z,1.7nm,0.8s,baz=4.1,slow=1.0,SNR=9.5								
LPAZ	**La Paz**	**150.91**	**336**	PKIKP		**PKPbc**	**02 19 34.0**	**-1.9**
LPAZ	**La Paz**	**150.91**	**336**	PKPbc		**PKPbc**	**02 19 34.0**	**-1.9**

*JMA **20** 02:06:42.4±0.1, 43.˚1N±0.˚5×145.˚6E±0.˚6, h46km, MV3.0/31, OFF NEMURO PENINSULA*
*SKHL **20** 02:06:43.5±0.4, 43.˚10N×145.˚60E, h41km±4km, mb4.3/3*
ISC 20 02:06:42.2±3.0, **43.˚1N**±0.˚1×**145.˚6E**±0.˚1, **h47**km±16km, **n10, σ0ˢ22/18, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.33**	**17**	P		**Pn**	**02 06 51.3**	**0.0**
NEM2				S		**Sn**	**02 06 57.6**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.33**	**14**	*i* P		**Pn**	**02 06 51.4**	**+0.1**
NMR				*i* S		**Sn**	**02 06 57.6**	**-0.2**
JKHN	**Kushirohamanak**	**0.33**	**276**	*i* P		**Pn**	**02 06 51.6**	**+0.3**
JKHN				*e*S		**Sn**	**02 06 57.7**	**-0.1**
AKK	**Akkeshi**	**0.57**	**267**	*e*P		**Pn**	**02 06 54.1**	**+0.1**
AKK				*e*S		**Sn**	**02 07 02.3**	**-0.2**
JAK	**Akkeshi**	**0.68**	**266**	P		**Pn**	**02 06 55.5**	**+0.1**
JAK				S		**Sn**	**02 07 04.9**	**-0.1**
JNK	**Nakash**	**0.85**	**310**	P		**Pn**	**02 06 57.8**	**+0.1**
JNK				S		**Sn**	**02 07 08.6**	**-0.5**
JNSB	**Nemuroshibetsu**	**0.85**	**329**	P		**Pn**	**02 06 58.1**	**+0.3**
JNSB				S		**Sn**	**02 07 09.1**	**-0.1**
JRA	**Rausu**	**0.96**	**338**	*e*P		**Pn**	**02 06 59.5**	**+0.2**
JRA				*e*S		**Sn**	**02 07 11.9**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**1.00**	**10**	*i* P		**Pn**	**02 06 59.9**	**+0.1**
YUK				AMB		AMB	02 07 00.8	
	250nm,0.3s							
YUK				*e*S		**Sn**	**02 07 12.6**	**-0.2**
YUK				A		A	02 07 14.3	
	410nm,0.3s							
YUK				A		A	02 07 14.3	
	200nm,0.3s							
SHO	**Shikotan**	**1.21**	**47**	*e*P		Pn	02 07 15.6	+13
SHO				AMB		AMB	02 07 17.2	
	30nm,0.2s							
SHO				*e*S		Sn	02 07 29.1	+11
SHO				A		A	02 07 31.5	
	180nm,0.2s							
SHO				A		A	02 07 31.5	
	170nm,0.2s							

*TEH **20** 02:27:40.6, 35.˚04N×45.˚62E, h8km±4km, ML3.3, Presumed earthquake*
*ISN **20** 02:27:49.4±2.0, 35.˚03N×45.˚62E, h23km±7km, ML3.4, Presumed earthquake*
ISC 20 02:27:44.5±1.2, **35.˚05N**±0.˚05×**45.˚91E**±0.˚07, **h10**km, **n11, σ1ˢ70/13, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.52**	**131**	Pg		**Pg**	**02 27 54.7**	**-0.1**
IDHR				Sg		**Sb**	**02 28 05.9**	**+2.3**
IGHG	**Ghaleghazi**	**0.90**	**142**	Pg		**Pg**	**02 28 01.4**	**-0.4**
SNJK	**Sanadaj_Korde**	**1.04**	**68**	Pg		**Pg**	**02 28 04.6**	**+0.2**
SNQR	**Sonqor, Kerman**	**1.43**	**97**	Pg		**Pg**	**02 28 11.6**	**+0.8**
ILBA	**Ilam Banvizeh**	**1.44**	**170**	Pg		Pn	**02 28 09.1**	**-1.7**
MAHB	**Mahabad**	**1.73**	**355**	Pg		Pn	02 28 12.6	-2.2
BHD	**Baghdad**	**2.18**	**216**	*i* P		**Pn**	**02 28 24.2**	**+3.4**
	baz=30							
BHD				*i* S		**Sn**	**02 28 48.4**	**+0.6**
BHD				IAML			02 28 48.7	
	comp=E,372nm,0.8s							
BHD				IAML			02 28 49.0	
	comp=N,396nm,0.5s							
HGHA	**Hamedan- Ghaye**	**2.45**	**79**	Pn		**Pn**	**02 28 26.1**	**+1.3**
IAZR	**Azarshahr**	**2.63**	**1**	Pn		**Pn**	**02 28 26.4**	**-0.9**
RAFI	**Al-Rafai**	**3.32**	**177**	*i* P		**Pb**	**02 28 42.2**	**-1.3**
RAFI				*i* S		**Sb**	**02 29 21.9**	**-1.9**
IHRS	**Heris**	**3.39**	**15**	Pn		**Pn**	**02 28 37.8**	**+0.1**

*SJA **20** 03:00:49.9±0.7, 29.˚58S×72.˚44W, h6km±5km, ML4.2, MW3.8*
*NEIC **20** 03:00:53.7±2.0, 29.˚56S±0.˚04×72.˚30W±0.˚09, h10km±6km, mb4.3/4, ML4.0(GUC), Error ellipse: s-maj=11.5km s-min=5.3km az=68.0*
*IDC **20** 03:00:54.6±0.9, 29.˚62S×72.˚05W, h0km, mb4.0/7, mbtmp3.9/12, ML3.8/5, MS3.1/1, Error ellipse: s-maj=23.6km s-min=17.5km az=61.0*
*GUC **20** 03:00:57.2±0.6, 29.˚67S×72.˚02W, h25km±9km, ML4.1*
ISC 20 03:00:54.9±1.7, **29.˚63S**±0.˚03×**72.˚09W**±0.˚05, **h10**km±10km, **n96, σ1ˢ74/118, mb4.2/6, 6C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GO04	**Tololo Observa**	**1.24**	**116**	*e*P		**Pn**	**03 01 18.2**	**-0.3**
GO04				*e*S		**Sn**	**03 01 36.6**	**+1.2**
GO04				IAML			03 01 38.1	
	comp=Z,7μm,0.4s							
GO04	**Tololo Observa**	**1.24**	**116**	*i* P		**Pn**	**03 01 18.3**	**-0.3**
GO04				*e*S		**Sg**	**03 01 34.7**	**-0.2**
GO04				IAML			03 01 39.5	
	comp=E,21μm,0.2s							
GO04	**Tololo Observa**	**1.24**	**116**			**Pn**	**03 01 18.1**	**-0.4**
LCO	**Las Campanas**	**1.36**	**63**	*e*P		**Pg**	**03 01 20.8**	**-0.2**
LCO				*e*S		**Sg**	**03 01 43.6**	**+5.1**
LCO				IAML			03 01 45.3	
	comp=Z,5μm,0.6s							
LCO	**Las Campanas**	**1.36**	**63**	*e*P		**Pb**	**03 01 20.4**	**-0.1**
LCO				*e*S		**Sg**	**03 01 38.0**	**-0.5**
LCO	**Las Campanas**	**1.36**	**63**	Pn		**Pb**	**03 01 20.4**	**-0.1**
AC04	**Llanos de Chal**	**1.67**	**32**	*e*P		**Pn**	**03 01 23.7**	**-0.5**
AC04				*e*S		**Sg**	**03 01 53.9**	**+5.3**
AC04				IAML			03 02 01.2	
	comp=Z,1μm,0.5s							
AC04	**Llanos de Chal**	**1.67**	**32**	*i* P		**Pn**	**03 01 24.4**	**+0.1**
AC04	**Llanos de Chal**	**1.67**	**32**	Pn		**Pn**	**03 01 24.1**	**-0.1**
CO03	**El Pedregal**	**1.71**	**135**	*e*P		**Pn**	**03 01 23.3**	**+0.4**
CO03				*e*S		**Sn**	**03 01 41.5**	**-5.2**
CO03				IAML			03 01 59.8	
	comp=Z,934nm,0.8s							
CO03	**El Pedregal**	**1.71**	**135**	*i* P		**Pn**	**03 01 25.2**	**+0.4**
CO03				*e*S		**Sn**	**03 01 46.7**	**0.0**
CO03				IAML			03 01 49.2	
	comp=E,2μm,0.4s							
CO03	**El Pedregal**	**1.71**	**135**	Pn		**Pn**	**03 01 25.2**	**+0.4**
CO01	**Juntas del Tor**	**1.77**	**102**	*e*P		**Pb**	**03 01 26.9**	**-0.5**
CO01				*e*P		**Pb**	**03 01 27.0**	**-0.5**
CO01				*e*S		**Sg**	**03 01 51.2**	**-0.5**
CO01				IAML			03 01 54.0	
	comp=Z,1μm,0.3s							
CO01	**Juntas del Tor**	**1.77**	**102**	*e*P		**Pb**	**03 01 27.0**	**-0.5**
CO01				*e*S		**Sb**	**03 01 48.8**	**-1.0**
CO01				IAML			03 01 56.1	
	comp=N,2μm,0.2s							
CO01	**Juntas del Tor**	**1.77**	**102**	Pn		**Pb**	**03 01 26.8**	**-0.7**
AC05	**El Transito**	**1.77**	**64**	*e*P		**Pb**	**03 01 26.9**	**-0.5**
AC05				*e*S		**Sg**	**03 01 54.3**	**+2.5**
AC05				IAML			03 01 55.2	
	comp=Z,1μm,0.3s							
AC05	**El Transito**	**1.77**	**64**	*i* P		**Pb**	**03 01 26.9**	**-0.5**
AC05				*e*S		**Sb**	**03 01 50.2**	**+0.4**
AC05				IAML			03 01 53.8	
	comp=N,3μm,0.4s							
AC05	**El Transito**	**1.77**	**64**	Pn		**Pb**	**03 01 26.8**	**-0.7**
CO02	**Combarbal**	**1.83**	**149**	*e*P		**Pn**	**03 01 27.2**	**+0.7**
CO02				*e*S		**Sg**	**03 01 54.8**	**+1.1**
CO02				IAML			03 01 56.5	
	comp=Z,2μm,0.3s							
CO02	**Combarbal**	**1.83**	**149**	*i* P		**Pn**	**03 01 27.3**	**+0.7**
CO02				*e*S		**Sn**	**03 01 49.1**	**-0.7**
CO02				IAML			03 01 58.1	
	comp=E,7μm,0.5s							
CO02	**Combarbal**	**1.83**	**149**	Pn		**Pn**	**03 01 27.2**	**+0.7**
AROD	**Rodeo**	**2.33**	**104**	*e*P		**Pb**	**03 01 36.8**	**-0.4**
AROD				*e*S		**Sg**	**03 02 07.8**	**-2.1**
CO04	**Los Peladeros**	**2.59**	**159**	*e*P		**Pn**	**03 01 38.4**	**+1.3**
CO04				IAML			03 02 23.8	
	comp=E,1μm,0.7s							
CO04	**Los Peladeros**	**2.59**	**159**	Pn		**Pn**	**03 01 37.6**	**+0.5**
GO03	**Copiapo**	**2.60**	**39**	*e*P		**Pn**	**03 01 37.8**	**+0.8**
GO03				*e*S		**Sb**	**03 02 14.0**	**+0.4**
GO03				IAML			03 02 26.0	
	comp=Z,681nm,0.9s							
GO03	**Copiapo**	**2.60**	**39**	*e*P		**Pn**	**03 01 38.0**	**+1.0**
GO03				IAML			03 02 26.5	
	comp=E,1μm,0.7s							
GO03	**Copiapo**	**2.60**	**39**	Pn		**Pn**	**03 01 37.4**	**+0.4**
ACDV	**Cuesta del Vie**	**2.63**	**103**	*e*P		**Pb**	**03 01 41.8**	**-0.4**
ACDV				*e*S		**Sg**	**03 02 18.7**	**-0.7**
ACDV				IAML			03 02 22.4	
	comp=Z,623nm,0.5s							
ACCO	**Cerro Coronel**	**2.79**	**111**	*e*P		**Pb**	**03 01 43.9**	**-1.0**
ACCO				*e*P		**Pb**	**03 01 44.0**	**-1.0**
ACCO				*e*S		**Sb**	**03 02 16.5**	**-2.7**
ACCO				IAML			03 02 24.2	
	comp=Z,414nm,0.7s							
RTLS	**Leoncito**	**3.23**	**133**	*e*P		Pn	03 01 35.1	-11
RTLS				*e*S		**Sb**	**03 02 33.5**	**+1.5**
RTLS				IAML			03 02 39.1	
	comp=Z,1μm,1.0s							
VA03	**San Esteban**	**3.39**	**158**	*e*P		**Pn**	**03 01 49.0**	**+1.1**
VA03				*e*S		**Sn**	**03 02 31.5**	**+3.2**
VA03				IAML			03 02 45.7	
	comp=Z,438nm,0.4s							
VA03	**San Esteban**	**3.39**	**158**	*e*P		**Pn**	**03 01 49.5**	**+1.5**
VA03				IAML			03 02 45.5	
	comp=E,746nm,0.2s							
VA03	**San Esteban**	**3.39**	**158**	Pn		**Pn**	**03 01 49.3**	**+1.4**
ROCH	**El Roble**	**3.46**	**165**	*e*P		**Pn**	**03 01 46.7**	**-2.3**
ROCH				IAML			03 02 53.1	
	comp=N,500nm,0.4s							
ZON	**Zonda**	**3.50**	**124**	*e*P		**Pn**	**03 01 52.9**	**+3.5**
ZON				*e*S		**Sb**	**03 02 38.5**	**-1.1**
ZON				IAML			03 02 51.1	
	comp=Z,208nm,0.9s							
ZON	**Zonda**	**3.50**	**124**	Pn		**Pn**	**03 01 52.1**	**+2.7**
VCA	**Vinchina**	**3.51**	**76**	*e*P		**Pb**	**03 01 54.1**	**-3.0**
VCA				*e*S		**Sg**	**03 02 44.0**	**-3.5**
VCA	**Vinchina**	**3.51**	**76**	*e*P		**Pb**	**03 01 54.9**	**-2.3**
PEL	**Peldehue**	**3.70**	**162**	*e*P		**Pn**	**03 01 53.3**	**+1.1**
PEL	**Peldehue**	**3.70**	**162**	Pn		**Pn**	**03 01 52.8**	**+0.6**
AC01	**Pan de Azucar**	**3.71**	**21**	*e*P		**Pn**	**03 01 50.8**	**-1.4**
AC01	**Pan de Azucar**	**3.71**	**21**	*e*P		**Pn**	**03 01 51.5**	**-0.8**
AC01	**Pan de Azucar**	**3.71**	**21**	Pn		**Pn**	**03 01 51.4**	**-0.8**
MT02	**Curacav**	**3.71**	**168**	*e*P		**Pn**	**03 01 52.3**	**0.0**
MT02				*e*S		**Sb**	**03 02 49.5**	**+4.0**
MT02	**Curacav**	**3.71**	**168**	*e*P		**Pn**	**03 01 52.1**	**-0.1**
AC02	**Maricunga**	**3.81**	**44**	*e*P		**Pn**	**03 01 55.8**	**+1.6**
AC02				*e*S		**Sg**	**03 02 56.4**	**-1.0**
AC02	**Maricunga**	**3.81**	**44**	*e*P		**Pn**	**03 01 55.9**	**+1.6**
AC02	**Maricunga**	**3.81**	**44**	Pn		**Pn**	**03 01 55.7**	**+1.6**
CFA	**Coronel Fontan**	**3.86**	**122**	Pn		**Pn**	**03 01 56.7**	**+2.4**
	comp=Z,5.5nm,0.3s,baz=294,slow=19,SNR=43							
CFA				Sn		**Sn**	**03 02 43.1**	**+3.4**
	comp=Z,11nm,0.3s,baz=251,slow=20,SNR=7.1							
CFA				Lg		Lg	03 02 56.1	
	comp=Z,20nm,0.3s,baz=199,slow=15,SNR=9.3							
	comp=Z,14nm,0.3s							
CFA	**Coronel Fontan**	**3.86**	**122**	*e*P		**Pn**	**03 01 57.1**	**+2.8**
MT10	**Hacienda Santa**	**3.87**	**160**	*e*P		**Pn**	**03 01 55.7**	**+1.2**
MT05	**Renca**	**3.92**	**163**	*e*P		**Pn**	**03 01 55.8**	**+0.6**
MT05	**Renca**	**3.92**	**163**	Pn		**Pn**	**03 01 55.8**	**+0.6**
MT14	**Cerro Calฺn**	**3.98**	**161**	*e*P		**Pn**	**03 01 57.6**	**+1.5**
MT16	**CCHEN**	**4.02**	**161**	*e*P		**Pn**	**03 01 57.9**	**+1.4**
MT16	**CCHEN**	**4.02**	**161**	Pn		**Pn**	**03 01 57.5**	**+1.0**
VA05	**Santo Domingo**	**4.04**	**174**	Pn		**Pn**	**03 01 56.0**	**-0.7**
TINO	**Tinogasta**	**4.26**	**70**	*e*P		**Pn**	**03 02 02.8**	**+2.9**
MT01	**Popeta**	**4.28**	**171**	*e*P		**Pn**	**03 02 00.2**	**+0.1**
MT01	**Popeta**	**4.28**	**171**	Pn		**Pn**	**03 01 59.9**	**-0.3**
MT13	**San Alfonso**	**4.38**	**160**	Pn		**Pn**	**03 02 03.3**	**+1.8**
PB14	**IPOC Station P**	**5.20**	**17**	Pn		**Pn**	**03 02 11.4**	**-1.7**
BO02	**Sierra Bellavi**	**5.27**	**168**	Pn		**Pn**	**03 02 13.2**	**-0.5**
GO05	**Hualane**	**5.37**	**179**	Pn		**Pn**	**03 02 13.8**	**-1.3**
ML02	**Panimavida**	**6.14**	**175**	Pn		**Pn**	**03 02 24.8**	**-0.9**
TCA	**Tanti**	**6.68**	**107**	*e*P		**Pn**	**03 02 34.1**	**+0.9**
H03N1	**Juan Fernandez**	**6.96**	**235**	T		T	03 10 02.4	
	baz=64,slow=71,SNR=1839							
H03N2	**Juan Fernandez**	**6.97**	**235**	T		T	03 10 02.0	
	baz=64,slow=71,SNR=1978							
H03N3	**Juan Fernandez**	**6.97**	**235**	T		T	03 10 02.3	
	baz=64,slow=71,SNR=1789							
PB06	**IPOC Station P**	**7.25**	**19**	Pn		**Pn**	**03 02 38.7**	**-2.4**
PB07	**IPOC Station P**	**8.11**	**15**	Pn		**Pn**	**03 02 50.5**	**-2.4**
GO06	**Curarrehue**	**9.95**	**177**	Pn		**Pn**	**03 03 16.1**	**-1.9**
PSGCX	**Pisagua**	**10.14**	**11**	Pn		**Pn**	**03 03 18.1**	**-2.6**
PLCA	**Paso Flores**	**11.15**	**174**	Pn		**Pn**	**03 03 34.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=13,SNR=8.7							
	comp=Z,0.6nm,0.3s							
PLCA	**Paso Flores**	**11.15**	**174**	Pn		**Pn**	**03 03 34.0**	**-0.4**
CPUP	**Villa Florida**	**13.45**	**79**	Pn		**Pn**	**03 04 08.0**	**+2.2**
	comp=Z,2.0nm,0.3s,baz=210,slow=14,SNR=3.5							
CPUP				LR		LR	03 09 35.4	
	comp=Z,79nm,18.3s,baz=259,slow=39							
	comp=Z,0.5nm,0.5s							
CPUP	**Villa Florida**	**13.45**	**79**	Pn		**Pn**	**03 04 04.9**	**-0.9**
LPAZ	**La Paz**	**13.77**	**16**	Pn		**Pn**	**03 04 12.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=179,slow=5.8,SNR=9.5							
	comp=Z,1.2nm,0.5s							
LPAZ	**La Paz**	**13.77**	**16**	Pn		**Pn**	**03 04 09.1**	**-1.6**
SIV	**San Ignacio**	**16.93**	**39**	Pn		**Pn**	**03 04 53.1**	**+1.0**
	baz=221,slow=11,SNR=22							
	comp=Z,3.0nm,0.7s							
BDFB	**Brasilia**	**26.14**	**63**	P		**P**	**03 06 28.8**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=240,slow=9.4,SNR=3.6							
	comp=Z,1.7nm,0.5s							
BDFB	**Brasilia**	**26.14**	**63**	P		**P**	**03 06 28.1**	**-1.5**
ORCD	**Orcadas**	**36.06**	**157**			**P**	**03 07 57.0**	**+0.7**
SNAA	**Sanae**	**55.65**	**159**	P		**P**	**03 10 32.1**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=280,slow=6.9,SNR=5.1							
	comp=Z,1.2nm,0.5s							
QSPA	**South Pole Qui**	**60.59**	**180**	P		**P**	**03 11 06.8**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=142,slow=2.7,SNR=6.9							
	comp=Z,1.7nm,0.7s							
QSPA	**South Pole Qui**	**60.59**	**180**	P		**P**	**03 11 06.1**	**+0.6**
QSPA				IAmb		IAmb	03 11 08.3	
	comp=Z,1.7nm,0.8s							
TXAR	**Lajitas Array**	**65.93**	**330**	P		**P**	**03 11 41.9**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=151,slow=6.2,SNR=1.9							
	comp=Z,0.1nm,0.4s							
DBIC	**Dimbokro**	**73.86**	**72**	P		**P**	**03 12 31.1**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=234,slow=6.0,SNR=3.7							
	comp=Z,1.9nm,0.5s							
DBIC	**Dimbokro**	**73.86**	**72**	P		**P**	**03 12 29.8**	**-0.5**
DBIC				IAmb		IAmb	03 12 31.8	
	comp=Z,2.5nm,0.6s							
BOSA	**Boshof**	**82.15**	**118**	P		**P**	**03 13 17.1**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=247,slow=4.8,SNR=3.9							
	comp=Z,1.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**82.78**	**71**	P		**P**	**03 13 20.5**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=234,slow=4.9,SNR=17							
	comp=Z,2.1nm,0.7s							
KURBB	**Kurchatov Arra**	**149.59**	**38**	PKPbc		**PKiKP**	**03 20 46.2**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=299,slow=3.2,SNR=16							
ZALV	**Zalesovo Beam**	**150.47**	**28**	PKPbc		**PKiKP**	**03 20 48.4**	**+1.4**
	comp=Z,7.8nm,0.7s,baz=310,slow=3.0,SNR=27							
MKAR	**Makanchi Array**	**153.74**	**42**	PKPbc		**PKiKP**	**03 20 55.4**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=304,slow=2.0,SNR=3.1							
HHC	**Hu-ho-hao-te**	**168.42**	**346**	*e*P		**PKPdf**	**03 20 57.9**	**-4.1**
PZH	**PanZhiHua**	**173.72**	**118**	PKP		**PKPdf**	**03 21 01.4**	**-3.8**

*IDC **20** 03:08:00.8±0.4, 54.˚93S×29.˚05W, h0km, mb4.9/14, mbtmp4.9/15, ML4.9/1, MS4.2/32, Error ellipse: s-maj=17.8km s-min=13.0km az=61.0*
*MOS **20** 03:08:01.1±1.1, 54.˚99S×29.˚25W, h10km, mb5.3/17, Error ellipse: s-maj=17.9km s-min=10.8km az=109.7*
*NEIC **20** 03:08:02.4±1.8, 54.˚95S±0.˚08×29.˚2W±0.˚1, h10km±1km, mb5.3/67, Mww5.2/10, Error ellipse: s-maj=14.3km s-min=9.3km az=143.0*
*GFZ **20** 03:08:03.8±0.3,

PMSA Palmer Station 19.82 226 P **P** **03 12 33.5 +0.7**
comp=Z,3.2nm,0.3s,baz=78,slow=7.4,SNR=15
PMSA LR LR 03 19 37.1
comp=Z,556nm,18.2s,baz=80,slow=35
comp=Z,77nm,0.9s
PMSA Palmer Station 19.82 226 P **Pn** **03 12 34.4 0.0**
PMSA IAmb IAmb 03 12 42.6
comp=Z,145nm,0.9s
PMSA Palmer Station 19.82 226 *e*P **Pn** **03 12 35.0 +0.6**
PMSA Palmer Station 19.82 226 P **Pn** **03 12 35.5 +1.1**
SNAA Sanae 20.18 156 ⇓P **P** **03 12 36.4 -0.4**
comp=Z,3μm,0.9s
SNAA ⇑PcP **PcP** **03 16 51.6 +1.1**
comp=Z,89nm,0.5s
SNAA Sanae 20.18 156 P **P** **03 12 36.5 -0.4**
comp=Z,130nm,1.0s,baz=304,slow=9.1,SNR=145
SNAA PcP **PcP** **03 16 50.6 +0.2**
comp=Z,3.3nm,0.5s,baz=318,slow=1.9,SNR=3.6
SNAA LR LR 03 19 55.5
comp=Z,2μm,18.8s,baz=300,slow=35
comp=Z,130nm,1.0s
SNAA Sanae 20.18 156 P **P** **03 12 36.1 -0.7**
SNAA IAmb IAmb 03 12 40.9
comp=Z,172nm,1.0s
SNAA Sanae 20.18 156 P **P** **03 12 36.6 -0.2**
TROLL Troll, Antarti 21.71 154 ⇓P **P** **03 12 52.6 -0.8**
comp=Z,3μm,0.6s
TROLL ⇑PcP **PcP** **03 16 55.2 +1.7**
comp=Z,421nm,1.1s
BELA Belgrano 2 23.10 183 P **P** **03 13 08.8 +0.9**
BELA IAmb IAmb 03 13 09.7
comp=Z,83nm,1.2s
MG02 Cerro Sombrero 23.52 259 P **P** **03 13 12.3 0.0**
MG02 Cerro Sombrero 23.52 259 P **P** **03 13 11.3 -1.0**
NVL N'lazarevskaya 23.77 147 *e*P **P** **03 13 13.1 -1.5**
NVL *e*S **S** **03 17 24.2 -4.8**
NVL pmax pmax
comp=Z,18nm,0.8s
NVL MLR MLR
comp=Z,336nm,14.0s
GO10 Punta Arenas 24.42 257 P **P** **03 13 20.9 +0.1**
GO10 Punta Arenas 24.42 257 P **P** **03 13 22.2 +1.4**
MG05 Puerto Natales 25.81 259 P **P** **03 13 32.5 -0.8**
MG05 IAmb IAmb 03 13 47.0
comp=Z,73nm,0.8s
MG05 Puerto Natales 25.81 259 P **P** **03 13 32.8 -0.6**
GO08 Villa O'Higgin 27.32 266 P **P** **03 13 46.4 -0.6**
GO08 IAmb IAmb 03 14 18.6
comp=Z,111nm,1.6s
GO08 Villa O'Higgin 27.32 266 P **P** **03 13 47.7 +0.7**
TRQA Tornquist 27.88 294 P **P** **03 13 51.8 -0.4**
TRQA pmax pmax
comp=Z,41nm,1.3s
TRQA Tornquist 27.88 294 P **P** **03 13 51.8 -0.4**
TRQA IAmb IAmb 03 14 08.3
comp=Z,41nm,1.2s
COYC Coyhaique 28.61 271 P **P** **03 13 58.5 0.0**
PLCA Paso Flores 30.73 280 P **P** **03 14 17.6 +0.1**
comp=Z,3.8nm,0.9s,baz=136,slow=8.0,SNR=6.5
PLCA PcP **PcP** **03 17 14.9 +0.1**
comp=Z,2.9nm,1.0s,baz=131,slow=2.8,SNR=3.6
PLCA LR LR 03 27 13.2
comp=Z,390nm,19.5s,baz=132,slow=38
comp=Z,3.8nm,0.9s
PLCA Paso Flores 30.73 280 P **P** **03 14 18.2 +0.7**
ITAB Concordia 32.38 319 P **P** **03 14 32.5 +0.5**
SYO Syowa Base 33.12 142 ⇓*e*P **P** **03 14 37.2 -0.8**
SPB Sao Paulo 34.17 329 P **P** **03 14 47.6 0.0**
SPB Sao Paulo 34.17 329 *e*P **P** **03 14 48.4 +0.8**
SPB Sao Paulo 34.17 329 P **P** **03 14 48.6 +1.0**
BO02 Sierra Bellavi 35.05 288 P **P** **03 14 55.0 -0.3**
BO02 Sierra Bellavi 35.05 288 P **P** **03 14 58.4 +3.1**
CPUP Villa Florida 35.27 313 P **P** **03 14 56.7 -0.4**
comp=Z,13nm,1.0s,baz=154,slow=11,SNR=12
comp=Z,13nm,1.0s
CPUP Villa Florida 35.27 313 P **P** **03 14 56.4 -0.7**
CPUP Villa Florida 35.27 313 P **P** **03 14 57.0 -0.1**
QSPA South Pole Qui 35.29 180 P **P** **03 14 57.4 +0.3**
comp=Z,65nm,0.9s,baz=186,slow=4.9,SNR=124
QSPA LR LR 03 29 31.8
comp=Z,1μm,18.9s,baz=189,slow=36
comp=Z,65nm,0.9s
QSPA South Pole Qui 35.29 180 P **P** **03 14 56.8 -0.3**
GO05 Hualane 35.53 286 P **P** **03 14 58.1 -1.2**
GO05 IAmb IAmb 03 15 04.1
comp=Z,25nm,0.9s
BO04 La Punta 35.56 289 P **P** **03 14 59.2 -0.4**
BO04 IAmb IAmb 03 15 07.8
comp=Z,56nm,1.1s
MT09 Talagante 35.93 289 P **P** **03 15 01.9 -0.9**
MT09 IAmb IAmb 03 15 20.0
comp=Z,111nm,1.4s
MT16 CCHEN 35.94 290 P **P** **03 15 02.6 -0.2**
MT16 IAmb IAmb 03 15 15.8
comp=Z,59nm,1.1s
SJPY San Joaquin 35.94 315 *e*P **P** **03 15 01.8 -1.1**
MT01 Popeta 36.00 288 P **P** **03 15 01.9 -1.5**
MT05 Renca 36.08 289 P **P** **03 15 04.9 +0.8**
MT05 IAmb IAmb 03 15 23.1
comp=Z,109nm,1.4s
CFA Coronel Fontan 36.12 294 LR LR 03 30 26.9
comp=Z,148nm,20.0s,baz=116,slow=37
PEL Peldehue 36.24 290 P **P** **03 15 04.4 -1.1**
PEL pmax pmax
comp=Z,73nm,1.2s
PEL Peldehue 36.24 290 P **P** **03 15 04.4 -1.1**
PEL IAmb IAmb 03 15 23.7
comp=Z,73nm,1.2s
PEL Peldehue 36.24 290 P **P** **03 15 07.1 +1.7**
VA05 Santo Domingo 36.36 288 P **P** **03 15 06.1 -0.3**
VA05 Santo Domingo 36.36 288 P **P** **03 15 07.1 +0.8**
ZON Zonda 36.40 294 P **P** **03 15 07.9 +1.1**
VA03 San Esteban 36.46 290 P **P** **03 15 08.8 +1.4**
CO04 Los Peladeros 37.24 291 P **P** **03 15 14.5 +0.2**
CO04 IAmb IAmb 03 15 32.4
comp=Z,48nm,1.1s
CO04 Los Peladeros 37.24 291 P **P** **03 15 16.8 +2.6**
CO02 Combarbal 37.90 291 P **P** **03 15 19.8 +0.1**
CO02 IAmb IAmb 03 16 06.0
comp=Z,38nm,1.1s
CO02 Combarbal 37.90 291 P **P** **03 15 22.1 +2.4**
CO03 El Pedregal 38.02 292 P **P** **03 15 22.3 +1.7**
CO01 Juntas del Tor 38.38 294 P **P** **03 15 27.0 +3.1**
AC05 El Transito 39.38 294 P **P** **03 15 34.4 +2.3**
LCO Las Campanas 39.47 294 P **P** **03 15 32.4 -0.6**
LCO pmax pmax
comp=Z,18nm,1.0s
LCO Las Campanas 39.47 294 P **P** **03 15 32.4 -0.6**
IPMB Ipameri, GO 39.70 331 *e*P **P** **03 15 35.8 +1.0**
AC04 Llanos de Chal 40.31 294 P **P** **03 15 40.2 +0.5**
AC04 IAmb IAmb 03 15 54.1
comp=Z,53nm,1.1s
AC04 Llanos de Chal 40.31 294 P **P** **03 15 36.6 -3.0**
GO03 Copiapo 40.36 296 P **P** **03 15 40.7 +0.5**
AC02 Maricunga 40.40 298 P **P** **03 15 39.9 -1.1**
AC02 IAmb IAmb 03 15 56.8
comp=Z,53nm,1.1s
AC02 Maricunga 40.40 298 P **P** **03 15 42.8 +1.8**
COIM Forte Coimbra 41.18 317 *e*P **P** **03 15 46.2 -0.7**
SALTA 41.19 303 P **P** **03 15 49.0 +1.5**
SUR Sutherland 41.45 78 LR LR 03 28 56.6
comp=Z,242nm,18.2s,baz=202,slow=30
SUR Sutherland 41.45 78 P **P** **03 15 50.2 +1.0**
SUR IAmb IAmb 03 16 05.8
comp=Z,48nm,1.2s
MAW Mawson 41.67 145 P **P** **03 15 50.4 0.0**
comp=Z,5.7nm,1.1s
MAW Mawson 41.67 145 P **P** **03 15 50.4 0.0**
comp=Z,23nm,0.8s,baz=239,slow=8.3,SNR=37
MAW PcP **PcP** **03 17 47.4 +0.7**
comp=Z,13nm,1.1s,baz=234,slow=3.1,SNR=3.5
MAW LR LR 03 32 16.0
comp=Z,342nm,18.9s,baz=262,slow=35
comp=Z,23nm,0.8s
MAW Mawson 41.67 145 P **P** **03 15 50.1 -0.3**
MAW Mawson 41.67 145 P **P** **03 15 50.2 -0.3**
AC01 Pan de Azucar 41.72 297 P **P** **03 15 50.5 -0.8**
AC01 IAmb IAmb 03 16 05.4
comp=Z,103nm,1.1s
BDFB Brasilia 41.88 332 P **P** **03 15 53.3 +0.6**
comp=Z,5.1nm,0.6s,baz=153,slow=7.2,SNR=9.0
BDFB LR LR 03 32 58.8
comp=Z,243nm,18.1s,baz=219,slow=36
comp=Z,5.1nm,0.6s
BDFB Brasilia 41.88 332 P **P** **03 15 51.4 -1.4**

PB05 IPOC Station P 44.24 300 P **P** **03 16 12.5 +0.6**
PB09 IPOC Station P 44.65 302 P **P** **03 16 17.3 +2.1**
PB03 IPOC Station P 44.69 301 P **P** **03 16 17.9 +2.4**
BBSD Serra de San D 44.77 315 *e*P **P** **03 16 15.2 -0.8**
PB02 IPOC Station P 45.38 301 P **P** **03 16 23.9 +3.0**
PB01 IPOC Station P 45.41 302 P **P** **03 16 23.6 +2.4**
PTLB Pontes e Lacer 45.75 318 IAmb IAmb 03 16 28.8
comp=Z,37nm,0.9s
PTLB Pontes e Lacer 45.75 318 *e*P **P** **03 16 23.6 -0.2**
PB08 IPOC Station P 46.01 303 P **P** **03 16 29.1 +2.8**
SIV San Ignacio 46.03 315 LR LR 03 35 29.9
comp=Z,89nm,19.2s,baz=147,slow=36
GO01 Chusmiza 46.44 303 P **P** **03 16 30.3 +0.6**
GO01 Chusmiza 46.44 303 P **P** **03 16 31.1 +1.3**
PB11 IPOC Station P 46.58 303 P **P** **03 16 32.0 +1.5**
BOSA Boshof 46.80 79 P **P** **03 16 31.6 -0.4**
comp=Z,10.0nm,0.7s,baz=219,slow=6.5,SNR=37
BOSA LR LR 03 32 04.1
comp=Z,324nm,19.5s,baz=203,slow=31
comp=Z,10.0nm,0.7s
BOSA Boshof 46.80 79 P **P** **03 16 31.5 -0.6**
BOSA IAmb IAmb 03 16 37.0
comp=Z,22nm,1.1s
BOSA Boshof 46.80 79 P **P** **03 16 32.4 +0.3**
PSGCX Pisagua 46.95 302 P **P** **03 16 35.8 +2.5**
SBA Scott Base 47.09 185 P **P** **03 16 33.7 +0.1**
SBA pmax pmax
comp=Z,17nm,1.1s
SBA Scott Base 47.09 185 P **P** **03 16 33.7 +0.1**
SBA IAmb IAmb 03 16 39.8
comp=Z,17nm,1.1s
WIN Windhoek 47.11 66 P **P** **03 16 34.5 -0.2**
WIN pmax pmax
comp=Z,32nm,1.5s
WIN Windhoek 47.11 66 P **P** **03 16 34.5 -0.2**
WIN IAmb IAmb 03 16 40.4
comp=Z,32nm,1.5s
H10S2 ASCENSION HYDR 47.31 20 T T 04 07 44.9
baz=29,slow=74,SNR=8.7
H10S3 ASCENSION HYDR 47.31 20 T T 04 07 44.6
baz=191,slow=74,SNR=18
VNDA Vanda 47.61 183 P **P** **03 16 38.4 +0.8**
comp=Z,6.4nm,0.9s,baz=192,slow=6.0,SNR=12
VNDA LR LR 03 36 49.3
comp=Z,212nm,19.5s,baz=162,slow=36
comp=Z,6.4nm,0.9s
VNDA Vanda 47.61 183 P **P** **03 16 38.8 +1.1**
VNDA pmax pmax
comp=Z,9.0nm,0.8s
VNDA Vanda 47.61 183 P **P** **03 16 38.8 +1.1**
PB16 IPOC Station P 47.73 304 IAmb IAmb 03 16 55.5
comp=Z,21nm,1.1s
PB16 IPOC Station P 47.73 304 P **P** **03 16 41.8 +1.8**
H10N1 ASCENSION HYDR 48.42 20 T T 04 09 10.4
baz=191,slow=75,SNR=5.4
H10N3 ASCENSION HYDR 48.42 20 T T 04 09 09.8
baz=191,slow=75,SNR=7.5
H10N2 ASCENSION HYDR 48.44 20 T T 04 09 11.0
baz=191,slow=75,SNR=7.3
LPAZ La Paz 48.85 307 P **P** **03 16 49.4 +0.7**
comp=Z,40nm,0.7s,baz=152,slow=5.5,SNR=94
LPAZ LR LR 03 40 30.4
comp=Z,76nm,18.8s,baz=160,slow=40
comp=Z,40nm,0.7s
LPAZ La Paz 48.85 307 *e*P **P** **03 16 49.3 +0.7**
H04S2 CROZET ISLANDS 49.00 116 T T 04 10 20.3
baz=230,slow=76,SNR=22
H04S3 CROZET ISLANDS 49.01 116 T T 04 10 21.4
baz=230,slow=76,SNR=20
H04S1 CROZET ISLANDS 49.02 116 T T 04 10 22.8
baz=230,slow=76,SNR=25
RCBR Riachuelo 49.30 351 LR LR 03 35 43.4
comp=Z,44nm,18.3s,baz=172,slow=34
LBTB Lobatse 49.77 76 LR LR 03 34 17.2
comp=Z,134nm,20.2s,baz=208,slow=32
LBTB Lobatse 49.77 76 IAmb IAmb 03 17 00.1
comp=Z,24nm,1.0s
LBTB Lobatse 49.77 76 P **P** **03 16 55.5 +0.5**
TSUM Tsumeb 50.14 64 P **P** **03 16 57.9 0.0**
TSUM IAmb IAmb 03 16 59.8
comp=Z,36nm,1.4s
TSUM Tsumeb 50.14 64 P **P** **03 16 58.2 +0.3**
CKGRV CKGRV 51.63 71 P **P** **03 17 09.5 +0.4**
MATP Matopo 55.03 75 LR LR 03 37 27.5
comp=Z,185nm,19.9s,baz=278,slow=32
CASY Casey 55.30 161 P **P** **03 17 35.5 +0.2**
NNA Nana 56.76 300 ⇓*e*P **P** **03 17 46.6 +0.2**
NNA pmax pmax
comp=Z,41nm,1.2s
MACA Manacapuru-AM 57.63 322 P **P** **03 17 51.2 -1.3**
MACA Manacapuru-AM 57.63 322 *e*P **P** **03 17 51.4 -1.2**
LSZ Lusaka 59.03 71 P **P** **03 18 01.9 -0.6**
LSZ pmax pmax
comp=Z,12nm,0.9s
LSZ Lusaka 59.03 71 P **P** **03 18 01.9 -0.6**
LSZ Lusaka 59.03 71 P **P** **03 18 02.9 +0.5**
ATAH Atahualpa 61.70 301 LR LR 03 48 24.6
comp=Z,121nm,18.5s,baz=163,slow=39
RPN Rapa Nui 62.75 261 LR LR 03 40 09.0
comp=Z,166nm,21.8s,baz=120,slow=31
MDP Montagnes des 62.96 333 LR LR 03 46 07.1
comp=Z,148nm,18.8s,baz=166,slow=36
DBIC Dimbokro 64.66 27 P **P** **03 18 39.2 -0.9**
comp=Z,6.1nm,0.9s,baz=193,slow=8.6,SNR=4.3
DBIC LR LR 03 42 14.8
comp=Z,175nm,18.8s,baz=158,slow=32
comp=Z,6.1nm,0.9s
DBIC Dimbokro 64.66 27 P **P** **03 18 38.5 -1.6**
DBIC IAmb IAmb 03 19 46.9
comp=Z,73nm,1.9s
OTAV Otavalo 68.13 305 P **P** **03 19 03.1 +0.1**
OTAV pmax pmax
comp=Z,39nm,1.6s
OTAV Otavalo 68.13 305 P **P** **03 19 03.1 +0.1**
OTAV IAmb IAmb 03 19 21.1
comp=Z,39nm,1.6s
OTAV Otavalo 68.13 305 *e*P **P** **03 19 03.9 +0.9**
ROSC El Rosal 70.34 311 P **P** **03 19 16.7 +0.2**
comp=Z,4.5nm,0.4s,baz=152,slow=5.9,SNR=8.1
ROSC LR LR 03 52 01.3
comp=Z,149nm,19.4s,baz=144,slow=38
comp=Z,4.5nm,0.4s
ROSC El Rosal 70.34 311 P **P** **03 19 15.8 -0.8**
ROSC IAmb IAmb 03 19 33.7
comp=Z,14nm,0.8s
SDV Santo Domingo 72.46 317 LR LR 03 54 29.6
comp=Z,492nm,18.7s,baz=122,slow=38
SDV Santo Domingo 72.46 317 P **P** **03 19 28.7 -0.4**
SDV IAmb IAmb 03 19 32.5
comp=Z,44nm,0.9s
SDV Santo Domingo 72.46 317 *e*P **P** **03 19 28.7 -0.4**
MBAR Mbarara 72.65 65 LR LR 03 49 55.8
comp=Z,228nm,18.2s,baz=214,slow=35
MBAR Mbarara 72.65 65 P **P** **03 19 30.6 +0.3**
MBAR pmax pmax
comp=Z,31nm,1.4s
MBAR Mbarara 72.65 65 P **P** **03 19 30.6 +0.3**
MBAR IAmb IAmb 03 19 34.6
comp=Z,31nm,1.4s
TORD Torodi Ar. Bea 72.67 32 P **P** **03 19 29.7 -0.3**
comp=Z,12nm,0.8s,baz=199,slow=6.4,SNR=39
comp=Z,12nm,0.8s
TORD Torodi Ar. Bea 72.67 32 P **P** **03 19 29.2 -0.9**
GDHS Morne Mazeau, 76.18 328 P **P** **03 19 49.2 -1.3**
SJG San Juan 79.31 324 LR LR 03 58 36.4
comp=Z,68nm,18.4s,baz=158,slow=38
JTS Las Juntas de 80.00 304 LR LR 03 58 15.1
comp=Z,33nm,19.9s,baz=131,slow=38
JTS Las Juntas de 80.00 304 ⇑*e*P **P** **03 20 12.0 +0.3**
JTS pmax pmax
comp=Z,11nm,1.1s
RPZ Rata Peaks 80.21 195 P **P** **03 20 11.8 -0.8**
LTZ Lake Taylor 80.94 196 P **P** **03 20 15.9 -0.6**
THZ Tophouse 81.83 196 P **P** **03 20 20.9 -0.5**
THZ IAmb IAmb 03 20 25.3
comp=Z,29nm,1.0s
TAM Tamanrasset 82.92 32 P **P** **03 20 28.7 +1.6**
TAM pmax pmax
comp=Z,88nm,0.2s
TAM Tamanrasset 82.92 32 P **P** **03 20 28.7 +1.6**
RTZ Ruatahuna 84.14 200 P **P** **03 20 33.5 +0.1**
URZ Urewera 84.46 200 LR LR 03 54 09.8
comp=Z,186nm,20.1s,baz=164,slow=33
ESQI Esquipulas 85.80 303 IAmb IAmb 03 20 56.8
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 87.81 152 LR LR 03 56 57.3

comp=Z,144nm,19.5s,baz=44,slow=33
MDT Midelt 89.93 20 LR LR 03 58 16.3
comp=Z,131nm,18.2s,baz=209,slow=34
MD01 Midelt array s 89.95 20 P **P** **03 21 01.7 +0.3**
TEIG Tepich 90.18 306 P **P** **03 21 02.3 -0.3**
TEIG IAmb IAmb 03 21 17.6
comp=Z,32nm,1.0s
CMIG Matias Romero 90.70 299 LR LR 04 00 59.3
comp=Z,36nm,18.1s,baz=145,slow=35
PPT2 Papeete2 91.92 235 *e*LR LR 03 50 33.8
comp=Z,122nm,21.8s
PPT2 *e*LR LR 03 50 35.6
comp=Z,135nm,22.8s
FORT Forrest 92.38 160 P **P** **03 21 16.7 +3.9**
comp=Z,16nm,1.1s
STKA Stephens Creek 93.14 172 P **P** **03 21 16.4 0.0**
comp=Z,57nm,1.0s
STKA Stephens Creek 93.14 172 P **P** **03 21 16.1 -0.3**
comp=Z,7.1nm,0.9s,baz=170,slow=3.9,SNR=7.5
STKA PP **PP** **03 25 01.6 +3.0**
comp=Z,3.1nm,0.9s,baz=187,slow=8.5,SNR=3.9
STKA LR LR 04 02 29.7
comp=Z,539nm,19.3s,baz=203,slow=35
comp=Z,7.1nm,0.9s
TAOE Nuku Hiva Isla 94.57 248 *e*LR LR 03 51 49.7
comp=Z,78nm,22.1s
KEST Kesra 96.17 31 LR LR 04 02 09.4
comp=Z,460nm,18.8s,baz=322,slow=34
ESDC Sonseca Array 96.69 19 P **P** **03 21 32.9 +0.8**
comp=Z,0.4nm,0.4s,baz=180,slow=5.2,SNR=5.7
ESDC LR LR 04 01 27.0
comp=Z,117nm,19.8s,baz=180,slow=33
comp=Z,0.4nm,0.4s
ESDC Sonseca Array 96.69 19 P **P** **03 21 32.8 +0.6**
ESDC IAmb IAmb 03 21 34.5
comp=Z,17nm,1.5s
VAE Valguarnera 99.34 34 LR LR 04 05 00.4
comp=Z,162nm,18.1s,baz=138,slow=34
AS09 Alice Springs 100.32 164 P **Pdif** **03 21 48.6 -0.4**
comp=Z,7.3nm,0.9s
ASAR Alice Springs 100.35 164 P **Pdif** **03 21 47.9 -1.3**
comp=Z,4.9nm,0.8s,baz=194,slow=4.4,SNR=19
ASAR PP **PP** **03 25 53.5 -0.9**
comp=Z,2.9nm,0.9s,baz=185,slow=7.2,SNR=11
ASAR Alice Springs 100.35 164 **Pdif** **03 21 47.5 -1.7**
AS17 Alice Springs 100.36 164 P **Pdif** **03 21 48.8 -0.5**
comp=Z,9.3nm,1.0s
AS15 Alice Springs 100.38 164 P **Pdif** **03 21 48.5 -0.9**
comp=Z,6.8nm,0.9s
WRA Warramunga Arr 104.07 164 Pdiff **Pdif** **03 22 05.8 +0.1**
comp=Z,0.7nm,0.9s,baz=360,slow=23,SNR=4.5
WRA PP **PP** **03 26 22.8 +0.4**
comp=Z,2.9nm,0.9s,baz=190,slow=5.8,SNR=8.6
TXAR Lajitas Array 105.31 299 PKKPbc PKKPbc 03 37 49.0 0.0
comp=Z,1.1nm,1.0s,baz=291,slow=3.2,SNR=6.3
CLL Collm 111.56 27 *e*PP **PP** **03 27 21.0 +3.0**
CLL AMS AMS 04 11 00.0
comp=N,100nm,20.4s
CLL AMS AMS 04 11 00.0
comp=E,100nm,18.0s
HYB Hyderabad 114.21 94 *e*Pdif **Pdif** **03 22 50.7 0.0**
HYB *e*SKSdf **SKSdf** **03 33 53.5 +0.4**
LABN Labinsk 115.48 48 *i* PKIKP **PKPdf** **03 26 42.2 -1.2**
LABN pmax pmax
comp=Z,18nm,0.5s
KBZ Khabaz 115.70 50 *i* PKIKP **PKiKP** **03 26 44.4 +0.6**
KIV Kislovodsk 115.78 50 *i* PKIKP **PKiKP** **03 26 44.9 +0.8**
KIV pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 115.98 37 PKP **PKPdf** **03 26 43.3 -0.8**
comp=Z,1.2nm,0.6s,baz=251,slow=1.5,SNR=2.6
AKBB Malin Array Si 115.98 37 ⇓*i* PKIKP **PKPdf** **03 26 43.9 -0.2**
AKT Akhty 116.13 55 *i* PKIKP **PKiKP** **03 26 45.0 +0.1**
AKT pmax pmax
comp=Z,11nm,1.7s
AKT MLR MLR
comp=Z,167nm,21.0s
ERBR Yeremizino-Bor 116.23 47 *i* PKIKP **PKPdf** **03 26 44.3 -0.5**
ERBR pmax pmax
comp=Z,7.0nm,0.5s
PSUT Pine Spring 117.73 298 **PKPdf** **03 26 48.1 -0.1**
TPNV Topopah Spring 117.77 295 PKIKP **PKPdf** **03 26 48.1 -0.2**
TPNV Topopah Spring 117.77 295 PKPdf **PKPdf** **03 26 48.1 -0.2**
MNK Minsk 118.71 34 *i* PKP **PKPdf** **03 26 48.0 -1.3**
comp=E,11nm,0.7s
MNK *i* PKP **PKPdf** **03 26 48.0 -1.3**
comp=N,9.0nm,0.8s
MNK *i* PKP **PKPdf** **03 26 48.0 -1.3**
comp=Z,7.0nm,0.7s,baz=214
MNK *i* PP **PP** **03 28 05.2 -3.2**
MNK *i* PPP PPP 03 30 35.6
MNK *i* SKS **SKSdf** **03 34 00.1 +0.2**
MNK *i* PS **SP** **03 37 52.1 -0.3**
MNK *i* SS **SS** **03 44 24.3 -1.6**
MNK *i* SSS SSS 03 48 47.3
MNK *i* LRM MLR 04 17 13.2
comp=E,24nm,15.4s
MNK *i* LRM MLR 04 17 13.2
comp=N,28nm,15.7s
MNK *i* LRM MLR 04 17 13.2
comp=Z,70nm,16.9s
MNK Minsk 118.71 34 *i* PKIKP **PKPdf** **03 26 47.9 -1.3**
MNK *i* 03 34 00.0
MNK *i* PS **SP** **03 37 52.0 -0.3**
MNK *i* SS SS 03 44 24.2 -1.7
MNK *i* 03 44 45.4
MNK *i* SSS SSS 03 48 47.3
MNK pmax pmax
comp=N,9.0nm,0.8s
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=E,11nm,0.7s
MNK MLR MLR
comp=Z,70nm,17.0s
MNK MLR MLR
comp=N,28nm,16.0s
MNK MLR MLR
comp=E,24nm,15.0s
PDAR Pinedale Array 118.83 304 PKP **PKPdf** **03 26 48.8 -1.4**
comp=E,0.5nm,0.6s,baz=134,slow=6.4,SNR=5.7
PDAR PKKPbc **PKKPbc** **03 37 04.8 +0.4**
comp=E,0.8nm,0.8s,baz=24,slow=1.2,SNR=5.8
SPUT South Promonto 119.13 301 PKPdf **PKPdf** **03 26 50.1 -0.6**
HFS Hagfors 119.70 23 PKP **PKPdf** **03 26 49.7 -1.3**
comp=E,1.7nm,0.9s,baz=190,slow=1.7,SNR=3.7
NVAR Mina Array Bea 119.95 295 PKP **PKiKP** **03 26 52.9 +0.4**
comp=E,0.5nm,0.6s,baz=172,slow=3.0,SNR=5.5
NVAR PKKPbc **PKKPab** **03 37 02.9 +1.6**
comp=E,0.6nm,0.7s,baz=261,slow=4.6,SNR=4.5
NVAR Mina Array Bea 119.95 295 **PKPdf** **03 26 52.0 -0.5**
NB2 NORSAR Subarra 119.98 21 PKPdf **PKPdf** **03 26 51.3 -0.2**
comp=Z,6.9nm,1.4s,baz=202,slow=1.9
NOA NORSAR Array B 119.98 21 PKP **PKPdf** **03 26 51.4 -0.2**
comp=Z,2.0nm,0.9s,baz=205,slow=1.8,SNR=5.8
ELK Elko 120.10 299 PKIKP **PKiKP** **03 26 53.2 +0.4**
ELK Elko 120.10 299 PKPdf **PKiKP** **03 26 53.2 +0.4**
TOLI2 Tolitoli 120.97 144 PKPdf **PKPdf** **03 26 53.9 -1.1**
VSU Vasula 121.66 31 ⇓*i* PKIKP **PKPdf** **03 26 53.5 -1.2**
OBN Obninsk 122.16 38 ⇑*e* PKIKP **PKPdf** **03 26 55.7 -0.1**
OBN *e* 03 28 31.0
OBN *e* PPP PPP 03 31 05.5
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,50nm,17.0s
SFJD Kangerlussuaq 122.71 350 *i* P **PKiKP** **03 26 59.2 +2.4**
MOS Moscow 123.02 38 *e* PKIKP **PKPdf** **03 26 54.6 -2.9**
FINES FINESS Array B 123.94 28 PKP **PKPdf** **03 26 58.8 -0.3**
comp=Z,5.6nm,0.7s,baz=209,slow=1.9,SNR=26
FINES FINESS Array B 123.94 28 PKPdf **PKPdf** **03 26 58.3 -0.7**
BELG Belogornoye 124.37 46 *d* PKIKP **PKPdf** **03 26 59.4 -0.7**
ILULI Ilulissat 124.91 351 *i* P **PKiKP** **03 27 03.1 +2.1**
CHGR Chuyangaron 124.97 71 ⇓*i* PKIKP **PKiKP** **03 27 02.6 +0.3**
GDH Godhavn 125.18 350 *i* P **PKiKP** **03 27 03.7 +2.2**
SCO Scoresbysund 125.25 3 *i* P **PKiKP** **03 27 04.1 +2.4**
SAQQ Saqqaq 125.76 351 *i* P **PKiKP** **03 27 05.5 +2.8**
CMAR Chiang Mai Arr 126.48 112 PKP **PKiKP** **03 27 06.0 +0.2**
comp=Z,7.2nm,1.0s,baz=232,slow=4.2,SNR=19
CMAR Chiang Mai Arr 126.48 112 PKPdf **PKPdf** **03 27 05.0 -0.3**
NIAQ Niaqornat 126.67 350 *i* P **PKiKP** **03 27 06.8 +2.3**
CHTO Chiang Mai 126.77 111 PKIKP **PKiKP** **03 27 06.1 -0.3**
CHTO Chiang Mai 126.77 111 PKPdf **PKiKP** **03 27 06.1 -0.3**
SUMG Summit 127.41 356 PKIKP **PKPdf** **03 27 05.1 -0.9**
SUMG Summit 127.41 356 PKPdf **PKPdf** **03 27 05.1 -0.9**
SUMG Summit 127.41 356 *i* P **PKPdf** **03 27 06.0 0.0**

KLMR	Klimovskoe	127.55	35	*e*PKIKP	PKPdf	03 27 04.3	-1.7		
KLMR				pmax	pmax				
	comp=Z,11nm,1.3s								
ABKAR	Akbulak array	127.66	56	PKPdf	PKPdf	03 27 05.9	-0.7		
KKAR	Karatay Array	128.82	68	PKIKP	PKPdf	03 27 08.7	-0.4		
KKAR	Karatay Array	128.82	68	PKPdf	PKPdf	03 27 08.7	-0.4		
UPNV	Upernavik	128.82	350	*i* P	PKPdf	03 27 07.7	-0.4		
KSH2	Kashi	128.85	75	PKP	PKiKP	03 27 10.5	+0.4		
DBG	Daneborg	129.13	3	*i* P	PKiKP	03 27 09.4	+0.1		
BLKN	Baker Lake	129.54	329	PKPdf	PKPdf	03 27 09.3	-0.4		
ARCES	ARCESS Array B	130.34	22	PKP	PKPdf	03 27 11.1	0.0		
	comp=Z,15nm,0.9s,baz=228,slow=1.5,SNR=36								
ARCES	ARCESS Array B	130.34	22	PKPdf	PKPdf	03 27 10.5	-0.6		
KULLO	Kullorsuaq	130.62	350	*i* P	PKPdf	03 27 11.8	+0.3		
AAK	Ala-Archa	130.65	71	⇓*e*PKIKP	PKiKP	03 27 13.3	-0.3		
AAK	Ala-Archa	130.65	71	PKPdf	PKPdf	03 27 13.0	+0.2		
LVZ	Lovozero	131.28	27	⇓*e*PKIKP	PKPdf	03 27 12.7	-0.3		
DAG	Danmarks Havn	131.63	3	*i* P	PKPdf	03 27 13.2	-0.2		
ARTI	Arti	131.68	48	*d i* PKIKP	PKPdf	03 27 14.4	+0.4		
ARTI	Arti	131.68	48	PKPdf	PKPdf	03 27 13.9	-0.1		
NEEM	North Greenlan	132.85	354	*i* P	PKPdf	03 27 15.9	-0.1		
TULEG	Thule	133.65	348	*i* P	PKPdf	03 27 17.7	+0.5		
PDGK	Podgornoye	133.86	74	PKIKP	PKPdf	03 27 18.2	-0.5		
PDGK	Podgornoye	133.86	74	PKPdf	PKPdf	03 27 18.2	-0.5		
PZH	PanZhiHua	134.48	108	PKP	PKPdf	03 27 21.1	+0.7		
YKA	Yellowknife Ar	134.63	319	PKP	PKPdf	03 27 19.1	-0.2		
	comp=Z,5.6nm,0.7s,baz=131,slow=2.1,SNR=45								
YKA				PP	PP	03 29 53.9	+0.2		
	comp=Z,2.3nm,1.0s,baz=124,slow=7.4,SNR=7.6								
BORK	Borovoye	135.10	58	PKIKP	PKPdf	03 27 20.7	+0.1		
BORK	Borovoye	135.10	58	PKPdf	PKPdf	03 27 20.7	+0.1		
BVAR	Borovoye Array	135.12	58	PKP	PKPdf	03 27 20.8	+0.2		
	comp=Z,8.9nm,0.8s,baz=228,slow=1.8,SNR=22								
SPITS	Spitsbergen Ar	135.73	12	PKP	PKPdf	03 27 21.1	+0.1		
	comp=Z,4.6nm,0.8s,baz=207,slow=1.9,SNR=5.0								
KBS	Kingsbay	135.85	11	*i* P	PKiKP	03 27 22.3	-0.6		
NOR	Nord	136.49	3	*i* P	PKPdf	03 27 23.1	+0.7		
MK31	Makanchi Array	137.58	71	*c i* PKIKP	PKiKP	03 27 27.0	-0.4		
MKAR	Makanchi Array	137.58	71	PKhKP	PKPpre	03 27 15.4			
	comp=Z,0.5nm,0.5s,baz=222,slow=2.3,SNR=6.3								
MKAR				PKP	PKPdf	03 27 24.8	-0.6		
	comp=Z,1.9nm,0.8s,baz=259,slow=4.6,SNR=11								
MKAR				PP	PP	03 30 14.3	+1.7		
	comp=Z,0.8nm,0.9s,baz=243,slow=5.3,SNR=4.0								
MKAR	Makanchi Array	137.58	71	*c i* PKIKP	PKiKP	03 27 27.3	-0.1		
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
KURBB	Kurchatov Arra	137.83	65	PKhKP	PKPpre	03 27 16.7			
	comp=Z,1.4nm,0.9s,baz=242,slow=3.9,SNR=10								
KURBB				PKP	PKPdf	03 27 24.6	-1.1		
	comp=Z,2.4nm,0.6s,baz=240,slow=2.9,SNR=12								
KURBB				PP	PP	03 30 13.7	-0.4		
	comp=Z,0.4nm,0.6s,baz=253,slow=6.4,SNR=4.4								
KURBB				SKPbc	SKPbc	03 31 00.4	+1.9		
	comp=Z,0.2nm,0.4s,baz=226,slow=3.4,SNR=4.2								
KURK	Kurchatov	137.93	65	PKIKP	PKPdf	03 27 24.6	-1.3		
WMQ	Urumqi	138.76	79	*e*PKP	PKPdf	03 27 28.1	+0.4		
CD2	Chengdu	139.01	106	PKP	PKPdf	03 27 28.5	-0.1		
DGZ	Jazzator, Alta	142.06	71	⇓*e*PKIKP	PKPdf	03 27 31.5	-2.1		
ZAA0	Zalesovo Array	142.87	64	PKPpre	PKPpre	03 27 30.2			
ZALV	Zalesovo Beam	142.87	64	PKhKP	PKPpre	03 27 31.4			
	comp=Z,1.7nm,0.4s,baz=253,slow=3.8,SNR=8.0								
ZALV				PP	PP	03 30 44.1	-0.8		
	comp=Z,0.6nm,0.3s,baz=284,slow=7.3,SNR=4.2								
ZALV	Zalesovo Beam	142.87	64	PKHKP	PKPpre	03 27 30.4			
ZALV	Zalesovo Beam	142.87	64	PKPpre	PKPpre	03 27 30.4			
LZH	Lanzhou	142.88	101	*e*PKP	PKPdf	03 27 34.8	-0.8		
GTA2	Gaotai	142.89	93	*e*PKP	PKPdf	03 27 31.9	-3.5		
GTA2				pPKP	pPKPdf	03 27 38.3	-0.4		
XAN	Xi'an	144.22	108	PKP	PKPbc	03 27 36.8	+0.7		
INK	Inuvik	144.27	322	PKIKP	PKPbc	03 27 34.9	-0.2		
INK	Inuvik	144.27	322		PKPbc	03 27 34.9	-0.2		
WHN	Wuhan	144.38	118	PKP	PKPbc	03 27 37.0	+0.4		
O28M	Mount Upton	144.45	308	P	PKPbc	03 27 36.8	+0.6		
	baz=112								
YUK8	Steele Glacier	144.45	309	P	PKPbc	03 27 36.5	+0.3		
	baz=112								
G30M	tAoh Zraii Nji	144.87	319	P	PKPbc	03 27 37.1	0.0		
	baz=107								
J29N	Klondike Camp	144.88	315	P	PKPbc	03 27 37.5	+0.2		
	baz=109								
F30M	Barrier River	144.89	320	PKPdf	PKPab	03 27 36.6	-0.5		
F30M	Barrier River	144.89	320	P	PKPbc	03 27 37.4	+0.3		
	baz=106								
YUK3	Moose Creek	144.94	310	P	PKPbc	03 27 37.7	0.0		
	baz=111								
DAWY	Dawson	145.25	314	P	PKPab	03 27 38.6	0.0		
	baz=108								
BVCY	Beaver Creek	145.34	311	P	PKPab	03 27 39.0	+0.1		
	baz=110								
H29M	Whitestone	145.47	318	P	PKPbc	03 27 39.0	0.0		
	baz=106								
G29M	Pine Creek	145.53	319	P	PKPbc	03 27 39.3	0.0		
	baz=106								
M27K	Edge Creek, AK	145.76	310	P	PKPbc	03 27 40.3	0.0		
	baz=109								
CRQE	Cirque	145.77	307	P	PKPdf	03 27 39.8	+0.1		
	baz=111								
E29M	Blow River	145.85	321	P	PKPbc	03 27 40.2	0.0		
	baz=104								
I28M	Miner Creek	145.88	316	P	PKPbc	03 27 40.2	-0.2		
	baz=106								
BCAR	Beaver Creek A	145.95	311	PKPdf	PKPdf	03 27 39.9	0.0		
MCARA	McCarthy VSAT	145.95	308	P	PKPbc	03 27 40.8	+0.2		
	baz=110								
L27K	Beaver Creek,	145.97	311	P	PKPbc	03 27 40.7	0.0		
	baz=108								
KAIM	Kayak Island	146.09	305	P	PKPbc	03 27 41.1	0.0		
	baz=111								
M26K	Nabesna, AK	146.27	310	P	PKPbc	03 27 41.5	-0.2		
	baz=108								
D28M	Stokes Point	146.35	323	P	PKPbc	03 27 41.8	+0.2		
	baz=101								
F28M	Old Crow	146.40	320	P	PKPbc	03 27 41.9	+0.1		
	baz=103								
E28M	Babbage River	146.49	321	PKPdf	PKPdf	03 27 40.2	-0.4		
E28M	Babbage River	146.49	321	P	PKPbc	03 27 41.7	-0.4		
	baz=102								
BMRM	Bremner River	146.53	307	P	PKPbc	03 27 42.2	-0.3		
	baz=109								
I27K	Kandik River	146.60	316	P	PKPbc	03 27 42.5	0.0		
	baz=105,SNR=15								
L26K	Log Cabin Wild	146.62	311	P	PKPbc	03 27 42.6	0.0		
	baz=107								
H27K	Steamboat Moun	146.72	317	P	PKPbc	03 27 43.1	+0.2		
	baz=104								
Q23K	Middleton Isla	146.83	304	P	PKPbc	03 27 43.8	+0.5		
	baz=110								
G27K	Doyon Strip	146.90	318	P	PKPbc	03 27 43.5	+0.2		
	baz=103								
EYAK	Cordova Ski Ar	146.93	306	P	PKPab	03 27 44.3	-0.6		
	baz=109								
D27M	Malcolm River	147.12	322	P	PKPbc	03 27 44.6	+0.6		
	baz=100								
E27K	Coleen River	147.16	320	P	PKPbc	03 27 44.4	+0.4		
	baz=101								
SCRK	Sand Creek	147.16	312	P	PKPbc	03 27 44.3	+0.1		
	baz=105,SNR=15								
HARP	HAARP	147.23	309	P	PKPbc	03 27 44.9	+0.5		
	baz=107								
KLU	Klutina	147.31	308	P	PKPbc	03 27 45.1	+0.4		
	baz=108								
RIDG	Independent Ri	147.46	312	P	PKPbc	03 27 45.3	+0.3		
	baz=105,SNR=22								
P23K	Montague Islan	147.53	304	P	PKPbc	03 27 45.1	-0.1		
	baz=109								
PAX	Paxson	147.53	310	PKP2	PKPbc	03 27 44.7	-0.6		
PAX	Paxson	147.53	310		PKPbc	03 27 44.6	-0.6		
PAX	Paxson	147.53	310	P	PKPbc	03 27 45.3	0.0		
	baz=106,SNR=15								
M24K	Tolsona, Glenn	147.60	309	P	PKPbc	03 27 46.2	+0.7		
	baz=107								
GLI	Glacier Island	147.66	306	P	PKPbc	03 27 45.9	+0.3		
	baz=108								
G26K	Porcupine Rive	147.75	318	P	PKPbc	03 27 46.0	+0.5		
	baz=101								
NJ2	Nanjing	147.85	122	⇓PKPbc	PKPbc	03 27 47.4	+0.5		
K24K	Donnelly Dome	147.88	312	P	PKPbc	03 27 46.5	+0.4		
	baz=104,SNR=5.7								
J25K	Salcha River,	147.90	313	P	PKPbc	03 27 46.3	+0.1		
	baz=103,SNR=9.9								
F26K	Sheenjek River	148.02	319	P	PKPbc	03 27 47.0	+0.6		
	baz=100								
SCM	Sheep Creek Mo	148.05	308	P	PKPbc	03 27 47.2	+0.6		
	baz=106								
KNGR	Kungurtug, Tuv	148.09	75	⇓*e*PKIKP	PKPdf	03 27 44.6	+0.7		
C27K	Jago River	148.13	323	P	PKPbc	03 27 47.2	+0.6		
	baz=97								
PRP	Porcupine Dome	148.16	315	P	PKPbc	03 27 46.9	0.0		
	baz=102,SNR=39								
M23K	Glacier View	148.22	308	P	PKPbc	03 27 47.3	+0.3		
	baz=106,SNR=6.0								
PWL	Port Wells	148.23	306	P	PKPbc	03 27 47.2	+0.1		
	baz=107								
FYU	Fort Yukon	148.24	317	PKPdf	PKPdf	03 27 45.1	+1.6		
DHY	Denali Highway	148.40	310	P	PKPbc	03 27 47.7	+0.1		
	baz=104								
WAT6	Susitna Watana	148.43	309	P	PKPbc	03 27 48.0	+0.3		
	baz=105								
KNK	Knik Glacier	148.45	307	P	PKPbc	03 27 47.9	+0.2		
	baz=106								
SML	Sawmill	148.50	308	P	PKPbc	03 27 48.1	+0.3		
	baz=106,SNR=8.3								
HDA	Harding Lake	148.52	313	P	PKPbc	03 27 47.6	-0.1		
	baz=102,SNR=7.0								
SEW	Seward	148.54	304	P	PKPbc	03 27 48.2	+0.4		
	baz=108								
F25K	Christian Rive	148.57	319	P	PKiKP	03 27 48.6	-0.7		
	baz=98								
ILAR	Eielson Array	148.57	313	PKPbc	PKPbc	03 27 47.6	-0.2		
	comp=Z,30nm,0.9s,baz=96,slow=2.9,SNR=7.0								
ILAR	Eielson Array	148.57	313		PKPdf	03 27 42.0	-2.1		
ILAR					PKPbc	03 27 47.7	-0.2		
C26K	Camden Bay	148.58	323	P	PKiKP	03 27 48.6	-0.5		
	baz=95								
E25K	Arctic Village	148.62	320	P	PKPbc	03 27 48.5	+0.6		
	baz=98								
G25K	Bearman Lake	148.62	317	P	PKiKP	03 27 48.6	-0.7		
	baz=99								
PMR	Palmer	148.81	307	P	PKPbc	03 27 48.7	+0.2		
	baz=106								
NRIK	Noril'sk	148.83	38	PKPbc	PKPbc	03 27 48.5	+0.2		
	comp=Z,13nm,0.9s,baz=267,slow=2.5,SNR=14								
NRIK	Noril'sk	148.83	38	PKP2	PKPbc	03 27 48.9	+0.6		
NRIK	Noril'sk	148.83	38		PKPbc	03 27 48.9	+0.6		
WAT1	Susitna Watana	148.86	309	P	PKPbc	03 27 48.9	+0.3		
	baz=104								
POKR	Poker Plat Res	148.87	314	P	PKPbc	03 27 48.6	0.0		
	baz=101								
RC01	Rabbit Creek A	148.95	306	P	PKPbc	03 27 49.0	+0.1		
	baz=106								
COLA	College	149.00	313	PKP2	PKPbc	03 27 48.4	-0.4		
COLA	College	149.00	313	PKPbc	PKPbc	03 27 48.4	-0.4		
COLA	College	149.00	313	P	PKPbc	03 27 49.0	+0.1		
	baz=101								
D25K	Kavik River	149.04	322	P	PKPbc	03 27 49.1	+0.1		
	baz=95								
BRSE	Bradley Lake S	149.05	303	P	PKPbc	03 27 49.2	0.0		
	baz=107								
G24K	Hadweenzic Riv	149.15	317	P	PKPbc	03 27 49.6	+0.4		
	baz=98								
H24K	Noodor Dome	149.18	315	P	PKPbc	03 27 49.5	+0.1		
	baz=100,SNR=18								
MCK	McKinley	149.23	311	P	PKPbc	03 27 49.9	+0.3		
	baz=102,SNR=16								
M22K	Willow	149.31	307	P	PKPbc	03 27 50.2	+0.5		
	baz=104								
KDAK	Kodiak Island	149.34	299	*de*PKIKP	PKPbc	03 27 47.8	-2.1		
KDAK	Kodiak Island	149.34	299	P	PKPbc	03 27 50.2	+0.3		
	baz=110								
F24K	Squaw Lake	149.41	319	P	PKiKP	03 27 50.5	-0.5		
	baz=97								
NEA2	Nenana	149.46	313	P	PKPbc	03 27 49.9	-0.2		
	baz=101,SNR=20								
HOM	Homer	149.46	303	P	PKPbc	03 27 50.6	+0.4		
	baz=107								
OHAK	Old Harbor	149.51	298	P	PKPbc	03 27 50.8	+0.4		
	baz=110								
BTO2	Baotou	149.52	101	*e*PKPbc	PKPdf	03 27 46.8	+0.2		
BTO2				PKPab	pPKPab	03 27 59.0	-0.4		
BTO2				SS	SS	03 50 33.0	-5.0		
BTO2				PPMZ					
	comp=Z,320nm,4.5s								
BTO2				L	L				
	comp=Z,200nm,3.9s								
BTO2				L	L				
	comp=Z,160nm,4.3s								
BTO2				L	L				
	comp=Z,130nm,5.1s								
CUT	Chulitna	149.53	308	PKPbc	PKPbc	03 27 50.4	+0.2		
CUT	Chulitna	149.53	308	P	PKPbc	03 27 50.7	+0.4		
	baz=103								
CAPN	Captain Cook N	149.53	305	P	PKPbc	03 27 49.9	-0.4		
	baz=106								
I23K	Minto, Yukon-K	149.68	314	P	PKPbc	03 27 50.1	-0.4		
	baz=99,SNR=12								
E24K	Your Creek	149.70	320	P	PKiKP	03 27 51.3	-0.3		
	baz=95								
SII	Sitkinak Islan	149.74	296	P	PKPbc	03 27 51.2	+0.2		
	baz=111								
TRF	Thorofare Moun	149.76	310	P	PKPbc	03 27 51.1	+0.1		
	baz=102,SNR=7.6								
L22K	Petersville	149.78	308	P	PKPbc	03 27 51.2	+0.2		
	baz=103,SNR=15								
H23K	Yukon River	149.85	315	P	PKPbc	03 27 51.2	+0.2		
	baz=98								
HNS	HongShan	149.86	111	⇓PKPbc	PKiKP	03 27 52.5	-0.3		
D24K	Happy Valley	149.90	322	P	PKPbc	03 27 51.4	+0.4		
	baz=93								
SKT	Skwentna	150.01	307	P	PKPbc	03 27 51.6	+0.1		
	baz=103,SNR=16								
O20K	Slope Mountain	150.05	303	P	PKPbc	03 27 51.7	0.0		
	baz=106								
E23K	Chandalar	150.12	319	P	PKPbc	03 27 51.7	0.0		
	baz=94								
TOLK	Toolik Lake Re	150.14	321	P	PKiKP	03 27 52.2	-0.3		
	baz=93								
SPCR	Spurr Chakacha	150.14	305	P	PKPbc	03 27 51.9	0.0		
	baz=104								
G23K	Bananza Creek	150.16	317	P	PKiKP	03 27 52.6	0.0		
	baz=96								
CHIR	Chirikof Islan	150.23	294	P	PKPbc	03 27 52.5	+0.4		
	baz=111								
P19K	Oil Pt	150.23	302	P	PKPbc	03 27 52.1	0.0		
	baz=106								
MLY	Manley	150.23	313	PKPbc	PKPbc	03 27 50.9	-1.1		
MLY	Manley	150.23	313	P	PKPbc	03 27 51.6	-0.4		
	baz=98,SNR=22								
TIA	Tai'an	150.26	115	PKPbc	PKiKP	03 27 53.3	-0.4		
COLD	Coldfoot	150.28	318	P	PKiKP	03 27 52.8	0.0		
	baz=95								
PPLA	Purkeypile	150.50	309	P	PKPbc	03 27 53.1	+0.3		
	baz=101								
MOY	Mondy	150.52	75	*e*PKIKP	PKPdf	03 27 47.6	-0.2		
MOY				pmax	pmax				
	comp=Z,72nm,1.8s								
C23K	Itkillik River	150.54	323	P	PKiKP	03 27 53.1	-0.1		
	baz=90								
HHC	Hu-ho-hao-te	150.54	102	*e*PKPbc	PKPdf	03 27 44.3	-3.9		
HHC				L	L				
	comp=Z,86nm,15.3s								
HHC				L	L				
	comp=Z,130nm,16.0s								
CAST	Castle Rocks	150.55	310	P	PKPbc	03 27 52.6	-0.2		
	baz=100,SNR=21								
D23K	Nanushuk River	150.56	321	P	PKiKP	03 27 53.4	+0.1		
	baz=92								
H22K	Ishtalitna Cre	150.61	315	P	PKPbc	03 27 53.1	+0.2		
	baz=96,SNR=19								
M20K	Styx River	150.73	307	P	PKPbc	03 27 53.1	-0.2		
	baz=102								
CHUM	Lake Minchumin	150.73	311	P	PKPbc	03 27 53.0	-0.1		
	baz=99,SNR=5.3								
G22K	Bettles	150.76	317	P	PKiKP	03 27 53.7	0.0		
	baz=95								
I21K	Tanana	150.78	313	P	PKPbc	03 27 53.2	0.0		
	baz=97,SNR=8.7								
Q18K	Katmai Hardscr	150.83	300	P	PKPbc	03 27 53.6	-0.1		
	baz=107								
O19K	Port Alsworth	150.90	303	PKPbc	PKPbc	03 27 53.4	-0.2		
O19K	Port Alsworth	150.90	303	P	PKPbc	03 27 53.3	-0.3		
	baz=104								
E22K	Anaktuvuk Pass	150.95	320	P	PKiKP	03 27 54.0	-0.1		
	baz=92								
F22K	John River	151.06	318	P	PKiKP	03 27 54.4	0.0		
	baz=93								
N19K	Bonanza Creek	151.13	304	P	PKPbc	03 27 53.7	-0.5		
	baz=103,SNR=10								
P18K	Big Mountain,	151.14	301	P	PKPbc	03 27 53.8	-0.5		
	baz=105								
Q17K	Contact Creek	151.16	299	P	PKiKP	03 27 54.8	-0.2		
	baz=107								
H21K	Melozitna Rive	151.17	314	P	PKPbc	03 27 54.3	+0.2		
	baz=96,SNR=25								
R17L	Mt. Peulik Vol	151.22	297	P	PKPbc	03 27 54.6	+0.2		
	baz=108								
ZAK	Zakamensk	151.23	79	*e*PKIKP	PKPbc	03 27 53.8	-1.1		
ZAK				pmax	pmax				
	comp=Z,38nm,1.4s								
O18K	Koktuh Hills	151.25	302	P	PKPbc	03 27 54.1	-0.4		
	baz=104,SNR=16								
K20K	Telida	151.42	309	P	PKPbc	03 27 54.9	+0.1		
	baz=99,SNR=13								
B22K	Teshekpuk Lake	151.49	324	P	PKiKP	03 27 55.4	+0.3		
	baz=87								
G21K	Allakaket	151.52	316	PKPbc	PKPbc	03 27 54.2	-0.7		
G21K	Allakaket	151.52	316	P	PKiKP	03 27 55.5	+0.1		
	baz=94								
F21K	Alatna River	151.55	318	P	PKiKP	03 27 55.8	+0.3		
	baz=92								
J20K	Nowinta River	151.57	311	P	PKiKP	03 27 55.4	-0.1		
	baz=97,SNR=7.6								
L19K	White Mountain	151.58	307	P	PKPbc	03 27 55.1	-0.1		
	baz=100								
IMAR	Indian Mountai	151.59	315		PKPdf	03 27 46.2	-2.6		
IMAR					PKiKP	03 27 55.4	-0.1		
Q16K	King Salmon	151.66	299	P	PKPbc	03 27 55.3	-0.1		
	baz=106								
P17K	Kvichak River	151.69	300	P	PKPbc	03 27 55.4	-0.1		
	baz=105,SNR=8.4								
SONM	Songino Array	151.75	86	PKP	PKPdf	03 27 48.7	-1.1		
	comp=Z,1.7nm,1.0s,baz=192,slow=2.8,SNR=8.6								
SONM				PKPbc	PKiKP	03 27 56.4	-0.2		
	comp=Z,15nm,0.6s,baz=226,slow=3.2,SNR=57								
SONM	Songino Array	151.75	86	PKIKP	PKPdf	03 27 48.9	-0.9		
SONM						03 27 56.1			
SONM	Songino Array	151.75	86		PKPdf	03 27 48.9	-0.9		
SONM					PKPbc	03 27 56.1	-0.1		
E21K	Killik River	151.75	320	P	PKiKP	03 27 56.0	+0.1		
	baz=90								
N18K	Kilae Creek	151.77	304	P	PKPbc	03 27 55.8	+0.2		
	baz=102,SNR=5.2								
I20K	Naagheedeneel	151.79	312	P	PKiKP	03 27 56.5	+0.6		
	baz=96								
CHGN	Chignik	151.87	294	P	PKiKP	03 27 56.8	+0.5		
	baz=109								
M18K	Stony River	151.91	305	P	PKiKP	03 27 56.2	-0.1		
	baz=101								
B21K	Ikpikpuk River	151.94	323	P	PKiKP	03 27 56.7	+0.6		
	baz=87								
A22K	Sinclair Lake	151.95	326	P	PKiKP	03 27 56.4	+0.4		
	baz=84								
CHNA	Chernabura Isl	152.00	290	P	PKPbc	03 27 56.4	+0.1		
	baz=111								
TLY	Talaya	152.01	77	⇓*e*PKIKP	PKPdf	03 27 48.5	-1.5		
TLY	Talaya	152.01	77	PKPdf	PKPdf	03 27 48.4	-1.5		
H20K	Anotleneega Mo	152.02	314	P	PKiKP	03 27 57.0	+0.6		
	baz=94								
C21K	Knifeblade Rid	152.03	322	P	PKiKP	03 27 57.0	+0.7		
	baz=88								
O17K	Kolganek Bris	152.16	301	P	PKPbc	03 27 56.4	-0.1		
	baz=103								
J19K	Poorman	152.19	311	P	PKiKP	03 27 57.2	+0.4		
	baz=96								
N17K	Nushagak Hills	152.37	303	P	PKiKP	03 27 57.6	+0.3		
	baz=102								
F20K	Avaraart Lake	152.42	317	P	PKiKP	03 27 57.2	+0.1		
	baz=91								
P16K	Nushagak River	152.43	300	P	PKiKP	03 27 57.6	+0.2		
	baz=104								
L18K	Granite Mounta	152.44	307	P	PKiKP	03 27 58.2	+0.8		
	baz=99								
A21K	Barrow	152.44	326	P	PKiKP	03 27 57.4	+0.3		
	baz=82								
S14K	Fog Glacier	152.47	293	P	PKiKP	03 27 57.8	+0.1		
	baz=108								
BJT	Baijiatuao	152.54	108	PKIKP	PKPbc	03 27 57.9	-0.1		
BJT	Baijiatuao	152.54	108		PKPbc	03 27 57.9	-0.1		
BJI2	Beijing	152.54	108	P	PKiKP	03 27 58.4	+0.1		
BJI2				pmax	pmax				
	comp=Z,8.0nm,0.9s								
E20K	Nigu River	152.58	320	P	PKiKP	03 27 58.1	+0.5		
	baz=88								
O16K	Kokwok River B	152.61	301	P	PKPbc	03 27 57.4	-0.2		
	baz=103								
J18K	Innoko River	152.62	309	P	PKiKP	03 27 58.1	+0.4		
	baz=97								
M17K	Holitna River	152.65	305	P	PKiKP	03 27 58.2	+0.4		
	baz=100								
SDPT	Sand Point	152.65	291	P	PKiKP	03 27 58.1	+0.1		
	baz=110

KSAR	Wonju Array Be	156.51	129			PKPab	03 28 26.1	+0.7	
KSRS	Korea Array	156.53	129	PKPab		PKPab	03 28 26.6	+1.0	
	comp=Z,8.9nm,1.0s,baz=219,slow=4.9,SNR=8.6								
MJAR	Matsushiro Arr	159.62	150	PKP		PKPdf	03 27 59.5	-1.0	
	comp=Z,1.6nm,0.8s,baz=189,slow=1.5,SNR=6.7								
MJAR				PKPab		PKPab	03 28 38.9	-0.2	
	comp=Z,2.4nm,0.8s,baz=198,slow=4.3,SNR=4.4								
MAJO	Matsushiro	159.62	149	*e*PKIKP		PKPdf	03 28 00.3	-0.3	
CN2	Changchun	160.15	114	*e*PKP		PKPdf	03 27 57.8	-3.1	
HILR	Hailar Array B	160.29	93	PKPab		PKPab	03 28 42.5	+0.8	
	comp=Z,2.2nm,0.4s,baz=212,slow=5.3,SNR=4.6								
BNX	BinXian	162.48	112	||P		PKPab	03 28 50.8	-0.5
BNX				pmax		pmax			
	comp=Z,16nm,1.0s								
AMKA	Amchitka	162.65	270	PKPdf		PKPdf	03 28 02.7	-0.5	
AMKA						PKPab	03 28 50.5	-1.4	
USRK	Ussuriysk Ar.	163.74	124	PKPab		PKPab	03 28 56.5	-0.3	
	comp=Z,5.3nm,0.9s,baz=238,slow=3.6,SNR=5.3								
USRK	Ussuriysk Ar.	163.74	124	PKPab		PKPab	03 28 56.1	-0.7	
ZEA	Zeya	166.18	85	*i* PKP2		PKPab	03 29 08.7	+1.3	
YSS	Yuzhno-Sakhali	170.49	144	*e*PKIKP		PKPdf	03 28 10.1	+0.7	
YSS				pmax		pmax			
	comp=Z,10.0nm,1.0s								
MA2	Magadan	175.37	1	*e*PKIKP		PKPdf	03 28 13.6	+2.6	

TRN 20 03:22:30.9, 17.49N×61.18W, h15km, MD4.1, 1D, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.61	287	*e*P	Pn	03 22 45.6	+0.5
ANWB				*e*S	Sn	03 22 54.8	+0.2
DSDZ	La Diserade, G	1.17	175	*e*P	Pg	03 22 53.7	+0.1
DSDZ				*e*S	Sg	03 23 11.2	+2.4
MBWH	Windy Hill	1.22	233	*e*P	Pg	03 22 55.4	+0.9
MBWH				*e*S	Sg	03 23 13.0	+2.6
DHSZ	Broadband at M	1.33	205	*e*P	Pg	03 22 56.5	-0.1
DHSZ				*e*S	Sg	03 23 15.7	+1.7
SKI	Saint Kitts	1.50	264	*e*P	Pg	03 23 00.1	+0.3
SKI				*e*S	Sg	03 23 19.7	+0.3
MMLZ	Guadeloupe Bro	1.51	198	*e*P	Pg	03 22 59.4	-0.6
MMLZ				*e*S	Sg	03 23 19.9	+0.3
MAGL	Barre de l'ile	1.53	184	*e*P	Pg	03 22 59.8	-0.6
MAGL				*e*S	Sg	03 23 21.4	+1.1
TBG	Guadaloupe-3	1.69	196	*e*P	Pg	03 23 01.8	+0.1
TBG				*e*S	Sg	03 23 24.2	-1.1
SEUS	St. Eustatius	1.72	271	*e*P	Pb	03 23 03.2	+0.8
SEUS				*e*S	Sg	03 23 25.4	-1.1
SMRT	St. Maarten	1.90	288	*e*P	Pb	03 23 04.1	-1.2
SMRT				*e*S	Sb	03 23 29.3	+0.5
DWS	Wesley	1.91	184	*e*P	Pb	03 23 04.3	-1.2
DWS				*e*S	Sb	03 23 30.1	+0.9
SABA	Saba	1.98	274	*e*P	Pb	03 23 05.6	-1.1
SABA				*e*S	Sb	03 23 31.1	-0.1
DSLB	Salisbury	2.05	187	*e*P	Pb	03 23 07.0	-1.0
DSLB				*e*S	Sb	03 23 33.2	0.0
BIM	Bigot	2.95	178	*e*P	Pb	03 23 20.4	-2.9
BIM				*e*S	Sn	03 23 54.9	+2.3
SLBI	Saint Lucia, B	3.45	177	*e*P	Pn	03 23 26.1	+2.0
SLBI				*e*S	Sn	03 24 06.5	+1.7
SLAC	Saint Lucia, A	3.58	176	*e*P	Pn	03 23 28.1	+2.1
SLAC				*e*S	Sn	03 24 09.7	+1.7

*IDC **20** 03:29:05.3±1.9, 5.48S×152.10E, h0km, mb3.7/5, mbtmp3.8/6, ML2.1/1, Error ellipse: s-maj=74.8km s-min=21.5km az=122.0*

ISC 20 03:29:11.4±1.9, 5.6S±0.3×152.1E±0.4, h45km, n7, σ0°53/8, mb3.6/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.19	232	Pn	Pn	03 30 39.6	-0.7
	3.1nm,0.3s,baz=345,slow=2.3,SNR=3.0						
PMG				Sn	Sn	03 31 50.5	+0.6
	4.6nm,0.3s,baz=153,slow=20,SNR=6.7						
	7.4nm,0.4s						
WRA	Warramunga Arr	22.40	229	P	P	03 34 06.2	-0.1
	1.4nm,0.5s,baz=53,slow=10.0,SNR=18						
	1.4nm,0.5s						
ASAR	Alice Springs	25.10	222	P	P	03 34 32.9	+0.7
	2.2nm,0.6s,baz=56,slow=9.1,SNR=25						
	2.2nm,0.6s						
SONM	Songino Array	66.61	328	P	P	03 39 57.4	0.0
	0.7nm,0.6s,baz=128,slow=6.9,SNR=3.8						
	0.7nm,0.6s						
MKAR	Makanchi Array	80.45	319	P	P	03 41 18.8	+0.1
	0.2nm,0.4s,baz=100,slow=6.3,SNR=2.4						
	0.2nm,0.4s						
ILAR	Eielson Array	83.15	22	P	P	03 41 32.4	0.0
	0.3nm,0.7s,baz=250,slow=5.1,SNR=6.8						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	149.87	287	PKPbc	PKPbc	03 48 57.8	0.0
	1.2nm,0.3s,baz=87,slow=2.3,SNR=36						

*ISK **20** 04:05:46.5, 38.32N×23.95E, h6km, ML3.1/13*
*IDC **20** 04:05:47.7±1.6, 38.25N×23.98E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=59.5km s-min=27.7km az=153.0*
*ATH **20** 04:05:48.5, 38.22N×24.16E, h14km, ML3.7/18, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **20** 04:05:49.2, 38.2N±0.6×24.1E±0.8, h4km±1km, M3.4/30, MLh3.4/30*
*SOF **20** 04:05:50.9, 38.6N±0.1×24.36E±0.04, h2km±1km, MD3.6/6*
*AFAD **20** 04:05:54.5, 38.60N×24.87E, h8km±1km, ML2.6*

ISC 20 04:05:48.4±0.9, 38.27N±0.02×24.14E±0.02, h11km±7km, n126, σ1°34/175, 4C-6D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DION	Dionisos Attik	0.26	220	P	Pg	04 05 53.8	+0.1
DION				S	Sg	04 05 56.9	-0.3
DION	Dionisos Attik	0.26	220	P	Pg	04 05 53.7	0.0
DION				S	Sg	04 05 57.0	-0.3
PTL	Penteli	0.31	224	P	Pg	04 05 54.9	+0.1
PTL				S	Sg	04 05 58.9	-0.1
PTL	Penteli	0.31	224	P	Pg	04 05 54.7	-0.1
PTL				S	Sg	04 05 58.8	-0.1
KARY	Karystos	0.34	136	P	Pg	04 05 55.2	0.0
KARY				S	Sg	04 05 59.4	-0.4
KARY	Karystos	0.34	136	P	Pg	04 05 54.8	-0.4
KARY				S	Sg	04 05 58.9	-0.9
KYMI	Kymi, Euboea I	0.36	355	P	Pb	04 05 57.0	+0.1
KYMI				S	Sb	04 06 02.6	0.0
KYMI	Kymi, Euboea I	0.36	355	P	Pb	04 05 56.9	+0.1
KYMI				S	Sb	04 06 03.0	+0.5
ACHAR	Athens-Acharne	0.37	238	P	Pg	04 05 56.1	+0.3
ACHAR				S	Sg	04 06 01.2	+0.4
ATHP	Athens-Neo Psi	0.40	227	P	Pg	04 05 56.1	-0.2
ATHP				S	Sg	04 06 01.2	-0.4
ATHU	Athens Univers	0.42	222	P	Pg	04 05 56.6	-0.1
ATHU				S	Sg	04 06 01.7	-0.5
ATHU	Athens Univers	0.42	222	P	Pg	04 05 56.3	-0.4
ATHU				S	Sg	04 06 01.7	-0.5
ATH5	Athens Parliam	0.44	227	P	Pg	04 05 56.1	-0.9
ATH5				S	Sg	04 06 01.7	-1.1
NOAC	Athens-Thissio	0.45	228	P	Pg	04 05 57.3	0.0
NOAC				S	Sg	04 06 03.2	0.0
ATH	Athens Observa	0.45	228	P	Pg	04 05 57.5	+0.2
ATH				S	Sg	04 06 03.4	+0.1
ATH	Athens Observa	0.45	228	P	Pg	04 05 57.0	-0.2
ATH				S	Sg	04 06 03.3	+0.1
STFN	Stefani	0.48	258	P	Pb	04 05 58.4	-0.5
STFN				S	Sb	04 06 05.0	-1.0
VLY	Voula,Athens	0.50	213	P	Pg	04 05 58.1	-0.1
VLY				S	Sg	04 06 04.3	-0.6
VLY	Voula,Athens	0.50	213	P	Pg	04 05 57.9	-0.3
VLY				S	Sg	04 06 04.2	-0.7
ELFA	Athens-Elefsin	0.53	244	P	Pg	04 05 58.7	+0.1
ELFA				S	Sg	04 06 06.0	+0.4
MAGU	Magoula	0.53	249	P	Pg	04 05 59.0	+0.2
MAGU				S	Sg	04 06 05.9	+0.1
LVRA	Laurium	0.56	187	P	Pg	04 05 58.9	-0.5
LVRA				S	Sg	04 06 06.2	-0.7
VILL	Villia	0.66	261	P	Pb	04 06 01.7	-0.3
SKY	Skiros Island	0.68	28	P	Pb	04 06 02.9	+0.5
SKY				S	Sb	04 06 13.2	+1.4
SKY	Skiros Island	0.68	28	P	Pb	04 06 02.6	+0.2
SKY				S	Sb	04 06 12.9	+1.1
VIL2	Platees	0.69	265	P	Pb	04 06 01.8	-0.7
VIL2				S	Sb	04 06 10.9	-1.1
MET4	Agioi Theodoro	0.88	222	P	Pg	04 06 05.0	-0.3
MET4				S	Sg	04 06 17.3	+0.6
MET5	Makryloggos,Me	0.90	224	P	Pg	04 06 05.6	-0.2
MET5				S	Sg	04 06 17.8	+0.3
AOS2	Alonissos-2	0.90	345	P	Pn	04 06 06.3	-0.7
MET1	Methana Town,	0.92	221	P	Pg	04 06 05.6	-0.5
AOS	Alonnisos	0.92	347	P	Pn	04 06 06.6	-0.6
AOS				S	Sn	04 06 20.1	-0.4
MET2	Kameni Chora,	0.92	224	P	Pg	04 06 05.9	-0.3
MET6	Megalochori,Me	0.92	222	P	Pg	04 06 06.1	-0.1
LTK	Loutraki	0.96	255	P	Pb	04 06 07.3	+0.3
LTK				S	Sb	04 06 20.5	+0.7
LTK	Loutraki	0.96	255	P	Pb	04 06 07.4	+0.3
LOUT	Loutraki	0.96	253	P	Pb	04 06 07.2	+0.1
LOUT				S	Sb	04 06 19.9	+0.1
LKR	Lokris	0.97	293	P	Pn	04 06 07.3	-0.7
LKR				S	Sn	04 06 21.6	-0.1
LKR	Lokris	0.97	293	P	Pb	04 06 07.0	-0.3
ATAL	Atalanti	0.97	296	P	Pn	04 06 07.2	-0.8
ATAL				S	Sn	04 06 21.3	-0.5
ATAL	Atalanti	0.97	296	P	Pn	04 06 07.4	-0.6
MET3	Ano Fanari,Met	1.00	226	P	Pg	04 06 07.3	-0.5
MET3				S	Sg	04 06 20.4	-0.4
YDRA	Hydra	1.07	210	P	Pg	04 06 08.3	-0.6
YDRA				S	Sg	04 06 22.5	-0.3
ACOR	Acrocorinthos	1.07	249	P	Pg	04 06 08.2	-0.9
ACOR				S	Sg	04 06 22.5	-0.5
TNSA	Tinos	1.09	132	P	Pg	04 06 08.6	-0.8
TNSA				S	Sg	04 06 22.9	-0.8
THAL	Thalero	1.19	259	P	Pn	04 06 11.2	+0.3
THAL	Thalero	1.19	259	P	Pb	04 06 10.9	-0.1
THAL				S	Sn	04 06 27.5	+0.4
NEO	Neokhori	1.25	326	P	Pn	04 06 12.9	+1.0
NEO				S	Sn	04 06 29.3	+0.5
NEO	Neokhori	1.25	326	P	Pn	04 06 12.6	+0.7
AXAR	Agios Charalam	1.26	293	P	Pn	04 06 12.5	+0.5
AXAR	Agios Charalam	1.26	293	P	Pn	04 06 12.4	+0.4
DLFA	Delphi	1.31	279	P	Pn	04 06 12.9	+0.3
XOR	Xorichti	1.32	326	P	Pn	04 06 13.6	+0.8
XOR				S	Sn	04 06 30.8	+0.4
XOR	Xorichti	1.32	326	P	Pn	04 06 13.3	+0.5
EFSA	Agios Efstrati	1.43	27	P	Pn	04 06 14.3	+0.1
GUR	Goura	1.46	257	P	Pn	04 06 14.7	-0.1
CHOS	Chios island	1.51	85	Pn	Pn	04 06 17.0	+1.5
CHOS				S	Sn	04 06 38.9	+3.2
CHOS	Chios island	1.51	85	P	Pn	04 06 15.9	+0.4
EAG2	Marmaro, Chios	1.57	80	P	Pn	04 06 16.0	-0.2
EAG2				S	Sn	04 06 36.7	+0.3
KALE	Kalithea	1.58	275	P	Pb	04 06 17.0	-0.6
KLV	Kalavryta, Ach	1.58	262	P	Pn	04 06 16.7	+0.2
AGG	Agios Georgios	1.60	298	P	Pg	04 06 17.8	-1.4
SERG	Sergoula	1.64	275	P	Pb	04 06 18.0	-0.7
PAIG	Paliouri	1.69	348	P	Pb	04 06 18.5	-1.0
EFP	Efpalio	1.76	276	P	Pb	04 06 20.0	-0.8
ANX	Ano Chora	1.77	281	P	Pb	04 06 20.3	-0.6
LIA	Limnos Island	1.81	26	P	Pn	04 06 19.6	0.0
VLI	Veliai	1.82	212	P	Pn	04 06 19.6	-0.1
KARB	zmir-Karabur	1.83	77	P	Pn	04 06 19.2	-0.5
KARB				S	Sn	04 06 41.0	-1.8
KARB				IAML		04 06 51.0	
	comp=E,88nm,0.5s						
ZEYE	Izmir, Urla-Ze	1.86	90	P	Pn	04 06 19.8	-0.4
ZEYE				S	Sn	04 06 38.4	-5.3
ZEYE				IAML		04 06 52.0	
	comp=N,96nm,0.7s						
PRK	Paraskevi	1.93	59	P	Pn	04 06 21.5	+0.4
DRO	Drossia	1.94	261	P	Pn	04 06 22.6	+1.2
KOCA	Canakkale, Ayv	1.98	51	P	Pn	04 06 20.4	-1.5
KOCA				IAML		04 07 02.0	
	comp=N,83nm,0.9s						
KOCA				IAML		04 07 04.0	
	comp=E,89nm,0.4s						
OUR	Ouranopolis	2.06	357	Pn	Pn	04 06 22.0	-1.0
OUR				Sn	Sn	04 06 47.7	-0.9
OUR	Ouranopolis	2.06	357	P	Pn	04 06 23.8	+0.9
TYRN	Tyrnavos	2.06	315	P	Pb	04 06 24.6	-1.3
ITM	Ithomi	2.07	239	P	Pn	04 06 24.4	+1.3
BOZC	Bozcaada	2.16	43	Pn	Pn	04 06 24.4	+0.1
BOZC	Bozcaada	2.16	43	P	Pn	04 06 23.7	-0.7
BOZC				S	Sn	04 06 45.6	-5.5
BOZC				IAML		04 07 05.0	
	comp=E,66nm,0.7s						
BAGT	Foa	2.16	79	P	Pb	04 06 29.2	+1.6
DGB	zmir	2.17	95	P	Pn	04 06 23.2	-1.3
DGB				S	Sn	04 06 45.2	-6.2
AYVA	Ayvalik	2.25	62	P	Pg	04 06 32.4	+0.9
AYVA				S	Sn	04 06 50.2	-2.9
BLCB	Balcova	2.29	86	Pn	Pn	04 06 28.1	+2.1
EZN	Ezine	2.30	47	Pn	Pn	04 06 27.4	+1.1
DKL	Dikili	2.31	69	Pn	Pn	04 06 28.0	+1.7
GOAD	anakkale-G¶	2.33	36	P	Pn	04 06 27.0	+0.3
GOAD				S	Sn	04 06 51.0	-4.4
GOAD				IAML		04 07 13.0	
	comp=E,81nm,0.7s						
GOAD				IAML		04 07 19.0	
	comp=N,66nm,1.4s						
GADA	Gvkgeada	2.35	35	Pn	Pn	04 06 27.5	+0.5
BAYC	CANAKKALE_Bayr	2.38	51	P	Pn	04 06 27.5	+0.1
BAYC				S	Sn	04 06 48.7	-7.8
ZEDA	zmir-Bergama	2.40	72	P	Pn	04 06 30.6	+2.9
ZEDA				S	Sn	04 06 54.4	-2.7
GCAM	G?zelcaml?	2.51	102	Pn	Pn	04 06 31.6	+2.5
CAMT	Merkez	2.53	78	P	Pn	04 06 28.0	-1.5
CAMT				IAML		04 07 14.0	
	comp=N,88nm,0.8s						
CAMT				IAML		04 07 17.0	
	comp=E,97nm,0.6s						
BUHA	Balikesir, Bur	2.60	61	P	Pn	04 06 30.1	-0.3
BUHA				IAML		04 07 18.0	
	comp=E,50nm,1.0s						
GELI	Tayfur-Gelibol	2.79	40	Pn	Pn	04 06 33.7	+0.7
BODT	Bodrum	2.79	115	Pn	Pn	04 06 34.6	+1.6
LAPS	Lapseki, ANA	2.88	46	P	Pn	04 06 34.4	+0.2
LAPS				S	Sn	04 07 05.6	-3.3
LAPS				IAML		04 07 28.0	
	comp=N,34nm,1.0s						
LAPS				IAML		04 07 28.0	
	comp=E,36nm,0.6s						
STEP	BALIKESIR_Sava	3.00	67	P	Pb	04 06 42.1	+0.1
ALN	Alexandroupoli	3.00	29	Pn	Pn	04 06 36.7	+0.8
ERIK	Erikli-Kesan	3.02	37	Pn	Pn	04 06 37.1	+1.0
GOKT	Kean, EDRN	3.06	38	P	Pn	04 06 37.6	+0.9
GOKT				IAML		04 07 33.0	
	comp=E,30nm,0.6s						
GOKT				IAML		04 07 37.0	
	comp=N,37nm,1.0s						
KTTT	Salihli	3.13	81	P	Pn	04 06 38.9	+1.2
KESN	Edirne-Kesan	3.22	37	P	Pn	04 06 37.0	-2.2
KRBG	Karabiga-Canak	3.24	48	Pn	Pn	04 06 40.2	+1.1
VAY	Valandovo	3.27	339	*i* Pn	Pb	04 06 42.5	-4.1
MMB	Musomishta	3.28	355	P	Pn	04 06 41.4	+1.6
BKES	Balkesir-Mer	3.29	63	P	Pn	04 06 39.6	-0.3
BKES				IAML		04 07 44.0	
	comp=E,27nm,0.8s						
CMHT	Manyas	3.45	59	P	Pn	04 06 42.5	+0.5
CMHT				IAML		04 07 44.0	
	comp=E,25nm,0.9s						
CMHT				IAML		04 07 51.0	
	comp=N,27nm,0.6s						
RZN	Rozhen	3.45	7	P	Pn	04 06 43.4	+1.2
KDZ	Kurdzhali	3.48	15	P	Pn	04 06 43.1	+0.7
KDZ	Kurdzhali	3.48	15	Pn	Pn	04 06 42.9	+0.5
MADA	Marmara adas	3.51	48	P	Pn	04 06 43.5	+0.6
KKB	Krupnik	3.65	348	P	Pn	04 06 46.8	+2.0
BAND	Balkesir-Ban	3.71	55	||P	Pn	04 06 47.1	+1.5
OHR	Ohrid	3.83	319	*i* Pn	Pb	04 06 53.0	-3.1
PLNA	Plana	4.23	353	P	Pn	04 06 55.3	+2.4
VTS	Vitosha	4.39	351	P	Pn	04 06 56.6	+1.4
PDG	Podgorica	5.58	320	||P	Pn	04 07 14.8	+3.5
TIP	Timpagrande	5.84	281	||P	Pn	04 07 16.8	+1.8
STFAR	Stefanesti-Arg	6.61	5	||P	Pn	04 07 28.4	+2.9
MDVR	Moldovita	6.75	345	||P	Pn	04 07 28.9	+1.5
MLR	Muntele Rosu	7.33	10	||P	Pn	04 07 37.7	+2.1
VRI	Vrincioaia	7.83	13	||P	Pn	04 07 44.8	+2.6
TURR	Turia	7.90	10	||P	Pn	04 07 45.4	+2.2
TESR	Tescani	8.44	12	||P	Pn	04 07 53.1	+2.6
CJR	Cluj-Napoca	8.44	357	||P	Pn	04 07 53.0	+2.4
ESDC	Sonseca Array	21.86	282	P		P	04 10 40.6	-0.5	
	0.7nm,0.7s,baz=84,slow=11,SNR=5.0								
	0.7nm,0.7s								
TORD	Torodi Ar. Bea	32.00	225	P		P	04 12 14.9	+0.1	
	0.7nm,0.6s,baz=35,slow=7.8,SNR=15								
	0.7nm,0.6s								
MKAR	Makanchi Array	42.81	59	P		P	04 13 48.0	+1.8	
	0.3nm,0.5s,baz=280,slow=8.4,SNR=5.1								
	0.3nm,0.5s								

*IDC **20** 04:16:24.1±2.3, 17.20S×175.20W, h244km±20km, mb3.8/7, mbtmp4.4/9, Error ellipse: s-maj=71.3km s-min=12.2km az=148.0*
*NEIC **20** 04:16:25.8±1.5, 17.35S±0.06×175.00W±0.09, h262km±6km, mb4.3/42, Error ellipse: s-maj=12.1km s-min=8.4km az=89.0*

ISC 20 04:16:24.7±0.5, 17.25S±0.09×175.01W±0.08, h256km, n69, σ1°24/70, mb4.2/30, 1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUTU	Fugatoga	4.19	314	Pn	Pn	04 17 34.1	+3.1
AFI	Afiamalu	4.56	44	P	Pn	04 17 35.8	+0.3
	115nm,0.6s,baz=53,slow=1.7,SNR=16						
AFI				S	S	04 18 27.4	-4.5
	156nm,0.3s,baz=50,slow=21,SNR=15						
AFI	Afiamalu	4.56	44	Pn	Pn	04 17 35.6	+0.1
NIUE	Niue	5.16	111	Pn	Pn	04 17 44.4	+1.7
MSVF	Nonsavu	6.64	265	P	Pn	04 18 03.2	+2.1
	16nm,0.9s,baz=112,slow=16,SNR=7.1						
MSVF	Nonsavu	6.64	265	Pn	Pn	04 18 05.5	+4.4
FUNA	Funafuti	10.35	326	Pn	Pn	04 18 45.0	-2.7
MARNC	Mare, Loyalty	16.54	253	P	P	04 20 00.7	-0.5
DZM	Mont Dzumac	18.11	252	P	P	04 20 16.5	-1.8
	5.0nm,0.9s,baz=86,slow=23,SNR=5.6						
KOUNC	Koumac, New Ca	19.86	257	P	P	04 20 35.2	-1.8
TOZ	Tahuroa Road	22.04	200	P	P	04 20 59.1	+0.6
MRZ	Mangatainoka R	24.70	197	P	P	04 21 21.6	-1.1
TCW	Tory Channel	25.59	199	P	P	04 21 31.8	+1.1
QRZ	Quartz Range	25.84	202	P	P	04 21 32.9	0.0
EIDS	Eidsvold	32.53	250	P	P	04 22 31.6	-0.6
EIDS				IAmb	IAmb	04 22 32.9	
	comp=Z,5.2nm,0.8s						
ARMA	Armidale	33.08	241	P	P	04 22 36.5	-0.3
ARMA				IAmb	IAmb	04 22 39.0	
	comp=Z,15nm,1.3s						
CTAO	Charters Tower	36.75	259	P	P	04 23 07.2	-1.1
CTAO				IAmb	IAmb	04 23 08.9	
	comp=Z,8.1nm,1.0s						
COEN	Coen	40.35	269	P	P	04 23 38.1	0.0
COEN				IAmb	IAmb	04 23 38.7	
	comp=Z,10nm,1.0s						
STKA	Stephens Creek	41.78	241	P	P	04 23 49.0	-0.6
	comp=Z,8.1nm,0.8s,baz=90,slow=8.6,SNR=12						
	comp=Z,8.1nm,0.8s						
BBOO	Buckleboo	46.55	241	P	P	04 24 26.4	-0.9
BBOO				IAmb	IAmb	04 25 08.8	
	comp=Z,42nm,1.5s						
WR8	Warramunga Arr	47.78	258	P	P	04 24 35.5	-1.4
WB0	Warramunga Arr	47.90	259	P	P	04 24 36.3	-1.5
WB0				IAmb	IAmb	04 24 37.1	
	comp=Z,10nm,0.8s						
WRAB	Tennant Creek	47.93	259	P	P	04 24 36.7	-1.3
WRAB				IAmb	IAmb	04 24 37.3	
	comp=Z,8.5nm,0.7s						
WRA	Warramunga Arr	47.94	258	P	P	04 24 36.9	-1.2
	comp=Z,7.2nm,0.6s,baz=95,slow=7.1,SNR=124						
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	47.94	258	P	P	04 24 36.7	-1.4
AS31	Alice Springs	48.08	253	P	P	04 24 38.1	-1.1
ASAR	Alice Springs	48.08	253	P	P	04 24 38.4	-0.8
	comp=Z,7.2nm,0.6s,baz=88,slow=8.5,SNR=772						
FORT	Forrest	53.21	244	P	P	04 25 16.0	-1.2
FORT				IAmb	IAmb	04 25 27.5	
	comp=Z,17nm,1.4s						
KNRA	Kununurra	53.78	263	P	P	04 25 20.6	-1.0
KNRA				IAmb	IAmb	04 25 20.9	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	56.33	259	P	P	04 25 39.1	-0.6
TOLI2	Tolitoli	65.79	279	P	P	04 26 43.6	+0.4
KIWB	Kanaga Island	68.84	359	P	P	04 27 02.2	+0.9
KIWB				IAmb	IAmb	04 27 25.4	
	comp=Z,6.0nm,1.0s						
UGM	Wanagama	72.91	267	P	P	04 27 26.4	-0.3
PETK	Petropavlovsk-	73.93	343	P	P	04 27 32.5	+0.7
O02D	Mt. Diablo Mer	74.99	39	P	P	04 27 39.8	+1.6
O02D				IAmb	IAmb	04 27 40.7	
	comp=Z,5.4nm,0.9s						
MDPB	Devils Postpil	75.78	43	P	P	04 27 42.2	-0.8
BELC	Belle Mtn. Jos	75.84	47	P	P	04 27 43.7	+0.4
BELC				IAmb	IAmb	04 27 45.6	
	comp=Z,4.7nm,0.9s						
MPMC	Manual Prospec	75.94	45	P	P	04 27 44.6	+0.8
MPMC				IAmb	IAmb	04 27 46.2	
	comp=Z,4.3nm,1.0s						
WAKR	Walker	76.05	42	P	P	04 27 46.1	+1.6
PNTR	Pine Nut	76.29	41	P	P	04 27 47.3	+1.5
PNTR				IAmb	IAmb	04 27 48.1	
	comp=Z,5.8nm,0.8s						
GWY	Greenwater Val	76.56	45	P	P	04 27 48.1

Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISPG	**Isla Puna-Puer**	**1.02**	**60**	⇑P	Pg	04 16 58.1	+0.1
ISPG				S	Sb	04 17 12.1	-0.8
MORR	**Playas El Morr**	**1.10**	**40**	⇑P	Pg	04 16 58.2	-1.4
MORR				S	Sg	04 17 11.9	-2.0
SALI	**Salinas**	**1.29**	**3**	P	Pg	04 17 02.7	-0.6
MCRA	**Macar, Loja**	**1.40**	**129**	P	Pn	04 17 03.3	-2.0
MCRA				S	Sg	04 17 20.2	-3.4
ISPT	**Isla de la Pla**	**2.21**	**359**	P	Pn	04 17 15.2	-1.2
ZUMB	**Zumba**	**2.34**	**126**	P	Pn	04 17 18.6	+0.3
TAMH	**Tambohuasha Ch**	**2.98**	**50**	P	Pn	04 17 20.2	-7.1
PUYO	**Puyo, Santa Ro**	**3.62**	**57**	P	Pb	04 17 41.4	-2.0
BRRN	**Barrancas-Volc**	**3.72**	**44**	P	Pn	04 17 37.3	-0.2
SLOR	**San Lorenzo -**	**3.74**	**43**	P	Pn	04 17 37.5	-0.3
BNAS	**Cotopaxi Volca**	**3.80**	**43**	P	Pn	04 17 37.8	-0.8
SUCR	**Mariscal Sucre**	**3.81**	**42**	P	Pn	04 17 38.8	0.0
BTAM	**Cotopaxi Volca**	**3.85**	**44**	P	Pn	04 17 39.4	0.0
TAMB	**Tambo**	**3.86**	**44**	P	Pn	04 17 39.5	0.0
VC1	**Cotopaxi 1**	**3.87**	**43**	P	Pn	04 17 39.5	-0.1
PKYU	**Pakayacu**	**3.91**	**62**	P	Pn	04 17 38.7	-1.0
PITA	**Cotopaxi Volc**	**3.91**	**42**	P	Pn	04 17 40.1	-0.1
JUA2	**San Juan 2**	**4.07**	**37**	P	Pn	04 17 41.8	-0.6
PULU	**Pululahua**	**4.32**	**36**	P	Pn	04 17 44.9	-0.8
PAC1	**Pacto, Paraso**	**4.36**	**31**	P	Pn	04 17 43.2	-2.9
CUSE	**Cuicocha Este**	**4.61**	**35**	P	Pn	04 17 48.9	-0.8
CHMA	**Chilma**	**5.25**	**35**	P	Pn	04 17 58.7	+0.2

IDC ***20*** *04:26:10.6±0.8, 14°.59N×55°.80E, h0km, mb4.0/21, mbtmp4.0/21, MS3.6/44, Error ellipse: s-maj=18.8km s-min=17.1km az=28.0*

GFZ ***20*** *04:26:12.9±0.4, 15°.5×5°.6E±°, h10km, M4.5/31, mb4.5/31*

NEIC ***20*** *04:26:13.9±1.6, 14°.72N±0°.07×55°.75E±0°.09, h10km±1km, mb4.6/64, Error ellipse: s-maj=16.2km s-min=8.1km az=235.0*

ISC 20 04:26:13.2±0.5,**14°.66N**±0°.07×**55°.76E**±0°.07,**h10**km,**n202,** σ1**13**/180,**mb4.6**/74,**MS3.7**/46,**2C-6D,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.95**	**17**	LR	LR	04 31 47.0	
	comp=Z,5.6nm,18.3s,baz=244,slow=37						
UOSS	**Minazif**	**10.24**	**2**		**Pn**	**04 28 42.7**	**+2.4**
UOSS	**Minazif**	**10.24**	**2**	P	**Pn**	**04 28 39.3**	**-1.0**
ATD	**Arta Tunnel**	**12.96**	**258**	LR	LR	04 33 09.1	
	comp=Z,28nm,18.7s,baz=116,slow=32						
RAYN	**Ar Rayn**	**13.09**	**314**	Pn	**Pn**	**04 29 17.9**	**-1.5**
RAYN	**Ar Rayn**	**13.09**	**314**	P	**Pn**	**04 29 17.9**	**-1.5**
HRA	**Herat**	**20.49**	**15**		**P**	**04 30 50.4**	**-1.3**
HRA				IAmb	IAmb	04 30 58.8	
	comp=Z,22nm,1.1s						
HYB	**Hyderabad**	**22.08**	**80**	*eP*	**P**	**04 31 08.2**	**-0.5**
HYB				*eS*	**S**	**04 35 11.3**	**-1.1**
LODK	**Lodwar**	**23.00**	**243**	P	**P**	**04 31 19.1**	**+0.5**
LODK	**Lodwar**	**23.00**	**243**	P	**P**	**04 31 19.3**	**+0.7**
KBL	**Kabul**	**23.14**	**29**	P	**P**	**04 31 20.6**	**+0.6**
KBL				IAmb	IAmb	04 31 30.6	
	comp=Z,18nm,1.3s						
EIL	**Elat**	**24.32**	**311**	LR	LR	04 41 51.6	
	comp=Z,80nm,21.9s,baz=98,slow=39						
EIL	**Elat**	**24.32**	**311**	P	**P**	**04 31 30.8**	**-0.4**
KIBK	**Kibwezi**	**24.36**	**227**	P	**P**	**04 31 31.2**	**-0.6**
HRFI	**Mount Harif**	**24.46**	**312**	P	**P**	**04 31 33.3**	**+0.8**
ASF	**Jabal al Asfar**	**24.49**	**319**	LR	LR	04 41 54.9	
	comp=Z,100nm,18.8s,baz=27,slow=38						
NIL	**Nilore**	**24.67**	**37**	P	**P**	**04 31 35.8**	**+1.4**
NIL				IAmb	IAmb	04 31 47.4	
	comp=Z,13nm,1.2s						
HAKT	**HAKKARI**	**25.19**	**337**	P	**P**	**04 31 39.0**	**-0.3**
SHAA	**Shahritus**	**25.31**	**23**	P	**P**	**04 31 39.6**	**-0.6**
SHAA				IAmb	IAmb	04 31 51.1	
	comp=Z,41nm,1.3s						
KZIT	**Kziot**	**25.40**	**313**	P	**P**	**04 31 41.4**	**+0.4**
PALK	**Pallekele**	**25.55**	**104**	LR	LR	04 39 49.6	
	comp=Z,131nm,19.0s,baz=306,slow=32						
MMLI	**Mount Malkishu**	**25.62**	**317**	P	**P**	**04 31 43.2**	**+0.2**
MMAI	**Mount Meron Ar**	**26.00**	**318**	P	**P**	**04 31 47.5**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=119,slow=11,SNR=4.5						
	comp=Z,0.7nm,0.3s						
GEVA	**Gevas**	**26.10**	**337**	P	**P**	**04 31 49.4**	**+2.0**
GURO	**Guroymak-BITLI**	**26.70**	**336**	P	**P**	**04 31 54.3**	**+1.4**
GURO				IAmb	IAmb	04 32 06.9	
	comp=Z,13nm,0.9s						
MANEM	**Manem**	**26.82**	**29**	P	**P**	**04 31 53.9**	**-0.2**
MANEM				IAmb	IAmb	04 32 16.1	
	comp=Z,32nm,1.3s						
GNI	**Garni**	**27.16**	**341**	LR	LR	04 44 03.9	
	comp=Z,211nm,19.6s,baz=153,slow=39						
GNI	**Garni**	**27.16**	**341**	P	**P**	**04 31 57.1**	**+0.1**
GNI				IAmb	IAmb	04 32 24.4	
	comp=Z,16nm,0.9s						
GNI	**Garni**	**27.16**	**341**	P	**P**	**04 31 56.4**	**-0.6**
GAR	**Garm**	**27.43**	**25**	P	**P**	**04 31 59.8**	**+0.4**
GAR				IAmb	IAmb	04 32 31.4	
	comp=Z,22nm,1.5s						
GAZ	**Gaziantep**	**27.84**	**327**	P	**P**	**04 32 03.1**	**+0.1**
GAZ				IAmb	IAmb	04 32 17.4	
	comp=Z,8.8nm,0.9s						
BTK	**Batken**	**28.53**	**25**	P	**P**	**04 32 09.4**	**+0.2**
BTK				IAmb	IAmb	04 32 11.7	
	comp=Z,9.8nm,1.0s						
BTK	**Batken**	**28.53**	**25**	P	**P**	**04 32 08.0**	**-1.2**
KOPT	**Kop Dagi**	**28.57**	**335**	P	**P**	**04 32 09.2**	**-0.6**
KOPT				IAmb	IAmb	04 32 28.1	
	comp=Z,12nm,1.1s						
ARPR	**Arapgir-MALATY**	**28.76**	**331**	P	**P**	**04 32 10.8**	**-0.5**
MBAR	**Mbarara**	**29.03**	**241**	LR	LR	04 42 29.8	
	comp=Z,107nm,21.0s,baz=56,slow=34						
EPOS	**Posof**	**29.04**	**340**	P	**P**	**04 32 13.3**	**-0.4**
KELT	**Kelkit**	**29.21**	**334**	P	**P**	**04 32 14.5**	**-0.8**
KSH2	**Kashi**	**29.98**	**32**	P	**P**	**04 32 22.9**	**+0.8**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KBZ	**Khabaz**	**30.98**	**342**	P	**P**	**04 32 31.4**	**+0.6**
	comp=Z,4.4nm,0.9s,baz=173,slow=4.9,SNR=8.5						
KBZ				LR	LR	04 47 00.9	
	comp=Z,133nm,19.9s,baz=155,slow=40						
	comp=Z,4.4nm,0.9s						
KK31	**Karatay Array**	**31.05**	**21**	P	**P**	**04 32 31.7**	**+0.3**
KKAR	**Karatay Array**	**31.05**	**21**	P	**P**	**04 32 30.4**	**-1.0**
KIV	**Kislovodsk**	**31.25**	**342**	P	**P**	**04 32 33.5**	**+0.2**
KIV				IAmb	IAmb	04 32 42.4	
	comp=Z,13nm,1.0s						
BRTR	**Keskin Array B**	**31.61**	**326**	P	**P**	**04 32 36.8**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=125,slow=9.0,SNR=2.8						
BRTR				PP	**PnPn**	**04 33 40.2**	**+0.2**
	comp=Z,2.6nm,1.2s,baz=138,slow=10.0,SNR=4.5						
BRTR				LR	LR	04 46 56.8	
	comp=Z,75nm,20.1s,baz=122,slow=39						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**31.61**	**326**	P	**P**	**04 32 35.7**	**-0.8**
ELL	**Elmali**	**31.85**	**318**	P	**P**	**04 32 39.4**	**+0.8**
ELL				IAmb	IAmb	04 32 41.5	
	comp=Z,16nm,1.1s						
AAK	**Ala-Archa**	**32.21**	**26**	LR	LR	04 47 36.4	
	comp=Z,115nm,19.0s,baz=222,slow=40						
AAK	**Ala-Archa**	**32.21**	**26**	P	**P**	**04 32 42.8**	**+1.0**
AAK				IAmb	IAmb	04 32 59.1	
	comp=Z,7.0nm,1.3s						
KDJ	**Kajisay**	**33.04**	**30**	P	**P**	**04 32 46.5**	**-2.5**
KDJ				IAmb	IAmb	04 32 57.3	
	comp=Z,11nm,1.4s						
KDJ	**Kajisay**	**33.04**	**30**	P	**P**	**04 32 46.1**	**-3.0**
TARG	**Taragay, Kyrgy**	**33.04**	**31**	P	**P**	**04 32 48.9**	**-0.5**
WUS	**Wushi**	**33.38**	**33**	P	**P**	**04 32 52.1**	**0.0**
WUS				IAmb	IAmb	04 32 54.8	
	comp=Z,14nm,1.2s						
OPO	**Ambohidratompo**	**34.09**	**195**	LR	LR	04 43 53.1	
	comp=Z,187nm,21.9s,baz=81,slow=31						
IDI	**Anoyia**	**34.48**	**312**	P	**P**	**04 33 02.0**	**+0.4**
AB31	**Akbulak array**	**34.67**	**5**	P	**P**	**04 33 02.6**	**-0.2**
AB31				IAmb	IAmb	04 33 05.9	
	comp=Z,9.2nm,0.9s						
ABKAR	**Akbulak array**	**34.67**	**5**	P	**P**	**04 33 02.6**	**-0.3**
PDGK	**Podgornoye**	**35.06**	**31**	P	**P**	**04 33 05.7**	**-0.9**
AKTO	**Aktyubinsk**	**35.72**	**2**	P	**P**	**04 33 11.9**	**-0.1**
	comp=Z,7.1nm,0.8s,baz=196,slow=8.9,SNR=13						
AKTO				LR	LR	04 49 57.9	
	comp=Z,124nm,21.7s,baz=187,slow=40						
	comp=Z,7.1nm,0.8s						
MAKZ	**Makanchi**	**38.81**	**29**	P	**P**	**04 33 37.3**	**-1.0**
MAKZ	**Makanchi**	**38.81**	**29**	P	**P**	**04 33 37.1**	**-1.2**
MKAR	**Makanchi Array**	**38.95**	**29**	P	**P**	**04 33 39.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=208,slow=9.6,SNR=8.2						
MKAR				PcP	**PcP**	**04 35 48.1**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=222,slow=1.9,SNR=2.6						
MKAR				LR	LR	04 51 07.5	
	comp=Z,124nm,21.0s,baz=208,slow=38						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**38.95**	**29**	P	**P**	**04 33 39.0**	**-0.5**
GRG	**Griva**	**39.05**	**319**	P	**P**	**04 33 39.2**	**-1.2**
VRI	**Vrincioaia**	**39.53**	**328**	P	**P**	**04 33 44.4**	**0.0**
PLOR	**Plostina**	**39.56**	**328**	⇓P	**P**	**04 33 45.5**	**+0.9**
MLR	**Muntele Rosu**	**39.69**	**327**	⇑P	**P**	**04 33 47.0**	**+1.2**
MLR	**Muntele Rosu**	**39.69**	**327**	P	**P**	**04 33 45.3**	**-0.5**
WMQ	**Urumqi**	**39.82**	**37**	*eP*	**P**	**04 33 49.9**	**+3.1**
WMQ				LR	LR		
	comp=Z,96nm,21.5s						
BVAR	**Borovoye Array**	**39.99**	**14**	P	**P**	**04 33 48.0**	**0.0**
	comp=Z,1.1nm,0.5s,baz=182,slow=5.8,SNR=5.2						
	comp=Z,1.1nm,0.5s						
BORK	**Borovoye**	**39.99**	**14**	P	**P**	**04 33 47.5**	**-0.5**
TESR	**Tescani**	**40.01**	**328**	⇓P	**P**	**04 33 49.5**	**+1.2**
TESR	**Tescani**	**40.01**	**328**	P	**P**	**04 33 47.3**	**-1.0**
ONER	**Baraj Valea Uz**	**40.02**	**328**	⇓P	**P**	**04 33 50.3**	**+1.9**
KURBB	**Kurchatov Arra**	**40.33**	**22**	P	**P**	**04 33 50.5**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=221,slow=8.5,SNR=14						
KURBB				PP	**PnPn**	**04 35 26.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=207,slow=7.8,SNR=4.2						
KURBB				LR	LR	04 51 49.8	
	comp=Z,94nm,18.9s,baz=186,slow=38						
	comp=Z,2.2nm,1.0s						
LSZ	**Lusaka**	**40.35**	**224**	LR	LR	04 50 06.0	
	comp=Z,198nm,20.9s,baz=10,slow=36						
KURK	**Kurchatov**	**40.44**	**22**	P	**P**	**04 33 51.8**	**+0.1**
KURK	**Kurchatov**	**40.44**	**22**	P	**P**	**04 33 49.9**	**-1.8**
BURAR	**Bucovina Array**	**41.48**	**329**	⇑P	**P**	**04 34 02.0**	**+1.5**
BURAR	**Bucovina Array**	**41.48**	**329**	P	**P**	**04 34 00.1**	**-0.4**
CM31	**Chiang Mai Arr**	**41.50**	**79**	P	**P**	**04 34 00.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.50**	**79**	P	**P**	**04 34 00.6**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=280,slow=8.7,SNR=12						
CMAR				LR	LR	04 53 44.8	
	comp=Z,28nm,18.3s,baz=265,slow=40						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.50**	**79**	P	**P**	**04 34 00.3**	**-0.6**
BUR08	**Bucovina Ar. S**	**41.51**	**329**	P	**P**	**04 33 59.2**	**-1.5**
MDVR	**Moldovita**	**41.61**	**323**	⇓P	**P**	**04 34 02.2**	**+0.6**
ARTI	**Arti**	**41.69**	**2**	P	**P**	**04 34 00.6**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=202,slow=11,SNR=5.8						
ARTI				LR	LR	04 53 37.4	
	comp=Z,66nm,18.4s,baz=182,slow=39						
	comp=Z,1.3nm,0.3s						
ARTI	**Arti**	**41.69**	**2**	P	**P**	**04 34 01.4**	**-0.6**
AKASG	**Malin Array Be**	**41.86**	**335**	P	**P**	**04 34 01.1**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=150,slow=7.7,SNR=5.7						
AKASG				PP	**PnPn**	**04 35 44.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=148,slow=11,SNR=4.7						
AKASG				LR	LR	04 54 01.0	
	comp=Z,60nm,21.3s,baz=152,slow=40						
	comp=Z,0.4nm,0.4s						
MARR	**Marisel-Cluj**	**41.96**	**326**	⇓P	**P**	**04 34 05.7**	**+1.2**
BZS	**Buzias**	**42.15**	**324**	P	**P**	**04 34 04.5**	**-1.4**
OBN	**Obninsk**	**43.02**	**344**	LR	LR	04 54 43.1	
	comp=Z,96nm,21.3s,baz=239,slow=40						
MARCO	**Tramutola**	**43.15**	**314**	P	**P**	**04 34 14.4**	**+0.1**
KOLS	**Kolonicke sedl**	**43.83**	**328**	*eP*	P	04 34 25.2	+5.7
MATP	**Matopo**	**43.97**	**218**	LR	LR	04 52 21.8	
	comp=Z,96nm,19.0s,baz=76,slow=36						
KIRV	**Kirov**	**44.10**	**355**	LR	LR	04 56 44.5	
	comp=Z,64nm,18.2s,baz=158,slow=42						
MORH	**Mrgy, Hungar**	**44.20**	**323**	P	**P**	**04 34 20.8**	**-1.7**
BLY	**Banja Luka**	**44.30**	**320**	P	**P**	**04 34 22.3**	**-1.0**
BLY	**Banja Luka**	**44.30**	**320**	P	**P**	**04 34 22.6**	**-0.7**
PZH	**PanZhiHua**	**44.42**	**67**	P	**P**	**04 34 27.1**	**+2.4**
INTR	**Introdacqua**	**45.17**	**315**	P	**P**	**04 34 29.6**	**-0.8**
INTR				IAmb	IAmb	04 34 34.2	
	comp=Z,17nm,1.2s						
MNK	**Minsk**	**45.30**	**337**	*i* P	**P**	**04 34 32.2**	**+1.1**
	comp=E,8.0nm,0.7s						
MNK				*i* P	**P**	**04 34 32.2**	**+1.1**
	comp=N,12nm,0.7s						
MNK				*i* P	**P**	**04 34 32.2**	**+1.1**
	comp=Z,5.0nm,0.6s,baz=140						
MNK				*i* PcP	**PcP**	**04 36 11.8**	**+1.1**
MNK				*i* PP	**PP**	**04 36 18.2**	**+1.1**
MNK				*i* PPP	PPP	04 36 56.7	
MNK				*i* S	**S**	**04 41 13.3**	**+1.7**
MNK				*i* ScS	**ScS**	**04 44 29.2**	**+1.2**
MNK				*i* SS	**SS**	**04 44 37.4**	**+3.0**
MNK				*i* SSS	SSS	04 45 23.3	
MNK				*i* LQ	LQ	04 50 12.8	
MNK				*i* LR	LR	04 53 39.6	
MNK				*i* LRM	MLR	04 56 25.1	
	comp=Z,50nm,16.7s						
MNK				*i* LRM	MLR	04 56 31.4	
	comp=N,13nm,11.2s						
MNK				*i* LRM	MLR	04 56 57.4	
	comp=E,32nm,16.2s						
ZAA0	**Zalesovo Array**	**45.33**	**24**	P	**P**	**04 34 30.5**	**-0.9**
ZALV	**Zalesovo Beam**	**45.33**	**24**	P	**P**	**04 34 30.4**	**-0.9**
	comp=E,2.1nm,0.7s,baz=216,slow=7.3,SNR=8.4						
ZALV				LR	LR	04 55 45.0	
	comp=E,84nm,19.5s,baz=245,slow=39						
	comp=E,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**45.33**	**24**	P	**P**	**04 34 30.1**	**-1.3**
LANS	**Liptovska Anna**	**45.42**	**327**	*eP*	**P**	**04 34 35.3**	**+3.1**
GUMA	**Gualdo di Mace**	**45.99**	**317**	P	**P**	**04 34 35.4**	**-1.4**
NACGM	**Naroch**	**46.02**	**337**	*eP*	**P**	**04 34 37.3**	**+0.5**
	comp=Z,7.0nm,0.8s,baz=139						
NRCA	**Norcia**	**46.04**	**316**	P	**P**	**04 34 37.2**	**-0.1**
NRCA				IAmb	IAmb	04 34 40.3	
	comp=Z,9.4nm,1.1s						
MODS	**Modra-Piesok**	**46.16**	**325**	*eP*	P	04 34 43.6	+5.5
CESX	**Cesi**	**46.31**	**316**	P	**P**	**04 34 38.1**	**-1.2**
CESX				IAmb	IAmb	04 34 47.4	
	comp=Z,9.3nm,1.1s						
RONA	**Rosalia, Austr**	**46.35**	**324**	*i* P	**P**	**04 34 40.4**	**+0.8**
	comp=Z,7.3nm,1.4s						
ARSA	**Arzberg**	**46.57**	**323**	P	**P**	**04 34 40.9**	**-0.4**
ARSA				IAmb	IAmb	04 35 22.4	
	comp=Z,5.2nm,0.8s						
ARSA	**Arzberg**	**46.57**	**323**	*eP*	**P**	**04 34 42.3**	**+1.1**
	comp=Z,1.6nm,0.5s						
SOKA	**Soboth**	**46.57**	**322**	*i* P	**P**	**04 34 42.2**	**+0.8**
	comp=Z,8.5nm,1.3s						
MURB	**Monte Urbino**	**46.61**	**316**	P	**P**	**04 34 41.5**	**-0.2**
CONA	**Conrad Observa**	**46.72**	**324**	*i* P	**P**	**04 34 43.4**	**+0.9**
	comp=Z,11nm,1.9s						
OBKA	**Obir**	**46.78**	**321**	*i* P	**P**	**04 34 44.2**	**+1.1**
	comp=Z,9.5nm,1.3s						
OBKA	**Obir**	**46.78**	**321**	P	**P**	**04 34 43.0**	**-0.1**
MORC	**Moravsky Berou**	**46.80**	**327**	P	**P**	**04 34 42.5**	**-0.6**
MORC				IAmb	IAmb	04 35 08.6	
	comp=Z,4.0nm,1.1s						
TRI	**Trieste**	**46.88**	**320**	P	**P**	**04 34 43.4**	**-0.3**
VRAC	**Vranov**	**47.05**	**326**	LR	LR	04 59 57.3	
	comp=Z,9.4nm,18.9s,baz=104,slow=43						
MYKA	**Terra Mystica**	**47.39**	**321**	*i* P	**P**	**04 34 48.8**	**+1.0**
	comp=Z,10nm,1.2s						
MOA	**Molln**	**47.60**	**323**	*i* P	**P**	**04 34 50.0**	**+0.6**
	comp=Z,6.6nm,1.2s						
MOA	**Molln**	**47.60**	**323**	P	**P**	**04 34 49.5**	**+0.1**
KBA	**Koelnbreinsper**	**47.78**	**322**	*i* P	**P**	**04 34 51.7**	**+0.7**
	comp=Z,6.1nm,1.2s						
KBA	**Koelnbreinsper**	**47.78**	**322**	P	**P**	**04 34 50.9**	**-0.1**
STAL	**STALIGIAL**	**47.79**	**320**	P	**P**	**04 34 49.9**	**-0.9**
STAL				IAmb	IAmb	04 35 02.0	
	comp=Z,7.9nm,1.0s						
BIOA	**Bad Ischl, Aus**	**47.90**	**322**	*eP*	**P**	**04 34 52.5**	**+0.9**
	comp=Z,1.4nm,0.5s						
TEOL	**Teolo**	**48.05**	**319**	P	**P**	**04 34 52.8**	**0.0**
TEOL				IAmb	IAmb	04 34 54.3	
	comp=Z,8.7nm,0.9s						
ZCCA	**Zocca**	**48.08**	**317**	P	**P**	**04 34 53.0**	**-0.2**
ABTA	**Abfaltersbach**	**48.13**	**321**	*i* P	**P**	**04 34 54.4**	**+0.8**
	comp=Z,8.7nm,1.5s						
LESA	**Schwarzleotal**	**48.34**	**322**	*eP*	**P**	**04 34 55.0**	**-0.1**
	comp=Z,9.2nm,1.6s						
WTTA	**Wattenberg**	**48.90**	**321**	*i* P	**P**	**04 34 59.3**	**-0.3**
	comp=Z,12nm,1.5s						
WTTA	**Wattenberg**	**48.90**	**321**	P	**P**	**04 34 59.1**	**-0.5**
WATA	**Walderalm**	**48.97**	**321**	*eP*	**P**	**04 35 00.1**	**0.0**
	comp=Z,6.5nm,0.9s						
SQTA	**Sankt Quirin**	**49.14**	**321**	*i* P	**P**	**04 35 01.6**	**+0.3**
	comp=Z,8.5nm,1.2s						
LBTB	**Lobatse**	**49.20**	**217**	LR	LR	04 56 27.6	
	comp=Z,85nm,18.2s,baz=44,slow=37						
LBTB	**Lobatse**	**49.20**	**217**	P	**P**	**04 35 02.9**	**+0.9**
LBTB				IAmb	IAmb	04 35 10.4	
	comp=Z,9.6nm,1.0s						
LBTB	**Lobatse**	**49.20**	**217**	P	**P**	**04 35 02.5**	**+0.5**
MOTA	**Moosalm**	**49.26**	**321**	*i* P	**P**	**04 35 01.6**	**-0.7**
	comp=Z,14nm,1.5s						
FETA	**Feichten**	**49.35**	**320**	*i* P	**P**	**04 35 02.7**	**-0.3**
	comp=Z,5.6nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**49.47**	**320**	P	**P**	**04 35 03.3**	**-0.7**
FUORN				IAmb	IAmb	04 35 08.3	
	comp=Z,5.4nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**49.47**	**320**	P	**P**	**04 35 03.6**	**-0.5**
RETA	**Reutte**	**49.53**	**321**	*i* P	**P**	**04 35 03.6**	**-0.7**
	comp=Z,3.5nm,1.0s						
DAVOX	**Davos/Dischmat**	**49.77**	**320**	LR	LR	04 58 02.1	
	comp=Z,43nm,18.2s,baz=78,slow=38						
DAVA	**Damuels**	**49.98**	**320**	*i* P	**P**	**04 35 08.1**	**+0.3**
	comp=Z,13nm,1.3s						
DAVA	**Damuels**	**49.98**	**320**	P	**P**	**04 35 07.9**	**0.0**
CLL	**Collm**	**50.07**	**326**	*eP*	**P**	**04 35 09.0**	**+0.8**
TSUM	**Tsumeb**	**50.45**	**229**	LR	LR	04 57 10.9	
	comp=Z,216nm,19.8s,baz=33,slow=37						
SENIN	**Lac Senin/Sane**	**51.25**	**318**	P	**P**	**04 35 16.5**	**-1.0**
FIA1	**FINESS Array S**	**51.34**	**342**	P	**P**	**04 35 17.0**	**-0.6**
FINES	**FINESS Array B**	**51.34**	**342**	P	**P**	**04 35 17.2**	**-0.5**
	comp=Z,5.8nm,1.0s,baz=137,slow=8.8,SNR=11						
FINES				LR	LR	04 59 42.0	
	comp=Z,81nm,20.0s,baz=140,slow=39						
	comp=Z,5.8nm,1.0s						
FINES	**FINESS Array B**	**51.34**	**342**	P	**P**	**04 35 16.2**	**-1.4**
BFO	**Black Forest**	**51.37**	**321**	P	**P**	**04 35 18.0**	**-0.1**
BFO				IAmb	IAmb	04 35 19.2	
	comp=Z,8.6nm,1.3s						
XAN	**Xi'an**	**51.54**	**58**	P	**P**	**04 35 23.0**	**+3.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,2.1s						
BOSA	**Boshof**	**52.17**	**214**	P	**P**	**04 35 23.8**	**-0.6**
	comp=Z,4.4nm,1.0s,baz=41,slow=7.6,SNR=3.8						
BOSA				LR	LR	04 58 06.4	
	comp=Z,90nm,18.8s,baz=1.0,slow=37						
	comp=Z,4.4nm,1.0s						
BOSA	**Boshof**	**52.17**	**214**	P	**P**	**04 35 23.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**52.40**	**275**	P	**P**	**04 35 26.5**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=85,slow=7.2,SNR=3.6						
TORD				PcP	**PcP**	**04 36 36.5**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=75,slow=4.4,SNR=4.1						
	comp=Z,0.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**52.40**	**275**	P	**P**	**04 35 24.9**	**-1.3**
TORD				IAmb	IAmb	04 35 50.2	
	comp=Z,2.9nm,0.6s						
SSB	**Saint Sauveur**	**52.69**	**316**	P	**P**	**04 35 27.7**	**-0.3**
SSB				IAmb	IAmb	04 35 29.1	
	comp=Z,8.6nm,1.0s						
SSB	**Saint Sauveur**	**52.69**	**316**	P	**P**	**04 35 28.6**	**+0.5**
TLY	**Talaya**	**53.06**	**35**	LR	LR	05 00 43.6	
	comp=Z,120nm,19.9s,baz=217,slow=39						
SONM	**Songino Array**	**53.17**	**41**	P	**P**	**04 35 31.3**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=231,slow=6.7,SNR=6.5						
SONM				LR	LR	05 00 08.4	
	comp=Z,103nm,21.7s,baz=266,slow=38						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**53.17**	**41**	P	**P**	**04 35 31.6**	**-0.1**
OUL	**Oulu**	**54.31**	**345**	P	**P**	**04 35 39.3**	**-0.1**
HFS	**Hagfors**	**54.73**	**336**	P	**P**	**04 35 41.2**	**-1.5**
	comp=Z,2.0nm,0.9s,baz=126,slow=9.3,SNR=3.6						
HFS				LR	LR	05 03 54.8	
	comp=Z,25nm,18.4s,baz=126,slow=41						
	comp=Z,2

n14,σ0$77/14, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBHR	**Beni Haroun da**	**0.09**	**289**	P	**Pg**	**04 56 32.9**	**-0.1**
CBOS	**Bilal Ibnou Ra**	**0.26**	**350**	P	**Pg**	**04 56 36.3**	**+0.3**
CASM	**Ain Smara**	**0.29**	**161**	P	**Pg**	**04 56 37.1**	**+0.5**
CKFL	**Kef-Lekhel**	**0.31**	**116**	P	**Pb**	**04 56 38.0**	**-0.7**
COAT	**Oued Athmania**	**0.31**	**193**	P	**Pb**	**04 56 37.3**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.40**	**271**	P	**Pg**	**04 56 38.7**	**0.0**
CAEH	**'Ain El Ouahch**	**0.45**	**58**	P	**Pb**	**04 56 40.6**	**-0.5**
CTEI	**Djebel Teioual**	**0.47**	**177**	P	**Pb**	**04 56 41.2**	**-0.3**
CSGS	**Sigus**	**0.49**	**146**	P	**Pb**	**04 56 41.9**	**+0.2**
CJSR	**Ain Djasser**	**0.76**	**207**	P	**Pb**	**04 56 46.4**	**+0.1**
CMAH	**Djebel Manchou**	**0.85**	**84**	P	**Pn**	**04 56 48.4**	**-0.7**
KEST	**Kesra**	**2.54**	**108**	Pn	**Pn**	**04 57 12.8**	**+0.4**
	14nm,0.3s,baz=300,slow=4.9,SNR=69						
KEST				Lg	Lg	04 57 45.0	
	2.1nm,0.3s,baz=246,slow=9.0,SNR=4.1 39nm,0.4s						
ESDC	**Sonseca Array**	**8.73**	**294**	Pn	**Pn**	**04 58 38.5**	**+1.1**
	0.1nm,0.3s,baz=101,slow=14,SNR=6.6 0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**23.67**	**191**	P	**P**	**05 01 42.0**	**-0.9**
	0.5nm,0.8s,baz=7.3,slow=10,SNR=2.8 0.5nm,0.8s						

IDC 20 04:57:41.9±1.3,9°02S×159°55E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=30.1km s-min=9.8km az=42.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.56**	**136**	Pg	Pg	04 57 52.9	+0.2
	9.2nm,0.3s,baz=236,slow=21,SNR=76						
HNR				Lg	Lg	04 58 00.3	
	74nm,0.3s,baz=64,slow=5.9,SNR=31						
WRA	**Warramunga Arr**	**26.68**	**243**	P	P	05 03 21.9	-1.0
	0.6nm,0.7s,baz=75,slow=9.6,SNR=6.0 0.6nm,0.7s						
ASAR	**Alice Springs**	**28.52**	**236**	P	P	05 03 40.8	+1.3
	0.2nm,0.4s,baz=54,slow=9.8,SNR=2.2 0.2nm,0.4s						
ILAR	**Eielson Array**	**83.64**	**20**	P	P	05 10 11.8	-0.2
	0.7nm,0.5s,baz=245,slow=4.8,SNR=20 0.7nm,0.5s						

*IDC **20** 05:01:40.6±0.9, 29°.33N×68°.73E, h0km, mb3.9/18, mbtmp3.9/19, ML4.1/1, MS3.4/14, Error ellipse: s-maj=21.2km s-min=17.7km az=18.0*
*NEIC **20** 05:01:42.7±1.3, 29°.4N±0°.1×68°.8E±0°.1, h10km±1km, mb4.1/15, Error ellipse: s-maj=20.4km s-min=18.6km az=237.0*

ISC 20 05:01:42.0±0.6, 29°40N±0°.06×68°80E±0°.05, h10km, n76, σ1$56/73, mb4.0/22, MS3.4/14, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNR	**BIKANER**	**4.17**	**108**	*e*P	**Pn**	**05 02 46.9**	**+1.2**
BKNR				*e*S	**Sn**	**05 03 36.4**	**+1.9**
BKNR				IAML		05 04 05.1	
	comp=E,358nm,0.8s						
KBL	**Kabul**	**5.13**	**2**	Pn	**Pn**	**05 03 00.9**	**+1.7**
NIL	**Nilore**	**5.70**	**41**	Pn	**Pn**	**05 03 08.0**	**+1.2**
AJM	**Ajmer**	**5.95**	**118**	*e*P	**Pn**	**05 03 11.8**	**+1.6**
AJM				*e*S	**Sn**	**05 04 21.5**	**+3.0**
AJM				IAML		05 05 01.4	
	comp=E,59nm,0.7s						
BHUJ	**Bhuj**	**6.17**	**173**	*e*S	**Sn**	**05 04 20.4**	**-3.3**
JMU	**Jammu**	**6.18**	**55**	*e*S	**Sn**	**05 04 23.1**	**-1.1**
JMU				IAML		05 04 27.8	
	comp=N,127nm,0.4s						
JMU				IAML		05 04 28.4	
	comp=E,93nm,0.4s						
TLWR	**Talawar**	**6.67**	**66**	*e*S	**Sn**	**05 04 36.8**	**+0.4**
THN	**Thein Dam**	**6.71**	**61**	*e*S	**Sn**	**05 04 37.8**	**+0.7**
THN				IAML		05 04 40.0	
	comp=N,59nm,1.6s						
THN				IAML		05 04 40.9	
	comp=E,121nm,0.6s						
KUDL	**Kundal**	**6.87**	**99**	*e*P	**Pn**	**05 03 23.3**	**+0.5**
KUDL				*e*S	**Sn**	**05 04 40.3**	**-0.7**
KUDL				IAML		05 04 45.4	
	comp=N,32nm,0.5s						
KUDL				IAML		05 04 46.3	
	comp=E,31nm,1.4s						
KUDL				IAML		05 05 36.2	
	comp=N,39nm,0.9s						
KUDL				IAML		05 05 38.6	
	comp=E,32nm,1.2s						
DHRM	**DHARAMSHALA**	**7.05**	**64**	*e*P	**Pn**	**05 03 28.1**	**+2.5**
DHRM				*i* x	x	05 03 36.7	
DHRM				*e*S	**Sn**	**05 04 47.1**	**+1.1**
DHRM				IAML		05 04 51.4	
	comp=N,250nm,0.5s						
DHRM				IAML		05 04 51.5	
	comp=E,230nm,0.5s						
TSSA	**Tissa**	**7.18**	**60**	*e*S	**Sn**	**05 04 47.6**	**-1.4**
TSSA				IAML		05 04 58.3	
	comp=E,107nm,0.8s						
SHAA	**Shahritus**	**8.16**	**356**	Pn	**Pn**	**05 03 41.6**	**+0.9**
CHGR	**Chuyangaron**	**9.24**	**2**		**Pn**	**05 03 56.1**	**+0.6**
JHNI	**Jhansi**	**9.56**	**112**	*e*P	**Pn**	**05 04 00.6**	**+0.7**
JHNI				*e*S	**Sn**	**05 05 45.0**	**-2.5**
GAR	**Garm**	**9.66**	**7**		**Pn**	**05 04 02.5**	**+1.2**
BHPL	**Bhopal**	**9.87**	**126**	*e*S	**Sn**	**05 05 52.2**	**-2.8**
BTK	**Batken**	**10.77**	**8**		**Pn**	**05 04 18.5**	**+2.2**
KSH2	**Kashi**	**11.22**	**28**	Pn	**Pn**	**05 04 25.3**	**+2.7**
KSH2				Sn	**Sn**	**05 06 28.1**	**0.0**
KSH2				smax	smax		
	comp=N,40nm,0.6s						
KSH2				smax	smax		
	comp=E,35nm,0.7s						
ARSB	**Arslanbob**	**12.38**	**15**	Pn	**Pn**	**05 04 39.3**	**+0.9**
KK31	**Karatay Array**	**13.75**	**5**		**Pn**	**05 04 55.5**	**-1.6**
KKAR	**Karatay Array**	**13.75**	**5**		**Pn**	**05 04 54.9**	**-2.1**
AAK	**Ala-Archa**	**13.99**	**18**	Pn	**Pn**	**05 05 00.1**	**-0.3**
	comp=E,0.9nm,0.3s,baz=206,slow=6.0,SNR=6.6						
AAK				Sn	**Sn**	**05 07 28.7**	**-7.2**
	comp=E,0.4nm,0.3s,baz=329,slow=17,SNR=1.4						
AAK				LR	LR	05 11 07.0	
	comp=E,157nm,19.7s,baz=210,slow=40 comp=E,3.7nm,0.5s						
AAK	**Ala-Archa**	**13.99**	**18**		**Pn**	**05 05 00.7**	**+0.2**
BOOM	**Boomskoye usch**	**14.28**	**22**		**Pn**	**05 05 03.5**	**-1.0**
TARG	**Taragay, Kyrgy**	**14.31**	**28**		**Pn**	**05 05 06.0**	**+0.9**
KDJ	**Kajisay**	**14.40**	**26**	Pn	**Pn**	**05 05 05.9**	**-0.3**
PDGK	**Podgornoye**	**16.34**	**29**	Pn	**Pn**	**05 05 32.5**	**+0.9**
MAKZ	**Makanchi**	**20.19**	**27**		**P**	**05 06 17.3**	**+0.4**
MAKZ				IAmb	IAmb	05 06 20.6	
	comp=E,3.7nm,0.7s						
MKAR	**Makanchi Array**	**20.31**	**28**	P	**P**	**05 06 17.8**	**-0.3**
	comp=E,1.9nm,0.8s,baz=209,slow=9.7,SNR=13						
MKAR				LR	LR	05 13 55.1	
	comp=E,63nm,18.1s,baz=180,slow=36 comp=E,1.9nm,0.8s						
MKAR	**Makanchi Array**	**20.31**	**28**		**P**	**05 06 18.3**	**+0.2**
WMQ	**Urumqi**	**20.85**	**41**	*e*P	Pn	05 06 26.4	-0.1
WMQ				pP	sP	05 06 31.1	+2.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				LR	LR		
	comp=N,330nm,19.9s						
WMQ				LR	LR		
	comp=E,230nm,19.1s						
WMQ				LR	LR		
	comp=Z,65nm,18.1s						
AB31	**Akbulak array**	**20.95**	**344**		**P**	**05 06 25.3**	**+0.2**
AB31				IAmb	IAmb	05 06 28.8	
	comp=Z,8.6nm,0.9s						
ABKAR	**Akbulak array**	**20.95**	**344**		**P**	**05 06 25.6**	**+0.6**
RAYN	**Ar Rayn**	**21.64**	**260**		**P**	**05 06 33.1**	**+0.4**
RAYN				IAmb	IAmb	05 06 34.8	
	comp=Z,5.0nm,0.8s						
GNI	**Garni**	**22.42**	**305**	LR	LR	05 16 15.9	
	comp=Z,58nm,18.6s,baz=124,slow=39						
KURBB	**Kurchatov Arra**	**22.44**	**16**	P	**P**	**05 06 40.3**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=210,slow=12,SNR=11 comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**22.54**	**16**	P	**P**	**05 06 41.3**	**-0.8**
KURK				IAmb	IAmb	05 06 50.5	
	comp=Z,2.6nm,0.8s						
BVAR	**Borovoye Array**	**23.64**	**2**	P	**P**	**05 06 53.4**	**+0.1**
	comp=Z,4.5nm,0.6s,baz=169,slow=10.0,SNR=9.8 comp=Z,4.5nm,0.6s						
BORK	**Borovoye**	**23.66**	**2**	P	**P**	**05 06 53.6**	**+0.1**
PALK	**Pallekele**	**24.70**	**151**	LR	LR	05 16 24.3	
	comp=Z,100nm,20.8s,baz=356,slow=36						
KBZ	**Khabaz**	**25.11**	**312**	P	**P**	**05 07 06.9**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=122,slow=9.8,SNR=7.1 comp=Z,3.1nm,0.9s						
ZAA0	**Zalesovo Array**	**27.17**	**21**	P	**P**	**05 07 26.1**	**+0.6**
ZAA0				IAmb	IAmb	05 08 08.3	
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**27.17**	**21**	P	**P**	**05 07 26.1**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=210,slow=12,SNR=2.3						
ZALV				LR	LR	05 19 08.9	
	comp=Z,45nm,18.9s,baz=164,slow=38 comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**27.17**	**21**	P	**P**	**05 07 25.6**	**+0.1**
ARTI	**Arti**	**27.97**	**348**	LR	LR	05 20 38.8	
	comp=Z,56nm,18.8s,baz=118,slow=41						
EIL	**Elat**	**29.39**	**279**	LR	LR	05 20 45.4	
	comp=Z,81nm,19.2s,baz=90,slow=39						
CMAR	**Chiang Mai Arr**	**29.55**	**105**	LR	LR	05 20 23.0	
	comp=Z,51nm,21.8s,baz=215,slow=38						
BR131	**Keskin Array S**	**30.56**	**299**	P	**P**	**05 07 56.6**	**+0.6**
BR131				IAmb	IAmb	05 08 22.0	
	comp=Z,3.5nm,1.1s						
BRTR	**Keskin Array B**	**30.56**	**299**	P	**P**	**05 07 55.4**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=120,slow=5.7,SNR=3.7 comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**30.56**	**299**	P	**P**	**05 07 56.3**	**+0.3**
SONM	**Songino Array**	**34.24**	**47**	P	**P**	**05 08 30.5**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=278,slow=9.9,SNR=1.8 comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**36.42**	**317**	P	**P**	**05 08 47.9**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=104,slow=7.1,SNR=5.7 comp=Z,1.4nm,0.7s						
AKBB	**Malin Array Si**	**36.42**	**317**	P	**P**	**05 08 47.9**	**+1.2**
AKBB				IAmb	IAmb	05 08 50.0	
	comp=Z,4.3nm,0.7s						
HHC	**Hu-ho-hao-te**	**36.47**	**60**	*e*P	**P**	**05 08 47.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,43nm,4.0s						
MLR	**Muntele Rosu**	**37.14**	**308**	P	**P**	**05 08 53.8**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=100,slow=8.8,SNR=5.2 comp=Z,3.8nm,0.9s						
BURAR	**Bucovina Array**	**38.06**	**311**	P	**P**	**05 09 00.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**38.08**	**311**	P	**P**	**05 09 00.6**	**-0.4**
WHN	**Wuhan**	**39.27**	**77**	P	**P**	**05 09 07.8**	**-3.3**
NRIK	**Noril'sk**	**41.43**	**10**	LR	LR	05 29 44.3	
	comp=Z,63nm,19.7s,baz=210,slow=41						
FINES	**FINESS Array B**	**42.58**	**331**	P	**P**	**05 09 38.6**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=116,slow=13,SNR=5.8						
FINES				LR	LR	05 30 49.2	
	comp=Z,59nm,18.4s,baz=120,slow=41 comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**42.58**	**331**	P	**P**	**05 09 37.9**	**0.0**
MODS	**Modra-Piesok**	**43.45**	**311**	*e*P	P	05 09 51.1	+5.9
MODS				*e*		05 37 42.4	
GERES	**GERESS Array B**	**45.85**	**311**	LR	LR	05 33 25.2	
	comp=Z,39nm,19.0s,baz=60,slow=42						
MURB	**Monte Urbino**	**46.57**	**303**	P	**P**	**05 10 10.1**	**-0.1**
ARCES	**ARCESS Array B**	**47.11**	**341**	P	**P**	**05 10 14.4**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=126,slow=7.6,SNR=10 comp=Z,1.3nm,0.6s						
HFS	**Hagfors**	**47.73**	**326**	P	**P**	**05 10 19.8**	**+1.0**
	comp=Z,2.4nm,0.9s,baz=132,slow=6.2,SNR=3.9						
HFS				LR	LR	05 34 31.7	
	comp=Z,38nm,18.5s,baz=88,slow=41 comp=Z,2.4nm,0.9s						
NB2	**NORSAR Subarra**	**49.13**	**327**	P	**P**	**05 10 31.0**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=108,slow=7.9						
NOA	**NORSAR Array B**	**49.13**	**327**	P	**P**	**05 10 30.1**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=108,slow=7.5,SNR=5.2						
NOA				LR	LR	05 33 58.8	
	comp=Z,34nm,18.5s,baz=90,slow=39 comp=Z,0.7nm,0.7s						
MJAR	**Matsushiro Arr**	**57.55**	**63**	LR	LR	05 39 25.1	
	comp=Z,206nm,18.1s,baz=224,slow=39						
ESDC	**Sonseca Array**	**59.33**	**301**	P	**P**	**05 11 43.9**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=76,slow=7.3,SNR=4.7 comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**63.82**	**271**	P	**P**	**05 12 13.7**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=60,slow=5.6,SNR=8.5 comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**79.96**	**120**	P	**P**	**05 13 51.5**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=322,slow=4.8,SNR=5.1 comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**79.96**	**120**	P	**P**	**05 13 51.5**	**-0.3**
INK	**Inuvik**	**81.19**	**8**	P	**P**	**05 13 58.7**	**+1.2**
INK				IAmb	IAmb	05 14 35.4	
	comp=Z,3.5nm,1.2s						
ASAR	**Alice Springs**	**81.84**	**123**	P	**P**	**05 14 02.5**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=306,slow=5.4,SNR=12 comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**88.39**	**2**	P	**P**	**05 14 35.7**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=354,slow=5.0,SNR=6.7 comp=Z,0.8nm,0.7s						

*BJI **20** 05:25:02.5, 24°.25N×125°.40E, h21km, mB4.9/26, mb4.7/58, ML4.4/2, Ms4.7/64, Ms7 4.6/61*
*MOS **20** 05:25:02.7±0.8, 24°.33N×125°.27E, h16km, mb5.2/58, MS4.5/14, Error ellipse: s-maj=8.8km s-min=4.3km az=126.4*
*IDC **20** 05:25:02.5±0.6, 24°.34N×125°.16E, h0km, mb4.4/29, mbtmp4.4/32, ML3.6/3, MS4.2/49, Error ellipse: s-maj=17.4km s-min=13.0km az=74.0*
*NEIC **20** 05:25:04.7±1.8, 24°.30N±0°.09×125°.30E±0°.07, h16km±5km, mb5.2/123, Mww4.9/17, Error ellipse: s-maj=13.1km s-min=8.0km az=159.0*
*GFZ **20** 05:25:05.6±0.3, 24°N±4°×12°5E±°, h10km, M5.0/18, mb4.9/18*
*NIED **20** 05:25:06.8, 24°.32N×125°.26E, h43km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr0.53; Mθθ-0.60; Mϕϕ0.07; Mrθ1.94; Mθϕ-0.91; Mϕr1.63; Fault plane solution: M0 2.68000×10^16^ NP1: ϕs252.00000°, δ10.00000°, λ113.00000°. NP2: ϕs49.00000°, δ81.00000°, λ86.00000°.*
*JMA **20** 05:25:06.8±0.2, 24°N±1°×125°.3E±0°.6, h43km±3km, MD5.0/11, MW4.9/11, NEAR MIYAKOJIMA ISLAND*
JMA Felt II J1 at NEAR MIYAKOJIMA ISLAND .
*BGR **20** 05:25:06.6, 24°.20N×125°.18E, h26km, mb4.7, Ms4.8*
*GCMT **20** 05:25:07.8±0.3, 24°.20N±0°.02×125°.24E±0°.02, h35km±1km, MW4.9/85, Moment Tensor Solution. s43, c53; s85, c120; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.91±.13; Mθθ-1.34±.09; Mϕϕ-0.57±.09; Mrθ1.10±.08; Mθϕ-0.91±.05; Mϕr1.49±.09; Best double couple: M0 2.67300×10^16^ NP1:ϕs249.00000°, δ25.00000°, λ114.00000°. NP2: ϕs43.00000°, δ67.00000°, λ79.00000°. Principal axes: T 2.7100, Plg66.0000°, Azm294.0000°; N -0.0740, Plg10.0000°, Azm47.0000°; P -2.6360, Plg22.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 05:25:07.0±0.5, 24°33N±0°.03×125°24E±0°.03, h31km±2km, h33km:pP-P, n734, σ1$15/674, mb5.0/207, MS4.5/83, 38C-22D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.42**	**11**	*i* P	**Pn**	**05 25 16.6**	**-0.3**
JMJ2				A	A	05 25 16.6	
	comp=N,151nm,1.1s,comp=E,337nm,2.9s						
JMJ2				S	**Sn**	**05 25 23.9**	**+0.3**
JOGS	**Gusukube**	**0.46**	**20**	*i* P	**Pn**	**05 25 17.2**	**-0.3**
JOGS				A	A	05 25 17.2	
	comp=N,140nm,1.9s,comp=E,356nm,1.7s						
JOGS				S	**Sn**	**05 25 25.2**	**+0.6**
JMJ	**Miyako jima 2**	**0.49**	**6**	P	**Pb**	**05 25 16.7**	**-0.6**
JMJ	**Miyako jima 2**	**0.49**	**6**	S	**Sb**	**05 25 24.1**	**-0.2**
JIRJ	**Irabujima**	**0.50**	**355**	*i* P	**Pb**	**05 25 17.7**	**+0.1**
JIRJ				A	A	05 25 17.7	
	comp=N,159nm,1.1s,comp=E,220nm,1.6s						
JIRJ				S	**Sn**	**05 25 25.5**	**-0.2**
JTJ	**Tarama**	**0.58**	**303**	*i* P	**Pb**	**05 25 18.8**	**0.0**
JTJ				A	A	05 25 18.8	
	comp=N,140nm,1.1s,comp=E,112nm,2.4s						
JTJ				*e*S	**Sn**	**05 25 27.7**	**+0.2**
JIKM	**Ikemajima**	**0.59**	**1**	*i* P	**Pb**	**05 25 19.1**	**0.0**
JIKM				A	A	05 25 19.1	
	comp=N,137nm,1.4s,comp=E,210nm,1.1s						
JIKM				S	**Sn**	**05 25 28.0**	**+0.1**
JISG	**Ishigakijimahi**	**0.88**	**287**	*i* P	**Pn**	**05 25 23.0**	**-0.3**
JISG				A	A	05 25 23.0	
	comp=N,124nm,0.5s,comp=E,61nm,0.5s						
JISG				S	**Sb**	**05 25 35.9**	**+0.5**
JIJ	**Ishigaki jima**	**1.00**	**272**	*i* P	**Pn**	**05 25 25.1**	**+0.2**
JIJ				A	A	05 25 25.1	
	comp=N,33nm,0.7s,comp=E,40nm,1.5s						
JIJ				*e*S	**Sb**	**05 25 38.9**	**+0.2**
JKRS	**Kuro-shima**	**1.12**	**266**	*i* P	**Pb**	**05 25 27.5**	**-0.4**
JKRS				A	A	05 25 27.5	
	comp=N,121nm,1.9s,comp=E,98nm,2.3s						
JKRS				*e*S	**Sb**	**05 25 42.0**	**-0.1**
HATJ	**Hateruma jima**	**1.34**	**259**	P	**Pn**	**05 25 29.8**	**+0.3**
HATJ				A	A	05 25 29.8	
	comp=N,71nm,2.1s,comp=E,75nm,3.0s						
HATJ				*e*S	**Sn**	**05 25 46.4**	**+0.2**
IRIF	**Iriomote-Funau**	**1.38**	**271**	P	**Pn**	**05 25 30.8**	**+0.7**
IRIF				A	A	05 25 30.8	
	comp=N,84nm,1.6s,comp=E,88nm,0.8s						
YOJ	**Yonaguni jima**	**2.04**	**274**	P	**Pn**	**05 25 39.9**	**+0.8**
YOJ	**Yonaguni jima**	**2.04**	**274**	P	**Pn**	**05 25 39.0**	**-0.2**
YOJ	**Yonaguni jima**	**2.04**	**274**		**Pn**	**05 25 39.0**	**-0.2**
YOJ	**Yonaguni jima**	**2.04**	**274**	P	**Pn**	**05 25 39.8**	**+0.7**
YOJ	**Yonaguni jima**	**2.04**	**274**	A	A	05 25 39.9	
	comp=N,13nm,2.9s,comp=E,25nm,2.6s						
JYNG	**Yonagunijimaku**	**2.09**	**274**	A	A	05 25 40.7	
	comp=N,21nm,3.4s,comp=E,20nm,1.8s						
JKE	**Kume jima 2**	**2.43**	**35**	A	A	05 25 45.3	
	comp=N,8.0nm,3.0s,comp=E,13nm,2.2s						
JAGN	**Aguni-jima**	**2.89**	**38**	A	A	05 25 51.8	
	comp=N,9.0nm,2.5s,comp=E,11nm,1.3s						
JJT3	**Tamagusuku3**	**2.93**	**51**	A	A	05 25 52.3	
	comp=N,42nm,2.2s,comp=E,28nm,2.8s						
NACB	**Ninganchiao**	**3.33**	**268**	P	**Pn**	**05 25 56.7**	**-0.3**
NACB	**Ninganchiao**	**3.33**	**268**		**Pn**	**05 25 56.6**	**-0.3**
NACB	**Ninganchiao**	**3.33**	**268**	P	**Pn**	**05 25 56.9**	**-0.1**
TATO	**Taipei**	**3.47**	**281**	P	**Pn**	**05 26 01.2**	**+2.3**
TATO	**Taipei**	**3.47**	**281**		**Pn**	**05 26 01.2**	**+2.3**
YHNB	**Yeheng**	**3.53**	**276**		**Pn**	**05 26 01.2**	**+1.4**
YHNB	**Yeheng**	**3.53**	**276**	P	**Pn**	**05 26 02.1**	**+2.3**
JIH	**Iheya**	**3.65**	**42**	A	A	05 26 02.5	
	comp=N,6.0nm,2.3s,comp=E,9.0nm,3.3s						
JOW	**Kunigami**	**3.71**	**47**	P	**Pn**	**05 26 02.1**	**0.0**
JOW	**Kunigami**	**3.71**	**47**		**Pn**	**05 26 01.0**	**-1.1**
JOW	**Kunigami**	**3.71**	**47**	P	**Pn**	**05 26 01.5**	**-0.6**
JOW	**Kunigami**	**3.71**	**47**	A	A	05 26 03.3	
	comp=N,5.0nm,11.2s,comp=E,5.0nm,3.9s						
YULB	**Yu-li**	**3.73**	**256**	P	**Pn**	**05 26 01.2**	**-1.3**
YULB	**Yu-li**	**3.73**	**256**		**Pn**	**05 26 01.2**	**-1.3**
YULB	**Yu-li**	**3.73**	**256**	P	**Pn**	**05 26 01.1**	**-1.3**
SSLB	**Suanglung**	**3.95**	**263**	P	**Pn**	**05 26 05.0**	**-0.6**
SSLB	**Suanglung**	**3.95**	**263**	Pn	**Pn**	**05 26 05.4**	**-0.2**
SSLB	**Suanglung**	**3.95**	**263**	P	**Pn**	**05 26 05.3**	**-0.2**
TWGBT	**Beinan**	**4.10**	**249**	P	**Pn**	**05 26 05.8**	**-1.8**
TWG	**Pinlang**	**4.11**	**249**	Pn	**Pn**	**05 26 06.3**	**-1.4**
TWG	**Pinlang**	**4.11**	**249**	P	**Pn**	**05 26 06.1**	**-1.6**
TPUB	**Ta-pu**	**4.34**	**257**	P	**Pn**	**05 26 11.6**	**+0.7**
TPUB	**Ta-pu**	**4.34**	**257**	Pn	**Pn**	**05 26 11.9**	**+1.0**
TPUB	**Ta-pu**	**4.34**	**257**	P	**Pn**	**05 26 11.6**	**+0.7**
JMZ	**Minamidaito 2**	**5.63**	**73**	P	**Pn**	**05 26 25.9**	**-2.6**
JMZ	**Minamidaito 2**	**5.63**	**73**	Pn	**Pn**	**05 26 26.5**	**-2.0**
QZH2	**Quanzhou**	**6.07**	**277**	Pn	**Pn**	**05 26 35.8**	**+1.1**
QZH2				Sn	**Sn**	**05 27 42.3**	**-0.8**
QZH2				SMN			
	comp=E,150nm,1.0s						
QZH2				SME			
	comp=E,130nm,0.8s						
QZH2				L	L		
	comp=E,820nm,6.9s						
QZH2				L	L		
	comp=E,2μm,12.6s						
QZH2				L	L		
	comp=E,3μm,11.8s						
PACPP	**Pamplona Cagay**	**6.87**	**213**	*i* P	**Pn**	**05 26 44.0**	**-1.7**
NJ2	**Nanjing**	**9.53**	**325**	*e*P	**Pn**	**05 27 24.6**	**+2.5**
NJ2				S	**Sn**	**05 29 06.8**	**-1.4**
NJ2				pmax	pmax		
	comp=E,33nm,0.5s						
NJ2				L	L		
	comp=E,7μm,12.8s						
NJ2				L	L		
	comp=E,5μm,15.2s						
NJ2				L	L		
	comp=E,8μm,12.3s						
JNU	**Nakatsue**	**10.06**	**28**	Pn	**Pn**	**05 27 28.9**	**-0.5**
	comp=E,0.5nm,0.3s,baz=259,slow=7.7,SNR=2.2 comp=E,6.8nm,0.8s						
LQP	**Lukban**	**10.74**	**200**	*e*P	**Pn**	**05 27 38.7**	**-0.3**
WHN	**Wuhan**	**11.48**	**305**	P	**Pn**	**05 27 50.9**	**+2.1**
CNSH	**ChangSha**	**11.69**	**292**	P	**Pn**	**05 27 53.9**	**+2.2**
CNSH				S	Sn	05 30 12.8	+12
CNSH				L	L		
	comp=E,1μm,13.7s						
CNSH				L	L		
	comp=E,2μm,13.2s						
CNSH				L	L		
	comp=E,2μm,16.1s						
KSAR	**Wonju Array Be**	**13.27**	**9**	P	**Pn**	**05 28 11.9**	**-1.3**
KSAR	**Wonju Array Be**	**13.27**	**9**	Pn	**Pn**	**05 28 11.9**	**-1.3**
KSRS	**Korea Array**	**13.28**	**9**	Pn	**Pn**	**05 28 13.6**	**+0.1**
	comp=E,0.2nm,0.3s,baz=190,slow=14,SNR=6.6 comp=E,2.6nm,0.8s						
TIA	**Tai'an**	**13.75**	**331**	P	Pn	05 28 09.8	-10
TIA				pm

comp=Z,11nm,0.8s
MJAR Matsushiro Arr 16.51 40 P **P** **05 28 58.5 -0.2**
MJAR pmax pmax
comp=Z,7.0nm,1.0s
MJAR Matsushiro Arr 16.51 40 **P** **05 28 58.5 -0.2**
MJB9 Matsu-Tunnel 16.51 39 **Pn** **05 28 56.5 +0.2**
DAV Davao City (W) 17.16 179 LR LR 05 36 60.0
comp=Z,495nm,18.8s,baz=360,slow=42
XAN Xi'an 17.20 308 P **P** **05 29 07.3 +0.9**
XAN pP pP 05 29 11.4 -3.0
XAN sP sP 05 29 15.3 -2.9
XAN pmax pmax
comp=Z,23nm,0.8s
XAN pmax pmax
comp=Z,410nm,7.9s
XAN L L
comp=Z,620nm,8.9s
XAN L L
comp=Z,2μm,12.7s
XAN L L
comp=Z,3μm,15.1s
BJI2 Beijing 17.41 336 P **P** **05 29 09.3 +0.7**
BJI2 S **S** **05 32 25.0 -3.0**
BJI2 pmax pmax
comp=Z,8.0nm,0.7s
BJI2 pmax pmax
comp=Z,140nm,3.5s
BJI2 L L
comp=Z,660nm,13.3s
BJI2 L L
comp=Z,360nm,14.6s
BJI2 L L
comp=Z,880nm,16.7s
BJT Baijiatuau 17.41 336 P **Pn** **05 29 06.7 -0.8**
BJT pmax pmax
comp=Z,13nm,0.8s
BJT Baijiatuau 17.41 336 **Pn** **05 29 06.7 -0.8**
CN2 Changchun 19.43 0 ⇓P **Pn** **05 29 31.8 -0.2**
CN2 *e*sP pP 05 29 40.3 +1.5
CN2 *e*S **S** **05 33 05.1 -3.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 L L
comp=Z,400nm,12.0s
CN2 L L
comp=Z,300nm,12.0s
CN2 L L
comp=Z,500nm,13.0s
SLVN Son La 19.89 266 P **P** **05 29 34.9 -1.1**
HHC Hu-ho-hao-te 20.06 328 *e*P Pn 05 29 38.9 -0.8
HHC sP sP 05 29 49.3 -0.3
HHC S Sn 05 33 23.3 -1.2
HHC sS sS 05 33 29.6 -4.6
HHC SS **SnSn** **05 33 45.3 +6.0**
HHC pmax pmax
comp=Z,36nm,0.9s
HHC pmax pmax
comp=Z,200nm,3.5s
HHC L L
comp=Z,1μm,12.6s
HHC L L
comp=Z,1μm,13.4s
HHC L L
comp=Z,1μm,13.4s
MYLDM Lahad Datu 20.11 200 P **P** **05 29 38.7 +0.3**
MYLDM Lahad Datu 20.11 200 P Pn 05 29 40.5 +0.1
MYLDM Lahad Datu 20.11 200 P Pn 05 29 41.7 +1.4
CD2 Chengdu 20.11 294 P **P** **05 29 37.9 -0.5**
CD2 pP pP 05 29 43.8 -2.5
CD2 sP sP 05 29 47.1 -3.1
CD2 S **S** **05 33 22.9 +0.1**
CD2 sS sS 05 33 35.5 +0.1
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,520nm,8.3s
CD2 L L
comp=Z,1μm,13.5s
CD2 L L
comp=Z,1μm,13.1s
CD2 L L
comp=Z,2μm,12.4s
KMI2 Kunming 20.44 277 ⇑P Pn 05 29 44.3 -0.2
KMI2 pP pP 05 29 48.4 -1.8
KMI2 S Sn 05 33 35.4 +1.2
KMI2 pmax pmax
comp=Z,27nm,0.9s
KMI2 pmax pmax
comp=Z,180nm,4.7s
KMI2 L L
comp=Z,590nm,16.0s
KMI2 L L
comp=Z,1μm,15.7s
KMI2 L L
comp=Z,1μm,16.0s
USRK Ussuriysk Ar. 20.58 14 P **P** **05 29 42.6 -0.6**
comp=Z,2.2nm,0.7s,baz=197,slow=9.0,SNR=3.0
USRK LR LR 05 37 29.3
comp=Z,492nm,21.1s,baz=189,slow=36
comp=Z,2.2nm,0.7s
BTO2 Baotou 20.82 326 *e*P **P** **05 29 46.0 0.0**
BTO2 pP **pP** **05 29 51.4 -2.6**
BTO2 PP **PnPn** **05 30 08.0 +3.2**
BTO2 S **S** **05 33 38.8 +2.0**
BTO2 pmax pmax
comp=Z,32nm,1.2s
BTO2 pmax pmax
comp=Z,320nm,4.4s
BTO2 L L
comp=Z,2μm,14.5s
BTO2 L L
comp=Z,1μm,16.6s
BTO2 L L
comp=Z,4μm,15.0s
XLT XiLinHaoTe 20.92 341 *e*P **P** **05 29 46.4 -0.6**
XLT pmax pmax
comp=Z,22nm,1.4s
XLT L L
comp=Z,130nm,14.4s
XLT L L
comp=Z,730nm,13.6s
XLT L L
comp=Z,2μm,14.8s
JTM Tenmabayashi 21.09 35 **P** **05 29 49.0 +0.1**
JTM IAmb IAmb 05 30 03.4
comp=Z,117nm,0.9s
PZH PanZhiHua 21.33 281 P **P** **05 29 52.8 +1.1**
GUMO Guam 21.39 116 LR LR 05 36 20.3
comp=Z,496nm,20.8s,baz=296,slow=32
BNX BinXian 21.43 4 ⇑P **P** **05 29 52.0 -0.4**
BNX pmax pmax
comp=Z,11nm,0.9s
LZH Lanzhou 21.84 307 *e*P **P** **05 29 54.9 -2.2**
LZH pP pP 05 29 59.6 -5.7
LZH SS Sn 05 34 36.5 +29
LZH pmax pmax
comp=Z,64nm,1.0s
LZH pmax pmax
comp=Z,250nm,4.5s
LZH L L
comp=Z,880nm,16.3s
LZH L L
comp=Z,2μm,15.5s
LZH L L
comp=Z,2μm,15.8s
LZDM Lanzhou Array 21.89 307 P **P** **05 29 57.7 -0.1**
comp=Z,18nm,0.6s,baz=147,slow=8.8,SNR=16
LZDM LR LR 05 39 09.3
comp=Z,1μm,19.9s,baz=45,slow=39
comp=Z,18nm,0.6s
ERM Erimo 23.07 36 ⇑*e*P **P** **05 30 11.3 +1.4**
GTOI Gorontalo 23.65 186 P **P** **05 30 14.0 -1.8**
comp=Z,29nm,1.0s
TNCH TengChong 24.28 277 P **P** **05 30 20.8 -1.1**
TNCH pP pP 05 30 28.3 -2.2
TNCH PP **PnPn** **05 30 52.8 +0.5**
TNCH pmax pmax
comp=Z,96nm,1.1s
TNCH L L
comp=Z,810nm,11.4s
TNCH L L
comp=Z,880nm,14.2s
TNCH L L
comp=Z,2μm,13.0s

ASAJ Asahikawa 24.31 31 P **P** **05 30 21.2 -0.6**
ASAJ pmax pmax
comp=Z,45nm,1.2s
JKA Kamikawa-asahi 24.31 31 **P** **05 30 21.2 -0.6**
JKA Kamikawa-asahi 24.31 31 P **P** **05 30 21.8 0.0**
CHTO Chiang Mai 25.04 262 P **P** **05 30 26.9 -1.7**
CHTO pmax pmax
comp=Z,26nm,0.7s
CHTO Chiang Mai 25.04 262 P **P** **05 30 26.9 -1.7**
CHTO IAmb IAmb 05 30 40.0
comp=Z,26nm,0.7s
CHTO Chiang Mai 25.04 262 P **P** **05 30 29.6 +1.0**
comp=Z,399nmcomp=Z,47nm,1.0s
CHTO Chiang Mai 25.04 262 P **P** **05 30 29.6 +1.0**
CM31 Chiang Mai Arr 25.15 262 P **P** **05 30 29.1 -0.5**
CMAR Chiang Mai Arr 25.15 262 P **P** **05 30 29.8 +0.2**
comp=Z,1.6nm,0.3s,baz=62,slow=7.8,SNR=18
CMAR LR LR 05 41 37.7
comp=Z,477nm,19.9s,baz=75,slow=40
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 25.15 262 *ce*P **P** **05 30 31.1 +1.5**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 25.15 262 P **P** **05 30 28.1 -1.5**
HIA Hailar 25.26 352 P **P** **05 30 28.8 -1.5**
HIA pmax pmax
comp=Z,50nm,1.4s
HIA Hailar 25.26 352 **P** **05 30 28.8 -1.5**
HIA IAmb IAmb 05 30 41.2
comp=Z,50nm,1.4s
HILR Hailar Array B 25.55 352 P **P** **05 30 32.9 0.0**
comp=Z,2.2nm,0.4s,baz=153,slow=13,SNR=6.0
comp=Z,2.2nm,0.4s
SIJI Sorong 25.72 166 LR LR 05 39 32.8
comp=Z,385nm,19.7s,baz=54,slow=34
HEH HeiHe 25.93 3 *e*P **P** **05 30 33.3 -3.1**
HEH pmax pmax
comp=Z,4.0nm,0.7s
HEH L L
comp=Z,880nm,13.2s
HEH L L
comp=Z,390nm,11.7s
HEH L L
comp=Z,1μm,14.3s
GTA2 Gaotai 26.27 311 P **P** **05 30 38.9 -0.8**
GTA2 pP pP 05 30 48.9 +0.5
GTA2 pmax pmax
comp=Z,56nm,1.0s
GTA2 pmax pmax
comp=Z,130nm,7.9s
GTA2 L L
comp=Z,700nm,15.1s
GTA2 L L
comp=Z,1μm,14.1s
GTA2 L L
comp=Z,1μm,15.1s
YSS Yuzhno-Sakhali 26.57 27 *e*P **P** **05 30 42.1 -0.1**
YSS *e*S **S** **05 35 16.4 +1.7**
YSS pmax pmax
comp=Z,30nm,1.3s
YSS pmax pmax
comp=Z,100nm,4.4s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=E,400nm,18.0s
NPW Naypyitaw 27.32 266 P **P** **05 30 51.3 +2.1**
ULN Ulaanbaatar 27.57 333 *ce*P **P** **05 30 50.2 -1.1**
ULN pmax pmax
comp=Z,21nm,1.7s
ULN Ulaanbaatar 27.57 333 P **P** **05 30 50.3 -1.1**
comp=Z,60nm,1.0s
ULN Ulaanbaatar 27.57 333 P **P** **05 30 50.3 -1.1**
SONM Songino Array 27.82 332 P **P** **05 30 52.6 -1.0**
comp=Z,4.2nm,0.9s,baz=150,slow=9.8,SNR=24
SONM LR LR 05 43 28.4
comp=Z,1μm,19.9s,baz=143,slow=40
comp=Z,4.2nm,0.9s
SONM Songino Array 27.82 332 P **P** **05 30 52.3 -1.3**
SONM pmax pmax
comp=Z,17nm,1.4s
SONM Songino Array 27.82 332 **P** **05 30 52.3 -1.3**
GOMU GeErMu 28.70 301 P **P** **05 31 01.8 0.0**
GOMU pmax pmax
comp=Z,13nm,0.8s
GOMU L L
comp=Z,540nm,15.7s
GOMU L L
comp=Z,520nm,14.7s
KAPI Kappang 29.65 191 LR LR 05 42 36.2
comp=Z,255nm,21.9s,baz=16,slow=36
JAY Jayapura 30.63 148 LR LR 05 41 21.1
comp=Z,533nm,20.1s,baz=339,slow=32
ZAK Zakamensk 31.09 332 *e*P **P** **05 31 19.3 -3.2**
ZAK pmax pmax
comp=Z,10.0nm,2.2s
TLY Talaya 31.93 334 LR LR 05 46 11.3
comp=Z,873nm,18.2s,baz=127,slow=40
TLY Talaya 31.93 334 ⇓*i*P **P** **05 31 28.9 -0.9**
TLY pmax pmax
comp=Z,6.0nm,0.8s
PSI Prapat 33.21 234 P **P** **05 31 40.7 -0.8**
PSI pmax pmax
comp=Z,10.0nm,1.0s
PSI Prapat 33.21 234 P **P** **05 31 42.3 +0.8**
comp=Z,9.3nm,1.1s
RPSI Rantau Prapat 33.28 234 P **P** **05 31 40.7 -1.3**
KNGR Kungurtug, Tuv 33.87 328 ⇓*e*P **P** **05 31 46.0 -0.9**
KNGR pmax pmax
comp=Z,7.0nm,0.7s
LEM Lembang 35.41 211 LR LR 05 47 40.8
comp=Z,91nm,18.6s,baz=302,slow=38
WMQ Urumqi 36.27 312 *e*P **P** **05 32 07.6 0.0**
WMQ pP pP 05 32 17.3 +0.9
WMQ pmax pmax
comp=Z,17nm,1.5s
WMQ L L
comp=Z,560nm,16.9s
WMQ L L
comp=Z,430nm,15.1s
WMQ L L
comp=Z,380nm,18.9s
MTN Manton Dam 37.39 171 P **P** **05 32 15.0 -2.2**
PETK Petropavlovsk- 37.73 32 P **P** **05 32 19.9 +0.1**
comp=Z,2.8nm,0.7s,baz=207,slow=3.0,SNR=4.5
PETK LR LR 05 48 35.2
comp=Z,308nm,19.9s,baz=235,slow=37
comp=Z,2.8nm,0.7s
PETK Petropavlovsk- 37.73 32 P **P** **05 32 19.0 -0.8**
PETK Petropavlovsk- 37.73 32 P **P** **05 32 19.0 -0.8**
YAK Yakutsk 37.81 3 LR LR 05 48 45.5
comp=Z,166nm,18.5s,baz=184,slow=38
YAK Yakutsk 37.81 3 ⇑*e*P **P** **05 32 22.9 +2.7**
YAK pmax pmax
comp=Z,12nm,0.6s
PET Petropavlovsk 38.15 33 *e*P **P** **05 32 23.0 -0.2**
PET *e*S **S** **05 38 13.7 -0.6**
PET 05 42 37.6
PET pmax pmax
comp=Z,49nm,1.3s
PET MLR MLR
comp=Z,200nm,21.0s
PET MLR MLR
comp=Z,200nm,14.0s
KRVT Keravat (AS076 38.60 134 LR LR 05 45 46.9
comp=Z,109nm,21.1s,baz=72,slow=32
DGZ Jazzator, Alta 38.78 321 ⇓*e*P **P** **05 32 28.5 -0.3**
DGZ pmax pmax
comp=Z,4.0nm,0.6s
H11N1 WAKE ISLAND Hy 38.78 88 T T 06 14 12.0
baz=284,slow=75,SNR=18
H11N2 WAKE ISLAND Hy 38.78 88 T T 06 14 12.1
baz=284,slow=75,SNR=32
H11N3 WAKE ISLAND Hy 38.80 88 T T 06 14 13.1
baz=284,slow=75,SNR=27
H11S3 WAKE ISLAND Hy 38.92 90 T T 06 14 23.5
baz=282,slow=75,SNR=18
H11S1 WAKE ISLAND Hy 38.93 90 T T 06 14 20.0
baz=282,slow=75,SNR=5.1
H11S2 WAKE ISLAND Hy 38.94 90 T T 06 14 34.8
baz=282,slow=75,SNR=5.6
MA2 Magadan 39.50 20 LR LR 05 49 22.4
comp=Z,228nm,19.2s,baz=226,slow=37
MA2 Magadan 39.50 20 ⇑*e*P **P** **05 32 34.0 -0.5**

MA2 pmax pmax
comp=Z,16nm,1.0s
PMG Port Moresby 39.78 145 LR LR 05 46 29.3
comp=Z,243nm,22.0s,baz=270,slow=32
PTH Pithoragarh 40.29 288 *ex* **P** **05 32 42.9 +1.1**
MK31 Makanchi Array 40.85 314 P **P** **05 32 45.8 -0.1**
MKAR Makanchi Array 40.85 314 P **P** **05 32 45.6 -0.4**
comp=Z,7.5nm,0.3s,baz=96,slow=11,SNR=71
MKAR LR LR 05 51 06.4
comp=Z,614nm,19.4s,baz=114,slow=38
comp=Z,7.5nm,0.3s
MKAR Makanchi Array 40.85 314 P **P** **05 32 45.3 -0.7**
MKAR Makanchi Array 40.85 314 **P** **05 32 45.3 -0.7**
MAKZ Makanchi 41.06 314 P **P** **05 32 47.8 +0.2**
MAKZ Makanchi 41.06 314 **P** **05 32 46.5 -1.1**
MAKZ IAmb IAmb 05 32 58.1
comp=Z,43nm,1.1s
MAKZ Makanchi 41.06 314 P **P** **05 32 47.0 -0.6**
HNLY HANLEY 41.23 293 *e*P **P** **05 32 50.5 +0.6**
HNLY IAmb IAmb 05 32 53.2
comp=Z,26nm,1.1s
SHLS Shalkode 41.86 308 *e*P **P** **05 32 51.9 -2.5**
SHLS pmax pmax
comp=Z,22nm,1.2s
SHLS Shalkode 41.86 308 *e*P **P** **05 32 51.9 -2.5**
comp=Z,22nm,1.2s
PDGK Podgornoye 41.87 308 P **P** **05 32 54.8 +0.3**
KLP Kalpa 41.88 291 *e*P **P** **05 32 56.4 +1.4**
KLP IAmb IAmb 05 32 57.7
comp=Z,49nm,1.1s
FITZ Fitzroy Crossi 42.17 179 LR LR 05 53 03.4
comp=Z,48nm,20.0s,baz=12,slow=40
UZB Uzynbulak 42.17 308 *e*P **P** **05 32 57.1 +0.1**
UZB Uzynbulak 42.17 308 *e*P **P** **05 32 57.1 +0.1**
ZAA0 Zalesovo Array 42.19 325 **P** **05 32 55.8 -1.0**
ZALV Zalesovo Beam 42.19 325 P **P** **05 32 55.6 -1.1**
comp=Z,8.2nm,0.6s,baz=115,slow=8.7,SNR=26
ZALV LR LR 05 51 54.9
comp=Z,526nm,18.8s,baz=123,slow=38
comp=Z,8.2nm,0.6s
SATY Saty 42.60 308 *e*P **P** **05 33 00.5 +0.1**
SATY Saty 42.60 308 *e*P **P** **05 33 00.6 +0.1**
SEY Seymchan 42.64 18 ⇓*i*P **P** **05 33 01.2 +0.9**
SEY pmax pmax
comp=Z,6.0nm,0.7s
TARG Taragay, Kyrgy 42.81 306 P **P** **05 33 03.8 +1.2**
TDK Taldyqorghan 42.99 311 *e*P **P** **05 33 03.8 +0.4**
TDK pmax pmax
comp=Z,36nm,0.9s
TDK Taldyqorghan 42.99 311 *e*P **P** **05 33 03.9 +0.4**
comp=Z,36nm,0.9s
NPLP NPLP New Delhi 43.02 287 *e*P **P** **05 33 05.3 +1.5**
NPLP *i* x x 05 33 13.7
KDJ Kajisay 43.34 306 IAmb IAmb 05 33 18.0
comp=Z,38nm,1.1s
DHRM DHARAMSHALA 43.51 292 *e*P **P** **05 33 08.3 +0.2**
DHRM *i* x x 05 33 38.8
BHPL Bhopal 43.59 279 *ex* x 05 33 18.8
MDOK Medeo 43.59 308 *e*P **P** **05 33 08.6 +0.1**
MDOK Medeo 43.59 308 *e*P **P** **05 33 08.6 +0.1**
TSSA Tissa 43.61 293 *e*P **P** **05 33 09.5 +0.7**
TSSA IAmb IAmb 05 33 09.9
comp=Z,57nm,0.8s
TNSS Tian-Shan 43.65 308 *e*P **P** **05 33 09.1 -0.1**
TNSS Tian-Shan 43.65 308 *e*P **P** **05 33 09.1 -0.1**
ASAI AK-SAY(Kyrgyzs 43.66 304 P **P** **05 33 10.4 +1.1**
KUDL Kundal 43.66 286 *e*P **P** **05 33 09.2 +0.1**
KUDL IAmb IAmb 05 33 11.4
comp=Z,9.5nm,0.8s
KUDL *i* x x 05 33 18.2
AAA Alma-Ata 43.70 308 *e*P **P** **05 33 09.4 +0.2**
AAA pmax pmax
comp=Z,16nm,0.5s
AAA Alma-Ata 43.70 308 *e*P **P** **05 33 09.5 +0.2**
comp=Z,16nm,0.5s
THN Thein Dam 43.96 292 *e*P **P** **05 33 12.0 +0.6**
THN IAmb IAmb 05 33 14.6
comp=Z,42nm,1.0s
NRN Naryn 44.12 305 IAmb IAmb 05 33 24.5
comp=Z,44nm,1.0s
KSH2 Kashi 44.22 302 P **P** **05 33 15.3 +1.7**
KSH2 pP pwP 05 33 25.0 +0.5
KSH2 pmax pmax
comp=Z,23nm,1.2s
KSH2 L L
comp=Z,340nm,15.1s
KSH2 L L
comp=Z,600nm,14.1s
KSH2 L L
comp=Z,720nm,16.5s
KUU Kurty 44.23 309 *e*P **P** **05 33 13.7 +0.3**
KUU Kurty 44.23 309 *e*P **P** **05 33 13.8 +0.3**
KURK Kurchatov 44.39 319 P **P** **05 33 14.0 -0.6**
KURK pmax pmax
comp=Z,34nm,1.0s
KURK Kurchatov 44.39 319 **P** **05 33 14.0 -0.6**
KURK IAmb IAmb 05 33 24.4
comp=Z,34nm,1.0s
KURK Kurchatov 44.39 319 P **P** **05 33 14.0 -0.6**
KURBB Kurchatov Arra 44.42 319 P **P** **05 33 14.3 -0.5**
comp=Z,7.1nm,0.5s,baz=107,slow=8.3,SNR=63
KURBB PcP **PP** **05 35 01.2 +2.6**
comp=Z,1.9nm,0.9s,baz=116,slow=3.8,SNR=2.6
KURBB LR LR 05 54 39.7
comp=Z,201nm,18.1s,baz=140,slow=40
comp=Z,7.1nm,0.5s
KURBB Kurchatov Arra 44.42 319 P **P** **05 33 14.5 -0.3**
WB0 Warramunga Arr 44.73 168 IAmb IAmb 05 33 18.4
comp=Z,37nm,1.4s
WRAB Tennant Creek 44.88 168 *d*/P **P** **05 33 18.1 -0.7**
WRAB pmax pmax
comp=Z,24nm,1.1s
WRA Warramunga Arr 44.89 168 P **P** **05 33 18.7 -0.1**
comp=Z,9.2nm,0.6s,baz=348,slow=8.8,SNR=83
comp=Z,9.2nm,0.6s
WRA Warramunga Arr 44.89 168 *i* P **P** **05 33 18.7 -0.1**
WRA pmax pmax
comp=Z,10.0nm,0.5s
WRA Warramunga Arr 44.89 168 P **P** **05 33 17.3 -1.5**
WR8 Warramunga Arr 44.93 168 **P** **05 33 19.3 +0.1**
WR8 IAmb IAmb 05 33 19.7
comp=Z,19nm,0.5s
AAK Ala-Archa 45.38 307 LR LR 05 55 09.1
comp=Z,242nm,18.5s,baz=80,slow=40
AAK Ala-Archa 45.38 307 *i* P **P** **05 33 23.5 +0.7**
AAK pmax pmax
comp=Z,63nm,1.2s
AAK Ala-Archa 45.38 307 P **P** **05 33 23.1 +0.3**
AAK Ala-Archa 45.38 307 P **P** **05 33 24.3 +1.5**
SGDS Sogindy 45.38 308 *e*P **P** **05 33 22.9 +0.2**
AJM Ajmer 45.54 284 *e*P **P** **05 33 24.7 +0.6**
AJM IAmb IAmb 05 33 25.6
comp=Z,17nm,0.6s
AJM *i* x x 05 33 34.2
PALK Pallekele 45.84 256 LR LR 05 53 04.8
comp=Z,128nm,21.3s,baz=63,slow=37
NIL Nilore 46.01 294 P **P** **05 33 27.4 -0.3**
NIL pmax pmax
comp=Z,45nm,0.8s
NIL Nilore 46.01 294 P **P** **05 33 27.4 -0.3**
NIL Nilore 46.01 294 P **P** **05 33 28.4 +0.7**
BTLS Baital 46.03 310 *e*P **P** **05 33 28.1 +0.4**
BTLS Baital 46.03 310 *e*P **P** **05 33 28.1 +0.4**
MTSU Mount Surprise 46.12 154 P **P** **05 33 30.2 +1.6**
SHEM Shemya Is, Ala 46.35 39 LR LR 05 53 00.1
comp=Z,50nm,21.3s,baz=130,slow=36
ARSB Arslanbob 46.36 305 IAmb IAmb 05 33 32.6
comp=Z,17nm,1.0s
QIS Mount Isa 46.76 161 P **P** **05 33 34.1 +0.5**
MANEM Manem 47.21 299 IAmb IAmb 05 33 39.2
comp=Z,28nm,0.6s
TIXI Tiksi 47.39 2 LR LR 05 55 15.2
comp=Z,447nm,19.1s,baz=196,slow=38
TIXI Tiksi 47.39 2 ⇑*e*P **P** **05 33 39.6 +1.7**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
HNR Honiara 47.69 131 LR LR 05 50 46.5
comp=Z,8.3nm,21.9s,baz=26,slow=32
DZA Taraz 47.72 307 *e*P **P** **05 33 41.2 +0.2**
DZA pmax pmax
comp=Z,5.0nm,0.4s
DZA Taraz 47.72 307 *e*P **P** **05 33 41.3 +0.2**
comp=Z,5.1nm,0.4s
BTK Batken 47.93 303 IAmb IAmb 05 33 44.8
comp=Z,36nm,1.6s

GAR Garm 48.30 301 P P 05 33 46.4 +0.8
KK31 Karatay Array 48.34 307 *i* P P 05 33 46.5 +0.8
KKAR Karatay Array 48.34 307 P P 05 33 45.8 0.0
KKAR Karatay Array 48.34 307 P 05 33 45.8 0.0
ASAR Alice Springs 48.45 169 P P 05 33 47.0 +0.3
comp=Z,3.9nm,0.5s,baz=356,slow=14,SNR=52
comp=Z,3.9nm,0.5s
ASAR Alice Springs 48.45 169 P P 05 33 46.2 -0.5
ASAR Alice Springs 48.45 169 P P 05 33 46.2 -0.5
IUG luzhnay 48.62 306 *eP* P 05 33 48.2 +0.2
IUG pmax pmax
comp=Z,15nm,0.8s
IUG luzhnay 48.62 306 *eP* P 05 33 48.3 +0.2
comp=Z,15nm,0.8s
BRLS Borolday 48.82 307 *eP* P 05 33 50.5 +1.0
BRLS Borolday 48.82 307 *eP* P 05 33 50.5 +1.0
CHM Chimkent 48.95 306 *eP* P 05 33 50.8 +0.3
CHM Chimkent 48.95 306 *eP* P 05 33 50.8 +0.3
AMKA Amchitka 49.10 42 P P 05 33 51.5 +0.1
CHGR Chuyangaron 49.20 301 *c i* P P 05 33 53.0 +0.5
CHGR pmax pmax
comp=Z,36nm,0.7s
KBL Kabul 49.44 295 P P 05 33 55.6 +1.0
KBL pmax pmax
comp=Z,34nm,0.8s
KBL Kabul 49.44 295 P P 05 33 55.6 +1.0
KBL Kabul 49.44 295 P P 05 33 55.6 +1.0
BVAR Borovoye Array 49.93 320 P P 05 33 57.5 -0.2
comp=Z,3.9nm,0.6s,baz=101,slow=8.1,SNR=9.4
BVAR PcP PcP 05 35 18.8 +1.1
comp=Z,2.2nm,0.7s,baz=80,slow=3.2,SNR=2.2
comp=Z,3.9nm,0.6s
BORK Borovoye 49.98 320 P P 05 33 58.4 +0.3
BORK pmax pmax
comp=Z,9.0nm,0.7s
BORK Borovoye 49.98 320 P P 05 33 58.4 +0.3
SHAA Shahritus 50.04 299 IAmb IAmb 05 34 01.3
comp=Z,79nm,1.0s
NRIK Noril'sk 50.27 344 P P 05 33 58.9 -1.2
NRIK LR LR 05 57 46.3
comp=Z,573nm,18.8s,baz=138,slow=39
comp=Z,7.4nm,0.8s
NRIK Noril'sk 50.27 344 P P 05 33 59.3 -0.7
NRIK pmax pmax
comp=Z,25nm,1.0s
NRIK Noril'sk 50.27 344 P 05 33 59.2 -0.7
NRIK IAmb IAmb 05 34 09.8
comp=Z,25nm,1.0s
BILL Bilibino 50.33 19⇓ *i* P P 05 34 00.9 +0.4
BILL pmax pmax
comp=Z,20nm,1.5s
KIWB Kanaga Island 51.36 42 P P 05 34 09.3 +0.8
AB31 Akbulak array 55.99 314 *i* P P 05 34 42.8 +0.3
ABKAR Akbulak array 55.99 314 P 05 34 42.6 +0.1
SVE Sverdlovsk 56.13 323 *eP* P 05 34 43.7 +0.3
SVE pmax pmax
comp=Z,38nm,1.1s
SVE MLR MLR
comp=Z,816nm,17.0s
AKTO Aktyubinsk 57.26 315 LR LR 06 01 25.9
comp=Z,546nm,18.2s,baz=102,slow=38
AKTO Aktyubinsk 57.26 315 P P 05 34 51.4 -0.1
ARTI Arti 57.32 323 LR LR 06 01 21.8
comp=Z,520nm,20.0s,baz=108,slow=38
ARTI Arti 57.32 323 *c i* P P 05 34 51.4 -0.4
ARTI 05 35 46.8
ARTI 05 36 54.3
ARTI S S 05 42 46.4 +0.4
ARTI SS SS 05 46 33.1 -2.2
ARTI pmax pmax
comp=Z,19nm,0.8s
ARTI MLR MLR
comp=Z,459nm,19.0s
ARTI Arti 57.32 323 P P 05 34 51.2 -0.6
ARTI IAmb IAmb 05 34 52.1
comp=Z,23nm,0.7s
STKA Stephens Creek 58.04 164 P P 05 34 56.8 -0.2
comp=Z,4.2nm,0.6s,baz=334,slow=6.9,SNR=8.8
comp=Z,4.2nm,0.6s
M11K Mekoryuk 58.59 33 P P 05 34 60.0 -0.6
baz=264
F14K Arctic Creek 59.19 27 P P 05 35 05.3 +0.6
baz=261
ANM Nome 59.46 28 P P 05 35 07.5 +0.9
baz=262
K13K Kusilvak Mount 59.48 31 P P 05 35 08.1 +1.3
baz=265
F15K North Star Dit 59.91 27 P P 05 35 10.1 +0.4
baz=262
M13K Dall Lake 60.00 33 P P 05 35 11.0 +0.6
baz=267
C16K Lisburne Hills 60.02 24 P P 05 35 10.8 +0.4
baz=260
J14K Nanvarnak Lak 60.07 30 P P 05 35 12.1 +1.3
baz=265
G15K Niukluk 60.08 28 P P 05 35 12.2 +1.3
baz=264
L14K Kuka Creek 60.38 32 IAmb IAmb 05 35 28.3
comp=Z,24nm,1.0s
L14K Kuka Creek 60.38 32 P P 05 35 14.1 +1.2
baz=267
M14K Bethel 60.70 33 P P 05 35 16.4 +1.3
baz=268
D17K Noatak River 60.78 25 P P 05 35 16.9 +1.2
baz=263,SNR=8.6
H16K Elim 60.81 28 P P 05 35 16.6 +0.7
baz=265
N14K Kuskokwak Cree 60.81 34 P P 05 35 17.0 +1.1
baz=268
G16K Koyuk River 60.83 27 P P 05 35 17.3 +1.3
baz=265
C17K DeLong Mountai 60.85 24 P P 05 35 16.7 +0.6
baz=262
RDOG Red Dog Mine 60.89 24 P P 05 35 17.7 +1.3
baz=263
L15K Ungalak Mounta 60.97 31 P P 05 35 18.5 +1.5
baz=268
K15K Wolf Creek Mou 60.98 31 P P 05 35 18.5 +1.5
baz=267
O14K Tigyukauivet M 61.01 34 P P 05 35 17.8 +0.5
baz=269
E17K Hotham Inlet 61.20 25 P P 05 35 19.8 +1.3
baz=264
M15K Kasigluk River 61.33 33 P P 05 35 20.4 +1.0
baz=269
F17K Baldwin Pennin 61.37 26 IAmb IAmb 05 35 33.6
comp=Z,31nm,1.1s
F17K Baldwin Pennin 61.37 26 P P 05 35 20.1 +0.6
baz=265
I17K Unalakleet 61.43 29 P P 05 35 20.1 +0.1
baz=267
J16K Anvik River 61.45 30 P P 05 35 20.3 +0.1
baz=268
SDPT Sand Point 61.48 39 P P 05 35 21.2 +0.6
baz=272
G17K Kiwalik Mounta 61.54 27 P P 05 35 20.9 0.0
baz=266,SNR=6.8
C18K Utukok River 61.59 24 P P 05 35 23.3 +2.1
C18K IAmb IAmb 05 35 34.2
comp=Z,36nm,1.3s
C18K Utukok River 61.59 24 P P 05 35 21.2 0.0
baz=264
N15K Kwethluk River 61.62 33 P P 05 35 22.1 +0.6
baz=270
E18K Tukpahlearik C 61.70 25 IAmb IAmb 05 35 38.2
comp=Z,11nm,0.8s
E18K Tukpahlearik C 61.70 25 P P 05 35 22.7 +0.9
baz=265,SNR=6.3
O15K Ungalikthiuk R 61.75 34 P P 05 35 23.2 +0.9
baz=270
A19K Wainwright 61.81 22 P P 05 35 23.1 +0.6
baz=263
H17K Granite Mounta 61.82 28 P P 05 35 23.4 +0.7
baz=267
L16K Owhat River 61.93 31 P P 05 35 23.8 +0.3
baz=270
S14K Fog Glacier 61.97 38 P P 05 35 24.7 +0.7
baz=272
CHNA Chernabura Isl 62.02 39 P P 05 35 24.3 +0.2
baz=273
F18K Selawik 62.02 26 P P 05 35 25.3 +1.3
baz=267,SNR=17
M16K Timber Creek 62.17 32 P P 05 35 26.3 +1.1
baz=270
C19K Lookout Ridge 62.22 23 IAmb IAmb 05 35 38.4
comp=Z,29nm,1.0s
C19K Lookout Ridge 62.22 23 P P 05 35 26.7 +1.4
baz=265
KIRV Kirov 62.22 325 *c i* P P 05 35 24.9 -0.6
comp=Z,802nm,18.5s,baz=91,slow=39
KIRV Kirov 62.22 325 LR LR 06 05 25.0
N16K Nishlik Lake 62.27 33 P P 05 35 27.6 +1.7
baz=271
G18K Tagagawik 62.39 27 IAmb IAmb 05 35 40.2
comp=Z,23nm,1.0s
G18K Tagagawik 62.39 27 P P 05 35 28.0 +1.5
baz=268,SNR=7.6
K17K Iditarod 62.48 30 P P 05 35 27.7 +0.6
baz=270
H18K Honhosa River 62.49 28 P P 05 35 29.0 +1.8
baz=269
CHGN Chignik 62.60 38 P P 05 35 30.0 +2.0
baz=273
O16K Kokwok River B 62.63 34 P P 05 35 29.1 +0.9
baz=272
D19K Kuna River 62.71 24 P P 05 35 29.3 +0.7
baz=267,SNR=14
F19K Shaleruckik Mo 62.77 26 IAmb IAmb 05 35 42.5
comp=Z,39nm,1.4s
F19K Shaleruckik Mo 62.77 26 P P 05 35 30.1 +1.1
baz=268,SNR=6.0
M17K Holitna River 62.91 32 P P 05 35 30.9 +0.9
baz=271
E19K Redstone River 63.00 25 IAmb IAmb 05 35 46.9
comp=Z,20nm,0.9s
E19K Redstone River 63.00 25 P P 05 35 31.1 +0.5
baz=268,SNR=13
G19K Purcell Mounta 63.03 26 IAmb IAmb 05 35 44.6
comp=Z,33nm,1.4s
G19K Purcell Mounta 63.03 26 P P 05 35 31.6 +0.8
baz=269,SNR=5.1
N17K Nushagak Hills 63.05 33 P P 05 35 32.0 +1.0
baz=272
B20K Meade River 63.12 22 P P 05 35 32.5 +1.2
baz=267
O17K Koliganek Bris 63.13 34 P P 05 35 32.2 +0.7
baz=273
J18K Innoko River 63.20 29 P P 05 35 32.8 +0.9
baz=271
D20K Etivluk River 63.27 24 P P 05 35 33.5 +1.1
baz=268,SNR=10
H19K Roundabout Mou 63.29 27 P P 05 35 33.2 +0.7
baz=270
Q16K King Salmon 63.41 35 P P 05 35 34.0 +0.7
baz=274
E20K Nigu River 63.42 24 P P 05 35 34.1 +0.8
baz=269,SNR=20
F20K Avaraart Lake 63.58 25 IAmb IAmb 05 35 48.5
comp=Z,23nm,1.3s
F20K Avaraart Lake 63.58 25 P P 05 35 35.7 +1.3
baz=270
R17L Mt. Peulik Vol 63.64 36 P P 05 35 36.0 +1.0
baz=274
BELG Belogornoye 63.66 318 *c i* P P 05 35 34.8 -0.3
BELG pmax pmax
comp=Z,8.0nm,0.8s
M18K Stony River 63.68 32 P P 05 35 35.8 +0.6
baz=273
Q17K Contact Creek 63.84 35 P P 05 35 36.6 +0.2
baz=274
C21K Knifeblade Rid 63.94 23 P P 05 35 38.0 +1.3
baz=270,SNR=5.5
H20K Anotleneega Mo 63.95 27 P P 05 35 38.4 +1.6
baz=272,SNR=10
B21K Ikpikpuk River 64.00 23 P P 05 35 38.4 +1.3
baz=270
P18K Big Mountain, 64.10 34 P P 05 35 39.7 +1.7
baz=274
I20K Naaghedeneel 64.14 28 P P 05 35 39.8 +1.7
baz=272
CHIR Chirikof Islan 64.20 38 P P 05 35 40.3 +1.6
baz=276
E21K Killik River 64.24 24 P P 05 35 40.0 +1.2
baz=271
Q18K Katmai Hardscr 64.27 35 P P 05 35 39.9 +0.7
baz=275
IMAR Indian Mountai 64.40 27 P P 05 35 41.1 +1.4
B22K Teshekpuk Lake 64.41 22 P P 05 35 40.7 +1.0
baz=271
F21K Alatna River 64.46 25 IAmb IAmb 05 35 53.8
comp=Z,13nm,0.9s
F21K Alatna River 64.46 25 P P 05 35 41.2 +1.0
baz=272
G21K Allakaket 64.47 26 P P 05 35 41.9 +1.6
baz=272,SNR=15
DRN Derbent 64.71 307 *i* P P 05 35 51.4 +9.2
DRN pmax pmax
comp=Z,62nm,1.9s
SII Sitkinak Islan 64.92 37 P P 05 35 44.6 +1.2
baz=276
M20K Styx River 64.93 31 P P 05 35 44.2 +0.7
baz=275
F22K John River 64.95 25 P P 05 35 44.7 +1.3
baz=273
P19K Oil Pt 65.09 34 P P 05 35 45.3 +0.9
baz=276
MAK Makhachkala 65.14 308 *eP* P 05 35 42.8 -2.2
MAK *e* 05 38 11.6
MAK *e*PPP PPP 05 39 44.4
MAK *e*S S 05 44 22.9 -2.8
MAK *e*SS SS 05 48 36.6 -1.5
MAK pmax pmax
comp=Z,123nm,0.8s
MAK MLR MLR
comp=Z,335nm,12.0s
G22K Bettles 65.25 26 P P 05 35 46.4 +1.2
baz=274
AKT Akhty 65.25 306 *eP* P 05 35 46.0 +0.1
AKT *e* 05 36 17.8
AKT pmax pmax
comp=Z,22nm,0.9s
AKT MLR MLR
comp=Z,458nm,17.0s
PPLA Purkeypile 65.28 30 P P 05 35 46.7 +0.9
baz=275
OHAK Old Harbor 65.33 36 P P 05 35 47.0 +1.1
baz=277
C23K Itkillik River 65.39 22 P P 05 35 47.5 +1.4
baz=274
D23K Nanushuk River 65.42 23 P P 05 35 46.9 +0.6
baz=274,SNR=14
SPCR Spurr Chakacha 65.44 32 P P 05 35 47.7 +1.0
baz=276
KDAK Kodiak Island 65.64 36 LR LR 06 04 16.1
comp=Z,59nm,21.6s,baz=261,slow=36
KDAK Kodiak Island 65.64 36 P P 05 35 49.1 +1.2
baz=277
G23K Bananza Creek 65.85 26 IAmb IAmb 05 36 03.6
comp=Z,22nm,0.9s
G23K Bananza Creek 65.85 26 P P 05 35 50.2 +0.9
baz=275,SNR=9.2
E23K Chandalar 65.88 24 P P 05 35 50.4 +0.9
baz=275,SNR=18
D24K Happy Valley 66.07 23 P P 05 35 51.7 +1.1
baz=276
BTLR Botlikh 66.12 308 *eP* P 05 35 50.2 -1.3
BTLR pmax pmax
comp=Z,19nm,1.4s
DVE Vedeno 66.13 308⇓ *i* P P 05 35 50.8 -0.7
DVE pmax pmax
comp=Z,21nm,0.9s
H23K Yukon River 66.13 27 P P 05 35 52.3 +1.3
baz=276
E24K Your Creek 66.30 24 P P 05 35 53.2 +1.0
baz=276
MSVF Nonsavu 66.33 124 LR LR 06 02 04.0
comp=Z,151nm,19.8s,baz=311,slow=34
BRSE Bradley Lake S 66.34 33 P P 05 35 53.9 +1.5
baz=278
M22K Willow 66.37 31 P P 05 35 54.0 +1.4
baz=278
F24K Squaw Lake 66.59 25 P P 05 35 55.7 +1.7
baz=277,SNR=29
RND Reindeer 66.73 29 IAmb IAmb 05 36 02.9
comp=Z,20nm,0.8s
O22K Cooper Landing 66.73 32 P P 05 35 56.1 +1.2
baz=278
G24K Hadweenzic Riv 66.86 26 P P 05 35 57.6 +2.0
baz=278,SNR=16
PMR Palmer 66.86 31 P P 05 35 57.7 +2.0
baz=278
D25K Kavik River 66.92 23 IAmb IAmb 05 36 12.5
comp=Z,21nm,0.9s
D25K Kavik River 66.92 23 P P 05 35 57.9 +1.8
baz=278
SEW Seward 66.92 33 P P 05 35 57.0 +0.8
baz=279
WAT1 Susitna Watana 66.94 30 P P 05 35 57.4 +1.1
baz=278
COLA College 66.95 28⇑ *eP* P 05 36 00.1 +3.8
COLA pmax pmax
comp=Z,29nm,2.5s
KLMR Klimovskoe 67.01 328 *eP* P 05 35 54.0 -2.7
KLMR pmax pmax
comp=Z,33nm,1.4s
KLMR MLR MLR
comp=Z,601nm,16.0s
C26K Camden Bay 67.34 22 P P 05 35 59.5 +0.9
baz=279
PWL Port Wells 67.35 32 P P 05 36 00.4 +1.5
baz=280
WAT6 Susitna Watana 67.35 30 P P 05 36 00.5 +1.4
baz=279
ILAR Eielson Array 67.38 28 P P 05 36 00.2 +1.2
comp=Z,1.4nm,0.8s,baz=266,slow=4.0,SNR=13
ILAR LR LR 06 06 51.1
comp=Z,84nm,20.2s,baz=278,slow=37
comp=Z,1.4nm,0.8s
ILAR Eielson Array 67.38 28 P P 05 35 59.8 +0.8
ILAR Eielson Array 67.38 28 P P 05 35 59.8 +0.8
E25K Arctic Village 67.38 24 P P 05 36 00.0 +1.0
baz=279,SNR=8.6
G25K Bearman Lake 67.39 25 P P 05 36 00.2 +1.2
baz=279,SNR=12
F25K Christian Rive 67.43 25 IAmb IAmb 05 36 14.2
comp=Z,22nm,0.8s
F25K Christian Rive 67.43 25 P P 05 36 01.4 +2.0
baz=279,SNR=21
VRH Novokhopyorsk 67.47 317 *eP* P 05 35 59.4 -0.3
VRH pmax pmax
comp=Z,49nm,0.8s
SCM Sheep Creek Mo 67.67 31 P P 05 36 01.7 +0.7
baz=280
GNI Garni 67.75 305 LR LR 06 09 29.3
comp=Z,90nm,19.4s,baz=78,slow=39
GNI Garni 67.75 305 *ce* P P 05 36 03.4 +1.4
GNI pmax pmax
comp=Z,23nm,1.6s
GNI Garni 67.75 305 P P 05 36 03.5 +1.4
comp=Z,19nm,1.4s
C27K Jago River 67.80 22 P P 05 36 02.3 +0.8
baz=280
NCK Nalchik 67.82 309⇓ *eP* P 05 36 01.9 -0.3
NCK pmax pmax
comp=Z,20nm,0.4s
LVZ Lovozero 67.93 336⇑ *iP* P 05 36 03.1 +0.6
LVZ pmax pmax
comp=Z,13nm,1.4s
GLI Glacier Island 67.94 32 P P 05 36 04.3 +1.7
baz=280
F26K Sheenjek River 67.98 24 P P 05 36 04.3 +1.5
baz=280,SNR=19
M24K Tolsona, Glenn 68.15 30 P P 05 36 05.6 +1.6
baz=281
G26K Porcupine Rive 68.26 25 P P 05 36 06.3 +1.9
baz=281
KBZ Khabaz 68.26 309 P P 05 36 05.5 +0.6
comp=Z,8.1nm,0.8s,baz=66,slow=3.9,SNR=16
KBZ LR LR 06 10 51.2
comp=Z,339nm,18.4s,baz=64,slow=40
comp=Z,8.1nm,0.8s
KBZ Khabaz 68.26 309 *c i* P P 05 36 05.3 +0.4
KBZ pmax pmax
comp=Z,16nm,1.0s
KVAR Kislovodsk Arr 68.35 310 LR LR 06 10 50.9
comp=Z,129nm,18.9s,baz=254,slow=40
KIV Kislovodsk 68.36 310 ⇑P P 05 36 03.9 -1.7
KIV Kislovodsk 68.36 310 *eP* P 05 36 06.5 +0.8
KIV pmax pmax
comp=Z,57nm,1.1s
KIV MLR MLR
comp=Z,107nm,17.0s
KIV Kislovodsk 68.36 310 P 05 36 06.4 +0.7
KIV Kislovodsk 68.36 310 P P 05 36 06.8 +1.1
comp=Z,705nmcomp=Z,57nm,1.2s
KLU Klutina 68.39 31 P P 05 36 06.2 +0.7
baz=281
SHA1 Shidzhatmaz 68.43 309 *ce* P P 05 36 06.7 +0.4
APA Apatity 68.46 336 *eP* P 05 36 04.3 -1.4
APA *e* 05 36 33.5
APA *e* 05 38 37.6
APA pmax pmax
comp=Z,11nm,1.1s
APA MLR MLR
comp=Z,439nm,20.5s
EYAK Cordova Ski Ar 68.66 32 P P 05 36 07.3 +0.2
baz=282
D27M Malcolm River 68.83 22 IAmb IAmb 05 36 22.4
comp=Z,26nm,1.0s
D27M Malcolm River 68.83 22 P P 05 36 08.8 +0.8
baz=283
E27K Coleen River 68.83 24 IAmb IAmb 05 36 22.5
comp=Z,27nm,1.1s
E27K Coleen River 68.83 24 P P 05 36 09.4 +1.4
baz=282,SNR=9.5
LPSR Galich'ya Gora 68.87 319 *eP* P 05 36 08.2 -0.3
LPSR pmax pmax
comp=Z,46nm,0.9s
VORR Voronezh 68.91 318 *eP* P 05 36 08.6 -0.2
VORR pmax pmax
comp=Z,60nm,0.4s
MOS Moscow 68.94 323 *eP* P 05 36 09.3 +0.4
MOS *e* 05 36 19.3
MOS *e* 05 36 31.7
MOS *e* 05 45 05.5
MOS pmax pmax
comp=Z,33nm,0.6s
N25K Chitina, Valde 68.99 31 P P 05 36 10.2 +1.0
baz=282
VSR Storozhevoye 69.03 318 *eP* P 05 36 09.1 -0.5
VSR pmax pmax
comp=Z,33nm,1.0s
G27K Doyon Strip 69.11 25 P P 05 36 10.3 +0.4
baz=283,SNR=6.8
BMRM Bremner River 69.12 31 P P 05 36 11.1 +1.0
baz=282
L26K Log Cabin Wild 69.25 29 P P 05 36 11.8 +1.1
baz=283
H27K Steamboat Moun 69.29 26 P P 05 36 12.5 +1.5
baz=283,SNR=13
VADS Vadso 69.33 339 *eP* P 05 36 10.6 -0.4
KAIM Kayak Island 69.44 33 P P 05 36 13.1 +1.1
baz=283
ERBR Yeremizino-Bor 69.47 312 *eP* P 05 36 12.6 +0.2
ERBR pmax pmax
comp=Z,65nm,0.9s
E28M Babbage River 69.48 23 IAmb IAmb 05 36 26.3
comp=Z,31nm,1.1s
E28M Babbage River 69.48 23 P P 05 36 13.2 +1.2
baz=284
GEVA Gevas 69.48 304 IAmb IAmb 05 36 25.0
comp=Z,27nm,1.0s
LABN Labinsk 69.56 311 *eP* P 05 36 12.6 -0.4
LABN pmax pmax
comp=Z,37nm,0.6s
K27K Chicken 69.57 28 IAmb IAmb 05 36 21.3
comp=Z,12nm,0.9s
D28M Stokes Point 69.58 22 P P 05 36 12.5 -0.1
baz=285
F28M Old Crow 69.60 24 P P 05 36 13.8 +1.0
baz=284,SNR=22
OBN Obninsk 69.67 322 *ce* P P 05 36 13.1 -0.3
OBN *e* 05 36 36.2
OBN *e* 05 38 51.9
OBN *e*SSS SSS 05 52 57.4
OBN pmax pmax
comp=Z,46nm,1.3s
OBN MLR MLR
comp=Z,298nm,20.0s
CRQE Cirque 69.89 32 P P 05 36 15.5 +0.6
baz=284
L27K Beaver Creek, 69.91 29 P P 05 36 15.4 +0.5
baz=284
BCAR Beaver Creek A 69.93 29 P P 05 36 17.8 +2.8
E29M Blow River 70.11 23 IAmb IAmb 05 36 30.0
comp=Z,12nm,1.0s
E29M Blow River 70.11 23 P P 05 36 17.1 +1.2
baz=286,SNR=6.8
I28M Miner Creek 70.11 26 IAmb IAmb 05 36 30.9
comp=Z,20nm,1.0s
I28M Miner Creek 70.11 26 P P 05 36 16.6 +0.4

baz=285,SNR=12
SPA0 Spitsbergen Ar 70.12 348 *e*P P 05 36 15.8 -0.1
SPA0 IAmb IAmb 05 36 28.0
comp=Z,28nm,1.2s
SPITS Spitsbergen Ar 70.12 348 P P 05 36 15.5 -0.4
comp=Z,0.8nm,0.3s,baz=77,slow=7.2,SNR=8.9
SPITS LR LR 06 11 13.7
comp=Z,140nm,19.1s,baz=48,slow=40
comp=Z,0.8nm,0.3s
VSLR Vesoyloye 70.35 310 *de*P P 05 36 18.5 +0.6
VSLR pmax pmax
comp=Z,27nm,1.1s
G29M Pine Creek 70.47 25 P P 05 36 19.0 +0.8
baz=286,SNR=18
BVCY Beaver Creek 70.51 30 P P 05 36 19.5 +0.9
baz=285
H29M Whitestone 70.53 25 IAmb IAmb 05 36 33.1
comp=Z,20nm,1.1s
H29M Whitestone 70.53 25 P P 05 36 19.6 +1.0
baz=286
SOC Sochi 70.54 310 *e*P P 05 36 17.6 -1.4
SOC *e* 05 38 53.3
SOC *e*S S 05 45 28.5 -1.9
SOC *e*SSS SSS 05 53 15.9
SOC pmax pmax
comp=Z,19nm,0.8s
SOC MLR MLR
comp=Z,192nm,17.0s
DAWY Dawson 70.71 28 P P 05 36 20.4 +0.7
baz=286,SNR=5.3
ARA0 ARCESS Array S 70.78 338 *e*P P 05 36 20.0 0.0
ARA0 IAmb IAmb 05 36 31.0
comp=Z,26nm,1.4s
ARCES ARCESS Array B 70.78 338 P P 05 36 19.6 -0.4
comp=Z,1.6nm,0.6s,baz=79,slow=7.9,SNR=14
ARCES LR LR 06 12 03.5
comp=Z,291nm,19.3s,baz=73,slow=40
comp=Z,1.6nm,0.6s
ARCES ARCESS Array B 70.78 338 P P 05 36 19.6 -0.4
ARCES pmax pmax
comp=Z,28nm,1.6s
ARCES ARCESS Array B 70.78 338 IAmb IAmb 05 36 31.4
comp=Z,28nm,1.6s
YUK3 Moose Creek 70.86 30 P P 05 36 21.3 +0.4
baz=286
J29N Klondike Camp 71.09 27 P P 05 36 22.6 +0.6
baz=287
F30M Barrier River 71.10 24 P P 05 36 22.4 +0.4
baz=288
EPYK Eagle Plains 71.13 25 IAmb IAmb 05 36 36.0
comp=Z,27nm,0.9s
EPYK Eagle Plains 71.13 25 P P 05 36 22.0 -0.2
baz=287,SNR=10
G30M tAoh Zrail Nji 71.13 24 P P 05 36 22.9 +0.6
baz=288,SNR=16
O28M Mount Upton 71.26 31 P P 05 36 23.4 -0.1
baz=286
YUK8 Steele Glacier 71.32 31 P P 05 36 24.2 +0.5
baz=286
PINM Pinnacle 71.42 32 P P 05 36 24.7 +0.5
baz=286
L29M L29M 71.52 28 IAmb IAmb 05 36 40.3
comp=Z,26nm,1.1s
L29M L29M 71.52 28 P P 05 36 25.4 +0.7
baz=287
K29M Barlow Dome 71.56 28 P P 05 36 25.7 +0.7
baz=288,SNR=5.7
M29M Somme Creek 71.57 29 P P 05 36 25.8 +0.7
baz=287
I30M Mount Dempster 71.61 26 IAmb IAmb 05 36 39.1
comp=Z,13nm,0.9s
I30M Mount Dempster 71.61 26 P P 05 36 25.8 +0.5
baz=288
INK Inuvik 71.69 23 LR LR 06 09 16.5
comp=Z,90nm,21.8s,baz=274,slow=37
INK Inuvik 71.69 23 IAmb IAmb 05 36 39.0
comp=Z,28nm,1.0s
INK Inuvik 71.69 23 P P 05 36 26.1 +0.6
baz=290,SNR=11
ANN Anapa 71.79 312 *e*P P 05 36 26.7 +0.2
ANN pmax pmax
comp=Z,70nm,0.9s
YUK4 Talbot Arm 71.81 30 P P 05 36 26.6 -0.1
baz=287
J30M Hart River 71.83 27 P P 05 36 26.4 -0.2
baz=288
RAYN Ar Rayn 71.83 288 P P 05 36 26.2 -1.1
G31M Satah River 71.88 24 IAmb IAmb 05 36 39.9
comp=Z,16nm,0.9s
G31M Satah River 71.88 24 P P 05 36 26.4 -0.2
baz=289
F31M Tsiigehtchic 71.90 23 IAmb IAmb 05 36 40.1
comp=Z,26nm,1.1s
F31M Tsiigehtchic 71.90 23 P P 05 36 26.6 -0.2
baz=290
YUK6 Outpost Mounta 72.07 31 P P 05 36 28.5 +0.3
baz=288
O29M Mount Kennedy 72.16 31 P P 05 36 27.8 -0.8
baz=288
H31M Peel River 72.23 25 IAmb IAmb 05 36 42.6
comp=Z,22nm,1.1s
H31M Peel River 72.23 25 P P 05 36 28.5 -0.3
baz=290
M30M Minto, Yukon 72.27 29 P P 05 36 29.4 +0.2
baz=288
AFI Afiamalu 72.27 115 LR LR 06 01 34.4
comp=Z,98nm,21.0s,baz=296,slow=30
JETT Jettan, Norway 72.45 339 *e*P P 05 36 30.3 +0.2
N30M Aishikik Lake 72.49 30 P P 05 36 31.2 +0.6
baz=289
HYT Haines Junctio 72.50 31 P P 05 36 31.2 +0.5
baz=288
NOR Nord 72.56 355 *i* P P 05 36 30.2 -0.4
NOR IAmb IAmb 05 36 30.6
comp=Z,3.7nm,0.8s
P29M Windy Craggy 72.77 32 P P 05 36 32.2 0.0
baz=289
A36M Sachs Harbour 72.87 18 P P 05 36 33.2 +0.7
baz=296
TRO Tromso 72.90 339 *e*P P 05 36 32.5 -0.1
P30M Million Dollar 72.98 31 P P 05 36 33.4 -0.1
baz=289
N31M Braeburn, Yuko 73.08 30 P P 05 36 34.2 +0.2
baz=290
FINES FINESS Array B 73.17 330 P P 05 36 34.3 -0.2
comp=Z,16nm,0.7s,baz=74,slow=6.9,SNR=70
FINES LR LR 06 12 04.3
comp=Z,630nm,18.6s,baz=78,slow=39
comp=Z,16nm,0.7s
FINES FINESS Array B 73.17 330 P 05 36 34.1 -0.3
O30N Mendenhall 73.18 30 P P 05 36 34.5 -0.1
baz=290
M31M Drury Creek, Y 73.45 29 P P 05 36 35.9 -0.2
baz=291
PLBC Pleasant Camp 73.49 32 P P 05 36 35.7 -0.7
baz=290
WHY Whitehorse 73.77 30 P P 05 36 38.4 +0.2
baz=291
VSU Vasula 73.88 327 *ce*P P 05 36 38.0 -0.7
VSU pmax pmax
comp=Z,24nm,0.8s
SKAG Skagway 73.99 32 P P 05 36 39.0 -0.3
baz=291
SIM Simferopol' 73.99 312 *e*P P 05 36 49.3 +10
SIM S S 05 46 34.8 +25
SIM pmax pmax
comp=Z,43nm,0.8s
SIM MLR MLR
comp=Z,142nm,20.0s
N32M Quiet Lake 74.41 30 P P 05 36 42.0 +0.2
baz=292
C36M Paulatuk 74.42 20 IAmb IAmb 05 36 54.5
comp=Z,28nm,1.1s
C36M Paulatuk 74.42 20 P P 05 36 41.8 +0.2
baz=298
MMPY Sheldon Lake, 74.64 28 P P 05 36 42.9 -0.3
baz=293
MNK Minsk 74.65 323 *i* P P 05 36 43.8 +0.6
comp=E,9.0nm,0.5s
MNK *i* P P 05 36 43.8 +0.6
comp=N,10.0nm,0.5s
MNK *i* P P 05 36 43.8 +0.6
comp=Z,8.0nm,0.7s,baz=70
MNK *i* pP pP 05 36 50.3 -2.3
MNK *i* PP PP 05 39 30.4 +0.5
MNK *i* PPP PPP 05 41 15.9
MNK *i* S S 05 46 19.1 +2.2
MNK *i* SS SS 05 51 07.3 +3.4
MNK *i* SSS SSS 05 54 29.2
MNK *i* LQ LQ 06 05 32.7
MNK *i* LR LR 06 09 01.9
MNK *i* LRM MLR 06 11 54.9
comp=E,126nm,18.2s
MNK *i* LRM MLR 06 11 54.9
comp=N,261nm,20.1s
MNK *i* LRM MLR 06 11 54.9
comp=Z,321nm,19.8s
MNK Minsk 74.65 323 *i* P PP 05 39 28.5 -1.5
comp=E,12nm,0.8s
MNK *i* P PP 05 39 28.5 -1.5
comp=N,7.0nm,0.5s
MNK *i* P PP 05 39 28.5 -1.5
comp=Z,4.0nm,0.5s,baz=124
MNK *i* LQ LQ 05 44 11.0
MNK *i* LR LR 05 45 49.2
MNK *i* LRM MLR 05 47 10.9
comp=E,24nm,15.6s
MNK *i* LRM MLR 05 47 34.9
comp=Z,24nm,16.1s
MNK *i* LRM MLR 05 47 41.3
comp=N,38nm,17.3s
MNK Minsk 74.65 323 *i* P P 05 36 43.8 +0.6
MNK *i* *PP pP 05 36 50.2 -2.3
MNK *i* 05 36 57.8
MNK *i* 05 39 30.4
MNK *i* PPP PPP 05 41 15.8
MNK *i* S S 05 46 19.1 +2.2
MNK *i* SS SS 05 51 07.3 +3.4
MNK pmax pmax
comp=E,9.0nm,0.5s
MNK pmax pmax
comp=N,10.0nm,0.5s
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK MLR MLR
comp=Z,321nm,20.0s
MNK MLR MLR
comp=E,126nm,18.0s
MNK MLR MLR
comp=N,261nm,20.0s
P32M Atlin 74.71 31 P P 05 36 43.4 -0.2
baz=292
STEI Steigen 74.85 338 *e*P P 05 36 44.3 +0.2
STEI IAmb IAmb 05 36 54.0
comp=Z,140nm,2.1s
SIT Sitka 74.85 34 P P 05 36 44.2 -0.1
baz=291
P33M Teslin, Yukon 74.89 30 P P 05 36 43.4 -1.3
baz=292
FAUS Fauske 75.08 338 *e*P P 05 36 45.6 +0.1
FAUS IAmb IAmb 05 36 56.5
comp=Z,25nm,0.9s
AK03 Malin Array Si 75.19 319 P P 05 36 46.0 -0.5
AK09 Malin Array Si 75.20 319 P P 05 36 46.2 -0.3
AKASG Malin Array Be 75.20 319 P P 05 36 46.0 -0.5
comp=Z,1.2nm,0.4s,baz=62,slow=5.3,SNR=17
comp=Z,1.2nm,0.4s
AKASG Malin Array Be 75.20 319 *i* P P 05 36 46.0 -0.5
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 75.20 319 P P 05 36 45.8 -0.7
AKASG IAmb IAmb 05 36 58.0
comp=Z,31nm,1.6s
AKBB Malin Array Si 75.20 319 *c* P P 05 36 45.8 -0.7
AKBB pmax pmax
comp=Z,19nm,1.6s
AKBB Malin Array Si 75.20 319 IAmb IAmb 05 36 56.8
comp=Z,15nm,0.7s
AKBB Malin Array Si 75.20 319 P P 05 36 46.1 -0.4
AK08 Malin Array Si 75.21 319 P P 05 36 46.2 -0.3
AK01 Malin Array Si 75.21 319 P P 05 36 45.9 -0.7
KIEV Kiev 75.21 319 ⇑P P 05 36 45.3 -1.3
KIEV Kiev 75.21 319 P P 05 36 46.3 -0.2
KIEV Kiev 75.21 319 P 05 36 46.3 -0.2
KIEV Kiev 75.21 319 P P 05 36 46.1 -0.5
comp=Z,84nm,1.1s
AK10 Malin Array Si 75.22 319 P P 05 36 46.2 -0.4
AK02 Malin Array Si 75.23 319 P P 05 36 46.2 -0.5
AK04 Malin Array Si 75.23 319 P P 05 36 46.1 -0.6
AK23 Malin Array Si 75.24 319 P P 05 36 46.6 -0.1
AK05 Malin Array Si 75.24 319 P P 05 36 47.3 +0.6
AK11 Malin Array Si 75.24 319 P P 05 36 46.1 -0.6
AK06 Malin Array Si 75.26 319 P P 05 36 46.6 -0.2
AK12 Malin Array Si 75.26 319 P P 05 36 46.5 -0.4
AK15 Malin Array Si 75.26 319 P P 05 36 47.2 +0.3
AK16 Malin Array Si 75.28 319 P P 05 36 46.5 -0.5
AK21 Malin Array Si 75.28 319 P P 05 36 46.5 -0.5
AK18 Malin Array Si 75.29 319 P P 05 36 46.5 -0.5
AK14 Malin Array Si 75.30 319 P P 05 36 46.6 -0.4
AK17 Malin Array Si 75.31 319 P P 05 36 46.6 -0.5
AK20 Malin Array Si 75.32 319 P P 05 36 46.7 -0.5
AK19 Malin Array Si 75.32 319 P P 05 36 46.7 -0.5
AK13 Malin Array Si 75.33 319 P P 05 36 46.8 -0.4
Q32M Nakina River 75.63 31 P P 05 36 47.4 -1.7
baz=293
MOR8 Moi Rana 75.95 337 *e*P P 05 36 49.6 -1.0
MOR8 IAmb IAmb 05 37 00.4
comp=Z,16nm,0.7s
RAUS Rausandaksla 75.97 337 *e*P P 05 36 50.7 +0.1
RAUS IAmb IAmb 05 37 01.1
comp=Z,16nm,0.7s
BR131 Keskin Array S 76.05 307 *de*P P 05 36 52.2 +0.4
BR131 Keskin Array S 76.05 307 IAmb IAmb 05 37 03.7
comp=Z,38nm,1.1s
BRTR Keskin Array B 76.05 307 P P 05 36 51.8 0.0
comp=Z,4.5nm,0.8s,baz=93,slow=5.2,SNR=15
BRTR LR LR 06 14 53.7
comp=Z,102nm,20.2s,baz=86,slow=39
comp=Z,4.5nm,0.8s
BRTR Keskin Array B 76.05 307 *i* P P 05 36 52.2 +0.4
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 76.05 307 P P 05 36 51.3 -0.5
KIRS Kirsehir-Merke 76.05 307 ⇓P P 05 36 50.2 -1.5
BR104 Keskin Array S 76.05 307 P P 05 36 52.5 +0.7
comp=Z,180nmcomp=Z,24nm,1.0s
BR106 Keskin Array S 76.06 307 P P 05 36 52.1 +0.3
R33M Jennings River 76.07 31 P P 05 36 50.9 -0.7
baz=294
VAGH Vaagaholmen 76.09 338 *e*P P 05 36 51.2 0.0
VAGH IAmb IAmb 05 37 02.0
comp=Z,194nm,2.5s
KONS Konsvik 76.26 338 *e*P P 05 36 53.2 +1.0
KONS IAmb IAmb 05 36 60.0
comp=Z,221nm,2.5s
STOK Stokkvaagen 76.38 337 *e*P P 05 36 52.6 -0.2
STOK IAmb IAmb 05 37 08.9
comp=Z,308nm,3.0s
LEIR Leirfjorden 76.45 337 *e*P P 05 36 53.4 +0.1
LEIR IAmb IAmb 05 36 53.8
comp=Z,13nm,0.9s
CRAG Craig 76.59 35 P P 05 36 53.9 -0.4
baz=293
S34M Telegraph Cree 76.60 32 P P 05 36 54.0 -0.4
baz=294
WRAK Wrangell Islan 76.61 34 P P 05 36 54.5 +0.1
baz=294
SORM Soroca 76.65 317 ⇑P P 05 36 54.2 -0.7
SORM Soroca 76.65 317 P P 05 36 54.1 -0.7
DAG Danmarks Havn 76.77 352 *i* P P 05 36 54.4 -0.5
DAG IAmb IAmb 05 36 55.3
comp=Z,8.7nm,1.0s
DLBC Dease Lake 76.92 31 P P 05 36 56.3 +0.1
baz=295
MMAI Mount Meron Ar 77.03 300 P P 05 36 57.3 -0.1
comp=Z,0.7nm,0.2s,baz=72,slow=9.3,SNR=1.8
comp=Z,0.7nm,0.2s
T35M Bob Quinn 77.43 33 P P 05 36 59.4 +0.3
baz=295
TLCR 77.44 314 ⇓P P 05 36 58.4 -0.9
TLCR 77.44 314 P P 05 36 58.4 -0.9
WRGLY Wrigley 77.57 26 P P 05 37 00.5 +0.8
baz=300
NSS Namsos 77.67 336 *e*P P 05 37 00.2 0.0
NSS IAmb IAmb 05 37 10.8
comp=Z,170nm,2.6s
CFR Carcaliu 77.89 314 ⇑P P 05 37 01.2 -0.6
CFR Carcaliu 77.89 314 P P 05 37 01.2 -0.6
TIRR Tirgusor 77.98 313 ⇑P P 05 37 00.9 -1.4
TIRR Tirgusor 77.98 313 P P 05 37 00.9 -1.4
TESR Tescani 78.33 316 ⇓P P 05 37 03.3 -1.0
NEEM North Greenlan 78.43 359 *i* P P 05 37 05.6 +1.0
NEEM IAmb IAmb 05 37 06.7
comp=Z,13nm,1.0s
BIZ Bicaz 78.51 316 ⇑P P 05 37 05.5 +0.2
VRI Vrincioaia 78.54 315 ⇑P P 05 37 05.8 +0.3
VRI Vrincioaia 78.54 315 P P 05 37 05.7 +0.3
ONER Baraj Valea Uz 78.57 316 ⇑P P 05 37 04.7 -0.8
PLOR Plostina 78.59 315 ⇓P P 05 37 04.9 -0.9
PLOR Plostina 78.59 315 P P 05 37 04.9 -0.9
SAHR Sahastru 78.62 315 ⇑P P 05 37 05.3 -0.6
BUR08 Bucovina Ar. S 78.80 317 IAmb IAmb 05 37 18.9
comp=Z,25nm,1.3s
BURAR Bucovina Array 78.80 317 ⇑P P 05 37 07.1 +0.1
BURAR Bucovina Array 78.80 317 P P 05 37 07.0 +0.1
BURAR Bucovina Array 78.80 317 P 05 37 07.1 +0.1
TULEG Thule 78.99 3 *i* P P 05 37 08.2 +0.9
TULEG IAmb IAmb 05 37 10.1
comp=Z,37nm,1.4s
URZ Urewera 79.00 141 LR LR 06 06 43.9
comp=Z,109nm,21.9s,baz=306,slow=32
OZUR 79.05 316 ⇓P P 05 37 08.8 +0.5
DBG Daneborg 79.06 351 *i* P P 05 37 07.4 -0.3
DBG IAmb IAmb 05 37 08.9
comp=Z,4.3nm,0.7s
MLR Muntele Rosu 79.19 315 LR LR 06 18 10.1
comp=Z,187nm,18.4s,baz=54,slow=40
MLR Muntele Rosu 79.19 315 ⇑P P 05 37 07.9 -1.3
MLR Muntele Rosu 79.19 315 P P 05 37 07.9 -1.3
MLR Muntele Rosu 79.19 315 IAmb IAmb 05 37 21.2
comp=Z,22nm,1.0s
HFS Hagfors 79.22 332 P P 05 37 08.7 -0.2
comp=Z,11nm,0.8s,baz=70,slow=5.2,SNR=22
HFS LR LR 06 16 39.4
comp=Z,316nm,18.7s,baz=42,slow=39
comp=Z,11nm,0.8s
DOPR Dopca 79.35 316 ⇑P P 05 37 10.3 +0.4
NC405 NORSAR Array S 79.55 333 IAmb IAmb 05 37 22.2
comp=Z,20nm,0.8s
NC303 NORSAR Array S 79.64 333 IAmb IAmb 05 37 22.8
comp=Z,59nm,1.7s
NB201 NORSAR Array S 79.76 333 IAmb IAmb 05 37 22.7
comp=Z,17nm,1.1s
NB2 NORSAR Subarra 79.80 333 P P 05 37 11.7 -0.4
comp=Z,28nm,1.2s,baz=54,slow=6.2
NB2 NORSAR Subarra 79.80 333 P P 05 37 11.7 -0.4
NOA NORSAR Array B 79.80 333 P P 05 37 12.2 +0.1
comp=Z,5.8nm,0.8s,baz=56,slow=5.5,SNR=26
NOA LR LR 06 16 02.5
comp=Z,192nm,19.2s,baz=70,slow=38
comp=Z,5.8nm,0.8s
NC602 NORSAR Array S 79.82 333 *e*P P 05 37 12.7 +0.6
BMR Baia Mare 79.83 318 ⇓P P 05 37 11.4 -1.1
BMR Baia Mare 79.83 318 P P 05 37 11.4 -1.1
NC204 NORSAR Array S 79.86 333 IAmb IAmb 05 37 24.0
comp=Z,21nm,1.1s
KOLS Kolonicke sedl 80.04 319 *e*P P 05 37 14.8 +1.2
KOLS *e* 05 37 24.1
KOLS Kolonicke sedl 80.04 319 *e*P P 05 37 14.8 +1.2
KOLS *e* 05 37 24.1
DOMB Dombas 80.11 335 *e*P P 05 37 14.5 +0.8
DOMB IAmb IAmb 05 37 24.6
comp=Z,19nm,0.9s
BLEU Blekinge 80.15 328 *i* P P 05 37 15.0 +1.1
CJR Cluj-Napoca 80.17 317 ⇑P P 05 37 13.8 -0.6
CJR Cluj-Napoca 80.17 317 P P 05 37 13.8 -0.6
HUMR Humele 80.20 314 ⇑P P 05 37 13.7 -0.8
MOL Molde 80.40 335 *e*P P 05 37 15.6 +0.4
MARR Marisel-Cluj 80.49 317 ⇑P P 05 37 16.5 +0.4
LOT Lotru 80.60 316 ⇓P P 05 37 17.2 +0.4
AKN Aaknes 80.83 335 *e*P P 05 37 18.9 +1.3
STRU Stroemstad 80.89 331 *i* P P 05 37 20.0 +2.2
OJC Ojcow 80.91 321 P P 05 37 17.9 -0.3
OJC Ojcow 80.91 321 P P 05 37 17.9 -0.3
DEL Delary 81.00 328 *i* P P 05 37 19.3 +0.8
GZR Gura Zlata 81.26 316 ⇓P P 05 37 19.7 -0.5
GZR Gura Zlata 81.26 316 P P 05 37 19.7 -0.5
YKA Yellowknife Ar 81.37 24 P P 05 37 20.8 +0.5
comp=Z,1.5nm,0.7s,baz=318,slow=5.2,SNR=17
comp=Z,1.5nm,0.7s
YKA Yellowknife Ar 81.37 24 *i* P P 05 37 23.7 +3.3
YKA pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 81.37 24 P P 05 37 19.9 -0.5
LANS Liptovska Anna 81.59 320 *e*P P 05 37 25.2 +3.3
LANS *e* 05 37 33.7
LANS Liptovska Anna 81.59 320 *e*P P 05 37 25.1 +3.2
LANS *e* 05 37 33.7
HERR Herculane 81.71 316 ⇑P P 05 37 22.6 +0.1
OKC Ostrava-Krasne 82.03 321 AMS AMS 06 17 30.0
comp=Z,200nm,14.5s
MDVR Moldovita 82.20 316 ⇓P P 05 37 25.0 -0.2
MORC Moravsky Berou 82.41 321 IAmb IAmb 05 37 37.9
comp=Z,12nm,0.9s
MORC Moravsky Berou 82.41 321 *e*P P 05 37 27.1 +0.9
MORC *e* 05 37 37.0
SCO Scoresbysund 82.64 349 *i* P P 05 37 28.5 +1.7
SCO IAmb IAmb 05 37 29.8
comp=Z,8.6nm,1.1s
KRLC Kraliky 82.69 322 *e*pP pP 05 37 38.8 +1.8
KRLC AMS AMS 06 16 20.0
comp=Z,300nm,15.9s
SUMG Summit 82.71 355 P P 05 37 27.7 -0.1
SUMG pmax pmax
comp=Z,19nm,0.8s
SUMG Summit 82.71 355 P P 05 37 27.7 -0.1
SUMG IAmb IAmb 05 37 40.3
comp=Z,19nm,0.8s
SUMG Summit 82.71 355 *i* P P 05 37 29.3 +1.6
SUMG IAmb IAmb 05 37 30.1
comp=Z,6.6nm,0.8s
OSTC Ostas 82.77 323 *e*pP pP 05 37 43.1 +5.7
OSTC AMS AMS 06 17 20.0
comp=Z,300nm,20.6s
JAVC Velka Javorina 82.77 321 *e*P P 05 37 30.2 +2.1
JAVC *e* 05 37 40.4
DPC Dobruska-Polom 82.81 322 *e*pP pP 05 37 39.6 +1.9
DPC AMS AMS 06 17 20.0
comp=Z,300nm,19.6s
CHVC Chvalec 82.84 323 AMS AMS 06 17 20.0
comp=Z,300nm,18.3s
UPC Upice 82.91 323 AMS AMS 06 17 10.0
comp=Z,300nm,16.7s
VAY Valandovo 83.18 312 *i* P P 05 37 41.3 +11
MUD Monsted U'grnd 83.21 330 *i* P P 05 37 31.2 +1.1
MORH Mrgy, Hungar 83.46 318 ⇑P P 05 37 31.1 -0.6
BRG Berggiesshubel 83.85 324 *e*P P 05 37 34.8 +1.3
comp=Z,5.7nm,1.1s,baz=57,slow=5.0
BRG Berggiesshubel 83.85 324 *e*P P 05 37 35.1 +1.6
BRG Amp 05 37 36.4
comp=Z,5.7nm,1.1s
BRG Berggiesshubel 83.85 324 P P 05 37 44.6 +11
BRG Amp 05 37 45.3
comp=Z,5.2nm,0.7s
PRU Pruhonice 83.98 323 AMS AMS 06 18 00.0
comp=Z,300nm,18.9s
BSEG Bad Segeberg 84.08 327 *e*P P 05 37 35.7 +1.1
comp=Z,14nm,1.5s,baz=57,slow=5.0
GORT1 Trebel 84.11 326 *e*P P 05 37 36.2 +1.5
comp=Z,14nm,1.1s,baz=57,slow=5.0
GORT1 *es*P pwP 05 37 46.7 +0.5
CLL Collm 84.13 324 *i* P P 05 37 35.1 +0.1
CLL *i* *SP pwP 05 37 45.4 -1.0
CLL pmax pmax
comp=Z,10.0nm,1.2s
CLL MLR MLR
comp=Z,500nm,18.2s
CLL Collm 84.13 324 *e*P P 05 37 35.7 +0.7
comp=Z,6.2nm,0.9s,baz=57,slow=5.0
CLL *es*P pwP 05 37 45.4 -1.0
CLL Collm 84.13 324 *i* P P 05 37 35.1 +0.1
comp=Z,10.0nm,1.2s
CLL *i* sP pP 05 37 44.6 +0.2
comp=Z,11nm,1.0s
CLL AMS AMS 06 19 00.0
comp=N,200nm,19.4s
CLL AMS AMS 06 19 00.0
comp=E,300nm,20.0s
CLL AMS AMS 06 19 00.0
comp=Z,500nm,18.2s
RONA Rosalia, Austr 84.14 320 *e*P P 05 37 36.2 +1.0
comp=Z,5.4nm,1.1s
CONA Conrad Observa 84.28 320 *i* P P 05 37 36.8 +0.9
comp=Z,17nm,0.9s,SNR=6.5
ZVC Zvikov 84.46 322 *e*pP pP 05 37 48.2 +2.1
ZVC AMS AMS 06 17 20.0
comp=Z,300nm,19.5s

FLTG	**Flechtingen**	**84.50**	**326**	*e*P		**P**	**05 37 37.6**	**+0.8**
	comp=Z,32nm,1.7s,baz=57,slow=5.0							
FLTG				*e*S	P	**pwP**	**05 37 47.5**	**-0.8**
CKRC	**Cesky Krumlov**	**84.72**	**322**	*e*pP		**pP**	**05 37 49.7**	**+2.3**
CKRC				AMS	AMS		06 17 30.0	
	comp=Z,300nm,22.0s							
ARSA	**Arzberg**	**84.82**	**320**	*e*P		**P**	**05 37 38.8**	**+0.2**
	comp=Z,7.4nm,1.0s							
TANN	**Tannenbergstha**	**84.90**	**324**	*e*P		**P**	**05 37 38.4**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=57,slow=5.0							
ASSE	**Asse, Remlinge**	**84.91**	**326**	*e*P		**P**	**05 37 39.7**	**+0.9**
	comp=Z,12nm,1.1s,baz=57,slow=5.0							
ASSE				*e*S	P	**sP**	**05 37 50.9**	**-0.7**
KHC	**Kasperske Hory**	**84.97**	**322**	‖*e*P		**P**	**05 37 40.1**	**+0.8**
KHC				pmax	pmax			
	comp=Z,5.0nm,1.2s							
KHC	**Kasperske Hory**	**84.97**	**322**	*e*pP		**pP**	**05 37 50.9**	**+2.2**
KHC				AMS	AMS		06 17 50.0	
	comp=Z,300nm,24.1s							
NKC	**Novy Kostel**	**85.00**	**324**	AMS	AMS		06 20 10.0	
	comp=Z,300nm,16.6s							
PLN	**Plauen**	**85.02**	**324**	*e*P		**P**	**05 37 40.5**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=57,slow=5.0							
GEC2	**GERESS Array S**	**85.05**	**322**	IAmb	IAmb		05 37 51.9	
	comp=Z,12nm,0.9s							
GEC2	**GERESS Array S**	**85.05**	**322**	*e*P		**P**	**05 37 40.1**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=57,slow=5.0							
GERES	**GERESS Array B**	**85.05**	**322**	P		**P**	**05 37 40.0**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=54,slow=2.3,SNR=11							
	comp=Z,1.7nm,0.7s							
GERES	**GERESS Array B**	**85.05**	**322**	P		**P**	**05 37 39.5**	**-0.3**
GERES	**GERESS Array B**	**85.05**	**322**	P		**P**	**05 37 39.5**	**-0.3**
CLZ	**Clausthal**	**85.22**	**326**	*e*P		**P**	**05 37 41.1**	**+0.6**
	comp=Z,31nm,1.1s,baz=57,slow=5.0							
CLZ				*e*S	P	**pwP**	**05 37 52.2**	**+0.2**
MOX	**Moxa**	**85.23**	**324**	*e*P		**P**	**05 37 40.4**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=57,slow=5.0							
MOX				*e*S	P	**pwP**	**05 37 51.5**	**-0.5**
MOX				*e*L	L		06 20 25.9	
	comp=Z,412nm,18.2s							
RETH	**Rethem/Aller,**	**85.23**	**327**	*e*P		**P**	**05 37 40.9**	**+0.5**
	comp=Z,22nm,1.6s,baz=57,slow=5.0							
RETH				*e*S	P	**pwP**	**05 37 51.8**	**-0.1**
MOA	**Molln**	**85.25**	**321**	*i* P		**P**	**05 37 41.4**	**+0.7**
	comp=Z,12nm,0.8s,SNR=5.8							
WET	**Wettzell**	**85.35**	**322**	*e*P		**P**	**05 37 41.4**	**+0.2**
	comp=Z,2.5nm,1.0s,baz=57,slow=5.0							
ROTZ	**Rotzenmuhle**	**85.39**	**323**	*e*P		**P**	**05 37 42.1**	**+0.8**
	comp=Z,1.5nm,1.2s,baz=57,slow=5.0							
SOKA	**Soboth**	**85.40**	**320**	*i* P		**P**	**05 37 42.1**	**+0.5**
	comp=Z,10nm,0.8s,SNR=5.4							
SESA	**Seetaler Alpe,**	**85.45**	**320**	*i* P		**P**	**05 37 42.4**	**+0.4**
	SNR=7.8							
GTTG	**Gottingen**	**85.60**	**326**	*e*P		**P**	**05 37 42.9**	**+0.6**
	comp=Z,6.3nm,1.0s,baz=57,slow=5.0							
GTTG				*e*S	P	**pwP**	**05 37 54.3**	**+0.5**
OBKA	**Obir**	**85.78**	**320**	*i* PcP		**P**	**05 37 44.5**	**+1.0**
	comp=Z,6.5nm,0.6s							
RAR	**Rarotonga**	**85.81**	**115**	LR	LR		06 15 53.5	
	comp=Z,53nm,18.6s,baz=306,slow=36							
GRF	**Grafenberg Arr**	**85.96**	**324**	*e*L	L		06 20 31.2	
	comp=Z,348nm,18.3s							
RJOB	**Jochberg**	**86.15**	**321**	*e*P		**P**	**05 37 46.9**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=57,slow=5.0							
KBA	**Koelnbreinsper**	**86.18**	**321**	*e*PcP		**P**	**05 37 46.6**	**+1.0**
	comp=Z,6.0nm,1.0s							
MYKA	**Terra Mystica**	**86.25**	**320**	*e*PcP		**PcP**	**05 37 47.9**	**-0.4**
	comp=Z,3.3nm,0.8s							
IBBN	**Ibbenburen**	**86.28**	**327**	*e*P		**P**	**05 37 45.9**	**+0.3**
	comp=Z,22nm,1.2s,baz=57,slow=5.0							
IBBN				*e*S	P	**pwP**	**05 37 57.4**	**+0.2**
LESA	**Schwarzleotal**	**86.38**	**321**	*i* PcP		**P**	**05 37 47.6**	**+1.2**
	comp=Z,7.8nm,0.8s							
KASTN	**Kahler Asten**	**86.59**	**326**	*e*P		**P**	**05 37 48.2**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=57,slow=5.0							
KASTN				*e*S	P	**pwP**	**05 37 58.8**	**0.0**
ABTA	**Abfaltersbach**	**86.84**	**321**	*e*P		**P**	**05 37 49.0**	**+0.3**
	comp=Z,4.9nm,0.9s							
BUG	**Bochum--Univer**	**87.03**	**326**	*e*P		**P**	**05 37 49.9**	**+0.5**
	comp=Z,8.6nm,0.5s,baz=57,slow=5.0							
BUG				*e*S	P	**pwP**	**05 38 01.0**	**+0.1**
WATA	**Walderalm**	**87.06**	**321**	*e*PcP		**PcP**	**05 37 50.9**	**-1.0**
	comp=Z,4.4nm,0.5s							
WTTA	**Wattenberg**	**87.06**	**321**	*i* P		**P**	**05 37 50.0**	**+0.1**
	comp=Z,12nm,1.2s							
TNS	**Taunus Mts**	**87.14**	**325**	*e*P		**P**	**05 37 51.8**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=57,slow=5.0							
MOTA	**Moosalm**	**87.32**	**322**	*i* P		**P**	**05 37 50.3**	**-0.8**
	comp=Z,8.5nm,1.0s							
SQTA	**Sankt Quirin**	**87.33**	**321**	*i* P		**P**	**05 37 50.9**	**-0.2**
	comp=Z,7.9nm,1.0s							
RETA	**Reutte**	**87.44**	**322**	*e*PcP		**P**	**05 37 52.1**	**+0.5**
	comp=Z,3.2nm,0.7s							
EDM	**Edmonton**	**87.62**	**31**	IAmb	IAmb		05 38 08.3	
	comp=Z,15nm,1.0s							
FETA	**Feichten**	**87.71**	**321**	*e*PcP		**P**	**05 37 53.2**	**+0.2**
	comp=Z,3.5nm,1.0s							
DAVA	**Damuels**	**88.05**	**322**	*i* P		**P**	**05 37 54.3**	**-0.3**
	comp=Z,4.0nm,0.5s							
BFO	**Black Forest**	**88.30**	**323**	*e*P		**P**	**05 37 55.5**	**-0.1**
	comp=Z,2.7nm,1.1s,baz=57,slow=5.0							
TUE	**Stuetta**	**88.81**	**322**	IAmb	IAmb		05 38 10.7	
	comp=Z,20nm,1.4s							
EKA	**Eskdalemuir Ar**	**89.28**	**333**	P		**P**	**05 38 01.1**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=46,slow=4.8,SNR=4.2							
	comp=Z,0.8nm,0.6s							
FFC	**Flin Flon**	**91.47**	**25**	P		**P**	**05 38 10.8**	**+0.6**
FFC				pmax	pmax			
	comp=Z,11nm,1.2s							
FFC	**Flin Flon**	**91.47**	**25**	P		**P**	**05 38 10.8**	**+0.6**
FFC				IAmb	IAmb		05 38 25.1	
	comp=Z,11nm,1.1s							
FRB	**Frobisher Bay**	**91.55**	**6**	LR	LR		06 22 02.3	
	comp=Z,123nm,19.4s,baz=20,slow=37							
PPT	**Papeete**	**92.86**	**108**	LR	LR		06 13 51.9	
	comp=Z,44nm,19.5s,baz=296,slow=32							
PPT2	**Papeete2**	**92.87**	**108**	*e*LR	LR		06 07 50.9	
PPT2	comp=Z,136nm,35.0s							
				*e*LR	LR		06 08 01.7	
	comp=Z,234nm,30.5s							
DLMT	**Dillon**	**92.97**	**37**	IAmb	IAmb		05 38 32.4	
	comp=Z,16nm,1.4s							
HLID	**Hailey**	**93.08**	**39**	IAmb	IAmb		05 38 33.5	
	comp=Z,9.2nm,1.3s							
NVAR	**Mina Array Bea**	**93.76**	**45**	P		**P**	**05 38 23.2**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=313,slow=5.9,SNR=2.6							
	comp=Z,0.3nm,0.5s							
PDAR	**Pinedale Array**	**96.32**	**37**	P		**P**	**05 38 33.1**	**0.0**
	comp=Z,0.1nm,0.5s,baz=321,slow=6.3,SNR=1.8							
	comp=Z,0.1nm,0.5s							
TAOE	**Nuku Hiva Isla**	**97.77**	**96**	*e*LR	LR		06 10 19.8	
	comp=Z,126nm,27.2s							

*BER **20** 05:25:29.0±2.4, 82°.30N×5°.57W, h10km, Mw3.7, ML1.9(DNK), Confirmed Earthquake*
*DNK **20** 05:25:30.1±2.6, 82°.43N×5°.16W, h36km±24km, ML1.9, Presumed earthquake*

ISC 20 05:25:26.8±2.0, **82°.2N**±0°.1×**5°.61W**±0°.05, **h10**km, **n14,**
σ1°**91**/20, **1C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.67**	**256**	*i* P	**Pn**	**05 25 56.6**	**+0.6**
NOR				*e*S	**Sn**	**05 26 16.1**	**-1.4**
NOR				IAMLHF		05 26 19.0	
	comp=Z,12nm,0.2s						
NOR	**Nord**	**1.67**	**256**	*e*P	**Pn**	**05 25 57.1**	**+1.1**
NOR				*i* S	**Sn**	**05 26 16.6**	**-0.9**
NOR				IAML		05 26 18.2	
	comp=Z,44nm,0.4s						
KBS	**Kingsbay**	**4.33**	**129**	*e*P	**Pn**	**05 26 34.0**	**+1.5**
KBS				IAML		05 26 36.7	
	comp=Z,3.9nm,0.7s						
KBS				*e*S	**Sn**	**05 27 20.0**	**-2.9**
KBS	**Kingsbay**	**4.33**	**129**	*i* P	**Pn**	**05 26 34.0**	**+1.5**
KBS				*i* S	**Sn**	**05 27 20.7**	**-2.2**
BRBB	**Barentsburg B**	**5.28**	**130**	*e*P	**Pn**	**05 26 47.4**	**+1.8**
SPA0	**Spitsbergen Ar**	**5.44**	**126**	*e*P	**Pn**	**05 26 49.2**	**+1.4**
SPA0				IAML		05 26 56.8	
	comp=Z,3.7nm,0.3s						
SPA0				*e*S	**Sn**	**05 27 47.6**	**-2.7**
DAG	**Danmarks Havn**	**5.90**	**210**	*e*P	**Pn**	**05 26 56.6**	**+2.6**
DAG				*e*S	**Sn**	**05 28 00.4**	**-1.2**
DAG				IAMLHF		05 28 05.0	
	comp=Z,2.0nm,0.2s						
DAG	**Danmarks Havn**	**5.90**	**210**	*e*P	**Pn**	**05 26 56.1**	**+2.0**
DAG				*i* S	**Sn**	**05 28 00.2**	**-1.4**
DAG				IAML		05 28 06.6	
	comp=Z,3.0nm,0.3s						
HSPB	**Hornsund (broa**	**6.38**	**133**	*e*P	**Pn**	**05 27 03.1**	**+2.4**
HSPB				IAML		05 27 04.8	
	comp=Z,3.3nm,0.4s						
DBG	**Daneborg**	**8.39**	**208**	*e*P	**Pn**	**05 27 29.1**	**+0.9**
DBG				*e*S	Sn	05 28 56.5	-6.3
DBG				IAMLHF		05 29 06.8	
	comp=Z,0.3nm,0.2s						
DBG	**Daneborg**	**8.39**	**208**	*i* P	**Pn**	**05 27 30.0**	**+1.7**
DBG				*i* S	Sn	05 28 58.0	-4.9
DBG				IAML		05 29 06.7	
	comp=Z,1.8nm,0.3s						
NEEM	**North Greenlan**	**9.03**	**263**	*i* P	**Pn**	**05 27 35.3**	**-2.0**
NEEM				*i* S	Sn	05 29 09.0	-10
NEEM				IAML		05 29 15.1	
	comp=Z,2.4nm,0.3s						
SUMG	**Summit**	**11.69**	**234**	*i* P	**Pn**	**05 28 13.2**	**-0.6**
SUMG				*i* S	Sn	05 30 14.1	-10
SUMG				IAML		05 30 26.0	
	comp=Z,1.7nm,0.5s						
TULEG	**Thule**	**12.19**	**278**	*i* P	Pn	05 28 16.5	-3.6

*IDC **20** 05:32:32.3±0.8, 6°.04N×126°.72E, h0km, mb4.0/9, mbtmp4.0/9, MS3.5/2, Error ellipse: s-maj=48.1km s-min=15.5km az=61.0*
*NEIC **20** 05:32:34.7±1.9, 5°.98N±0°.07×126°.5E±0°.1, h10km±1km, mb4.4/10, Error ellipse: s-maj=23.0km s-min=10.8km az=71.0*
*MAN **20** 05:32:38.0, 6°.09N×126°.19E, h6km, MS3.9*
*DJA **20** 05:32:40.4±1.0, 6°.N±7°.×12°.6E±°, h10km, M4.6/6, mB5.1/4, mb4.8/6, MLv4.5/6, Mw(mB)4.4/4*

ISC 20 05:32:37.5±1.2, **5°.94N**±0°.04×**126°.40E**±0°.06, **h34**km±3km,
n46, σ1°**79**/46, **mb4.3**/14, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.39**	**324**	Pn	**Pb**	**05 33 02.0**	**-1.0**
	110nm,0.3s,baz=37,slow=2.5,SNR=7.1						
DAV				Sn	**Sb**	**05 33 24.2**	**+3.7**
	118nm,0.3s,baz=238,slow=20,SNR=8.1						
DAV	**Davao City (W)**	**1.39**	**324**		**Pb**	**05 33 01.6**	**-1.5**
DMPH	**Davao City--Mi**	**1.44**	**322**	*i* P	**Pb**	**05 33 02.6**	**-1.4**
DMPH				*i* S	**Sb**	**05 33 26.9**	**+4.9**
GSPH	**General Santos**	**1.45**	**276**	*i* P	**Pn**	**05 32 58.4**	**-3.1**
GSPH				*i* S	**Sn**	**05 33 16.5**	**-2.9**
KCP	**Kidapawan**	**1.68**	**309**	*i* P	**Pn**	**05 33 05.1**	**+0.5**
KCP				*i* S	Sb	05 33 39.0	+10
CDOP	**Cateel, Davao**	**1.83**	**1**	*e*P	**Pb**	**05 33 08.3**	**-2.2**
CDOP				*e*S	**Sb**	**05 33 34.3**	**+1.2**
BIPH	**Bislig**	**2.23**	**359**	*e*P	**Pb**	**05 33 15.0**	**-2.2**
BIPH				*e*S	**Sb**	**05 33 47.3**	**+2.7**
SGSI	**Sangihe**	**2.40**	**201**	P	**Pn**	**05 33 14.6**	**+0.2**
SGSI				S	**Sn**	**05 33 44.7**	**+2.0**
CTBH	**Cotabato--PC H**	**2.49**	**301**	*i* P	**Pb**	**05 33 18.7**	**-3.0**
CGP	**Cagayan de Oro**	**3.02**	**326**	*e*P	**Pb**	**05 33 32.0**	**+1.3**
CGP				*e*S	**Sb**	**05 34 09.9**	**+2.7**
TSSP	**Tandag City**	**3.09**	**356**	*e*P	**Pb**	**05 33 27.8**	**-4.1**
TSSP				*e*S	**Sn**	**05 34 02.4**	**+2.6**
SCPH	**Surigao**	**3.92**	**347**	*e*P	Pb	05 33 40.7	-5.4
SCPH				*e*S	**Sb**	**05 34 33.0**	**-0.2**
LLP	**Lapu-Lapu**	**4.97**	**331**	*e*P	Pb	05 33 56.0	-8.0
LLP				*i* S	**Sb**	**05 35 03.3**	**0.0**
TNTI	**Ternate**	**5.22**	**169**	Pn	**Pn**	**05 33 52.8**	**-0.5**
PLP	**Palo**	**5.38**	**345**	*e*P	Pn	05 34 00.6	+5.1
GTOI	**Gorontalo**	**6.26**	**213**	P	**Pn**	**05 34 07.6**	**+0.1**
TOLI2	**Tolitoli**	**7.38**	**230**	Pn	**Pn**	**05 34 22.8**	**-0.1**
LUWI	**Luwuk**	**7.82**	**208**	Pn	**Pn**	**05 34 29.9**	**+0.9**
MYLDM	**Lahad Datu**	**7.90**	**265**	Pn	**Pn**	**05 34 30.4**	**+0.3**
MTN	**Manton Dam**	**19.24**	**166**	P	**P**	**05 36 58.8**	**-0.3**
MTN				IAmb	IAmb	05 37 00.2	
	comp=Z,6.0nm,1.1s						
KNRA	**Kununurra**	**21.60**	**174**	P	**P**	**05 37 25.6**	**+0.9**
KNRA				IAmb	IAmb	05 37 26.7	
	comp=Z,27nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.89**	**182**	P	**P**	**05 37 47.4**	**-0.9**
WB0	**Warramunga Arr**	**26.73**	**163**	P	**P**	**05 38 14.1**	**+0.1**
WB0				IAmb	IAmb	05 38 44.9	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**26.88**	**163**	P	**P**	**05 38 15.5**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=343,slow=10.0,SNR=7.4						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**26.88**	**163**	P	**P**	**05 38 15.1**	**-0.3**
WR8	**Warramunga Arr**	**26.94**	**163**	P	**P**	**05 38 14.7**	**-1.3**
WR8				IAmb	IAmb	05 38 42.3	
	comp=Z,6.5nm,1.1s						
ASAR	**Alice Springs**	**30.32**	**166**	P	**P**	**05 38 46.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=340,slow=7.0,SNR=6.1						
	comp=Z,0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**32.32**	**18**	LR	LR	05 51 40.8	
	comp=Z,71nm,21.6s,baz=188,slow=36						
FORT	**Forrest**	**36.54**	**178**	P	**P**	**05 39 39.6**	**-0.5**
FORT				IAmb	IAmb	05 40 21.4	
	comp=Z,7.3nm,1.0s						
BBOO	**Buckleboo**	**39.61**	**167**	P	**P**	**05 40 06.3**	**+0.3**
BBOO				IAmb	IAmb	05 40 45.6	
	comp=Z,24nm,1.4s						
STKA	**Stephens Creek**	**40.30**	**160**	P	**P**	**05 40 11.3**	**-0.4**
	comp=Z,5.6nm,1.1s,baz=322,slow=7.2,SNR=3.8						
STKA				LR	LR	05 58 29.1	
	comp=Z,98nm,20.9s,baz=353,slow=39						
	comp=Z,5.6nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**41.19**	**69**	T	T	06 24 08.9	
	baz=258,slow=75,SNR=56						
H11S1	**WAKE ISLAND Hy**	**41.21**	**69**	T	T	06 24 08.3	
	baz=258,slow=75,SNR=59						
H11S2	**WAKE ISLAND Hy**	**41.21**	**69**	T	T	06 24 07.2	
	baz=258,slow=75,SNR=104						
H11N1	**WAKE ISLAND Hy**	**41.66**	**67**	T	T	06 24 46.7	
	baz=255,slow=75,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**41.66**	**67**	T	T	06 24 46.7	
	baz=255,slow=75,SNR=7.5						
H11N3	**WAKE ISLAND Hy**	**41.67**	**67**	T	T	06 24 47.4	
	baz=255,slow=75,SNR=9.1						
MKAR	**Makanchi Array**	**55.57**	**325**	P	**P**	**05 42 08.8**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=118,slow=6.8,SNR=2.1						
	comp=Z,0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**59.72**	**327**	P	**P**	**05 42 39.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=127,slow=7.1,SNR=5.9						
	comp=Z,0.8nm,0.3s						
C23K	**Itkillik River**	**82.04**	**20**	P	**P**	**05 44 54.3**	**+0.4**
ILAR	**Eielson Array**	**83.26**	**26**	P	**P**	**05 45 00.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=246,slow=4.4,SNR=5.3						
	comp=Z,0.2nm,0.6s						
G29M	**Pine Creek**	**86.77**	**23**	P	**P**	**05 45 19.1**	**+1.0**
SPITS	**Spitsbergen Ar**	**88.26**	**349**	P	**P**	**05 45 25.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=65,slow=5.3,SNR=5.1						
	comp=Z,0.6nm,0.4s						
ARCES	**ARCESS Array B**	**88.28**	**340**	P	**P**	**05 45 25.4**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=84,slow=5.6,SNR=15						
	comp=Z,0.6nm,0.4s						
FINES	**FINESS Array B**	**89.75**	**332**	P	**P**	**05 45 31.8**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=87,slow=4.2,SNR=5.8						
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**89.75**	**332**	P	**P**	**05 45 31.6**	**-0.6**

*JMA **20** 05:42:31.7±0.2, 24°.N±1°.×125°.3E±0°.7, h39km±4km, MV3.2/10, NEAR MIYAKOJIMA ISLAND*

ISC 20 05:42:30.9±2.3, **24°.3N**±0°.1×**125°.3E**±0°.1, **h29**km±15km, **n16,**
σ1°**01**/25, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.44**	**4**	*i* P	**Pn**	**05 42 41.4**	**+0.1**
JMJ2				S	**Sn**	**05 42 48.8**	**+0.4**
JOGS	**Gusukube**	**0.47**	**12**	*i* P	**Pn**	**05 42 42.1**	**+0.3**
JOGS				S	**Sn**	**05 42 49.9**	**+0.8**
JMJ	**Miyako jima 2**	**0.52**	**360**	P	**Pn**	**05 42 41.5**	**-0.8**
JIRJ	**Irabujima**	**0.54**	**350**	P	**Pn**	**05 42 42.6**	**-0.1**
JIRJ				*e*S	**Sn**	**05 42 50.5**	**-0.3**
JIKM	**Ikemajima**	**0.62**	**356**	P	**Pn**	**05 42 43.9**	**+0.1**
JIKM				*e*S	**Sn**	**05 42 53.2**	**+0.3**
JTJ	**Tarama**	**0.64**	**302**	*i* P	**Pn**	**05 42 43.6**	**-0.4**
JTJ				*e*S	**Sn**	**05 42 52.4**	**-0.8**
JISG	**Ishigakijimahi**	**0.94**	**288**	*e*P	**Pb**	**05 42 47.9**	**-0.8**
JISG				*e*S	**Sn**	**05 43 00.1**	**-0.6**
JIJ	**Ishigaki jima**	**1.05**	**274**	P	**Pb**	**05 42 50.1**	**-0.3**
JIJ				*e*S	**Sn**	**05 43 03.6**	**+0.2**
JKRS	**Kuro-shima**	**1.18**	**267**	*e*P	**Pb**	**05 42 52.5**	**0.0**
JKRS				*e*S	**Sb**	**05 43 08.9**	**+1.5**
HATJ	**Hateruma jima**	**1.38**	**260**	*e*P	**Pn**	**05 42 54.6**	**+0.4**
HATJ				*e*S	**Sn**	**05 43 11.5**	**-0.1**
YOJ	**Yonaguni jima**	**2.09**	**275**	P	**Pb**	**05 43 06.2**	**-1.9**
NACB	**Ninganchiao**	**3.38**	**269**	P	**Pn**	**05 43 21.8**	**+0.1**
YHNB	**Yeheng**	**3.59**	**277**	P	**Pn**	**05 43 27.5**	**+2.8**
YULB	**Yu-li**	**3.77**	**257**	P	**Pn**	**05 43 26.3**	**-0.8**
TWGBT	**Beinan**	**4.14**	**250**	P	**Pn**	**05 43 31.1**	**-1.1**
TPUB	**Ta-pu**	**4.39**	**258**	P	**Pn**	**05 43 37.1**	**+1.5**

*IDC **20** 05:43:10.2±1.6, 37°.32N×20°.63E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=42.9km s-min=28.1km az=118.0*
*ATH **20** 05:43:11.3, 37°.18N×20°.27E, h9km±2km, ML3.5/13, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **20** 05:43:14.3, 37°.N±2°.×2°.0E±°, h0km±1km, M3.4/29, MLh3.4/29*

ISC 20 05:43:12.7±1.6, **37°.29N**±0°.04×**20°.36E**±0°.05, **h12**km±9km,
n67, σ0°**98**/89, **mb3.5**/5, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.56**	**42**	P	**Pb**	**05 43 24.7**	**+0.2**
LTHK				S	**Sb**	**05 43 32.5**	**+0.1**
LTHK	**Lithakia**	**0.56**	**42**	P	**Pb**	**05 43 25.3**	**+0.8**
LTHK				S	**Sb**	**05 43 34.4**	**+1.9**
ORTH	**Orthonies,Zaky**	**0.62**	**26**	P	**Pb**	**05 43 26.1**	**+0.6**
ORTH	**Orthonies,Zaky**	**0.62**	**26**	P	**Pb**	**05 43 26.2**	**+0.8**
ORTH				S	**Sn**	**05 43 36.1**	**-1.1**
KYPS	**Kipseli, Zakin**	**0.64**	**35**	P	**Pb**	**05 43 26.4**	**+0.6**
KYPS				S	**Sn**	**05 43 36.7**	**-1.0**
RTZL	**Ratzakli, Kefa**	**0.85**	**23**	P	**Pn**	**05 43 29.9**	**-0.5**
RTZL				S	**Sn**	**05 43 42.4**	**-0.3**
RTZL	**Ratzakli, Kefa**	**0.85**	**23**	P	**Pn**	**05 43 29.9**	**-0.5**
RTZL				S	**Sn**	**05 43 42.7**	**0.0**
CLEM	**Kyllini,Ilia,G**	**0.86**	**46**	P	**Pn**	**05 43 30.2**	**-0.4**
CLEM				S	**Sn**	**05 43 43.2**	**+0.2**
ARG2	**Argostoli**	**0.89**	**7**	P	**Pg**	**05 43 29.3**	**-0.6**
ARG2	**Argostoli**	**0.89**	**7**	P	**Pn**	**05 43 30.7**	**-0.3**
VLS	**Valsamata**	**0.90**	**12**	P	**Pn**	**05 43 30.7**	**-0.5**
VLS				S	**Sn**	**05 43 44.5**	**+0.3**
VLS	**Valsamata**	**0.90**	**12**	P	**Pn**	**05 43 30.9**	**-0.3**
VLS				S	**Sn**	**05 43 44.6**	**+0.4**
DMLN	**Damoulianata-K**	**0.94**	**1**	P	**Pg**	**05 43 29.6**	**-1.4**
DMLN	**Damoulianata-K**	**0.94**	**1**	P	**Pn**	**05 43 31.8**	**0.0**
DMLN				S	**Sn**	**05 43 45.3**	**+0.1**
AMT	**Artemida-Makis**	**1.10**	**77**	P	**Pb**	**05 43 34.2**	**+0.5**
AMT	**Artemida-Makis**	**1.10**	**77**	P	**Pb**	**05 43 34.2**	**+0.5**
VSK1	**VASILIKIADES**	**1.12**	**8**	P	**Pn**	**05 43 35.3**	**+1.0**
PYL1	**Pylos**	**1.13**	**109**	P	**Pb**	**05 43 33.9**	**-0.3**
RLS	**Riolos of Patr**	**1.16**	**49**	P	**Pn**	**05 43 35.1**	**+0.3**
RLS	**Riolos of Patr**	**1.16**	**49**	P	**Pn**	**05 43 35.4**	**+0.6**
RLS				S	**Sn**	**05 43 52.2**	**+1.6**
FSK	**Fiskardo**	**1.18**	**8**	P	**Pn**	**05 43 36.0**	**+1.1**
FSK	**Fiskardo**	**1.18**	**8**	P	**Pn**	**05 43 35.6**	**+0.7**
PYL	**PYLOS**	**1.18**	**109**	P	**Pn**	**05 43 34.9**	**0.0**
PYL				S	**Sb**	**05 43 50.5**	**+0.4**
PYL	**PYLOS**	**1.18**	**109**	P	**Pn**	**05 43 34.4**	**-0.5**
PYL				S	**Sb**	**05 43 50.2**	**+0.1**
AXS	**Araxos**	**1.21**	**42**	P	**Pg**	**05 43 36.1**	**+0.2**
ITM	**Ithomi**	**1.26**	**95**	P	**Pn**	**05 43 36.5**	**+0.4**
ITM				S	**Sb**	**05 43 52.9**	**+0.5**
ITM	**Ithomi**	**1.26**	**95**	P	**Pn**	**05 43 36.3**	**+0.2**
DRO	**Drossia**	**1.26**	**58**	P	**Pg**	**05 43 37.0**	**0.0**
DRO	**Drossia**	**1.26**	**58**	P	**Pb**	**05 43 36.7**	**+0.3**
VALY	**Valyra**	**1.30**	**95**	P

IRNE					S		Sg	05 46 34.2	-1.1
IKAS	**Kald??rsel**	**0.22**	**62**		P		Pg	05 46 32.3	-0.2
IKAS					S		Sg	05 46 36.2	+0.6
IVOS	**Vogsosar**	**0.27**	**105**		P		Pg	05 46 32.9	-0.6
IVOS					S		Sg	05 46 37.2	+0.2
IEDA	**Engidalur**	**0.43**	**68**		P		Pg	05 46 35.8	-0.7
IEDA					S		Sg	05 46 42.0	-0.1
IBJA	**Bjarnastaoir**	**0.44**	**86**		P		Pg	05 46 35.9	-0.7
IBJA					S		Sg	05 46 42.4	0.0
IMOR	**Morastadir**	**0.45**	**32**		P		Pg	05 46 36.0	-0.9
IMOR					S		Sg	05 46 42.4	-0.4
IHEI	**Heioarbar**	**0.54**	**59**		P		Pg	05 46 37.6	-1.0
IHEI					S		Sg	05 46 45.5	-0.2
IKRO	**Krokur**	**0.55**	**71**		P		Pg	05 46 37.6	-1.1
IKRO					S		Sg	05 46 46.0	+0.2
ISOL	**Solvholt**	**0.59**	**89**		P		Pg	05 46 38.3	-1.3
ISOL					S		Sg	05 46 46.7	-0.7
IASM	**Asmuli**	**0.75**	**96**		P		Pg	05 46 40.8	-1.7
IASM					S		Sg	05 46 51.2	-1.0
ISAU	**Saurbar**	**0.83**	**84**		P		Pg	05 46 42.3	-1.8
ISAU					S		Sg	05 46 53.9	-1.0
BORG	**Borgarnes**	**0.93**	**26**		Pg		Pg	05 46 43.4	-2.5
	221nm,0.3s,baz=200,slow=11,SNR=76								
BORG					Lg		Lg	05 46 56.7	
	1μm,0.3s,baz=24,slow=19,SNR=93								
BORG	**Borgarnes**	**0.93**	**26**		Pg		**Pg**	**05 46 43.4**	**-2.5**
BORG					Sg		**Sg**	**05 46 56.2**	**-1.8**
IASB	**sbjarnarstai**	**0.93**	**26**		P		**Pg**	**05 46 43.9**	**-2.1**
IASB					S		**Sg**	**05 46 56.8**	**-1.2**
IGYG	**Gygjarholskot**	**0.98**	**68**		P		**Pg**	**05 46 44.6**	**-2.3**
IGYG					S		**Sg**	**05 46 58.2**	**-1.4**
IVES	**Vestmannaeyjar**	**1.01**	**117**		P		**Pg**	**05 46 44.7**	**-2.8**
IVES					S		**Sg**	**05 46 58.0**	**-2.8**
IHAU	**Haukadalur**	**1.03**	**86**		P		**Pg**	**05 46 45.5**	**-2.3**
IHAU					S		**Sg**	**05 46 59.6**	**-1.5**
IVEY	**Vestmannaeyjar**	**1.03**	**118**		P		**Pg**	**05 46 44.9**	**-2.9**
IVEY					S		**Sg**	**05 46 58.5**	**-2.7**
IBEY	**Bjarnarey**	**1.05**	**116**		P		**Pg**	**05 46 45.2**	**-3.0**
IBEY					S		**Sg**	**05 46 59.0**	**-2.8**
SOEG	**Soedalen**	**5.67**	**323**	*eP*			**Pn**	**05 47 51.2**	**-1.1**
SOEG				*i* S			**Sn**	**05 48 53.0**	**-4.3**
SOEG					IAML			05 49 31.0	
	comp=Z,115nm,1.0s								
SCO	**Scoresbysund**	**6.59**	**1**		Pn		**Pn**	**05 48 05.3**	**+0.3**
SCO	**Scoresbysund**	**6.59**	**1**	*eP*			**Pn**	**05 48 05.8**	**+0.8**
SCO				*i* S			**Sn**	**05 49 17.5**	**-2.6**
SCO					IAML			05 49 53.9	
	comp=Z,32nm,1.0s								
ANGG	**Ammassalik, Gr**	**6.78**	**291**		Pn		**Pn**	**05 48 07.2**	**-0.3**
ANGG	**Ammassalik, Gr**	**6.78**	**291**	*i* P			Pn	05 48 12.9	+5.5
SUMG	**Summit**	**10.50**	**333**		Pn		**Pn**	**05 48 57.3**	**-1.6**
SUMG	**Summit**	**10.50**	**333**	*i* P			**Pn**	**05 48 58.6**	**-0.3**
SFJD	**Kangerlussuaq**	**12.11**	**297**		LR		LR	05 53 25.8	
	comp=Z,164nm,19.0s,baz=94,slow=35								
ESK	**Eskdalemuir**	**12.89**	**123**		Pn		**Pn**	**05 49 32.8**	**+1.5**
EKA	**Eskdalemuir Ar**	**12.90**	**123**		Pn		**Pn**	**05 49 32.7**	**+1.4**
	baz=318,slow=12								
	comp=Z,1.8nm,0.6s								
HFS	**Hagfors**	**17.14**	**86**		LR		LR	05 57 12.7	
	comp=Z,47nm,18.0s,baz=273,slow=38								
ARCES	**ARCESS Array B**	**19.24**	**52**		P		**Pn**	**05 50 53.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=276,slow=11,SNR=4.3								
	comp=Z,1.6nm,0.9s								
FRB	**Frobisher Bay**	**20.06**	**290**		LR		LR	05 57 48.0	
	comp=Z,84nm,19.3s,baz=138,slow=34								
FIA1	**FINESS Array S**	**21.91**	**74**		P		**P**	**05 51 20.8**	**-0.3**
FIA1					IAmb		IAmb	05 51 24.3	
	comp=Z,17nm,1.4s								
FINES	**FINESS Array B**	**21.91**	**74**		P		**P**	**05 51 21.5**	**+0.4**
	comp=Z,2.8nm,1.0s,baz=297,slow=8.4,SNR=5.6								
	comp=Z,2.8nm,1.0s								
FINES	**FINESS Array B**	**21.91**	**74**				**P**	**05 51 21.7**	**+0.7**
CLL	**Collm**	**22.37**	**108**	*eS*			**S**	**05 55 32.0**	**+0.3**
ECH	**Echery**	**22.44**	**121**		P		**P**	**05 51 27.8**	**+0.8**
ECH					IAmb		IAmb	05 51 34.5	
	comp=Z,7.5nm,1.1s								
BFO	**Black Forest**	**22.80**	**119**		P		**P**	**05 51 31.3**	**+0.6**
BFO					IAmb		IAmb	05 51 35.2	
	comp=Z,5.5nm,1.0s								
SCHQ	**Schefferville**	**23.95**	**269**		P		**P**	**05 51 41.8**	**-0.4**
GERES	**GERESS Array B**	**24.54**	**111**		P		**P**	**05 51 50.5**	**+2.7**
	comp=Z,0.1nm,0.4s,baz=323,slow=8.5,SNR=1.1								
GERES					LR		LR	06 01 33.2	
	comp=Z,50nm,18.7s,baz=293,slow=37								
	comp=Z,0.1nm,0.4s								
DAVOX	**Davos/Dischmat**	**24.67**	**119**		LR		LR	06 01 12.1	
	comp=Z,79nm,18.8s,baz=283,slow=36								
CEST	**Esterri de Car**	**25.30**	**136**		P		**P**	**05 51 56.5**	**+1.8**
CEST					IAmb		IAmb	05 52 03.7	
	comp=Z,6.2nm,1.0s								
MORC	**Moravsky Berou**	**25.44**	**105**		P		**P**	**05 51 56.2**	**+0.3**
MORC					IAmb		IAmb	05 51 59.4	
	comp=Z,5.0nm,1.1s								
CTI	**Castel Tesino**	**25.96**	**117**		P		**P**	**05 52 00.5**	**-0.2**
PRED	**Cave del Predi**	**26.40**	**114**		P		**P**	**05 52 05.4**	**+0.8**
PRED					IAmb		IAmb	05 52 08.7	
	comp=Z,2.8nm,0.8s								
ESDC	**Sonseca Array**	**26.59**	**147**		P		**P**	**05 52 09.4**	**+3.0**
	comp=Z,0.7nm,0.7s,baz=339,slow=10,SNR=5.7								
ESDC					LR		LR	06 01 46.4	
	comp=Z,59nm,18.6s,baz=324,slow=34								
	comp=Z,0.7nm,0.7s								
MDT	**Midelt**	**33.03**	**152**		LR		LR	06 05 40.2	
	comp=Z,36nm,18.7s,baz=358,slow=35								
YKA	**Yellowknife Ar**	**38.17**	**311**		LR		LR	06 09 12.9	
	comp=Z,106nm,18.7s,baz=344,slow=36								
D25K	**Kavik River**	**41.36**	**334**		P		**P**	**05 54 14.0**	**+0.2**
F20K	**Avaraart Lake**	**45.09**	**336**		P		**P**	**05 54 44.7**	**+0.9**
F20K					IAmb		IAmb	05 54 47.4	
	comp=Z,3.2nm,0.9s								
ILAR	**Eielson Array**	**45.34**	**330**		P		**P**	**05 54 46.4**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=33,slow=8.7,SNR=3.9								
	comp=Z,0.5nm,0.9s								
BCAR	**Beaver Creek A**	**45.61**	**326**		P		**P**	**05 54 49.0**	**+1.0**
S39A	**Bolivar**	**48.69**	**273**		P		**P**	**05 55 12.6**	**+0.3**
BBB	**Bella Bella**	**50.75**	**310**		LR		LR	06 15 24.5	
	comp=Z,68nm,18.7s,baz=300,slow=34								
PDAR	**Pinedale Array**	**51.51**	**290**		P		**P**	**05 55 34.0**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=65,slow=6.1,SNR=7.5								
	comp=Z,0.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**53.41**	**150**		P		**P**	**05 55 49.2**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=351,slow=8.2,SNR=2.6								
	comp=Z,0.5nm,0.8s								
ELK	**Elko**	**55.53**	**293**		P		**P**	**05 56 04.7**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=15,slow=6.3,SNR=5.5								
	comp=Z,1.1nm,0.8s								
HHC	**Hu-ho-hao-te**	**69.38**	**36**	*eP*			**P**	**05 57 34.4**	**-1.5**
HHC					pmax		pmax		
	comp=Z,12nm,0.6s								
HHC					pmax		pmax		
	comp=Z,48nm,4.8s								
USRK	**Ussuriysk Ar.**	**70.32**	**19**		LR		LR	06 30 26.1	
	comp=Z,58nm,18.2s,baz=178,slow=38								

ASRS ***20*** *05:59:58.0±1.2,54.°15N×86.°52E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 06:00:02.5±2.6,54.°11N×86.°38E,h0km,mbtmp2.7/2, ML2.6/2,1C-2D,Error ellipse: s-maj=20.6km s-min=13.0km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**261**	I	I	06 06 30.0	
	baz=80,slow=311,SNR=1.3						
ZALV	**Zalesovo Beam**	**0.93**	**261**	Pg	Pg	06 00 19.6	-0.7
	0.7nm,0.3s,baz=76,slow=18,SNR=7.1						
ZALV				Lg	Lg	06 00 33.9	
	1.3nm,0.3s,baz=79,slow=28,SNR=7.3						
KURBB	**Kurchatov Arra**	**5.94**	**237**	Pn	Pn	06 01 32.6	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=6.0						
KURBB				Lg	Lg	06 03 08.2	
	0.1nm,0.3s,baz=58,slow=31,SNR=1.7						
	0.6nm,0.4s						
MK31	**Makanchi Array**	**7.78**	**201**	⇑Pg	Pn	06 02 01.2	+4.3
	0.1nm,0.3s,baz=89,slow=18,SNR=11						
MK31				Lg	Lg	06 03 05.8	
	0.7nm,0.5s,baz=93,slow=26,SNR=5.1						
MKAR	**Makanchi Array**	**7.78**	**201**	Pn	Pn	06 01 57.8	+1.0
	0.2nm,0.3s,baz=26,slow=14,SNR=6.2						
	0.1nm,0.3s						
MAKZ	**Makanchi**	**7.83**	**203**	⇓Pg	Pb	06 02 08.6	-10
	1.2nm,0.7s						
MAKZ				⇓Lg	Lg	06 03 10.4	
	1.2nm,0.6s						

BJI ***20*** *06:00:34.5,5.°00S×134.°41E,h10km,mB5.0/18,mb4.9/58, Ms4.8/7,Ms7.4,5/2*

IDC ***20*** *06:00:36.8±0.4,4.°79S×134.°21E,h0km,mb4.7/20, mbtmp4.7/26,ML4.4/5,MS3.9/29,Error ellipse: s-maj=19.0km s-min=10.4km az=70.0*

NEIC ***20*** *06:00:40.0±1.3,4.°77S±0.°06×134.°14E±0.°09,h19km±4km, mb5.1/136,Mww4.8/11,Error ellipse: s-maj=12.8km s-min=9.0km az=74.0*

GFZ ***20*** *06:00:39.3±0.2,5.°5S±3.°×13.°4E±.°,h10km,M4.8/21, mb5.0/21*

DJA ***20*** *06:00:42.2±0.4,5.°5S±1.°×13.°4E±.°,h32km±4km,M5.2/60, mb5.2/60,mB5.7/30,MLv5.3/22,Mw(mB)5.2/30, MwMwp4.7/4,Mwp5.0/4*

GCMT ***20*** *06:00:42.0±0.3,4.°72S±0.°03×133.°99E±0.°02,h23km, MW4.9/92,Moment Tensor Solution. s30,c34; s92,c114; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.95±.18; Mθθ=0.57±.10; Mϕϕ=2.38±.11; Mrθ=0.35±.17; Mrϕ=-0.54±.06; Mθϕ=0.40±.13; Best double couple: M=2.78300×10^16^ NP1:ϑ=338.00000°,δ=42.00000°,λ=-101.00000°. NP2: ϕ=172.00000°,δ=49.00000°,λ=-80.00000°. Principal axes: T 2.5440, Plg3.0000°, Azm255.0000°; N 0.4760, Plg7.0000°, Azm346.0000°; P -3.0230, Plg82.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 06:00:41.1±0.3,4.°81S±0.°03×134.°08E±0.°04,h28km,n545, σ1§21/493,mb5.0/116,MS3.9/26,3C-6D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**1.20**	**342**	P	**Pn**	**06 01 01.2**	**-0.8**
KMPI				S	**Sb**	**06 01 19.1**	**+0.7**
FAKI	**Fak Fak**	**2.62**	**316**	P	**Pn**	**06 01 21.2**	**-0.4**
FAKI	**Fak Fak**	**2.62**	**316**		**Pn**	**06 01 21.1**	**-0.6**
FAKI	**Fak Fak**	**2.62**	**316**	P	**Pn**	**06 01 21.2**	**-0.4**
FAKI				S	**Sn**	**06 01 50.9**	**-1.6**
FAKI	**Fak Fak**	**2.62**	**316**	P	**Pn**	**06 01 21.4**	**-0.2**
SRPI	**Serui, Papua**	**3.63**	**36**	P	**Pn**	**06 01 38.0**	**+2.6**
MWPI	**Manokwari, Pap**	**3.85**	**359**	P	**Pn**	**06 01 40.5**	**+1.9**
MWPI				S	**Sn**	**06 02 23.6**	**+0.7**
BAKI	**Biak**	**4.12**	**29**	P	**Pn**	**06 01 42.6**	**+0.3**
BAKI				S	**Sn**	**06 02 29.9**	**+0.3**
BNDI	**Bandanaira**	**4.18**	**274**	P	**Pn**	**06 01 43.8**	**+0.8**
BNDI	**Bandanaira**	**4.18**	**274**	P	**Pn**	**06 01 43.4**	**+0.4**
BNDI				S	**Sn**	**06 02 31.5**	**+0.6**
BNDI	**Bandanaira**	**4.18**	**274**	P	**Pn**	**06 01 43.8**	**+0.8**
SAUI	**Saumlaki**	**4.19**	**221**		**Pn**	**06 01 44.8**	**+1.5**
SAUI	**Saumlaki**	**4.19**	**221**	P	**Pn**	**06 01 45.0**	**+1.8**
SAUI				S	**Sn**	**06 02 32.8**	**+1.4**
SAUI	**Saumlaki**	**4.19**	**221**	P	**Pn**	**06 01 45.0**	**+1.8**
WAMI	**Wamena**	**4.71**	**79**	P	Pb	06 01 57.1	-5.8
SIJI	**Sorong**	**4.82**	**324**	Pn	**Pn**	**06 01 50.8**	**-1.1**
	10nm,0.3s,baz=140,slow=10,SNR=48						
SIJI					Sn	**Sn**	**06 02 39.2**	**-7.6**
	40nm,0.3s,baz=339,slow=23,SNR=5.3						
SIJI					LR	LR	06 04 15.9	
	comp=Z,1μm,20.8s,baz=121,slow=45						
	34nm,0.3s						
SIJI	**Sorong**	**4.82**	**324**	P	**Pn**	**06 01 51.4**	**-0.5**
GENI	**Genym**	**6.46**	**70**	P	**Pn**	**06 02 16.0**	**+1.6**
	1.3nm3μm5μm277nm,0.8s						
GENI	**Genyem**	**6.46**	**70**	P	**Pn**	**06 02 16.0**	**+1.6**
JAY	**Jayapura**	**6.99**	**71**	Pn	**Pn**	**06 02 19.8**	**-2.0**
	3.4nm,0.3s,baz=190,slow=9.4,SNR=7.5						
JAY					Sn	**Sn**	**06 03 36.6**	**-3.7**
	0.5nm,0.3s,baz=296,slow=21,SNR=1.5						
	44nm,0.8s						
JAY	**Jayapura**	**6.99**	**71**	P	**Pn**	**06 02 22.4**	**+0.7**
	0.4m1μm87nm,0.8s						
KDU	**Kakadu**	**7.99**	**191**	P	**Pn**	**06 02 35.1**	**-0.2**
	comp=Z,25nm,0.7s,comp=Z,0.0nmcomp=Z,333μmcomp=Z,320μm						
DRS	**Darwin Rock St**	**8.20**	**202**	P	**Pn**	**06 02 38.9**	**+0.6**
MTN	**Manton Dam**	**8.50**	**200**	P	**Pn**	**06 02 42.2**	**-0.2**
MTN	**Manton Dam**	**8.50**	**200**		**Pn**	**06 02 42.2**	**-0.2**
SANI	**Sanana**	**8.53**	**288**	P	**Pn**	**06 02 40.8**	**-2.1**
SANI	**Sanana**	**8.53**	**288**	P	**Pn**	**06 02 40.6**	**-2.3**
SANI	**Sanana**	**8.53**	**288**	P	**Pn**	**06 02 40.9**	**-2.0**
TNTI	**Ternate**	**8.71**	**309**	P	**Pn**	**06 02 45.8**	**+0.6**
	comp=Z,83nm,0.8s						
TNTI	**Ternate**	**8.71**	**309**	P	**Pn**	**06 02 46.1**	**+0.8**
SOEI	**Soe**	**10.90**	**243**	P	**Pn**	**06 03 15.9**	**+0.4**
SOEI	**Soe**	**10.90**	**243**		**Pn**	**06 03 14.5**	**-1.0**
SOEI	**Soe**	**10.90**	**243**	P	**Pn**	**06 03 14.8**	**-0.7**
SOEI	**Soe**	**10.90**	**243**	P	**Pn**	**06 03 14.9**	**-0.6**
KDI	**Kendari**	**11.46**	**274**	P	**Pn**	**06 03 24.4**	**+1.4**
	comp=Z,52nm,0.7s						
BATI	**Baumata**	**11.64**	**242**	Pn	**Pn**	**06 03 22.0**	**-3.4**
	comp=Z,26nm,0.3s,baz=145,slow=3.0,SNR=5.7						
BATI					Sn	Sn	06 05 23.8	-11
	comp=Z,11nm,0.3s,baz=296,slow=23,SNR=6.2						
LUWI	**Luwuk**	**11.90**	**288**	P	**Pn**	**06 03 27.6**	**-1.4**
LUWI	**Luwuk**	**11.90**	**288**		**Pn**	**06 03 28.2**	**-0.8**
LUWI	**Luwuk**	**11.90**	**288**	P	**Pn**	**06 03 28.2**	**-0.8**
	comp=Z,3μmcomp=Z,267nm,1.3s						
LUWI	**Luwuk**	**11.90**	**288**	P	**Pn**	**06 03 28.3**	**-0.8**
KNRA	**Kununurra**	**12.00**	**205**	P	**Pn**	**06 03 28.0**	**-2.3**
	comp=Z,323nm,0.8s,comp=Z,0.0nm						
KNRA	**Kununurra**	**12.00**	**205**		**Pn**	**06 03 28.1**	**-2.2**
SGSI	**Sangihe**	**12.01**	**314**	P	**Pn**	**06 03 30.5**	**-0.1**
	comp=Z,4μmcomp=Z,172nm,0.8s						
GTOI	**Gorontalo**	**12.31**	**296**	P	**Pn**	**06 03 36.5**	**+1.8**
	comp=Z,3μmcomp=Z,327nm,1.0s						
COEN	**Coen**	**12.76**	**136**	P	**Pn**	**06 03 37.8**	**-3.0**
	comp=Z,35nm,0.7s						
COEN	**Coen**	**12.76**	**136**	P	**Pn**	**06 03 38.2**	**-2.7**
COEN	**Coen**	**12.76**	**136**		**Pn**	**06 03 38.7**	**-2.2**
COEN	**Coen**	**12.76**	**136**	P	**Pn**	**06 03 38.2**	**-2.7**
PMG	**Port Moresby**	**13.75**	**110**	Pn	**Pn**	**06 03 50.2**	**-4.1**
	comp=Z,24nm,0.8s,baz=293,slow=10,SNR=4.9						
PMG					Lg	Lg	06 08 02.8	
	comp=Z,1.3nm,0.3s,baz=311,slow=18,SNR=1.3						
PMG					LR	LR	06 09 46.3	
	comp=Z,472nm,18.8s,baz=267,slow=40						
PMG	**Port Moresby**	**13.75**	**110**	Pn	**Pn**	**06 03 51.9**	**-2.4**
PMG	**Port Moresby**	**13.75**	**110**	P	**Pn**	**06 03 53.5**	**-0.8**
	comp=Z,63nm,0.9s						
PMG	**Port Moresby**	**13.75**	**110**	P	**Pn**	**06 03 53.8**	**-0.5**
KAPI	**Kappang**	**14.28**	**269**	Pn	**Pn**	**06 04 01.1**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=106,slow=9.3,SNR=9.0						
KAPI					Lg	Lg	06 08 25.5	
	comp=Z,0.8nm,0.3s,baz=344,slow=18,SNR=1.1						
KAPI					LR	LR	06 10 47.2	
	comp=Z,378nm,21.7s,baz=88,slow=42						
	comp=Z,46nm,1.0s						
KAPI	**Kappang**	**14.28**	**269**	Pn	**Pn**	**06 04 02.8**	**+1.2**
KAPI	**Kappang**	**14.28**	**269**	P	**Pn**	**06 04 02.2**	**+0.6**
	comp=Z,890nmcomp=Z,37nm,1.0s						
KAPI	**Kappang**	**14.28**	**269**	P	**Pn**	**06 04 03.2**	**+1.7**
TOLI2	**Tolitoli**	**14.53**	**294**	Pn	**Pn**	**06 04 04.1**	**-0.9**
TOLI2	**Tolitoli**	**14.53**	**294**	P	**Pn**	**06 04 04.0**	**-1.1**
DAV	**Davao City (W)**	**14.54**	**324**	LR	LR	06 10 48.3	
	comp=Z,269nm,18.8s,baz=160,slow=42						
LBFI	**Labuhan Bajo,**	**14.56**	**255**	P	**Pn**	**06 04 08.0**	**+2.6**
PCI	**Palu**	**14.75**	**285**	P	**Pn**	**06 04 08.7**	**+0.8**
	comp=Z,3μmcomp=Z,85nm,0.6s						
WB0	**Warramunga Arr**	**14.87**	**179**	Pn	**Pn**	**06 04 06.2**	**-3.4**
WB9	**Warramunga Arr**	**14.89**	**179**	P	**Pn**	**06 04 06.6**	**-3.3**
	comp=Z,111nm,0.9s						
WRAB	**Tennant Creek**	**15.04**	**179**	P	**Pn**	**06 04 10.1**	**-1.7**
WRAB	**Tennant Creek**	**15.04**	**179**	Pn	**Pn**	**06 04 08.5**	**-3.2**
WRAB	**Tennant Creek**	**15.04**	**179**	P	**Pn**	**06 04 11.4**	**-0.4**
WB2	**Warramunga Arr**	**15.04**	**179**	P	**Pn**	**06 04 09.3**	**-2.6**
	comp=Z,141nm,0.9s,comp=Z,0.0nm						
WR1	**Warramunga Arr**	**15.04**	**179**	P	**Pn**	**06 04 09.3**	**-2.6**
	comp=Z,131nm,0.8s,comp=Z,0.0nm						
WRA	**Warramunga Arr**	**15.04**	**179**	Pn	**Pn**	**06 04 08.6**	**-3.3**
	comp=Z,0.8nm,0.3s,baz=352,slow=14,SNR=18						
WRA					Sn	Sn	06 06 45.5	-12
	comp=Z,1.9nm,0.3s,baz=356,slow=22,SNR=6.5						
WRA					Lg	Lg	06 08 34.6	
	baz=5.7,slow=27						
WR8	**Warramunga Arr**	**15.06**	**178**			**Pn**	**06 04 09.2**	**-3.0**
WR8					IAmb	IAmb	06 04 19.0	
	comp=Z,54nm,0.7s						
WR0	**Warramunga Arr**	**15.07**	**178**	P	**Pn**	**06 04 10.1**	**-2.0**
	comp=Z,182nm,0.8s,comp=Z,0.0nm						
MMSI	**Mamuju**	**15.29**	**277**	P	**Pn**	**06 04 15.8**	**+0.7**
	comp=Z,49nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.58**	**211**	P	**Pn**	**06 04 14.8**	**-4.1**
	comp=Z,14nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.58**	**211**	Pn	**Pn**	**06 04 14.5**	**-4.4**
	comp=Z,3.2nm,0.3s,baz=36,slow=15,SNR=62						
FITZ					Sn	Sn	06 06 58.2	-12
	comp=Z,5.3nm,0.3s,baz=138,slow=15,SNR=12						
FITZ	**Fitzroy Crossi**	**15.58**	**211**	P	**Pn**	**06 04 17.0**	**-1.9**
FITZ	**Fitzroy Crossi**	**15.58**	**211**		**Pn**	**06 04 14.8**	**-4.1**
FITZ	**Fitzroy Crossi**	**15.58**	**211**	Pn	**Pn**	**06 04 17.0**	**-1.9**
QIS	**Mount Isa**	**16.55**	**162**	P	**Pn**	**06 04 28.8**	**-2.6**
	comp=Z,51nm,1.0s						
QIS	**Mount Isa**	**16.55**	**162**	P	**Pn**	**06 04 29.9**	**-1.4**
QIS	**Mount Isa**	**16.55**	**162**	P	**Pn**	**06 04 28.5**	**-2.8**
MTSU	**Mount Surprise**	**16.60**	**144**	P	**Pn**	**06 04 32.3**	**+0.3**
	comp=Z,49nm,0.9s						
MTSU	**Mount Surprise**	**16.60**	**144**	P	**P**	**06 04 34.8**	**+0.5**
PLAI	**Plampang**	**16.68**	**255**	P	**Pn**	**06 04 30.7**	**-2.2**
PLAI	**Plampang**	**16.68**	**255**	P	**Pn**	**06 04 32.0**	**-0.9**
	comp=Z,156nm,0.9s						
PLAI	**Plampang**	**16.68**	**255**	P	**Pn**	**06 04 30.3**	**-2.7**
MYLDM	**Lahad Datu**	**18.46**	**302**	P	**P**	**06 04 52.5**	**-2.3**
MYLDM	**Lahad Datu**	**18.46**	**302**	P	**Pn**	**06 04 56.9**	**+1.9**
	comp=Z,1μmcomp=Z,119nm,1.1s						
MYLDM	**Lahad Datu**	**18.46**	**302**	P	**Pn**	**06 04 56.8**	**+1.7**
KHKI	**Kahang-Kahang**	**18.69**	**258**	P	**P**	**06 04 55.1**	**-2.2**
	comp=Z,149nm,0.9s						
AS15	**Alice Springs**	**18.72**	**180**	P	**Pn**	**06 04 59.9**	**+1.7**
	comp=Z,122nm,1.0s						
AS17	**Alice Springs**	**18.75**	**180**	P	**Pn**	**06 04 58.5**	**0.0**
	comp=Z,191nm,0.9s						
AS31	**Alice Springs**	**18.75**	**181**	P	**Pn**	**06 05 00.1**	**+1.5**
	comp=Z,46nm,0.9s,comp=Z,0.0nm						
AS31	**Alice Springs**	**18.75**	**181**	P	**P**	**06 04 56.3**	**-1.7**
ASAR	**Alice Springs**	**18.75**	**181**	P	**P**	**06 04 56.0**	**-2.0**
	comp=Z,1.3nm,0.3s,baz=4.7,slow=8.8,SNR=109						
ASAR					Sn	Sn	06 08 13.8	-14
	comp=Z,0.5nm,0.3s,baz=354,slow=27,SNR=4.5						
ASAR					Lg	Lg	06 10 30.4	
	baz=12,slow=28						
ASAR					LR	LR	06 12 48.2	
	comp=Z,661nm,18.5s,baz=360,slow=39						
	comp=Z,24nm,0.7s						
ASAR	**Alice Springs**	**18.75**	**181**	P	**P**	**06 04 55.7**	**-2.3**
AS09	**Alice Springs**	**18.78**	**180**	P	**Pn**	**06 04 59.0**	**0.0**
	comp=Z,179nm,0.9s						
CTA	**Charters Tower**	**19.26**	**143**	P	**Pn**	**06 05 05.4**	**+0.7**
	comp=Z,30nm,0.9s						
CTA	**Charters Tower**	**19.26**	**143**	P	**P**	**06 05 03.4**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=317,slow=11,SNR=51						
CTA					Lg	Lg	06 10 45.0	
	comp=Z,0.3nm,0.3s,baz=37,slow=21,SNR=3.7						
CTA					LR	LR	06 11 42.8	
	comp=Z,169nm,18.1s,baz=317,slow=35						
	comp=Z,41nm,0.8s						
CTAO	**Charters Tower**	**19.26**	**143**	P	**P**	**06 05 02.3**	**-1.3**
CTAO	**Charters Tower**	**19.26**	**143**	P	**Pn**	**06 05 05.6**	**+0.8**
JAGI	**Jajag, Banyuwa**	**20.13**	**259**	P	**P**	**06 05 11.7**	**-1.4**
JAGI					IAmb	IAmb	06 05 20.0	
	comp=Z,58nm,0.9s						
KKM	**Kota Kinabalu**	**20.85**	**301**	P	**P**	**06 05 20.9**	**-0.1**
KKM	**Kota Kinabalu**	**20.85**	**301**	P

CN2	**Changchun**	**49.01**	**352**	⇑P		**P**	**06 09 26.3**	**+1.0**
CN2				*es*P		pP	06 09 33.0	-0.1
CN2				*e*S		**S**	**06 16 30.4**	**+2.3**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
CN2				pmax		pmax		
	comp=Z,100nm,4.0s							
JKA	**Kamikawa-asahi**	**49.30**	**8**	P		**P**	**06 09 26.9**	**-0.7**
JKA	**Kamikawa-asahi**	**49.30**	**8**	P		**P**	**06 09 27.8**	**+0.2**
MDJ	**Mudanjiang**	**49.37**	**356**			**P**	**06 09 26.5**	**-1.5**
MDJ				IAmb		IAmb	06 09 30.4	
	comp=Z,22nm,0.9s							
MDJ	**Mudanjiang**	**49.37**	**356**	P		**P**	**06 09 28.6**	**+0.6**
MDJ				pmax		pmax		
	comp=Z,26nm,1.2s							
LZH	**Lanzhou**	**49.57**	**328**	*e*P		**P**	**06 09 26.6**	**-3.4**
LZH				pmax		pmax		
	comp=Z,18nm,1.0s							
HHC	**Hu-ho-hao-te**	**49.91**	**338**	*e*P		**P**	**06 09 33.1**	**+0.7**
HHC				pmax		pmax		
	comp=Z,12nm,0.5s							
HHC				pmax		pmax		
	comp=Z,78nm,5.0s							
HHC				L		L		
	comp=Z,120nm,16.0s							
HHC				L		L		
	comp=Z,100nm,16.0s							
BTO2	**Baotou**	**50.47**	**336**	*e*P		**P**	**06 09 38.4**	**+1.7**
BTO2				sP		**pP**	**06 09 45.1**	**+0.6**
BTO2				PP		**PP**	**06 11 33.3**	**+0.6**
BTO2				S		**S**	**06 16 54.6**	**+5.7**
BTO2				pmax		pmax		
	comp=Z,14nm,0.5s							
BTO2				pmax		pmax		
	comp=Z,150nm,5.3s							
BTO2				L		L		
	comp=Z,280nm,14.0s							
BTO2				L		L		
	comp=Z,150nm,4.8s							
BTO2				L		L		
	comp=Z,170nm,7.4s							
BNX	**BinXian**	**50.68**	**354**	⇑P		**P**	**06 09 38.5**	**+0.5**
BNX				pmax		pmax		
	comp=Z,40nm,0.9s							
XLT	**XiLinHaoTe**	**51.13**	**343**	*e*P		**P**	**06 09 42.0**	**+0.4**
XLT				pmax		pmax		
	comp=Z,16nm,1.0s							
XLT				pmax		pmax		
	comp=Z,92nm,6.1s							
XLT				L		L		
	comp=Z,27nm,20.3s							
XLT				L		L		
	comp=Z,200nm,21.9s							
URZ	**Urewera**	**51.33**	**137**	LR		LR	06 32 35.7	
	comp=Z,422nm,18.0s,baz=306,slow=37							
AFI	**Afiamalu**	**54.07**	**104**	LR		LR	06 32 02.0	
	comp=Z,57nm,20.7s,baz=296,slow=35							
GTA2	**Gaotai**	**54.26**	**327**	*e*P		**P**	**06 10 06.1**	**+1.3**
GTA2				pP		pP	06 10 09.3	-3.4
GTA2				pmax		pmax		
	comp=Z,11nm,1.0s							
PALK	**Pallekele**	**54.60**	**282**	LR		LR	06 35 55.6	
	comp=Z,77nm,19.8s,baz=102,slow=39							
GOMU	**GeErMu**	**54.90**	**321**	P		**P**	**06 10 10.8**	**+1.0**
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.3s							
HEH	**HeiHe**	**55.15**	**355**	*e*P		**P**	**06 10 11.8**	**+0.9**
HILR	**Hailar Array B**	**55.56**	**349**	P		**P**	**06 10 14.5**	**+0.6**
	comp=Z,16nm,0.8s,baz=152,slow=13,SNR=10							
	comp=Z,16nm,0.8s							
SONM	**Songino Array**	**57.79**	**338**	P		**P**	**06 10 31.0**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=152,slow=9.1,SNR=13							
SONM				PcP		**PcP**	**06 11 22.9**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=140,slow=5.4,SNR=5.3							
SONM				LR		LR	06 35 26.8	
	comp=Z,97nm,20.3s,baz=147,slow=36							
	comp=Z,2.2nm,0.6s							
SONM	**Songino Array**	**57.79**	**338**			**P**	**06 10 30.1**	**+0.2**
SONM				PcP		**PcP**	**06 11 22.9**	**+0.5**
PEA0B	**Petropavlovsk-**	**61.05**	**16**	P		**P**	**06 10 51.7**	**-0.5**
PETK	**Petropavlovsk-**	**61.05**	**16**	P		**P**	**06 10 51.8**	**-0.4**
	comp=Z,4.8nm,0.8s,baz=227,slow=6.9,SNR=6.1							
	comp=Z,4.8nm,0.8s							
PETK	**Petropavlovsk-**	**61.05**	**16**	P		**P**	**06 10 50.1**	**-2.1**
TLY	**Talaya**	**61.98**	**339**	LR		LR	06 40 20.5	
	comp=Z,41nm,18.0s,baz=156,slow=38							
CASY	**Casey**	**63.53**	**190**	P		**P**	**06 11 09.2**	**+0.6**
CASY				IAmb		IAmb	06 11 10.5	
	comp=Z,13nm,0.9s							
WMQ	**Urumqi**	**63.89**	**324**	⇑P		**P**	**06 11 13.3**	**+1.8**
WMQ				sP		pwP	06 11 25.0	+2.5
WMQ				PP		**PP**	**06 13 36.6**	**+4.3**
WMQ				pmax		pmax		
	comp=Z,39nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,150nm,3.9s							
SHEM	**Shemya Is, Ala**	**66.54**	**25**	LR		LR	06 35 59.9	
	comp=Z,87nm,21.6s,baz=241,slow=32							
YAK	**Yakutsk**	**66.73**	**358**	LR		LR	06 40 14.0	
	comp=Z,42nm,18.9s,baz=184,slow=36							
YAK	**Yakutsk**	**66.73**	**358**	P		**P**	**06 11 29.7**	**+0.3**
ZSN	**Zaisan**	**67.63**	**326**	*e*P		**P**	**06 11 36.4**	**+1.0**
AMKA	**Amchitka**	**67.97**	**29**	P		**P**	**06 11 37.4**	**0.0**
SHLS	**Shalkode**	**68.57**	**320**	*e*P		**P**	**06 11 40.7**	**-0.8**
	comp=Z,5.0nm,0.8s							
PDGK	**Podgornoye**	**68.63**	**320**	P		**P**	**06 11 41.3**	**-0.7**
MKAR	**Makanchi Array**	**68.72**	**325**	P		**P**	**06 11 43.3**	**+1.0**
	comp=Z,15nm,0.9s,baz=114,slow=8.1,SNR=92							
	comp=Z,15nm,0.9s							
MKAR	**Makanchi Array**	**68.72**	**325**	P		**P**	**06 11 41.0**	**-1.3**
UZB	**Uzynbulak**	**68.84**	**320**	⇓*i*P		**P**	**06 11 44.1**	**+0.8**
	comp=Z,7.7nm,0.9s							
MAKZ	**Makanchi**	**68.91**	**324**	P		**P**	**06 11 43.6**	**+0.1**
NIL	**Nilore**	**68.95**	**309**	P		**P**	**06 11 43.1**	**-1.0**
NIL				IAmb		IAmb	06 12 03.5	
	comp=Z,18nm,1.2s							
TARG	**Taragay, Kyrgy**	**68.97**	**318**	P		**P**	**06 11 44.2**	**-0.3**
SATY	**Saty**	**69.20**	**320**	⇓*i*P		**P**	**06 11 46.3**	**+0.8**
	comp=Z,6.7nm,0.8s							
KPKS	**Kokpek**	**69.21**	**320**	*e*P		**P**	**06 11 46.3**	**+0.8**
KSH2	**Kashi**	**69.37**	**315**	P		**P**	**06 11 47.8**	**+1.1**
KSH2				sP		pwP	06 11 58.9	+1.2
KSH2				pmax		pmax		
	comp=Z,15nm,0.8s							
KDJ	**Kajisay**	**69.57**	**318**	IAmb		IAmb	06 11 50.1	
	comp=Z,14nm,0.7s							
KIWB	**Kanaga Island**	**70.00**	**30**	P		**P**	**06 11 49.4**	**-0.6**
KIWB				IAmb		IAmb	06 11 52.0	
	comp=Z,20nm,1.1s							
NRN	**Naryn**	**70.05**	**317**	IAmb		IAmb	06 11 52.8	
	comp=Z,8.7nm,0.7s							
MDOK	**Medeo**	**70.12**	**319**	*e*P		**P**	**06 11 52.1**	**+0.8**
TDK	**Taldyqorghan**	**70.13**	**321**	*e*P		**P**	**06 11 52.0**	**+0.9**
	comp=Z,6.9nm,0.7s							
TNSS	**Tian-Shan**	**70.13**	**319**	*e*P		**P**	**06 11 52.0**	**+0.4**
AAA	**Alma-Ata**	**70.23**	**319**	*e*P		**P**	**06 11 52.7**	**+0.9**
KUU	**Kurty**	**70.92**	**320**	*e*P		**P**	**06 11 56.8**	**+0.9**
	comp=Z,5.5nm,0.9s							
ZAA0	**Zalesovo Array**	**71.51**	**332**	P		**P**	**06 11 58.7**	**-0.5**
ZALV	**Zalesovo Beam**	**71.51**	**332**	P		**P**	**06 11 59.2**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=114,slow=5.3,SNR=23							
	comp=Z,4.6nm,0.6s							
ZALV	**Zalesovo Beam**	**71.51**	**332**	P		**P**	**06 11 58.7**	**-0.5**
AAK	**Ala-Archa**	**71.58**	**318**	P		**P**	**06 12 00.4**	**+0.3**
	comp=Z,5.4nm,0.7s,baz=111,slow=4.1,SNR=8.3							
	comp=Z,5.4nm,0.7s							
AAK	**Ala-Archa**	**71.58**	**318**			**P**	**06 11 59.6**	**-0.5**
ARSB	**Arslanbob**	**72.07**	**316**	P		**P**	**06 12 02.7**	**-0.3**
ARSB				IAmb		IAmb	06 12 05.2	
	comp=Z,20nm,0.8s							
KURK	**Kurchatov**	**72.85**	**327**	P		**P**	**06 12 07.2**	**-0.1**
KURK				IAmb		IAmb	06 12 22.1	
	comp=Z,11nm,0.8s							
KURBB	**Kurchatov Arra**	**72.85**	**327**	P		**P**	**06 12 07.6**	**+0.3**
	comp=Z,6.1nm,0.7s,baz=123,slow=5.2,SNR=27							
	comp=Z,6.1nm,0.7s							
BTLS	**Baital**	**72.90**	**320**	*e*P		**P**	**06 12 08.7**	**+0.9**
GAR	**Garm**	**73.08**	**313**	P		**P**	**06 12 09.0**	**-0.2**
GAR				IAmb		IAmb	06 12 10.8	
	comp=Z,22nm,0.9s							
CHGR	**Chuyangaron**	**73.81**	**312**	P		**P**	**06 12 12.9**	**-0.5**
DZA	**Taraz**	**73.81**	**317**	*e*P		**P**	**06 12 14.1**	**+0.9**
	comp=Z,9.5nm,0.8s							
VNDA	**Vanda**	**74.15**	**174**	P		**P**	**06 12 14.6**	**0.0**
	comp=Z,2.8nm,0.9s,baz=323,slow=6.4,SNR=13							
VNDA				LR		LR	06 43 42.8	
	comp=Z,157nm,19.6s,baz=356,slow=35							
	comp=Z,2.8nm,0.9s							
VNDA	**Vanda**	**74.15**	**174**	P		**P**	**06 12 14.4**	**-0.1**
IUG	**Iuzhnay**	**74.42**	**316**	*e*P		**P**	**06 12 17.8**	**+0.9**
	comp=Z,7.3nm,0.9s							
KK31	**Karatay Array**	**74.45**	**317**	P		**P**	**06 12 16.6**	**-0.3**
KK31				IAmb		IAmb	06 12 18.5	
	comp=Z,11nm,0.8s							
KKAR	**Karatay Array**	**74.45**	**317**	P		**P**	**06 12 17.4**	**+0.5**
CHM	**Chimkent**	**74.78**	**316**	*e*P		**P**	**06 12 19.9**	**+1.1**
	comp=Z,4.4nm,0.5s							
BRLS	**Boroldaу**	**74.88**	**317**	*e*P		**P**	**06 12 20.3**	**+0.9**
	comp=Z,7.9nm,0.9s							
PPT2	**Papeete2**	**75.55**	**107**	*e*LR		LR	06 35 34.1	
	comp=Z,132nm,33.0s							
PPT2				*e*LR		LR	06 35 39.3	
	comp=Z,114nm,33.2s							
PPT	**Papeete**	**75.55**	**107**	LR		LR	06 45 05.8	
	comp=Z,28nm,18.1s,baz=273,slow=35							
SPIA	**Saint Paul Isl**	**76.33**	**28**	P		**P**	**06 12 27.8**	**+0.4**
	baz=238							
TIXI	**Tiksi**	**76.39**	**358**	LR		LR	06 46 29.2	
	comp=Z,60nm,19.0s,baz=197,slow=36							
TIXI	**Tiksi**	**76.39**	**358**	P		**P**	**06 12 26.5**	**-0.9**
TIXI				IAmb		IAmb	06 12 28.6	
	comp=Z,13nm,0.8s							
UNV	**Unalaska Valle**	**76.50**	**32**	P		**P**	**06 12 28.5**	**+0.1**
	baz=242							
BVAR	**Borovoye Array**	**78.44**	**326**	P		**P**	**06 12 39.6**	**+0.3**
	comp=Z,12nm,0.8s,baz=121,slow=5.7,SNR=31							
	comp=Z,12nm,0.8s							
MAW	**Mawson**	**78.47**	**202**	P		**P**	**06 12 40.4**	**+1.2**
	comp=Z,11nm,1.0s,baz=59,slow=7.4,SNR=13							
MAW				LR		LR	06 45 20.9	
	comp=Z,116nm,19.2s,baz=62,slow=34							
	comp=Z,11nm,1.0s							
MAW	**Mawson**	**78.47**	**202**			**P**	**06 12 40.2**	**+1.1**
BORK	**Borovoye**	**78.49**	**326**	P		**P**	**06 12 39.3**	**-0.3**
BORK				IAmb		IAmb	06 12 41.3	
	comp=Z,11nm,0.8s							
GAMB	**Gambell**	**79.38**	**22**	P		**P**	**06 12 44.8**	**+0.6**
	baz=235							
M11K	**Mekoryuk**	**79.79**	**26**	P		**P**	**06 12 47.4**	**+0.9**
	baz=241							
SDPT	**Sand Point**	**80.32**	**32**	P		**P**	**06 12 49.7**	**+0.3**
	baz=247							
NRIK	**Noril'sk**	**80.48**	**345**	P		**P**	**06 12 50.6**	**+0.6**
	comp=Z,18nm,0.9s,baz=136,slow=5.5,SNR=20							
NRIK				LR		LR	06 50 39.0	
	comp=Z,129nm,19.6s,baz=144,slow=37							
	comp=Z,18nm,0.9s							
NRIK	**Noril'sk**	**80.48**	**345**	P		**P**	**06 12 49.8**	**-0.2**
NRIK				IAmb		IAmb	06 12 51.6	
	comp=Z,27nm,1.0s							
CHNA	**Chernabura Isl**	**80.58**	**32**	P		**P**	**06 12 51.3**	**+0.4**
	baz=248							
M13K	**Dall Lake**	**81.05**	**26**	P		**P**	**06 12 54.2**	**+1.0**
	baz=244							
S14K	**Fog Glacier**	**81.16**	**31**	P		**P**	**06 12 54.7**	**+0.6**
	baz=247							
K13K	**Kusilvak Mount**	**81.19**	**25**	IAmb		IAmb	06 12 56.3	
	comp=Z,17nm,1.1s							
K13K	**Kusilvak Mount**	**81.19**	**25**	P		**P**	**06 12 55.1**	**+1.1**
	baz=242							
O14K	**Tigyukauivet M**	**81.50**	**28**	P		**P**	**06 12 55.7**	**0.0**
O14K				IAmb		IAmb	06 12 57.5	
	comp=Z,17nm,0.9s							
O14K	**Tigyukauivet M**	**81.50**	**28**	P		**P**	**06 12 56.4**	**+0.7**
	baz=246							
N14K	**Kuskokwak Cree**	**81.59**	**27**	P		**P**	**06 12 56.9**	**+0.8**
	baz=245							
TNA	**Tin City**	**81.72**	**21**	P		**P**	**06 12 57.7**	**+1.0**
	baz=239							
CHGN	**Chignik**	**81.75**	**31**	P		**P**	**06 12 57.9**	**+0.9**
	baz=248							
L14K	**Kuka Creek**	**81.76**	**26**	P		**P**	**06 12 56.8**	**-0.1**
L14K				IAmb		IAmb	06 12 59.1	
	comp=Z,23nm,0.9s							
L14K	**Kuka Creek**	**81.76**	**26**	P		**P**	**06 12 57.9**	**+1.0**
	baz=244							
M14K	**Bethel**	**81.82**	**26**	IAmb		IAmb	06 12 59.3	
	comp=Z,12nm,0.8s							
M14K	**Bethel**	**81.82**	**26**	P		**P**	**06 12 58.2**	**+0.9**
	baz=245							
J14K	**Nanvaranak Lak**	**82.02**	**24**	P		**P**	**06 12 59.2**	**+0.9**
	baz=243							
O15K	**Ungalikthiuk R**	**82.15**	**28**	P		**P**	**06 12 59.7**	**+0.6**
	baz=247							
ANM	**Nome**	**82.15**	**22**	P		**P**	**06 12 59.8**	**+0.8**
	baz=241							
F14K	**Arctic Creek**	**82.25**	**21**	P		**P**	**06 13 00.5**	**+1.0**
	baz=240							
M15K	**Kagluk River**	**82.36**	**27**	P		**P**	**06 13 00.8**	**+0.6**
	baz=246							
L15K	**Ungalak Mounta**	**82.42**	**26**	P		**P**	**06 13 01.1**	**+0.7**
	baz=245,SNR=5.3							
N15K	**Kwethluk River**	**82.42**	**27**	IAmb		IAmb	06 13 02.5	
	comp=Z,13nm,0.9s							
N15K	**Kwethluk River**	**82.42**	**27**	P		**P**	**06 13 01.3**	**+0.8**
	baz=246,SNR=8.2							
K15K	**Wolf Creek Mou**	**82.66**	**25**	P		**P**	**06 13 01.8**	**+0.1**
K15K	**Wolf Creek Mou**	**82.66**	**25**	P		**P**	**06 13 02.7**	**+0.9**
	baz=245,SNR=12							
G15K	**Niukluk**	**82.86**	**22**	P		**P**	**06 13 03.3**	**+0.6**
	baz=242							
P16K	**Nushagak River**	**82.97**	**29**	P		**P**	**06 13 04.1**	**+0.7**
	baz=248							
F15K	**North Star Dit**	**82.97**	**21**	P		**P**	**06 13 04.2**	**+0.9**
	baz=242							
CHIR	**Chirikof Islan**	**83.06**	**32**	P		**P**	**06 13 04.6**	**+0.7**
	baz=251							
O16K	**Kokwok River B**	**83.13**	**28**	P		**P**	**06 13 04.8**	**+0.6**
	baz=248							
N16K	**Nishlik Lake**	**83.14**	**27**	P		**P**	**06 13 05.3**	**+1.0**
	baz=248,SNR=7.2							
M16K	**Timber Creek**	**83.27**	**27**	IAmb		IAmb	06 13 06.9	
	comp=Z,18nm,0.9s							
M16K	**Timber Creek**	**83.27**	**27**	P		**P**	**06 13 05.9**	**+1.0**
	baz=247,SNR=7.2							
R17L	**Mt. Peulik Vol**	**83.28**	**30**	P		**P**	**06 13 05.5**	**+0.5**
	baz=250							
L16K	**Owhat River**	**83.31**	**26**	P		**P**	**06 13 06.1**	**+1.0**
	baz=247,SNR=16							
AB31	**Akbulak array**	**83.37**	**321**	P		**P**	**06 13 05.1**	**-0.5**
ABKAR	**Akbulak array**	**83.37**	**321**	P		**P**	**06 13 05.8**	**+0.2**
H16K	**Elim**	**83.39**	**23**	P		**P**	**06 13 05.9**	**+0.5**
	baz=244							
J16K	**Anvik River**	**83.46**	**24**	P		**P**	**06 13 05.9**	**+0.1**
J16K				IAmb		IAmb	06 13 09.5	
	comp=Z,16nm,0.9s							
J16K	**Anvik River**	**83.46**	**24**	P		**P**	**06 13 06.8**	**+0.9**
	baz=246,SNR=12							
O17K	**Koliganek Bris**	**83.67**	**28**	P		**P**	**06 13 07.9**	**+1.0**
	baz=249,SNR=9.3							
I17K	**Unalakleet**	**83.68**	**24**	P		**P**	**06 13 08.0**	**+1.1**
	baz=246							
G16K	**Koyuk River**	**83.68**	**22**	P		**P**	**06 13 07.7**	**+0.8**
	baz=244							
Q17K	**Contact Creek**	**83.73**	**30**	P		**P**	**06 13 07.6**	**+0.1**
	baz=250							
P17K	**Kvichak River**	**83.78**	**29**	P		**P**	**06 13 08.3**	**+0.7**
	baz=250							
N17K	**Nushagak Hills**	**83.89**	**28**	IAmb		IAmb	06 13 09.9	
	comp=Z,8.4nm,0.8s							
N17K	**Nushagak Hills**	**83.89**	**28**	P		**P**	**06 13 09.1**	**+0.9**
	baz=249,SNR=6.3							
C16K	**Lisburne Hills**	**83.97**	**19**	P		**P**	**06 13 09.2**	**+0.9**
	baz=241							
L17K	**Donlin**	**83.99**	**26**	P		**P**	**06 13 09.7**	**+1.1**
	baz=248,SNR=8.1							
SII	**Sitkinak Islan**	**84.05**	**32**	P		**P**	**06 13 10.1**	**+1.0**
	baz=252							
M17K	**Holitna River**	**84.09**	**27**	P		**P**	**06 13 10.3**	**+1.2**
	baz=249,SNR=8.1							
J17K	**VABM Dome**	**84.14**	**25**	IAmb		IAmb	06 13 11.2	
	comp=Z,11nm,1.0s							
J17K	**VABM Dome**	**84.14**	**25**	P		**P**	**06 13 10.4**	**+1.1**
	baz=247,SNR=6.8							
K17K	**Iditarod**	**84.20**	**25**	IAmb		IAmb	06 13 12.0	
	comp=Z,12nm,0.9s							
K17K	**Iditarod**	**84.20**	**25**	P		**P**	**06 13 10.7**	**+1.0**
	baz=248,SNR=7.0							
Q18K	**Katmai Hardscr**	**84.29**	**30**	P		**P**	**06 13 10.8**	**+0.4**
	baz=251							
G17K	**Kiwalik Mounta**	**84.37**	**22**	P		**P**	**06 13 11.4**	**+0.9**
	baz=245,SNR=12							
H17K	**Granite Mounta**	**84.42**	**23**	P		**P**	**06 13 11.7**	**+1.0**
	baz=246,SNR=11							
P18K	**Big Mountain,**	**84.43**	**29**	P		**P**	**06 13 11.6**	**+0.7**
	baz=251							
D17K	**Noatak River**	**84.45**	**20**	P		**P**	**06 13 12.0**	**+1.2**
	baz=243,SNR=8.3							
F17K	**Baldwin Pennin**	**84.54**	**21**	IAmb		IAmb	06 13 13.3	
	comp=Z,13nm,0.9s							
F17K	**Baldwin Pennin**	**84.54**	**21**	P		**P**	**06 13 12.1**	**+0.8**
	baz=245							
N18K	**Kilae Creek**	**84.55**	**28**	P		**P**	**06 13 12.1**	**+0.7**
	baz=250							
O18K	**Koktuh Hills**	**84.59**	**29**	P		**P**	**06 13 11.9**	**+0.2**
	baz=251							
E17K	**Hotham Inlet**	**84.61**	**21**	P		**P**	**06 13 12.8**	**+1.2**
	baz=244,SNR=6.7							
RDOG	**Red Dog Mine**	**84.67**	**20**	P		**P**	**06 13 12.9**	**+0.9**
	baz=243							
L18K	**Granite Mounta**	**84.72**	**26**	P		**P**	**06 13 13.3**	**+1.0**
	baz=249							
OHAK	**Old Harbor**	**84.72**	**31**	P		**P**	**06 13 13.2**	**+0.8**
	baz=253							
C17K	**DeLong Mountai**	**84.78**	**19**	P		**P**	**06 13 13.3**	**+0.9**
	baz=243							
M18K	**Stony River**	**84.85**	**27**	P		**P**	**06 13 14.0**	**+1.1**
	baz=250,SNR=5.2							
AKTO	**Aktyubinsk**	**84.87**	**321**	P		**P**	**06 13 13.4**	**+0.1**
	comp=Z,5.4nm,0.9s,baz=89,slow=5.7,SNR=12							
	comp=Z,5.4nm,0.9s							
TAOE	**Nuku Hiva Isla**	**85.10**	**98**	*e*LR		LR	06 40 04.3	
	comp=Z,146nm,25.3s							
H18K	**Honhosa River**	**85.11**	**23**	IAmb		IAmb	06 13 15.8	
	comp=Z,20nm,1.1s							
H18K	**Honhosa River**	**85.11**	**23**	P		**P**	**06 13 14.7**	**+0.5**
	baz=248,SNR=6.1							
O19K	**Port Alsworth**	**85.12**	**28**	P		**P**	**06 13 14.6**	**+0.3**
	baz=252							
J18K	**Innoko River**	**85.15**	**25**	IAmb		IAmb	06 13 16.9	
	comp=Z,17nm,1.1s							
J18K	**Innoko River**	**85.15**	**25**	P		**P**	**06 13 15.2**	**+0.7**
	baz=249,SNR=14							
QSPA	**South Pole Qui**	**85.15**	**180**	P		**P**	**06 13 14.2**	**-0.4**
	comp=Z,10nm,0.9s,baz=328,slow=2.2,SNR=20							
QSPA				LR		LR	06 51 22.4	
	comp=Z,159nm,20.0s,baz=3.5,slow=36							
	comp=Z,10nm,0.9s							
QSPA	**South Pole Qui**	**85.15**	**180**	P		**P**	**06 13 14.1**	**-0.5**
QSPA				IAmb		IAmb	06 13 15.7	
	comp=Z,17nm,1.1s							
E18K	**Tukpahlearik C**	**85.19**	**21**	IAmb		IAmb	06 13 17.2	
	comp=Z,14nm,1.1s							
E18K	**Tukpahlearik C**	**85.19**	**21**	P		**P**	**06 13 15.3**	**+0.8**
	baz=245,SNR=6.5							
F18K	**Selawik**	**85.19**	**22**	P		**P**	**06 13 15.1**	**+0.6**
	baz=246							
N19K	**Bonanza Creek**	**85.24**	**28**	P		**P**	**06 13 15.8**	**+0.7**
	baz=251							
KDAK	**Kodiak Island**	**85.25**	**31**	P		**P**	**06 13 15.6**	**+0.6**
	baz=253							
G18K	**Tagagawik**	**85.28**	**22**	IAmb		IAmb	06 13 16.5	
	comp=Z,10nm,1.0s							
G18K	**Tagagawik**	**85.28**	**22**	P		**P**	**06 13 15.6**	**+0.5**
	baz=247,SNR=6.1							
P19K	**Oil Pt**	**85.48**	**29**	P		**P**	**06 13 16.5**	**+0.3**
	baz=253							
C18K	**Utukok River**	**85.51**	**19**	P		**P**	**06 13 16.9**	**+0.7**
	baz=245							
L19K	**White Mountain**	**85.52**	**26**	IAmb		IAmb	06 13 19.1	
	comp=Z,20nm,1.3s							
L19K	**White Mountain**	**85.52**	**26**	P		**P**	**06 13 17.1**	**+0.8**
	baz=251,SNR=8.4							
GCSA	**Galena City Sc**	**85.54**	**24**	P		**P**	**06 13 17.2**	**+0.9**
	baz=249,SNR=8.5							
M19K	**Big River Lodg**	**85.63**	**27**	P		**P**	**06 13 17.8**	**+0.9**
	baz=251							
J19K	**Poorman**	**85.79**	**25**	P		**P**	**06 13 18.6**	**+1.0**
	baz=250,SNR=15							
O20K	**Slope Mountain**	**85.90**	**29**	P		**P**	**06 13 19.1**	**+0.8**
	baz=253							
F19K	**Shaleruckik Mo**	**85.97**	**22**	IAmb		IAmb	06 16 36.7	
	comp=Z,19nm,2.0s							
F19K	**Shaleruckik Mo**	**85.97**	**22**	P		**P**	**06 13 19.5**	**+1.1**
	baz=248							
G19K	**Purcell Mounta**	**85.97**	**22**	IAmb		IAmb	06 13 20.4	
	comp=Z,9.6nm,0.9s							
G19K	**Purcell Mounta**	**85.97**	**22**	P		**P**	**06 13 19.3**	**+0.9**
	baz=249,SNR=11							
H19K	**Roundabout Mou**	**85.99**	**23**	P		**P**	**06 13 19.3**	**+0.8**
H19K	**Roundabout Mou**	**85.99**	**23**	P		**P**	**06 13 19.4**	**+0.9**
	baz=249,SNR=14							
M20K	**Styx River**	**86.19**	**27**	P		**P**	**06 13 20.5**	**+0.8**
	baz=252							
C19K	**Lookout Ridge**	**86.23**	**19**	P		**P**	**06 13 20.9**	**+1.2**
	baz=246							
K20K	**Telida**	**86.24**	**25**	P		**P**	**06 13 20.8**	**+1.0**
	baz=252,SNR=16							
HOM	**Homer**	**86.25**	**29**	P		**P**	**06 13 20.2**	**+0.2**
	baz=254							
E19K	**Redstone River**	**86.40**	**21**	IAmb		IAmb	06 13 22.6	
	comp=Z,10nm,0.8s							
E19K	**Redstone River**	**86.40**	**21**	P		**P**	**06 13 21.3**	**+0.7**
	baz=248,SNR=8.0							

PMR	**Palmer** baz=256,SNR=5.7	87.95	28	P	P	06 13 28.4 +0.3
B21K	**Ikpikpuk River** baz=251	88.06	19	P	P	06 13 29.0 +0.5
H22K	**Ishtalitna Cre** baz=254,SNR=5.4	88.10	23	P	P	06 13 29.6 +0.8
MLY	**Manley** comp=Z,9.5nm,0.8s	88.12	24	IAmb	IAmb	06 13 30.5
MLY	**Manley** baz=254,SNR=16	88.12	24	P	P	06 13 29.3 +0.4
PWL	**Port Wells** baz=257	88.15	29	P	P	06 13 29.4 +0.3
KNK	**Knik Glacier** baz=257,SNR=6.0	88.22	28	P	P	06 13 29.9 +0.4
F22K	**John River** baz=253	88.25	22	P	P	06 13 30.0 +0.5
G22K	**Bettles** baz=254	88.33	22	P	P	06 13 30.7 +0.8
SML	**Sawmill** baz=257,SNR=5.6	88.37	28	P	P	06 13 30.6 +0.4
P23K	**Montague Islan** baz=258	88.41	30	P	P	06 13 30.7 +0.3
WAT1	**Susitna Watana** baz=256	88.51	27	P	P	06 13 31.1 +0.2
MCK	**McKinley** comp=Z,8.2nm,0.8s	88.55	26	IAmb	IAmb	06 13 31.8
MCK	**McKinley** baz=256	88.55	26	P	P	06 13 31.4 +0.4
M23K	**Glacier View** baz=257	88.65	28	P	P	06 13 31.8 +0.3
B22K	**Teshekpuk Lake** baz=252	88.68	19	P	P	06 13 32.2 +0.8
NEA2	**Nenana** baz=256	88.70	25	P	P	06 13 32.3 +0.6
I23K	**Minto, Yukon-K** comp=Z,12nm,0.8s	88.72	24	IAmb	IAmb	06 13 33.5
I23K	**Minto, Yukon-K** baz=256,SNR=12	88.72	24	P	P	06 13 31.9 +0.2
GLI	**Glacier Island** baz=258	88.75	29	P	P	06 13 32.0 +0.1
H23K	**Yukon River** baz=256	88.81	24	P	P	06 13 32.5 +0.3
WAT6	**Susitna Watana** baz=257	88.81	27	P	P	06 13 32.3 -0.1
Q23K	**Middleton Isla** baz=259	88.82	30	P	P	06 13 32.3 0.0
SCM	**Sheep Creek Mo** baz=258	88.84	28	P	P	06 13 32.8 +0.3
G23K	**Bananza Creek** comp=Z,9.9nm,0.9s	88.84	23	IAmb	IAmb	06 13 34.7
G23K	**Bananza Creek** baz=255,SNR=15	88.84	23	P	P	06 13 32.6 +0.3
COLD	**Coldfoot** baz=255	88.91	22	P	P	06 13 32.7 +0.1
DHY	**Denali Highway** baz=258,SNR=8.3	89.08	27	P	P	06 13 33.6 -0.1
D23K	**Nanushuk River** comp=Z,7.8nm,0.9s	89.20	20	IAmb	IAmb	06 13 35.4
D23K	**Nanushuk River** baz=254	89.20	20	P	P	06 13 34.3 +0.4
CCB	**Clear Creek Bu** comp=Z,6.7nm,0.9s	89.24	25	IAmb	IAmb	06 13 34.8
COLA	**College** baz=257	89.27	25	P	P	06 13 34.7 +0.4
EYAK	**Cordova Ski Ar** baz=259	89.33	29	P	P	06 13 34.7 +0.1
E23K	**Chandalar** comp=Z,7.8nm,0.8s	89.34	21	IAmb	IAmb	06 13 36.0
E23K	**Chandalar** baz=256,SNR=9.0	89.34	21	P	P	06 13 34.9 +0.2
KLU	**Klutina** baz=259	89.43	28	P	P	06 13 35.4 +0.1
M24K	**Tolsona, Glenn** baz=259	89.43	28	P	P	06 13 35.8 +0.6
C23K	**Itkillik River** comp=Z,8.4nm,0.9s	89.45	20	IAmb	IAmb	06 13 35.6
C23K	**Itkillik River** baz=254	89.45	20	P	P	06 13 35.6 +0.5
H24K	**Noodor Dome** comp=Z,8.6nm,1.0s	89.48	24	IAmb	IAmb	06 13 36.9
H24K	**Noodor Dome** baz=257,SNR=13	89.48	24	P	P	06 13 35.5 +0.1
POKR	**Poker Plat Res** baz=258	89.50	24	P	P	06 13 35.6 +0.2
TOLK	**Toolik Lake Re** baz=256	89.50	21	P	P	06 13 35.5 +0.1
HDA	**Harding Lake** comp=Z,7.2nm,0.9s	89.55	25	IAmb	IAmb	06 13 36.6
HDA	**Harding Lake** baz=258	89.55	25	P	P	06 13 36.0 +0.3
IL31		89.66	25	P	P	06 13 34.2 -1.9
ILAR	**Eielson Array** comp=Z,4.4nm,1.1s,baz=266,slow=4.1,SNR=18 comp=Z,4.4nm,1.1s	89.66	25	P	P	06 13 34.5 -1.6
E24K	**Your Creek** baz=256	89.76	22	P	P	06 13 37.0 +0.3
G24K	**Hadweenzic Riv** comp=Z,9.4nm,1.2s	89.83	23	P	P	06 13 36.9 0.0
G24K				IAmb	IAmb	06 13 38.8
G24K	**Hadweenzic Riv** baz=257,SNR=5.9	89.83	23	P	P	06 13 37.4 +0.4
F24K	**Squaw Lake** comp=Z,13nm,1.4s	89.85	22	IAmb	IAmb	06 13 39.1
F24K	**Squaw Lake** baz=257,SNR=7.9	89.85	22	P	P	06 13 37.5 +0.5
KAIM	**Kayak Island** baz=260	89.87	30	P	P	06 13 37.8 +0.6
D24K	**Happy Valley** baz=256	89.89	20	P	P	06 13 37.6 +0.4
PAX	**Paxson** baz=259	89.92	27	P	P	06 13 38.0 +0.5
K24K	**Donnelly Dome** baz=259	89.94	26	P	P	06 13 38.0 +0.5
HARP	**HAARP** baz=260	89.95	27	P	P	06 13 38.4 +0.8
BMRM	**Bremner River** baz=260	89.96	29	P	P	06 13 38.5 +0.8
N25K	**Chitina, Valde** baz=260	90.07	28	P	P	06 13 38.2 0.0
J25K	**Salcha River,** baz=259	90.26	25	P	P	06 13 39.3 +0.2
RIDG	**Independent Ri** baz=260	90.33	26	P	P	06 13 39.7 +0.3
PRP	**Porcupine Dome** baz=259	90.37	24	P	P	06 13 39.7 +0.1
G25K	**Bearman Lake** baz=259	90.38	23	P	P	06 13 39.9 +0.5
RAYN	**Ar Rayn** comp=Z,14nm,1.4s	90.60	293		P	06 13 39.7 -1.8
RAYN				IAmb	IAmb	06 13 54.5
CRQE	**Cirque** baz=261	90.65	29	P	P	06 13 41.3 +0.2
FYU	**Fort Yukon** comp=Z,9.5nm,1.0s	90.68	23	IAmb	IAmb	06 13 43.2
F25K	**Christian Rive** baz=259,SNR=5.6	90.71	22	P	P	06 13 41.7 +0.6
SCRK	**Sand Creek** baz=261	90.75	26	P	P	06 13 41.9 +0.4
D25K	**Kavik River** baz=258	90.78	20	P	P	06 13 41.1 -0.2
MCARA	**McCarthy VSAT** baz=261	90.78	29	P	P	06 13 41.6 +0.1
E25K	**Arctic Village** comp=Z,6.9nm,1.0s	90.84	22	IAmb	IAmb	06 13 43.6
E25K	**Arctic Village** baz=259,SNR=6.8	90.84	22	P	P	06 13 42.0 +0.4
L26K	**Log Cabin Wild** baz=261	90.88	27	P	P	06 13 42.3 +0.4
M26K	**Nabesna, AK** baz=262	90.94	28	P	P	06 13 42.4 +0.1
F26K	**Sheenjek River** baz=260,SNR=6.2	91.29	22	P	P	06 13 43.8 0.0
G26K	**Porcupine Rive** baz=261	91.31	23	P	P	06 13 44.5 +0.7
C26K	**Camden Bay** baz=260	91.39	20	P	P	06 13 44.8 +0.6
M27K	**Edge Creek, AK** baz=262	91.45	28	P	P	06 13 44.1 -0.6
L27K	**Beaver Creek,** baz=262	91.57	27	P	P	06 13 45.6 +0.5
BCAR	**Beaver Creek A**	91.59	27	P	P	06 13 44.1 -1.2
C27K	**Jago River** baz=261	91.76	20	P	P	06 13 46.2 +0.4
ELIB	**Princess Elisa** comp=Z,6.1nm,1.0s	91.77	197	*d*P	P	06 13 47.3 +1.2
BVCY	**Beaver Creek** baz=263	91.93	28	P	P	06 13 47.1 +0.3
PINM	**Pinnacle**	91.97	30	P	P	06 13 47.3 +0.2
	baz=264					
I27K	**Kandik River** comp=Z,7.2nm,0.9s	91.99	24	IAmb	IAmb	06 13 48.8
I27K	**Kandik River** baz=263	91.99	24	P	P	06 13 47.4 +0.3
YUK3	**Moose Creek** baz=264	92.05	28	P	P	06 13 47.8 +0.2
O28M	**Mount Upton** baz=264	92.07	29	P	P	06 13 47.8 0.0
H27K	**Steamboat Moun** comp=Z,6.4nm,1.1s	92.10	24	IAmb	IAmb	06 13 49.2
H27K	**Steamboat Moun** baz=263,SNR=5.8	92.10	24	P	P	06 13 48.1 +0.5
G27K	**Doyon Strip** baz=263	92.12	23	P	P	06 13 47.9 +0.3
E27K	**Coleen River** baz=263,SNR=5.7	92.31	22	P	P	06 13 48.6 +0.1
YUK8	**Steele Glacier** baz=264	92.33	29	P	P	06 13 49.0 0.0
I28M	**Miner Creek** comp=Z,6.5nm,0.9s	92.66	25	IAmb	IAmb	06 13 52.0
I28M	**Miner Creek** baz=264	92.66	25	P	P	06 13 50.5 +0.2
D27M	**Malcolm River** baz=264	92.67	21	P	P	06 13 50.6 +0.5
BRWY	**Burwash Landin** baz=265	92.69	29	P	P	06 13 50.5 +0.2
DAWY	**Dawson** comp=Z,13nm,1.5s	92.77	26	IAmb	IAmb	06 13 53.0
DAWY	**Dawson** baz=265	92.77	26	P	P	06 13 50.7 +0.1
O29M	**Mount Kennedy** baz=265	92.82	30	P	P	06 13 51.0 -0.1
YUK4	**Talbot Arm** baz=266	92.87	29	P	P	06 13 51.7 +0.3
F28M	**Old Crow** baz=264	92.90	22	P	P	06 13 51.3 +0.2
YUK6	**Outpost Mounta** baz=266	92.98	29	P	P	06 13 51.9 0.0
M29M	**Somme Creek** baz=266	93.05	28	P	P	06 13 52.1 0.0
E28M	**Babbage River** comp=Z,13nm,1.6s	93.12	22	IAmb	IAmb	06 13 53.1
E28M	**Babbage River** baz=265	93.12	22	P	P	06 13 52.2 0.0
P29M	**Windy Craggy** baz=266	93.19	31	P	P	06 13 52.8 +0.1
L29M	**L29M** baz=266	93.25	27	P	P	06 13 52.4 -0.5
H29M	**Whitestone** baz=266	93.37	24	P	P	06 13 53.0 -0.4
HYT	**Haines Junctio** baz=266	93.39	29	P	P	06 13 53.1 -0.5
D28M	**Stokes Point** baz=266	93.47	21	P	P	06 13 53.3 -0.3
G29M	**Pine Creek** comp=Z,12nm,1.0s	93.56	23	IAmb	IAmb	06 13 55.0
G29M	**Pine Creek** baz=266	93.56	23	P	P	06 13 54.0 -0.3
K29M	**Barlow Dome** baz=266	93.57	26	P	P	06 13 54.2 -0.2
P30M	**Million Dollar** baz=267	93.61	30	P	P	06 13 54.3 -0.4
N30M	**Aishikik Lake** baz=267	93.63	29	P	P	06 13 54.1 -0.6
E29M	**Blow River** baz=266	93.70	22	P	P	06 13 54.5 -0.3
M30M	**Minto, Yukon** baz=267	93.83	28	P	P	06 13 55.3 -0.3
S31K	**Pelican** baz=267	93.87	32	P	P	06 13 55.3 -0.5
PLBC	**Pleasant Camp** baz=267	93.88	31	P	P	06 13 55.7 -0.1
EPYK	**Eagle Plains** baz=267	94.05	24	P	P	06 13 56.1 -0.4
O30N	**Mendenhall** baz=268	94.08	29	P	P	06 13 56.5 -0.3
J30M	**Hart River** baz=268	94.13	26	P	P	06 13 56.7 -0.3
I30M	**Mount Dempster** baz=268	94.14	25	P	P	06 13 56.8 -0.3
N31M	**Braeburn, Yuko** baz=268	94.26	29	P	P	06 13 56.8 -0.8
G30M	**tAoh Zraii Nji** comp=Z,7.4nm,0.9s	94.27	23	IAmb	IAmb	06 13 57.5
G30M	**tAoh Zraii Nji** baz=268	94.27	23	P	P	06 13 57.1 -0.4
SIT	**Sitka** baz=268	94.32	33	P	P	06 13 57.2 -0.6
SKAG	**Skagway** baz=268	94.41	31	P	P	06 13 57.7 -0.5
F30M	**Barrier River** baz=268	94.46	23	P	P	06 13 57.7 -0.7
WHY	**Whitehorse** baz=268	94.67	30	P	P	06 13 59.0 -0.6
S32K	**Killisnoo** baz=268	94.74	33	P	P	06 13 59.3 -0.4
R32K	**Eaglecrest** baz=269	94.79	32	P	P	06 13 59.5 -0.5
H31M	**Pearl River** baz=269	95.00	24	P	P	06 14 00.3 -0.5
G31M	**Satah River** baz=270	95.04	23	P	P	06 14 00.7 -0.2
P32M	**Atlin** baz=269	95.23	31	P	P	06 14 01.4 -0.7
F31M	**Tsiigehtchic** baz=270	95.25	23	P	P	06 14 01.3 -0.6
INK	**Inuvik** baz=270	95.32	22	P	P	06 14 01.8 -0.5
CRAG	**Craig** baz=270	95.52	35	P	P	06 14 02.9 -0.5
U33K	**Whale Pass** baz=270	95.52	34	P	P	06 14 03.0 -0.4
P33M	**Teslin, Yukon** baz=270	95.69	30	P	P	06 14 03.9 -0.3
WRAK	**Wrangell Islan** baz=270	95.95	34	P	P	06 14 05.1 -0.2
Q32M	**Nakina River** baz=271	95.97	31	P	P	06 14 05.6 0.0
V35K	**Ketchikan** baz=271	96.38	35	P	P	06 14 07.4 +0.1
MMPY	**Sheldon Lake,** baz=272	96.39	28	P	P	06 14 07.2 -0.1
S34M	**Telegraph Cree** baz=272	96.59	32	P	P	06 14 08.0 -0.3
R33M	**Jennings River** baz=272	96.64	31	P	P	06 14 08.2 -0.4
T35M	**Bob Quinn** baz=272	97.10	33	P	P	06 14 10.0 -0.6
DLBC	**Dease Lake** baz=272	97.16	32	P	Pdif	06 14 10.6 -0.4
TROLL	**Troll, Antarti** comp=Z,135nm,1.0s	97.25	194	⇓P	Pdif	06 14 12.0 +0.7
SNAA	**Sanae** comp=Z,36nm,0.7s	98.70	193	⇓P	Pdif	06 14 19.1 +1.4
SNAA	**Sanae** comp=Z,2.5nm,1.0s,baz=208,slow=6.3,SNR=3.8	98.70	193	P	Pdif	06 14 18.6 +1.0
SNAA	comp=Z,98nm,20.6s,baz=116,slow=34 comp=Z,2.5nm,1.0s			LR	LR	06 57 19.8
SNAA	**Sanae** comp=Z,8.1nm,1.4s	98.70	193	IAmb	IAmb	06 15 48.8
ARCES	**ARCESS Array B** comp=Z,2.6nm,0.8s,baz=79,slow=6.3,SNR=10	100.93	340	P	Pdif	06 14 26.5 -0.9
FINES	**FINESS Array B** comp=Z,0.9nm,0.8s,baz=93,slow=2.8,SNR=5.1	102.77	332	P	Pdif	06 14 35.1 -0.6
RNPP9	**Sopachiv**	105.06	322	P	Pdif	06 14 45.0 -1.2
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=189,slow=3.3,SNR=5.1	120.33	59	PKP	PKiKP	06 19 30.4 -0.2
ESDC	**Sonseca Array** comp=Z,0.4nm,0.7s,baz=349,slow=1.3,SNR=4.1	128.68	319	PKP	PKPdf	06 19 46.2 0.0
TORD	**Torodi Ar. Bea** comp=Z,1.6nm,0.7s,baz=59,slow=2.8,SNR=9.5	132.32	283	PKP	PKPdf	06 19 53.1 -0.6
CFA	**Coronel Fontan** comp=Z,0.3nm,0.3s,baz=311,slow=11,SNR=12	138.00	151	PKP	PKPdf	06 20 04.2 +0.2
NNA	**Nana** comp=Z,27nm,0.8s,baz=268,slow=4.7,SNR=12	145.01	119	PKP	PKPdf	06 20 16.9 0.0
ATAH	**Atahualpa** comp=Z,16nm,0.8s,baz=188,slow=4.9,SNR=20	145.48	110	PKPbc	PKPab	06 20 19.6 +1.1
CPUP	**Villa Florida** comp=Z,7.0nm,0.9s,baz=213,slow=3.2,SNR=23	147.13	161	PKPbc	PKPbc	06 20 22.3 0.0
ROSC	**El Rosal** comp=Z,29nm,0.7s,baz=169,slow=5.2,SNR=28	151.70	89	PKPbc	PKiKP	06 20 35.0 0.0
SIV	**San Ignacio** comp=Z,4.6nm,1.1s,baz=209,slow=2.9,SNR=11	154.46	144	PKPab	PKPab	06 20 52.4 -2.0

*SNET **20** 06:01:31.7±0.9, 13°.32N×89°.65W, h66km, ML2.7,*

Presumed earthquake
*CATAC **20** 06:01:31.5±0.5, 13°N±3°×9°0W±°, h46km±3km, M2.8/19, MLv2.8/19, Error ellipse: s-maj=7.0km s-min=4.0km az=23.4, confirmed*
*GCG **20** 06:01:33.2±1.0, 13°.40N×89°.59W, h59km±6km, MD3.8, Presumed earthquake*

ISC 20 06:01:31.7±2.7, 13°.3N±0°.1×89°.65W±0°.08, h65km±10km, n43, σ0°.40/71, 1C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	0.38	57	P	Pn	06 01 42.5	-0.4
LALI				S	Sn	06 01 51.4	+0.3
LALI	**Alcalda de L**	0.38	57	*e*P	Pn	06 01 42.8	+0.0
LALI				*e*S	Sn	06 01 50.4	-0.8
LALI	**Alcalda de L**	0.38	57	⇓*i*P	Pn	06 01 42.9	0.0
LALI				*e*S	Sn	06 01 50.6	-0.6
JAYA	**Jayaque - finc**	0.42	28	P	Pn	06 01 43.2	-0.2
JAYA				S	Sn	06 01 52.3	+0.2
JAYA	**Jayaque - finc**	0.42	28	⇓*i*P	Pn	06 01 43.4	-0.1
JAYA				*i* S	Sn	06 01 51.4	-0.6
JAYA	**Jayaque - finc**	0.42	28	⇓*i*P	Pn	06 01 43.4	-0.1
JAYA				*e*S	Sn	06 01 51.8	-0.2
PMON	**Piamonte**	0.54	37	P	Pn	06 01 44.5	-0.1
PMON				S	Sn	06 01 54.0	+0.1
PMON	**Piamonte**	0.54	37	⇓*i*P	Pn	06 01 44.6	0.0
CEVE	**Cerro Verde**	0.54	2	P	Pn	06 01 44.7	0.0
CEVE				S	Sn	06 01 55.0	+0.7
CEVE	**Cerro Verde**	0.54	2	*e*P	Pn	06 01 44.9	+0.1
PANCS	**Alcalda de**	0.56	54	S	Sn	06 01 54.4	+0.1
CEDA	**San Andres**	0.57	25	P	Pn	06 01 44.6	-0.3
CEDA				S	Sn	06 01 55.3	+0.8
CEDA	**San Andres**	0.57	25	*e*P	Pn	06 01 45.0	+0.1
BOQS	**Boqueron**	0.57	39	*e*P	Pn	06 01 45.2	+0.1
LOMA	**Loma Larga**	0.59	52	P	Pn	06 01 44.7	-0.4
LOMA	**Loma Larga**	0.59	52	*e*P	Pn	06 01 45.2	+0.1
LOMA				*e*S	Sn	06 01 55.4	+0.5
UEES	**Universidad Ev**	0.59	43	P	Pn	06 01 44.6	-0.5
UEES				S	Sn	06 01 54.9	0.0
SEMO	**Seminario San**	0.59	45	P	Pn	06 01 44.6	-0.4
SEMO				S	Sn	06 01 55.9	+1.1
RTR	**El Retiro**	0.61	0	*e*P	Pn	06 01 45.7	+0.3
NUBE	**Las Nubes**	0.63	348	P	Pn	06 01 45.2	-0.4
NUBE	**Las Nubes**	0.63	348	⇓*i*P	Pn	06 01 45.6	0.0
NUBE				*i* S	Sn	06 01 55.5	-0.3
NUBE	**Las Nubes**	0.63	348	*e*P	Pn	06 01 45.6	0.0
NUBE				*e*S	Sn	06 01 56.2	+0.4
FAME	**Alcaldia de Sa**	0.66	327	P	Pn	06 01 45.5	-0.3
LFRS	**El Faro**	0.66	59	⇑*i*P	Pn	06 01 46.1	+0.2
UNIC	**Universidad Ca**	0.70	8	P	Pn	06 01 46.0	-0.3
UNIC				S	Sn	06 01 57.7	+0.6
LOAL	**Lomas de Alarc**	0.72	350	P	Pn	06 01 46.5	-0.1
LOAL				S	Sn	06 01 58.2	+0.7
SLOZ	**Alcaldia de Sa**	0.75	350	P	Pn	06 01 46.9	0.0
SLOZ				S	Sn	06 01 58.8	+0.7
PAVA	**Las Pavas**	0.81	58	P	Pn	06 01 47.6	-0.1
PAVA				S	Sn	06 01 59.9	+0.4
COEG	**Centro de Oper**	0.82	66	P	Pn	06 01 47.4	-0.3
COEG				S	Sn	06 02 00.1	+0.5
COEG	**Centro de Oper**	0.82	66	*e*P	Pn	06 01 47.7	0.0
COEG				*e*S	Sn	06 01 59.9	+0.3
TECO	**Alcaldia de Te**	0.88	73	P	Pn	06 01 48.1	-0.3
TECO				S	Sn	06 02 01.0	+0.1
SCLA	**Alcaldia de Sa**	0.99	65	S	Sn	06 02 03.5	+0.2
JUAM	**Asuncion Mita**	1.05	357	⇓*i*P	Pn	06 01 50.4	-0.2
JUAM				*e*S	Sn	06 02 04.4	-0.3
P5NO	**Presa 5 de nov**	1.11	51	P	Pn	06 01 50.5	-0.9
P5NO				S	Sn	06 02 05.5	-0.6
MTO3	**Montecristo**	1.14	14	P	Pn	06 01 51.5	-0.4
MTO3				S	Sn	06 02 06.6	-0.5
MTO3	**Montecristo**	1.14	14	⇓*e*P	Pn	06 01 51.6	-0.4
MTO3	**Montecristo**	1.14	14	*e*P	Pn	06 01 51.6	-0.4
PACA	**Pacayal**	1.30	82	P	Pn	06 01 54.3	+0.3
PACA				S	Sn	06 02 11.3	+0.6
ESQI	**Esquipulas**	1.30	13	P	Pn	06 01 53.7	-0.3
ESQI				S	Sn	06 02 10.6	-0.1
ESQI	**Esquipulas**	1.30	13	*e*P	Pn	06 01 54.0	0.0
SARH	**Santa Rosa de**	1.71	30	P	Pn	06 01 59.6	+0.1
SARH				S	Sn	06 02 20.8	+0.3
SARH	**Santa Rosa de**	1.71	30	⇓*i*P	Pn	06 01 59.8	+0.4
MARCA	**Marcala la Paz**	1.79	61	P	Pn	06 02 00.3	-0.2
MARCA				S	Sn	06 02 22.3	-0.1

*PDG **20** 06:12:45.6±0.0, 43°.65N×17°.61E, h0km, ML2.6/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*BEO **20** 06:12:46.9±0.4, 43°.65N×17°.66E, h2km±5km, ML2.4/5*
*RHSSO **20** 06:12:47.3±0.4, 43°.65N×17°.74E, h6km±2km, ML2.6/6*

ISC 20 06:12:46.5±1.0, 43°.64N±0°.02×17°.69E±0°.02, h7km±9km, n48, σ1°.21/92, 8C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RICI	**Ricice**	0.43	251	*e*Pg	Pg	06 12 54.3	-0.6
RICI				Sg	Sg	06 13 01.0	+0.6
MAKA	**Makarska**	0.60	235	*e*Pg	Pg	06 12 57.5	-0.6
MAKA				Sg	Sg	06 13 05.7	-0.2
STON	**Ston**	0.76	180	*e*Pg	Pg	06 13 00.5	-0.6
STON				Sg	Sg	06 13 11.1	+0.7
STON	**Ston**	0.76	180	*e*Pg	Pg	06 13 00.2	-0.9
STON				*e*Sg	Sg	06 13 11.7	+0.7
KLINJ	**Klinje**	0.80	125	*e*Pg	Pg	06 13 00.9	-1.0
KLINJ				*e*Sg	Sg	06 13 12.6	+0.3
BRY	**Bratogost**	0.96	140	⇑*i*Pg	Pg	06 13 03.6	-1.3
BRY				*e*Sg	Sg	06 13 18.0	+0.6
BRY	**Bratogost**	0.96	140	*e*Pg	Pg	06 13 04.1	-0.8
BRY				*i* Sg	Sn	06 13 19.9	-0.6
UPM	**Unac-Piva**	0.98	116	⇑*i*Pg	Pg	06 13 04.9	-0.5
UPM				*e*Sg	Sg	06 13 17.9	-0.3
UPM	**Unac-Piva**	0.98	116	*e*Pg	Pg	06 13 04.8	-0.6
UPM				*i* Sg	Sn	06 13 21.0	-0.2
KIJV	**Kijevo**	1.00	292	*e*Pg	Pb	06 13 06.0	-0.2
KIJV				Sg	Sn	06 13 20.5	-1.0
DBRK	**Dubrovnik**	1.02	161	*e*Pg	Pg	06 13 05.7	-0.4
DBRK				Sg	Sg	06 13 19.7	+0.4
TREB	**Trebinje**	1.04	152	*e*Pg	Pg	06 13 05.5	-0.9
TREB				*e*Sg	Sb	06 13 21.2	+0.6
TREB	**Trebinje**	1.04	152	⇑*i*Pg	Pg	06 13 05.4	-0.9
TREB				*e*Sg	Sb	06 13 20.8	+0.2
BLY	**Banja Luka**	1.17	342	*e*Pg	Pg	06 13 08.8	-0.2
BLY				*e*Sg	Sg	06 13 24.2	0.0
BLY	**Banja Luka**	1.17	342	⇑*i*Pg	Pb	06 13 08.5	-0.6
BLY				*e*Sg	Sn	06 13 24.4	-1.2
BBLS	**Lazi&#263i**	1.26	79	*e*Pg	Pn	06 13 09.8	-0.9
BBLS	**Lazi&#263i**	1.26	79	⇑*i*Pg	Pn	06 13 09.4	-1.3
BBLS				*e*Sg	Sb	06 13 25.6	-1.6
NKME	**Niksic**	1.27	133	*e*Pg	Pn	06 13 10.0	-0.7
NKME				*i* Sg	Sn	06 13 30.5	+2.5
PLE	**Pljevlja**	1.27	103	*e*Pg	Pn	06 13 10.2	-0.6
PLE				*i* Sg	Sn	06 13 30.9	+2.7
HCY	**Herceg Novi**	1.32	153	⇑*i*Pg	Pn	06 13 10.4	-1.0
HCY				*e*Sg	Sn	06 13 29.2	-0.2
HCY	**Herceg Novi**	1.32	153	*e*Pg	Pn	06 13 10.6	-0.8
HCY				*i* Sg	Sg	06 13 31.9	+2.8
CEME	**Cevo**	1.41	140	*e*Pg	Pg	06 13 12.4	-0.3
CEME				*i* Sg	Sg	06 13 35.1	+3.3
MORI	**Morici**	1.46	280	*e*Pg	Pg	06 13 14.4	0.0
MORI				Sg	Sg	06 13 35.8	+2.5
ZIRJ	**Zirje**	1.49	271	*e*Pg	Pg	06 13 15.0	0.0
ZIRJ				Sg	Sg	06 13 36.2	+2.0
KOME	**Kolasin**	1.55	120	*e*Pn	Pb	06 13 15.2	-0.3
KOME				*i* Sn	Sg	06 13 40.2	+4.0
BUM	**Brajici-Budva**	1.60	146	*e*Pn	Pb	06 13 15.8	-0.6
BUM				*i* Sn	Sg	06 13 41.4	+3.5
TEKS	**Tekeris**	1.61	55	*e*Pg	Pb	06 13 16.7	+0.2
TEKS				*e*Sg	Sg	06 13 39.3	+1.1
TEKS	**Tekeris**	1.61	55	*e*Pn	Pb	06 13 15.7	-0.8
TEKS				*e*Sn	Sb	06 13 36.6	-0.5
UDBI	**Udbina**	1.65	303	*e*Pn	Pb	06 13 17.3	0.0
UDBI				Sg	Sg	06 13 40.6	+1.1
PDG	**Podgorica**	1.66	136	⇑*i*Pn	Pb	06 13 16.9	-0.5
PDG				*e*Sn	Sb	06 13 38.4	-0.5
PDG	**Podgorica**	1.66	136	*e*Pn	Pb	06 13 17.2	-0.2
PDG				*i* Sn	Sg	06 13 42.9	+3.0
SJES	**Sjenica**	1.70	102	*e*Pn	Pb	06 13 17.8	-0.4
SJES	**Sjenica**	1.70	102	⇑*i*Pn	Pn	06 13 16.3	-0.4
SJES				*e*Sn	Sn	06 13 38.9	0.0
DIVS	**Divibare**	1.73	74	*e*Pg	Pg	06 13 19.4	-0.2
DIVS				*e*Sg	Sg	06 13 42.3	+0.3

IVA	**Berane**	**1.78**	**115**	*e*Pn	**Pb**	**06 13 19.6**	**+0.1**
IVA				*i* Sn	**Sg**	**06 13 46.0**	**+2.3**
IVAS	**Ivanjica**	**1.79**	**91**	*e*Pg	**Pb**	**06 13 18.5**	**-1.1**
IVAS				*e*Sg	**Sg**	**06 13 43.1**	**-0.8**
DRME	**Dracevica, Mon**	**1.82**	**142**	*e*Pn	**Pb**	**06 13 19.1**	**-1.0**
DRME				*e*Sn	**Sn**	**06 13 41.9**	**+0.4**
DRME	**Dracevica, Mon**	**1.82**	**142**	*e*Pn	**Pb**	**06 13 19.7**	**-0.4**
DRME				*i* Sn	**Sg**	**06 13 46.6**	**+1.8**
PLIT	**Plitvice**	**1.94**	**311**	*e*Pn	**Pb**	**06 13 20.8**	**-1.3**
DUGI	**Dugi Otok**	**1.94**	**281**	*e*Pn	**Pb**	**06 13 21.8**	**-0.4**
DUGI				Sn	**Sg**	**06 13 47.8**	**-1.0**
PVY	**Plav**	**1.96**	**121**	*e*Pn	**Pb**	**06 13 21.9**	**-0.7**
PVY				*i* Sn	**Sg**	**06 13 50.5**	**+1.1**
VIRC	**Vir**	**2.01**	**290**	*e*Pn	**Pn**	**06 13 21.4**	**+0.5**
VIRC				Sn	**Sb**	**06 13 49.0**	**+0.3**
ULC	**Ulcinj**	**2.02**	**145**	*e*Pn	**Pb**	**06 13 22.5**	**-1.1**
ULC				*i* Sn	**Sg**	**06 13 51.5**	**0.0**
TRUS	**Trudelj**	**2.05**	**72**	*e*Pn	**Pn**	**06 13 21.4**	**0.0**
MOSL	**Moslavina**	**2.09**	**342**	*e*Pn	**Pn**	**06 13 22.8**	**+0.9**
MOSL				Sn	**Sb**	**06 13 51.0**	**+0.1**
FRGS	**Fruska Gora**	**2.15**	**44**	*e*Pn	**Pn**	**06 13 23.2**	**+0.4**
FRGS				*e*Sn	**Sn**	**06 13 49.6**	**-0.2**
NVLJ	**Novalja**	**2.23**	**296**	*e*Pn	**Pb**	**06 13 25.9**	**-1.3**
NVLJ				Sn	**Sb**	**06 13 55.1**	**+0.1**
MORH	**Mrgy, Hungar**	**2.67**	**14**	*e*Pn	**Pn**	**06 13 30.9**	**+1.0**
MORH				*e*Sn	**Sn**	**06 14 03.2**	**+0.8**

*MDD **20** 06:14:28.6±1.9, 36°.80N×13°.30W, h0km, Mb3.8/3, M_mb3.1/3, Error ellipse: s-maj=20.9km s-min=13.4km az=150.0*

INMG 20 06:14:32.4±0.9, 37°.13N×13°.60W, h10km, ML1.9, 3C-1D, Error ellipse: s-maj=10.2km s-min=7.2km az=160.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.82**	**89**	Pn	Pn	06 15 24.8	-6.4
PFVI	**Vila Bisbo**	**3.82**	**89**	⇓*e*P	Pn	06 15 24.8	-6.4
PFVI				*e*S	Sn	06 16 04.9	-11
PMAFR	**Mafra**	**3.87**	**61**	Pn	Pn	06 15 25.9	-6.0
PMAFR	**Mafra**	**3.87**	**61**	*e*P	Pn	06 15 25.9	-6.0
PLOUS	**Minas do Lousa**	**4.21**	**76**	*e*P	Pn	06 15 30.4	-6.3
PLOUS				*e*S	Sn	06 16 14.8	-11
MOE	**Montemor**	**4.38**	**70**	*e*P	Pn	06 15 32.5	-6.6
MOE				*e*S	Sn	06 16 18.2	-12
PCVE	**Castro Verde**	**4.46**	**82**	Pn	Pn	06 15 33.5	-6.6
PCVE				Sn	Sn	06 16 18.3	-14
PCVE	**Castro Verde**	**4.46**	**82**	*e*P	Pn	06 15 34.6	-5.5
PBDV	**Barranco-do-Ve**	**4.53**	**87**	Sn	Sn	06 16 21.2	-13
PBDV	**Barranco-do-Ve**	**4.53**	**87**	*e*P	Pn	06 15 35.4	-5.7
PBDV				*e*S	Sn	06 16 21.3	-13
EVO	**Evora**	**4.64**	**71**	Pn	Pn	06 15 36.9	-5.6
EVO				Sn	Sn	06 16 23.9	-13
EVO	**Evora**	**4.64**	**71**	*e*S	Sn	06 16 24.1	-12
PMTG	**Montargil**	**4.66**	**64**	*e*P	Pn	06 15 36.5	-6.4
PMTG				*e*S	Sn	06 16 25.3	-12
PVAQ	**Vaqueiros**	**4.70**	**85**	*e*P	Pn	06 15 37.8	-5.6
PVAQ				*e*S	Sn	06 16 26.0	-12
PVAQ				*i* IAML		06 16 29.2	
PVAQ				*i* IAML		06 16 32.6	
PVAQ				*i* IAML		06 16 33.7	
PARRA	**Arraiolos**	**4.71**	**67**	*e*P	Pn	06 15 36.5	-7.0
PARRA				*e*S	Sn	06 16 26.5	-12
PARRA				*i* IAML		06 16 30.3	
PARRA				*i* IAML		06 16 31.0	
PARRA				*i* IAML		06 16 31.1	
EGRO	**El Granado**	**4.89**	**83**	Sn	Sn	06 16 30.8	-12
EGRO	**El Granado**	**4.89**	**83**	Pn	Pn	06 15 39.7	-6.3
EGRO	88nm,SNR=1.3			⇑*i*Vmb_VC		06 15 41.0	
EGRO				Sn	Sn	06 16 31.6	-11
PBAR	**Barrancos**	**5.31**	**77**	Pn	Pn	06 15 45.5	-6.2
PBAR				Sn	Sn	06 16 41.1	-12
PBAR	**Barrancos**	**5.31**	**77**	*e*P	Pn	06 15 45.8	-6.0
PMRV	**Marv??o**	**5.40**	**63**	*e*P	Pn	06 15 46.9	-6.0
PMRV				*e*S	Sn	06 16 44.4	-11
EBAD	**Badajoz**	**5.46**	**71**	Pn	Pn	06 15 47.7	-6.0
EBAD	**Badajoz**	**5.46**	**71**	Pn	Pn	06 15 47.8	-6.0
EBAD	66nm,SNR=1.2			⇑*i*Vmb_VC		06 15 48.5	
EBAD				Sn	Sn	06 16 48.3	-8.2
ECAB	**El Cabril**	**6.57**	**79**	Pn	Pn	06 16 03.3	-5.8
ECAB	33nm,SNR=0.8			⇑*i*Vmb_VC		06 16 03.6	

GUC 20 06:18:36.5±0.7, 25°.02S×69°.31W, h101km±6km, ML3.3, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**1.07**	**291**	⇑*e*P	Pn	06 18 59.7	+1.6
PB14				*e*S	Sn	06 19 16.7	+2.4
PB14	comp=E,440nm,0.4s			IAML		06 19 17.8	
AC01	**Pan de Azucar**	**1.62**	**226**	*e*P	Pn	06 19 05.3	+1.0
AC01				*i* S	Sn	06 19 26.2	+0.8
AC01	comp=E,216nm,0.2s			IAML		06 19 33.6	
AC02	**Maricunga**	**1.82**	**175**	⇑*e*P	Pn	06 19 08.6	+1.3
AC02				*e*S	Sn	06 19 32.3	+1.7
AC02	comp=E,186nm,0.3s			IAML		06 19 37.3	
AF01	**San Pedro de A**	**2.30**	**27**	⇑*e*P	Pn	06 19 14.4	+1.0
AF01				*e*S	Sn	06 19 43.7	+2.2
AF01	comp=N,385nm,0.5s			IAML		06 19 45.1	
PB05	**IPOC Station P**	**2.31**	**339**	*e*P	Pn	06 19 14.2	+1.0
PB05				*e*S	Sn	06 19 41.2	-0.1
PB06	**IPOC Station P**	**2.31**	**354**	*e*P	Pn	06 19 14.4	+1.0
PB06				*e*S	Sn	06 19 44.6	+3.0
GO03	**Copiapo**	**2.69**	**198**	*e*P	Pn	06 19 18.6	+0.3
GO03				*i* S	Sn	06 19 51.8	+1.4
PB03	**IPOC Station P**	**2.98**	**352**	*e*P	Pn	06 19 23.1	+0.8
PB09	**IPOC Station P**	**3.21**	**1**	*e*P	Pn	06 19 26.5	+1.2
PB07	**IPOC Station P**	**3.32**	**351**	⇑*e*P	Pn	06 19 28.3	+1.5
SLA	**San Lorenzo**	**3.47**	**86**	*e*P	Pn	06 19 31.6	+2.8
SLA				*e*S	Sn	06 20 12.8	+3.7
AC04	**Llanos de Chal**	**3.54**	**206**	*e*P	Pn	06 19 28.2	-1.4
VCA	**Vinchina**	**3.83**	**165**	*e*P	Pn	06 19 35.7	+2.1
VCA				*e*S	Sn	06 20 09.4	-8.4
AC05	**El Transito**	**3.90**	**193**	*e*P	Pn	06 19 34.5	0.0
AC05				*e*S	Sn	06 20 19.7	+0.3

*IDC **20** 06:19:05.1±2.8, 21°.25S×68°.23W, h122km±24km, mb3.7/3, mbtmp4.0/7, Error ellipse: s-maj=27.4km s-min=25.7km az=99.0*

*GUC **20** 06:19:06.3±0.8, 21°.19S×68°.55W, h132km±5km, ML3.6*

*NEIC **20** 06:19:06.2±1.4, 21°.20S±0°.05×68°.6W±0°.1, h132km±7km, mb4.1/7, Error ellipse: s-maj=16.6km s-min=7.0km az=98.0*

ISC 20 06:19:05.5±0.7, 21°.15S±0°.03×68°.50W±0°.07, h131km±7km, n53, σ1$ 08/68, mb4.0/5, 3C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.94**	**227**	⇓*i*P	Pn	**06 19 28.4**	**+0.2**
PB09				*i* S	Sn	**06 19 45.2**	**-0.2**
PB09	comp=N,2μm,0.3s			IAML		06 19 46.6	
PB09	**IPOC Station P**	**0.94**	**227**		Pn	**06 19 28.5**	**+0.2**
PB09					Sn	**06 19 45.3**	**-0.1**
PB09	**IPOC Station P**	**0.94**	**227**	*e*S	Sn	**06 19 45.2**	**-0.2**
PB08	**IPOC Station P**	**1.18**	**329**	⇑*i*P	Pn	**06 19 31.5**	**+0.8**
PB08				*i* S	Sn	**06 19 50.7**	**+1.0**
PB08	comp=N,1μm,0.3s			IAML		06 19 51.5	
PB08	**IPOC Station P**	**1.18**	**329**		Pn	**06 19 31.6**	**+0.9**
PB08				Sn	Sn	**06 19 50.8**	**+1.0**
PB02	**IPOC Station P**	**1.31**	**262**	⇓*i*P	Pn	**06 19 31.6**	**-0.1**
PB02	**IPOC Station P**	**1.31**	**262**	*e*P	Pn	**06 19 31.7**	**-0.1**
PB02				*i* S	Sn	**06 19 51.0**	**-0.7**
PB02	**IPOC Station P**	**1.31**	**262**		Pn	**06 19 31.6**	**-0.1**
PB02				Sn	Sn	**06 19 51.0**	**-0.7**
PB02	**IPOC Station P**	**1.31**	**262**	*i* S	Sn	**06 19 51.0**	**-0.7**
PB07	**IPOC Station P**	**1.41**	**246**	*e*P	Pn	**06 19 32.4**	**-0.5**
PB07				*i* S	Sn	**06 19 52.7**	**-1.1**
PB07	**IPOC Station P**	**1.41**	**246**	Pn	Pn	**06 19 32.5**	**-0.4**
PB07	**IPOC Station P**	**1.41**	**246**	*i* S	Sn	**06 19 52.6**	**-1.1**
PB03	**IPOC Station P**	**1.47**	**232**	*e*P	Pn	**06 19 33.0**	**-0.4**
PB03				*i* S	Sn	**06 19 53.7**	**-1.1**
PB03	**IPOC Station P**	**1.47**	**232**	Pn	Pn	**06 19 33.1**	**-0.4**
PB03	**IPOC Station P**	**1.47**	**232**	*i* S	Sn	**06 19 53.7**	**-1.1**
GO01	**Chusmiza**	**1.61**	**336**	⇑*i*P	Pn	**06 19 36.1**	**+0.7**
GO01				*e*S	Sn	**06 19 59.4**	**+1.1**
GO01	comp=E,972nm,0.4s			IAML		06 20 00.9	
GO01	**Chusmiza**	**1.61**	**336**		Pn	**06 19 36.2**	**+0.7**
PB11	**IPOC Station P**	**1.76**	**322**	⇑*i*P	Pn	**06 19 36.8**	**0.0**
PB11				*e*S	Sn	**06 20 00.4**	**-0.3**
PB11	**IPOC Station P**	**1.76**	**322**		Pn	**06 19 36.8**	**0.0**
TA02	**Huaiquique**	**1.76**	**300**	*e*P	Pn	**06 19 36.4**	**-0.2**
TA02				*e*S	Sn	**06 19 59.8**	**-0.7**
AF01	**San Pedro de A**	**1.81**	**171**	*e*P	Pn	**06 19 38.1**	**+0.4**
PB06	**IPOC Station P**	**1.84**	**213**	*e*P	Pn	**06 19 37.9**	**+0.1**
PB06				*i* S	Sn	**06 20 01.1**	**-1.3**
PB06	**IPOC Station P**	**1.84**	**213**	Pn	Pn	**06 19 37.8**	**0.0**
PSGCX	**Pisagua**	**2.17**	**315**	*e*P	Pn	**06 19 41.0**	**-0.8**
PSGCX				*e*S	Sn	**06 20 08.1**	**-1.5**
PSGCX	**Pisagua**	**2.17**	**315**		Pn	**06 19 41.1**	**-0.6**
PB05	**IPOC Station P**	**2.31**	**223**	IAML		06 20 13.2	
PB16	**IPOC Station P**	**2.96**	**341**	*e*P	Pn	**06 19 53.1**	**+0.8**
PB16				*e*S	Sn	**06 20 28.7**	**+0.5**
PB16	comp=N,85nm,0.3s			IAML		06 20 35.8	
PB16	**IPOC Station P**	**2.96**	**341**		Pn	**06 19 53.0**	**+0.8**
PB12	**IPOC Station P**	**3.06**	**325**	*e*P	Pn	**06 19 51.4**	**-1.6**
PB12				*e*S	Sn	**06 20 28.1**	**-1.6**
PB12	comp=E,199nm,0.3s			IAML		06 20 35.6	
PB12	**IPOC Station P**	**3.06**	**325**		Pn	**06 19 52.1**	**-0.9**
PB18	**Visviri**	**3.66**	**345**	Pn	Pn	**06 20 02.5**	**+1.1**
LPAZ	**La Paz**	**4.85**	**4**	P	Pn	**06 20 18.6**	**+1.4**
LPAZ	comp=E,14nm,0.4s,baz=184,slow=4.2,SNR=144			S	Sn	**06 21 08.8**	**-4.2**
LPAZ	**La Paz**	**4.85**	**4**		Pn	**06 20 18.9**	**+1.6**
SIV	**San Ignacio**	**8.72**	**55**	P	Pn	**06 21 05.2**	**-3.5**
SIV	comp=E,7.4nm,0.4s,baz=260,slow=7.8,SNR=43 comp=E,0.6nm,0.6s,baz=211,slow=20,SNR=1.3			S	Sn	06 22 32.6	-13
TRQA	**Tornquist**	**17.77**	**163**	P	P	**06 23 02.4**	**-1.1**
GO06	**Curarrehue**	**18.55**	**187**	P	P	**06 23 11.8**	**-0.3**
GO06	comp=E,7.7nm,0.8s			IAmb	IAmb	06 23 14.0	
MACA	**Manacapuru-AM**	**19.44**	**24**	P	P	**06 23 21.7**	**-0.2**
PLCA	**Paso Flores**	**19.60**	**185**	P	P	**06 23 22.9**	**-0.6**
BDFB	**Brasilia**	**20.19**	**78**	P	P	**06 23 28.7**	**-1.5**
BDFB	comp=E,1.5nm,0.8s,baz=337,slow=13,SNR=4.5 comp=E,1.3nm,0.4s,baz=266,slow=9.2,SNR=4.8			IAmb	IAmb	06 24 08.4	
BDFB	**Brasilia**	**20.19**	**78**	P	P	**06 23 29.1**	**-1.1**
TEIG	**Tepich**	**45.45**	**334**	P	P	**06 27 12.5**	**+1.0**
TEIG	comp=E,11nm,1.5s comp=E,6.0nm,0.9s			IAmb	IAmb	06 27 39.4	
S54A	**Dingess, Beckl**	**59.87**	**348**	P	P	**06 28 58.2**	**+0.8**
S54A	comp=E,3.8nm,0.8s			IAmb	IAmb	06 28 58.6	
Q54A	**Coxs Mills**	**60.93**	**349**	P	P	**06 29 05.3**	**+0.8**
QSPA	**South Pole Qui**	**69.04**	**180**	P	P	**06 29 56.5**	**-0.4**
QSPA	comp=E,3.7nm,1.3s			IAmb	IAmb	06 30 17.8	
NVAR	**Mina Array Bea**	**75.46**	**322**	P	P	**06 30 37.5**	**+2.0**
	comp=E,0.5nm,0.9s,baz=57,slow=4.6,SNR=2.9 comp=E,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.88**	**70**	P	P	**06 30 42.9**	**-0.8**
	comp=E,2.1nm,0.5s,baz=252,slow=5.3,SNR=21 comp=E,2.1nm,0.5s						
YKA	**Yellowknife Ar**	**90.99**	**340**	P	P	**06 31 54.5**	**+0.2**
	comp=E,0.6nm,0.6s,baz=146,slow=5.6,SNR=6.5 comp=E,0.6nm,0.6s						
ASAR	**Alice Springs**	**130.39**	**207**	PKP	**PKPdf**	**06 38 01.6**	**+0.3**
	comp=E,0.2nm,0.5s,baz=122,slow=1.6,SNR=5.0						
WRA	**Warramunga Arr**	**133.44**	**210**	PKP	**PKiKP**	**06 38 07.9**	**-0.4**
	comp=E,0.9nm,0.8s,baz=184,slow=5.0,SNR=1.6						
ZALV	**Zalesovo Beam**	**141.48**	**25**	PKP	**PKiKP**	**06 38 23.2**	**-0.4**
	comp=E,0.4nm,0.4s,baz=336,slow=3.2,SNR=1.5						
MK31	**Makanchi Array**	**145.13**	**36**	PKPab	**PKPab**	**06 38 28.3**	**+0.9**
MKAR	**Makanchi Array**	**145.13**	**36**	PKPbc	**PKPab**	**06 38 27.6**	**+0.2**
	comp=E,1.7nm,0.7s,baz=320,slow=3.6,SNR=18						
MKAR	**Makanchi Array**	**145.13**	**36**	PKPab	**PKPab**	**06 38 28.0**	**+0.6**

*REY **20** 06:23:00.3, 63°.89N×22°.32W, h4km*

*IDC **20** 06:23:01.3±1.4, 64°.08N×22°.49W, h0km, mb3.4/5, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=29.0km s-min=11.3km az=119.0*

ISC 20 06:22:59.3±0.7, 63°.91N±0°.04×22°.28W±0°.02, h16km±3km, n35, σ1$ 69/56, mb3.3/4, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVOG	**Vogar**	**0.08**	**321**	P	**Pg**	**06 23 02.5**	**0.0**
IVOG				S	**Sg**	**06 23 04.3**	**-0.2**
IGRV	**Grindav??k**	**0.09**	**238**	P	**Pb**	**06 23 02.0**	**-0.5**
IGRV				S	**Sg**	**06 23 03.6**	**-1.0**
IKRI	**Krysuvik**	**0.09**	**108**	P	**Pb**	**06 23 02.8**	**+0.2**
IKRI				S	**Sb**	**06 23 04.7**	**0.0**
IRNE	**Reykjanes**	**0.21**	**245**	P	**Pb**	**06 23 04.0**	**-0.7**
IRNE				S	**Sg**	**06 23 07.1**	**-0.3**
INYL	**Nylenda**	**0.21**	**289**	P	**Pb**	**06 23 04.3**	**-0.5**
INYL				S	**Sb**	**06 23 06.9**	**-1.6**
IKAS	**Kald??rsel**	**0.22**	**58**	P	**Pb**	**06 23 05.3**	**+0.4**
IKAS				S	**Sb**	**06 23 09.4**	**+0.7**
IVOS	**Vogsosar**	**0.26**	**102**	P	**Pb**	**06 23 05.7**	**+0.2**
IVOS				S	**Sb**	**06 23 10.2**	**+0.4**
IEDA	**Engidalur**	**0.43**	**65**	P	**Pn**	**06 23 08.6**	**-2.2**
IEDA				S	**Sn**	**06 23 15.3**	**-3.1**
IBJA	**Bjarnastaoir**	**0.43**	**84**	P	**Pn**	**06 23 08.7**	**-2.1**
IBJA				S	**Sn**	**06 23 15.4**	**-3.0**
IMOR	**Morastadir**	**0.46**	**30**	P	**Pn**	**06 23 08.8**	**-2.4**
IMOR				S	**Sn**	**06 23 15.6**	**-3.5**
IHEI	**Heioarbar**	**0.55**	**57**	P	**Pn**	**06 23 10.5**	**-1.8**
IHEI				S	**Sn**	**06 23 18.7**	**-2.5**
IKRO	**Krokur**	**0.55**	**69**	P	**Pn**	**06 23 10.5**	**-1.9**
IKRO				S	**Sn**	**06 23 19.4**	**-1.8**
ISOL	**Solvholt**	**0.59**	**87**	P	**Pn**	**06 23 11.1**	**-1.9**
ISOL				S	**Sn**	**06 23 19.8**	**-2.4**
IASM	**Asmuli**	**0.74**	**95**	P	**Pn**	**06 23 13.6**	**-1.5**
IASM				S	**Sn**	**06 23 24.2**	**-1.7**
ISAU	**Saurbar**	**0.83**	**83**	P	**Pn**	**06 23 15.1**	**-1.1**
ISAU				S	**Sn**	**06 23 27.0**	**-1.1**
BORG	**Borgarnes**	**0.94**	**26**	Pg	**Pn**	**06 23 16.7**	**-1.1**
BORG	188nm,0.3s,baz=191,slow=7.5,SNR=124 640nm,0.3s,baz=4.7,slow=16,SNR=23			Lg	Lg	06 23 29.9	
IASB	**sbjarnarstai**	**0.94**	**26**	P	**Pn**	**06 23 16.9**	**-0.9**
IASB				S	**Sn**	**06 23 29.9**	**-1.0**
IGYG	**Gygjarholskot**	**0.98**	**67**	P	**Pn**	**06 23 17.5**	**-0.8**
IGYG				S	**Sn**	**06 23 31.9**	**0.0**
IVES	**Vestmannaeyjar**	**1.00**	**117**	P	**Pb**	**06 23 17.5**	**-0.7**
IVES				S	**Sb**	**06 23 31.0**	**-0.1**
IVEY	**Vestmannaeyjar**	**1.02**	**118**	P	**Pn**	**06 23 17.8**	**-1.1**
IVEY				S	**Sg**	**06 23 31.6**	**-0.6**
IHAU	**Haukadalur**	**1.02**	**85**	P	**Pg**	**06 23 18.2**	**-0.8**
IHAU				S	**Sn**	**06 23 32.5**	**-0.5**
IBEY	**Bjarnarey**	**1.04**	**115**	P	**Pn**	**06 23 18.1**	**-1.0**
IBEY				S	**Sb**	**06 23 31.9**	**-0.2**
IMID	**Miomork**	**1.09**	**102**	P	**Pg**	**06 23 19.1**	**-1.2**
IMID				S	**Sg**	**06 23 33.7**	**-0.8**
IFED	**Fedgar**	**1.15**	**83**	P	**Pg**	**06 23 20.4**	**-1.0**
IFED				S	**Sg**	**06 23 36.7**	**+0.3**
IMJO	**Mjoaskard**	**1.15**	**87**	P	**Pg**	**06 23 20.2**	**-1.2**
IMJO				S	**Sg**	**06 23 36.7**	**+0.2**
ISLY	**Slysaalda**	**1.40**	**92**	P	**Pb**	**06 23 24.2**	**-0.9**
ISLY				S	**Sg**	**06 23 43.4**	**-1.1**
IAUS	**Austmannsbunga**	**1.44**	**98**	P	**Pb**	**06 23 24.5**	**-1.3**
ISTE	**Stelbrattur**	**1.50**	**49**	P	**Pg**	**06 23 25.9**	**-2.1**
EKA	**Eskdalemuir Ar** baz=312,slow=14 0.9nm,0.6s	**12.89**	**123**	Pn	P	06 26 06.2	-6.0
ARCES	**ARCESS Array B** baz=287,slow=16,SNR=3.7 0.4nm,0.5s	**19.25**	**52**	P	**Pn**	**06 27 26.4**	**+2.9**
FINES	**FINESS Array B** 1.4nm,0.8s,baz=322,slow=12,SNR=3.9 1.4nm,0.8s	**21.91**	**74**	P	**P**	**06 27 56.6**	**+5.3**
ESDC	**Sonseca Array** 0.4nm,0.7s,baz=344,slow=12,SNR=2.1 0.4nm,0.7s	**26.58**	**147**	P	P	06 28 43.7	+7.3
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=13,slow=8.9,SNR=1.7 0.3nm,0.3s	**49.72**	**48**	P	**P**	**06 31 52.7**	**+2.7**
PDAR	**Pinedale Array** 0.2nm,0.6s,baz=13,slow=5.6,SNR=2.4 0.2nm,0.6s	**51.52**	**290**	P	P	06 32 07.8	+3.7
TORD	**Torodi Ar. Bea** 0.4nm,0.7s,baz=340,slow=5.8,SNR=2.3 0.4nm,0.7s	**53.39**	**150**	P	P	06 32 23.7	+5.8

*BGR **20** 06:23:27.4, 63°.33N×24°.17W, h10km, mb4.3*

*IDC **20** 06:23:30.1±0.8, 63°.96N×22°.21W, h0km, mb3.5/11, mbtmp3.5/13, ML3.7/2, MS3.7/4, Error ellipse: s-maj=16.2km s-min=10.5km az=113.0*

*REY **20** 06:23:30.1, 63°.89N×22°.34W, h6km*

ISC 20 06:23:30.5±0.8, 63°.91N±0°.03×22°.30W±0°.02, h6km±5km, n60, σ1$ 40/61, mb3.8/18, MS3.7/4, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVOG	**Vogar**	**0.07**	**324**	P	**Pg**	**06 23 32.1**	**-0.1**
IVOG				S	**Sg**	**06 23 33.9**	**+0.5**
IGRV	**Grindav??k**	**0.09**	**230**	P	**Pg**	**06 23 31.8**	**-0.8**
IGRV				S	**Sg**	**06 23 32.9**	**-1.1**
IKRI	**Krysuvik**	**0.11**	**110**	P	**Pg**	**06 23 32.6**	**-0.3**
IKRI				S	**Sg**	**06 23 34.5**	**+0.1**
INYL	**Nylenda**	**0.20**	**287**	P	**Pg**	**06 23 34.0**	**-0.5**
INYL				S	**Sg**	**06 23 36.8**	**-0.4**
IRNE	**Reykjanes**	**0.20**	**241**	P	**Pg**	**06 23 33.8**	**-0.7**
IRNE				S	**Sg**	**06 23 36.1**	**-1.2**
IKAS	**Kald??rsel**	**0.23**	**61**	P	**Pg**	**06 23 35.2**	**+0.2**
IKAS				S	**Sg**	**06 23 39.1**	**+1.1**
IVOS	**Vogsosar**	**0.27**	**103**	P	**Pg**	**06 23 35.5**	**-0.3**
IVOS				S	**Sg**	**06 23 39.8**	**+0.3**
IEDA	**Engidalur**	**0.44**	**67**	P	**Pg**	**06 23 38.5**	**-0.5**
IEDA				S	**Sg**	**06 23 45.1**	**+0.4**
IBJA	**Bjarnastaoir**	**0.44**	**85**	P	**Pg**	**06 23 38.5**	**-0.5**
IBJA				S	**Sg**	**06 23 45.0**	**+0.1**
IMOR	**Morastadir**	**0.46**	**32**	P	**Pg**	**06 23 38.9**	**-0.4**
IMOR				S	**Sg**	**06 23 45.3**	**0.0**
IHEI	**Heioarbar**	**0.55**	**58**	P	**Pg**	**06 23 40.4**	**-0.7**
IHEI				S	**Sg**	**06 23 48.7**	**+0.4**
IKRO	**Krokur**	**0.55**	**70**	P	**Pg**	**06 23 40.8**	**-0.4**
IKRO				S	**Sb**	**06 23 49.2**	**-1.5**
ISOL	**Solvholt**	**0.60**	**88**	P	**Pg**	**06 23 41.0**	**-1.1**
ISOL				S	**Sg**	**06 23 49.5**	**-0.4**
IASM	**Asmuli**	**0.75**	**95**	P	**Pg**	**06 23 43.4**	**-1.6**
IASM				S	**Sg**	**06 23 54.1**	**-0.5**
ISAU	**Saurbar**	**0.84**	**84**	P	**Pg**	**06 23 44.9**	**-1.7**
ISAU				S	**Sg**	**06 23 56.6**	**-0.8**
BORG	**Borgarnes** 328nm,0.3s,baz=204,slow=2.9,SNR=12	**0.94**	**27**	Pg	**Pg**	**06 23 46.8**	**-1.7**
BORG	2μm,0.3s,baz=37,slow=18,SNR=30			Lg	Lg	06 23 59.4	
IASB	**sbjarnarstai**	**0.94**	**27**	P	**Pg**	**06 23 47.0**	**-1.5**
IASB				S	**Sg**	**06 23 59.9**	**-0.8**
IGYG	**Gygjarholskot**	**0.99**	**67**	P	**Pg**	**06 23 47.5**	**-2.0**
IGYG				S	**Sg**	**06 24 01.4**	**-0.9**
EKA	**Eskdalemuir Ar** baz=323,slow=13 0.9nm,0.4s	**12.90**	**123**	Pn	**Pn**	**06 26 34.3**	**+0.2**
ARCES	**ARCESS Array B** baz=291,slow=10,SNR=2.3 0.6nm,0.6s	**19.25**	**52**	P	**Pn**	**06 27 55.1**	**-1.0**
BSEG	**Bad Segeberg** 62nm,21.3s	**19.34**	**106**	*e*L	L	06 35 00.3	
GORT1	**Trebel** 13nm,1.0s,baz=319,slow=10.0	**20.43**	**107**	*e*P	Pn	06 28 11.4	+1.2
KASTN	**Kahler Asten** 13nm,1.4s,baz=319,slow=10.0	**20.56**	**114**	*e*P	Pn	06 28 12.8	+1.1
ASSE	**Asse, Remlinge** 16nm,1.2s,baz=319,slow=10.0	**20.79**	**109**	*e*P	Pn	06 28 15.8	+1.5
FLTG	**Flechtingen** 6.5nm,0.8s,baz=319,slow=10.0	**20.88**	**108**	*e*P	Pn	06 28 17.0	+1.6
GTTG	**Gottingen** 113nm,2.3s,baz=319,slow=10.0	**20.93**	**111**	*e*P	Pn	06 28 15.5	-0.6
TNS	**Taunus Mts** 18nm,1.4s,baz=319,slow=10.0	**21.33**	**115**	*e*P	**P**	**06 28 21.8**	**+3.9**
TNS	327nm,18.1s			*e*L	L	06 36 55.3	
FINES	**FINESS Array B** 1.2nm,0.8s,baz=325,slow=12,SNR=2.9 1.2nm,0.8s	**21.92**	**74**	P	**P**	**06 28 25.3**	**+1.3**
NEUB	**Neuenburg** 60nm,1.7s,baz=319,slow=10.0	**21.93**	**109**	*e*P	**P**	**06 28 25.8**	**+1.5**
MOX	**Moxa** 6.1nm,1.1s,baz=319,slow=10.0	**22.29**	**111**	*e*P	**P**	**06 28 30.3**	**+2.1**
MOX	131nm,19.3s			*e*L	L	06 38 04.6	
CLL	**Collm** 14nm,1.1s,baz=319,slow=10.0	**22.37**	**108**	*e*P	**P**	**06 28 34.1**	**+5.1**
CLL

comp=Z,44nm,18.4s,baz=144,slow=38

IDC ***20*** *07:08:47.4±1.2,60˚.78N×151˚.68W,h62km±12km,mb3.6/16, mbtmp3.9/21,MS2.7/6,Error ellipse: s-maj=14.2km s-min=8.8km az=104.0*

NEIC ***20*** *07:08:48.7±1.4,60˚.79N±0˚.03×151˚.50W±0˚.06,h78km±3km, mb4.2/32,ML4.1/210,ML3.9(AEIC),Error ellipse: s-maj=4.0km s-min=3.9km az=214.0*

AEIC ***20*** *07:08:49.9±1.8,60˚.79N±0˚.03×151˚.45W±0˚.05,h69km±3km, Error ellipse: s-maj=3.9km s-min=3.7km az=202.0*

ISC 20 07:08:48.7±0.6,60.76N±0˚.03×151˚.45W±0˚.03,h81km±5km, n281,σ0̸92/293,mb4.0/25,Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	
CAPN	**Captain Cook N**	**0.14**	**85**			**Pn**	**07 09 01.3**	**+0.9**
CAPN						**Sn**	**07 09 11.6**	**+2.5**
RDT	**Redoubt**	**0.51**	**249**			**Pn**	**07 09 02.1**	**-0.6**
RDT						**Sn**	**07 09 12.1**	**-1.0**
SPU	**Mount Spurr**	**0.52**	**326**			**Pn**	**07 09 01.9**	**-0.9**
SPCR	**Spurr Chakacha**	**0.58**	**321**			**Pn**	**07 09 02.4**	**-1.0**
SPCR						**Sn**	**07 09 12.7**	**-1.6**
SPCG	**Spurr Capps Gl**	**0.61**	**333**			**Pn**	**07 09 02.8**	**-0.9**
SPCG						**Sn**	**07 09 13.4**	**-1.3**
SPCP	**Crater Peak Br**	**0.62**	**326**			**Pn**	**07 09 03.2**	**-0.7**
SPCP						**Sn**	**07 09 14.1**	**-1.0**
CKL	**Chakachamna La**	**0.62**	**316**			**Pn**	**07 09 02.9**	**-0.9**
DFR	**Drift River**	**0.63**	**255**			**Pn**	**07 09 03.4**	**-0.5**
DFR						**Sn**	**07 09 14.9**	**-0.2**
SLKM	**Skilak Lake**	**0.65**	**112**			**Pn**	**07 09 04.0**	**-0.1**
SLKM					Sn	**Sn**	**07 09 15.5**	**+0.1**
SPBG	**Spurr Blockage**	**0.68**	**319**			**Pn**	**07 09 03.6**	**-0.7**
RDJH	**Redoubt Jeurge**	**0.69**	**257**			**Pn**	**07 09 04.2**	**-0.3**
RDJH						**Sn**	**07 09 16.1**	**-0.1**
RDSO	**Redoubt South**	**0.71**	**245**			**Sn**	**07 09 16.5**	**-0.1**
RED	**Redoubt Volcan**	**0.74**	**243**			**Pn**	**07 09 04.8**	**-0.1**
RED					Sn	**Sn**	**07 09 17.0**	**0.0**
RED					IAML		07 09 17.6	
	comp=E,8μm,0.4s							
RED					IAML		07 09 18.0	
	comp=N,8μm,0.7s							
NCT	**North Crescent**	**0.76**	**256**			**Sn**	**07 09 17.2**	**-0.2**
STLK	**Strandline Lak**	**0.77**	**346**			**Pn**	**07 09 04.5**	**-0.7**
STLK					Sn	**Sn**	**07 09 16.0**	**-1.6**
STLK					IAML		07 09 17.1	
	comp=N,3μm,0.2s							
STLK					IAML		07 09 17.3	
	comp=E,4μm,0.5s							
O22K	**Cooper Landing**	**0.89**	**107**			**Pn**	**07 09 06.9**	**+0.4**
O22K					Sn	**Sn**	**07 09 20.4**	**+0.6**
O20K	**Slope Mountain**	**0.89**	**221**			**Sn**	**07 09 20.6**	**+0.6**
RC01	**Rabbit Creek A**	**0.90**	**67**			**Pn**	**07 09 06.5**	**-0.1**
RC01						**Sn**	**07 09 20.5**	**+0.5**
RC01					IAML		07 09 21.3	
	comp=N,6μm,0.5s							
RC01					IAML		07 09 21.5	
	comp=E,6μm,0.5s							
BRLK	**Bradley Lake**	**1.03**	**164**			**Pn**	**07 09 08.8**	**+0.5**
BRLK					Sn	**Sn**	**07 09 24.2**	**+1.4**
BRLK					IAML		07 09 25.4	
	comp=N,3μm,0.5s							
BRLK					IAML		07 09 26.0	
	comp=E,3μm,0.5s							
BRSE	**Bradley Lake S**	**1.08**	**161**			**Pn**	**07 09 09.2**	**+0.4**
IVE	**Iliamna Volcan**	**1.08**	**227**			**Pn**	**07 09 09.1**	**+0.3**
HOM	**Homer**	**1.10**	**185**			**Pn**	**07 09 09.9**	**+0.9**
HOM					IAML		07 09 27.9	
	comp=N,5μm,0.9s							
ILSW	**Iliamna Southw**	**1.15**	**228**			**Pn**	**07 09 10.1**	**+0.4**
ILSW					Sn	**Sn**	**07 09 26.3**	**+0.9**
ILSW					IAML		07 09 28.0	
	comp=N,4μm,0.7s							
ILSW					IAML		07 09 29.7	
	comp=E,4μm,0.6s							
SEW	**Seward**	**1.19**	**123**			**Pn**	**07 09 10.0**	**0.0**
SEW					Sn	**Sn**	**07 09 26.1**	**+0.1**
SEW					IAML		07 09 30.3	
	comp=E,4μm,0.4s							
M22K	**Willow**	**1.19**	**32**			**Pn**	**07 09 10.2**	**+0.2**
M22K					Sn	**Sn**	**07 09 25.9**	**-0.2**
SKT	**Skwentna**	**1.23**	**358**			**Pn**	**07 09 10.4**	**-0.2**
SKT						**Sn**	**07 09 26.6**	**-0.6**
SKT					IAML		07 09 28.0	
	comp=N,3μm,0.3s							
CNPM	**China Poot**	**1.24**	**175**			**Pn**	**07 09 11.3**	**+0.6**
CNPM					Sn	**Sn**	**07 09 28.0**	**+0.7**
CNPM					IAML		07 09 30.0	
	comp=E,3μm,0.5s							
CNPM					IAML		07 09 34.4	
	comp=N,2μm,0.4s							
M20K	**Styx River**	**1.39**	**325**			**Pn**	**07 09 12.7**	**-0.1**
PMR	**Palmer**	**1.40**	**52**	P		**Pn**	**07 09 12.3**	**-0.4**
PMR	**Palmer**	**1.40**	**52**	S		**Sn**	**07 09 30.0**	**-0.9**
PMR	**Palmer**	**1.40**	**52**			**Pn**	**07 09 12.5**	**-0.3**
PMR					Sn	**Sn**	**07 09 30.1**	**-0.8**
PMR					IAML		07 09 33.6	
	comp=N,2μm,0.8s							
PMR					IAML		07 09 34.6	
	comp=E,2μm,0.3s							
P19K	**Oil Pt**	**1.42**	**220**			**Pn**	**07 09 14.1**	**+1.1**
N19K	**Bonanza Creek**	**1.49**	**274**			**Pn**	**07 09 13.5**	**-0.5**
N19K						**Sn**	**07 09 31.8**	**-1.3**
N19K					IAML		07 09 33.0	
	comp=N,2μm,0.3s							
N19K					IAML		07 09 33.3	
	comp=E,1μm,0.6s							
PWL	**Port Wells**	**1.53**	**85**			**Pn**	**07 09 14.4**	**-0.1**
PWL					Sn	**Sn**	**07 09 33.8**	**-0.1**
PWL					IAML		07 09 36.7	
	comp=E,3μm,0.6s							
O19K	**Port Alsworth**	**1.53**	**250**			**Pn**	**07 09 14.0**	**-0.4**
O19K						**Sn**	**07 09 31.6**	**-2.2**
O19K					IAML		07 09 34.9	
	comp=N,2μm,0.5s							
O19K					IAML		07 09 35.9	
	comp=E,2μm,0.4s							
GHO	**Glory Hole Cre**	**1.59**	**49**			**Pn**	**07 09 15.2**	**-0.1**
GHO					Sn	**Sn**	**07 09 35.0**	**-0.4**
KNK	**Knik Glacier**	**1.59**	**64**			**Pn**	**07 09 15.3**	**0.0**
KNK						**Sn**	**07 09 35.8**	**+0.3**
KNK					IAML		07 09 42.2	
	comp=E,3μm,0.6s							
CUT	**Chulitna**	**1.75**	**18**			**Pn**	**07 09 17.5**	**+0.3**
L22K	**Petersville**	**1.81**	**10**			**Pn**	**07 09 18.4**	**+0.3**
L22K					IAML		07 09 45.1	
	comp=N,2μm,0.4s							
M19K	**Big River Lodg**	**1.83**	**310**			**Pn**	**07 09 18.2**	**-0.1**
M19K					IAML		07 09 41.7	
	comp=E,893nm,0.5s							
SML	**Sawmill**	**1.84**	**54**			**Pn**	**07 09 18.3**	**-0.2**
SML						**Sn**	**07 09 39.7**	**-1.4**
SML					IAML		07 09 41.2	
	comp=E,2μm,0.4s							
O18K	**Koktuh Hills**	**2.08**	**246**			**Pn**	**07 09 21.3**	**-0.3**
O18K					IAML		07 09 47.2	
	comp=N,622nm,0.5s							
GLI	**Glacier Island**	**2.13**	**85**			**Pn**	**07 09 21.1**	**-1.3**
P23K	**Montague Islan**	**2.15**	**109**			**Pn**	**07 09 22.4**	**-0.1**
L19K	**White Mountain**	**2.17**	**313**			**Pn**	**07 09 23.2**	**+0.3**
L19K					IAML		07 09 50.5	
	comp=E,825nm,0.4s							
PPLA	**Purkeypile**	**2.18**	**351**			**Pn**	**07 09 23.0**	**-0.1**
PPLA					IAML		07 09 53.0	
	comp=N,629nm,1.3s							
N18K	**Kilae Creek**	**2.19**	**270**			**Pn**	**07 09 22.6**	**-0.5**
SCM	**Sheep Creek Mo**	**2.26**	**60**			**Pn**	**07 09 24.0**	**-0.2**
SCM					IAML		07 10 00.1	
	comp=E,2μm,0.9s							
P18K	**Big Mountain,**	**2.34**	**236**			**Pn**	**07 09 24.9**	**-0.2**
FID	**Port Fidalgo**	**2.44**	**88**			**Pn**	**07 09 24.7**	**-1.8**
FID					IAML		07 09 54.2	
	comp=E,1μm,0.5s							
HIN	**Hinchinbrook I**	**2.47**	**96**			**Pn**	**07 09 26.2**	**-0.6**
VMT	**TAPS Tl Valdez**	**2.50**	**80**			**Pn**	**07 09 26.8**	**-0.4**
CAST	**Castle Rocks**	**2.69**	**354**			**Pn**	**07 09 29.3**	**-0.6**
TRF	**Thorofare Moun**	**2.76**	**11**			**Pn**	**07 09 29.2**	**-1.7**
TRF					IAML		07 10 05.3	
	comp=E,826nm,0.4s							
KLU	**Klutina**	**2.78**	**72**			**Pn**	**07 09 30.8**	**-0.3**
KLU					IAML		07 10 06.5	
	comp=E,909nm,0.6s							
DIV	**Divide**	**2.79**	**80**			**Pn**	**07 09 30.7**	**-0.6**
DIV					IAML		07 10 04.9	
	comp=E,813nm,0.4s							
DIV					IAML		07 10 05.7	
	comp=N,950nm,0.5s							
EYAK	**Cordova Ski Ar**	**2.81**	**92**	P		**Pn**	**07 09 30.6**	**-0.9**
EYAK	**Cordova Ski Ar**	**2.81**	**92**	S		**Sn**	**07 10 04.3**	**0.0**
EYAK	**Cordova Ski Ar**	**2.81**	**92**			**Pn**	**07 09 30.8**	**-0.6**
EYAK					IAML		07 10 20.1	
	comp=E,373nm,0.6s							
EYAK					IAML		07 10 24.1	
	comp=N,481nm,0.8s							
KTH	**Kantishna Hill**	**2.82**	**5**			**Pn**	**07 09 31.2**	**-0.4**
KTH					IAML		07 10 08.8	
	comp=N,967nm,0.6s							
KTH					IAML		07 10 27.6	
	comp=E,967nm,0.8s							
N17K	**Nushagak Hills**	**2.84**	**268**			**Pn**	**07 09 31.6**	**-0.3**
M24K	**Tolsona, Glenn**	**2.87**	**60**			**Pn**	**07 09 32.6**	**+0.2**
MID	**Middleton Isla**	**2.88**	**115**			**Pn**	**07 09 32.2**	**-0.3**
MID					IAML		07 10 17.8	
	comp=E,876nm,0.5s							
MID					IAML		07 10 21.6	
	comp=N,796nm,0.8s							
K20K	**Telida**	**2.89**	**336**			**Pn**	**07 09 32.6**	**+0.1**
L18K	**Granite Mounta**	**2.91**	**303**			**Pn**	**07 09 32.8**	**0.0**
RND	**Reindeer**	**2.93**	**24**			**Pn**	**07 09 32.8**	**-0.3**
RND					IAML		07 10 22.3	
	comp=N,477nm,0.9s							
RND					IAML		07 10 22.7	
	comp=E,661nm,1.3s							
P17K	**Kvichak River**	**2.96**	**240**			**Pn**	**07 09 34.1**	**+0.7**
M17K	**Holitna River**	**2.98**	**285**			**Pn**	**07 09 33.5**	**-0.3**
M17K					IAML		07 10 08.4	
	comp=N,714nm,0.7s							
M17K					IAML		07 10 08.8	
	comp=E,786nm,0.4s							
DHY	**Denali Highway**	**3.02**	**38**			**Pn**	**07 09 34.7**	**+0.3**
DHY					IAML		07 10 19.4	
	comp=E,626nm,0.5s							
DHY					IAML		07 10 30.7	
	comp=N,529nm,0.6s							
KDAK	**Kodiak Island**	**3.04**	**192**	P		**Pn**	**07 09 34.1**	**-0.4**
	comp=N,32nm,0.3s,baz=37,slow=3.9,SNR=1588							
KDAK				S		**Sn**	**07 10 07.4**	**-2.4**
	comp=N,74nm,0.3s,baz=353,slow=8.6,SNR=6.1							
KDAK				LR		LR	07 11 02.1	
	comp=N,93nm,20.4s,baz=349,slow=44							
KDAK	**Kodiak Island**	**3.04**	**192**			**Pn**	**07 09 34.6**	**0.0**
KDAK					IAML		07 10 21.1	
	comp=N,526nm,0.7s							
KDAK					IAML		07 10 22.9	
	comp=N,412nm,0.5s							
PS12	**TAPS Pump St12**	**3.14**	**74**			**Pn**	**07 09 35.3**	**-0.6**
PS11	**TAPS Pump St11**	**3.16**	**63**			**Pn**	**07 09 36.5**	**+0.3**
CHUM	**Lake Minchumin**	**3.17**	**353**			**Pn**	**07 09 36.2**	**0.0**
MCK	**McKinley**	**3.21**	**20**			**Pn**	**07 09 36.2**	**-0.6**
MCK					IAML		07 10 31.9	
	comp=E,437nm,0.7s							
MCK					IAML		07 10 33.3	
	comp=N,489nm,1.0s							
ACHA	**Angle Creek He**	**3.23**	**219**			**Pn**	**07 09 37.2**	**0.0**
ANCK	**Angle Creek**	**3.29**	**221**			**Pn**	**07 09 38.9**	**+0.9**
GOAT	**Goat Mountain**	**3.31**	**90**			**Pn**	**07 09 37.2**	**-1.1**
BMRM	**Bremner River**	**3.35**	**83**			**Pn**	**07 09 37.6**	**-1.2**
BMRM					IAML		07 10 38.0	
	comp=E,541nm,0.7s							
BMRM					IAML		07 10 38.0	
	comp=N,485nm,0.8s							
Q16K	**King Salmon**	**3.36**	**234**			**Pn**	**07 09 39.8**	**+0.9**
Q17K	**Contact Creek**	**3.37**	**224**			**Pn**	**07 09 39.9**	**+0.8**
HARP	**HAARP**	**3.43**	**59**			**Pn**	**07 09 39.1**	**-0.8**
O16K	**Kokwok River B**	**3.52**	**254**			**Pn**	**07 09 41.0**	**-0.1**
BWN	**Browne**	**3.55**	**14**			**Pn**	**07 09 41.5**	**+0.1**
KAIM	**Kayak Island**	**3.59**	**100**	Pn		**Pn**	**07 09 41.4**	**-0.6**
KAIM					IAML		07 10 29.9	
	comp=E,415nm,0.8s							
PAX	**Paxson**	**3.60**	**49**			**Pn**	**07 09 42.8**	**+0.6**
PAX					IAML		07 10 37.0	
	comp=E,426nm,0.6s							
PAX					IAML		07 10 37.5	
	comp=N,448nm,0.7s							
J20K	**Nowinta River**	**3.66**	**341**			**Pn**	**07 09 42.5**	**-0.4**
OHAK	**Old Harbor**	**3.67**	**196**	P		**Pn**	**07 09 42.3**	**-0.8**
OHAK	**Old Harbor**	**3.67**	**196**	S		**Sn**	**07 10 22.9**	**-2.2**
OHAK	**Old Harbor**	**3.67**	**196**			**Pn**	**07 09 42.8**	**-0.3**
OHAK					IAML		07 10 40.5	
	comp=E,209nm,0.9s							
OHAK					IAML		07 10 44.2	
	comp=N,177nm,0.7s							
J18K	**Innoko River**	**3.68**	**320**			**Pn**	**07 09 43.3**	**+0.1**
M16K	**Timber Creek**	**3.68**	**277**			**Pn**	**07 09 43.3**	**0.0**
P16K	**Nushagak River**	**3.72**	**245**			**Pn**	**07 09 44.3**	**+0.6**
P16K					IAML		07 10 49.8	
	comp=N,374nm,0.8s							
P16K					IAML		07 11 00.2	
	comp=E,373nm,0.8s							
GLB	**Gilahina Butte**	**3.77**	**76**			**Pn**	**07 09 44.0**	**-0.5**
GLB					IAML		07 10 29.4	
	comp=E,178nm,0.7s							
GLB					IAML		07 10 49.0	
	comp=N,332nm,0.8s							
J19K	**Poorman**	**3.79**	**331**			**Pn**	**07 09 44.6**	**-0.1**
K17K	**Iditarod**	**3.81**	**304**	Pn		**Pn**	**07 09 45.2**	**+0.2**
K17K					IAML		07 10 28.6	
	comp=N,238nm,0.9s							
K17K					IAML		07 10 28.6	
	comp=E,388nm,0.6s							
PLK5	**Peulik 5**	**3.92**	**228**			**Pn**	**07 09 48.1**	**+1.7**
VRDI	**Verde Repeater**	**3.92**	**80**			**Pn**	**07 09 45.9**	**-0.8**
VRDI					IAML		07 10 48.8	
	comp=N,159nm,0.9s							
PLK3	**Peulik 3**	**3.95**	**221**			**Pn**	**07 09 48.7**	**+1.8**
L16K	**Owhat River**	**4.00**	**287**			**Pn**	**07 09 47.2**	**-0.3**
L16K					IAML		07 10 50.0	
	comp=N,128nm,0.7s							
NEA2	**Nenana**	**4.00**	**15**			**Pn**	**07 09 47.3**	**-0.3**
R17L	**Mt. Peulik Vol**	**4.03**	**221**			**Pn**	**07 09 49.7**	**+1.7**
WRH	**Wood River Hil**	**4.04**	**21**			**Pn**	**07 09 47.9**	**-0.2**
WRH					IAML		07 10 59.9	
	comp=E,242nm,1.0s							
WRH					IAML		07 11 03.1	
	comp=N,186nm,0.7s							
CRQM	**Cirque**	**4.08**	**86**			**Pn**	**07 09 47.8**	**-1.0**
CRQM					IAML		07 10 36.4	
	comp=N,316nm,0.4s							
CRQM					IAML		07 10 57.3	
	comp=E,280nm,0.9s							
MCARA	**McCarthy VSAT**	**4.14**	**78**			**Pn**	**07 09 48.4**	**-1.1**
MCARA					IAML		07 10 45.9	
	comp=N,284nm,0.4s							
MCARA					IAML		07 10 52.7	
	comp=E,352nm,0.7s							
HDA	**Harding Lake**	**4.21**	**28**			**Pn**	**07 09 50.2**	**-0.3**
HDA					IAML		07 10 47.1	
	comp=E,316nm,0.5s							
TGL	**Tana Glacier**	**4.23**	**86**	Pn		**Pn**	**07 09 49.7**	**-1.1**
TGL					IAML		07 10 55.8	
	comp=E,182nm,0.5s							
TGL					IAML		07 11 01.9	
	comp=N,254nm,0.9s							
CCB	**Clear Creek Bu**	**4.25**	**22**			**Pn**	**07 09 50.6**	**-0.3**
CCB					IAML		07 10 49.9	
	comp=N,111nm,0.4s							
CCB					IAML		07 10 57.8	
	comp=E,164nm,0.9s							
MENT	**Mentasta**	**4.27**	**56**			**Pn**	**07 09 51.0**	**-0.2**
I20K	**Naaghedeneel**	**4.29**	**342**			**Pn**	**07 09 51.0**	**-0.4**
MLY	**Manley**	**4.30**	**4**	IAML			07 10 43.3	
	comp=N,153nm,0.7s							
N15K	**Kwethluk River**	**4.32**	**266**	IAML			07 10 41.8	
	comp=N,123nm,0.9s							
N15K					IAML		07 11 13.8	
	comp=E,168nm,0.6s							
M26K	**Nabesna, AK**	**4.36**	**64**			**Pn**	**07 09 52.5**	**0.0**
M26K	**Nabesna, AK**	**4.36**	**64**	IAML			07 10 43.2	
	comp=N,203nm,0.4s							
M26K					IAML		07 11 10.3	
	comp=E,180nm,0.6s							
PTPK	**Patty Peak**	**4.40**	**80**			**Pn**	**07 09 51.2**	**-2.0**
SII	**Sitkinak Islan**	**4.45**	**200**	P		**Pn**	**07 09 53.7**	**0.0**
I21K	**Tanana**	**4.45**	**357**			**Pn**	**07 09 53.2**	**-0.5**
I21K	**Tanana**	**4.45**	**357**	IAML			07 11 24.3	
	comp=E,105nm,0.8s							
COLA	**College**	**4.45**	**20**	P		**Pn**	**07 09 53.5**	**-0.1**
L26K	**Log Cabin Wild**	**4.46**	**56**	IAML			07 11 14.4	
	comp=N,214nm,0.4s							
MDM	**Murphy Dome**	**4.47**	**18**			**Pn**	**07 09 53.3**	**-0.6**
I23K	**Minto, Yukon-K**	**4.51**	**11**	IAML			07 11 19.6	
	comp=E,152nm,1.3s							
I23K					IAML		07 11 20.4	
	comp=N,146nm,0.9s							
ILAR	**Eielson Array**	**4.54**	**25**	P		**Pn**	**07 09 54.8**	**-0.2**
	comp=N,22nm,0.3s,baz=215,slow=13,SNR=244							
ILAR				S		**Sn**	**07 10 45.5**	**-0.8**
	comp=N,27nm,0.6s,baz=204,slow=22,SNR=3.0							
SCRK	**Sand Creek**	**4.74**	**44**	IAML			07 11 03.8	
	comp=N,205nm,0.9s							
SCRK					IAML		07 11 06.7	
	comp=E,145nm,0.7s							
POKR	**Poker Plat Res**	**4.75**	**21**			**Pn**	**07 09 57.8**	**+0.1**
GRNC	**Granite Creek**	**4.76**	**86**	IAML			07 10 51.0	
	comp=N,137nm,1.0s							
GRNC					IAML		07 10 56.0	
	comp=E,117nm,0.9s							
BARN	**Barnard Glacie**	**4.79**	**82**	IAML			07 11 24.2	
	comp=N,93nm,1.0s							
BARN					IAML		07 11 26.3	
	comp=E,114nm,0.7s							
M27K	**Edge Creek, AK**	**4.85**	**66**	IAML			07 11 37.9	
	comp=N,111nm,1.1s							
H21K	**Melozitna Rive**	**4.96**	**353**	IAML			07 11 38.0	
	comp=E,65nm,1.1s							
J16K	**Amvik River**	**5.00**	**304**			**Pn**	**07 10 01.3**	**+0.2**
L27K	**Beaver Creek,**	**5.10**	**59**	IAML			07 11 29.7	
	comp=N,71nm,1.1s							
LOGN	**Logan Glacier**	**5.12**	**85**			**Pn**	**07 10 02.6**	**-0.3**
LOGN	**Logan Glacier**	**5.12**	**85**	IAML			07 11 01.9	
	comp=N,129nm,0.5s							
LOGN					IAML		07 11 05.0	
	comp=E,95nm,0.8s							
N14K	**Kuskokwak Cree**	**5.16**	**265**	IAML			07 11 54.1	
	comp=N,99nm,1.4s							
N14K					IAML		07 12 20.6	
	comp=E,87nm,1.3s							
M14K	**Bethel**	**5.16**	**275**	IAML			07 11 44.6	
	comp=E,56nm,1.2s							
H22K	**Ishtalitna Cre**	**5.16**	**0**	IAML			07 11 05.2	
	comp=E,58nm,1.0s							
H23K	**Yukon River**	**5.16**	**9**			**Pn**	**07 10 04.0**	**+0.6**
H23K	**Yukon River**	**5.16**	**9**	IAML			07 11 04.6	
	comp=N,61nm,0.5s							
H23K					IAML		07 11 05.3	
	comp=E,85nm,0.5s							
PS06	**TAPS Pump Stn6**	**5.18**	**8**			**Pn**	**07 10 04.1**	**+0.6**
I17K	**Unalakleet**	**5.33**	**310**			**Pn**	**07 10 06.0**	**+0.4**
I17K	**Unalakleet**	**5.33**	**310**	IAML			07 11 07.9	
	comp=E,51nm,0.7s							
H24K	**Noodor Dome**	**5.35**	**16**	IAML			07 11 41.0	
	comp=E,75nm,0.8s							
H24K					IAML		07 11 41.3	
	comp=N,73nm,0.9s							
CHIR	**Chirikof Islan**	**5.42**	**206**	P		**Pn**	**07 10 07.2**	**+0.4**
CHIR	**Chirikof Islan**	**5.42**	**206**	S		**Sn**	**07 11 05.1**	**-2.6**
K27K	**Chicken**	**5.46**	**49**			**Pn**	**07 10 07.5**	**+0.1**
PRP	**Porcupine Dome**	**5.48**	**27**			**Pn**	**07 10 08.0**	**+0.2**
I26K	**Coal Creek Min**	**5.92**	**36**			**Pn**	**07 10 13.9**	**+0.2**
H16K	**Elim**	**6.31**	**313**			**Pn**	**07 10 19.5**	**+0.6**
G17K	**Kiwalik Mounta**	**6.33**	**323**			**Pn**	**07 10 19.6**	**+0.3**
M29M	**Somme Creek**	**6.42**	**69**			**Pn**	**07 10 20.9**	**+0.2**
FYU	**Fort Yukon**	**6.45**	**23**			**Pn**	**07 10 21.7**	**+0.8**
K13K	**Kusilvak Mount**	**6.46**	**286**			**Pn**	**07 10 21.5**	**+0.4**
G25K	**Bearman Lake**	**6.48**	**19**			**Pn**	**07 10 21.6**	**+0.4**
DAWY	**Dawson**	**6.51**	**54**			**Pn**	**07 10 21.9**	**+0.1**
COLD	**Coldfoot**	**6.52**	**4**			**Pn**	**07 10 22.1**	**+0.3**
F21K	**Alatna River**	**6.55**	**353**			**Pn**	**07 10 22.7**	**+0.4**
I27K	**Kandik River**	**6.59**	**38**			**Pn**	**07 10 22.8**	**0.0**
F20K	**Avaraart Lake**	**6.59**	**345**			**Pn**	**07 10 23.3**	**+0.5**
F19K	**Shaleruckik Mo**	**6.71**	**338**			**Pn**	**07 10 24.4**	**0.0**
L29M	**L29M**	**6.71**	**64**			**Pn**	**07 10 25.0**	**+0.5**
F22K	**John River**	**6.79**	**358**			**Pn**	**07 10 26.2**	**+0.7**
G16K	**Koyuk River**	**6.79**	**318**			**Pn**	**07 10 25.8**	**+0.2**
HYT	**Haines Junctio**	**6.83**	**83**			**Pn**	**07 10 26.2**	**0.0**
F18K	**Selawik**	**6.90**	**332**			**Pn**	**07 10 27.4**	**+0.3**
F24K	**Squaw Lake**	**6.96**	**11**			**Pn**	**07 10 28.2**	**+0.3**
N30M	**Aishikik Lake**	**6.99**	**78**			**Pn**	**07 10 27.4**	**-1.0**
I28M	**Miner Creek**	**7.02**	**43**			**Pn**	**07 10 28.7**	**-0.1**
H27K	**Steamboat Moun**	**7.06**	**35**			**Pn**	**07 10 28.6**	**-0.6**
G26K	**Porcupine Rive**	**7.07**	**25**			**Pn**	**07 10 29.3**	**0.0**
F17K	**Baldwin Pennin**	**7.18**	**327**			**Pn**	**07 10 31.8**	**+1.0**
E19K	**Redstone River**	**7.18**	**342**			**Pn**	**07 10 31.6**	**+0.7**
K29M	**Barlow Dome**	**7.19**	**58**			**Pn**	**07 10 31.0**	**-0.1**
M30M	**Minto, Yukon**	**7.21**	**69**			**Pn**	**07 10 30.9**	**-0.4**
SDPT	**Sand Point**	**7.23**	**225**	P		**Pn**	**07 10 33.1**	**+1.5**
SDPT	**Sand Point**	**7.23**	**225**	S		**Sn**	**07 11 51.1**	**-0.9**
SDPT	**Sand Point**	**7.23**	**225**			**Pn**	**07 10 31.7**	**+0.1**
M11K	**Mekoryuk**	**7.28**	**274**			**Pn**	**07 10 33.2**	**+1.1**
F25K	**Christian Rive**	**7.31**	**18**			**Pn**	**07 10 32.6**	**-0.1**
BM04	**Burnt Mountain**	**7.33**	**21**			**Pn**	**07 10 32.6**	**-0.3**
CHNA	**Chernabura Isl**	**7.36**	**220**	P		**Pn**	**07 10 33.9**	**+0.6**
CNBA	**Chernabura Isl**	**7.37**	**220**			**Pn**	**07 10 32.4**	**-1.0**
E23K	**Chandalar**	**7.38**	**5**

BLKN IAmb IAmb 07 14 28.5
comp=Z,5.2nm,0.8s
HATC Hat Creek Radi 27.12 124 P P 07 14 23.4 -0.5
HATC IAmb IAmb 07 14 27.1
comp=Z,11nm,1.2s
PETK Petropavlovsk- 28.13 277 P P 07 14 31.2 -1.5
comp=Z,0.9nm,0.6s,baz=73,slow=11,SNR=1.8
comp=Z,0.9nm,0.6s
PETK Petropavlovsk- 28.13 277 P P 07 14 31.5 -1.1
ILON Igloolik, Nuna 28.93 43 P P 07 14 39.2 -0.3
POIN Pond Inlet 29.19 36 P P 07 14 41.6 -0.3
PNTR Pine Nut 29.35 123 P P 07 14 42.4 -1.4
PNTR IAmb IAmb 07 15 04.1
comp=Z,2.6nm,0.8s
NVAR Mina Array Bea 30.44 122 P P 07 14 56.2 +2.7
comp=Z,0.9nm,0.7s,baz=317,slow=9.4,SNR=6.9
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 30.84 106 P P 07 14 58.7 +1.7
comp=Z,0.1nm,0.4s,baz=317,slow=8.0,SNR=2.2
comp=Z,0.1nm,0.4s
PDAR Pinedale Array 30.84 106 P P 07 14 56.5 -0.6
TIXI Tiksi 31.34 323 LR LR 07 27 44.9
comp=Z,23nm,19.9s,baz=58,slow=36
TIXI Tiksi 31.34 323 P P 07 15 01.7 +0.9
K22A Casper 32.37 103 P P 07 15 09.5 -0.9
K22A IAmb IAmb 07 15 47.3
comp=Z,2.5nm,1.0s
SPITS Spitsbergen Ar 41.11 4 P P 07 16 23.6 -0.3
comp=Z,1.5nm,0.7s,baz=325,slow=12,SNR=1.9
comp=Z,1.5nm,0.7s
WMOK Wichita Mounta 42.32 103 P P 07 16 34.6 +0.4
WMOK IAmb IAmb 07 16 40.5
comp=Z,2.6nm,0.8s
NRIK Noril'sk 43.56 334 P P 07 16 44.0 +0.2
comp=Z,2.3nm,0.5s,baz=25,slow=8.8,SNR=2.4
comp=Z,2.3nm,0.5s
NRIK Noril'sk 43.56 334 P P 07 16 44.3 +0.5
NRIK IAmb IAmb 07 17 15.8
comp=Z,3.8nm,1.1s
TXAR Lajitas Array 44.54 113 P P 07 16 54.6 +2.4
comp=Z,0.2nm,0.4s,baz=321,slow=5.2,SNR=4.2
comp=Z,0.2nm,0.4s
ARCES ARCESS Array B 49.98 1 P P 07 17 34.1 +0.3
comp=Z,0.5nm,0.6s,baz=4.8,slow=7.3,SNR=5.2
comp=Z,0.5nm,0.6s
ARCES ARCESS Array B 49.98 1 P P 07 17 33.6 -0.2
ARCES IAmb IAmb 07 17 49.9
comp=Z,2.2nm,1.1s
KSRS Korea Array 53.76 283 P P 07 18 03.9 +1.6
comp=Z,3.3nm,0.6s,baz=37,slow=7.0,SNR=8.7
comp=Z,3.3nm,0.6s
SONM Songino Array 54.97 306 P P 07 18 12.8 +1.7
comp=Z,6.4nm,0.8s,baz=42,slow=7.4,SNR=25
comp=Z,6.4nm,0.8s
SONM Songino Array 54.97 306 P P 07 18 11.2 +0.1
SONM IAmb IAmb 07 18 13.6
comp=Z,5.0nm,0.9s
ZAA0 Zalesovo Array 57.22 324 P P 07 18 25.8 -1.1
ZAA0 IAmb IAmb 07 18 27.6
comp=Z,1.7nm,0.8s
ZALV Zalesovo Beam 57.22 324 P P 07 18 27.1 +0.2
comp=Z,1.5nm,0.6s,baz=30,slow=8.2,SNR=4.9
comp=Z,1.5nm,0.6s
NC204 NORSAR Array S 57.53 10 P P 07 18 28.4 -0.6
NC303 NORSAR Array S 57.63 10 P P 07 18 30.3 +0.6
NOA NORSAR Array B 57.80 10 LR LR 07 44 16.0
comp=Z,4.8nm,19.0s,baz=115,slow=37
FIA1 FINESS Array S 58.11 1 P P 07 18 32.7 -0.3
FINES FINESS Array B 58.11 1 P P 07 18 32.5 -0.5
comp=Z,0.7nm,0.5s,baz=359,slow=10,SNR=5.4
comp=Z,0.7nm,0.5s
FINES FINESS Array B 58.11 1 P P 07 18 32.7 -0.3
NC602 NORSAR Array S 58.13 10 P P 07 18 32.7 -0.4
HFS Hagfors 58.89 9 P P 07 18 39.6 +1.1
comp=Z,0.4nm,0.3s,baz=24,slow=7.9,SNR=6.0
comp=Z,0.4nm,0.3s
BVAR Borovoye Array 61.75 333 P P 07 18 57.5 -0.6
comp=Z,1.1nm,0.6s,baz=36,slow=5.4,SNR=2.7
comp=Z,1.1nm,0.6s
KURK Kurchatov 61.83 326 P P 07 18 57.8 -0.8
KURK IAmb IAmb 07 19 10.7
comp=Z,1.2nm,0.8s
KURBB Kurchatov Arra 61.94 326 P P 07 18 58.6 -0.7
comp=Z,0.8nm,0.5s,baz=28,slow=7.0,SNR=5.1
comp=Z,0.8nm,0.5s
MKAR Makanchi Array 64.32 322 P P 07 19 14.4 -0.8
comp=Z,0.3nm,0.6s,baz=50,slow=8.6,SNR=3.0
comp=Z,0.3nm,0.6s
MKAR Makanchi Array 64.32 322 P P 07 19 15.0 -0.2
AB31 Akbulak array 67.45 338 P P 07 19 35.5 +0.2
ABKAR Akbulak array 67.45 338 P P 07 19 35.1 -0.1
AKASG Malin Array Be 68.89 360 P P 07 19 43.7 -0.5
comp=Z,0.8nm,0.4s,baz=4.0,slow=6.3,SNR=5.1
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 68.89 360 P P 07 19 43.7 -0.5
AKASG IAmb IAmb 07 20 02.8
comp=Z,2.7nm,1.0s
AKBB Malin Array Si 68.89 360 P P 07 19 44.0 -0.1
AKBB IAmb IAmb 07 19 44.6
comp=Z,3.5nm,1.0s
KIEV Kiev 68.90 360 P P 07 19 43.9 -0.3
KIEV IAmb IAmb 07 19 44.7
comp=Z,3.0nm,1.0s
CMAR Chiang Mai Arr 83.24 296 LR LR 08 01 06.1
comp=Z,12nm,20.4s,baz=245,slow=38
BOSA Boshof 147.78 5 PKPbc PKPbc 07 28 22.0 -1.7
comp=Z,2.4nm,0.8s,baz=344,slow=0.4,SNR=4.5
BOSA Boshof 147.78 5 PKPdf PKPdf 07 28 20.7 -0.1
BOSA PKPbc **PKiKP 07 28 23.9 -1.8**
BOSA PKPab **PKPab 07 28 26.9 +0.6**
QSPA South Pole Qui 150.56 180 PKPbc PKiKP 07 28 30.2 +0.2
comp=Z,1.5nm,0.6s,baz=0.0,slow=0.0,SNR=12
QSPA South Pole Qui 150.56 180 PKPdf PKPdf 07 28 25.2 +1.3
QSPA **PKiKP 07 28 30.6 +0.5**
QSPA PKPab **PKPab 07 28 38.4 +1.8**

*IDC **20** 07:10:41.6±1.3,36°.69N×141°.70E,h0km,mb3.6/6, mbtmp3.5/7,ML2.4/1,Error ellipse: s-maj=32.2km s-min=26.3km az=67.0*
*JMA **20** 07:10:43.4±0.1,37°.0N±0°.2×141°.4E±0°.6,h29km,MV3.5/38, E OFF FUKUSHIMA PREF*
ISC 20 07:10:40.9±2.3,37°.03N±0°.05×141°.51E±0°.09,h1km±13km, n22,σ1s28/23,mb3.5/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.57**	**277**	P	**Pg**	**07 10 52.6**	**+0.7**
ONAJ				*e*S	**Sg**	**07 10 59.8**	**+0.5**
JFK	**Kawauchi**	**0.61**	**304**	P	**Pg**	**07 10 53.4**	**+0.8**
JFK				S	**Sg**	**07 11 00.3**	**-0.1**
JFFD	**Fukushimafurud**	**0.76**	**275**	*i* P	**Pg**	**07 10 55.7**	**+0.2**
JFFD				S	**Sg**	**07 11 04.3**	**-1.1**
JMST	**Minamisoumatoc**	**0.85**	**325**	*i* P	**Pg**	**07 10 57.7**	**+0.5**
JMST				S	**Sg**	**07 11 08.2**	**-0.1**
JHO	**Hitachi**	**0.86**	**241**	*i* P	**Pg**	**07 10 57.5**	**0.0**
JHO				S	**Sg**	**07 11 07.7**	**-1.0**
JMM	**Marumori**	**1.01**	**326**	*i* P	**Pg**	**07 11 00.5**	**+0.2**
JMM				S	**Sg**	**07 11 12.5**	**-0.9**
JOTO	**OTAMA OYAMA**	**1.07**	**300**	*i* P	**Pg**	**07 11 01.5**	**0.0**
JOTO				S	**Sg**	**07 11 14.5**	**-1.0**
JIO	**Ouri**	**1.43**	**355**	*i* P	**Pn**	**07 11 07.4**	**-0.5**
JIO				S	**Sn**	**07 11 24.6**	**-2.7**
JFY	**Yanaizu**	**1.49**	**285**	*i* P	**Pn**	**07 11 07.9**	**-1.0**
MJAR	**Matsushiro Arr**	**2.69**	**261**	Pn	**Pn**	**07 11 25.3**	**-0.2**
	0.7nm,0.3s,baz=83,slow=17,SNR=9.6						
MJAR				Sn	**Sn**	**07 11 58.8**	**+0.1**
	1.4nm,0.3s,baz=87,slow=9.9,SNR=6.3						
	4.4nm,0.4s						
SONM	**Songino Array**	**27.85**	**304**	P	**P**	**07 16 35.4**	**+3.3**
	0.3nm,0.6s,baz=107,slow=9.3,SNR=2.2						
	0.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.08**	**121**	T	T	07 46 03.7	
	baz=314,slow=75,SNR=87						
H11N1	**WAKE ISLAND Hy**	**28.09**	**121**	T	T	07 46 04.4	
	baz=314,slow=75,SNR=173						
H11N3	**WAKE ISLAND Hy**	**28.10**	**121**	T	T	07 46 05.1	
	baz=314,slow=75,SNR=125						
H11S1	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	07 46 56.1	
	baz=315,slow=75,SNR=45						
H11S3	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	07 46 56.1	
	baz=315,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**28.81**	**123**	T	T	07 46 57.3	
	baz=315,slow=75,SNR=33						
MKAR	**Makanchi Array**	**44.18**	**302**	P	P	07 18 55.4	+4.1
	0.5nm,0.8s,baz=91,slow=9.7,SNR=4.2						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**46.06**	**308**	P	P	07 19 10.2	+4.1
	0.4nm,0.3s,baz=82,slow=8.3,SNR=5.6						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**49.45**	**32**	P	**P**	**07 19 33.8**	**+1.5**
	0.3nm,0.6s,baz=268,slow=5.6,SNR=4.2						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**57.07**	**188**	P	**P**	**07 20 28.1**	**-0.7**
	1.9nm,1.0s,baz=3.7,slow=7.0,SNR=1.8						
	1.9nm,1.0s						
ASAR	**Alice Springs**	**60.80**	**188**	P	**P**	**07 20 52.8**	**-1.8**
	0.3nm,0.8s,baz=353,slow=7.7,SNR=1.8						
	0.3nm,0.8s						

IDC 20 07:20:11.1±3.2,53°.99N×86°.83E,h0km,mbtmp2.4/2, ML2.1/2,Error ellipse: s-maj=26.7km s-min=15.3km az=65.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.19**	**269**	I	I	07 27 30.0	
	baz=87,slow=311,SNR=1.8						
ZALV	**Zalesovo Beam**	**1.19**	**269**	Pg	Pb	07 20 34.3	-0.2
	0.6nm,0.3s,baz=87,slow=16,SNR=6.0						
ZALV				Lg	Lg	07 20 49.6	
	1.3nm,0.3s,baz=86,slow=30,SNR=9.2						
KURBB	**Kurchatov Arra**	**6.10**	**240**	Pn	Pn	07 21 42.7	+0.2
	baz=58,slow=13,SNR=1.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.76**	**204**	Pn	Pn	07 22 06.8	+1.4
	0.1nm,0.3s,baz=24,slow=13,SNR=1.8						
MKAR				Lg	Lg	07 24 15.9	
	0.1nm,0.3s,baz=25,slow=32,SNR=4.8						
	0.1nm,0.3s						

*IDC **20** 07:29:15.3±0.9,5°.59N×74°.41W,h93km±11km,mb3.0/3, mbtmp3.5/4,Error ellipse: s-maj=32.6km s-min=12.9km az=121.0*
*CATAC **20** 07:29:16.5±0.6,6°.N±3°.×7°.4W±°,h94km±13km,M4.0/8, mb4.0/2,MLv4.0/8,Error ellipse: s-maj=11.3km s-min=4.8km az=116.7,confirmed*
*RSNC **20** 07:29:17.7±0.0,5°.62N×74°.38W,h84km±1km,M3.2,mB4.4, mb4.1,ML3.0,Mw(mB)3.5*
ISC 20 07:29:15.9±0.8,5°.62N±0°.03×74°.36W±0°.03,h96km±6km, n44,σ1s15/76,mb3.1/3,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.29**	**84**	P	**Pn**	**07 29 30.2**	**0.0**
SPBC				S	**Sn**	**07 29 39.8**	**-1.0**
ROSC	**El Rosal**	**0.78**	**177**	P	**Pn**	**07 29 35.1**	**+0.9**
	287nm,0.3s,baz=225,slow=7.1,SNR=656						
ROSC				S	**Sn**	**07 29 46.9**	**-0.9**
	655nm,0.3s,baz=128,slow=21,SNR=10						
ROSC	**El Rosal**	**0.78**	**177**	P	**Pn**	**07 29 35.1**	**+0.9**
ROSC				S	**Sn**	**07 29 46.6**	**-1.2**
PTBC	**PUERTO BERRIO,**	**0.92**	**354**	P	**Pn**	**07 29 35.4**	**+0.2**
PTBC				S	**Sn**	**07 29 49.6**	**-0.1**
GUY2C	**Guyana, Caldas**	**1.07**	**248**	P	**Pn**	**07 29 37.9**	**+0.5**
GUY2C				S	**Sn**	**07 29 53.6**	**+0.2**
CVER	**Cruz Verde, Cu**	**1.13**	**165**	P	**Pn**	**07 29 39.2**	**+1.1**
CVER				S	**Sn**	**07 29 55.3**	**+0.7**
CHIC	**Chingaza**	**1.17**	**147**	P	**Pn**	**07 29 39.1**	**+0.7**
CHIC				S	**Sn**	**07 29 56.0**	**+0.7**
CMAN1	**Manizales, Cal**	**1.28**	**245**	P	**Pn**	**07 29 40.4**	**+0.8**
CMAN1				S	**Sn**	**07 29 57.1**	**-0.3**
RUSC	**La Rusia**	**1.30**	**78**	P	**Pn**	**07 29 40.7**	**+0.6**
RUSC				S	**Sn**	**07 29 59.6**	**+1.4**
RUSC	**La Rusia**	**1.30**	**78**	P	**Pn**	**07 29 40.6**	**+0.5**
RUSC				S	**Sn**	**07 29 59.0**	**+0.8**
MEDEC	**Medelln, Ant**	**1.38**	**298**	P	**Pn**	**07 29 41.7**	**+1.0**
MEDEC				S	**Sn**	**07 30 00.8**	**+1.3**
BRJC	**Barrancabermej**	**1.48**	**25**	P	**Pn**	**07 29 42.3**	**+0.6**
BRJC				S	**Sn**	**07 30 02.1**	**+0.8**
BARC	**Barichara**	**1.52**	**51**	P	**Pn**	**07 29 43.7**	**+1.2**
BARC				S	**Sn**	**07 30 03.5**	**+0.9**
VILC	**Villavicencio,**	**1.64**	**156**	P	**Pn**	**07 29 44.8**	**+0.9**
VILC				S	**Sn**	**07 30 06.2**	**+1.1**
CBOC	**Ciudad Bolivar**	**1.66**	**278**	P	**Pn**	**07 29 45.5**	**+1.4**
CBOC				S	**Sn**	**07 30 05.3**	**-0.3**
ARMEC	**Armenia, Quind**	**1.67**	**231**	P	**Pn**	**07 29 45.7**	**+1.4**
ARMEC				S	**Sn**	**07 30 08.9**	**+3.0**
VMM09	**Lebrija**	**1.84**	**35**	P	**Pn**	**07 29 47.6**	**+1.2**
PRAC	**Prado**	**1.96**	**195**	P	**Pn**	**07 29 48.2**	**+0.2**
PRAC				S	**Sn**	**07 30 13.2**	**+0.8**
PRAC	**Prado**	**1.96**	**195**	P	**Pn**	**07 29 48.1**	**+0.1**
PRAC				S	**Sn**	**07 30 12.7**	**+0.3**
PAMC	**Pamplona, Colo**	**2.38**	**44**	P	**Pn**	**07 29 55.3**	**+1.5**
PAMC				S	**Sn**	**07 30 23.5**	**+0.8**
UREC	**San Jos de Ur**	**2.41**	**331**	P	**Pn**	**07 29 53.6**	**-0.2**
UREC				S	**Sn**	**07 30 22.1**	**-0.8**
OCAC	**Ocana**	**2.80**	**22**	P	**Pn**	**07 29 59.9**	**+0.8**
OCAC				S	**Sn**	**07 30 33.8**	**+1.5**
APAC	**Apartado, Choc**	**3.16**	**316**	P	**Pn**	**07 30 05.2**	**+1.5**
APAC				S	**Sn**	**07 30 41.1**	**+0.5**
JAMC	**Jamundi, Valle**	**3.32**	**224**	P	**Pn**	**07 30 07.1**	**+1.0**
JAMC				S	**Sn**	**07 30 46.1**	**+1.3**
MACC	**Macarena, Meta**	**3.49**	**171**	P	**Pn**	**07 30 07.1**	**-1.2**
MACC				S	**Sn**	**07 30 45.4**	**-3.3**
GARC	**Garzon, Huila**	**3.59**	**198**	P	**Pn**	**07 30 09.5**	**-0.3**
GARC				S	**Sn**	**07 30 50.3**	**-1.2**
LCBC	**Los crdobas,**	**3.78**	**328**	P	**Pn**	**07 30 12.1**	**0.0**
LCBC				S	**Sn**	**07 30 56.1**	**+0.5**
POPC	**Popayan, Colom**	**3.83**	**217**	P	**Pn**	**07 30 14.3**	**+1.3**
POPC				S	**Sn**	**07 30 58.4**	**+1.2**
ARGC	**Ariguani, Magd**	**4.21**	**2**	P	**Pn**	**07 30 19.4**	**+1.4**
ARGC				S	Sn	07 31 15.9	+10
FLOC	**Florencia**	**4.21**	**198**	P	**Pn**	**07 30 17.9**	**-0.1**
FLOC				S	**Sn**	**07 31 06.1**	**-0.1**
SJCC	**San Jacinto, C**	**4.32**	**349**	P	**Pn**	**07 30 18.5**	**-1.0**
SJCC	**San Jacinto, C**	**4.32**	**349**	P	**Pn**	**07 30 18.3**	**-1.3**
SJCC				S	**Sn**	**07 31 07.2**	**-1.7**
BBAC	**Balboa, Cauca**	**4.59**	**219**	P	**Pn**	**07 30 23.7**	**+0.4**
SDV	**Santo Domingo**	**4.92**	**49**	P	**Pn**	**07 30 29.5**	**+1.8**
	23nm,0.3s,baz=152,slow=7.9,SNR=35						
SDV				S	**Sn**	**07 31 24.0**	**+0.4**
	31nm,0.4s,baz=69,slow=18,SNR=12						
PTLC	**Puerto Leguiza**	**5.43**	**185**	P	**Pn**	**07 30 37.4**	**+2.9**
	386nm13nm,0.6s						
BCIP	**Isla Barro Col**	**6.47**	**303**	P	**Pn**	**07 30 49.1**	**+0.5**
BCIP	**Isla Barro Col**	**6.47**	**303**	P	**Pn**	**07 30 49.5**	**+0.9**
URI	**Uribia**	**6.48**	**21**	P	**Pn**	**07 30 47.9**	**-0.8**
URI				S	**Sn**	**07 32 03.2**	**+1.9**
URIC	**Uribia, Colomb**	**6.48**	**21**	P	**Pn**	**07 30 47.7**	**-1.1**
URIC				S	**Sn**	**07 32 01.8**	**+0.5**
LPAZ	**La Paz**	**22.62**	**164**	P	**P**	**07 34 08.8**	**-0.8**
	0.6nm,0.6s,baz=340,slow=12,SNR=2.3						
	0.6nm,0.6s						
PDAR	**Pinedale Array**	**48.34**	**325**	P	**P**	**07 37 46.7**	**-1.4**
	0.1nm,0.5s,baz=150,slow=4.4,SNR=1.6						
	0.1nm,0.5s						
YKA	**Yellowknife Ar**	**63.97**	**340**	P	**P**	**07 39 38.5**	**-0.2**
	0.3nm,0.5s,baz=134,slow=6.3,SNR=8.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**147.41**	**234**	PKPbc	**PKPdf**	**07 48 48.5**	**+1.5**
	1.2nm,0.4s,baz=109,slow=3.4,SNR=34						
WRA	**Warramunga Arr**	**148.68**	**240**	PKPbc	**PKPbc**	**07 48 52.0**	**-0.9**
	1.3nm,0.5s,baz=109,slow=2.4,SNR=9.9						

*IDC **20** 07:35:27.3±2.9,53°.51N×87°.85E,h0km,mbtmp2.8/2, ML2.4/2,Error ellipse: s-maj=24.4km s-min=16.7km az=59.0*
ASRS 20 07:35:23.0±0.9,53°.63N×87°.91E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**281**	I	I	07 47 10.0	
	0.1nm,1.0s,baz=99,slow=319,SNR=18						
ZALV	**Zalesovo Beam**	**1.86**	**281**	Pg	Pg	07 35 59.9	+1.2
	0.8nm,0.3s,baz=105,slow=16,SNR=16						
ZALV				Lg	Lg	07 36 25.4	
	1.0nm,0.3s,baz=107,slow=28,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.51**	**246**	Pn	Pn	07 37 04.2	+4.2
	0.1nm,0.3s,baz=62,slow=14,SNR=6.3						
KURBB				Sn	Sn	07 38 18.6	+3.7
	baz=64,slow=24,SNR=4.0						
KURBB				Lg	Lg	07 38 48.1	
	baz=62,slow=32,SNR=6.0						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**7.74**	**210**	Pn	Pn	07 37 20.2	+3.4
	0.1nm,0.3s,baz=30,slow=14,SNR=4.3						
MKAR				Lg	Lg	07 39 27.5	
	baz=21,slow=26,SNR=2.5						
	0.1nm,0.2s						

KRSC 20 07:38:47.4±1.0,55°.39N×166°.19E,h36km±8km,MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.23**	**213**	*e*P	Pn	07 38 54.9	-0.3
BKI				*e*S	Sn	07 39 00.0	-1.7
KBTR	**Krutoberegovo**	**2.07**	**295**	*e*P	Pn	07 39 21.4	+1.8
MKZ	**Mys Kozlova**	**2.70**	**254**	*e*P	Pn	07 39 32.2	+3.9
MKZ				*e*S	Sn	07 40 04.5	+4.9
TUMR	**Tumrok**	**3.45**	**271**	*e*P	Pn	07 39 43.0	+4.3
SPN	**Mys Shipunski**	**4.29**	**240**	*e*S	Sn	07 40 43.3	+4.5
SDLR	**Sedlovina**	**4.77**	**247**	*e*P	Pn	07 40 01.5	+4.7
AVH	**Avacha**	**4.86**	**247**	*e*P	Pn	07 40 02.0	+4.1
KRX	**Arik**	**4.86**	**248**	*e*P	Pn	07 40 03.4	+5.4
KOK	**Koryaka**	**4.90**	**248**	*e*P	Pn	07 40 03.4	+4.9
GNL	**Ganaly**	**5.09**	**254**	*e*P	Pn	07 40 06.0	+4.8

IDC 20 07:59:58.5±2.4,5°.44S×129°.03E,h0km,mb3.6/1, mbtmp3.5/3,ML3.5/2,Error ellipse: s-maj=159.4km s-min=31.7km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.32**	**161**	Pn	Pn	08 03 34.3	-1.8
	0.2nm,0.3s,baz=343,slow=13,SNR=4.6						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**18.72**	**166**	P	Pn	08 04 19.4	+0.3
	0.2nm,0.3s,baz=348,slow=9.9,SNR=11						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**66.40**	**327**	P	P	08 10 49.4	0.0
	0.3nm,0.5s,baz=115,slow=6.9,SNR=3.5						
	0.3nm,0.5s						

*IDC **20** 08:03:44.2±7.1,35°.87N×69°.38E,h104km±53km,mb3.5/10, mbtmp3.9/15,Error ellipse: s-maj=54.9km s-min=19.8km az=22.0*
*NEIC **20** 08:03:51.8±1.2,36°.25N±0°.06×69°.54E±0°.09,h172km±3km, mb4.2/26,Error ellipse: s-maj=10.7km s-min=7.9km az=73.0*
*NNC **20** 08:03:56.3±5.7,36°.73N×69°.32E,h159km±90km,mb3.4, mpv4.2,Error ellipse: s-maj=49.4km s-min=31.1km az=37.0*
ISC 20 08:03:49.7±0.5,36°.28N±0°.05×69°.61E±0°.05,h150km,n90, σ2s34/102,mb4.1/20,3C-5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHAA	**Shahritus**	**1.75**	**318**		**Pn**	**08 04 25.7**	**+3.6**
SHAA				Sn	**Sn**	**08 04 50.7**	**+3.8**
KBL	**Kabul**	**1.79**	**195**		**Pn**	**08 04 26.0**	**+3.3**
KBL				Sn	**Sn**	**08 04 50.9**	**+2.9**
MANEM	**Manem**	**2.08**	**52**		Pn	08 04 31.6	+5.5
CHGR	**Chuyangaron**	**2.40**	**351**		**Pn**	**08 04 33.0**	**+3.3**
GAR	**Garm**	**2.77**	**11**		**Pn**	**08 04 37.9**	**+3.6**
DRK	**Karamyk**	**3.64**	**28**		**Pn**	**08 04 49.3**	**+3.8**
BTK	**Batken**	**3.89**	**14**		**Pn**	**08 04 51.9**	**+3.3**
NIL	**Nilore**	**3.98**	**130**		**Pn**	**08 04 53.2**	**+3.5**
KSH2	**Kashi**	**5.52**	**57**	Pn	Pn	08 05 16.5	+6.4
KSH2				Sn	**Sn**	**08 06 18.5**	**+5.6**
KSH2				smax	smax		
	comp=N,230nm,0.6s						
KSH2				smax	smax		
	comp=E,160nm,0.7s						
JMU	**Jammu**	**5.54**	**127**	*e*S	**Sn**	**08 06 15.5**	**+2.2**
JMU				IAML		08 06 16.8	
	comp=E,299nm,0.9s						
JMU				IAML		08 06 16.9	
	comp=N,305nm,0.6s						
ARSB	**Arslanbob**	**5.69**	**27**		**Pn**	**08 05 14.6**	**+2.3**
HRA	**Herat**	**6.31**	**255**	Pn	**Pn**	**08 05 22.2**	**+1.4**
THN	**Thein Dam**	**6.36**	**125**	*e*P	**Pn**	**08 05 24.7**	**+3.4**
THN				*e*S	**Sn**	**08 06 32.8**	**-0.1**
THN				IAML		08 06 34.9	
	comp=E,168nm,0.1s						
THN				IAML		08 06 48.4	
	comp=E,79nm,0.1s						
TSSA	**Tissa**	**6.39**	**121**	*e*P	**Pn**	**08 05 25.0**	**+3.2**
TSSA				*e*S	**Sn**	**08 06 31.9**	**-2.1**
TSSA				IAML		08 06 34.4	
	comp=E,177nm,0.3s						
TSSA				IAML		08 06 48.4	
	comp=E,305nm,0.4s						
DHRM	**DHARAMSHALA**	**6.84**	**124**	*e*P	**Pn**	**08 05 29.8**	**+2.0**
DHRM				*e*S	**Sn**	**08 06 41.3**	**-3.4**
DHRM				IAML		08 06 46.2	
	comp=E,279nm,0.4s						
DHRM				IAML		08 06 46.3	
	comp=N,167nm,0.2s						
KK31	**Karatay Array**	**6.85**	**6**	⇓P	**Pn**	**08 05 29.4**	**+1.7**
	comp=N,3.0nm,0.2s,baz=188,slow=13,SNR=65						
KK31				⇑S	**Sn**	**08 06 42.6**	**-1.9**
	comp=N,15nm,0.5s,baz=193,slow=26						
KK31	**Karatay Array**	**6.85**	**6**		**Pn**	**08 05 29.5**	**+1.7**
KKAR	**Karatay Array**	**6.85**	**6**		**Pn**	**08 05 29.4**	**+1.7**
UCH	**Uchtor**	**7.05**	**31**	P	**Pn**	**08 05 33.4**	**+2.6**
	SNR=7.3						
EKS2	**Erkin-Say**	**7.14**	**26**	P	**Pn**	**08 05 33.9**	**+2.2**
	SNR=14						
NRN	**Naryn**	**7.16**	**42**	Pn	**Pn**	**08 05 34.0**	**+1.8**
AAK	**Ala-Archa**	**7.39**	**29**	P	**Pn**	**08 05 36.6**	**+1.6**
	comp=N,11nm,0.3s,baz=220,slow=7.9,SNR=32						
AAK				S	**Sn**	**08 06 56.5**	**-1.2**
	comp=N,32nm,0.8s,baz=212,slow=7.4,SNR=10						
AAK	**Ala-Archa**	**7.39**	**29**	P	**Pn**	**08 05 37.6**	**+2.6**
	SNR=14						
AAK	**Ala-Archa**	**7.39**	**29**	⇑P	**Pn**	**08 05 37.1**	**+2.1**
	comp=N,19nm,0.8s						
AAK				⇓S	**Sn**	**08 06 57.4**	**-0.2**
	comp=N,5.9nm,0.5s						
AAK	**Ala-Archa**	**7.39**	**29**		**Pn**	**08 05 37.9**	**+2.9**
BHK	**Bhakra**	**7.44**	**129**	*ex*	**Sn**	**08 06 57.1**	**-1.8**
BHK				IAML		08 06 59.3	
	comp=N,110nm,0.7s						
BHK				IAML		08 06 59.8	
	comp=E,73nm,0.5s						
FRU1	**Bishkek**	**7.59**	**29**	Pn	**Pn**	**08 05 39.9**	**+2.3**

KURK	**Kurchatov**	**15.82**	**21**			**Pn**	**08 07 24.3**	**+0.3**
AKTO	**Aktyubinsk**	**16.44**	**333**	P		**Pn**	**08 07 33.1**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=163,slow=8.0,SNR=17							
AKTO				S		**S**	**08 10 28.4**	**-5.7**
	comp=Z,1.7nm,0.5s,baz=336,slow=21,SNR=3.8							
AKTO	**Aktyubinsk**	**16.44**	**333**	⇓P		**Pn**	**08 07 32.8**	**+1.1**
	comp=Z,4.1nm,0.9s							
AKTO				⇑S		**S**	**08 10 28.3**	**-5.9**
	comp=Z,1.9nm,0.8s							
EVN	**Everest**	**16.75**	**115**			**P**	**08 07 36.8**	**+0.8**
EVN				IAmb		IAmb	08 07 37.9	
	comp=Z,13nm,0.7s							
BVAR	**Borovoye Array**	**16.75**	**2**	P		**P**	**08 07 36.2**	**+1.1**
	comp=Z,3.2nm,0.5s,baz=175,slow=7.9,SNR=11							
BORK	**Borovoye**	**16.77**	**1**	P		**P**	**08 07 36.2**	**+0.9**
ZAA0	**Zalesovo Array**	**20.59**	**26**	P		**P**	**08 08 17.2**	**+0.5**
ZAA0				IAmb		IAmb	08 08 19.8	
	comp=Z,3.4nm,0.5s							
ZALV	**Zalesovo Beam**	**20.59**	**26**	P		**P**	**08 08 18.4**	**+1.6**
	comp=Z,3.0nm,0.4s,baz=211,slow=11,SNR=11							
	comp=Z,3.0nm,0.4s							
ARTI	**Arti**	**21.50**	**343**	P		**P**	**08 08 28.0**	**+1.6**
	comp=Z,2.7nm,0.6s,baz=141,slow=6.9,SNR=4.2							
	comp=Z,2.7nm,0.6s							
ARTI	**Arti**	**21.50**	**343**	P		**P**	**08 08 27.1**	**+0.6**
ARTI				IAmb		IAmb	08 08 30.9	
	comp=Z,4.5nm,0.6s							
SHL	**Shillong**	**21.84**	**113**	P		**P**	**08 08 29.0**	**-1.5**
RAYN	**Ar Rayn**	**24.39**	**245**	P		**P**	**08 08 52.5**	**-1.7**
PZH	**PanZhiHua**	**28.99**	**101**	P		**P**	**08 09 36.5**	**+1.0**
SONM	**Songino Array**	**29.38**	**55**	P		**P**	**08 09 41.7**	**+2.9**
	comp=Z,0.6nm,0.5s,baz=297,slow=9.4,SNR=2.1							
	comp=Z,0.6nm,0.5s							
AKBB	**Malin Array Si**	**32.22**	**309**	P		**P**	**08 10 02.9**	**-0.5**
AKBB				IAmb		IAmb	08 10 36.4	
	comp=Z,9.1nm,1.5s							
KIEV	**Kiev**	**32.23**	**309**	P		**P**	**08 10 02.9**	**-0.6**
KIEV				IAmb		IAmb	08 10 20.9	
	comp=Z,5.2nm,1.4s							
HHC	**Hu-ho-hao-te**	**32.89**	**69**	*e*P		**P**	**08 10 09.5**	**-0.1**
HHC				pmax		pmax		
	comp=Z,12nm,0.5s							
HHC				pmax		pmax		
	comp=Z,85nm,6.0s							
SLVN	**Son La**	**33.34**	**107**	P		**P**	**08 10 13.6**	**0.0**
BURAR	**Bucovina Array**	**34.47**	**303**	P		**P**	**08 10 22.7**	**-0.4**
FIA1	**FINESS Array S**	**37.05**	**327**	P		**P**	**08 10 44.2**	**-0.6**
FINES	**FINESS Array B**	**37.05**	**327**	P		**P**	**08 10 46.0**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=90,slow=12,SNR=2.0							
	comp=Z,0.8nm,0.8s							
ARCES	**ARCESS Array B**	**40.93**	**338**	P		**P**	**08 11 18.2**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=112,slow=9.3,SNR=7.5							
	comp=Z,0.8nm,0.6s							
ARCES	**ARCESS Array B**	**40.93**	**338**	P		**P**	**08 11 17.4**	**+0.5**
ARCES				IAmb		IAmb	08 11 38.8	
	comp=Z,6.3nm,1.4s							
KHC	**Kasperske Hory**	**42.20**	**306**	P		**P**	**08 11 27.5**	**-0.2**
TRI	**Trieste**	**42.42**	**301**	P		**P**	**08 11 28.6**	**-0.8**
TRI				IAmb		IAmb	08 12 13.0	
	comp=Z,9.5nm,1.2s							
HFS	**Hagfors**	**42.55**	**322**	P		**P**	**08 11 31.1**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=29,slow=3.3,SNR=2.0							
	comp=Z,0.9nm,0.6s							
NC303	**NORSAR Array S**	**43.84**	**324**	P		**P**	**08 11 40.8**	**+0.3**
NC303				IAmb		IAmb	08 12 15.7	
	comp=Z,6.2nm,1.1s							
NBO00	**NORSAR Array S**	**44.10**	**323**	P		**P**	**08 11 41.1**	**-1.6**
NBO00				IAmb		IAmb	08 11 55.7	
	comp=Z,10nm,1.3s							
KSRS	**Korea Array**	**46.01**	**70**	P		**P**	**08 11 59.6**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=279,slow=5.6,SNR=2.0							
	comp=Z,0.5nm,0.5s							
USA0B	**Ussuriysk Arra**	**47.25**	**60**	P		**P**	**08 12 06.9**	**-0.7**
USA0B				IAmb		IAmb	08 12 46.6	
	comp=Z,17nm,1.3s							
USRK	**Ussuriysk Ar.**	**47.25**	**60**	P		**P**	**08 12 10.3**	**+2.8**
	comp=Z,1.3nm,0.8s,baz=351,slow=9.3,SNR=5.1							
	comp=Z,1.3nm,0.8s							
USRK	**Ussuriysk Ar.**	**47.25**	**60**	P		**P**	**08 12 07.2**	**-0.4**
SPITS	**Spitsbergen Ar**	**47.46**	**347**	P		**P**	**08 12 10.4**	**+1.7**
	comp=Z,2.6nm,0.9s,baz=141,slow=16,SNR=1.7							
	comp=Z,2.6nm,0.9s							
MJB9	**Matsu-Tunnel**	**54.07**	**68**	P		**P**	**08 12 59.2**	**+0.4**
MJB9				IAmb		IAmb	08 13 38.3	
	comp=Z,3.5nm,0.5s							
MAJO	**Matsushiro**	**54.07**	**68**	P		**P**	**08 12 58.9**	**+0.1**
MAJO				IAmb		IAmb	08 13 38.3	
	comp=Z,3.7nm,0.5s							
MJAR	**Matsushiro Arr**	**54.08**	**68**	P		**P**	**08 12 58.7**	**-0.2**
D19K	**Kuna River**	**69.69**	**17**	P		**P**	**08 14 42.2**	**-0.4**
E18K	**Tukpahlearik C**	**69.89**	**18**	P		**P**	**08 14 43.4**	**-0.4**
E18K				IAmb		IAmb	08 15 09.7	
	comp=Z,8.8nm,1.3s							
J20K	**Nowinta River**	**74.10**	**18**	P		**P**	**08 15 08.7**	**-0.3**
J20K				IAmb		IAmb	08 15 46.8	
	comp=Z,5.3nm,1.4s							
ASAR	**Alice Springs**	**85.05**	**124**	P		**P**	**08 16 07.1**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=302,slow=4.2,SNR=1.9							
	comp=Z,0.2nm,0.6s							
ASAR	**Alice Springs**	**85.05**	**124**	P		**P**	**08 16 07.7**	**-1.0**

*CATAC **20** 08:06:33.1±0.9, 16°N±4°×9°4W±°, h37km±20km, M3.9/8, MLv3.9/8, Error ellipse: s-maj=10.0km s-min=4.3km az=44.7, confirmed*
*MEX **20** 08:06:33.0±0.4, 15°.76N×94°.31W, h68km±10km, MD4.2*
ISC 20 08:06:31.9±1.1, 15°.84N±0°.05×94°.26W±0°.03, h73km±14km, n42, σ1§45/74, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CARR	**Arriaga**	**0.53**	**39**	*e*P	**Pn**	**08 06 45.0**	**-0.3**
CARR				*e*S	**Sn**	**08 06 55.4**	**+0.3**
CMIG	**Matias Romero**	**1.39**	**334**	*e*P	**Pn**	**08 06 55.7**	**+0.2**
CMIG				*e*S	**Sn**	**08 07 13.5**	**+0.2**
TGIG		**1.44**	**49**	*i* P	**Pn**	**08 06 55.5**	**-0.7**
TGIG				*e*S	**Sn**	**08 07 12.4**	**-2.1**
HUIG	**Huatulco**	**1.79**	**268**	*e*P	**Pn**	**08 06 59.9**	**-0.8**
HUIG				*e*S	**Sn**	**08 07 20.1**	**-2.6**
PATR	**El Naranjo**	**2.08**	**110**	*e*P	**Pn**	**08 07 04.6**	**-0.3**
PATR				*e*S	**Sn**	**08 07 29.8**	**-0.2**
PAVE	**Pavencul**	**2.10**	**107**	*e*P	**Pn**	**08 07 05.5**	**+0.2**
PAVE				*e*S	**Sn**	**08 07 30.8**	**+0.1**
THIG		**2.13**	**115**	*e*P	**Pn**	**08 07 05.2**	**-0.2**
THIG				*e*S	**Sn**	**08 07 30.0**	**-1.0**
CHUJ	**Union Juarez**	**2.20**	**109**	*e*P	**Pn**	**08 07 06.3**	**-0.2**
CHUJ				*e*S	**Sn**	**08 07 32.7**	**-0.3**
NEUV	**Arroyo Zacate**	**2.38**	**322**	*e*P	**Pn**	**08 07 09.2**	**+0.4**
NEUV				*e*S	**Sn**	**08 07 36.9**	**-0.1**
OXLC	**Oaxaca**	**2.65**	**298**	*e*P	**Pn**	**08 07 12.5**	**-0.1**
OXLC				*e*S	**Sn**	**08 07 43.0**	**-0.8**
VHO	**Vista Hermosa**	**2.68**	**298**	*e*P	**Pn**	**08 07 14.8**	**+1.8**
VHO				*e*S	**Sn**	**08 07 43.7**	**-0.8**
HUEH	**Huehuetenango**	**2.70**	**101**	P	**Pn**	**08 07 13.7**	**+0.3**
HUEH	**Huehuetenango**	**2.70**	**101**	*e*P	**Pn**	**08 07 13.6**	**+0.3**
HUEH				*e*S	**Sn**	**08 07 45.3**	**+0.1**
PEIG	**Puerto Escondi**	**2.79**	**274**	*e*P	**Pn**	**08 07 13.7**	**-0.6**
PEIG				*e*S	**Sn**	**08 07 45.0**	**-2.0**
RTAL	**Retalhuleu**	**2.79**	**117**	P	**Pn**	**08 07 14.8**	**+0.4**
RTAL				S	**Sn**	**08 07 45.7**	**-1.4**
RTAL	**Retalhuleu**	**2.79**	**117**	*e*P	**Pn**	**08 07 14.7**	**+0.3**
RTAL				*e*S	**Sn**	**08 07 46.4**	**-0.7**
YOIG	**Yosondua**	**3.32**	**288**	*e*P	**Pn**	**08 07 21.8**	**0.0**
YOIG				*e*S	**Sn**	**08 07 58.8**	**-1.4**
TOIG	**Toxpalan**	**3.50**	**310**	*e*P	**Pn**	**08 07 25.6**	**+1.4**
TOIG				*e*S	**Sn**	**08 08 04.6**	**+0.1**
TXIG	**Tlaxiaco**	**3.65**	**293**	*e*P	**Pn**	**08 07 26.6**	**+0.3**
TXIG				*e*S	**Sn**	**08 08 07.7**	**-0.7**
TPIG	**Tehuac#an**	**3.93**	**311**	*e*P	**Pn**	**08 07 31.6**	**+1.7**
TPIG				*e*S	**Sn**	**08 08 14.4**	**-0.6**
HLIG	**Huajuapan de L**	**3.93**	**301**	*e*P	**Pn**	**08 07 31.2**	**+1.1**
HLIG				*e*S	**Sn**	**08 08 15.2**	**0.0**
FTIG	**Fresnillo de T**	**4.25**	**300**	*e*P	**Pn**	**08 07 34.9**	**+0.6**
FTIG				*e*S	**Sn**	**08 08 21.2**	**-1.5**
SCIG	**Sabancuy**	**4.28**	**43**	P	**Pn**	**08 07 34.1**	**-0.5**
SCIG	**Sabancuy**	**4.28**	**43**	*e*P	**Pn**	**08 07 34.1**	**-0.5**
SCIG				*e*S	**Sn**	**08 08 20.0**	**-3.2**
PETF	**Flores**	**4.35**	**75**	P	**Pn**	**08 07 35.4**	**-0.1**
PETF	**Flores**	**4.35**	**75**	*e*P	**Pn**	**08 07 35.5**	**0.0**
PETF				*e*S	**Sn**	**08 08 22.2**	**-2.8**
LVIG	**Laguna Verde**	**4.38**	**332**	*e*P	**Pn**	**08 07 36.2**	**+0.2**
LVIG				*e*		08 08 21.1	
TLIG	**Tlapa**	**4.47**	**293**	P	**Pn**	**08 07 39.9**	**+2.5**
TLIG	**Tlapa**	**4.47**	**293**	*e*P	**Pn**	**08 07 39.3**	**+1.9**
TLIG				*e*S	**Sn**	**08 08 27.6**	**-0.6**
FAME	**Alcaldia de Sa**	**4.55**	**115**	S	**Sn**	**08 08 29.5**	**-0.6**
NUBE	**Las Nubes**	**4.74**	**113**	P	**Pn**	**08 07 41.2**	**+0.2**
NUBE				S	**Sn**	**08 08 35.8**	**+1.1**
CEVE	**Cerro Verde**	**4.90**	**113**	S	**Sn**	**08 08 43.3**	**+4.3**
ESQI	**Esquipulas**	**4.91**	**104**	P	**Pn**	**08 07 45.0**	**+1.6**
JAYA	**Jayaque - finc**	**5.13**	**114**	S	**Sn**	**08 08 44.9**	**+0.5**
PMON	**Piamonte**	**5.22**	**113**	P	**Pn**	**08 07 50.5**	**+2.9**
PMON				S	**Sn**	**08 08 49.1**	**+2.5**
DAIG	**Los Arroyos**	**5.31**	**284**	*e*P	**Pn**	**08 07 49.2**	**+0.4**
DAIG				*e*S	**Sn**	**08 08 46.6**	**-2.0**
SARH	**Santa Rosa de**	**5.41**	**101**	P	**Pn**	**08 07 49.0**	**-1.1**
YAIG	**Yautepec**	**5.49**	**304**	*e*P	**Pn**	**08 07 54.2**	**+2.9**
YAIG				*e*S	**Sn**	**08 08 52.7**	**-0.5**
MEIG	**Mezcala**	**5.54**	**293**	*e*P	**Pn**	**08 07 52.8**	**+0.9**
MEIG				*e*S	**Sn**	**08 08 54.0**	**-0.3**
PLIG	**Platanillo**	**5.62**	**298**	*e*P	**Pn**	**08 07 55.8**	**+2.7**
PLIG				*e*S	**Sn**	**08 08 56.1**	**-0.3**
MAVM	**Malinalco, Edo**	**5.89**	**303**	*e*P	**Pn**	**08 08 00.2**	**+3.4**
MAVM				*e*S	**Sn**	**08 09 01.2**	**-1.8**
ARIG	**Puente Sto Nin**	**6.31**	**294**	*e*P	**Pn**	**08 08 05.0**	**+2.5**
ARIG				*e*S	**Sn**	**08 09 12.7**	**-0.5**

*IDC **20** 08:09:54.7±3.2, 53°.51N×87°.92E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=28.8km s-min=18.3km az=56.0*
ASRS 20 08:09:53.0±0.9, 53°.64N×88°.02E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**281**	I	I	08 21 40.0	
	0.2nm,1.1s,baz=98,slow=313,SNR=21						
ZALV	**Zalesovo Beam**	**1.92**	**281**	Pn	Pn	08 10 27.8	**+0.8**
	1.2nm,0.3s,baz=101,slow=12,SNR=12						
ZALV				Lg	Lg	08 10 54.7	
	1.6nm,0.3s,baz=105,slow=28,SNR=10						
KURBB	**Kurchatov Arra**	**6.58**	**246**	Pn	Pn	08 11 31.9	**+1.0**
	0.1nm,0.3s,baz=61,slow=14,SNR=5.3						
KURBB				Lg	Lg	08 13 19.2	
	baz=62,slow=32,SNR=6.3						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.77**	**210**	Pn	Pn	08 11 48.4	**+1.0**
	0.1nm,0.3s,baz=26,slow=14,SNR=2.8						
MKAR				Lg	Lg	08 13 54.0	
	baz=28,slow=34,SNR=2.0						
	0.2nm,0.4s						

*CATAC **20** 08:13:13.3±0.2, 9°N±3°×8°3W±°, h16km±2km, M3.4/12, MLv3.4/12, Error ellipse: s-maj=7.1km s-min=4.0km az=18.9, confirmed*
*UCR **20** 08:13:13.6±0.8, 8°.80N×82°.94W, h36km±2km, MW3.5, Presumed earthquake*
*UPA **20** 08:13:14.1±0.9, 8°.85N×82°.89W, h34km±4km, ML3.5, MW3.4, Presumed earthquake*
ISC 20 08:13:13.9±1.0, 8°.84N±0°.03×82°.93W±0°.02, h34km±2km, n94, σ1§05/108, 25C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VITO	**San Vito**	**0.04**	**238**	⇑*e*P	**Pb**	**08 13 20.0**	**+0.2**
VITO				*e*S	**Sb**	**08 13 25.2**	**+1.5**
VITO	**San Vito**	**0.04**	**238**	*i* P	**Pb**	**08 13 20.0**	**+0.2**
VITO				*e*S	**Sb**	**08 13 25.3**	**+1.6**
SCLRA	**Santa Clara, W**	**0.15**	**94**	⇑*i*P	**Pb**	**08 13 20.2**	**-0.2**
SCLRA	**Santa Clara, W**	**0.15**	**94**	⇑*i*P	**Pb**	**08 13 20.2**	**-0.2**
NELV	**Ciudad Neily**	**0.19**	**184**	⇑*i*P	**Pb**	**08 13 20.4**	**-0.1**
NELV				*e*S	**Sb**	**08 13 25.8**	**+0.7**
NELY	**Ciudad Neily**	**0.19**	**184**	⇑*i*P	**Pb**	**08 13 20.4**	**-0.1**
NELY				*e*S	**Sb**	**08 13 25.7**	**+0.7**
BRU2	**Volcan**	**0.24**	**101**	P	**Pn**	**08 13 20.9**	**+0.2**
BRU2	**Volcan**	**0.24**	**101**	⇑*i*P	**Pn**	**08 13 20.9**	**+0.2**
BRU2				*e*S	**Sb**	**08 13 26.3**	**+0.1**
BRU2	**Volcan**	**0.24**	**101**	⇑*i*P	**Pn**	**08 13 20.9**	**+0.2**
BRU2				*e*S	**Sb**	**08 13 26.3**	**+0.1**
CDITO	**Canoas**	**0.27**	**168**	P	**Pn**	**08 13 21.1**	**-0.1**
CDITO				S	**Sb**	**08 13 27.1**	**+0.5**
EDP2	**Potrero Grande**	**0.30**	**305**	*e*P	**Pb**	**08 13 21.5**	**-0.2**
CLLRA	**Cordillera,**	**0.33**	**107**	⇑*i*P	**Pb**	**08 13 22.0**	**-0.3**
CLLRA				*e*S	**Sb**	**08 13 28.1**	**+0.1**
BQTLY	**Boquete Panama**	**0.47**	**100**	⇑*i*P	**Pb**	**08 13 23.6**	**-0.7**
BQTLY	**Boquete Panama**	**0.47**	**100**	⇑*i*P	**Pb**	**08 13 23.6**	**-0.7**
BURE	**Buenos Aires**	**0.52**	**309**	⇑*i*P	**Pb**	**08 13 24.1**	**-0.8**
DRK0	**Durika**	**0.52**	**323**	P	**Pb**	**08 13 21.2**	**-3.8**
DRK0				S	Sb	08 13 21.3	-11
PANP	**Palmar Norte**	**0.53**	**283**	⇑*i*P	**Pb**	**08 13 24.0**	**-1.1**
PANP				*e*S	**Sb**	**08 13 31.9**	**-0.9**
PIRO	**Carate, Puerto**	**0.59**	**223**	P	**Pn**	**08 13 25.2**	**-0.6**
PIRO	**Carate, Puerto**	**0.59**	**223**	*e*P	**Pn**	**08 13 25.1**	**-0.8**
PTPA	**Petro Terminal**	**0.64**	**175**	*e*P	**Pn**	**08 13 26.3**	**-0.3**
BGUAL	**Bijagual, Pana**	**0.68**	**119**	⇑*i*P	**Pn**	**08 13 26.7**	**-0.4**
BGUAL				*e*S	**Sn**	**08 13 36.4**	**-0.1**
EDPE	**Pejibaye, P**	**0.71**	**296**	⇑*e*P	**Pn**	**08 13 26.7**	**-0.8**
PBNVO	**Pueblo Nuevo,**	**0.73**	**86**	⇑*i*P	**Pn**	**08 13 26.9**	**-0.9**
PBNVO	**Pueblo Nuevo,**	**0.73**	**86**	⇑*i*P	**Pn**	**08 13 26.9**	**-0.9**
PBNVO				*e*S	**Sn**	**08 13 37.1**	**-0.7**
PBNVO				IAML		08 13 37.5	
	comp=Z,1μm,0.2s						
SAJE	**San Jernim**	**0.76**	**311**	⇑*i*P	**Pn**	**08 13 27.3**	**-1.1**
RBALA	**Bur**	**0.77**	**87**	*e*P	**Pn**	**08 13 27.6**	**-0.8**
RBALA	**Bur**	**0.77**	**87**	*i* P	**Pn**	**08 13 27.6**	**-0.8**
RBALA				*e*S	**Sn**	**08 13 38.1**	**-0.6**
RGM0	**Gandoca**	**0.81**	**23**	P	**Pb**	**08 13 29.8**	**+0.2**
RGM0				S	**Sn**	**08 13 34.6**	**-5.1**
KKNTU	**Kakinte**	**1.11**	**90**	⇑*i*P	**Pn**	**08 13 32.6**	**-0.5**
KKNTU	**Kakinte**	**1.11**	**90**	⇑*i*P	**Pn**	**08 13 32.5**	**-0.5**
KKNTU				*e*S	**Sn**	**08 13 47.0**	**-0.3**
TAAN	**Batan**	**1.30**	**342**	*e*P	**Pn**	**08 13 36.3**	**+0.6**
VINA	**Juan Vinas**	**1.32**	**323**	⇓*i*P	**Pn**	**08 13 36.6**	**+0.6**
VERB	**Verbena**	**1.33**	**326**	*e*P	**Pn**	**08 13 36.6**	**+0.5**
REPA	**Paraso**	**1.35**	**317**	⇑*e*P	**Pn**	**08 13 36.6**	**+0.2**
RAZU	**San Marcos de**	**1.35**	**307**	*e*P	**Pn**	**08 13 36.4**	**-0.1**
PITB	**Pirrs, San**	**1.35**	**307**	*e*P	**Pn**	**08 13 36.6**	**+0.1**
QUEP	**Quepos**	**1.35**	**296**	S	**Sn**	**08 13 53.4**	**+0.3**
IRES	**Siquirres**	**1.37**	**336**	*e*P	**Pn**	**08 13 36.8**	**+0.2**
RESJ	**San Isidro (Tu**	**1.37**	**329**	⇓*i*P	**Pn**	**08 13 37.6**	**+0.8**
PCAYA	**Pacayas**	**1.38**	**321**	⇑*i*P	**Pn**	**08 13 37.6**	**+0.7**
VTCV	**VTCV, Calle Va**	**1.38**	**325**	*e*P	**Pn**	**08 13 37.7**	**+0.8**
LCOCO	**El Coco**	**1.38**	**333**	*e*P	**Pn**	**08 13 37.6**	**+0.8**
ABRB	**Las Abras (San**	**1.39**	**326**	⇑*i*P	**Pn**	**08 13 38.1**	**-0.9**
ABE2	**San Pablo**	**1.40**	**308**	⇓*i*P	**Pn**	**08 13 37.5**	**+0.2**
TAGO	**Cartago**	**1.41**	**316**	⇓*i*P	**Pn**	**08 13 37.8**	**+0.5**
RVLA	**Villa Bonita**	**1.42**	**333**	*e*P	**Pn**	**08 13 37.9**	**+0.7**
VTR0	**Volcan Turrial**	**1.43**	**325**	⇓*i*P	**Pn**	**08 13 38.8**	**+1.0**
CVTR	**Volcan Turrial**	**1.43**	**325**	⇑*e*P	**Pn**	**08 13 38.4**	**+0.6**
VICA	**Volcano Irazu**	**1.45**	**322**	*e*P	**Pn**	**08 13 38.4**	**+0.3**
PICV	**PH. Pirrs**	**1.47**	**302**	*e*P	**Pn**	**08 13 37.8**	**-0.2**
CVIMO	**Finca Echandi**	**1.54**	**320**	*e*P	**Pb**	**08 13 44.5**	**+2.5**
ACOS	**Acosta**	**1.54**	**308**	*e*P	**Pn**	**08 13 39.2**	**0.0**
CORON	**Coronado**	**1.54**	**317**	⇑*e*P	**Pn**	**08 13 39.9**	**+0.8**
ECI	**Escuela Centro**	**1.55**	**315**	*e*P	**Pn**	**08 13 39.4**	**+0.1**
SJS3	**Mercedes San J**	**1.55**	**315**	*e*P	**Pn**	**08 13 39.7**	**+0.4**
SJS	**Escuela Geolog**	**1.55**	**315**	*e*P	**Pn**	**08 13 39.7**	**+0.4**
LUJA	**Lujan**	**1.56**	**314**	*e*P	**Pn**	**08 13 39.7**	**+0.4**
LUPE	**Guadalupe**	**1.56**	**315**	*e*P	**Pn**	**08 13 39.9**	**+0.6**
MEXI	**Barrio Mexico**	**1.58**	**314**	*e*P	**Pn**	**08 13 40.2**	**+0.6**
TIBA	**Tibas**	**1.58**	**315**	*e*P	**Pn**	**08 13 40.2**	**+0.5**
PAVB	**Pavas, San Jos**	**1.60**	**313**	*e*P	**Pn**	**08 13 40.2**	**+0.2**
PILE	**Guapiles**	**1.61**	**328**	*e*P	**Pn**	**08 13 41.2**	**+1.3**
DOMI	**Santo Domingo**	**1.61**	**315**	*e*P	**Pn**	**08 13 40.3**	**+0.2**
HDC	**Heredia**	**1.64**	**315**	*e*P	**Pn**	**08 13 40.9**	**+0.4**
SANTA	**Santa Ana**	**1.64**	**311**	⇑*i*P	**Pn**	**08 13 40.7**	**+0.2**
HEME	**Heredia, Merce**	**1.65**	**314**	*e*P	**Pn**	**08 13 41.5**	**+0.8**
BELE	**Belen**	**1.68**	**312**	*e*P	**Pn**	**08 13 41.2**	**+0.3**
PURI	**Puriscal**	**1.69**	**306**	*e*P	**Pn**	**08 13 41.1**	**0.0**
VBV1	**V. Barva**	**1.71**	**318**	*e*P	**Pn**	**08 13 42.4**	**+0.8**
UELA	**Alajuela**	**1.72**	**313**	*e*P	Pn	08 13 34.5	-7.0
POAS	**San Pedro de P**	**1.78**	**314**	*e*P	**Pn**	**08 13 43.5**	**+1.0**
TCS1	**Tacares**	**1.80**	**312**	P	**Pn**	**08 13 43.4**	**+0.7**
TCS1	**Tacares**	**1.80**	**312**	*e*P	**Pn**	**08 13 43.3**	**+0.7**
ATEO	**Atenas**	**1.82**	**308**	*e*P	**Pn**	**08 13 43.1**	**+0.2**
TRB2	**Turrubares**	**1.84**	**306**	P	**Pn**	**08 13 43.3**	**+0.2**
TRB2				S	**Sn**	**08 14 07.1**	**+1.9**
TRB2	**Turrubares**	**1.84**	**306**	*e*P	**Pn**	**08 13 43.1**	**0.0**
TRT2	**Tortugero**	**1.88**	**335**	P	**Pn**	**08 13 44.2**	**+0.6**
TRT2	**Tortugero**	**1.88**	**335**	*e*P	**Pn**	**08 13 44.3**	**+0.6**
NARAN	**Naranjo de Ala**	**1.90**	**311**	*e*P	**Pn**	**08 13 45.2**	**+1.3**
ARTO	**Ro Cuarto**	**1.96**	**320**	*e*P	**Pn**	**08 13 46.0**	**+1.3**
SRA1	**San Ramn**	**1.96**	**309**	*e*P	**Pn**	**08 13 44.8**	**-0.2**
GMAL	**Guarumal, Vera**	**1.99**	**122**	*e*P	**Pn**	**08 13 45.0**	**-0.2**
ITAL	**Pital**	**2.07**	**321**	*e*P	**Pn**	**08 13 47.0**	**+0.7**
COVE	**Coope Vega, Sa**	**2.36**	**322**	P	**Pn**	**08 13 52.9**	**+2.6**
VACR	**Volcan Arenal**	**2.36**	**313**	*e*P	**Pn**	**08 13 51.4**	**+1.1**
ARE1	**Arenal 1**	**2.39**	**313**	*e*P	**Pn**	**08 13 51.3**	**+0.7**
VARE2	**V. Arenal**	**2.39**	**313**	*e*P	**Pn**	**08 13 51.6**	**+0.9**
JTS	**Las Juntas de**	**2.46**	**306**	P	**Pn**	**08 13 53.1**	**+1.5**
JTS	**Las Juntas de**	**2.46**	**306**	*e*P	**Pn**	**08 13 52.1**	**+0.5**
JUNT	**Juntas**	**2.46**	**306**	*e*P	**Pn**	**08 13 52.5**	**+0.9**
UPAL	**Upala**	**2.89**	**315**	P	**Pn**	**08 13 58.3**	**+0.7**
BCIP	**Isla Barro Col**	**3.07**	**84**	P	**Pn**	**08 14 03.2**	**+3.1**
BLUN	**Bluefields**	**3.25**	**345**	P	**Pn**	**08 14 02.9**	**+0.4**
MAS3	**Al N del Volca**	**4.49**	**315**	P	**Pn**	**08 14 17.4**	**-2.2**

IDC 20 08:15:25.5±3.8, 54°.21N×87°.61E, h0km, mbtmp2.6/2, ML2.4/2, 2D, Error ellipse: s-maj=34.3km s-min=20.5km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.66**	**262**	I	I	08 24 20.0	
	baz=80,slow=308,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.66**	**262**	Pg	Pn	08 15 55.0	-0.9
	1.4nm,0.3s,baz=77,slow=12,SNR=16						
ZALV				Lg	Lg	08 16 18.7	
	0.8nm,0.3s,baz=81,slow=28,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.61**	**241**	Pn	Pn	08 17 04.6	**+0.7**
	0.1nm,0.3s,baz=54,slow=14,SNR=4.6						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**8.16**	**207**	Pn	Pn	08 17 26.3	**+1.1**
	0.1nm,0.3s,baz=24,slow=15,SNR=1.7						
	0.1nm,0.5s						
AAK	**Ala-Archa**	**14.46**	**222**	⇓Pg	P	08 18 55.7	-2.8
	0.5nm,0.5s						
AAK				⇓Lg	Lg	08 20 03.7	
	0.7nm,0.6s						

*IDC **20** 08:25:56.4±2.2, 6°.32S×149°.74E, h0km, mb3.8/5, mbtmp3.9/6, ML1.6/1, Error ellip

AFI Afiamalu 13.26 38 P P 09 00 04.1 -3.3
13nm,0.4s,baz=270,slow=7.1,SNR=6.5
AFI S S 09 02 16.9 -12
22nm,1.0s,baz=115,slow=24,SNR=1.7
AFI Afiamalu 13.26 38 P P 09 00 04.3 -3.1
WHRZ Whale Island 13.38 190 P P 09 00 08.7 +0.5
RUGZ Raukumara Rang 13.38 188 P P 09 00 10.5 +2.1
RUGZ S S 09 02 31.2 +0.3
TOZ Tahuroa Road 13.55 195 P P 09 00 14.1 +4.1
TWGZ Tauwhareparae 13.56 187 P P 09 00 10.7 +0.5
TWGZ S S 09 02 34.5 +0.4
URZ Urewera 13.75 189 P P 09 00 11.3 -0.8
13nm,0.5s,baz=335,slow=1.6,SNR=18
URZ S S 09 02 34.2 -3.5
5.9nm,0.5s,baz=83,slow=21,SNR=10
URZ Urewera 13.75 189 P P 09 00 12.0 -0.1
URZ Urewera 13.75 189 P P 09 00 10.7 -1.3
URZ S S 09 02 37.7 0.0
MWZ Matawai 13.77 188 P P 09 00 13.3 +1.0
MWZ S S 09 02 37.1 -1.0
RAGZ Rawiri 13.94 188 P P 09 00 13.7 -0.5
RAGZ S S 09 02 45.1 +3.6
MTHZ Maungataniwha 14.37 190 P P 09 00 17.6 -1.1
HIZ Hauiti 14.45 196 P P 09 00 21.1 +1.6
HIZ Hauiti 14.45 196 P P 09 00 24.2 +4.7
ETVZ East Tongariro 14.85 193 P P 09 00 23.6 -0.1
ETVZ S S 09 02 54.7 -4.3
MCHZ McNeill Hill 14.97 190 P P 09 00 23.5 -1.4
MCHZ S S 09 03 00.5 -0.7
FWVZ Far West T-bar 15.00 193 P P 09 00 25.9 +0.4
KWHZ Kaweka Forest 15.00 191 P P 09 00 24.1 -1.2
KWHZ S S 09 02 56.5 -5.2
WNVZ Wahianoa 15.06 193 P P 09 00 25.2 -0.8
BHHZ Black Hill Sta 15.12 192 P P 09 00 24.6 -2.0
BHHZ S S 09 03 00.9 -3.2
KRHZ Kereru 15.22 191 P P 09 00 25.7 -1.8
BFZ Birch Farm 16.25 190 P P 09 00 37.5 -0.6
SNZO South Karori 17.15 193 P P 09 00 48.3 +1.4
QRZ Quartz Range 17.25 199 P P 09 00 48.1 +0.2
KHZ Kahutara 18.46 195 P P 09 00 59.5 +0.6
EIDS Eidsvold 26.14 262 P P 09 02 08.8 +0.7
EIDS IAmb IAmb 09 02 09.7
comp=Z,3.8nm,0.8s
CTAO Charters Tower 31.43 272 P P 09 02 54.8 +0.5
STKA Stephens Creek 34.39 249 P P 09 03 19.1 -0.1
comp=Z,2.1nm,0.5s,baz=90,slow=9.8,SNR=8.5
comp=Z,2.1nm,0.5s
INKA Innaminka 35.20 256 P P 09 03 26.8 +0.8
COEN Coen 36.19 280 P P 09 03 33.1 -1.3
COEN IAmb IAmb 09 03 42.2
comp=Z,13nm,1.3s
BBOO Buckleboo 39.09 248 P P 09 03 57.1 -0.8
AS31 Alice Springs 41.86 261 P P 09 04 20.0 -0.2
AS31 IAmb IAmb 09 04 22.6
comp=Z,1.9nm,0.3s
ASAR Alice Springs 41.86 261 P P 09 04 19.8 -0.4
comp=Z,1.2nm,0.3s,baz=86,slow=7.0,SNR=60
ASAR PcP PcP 09 06 03.8 -0.3
comp=Z,0.4nm,0.6s,baz=92,slow=5.0,SNR=3.3
ASAR S S 09 09 57.9 -2.8
comp=Z,0.2nm,0.5s,baz=98,slow=15,SNR=2.0
comp=Z,1.2nm,0.3s
ASAR Alice Springs 41.86 261 P P 09 04 19.7 -0.5
WR8 Warramunga Arr 42.16 267 P P 09 04 21.8 -0.7
WR8 IAmb IAmb 09 04 32.4
comp=Z,15nm,1.5s
WB0 Warramunga Arr 42.30 267 P 09 04 23.1 -0.7
WB0 IAmb IAmb 09 04 23.6
comp=Z,7.3nm,0.8s
WRA Warramunga Arr 42.31 267 P P 09 04 23.1 -0.7
comp=Z,6.1nm,0.5s,baz=99,slow=7.1,SNR=67
comp=Z,6.1nm,0.5s
WRA Warramunga Arr 42.31 267 P 09 04 23.0 -0.7
FORT Forrest 45.99 250 P P 09 04 51.2 -0.9
FORT IAmb IAmb 09 04 58.8
comp=Z,17nm,1.5s
KNRA Kununurra 48.64 270 P P 09 05 12.2 0.0
OVEH Oceanview Est 49.58 31 P P 09 05 18.3 -0.9
FITZ Fitzroy Crossi 50.72 266 P P 09 05 27.5 0.0
VNDA Vanda 53.60 185 P P 09 05 48.8 +1.5
MBWA Marble Bar 55.19 261 P P 09 05 58.6 -0.8
MBWA IAmb IAmb 09 06 32.7
comp=Z,18nm,1.2s
MORW Morawa 56.56 250 P P 09 06 08.4 -0.4
MORW IAmb IAmb 09 06 41.9
comp=Z,18nm,1.4s
CASY Casey 59.39 206 P P 09 06 27.5 +0.2
GIRL Giralia 59.69 257 P P 09 06 31.3 +1.2
TOLI2 Tolitoli 62.73 285 P P 09 06 49.3 -0.8
TOLI2 IAmb IAmb 09 06 51.5
comp=Z,9.2nm,1.0s
QSPA South Pole Qui 65.40 180 P P 09 07 07.5 +1.0
comp=Z,3.1nm,0.9s,baz=34,slow=5.1,SNR=11
comp=Z,3.1nm,0.9s
QSPA South Pole Qui 65.40 180 P P 09 07 08.2 +1.7
QSPA IAmb IAmb 09 07 09.5
comp=Z,5.5nm,1.2s
MJAR Matsushiro Arr 72.51 326 P P 09 07 50.4 +0.8
comp=Z,1.8nm,0.9s,baz=172,slow=5.8,SNR=4.9
comp=Z,1.8nm,0.9s
MJAR Matsushiro Arr 72.51 326 P P 09 07 50.1 +0.6
MAJO Matsushiro 72.51 326 P P 09 07 48.9 -0.6
MAJO IAmb IAmb 09 07 50.5
comp=Z,5.7nm,1.1s
MJB9 Matsu-Tunnel 72.52 326 P P 09 07 49.9 +0.3
MJB9 IAmb IAmb 09 07 50.4
comp=Z,6.2nm,1.1s
ERM Erimo 74.57 332 P P 09 08 02.1 +1.0
AMKA Amchitka 75.73 360 P P 09 08 08.0 +0.6
AMKA IAmb IAmb 09 08 08.2
comp=Z,3.0nm,0.8s
KIWB Kanaga Island 76.25 2 P P 09 08 11.0 +0.7
KIWB IAmb IAmb 09 08 11.5
comp=Z,3.8nm,0.9s
MAW Mawson 77.00 200 P P 09 08 14.7 +0.4
comp=Z,1.4nm,0.5s,baz=188,slow=7.1,SNR=3.0
comp=Z,1.4nm,0.5s
MAW Mawson 77.00 200 P P 09 08 15.2 +0.9
KSRS Korea Array 78.81 320 P P 09 08 24.5 0.0
comp=Z,0.8nm,0.6s,baz=126,slow=7.2,SNR=3.1
comp=Z,0.8nm,0.6s
UNV Unalaska Valle 79.08 8 P P 09 08 25.5 0.0
UNV IAmb IAmb 09 08 31.3
comp=Z,15nm,1.3s
PEA0B Petropavlovsk- 79.84 347 P P 09 08 30.7 +1.1
PEA0B IAmb IAmb 09 08 59.4
comp=Z,17nm,1.1s
PETK Petropavlovsk- 79.84 347 P P 09 08 30.2 +0.6
comp=Z,3.2nm,0.8s,baz=116,slow=6.1,SNR=4.8
comp=Z,3.2nm,0.8s
PETK Petropavlovsk- 79.84 347 P P 09 08 30.5 +0.9
USRK Ussuriysk Ar. 81.39 327 P P 09 08 38.8 +1.0
comp=Z,0.8nm,0.4s,baz=145,slow=2.9,SNR=8.6
comp=Z,0.8nm,0.4s
TROLL Troll, Antarti 83.55 181 ⇑P P 09 08 49.3 +0.7
comp=Z,196nm,0.3s
SNAA Sanae 83.89 179 P P 09 08 50.2 0.0
comp=Z,0.7nm,0.5s,baz=191,slow=5.2,SNR=2.3
comp=Z,0.7nm,0.5s
SNAA Sanae 83.89 179 P P 09 08 50.2 0.0
SNAA IAmb IAmb 09 09 10.0
comp=Z,3.9nm,1.3s
VNA2 Neumayer--Watz 84.52 178 ⇑P P 09 08 53.9 +0.6
comp=Z,3.3nm,0.6s,baz=184,slow=5.2
CMAR Chiang Mai Arr 89.75 290 P P 09 09 19.6 +0.8
comp=Z,0.9nm,0.2s,baz=149,slow=3.9,SNR=7.4
comp=Z,0.9nm,0.2s
CMAR Chiang Mai Arr 89.75 290 P P 09 09 19.0 +0.2
BVAR Borovoye Array 120.99 318 PKP PKPdf 09 15 07.9 -0.8
comp=Z,1.4nm,0.4s,baz=60,slow=3.2,SNR=3.9
SPITS Spitsbergen Ar 125.89 356 PKP PKPdf 09 15 16.7 -0.7
comp=Z,1.1nm,0.7s,baz=101,slow=7.5,SNR=1.4
ARCES ARCESS Array B 132.64 348 PKP PKPdf 09 15 30.9 +0.5
comp=Z,0.3nm,0.3s,baz=85,slow=1.4,SNR=6.5
FINES FINESS Array B 139.17 341 PKhKP PKPpre 09 15 34.3
comp=Z,0.4nm,0.3s,baz=57,slow=5.1,SNR=4.3
FINES PKP PKPdf 09 15 42.5 -0.1
comp=Z,0.6nm,0.5s,baz=42,slow=4.3,SNR=4.4
NB2 NORSAR Subarra 142.84 351 PKP PKPdf 09 15 46.0 -3.4
comp=Z,0.7nm,0.5s,baz=17,slow=4.6
NOA NORSAR Array B 142.84 351 PKhKP PKPpre 09 15 46.0
comp=Z,1.7nm,0.9s,baz=9.0,slow=2.7,SNR=3.9
HFS Hagfors 143.30 349 PKP PKPab 09 15 47.8 -0.3
comp=Z,4.6nm,0.4s,baz=64,slow=3.4,SNR=48
AKASG Malin Array Be 145.59 327 PKPbc PKPdf 09 15 55.0 +0.7
comp=Z,1.8nm,0.4s,baz=47,slow=3.8,SNR=12
AKBB Malin Array Si 145.59 327 PKPdf 09 15 55.2 +0.8
KIEV Kiev 145.61 327 PKPbc PKPdf 09 15 55.1 +0.8
GAZ Gaziantep 145.90 300 PKPab PKPbc 09 15 58.1 +0.9
BNN Bunyan 146.59 304 PKPbc PKPdf 09 15 57.7 +1.0
MMAI Mount Meron Ar 147.97 293 PKPbc PKPbc 09 16 04.1 +1.2
comp=Z,4.1nm,0.6s,baz=67,slow=4.6,SNR=5.9
BRTR Keskin Array B 148.00 306 PKPbc PKPbc 09 16 02.6 -0.3
comp=Z,0.7nm,0.4s,baz=110,slow=5.1,SNR=1.9
BRTR Keskin Array B 148.00 306 PKPdf PKPdf 09 15 57.7 -1.2
BRTR PKPbc PKPbc 09 16 02.2 -0.6
BRTR PKPab PKiKP 09 16 06.3 +2.1
EKA Eskdalemuir Ar 149.30 3 PKPbc PKPbc 09 16 05.1 -0.2
comp=Z,0.5nm,0.4s,baz=340,slow=2.6,SNR=5.1

*IDC **20** 09:07:26.1±0.6, 15°.33S×174°.74W, h0^{km}, mb4.4/13, mbtmp4.4/15, ML4.2/2, MS4.2/7, Error ellipse: s-maj=26.5km s-min=15.7km az=137.0*
*GFZ **20** 09:07:26.4±0.2, 16°.5S±5°.×17°.5W±°, h10km, M4.6/15, mb4.6/15, Error ellipse: s-maj=11.2km s-min=8.6km az=150.2, confirmed*
*NEIC **20** 09:07:27.4±2.4, 15°.16S±0°.08×174°.50W±0°.05, h10km±1km, mb4.9/44, Error ellipse: s-maj=13.5km s-min=8.6km az=177.0*
*GCMT **20** 09:07:31.4±0.2, 15°.23S±0°.02×174°.51W±0°.01, h22km±1km, MW5.0/111, Moment Tensor Solution. s42,c55; s111,c171; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.93±.15; $M_{\theta\theta}$-0.25±.14; $M_{\phi\phi}$1.18±.11; $M_{r\theta}$0.13±.19; $M_{\theta\phi}$4.56±.13; $M_{r\phi}$0.11±.18; Best double couple: M_o4.61800×10^{16} NP1:ϕ_s356.00000°, δ89.00000°, λ179.00000°. NP2:ϕ_s86.00000°, δ89.00000°, λ1.00000°. Principal axes: T 5.0860, Plg2.0000°, Azm311.0000°; N -0.9350, Plg88.0000°, Azm114.0000°; P -4.1500, Plg0.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **20** 09:07:32.4, 14°.67S×173°.89W, h42^{km}, mB5.3/2, mb5.0/15, Ms4.8/4, Ms7 4.5/4*

ISC 20 09:07:31.6±0.4, 15°.43S±0°.07×174°.61W±0°.07, h35^{km}, n407, σ1^{s}65/365, mb4.7/41, MS4.6/13, 2C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.13**	**61**	Pn	Pn	09 08 10.6	-7.9
	30nm,0.3s,baz=48,slow=3.2,SNR=47						
AFI				Sn	Sn	09 08 45.7	-8.9
	18nm,0.3s,baz=86,slow=22,SNR=5.8						
AFI				LR	LR	09 09 16.9	
	comp=Z,2μm,18.9s,baz=286,slow=35						
AFI	**Afiamalu**	**3.13**	**61**	Pn	Pn	09 08 10.9	-7.6
FUTU	**Fugatoga**	**3.58**	**288**	Pn	Pn	09 08 18.9	-5.8
FUTU	**Fugatoga**	**3.58**	**288**	P	Pn	09 08 18.5	-6.1
NIUE	**Niue**	**5.75**	**130**	Pn	**Pn**	**09 08 52.5**	**-2.1**
MSVF	**Nonsavu**	**7.41**	**251**	Pn	**Pn**	**09 09 16.5**	**-0.8**
	0.2nm,0.3s,baz=124,slow=15,SNR=4.3						
MSVF				LR	LR	09 11 34.0	
	comp=Z,2μm,18.2s,baz=65,slow=34						
	5.9nm,0.9s						
MSVF	**Nonsavu**	**7.41**	**251**		**Pn**	**09 09 18.6**	**+1.2**
RAO	**Raoul Island**	**14.09**	**192**	LR	LR	09 15 27.4	
	comp=Z,2μm,19.0s,baz=346,slow=34						
RAO	**Raoul Island**	**14.09**	**192**	Pn	**Pn**	**09 10 49.4**	**+0.7**
RAR	**Rarotonga**	**15.21**	**114**	LR	LR	09 15 34.5	
	comp=Z,1μm,21.2s,baz=279,slow=32						
RAR	**Rarotonga**	**15.21**	**114**	P	Pn	09 10 57.5	-6.3
MARNC	**Mare, Loyalty**	**17.53**	**247**		**P**	**09 11 34.1**	**-0.1**
OUENC	**Ouen Island, N**	**18.87**	**246**		**P**	**09 11 49.0**	**+0.1**
OUENC				IAmb	IAmb	09 11 56.0	
	comp=Z,90nm,1.1s						
DZM	**Mont Dzumac**	**19.11**	**247**	Pn	**P**	**09 11 51.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=82,slow=16,SNR=13						
	comp=Z,30nm,1.1s						
ONTNC	**Ouen Toro**	**19.18**	**246**		**Pn**	**09 11 53.1**	**-0.3**
ONTNC				IAmb	IAmb	09 11 58.5	
	comp=Z,120nm,1.0s						
OUZ	**Omahuta**	**22.37**	**206**	P	P	09 12 20.3	-6.5
TOZ	**Tahuroa Road**	**23.88**	**200**		**P**	**09 12 43.6**	**+1.8**
TOZ				IAmb	IAmb	09 12 51.7	
	comp=Z,81nm,1.5s						
URZ	**Urewera**	**23.89**	**196**	P	P	09 12 35.4	-6.6
PAE	**Paea**	**24.09**	**99**	*eT*	T	09 37 34.2	
	comp=Z,39nm,0.2s						
PPT2	**Papeete2**	**24.09**	**99**	*eS*	**S**	**09 16 59.0**	**-0.7**
	comp=Z,2μm,25.2s						
PPT2				*e*LR	LR	09 18 32.1	
	comp=Z,684nm,24.0s						
PPT2				*e*LR	LR	09 18 39.3	
	comp=Z,491nm,25.5s						
PPT2				*eT*	T	09 37 36.1	
	comp=Z,18nm,0.4s						
TIAR	**Tiarei**	**24.31**	**99**	*eT*	T	09 37 54.3	
	comp=Z,298nm,0.3s						
TVO	**Taravao**	**24.40**	**99**	*eT*	T	09 38 00.4	
	comp=Z,46nm,0.4s						
PMOR	**Pomariorio Ree**	**25.77**	**93**	*eT*	T	09 39 54.2	
	comp=Z,26nm,0.3s						
VAH	**Vaihoa**	**26.01**	**93**	*eT*	T	09 40 03.9	
	comp=Z,23nm,0.3s						
TAOE	**Nuku Hiva Isla**	**34.28**	**83**	*e*LR	LR	09 22 26.8	
	comp=Z,197nm,26.7s						
TAOE				*eT*	T	09 50 19.5	
	comp=Z,54nm,0.2s						
H11S2	**WAKE ISLAND Hy**	**38.41**	**331**	T	T	09 55 20.9	
	baz=149,slow=76,SNR=517						
H11S3	**WAKE ISLAND Hy**	**38.42**	**331**	T	T	09 55 19.5	
	baz=149,slow=76,SNR=174						
H11S1	**WAKE ISLAND Hy**	**38.42**	**331**	T	T	09 55 22.4	
	baz=149,slow=76,SNR=234						
MTSU	**Mount Surprise**	**39.37**	**260**	P	**P**	**09 14 56.6**	**-1.5**
H11N3	**WAKE ISLAND Hy**	**39.38**	**332**	T	T	09 56 30.0	
	baz=151,slow=76,SNR=237						
H11N1	**WAKE ISLAND Hy**	**39.38**	**332**	T	T	09 56 32.1	
	baz=151,slow=76,SNR=374						
H11N2	**WAKE ISLAND Hy**	**39.39**	**332**	T	T	09 56 36.8	
	baz=151,slow=76,SNR=300						
CMSA	**Cobar Meteorol**	**39.54**	**239**	P	**P**	**09 14 58.6**	**-0.8**
STKA	**Stephens Creek**	**43.02**	**240**	P	**P**	**09 15 26.8**	**-1.1**
	comp=Z,10nm,1.0s,baz=76,slow=10,SNR=5.8						
	comp=Z,10nm,1.0s						
STKA	**Stephens Creek**	**43.02**	**240**	P	**P**	**09 15 26.7**	**-1.3**
WRA	**Warramunga Arr**	**48.70**	**257**	P	**P**	**09 16 10.1**	**-2.9**
	comp=Z,3.8nm,0.9s,baz=91,slow=8.4,SNR=4.8						
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**48.70**	**257**		**P**	**09 16 12.7**	**-0.3**
AS31	**Alice Springs**	**48.99**	**252**		**P**	**09 16 13.9**	**-1.3**
ASAR	**Alice Springs**	**49.00**	**252**	P	**P**	**09 16 12.4**	**-2.8**
	comp=Z,5.6nm,0.9s,baz=85,slow=8.1,SNR=22						
	comp=Z,5.6nm,0.9s						
ASAR	**Alice Springs**	**49.00**	**252**		**P**	**09 16 13.5**	**-1.8**
SOEI	**Soe**	**59.77**	**268**		**P**	**09 17 31.6**	**-2.2**
SOEI	**Soe**	**59.77**	**268**	P	**P**	**09 17 34.0**	**+0.2**
MBWA	**Marble Bar**	**62.24**	**254**	P	**P**	**09 17 49.2**	**-1.1**
VNDA	**Vanda**	**63.23**	**186**	P	**P**	**09 17 56.6**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=14,slow=6.4,SNR=5.4						
	comp=Z,1.4nm,0.9s						
VNDA	**Vanda**	**63.23**	**186**	P	**P**	**09 17 57.1**	**+1.1**
KIWB	**Kanaga Island**	**67.03**	**358**		**P**	**09 18 18.6**	**-2.3**
KIWB				IAmb	IAmb	09 18 26.6	
	comp=Z,7.0nm,1.1s						
ADK	**Adak**	**67.05**	**359**	P	**P**	**09 18 18.2**	**-2.8**
ATKA	**Atka Island**	**67.35**	**0**		**P**	**09 18 20.3**	**-2.5**
ATKA				IAmb	IAmb	09 18 24.3	
	comp=Z,19nm,1.4s						
MJAR	**Matsushiro Arr**	**68.22**	**320**	P	**P**	**09 18 25.6**	**-3.1**
	comp=Z,0.8nm,0.7s,baz=157,slow=6.6,SNR=4.3						
	comp=Z,0.8nm,0.7s						
UNV	**Unalaska Valle**	**69.34**	**5**	P	**P**	**09 18 36.8**	**+1.5**
	baz=188						
JKA	**Kamikawa-asahi**	**70.96**	**329**		**P**	**09 18 43.7**	**-1.7**
JKA				IAmb	IAmb	09 18 50.7	
	comp=Z,16nm,1.3s						
JKA	**Kamikawa-asahi**	**70.96**	**329**	P	**P**	**09 18 45.4**	**-0.1**
CHNA	**Chernabura Isl**	**71.14**	**9**	P	**P**	**09 18 47.7**	**+1.4**
	baz=195						
SAO	**San Andreas Ge**	**72.13**	**42**		**P**	**09 18 50.2**	**-2.6**
PETK	**Petropavlovsk-**	**72.31**	**343**	P	**P**	**09 18 53.3**	**-0.1**
	comp=Z,5.8nm,1.1s,baz=251,slow=4.5,SNR=3.9						
	comp=Z,5.8nm,1.1s						
SPIA	**Saint Paul Isl**	**72.42**	**2**	P	**P**	**09 18 55.0**	**+1.0**
	baz=184						
S14K	**Fog Glacier**	**72.55**	**9**	P	**P**	**09 18 56.4**	**+1.5**
	baz=195						
CHGN	**Chignik**	**72.74**	**9**	P	**P**	**09 18 57.6**	**+1.8**
	baz=196						
CHIR	**Chirikof Islan**	**72.76**	**11**	P	**P**	**09 18 57.8**	**+1.8**
	baz=199						
ISA	**Isabella, Lake**	**73.49**	**45**		**P**	**09 18 58.5**	**-2.4**
ISA				IAmb	IAmb	09 19 06.5	
	comp=Z,12nm,1.2s						
CMB	**Columbia Colle**	**73.56**	**42**		**P**	**09 18 58.2**	**-3.1**
CMB				IAmb	IAmb	09 19 05.8	
	comp=Z,13nm,1.4s						
AFDM	**Forest Hills D**	**73.72**	**41**		**P**	**09 19 00.2**	**-1.9**
AFDM				IAmb	IAmb	09 19 07.3	
	comp=Z,14nm,1.5s						
SII	**Sitkinak Islan**	**73.73**	**12**	P	**P**	**09 19 03.0**	**+1.3**
	baz=200						
O03E	**Paynes Creek**	**74.00**	**39**		**P**	**09 19 01.6**	**-2.3**
O03E				IAmb	IAmb	09 19 09.1	
	comp=Z,24nm,1.4s						
CWC	**Cottonwood Cre**	**74.18**	**44**	P	**P**	**09 19 03.5**	**-1.5**
YBH	**Yreka Blue Hor**	**74.33**	**38**		**P**	**09 19 05.9**	**+0.2**
YBH				IAmb	IAmb	09 19 11.4	
	comp=Z,20nm,1.4s						
R17L	**Mt. Peulik Vol**	**74.35**	**10**	P	**P**	**09 19 06.7**	**+1.3**
	baz=198						
OHAK	**Old Harbor**	**74.52**	**12**	P	**P**	**09 19 07.8**	**+1.5**
	baz=201						
QSPA	**South Pole Qui**	**74.61**	**180**	P	**P**	**09 19 08.0**	**+0.9**
	comp=Z,4.0nm,1.0s,baz=31,slow=2.8,SNR=8.0						
	comp=Z,4.0nm,1.0s						
QSPA	**South Pole Qui**	**74.61**	**180**	P	**P**	**09 19 08.0**	**+0.9**
GWY	**Greenwater Val**	**75.00**	**45**	P	**P**	**09 19 07.8**	**-2.1**
Q17K	**Contact Creek**	**75.03**	**10**	P	**P**	**09 19 10.5**	**+1.1**
	baz=199						
NVAR	**Mina Array Bea**	**75.13**	**43**	P	**P**	**09 19 10.3**	**-0.3**
	comp=Z,5.6nm,1.1s,baz=229,slow=8.4,SNR=14						
	comp=Z,5.6nm,1.1s						
NVAR	**Mina Array Bea**	**75.13**	**43**	P	**P**	**09 19 08.7**	**-1.9**
KDAK	**Kodiak Island**	**75.19**	**12**	P	**P**	**09 19 11.3**	**+1.1**
	baz=202						
O14K	**Tigyukauivet M**	**75.21**	**7**	P	**P**	**09 19 11.8**	**+1.5**
	baz=193						
Q16K	**King Salmon**	**75.30**	**10**	P	**P**	**09 19 12.6**	**+1.9**
	baz=198						
O15K	**Ungalikthiuk R**	**75.31**	**8**	P	**P**	**09 19 12.6**	**+1.7**
	baz=195						
P16K	**Nushagak River**	**75.43**	**9**	P	**P**	**09 19 12.7**	**+1.2**
	baz=196						
Q18K	**Katmai Hardscr**	**75.54**	**10**	P	**P**	**09 19 14.2**	**+1.9**
	baz=200						
N14K	**Kuskokwak Cree**	**75.82**	**7**	P	**P**	**09 19 14.8**	**+1.1**
	baz=193						
P17K	**Kvichak River**	**75.82**	**10**	P	**P**	**09 19 15.4**	**+1.6**
	baz=198						
M11K	**Mekoryuk**	**75.86**	**4**	P	**P**	**09 19 15.7**	**+1.8**
	baz=188						
O16K	**Kokwok River B**	**75.95**	**9**	P	**P**	**09 19 15.9**	**+1.4**
	baz=196						
M13K	**Dall Lake**	**76.12**	**6**	P	**P**	**09 19 17.4**	**+2.0**
	baz=191						
P18K	**Big Mountain,**	**76.21**	**10**	P	**P**	**09 19 17.4**	**+1.4**
	baz=199						
N15K	**Kwethluk River**	**76.24**	**7**	P	**P**	**09 19 17.9**	**+1.7**
	baz=194						
O17K	**Koliganek Bris**	**76.28**	**9**	P	**P**	**09 19 18.2**	**+1.8**
	baz=197						
Y14A	**Wickenburg**	**76.44**	**49**		**P**	**09 19 16.4**	**-1.6**
M14K	**Bethel**	**76.60**	**6**	P	**P**	**09 19 19.5**	**+1.4**
	baz=192,SNR=13						
PINE	**Pine Mountain**	**76.62**	**37**		**P**	**09 19 14.9**	**-4.0**
PINE				IAmb	IAmb	09 19 23.9	
	comp=Z,8.7nm,1.0s						
O18K	**Koktuh Hills**	**76.65**	**10**	P	**P**	**09 19 20.4**	**+1.9**
	baz=199						
M15K	**Kasigluk River**	**76.68**	**7**	P	**P**	**09 19 20.4**	**+1.8**
	baz=194,SNR=10						
N16K	**Nishlik Lake**	**76.71**	**8**	P	**P**	**09 19 20.4**	**+1.6**
	baz=196						
USRK	**Ussuriysk Ar.**	**76.71**	**324**	LR	LR	09 46 38.7	
	comp=Z,256nm,21.7s,baz=139,slow=31						
P19K	**Oil Pt**	**76.81**	**11**	P	**P**	**09 19 21.1**	**+1.7**
	baz=201						
BMN	**Battle Mountai**	**76.94**	**41**	P	**P**	**09 19 19.7**	**-1.1**
BMN				IAmb	IAmb	09 19 25.5	
	comp=Z,12nm,1.3s						
N17K	**Nushagak Hills**	**76.98**	**9**	P	**P**	**09 19 21.8**	**+1.5**
	baz=197						
L14K	**Kuka Creek**	**77.10**	**6**		**P**	**09 19 17.3**	**-3.6**
L14K				IAmb	IAmb	09 19 25.3	
	comp=Z,14nm,1.2s						
L14K	**Kuka Creek**	**77.10**	**6**	P	**P**	**09 19 22.6**	**+1.7**
	baz=192						
HOM	**Homer**	**77.11**	**12**	P	**P**	**09 19 22.5**	**+1.4**
	baz=203						
O19K	**Port Alsworth**	**77.12**	**10**	P	**P**	**09 19 19.5**	**-1.6**
O19K	**Port Alsworth**	**77.12**	**10**	P	**P**	**09 19 22.6**	**+1.5**
	baz=200						
WVOR	**Wild Horse Val**	**77.18**	**39**	P	**P**	**09 19 21.7**	**-0.4**
WVOR				IAmb	IAmb	09 19 26.1	
	comp=Z,17nm,1.6s						
WVOR	**Wild Horse Val**	**77.18**	**39**	P	**P**	**09 19 21.7**	**-0.4**
M16K	**Timber Creek**	**77.22**	**8**	P	**P**	**09 19 23.5**	**+1.8**
	baz=195						
TUC	**Tucson**	**77.31**	**51**		**P**	**09 19 22.0**	**-1.0**
TUC	**Tucson**	**77.31**	**51**	P	**P**	**09 19 23.2**	**+0.2**
O20K	**Slope Mountain**	**77.32**	**11**	P	**P**	**09 19 23.8**	**+1.5**
	baz=202						
N18K	**Kilae Creek**	**77.33**	**9**	P	**P**	**09 19 24.3**	**+2.0**
	baz=198						
H02S1	**DAWSON INLET T**	**77.35**	**24**	T	T	10 44 03.7	
	SNR=10						
H02S2	**DAWSON INLET T**	**77.35**	**24**	T	T	10 44 03.6	
	SNR=10						
BRSE	**Bradley Lake S**	**77.37**	**12**	P	**P**	**09 19 24.3**	**+1.7**
	baz=204						
K13K	**Kusilvak Mount**	**77.51**	**5**	P	**P**	**09 19 22.8**	**-0.4**
K13K				IAmb	IAmb	09 19 27.0	
	comp=Z,13nm,1.2s						
K13K	**Kusilvak Mount**	**77.51**	**5**	P	**P**	**09 19 25.0**	**+1.8**
	baz=190						
L15K	**Ungalak Mounta**	**77.55**	**6**	P	**P**	**09 19 25.0**	**+1.5**
	baz=193,SNR=7.5						
N19K	**Bonanza Creek**	**77.68**	**10**	P	**P**	**09 19 26.1**	**+1.8**
	baz=200						
M17K	**Holitna River**	**77.78**	**8**	P	**P**	**09 19 26.6**	**+1.8**
	baz=197						
J08A	**Circle Bar Ran**	**77.81**	**38**		**P**	**09 19 22.1**	**-3.4**
L16K	**Owhat River**	**77.82**	**7**	P	**P**	**09 19 26.6**	**+1.6**
	baz=195						
SEW	**Seward**	**77.97**	**13**	P	**P**	**09 19 27.7**	**+1.9**
	baz=205						
Q23K	**Middleton Isla**	**78.06**	**14**	P	**P**	**09 19 27.7**	**+1.4**
	baz=208						
M18K	**Stony River**	**78.11**	**9**	P	**P**	**09 19 28.1**	**+1.5**
	baz=198						
K15K	**Wolf Creek Mou**	**78.15**	**6**	P	**P**	**09 19 28.9**	**+2.1**
	baz=193						
CAPN	**Captain Cook N**	**78.23**	**12**	P	**P**	**09 19 28.9**	**+1.6**
	baz=203						
L17K	**Donlin

baz=196
KAIM Kayak Island 78.96 15 P P 09 19 33.4 +2.0
baz=210
GAMB Gambell 78.99 1 P P 09 19 33.3 +1.9
baz=183
GLI Glacier Island 79.18 13 P P 09 19 34.3 +1.8
baz=207
EYAK Cordova Ski Ar 79.19 14 P P 09 19 34.4 +1.9
baz=208
J16K Anvik River 79.22 6 P P 09 19 34.2 +1.5
baz=194,SNR=7.5
SIT Sitka 79.26 21 P P 09 19 34.4 +1.4
baz=218
NJ2 Nanjing 79.26 308 eP P 09 19 35.6 +2.0
NJ2 pmax pmax
comp=Z,31nm,1.2s
V35K Ketchikan 79.27 23 P P 09 19 34.5 +1.4
baz=222
SKT Skwentna 79.28 11 P P 09 19 34.8 +1.7
baz=203
U33K Whale Pass 79.30 22 P P 09 19 35.1 +1.8
baz=220
M22K Willow 79.34 12 P P 09 19 34.8 +1.5
baz=204
BMO Blue Mountains 79.35 38 P P 09 19 31.2 -2.7
PMR Palmer 79.39 12 P P 09 19 35.0 +1.4
baz=205
J17K VABM Dome 79.50 7 P P 09 19 35.9 +1.7
baz=195
DUG Dugway, Tooele 79.68 43 P P 09 19 35.2 -0.7
SML Sawmill 79.75 12 P P 09 19 37.4 +1.8
baz=206
I17K Unalakleet 79.80 6 P P 09 19 38.1 +2.3
baz=194
WRAK Wrangell Islan 79.81 22 P P 09 19 37.8 +1.8
baz=221
BMRM Bremner River 79.83 14 P P 09 19 37.7 +1.6
baz=209
S32K Killisnoo 79.83 21 P P 09 19 37.9 +1.8
baz=219
M23K Glacier View 79.86 13 P P 09 19 38.1 +1.9
baz=206
J18K Innoko River 79.86 8 P P 09 19 38.7 +2.4
baz=198
T33K Petersburg 79.89 22 P P 09 19 38.0 +1.6
baz=221
CUT Chulitna 79.91 11 P P 09 19 38.2 +1.8
baz=204
L22K Petersville 79.93 11 P P 09 19 38.1 +1.4
baz=203
SCM Sheep Creek Mo 79.98 13 P P 09 19 38.4 +1.5
baz=207
KLU Klutina 79.98 14 P P 09 19 38.7 +1.7
baz=208
CRQE Cirque 80.01 15 P P 09 19 38.7 +1.5
baz=211
PPLA Purkeypile 80.02 10 P P 09 19 38.6 +1.3
baz=202
ANM Nome 80.06 4 P P 09 19 39.7 +2.5
baz=189
K20K Telida 80.14 9 P P 09 19 39.6 +1.9
baz=200
PINM Pinnacle 80.20 17 P P 09 19 40.0 +1.8
baz=214
H16K Elim 80.38 5 P P 09 19 40.8 +1.8
baz=192
N25K Chitina, Valde 80.39 14 P P 09 19 41.0 +1.8
baz=209
HLID Hailey 80.39 40 P P 09 19 40.1 +0.3
M24K Tolsona, Glenn 80.47 13 P P 09 19 40.9 +1.3
baz=208
R32K Eaglecrest 80.48 20 P P 09 19 41.4 +1.8
baz=219
J19K Poorman 80.52 8 P P 09 19 41.7 +2.0
baz=198
P29M Windy Craggy 80.54 18 P P 09 19 41.5 +1.6
baz=216
WAT6 Susitna Watana 80.57 12 P P 09 19 41.6 +1.4
baz=206
MCARA McCarthy VSAT 80.57 15 P P 09 19 41.8 +1.8
baz=211
G15K Niukluk 80.58 5 P P 09 19 41.7 +1.7
baz=190
WAT1 Susitna Watana 80.63 12 P P 09 19 42.0 +1.7
baz=205
O28M Mount Upton 80.79 16 P P 09 19 43.1 +1.5
baz=214
PLBC Pleasant Camp 80.82 19 P P 09 19 43.2 +1.8
baz=217
O29M Mount Kennedy 80.85 17 P P 09 19 43.2 +1.4
baz=215
TRF Thorofare Moun 80.87 11 P P 09 19 43.5 +1.7
baz=204
H17K Granite Mounta 80.90 6 P P 09 19 43.4 +1.7
baz=194
F14K Arctic Creek 80.90 3 P P 09 19 43.3 +1.6
baz=188
TNA Tin City 80.91 3 P P 09 19 43.2 +1.5
baz=186
J20K Nowinta River 80.91 9 P P 09 19 43.7 +1.9
baz=200
CHUM Lake Minchumin 80.92 10 P P 09 19 43.3 +1.4
baz=202
HARP HAARP 80.96 13 P P 09 19 44.2 +2.1
baz=209
T35M Bob Quinn 81.01 23 P P 09 19 44.7 +2.1
baz=223
GCSA Galena City Sc 81.07 8 P P 09 19 44.6 +2.1
baz=197
DHY Denali Highway 81.08 12 P P 09 19 44.5 +1.5
baz=206
G16K Koyuk River 81.11 5 P P 09 19 45.1 +2.3
baz=192
SKAG Skagway 81.15 19 P P 09 19 45.1 +2.0
baz=218
P30M Million Dollar 81.17 18 P P 09 19 45.1 +1.7
baz=217
MNTX Cornudas Mount 81.18 54 P P 09 19 43.4 -0.6
HWUT Hardware Ranch 81.20 43 P P 09 19 45.5 +1.4
F15K North Star Dit 81.24 4 P P 09 19 45.0 +1.5
baz=190
H18K Honhosa River 81.28 7 P P 09 19 44.9 +1.1
baz=196
YUK8 Steele Glacier 81.33 16 P P 09 19 45.2 +0.7
baz=214
MCK McKinley 81.37 11 P P 09 19 45.6 +1.3
baz=205
S34M Telegraph Cree 81.37 22 P P 09 19 45.6 +1.2
baz=222
G17K Kiwalik Mounta 81.38 6 P P 09 19 45.8 +1.6
baz=194
PAX Paxson 81.39 13 P P 09 19 45.4 +0.9
baz=208
YUK6 Outpost Mounta 81.43 17 P P 09 19 45.9 +1.0
baz=215
I20K Naaghedeneel 81.44 9 P P 09 19 46.3 +1.7
baz=200
M26K Nabesna, AK 81.46 14 P P 09 19 46.6 +1.8
baz=211
YUK3 Moose Creek 81.56 16 P P 09 19 47.3 +1.7
baz=213
HYT Haines Junctio 81.58 17 P P 09 19 47.0 +1.4
baz=216
TXAR Lajitas Array 81.60 57 P P 09 19 45.9 -0.5
comp=Z,1.8nm,0.9s,baz=232,slow=6.1,SNR=14
comp=Z,1.8nm,0.9s
TXAR Lajitas Array 81.60 57 P 09 19 44.3 -2.1
BRWY Burwash Landin 81.60 16 P P 09 19 47.1 +1.6
baz=214
YUK4 Talbot Arm 81.69 17 P P 09 19 49.0 +2.8
baz=215
M27K Edge Creek, AK 81.69 15 P P 09 19 48.0 +1.8
baz=212
ANMO Albuquerque 81.71 50 P 09 19 44.2 -2.8
ANMO Albuquerque 81.71 50 P P 09 19 47.3 +0.3
Q32M Nakina River 81.76 21 P P 09 19 49.0 +2.3
baz=221
P32M Atlin 81.76 20 P P 09 19 48.4 +1.9
baz=220
H19K Roundabout Mou 81.87 8 P P 09 19 49.3 +2.5
baz=198
L26K Log Cabin Wild 81.92 14 P P 09 19 48.8 +1.6
baz=210
O30N Mendenhall 81.95 18 P P 09 19 49.0 +1.5
baz=217
G18K Tagagawik 81.97 7 P P 09 19 49.6 +2.2
baz=196
BVCY Beaver Creek 81.99 15 P P 09 19 49.7 +2.0
baz=213
H20K Anotleneega Mo 82.05 8 P P 09 19 49.3 +1.5
baz=199
K24K Donnelly Dome 82.06 12 P P 09 19 49.6 +1.6
baz=208
AHID Auburn Hatcher 82.07 42 P P 09 19 49.2 +0.5
NEA2 Nenana 82.13 11 P P 09 19 50.0 +1.7
baz=205
DLBC Dease Lake 82.16 22 P P 09 19 50.7 +2.1
baz=223
I21K Tanana 82.18 9 P P 09 19 50.8 +2.3
baz=202
RIDG Independent Ri 82.20 13 P P 09 19 50.6 +1.8
baz=209
N30M Aishikik Lake 82.22 17 P P 09 19 50.2 +1.4
baz=216
WHY Whitehorse 82.23 19 P P 09 19 50.4 +1.4
baz=218
F17K Baldwin Pennin 82.24 5 P P 09 19 50.3 +1.6
baz=193
MLY Manley 82.24 10 P P 09 19 50.1 +1.2
baz=203
L27K Beaver Creek, 82.30 14 P P 09 19 50.5 +1.2
baz=212
BCAR Beaver Creek A 82.32 14 P 09 19 46.2 -3.1
HDA Harding Lake 82.37 12 P P 09 19 51.1 +1.6
baz=207
G19K Purcell Mounta 82.39 7 P P 09 19 51.9 +2.3
baz=197
H21K Melozitna Rive 82.50 9 P P 09 19 52.5 +2.3
baz=201
P33M Teslin, Yukon 82.53 20 P P 09 19 52.4 +1.9
baz=220
R33M Jennings River 82.53 21 P P 09 19 52.5 +1.9
baz=222
F18K Selawik 82.55 6 P P 09 19 51.8 +1.5
baz=194
I23K Minto, Yukon-K 82.59 10 P P 09 19 52.4 +1.9
baz=204
SCRK Sand Creek 82.60 13 P P 09 19 52.4 +1.5
baz=210
COLA College 82.61 11 P P 09 19 52.0 +1.3
baz=206
COLA College 82.61 11 P P 09 19 50.2 -0.5
N31M Braeburn, Yuko 82.61 18 P P 09 19 52.9 +2.0
baz=218
M29M Somme Creek 82.64 16 P P 09 19 52.0 +0.9
baz=215
IMAR Indian Mountai 82.67 8 P P 09 19 47.7 -3.3
ILAR Eielson Array 82.70 12 P P 09 19 50.0 -1.2
comp=Z,5.1nm,1.1s,baz=223,slow=5.4,SNR=18
comp=Z,5.1nm,1.1s
ILAR Eielson Array 82.70 12 P 09 19 48.9 -2.3
HEH HeiHe 82.79 327 eP P 09 19 53.4 +1.4
HEH pmax pmax
comp=Z,8.0nm,1.3s
HEH L L
comp=Z,150nm,17.5s
HEH L L
comp=Z,160nm,15.5s
HEH L L
comp=Z,180nm,16.1s
E17K Hotham Inlet 82.82 5 P P 09 19 53.1 +1.3
baz=192
J25K Salcha River, 82.86 12 P P 09 19 52.7 +0.6
baz=208
POKR Poker Plat Res 82.91 11 P P 09 19 53.0 +0.6
baz=206
H22K Ishtalitna Cre 82.94 9 P P 09 19 53.9 +1.5
baz=202
F19K Shaleruckik Mo 82.97 7 P P 09 19 54.6 +2.0
baz=196
PDAR Pinedale Array 83.07 42 P P 09 19 53.1 -0.8
comp=Z,1.6nm,0.8s,baz=211,slow=3.2,SNR=16
comp=Z,1.6nm,0.8s
PDAR Pinedale Array 83.07 42 P P 09 19 50.7 -3.2
N32M Quiet Lake 83.17 19 P P 09 19 55.6 +1.8
baz=220
H23K Yukon River 83.18 10 P P 09 19 55.4 +1.7
baz=204
M30M Minto, Yukon 83.20 17 P P 09 19 55.1 +1.2
baz=216
G21K Allakaket 83.20 8 P P 09 19 55.7 +1.9
baz=200
E18K Tukpahlearik C 83.25 5 P P 09 19 55.8 +1.8
baz=194
L29M L29M 83.27 16 P P 09 19 56.0 +1.7
baz=215,SNR=9.9
D17K Noatak River 83.32 4 P P 09 19 56.5 +2.1
baz=191
F20K Avaraart Lake 83.42 7 P P 09 19 56.7 +1.9
baz=198
H24K Nordor Dome 83.48 11 P P 09 19 57.0 +1.7
baz=206
M31M Drury Creek, Y 83.59 18 P P 09 19 57.8 +1.9
baz=219
E19K Redstone River 83.63 7 P P 09 19 57.3 +1.3
baz=197,SNR=6.2
PRP Porcupine Dome 83.63 12 P P 09 19 57.8 +1.6
baz=208
DAWY Dawson 83.74 15 P P 09 19 53.6 -3.1
DAWY Dawson 83.74 15 P P 09 19 58.2 +1.6
baz=4,SNR=11
C16K Lisburne Hills 83.74 3 P P 09 19 58.2 +1.7
baz=189
WTLY Watson Lake, Y 83.81 21 P P 09 19 58.9 +1.8
baz=224
F21K Alatna River 83.87 8 P P 09 19 58.9 +1.7
baz=200
G22K Bettles 83.87 9 P P 09 19 59.2 +2.0
baz=202
G23K Bananza Creek 83.91 10 P P 09 19 59.6 +2.1
baz=204
K29M Barlow Dome 84.03 16 P P 09 19 59.8 +1.5
baz=216,SNR=6.7
LIRD Liard River Hi 84.28 23 P P 09 20 01.1 +1.7
baz=226
F22K John River 84.32 8 P P 09 20 01.5 +2.0
baz=202
G24K Hadweenzic Riv 84.33 11 P P 09 20 01.2 +1.7
baz=206
J29N Klondike Camp 84.35 15 P P 09 20 01.4 +1.6
baz=215
COLD Coldfoot 84.36 9 P P 09 20 01.4 +1.7
baz=204
ISCO Idaho Springs 84.39 46 P P 09 20 00.4 -0.5
C18K Utukok River 84.40 5 P P 09 20 01.6 +1.7
baz=193
E20K Nigu River 84.52 7 P P 09 20 02.4 +1.9
baz=198,SNR=7.9
I27K Kandik River 84.52 13 IAmb IAmb 09 20 03.9
comp=Z,19nm,1.5s
I27K Kandik River 84.52 13 P P 09 20 01.8 +1.2
baz=212
D19K Kuna River 84.54 6 P P 09 20 02.1 +1.4
baz=196
G25K Bearman Lake 84.63 11 P P 09 20 02.4 +1.4
baz=208
BJI2 Beijing 84.64 314 P P 09 20 03.9 +2.2
BJI2 pmax pmax
comp=Z,3.0nm,1.3s
BJI2 L L
comp=Z,65nm,14.3s
BJI2 L L
comp=Z,59nm,13.5s
I28M Miner Creek 84.77 14 P P 09 20 03.2 +1.2
baz=213
MMPY Sheldon Lake, 84.85 19 P P 09 20 03.5 +1.2
baz=222
D20K Etivluk River 84.91 7 P P 09 20 04.6 +2.1
baz=197,SNR=9.3
J30M Hart River 84.93 16 P P 09 20 04.3 +1.5
baz=217
E21K Killik River 84.96 8 P P 09 20 04.0 +1.3
baz=200
C19K Lookout Ridge 84.99 5 P P 09 20 04.7 +1.8
baz=194
CMIG Matias Romero 84.99 71 LR LR 09 51 03.4
comp=Z,106nm,18.0s,baz=256,slow=31
F24K Squaw Lake 85.00 10 P P 09 20 04.6 +1.6
baz=206
H27K Steamboat Moun 85.08 13 P P 09 20 04.9 +1.6
baz=212,SNR=8.1
E23K Chandalar 85.21 9 P P 09 20 05.5 +1.4
baz=204,SNR=5.7
G26K Porcupine Rive 85.23 12 P P 09 20 06.0 +1.9
baz=210
E24K Your Creek 85.40 10 P P 09 20 06.6 +1.6
baz=205
I30M Mount Dempster 85.44 15 P P 09 20 06.6 +1.3
baz=217,SNR=12
F25K Christian Rive 85.45 11 P P 09 20 07.3 +2.0
baz=208,SNR=5.8
C21K Knifeblade Rid 85.54 7 P P 09 20 07.3 +1.7
baz=199
KOTAN Kotaneelee Air 85.54 23 P P 09 20 07.2 +1.4
baz=228
G27K Doyon Strip 85.54 12 P P 09 20 07.3 +1.6
baz=212
TOLK Toolik Lake Re 85.75 9 P P 09 20 08.2 +1.5
baz=204
H29M Whitestone 85.77 14 P P 09 20 08.2 +1.4
baz=215,SNR=9.5
F26K Sheenjek River 85.82 11 P P 09 20 08.4 +1.4
baz=209,SNR=8.3
D23K Nanushuk River 85.89 8 P P 09 20 09.0 +1.7
baz=203,SNR=6.6
E25K Arctic Village 85.93 11 P P 09 20 09.3 +1.7
baz=208,SNR=7.4
A19K Wainwright 85.94 5 P P 09 20 09.2 +1.8
baz=193
B21K Ikpikpuk River 86.00 7 P P 09 20 09.3 +1.5
baz=199
B20K Meade River 86.09 6 P P 09 20 10.1 +1.9
baz=197
H03S2 Juan Fernandez 86.15 124 T T 10 55 28.1
baz=252,slow=75,SNR=26
H03S1 Juan Fernandez 86.17 124 T T 10 55 30.6
baz=252,slow=75,SNR=27
H03S3 Juan Fernandez 86.17 124 T T 10 55 30.6
baz=252,slow=75,SNR=21
H03N2 Juan Fernandez 86.25 124 T T 10 55 32.4
baz=257,slow=73,SNR=7.7
H03N3 Juan Fernandez 86.26 124 T T 10 55 31.9
baz=257,slow=73,SNR=8.8
H03N1 Juan Fernandez 86.27 124 T T 10 55 30.6
baz=257,slow=73,SNR=7.3
EPYK Eagle Plains 86.28 14 P P 09 20 10.9 +1.5
baz=216
D24K Happy Valley 86.33 9 P P 09 20 10.8 +1.3
baz=205
G29M Pine Creek 86.42 14 P P 09 20 11.3 +1.3
baz=215
H31M Peel River 86.42 15 P P 09 20 11.4 +1.4
baz=219
F28M Old Crow 86.60 13 P P 09 20 12.3 +1.4
baz=213
C23K Itkillik River 86.70 8 P P 09 20 12.5 +1.2
baz=203
E27K Coleen River 86.73 12 P P 09 20 13.4 +1.9
baz=212
B22K Teshekpuk Lake 86.82 7 P P 09 20 13.7 +1.9
baz=200
D25K Kavik River 86.87 10 P P 09 20 13.6 +1.4
baz=207
G30M tAoh Zraii Nji 86.89 14 P P 09 20 13.6 +1.3
baz=217
A22K Sinclair Lake 87.27 6 P P 09 20 15.7 +1.7
baz=199
G31M Satah River 87.32 15 P P 09 20 15.3 +1.0
baz=219
E28M Babbage River 87.50 12 P P 09 20 16.5 +1.3
baz=214
F30M Barrier River 87.50 14 P P 09 20 16.9 +1.7
baz=217
C27K Jago River 87.58 10 P P 09 20 17.4 +1.8
baz=210
C26K Camden Bay 87.64 10 P P 09 20 17.5 +1.8
baz=208
E29M Blow River 87.66 13 P P 09 20 17.2 +1.2
baz=215
XAN Xi'an 87.71 306 P P 09 20 19.8 +2.7
XAN pmax pmax
comp=Z,8.0nm,1.0s
D27M Malcolm River 87.75 11 P P 09 20 17.9 +1.4
baz=212
F31M Tsiigehtchic 87.85 15 P P 09 20 18.4 +1.6
baz=219
HHC Hu-ho-hao-te 88.20 313 eP P 09 20 21.1 +1.8
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,5.4s
D28M Stokes Point 88.26 12 P P 09 20 20.1 +1.4
baz=214
INK Inuvik 88.58 14 P P 09 20 21.4 +1.1
baz=219
INK Inuvik 88.58 14 P P 09 20 19.1 -1.2
KMI2 Kunming 89.99 296 P P 09 20 31.1 +2.8
KMI2 pmax pmax
comp=Z,11nm,1.1s
KMI2 L L
comp=Z,190nm,25.5s
YKA Yellowknife Ar 90.59 24 P P 09 20 30.4 +0.6
comp=Z,4.4nm,1.3s,baz=237,slow=4.4,SNR=11
comp=Z,4.4nm,1.3s
YKA Yellowknife Ar 90.59 24 P P 09 20 28.3 -1.5
PZH PanZhiHua 91.25 297 P P 09 20 36.3 +2.4
CMAR Chiang Mai Arr 91.52 289 P P 09 20 35.0 -0.2
comp=Z,0.7nm,0.3s,baz=100,slow=4.5,SNR=12
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 91.52 289 P 09 20 33.8 -1.4
C36M Paulatuk 91.70 16 P P 09 20 36.0 +1.1
baz=228
ELIB Princess Elisa 92.00 186 dP P 09 20 38.1 +1.5
comp=Z,2.3nm,1.3s
LZH Lanzhou 92.31 307 eP P 09 20 47.3 +8.6
LZH pP sP 09 20 59.1 +6.2
LZH pmax pmax
comp=Z,13nm,0.9s
JTS Las Juntas de 92.36 80 LR LR 09 55 06.5
comp=Z,66nm,18.1s,baz=281,slow=31
TROLL Troll, Antarti 92.75 179 P P 09 20 41.9 +1.8
A36M Sachs Harbour 93.20 14 P P 09 20 43.0 +1.2
baz=227
VNA2 Neumayer--Watz 93.41 176 ⇑P P 09 20 44.7 +1.7
comp=Z,1.3nm,1.0s,baz=192,slow=4.3
VNA2 Neumayer--Watz 93.41 176 P P 09 20 41.8 -1.2
VNA1 Neumayer--Stat 93.62 175 ⇑P P 09 20 45.6 +1.7
comp=Z,3.7nm,1.1s
FINES FINESS Array B 131.72 347 PKP PKPdf 09 26 41.0 +0.5
comp=Z,1.7nm,1.0s,baz=298,slow=6.2,SNR=4.1
CLL Collm 143.69 352 i PKPdf PKPdf 09 27 04.4 +1.6
OSTC Ostas 143.89 348 AMS AMS 10 37 00.0
comp=Z,100nm,19.6s
OKC Ostrava-Krasne 144.15 346 AMS AMS 10 37 40.0
comp=Z,200nm,22.7s
KRLC Kraliky 144.23 347 AMS AMS 10 36 20.0
comp=Z,200nm,21.1s
MORC Moravsky Berou 144.34 346 ePKP PKPdf 09 27 03.3 -0.8
PRU Pruhonice 144.74 350 AMS AMS 10 41 50.0
comp=Z,100nm,11.6s
NKC Novy Kostel 144.82 352 AMS AMS 10 39 10.0
comp=Z,200nm,21.4s
VRAC Vranov 145.00 347 PKP PKPdf 09 27 05.5 +0.4
comp=Z,4.6nm,0.7s,baz=13,slow=4.6,SNR=13
VRAC Vranov 145.00 347 ePKP PKPdf 09 27 05.6 -5.9
JAVC Velka Javorina 145.18 346 ePKP PKPdf 09 27 07.3 -3.7
KRUC Moravsky 145.27 347 ePKP PKPdf 09 27 06.4 -5.6
ZVC Zvikov 145.33 350 ePKP PKPdf 09 27 07.1 +1.4
MLR Muntele Rosu 145.40 334 PKPbc PKPdf 09 27 06.4 +0.3
comp=Z,9.7nm,1.2s,baz=30,slow=2.3,SNR=9.4
MLR Muntele Rosu 145.40 334 PKPbc 09 27 05.0 -1.0
BRTR Keskin Array B 145.44 320 PKPbc PKPdf 09 27 07.5 +1.1
comp=Z,8.7nm,1.1s,baz=122,slow=1.6,SNR=14
BRTR Keskin Array B 145.44 320 PKPbc 09 27 04.6 -1.8
MODS Modra-Piesok 145.72 346 ePKP PKPdf 09 27 09.8 -2.1
KHC Kasperske Hory 145.73 350 ePKP PKPab 09 27 08.7 +1.5
KHC AMS AMS 10 38 20.0
comp=Z,200nm,20.2s
CKRC Cesky Krumlov 145.91 349 AMS AMS 10 38 50.0
comp=Z,100nm,20.2s
GERES GERESS Array B 145.99 350 PKPbc PKPbc 09 27 07.9 +0.1
comp=Z,2.6nm,0.9s,baz=338,slow=0.5,SNR=18
WINA Alland / Wiene 146.24 347 i PKiKP PKiKP 09 27 11.6 0.0
SNR=8.2
CONA Conrad Observa 146.46 347 i PKP PKiKP 09 27 11.2 -0.9
comp=Z,17nm,1.1s,SNR=11
RONA Rosalia, Austr 146.58 347 i PKP PKiKP 09 27 11.8 -0.5
comp=Z,20nm,1.1s,SNR=8.0
MOA Molln 146.85 349 i PKP PKPab 09 27 11.5 -0.1
comp=Z,17nm,1.3s
BIOA Bad Ischl, Aus 147.12 350 i PKiKP PKiKP 09 27 14.5 +1.1
comp=Z,9.9nm,0.9s
ARSA Arzberg 147.17 347 i PKP PKiKP 09 27 13.3 -0.2

	comp=Z,12nm,1.4s							
LESA	**Schwarzleotal**	**147.53**	**351**	*i* PKP		**PKPab**	**09 27 13.7**	**-0.6**
	comp=Z,16nm,1.3s							
RETA	**Reutte**	**147.73**	**353**	*e*PKP		**PKiKP**	**09 27 14.4**	**-0.4**
	comp=Z,2.2nm,0.5s							
KBA	**Koelnbreinsper**	**147.76**	**350**	*i* PKP		**PKPbc**	**09 27 13.9**	**+0.9**
	comp=Z,2.4nm,0.7s							
SOKA	**Soboth**	**147.82**	**347**	*i* PKP		**PKiKP**	**09 27 14.1**	**-0.9**
	comp=Z,9.7nm,1.3s							
MOTA	**Moosalm**	**147.83**	**353**	*i* PKP		**PKiKP**	**09 27 14.6**	**-0.5**
	comp=Z,4.0nm,1.1s							
WTTA	**Wattenberg**	**147.84**	**352**	*i* PKP		**PKiKP**	**09 27 15.2**	**0.0**
	comp=Z,3.8nm,0.8s							
SQTA	**Sankt Quirin**	**147.94**	**353**	*e*PKP		**PKiKP**	**09 27 15.2**	**-0.1**
	comp=Z,2.6nm,0.6s							
DAVA	**Damuels**	**148.02**	**354**	*i* PKP		**PKiKP**	**09 27 15.3**	**-0.2**
	comp=Z,7.7nm,1.3s							
OBKA	**Obir**	**148.08**	**348**	*i* PKiKP		**PKiKP**	**09 27 15.3**	**-0.3**
	comp=Z,5.1nm,0.8s							
MYKA	**Terra Mystica**	**148.14**	**349**	*i* PKiKP		**PKiKP**	**09 27 15.6**	**-0.1**
	comp=Z,5.6nm,1.2s							
FETA	**Feichten**	**148.19**	**353**	*i* PKiKP		**PKiKP**	**09 27 15.7**	**-0.1**
	comp=Z,2.4nm,0.6s							
ABTA	**Abfaltersbach**	**148.22**	**351**	*i* PKP		**PKPbc**	**09 27 14.0**	**-0.1**
	comp=Z,3.6nm,0.7s							
DAVOX	**Davos/Dischmat**	**148.52**	**354**	PKPbc		**PKPbc**	**09 27 15.7**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=200,slow=3.6,SNR=6.3							
EIL	**Elat**	**149.35**	**303**	PKPbc		**PKPbc**	**09 27 17.9**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=351,slow=4.2,SNR=3.9							
ESDC	**Sonseca Array**	**154.50**	**17**	PKPbc		**PKPbc**	**09 27 28.1**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=216,slow=6.3,SNR=4.3							

DJA ***20*** *09:08:26.4±3.8, 4°S±12°×15°4E±2°9, h114km±22km, M5.1/9, mb5.1/9, mB5.6/2, Mw(mB)5.1/2*

NEIC ***20*** *09:08:27.6±1.2, 4.47S±0.09×153.63E±0.08, h94km±6km, mb4.5/27, Error ellipse: s-maj=12.6km s-min=11.3km az=200.0*

IDC ***20*** *09:08:35.9±2.4, 4.55S×153.32E, h167km±20km, mb3.8/16, mbtmp4.4/18, Error ellipse: s-maj=20.6km s-min=10.9km az=100.0*

ISC 20 09:08:27.9±0.6, **4°47S**±0.06×**153°51E**±0.09, **h100**km, **n54,** σ19**48**/56, **mb4.4**/27, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.37**	**282**			**Pn**	**09 08 53.5**	**+0.8**
RABL				Sn		**Sn**	**09 09 11.7**	**+0.3**
PMG	**Port Moresby**	**7.99**	**232**	P		**Pn**	**09 10 24.6**	**+3.3**
	106nm,0.4s,baz=40,slow=8.5,SNR=21							
PMG				S		**Sn**	**09 11 52.4**	**+2.3**
	90nm,0.4s,baz=137,slow=18,SNR=12							
PMG	**Port Moresby**	**7.99**	**232**			**Pn**	**09 10 21.7**	**+0.4**
PMG	**Port Moresby**	**7.99**	**232**	P		**Pn**	**09 10 25.2**	**+3.9**
	2µm152nm,0.6s							
PATS	**Pohnpei**	**12.21**	**23**	Pn		**Pn**	**09 11 17.6**	**-0.9**
JAY	**Jayapura**	**12.93**	**278**	P		**P**	**09 11 33.2**	**-1.6**
	12nm,0.6s,baz=49,slow=7.0,SNR=8.8							
COEN	**Coen**	**13.89**	**227**	P		**P**	**09 11 44.1**	**-1.3**
CTAO	**Charters Tower**	**17.06**	**204**			**Pn**	**09 12 20.4**	**0.0**
CTAO				IAmb		IAmb	09 12 37.0	
	comp=Z,21nm,1.5s							
EIDS	**Eidsvold**	**20.91**	**186**			**P**	**09 13 03.5**	**+1.0**
EIDS				IAmb		IAmb	09 13 05.2	
	comp=Z,13nm,1.3s							
FAKI	**Fak Fak**	**21.27**	**273**	P		**P**	**09 13 07.3**	**+0.8**
MTN	**Manton Dam**	**23.62**	**248**	P		**P**	**09 13 30.2**	**0.0**
WB0	**Warramunga Arr**	**24.05**	**229**			**P**	**09 13 33.8**	**-0.2**
WR8	**Warramunga Arr**	**24.08**	**229**			**P**	**09 13 34.6**	**+0.3**
WR8				IAmb		IAmb	09 13 36.6	
	comp=Z,21nm,0.6s							
WRAB	**Tennant Creek**	**24.18**	**229**	P		**P**	**09 13 34.9**	**-0.3**
WRAB				IAmb		IAmb	09 13 37.5	
	comp=Z,18nm,0.6s							
WRA	**Warramunga Arr**	**24.20**	**229**	P		**P**	**09 13 36.2**	**+0.9**
	comp=Z,18nm,0.5s,baz=52,slow=9.8,SNR=15							
WRA				PcP		**PcP**	**09 17 12.8**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=58,slow=3.0,SNR=2.4							
WRA				S		**S**	**09 17 39.1**	**-7.6**
	comp=Z,1.8nm,0.9s,baz=46,slow=16,SNR=3.1							
	comp=Z,18nm,0.5s							
WRA	**Warramunga Arr**	**24.20**	**229**	P		**P**	**09 13 34.5**	**-0.8**
ARMA	**Armidale**	**25.87**	**184**	P		**P**	**09 13 49.8**	**-0.7**
ARMA				IAmb		IAmb	09 13 53.0	
	comp=Z,10nm,0.8s							
INKA	**Innaminka**	**26.15**	**206**	P		**P**	**09 13 52.9**	**0.0**
KNRA	**Kununurra**	**26.75**	**244**			**P**	**09 13 58.9**	**+0.4**
KNRA				IAmb		IAmb	09 14 03.2	
	comp=Z,9.1nm,0.7s							
AS31	**Alice Springs**	**26.87**	**223**			**P**	**09 13 60.0**	**+0.4**
ASAR	**Alice Springs**	**26.87**	**223**	P		**P**	**09 13 59.9**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=46,slow=9.1,SNR=54							
ASAR				PcP		**PcP**	**09 17 19.4**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=55,slow=3.0,SNR=4.5							
	comp=Z,1.5nm,0.5s							
STKA	**Stephens Creek**	**29.47**	**201**	P		**P**	**09 14 22.4**	**-0.1**
	comp=Z,7.0nm,0.6s,baz=11,slow=7.7,SNR=28							
	comp=Z,7.0nm,0.6s							
FITZ	**Fitzroy Crossi**	**30.44**	**241**			**P**	**09 14 31.4**	**+0.2**
CAN	**Canberra**	**30.98**	**187**	P		**P**	**09 14 34.6**	**-1.3**
BBOO	**Buckleboo**	**32.58**	**208**	P		**P**	**09 14 48.9**	**-1.0**
BBOO				IAmb		IAmb	09 15 25.9	
	comp=Z,19nm,1.3s							
MBWA	**Marble Bar**	**36.75**	**240**	P		**P**	**09 15 26.8**	**+0.8**
MBWA				IAmb		IAmb	09 15 29.2	
	comp=Z,9.2nm,0.8s							
JOW	**Kunigami**	**39.55**	**323**	P		**P**	**09 15 49.6**	**+0.3**
MORW	**Morawa**	**43.10**	**231**	P		**P**	**09 16 18.3**	**-0.2**
MORW				IAmb		IAmb	09 16 19.1	
	comp=Z,7.1nm,0.8s							
KSRS	**Korea Array**	**48.03**	**332**	P		**P**	**09 16 57.3**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=139,slow=9.5,SNR=5.0							
	comp=Z,1.3nm,0.7s							
USRK	**Ussuriysk Ar.**	**52.17**	**340**	P		**P**	**09 17 28.8**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=216,slow=5.7,SNR=1.9							
	comp=Z,1.9nm,0.9s							
PPI	**Padang Panjang**	**53.20**	**273**	P		**P**	**09 17 35.6**	**-0.8**
	comp=Z,2µmcomp=Z,34nm,0.8s							
KULM	**Kulim**	**53.68**	**280**	P		**P**	**09 17 40.0**	**+0.1**
PETK	**Petropavlovsk-**	**57.47**	**3**	P		**P**	**09 18 08.4**	**+2.1**
	comp=Z,1.5nm,0.8s,baz=198,slow=7.7,SNR=1.5							
	comp=Z,1.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**58.38**	**295**	P		**P**	**09 18 14.4**	**+1.0**
	comp=Z,4.0nm,0.9s,baz=112,slow=5.1,SNR=14							
	comp=Z,4.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**58.38**	**295**	P		**P**	**09 18 13.0**	**-0.4**
SONM	**Songino Array**	**66.43**	**327**	P		**P**	**09 19 07.2**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=144,slow=4.9,SNR=3.5							
	comp=Z,0.6nm,0.4s							
EVN	**Everest**	**71.77**	**301**	P		**P**	**09 19 41.7**	**+1.0**
EVN				IAmb		IAmb	09 19 42.6	
	comp=Z,11nm,0.8s							
VNDA	**Vanda**	**73.14**	**178**	P		**P**	**09 19 47.9**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=331,slow=7.0,SNR=15							
	comp=Z,2.6nm,0.6s							
VNDA	**Vanda**	**73.14**	**178**	P		**P**	**09 19 47.9**	**+0.8**
VNDA				IAmb		IAmb	09 19 48.5	
	comp=Z,2.9nm,0.7s							
K15K	**Wolf Creek Mou**	**74.85**	**20**	P		**P**	**09 19 58.1**	**+0.8**
K15K				IAmb		IAmb	09 20 28.0	
	comp=Z,21nm,1.5s							
MKAR	**Makanchi Array**	**80.55**	**319**	P		**P**	**09 20 29.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=96,slow=7.6,SNR=11							
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**81.27**	**326**	P		**P**	**09 20 32.1**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=106,slow=4.4,SNR=4.0							
	comp=Z,1.0nm,0.5s							
ILAR	**Eielson Array**	**81.59**	**22**	P		**P**	**09 20 33.7**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=258,slow=5.5,SNR=6.3							
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**83.95**	**322**	P		**P**	**09 20 46.3**	**-0.6**
KURK	**Kurchatov**	**83.95**	**322**	IAmb		IAmb	09 20 47.6	
	comp=Z,3.1nm,0.8s							
KURBB	**Kurchatov Arra**	**83.98**	**322**	P		**P**	**09 20 46.3**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=106,slow=4.2,SNR=11							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**85.49**	**180**	P		**P**	**09 20 54.3**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=108,slow=0.2,SNR=12							
	comp=Z,2.0nm,0.6s							
QSPA	**South Pole Qui**	**85.49**	**180**	IAmb		IAmb	09 21 26.4	
	comp=Z,14nm,1.5s							
MAW	**Mawson**	**86.15**	**203**	P		**P**	**09 20 57.1**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=78,slow=8.0,SNR=4.3							
	comp=Z,2.5nm,0.7s							
MAW	**Mawson**	**86.15**	**203**	IAmb		IAmb	09 21 28.9	
	comp=Z,2.3nm,1.4s							

BVAR	**Borovoye Array**	**89.40**	**323**	P		**P**	**09 21 12.7**	**-0.7**
	comp=Z,3.7nm,0.8s,baz=131,slow=6.7,SNR=10							
	comp=Z,3.7nm,0.8s							
AKASG	**Malin Array Be**	**114.64**	**325**	PKP		**PKiKP**	**09 26 55.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=64,slow=2.2,SNR=2.2							
ESDC	**Sonseca Array**	**139.46**	**333**	PKP		**PKPdf**	**09 27 44.5**	**+0.3**
	comp=Z,1.5nm,1.0s,baz=341,slow=2.2,SNR=6.7							
TORD	**Torodi Ar. Bea**	**150.88**	**289**	PKPbc		**PKPbc**	**09 28 09.3**	**-0.6**
	comp=Z,5.3nm,0.7s,baz=66,slow=2.3,SNR=29							

NEIC ***20*** *09:18:24.2±1.2, 15.02S±0.10×174.61W±0.02, h10km±1km, mb4.6/33, Error ellipse: s-maj=16.8km s-min=3.0km az=173.0*

IDC ***20*** *09:18:26.2±0.6, 15.31S×174.70W, h0km, mb4.2/13, mbtmp4.2/14, ML3.7/1, MS4.3/53, Error ellipse: s-maj=27.6km s-min=16.4km az=134.0*

GCMT ***20*** *09:18:30.1±0.2, 15.20S±0.01×174.55W±0.01, h13km±1km, MW5.0/125, Moment Tensor Solution. s50,c62; s125,c205; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-0.34±.08; Mθθ-1.90±.08; Mϕϕ2.24±.07; Mrθ0.48±.19; Mθϕ3.36±.08; Mϕr0.45±.18; Best double couple: M○3.99600×1016 NP1:ϕs344.00000°, δ82.00000°, λ177.00000°. NP2:ϕs74.00000°, δ87.00000°, λ8.00000°. Principal axes: T 4.2030, Plg8.0000°, Azm299.0000°; N -0.4120, Plg81.0000°, Azm96.0000°; P -3.7880, Plg3.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 09:18:24.9±0.4, **15.08S**±0.09×**174.52W**±0.07, **h10**km, **n156,** σ2822/87, **mb4.5**/29, **MS4.4**/52, **1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.90**	**67**	Pn		**Pn**	**09 19 11.3**	**+0.1**
	37nm,0.3s,baz=227,slow=5.9,SNR=43							
AFI				Sn		**Sn**	**09 19 42.2**	**-4.1**
	29nm,0.3s,baz=41,slow=21,SNR=6.4							
AFI				LR		LR	09 20 16.4	
	comp=Z,2µm,18.1s,baz=304,slow=35							
AFI	**Afiamalu**	**2.90**	**67**	Pn		**Pn**	**09 19 11.7**	**+0.5**
FUTU	**Fugatoga**	**3.57**	**282**			**Pn**	**09 19 18.6**	**-1.7**
NIUE	**Niue**	**5.93**	**133**	Pn		**Pn**	**09 19 52.6**	**-0.2**
MSVF	**Nonsavu**	**7.60**	**249**	Pn		Pn	09 20 19.4	+3.5
	0.3nm,0.3s,baz=115,slow=12,SNR=5.9							
MSVF	**Nonsavu**	**7.60**	**249**	Pn		**Pn**	**09 20 13.0**	**-2.9**
RAO	**Raoul Island**	**14.45**	**192**	LR		LR	09 26 27.9	
	comp=Z,2µm,19.0s,baz=6.5,slow=34							
RAR	**Rarotonga**	**15.28**	**116**	LR		LR	09 26 35.0	
	comp=Z,1µm,21.3s,baz=279,slow=32							
OUENC	**Ouen Island, N**	**19.09**	**245**	P		**P**	**09 22 45.5**	**-2.4**
OUENC				IAmb		IAmb	09 22 55.7	
	comp=Z,47nm,1.0s							
DZM	**Mont Dzumac**	**19.33**	**246**	P		**Pn**	**09 22 51.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=83,slow=19,SNR=9.3							
	comp=Z,11nm,0.8s							
ONTNC	**Ouen Toro**	**19.39**	**245**			**P**	**09 22 49.4**	**-1.8**
PAE	**Paea**	**24.06**	**100**	*e*T		T	09 48 32.2	
	comp=Z,40nm,0.3s							
PPT	**Papeete**	**24.06**	**99**	LR		LR	09 31 06.4	
	comp=Z,434nm,19.1s,baz=271,slow=31							
PPT2	**Papeete2**	**24.06**	**99**	*e*S		S	09 28 10.3	+12
	comp=Z,2µm,25.5s							
PPT2				*e*LR		LR	09 29 31.9	
	comp=Z,1µm,26.5s							
PPT2				*e*LR		LR	09 29 39.7	
	comp=Z,932nm,25.5s							
PPT2				*e*T		T	09 48 34.2	
	comp=Z,14nm,0.3s							
TOZ	**Tahuroa Road**	**24.24**	**200**			**P**	**09 23 40.6**	**-1.4**
URZ	**Urewera**	**24.25**	**196**	LR		LR	09 32 22.9	
	comp=Z,1µm,18.3s,baz=25,slow=35							
TIAR	**Tiarei**	**24.28**	**99**	*e*T		T	09 48 46.6	
	comp=Z,326nm,0.3s							
TVO	**Taravao**	**24.38**	**100**	*e*T		T	09 48 55.9	
	comp=Z,33nm,0.3s							
BKZ	**Black Stump Fm**	**25.27**	**197**	P		**P**	**09 23 51.7**	**+0.3**
BKZ				IAmb		IAmb	09 24 00.8	
	comp=Z,28nm,1.3s							
HNR	**Honiara**	**25.56**	**280**	LR		LR	09 32 40.0	
	comp=Z,35nm,20.5s,baz=214,slow=34							
PMOR	**Poariorio Ree**	**25.71**	**93**	*e*T		T	09 50 50.7	
	comp=Z,17nm,0.3s							
RPZ	**Rata Peaks**	**31.09**	**200**	LR		LR	09 36 43.3	
	comp=Z,362nm,18.4s,baz=158,slow=36							
TAOE	**Nuku Hiva Isla**	**34.16**	**84**	*e*LR		LR	09 33 28.2	
	comp=Z,450nm,27.9s							
TAOE				*e*T		T	10 01 18.8	
	comp=Z,52nm,0.3s							
KRVT	**Keravat (AS076**	**34.61**	**285**	LR		LR	09 38 04.3	
	comp=Z,117nm,19.2s,baz=49,slow=34							
CTA	**Charters Tower**	**37.66**	**257**	LR		LR	09 40 15.4	
	comp=Z,327nm,18.1s,baz=68,slow=35							
H11S2	**WAKE ISLAND Hy**	**38.14**	**330**	T		T	10 06 18.1	
	baz=149,slow=76,SNR=281							
H11S3	**WAKE ISLAND Hy**	**38.15**	**330**	T		T	10 06 16.4	
	baz=149,slow=76,SNR=164							
H11S1	**WAKE ISLAND Hy**	**38.16**	**330**	T		T	10 06 16.9	
	baz=149,slow=76,SNR=191							
H11N3	**WAKE ISLAND Hy**	**39.10**	**332**	T		T	10 07 35.1	
	baz=151,slow=76,SNR=855							
H11N1	**WAKE ISLAND Hy**	**39.11**	**332**	T		T	10 07 35.4	
	baz=151,slow=76,SNR=1500							
H11N2	**WAKE ISLAND Hy**	**39.12**	**332**	T		T	10 07 36.4	
	baz=151,slow=76,SNR=926							
STKA	**Stephens Creek**	**43.27**	**239**	P		**P**	**09 26 26.6**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=82,slow=12,SNR=7.4							
STKA				LR		LR	09 44 50.2	
	comp=Z,377nm,19.2s,baz=61,slow=37							
	comp=Z,5.8nm,0.9s							
JAY	**Jayapura**	**45.86**	**281**	LR		LR	09 43 45.2	
	comp=Z,370nm,21.0s,baz=114,slow=33							
WRA	**Warramunga Arr**	**48.87**	**257**	P		**P**	**09 27 11.9**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=91,slow=7.4,SNR=5.2							
	comp=Z,2.2nm,0.8s							
WRA	**Warramunga Arr**	**48.87**	**257**	P		**P**	**09 27 08.8**	**-2.4**
AS31	**Alice Springs**	**49.18**	**252**			**P**	**09 27 11.6**	**-2.0**
ASAR	**Alice Springs**	**49.18**	**252**	P		**P**	**09 27 13.3**	**-0.3**
	comp=Z,6.7nm,0.8s,baz=84,slow=7.3,SNR=33							
ASAR				LR		LR	09 46 20.2	
	comp=Z,481nm,19.8s,baz=97,slow=34							
	comp=Z,6.7nm,0.8s							
ASAR	**Alice Springs**	**49.18**	**252**			**P**	**09 27 11.5**	**-2.1**
GUMO	**Guam**	**49.25**	**303**	LR		LR	09 45 09.5	
	comp=Z,257nm,19.2s,baz=122,slow=33							
SIJI	**Sorong**	**55.34**	**280**	LR		LR	09 50 37.4	
	comp=Z,36nm,21.7s,baz=86,slow=35							
FITZ	**Fitzroy Crossi**	**57.22**	**258**	LR		LR	09 50 43.9	
	comp=Z,386nm,20.4s,baz=98,slow=34							
JCJ	**Chichijima**	**59.35**	**315**	LR		LR	09 49 59.1	
	comp=Z,516nm,19.9s,baz=118,slow=32							
SOEI	**Soe**	**59.86**	**267**	P		**P**	**09 28 30.1**	**-1.3**
BATI	**Baumata**	**60.35**	**267**	LR		LR	09 52 56.0	
	comp=Z,382nm,20.0s,baz=112,slow=34							
RPN	**Rapa Nui**	**61.41**	**113**	LR		LR	09 48 54.8	
	comp=Z,97nm,19.4s,baz=9.5,slow=30							
DAV	**Davao City (W)**	**63.30**	**286**	LR		LR	09 55 05.4	
	comp=Z,258nm,18.2s,baz=122,slow=35							
VNDA	**Vanda**	**63.59**	**186**	P		**P**	**09 28 56.9**	**+1.4**
	comp=Z,1.8nm,1.0s,baz=0.1,slow=5.7,SNR=5.8							
VNDA				LR		LR	09 54 36.1	
	comp=Z,96nm,18.8s,baz=14,slow=34							
	comp=Z,1.8nm,1.0s							
NWAO	**Narrogin (SRO)**	**63.84**	**240**	LR		LR	09 56 10.8	
	comp=Z,365nm,18.5s,baz=78,slow=36							
KAPI	**Kappang**	**65.29**	**271**	LR		LR	09 55 16.6	
	comp=Z,328nm,21.3s,baz=90,slow=34							
MJAR	**Matsushiro Arr**	**68.00**	**320**	P		P	09 29 28.8	+4.3
	comp=Z,1.3nm,0.9s,baz=149,slow=4.7,SNR=4.6							
MJAR				LR		LR	09 53 45.6	
	comp=Z,188nm,21.9s,baz=126,slow=31							
	comp=Z,1.3nm,0.9s							
JOW	**Kunigami**	**69.42**	**307**	LR		LR	09 53 53.9	
	comp=Z,387nm,21.8s,baz=105,slow=31							
JKA	**Kamikawa-asahi**	**70.70**	**329**			**P**	**09 29 39.2**	**-1.7**
JNU	**Nakatsue**	**70.79**	**314**	LR		LR	09 55 10.3	
	comp=Z,196nm,21.7s,baz=134,slow=31							
LPIG	**La Paz**	**73.80**	**59**	LR		LR	09 54 29.0	
	comp=Z,197nm,19.8s,baz=222,slow=29							
MDPB	**Devils Postpil**	**73.87**	**43**	P		**P**	**09 29 59.0**	**-1.5**
MDPB				IAmb		IAmb	09 30 08.5	
	comp=Z,6.0nm,1.4s							
CWC	**Cottonwood Cre**	**73.87**	**44**	P		**P**	**09 29 58.5**	**-1.8**
CWC				IAmb		IAmb	09 30 12.5	
	comp=Z,6.5nm,1.5s							

MPMC	**Manual Prospec**	**74.07**	**45**			**P**	**09 29 59.2**	**-2.3**
MPMC				IAmb		IAmb	09 30 11.4	
	comp=Z,6.1nm,1.2s							
WAKR	**Walker**	**74.12**	**42**			**P**	**09 29 60.0**	**-1.9**
WAKR				IAmb		IAmb	09 30 11.8	
	comp=Z,6.6nm,1.2s							
MPK	**Martis Peak**	**74.19**	**41**	P		**P**	**09 29 59.3**	**-3.1**
QSM	**Queen of Sheba**	**74.44**	**45**	P		**P**	**09 30 02.5**	**-1.1**
QSM				IAmb		IAmb	09 30 14.4	
	comp=Z,14nm,1.5s							
DSP	**Deep Springs**	**74.45**	**44**	P		**P**	**09 30 02.4**	**-1.1**
DSP				IAmb		IAmb	09 30 12.9	
	comp=Z,9.1nm,1.5s							
NVAR	**Mina Array Bea**	**74.82**	**43**	P		**P**	**09 30 10.0**	**+4.1**
	comp=Z,1.3nm,1.0s,baz=242,slow=8.2,SNR=7.2							
	comp=Z,1.3nm,1.0s							
NVAR	**Mina Array Bea**	**74.82**	**43**	P		**P**	**09 30 04.3**	**-1.6**
KDAK	**Kodiak Island**	**74.83**	**12**	LR		LR	09 57 11.2	
	comp=Z,250nm,19.9s,baz=210,slow=31							
GMN	**Gold Mountain**	**74.89**	**44**	P		**P**	**09 30 05.1**	**-1.3**
NV11	**Mina Array Sit**	**74.92**	**43**	P		**P**	**09 30 05.3**	**-1.1**
NV11				IAmb		IAmb	09 30 16.8	
	comp=Z,5.7nm,1.2s							
QSPA	**South Pole Qui**	**74.97**	**180**	P		**P**	**09 30 08.2**	**+2.0**
	comp=Z,3.2nm,0.9s,baz=22,slow=2.7,SNR=7.7							
	comp=Z,3.2nm,0.9s							
QSPA	**South Pole Qui**	**74.97**	**180**	P		**P**	**09 30 05.4**	**-0.9**
QSPA				IAmb		IAmb	09 30 36.8	
	comp=Z,9.8nm,1.2s							
WCT	**Wildcat Mounta**	**75.05**	**45**			**P**	**09 30 05.8**	**-1.3**
KSRS	**Korea Array**	**75.17**	**316**	LR		LR	10 00 44.5	
	comp=Z,171nm,19.1s,baz=125,slow=34							
KVN	**Kaiserville**	**75.30**	**42**			**P**	**09 30 06.3**	**-2.4**
W13A	**Hualapai Mount**	**76.09**	**47**			**P**	**09 30 11.3**	**-1.9**
W13A				IAmb		IAmb	09 30 21.5	
	comp=Z,5.1nm,1.3s							
PINE	**Pine Mountain**	**76.28**	**37**	P		**P**	**09 30 12.9**	**-1.3**
PINE				IAmb		IAmb	09 30 24.2	
	comp=Z,7.0nm,1.0s							
PRN	**Pahroc Range**	**76.44**	**45**			**P**	**09 30 14.8**	**-0.4**
PRN				IAmb		IAmb	09 30 57.9	
	comp=Z,6.9nm,1.3s							
USRK	**Ussuriysk Ar.**	**76.48**	**324**	LR		LR	09 57 49.5	
	comp=Z,213nm,21.6s,baz=136,slow=31							
LEM	**Lembang**	**76.57**	**266**	LR		LR	10 05 33.0	
	comp=Z,126nm,19.8s,baz=172,slow=37							
BMN	**Battle Mountai**	**76.62**	**41**	P		**P**	**09 30 15.6**	**-0.5**
BMN				IAmb		IAmb	09 30 33.9	
	comp=Z,9.1nm,1.5s							
H02S2	**DAWSON INLET T**	**76.99**	**24**	T		T	10 55 07.1	
	SNR=19							
H02S1	**DAWSON INLET T**	**76.99**	**24**	T		T	10 55 07.1	
	SNR=19							
ELK	**Elko**	**78.06**	**42**	LR		LR	09 59 40.4	
	comp=Z,164nm,18.4s,baz=289,slow=32							
BBB	**Bella Bella**	**78.09**	**27**	LR		LR	09 57 30.1	
	comp=Z,230nm,20.3s,baz=225,slow=30							
NJ2	**Nanjing**	**79.11**	**307**	*e*P		**P**	**09 30 33.1**	**+3.2**
NJ2				pmax		pmax		
	comp=Z,41nm,0.9s							
J18K	**Innoko River**	**79.50**	**8**			**P**	**09 30 30.4**	**-1.0**
J18K				IAmb		IAmb	09 30 39.3	
	comp=Z,6.3nm,1.1s							
MA2	**Magadan**	**79.53**	**343**	LR		LR	10 02 21.6	
	comp=Z,101nm,19.8s,baz=158,slow=33							
NEW	**Newport**	**81.06**	**35**	LR		LR	10 00 21.2	
	comp=Z,255nm,19.9s,baz=227,slow=31							
TXAR	**Lajitas Array**	**81.33**	**57**	P		P	09 30 47.0	+4.9
	comp=Z,2.4nm,1.2s,baz=241,slow=5.8,SNR=12

VRAC	**Vranov**	**144.67**	**347**	*e*PKP	**PKiKP**	**09 38 05.6**	**-0.1**
JAVC	**Velka Javorina**	**144.85**	**346**	*e*PKP	**PKiKP**	**09 38 07.3**	**+1.2**
KRUC	**Moravsky**	**144.94**	**347**	*e*PKP	**PKiKP**	**09 38 06.1**	**-0.1**
BRTR	**Keskin Array B**	**145.22**	**320**	PKPbc	**PKiKP**	**09 38 07.0**	**-0.3**
	comp=Z,8.2nm,1.3s,baz=78,slow=1.8,SNR=7.3						
BRTR	**Keskin Array B**	**145.22**	**320**		**PKPbc**	**09 38 01.4**	**-1.6**
MODS	**Modra-Piesok**	**145.40**	**346**	*e*PKP	**PKiKP**	**09 38 09.8**	**+2.6**
GERES	**GERESS Array B**	**145.65**	**350**	PKPbc	**PKiKP**	**09 38 07.9**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=2.2,slow=2.6,SNR=13						
GERES	**GERESS Array B**	**145.65**	**350**		**PKPab**	**09 38 03.2**	**-1.1**
CONA	**Conrad Observa**	**146.13**	**347**	*i* PKP	**PKiKP**	**09 38 11.9**	**+3.1**
	comp=Z,14nm,1.4s						
RONA	**Rosalia, Austr**	**146.25**	**347**	*i* PKP	**PKiKP**	**09 38 12.3**	**+3.3**
	comp=Z,15nm,1.1s						
MOA	**Molln**	**146.52**	**349**	*i* PKiKP	**PKiKP**	**09 38 13.9**	**+4.4**
	comp=Z,14nm,1.4s						
BIOA	**Bad Ischl, Aus**	**146.78**	**350**	*i* PKP	**PKiKP**	**09 38 14.1**	**+4.1**
	comp=Z,5.1nm,0.7s						
ARSA	**Arzberg**	**146.85**	**347**	*i* PKP	**PKiKP**	**09 38 14.3**	**+4.1**
	comp=Z,5.0nm,0.9s						
LESA	**Schwarzleotal**	**147.19**	**351**	*e*PKP	**PKiKP**	**09 38 15.6**	**+4.6**
	comp=Z,4.1nm,0.9s						
RETA	**Reutte**	**147.39**	**353**	*i* PKP	**PKiKP**	**09 38 14.5**	**+3.1**
	comp=Z,9.0nm,1.2s						
MOTA	**Moosalm**	**147.49**	**353**	*e*PKP	**PKiKP**	**09 38 14.7**	**+3.0**
	comp=Z,13nm,1.3s						
SOKA	**Soboth**	**147.50**	**348**	*e*PKP	**PKiKP**	**09 38 13.7**	**+2.1**
	comp=Z,6.9nm,1.1s						
WTTA	**Wattenberg**	**147.50**	**352**	*i* PKP	**PKiKP**	**09 38 15.4**	**+3.7**
	comp=Z,8.6nm,1.1s						
SQTA	**Sankt Quirin**	**147.60**	**353**	*i* PKP	**PKiKP**	**09 38 15.5**	**+3.6**
	comp=Z,6.4nm,1.2s						
DAVA	**Damuels**	**147.68**	**354**	*i* PKP	**PKPab**	**09 38 14.1**	**+1.9**
	comp=Z,5.2nm,0.8s						
OBKA	**Obir**	**147.75**	**348**	*e*PKP	**PKPab**	**09 38 15.7**	**+3.2**
	comp=Z,3.8nm,1.0s						
MYKA	**Terra Mystica**	**147.81**	**349**	*e*PKP	**PKPab**	**09 38 15.2**	**+2.5**
	comp=Z,4.3nm,1.0s						
FETA	**Feichten**	**147.85**	**353**	*e*PKP	**PKPab**	**09 38 16.3**	**+3.4**
	comp=Z,3.3nm,0.8s						
ABTA	**Abfaltersbach**	**147.88**	**351**	*e*PKP	**PKPab**	**09 38 15.1**	**+2.2**
	comp=Z,5.8nm,0.9s						
ESDC	**Sonseca Array**	**154.13**	**17**	PKPab	**PKPab**	**09 38 41.1**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=271,slow=6.6,SNR=4.8						

*SNET **20** 09:20:22.4±2.4, 13.52N×90.39W, h13km, ML2.8, Presumed earthquake*
*CATAC **20** 09:20:22.2±0.7, 13.6N±4.4×9.0W±.6, h25km±3km, M2.9/6, MLv2.9/6, Error ellipse: s-maj=9.6km s-min=4.9km az=17.3, confirmed*
*GCG **20** 09:20:22.6±0.8, 13.54N×90.36W, h36km±238km, MD3.9, Presumed earthquake*

ISC 20 09:20:21.6±2.5, 13.48N±0.10×90.25W±0.06, h11km±12km, n25, σ0.95/32, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAME	**Alcaldia de Sa**	**0.43**	**32**	P		**Pn**	**09 20 33.1**	**-0.7**
NUBE	**Las Nubes**	**0.62**	**47**	P		**Pn**	**09 20 36.0**	**-0.5**
NUBE	**Las Nubes**	**0.62**	**47**	*e*P		**Pn**	**09 20 35.8**	**-0.7**
NUBE	**Las Nubes**	**0.62**	**47**	*e*P		**Pn**	**09 20 36.0**	**-0.5**
NUBE				*e*S		**Sn**	**09 20 46.4**	**-0.2**
LOAL	**Lomas de Alarc**	**0.69**	**41**	P		**Pn**	**09 20 37.0**	**-0.3**
LOAL				S		**Sn**	**09 20 48.1**	**0.0**
CEVE	**Cerro Verde**	**0.70**	**60**	S		**Sn**	**09 20 49.5**	**+0.9**
SBLS	**San Blas**	**0.70**	**59**	*e*S		**Sn**	**09 20 49.1**	**+0.3**
SNJE	**San Jose**	**0.73**	**58**	*e*P		**Pn**	**09 20 37.8**	**-0.3**
SNJE				*e*S		**Sn**	**09 20 50.0**	**+0.5**
JAYA	**Jayaque - finc**	**0.80**	**77**	P		**Pn**	**09 20 38.8**	**-0.1**
JAYA	**Jayaque - finc**	**0.80**	**77**	*i* P		**Pn**	**09 20 38.6**	**-0.3**
JAYA				*e*S		**Sn**	**09 20 50.6**	**-0.4**
JAYA	**Jayaque - finc**	**0.80**	**77**	*e*P		**Pn**	**09 20 38.6**	**-0.3**
JAYA				*e*S		**Sn**	**09 20 51.3**	**+0.4**
FG16	**Alotenango, Sa**	**0.83**	**342**	*e*P		**Pn**	**09 20 41.3**	**+1.8**
FG8	**Yepocapa, Chim**	**0.83**	**339**	*e*P		**Pn**	**09 20 41.5**	**+2.1**
UNIC	**Universidad Ca**	**0.84**	**54**	P		**Pn**	**09 20 39.3**	**-0.2**
UNIC				S		**Sn**	**09 20 52.3**	**+0.3**
PMON	**Piamonte**	**0.94**	**75**	S		**Sn**	**09 20 55.0**	**+0.7**
JUAM	**Asuncion Mita**	**1.00**	**32**	*e*P		**Pg**	**09 20 40.9**	**0.0**
UEES	**Universidad Ev**	**1.01**	**76**	S		**Sn**	**09 20 56.6**	**+0.5**
SEMO	**Seminario San**	**1.02**	**77**	S		**Sn**	**09 20 57.6**	**+1.3**
LOMA	**Loma Larga**	**1.06**	**81**	S		**Sn**	**09 20 58.1**	**+0.7**
MTO3	**Montecristo**	**1.26**	**43**	P		**Pn**	**09 20 44.7**	**-0.7**
MTO3				S		**Sg**	**09 21 02.1**	**-0.1**
MTO3	**Montecristo**	**1.26**	**43**	*e*P		**Pn**	**09 20 44.6**	**-0.8**
MTO3	**Montecristo**	**1.26**	**43**	*e*P		**Pn**	**09 20 44.8**	**-0.5**
COEG	**Centro de Oper**	**1.34**	**84**	S		**Sg**	**09 21 05.1**	**+0.4**
ESQI	**Esquipulas**	**1.39**	**39**	S		**Sg**	**09 21 06.1**	**-0.3**
RTAL	**Retalhuleu**	**1.75**	**307**	S		**Sn**	**09 21 11.1**	**-3.1**

*IDC **20** 09:24:22.9±3.0, 54.35N×87.14E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=26.5km s-min=19.2km az=47.0*

ASRS 20 09:24:21.0±1.1, 54.30N×86.84E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**254**	I		I	09 32 20.0	
	baz=74,slon=309,SNR=2.8							
ZALV	**Zalesovo Beam**	**1.24**	**254**	Pg		Pn	09 24 47.3	+1.7
	4.0nm,0.3s,baz=72,slow=17,SNR=30							
ZALV				Lg		Lg	09 25 08.8	
	2.6nm,0.3s,baz=70,slow=25,SNR=10							
KURBB	**Kurchatov Arra**	**6.27**	**237**	Pn		Pn	09 25 59.9	+5.2
KURBB	0.1nm,0.3s,baz=52,slow=14,SNR=9.1			Lg		Lg	09 27 48.3	
	baz=56,slow=34,SNR=1.4							
	0.9nm,0.4s							
MKAR	**Makanchi Array**	**8.05**	**203**	Pn		Pn	09 26 24.1	+4.9
	0.2nm,0.3s,baz=26,slow=14,SNR=7.7							
MKAR				Lg		Lg	09 28 38.6	
	baz=30,slow=32,SNR=2.0							
	0.3nm,0.3s							

IDC 20 09:26:35.3±1.2, 12.61N×144.03E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=47.7km s-min=19.8km az=111.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.27**	**40**	Pn		Pn	09 27 00.4	+0.1
	315nm,0.3s,baz=297,slow=2.2,SNR=244							
GUMO				Sn		Sg	09 27 13.5	-2.7
	486nm,0.3s,baz=114,slow=24,SNR=60							
WRA	**Warramunga Arr**	**33.73**	**197**	P		P	09 33 18.2	-0.4
	1.5nm,0.8s,baz=17,slow=8.9,SNR=2.8							
	1.5nm,0.8s							
ASAR	**Alice Springs**	**37.39**	**195**	P		P	09 33 51.4	+1.3
	0.3nm,0.7s,baz=17,slow=8.7,SNR=7.9							
	0.3nm,0.7s							
STKA	**Stephens Creek**	**44.30**	**183**	P		P	09 34 45.5	-1.5
	1.1nm,0.4s,baz=0.6,slow=9.1,SNR=5.8							
	1.1nm,0.4s							
SONM	**Songino Array**	**47.06**	**326**	P		P	09 35 08.7	-0.2
	0.3nm,0.4s,baz=132,slow=11,SNR=1.4							
	0.3nm,0.4s							

*IDC **20** 09:39:14.3±10.0, 24.23S×178.71W, h365km±79km, mb3.3/3, mbtmp4.0/4, Error ellipse: s-maj=147.2km s-min=58.0km az=135.0*

ISC 20 09:39:11.6±5.0, 24.4S±0.2×178.5W±0.7, h350km, n7, σ0.37/5, mb3.7/5, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**7.39**	**334**	P		**Pn**	**09 40 58.7**	**-0.1**
	4.5nm,0.5s,baz=161,slow=12,SNR=8.4							
STKA	**Stephens Creek**	**35.80**	**249**	P		**P**	**09 45 38.7**	**-0.3**
	1.6nm,0.4s,baz=93,slow=9.7,SNR=5.3							
	1.6nm,0.4s							
ASAR	**Alice Springs**	**43.29**	**261**	P		**P**	**09 46 40.8**	**+0.3**
	1.0nm,0.4s,baz=93,slow=7.8,SNR=47							
ASAR				PcP		**PcP**	**09 48 22.3**	**0.0**
	0.2nm,0.8s,baz=101,slow=3.8,SNR=2.5							
	1.0nm,0.4s							
WRA	**Warramunga Arr**	**43.73**	**266**	P		**P**	**09 46 44.0**	**+0.2**
	0.8nm,0.5s,baz=101,slow=7.8,SNR=5.5							
	0.8nm,0.5s							
TROLL	**Troll, Antarti**	**83.83**	**180**	⇑P		P	09 50 55.5	-6.8
	comp=Z,108nm,0.5s							
VNA2	**Neumayer--Watz**	**84.71**	**177**	⇑P		P	09 50 59.5	-7.0
	comp=Z,3.3nm,0.8s,baz=190,slow=3.9							
VNA1	**Neumayer--Stat**	**84.94**	**177**	⇑P		P	09 51 00.8	-6.8
	comp=Z,3.0nm,1.0s							

*IDC **20** 09:50:18.2±3.2, 54.17N×87.36E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=28.4km s-min=19.6km az=46.0*

ASRS 20 09:50:16.0±0.7, 54.13N×87.21E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**263**	I		I	09 59 10.0	
	baz=80,slow=310,SNR=0.6							
ZALV	**Zalesovo Beam**	**1.42**	**263**	Pg		Pb	09 50 45.1	+1.7
	4.1nm,0.3s,baz=79,slow=14,SNR=26							
ZALV				Lg		Lg	09 51 05.6	
	6.5nm,0.3s,baz=84,slow=31,SNR=16							
KURBB	**Kurchatov Arra**	**6.37**	**240**	Pn		Pn	09 51 55.4	+4.3
	0.1nm,0.3s,baz=53,slow=13,SNR=7.9							
KURBB				Lg		Lg	09 53 45.9	
	baz=60,slow=26,SNR=2.1							
	0.6nm,0.3s							
MKAR	**Makanchi Array**	**7.99**	**205**	Pn		Pn	09 52 17.3	+4.0
	0.1nm,0.3s,baz=26,slow=14,SNR=2.2							
	0.2nm,0.3s							

*IDC **20** 09:54:40.0±3.3, 54.22N×87.13E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=30.0km s-min=18.8km az=58.0*

ASRS 20 09:54:41.0±0.7, 54.25N×86.87E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**257**	I		I	10 02 40.0	
	baz=74,slow=312,SNR=2.7							
ZALV	**Zalesovo Beam**	**1.25**	**257**	Pg		Pn	09 55 06.3	+0.6
	1.4nm,0.3s,baz=74,slow=15,SNR=9.9							
ZALV				Lg		Lg	09 55 24.1	
	1.4nm,0.3s,baz=80,slow=32,SNR=7.7							
KURBB	**Kurchatov Arra**	**6.26**	**238**	Pn		Pn	09 56 16.0	+1.4
	baz=52,slow=14,SNR=2.4							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**8.02**	**203**	Pn		Pn	09 56 38.6	-0.1
	baz=26,slow=14,SNR=1.6							
	0.1nm,0.4s							

*TEH **20** 09:55:44.2, 34.56N×45.27E, h8km±51km, ML3.2, Presumed earthquake*
*ISN **20** 09:55:47.2±2.0, 34.56N×45.27E, h8km, ML3.3, Presumed earthquake*

ISC 20 09:55:47.0±1.2, 34.52N±0.07×45.32E±0.07, h18km, n10, σ1.00/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.90**	**78**	Pg		**Pb**	**09 56 02.7**	**-1.5**
IDHR				Sg		**Sb**	**09 56 15.7**	**-0.1**
IGHG	**Ghaleghazi**	**1.04**	**100**	Pg		**Pb**	**09 56 05.9**	**-0.8**
ILBA	**Ilam Banvizeh**	**1.15**	**140**	Pg		**Pn**	**09 56 07.3**	**-1.0**
KCHF	**Cheshme Sefid,**	**1.44**	**99**	Pg		**Pn**	**09 56 12.6**	**+0.2**
BHD	**Baghdad**	**1.47**	**213**	*i* P		**Pg**	**09 56 15.8**	**+0.4**
	baz=30							
BHD				*i* S		**Sb**	**09 56 32.9**	**+0.7**
BHD				IAML			09 56 36.0	
	comp=N,357nm,0.3s							
BHD				IAML			09 56 36.2	
	comp=E,555nm,0.4s							
SNJK	**Sanadaj_Korde**	**1.71**	**57**	Pg		**Pb**	**09 56 17.9**	**-0.1**
SNQR	**Sonqor, Kerman**	**1.93**	**79**	Pn		**Pn**	**09 56 20.5**	**+1.3**
IBZA	**Bozab**	**2.10**	**91**	Pn		**Pn**	**09 56 22.6**	**+1.1**
MAHB	**Mahabad**	**2.27**	**8**	Pn		**Pn**	**09 56 23.2**	**-0.6**
IALM	**Almabolaq**	**2.37**	**81**	Pn		**Pn**	**09 56 26.3**	**+1.0**

*IDC **20** 10:32:46.5±1.5, 35.91N×140.15E, h78km±14km, mb3.4/9, mbtmp3.8/13, MS2.8/2, Error ellipse: s-maj=20.6km s-min=8.3km az=68.0*
*NEIC **20** 10:32:46.4±0.9, 35.97N±0.05×140.13E±0.08, h73km±5km, mb4.4/6, Error ellipse: s-maj=10.1km s-min=7.0km az=70.0*
*JMA **20** 10:32:46.4±0.1, 36.0N±0.3×140.1E±0.4, h61km, MD3.8/40, MV3.6/40, SOUTHERN IBARAKI PREF*
JMA Felt II J1 at SOUTHERN IBARAKI PREF .
*NIED **20** 10:32:46.4, 35.99N×140.08E, h61km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr4.94; Mθθ0.43; Mϕϕ -5.37; Mrθ -1.01; Mrϕ -1.78; Mθϕ4.02; Fault plane solution: M0 6.86000×10^14 NP1: ϕs215.00000°, δ31.00000°, λ124.00000°. NP2: ϕs357.00000°, δ64.00000°, λ71.00000°.*

ISC 20 10:32:46.0±0.8, 35.97N±0.04×140.11E±0.05, h68km±7km, n53, σ1.03/53, mb3.9/12, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JYT	**Yasato**	**0.27**	**15**	*i* P		**Pn**	**10 32 56.4**	**-0.3**
JYT				A		A	10 32 56.4	
	comp=N,17nm,0.5s,comp=E,19nm,0.4s							
JYT				S		**Sn**	**10 33 03.8**	**-0.8**
JIHU	**Itakohorinouch**	**0.34**	**90**	*i* P		**Pn**	**10 32 57.5**	**+0.4**
JIHU				S		**Sn**	**10 33 06.9**	**+1.6**
TOK	**Tokyo**	**0.40**	**226**	A		A	10 32 57.4	
	comp=N,36nm,0.6s,comp=E,26nm,0.6s							
JSMT	**Sammumatsuo**	**0.42**	**140**	A		A	10 32 58.0	
	comp=N,6.0nm,0.7s,comp=E,9.0nm,1.4s							
JCCN	**Chibachonan**	**0.59**	**170**	A		A	10 32 59.7	
	comp=N,6.0nm,0.3s,comp=E,6.0nm,0.8s							
JCAJ	**Choshiashikaji**	**0.66**	**112**	A		A	10 33 00.6	
	comp=N,4.0nm,6.6s,comp=E,4.0nm,9.3s							
JAG	**Ashikaga**	**0.70**	**311**	*i* P		**Pn**	**10 33 00.8**	**0.0**
JAG				A		A	10 33 00.8	
	comp=N,10.0nm,0.6s,comp=E,10.0nm,0.3s							
JAG				⇓S		**Sn**	**10 33 10.9**	**-0.7**
JRY	**Ryogami san**	**0.98**	**273**	⇓*i* P		**Pn**	**10 33 04.4**	**+0.2**
JRY				⇓*e*S		**Sn**	**10 33 17.1**	**-0.5**
JKT	**Katashina**	**1.06**	**319**	⇓*i* P		**Pn**	**10 33 05.2**	**-0.1**
JKT				A		A	10 33 05.2	
	comp=N,11nm,0.4s,comp=E,13nm,0.5s							
JKT				⇓S		**Sn**	**10 33 19.5**	**0.0**
JOD2	**Odawara 2**	**1.09**	**230**	⇓*i* P		**Pn**	**10 33 05.3**	**-0.2**
JOD2				⇓S		**Sn**	**10 33 18.8**	**-1.2**
BSO3	**Boso 3**	**1.21**	**164**	P		**Pn**	**10 33 06.5**	**-0.3**
BSO3				S		**Sn**	**10 33 23.5**	**+1.2**
JYN	**Shimodi**	**1.36**	**250**	⇓*i* P		**Pn**	**10 33 09.5**	**+0.4**
JYN				⇓S		**Sn**	**10 33 26.3**	**0.0**
JIM2	**Oshima 3**	**1.36**	**204**	*i* P		**Pn**	**10 33 08.2**	**-0.9**
JIM2				A		A	10 33 08.2	
	comp=N,4.0nm,0.3s,comp=E,5.0nm,0.3s							
JIM2				S		**Sn**	**10 33 24.8**	**-1.6**
JFY	**Yanaizu**	**1.47**	**347**	*i* P		**Pn**	**10 33 10.9**	**+0.3**
JUON	**Uonuma**	**1.50**	**326**	P		**Pn**	**10 33 11.2**	**+0.3**
JUON				S		**Sn**	**10 33 30.9**	**+1.2**
MJAR	**Matsushiro Arr**	**1.64**	**291**	P		**Pn**	**10 33 12.8**	**0.0**
	comp=E,176nm,0.4s,baz=93,slow=9.1,SNR=726							
MJAR				S		**Sn**	**10 33 34.9**	**+1.9**
	comp=E,43nm,0.4s,baz=29,slow=8.6,SNR=3.2							
MJAR				LR		LR	10 34 04.9	
	comp=E,112nm,19.7s,baz=138,slow=46							
MAJO	**Matsushiro**	**1.64**	**291**			**Pn**	**10 33 13.5**	**+0.7**
MJB9	**Matsu-Tunnel**	**1.65**	**291**			**Pn**	**10 33 13.6**	**+0.8**
JSG	**Sagara**	**2.04**	**231**			**Pn**	**10 33 18.4**	**+0.3**
JGF	**Kuroka**	**2.27**	**262**			**Pn**	**10 33 22.2**	**+1.0**
INU	**Inuyama**	**2.59**	**257**			**Pn**	**10 33 26.3**	**+0.7**
JHJ	**Hachijo jima 2**	**2.85**	**186**	P		**Pn**	**10 33 29.1**	**-0.1**
	comp=E,79nm,0.3s,baz=337,slow=20,SNR=44							
JHJ				S		**Sn**	**10 34 02.4**	**0.0**
	comp=E,199nm,0.3s,baz=69,slow=24,SNR=8.5							
JHJ2	**Mitsune**	**2.86**	**185**	Pn		**Pn**	**10 33 29.7**	**+0.5**
JTM	**Tenmabayashi**	**4.87**	**9**			**Pn**	**10 33 57.3**	**+0.6**
JMN	**Monobe**	**5.59**	**248**	Pn		**Pn**	**10 34 07.2**	**+0.6**
ERM	**Erimo**	**6.49**	**21**	Pn		**Pn**	**10 34 17.2**	**-1.6**
ASAJ	**Asahikawa**	**8.36**	**12**	P		**Pn**	**10 34 43.7**	**-0.7**
	comp=E,2.4nm,0.3s,baz=221,slow=7.0,SNR=17							
ASAJ				S		**Sn**	**10 36 16.2**	**-1.0**
	comp=E,3.4nm,0.7s,baz=354,slow=32,SNR=4.2							
JKA	**Kamikawa-asahi**	**8.36**	**12**			**Pn**	**10 34 43.2**	**-1.2**
JKA	**Kamikawa-asahi**	**8.36**	**12**			**Sn**	**10 36 16.2**	**-1.0**
KSRS	**Korea Array**	**9.90**	**282**	P		**Pn**	**10 35 08.4**	**+3.0**
	comp=E,1.0nm,0.5s,baz=94,slow=14,SNR=5.5							
KSRS				LR		LR	10 38 47.4	
	comp=E,37nm,18.7s,baz=90,slow=36							
USRK	**Ussuriysk Ar.**	**10.31**	**325**	P		**Pn**	**10 35 14.3**	**+3.3**
	comp=E,2.3nm,0.8s,baz=150,slow=8.8,SNR=4.1							
GUMO	**Guam**	**22.69**	**168**	LR		LR	10 45 37.8	
	comp=E,30nm,18.5s,baz=112,slow=34							
H11N2	**WAKE ISLAND Hy**	**28.55**	**117**	T		T	11 08 38.3	
	baz=308,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**28.55**	**117**	T		T	11 08 45.5	
	baz=308,slow=75,SNR=7.7							
H11N3	**WAKE ISLAND Hy**	**28.57**	**117**	T		T	11 08 38.1	
	baz=308,slow=75,SNR=9.2							
H11S1	**WAKE ISLAND Hy**	**29.21**	**119**	T		T	11 08 49.0	
	baz=313,SNR=6.9							
H11S3	**WAKE ISLAND Hy**	**29.21**	**120**	T		T	11 08 47.8	
	baz=313,SNR=5.0							
H11S2	**WAKE ISLAND Hy**	**29.22**	**120**	T		T	11 08 53.7	
	baz=313							
ZALV	**Zalesovo Beam**	**41.87**	**313**	P		**P**	**10 40 28.4**	**-0.8**
	comp=E,0.8nm,0.3s,baz=92,slow=5.1,SNR=6.2							
	comp=E,0.8nm,0.3s							
MKAR	**Makanchi Array**	**43.80**	**303**	P		**P**	**10 40 45.1**	**0.0**
	comp=E,1.3nm,0.8s,baz=83,slon=10,SNR=9.1							
	comp=E,1.3nm,0.8s							
KURK	**Kurchatov**	**45.77**	**309**	P		**P**	**10 41 00.1**	**-0.4**
KURK				IAmb		IAmb	10 41 01.7	
	comp=Z,6.3nm,1.1s							
KURBB	**Kurchatov Arra**	**45.84**	**309**	P		**P**	**10 41 00.8**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=85,slon=8.3,SNR=21							
	comp=Z,1.7nm,0.4s							
ILAR	**Eielson Array**	**50.95**	**32**	P		**P**	**10 41 40.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=273,slon=5.6,SNR=7.0							
	comp=Z,0.7nm,0.7s							
WB0	**Warramunga Arr**	**55.69**	**187**	P		**P**	**10 42 14.7**	**-0.7**
WB0				IAmb		IAmb	10 42 49.0	
	comp=Z,5.2nm,1.1s							
WR8	**Warramunga Arr**	**55.87**	**186**	P		**P**	**10 42 16.0**	**-0.7**
WR8				IAmb		IAmb	10 42 22.5	
	comp=Z,6.0nm,1.2s							
WB2	**Warramunga Arr**	**55.87**	**187**	P		**P**	**10 42 16.1**	**-0.6**
WRA	**Warramunga Arr**	**55.87**	**187**	P		**P**	**10 42 15.8**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=0.4,slow=7.6,SNR=5.7							
	comp=Z,1.4nm,0.7s							
WRA	**Warramunga Arr**	**55.87**	**187**	IAmb		IAmb	10 42 19.1	
	comp=Z,0.6nm,1.3s							
ASAR	**Alice Springs**	**59.60**	**187**	P		**P**	**10 42 42.0**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=19,slow=11,SNR=7.3							
	comp=Z,0.2nm,0.6s							
ARCES	**ARCESS Array B**	**64.62**	**339**	P		**P**	**10 43 15.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=55,slow=6.4,SNR=3.6							
	comp=Z,0.4nm,0.6s							
AKASG	**Malin Array Be**	**74.49**	**322**	P		**P**	**10 44 16.0**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=49,slow=6.7,SNR=4.5							
	comp=Z,0.3nm,0.4s							
AKASG	**Malin Array Be**	**74.49**	**322**	IAmb		IAmb	10 44 37.4	
	comp=Z,2.6nm,1.2s							
TXAR	**Lajitas Array**	**91.60**	**52**	P		**P**	**10 45 46.3**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=327,slow=3.6,SNR=2.4							
	comp=Z,0.2nm,0.8s							

*NEIC **20** 11:22:01.9±1.4, 12.86S±0.07×166.76E±0.09, h108km±5km, mb4.6/67, Error ellipse: s-maj=12.2km s-min=10.8km az=79.0*
*GCMT **20** 11:22:02.9±0.2, 12.86S±0.03×166.51E±0.02, h130km±3km, MW4.9/99, Moment Tensor Solution. s44,c49; s99,c131; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.14±.08; Mθθ-0.43±.10; Mϕϕ-1.71±.11; Mrθ-0.45±.08; Mθϕ0.94±.12; Mrϕ-1.34±.08; Best double couple: M0 2.58100×10^16 NP1: ϕs314.00000°, δ36.00000°, λ56.00000°. NP2: ϕs173.00000°, δ61.00000°, λ112.00000°. Principal axes: T 2.7260, Plg67.0000°, Azm125.0000°; N -0.2930, Plg19.0000°, Azm342.0000°; P -2.4360, Plg13.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **20** 11:22:03.1, 12.92S×166.64E, h114km, mb4.8/49, Santa Cruz Islands*
*IDC **20** 11:22:04.7±2.1, 12.90S×166.68E, h137km±18km, mb4.2/20, mbtmp4.5/21, MS3.5/28, Error ellipse: s-maj=15.2km s-min=11.9km az=85.0*
*BJI **20** 11:22:04.1, 12.17S×166.77E, h121km, mB4.8/5, mb4.8/40*
*GFZ **20** 11:22:06.6±0.3, 13.0S±4.6×16.7E±.7, h155km, M4.6/21, mb4.6/21*

**ISC 20 11:22:00.6±0.3, 12.83S±0.04×166.74E±0.05, h100km, n244, σ1.24/226, mb4.7/64, 4

RAO Raoul Island 21.68 141 LR LR 11 32 53.5
comp=Z,83nm,19.0s,baz=304,slow=30
MTSU Mount Surprise 22.24 253 P **P** **11 26 50.0 +0.7**
MTSU Mount Surprise 22.24 253 P **P** **11 26 49.5 +0.1**
ARMA Armidale 22.40 216 **P** **11 26 51.1 +0.1**
ARMA IAmb IAmb 11 26 53.6
comp=Z,22nm,0.9s
ARMA Armidale 22.40 216 P **P** **11 26 51.4 +0.4**
OUZ Omahuta 23.14 166 P **P** **11 26 59.4 +1.3**
QLP Quilpie 25.16 234 P **P** **11 27 16.9 +0.2**
QLP Quilpie 25.16 234 P **P** **11 27 17.2 +0.5**
HAZ Te Kaha 26.71 160 P **P** **11 27 30.9 +0.5**
CMSA Cobar Meteorol 26.86 223 P **P** **11 27 30.9 -1.1**
URZ Urewera 26.96 162 P **P** **11 27 32.0 -0.7**
URZ Urewera 26.96 162 P **P** **11 27 34.9 +2.2**
MWZ Matawai 27.16 161 P **P** **11 27 36.4 +1.9**
TWGZ Tauwhareparae 27.16 160 P **P** **11 27 36.4 +1.8**
CAN Canberra 27.55 213 P **P** **11 27 37.7 -0.4**
CAN IAmb IAmb 11 28 19.8
comp=Z,53nm,1.5s
CAN Canberra 27.55 213 P **P** **11 27 39.1 +1.0**
BKZ Black Stump Fm 27.62 164 P **P** **11 27 38.5 -0.2**
BKZ Black Stump Fm 27.62 164 P **P** **11 27 38.0 -0.7**
BHHZ Black Hill Sta 27.80 164 P **P** **11 27 40.0 -0.4**
PNHZ Pukenui 28.24 165 P **P** **11 27 44.1 -0.1**
TSZ Takapari Road 28.32 165 P **P** **11 27 44.7 -0.2**
INKA Innaminka 28.46 235 **P** **11 27 46.6 +0.4**
MRZ Mangatainoka R 28.79 166 P **P** **11 27 47.6 -1.4**
NNZ Nelson 28.87 170 P **P** **11 27 51.0 +1.3**
BFZ Birch Farm 28.97 165 P **P** **11 27 52.0 +1.4**
THZ Tophouse 29.32 171 P **P** **11 27 52.8 -1.0**
STKA Stephens Creek 29.88 227 P **P** **11 27 59.3 +0.5**
comp=Z,10nm,0.8s,baz=40,slow=7.0,SNR=16
STKA LR LR 11 39 08.6
comp=Z,214nm,19.3s,baz=37,slow=34
comp=Z,10nm,0.8s
STKA Stephens Creek 29.88 227 P **P** **11 27 59.4 +0.6**
STKA Stephens Creek 29.88 227 P **P** **11 27 58.8 0.0**
KHZ Kahutara 30.07 170 P **P** **11 28 00.8 +0.6**
LTZ Lake Taylor 30.23 172 P **P** **11 28 01.6 -0.1**
RPZ Rata Peaks 31.00 174 LR LR 11 39 11.8
comp=Z,26nm,18.7s,baz=150,slow=33
RPZ Rata Peaks 31.00 174 P **P** **11 28 09.1 +0.6**
RPZ Rata Peaks 31.00 174 P **P** **11 28 09.1 +0.6**
WR8 Warramunga Arr 31.69 253 P **P** **11 28 14.1 -0.8**
WR8 IAmb IAmb 11 28 21.7
comp=Z,12nm,1.3s
WB0 Warramunga Arr 31.77 253 P **P** **11 28 14.7 -0.9**
WRAB Tennant Creek 31.83 253 P **P** **11 28 16.1 0.0**
WRA Warramunga Arr 31.84 253 P **P** **11 28 14.9 -1.3**
comp=Z,1.9nm,0.8s,baz=83,slow=9.3,SNR=3.4
comp=Z,1.9nm,0.8s
WRA Warramunga Arr 31.84 253 P **P** **11 28 15.0 -1.3**
ODZ Otahua Downs 32.28 175 P **P** **11 28 19.1 -0.6**
EAZ Earnscleugh 32.37 177 P **P** **11 28 21.0 +0.5**
HTT Hallett 32.61 226 P **P** **11 28 23.0 +0.1**
AS01 Alice Springs 32.88 246 P **P** **11 28 24.8 -0.5**
AS31 Alice Springs 32.92 246 P **P** **11 28 24.9 -0.7**
ASAR Alice Springs 32.92 246 P **P** **11 28 24.4 -1.2**
comp=Z,5.7nm,0.7s,baz=70,slow=9.8,SNR=100
ASAR PcP **PcP** **11 31 07.0 -1.0**
comp=Z,1.9nm,0.9s,baz=84,slow=3.4,SNR=9.0
ASAR ScP **ScP** **11 34 37.6 -5.6**
comp=Z,0.4nm,0.9s,baz=60,slow=3.1,SNR=4.1
ASAR LR LR 11 40 43.2
comp=Z,159nm,21.3s,baz=101,slow=34
comp=Z,5.7nm,0.7s
ASAR Alice Springs 32.92 246 P **P** **11 28 24.0 -1.7**
ASAR **PcP** **11 31 06.6 -1.4**
WHZ Wether Hill Ro 32.97 178 P **P** **11 28 25.3 -0.4**
TUZ Tuapeka 33.11 176 P **P** **11 28 27.7 +0.8**
PTPS Port Pirie 33.14 228 P **P** **11 28 26.5 -0.9**
MOO Moorlands 34.04 206 P **P** **11 28 33.8 -1.2**
GUMO Guam 34.04 320 LR LR 11 40 41.5
comp=Z,50nm,20.3s,baz=148,slow=33
BBOO Buckleboo 34.38 230 P **P** **11 28 38.1 0.0**
BBOO Buckleboo 34.38 230 P **P** **11 28 38.6 +0.5**
BBOO Buckleboo 34.38 230 P **P** **11 28 37.6 -0.5**
SAUI Saumlaki 35.17 274 P **P** **11 28 43.1 -2.1**
FAKI Fak Fak 35.51 283 P **P** **11 28 47.1 -1.0**
KNRA Kununurra 36.89 261 P **P** **11 28 59.4 -0.4**
KNRA IAmb IAmb 11 29 00.6
comp=Z,6.5nm,0.8s
SIJI Sorong 37.10 286 LR LR 11 46 30.8
comp=Z,53nm,18.2s,baz=64,slow=40
FORT Forrest 39.86 237 P **P** **11 29 24.6 +0.1**
FORT IAmb IAmb 11 29 25.3
comp=Z,12nm,0.7s
FITZ Fitzroy Crossi 39.90 257 LR LR 11 43 47.9
comp=Z,113nm,20.9s,baz=26,slow=33
FITZ Fitzroy Crossi 39.90 257 P **P** **11 29 23.7 -1.3**
BATI Baumata 42.26 269 LR LR 11 47 03.8
comp=Z,204nm,18.1s,baz=136,slow=36
PPT Papeete 42.35 102 LR LR 11 43 56.6
comp=Z,36nm,21.1s,baz=298,slow=31
PPT2 Papeete2 42.35 102 *e*P P 11 29 35.7 -10
comp=Z,27nm,22.2s
PPT2 *e*LR LR 11 41 45.2
comp=Z,214nm,34.2s
PPT2 *e*LR LR 11 41 50.0
comp=Z,368nm,32.5s
MBWA Marble Bar 45.58 253 P **P** **11 30 11.1 +0.2**
MBWA Marble Bar 45.58 253 P **P** **11 30 11.2 +0.3**
MBWA IAmb IAmb 11 30 12.3
comp=Z,24nm,1.0s
MBWA Marble Bar 45.58 253 P **P** **11 30 09.9 -1.1**
JCJ Chichijima 46.30 329 LR LR 11 46 50.1
comp=Z,31nm,21.8s,baz=106,slow=32
MEEK Meekatharra 47.07 246 P **P** **11 30 22.1 -0.5**
MEEK Meekatharra 47.07 246 P **P** **11 30 21.5 -1.1**
KLBR Kellerberrin 48.61 239 P **P** **11 30 33.7 -0.7**
NWAO Narrogin (SRO) 49.31 238 LR LR 11 51 11.5
comp=Z,146nm,19.4s,baz=339,slow=36
NWAO Narrogin (SRO) 49.31 238 P **P** **11 30 39.1 -0.6**
NWAO Narrogin (SRO) 49.31 238 P **P** **11 30 39.6 0.0**
MORW Morawa 49.65 243 P **P** **11 30 42.5 +0.1**
MORW Morawa 49.65 243 P **P** **11 30 42.7 +0.4**
TAOE Nuku Hiva Isla 52.24 91 *e*LR LR 11 46 03.2
comp=Z,202nm,30.8s
KKM Kota Kinabalu 53.59 287 P **P** **11 31 11.3 -0.6**
KKM Kota Kinabalu 53.59 287 P **P** **11 31 12.2 +0.2**
comp=Z,18nm,1.1s
KKM Kota Kinabalu 53.59 287 P **P** **11 31 11.3 -0.6**
JMN Monobe 55.88 327 P **P** **11 31 27.3 -0.8**
MJAR Matsushiro Arr 55.99 332 P **P** **11 31 28.0 -0.8**
comp=Z,5.9nm,1.1s,baz=165,slow=6.7,SNR=13
MJAR LR LR 11 56 13.4
comp=Z,11nm,18.9s,baz=187,slow=37
comp=Z,5.9nm,1.1s
MJAR Matsushiro Arr 55.99 332 **P** **11 31 28.4 -0.4**
MJAR IAmb IAmb 11 31 29.3
comp=Z,5.7nm,1.1s
MAJO Matsushiro 55.99 332 P **P** **11 31 28.5 -0.3**
MAJO IAmb IAmb 11 31 29.6
comp=Z,8.3nm,0.9s
MAJO Matsushiro 55.99 332 P **P** **11 31 28.6 -0.2**
MJB9 Matsu-Tunnel 56.00 332 P **P** **11 31 28.5 -0.3**
MJB9 IAmb IAmb 11 31 29.6
comp=Z,8.2nm,0.9s
YULB Yu-li 57.20 309 P **P** **11 31 37.1 -0.5**
YULB IAmb IAmb 11 31 59.8
comp=Z,8.7nm,1.1s
ERM Erimo 58.73 340 P **P** **11 31 48.3 +0.4**
ERM IAmb IAmb 11 31 55.4
comp=Z,12nm,1.1s
JKA Kamikawa-asahi 60.79 340 P **P** **11 32 02.5 +0.5**
JKA IAmb IAmb 11 32 04.1
comp=Z,18nm,1.3s
KSRS Korea Array 61.89 326 P **P** **11 32 10.4 +1.0**
comp=Z,2.1nm,0.9s,baz=130,slow=7.6,SNR=6.6
comp=Z,2.1nm,0.9s
INCN Inchon 62.63 325 P **P** **11 32 15.4 +0.9**
YSS Yuzhno-Sakhali 63.27 342 P **P** **11 32 19.0 +0.5**
YSS IAmb IAmb 11 32 20.8
comp=Z,16nm,1.0s
NJ2 Nanjing 63.97 315 *e*P **P** **11 32 24.3 +0.9**
NJ2 pmax pmax
comp=Z,37nm,0.5s
VNDA Vanda 64.74 181 P **P** **11 32 27.7 0.0**
comp=Z,9.0nm,1.2s,baz=344,slow=7.4,SNR=12
comp=Z,9.0nm,1.2s
VNDA Vanda 64.74 181 P **P** **11 32 28.0 +0.2**
VNDA IAmb IAmb 11 32 29.7
comp=Z,12nm,1.1s
AMKA Amchitka 64.86 9 P **P** **11 32 28.9 +0.1**
USRK Ussuriysk Ar. 64.97 333 P **P** **11 32 30.0 +0.3**
comp=Z,11nm,1.0s,baz=140,slow=6.4,SNR=11
comp=Z,11nm,1.0s
USRK Ussuriysk Ar. 64.97 333 P **P** **11 32 30.4 +0.8**
SBA Scott Base 65.03 180 P **P** **11 32 30.8 +1.2**
CASY Casey 65.09 202 P **P** **11 32 29.7 -0.5**
CASY IAmb IAmb 11 32 57.2
comp=Z,6.3nm,1.0s
SHEM Shemya Is, Ala 65.60 5 LR LR 11 59 28.2
comp=Z,7.9nm,18.2s,baz=78,slow=34
PETK Petropavlovsk- 66.13 354 P **P** **11 32 37.9 +0.9**
comp=Z,2.0nm,0.7s,baz=179,slow=6.6,SNR=3.3
PETK LR LR 11 54 46.7
comp=Z,24nm,21.6s,baz=182,slow=30
comp=Z,2.0nm,0.7s
PETK Petropavlovsk- 66.13 354 P **P** **11 32 37.2 +0.2**
BNX BinXian 68.23 331 ⇓P **P** **11 32 51.0 +0.6**
BNX pmax pmax
comp=Z,16nm,0.9s
LYN LuoYang 69.79 314 P **P** **11 33 01.9 +1.6**
LYN pmax pmax
comp=Z,29nm,0.5s
HNS HongShan 69.85 318 ⇓P **P** **11 33 01.9 +1.3**
HNS pmax pmax
comp=Z,18nm,1.0s
BJI2 Beijing 70.46 321 P **P** **11 33 05.6 +1.3**
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
HEH HeiHe 71.63 335 *e*P **P** **11 33 11.3 +0.2**
HEH pmax pmax
comp=Z,8.0nm,0.8s
XAN Xi'an 72.04 312 P **P** **11 33 14.3 +0.3**
XAN pmax pmax
comp=Z,14nm,1.1s
XLT XiLinHaoTe 72.87 324 *e*P **P** **11 33 20.3 +1.5**
XLT pmax pmax
comp=Z,16nm,1.1s
XLT pmax pmax
comp=Z,73nm,3.9s
KMI2 Kunming 72.88 302 P **P** **11 33 21.3 +1.9**
KMI2 pP pwP 11 33 48.8 +0.1
KMI2 pmax pmax
comp=Z,20nm,1.3s
MA2 Magadan 73.30 352 LR LR 12 03 26.3
comp=Z,23nm,18.7s,baz=195,slow=34
CMAR Chiang Mai Arr 73.72 294 P **P** **11 33 25.2 +1.1**
comp=Z,7.0nm,1.0s,baz=117,slow=4.4,SNR=31
comp=Z,7.0nm,1.0s
HHC Hu-ho-hao-te 73.81 320 *e*P **P** **11 33 26.5 +2.1**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,67nm,3.8s
CHTO Chiang Mai 73.84 294 P **P** **11 33 25.0 +0.1**
CHTO IAmb IAmb 11 33 26.5
comp=Z,10nm,1.2s
CHTO Chiang Mai 73.84 294 P **P** **11 33 25.3 +0.4**
comp=Z,8.2nm,1.3s
PZH PanZhiHua 74.25 302 P **P** **11 33 29.3 +2.0**
LZH Lanzhou 76.67 312 *e*P **P** **11 33 42.4 +1.4**
LZH sP sP 11 34 24.8 +8.3
LZH pmax pmax
comp=Z,22nm,1.0s
QSPA South Pole Qui 77.19 180 P **P** **11 33 43.0 -0.3**
comp=Z,40nm,0.9s,baz=25,slow=1.8,SNR=88
comp=Z,40nm,0.9s
QSPA South Pole Qui 77.19 180 P **P** **11 33 43.3 0.0**
N15K Kwethluk River 77.46 16 P **P** **11 33 44.4 -0.3**
N15K IAmb IAmb 11 33 45.7
comp=Z,11nm,1.2s
M14K Bethel 77.46 15 P **P** **11 33 45.3 +0.7**
M14K IAmb IAmb 11 33 46.0
comp=Z,7.4nm,0.9s
KDAK Kodiak Island 77.88 21 LR LR 12 01 15.4
comp=Z,41nm,20.1s,baz=199,slow=30
M16K Timber Creek 78.48 16 P **P** **11 33 50.5 +0.2**
M16K IAmb IAmb 11 33 52.2
comp=Z,6.6nm,0.8s
J14K Nanvaranak Lak 78.81 13 P **P** **11 33 53.0 +1.0**
K15K Wolf Creek Mou 78.89 15 P **P** **11 33 53.4 +0.9**
K15K IAmb IAmb 11 33 54.3
comp=Z,9.6nm,0.8s
ULN Ulaanbaatar 80.31 324 P **P** **11 34 01.6 +0.9**
BILL Bilibino 80.65 360 P **P** **11 34 02.5 +0.7**
BILL IAmb IAmb 11 34 03.3
comp=Z,24nm,1.1s
SONM Songino Array 80.67 324 P **P** **11 34 02.5 -0.1**
comp=Z,4.5nm,1.0s,baz=141,slow=5.6,SNR=19
comp=Z,4.5nm,1.0s
SONM Songino Array 80.67 324 P **P** **11 34 02.9 +0.3**
SONM IAmb IAmb 11 34 04.3
comp=Z,10nm,1.2s
GTA2 Gaotai 81.06 314 *e*P **P** **11 34 06.3 +1.4**
GTA2 pP pwP 11 34 34.9 +1.3
GTA2 pmax pmax
comp=Z,13nm,1.1s
J18K Innoko River 81.09 16 P **P** **11 34 04.4 0.0**
K20K Telida 81.73 17 P **P** **11 34 05.2 -2.6**
K20K Telida 81.73 17 **P** **11 34 04.9 -2.9**
BMRM Bremner River 83.01 22 P **P** **11 34 15.5 +1.0**
CRQM Cirque 83.40 22 P **P** **11 34 16.0 -0.7**
KHMM Horse Mountain 83.40 46 P **P** **11 34 17.1 0.0**
MAW Mawson 83.44 202 P **P** **11 34 16.5 -0.1**
comp=Z,6.2nm,0.9s,baz=100,slow=5.6,SNR=7.3
comp=Z,6.2nm,0.9s
MAW Mawson 83.44 202 P **P** **11 34 16.6 -0.1**
YBH Yreka Blue Hor 84.44 45 LR LR 12 06 06.4
comp=Z,18nm,18.7s,baz=232,slow=31
BBB Bella Bella 85.49 34 LR LR 12 07 54.1
comp=Z,40nm,18.4s,baz=217,slow=32
PFO Pinyon Flats O 86.31 55 LR LR 12 05 21.1
comp=Z,34nm,21.2s,baz=251,slow=30
NVAR Mina Array Bea 86.43 49 P **P** **11 34 32.8 +0.4**
comp=Z,0.4nm,0.5s,baz=248,slow=7.7,SNR=1.8
NVAR LR LR 12 08 06.1
comp=Z,44nm,18.3s,baz=220,slow=32
comp=Z,0.4nm,0.5s
EVN Everest 87.25 299 **P** **11 34 36.9 -0.3**
I07A Izee 87.50 44 P **P** **11 34 37.6 +0.2**
TIXI Tiksi 88.02 349 LR LR 12 11 00.7
comp=Z,21nm,19.5s,baz=166,slow=33
PRN Pahroc Range 88.55 51 IAmb IAmb 11 34 43.9
comp=Z,5.5nm,1.3s
BELA Belgrano 2 88.65 176 P **P** **11 34 41.5 -0.6**
BMO Blue Mountains 89.24 44 IAmb IAmb 11 34 45.8
comp=Z,3.6nm,1.2s
F10A Beach Ranch, E 89.65 43 P **P** **11 34 47.0 -0.4**
F10A IAmb IAmb 11 34 52.0
comp=Z,3.5nm,0.9s
MFID Camas Ranch 89.79 45 **P** **11 34 48.0 -0.2**
MFID IAmb IAmb 11 34 49.2
comp=Z,3.0nm,1.0s
PLID Pearl Lake 90.19 44 P **P** **11 34 50.1 0.0**
U15A North Rim 90.40 53 IAmb IAmb 11 34 57.2
comp=Z,3.2nm,0.9s
NEW Newport 90.46 40 LR LR 12 11 57.8
comp=Z,16nm,18.1s,baz=285,slow=33
MTPU Mount Pierson 90.91 51 P **P** **11 34 54.2 +0.4**
MTPU IAmb IAmb 11 34 55.7
comp=Z,4.5nm,1.2s
WMQ Urumqi 91.04 315 *e*P **P** **11 34 55.0 +1.1**
WMQ pmax pmax
comp=Z,11nm,1.3s
ELIB Princess Elisa 91.98 191 *d*P **P** **11 34 56.8 -1.0**
comp=Z,5.0nm,1.2s
PDAR Pinedale Array 94.04 47 LR LR 12 12 15.5
comp=Z,12nm,18.8s,baz=310,slow=32
ANMO Albuquerque 94.65 55 LR LR 12 10 43.1
comp=Z,21nm,18.8s,baz=260,slow=31
TROLL Troll, Antarti 94.70 185 ⇑P **P** **11 35 09.1 -1.3**
comp=Z,257nm,0.7s
SNAA Sanae 95.41 183 ⇑P **P** **11 35 11.9 -1.7**
comp=Z,62nm,0.9s
SNAA Sanae 95.41 183 P **P** **11 35 11.5 -2.0**
comp=Z,2.6nm,0.9s,baz=190,slow=6.9,SNR=5.5
comp=Z,2.6nm,0.9s
SNAA Sanae 95.41 183 P **P** **11 35 12.3 -1.2**
MKAR Makanchi Array 95.48 317 P **P** **11 35 13.4 -0.8**
comp=Z,5.0nm,1.0s,baz=101,slow=6.5,SNR=30
MKAR PKKPbc **PKKPbc** **11 52 04.2 -3.2**
comp=Z,0.8nm,0.9s,baz=311,slow=4.0,SNR=4.5
comp=Z,5.0nm,1.0s
MKAR Makanchi Array 95.48 317 P **P** **11 35 13.2 -1.0**
ZAIG Zacatecas 95.50 68 P **P** **11 35 14.2 -0.9**
ZAIG IAmb IAmb 11 35 15.9
comp=Z,1.6nm,0.6s
ZAA0 Zalesovo Array 95.56 324 P **P** **11 35 13.6 -0.7**
ZALV Zalesovo Beam 95.56 324 P **P** **11 35 13.5 -0.8**
comp=Z,2.1nm,0.7s,baz=103,slow=4.7,SNR=11
comp=Z,2.1nm,0.7s
MAKZ Makanchi 95.69 317 P **P** **11 35 15.0 -0.2**
TX31 Lajitas Ar. Si 95.82 61 P **P** **11 35 15.9 -0.4**
TX31 IAmb IAmb 11 35 30.1
comp=Z,2.4nm,1.4s
TXAR Lajitas Array 95.82 61 P **P** **11 35 16.7 +0.4**
comp=Z,0.4nm,0.7s,baz=222,slow=5.6,SNR=6.3
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 95.82 61 P **P** **11 35 15.5 -0.7**
YKA Yellowknife Ar 96.10 27 P **P** **11 35 15.2 -1.4**
comp=Z,0.6nm,0.9s,baz=263,slow=4.2,SNR=4.6
comp=Z,0.6nm,0.9s
YKA Yellowknife Ar 96.10 27 P **P** **11 35 16.0 -0.6**
YKAW1 Yellowknife Wh 96.15 27 P **P** **11 35 16.2 -0.6**
YKAW1 IAmb IAmb 11 35 47.9
comp=Z,1.6nm,0.7s
VNA2 Neumayer--Watz 96.35 182 ⇑P **P** **11 35 15.8 -2.0**
comp=Z,2.3nm,0.6s,baz=173,slow=4.8
VNA1 Neumayer--Stat 96.65 182 ⇑P **P** **11 35 17.7 -1.4**
comp=Z,1.6nm,0.7s
NRIK Noril'sk 98.12 339 LR LR 12 17 54.0
comp=Z,14nm,20.7s,baz=158,slow=34
KURBB Kurchatov Arra 98.67 320 PKKPbc PKKPbc 11 51 55.9 -2.9
comp=Z,0.4nm,0.3s,baz=282,slow=3.2,SNR=5.0
KSH2 Kashi 98.88 308 P Pdif 11 35 32.3 +2.4
KSH2 pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 118.29 346 PKP **PKPdf** **11 40 34.8 -0.9**
comp=Z,1.5nm,0.6s,baz=85,slow=1.6,SNR=8.0
FINES FINESS Array B 123.78 339 PKP **PKPdf** **11 40 45.4 -1.0**
comp=Z,1.2nm,0.8s,baz=115,slow=6.6,SNR=4.9
BOSA Boshof 124.46 222 PKP **PKPdf** **11 40 48.1 -0.8**
comp=Z,0.7nm,0.4s,baz=81,slow=1.8,SNR=3.8
AK11 Malin Array Si 128.92 327 PKP **PKPdf** **11 40 55.7 -0.8**
AK22 Malin Array Si 128.93 327 PKP **PKPdf** **11 40 55.7 -0.8**
AK05 Malin Array Si 128.93 326 PKP **PKPdf** **11 40 56.9 +0.4**
AK12 Malin Array Si 128.95 326 PKP **PKPdf** **11 40 55.8 -0.8**
AK06 Malin Array Si 128.96 326 PKP **PKPdf** **11 40 57.1 +0.5**
AK16 Malin Array Si 128.96 327 PKP **PKPdf** **11 40 55.6 -1.0**
LUBAR Lubar, Ukraine 130.09 326 PKP **PKPdf** **11 40 58.3 -0.5**
GERES GERESS Array B 137.72 334 PKP **PKPdf** **11 41 11.3 -2.0**
comp=Z,0.5nm,0.7s,baz=211,slow=0.8,SNR=4.9
SSB Saint Sauveur 144.28 338 PKPdf **PKPab** **11 41 24.4 +1.2**
RAFF Raffo Rosso 145.36 319 PKPdf **PKPdf** **11 41 26.3 -0.9**
VSL Villasalto 146.75 327 PKPbc **PKPdf** **11 41 31.2 +1.7**
KEST Kesra 149.41 322 PKPbc **PKPbc** **11 41 38.5 0.0**
comp=Z,9.6nm,0.8s,baz=4.7,slow=2.0,SNR=10
ESDC Sonseca Array 152.03 345 PKPbc **PKPbc** **11 41 43.9 -0.6**
comp=Z,2.3nm,0.9s,baz=6.9,slow=1.9,SNR=16
ESDC PKPab **PKPab** **11 41 54.3 +0.1**
comp=Z,3.0nm,0.8s,baz=10,slow=4.2,SNR=12
ESDC Sonseca Array 152.03 345 **PKPbc** **11 41 44.6 0.0**
ESDC **PKPab** **11 41 54.9 +0.8**
TORD Torodi Ar. Bea 165.42 273 PKP **PKPdf** **11 41 53.3 -1.0**
comp=Z,0.6nm,0.9s,baz=6.8,slow=0.6,SNR=5.0
TORD PKPab **PKPab** **11 42 52.2 -0.8**
comp=Z,2.3nm,1.0s,baz=76,slow=4.4,SNR=7.9

AEIC ***20*** *11:32:37.7±1.3, 67°.48N±0°.02×143°.75W±0°.04, h10km±6km, Error ellipse: s-maj=2.3km s-min=2.1km az=162.0*

NEIC 20 11:32:37.9±1.2, 67.46N±0°.02×143.73W±0°.03, h10km±1km, ML3.3/114**, ML3.2**(AEIC)**, Error ellipse: s-maj=2.9km s-min=2.6km az=26.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
F26K	**Sheenjek River**	**0.28**	**326**		Pg	11 32 43.0	-0.6
F26K				Sg	Sg	11 32 46.2	-1.2
F26K				IAML		11 32 46.8	
	comp=N,4μm,0.4s						
F26K				IAML		11 32 48.4	
	comp=E,4μm,0.6s						
BM02	**Burnt Mountain**	**0.30**	**264**		Pg	11 32 43.5	-0.4
G26K	**Porcupine Rive**	**0.52**	**183**		Pb	11 32 48.5	-0.4
G26K				Sg	Sb	11 32 55.6	-0.9
F25K	**Christian Rive**	**0.75**	**281**		Pg	11 32 51.9	-0.4
F25K				Sg	Sg	11 33 01.9	-0.2
F25K				IAML		11 33 06.6	
	comp=E,1μm,0.3s						
E25K	**Arctic Village**	**0.96**	**314**		Pg	11 32 55.7	-0.7
E25K				Sg	Sg	11 33 08.7	-0.1
E25K				IAML		11 33 12.0	
	comp=N,937nm,0.6s						
E25K				IAML		11 33 12.6	
	comp=E,835nm,0.3s						
G27K	**Doyon Strip**	**1.04**	**128**		Pg	11 32 57.6	-0.3
G27K				Sg	Sg	11 33 11.1	-0.4
G27K				IAML		11 33 14.2	
	comp=E,774nm,0.7s						
G27K				IAML		11 33 15.2	
	comp=N,772nm,0.6s						
FYU	**Fort Yukon**	**1.08**	**214**		Pb	11 32 58.7	+0.2
FYU	**Fort Yukon**	**1.08**	**214**		Sn	11 33 13.9	0.0
FYU	**Fort Yukon**	**1.08**	**214**	IAML		11 33 15.0	
	comp=E,1μm,0.6s						
FYU				IAML		11 33 15.2	
	comp=N,1μm,0.5s						
E27K	**Coleen River**	**1.09**	**47**		Pg	11 32 57.2	-1.5
E27K	**Coleen River**	**1.09**	**47**		Sb	11 33 13.0	0.0
E27K	**Coleen River**	**1.09**	**47**	IAML		11 33 16.0	
	comp=E,630nm,0.5s						
E27K				IAML		11 33 17.3	
	comp=N,652nm,0.7s						
G25K	**Bearman Lake**	**1.16**	**234**		Pb	11 32 59.7	-0.3
G25K					Sn	11 33 16.0	0.0
F28M	**Old Crow**	**1.49**	**82**		Pn	11 33 04.3	-0.3
F28M				IAML		11 33 30.2	
	comp=N,338nm,0.4s						
F28M				IAML		11 33 31.6	
	comp=E,425nm,0.6s						
H27K	**Steamboat Moun**	**1.51**	**144**		Pn	11 33 05.1	+0.1
H27K	**Steamboat Moun**	**1.51**	**144**		Sg	11 33 26.3	-0.2
H27K	**Steamboat Moun**	**1.51**	**144**	IAML		11 33 28.4	
	comp=N,448nm,0.3s						
H27K				IAML		11 33 29.9	
	comp=E,445nm,0.5s						
F24K	**Squaw Lake**	**1.60**	**274**		Pn	11 33 05.7	-0.5
F24K	**Squaw Lake**	**1.60**	**274**		Sb	11 33 27.7	-0.1
F24K	**Squaw Lake**	**1.60**	**274**	IAML		11 33 31.2	
	comp=E,346nm,0.2s						
F24K				IAML		11 33 32.9	
	comp=N,676nm,0.2s						
G24K	**Hadweenzic Riv**	**1.66**	**244**		Pn	11 33 06.3	-0.6
G24K	**Hadweenzic Riv**	**1.66**	**244**		Sb	11 33 29.8	+0.5
G24K	**Hadweenzic Riv**	**1.66**	**244**	IAML		11 33 32.3	
	comp=E,792nm,0.6s						
G24K				IAML		11 33 32.5	
	comp=N,814nm,0.5s						
E24K	**Your Creek**	**1.91**	**291**		Pn	11 33 10.2	-0.3
E24K	**Your Creek**	**1.91**	**291**		Sb	11 33 36.6	-0.1
E24K	**Your Creek**	**1.91**	**291**	IAML		11 33 45.8	
	comp=E,131nm,0.9s						
E24K				IAML		11 33 47.2	
	comp=N,143nm,0.9s						
E28M	**Babbage River**	**1.95**	**52**		Pn	11 33 10.2	-0.8
E28M				IAML		11 33 46.9	
	comp=N,217nm,0.7s						
I27K	**Kandik River**	**2.05**	**155**		Pn	11 33 13.4	+1.0
D27M	**Malcolm River**	**2.06**	**29**		Pn	11 33 12.6	0.0
D27M	**Malcolm River**	**2.06**	**29**		Sb	11 33 41.7	+0.7
D27M	**Malcolm River**	**2.06**	**29**	IAML		11 33 46.4	
	comp=E,215nm,0.6s						
D27M				IAML		11 33 48.8	
	comp=N,141nm,0.2s						
PRP	**Porcupine Dome**	**2.08**	**201**		Pn	11 33 13.2	+0.2
D25K	**Kavik River**	**2.11**	**334**	Pn	Pn	11 33 13.7	+0.4
D25K	**Kavik River**	**2.11**	**334**		Sb	11 33 42.5	+0.1
D25K	**Kavik River**	**2.11**	**334**	IAML		11 33 43.6	
	comp=N,268nm,0.6s						
D25K				IAML		11 33 46.8	
	comp=E,308nm,0.6s						
C27K	**Jago River**	**2.17**	**0**		Pn	11 33 14.6	+0.5
I26K	**Coal Creek Min**	**2.18**	**174**		Pn	11 33 14.5	+0.4
G29M	**Pine Creek**	**2.29**	**101**		Pn	11 33 15.3	-0.4
G29M				IAML		11 33 55.4	
	comp=N,204nm,0.7s						
E23K	**Chandalar**	**2.32**	**288**		Pn	11 33 16.4	+0.2
H24K	**Noodor Dome**	**2.32**	**227**		Pn	11 33 15.3	-0.9
PS04	**TAPS Pump Stn4**	**2.33**	**297**		Pn	11 33 16.4	+0.1
E29M	**Blow River**	**2.39**	**64**		Pn	11 33 16.6	-0.4

H29M	**Whitestone**	**2.46 118**			Pn	11 33 18.5	+0.5
H29M			IAML			11 34 00.7	
	comp=E,167nm,0.6s						
H29M			IAML			11 34 04.1	
	comp=N,162nm,1.1s						
TOLK	**Toolik Lake Re**	**2.49 301**			Pn	11 33 19.1	+0.6
C26K	**Camden Bay**	**2.50 351**			Pn	11 33 19.1	+0.6
C26K	**Camden Bay**	**2.50 351**	IAML			11 34 03.0	
	comp=E,117nm,0.6s						
C26K			IAML			11 34 06.8	
	comp=N,125nm,0.7s						
COLD	**Coldfoot**	**2.52 268**			Pn	11 33 18.4	-0.4
I28M	**Miner Creek**	**2.53 141**			Pn	11 33 19.5	+0.5
I28M			IAML			11 34 05.3	
	comp=E,157nm,0.6s						
I28M			IAML			11 34 06.1	
	comp=N,147nm,0.6s						
D24K	**Happy Valley**	**2.54 314**	Pn		Pn	11 33 18.7	-0.4
D24K			IAML			11 34 01.4	
	comp=N,153nm,0.6s						
D24K			IAML			11 34 03.4	
	comp=E,162nm,0.5s						
G23K	**Bananza Creek**	**2.58 256**			Pn	11 33 18.7	-1.0
D28M	**Stokes Point**	**2.63 42**			Pn	11 33 21.1	+0.8
POKR	**Poker Plat Res**	**2.79 214**			Pn	11 33 22.8	+0.2
PS07	**TAPS Pump Stn7**	**2.83 222**			Pn	11 33 23.1	0.0
H23K	**Yukon River**	**2.84 237**			Pn	11 33 22.6	-0.6
H23K	**Yukon River**	**2.84 237**	IAML			11 34 11.1	
	comp=E,122nm,0.8s						
J25K	**Salcha River,**	**2.94 194**			Pn	11 33 25.2	+0.5
G30M	**tAoh Zraii Nji**	**2.96 96**			Pn	11 33 25.0	+0.1
G30M			IAML			11 34 22.8	
	comp=N,90nm,0.9s						
EPYK	**Eagle Plains**	**2.97 108**			Pn	11 33 25.1	+0.1
IL31		**2.99 207**			Pn	11 33 25.7	+0.5
ILAR	**Eielson Array**	**2.99 207**			Pn	11 33 25.2	-0.1
D23K	**Nanushuk River**	**3.00 303**			Pn	11 33 26.3	+0.9
D23K			IAML			11 34 27.6	
	comp=E,96nm,1.1s						
F30M	**Barrier River**	**3.05 84**			Pn	11 33 26.6	+0.5
COLA	**College**	**3.09 215**			Pn	11 33 26.9	+0.3
I23K	**Minto, Yukon-K**	**3.25 227**			Pn	11 33 28.3	-0.5
I23K	**Minto, Yukon-K**	**3.25 227**	IAML			11 34 24.5	
	comp=E,91nm,0.6s						
I23K			IAML			11 34 26.5	
	comp=N,74nm,0.8s						
CCB	**Clear Creek Bu**	**3.28 212**			Pn	11 33 29.1	-0.2
CCB	**Clear Creek Bu**	**3.28 212**	IAML			11 34 26.7	
	comp=E,74nm,0.4s						
HDA	**Harding Lake**	**3.34 205**			Pn	11 33 29.9	-0.1
C23K	**Itkillik River**	**3.47 317**			Pn	11 33 32.3	+0.5
C23K	**Itkillik River**	**3.47 317**	IAML			11 34 30.1	
	comp=E,79nm,0.9s						
WRH	**Wood River Hil**	**3.49 213**			Pn	11 33 32.2	0.0
WRH			IAML			11 34 29.4	
	comp=N,51nm,0.7s						
WRH			IAML			11 34 32.0	
	comp=E,71nm,0.8s						
K27K	**Chicken**	**3.52 168**			Pn	11 33 33.6	+1.1
I30M	**Mount Dempster**	**3.72 124**			Pn	11 33 36.0	+0.6
I30M			IAML			11 34 34.9	
	comp=N,55nm,0.6s						
I30M			IAML			11 34 39.9	
	comp=E,52nm,0.7s						
G31M	**Satah River**	**3.72 94**			Pn	11 33 35.0	-0.3
G31M			IAML			11 34 48.9	
	comp=E,54nm,1.4s						
G31M			IAML			11 34 50.5	
	comp=N,57nm,1.1s						
RIDG	**Independent Ri**	**3.77 188**			Pn	11 33 36.9	+0.9
K24K	**Donnelly Dome**	**3.77 194**			Pn	11 33 37.0	+1.0
F21K	**Alatna River**	**3.78 271**			Pn	11 33 36.0	-0.2
F21K			IAML			11 34 46.1	
	comp=E,66nm,0.6s						
F21K			IAML			11 34 49.1	
	comp=N,60nm,0.6s						
F31M	**Tsiigehtchic**	**3.85 86**			Pn	11 33 37.3	+0.3
F31M			IAML			11 34 57.0	
	comp=E,38nm,0.9s						
DAWY	**Dawson**	**3.85 150**			Pn	11 33 38.1	+1.0
DAWY			IAML			11 34 47.3	
	comp=N,39nm,0.5s						
INK	**Inuvik**	**3.95 73**			Pn	11 33 38.6	+0.2
G21K	**Allakaket**	**3.96 261**			Pn	11 33 37.1	-1.5
E21K	**Killik River**	**3.99 289**			Pn	11 33 38.7	-0.3
E21K	**Killik River**	**3.99 289**	IAML			11 34 51.0	
	comp=E,35nm,0.9s						
I21K	**Tanana**	**4.04 239**			Pn	11 33 38.8	-0.9
I21K					Pn	11 33 39.5	-0.2
BWN	**Browne**	**4.06 218**	Pn		Pn	11 33 39.6	-0.3
BWN			IAML			11 34 56.6	
	comp=N,54nm,0.6s						
H31M	**Peel River**	**4.09 110**			Pn	11 33 40.3	-0.1
H31M			IAML			11 35 00.9	
	comp=E,42nm,0.7s						
H31M			IAML			11 35 10.7	
	comp=N,39nm,0.7s						
J30M	**Hart River**	**4.18 130**			Pn	11 33 42.7	+0.9
J30M			IAML			11 35 00.3	
	comp=E,35nm,0.6s						
J30M			IAML			11 35 01.6	
	comp=N,43nm,0.9s						
IMAR	**Indian Mountai**	**4.25 254**			Pn	11 33 42.2	-0.3
IM04	**Indian Mountai**	**4.26 254**			Pn	11 33 41.5	-1.2
C21K	**Knifeblade Rid**	**4.44 298**			Pn	11 33 45.5	+0.3
K29M	**Barlow Dome**	**4.45 142**			Pn	11 33 46.5	+1.1
K29M			IAML			11 35 04.5	
	comp=E,28nm,1.0s						
K29M			IAML			11 35 11.2	
	comp=N,26nm,1.0s						
BCAR	**Beaver Creek A**	**4.49 169**			Pn	11 33 46.4	+0.5
L27K	**Beaver Creek,**	**4.49 169**			Pn	11 33 46.4	0.0
B22K	**Teshekpuk Lake**	**4.54 314**	Pn		Pn	11 33 46.2	-0.3
MENT	**Mentasta**	**4.54 180**			Pn	11 33 46.4	-0.3
B21K	**Ikpikpuk River**	**4.55 303**	Pn		Pn	11 33 45.9	-0.7
B21K			IAML			11 35 19.9	
	comp=N,28nm,1.2s						
B21K			IAML			11 35 21.3	
	comp=E,28nm,1.3s						
RND	**Reindeer**	**4.60 210**			Pn	11 33 48.3	+0.9
RND			IAML			11 34 42.0	
	comp=E,29nm,0.4s						
F20K	**Avaraart Lake**	**4.68 270**			Pn	11 33 48.3	0.0
F20K			IAML			11 35 13.1	
	comp=N,36nm,0.7s						
F20K			IAML			11 35 13.8	
	comp=E,27nm,0.6s						
E20K	**Nigu River**	**4.78 285**			Pn	11 33 50.4	+0.5
H20K	**Anotleneega Mo**	**4.89 251**			Pn	11 33 49.9	-1.4
L29M	**L29M**	**4.96 149**	Pn		Pn	11 33 53.5	+1.1
L29M			IAML			11 35 22.3	
	comp=E,28nm,1.3s						
L29M			IAML			11 35 23.1	
	comp=N,29nm,0.9s						
CHUM	**Lake Minchumin**	**5.05 229**			Pn	11 33 52.6	-0.9
WAT1	**Susitna Watana**	**5.08 206**			Pn	11 33 55.0	+1.1
M26K	**Nabesna, AK**	**5.09 176**			Pn	11 33 55.6	+1.4
I20K	**Naaghedeneel**	**5.12 244**	Pn		Pn	11 33 55.2	+0.8
HARP	**HAARP**	**5.12 187**			Pn	11 33 55.7	+1.1
WAT7	**Susitna Watana**	**5.12 207**			Pn	11 33 55.5	+0.9
M27K	**Edge Creek, AK**	**5.19 170**			Pn	11 33 56.3	+0.7
WAT6	**Susitna Watana**	**5.19 201**			Pn	11 33 56.8	+1.2
E19K	**Redstone River**	**5.20 276**			Pn	11 33 55.8	+0.2
BVCY	**Beaver Creek**	**5.21 165**			Pn	11 33 57.1	+1.2
A22K	**Sinclair Lake**	**5.35 317**			Pn	11 33 57.3	-0.3
CAST	**Castle Rocks**	**5.35 225**			Pn	11 33 56.8	-0.9
J20K	**Nowinta River**	**5.40 237**			Pn	11 33 57.5	-0.9
G19K	**Purcell Mounta**	**5.44 262**	Pn		Pn	11 33 58.7	-0.3
H19K	**Roundabout Mou**	**5.45 255**			Pn	11 33 58.8	-0.2
M24K	**Tolsona, Glenn**	**5.48 192**	Pn		Pn	11 34 01.5	+2.0
D19K	**Kuna River**	**5.51 287**			Pn	11 33 59.8	0.0
F19K	**Shaleruckik Mo**	**5.51 270**	Pn		Pn	11 33 58.4	-1.5
B20K	**Meade River**	**5.51 304**	Pn		Pn	11 33 59.7	-0.1
M29M	**Somme Creek**	**5.51 154**			Pn	11 34 01.4	+1.4
M30M	**Minto, Yukon**	**5.72 146**			Pn	11 34 03.5	+0.7
CUT	**Chulitna**	**5.79 212**			Pn	11 34 03.9	+0.3
PPLA	**Purkeypile**	**5.80 222**	Pn		Pn	11 34 04.2	+0.2
SCM	**Sheep Creek Mo**	**5.86 197**	Pn		Pn	11 34 06.8	+2.0
YUK3	**Moose Creek**	**5.88 165**			Pn	11 34 06.3	+1.1
N25K	**Chitina, Valde**	**5.89 184**			Pn	11 34 06.6	+1.4
J19K	**Poorman**	**6.01 240**			Pn	11 34 05.4	-1.3
SML	**Sawmill**	**6.01 201**			Pn	11 34 07.8	+1.0
GLB	**Gilahina Butte**	**6.05 180**	Pn		Pn	11 34 07.7	+0.4
KLU	**Klutina**	**6.07 190**			Pn	11 34 06.8	-0.9
C19K	**Lookout Ridge**	**6.11 293**		Pn	Pn	11 34 08.2	+0.1
MCARA	**McCarthy VSAT**	**6.11 177**			Pn	11 34 09.5	+1.4
G18K	**Tagagawik**	**6.13 262**	Pn		Pn	11 34 07.1	-1.3
VRDI	**Verde Repeater**	**6.26 179**	Pn		Pn	11 34 07.9	-2.5
F18K	**Selawik**	**6.29 269**			Pn	11 34 10.2	-0.3
PTPK	**Patty Peak**	**6.33 174**			Pn	11 34 12.7	+1.4
H18K	**Honhosa River**	**6.33 255**			Pn	11 34 10.9	-0.2
PMR	**Palmer**	**6.34 204**	Pn		Pn	11 34 09.1	-2.1
M22K	**Willow**	**6.36 209**	Pn		Pn	11 34 09.9	-1.5
DIV	**Divide**	**6.42 189**	Pn		Pn	11 34 11.0	-1.4
SKT	**Skwentna**	**6.43 215**			Pn	11 34 13.6	+1.0
E18K	**Tukpahlearik C**	**6.49 277**	Pn		Pn	11 34 10.7	-2.6
BARN	**Barnard Glacie**	**6.49 171**	Pn		Pn	11 34 11.8	-1.7
BMRM	**Bremner River**	**6.53 184**	Pn		Pn	11 34 13.0	-1.0
M31M	**Drury Creek, Y**	**6.61 139**	Pn		Pn	11 34 13.4	-1.6
C18K	**Utukok River**	**6.65 288**	Pn		Pn	11 34 15.6	+0.1
N30M	**Aishikik Lake**	**6.67 151**	Pn		Pn	11 34 16.4	+0.6
J18K	**Innoko River**	**6.73 240**	Pn		Pn	11 34 16.9	+0.3
LOGN	**Logan Glacier**	**6.77 169**	Pn		Pn	11 34 16.1	-1.2
GRNC	**Granite Creek**	**6.81 172**	Pn		Pn	11 34 16.6	-1.4
FID	**Port Fidalgo**	**6.85 191**	Pn		Pn	11 34 18.9	+0.7
O28M	**Mount Upton**	**6.89 165**	Pn		Pn	11 34 18.8	-0.3
N31M	**Braeburn, Yuko**	**6.91 147**	Pn		Pn	11 34 18.2	-0.8

*BJI **20** 11:48:51.0, 18°.66S×169°.73E, h161km, mB4.7/3, mb4.6/20*
*IDC **20** 11:48:52.2±0.6, 18°.94S×169°.05E, h153km±4km, mb4.3/19, mbtmp4.7/22, MS3.4/3, Error ellipse: s-maj=11.8km s-min=10.4km az=109.0*
*NEIC **20** 11:48:52.3±1.5, 19°.01S±0°.08×169°.16E±0°.08, h148km±5km, mb4.7/189, Error ellipse: s-maj=11.8km s-min=10.0km az=146.0*
*NOU **20** 11:48:53.4, 19°.03S×168°.99E, h148km, mb4.8/77, Vanuatu Islands*
*GFZ **20** 11:48:54.5±0.2, 19°.5±4°.4×16°.9E±°, h164km, M4.8/19, mb4.8/19*

ISC 20 11:48:52.2±0.4,**19°.00S**±0°.04×**169°.07E**±0°.04,**h153**km±3km, **h153**km:**pP-P,n395,**σ1**05**/362,**mb4.7**/111,**4C-3D,**
Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.35**	**333**	P	**Pn**	**11 49 20.9**	**+0.5**
DVP	**Devils Point**	**1.52**	**326**	P	**Pn**	**11 49 23.2**	**+1.0**
MARNC	**Mare, Loyalty**	**2.65**	**201**	P	**Pn**	**11 49 35.1**	**-0.2**
MARNC	**Mare, Loyalty**	**2.65**	**201**	P	**Sn**	**11 50 07.3**	**-1.5**
MARNC	**Mare, Loyalty**	**2.65**	**201**		**Pn**	**11 49 35.3**	**-0.1**
MARNC				S	**Sn**	**11 50 07.2**	**-1.5**
YATNC	**Mamie plateau,**	**3.66**	**213**	P	**Pn**	**11 49 47.6**	**-0.6**
YATNC	**Mamie plateau,**	**3.66**	**213**	S	**Sn**	**11 50 31.6**	**-0.1**
DZM	**Mont Dzumac**	**3.92**	**218**	P	**Pn**	**11 49 52.2**	**+0.6**
	391nm,0.3s,baz=119,slow=23,SNR=1178						
DZM				S	**Sn**	**11 50 36.7**	**-1.1**
	530nm,0.5s,baz=30,slow=14,SNR=4.5						
OUENC	**Ouen Island, N**	**3.99**	**211**	P	**Pn**	**11 49 53.3**	**+0.9**
OUENC	**Ouen Island, N**	**3.99**	**211**	S	**Sn**	**11 50 39.7**	**+0.5**
OUENC	**Ouen Island, N**	**3.99**	**211**		**Pn**	**11 49 53.1**	**+0.8**
OUENC				S	**Sn**	**11 50 40.6**	**+1.4**
NOUC	**Port Laguerre**	**4.03**	**220**	P	**Pn**	**11 49 54.0**	**+1.1**
NOUC	**Port Laguerre**	**4.03**	**220**	S	**Sn**	**11 50 40.2**	**+0.1**
ONTNC	**Ouen Toro**	**4.10**	**216**	P	**Pn**	**11 49 54.7**	**+0.9**
ONTNC	**Ouen Toro**	**4.10**	**216**	S	**Sn**	**11 50 42.3**	**+0.5**
ONTNC	**Ouen Toro**	**4.10**	**216**		**Pn**	**11 49 54.7**	**+0.9**
KOUNC	**Koumac, New Ca**	**4.76**	**250**	P	**Pn**	**11 50 03.4**	**+0.9**
KOUNC	**Koumac, New Ca**	**4.76**	**250**	S	**Sn**	**11 50 56.7**	**-0.6**
KOUNC	**Koumac, New Ca**	**4.76**	**250**		**Pn**	**11 50 03.5**	**+1.0**
MSVF	**Nonsavu**	**8.62**	**83**	P	**Pn**	**11 50 55.3**	**+1.3**
	28nm,0.8s,baz=253,slow=9.8,SNR=16						
MSVF	**Nonsavu**	**8.62**	**83**	P	**Pn**	**11 50 57.4**	**+3.4**
MSVF	**Nonsavu**	**8.62**	**83**	P	**Pn**	**11 50 57.6**	**+3.6**
NFK	**Norfolk Island**	**10.05**	**186**	P	**Pn**	**11 51 16.7**	**+3.8**
DGTI	**Dogotuki**	**10.52**	**77**	P	**Pn**	**11 51 21.7**	**+2.6**
HURO	**Huro Makira**	**10.95**	**320**	P	**Pn**	**11 51 26.3**	**+1.5**
NGOA	**Tingoa Renbel**	**11.41**	**309**	P	**Pn**	**11 51 31.9**	**+1.1**
HNR	**Honiara**	**12.98**	**316**	P	**Pn**	**11 51 51.5**	**+0.4**
	3.8nm,0.6s,baz=266,slow=2.0,SNR=8.6						
HNR	**Honiara**	**12.98**	**316**	P	**Pn**	**11 51 53.2**	**+2.1**
HNR	**Honiara**	**12.98**	**316**	Pn	**Pn**	**11 51 51.3**	**+0.2**
FUTU	**Fugatoga**	**13.13**	**71**	Pn	**Pn**	**11 51 51.6**	**-1.5**
FUTU	**Fugatoga**	**13.13**	**71**	P	**P**	**11 51 57.1**	**-0.4**
SAVO	**Savo Central**	**13.28**	**316**	P	**Pn**	**11 51 56.6**	**+1.6**
TATA	**Tatamba Isabel**	**13.86**	**318**	P	**P**	**11 52 04.2**	**-1.5**
RAO	**Raoul Island**	**15.65**	**133**		**Pn**	**11 52 23.1**	**-1.5**
OUZ	**Omahuta**	**16.65**	**167**	P	**Pn**	**11 52 37.6**	**+1.0**
OUZ	**Omahuta**	**16.65**	**167**	P	**Pn**	**11 52 38.6**	**+1.9**
WCZ	**Waipu Caves**	**17.51**	**166**	P	**Pn**	**11 52 49.4**	**+2.5**
EIDS	**Eidsvold**	**17.81**	**246**	P	**Pn**	**11 52 51.2**	**+0.5**
EIDS	**Eidsvold**	**17.81**	**246**		**Pn**	**11 52 51.3**	**+0.6**
EIDS	**Eidsvold**	**17.81**	**246**	P	**Pn**	**11 52 50.8**	**+0.1**
GRZ	**Great Barrier**	**18.08**	**163**	P	**Pn**	**11 52 55.8**	**+1.0**
WIAZ	**Waiheke Island**	**18.51**	**164**	P	**Pn**	**11 52 59.1**	**+0.4**
MKAZ	**Moumakai**	**18.81**	**165**	P	**Pn**	**11 53 01.7**	**-0.6**
AFI	**Afiamalu**	**19.05**	**77**	P	**P**	**11 53 03.6**	**+0.6**
	23nm,0.6s,baz=277,slow=15,SNR=7.7						
AFI	**Afiamalu**	**19.05**	**77**	P	**P**	**11 53 02.3**	**-0.6**
AFI				IAmb	IAmb	11 53 07.8	
	comp=Z,25nm,0.7s						
ARMA	**Armidale**	**19.47**	**231**	P	**P**	**11 53 07.9**	**+0.5**
ARMA	**Armidale**	**19.47**	**231**	P	**Pn**	**11 53 09.2**	**-1.0**
ARMA				IAmb	IAmb	11 53 27.0	
	comp=Z,44nm,1.4s						
ARMA	**Armidale**	**19.47**	**231**	P	**P**	**11 53 07.8**	**+0.4**
TOZ	**Tahuroa Road**	**19.49**	**165**	P	**Pn**	**11 53 09.5**	**-0.7**
NIUE	**Niue**	**19.86**	**94**	P	**P**	**11 53 10.2**	**-1.4**
NIUE	**Niue**	**19.86**	**94**	P	**P**	**11 53 10.5**	**-1.0**
TLZ	**Tolley Road**	**20.07**	**165**	P	**Pn**	11 53 15.8	-1.3
HIZ	**Hauiti**	**20.09**	**167**	P	**Pn**	11 53 15.7	-1.6
HIZ	**Hauiti**	**20.09**	**167**	P	**Pn**	11 53 16.5	-0.8
HIZ	**Hauiti**	**20.09**	**167**	P	**P**	**11 53 15.2**	**+1.4**
HAZ	**Te Kaha**	**20.18**	**160**	P	**P**	**11 53 16.5**	**+1.7**
MXZ	**Matakaoa Point**	**20.18**	**158**	P	**P**	**11 53 16.3**	**+1.5**
MXZ	**Matakaoa Point**	**20.18**	**158**	P	**Pn**	11 53 18.2	-0.3
URZ	**Urewera**	**20.43**	**162**	P	**P**	**11 53 18.8**	**+1.3**
	comp=Z,35nm,0.6s,baz=340,slow=4.8,SNR=26						
	comp=Z,35nm,0.6s						
URZ	**Urewera**	**20.43**	**162**	P	**Pn**	11 53 19.7	-1.7
URZ	**Urewera**	**20.43**	**162**	P	**P**	**11 53 19.3**	**+1.9**
URZ	**Urewera**	**20.43**	**162**	P	**Pn**	11 53 19.8	-1.6
WMGZ	**Waiomatatini S**	**20.45**	**158**	P	**P**	**11 53 19.1**	**+1.4**
PUZ	**Puketiti**	**20.62**	**159**	P	**P**	**11 53 20.4**	**+0.8**
MWZ	**Matawai**	**20.63**	**161**	P	**P**	**11 53 21.1**	**+1.5**
RTZ	**Ruatahuna**	**20.72**	**162**	P	**P**	**11 53 22.4**	**+1.7**
BKZ	**Black Stump Fm**	**21.10**	**164**	P	**P**	**11 53 26.1**	**+1.4**
BKZ	**Black Stump Fm**	**21.10**	**164**	P	**P**	**11 53 26.2**	**+1.5**
KNZ	**Kokohu**	**21.30**	**161**	P	**P**	**11 53 27.5**	**+0.7**
CTA	**Charters Tower**	**21.52**	**263**	P	**P**	**11 53 29.6**	**+0.2**
	comp=Z,23nm,0.6s,baz=90,slow=11,SNR=42						
	comp=Z,23nm,0.6s						
CTA	**Charters Tower**	**21.52**	**263**	P	**P**	**11 53 31.2**	**+1.8**
CTAO	**Charters Tower**	**21.52**	**263**	P	**P**	**11 53 31.3**	**+1.8**
CTAO	**Charters Tower**	**21.52**	**263**	P	**P**	**11 53 30.9**	**+1.5**
CTAO				IAmb	IAmb	11 53 31.9	
	comp=Z,25nm,0.6s						
CTAO	**Charters Tower**	**21.52**	**263**	P	**P**	**11 53 30.9**	**+1.5**
TSZ	**Takapari Road**	**21.81**	**166**	P	**P**	**11 53 33.3**	**+1.1**
QRZ	**Quartz Range**	**21.95**	**173**	P	**P**	**11 53 34.8**	**+1.1**
QRZ	**Quartz Range**	**21.95**	**173**	P	**P**	**11 53 36.5**	**+2.8**
PXZ	**Pawanui**	**22.01**	**164**	P	**P**	**11 53 35.2**	**+1.0**
MRZ	**Mangatainoka R**	**22.30**	**167**	P	**P**	**11 53 37.4**	**+0.3**
NNZ	**Nelson**	**22.45**	**171**	P	**P**	**11 53 39.9**	**+1.4**
BFZ	**Birch Farm**	**22.47**	**166**	P	**P**	**11 53 39.8**	**+1.1**
BFZ	**Birch Farm**	**22.47**	**166**	P	**P**	**11 53 38.7**	**0.0**
SNZO	**South Karori**	**22.75**	**169**	P	**P**	**11 53 43.5**	**+2.2**
THZ	**Tophouse**	**22.93**	**173**	P	**P**	**11 53 44.1**	**+1.1**
PMG	**Port Moresby**	**23.25**	**291**		**P**	**11 53 47.2**	**+0.9**
MTSU	**Mount Surprise**	**23.47**	**268**	P	**P**	**11 53 49.2**	**+1.0**
MTSU	**Mount Surprise**	**23.47**	**268**	P	**P**	**11 53 49.8**	**+1.5**
KHZ	**Kahutara**	**23.65**	**172**	P	**P**	**11 53 50.0**	**+0.5**
KHZ	**Kahutara**	**23.65**	**172**	P	**P**	**11 53 49.5**	**0.0**
INZ	**Inchbonnie**	**23.74**	**176**	P	**P**	**11 53 51.3**	**+1.0**
LTZ	**Lake Taylor**	**23.86**	**174**	P	**P**	**11 53 52.7**	**+1.2**
CAN	**Canberra**	**24.07**	**223**	P	**P**	**11 53 53.9**	**+0.4**
CAN	**Canberra**	**24.07**	**223**	P	**P**	**11 53 53.8**	**+0.3**
CAN				IAmb	IAmb	11 53 57.8	
	comp=Z,22nm,1.0s						
QLP	**Quilpie**	**24.08**	**247**	P	**P**	**11 53 55.3**	**+1.7**
QLP	**Quilpie**	**24.08**	**247**	P	**P**	**11 53 54.5**	**+0.8**
GVZ	**Greta Valley S**	**24.13**	**173**	P	**P**	**11 53 54.2**	**+0.3**
FOZ	**Fox Glacier**	**24.47**	**179**	P	**P**	**11 53 58.6**	**+1.7**
CMSA	**Cobar Meteorol**	**24.49**	**235**	P	**P**	**11 53 57.5**	**+0.2**
CMSA	**Cobar Meteorol**	**24.49**	**235**	P	**P**	**11 53 58.3**	**+1.0**
RPZ	**Rata Peaks**	**24.70**	**177**	P	**P**	**11 54 00.7**	**+1.6**
RPZ	**Rata Peaks**	**24.70**	**177**	P	**P**	**11 54 00.3**	**+1.2**
RACZ	**Rakaia**	**24.79**	**175**	P	**P**	**11 54 01.4**	**+1.6**
MQZ	**McQueen's Vall**	**24.82**	**174**	P	**P**	**11 54 01.1**	**+1.0**
ARCZ	**Arundel**	**24.94**	**176**	P	**P**	**11 54 02.5**	**+1.2**
COEN	**Coen**	**25.32**	**278**	P	**P**	**11 54 07.1**	**+2.1**
COEN	**Coen**	**25.32**	**278**	P	**P**	**11 54 06.0**	**+1.0**
LBZ	**Lake Benmore**	**25.33**	**178**	P	**P**	**11 54 06.1**	**+1.4**
TMZ	**Timaru**	**25.36**	**177**	P	**P**	**11 54 04.4**	**-0.6**
WHZ	**Wether Hill Ro**	**26.84**	**182**	P	**P**	**11 54 20.0**	**+1.7**
TUZ	**Tuapeka**	**26.88**	**179**	P	**P**	**11 54 20.0**	**+1.3**
INKA	**Innaminka**	**27.36**	**246**	P	**P**	**11 54 24.0**	**+0.8**
TOOL	**Toolangi**	**27.68**	**223**	P	**P**	**11 54 26.4**	**+0.4**
QIS	**Mount Isa**	**27.75**	**262**	P	**P**	**11 54 27.7**	**+0.9**
STKA	**Stephens Creek**	**27.84**	**237**	P	**P**	**11 54 28.6**	**+1.2**
	comp=Z,12nm,0.7s,baz=63,slow=8.9,SNR=29						
STKA				PcP	**PcP**	**11 57 40.0**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=95,slow=4.3,SNR=3.3						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**27.84**	**237**	P	**P**	**11 54 28.4**	**+1.0**
STKA	**Stephens Creek**	**27.84**	**237**	P	**P**	**11 54 28.8**	**+1.4**
STKA				pP	**pwP**	**11 55 01.6**	**-3.5**
RAR	**Rarotonga**	**29.32**	**100**	LR	LR	12 06 08.6	
	comp=Z,45nm,19.1s,baz=34,slow=35						
MOO	**Moorlands**	**29.83**	**214**	P	**P**	**11 54 45.8**	**+0.9**
MOO	**Moorlands**	**29.83**	**214**	P	**P**	**11 54 46.1**	**+1.2**
HTT	**Hallett**	**30.49**	**236**	P	**P**	**11 54 51.6**	**+0.7**
WR8	**Warramunga Arr**	**32.57**	**262**	P	**P**	**11 55 08.5**	**-0.7**
WR8				IAmb	IAmb	11 55 09.0	
	comp=Z,16nm,1.4s						
BBOO	**Buckleboo**	**32.57**	**238**	P	**P**	**11 55 09.2**	**+0.1**
BBOO	**Buckleboo**	**32.57**	**238**	P	**P**	**11 55 09.6**	**+0.4**
BBOO				IAmb	IAmb	11 55 53.7	
	comp=Z,26nm,1.4s						
WB0	**Warramunga Arr**	**32.68**	**263**	P	**P**	**11 55 09.6**	**-0.7**
WB0				IAmb	IAmb	11 55 10.1	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**32.71**	**263**	P	**P**	**11 55 11.0**	**+0.5**
WRA	**Warramunga Arr**	**32.72**	**262**	P	**P**	**11 55 09.6**	**-1.0**
	comp=Z,4.3nm,0.6s,baz=82,slow=6.0,SNR=27						
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**32.72**	**262**	P	**P**	**11 55 09.8**	**-0.8**
AS01	**Alice Springs**	**32.98**	**256**	P	**P**	**11 55 13.1**	**+0.2**
AS31	**Alice Springs**	**33.03**	**256**	P	**P**	**11 55 13.4**	**+0.1**
ASAR	**Alice Springs**	**33.03**	**256**	P	**P**	**11 55 12.9**	**-0.3**
	comp=Z,35nm,0.4s,baz=82,slow=8.6,SNR=1678						
ASAR				PcP	**PcP**	**11 57 53.2**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=80,slow=4.8,SNR=4.8						
ASAR				S	**S**	**12 00 18.2**	**-2.6**
	comp=Z,3.5nm,0.9s,baz=82,slow=18,SNR=16						
ASAR				ScP	**ScP**	**12 01 23.1**	**-0.4**
	comp=Z,1.2nm,1.0s,baz=132,slow=3.2,SNR=5.0						
ASAR				PKiKP	**PKiKP**	**12 05 17.8**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=104,slow=1.4,SNR=6.3						
	comp=Z,35nm,

BJI2 Beijing 76.64 321 P **P** **12 00 26.6 +0.5**
BJI2 pmax pmax
comp=Z,4.0nm,0.9s
HEH HeiHe 78.13 334 *e*P **P** **12 00 34.3 +0.2**
CHNA Chernabura Isl 78.25 18 P **P** **12 00 37.0 +2.3**
CMAR Chiang Mai Arr 78.26 294 P **P** **12 00 36.2 +0.7**
comp=Z,2.1nm,0.7s,baz=131,slow=4.4,SNR=16
CMAR pP **pP** **12 01 13.8 +0.7**
comp=Z,2.2nm,0.6s,baz=136,slow=4.6,SNR=3.6
comp=Z,2.1nm,0.7s
CMAR Chiang Mai Arr 78.26 294 **P** **12 00 36.7 +1.1**
CHTO Chiang Mai 78.40 295 P **P** **12 00 37.2 +0.8**
MAW Mawson 78.59 202 P **P** **12 00 37.8 +1.2**
comp=Z,12nm,0.9s,baz=119,slow=6.4,SNR=17
comp=Z,12nm,0.9s
MAW Mawson 78.59 202 P **P** **12 00 37.9 +1.4**
MAW Mawson 78.59 202 P **P** **12 00 36.6 +0.1**
PZH PanZhiHua 79.44 303 P **P** **12 00 44.6 +2.6**
HHC Hu-ho-hao-te 79.93 319 *e*P **P** **12 00 46.0 +1.6**
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,77nm,4.7s
OHAK Old Harbor 82.19 20 P **P** **12 00 57.3 +1.6**
BELA Belgrano 2 82.35 175 **P** **12 00 55.7 -0.8**
LZH Lanzhou 82.45 312 *e*P P 12 01 04.3 +6.5
LZH pP sP 12 01 46.1 -5.6
LZH pmax pmax
comp=Z,23nm,1.0s
N15K Kwethluk River 82.77 15 P **P** **12 00 59.5 +0.8**
N15K IAmb IAmb 12 01 00.7
comp=Z,18nm,1.3s
O16K Kokwok River B 82.78 16 P **P** **12 00 58.7 0.0**
M16K Timber Creek 83.79 15 IAmb IAmb 12 01 06.6
comp=Z,19nm,1.2s
N17K Nushagak Hills 83.81 16 IAmb IAmb 12 01 06.4
comp=Z,16nm,1.2s
SMAI San Martin Ant 84.11 162 **P** **12 01 04.9 -0.6**
L16K Owhat River 84.26 14 IAmb IAmb 12 01 07.9
comp=Z,17nm,1.2s
ILSW Iliamna Southw 84.48 18 P **P** **12 01 07.5 0.0**
M17K Holitna River 84.49 15 P **P** **12 01 08.6 +1.1**
M17K IAmb IAmb 12 01 10.3
comp=Z,22nm,1.3s
CNPM China Poot 84.69 19 P **P** **12 01 08.9 +0.4**
CNPM IAmb IAmb 12 01 17.6
comp=Z,24nm,1.2s
J16K Anvik River 85.39 13 **P** **12 01 13.0 +1.2**
ELIB Princess Elisa 86.35 190 *d*P **P** **12 01 16.2 -0.7**
comp=Z,2.9nm,1.0s
J18K Innoko River 86.43 15 P **P** **12 01 17.2 +0.2**
O02D Mt. Diablo Mer 86.45 45 P **P** **12 01 18.8 +1.0**
O02D IAmb IAmb 12 01 20.1
comp=Z,15nm,0.9s
ULN Ulaanbaatar 86.58 323 P **P** **12 01 17.8 -0.5**
ULN Ulaanbaatar 86.58 323 P **P** **12 01 19.2 +0.9**
G16K Koyuk River 86.90 12 P **P** **12 01 20.1 +0.9**
GTA2 Gaotai 86.92 314 *e*P **P** **12 01 20.9 +0.8**
GTA2 pmax pmax
comp=Z,10.0nm,1.0s
SONM Songino Array 86.93 323 P **P** **12 01 20.5 +0.5**
comp=Z,5.3nm,0.9s,baz=140,slow=5.4,SNR=19
SONM pP **pP** **12 01 57.8 -0.2**
comp=Z,2.9nm,0.9s,baz=130,slow=5.6,SNR=3.9
SONM LR LR 12 40 40.4
comp=Z,38nm,19.5s,baz=160,slow=36
comp=Z,5.3nm,0.9s
SONM Songino Array 86.93 323 **P** **12 01 20.0 +0.1**
M02C Callahan 86.98 44 IAmb IAmb 12 01 22.2
comp=Z,9.2nm,0.8s
ORV Oroville 87.03 46 **P** **12 01 21.1 +0.5**
CMB Columbia Colle 87.12 48 **P** **12 01 21.2 +0.2**
CMB IAmb IAmb 12 01 22.5
comp=Z,7.7nm,1.0s
AFDM Forest Hills D 87.12 47 **P** **12 01 21.5 +0.5**
AFDM IAmb IAmb 12 01 22.5
comp=Z,9.7nm,1.0s
O03E Paynes Creek 87.17 46 P **P** **12 01 21.6 +0.4**
O03E IAmb IAmb 12 01 22.7
comp=Z,12nm,1.0s
EYAK Cordova Ski Ar 87.23 21 P **P** **12 01 21.7 +0.8**
YBH Yreka Blue Hor 87.24 44 LR LR 12 33 29.4
comp=Z,17nm,21.7s,baz=203,slow=31
ISA Isabella, Lake 87.46 51 P **P** **12 01 22.6 -0.1**
BFSC Mount Baldy Ra 87.46 53 P **P** **12 01 22.8 0.0**
DPP Dos Picos Cty 87.49 54 P **P** **12 01 22.8 0.0**
DPP IAmb IAmb 12 01 24.6
comp=Z,8.5nm,1.0s
HATC Hat Creek Radi 87.64 45 P **P** **12 01 24.0 +0.5**
L04D Klamath Falls 87.74 44 **P** **12 01 24.6 +0.6**
DIB Dawson Inlet, 87.75 31 P **P** **12 01 24.1 +0.6**
DIB IAmb IAmb 12 01 60.0
comp=Z,12nm,1.2s
MPK Martis Peak 87.93 47 IAmb IAmb 12 01 27.8
comp=Z,8.0nm,1.0s
BEKR Beckworth 87.96 47 IAmb IAmb 12 01 26.7
comp=Z,8.0nm,1.1s
LRMC Laurel Mtn Rad 87.96 51 IAmb IAmb 12 01 27.9
comp=Z,8.2nm,1.0s
WAKR Walker 88.00 48 IAmb IAmb 12 01 27.3
comp=Z,6.0nm,1.1s
BORC Borrego Spring 88.00 54 P **P** **12 01 25.9 +0.6**
BORC IAmb IAmb 12 01 26.8
comp=Z,7.6nm,0.9s
PNTR Pine Nut 88.14 48 IAmb IAmb 12 01 27.9
comp=Z,5.5nm,0.9s
CCCA Chr Cany lake 88.22 52 IAmb IAmb 12 01 29.0
comp=Z,11nm,0.8s
MPMC Manual Prospec 88.35 51 IAmb IAmb 12 01 28.8
comp=Z,7.4nm,1.3s
DSP Deep Springs 88.55 50 P **P** **12 01 28.4 +0.7**
DSP IAmb IAmb 12 01 29.7
comp=Z,7.7nm,1.2s
PAHR Pah Rah Range 88.56 47 P **P** **12 01 28.1 +0.2**
PAHR IAmb IAmb 12 01 29.8
comp=Z,8.9nm,1.1s
G19K Purcell Mounta 88.63 13 IAmb IAmb 12 01 30.2
comp=Z,8.2nm,1.3s
TROLL Troll, Antarti 88.76 184 ⇑P **P** **12 01 27.7 -0.7**
comp=Z,374nm,0.7s
TROLL ⇓pP **pP** **12 02 06.5 -0.2**
comp=Z,237nm,0.7s
NVAR Mina Array Bea 88.77 49 P **P** **12 01 29.9 +0.9**
comp=Z,2.3nm,0.8s,baz=228,slow=8.5,SNR=14
comp=Z,2.3nm,0.8s
NVAR Mina Array Bea 88.77 49 P **P** **12 01 28.9 -0.1**
QSM Queen of Sheba 88.77 51 IAmb IAmb 12 01 31.0
comp=Z,16nm,1.5s
CRAG Craig 88.80 29 P **P** **12 01 30.1 +1.7**
NV11 Mina Array Sit 88.87 49 P **P** **12 01 28.8 -0.7**
NV11 IAmb IAmb 12 01 31.1
comp=Z,8.3nm,1.1s
BC3 Big Chuckawall 88.89 54 P **P** **12 01 28.2 -1.4**
WIFE Three Sisters- 88.92 42 IAmb IAmb 12 01 31.8
comp=Z,9.3nm,0.9s
FURC Furnace Creek, 88.98 51 P **P** **12 01 30.0 +0.3**
FURC IAmb IAmb 12 01 31.5
comp=Z,10.0nm,1.0s
GWY Greenwater Val 89.00 51 **P** **12 01 30.5 +0.3**
GWY IAmb IAmb 12 01 32.1
comp=Z,8.4nm,1.1s
GMN Gold Mountain 89.04 50 P **P** **12 01 30.1 -0.3**
GLA Glamis 89.13 55 P **P** **12 01 29.8 -0.9**
GLA IAmb IAmb 12 01 33.7
comp=Z,6.0nm,0.8s
KVN Kaiserville 89.17 48 P **P** **12 01 30.4 -0.5**
IMAR Indian Mountai 89.24 14 P **P** **12 01 30.1 -0.1**
WCT Wildcat Mounta 89.29 51 P **P** **12 01 31.8 +0.5**
WCT IAmb IAmb 12 01 33.0
comp=Z,8.1nm,1.0s
I05D Terrebonne, OR 89.35 42 P **P** **12 01 32.0 +0.6**
PINE Pine Mountain 89.36 43 P **P** **12 01 31.8 +0.2**
SNAA Sanae 89.39 183 ⇑P **P** **12 01 30.2 -1.0**
comp=Z,100nm,0.7s
SNAA Sanae 89.39 183 P **P** **12 01 30.1 -1.0**
comp=Z,3.4nm,0.6s,baz=206,slow=9.5,SNR=12
SNAA pP **pP** **12 02 08.5 -1.1**
comp=Z,2.2nm,0.7s,baz=232,slow=7.6,SNR=2.2
comp=Z,3.4nm,0.6s
SNAA Sanae 89.39 183 P **P** **12 01 30.2 -1.0**
SNAA IAmb IAmb 12 01 32.2
comp=Z,19nm,1.5s
SNAA Sanae 89.39 183 P **P** **12 01 30.6 -0.7**
MTPC Mountain Pass 89.55 52 IAmb IAmb 12 01 34.4
comp=Z,14nm,1.4s

HOOD Mount Hood Mea 89.61 41 P **P** **12 01 32.5 -0.2**
SLBS Sierra La Lagu 89.62 65 P **P** **12 01 35.1 +1.9**
TPNV Topopah Spring 89.63 51 P **P** **12 01 33.4 +0.4**
TPNV IAmb IAmb 12 01 34.7
comp=Z,8.5nm,0.9s
BLYC Blythe 89.64 54 IAmb IAmb 12 01 34.9
comp=Z,11nm,1.2s
F20K Avaraart Lake 89.69 13 P **P** **12 01 32.7 +0.4**
B04A Port Angeles 89.79 38 P **P** **12 01 33.4 +0.2**
ILAR Eielson Array 90.05 17 P **P** **12 01 32.4 -1.8**
comp=Z,1.7nm,0.5s,baz=240,slow=4.6,SNR=30
ILAR pP **pP** **12 02 11.6 -1.0**
comp=Z,1.0nm,0.8s,baz=237,slow=5.5,SNR=3.2
comp=Z,1.7nm,0.5s
LON Longmire 90.18 40 P **P** **12 01 34.9 -0.3**
LON IAmb IAmb 12 01 36.4
comp=Z,5.1nm,0.9s
WVOR Wild Horse Val 90.26 45 P **P** **12 01 36.6 +0.8**
S11A Rachel 90.27 50 P **P** **12 01 35.9 -0.1**
S11A IAmb IAmb 12 01 37.5
comp=Z,7.5nm,0.8s
VNA2 Neumayer--Watz 90.28 181 ⇑P **P** **12 01 34.4 -0.9**
comp=Z,11nm,0.6s,baz=178,slow=4.4
VNA2 Neumayer--Watz 90.28 181 P **P** **12 01 34.7 -0.6**
BCAR Beaver Creek A 90.36 20 P **P** **12 01 36.3 +0.6**
J25K Salcha River, 90.37 18 IAmb IAmb 12 01 38.8
comp=Z,10nm,1.5s
BMN Battle Mountai 90.37 47 P **P** **12 01 36.7 +0.3**
BMN IAmb IAmb 12 01 38.1
comp=Z,7.5nm,0.8s
VNA1 Neumayer--Stat 90.57 181 ⇑P **P** **12 01 35.8 -0.8**
comp=Z,18nm,1.2s
W13A Hualapai Mount 90.65 53 IAmb IAmb 12 01 39.7
comp=Z,6.4nm,0.9s
HSIG 90.69 60 **P** **12 01 38.1 +0.1**
J08A Circle Bar Ran 90.77 44 **P** **12 01 37.8 -0.3**
MXC Moxie City 91.03 41 IAmb IAmb 12 01 40.7
comp=Z,8.2nm,0.9s
COLD Coldfoot 91.09 15 P **P** **12 01 39.2 +0.3**
LTY Liberty 91.11 40 IAmb IAmb 12 01 40.8
comp=Z,7.8nm,0.9s
E08A Dider Farm, El 91.75 41 IAmb IAmb 12 01 44.2
comp=Z,9.9nm,1.1s
LCMT Little Creek M 91.86 51 IAmb IAmb 12 01 45.1
comp=Z,7.7nm,0.8s
ELK Elko 91.88 47 P **P** **12 01 42.9 -0.6**
E23K Chandalar 91.88 14 P **P** **12 01 42.6 0.0**
LLLB Lillooet 91.94 37 IAmb IAmb 12 01 44.7
comp=Z,6.7nm,0.8s
PSUT Pine Spring 92.00 50 P **P** **12 01 43.8 -0.3**
TUC Tucson 92.01 57 P **P** **12 01 44.0 0.0**
TUC IAmb IAmb 12 01 46.2
comp=Z,7.0nm,0.9s
TUC Tucson 92.01 57 P **P** **12 01 45.1 +1.0**
R33M Jennings River 92.05 26 P **P** **12 01 43.5 -0.1**
R33M IAmb IAmb 12 01 44.9
comp=Z,9.1nm,1.1s
D08A Wollman Farm, 92.08 41 P **P** **12 01 44.7 +0.7**
D08A IAmb IAmb 12 01 45.5
comp=Z,5.7nm,1.0s
KNB Kanab 92.18 52 IAmb IAmb 12 01 46.8
comp=Z,7.8nm,1.0s
EVN Everest 92.18 299 P **P** **12 01 44.3 -1.4**
EVN IAmb IAmb 12 02 20.4
comp=Z,8.7nm,1.4s
SZCU Shurtz Canyon 92.20 51 P **P** **12 01 44.5 -0.5**
SZCU IAmb IAmb 12 01 46.9
comp=Z,5.7nm,1.1s
K29M Barlow Dome 92.30 21 P **P** **12 01 44.3 -0.4**
K29M IAmb IAmb 12 02 25.4
comp=Z,7.5nm,1.5s
MFID Camas Ranch 92.55 45 IAmb IAmb 12 01 48.0
comp=Z,4.0nm,0.8s
I28M Miner Creek 92.59 19 P **P** **12 01 45.4 -0.6**
I28M IAmb IAmb 12 01 48.0
comp=Z,5.7nm,1.4s
WUAZ Wupatki 92.71 53 IAmb IAmb 12 01 49.3
comp=Z,7.0nm,0.9s
PKCU Pink Cliffs 92.71 51 IAmb IAmb 12 01 50.0
comp=Z,6.0nm,0.9s
G27K Doyon Strip 93.02 17 P **P** **12 01 48.5 +0.7**
MTPU Mount Pierson 93.03 51 IAmb IAmb 12 01 51.3
comp=Z,3.8nm,0.8s
X18A Snowflake 93.45 55 IAmb IAmb 12 01 52.6
comp=Z,5.5nm,1.0s
HLID Hailey 93.55 45 **P** **12 01 51.1 +0.1**
HLID IAmb IAmb 12 01 52.9
comp=Z,3.2nm,0.8s
HLID Hailey 93.55 45 P **P** **12 01 52.0 +1.0**
D25K Kavik River 93.61 14 P **P** **12 01 50.4 -0.2**
D25K IAmb IAmb 12 02 13.8
comp=Z,6.6nm,1.5s
HVU Hansel Valley 93.99 47 IAmb IAmb 12 01 54.3
comp=Z,2.9nm,0.8s
BSUT Blindstream Ca 94.96 49 IAmb IAmb 12 01 59.0
comp=Z,2.5nm,0.7s
G31M Satah River 95.30 19 IAmb IAmb 12 01 59.1
comp=Z,5.8nm,1.1s
PV19 Morning Glory 95.48 51 IAmb IAmb 12 02 02.7
comp=Z,3.3nm,0.9s
PV23 Carpenter Ridg 95.51 51 P **P** **12 01 59.0 -1.3**
VHRN Van Horn 96.16 60 **P** **12 02 02.9 -0.3**
VHRN IAmb IAmb 12 02 06.1
comp=Z,5.0nm,1.4s
PD31 Pinedale Array 96.57 47 P **P** **12 02 04.8 -0.2**
PDAR Pinedale Array 96.57 47 P **P** **12 02 05.8 +0.9**
comp=Z,2.2nm,0.4s,baz=229,slow=3.7,SNR=4.3
comp=Z,2.2nm,0.4s
PDAR Pinedale Array 96.57 47 P **P** **12 02 04.6 -0.3**
TX31 Lajitas Ar. Si 96.80 61 **P** **12 02 04.1 -2.0**
TX31 IAmb IAmb 12 02 07.7
comp=Z,3.4nm,1.1s
TXAR Lajitas Array 96.80 61 P **P** **12 02 06.5 +0.4**
comp=Z,0.9nm,0.8s,baz=221,slow=5.6,SNR=16
comp=Z,0.9nm,0.8s
TXAR Lajitas Array 96.80 61 P **P** **12 02 04.1 -2.0**
PLCA Paso Flores 98.82 138 P **P** **12 02 14.7 -0.4**
comp=Z,2.4nm,1.1s,baz=113,slow=3.6,SNR=3.4
comp=Z,2.4nm,1.1s
YKA Yellowknife Ar 100.53 27 P **Pdif** **12 02 21.1 -0.7**
comp=Z,0.9nm,0.6s,baz=257,slow=4.6,SNR=11
YKA pP **pPdif** **12 03 00.1 -0.4**
comp=Z,0.7nm,0.7s,baz=256,slow=4.6,SNR=5.3
YKA Yellowknife Ar 100.53 27 **Pdif** **12 02 21.7 -0.2**
YKAW1 Yellowknife Wh 100.58 27 Pdif **Pdif** **12 02 21.8 -0.2**
APMT Aspermont 100.85 58 Pdif **Pdif** **12 02 24.4 +0.4**
MKAR Makanchi Array 101.45 316 P **Pdif** **12 02 25.7 -0.7**
comp=Z,0.6nm,0.5s,baz=94,slow=7.1,SNR=5.9
MKAR PKiKP **PKiKP** **12 06 49.0 -0.7**
comp=Z,0.5nm,0.7s,baz=138,slow=2.9,SNR=4.6
MKAR Makanchi Array 101.45 316 **Pdif** **12 02 26.7 +0.3**
SPITS Spitsbergen Ar 119.34 354 PKP **PKPdf** **12 07 21.3 -1.2**
comp=Z,1.6nm,0.5s,baz=57,slow=5.3,SNR=4.8
BOSA Boshof 121.15 217 PKP **PKPdf** **12 07 26.6 -1.0**
comp=Z,2.4nm,0.8s,baz=151,slow=1.4,SNR=6.5
ARCES ARCESS Array B 124.80 345 PKP **PKPdf** **12 07 32.4 -0.8**
comp=Z,1.2nm,0.3s,baz=76,slow=2.1,SNR=34
BDFB Brasilia 129.83 131 PKP **PKPdf** **12 07 43.9 -0.6**
comp=Z,3.0nm,0.4s,baz=106,slow=3.9,SNR=4.0
FINES FINESS Array B 130.31 338 PKP **PKPdf** **12 07 42.7 -1.2**
comp=Z,0.7nm,0.5s,baz=17,slow=2.8,SNR=5.9
FINES SKPbc **SKPab** **12 10 51.6 -1.3**
comp=Z,2.9nm,0.7s,baz=80,slow=4.3,SNR=11
AKASG Malin Array Be 135.20 324 SKPbc **SKPbc** **12 11 09.2 -0.9**
comp=Z,1.8nm,0.7s,baz=48,slow=4.2,SNR=4.6
AK11 Malin Array Si 135.25 324 PKP **PKPdf** **12 07 53.0 -0.5**
LUBAR Lubar, Ukraine 136.41 324 PKP **PKPdf** **12 07 55.8 +0.1**
RNPP5 Staryi Chortor 136.71 327 PKP **PKPdf** **12 07 56.1 -0.1**
KMPD K-Podol'skiy 137.84 323 PKP **PKPdf** **12 07 57.8 -0.6**
CHVC Chvalec 141.89 332 *e*PKP **PKPdf** **12 08 00.8 -4.9**
EKA Eskdalemuir Ar 143.25 353 PKP PKPbc 12 08 05.3 -0.1
comp=Z,0.5nm,0.3s,baz=333,slow=2.8,SNR=5.6
TANN Tannenbergstha 143.54 335 *e*PKPbc PKPbc 12 08 06.2 -0.3
baz=38,slow=3.2
GTTG Gottingen 143.59 338 *e*PKPbc PKPbc 12 08 06.2 -0.2
baz=38,slow=3.2
PLN Plauen 143.61 335 *e*PKPbc PKPbc 12 08 06.2 -0.4
baz=38,slow=3.2
IBBN Ibbenburen 143.68 341 *e*PKPbc PKPbc 12 08 06.4 -0.3
baz=38,slow=3.2
MOX Moxa 143.70 336 *e*PKPbc PKPab 12 08 06.4 +0.4
baz=38,slow=3.2
MOX *e*L L 13 17 02.3
comp=Z,26nm,20.7s
RONA Rosalia, Austr 143.80 328 *i* PKP PKPbc 12 08 07.8 +0.5
comp=Z,10nm,0.9s,SNR=7.3

CONA Conrad Observa 143.85 329 *i* PKP PKPbc 12 08 08.2 +0.7
comp=Z,4.7nm,0.5s,SNR=8.8
CKRC Cesky Krumlov 143.95 331 *e*PKP PKPbc 12 08 07.5 -0.2
KHC Kasperske Hory 144.05 332 *e*PKP PKPbc 12 08 08.0 0.0
ROTZ Rotzenmuhle 144.15 334 *e*PKPbc PKPbc 12 08 08.4 +0.2
baz=38,slow=3.2
UBBA Unterbreizbach 144.17 337 *e*PKPbc PKPbc 12 08 08.2 +0.1
baz=38,slow=3.2
GEC2 GERESS Array S 144.20 332 *e*PKPbc **PKPab** **12 08 08.2 +0.1**
baz=38,slow=3.2
GERES GERESS Array B 144.20 332 PKP PKPbc 12 08 08.4 -0.1
comp=Z,4.9nm,0.7s,baz=38,slow=2.4,SNR=35
GERES SKPbc **SKPbc** **12 11 34.0 -0.7**
comp=Z,0.9nm,0.7s,baz=64,slow=3.1,SNR=5.5
GERES GERESS Array B 144.20 332 **PKPab** **12 08 08.2 +0.1**
WET Wettzell 144.34 333 *e*PKPbc PKPbc 12 08 08.9 0.0
baz=38,slow=3.2
KASTN Kahler Asten 144.41 339 *e*PKPbc **PKPab** **12 08 08.7 0.0**
baz=38,slow=3.2
IDI Anoyia 144.46 305 PKPdf **PKPab** **12 08 09.3 -0.2**
ARSA Arzberg 144.49 328 PKPdf PKPbc 12 08 09.4 0.0
GRA1 Grafenberg Arr 144.61 335 PKPbc **PKPab** **12 08 09.0 -0.5**
GRF Grafenberg Arr 144.61 335 *e*PKPbc PKPbc 12 08 09.7 +0.1
baz=38,slow=3.2
GRF *e*L L 13 14 31.4
comp=Z,26nm,18.6s
MOA Molln 144.67 330 *i* PKP PKPbc 12 08 10.1 +0.2
comp=Z,13nm,0.6s,SNR=17
SESA Seetaler Alpe, 145.05 329 *i* PKP **PKPbc** **12 08 11.1 -0.3**
comp=Z,80nm,0.9s,SNR=28
BIOA Bad Ischl, Aus 145.08 331 *i* PKP **PKPbc** **12 08 10.7 -0.5**
comp=Z,7.3nm,0.5s
PERS Pernice 145.11 328 *e*PKPbc **PKPbc** **12 08 11.1 -0.3**
SOKA Soboth 145.12 328 *i* PKP **PKPbc** **12 08 11.2 -0.3**
comp=Z,14nm,0.5s,SNR=18
RCBR Riachuelo 145.16 133 PKPbc **PKPbc** **12 08 11.5 -1.0**
TNS Taunus Mts 145.22 338 *e*PKPbc **PKPab** **12 08 11.7 -0.1**
baz=38,slow=3.2
BLY Banja Luka 145.25 324 PKPdf **PKPab** **12 08 12.1 0.0**
PDG Podgorica 145.39 319 PKPdf **PKPdf** **12 08 11.9 -0.2**
RJOB Jochberg 145.43 331 *e*PKPbc **PKPbc** **12 08 12.4 0.0**
baz=38,slow=3.2
OBKA Obir 145.48 328 *i* PKP **PKPdf** **12 08 12.4 +0.2**
comp=Z,12nm,0.9s,SNR=5.4
KBA Koelnbreinsper 145.66 330 *i* PKP **PKPdf** **12 08 12.3 -0.3**
comp=Z,4.0nm,0.6s,SNR=6.9
VNDS Vrh nad Dolski 145.69 328 *i* PKPbc **PKPdf** **12 08 12.8 +0.3**
LESA Schwarzleotal 145.72 331 *i* PKP **PKPdf** **12 08 12.9 +0.3**
comp=Z,11nm,0.5s,SNR=10
MYKA Terra Mystica 145.84 329 *i* PKP **PKPdf** **12 08 12.8 0.0**
comp=Z,2.8nm,0.4s,SNR=6.6
UCC Uccle 146.03 343 PKPdf **PKPdf** **12 08 12.2 -0.6**
ITM Ithomi 146.05 309 PKPdf **PKPdf** **12 08 13.6 +0.2**
CADS Cadrg 146.08 329 *e*PKPbc **PKPdf** **12 08 13.3 +0.1**
STU Stuttgart 146.14 336 PKPdf **PKPdf** **12 08 12.7 -0.5**
STU Stuttgart 146.14 336 *e*PKPbc **PKPab** **12 08 14.8 -0.4**
baz=38,slow=3.2
WTTA Wattenberg 146.31 332 *i* PKP **PKPbc** **12 08 14.7 -0.5**
comp=Z,4.8nm,0.5s,SNR=5.4
SABO M.te Sabotino 146.32 329 PKPdf **PKPdf** **12 08 13.3 -0.3**
WLF Walferdange 146.48 340 PKPdf **PKPdf** **12 08 12.6 -1.1**
WLF Walferdange 146.48 340 *e*PKPbc **PKPbc** **12 08 15.9 +0.6**
baz=38,slow=3.2
MOTA Moosalm 146.48 332 *i* PKP **PKPbc** **12 08 15.3 -0.4**
comp=Z,6.1nm,0.6s,SNR=7.7
RETA Reutte 146.52 333 *i* PKP **PKPbc** **12 08 15.2 -0.5**
comp=Z,3.6nm,0.5s
SQTA Sankt Quirin 146.53 332 *i* PKP **PKPbc** **12 08 15.2 -0.6**
comp=Z,9.0nm,0.6s,SNR=7.3
STAL STALIGIAL 146.56 330 PKPdf **PKPdf** **12 08 12.9 -1.1**
BFO Black Forest 146.83 336 *e*PKPbc **PKPbc** **12 08 16.3 -0.1**
baz=38,slow=3.2
FETA Feichten 146.89 332 *i* PKP **PKPbc** **12 08 16.5 -0.3**
comp=Z,6.6nm,0.5s,SNR=8.4
DAVA Damuels 147.05 334 *e*PKP **PKPbc** **12 08 16.9 -0.3**
comp=Z,6.2nm,0.7s
CTI Castel Tesino 147.21 330 PKPdf **PKPdf** **12 08 14.5 -0.7**
KEST Kesra 155.54 317 PKPab **PKPab** **12 08 55.1 +0.4**
comp=Z,2.5nm,0.8s,baz=87,slow=3.4,SNR=4.1
DBIC Dimbokro 166.39 207 PKPab **PKPab** **12 09 42.0 -0.2**
comp=Z,3.4nm,0.9s,baz=138,slow=6.4,SNR=3.2
TORD Torodi Ar. Bea 166.54 246 PKP **PKPdf** **12 08 38.2 -2.0**
comp=Z,3.5nm,0.9s,baz=58,slow=0.5,SNR=16
TORD PKPab **PKPab** **12 09 42.8 -0.4**
comp=Z,2.1nm,1.0s,baz=117,slow=1.5,SNR=5.0
TORD Torodi Ar. Bea 166.54 246 **PKPdf** **12 08 39.9 -0.4**

ISK ***20*** *11:55:21.3, 36.99N×36.08E, h5km, ML2.6/12*
AFAD ***20*** *11:55:22.5, 36.97N×36.14E, h7km±3km, ML2.7*
ISC 20 11:55:22.0±1.1, 36.99N±0.02×36.10E±0.02, h5km±10km, n31, σ0.83/56, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HASA	**Hatay-Hassa-Ha**	**0.39**	**127**	P	**Pg**	**11 55 29.8**	**+0.2**
HASA				S	**Sg**	**11 55 34.8**	**+0.1**
HASA				IAML		11 55 36.0	
	comp=N,1μm,0.2s						
HASA				IAML		11 55 36.0	
	comp=E,801nm,0.1s						
KAMA	**Osmaniye**	**0.50**	**66**	P	**Pg**	**11 55 31.6**	**+0.1**
KAMA				IAML		11 55 38.0	
	comp=N,603nm,0.1s						
KAMA				S	**Sg**	**11 55 38.2**	**+0.1**
KOZT	**Kozan**	**0.54**	**336**	Pg	**Pg**	**11 55 32.8**	**+0.4**
KOZT				Sg	**Sb**	**11 55 41.1**	**-0.9**
TAHT	**Tahtakopru-Hat**	**0.61**	**173**	Pg	**Pg**	**11 55 34.0**	**+0.2**
ANDN	**Andirin**	**0.62**	**18**	P	**Pg**	**11 55 34.5**	**+0.5**
ANDN				S	**Sb**	**11 55 44.1**	**-0.5**
CAYT	**Sariam**	**0.65**	**287**	P	**Pg**	**11 55 34.1**	**-0.4**
CAYT				S	**Sn**	**11 55 47.7**	**-0.7**
KRTS	**Karatas**	**0.71**	**235**	Pg	**Pb**	**11 55 36.6**	**-0.2**
KRTS				Sg	**Sb**	**11 55 46.7**	**-0.2**
KUZU	**Kuzuini**	**0.81**	**105**	P	**Pb**	**11 55 38.0**	**-0.6**
KUZU				S	**Sn**	**11 55 51.0**	**-1.5**
KUZU				IAML		11 55 52.0	
	comp=E,649nm,0.5s						
KMRS	**Kahramanmaras**	**0.82**	**51**	Pg	**Pb**	**11 55 38.6**	**-0.2**
KMRS				Sg	**Sb**	**11 55 50.8**	**+0.6**
RHAN	**Hatay/Reyhanl**	**0.83**	**151**	P	**Pg**	**11 55 38.0**	**+0.1**
RHAN				S	**Sb**	**11 55 49.8**	**-0.6**
RHAN				IAML		11 55 51.0	
	comp=N,436nm,0.3s						
RHAN				IAML		11 55 51.0	
	comp=E,304nm,0.6s						
KAHM	**Kahramanmaras,**	**0.89**	**53**	P	**Pb**	**11 55 39.3**	**-0.5**
KAHM				S	**Sb**	**11 55 51.5**	**-0.4**
KAHM				IAML		11 55 55.0	
	comp=N,169nm,0.7s						
KAHM				IAML		11 55 55.0	
	comp=E,161nm,0.5s						
GAZ	**Gaziantep**	**0.91**	**78**	Pg	**Pb**	**11 55 40.6**	**+0.4**
GAZ				Sg	**Sn**	**11 55 53.8**	**-1.1**
KHMN	**Narli-Kahraman**	**0.94**	**64**	Pg	**Pb**	**11 55 40.6**	**-0.1**
KHMN	**Narli-Kahraman**	**0.94**	**64**	P	**Pb**	**11 55 40.8**	**0.0**
KHMN				S	**Sb**	**11 55 53.7**	**+0.3**
KHMN				IAML		11 55 56.0	
	comp=E,214nm,0.4s						
KHMN				IAML		11 55 57.0	
	comp=N,224nm,0.6s						
YAYL	**Yayladag**	**0.95**	**180**	P	**Pn**	**11 55 43.9**	**+1.8**
YAYL				S	**Sn**	**11 55 57.8**	**+1.8**
SAIM	**ADANA**	**0.99**	**359**	P	**Pg**	**11 55 41.2**	**+0.3**
SAIM				S	**Sn**	**11 55 56.5**	**-0.4**
SAIM				IAML		11 55 57.0	
	comp=N,127nm,0.1s						
SAIM				IAML		11 56 00.0	
	comp=E,157nm,0.5s						
GULE	**Gulek**	**1.10**	**286**	P	**Pg**	**11 55 42.0**	**-1.0**
GULE				S	**Sn**	**11 56 00.7**	**+1.0**
CMRD	**Camardi-Nigde**	**1.11**	**308**	Pn	**Pg**	**11 55 41.8**	**-1.5**
GZT	**Gaziantep**	**1.23**	**72**	P	**Pn**	**11 55 45.8**	**0.0**
GZT				S	**Sb**	**11 56 01.8**	**-0.1**
GZT				IAML		11 56 04.0	
	comp=N,146nm,0.7s						
GZT				IAML		11 56 06.0	
	comp=E,226nm,0.7s						
YAHY	**KAYSERI_Yahyal**	**1.25**	**332**	P	**Pg**	**11 55 45.9**	**0.0**
YAHY				S	**Sn**	**11 56 04.2**	**+0.7**
NZIP	**Nizip/Gaziante**	**1.26**	**87**	P	**Pg**	**11 55 46.0**	**-0.2**
NZIP				S	**Sn**	**11 56 04.0**	**+0.4**
NZIP				IAML		11 56 05.0	
	comp=E,213nm,0.4s						
NZIP				IAML		11 56 06.0	

	comp=N,152nm,0.3s								
SARI	**SarD1z-Kayseri**	**1.44**	**10**	Pn	**Pb**	**11 55 49.3**	**-0.1**		
SARI				Sn	**Sg**	**11 56 10.1**	**+1.8**		
AKCA	**Adyaman/G¶l**	**1.50**	**57**	P	**Pn**	**11 55 49.6**	**0.0**		
AKCA				S	**Sg**	**11 56 11.3**	**+1.1**		
AKCA				IAML		11 56 12.0			
	comp=E,94nm,0.7s								
AKCA				IAML		11 56 14.0			
	comp=N,123nm,0.5s								
ATAB	**Bozova**	**1.82**	**74**	P	**Pg**	**11 55 56.2**	**-0.7**		
ATAB				S	**Sg**	**11 56 19.6**	**-0.8**		
ATAB				IAML		11 56 24.0			
	comp=N,149nm,0.3s								
ATAB				IAML		11 56 24.0			
	comp=E,158nm,0.3s								
AZEY	**Adyaman-Merk**	**1.90**	**64**	P	**Pn**	**11 55 55.3**	**+0.3**		
AZEY				S	**Sn**	**11 56 19.6**	**+0.2**		
AKCD	**Akcadag**	**1.95**	**47**	P	**Pn**	**11 55 56.3**	**+0.4**		
AKCD				S	**Sg**	**11 56 23.8**	**-0.9**		
GULA	**Gulagac**	**2.00**	**313**	Pn	**Pn**	**11 55 57.4**	**+0.9**		
SURC	**SANLIURFA_SURC**	**2.02**	**92**	P	**Pb**	**11 55 57.6**	**-1.5**		
SURC				S	**Sb**	**11 56 23.9**	**-0.6**		
EREN	**Erenkoy**	**2.13**	**228**	Pn	**Pb**	**11 55 59.6**	**-1.4**		
URFA	**Urfa**	**2.22**	**77**	Pn	**Pb**	**11 56 01.3**	**-1.3**		
URFA				Sn	**Sb**	**11 56 30.5**	**+0.1**		
SVRC	**Sivrice-ELAZID**	**2.90**	**60**	Pn	**Pn**	**11 56 10.6**	**+1.7**		

*IDC **20** 12:23:16.8±2.5, 6°.31N×125°.55E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=222.4km s-min=28.1km az=64.0*
*NEIC **20** 12:23:35.3±1.2, 6°.15N±0°.04×125°.43E±0°.09, h156km±6km, mb4.2/23, Error ellipse: s-maj=13.8km s-min=2.5km az=64.0*
*MAN **20** 12:23:36.0, 6°.44N×125°.72E, h142km, MS4.1*

ISC 20 12:23:35.2±0.7, 6°.26N±0°.05×125°.70E±0°.07, h157km±6km, n52, σ1s14/58, mb4.1/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.77**	**257**	*i* P	**Pn**	**12 23 59.2**	**+0.2**
GSPH				*i* S	**Sn**	**12 24 16.9**	**-0.4**
DAV	**Davao City (W)**	**0.82**	**351**	Pn	**Pn**	**12 23 59.5**	**+0.2**
DAV				Sn	**Sn**	**12 24 18.9**	**+1.1**
DMPH	**Davao City--Mi**	**0.84**	**347**	*i* P	**Pn**	**12 24 00.2**	**+0.8**
DMPH				*i* S	**Sn**	**12 24 18.9**	**+0.8**
KCP	**Kidapawan**	**0.96**	**321**	*i* P	**Pn**	**12 24 00.7**	**+0.2**
KCP				*i* S	**Sn**	**12 24 21.3**	**+1.5**
CDOP	**Cateel, Davao**	**1.68**	**26**	*i* P	**Pn**	**12 24 06.4**	**-0.8**
CDOP				*i* S	**Sn**	**12 24 29.9**	**-2.0**
CTBH	**Cotabato--PC H**	**1.74**	**304**	*i* P	**Pn**	**12 24 07.7**	**-0.1**
CTBH				*i* S	Sn	12 24 12.8	-20
BIPH	**Bislig**	**2.02**	**19**	*eP*	**Pn**	**12 24 11.5**	**+0.5**
BIPH				*eS*	**Sn**	**12 24 39.4**	**+0.7**
CGP	**Cagayan de Oro**	**2.40**	**335**	*eP*	**Pn**	**12 24 15.2**	**-0.3**
CGP				*eS*	**Sn**	**12 24 46.4**	**-0.3**
TSSP	**Tandag City**	**2.81**	**10**	*eP*	**Pn**	**12 24 19.5**	**-1.0**
TSSP				*eS*	**Sn**	**12 24 55.2**	**-0.4**
DCPH	**Dipolog City**	**3.28**	**315**	*eP*	**Pn**	**12 24 29.8**	**+3.3**
SCPH	**Surigao**	**3.51**	**357**	*eP*	**Pn**	**12 24 27.6**	**-1.8**
LSIP	**Lazi, Siquijor**	**3.52**	**324**	*i* P	**Pn**	**12 24 29.2**	**-0.2**
TBP	**Tagbilaran**	**3.87**	**332**	*eP*	**Pn**	**12 24 33.5**	**-0.5**
LLP	**Lapu-Lapu**	**4.38**	**337**	*eP*	**Pn**	**12 24 39.6**	**-1.1**
LLP				*eS*	**Sn**	**12 25 30.2**	**-1.6**
PLP	**Palo**	**4.93**	**352**	*eP*	**Pn**	**12 24 48.1**	**+0.2**
TNTI	**Ternate**	**5.70**	**163**	Pn	**Pn**	**12 24 56.8**	**-1.2**
TOLI2	**Tolitoli**	**7.09**	**224**	Pn	Pn	12 25 11.6	-5.0
MYLDM	**Lahad Datu**	**7.25**	**262**	Pn	Pn	12 25 13.3	-5.3
LUWI	**Luwuk**	**7.82**	**202**	Pn	Pn	12 25 22.1	-4.1
FAKI	**Fak Fak**	**11.22**	**144**	Pn	**Pn**	**12 26 11.7**	**+0.5**
MTN	**Manton Dam**	**19.73**	**164**	P	**P**	**12 27 53.4**	**+0.5**
MTN				IAmb	IAmb	12 27 58.0	
	comp=Z,7.5nm,1.4s						
JOW	**Kunigami**	**20.61**	**7**	P	**P**	**12 28 03.1**	**+0.9**
JOW				IAmb	IAmb	12 28 19.0	
	comp=Z,25nm,1.2s						
KNRA	**Kununurra**	**22.00**	**172**	P	**P**	**12 28 17.0**	**0.0**
KNRA				IAmb	IAmb	12 28 26.4	
	comp=Z,6.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.20**	**180**	P	**P**	**12 28 37.3**	**0.0**
WB0	**Warramunga Arr**	**27.24**	**162**	P	**P**	**12 29 03.8**	**-1.0**
WB0				IAmb	IAmb	12 29 29.3	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**27.39**	**162**	P	**P**	**12 29 03.9**	**-2.2**
	comp=Z,1.0nm,0.8s,baz=345,slow=9.3,SNR=2.2						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**27.39**	**162**	P	**P**	**12 29 05.9**	**-0.2**
WR8	**Warramunga Arr**	**27.45**	**162**	P	**P**	**12 29 05.7**	**-1.0**
WR8				IAmb	IAmb	12 29 34.4	
	comp=Z,10nm,1.4s						
ENH	**Enshi**	**28.34**	**329**	P	**P**	**12 29 14.2**	**-0.4**
ENH				IAmb	IAmb	12 29 51.8	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**30.80**	**165**	P	**P**	**12 29 36.2**	**-0.2**
ASAR	**Alice Springs**	**30.80**	**165**	P	**P**	**12 29 35.6**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=341,slow=7.0,SNR=65						
	comp=Z,1.2nm,0.5s						
MJB9	**Matsu-Tunnel**	**32.24**	**19**	P	**P**	**12 29 49.1**	**+0.3**
MJB9				IAmb	IAmb	12 30 12.1	
	comp=Z,7.2nm,1.5s						
PBA	**Port Blair**	**32.98**	**282**	P	**P**	**12 29 52.5**	**-3.0**
INKA	**Innaminka**	**36.79**	**157**	P	**P**	**12 30 27.4**	**-0.5**
FORT	**Forrest**	**36.90**	**177**	P	**P**	**12 30 27.6**	**-1.2**
FORT				IAmb	IAmb	12 30 40.3	
	comp=Z,6.2nm,1.1s						
BBOO	**Buckleboo**	**40.08**	**166**	P	**P**	**12 30 55.7**	**+0.3**
STKA	**Stephens Creek**	**40.84**	**159**	P	**P**	**12 31 01.9**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=336,slow=11,SNR=3.2						
	comp=Z,1.3nm,0.5s						
KOUNC	**Koumac, New Ca**	**46.33**	**126**	P	**P**	**12 31 45.8**	**+0.1**
LHI	**Lord Howe Isla**	**49.25**	**142**	P	**P**	**12 32 07.5**	**-0.5**
PET	**Petropavlovsk**	**53.83**	**24**	P	**P**	**12 32 43.6**	**+2.0**
MKAR	**Makanchi Array**	**54.91**	**325**	P	**P**	**12 32 48.4**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=129,slow=8.1,SNR=3.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.91**	**325**	P	**P**	**12 32 48.9**	**-0.8**
AB31	**Akbulak array**	**69.56**	**320**	P	**P**	**12 34 26.5**	**-0.6**
ABKAR	**Akbulak array**	**69.56**	**320**	P	**P**	**12 34 26.4**	**-0.7**
UNV	**Unalaska Valle**	**71.95**	**35**	P	**P**	**12 34 42.7**	**+1.3**
UNV				IAmb	IAmb	12 35 12.9	
	comp=Z,7.4nm,1.0s						
UWE	**Uwekahuna**	**77.60**	**72**	P	**P**	**12 35 15.9**	**+1.1**
IMAR	**Indian Mountai**	**80.47**	**24**	P	**P**	**12 35 30.4**	**+1.1**
E21K	**Killik River**	**80.66**	**22**	P	**P**	**12 35 31.1**	**+0.8**
E21K				IAmb	IAmb	12 36 08.6	
	comp=Z,3.0nm,1.2s						
G23K	**Bananza Creek**	**82.02**	**24**	P	**P**	**12 35 38.8**	**+1.3**
G23K				IAmb	IAmb	12 36 17.7	
	comp=Z,4.0nm,1.5s						
IL31		**83.28**	**26**	P	**P**	**12 35 45.6**	**+1.7**
IL31				IAmb	IAmb	12 36 19.5	
	comp=Z,2.0nm,0.8s						
K27K	**Chicken**	**85.40**	**26**	P	**P**	**12 35 55.4**	**+0.7**
K27K				IAmb	IAmb	12 36 21.2	
	comp=Z,5.8nm,1.5s						
BCAR	**Beaver Creek A**	**85.61**	**27**	P	**P**	**12 35 56.7**	**+0.9**

*NNC **20** 12:28:29.6±2.3, 41°.94N×81°.65E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=17.1km s-min=8.9km az=162.0*
*SOME **20** 12:28:34.0, 42°.42N×81°.52E, h5km*

ISC 20 12:28:31.5±3.2, 41°.9N±0°.2×81°.37E±0°.08, h17km±13km, n7, σ2s71/15, 4C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.89**	**313**	*eP*	**Pn**	**12 29 00.6**	**-2.5**
	13nm,0.4s						
SHLS				*eS*	**Sn**	**12 29 19.9**	**-6.7**
	29nm,0.3s						
PDGK	**Podgornoye**	**2.00**	**317**	⇓Pn	**Pn**	**12 29 05.9**	**+1.3**
	4.2nm,0.4s						
PDGK				⇓Sn	**Sg**	**12 29 34.6**	**-1.2**
	29nm,0.5s						
UZB	**Uzynbulak**	**2.14**	**307**	*eP*	**Pb**	**12 29 11.7**	**+1.9**
	5.9nm,0.4s						
UZB				*eS*	**Sb**	**12 29 38.8**	**+2.7**
	12nm,0.4s						
SATY	**Saty**	**2.48**	**299**	*eP*	**Pg**	**12 29 18.9**	**-0.2**
	3.9nm,0.3s						
SATY				*eS*	**Sg**	**12 29 51.1**	**-0.2**
	11nm,0.4s						
KPKS	**Kokpek**	**2.53**	**309**	*eP*	**Pb**	**12 29 18.0**	**+1.6**
	0.2nm,0.2s						
KPKS				*eS*	**Sb**	**12 29 49.8**	**+2.5**
	36nm,0.6s						
MAKZ	**Makanchi**	**4.94**	**5**	⇑Pn	**Pn**	**12 29 44.8**	**0.0**
	1.0nm,0.5s						
MAKZ				⇓Pg	Pg	12 29 57.6	-8.4
	1.0nm,0.6s						
MAKZ				⇓Sn	**Sn**	**12 30 42.2**	**+0.8**
	1.3nm,0.6s						
MAKZ				⇓Lg	Lg	12 31 01.0	
	1.4nm,0.8s						
MK31	**Makanchi Array**	**4.95**	**7**	Pn	**Pn**	**12 29 45.3**	**+0.3**
	0.2nm,0.4s,baz=184,slow=14,SNR=10						
MK31				⇑Pg	**Pb**	**12 29 55.8**	**-1.8**
	0.4nm,0.5s,baz=186,slow=15,SNR=3.3						
MK31				⇑Sn	**Sn**	**12 30 43.4**	**+1.6**
	0.9nm,0.6s,baz=189,slow=21,SNR=5.7						
MK31				⇑Lg	Lg	12 31 01.6	
	2.4nm,0.8s,baz=189,slow=30,SNR=3.2						

*IDC **20** 12:37:21.8±1.0, 64°.11N×17°.37E, h0km, mbtmp2.4/4, ML1.7/4, Error ellipse: s-maj=11.4km s-min=7.1km az=134.0*
*BER **20** 12:37:22.2±0.8, 64°.08N×17°.90E, h0km, ML1.8, ML2.7(UPP), Suspected explosion*
*UPP **20** 12:37:22.3±0.2, 64°.15N×17°.24E, h0km, ML2.7, Suspected explosion*
*DNK **20** 12:37:22.7±0.5, 64°.14N×17°.22E, h0km, ML2.7(UPP), Explosion*

ISC 20 12:37:20.5±0.7, 64°.21N±0°.03×17°.12E±0°.02, h0km, n24, σ0s76/45, 4C-4D, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BREU	**Bredtraesk**	**0.72**	**116**	⇑P	**Pg**	**12 37 34.5**	**+0.3**
BREU				S	**Sg**	**12 37 43.0**	**-0.5**
BREU	**Bredtraesk**	**0.72**	**116**	⇑P	**Pg**	**12 37 34.5**	**+0.3**
BREU				S	**Sg**	**12 37 43.0**	**-0.5**
SOLU	**Sollefteaa**	**0.97**	**176**	⇓P	**Pg**	**12 37 39.4**	**+0.4**
SOLU				S	**Sg**	**12 37 51.1**	**-0.4**
SOLU	**Sollefteaa**	**0.97**	**176**	⇓P	**Pg**	**12 37 39.4**	**+0.4**
SOLU				S	**Sg**	**12 37 51.1**	**-0.4**
SVAU	**Svanoeiden**	**1.10**	**74**	⇑P	**Pb**	**12 37 42.5**	**+0.1**
SVAU				S	**Sg**	**12 37 56.7**	**+0.8**
SVAU	**Svanoeiden**	**1.10**	**74**	⇑P	**Pb**	**12 37 42.5**	**+0.1**
SVAU				S	**Sg**	**12 37 56.7**	**+0.8**
NOD	**Norderasen**	**1.27**	**233**	P	**Pn**	**12 37 45.8**	**+0.4**
NOD				S	**Sn**	**12 38 02.4**	**-0.6**
NOD	**Norderasen**	**1.27**	**233**	P	**Pn**	**12 37 45.8**	**+0.4**
NOD				S	**Sn**	**12 38 02.4**	**-0.6**
ODEU	**Stanfors**	**1.58**	**81**	P	**Pg**	**12 37 50.7**	**0.0**
ODEU				S	**Sg**	**12 38 11.5**	**+0.4**
ODEU	**Stanfors**	**1.58**	**81**	P	**Pg**	**12 37 50.7**	**0.0**
ODEU				S	**Sg**	**12 38 11.5**	**+0.4**
HEMU	**Hemsoen**	**1.60**	**165**	⇓P	**Pn**	**12 37 50.1**	**+0.2**
HEMU	**Hemsoen**	**1.60**	**165**	⇓P	**Pn**	**12 37 50.1**	**+0.2**
UMAU	**Umeaa**	**1.60**	**100**	P	**Pb**	**12 37 50.5**	**-0.4**
UMAU				S	**Sn**	**12 38 10.7**	**-0.5**
UMAU	**Umeaa**	**1.60**	**100**	P	**Pb**	**12 37 50.5**	**-0.4**
UMAU				S	**Sn**	**12 38 10.7**	**-0.5**
NSS	**Namsos**	**2.26**	**280**	*eP*	**Pg**	**12 38 03.9**	**+0.1**
NSS				*eS*	**Sg**	**12 38 34.7**	**+1.6**
NSS				IAML		12 38 36.0	
	comp=Z,15nm,0.5s						
MOR8	**Moi Rana**	**2.27**	**331**	*eP*	**Pg**	**12 38 04.0**	**+0.1**
MOR8				*eS*	**Sg**	**12 38 33.3**	**0.0**
MOR8				IAML		12 38 34.5	
	comp=Z,6.5nm,0.3s						
LEIR	**Leirfjorden**	**2.55**	**320**	*eP*	**Pb**	**12 38 07.2**	**+0.2**
LEIR				*eS*	**Sg**	**12 38 41.4**	**-0.8**
LEIR				IAML		12 38 46.9	
	comp=Z,5.7nm,0.4s						
RAUS	**Rausandaksla**	**2.58**	**331**	*eS*	**Sb**	**12 38 40.5**	**+0.7**
STOK	**Stokkvaagen**	**2.74**	**323**	*eP*	**Pb**	**12 38 09.7**	**-0.5**
STOK				*eS*	**Sb**	**12 38 45.2**	**+1.0**
STOK				IAML		12 38 56.3	
	comp=Z,5.4nm,0.3s						
KONS	**Konsvik**	**2.84**	**326**	*eP*	**Pb**	**12 38 10.8**	**-1.2**
KONS				*eS*	**Sb**	**12 38 47.4**	**+0.2**
KONS				IAML		12 38 57.5	
	comp=Z,8.2nm,0.3s						
NOA	**NORSAR Array B**	**4.19**	**223**	Pn	**Pn**	**12 38 26.1**	**+0.5**
	baz=42,slow=14,SNR=1.2						
NOA				Sn	**Sn**	**12 39 14.9**	**-0.3**
	baz=336,slow=21,SNR=1.4						
NOA				Lg	Lg	12 39 33.8	
	comp=Z,0.1nm,0.3s,baz=44,slow=27,SNR=6.2						
	comp=Z,0.1nm,0.4s						
HFS	**Hagfors**	**4.40**	**203**	Pn	**Pn**	**12 38 29.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=1.7						
HFS				Sn	**Sn**	**12 39 19.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=35,slow=24,SNR=7.9						
HFS				Lg	Lg	12 39 36.3	
	comp=Z,1.1nm,0.3s,baz=26,slow=28,SNR=12						
	comp=Z,1.3nm,1.0s						
FINES	**FINESS Array B**	**4.96**	**120**	Pn	**Pn**	**12 38 36.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=305,slow=13,SNR=4.2						
FINES				Sn	**Sn**	**12 39 32.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=307,slow=22,SNR=6.9						
FINES				Lg	Lg	12 39 50.8	
	comp=Z,0.9nm,0.3s,baz=308,slow=24,SNR=13						
	comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**6.28**	**28**	Pn	**Pn**	**12 38 55.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=212,slow=13,SNR=6.2						
ARCES				Sn	**Sn**	**12 40 04.3**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=215,slow=23,SNR=5.8						
	comp=Z,0.2nm,0.3s						

*SOME **20** 12:51:51.1, 39°.75N×75°.60E, h10km*
*NNC **20** 12:51:53.5±1.3, 39°.86N×75°.61E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=9.2km s-min=6.4km az=174.0*
*KRNET **20** 12:51:55.4±0.1, 39°.88N×75°.70E, h14km, mb3.3*

ISC 20 12:51:58.5±1.4, 39°.96N±0°.06×75°.64E±0°.03, h10km, n46, σ1s96/76, 25C-19D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.09**	**360**	⇑*iP*	**Pg**	**12 52 17.9**	**-1.7**
JNKS				⇑*iS*	**Sg**	**12 52 34.0**	**+0.1**
NRN	**Naryn**	**1.50**	**11**	⇑*eP*	**Pn**	**12 52 24.3**	**-1.5**
NRN				⇑*iS*	**Sn**	**12 52 45.6**	**0.0**
SFK	**Sufi-Kurgan**	**1.64**	**273**	⇓*iP*	**Pn**	**12 52 26.9**	**-0.7**
SFK				⇓*iS*	**Sg**	**12 52 50.0**	**-1.3**
SALK	**Salom-Alik**	**1.67**	**304**	⇓*iP*	**Pn**	**12 52 28.0**	**0.0**
SALK				⇓*iS*	**Sg**	**12 52 51.9**	**-0.2**
ULHL	**Ulahol**	**2.33**	**11**	⇓*iP*	**Pn**	**12 52 37.8**	**+0.6**
ULHL				⇓*iS*	**Sb**	**12 53 08.6**	**-1.1**
TARG	**Taragay, Kyrgy**	**2.42**	**42**	⇓*iP*	**Pn**	**12 52 38.5**	**0.0**
TARG				⇓*iS*	**Sn**	**12 53 10.0**	**+1.6**
KDJ	**Kajisay**	**2.47**	**28**	⇓*iP*	**Pn**	**12 52 39.3**	**+0.3**
KDJ				⇓*iS*	**Sn**	**12 53 11.4**	**+2.2**
BOOM	**Boomskoye usch**	**2.54**	**5**	⇑*iP*	**Pn**	**12 52 40.9**	**+0.9**
BOOM				⇑*iS*	**Sb**	**12 53 14.1**	**-1.6**
KBK	**Karagaybulak**	**2.75**	**349**	⇑*iP*	**Pn**	**12 52 43.6**	**+0.8**
KBK				⇑*iS*	**Sn**	**12 53 19.0**	**+2.8**
AAK	**Ala-Archa**	**2.81**	**343**	⇑Pg	**Pb**	**12 52 46.2**	**-2.8**
	4.9nm,0.5s						
AAK				⇑Lg	Lg	12 53 25.8	
	21nm,0.8s						
AAK	**Ala-Archa**	**2.81**	**343**	⇑*iP*	**Pn**	**12 52 44.7**	**+1.0**
AAK				⇑*iS*	**Sb**	**12 53 20.8**	**-2.7**
TKM2	**Tokmak 2**	**2.96**	**359**	⇓*iP*	**Pn**	**12 52 46.7**	**+0.9**
TKM2				⇓*iS*	**Sn**	**12 53 24.2**	**+2.7**
EKS2	**Erkin-Say**	**3.04**	**333**	⇑*iP*	**Pn**	**12 52 47.8**	**+1.0**
EKS2				⇑*iS*	**Sn**	**12 53 26.2**	**+2.8**
KST	**Kastek**	**3.09**	**4**	Pg	**Pn**	**12 52 50.5**	**+2.9**
	16nm,0.4s						
KST				Lg	Lg	12 53 33.3	
	30nm,0.4s						
KST	**Kastek**	**3.09**	**4**	*eP*	**Pn**	**12 52 50.5**	**+2.9**
	16nm,0.4s						
KST				*eS*	**Sb**	**12 53 33.3**	**+1.8**
	30nm,0.4s						
CHMS	**Chumysh**	**3.11**	**348**	⇓*iP*	**Pn**	**12 52 48.5**	**+0.8**
CHMS				⇓*iS*	**Sn**	**12 53 27.5**	**+2.6**
IZV	**Izvestkoviy**	**3.16**	**13**	Pg	**Pb**	**12 52 53.3**	**-1.6**
IZV				Lg	Lg	12 53 37.5	
IZV	**Izvestkoviy**	**3.16**	**13**	*eP*	**Pb**	**12 52 53.3**	**-1.6**
IZV				*eS*	**Sg**	**12 53 37.5**	**-2.6**
ANVS	**Anan'yevo**	**3.21**	**28**	⇑*eP*	**Pn**	**12 52 49.6**	**+0.4**
ANVS				⇑*eS*	**Sn**	**12 53 29.1**	**+1.5**
TNSS	**Tian-Shan**	**3.23**	**17**	Pg	**Pb**	**12 52 54.1**	**-2.2**
	1.3nm,0.3s						
TNSS				Lg	Lg	12 53 39.4	
	10nm,0.6s						
TNSS	**Tian-Shan**	**3.23**	**17**	*eP*	**Pb**	**12 52 54.1**	**-2.2**
	1.3nm,0.3s						
TNSS				*eS*	**Sb**	**12 53 39.4**	**+3.6**
	10nm,0.6s						
MRKS	**Merke**	**3.32**	**328**	Pg	**Pb**	**12 52 54.9**	**-2.7**
	2.1nm,0.3s						
MRKS				Lg	Lg	12 53 40.7	
	31nm,0.4s						
MRKS	**Merke**	**3.32**	**328**	*eP*	**Pb**	**12 52 54.9**	**-2.7**
	2.1nm,0.3s						
MRKS				*eS*	**Sb**	**12 53 40.7**	**+2.5**
	31nm,0.4s						
ARK	**Arkit**	**3.34**	**305**	⇑*iP*	**Pn**	**12 52 51.8**	**+0.9**
ARK				⇑*iS*	**Sn**	**12 53 33.1**	**+2.5**
MDOK	**Medeo**	**3.38**	**18**	Pg	**Pb**	**12 52 55.3**	**-3.2**
	2.9nm,0.8s						
MDOK				Pg	Pn	12 52 57.2	+5.8
	4.0nm,0.2s						
MDOK				Lg	Lg	12 53 44.5	
	32nm,0.5s						
MDOK				Lg	Lg	12 53 45.2	
	22nm,1.1s						
USP	**Ospenovka**	**3.42**	**346**	⇓*iP*	**Pn**	**12 52 53.0**	**+1.1**
USP				⇓*iS*	**Sn**	**12 53 35.1**	**+2.6**
MNAS	**Manas**	**3.46**	**318**	⇑*iP*	**Pn**	**12 52 53.6**	**+1.0**
MNAS				⇑*iS*	**Sn**	**12 53 36.3**	**+2.6**
SGDS	**Sogindy**	**3.57**	**348**	Pg	**Pb**	**12 53 00.2**	**-1.7**
	1.3nm,0.2s						
SGDS				Lg	Lg	12 53 49.6	
	19nm,0.4s						
BTK	**Batken**	**3.70**	**273**	⇑*iP*	**Pn**	**12 52 56.4**	**+0.6**
BTK				⇑*iS*	**Sn**	**12 53 41.0**	**+1.4**
KRBS	**Karabastau**	**3.74**	**0**	Pg	**Pb**	**12 53 04.4**	**-0.2**
	2.1nm,0.4s						
KRBS				Lg	Lg	12 53 56.9	
	1.6nm,0.2s						
KRBS	**Karabastau**	**3.74**	**0**	*eP*	**Pb**	**12 53 04.4**	**-0.2**
	2.1nm,0.4s						
KRBS				*eS*	**Sg**	**12 53 56.9**	**-1.6**
	1.6nm,0.2s						
TRKS	**Terek-Say**	**3.76**	**296**	⇓*eP*	**Pn**	**12 52 56.8**	**+0.1**
TRKS				⇓*iS*	**Sn**	**12 53 41.8**	**+0.7**
KTBS	**Karatobe**	**3.83**	**11**	Pg	**Pb**	**12 53 05.8**	**-0.5**
	8.7nm,0.5s						
KTBS				Lg	Lg	12 53 59.6	
	19nm,0.4s						
KTBS	**Karatobe**	**3.83**	**11**	*eP*	**Pb**	**12 53 05.8**	**-0.5**
	8.7nm,0.5s						
KTBS				*eS*	**Sg**	**12 53 59.6**	**-2.0**
	26nm,0.7s						
UZB	**Uzynbulak**	**4.08**	**37**	Pg	**Pb**	**12 53 09.4**	**-1.1**
	0.9nm,0.3s						
UZB				Lg	Lg	12 54 05.6	
	8.3nm,0.6s						
UZB	**Uzynbulak**	**4.08**	**37**	*eP*	**Pb**	**12 53 09.4**	**-1.1**
	0.9nm,0.3s						
UZB				*eS*	**Sg**	**12 54 05.7**	**-3.8**
	8.3nm,0.6s						
KPKS	**Kokpek**	**4.18**	**32**	Pg	**Pb**	**12 53 10.4**	**-1.9**
KPKS				Lg	Lg	12 54 06.8	
KPKS	**Kokpek**	**4.18**	**32**	*eP*	**Pb**	**12 53 10.4**	**-1.9**
	0.3nm,0.2s						
KPKS				*eS*	**Sb**	**12 54 06.8**	**+3.9**
	19nm,0.6s						
PDGK	**Podgornoye**	**4.44**	**39**	⇑Pg	**Pb**	**12 53 17.7**	**+1.1**
	4.2nm,0.8s						
PDGK				⇓Lg	Lg	12 54 18.8	
	16nm,0.7s						
ARXS	**Arharly**	**4.55**	**20**	Pg	**Pb**	**12 53 18.5**	**-0.1**
ARXS				Lg	Lg	12 54 20.8	
ARXS	**Arharly**	**4.55**	**20**	*eP*	**Pb**	**12 53 18.4**	**-0.1**
	1.9nm,0.3s						
ARXS				*eS*	**Sg**	**12 54 20.8**	**-4.0**
	6.6nm,0.6s						
KK31	**Karatay Array**	**4.97**	**311**	⇑Pg	**Pb**	**12 53 25.4**	**-0.2**
	1.0nm,0.4s,baz=127,slow=13,SNR=4.1						
KK31				⇑Lg	Lg	12 54 37.5	
	2.1nm,0.5s,baz=127,slow=26,SNR=6.0						
BTLS	**Baital**	**5.21**	**348**	Pg	**Pb**	**12 53 31.9**	**+2.1**
BTLS				Lg	Lg	12 54 43.8	
BTLS	**Baital**	**5.21**	**348**	*eP*	**Pb**	**12 53 31.9**	**+2.1**
	0.4nm,0.2s						
BTLS				*eS*	**Sg**	**12 54 43.8**	**-2.1**
	5.7nm,0.4s						
DJR	**Jarkent**	**5.35**	**34**	Pg	**Pb**	**12 53 34.8**	**+2.6**
	1.0nm,0.2s						
DJR				Lg	Lg	12 54 48.5	
	2.1nm,0.3s			

*IDC **20** 13:36:13.0±3.6,23˚.18S×68˚.09W,h108km±32km,mb3.6/4, mbtmp3.9/6,Error ellipse: s-maj=36.8km s-min=26.1km az=120.0*

*GUC **20** 13:36:13.5±0.9,23˚.21S×68˚.55W,h119km±6km,ML3.8*

ISC 20 13:36:12.8±0.8,23˚.27S±0˚.05×68˚.51W±0˚.06,h115km±7km, n37,σ0°84/41,6C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.44**	**44**	⇓*iP*	**Pn**	**13 36 30.4**	**+0.1**
AF01				*eS*	**Sn**	**13 36 43.4**	**+0.2**
AF01				IAML		13 36 44.3	
	comp=N,5µm,0.4s						
AF01	**San Pedro de A**	**0.44**	**44**		**Pn**	**13 36 30.3**	**+0.1**
PB06	**IPOC Station P**	**1.13**	**300**	⇑*iP*	**Pn**	**13 36 36.3**	**+0.4**
PB06				*eS*	**Sn**	**13 36 53.3**	**0.0**
PB06				IAML		13 36 56.0	
	comp=E,4µm,0.2s						
PB06	**IPOC Station P**	**1.13**	**300**		**Pn**	**13 36 35.9**	**0.0**
PB05	**IPOC Station P**	**1.61**	**285**	⇑*iP*	**Pn**	**13 36 41.3**	**0.0**
PB05				*eS*	**Sn**	**13 37 02.6**	**-0.4**
PB05				IAML		13 37 08.5	
	comp=E,531nm,0.2s						
PB05	**IPOC Station P**	**1.61**	**285**		**Pn**	**13 36 41.2**	**-0.1**
PB09	**IPOC Station P**	**1.61**	**335**	⇑*iP*	**Pn**	**13 36 42.2**	**+0.7**
PB09				*eS*	**Sn**	**13 37 03.6**	**+0.3**
PB09	**IPOC Station P**	**1.61**	**335**		**Pn**	**13 36 42.0**	**+0.6**
PB03	**IPOC Station P**	**1.67**	**316**	⇑*iP*	**Pn**	**13 36 42.2**	**0.0**
PB03				*eS*	**Sn**	**13 37 03.9**	**-0.5**
PB03				IAML		13 37 05.1	
	comp=E,1µm,0.2s						
PB03	**IPOC Station P**	**1.67**	**316**		**Pn**	**13 36 42.1**	**0.0**
PB07	**IPOC Station P**	**1.99**	**320**	⇑*iP*	**Pn**	**13 36 46.1**	**0.0**
PB07				IAML		13 37 15.3	
	comp=E,816nm,0.2s						
PB07	**IPOC Station P**	**1.99**	**320**		**Pn**	**13 36 45.8**	**-0.3**
PB14	**IPOC Station P**	**2.19**	**232**	⇑*iP*	**Pn**	**13 36 49.0**	**+0.2**
PB14				*eS*	**Sn**	**13 37 16.6**	**+0.3**
PB14				IAML		13 37 17.5	
	comp=E,249nm,0.3s						
PB02	**IPOC Station P**	**2.33**	**326**	*eP*	**Pn**	**13 36 49.9**	**-0.4**
PB02				IAML		13 37 23.8	
	comp=E,742nm,0.3s						
PB02	**IPOC Station P**	**2.33**	**326**		**Pn**	**13 36 49.9**	**-0.4**
PB08	**IPOC Station P**	**3.17**	**349**	*eP*	**Pn**	**13 37 01.4**	**-0.2**
PB08				IAML		13 38 11.7	
	comp=E,72nm,0.2s						
PB08	**IPOC Station P**	**3.17**	**349**		**Pn**	**13 37 01.4**	**-0.2**
AC01	**Pan de Azucar**	**3.44**	**213**	*eP*	**Pn**	**13 37 03.6**	**-1.1**
AC01	**Pan de Azucar**	**3.44**	**213**		**Pn**	**13 37 03.8**	**-0.9**
AC02	**Maricunga**	**3.59**	**189**	*eP*	**Pn**	**13 37 08.1**	**+0.9**
GO01	**Chusmiza**	**3.64**	**350**	*eP*	**Pn**	**13 37 07.3**	**-0.6**
GO01	**Chusmiza**	**3.64**	**350**		**Pn**	**13 37 07.5**	**-0.4**
PB11	**IPOC Station P**	**3.65**	**343**	*eP*	**Pn**	**13 37 06.0**	**-1.8**
GO03	**Copiapo**	**4.58**	**200**	Pn	**Pn**	**13 37 18.5**	**-1.5**
AC05	**El Transito**	**5.76**	**196**		**Pn**	**13 37 34.6**	**-1.5**
LPAZ	**La Paz**	**6.96**	**3**	P	**Pn**	**13 37 53.3**	**+0.6**
	comp=E,0.4nm,0.3s,baz=183,slow=6.5,SNR=5.5						
SIV	**San Ignacio**	**10.07**	**45**	P	Pn	13 38 29.3	-5.2
	comp=E,3.9nm,0.3s,baz=237,slow=10,SNR=18						
SIV				S	Sn	13 40 14.3	-11
	comp=E,1.6nm,0.3s,baz=124,slow=17,SNR=7.2						
VAO	**Valinhos**	**19.82**	**93**	P	**P**	**13 40 33.2**	**-1.3**
BDFB	**Brasilia**	**20.75**	**72**	P	**P**	**13 40 42.4**	**-2.2**
	comp=E,3.3nm,0.4s,baz=237,slow=9.7,SNR=4.9						
	comp=E,3.3nm,0.4s						
BDFB	**Brasilia**	**20.75**	**72**	P	**P**	**13 40 42.9**	**-1.7**
BDFB				IAmb	IAmb	13 40 44.1	
	comp=Z,5.3nm,0.7s						
QSPA	**South Pole Qui**	**66.93**	**180**	P	**P**	**13 46 53.9**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=326,slow=1.7,SNR=22						
	comp=Z,0.9nm,0.4s						
QSPA	**South Pole Qui**	**66.93**	**180**	IAmb	IAmb	13 46 54.1	
	comp=Z,6.9nm,1.5s						
TORD	**Torodi Ar. Bea**	**77.61**	**70**	P	**P**	**13 47 56.4**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=252,slow=5.1,SNR=6.4						
	comp=Z,0.7nm,0.5s						
YKA	**Yellowknife Ar**	**92.97**	**340**	P	**P**	**13 49 13.2**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=129,slow=4.4,SNR=3.5						
	comp=Z,0.3nm,0.8s						
BVAR	**Borovoye Array**	**137.03**	**36**	PKP	**PKPdf**	**13 55 22.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=241,slow=1.5,SNR=5.9						
MKAR	**Makanchi Array**	**146.82**	**38**	PKPbc	**PKPdf**	**13 55 40.2**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=298,slow=3.1,SNR=4.6						
MKAR	**Makanchi Array**	**146.82**	**38**		**PKPdf**	**13 55 40.0**	**+0.5**

IDC 20 13:50:42.8±4.8,3˚.18N×129˚.84E,h0km,mb3.5/4, mbtmp3.6/4,Error ellipse: s-maj=388.7km s-min=22.7km az=70.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**6.06**	**325**	*eP*	Pg	13 53 00.8	+22
BIPH				*eS*	Sn	13 53 21.3	-2.5
WRA	**Warramunga Arr**	**23.40**	**169**	P	P	13 55 53.7	+0.1
	1.2nm,0.8s,baz=350,slow=11,SNR=2.3						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**26.98**	**172**	P	P	13 56 26.4	-0.1
	0.2nm,0.7s,baz=354,slow=6.0,SNR=5.8						
	0.2nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**39.13**	**64**	T	T	14 40 27.9	
	baz=252,slow=75,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**39.15**	**64**	T	T	14 40 29.2	
	baz=252,slow=75,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**39.15**	**64**	T	T	14 40 31.1	
	baz=252,slow=75,SNR=4.5						
MKAR	**Makanchi Array**	**59.80**	**324**	P	P	14 00 50.5	+0.5
	0.9nm,0.5s,baz=122,slow=8.4,SNR=9.2						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**63.89**	**326**	P	P	14 01 16.8	-0.6
	0.3nm,0.4s,baz=124,slow=6.4,SNR=6.5						
	0.3nm,0.4s						

*IDC **20** 13:51:42.3±2.4,20˚.56S×178˚.14W,h531km±21km,mb3.5/7, mbtmp4.3/9,Error ellipse: s-maj=27.6km s-min=20.7km az=99.0*

*NEIC **20** 13:51:44.9±1.2,20˚.8S±0˚.1×178˚.1W±0˚.1,h557km±8km, mb4.2/30,Error ellipse: s-maj=19.1km s-min=17.8km az=128.0*

*NOU **20** 13:51:45.6,20˚.76S×178˚.28W,h567km,mb4.1/28,Fiji Islands Region*

ISC 20 13:51:44.6±0.6,20˚.83S±0˚.09×178˚.24W±0˚.09,h550km, n79,σ1°04/75,mb4.2/23,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.64**	**348**	P	**P**	**13 53 00.0**	**+2.4**
LKBA	**Tubou, Lakemba**	**2.64**	**348**	S	**S**	**13 53 59.6**	**+2.7**
TAVE	**Taveuni**	**4.39**	**339**	P	**P**	**13 53 11.5**	**+1.9**
MSVF	**Nonsavu**	**4.67**	**311**	P	**P**	**13 53 09.4**	**-2.4**
	19nm,0.9s,baz=141,slow=5.0,SNR=20						
MSVF	**Nonsavu**	**4.67**	**311**	P	**P**	**13 53 13.4**	**+1.5**
MSVF	**Nonsavu**	**4.67**	**311**	S	**S**	**13 54 25.3**	**+2.4**
MSVF	**Nonsavu**	**4.67**	**311**		**P**	**13 53 13.4**	**+1.5**
DGTI	**Dogotuki**	**4.90**	**337**	P	**P**	**13 53 15.2**	**+1.5**
NIUE	**Niue**	**8.01**	**79**	P	**P**	**13 53 40.5**	**-2.0**
MARNC	**Mare, Loyalty**	**12.83**	**265**	P	**P**	**13 54 32.8**	**+1.1**
MARNC	**Mare, Loyalty**	**12.83**	**265**	P	**P**	**13 54 32.1**	**+0.4**
YATNC	**Mamie plateau,**	**13.90**	**262**	P	**P**	**13 54 43.6**	**+0.8**
DZM	**Mont Dzumac**	**14.32**	**262**	P	**P**	**13 54 46.3**	**-0.9**
	6.7nm,0.6s,baz=116,slow=11,SNR=17						
KOUNC	**Koumac, New Ca**	**16.36**	**268**	P	**P**	**13 55 06.7**	**-0.8**
TOZ	**Tahuroa Road**	**17.70**	**197**	P	**P**	**13 55 20.9**	**+1.4**
URZ	**Urewera**	**17.83**	**192**	P	**P**	**13 55 19.2**	**-1.5**
	3.1nm,0.3s,baz=271,slow=3.3,SNR=8.4						
URZ	**Urewera**	**17.83**	**192**	P	**P**	**13 55 21.4**	**+0.7**
BKZ	**Black Stump Fm**	**18.83**	**193**	P	**P**	**13 55 30.7**	**+0.8**
EIDS	**Eidsvold**	**28.54**	**255**	P	**P**	**13 56 56.8**	**+0.2**
EIDS				IAmb	IAmb	13 57 19.3	
	comp=Z,4.3nm,1.0s						
ARMA	**Armidale**	**28.72**	**244**	P	**P**	**13 56 58.9**	**+0.8**
ARMA				IAmb	IAmb	13 57 00.2	
	comp=Z,6.3nm,0.8s						
CTAO	**Charters Tower**	**33.23**	**265**	P	**P**	**13 57 36.8**	**0.0**
CTAO	**Charters Tower**	**33.23**	**265**	P	**P**	**13 57 37.0**	**+0.2**
QLP	**Quilpie**	**34.75**	**253**	P	**P**	**13 57 49.2**	**-0.2**
TOO	**Toolangi**	**35.52**	**234**	P	**P**	**13 57 56.4**	**+0.7**
TOO				IAmb	IAmb	13 58 13.5	
	comp=Z,5.9nm,1.2s						
COEN	**Coen**	**37.38**	**274**	P	**P**	**13 58 10.8**	**-0.5**
COEN				IAmb	IAmb	13 58 12.5	
	comp=Z,7.2nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.44**	**244**	P	**P**	**13 58 11.6**	**0.0**
	comp=Z,3.2nm,0.4s,baz=93,slow=12,SNR=9.5						
	comp=Z,3.2nm,0.4s						
STKA	**Stephens Creek**	**37.44**	**244**	P	**P**	**13 58 11.7**	**+0.1**
INKA	**Innaminka**	**37.88**	**251**	P	**P**	**13 58 15.8**	**+0.6**
QIS	**Mount Isa**	**39.35**	**263**	P	**P**	**13 58 26.5**	**-0.8**
HTT	**Hallett**	**39.87**	**242**	P	**P**	**13 58 30.4**	**-0.9**
BBOO	**Buckleboo**	**42.20**	**244**	P	**P**	**13 58 49.0**	**-0.7**
BBOO	**Buckleboo**	**42.20**	**244**	P	**P**	**13 58 49.7**	**0.0**
WR8	**Warramunga Arr**	**44.18**	**262**	P	**P**	**13 59 04.5**	**-0.8**
WR8				IAmb	IAmb	13 59 06.1	
	comp=Z,14nm,1.2s						
AS01	**Alice Springs**	**44.18**	**257**	P	**P**	**13 59 04.7**	**-0.6**
AS31	**Alice Springs**	**44.22**	**257**		**P**	**13 59 05.3**	**-0.3**
ASAR	**Alice Springs**	**44.23**	**257**	P	**P**	**13 59 05.5**	**-0.1**
	comp=Z,9.2nm,0.8s,baz=97,slow=7.8,SNR=118						
ASAR				PcP	**PcP**	**14 00 38.2**	**0.0**
	comp=Z,0.8nm,0.6s,baz=97,slow=3.8,SNR=5.6						
	comp=Z,9.2nm,0.8s						
ASAR	**Alice Springs**	**44.23**	**257**	P	**P**	**13 59 05.1**	**-0.5**
WB0	**Warramunga Arr**	**44.31**	**263**	P	**P**	**13 59 05.7**	**-0.6**
WRAB	**Tennant Creek**	**44.33**	**262**	P	**P**	**13 59 05.6**	**-0.8**
WRAB	**Tennant Creek**	**44.33**	**262**	P	**P**	**13 59 06.1**	**-0.3**
WRAB				IAmb	IAmb	13 59 46.7	
	comp=Z,23nm,1.5s						
WRA	**Warramunga Arr**	**44.33**	**262**	P	**P**	**13 59 06.0**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=97,slow=7.3,SNR=96						
	comp=Z,2.9nm,0.3s						
MTN	**Manton Dam**	**48.94**	**271**	P	**P**	**13 59 40.4**	**-0.9**
MTN				IAmb	IAmb	13 59 41.2	
	comp=Z,3.5nm,0.7s						
FORT	**Forrest**	**48.96**	**247**	P	**P**	**13 59 40.9**	**-0.3**
FORT				IAmb	IAmb	13 59 41.6	
	comp=Z,4.8nm,0.6s						
KNRA	**Kununurra**	**50.41**	**267**	P	**P**	**13 59 51.8**	**-0.3**
KNRA				IAmb	IAmb	13 59 52.6	
	comp=Z,4.6nm,0.8s						
FAKI	**Fak Fak**	**51.36**	**283**	P	**P**	**13 59 58.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.76**	**263**	P	**P**	**14 00 09.1**	**+0.1**
SBA	**Scott Base**	**57.53**	**184**	P	**P**	**14 00 42.4**	**+1.2**
MBWA	**Marble Bar**	**57.56**	**258**	P	**P**	**14 00 42.0**	**-0.4**
MBWA	**Marble Bar**	**57.56**	**258**	P	**P**	**14 00 41.8**	**-0.6**
MBWA				IAmb	IAmb	14 00 46.0	
	comp=Z,20nm,1.2s						
MEEK	**Meekatharra**	**57.60**	**251**	P	**P**	**14 00 41.7**	**-1.0**
NWAO	**Narrogin (SRO)**	**58.02**	**244**	P	**P**	**14 00 45.1**	**-0.3**
NWAO	**Narrogin (SRO)**	**58.02**	**244**	P	**P**	**14 00 45.2**	**-0.2**
NWAO	**Narrogin (SRO)**	**58.02**	**244**	P	**P**	**14 00 45.6**	**+0.2**
NWAO				IAmb	IAmb	14 01 20.9	
	comp=Z,20nm,1.3s						
BLDU	**Ballidu**	**58.72**	**246**	P	**P**	**14 00 49.4**	**-0.7**
MUN	**Mundaring**	**58.98**	**245**	P	**P**	**14 00 51.4**	**-0.4**
MORW	**Morawa**	**59.50**	**248**	P	**P**	**14 00 54.7**	**-0.6**
MORW	**Morawa**	**59.50**	**248**	P	**P**	**14 00 55.2**	**-0.1**
MORW				IAmb	IAmb	14 01 06.5	
	comp=Z,18nm,1.4s						
GIRL	**Giralia**	**62.25**	**255**	P	**P**	**14 01 14.0**	**+0.5**
TOLI2	**Tolitoli**	**63.45**	**282**	P	**P**	**14 01 20.5**	**-0.9**
TOLI2	**Tolitoli**	**63.45**	**282**	P	**P**	**14 01 20.8**	**-0.6**
TOLI2				IAmb	IAmb	14 01 39.0	
	comp=Z,6.1nm,1.1s						
QSPA	**South Pole Qui**	**69.24**	**180**	P	**P**	**14 01 58.3**	**+1.8**
	comp=Z,1.8nm,0.7s,baz=353,slow=0.7,SNR=10						
	comp=Z,1.8nm,0.7s						
QSPA	**South Pole Qui**	**69.24**	**180**	P	**P**	**14 01 57.9**	**+1.4**
KKM	**Kota Kinabalu**	**69.63**	**285**	P	**P**	**14 01 59.0**	**-0.7**
KKM				IAmb	IAmb	14 01 59.6	
	comp=Z,6.0nm,1.0s						
MJAR	**Matsushiro Arr**	**70.34**	**324**	P	**P**	**14 02 02.3**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=158,slow=5.3,SNR=5.1						
	comp=Z,1.0nm,0.5s						
MJAR	**Matsushiro Arr**	**70.34**	**324**	IAmb	IAmb	14 02 03.5	
	comp=Z,0.9nm,0.7s						
KIWB	**Kanaga Island**	**72.38**	**1**	P	**P**	**14 02 14.4**	**-0.4**
ADK	**Adak**	**72.41**	**1**	P	**P**	**14 02 14.4**	**-0.6**
ADK				IAmb	IAmb	14 02 26.9	
	comp=Z,6.7nm,1.1s						
BBJI	**Bungbulang**	**72.57**	**269**	P	**P**	**14 02 16.0**	**-0.9**
KSRS	**Korea Array**	**76.99**	**319**	P	**P**	**14 02 39.8**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=132,slow=5.6,SNR=5.4						
	comp=Z,0.8nm,0.5s						
N15K	**Kwethluk River**	**82.05**	**9**	P	**P**	**14 03 07.3**	**+0.2**
N15K				IAmb	IAmb	14 03 09.1	
	comp=Z,11nm,1.3s						
IMAR	**Indian Mountai**	**88.52**	**10**	P	**P**	**14 03 38.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**90.01**	**290**	P	**P**	**14 03 46.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=126,slow=3.3,SNR=11						
	comp=Z,1.3nm,0.7s						
KURK	**Kurchatov**	**114.08**	**317**		PKPdf	14 09 20.1	-1.3
KURBB	**Kurchatov Arra**	**114.14**	**317**	PKP	PKPdf	14 09 20.1	-1.4
	comp=Z,0.3nm,0.6s,baz=89,slow=1.9,SNR=5.0						
ARCES	**ARCESS Array B**	**129.20**	**349**	PKP	**PKPdf**	**14 09 49.0**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=338,slow=1.9,SNR=3.5						
HFS	**Hagfors**	**139.83**	**351**	PKhKP	PKPpre	14 10 03.3	
	comp=Z,0.4nm,0.3s,baz=29,slow=3.4,SNR=5.3						
AKASG	**Malin Array Be**	**143.19**	**331**	PKP	PKPab	14 10 13.3	-0.8
	comp=Z,2.9nm,0.4s,baz=44,slow=4.1,SNR=18						
MMAI	**Mount Meron Ar**	**147.78**	**299**	PKPbc	**PKPbc**	**14 10 28.8**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=88,slow=4.9,SNR=2.3						
GERES	**GERESS Array B**	**150.46**	**344**	PKPbc	**PKPbc**	**14 10 31.8**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=129,slow=1.9,SNR=4.3						

*ISK **20** 13:55:58.5,33˚.93N×25˚.65E,h7km,ML3.1/11*

*IDC **20** 13:56:00.1±1.2,33˚.92N×25˚.51E,h0km,mb3.6/9, mbtmp3.5/14,ML3.3/5,MS3.2/2,Error ellipse: s-maj=23.0km s-min=18.6km az=6.0*

*ATH **20** 13:56:04.5,34˚.21N×25˚.48E,h13km±6km,ML3.1/8, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*THE **20** 13:56:06.5,34˚.N±8˚×25˚.5E±˚,h0km±6km,M3.0/8,MLh3.0/8*

ISC 20 13:56:03.9±0.9,34˚.09N±0˚.09×25˚.55E±0˚.04,h21km±4km, n47,σ1°31/60,mb3.6/8,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.11**	**327**	P	**Pn**	**13 56 23.0**	**-1.1**
SIVA				S	**Sn**	**13 56 39.7**	**+0.8**
SIVA	**Sivas**	**1.11**	**327**	P	**Pn**	**13 56 23.4**	**-0.8**
SIVA				S	**Sb**	**13 56 36.5**	**-1.9**
ZKR	**Zakros**	**1.17**	**28**	Pn	**Pn**	**13 56 23.9**	**-1.1**
ZKR				Sn	**Sn**	**13 56 41.1**	**+0.8**
ZKR	**Zakros**	**1.17**	**28**	P	**Pn**	**13 56 25.1**	**+0.2**
ZKR	**Zakros**	**1.17**	**28**	P	**Pn**	**13 56 25.2**	**+0.2**
ZKR				S	**Sb**	**13 56 39.7**	**-0.3**
NPS	**Neapolis**	**1.18**	**3**	P	**Pn**	**13 56 23.7**	**-1.4**
NPS				S	**Sb**	**13 56 38.2**	**-2.1**
NPS	**Neapolis**	**1.18**	**3**	P	**Pn**	**13 56 24.8**	**-0.3**
NPS				S	**Sb**	**13 56 38.7**	**-1.6**
IACM	**Heraklion**	**1.28**	**342**	P	**Pn**	**13 56 24.9**	**-1.6**
IACM				S	**Sb**	**13 56 47.3**	**+4.1**
IDI	**Anoyia**	**1.32**	**336**	Pn	**Pn**	**13 56 27.3**	**+0.2**
	2.3nm,0.3s,baz=164,slow=15,SNR=20						
IDI				Sn	**Sb**	**13 56 47.2**	**+2.8**
	28nm,0.3s,baz=266,slow=18,SNR=9.0						
IDI	**Anoyia**	**1.32**	**336**	Pn	**Pn**	**13 56 26.0**	**-1.1**
IDI				Sn	**Sb**	**13 56 46.3**	**+1.9**
IDI	**Anoyia**	**1.32**	**336**	P	**Pn**	**13 56 26.5**	**-0.5**
IDI				S	**Sn**	**13 56 42.3**	**-1.8**
IDI	**Anoyia**	**1.32**	**336**	P	**Pn**	**13 56 26.7**	**-0.4**
IDI				S	**Sn**	**13 56 42.2**	**-1.8**
GVD	**Gavdhos**	**1.42**	**302**	Pn	**Pn**	**13 56 27.4**	**-1.0**
GVD				Sn	**Sb**	**13 56 49.6**	**+2.3**
GVD	**Gavdhos**	**1.42**	**302**	P	**Pb**	**13 56 29.6**	**0.0**
GVD				S	**Sb**	**13 56 48.1**	**+0.8**
GVD	**Gavdhos**	**1.42**	**302**	P	**Pn**	**13 56 28.4**	**0.0**
GVD				S	**Sn**	**13 56 46.0**	**-0.5**
VAM	**Vamos**	**1.72**	**320**	P	**Pb**	**13 56 34.0**	**-0.8**
VAM				S	**Sb**	**13 56 57.2**	**+1.2**
VAM	**Vamos**	**1.72**	**320**	P	**Pb**	**13 56 34.0**	**-0.8**
IMMV	**Iera Moni Meta**	**1.88**	**317**	Pn	**Pn**	**13 56 34.0**	**-0.8**
IMMV	**Iera Moni Meta**	**1.88**	**317**	P	**Pb**	**13 56 36.6**	**-0.9**
IMMV				S	**Sb**	**13 56 59.5**	**-1.1**
IMMV	**Iera Moni Meta**	**1.88**	**317**	P	**Pn**	**13 56 35.3**	**+0.5**
KNDR	**Palaiochora Ch**	**1.96**	**306**	Pn	**Pn**	**13 56 35.1**	**-0.7**
KNDR	**Palaiochora Ch**	**1.96**	**306**	P	**Pn**	**13 56 36.0**	**+0.2**
KARP	**Karpathos**	**1.97**	**42**	Pn	**Pn**	**13 56 34.3**	**-1.8**
KARP	**Karpathos**	**1.97**	**42**	P	**Pb**	**13 56 38.7**	**-0.4**
KARP	**Karpathos**	**1.97**	**42**	P	**Pn**	**13 56 37.6**	**+1.5**
ANKY	**Antikythira Is**	**2.56**	**315**	P	**Pn**	**13 56 44.7**	**+0.6**
DAT	**Datca**	**3.12**	**32**	Pn	**Pn**	**13 56 50.8**	**-1.1**
BODT	**Bodrum**	**3.30**	**25**	Pn	**Pn**	**13 56 53.7**	**-0.6**
TURN	**Turunc**	**3.47**	**39**	Pn	**Pn**	**13 56 55.7**	**-1.0**
DALY	**Dalyan (Mula)**	**3.72**	**42**	Pn	**Pn**	**13 56 59.1**	**-1.0**
YER	**Yerkesik**	**3.77**	**35**	Pn	**Pn**	**13 56 59.5**	**-1.4**
MMAI	**Mount Meron Ar**	**8.30**	**95**	Pn	Pn	13 58 00.4	-2.7
	0.5nm,0.3s,baz=272,slow=11,SNR=1.7						
	0.3nm,0.3s						
BRTR	**Keskin Array B**	**8.58**	**47**	Pn	**Pn**	**13 58 08.6**	**+1.6**
	0.1nm,0.3s,baz=242,slow=9.2,SNR=3.0						
	1.0nm,0.8s						
KEST	**Kesra**		**13.40**	**282**	LR	LR	14 04 31.4
	comp=Z,34nm,19.7s,baz=32,slow=38						
KBZ	**Khabaz**		**16.56**	**49**	Pn	**P**	**13 59 57.8**	**+0.7**
	0.1nm,0.3s,baz=217,slow=12,SNR=3.5						
	1.4nm,0.6s						
AKASG	**Malin Array Be**		**16.82**	**8**	Pn	**P**	**13 59 59.4**	**-0.6**
	0.5nm,0.3s,baz=202,slow=11,SNR=5.5						
	0.5nm,0.5s						
GERES	**GERESS Array B**		**17.18**	**333**	P	**Pn**	**14 00 02.4**	**-0.2**
	baz=182,slow=11,SNR=4.1						
	0.3nm,0.4s						
ESDC	**Sonseca Array**		**24.19**	**292**	P	**P**	**14 01 18.6**	**-0.3**
	0.4nm,0.7s,baz=87,slow=9.3,SNR=4.1						
	0.4nm,0.7s						
FINES	**FINESS Array B**		**27.38**	**1**	P	**P**	**14 01 49.3**	**+1.9**
	0.7nm,0.7s,baz=153,slow=13,SNR=3.8						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**		**30.06**	**232**	P	**P**	**14 02 09.7**	**-2.0**
	0.4nm,0.9s,baz=31,slow=8.6,SNR=1.6						
	0.4nm,0.9s						
ARCES	**ARCESS Array B**		**35.50**	**360**	P	**P**	**14 02 59.6**	**+0.9**
	0.7nm,0.7s,baz=177,slow=9.7,SNR=2.4						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**		**41.56**	**50**	P	**P**	**14 03 50.5**	**+0.7**
	0.5nm,0.4s,baz=276,slow=8.7,SNR=11						
	0.5nm,0.4s						
MKAR	**Makanchi Array**		**44.11**	**56**	P	**P**	**14 04 11.4**	**+0.8**
	0.9nm,0.6s,baz=279,slow=6.2,SNR=10						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**		**45.52**	**45**	P	**P**	**14 04 21.5**	**-0.2**
	0.8nm,0.6s,baz=278,slow=10,SNR=3.7						
	0.8nm,0.6s						
TSUM	**Tsumeb**		**53.53**	**189**	LR	LR	14 30 06.8	
	comp=Z,58nm,18.8s,baz=332,slow=38						
SONM	**Songino Array**		**59.92**	**50**	P	**P**	**14 06 09.2**	**+0.8**
	0.3nm,0.3s,baz=316,slow=6.0,SNR=1.7						
	0.3nm,0.3s						
YKA	**Yellowknife Ar**		**78.57**	**342**	P	**P**	**14 08 04.0**	**+0.6**
	0.2nm,0.6s,baz=43,slow=6.2,SNR=2.5						
	0.2nm,0.6s						

*IDC **20** 13:56:39.1±1.6,20˚.71S×178˚.24W,h553km±20km,mb3.1/6, mbtmp4.1/10,Error ellipse: s-maj=27.5km s-min=17.5km az=146.0*

*NEIC **20** 13:56:39.5±0.7,20˚.7S±0˚.1×178˚.2W±0˚.1,h557km±9km, mb4.1/22,Error ellipse: s-maj=20.5km s-min=17.0km az=128.0*

ISC 20 13:56:39.0±0.6,20˚.7S±0˚.1×178˚.2W±0˚.1,h550km,n37, σ0°68/35,mb4.0/17,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**309**	P	**P**	**13 58 06.9**	**+1.2**
	2.4nm,0.5s,baz=208,slow=23,SNR=5.5						
MSVF	**Nonsavu**	**4.61**	**309**	P	**P**	**13 58 07.1**	**+1.4**
AFI	**Afiamalu**	**9.14**	**43**	P	**P**	**13 58 47.6**	**-0.7**
	20nm,0.6s,baz=275,slow=2.2,SNR=4.5						
MARNC	**Mare, Loyalty**	**12.86**	**264**	P	**P**	**13 59 26.9**	**+0.5**
DZM	**Mont Dzumac**	**14.35**	**262**	P

SRDR	**Sredinnyy**	**2.97**	**289**	*e*P	Pn	14 00 19.8 +3.5
KII	**Karymskiy**	**3.40**	**247**	*e*P	Pn	14 00 26.1 +3.9
ESO	**Esso**	**3.46**	**280**	*e*P	Pn	14 00 26.7 +3.6
SPN	**Mys Shipunski**	**3.65**	**231**	*e*P	Pn	14 00 29.4 +3.7
SPN				*e*S	Sn	14 01 10.5 +3.0
NLC	**Nalytchevo**	**3.92**	**236**	*e*P	Pn	14 00 32.6 +3.3
NLC				*e*S	Sn	14 01 17.1 +3.1
SDLR	**Sedlovina**	**4.08**	**240**	*e*P	Pn	14 00 36.1 +4.4
SMAR	**Somma**	**4.13**	**240**	*e*P	Pn	14 00 36.9 +4.5
KRER	**Koryakskii**	**4.13**	**241**	*e*P	Pn	14 00 37.1 +4.7
KRX	**Arik**	**4.15**	**242**	*e*P	Pn	14 00 37.8 +5.1
AVH	**Avacha**	**4.16**	**240**	*e*P	Pn	14 00 37.7 +5.0
KOK	**Koryaka**	**4.19**	**241**	*e*P	Pn	14 00 38.2 +5.0
DALK	**Dalny**	**4.29**	**238**	*e*P	Pn	14 00 38.7 +4.3
PET	**Petropavlovsk**	**4.34**	**238**	*e*P	Pn	14 00 39.2 +4.1
PET				*e*S	Sn	14 01 27.9 +3.5
GNL	**Ganaly**	**4.35**	**249**	*e*P	Pn	14 00 40.1 +4.8
KRMR	**Karymshinskiy**	**4.71**	**239**	*e*P	Pn	14 00 44.1 +3.9
KRMR				*e*S	Sn	14 01 38.5 +5.0
RUS	**Russkaya**	**4.78**	**233**	*e*P	Pn	14 00 44.9 +3.8
MTVR	**Mutnovka**	**4.90**	**235**	*e*P	Pn	14 00 47.3 +4.3
GRL	**Gorelyy**	**4.91**	**236**	*e*P	Pn	14 00 47.8 +4.7
ASAK	**Asacha**	**5.10**	**236**	*e*P	Pn	14 00 50.7 +5.1
KDTR	**Khodutka, Kamc**	**5.41**	**230**	*e*P	Pn	14 00 52.5 +2.8

*NEIC **20** 14:25:05.4±0.8,21°.1S±0°.2×178°.3W±0°.2, h516km±9km, mb4.1/16, Error ellipse: s-maj=29.5km s-min=12.8km az=136.0*
*IDC **20** 14:25:06.1±5.5,20°.77S×178°.40W, h531km±46km, mb2.8/2, mbtmp4.0/5, Error ellipse: s-maj=166.7km s-min=26.8km az=155.0*
ISC 20 14:25:10.8±1.0,**21°.2S**±0°.2×**178°.7W**±0°.2,**h579**km,**n24,** σ**1s04/22**,**mb4.1/10**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**317**	P	P	14 26 31.5	-7.9
	2.9nm,0.5s,baz=146,slow=8.8,SNR=5.4						
AFI	**Afiamalu**	**9.76**	**43**	P	P	14 27 16.3	-11
	26nm,0.4s,baz=144,slow=1.7,SNR=18						
MARNC	**Mare, Loyalty**	**12.40**	**266**	P	**P**	**14 27 51.5**	**-2.1**
DZM	**Mont Dzumac**	**13.88**	**264**	P	**P**	**14 28 06.7**	**-2.1**
	7.5nm,0.9s,baz=91,slow=17,SNR=3.2						
TOZ	**Tahuroa Road**	**17.26**	**196**	P	**P**	**14 28 40.0**	**-0.4**
BBOO	**Buckleboo**	**41.70**	**244**	P	**P**	**14 32 10.6**	**+0.5**
WR8	**Warramunga Arr**	**43.75**	**263**	P	**P**	**14 32 26.3**	**+0.1**
AS31	**Alice Springs**	**43.76**	**257**	P	**P**	**14 32 26.7**	**+0.4**
ASAR	**Alice Springs**	**43.77**	**257**	P	**P**	**14 32 27.2**	**+0.9**
	0.9nm,0.5s,baz=90,slow=8.4,SNR=48						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**43.77**	**257**	P	**P**	**14 32 26.5**	**+0.2**
WB0	**Warramunga Arr**	**43.88**	**263**	P	**P**	**14 32 27.6**	**+0.4**
WB0				IAmb	IAmb	14 32 29.3	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**43.90**	**263**	P	**P**	**14 32 27.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=95,slow=7.2,SNR=4.6						
	comp=Z,0.5nm,0.5s						
FORT	**Forrest**	**48.46**	**247**	P	**P**	**14 33 02.7**	**+1.0**
FORT				IAmb	IAmb	14 33 17.9	
	comp=Z,11nm,1.4s						
KNRA	**Kununurra**	**50.00**	**267**	P	**P**	**14 33 14.5**	**+1.4**
KNRA				IAmb	IAmb	14 33 53.8	
	comp=Z,5.5nm,1.1s						
UGM	**Wanagama**	**69.33**	**269**	P	**P**	**14 35 23.1**	**+1.5**
KIWB	**Kanaga Island**	**72.72**	**1**	P	**P**	**14 35 40.5**	**+0.1**
ADK	**Adak**	**72.75**	**1**	P	**P**	**14 35 40.9**	**+0.3**
ADK				IAmb	IAmb	14 35 55.6	
	comp=Z,9.8nm,1.4s						
ATKA	**Atka Island**	**73.16**	**3**	P	**P**	**14 35 43.0**	**+0.1**
ATKA				IAmb	IAmb	14 35 45.3	
	comp=Z,4.0nm,1.0s						
UNV	**Unalaska Valle**	**75.43**	**7**	P	**P**	**14 35 55.6**	**-0.1**
UNV				IAmb	IAmb	14 36 16.0	
	comp=Z,8.7nm,1.1s						
O02D	**Mt. Diablo Mer**	**80.18**	**40**	P	**P**	**14 36 20.2**	**-1.5**
O02D				IAmb	IAmb	14 36 24.4	
	comp=Z,9.8nm,1.5s						
GNW	**Green Mountain**	**84.79**	**34**	P	**P**	**14 36 44.1**	**-0.5**
GNW				IAmb	IAmb	14 36 44.9	
	comp=Z,11nm,1.5s						
A04D	**Lummi Island**	**85.58**	**33**	P	**P**	**14 36 47.4**	**-0.9**
IMAR	**Indian Mountai**	**88.92**	**10**	P	**P**	**14 37 04.7**	**+1.0**
AKASG	**Malin Array Be**	**143.29**	**330**	PKP	**PKPdf**	**14 43 39.1**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=43,slow=4.1,SNR=6.3						

*SOF **20** 14:34:21.9, 41°.93N×23°.23E±0°.01, h14km±1km, MD2.5/6*
*SKO **20** 14:34:22.6, 41°.86N×23°.18E, h8km, ML1.8*
*BEO **20** 14:34:22.6±0.4, 41°.94N×23°.13E, h8km±8km, ML1.8/9*
ISC 20 14:34:21.4±0.9,**41°.92N**±0°.02×**23°.22E**±0°.03,**h11**km±7km, **n17**,σ**0s68**/33,**Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.11**	**221**	P*g*	**Pg**	**14 34 24.5**	**+0.2**
KKB				S*g*	**Sg**	**14 34 26.6**	**+0.2**
MMB	**Musomishta**	**0.54**	**133**	P*g*	**Pb**	**14 34 32.4**	**-0.6**
MMB				S*g*	**Sb**	**14 34 40.1**	**-0.7**
PLNA	**Plana**	**0.57**	**15**	P*g*	**Pg**	**14 34 32.4**	**-0.2**
PLNA				S*g*	**Sg**	**14 34 40.1**	**-0.1**
VTS	**Vitosha**	**0.69**	**1**	P*g*	**Pg**	**14 34 35.1**	**+0.2**
VTS				S*g*	**Sg**	**14 34 43.4**	**-0.7**
VTS	**Vitosha**	**0.69**	**1**	*e*P*g*	**Pg**	**14 34 34.9**	**0.0**
VTS				*e*S*g*	**Sg**	**14 34 43.7**	**-0.4**
VAY	**Valandovo**	**0.78**	**219**	*i* P*g*	**Pb**	**14 34 37.1**	**+0.2**
VAY				*i* S*g*	**Sb**	**14 34 47.2**	**-0.2**
VAY				*e*L*g*	L*g*	14 34 47.3	
	comp=E,24nm,0.3s						
VAY				*e*L*g*	L*g*	14 34 47.9	
	comp=N,31nm,0.3s						
BOSS	**Bosilegrad**	**0.80**	**316**	*e*P*g*	**Pg**	**14 34 35.5**	**-1.3**
BOSS				*e*S*g*	**Sg**	**14 34 47.2**	**0.0**
SRS	**Serrai**	**0.85**	**161**	*e*P*g*	**Pb**	**14 34 38.1**	**-0.1**
SRS				*e*S*g*	**Sn**	**14 34 52.1**	**+0.3**
BLSH	**Balsha**	**0.93**	**3**	P	**Pg**	**14 34 39.4**	**-0.1**
RZN	**Rozhen**	**1.16**	**101**	P*g*	**Pn**	**14 34 43.8**	**+0.1**
RZN				S*g*	**Sn**	**14 34 58.8**	**-0.8**
PLD	**Plovdiv**	**1.16**	**78**	*e*P*g*	**Pg**	**14 34 43.9**	**+0.2**
PLD				*e*S*g*	**Sn**	**14 35 00.8**	**+1.5**
BARS	**Barje**	**1.37**	**311**	*e*P*g*	**Pg**	**14 34 46.4**	**-0.1**
BARS				*e*S*g*	**Sn**	**14 35 04.8**	**+0.1**
ZAPS	**Zavoj**	**1.42**	**342**	*e*P*g*	**Pb**	**14 34 47.7**	**-0.2**
ZAPS				*e*S*g*	**Sg**	**14 35 07.3**	**+0.2**
MPEP	**Malo Peshtene**	**1.48**	**15**	P	**Pb**	**14 34 48.6**	**-0.4**
MPEP				S	**Sg**	**14 35 08.8**	**-0.3**
BLKB	**Belogradchik**	**1.75**	**347**	*e*P*g*	**Pb**	**14 34 52.8**	**-0.7**
BLKB				*e*S*g*	**Sb**	**14 35 16.2**	**+0.8**
SELS	**Selova**	**2.02**	**311**	*e*P*g*	**Pb**	**14 34 57.6**	**-0.6**
SELS				*e*S*g*	**Sb**	**14 35 24.8**	**+1.4**
ZAGS	**Zajecar**	**2.02**	**339**	*e*P*g*	**Pb**	**14 34 57.8**	**-0.4**
ZAGS				*e*S*g*	**Sb**	**14 35 25.1**	**+1.7**

*IDC **20** 14:36:52.7±20.0, 27°.19N×53°.44E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=371.3km s-min=55.8km az=5.0*
*TEH **20** 14:36:57.7, 27°.66N×53°.46E, h12km±41km, ML3.1, Presumed earthquake*
ISC 20 14:36:58.4±1.1,**27°.69N**±0°.08×**53°.4E**±0°.1,**h10**km,**n12,** σ**0s92**/12,**mb3.5/5**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.10**	**240**	P*g*	**Pg**	**14 37 00.8**	**-0.2**
LMD1	**Lamerd**	**0.40**	**211**	P*g*	**Pg**	**14 37 06.3**	**0.0**
JHRM	**Jahrom**	**0.83**	**11**	P*g*	**Pg**	**14 37 14.2**	**-0.3**
QIR1	**Qir**	**0.85**	**339**	P*g*	**Pb**	**14 37 15.3**	**0.0**
IMEH	**Mehriz**	**3.84**	**16**	P*n*	**Pn**	**14 37 59.1**	**+1.3**
IBAF	**Bafgh**	**4.33**	**25**	P*n*	**Pn**	**14 38 05.3**	**+0.8**
DOBD	**Dorbid, Yazd**	**4.40**	**12**	P*n*	**Pn**	**14 38 06.0**	**+0.5**
BVAR	**Borovoye Array**	**28.28**	**22**	P	**P**	**14 42 52.1**	**+0.2**
	1.1nm,0.4s,baz=218,slow=7.0,SNR=6.2						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**29.63**	**42**	P	**P**	**14 43 03.3**	**-0.6**
	0.2nm,0.5s,baz=246,slow=11,SNR=2.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**29.81**	**33**	P	**P**	**14 43 03.7**	**-1.8**
	0.2nm,0.4s,baz=231,slow=8.8,SNR=3.0						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**34.91**	**33**	P	**P**	**14 43 49.0**	**-1.1**
	0.8nm,0.6s,baz=236,slow=8.1,SNR=4.0						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**38.38**	**339**	P	**P**	**14 44 19.2**	**-0.3**
	0.5nm,0.5s,baz=147,slow=7.8,SNR=3.6						
	0.5nm,0.5s						

*JMA **20** 14:45:03.0±0.3,25°.75N±4°.1×122°.4E±0°.8, h227km±4km, MV2.8/13, TAIWAN REGION*
*TAP **20** 14:45:03.0,25°.45N×122°.46E, h231km, ML3.5, D*
ISC 20 14:45:03.1±2.5,**25°.36N**±0°.10×**122°.39E**±0°.05, **h227**km±15km,**n52,** σ**0s70**/91,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	**Pengchaiyu**	**0.40**	**313**	P	**Pn**	**14 45 33.5**	**+0.5**
PCYT				S	**S**	**14 45 55.0**	**-1.5**
TWB1	**Santiao Chiao**	**0.51**	**226**	P	**Pn**	**14 45 33.8**	**+0.4**
TWB1				*e*S	**S**	**14 45 56.3**	**-0.7**
SXI1	**Grass Mountain**	**0.54**	**241**	P	**Pn**	**14 45 33.4**	**-0.2**
SXI1				*e*S	**S**	**14 45 58.9**	**+1.6**
TIPB	**Shuangxi**	**0.64**	**233**	*i* P	**Pn**	**14 45 34.1**	**+0.2**
TIPB				*e*S	**S**	**14 45 57.9**	**-0.1**
YM01	**YM01**	**0.78**	**254**	*e*S	**S**	**14 45 59.0**	**0.0**
TWC	**Suao**	**0.90**	**214**	P	**Pn**	**14 45 36.0**	**+0.9**
TWC				*e*S	**S**	**14 45 59.4**	**-0.7**
TWE	**Neicheng**	**0.92**	**226**	P	**Pn**	**14 45 36.1**	**+0.9**
TWE				*e*S	**S**	**14 46 00.4**	**+0.1**
ESAO	**Su ao**	**0.93**	**213**	*e*S	**S**	**14 45 59.5**	**-0.9**
FUSB	**Fushanzhiwuyua**	**0.94**	**231**	P	**Pn**	**14 45 35.6**	**+0.1**
FUSB				S	**S**	**14 46 01.3**	**+0.6**
EOS2	**EOS2**	**0.95**	**189**	*e*P	**Pn**	**14 45 35.9**	**+0.6**
EOS2				*e*S	**S**	**14 46 00.8**	**+0.4**
NDS	**Dongshan**	**0.95**	**221**	P	**Pn**	**14 45 36.3**	**+0.9**
NDS				S	**S**	**14 46 01.9**	**+1.3**
NWLT	**Wulai**	**0.99**	**235**	P	**Pn**	**14 45 35.4**	**-0.4**
NWLT				S	**S**	**14 46 01.0**	**-0.2**
JYNG	**Yonagunijimaku**	**1.03**	**151**	*e*P	**Pn**	**14 45 35.7**	**-0.2**
YOJ	**Yonaguni jima**	**1.05**	**148**	P	**Pn**	**14 45 36.1**	**+0.1**
YOJ				*e*S	**S**	**14 46 01.3**	**-0.5**
EWUT	**Wuta**	**1.07**	**212**	*e*P	**Pn**	**14 45 36.5**	**+0.4**
EWUT				*e*S	**S**	**14 46 02.4**	**+0.4**
EOS3	**EOS3**	**1.07**	**184**	P	**Pn**	**14 45 36.6**	**+0.7**
EOS3				*e*S	**S**	**14 46 00.8**	**-0.8**
NDT	**Datong Townshi**	**1.10**	**227**	*e*S	**S**	**14 46 03.3**	**+1.0**
ENA	**Nanau**	**1.10**	**213**	P	**Pn**	**14 45 35.2**	**-1.2**
ENA				S	**S**	**14 46 02.1**	**-0.2**
LATG	**Datong**	**1.14**	**224**	P	**Pn**	**14 45 37.1**	**+0.3**
LATG				S	**S**	**14 46 03.4**	**+0.5**
YHNB	**Yeheng**	**1.15**	**234**	P	**Pn**	**14 45 36.5**	**-0.3**
YHNB				S	**S**	**14 46 02.7**	**-0.3**
NSK	**Sanguang**	**1.16**	**234**	P	**Pn**	**14 45 36.5**	**-0.3**
NSK				S	**S**	**14 46 02.8**	**-0.3**
KSHI	**Guanxi Townshi**	**1.25**	**243**	*e*S	**S**	**14 46 03.3**	**-0.7**
NNS	**Nan Shan**	**1.30**	**226**	P	**Pn**	**14 45 38.2**	**+0.2**
NNS				S	**S**	**14 46 04.5**	**-0.6**
NNSB	**Datong**	**1.30**	**225**	P	**Pn**	**14 45 38.1**	**+0.2**
NNSB				S	**S**	**14 46 04.8**	**-0.2**
NFF	**Wufeng Townshi**	**1.37**	**238**	P	**Pn**	**14 45 37.9**	**-0.1**
NFF				S	**S**	**14 46 05.0**	**-0.7**
ETL	**Fush Village**	**1.39**	**211**	*e*P	**Pn**	**14 45 38.5**	**0.0**
ETL				*e*S	**S**	**14 46 06.4**	**+0.4**
NACB	**Ninganchiao**	**1.39**	**212**	P	**Pn**	**14 45 37.8**	**-0.7**
NACB				*e*S	**S**	**14 46 05.2**	**-0.7**
ETLH	**Xiulin Townshi**	**1.42**	**216**	P	**Pn**	**14 45 38.5**	**-0.2**
ETLH				S	**S**	**14 46 06.3**	**-0.2**
LIOB	**Emei**	**1.44**	**241**	P	**Pn**	**14 45 38.6**	**-0.2**
LIOB				*e*S	**S**	**14 46 06.5**	**-0.1**
NSTT	**Nanjuang**	**1.46**	**240**	P	**Pn**	**14 45 38.8**	**-0.2**
NSTT				*e*S	**S**	**14 46 06.8**	**-0.1**
TWT	**Tachien**	**1.56**	**225**	*e*P	**Pn**	**14 45 40.9**	**+0.9**
TWT				S	**S**	**14 46 09.8**	**+1.1**
IRIF	**Iriomote-Funau**	**1.59**	**130**	*e*P	**Pn**	**14 45 40.3**	**+0.3**
IRIF				*e*S	**S**	**14 46 09.1**	**+0.5**
WHF	**Hehuan Shan**	**1.59**	**221**	*e*P	**Pn**	**14 45 40.5**	**0.0**
WHF				*e*S	**S**	**14 46 10.1**	**+0.5**
LXIB	**Xiulin Townshi**	**1.60**	**214**	*e*P	**Pn**	**14 45 41.8**	**+1.5**
LXIB				S	**S**	**14 46 09.4**	**+0.1**
ETM	**Tongmen**	**1.61**	**211**	*e*S	**S**	**14 46 09.3**	**+0.1**
TEYL	**Yanliau Villag**	**1.65**	**206**	*e*S	**S**	**14 46 08.4**	**-1.4**
WHP	**Taichung City**	**1.70**	**231**	*e*S	**S**	**14 46 09.2**	**-1.5**
SHUL	**Shoufeng**	**1.74**	**206**	*e*P	**Pn**	**14 45 41.1**	**-0.2**
SHUL				*e*S	**S**	**14 46 10.6**	**-0.5**
OWD	**Renai**	**1.79**	**219**	*e*S	**S**	**14 46 11.4**	**-0.8**
WUSB	**Renai**	**1.79**	**221**	*e*P	**Pn**	**14 45 41.9**	**-0.1**
WUSB				*e*S	**S**	**14 46 12.7**	**+0.5**
JKRS	**Kuro-shima**	**1.84**	**127**	P	**Pn**	**14 45 42.6**	**+0.4**
JKRS				S	**S**	**14 46 12.7**	**0.0**
WCS	**Beigang Elemen**	**1.87**	**226**	*e*S	**S**	**14 46 11.6**	**-1.6**
JIJ	**Ishigaki jima**	**1.87**	**122**	P	**Pn**	**14 45 42.5**	**0.0**
JIJ				S	**S**	**14 46 12.1**	**-1.1**
JISG	**Ishigakijimahi**	**1.90**	**113**	*e*P	**Pn**	**14 45 43.1**	**+0.3**
JISG				S	**S**	**14 46 13.2**	**-0.4**
VWUT	**VWDT**	**1.96**	**216**	*e*S	**S**	**14 46 16.8**	**+2.0**
SSLB	**Suanglung**	**2.04**	**220**	*e*P	**Pn**	**14 45 45.1**	**+0.9**
SSLB				*e*S	**S**	**14 46 15.8**	**-0.5**
HGSD	**Ruisui**	**2.06**	**206**	*e*P	**Pn**	**14 45 44.0**	**-0.3**
HGSD				*e*S	**S**	**14 46 15.5**	**-1.0**
WHYT	**Xinyi Township**	**2.17**	**221**	*e*S	**S**	**14 46 18.5**	**0.0**
JTJ	**Tarama**	**2.21**	**108**	*e*P	**Pn**	**14 45 46.5**	**+0.7**
JIRJ	**Irabujima**	**2.59**	**101**	*e*P	**Pn**	**14 45 50.0**	**+0.3**
JIRJ				*e*S	**S**	**14 46 25.1**	**-1.0**
JMJ2	**Miyako jima3**	**2.73**	**102**	P	**Pn**	**14 45 51.8**	**+0.6**
JMJ2				*e*S	**S**	**14 46 28.4**	**-0.4**
JOGS	**Gusukube**	**2.80**	**102**	*e*P	**Pn**	**14 45 52.6**	**+0.7**
JOGS				*e*S	**S**	**14 46 29.6**	**-0.5**

IDC 20 15:10:41.9±2.1,**5°.96S×130°.35E, h0**km,**mb3.5**/1, **mbtmp3.5**/3,**ML3.7/2**,**Error ellipse: s-maj=100.1km s-min=31.5km az=70.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.43**	**165**	Pn	Pn	15 14 07.5	-0.1
	0.3nm,0.3s,baz=345,slow=11,SNR=9.2						
WRA				Sn	Sn	15 16 33.6	-15
	0.4nm,0.3s,baz=338,slow=22,SNR=6.0						
	1.2nm,0.9s						
ASAR	**Alice Springs**	**17.93**	**169**	P	Pn	15 14 53.0	0.0
	0.3nm,0.3s,baz=343,slow=9.7,SNR=32						
ASAR				S	Sn	15 17 59.8	-14
	0.5nm,0.8s,baz=358,slow=28,SNR=5.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**67.55**	**326**	P	P	15 21 40.2	0.0
	0.3nm,0.5s,baz=112,slow=7.3,SNR=5.2						
	0.3nm,0.5s						

*IDC **20** 15:19:51.8±1.8,30°.33N×94°.85E, h0km, mb3.9/6, mbtmp3.7/9, ML3.3/2, MS3.4/1, Error ellipse: s-maj=42.8km s-min=30.4km az=53.0*
*NEIC **20** 15:19:53.9±1.9,30°.38N±0°.10×95°.0E±0°.1, h10km±2km, mb4.0/9, Error ellipse: s-maj=24.1km s-min=7.4km az=310.0*
ISC 20 15:19:54.9±0.9,**30°.35N**±0°.09×**95°.0E**±0°.2,**h23**km,**n21,** σ**0s92**/17,**mb3.6/7**,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**6.12**	**186**	Pn	**Pn**	**15 21 25.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**12.37**	**162**	Pn	**Pn**	**15 22 49.0**	**-0.7**
	0.3nm,0.5s,baz=330,slow=13,SNR=5.8						
WUS	**Wushi**	**16.75**	**315**		**P**	**15 23 49.3**	**-0.9**
WUS				IAmb	IAmb	15 23 57.3	
	comp=Z,20nm,1.2s						
PDGK	**Podgornoye**	**17.91**	**321**	P	**P**	**15 24 03.8**	**+0.7**
TARG	**Taragay, Kyrgy**	**17.92**	**314**		**P**	**15 24 04.0**	**+0.5**
MKAR	**Makanchi Array**	**19.15**	**333**	P	**P**	**15 24 14.8**	**-1.8**
	baz=145,slow=15,SNR=5.8						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**19.53**	**23**	P	**Pn**	**15 24 22.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=218,slow=12,SNR=6.4						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**19.53**	**23**	P	**Pn**	**15 24 22.0**	**-0.2**
AAK	**Ala-Archa**	**20.49**	**312**	P	Pn	15 24 31.9	-1.7
	comp=Z,1.5nm,0.3s,baz=131,slow=9.9,SNR=5.7						
	comp=Z,1.5nm,0.3s						
AAK	**Ala-Archa**	**20.49**	**312**	IAmb	IAmb	15 24 42.4	
	comp=Z,8.0nm,1.1s						
BTK	**Batken**	**21.96**	**303**		**P**	**15 24 48.1**	**+1.0**
BTK				IAmb	IAmb	15 24 59.1	
	comp=Z,7.4nm,1.0s						

KBL	**Kabul**	**22.29**	**288**	P	**P**	**15 24 50.8**	**-0.1**
KURBB	**Kurchatov Arra**	**23.71**	**333**	P	**P**	**15 25 04.3**	**-0.7**
	comp=Z,3.9nm,0.2s,baz=144,slow=10,SNR=6.0						
	comp=Z,3.9nm,0.2s						
KURK	**Kurchatov**	**23.75**	**334**	P	**P**	**15 25 05.3**	**-0.1**
KURK				IAmb	IAmb	15 25 16.4	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**24.71**	**346**	P	**P**	**15 25 14.0**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=155,slow=11,SNR=5.0						
	comp=Z,1.0nm,0.8s						
PALK	**Pallekele**	**26.60**	**213**	P	**P**	**15 25 30.5**	**-1.2**
BVAR	**Borovoye Array**	**28.91**	**329**	P	**P**	**15 25 51.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=132,slow=11,SNR=4.2						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**52.16**	**313**	P	**P**	**15 29 03.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=79,slow=7.1,SNR=4.4						
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**52.16**	**313**	IAmb	IAmb	15 29 37.4	
	comp=Z,2.1nm,1.1s						
IDI	**Anoyia**	**58.02**	**295**	LR	LR	16 00 36.5	
	comp=Z,37nm,21.6s,baz=125,slow=42						
ILAR	**Eielson Array**	**73.75**	**23**	P	**P**	**15 31 28.3**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=317,slow=8.6,SNR=4.3						
	comp=Z,0.3nm,0.6s						

*IDC **20** 15:20:02.2±5.5,4°.45S×153°.67E, h105km±44km, mb3.7/12, mbtmp4.1/13, Error ellipse: s-maj=34.6km s-min=18.6km az=83.0*
*NEIC **20** 15:20:02.7±1.1,4°.38S±0°.04×153°.58E±0°.07, h102km±7km, mb4.3/22, Error ellipse: s-maj=11.0km s-min=5.6km az=71.0*
ISC 20 15:20:01.8±0.5,**4°.37S**±0°.06×**153°.58E**±0°.07,**h100**km,**n45,** σ**0s75**/47,**mb4.2**/21,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.43**	**277**	Pn	**Pn**	**15 20 27.9**	**+0.6**
RABL				Sn	**Sn**	**15 20 47.3**	**+0.8**
MANU	**Manus Island**	**6.62**	**290**	Pn	**Pn**	**15 21 35.3**	**-1.4**
HNR	**Honiara**	**8.07**	**129**	S	**Sn**	**15 23 26.0**	**-0.1**
	5.0nm,0.8s,baz=125,slow=6.5,SNR=4.8						
PMG	**Port Moresby**	**8.10**	**232**	P	**Pn**	**15 21 57.5**	**+0.7**
	44nm,0.4s,baz=45,slow=3.2,SNR=48						
PMG				S	**Sn**	**15 23 28.2**	**+1.4**
	32nm,0.4s,baz=142,slow=20,SNR=12						
PMG	**Port Moresby**	**8.10**	**232**		**Pn**	**15 21 57.4**	**+0.6**
PMG					**Sn**	**15 23 27.4**	**+0.7**
PATS	**Pohnpei**	**12.09**	**23**	Pn	**Pn**	**15 22 51.5**	**+0.7**
COEN	**Coen**	**14.00**	**226**	Pn	**Pn**	**15 23 16.4**	**+0.5**
MTN	**Manton Dam**	**23.72**	**248**	P	**P**	**15 25 04.0**	**-1.0**
WB0	**Warramunga Arr**	**24.16**	**229**		**P**	**15 25 08.8**	**-0.1**
WB0				IAmb	IAmb	15 25 10.5	
	comp=Z,9.8nm,0.6s						
WR8	**Warramunga Arr**	**24.20**	**229**		**P**	**15 25 09.5**	**+0.2**
WR8				IAmb	IAmb	15 25 10.5	
	comp=Z,14nm,1.2s						
WRAB	**Tennant Creek**	**24.30**	**229**	P	**P**	**15 25 10.5**	**+0.4**
WRAB				IAmb	IAmb	15 25 11.7	
	comp=Z,6.8nm,0.6s						
WRA	**Warramunga Arr**	**24.31**	**229**	P	**P**	**15 25 10.6**	**+0.3**
	comp=Z,7.1nm,0.5s,baz=53,slow=9.8,SNR=24						
	comp=Z,7.1nm,0.5s						
INKA	**Innaminka**	**26.26**	**206**	P	**P**	**15 25 28.2**	**+0.4**
KNRA	**Kununurra**	**26.86**	**244**	P	**P**	**15 25 32.7**	**-0.6**
KNRA				IAmb	IAmb	15 25 36.3	
	comp=Z,7.1nm,1.0s						
AS31	**Alice Springs**	**26.99**	**223**		**P**	**15 25 33.9**	**-0.6**
ASAR	**Alice Springs**	**26.99**	**223**	P	**P**	**15 25 34.1**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=56,slow=8.9,SNR=50						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**26.99**	**223**	P	**P**	**15 25 33.9**	**-0.7**
STKA	**Stephens Creek**	**29.59**	**201**	P	**P**	**15 25 57.2**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=25,slow=12,SNR=7.1						
	comp=Z,2.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.55**	**

SIJI	**Sorong**	**4.98**	**303**	P		**Pn**	**15 24 45.2**	**+1.2**
JAY	**Jayapura**	**5.38**	**78**	P		**Pn**	**15 24 51.4**	**+1.9**
	2.5nm,0.3s,baz=258,slow=13,SNR=18							
JAY				S		**Sn**	**15 25 55.0**	**+4.2**
	9.0nm,0.6s,baz=134,slow=23,SNR=1.8							
	13nm,0.7s							
JAY	**Jayapura**	**5.38**	**78**	P		**Pn**	**15 24 51.7**	**+2.1**
	14nm,0.9s							
TNTI	**Ternate**	**9.16**	**298**	Pn		**Pn**	**15 25 43.0**	**+1.5**
MTN	**Manton Dam**	**10.11**	**205**			**Pn**	**15 25 57.6**	**+3.0**
COEN	**Coen**	**12.81**	**144**	Pn		**Pn**	**15 26 32.8**	**+1.3**
PMG	**Port Moresby**	**12.99**	**117**	P		**Pn**	**15 26 35.9**	**+2.0**
	0.6nm,0.3s,baz=216,slow=20,SNR=1.4							
	7.7nm,0.7s							
KNRA	**Kununurra**	**13.67**	**208**			**Pn**	**15 26 45.0**	**+1.8**
WB0	**Warramunga Arr**	**16.09**	**184**	Pn		**Pn**	**15 27 14.9**	**-0.6**
WB0				IAmb		IAmb	15 27 37.0	
	comp=Z,7.0nm,0.9s							
WRA	**Warramunga Arr**	**16.27**	**184**	P		**Pn**	**15 27 17.1**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=7.9,slow=12,SNR=7.2							
WRA				S		**Sn**	**15 30 11.4**	**-6.4**
	comp=Z,2.1nm,0.5s,baz=1.8,slow=23,SNR=5.9							
WRA	**Warramunga Arr**	**16.27**	**184**	Pn		**Pn**	**15 27 16.6**	**-1.2**
WR8	**Warramunga Arr**	**16.27**	**183**	Pn		**Pn**	**15 27 17.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**17.30**	**213**	S		**Sn**	**15 30 33.2**	**-10**
	comp=Z,4.8nm,0.6s,baz=194,slow=15,SNR=9.3							
FITZ				LR		LR	15 35 14.7	
	comp=Z,66nm,19.4s,baz=352,slow=40							
FITZ	**Fitzroy Crossi**	**17.30**	**213**	P		**P**	**15 27 33.1**	**+0.9**
CTA	**Charters Tower**	**19.48**	**148**	LR		LR	15 36 27.7	
	comp=Z,67nm,21.5s,baz=248,slow=39							
AS31	**Alice Springs**	**19.99**	**184**			**Pn**	**15 28 04.9**	**+1.3**
AS31				IAmb		IAmb	15 28 07.8	
	comp=Z,4.9nm,0.6s							
ASAR	**Alice Springs**	**19.99**	**184**	P		**Pn**	**15 28 05.6**	**+2.0**
	comp=Z,8.4nm,0.6s,baz=9.0,slow=12,SNR=72							
ASAR				S		**S**	**15 31 37.9**	**-7.9**
	comp=Z,1.9nm,0.8s,baz=8.4,slow=27,SNR=5.4							
ASAR				LR		LR	15 36 34.9	
	comp=Z,102nm,20.1s,baz=326,slow=39							
	comp=Z,8.4nm,0.6s							
ASAR	**Alice Springs**	**19.99**	**184**			**Pn**	**15 28 05.1**	**+1.5**
INKA	**Innaminka**	**24.52**	**169**	P		**P**	**15 28 48.3**	**-0.4**
INKA				IAmb		IAmb	15 29 02.5	
	comp=Z,3.8nm,1.2s							
STKA	**Stephens Creek**	**28.71**	**169**	P		**P**	**15 29 27.1**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=328,slow=12,SNR=3.1							
	comp=Z,1.3nm,0.6s							
BBOO	**Buckleboo**	**29.05**	**179**	P		**P**	**15 29 29.8**	**+0.5**
MA2	**Magadan**	**64.15**	**9**	P		**P**	**15 34 02.7**	**-0.4**
KIWB	**Kanaga Island**	**68.30**	**29**	P		**P**	**15 34 29.1**	**-0.8**
KIWB				IAmb		IAmb	15 34 55.5	
	comp=Z,6.5nm,1.4s							
MKAR	**Makanchi Array**	**68.54**	**324**	P		**P**	**15 34 31.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=103,slow=8.8,SNR=4.9							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**68.54**	**324**	P		**P**	**15 34 30.6**	**-1.0**
ZALV	**Zalesovo Beam**	**71.10**	**331**	P		**P**	**15 34 46.0**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=132,slow=6.4,SNR=2.4							
	comp=Z,0.8nm,0.7s							
BVAR	**Borovoye Array**	**78.20**	**326**	P		**P**	**15 35 28.6**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=123,slow=7.6,SNR=4.5							
	comp=Z,1.2nm,0.8s							
AB31	**Akbulak array**	**83.31**	**320**	P		**P**	**15 35 54.9**	**-0.9**
AB31				IAmb		IAmb	15 35 56.3	
	comp=Z,1.6nm,1.2s							
ABKAR	**Akbulak array**	**83.31**	**320**	P		**P**	**15 35 54.9**	**-0.9**
K20K	**Telida**	**84.58**	**25**	P		**P**	**15 36 02.0**	**0.0**
K20K				IAmb		IAmb	15 36 41.0	
	comp=Z,3.6nm,1.3s							
J20K	**Nowinta River**	**84.82**	**24**	P		**P**	**15 36 03.0**	**-0.1**
J20K				IAmb		IAmb	15 36 43.1	
	comp=Z,2.2nm,1.4s							
QSPA	**South Pole Qui**	**86.34**	**180**	P		**P**	**15 36 10.8**	**0.0**
	comp=Z,2.1nm,1.0s,baz=253,slow=4.5,SNR=3.2							
	comp=Z,2.1nm,1.0s							
QSPA	**South Pole Qui**	**86.34**	**180**	IAmb		IAmb	15 36 35.5	
	comp=Z,3.2nm,1.3s							
MLY	**Manley**	**86.48**	**24**	P		**P**	**15 36 10.8**	**-0.6**
MLY				IAmb		IAmb	15 36 40.4	
	comp=Z,2.6nm,1.4s							
I23K	**Minto, Yukon-K**	**87.08**	**24**	P		**P**	**15 36 13.9**	**-0.3**
ILAR	**Eielson Array**	**88.01**	**25**	P		**P**	**15 36 16.2**	**-2.6**
	comp=Z,0.3nm,0.4s,baz=261,slow=4.4,SNR=5.4							
	comp=Z,0.3nm,0.4s							
ARCES	**ARCESS Array B**	**100.27**	**340**	P		**Pdif**	**15 37 12.9**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=74,slow=5.6,SNR=3.6							
LPAZ	**La Paz**	**149.44**	**131**	PKPbc		**PKPbc**	**15 43 20.4**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=288,slow=3.2,SNR=4.3							

*SNET **20** 15:29:51.3±2.2, 13°.08N×87°.32W, h8km±9km, ML3.5, Presumed earthquake*
*CATAC **20** 15:29:51.2±0.2, 13°N±1°×8°.7W×°, h4km±1km, M3.6/24, MLv3.6/24, Error ellipse: s-maj=3.6km s-min=1.8km az=33.1, confirmed*

ISC 20 15:29:51.1±1.0, 12°.99N±0°.04×87°.36W±0°.02, h7km±9km, **n44,** σ0**960/65, 7C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.20**	**266**	⇑P	**Pg**	**15 29 55.0**	**-0.1**
CSGN				S	**Sg**	**15 29 57.1**	**-0.8**
CRIN	**San Cristobal**	**0.41**	**134**	⇑P	**Pg**	**15 30 00.5**	**-0.3**
CRIN				S	**Sb**	**15 30 07.6**	**+0.3**
CNCH	**Conchagua**	**0.55**	**301**	⇑P	**Pg**	**15 30 02.0**	**+0.4**
CNCH				S	**Sg**	**15 30 09.7**	**+0.8**
CNCH	**Conchagua**	**0.55**	**301**	⇑*i*P	**Pg**	**15 30 02.0**	**+0.4**
LCND	**La Caada**	**0.61**	**301**	⇑P	**Pg**	**15 30 03.0**	**+0.2**
LCND	**La Caada**	**0.61**	**301**	*e*P	**Pg**	**15 30 03.2**	**+0.4**
LCND				*e*S	**Sb**	**15 30 11.9**	**-0.9**
QUEN	**Al S del Volca**	**0.63**	**129**	P	**Pg**	**15 30 02.8**	**-0.5**
HERN	**Volcan Telica**	**0.64**	**126**	⇑P	**Pg**	**15 30 03.9**	**+0.5**
TELN	**Telica**	**0.64**	**127**	P	**Pg**	**15 30 03.2**	**-0.2**
HOYN	**Al Sur del Vol**	**0.65**	**127**	P	**Pg**	**15 30 04.1**	**+0.5**
TEL3	**Telica 3**	**0.65**	**130**	⇓P	**Pb**	**15 30 05.0**	**+0.3**
INTP	**Intipuca**	**0.71**	**287**	⇓*e*P	**Pg**	**15 30 04.5**	**-0.2**
INTP				*i* Sg	**Sg**	**15 30 15.0**	**+0.9**
AESN	**El Sauce Leon**	**0.80**	**97**	S	**Sb**	**15 30 17.8**	**-0.5**
CNGN	**Cerro Negro**	**0.81**	**127**	⇓P	**Pg**	**15 30 06.4**	**-0.1**
CNGA	**Al SSO del Vol**	**0.81**	**128**	P	**Pg**	**15 30 06.7**	**+0.1**
MOM3	**MOM3**	**0.95**	**120**	P	**Pg**	**15 30 09.0**	**-0.3**
LIMN	**Finca el Limon**	**0.97**	**86**	P	**Pg**	**15 30 09.5**	**-0.2**
LIMN				S	**Sb**	**15 30 23.5**	**+0.3**
BLLM	**Bellamira**	**0.97**	**298**	*e*P	**Pg**	**15 30 09.8**	**0.0**
MOMN	**Momotombo**	**0.98**	**126**	P	**Pg**	**15 30 09.5**	**-0.4**
MOMN				S	**Sg**	**15 30 23.3**	**+0.5**
VSM	**San Miguel**	**0.99**	**296**	*e*P	**Pg**	**15 30 09.9**	**-0.3**
RANC	**El Ranchito**	**1.01**	**296**	P	**Pg**	**15 30 10.0**	**-0.5**
RANC	**El Ranchito**	**1.01**	**296**	*e*P	**Pg**	**15 30 10.0**	**-0.5**
LCY	**Lacayo**	**1.01**	**295**	*e*P	**Pg**	**15 30 09.8**	**-0.7**
MOM2	**El Cardon**	**1.01**	**123**	P	**Pg**	**15 30 10.5**	**-0.1**
MOM2				S	**Sb**	**15 30 25.5**	**+1.1**
PACA	**Pacayal**	**1.06**	**297**	⇑P	**Pg**	**15 30 10.7**	**-0.7**
PACA	**Pacayal**	**1.06**	**297**	*e*P	**Pg**	**15 30 10.6**	**-0.7**
OCON	**Estacion meteo**	**1.06**	**53**	P	**Pg**	**15 30 11.3**	**-0.3**
OCON				S	**Sn**	**15 30 26.8**	**-0.7**
COPN	**Copaltepe**	**1.10**	**137**	⇓P	**Pg**	**15 30 10.8**	**-1.4**
TECA	**Tecapa**	**1.22**	**294**	*e*P	**Pg**	**15 30 13.2**	**-1.4**
APYN	**Apoyeque**	**1.24**	**127**	P	**Pb**	**15 30 14.5**	**-0.2**
APYN				S	**Sg**	**15 30 30.8**	**-0.1**
RCFN	**Al S de San Ju**	**1.24**	**64**	P	**Pn**	**15 30 15.0**	**+0.2**
RCFN				S	**Sn**	**15 30 32.0**	**+0.1**
RCON	**San Juan de Ri**	**1.27**	**67**	P	**Pg**	**15 30 14.9**	**-0.5**
RCON				S	**Sn**	**15 30 33.9**	**+1.3**
RCVN	**Varillal2**	**1.27**	**62**	P	**Pg**	**15 30 14.7**	**-0.9**
RCVN				S	**Sn**	**15 30 32.9**	**0.0**
APQ2	**Apoyeque**	**1.28**	**128**	S	**Sg**	**15 30 32.8**	**+0.6**
MARCA	**Marcala la Paz**	**1.33**	**330**	P	**Pn**	**15 30 15.7**	**-0.6**
MARCA				S	**Sn**	**15 30 35.3**	**+0.9**
RCPN	**Sur Rio San Ju**	**1.34**	**66**	P	**Pg**	**15 30 16.6**	**-0.2**
TISN	**Laguna Tiscapa**	**1.35**	**128**	P	**Pn**	**15 30 15.4**	**-1.0**
MGAN	**Managua**	**1.37**	**128**	P	**Pn**	**15 30 16.8**	**+0.2**
MGAN				S	**Sb**	**15 30 35.2**	**+0.5**
MATN	**Matagalpa**	**1.40**	**92**	P	**Pn**	**15 30 16.5**	**-0.5**
MATN				S	**Sn**	**15 30 35.9**	**+0.2**
WILN	**Americas 2**	**1.41**	**126**	P	**Pn**	**15 30 16.2**	**-0.8**
WILN				S	**Sg**	**15 30 37.1**	**+0.7**
TECO	**Alcaldia de Te**	**1.49**	**292**	*e*P	**Pb**	**15 30 19.1**	**0.0**
TECO				⇓*e*S	**Sn**	**15 30 38.2**	**+0.2**
MAS3	**Al N del Volca**	**1.50**	**130**	P	**Pn**	**15 30 17.9**	**-0.5**
MAS3				S	**Sn**	**15 30 38.4**	**+0.2**
SJTE	**Alcalda de S**	**1.72**	**291**	*e*P	**Pn**	**15 30 21.8**	**+0.2**
SJTE				*e*S	**Sb**	**15 30 45.4**	**+0.4**
JAYA	**Jayaque - finc**	**2.14**	**288**	*e*P	**Pn**	**15 30 27.9**	**+0.5**
JAYA				*e*S	**Sb**	**15 30 56.6**	**-0.5**

KRSC 20 15:42:42.2±0.9, 54°.90N×164°.75E, h46km±21km**, Ml3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.77**	**66**	*e*P	Pn	15 42 57.8	+1.1
BKI				*e*S	Sn	15 43 08.0	+0.8
KBTR	**Krutoberegovo**	**1.71**	**321**	*e*P	Pn	15 43 10.2	+0.6
KBTR				*e*S	Sn	15 43 29.5	-0.7
MKZ	**Mys Kozlova**	**1.78**	**260**	*e*P	Pn	15 43 12.7	+2.2
MKZ				*e*S	Sn	15 43 33.4	+1.4
ZLN	**Zelenaya**	**2.51**	**298**	*e*P	Pn	15 43 23.9	+3.3
BZGR	**Bezymyannyi-Gr**	**2.54**	**296**	*e*P	Pn	15 43 24.1	+3.2
BZGR				*e*S	Sn	15 43 53.6	+2.9
CIRR	**Tsirk**	**2.58**	**300**	*e*P	Pn	15 43 24.9	+3.2
BZP	**Bezymyannyi-Pe**	**2.61**	**295**	*e*P	Pn	15 43 24.7	+2.7
BZMR	**Bezymyannaya**	**2.64**	**295**	*e*P	Pn	15 43 25.7	+3.3
BZWR	**Bezymyannyi-We**	**2.65**	**296**	*e*P	Pn	15 43 25.9	+3.3
BZWR				*e*S	Sn	15 43 58.6	+5.1
TUMR	**Tumrok**	**2.67**	**280**	*e*P	Pn	15 43 26.4	+3.6
KIRR	**Kirishev**	**2.73**	**295**	*e*P	Pn	15 43 27.1	+3.5
KPT	**Kopyto**	**2.79**	**294**	*e*P	Pn	15 43 28.2	+3.8
KOZ	**Kozyrevsk**	**3.01**	**295**	*e*P	Pn	15 43 31.4	+4.0
KII	**Karymskiy**	**3.21**	**257**	*e*P	Pn	15 43 34.1	+3.9
SPN	**Mys Shipunski**	**3.32**	**239**	*e*P	Pn	15 43 35.2	+3.6
SDLR	**Sedlovina**	**3.82**	**247**	*e*P	Pn	15 43 42.6	+4.1
SMAR	**Somma**	**3.87**	**247**	*e*P	Pn	15 43 43.4	+4.2
KRER	**Koryakskii**	**3.88**	**248**	*e*P	Pn	15 43 44.0	+4.6
KRX	**Arik**	**3.91**	**249**	*e*P	Pn	15 43 44.1	+4.4
KOK	**Koryaka**	**3.94**	**248**	*e*P	Pn	15 43 44.4	+4.2
DALK	**Dalny**	**4.00**	**245**	*e*P	Pn	15 43 44.5	+3.6
PET	**Petropavlovsk**	**4.06**	**245**	*e*P	Pn	15 43 47.0	+5.3
GNL	**Ganaly**	**4.17**	**256**	*e*P	Pn	15 43 47.1	+3.8
RUS	**Russkaya**	**4.45**	**239**	*e*P	Pn	15 43 50.3	+3.2
MTVR	**Mutnovka**	**4.59**	**241**	*e*P	Pn	15 43 52.8	+3.6
GRL	**Gorelyy**	**4.61**	**242**	*e*P	Pn	15 43 53.4	+4.1
ASAK	**Asacha**	**4.79**	**241**	*e*P	Pn	15 43 56.4	+4.5
KDTR	**Khodutka, Kamc**	**5.05**	**235**	*e*P	Pn	15 43 58.1	+2.8

*IDC **20** 16:14:18.1±1.1, 3°.36S×131°.10E, h0km, mb4.0/8, mbtmp4.1/10, ML3.8/2, MS2.9/2, Error ellipse: s-maj=42.4km s-min=18.8km az=82.0*
*NEIC **20** 16:14:20.8±1.4, 3°.42S±0°.05×130°.95E±0°.07, h19km±4km, mb4.2/18, Error ellipse: s-maj=10.4km s-min=7.6km az=102.0*
*DJA **20** 16:14:21.6±0.5, 3°S±3°×13°.1E±°, h12km±4km, M4.3/14, mB5.0/2, mb4.6/6, MLv4.2/14, Mw(mB)4.4/2*

ISC 20 16:14:21.7±0.5, 3°.42S±0°.05×131°.08E±0°.06, h30km**, n45,** σ1**985/43, mb4.2/14, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.27**	**67**		**Pb**	**16 14 44.1**	**-0.8**
FAKI	**Fak Fak**	**1.27**	**67**	P	**Pb**	**16 14 44.3**	**-0.6**
BNDI	**Bandanaira**	**1.61**	**227**	P	**Pb**	**16 14 51.8**	**+1.1**
SIJI	**Sorong**	**2.54**	**4**	Pn	**Pn**	**16 14 59.8**	**-1.1**
	11nm,0.3s,baz=193,slow=23,SNR=51						
SIJI				Sn	**Sn**	**16 15 28.8**	**-2.0**
	12nm,0.3s,baz=184,slow=7.7,SNR=9.5						
SIJI				LR	LR	16 16 01.4	
	comp=Z,172nm,18.7s,baz=224,slow=42						
	29nm,0.2s						
SIJI	**Sorong**	**2.54**	**4**	P	**Pn**	**16 14 59.5**	**-1.3**
MWPI	**Manokwari, Pap**	**3.85**	**50**	P	**Pn**	**16 15 20.5**	**+1.6**
SAUI	**Saumlaki**	**4.54**	**177**	Pn	**Pn**	**16 15 26.3**	**-2.1**
SANI	**Sanana**	**5.27**	**285**	P	**Pn**	**16 15 39.3**	**+0.9**
	0.3nm57nm,0.6s						
BAKI	**Biak**	**5.49**	**66**	P	**Pn**	**16 15 43.4**	**+2.0**
KDI	**Kendari**	**8.46**	**266**	P	**Pn**	**16 16 24.0**	**+1.7**
	985nm16nm,0.9s						
LUWI	**Luwuk**	**8.63**	**286**	Pn	Pn	16 16 18.2	-6.5
SOEI	**Soe**	**9.24**	**227**	Pn	**Pn**	**16 16 30.6**	**-2.6**
MTN	**Manton Dam**	**9.37**	**180**		**Pn**	**16 16 34.4**	**-0.4**
JAY	**Jayapura**	**9.65**	**85**	LR	LR	16 21 52.9	
	comp=Z,72nm,18.5s,baz=8.0,slow=47						
BATI	**Baumata**	**9.99**	**227**	Pn	**Pn**	**16 16 42.9**	**-0.3**
	1.4nm,0.3s,baz=209,slow=1.3,SNR=6.6						
	43nm,0.8s						
KNRA	**Kununurra**	**12.40**	**190**		**Pn**	**16 17 13.1**	**-3.1**
FITZ	**Fitzroy Crossi**	**15.54**	**200**	Pn	**Pn**	**16 17 55.8**	**-3.0**
	0.7nm,0.3s,baz=36,slow=10,SNR=13						
FITZ	**Fitzroy Crossi**	**15.54**	**200**		**Pn**	**16 17 54.1**	**-4.6**
COEN	**Coen**	**15.88**	**132**	Pn	**Pn**	**16 18 04.1**	**+0.9**
COEN				IAmb	IAmb	16 18 29.7	
	comp=Z,24nm,1.4s						
WB0	**Warramunga Arr**	**16.57**	**169**	Pn	**Pn**	**16 18 07.5**	**-4.4**
WRA	**Warramunga Arr**	**16.73**	**169**	Pn	**Pn**	**16 18 10.5**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=355,slow=13,SNR=6.8						
WRA				Sn	Sn	16 21 09.3	-10
	comp=Z,0.6nm,0.3s,baz=360,slow=23,SNR=5.2						
WR8	**Warramunga Arr**	**16.77**	**169**	Pn	**Pn**	**16 18 10.9**	**-3.6**
AS31	**Alice Springs**	**20.32**	**173**	P	**P**	**16 18 55.6**	**+0.1**
AS31				IAmb	IAmb	16 19 10.7	
	comp=Z,3.4nm,0.5s						
ASAR	**Alice Springs**	**20.32**	**173**	P	**P**	**16 18 56.7**	**+1.2**
	comp=Z,4.1nm,0.3s,baz=351,slow=11,SNR=108						
ASAR				S	S	16 22 31.3	-11
	comp=Z,1.1nm,0.7s,baz=352,slow=26,SNR=5.8						
	comp=Z,4.1nm,0.3s						
ASAR	**Alice Springs**	**20.32**	**173**		Pn	16 18 57.4	-0.2
MBWA	**Marble Bar**	**20.81**	**211**	P	**P**	**16 18 59.5**	**-1.3**
MBWA				IAmb	IAmb	16 19 07.0	
	comp=Z,17nm,1.3s						
BBJI	**Bungbulang**	**23.66**	**259**	P	**P**	**16 19 29.3**	**-1.7**
INKA	**Innaminka**	**25.89**	**160**	P	**P**	**16 19 51.2**	**+0.2**
INKA				IAmb	IAmb	16 20 19.6	
	comp=Z,4.2nm,1.1s						
FORT	**Forrest**	**27.37**	**186**	P	**P**	**16 20 04.8**	**+0.4**
FORT				IAmb	IAmb	16 20 10.9	
	comp=Z,8.3nm,1.1s						
MORW	**Morawa**	**29.24**	**208**	P	**P**	**16 20 20.0**	**-1.1**
MORW				IAmb	IAmb	16 20 43.1	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**29.99**	**162**	P	**P**	**16 20 28.9**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=350,slow=11,SNR=2.5						
	comp=Z,1.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**32.10**	**202**	P	**P**	**16 20 45.8**	**-0.5**
JMN	**Monobe**	**37.04**	**4**	P	**P**	**16 21 29.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**38.40**	**306**	P	**P**	**16 21 42.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=140,slow=7.5,SNR=7.2						
	comp=Z,0.3nm,0.3s						
JGF	**Kuroka**	**39.26**	**8**	P	**P**	**16 21 47.9**	**+0.3**
JGF				IAmb	IAmb	16 21 50.8	
	comp=Z,10nm,1.4s						
KSRS	**Korea Array**	**40.77**	**356**	P	**P**	**16 22 00.8**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=178,slow=9.3,SNR=5.0						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**65.87**	**326**	P	**P**	**16 25 05.5**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=115,slow=7.5,SNR=10.0						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**65.87**	**326**	P	**P**	**16 25 04.5**	**-0.1**
ZALV	**Zalesovo Beam**	**68.89**	**333**	P	**P**	**16 25 23.4**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=94,slow=4.5,SNR=4.2						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**70.06**	**327**	P	**P**	**16 25 31.6**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=127,slow=5.6,SNR=18						
	comp=Z,1.6nm,0.8s						
KURK	**Kurchatov**	**70.06**	**328**		**P**	**16 25 30.2**	**-0.6**
KURK				IAmb	IAmb	16 25 33.1	
	comp=Z,2.6nm,0.9s						
BVAR	**Borovoye Array**	**75.64**	**327**	P	**P**	**16 26 04.8**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=141,slow=5.0,SNR=3.9						
	comp=Z,1.4nm,0.5s						
L16K	**Owhat River**	**83.40**	**27**	P	**P**	**16 26 47.2**	**+1.3**
J18K	**Innoko River**	**85.17**	**25**	P	**P**	**16 26 56.1**	**+1.3**
J18K				IAmb	IAmb	16 26 56.8	
	comp=Z,1.4nm,0.8s						
J20K	**Nowinta River**	**86.47**	**25**	P	**P**	**16 27 02.9**	**+1.6**
J20K				IAmb	IAmb	16 27 20.4	
	comp=Z,1.4nm,0.9s						

*IDC **20** 16:17:46.0±0.7, 49°.28N×158°.55E, h0km, mb3.8/14, mbtmp3.8/15, ML3.0/1, MS2.8/4, Error ellipse: s-maj=20.7km s-min=17.2km az=139.0*
*NEIC **20** 16:17:47.4±0.8, 49°.19N±0°.06×158°.4E±0°.1, h10km±1km, mb4.5/28, Error ellipse: s-maj=16.7km s-min=2.9km az=124.0*
*KRSC **20** 16:17:48.1±1.7, 49°.40N×158°.87E, h41km±25km, Ml4.3*
*MOS **20** 16:17:49.9±1.0, 49°.34N×158°.70E, h36km, mb4.4/7, Error ellipse: s-maj=15.3km s-min=3.5km az=91.6*

ISC 20 16:17:49.0±0.5, 49°.26N±0°.06×158°.59E±0°.05, h18km**, n138,** σ1**§40/157, mb4.2/31, 3C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**313**	⇑*i*P	**Pn**	**16 18 22.2**	**-1.5**
SKR				*i* S	**Sn**	**16 18 47.5**	**-2.4**
SKR				pmax	pmax		
	comp=Z,569nm,0.6s						
SKR				smax	smax		
	comp=E,2μm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.5s						
SKR	**Severo-Kuril's**	**2.14**	**313**	*i* P	**Pn**	**16 18 22.2**	**-1.5**
SKR				*e*S	**Sn**	**16 18 47.8**	**-2.1**
PAU	**Pauzhetka**	**2.49**	**333**	PN	**Pn**	**16 18 28.2**	**-0.3**
PAU				S	**Sn**	**16 18 57.6**	**-0.8**
PAU	**Pauzhetka**	**2.49**	**333**	*e*P	**Pn**	**16 18 28.3**	**-0.3**
PAU				*e*S	**Sn**	**16 18 57.6**	**-0.8**
KDTR	**Khodutka, Kamc**	**2.58**	**353**	PN	**Pn**	**16 18 28.6**	**-1.1**
KDTR				S	**Sn**	**16 18 58.2**	**-2.3**
KDTR	**Khodutka, Kamc**	**2.58**	**353**	*e*P	**Pn**	**16 18 28.7**	**-1.1**
KDTR				*e*S	**Sn**	**16 18 58.2**	**-2.3**
ASAK	**Asacha**	**3.16**	**352**	PN	**Pn**	**16 18 37.4**	**-0.4**
ASAK	**Asacha**	**3.16**	**352**	*e*P	**Pn**	**16 18 37.5**	**-0.4**
RUS	**Russkaya**	**3.18**	**359**	PN	**Pn**	**16 18 37.1**	**-0.9**
RUS				S	**Sn**	**16 19 12.2**	**-3.3**
RUS	**Russkaya**	**3.18**	**359**	*e*P	**Pn**	**16 18 37.2**	**-0.9**
RUS				*e*S	**Sn**	**16 19 12.2**	**-3.3**
MIPR	**Malaya Ipel'ka**	**3.24**	**340**	PN	**Pn**	**16 18 39.5**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.24**	**340**	*e*P	**Pn**	**16 18 39.5**	**+0.6**
MTVR	**Mutnovka**	**3.24**	**356**	PN	**Pn**	**16 18 38.4**	**-0.6**
MTVR				S	**Sn**	**16 19 14.4**	**-2.8**
MTVR	**Mutnovka**	**3.24**	**356**	*e*P	**Pn**	**16 18 38.5**	**-0.6**
MTVR				*e*S	**Sn**	**16 19 14.4**	**-2.8**
GRL	**Gorelyy**	**3.31**	**355**	PN	**Pn**	**16 18 40.0**	**0.0**
GRL				S	**Sn**	**16 19 17.3**	**-1.7**
GRL	**Gorelyy**	**3.31**	**355**	*e*P	**Pn**	**16 18 40.1**	**0.0**
GRL				*e*S	**Sn**	**16 19 17.4**	**-1.7**
KRMR	**Karymshinskiy**	**3.59**	**356**	PN	**Pn**	**16 18 44.3**	**+0.6**
KRMR				S	**Sn**	**16 19 25.2**	**-0.3**
KRMR	**Karymshinskiy**	**3.59**	**356**	*e*P	**Pn**	**16 18 44.3**	**+0.6**
KRMR				*e*S	**Sn**	**16 19 25.2**	**-0.3**
PET	**Petropavlovsk**	**3.77**	**1**	*e*PN	**Pn**	**16 18 45.7**	**-0.5**
PET				*e*S	**Sn**	**16 19 27.7**	**-2.4**
PET				pmax	pmax		
	comp=Z,33nm,0.5s						
PET				smax	smax		
	comp=N,161nm,0.6s						
PET				smax	smax		
	comp=E,203nm,0.6s						
PET	**Petropavlovsk**	**3.77**	**1**		**Pn**	**16 18 45.8**	**-0.4**
PET	**Petropavlovsk**	**3.77**	**1**	*e*P	**Pn**	**16 18 45.6**	**-0.6**
PET				*e*S	**Sn**	**16 19 27.4**	**-2.7**
DALK	**Dalny**	**3.78**	**1**	PN

ILAR	**Eielson Array**	**32.27**	**41**	*e*P		**P**		**16 24 17.9**	**+1.7**
D25K	**Kavik River**	**32.90**	**32**	P		**P**		**16 24 22.3**	**+0.6**
RAGM	**Ragged Mountai**	**33.47**	**49**	P		**P**		**16 24 27.5**	**+0.7**
C27K	**Jago River**	**33.88**	**32**	P		**P**		**16 24 30.4**	**+0.3**
C27K				IAmb		IAmb		16 25 08.2	
	comp=Z,5.5nm,1.4s								
L27K	**Beaver Creek,**	**34.55**	**44**	P		**P**		**16 24 36.7**	**+0.6**
BCAR	**Beaver Creek A**	**34.57**	**44**	P		**P**		**16 24 36.7**	**+0.5**
BARN	**Barnard Glacie**	**34.85**	**47**	P		**P**		**16 24 39.2**	**+0.4**
L29M	**L29M**	**36.21**	**43**	P		**P**		**16 24 51.5**	**+1.1**
DGZ	**Jazzator, Alta**	**44.61**	**299**	*i* P		**P**		**16 26 00.3**	**+0.2**
DGZ				pmax		pmax			
	comp=Z,1.0nm,0.9s								
YKA	**Yellowknife Ar**	**46.68**	**40**	P		**P**		**16 26 15.7**	**-0.4**
	comp=Z,1.3nm,1.0s,baz=292,slow=7.2,SNR=4.5								
	comp=Z,1.3nm,1.0s								
YKA	**Yellowknife Ar**	**46.68**	**40**	*e*P		**P**		**16 26 17.2**	**+1.1**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.9s								
KURK	**Kurchatov**	**49.03**	**304**	*i* P		**P**		**16 26 35.8**	**+1.4**
KURK				pmax		pmax			
	comp=Z,3.0nm,1.2s								
KURK	**Kurchatov**	**49.03**	**304**	P		**P**		**16 26 33.7**	**-0.7**
KURK				IAmb		IAmb		16 26 37.7	
	comp=Z,1.4nm,0.6s								
MK31	**Makanchi Array**	**49.04**	**298**	*i* P		**P**		**16 26 35.3**	**+0.7**
MKAR	**Makanchi Array**	**49.04**	**298**	P		**P**		**16 26 33.6**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=60,slow=5.4,SNR=11								
	comp=Z,0.5nm,0.4s								
MKAR	**Makanchi Array**	**49.04**	**298**	*i* P		**P**		**16 26 38.4**	**+3.8**
KURBB	**Kurchatov Arra**	**49.12**	**304**	P		**P**		**16 26 34.4**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=63,slow=7.8,SNR=4.8								
	comp=Z,0.7nm,0.5s								
SPITS	**Spitsbergen Ar**	**50.77**	**351**	P		**P**		**16 26 46.8**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=71,slow=6.3,SNR=4.6								
	comp=Z,2.3nm,0.8s								
SPITS	**Spitsbergen Ar**	**50.77**	**351**	P		**P**		**16 26 46.8**	**-0.6**
SPITS				pmax		pmax			
	comp=Z,18nm,1.4s								
ARTI	**Arti**	**55.71**	**319**	*c* *i*P		**P**		**16 27 26.7**	**+2.7**
ARTI								16 28 26.8	
ARTI								16 29 31.9	
ARTI				S		**S**		**16 35 10.2**	**+1.0**
ARTI				SS		**SS**		**16 38 48.7**	**-5.2**
ARTI				pmax		pmax			
	comp=Z,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**56.50**	**259**	P		**P**		**16 27 31.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=45,slow=7.1,SNR=4.3								
	comp=Z,0.4nm,0.4s								
PNTR	**Pine Nut**	**56.83**	**67**	P		**P**		**16 27 32.1**	**-0.4**
PNTR				IAmb		IAmb		16 27 55.0	
	comp=Z,4.2nm,0.9s								
NVAR	**Mina Array Bea**	**58.03**	**67**	P		**P**		**16 27 41.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=292,slow=5.4,SNR=4.5								
	comp=Z,0.7nm,0.7s								
NVAR	**Mina Array Bea**	**58.03**	**67**	P		**P**		**16 27 40.7**	**-0.2**
AB31	**Akbulak array**	**59.59**	**311**			**P**		**16 27 50.6**	**-0.7**
ABKAR	**Akbulak array**	**59.59**	**311**	P		**P**		**16 27 50.4**	**-0.9**
BW06	**Boulder Array**	**60.29**	**58**	P		**P**		**16 27 57.0**	**+0.4**
BW06				IAmb		IAmb		16 27 57.9	
	comp=Z,2.1nm,0.9s								
PD31	**Pinedale Array**	**60.30**	**58**			**P**		**16 27 56.8**	**+0.2**
PD31				IAmb		IAmb		16 27 57.9	
	comp=Z,2.4nm,1.0s								
PDAR	**Pinedale Array**	**60.30**	**58**	P		**P**		**16 27 57.1**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=316,slow=4.1,SNR=10								
	comp=Z,1.1nm,0.8s								
PDAR	**Pinedale Array**	**60.30**	**58**	P		**P**		**16 27 56.9**	**+0.3**
FINES	**FINESS Array B**	**63.27**	**337**	P		**P**		**16 28 15.3**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=28,slow=7.7,SNR=1.7								
	comp=Z,0.4nm,0.5s								
PV10	**Paradox Valley**	**63.53**	**61**	IAmb		IAmb		16 28 19.3	
	comp=Z,0.8nm,1.0s								
EPLO	**Experimental L**	**63.57**	**44**	P		**P**		**16 28 18.2**	**0.0**
EPLO				IAmb		IAmb		16 28 41.7	
	comp=Z,6.7nm,1.3s								
PV19	**Morning Glory**	**63.60**	**61**	IAmb		IAmb		16 28 19.8	
	comp=Z,5.2nm,0.8s								
PV13	**Radium Mtn., P**	**63.80**	**61**	IAmb		IAmb		16 28 21.1	
	comp=Z,4.2nm,0.8s								
OBN	**Obninsk**	**65.24**	**328**	*e*P		**P**		**16 28 31.6**	**+2.6**
OBN				*e*				16 30 54.4	
OBN				*e*S		**S**		**16 37 14.2**	**+3.1**
OBN				pmax		pmax			
	comp=Z,3.0nm,1.0s								
NOA	**NORSAR Array B**	**66.96**	**343**	P		**P**		**16 28 39.1**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=21,slow=6.3,SNR=2.6								
	comp=Z,0.4nm,0.6s								
HFS	**Hagfors**	**67.31**	**342**	P		**P**		**16 28 41.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=36,slow=7.6,SNR=1.2								
	comp=Z,0.5nm,0.5s								
KOUNC	**Koumac, New Ca**	**69.68**	**174**	P		**P**		**16 28 57.1**	**-0.2**
KBZ	**Khabaz**	**71.67**	**317**	*i* P		**P**		**16 29 12.1**	**+2.7**
KBZ				pmax		pmax			
	comp=Z,2.0nm,1.1s								
WB0	**Warramunga Arr**	**72.01**	**204**	P		**P**		**16 29 09.5**	**-2.0**
WB0				IAmb		IAmb		16 29 32.5	
	comp=Z,6.6nm,1.2s								
WR8	**Warramunga Arr**	**72.16**	**204**	P		**P**		**16 29 10.7**	**-1.8**
WR8				IAmb		IAmb		16 29 22.9	
	comp=Z,12nm,1.4s								
WRA	**Warramunga Arr**	**72.19**	**204**	P		**P**		**16 29 13.3**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=16,slow=6.1,SNR=5.2								
	comp=Z,1.9nm,0.7s								
DEOK	**Depew**	**72.33**	**55**	P		**P**		**16 29 13.4**	**-0.1**
TX31	**Lajitas Ar. Si**	**73.07**	**65**			**P**		**16 29 17.9**	**-0.2**
TX31				IAmb		IAmb		16 29 18.8	
	comp=Z,2.9nm,1.1s								
TXAR	**Lajitas Array**	**73.07**	**65**	P		**P**		**16 29 18.0**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=302,slow=5.3,SNR=25								
	comp=Z,1.4nm,0.5s								
TXAR	**Lajitas Array**	**73.07**	**65**	P		**P**		**16 29 18.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**73.16**	**213**	LR		LR		17 05 23.4	
	comp=Z,32nm,18.0s,baz=168,slow=39								
FITZ	**Fitzroy Crossi**	**73.16**	**213**	P		**P**		**16 29 17.6**	**-0.9**
ASAR	**Alice Springs**	**75.86**	**203**	P		**P**		**16 29 32.8**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=15,slow=6.0,SNR=7.8								
	comp=Z,0.4nm,0.6s								

BJI ***20*** *16:25:28.8,33˙.11S×177˙.43W,h5km,mb5.2/10*
IDC ***20*** *16:25:28.9±0.4,33˙.64S×177˙.94W,h0km,mb4.6/16, mbtmp4.6/19,ML4.8/3,MS3.7/37,Error ellipse: s-maj=17.6km s-min=14.1km az=80.0*
NEIC ***20*** *16:25:31.0±1.9,33˙.53S±0˙.05×177˙.88W±0˙.10,h10km±1km, mb4.9/73,Error ellipse: s-maj=15.6km s-min=5.6km az=119.0*
GCMT ***20*** *16:25:31.0±0.3,33˙.65S±0˙.03×177˙.52W±0˙.02,h14km±1km, MW4.9/94,Moment Tensor Solution. s29,c36; s94,c124; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.48±.16; Mθθ=0.11±.10; Mφφ=2.59±.11; Mrθ=0.40±.27; Mrφ=0.05±.07; Mθφ=0.07±.17; Best double couple: M₀=2.56900×10¹⁶ NP1:φs=10.00000°,δ45.00000°,λ=-77.00000°. NP2: φs=172.00000°,δ46.00000°,λ=-103.00000°. Principal axes: T 2.5920, Plg1.0000°, Azm271.0000°; N -0.0440, Plg9.0000°, Azm181.0000°; P -2.5460, Plg81.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
WEL ***20*** *16:25:31.1±0.7,35˙S±10˙×17˙7W±˙,h12km,M4.5/49, mB5.1/36,ML5.4/49,MLv5.4/49,Mw(mB)4.4/36 Error ellipse: s-maj=16.8km s-min=6.4km az=138.6*

ISC 20 16:25:30.0±0.3,33˙69S±0˙05×177˙80W±0˙06,h10km, n238,σ1ŝ76/187,mb4.8/51,MS3.8/35,3C-5D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.42**	**359**	Pn	**Pn**	**16 26 33.1**	**-4.0**
	83nm,0.3s,baz=88,slow=10.0,SNR=7.5						
RAO				Sn	**Sn**	**16 27 21.7**	**-7.0**
	355nm,0.3s,baz=83,slow=23,SNR=6.7						
RAO				LR	LR	16 29 50.6	
	comp=Z,696nm,18.2s,baz=198,slow=60						
RAO	**Raoul Island**	**4.42**	**359**	Pn	Pn	16 26 31.6	-5.5
MXZ	**Matakaoa Point**	**5.00**	**218**	Pn	**Pn**	**16 26 42.9**	**-2.2**
MXZ	**Matakaoa Point**	**5.00**	**218**	P	**Pn**	**16 26 44.3**	**-0.8**
MXZ				S	**Sn**	**16 27 41.0**	**-2.0**
WMGZ	**Waiomatatini S**	**5.15**	**216**	P	**Pn**	**16 26 45.6**	**-1.4**
WMGZ				S	**Sn**	**16 27 46.2**	**-0.3**
PUZ	**Puketiti**	**5.42**	**215**	P	**Pn**	**16 26 48.4**	**-2.5**
PUZ				S	**Sn**	**16 27 50.8**	**-2.6**
HAZ	**Te Kaha**	**5.42**	**220**	P	**Pn**	**16 26 50.2**	**-0.6**
HAZ				S	**Sn**	**16 27 53.8**	**+0.5**
RUGZ	**Raukumara Rang**	**5.63**	**219**	P	**Pn**	**16 26 53.2**	**-0.7**
RUGZ				S	**Sn**	**16 27 57.4**	**-1.3**
TWGZ	**Tauwhareparae**	**5.64**	**216**	P	**Pn**	**16 26 52.6**	**-1.3**
CNGZ	**Carnagh Station**	**5.78**	**213**	P	**Pn**	**16 26 53.9**	**-1.8**
TKGZ	**Te Karaka**	**5.91**	**215**	P	**Pn**	**16 26 56.0**	**-1.5**
MWZ	**Matawai**	**5.99**	**218**	P	**Pn**	**16 26 56.7**	**-1.9**
MWZ				S	**Sn**	**16 28 04.6**	**-2.8**
URZ	**Urewera**	**6.15**	**221**	Pn	**Pn**	**16 26 59.3**	**-1.6**
	5.4nm,0.3s,baz=255,slow=5.0,SNR=34						
URZ				Sn	**Sn**	**16 28 08.5**	**-2.8**
	98nm,0.3s,baz=181,slow=23,SNR=17						
URZ				LR	LR	16 28 41.8	
	comp=Z,153nm,20.0s,baz=15,slow=32						
	24nm,0.4s						
URZ	**Urewera**	**6.15**	**221**	P	**Pn**	**16 26 59.3**	**-1.6**
URZ				S	**Sn**	**16 28 07.8**	**-3.4**
RIGZ	**Rimuhau**	**6.16**	**214**	P	**Pn**	**16 26 58.7**	**-2.4**
RAGZ	**Rawiri**	**6.17**	**218**	P	**Pn**	**16 26 59.5**	**-1.7**
PRGZ	**Paritu Road**	**6.28**	**212**	P	**Pn**	**16 27 01.0**	**-1.6**
TGRZ	**Tauranga**	**6.29**	**228**	P	**Pn**	**16 27 03.1**	**+0.3**
KNZ	**Kokohu**	**6.46**	**213**	P	Pn	16 27 01.8	-3.3
KNZ				S	**Sn**	**16 28 15.5**	**-3.2**
MHGZ	**Mahia Peninsul**	**6.46**	**211**	P	Pn	16 27 02.5	-2.7
MHGZ				S	**Sn**	**16 28 16.7**	**-2.2**
OMRZ	**Omania**	**6.47**	**225**	P	**Pn**	**16 27 06.5**	**+1.2**
RTZ	**Ruatahuna**	**6.48**	**219**		**Pn**	**16 27 03.0**	**-2.5**
RTZ	**Ruatahuna**	**6.48**	**219**	P	**Pn**	**16 27 04.4**	**-1.1**
MUGZ	**Murupara**	**6.49**	**221**	P	**Pn**	**16 27 03.7**	**-1.9**
MUGZ				S	**Sn**	**16 28 15.1**	**-4.7**
RAHZ	**Arahi**	**6.66**	**217**	P	**Pn**	**16 27 06.3**	**-1.5**
RAHZ				S	**Sn**	**16 28 21.5**	**-2.2**
HSRZ	**Hossack Road**	**6.68**	**225**	P	**Pn**	**16 27 10.7**	**+2.6**
MKAZ	**Moumakai**	**6.68**	**237**	P	**Pn**	**16 27 10.5**	**+2.3**
PRRZ	**Plateau Road**	**6.72**	**223**	P	**Pn**	**16 27 10.0**	**+1.3**
PRRZ				S	**Sn**	**16 28 22.2**	**-3.1**
MTHZ	**Maungataniwha**	**6.73**	**218**	P	**Pn**	**16 27 07.1**	**-1.8**
MTHZ				S	**Sn**	**16 28 23.1**	**-2.5**
ETAZ	**East Tamaki Re**	**6.78**	**239**	P	**Pn**	**16 27 14.0**	**+4.5**
TOZ	**Tahuroa Road**	**6.78**	**232**		**Pn**	**16 27 09.4**	**-0.1**
TOZ	**Tahuroa Road**	**6.78**	**232**	P	**Pn**	**16 27 10.0**	**+0.5**
TOZ				S	**Sn**	**16 28 25.6**	**-1.1**
WCZ	**Waipu Caves**	**6.84**	**249**	P	**Pn**	**16 27 12.2**	**+1.8**
NMHZ	**Naumai**	**6.93**	**217**	P	**Pn**	**16 27 09.7**	**-2.0**
MRHZ	**Matea Rd**	**6.94**	**221**	P	**Pn**	**16 27 10.6**	**-1.2**
ARHZ	**Aropaoanui**	**6.97**	**216**	P	Pn	16 27 09.4	-2.7
AWAZ	**Awhitu Peninsu**	**7.03**	**239**	P	Pn	16 27 18.2	+5.3
KUTZ	**Kaahu Road**	**7.04**	**225**	P	**Pn**	**16 27 14.3**	**+1.1**
MCHZ	**McNeill Hill**	**7.25**	**216**	P	**Pn**	**16 27 13.5**	**-2.5**
OUZ	**Omahuta**	**7.27**	**255**	P	**Pn**	**16 27 18.6**	**+2.4**
RITZ	**Rihia Road**	**7.35**	**222**	P	**Pn**	**16 27 18.0**	**+0.6**
KAHZ	**Kahuranaki**	**7.44**	**214**	P	Pn	16 27 14.6	-4.0
TMVZ	**Te Maari**	**7.54**	**222**	P	**Pn**	**16 27 18.8**	**-1.2**
NTVZ	**North Tongarir**	**7.54**	**222**	P	**Pn**	**16 27 18.4**	**-1.6**
ETVZ	**East Tongariro**	**7.54**	**222**	P	**Pn**	**16 27 18.3**	**-1.9**
KRVZ	**Karewarewa**	**7.56**	**223**	P	**Pn**	**16 27 19.9**	**-0.4**
KRHZ	**Kereru**	**7.57**	**217**	P	Pn	16 27 17.3	-3.0
WTVZ	**West Tongariro**	**7.60**	**223**	P	**Pn**	**16 27 22.0**	**+1.2**
BHHZ	**Black Hill Sta**	**7.61**	**219**	P	**Pn**	**16 27 18.4**	**-2.5**
SNVZ	**South Ngauruho**	**7.62**	**222**	P	**Pn**	**16 27 19.2**	**-1.5**
HIZ	**Hauiti**	**7.65**	**229**	P	**Pn**	**16 27 23.6**	**+2.1**
COVZ	**Chateau Observ**	**7.68**	**222**	P	**Pn**	**16 27 22.3**	**+0.3**
MOVZ	**Moawhango**	**7.71**	**220**	P	**Pn**	**16 27 21.4**	**-1.0**
WHVZ	**Whangaehu Hut**	**7.71**	**222**	P	**Pn**	**16 27 22.4**	**-0.2**
FWVZ	**Far West T-bar**	**7.72**	**222**	P	**Pn**	**16 27 23.1**	**+0.5**
WNVZ	**Wahianoa**	**7.74**	**221**	P	**Pn**	**16 27 23.1**	**+0.3**
PNHZ	**Pukenui**	**7.86**	**216**	P	Pn	16 27 20.2	-4.2
WPHZ	**Waipukurau**	**7.86**	**214**	P	Pn	16 27 19.9	-4.4
PRHZ	**Porangahau**	**7.93**	**213**	P	Pn	16 27 21.4	-3.9
TSZ	**Takapari Road**	**8.09**	**216**	P	Pn	16 27 23.4	-4.1
VRZ	**Vera Road**	**8.09**	**226**	P	**Pn**	**16 27 28.3**	**+0.9**
ANWZ	**Angora Road**	**8.16**	**212**	P	Pn	16 27 25.4	-3.1
DVHZ	**Dannevirke**	**8.18**	**214**	P	Pn	16 27 25.2	-3.5
POWZ	**Post Office Ro**	**8.44**	**216**	P	Pn	16 27 29.5	-2.7
BFZ	**Birch Farm**	**8.44**	**213**	P	Pn	16 27 27.2	-5.1
DREZ	**Durham Road**	**8.47**	**227**	P	**Pn**	**16 27 35.1**	**+2.5**
PRWZ	**Pori Road**	**8.47**	**214**	P	Pn	16 27 29.1	-3.6
TIWZ	**Tintock**	**8.68**	**214**	P	Pn	16 27 32.0	-3.7
MRZ	**Mangatainoka R**	**8.74**	**215**	P	Pn	16 27 31.3	-5.0
HOWZ	**Holdsworth Sta**	**8.95**	**215**	P	Pn	16 27 35.0	-4.3
OGWZ	**Otaki Gorge**	**9.06**	**216**	P	Pn	16 27 37.1	-3.6
KIW	**Kapiti Island**	**9.22**	**217**	P	**Pn**	**16 27 40.6**	**-2.4**
CAW	**Cannon Point**	**9.33**	**215**	P	Pn	16 27 39.9	-4.6
DUWZ	**D'Urville Isla**	**9.69**	**220**	P	**Pn**	**16 27 48.3**	**-1.2**
TCW	**Tory Channel**	**9.80**	**218**	P	Pn	16 27 47.1	-3.8
CTZ	**Chatham Island**	**10.08**	**175**		Pn	16 27 51.5	-3.2
CTZ	**Chatham Island**	**10.08**	**175**	P	Pn	16 27 52.4	-2.3
CTZ				S	Sn	16 29 33.6	-14
TUWZ	**Tuamarina**	**10.13**	**218**	P	**Pn**	**16 27 55.8**	**+0.4**
NNZ	**Nelson**	**10.28**	**220**	P	**Pn**	**16 27 56.3**	**-1.1**
BSWZ	**Blackbirch Sta**	**10.37**	**217**	P	**Pn**	**16 27 56.6**	**-2.2**
TKNZ	**Takaka Hill**	**10.38**	**222**	P	Pn	**16 27 56.2**	**-2.7**
MRNZ	**Matariki Terra**	**10.74**	**221**	P	Pn	16 28 00.4	-3.4
THZ	**Tophouse**	**10.91**	**220**	P	Pn	16 28 02.9	-3.3
KHZ	**Kahutara**	**11.06**	**216**	P	**Pn**	**16 28 07.7**	**-2.5**
KHZ				S	Sn	16 29 59.2	-13
LTZ	**Lake Taylor**	**11.97**	**218**	P	Pn	16 28 17.9	-2.7
LTZ				S	Sn	16 30 19.1	-15
INZ	**Inchbonnie**	**12.36**	**220**	P	**Pn**	**16 28 24.3**	**-1.7**
INZ				S	Sn	16 30 30.5	-13
MQZ	**McQueen's Vall**	**12.47**	**214**	P	Pn	16 28 22.2	-5.2
MQZ				S	Sn	16 30 30.9	-15
OXZ	**Oxford**	**12.48**	**217**	P	Pn	16 28 23.8	-3.7
OXZ				S	Sn	16 30 28.8	-18
RACZ	**Rakaia**	**12.73**	**215**	P	**Pn**	**16 28 28.4**	**-2.5**
RACZ				S	Sn	16 30 38.4	-14
WACZ	**Wakanui South**	**13.03**	**215**	P	Pn	16 28 31.5	-3.6
WACZ				S	Sn	16 30 44.0	-16
RPZ	**Rata Peaks**	**13.26**	**218**	P	Pn	16 28 35.0	-3.1
RPZ				S	Sn	16 30 52.0	-14
ARCZ	**Arundel**	**13.36**	**217**	P	Pn	16 28 36.6	-3.0
ARCZ				S	Sn	16 30 52.2	-16
TMZ	**Timaru**	**13.76**	**216**	P	Pn	16 28 40.1	-5.0
TMZ				S	Sn	16 31 02.1	-16
LBZ	**Lake Benmore**	**14.17**	**218**	P	Pn	16 28 47.2	-3.5
ODZ	**Otahua Downs**	**14.42**	**215**	P	Pn	16 28 50.1	-4.0
JCZ	**Jackson Bay**	**14.70**	**221**	P	**Pn**	**16 28 56.2**	**-1.9**
MSVF	**Nonsavu**	**16.32**	**346**	Pn	**Pn**	**16 29 17.7**	**-1.6**
	0.8nm,0.3s,baz=177,slow=8.4,SNR=6.7						
	11nm,0.8s						
MSVF	**Nonsavu**	**16.32**	**346**	Pn	**Pn**	**16 29 18.2**	**-1.1**
DZM	**Mont Dzumac**	**18.08**	**306**	P	**Pn**	**16 29 39.7**	**-1.8**
	0.7nm,0.3s,baz=89,slow=21,SNR=12						
	22nm,0.9s						
RAR	**Rarotonga**	**20.22**	**57**	P	LR	16 35 39.5	
	comp=Z,169nm,20.1s,baz=256,slow=30						
AFI	**Afiamalu**	**20.43**	**17**	P	**P**	**16 30 07.7**	**+0.1**
	66nm,1.0s,baz=258,slow=5.9,SNR=6.2						
AFI				LR	LR	16 44 15.6	
	comp=Z,30nm,18.5s,baz=224,slow=55						
	66nm,1.0s						
AFI	**Afiamalu**	**20.43**	**17**		**P**	**16 30 07.5**	**-0.1**
KOUNC	**Koumac, New Ca**	**20.59**	**305**	Pn	Pn	16 30 11.0	-0.4
KOUNC				IAmb	IAmb	16 30 12.0	
	comp=Z,44nm,1.0s						
EIDS	**Eidsvold**	**28.24**	**279**		**P**	**16 31 22.8**	**-0.4**
EIDS				IAmb	IAmb	16 31 26.3	
	comp=Z,11nm,0.8s						
PPT2	**Papeete2**	**29.94**	**65**	*e*P	**P**	**16 31 37.9**	**-0.5**
	comp=Z,42nm,25.8s						
PPT2				*e*S	**S**	**16 36 29.3**	**-6.8**
	comp=Z,41nm,25.0s						
PPT2				*e*LR	LR	16 39 07.0	
	comp=Z,749nm,27.2s						
PPT2				*e*LR	LR	16 39 15.0	
	comp=Z,451nm,25.5s						
PPT	**Papeete**	**29.95**	**65**	LR	LR	16 40 33.2	
	comp=Z,168nm,20.0s,baz=240,slow=30						
STKA	**Stephens Creek**	**34.04**	**262**	P	**P**	**16 32 13.3**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=124,slow=16,SNR=3.0						
STKA				PcP	**PcP**	**16 34 52.3**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=329,slow=5.9,SNR=3.9						
STKA				LR	LR	16 46 27.6	
	comp=Z,374nm,18.1s,baz=59,slow=37						
	comp=Z,1.6nm,0.8s						
CTA	**Charters Tower**	**34.62**	**284**	P	**P**	**16 32 19.6**	**+0.1**
	comp=Z,23nm,0.6s,baz=112,slow=10,SNR=47						
CTA				LR	LR	16 44 32.0	
	comp=Z,121nm,21.6s,baz=102,slow=33						
	comp=Z,23nm,0.6s						
CTAO	**Charters Tower**	**34.62**	**284**	P	**P**	**16 32 20.2**	**+0.7**
INKA	**Innaminka**	**35.95**	**268**		**P**	**16 32 31.6**	**+0.7**
BBOO	**Buckleboo**	**38.35**	**258**	P	**P**	**16 32 51.7**	**+0.5**
BBOO				IAmb	IAmb	16 33 52.8	
	comp=Z,82nm,1.9s						
COEN	**Coen**	**40.43**	**290**	P	**P**	**16 33 08.4**	**-0.3**
KRVT	**Keravat (AS076**	**40.54**	**310**	LR	LR	16 46 45.7	
	comp=Z,24nm,21.3s,baz=106,slow=32						
TAOE	**Nuku Hiva Isla**	**42.54**	**63**	*e*LR	LR	16 44 57.0	
	comp=Z,285nm,26.6s						
AS31	**Alice Springs**	**43.20**	**270**		**P**	**16 33 30.8**	**-0.6**
ASAR	**Alice Springs**	**43.20**	**270**	P	**P**	**16 33 30.8**	**-0.6**
	comp=Z,11nm,0.7s,baz=110,slow=7.3,SNR=202						
ASAR				PcP	**PcP**	**16 35 20.8**	**0.0**
	comp=Z,2.5nm,0.7s,baz=117,slow=4.1,SNR=5.1						
ASAR				S	**S**	**16 39 52.4**	**-5.9**
	comp=Z,1.1nm,0.9s,baz=115,slow=15,SNR=6.8						
ASAR				LR	LR	16 50 15.3	
	comp=Z,206nm,21.3s,baz=116,slow=34						
	comp=Z,11nm,0.7s						
WR8	**Warramunga Arr**	**44.34**	**275**		**P**	**16 33 39.8**	**-0.8**
WR8				IAmb	IAmb	16 33 40.7	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**44.48**	**275**	P	**P**	**16 33 40.9**	**-0.7**
WRAB				IAmb	IAmb	16 33 53.0	
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**44.48**	**275**	P	**P**	**16 33 41.0**	**-0.8**
	comp=Z,14nm,0.6s,baz=117,slow=7.6,SNR=37						
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**44.48**	**275**		**P**	**16 33 40.9**	**-0.8**
WB0	**Warramunga Arr**	**44.52**	**276**		**P**	**16 33 41.3**	**-0.7**
WB0				IAmb	IAmb	16 33 42.0	
	comp=Z,23nm,0.8s						
SBA	**Scott Base**	**44.78**	**185**	P	**P**	**16 33 46.0**	**+2.7**
VNDA	**Vanda**	**44.85**	**186**	P	**P**	**16 33 44.7**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=46,slow=5.7,SNR=7.9						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**44.85**	**186**	P	**P**	**16 33 45.7**	**+1.8**
JAY	**Jayapura**	**49.61**	**300**	LR	LR	16 53 15.8	
	comp=Z,93nm,20.4s,baz=219,slow=34						
MTN	**Manton Dam**	**50.73**	**281**		**P**	**16 34 29.1**	**-1.2**
KNRA	**Kununurra**	**51.19**	**277**		**P**	**16 34 33.6**	**-0.1**
KNRA				IAmb	IAmb	16 34 33.9	
	comp=Z,10nm,0.8s						
CASY	**Casey**	**52.34**	**209**		**P**	**16 34 42.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**52.59**	**272**	LR	LR	16 56 23.0	
	comp=Z,220nm,19.5s,baz=166,slow=35						
FITZ	**Fitzroy Crossi**	**52.59**	**272**		**P**	**16 34 43.4**	**-0.7**
NWAO	**Narrogin (SRO)**	**53.46**	**252**	P	**P**	**16 34 50.4**	**0.0**
MBWA	**Marble Bar**	**56.09**	**266**	P	**P**	**16 35 08.7**	**-0.9**
MBWA				IAmb	IAmb	16 36 15.9	
	comp=Z,24nm,1.4s						
QSPA	**South Pole Qui**	**56.43**	**180**	P	**P**	**16 35 13.3**	**+1.7**
	comp=Z,15nm,0.9s,baz=23,slow=1.2,SNR=45						
	comp=Z,15nm,0.9s						
QSPA	**South Pole Qui**	**56.43**	**180**		**P**	**16 35 13.7**	**+2.1**
SIJI	**Sorong**	**57.74**	**293**	LR	L

LHV	Little Huntoon	90.30	43	IAmb	IAmb	16 38 33.5	
	comp=Z,5.4nm,1.0s						
BEKR	Beckworth	90.41	40	P	P	16 38 32.0	+0.3
BEKR				IAmb	IAmb	16 41 21.4	
	comp=Z,9.7nm,1.8s						
YBH	Yreka Blue Hor	90.51	38	LR	LR	17 12 35.7	
	comp=Z,38nm,19.7s,baz=222,slow=31						
NVAR	Mina Array Bea	90.53	43	P	P	16 38 33.7	+1.3
	comp=Z,2.6nm,0.8s,baz=214,slow=7.6,SNR=9.0						
NVAR				LR	LR	17 16 29.6	
	comp=Z,33nm,18.4s,baz=250,slow=34						
	comp=Z,2.6nm,0.8s						
TPNV	Topopah Spring	90.70	45	IAmb	IAmb	16 38 35.8	
	comp=Z,3.9nm,0.9s						
PRN	Pahroc Range	91.71	45	IAmb	IAmb	16 38 41.0	
	comp=Z,7.1nm,1.2s						
TIA	Tai'an	92.33	313	P	P	16 38 41.4	+1.0
TIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KNB	Kanab	92.79	47	IAmb	IAmb	16 38 45.8	
	comp=Z,3.9nm,1.0s						
PINE	Pine Mountain	92.90	37	IAmb	IAmb	16 38 56.5	
	comp=Z,7.2nm,1.1s						
KDAK	Kodiak Island	93.56	13	LR	LR	17 17 19.3	
	comp=Z,38nm,18.7s,baz=213,slow=33						
CMIG	Matias Romero	93.61	72	LR	LR	17 11 22.0	
	comp=Z,37nm,20.9s,baz=184,slow=29						
ELK	Elko	93.84	43	LR	LR	17 14 16.0	
	comp=Z,36nm,19.6s,baz=227,slow=31						
ATAH	Atahualpa	93.85	101	LR	LR	17 10 32.9	
	comp=Z,32nm,22.0s,baz=213,slow=29						
J08A	Circle Bar Ran	93.86	39	IAmb	IAmb	16 38 49.6	
	comp=Z,5.2nm,1.1s						
TXAR	Lajitas Array	94.01	57	LR	LR	17 13 53.5	
	comp=Z,41nm,19.0s,baz=222,slow=31						
CMAR	Chiang Mai Arr	94.64	289	P	P	16 38 51.9	+0.4
	comp=Z,1.5nm,0.7s,baz=142,slow=3.5,SNR=12						
CMAR				PP	PP	16 42 38.6	-1.3
	comp=Z,1.1nm,0.7s,baz=143,slow=6.8,SNR=9.9						
	comp=Z,1.5nm,0.7s						
ANMO	Albuquerque	95.49	51	LR	LR	17 14 52.0	
	comp=Z,42nm,19.3s,baz=222,slow=31						
BBB	Bella Bella	95.91	28	LR	LR	17 22 16.6	
	comp=Z,23nm,18.1s,baz=213,slow=36						
PLID	Pearl Lake	96.34	39	IAmb	IAmb	16 39 00.5	
	comp=Z,3.5nm,1.0s						
MA2	Magadan	96.50	345	LR	LR	17 19 02.1	
	comp=Z,24nm,19.9s,baz=195,slow=33						
LPAZ	La Paz	96.64	114	P	P	16 39 02.9	+1.4
	comp=Z,1.3nm,0.7s,baz=207,slow=2.3,SNR=3.1						
LPAZ				LR	LR	17 12 45.7	
	comp=Z,23nm,19.7s,baz=230,slow=29						
	comp=Z,1.3nm,0.7s						
LPAZ	La Paz	96.64	114	IAmb	IAmb	16 42 33.4	
	comp=Z,10nm,1.9s						
PZH	PanZhiHua	96.96	297	P	P	16 39 04.5	+2.4
CPUP	Villa Florida	97.81	129	LR	LR	17 16 48.6	
	comp=Z,36nm,19.7s,baz=254,slow=31						
NEW	Newport	97.92	36	LR	LR	17 17 43.3	
	comp=Z,55nm,18.9s,baz=188,slow=32						
PDAR	Pinedale Array	98.39	44	LR	LR	17 18 13.6	
	comp=Z,26nm,19.0s,baz=245,slow=32						
HHC	Hu-ho-hao-te	98.63	314	*e*P	Pdif	16 39 11.4	+2.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	119.98	309	PKP	PKPdf	16 44 19.9	-0.6
	comp=Z,0.8nm,0.9s,baz=112,slow=1.3,SNR=4.5						
KSH2	Kashi	122.19	298	PKP	PKPdf	16 44 25.3	+0.2
KURBB	Kurchatov Arra	123.44	312	PKP	PKPdf	16 44 26.3	-0.6
	comp=Z,1.9nm,0.8s,baz=112,slow=2.0,SNR=18						
BVAR	Borovoye Array	128.84	314	PKP	PKPdf	16 44 37.9	+0.7
	comp=Z,1.8nm,0.8s,baz=90,slow=3.0,SNR=4.6						
SPITS	Spitsbergen Ar	134.98	356	PKP	PKPdf	16 44 48.5	+0.4
	comp=Z,6.1nm,0.9s,baz=101,slow=3.1,SNR=6.0						
ARCES	ARCESS Array B	141.82	347	PKP	PKPdf	16 45 01.2	+0.3
	comp=Z,2.1nm,0.7s,baz=45,slow=1.9,SNR=6.2						
KBZ	Khabaz	146.99	300	PKPbc	PKPbc	16 45 13.3	+0.7
	comp=Z,8.5nm,0.9s,baz=167,slow=1.5,SNR=13						
FIA1	FINESS Array S	148.27	338		PKPbc	16 45 15.5	0.0
FINES	FINESS Array B	148.27	338	PKPbc	PKPbc	16 45 15.5	-0.1
	comp=Z,19nm,0.8s,baz=64,slow=4.4,SNR=61						
FINES	FINESS Array B	148.27	338		PKPbc	16 45 15.2	-0.3
NB2	NORSAR Subarra	152.01	351	PKP	PKPbc	16 45 24.6	-0.1
	comp=Z,7.5nm,0.8s,baz=15,slow=4.0						
NOA	NORSAR Array B	152.01	351	PKPbc	PKPbc	16 45 24.7	0.0
	comp=Z,4.9nm,0.7s,baz=14,slow=4.1,SNR=22						
NOA				PKPab	PKPab	16 45 33.7	-0.4
	comp=Z,3.6nm,0.9s,baz=17,slow=3.1,SNR=6.1						
NC602	NORSAR Array S	152.26	350		PKPbc	16 45 25.2	0.0
MMAI	Mount Meron Ar	152.32	278	PKPbc	PKiKP	16 45 27.8	+1.2
	comp=Z,4.4nm,0.7s,baz=86,slow=3.7,SNR=5.7						
MMAI				PKPab	PKPab	16 45 37.1	+0.7
	comp=Z,6.5nm,0.8s,baz=88,slow=2.6,SNR=4.6						
DBIC	Dimbokro	152.33	165	PKPbc	PKPbc	16 45 27.4	+0.6
	comp=Z,15nm,1.0s,baz=200,slow=1.4,SNR=8.4						
DBIC	Dimbokro	152.33	165		PKPbc	16 45 27.5	+0.7
BNN	Bunyan	152.49	291		PKPbc	16 45 26.9	+0.3
HFS	Hagfors	152.49	348	PKPbc	PKPbc	16 45 25.5	-0.2
	comp=Z,6.9nm,0.7s,baz=211,slow=0.9,SNR=13						
HFS				PKPab	PKPab	16 45 35.2	-0.8
	comp=Z,6.0nm,0.8s,baz=135,slow=0.6,SNR=5.5						
AKASG	Malin Array Be	153.95	319	PKPbc	PKPbc	16 45 29.6	+0.4
	comp=Z,1.3nm,0.7s,baz=61,slow=2.4,SNR=5.1						
AKASG				PKPab	PKPab	16 45 41.4	-1.2
	comp=Z,5.2nm,0.9s,baz=50,slow=3.5,SNR=13						
BRTR	Keskin Array B	154.17	293	PKPbc	PKiKP	16 45 31.5	+1.2
	comp=Z,5.4nm,0.9s,baz=142,slow=3.0,SNR=10						
BRTR				PKPab	PKPab	16 45 42.5	-1.5
	comp=Z,5.6nm,0.9s,baz=133,slow=3.7,SNR=8.4						
KMPD	K-Podol'skiy	156.58	317	P	PKPab	16 45 53.2	-0.6
BURAR	Bucovina Array	157.78	316		PKPab	16 45 58.7	-0.6
EKA	Eskdalemuir Ar	158.03	8	PKPab	PKPab	16 45 59.0	-0.8
	comp=Z,0.2nm,0.4s,baz=320,slow=3.8,SNR=3.6						
TORD	Torodi Ar. Bea	159.55	179	PKP	PKPdf	16 45 29.1	-0.4
	comp=Z,0.6nm,0.8s,baz=299,slow=1.5,SNR=3.9						
TORD				PKPab	PKPab	16 46 05.8	-1.6
	comp=Z,2.8nm,0.9s,baz=178,slow=3.7,SNR=6.3						
CLL	Collm	160.71	339	*e*PKPdf	PKPdf	16 45 36.0	+6.3
CLL				*i* PKPab	PKPab	16 46 11.6	0.0
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	160.80	337	*e*PKPab	PKPab	16 46 12.4	+0.4
BRG				Amp		16 46 13.0	
	comp=Z,4.8nm,0.8s						
GERES	GERESS Array B	162.59	334	PKPab	PKPab	16 46 18.3	-1.8
	comp=Z,1.6nm,0.8s,baz=36,slow=3.4,SNR=9.2						
ESDC	Sonseca Array	172.24	38	PKPab	PKPab	16 47 03.4	+0.5
	comp=Z,0.5nm,0.9s,baz=336,slow=3.3,SNR=4.5						

*NEIC **20** 16:27:23.7±1.6, 10.5S±0.1×161.2E±0.1, h35km±2km, mb4.2/8, Error ellipse: s-maj=24.7km s-min=6.6km az=223.0*
*IDC **20** 16:27:25.3±3.2, 10.69S×161.27E, h51km±24km, mb3.3/4, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=42.8km s-min=17.2km az=60.0*

ISC 20 16:27:25.6±0.7, 10.62S±0.1×161.2E±0.1, h62km, n19, σ1s11/20, mb3.7/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.74	313	P	Pn	16 27 52.1	-1.5
	43nm,0.5s,baz=217,slow=2.6,SNR=86						
HNR				S	Sn	16 28 16.2	+1.4
	232nm,0.8s,baz=223,slow=23,SNR=59						
HNR				LR	LR	16 28 44.9	
	comp=Z,15nm,19.7s,baz=190,slow=44						
HNR	Honiara	1.74	313		Pn	16 27 50.6	-2.9
KOUNC	Koumac, New Ca	10.30	164	Pn	Pn	16 29 50.1	-0.6
DZM	Mont Dzumac	12.43	157	P	Pn	16 30 19.7	-0.1
	1.3nm,0.3s,baz=30,slow=11,SNR=25						
	6.8nm,0.5s						
MARNC	Mare, Loyalty	12.61	150	Pn	Pn	16 30 22.2	-0.1
ONTNC	Ouen Toro	12.65	157	Pn	Pn	16 30 23.0	+0.2
OUENC	Ouen Island, N	12.90	156	Pn	Pn	16 30 26.8	+0.6
CTAO	Charters Tower	17.23	235		Pn	16 31 22.0	-0.2
MSVF	Nonsavu	17.76	115		Pn	16 31 28.1	-0.7
MSVF				IAmb	IAmb	16 31 44.6	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	27.42	247	P	P	16 33 06.7	+0.9
WRA	Warramunga Arr	27.52	247	P	P	16 33 07.6	+1.0
	comp=Z,0.9nm,0.8s,baz=73,slow=9.0,SNR=2.1						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	27.52	247	P	P	16 33 06.5	-0.2
ASAR	Alice Springs	29.09	240	P	P	16 33 20.7	+0.1
	comp=Z,0.2nm,0.7s,baz=67,slow=8.8,SNR=4.0						
	comp=Z,0.2nm,0.7s						
JKA	Kamikawa-asahi	57.05	344	P	P	16 37 04.6	-0.6
JKA				IAmb	IAmb	16 37 15.9	
	comp=Z,7.7nm,1.4s						
SONM	Songino Array	75.76	325	P	P	16 39 07.0	+2.1
	comp=Z,0.4nm,0.5s,baz=132,slow=5.4,SNR=4.8						
	comp=Z,0.4nm,0.5s						
ILSW	Iliamna Southw	79.20	21	P	P	16 39 24.1	+0.3
QSPA	South Pole Qui	79.38	180	P	P	16 39 24.8	0.0
QSPA				IAmb	IAmb	16 39 45.7	
	comp=Z,3.0nm,1.3s						
J17K	VABM Dome	79.80	17	P	P	16 39 26.9	+0.1
J17K				IAmb	IAmb	16 39 29.4	
	comp=Z,4.0nm,1.2s						
MKAR	Makanchi Array	90.21	318	P	P	16 40 19.8	+0.4
	comp=Z,0.3nm,0.7s,baz=96,slow=9.3,SNR=1.8						
	comp=Z,0.3nm,0.7s						

*UPP **20** 17:00:35.9±0.1, 67.07N×20.91E, h0km, ML2.1, Suspected explosion*
*IDC **20** 17:00:37.8±0.9, 67.05N×21.19E, h0km, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=15.9km s-min=6.5km az=111.0*

ISC 20 17:00:36.4±0.9, 67.06N±0.03×20.89E±0.03, h0km, n16, σ0s98/22, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.14	295	P	Pg	17 00 38.9	-0.2
DUNU				S	Sg	17 00 41.0	+0.1
MASU	Masugnsbyn	0.58	47	P	Pg	17 00 46.9	-0.8
MASU				S	Sg	17 00 54.6	-0.6
ERTU	Ertsjaerv	0.72	134	P	Pg	17 00 49.6	-0.7
ERTU				S	Sg	17 00 59.2	-0.4
HARU	Harads	0.90	178	P	Pg	17 00 53.0	-0.7
HARU				S	Sg	17 01 05.4	0.0
RATU	Laukkuluspa	0.92	327	P	Pg	17 00 52.9	-1.1
KUA	Kurravaara	0.92	347	P	Pg	17 00 53.0	-1.1
SALU	Saltoluokta	0.98	290	*e*P	Pg	17 00 54.4	-0.9
SALU	Saltoluokta	0.98	290	P	Pg	17 00 54.3	-0.9
LANU	Lannavaara	1.08	23	*e*P	Pg	17 00 56.3	-0.7
LANU	Lannavaara	1.08	23	P	Pg	17 00 56.1	-1.0
NIKU	Nikkaluokta	1.08	319	P	Pg	17 00 55.8	-1.3
I37NO	I37NO	2.20	338	I	I	17 13 53.7	
	baz=156,slow=318,SNR=3.3						
ARCES	ARCESS Array B	3.02	32	Pn	Pn	17 01 25.7	+0.2
	0.6nm,0.3s,baz=212,slow=13,SNR=56						
ARCES				Sn	Sn	17 02 04.2	+1.9
	1.1nm,0.3s,baz=214,slow=22,SNR=10						
ARCES				Lg	Lg	17 02 10.8	
	0.9nm,0.3s,baz=213,slow=28,SNR=7.0						
	1.4nm,0.2s						
FINES	FINESS Array B	6.07	156	Pn	Pn	17 02 07.9	+0.6
	0.2nm,0.3s,baz=345,slow=12,SNR=8.7						
FINES				Sn	Sn	17 03 17.6	+0.1
	0.4nm,0.3s,baz=346,slow=24,SNR=7.2						
FINES				Lg	Lg	17 03 48.0	
	0.4nm,0.3s,baz=340,slow=25,SNR=5.3						
	0.4nm,0.3s						
NOA	NORSAR Array B	7.38	220	Pn	Pn	17 02 26.6	+1.3
	baz=36,slow=12,SNR=1.8						
	0.5nm,0.8s						
HFS	Hagfors	7.65	208	Pn	Pn	17 02 29.7	+0.7
	0.1nm,0.3s,baz=29,slow=12,SNR=1.9						
HFS				Sn	Sn	17 03 54.8	-1.5
	0.1nm,0.3s,baz=23,slow=27,SNR=1.3						
HFS				Lg	Lg	17 04 35.6	
	0.2nm,0.3s,baz=26,slow=28,SNR=3.0						
	1.9nm,1.0s						

*IDC **20** 17:12:02.0±1.9, 0.31S×125.10E, h0km, mb3.1/3, mbtmp3.1/3, MS2.6/1, Error ellipse: s-maj=205.7km s-min=27.1km az=64.0*

DJA 20 17:12:06.7±0.5, 0°S±7°×12°5E±°, h10km, M3.4/6, MLv3.4/6, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.45	62	P	Pn	17 12 37.8	-8.9
LUWI	Luwuk	2.52	255	P	Pn	17 12 48.0	+0.3
WRA	Warramunga Arr	21.41	156	P	P	17 16 51.9	-3.0
	0.1nm,0.4s,baz=334,slow=10,SNR=1.8						
	0.1nm,0.4s						
ASAR	Alice Springs	24.65	161	P	P	17 17 26.0	-1.8
	0.4nm,0.9s,baz=344,slow=10,SNR=5.3						
	0.4nm,0.9s						
KRVT	Keravat (AS076	27.08	99	LR	LR	17 27 55.5	
	comp=Z,13nm,21.8s,baz=329,slow=35						
MKAR	Makanchi Array	60.09	327	P	P	17 22 10.4	-3.9
	0.3nm,0.5s,baz=132,slow=6.9,SNR=5.8						
	0.3nm,0.5s						

*BJI **20** 17:29:58.9, 6.57N×126.96E, h62km, mB4.7/5, mb4.7/32, Ms4.2/5, Ms7 4.1/7*
*MAN **20** 17:29:58.0, 6.51N×127.13E, h55km, MS4.8*
*NEIC **20** 17:30:02.9±1.5, 6.70N±0.07×126.85E±0.08, h72km±8km, mb4.7/89, Error ellipse: s-maj=11.7km s-min=9.4km az=117.0*
*IDC **20** 17:30:02.5±1.5, 6.75N×127.00E, h67km±13km, mb4.1/22, mbtmp4.4/25, MS3.6/38, Error ellipse: s-maj=16.3km s-min=9.9km az=67.0*
*GFZ **20** 17:30:02.9±0.2, 7°N±2°×12°7E±°, h70km, M4.6/45, mb4.9/45*
*DJA **20** 17:30:02.0±0.6, 7°N±5°×12°7E±°, h61km±5km, M4.8/31, mb4.9/31, mB5.2/17, MLv5.1/9, Mw(mB)4.6/17, MwMwp6.3/1, Mwp6.3/1*

ISC 20 17:30:02.4±0.8, 6.66N±0.03×126.93E±0.05, h67km±7km, n489, σ1s27/437, mb4.6/76, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDOP	Cateel, Davao	1.22	337	*i* P	Pn	17 30 22.0	-1.5
CDOP				*i* S	Sn	17 30 38.4	-1.0
DAV	Davao City (W)	1.40	287	P	Pn	17 30 25.2	-0.7
	3µm,0.5s,baz=249,slow=2.0,SNR=36						
DAV				S	Sn	17 30 46.1	+2.5
	4µm,0.7s,baz=138,slow=20,SNR=4.2						
DAV				LR	LR	17 31 19.2	
	comp=Z,3µm,18.4s,baz=177,slow=53						
DAV	Davao City (W)	1.40	287	P	Pn	17 30 26.3	+0.4
DAV	Davao City (W)	1.40	287	S	Sn	17 30 47.9	+4.3
DAV	Davao City (W)	1.40	287		Pn	17 30 25.3	-0.6
DAV	Davao City (W)	1.40	287	P	Pn	17 30 25.3	-0.6
DAV	Davao City (W)	1.40	287	P	Pn	17 30 25.5	-0.4
DAV	Davao City (W)	1.40	287	P	Pn	17 30 23.0	-2.9
DMPH	Davao City--Mi	1.47	287	*i* P	Pn	17 30 26.7	-0.1
DMPH				*i* S	Sn	17 30 47.2	+1.9
BIPH	Bislig	1.62	340	*e*P	Pn	17 30 27.4	-1.4
BIPH				*e*S	Sn	17 30 47.0	-1.9
KCP	Kidapawan	1.86	281	*i* P	Pn	17 30 31.3	-0.8
GSPH	General Santos	2.04	254	*i* P	Pn	17 30 31.9	-2.8
GSPH				*i* S	Sn	17 30 54.5	-4.8
BUKP	Musuan	2.21	303	*e*P	Pn	17 30 37.0	+0.1
BUKP				*i* S	Sn	17 31 08.1	+4.8
TSSP	Tandag City	2.48	343	*e*P	Pn	17 30 39.8	-0.6
TSSP				*e*S	Sn	17 31 16.4	+6.7
CTBH	Cotabato--PC H	2.72	282	*e*P	Pn	17 30 43.3	-0.4
CGP	Cagayan de Oro	2.84	309	*i* P	Pn	17 30 46.4	+0.9
SGSI	Sangihe	3.26	205	P	Pn	17 30 52.9	+1.7
SGSI	Sangihe	3.26	205	P	Pn	17 30 53.0	+1.9
SCPH	Surigao	3.42	336	*e*P	Pn	17 30 53.0	-0.2
SCPH				*e*S	Sn	17 31 42.8	+10
PAGZ	Pagadian	3.71	289	*i* P	Pn	17 30 58.0	+0.7
DCPH	Dipolog City	4.03	299	*e*P	Pn	17 31 02.8	+1.2
LSIP	Lazi, Siquijor	4.09	307	*i* P	Pn	17 31 03.3	+0.9
TBP	Tagbilaran	4.28	315	*e*P	Pn	17 31 05.5	+0.5
TBP				*i* S	Sn	17 31 51.4	-2.3
IPIL	Ipil	4.46	285	*i* P	Pn	17 31 08.5	+0.9
SNPH	Sibulan	4.53	306	*e*P	Pn	17 31 09.9	+1.4
SNPH				*e*S	Sn	17 32 02.8	+2.9
LLP	Lapu-Lapu	4.67	321	*e*P	Pn	17 31 11.1	+0.7
LLP				*e*S	Sn	17 32 07.4	+4.1
ZCP	Zamboanga City	4.83	274	*e*P	Pn	17 31 13.1	+0.6
ZCP				*es*	Sn	17 32 08.9	+1.8
PLP	Palo	4.88	337	*e*P	Pn	17 31 12.1	-1.1
PLP				*e*S	Sn	17 32 10.7	+2.3
MNI	Manado	5.58	202	P	Pn	17 31 27.1	+4.2
TNTI	Ternate	5.86	176		Pn	17 31 26.5	-0.3
TNTI	Ternate	5.86	176	P	Pn	17 31 28.4	+1.7
	0.4nm1µm80nm,0.7s						
TNTI	Ternate	5.86	176	P	Pn	17 31 28.5	+1.7

GTOI	Gorontalo	7.14	213	P	Pn	17 31 44.2	-0.1
	0.8nm2µm204nm,0.7s						
TOLI2	Tolitoli	8.24	228	S	Sn	17 33 33.7	+2.8
TOLI2	Tolitoli	8.24	228		Pn	17 31 56.5	-2.8
TOLI2	Tolitoli	8.24	228	P	Pn	17 31 57.6	-1.7
GQP	Guinayangan	8.44	329	*e*P	Pn	17 32 03.9	+1.9
MYLDM	Lahad Datu	8.51	261	P	Pn	17 32 04.9	+2.0
MYLDM	Lahad Datu	8.51	261	S	Sn	17 33 39.8	+2.3
MYLDM	Lahad Datu	8.51	261	P	Pn	17 32 05.8	+2.9
	680nm35nm,0.9s						
MYLDM	Lahad Datu	8.51	261	P	Pn	17 32 04.3	+1.4
SWI	Sorong	8.63	150	P	Pn	17 32 04.4	-0.2
SIJI	Sorong	8.64	150	P	Pn	17 32 03.9	-0.9
	28nm,0.4s,baz=331,slow=15,SNR=36						
SIJI				S	Sn	17 33 35.5	-5.3
	11nm,0.2s,baz=281,slow=23,SNR=2.8						
SIJI				LR	LR	17 35 59.2	
	comp=Z,292nm,20.2s,baz=332,slow=41						
SIJI	Sorong	8.64	150	P	Pn	17 32 04.1	-0.7
	870nm30nm,0.4s						
SIJI	Sorong	8.64	150	P	Pn	17 32 03.6	-1.2
PPR	Puerto Princes	8.68	291	*e*P	Pn	17 32 06.8	+1.5
LUWI	Luwuk	8.70	209		Pn	17 32 02.7	-2.8
LUWI	Luwuk	8.70	209	P	Pn	17 32 10.1	+4.6
	2µm144nm,0.7s						
LQP	Lukban	9.11	325	*e*P	Pn	17 32 16.4	+5.1
APSI	Ampana	9.18	215	P	Pn	17 32 11.9	-0.2
TGY	Tagaytay City	9.46	322	LR	LR	17 36 12.8	
	comp=Z,814nm,21.4s,baz=142,slow=39						
NLAI	Namlea	9.83	179	P	Pn	17 32 20.8	-0.2
PCI	Palu	10.32	224	P	Pn	17 32 31.2	+3.5
	30nm,0.8s						
KKM	Kota Kinabalu	10.66	267	P	Pn	17 32 35.4	+2.9
KKM	Kota Kinabalu	10.66	267	P	Pn	17 32 33.4	+0.9
FAKI	Fak Fak	10.90	151	P	Pn	17 32 36.5	+0.9
FAKI	Fak Fak	10.90	151	P	Pn	17 32 35.4	-0.2
BNDI	Bandanaira	11.50	165	P	Pn	17 32 43.3	-0.4
BAKI	Biak	12.03	130	P	Pn	17 32 52.5	+1.4
	890nm69nm,1.0s						
MMSI	Mamuju	12.26	221	P	P	17 33 12.9	+8.8
SRPI	Serui, Papua	12.58	132	P	Pn	17 33 00.2	+1.6
KAPI	Kappang	13.63	212	P	Pn	17 33 13.9	+1.2
	15nm,0.8s,baz=5.2,slow=15,SNR=4.5						
KAPI				LR	LR	17 38 20.6	
	comp=Z,93nm,22.0s,baz=32,slow=36						
KAPI	Kappang	13.63	212	P	Pn	17 33 13.2	+0.6
MMRI	Maumere	15.89	197	P	Pn	17 33 43.1	+1.1
JAY	Jayapura	16.50	123	LR	LR	17 40 38.3	
	comp=Z,110nm,19.5s,baz=342,slow=39						
BATI	Baumata	17.06	191	P	P	17 33 57.4	-0.2
	18nm,0.4s,baz=273,slow=21,SNR=2.4						
BATI	Baumata	17.06	191	P	P	17 34 14.8	+17
BATI	Baumata	17.06	191	P	Pn	17 33 56.8	0.0
WBSI	Waikabubak, Su	17.84	205	P	P	17 34 05.7	-0.5
PLAI	Plampang	17.88	211	P	Pn	17 34 08.1	+1.4
PLAI	Plampang	17.88	211	P	P	17 34 06.0	-0.5
DLV	Lat	18.93	287	P	Pn	17 34 19.7	+0.1
GUMO	Guam	18.95	67	LR	LR	17 39 28.2	
	comp=Z,97nm,21.6s,baz=235,slow=30						
DNP	Denpasar	19.19	218	P	P	17 34 20.5	-0.4
IGBI	Denpasar	19.34	218	P	P	17 34 22.1	-0.5
JAGI	Jajag, Banyuwa	19.70	220	P	Pn	17 34 28.1	-0.3
MTN	Manton Dam	19.82	168		Pn	17 34 29.5	-0.3
MTN	Manton Dam	19.82	168	P	P	17 34 28.6	+0.9
JOW	Kunigami	20.11	4	LR	LR	17 41 17.7	
	comp=Z,90nm,21.6s,baz=184,slow=34						
JOW	Kunigami	20.11	4	P	Pn	17 34 32.2	-1.0
JOW	Kunigami	20.11	4	S	S	17 38 14.7	+1.6
JOW	Kunigami	20.11	4		P	17 34 30.4	-0.4
JOW				IAmb	IAmb	17 35 07.5	
	comp=Z,40nm,1.4s						
JOW	Kunigami	20.11	4	P	P	17 34 30.6	-0.1
QIZ	Qiongzhong	20.68	308	P	P	17 34 35.3	-1.7
QIZ				S	S	17 38 22.8	-1.6
QIZ				L	L		
	comp=Z,220nm,12.4s						
QIZ				L	L		
	comp=Z,270nm,16.3s						
QIZ				L	L		
	comp=Z,350nm,18.6s						
KNRA	Kununurra	22.26	175		P	17 34 54.0	0.0
KNRA				IAmb	IAmb	17 35 03.8	
	comp=Z,31nm,0.8s						
TPRI	Tanjung Pinang	23.06	257	P	P	17 35 02.7	+0.3
LEM	Lembang	23.46	236	LR	LR	17 45 58.6	
	comp=Z,198nm,19.6s,baz=138,slow=41						
LEM	Lembang	23.46	236	P	P	17 35 06.5	+0.1
MYKOM	Kota Tinggi	23.51	259		P	17 35 04.6	-2.1
MYKOM	Kota Tinggi	23.51	259	P	P	17 35 07.7	+1.0
	comp=Z,19nm,1.0s						
MYKOM

MJAR LR LR 17 50 31.6
comp=Z,92nm,19.0s,baz=208,slow=39
comp=Z,7.0nm,0.7s
MJAR Matsushiro Arr 31.48 18 P 17 36 16.0 -1.9
MAJO Matsushiro 31.49 18 P P 17 36 17.7 -0.2
MAJO Matsushiro 31.49 18 P P 17 36 16.2 -1.7
MAJO IAmb IAmb 17 36 19.2
comp=Z,9.7nm,0.7s
MAJO Matsushiro 31.49 18 P P 17 36 17.7 -0.2
MJB9 Matsu-Tunnel 31.49 18 P P 17 36 16.2 -1.7
MJB9 IAmb IAmb 17 36 20.2
comp=Z,9.4nm,0.7s
CD2 Chengdu 32.46 321 P P 17 36 26.0 -0.5
CD2 S S **17 41 35.6 -1.1**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 L L
comp=Z,350nm,12.1s
CD2 L L
comp=Z,240nm,11.4s
CD2 L L
comp=Z,230nm,12.7s
HNS HongShan 32.56 342 ||P P 17 36 25.4 -1.8
HNS pmax pmax
comp=Z,12nm,0.8s
CTA Charters Tower 32.68 145 LR LR 17 51 57.7
comp=Z,97nm,18.3s,baz=322,slow=40
MEEK Meekatharra 34.06 193 P P 17 36 41.2 +0.7
BJI2 Beijing 34.59 345 P P 17 36 44.4 -0.5
BJI2 pmax pmax
comp=Z,4.0nm,0.4s
LZDM Lanzhou Array 36.11 327 LR LR 17 52 38.3
comp=Z,128nm,21.1s,baz=350,slow=38
LZH Lanzhou 36.12 327 *e*P P 17 36 52.3 -6.0
LZH sP sP 17 37 20.9 0.0
LZH S S 17 42 16.3 -17
LZH pmax pmax
comp=Z,18nm,1.0s
LZH LR LR
comp=N,220nm,16.1s
LZH LR LR
comp=E,190nm,17.2s
LZH LR LR
comp=Z,300nm,18.0s
HHC Hu-ho-hao-te 36.71 340 *e*P P 17 37 03.3 +0.1
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,56nm,4.4s
USRK Ussuriysk Ar. 37.66 6 P P 17 37 10.2 -0.8
comp=Z,3.6nm,0.7s,baz=189,slow=7.0,SNR=7.6
USRK LR LR 17 55 13.9
comp=Z,57nm,19.1s,baz=180,slow=40
comp=Z,3.6nm,0.7s
ERM Erimo 38.05 20 P P 17 37 15.7 +1.4
BLDU Ballidu 38.33 194 P P 17 37 17.8 +1.0
KLBR Kellerberrin 39.03 192 P P 17 37 23.8 +1.1
MUN Mundaring 39.76 194 P P 17 37 30.0 +1.3
ASAJ Asahikawa 39.76 18 LR LR 17 52 41.3
comp=Z,92nm,21.7s,baz=186,slow=34
JKA Kamikawa-asahi 39.76 18 P 17 37 28.8 +0.2
JKA IAmb IAmb 17 37 31.5
comp=Z,9.4nm,0.8s
JKA Kamikawa-asahi 39.76 18 P P 17 37 29.3 +0.7
BBOO Buckleboo 40.20 168 P P 17 37 33.6 +1.2
NWAO Narrogin (SRO) 40.43 193 P P 17 37 35.9 +1.6
NWAO Narrogin (SRO) 40.43 193 P 17 37 35.4 +1.1
H11S3 WAKE ISLAND Hy 40.45 69 T T 18 21 55.3
baz=253,slow=77,SNR=9.2
H11S1 WAKE ISLAND Hy 40.47 69 T T 18 21 50.1
baz=253,slow=77,SNR=2.9
H11S2 WAKE ISLAND Hy 40.47 69 T T 18 21 53.2
baz=253,slow=77,SNR=9.7
STKA Stephens Creek 40.80 161 P P 17 37 38.2 +0.9
comp=Z,3.8nm,0.5s,baz=332,slow=8.2,SNR=10
STKA LR LR 17 57 25.5
comp=Z,59nm,19.4s,baz=18,slow=40
comp=Z,3.8nm,0.5s
STKA Stephens Creek 40.80 161 P P 17 37 38.3 +0.9
GTA2 Gaotai 40.81 327 P P 17 37 37.6 0.0
GTA2 pP pP 17 37 53.8 +0.7
GTA2 pmax pmax
comp=Z,9.0nm,0.7s
GTA2 L L
comp=Z,130nm,15.1s
GTA2 L L
comp=Z,140nm,15.5s
GTA2 L L
comp=Z,320nm,18.9s
H11N1 WAKE ISLAND Hy 40.90 68 T T 18 22 12.7
baz=264,slow=76,SNR=11
H11N2 WAKE ISLAND Hy 40.91 68 T T 18 22 08.0
baz=264,slow=76,SNR=7.6
H11N3 WAKE ISLAND Hy 40.92 68 T T 18 22 07.8
baz=264,slow=76,SNR=11
HTT Hallett 41.46 165 P P 17 37 45.0 +2.2
CMSA Cobar Meteorol 42.00 156 P P 17 37 48.6 +1.4
GC1S Gold Coast 1 S 43.09 145 P P 17 37 57.1 +1.0
HEH HeiHe 43.45 0 *e*P P 17 37 58.1 -0.6
EVN Everest 43.47 304 P 17 37 57.1 -2.8
EVN IAmb IAmb 17 38 18.4
comp=Z,7.2nm,0.7s
SONM Songino Array 44.62 340 P P 17 38 07.1 -1.1
comp=Z,0.6nm,0.5s,baz=157,slow=6.7,SNR=5.2
SONM LR LR 17 57 41.4
comp=Z,60nm,19.8s,baz=178,slow=37
comp=Z,0.6nm,0.5s
TLY Talaya 48.84 341 LR LR 18 00 06.4
comp=Z,34nm,21.6s,baz=161,slow=37
WMQ Urumqi 50.48 324 *e*P P 17 38 54.4 +0.7
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ L L
comp=Z,93nm,24.1s
PETK Petropavlovsk- 52.67 23 P P 17 39 10.4 +0.7
comp=Z,6.9nm,0.7s,baz=213,slow=4.7,SNR=14
PETK LR LR 18 03 34.2
comp=Z,27nm,18.7s,baz=235,slow=38
comp=Z,6.9nm,0.7s
PETK Petropavlovsk- 52.67 23 P P 17 39 09.4 -0.4
PET Petropavlovsk 52.98 23 P P 17 39 13.7 +1.7
MKAR Makanchi Array 55.30 324 P P 17 39 29.1 -0.1
comp=Z,9.2nm,0.5s,baz=122,slow=8.1,SNR=110
comp=Z,9.2nm,0.5s
MKAR Makanchi Array 55.30 324 P 17 39 27.6 -1.5
YAK Yakutsk 55.30 2 LR LR 18 08 04.8
comp=Z,20nm,18.1s,baz=192,slow=41
PDGK Podgornoye 55.32 319 P P 17 39 28.1 -1.3
MAKZ Makanchi 55.49 324 P 17 39 29.7 -0.8
MAKZ Makanchi 55.49 324 P P 17 39 29.3 -1.2
PRZ Przheval'sk 55.66 318 P P 17 39 33.1 +1.1
TARG Taragay, Kyrgy 55.74 317 IAmb IAmb 17 39 52.2
comp=Z,4.8nm,0.8s
TARG Taragay, Kyrgy 55.74 317 P P 17 39 33.3 +0.4
KSH2 Kashi 56.31 313 P P 17 39 36.8 +0.2
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
KDJ Kajisay 56.33 317 P P 17 39 37.3 +0.5
NIL Nilore 56.33 306 P 17 39 35.9 -0.9
NIL Nilore 56.33 306 P P 17 39 36.8 0.0
ZALV Zalesovo Beam 58.10 332 P P 17 39 47.6 -1.2
comp=Z,2.1nm,0.4s,baz=131,slow=6.6,SNR=3.9
ZALV LR LR 18 06 08.2
comp=Z,51nm,19.7s,baz=128,slow=37
comp=Z,2.1nm,0.4s
AAK Ala-Archa 58.36 317 LR LR 18 07 08.3
comp=Z,75nm,18.5s,baz=94,slow=38
AAK Ala-Archa 58.36 317 P P 17 39 49.6 -1.4
AAK IAmb IAmb 17 39 52.4
comp=Z,2.8nm,0.7s
DRK Karamyk 59.17 312 P P 17 39 57.5 +0.6
KURK Kurchatov 59.41 327 P 17 39 56.6 -1.3
KURK Kurchatov 59.41 327 P P 17 39 57.8 -0.2
KURBB Kurchatov Arra 59.41 326 P P 17 39 57.5 -0.5
comp=Z,7.6nm,0.7s,baz=128,slow=6.2,SNR=42
comp=Z,7.6nm,0.7s
ARK Arkit 59.81 315 P P 17 40 01.4 +0.4
BTK Batken 60.07 313 IAmb IAmb 17 40 03.6
comp=Z,5.2nm,0.8s
BTK Batken 60.07 313 P P 17 40 02.6 -0.2
GAR Garm 60.12 311 P P 17 40 03.0 -0.2
KK31 Karatay Array 61.26 316 P 17 40 09.2 -1.6
KKAR Karatay Array 61.26 316 P 17 40 09.2 -1.6
AFI Afiamalu 64.17 109 LR LR 18 05 43.4
comp=Z,55nm,18.8s,baz=356,slow=33
KIWB Kanaga Island 64.18 35 P 17 40 29.8 -0.1
KIWB IAmb IAmb 17 40 32.2
comp=Z,8.3nm,0.8s
ADK Adak 64.46 35 P P 17 40 33.6 +1.8
GSTR Great Sitkin T 64.90 35 P P 17 40 34.3 -0.4
TIXI Tiksi 64.93 1 LR LR 18 10 03.3
comp=Z,37nm,20.7s,baz=196,slow=37
BVAR Borovoye Array 65.00 326 P P 17 40 35.0 -0.3
comp=Z,12nm,0.6s,baz=129,slow=8.1,SNR=64
comp=Z,12nm,0.6s
BORK Borovoye 65.05 326 P 17 40 35.1 -0.5
ATKA Atka Island 66.00 35 P P 17 40 42.9 +1.2
ATKA Atka Island 66.00 35 P 17 40 42.4 +0.7
NRIK Noril'sk 67.65 346 LR LR 18 14 49.0
comp=Z,53nm,18.0s,baz=167,slow=40
SPIA Saint Paul Isl 69.90 31 P P 17 41 06.6 +0.5
baz=250
AB31 Akbulak array 70.03 320 IAmb IAmb 17 41 07.5
comp=Z,6.3nm,0.7s
ABKAR Akbulak array 70.03 320 P 17 41 06.0 -1.1
UNV Unalaska Valle 70.92 35 P P 17 41 12.4 0.0
baz=255
AKTO Aktyubinsk 71.51 321 LR LR 18 15 11.8
comp=Z,112nm,20.3s,baz=248,slow=38
GAMB Gambell 71.66 24 P P 17 41 17.0 +0.3
baz=247
ARTI Arti 72.67 327 LR LR 18 15 02.6
comp=Z,45nm,19.1s,baz=126,slow=37
ARTI Arti 72.67 327 P 17 41 21.2 -1.7
TNA Tin City 73.84 23 P P 17 41 29.1 -0.4
baz=250
K13K Kusilvak Mount 74.08 27 P P 17 41 31.1 0.0
baz=254
M13K Dall Lake 74.29 29 P P 17 41 32.8 +0.6
baz=256
F14K Arctic Creek 74.44 23 P P 17 41 33.0 -0.1
baz=251
ANM Nome 74.54 24 P P 17 41 34.2 +0.6
baz=253
SDPT Sand Point 74.68 34 P P 17 41 35.5 +0.8
baz=259
J14K Nanvaranak Lak 74.80 27 P P 17 41 36.0 +0.8
baz=255
L14K Kuka Creek 74.84 28 P P 17 41 36.4 +1.0
baz=256,SNR=6.1
N14K Kuskokwak Cree 74.98 30 P P 17 41 37.4 +1.1
baz=257
M14K Bethel 75.04 29 P P 17 41 37.9 +1.3
baz=257,SNR=5.0
O14K Tigyukauivet M 75.04 30 P P 17 41 37.5 +0.8
baz=258
CHNA Chernabura Isl 75.09 35 P P 17 41 37.1 +0.1
baz=260
F15K North Star Dit 75.17 23 P P 17 41 38.0 +0.7
baz=253
G15K Niukluk 75.21 24 P P 17 41 38.1 +0.6
baz=254
S14K Fog Glacier 75.36 34 P P 17 41 39.4 +0.6
baz=260
L15K Ungalak Mounta 75.47 28 P P 17 41 40.3 +1.2
baz=257
K15K Wolf Creek Mou 75.59 27 P P 17 41 40.8 +0.9
baz=257
M15K Kasigluk River 75.63 29 P P 17 41 41.3 +1.3
baz=258,SNR=6.0
O15K Ungalikthiuk R 75.75 31 P P 17 41 41.7 +0.9
baz=259
N15K Kwethluk River 75.81 30 IAmb IAmb 17 41 43.8
comp=Z,9.2nm,0.9s
N15K Kwethluk River 75.81 30 P P 17 41 42.1 +1.0
baz=258
H16K Elim 75.86 25 P P 17 41 42.0 +0.8
baz=256
CHGN Chignik 75.99 34 P P 17 41 43.3 +1.1
baz=261
G16K Koyuk River 76.00 24 P P 17 41 43.2 +1.1
baz=255
J16K Anvik River 76.24 26 P P 17 41 44.9 +1.4
baz=257
I17K Unalakleet 76.33 26 P P 17 41 45.6 +1.7
baz=257
D17K Noatak River 76.34 22 P P 17 41 45.2 +1.2
baz=254
L16K Owhat River 76.42 28 P P 17 41 45.5 +1.0
baz=259
RDOG Red Dog Mine 76.50 21 P P 17 41 46.1 +1.2
baz=254
N16K Nishlik Lake 76.52 29 P P 17 41 46.1 +1.0
baz=260
C17K DeLong Mountai 76.53 21 P P 17 41 46.1 +1.1
baz=254
M16K Timber Creek 76.53 29 P P 17 41 46.6 +1.5
baz=259
E17K Hotham Inlet 76.64 22 P P 17 41 47.2 +1.6
baz=255
P16K Nushagak River 76.66 31 P P 17 41 46.3 +0.5
baz=261
O16K Kokwok River B 76.70 30 P P 17 41 46.9 +0.8
baz=260
F17K Baldwin Pennin 76.70 23 P P 17 41 46.4 +0.4
baz=256
G17K Kiwalik Mounta 76.72 24 P P 17 41 46.9 +0.7
baz=257
H17K Granite Mounta 76.89 25 P P 17 41 48.4 +1.3
baz=258
J17K VABM Dome 76.93 26 P P 17 41 48.5 +1.2
baz=259
L17K Donlin 77.05 28 P P 17 41 49.3 +1.2
baz=260
K17K Iditarod 77.15 27 IAmb IAmb 17 41 51.3
comp=Z,5.8nm,0.8s
K17K Iditarod 77.15 27 P P 17 41 49.5 +0.9
baz=260
E18K Tukpahlearik C 77.19 22 IAmb IAmb 17 41 50.9
comp=Z,5.5nm,0.7s
E18K Tukpahlearik C 77.19 22 P P 17 41 49.9 +1.2
baz=256
O17K Koliganek Bris 77.23 30 P P 17 41 50.5 +1.5
baz=261
C18K Utukok River 77.27 21 P P 17 41 49.8 +0.5
baz=256
R17L Mt. Peulik Vol 77.30 32 P P 17 41 50.6 +1.0
baz=262
N17K Nushagak Hills 77.30 29 P P 17 41 50.7 +1.2
baz=261
M17K Holitna River 77.32 29 P P 17 41 50.6 +1.0
baz=261
F18K Selawik 77.36 23 P P 17 41 50.8 +1.1
baz=257
P17K Kvichak River 77.47 31 P P 17 41 51.7 +1.2
baz=262
H18K Honnosa River 77.58 25 P P 17 41 52.0 +1.0
baz=259
G18K Tagagawik 77.61 24 P P 17 41 52.3 +1.1
baz=258
Q17K Contact Creek 77.63 32 P P 17 41 51.7 +0.1
baz=263
A19K Wainwright 77.71 19 P P 17 41 52.3 +0.7
baz=255
L18K Granite Mounta 77.80 28 P P 17 41 53.2 +0.9
baz=261
KIRV Kirov 77.84 328 LR LR 18 19 55.7
comp=Z,38nm,20.2s,baz=115,slow=38
C19K Lookout Ridge 77.95 21 IAmb IAmb 17 41 57.4
comp=Z,8.0nm,0.8s
C19K Lookout Ridge 77.95 21 P P 17 41 54.3 +1.2
baz=257
N18K Kilae Creek 77.95 29 P P 17 41 54.0 +0.8
baz=262
J18K Inako River 77.99 27 P P 17 41 54.4 +1.1
baz=261
M18K Stony River 78.10 29 P P 17 41 55.0 +1.1
baz=262
P18K Big Mountain, 78.11 31 P P 17 41 54.7 +0.6
baz=263
GCSA Galena City Sc 78.13 25 P P 17 41 54.7 +0.7
baz=260
Q18K Katmai Hardscr 78.14 32 P P 17 41 55.5 +1.1
baz=263
F19K Shaleruckik Mo 78.14 23 P P 17 41 54.9 +0.8
baz=259
O18K Koktuh Hills 78.18 30 P P 17 41 55.3 +0.8
baz=263
G19K Purcell Mounta 78.29 24 P P 17 41 55.8 +0.9
baz=260
D19K Kuna River 78.34 21 P P 17 41 56.0 +0.8
baz=258
SII Sitkinak Islan 78.35 34 P P 17 41 56.1 +0.6
baz=264
H19K Roundabout Mou 78.44 24 P P 17 41 56.7 +1.1
baz=261
E19K Redstone River 78.47 22 P P 17 41 56.7 +0.8
baz=260
J19K Poorman 78.55 26 P P 17 41 57.0 +0.6
baz=262
L19K White Mountain 78.65 28 P P 17 41 57.5 +0.5
baz=263
N19K Bonanza Creek 78.66 29 P P 17 41 58.0 +0.8
baz=263
OHAK Old Harbor 78.91 33 P P 17 41 59.9 +1.5
OHAK Old Harbor 78.91 33 P P 17 41 59.0 +0.6
baz=265
D20K Etivluk River 78.92 21 P P 17 41 59.6 +1.2
baz=260
B20K Meade River 78.97 20 P P 17 41 59.1 +0.5
baz=259
F20K Avaraart Lake 78.97 23 P P 17 41 59.2 +0.6
baz=261
E20K Nigu River 79.00 22 P P 17 41 59.8 +0.9
baz=260
H20K Anotleneega Mo 79.08 25 P P 17 41 59.6 +0.3
baz=262
K20K Telida 79.15 27 P P 17 42 00.9 +1.2
baz=263
I20K Naaghedeneel 79.16 25 P P 17 42 00.3 +0.7
baz=263
P19K Oil Pt 79.16 31 P P 17 42 00.1 +0.3
baz=265
J20K Nowinta River 79.22 26 P P 17 42 00.8 +0.7
baz=263
KDAK Kodiak Island 79.33 33 LR LR 18 11 51.8
comp=Z,37nm,21.1s,baz=233,slow=32
KDAK Kodiak Island 79.33 33 P P 17 42 02.3 +1.6
baz=266
M20K Styx River 79.42 28 P P 17 42 02.7 +1.4
baz=264
O20K Slope Mountain 79.50 30 P P 17 42 03.0 +1.3
baz=265
RAYN Ar Rayn 79.53 293 P 17 42 01.4 -1.2
RAYN IAmb IAmb 17 42 03.2
comp=Z,7.8nm,0.8s
RAYN Ar Rayn 79.53 293 P P 17 42 01.6 -1.0
C21K Knifeblade Rid 79.65 21 P P 17 42 03.7 +1.4
baz=262
G21K Allakaket 79.77 24 P P 17 42 04.4 +1.4
baz=263
B21K Ikpikpuk River 79.78 20 IAmb IAmb 17 42 05.3
comp=Z,6.8nm,0.7s
B21K Ikpikpuk River 79.78 20 P P 17 42 04.1 +1.2
baz=262
SPCR Spurr Chakacha 79.80 29 P P 17 42 04.4 +1.0
baz=265
E21K Killik River 79.84 22 P P 17 42 05.1 +1.7
baz=262
F21K Alatna River 79.87 23 P P 17 42 04.9 +1.4
baz=263
PPLA Purkeypile 79.95 27 P P 17 42 05.3 +1.1
baz=265
H21K Melozitna Rive 79.96 25 P P 17 42 05.4 +1.4
baz=264
HOM Homer 79.96 31 P P 17 42 05.0 +0.9
baz=266
CHUM Lake Minchumin 79.99 26 P P 17 42 05.1 +1.0
baz=265
CAST Castle Rocks 80.05 27 IAmb IAmb 17 42 07.2
comp=Z,6.4nm,0.9s
CAST Castle Rocks 80.05 27 P P 17 42 04.9 +0.3
baz=265,SNR=5.6
SKT Skwentna 80.18 28 P P 17 42 06.1 +0.8
baz=266
I21K Tanana 80.25 25 IAmb IAmb 17 42 08.2
comp=Z,6.5nm,0.9s
I21K Tanana 80.25 25 P P 17 42 06.4 +0.8
baz=265,SNR=6.8
CAPN Captain Cook N 80.28 30 P P 17 42 07.1 +1.3
baz=266
B22K Teshekpuk Lake 80.29 20 P P 17 42 06.7 +1.0
baz=263
F22K John River 80.40 23 P P 17 42 07.2 +0.8
baz=264
BRSE Bradley Lake S 80.42 31 P P 17 42 07.4 +0.7
baz=267
H22K Ishtalitna Cre 80.57 24 P P 17 42 08.1 +0.8
baz=265,SNR=5.3
L22K Petersville 80.58 28 P P 17 42 08.4 +0.9
baz=266,SNR=8.7
E22K Anaktuvuk Pass 80.60 22 P P 17 42 08.5 +1.0
baz=264
G22K Bettles 80.61 23 P P 17 42 09.0 +1.5
baz=265
MLY Manley 80.77 25 IAmb IAmb 17 42 10.7
comp=Z,5.7nm,0.8s
MLY Manley 80.77 25 P P 17 42 09.2 +0.7
baz=266,SNR=9.7
TRF Thorofare Moun 80.86 27 P P 17 42 09.9 +0.8
baz=267
O22K Cooper Landing 80.97 30 P P 17 42 10.7 +1.2
baz=268
RC01 Rabbit Creek A 80.99 29 P P 17 42 10.1 +0.5
baz=268
SEW Seward 81.09 30 P P 17 42 11.1 +1.0
baz=268
D23K Nanushuk River 81.09 21 IAmb IAmb 17 42 12.1
comp=Z,9.3nm,1.4s
D23K Nanushuk River 81.09 21 P P 17 42 10.6 +0.6
baz=265,SNR=5.3
GEVA Gevas 81.11 308 IAmb IAmb 17 42 12.4
comp=Z,5.5nm,0.7s
KBZ Khabaz 81.13 313 LR LR 18 22 18.2
comp=Z,41nm,20.9s,baz=57,slow=39
COLD Coldfoot 81.14 23 IAmb IAmb 17 42 14.1
comp=Z,5.3nm,0.6s
COLD Coldfoot 81.14 23 P P 17 42 11.4 +1.0
baz=266,SNR=10.0
G23K Bananza Creek 81.17 24 P P 17 42 11.2 +0.6
baz=266,SNR=7.1
C23K Itkillik River 81.19 20 IAmb IAmb 17 42 12.8
comp=Z,7.4nm,0.7s
C23K Itkillik River 81.19 20 P P 17 42 11.1 +0.6
baz=265
PMR Palmer 81.30 29 P P 17 42 12.0 +0.8
baz=268
H23K Yukon River 81.31 24 P P 17 42 12.9 +1.5
baz=267
I23K Minto, Yukon-K 81.36 25 P P 17 42 12.6 +1.2
baz=267,SNR=12
E23K Chandalar 81.42 22 P P 17 42 12.8 +0.9
baz=266,SNR=5.8
NEA2 Nenana 81.45 26 IAmb IAmb 17 42 14.3
comp=Z,5.5nm,0.9s
NEA2 Nenana 81.45 26 P P 17 42 12.3 +0.3
baz=268
TOLK Toolik Lake Re 81.47 22 P P 17 42 13.1 +1.0
baz=266,SNR=6.3
MCK McKinley 81.47 27 P P 17 42 12.9 +0.7
baz=268,SNR=5.1
WAT1 Susitna Watana 81.62 28 P P 17 42 13.6 +0.6
baz=268
KNK Knik Glacier 81.62 29 P P 17 42 13.8 +0.8
baz=269
PWL Port Wells 81.66 30 P P 17 42 14.2 +0.9
baz=269
SML Sawmill 81.69 29 P P 17 42 14.2 +0.8
baz=269
D24K Happy Valley 81.77 21 P P 17 42 14.7 +1.0
baz=267,SNR=8.0
E24K Your Creek 81.84 22 P P 17 42 15.5 +1.4
baz=268
WRH Wood River Hil 81.87 26 IAmb IAmb 17 42 15.8
comp=Z,20nm,1.4s
M23K Glacier View 81.98 29 P P 17 42 16.2 +1.4
baz=269
WAT6 Susitna Watana 81.98 28 P P 17 42 15.8 +0.7
baz=269
H24K Noodor Dome 82.00 24 IAmb IAmb 17 42 18.2
comp=Z,6.3nm,0.8s
H24K Noodor Dome 82.00 24 P P 17 42 16.0 +1.0
baz=268,SNR=12
F24K Squaw Lake 82.05 23 P P 17 42 16.3 +1.2
baz=268,SNR=6.6
P23K Montague Islan 82.11 30 P P 17 42 16.7 +1.2
baz=270
DHY Denali Highway 82.16 27 IAmb IAmb 17 42 45.7
comp=Z,1.1nm,1.5s
DHY Denali Highway 82.16 27 P P 17 42 17.1 +1.1
baz=269
SCM Sheep Creek Mo 82.17 29 P P 17 42 16.8 +0.8

	baz=270						
POKR	**Poker Plat Res**	**82.17**	**25**	P	**P**	**17 42 17.0**	**+1.2**
	baz=269						
G24K	**Hadweenzic Riv**	**82.19**	**24**	IAmb	IAmb	17 42 19.4	
	comp=Z,5.7nm,0.7s						
G24K	**Hadweenzic Riv**	**82.19**	**24**	P	**P**	**17 42 16.6**	**+0.7**
	baz=269,SNR=8.4						
GLI	**Glacier Island**	**82.27**	**30**	P	**P**	**17 42 17.1**	**+0.7**
	baz=270						
HDA	**Harding Lake**	**82.36**	**26**	IAmb	IAmb	17 42 18.2	
	comp=Z,9.1nm,0.8s						
HDA	**Harding Lake**	**82.36**	**26**	P	**P**	**17 42 17.7**	**+0.8**
	baz=270,SNR=8.3						
IL31		**82.39**	**26**	IAmb	IAmb	17 42 18.2	
	comp=Z,4.0nm,0.7s						
ILAR	**Eielson Array**	**82.39**	**26**	P	**P**	**17 42 16.6**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=239,slow=5.2,SNR=39						
	comp=Z,3.2nm,0.6s						
D25K	**Kavik River**	**82.65**	**21**	P	**P**	**17 42 18.6**	**+0.4**
	baz=269						
M24K	**Tolsona, Glenn**	**82.71**	**28**	P	**P**	**17 42 19.5**	**+0.7**
	baz=270						
G25K	**Bearman Lake**	**82.73**	**24**	P	**P**	**17 42 19.7**	**+1.0**
	baz=270						
KLU	**Klutina**	**82.84**	**29**	P	**P**	**17 42 20.7**	**+1.3**
	baz=271						
K24K	**Donnelly Dome**	**82.88**	**27**	P	**P**	**17 42 20.8**	**+1.2**
	baz=271						
F25K	**Christian Rive**	**82.91**	**23**	P	**P**	**17 42 20.6**	**+0.9**
	baz=270						
EYAK	**Cordova Ski Ar**	**82.93**	**30**	P	**P**	**17 42 20.8**	**+0.9**
	baz=271						
E25K	**Arctic Village**	**82.94**	**22**	P	**P**	**17 42 20.8**	**+1.1**
	baz=270						
PRP	**Porcupine Dome**	**82.97**	**25**	P	**P**	**17 42 20.7**	**+0.5**
	baz=271						
PAX	**Paxson**	**83.03**	**27**	P	**P**	**17 42 21.1**	**+0.7**
	baz=271						
J25K	**Salcha River,**	**83.05**	**26**	P	**P**	**17 42 21.3**	**+0.8**
	baz=271,SNR=7.3						
HARP	**HAARP**	**83.18**	**28**	P	**P**	**17 42 22.5**	**+1.3**
	baz=271						
RIDG	**Independent Ri**	**83.29**	**27**	IAmb	IAmb	17 42 23.2	
	comp=Z,6.0nm,0.6s						
RIDG	**Independent Ri**	**83.29**	**27**	P	**P**	**17 42 22.6**	**+0.8**
	baz=272						
N25K	**Chitina, Valde**	**83.47**	**29**	P	**P**	**17 42 24.0**	**+1.3**
	baz=272						
F26K	**Sheenjek River**	**83.48**	**23**	P	**P**	**17 42 23.7**	**+1.1**
	baz=272						
BMRM	**Bremner River**	**83.48**	**29**	P	**P**	**17 42 24.0**	**+1.3**
	baz=272						
C27K	**Jago River**	**83.59**	**21**	P	**P**	**17 42 23.8**	**+0.7**
	baz=272						
G26K	**Porcupine Rive**	**83.64**	**23**	IAmb	IAmb	17 42 26.6	
	comp=Z,4.8nm,0.9s						
G26K	**Porcupine Rive**	**83.64**	**23**	P	**P**	**17 42 24.7**	**+1.3**
	baz=272						
SCRK	**Sand Creek**	**83.67**	**26**	P	**P**	**17 42 24.9**	**+1.2**
	baz=272						
MENT	**Mentasta**	**83.83**	**27**	IAmb	IAmb	17 42 26.9	
	comp=Z,7.6nm,0.7s						
GLB	**Gilahina Butte**	**83.85**	**29**	IAmb	IAmb	17 42 27.1	
	comp=Z,11nm,1.0s						
L26K	**Log Cabin Wild**	**83.99**	**27**	P	**P**	**17 42 26.7**	**+1.4**
	baz=273						
M26K	**Nabesna, AK**	**84.19**	**28**	P	**P**	**17 42 27.6**	**+1.2**
	baz=273						
MCARA	**McCarthy VSAT**	**84.23**	**29**	P	**P**	**17 42 27.7**	**+1.2**
	baz=273						
CRQE	**Cirque**	**84.23**	**30**	P	**P**	**17 42 28.3**	**+1.6**
	baz=273						
E27K	**Coleen River**	**84.42**	**22**	IAmb	IAmb	17 42 30.2	
	comp=Z,7.3nm,0.8s						
E27K	**Coleen River**	**84.42**	**22**	P	**P**	**17 42 28.9**	**+1.6**
	baz=274,SNR=7.2						
G27K	**Doyon Strip**	**84.49**	**23**	P	**P**	**17 42 28.9**	**+1.2**
	baz=274,SNR=6.4						
D27M	**Malcolm River**	**84.58**	**21**	P	**P**	**17 42 29.1**	**+1.0**
	baz=274						
H27K	**Steamboat Moun**	**84.58**	**24**	IAmb	IAmb	17 42 31.4	
	comp=Z,7.0nm,0.8s						
H27K	**Steamboat Moun**	**84.58**	**24**	P	**P**	**17 42 29.8**	**+1.5**
	baz=274,SNR=11						
I27K	**Kandik River**	**84.59**	**25**	P	**P**	**17 42 29.0**	**+0.7**
	baz=274,SNR=25						
L27K	**Beaver Creek,**	**84.68**	**27**	IAmb	IAmb	17 42 31.6	
	comp=Z,4.3nm,0.8s						
L27K	**Beaver Creek,**	**84.68**	**27**	P	**P**	**17 42 29.8**	**+1.0**
	baz=274						
M27K	**Edge Creek, AK**	**84.71**	**28**	P	**P**	**17 42 30.4**	**+1.4**
	baz=274						
F28M	**Old Crow**	**85.12**	**23**	P	**P**	**17 42 32.1**	**+1.2**
	baz=276,SNR=6.9						
E28M	**Babbage River**	**85.15**	**22**	IAmb	IAmb	17 42 33.6	
	comp=Z,7.7nm,1.0s						
E28M	**Babbage River**	**85.15**	**22**	P	**P**	**17 42 32.1**	**+1.1**
	baz=276						
BVCY	**Beaver Creek**	**85.18**	**28**	P	**P**	**17 42 32.4**	**+1.1**
	baz=275						
I28M	**Miner Creek**	**85.30**	**25**	P	**P**	**17 42 32.8**	**+0.8**
	baz=276,SNR=22						
YUK3	**Moose Creek**	**85.42**	**28**	P	**P**	**17 42 33.3**	**+0.5**
	baz=276						
O28M	**Mount Upton**	**85.65**	**29**	P	**P**	**17 42 34.2**	**+0.2**
	baz=276						
DAWY	**Dawson**	**85.68**	**26**	IAmb	IAmb	17 42 36.3	
	comp=Z,3.3nm,0.7s						
DAWY	**Dawson**	**85.68**	**26**	P	**P**	**17 42 34.4**	**+0.7**
	baz=276						
PINM	**Pinnacle**	**85.69**	**30**	P	**P**	**17 42 34.6**	**+0.7**
	baz=276						
E29M	**Blow River**	**85.77**	**22**	P	**P**	**17 42 34.4**	**+0.3**
	baz=277						
YUK8	**Steele Glacier**	**85.81**	**29**	P	**P**	**17 42 34.8**	**+0.1**
	baz=276						
H29M	**Whitestone**	**85.86**	**24**	P	**P**	**17 42 35.7**	**+1.2**
	baz=277						
G29M	**Pine Creek**	**85.91**	**23**	P	**P**	**17 42 35.4**	**+0.6**
	baz=277,SNR=11						
M29M	**Somme Creek**	**86.28**	**28**	IAmb	IAmb	17 42 39.9	
	comp=Z,4.5nm,0.6s						
M29M	**Somme Creek**	**86.28**	**28**	P	**P**	**17 42 37.9**	**+1.0**
	baz=277						
VNDA	**Vanda**	**86.29**	**173**	P	**P**	**17 42 37.2**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=306,slow=8.1,SNR=5.9						
VNDA				LR	LR	18 22 43.9	
	comp=Z,20nm,18.7s,baz=318,slow=37						
	comp=Z,1.1nm,0.6s						
YUK4	**Talbot Arm**	**86.33**	**29**	P	**P**	**17 42 37.0**	**-0.2**
	baz=277						
L29M	**L29M**	**86.35**	**27**	IAmb	IAmb	17 42 40.4	
	comp=Z,4.0nm,0.8s						
L29M	**L29M**	**86.35**	**27**	P	**P**	**17 42 38.1**	**+1.0**
	baz=278						
EPYK	**Eagle Plains**	**86.50**	**24**	P	**P**	**17 42 38.5**	**+0.8**
	baz=279						
YUK6	**Outpost Mounta**	**86.52**	**29**	P	**P**	**17 42 38.3**	**+0.1**
	baz=277						
K29M	**Barlow Dome**	**86.53**	**26**	P	**P**	**17 42 38.2**	**+0.2**
	baz=278						
G30M	**tAoh Zraii Nji**	**86.60**	**23**	P	**P**	**17 42 39.1**	**+0.9**
	baz=279						
F30M	**Barrier River**	**86.67**	**22**	P	**P**	**17 42 38.8**	**+0.3**
	baz=279						
I30M	**Mount Dempster**	**86.81**	**25**	P	**P**	**17 42 39.7**	**+0.3**
	baz=279						
J30M	**Hart River**	**86.93**	**25**	P	**P**	**17 42 40.2**	**+0.2**
	baz=279						
HYT	**Haines Junctio**	**86.95**	**29**	P	**P**	**17 42 40.2**	**0.0**
	baz=278						
P29M	**Windy Craggy**	**87.01**	**30**	P	**P**	**17 42 40.4**	**0.0**
	baz=278						
M30M	**Minto, Yukon**	**87.03**	**27**	P	**P**	**17 42 40.6**	**+0.1**
	baz=279						
N30M	**Aishikik Lake**	**87.06**	**29**	P	**P**	**17 42 40.7**	**+0.1**
	baz=278						
P30M	**Million Dollar**	**87.32**	**30**	P	**P**	**17 42 42.1**	**+0.2**
	baz=279						
G31M	**Satah River**	**87.37**	**23**	IAmb	IAmb	17 42 43.7	
	comp=Z,4.6nm,0.8s						
G31M	**Satah River**	**87.37**	**23**	P	**P**	**17 42 42.3**	**+0.4**
	baz=281						
INK	**Inuvik**	**87.39**	**22**	P	**P**	**17 42 41.6**	**-0.3**
	baz=281						
F31M	**Tsiigehtchic**	**87.47**	**22**	P	**P**	**17 42 42.3**	**0.0**
	baz=281						
H31M	**Peel River**	**87.55**	**24**	P	**P**	**17 42 42.5**	**-0.3**
	baz=281						
O30N	**Mendenhall**	**87.65**	**29**	P	**P**	**17 42 43.2**	**-0.2**
	baz=279						
SPITS	**Spitsbergen Ar**	**87.66**	**349**	P	**P**	**17 42 41.7**	**-1.4**
	comp=Z,2.3nm,0.7s,baz=80,slow=11,SNR=5.6						
	comp=Z,2.3nm,0.7s						
N31M	**Braeburn, Yuko**	**87.68**	**28**	P	**P**	**17 42 43.4**	**-0.1**
	baz=280						
MMAI	**Mount Meron Ar**	**87.69**	**303**	P	**P**	**17 42 44.2**	**0.0**
	comp=Z,0.7nm,0.4s,baz=54,slow=11,SNR=2.4						
	comp=Z,0.7nm,0.4s						
PLBC	**Pleasant Camp**	**87.72**	**31**	P	**P**	**17 42 44.5**	**+0.7**
	baz=279						
ARCES	**ARCESS Array B**	**87.79**	**340**	P	**P**	**17 42 43.0**	**-0.9**
	comp=Z,2.6nm,0.9s,baz=88,slow=5.5,SNR=8.2						
	comp=Z,2.6nm,0.9s						
S31K	**Pelican**	**88.03**	**32**	P	**P**	**17 42 45.2**	**+0.1**
	baz=279						
M31M	**Drury Creek, Y**	**88.20**	**28**	P	**P**	**17 42 46.2**	**+0.2**
	baz=281						
P32M	**Atlin**	**89.03**	**30**	P	**P**	**17 42 50.6**	**+0.6**
	baz=282						
A36M	**Sachs Harbour**	**89.15**	**17**	P	**P**	**17 42 50.7**	**+0.5**
	baz=289						
P33M	**Teslin, Yukon**	**89.34**	**29**	P	**P**	**17 42 51.0**	**-0.5**
	baz=282						
FINES	**FINESS Array B**	**89.36**	**332**	P	**P**	**17 42 50.5**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=49,slow=5.8,SNR=8.5						
FINES				LR	LR	18 26 31.9	
	comp=Z,43nm,19.8s,baz=97,slow=38						
	comp=Z,1.1nm,0.7s						
MMPY	**Sheldon Lake,**	**89.54**	**27**	P	**P**	**17 42 52.6**	**+0.3**
	baz=284						
AKASG	**Malin Array Be**	**89.76**	**321**	P	**P**	**17 42 51.7**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=74,slow=3.0,SNR=4.6						
	comp=Z,0.7nm,0.5s						
Q32M	**Nakina River**	**89.89**	**31**	P	**P**	**17 42 53.7**	**-0.5**
	baz=283						
U33K	**Whale Pass**	**90.05**	**33**	P	**P**	**17 42 54.5**	**-0.1**
	baz=282						
CRAG	**Craig**	**90.18**	**34**	P	**P**	**17 42 55.2**	**-0.1**
	baz=282						
WRAK	**Wrangell Islan**	**90.40**	**33**	P	**P**	**17 42 56.1**	**-0.3**
	baz=282						
C36M	**Paulatuk**	**90.41**	**20**	P	**P**	**17 42 55.8**	**-0.2**
	baz=290						
V35K	**Ketchikan**	**91.05**	**34**	P	**P**	**17 42 58.6**	**-0.7**
	baz=283						
DLBC	**Dease Lake**	**91.15**	**31**	LR	LR	18 18 34.8	
	comp=Z,30nm,21.6s,baz=266,slow=32						
DLBC	**Dease Lake**	**91.15**	**31**	P	**P**	**17 42 58.9**	**-1.0**
	baz=285						
WTLY	**Watson Lake, Y**	**91.32**	**29**	P	**P**	**17 43 00.5**	**-0.1**
	baz=286						
MLR	**Muntele Rosu**	**92.94**	**316**	LR	LR	18 30 08.0	
	comp=Z,59nm,18.7s,baz=146,slow=39						
HFS	**Hagfors**	**95.53**	**332**	LR	LR	18 29 50.4	
	comp=Z,52nm,20.1s,baz=72,slow=38						
NOA	**NORSAR Array B**	**96.27**	**334**	LR	LR	18 33 23.1	
	comp=Z,25nm,18.6s,baz=65,slow=40						
QSPA	**South Pole Qui**	**96.54**	**180**	P	**P**	**17 43 25.1**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=77,slow=3.6,SNR=3.2						
	comp=Z,1.2nm,0.8s						
YKA	**Yellowknife Ar**	**96.77**	**24**	P	**P**	**17 43 25.9**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=301,slow=4.4,SNR=19						
	comp=Z,1.6nm,0.7s						
CLL	**Collm**	**99.39**	**324**	*i* Pdif	**Pdif**	**17 43 36.4**	**-1.1**
CLL				*ex*	x	17 43 48.0	
TXAR	**Lajitas Array**	**119.64**	**51**	PKP	**PKiKP**	**17 48 46.7**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=236,slow=1.1,SNR=5.1						
TORD	**Torodi Ar. Bea**	**122.15**	**290**	PKP	**PKPdf**	**17 48 49.8**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=63,slow=1.9,SNR=8.9						

VIE ***20*** *17:54:14.8±0.5,51°.46N×16°.37E,h0km,mb2.4/8,ml2.7/9, Error ellipse: s-maj=6.4km s-min=3.5km az=79.0 61 km NW of Wroclaw Suspected Mining induced.*
GFZ ***20*** *17:54:14.9±0.4,51°.N±.3×1°.6E±.,h1km,M2.7/24,ML2.4/24, Error ellipse: s-maj=8.1km s-min=4.2km az=38.7, confirmed*
IPEC ***20*** *17:54:14.5±0.2,51°.49N×16°.25E,h1km,ML2.5/8,Error ellipse: s-maj=1.9km s-min=1.2km az=67.0*
IDC ***20*** *17:54:17.1±0.9,51°.44N×16°.06E,h0km,mbtmp3.1/5, ML2.2/4,Error ellipse: s-maj=19.3km s-min=8.7km az=118.0*
PRU ***20*** *17:54:17.9,51°.36N×16°.16E,h0km*
ISC 20 17:54:14.3±0.8, 51°.52N±0°.03×16°.23E±0°.02, h0km, n66,
σ0s77/102, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**176**	*e*Pg	**Pg**	**17 54 27.4**	**+0.1**
KSP				*e*Sg	**Sg**	**17 54 35.4**	**-0.5**
KSP	**Ksiaz**	**0.68**	**176**	P	**Pg**	**17 54 27.3**	**+0.1**
CHVC	**Chvalec**	**0.94**	**187**	*e*PG	**Pg**	**17 54 32.4**	**+0.2**
CHVC				*e*SG	**Sg**	**17 54 44.1**	**-0.2**
	comp=Z,46nm,0.5s						
CHVC	**Chvalec**	**0.94**	**187**	P	**Pg**	**17 54 32.4**	**+0.2**
OSTC	**Ostas**	**0.96**	**180**	*e*PG	**Pg**	**17 54 32.9**	**+0.2**
OSTC				*e*SG	**Sg**	**17 54 44.3**	**-0.8**
	comp=Z,51nm,0.5s						
OSTC	**Ostas**	**0.96**	**180**	P	**Pg**	**17 54 32.6**	**-0.1**
DPC	**Dobruska-Polom**	**1.17**	**177**	*e*PG	**Pg**	**17 54 36.3**	**-0.4**
DPC				*e*SG	**Sg**	**17 54 50.8**	**-1.0**
	comp=Z,31nm,0.7s						
DPC	**Dobruska-Polom**	**1.17**	**177**	P	**Pg**	**17 54 36.2**	**-0.4**
PIVO	**Bartosovice**	**1.35**	**171**	*e*Pg	**Pg**	**17 54 39.2**	**-0.9**
	baz=352						
PIVO				*e*Sg	**Sg**	**17 54 55.7**	**-1.9**
	41nm,0.4s,baz=352						
KRLC	**Kraliky**	**1.49**	**166**	*e*PG	**Pn**	**17 54 41.8**	**-0.5**
KRLC				*e*SG	**Sg**	**17 55 00.1**	**-1.9**
	comp=Z,33nm,0.6s						
KRLC	**Kraliky**	**1.49**	**166**	P	**Pn**	**17 54 41.7**	**-0.6**
BRG	**Berggiesshubel**	**1.57**	**247**	P	**Pn**	**17 54 42.6**	**-0.9**
BRG	**Berggiesshubel**	**1.57**	**247**	Pn	**Pn**	**17 54 42.6**	**-0.9**
BRG				Pg	**Pg**	**17 54 45.0**	**+0.5**
BRG				Sg	**Sg**	**17 55 05.2**	**+0.4**
BRG				Amp		17 55 06.3	
	comp=Z,36nm,0.5s						
ANAC	**Anensky vrch**	**1.62**	**153**	*e*Sg	**Sn**	**17 55 04.2**	**-1.6**
	comp=Z,24nm,0.5s,baz=334						
RICC	**Richard**	**1.66**	**235**	*e*PG	**Pb**	**17 54 45.5**	**-0.2**
RICC				*e*SG	**Sn**	**17 55 06.6**	**0.0**
	comp=Z,93nm,0.8s						
RYBC	**Ceska Rybna**	**1.71**	**183**	*e*Pn	**Pn**	**17 54 44.7**	**-0.7**
	baz=4.0						
RYBC				*e*Sg	**Sn**	**17 55 07.1**	**-0.9**
	comp=Z,32nm,0.5s,baz=4.0						
RUE	**Ruedersdorf**	**1.79**	**304**	P	**Pn**	**17 54 46.6**	**+0.2**
PRU	**Pruhonice**	**1.87**	**216**	*e*PG	**Pb**	**17 54 48.9**	**-0.4**
PRU				*e*SG	**Sn**	**17 55 11.6**	**-0.2**
	comp=Z,49nm,0.7s						
PRU	**Pruhonice**	**1.87**	**216**	P	**Pn**	**17 54 47.0**	**-0.5**
MORC	**Moravsky Berou**	**1.93**	**154**	*e*Pn	**Pn**	**17 54 47.8**	**-0.7**
	baz=335						
MORC				*e*Sg	**Sn**	**17 55 14.0**	**+0.5**
	comp=Z,28nm,1.0s,baz=335						
MORC	**Moravsky Berou**	**1.93**	**154**	P	**Pn**	**17 54 47.5**	**-0.9**
CLL	**Collm**	**2.03**	**265**	*e*Pn	**Pn**	**17 54 49.0**	**-0.7**
CLL				*e*Pg	**Pg**	**17 54 53.0**	**-0.2**
CLL				*e*Sg	**Sg**	**17 55 19.0**	**-0.4**
	comp=Z,17nm,0.5s						
CLL	**Collm**	**2.03**	**265**	P	**Pn**	**17 54 49.1**	**-0.6**
OKC	**Ostrava-Krasne**	**2.08**	**143**	*e*PG	**Pg**	**17 54 53.7**	**-0.4**
OKC				*e*SG	**Sb**	**17 55 19.0**	**-0.2**
	comp=Z,36nm,0.9s						
OKC	**Ostrava-Krasne**	**2.08**	**143**	P	**Pn**	**17 54 51.3**	**+0.9**
VRAC	**Vranov**	**2.22**	**174**	*e*Pn	**Pn**	**17 54 51.8**	**-0.6**
	baz=354						
VRAC				*e*Sg	**Sb**	**17 55 23.1**	**-0.3**
	comp=Z,26nm,0.9s,baz=354						
VRAC	**Vranov**	**2.22**	**174**	*e*PN	**Pn**	**17 54 51.9**	**-0.5**
VRAC				*e*SG	**Sb**	**17 55 23.2**	**-0.2**
LNIZ	**Loecknitz**	**2.33**	**329**	P	**Pn**	**17 54 53.7**	**-0.2**
KRUC	**Moravsky**	**2.46**	**177**	*e*Pn	**Pn**	**17 54 54.9**	**-0.8**
	baz=358						
KRUC				*e*Sg	**Sb**	**17 55 30.4**	**+0.2**
	comp=Z,23nm,1.1s,baz=358						
KRUC	**Moravsky**	**2.46**	**177**	P	**Pn**	**17 54 55.5**	**-0.1**
STAC	**Stalkov**	**2.56**	**194**	*e*Pn	**Pn**	**17 54 56.4**	**-0.7**
	baz=14						
STAC				*e*Sg	**Sb**	**17 55 33.6**	**+0.5**
	comp=Z,26nm,0.6s,baz=14						
OJC	**Ojcow**	**2.61**	**118**	*e*Pg	**Pg**	**17 55 04.0**	**-0.3**
OJC				*e*Sg	**Sg**	**17 55 38.6**	**+0.5**
OJC	**Ojcow**	**2.61**	**118**	P	**Pg**	**17 55 05.4**	**+1.1**
TANN	**Tannenbergstha**	**2.62**	**247**	P	**Pn**	**17 54 57.7**	**-0.2**
NKC	**Novy Kostel**	**2.71**	**243**	P	**Pn**	**17 54 59.1**	**-0.1**
NEUB	**Neuenburg**	**2.81**	**265**	P	**Pg**	**17 55 07.5**	**-0.6**
JAVC	**Velka Javorina**	**2.82**	**160**	*e*Pn	**Pn**	**17 54 59.9**	**-0.7**
	baz=342						
JAVC	**Velka Javorina**	**2.82**	**160**	*e*PN	**Pn**	**17 55 00.0**	**-0.7**
JAVC	**Velka Javorina**	**2.82**	**160**	P	**Pn**	**17 55 01.6**	**+0.9**
KHC	**Kasperske Hory**	**2.93**	**216**	*e*PN	**Pn**	**17 55 02.1**	**-0.1**
KHC				*e*PG	**Pb**	**17 55 07.7**	**+0.3**
KHC				*e*SG	**Sb**	**17 55 45.3**	**+1.6**
	comp=Z,11nm,0.5s						
KHC	**Kasperske Hory**	**2.93**	**216**	P	**Pn**	**17 55 01.6**	**-0.6**
WIMM	**Wimmelburg**	**2.95**	**272**	P	**Pn**	**17 55 02.2**	**-0.1**
CKRC	**Cesky Krumlov**	**2.97**	**205**	*e*PN	**Pn**	**17 55 03.2**	**+0.5**
CKRC				*e*PG	**Pb**	**17 55 09.0**	**+1.0**
CKRC				*e*SG	**Sb**	**17 55 45.2**	**+0.4**
	comp=Z,17nm,0.5s						
CKRC	**Cesky Krumlov**	**2.97**	**205**	P	**Pn**	**17 55 02.7**	**0.0**
MANZ	**Manzenberg**	**3.03**	**241**	P	**Pn**	**17 55 03.3**	**-0.2**
MOX	**Moxa**	**3.04**	**255**	P	**Pg**	**17 55 11.6**	**-0.8**
ROTZ	**Rotzenmuhle**	**3.10**	**237**	P	**Pn**	**17 55 04.6**	**+0.1**
GERES	**GERESS Array B**	**3.13**	**212**	Pn	**Pn**	**17 55 05.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=17						
GERES				Pg	**Pb**	**17 55 11.9**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=31,slow=16,SNR=59						
GERES				Lg	Lg	17 55 53.3	
	comp=Z,0.4nm,0.3s,baz=30,slow=29,SNR=15						
	comp=Z,1.4nm,0.5s						
LANS	**Liptovska Anna**	**3.15**	**137**	*e*PG	**Pg**	**17 55 15.1**	**+0.4**
LANS				*e*SG	**Sg**	**17 55 57.3**	**+1.8**
WET	**Wettzell**	**3.20**	**223**	P	**Pn**	**17 55 05.7**	**-0.2**
MODS	**Modra-Piesok**	**3.22**	**167**	*e*PG	**Pg**	**17 55 16.5**	**+0.5**
MODS				*e*SG	**Sg**	**17 55 56.3**	**-1.4**
WINA	**Alland / Wiene**	**3.41**	**182**	*i* Pn	**Pn**	**17 55 09.2**	**+0.5**
	comp=Z,0.7nm,0.2s						
WINA				*i* Sn	**Sn**	**17 55 51.3**	**+1.4**
	comp=Z,3.3nm,0.4s						
GRB3	**Grafenberg Arr**	**3.56**	**234**	P	**Pn**	**17 55 10.3**	**-0.6**
CONA	**Conrad Observa**	**3.60**	**184**	*e*Pn	**Pn**	**17 55 11.2**	**-0.2**
	comp=Z,0.4nm,0.3s						
CONA				*e*Sn	**Sn**	**17 55 53.3**	**-1.4**
	comp=Z,3.1nm,0.5s						
GRFO	**Grafenberg**	**3.67**	**242**	P	**Pn**	**17 55 12.2**	**-0.2**
RONA	**Rosalia, Austr**	**3.82**	**179**	*e*Pn	**Pn**	**17 55 14.6**	**+0.2**
	comp=Z,0.3nm,0.2s						
RONA				Sg	**Sg**	**17 56 18.6**	**+1.6**
	comp=Z,7.5nm,0.6s						
MOA	**Molln**	**3.88**	**200**	*i* Pn	**Pn**	**17 55 15.7**	**+0.4**
	comp=Z,0.7nm,0.2s						
MOA				Pg	**Pg**	**17 55 27.8**	**-0.9**
	comp=Z,3.2nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	*e*Pn	**Pn**	**17 55 19.7**	**+0.4**
	comp=Z,1.0nm,0.3s						
BIOA				*e*Sg	**Sg**	**17 56 30.2**	**+1.6**
	comp=Z,10nm,0.5s						
ARSA	**Arzberg**	**4.29**	**186**	*e*Pn	**Pn**	**17 55 20.7**	**-0.2**
	comp=Z,0.5nm,0.3s						
ARSA				Sg	**Sg**	**17 56 32.9**	**+0.7**
	comp=Z,3.1nm,0.5s						
KOLS	**Kolonicke sedl**	**4.67**	**121**	*e*PN	**Pn**	**17 55 23.7**	**-2.3**
KOLS				*e*PG	**Pg**	**17 55 43.9**	**+0.2**
KOLS				*e*SG	**Sg**	**17 56 44.8**	**+0.7**
LESA	**Schwarzleotal**	**4.70**	**211**	Pg	**Pg**	**17 55 44.3**	**-0.1**
	comp=Z,1.4nm,0.3s						
KBA	**Koelnbreinsper**	**4.83**	**204**	*e*Pn	**Pn**	**17 55 29.2**	**+0.8**
	comp=Z,1.9nm,0.5s						
KBA				Sg	**Sg**	**17 56 50.5**	**+1.3**
	comp=Z,8.2nm,0.7s						
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**17 56 15.4**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=283,slow=12,SNR=2.2						
HFS	**Hagfors**	**8.75**	**352**	Pn	**Pn**	**17 56 22.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=149,slow=17,SNR=1.6						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**17 56 56.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=205,slow=10,SNR=5.2						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**18.60**	**10**	Pn	**P**	**17 58 32.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=195,slow=13,SNR=6.4						
	comp=Z,0.4nm,0.4s						

IDC ***20*** *18:25:26.5±3.2,37°.32N×72°.24E,h163km±26km,mb3.6/16, mbtmp4.2/22,MS3.4/1, Error ellipse: s-maj=23.5km s-min=14.3km az=2.0*
NEIC ***20*** *18:25:29.8±1.2,37°.51N±0°.06×72°.24E±0°.09,h188km±3km, mb4.2/30,Error ellipse: s-maj=10.0km s-min=8.7km az=107.0*
NNC ***20*** *18:25:37.1±3.7,38°.17N×72°.50E,h247km±33km,mb3.2, mpv4.3,Error ellipse: s-maj=37.0km s-min=18.4km az=9.0*
ISC 20 18:25:29.9±0.4, 37°.46N±0°.04×72°.23E±0°.04, h200km, n132,
σ2s44/158, mb4.1/37, 8C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	**Manem**	**0.44**	**281**		**Pn**	**18 25 56.1**	**-1.0**

MDOK	**Medeo**		**6.78**	**31**	⇑P		**Pn**	**18 27 04.3**	**-3.1**
	comp=N,14nm,0.6s								
MDOK					⇓S		Sn	18 28 13.3	-11
	comp=N,11nm,0.6s								
KNDC	**Almaty**		**6.79**	**31**	⇑P		**Pn**	**18 27 06.3**	**-1.0**
	comp=N,53nm,0.7s								
KNDC					⇓S		**Sn**	**18 28 17.9**	**-6.9**
	comp=N,65nm,0.8s								
PRZ	**Przheval'sk**		**6.90**	**41**			**Pn**	**18 27 08.7**	**-0.2**
BHK	**Bhakra**		**6.95**	**149**	*e*P		**Pn**	**18 27 08.8**	**-0.7**
BHK					*e*S		**Sn**	**18 28 23.2**	**-5.4**
BHK					IAML			18 28 25.3	
	comp=N,98nm,0.4s								
BHK					IAML			18 28 25.5	
	comp=E,131nm,0.5s								
KLP	**Kalpa**		**7.72**	**138**	*e*P		**Pn**	**18 27 19.2**	**-0.5**
KLP					*e*S		**Sn**	**18 28 40.0**	**-7.1**
PDGK	**Podgornoye**		**8.07**	**41**	⇓P		**Pn**	**18 27 22.6**	**-1.4**
	comp=E,13nm,0.7s								
PDGK					⇓S		**Sn**	**18 28 46.8**	**-8.0**
	comp=E,24nm,0.9s								
PDGK	**Podgornoye**		**8.07**	**41**			**Pn**	**18 27 22.7**	**-1.3**
UTK	**UTTARKASHI**		**8.46**	**141**	*e*P		**Pn**	**18 27 29.2**	**-0.1**
UTK					*e*S		**Sn**	**18 28 56.5**	**-8.0**
HRA	**Herat**		**8.66**	**252**			**Pn**	**18 27 31.4**	**-0.5**
JOSI	**Joshimath**		**9.18**	**136**	*e*S		**Sn**	**18 29 15.2**	**-6.6**
JOSI					IAML			18 29 21.4	
	comp=E,144nm,0.1s								
JOSI					IAML			18 29 22.2	
	comp=N,199nm,0.6s								
JASL	**Jaisalmer**		**10.56**	**186**	*e*P		**Pn**	**18 27 55.9**	**-0.5**
JASL					*e*S		Sn	18 29 44.1	-10
AJM	**Ajmer**		**11.19**	**169**	*e*P		**Pn**	**18 28 02.8**	**-1.6**
MAKZ	**Makanchi**		**11.81**	**35**	⇓P		**Pn**	**18 28 10.7**	**-1.4**
	comp=N,1.7nm,0.5s								
MAKZ	**Makanchi**		**11.81**	**35**			**Pn**	**18 28 10.5**	**-1.7**
MK31	**Makanchi Array**		**11.94**	**35**	⇓P		**Pn**	**18 28 14.0**	**+0.1**
	comp=N,1.3nm,0.5s,baz=209,slow=9.6,SNR=8.3								
MKAR	**Makanchi Array**		**11.94**	**35**	P		**Pn**	**18 28 13.2**	**-0.7**
	comp=N,1.4nm,0.7s,baz=216,slow=14,SNR=9.3								
MKAR	**Makanchi Array**		**11.94**	**35**			**Pn**	**18 28 13.0**	**-0.9**
WMQ	**Urumqi**		**13.35**	**57**	*e*P		**Pn**	**18 28 31.3**	**-0.3**
WMQ					S		**Sn**	**18 31 08.0**	**+7.5**
WMQ					pmax		pmax		
	comp=Z,10.0nm,0.9s								
KURBB	**Kurchatov Arra**		**13.91**	**17**	P		**Pn**	**18 28 36.7**	**-1.7**
	comp=Z,7.0nm,0.5s,baz=205,slow=11,SNR=58								
KURBB					S		**Sn**	**18 31 13.8**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=208,slow=18,SNR=4.9								
KURBB	**Kurchatov Arra**		**13.91**	**17**	⇑P		**Pn**	**18 28 36.3**	**-2.2**
	comp=Z,33nm,1.0s								
KURK	**Kurchatov**		**14.02**	**17**	⇓P		**Pn**	**18 28 37.8**	**-1.9**
	comp=Z,9.1nm,0.9s								
KURK	**Kurchatov**		**14.02**	**17**			**P**	**18 28 41.7**	**0.0**
AB31	**Akbulak array**		**14.77**	**327**	⇓P		**Pn**	**18 28 48.0**	**-1.1**
	comp=Z,9.2nm,0.6s,baz=136,slow=13,SNR=133								
AB31					⇑S		**S**	**18 31 25.2**	**-7.8**
	comp=Z,4.4nm,0.6s,baz=133,slow=25,SNR=8.9								
AB31	**Akbulak array**		**14.77**	**327**			**Pn**	**18 28 48.0**	**-1.1**
ABKAR	**Akbulak array**		**14.77**	**327**			**Pn**	**18 28 47.7**	**-1.4**
EVN	**Everest**		**15.49**	**123**	P		**Pn**	**18 28 58.4**	**-0.3**
EVN					IAmb	IAmb		18 29 04.6	
	comp=Z,6.2nm,0.5s								
BVAR	**Borovoye Array**		**15.62**	**356**	P		**Pn**	**18 28 58.0**	**-1.4**
	comp=Z,14nm,0.7s,baz=162,slow=12,SNR=44								
BVAR					S		**S**	**18 31 47.5**	**-5.1**
	comp=Z,2.6nm,0.6s,baz=165,slow=23,SNR=5.2								
BORK	**Borovoye**		**15.65**	**356**			**Pn**	**18 28 58.5**	**-1.1**
AKTO	**Aktyubinsk**		**16.48**	**326**	P		**Pn**	**18 29 09.9**	**+0.1**
	comp=Z,15nm,0.4s,baz=115,slow=7.6,SNR=33								
AKTO					S		**S**	**18 32 04.2**	**-6.8**
	comp=Z,5.5nm,0.6s,baz=89,slow=20,SNR=6.7								
AKTO	**Aktyubinsk**		**16.48**	**326**	⇑P		**Pn**	**18 29 10.1**	**+0.3**
	comp=Z,6.4nm,0.5s								
AKTO					⇑S		**S**	**18 32 03.3**	**-7.8**
	comp=Z,2.8nm,0.6s								
ZALV	**Zalesovo Beam**		**18.64**	**24**	P		**P**	**18 29 32.9**	**+0.6**
	comp=Z,24nm,0.3s,baz=221,slow=10,SNR=130								
ZALV	**Zalesovo Beam**		**18.64**	**24**			**P**	**18 29 32.6**	**+0.3**
ARTI	**Arti**		**21.09**	**338**	P		**P**	**18 29 59.5**	**+1.0**
	comp=Z,11nm,0.8s,baz=153,slow=6.5,SNR=22								
	comp=Z,11nm,0.8s								
ARTI	**Arti**		**21.09**	**338**			**P**	**18 29 58.6**	**+0.1**
GTA2	**Gaotai**		**21.62**	**76**	*e*P		**P**	**18 30 07.3**	**+2.9**
GTA2					pmax		pmax		
	comp=Z,3.0nm,1.0s								
SONM	**Songino Array**		**26.98**	**56**	P		**P**	**18 30 54.9**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=281,slow=9.1,SNR=5.7								
	comp=Z,0.8nm,0.5s								
SONM	**Songino Array**		**26.98**	**56**	P		**P**	**18 30 53.9**	**+0.8**
NRIK	**Noril'sk**		**33.01**	**10**	P		**P**	**18 31 46.7**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=198,slow=9.8,SNR=3.9								
	comp=Z,4.8nm,0.7s								
NRIK	**Noril'sk**		**33.01**	**10**	P		**P**	**18 31 45.9**	**+0.2**
NRIK					IAmb	IAmb		18 31 48.4	
	comp=Z,4.8nm,0.8s								
AKASG	**Malin Array Be**		**33.13**	**307**	P		**P**	**18 31 47.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=83,slow=7.6,SNR=5.0								
	comp=Z,0.2nm,0.3s								
AKASG	**Malin Array Be**		**33.13**	**307**	P		**P**	**18 31 46.3**	**-0.6**
MNK	**Minsk**		**34.53**	**314**	*i* P		**P**	**18 32 00.5**	**+1.6**
	comp=E,5.0nm,0.7s								
MNK					*i* P		**P**	**18 32 00.5**	**+1.6**
	comp=N,8.0nm,0.8s								
MNK					*i* P		**P**	**18 32 00.5**	**+1.6**
	comp=Z,4.0nm,0.7s,baz=101								
MNK					*i* pP		**pP**	**18 32 40.1**	**-0.8**
MNK					*i* PP		**PnPn**	**18 33 23.0**	**+1.2**
MNK					*i* S		**S**	**18 37 16.3**	**+3.9**
MNK					*i* sS		**sS**	**18 38 27.0**	**-1.0**
MNK					*i* SS		**SnSn**	**18 39 53.0**	**+3.1**
MNK					*i* LR		LR	18 47 23.0	
MNK					*i* LRM		MLR	18 47 56.6	
	comp=N,12nm,16.0s								
MNK					*i* LRM		MLR	18 48 11.8	
	comp=Z,18nm,15.9s								
MNK					*i* LRM		MLR	18 48 37.1	
	comp=E,12nm,14.1s								
MLR	**Muntele Rosu**		**35.19**	**298**	P		**P**	**18 32 08.7**	**+3.9**
	comp=E,1.4nm,0.5s,baz=171,slow=10,SNR=4.0								
MLR	**Muntele Rosu**		**35.19**	**298**	IAmb		IAmb	18 32 29.2	
	comp=Z,4.2nm,1.1s								
FINES	**FINESS Array B**		**37.25**	**325**	P		**P**	**18 32 22.9**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=120,slow=8.9,SNR=20								
	comp=Z,1.3nm,0.3s								
FINES	**FINESS Array B**		**37.25**	**325**	P		**P**	**18 32 22.5**	**+0.6**
VADS	**Vadso**		**39.77**	**339**	*e*P		**P**	**18 32 44.6**	**+1.9**
VADS					IAmb		IAmb	18 32 46.0	
	comp=Z,55nm,2.0s								
ARA0	**ARCESS Array S**		**40.64**	**337**	*e*P		**P**	**18 32 51.7**	**+1.7**
ARA0					IAmb		IAmb	18 32 52.2	
	comp=Z,7.9nm,1.0s								
ARCES	**ARCESS Array B**		**40.64**	**337**	P		**P**	**18 32 51.8**	**+1.8**
	comp=Z,3.0nm,0.4s,baz=113,slow=8.2,SNR=49								
	comp=Z,3.0nm,0.4s								
ARCES	**ARCESS Array B**		**40.64**	**337**	P		**P**	**18 32 51.4**	**+1.5**
ARCES					IAmb		IAmb	18 32 52.5	
	comp=Z,6.4nm,1.0s								
HEH	**HeiHe**		**40.89**	**54**	*e*P		**P**	**18 32 54.3**	**+2.1**
HEH					pmax		pmax		
	comp=Z,10.0nm,0.7s								
KTK1	**Kautokeino**		**41.15**	**336**	*e*P		**P**	**18 32 55.4**	**+1.4**
KTK1					IAmb		IAmb	18 32 55.6	
	comp=Z,7.9nm,0.5s								
YAK	**Yakutsk**		**42.62**	**36**	P		**P**	**18 33 06.5**	**+0.5**
YAK					IAmb		IAmb	18 33 08.0	
	comp=Z,6.8nm,0.8s								
TRO	**Tromso**		**42.80**	**336**	*e*P		**P**	**18 33 08.2**	**+0.9**
HFS	**Hagfors**		**42.93**	**321**	P		**P**	**18 33 09.7**	**+1.1**
	comp=Z,4.1nm,0.5s,baz=98,slow=11,SNR=29								
	comp=Z,4.1nm,0.5s								
FAUS	**Fauske**		**43.42**	**332**	*e*P		**P**	**18 33 14.1**	**+1.8**
FAUS					IAmb		IAmb	18 33 14.9	
	comp=Z,5.5nm,0.9s								
MOR8	**Moi Rana**		**43.47**	**330**	*e*P		**P**	**18 33 13.8**	**+0.9**
MOR8					IAmb		IAmb	18 33 14.1	
	comp=Z,6.0nm,0.7s								
STEI	**Steigen**		**43.57**	**333**	*e*P		**P**	**18 33 15.2**	**+1.7**
LEIR	**Leirfjorden**		**43.99**	**330**	*e*P		**P**	**18 33 18.6**	**+1.7**
NC602	**NORSAR Array S**		**44.04**	**322**	*e*P		**P**	**18 33 18.1**	**+0.7**
VAGH	**Vaagaholmen**		**44.05**	**331**	*e*P		**P**	**18 33 19.5**	**+2.2**
KONS	**Konsvik**		**44.06**	**330**	*e*P		**P**	**18 33 19.0**	**+1.6**
STOK	**Stokkvaagen**		**44.07**	**330**	*e*P		**P**	**18 33 19.1**	**+1.6**
NB2	**NORSAR Subarra**		**44.22**	**322**	P		**P**	**18 33 19.8**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=92,slow=7.9								
NB2	**NORSAR Subarra**		**44.22**	**322**	P		**P**	**18 33 19.8**	**+1.0**
NOA	**NORSAR Array B**		**44.22**	**322**	P		**P**	**18 33 19.8**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=101,slow=7.3,SNR=9.1								
	comp=Z,2.0nm,0.6s								
BJO1	**Bjornoya**		**44.65**	**342**	*e*P		**P**	**18 33 23.9**	**+1.9**
BJO1					IAmb		IAmb	18 33 24.8	
	comp=Z,16nm,1.2s								
KONO	**Kongsberg**		**44.97**	**320**	*e*P		**P**	**18 33 26.1**	**+1.3**
SPITS	**Spitsbergen Ar**		**46.79**	**346**	P		**P**	**18 33 40.7**	**+1.9**
	comp=Z,1.5nm,0.4s,baz=110,slow=11,SNR=11								
	comp=Z,1.5nm,0.4s								
KBS	**Kingsbay**		**47.90**	**347**	*e*P		**P**	**18 33 47.8**	**+0.6**
KBS					IAmb		IAmb	18 33 50.3	
	comp=Z,5.5nm,0.7s								
MJAR	**Matsushiro Arr**		**51.69**	**70**	P		**P**	**18 34 17.3**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=287,slow=11,SNR=4.1								
	comp=Z,0.6nm,0.7s								
MJAR	**Matsushiro Arr**		**51.69**	**70**	P		**P**	**18 34 17.2**	**+0.8**
EKA	**Eskdalemuir Ar**		**52.29**	**316**	P		**P**	**18 34 21.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=90,slow=7.7,SNR=4.9								
	comp=Z,0.6nm,0.6s								
MBAR	**Mbarara**		**53.86**	**235**	LR		LR	19 01 57.8	
	comp=Z,35nm,18.8s,baz=58,slow=41								
TORD	**Torodi Ar. Bea**		**66.72**	**269**	P		**P**	**18 36 00.2**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=48,slow=5.8,SNR=28								
	comp=Z,2.3nm,0.4s								
TORD	**Torodi Ar. Bea**		**66.72**	**269**	P		**P**	**18 35 59.8**	**+0.1**
ILAR	**Eielson Array**		**73.59**	**16**	P		**P**	**18 36 41.3**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=313,slow=5.3,SNR=13								
	comp=Z,1.4nm,0.9s								
ILAR	**Eielson Array**		**73.59**	**16**	P		**P**	**18 36 41.2**	**+0.6**
G31M	**Satah River**		**73.99**	**11**	P		**P**	**18 36 43.7**	**+0.8**
G31M					IAmb		IAmb	18 36 46.4	
	comp=Z,3.3nm,1.1s								
H29M	**Whitestone**		**73.99**	**12**	P		**P**	**18 36 44.1**	**+1.2**
H29M					IAmb		IAmb	18 36 45.4	
	comp=Z,2.7nm,0.7s								
J25K	**Salcha River,**		**74.06**	**16**	P		**P**	**18 36 44.3**	**+0.8**
I28M	**Miner Creek**		**74.41**	**13**	P		**P**	**18 36 45.8**	**+0.3**
I28M					IAmb		IAmb	18 36 47.5	
	comp=Z,2.5nm,0.7s								
L22K	**Petersville**		**74.54**	**19**	P		**P**	**18 36 46.9**	**+0.7**
K24K	**Donnelly Dome**		**74.67**	**16**	P		**P**	**18 36 47.7**	**+0.8**
K24K					IAmb		IAmb	18 36 55.4	
	comp=Z,8.3nm,1.2s								
SKT	**Skwentna**		**74.79**	**20**	P		**P**	**18 36 48.3**	**+0.7**
SKT					IAmb		IAmb	18 36 49.0	
	comp=Z,6.3nm,1.0s								
SCRK	**Sand Creek**		**74.91**	**16**	P		**P**	**18 36 49.5**	**+1.1**
SCRK					IAmb		IAmb	18 36 50.5	
	comp=Z,9.1nm,1.4s								
DHY	**Denali Highway**		**74.92**	**17**	P		**P**	**18 36 49.5**	**+1.0**
RIDG	**Independent Ri**		**74.93**	**16**	P		**P**	**18 36 49.0**	**+0.5**
RIDG					IAmb		IAmb	18 37 06.5	
	comp=Z,10nm,1.4s								
H31M	**Peel River**		**75.02**	**11**	P		**P**	**18 36 50.1**	**+1.2**
H31M					IAmb		IAmb	18 36 50.5	
	comp=Z,2.5nm,0.7s								
I30M	**Mount Dempster**		**75.24**	**12**	P		**P**	**18 36 51.6**	**+1.3**
I30M					IAmb		IAmb	18 36 52.4	
	comp=Z,3.2nm,1.0s								
PAX	**Paxson**		**75.46**	**17**	P		**P**	**18 36 52.4**	**+0.8**
PAX					IAmb		IAmb	18 37 15.0	
	comp=Z,6.0nm,1.4s								
DBIC	**Dimbokro**		**75.73**	**267**	P		**P**	**18 36 53.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=117,slow=4.5,SNR=1.6								
	comp=Z,1.5nm,0.5s								
DBIC	**Dimbokro**		**75.73**	**267**	P		**P**	**18 36 53.7**	**0.0**
SML	**Sawmill**		**75.77**	**19**	P		**P**	**18 36 54.3**	**+1.0**
M24K	**Tolsona, Glenn**		**76.04**	**18**	P		**P**	**18 36 56.5**	**+1.7**
BCAR	**Beaver Creek A**		**76.19**	**15**	P		**P**	**18 36 57.1**	**+1.5**
YKA	**Yellowknife Ar**		**80.24**	**3**	P		**P**	**18 37 19.0**	**+1.3**
	comp=Z,2.4nm,0.5s,baz=352,slow=5.5,SNR=34								
	comp=Z,2.4nm,0.5s								
YKA	**Yellowknife Ar**		**80.24**	**3**	P		**P**	**18 37 18.8**	**+1.1**
WRA	**Warramunga Arr**		**81.67**	**123**	P		**P**	**18 37 25.8**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=333,slow=5.2,SNR=1.8								
	comp=Z,0.1nm,0.4s								
WRA	**Warramunga Arr**		**81.67**	**123**	IAmb		IAmb	18 37 31.0	
	comp=Z,0.1nm,1.2s								

*SJA **20** 18:29:11.2±0.7, 31°.99S×69°.96W, h108km±4km, ML3.7, MW3.7*
*GUC **20** 18:29:12.2±0.8, 32°.00S×70°.19W, h122km±4km, ML3.7*
ISC 20 18:29:10.2±1.5, 31°.98S±0°.02×70°.02W±0°.03, h125km±10km, n49, σ1°43/91, 13C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.64**	**73**	*e*P		**Pn**		**18 29 29.7**	**-0.3**
RTLS				*e*S		**Sn**		**18 29 43.8**	**-1.2**
RTLS				IAML				18 29 44.7	
	comp=Z,5μm,0.4s								
CO04	**Los Peladeros**	**0.82**	**266**	⇑*e*P		**Pn**		**18 29 31.1**	**-0.3**
CO04				*e*S		**Sn**		**18 29 45.8**	**-1.5**
CO04				IAML				18 29 48.2	
	comp=N,4μm,0.2s								
VA03	**San Esteban**	**0.90**	**210**	*e*P		**Pn**		**18 29 32.0**	**+0.2**
VA03				IAML				18 29 48.8	
	comp=Z,1μm,0.3s								
VA03	**San Esteban**	**0.90**	**210**	⇑*e*P		**Pn**		**18 29 32.2**	**+0.3**
VA03				*e*S		**Sn**		**18 29 47.1**	**-1.1**
VA03				IAML				18 29 48.8	
	comp=E,5μm,0.2s								
CO02	**Combarbal**	**1.14**	**313**	*e*P		**Pn**		**18 29 35.0**	**+0.8**
CO02				*e*S		**Sn**		**18 29 53.0**	**+0.6**
CO02				IAML				18 29 54.4	
	comp=Z,3μm,0.4s								
CO02	**Combarbal**	**1.14**	**313**	⇑*e*P		**Pn**		**18 29 34.9**	**+0.6**
CO02				*e*S		**Sn**		**18 29 51.2**	**-1.3**
ZON	**Zonda**	**1.22**	**69**	*e*P		**Pn**		**18 29 35.2**	**+0.2**
ZON				*e*S		**Sn**		**18 29 52.9**	**-0.8**
ZON				IAML				18 29 52.9	
	comp=Z,568nm,0.2s								
ARCO	**CERRO ARCO**	**1.25**	**133**	*e*P		**Pn**		**18 29 36.6**	**+1.2**
ARCO				*e*S		**Sn**		**18 29 56.0**	**+1.4**
ARCO				IAML				18 29 57.8	
	comp=Z,1μm,0.3s								
CO03	**El Pedregal**	**1.28**	**333**	*e*P		**Pn**		**18 29 36.7**	**+1.1**
CO03				*e*S		**Sn**		**18 29 55.9**	**+1.0**
CO03				IAML				18 29 57.6	
	comp=Z,653nm,0.1s								
CO03	**El Pedregal**	**1.28**	**333**	⇑*e*P		**Pn**		**18 29 36.5**	**+0.8**
CO03				*e*S		**Sn**		**18 29 54.1**	**-0.8**
CO03				IAML				18 29 57.0	
	comp=E,2μm,0.4s								
PEL	**Peldehue**	**1.29**	**206**	*e*P		**Pn**		**18 29 35.9**	**+0.2**
PEL				*e*S		**Sn**		**18 29 55.1**	**+0.1**
PEL				IAML				18 29 56.0	
	comp=Z,450nm,0.3s								
PEL	**Peldehue**	**1.29**	**206**	*i* P		**Pn**		**18 29 35.6**	**-0.1**
PEL				*i* S		**Sn**		**18 29 53.7**	**-1.3**
PEL				IAML				18 29 56.2	
	comp=N,1μm,0.4s								
ROCH	**El Roble**	**1.29**	**220**	⇑*e*P		**Pn**		**18 29 36.2**	**+0.2**
ROCH				*e*S		**Sn**		**18 29 54.4**	**-1.1**
ROCH				IAML				18 29 56.9	
	comp=N,1μm,0.3s								
SJA	**San Juan**	**1.32**	**70**	*e*P		Pn		18 29 23.9	-12
SJA				IAML				18 29 57.2	
	comp=Z,1μm,0.3s								
MT10	**Hacienda Santa**	**1.36**	**199**	⇑*e*P		**Pn**		**18 29 37.5**	**+0.9**
MT10				*e*S		**Sn**		**18 29 56.9**	**+0.3**
MT10				IAML				18 29 58.2	
	comp=E,5μm,0.5s								
MT04	**Ro Olivares**	**1.42**	**184**	*e*P		**Pn**		**18 29 38.5**	**+1.2**
MT04				*e*S		**Sn**		**18 30 00.2**	**+2.2**
MT04	**Ro Olivares**	**1.42**	**184**	⇑*e*P		**Pn**		**18 29 38.3**	**+0.9**
MT04				*e*S		**Sn**		**18 29 58.1**	**+0.2**
MT04				IAML				18 30 04.6	
	comp=N,365nm,0.2s								
MT08	**Bocatoma Ro**	**1.46**	**180**	*e*P		**Pn**		**18 29 39.4**	**+1.6**
MT08				*e*S		**Sn**		**18 29 58.4**	**-0.3**
MT08	**Bocatoma Ro**	**1.46**	**180**	⇓*e*P		**Pn**		**18 29 39.1**	**+1.4**
MT08				*e*S		**Sn**		**18 29 59.0**	**+0.3**
RTLL	**Cerro Villicun**	**1.47**	**64**	*e*P		**Pn**		**18 29 37.9**	**+0.2**
RTLL				*e*S		**Sn**		**18 29 57.9**	**-0.6**
RTLL				IAML				18 29 58.5	
	comp=Z,2μm,0.5s								
MT14	**Cerro Cal¡n**	**1.47**	**197**	⇑*i*P		**Pn**		**18 29 38.5**	**+0.7**
MT14				*i* S		**Sn**		**18 29 58.9**	**+0.1**
MT14				IAML				18 30 04.0	
	comp=E,1μm,0.4s								
AAGR	**Agrelo**	**1.49**	**138**	*e*P		**Pn**		**18 29 39.3**	**+1.4**
AAGR				*e*S		**Sn**		**18 29 59.9**	**+0.8**
AAGR				IAML				18 30 01.3	
	comp=Z,305nm,0.4s								
MT16	**CCHEN**	**1.50**	**196**	⇑*e*P		**Pn**		**18 29 38.9**	**+0.8**
MT16				*e*S		**Sn**		**18 29 59.5**	**+0.2**
MT16				IAML				18 30 03.8	
	comp=E,676nm,0.5s								
MT05	**Renca**	**1.53**	**203**	*e*P		**Pn**		**18 29 39.3**	**+0.9**
MT05				*e*S		**Sn**		**18 30 00.8**	**+1.0**
MT05				IAML				18 30 01.2	
	comp=Z,674nm,0.3s								
MT05	**Renca**	**1.53**	**203**	*e*P		**Pn**		**18 29 39.2**	**+0.8**
MT05				*e*S		**Sn**		**18 29 58.7**	**-1.2**
MT05				IAML				18 30 01.3	
	comp=E,3μm,0.5s								
CFA	**Coronel Fontan**	**1.56**	**76**	*e*P		**Pn**		**18 29 38.8**	**0.0**
CFA				*e*S		**Sn**		**18 29 59.7**	**-0.7**
CFA				IAML				18 30 00.3	
	comp=Z,1μm,0.3s								
MT02	**Curacav**	**1.58**	**216**	*e*P		**Pn**		**18 29 39.1**	**+0.1**
MT02				*e*S		**Sn**		**18 30 00.6**	**-0.3**
MT02	**Curacav**	**1.58**	**216**	*i* P		**Pn**		**18 29 38.9**	**-0.1**
MT02				*i* S		**Sn**		**18 30 00.1**	**-0.8**
MT02				IAML				18 30 03.0	
	comp=E,331nm,0.3s								
ACCO	**Cerro Coronel**	**1.61**	**31**	*e*P		**Pn**		**18 29 40.8**	**+1.1**
ACCO				*e*S		**Sn**		**18 30 02.8**	**+0.8**
ACCO				IAML				18 30 04.0	
	comp=Z,598nm,0.5s								
MT15	**Las Vizcachas**	**1.66**	**194**	⇓*i*P		**Pn**		**18 29 41.0**	**+1.1**
MT15				*i* S		**Sn**		**18 30 02.6**	**0.0**
MT15				IAML				18 30 05.2	
	comp=E,2μm,0.3s								
MT13	**San Alfonso**	**1.77**	**187**	*e*P		**Pn**		**18 29 42.6**	**+1.3**
MT13				*e*S		**Sn**		**18 30 07.0**	**+2.1**
MT13				IAML				18 30 08.8	
	comp=Z,327nm,0.2s								
MT13	**San Alfonso**	**1.77**	**187**	⇑*e*P		**Pn**		**18 29 42.5**	**+1.3**
MT13				*e*S		**Sn**		**18 30 04.8**	**-0.1**
MT13				IAML				18 30 09.9	
	comp=E,582nm,0.2s								
MT12	**Pirque**	**1.80**	**194**	⇓*e*P		**Pn**		**18 29 42.7**	**+1.1**
MT12				*e*S		**Sn**		**18 30 05.7**	**+0.1**
MT12				IAML				18 30 08.0	
	comp=E,2μm,0.5s								
LMEL	**Las Melosas**	**1.86**	**185**	⇑*e*P		**Pn**		**18 29 43.9**	**+1.4**
LMEL				*e*S		**Sn**		**18 30 07.0**	**-0.1**
LMEL				IAML				18 30 13.0	
	comp=E,426nm,0.2s								
AROD	**Rodeo**	**1.87**	**15**	*e*P		**Pn**		**18 29 45.2**	**+2.5**
AROD				*e*S		**Sn**		**18 30 04.0**	**-3.5**
CO06	**Fray Jorge**	**1.90**	**313**	*i* P		**Pn**		**18 29 42.9**	**+0.1**
CO06				*i* S		**Sn**		**18 30 06.5**	**-1.1**
CO06				IAML				18 30 13.5	
	comp=E,522nm,0.2s								
GO04	**Tololo Observa**	**1.93**	**339**	*e*P		**Pn**		**18 29 44.6**	**+1.3**
GO04				*e*S		**Sn**		**18 30 09.9**	**+1.4**
GO04				IAML				18 30 12.0	
	comp=Z,438nm,0.2s								
GO04	**Tololo Observa**	**1.93**	**339**	*e*P		**Pn**		**18 29 44.4**	**+1.1**
GO04				*e*S		**Sn**		**18 30 09.0**	**+0.5**
GO04				IAML				18 30 11.1	
	comp=N,1μm,0.4s								
AVIZ

	comp=Z,6.2nm,0.8s								
MORE	**Moreh**	**20.49**	**5**	P	**P**	**18 35 12.9**	**-3.0**
MORE				IAmb	IAmb	18 35 31.3	
	comp=Z,11nm,0.7s								
SLVN	**Son La**	**20.78**	**32**	P	**P**	**18 35 18.7**	**-0.5**
SLVN				IAmb	IAmb	18 35 34.0	
	comp=Z,9.7nm,1.1s								
KKM	**Kota Kinabalu**	**23.83**	**83**	P	**P**	**18 35 52.8**	**+1.4**
KKM				IAmb	IAmb	18 35 56.4	
	comp=Z,12nm,1.2s								
LSA	**Lhasa**	**25.88**	**357**	P	**P**	**18 36 07.3**	**-3.1**
LSA				IAmb	IAmb	18 36 39.4	
	comp=Z,3.7nm,0.6s								
MYLDM	**Lahad Datu**	**26.05**	**86**	P	**P**	**18 36 12.0**	**+0.4**
DAV	**Davao City (W)**	**33.18**	**83**	LR	LR	18 52 59.0	
	comp=Z,43nm,18.4s,baz=208,slow=41								
FITZ	**Fitzroy Crossi**	**39.27**	**125**	LR	LR	18 56 49.0	
	comp=Z,67nm,18.2s,baz=0.5,slow=40								
BTK	**Batken**	**41.11**	**335**	P	**P**	**18 38 23.2**	**+1.1**
AAK	**Ala-Archa**	**41.92**	**340**	LR	LR	18 58 19.3	
	comp=Z,55nm,19.6s,baz=158,slow=40								
KKAR	**Karatay Array**	**43.78**	**337**	P	**P**	**18 38 44.0**	**+0.3**
MKAR	**Makanchi Array**	**43.80**	**350**	P	**P**	**18 38 44.7**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=172,slow=8.7,SNR=11								
MKAR				LR	LR	18 59 45.7	
	comp=Z,29nm,19.7s,baz=150,slow=40								
	comp=Z,0.6nm,0.5s								
MKAR	**Makanchi Array**	**43.80**	**350**	P	**P**	**18 38 43.1**	**-0.7**
SONM	**Songino Array**	**45.58**	**13**	P	**P**	**18 38 59.0**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=194,slow=10.0,SNR=5.7								
SONM				LR	LR	18 58 53.9	
	comp=Z,61nm,20.3s,baz=192,slow=37								
	comp=Z,0.7nm,0.6s								
SONM	**Songino Array**	**45.58**	**13**	P	**P**	**18 38 58.3**	**+0.1**
SONM				IAmb	IAmb	18 39 06.1	
	comp=Z,1.1nm,1.0s								
JNU	**Nakatsue**	**46.32**	**46**	LR	LR	18 59 23.4	
	comp=Z,31nm,19.3s,baz=257,slow=37								
KSRS	**Korea Array**	**46.73**	**39**	LR	LR	18 59 10.6	
	comp=Z,40nm,19.4s,baz=205,slow=37								
WRA	**Warramunga Arr**	**47.42**	**121**	P	**P**	**18 39 11.6**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=297,slow=7.8,SNR=2.7								
	comp=Z,0.3nm,0.7s								
WRA	**Warramunga Arr**	**47.42**	**121**	IAmb	IAmb	18 39 19.1	
	comp=Z,0.1nm,1.1s								
KURBB	**Kurchatov Arra**	**48.19**	**348**	P	**P**	**18 39 19.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=159,slow=6.1,SNR=4.8								
	comp=Z,0.6nm,0.5s								
KURK	**Kurchatov**	**48.26**	**348**	P	**P**	**18 39 19.1**	**+0.3**
KURK	**Kurchatov**	**48.26**	**348**	IAmb	IAmb	18 39 22.2	
	comp=Z,1.2nm,0.5s								
TLY	**Talaya**	**48.72**	**9**	LR	LR	19 01 51.2	
	comp=Z,38nm,19.2s,baz=178,slow=38								
ASAR	**Alice Springs**	**48.72**	**126**	P	**P**	**18 39 21.7**	**-1.3**
	comp=Z,0.5nm,1.1s,baz=302,slow=8.4,SNR=1.7								
	comp=Z,0.5nm,1.1s								
ZALV	**Zalesovo Beam**	**50.46**	**354**	P	**P**	**18 39 36.9**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=186,slow=8.2,SNR=8.9								
	comp=Z,1.7nm,0.5s								
JGF	**Kuroka**	**52.20**	**47**	P	**P**	**18 39 49.0**	**-0.1**
JGF				IAmb	IAmb	18 40 25.2	
	comp=Z,5.3nm,1.0s								
BVAR	**Borovoye Array**	**52.41**	**343**	P	**P**	**18 39 50.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=168,slow=7.4,SNR=2.8								
	comp=Z,0.5nm,0.5s								
FOMA	**Nahampoana Res**	**52.52**	**235**	P	**P**	**18 39 50.7**	**-0.8**
GUMO	**Guam**	**52.68**	**76**	LR	LR	19 02 47.2	
	comp=Z,11nm,19.5s,baz=293,slow=37								
JHJ	**Hachijo jima 2**	**52.98**	**51**	LR	LR	19 03 41.6	
	comp=Z,22nm,18.7s,baz=22,slow=38								
MJAR	**Matsushiro Arr**	**53.24**	**46**	P	**P**	**18 39 57.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=239,slow=5.1,SNR=4.9								
MJAR				LR	LR	19 03 52.0	
	comp=Z,34nm,18.9s,baz=230,slow=38								
	comp=Z,0.4nm,0.5s								
MJAR	**Matsushiro Arr**	**53.24**	**46**	P	**P**	**18 39 56.2**	**-0.6**
MJAR				IAmb	IAmb	18 40 24.4	
	comp=Z,2.2nm,1.4s								
LSZ	**Lusaka**	**66.30**	**252**	LR	LR	19 05 17.0	
	comp=Z,36nm,19.3s,baz=130,slow=31								
MATP	**Matopo**	**67.09**	**246**	LR	LR	19 07 12.4	
	comp=Z,35nm,19.9s,baz=62,slow=33								
AKASG	**Malin Array Be**	**70.37**	**323**	LR	LR	19 16 41.5	
	comp=Z,15nm,18.0s,baz=152,slow=39								
LBTB	**Lobatse**	**70.77**	**242**	LR	LR	19 12 24.5	
	comp=Z,22nm,18.2s,baz=88,slow=35								
FINES	**FINESS Array B**	**75.59**	**333**	P	**P**	**18 42 22.4**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=159,slow=4.3,SNR=1.6								
	comp=Z,0.8nm,0.9s								
FINES	**FINESS Array B**	**75.59**	**333**	P	**P**	**18 42 22.3**	**-0.3**
OJC	**Ojcow**	**76.06**	**321**	P	**P**	**18 42 26.7**	**+1.1**
ARCES	**ARCESS Array B**	**78.59**	**341**	LR	LR	19 21 17.6	
	comp=Z,36nm,18.6s,baz=100,slow=39								
GERES	**GERESS Array B**	**79.78**	**319**	P	**P**	**18 42 47.8**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=103,slow=4.8,SNR=17								
	comp=Z,1.7nm,0.7s								
HFS	**Hagfors**	**81.18**	**330**	LR	LR	19 21 31.9	
	comp=Z,16nm,20.3s,baz=125,slow=38								
DAVOX	**Davos/Dischmat**	**82.19**	**317**	P	**P**	**18 43 00.1**	**+0.6**
	comp=Z,2.8nm,0.5s,baz=121,slow=5.9,SNR=4.6								
	comp=Z,2.8nm,0.5s								
NOA	**NORSAR Array B**	**82.50**	**331**	LR	LR	19 23 05.1	
	comp=Z,21nm,19.5s,baz=90,slow=38								
SPITS	**Spitsbergen Ar**	**83.54**	**348**	LR	LR	19 24 55.3	
	comp=Z,22nm,20.7s,baz=119,slow=39								
EKA	**Eskdalemuir Ar**	**90.15**	**325**	P	**P**	**18 43 39.3**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=93,slow=4.3,SNR=1.9								
	comp=Z,0.4nm,0.5s								

NAO ***20*** *18:33:11.8,39˚.07N×24˚.47E,h10km,MB3.8*
IDC ***20*** *18:33:18.8±1.2,38˚.75N×21˚.68E,h53km±13km,mb3.8/16, mbtmp4.0/28,MS2.7/4, Error ellipse: s-maj=10.7km s-min=9.7km az=39.0*
BEO ***20*** *18:33:19.2±1.9,38˚.63N×21˚.49E,h36km±9km,ML3.8/16*
NEIC ***20*** *18:33:20.4±1.6,38˚.83N±0˚.04×21˚.65E±0˚.07,h59km±7km, mb4.2/17, Error ellipse: s-maj=8.3km s-min=5.7km az=76.0*
GFZ ***20*** *18:33:21.1±0.2,39˚.N×2˚.×2˚.2E±˚, h68km±6km,M4.2/13, mb4.4/13*
THE ***20*** *18:33:21.9,38˚.8N±1˚.0×21˚.7E±0˚.8,h59km±1km,M4.0/28, MLh4.0/28*
ATH ***20*** *18:33:21.1,38˚.80N×21˚.67E,h64km±1km,ML4.1/30, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
SOF ***20*** *18:33:22.9,38˚.9N±0˚.3×22˚.1E±0˚.2, h18km±54km,MD4.2/8*
PDG ***20*** *18:33:22.7±0.4,38˚.78N×21˚.66E,h54km±1km,ML4.1/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

ISC 20 18:33:20.5±0.5,38˚.80N±0˚.03×21˚.63E±0˚.02,h69km±4km, n387,σ1ǂ84/463,mb4.1/20,16C-13D,Greece

Code	Station Name	Δ°	AZ°	Op	Phase ID	ISC	Time h m s	Res
EVR	**Evrytania**	**0.18**	**49**	P		**Pn**	**18 33 31.3**	**+0.2**
EVR				S		**Sn**	**18 33 38.2**	**-0.6**
EVR	**Evrytania**	**0.18**	**49**	P		**Pn**	**18 33 31.1**	**+0.1**
EVR				S		**Sn**	**18 33 37.8**	**-1.0**
PVO	**Paravola**	**0.20**	**205**	P		**Pn**	**18 33 31.0**	**0.0**
PVO				S		**Sn**	**18 33 38.3**	**-0.3**
PVO	**Paravola**	**0.20**	**205**	P		**Pn**	**18 33 31.0**	**0.0**
PVO				S		**Sn**	**18 33 37.6**	**-1.0**
ANX	**Ano Chora**	**0.30**	**132**	P		**Pn**	**18 33 31.7**	**-0.1**
ANX				S		**Sn**	**18 33 39.4**	**-0.5**
ANX	**Ano Chora**	**0.30**	**132**	P		**Pn**	**18 33 31.6**	**-0.1**
ANX				S		**Sn**	**18 33 39.4**	**-0.5**
AMPL	**Ampelaki**	**0.35**	**291**	P		**Pn**	**18 33 32.4**	**+0.4**
AMPL				S		**Sn**	**18 33 40.6**	**+0.3**
AMPL	**Ampelaki**	**0.35**	**291**	P		**Pn**	**18 33 32.3**	**+0.4**
AMPL				S		**Sn**	**18 33 40.3**	**0.0**
AGRP	**Agrapidokambos**	**0.41**	**170**	P		**Pn**	**18 33 32.2**	**-0.2**
AGRP				S		**Sn**	**18 33 40.9**	**-0.2**
EFP	**Efpalio**	**0.43**	**150**	P		**Pn**	**18 33 32.6**	**+0.1**
EFP				S		**Sn**	**18 33 41.2**	**-0.1**
EFP	**Efpalio**	**0.43**	**150**	P		**Pn**	**18 33 32.5**	**-0.1**
EFP				S		**Sn**	**18 33 41.4**	**0.0**
MSL1	**Messolongi**	**0.45**	**201**	P		**Pn**	**18 33 33.0**	**+0.2**
MG00	**Magoula, Dorid**	**0.46**	**147**	P		**Pn**	**18 33 32.8**	**0.0**
MG00				S		**Sn**	**18 33 41.8**	**0.0**
PYRG	**Pyrgos, Dorida**	**0.49**	**142**	P		**Pn**	**18 33 33.2**	**0.0**
PYRG				S		**Sn**	**18 33 42.4**	**-0.1**
AST1	**Astakos**	**0.50**	**239**	P		**Pn**	**18 33 33.7**	**+0.6**
AST1				S		**Sn**	**18 33 43.0**	**+0.5**
SERG	**Sergoula**	**0.51**	**139**	P		**Pn**	**18 33 33.5**	**+0.2**
SERG				S		**Sn**	**18 33 42.2**	**-0.5**
SERG	**Sergoula**	**0.51**	**139**	P		**Pn**	**18 33 33.4**	**+0.1**
SERG				S		**Sn**	**18 33 42.8**	**0.0**
RIOA	**Rio**	**0.52**	**166**	P		**Pn**	**18 33 33.8**	**+0.4**
RIOA				S		**Sn**	**18 33 43.1**	**+0.3**
UPR	**University Cam**	**0.53**	**167**	P		**Pn**	**18 33 34.0**	**+0.5**
UPR				S		**Sn**	**18 33 44.0**	**+1.0**
UPR	**University Cam**	**0.53**	**167**	P		**Pn**	**18 33 33.8**	**+0.3**
PATC	**Patra C**	**0.54**	**169**	P		**Pn**	**18 33 34.1**	**+0.5**
PATG	**Patra B**	**0.56**	**172**	P		**Pn**	**18 33 34.7**	**+0.8**
KALE	**Kalithea**	**0.57**	**135**	P		**Pn**	**18 33 34.2**	**+0.2**
KALE				S		**Sn**	**18 33 43.5**	**-0.4**
KALE	**Kalithea**	**0.57**	**135**	P		**Pn**	**18 33 34.2**	**+0.2**
KALE				S		**Sn**	**18 33 44.0**	**+0.1**
AGG	**Agios Georgios**	**0.59**	**67**	P		**Pn**	**18 33 34.2**	**0.0**
AGG				S		**Sn**	**18 33 43.4**	**-0.8**
AGG	**Agios Georgios**	**0.59**	**67**	P		**Pn**	**18 33 34.3**	**0.0**
AGG	**Agios Georgios**	**0.59**	**67**	P		**Pn**	**18 33 34.2**	**0.0**
AGG				S		**Sn**	**18 33 43.5**	**-0.7**
ART2	**Arta**	**0.61**	**305**	P		**Pn**	**18 33 35.3**	**+0.9**
TETR	**Tetrakomo, Epi**	**0.61**	**333**	P		**Pn**	**18 33 35.8**	**+1.3**
TETR				S		**Sn**	**18 33 45.2**	**+0.4**
TETR	**Tetrakomo, Epi**	**0.61**	**333**	P		**Pn**	**18 33 35.8**	**+1.3**
ARTB	**Arta**	**0.62**	**305**	P		**Pn**	**18 33 35.7**	**+1.3**
PSARO	**Psaromita, Dor**	**0.63**	**137**	P		**Pn**	**18 33 35.2**	**+0.6**
LAM2	**Lamia**	**0.63**	**80**	P		**Pn**	**18 33 34.5**	**-0.1**
SOFA	**Sofades**	**0.65**	**34**	P		**Pn**	**18 33 35.9**	**+1.1**
TEME	**Temeni, Aigial**	**0.68**	**146**	P		**Pn**	**18 33 35.8**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.73**	**264**	P		**Pn**	**18 33 36.4**	**+0.7**
NYDR				S		**Sn**	**18 33 47.7**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.73**	**264**	P		**Pn**	**18 33 36.3**	**+0.6**
DLFA	**Delphi**	**0.75**	**115**	P		**Pn**	**18 33 36.1**	**+0.2**
RLS	**Riolos of Patr**	**0.75**	**190**	P		**Pn**	**18 33 36.7**	**+0.7**
RLS				S		**Sn**	**18 33 49.3**	**+2.0**
RLS	**Riolos of Patr**	**0.75**	**190**	P		**Pn**	**18 33 36.6**	**+0.7**
LKD2	**Lefkada island**	**0.76**	**270**	P		**Pn**	**18 33 37.1**	**+1.0**
LKD2				S		**Sn**	**18 33 49.3**	**+1.7**
LKD2	**Lefkada island**	**0.76**	**270**	P		**Pn**	**18 33 37.2**	**+1.2**
LKD2	**Lefkada island**	**0.76**	**270**	P		**Pn**	**18 33 36.8**	**+0.8**
TSLK	**Tsoukalades, L**	**0.76**	**272**	P		**Pn**	**18 33 37.2**	**+1.1**
TSLK				S		**Sn**	**18 33 49.7**	**+2.2**
TSLK	**Tsoukalades, L**	**0.76**	**272**	P		**Pn**	**18 33 36.9**	**+0.8**
EVGI	**Lefkada island**	**0.78**	**257**	P		**Pn**	**18 33 37.0**	**+0.7**
AXAR	**Agios Charalam**	**0.80**	**92**	P		**Pn**	**18 33 36.7**	**+0.1**
AXAR				S		**Sn**	**18 33 48.2**	**-0.2**
AXAR	**Agios Charalam**	**0.80**	**92**	P		**Pn**	**18 33 36.7**	**+0.1**
THL	**Klokotos Trika**	**0.82**	**21**	P		**Pn**	**18 33 37.6**	**+0.8**
THL				S		**Sn**	**18 33 50.2**	**+1.5**
THL	**Klokotos Trika**	**0.82**	**21**	P		**Pn**	**18 33 37.5**	**+0.8**
PRMD	**Pramanda**	**0.84**	**331**	P		**Pn**	**18 33 39.0**	**+1.9**
PRMD	**Pramanda**	**0.84**	**331**	P		**Pn**	**18 33 38.0**	**+0.9**
DRO	**Drossia**	**0.85**	**176**	P		**Pn**	**18 33 37.6**	**+0.5**
DRO				S		**Sn**	**18 33 50.3**	**+1.0**
DRO	**Drossia**	**0.85**	**176**	P		**Pn**	**18 33 37.2**	**+0.1**
KLV1	**Kalavrita**	**0.85**	**154**	P		**Pn**	**18 33 37.6**	**+0.5**
KLV	**Kalavryta, Ach**	**0.86**	**151**	P		**Pn**	**18 33 37.8**	**+0.5**
KLV				S		**Sn**	**18 33 50.4**	**+0.7**
KLV	**Kalavryta, Ach**	**0.86**	**151**	P		**Pn**	**18 33 37.2**	**-0.1**
FSK	**Fiskardo**	**0.90**	**248**	P		**Pn**	**18 33 37.9**	**+0.1**
FSK				S		**Sn**	**18 33 50.9**	**+0.4**
FSK	**Fiskardo**	**0.90**	**248**	P		**Pn**	**18 33 37.8**	**+0.1**
RTZL	**Ratzakli, Kefa**	**0.99**	**223**	P		**Pn**	**18 33 39.1**	**+0.3**
RTZL				S		**Sn**	**18 33 53.3**	**+1.0**
RTZL	**Ratzakli, Kefa**	**0.99**	**223**	P		**Pn**	**18 33 38.9**	**+0.1**
GUR	**Goura**	**1.02**	**147**	P		**Pn**	**18 33 39.4**	**0.0**
GUR				S		**Sn**	**18 33 53.4**	**+0.1**
GUR	**Goura**	**1.02**	**147**	P		**Pn**	**18 33 39.3**	**-0.1**
TYRN	**Tyrnavos**	**1.02**	**27**	P		**Pn**	**18 33 39.8**	**+0.6**
TYRN				S		**Sn**	**18 33 54.8**	**+0.6**
TYRN	**Tyrnavos**	**1.02**	**27**	P		**Pn**	**18 33 39.5**	**+0.2**
VLS	**Valsamata**	**1.03**	**233**	P		**Pn**	**18 33 39.3**	**0.0**
VLS				S		**Sn**	**18 33 53.7**	**+0.4**
JAN	**Janina**	**1.05**	**325**	P		**Pn**	**18 33 41.5**	**+1.8**
JAN				S		**Sn**	**18 33 56.1**	**+2.2**
JAN	**Janina**	**1.05**	**325**	P		**Pn**	**18 33 41.0**	**+1.3**
LKR	**Lokris**	**1.08**	**97**	P		**Pn**	**18 33 39.5**	**-0.4**
LKR				S		**Sn**	**18 33 53.8**	**-0.6**
LKR	**Lokris**	**1.08**	**97**	P		**Pn**	**18 33 39.6**	**-0.4**
ATAL	**Atalanti**	**1.09**	**95**	P		**Pn**	**18 33 39.8**	**-0.3**
ATAL				S		**Sn**	**18 33 54.0**	**-0.8**
ATAL	**Atalanti**	**1.09**	**95**	P		**Pn**	**18 33 40.1**	**0.0**
THAL	**Thalero**	**1.11**	**133**	P		**Pn**	**18 33 40.2**	**-0.1**
THAL				S		**Sn**	**18 33 54.3**	**-0.8**
IGT	**Igoumenitsa**	**1.25**	**306**	*e*Pg		**Pn**	**18 33 42.9**	**+0.8**
IGT				*e*Sg		**Sn**	**18 33 59.8**	**+1.5**
LTK	**Loutraki**	**1.30**	**126**	P		**Pn**	**18 33 42.8**	**0.0**
NEOK	**Neokhori**	**1.34**	**67**	P		**Pn**	**18 33 43.3**	**+0.2**
XOR	**Xorichti**	**1.34**	**64**	P		**Pn**	**18 33 43.4**	**0.0**
VIL2	**Platees**	**1.41**	**114**	P		**Pn**	**18 33 44.7**	**+0.4**
ITM	**Ithomi**	**1.63**	**172**	*e*P		**Pn**	**18 33 48.3**	**+1.1**
ITM	**Ithomi**	**1.63**	**172**			**Pn**	**18 33 48.3**	**+1.1**
ITM	**Ithomi**	**1.63**	**172**	P		**Pn**	**18 33 49.1**	**+1.8**
SRN	**Sarande**	**1.66**	**311**	P		**Pn**	**18 33 48.7**	**+1.1**
KEK	**Kerkira**	**1.69**	**303**	*e*P		**Pn**	**18 33 48.0**	**+0.1**
KEK	**Kerkira**	**1.69**	**303**			**Pn**	**18 33 47.9**	**-0.1**
KEK	**Kerkira**	**1.69**	**303**	P		**Pn**	**18 33 48.1**	**+0.1**
KBN	**Korca**	**1.94**	**341**	P		**Pn**	18 33 55.8	+4.4
PAIG	**Paliouri**	**1.95**	**54**	P		**Pn**	**18 33 51.2**	**-0.2**
THE	**Thessaloniki**	**2.10**	**29**	P		**Pn**	**18 33 54.5**	**+1.1**
GRG	**Griva**	**2.24**	**15**	P		**Pn**	**18 33 56.5**	**+1.1**
VLO	**Vlora**	**2.35**	**316**	P		**Pn**	**18 33 58.3**	**+1.5**
OUR	**Ouranopolis**	**2.38**	**49**	*e*P		**Pn**	**18 33 56.9**	**-0.3**
OHR	**Ohrid**	**2.40**	**345**	*i* Pn		**Pn**	**18 33 59.7**	**+2.1**
OHR				*i* Sn		**Sn**	**18 34 29.3**	**+3.4**
SOH	**Sokhos**	**2.42**	**33**	P		**Pn**	**18 33 59.2**	**+1.3**
KNT	**Kendrikon**	**2.55**	**22**	P		**Pn**	**18 34 02.1**	**+2.5**
VAY	**Valandovo**	**2.62**	**16**	*i* Pn		**Pn**	**18 34 03.0**	**+2.4**
SRS	**Serrai**	**2.76**	**32**	*e*Pn		**Pn**	**18 34 03.1**	**+0.6**
SRS	**Serrai**	**2.76**	**32**	P		**Pn**	**18 34 03.5**	**+1.1**
KTHA	**Kythira Island**	**2.78**	**155**	*e*P		**Pn**	**18 34 03.4**	**+0.7**
KTHA	**Kythira Island**	**2.78**	**155**	P		**Pn**	**18 34 04.8**	**+2.1**
MMB	**Musomishta**	**3.19**	**30**	P		**Pn**	**18 34 09.4**	**+1.1**
MMB				S		**Sn**	**18 34 45.4**	**+0.2**
KKB	**Krupnik**	**3.25**	**20**	P		**Pn**	**18 34 10.4**	**+1.3**
KKB				S		**Sn**	**18 34 47.8**	**+1.2**
CHOS	**Chios island**	**3.49**	**95**	*e*P		**Pn**	**18 34 12.9**	**+0.5**
CHOS	**Chios island**	**3.49**	**95**	P		**Pn**	**18 34 13.5**	**+1.1**
GADA	**Gvkgeada**	**3.58**	**66**	*e*P		**Pn**	**18 34 13.9**	**+0.3**
BOZC	**Bozcaada**	**3.58**	**72**	*e*P		**Pn**	**18 34 14.4**	**+0.8**
ULC	**Ulcinj**	**3.65**	**331**	*e*Pn		**Pn**	**18 34 14.8**	**+0.2**
ULC				*i* Sn		**Sn**	**18 34 55.1**	**-1.3**
RZN	**Rozhen**	**3.75**	**38**	P		**Pn**	**18 34 16.5**	**+0.8**
BOSS	**Bosilegrad**	**3.75**	**10**	*e*Pn		**Pn**	**18 34 16.0**	**+2.1**
EZN	**Ezine**	**3.78**	**73**	*e*P		**Pn**	**18 34 16.7**	**+0.4**
RDO	**Rodhopi**	**3.81**	**51**	*e*P		**Pn**	**18 34 16.8**	**+0.1**
RDO	**Rodhopi**	**3.81**	**51**			**Pn**	**18 34 16.6**	**-0.1**
RDO	**Rodhopi**	**3.81**	**51**	P		**Pn**	**18 34 16.8**	**+0.1**
TIP	**Timpagrande**	**3.82**	**277**	ǁP		**Pn**	**18 34 17.0**	**+0.1**
TIP				ǁS		**Sn**	**18 34 58.3**	**-2.3**
TIP	**Timpagrande**	**3.82**	**277**			**Pn**	**18 34 17.1**	**+0.2**
TIP	**Timpagrande**	**3.82**	**277**	P		**Pn**	**18 34 17.4**	**+0.5**
IMMV	**Iera Moni Meta**	**3.82**	**150**	*e*P		**Pn**	**18 34 17.4**	**+0.5**
IMMV	**Iera Moni Meta**	**3.82**	**150**	P		**Pn**	**18 34 17.3**	**+0.4**
DRME	**Dracevica, Mon**	**3.87**	**332**	*e*Pn		**Pn**	**18 34 18.3**	**+0.8**
DRME				*i* Sn		**Sn**	**18 35 00.4**	**-1.3**
KNDR	**Palaiochora Ch**	**3.90**	**155**	*e*P		**Pn**	**18 34 18.2**	**+0.3**
PLNA	**Plana**	**3.92**	**20**	P		**Pn**	**18 34 21.1**	**+2.8**
COMU	**Canakkale**	**3.97**	**69**	*e*P		**Pn**	**18 34 19.4**	**+0.5**
CAVK	**Edirne/Enez-Ca**	**3.98**	**60**	ǁP		**Pn**	**18 34 21.1**	**+2.1**
ENEZ	**Enez**	**3.99**	**60**	*e*P		**Pn**	**18 34 19.9**	**+0.8**
ALN	**Alexandroupoli**	**3.99**	**57**	*e*P		**Pn**	**18 34 19.4**	**+0.2**
ALN	**Alexandroupoli**	**3.99**	**57**			**Pn**	**18 34 19.0**	**-0.2**
ALN	**Alexandroupoli**	**3.99**	**57**	P		**Pn**	**18 34 19.7**	**+0.5**
PVY	**Plav**	**4.00**	**342**	*e*Pn		**Pn**	**18 34 20.0**	**+0.5**
PVY				*i* Sn		**Sn**	**18 35 03.5**	**-1.6**
VTS	**Vitosha**	**4.01**	**17**	P		**Pn**	**18 34 22.2**	**+2.6**
VTS				S		**Sn**	**18 35 05.8**	**+0.5**
KDZ	**Kurdzhali**	**4.01**	**44**	P		**Pn**	**18 34 19.9**	**+0.5**
KDZ				S		**Sn**	**18 35 03.3**	**-1.8**
KDZ	**Kurdzhali**	**4.01**	**44**	*e*P		**Pn**	**18 34 20.0**	**+0.5**
BARS	**Barje**	**4.02**	**2**	*e*Pn		**Pn**	**18 34 20.4**	**+0.8**
PDG	**Podgorica**	**4.05**	**334**	ǁP		**Pn**	**18 34 20.6**	**+0.5**
PDG	**Podgorica**	**4.05**	**334**	Pn		**Pn**	**18 34 19.3**	**-0.7**
PDG						**Sn**	**18 35 05.2**	**-1.1**
PDG	**Podgorica**	**4.05**	**334**	*e*Pn		**Pn**	**18 34 20.1**	**+0.1**
PDG	**Podgorica**	**4.05**	**334**	*e*Pn		**Pn**	**18 34 19.1**	**-0.9**
PDG	**Podgorica**	**4.05**	**334**	*e*Pn		**Pn**	**18 34 20.5**	**+0.5**
PDG				*i* Sn		**Sn**	**18 35 05.2**	**-1.1**
GELI	**Tayfur-Gelibol**	**4.07**	**65**	*e*P		**Pn**	**18 34 20.3**	**+0.1**
BUM	**Brajici-Budva**	**4.07**	**330**	*e*Pn		**Pn**	**18 34 20.2**	**-0.2**
BUM				*i* Sn		**Sn**	**18 35 05.5**	**-1.3**
DKL	**Dikili**	**4.12**	**85**	*e*P		**Pn**	**18 34 21.9**	**+0.9**
ERIK	**Erikli-Kesan**	**4.20**	**62**	*e*P		**Pn**	**18 34 21.7**	**-0.4**
MATE	**Matera**	**4.23**	**298**	ǁP		**Pn**	**18 34 21.9**	**-0.4**
MATE	**Matera**	**4.23**	**298**	P		**Pn**	**18 34 22.6**	**+0.2**
BLSH	**Balsha**	**4.24**	**17**	P		**Pn**	**18 34 26.3**	**+3.6**
BLCB	**Balcova**	**4.26**	**94**	*e*P		**Pn**	**18 34 24.2**	**+1.3**
CEME	**Cevo**	**4.28**	**332**	*e*Pn		**Pn**	**18 34 23.2**	**0.0**
CEME				*i* Sn		**Sn**	**18 35 10.1**	**-1.7**
IVA	**Berane**	**4.28**	**343**	*e*Pn		**Pn**	**18 34 23.5**	**+0.3**
IVA				*i* Sn		**Sn**	**18 35 10.2**	**-1.7**
KOME	**Kolasin**	**4.36**	**339**	*e*Pn		**Pn**	**18 34 24.9**	**+0.6**
KOME				*i* Sn		**Sn**	**18 35 12.0**	**-1.8**
HCY	**Herceg Novi**	**4.36**	**328**	*e*Pn		**Pn**	**18 34 23.1**	**-1.1**
HCY	**Herceg Novi**	**4.36**	**328**	*e*Pn		**Pn**	**18 34 23.8**	**-0.4**
HCY				*i* Sn		**Sn**	**18 35 11.1**	**-2.6**
IDI	**Anoyia**	**4.37**	**142**	P		**Pn**	**18 34 23.1**	**-1.3**
	24nm,0.3s,baz=225,slow=4.3,SNR=80								
IDI					S	**Sn**	**18 35 10.5**	**-3.5**
	61nm,0.2s,baz=86,slow=21,SNR=9.3								
IDI	**Anoyia**	**4.37**	**142**	*e*P		**Pn**	**18 34 23.9**	**-0.5**
IDI	**Anoyia**	**4.37**	**142**			**Pn**	**18 34 23.0**	**-1.4**
CANM	**Can-anakkale**	**4.37**	**72**	*e*P		**Pn**	**18 34 25.1**	**+0.7**
GVD	**Gavdhos**	**4.41**	**153**	*e*P		**Pn**	**18 34 25.4**	**+0.4**
DIM	**Dimitrovgrad**	**4.43**	**42**	P		**Pn**	**18 34 26.2**	**+1.1**
SELS	**Selova**	**4.43**	**355**	*e*Pn		**Pn**	**18 34 25.4**	**+0.1**
NKME	**Niksic**	**4.46**	**334**	*e*Pn		**Pn**	**18 34 26.3**	**+0.7**
NKME				*i* Sn		**Sn**	**18 35 14.7**	**-1.5**

BRTR	Keskin Array B	9.36	81			Pn		18 35 35.2	+2.5
VSL	Villasalto	9.55	278		Pn	Pn		18 35 34.5	-0.7
ARSA	Arzberg	9.56	334	*e*Pn		Pn		18 35 35.3	0.0
	1.0nm,0.4s								
ARSA				*e*Sn		Sn		18 37 15.8	-5.1
	2.2nm,0.5s								
RONA	Rosalia, Austr	9.71	338	*e*Pn		Pn		18 35 37.2	-0.1
	0.4nm,0.3s								
RONA				*e*Sn		Sn		18 37 22.1	-2.6
	3.2nm,0.3s								
ACOM	Acomizza, Ital	9.78	325	P		Pn		18 35 40.5	+2.0
MYKA	Terra Mystica	9.79	326	*i* Pn		Pn		18 35 38.7	+0.3
	0.4nm,0.2s								
MYKA				*e*Sn		Sn		18 37 20.3	-6.3
	2.5nm,0.3s								
SESA	Seetaler Alpe,	9.79	330	*e*Pn		Pn		18 35 37.6	-1.0
	2.6nm,0.3s								
SESA				*e*Sn		Sn		18 37 23.1	-3.7
	0.2nm,0.1s								
TEOL	Teolo	9.89	315	Pn		Pn		18 35 37.8	-2.0
STAL	STALIGIAL	9.94	321			Pn		18 35 38.6	-2.0
CONA	Conrad Observa	10.04	337	*e*Pn		Pn		18 35 41.5	-0.4
	0.4nm,0.3s								
CONA				*e*Sn		Sn		18 37 29.0	-3.9
	1.5nm,0.5s								
MODS	Modra-Piesok	10.08	343	*e*S		Sn		18 37 27.0	-6.7
CSS	Mathiatis	10.12	109	P		Pn		18 35 43.0	0.0
KEST	Kesra	10.26	256	P		Pn		18 35 43.2	-1.8
	2.2nm,0.6s,baz=339,slow=4.2,SNR=7.5								
KEST				S		Sn		18 37 32.6	-5.7
	2.3nm,0.5s,baz=282,slow=19,SNR=5.1								
KEST	Kesra	10.26	256			Pn		18 35 45.2	+0.3
KBA	Koelnbreinsper	10.26	326	*e*Pn		Pn		18 35 44.6	-0.4
	0.7nm,0.4s								
KBA				*e*Sn		Sn		18 37 32.2	-6.2
	6.7nm,0.4s								
CTI	Castel Tesino	10.34	318			Pn		18 35 44.5	-1.4
ABTA	Abfaltersbach	10.39	323	*e*Pn		Pn		18 35 44.9	-1.8
	2.8nm,0.4s,SNR=4.2								
ABTA				*e*Sn		Sn		18 37 35.4	-6.0
	6.2nm,0.3s								
JAVC	Velka Javorina	10.46	345	*e*SN		Sn		18 37 40.1	-2.8
MOA	Molln	10.51	332	*i* Pn		Pn		18 35 48.5	+0.2
	0.6nm,0.1s								
MOA				*e*Sn		Sn		18 37 35.2	-9.2
	18nm,0.7s								
BIOA	Bad Ischl, Aus	10.62	329	*e*Pn		Pn		18 35 48.6	-1.3
	0.4nm,0.2s								
BIOA				*e*Sn		Sn		18 37 44.1	-3.0
	8.5nm,0.4s								
SALO	Salr	10.69	313	Pn		Pn		18 35 49.5	-1.2
LESA	Schwarzleotal	10.82	326	*e*Pn		Pn		18 35 52.5	0.0
	1.9nm,0.3s								
LESA				*e*Sn		Sn		18 37 45.8	-6.0
	7.7nm,0.3s								
KRUC	Moravsky	10.93	342	*e*PN		Pn		18 36 00.4	+6.5
KRUC				*e*SN		Sn		18 37 53.1	-1.3
RJOB	Jochberg	11.01	327	P		Pn		18 35 55.5	+0.4
VRAC	Vranov	11.11	343	P		Pn		18 35 54.1	-2.3
	0.8nm,0.3s,baz=170,slow=12,SNR=1.3								
VRAC				LR		LR		18 40 35.5	
	comp=Z,47nm,19.7s,baz=165,slow=39								
VRAC	Vranov	11.11	343	*e*PN		Pn		18 36 01.1	+4.7
WTTA	Wattenberg	11.18	322	*e*Pn		Pn		18 35 57.4	-0.1
	3.5nm,0.3s,SNR=6.2								
WTTA				*e*Sn		Sn		18 37 55.7	-5.1
	14nm,0.4s								
WTTA	Wattenberg	11.18	322	P		Pn		18 35 56.6	-0.9
WATA	Walderalm	11.26	323	*e*Pn		Pn		18 35 57.7	-0.8
	2.7nm,0.3s,SNR=6.5								
WATA				*e*Sn		Sn		18 37 56.9	-5.7
	17nm,0.4s								
CY604	RAF Akrotiri,	11.27	109			Pn		18 35 56.8	-1.6
CKRC	Cesky Krumlov	11.32	335	*e*SN		Sn		18 37 59.8	-4.3
SQTA	Sankt Quirin	11.35	321	*e*Pn		Pn		18 35 59.2	-0.6
	2.8nm,0.4s								
SQTA				*e*Sn		Sn		18 37 59.6	-5.4
	13nm,0.4s								
MORC	Moravsky Berou	11.36	346	*e*PN		Pn		18 36 03.1	+3.3
MORC				*e*SN		Sn		18 37 59.5	-5.5
FUORN	Ofenpass-Fuorn	11.44	317			Pn		18 36 00.2	-1.0
FETA	Feichten	11.46	319	*e*Pn		Pn		18 36 00.2	-1.1
	0.2nm,0.2s								
FETA				*e*Sn		Sn		18 38 03.3	-4.3
	5.5nm,0.6s								
MOTA	Moosalm	11.49	321	*e*Pn		Pn		18 36 00.8	-1.0
	2.6nm,0.4s								
MOTA				*e*Sn		Sn		18 38 02.6	-5.7
	12nm,0.4s								
GERES	GERESS Array B	11.55	333	P		Pn		18 36 02.5	0.0
	0.3nm,0.4s,baz=160,slow=13,SNR=5.0								
GERES				S		Sn		18 38 05.1	-4.7
	2.0nm,0.4s,baz=152,slow=22,SNR=13								
DAVOX	Davos/Dischmat	11.74	317	P		Pn		18 36 05.3	+0.1
	2.8nm,0.4s,baz=118,slow=20,SNR=9.5								
DAVOX				S		Sn		18 38 11.5	-3.1
	13nm,0.5s,baz=292,slow=20,SNR=7.1								
RETA	Reutte	11.76	321	*e*Sn		Sn		18 38 10.1	-4.6
	16nm,0.4s								
KHC	Kasperske Hory	11.84	333	*e*PN		Pn		18 36 02.7	-3.7
KHC				*e*SN		Sn		18 38 10.6	-6.1
TUE	Stuetta	11.85	314			Pn		18 36 06.1	-0.6
TUE	Stuetta	11.85	314	P		Pn		18 36 10.0	+3.3
	27nm,0.6s								
TUE	Stuetta	11.85	314	P		Pn		18 36 06.3	-0.5
DAVA	Damuels	12.07	318	*i* Pn		Pn		18 36 09.2	-0.4
	0.8nm,0.2s								
DAVA				*e*Sn		Sn		18 38 18.1	-4.4
	14nm,0.6s								
MMAI	Mount Meron Ar	12.56	113	P		Pn		18 36 12.9	-3.4
	1.0nm,0.2s,baz=294,slow=14,SNR=9.8								
MMAI				S		Sn		18 38 28.1	-6.4
	0.6nm,0.3s,baz=294,slow=13,SNR=4.5								
GEM	Giv'at Ha'Em	12.65	112	P		Pn		18 36 14.9	-2.6
SALP	Salfit	12.93	117	P		Pn		18 36 17.4	-3.9
	20nm,0.6s								
SENIN	Lac Senin/Sane	12.98	310			Pn		18 36 20.9	-1.2
KZIT	Kziot	13.10	123	P		Pn		18 36 18.7	-4.9
	30nm,0.6s								
KZIT	Kziot	13.10	123	P		Pn		18 36 19.4	-4.2
YTIR	Yattir	13.29	120	P		Pn		18 36 22.8	-3.5
	606nm22nm,0.6s								
MSBI	Mazada	13.49	119	P		Pn		18 36 24.9	-3.8
	7.9nm,0.6s								
MSBI	Mazada	13.49	119	P		Pn		18 36 25.0	-3.7
LISJ	El Lisan	13.62	119	P		Pn		18 36 27.0	-3.4
	601nm23nm,0.5s								
GHAJ	Ghor Haditha	13.64	119	P		Pn		18 36 27.8	-2.9
ASF	Jabal al Asfar	14.08	113	P		Pn		18 36 33.5	-3.2
	2.5nm,0.7s,baz=279,slow=4.3,SNR=4.1								
HRFI	Mount Harif	14.09	124	P		Pn		18 36 32.0	-4.7
	11nm,0.6s								
EIL	Elat	14.28	126	P		Pn		18 36 34.2	-5.0
	4.6nm,0.3s,baz=279,slow=3.5,SNR=24								
EIL				S		Sn		18 39 01.1	-15
	4.3nm,0.3s,baz=348,slow=16,SNR=4.6								
EIL	Elat	14.28	126	P		Pn		18 36 34.3	-4.9
SUW	Suwalki	15.26	3	P		Pn		18 36 54.3	+2.7
KBZ	Khabaz	16.72	66	P		Pn		18 37 10.3	+0.2
	1.8nm,0.8s,baz=270,slow=8.1,SNR=4.2								
GEVA	Gevas	16.77	85			P		18 37 15.8	+3.5
HAKT	HAKKARI	17.40	87	P		P		18 37 22.6	+3.4
GNI	Garni	17.89	78	LR		LR		18 45 37.7	
	comp=Z,30nm,20.3s,baz=303,slow=41								
ESDC	Sonseca Array	19.83	281	P		P		18 37 46.9	+1.2
	2.9nm,0.8s,baz=76,slow=11,SNR=20								
ESDC	Sonseca Array	19.83	281			P		18 37 46.7	+1.1
ESDC					IAmb	IAmb		18 37 48.3	
	comp=Z,16nm,1.3s								
VSU	Vasula	19.96	8	P		P		18 37 46.0	-0.7
MTSE	Matsula	19.98	3	*e*P		P		18 37 46.4	-0.6
PAB	San Pablo	20.14	280			P		18 37 50.2	+1.2
PAB					IAmb	IAmb		18 37 51.3	
	comp=Z,15nm,1.1s								
UPP	Uppsala	21.23	354	*e*P		P		18 38 00.2	-0.3
AAL	Aland	21.43	358	*e*P		P		18 38 01.5	-1.0
MEF	Metsahovi	21.51	4	*e*P		P		18 38 03.6	+0.1
HFS	Hagfors	21.94	349	P		P		18 38 07.8	-0.3
	comp=Z,3.1nm,0.4s,baz=162,slow=11,SNR=32								
	comp=Z,3.1nm,0.4s								
MD01	Midelt array s	22.16	263			P		18 38 12.0	+1.1
RAF	Rauma	22.25	0	*e*P		P		18 38 11.5	+0.1
FINES	FINESS Array B	22.84	6	P		P		18 38 16.3	-1.3
	comp=Z,3.3nm,0.6s,baz=171,slow=9.4,SNR=17								
	comp=Z,3.3nm,0.6s								
FINES	FINESS Array B	22.84	6			P		18 38 17.5	-0.1

NC602	NORSAR Array S	22.85	347	*e*P		P		18 38 16.8	-1.0
NC602	NORSAR Array S	22.85	347			P		18 38 16.8	-1.0
NC602					IAmb	IAmb		18 38 20.8	
	comp=Z,11nm,1.2s								
NAO01	NORSAR Array S	23.07	347	P		P		18 38 19.3	-0.7
NAO01					IAmb	IAmb		18 38 26.2	
	comp=Z,13nm,1.3s								
NC405	NORSAR Array S	23.18	348	P		P		18 38 20.3	-0.7
NC405					IAmb	IAmb		18 38 21.3	
	comp=Z,6.3nm,0.7s								
NB2	NORSAR Subarra	23.20	347	P		P		18 38 20.4	-0.8
	comp=Z,1.5nm,0.4s,baz=153,slow=10								
NB2	NORSAR Subarra	23.20	347	P		P		18 38 20.4	-0.8
NOA	NORSAR Array B	23.20	347	P		P		18 38 20.5	-0.7
	comp=Z,0.8nm,0.4s,baz=185,slow=18,SNR=19								
NOA					LR	LR		18 48 52.8	
	comp=Z,13nm,18.0s,baz=110,slow=40								
	comp=Z,0.8nm,0.4s								
EKA	Eskdalemuir Ar	23.44	323	P		P		18 38 23.7	+0.2
	comp=Z,4.9nm,0.6s,baz=124,slow=10,SNR=32								
	comp=Z,4.9nm,0.6s								
SKAR	Skarslia	23.45	343	*e*P		P		18 38 24.5	+1.0
KEF	Keuruu	23.48	4	*e*P		P		18 38 23.9	+0.1
NC204	NORSAR Array S	23.50	347	P		P		18 38 23.9	-0.2
NC204					IAmb	IAmb		18 38 25.3	
	comp=Z,7.3nm,0.6s								
SUF	Sumiainen	24.11	5	*e*P		P		18 38 29.3	-0.2
VAF	Ylistaro	24.29	1	*e*P		P		18 38 31.3	+0.3
DOMB	Dombas	24.52	346	*e*P		P		18 38 35.2	+2.0
JOF	Joensuu	24.86	11	*e*P		P		18 38 35.8	-0.4
RAYN	Ar Rayn	25.37	120	P		P		18 38 43.5	+2.1
ARCES	ARCESS Array B	30.87	3	P		P		18 39 29.6	-0.3
	comp=Z,0.6nm,0.4s,baz=189,slow=8.7,SNR=8.5								
ARCES					PcP	PcP		18 42 23.7	-1.3
	comp=Z,0.8nm,0.8s,baz=191,slow=1.8,SNR=1.2								
	comp=Z,0.6nm,0.4s								
ARCES	ARCESS Array B	30.87	3	IAmb		IAmb		18 40 02.1	
	comp=Z,7.5nm,1.4s								
TORD	Torodi Ar. Bea	31.06	220	P		P		18 39 32.7	+0.6
	comp=Z,4.0nm,0.5s,baz=32,slow=9.3,SNR=25								
	comp=Z,4.0nm,0.5s								
KK31	Karatay Array	36.75	67			P		18 40 21.6	+0.4
KK31					IAmb	IAmb		18 40 23.7	
	comp=Z,3.5nm,1.1s								
KKAR	Karatay Array	36.75	67			P		18 40 21.0	-0.2
SPITS	Spitsbergen Ar	39.55	358	P		P		18 40 44.0	-0.3
	comp=Z,0.4nm,0.4s,baz=153,slow=10,SNR=1.7								
	comp=Z,0.4nm,0.4s								
DBIC	Dimbokro	39.94	224	P		P		18 40 48.0	-0.1
	comp=Z,2.5nm,0.5s,baz=29,slow=11,SNR=3.2								
	comp=Z,2.5nm,0.5s								
KURBB	Kurchatov Arra	41.16	54	P		P		18 40 58.3	+0.4
	comp=Z,0.6nm,0.4s,baz=282,slow=8.8,SNR=4.2								
	comp=Z,0.6nm,0.4s								
KURK	Kurchatov	41.21	54	P		P		18 40 58.3	0.0
MKAR	Makanchi Array	44.23	59	P		P		18 41 22.8	0.0
	comp=Z,1.4nm,0.5s,baz=276,slow=7.9,SNR=16								
MKAR					PcP	PcP		18 43 05.5	-0.8
	comp=Z,0.4nm,0.6s,baz=264,slow=5.7,SNR=2.2								
	comp=Z,1.4nm,0.5s								
MKAR	Makanchi Array	44.23	59	P		P		18 41 22.2	-0.7
ZALV	Zalesovo Beam	44.63	49	P		P		18 41 25.6	-0.3
	comp=Z,1.2nm,0.4s,baz=275,slow=7.3,SNR=3.6								
	comp=Z,1.2nm,0.4s								
NRIK	Noril'sk	45.85	27	PcP		PcP		18 43 12.3	+0.9
	comp=Z,2.5nm,0.7s,baz=256,slow=4.2,SNR=2.1								
SCHQ	Schefferville	58.63	317	P		P		18 43 10.3	+0.4
	comp=Z,3.8nm,0.6s,baz=68,slow=6.7,SNR=6.1								
	comp=Z,3.8nm,0.6s								
YKA	Yellowknife Ar	73.10	340	P		P		18 44 43.1	+0.1
	comp=Z,0.6nm,0.6s,baz=44,slow=5.4,SNR=8.1								
	comp=Z,0.6nm,0.6s								
ULM	Lac du Bonnet	75.72	324	P		P		18 44 59.4	+1.0
	comp=Z,2.3nm,0.7s,baz=47,slow=11,SNR=3.5								
	comp=Z,2.3nm,0.7s								
ULM	Lac du Bonnet	75.72	324	IAmb		IAmb		18 45 00.3	
	comp=Z,1.8nm,0.7s								
ILAR	Eielson Array	76.37	355	P		P		18 45 02.3	+0.4
	comp=Z,0.3nm,0.6s,baz=286,slow=3.7,SNR=2.3								
	comp=Z,0.3nm,0.6s								
TXAR	Lajitas Array	95.17	314	P		P		18 46 37.9	+1.3
	comp=Z,0.6nm,0.7s,baz=59,slow=3.4,SNR=5.5								
	comp=Z,0.6nm,0.7s								
ASAR	Alice Springs	121.37	96	PKP		PKPdf		18 52 05.7	-0.4
	comp=Z,0.3nm,0.5s,baz=320,slow=1.7,SNR=5.6								

IDC ***20*** *18:34:31.1±1.5, 18°.93N×145°.16E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=55.2km s-min=33.4km az=88.0*

ISC 20 18:34:36.2±1.4, 18°.9N±0°.2×145°.2E±0°.4, h35km, n6, σ0s 99/7, mb3.6/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.02	196	P	P	P	18 42 07.9	-0.1
	0.1nm,0.2s,baz=9.9,slow=7.6,SNR=1.9							
	0.1nm,0.2s							
MKAR	Makanchi Array	58.02	314	P	P	P	18 44 25.7	0.0
	0.1nm,0.3s,baz=97,slow=8.6,SNR=1.5							
MKAR				PcP	PcP	PcP	18 45 19.0	+1.5
	0.1nm,0.4s,baz=85,slow=5.5,SNR=1.7							
	0.1nm,0.3s							
KURBB	Kurchatov Arra	60.89	318	P	P	P	18 44 45.0	-0.4
	0.2nm,0.5s,baz=93,slow=7.2,SNR=4.9							
	0.2nm,0.5s							
BVAR	Borovoye Array	66.06	320	P	P	P	18 45 19.7	+0.2
	0.5nm,0.4s,baz=99,slow=6.3,SNR=2.4							
	0.5nm,0.4s							
YKA	Yellowknife Ar	78.05	28	P	P	P	18 46 31.3	+0.2
	0.4nm,0.5s,baz=292,slow=5.4,SNR=3.7							
	0.4nm,0.5s							
FINES	FINESS Array B	86.54	335	P	P	P	18 47 14.3	-1.1
	0.5nm,0.3s,baz=57,slow=5.3,SNR=12							
	0.5nm,0.3s							

IDC 20 18:55:35.9±1.9, 5°.16S×129°.57E, h170km±27km, mb2.7/1, mbtmp4.0/6, Error ellipse: s-maj=37.2km s-min=18.7km az=95.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.58	22	P	Pn	Pn	18 56 44.3	0.0
	50nm,0.2s,baz=203,slow=15,SNR=168							
SIJI				S	Sn	Sn	18 57 33.0	-4.9
	36nm,0.2s,baz=268,slow=24,SNR=21							
BATI	Baumata	7.71	229	P	Pn	Pn	18 57 27.4	+2.0
	11nm,0.4s,baz=75,slow=6.1,SNR=4.4							
FITZ	Fitzroy Crossi	13.43	196	P	Pn	Pn	18 58 39.9	+0.1
	3.4nm,0.6s,baz=9.6,slow=12,SNR=25							
FITZ				S	Sn	Sn	19 01 00.7	-8.3
	1.6nm,0.7s,baz=31,slow=5.4,SNR=2.2							
WRA	Warramunga Arr	15.41	163	P	Pn	Pn	18 59 03.0	-1.6
	0.7nm,0.6s,baz=337,slow=13,SNR=9.0							
WRA				S	Sn	Sn	19 01 41.9	-15
	0.3nm,0.3s,baz=342,slow=22,SNR=6.6							
ASAR	Alice Springs	18.87	168	P	P	P	18 59 43.7	+0.3
	3.4nm,0.5s,baz=346,slow=12,SNR=100							
ASAR				S	S	S	19 03 02.0	-7.0
	0.5nm,0.8s,baz=349,slow=19,SNR=4.9							
MKAR	Makanchi Array	66.46	327	P	P	Pn	19 06 06.2	-0.8
	0.1nm,0.4s,baz=115,slow=10,SNR=1.7							
	0.1nm,0.4s							

CATAC ***20*** *19:09:34.0±1.8, 12°N±7°×8°9W±°, h3km±12km, M3.9/12, MLv3.9/12, Error ellipse: s-maj=16.5km s-min=7.1km az=15.9, confirmed*

IDC ***20*** *19:09:35.9±1.8, 13°.03N×88°.51W, h0km, mb3.9/4, mbtmp3.8/6, ML3.4/2, MS2.9/1, Error ellipse: s-maj=58.3km s-min=17.2km az=41.0*

GCG ***20*** *19:09:37.1±1.5, 12°.36N×89°.73W, h27km±999km, MD4.4, Presumed earthquake*

SNET ***20*** *19:09:37.2±2.1, 12°.41N×89°.31W, h10km±13km, ML3.6, Presumed earthquake*

NEIC ***20*** *19:09:40.6±1.9, 12°.63N±0°.08×88°.99W±0°.03, h35km±2km, mb4.2/18, Error ellipse: s-maj=13.2km s-min=4.6km az=191.0*

ISC 20 19:09:36.4±1.0, 12°.15N±0°.10×89°.40W±0°.06, h39km±4km, n89, σ1s 85/97, mb4.1/12, 4C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.33	3	*e*P		Pn	19 09 57.3	-1.2

LALI	Alcalda de L	1.33	3	*e*P		Pn		19 09 57.3	-1.2
JAYA	Jayaque - finc	1.50	358	P		Pn		19 10 00.0	-0.9
JAYA				S		Sn		19 10 18.8	-0.5
JAYA	Jayaque - finc	1.50	358	*e*P		Pn		19 09 59.4	-1.5
JAYA	Jayaque - finc	1.50	358	*e*P		Pn		19 09 59.5	-1.5
LFRS	El Faro	1.50	13	*e*P		Pn		19 09 59.8	-1.1
LOMA	Loma Larga	1.50	8	*e*P		Pn		19 10 00.2	-0.8
SJTE	Alcalda de S	1.51	15	*e*P		Pn		19 09 59.6	-1.4
TECO	Alcaldia de Te	1.51	23	P		Pn		19 09 59.6	-1.3
TECO				S		Sn		19 10 22.1	+2.7
TECO	Alcaldia de Te	1.51	23	*e*P		Pn		19 10 01.8	+0.9
COEG	Centro de Oper	1.55	19	P		Pn		19 10 00.4	-1.1
COEG	Centro de Oper	1.55	19	*e*P		Pn		19 10 00.1	-1.4
PMON	Piamonte	1.56	3	P		Pn		19 10 00.9	-0.8
PMON				S		Sn		19 10 22.4	+1.7
PMON	Piamonte	1.56	3	*e*P		Pn		19 10 00.5	-1.2
UEES	Universidad Ev	1.57	6	*e*P		Pn		19 10 00.1	-1.7
BOQS	Boqueron	1.58	4	*i* P		Pn		19 10 01.1	-1.0
PIC2	El Picacho	1.59	5	*e*P		Pn		19 10 01.3	-1.0
TECA	Tecapa	1.60	33	*e*P		Pn		19 10 01.4	-0.9
LFU	La Fuente	1.61	10	*e*P		Pn		19 10 01.7	-0.7
LBRS	Las Brisas	1.62	12	*e*P		Pn		19 10 00.5	-2.0
PAVA	Las Pavas	1.62	16	P		Pn		19 10 01.6	-0.9
PAVA				S		Sn		19 10 25.7	+3.5
PAVA	Las Pavas	1.62	16	*e*P		Pn		19 10 01.7	-0.9
CEDA	San Andres	1.65	0	*e*P		Pn		19 10 02.2	-0.6
RANC	El Ranchito	1.68	40	P		Pn		19 10 03.8	+0.4
RANC				S		Sn		19 10 24.7	+1.0
INTP	Intipuca	1.68	51	*e*P		Pn		19 10 03.6	+0.4
INTP				*e*S		Sn		19 10 21.1	-2.4
SCLA	Alcaldia de Sa	1.68	23	*e*P		Pn		19 10 02.4	-0.9
PACA	Pacayal	1.68	38	P		Pn		19 10 03.5	+0.1
PACA				S		Sn		19 10 34.0	+10
PACA	Pacayal	1.68	38	*e*P		Pn		19 10 02.7	-0.7
PACA				*e*P				19 10 03.3	
CEVE	Cerro Verde	1.69	352	P		Pn		19 10 02.8	-0.8
CEVE				S		Sn		19 10 30.2	+6.2
CEVE	Cerro Verde	1.69	352	*e*P		Pn		19 10 02.4	-1.1
SBLS	San Blas	1.70	353	*e*P		Pn		19 10 02.7	-1.0
SNJE	San Jose	1.72	353	*e*P		Pn		19 10 03.2	-0.9
NUBE	Las Nubes	1.78	348	P		Pn		19 10 03.8	-1.1
NUBE	Las Nubes	1.78	348	*i* P		Pn		19 10 03.6	-1.1
NUBE				*i* S		Sn		19 10 22.4	-3.9
NUBE	Las Nubes	1.78	348	*i* P		Pn		19 10 03.7	-1.1
NUBE				*e*S		Sn		19 10 26.4	0.0
FAME	Alcaldia de Sa	1.79	340	P		Pn		19 10 04.1	-0.7
FAME				S		Sn		19 10 23.6	-2.7
LCND	La Caada	1.87	52	P		Pn		19 10 06.1	+0.3
LCND	La Caada	1.87	52	*e*P		Pn		19 10 05.9	0.0
LCND				*e*P				19 10 06.2	
LCND				*e*S		Sn		19 10 28.2	-0.1
LOAL	Lomas de Alarc	1.88	349	*e*P		Pn		19 10 07.5	+1.5
CNCH	Conchagua	1.89	54	P		Pn		19 10 06.7	+0.3
CNCH				S		Sn		19 10 32.5	+3.4
CNCH	Conchagua	1.89	54	*e*P		Pn		19 10 06.2	-0.2
CNCH				*e*P				19 10 07.3	
CNCH				*e*S		Sn		19 10 29.8	+0.8
SLOZ	Alcaldia de Sa	1.91	349	P		Pn		19 10 07.7	+1.3
SLOZ	Alcaldia de Sa	1.91	349	*e*P		Pn		19 10 06.7	+0.3
P5NO	Presa 5 de nov	1.93	19	*e*P		Pn		19 10 06.3	-0.4
RBDL	Robledal	1.97	352	*e*P		Pn		19 10 06.8	-0.7
LLGN	La Laguna	2.05	12	*e*P		Pn		19 10 08.2	-0.2
MTO3	Montecristo	2.24	1	P		Pn		19 10 10.8	-0.4
MTO3				S		Sn		19 10 38.4	+0.8
MTO3	Montecristo	2.24	1	Pn		Pn		19 10 10.4	-0.7
MTO3	Montecristo	2.24	1	*i* P		Pn		19 10 10.7	-0.4
MTO3	Montecristo	2.24	1	*e*P		Pn		19 10 10.7	-0.4
CRIN	San Cristobal	2.36	76			Pn		19 10 10.9	-1.7
ESQI	Esquipulas	2.40	1	Pn		Pn		19 10 11.4	-1.8
HERN	Volcan Telica	2.55	79	Pn		Pn

*GFZ **20** 19:21:40.0±0.2,30˚N±3˚×9˚5E±˚,h10km,M4.7/30, mb4.9/30*
*NDI **20** 19:21:46.9±2.3,30˚16N×94˚58E,h27km±41km,mb4.9, MW4.7,Presumed earthquake*
*BGR **20** 19:22:08.2,32˚44N×91˚52E,h33km,mb4.5*
ISC 20 19:21:39.4±0.7,**30˚27N**±0˚03×**94˚79E**±0˚03,**h14**km±4km, **n682**,σ1§**20**/645,**mb4.8**/181,**MS3.3**/18,**39C-13D,Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.21**	**261**	P	**Pb**	**19 22 34.0**	**-2.5**
LSA	**Lhasa**	**3.21**	**261**		**Pb**	**19 22 34.0**	**-2.5**
TAWA	**Tawang**	**3.69**	**225**	*e*P	**Pb**	**19 22 41.7**	**-3.1**
TAWA				*i* x	x	19 22 49.0	
TAWA				*e*x	x	19 23 24.8	
MOKO	**MOKOCHONG**	**3.94**	**184**	*e*P	**Pn**	**19 22 43.3**	**+3.6**
MOKO				*i* x	x	19 22 58.1	
MOKO				*e*S	**Sn**	**19 23 26.5**	**+0.7**
TEZP	**TEZPUR**	**4.04**	**206**	*e*P	**Pn**	**19 22 45.2**	**+4.3**
TEZP				*i* x	x	19 22 52.9	
TEZP				*e*x	x	19 23 46.6	
GUWA	**GUWAHATI**	**4.89**	**215**	*e*P	**Pn**	**19 22 56.1**	**+3.5**
GUWA				*e*x	x	19 24 14.5	
SHL	**Shillong**	**5.34**	**209**	P	**Pn**	**19 23 00.4**	**+1.4**
SHL	**Shillong**	**5.34**	**209**	Pn	**Pn**	**19 23 00.4**	**+1.4**
SHL	**Shillong**	**5.34**	**209**	*e*P	**Pn**	**19 23 01.4**	**+2.5**
SHL				*e*x	x	19 24 31.1	
IMP	**Imphal**	**5.47**	**188**	*e*P	**Pn**	**19 23 03.5**	**+2.9**
IMP				*i* x	x	19 23 22.9	
IMP				*e*S	**Sn**	**19 24 01.7**	**-1.6**
GOMU	**GeErMu**	**5.92**	**0**	Pn	**Pn**	**19 23 06.9**	**-0.1**
GOMU				Sn	**Sn**	**19 24 13.0**	**-1.8**
GOMU				SMN			
	32nm,1.2s						
GOMU				SME			
	32nm,1.4s						
GOMU				L	L		
	comp=N,1μm,5.6s						
GOMU				L	L		
	comp=E,1μm,4.8s						
DHUB	**DHUBRI**	**5.98**	**226**	*e*P	**Pn**	**19 23 10.4**	**+2.8**
DHUB				*e*S	**Sn**	**19 24 10.7**	**-5.3**
MORE	**Moreh**	**6.02**	**184**		**Pn**	**19 23 09.9**	**+1.8**
TNCH	**TengChong**	**6.18**	**147**	Pn	**Pn**	**19 23 10.3**	**-0.1**
TNCH				Sn	**Sn**	**19 24 22.3**	**+1.3**
TNCH				Sg	**Sg**	**19 24 55.8**	**-1.9**
TNCH				SMN			
	260nm,2.4s						
TNCH				SME			
	210nm,2.1s						
TNCH				L	L		
	comp=Z,370nm,4.1s						
PZH	**PanZhiHua**	**7.18**	**120**	Pn	**Pn**	**19 23 26.9**	**+2.7**
EVN	**Everest**	**7.34**	**254**		**Pn**	**19 23 26.0**	**-0.9**
EVN	**Everest**	**7.34**	**254**	P	**Pn**	**19 23 30.9**	**+4.0**
CD2	**Chengdu**	**7.76**	**83**	Pn	**Pn**	**19 23 30.3**	**-1.7**
CD2				Sn	**Sn**	**19 24 57.8**	**-1.9**
CD2				L	L		
	comp=N,1μm,7.0s						
CD2				L	L		
	comp=E,1μm,7.6s						
CD2				L	L		
	comp=Z,1μm,7.3s						
KMI2	**Kunming**	**8.70**	**124**	P	**Pn**	**19 23 47.3**	**+2.2**
KMI2				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI2				L	L		
	comp=N,770nm,6.1s						
KMI2				L	L		
	comp=E,610nm,4.4s						
KMI2				L	L		
	comp=Z,330nm,8.0s						
LZDM	**Lanzhou Array**	**9.38**	**50**	Pn	**Pn**	**19 23 53.9**	**-0.6**
	baz=242,slow=3.2						
LZDM				LR	LR	19 27 44.9	
	comp=Z,128nm,22.0s,baz=80,slow=39 3.6nm,0.3s						
LZH	**Lanzhou**	**9.55**	**50**	*e*P	**Pn**	**19 24 00.0**	**+3.3**
LZH				pP		19 24 04.6	
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
LZH				L	L		
	comp=N,530nm,5.7s						
LZH				L	L		
	comp=E,540nm,6.5s						
LZH				L	L		
	comp=Z,460nm,7.7s						
GTA2	**Gaotai**	**10.06**	**23**	*e*P	**Pn**	**19 24 02.4**	**-1.3**
GTA2				pP		19 24 07.9	
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA2				L	L		
	comp=N,480nm,9.3s						
GTA2				L	L		
	comp=E,350nm,7.6s						
GTA2				L	L		
	comp=Z,450nm,10.7s						
BOK	**Bokaro**	**10.22**	**233**	*e*P	**Pn**	**19 24 07.8**	**+2.0**
NPW	**Naypyitaw**	**10.51**	**173**	P	**Pn**	**19 24 11.3**	**+1.6**
GYA	**Guiyang**	**11.12**	**107**	P	**Pn**	**19 24 19.3**	**+1.1**
GYA				pmax	pmax		
	comp=Z,33nm,0.9s						
GYA				pmax	pmax		
	comp=Z,65nm,3.1s						
CHTO	**Chiang Mai**	**12.01**	**161**	P	**Pn**	**19 24 32.4**	**+2.1**
CHTO	**Chiang Mai**	**12.01**	**161**		**Pn**	**19 24 32.4**	**+2.1**
CHTO	**Chiang Mai**	**12.01**	**161**	P	**Pn**	**19 24 32.0**	**+1.7**
CHTO	**Chiang Mai**	**12.01**	**161**	P	**Pn**	**19 24 32.6**	**+2.3**
CM31	**Chiang Mai Arr**	**12.35**	**161**		**Pn**	**19 24 36.6**	**+1.6**
CMAR	**Chiang Mai Arr**	**12.35**	**161**	Pn	**Pn**	**19 24 33.0**	**-1.9**
	0.1nm,0.3s,baz=333,slow=13,SNR=26						
CMAR				LR	LR	19 30 22.9	
	comp=Z,36nm,18.5s,baz=190,slow=43						
CMAR	**Chiang Mai Arr**	**12.35**	**161**	*i* P	**Pn**	**19 24 38.5**	**+3.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**12.35**	**161**		**Pn**	**19 24 36.2**	**+1.3**
XAN	**Xi'an**	**12.55**	**69**	P	**Pn**	**19 24 38.8**	**+1.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				L	L		
	comp=Z,310nm,5.8s						
XAN				L	L		
	comp=Z,270nm,6.5s						
XAN				L	L		
	comp=Z,240nm,10.3s						
ENH	**Enshi**	**12.71**	**86**	Pn	**Pn**	**19 24 38.3**	**-1.5**
BLSP	**Bilaspur**	**13.93**	**237**	*ex*	**P**	**19 25 07.0**	**+2.3**
BLSP				IAmb	IAmb	19 25 08.3	
	comp=Z,28nm,0.8s						
GULI	**GuiLin**	**14.65**	**106**	P	**Pn**	**19 25 02.0**	**-4.3**
GULI				pmax	pmax		
	comp=Z,21nm,1.0s						
GULI				L	L		
	comp=Z,370nm,10.7s						
GULI				L	L		
	comp=Z,220nm,7.3s						
GULI				L	L		
	comp=Z,190nm,8.1s						
WMQ	**Urumqi**	**14.66**	**339**	*e*P	**Pn**	**19 25 08.9**	**+2.4**
WMQ				sP	P	19 25 13.8	+1.1
WMQ				pmax	pmax		
	comp=Z,12nm,1.5s						
WMQ				L	L		
	comp=Z,320nm,9.3s						
WMQ				L	L		
	comp=Z,190nm,9.3s						
WMQ				L	L		
	comp=Z,78nm,14.9s						
LYN	**LuoYang**	**15.53**	**69**	P	**P**	**19 25 22.8**	**+0.5**
LYN				pmax	pmax		
	comp=Z,25nm,0.8s						
LYN				LR	LR		
	comp=N,240nm,7.9s						
LYN				LR	LR		
	comp=E,270nm,10.0s						
LYN				LR	LR		
	comp=Z,250nm,8.2s						
DHRM	**DHARAMSHALA**	**15.94**	**282**	*e*P	**P**	**19 25 27.5**	**+0.4**
DHRM				IAmb	IAmb	19 25 31.0	
	comp=Z,47nm,0.4s						
TSSA	**Tissa**	**16.10**	**284**	*ex*	**Pn**	**19 25 25.9**	**+0.3**
TSSA				*e*P	**P**	**19 25 27.0**	**-1.9**
BTO2	**Baotou**	**16.11**	**45**	*e*P	**Pn**	**19 25 25.6**	**0.0**
BTO2				pP	**P**	**19 25 28.8**	**-0.1**
BTO2				PP	**sP**	**19 25 39.3**	**+3.4**
BTO2				S	**Sn**	**19 28 24.8**	**+0.7**
BTO2				pmax	pmax		
	comp=Z,23nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,350nm,4.6s						
BTO2				L	L		
	comp=Z,320nm,6.3s						
BTO2				L	L		
	comp=Z,220nm,6.7s						
BTO2				L	L		
	comp=Z,470nm,12.8s						
GUNA	**GUNA**	**16.47**	**254**	*ex*	**Pn**	**19 25 28.1**	**-2.2**
WUS	**Wushi**	**16.67**	**315**		**Pn**	**19 25 32.0**	**-0.8**
WHN	**Wuhan**	**16.88**	**84**	P	**Pn**	**19 25 33.9**	**-1.4**
WHN				pmax	pmax		
	comp=Z,190nm,1.8s						
WHN				pmax	pmax		
	comp=Z,460nm,3.4s						
WHN				L	L		
	comp=Z,690nm,9.7s						
WHN				L	L		
	comp=Z,590nm,5.4s						
WHN				L	L		
	comp=Z,930nm,9.7s						
BHPL	**Bhopal**	**17.00**	**250**	*e*P	**P**	**19 25 39.9**	**+1.1**
BHPL				IAmb	IAmb	19 25 41.5	
	comp=Z,36nm,1.0s						
HHC	**Hu-ho-hao-te**	**17.23**	**48**	*e*P	**Pn**	**19 25 39.5**	**-0.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,76nm,3.5s						
HHC				L	L		
	comp=Z,220nm,7.6s						
HHC				L	L		
	comp=Z,160nm,7.6s						
HHC				L	L		
	comp=Z,120nm,8.4s						
QIZ	**Qiongzhong**	**17.65**	**126**	P	**Pn**	**19 25 45.3**	**+0.3**
QIZ				S	**Sn**	**19 29 03.3**	**+1.7**
QIZ				L	L		
	comp=Z,160nm,9.0s						
QIZ				L	L		
	comp=Z,180nm,8.2s						
QIZ				L	L		
	comp=Z,210nm,9.6s						
SHLS	**Shalkode**	**17.75**	**321**	*e*P	**Pn**	**19 25 43.5**	**-2.8**
SHLS	**Shalkode**	**17.75**	**321**	*e*P	**Pn**	**19 25 43.5**	**-2.8**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**19 25 47.3**	**-0.5**
TARG				pmax	pmax		
	comp=Z,43nm,1.1s						
TARG	**Taragay, Kyrgy**	**17.85**	**314**		**Pn**	**19 25 47.2**	**-0.5**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**P**	**19 25 50.2**	**+1.8**
PDGK	**Podgornoye**	**17.85**	**321**	P	**Pn**	**19 25 46.5**	**-1.0**
PDGK	**Podgornoye**	**17.85**	**321**	P	**Pn**	**19 25 46.4**	**-1.2**
PRZ	**Przheval'sk**	**17.93**	**317**	P	**P**	**19 25 50.0**	**+0.9**
PRZ				pmax	pmax		
	comp=Z,154nm,1.3s						
PRZ	**Przheval'sk**	**17.93**	**317**		**P**	**19 25 50.0**	**+0.9**
PRZ				IAmb	IAmb	19 25 54.7	
	comp=Z,154nm,1.3s						
UZB	**Uzynbulak**	**17.99**	**320**	*e*P	**Pn**	**19 25 49.4**	**+0.2**
UZB	**Uzynbulak**	**17.99**	**320**	*e*P	**Pn**	**19 25 49.4**	**+0.2**
HNS	**HongShan**	**17.99**	**61**	⇑P	**P**	**19 25 51.5**	**+1.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HNS				L	L		
	comp=Z,230nm,10.1s						
HNS				L	L		
	comp=Z,110nm,10.5s						
HNS				L	L		
	comp=Z,200nm,11.3s						
KSH2	**Kashi**	**18.09**	**304**	P	**Pn**	**19 25 50.3**	**-0.2**
KSH2				pP	pP	19 25 53.4	-2.3
KSH2				pmax	pmax		
	comp=Z,8.0nm,1.6s						
SATY	**Saty**	**18.28**	**319**	*e*P	**P**	**19 25 53.0**	**+0.1**
SATY	**Saty**	**18.28**	**319**	*e*P	**P**	**19 25 53.0**	**+0.1**
KPKS	**Kokpek**	**18.39**	**320**	*e*P	**P**	**19 25 54.0**	**0.0**
KPKS	**Kokpek**	**18.39**	**320**	*e*P	**P**	**19 25 54.1**	**0.0**
KDJ	**Kajisay**	**18.46**	**315**	P	**P**	**19 25 54.2**	**-0.7**
KDJ				pmax	pmax		
	comp=Z,31nm,0.8s						
KDJ	**Kajisay**	**18.46**	**315**		**P**	**19 25 54.2**	**-0.7**
NIL	**Nilore**	**18.58**	**286**	P	**P**	**19 25 54.2**	**-2.0**
NIL				pmax	pmax		
	comp=Z,55nm,0.9s						
NIL	**Nilore**	**18.58**	**286**		**P**	**19 25 54.2**	**-2.0**
NIL				IAmb	IAmb	19 26 01.1	
	comp=Z,55nm,0.8s						
NIL	**Nilore**	**18.58**	**286**	P	**P**	**19 25 55.0**	**-1.2**
ZSN	**Zaisan**	**18.79**	**339**	*e*P	**P**	**19 25 58.3**	**0.0**
ZSN	**Zaisan**	**18.79**	**339**	*e*P	**P**	**19 25 58.4**	**0.0**
NRN	**Naryn**	**18.83**	**311**	P	**P**	**19 25 58.9**	**-0.3**
NRN				pmax	pmax		
	comp=Z,28nm,1.4s						
NRN	**Naryn**	**18.83**	**311**		**P**	**19 25 58.9**	**-0.3**
TNSS	**Tian-Shan**	**19.12**	**317**	*e*P	**P**	**19 26 02.6**	**+0.2**
TNSS	**Tian-Shan**	**19.12**	**317**	*e*P	**P**	**19 26 02.6**	**+0.2**
MDOK	**Medeo**	**19.13**	**317**	*e*P	**Pn**	**19 26 02.8**	**-0.3**
MDOK	**Medeo**	**19.13**	**317**	*e*P	**Pn**	**19 26 02.9**	**-0.3**
MK31	**Makanchi Array**	**19.14**	**333**	*ce*P	**P**	**19 26 01.6**	**-0.6**
MKAR	**Makanchi Array**	**19.14**	**333**	P	**P**	**19 26 01.5**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=136,slow=14,SNR=57						
MKAR				PcP	**PcP**	**19 30 26.2**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=183,slow=0.8,SNR=6.2						
	comp=Z,6.6nm,0.7s						
MKAR	**Makanchi Array**	**19.14**	**333**		**P**	**19 26 00.6**	**-1.6**
MKAR					**PcP**	**19 30 25.5**	**-0.4**
KNDC	**Almaty**	**19.21**	**317**	P	**Pn**	**19 26 06.3**	**+2.3**
AAA	**Alma-Ata**	**19.24**	**317**	*e*P	**P**	**19 26 03.8**	**+0.5**
AAA	**Alma-Ata**	**19.24**	**317**	*e*P	**P**	**19 26 03.9**	**+0.5**
MAKZ	**Makanchi**	**19.28**	**333**	P	**P**	**19 26 03.2**	**-0.5**
MAKZ	**Makanchi**	**19.28**	**333**		**P**	**19 26 02.5**	**-1.2**
MAKZ	**Makanchi**	**19.28**	**333**	P	**P**	**19 26 03.5**	**-0.1**
TDK	**Taldyqorghan**	**19.56**	**323**	*e*P	**P**	**19 26 07.2**	**+0.4**
TDK	**Taldyqorghan**	**19.56**	**323**	*e*P	**P**	**19 26 07.2**	**+0.4**
HYB	**Hyderabad**	**19.57**	**233**	*e*P	**Pn**	**19 26 08.2**	**-0.2**
HYB				*e*S	Sn	19 30 01.2	+13
TIA	**Tai'an**	**19.58**	**66**	P	**Pn**	**19 26 08.0**	**-0.4**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SONM	**Songino Array**	**19.68**	**24**	P	**P**	**19 26 07.9**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=212,slow=12,SNR=52						
SONM				PcP	**PcP**	**19 30 27.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=173,slow=2.4,SNR=2.4						
SONM				LR	LR	19 34 50.0	
	comp=Z,42nm,20.4s,baz=196,slow=40						
	comp=Z,9.4nm,0.8s						
SONM	**Songino Array**	**19.68**	**24**		**P**	**19 26 07.2**	**-1.1**
ULN	**Ulaanbaatar**	**19.94**	**25**	*ce*P	**P**	**19 26 10.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,16nm,1.3s						
ULN	**Ulaanbaatar**	**19.94**	**25**	P	**P**	**19 26 10.1**	**-1.0**
	comp=Z,57nm,1.5s						
ULN	**Ulaanbaatar**	**19.94**	**25**	P	**P**	**19 26 11.3**	**+0.2**
BJT	**Baijiatuau**	**19.96**	**55**	P	**P**	**19 26 08.3**	**-2.9**
BJT				pmax	pmax		
	comp=Z,27nm,1.8s						
BJT	**Baijiatuau**	**19.96**	**55**	P	**P**	**19 26 08.3**	**-2.9**
BJI2	**Beijing**	**19.97**	**55**	P	**Pn**	**19 26 12.5**	**-0.5**
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BJI2				L	L		
	comp=Z,180nm,7.3s						
BJI2				L	L		
	comp=Z,150nm,8.1s						
BJI2				L	L		
	comp=Z,230nm,9.2s						
KUU	**Kurty**	**19.98**	**318**	*e*P	**P**	**19 26 11.9**	**+0.5**
KUU	**Kurty**	**19.98**	**318**	*e*P	**P**	**19 26 12.0**	**+0.5**
DGZ	**Jazzator, Alta**	**20.19**	**346**	*i* P	**P**	**19 26 13.8**	**0.0**
DGZ				pmax	pmax		
	comp=Z,26nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**313**	P	**P**	**19 26 16.9**	**+0.7**
	comp=Z,32nm,1.1s,baz=124,slow=6.8,SNR=44						
	comp=Z,32nm,1.1s						
AAK	**Ala-Archa**	**20.41**	**313**	P	Pn	19 26 18.5	+0.2
AAK	**Ala-Archa**	**20.41**	**313**		Pn	19 26 17.4	-0.9
AAK				IAmb	IAmb	19 26 23.2	
	comp=Z,91nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**313**	P	Pn	19 26 18.6	+0.3
FRU1	**Bishkek**	**20.41**	**313**	IAmb	IAmb	19 26 20.2	
	comp=Z,49nm,1.2s						
KNGR	**Kungurtug, Tuv**	**20.42**	**5**	*i* P	**P**	**19 26 15.0**	**-1.2**
KNGR				pmax	pmax		
	comp=Z,11nm,1.1s						
MANEM	**Manem**	**20.48**	**297**		**P**	**19 26 18.0**	**+0.9**
MANEM				IAmb	IAmb	19 26 23.0	
	comp=Z,146nm,1.3s						
NJ2	**Nanjing**	**20.66**	**79**	*e*P	**P**	**19 26 18.0**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,34nm,1.6s						
SGDS	**Sogindy**	**20.75**	**315**	*e*P	**P**	**19 26 20.4**	**+0.6**
DRK	**Karamyk**	**20.94**	**302**	IAmb	IAmb	19 26 26.1	
	comp=Z,78nm,1.3s						
ZAK	**Zakamensk**	**21.08**	**15**	*e*P	**P**	**19 26 22.6**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,35nm,1.5s						
XLT	**XiLinHaoTe**	**21.68**	**45**	*e*P	**P**	**19 26 30.5**	**+0.6**
XLT				pmax	pmax		
	comp=Z,18nm,1.3s						
XLT				pmax	pmax		
	comp=Z,82nm,5.2s						
XLT				L	L		
	comp=Z,170nm,7.6s						
XLT				L	L		
	comp=Z,120nm,8.2s						
MOY	**Mondy**	**21.87**	**10**	*e*P	**P**	**19 26 32.4**	**+0.6**
MOY				pmax	pmax		
	comp=Z,43nm,1.6s						
GAR	**Garm**	**21.89**	**300**	IAmb	IAmb	19 26 34.4	
	comp=Z,80nm,1.1s						
GAR	**Garm**	**21.89**	**300**	P	**P**	**19 26 32.1**	**-0.1**
BTLS	**Baital**	**21.98**	**318**	*e*P	**P**	**19 26 33.6**	**+0.6**
BTLS	**Baital**	**21.98**	**318**	*e*P	**P**	**19 26 33.6**	**+0.6**
KBL	**Kabul**	**22.13**	**288**	P	**P**	**19 26 34.8**	**-0.1**
KBL				pmax	pmax		
	comp=Z,89nm,1.1s						
KBL	**Kabul**	**22.13**	**288**		**P**	**19 26 34.8**	**-0.1**
KBL	**Kabul**	**22.13**	**288**	P	**P**	**19 26 36.1**	**+1.2**
DLV	**Lat**	**22.22**	**142**	P	**P**	**19 26 35.8**	**-0.2**
TLY	**Talaya**	**22.38**	**15**	LR	LR	19 35 57.9	
	comp=Z,76nm,20.0s,baz=198,slow=38						
DZA	**Taraz**	**22.58**	**310**	*e*P	**P**	**19 26 40.2**	**+0.8**
DZA				pmax	pmax		
	comp=Z,14nm,0.9s						
DZA	**Taraz**	**22.58**	**310**	*e*P	**P**	**19 26 40.3**	**+0.8**
	comp=Z,14nm,0.9s						
CHGR	**Chuyangaron**	**22.68**	**299**	*d* iP	**P**	**19 26 40.4**	**-0.2**
SEM	**Semipalatinsk**	**22.89**	**336**	*e*P	**P**	**19 26 42.5**	**-0.3**
SEM				pmax	pmax		
	comp=Z,12nm,0.9s						
SEM	**Semipalatinsk**	**22.89**	**336**	*e*P	**P**	**19 26 42.6**	**-0.3**
	comp=Z,12nm,0.9s						
IRK	**Irkutsk**	**23.05**	**15**	*e*P	**P**	**19 26 44.2**	**0.0**
IRK				pmax	pmax		
	comp=Z,48nm,1.7s						
IUG	**Iuzhnay**	**23.14**	**308**	*e*P	**P**	**19 26 46.1**	**+0.7**
IUG				pmax	pmax		
	comp=Z,14nm,0.8s						
IUG	**Iuzhnay**	**23.14**	**308**	*e*P	**P**	**19 26 46.1**	**+0.7**
	comp=Z,14nm,0.8s						
KK31	**Karatay Array**	**23.21**	**310**	*i* P	**P**	**19 26 46.8**	**+0.8**
KK31	**Karatay Array**	**23.21**	**310**	IAmb	IAmb	19 26 50.1	
	comp=Z,54nm,1.6s						
KKAR	**Karatay Array**	**23.21**	**310**	P	**P**	**19 26 45.9**	**-0.1**
KKAR	**Karatay Array**	**23.21**	**310**		**P**	**19 26 45.9**	**-0.1**
SHAA	**Shahritus**	**23.25**	**295**	IAmb	IAmb	19 26 50.2	
	comp=Z,67nm,1.0s						
CHM	**Chimkent**	**23.50**	**308**	*e*P	**P**	**19 26 49.8**	**+0.9**
CHM				pmax	pmax		
	comp=Z,19nm,1.1s						
CHM	**Chimkent**	**23.50**	**308**	*e*P	**P**	**19 26 49.9**	**+0.9**
	comp=Z,19nm,1.1s						
BRLS	**Borolday**	**23.63**	**309**	*e*P	**P**	**19 26 51.2**	**+1.0**
BRLS	**Borolday**	**23.63**	**309**	*e*P	**P**	**19 26 51.2**	**+1.0**
KURBB	**Kurchatov Arra**	**23.70**	**334**	P	**P**	**19 26 50.1**	**-0.6**
	comp=Z,12nm,0.7s,baz=144,slow=10,SNR=84						
KURBB				PcP	**PcP**	**19 30 34.9**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=152,slow=1.7,SNR=9.5						
	comp=Z,12nm,0.7s						
KURBB	**Kurchatov Arra**	**23.70**	**334**	P	**P**	**19 26 50.0**	**-0.7**
KURK	**Kurchatov**	**23.74**	**334**	P	**P**	**19 26 50.1**	**-1.0**
KURK						19 30 34.9	
KURK	**Kurchatov**	**23.74**	**334**		**P**	**19 26 50.1**	**-1.0**
KURK				IAmb	IAmb	19 26 53.8	
	comp=Z,22nm,0.8s						
KURK	**Kurchatov**	**23.74**	**334**	P	**P**	**19 26 50.8**	**-0.3**
ZAA0	**Zalesovo Array**	**24.75**	**346**	IAmb	IAmb	19 27 02.4	
	comp=Z,80nm,1.8s						
ZALV	**Zalesovo Beam**	**24.75**	**346**	P	**P**	**19 27 00.0**	**-0.3**
	comp=Z,8.9nm,0.7s,baz=161,slow=9.4,SNR=49						
	comp=Z,8.9nm,0.7s						
ZALV	**Zalesovo Beam**	**24.75**	**346**		**P**	**19 26 59.5**	**-0.9**
HIA	**Hailar**	**26.78**	**38**	*i* P	**P**	**19 27 19.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**26.78**	**38**	P	**P**	**19 27 18.4**	**-0.5**
HILR	**Hailar Array B**	**26.95**	**37**	P	**P**	**19 27 21.1**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=217,slow=9.3,SNR=5.4						
	comp=Z,1.3nm,0.4s						
KSRS	**Korea Array**	**28.33**	**66**	P	**P**	**19 27 32.7**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=266,slow=9.8,SNR=5.1						
KSRS				LR	LR	19 39 34.7	
	comp=Z,30nm,20.5s,baz=215,slow=38						
	comp=Z,0.8nm,0.6s						
BVAR	**Borovoye Array**	**28.89**	**329**	P	**P**	**19 27 38.3**	**+0.7**
	comp=Z,6.7nm,0.8s,baz=127,slow=8.8,SNR=31						
BVAR				PcP	**PcP**	**19 30 46.8**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=129,slow=4.0,SNR=6.7						
	comp=Z,6.7nm,0.8s						
BORK	**Borovoye**	**28.93**	**329**	P	**P**	**19 27 37.3**	**-0.8**
BORK				pmax	pmax		
	comp=Z,13nm,0.9s						
BORK	**Borovoye**	**28.93**	**329**		**P**	**19 27 37.2**	**-0.8**
BORK				IAmb	IAmb	19 27 40.9	
	comp=Z,13nm,0.8s						
HEH	**HeiHe**	**31.54**	**41**	*e*P	**P**	**19 28 02.4**	**+1.3**
HEH				L	L		
	comp=Z,120nm,13.9s						
HEH				L	L		
	comp=Z,130nm,15.3s						
HEH				L	L		
	comp=Z,180nm,15.0s						
USRK	**Ussuriysk Ar.**	**32.43**	**54**	LR	LR	19 41 52.6	
	comp=Z,70nm,18.4s,baz=222,slow=38						
AB31	**Akbulak array**	**32.43**	**316**	*i* P	**P**	**19 28 09.8**	**+0.9**
ABKAR	**Akbulak array**	**32.43**	**316**		**P**	**19 28 08.3**	**-0.7**
ZEA	**Zeya**	**33.17**	**36**	*e*P	**P**	**19 28 16.0**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,100nm,10.0s						
MYLDM	**Lahad Datu**	**33.50**	**133**	P	**P**	**19 28 19.8**	**+1.2**
MYLDM				IAmb	IAmb	19 28 22.5	
	comp=Z,15nm,1.1s						
AKTO	**Aktyubinsk**	**34.03**	**317**	P	**P**	**19 28 23.1**	**+0.1**
SVE	**Sverdlovsk**	**35.66**	**328**	*e*P	**P**	**19 28 38.2**	**+1.3**
SVE				pmax	pmax		
	comp=Z,55nm,1.5s						
ARTI	**

NRIK **Noril'sk** 39.34 356 P P 19 29 06.1 -1.7
comp=Z,7.0nm,0.9s,baz=190,slow=4.7,SNR=7.2
NRIK **Noril'sk** 39.34 356*c* *i*P P 19 29 07.2 -0.6
NRIK pmax pmax
comp=Z,11nm,1.2s
ASAJ **Asahikawa** 39.97 56 LR LR 19 46 38.8
comp=Z,34nm,19.2s,baz=314,slow=38
YSS **Yuzhno-Sakhali** 40.34 52 *e*P P 19 29 16.7 +0.2
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,100nm,17.0s
YSS **Yuzhno-Sakhali** 40.34 52 P 19 29 15.8 -0.7
YSS IAmb IAmb 19 29 19.3
comp=Z,49nm,1.4s
YSS **Yuzhno-Sakhali** 40.34 52 P P 19 29 17.1 +0.6
BELG **Belogornoye** 40.82 317*d* *i*P P 19 29 22.2 +1.8
BELG pmax pmax
comp=Z,3.0nm,1.1s
TYV **Tymovskoe** 40.91 46 *e*P P 19 29 22.5 +1.4
TYV *e*S S 19 35 34.9 +2.7
TYV pmax pmax
comp=Z,7.0nm,1.3s
TYV pmax pmax
comp=Z,100nm,6.2s
TYV smax smax
comp=N,200nm,9.4s
TYV smax smax
comp=E,800nm,9.4s
GNI **Garni** 41.59 298*ce*P P 19 29 29.0 +1.9
GNI pmax pmax
comp=Z,28nm,1.3s
GNI **Garni** 41.59 298 P 19 29 27.9 +0.8
GNI IAmb IAmb 19 29 33.3
comp=Z,20nm,1.1s
GNI **Garni** 41.59 298 P P 19 29 30.5 +3.3
KIRV **Kirov** 41.80 326*ce*P P 19 29 28.8 +0.5
HAKT **HAKKARI** 42.58 294 P P 19 29 37.1 +1.7
KBZ **Khabaz** 42.90 303 P P 19 29 37.6 0.0
comp=Z,3.5nm,1.0s,baz=60,slow=7.5,SNR=5.6
comp=Z,3.5nm,1.0s
KBZ **Khabaz** 42.90 303*ce*P P 19 29 38.8 +1.3
KBZ pmax pmax
comp=Z,5.0nm,1.1s
GEVA **Gevas** 43.02 295 P P 19 29 39.0 +0.2
KIV **Kislovodsk** 43.06 303 *e*P P 19 29 39.2 +0.2
KIV pmax pmax
comp=Z,19nm,1.0s
KIV **Kislovodsk** 43.06 303 P 19 29 39.2 +0.2
KIV IAmb IAmb 19 29 44.2
comp=Z,39nm,1.2s
KIV **Kislovodsk** 43.06 303 P P 19 29 41.4 +2.5
EPOS **Posof** 43.06 300 P P 19 29 41.8 +2.6
SHA1 **Shidzhatmaz** 43.08 303*ce*P P 19 29 40.5 +1.2
GURO **Guroymak-BITLI** 43.80 296 IAmb IAmb 19 29 48.9
comp=Z,13nm,0.8s
RAYN **Ar Rayn** 44.19 274 P P 19 29 49.0 +0.7
RAYN pmax pmax
comp=Z,3.0nm,0.8s
RAYN **Ar Rayn** 44.19 274 P 19 29 49.0 +0.7
VRH **Novokhopyorsk** 44.20 314 *e*P P 19 29 48.0 +0.1
VRH pmax pmax
comp=Z,29nm,1.2s
SOC **Sochi** 45.22 303 *e*P P 19 29 56.0 -0.1
SOC *e* 19 31 41.1
SOC *e*S S 19 36 35.6 0.0
SOC pmax pmax
comp=Z,29nm,0.8s
SOC MLR MLR
comp=Z,38nm,15.0s
VORD **Divnogorie** 45.70 313 *e*P P 19 29 58.8 -1.0
VORD pmax pmax
comp=Z,10.0nm,1.4s
VSR **Storozhevoye** 45.80 314 *e*P P 19 30 00.7 0.0
VSR pmax pmax
comp=Z,13nm,0.7s
VORR **Voronezh** 45.82 314 *e*P P 19 30 01.5 +0.7
VORR pmax pmax
comp=Z,32nm,0.6s
LPSR **Galich'ya Gora** 46.09 316 *e*P P 19 30 03.3 +0.4
LPSR pmax pmax
comp=Z,28nm,0.7s
ARPR **Arapgir-MALATY** 46.61 297 P P 19 30 09.8 +2.4
MOS **Moscow** 47.24 320 *e*P P 19 30 12.9 +1.0
MOS pmax pmax
comp=Z,30nm,0.6s
KLMR **Klimovskoe** 47.27 327 *e*P P 19 30 10.5 -1.5
KLMR *e* 19 32 00.5
KLMR pmax pmax
comp=Z,27nm,1.4s
MA2 **Magadan** 47.31 35 LR LR 19 51 13.7
comp=Z,32nm,18.7s,baz=253,slow=38
MA2 **Magadan** 47.31 35 *ce*P P 19 30 12.8 +0.5
MA2 pmax pmax
comp=Z,11nm,1.3s
OBN **Obninsk** 47.76 319 *de*P P 19 30 15.8 -0.1
OBN *e* 19 32 11.8
OBN *e*PPP PPP 19 32 56.9
OBN *e*S S 19 37 05.8 -5.9
OBN pmax pmax
comp=Z,16nm,1.1s
OBN MLR MLR
comp=Z,22nm,19.0s
OBN **Obninsk** 47.76 319 P P 19 30 15.5 -0.4
comp=Z,20nm,0.9s
TOKA **Tokat** 47.88 299 IAmb IAmb 19 30 22.1
comp=Z,14nm,1.0s
SEY **Seymchan** 48.85 31 *ce*P P 19 30 24.9 +0.7
SEY pmax pmax
comp=Z,9.0nm,2.5s
SOEI **Soe** 48.85 140 P 19 30 24.4 -0.5
SOEI **Soe** 48.85 140 P P 19 30 24.9 0.0
SOEI **Soe** 48.85 140 P P 19 30 25.0 0.0
SIM **Simferopol'** 49.16 305 P P 19 30 25.4 -1.4
SIM pmax pmax
comp=Z,20nm,0.8s
BRTR **Keskin Array B** 50.12 298 P P 19 30 35.0 +0.5
comp=Z,4.3nm,0.8s,baz=122,slow=6.6,SNR=21
comp=Z,4.3nm,0.8s
BRTR **Keskin Array B** 50.12 298 *i* P P 19 30 35.0 +0.5
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR **Keskin Array B** 50.12 298 P 19 30 33.9 -0.6
BR104 **Keskin Array S** 50.12 298 P P 19 30 34.0 -0.5
comp=Z,40nmcomp=Z,5.0nm,1.1s
BR106 **Keskin Array S** 50.14 298 P P 19 30 34.1 -0.5
comp=Z,62nmcomp=Z,8.2nm,0.9s
BR105 **Keskin Array S** 50.14 298 P P 19 30 34.7 +0.1
comp=Z,50nmcomp=Z,6.1nm,0.9s
PETK **Petropavlovsk-** 50.38 44 P P 19 30 36.4 +0.3
comp=Z,3.1nm,0.8s,baz=268,slow=7.4,SNR=3.9
PETK LR LR 19 51 27.2
comp=Z,14nm,19.5s,baz=280,slow=36
comp=Z,3.1nm,0.8s
PETK **Petropavlovsk-** 50.38 44 P P 19 30 36.0 0.0
LVZ **Lovozero** 51.16 335 *ce*P P 19 30 42.2 +0.5
LVZ pmax pmax
comp=Z,9.0nm,1.3s
EIL **Elat** 51.30 285 P P 19 30 44.1 +0.8
SAHE **Sakarya_HENDEK** 52.04 300 ⇓P P 19 30 48.6 -0.1
AK08 **Malin Array Si** 52.06 313 P P 19 30 48.3 -0.4
AK10 **Malin Array Si** 52.06 313 P P 19 30 48.3 -0.4
AK10 pP pP 19 30 52.2 -1.8
AK03 **Malin Array Si** 52.08 313 P P 19 30 48.4 -0.4
AKASG **Malin Array Be** 52.08 313 P P 19 30 48.8 0.0
comp=Z,8.8nm,0.8s,baz=79,slow=6.6,SNR=22
AKASG LR LR 19 56 36.8
comp=Z,22nm,18.6s,baz=10.0,slow=40
comp=Z,8.8nm,0.8s
AKASG **Malin Array Be** 52.08 313 P P 19 30 48.6 -0.2
AKBB **Malin Array Si** 52.08 313 *ce*P P 19 30 48.3 -0.5
AKBB **Malin Array Si** 52.08 313 IAmb IAmb 19 30 51.0
comp=Z,19nm,0.9s
AKBB **Malin Array Si** 52.08 313 P P 19 30 48.1 -0.7
AK01 **Malin Array Si** 52.09 313 P P 19 30 48.1 -0.7
KIEV **Kiev** 52.09 313 ⇓P P 19 30 49.5 +0.7
KIEV **Kiev** 52.09 313 ⇓P P 19 30 49.5 +0.7
KIEV **Kiev** 52.09 313 P P 19 30 48.3 -0.6
comp=Z,89nm,1.4s
AK02 **Malin Array Si** 52.09 313 P P 19 30 48.2 -0.7
AK05 **Malin Array Si** 52.09 313 P P 19 30 48.2 -0.7
AK07 **Malin Array Si** 52.10 313 P P 19 30 48.7 -0.2
AK06 **Malin Array Si** 52.10 313 P P 19 30 48.3 -0.7
AK04 **Malin Array Si** 52.11 313 P P 19 30 48.7 -0.3

MNK **Minsk** 52.75 318 *i* P P 19 30 54.6 +0.8
comp=E,5.0nm,0.7s
MNK *i* P P 19 30 54.6 +0.8
MNK comp=N,9.0nm,1.0s *i* P P 19 30 54.6 +0.8
MNK comp=Z,18nm,1.0s,baz=88
MNK *i* PcP PcP 19 32 04.2 +1.0
MNK *i* PP PP 19 32 53.9 +1.0
MNK *i* PPP PPP 19 33 57.4
MNK *i* S S 19 38 23.1 +1.7
MNK *i* ScS ScS 19 40 44.5 +1.5
MNK *i* SS SS 19 42 03.0 +3.5
MNK *i* SSS SSS 19 43 48.6
MNK *i* LQ LQ 19 50 04.6
MNK *i* LR LR 19 52 46.1
MNK *i* LRM MLR 19 56 39.1
MNK comp=Z,18nm,15.2s *i* LRM MLR 19 56 41.0
MNK comp=N,17nm,15.7s *i* LRM MLR 19 57 29.8
MNK comp=E,24nm,19.6s
MNK Minsk 52.75 318 *i* P P 19 30 54.5 +0.8
MNK *i* 19 32 04.1
MNK *i* 19 32 53.8
MNK *i* PPP PPP 19 33 57.3
MNK *i* S S 19 38 23.0 +1.7
MNK *i* 19 40 44.4
MNK *i* SS SS 19 42 03.0 +3.5
MNK *i* SSS SSS 19 43 48.6
MNK pmax pmax
comp=E,5.0nm,0.7s
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK pmax pmax
comp=Z,18nm,1.0s
MNK MLR MLR
comp=Z,18nm,15.0s
MNK MLR MLR
comp=N,17nm,16.0s
MNK MLR MLR
comp=E,24nm,20.0s
SORM **Soroca** 52.84 310 ⇑P P 19 30 54.5 0.0
SORM **Soroca** 52.84 310 ⇑P P 19 30 54.5 0.0
SORM **Soroca** 52.84 310 P P 19 30 54.5 0.0
comp=E,13nm,0.8s
MI28 **Mi28,Pidlybu** 53.05 313 P P 19 30 54.9 -1.1
LUBAR **Lubar, Ukraine** 53.07 312 P P 19 30 55.4 -0.8
VSU **Vasula** 53.38 323 *ce*P P 19 30 57.9 -0.3
VSU pmax pmax
comp=Z,30nm,1.3s
VSU **Vasula** 53.38 323 P P 19 30 58.1 -0.1
ICOR **Ion Corvin** 53.74 305 ⇑P P 19 31 02.2 +1.1
ARBE **Arbavere** 53.78 324 P P 19 31 02.0 +0.9
FINES **FINESS Array B** 53.79 326 P P 19 31 01.4 +0.1
comp=Z,3.1nm,0.5s,baz=98,slow=8.0,SNR=34
comp=Z,3.1nm,0.5s
FINES **FINESS Array B** 53.79 326 P P 19 31 01.8 +0.6
FINES **FINESS Array B** 53.79 326 P 19 31 01.8 +0.6
KMPD **K-Podol'skiy** 54.05 310 P P 19 31 02.4 -1.0
OUL **Oulu** 54.11 331 P P 19 31 00.9 -2.6
RNPP9 **Sopachiv** 54.12 314 P P 19 31 04.0 +0.1
RNPP5 **Staryi Chortor** 54.14 314 P P 19 31 04.2 +0.2
RNPP8 **Varash** 54.15 314 P P 19 31 04.3 +0.2
TESR **Tescani** 54.19 308 P P 19 31 04.3 -0.1
comp=Z,10nm,1.5s
VRI **Vrincioaia** 54.23 307 ⇑P P 19 31 04.9 +0.2
VRI **Vrincioaia** 54.23 307 ⇑P P 19 31 04.9 +0.2
VRI **Vrincioaia** 54.23 307 P P 19 31 05.7 +1.0
comp=Z,23nm,1.4s
VRI **Vrincioaia** 54.23 307 P P 19 31 06.2 +1.5
SAHR **Sahastru** 54.27 307 ⇑P P 19 31 06.2 +1.0
PLOR **Plostina** 54.28 307 ⇓P P 19 31 05.9 +0.7
PLOR **Plostina** 54.28 307 ⇓P P 19 31 05.9 +0.7
ONER **Baraj Valea Uz** 54.39 308 ⇓P P 19 31 06.7 +0.8
ISR **Istrita** 54.47 306 ⇑P P 19 31 07.6 +1.0
ISR **Istrita** 54.47 306 ⇑P P 19 31 07.6 +1.0
BIZ **Bicaz** 54.50 308 ⇓P P 19 31 07.9 +1.2
COVR **Voineasa-Covas** 54.59 307 ⇑P P 19 31 08.9 +1.5
NEHR **Nehoiu** 54.59 306 ⇑P P 19 31 09.1 +1.7
BALY **Balya** 54.68 299 P P 19 31 08.8 +0.6
TURR **Turia** 54.69 307 ⇑P P 19 31 09.0 +0.9
ARCES **ARCESS Array B** 54.75 336 P P 19 31 08.1 -0.1
comp=Z,1.9nm,0.7s,baz=72,slow=12,SNR=6.4
ARCES PcP PcP 19 32 10.9 +0.3
ARCES comp=Z,0.7nm,0.5s,baz=84,slow=4.3,SNR=5.2
ARCES LR LR 19 57 01.7
comp=Z,28nm,19.6s,baz=88,slow=39
comp=Z,1.9nm,0.7s
ARCES **ARCESS Array B** 54.75 336 P P 19 31 07.9 -0.3
ARCES PcP 19 32 11.1 +0.5
ARCES IAmb IAmb 19 32 42.0
comp=Z,34nm,1.9s
MLR **Muntele Rosu** 54.83 307 ⇑P P 19 31 10.6 +1.4
MLR **Muntele Rosu** 54.83 307 ⇑P P 19 31 10.6 +1.4
MLR **Muntele Rosu** 54.83 307 P P 19 31 10.4 +1.2
OZUR 54.84 307 ⇑P P 19 31 09.3 +0.1
PABE **Paberze** 54.96 319 P P 19 31 11.0 +1.1
BURAR **Bucovina Array** 55.00 309 ⇑P P 19 31 11.8 +1.3
BURAR **Bucovina Array** 55.00 309 ⇑P P 19 31 11.8 +1.3
BURAR **Bucovina Array** 55.00 309 P 19 31 09.9 -0.6
DOPR **Dopca** 55.13 307 ⇑P P 19 31 12.3 +1.0
BILL **Bilibino** 55.39 26 *ce*P P 19 31 14.5 +1.7
BILL pmax pmax
comp=Z,6.0nm,1.3s
VOIR 55.46 307 ⇓P P 19 31 14.7 +1.0
VOIR 55.46 307 ⇓P P 19 31 14.7 +1.0
VOIR 55.46 307 P P 19 31 14.4 +0.6
SUW **Suwalki** 55.53 317 *e*P P 19 31 14.1 0.0
RDO **Rodhopi** 55.93 302 IAmb IAmb 19 31 20.5
comp=Z,16nm,1.2s
BMR **Baia Mare** 56.14 310 P P 19 31 20.0 +1.4
KNRA **Kununurra** 56.19 140 P P 19 31 20.0 +0.9
LOT **Lotru** 56.34 307 P P 19 31 20.8 +0.7
KWP **Kalwaria Pacla** 56.35 312 *e*P P 19 31 20.9 +0.8
KWP **Kalwaria Pacla** 56.35 312 P P 19 31 20.8 +0.8
comp=Z,41nm,1.4s
MARR **Marisel-Cluj** 56.56 308 ⇑P P 19 31 22.6 +1.0
TRPA **Tarpa** 56.70 310 P P 19 31 24.2 +1.7
KOLS **Kolonicke sedl** 56.74 311 *e*P P 19 31 24.0 +1.2
KOLS **Kolonicke sedl** 56.74 311 *e*P P 19 31 24.0 +1.2
DEV **Deva** 56.86 308 P P 19 31 23.7 0.0
BEL **Belsk** 57.23 315 *e*P P 19 31 26.8 +0.6
SIRR **Siria** 57.63 308 ⇓P P 19 31 29.3 +0.2
BZS **Buzias** 57.79 307 P P 19 31 31.8 +1.6
MDVR **Moldovita** 57.90 306 ⇑P P 19 31 31.9 +0.8
NIE **Niedzica** 57.94 312 *e*P P 19 31 32.8 +1.5
NIE **Niedzica** 57.94 312 P P 19 31 31.9 +0.7
comp=Z,4.2nm,1.4s
OJC **Ojcow** 58.11 313 *e*P P 19 31 33.1 +0.6
OJC **Ojcow** 58.11 313 P P 19 31 32.8 +0.4
comp=Z,291nmcomp=Z,19nm,0.8s
OJC **Ojcow** 58.11 313 P P 19 31 33.5 +1.1
SPITS **Spitsbergen Ar** 58.23 346 P P 19 31 33.1 +0.3
comp=Z,2.6nm,0.9s,baz=95,slow=10,SNR=2.2
comp=Z,2.6nm,0.9s
SPITS **Spitsbergen Ar** 58.23 346 P P 19 31 33.2 +0.3
SPITS pmax pmax
comp=Z,24nm,1.4s
LANS **Liptovska Anna** 58.52 312 *e*P P 19 31 38.6 +3.2
LANS **Liptovska Anna** 58.52 312 *e*P P 19 31 38.5 +3.2
AGG **Agios Georgios** 58.83 300 P P 19 31 36.1 -1.6
GKP **Gorka Klasztor** 59.14 317 *e*P P 19 31 39.9 +0.5
MORC **Moravsky Berou** 59.63 313 ⇑P P 19 31 42.7 -0.3
MORC **Moravsky Berou** 59.63 313 ⇑P P 19 31 42.7 -0.3
MORC **Moravsky Berou** 59.63 313 IAmb IAmb 19 31 45.6
comp=Z,7.3nm,0.9s
MORC **Moravsky Berou** 59.63 313 *e*P P 19 31 42.7 -0.3
MORH **Mrgy, Hungar** 59.69 309 ⇑P P 19 31 43.8 +0.4
MORH **Mrgy, Hungar** 59.69 309 P P 19 31 44.6 +1.2
comp=Z,7.4nm,1.5s
JAVC **Velka Javorina** 59.74 312 *e*P P 19 31 45.3 +1.5
HFS **Hagfors** 59.92 325 P P 19 31 45.3 +0.5
comp=Z,4.0nm,0.7s,baz=118,slow=5.7,SNR=7.6
comp=Z,4.0nm,0.7s
KRLC **Kraliky** 60.04 313 *e*P P 19 31 47.0 +1.1
KRLC **Kraliky** 60.04 313 *e*P P 19 31 47.0 +1.1
MODS **Modra-Piesok** 60.10 311 *e*P P 19 31 48.2 +1.9
MODS **Modra-Piesok** 60.10 311 *e*P P 19 31 48.2 +1.9
KSP **Ksiaz** 60.19 314 *e*P P 19 31 47.8 +1.0
KSP **Ksiaz** 60.19 314 P P 19 31 47.0 +0.2
comp=Z,6.7nm,1.4s
MPLH **Magyarpolny** 60.20 310 P P 19 31 46.8 -0.2
comp=Z,19nm,1.4s

DPC **Dobruska-Polom** 60.27 314 *e*P P 19 31 48.7 +1.3
DPC **Dobruska-Polom** 60.27 314 *e*P P 19 31 48.7 +1.3
DPC **Dobruska-Polom** 60.27 314 P P 19 31 48.5 +1.1
comp=Z,8.5nm,1.5s
OSTC **Ostas** 60.30 314 *e*P P 19 31 50.0 +2.4
OSTC **Ostas** 60.30 314 *e*P P 19 31 50.0 +2.4
VRAC **Vranov** 60.33 312 *e*P P 19 31 48.4 +0.6
KRUC **Moravsky** 60.51 312 *e*P P 19 31 49.3 +0.2
NC405 **NORSAR Array S** 60.72 326 P P 19 31 50.0 -0.3
NC303 **NORSAR Array S** 60.87 327 P P 19 31 51.1 -0.2
NC303 IAmb IAmb 19 31 53.6
comp=Z,13nm,1.0s
RONA **Rosalia, Austr** 60.90 311 *e*P P 19 31 52.2 +0.4
comp=Z,3.5nm,0.8s
WINA **Alland / Wiene** 60.95 311 *e*P P 19 31 52.3 +0.3
comp=Z,2.0nm,0.6s
NB2 **NORSAR Subarra** 60.97 326 P P 19 31 51.6 -0.4
comp=Z,3.2nm,0.6s,baz=79,slow=6.9
NOA **NORSAR Array B** 60.97 326 P P 19 31 52.3 +0.3
comp=Z,4.4nm,0.7s,baz=79,slow=6.9,SNR=11
NOA LR LR 19 59 36.6
comp=Z,10nm,18.4s,baz=60,slow=37
comp=Z,4.4nm,0.7s
CONA **Conrad Observa** 61.13 311 *e*P P 19 31 53.7 +0.4
comp=Z,12nm,0.8s,SNR=12
NC204 **NORSAR Array S** 61.15 327 P 19 31 53.1 -0.1
NC204 IAmb IAmb 19 31 54.9
comp=Z,12nm,0.8s
PRU **Pruhonice** 61.47 314 *e*P P 19 31 56.4 +0.9
PRU **Pruhonice** 61.47 314 *e*P P 19 31 56.4 +0.9
BRG **Berggiesshubel** 61.63 315 *e*P P 19 31 57.5 +1.0
comp=Z,3.5nm,0.8s,baz=74,slow=6.9
BRG **Berggiesshubel** 61.63 315 *e*P P 19 31 58.4 +1.8
BRG Amp 19 31 59.1
comp=Z,5.7nm,0.9s
ZVC **Zvikov** 61.83 313 *e*P P 19 31 59.3 +1.4
CKRC **Cesky Krumlov** 61.91 312 *e*P P 19 31 59.9 +1.4
CKRC **Cesky Krumlov** 61.91 312 *e*P P 19 31 59.9 +1.4
SOKA **Soboth** 61.99 310 *e*P P 19 31 59.9 +0.7
comp=Z,6.7nm,0.8s
LODK **Lodwar** 62.03 257 P 19 32 00.8 +0.9
CLL **Collm** 62.10 315 *i* P P 19 32 00.6 +0.9
CLL pmax pmax
comp=Z,6.0nm,1.3s
CLL **Collm** 62.10 315 *i* P P 19 32 00.6 +0.9
comp=Z,6.0nm,1.3s
CLL *e*PP PP 19 34 18.0 +1.9
SESA **Seetaler Alpe,** 62.18 310 *e*P P 19 32 00.3 -0.3
comp=Z,7.4nm,1.0s,SNR=7.1
GEC2 **GERESS Array S** 62.29 313 IAmb IAmb 19 32 03.8
comp=Z,6.1nm,0.8s
GEC2 **GERESS Array S** 62.29 313 *e*P P 19 32 02.0 +0.8
comp=Z,3.9nm,0.8s,baz=74,slow=6.9
GERES **GERESS Array B** 62.29 313 P P 19 32 01.9 +0.8
comp=Z,3.2nm,0.7s,baz=64,slow=5.0,SNR=36
comp=Z,3.2nm,0.7s
GERES **GERESS Array B** 62.29 313 P P 19 32 02.0 +0.8
GERES **GERESS Array B** 62.29 313 P P 19 32 01.5 +0.3
KHC **Kasperske Hory** 62.29 313 *ce*P P 19 32 02.1 +0.9
KHC pmax pmax
comp=Z,10.0nm,1.7s
KHC **Kasperske Hory** 62.29 313 *e*P P 19 32 02.0 +0.9
KHC **Kasperske Hory** 62.29 313 P P 19 32 01.6 +0.5
OBKA **Obir** 62.36 310 *e*P P 19 32 01.8 +0.1
comp=Z,8.7nm,1.7s
BIOA **Bad Ischl, Aus** 62.64 311 *e*P P 19 32 03.3 -0.1
comp=Z,2.7nm,0.5s
TANN **Tannenbergstha** 62.66 314 *e*P P 19 32 03.7 +0.2
comp=Z,2.5nm,0.8s,baz=74,slow=6.9
WB0 **Warramunga Arr** 62.66 137 P P 19 32 04.4 +0.5
WB0 IAmb IAmb 19 32 42.0
comp=Z,19nm,1.8s
WET **Wettzell** 62.73 313 *e*P P 19 32 05.2 +1.1
comp=Z,3.3nm,0.7s,baz=74,slow=6.9
WRA **Warramunga Arr** 62.77 138 P P 19 32 04.3 -0.3
comp=Z,2.2nm,0.7s,baz=326,slow=7.1,SNR=24
comp=Z,2.2nm,0.7s
WRA **Warramunga Arr** 62.77 138 *i* P P 19 32 05.0 +0.4
WRA pmax pmax
comp=Z,3.0nm,0.7s
WRA **Warramunga Arr** 62.77 138 P P 19 32 03.7 -0.9
FLTG **Flechtingen** 62.90 317 *e*P P 19 32 06.3 +1.3
comp=Z,3.9nm,0.9s,baz=74,slow=6.9
MYKA **Terra Mystica** 62.93 310 *e*P P 19 32 05.2 -0.3
comp=Z,3.6nm,1.0s
TIP **Timpagrande** 62.94 301 IAmb IAmb 19 32 08.0
comp=Z,6.5nm,0.9s
ROTZ **Rotzenmuhle** 62.99 314 *e*P P 19 32 07.1 +1.4
comp=Z,1.1nm,0.8s,baz=74,slow=6.9
KBA **Koelnbreinsper** 63.00 311 *e*P P 19 32 05.9 -0.1
comp=Z,3.7nm,0.9s
MOX **Moxa** 63.12 315 *e*P P 19 32 07.3 +0.8
comp=Z,1.6nm,0.8s,baz=74,slow=6.9
MOX *e*L L 20 01 16.4
comp=Z,26nm,19.0s
RJOB **Jochberg** 63.17 311 *e*P P 19 32 07.7 +0.7
comp=Z,2.5nm,0.7s,baz=74,slow=6.9
LESA **Schwarzleotal** 63.34 311 *e*P P 19 32 08.5 +0.3
comp=Z,13nm,1.2s,SNR=13
CLZ **Clausthal** 63.54 316 *e*P P 19 32 10.5 +1.1
comp=Z,4.1nm,0.8s,baz=74,slow=6.9
GRF **Grafenberg Arr** 63.62 314 *e*P P 19 32 11.4 +1.5
comp=Z,6.0nm,0.7s,baz=74,slow=6.9
GRF *e*L L 20 00 16.1
comp=Z,25nm,18.0s
STAL **STALIGIAL** 63.65 310 P P 19 32 09.2 -1.0
STAL IAmb IAmb 19 32 11.8
comp=Z,6.5nm,0.8s
FUR **Furstenfeldbru** 64.03 312 *e*P P 19 32 13.7 +1.1
comp=Z,1.5nm,0.7s,baz=74,slow=6.9
WTTA **Wattenberg** 64.06 311 *e*P P 19 32 13.2 +0.1
comp=Z,8.4nm,0.9s
WATA **Walderalm** 64.08 311 *e*P P 19 32 13.7 +0.6
comp=Z,4.3nm,1.0s
INTR **Introdacqua** 64.12 305 IAmb IAmb 19 32 23.8
comp=Z,11nm,1.1s
SQTA **Sankt Quirin** 64.35 311 *e*P P 19 32 14.6 -0.3
comp=Z,4.0nm,0.8s
FDMO **Fiordimonte** 64.37 306 IAmb IAmb 19 32 18.9
comp=Z,7.7nm,1.0s
MOTA **Moosalm** 64.38 311 *e*P P 19 32 15.2 0.0
comp=Z,9.2nm,1.1s
NRCA **Norcia** 64.42 306 IAmb IAmb 19 32 19.4
comp=Z,7.4nm,0.9s
RETA **Reutte** 64.56 312 *e*P P 19 32 16.3 +0.1
comp=Z,5.1nm,0.8s,SNR=5.8
FETA **Feichten** 64.72 311 *e*P P 19 32 16.8 -0.6
comp=Z,7.8nm,1.0s,SNR=7.4
GAMB **Gambell** 64.80 29 P P 19 32 16.8 -0.5
baz=287
KASTN **Kahler Asten** 64.90 316 *e*P P 19 32 20.1 +1.8
baz=74,slow=6.9
DAVA **Damuels** 65.19 312 *e*P P 19 32 19.7 -0.7
comp=Z,7.1nm,1.0s
AS31 **Alice Springs** 65.46 141 P 19 32 22.7 +0.5
ASAR **Alice Springs** 65.46 141 P P 19 32 22.6 +0.4
comp=Z,3.0nm,0.7s,baz=326,slow=6.6,SNR=47
comp=Z,3.0nm,0.7s
TNA **Tin City** 65.77 27 P P 19 32 23.1 -0.5
baz=290
C16K **Lisburne Hills** 65.78 24 P P 19 32 21.8 -1.8
baz=291
TUE **Stuetta** 65.80 311 IAmb IAmb 19 32 26.2
comp=Z,6.8nm,0.8s
C17K **DeLong Mountai** 66.45 23 P P 19 32 26.1 -1.9
baz=293
WLF **Walferdange** 66.76 315 P P 19 32 31.1 +0.8
WLF pmax pmax
comp=Z,15nm,1.0s
WLF **Walferdange** 66.76 315 P 19 32 31.1 +0.8
WLF **Walferdange** 66.76 315 *e*P P 19 32 32.6 +2.4
comp=Z,7.8nm,0.9s,baz=74,slow=6.9
D17K **Noatak River** 66.79 24 P P 19 32 28.9 -1.2
baz=293
F15K **North Star Dit** 66.98 26 P P 19 32 30.1 -1.3
baz=292
ANM **Nome** 67.14 28 P P 19 32 31.3 -1.1
baz=292
SENIN **Lac Senin/Sane** 67.17 311 P 19 32 33.3 0.0
SENIN IAmb IAmb 19 32 36.1
comp=Z,6.3nm,0.7s
C19K **Lookout Ridge** 67.39 22 P P 19 32 33.2 -0.8
baz=296
E17K **Hotham Inlet** 67.48 24 P P 19 32 32.8 -1.7
baz=294
G15K **Niukluk** 67.50 27 P P 19 32 32.9 -1.8
baz=293

B20K	Meade River baz=297	67.75	21	P	P	19 32 34.5	-1.7		
E18K	Tukpahlearik C baz=295	67.77	24	P	P	19 32 34.6	-1.7		
F17K	Baldwin Pennin baz=295	67.96	25	P	P	19 32 36.9	-0.6		
G16K	Koyuk River comp=Z,11nm,1.0s	67.99	26	IAmb	IAmb	19 32 40.3			
G16K	Koyuk River baz=295	67.99	26	P	P	19 32 36.4	-1.3		
MBAR	Mbarara comp=Z,4.0nm,1.1s	68.08	256	*i* P pmax	P pmax	19 32 41.0	+1.6		
D19K	Kuna River comp=Z,11nm,1.2s	68.14	22	IAmb	IAmb	19 32 41.3			
D19K	Kuna River baz=297	68.14	22	P	P	19 32 37.1	-1.6		
H16K	Elim baz=295	68.35	27	P	P	19 32 39.4	-0.6		
M11K	Mekoryuk baz=293	68.41	32	P	P	19 32 39.8	-0.6		
F18K	Selawik baz=296	68.46	24	P	P	19 32 40.3	-0.3		
K13K	Kusilvak Mount comp=Z,9.8nm,1.2s	68.47	30	IAmb	IAmb	19 32 41.8			
K13K	Kusilvak Mount baz=294	68.47	30	P	P	19 32 39.8	-1.1		
D20K	Etivluk River baz=298	68.52	22	P	P	19 32 40.3	-0.9		
G17K	Kiwalik Mounta baz=296	68.58	26	P	P	19 32 40.9	-0.6		
J14K	Nanvaranak Lak baz=294	68.61	29	P	P	19 32 40.2	-1.4		
B22K	Teshekpuk Lake baz=300	68.70	20	P	P	19 32 40.8	-1.3		
B21K	Ikpikpuk River comp=Z,9.6nm,1.1s	68.71	21	IAmb	IAmb	19 32 44.6			
B21K	Ikpikpuk River baz=300	68.71	21	P	P	19 32 41.3	-0.9		
E20K	Nigu River baz=299	68.88	22	P	P	19 32 42.4	-1.0		
C21K	Kniveblade Rid baz=300	68.89	21	P	P	19 32 42.2	-1.2		
E19K	Redstone River baz=298	68.92	23	P	P	19 32 42.0	-1.5		
F19K	Shaleruckik Mo comp=Z,9.7nm,1.2s	69.02	24	IAmb	IAmb	19 32 46.3			
F19K	Shaleruckik Mo baz=298	69.02	24	P	P	19 32 43.1	-1.0		
H17K	Granite Mounta baz=297,SNR=7.2	69.11	26	P	P	19 32 43.7	-1.1		
G18K	Tagagawik baz=298	69.14	25	P	P	19 32 44.2	-0.8		
I17K	Unalakleet baz=296	69.28	27	P	P	19 32 44.9	-1.0		
E21K	Killik River comp=Z,9.4nm,1.0s	69.50	22	IAmb	IAmb	19 32 49.6			
E21K	Killik River baz=301	69.50	22	P	P	19 32 45.8	-1.4		
L14K	Kuka Creek comp=Z,6.3nm,1.0s	69.58	30	IAmb	IAmb	19 32 50.2			
L14K	Kuka Creek baz=296	69.58	30	P	P	19 32 46.2	-1.5		
J16K	Anvik River comp=Z,15nm,1.1s	69.59	28	IAmb	IAmb	19 32 50.6			
J16K	Anvik River baz=297	69.59	28	P	P	19 32 46.6	-1.2		
G19K	Purcell Mounta baz=299	69.59	24	P	P	19 32 46.6	-1.2		
H18K	Honhosa River baz=298	69.60	26	P	P	19 32 46.5	-1.3		
F20K	Avaraart Lake baz=300	69.63	23	P	P	19 32 46.4	-1.5		
K15K	Wolf Creek Mou comp=Z,19nm,1.4s	69.65	29	IAmb	IAmb	19 32 51.0			
K15K	Wolf Creek Mou baz=296	69.65	29	P	P	19 32 47.4	-0.8		
KEST	Kesra comp=Z,8.9nm,1.0s,baz=72,slow=8.8,SNR=5.2 comp=Z,8.9nm,1.0s	69.67	300	P	P	19 32 49.1	+0.2		
KEST	Kesra comp=Z,9.7nm,1.0s	69.67	300	IAmb	IAmb	19 32 52.5			
C23K	Itkillik River baz=303	69.79	20	P	P	19 32 48.2	-0.7		
EKA	Eskdalemuir Ar comp=Z,3.7nm,1.0s,baz=76,slow=7.0,SNR=7.5 comp=Z,3.7nm,1.0s	69.93	323	P	P	19 32 50.1	+0.1		
EKA	Eskdalemuir Ar EKA comp=Z,11nm,1.4s	69.93	323	P pmax	P pmax	19 32 50.8	+0.8		
H19K	Roundabout Mou baz=299,SNR=7.9	70.12	25	P	P	19 32 50.7	-0.2		
J17K	VABM Dome comp=Z,12nm,1.1s	70.15	27	IAmb	IAmb	19 32 53.9			
J17K	VABM Dome baz=298	70.15	27	P	P	19 32 50.2	-1.0		
M14K	Bethel comp=Z,12nm,1.1s	70.16	31	IAmb	IAmb	19 32 56.0			
M14K	Bethel baz=296	70.16	31	P	P	19 32 49.8	-1.4		
D23K	Nanushuk River comp=Z,14nm,1.1s	70.25	20	IAmb	IAmb	19 32 54.7			
D23K	Nanushuk River baz=303	70.25	20	P	P	19 32 50.9	-0.8		
F21K	Alatna River baz=301,SNR=6.7	70.29	23	P	P	19 32 51.9	-0.2		
E22K	Anaktuvuk Pass baz=302	70.35	21	P	P	19 32 51.5	-0.9		
GCSA	Galena City Sc baz=299	70.35	26	P	P	19 32 51.7	-0.7		
F22K	John River baz=302	70.57	22	P	P	19 32 52.0	-1.8		
N14K	Kuskokwak Cree baz=297	70.65	31	P	P	19 32 54.0	-0.3		
G21K	Allakaket comp=Z,8.9nm,1.2s	70.66	23	IAmb	IAmb	19 32 56.3			
G21K	Allakaket baz=302	70.66	23	P	P	19 32 53.3	-1.0		
D24K	Happy Valley baz=305	70.69	20	P	P	19 32 53.8	-0.7		
H20K	Anotleneega Mo baz=301,SNR=6.3	70.71	24	P	P	19 32 54.0	-0.7		
M15K	Kasigluk River baz=298	70.74	30	P	P	19 32 53.9	-1.0		
TOLK	Toolik Lake Re baz=304	70.76	20	P	P	19 32 54.5	-0.4		
L16K	Owhat River comp=Z,17nm,1.5s	70.78	29	IAmb	IAmb	19 32 57.0			
L16K	Owhat River baz=298	70.78	29	P	P	19 32 54.5	-0.6		
K17K	Iditarod baz=299,SNR=8.5	70.78	28	P	P	19 32 53.9	-1.2		
J18K	Innoko River comp=Z,19nm,1.4s	71.05	27	IAmb	IAmb	19 32 59.7			
J18K	Innoko River baz=300,SNR=5.5	71.05	27	P	P	19 32 56.7	0.0		
L17K	Donlin baz=299	71.07	28	P	P	19 32 56.5	-0.3		
E23K	Chandalar comp=Z,15nm,1.8s	71.08	21	IAmb	IAmb	19 32 59.6			
E23K	Chandalar baz=304	71.08	21	P	P	19 32 56.2	-0.7		
G22K	Bettles baz=303	71.11	22	P	P	19 32 56.1	-0.9		
O14K	Tigyukauivet M baz=298	71.15	32	P	P	19 32 57.5	+0.1		
J19K	Poorman comp=Z,10nm,1.1s	71.20	26	IAmb	IAmb	19 33 01.7			
J19K	Poorman baz=301,SNR=5.9	71.20	26	P	P	19 32 58.2	+0.6		
I20K	Naaghedeneel baz=301	71.21	25	P	P	19 32 57.6	0.0		
N15K	Kwethluk River baz=298	71.25	31	P	P	19 32 57.7	-0.2		
D25K	Kavik River comp=Z,18nm,1.4s	71.30	19	IAmb	IAmb	19 33 03.0			
D25K	Kavik River baz=307,SNR=9.4	71.30	19	P	P	19 32 57.4	-0.8		
M16K	Timber Creek baz=299	71.33	30	P	P	19 32 57.7	-0.8		
C26K	Camden Bay baz=308	71.34	18	P	P	19 32 57.7	-0.7		
H21K	Melozitna Rive comp=Z,16nm,1.4s	71.36	24	IAmb	IAmb	19 33 01.3			
H21K	Melozitna Rive baz=302,SNR=9.0	71.36	24	P	P	19 32 58.4	-0.2		
COLD	Coldfoot baz=304	71.36	22	P	P	19 32 58.4	-0.2		
E24K	Your Creek comp=Z,8.7nm,0.9s	71.42	21	IAmb	IAmb	19 33 01.7			
E24K	Your Creek baz=305,SNR=11	71.42	21	P	P	19 32 58.1	-0.8		
J20K	Nowinta River comp=Z,13nm,1.2s	71.66	26	IAmb	IAmb	19 33 04.7			
J20K	Nowinta River baz=302,SNR=10	71.66	26	P	P	19 33 00.4	0.0		
N16K	Nishlik Lake baz=299	71.68	30	P	P	19 33 00.1	-0.5		
L18K	Granite Mounta baz=300	71.68	28	P	P	19 33 01.0	+0.5		
G23K	Bananza Creek baz=304	71.71	22	P	P	19 33 00.9	+0.1		
H22K	Ishtalitna Cre comp=Z,13nm,1.5s	71.72	23	IAmb	IAmb	19 33 03.6			
H22K	Ishtalitna Cre baz=304,SNR=6.3	71.72	23	P	P	19 33 00.7	-0.1		
M17K	Holitna River baz=300	71.79	29	P	P	19 33 01.7	+0.5		
O15K	Ungalikthiuk R baz=299	71.84	32	P	P	19 33 02.3	+0.8		
C27K	Jago River comp=Z,19nm,1.2s	71.85	18	IAmb	IAmb	19 33 04.6			
C27K	Jago River baz=309,SNR=10	71.85	18	P	P	19 33 02.0	+0.5		
I21K	Tanana baz=303	71.90	24	P	P	19 33 01.8	0.0		
F24K	Squaw Lake baz=306	71.93	21	P	P	19 33 01.9	-0.1		
K20K	Telida comp=Z,9.7nm,1.2s	72.12	26	IAmb	IAmb	19 33 06.2			
K20K	Telida baz=302	72.12	26	P	P	19 33 03.3	+0.1		
E25K	Arctic Village comp=Z,12nm,1.4s	72.27	20	IAmb	IAmb	19 33 06.8			
E25K	Arctic Village baz=308,SNR=6.6	72.27	20	P	P	19 33 03.8	-0.2		
N17K	Nushagak Hills baz=300	72.33	30	P	P	19 33 04.4	-0.1		
H23K	Yukon River baz=305	72.38	23	P	P	19 33 04.0	-0.8		
O16K	Kokwok River B comp=Z,22nm,1.4s	72.41	31	IAmb	IAmb	19 33 07.7			
O16K	Kokwok River B baz=300	72.41	31	P	P	19 33 05.0	0.0		
M18K	Stony River baz=301	72.41	28	P	P	19 33 04.9	0.0		
MLY	Manley baz=304,SNR=6.5	72.42	24	P	P	19 33 04.9	-0.1		
L19K	White Mountain comp=Z,16nm,1.3s	72.44	27	IAmb	IAmb	19 33 11.0			
L19K	White Mountain baz=302	72.44	27	P	P	19 33 04.6	-0.6		
CHUM	Lake Minchumin baz=303	72.50	25	P	P	19 33 04.5	-0.8		
G24K	Hadweenzic Riv baz=307	72.55	22	P	P	19 33 05.0	-0.6		
F25K	Christian River baz=308,SNR=6.5	72.57	20	P	P	19 33 05.8	-0.1		
CEST	Esterri de Car comp=Z,8.1nm,1.0s	72.61	309	IAmb	IAmb	19 33 10.6			
O17K	Koliganek Bris baz=301	72.75	30	P	P	19 33 06.4	-0.5		
N18K	Kilae Creek baz=301	72.80	29	P	P	19 33 06.7	-0.6		
I23K	Minto, Yukon-K baz=305	72.84	23	P	P	19 33 06.0	-1.4		
CAST	Castle Rocks comp=Z,15nm,1.2s	72.84	26	IAmb	IAmb	19 33 10.4			
CAST	Castle Rocks baz=304,SNR=8.2	72.84	26	P	P	19 33 06.7	-0.8		
D27M	Malcolm River baz=312	72.84	18	P	P	19 33 06.6	-0.9		
H24K	Noodor Dome baz=306	72.93	22	P	P	19 33 06.8	-1.3		
G25K	Bearman Lake baz=308	72.94	21	P	P	19 33 07.5	-0.5		
F26K	Sheenjek River baz=309	72.96	20	P	P	19 33 07.4	-0.8		
PPLA	Purkeypile baz=304,SNR=5.2	73.09	26	P	P	19 33 09.0	-0.2		
NEA2	Nenana baz=306	73.26	24	P	P	19 33 08.7	-1.2		
M20K	Styx River comp=Z,21nm,1.4s	73.29	27	IAmb	IAmb	19 33 18.4			
M20K	Styx River baz=303	73.29	27	P	P	19 33 09.5	-0.8		
N19K	Bonanza Creek baz=302	73.32	29	P	P	19 33 09.3	-1.1		
P17K	Kichak River baz=301	73.34	31	P	P	19 33 09.1	-1.3		
E27K	Coleen River comp=Z,8.3nm,1.1s	73.37	19	IAmb	IAmb	19 33 13.4			
E27K	Coleen River baz=311,SNR=8.3	73.37	19	P	P	19 33 09.4	-1.2		
S14K	Fog Glacier baz=300	73.38	34	P	P	19 33 09.8	-1.0		
POKR	Poker Plat Res baz=307	73.51	23	P	P	19 33 10.3	-1.1		
O18K	Koktuh Hills baz=302	73.53	30	P	P	19 33 10.9	-0.7		
G26K	Porcupine Rive baz=310,SNR=9.4	73.54	21	P	P	19 33 10.1	-1.4		
E28M	Babbage River comp=Z,11nm,1.1s	73.66	18	IAmb	IAmb	19 33 16.7			
E28M	Babbage River baz=313	73.66	18	P	P	19 33 10.9	-1.3		
MCK	McKinley baz=306	73.82	25	P	P	19 33 13.1	-0.1		
L22K	Petersville comp=Z,12nm,0.9s	73.84	26	IAmb	IAmb	19 33 15.4			
L22K	Petersville baz=305,SNR=7.8	73.84	26	P	P	19 33 13.1	-0.4		
SKT	Skwentna comp=Z,16nm,1.2s	73.86	27	IAmb	IAmb	19 33 15.3			
SKT	Skwentna baz=304,SNR=5.4	73.86	27	P	P	19 33 13.3	-0.2		
PRP	Porcupine Dome baz=309,SNR=9.1	73.90	22	P	P	19 33 13.2	-0.7		
ILAR	Eielson Array comp=Z,2.5nm,0.9s,baz=292,slow=3.4,SNR=20	73.91	23	P	P	19 33 13.1	-0.7		
ILAR	comp=Z,0.3nm,0.6s,baz=286,slow=6.1,SNR=4.4			PP	PP	19 35 57.7	-0.4		
ILAR	comp=Z,31nm,19.6s,baz=297,slow=38 comp=Z,2.5nm,0.9s			LR	LR	20 08 43.7			
ILAR	Eielson Array	73.91	23		P	19 33 11.8	-1.9		
SPCR	Spurr Chakacha baz=304	74.03	28	P	P	19 33 13.9	-0.8		
Q17K	Contact Creek baz=302	74.07	31	P	P	19 33 12.9	-2.1		
CHNA	Chernabura Isl baz=300	74.08	35	P	P	19 33 13.7	-1.2		
HDA	Harding Lake baz=308	74.11	23	P	P	19 33 13.0	-1.9		
R17L	Mt. Peulik Vol baz=302	74.19	32	P	P	19 33 13.5	-2.0		
F28M	Old Crow baz=313	74.24	19	P	P	19 33 13.1	-2.6		
E29M	Blow River comp=Z,11nm,1.1s	74.24	18	IAmb	IAmb	19 33 18.5			
E29M	Blow River baz=314	74.24	18	P	P	19 33 14.1	-1.5		
G27K	Doyon Strip baz=312,SNR=7.2	74.27	20	P	P	19 33 14.3	-1.6		
A36M	Sachs Harbour baz=325	74.30	12	P	P	19 33 15.3	-0.6		
P19K	Oil Pt baz=304	74.48	29	P	P	19 33 15.9	-1.2		
WAT1	Susitna Watana baz=307	74.50	25	P	P	19 33 16.5	-0.7		
H27K	Steamboat Moun comp=Z,13nm,0.9s	74.69	20	IAmb	IAmb	19 33 21.4			
H27K	Steamboat Moun baz=312,SNR=16	74.69	20	P	P	19 33 17.2	-1.1		
DHY	Denali Highway baz=308	74.77	25	P	P	19 33 18.3	-0.7		
K24K	Donnelly Dome comp=Z,23nm,1.3s	74.89	24	IAmb	IAmb	19 33 21.4			
K24K	Donnelly Dome baz=309	74.89	24	P	P	19 33 19.1	-0.4		
WAT6	Susitna Watana baz=307	74.94	25	P	P	19 33 19.4	-0.6		
PMR	Palmer baz=306	75.02	26	P	P	19 33 19.8	-0.3		
I27K	Kandik River comp=Z,14nm,1.0s	75.09	21	IAmb	IAmb	19 33 23.8			
I27K	Kandik River baz=312,SNR=12	75.09	21	P	P	19 33 19.5	-1.2		
SML	Sawmill baz=307	75.19	26	P	P	19 33 20.5	-0.8		
G29M	Pine Creek baz=315	75.25	19	P	P	19 33 20.7	-0.9		
RIDG	Independent Ri comp=Z,22nm,1.5s	75.25	23	IAmb	IAmb	19 33 22.9			
RIDG	Independent Ri baz=310	75.25	23	P	P	19 33 20.6	-1.1		
F30M	Barrier River comp=Z,21nm,1.1s	75.36	18	IAmb	IAmb	19 33 24.8			
F30M	Barrier River baz=316,SNR=6.6	75.36	18	P	P	19 33 22.1	0.0		
SCRK	Sand Creek baz=310,SNR=9.1	75.39	23	P	P	19 33 21.1	-1.4		
INK	Inuvik comp=Z,9.6nm,1.1s	75.43	17	IAmb	IAmb	19 33 24.7			
INK	Inuvik baz=318	75.43	17	P	P	19 33 21.7	-0.8		
M23K	Glacier View baz=308	75.43	26	P	P	19 33 22.1	-0.6		
BRSE	Bradley Lake S baz=306	75.47	28	P	P	19 33 22.5	-0.4		
PAX	Paxson baz=309	75.52	24	P	P	19 33 22.2	-1.0		
H29M	Whitestone comp=Z,16nm,1.2s	75.64	20	IAmb	IAmb	19 33 27.4			
H29M	Whitestone baz=314,SNR=7.9	75.64	20	P	P	19 33 23.7	-0.1		
G30M	tAoh Zraii Nji	75.70	18		P	19 33 23.6	-0.5		
G30M	tAoh Zraii Nji baz=316,SNR=14	75.70	18	P	P	19 33 22.9	-1.2		
I28M	Miner Creek comp=Z,13nm,1.2s	75.71	21	IAmb	IAmb	19 33 26.6			
I28M	Miner Creek baz=313,SNR=7.4	75.71	21	P	P	19 33 23.3	-1.0		
SII	Sitkinak Islan baz=304	75.77	32	P	P	19 33 24.3	-0.4		
SEW	Seward baz=307	75.78	28	P	P	19 33 23.6	-1.0		
KDAK	Kodiak Island baz=305	75.81	31	P	P	19 33 24.6	-0.2		
OHAK	Old Harbor baz=304	75.81	31	P	P	19 33 23.7	-1.1		
HARP	HAARP baz=310	76.00	25	P	P	19 33 25.0	-0.9		
EPYK	Eagle Plains baz=316	76.00	19	P	P	19 33 25.9	0.0		
STKA	Stephens Creek comp=Z,2.4nm,0.7s,baz=299,slow=5.5,SNR=5.0 comp=Z,2.4nm,0.7s	76.10	140	P	P	19 33 25.0	-1.8		
STKA	Stephens Creek	76.10	140	P	P	19 33 25.0	-1.8		
L26K	Log Cabin Wild baz=311	76.23	24	P	P	19 33 26.7	-0.5		
GLI	Glacier Island baz=308	76.23	26	P	P	19 33 27.1	-0.1		
G31M	Satah River comp=Z,13nm,1.0s	76.27	18	IAmb	IAmb	19 33 29.2			
G31M	Satah River baz=318,SNR=5.7	76.27	18	P	P	19 33 26.9	-0.3		
KLU	Klutina baz=309	76.29	26	P	P	19 33 27.0	-0.6		
N25K	Anitia, Valde baz=310	76.71	25	P	P	19 33 29.6	-0.4		
C36M	Paulatuk comp=Z,9.8nm,1.1s	76.71	13	IAmb	IAmb	19 33 33.8			
C36M	Paulatuk baz=326	76.71	13	P	P	19 33 29.1	-0.6		
L27K	Beaver Creek, comp=Z,14nm,1.2s	76.72	23	IAmb	IAmb	19 33 33.2			
L27K	Beaver Creek, baz=312	76.72	23	P	P	19 33 29.7	-0.4		
BCAR	Beaver Creek A	76.73	23		P	19 33 29.6	-0.5		
M26K	Nabesna, AK baz=311	76.76	24	P	P	19 33 29.8	-0.5		
DAWY	Dawson baz=314	76.83	21	P	P	19 33 29.8	-0.8		
I30M	Mount Dempster I30M comp=Z,8.3nm,1.0s	76.93	20	IAmb	P IAmb	19 33 30.7 19 33 33.1	-0.6		
I30M	Mount Dempster baz=316,SNR=9.5	76.93	20	P	P	19 33 30.5	-0.8		
H31M	Peel River comp=Z,17nm,1.1s	77.08	19	IAmb	IAmb	19 33 36.4			
H31M	Peel River baz=318,SNR=13	77.08	19	P	P	19 33 31.9	-0.1		
M27K	Edge Creek, AK M27K comp=Z,24nm,1.6s	77.18	24	P	P IAmb	19 33 33.0 19 36 10.7	+0.3		
M27K	Edge Creek, AK baz=312	77.18	24	P	P	19 33 32.5	-0.3		
J30M	Hart River comp=Z,11nm,1.3s	77.41	20	IAmb	IAmb	19 33 36.2			
J30M	Hart River baz=316,SNR=6.7	77.41	20	P	P	19 33 33.6	-0.3		
MCARA	McCarthy VSAT baz=311	77.43	25	P	P	19 33 33.2	-0.8		
Q23K	Middleton Isla baz=309	77.43	27	P	P	19 33 33.6	-0.3		
ESDC	Sonseca Array comp=Z,9.9nm,1.0s,baz=47,slow=6.5,SNR=14 comp=Z,2.9nm,1.0s	77.45	309	P	P	19 33 33.9	-0.7		
ESDC	Sonseca Array	77.45	309		P	19 33 34.4	-0.2		
BVCY	Beaver Creek baz=313	77.49	23	P	P	19 33 33.5	-0.8		
K29M	Barlow Dome baz=316	77.58	21	P	P	19 33 33.4	-1.5		
L29M	L29M baz=315	77.91	22	P	P	19 33 36.2	-0.5		
YUK3	Moose Creek baz=313	78.07	24	P	P	19 33 36.6	-1.2		
M29M	Somme Creek baz=315	78.27	22	P	P	19 33 38.3	-0.4		
LSZ	Lusaka LSZ comp=Z,7.0nm,0.8s	78.45	245	P pmax	P pmax	19 33 40.5	+0.1		
LSZ	Lusaka LSZ comp=Z,6.5nm,0.8s	78.45	245	IAmb	P IAmb	19 33 40.5 19 33 43.0	+0.1		
YUK8	Steele Glacier baz=314	78.65	24	P	P	19 33 40.3	-0.8		
M30M	Minto, Yukon baz=316	78.72	22	P	P	19 33 40.2	-0.9		
YUK4	Talbot Arm baz=315	78.99	23	P	P	19 33 40.2	-2.7		
PINM	Pinnacle baz=314	79.30	25	P	P	19 33 43.6	-0.9		
YUK6	Outpost Mounta baz=315	79.37	23	P	P	19 33 43.9	-1.1		
N30M	Aishikik Lake baz=316	79.43	23	P	P	19 33 44.4	-0.7		
HYT	Haines Junctio baz=316	79.75	23	P	P	19 33 46.0	-0.9		
M31M	Drury Creek, Y baz=318	79.76	21	P	P	19 33 46.3	-0.4		
N31M	Braeburn, Yuko baz=317	79.84	22	P	P	19 33 47.0	-0.3		
O30N	Mendenhall baz=317	80.27	23	P	P	19 33 48.7	-0.9		
MMPY	Sheldon Lake, baz=321	80.38	20	P	P	19 33 49.7	-0.5		
P30M	Million Dollar baz=316	80.45	23	P	P	19 33 49.9	-0.7		
P29M	Windy Craggy baz=316	80.53	24	P	P	19 33 49.8	-1.2		
WHY	Whitehorse baz=318	80.75	22	P	P	19 33 50.7	-1.6		
PLBC	Pleasant Camp baz=317	81.14	24	P	P	19 33 53.3	-1.0		
P33M	Teslin, Yukon baz=320	81.76	22	P	P	19 33 56.9	-0.8		
P32M	Atlin baz=319	81.94	23	P	P	19 33 57.7	-0.8		
S31K	Pelican baz=317	82.29	25	P	P	19 33 59.1	-1.1		
R32K	Eaglecrest baz=315	82.66	24	P	P	19 34 00.9	-1.3		
R33M	Jennings River baz=321	82.99	22	P	P	19 34 03.9	-0.3		
DLBC	Dease Lake baz=322	84.05	22	P	P	19 34 08.6	-0.9		
YKA	Yellowknife Ar comp=Z,16nm,0.9s,baz=339,slow=4.7,SNR=9.9 comp=Z,1.6nm,0.9s	84.59	13	P	P	19 34 11.3	-0.8		
YKA	Yellowknife Ar YKA comp=Z,2.0nm,0.9s	84.59	13	*i* P pmax	P pmax	19 34 13.0	+0.9		

YKA	**Yellowknife Ar**	**84.59**	**13**	P		**P**	**19 34 11.1**	**-1.0**
WRAK	**Wrangell Islan**	**84.84**	**24**	P		**P**	**19 34 11.9**	**-1.5**
	baz=320							
CRAG	**Craig**	**85.29**	**25**	P		**P**	**19 34 15.0**	**-0.8**
	baz=320							
V35K	**Ketchikan**	**85.95**	**25**	P		**P**	**19 34 17.8**	**-1.1**
	baz=321							
LBTB	**Lobatse**	**86.11**	**238**	P		**P**	**19 34 20.6**	**+0.3**
LBTB				pmax	pmax			
	comp=Z,22nm,1.4s							
LBTB	**Lobatse**	**86.11**	**238**			**P**	**19 34 20.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**86.11**	**283**	P		**P**	**19 34 20.4**	**-0.2**
	comp=Z,5.7nm,1.1s,baz=46,slow=4.0,SNR=14							
TORD				PP		**PP**	**19 37 40.0**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=45,slow=6.8,SNR=4.2							
	comp=Z,5.7nm,1.1s							
TORD	**Torodi Ar. Bea**	**86.11**	**283**			**P**	**19 34 20.7**	**+0.2**
TORD				IAmb	IAmb		19 34 23.7	
	comp=Z,7.9nm,1.2s							
BOSA	**Boshof**	**88.45**	**235**	P		**P**	**19 34 31.4**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=58,slow=9.5,SNR=1.9							
	comp=Z,1.2nm,0.7s							
BOSA	**Boshof**	**88.45**	**235**	P		**P**	**19 34 32.0**	**+0.4**
BOSA				pmax	pmax			
	comp=Z,42nm,2.0s							
BOSA	**Boshof**	**88.45**	**235**	P		**P**	**19 34 32.0**	**+0.4**
VNDA	**Vanda**	**114.59**	**167**	PP		**PP**	**19 41 16.0**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=293,slow=5.4,SNR=5.8							
TXAR	**Lajitas Array**	**118.17**	**18**	PKP		**PKPdf**	**19 40 24.1**	**-2.6**
	comp=Z,0.4nm,0.8s,baz=125,slow=1.3,SNR=3.8							
TXAR	**Lajitas Array**	**118.17**	**18**			**PKPdf**	**19 40 23.9**	**-2.8**
QSPA	**South Pole Qui**	**120.05**	**180**	PKP		**PKPdf**	**19 40 28.2**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=249,slow=3.6,SNR=3.5							
QSPA	**South Pole Qui**	**120.05**	**180**			**PKiKP**	**19 40 29.0**	**-0.1**

*SJA **20** 19:30:07.6±2.0,21°.81S×68°.52W,h115km,ML4.0,MW3.9*
*NEIC **20** 19:30:07.5±1.3,21°.88S±0°.06×68°.57W±0°.07,h127km±7km,*
mb4.1/8,ML4.0(GUC),Error ellipse: s-maj=10.1km
s-min=7.3km az=59.0
*IDC **20** 19:30:08.9±3.2,21°.92S×68°.30W,h134km±29km,mb3.6/3,*
mbtmp4.0/5,Error ellipse: s-maj=37.8km s-min=29.0km
az=97.0
*GUC **20** 19:30:08.8±0.9,21°.83S×68°.58W,h121km±6km,ML4.0*
*VAO **20** 19:30:12.0±0.6,21°.54S×67°.98W,h122km,mb4.3,*
Presumed earthquake

ISC 20 19:30:06.3±0.6,21.84S±0°.03×68.55W±0°.05,h131km±6km,
n105,σ1s70/116,6C-6D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
PB09	**IPOC Station P**	**0.65**	**274**	*eP*	**Pn**	**19**	**30 28.0**	**+1.4**
PB09				*eS*	**Sn**	**19**	**30 44.1**	**+2.2**
PB09				IAML		19	30 46.0	
	comp=Z,2μm,0.4s							
PB09	**IPOC Station P**	**0.65**	**274**	↑*eP*	**Pn**	**19**	**30 27.8**	**+1.2**
PB09				*eS*	**Sn**	**19**	**30 41.7**	**-0.2**
PB09	**IPOC Station P**	**0.65**	**274**		**Pn**	**19**	**30 27.1**	**+0.6**
PB03	**IPOC Station P**	**1.14**	**259**	*eP*	**Pn**	**19**	**30 31.9**	**+1.1**
PB03				*eS*	**Sn**	**19**	**30 50.6**	**+1.3**
PB03				IAML		19	30 52.3	
	comp=Z,3μm,0.3s							
PB03	**IPOC Station P**	**1.14**	**259**	↑*eP*	**Pn**	**19**	**30 31.9**	**+1.1**
PB03				*eS*	**Sn**	**19**	**30 49.6**	**+0.3**
PB03				IAML		19	30 51.0	
	comp=E,3μm,0.3s							
PB03	**IPOC Station P**	**1.14**	**259**		**Pn**	**19**	**30 31.4**	**+0.6**
AF01	**San Pedro de A**	**1.15**	**163**	*eP*	**Pn**	**19**	**30 33.2**	**+2.1**
AF01				IAML		19	31 15.4	
	comp=Z,1μm,1.3s							
AF01	**San Pedro de A**	**1.15**	**163**	↓*iP*	**Pn**	**19**	**30 32.8**	**+1.7**
AF01				IAML		19	31 12.0	
	comp=N,2μm,0.4s							
AF01	**San Pedro de A**	**1.15**	**163**		**Pn**	**19**	**30 32.5**	**+1.4**
PB07	**IPOC Station P**	**1.25**	**275**	*eP*	**Pn**	**19**	**30 32.9**	**+1.0**
PB07				*eS*	**Sn**	**19**	**30 52.7**	**+1.3**
PB07				IAML		19	30 53.6	
	comp=Z,3μm,0.3s							
PB07	**IPOC Station P**	**1.25**	**275**	↑*iP*	**Pn**	**19**	**30 33.1**	**+1.1**
PB07				*eS*	**Sn**	**19**	**30 51.7**	**+0.4**
PB07				IAML		19	30 54.5	
	comp=E,3μm,0.2s							
PB07	**IPOC Station P**	**1.25**	**275**		**Pn**	**19**	**30 32.6**	**+0.7**
PB06	**IPOC Station P**	**1.28**	**228**	*eP*	**Pn**	**19**	**30 33.6**	**+1.4**
PB06				*eS*	**Sn**	**19**	**30 53.7**	**+1.8**
PB06				IAML		19	30 55.0	
	comp=Z,1μm,0.3s							
PB06	**IPOC Station P**	**1.28**	**228**	↑*eP*	**Pn**	**19**	**30 33.6**	**+1.4**
PB06				*eS*	**Sn**	**19**	**30 52.7**	**+0.7**
PB06				IAML		19	30 54.0	
	comp=N,5μm,0.4s							
PB06	**IPOC Station P**	**1.28**	**228**		**Pn**	**19**	**30 33.1**	**+0.9**
PB02	**IPOC Station P**	**1.36**	**292**	*eP*	**Pn**	**19**	**30 33.9**	**+0.9**
PB02				*eS*	**Sn**	**19**	**30 54.4**	**+1.1**
PB02				IAML		19	30 58.5	
	comp=Z,5μm,0.3s							
PB02	**IPOC Station P**	**1.36**	**292**	↑*eP*	**Pn**	**19**	**30 34.2**	**+1.2**
PB02				*eS*	**Sn**	**19**	**30 53.3**	**-0.1**
PB02	**IPOC Station P**	**1.36**	**292**		**Pn**	**19**	**30 33.9**	**+0.9**
PB08	**IPOC Station P**	**1.79**	**341**		**Pn**	**19**	**30 40.1**	**+2.0**
PB05	**IPOC Station P**	**1.83**	**236**	*eP*	**Pn**	**19**	**30 39.5**	**+1.1**
PB05				*eS*	**Sn**	**19**	**31 03.7**	**+0.8**
PB05				IAML		19	31 09.8	
	comp=Z,664nm,0.4s							
PB05	**IPOC Station P**	**1.83**	**236**	↑*eP*	**Pn**	**19**	**30 39.5**	**+1.1**
PB05				*eS*	**Sn**	**19**	**31 02.6**	**-0.3**
PB05				IAML		19	31 04.9	
	comp=E,899nm,0.2s							
PB05	**IPOC Station P**	**1.83**	**236**		**Pn**	**19**	**30 39.0**	**+0.7**
TA02	**Huaiquique**	**2.15**	**316**	*eP*	**Pn**	**19**	**30 43.0**	**+0.8**
TA02				*eS*	**Sn**	**19**	**31 10.6**	**+0.8**
TA02				IAML		19	31 12.0	
	comp=Z,2μm,0.1s							
TA02	**Huaiquique**	**2.15**	**316**	*iP*	**Pn**	**19**	**30 42.7**	**+0.5**
TA02				IAML		19	31 14.7	
	comp=N,5μm,0.1s							
GO01	**Chusmiza**	**2.25**	**344**	*eP*	**Pn**	**19**	**30 45.5**	**+1.6**
GO01	**Chusmiza**	**2.25**	**344**	↓*iP*	**Pn**	**19**	**30 45.4**	**+1.5**
GO01				*eS*	**Sn**	**19**	**31 13.5**	**+0.9**
GO01	**Chusmiza**	**2.25**	**344**		**Pn**	**19**	**30 45.0**	**+1.2**
PB11	**IPOC Station P**	**2.32**	**333**	*eP*	**Pn**	**19**	**30 45.4**	**+1.0**
PB11				*eS*	**Sn**	**19**	**31 14.8**	**+1.2**
PB11				IAML		19	31 15.1	
	comp=Z,577nm,0.1s							
PB11	**IPOC Station P**	**2.32**	**333**	↓*eP*	**Pn**	**19**	**30 45.0**	**+0.6**
PB11				*eS*	**Sn**	**19**	**31 13.8**	**+0.2**
PB11	**IPOC Station P**	**2.32**	**333**		**Pn**	**19**	**30 45.0**	**+0.6**
PSGCX	**Pisagua**	**2.68**	**326**	*eP*	**Pn**	**19**	**30 48.9**	**0.0**
PSGCX				*eS*	**Sn**	**19**	**31 22.7**	**+1.0**
PSGCX				IAML		19	31 23.8	
	comp=Z,479nm,0.3s							
PSGCX	**Pisagua**	**2.68**	**326**	↓*eP*	**Pn**	**19**	**30 48.7**	**-0.2**
PSGCX	**Pisagua**	**2.68**	**326**		**Pn**	**19**	**30 48.2**	**-0.7**
YJA	**Yavi**	**2.83**	**97**	*eP*	**Pn**	**19**	**30 54.3**	**+3.1**
SALTA		**3.12**	**140**	*eP*	**Pn**	**19**	**30 58.1**	**+3.1**
SALTA				*eS*	**Sn**	**19**	**31 34.5**	**+2.0**
HJA	**Humahuaca**	**3.20**	**116**	*eP*	**Pn**	**19**	**30 59.1**	**+3.2**
PB14	**IPOC Station P**	**3.25**	**211**	*eP*	**Pn**	**19**	**30 57.4**	**+0.8**
PB14				*eS*	**Sn**	**19**	**31 34.8**	**-0.5**
PB14				IAML		19	31 37.1	
	comp=Z,369nm,0.5s							
PB14	**IPOC Station P**	**3.25**	**211**		**Pn**	**19**	**30 56.4**	**-0.1**
PX02	**IPOC Station P**	**3.26**	**331**	*eP*	Pn	19	30 51.0	-5.4
PX02				IAML		19	31 38.8	
	comp=N,202nm,0.2s							
PB16	**IPOC Station P**	**3.61**	**345**	*eP*	**Pn**	**19**	**31 02.9**	**+1.5**
PB16				*eS*	Sn	19	31 33.0	-11
PB16	**IPOC Station P**	**3.61**	**345**	↓*iP*	**Pn**	**19**	**31 02.8**	**+1.4**
PB16	**IPOC Station P**	**3.61**	**345**		**Pn**	**19**	**31 02.4**	**+0.9**
PB12	**IPOC Station P**	**3.62**	**332**	*eP*	**Pn**	**19**	**31 01.0**	**-0.2**
PB12				*eS*	**Sn**	**19**	**31 43.4**	**-0.3**
PB12				IAML		19	31 44.0	
	comp=Z,166nm,0.2s							
PB12	**IPOC Station P**	**3.62**	**332**	↓*eP*	**Pn**	**19**	**31 00.4**	**-0.8**
PB12	**IPOC Station P**	**3.62**	**332**		**Pn**	**19**	**31 00.0**	**-1.2**
SLA	**San Lorenzo**	**4.00**	**136**	*eP*	**Pn**	**19**	**31 09.6**	**+3.4**
PB18	**Visviri**	**4.32**	**348**		**Pn**	**19**	**31 11.9**	**+1.0**
AC01	**Pan de Azucar**	**4.68**	**203**	*eP*	**Pn**	**19**	**31 14.6**	**-0.5**
AC01				*eS*	**Sn**	**19**	**32 06.0**	**-2.6**
AC01				IAML		19	32 08.0	
	comp=Z,145nm,0.2s							
AC01	**Pan de Azucar**	**4.68**	**203**		**Pn**	**19**	**31 14.7**	**-0.4**
AC02	**Maricunga**	**5.00**	**186**	*eP*	**Pn**	**19**	**31 20.7**	**+0.9**
AC02				*eS*	**Sn**	**19**	**32 23.6**	**+6.6**
AC02				IAML		19	32 24.2	
	comp=Z,55nm,0.8s							
AC02	**Maricunga**	**5.00**	**186**		**Pn**	**19**	**31 20.2**	**+0.4**
LPAZ	**La Paz**	**5.54**	**4**	P	**Pn**	**19**	**31 30.9**	**+3.7**
	comp=Z,25nm,0.3s,baz=200,slow=16,SNR=183							
LPAZ				S	Sn	19	32 21.2	-9.1
	comp=Z,5.6nm,0.8s,baz=134,slow=9.1,SNR=1.4							
LPAZ	**La Paz**	**5.54**	**4**		**Pn**	**19**	**31 29.4**	**+2.1**
LPAZ	**La Paz**	**5.54**	**4**	*eP*	**Pn**	**19**	**31 29.0**	**+1.7**
GO03	**Copiapo**	**5.93**	**195**		**Pn**	**19**	**31 30.7**	**-1.2**
AC05	**El Transito**	**7.13**	**192**		**Pn**	**19**	**31 46.4**	**-1.8**
LCO	**Las Campanas**	**7.40**	**195**		**Pn**	**19**	**31 49.1**	**-2.7**
GO04	**Tololo Observa**	**8.54**	**193**		**Pn**	**19**	**32 05.1**	**-2.0**
BBSD	**Serra de San D**	**8.80**	**60**	*eP*	**Pn**	**19**	**32 08.2**	**-2.3**
BBSD				*eS*	Sn	19	33 39.0	-9.2
MURT	**Porto Murtinho**	**10.17**	**91**	*eP*	**Pn**	**19**	**32 27.1**	**-1.7**
COIM	**Forte Coimbra**	**10.24**	**81**	*eP*	**Pn**	**19**	**32 26.6**	**-3.3**
COIM				*eS*	**Sn**	**19**	**34 15.8**	**-7.1**
PTLB	**Pontes e Lacer**	**10.95**	**56**	*eP*	**Pn**	**19**	**32 37.9**	**-1.5**
SJPY	**San Joaquin**	**11.85**	**108**	*eP*	**Pn**	**19**	**32 51.3**	**+0.1**
AQDB	**Aquidauana**	**12.06**	**86**	*eP*	**Pn**	**19**	**32 53.3**	**-0.8**
AMBA	**Amambai (Brazi**	**12.59**	**97**	*eP*	**Pn**	**19**	**33 00.4**	**-0.4**
SALV	**Santo Antonio**	**13.52**	**66**	*eP*	**Pn**	**19**	**33 11.9**	**-1.0**
H03N1	**Juan Fernandez**	**14.75**	**216**	T	T	19	49 04.7	
	baz=35							
H03N2	**Juan Fernandez**	**14.76**	**216**	T	T	19	48 36.0	
	baz=35							
TRCB	**Terra Rica**	**14.76**	**97**	P	**P**	**19**	**33 32.4**	**+1.2**
TRCB	**Terra Rica**	**14.76**	**97**	*eP*	**Pn**	**19**	**33 29.1**	**+0.4**
H03N3	**Juan Fernandez**	**14.76**	**216**	T	T	19	48 22.1	
	baz=35							
PTGB	**Pitanga**	**15.41**	**104**	*eP*	**P**	**19**	**33 39.1**	**+0.5**
ITAB	**Concordia**	**15.87**	**113**	Pn	**Pn**	**19**	**33 41.3**	**-1.1**
ITAB	**Concordia**	**15.87**	**113**	*eP*	**P**	**19**	**33 44.7**	**+1.2**
LDASE	**Londrina, Braz**	**16.17**	**99**	*eP*	**P**	**19**	**33 47.6**	**+0.7**
CLDB	**Colider**	**16.38**	**50**	*eP*	**Pn**	**19**	**33 49.1**	**+0.3**
TRQA	**Tornquist**	**17.12**	**162**	P	**P**	**19**	**33 55.1**	**-2.2**
TRQA				IAmb	IAmb	19	34 06.8	
	comp=Z,20nm,1.4s							
GO06	**Curarrehue**	**17.86**	**187**	P	**P**	**19**	**34 03.5**	**-2.0**
GO06				IAmb	IAmb	19	34 08.6	
	comp=Z,17nm,1.3s							
PLCA	**Paso Flores**	**18.91**	**185**	P	**Pn**	**19**	**34 18.6**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=17,slow=11,SNR=3.0							
PLCA	**Paso Flores**	**18.91**	**185**	P	**P**	**19**	**34 13.9**	**-2.9**
SNDB	**Serra Nova Dou**	**19.19**	**62**	*eP*	**P**	**19**	**34 20.3**	**+0.3**
NPGB	**Novo Progresso**	**19.46**	**43**	*eP*	**P**	**19**	**34 23.4**	**+0.5**
IPMB	**Ipameri, GO**	**19.50**	**82**	*eP*	**Pn**	**19**	**34 24.6**	**-1.4**
PET01	**Itanhaem-SP**	**19.72**	**101**	*eP*	**Pn**	**19**	**34 26.7**	**-1.8**
VAO	**Valinhos**	**19.98**	**97**	P	**Pn**	**19**	**34 29.9**	**-1.8**
VAO	**Valinhos**	**19.98**	**97**	*eP*	**P**	**19**	**34 29.0**	**+0.4**
BDFB	**Brasilia**	**20.39**	**76**	P	**P**	**19**	**34 32.7**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=220,slow=12,SNR=4.0							
	comp=Z,3.1nm,0.5s							
BDFB	**Brasilia**	**20.39**	**76**	IAmb	IAmb	19	34 35.6	
	comp=Z,10nm,1.2s							
CANS	**Sao Roque de M**	**20.73**	**90**	*eP*	**P**	**19**	**34 35.7**	**-1.0**
ITTB	**Itaituba**	**21.36**	**37**	*eP*	**P**	**19**	**34 43.4**	**0.0**
SGC2	**Sao Gabriel da**	**21.61**	**4**	*eP*	**P**	**19**	**34 47.1**	**+1.1**
PRPB	**Parauapebas**	**23.89**	**52**	*eP*	**P**	**19**	**35 09.0**	**+0.9**
SMTB	**Santa Maria do**	**23.94**	**61**	*eP*	**P**	**19**	**35 09.8**	**+1.3**
JANB	**Januaria**	**23.94**	**78**	*eP*	**P**	**19**	**35 09.2**	**+0.6**
BOAV	**Boa Vista**	**25.34**	**19**	P	**P**	**19**	**35 21.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**77.15**	**70**	P	**P**	**19**	**41 47.5**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=254,slow=5.4,SNR=14							
	comp=Z,1.0nm,0.4s							
TORD	**Torodi Ar. Bea**	**77.15**	**70**	IAmb	IAmb	19	41 51.4	
	comp=Z,5.0nm,1.4s							
YKA	**Yellowknife Ar**	**91.62**	**340**	P	**P**	**19**	**43 00.3**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.7,SNR=5.0							
	comp=Z,0.4nm,0.5s							
H11S2	**WAKE ISLAND Hyd**	**28.25**	**277**	T	T	22	09 24.5	
	baz=102,slow=74,SNR=9.2							
H11S1	**WAKE ISLAND Hyd**	**28.26**	**277**	T	T	22	09 25.7	
	baz=102,slow=74,SNR=7.8							
H11S3	**WAKE ISLAND Hyd**	**28.27**	**277**	T	T	22	09 23.6	
	baz=102,slow=74,SNR=8.6							
H11N3	**WAKE ISLAND Hyd**	**28.34**	**278**	T	T	22	09 27.0	
	baz=103,slow=75,SNR=4.0							
H11N2	**WAKE ISLAND Hyd**	**28.36**	**278**	T	T	22	09 17.9	
	baz=103,slow=75,SNR=3.3							
H11N1	**WAKE ISLAND Hyd**	**28.36**	**278**	T	T	22	09 29.0	
	baz=103,slow=75,SNR=4.0							
MKAR	**Makanchi Array**	**145.71**	**36**	PKPbc	**PKPab**	**19**	**49 31.4**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=316,slow=3.4,SNR=2.1							

*IDC **20** 19:39:15.2±1.3,29°.57N×95°.58E,h0km,mb3.3/5,*
mbtmp3.4/5,Error ellipse: s-maj=59.4km s-min=23.4km
az=61.0
*NDI **20** 19:39:17.7±1.4,30°.02N×95°.27E,h10km,ML3.2,MW3.0,*
Presumed earthquake

ISC 20 19:39:17.9±1.0,29.70N±0°.08×95.57E±0°.10,h18km,n9,
σ1s63/14,mb3.6/3,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MOKO	**MOKOCHONG**	**3.50**	**196**	*eP*	**Pn**	**19**	**40 10.8**	**-0.7**
MOKO				*i* x	x	19	40 24.0	
MOKO				*eS*	**Sn**	**19**	**40 52.5**	**0.0**
MOKO				IAML		19	40 58.8	
	comp=N,79nm,1.0s							
MOKO				IAML		19	41 09.2	
	comp=N,98nm,0.5s							
TAWA	**Tawang**	**3.88**	**238**	*eP*	**Pn**	**19**	**40 16.7**	**-0.3**
TAWA				*i* PG	**Pg**	**19**	**40 31.6**	**-0.6**
TAWA				*eS*	**Sn**	**19**	**41 01.1**	**-1.1**
TAWA				IAML		19	41 24.6	
	comp=N,74nm,0.6s							
TEZP	**TEZPUR**	**3.93**	**219**	*eP*	**Pn**	**19**	**40 19.1**	**+1.8**
TEZP				*eS*	**Sn**	**19**	**41 03.5**	**+0.5**
IMP	**Imphal**	**5.06**	**197**	*ex*	**Pn**	**19**	**40 30.8**	**-2.3**
IMP				*eS*	**Sn**	**19**	**41 35.1**	**+4.0**
SONM	**Songino Array**	**19.94**	**22**	P	**P**	**19**	**43 49.9**	**+1.0**
	comp=N,0.8nm,0.9s,baz=196,slow=11,SNR=4.7							
	comp=N,0.8nm,0.9s							
MKAR	**Makanchi Array**	**19.95**	**332**	P	**Pn**	**19**	**43 50.3**	**-0.4**
	comp=N,0.7nm,0.7s,baz=143,slow=12,SNR=8.4							
	comp=N,0.7nm,0.7s							
WRA	**Warramunga Arr**	**61.90**	**138**	P	**P**	**19**	**49 35.6**	**-1.0**
	comp=N,0.4nm,0.8s,baz=323,slow=8.4,SNR=3.3							
	comp=N,0.4nm,0.8s							
GERES	**GERESS Array B**	**63.17**	**313**	P	**P**	**19**	**49 45.5**	**+0.6**
	comp=N,0.1nm,0.3s,baz=67,slow=3.3,SNR=2.8							
	comp=N,0.1nm,0.3s							
ASAR	**Alice Springs**	**64.60**	**141**	P	**P**	**19**	**49 54.2**	**-0.2**
	comp=N,0.6nm,0.7s,baz=326,slow=6.6,SNR=11							
	comp=N,0.6nm,0.7s							

*SOME **20** 19:39:34.8,42°.22N×76°.37E,h10km*
*NNC **20** 19:39:35.8±0.5,42°.31N×76°.39E,h0km,mb3.0,mpv2.8,*
Error ellipse: s-maj=3.1km s-min=1.8km az=173.0
*KNET **20** 19:39:36.2±0.3,42°.27N×76°.18E,h12km±2km,ml1.1,Error*
ellipse: s-maj=4.3km s-min=2.2km az=53.0

ISC 20 19:39:35.3±1.1,42°.27N±0°.05×76°.35E±0°.02,h16km±7km,
n25,σ0s80/61,6C-4D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
ULHL	**Ulahol**	**0.08**	**252**	↑P	**Pg**	**19**	**39 38.6**	**-0.2**
	9.8nm,0.1s							
ULHL				↑S	**Sg**	**19**	**39 41.1**	**0.0**
	27nm,0.1s							
KST	**Kastek**	**0.82**	**340**	P	**Pb**	**19**	**39 51.1**	**-0.3**
	2.8nm,0.1s							
KST				P	**Pb**	**19**	**39 51.2**	**-0.1**
	2.7nm,0.1s							
KST				S	**Sb**	**19**	**40 02.2**	**0.0**
	3.4nm,0.1s							
KST				S	**Sg**	**19**	**40 02.8**	**+0.6**
	3.6nm,0.1s							
KST	**Kastek**	**0.82**	**340**	*eP*	**Pb**	**19**	**39 51.2**	**-0.1**
	2.7nm,0.1s							
KST				*eS*	**Sg**	**19**	**40 02.8**	**+0.6**
	7.0nm,0.2s							
TKM2	**Tokmak 2**	**0.85**	**320**	↓P	**Pb**	**19**	**39 51.5**	**-0.4**
	1.0nm,0.1s							
TKM2				↑S	**Sb**	**19**	**40 03.5**	**+0.2**
	6.0nm,0.1s							
TNSS	**Tian-Shan**	**0.88**	**30**	P	**Pb**	**19**	**39 52.3**	**-0.3**
	1.9nm,0.2s							
TNSS				P	**Pb**	**19**	**39 52.3**	**-0.3**
	1.9nm,0.1s							
TNSS				S	**Sg**	**19**	**40 04.4**	**+0.1**
	2.9nm,0.2s							
TNSS				S	**Sg**	**19**	**40 04.4**	**+0.1**
	3.0nm,0.2s							
TNSS	**Tian-Shan**	**0.88**	**30**	*eP*	**Pb**	**19**	**39 52.3**	**-0.3**
	1.9nm,0.1s							
TNSS				*eS*	**Sg**	**19**	**40 04.4**	**+0.1**
	2.9nm,0.2s							
MDOK	**Medeo**	**1.03**	**30**	P	**Pb**	**19**	**39 53.8**	**-1.1**
	1.2nm,0.6s							
MDOK				Pg	**Pb**	**19**	**39 54.6**	**-0.3**
	3.2nm,0.2s							
MDOK				Pg	**Pb**	**19**	**39 54.6**	**-0.3**
	3.1nm,0.1s							
MDOK				Lg	Lg	19	40 08.4	
	3.1nm,0.2s							
MDOK				S	**Sg**	**19**	**40 08.5**	**-0.4**
	2.6nm,0.6s							
MDOK				Lg	Lg	19	40 08.7	
	3.1nm,0.2s							
MDOK	**Medeo**	**1.03**	**30**	*eP*	**Pb**	**19**	**39 54.6**	**-0.3**
	3.1nm,0.1s							
MDOK				*eS*	**Sg**	**19**	**40 08.7**	**-0.2**
	3.1nm,0.2s							
KBK	**Karagaybulak**	**1.10**	**291**	⇑P	**Pb**	**19**	**39 55.2**	**-1.0**
	0.9nm,0.1s							
KBK				⇓S	**Sb**	**19**	**40 10.5**	**+0.1**
	4.3nm,0.1s							
CHMS	**Chumysh**	**1.39**	**302**	⇑P	**Pb**	**19**	**40 00.7**	**-0.2**
	0.5nm,0.1s							
CHMS				⇑S	**Sb**	**19**	**40 18.8**	**+0.4**
	2.8nm,0.2s							
KTBS	**Karatobe**	**1.46**	**10**	P	**Pb**	**19**	**40 02.2**	**0.0**
	3.1nm,0.1s							
KTBS				P	**Pb**	**19**	**40 02.2**	**0.0**
	3.5nm,0.1s							
KTBS				S	**Sb**	**19**	**40 21.4**	**+0.8**
	4.8nm,0.2s							
KTBS				S	**Sb**	**19**	**40 21.4**	**+0.8**
	4.8nm,0.2s							
KTBS	**Karatobe**	**1.46**	**10**	*eP*	**Pb**	**19**	**40 02.1**	**0.0**
	3.1nm,0.1s							
KTBS				*eS*	**Sb**	**19**	**40 21.4**	**+0.8**
	4.8nm,0.2s							
KRBS	**Karabastau**	**1.51**	**341**	P	**Pb**	**19**	**40 03.2**	**+0.2**
	1.0nm,0.1s							
KRBS				P	**Pb**	**19**	**40 03.6**	**+0.6**
	1.1nm,0.1s							
KRBS				S	**Sb**	**19**	**40 23.0**	**+1.1**
	1.8nm,0.2s							
KRBS				S	**Sg**	**19**	**40 24.1**	**+0.1**
	0.4nm,0.1s							
KRBS	**Karabastau**	**1.51**	**341**	*eP*	**Pb**	**19**	**40 03.6**	**+0.6**
	1.1nm,0.1s							
KRBS				*eS*	**Sg**	**19**	**40 24.1**	**+0.1**
	0.4nm,0.1s							
USP	**Ospenovka**	**1.69**	**307**	⇓P	**Pb**	**19**	**40 06.1**	**+0.1**
	0.7nm,0.1s							
USP				⇓S	**Sb**	**19**	**40 28.1**	**+1.1**
	3.7nm,0.2s							
SATY	**Saty**	**1.71**	**62**	P	**Pb**	**19**	**40 06.7**	**+0.2**
	0.6nm,0.1s							
SATY				S	**Sg**	**19**	**40 29.2**	**-1.2**
	5.5nm,0.1s							
SATY	**Saty**	**1.71**	**62**	*eP*	**Pb**	**19**	**40 06.7**	**+0.2**
	0.6nm,0.1s							
SATY				*eS*	**Sg**	**19**	**40 29.2**	**-1.2**
	5.5nm,0.1s							
SGDS	**Sogindy**	**1.73**	**314**	P	**Pb**	**19**	**40 07.1**	**+0.4**
	1.2nm,0.1s							
SGDS				P	**Pg**	**19**	**40 07.5**	**-1.0**
	1.0nm,0.1s							
SGDS				S	**Sg**	**19**	**40 30.3**	**-0.7**
	1.2nm,0.1s							
SGDS				S	**Sb**	**19**	**40 30.6**	**+2.3**
	1.7nm,0.1s							

JAR				eS		Sn	19 42 21.3	-0.2
JOB	**Onbets**	**3.50**	**255**	P		**Pn**	**19 41 43.0**	**+1.8**
JOB				eS		Sn	19 42 22.2	-0.7
JCH	**Churui**	**3.93**	**252**	P		**Pn**	**19 41 48.0**	**+1.0**
JNBK	**Urakawa-nobuka**	**4.47**	**250**	P		**Pn**	**19 41 55.4**	**+0.9**
JOT	**Ohata**	**6.01**	**248**	P		**Pn**	**19 42 16.7**	**+1.1**

*ISK **20** 19:41:45.4, 35°.82N×23°.40E, h11km, ML3.3/14*
*THE **20** 19:41:45.8, 36°.N±2°.×2°.3E±°, h11km±1km, M3.4/18, MLh3.4/18*
*ATH **20** 19:41:45.6, 35°.86N×23°.45E, h12km±1km, ML3.4/30, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*IDC **20** 19:41:49.5±2.5, 35°.96N×23°.46E, h42km±28km, mb3.4/8, mbtmp3.5/11, ML2.9/3, Error ellipse: s-maj=21.3km s-min=15.7km az=33.0*

ISC 20 19:41:45.7±0.8, **35°.86N**±0°.02×**23°.44E**±0°.02, **h12**km±5km, **n107**, σ0°**79**/142, **mb3.7**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.11**	**276**	P	**Pg**	**19 41 48.8**	**+0.1**
ANKY				S	**Sg**	**19 41 50.4**	**-0.4**
ANKY	**Antikythira Is**	**0.11**	**276**	P	**Pg**	**19 41 48.8**	**+0.1**
ANKY				S	**Sg**	**19 41 50.6**	**-0.2**
KTHA	**Kythira Island**	**0.50**	**323**	Pg	**Pg**	**19 41 56.2**	**+0.7**
KTHA				Sg	**Sb**	**19 42 03.5**	**-0.3**
KTHA	**Kythira Island**	**0.50**	**323**	P	**Pg**	**19 41 56.0**	**+0.5**
KTHA				S	**Sb**	**19 42 03.4**	**-0.3**
KTHA	**Kythira Island**	**0.50**	**323**	P	**Pg**	**19 41 55.9**	**+0.4**
CH01	**Chania**	**0.58**	**125**	P	**Pg**	**19 41 56.5**	**-0.5**
CH01				S	**Sg**	**19 42 05.2**	**+0.4**
IMMV	**Iera Moni Meta**	**0.59**	**132**	Pg	**Pg**	**19 41 57.4**	**+0.1**
IMMV				Sg	**Sb**	**19 42 06.1**	**-0.3**
IMMV	**Iera Moni Meta**	**0.59**	**132**	P	**Pg**	**19 41 57.6**	**+0.3**
IMMV				S	**Sb**	**19 42 06.1**	**-0.3**
IMMV	**Iera Moni Meta**	**0.59**	**132**	P	**Pg**	**19 41 56.7**	**-0.5**
IMMV				S	**Sg**	**19 42 05.1**	**0.0**
CHAN	**Chania**	**0.60**	**124**	P	**Pg**	**19 41 57.2**	**-0.1**
CHAN				S	**Sg**	**19 42 05.5**	**+0.3**
CHNB	**Souda**	**0.63**	**126**	P	**Pg**	**19 41 57.5**	**-0.5**
CHNB				S	**Sg**	**19 42 06.5**	**+0.2**
KNDR	**Palaiochora Ch**	**0.64**	**166**	Pg	**Pg**	**19 41 57.6**	**-0.5**
KNDR				Sg	**Sg**	**19 42 06.9**	**+0.4**
KNDR	**Palaiochora Ch**	**0.64**	**166**	P	**Pg**	**19 41 57.5**	**-0.5**
KNDR				S	**Sg**	**19 42 06.3**	**-0.2**
KNDR	**Palaiochora Ch**	**0.64**	**166**	P	**Pg**	**19 41 57.6**	**-0.5**
KNDR				S	**Sg**	**19 42 06.3**	**-0.2**
NPS1	**Neapolis Lacon**	**0.72**	**335**	P	**Pg**	**19 42 00.1**	**+0.4**
NPS1				S	**Sg**	**19 42 09.7**	**+0.5**
VAM	**Vamos**	**0.77**	**126**	P	**Pb**	**19 42 01.5**	**+0.5**
VAM				S	**Sb**	**19 42 11.6**	**+0.3**
VAM	**Vamos**	**0.77**	**126**	P	**Pg**	**19 42 00.4**	**-0.1**
VAM				S	**Sg**	**19 42 10.8**	**+0.3**
MNVA	**Monemvasia**	**0.89**	**339**	P	**Pb**	**19 42 03.2**	**+0.1**
MNVA				S	**Sg**	**19 42 14.4**	**-0.1**
VLI	**Veliai**	**0.95**	**335**	P	**Pg**	**19 42 04.1**	**0.0**
VLI				S	**Sb**	**19 42 17.6**	**+0.9**
VLI	**Veliai**	**0.95**	**335**	P	**Pg**	**19 42 04.0**	**0.0**
VLI				S	**Sg**	**19 42 15.9**	**-0.6**
RTHF	**Rethymno-Limin**	**0.98**	**119**	P	**Pg**	**19 42 04.4**	**-0.2**
RTHF				S	**Sg**	**19 42 17.0**	**-0.5**
MHLO	**Agia Marina, M**	**1.14**	**43**	P	**Pb**	**19 42 07.1**	**-0.2**
MHLO				S	**Sn**	**19 42 25.2**	**+2.1**
MHLO	**Agia Marina, M**	**1.14**	**43**	P	**Pb**	**19 42 07.2**	**-0.2**
MHLO				S	**Sb**	**19 42 21.7**	**-0.4**
GVD	**Gavdhos**	**1.15**	**152**	Pn	**Pn**	**19 42 07.7**	**+0.1**
GVD				Sn	**Sn**	**19 42 23.6**	**+0.4**
GVD	**Gavdhos**	**1.15**	**152**	S	**Sb**	**19 42 22.2**	**-0.1**
GVD	**Gavdhos**	**1.15**	**152**	P	**Pn**	**19 42 07.7**	**+0.1**
GVD				S	**Sb**	**19 42 22.5**	**+0.3**
IDI	**Anoyia**	**1.31**	**115**	P	**Pg**	**19 42 10.9**	**0.0**
	26nm,0.4s,baz=285,slow=11,SNR=80						
IDI				S	**Sg**	**19 42 28.6**	**+0.6**
	656nm,0.6s,baz=47,slow=17,SNR=31						
IDI	**Anoyia**	**1.31**	**115**	Pn	**Pb**	**19 42 10.6**	**+0.3**
IDI				Sn	**Sg**	**19 42 28.9**	**+0.9**
IDI	**Anoyia**	**1.31**	**115**	P	**Pn**	**19 42 09.4**	**-0.5**
IDI				S	**Sg**	**19 42 28.2**	**+0.1**
IDI	**Anoyia**	**1.31**	**115**	P	**Pn**	**19 42 09.9**	**-0.1**
IDI				S	**Sb**	**19 42 26.9**	**-0.3**
SIVA	**Sivas**	**1.40**	**126**	P	**Pg**	**19 42 13.4**	**+0.8**
SIVA				S	**Sg**	**19 42 32.9**	**+2.1**
SIVA	**Sivas**	**1.40**	**126**	P	**Pn**	**19 42 10.7**	**-0.3**
IACM	**Heraklion**	**1.44**	**112**	P	**Pb**	**19 42 12.2**	**-0.3**
IACM				S	**Sg**	**19 42 31.5**	**-0.5**
IACM	**Heraklion**	**1.44**	**112**	P	**Pn**	**19 42 11.6**	**-0.0**
YDRA	**Hydra**	**1.49**	**1**	P	**Pn**	**19 42 12.4**	**+0.1**
THR9	**Santorini-Faro**	**1.63**	**72**	P	**Pn**	**19 42 14.1**	**-0.1**
THR5	**Thira Island,**	**1.65**	**70**	P	**Pn**	**19 42 14.7**	**+0.2**
THR5	**Thira Island,**	**1.65**	**70**	P	**Pn**	**19 42 14.3**	**-0.1**
SAP3	**Santorini-Thir**	**1.65**	**69**	P	**Pb**	**19 42 15.4**	**-0.6**
SAP3				S	**Sg**	**19 42 38.2**	**-0.6**
SAP3	**Santorini-Thir**	**1.65**	**69**	P	**Pn**	**19 42 14.3**	**-0.1**
THR6	**Thira Island,**	**1.66**	**72**	P	**Pn**	**19 42 14.6**	**-0.1**
AAMF	**Ano Amfeia**	**1.67**	**319**	P	**Pb**	**19 42 15.8**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.68**	**70**	P	**Pb**	**19 42 15.9**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.68**	**70**	P	**Pn**	**19 42 15.4**	**+0.6**
THR3	**Thira Island,**	**1.68**	**70**	P	**Pn**	**19 42 15.5**	**+0.6**
THR3	**Thira Island,**	**1.68**	**70**	P	**Pn**	**19 42 15.0**	**+0.1**
PYL	**PYLOS**	**1.72**	**308**	S	**Sn**	**19 42 38.1**	**+0.9**
PYL	**PYLOS**	**1.72**	**308**	P	**Pn**	**19 42 16.2**	**+0.8**
MET1	**Methana Town,**	**1.72**	**359**	P	**Pn**	**19 42 15.2**	**-0.2**
THR2	**Thira island,**	**1.72**	**69**	P	**Pn**	**19 42 15.8**	**+0.3**
ME13	**Ano Fanari,Met**	**1.72**	**354**	P	**Pn**	**19 42 15.5**	**-0.1**
THERA	**Ancient Thera,**	**1.73**	**72**	P	**Pn**	**19 42 15.8**	**+0.3**
THERA				S	**Sb**	**19 42 38.8**	**-0.3**
THERA	**Ancient Thera,**	**1.73**	**72**	P	**Pn**	**19 42 15.3**	**-0.2**
MET6	**Megalochori,Me**	**1.73**	**358**	P	**Pn**	**19 42 15.9**	**+0.3**
VLX	**Vlachokerasia**	**1.73**	**331**	P	**Pn**	**19 42 15.4**	**-0.4**
VLX				S	**Sb**	**19 42 39.4**	**+0.1**
THR8	**Santorini-Mono**	**1.74**	**71**	P	**Pn**	**19 42 16.1**	**+0.4**
THR8	**Santorini-Mono**	**1.74**	**71**	P	**Pn**	**19 42 15.6**	**-0.2**
MET2	**Kameni Chora,**	**1.75**	**357**	P	**Pn**	**19 42 15.9**	**0.0**
MET4	**Agioi Theodoro**	**1.76**	**359**	P	**Pn**	**19 42 16.0**	**0.0**
MET5	**Makryloggos,Me**	**1.76**	**358**	P	**Pn**	**19 42 16.4**	**+0.4**
ITM	**Ithomi**	**1.79**	**318**	Pn	**Pn**	**19 42 17.1**	**+0.6**
ITM	**Ithomi**	**1.79**	**318**	P	**Pn**	**19 42 17.2**	**+0.6**
NPS	**Neapolis**	**1.87**	**108**	P	**Pn**	**19 42 17.6**	**0.0**
NPS				S	**Sn**	**19 42 41.8**	**+0.7**
NPS	**Neapolis**	**1.87**	**108**	P	**Pn**	**19 42 17.4**	**-0.2**
VLY	**Voula,Athens**	**2.01**	**8**	P	**Pn**	**19 42 18.0**	**-0.5**
VLY				S	**Sn**	**19 42 44.1**	**-0.5**
VLY	**Voula,Athens**	**2.01**	**8**	P	**Pn**	**19 42 18.7**	**-0.8**
ACOR	**Acrocorinthos**	**2.08**	**348**	P	**Pn**	**19 42 20.1**	**-0.4**
ATH	**Athens Observa**	**2.12**	**6**	P	**Pn**	**19 42 20.5**	**-0.5**
ATHU	**Athens Univers**	**2.12**	**7**	P	**Pn**	**19 42 20.4**	**-0.7**
ATHU	**Athens Univers**	**2.12**	**7**	P	**Pn**	**19 42 20.3**	**-0.7**
LOUT	**Loutraki**	**2.16**	**350**	P	**Pn**	**19 42 20.9**	**-0.6**
AMT	**Artemida-Makis**	**2.17**	**321**	P	**Pn**	**19 42 22.8**	**+1.1**
LTK	**Loutraki**	**2.19**	**350**	P	**Pn**	**19 42 22.9**	**+0.9**
PTL	**Penteli**	**2.21**	**9**	P	**Pn**	**19 42 21.6**	**-0.7**
MAGU	**Magoula**	**2.22**	**2**	P	**Pn**	**19 42 22.0**	**-0.3**
DION	**Dionisos Attik**	**2.25**	**10**	P	**Pn**	**19 42 22.4**	**-0.4**
GUR	**Goura**	**2.25**	**337**	P	**Pn**	**19 42 23.4**	**+0.5**
THAL	**Thalero**	**2.26**	**344**	P	**Pn**	**19 42 23.6**	**+0.7**
KARY	**Karystos**	**2.31**	**20**	P	**Pn**	**19 42 23.1**	**-0.6**
STFN	**Stefani**	**2.32**	**2**	P	**Pn**	**19 42 23.6**	**-0.1**
VIL2	**Platees**	**2.35**	**357**	P	**Pn**	**19 42 23.4**	**-0.8**
ZKR	**Zakros**	**2.39**	**107**	Pn	**Pn**	**19 42 25.8**	**+1.2**
ZKR	**Zakros**	**2.39**	**107**	P	**Pn**	**19 42 25.0**	**+0.4**
KLV	**Kalavryta, Ach**	**2.41**	**335**	P	**Pn**	**19 42 26.0**	**+1.0**
DRO	**Drossia**	**2.51**	**327**	P	**Pn**	**19 42 27.8**	**+1.5**
TEME	**Temeni, Aigial**	**2.59**	**336**	P	**Pn**	**19 42 27.3**	**-0.2**
AGEO	**AgiosGiorgios,**	**2.64**	**336**	P	**Pn**	**19 42 28.1**	**0.0**
PSARO	**Psaromita, Dor**	**2.67**	**338**	P	**Pn**	**19 42 28.5**	**0.0**
KALE	**Kalithea**	**2.73**	**338**	P	**Pn**	**19 42 29.6**	**+0.1**
KARP	**Karpathos**	**3.05**	**95**	Pn	**Pn**	**19 42 35.5**	**+1.8**
CHOS	**Chios island**	**3.28**	**39**	Pn	**Pn**	**19 42 38.6**	**+1.6**
BODT	**Bodrum**	**3.35**	**68**	Pn	**Pn**	**19 42 39.7**	**+1.9**
DAT	**Datca**	**3.46**	**74**	Pn	**Pn**	**19 42 41.7**	**+2.3**
ARG	**Arkhangelos**	**3.82**	**83**	Pn	**Pn**	**19 42 46.5**	**+2.2**
TURN	**Turunc**	**3.99**	**75**	Pn	**Pn**	**19 42 48.9**	**+2.3**
DALY	**Dalyan (Mula)**	**4.32**	**76**	Pn	**Pn**	**19 42 54.5**	**+3.3**
BRTR	**Keskin Array B**	**8.95**	**61**	P	**Pn**	**19 43 54.2**	**-0.7**
	0.1nm,0.3s,baz=250,slow=12,SNR=3.3 0.2nm,0.3s						
MMAI	**Mount Meron Ar**	**10.28**	**103**	P	**Pn**	**19 44 15.0**	**+1.9**
	0.6nm,0.3s,baz=280,slow=11,SNR=1.6 0.4nm,0.3s						
GERES	**GERESS Array B**	**14.82**	**334**	P	**Pn**	**19 45 15.7**	**+0.5**
	baz=156,slow=11,SNR=1.7 0.1nm,0.4s						
HFS	**Hagfors**	**25.10**	**348**	P	**P**	**19 47 08.7**	**-1.2**
	1.3nm,0.6s,baz=153,slow=10.0,SNR=6.0 1.3nm,0.6s						
FINES	**FINESS Array B**	**25.66**	**3**	P	**P**	**19 47 14.5**	**-0.6**
	0.4nm,0.7s,baz=180,slow=9.7,SNR=1.3 0.4nm,0.7s						
EKA	**Eskdalemuir Ar**	**26.66**	**325**	P	**P**	**19 47 24.2**	**0.0**
	0.7nm,0.5s,baz=125,slow=10.0,SNR=4.9 0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.91**	**226**	P	**P**	**19 47 53.9**	**+0.4**
	1.2nm,0.6s,baz=33,slow=9.4,SNR=8.7 1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**41.78**	**52**	P	**P**	**19 49 33.5**	**-1.3**
	0.8nm,0.9s,baz=276,slow=8.7,SNR=6.5 0.8nm,0.9s						
MKAR	**Makanchi Array**	**44.57**	**57**	P	**P**	**19 49 56.9**	**-0.5**
	0.6nm,0.5s,baz=268,slow=8.2,SNR=13 0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**45.54**	**47**	P	**P**	**19 50 03.0**	**-2.1**
	0.8nm,0.6s,baz=253,slow=10,SNR=4.8 0.8nm,0.6s						
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**19 51 52.4**	**-0.6**
	0.3nm,0.5s,baz=318,slow=4.1,SNR=1.8 0.3nm,0.5s						

*NEIC **20** 20:04:32.8±1.6, 43°.68N±0°.04×105°.36W±0°.05, h0km±1km, ML3.4/46, Error ellipse: s-maj=7.7km s-min=5.5km az=29.0*
*IDC **20** 20:04:33.8±1.6, 44°.12N×105°.76W, h0km, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=60.2km s-min=8.7km az=147.0*

ISC 20 20:04:30.9±0.9, **43°.59N**±0°.04×**105°.40W**±0°.05, **h0**km, **n28**, σ2**69**/27, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.12**	**61**		**Pg**	**20 04 53.3**	**+0.9**
K22A	**Casper**	**1.25**	**221**		**Pn**	**20 04 59.1**	**+3.4**
K22A				IAML		20 05 21.1	
	655nm,0.3s						
K22A				IAML		20 05 23.2	
	709nm,0.3s						
BW06	**Boulder Array**	**3.15**	**256**		**Pb**	**20 05 26.5**	**-1.4**
BW06				IAML		20 06 15.8	
	76nm,0.3s						
BW06				IAML		20 06 16.0	
	61nm,0.3s						
PD31	**Pinedale Array**	**3.15**	**256**	Pn	**Pb**	**20 05 26.4**	**-1.4**
PDAR	**Pinedale Array**	**3.15**	**256**	Pn	**Pb**	**20 05 26.8**	**-1.1**
	4.4nm,0.3s,baz=70,slow=16,SNR=36						
PDAR				Lg	Lg	20 06 10.2	
	13nm,0.3s,baz=66,slow=28,SNR=4.2 6.0nm,0.3s						
PDAR	**Pinedale Array**	**3.15**	**256**		**Pb**	**20 05 26.4**	**-1.4**
LAO	**LASA Array**	**3.15**	**350**		**Pn**	**20 05 23.6**	**+1.8**
LAO				IAML		20 06 15.0	
	144nm,1.0s						
RLMT	**Red Lodge**	**3.17**	**300**		**Pn**	**20 05 25.2**	**+3.0**
RLMT				IAML		20 06 19.5	
	84nm,0.4s						
RLMT				IAML		20 06 20.6	
	131nm,0.3s						
HAYD	**Hayden**	**3.37**	**205**		**Pb**	**20 05 30.7**	**-0.9**
HAYD				IAML		20 06 34.9	
	comp=E,62nm,0.9s						
HAYD				IAML		20 07 05.8	
	comp=N,75nm,1.3s						
YNE	**Yellowstone No**	**3.59**	**295**		**Pn**	**20 05 31.4**	**+3.2**
YNE				IAML		20 06 31.4	
	comp=E,117nm,0.3s						
YNE				IAML		20 06 38.7	
	comp=N,94nm,0.3s						
YMP	**Mirror Lake Pl**	**3.61**	**290**		**Pn**	**20 05 31.1**	**+2.8**
YMP				IAML		20 06 33.3	
	comp=N,118nm,0.3s						
OGNE	**Ogallala**	**3.64**	**135**		**Pn**	**20 05 33.1**	**+4.5**
OGNE				IAML		20 06 40.3	
	comp=N,114nm,0.5s						
GCMT	**Greycliff**	**3.75**	**307**		**Pn**	**20 05 31.3**	**+1.1**
LOHW	**Long Hollow**	**3.78**	**272**		**Pn**	**20 05 34.2**	**+3.7**
ISCO	**Idaho Springs**	**3.79**	**182**		**Pb**	**20 05 36.4**	**-2.5**
ISCO					**Sg**	**20 06 30.2**	**-2.5**
FLWY	**Flagg Ranch**	**3.86**	**279**		**Pn**	**20 05 35.4**	**+3.7**
FLWY				IAML		20 07 05.0	
	comp=N,52nm,1.4s						
YPP	**Pitchstone Pla**	**3.96**	**282**		**Pn**	**20 05 34.2**	**+1.0**
O20A	**White River Ci**	**4.05**	**212**		**Pn**	**20 05 38.6**	**+4.2**
O20A				IAML		20 07 11.5	
	comp=N,66nm,2.5s						
O20A				IAML		20 07 26.1	
	comp=N,73nm,2.6s						
RDMU	**Red Mountain**	**4.33**	**227**		**Pn**	**20 05 39.8**	**+1.7**
RDMU				IAML		20 06 59.0	
	comp=N,54nm,1.2s						
RDMU				IAML		20 07 01.5	
	comp=E,37nm,1.2s						
YHL	**Hebgen Lake**	**4.34**	**289**		**Pn**	**20 05 41.5**	**+3.1**
YHL				IAML		20 07 05.1	
	comp=E,38nm,1.1s						
YHL				IAML		20 07 15.9	
	comp=N,35nm,1.2s						
ECR	**Eagle Creek**	**4.39**	**265**		**Pg**	**20 05 54.2**	**-0.8**
E28A	**Huff**	**4.47**	**47**		**Pn**	**20 05 41.0**	**+1.0**
Q24A	**Divide**	**4.63**	**178**		**Pg**	**20 06 00.4**	**+0.9**
HWUT	**Hardware Ranch**	**4.96**	**249**		**Pn**	**20 05 45.5**	**-1.3**
HWUT				IAML		20 07 23.8	
	comp=N,28nm,2.3s						
HWUT				IAML		20 07 38.4	
	comp=N,23nm,1.1s						
BSUT	**Blindstream Ca**	**5.02**	**234**	IAML		20 07 23.0	
	comp=N,17nm,2.0s						
BSUT				IAML		20 07 30.8	
	comp=E,23nm,2.3s						
ELK	**Elko**	**7.84**	**252**	Pn	**Pn**	**20 06 31.1**	**+4.7**
	comp=E,0.3nm,0.3s,baz=70,slow=12,SNR=3.4						
ELK				Lg	Lg	20 08 37.6	
	comp=E,0.1nm,0.3s,baz=139,slow=14,SNR=1.8 comp=E,0.6nm,0.3s						
ULM	**Lac du Bonnet**	**9.31**	**41**	Pn	**Pn**	**20 06 44.4**	**-2.0**
	comp=E,0.9nm,0.3s,baz=236,slow=12,SNR=8.8						
ULM				Lg	Lg	20 09 13.7	
	comp=E,0.7nm,0.3s,baz=138,slow=19,SNR=3.1 comp=E,1.7nm,0.3s						
I56US	**NEWPORT INFRAS**	**9.41**	**304**	I	I	20 57 40.0	
	baz=117,slow=310,SNR=2.1						

*NOU **20** 20:05:30.8, 10°.47S×161°.60E, h74km, mB6.1/47, Solomon Islands*
*NEIC **20** 20:05:32.1±1.5, 10°.43S±0°.08×161°.53E±0°.08, h95km±4km, mb4.5/51, Error ellipse: s-maj=12.3km s-min=10.1km az=213.0*
*IDC **20** 20:05:32.4±2.2, 10°.48S×161°.44E, h102km±18km, mb4.0/18, mbtmp4.4/20, MS3.3/12, Error ellipse: s-maj=20.9km s-min=12.4km az=90.0*

ISC 20 20:05:31.6±0.4, **10°.52S**±0°.04×**161°.59E**±0°.06, **h100**km, **n132**, σ1**60**/118, **mb4.5**/44, **1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huru Makira**	**0.32**	**81**	P	Pn	20 05 41.7	-4.6
HURO	**Huru Makira**	**0.32**	**81**	S	**Sn**	**20 05 50.7**	**-6.5**
NGOA	**Tingoa Renbel**	**1.82**	**235**	P	**Pn**	**20 05 59.6**	**-2.2**
NGOA	**Tingoa Renbel**	**1.82**	**235**	S	**Sn**	**20 06 21.8**	**-3.1**
HNR	**Honiara**	**1.94**	**304**	P	**Pn**	**20 06 02.3**	**-1.1**
	67nm,0.5s,baz=113,slow=1.7,SNR=74						
HNR				S	**Sn**	**20 06 24.0**	**-3.7**
	46nm,0.5s,baz=338,slow=22,SNR=6.1						
HNR	**Honiara**	**1.94**	**304**	P	**Pn**	**20 06 02.8**	**-0.6**
HNR	**Honiara**	**1.94**	**304**	S	**Sn**	**20 06 26.2**	**-1.5**
HNR	**Honiara**	**1.94**	**304**		**Pn**	**20 06 02.0**	**-1.4**
HNR				Sn	**Sn**	**20 06 26.8**	**-0.9**
ALEG	**Aligegeo Malai**	**1.96**	**333**	P	**Pn**	**20 06 04.1**	**+0.4**
ALEG	**Aligegeo Malai**	**1.96**	**333**	S	**Sn**	**20 06 26.1**	**-2.0**
SAVO	**Savo Central**	**2.21**	**308**	P	**Pn**	**20 06 05.7**	**-1.3**
SAVO	**Savo Central**	**2.21**	**308**	S	**Sn**	**20 06 32.2**	**-1.9**
TATA	**Tatamba Isabel**	**2.75**	**320**	P	**Pn**	**20 06 13.1**	**-1.0**
TATA	**Tatamba Isabel**	**2.75**	**320**	S	**Sn**	**20 06 44.8**	**-1.9**
DVP	**Devils Point**	**9.61**	**139**	P	**Pn**	**20 07 47.4**	**+0.4**

RTV	**Rentapao**	**9.81**	**138**	P		**Pn**	**20 07 50.1**	**+0.3**
KOUNC	**Koumac, New Ca**	**10.31**	**166**	P		**Pn**	**20 07 58.1**	**+1.5**
KOUNC	**Koumac, New Ca**	**10.31**	**166**	S		**Sn**	**20 09 49.6**	**-0.6**
KOUNC	**Koumac, New Ca**	**10.31**	**166**			**Pn**	**20 07 57.4**	**+0.8**
KOUNC				Sn		Sn	20 09 40.7	-10
RABL	**Rabaul**	**11.26**	**303**	Pn		**Pn**	**20 08 06.7**	**-2.8**
NOUC	**Port Laguerre**	**12.38**	**159**	P		**Pn**	**20 08 26.7**	**+2.4**
DZM	**Mont Dzumac**	**12.40**	**159**	P		**Pn**	**20 08 26.5**	**+1.8**
	7.7nm,0.4s,baz=26,slow=8.1,SNR=87							
DZM				S		**Sn**	**20 10 36.4**	**-4.7**
	baz=87,slow=13							
MARNC	**Mare, Loyalty**	**12.54**	**151**	Pn		**Pn**	**20 08 27.9**	**+1.5**
YATNC	**Mamie plateau,**	**12.55**	**157**	P		**Pn**	**20 08 27.4**	**+0.7**
ONTNC	**Ouen Toro**	**12.62**	**159**	P		**Pn**	**20 08 31.2**	**+3.7**
ONTNC	**Ouen Toro**	**12.62**	**159**	Pn		**Pn**	**20 08 24.6**	**-2.9**
OUENC	**Ouen Island, N**	**12.86**	**158**	P		**Pn**	**20 08 33.3**	**+2.6**
OUENC	**Ouen Island, N**	**12.86**	**158**	Pn		**Pn**	**20 08 30.5**	**-0.2**
MANU	**Manus Island**	**16.44**	**300**			**Pn**	**20 09 16.2**	**-0.3**
MANU				IAmb		IAmb	20 09 20.4	
	comp=Z,27nm,1.1s							
PATS	**Pohnpei**	**17.54**	**349**	P		**Pn**	**20 09 29.7**	**-0.2**
PATS	**Pohnpei**	**17.54**	**349**			**P**	**20 09 27.9**	**-1.7**
CTA	**Charters Tower**	**17.57**	**235**	P		**Pn**	**20 09 31.4**	**+1.1**
	comp=Z,13nm,0.7s,baz=57,slow=12,SNR=16							
CTA				LR		LR	20 15 07.7	
	comp=Z,47nm,18.0s,baz=90,slow=33							
CTA	**Charters Tower**	**17.57**	**235**	P		**Pn**	**20 09 32.7**	**+2.4**
CTAO	**Charters Tower**	**17.57**	**235**	P		**Pn**	**20 09 32.7**	**+2.4**
CTAO	**Charters Tower**	**17.57**	**235**			**Pn**	**20 09 32.0**	**+1.7**
CTAO				IAmb		IAmb	20 09 33.7	
	comp=Z,17nm,0.8s							
EIDS	**Eidsvold**	**17.82**	**213**	P		**Pn**	**20 09 35.3**	**+2.1**
EIDS	**Eidsvold**	**17.82**	**213**	P		**Pn**	**20 09 34.8**	**+1.6**
ARMA	**Armidale**	**21.86**	**204**	P		**P**	**20 10 19.5**	**+3.1**
ARMA	**Armidale**	**21.86**	**204**	P		**P**	**20 10 16.7**	**+0.3**
ARMA				IAmb		IAmb	20 10 19.8	
	comp=Z,14nm,0.8s							
CMSA	**Cobar Meteorol**	**25.58**	**213**	P		**P**	**20 10 54.3**	**+2.9**
INKA	**Innaminka**	**26.03**	**226**			**P**	**20 10 56.3**	**+0.8**
INKA				IAmb		IAmb	20 10 59.3	
	comp=Z,13nm,0.9s							
WR8	**Warramunga Arr**	**27.73**	**247**			**P**	**20 11 10.5**	**-0.4**
WB0	**Warramunga Arr**	**27.78**	**247**			**P**	**20 11 11.2**	**-0.1**
WB0				IAmb		IAmb	20 11 46.9	
	comp=Z,9.7nm,1.2s							
WRAB	**Tennant Creek**	**27.86**	**247**	P		**P**	**20 11 12.0**	**-0.1**
WRA	**Warramunga Arr**	**27.87**	**247**	P		**P**	**20 11 11.9**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=77,slow=9.2,SNR=26 comp=Z,1.7nm,0.4s							
WRA	**Warramunga Arr**	**27.87**	**247**	P		**P**	**20 11 10.3**	**-1.9**
STKA	**Stephens Creek**	**28.17**	**218**	P		**P**	**20 11 13.8**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=22,slow=8.1,SNR=6.4							
STKA				LR		LR	20 21 40.3	
	comp=Z,95nm,19.0s,baz=27,slow=34 comp=Z,2.9nm,0.7s							
GUMO	**Guam**	**29.13**	**325**	LR		LR	20 21 54.5	
	comp=Z,21nm,21.1s,baz=135,slow=34							
ASAR	**Alice Springs**	**29.44**	**240**	P		**P**	**20 11 25.2**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=69,slow=9.6,SNR=14							
ASAR				LR		LR	20 21 32.1	
	comp=Z,89nm,18.6s,baz=310,slow=33 comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**29.44**	**240**	P		**P**	**20 11 26.9**	**+0.7**
MTN	**Manton Dam**	**29.90**	**263**	P		**P**	**20 11 30.9**	**+0.7**
TOO	**Toolangi**	**30.59**	**206**	P		**P**	**20 11 37.6**	**+1.5**
TOO				IAmb		IAmb	20 11 38.6	
	comp=Z,4.8nm,0.7s							
HTT	**Hallett**	**30.87**	**219**	P		**P**	**20 11 40.0**	**+1.3**
URZ	**Urewera**	**30.93**	**156**	LR		LR	20 23 18.0	
	comp=Z,45nm,18.5s,baz=336,slow=34							
BBOO	**Buckleboo**	**

comp=Z,5.0nm,0.9s
I21K Tanana 83.01 18 IAmb IAmb 20 17 47.6
comp=Z,4.1nm,0.8s
IMAR Indian Mountai 83.06 17 P **P** **20 17 46.6 +0.9**
H21K Melozitna Rive 83.10 17 P **P** **20 17 46.7 +0.8**
E19K Redstone River 83.22 15 IAmb IAmb 20 17 48.6
comp=Z,5.5nm,0.8s
MLY Manley 83.29 18 IAmb IAmb 20 17 48.9
comp=Z,3.8nm,0.7s
NEA2 Nenana 83.52 19 IAmb IAmb 20 17 49.0
comp=Z,5.5nm,1.0s
D19K Kuna River 83.80 14 P **P** **20 17 50.2 +0.8**
D19K IAmb IAmb 20 18 03.0
comp=Z,8.2nm,1.3s
HDA Harding Lake 84.10 20 IAmb IAmb 20 17 52.4
comp=Z,6.1nm,0.9s
IL31 84.35 20 P **P** **20 17 52.6 +0.4**
ILAR Eielson Array 84.35 20 P **P** **20 17 52.3 0.0**
comp=Z,1.0nm,0.6s,baz=248,slow=5.4,SNR=12
comp=Z,1.0nm,0.6s
ILAR Eielson Array 84.35 20 P **P** **20 17 52.8 +0.5**
RPN Rapa Nui 84.47 116 LR LR 20 50 15.4
comp=Z,61nm,18.4s,baz=30,slow=32
SCRK Sand Creek 84.86 21 P **P** **20 17 56.1 +1.1**
SCRK IAmb IAmb 20 17 57.0
comp=Z,3.5nm,0.8s
O02D Mt. Diablo Mer 85.96 48 P **P** **20 18 03.2 +2.2**
O02D IAmb IAmb 20 18 32.8
comp=Z,7.5nm,1.2s
DLBC Dease Lake 87.92 29 LR LR 20 56 30.0
comp=Z,21nm,18.5s,baz=104,slow=35
NVAR Mina Array Bea 88.83 51 P **P** **20 18 17.0 +2.0**
comp=Z,1.1nm,0.7s,baz=234,slow=6.6,SNR=7.3
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 88.83 51 P **P** **20 18 16.2 +1.2**
MKAR Makanchi Array 90.36 318 P **P** **20 18 21.1 -0.6**
comp=Z,2.0nm,0.5s,baz=90,slow=6.8,SNR=38
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 90.36 318 P **P** **20 18 21.2 -0.5**
MAKZ Makanchi 90.57 317 P **P** **20 18 21.7 -1.0**
MAKZ IAmb IAmb 20 18 23.7
comp=Z,1.9nm,0.9s
INK Inuvik 90.75 20 LR LR 21 01 29.6
comp=Z,9.4nm,18.2s,baz=34,slow=37
KURK Kurchatov 93.64 321 P **P** **20 18 35.5 -1.2**
KURK IAmb IAmb 20 18 36.6
comp=Z,3.8nm,1.1s
KURBB Kurchatov Arra 93.67 321 P **P** **20 18 35.6 -1.3**
comp=Z,0.8nm,0.8s,baz=106,slow=3.7,SNR=11
comp=Z,0.8nm,0.8s
YKA Yellowknife Ar 96.39 28 P **P** **20 18 48.8 -0.2**
comp=Z,0.9nm,0.6s,baz=260,slow=4.5,SNR=7.3
YKA LR LR 20 59 38.2
comp=Z,14nm,18.4s,baz=314,slow=34
comp=Z,0.9nm,0.6s
TROLL Troll, Antarti 96.49 186 ⇓P **P** **20 18 50.8 +1.2**
comp=Z,30nm,0.6s
VNA2 Neumayer--Watz 98.40 184 P **P** **20 18 55.4 -2.7**
baz=313
ARCES ARCESS Array B 114.76 344 PKP **PKiKP** **20 23 59.6 -0.3**
comp=Z,0.3nm,0.3s,baz=72,slow=1.6,SNR=10.0
FINES FINESS Array B 119.74 337 PKP **PKPdf** **20 24 09.7 +0.1**
comp=Z,0.2nm,0.3s,baz=132,slow=5.7,SNR=1.4
FINES FINESS Array B 119.74 337 **PKPdf** **20 24 09.6 -0.1**

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*IDC **20** 20:10:31.9±1.4,24°.87N×123°.34E,h0km,mb3.5/7, mbtmp3.5/7,MS2.6/1,Error ellipse: s-maj=52.4km s-min=19.6km az=65.0*
*JMA **20** 20:10:33.1±0.2,24°.9N±0°.9×123°.4E±0°.3,h26km,MV3.2/10, NW OFF ISHIGAKIJIMA IS*
ISC 20 20:10:32.3±1.7,24°.85N±0°.06×123°.39E±0°.04,h4km±13km, n25,σ0s60/29,mb3.4/7,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**222**	P		**Pb**	**20 10 44.0**	**0.0**
YOJ	**Yonaguni jima**	**0.52**	**222**	P		**Pb**	**20 10 44.0**	**0.0**
YOJ				S		**Sb**	**20 10 51.2**	**-0.6**
JYNG	**Yonagunijimaku**	**0.57**	**226**	*i* P		**Pb**	**20 10 44.9**	**+0.1**
JYNG				S		**Sb**	**20 10 52.7**	**-0.5**
IRIF	**Iriomote-Funau**	**0.60**	**149**	*i* P		**Pb**	**20 10 45.2**	**-0.1**
IRIF				S		**Sb**	**20 10 54.6**	**+0.5**
JKRS	**Kuro-shima**	**0.83**	**137**	P		**Pb**	**20 10 49.0**	**-0.3**
JKRS				S		**Sb**	**20 11 00.4**	**-0.4**
JIJ	**Ishigaki jima**	**0.84**	**125**	*i* P		**Pg**	**20 10 48.6**	**+0.2**
HATJ	**Hateruma jima**	**0.88**	**154**	P		**Pb**	**20 10 49.9**	**-0.2**
HATJ				*e*S		**Sb**	**20 11 02.0**	**-0.2**
JISG	**Ishigakijimahi**	**0.88**	**107**	*i* P		**Pg**	**20 10 49.1**	**0.0**
JISG				S		**Sg**	**20 11 00.6**	**+0.1**
JTJ	**Tarama**	**1.21**	**100**	P		**Pg**	**20 10 55.1**	**-0.5**
JMJ	**Miyako jima 2**	**1.73**	**91**	P		Pg	20 11 11.3	+5.8
NACB	**Ninganchiao**	**1.77**	**248**	P		**Pn**	**20 11 04.0**	**+0.3**
YHNB	**Yeheng**	**1.84**	**265**	P		**Pn**	**20 11 04.8**	**0.0**
YULB	**Yu-li**	**2.40**	**233**	P		**Pn**	**20 11 11.6**	**-0.8**
SSLB	**Suanglung**	**2.46**	**245**	P		**Pn**	**20 11 13.7**	**+0.4**
TWGBT	**Beinan**	**2.93**	**227**	P		**Pn**	**20 11 20.3**	**+0.7**
TPUB	**Ta-pu**	**2.96**	**239**	P		**Pn**	**20 11 21.6**	**+1.5**
JOW	**Kunigami**	**4.82**	**65**	P		**Pb**	**20 11 57.7**	**+0.3**
KSRS	**Korea Array**	**13.15**	**16**	LR		LR	20 19 24.3	
	comp=Z,27nm,18.4s,baz=230,slow=41							
CMAR	**Chiang Mai Arr**	**23.57**	**259**	P		**P**	**20 15 44.0**	**-0.2**
	0.4nm,0.6s,baz=58,slow=7.0,SNR=5.5							
	0.4nm,0.6s							
SONM	**Songino Array**	**26.60**	**334**	P		**P**	**20 16 12.1**	**+0.4**
	0.9nm,0.8s,baz=150,slow=8.5,SNR=6.9							
	0.9nm,0.8s							
MKAR	**Makanchi Array**	**39.28**	**314**	P		**P**	**20 18 02.8**	**+0.6**
	0.3nm,0.6s,baz=98,slow=10,SNR=5.6							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**40.80**	**326**	P		**P**	**20 18 14.3**	**-0.4**
	0.6nm,0.5s,baz=110,slow=9.2,SNR=4.1							
	0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**42.91**	**319**	P		**P**	**20 18 30.4**	**-1.6**
	0.4nm,0.8s,baz=110,slow=7.8,SNR=4.3							
	0.4nm,0.8s							
WRA	**Warramunga Arr**	**45.78**	**166**	P		**P**	**20 18 55.0**	**-0.2**
	0.9nm,0.7s,baz=347,slow=8.7,SNR=7.0							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**49.29**	**167**	P		**P**	**20 19 23.3**	**+0.8**
	0.2nm,0.5s,baz=354,slow=14,SNR=4.8							
	0.2nm,0.5s							

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*IDC **20** 20:18:33.5±1.5,38°.05N×134°.13E,h432km±26km,mb2.5/4, mbtmp3.4/7,Error ellipse: s-maj=44.7km s-min=20.9km az=61.0*
*JMA **20** 20:18:35.0±0.4,38°.N±3°×13°.5E±°,h429km,MV3.0/24, SEA OF JAPAN*
ISC 20 20:18:32.4±0.9,38°.1N±0°.1×134°.11E±0°.10,h400km,n10, σ2s63/12,mb2.8/4,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**3.61**	**117**	*e*P		**Pn**	**20 19 44.0**	**+3.0**
MJAR	**Matsushiro Arr**	**3.63**	**114**	P		**Pn**	**20 19 44.1**	**+3.0**
	5.2nm,0.8s,baz=295,slow=10,SNR=21							
JYT	**Yasato**	**5.21**	**109**	*e*P		**Pn**	**20 19 57.7**	**+1.0**
JYT				*e*S		**S**	**20 21 03.2**	**-1.9**
JMM	**Marumori**	**5.29**	**91**	*e*P		**Pn**	**20 19 58.9**	**+1.5**
USRK	**Ussuriysk Ar.**	**6.28**	**346**	P		**Pn**	**20 20 10.8**	**+2.9**
	5.8nm,0.7s,baz=161,slow=10,SNR=15							
ASAJ	**Asahikawa**	**8.77**	**44**	P		**P**	**20 20 37.7**	**+1.5**
	3.5nm,0.8s,baz=236,slow=11,SNR=2.5							
ASAJ				S		**S**	**20 22 13.3**	**-4.3**
	2.7nm,0.5s,baz=60,slow=32,SNR=6.3							
SONM	**Songino Array**	**22.38**	**305**	P		**P**	**20 22 57.5**	**-0.9**
	0.2nm,0.3s,baz=106,slow=11,SNR=2.2							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**38.59**	**300**	P		**P**	**20 25 18.1**	**-0.6**
	0.1nm,0.4s,baz=92,slow=9.2,SNR=1.9							
	0.1nm,0.4s							
WRA	**Warramunga Arr**	**57.75**	**180**	P		**P**	**20 27 41.2**	**-2.2**
	0.1nm,0.4s,baz=358,slow=7.1,SNR=1.4							
	0.1nm,0.4s							
FINES	**FINESS Array B**	**65.05**	**330**	P		**P**	**20 28 29.7**	**-1.4**
	1.1nm,0.9s,baz=56,slow=6.1,SNR=3.7							
	1.1nm,0.9s							

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*NEIC **20** 20:24:00.2±1.6,41°.10N±0°.02×112°.88W±0°.03,h0km±1km, ML1.8/26,Error ellipse: s-maj=3.8km s-min=2.9km az=312.0*
*IDC **20** 20:24:02.2±1.6,41°.19N×112°.80W,h0km,mbtmp1.8/1, ML3.5/1,Error ellipse: s-maj=69.8km s-min=11.3km az=147.0*
ISC 20 20:24:00.4±1.0,41°.08N±0°.03×112°.90W±0°.03,h0km,n26, σ0s86/27,Utah

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.18**	**214**			**Pg**	**20 24 05.6**	**+1.7**
SPUT	**South Promonto**	**0.41**	**55**			**Pg**	**20 24 08.4**	**+0.1**
SPUT				Sg		**Sg**	**20 24 14.8**	**+1.2**
SPUT				IAML			20 24 16.1	
	comp=N,140nm,0.3s							
HVU	**Hansel Valley**	**0.71**	**7**			**Pg**	**20 24 13.5**	**-0.5**
HVU				IAML			20 24 26.9	
	comp=E,74nm,0.4s							
NOQ	**North Oquirrh**	**0.72**	**125**	Pg		**Pg**	**20 24 14.9**	**+0.6**
NOQ				IAML			20 24 30.3	
	comp=E,35nm,0.3s							
NOQ				IAML			20 24 36.6	
	comp=N,29nm,0.3s							
DUG	**Dugway, Tooele**	**0.88**	**176**			**Pb**	**20 24 19.0**	**+0.3**
DUG				IAML			20 24 39.1	
	comp=N,44nm,0.5s							
DUG				IAML			20 24 40.0	
	comp=N,36nm,0.5s							
CTU	**Camp Tracy**	**0.95**	**113**			**Pb**	**20 24 19.4**	**-0.5**
TCUT	**Toone Canyon**	**1.12**	**87**			**Pb**	**20 24 22.6**	**-0.3**
HWUT	**Hardware Ranch**	**1.13**	**62**			**Pg**	**20 24 21.9**	**-0.3**
HWUT				IAML			20 24 43.9	
	comp=N,19nm,0.5s							
HWUT				IAML			20 24 45.7	
	comp=N,23nm,0.5s							
NLU	**North Lily Min**	**1.28**	**151**			**Pn**	**20 24 25.7**	**-0.1**
MPU	**Maple Canyon**	**1.43**	**137**	Pg		**Pg**	**20 24 26.7**	**-1.2**
BSUT	**Blindstream Ca**	**1.71**	**108**			**Pn**	**20 24 31.4**	**-0.4**
ELK	**Elko**	**1.81**	**260**			**Pn**	**20 24 33.8**	**+0.8**
ELK				IAML			20 25 01.9	
	comp=N,7.3nm,0.4s							
ELK				IAML			20 25 02.9	
	comp=N,6.3nm,0.4s							
P18A	**Preston Nutter**	**2.49**	**125**	Pn		**Pn**	**20 24 43.9**	**+1.4**
RDMU	**Red Mountain**	**2.57**	**100**	Pn		**Pn**	**20 24 43.7**	**+0.1**
PSUT	**Pine Spring**	**2.65**	**197**			**Pn**	**20 24 44.5**	**0.0**
SRU	**San Rafael Swe**	**2.68**	**136**			**Pn**	**20 24 44.9**	**-0.1**
HLID	**Hailey**	**2.73**	**336**			**Pn**	**20 24 46.5**	**+0.8**
BW06	**Boulder Array**	**3.01**	**55**			**Pn**	**20 24 49.1**	**-0.5**
BW06				IAML			20 25 37.7	
	comp=N,3.5nm,0.6s							
BW06				IAML			20 25 42.8	
	comp=N,4.0nm,0.6s							
PD31	**Pinedale Array**	**3.01**	**55**			**Pn**	**20 24 48.9**	**-0.7**
PDAR	**Pinedale Array**	**3.01**	**55**	Pn		**Pn**	**20 24 50.0**	**+0.4**
	comp=N,0.8nm,0.3s,baz=231,slow=13,SNR=11							
PDAR				Pg		**Pb**	**20 24 55.4**	**+0.3**
	comp=N,1.2nm,0.3s,baz=233,slow=15,SNR=11							
PDAR				Lg		Lg	20 25 35.3	
	comp=N,1.1nm,0.3s,baz=226,slow=20,SNR=8.3							
	comp=N,0.3nm,0.4s							
PDAR	**Pinedale Array**	**3.01**	**55**			**Pn**	**20 24 49.0**	**-0.6**
MTPU	**Mount Pierson**	**3.08**	**169**	Pn		**Pn**	**20 24 50.6**	**0.0**
BMN	**Battle Mountai**	**3.35**	**260**	Pn		**Pn**	**20 24 53.6**	**-0.6**
MCMT	**McKenzie Canyo**	**3.75**	**1**			**Pn**	**20 25 00.6**	**+0.8**
NVAR	**Mina Array Bea**	**4.94**	**239**	Pg		**Pg**	**20 25 32.7**	**-2.4**
	comp=N,0.2nm,0.3s,baz=47,slow=17,SNR=2.5							
I56US	**NEWPORT INFRAS**	**7.79**	**339**	I		I	21 07 50.0	
	comp=N,0.1nm,0.9s,baz=160,slow=317,SNR=3.1							

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*IDC **20** 20:30:24.0±4.8,3°.19S×130°.12E,h72km±51km,mb3.4/6, mbtmp3.6/8,ML3.0/2,Error ellipse: s-maj=83.3km s-min=17.3km az=81.0*
ISC 20 20:30:19.1±0.9,3°.14S±0°.09×130°.1E±0°.2,h25km,n8, σ0s38/9,mb3.6/5,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.53**	**27**	P		**Pb**	**20 31 03.7**	**0.0**
	1.7nm,0.3s,baz=180,slow=22,SNR=7.7							
SIJI				S		**Sn**	**20 31 28.6**	**+0.1**
	7.2nm,0.7s,baz=251,slow=7.0,SNR=4.8							
	4.3nm,0.3s							
WRA	**Warramunga Arr**	**17.21**	**166**	P		**P**	**20 34 19.2**	**-0.1**
	0.1nm,0.3s,baz=345,slow=12,SNR=4.6							
	0.8nm,0.8s							
ASAR	**Alice Springs**	**20.74**	**170**	P		**P**	**20 34 57.8**	**-0.3**
	3.0nm,0.7s,baz=352,slow=11,SNR=52							
	3.0nm,0.7s							
STKA	**Stephens Creek**	**30.56**	**161**	P		**P**	**20 36 31.1**	**+0.3**
	2.3nm,1.0s,baz=348,slow=9.3,SNR=2.9							
	2.3nm,1.0s							
MJAR	**Matsushiro Arr**	**40.19**	**10**	P		**P**	**20 37 53.2**	**-0.3**
	1.1nm,0.9s,baz=195,slow=8.7,SNR=2.5							
	1.1nm,0.9s							
SONM	**Songino Array**	**54.85**	**341**	P		**P**	**20 39 48.0**	**+0.7**
	0.2nm,0.4s,baz=130,slow=6.0,SNR=2.6							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**65.09**	**326**	P		**P**	**20 40 57.4**	**-0.2**
	0.3nm,0.8s,baz=134,slow=4.2,SNR=2.4							
	0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**69.31**	**328**	P		**P**	**20 41 23.8**	**-0.4**
	1.5nm,1.1s,baz=124,slow=5.7,SNR=8.7							
	1.5nm,1.1s							

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*VAO **20** 20:33:47.8±0.6,24°.68S×70°.34W,h10km,mb4.5, Presumed earthquake*
*SJA **20** 20:33:50.8±1.6,24°.61S×70°.72W,h58km,ML4.3,MW4.0*
*GFZ **20** 20:33:53.0±0.2,25°.S±2°×7°.0W±°,h67km,M4.7/12, mb4.7/12*
*NEIC **20** 20:33:53.7,24°.59S×70°.52W,h43km*
*NEIC **20** 20:33:53.7±1.9,24°.60S±0°.01×70°.5W±0°.1,h44km±5km, mb4.6/20,Mwr4.2/26,Mwr4.5(GUC),Error ellipse: s-maj=15.0km s-min=0.6km az=96.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.07; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-2.21; $M_{r\theta}$0.45; $M_{\theta\phi}$0.14; $M_{\phi r}$-1.51; Fault plane solution: M_o2.66000×10^{15} NP1:ϕs5.39000°, δ27.78000°,λ105.02000°. NP2:ϕs168.52000°,δ63.24000°, λ82.22000°. Principal axes: T 2.6042, Plg71.0000°, Azm62.0000°; N 0.1122, Plg7.0000°, Azm172.0000°; P -2.7164, Plg18.0000°, Azm264.0000°;*
*IDC **20** 20:33:54.0±0.4,24°.62S×70°.17W,h51km±3km,mb4.0/11, mbtmp4.2/16,MS3.2/8 Error ellipse: s-maj=18.0km s-min=12.8km az=80.0*
*GUC **20** 20:33:53.4±0.8,24°.63S×70°.28W,h49km±3km,ML4.5*
ISC 20 20:33:52.9±0.4,24°.63S±0°.03×70°.36W±0°.05,h48km±3km, h48km:pP-P,n211,σ1s64/227,mb4.5/17,MS3.3/4,12C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.04**	**272**	*i* P		**Pn**	**20 34 02.3**	**+1.5**
PB14				IAML			20 34 15.5	
	comp=Z,5μm,0.4s							
PB14	**IPOC Station P**	**0.04**	**272**	⇓*e*P		**Pn**	**20 34 02.1**	**+1.4**
PB14				*e*S		**Sn**	**20 34 08.3**	**+2.0**
PB14	**IPOC Station P**	**0.04**	**272**	⇓*e*P		**Pn**	**20 34 02.1**	**+1.4**
PB14				*e*S		**Sn**	**20 34 08.3**	**+2.0**
PB14	**IPOC Station P**	**0.04**	**272**			**Pn**	**20 34 01.6**	**+0.9**
PB14	**IPOC Station P**	**0.04**	**272**	P		**Pn**	**20 34 01.9**	**+1.2**
AC01	**Pan de Azucar**	**1.53**	**188**	*i* P		**Pn**	**20 34 19.3**	**+1.4**
AC01				IAML			20 34 42.5	
	comp=Z,3μm,0.6s							
AC01	**Pan de Azucar**	**1.53**	**188**	⇓*e*P		**Pn**	**20 34 19.2**	**+1.4**
AC01				*i* S		**Sn**	**20 34 38.8**	**+2.2**
AC01				IAML			20 34 41.5	
	comp=N,6μm,0.5s							
AC01	**Pan de Azucar**	**1.53**	**188**	⇓*e*P		**Pn**	**20 34 19.2**	**+1.4**
AC01				*e*S		**Sn**	**20 34 38.7**	**+2.2**
AC01				IAML			20 34 41.6	
	comp=N,6μm,0.5s							
AC01	**Pan de Azucar**	**1.53**	**188**			**Pn**	**20 34 19.2**	**+1.4**
AC01				Sn		**Sn**	**20 34 38.3**	**+1.8**
AC01	**Pan de Azucar**	**1.53**	**188**	P		**Pn**	**20 34 19.4**	**+1.6**
PB05	**IPOC Station P**	**1.77**	**5**	*i* P		**Pn**	**20 34 22.7**	**+1.5**
PB05				IAML			20 35 04.5	
	comp=Z,2μm,0.8s							
PB05	**IPOC Station P**	**1.77**	**5**	⇑*e*P		**Pn**	**20 34 22.6**	**+1.3**
PB05				*e*S		**Sn**	**20 34 44.6**	**+2.0**
PB05	**IPOC Station P**	**1.77**	**5**	⇑*e*P		**Pn**	**20 34 22.6**	**+1.3**
PB05				*e*S		**Sn**	**20 34 44.6**	**+2.0**
PB05				IAML			20 34 50.0	
	comp=E,2μm,0.3s							
PB05	**IPOC Station P**	**1.77**	**5**	Pn		**Pn**	**20 34 22.1**	**+0.9**
PB05	**IPOC Station P**	**1.77**	**5**	P		**Pn**	**20 34 22.8**	**+1.5**

PB06	**IPOC Station P**	**2.04**	**21**	*i* P		**Pn**	**20 34 26.6**	**+1.7**
PB06				IAML			20 34 56.8	
	comp=Z,3μm,0.5s							
PB06	**IPOC Station P**	**2.04**	**21**	⇑*e*P		**Pn**	**20 34 26.5**	**+1.5**
PB06				*e*S		**Sn**	**20 34 51.6**	**+2.2**
PB06				IAML			20 34 58.7	
	comp=N,5μm,0.5s							
PB06	**IPOC Station P**	**2.04**	**21**	⇑*i* P		**Pn**	**20 34 26.5**	**+1.5**
PB06				*e*S		**Sn**	**20 34 52.0**	**+2.6**
PB06				IAML			20 34 58.7	
	comp=N,5μm,0.5s							
PB06	**IPOC Station P**	**2.04**	**21**	Pn		**Pn**	**20 34 26.4**	**+1.4**
PB06	**IPOC Station P**	**2.04**	**21**	P		**Pn**	**20 34 26.7**	**+1.7**
AC02	**Maricunga**	**2.46**	**154**	*i* P		**Pn**	**20 34 34.0**	**+2.9**
AC02				IAML			20 35 08.2	
	comp=Z,2μm,0.3s							
AC02	**Maricunga**	**2.46**	**154**	*e*P		**Pn**	**20 34 33.8**	**+2.8**
AC02				*e*S		**Sn**	**20 35 03.4**	**+3.3**
AC02				IAML			20 35 08.1	
	comp=E,3μm,0.3s							
AC02	**Maricunga**	**2.46**	**154**	*e*P		**Pn**	**20 34 33.9**	**+2.9**
AC02				IAML			20 35 08.1	
	comp=E,3μm,0.3s							
AC02	**Maricunga**	**2.46**	**154**			**Pn**	**20 34 33.5**	**+2.5**
AC02	**Maricunga**	**2.46**	**154**	P		**Pn**	**20 34 33.8**	**+2.8**
AF01	**San Pedro de A**	**2.60**	**51**	*i* P		**Pn**	**20 34 36.3**	**+3.6**
AF01				IAML			20 35 24.9	
	comp=Z,5μm,0.8s							
AF01	**San Pedro de A**	**2.60**	**51**	*e*P		**Pn**	**20 34 34.2**	**+1.5**
AF01	**San Pedro de A**	**2.60**	**51**	*e*P		**Pn**	**20 34 33.6**	**+0.9**
AF01	**San Pedro de A**	**2.60**	**51**			**Pn**	**20 34 35.4**	**+2.7**
PB03	**IPOC Station P**	**2.63**	**12**	*i* P		**Pn**	**20 34 34.0**	**+1.0**
PB03				IAML			20 35 21.6	
	comp=Z,2μm,0.3s							
PB03	**IPOC Station P**	**2.63**	**12**	⇑*e*P		**Pn**	**20 34 33.8**	**+0.9**
PB03				*e*S		**Sn**	**20 35 06.0**	**+2.3**
PB03				IAML			20 35 16.4	
	comp=E,3μm,0.7s							
PB03	**IPOC Station P**	**2.63**	**12**	⇑*e*P		**Pn**	**20 34 33.8**	**+0.9**
PB03				IAML			20 35 16.3	
	comp=E,3μm,0.5s							
PB03	**IPOC Station P**	**2.63**	**12**			**Pn**	**20 34 33.7**	**+0.7**
PB03	**IPOC Station P**	**2.63**	**12**	P		**Pn**	**20 34 34.0**	**+1.0**
PB07	**IPOC Station P**	**2.92**	**9**	*i* P		**Pn**	**20 34 38.1**	**+1.0**
PB07				*e*S		Sn	20 35 23.2	+12
PB07				IAML			20 35 28.6	
	comp=Z,2μm,0.3s							
PB07	**IPOC Station P**	**2.92**	**9**	⇑*e*P		**Pn**	**20 34 37.8**	**+0.8**
PB07				IAML			20 35 24.8	
	comp=E,2μm,0.4s							
PB07	**IPOC Station P**	**2.92**	**9**	⇑*e*P		**Pn**	**20 34 37.8**	**+0.8**
PB07				IAML			20 35 24.8	
	comp=E,2μm,0.4s							
PB07	**IPOC Station P**	**2.92**	**9**			**Pn**	**20 34 37.2**	**+0.2**
PB07	**IPOC Station P**	**2.92**	**9**	P		**Pn**	**20 34 38.0**	**+1.0**
GO03	**Copiapo**	**2.96**	**178**	*i* P		**Pn**	**20 34 38.8**	**+1.4**
GO03				IAML			20 35 33.3	
	comp=Z,880nm,0.3s							
GO03	**Copiapo**	**2.96**	**178**	⇓*e*P		**Pn**	**20 34 38.6**	**+1.2**
GO03				*e*S		**Sn**	**20 35 14.3**	**+2.6**
GO03				IAML			20 35 29.9	
	comp=N,1μm,0.3s							
GO03	**Copiapo**	**2.96**	**178**	⇓*e*P		**Pn**	**20 34 38.6**	**+1.2**
GO03				IAML			20 35 29.9	
	comp=N,1μm,0.4s							
GO03	**Copiapo**	**2.96**	**178**			**Pn**	**20 34 38.6**	**+1.2**
GO03	**Copiapo**	**2.96**	**178**	P		**Pn**	**20 34 38.7**	**+1.3**
PB09	**IPOC Station P**	**3.00**	**20**	*i* P		**Pn**	**20 34 40.5**	**+2.4**
PB09				IAML			20 35 32.1	
	comp=Z,1μm,0.5s							
PB09	**IPOC Station P**	**3.00**	**20**	⇑*e*P		**Pn**	**20 34 40.0**	**+1.9**
PB09				*e*S		**Sn**	**20 35 15.0**	**+2.1**
PB09				IAML			20 35 35.7	
	comp=N,2μm,0.3s							
PB09	**IPOC Station P**	**3.00**	**20**	⇑*e*P		**Pn**	**20 34 40.0**	**+1.9**
PB09				IAML			20 35 35.8	
	comp=N,2μm,0.5s							
PB09	**IPOC Station P**	**3.00**	**20**			**Pn**	**20 34 39.4**	**+1.3**
PB09	**IPOC Station P**	**3.00**	**20**	P		**Pn**	**20 34 40.2**	**+2.1**
PB02	**IPOC Station P**	**3.32**	**7**	*i* P		**Pn**	**20 34 43.3**	**+0.9**
PB02				IAML			20 35 43.9	
	comp=Z,2μm,0.3s							
PB02	**IPOC Station P**	**3.32**	**7**	⇑*e*P		**Pn**	**20 34 42.9**	**+0.4**
PB02				*e*S		**Sn**	**20 35 23.2**	**+2.5**
PB02				IAML			20 35 42.1	
	comp=E,2μm,0.5s							
PB02	**IPOC Station P**	**3.32**	**7**	⇑*e*P		**Pn**	**20 34 42.9**	**+0.4**
PB02	**IPOC Station P**	**3.32**	**7**			**Pn**	**20 34 42.9**	**+0.4**
PB02	**IPOC Station P**	**3.32**	**7**	P		**Pn**	**20 34 43.1**	**+0.7**
AC04	**Llanos de Chal**	**3.62**	**190**	*i* P		**Pn**	**20 34 46.1**	**-0.3**
AC04				IAML			20 35 54.5	
	comp=Z,381nm,1.0s							
AC04	**Llanos de Chal**	**3.62**	**190**	*e*P		**Pn**	**20 34 45.6**	**-0.8**
AC04	**Llanos de Chal**	**3.62**	**190**	*e*P		**Pn**	**20 34 45.6**	**-0.8**
AC04	**Llanos de Chal**	**3.62**	**190**			**Pn**	**20 34 45.6**	**-0.8**
AC04	**Llanos de Chal**	**3.62**	**190**	P		**Pn**	**20 34 45.8**	**-0.6**
SALTA		**3.68**	**85**	*i* P		**Pn**	**20 34 51.4**	**+3.7**
SALTA				IAML			20 35 42.2	
	comp=Z,219nm,0.9s							
SALTA		**3.68**	**85**	P		**Pn**	**20 34 49.9**	**+2.2**
AC05	**El Transito**	**4.19**	**179**	*i* P		**Pn**	**20 34 56.0**	**+1.5**
AC05				IA

LPAZ	**La Paz**	**8.55**	**15**	P		**Pn**	**20 35 56.0**	**+1.3**
H03N1	**Juan Fernandez**	**11.53**	**218**	T		T	20 48 22.5	
	baz=43,slow=72,SNR=1264							
H03N2	**Juan Fernandez**	**11.54**	**219**	T		T	20 48 21.0	
	baz=43,slow=72,SNR=1322							
H03N3	**Juan Fernandez**	**11.55**	**218**	T		T	20 48 17.1	
	baz=43,slow=72,SNR=945							
BBSD	**Serra de San D**	**11.73**	**53**	*eP*		**Pn**	**20 36 35.6**	**-2.1**
CPUP	**Villa Florida**	**11.89**	**101**	P		**Pn**	**20 36 38.6**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=313,slow=13,SNR=4.4							
CPUP				LR		LR	20 41 11.7	
	comp=Z,53nm,21.6s,baz=257,slow=37							
CPUP	**Villa Florida**	**11.89**	**101**			**Pn**	**20 36 38.9**	**-0.9**
CPUP	**Villa Florida**	**11.89**	**101**	*eP*		**Pn**	**20 36 37.3**	**-2.5**
MURT	**Porto Murtinho**	**12.09**	**78**	*eP*		**Pn**	**20 36 41.8**	**-0.8**
SIV	**San Ignacio**	**12.23**	**47**	P		**Pn**	**20 36 42.0**	**-2.5**
	comp=Z,22nm,0.6s,baz=232,slow=8.5,SNR=14							
SIV				S		**Sn**	**20 38 53.5**	**-6.0**
	comp=Z,4.9nm,0.8s,baz=237,slow=13,SNR=3.3							
SIV				LR		LR	20 40 58.0	
	comp=Z,48nm,18.9s,baz=293,slow=35							
COIM	**Forte Coimbra**	**12.55**	**70**	*eP*		**Pn**	**20 36 46.2**	**-2.6**
SJPY	**San Joaquin**	**12.95**	**95**	*eP*		**Pn**	**20 36 52.2**	**-2.1**
PSAL	**Palomas, Salto**	**12.98**	**123**	*eP*		**Pn**	**20 36 52.1**	**-2.5**
PTLB	**Pontes e Lacer**	**13.94**	**51**			**Pn**	**20 37 08.9**	**+1.1**
PTLB	**Pontes e Lacer**	**13.94**	**51**	*eP*		**Pn**	**20 37 07.0**	**-0.8**
AQDB	**Aquidauana**	**14.16**	**76**	*eP*		**Pn**	**20 37 09.4**	**-1.3**
AMBA	**Amambai (Brazi**	**14.17**	**86**	*eP*		**Pn**	**20 37 08.5**	**-2.5**
GO06	**Curarrehue**	**14.94**	**183**			**P**	**20 37 26.7**	**+0.9**
VILB	**Vilhena**	**15.07**	**41**	*eP*		**Pn**	**20 37 20.8**	**-2.0**
PLCA	**Paso Flores**	**16.06**	**181**	P		**Pn**	**20 37 35.8**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=12,slow=7.9,SNR=4.7							
PLCA				LR		LR	20 43 59.8	
	comp=Z,124nm,19.6s,baz=0.5,slow=38							
CPSB	**Cacapava Do Su**	**16.07**	**115**	*eP*		**Pn**	**20 37 32.5**	**-3.0**
SALV	**Santo Antonio**	**16.26**	**60**	*eP*		**Pn**	**20 37 35.5**	**-2.5**
TRCB	**Terra Rica**	**16.34**	**87**	*eP*		**Pn**	**20 37 37.6**	**-1.4**
ITAB	**Concordia**	**16.60**	**103**	*eP*		**Pn**	**20 37 38.4**	**-3.9**
ITAB	**Concordia**	**16.60**	**103**	P		**Pn**	**20 37 39.6**	**-2.6**
PTGB	**Pitanga**	**16.63**	**94**	*eP*		**Pn**	**20 37 42.3**	**-0.4**
C2SB	**Chapadao do Su**	**17.29**	**74**	*eP*		**Pn**	**20 37 48.9**	**-1.9**
LDASE	**Londrina, Braz**	**17.62**	**90**	*eP*		**Pn**	**20 37 52.6**	**-2.5**
CNLB	**Canela**	**18.00**	**109**	*eP*		**P**	**20 37 57.8**	**-1.8**
FRTB	**Fartura**	**19.04**	**90**	*eP*		**P**	**20 38 08.1**	**-3.1**
CLDB	**Colider**	**19.45**	**48**	*eP*		**P**	**20 38 15.3**	**-0.3**
CLDB	**Colider**	**19.45**	**48**	P		**P**	**20 38 14.3**	**-1.4**
ARAG	**Araguaiana, MT**	**19.52**	**66**	*eP*		**P**	**20 38 16.1**	**-0.3**
BB19B	**Bebedouro**	**20.42**	**84**	*eP*		**P**	**20 38 26.4**	**+0.2**
SPB	**Sao Paulo**	**20.95**	**92**	*eP*		**P**	**20 38 30.9**	**-1.0**
SPB	**Sao Paulo**	**20.95**	**92**	P		**P**	**20 38 32.8**	**+1.0**
PET01	**Itanhaem-SP**	**21.01**	**94**	*eP*		**P**	**20 38 31.8**	**-0.8**
RCLB	**Rio Claro- Sao**	**21.04**	**89**	*eP*		**P**	**20 38 31.6**	**-1.3**
VAO	**Valinhos**	**21.46**	**90**			**P**	**20 38 37.5**	**+0.1**
VAO	**Valinhos**	**21.46**	**90**	*eP*		**P**	**20 38 35.8**	**-1.6**
IPMB	**Ipameri, GO**	**21.65**	**77**	*eP*		**P**	**20 38 38.4**	**-1.0**
TEFE	**Tefe**	**21.71**	**16**	*eP*		**P**	**20 38 40.0**	**0.0**
SNDB	**Serra Nova Dou**	**22.01**	**59**	*eP*		**P**	**20 38 41.0**	**-2.2**
CANS	**Sao Roque de M**	**22.55**	**84**	*eP*		**P**	**20 38 47.1**	**-2.1**
NPGB	**Novo Progresso**	**22.63**	**42**	*eP*		**P**	**20 38 48.2**	**-1.7**
BDFB	**Brasilia**	**22.78**	**71**	P		**P**	**20 38 48.8**	**-2.8**
	comp=Z,5.0nm,0.5s,baz=236,slow=7.0,SNR=7.9							
BDFB				LR		LR	20 48 48.2	
	comp=Z,64nm,18.2s,baz=265,slow=40							
	comp=Z,5.0nm,0.5s							
BDFB	**Brasilia**	**22.78**	**71**	P		**P**	**20 38 49.1**	**-2.5**
BDFB				IAmb		IAmb	20 38 51.9	
	comp=Z,23nm,1.3s							
PMNB	**Patos De Minas**	**23.04**	**79**	*eP*		**P**	**20 38 53.0**	**-1.2**
MACA	**Manacapuru-AM**	**23.29**	**25**	P		**P**	**20 38 54.8**	**-1.8**
MACA				IAmb		IAmb	20 39 16.2	
	comp=Z,22nm,0.7s							
MACA	**Manacapuru-AM**	**23.29**	**25**	*eP*		**P**	**20 38 56.0**	**-0.6**
BSCB	**Bom Sucesso**	**23.85**	**86**	*eP*		**P**	**20 39 00.7**	**-1.3**
SGC2	**Sao Gabriel da**	**24.55**	**8**	*eP*		**P**	**20 39 07.9**	**-0.4**
ITTB	**Itaituba**	**24.57**	**37**	*eP*		**P**	**20 39 07.9**	**-0.6**
DIAM	**Diamantina, MG**	**25.60**	**81**	*eP*		**P**	**20 39 17.0**	**-1.0**
JANB	**Januaria**	**26.24**	**74**	*eP*		**P**	**20 39 22.2**	**-1.5**
SMTB	**Santa Maria do**	**26.78**	**58**	*eP*		**P**	**20 39 28.4**	**-0.1**
PRPB	**Parauapebas**	**26.92**	**50**	*eP*		**P**	**20 39 28.8**	**-1.0**
SDBA	**SAO DESIDERIO**	**26.97**	**68**	*eP*		**P**	**20 39 30.1**	**-0.2**
BOAV	**Boa Vista**	**28.51**	**21**	P		**P**	**20 39 44.3**	**+0.4**
BOAV	**Boa Vista**	**28.51**	**21**	*eP*		**P**	**20 39 44.4**	**+0.4**
ROSC	**El Rosal**	**29.54**	**352**	P		**P**	**20 39 51.3**	**-2.2**
ROSC				IAmb		IAmb	20 40 08.6	
	comp=Z,7.8nm,0.6s							
MDP	**Montagnes des**	**34.21**	**33**	LR		LR	20 55 08.9	
	comp=Z,48nm,19.2s,baz=172,slow=37							
NBPS	**Pedro II - PI**	**34.32**	**59**	*eP*		**P**	**20 40 34.8**	**-0.4**
NBTA	**Tacaratu-PE**	**34.41**	**69**	*eP*		**P**	**20 40 35.1**	**-0.8**
SNAA	**Sanae**	**59.79**	**160**	P		**P**	**20 43 51.8**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=296,slow=7.8,SNR=4.7							
	comp=Z,1.7nm,0.8s							
SNAA	**Sanae**	**59.79**	**160**	IAmb		IAmb	20 44 07.6	
	comp=Z,3.9nm,0.8s							
TXAR	**Lajitas Array**	**62.48**	**327**	P		**P**	**20 44 12.3**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=150,slow=10,SNR=4.9							
TXAR				pP		**pP**	**20 44 25.4**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=119,slow=7.4,SNR=3.6							
TXAR				sP		**sP**	**20 44 33.3**	**+2.1**
	comp=Z,0.2nm,0.7s,baz=151,slow=8.0,SNR=1.8							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**62.48**	**327**	P		**P**	**20 44 11.9**	**+0.4**
SN07	**Snyder 07**	**64.35**	**332**	P		**P**	**20 44 23.7**	**-0.1**
SN07				IAmb		IAmb	20 44 26.1	
	comp=Z,7.7nm,0.8s							
QSPA	**South Pole Qui**	**65.58**	**180**	P		**P**	**20 44 32.8**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=204,slow=2.0,SNR=12							
QSPA				pP		**pP**	**20 44 45.8**	**+0.1**
	comp=Z,7.6nm,1.0s,baz=154,slow=5.9,SNR=10							
	comp=Z,2.1nm,0.8s							
QSPA	**South Pole Qui**	**65.58**	**180**	P		**P**	**20 44 32.6**	**+1.1**
QSPA						**pP**	**20 44 46.6**	**+0.8**
QSPA				IAmb		IAmb	20 44 47.8	
	comp=Z,9.1nm,0.9s							
QSPA	**South Pole Qui**	**65.58**	**180**	P		**P**	**20 44 29.4**	**-2.1**
QSPA				pP		**pP**	**20 44 46.8**	**+1.0**
S39A	**Bolivar**	**65.64**	**340**	P		**P**	**20 44 32.8**	**+0.8**
S39A				IAmb		IAmb	20 44 47.8	
	comp=Z,7.4nm,0.8s							
R40A	**Maddies Statio**	**65.88**	**341**	P		**P**	**20 44 34.1**	**+0.6**
DBIC	**Dimbokro**	**70.91**	**73**	P		**P**	**20 45 05.2**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=218,slow=5.0,SNR=3.6							
DBIC				pP		**pP**	**20 45 18.1**	**-1.9**
	comp=Z,5.7nm,0.6s,baz=244,slow=4.7,SNR=4.8							
DBIC				LR		LR	21 16 58.1	
	comp=Z,17nm,18.4s,baz=166,slow=36							
	comp=Z,1.6nm,0.5s							
DBIC	**Dimbokro**	**70.91**	**73**	P		**P**	**20 45 05.3**	**-0.2**
DBIC	**Dimbokro**	**70.91**	**73**	IAmb		IAmb	20 45 26.6	
	comp=Z,17nm,1.3s							
PV03	**Paradox Valley**	**72.22**	**329**	IAmb		IAmb	20 45 12.5	
	comp=Z,6.0nm,1.2s							
IRM	**Iron Mountain**	**72.30**	**322**	IAmb		IAmb	20 45 54.0	
	comp=Z,5.2nm,0.7s							
PDAR	**Pinedale Array**	**76.17**	**331**	P		**P**	**20 45 36.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=168,slow=7.7,SNR=6.8							
	comp=Z,0.4nm,0.5s							
PDAR	**Pinedale Array**	**76.17**	**331**	P		**P**	**20 45 36.5**	**+0.3**
ULM	**Lac du Bonnet**	**77.91**	**344**	P		**P**	**20 45 45.7**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=160,slow=6.2,SNR=5.8							
ULM				pP		**pP**	**20 46 00.2**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=93,slow=9.4,SNR=2.2							
	comp=Z,1.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**79.66**	**70**	P		**P**	**20 45 55.6**	**-0.1**
	comp=Z,6.7nm,0.6s,baz=258,slow=5.2,SNR=41							
TORD				pP		**pP**	**20 46 11.2**	**+0.7**
	comp=Z,3.5nm,0.5s,baz=254,slow=5.0,SNR=9.1							
	comp=Z,6.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**79.66**	**70**	P		**P**	**20 45 55.2**	**-0.6**
TORD				IAmb		IAmb	20 45 56.1	
	comp=Z,4.2nm,0.7s							
TORD						**pP**	**20 46 11.1**	**+0.7**
MAW	**Mawson**	**81.73**	**164**	P		**P**	**20 46 07.3**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=243,slow=11,SNR=4.3							
MAW				pP		**pP**	**20 46 20.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=319,slow=1.6,SNR=3.6							
	comp=Z,2.4nm,0.7s							
MAW	**Mawson**	**81.73**	**164**	P		**P**	**20 46 08.0**	**+2.1**
MAW	**Mawson**	**81.73**	**164**	IAmb		IAmb	20 46 22.9	
	comp=Z,0.8nm,0.9s							
BOSA	**Boshof**	**83.16**	**118**	P		**P**	**20 46 13.9**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=238,slow=4.5,SNR=7.2							
	comp=Z,2.4nm,0.6s							
BOSA	**Boshof**	**83.16**	**118**	P		**P**	**20 46 14.1**	**-0.3**
SFJD	**Kangerlussuaq**	**92.54**	**8**	LR		LR	21 29 30.9	
	comp=Z,18nm,18.9s,baz=14,slow=36							
YKA	**Yellowknife Ar**	**93.69**	**341**	P		**P**	**20 47 04.9**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=136,slow=4.9,SNR=7.6							
YKA				pP		**pP**	**20 47 18.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=143,slow=4.4,SNR=5.3							
	comp=Z,1.4nm,0.8s							
YKA	**Yellowknife Ar**	**93.69**	**341**	P		**P**	**20 47 04.5**	**+0.7**
YKA						**pP**	**20 47 17.9**	**-0.7**
ASAR	**Alice Springs**	**126.54**	**208**	PKP		**PKiKP**	**20 52 52.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=134,slow=1.6,SNR=13							
ASAR				pPKP		**pPKPdf**	**20 53 07.3**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=140,slow=1.5,SNR=5.3							
ASAR	**Alice Springs**	**126.54**	**208**			**PKPdf**	**20 52 51.6**	**+0.2**
H11S2	**WAKE ISLAND Hyl**	**126.89**	**275**	T		T	23 12 32.6	
	baz=107,slow=75,SNR=459							
H11S1	**WAKE ISLAND Hyl**	**126.90**	**275**	T		T	23 12 31.3	
	baz=107,slow=75,SNR=466							
H11S3	**WAKE ISLAND Hyl**	**126.91**	**275**	T		T	23 12 23.1	
	baz=107,slow=75,SNR=426							
H11N3	**WAKE ISLAND Hyl**	**127.06**	**277**	T		T	23 12 45.1	
	baz=106,slow=75,SNR=46							
H11N1	**WAKE ISLAND Hyl**	**127.07**	**277**	T		T	23 12 39.8	
	baz=106,slow=75,SNR=33							
H11N2	**WAKE ISLAND Hyl**	**127.07**	**277**	T		T	23 12 46.9	
	baz=106,slow=75,SNR=41							
WRA	**Warramunga Arr**	**129.60**	**211**	PKP		**PKiKP**	**20 52 58.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=142,slow=1.8,SNR=5.0							
WRA				pPKP		**pPKPdf**	**20 53 12.0**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=138,slow=1.8,SNR=6.4							
KURK	**Kurchatov**	**144.66**	**34**			**PKPdf**	**20 53 24.2**	**+0.2**
KURBB	**Kurchatov Arra**	**144.66**	**35**	PKP		**PKPdf**	**20 53 24.2**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=306,slow=3.6,SNR=45							
KURBB				pPKP		**pPKPdf**	**20 53 38.9**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=305,slow=3.5,SNR=21							
ARSB	**Arslanbob**	**145.33**	**52**	PKPdf		**PKPab**	**20 53 26.6**	**+0.8**
ZALV	**Zalesovo Beam**	**145.34**	**26**	PKPbc		**PKPab**	**20 53 26.2**	**+1.1**
	comp=Z,13nm,0.7s,baz=308,slow=4.0,SNR=59							
ZALV				pPKPbc		**pPKPdf**	**20 53 41.8**	**+1.4**
	comp=Z,13nm,0.8s,baz=319,slow=4.3,SNR=15							
ZALV	**Zalesovo Beam**	**145.34**	**26**			**PKPab**	**20 53 26.0**	**+0.9**
KSH2	**Kashi**	**147.86**	**55**	PKPbc		**PKiKP**	**20 53 34.4**	**-0.5**
MKAR	**Makanchi Array**	**148.93**	**38**	PKPbc		**PKiKP**	**20 53 36.3**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=323,slow=2.6,SNR=36							
MKAR				pPKPbc		**pPKPbc**	**20 53 51.9**	**+1.2**
	comp=Z,5.0nm,0.7s,baz=316,slow=2.8,SNR=22							
MKAR	**Makanchi Array**	**148.93**	**38**			**PKPbc**	**20 53 36.0**	**+0.6**
SONM	**Songino Array**	**156.70**	**6**	PKP		**PKPdf**	**20 53 43.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=65,slow=3.8,SNR=2.7							
SONM				PKPab		**PKPab**	**20 54 13.3**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=326,slow=5.5,SNR=4.0							
HHC	**Hu-ho-hao-te**	**163.74**	**355**	*eP*		**PKPdf**	**20 53 48.6**	**-2.2**
NJ2	**Nanjing**	**169.03**	**314**	*eP*		**PKPdf**	**20 53 57.1**	**+2.1**
NJ2				pmax		pmax		
	comp=Z,22nm,0.7s							
PZH	**PanZhiHua**	**172.62**	**74**	PKP		**PKPdf**	**20 53 59.3**	**+2.0**

*IDC **20** 20:39:07.9±1.1, 33.98N×25.49E, h0km, mb3.7/10, mbtmp3.7/19, ML3.5/8, MS3.0/4, Error ellipse: s-maj=23.1km s-min=15.4km az=12.0*
*ISK **20** 20:39:09.4, 34.01N×25.53E, h12km, ML3.5/12*
*ATH **20** 20:39:12.9, 34.27N×25.47E, h7km±3km, ML3.2/6, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **20** 20:39:14.5, 34.5°N×2.5°E±, h0km±5km, M3.0/11, MLh3.0/11*

ISC 20 20:39:11.9±1.1, 34.09N±0.06×25.52E±0.03, h31km±7km, n84, σ1§76/100, mb3.8/9, MS3.1/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.10**	**328**	P	**Pn**	**20 39 30.9**	**-0.3**
SIVA				S	**Sn**	**20 39 44.6**	**-0.7**
SIVA	**Sivas**	**1.10**	**328**	P	**Pn**	**20 39 30.5**	**-0.7**
SIVA				S	**Sn**	**20 39 42.4**	**-3.0**
NPS	**Neapolis**	**1.18**	**4**	P	**Pn**	**20 39 32.3**	**0.0**
NPS				S	**Sn**	**20 39 45.4**	**-1.9**
NPS	**Neapolis**	**1.18**	**4**	P	**Pn**	**20 39 32.2**	**-0.1**
NPS				S	**Sn**	**20 39 44.4**	**-2.9**
ZKR	**Zakros**	**1.18**	**29**	Pn	**Pb**	**20 39 33.3**	**-0.4**
ZKR				Sn	**Sb**	**20 39 50.4**	**+1.8**
ZKR	**Zakros**	**1.18**	**29**	P	**Pb**	**20 39 32.8**	**-0.9**
ZKR	**Zakros**	**1.18**	**29**	P	**Pn**	**20 39 32.4**	**+0.1**
ZKR				S	**Sn**	**20 39 47.7**	**-0.5**
IACM	**Heraklion**	**1.27**	**343**	P	**Pn**	**20 39 34.5**	**-0.8**
IACM				S	**Sn**	**20 39 48.7**	**-0.9**
IDI	**Anoyia**	**1.31**	**337**	Pg	**Pb**	**20 39 34.9**	**-1.0**
	6.4nm,0.3s,baz=150,slow=17,SNR=35						
IDI				Lg	Lg	20 39 49.0	
	22nm,0.3s,baz=345,slow=22,SNR=11						
IDI	**Anoyia**	**1.31**	**337**	Pn	**Pb**	**20 39 35.3**	**-0.7**
IDI				Sn	**Sb**	**20 39 53.7**	**+1.3**
IDI	**Anoyia**	**1.31**	**337**	P	**Pn**	**20 39 34.3**	**+0.2**
IDI	**Anoyia**	**1.31**	**337**	P	**Pn**	**20 39 34.1**	**0.0**
IDI				S	**Sn**	**20 39 50.1**	**-0.4**
GVD	**Gavdhos**	**1.40**	**303**	Pn	**Pn**	**20 39 36.0**	**+0.6**
GVD				Sn	**Sb**	**20 39 55.6**	**+0.6**
GVD	**Gavdhos**	**1.40**	**303**	P	**Pb**	**20 39 35.1**	**-1.0**
GVD				S	**Sb**	**20 39 58.5**	**+3.5**
GVD	**Gavdhos**	**1.40**	**303**	P	**Pb**	**20 39 36.4**	**-1.0**
VAM	**Vamos**	**1.71**	**321**	P	**Pb**	**20 39 42.0**	**-0.8**
VAM				S	**Sb**	**20 40 04.0**	**+0.2**
VAM	**Vamos**	**1.71**	**321**	P	**Pb**	**20 39 41.3**	**-1.4**
IMMV	**Iera Moni Meta**	**1.87**	**318**	Pn	**Pn**	**20 39 42.8**	**+1.0**
IMMV	**Iera Moni Meta**	**1.87**	**318**	P	**Pb**	**20 39 44.1**	**-1.3**
IMMV	**Iera Moni Meta**	**1.87**	**318**	P	**Pb**	**20 39 43.4**	**-2.0**
KNDR	**Palaiochora Ch**	**1.94**	**307**	Pn	**Pn**	**20 39 43.3**	**+0.6**
KNDR	**Palaiochora Ch**	**1.94**	**307**	S	**Sb**	**20 40 10.4**	**+0.1**
KARP	**Karpathos**	**1.99**	**42**	Pn	**Pn**	**20 39 44.6**	**+1.1**
KARP	**Karpathos**	**1.99**	**42**	P	**Pb**	**20 39 46.8**	**-0.7**
KARP	**Karpathos**	**1.99**	**42**	P	**Pb**	**20 39 46.5**	**-1.0**
THERA	**Ancient Thera,**	**2.28**	**359**	S	**Sn**	**20 40 15.6**	**+1.2**
THERA	**Ancient Thera,**	**2.28**	**359**	Pg_4		20 39 48.8	
SNT5	**Nea Kammeni, S**	**2.31**	**358**	P	**Pb**	**20 39 51.0**	**-2.0**
THR3	**Thira Island,**	**2.32**	**358**	P	**Pb**	**20 39 50.7**	**-2.4**
THR5	**Thira Island,**	**2.33**	**357**	P	**Pb**	**20 39 50.3**	**-3.0**
ANKY	**Antikythira Is**	**2.54**	**315**	P	**Pn**	**20 39 52.9**	**+1.8**
KTHA	**Kythira Island**	**2.96**	**318**	Pn	**Pn**	**20 39 58.3**	**+1.5**
KTHA	**Kythira Island**	**2.96**	**318**	P	**Pn**	**20 39 59.1**	**+2.3**
ARG	**Arkhangelos**	**3.01**	**44**	Pn	**Pn**	**20 39 59.1**	**+1.6**
DAT	**Datca**	**3.13**	**32**	Pn	**Pn**	**20 40 00.7**	**+1.5**
VLI	**Veliai**	**3.37**	**322**	P	**Pn**	**20 40 04.2**	**+1.8**
VLI	**Veliai**	**3.37**	**322**	Pg_4		20 40 03.4	
TURN	**Turunc**	**3.49**	**39**	Pn	**Pn**	**20 40 05.8**	**+1.8**
DALY	**Dalyan (Mula)**	**3.74**	**42**	Pn	**Pn**	**20 40 09.8**	**+2.3**
YER	**Yerkesik**	**3.79**	**36**	P	**Pn**	**20 40 10.8**	**+2.6**
AKAS	**Kas**	**3.97**	**56**	Pn	**Pn**	**20 40 12.5**	**+1.6**
DION	**Dionisos Attik**	**4.19**	**343**	P	**Pn**	**20 40 16.0**	**+2.3**
DION	**Dionisos Attik**	**4.19**	**343**	P	**Pn**	**20 40 15.5**	**+1.8**
CAME	**Cameli-Denizli**	**4.20**	**46**	Pn	**Pn**	**20 40 15.9**	**+1.9**
ELL	**Elmali**	**4.46**	**52**	Pn	**Pn**	**20 40 19.5**	**+1.9**
VIL2	**Platees**	**4.50**	**337**	P	**Pn**	**20 40 18.7**	**+0.7**
GUR	**Goura**	**4.62**	**327**	P	**Pn**	**20 40 20.8**	**+1.0**
KYMI	**Kymi, Euboea I**	**4.68**	**346**	P	**Pn**	**20 40 21.2**	**+0.8**
MMAI	**Mount Meron Ar**	**8.32**	**95**	Pn	**Pn**	**20 41 09.5**	**-1.0**
	1.1nm,0.3s,baz=294,slow=13,SNR=5.0						
MMAI				Sn	**Sn**	**20 42 42.7**	**-0.7**
	1.6nm,0.3s,baz=241,slow=26,SNR=3.0						
	0.6nm,0.3s						
BRTR	**Keskin Array B**	**8.60**	**47**	Pn	**Pn**	**20 41 15.4**	**+1.1**
	0.1nm,0.3s,baz=207,slow=13,SNR=4.4						
	0.4nm,0.4s						
EIL	**Eilat**	**9.15**	**116**	Pn	**Pn**	**20 41 20.7**	**-1.1**
	1.3nm,0.3s,baz=284,slow=5.4,SNR=8.2						
EIL				Sn	**Sn**	**20 42 59.4**	**-4.3**
	0.5nm,0.3s,baz=33,slow=21,SNR=1.6						
	6.2nm,0.6s						
VAE	**Valguarnera**	**9.64**	**294**	Pn	**Pn**	**20 41 29.3**	**+0.8**
	0.8nm,0.4s,baz=23,slow=15,SNR=1.2						
VAE				Sn	**Sn**	**20 43 11.6**	**-4.1**
	baz=21,slow=23						
ASF	**Jabal al Asfar**	**9.73**	**98**	Pn	**Pn**	**20 41 29.8**	**0.0**
	0.2nm,0.3s,baz=291,slow=16,SNR=1.9						
ASF				Sn	**Sn**	**20 43 14.6**	**-3.5**
	0.3nm,0.3s,baz=101,slow=14,SNR=1.7						
	1.0nm,0.4s						
MLR	**Muntele Rosu**	**11.40**	**2**	LR	LR	20 47 04.8	
	comp=Z,43nm,18.8s,baz=252,slow=42						
RONA	**Rosalia, Austr**	**15.27**	**336**	*eP*	**P**	**20 42 51.5**	**+1.8**
	0.7nm,0.5s						
SESA	**Seetaler Alpe,**	**15.42**	**331**	*eP*	**P**	**20 42 53.1**	**+1.4**
	5.4nm,0.7s						
KBA	**Koelnbreinsper**	**15.91**	**328**	*eP*	**P**	**20 42 58.7**	**+1.7**
	2.3nm,0.7s						
ABTA	**Abfaltersbach**	**16.04**	**326**	*i* P	**P**	**20 43 00.5**	**+2.1**
	4.3nm,0.8s						
MOA	**Molln**	**16.14**	**332**	*eP*	**P**	**20 43 01.1**	**+1.7**
	1.4nm,0.7s						
BIOA	**Bad Ischl, Aus**	**16.26**	**330**	*eP*	**P**	**20 43 02.2**	**+1.4**
	1.3nm,0.6s						
LESA	**Schwarzleotal**	**16.47**	**328**	*eP*	**P**	**20 43 05.2**	**+2.1**
	6.0nm,0.8s						
GNI	**Garni**	**16.47**	**63**	LR	LR	20 51 07.3	
	comp=Z,37nm,18.4s,baz=288,slow=44						
KBZ	**Khabaz**	**16.57**	**49**	Pn	**P**	**20 43 04.3**	**+0.1**
	0.1nm,0.3s,baz=226,slow=10.0,SNR=4.2						
	1.3nm,0.6s						
VRAC	**Vranov**	**16.59**	**339**	Pn	**Pn**	**20 43 02.6**	**+0.5**
	0.2nm,0.3s,baz=138,slow=11,SNR=4.3						
	1.4nm,0.3s						
WTTA	**Wattenberg**	**16.82**	**326**	*eP*	**P**	**20 43 09.2**	**+2.1**
	3.2nm,0.9s						
AKASG	**Malin Array Be**	**16.82**	**8**	Pn	**P**	**20 43 07.1**	**+0.2**
	1.4nm,0.3s,baz=202,slow=11,SNR=12						
	0.5nm,0.4s						
WATA	**Walderalm**	**16.90**	**326**	*eP*	**P**	**20 43 09.7**	**+1.8**
	2.2nm,0.9s						
SQTA	**Sankt Quirin**	**16.99**	**325**	*eP*	**P**	**20 43 10.9**	**+1.9**
	1.8nm,0.6s						
FETA	**Feichten**	**17.09**	**324**	*eP*	**P**	**20 43 12.3**	**+2.3**
	3.4nm,0.8s						
MOTA	**Moosalm**	**17.13**	**325**	*eP*	**P**	**20 43 12.4**	**+1.8**
	0.6nm,0.5s						
GERES	**GERESS Array B**	**17.17**	**333**	P	**P**	**20 43 10.4**	**-0.4**
	baz=152,slow=12,SNR=20						
	2.3nm,0.8s						
MNK	**Minsk**	**20.48**	**4**	*i* P	**P**	**20 43 46.9**	**-0.1**
	comp=E,2.0nm,0.7s						
MNK				*i* P	**P**	**20 43 46.9**	**-0.1**
	comp=N,6

PB09	**IPOC Station P**	**2.73**	**298**	⇑*i*	P	**Pn**	**21**	**35**	**02.7 +1.0**
PB09					IAML		21	35	43.0
	comp=E,143nm,0.4s								
PB09	**IPOC Station P**	**2.73**	**298**		Pn	**Pn**	**21**	**35**	**02.0 +0.3**
FSA	**Cafayete**	**3.05**	**169**	*e*	P	**Pn**	**21**	**35**	**06.8 +1.5**
PB03	**IPOC Station P**	**3.05**	**290**	*e*	P	**Pn**	**21**	**35**	**05.8 +0.4**
PB03					*e*S	**S**	**21**	**35**	**44.2 -1.3**
PB03					IAML		21	35	44.7
	comp=Z,185nm,0.5s								
PB03	**IPOC Station P**	**3.05**	**290**	⇑*i*	P	**Pn**	**21**	**35**	**05.5 +0.1**
PB03					IAML		21	35	45.5
	comp=E,368nm,0.2s								
PB03	**IPOC Station P**	**3.05**	**290**		Pn	**Pn**	**21**	**35**	**05.0 -0.4**
PB05	**IPOC Station P**	**3.28**	**274**	*e*	P	**Pn**	**21**	**35**	**08.3 +0.4**
PB05					*e*S	**S**	**21**	**35**	**48.9 -1.3**
PB05					IAML		21	35	51.1
	comp=Z,124nm,0.4s								
PB05	**IPOC Station P**	**3.28**	**274**	*i*	P	**Pn**	**21**	**35**	**08.1 +0.2**
PB05	**IPOC Station P**	**3.28**	**274**		Pn	**Pn**	**21**	**35**	**07.8 -0.1**
PB07	**IPOC Station P**	**3.29**	**294**	*e*	P	**Pn**	**21**	**35**	**08.6 +0.5**
PB07					*e*S	**S**	**21**	**35**	**49.5 -1.1**
PB07					IAML		21	35	50.5
	comp=Z,247nm,0.1s								
PB07	**IPOC Station P**	**3.29**	**294**	⇑*i*	P	**Pn**	**21**	**35**	**08.4 +0.3**
PB07	**IPOC Station P**	**3.29**	**294**		Pn	**Pn**	**21**	**35**	**08.0 -0.1**
PB02	**IPOC Station P**	**3.49**	**300**	*e*	P	**Pn**	**21**	**35**	**10.7 +0.3**
PB02					*e*S	**S**	**21**	**35**	**53.2 -1.5**
PB02					IAML		21	35	54.1
	comp=Z,246nm,0.2s								
PB02	**IPOC Station P**	**3.49**	**300**	⇑*i*	P	**Pn**	**21**	**35**	**10.2 -0.2**
PB02	**IPOC Station P**	**3.49**	**300**		Pn	**Pn**	**21**	**35**	**10.0 -0.4**
PB14	**IPOC Station P**	**3.75**	**246**	*e*	P	**Pn**	**21**	**35**	**14.0 +0.4**
PB14					*e*S	**S**	**21**	**35**	**58.8 -1.8**
PB14					IAML		21	36	02.0
	comp=Z,325nm,0.2s								
PB14	**IPOC Station P**	**3.75**	**246**	*i*	P	**Pn**	**21**	**35**	**13.9 +0.3**
PB14	**IPOC Station P**	**3.75**	**246**		Pn	**Pn**	**21**	**35**	**13.6 0.0**
PB08	**IPOC Station P**	**3.76**	**321**	*e*	P	**Pn**	**21**	**35**	**15.2 +1.4**
PB08					*e*S	**S**	**21**	**36**	**00.9 0.0**
PB08					IAML		21	36	04.8
	comp=Z,121nm,0.3s								
PB08	**IPOC Station P**	**3.76**	**321**	⇑*i*	P	**Pn**	**21**	**35**	**14.9 +1.0**
PB08	**IPOC Station P**	**3.76**	**321**		Pn	**Pn**	**21**	**35**	**14.6 +0.8**
GO01	**Chusmiza**	**4.16**	**325**	*e*	P	**Pn**	**21**	**35**	**19.9 +1.0**
GO01					*e*S	**S**	**21**	**36**	**10.0 0.0**
GO01					IAML		21	36	11.7
	comp=Z,118nm,0.5s								
GO01	**Chusmiza**	**4.16**	**325**	⇑*i*	P	**Pn**	**21**	**35**	**19.2 +0.4**
GO01	**Chusmiza**	**4.16**	**325**		Pn	**Pn**	**21**	**35**	**19.0 +0.2**
TA02	**Huaiquique**	**4.29**	**310**	*e*	P	**Pn**	**21**	**35**	**20.7 +0.8**
TA02					*e*S	**S**	**21**	**36**	**10.8 -1.2**
TA02					IAML		21	36	19.7
	comp=Z,155nm,0.1s								
AC02	**Maricunga**	**4.34**	**211**	*e*	P	**Pn**	**21**	**35**	**22.3 +1.4**
AC02					*e*S	S	21	36	00.5 -13
AC02	**Maricunga**	**4.34**	**211**	*i*	P	**Pn**	**21**	**35**	**22.1 +1.2**
AC02	**Maricunga**	**4.34**	**211**		Pn	**Pn**	**21**	**35**	**21.6 +0.7**
PB11	**IPOC Station P**	**4.35**	**319**	*e*	P	**Pn**	**21**	**35**	**20.4 -0.4**
PB11					*e*S	**S**	**21**	**36**	**10.8 -2.7**
PB11					IAML		21	36	13.2
	comp=Z,177nm,0.3s								
PB11	**IPOC Station P**	**4.35**	**319**	*i*	P	**Pn**	**21**	**35**	**20.1 -0.8**
PB11	**IPOC Station P**	**4.35**	**319**		Pn	**Pn**	**21**	**35**	**19.7 -1.1**
AC01	**Pan de Azucar**	**4.70**	**229**	*e*	P	**Pn**	**21**	**35**	**24.6 -0.2**
AC01					*e*S	**S**	**21**	**36**	**17.9 -3.1**
AC01					IAML		21	36	19.6
	comp=Z,113nm,0.2s								
AC01	**Pan de Azucar**	**4.70**	**229**	*e*	P	**Pn**	**21**	**35**	**24.2 -0.7**
AC01	**Pan de Azucar**	**4.70**	**229**		Pn	**Pn**	**21**	**35**	**23.7 -1.1**
PSGCX	**Pisagua**	**4.76**	**317**	*e*	P	**Pn**	**21**	**35**	**24.6 -1.2**
PSGCX					*e*S	**S**	**21**	**36**	**19.2 -3.5**
PSGCX					IAML		21	36	21.3
	comp=Z,101nm,0.4s								
PSGCX	**Pisagua**	**4.76**	**317**	*e*	P	**Pn**	**21**	**35**	**24.1 -1.7**
PSGCX	**Pisagua**	**4.76**	**317**		Pn	**Pn**	**21**	**35**	**23.8 -2.1**
PB16	**IPOC Station P**	**5.45**	**330**		Pn	**Pn**	**21**	**35**	**34.9 0.0**
GO03	**Copiapo**	**5.52**	**215**		Pn	**Pn**	**21**	**35**	**34.3 -0.9**
PB12	**IPOC Station P**	**5.64**	**322**		Pn	**Pn**	**21**	**35**	**35.4 -1.5**
LPAZ	**La Paz**	**6.93**	**348**		P	**Pn**	**21**	**35**	**54.6 +0.8**
	comp=Z,4.1nm,0.4s,baz=148,slow=6.9,SNR=26								
LPAZ					S	**S**	**21**	**37**	**09.1 -4.4**
	comp=Z,4.1nm,0.6s,baz=295,slow=11,SNR=5.8								
LPAZ	**La Paz**	**6.93**	**348**		Pn	**Pn**	**21**	**35**	**54.2 +0.3**
LPAZ	**La Paz**	**6.93**	**348**	*e*	P	**Pn**	**21**	**35**	**51.6 -2.3**
CO01	**Juntas del Tor**	**7.50**	**204**		Pn	**Pn**	**21**	**36**	**01.4 +0.6**
BBSD	**Serra de San D**	**8.18**	**45**	*e*	P	**Pn**	**21**	**36**	**08.0 -1.4**
MURT	**Porto Murtinho**	**8.49**	**82**	*e*	P	**Pn**	**21**	**36**	**13.3 0.0**
CFA	**Coronel Fontan**	**8.58**	**189**		P	**Pn**	**21**	**36**	**14.0 -0.4**
	comp=Z,4.3nm,0.3s,baz=22,slow=13,SNR=28								
CFA					S	**S**	**21**	**37**	**44.1 -7.2**
	comp=Z,1.1nm,0.3s,baz=264,slow=17,SNR=1.8								
ZON	**Zonda**	**8.60**	**192**		Pn	**Pn**	**21**	**36**	**13.1 -1.5**
SIV	**San Ignacio**	**8.82**	**38**		P	**Pn**	**21**	**36**	**16.0 -1.6**
	comp=Z,7.0nm,0.5s,baz=213,slow=12,SNR=33								
COIM	**Forte Coimbra**	**8.85**	**71**	*e*	P	**Pn**	**21**	**36**	**14.8 -3.1**
CPUP	**Villa Florida**	**9.06**	**113**		P	**Pn**	**21**	**36**	**17.7 -2.9**
	comp=Z,1.0nm,0.5s,baz=284,slow=14,SNR=3.9								
CPUP	**Villa Florida**	**9.06**	**113**	*e*	P	**Pn**	**21**	**36**	**19.7 -0.9**
VA03	**San Esteban**	**10.22**	**199**		Pn	**Pn**	**21**	**36**	**36.6 +1.2**
PTLB	**Pontes e Lacer**	**10.41**	**44**	*e*	P	**Pn**	**21**	**36**	**36.9 -1.1**
AMBA	**Amambai (Brazi**	**10.74**	**91**	*e*	P	**Pn**	**21**	**36**	**44.7 +2.5**
MT13	**San Alfonso**	**11.07**	**196**		Pn	**Pn**	**21**	**36**	**44.8 -1.5**
MT09	**Talagante**	**11.29**	**199**		Pn	**Pn**	**21**	**36**	**49.4 +0.2**
VILB	**Vilhena**	**11.81**	**32**	*e*	P	**Pn**	**21**	**36**	**57.3 +1.4**
BO02	**Sierra Bellavi**	**12.19**	**196**		Pn	**Pn**	**21**	**37**	**01.4 +1.0**
PTGB	**Pitanga**	**13.44**	**100**	*e*	P	**P**	**21**	**37**	**17.3 -0.8**
ITAB	**Concordia**	**13.78**	**110**			**P**	**21**	**37**	**22.6 +1.0**
ITAB	**Concordia**	**13.78**	**110**	*e*	P	**P**	**21**	**37**	**21.8 +0.1**
CPSB	**Cacapava Do Su**	**13.86**	**124**			**Pn**	**21**	**37**	**21.6 +0.5**
CPSB	**Cacapava Do Su**	**13.86**	**124**	*e*	P	**Pn**	**21**	**37**	**21.9 +0.9**
LDASE	**Londrina, Braz**	**14.29**	**94**	*e*	P	**P**	**21**	**37**	**27.2 -0.2**
CNLB	**Canela**	**15.46**	**117**	*e*	P	**Pn**	**21**	**37**	**41.0 +0.3**
FRTB	**Fartura**	**15.71**	**94**	*e*	P	**Pn**	**21**	**37**	**44.8 +1.1**
ARAG	**Araguaiana, MT**	**15.81**	**65**	*e*	P	**Pn**	**21**	**37**	**45.7 +0.8**
CLDB	**Colider**	**15.98**	**42**	*e*	P	**Pn**	**21**	**37**	**47.4 +0.4**
BB19B	**Bebedouro**	**16.92**	**87**	*e*	P	**Pn**	**21**	**37**	**57.4 -0.7**
GO06	**Curarrehue**	**16.93**	**193**		Pn	**Pn**	**21**	**37**	**59.0 +0.9**
GO06					IAmb	IAmb	21	38	06.8
	comp=Z,2.9nm,0.9s								
PLCA	**Paso Flores**	**17.88**	**190**		P	**Pn**	**21**	**38**	**09.8 +0.7**
	comp=Z,1.3nm,0.6s,baz=359,slow=12,SNR=3.2								
PLCA	**Paso Flores**	**17.88**	**190**		P	**Pn**	**21**	**38**	**09.1 -0.1**
PLCA					IAmb	IAmb	21	38	34.1
	comp=Z,4.4nm,1.1s								
IPMB	**Ipameri, GO**	**18.00**	**77**	*e*	P	**P**	**21**	**38**	**08.1 -0.3**
VAO	**Valinhos**	**18.12**	**94**	*e*	P	**P**	**21**	**38**	**09.8 +0.2**
SNDB	**Serra Nova Dou**	**18.34**	**55**	*e*	P	**P**	**21**	**38**	**11.7 -0.2**
CANS	**Sao Roque de M**	**19.03**	**85**	*e*	P	**P**	**21**	**38**	**20.4 +0.9**
BDFB	**Brasilia**	**19.08**	**70**		P	**P**	**21**	**38**	**20.4 +0.4**
	comp=Z,8.5nm,0.6s,baz=237,slow=11,SNR=17								
BDFB	**Brasilia**	**19.08**	**70**		P	**P**	**21**	**38**	**20.2 +0.2**
PMNB	**Patos De Minas**	**19.43**	**80**	*e*	P	**P**	**21**	**38**	**24.1 +0.4**
BSCB	**Bom Sucesso**	**20.39**	**88**	*e*	P	**P**	**21**	**38**	**35.0 +1.0**
DIAM	**Diamantina, MG**	**22.02**	**82**	*e*	P	**P**	**21**	**38**	**50.3 -0.3**
JANB	**Januaria**	**22.56**	**73**	*e*	P	**P**	**21**	**38**	**55.1 -0.4**
SMTB	**Santa Maria do**	**23.12**	**55**	*e*	P	**P**	**21**	**39**	**00.6 +0.1**
CAM01	**Campos-RJ**	**23.13**	**92**	*e*	P	**P**	**21**	**39**	**00.1 -0.3**
SDBA	**SAO DESIDERIO**	**23.25**	**66**	*e*	P	**P**	**21**	**39**	**01.4 -0.3**
PRPB	**Parauapebas**	**23.38**	**47**	*e*	P	**P**	**21**	**39**	**02.4 -0.4**
ARCA	**Araçuai, MG**	**24.01**	**79**	*e*	P	**P**	**21**	**39**	**08.3 -0.2**
GUA01	**Guaratinga, BA**	**26.05**	**80**	*e*	P	**P**	**21**	**39**	**27.4 +0.5**
BELA	**Belgrano 2**	**56.88**	**172**		P	**P**	**21**	**43**	**34.7 -0.3**
TXAR	**Lajitas Array**	**63.14**	**324**		P	**P**	**21**	**44**	**20.1 +1.9**
	comp=Z,0.1nm,0.5s,baz=136,slow=4.6,SNR=2.0								
	comp=Z,0.1nm,0.5s								
TXAR	**Lajitas Array**	**63.14**	**324**		P	**P**	**21**	**44**	**20.7 +2.5**
PAMR	**Moraine State**	**64.93**	**349**		P	**P**	**21**	**44**	**28.9 -0.6**
PAMR					IAmb	IAmb	21	44	30.3
	comp=Z,7.5nm,1.2s								
VHRN	**Van Horn**	**64.99**	**324**		P	**P**	**21**	**44**	**32.2 +1.9**
VHRN					IAmb	IAmb	21	44	33.1
	comp=Z,1.9nm,0.9s								
QSPA	**South Pole Qui**	**67.09**	**180**		P	**P**	**21**	**44**	**44.3 +1.1**
TORD	**Torodi Ar. Bea**	**75.95**	**69**		P	**P**	**21**	**45**	**37.5 +0.9**
	comp=Z,0.8nm,0.5s,baz=265,slow=6.1,SNR=16								
	comp=Z,0.8nm,0.5s								
MKAR	**Makanchi Array**	**145.64**	**39**		PKPbc	**PKPab**	**21**	**53**	**27.8 +1.0**
	comp=Z,0.7nm,0.5s,baz=321,slow=1.8,SNR=11								
MKAR	**Makanchi Array**	**145.64**	**39**			**PKPab**	**21**	**53**	**27.6 +0.7**

*NEIC **20** 21:38:18.3±1.8, 19°.23S±0°.05×169°.7E±0°.1, h259km±7km,*
mb4.4/27, Error ellipse: s-maj=16.2km s-min=6.9km az=96.0
*IDC **20** 21:38:19.5±1.5, 19°.22S×169°.49E, h270km±14km, mb3.8/12, mbtmp4.4/14, Error ellipse: s-maj=23.5km s-min=12.8km az=155.0*
*NOU **20** 21:38:20.7, 19°.27S×169°.60E, h224km, MLv4.4/11, Vanuatu Islands*

ISC 20 21:38:16.8±0.5, 19°.21S±0°.06×169°.70E±0°.09, h246km, n82, σ1§19/77, mb4.3/26, 3C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.86**	**319**	P		**Pn**		**21 38 59.8**	**+2.0**
RTV	**Rentapao**	**1.86**	**319**	S		**S**		**21 39 30.0**	**+0.9**
DVP	**Devils Point**	**2.06**	**316**	P		**Pn**		**21 39 01.1**	**+1.5**
DVP	**Devils Point**	**2.06**	**316**	S		**S**		**21 39 34.0**	**+0.8**
MARNC	**Mare, Loyalty**	**2.75**	**214**	P		**Pn**		**21 39 07.9**	**+1.6**
MARNC	**Mare, Loyalty**	**2.75**	**214**	P		**S**		**21 39 45.0**	**-0.5**
MARNC	**Mare, Loyalty**	**2.75**	**214**			**Pn**		**21 39 08.1**	**+1.7**
YATNC	**Mamie plateau,**	**3.87**	**222**	P		**Pn**		**21 39 19.7**	**+0.8**
OUENC	**Ouen Island, N**	**4.16**	**219**	Pn		**Pn**		**21 39 24.4**	**+2.0**
DZM	**Mont Dzumac**	**4.17**	**226**	P		**Pn**		**21 39 24.9**	**+2.3**
	15nm,0.4s,baz=60,slow=16,SNR=35								
DZM				S		**S**		**21 40 15.8**	**+1.1**
	28nm,0.5s,baz=123,slow=23,SNR=3.6								
NOUC	**Port Laguerre**	**4.29**	**227**	P		**Pn**		**21 39 26.4**	**+2.5**
ONTNC	**Ouen Toro**	**4.33**	**224**	P		**Pn**		**21 39 26.9**	**+2.6**
ONTNC	**Ouen Toro**	**4.33**	**224**	Pn		**Pn**		**21 39 27.6**	**+1.3**
KOUNC	**Kouac, New Ca**	**5.27**	**254**	Pn		**Pn**		**21 39 37.6**	**+1.8**
MSVF	**Nonsavu**	**8.06**	**81**	P		Pn		21 40 16.8	+5.7
	15nm,0.7s,baz=263,slow=14,SNR=13								
MSVF	**Nonsavu**	**8.06**	**81**	Pn		Pn		21 40 16.4	+5.3
LHI	**Lord Howe Isla**	**15.56**	**216**	P		**Pn**		**21 41 44.4**	**+0.5**
EIDS	**Eidsvold**	**18.28**	**247**	P		**P**		**21 42 13.7**	**+0.9**
EIDS					IAmb	IAmb		21 42 17.6	
	comp=Z,7.2nm,0.6s								
ARMA	**Armidale**	**19.81**	**232**	P		**P**		**21 42 30.0**	**+0.7**
ARMA					IAmb	IAmb		21 42 31.6	
	comp=Z,14nm,0.8s								
CTA	**Charters Tower**	**22.10**	**264**	P		**P**		**21 42 51.8**	**-0.5**
	comp=Z,9.6nm,0.8s,baz=90,slow=9.3,SNR=9.5								
	comp=Z,9.6nm,0.8s								
CTAO	**Charters Tower**	**22.10**	**264**	P		**P**		**21 42 52.5**	**+0.3**
CTAO					IAmb	IAmb		21 42 53.5	
	comp=Z,17nm,1.0s								
MSWZ	**Moikau Station**	**22.63**	**169**	P		**P**		**21 42 57.7**	**+0.9**
TOO	**Toolangi**	**27.94**	**224**	P		**P**		**21 43 45.3**	**+0.7**
TOO					IAmb	IAmb		21 44 06.9	
	comp=Z,10.0nm,1.4s								
STKA	**Stephens Creek**	**28.23**	**238**	P		**P**		**21 43 47.4**	**+0.1**
	comp=Z,13nm,0.7s,baz=64,slow=8.5,SNR=30								
	comp=Z,13nm,0.7s								
BBOO	**Buckleboo**	**32.97**	**239**	P		**P**		**21 44 28.3**	**-0.5**
WR8	**Warramunga Arr**	**33.14**	**263**	P		**P**		**21 44 28.6**	**-1.8**
WR8					IAmb	IAmb		21 44 29.1	
	comp=Z,5.9nm,0.7s								
WB0	**Warramunga Arr**	**33.25**	**263**	P		**P**		**21 44 29.4**	**-2.0**
WB0					IAmb	IAmb		21 44 30.5	
	comp=Z,7.4nm,0.6s								
WRA	**Warramunga Arr**	**33.29**	**263**	P		**P**		**21 44 30.1**	**-1.6**
	comp=Z,4.7nm,0.6s,baz=92,slow=9.1,SNR=58								
	comp=Z,4.7nm,0.6s								
WRA	**Warramunga Arr**	**33.29**	**263**	P		**P**		**21 44 28.5**	**-3.2**
AS31	**Alice Springs**	**33.55**	**256**	P		**P**		**21 44 32.8**	**-1.2**
ASAR	**Alice Springs**	**33.56**	**256**	P		**P**		**21 44 33.0**	**-1.0**
	comp=Z,32nm,0.5s,baz=83,slow=9.1,SNR=538								
	comp=Z,32nm,0.5s								
ASAR	**Alice Springs**	**33.56**	**256**	P		**P**		**21 44 32.9**	**-1.1**
KNRA	**Kununurra**	**39.15**	**269**	P		**P**		**21 45 19.8**	**-1.4**
KNRA					IAmb	IAmb		21 45 20.2	
	comp=Z,5.9nm,0.7s								
FORT	**Forrest**	**39.25**	**245**	P		**P**		**21 45 20.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**41.68**	**264**	P		**P**		**21 45 41.4**	**-0.5**
MBWA	**Marble Bar**	**46.79**	**259**	P		**P**		**21 46 21.7**	**-0.5**
MBWA					IAmb	IAmb		21 46 22.5	
	comp=Z,15nm,1.0s								
TOLI2	**Tolitoli**	**52.08**	**287**	P		**P**		**21 47 00.7**	**-1.5**
QSPA	**South Pole Qui**	**70.84**	**180**	P		**P**		**21 49 06.8**	**0.0**
	comp=Z,1.1nm,0.7s,baz=67,slow=1.4,SNR=5.9								
	comp=Z,1.1nm,0.7s								
QSPA	**South Pole Qui**	**70.84**	**180**	P		**P**		**21 49 06.5**	**-0.3**
ATKA	**Atka Island**	**72.49**	**10**	P		**P**		**21 49 16.3**	**-0.1**
ATKA					IAmb	IAmb		21 49 41.8	
	comp=Z,13nm,1.4s								
PETK	**Petropavlovsk-**	**72.77**	**352**	P		**P**		**21 49 18.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=137,slow=5.0,SNR=7.1								
	comp=Z,2.7nm,0.8s								
PETK	**Petropavlovsk-**	**72.77**	**352**	P		**P**		**21 49 18.2**	**+0.1**
PZH	**PanZhiHua**	**80.06**	**303**	P		**P**		**21 50 00.6**	**+0.9**
HHC	**Hu-ho-hao-te**	**80.48**	**319**	*e*P		**P**		**21 50 03.8**	**+2.1**
HHC					pmax	pmax			
	comp=Z,15nm,0.5s								
HHC					pmax	pmax			
	comp=Z,84nm,5.1s								
BELA	**Belgrano 2**	**82.09**	**175**	P		**P**		**21 50 09.0**	**-0.4**
N14K	**Kuskokwak Cree**	**82.23**	**14**	P		**P**		**21 50 10.6**	**+0.5**
N15K	**Kwethluk River**	**82.82**	**15**	P		**P**		**21 50 13.9**	**+0.6**
N15K					IAmb	IAmb		21 50 15.2	
	comp=Z,4.6nm,0.8s								
M14K	**Bethel**	**82.91**	**14**	P		**P**		**21 50 13.6**	**0.0**
K13K	**Kusilvak Mount**	**83.41**	**12**	P		**P**		**21 50 16.4**	**+0.2**
K13K					IAmb	IAmb		21 50 18.2	
	comp=Z,7.0nm,1.1s								
M16K	**Timber Creek**	**83.84**	**15**	P		**P**		**21 50 19.2**	**+0.8**
J16K	**Anvik River**	**85.46**	**13**	P		**P**		**21 50 26.9**	**+0.5**
J16K					IAmb	IAmb		21 50 28.4	
	comp=Z,6.6nm,0.8s								
J17K	**VABM Dome**	**85.89**	**14**	P		**P**		**21 50 27.4**	**-1.1**
J17K					IAmb	IAmb		21 50 31.5	
	comp=Z,4.2nm,1.0s								
J18K	**Innoko River**	**86.48**	**14**	P		**P**		**21 50 31.5**	**+0.1**
J18K					IAmb	IAmb		21 50 33.0	
	comp=Z,2.1nm,0.7s								
M02C	**Callahan**	**86.72**	**44**	P		**P**		**21 50 33.8**	**+0.6**
M02C					IAmb	IAmb		21 50 35.5	
	comp=Z,6.2nm,0.9s								
YBH	**Yreka Blue Hor**	**86.98**	**44**	P		**P**		**21 50 35.9**	**+1.4**
	comp=Z,2.4nm,0.7s,baz=183,slow=1.9,SNR=5.7								
	comp=Z,2.4nm,0.7s								
SONM	**Songino Array**	**87.46**	**323**	P		**P**		**21 50 35.9**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=132,slow=6.4,SNR=4.9								
	comp=Z,0.7nm,0.7s								
NVAR	**Mina Array Bea**	**88.46**	**48**	P		**P**		**21 50 43.0**	**+1.3**
	comp=Z,2.6nm,1.0s,baz=225,slow=7.5,SNR=7.4								
	comp=Z,2.6nm,1.0s								
NVAR	**Mina Array Bea**	**88.46**	**48**	P		**P**		**21 50 42.3**	**+0.6**
TROLL	**Troll, Antarti**	**88.59**	**184**	⇑P		**P**		**21 50 41.1**	**-0.6**
	comp=Z,92nm,0.5s								
SNAA	**Sanae**	**89.21**	**182**	⇑P		**P**		**21 50 43.7**	**-0.8**
	comp=Z,23nm,0.6s								
SNAA	**Sanae**	**89.21**	**182**	P		**P**		**21 50 44.2**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=72,slow=4.7,SNR=3.6								
	comp=Z,1.4nm,0.7s								
ILAR	**Eielson Array**	**90.08**	**17**	P		**P**		**21 50 47.2**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=234,slow=6.6,SNR=4.3								
	comp=Z,0.8nm,0.7s								
VNA2	**Neumayer--Watz**	**90.08**	**181**	⇑P		**P**		**21 50 47.9**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=176,slow=4.7								
TXAR	**Lajitas Array**	**96.37**	**61**	P		**P**		**21 51 18.9**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=238,slow=7.2,SNR=4.0								
	comp=Z,0.3nm,0.7s								
ARCES	**ARCESS Array B**	**125.15**	**345**	PKP		**PKPdf**		**21 56 46.2**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=116,slow=2.8,SNR=6.3								
ARCES	**ARCESS Array B**	**125.15**	**345**	PKP		**PKPdf**		**21 56 45.9**	**-1.5**
EKA	**Eskdalemuir Ar**	**143.53**	**353**	PKP		PKPab		21 57 19.1	+0.1
	comp=Z,0.4nm,0.6s,baz=29,slow=1.8,SNR=3.5								
WINA	**Alland / Wiene**	**144.12**	**329**	*e*PKP		PKPbc		21 57 22.4	+0.5
	comp=Z,2.2nm,0.9s								
RONA	**Rosalia, Austr**	**144.29**	**329**	*i* PKP		PKPbc		21 57 22.8	+0.3
	comp=Z,2.1nm,0.7s								
CONA	**Conrad Observa**	**144.34**	**329**	*i* PKP		PKPbc		21 57 22.9	+0.2
	comp=Z,0.1nm,0.2s								
GERES	**GERESS Array B**	**144.67**	**332**	PKP		**PKPab**		**21 57 23.1**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=33,slow=4.1,SNR=13								
GERES	**GERESS Array B**	**144.67**	**332**			**PKPab**		**21 57 22.6**	**-1.1**
SESA	**Seetaler Alpe,**	**145.54**	**329**	*e*PKP		**PKPdf**		**21 57 25.1**	**-0.8**
	comp=Z,1.7nm,0.5s								
BIOA	**Bad Ischl, Aus**	**145.56**	**331**	*e*PKP		**PKPdf**		**21 57 25.4**	**-0.3**
	comp=Z,0.7nm,0.3s								
KBA	**Koelnbreinsper**	**146.14**	**331**	*e*PKP		**PKPdf**		**21 57 26.9**	**0.0**
	comp=Z,2.0nm,0.5s								
LESA	**Schwarzleotal**	**146.19**	**332**	*i* PKP		**PKPbc**		**21 57 27.6**	**-0.7**
	comp=Z,0.4nm,0.3s								
WATA	**Walderalm**	**146.75**	**332**	*e*PKP		**PKPdf**		**21 57 28.8**	**+1.0**
	comp=Z,1.2nm,0.6s								
ABTA	**Abfaltersbach**	**146.77**	**331**	*e*PKP		**PKPdf**		**21 57 28.7**	**+0.8**
	comp=Z,1.1nm,0.6s								
WTTA	**Wattenberg**	**146.78**	**332**	*e*PKP		**PKPbc**		**21 57 29.4**	**-0.8**
	comp=Z,2.5nm,0.9s								
MOTA	**Moosalm**	**146.94**	**333**	*e*PKP		**PKPbc**		**21 57 29.6**	**-1.0**
	comp=Z,0.7nm,0.5s								
SQTA	**Sankt Quirin**	**147.00**	**333**	*e*PKP		**PKPbc**		**21 57 29.7**	**-0.9**
	comp=Z,1.2nm,0.4s								
FETA	**Feichten**	**147.36**	**333**	*e*PKP		**PKPbc**		**21 57 30.9**	**-0.8**
	comp=Z,0.7nm,0.5s								

*GCG **20** 21:49:20.0±2.0, 15°.25N×90°.23W, h6km±16km, MD4.8, ML4.2, Presumed earthquake*
*CATAC **20** 21:49:20.9, 15°.2N±1°.0×90°.3W±1°.0, h3km±1km, M3.8/13, MLv3.8/13, confirmed*
*SNET **20** 21:49:20.4±2.1, 15°.29N×90°.23W, h5km, ML4.3, Presumed earthquake*

ISC 20 21:49:19.4±1.3, 15°.27N±0°.04×90°.24W±0°.02, h6km±10km, n58, σ0§78/83, 6C-9D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**0.34**	**220**	*i* P			**Pb**	**21 49 26.1**	**-1.9**
GCG4	**OSOP**	**0.73**	**203**	*i* S			**Sb**	**21 49 44.6**	**-0.5**
GCG4					IAML			21 49 45.9	
	comp=E,6µm,0.7s								
FG16	**Alotenango, Sa**	**1.02**	**195**	*i* P			**Pb**	**21 49 38.9**	**-0.7**

FOXC	**Fox Airport**	**0.69**	**107**			**Pg**	22 02 05.9	+0.2
FOXC						Sg	22 02 15.2	+0.5
OAT	**Oat Mountain**	**0.69**	**150**			**Pg**	22 02 06.2	+0.4
SBC	**Santa Barbara**	**0.76**	**228**			**Pg**	22 02 07.1	+0.2
SBC						Sg	22 02 17.1	+0.3
CARC	**Carrizo Plain**	**0.76**	**299**			**Sb**	22 02 17.8	-0.3
BLCC	**Black Canyon**	**0.76**	**157**			**Pg**	22 02 07.4	+0.3
BLCC						Sb	22 02 17.9	-0.3
FIGC	**Figueroa Mtn.**	**0.82**	**255**			**Pg**	22 02 08.0	-0.2
FIGC						Sb	22 02 19.6	-0.3
CJV	**Casa Juvan**	**0.84**	**119**			**Pg**	22 02 08.0	-0.6
CJV						Sg	22 02 19.1	-0.4
ISA	**Isabella, Lake**	**0.85**	**32**	Pg		**Pg**	22 02 08.6	-0.1
ISA				Sg		Sg	22 02 19.5	-0.3
ISA				IAML			22 02 21.6	
	comp=E,1μm,0.2s							
ISA				IAML			22 02 23.1	
	comp=N,927nm,0.2s							
CCAC	**Calif City Air**	**0.86**	**76**			**Pg**	22 02 08.8	-0.1
CCAC						Sb	22 02 20.9	-0.1
SMMC	**Simmler**	**0.87**	**295**			**Pg**	22 02 08.8	-0.4
SMMC						Sg	22 02 20.9	+0.4
WASM	**Alta Sierra Ca**	**0.88**	**26**			**Pg**	22 02 09.1	-0.3
WASM						Sg	22 02 21.0	+0.1
SYP	**Santa Ynez Pea**	**0.89**	**242**			**Pb**	22 02 09.7	-0.2
SYP						Sb	22 02 22.4	+0.5
VES	**Vestal, Richgr**	**0.89**	**357**	Pg		**Pg**	22 02 08.9	-0.7
VES				Sg		Sg	22 02 20.3	-1.0
VES				IAML			22 02 23.6	
	comp=N,2μm,0.2s							
DECC	**Green Verdugo**	**0.90**	**140**			**Pg**	22 02 09.2	-0.5
DECC						Sg	22 02 21.6	+0.2
YEG	**Yeguas Mountai**	**0.90**	**303**			**Pg**	22 02 09.5	-0.3
WBSM	**Bird Springs**	**0.94**	**51**			**Sg**	22 02 23.0	+0.2
HLLC	**North Hollywoo**	**0.95**	**144**			**Pg**	22 02 10.0	-0.6
HLLC						Sg	22 02 23.1	+0.1
NJQ	**Nojoqui County**	**1.03**	**247**			**Pg**	22 02 11.6	-0.6
PASC	**Pasadena Art C**	**1.04**	**138**	Pg		**Pg**	22 02 11.3	-1.1
PASC				Sg		Sg	22 02 25.2	-0.8
PASC				IAML			22 02 26.9	
	comp=E,858nm,0.5s							
PASC				IAML			22 02 28.4	
	comp=N,629nm,0.3s							
MWC	**Mount Wilson**	**1.08**	**132**	Pg	Pg		22 02 11.9	-1.2
LRMC	**Laurel Mtn Rad**	**1.23**	**64**		Pn		22 02 14.7	-1.0
LRMC				IAML			22 02 34.0	
	comp=E,459nm,0.3s							
LRMC				IAML			22 02 34.3	
	comp=N,543nm,0.2s							
BFSC	**Mount Baldy Ra**	**1.33**	**122**	Pn	Pn		22 02 16.1	-1.1
BFSC				IAML			22 02 36.0	
	comp=E,706nm,0.6s							
BFSC				IAML			22 02 37.5	
	comp=N,609nm,0.5s							
WLHM	**Little Horse**	**1.34**	**26**		Pn		22 02 17.1	-0.3
ADO	**Adelanto Recei**	**1.37**	**106**		Pg		22 02 18.8	0.0
VOG	**Valley Oaks Go**	**1.40**	**348**		Pn		22 02 17.1	-0.9
CCCA	**Chr Cany lake**	**1.48**	**67**	Pn	Pn		22 02 18.3	-0.8
CCCA				IAML			22 02 45.2	
	comp=N,589nm,0.7s							
CCCA				IAML			22 02 45.8	
	comp=E,510nm,0.7s							
PKD	**Bear Valley Ra**	**1.58**	**309**	Pn	Pn		22 02 19.2	-1.4
PKD				IAML			22 02 41.9	
	comp=N,489nm,0.6s							
PKD				IAML			22 02 44.6	
	comp=E,592nm,0.6s							
MPMC	**Manual Prospec**	**1.68**	**48**	Pn	Pn		22 02 21.2	-0.8
MPMC				IAML			22 02 48.4	
	comp=E,236nm,0.7s							
MPMC				IAML			22 02 50.0	
	comp=N,356nm,0.6s							
CWC	**Cottonwood Cre**	**1.68**	**27**	Pn	Pn		22 02 20.7	-1.3
CWC				IAML			22 02 46.4	
	comp=E,522nm,0.2s							
ELS	**Elsinore Mount**	**1.86**	**134**	Pn	Pn		22 02 23.1	-1.2
PMPB	**Monarch Peak**	**1.92**	**312**	Pn	Pn		22 02 24.0	-1.2
PMPB				IAML			22 02 53.5	
	comp=E,412nm,0.5s							
PMPB				IAML			22 03 02.0	
	comp=N,418nm,0.8s							
HULI	**Fort Hunter Li**	**2.09**	**301**	Pn	Pn		22 02 26.4	-1.1
HULI				IAML			22 03 07.3	
	comp=E,282nm,0.8s							
HULI				IAML			22 03 11.1	
	comp=N,244nm,0.7s							
TIN	**Tinemaha, Big**	**2.20**	**17**	Pn	Pn		22 02 29.0	-0.1
BBGB	**Big Mountain B**	**2.31**	**315**	Pn	Pn		22 02 29.0	-1.5
FURC	**Furnace Creek,**	**2.33**	**49**	Pn	Pn		22 02 29.9	-0.8
DNR	**Dunn Ranch,Anz**	**2.42**	**124**	Pn	Pn		22 02 31.2	-1.0
PFO	**Pinyon Flats O**	**2.51**	**121**	Pn	Pn		22 02 32.7	-0.7
PMD	**Palm Desert**	**2.55**	**120**	Pn	Pn		22 02 33.3	-0.6
PMD				IAML			22 03 15.4	
	comp=N,98nm,0.7s							
PMD				IAML			22 03 16.9	
	comp=E,108nm,0.5s							
DPP	**Dos Picos Cty**	**2.61**	**138**	Pn	Pn		22 02 33.2	-1.4
SAO	**San Andreas Ge**	**2.67**	**313**	Pn	Pn		22 02 34.2	-1.3
BELC	**Belle Mtn. Jos**	**2.68**	**110**		Pn		22 02 34.5	-1.1
WCT	**Wildcat Mounta**	**2.69**	**46**	Pn	Pn		22 02 34.7	-1.1
BORC	**Borrego Spring**	**2.74**	**127**	Pn	Pn		22 02 35.0	-1.5
GMN	**Gold Mountain**	**2.75**	**31**	Pn	Pn		22 02 35.7	-1.1
MTPC	**Mountain Pass**	**2.90**	**78**	Pn	Pn		22 02 37.7	-1.0
BAR	**Barrett**	**3.00**	**138**	Pn	Pn		22 02 39.0	-0.9
TPNV	**Topopah Spring**	**3.01**	**48**	Pn	Pn		22 02 38.5	-1.9
TPNV				IAML			22 03 33.4	
	comp=E,75nm,0.8s							
MHC	**Mount Hamilton**	**3.19**	**319**	Pn	Pn		22 02 40.9	-1.9
BC3	**Big Chuckawall**	**3.23**	**112**	Pn	Pn		22 02 41.0	-2.2
IRM	**Iron Mountain**	**3.30**	**103**	Pn	Pn		22 02 42.6	-1.6
NV11	**Mina Array Sit**	**3.55**	**11**	Pn	Pn		22 02 46.0	-1.6
FARB	**Farallon Islan**	**4.22**	**312**	Pn	Pn		22 02 53.6	-3.1
W10A	**Hualapai Mount**	**4.23**	**86**	Pn	Pn		22 02 55.8	-1.3
PAHR	**Pah Rah Range**	**4.76**	**357**	Pn	Pn		22 03 00.0	-2.3
KNB	**Kanab**	**5.44**	**66**	Pn	Pn		22 03 13.7	-0.1

CATAC ***20*** *22:32:04.0, 13˚N±2˚×8˚7W±˚, h1km±2km, M3.0/13, MLv3.0/13, confirmed*
SNET ***20*** *22:32:06.6±0.8, 13.03N×87.40W, h10km, ML2.9, Presumed earthquake*

ISC 20 22:32:03.8±1.0, 12.94N±0.05×87.42W±0.03, h14km±8km, n18, σ0°74/28, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.14**	**284**	P	**Pg**	**22 32 06.4**	**-1.0**
CSGN				S	**Sb**	**22 32 11.8**	**+0.6**
CRIN	**San Cristobal**	**0.44**	**124**	P	**Pn**	**22 32 14.5**	**-1.3**
CNCH	**Conchagua**	**0.52**	**310**	*eP*	**Pn**	**22 32 16.6**	**-0.4**
CNCH				*eS*	**Sn**	**22 32 24.6**	**-1.1**
LCND	**La Caada**	**0.58**	**309**	*eP*	**Pn**	**22 32 17.2**	**-0.6**
LCND				*eS*	**Sn**	**22 32 26.4**	**-0.7**
QUEN	**Al S del Volca**	**0.66**	**122**	P	**Pb**	**22 32 16.9**	**-0.2**
INTP	**Intipuca**	**0.67**	**292**	*eS*	**Sn**	**22 32 29.1**	**-0.1**
HERN	**Volcan Telica**	**0.67**	**120**	P	**Pb**	**22 32 17.8**	**+0.5**
CNGA	**Al SSO del Vol**	**0.83**	**122**	P	**Pn**	**22 32 20.6**	**-0.6**
CNGN	**Cerro Negro**	**0.83**	**122**	P	**Pn**	**22 32 20.6**	**-0.7**
CNGN				S	**Sn**	**22 32 34.4**	**+1.0**
MACN	**El Madrono**	**0.87**	**123**	P	**Pg**	**22 32 21.1**	**+0.4**
MOM3	**MOM3**	**0.98**	**116**	P	**Pn**	**22 32 23.0**	**-0.2**
MOM3				S	**Sn**	**22 32 37.1**	**+0.1**
MOMN	**Momotombo**	**1.01**	**122**	P	**Pn**	**22 32 23.5**	**-0.2**
MOMN				S	**Sg**	**22 32 36.7**	**0.0**
PACA	**Pacayal**	**1.02**	**301**	*ieP*	**Pn**	**22 32 25.9**	**+2.0**
LIMN	**Finca el Limon**	**1.04**	**83**	P	**Pn**	**22 32 24.1**	**0.0**
LIMN				S	**Sn**	**22 32 38.2**	**-0.3**
COPN	**Copaltepe**	**1.11**	**133**	P	**Pb**	**22 32 24.8**	**-0.1**
RCON	**San Juan de Ri**	**1.35**	**66**	P	**Pg**	**22 32 29.2**	**-0.6**
RCON				S	**Sg**	**22 32 47.7**	**+0.4**
RCVN	**Varillal2**	**1.36**	**62**	P	**Pg**	**22 32 29.3**	**-0.7**
RCVN				S	**Sg**	**22 32 48.1**	**+0.5**
RCPN	**Sur Rio San Ju**	**1.42**	**66**	P	**Pg**	**22 32 31.0**	**-0.1**
RCPN				S	**Sg**	**22 32 50.0**	**+0.3**

KRSC ***20*** *22:33:08.8±0.5, 54˚15N×160˚77E, h80km±9km, Ml4.3*
MOS ***20*** *22:33:09.6±0.7, 54˚14N×160˚75E, h83km, mb4.1/4, Error ellipse: s-maj=12.1km s-min=4.8km az=67.0*
IDC ***20*** *22:33:12.5±2.5, 54˚63N×159˚69E, h108km±18km, mb3.3/6, mbtmp3.6/6, MS2.3/1, Error ellipse: s-maj=120.9km s-min=17.8km az=135.0*

ISC 20 22:33:10.5±0.8, 54˚15N±0˚03×160˚75E±0˚04, h75km±6km, n82, σ0°98/105, mb3.6/9, 1C-2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.70**	**54**	PN	**Pn**	**22 33 26.2**	**+0.5**
MKZ				S	**Sn**	**22 33 38.0**	**+1.0**
MKZ	**Mys Kozlova**	**0.70**	**54**	*eP*	**Pn**	**22 33 26.3**	**+0.5**
MKZ				*eS*	**Sn**	**22 33 38.0**	**+1.0**
KII	**Karymskiy**	**0.78**	**262**	PN	**Pn**	**22 33 25.9**	**-0.8**
KII	**Karymskiy**	**0.78**	**262**	*eP*	**Pn**	**22 33 25.9**	**-0.8**
TUMD	**Tumrok D**	**1.07**	**349**	PN	**Pn**	**22 33 29.6**	**-0.6**
TUMD				S	**Sn**	**22 33 44.3**	**-0.5**
TUMD	**Tumrok D**	**1.07**	**349**	*eP*	**Pn**	**22 33 29.6**	**-0.6**
TUMD				*eS*	**Sn**	**22 33 44.4**	**-0.5**
SPN	**Mys Shipunski**	**1.14**	**203**	PN	**Pn**	**22 33 31.3**	**+0.3**
SPN				S	**Sn**	**22 33 46.6**	**+0.3**
SPN	**Mys Shipunski**	**1.14**	**203**	*eP*	**Pn**	**22 33 31.3**	**+0.3**
SPN				*eS*	**Sn**	**22 33 46.7**	**+0.3**
NLC	**Nalytchevo**	**1.29**	**221**	PN	**Pn**	**22 33 32.8**	**0.0**
NLC				S	**Sn**	**22 33 49.7**	**+0.1**
NLC	**Nalytchevo**	**1.29**	**221**	*eP*	**Pn**	**22 33 32.8**	**0.0**
NLC				*eS*	**Sn**	**22 33 49.8**	**+0.1**
SDLR	**Sedlovina**	**1.41**	**232**	PN	**Pn**	**22 33 34.7**	**+0.2**
SDLR				S	**Sn**	**22 33 52.7**	**0.0**
SDLR	**Sedlovina**	**1.41**	**232**	*eP*	**Pn**	**22 33 34.8**	**+0.2**
SDLR				*eS*	**Sn**	**22 33 52.8**	**0.0**
KRER	**Koryakskii**	**1.46**	**235**	PN	**Pn**	**22 33 35.5**	**+0.2**
KRER	**Koryakskii**	**1.46**	**235**	*eP*	**Pn**	**22 33 35.6**	**+0.2**
SMAR	**Somma**	**1.46**	**233**	PN	**Pn**	**22 33 35.2**	**-0.1**
SMAR	**Somma**	**1.46**	**233**	*eP*	**Pn**	**22 33 35.3**	**-0.1**
KRX	**Arik**	**1.48**	**238**	PN	**Pn**	**22 33 35.4**	**0.0**
KRX	**Arik**	**1.48**	**238**	*eP*	**Pn**	**22 33 35.5**	**0.0**
AVH	**Avacha**	**1.49**	**234**	PN	**Pn**	**22 33 36.1**	**+0.6**
AVH	**Avacha**	**1.49**	**234**	*eP*	**Pn**	**22 33 36.2**	**+0.6**
KOK	**Koryaka**	**1.52**	**236**	PN	**Pn**	**22 33 36.2**	**+0.2**
KOK	**Koryaka**	**1.52**	**236**	*eP*	**Pn**	**22 33 36.2**	**+0.2**
DALK	**Dalny**	**1.64**	**227**	PN	**Pn**	**22 33 37.4**	**+0.1**
DALK				S	**Sn**	**22 33 57.6**	**-0.1**
DALK	**Dalny**	**1.64**	**227**	*eP*	**Pn**	**22 33 37.5**	**+0.1**
DALK				*eS*	**Sn**	**22 33 57.7**	**-0.1**
INSR	**Institute**	**1.68**	**230**	PN	**Pn**	**22 33 38.7**	**+0.8**
INSR				S	**Sn**	**22 34 00.2**	**+1.5**
INSR	**Institute**	**1.68**	**230**	*eP*	**Pn**	**22 33 38.8**	**+0.8**
INSR				*eS*	**Sn**	**22 34 00.3**	**+1.5**
PET	**Petropavlovsk**	**1.69**	**229**	*e*PN	**Pn**	**22 33 38.2**	**+0.2**
PET				*eS*	**Sn**	**22 33 58.9**	**0.0**
PET				pmax	pmax		
	comp=Z,99nm,0.5s						
PET				smax	smax		
	comp=E,2μm,0.5s						
PET				smax	smax		
	comp=N,1μm,0.7s						
PET	**Petropavlovsk**	**1.69**	**229**	*eP*	**Pn**	**22 33 38.0**	**0.0**
PET				*eS*	**Sn**	**22 33 58.8**	**-0.1**
GNL	**Ganaly**	**1.72**	**256**	PN	**Pn**	**22 33 38.7**	**+0.1**
GNL	**Ganaly**	**1.72**	**256**	*eP*	**Pn**	**22 33 38.7**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.79**	**359**	PN	**Pn**	**22 33 39.6**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.79**	**359**	*eP*	**Pn**	**22 33 39.6**	**+0.1**
ZLN	**Zelenaya**	**1.87**	**1**	PN	**Pn**	**22 33 41.4**	**+0.8**
ZLN	**Zelenaya**	**1.87**	**1**	*eP*	**Pn**	**22 33 41.4**	**+0.8**
LGNR	**Loginova**	**1.94**	**359**	PN	**Pn**	**22 33 42.8**	**+1.2**
LGNR	**Loginova**	**1.94**	**359**	*eP*	**Pn**	**22 33 42.8**	**+1.2**
CIRR	**Tsirk**	**1.97**	**360**	PN	**Pn**	**22 33 42.5**	**+0.6**
CIRR	**Tsirk**	**1.97**	**360**	*eP*	**Pn**	**22 33 42.5**	**+0.6**
KRMR	**Karymshinskiy**	**2.05**	**231**	PN	**Pn**	**22 33 43.3**	**+0.4**
KRMR				S	**Sn**	**22 34 08.6**	**+1.0**
KRMR	**Karymshinskiy**	**2.05**	**231**	*eP*	**Pn**	**22 33 43.3**	**+0.4**
KRMR				*eS*	**Sn**	**22 34 08.6**	**+1.0**
PEA0B	**Petropavlovsk-**	**2.10**	**241**	*d*PN	**Pn**	**22 33 43.7**	**+0.2**
PETK	**Petropavlovsk-**	**2.10**	**241**	P	**Pn**	**22 33 43.6**	**+0.1**
	comp=N,14nm,0.3s,baz=62,slow=18,SNR=54						
PETK				S	**Sn**	**22 34 09.4**	**+0.7**
	comp=N,24nm,0.4s,baz=88,slow=18,SNR=5.5						
ESO	**Esso**	**2.13**	**327**	PN	**Pn**	**22 33 43.4**	**-0.6**
ESO	**Esso**	**2.13**	**327**	*eP*	**Pn**	**22 33 43.4**	**-0.6**
RUS	**Russkaya**	**2.18**	**219**	PN	**Pn**	**22 33 44.4**	**-0.2**
RUS				S	**Sn**	**22 34 10.4**	**-0.3**
RUS	**Russkaya**	**2.18**	**219**	*eP*	**Pn**	**22 33 44.5**	**-0.2**
RUS				*eS*	**Sn**	**22 34 10.5**	**-0.3**
GRL	**Gorelyy**	**2.27**	**226**	PN	**Pn**	**22 33 47.1**	**+1.2**
GRL	**Gorelyy**	**2.27**	**226**	*eP*	**Pn**	**22 33 47.1**	**+1.2**
MTVR	**Mutnovka**	**2.27**	**224**	PN	**Pn**	**22 33 46.5**	**+0.5**
MTVR				S	**Sn**	**22 34 14.1**	**+1.0**
MTVR	**Mutnovka**	**2.27**	**224**	*eP*	**Pn**	**22 33 46.5**	**+0.5**
MTVR				*eS*	**Sn**	**22 34 14.2**	**+1.0**
KBTR	**Krutoberegovo**	**2.38**	**29**	PN	**Pn**	**22 33 48.2**	**+0.9**
KBTR	**Krutoberegovo**	**2.38**	**29**	*eP*	**Pn**	**22 33 48.2**	**+0.9**
ASAK	**Asacha**	**2.46**	**225**	PN	**Pn**	**22 33 49.3**	**+0.8**
ASAK	**Asacha**	**2.46**	**225**	*eP*	**Pn**	**22 33 49.3**	**+0.8**
SMKR	**Semkarok**	**2.47**	**9**	PN	**Pn**	**22 33 49.3**	**+0.7**
SMKR	**Semkarok**	**2.47**	**9**	*eP*	**Pn**	**22 33 49.3**	**+0.7**
APC	**Apacha**	**2.47**	**242**	PN	**Pn**	**22 33 49.3**	**+0.8**
APC	**Apacha**	**2.47**	**242**	*eP*	**Pn**	**22 33 49.3**	**+0.8**
KDTR	**Khodutka, Kamc**	**2.85**	**216**	PN	**Pn**	**22 33 53.3**	**-0.4**
KDTR	**Khodutka, Kamc**	**2.85**	**216**	*eP*	**Pn**	**22 33 53.3**	**-0.4**
BKI	**Bering**	**3.21**	**69**	PN	**Pn**	**22 33 58.8**	**+0.3**
BKI				S	**Sn**	**22 34 34.0**	**-1.6**
BKI	**Bering**	**3.21**	**69**	*eP*	**Pn**	**22 33 58.8**	**+0.3**
BKI				*eS*	**Sn**	**22 34 34.0**	**-1.6**
PAU	**Pauzhetka**	**3.60**	**223**	PN	**Pn**	**22 34 05.8**	**+2.0**
PAU	**Pauzhetka**	**3.60**	**223**	*eP*	**Pn**	**22 34 05.8**	**+2.0**
SKR	**Severo-Kuril's**	**4.49**	**221**	*e*PN	**Pn**	**22 34 13.6**	**-2.3**
SKR				pmax	pmax		
	comp=Z,25nm,0.4s						
MA2	**Magadan**	**7.71**	**319**	LR	LR	22 37 21.4	
	comp=Z,25nm,19.2s,baz=190,slow=36						
BILL	**Bilibino**	**14.18**	**8**	*i* P	**P**	**22 36 30.9**	**-1.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ERM	**Erimo**	**16.84**	**231**	*i* P	**Pn**	**22 37 00.8**	**-0.5**
YAK	**Yakutsk**	**18.06**	**308**	*i* P	**P**	**22 37 14.1**	**-1.4**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	**Matsushiro Arr**	**23.52**	**231**	P	**P**	**22 38 11.5**	**-2.2**
	comp=Z,1.4nm,0.4s,baz=27,slow=8.4,SNR=5.9						
	comp=Z,1.4nm,0.4s						
HIA	**Hailar**	**25.60**	**276**	*i* P	**P**	**22 38 32.0**	**-0.5**
HIA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**27.80**	**47**	P	**P**	**22 38 52.0**	**0.0**
	comp=Z,0.6nm,0.9s,baz=270,slow=8.1,SNR=6.3						
	comp=Z,0.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**34.68**	**170**	T	T	23 17 19.4	
	baz=355,slow=76,SNR=82						
H11N3	**WAKE ISLAND Hy**	**34.70**	**170**	T	T	23 17 21.9	
	baz=355,slow=76,SNR=78						
H11N1	**WAKE ISLAND Hy**	**34.70**	**170**	T	T	23 17 26.0	
	baz=355,slow=76,SNR=97						
NRIK	**Noril'sk**	**35.27**	**324**	*i* P	**P**	**22 39 58.8**	**+1.3**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARTI	**Arti**	**52.98**	**317**	*c i*P	**P**	**22 42 20.7**	**+1.8**
ARTI						22 44 17.5	
ARTI				S	**S**	**22 49 45.6**	**+3.1**
ARTI				SS	**SKiKP**	**22 53 25.1**	**-4.4**
ARTI				pmax	pmax		
	comp=Z,6.0nm,2.8s						
PDAR	**Pinedale Array**	**56.67**	**62**	P	**P**	**22 42 47.2**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=317,slow=8.7,SNR=4.0						
	comp=Z,0.3nm,0.5s						
OBN	**Obninsk**	**61.83**	**327**	*i*eP	**P**	**22 43 21.8**	**+0.7**
OBN				*e*		22 43 59.9	
OBN				*e*		22 45 41.1	
OBN				*e*S	S	22 52 01.4	+23
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,21nm,16.0s						
TXAR	**Lajitas Array**	**69.87**	**68**	P	**P**	**22 44 13.9**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=294,slow=4.8,SNR=7.2						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**77.21**	**205**	P	**P**	**22 44 55.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=18,slow=6.1,SNR=2.8						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**80.89**	**205**	P	**P**	**22 45 14.8**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=25,slow=6.1,SNR=4.9						
	comp=Z,0.2nm,0.3s						

BKK ***20*** *22:52:48.4±0.5, 12˚N±3˚×9˚5E±˚, h10km, M4.3/16, mB4.8/6, mb4.6/6, Mjma4.0/16, ML4.5/16, MLv4.4/16, Mw(mB)4.1/6*
IDC ***20*** *22:52:49.0±0.8, 12˚.14N×95˚.66E, h0km, mb4.0/17, mbtmp4.0/18, ML4.0/1, MS3.4/9, Error ellipse: s-maj=23.9km s-min=17.6km az=60.0*
NEIC ***20*** *22:52:49.0±2.2, 12˚.2N±0˚.1×94˚.91E±0˚.09, h10km±1km, mb4.5/20, Error ellipse: s-maj=18.6km s-min=12.5km az=150.0*
NDI ***20*** *22:52:51.7±2.5, 11˚.97N×94˚.87E, h10km, mb4.3, ML3.8, MW4.2, Presumed earthquake*

ISC 20 22:52:50.9±0.6, 12.10N±0.08×95.02E±0.05, h21km, n80, σ2°34/71, mb4.3/30, MS3.4/8, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.27**	**259**	Pn	**Pn**	**22 53 25.5**	**-1.6**
PBA	**Port Blair**	**2.27**	**259**	*i*P	**Pn**	**22 53 27.1**	**0.0**
PBA				*eS*	**Sn**	**22 53 54.1**	**-0.4**
RNTT	**Ranong**	**4.34**	**128**	P	**Pn**	**22 53 52.5**	**-3.2**
KHLT	**Khaolaem Dam**	**4.39**	**52**	P	**Pn**	**22 53 54.6**	**-1.7**
PHET	**Kaeng Krachan**	**4.58**	**79**	P	**Pn**	**22 53 56.1**	**-2.8**
SURT	**Suratani**	**4.86**	**130**	P	**Pn**	**22 53 59.9**	**-2.8**
PKDT	**Phuket**	**5.31**	**142**	P	**Pn**	**22 54 05.8**	**-3.2**
UTHA	**Uthaitani**	**5.50**	**51**	P	**Pn**	**22 54 09.9**	**-1.8**
	1.2nm0.1nm34nm,0.7s						
CM31	**Chiang Mai Arr**	**7.37**	**30**	Pn	**Pn**	**22 54 35.7**	**-1.6**
CMAR	**Chiang Mai Arr**	**7.37**	**30**	Pn	**Pn**	**22 54 35.1**	**-2.2**
	0.7nm,0.3s,baz=219,slow=15,SNR=36						
CMAR				LR	LR	22 57 53.4	
	comp=Z,126nm,18.1s,baz=220,slow=43						
	4.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**7.37**	**30**	Pn	**Pn**	**22 54 35.0**	**-2.3**
CHTO	**Chiang Mai**	**7.67**	**29**	Pn	**Pn**	**22 54 40.9**	**-0.6**
BWNR	**Bhubaneshwar**	**11.98**	**314**	*eP*	**Pn**	**22 55 40.1**	**-0.4**
BWNR				*eS*	**Sn**	**22 57 46.2**	**-7.4**
VIS	**Vishakhapatnam**	**12.60**	**298**	*eP*	**Pn**	**22 55 47.5**	**-1.5**
VIS				*eS*	Sn	22 57 58.4	-10
VIS				IAML		22 58 04.0	
	comp=E,14nm,0.5s						
VIS				IAML		22 58 04.4	
	comp=N,15nm,0.3s						
IMP	**Imphal**	**12.70**	**356**	*eP*	**Pn**	**22 55 52.8**	**+2.3**
RAGD	**RAYAGADA**	**13.20**	**304**	IAmb	IAmb	22 58 18.1	
	comp=Z,19nm,0.4s						
QIZ	**Qiongzhong**	**15.85**	**62**	P	**Pn**	**22 56 33.4**	**+0.5**
QIZ				S	**Sn**	**22 59 32.9**	**+4.8**
QIZ				LR	LR		
	comp=N,280nm,16.3s						
QIZ				LR	LR		
	comp=E,150nm,14.3s						
QIZ				LR	LR		
	comp=Z,280nm,10.3s						
HYB	**Hyderabad**	**16.77**	**290**	*eP*	**Pn**	**22 56 42.4**	**-2.3**
HYB				*eS*	**S**	**22 59 58.9**	**-2.2**
EVN	**Everest**	**17.54**	**335**		**Pn**	**22 56 53.6**	**-1.3**
NGP	**Nagpur**	**17.74**	**303**	*eP*	**P**	**22 56 58.3**	**+0.7**
NGP				IAmb	IAmb	22 57 05.9	
	comp=Z,6.4nm,0.6s						
LSA	**Lhasa**	**17.88**	**349**		**Pn**	**22 56 56.6**	**-2.2**
KAD	**Karad**	**20.80**	**287**	*eP*	Pn	22 57 32.8	-0.8
KAD				IAmb	IAmb	22 57 39.8	
	comp=Z,7.1nm,0.7s						
LGTI	**Lohaghat**	**22.12**	**323**	*eP*	**P**	**22 57 48.6**	**+3.3**
PTH	**Pithoragarh**	**22.19**	**324**	*eP*	**P**	**22 57 49.4**	**+3.3**
PTH				IAmb	IAmb	22 57 54.5	
	comp=Z,8.9nm,0.7s						
MYLDM	**Lahad Datu**	**24.20**	**104**	P	**P**	**22 58 07.8**	**+1.6**
MYLDM				IAmb	IAmb	22 58 35.4	
	comp=Z,14nm,1.0s						
KLP	**Kalpa**	**24.76**	**324**	*eP*	**P**	**22 58 14.1**	**+2.6**
KLP				IAmb	IAmb	22 58 21.1	
	comp=Z,14nm,0.8s						
LZH	**Lanzhou**	**25.18**	**17**	*eP*	**P**	**22 58 16.3**	**+1.

HFS **Hagfors** 75.27 329 P P 23 04 36.5 +4.3
comp=Z,2.1nm,0.6s,baz=123,slow=5.5,SNR=9.9
comp=Z,2.1nm,0.6s
GEC2 **GERESS Array S** 75.29 318 P P 23 04 31.8 -0.8
GERES **GERESS Array B** 75.29 318 P P 23 04 37.7 +5.1
comp=Z,1.7nm,0.8s,baz=93,slow=5.3,SNR=15
comp=Z,1.7nm,0.8s
GERES **GERESS Array B** 75.29 318 P P 23 04 32.1 -0.5
SPITS **Spitsbergen Ar** 75.90 348 P P 23 04 39.6 +4.1
comp=Z,1.5nm,0.6s,baz=94,slow=12,SNR=6.8
comp=Z,1.5nm,0.6s
BOSA **Boshof** 78.57 237 P P 23 04 57.0 +5.5
comp=Z,2.0nm,0.8s,baz=72,slow=6.0,SNR=4.1
comp=Z,2.0nm,0.8s
EKA **Eskdalemuir Ar** 84.75 325 P P 23 05 26.5 +3.0
comp=Z,0.9nm,0.8s,baz=78,slow=7.1,SNR=3.9
comp=Z,0.9nm,0.8s
G21K **Allakaket** 87.29 22 P P 23 05 34.6 -1.2
H21K **Melozitna Rive** 87.91 23 P P 23 05 38.3 -0.5
H22K **Ishtalitna Cre** 88.33 22 P P 23 05 39.7 -1.2
D25K **Kavik River** 88.37 18 P P 23 05 40.6 -0.4
D25K IAmb IAmb 23 05 48.2
comp=Z,3.5nm,0.9s
CAST **Castle Rocks** 89.15 24 P P 23 05 45.1 +0.3
TORD **Torodi Ar. Bea** 90.47 283 P P 23 05 55.7 +3.9
comp=Z,0.8nm,0.8s,baz=70,slow=6.4,SNR=4.4
comp=Z,0.8nm,0.8s
ILAR **Eielson Array** 90.53 22 P P 23 05 49.6 -1.5
comp=Z,0.5nm,0.9s,baz=288,slow=4.0,SNR=5.3
comp=Z,0.5nm,0.9s

MOS **20** *23:07:08.7±1.0,58.01S×25.75W,h54km,mb5.4/9, Error ellipse: s-maj=19.5km s-min=9.9km az=106.1*

NEIC **20** *23:07:10.1±2.0,57.96S±0.09×25.8W±0.2,h56km±4km, mb5.3/132,Mww5.1/10, Error ellipse: s-maj=14.2km s-min=10.6km az=222.0*

GCMT **20** *23:07:11.1±0.2,58.09S±0.02×25.18W±0.2,h56km, MW5.2/116,Moment Tensor Solution. s109,c159; s116,c176; Duration: 0 Moment tensor: Scale 1016Nm; Mrr6.26±.13; Mθθ0.96±.14; Mθφ-7.21±.12; Mrθ-0.07±.11; Mφφ1.55±.11; Mrφ1.08±.11; Best double couple: M≈6.96200×1016 NP1:φs168.00000°,δ41.00000°, λ88.00000°. NP2:φs351.00000°,δ49.00000°,λ92.00000°. Principal axes: T 6.3470, Plg85.0000°, Azm278.0000°; N 1.2370, Plg1.0000°, Azm170.0000°; P -7.5780, Plg4.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ **20** *23:07:12.5±0.7,58°S±3°×2°6W±°,h74km±7km,M5.5/46, mb5.4/46*

IDC **20** *23:07:12.0±1.9,57.92S×25.68W,h73km±15km,mb5.0/15, mbtmp5.2/17,MS4.2/32,Error ellipse: s-maj=15.0km s-min=11.0km az=57.0*

GFZ **20** *23:07:12.5,58.02S×25.68W,h56km,Mw5.1/21,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr6.03; Mθθ-0.31; Mφφ-5.71; Mrθ-0.60; Mθφ1.69; Mrφ0.86; Fault plane solution: M≈6.20255×10¹⁶ NP1: φs167.27131°,δ40.47521°,λ94.99428°. NP2: φs340.71787°,δ49.71016°,λ85.75141°. Principal axes: T 6.1250, Plg84.3493°, Azm218.5754°; N 0.1523, Plg3.2395°, Azm343.4682°; P -6.2773, Plg4.6250°, Azm73.7305°;*

ISC 20 23:07:12.0±0.4,**58.00S**±0.04×**25.74W**±0.05,**h75**km±3km, **h75**km:**pP-P,n815,**σ0**94**/829,**mb5.3**/88,**13C-3D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.06**	**297**	P	**Pn**	**23 08 52.3**	**-0.2**
HOPE	**Hope Point**	**7.06**	**297**		**Pn**	**23 08 52.3**	**-0.2**
HOPE	**Hope Point**	**7.06**	**297**	*i* P	**Pn**	**23 08 55.8**	**+3.3**
VNA1	**Neumayer--Stat**	**14.69**	**157**	⇑P	**Pn**	**23 10 34.0**	**-1.3**
	comp=Z,86nm,0.9s						
VNA2	**Neumayer--Watz**	**15.09**	**157**	⇑P	**Pn**	**23 10 38.8**	**-1.7**
	comp=Z,10nm,0.2s,baz=322,slow=13						
VNA2				⇑PcP	**PcP**	**23 15 43.9**	**+1.2**
	comp=Z,11nm,0.6s,baz=326,slow=3.9						
VNA2	**Neumayer--Watz**	**15.09**	**157**	P	**Pn**	**23 10 38.1**	**-2.3**
ESPZ	**Base Esperanza**	**16.11**	**237**	P	**Pn**	**23 10 53.5**	**+0.1**
ESPZ				IAmb	IAmb	23 11 20.7	
	comp=Z,203nm,1.4s						
SNAA	**Sanae**	**16.64**	**155**	⇑P	**Pn**	**23 10 59.7**	**-0.3**
	comp=Z,287nm,0.3s						
SNAA				⇑PcP	**PcP**	**23 15 46.2**	**+1.1**
	comp=Z,194nm,0.7s						
SNAA	**Sanae**	**16.64**	**155**	P	**Pn**	**23 10 59.5**	**-0.5**
	comp=Z,39nm,1.1s,baz=315,slow=14,SNR=35						
SNAA				S	Sn	23 13 50.1	-14
	comp=Z,4.7nm,0.9s,baz=297,slow=18,SNR=1.4						
SNAA				PcP	**PcP**	**23 15 45.7**	**+0.6**
	comp=Z,9.9nm,0.8s,baz=281,slow=1.8,SNR=5.1						
SNAA				LR	LR	23 15 55.6	
	comp=Z,1μm,22.0s,baz=304,slow=31						
SNAA	**Sanae**	**16.64**	**155**		**Pn**	**23 10 59.2**	**-0.9**
SNAA	**Sanae**	**16.64**	**155**	P	**Pn**	**23 10 60.0**	**-0.1**
TROLL	**Troll, Antarti**	**18.15**	**152**	⇑P	**P**	**23 11 18.2**	**+0.3**
	comp=Z,920nm,0.5s						
PMSA	**Palmer Station**	**19.30**	**234**	P	**Pn**	**23 11 31.8**	**-0.3**
	comp=Z,143nm,0.8s,baz=90,slow=10,SNR=20						
PMSA				LR	LR	23 17 51.2	
	comp=Z,2μm,21.8s,baz=70,slow=33						
PMSA	**Palmer Station**	**19.30**	**234**	P	**P**	**23 11 30.5**	**+0.2**
PMSA				IAmb	IAmb	23 11 40.2	
	comp=Z,170nm,0.8s						
PMSA	**Palmer Station**	**19.30**	**234**	*e*P	**P**	**23 11 27.9**	**-2.4**
PMSA	**Palmer Station**	**19.30**	**234**	P	**Pn**	**23 11 34.4**	**+2.2**
EFI	**East Falkland**	**19.52**	**275**	*i* P	**P**	**23 11 33.7**	**+0.8**
EFI				pmax	pmax		
	comp=Z,120nm,0.9s						
EFI	**East Falkland**	**19.52**	**275**		**P**	**23 11 32.5**	**-0.4**
EFI				IAmb	IAmb	23 11 37.2	
	comp=Z,100nm,0.8s						
EFI	**East Falkland**	**19.52**	**275**	P	**Pn**	**23 11 35.7**	**+0.8**
BELA	**Belgrano 2**	**20.20**	**185**		**P**	**23 11 40.2**	**+0.1**
BELA				IAmb	IAmb	23 11 45.8	
	comp=Z,111nm,0.8s						
NVL	**N'lazarevskaya**	**20.21**	**144**	*e*P	**P**	**23 11 39.2**	**-1.0**
NVL				*e*S	**S**	**23 15 19.2**	**-3.2**
NVL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,228nm,13.0s						
SMAI	**San Martin Ant**	**20.85**	**224**	P	**P**	**23 11 45.9**	**-1.3**
H09W1	**TRISTAN DA CUN**	**22.70**	**29**	T	T	23 36 16.5	
	SNR=10.0						
MG02	**Cerro Sombrero**	**24.90**	**263**	P	**P**	**23 12 26.8**	**-0.5**
MG02	**Cerro Sombrero**	**24.90**	**263**	P	**P**	**23 12 28.5**	**+1.1**
MG03	**Isla Dawson**	**25.04**	**260**		**P**	**23 12 28.2**	**-0.4**
GO10	**Punta Arenas**	**25.68**	**261**	P	**P**	**23 12 34.2**	**-0.3**
GO10				IAmb	IAmb	23 13 01.7	
	comp=Z,64nm,0.8s						
GO10	**Punta Arenas**	**25.68**	**261**	P	**P**	**23 12 36.0**	**+1.5**
MG05	**Puerto Natales**	**27.19**	**263**		**P**	**23 12 47.0**	**-1.1**
MG05				IAmb	IAmb	23 12 50.3	
	comp=Z,74nm,0.8s						
MG05	**Puerto Natales**	**27.19**	**263**	P	**P**	**23 12 47.3**	**-0.8**
GO08	**Villa O'Higgin**	**29.04**	**269**		**P**	**23 13 04.2**	**-0.4**
GO08				IAmb	IAmb	23 13 14.7	
	comp=Z,34nm,0.8s						
GO08	**Villa O'Higgin**	**29.04**	**269**	P	**P**	**23 13 06.1**	**+1.5**
AY03	**Cochrane**	**29.80**	**271**	P	**P**	**23 13 11.1**	**-0.2**
COYC	**Coyhaique**	**30.61**	**274**	P	**P**	**23 13 18.2**	**-0.2**
COYC	**Coyhaique**	**30.61**	**274**	P	**P**	**23 13 19.9**	**+1.5**
ANCO	**Parque Anchore**	**32.05**	**304**	*e*P	**P**	**23 13 30.2**	**-1.0**
LL02	**Futaleuf**	**32.09**	**277**		**P**	**23 13 32.4**	**+0.9**
LL02				IAmb	IAmb	23 13 40.6	
	comp=Z,31nm,1.0s						
LL02	**Futaleuf**	**32.09**	**277**	P	**P**	**23 13 31.8**	**+0.3**
QSPA	**South Pole Qui**	**32.25**	**180**	P	**P**	**23 13 34.2**	**+1.3**
	comp=Z,58nm,0.9s,baz=191,slow=6.7,SNR=120						
QSPA				PcP	**PcP**	**23 16 19.7**	**+0.5**
	comp=Z,16nm,0.9s,baz=213,slow=1.0,SNR=3.6						
QSPA				LR	LR	23 26 13.5	
	comp=Z,627nm,20.0s,baz=188,slow=35						
	comp=Z,58nm,0.9s						
QSPA	**South Pole Qui**	**32.25**	**180**	P	**P**	**23 13 33.1**	**+0.2**
QSPA	**South Pole Qui**	**32.25**	**180**	P	**P**	**23 13 34.9**	**+1.9**
QSPA				PcP	**PcP**	**23 16 19.9**	**+0.6**
PLCA	**Paso Flores**	**33.15**	**282**	P	**P**	**23 13 40.7**	**-0.2**
	comp=Z,32nm,1.0s,baz=142,slow=8.3,SNR=30						
PLCA				PcP	**PcP**	**23 16 22.1**	**0.0**
	comp=Z,4.9nm,0.8s,baz=128,slow=1.9,SNR=3.7						
PLCA				LR	LR	23 26 52.1	
	comp=Z,405nm,18.4s,baz=128,slow=36						
	comp=Z,32nm,1.0s						
PLCA	**Paso Flores**	**33.15**	**282**	P	**P**	**23 13 40.2**	**-0.6**
PLCA				IAmb	IAmb	23 13 42.6	
	comp=Z,26nm,0.8s						
PLCA	**Paso Flores**	**33.15**	**282**	*e*P	**P**	**23 13 39.8**	**-1.1**
PLCA	**Paso Flores**	**33.15**	**282**	P	**P**	**23 13 41.5**	**+0.6**
PLCA	**Paso Flores**	**33.15**	**282**	P	**P**	**23 13 41.4**	**+0.5**
PLCA				PcP	**PcP**	**23 16 22.4**	**+0.3**
CPSB	**Cacapava Do Su**	**33.53**	**313**		**P**	**23 13 43.3**	**-0.9**
CPSB	**Cacapava Do Su**	**33.53**	**313**	*e*P	**P**	**23 13 44.5**	**+0.4**
CPSB	**Cacapava Do Su**	**33.53**	**313**	P	**P**	**23 13 44.6**	**+0.4**
LR05	**Currie**	**34.27**	**281**		**P**	**23 13 49.9**	**-0.6**
LR05				IAmb	IAmb	23 13 54.1	
	comp=Z,47nm,0.8s						
GO06	**Curarrehue**	**34.47**	**282**		**P**	**23 13 51.6**	**-0.8**
PSAL	**Palomas, Salto**	**34.63**	**307**	*e*P	**P**	**23 13 52.6**	**-1.0**
LR04	**Corral**	**35.27**	**280**	P	**P**	**23 13 58.0**	**-1.2**
ITAB	**Concordia**	**35.90**	**318**	P	**P**	**23 14 05.4**	**+0.8**
ITAB	**Concordia**	**35.90**	**318**	*e*P	**P**	**23 14 04.1**	**-0.6**
BI02	**San Fabin de**	**36.57**	**286**	P	**P**	**23 14 09.3**	**-1.0**
PET01	**Itanhaem-SP**	**37.03**	**326**	*e*P	**P**	**23 14 14.7**	**+0.4**
SPB	**Sao Paulo**	**37.74**	**326**	P	**P**	**23 14 20.3**	**0.0**
SPB				IAmb	IAmb	23 14 22.6	
	comp=Z,66nm,0.9s						
SPB	**Sao Paulo**	**37.74**	**326**	*e*P	**P**	**23 14 20.6**	**+0.4**
SPB	**Sao Paulo**	**37.74**	**326**	P	**P**	**23 14 21.6**	**+1.4**
SPB	**Sao Paulo**	**37.74**	**326**	P	**P**	**23 14 21.9**	**+1.6**
BO02	**Sierra Bellavi**	**37.77**	**288**	P	**P**	**23 14 19.7**	**-0.9**
DUB01	**Friburgo-RJ**	**37.85**	**334**	*e*P	**P**	**23 14 21.6**	**+0.4**
CAM01	**Campos-RJ**	**37.93**	**336**	*e*P	**P**	**23 14 22.4**	**+0.5**
MAW	**Mawson**	**38.12**	**142**	P	**P**	**23 14 23.1**	**+0.2**
	comp=Z,6.5nm,1.1s						
MAW	**Mawson**	**38.12**	**142**	P	**P**	**23 14 23.2**	**+0.2**
	comp=Z,26nm,0.9s,baz=240,slow=10,SNR=27						
MAW				PcP	**PcP**	**23 16 36.4**	**+0.2**
	comp=Z,15nm,0.9s,baz=279,slow=5.6,SNR=8.0						
MAW				LR	LR	23 27 50.9	
	comp=Z,441nm,20.8s,baz=255,slow=32						
	comp=Z,26nm,0.9s						
MAW	**Mawson**	**38.12**	**142**	P	**P**	**23 14 23.3**	**+0.3**
MAW					**PcP**	**23 16 37.8**	**+1.6**
MAW	**Mawson**	**38.12**	**142**	P	**P**	**23 14 21.2**	**-1.8**
VAO	**Valinhos**	**38.16**	**327**	P	**P**	**23 14 23.4**	**-0.5**
VAO	**Valinhos**	**38.16**	**327**	*e*P	**P**	**23 14 24.0**	**+0.1**
PTGB	**Pitanga**	**38.18**	**319**	*e*P	**P**	**23 14 22.7**	**-1.4**
GO05	**Hualane**	**38.18**	**287**	P	**P**	**23 14 23.6**	**-0.4**
GO05				IAmb	IAmb	23 14 24.8	
	comp=Z,24nm,0.9s						
MT08	**Bocatoma Ro**	**38.45**	**290**	P	**P**	**23 14 26.0**	**-0.5**
BO03	**Pichilemu**	**38.60**	**287**	P	**P**	**23 14 27.2**	**-0.2**
MT09	**Talagante**	**38.68**	**289**	P	**P**	**23 14 27.2**	**-1.1**
CPUP	**Villa Florida**	**38.69**	**311**	P	**P**	**23 14 27.4**	**-0.9**
	comp=Z,7.0nm,0.5s,baz=154,slow=13,SNR=33						
CPUP				PcP	**PcP**	**23 16 38.8**	**+0.1**
	comp=Z,13nm,0.8s,baz=149,slow=6.1,SNR=8.4						
CPUP				LR	LR	23 29 16.7	
	comp=Z,265nm,20.8s,baz=150,slow=34						
	comp=Z,7.0nm,0.5s						
CPUP	**Villa Florida**	**38.69**	**311**	P	**P**	**23 14 27.3**	**-1.0**
CPUP	**Villa Florida**	**38.69**	**311**	P	**P**	**23 14 27.3**	**-1.0**
CPUP	**Villa Florida**	**38.69**	**311**	P	**P**	**23 14 27.6**	**-0.7**
CPUP				PcP	**PcP**	**23 16 39.0**	**+0.3**
MT16	**CCHEN**	**38.72**	**290**	P	**P**	**23 14 27.8**	**-0.7**
MT16				IAmb	IAmb	23 14 33.7	
	comp=Z,20nm,0.7s						
MT01	**Popeta**	**38.74**	**288**	P	**P**	**23 14 28.1**	**-0.5**
MT05	**Renca**	**38.86**	**289**	P	**P**	**23 14 29.0**	**-0.6**
MT05				IAmb	IAmb	23 14 52.6	
	comp=Z,63nm,1.4s						
RCLB	**Rio Claro- Sao**	**38.88**	**327**	*e*P	**P**	**23 14 30.1**	**+0.2**
ALF01	**Guarapari-ES**	**38.91**	**337**	*e*P	**P**	**23 14 30.4**	**+0.3**
PEL	**Peldehue**	**39.03**	**290**	P	**P**	**23 14 30.6**	**-0.5**
PEL				pmax	pmax		
	comp=Z,25nm,0.9s						
PEL	**Peldehue**	**39.03**	**290**	P	**P**	**23 14 30.6**	**-0.5**
PEL				IAmb	IAmb	23 14 53.4	
	comp=Z,25nm,0.9s						
PEL	**Peldehue**	**39.03**	**290**	P	**P**	**23 14 31.1**	**+0.1**
CFA	**Coronel Fontan**	**39.06**	**294**	LR	LR	23 29 55.1	
	comp=Z,311nm,21.8s,baz=170,slow=35						
LDASE	**Londrina, Braz**	**39.08**	**321**	*e*P	**P**	**23 14 32.1**	**+0.5**
VA05	**Santo Domingo**	**39.09**	**288**	P	**P**	**23 14 29.8**	**-1.7**
VA05				IAmb	IAmb	23 14 53.3	
	comp=Z,56nm,1.1s						
MT02	**Curacav**	**39.16**	**289**	P	**P**	**23 14 31.1**	**-1.1**
MT02				IAmb	IAmb	23 14 35.5	
	comp=Z,39nm,1.0s						
VA03	**San Esteban**	**39.27**	**290**	P	**P**	**23 14 31.4**	**-1.7**
VA03	**San Esteban**	**39.27**	**290**	P	**P**	**23 14 33.2**	**+0.1**
ZON	**Zonda**	**39.33**	**293**	P	**P**	**23 14 33.5**	**-0.1**
ZON				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZON	**Zonda**	**39.33**	**293**	P	**P**	**23 14 33.5**	**-0.1**
SJPY	**San Joaquin**	**39.41**	**314**	*e*P	**P**	**23 14 33.1**	**-1.1**
BSCB	**Bom Sucesso**	**39.47**	**331**	*e*P	**P**	**23 14 35.1**	**+0.2**
BSCB	**Bom Sucesso**	**39.47**	**331**	P	**P**	**23 14 36.2**	**+1.4**
RIB01	**Linhares ES**	**40.10**	**338**	*e*P	**P**	**23 14 40.0**	**0.0**
TRCB	**Terra Rica**	**40.15**	**320**	P	**P**	**23 14 40.2**	**-0.2**
TRCB				IAmb	IAmb	23 14 42.6	
	comp=Z,48nm,0.7s						
TRCB	**Terra Rica**	**40.15**	**320**	*e*P	**P**	**23 14 40.6**	**+0.2**
TRCB	**Terra Rica**	**40.15**	**320**	P	**P**	**23 14 40.8**	**+0.3**
BB19B	**Bebedouro**	**40.45**	**326**	*e*P	**P**	**23 14 43.3**	**+0.4**
SUR	**Sutherland**	**40.45**	**71**	LR	LR	23 27 24.5	
	comp=Z,994nm,20.7s,baz=208,slow=30						
SUR	**Sutherland**	**40.45**	**71**	P	**P**	**23 14 42.9**	**-0.1**
CANS	**Sao Roque de M**	**40.57**	**329**	*e*P	**P**	**23 14 44.4**	**+0.3**
BSFB	**Barra de Sao F**	**40.66**	**338**	*e*P	**P**	**23 14 44.6**	**0.0**
BSFB	**Barra de Sao F**	**40.66**	**338**	P	**P**	**23 14 45.5**	**+0.9**
CO02	**Combarbal**	**40.75**	**291**	P	**P**	**23 14 44.2**	**-1.2**
SJMB	**Sao Joao De Ma**	**40.86**	**337**	*e*P	**P**	**23 14 45.8**	**-0.4**
AMBA	**Amambai (Braz**	**40.87**	**316**	*e*P	**P**	**23 14 45.4**	**-0.9**
CO01	**Juntas del Tor**	**41.31**	**293**	P	**P**	**23 14 49.7**	**-0.5**
CO01	**Juntas del Tor**	**41.31**	**293**	P	**P**	**23 14 50.7**	**+0.6**
DIAM	**Diamantina, MG**	**41.80**	**334**	*e*P	**P**	**23 14 54.3**	**+0.2**
PMNB	**Patos De Minas**	**42.26**	**330**	*e*P	**P**	**23 14 58.2**	**+0.4**
PMNB	**Patos De Minas**	**42.26**	**330**	P	**P**	**23 14 58.7**	**+0.9**
AC05	**El Transito**	**42.34**	**294**	P	**P**	**23 14 57.3**	**-1.1**
AC05	**El Transito**	**42.34**	**294**	P	**P**	**23 14 58.3**	**-0.2**
GUA01	**Guaratinga, BA**	**42.65**	**340**	*e*P	**P**	**23 15 01.4**	**+0.5**
ARCA	**Araçuai, MG**	**42.82**	**317**	*e*P	**P**	**23 15 02.0**	**-0.3**
MURT	**Porto Murtinho**	**43.00**	**314**	*e*P	**P**	**23 15 02.7**	**-1.6**
IPMB	**Ipameri, GO**	**43.27**	**328**	*e*P	**P**	**23 15 06.5**	**+0.5**
AC02	**Maricunga**	**43.46**	**297**	P	**P**	**23 15 07.0**	**-1.0**
AC02	**Maricunga**	**43.46**	**297**	P	**P**	**23 15 07.5**	**-0.4**
CMC01	**Camacan, BA**	**43.80**	**341**	*e*P	**P**	**23 15 10.6**	**+0.4**
SBA	**Scott Base**	**44.19**	**184**	P	**P**	**23 15 13.7**	**+1.1**
SBA				pmax	pmax		
	comp=Z,34nm,1.0s						
SBA	**Scott Base**	**44.19**	**184**	P	**P**	**23 15 13.7**	**+1.1**
SBA				IAmb	IAmb	23 15 16.4	
	comp=Z,34nm,0.9s						
SBA	**Scott Base**	**44.19**	**184**	P	**P**	**23 15 15.3**	**+2.7**
SBA				pP	**pwP**	**23 15 33.0**	**0.0**
NBIT	**Itapeh - BA**	**44.20**	**341**	*e*P	**P**	**23 15 13.6**	**+0.2**
VNDA	**Vanda**	**44.66**	**182**	P	**P**	**23 15 18.4**	**+2.0**
	comp=Z,41nm,0.8s,baz=182,slow=6.4,SNR=154						
VNDA				PP	**PcP**	**23 16 59.1**	**+1.6**
	comp=Z,6.9nm,0.9s,baz=240,slow=6.4,SNR=6.3						
VNDA				LR	LR	23 32 49.0	
	comp=Z,254nm,21.8s,baz=184,slow=34						
	comp=Z,41nm,0.8s						
VNDA	**Vanda**	**44.66**	**182**	P	**P**	**23 15 17.4**	**+1.0**
VNDA				IAmb	IAmb	23 15 19.6	
	comp=Z,49nm,0.8s						
VNDA	**Vanda**	**44.66**	**182**	P	**P**	**23 15 18.9**	**+2.5**
COIM	**Forte Coimbra**	**44.66**	**315**	*e*P	**P**	**23 15 15.7**	**-1.3**
JANB	**Januaria**	**45.07**	**334**	*e*P	**P**	**23 15 20.2**	**-0.1**
BDFB	**Brasilia**	**45.45**	**329**	P	**P**	**23 15 24.2**	**+0.8**
	comp=Z,44nm,0.6s,baz=141,slow=5.4,SNR=76						
BDFB				PcP	**PcP**	**23 17 02.1**	**+0.9**
	comp=Z,6.8nm,0.6s,baz=180,slow=5.1,SNR=2.1						
BDFB				LR	LR	23 31 58.0	
	comp=Z,246nm,21.1s,baz=179,slow=33						
	comp=Z,44nm,0.6s						
BDFB	**Brasilia**	**45.45**	**329**	P	**P**	**23 15 23.4**	**+0.1**
BDFB				IAmb	IAmb	23 15 25.4	
	comp=Z,49nm,0.7s						
CCD	**Concordia, Ant**	**45.62**	**169**	P	**P**	**23 15 25.4**	**+1.0**
PP1B	**Ponte de Pedra**	**45.73**	**320**	*e*P	**P**	**23 15 25.5**	**0.0**
BOSA	**Boshof**	**45.74**	**73**	P	**P**	**23 15 25.1**	**-0.5**
	comp=Z,15nm,0.9s,baz=217,slow=10,SNR=22						
BOSA				PcP	**PcP**	**23 17 03.6**	**+1.4**
	comp=Z,7.2nm,1.0s,baz=159,slow=4.0,SNR=3.2						
BOSA				LR	LR	23 30 30.9	
	comp=Z,832nm,21.8s,baz=228,slow=31						
	comp=Z,15nm,0.9s						
BOSA	**Boshof**	**45.74**	**73**	P	**P**	**23 15 24.6**	**-1.1**
BOSA	**Boshof**	**45.74**	**73**	P	**P**	**23 15 25.0**	**-0.6**
BOSA	**Boshof**	**45.74**	**73**	P	**P**	**23 15 25.6**	**0.0**
BOSA	**Boshof**	**45.74**	**73**	P	**P**	**23 15 25.1**	**-0.6**
BOSA				PcP	**PcP**	**23 17 03.2**	**+1.0**
H04S2	**CROZET ISLANDS**	**46.06**	**111**	T	T	00 05 56.0	
	baz=225,slow=76,SNR=109						
H04S3	**CROZET ISLANDS**	**46.07**	**111**	T	T	00 05 57.2	
	baz=225,slow=76,SNR=88						
H04S1	**CROZET ISLANDS**	**46.08**	**111**	T	T	00 06 00.3	
	baz=225,slow=76,SNR=89						
AF01	**San Pedro de A**	**46.33**	**301**	P	**P**	**23 15 29.5**	**-1.1**
AF01				IAmb	IAmb	23 15 31.9	
	comp=Z,49nm,0.8s						
ARAG	**Araguaiana, MT**	**46.49**	**324**	*e*P	**P**	**23 15 31.6**	**+0.2**
SALV	**Santo Antonio**	**47.59**	**319**	*e*P	**P**	**23 15 40.0**	**0.0**
SDBA	**SAO DESIDERIO**	**47.77**	**334**	*e*P	**P**	**23 15 41.6**	**+0.2**
PB09	**IPOC Station P**	**47.82**	**300**	P	**P**	**23 15 41.7**	**-0.3**
PB09				IAmb	IAmb	23 15 50.6	
	comp=Z,58nm,1.5s						
PB03	**IPOC Station P**	**47.84**	**300**	P	**P**	**23 15 41.9**	**-0.2**
PB07	**IPOC Station P**	**48.18**	**300**	P	**P**	**23 15 43.7**	**-1.1**
PB07				IAmb	IAmb	23 15 46.3	
	comp=Z,21nm,0.7s						
BBSD	**Serra de San D**	**48.22**	**313**	*e*P	**P**	**23 15 43.1**	**-1.8**
PB02	**IPOC Station P**	**48.53**	**300**	P	**P**	**23 15 46.4**	**-1.0**
PB02				IAmb	IAmb	23 15 49.6	
	comp=Z,24nm,0.8s						
LBTB	**Lobatse**	**48.87**	**70**	P	**P**	**23 15 49.0**	**-0.9**
LBTB				pmax	pmax		
	comp=Z,19nm,0.9s						
LBTB	**Lobatse**	**48.87**	**70**	P	**P**	**23 15 49.0**	**-0.9**
LBTB				IAmb	IAmb	23 15 50.5	
	comp=Z,19nm,0.9s						
LBTB	**Lobatse**	**48.87**	**70**	P	**P**	**23 15 49.6**	**-0.3**
LBTB	**Lobatse**	**48.87**	**70**	P	**P**	**23 15 50.0**	**0.0**
LBTB	**Lobatse**	**48.87**	**70**	P	**P**	**23 15 49.5**	**-0.4**
LBTB				PcP	**PcP**	**23 17 14.7**	**+1.4**
PB08	**IPOC Station P**	**49.22**	**301**	P	**P**	**23 15 51.5**	**-1.5**
PB08				IAmb	IAmb	23 15 53.1	
	comp=Z,27nm,1.4s						
PTLB	**Pontes e Lacer**	**49.25**	**316**	P	**P**	**23 15 52.3**	**-0.4**
PTLB				IAmb	IAmb	23 15 54.3	
	comp=Z,49nm,0.9s						
PTLB	**Pontes e Lacer**	**49.25**	**316**	*e*P	**P**	**23 15 52.1**	**-0.6**
SIV	**San Ignacio**	**49.49**	**313**	LR	LR	23 37 10.6	
	comp=Z,119nm,21.1s,baz=152,slow=36						
GO01	**Chusmiza**	**49.65**	**302**	P	**P**	**23 15 55.5**	**-0.9**
GO01				IAmb	IAmb	23 15 58.2	
	comp=Z,20nm,0.7s						
GO01	**Chusmiza**	**49.65**	**302**	P	**P**	**23 15 56.3**	**0.0**
H10S2	**ASCENSION HYDR**	**49.66**	**14**	T	T	00 10 27.9	
	baz=188,slow=74,SNR=1060						
H10S3	**ASCENSION HYDR**	**49.67**	**14**	T	T	00 10 28.2	
	baz=32,slow=74,SNR=839						
NBTA	**Tacaratu-PE**	**49.68**	**344**	*e*P	**P**	**23 15 55.9**	**-0.1**
PB11	**IPOC Station P**	**49.77**	**301**	P	**P**	**23 15 54.7**	**-2.2**
PB11				IAmb	IAmb	23 16 04.5	
	comp=Z,13nm,0.8s						
SNDB	**Serra Nova Dou**	**49.86**	**326**	*e*P	**P**	**23 15 57.4**	**-0.1**
TSUM	**Tsumeb**	**49.99**	**58**	LR	LR	23 32 09.4	
	comp=Z,391nm,21.7s,baz=180,slow=30						
TSUM	**Tsumeb**	**49.99**	**58**	P	**P**	**23 15 58.5**	**-0.1**
TSUM	**Tsumeb**	**49.99**	**58**	P	**P**	**23 15 58.8**	**+0.2**
TSUM	**Tsumeb**	**49.99**	**58**	P	**P**	**23 15 58.8**	**+0.2**
TSUM	**Tsumeb**	**49.99**	**58**	P	**P**	**23 15 58.8**	**+0.2**
POGA	**Pongola**	**50.09**	**78**	P	**P**	**23 15 57.6**	**-1.5**
PSGCX	**Pisagua**	**50.13**	**301**	P	**P**	**23 15 58.6**	**-1.0**
PSGCX				IAmb	IAmb	23 16 23.2	
	comp=Z,49nm,1.5s					

MPGF Montagnes des 66.54 331 P **P** **23 17 53.8 +0.1**
DBIC Dimbokro 66.64 23 P **P** **23 17 54.3 0.0**
comp=Z,40nm,0.7s,baz=192,slow=8.5,SNR=43
DBIC LR LR 23 39 45.1
comp=Z,237nm,21.4s,baz=160,slow=29
comp=Z,40nm,0.7s
DBIC Dimbokro 66.64 23 P **P** **23 17 53.4 -0.9**
DBIC IAmb IAmb 23 17 55.4
comp=Z,37nm,0.8s
DBIC Dimbokro 66.64 23 P **P** **23 17 54.8 +0.5**
DBIC Dimbokro 66.64 23 P **P** **23 17 54.3 0.0**
DBIC pP **pP** **23 18 11.0 -1.7**
ACRG Accra 66.70 28 P **P** **23 17 53.9 -0.8**
ACRG IAmb IAmb 23 17 55.8
comp=Z,25nm,1.0s
EDA Edea 67.97 39 P **P** **23 18 02.3 -0.4**
EDA IAmb IAmb 23 18 03.9
comp=Z,26nm,1.0s
MCRA Macar, Loja 68.00 299 P **P** **23 18 01.7 -1.4**
comp=Z,17nm,0.8s
PTLC Puerto Leguiza 69.73 306 P **P** **23 18 11.5 -2.2**
comp=Z,60nm,0.9s
MACC Macarena, Meta 71.10 308 P **P** **23 18 21.5 -0.6**
comp=Z,656nmcomp=Z,24nm,0.9s
OTAV Otavalo 71.39 303 P **P** **23 18 24.0 -0.4**
OTAV pmax pmax
comp=Z,30nm,1.3s
OTAV Otavalo 71.39 303 P **P** **23 18 24.0 -0.4**
OTAV IAmb IAmb 23 18 28.0
comp=Z,30nm,1.2s
OTAV Otavalo 71.39 303 P **P** **23 18 24.7 +0.3**
comp=Z,20nm,1.4s
OTAV Otavalo 71.39 303 *e*P **P** **23 18 23.5 -0.8**
OTAV Otavalo 71.39 303 P **P** **23 18 24.8 +0.4**
OTAV Otavalo 71.39 303 P **P** **23 18 25.6 +1.2**
GARC Garzon, Huila 71.83 307 P **P** **23 18 26.3 -0.5**
comp=Z,62nm,0.5s
MBAR Mbarara 72.37 61 LR LR 23 48 00.4
comp=Z,361nm,18.2s,baz=203,slow=34
MBAR Mbarara 72.37 61 P **P** **23 18 31.1 +1.2**
MBAR pmax pmax
comp=Z,25nm,1.2s
MBAR Mbarara 72.37 61 P **P** **23 18 31.1 +1.2**
MBAR Mbarara 72.37 61 P **P** **23 18 32.7 +2.8**
MBAR Mbarara 72.37 61 P **P** **23 18 32.2 +2.3**
MBAR Mbarara 72.37 61 P **P** **23 18 32.7 +2.8**
BBAC Balboa, Cauca 72.44 305 P **P** **23 18 30.8 +0.4**
comp=Z,1µmcomp=Z,16nm,0.6s
POPC Popayan, Colom 72.66 306 P **P** **23 18 32.2 +0.5**
comp=Z,24nm,1.0s
ORTC Ortega, Tolima 73.28 308 P **P** **23 18 35.4 +0.3**
ROSC El Rosal 73.73 309 P **P** **23 18 38.8 +0.7**
comp=Z,21nm,0.8s,baz=143,slow=15,SNR=9.5
ROSC LR LR 23 51 42.1
comp=Z,103nm,21.8s,baz=126,slow=36
comp=Z,21nm,0.8s
ROSC El Rosal 73.73 309 P **P** **23 18 37.3 -0.9**
ROSC IAmb IAmb 23 18 41.9
comp=Z,20nm,0.8s
KIBK Kibwezi 74.37 69 P **P** **23 18 41.0 -0.6**
KIBK Kibwezi 74.37 69 P **P** **23 18 42.2 +0.6**
TORD Torodi Ar. Bea 74.39 28 P **P** **23 18 41.7 +0.2**
comp=Z,50nm,0.8s,baz=196,slow=6.5,SNR=372
comp=Z,50nm,0.8s
TORD Torodi Ar. Bea 74.39 28 P **P** **23 18 41.6 +0.2**
TORD IAmb IAmb 23 18 59.4
comp=Z,41nm,0.9s
SDV Santo Domingo 75.94 314 LR LR 23 51 42.0
comp=Z,355nm,22.0s,baz=118,slow=35
SDV Santo Domingo 75.94 314 P **P** **23 18 49.9 -0.8**
SDV IAmb IAmb 23 18 53.9
comp=Z,20nm,0.6s
SDV Santo Domingo 75.94 314 *e*P **P** **23 18 50.2 -0.4**
MLZ Mavora Lakes 76.36 190 P **P** **23 18 52.2 -0.3**
MLZ IAmb IAmb 23 18 54.8
comp=Z,85nm,1.3s
BIM Bigot 77.88 325 P **P** **23 19 01.2 -0.1**
BIM Bigot 77.88 325 x **P** **23 19 02.3 +1.1**
BIM Bigot 77.88 325 P **P** **23 19 02.3 +1.1**
LODK Lodwar 78.07 63 P **P** **23 19 03.1 +0.7**
LODK Lodwar 78.07 63 P **P** **23 19 06.5 +4.0**
FDFM Morne la Roset 78.11 325 P **P** **23 19 01.7 -0.9**
CXM Morne La Croix 78.19 325 P **P** **23 19 03.4 +0.3**
SVN Savane Anatole 78.22 325 P **P** **23 19 04.1 +0.9**
LTZ Lake Taylor 78.47 193 P **P** **23 19 05.1 +0.7**
LTZ IAmb IAmb 23 19 06.8
comp=Z,61nm,1.0s
TAU Tasmania Unive 79.29 175 P **P** **23 19 08.5 -0.3**
TAU pmax pmax
comp=Z,94nm,1.0s
TAU Tasmania Unive 79.29 175 P **P** **23 19 08.5 -0.3**
TAU Tasmania Unive 79.29 175 P **P** **23 19 07.9 -0.9**
MAGL Barre de l'ile 79.30 325 P **P** **23 19 09.2 +0.2**
MAGL Barre de l'ile 79.30 325 P **P** **23 19 10.6 +1.6**
TDBA Terre de Bas, 79.31 325 P **P** **23 19 09.6 +0.5**
TDBA Terre de Bas, 79.31 325 P **P** **23 19 09.6 +0.5**
THZ Tophouse 79.39 194 P **P** **23 19 09.8 +0.4**
THZ IAmb IAmb 23 19 16.3
comp=Z,47nm,0.8s
MSWZ Moikau Station 79.41 196 P **P** **23 19 09.2 -0.3**
CBE Ff, Capester 79.51 325 P **P** **23 19 10.9 +0.7**
CBE Ff, Capester 79.51 325 P **P** **23 19 12.0 +1.8**
GDSD La Dsirade Is 79.57 326 P **P** **23 19 10.0 -0.5**
H05N1 Guadeloupe/Mar 79.58 326 P **P** **23 19 11.2 +0.7**
SNR=8.4
SNZO South Karori 79.59 196 P **P** **23 19 09.4 -1.0**
GDHS Morne Mazeau, 79.75 325 P **P** **23 19 12.2 +0.7**
TCW Tory Channel 79.75 195 P **P** **23 19 10.8 -0.5**
MRNZ Matariki Terra 79.77 194 P **P** **23 19 11.0 -0.4**
ABD La Joyeuse, An 79.85 325 P **P** **23 19 11.6 -0.3**
ANWB Willy Bob 81.07 325 P **P** **23 19 18.1 -0.3**
ANWB Willy Bob 81.07 325 x **P** **23 19 18.7 +0.3**
ANWB Willy Bob 81.07 325 P **P** **23 19 19.3 +0.8**
SABA Saba 81.47 324 P **P** **23 19 20.0 -0.6**
SABA Saba 81.47 324 P **P** **23 19 19.6 -1.1**
SMRT St. Maarten 81.83 324 P **P** **23 19 21.5 -1.0**
SMRT St. Maarten 81.83 324 P **P** **23 19 22.6 +0.2**
RTZ Ruatahuna 81.88 198 P **P** **23 19 22.3 -0.5**
PDPR Patillas Dam, 82.74 322 P **P** **23 19 26.2 -1.0**
HUMP Col San Antoni 82.80 322 P **P** **23 19 26.9 -0.6**
HUMP IAmb IAmb 23 19 29.1
comp=Z,59nm,1.0s
SJG San Juan 82.87 322 LR LR 23 55 31.5
comp=Z,59nm,21.9s,baz=143,slow=35
SJG San Juan 82.87 322 P **P** **23 19 27.2 -0.7**
SJG pmax pmax
comp=Z,34nm,1.0s
SJG San Juan 82.87 322 P **P** **23 19 27.2 -0.7**
SJG IAmb IAmb 23 19 28.0
comp=Z,34nm,1.0s
SJG San Juan 82.87 322 P **P** **23 19 27.6 -0.3**
OBIP Obispado Ponce 82.96 321 P **P** **23 19 27.5 -0.9**
CELP Cerrillos 82.98 321 P **P** **23 19 27.7 -0.7**
CELP IAmb IAmb 23 19 28.4
comp=Z,28nm,0.6s
TOZ Tahuroa Road 82.98 197 P **P** **23 19 28.2 -0.2**
TOZ IAmb IAmb 23 19 30.2
comp=Z,28nm,1.0s
MLPR Magueyes Islan 83.03 321 P **P** **23 19 27.9 -0.8**
MLPR IAmb IAmb 23 19 29.0
comp=Z,40nm,0.8s
CRPR Cabo Rojo, PR 83.09 321 P **P** **23 19 27.9 -1.1**
ECPR Experimental S 83.13 321 P **P** **23 19 28.0 -1.3**
ECPR IAmb IAmb 23 19 31.6
comp=Z,18nm,0.7s
JTS Las Juntas de 83.22 302 P **P** **23 19 28.8 -1.1**
JTS pmax pmax
comp=Z,22nm,1.1s
JTS Las Juntas de 83.22 302 P **P** **23 19 28.8 -1.1**
JTS IAmb IAmb 23 19 31.3
comp=Z,22nm,1.1s
AOPR Arecibo Observ 83.29 321 P **P** **23 19 29.5 -0.6**
AOPR IAmb IAmb 23 19 30.9
comp=Z,73nm,1.4s
PRSN Puerto Rico Se 83.30 321 P **P** **23 19 29.1 -1.0**
NWAO Narrogin (SRO) 84.24 149 LR LR 23 53 07.3
comp=Z,145nm,20.4s,baz=158,slow=33
TOO Toolangi 84.51 173 P **P** **23 19 36.9 +0.5**
comp=Z,11nm,1.4s
TAM Tamanrasset 84.60 29 P **P** **23 19 38.4 +1.5**
TAM pmax pmax
comp=Z,46nm,0.3s
TAM Tamanrasset 84.60 29 P **P** **23 19 38.4 +1.5**
TAM Tamanrasset 84.60 29 P **P** **23 19 39.2 +2.3**

MUN Mundaring 84.85 148 P **P** **23 19 37.3 -0.8**
comp=Z,28nm,1.0s
BOAB BOACO BROADBAN 85.45 302 P **P** **23 19 39.7 -1.4**
BOAB IAmb IAmb 23 19 41.6
comp=Z,36nm,0.9s
BOAB BOACO BROADBAN 85.45 302 P **P** **23 19 40.6 -0.4**
KLBR Kellerberrin 85.65 149 P **P** **23 19 42.1 +0.1**
comp=Z,31nm,1.2s
SC01 Santiago de lo 85.66 318 P **P** **23 19 41.4 -0.6**
SIUN Universidad Ur 86.17 303 P **P** **23 19 43.8 -0.9**
KMBL Kambalda 86.92 153 P **P** **23 19 48.9 +0.5**
comp=Z,13nm,1.2s
HTT Hallett 88.02 167 P **P** **23 19 54.6 +1.0**
comp=Z,16nm,1.5s,comp=Z,0.0nm
BBOO Buckleboo 88.26 165 P **P** **23 19 54.9 +0.2**
comp=Z,35nm,1.2s
BBOO Buckleboo 88.26 165 P **P** **23 19 54.6 0.0**
BBOO IAmb IAmb 23 19 55.9
comp=Z,24nm,0.8s
NMDO Nuevo Mundo 88.26 315 P **P** **23 19 55.3 +0.7**
NMDO IAmb IAmb 23 20 01.4
comp=Z,31nm,0.9s
CHIV Chivirico 88.28 313 P **P** **23 19 54.8 +0.1**
CHIV IAmb IAmb 23 19 56.6
comp=Z,47nm,1.3s
ATD Arta Tunnel 88.71 66 LR LR 23 57 49.5
comp=Z,17nm,19.4s,baz=208,slow=34
MTO3 Montecristo 88.85 300 P **P** **23 19 56.8 -1.0**
MTO3 IAmb IAmb 23 19 58.2
comp=Z,15nm,0.7s
FORT Forrest 88.87 158 P **P** **23 19 58.5 +0.9**
comp=Z,44nm,0.9s
FORT Forrest 88.87 158 P **P** **23 19 57.2 -0.4**
STKA Stephens Creek 89.84 169 P **P** **23 20 03.0 +0.8**
comp=Z,125nm,1.0s
STKA Stephens Creek 89.84 169 P **P** **23 20 02.6 +0.4**
comp=Z,14nm,0.8s,baz=180,slow=4.6,SNR=24
comp=Z,14nm,0.8s
STKA Stephens Creek 89.84 169 *i* P **P** **23 20 01.0 -1.1**
STKA *e**PP **pP** **23 20 18.6 -3.2**
STKA Stephens Creek 89.84 169 P **P** **23 20 03.4 +1.2**
TIO Tiouine 89.93 16 P **P** **23 20 05.7 +3.4**
CMSA Cobar Meteorol 90.52 173 P **P** **23 20 05.8 +0.5**
comp=Z,29nm,1.3s
CMSA Cobar Meteorol 90.52 173 P **P** **23 20 06.3 +1.0**
MEEK Meekatharra 90.57 149 P **P** **23 20 05.7 +0.1**
comp=Z,22nm,1.2s
PPT2 Papeete2 91.64 232 *e*S **S** **23 31 02.8 -2.1**
comp=Z,135nm,30.2s
PPT2 *e*LR LR 23 49 40.8
comp=Z,828nm,25.0s
PPT2 *e*LR LR 23 49 47.6
comp=Z,718nm,29.5s
MDT Midelt 92.19 18 LR LR 23 56 18.4
comp=Z,211nm,21.0s,baz=178,slow=32
TEIG Tepich 93.45 303 P **P** **23 20 19.1 +0.3**
TEIG Tepich 93.45 303 P **P** **23 20 19.4 +0.7**
CMIG Matias Romero 93.78 296 LR LR 23 57 15.3
comp=Z,97nm,21.9s,baz=164,slow=32
INKA Innaminka 93.84 168 P **P** **23 20 21.3 +0.6**
INKA IAmb IAmb 23 20 22.5
comp=Z,5.7nm,0.8s
TAOE Nuku Hiva Isla 95.05 245 *e*LR LR 23 51 11.4
comp=Z,290nm,30.5s
AS09 Alice Springs 96.86 161 P **P** **23 20 34.9 +0.3**
comp=Z,18nm,0.9s
ASAR Alice Springs 96.89 161 P **P** **23 20 34.2 -0.5**
comp=Z,13nm,0.8s,baz=198,slow=4.3,SNR=96
ASAR PP **PP** **23 24 28.3 -1.5**
comp=Z,1.5nm,0.8s,baz=190,slow=7.7,SNR=6.5
ASAR PKiKP **PKiKP** **23 25 10.1 -0.4**
comp=Z,0.6nm,0.6s,baz=185,slow=1.5,SNR=5.2
ASAR PKKP **PKKPdf** **23 37 13.6 +0.5**
comp=Z,1.4nm,0.9s,baz=10,slow=2.2,SNR=8.8
ASAR PKPPKP P'P'df 23 45 24.1 -8.4
comp=Z,0.8nm,1.0s,baz=339,slow=2.3,SNR=4.1
comp=Z,13nm,0.8s
ASAR Alice Springs 96.89 161 P **P** **23 20 34.7 0.0**
AS31 Alice Springs 96.89 161 P **P** **23 20 35.0 +0.2**
comp=Z,6.4nm,0.8s
AS31 Alice Springs 96.89 161 P **P** **23 20 34.8 +0.1**
AS31 IAmb IAmb 23 20 35.7
comp=Z,4.2nm,0.7s
AS17 Alice Springs 96.91 161 P **P** **23 20 35.0 +0.3**
comp=Z,18nm,0.9s
AS15 Alice Springs 96.92 161 P **P** **23 20 35.1 +0.3**
comp=Z,20nm,0.9s
KEST Kesra 97.91 28 P Pdif 23 20 40.1 +1.2
comp=Z,3.6nm,0.9s,baz=135,slow=5.7,SNR=3.5
KEST LR LR 23 58 52.9
comp=Z,189nm,21.8s,baz=265,slow=32
comp=Z,3.6nm,0.9s
KEST Kesra 97.91 28 IAmb IAmb 23 21 02.6
comp=Z,7.0nm,1.0s
PAB San Pablo 98.82 17 P **P** **23 20 46.0 +3.2**
PAB pmax pmax
comp=Z,13nm,1.5s
PAB San Pablo 98.82 17 **23 20 46.0 +3.2**
PAB IAmb IAmb 23 20 46.7
comp=Z,13nm,1.4s
ESDC Sonseca Array 99.00 17 P **Pdif** **23 20 44.6 +1.1**
comp=Z,0.3nm,0.4s,baz=197,slow=4.2,SNR=5.4
ESDC LR LR 00 01 00.7
comp=Z,74nm,18.4s,baz=190,slow=33
comp=Z,0.3nm,0.4s
ESDC Sonseca Array 99.00 17 IAmb IAmb 23 20 51.2
comp=Z,5.2nm,1.4s
WRA Warramunga Arr 100.61 161 P **Pdif** **23 20 50.3 -1.1**
comp=Z,2.9nm,0.7s,baz=192,slow=4.4,SNR=18
WRA PP **PP** **23 24 55.5 -2.7**
comp=Z,1.5nm,0.9s,baz=187,slow=6.0,SNR=5.0
WRA PKiKP **PKiKP** **23 25 17.3 0.0**
comp=Z,0.5nm,0.6s,baz=220,slow=1.2,SNR=2.2
WRA PKKPbc **PKKPbc** **23 37 01.6 -0.9**
comp=Z,1.8nm,0.9s,baz=355,slow=2.9,SNR=10
WRA Warramunga Arr 100.61 161 **Pdif** **23 20 51.0 -0.4**
WRAB Tennant Creek 100.62 161 *i* P **Pdif** **23 20 49.9 -1.5**
WRAB pmax pmax
comp=Z,14nm,1.0s
WR8 Warramunga Arr 100.62 161 **Pdif** **23 20 51.3 -0.1**
WB0 Warramunga Arr 100.79 161 **Pdif** **23 20 52.1 -0.1**
TXAR Lajitas Array 108.38 296 PKiKP **PKiKP** **23 25 31.8 +0.6**
comp=Z,1.5nm,0.8s,baz=154,slow=1.7,SNR=16
TXAR PKKP **PKKPdf** **23 36 54.8 +0.3**
comp=Z,0.8nm,1.0s,baz=302,slow=3.8,SNR=4.7
GERES GERESS Array B 111.33 27 PKiKP **PKiKP** **23 25 35.6 -0.5**
comp=Z,0.5nm,0.7s,baz=222,slow=1.3,SNR=5.7
GERES PKKPbc **PKKPbc** **23 36 31.3 +0.2**
comp=Z,0.3nm,0.7s,baz=1.7,slow=3.1,SNR=6.5
CKRC Cesky Krumlov 111.45 27 AMS AMS 00 07 20.0
comp=Z,200nm,22.9s
KHC Kasperske Hory 111.57 27 *e*PS PS 23 36 01.6 +10
KHC AMS AMS 00 05 10.0
comp=Z,200nm,19.2s
HYB Hyderabad 112.17 93 *e*Pdif **Pdif** **23 21 43.5 +0.8**
PRU Pruhonice 112.60 27 *e*PS PS 23 36 14.9 +14
PRU AMS AMS 00 06 00.0
comp=Z,100nm,20.1s
DPC Dobruska-Polom 113.37 28 AMS AMS 00 08 30.0
comp=Z,200nm,20.3s
CLL Collm 113.46 25 *e*PKiKP **PKiKP** **23 25 40.0 +0.1**
CLL Collm 113.46 25 *e*PKiKP **PKiKP** **23 25 40.0 +0.1**
CLL *e*PP **PP** **23 26 33.0 -0.2**
CLL *e*PS **PS** **23 36 09.0 +0.1**
CLL *e*PPS PPS 23 37 18.0
CLL *e*SS SS 23 42 12.0 -1.9
CLL *e*SSS SSS 23 46 18.0
CLL *ex* x 23 50 12.0
CLL *ex* x 23 53 24.0
CHVC Chvalec 113.52 28 AMS AMS 00 08 40.0
comp=Z,100nm,13.5s
OSTC Ostas 113.53 28 AMS AMS 00 08 00.0
comp=Z,200nm,18.3s
EKA Eskdalemuir Ar 114.43 14 PKiKP **PKiKP** **23 25 42.7 +1.0**
comp=Z,0.8nm,0.8s,baz=220,slow=1.9,SNR=3.5
KBZ Khabaz 116.26 49 PKP **PKPdf** **23 25 43.8 -1.7**
comp=Z,1.7nm,0.9s,baz=225,slow=1.4,SNR=3.7
KIV Kislovodsk 116.36 49 *i* PKiKP **PKiKP** **23 25 46.5 +0.6**
KIV pmax pmax
comp=Z,4.0nm,1.1s
AKT Akhty 116.40 54 *e*PKiKP **PKiKP** **23 25 47.0 +0.9**
AKT MLR MLR
comp=Z,221nm,19.0s
CBX Cerro Bola 117.23 288 PKPdf **PKPdf** **23 25 47.4 -0.6**
SCHQ Schefferville 117.27 335 PKP **PKPdf** **23 25 46.7 -0.5**
comp=Z,6.7nm,0.8s,baz=198,slow=2.5,SNR=7.8

BLYC Blythe 117.30 290 **PKPdf** **23 25 47.8 -0.1**
AKASG Malin Array Be 117.31 36 PKP **PKPdf** **23 25 46.5 -0.9**
comp=Z,2.0nm,0.8s,baz=235,slow=1.2,SNR=4.1
AKASG Malin Array Be 117.31 36*c* iPKiKP **PKPdf** **23 25 47.0 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 117.31 36 PKPdf **PKPdf** **23 25 47.0 -0.3**
AKBB Malin Array Si 117.31 36*c* iPKiKP **PKiKP** **23 25 47.4 +0.1**
AKBB Malin Array Si 117.31 36 PKPdf **PKiKP** **23 25 46.9 -0.5**
HRA Herat 117.41 69 PKPdf **PKPdf** **23 25 48.2 -0.1**
TOLI2 Tolitoli 117.42 142 **PKPdf** **23 25 48.5 -0.3**
BAR Barrett 117.53 288 PKPdf **PKiKP** **23 25 48.5 +0.1**
K30B Basset 117.55 307 **PKiKP** **23 25 48.6 +0.4**
E38A The Farm, Brul 117.56 315 PKPdf **PKPdf** **23 25 47.4 -0.6**
BORC Borrego Spring 117.86 289 PKPdf **PKiKP** **23 25 49.6 +0.5**
DPP Dos Picos Cty 117.92 288 PKPdf **PKPdf** **23 25 49.1 0.0**
SUW Suwalki 118.47 30 PKIKP **PKPdf** **23 25 49.3 -0.1**
SUW Suwalki 118.47 30 **PKPdf** **23 25 49.3 -0.1**
MNK Minsk 120.22 33 *i* P **Pdif** **23 22 16.9 -0.5**
comp=E,8.0nm,0.8s
MNK *i* P **Pdif** **23 22 16.9 -0.5**
comp=N,9.0nm,1.0s
MNK *i* P **Pdif** **23 22 16.9 -0.5**
comp=Z,3.0nm,0.8s,baz=210
MNK *i* pP **pPdif** **23 22 36.3 -0.6**
MNK *i* PKP **PKiKP** **23 25 53.1 +0.2**
MNK *i* PP **PP** **23 27 18.8 -1.5**
MNK *i* PPP PPP 23 29 51.8
MNK *i* SKS **SKSdf** **23 32 58.7 +1.3**
MNK *i* SS **SS** **23 43 41.6 -0.2**
MNK *i* SSS SSS 23 48 08.5
MNK Minsk 120.22 33 *i* P **Pdif** **23 22 16.9 -0.5**
MNK *i* 23 25 53.0
MNK *i* 23 27 18.7
MNK *i* PPP PPP 23 29 51.7
MNK *i* 23 32 58.6
MNK *i* SS SS 23 43 41.6 -0.2
MNK *i* SSS SSS 23 48 08.5
MNK pmax pmax
comp=Z,3.0nm,0.8s
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK pmax pmax
comp=E,8.0nm,0.8s
RSSD Black Hills 120.62 305 PKIKP **PKiKP** **23 25 54.4 0.0**
RSSD Black Hills 120.62 305 **PKiKP** **23 25 54.4 0.0**
VSR Storozhevoye 121.06 42 *e*PKIKP **PKPdf** **23 25 54.3 -0.2**
VSR pmax pmax
comp=Z,4.0nm,0.6s
VORR Voronezh 121.45 41 *e*PKIKP **PKiKP** **23 25 55.4 0.0**
VORR pmax pmax
comp=Z,13nm,0.4s
HFS Hagfors 121.80 22 PKP **PKPdf** **23 25 53.8 -1.9**
comp=Z,3.0nm,0.8s,baz=174,slow=5.8,SNR=6.4
HFS PKKPbc **PKKPbc** **23 35 54.6 +0.5**
comp=Z,3.0nm,0.7s,baz=52,slow=2.4,SNR=8.8
NAO01 NORSAR Array S 121.92 20 PKPdf **PKiKP** **23 25 56.2 +0.2**
VRH Novokhopyorsk 121.97 43 *e*PKIKP **PKPdf** **23 25 56.2 -0.1**
VRH pmax pmax
comp=Z,18nm,0.7s
PDAR Pinedale Array 122.03 300 PKP **PKPdf** **23 25 56.2 -0.8**
comp=Z,5.2nm,0.5s,baz=148,slow=2.4,SNR=68
PDAR PKKPbc **PKKPab** **23 35 52.5 -0.5**
comp=Z,0.3nm,0.5s,baz=325,slow=4.0,SNR=4.2
LPSR Galich'ya Gora 122.12 41 *e*PKIKP **PKiKP** **23 25 56.8 +0.1**
LPSR pmax pmax
comp=Z,13nm,0.7s
NB2 NORSAR Subarra 122.16 20 PKPdf **PKPdf** **23 25 56.3 -0.1**
comp=Z,4.3nm,0.8s,baz=203,slow=1.9
NB2 PKKP **PKKPbc** **23 35 53.6 +0.8**
comp=Z,0.9nm,0.7s,baz=29,slow=4.6
NOA NORSAR Array B 122.16 20 PKP **PKPdf** **23 25 56.2 -0.2**
comp=Z,4.1nm,0.9s,baz=202,slow=1.8,SNR=7.1
NOA PKKPbc **PKKPbc** **23 35 53.1 +0.3**
comp=Z,1.1nm,0.7s,baz=21,slow=2.7,SNR=3.8
NOA NORSAR Array B 122.16 20 *e*PKIKP **PKiKP** **23 25 56.6 0.0**
NOA pmax pmax
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 122.19 314 PKP **PKPdf** **23 25 56.4 -0.3**
comp=Z,16nm,0.7s,baz=158,slow=1.6,SNR=38
ULM PP **PP** **23 27 31.4 -2.4**
comp=Z,2.7nm,0.9s,baz=138,slow=11,SNR=3.1
ULM PKKPbc **PKKPab** **23 35 51.4 +0.2**
comp=Z,0.9nm,0.5s,baz=304,slow=9.0,SNR=3.1
NIL Nilore 122.43 77 PKIKP **PKiKP** **23 25 58.3 +0.3**
NIL Nilore 122.43 77 **PKiKP** **23 25 58.3 +0.3**
AHID Auburn Hatcher 122.74 299 PKPdf **PKiKP** **23 25 59.4 +0.8**
NV11 Mina Array Sit 122.79 291 PKPdf **PKiKP** **23 25 59.6 +0.8**
BBGB Big Mountain B 122.81 288 PKPdf **PKiKP** **23 25 59.6 +0.8**
NVAR Mina Array Bea 122.86 291 PKP **PKiKP** **23 25 59.8 +0.9**
comp=Z,7.7nm,0.7s,baz=112,slow=2.0,SNR=17
NVAR Mina Array Bea 122.86 291 PKPdf **PKiKP** **23 25 59.0 +0.1**
VSU Vasula 123.34 30*c* iPKIKP **PKPdf** **23 25 58.3 -0.3**
VSU pmax pmax
comp=Z,10.0nm,0.8s
OBN Obninsk 123.41 38*d* iPKIKP **PKPdf** **23 25 58.9 0.0**
OBN *e* 23 27 44.3
OBN *e*SSS SSS 23 49 08.2
OBN pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 123.64 110 PKP **PKPdf** **23 26 00.4 -0.2**
comp=Z,8.7nm,0.7s,baz=217,slow=2.0,SNR=58
CMAR PKKPbc **PKKPbc** **23 35 45.8 -0.3**
comp=Z,1.3nm,0.3s,baz=18,slow=3.7,SNR=5.1
CMAR Chiang Mai Arr 123.64 110 *e*PKIKP **PKiKP** **23 26 01.0 +0.2**
CMAR pmax pmax
comp=Z,9.0nm,0.7s
CMAR Chiang Mai Arr 123.64 110 **PKPdf** **23 26 00.1 -0.5**
CHTO Chiang Mai 123.94 110 PKIKP **PKiKP** **23 26 01.4 0.0**
CHTO Chiang Mai 123.94 110 **PKiKP** **23 26 01.4 0.0**
CHTO Chiang Mai 123.94 110 PKP **PKiKP** **23 26 01.3 -0.1**
CHTO PKP **PKiKP** **23 26 01.4 -0.1**
CHGR Chuyangaron 124.20 71 *i* PKIKP **PKPdf** **23 26 00.3 -0.9**
MOS Moscow 124.26 38 *e*PKIKP **PKPdf** **23 25 59.2 -1.3**
BELG Belogornoye 125.13 46 *i* PKIKP **PKPdf** **23 26 02.0 -0.3**
NSS Namsos 125.52 19 *e*P **PKiKP** **23 26 04.9 +1.9**
FINES FINESS Array B 125.74 28 PKP **PKPdf** **23 26 03.1 -0.1**
comp=Z,13nm,0.5s,baz=191,slow=2.8,SNR=136
FINES PP **PP** **23 27 56.2 -1.2**
comp=Z,2.0nm,0.8s,baz=204,slow=5.9,SNR=3.2
FINES PKKPbc **PKKPbc** **23 35 39.1 +0.5**
comp=Z,1.4nm,0.9s,baz=64,slow=3.2,SNR=3.4
FINES FINESS Array B 125.74 28 **PKPdf** **23 26 02.9 -0.2**
SOEG Soedalen 125.96 357 *i* P **PKiKP** **23 26 03.8 0.0**
LEIR Leirfjorden 127.17 19 *e*P **PKPdf** **23 26 05.7 -0.1**
KONS Konsvik 127.52 18 *e*P **PKiKP** **23 26 07.6 +0.6**
ABKAR Akbulak array 127.82 56 **PKPdf** **23 26 07.1 -0.5**
KSH2 Kashi 127.83 75 PKP **PKiKP** **23 26 09.0 +0.3**
FFC Flin Flon 128.02 314 PKIKP **PKiKP** **23 26 08.4 0.0**
FFC Flin Flon 128.02 314 **PKiKP** **23 26 08.4 0.0**
KKAR Karatay Array 128.23 68 PKIKP **PKPdf** **23 26 08.2 -0.4**
KKAR Karatay Array 128.23 68 **PKPdf** **23 26 08.2 -0.4**
ILULI Ilulissat 128.23 349 *i* P **PKPdf** **23 26 07.8 +0.1**
FCC Fort Churchill 128.31 322 PKIKP **PKiKP** **23 26 08.5 -0.3**
FCC Fort Churchill 128.31 322 **PKiKP** **23 26 08.5 -0.3**
GDH Godhavn 128.53 348 *i* P **PKiKP** **23 26 08.8 -0.2**
FAUS Fauske 128.69 19 *e*P **PKiKP** **23 26 09.3 0.0**
FAUS IAmb IAmb 23 26 09.6
comp=Z,27nm,0.9s
KLMR Klimovskoe 128.97 35 *e*PKIKP **PKPdf** **23 26 07.3 -2.1**
KLMR pmax pmax
comp=Z,39nm,1.2s
STEI Steigen 129.18 19 *e*P **PKPdf** **23 26 09.6 +0.1**
STEI IAmb IAmb 23 26 10.4
comp=Z,17nm,0.9s
QIZ Qiongzhong 129.36 121 PKP **PKiKP** **23 26 15.0 +2.8**
QIZ PP **PP** **23 28 26.0 +4.7**
QIZ SS SS 23 45 41.5 +4.9
QIZ L L
comp=Z,170nm,17.4s
QIZ L L
comp=Z,97nm,10.9s
QIZ L L
comp=Z,200nm,15.4s
SAATT Saattut 129.82 349 *i* P **PKiKP** **23 26 12.0 +0.5**
AAK Ala-Archa 129.87 71 PKIKP **PKiKP** **23 26 12.9 +0.2**
AAK Ala-Archa 129.87 71 **PKiKP** **23 26 12.9 +0.2**
KIRV Kirov 130.51 42*c* iPKIKP **PKiKP** **23 26 12.8 -0.4**
SUMG Summit 130.58 355 *i* P **PKiKP** **23 26 13.6 +0.1**
TRO Tromso 131.32 19 *e*P **PKPdf** **23 26 13.5 0.0**
JETT Jettan, Norway 131.51 20 *e*P **PKPdf** **23 26 14.3 +0.3**
KTK1 Kautokeino 131.58 21 *e*P **PKPdf** **23 26 14.2 +0.1**
KTK1 IAmb IAmb 23 26 15.9
comp=Z,60nm,2.1s

PZH	PanZhiHua	131.76	108		PKP	PKPdf	23 26 15.9	-0.1		
ARTI	Arti	132.31	48	*c*	*i* PKIKP	PKiKP	23 26 17.0	+0.1		
ARTI					pmax	pmax				
	comp=Z,21nm,2.5s									
ARTI	Arti	132.31	48			PKPdf	23 26 16.4	+0.5		
ARA0	ARCESS Array S	132.46	22		*e*P	PKPdf	23 26 15.4	-0.4		
ARCES	ARCESS Array B	132.46	22		PKP	PKPdf	23 26 15.3	-0.5		
	comp=Z,6.0nm,0.6s,baz=207,slow=1.6,SNR=31									
ARCES					PP	PP	23 28 38.7	-2.5		
	comp=Z,4.4nm,0.9s,baz=216,slow=4.3,SNR=5.6									
ARCES	ARCESS Array B	132.46	22		*e*PKIKP	PKPdf	23 26 15.7	-0.1		
ARCES					pmax	pmax				
	comp=Z,6.0nm,0.6s									
LVZ	Lovozero	133.15	27	*c*	*i* PKIKP	PKPdf	23 26 17.3	+0.1		
LVZ					pmax	pmax				
	comp=Z,9.0nm,0.7s									
LVZ	Lovozero	133.15	27			PKPdf	23 26 16.8	-0.4		
SVE	Sverdlovsk	133.51	49		*e*PKIKP	PKiKP	23 26 18.8	-0.6		
SVE					pmax	pmax				
	comp=Z,13nm,0.9s									
KULLO	Kullorsuaq	133.95	349		*i* P	PKPdf	23 26 19.0	+0.6		
DAG	Danmarks Havn	134.58	2		*i* P	PKPdf	23 26 18.3	-1.2		
BORK	Borovoye	135.13	58		PKIKP	PKPdf	23 26 21.7	+0.5		
BORK	Borovoye	135.13	58			PKPdf	23 26 21.7	+0.5		
BVAR	Borovoye Array	135.14	58		PKhKP	PKPpre	23 26 07.4			
	comp=Z,2.0nm,0.8s,baz=220,slow=2.0,SNR=8.6									
BVAR					PKP	PKPdf	23 26 19.5	-1.8		
	comp=Z,9.5nm,0.7s,baz=236,slow=1.7,SNR=21									
BVAR					SKPbc	SKPbc	23 29 44.5	-0.6		
	comp=Z,0.9nm,0.8s,baz=226,slow=5.8,SNR=4.4									
BVAR					PKKP	PKKPdf	23 36 03.8	0.0		
	comp=Z,1.1nm,0.6s,baz=64,slow=3.9,SNR=4.7									
NEEM	North Greenlan	136.10	352		*i* P	PKiKP	23 26 24.3	-0.2		
MAKZ	Makanchi	136.59	72		PKHKP	PKPpre	23 26 15.5			
MAKZ	Makanchi	136.59	72			PKPpre	23 26 15.5			
MKAR	Makanchi Array	136.74	72		PKhKP	PKPpre	23 26 12.6			
	comp=Z,1.6nm,0.9s,baz=244,slow=2.6,SNR=9.8									
MKAR					PKP	PKPdf	23 26 23.0	-1.5		
	comp=Z,3.3nm,0.8s,baz=218,slow=3.7,SNR=13									
MKAR					PKKP	PKKPdf	23 36 00.9	+0.3		
	comp=Z,0.9nm,0.7s,baz=40,slow=1.5,SNR=10									
MKAR	Makanchi Array	136.74	72		PKIKP	PKPdf	23 26 24.5	0.0		
MKAR	Makanchi Array	136.74	72			PKPpre	23 26 15.9			
MKAR					PKPdf	PKPdf	23 26 24.5	0.0		
TULEG	Thule	137.03	346		*i* P	PKPdf	23 26 24.7	+0.5		
KURBB	Kurchatov Arra	137.40	66		PKhKP	PKPpre	23 26 12.2			
	comp=Z,0.8nm,0.2s,baz=237,slow=3.5,SNR=4.6									
KURBB					PKP	PKPdf	23 26 23.9	-1.6		
	comp=Z,4.9nm,0.8s,baz=238,slow=2.7,SNR=11									
WMQ	Urumqi	137.50	79		*e*PKP	PKiKP	23 26 28.4	+0.4		
WMQ					L	L				
	comp=Z,110nm,23.9s									
KURK	Kurchatov	137.50	66		PKIKP	PKPdf	23 26 25.2	-0.5		
KURK	Kurchatov	137.50	66			PKPdf	23 26 25.2	-0.5		
YKAW1	Yellowknife Wh	138.09	316			PKPdf	23 26 25.8	-0.6		
YKA	Yellowknife Ar	138.14	316		PKhKP	PKPpre	23 26 17.2			
	comp=Z,1.3nm,0.5s,baz=125,slow=2.7,SNR=9.7									
YKA					PKP	PKPdf	23 26 26.7	+0.2		
	comp=Z,34nm,0.8s,baz=132,slow=2.2,SNR=73									
YKA					PP	PP	23 29 15.3	-1.8		
	comp=Z,1.8nm,0.7s,baz=128,slow=6.5,SNR=5.6									
YKA					SKPbc	SKPbc	23 29 53.3	-0.4		
	comp=Z,4.0nm,0.9s,baz=128,slow=2.0,SNR=8.0									
YKA	Yellowknife Ar	138.14	316		PKPdf	PKPdf	23 26 27.1	+0.5		
SPITS	Spitsbergen Ar	138.31	12		PKhKP	PKPpre	23 26 16.2			
	comp=Z,3.2nm,0.7s,baz=172,slow=2.9,SNR=6.7									
SPITS					PKP	PKPdf	23 26 27.0	+0.5		
	comp=Z,8.0nm,0.8s,baz=157,slow=7.2,SNR=7.9									
SPITS					SKPbc	SKPbc	23 29 54.5	+0.6		
	comp=Z,4.0nm,1.0s,baz=178,slow=4.0,SNR=3.6									
KBS	Kingsbay	138.50	10		*i* P	PKPdf	23 26 25.7	-1.1		
HG4B	Hotspring	139.03	295			PKPdf	23 26 29.0	+0.5		
MOBC	Moresby Island	139.93	296		PKPdf	PKPdf	23 26 31.2	+1.1		
RES	Resolute Bay	139.96	337		PKIKP	PKiKP	23 26 31.2	-0.8		
RES	Resolute Bay	139.96	337		PKPdf	PKiKP	23 26 31.2	-0.8		
DIB	Dawson Inlet,	140.21	296			PKPdf	23 26 31.5	+0.9		
LZH	Lanzhou	140.46	101		*e*PKP	PKPdf	23 26 32.5	+0.6		
GTA2	Gaotai	140.84	94		PKP	PKPdf	23 26 28.8	-3.6		
GTA2					L	L				
	comp=Z,130nm,14.8s									
GTA2					L	L				
	comp=Z,220nm,22.3s									
GTA2					L	L				
	comp=Z,350nm,22.0s									
XAN	Xi'an	141.49	108		PKP	PKPdf	23 26 28.1	-5.5		
ZALV	Zalesovo Beam	142.49	65		PKhKP	PKPpre	23 26 29.8			
	comp=Z,2.3nm,0.5s,baz=239,slow=3.5,SNR=14									
ZALV	Zalesovo Beam	142.49	65		PKHKP	PKPpre	23 26 29.6			
ZALV	Zalesovo Beam	142.49	65			PKPpre	23 26 29.6			
R33M	Jennings River	143.01	305		P	PKPdf	23 26 34.8	-0.9		
	baz=121									
Q32M	Nakina River	143.36	304		P	PKPdf	23 26 35.4	-1.0		
	baz=121									
S32K	Killisnoo	143.62	300		P	PKPdf	23 26 36.0	-0.5		
	baz=122									
SIT	Sitka	143.75	299		P	PKPdf	23 26 36.4	-0.4		
	baz=122									
R32K	Eaglecrest	144.01	302		P	PKPdf	23 26 36.4	-0.9		
	baz=121,SNR=11									
P33M	Teslin, Yukon	144.24	305		P	PKPbc	23 26 36.9	+0.7		
	baz=120,SNR=27									
P32M	Atlin	144.32	304		P	PKPbc	23 26 36.7	+0.3		
	baz=120,SNR=13									
S31K	Pelican	144.64	300		P	PKPdf	23 26 37.9	-0.4		
	baz=121,SNR=6.1									
NJ2	Nanjing	144.65	122	⇓	PKP	PKPdf	23 26 39.3	+0.1		
MMPY	Sheldon Lake,	144.72	310		P	PKPdf	23 26 38.2	-0.3		
	baz=117,SNR=38									
C36M	Paulatuk	144.96	322		PKPbc	PKPbc	23 26 37.8	-0.2		
C36M	Paulatuk	144.96	322		P	PKPbc	23 26 37.6	-0.4		
	baz=114									
SKAG	Skagway	144.97	303		P	PKPdf	23 26 39.2	+0.3		
	baz=119,SNR=7.2									
WHY	Whitehorse	145.35	305			PKPab	23 26 40.5	+0.5		
WHY	Whitehorse	145.35	305		P	PKPab	23 26 40.2	+0.3		
	baz=118,SNR=15									
PLBC	Pleasant Camp	145.44	303		P	PKPab	23 26 40.7	+0.6		
	baz=119,SNR=8.6									
O30N	Mendenhall	145.93	305		P	PKPab	23 26 42.1	0.0		
	baz=117,SNR=26									
P30M	Million Dollar	146.01	303		P	PKPab	23 26 42.4	0.0		
	baz=118									
N31M	Braeburn, Yuko	146.11	306		P	PKPab	23 26 42.5	-0.3		
	baz=116,SNR=15									
P29M	Windy Craggy	146.13	302		P	PKPab	23 26 42.5	-0.4		
	baz=118,SNR=19									
A36M	Sachs Harbour	146.28	326			PKPab	23 26 42.6	-0.4		
A36M	Sachs Harbour	146.28	326		P	PKPab	23 26 43.0	-0.1		
	baz=109,SNR=38									
HYT	Haines Junctio	146.57	304		PKPdf	PKPdf	23 26 41.6	-0.1		
HYT	Haines Junctio	146.57	304		P	PKPab	23 26 44.6	0.0		
	baz=116,SNR=22									
N30M	Aishikik Lake	146.67	306			PKPbc	23 26 42.9	-0.8		
N30M	Aishikik Lake	146.67	306		P	PKPab	23 26 44.5	-0.5		
	baz=116,SNR=19									
O29M	Mount Kennedy	146.82	303			PKPdf	23 26 40.7	-1.5		
O29M	Mount Kennedy	146.82	303		P	PKPbc	23 26 44.7	+0.6		
	baz=116									
YUK6	Outpost Mounta	147.00	304		P	PKPbc	23 26 45.3	+0.5		
	baz=116									
M30M	Minto, Yukon	147.01	307		P	PKPbc	23 26 45.0	+0.5		
	baz=114									
HNS	HongShan	147.03	111	⇑	PKPbc	PKPbc	23 26 45.6	+0.4		
H31M	Peel River	147.26	314		PKPbc	PKPbc	23 26 46.0	+0.9		
H31M	Peel River	147.26	314		P	PKPbc	23 26 45.1	0.0		
	baz=111,SNR=138									
TIA	Tai'an	147.27	115		PKPbc	PKPbc	23 26 46.3	+0.3		
YUK4	Talbot Arm	147.30	305		P	PKPbc	23 26 46.2	+0.6		
	baz=115									
PINM	Pinnacle	147.48	302		P	PKPbc	23 26 46.6	+0.7		
	baz=116,SNR=17									
J30M	Hart River	147.60	311		PKPbc	PKiKP	23 26 47.4	-0.8		
J30M	Hart River	147.60	311		P	PKPbc	23 26 46.5	+0.3		
	baz=112,SNR=51									
F31M	Tsiigehtchic	147.60	317		PKPbc	PKPbc	23 26 46.0	+0.2		
F31M	Tsiigehtchic	147.60	317		P	PKPbc	23 26 46.1	+0.2		
	baz=109,SNR=7.9									
G31M	Satah River	147.63	316		P	PKPbc	23 26 46.4	+0.4		
	baz=110,SNR=34									
M29M	Somma Creek	147.67	307		P	PKPbc	23 26 47.2	+0.8		
	baz=113,SNR=87									
O28M	Mount Upton	147.74	303		P	PKiKP	23 26 47.9	-0.9		
	baz=115,SNR=16									
YUK8	Steele Glacier	147.76	304		P	PKPbc	23 26 47.8	+0.9		
	baz=114									
L29M	L29M	147.79	308		P	PKPbc	23 26 47.5	+0.9		
	baz=113,SNR=203									
INK	Inuvik	147.80	318		P	PKPbc	23 26 46.6	+0.2		
	baz=108,SNR=63									
K29M	Barlow Dome	147.81	309		P	PKPbc	23 26 47.0	+0.3		
	baz=112,SNR=37									
I30M	Mount Dempster	147.85	312		P	PKPbc	23 26 47.0	+0.2		
	baz=111,SNR=276									
HHC	Hu-ho-hao-te	148.04	104		*e*PKPbc	PKPbc	23 26 48.3	+0.2		
HHC					L	L				
	comp=Z,76nm,13.8s									
HHC					L	L				
	comp=Z,110nm,14.5s									
YUK3	Moose Creek	148.27	305		P	PKPbc	23 26 48.5	+0.3		
	baz=113,SNR=19									
J29N	Klondike Camp	148.32	310		P	PKiKP	23 26 48.8	-0.7		
	baz=110,SNR=6.8									
EPYK	Eagle Plains	148.37	314		P	PKPbc	23 26 48.2	+0.1		
	baz=109,SNR=102									
G30M	tAoh Zrail Nji	148.37	315		P	PKPbc	23 26 48.3	+0.3		
	baz=108,SNR=119									
F30M	Barrier River	148.40	317		P	PKPbc	23 26 48.4	+0.4		
	baz=107,SNR=58									
DAWY	Dawson	148.66	309		P	PKPbc	23 26 49.0	+0.2		
	baz=110,SNR=59									
BVCY	Beaver Creek	148.69	306		P	PKPbc	23 26 49.6	+0.6		
	baz=112,SNR=11									
H29M	Whitestone	148.96	313		P	PKPbc	23 26 49.9	+0.4		
	baz=108,SNR=18									
G29M	Pine Creek	149.03	315		P	PKPbc	23 26 50.0	+0.3		
	baz=107,SNR=133									
CRQE	Cirque	149.03	302		P	PKPbc	23 26 50.4	+0.4		
	baz=113,SNR=11									
M27K	Edge Creek, AK	149.11	305		P	PKPbc	23 26 50.6	+0.4		
	baz=112,SNR=23									
MCARA	McCarthy YSAT	149.25	303		P	PKiKP	23 26 51.2	-0.3		
	baz=112,SNR=11									
BCAR	Beaver Creek A	149.32	307			PKPdf	23 26 44.4	-1.7		
I28M	Miner Creek	149.34	312		P	PKPbc	23 26 50.6	+0.1		
	baz=108,SNR=42									
L27K	Beaver Creek,	149.34	307		P	PKiKP	23 26 51.1	-0.5		
	baz=110,SNR=128									
E29M	Blow River	149.38	318		P	PKPbc	23 26 50.8	+0.3		
	baz=104,SNR=8.4									
MOY	Mondy	149.38	79		*e*PKHKP	PKPpre	23 26 46.7			
MOY					pmax	pmax				
	comp=Z,62nm,2.2s									
M26K	Nabesna, AK	149.61	305		P	PKPbc	23 26 51.7	+0.4		
	baz=111,SNR=11									
BJI2	Beijing	149.77	110		PKPbc	PKiKP	23 26 52.8	-0.4		
BJI2					L	L				
	comp=Z,75nm,14.9s									
BJI2					L	L				
	comp=Z,67nm,14.9s									
BJI2					L	L				
	comp=Z,110nm,18.5s									
BMRM	Bremner River	149.80	302		P	PKiKP	23 26 52.7	0.0		
	baz=112,SNR=16									
ZAK	Zakamensk	149.87	82		*e*PKIKP	PKPdf	23 26 46.9	-0.5		
ZAK					pmax	pmax				
	comp=Z,57nm,1.2s									
D28M	Stokes Point	149.90	319		P	PKiKP	23 26 52.7	+0.2		
	baz=102,SNR=7.5									
F28M	Old Crow	149.91	316		P	PKiKP	23 26 52.5	-0.2		
	baz=104,SNR=10.0									
L26K	Log Cabin Wild	149.97	306		P	PKiKP	23 26 53.0	0.0		
	baz=110,SNR=29									
NRIK	Noril'sk	150.00	41		PKPbc	PKPbc	23 26 51.4	-0.5		
	comp=Z,19nm,0.8s,baz=270,slow=2.0,SNR=21									
Q23K	Middleton Isla	150.01	298		P	PKiKP	23 26 53.0	0.0		
	baz=114									
SONM	Songino Array	150.02	89		PKP	PKPdf	23 26 47.5	-0.3		
	comp=Z,2.3nm,0.4s,baz=204,slow=1.9,SNR=13									
SONM					PKPbc	PKPbc	23 26 52.8	-0.1		
	comp=Z,27nm,0.6s,baz=230,slow=3.4,SNR=129									
E28M	Babbage River	150.02	318		P	PKPbc	23 26 52.0	-0.1		
	baz=103,SNR=30									
N25K	Chitina, Valde	150.03	303		P	PKiKP	23 26 53.5	+0.3		
	baz=111,SNR=25									
I27K	Kandik River	150.05	312		P	PKiKP	23 26 53.2	+0.1		
	baz=106,SNR=8.5									
MENT	Mentasta	150.11	306		PKPbc	PKiKP	23 26 54.1	+0.8		
EYAK	Cordova Ski Ar	150.16	301		P	PKiKP	23 26 53.9	+0.5		
	baz=112,SNR=25									
H27K	Steamboat Moun	150.19	313		P	PKiKP	23 26 53.5	+0.2		
	baz=105,SNR=7.8									
G27K	Doyon Strip	150.38	314		P	PKiKP	23 26 53.6	-0.1		
	baz=104,SNR=36									
ULN	Ulaanbaatar	150.39	89		PKP	PKPbc	23 26 52.9	-0.8		
ULN					PKP	PKiKP	23 26 53.5	-1.0		
SCRK	Sand Creek	150.55	308		PKPbc	PKiKP	23 26 54.9	+0.7		
SCRK	Sand Creek	150.55	308		P	PKiKP	23 26 54.5	+0.3		
	baz=108,SNR=99									
HARP	HAARP	150.55	304		P	PKiKP	23 26 54.1	-0.1		
	baz=109,SNR=10									
KLU	Klutina	150.58	302		PKPbc	PKiKP	23 26 55.0	+0.6		
KLU	Klutina	150.58	302		P	PKiKP	23 26 54.8	+0.5		
	baz=110,SNR=28									
D27M	Malcolm River	150.66	319		PKPbc	PKiKP	23 26 55.1	+0.8		
D27M	Malcolm River	150.66	319		P	PKiKP	23 26 54.5	+0.3		
	baz=101,SNR=79									
E27K	Coleen River	150.68	317		PKPbc	PKiKP	23 26 54.7	+0.4		
E27K	Coleen River	150.68	317		P	PKiKP	23 26 54.4	+0.1		
	baz=102,SNR=44									
P23K	Montague Islan	150.72	299		P	PKiKP	23 26 54.7	+0.1		
	baz=112,SNR=20									
TLY	Talaya	150.78	80			PKiKP	23 26 54.7	-0.3		
RIDG	Independent Ri	150.84	307		PKPbc	PKiKP	23 26 56.0	+1.3		
RIDG	Independent Ri	150.84	307		P	PKiKP	23 26 55.2	+0.5		
	baz=107,SNR=132									
PAX	Paxson	150.87	305		P	PKiKP	23 26 54.9	0.0		
	baz=108,SNR=45									
GLI	Glacier Island	150.90	301		PKPbc	PKiKP	23 26 54.9	0.0		
GLI	Glacier Island	150.90	301		P	PKiKP	23 26 55.1	+0.2		
	baz=111,SNR=24									
M24K	Tolsona, Glenn	150.91	303		PKPbc	PKiKP	23 26 56.0	+1.0		
M24K	Tolsona, Glenn	150.91	303		P	PKiKP	23 26 55.9	+0.9		
	baz=108,SNR=32									
G26K	Porcupine Rive	151.24	314		P	PKiKP	23 26 55.9	+0.5		
	baz=102,SNR=5.8									
K24K	Donnelly Dome	151.26	307		P	PKiKP	23 26 55.9	+0.3		
	baz=107,SNR=19									
J25K	Salcha River,	151.31	309		PKPbc	PKiKP	23 26 56.4	+0.6		
J25K	Salcha River,	151.31	309		P	PKiKP	23 26 56.2	+0.5		
	baz=106,SNR=56									
SCM	Sheep Creek Mo	151.33	303		P	PKiKP	23 26 56.5	+0.6		
	baz=109,SNR=50									
IRK	Irkutsk	151.41	80		*e*PKIKP	PKPbc	23 26 53.9	-1.9		
IRK					pmax	pmax				
	comp=Z,48nm,2.2s									
PWL	Port Wells	151.46	300		P	PKiKP	23 26 56.6	+0.5		
	baz=110,SNR=49									
M23K	Glacier View	151.50	302		P	PKiKP	23 26 56.6	+0.5		
	baz=109,SNR=33									
F26K	Sheenjek River	151.52	315		P	PKiKP	23 26 57.0	+1.0		
	baz=101,SNR=7.0									
DL2	Dalian	151.56	118		PKPbc	PKPbc	23 26 55.8	-0.7		
PRP	Porcupine Dome	151.60	310		P	PKiKP	23 26 56.9	+0.5		
	baz=104,SNR=54									
C27K	Jago River	151.68	319		P	PKiKP	23 26 57.0	+0.7		
	baz=98,SNR=51									
KNK	Knik Glacier	151.70	301		P	PKiKP	23 26 57.0	+0.4		
	baz=109,SNR=24									
SEW	Seward	151.72	298		P	PKiKP	23 26 56.9	+0.3		
	baz=111,SNR=17									
DHY	Denali Highway	151.74	305		P	PKiKP	23 26 57.2	+0.5		
	baz=107,SNR=40									
WAT6	Susitna Watana	151.75	304		P	PKiKP	23 26 57.4	+0.5		
	baz=108,SNR=37									
SML	Sawmill	151.77	302		P	PKiKP	23 26 57.1	+0.4		
	baz=108,SNR=43									
HDA	Harding Lake	151.91	308		P	PKiKP	23 26 56.8	-0.1		
	baz=105,SNR=37									
O22K	Cooper Landing	151.97	299		P	PKiKP	23 26 57.6	+0.5		
	baz=110,SNR=6.0									
IL31		151.98	309		PKPbc	PKiKP	23 26 57.5	+0.5		
ILAR	Eielson Array	151.98	309		PKPbc	PKPbc	23 26 56.5	-0.2		
	comp=Z,133nm,0.9s,baz=116,slow=2.1,SNR=255									
ILAR	Eielson Array	151.98	309		PKIKP	PKiKP	23 26 57.9	+0.9		
ILAR	Eielson Array	151.98	309		PKPbc	PKiKP	23 26 57.9	+0.9		
PMR	Palmer	152.07	302		P	PKiKP	23 26 57.7	+0.5		
	baz=108,SNR=12									
F25K	Christian Rive	152.07	315		P	PKiKP	23 26 58.1	+0.9		
	baz=100,SNR=109									
G25K	Bearman Lake	152.09	313		P	PKiKP	23 26 58.5	+1.3		
	baz=101,SNR=78									
JMN	Monobe	152.11	142			PKiKP	23 26 59.2	+0.9		
C26K	Camden Bay	152.12	320		P	PKiKP	23 26 58.1	+0.9		
	baz=96,SNR=19									
E25K	Arctic Village	152.13	316		P	PKiKP	23 26 58.1	+0.8		
	baz=99,SNR=113									
WAT1	Susitna Watana	152.18	304		P	PKiKP	23 26 57.9	+0.3		
	baz=106									
RC01	Rabbit Creek A	152.18	300		P	PKiKP	23 26 58.2	+0.6		
	baz=109,SNR=21									
BRSE	Bradley Lake S	152.19	297		P	PKiKP	23 26 58.1	+0.5		
	baz=111									
BRLK	Bradley Lake	152.27	297		PKPbc	PKiKP	23 26 58.5	+0.7		
CCB	Clear Creek Bu	152.33	308		PKPbc	PKiKP	23 26 58.4	+0.7		
KDAK	Kodiak Island	152.35	293		PKIKP	PKiKP	23 26 58.6	+0.7		
KDAK	Kodiak Island	152.35	293			PKiKP	23 26 58.6	+0.7		
KDAK	Kodiak Island	152.35	293		P	PKiKP	23 26 58.4	+0.4		
	baz=113									
COLA	College	152.40	309		PKIKP	PKiKP	23 26 58.2	+0.3		
COLA	College	152.40	309			PKiKP	23 26 58.2	+0.3		
COLA	College	152.40	309		P	PKiKP	23 26 58.1	+0.2		
	baz=103									
WRH	Wood River Hil	152.41	308		PKPbc	PKiKP	23 26 58.5	+0.6		
OHAK	Old Harbor	152.47	291		P	PKiKP	23 26 58.5	+0.3		
	baz=114,SNR=16									
XLT	XiLinHaoTe	152.56	104		*e*PKPbc	PKiKP	23 26 59.4	+0.4		
XLT					PKPab	pPKPbc	23 27 16.1	-2.9		
M22K	Willow	152.57	302		P	PKiKP	23 26 58.9	+0.7		
	baz=108,SNR=13									
D25K	Kavik River	152.57	318		P	PKPbc	23 26 58.1	+0.1		
	baz=96,SNR=6.4									
MCK	McKinley	152.59	306		P	PKiKP	23 26 59.1	+0.7		
	baz=105,SNR=52									
HOM	Homer	152.59	297		PKPdf	PKPdf	23 26 53.0	+1.9		
HOM					PKPbc	PKiKP	23 26 59.9	+1.5		
HOM	Homer	152.59	297		P	PKiKP	23 26 58.9	+0.5		
	baz=110									
G24K	Hadweenzic Riv	152.62	313		PKPbc	PKiKP	23 26 59.2	+0.9		
G24K	Hadweenzic Riv	152.62	313		P	PKiKP	23 26 59.2	+0.9		
	baz=100,SNR=79									
H24K	Noodor Dome	152.62	311		PKPbc	PKiKP	23 26 59.2	+0.9		
H24K	Noodor Dome	152.62	311		P	PKiKP	23 26 58.9	+0.5		
	baz=101,SNR=56									
SII	Sitkinak Islan	152.64	289		P	PKiKP	23 26 59.4	+0.8		
	baz=115									
INCN	Inchon	152.65	127		PKIKP	PKPbc	23 26 58.9	-0.2		
INCN	Inchon	152.65	127		PKPbc	PKPbc	23 26 58.9	-0.2		
CUT	Chulitna	152.82	303			PKiKP	23 26 59.7	+0.9		
CUT	Chulitna	152.82	303		P	PKiKP	23 26 59.6	+0.9		
	baz=106,SNR=28									
NEA2	Nenana	152.85	308		PKPbc	PKiKP	23 26 59.4	+0.6		
NEA2	Nenana	152.85	308		P	PKiKP	23 26 58.9	+0.1		
	baz=103,SNR=39									
F24K	Squaw Lake	152.91	314		PKPbc	PKiKP	23 27 00.3	+1.4		
F24K	Squaw Lake	152.91	314		P	PKiKP	23 26 59.8	+0.9		
	baz=98,SNR=43									
BWN	Browne	152.92	307		PKPbc	PKiKP	23 26 59.6	+0.6		
CHIR	Chirikof Islan	153.06	287		PKPbc	PKiKP	23 27 00.1	+0.7		
CHIR	Chirikof Islan	153.06	287		P	PKiKP	23 26 60.0	+0.5		
	baz=116									
L22K	Petersville	153.08	303		PKPbc	PKiKP	23 27 00.2	+0.8		
L22K	Pet

	baz=87						
M18K	**Stony River**	**155.11 299**	P		PKPdf	23 27 03.8	+9.2
	baz=105						
I20K	**Naaghedeneel**	**155.17 307**	P		PKPdf	23 27 04.8	+10
	baz=98,SNR=7.7						
O17K	**Koliganek Bris**	**155.24 295**	P		PKPdf	23 27 04.3	+9.4
	baz=107,SNR=9.5						
S14K	**Fog Glacier**	**155.25 286**	P		PKPdf	23 27 04.7	+10
	baz=113						
E21K	**Killik River**	**155.27 316**	P		PKPdf	23 27 04.5	+10
	baz=91						
SDPT	**Sand Point**	**155.35 283**	P		PKPdf	23 27 04.9	+10
	baz=115						
H20K	**Anotleneega Mo**	**155.43 309**	P		PKPdf	23 27 05.6	+11
	baz=97,SNR=12						
B21K	**Ikpikpuk River**	**155.48 319**	P		PKPdf	23 27 05.4	+11
	baz=88,SNR=14						
N17K	**Nushagak Hills**	**155.50 297**	P		**PKPab**	**23 27 22.1**	**+0.6**
	baz=106						
A22K	**Sinclair Lake**	**155.51 322**	P		**PKPab**	**23 27 22.3**	**+1.1**
	baz=84						
J19K	**Poorman**	**155.54 305**	P		**PKPab**	**23 27 22.5**	**+0.9**
	baz=99						
C21K	**Knifeblade Rid**	**155.56 318**	P		**PKPab**	**23 27 22.9**	**+1.3**
	baz=89						
O16K	**Kokwok River B**	**155.67 294**	P		**PKPab**	**23 27 23.1**	**+0.8**
	baz=107						
L18K	**Granite Mounta**	**155.68 301**	P		**PKPab**	**23 27 23.2**	**+1.0**
	baz=102						
M17K	**Holitna River**	**155.84 299**	P		**PKPab**	**23 27 23.5**	**+0.5**
	baz=104						
F20K	**Avaraart Lake**	**155.90 313**	P		**PKPab**	**23 27 23.4**	**+0.4**
	baz=92						
J18K	**Innoko River**	**155.93 304**	P		**PKPab**	**23 27 23.9**	**+0.5**
	baz=100						
A21K	**Barrow**	**156.00 323**	P		**PKPab**	**23 27 24.5**	**+1.1**
	baz=82						
MJAR	**Matsushiro Arr**	**156.05 147**	PKP		**PKPdf**	**23 26 57.9**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=204,slow=2.7,SNR=7.2						
MJAR			PKPab		**PKPab**	**23 27 24.5**	**-0.1**
	comp=Z,4.9nm,0.8s,baz=193,slow=4.1,SNR=8.7						
H19K	**Roundabout Mou**	**156.09 309**	P		**PKPab**	**23 27 24.6**	**+0.7**
	baz=95						
E20K	**Nigu River**	**156.09 316**	P		**PKPab**	**23 27 24.9**	**+1.0**
	baz=89						
GCSA	**Galena City Sc**	**156.19 307**	P		**PKPab**	**23 27 25.3**	**+1.0**
	baz=97						
D20K	**Etivluk River**	**156.23 317**	P		**PKPab**	**23 27 25.3**	**+0.8**
	baz=88						
N16K	**Nishlik Lake**	**156.24 296**	P		**PKPab**	**23 27 25.4**	**+0.6**
	baz=105						
B20K	**Meade River**	**156.34 320**	P		**PKPab**	**23 27 25.6**	**+0.8**
	baz=84						
G19K	**Purcell Mounta**	**156.39 310**	P		**PKPab**	**23 27 25.8**	**+0.6**
	baz=93						
O15K	**Ungalikthiuk R**	**156.40 293**	P		**PKPab**	**23 27 25.6**	**+0.1**
	baz=107						
L17K	**Donlin**	**156.40 300**	P		**PKPab**	**23 27 26.2**	**+0.9**
	baz=102						
M16K	**Timber Creek**	**156.47 297**	P		**PKPab**	**23 27 26.6**	**+0.9**
	baz=104						
E19K	**Redstone River**	**156.49 314**	P		**PKPab**	**23 27 26.2**	**+0.5**
	baz=90						
K17K	**Iditarod**	**156.51 302**	P		**PKPab**	**23 27 26.6**	**+0.8**
	baz=100						
F19K	**Shaleruckik Mo**	**156.69 312**	P		**PKPab**	**23 27 26.8**	**+0.3**
	baz=91						
D19K	**Kuna River**	**156.79 316**	P		**PKPab**	**23 27 28.1**	**+1.2**
	baz=87						
N15K	**Kwethluk River**	**156.80 295**	P		**PKPab**	**23 27 28.0**	**+0.8**
	baz=105						
H18K	**Honhosa River**	**156.85 308**	P		**PKPab**	**23 27 28.5**	**+1.2**
	baz=95						
L16K	**Owhat River**	**156.86 299**	P		**PKPab**	**23 27 28.9**	**+1.5**
	baz=102						
J17K	**VABM Dome**	**156.97 303**	P		**PKPab**	**23 27 29.2**	**+1.4**
	baz=98						
G18K	**Tagagawik**	**157.02 310**	P		**PKPab**	**23 27 28.9**	**+0.9**
	baz=93						
O14K	**Tigyukauivet M**	**157.13 292**	P		**PKPab**	**23 27 29.8**	**+1.2**
	baz=106						
CN2	**Changchun**	**157.17 116**	*e*PKP		**PKPdf**	**23 26 55.6**	**-2.3**
M15K	**Kasigluk River**	**157.22 296**	P		**PKPab**	**23 27 30.1**	**+1.2**
	baz=103						
C19K	**Lookout Ridge**	**157.28 318**	P		**PKPab**	**23 27 30.4**	**+1.3**
	baz=84						
F18K	**Selawik**	**157.44 311**	P		**PKPab**	**23 27 30.6**	**+0.9**
	baz=90						
H17K	**Granite Mounta**	**157.49 307**	P		**PKPab**	**23 27 30.9**	**+0.9**
	baz=94						
N14K	**Kuskokwak Cree**	**157.51 294**	P		**PKPab**	**23 27 31.5**	**+1.3**
	baz=105,SNR=6.4						
A19K	**Wainwright**	**157.64 321**	P		**PKPab**	**23 27 31.8**	**+1.4**
	baz=80						
J16K	**Anvik River**	**157.64 303**	P		**PKPab**	**23 27 32.0**	**+1.3**
	baz=97						
I17K	**Unalakleet**	**157.75 304**	P		**PKPab**	**23 27 32.5**	**+1.4**
	baz=96						
E18K	**Tukpahlearik C**	**157.79 314**	P		**PKPab**	**23 27 32.6**	**+1.3**
	baz=87						
L15K	**Ungalak Mounta**	**157.80 298**	P		**PKPab**	**23 27 32.6**	**+1.2**
	baz=100						
G17K	**Kiwalik Mounta**	**157.83 308**	P		**PKPab**	**23 27 32.6**	**+1.1**
	baz=92						
M14K	**Bethel**	**157.84 296**	P		**PKPab**	**23 27 32.9**	**+1.3**
	baz=102,SNR=5.4						
UNV	**Unalaska Valle**	**157.85 276**	P		**PKPab**	**23 27 32.8**	**+1.0**
	baz=117						
C18K	**Utukok River**	**157.91 317**	P		**PKPab**	**23 27 32.7**	**+0.9**
	baz=84						
K15K	**Wolf Creek Mou**	**157.92 300**	P		**PKPab**	**23 27 33.2**	**+1.2**
	baz=99						
HILR	**Hailar Array B**	**158.14 98**	PKP		**PKPdf**	**23 27 00.2**	**+1.2**
	comp=Z,1.7nm,0.5s,baz=242,slow=3.1,SNR=1.9						
HILR			PKPab		**PKPab**	**23 27 34.1**	**+0.8**
	comp=Z,9.8nm,0.7s,baz=227,slow=4.4,SNR=8.8						
E17K	**Hotham Inlet**	**158.28 313**	P		**PKPab**	**23 27 34.1**	**+0.7**
	baz=87,SNR=6.1						
L14K	**Kuka Creek**	**158.30 297**	P		**PKPab**	**23 27 34.4**	**+0.8**
	baz=100						
M13K	**Dall Lake**	**158.44 294**	P		**PKPab**	**23 27 35.1**	**+0.9**
	baz=102						
H16K	**Elim**	**158.47 306**	P		**PKPab**	**23 27 35.0**	**+0.8**
	baz=93						
G16K	**Koyuk River**	**158.54 308**	P		**PKPab**	**23 27 35.4**	**+0.8**
	baz=90						
RDOG	**Red Dog Mine**	**158.61 316**	P		**PKPab**	**23 27 35.5**	**+0.7**
	baz=83						
C17K	**DeLong Mountai**	**158.66 317**	P		**PKPab**	**23 27 36.1**	**+1.1**
	baz=82						
D17K	**Noatak River**	**158.72 315**	P		**PKPab**	**23 27 36.2**	**+0.9**
	baz=84						
J14K	**Nanvaranak Lak**	**158.91 301**	P		**PKPab**	**23 27 36.7**	**+0.5**
	baz=96						
G15K	**Niukluk**	**159.25 307**	P		**PKPab**	**23 27 38.7**	**+1.1**
	baz=90						
K13K	**Kusilvak Mount**	**159.32 298**	P		**PKPab**	**23 27 39.3**	**+1.3**
	baz=98						
C16K	**Lisburne Hills**	**159.48 317**	P		**PKPab**	**23 27 39.8**	**+1.3**
	baz=80						
F15K	**North Star Dit**	**159.49 309**	P		**PKPab**	**23 27 39.9**	**+1.2**
	baz=88						
BNX	**BinXian**	**159.54 115**	⇓P		**PKPab**	**23 27 38.6**	**-0.8**
BNX			pmax		pmax		
	comp=Z,11nm,0.9s						
M11K	**Mekoryuk**	**159.82 294**	P		**PKPab**	**23 27 41.4**	**+1.3**
	baz=101						
ANM	**Nome**	**159.82 306**	P		**PKPab**	**23 27 41.7**	**+1.6**
	baz=90						
F14K	**Arctic Creek**	**160.20 309**	P		**PKPab**	**23 27 42.9**	**+1.2**
	baz=87						
USRK	**Ussuriysk Ar.**	**160.48 125**	PKPab		**PKPab**	**23 27 43.6**	**+0.1**
	comp=Z,3.7nm,0.8s,baz=192,slow=4.0,SNR=4.3						
ADK	**Adak**	**162.32 262**	PKP2		**PKPab**	**23 27 51.2**	**-0.1**
ADK	**Adak**	**162.32 262**			**PKPab**	**23 27 51.2**	**-0.1**
KIWB	**Kanaga Island**	**162.55 262**			**PKPdf**	**23 27 02.4**	**-1.3**
HEH	**HeiHe**	**162.55 105**	*e*P		**PKPab**	**23 27 51.8**	**-0.7**
HEH			pmax		pmax		
	comp=Z,8.0nm,0.8s						
HEH	**HeiHe**	**162.55 105**	PKP		**PKPdf**	**23 27 03.0**	**-0.8**
HEH			L		L		
	comp=Z,330nm,18.8s						
HEH			L		L		
	comp=Z,350nm,19.4s						
HEH			L		L		
	comp=Z,450nm,21.7s						
GAMB	**Gambell**	**162.62 304**	P		**PKPab**	**23 27 49.9**	**-2.5**
	baz=86						

YSS	**Yuzhno-Sakhali**	**166.93 143**	*e*PKP2		**PKPab**	**23 28 12.3**	**+0.6**
YSS			*e*			23 31 59.8	
PETK	**Petropavlovsk-**	**174.73 203**	PKP		**PKPdf**	**23 27 10.8**	**-0.8**
	comp=Z,8.4nm,1.0s,baz=132,slow=2.1,SNR=5.7						
PETK			PKPab		**PKPab**	**23 28 47.0**	**+0.8**
	comp=Z,17nm,1.0s,baz=157,slow=5.9,SNR=11						
PETK	**Petropavlovsk-**	**174.73 203**	PKPdf		**PKPdf**	**23 27 11.4**	**-0.2**
PETK			PKPab		**PKPab**	**23 28 46.3**	**+0.1**
MA2	**Magadan**	**177.59 47**	PKIKP		**PKPdf**	**23 27 11.6**	**-0.4**
MA2	**Magadan**	**177.59 47**	PKPdf		**PKPdf**	**23 27 11.6**	**-0.4**

*PRE **20** 23:26:25.9±0.8, 23.51°S×25.86°E, h5km, ML2.1, Presumed earthquake*

BGSI 20 23:26:29.8±1.3, 23.22°S×26.03°E, h2km±8km, ML2.6, Presumed earthquake, Botswana

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LPHEP	**Lephephe**	**0.21**	**227**	*i* P		Pg	23 26 33.7	-0.1
LPHEP				*i* S		Sg	23 26 37.1	+0.5
LPHEP				IAML			23 26 38.5	
	comp=E,311nm,0.5s							
LPHEP	**Lephephe**	**0.21**	**227**	*i* P		Pg	23 26 33.7	-0.1
KDWAN	**Kaudwane**	**1.26**	**263**	*i* P		Pg	23 26 50.9	-3.2
KDWAN				*i* S		Sg	23 27 04.8	-5.7
KDWAN				IAML			23 27 11.7	
	comp=N,52nm,0.5s							
KDWAN	**Kaudwane**	**1.26**	**263**	*i* P		Pg	23 26 51.5	-2.5
KDWAN				*i* S		Sg	23 27 09.3	-1.2
KDWAN				IAML			23 27 11.4	
	comp=E,108nm,0.3s							
KHWEE	**KHWEE**	**1.38**	**337**	*i* P		Pn	23 26 55.1	-1.1
KHWEE				*i* S		Sn	23 27 14.9	-0.1
KHWEE				IAML			23 27 17.6	
	comp=N,326nm,0.3s							
KHWEE	**KHWEE**	**1.38**	**337**	*i* P		Pn	23 26 53.9	-2.2
KHWEE				*i* S		Sg	23 27 12.8	-1.3
KHWEE				IAML			23 27 17.5	
	comp=N,316nm,0.3s							
LEPH	**Lephalale, Lim**	**1.75**	**112**	*e*P		Pn	23 26 58.1	-3.1
LEPH				*e*S		Sn	23 27 22.1	-2.0
LEPH				IAML			23 27 24.4	
	comp=Z,29nm,0.6s							
LBTB	**Lobatse**	**1.83**	**192**	*e*P		Pn	23 26 54.5	-7.8
LBTB				*e*S		Sn	23 27 15.6	-11
LBTB				IAML			23 27 19.0	
	comp=Z,36nm,0.2s							
SKOMA	**Sekoma**	**2.31**	**236**	*i* P		Pn	23 27 04.2	-4.7
SKOMA	**Sekoma**	**2.31**	**236**	*i* P		Pn	23 27 07.4	-1.5
SKOMA				*i* S		Sn	23 27 34.4	-3.6
SKOMA				IAML			23 27 43.0	
	comp=N,34nm,0.3s							
SOOWA	**Sowa**	**2.65**	**4**	*i* P		Pn	23 27 15.7	+2.0
SOOWA				*i* S		Sn	23 27 47.2	+0.8
SOOWA				IAML			23 27 57.7	
	comp=E,61nm,0.8s							
SOOWA	**Sowa**	**2.65**	**4**	*i* P		Pn	23 27 12.3	-1.3
SOOWA				*i* S		Sn	23 27 42.1	-4.4
SOOWA				IAML			23 27 57.7	
	comp=E,61nm,0.8s							
MAKGR	**Makgori**	**2.81**	**203**	*i* P		Pn	23 27 09.2	-6.6
MAKGR				*i* S		Sn	23 27 39.6	-11
MAKGR				IAML			23 27 53.5	
	comp=E,99nm,0.4s							
HRAO	**HartRAO**	**3.06**	**151**	*e*P		Pn	23 27 14.1	-5.2
HRAO				*e*S		Sn	23 27 48.3	-8.2
HRAO				IAML			23 28 05.0	
	comp=Z,6.0nm,0.4s							
PHPEN	**Phepeng**	**3.66**	**232**	*i* P		Pn	23 27 21.6	-6.0
PILG	**Pilgrimsrest,**	**4.61**	**113**	*e*P		Pn	23 27 38.4	-2.3
PILG				*e*S		Sn	23 28 30.5	-4.4
PILG				IAML			23 28 57.2	
	comp=Z,5.0nm,0.4s							
SNKL	**Senekal, Frees**	**5.27**	**163**	*e*P		Pn	23 27 44.0	-5.8
SNKL				*e*S		Sn	23 28 40.1	-11
SNKL				IAML			23 29 07.9	
	comp=Z,5.5nm,0.6s							
BOSA	**Boshof**	**5.42**	**187**	*e*P		Pn	23 27 43.8	-7.9
BOSA				*e*S		Sn	23 28 40.8	-14
BOSA				IAML			23 28 42.0	
	comp=Z,2.4nm,0.3s							
BRAK	**Brakfontein**	**8.97**	**197**	*e*P		Pn	23 28 33.5	-7.0
BRAK				*e*S		Sn	23 30 05.2	-17
BRAK				IAML			23 31 08.0	
	comp=Z,2.7nm,0.5s							
FRAZ	**Fraserburg**	**9.59**	**204**	*e*P		Pn	23 28 41.3	-7.8
FRAZ				*e*S		Sn	23 30 20.9	-17
FRAZ				IAML			23 30 22.2	
	comp=Z,1.0nm,1.0s							
SUR	**Sutherland**	**10.22**	**206**	*e*P		Pn	23 28 50.5	-7.2
SUR				*e*S		Sn	23 30 36.1	-17
SUR				IAML			23 30 51.9	
	comp=Z,1.4nm,0.8s							

IDC 20 23:55:47.1±3.2, 10.21S×120.35E, h0km, mb3.3/1, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=269.1km s-min=32.4km az=50.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.60**	**127**	Pn		Pn	23 59 40.3	-1.1
	0.1nm,0.3s,baz=302,slow=14,SNR=2.1							
WRA				Sn		Sn	00 02 35.1	-11
	0.1nm,0.3s,baz=298,slow=22,SNR=2.8							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**18.61**	**138**	P		Pn	00 00 06.8	+0.4
	0.1nm,0.3s,baz=312,slow=12,SNR=7.0							
ASAR				S		Sn	00 03 21.2	-14
	0.2nm,0.6s,baz=314,slow=24,SNR=2.1							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**66.14**	**332**	P		P	00 06 36.3	0.0
	0.2nm,0.5s,baz=131,slow=8.0,SNR=2.5							
	0.2nm,0.5s							

*NOU **20** 23:58:35.4, 15.13S×174.64W, h0km, mb4.7/13, Tonga Islands*

*IDC **20** 23:58:39.7±0.6, 15.61S×175.36W, h0km, mb4.3/15, mbtmp4.3/15, MS4.3/62, Error ellipse: s-maj=25.3km s-min=16.8km az=134.0*

*NEIC **20** 23:58:41.0±2.6, 15.41S±0.09×175.23W±0.06, h10km±1km, mb4.8/94, Error ellipse: s-maj=14.5km s-min=10.1km az=174.0*

*GCMT **20** 23:58:45.0±0.1, 15.36S±0.01×175.23W±0.01, h12km, MW5.1/144, Moment Tensor Solution. s78,c123; s144,c251; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.10±.09; Mθθ5.32±.08; Mϕϕ-4.22±.08; Mrθ0.68±.22; Mθϕ3.22±.07; Mϕr-0.94±.22; Best double couple: M₀5.90300×10¹⁶ NP1:ϕs29.00000°, δ78.00000°, λ-172.00000°. NP2:ϕs297.00000°, δ82.00000°, λ-12.00000°. Principal axes: T 6.3250, Plg3.0000°, Azm343.0000°; N -0.8440, Plg76.0000°, Azm85.0000°; P -5.4810, Plg14.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 23:58:40.7±0.4, 15.39S±0.08×175.15W±0.06, h10km, n252, σ1§50/181, mb4.8/58, MS4.3/60, 4D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.07**	**290**	P		**Pn**	**23 59 30.0**	**+0.7**
FUTU	**Fugatoga**	**3.07**	**290**			**Pn**	**23 59 27.1**	**-2.2**
AFI	**Afiamalu**	**3.58**	**66**	Pn		**Pn**	**23 59 33.8**	**-2.6**
	9.5nm,0.3s,baz=274,slow=13,SNR=16							
AFI				Sn		**Sn**	**00 00 14.5**	**-4.2**
	26nm,0.3s,baz=233,slow=20,SNR=6.4							
AFI				LR		LR	00 00 50.7	
	comp=Z,4μm,21.5s,baz=222,slow=34							
AFI	**Afiamalu**	**3.58**	**66**	Pn		**Pn**	**23 59 35.9**	**-0.5**
LKBA	**Tubou, Lakemba**	**4.51**	**231**	P		**Pn**	**23 59 51.6**	**+2.6**
DGTI	**Dogotuki**	**5.01**	**259**	P		**Pn**	**23 59 58.1**	**+2.2**
NIUE	**Niue**	**6.19**	**127**	Pn		**Pn**	**00 00 12.3**	**+0.2**
MSVF	**Nonsavu**	**6.93**	**249**	Pn		**Pn**	**00 00 24.3**	**+2.0**
	0.6nm,0.3s,baz=107,slow=14,SNR=8.3							
MSVF				LR		LR	00 02 41.3	
	comp=Z,6μm,20.7s,baz=78,slow=36							
MSVF	**Nonsavu**	**6.93**	**249**	P		Pn	00 00 27.0	+4.6
MSVF	**Nonsavu**	**6.93**	**249**			**Pn**	**00 00 21.3**	**-1.1**
RAO	**Raoul Island**	**14.03**	**190**	LR		LR	00 06 31.0	
	comp=Z,4μm,18.9s,baz=342,slow=34							

MARNC	**Mare, Loyalty**	**17.06 247**	P		**P**	**00 02 42.4**	**+1.1**
MARNC	**Mare, Loyalty**	**17.06 247**			**Pn**	**00 02 37.9**	**-1.6**
YATNC	**Mamie plateau,**	**18.25 246**	P		**P**	**00 02 57.0**	**+2.6**
OUENC	**Ouen Island, N**	**18.41 245**	P		**P**	**00 02 57.9**	**+1.8**
OUENC	**Ouen Island, N**	**18.41 245**			**Pn**	**00 02 54.4**	**-1.7**
OUENC			IAmb		IAmb	00 02 58.9	
	comp=Z,75nm,1.0s						
DZM	**Mont Dzumac**	**18.65 246**	P		**Pn**	**00 02 59.6**	**+0.5**
	comp=Z,33nm,1.0s,baz=73,slow=19,SNR=13						
ONTNC	**Ouen Toro**	**18.71 246**	P		**Pn**	**00 03 01.5**	**+1.7**
ONTNC	**Ouen Toro**	**18.71 246**	P		**P**	**00 02 57.3**	**-2.2**
ONTNC			IAmb		IAmb	00 03 07.4	
	comp=Z,76nm,1.0s						
NOUC	**Port Laguerre**	**18.78 246**	P		**Pn**	**00 03 01.7**	**+1.0**
KOUNC	**Koumac, New Ca**	**20.22 252**	P		Pn	00 03 18.6	+0.7
KOUNC	**Koumac, New Ca**	**20.22 252**	P		**P**	**00 03 15.3**	**-0.7**
KOUNC			IAmb		IAmb	00 03 37.2	
	comp=Z,105nm,1.3s						
URZ	**Urewera**	**23.78 195**	LR		LR	00 12 39.5	
	comp=Z,2μm,18.7s,baz=16,slow=36						
RTZ	**Ruatahuna**	**24.15 195**	P		**P**	**00 03 55.4**	**-1.6**
RTZ			IAmb		IAmb	00 04 04.5	
	comp=Z,57nm,1.3s						
PAE	**Paea**	**24.61 99**	*e*T		T	00 29 32.0	
	comp=Z,24nm,0.3s						
PPT	**Papeete**	**24.61 99**	LR		LR	00 11 05.4	
	comp=Z,425nm,20.0s,baz=269,slow=30						
PPT2	**Papeete2**	**24.61 99**	*e*P		P	00 03 53.6	-7.9
	comp=Z,65nm,26.5s						
PPT2			*e*S		S	00 08 13.6	-9.3
	comp=Z,4μm,26.0s						
PPT2			*e*LR		LR	00 09 56.4	
	comp=Z,979nm,26.0s						
PPT2			*e*LR		LR	00 10 03.2	
	comp=Z,1μm,25.2s						
XMAS	**Kiritimati**	**24.64 47**	P		**P**	**00 04 01.5**	**-0.1**
HNR	**Honiara**	**25.02 281**	LR		LR	00 12 20.9	
	comp=Z,64nm,19.5s,baz=202,slow=33						
PMOR	**Pomariorio Ree**	**26.30 93**	*e*T		T	00 31 36.6	
	comp=Z,4.5nm,0.3s						
RPZ	**Rata Peaks**	**30.58 200**	LR		LR	00 17 00.7	
	comp=Z,364nm,18.3s,baz=230,slow=36						
KRVT	**Keravat (AS076**	**34.11 285**	LR		LR	00 17 14.1	
	comp=Z,143nm,21.0s,baz=41,slow=33						
TAOE	**Nuku Hiva Isla**	**34.80 83**	*e*LR		LR	00 14 41.6	
	comp=Z,2μm,27.0s						
TAOE			*e*T		T	00 42 15.5	
	comp=Z,46nm,0.2s						
CTA	**Charters Tower**	**37.00 257**	LR		LR	00 18 23.9	
	comp=Z,439nm,20.0s,baz=60,slow=32						
PMG	**Port Moresby**	**37.25 275**	LR		LR	00 18 55.8	
	comp=Z,480nm,20.2s,baz=78,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.12 331**	T		T	00 46 24.3	
	baz=151,slow=74,SNR=20						
H11S3	**WAKE ISLAND Hy**	**38.13 331**	T		T	00 47 13.4	
	baz=151						
H11S1	**WAKE ISLAND Hy**	**38.14 331**	T		T	00 46 28.4	
	baz=151,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**39.10 333**	T		T	00 47 54.0	
	baz=152,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**39.10 333**	T		T	00 47 43.1	
	baz=152,slow=76,SNR=40						
H11N2	**WAKE ISLAND Hy**	**39.12 333**	T		T	00 47 57.4	
	baz=152,slow=76,SNR=34						
STKA	**Stephens Creek**	**42.58 239**	P		**P**	**00 06 35.2**	**-1.9**
	comp=Z,4.9nm,1.0s,baz=74,slow=11,SNR=6.8						
STKA			LR		LR	00 22 19.0	
	comp=Z,433nm,20.6s,baz=73,slow=34						
	comp=Z,4.9nm,1.0s						
WB0	**Warramunga Arr**	**48.16 257**			**P**	**00 07 18.3**	**-3.2**
WB2	**Warramunga Arr**	**48.19 257**	P		**P**	**00 07 20.1**	**-1.7**
WB2			IAmb		IAmb	00 07 20.5	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**48.20 257**	P		**P**	**00 07 17.6**	**-4.2**
WRA	**Warramunga Arr**	**48.20 257**	P		**P**	**00 07 19.7**	**-2.1**
	comp=Z,6.2nm,0.9s,baz=92,slow=8.3,SNR=28						
WRA			PcP		**PcP**	**00 08 49.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=98,slow=2.6,SNR=1.4						
	comp=Z,6.2nm,0.9s						
WRA	**Warramunga Arr**	**48.20 257**			**P**	**00 07 18.4**	**-3.4**
AS31	**Alice Springs**	**48.51 252**			**P**	**00 07 22.2**	**-2.0**
ASAR	**Alice Springs**	**48.51 252**	P		**P**	**00 07 21.6**	**-2.6**
	comp=Z,9.4nm,0.8s,baz=90,slow=7.5,SNR=71						
ASAR			LR		LR	00 25 46.7	
	comp=Z,1μm,21.6s,baz=89,slow=34						
	comp=Z,9.4nm,0.8s						
ASAR	**Alice Springs**	**48.51 252**			**P**	**00 07 22.4**	**-1.8**
GUMO	**Guam**	**48.92 304**	LR		LR	00 24 58.1	
	comp=Z,247nm,20.5s,baz=137,slow=32						
DPSS	**Saipan**	**49.15 306**	P		**P**	**00 07 27.2**	**-1.9**
SIJI	**Sorong**	**54.80 280**	P		**P**	**00 08 09.9**	**-1.4**
	comp=Z,8.3nm,0.6s,baz=118,slow=18,SNR=2.3						
	comp=Z,8.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**56.56 258**	LR		LR	00 30 09.1	
	comp=Z,641nm,21.5s,baz=105,slow=34						
FITZ	**Fitzroy Crossi**	**56.56 258**	P		**P**	**00 08 22.6**	**-1.3**
JCJ	**Chichijima**	**59.15 315**	LR		LR	00 30 08.3	
	comp=Z,449nm,20.2s,baz=138,slow=32						
BATI	**Banata**	**59.73 267**	LR		LR	00 33 08.2	
	comp=Z,375nm,19.6s,baz=143,slow=35						
RPN	**Rapa Nui**	**61.84 113**	LR		LR	00 30 22.2	
	comp=Z,164nm,21.0s,baz=26,slow=31						
DAV	**Davao City (W)**	**62.81 286**	LR		LR	00 33 38.3	
	comp=Z,134nm,21.1s,baz=134,slow=34						
SBA	**Scott Base**	**63.13 184**			**P**	**00 09 08.8**	**+0.7**
SBA			IAmb		IAmb	00 09 11.1	
	comp=Z,12nm,1.2s						
NWAO	**Narrogin (SRO)**	**63.15 241**	LR		LR	00 34 38.6	
	comp=Z,474nm,21.7s,baz=93,slow=34						
VNDA	**Vanda**	**63.22 185**	P		**P**	**00 09 08.5**	**-0.3**
VNDA	comp=Z,3.1nm,1.1s,baz=16,slow=19,SNR=6.3						
			LR		LR	00 33 13.6	
	comp=Z,84nm,19.8s,baz=34,slow=33						
	comp=Z,3.1nm,1.1s						
VNDA	**Vanda**	**63.22 185**			**P**	**00 09 08.9**	**+0.1**
VNDA			IAmb		IAmb	00 09 18.0	
	comp=Z,8.8nm,1.4s						
JHJ	**Hachijo jima 2**	**64.64 319**	LR		LR	00 38 23.2	
	comp=

KSRS	Korea Array	74.98	316	LR	LR	00 40 43.6		
	comp=Z,113nm,19.4s,baz=125,slow=34							
KDAK	Kodiak Island	75.26	12	LR	LR	00 37 45.6		
	comp=Z,224nm,20.2s,baz=193,slow=31							
NVAR	Mina Array Bea	75.46	43	P	P	00 10 27.8	+2.4	
	comp=Z,0.5nm,0.7s,baz=242,slow=8.1,SNR=8.0							
NVAR				LR	LR	00 37 19.9		
	comp=Z,168nm,19.6s,baz=229,slow=31							
	comp=Z,0.5nm,0.7s							
NVAR	Mina Array Bea	75.46	43	P	P	00 10 26.4	+1.0	
PAHR	Pah Rah Range	75.47	41	P	P	00 10 26.5	+1.2	
GMN	Gold Mountain	75.54	44	P	P	00 10 27.1	+1.2	
NV11	Mina Array Sit	75.56	43	P	P	00 10 27.8	+1.9	
NV11				IAmb	IAmb	00 10 33.4		
	comp=Z,9.6nm,1.5s							
BLYC	Blythe	75.62	49	P	P	00 10 28.0	+1.9	
BLYC				IAmb	IAmb	00 10 35.0		
	comp=Z,7.6nm,1.2s							
113A	Mohawk Valley,	75.69	50	P	P	00 10 27.6	+1.1	
113A				IAmb	IAmb	00 10 46.3		
	comp=Z,5.5nm,0.8s							
WCT	Wildcat Mounta	75.70	45	P	P	00 10 28.4	+1.7	
MTPC	Mountain Pass	75.76	47	P	P	00 10 29.0	+1.9	
MTPC				IAmb	IAmb	00 10 35.7		
	comp=Z,8.1nm,1.4s							
KVN	Kaiserville	75.94	42	P	P	00 10 28.0	-0.1	
LEM	Lembang	75.95	267	LR	LR	00 42 45.1		
	comp=Z,164nm,20.9s,baz=336,slow=35							
TPH	Tonopah	75.98	44	P	P	00 10 28.6	+0.2	
O16K	Kokwok River B	76.00	9	P	P	00 10 28.9	+1.2	
O16K				IAmb	IAmb	00 10 45.7		
	comp=Z,8.8nm,1.2s							
TPNV	Topopah Spring	76.04	45	P	P	00 10 29.2	+0.5	
USRK	Ussuriysk Ar.	76.38	324	LR	LR	00 37 49.8		
	comp=Z,645nm,21.9s,baz=126,slow=31							
M14K	Bethel	76.62	7		P	00 10 31.5	+0.3	
PINE	Pine Mountain	76.90	37		P	00 10 34.0	+0.5	
PINE				IAmb	IAmb	00 10 42.5		
	comp=Z,6.8nm,0.9s							
K15K	Wolf Creek Mou	78.17	6		P	00 10 41.5	+1.6	
U15A	North Rim	78.52	47		P	00 10 45.5	+2.7	
U15A				IAmb	IAmb	00 11 00.1		
	comp=Z,8.0nm,1.2s							
SZCU	Shurtz Canyon	78.54	46	P	P	00 10 41.9	-0.9	
BBB	Bella Bella	78.64	27	LR	LR	00 37 15.7		
	comp=Z,120nm,21.1s,baz=228,slow=29							
NJ2	Nanjing	78.82	308	*e*P	P	00 10 39.3	-4.8	
NJ2				pmax	pmax			
	comp=Z,27nm,0.6s							
PKCU	Pink Cliffs	79.00	46		P	00 10 46.0	+0.5	
PKCU				IAmb	IAmb	00 11 06.5		
	comp=Z,7.8nm,1.1s							
J16K	Anvik River	79.24	7	P	P	00 10 45.4	-0.4	
J16K				IAmb	IAmb	00 10 54.1		
	comp=Z,15nm,1.1s							
MA2	Magadan	79.66	343	LR	LR	00 40 25.5		
	comp=Z,305nm,21.7s,baz=135,slow=31							
J18K	Innoko River	79.90	8		P	00 10 49.0	-0.3	
J18K				IAmb	IAmb	00 10 57.3		
	comp=Z,8.6nm,1.1s							
L22K	Petersville	79.99	11	P	P	00 10 51.4	+1.5	
L22K				IAmb	IAmb	00 10 58.8		
	comp=Z,12nm,1.4s							
HLID	Hailey	80.70	40		P	00 10 55.0	+0.7	
VHRN	Van Horn	81.53	55		P	00 10 58.9	0.0	
PV05	Paradox Valley	81.55	47	P	P	00 10 59.5	+0.5	
MNTX	Cornudas Mount	81.58	54	P	P	00 10 57.7	-1.4	
NEW	Newport	81.66	35	LR	LR	00 39 17.8		
	comp=Z,94nm,21.0s,baz=225,slow=30							
PV10	Paradox Valley	81.72	47	P	P	00 10 58.7	-1.3	
PV10				IAmb	IAmb	00 11 22.3		
	comp=Z,15nm,1.2s							
H19K	Roundabout Mou	81.91	8		P	00 10 59.0	-0.9	
H19K				IAmb	IAmb	00 11 17.9		
	comp=Z,12nm,1.5s							
TX31	Lajitas Ar. Si	82.01	57		P	00 11 01.5	0.0	
TX31				IAmb	IAmb	00 11 25.5		
	comp=Z,7.7nm,1.4s							
TXAR	Lajitas Array	82.01	57	P	P	00 11 03.9	+2.4	
	comp=Z,0.7nm,1.1s,baz=259,slow=4.9,SNR=8.4							
TXAR				LR	LR	00 41 18.0		
	comp=Z,98nm,18.1s,baz=247,slow=31							
	comp=Z,0.7nm,1.1s							
TXAR	Lajitas Array	82.01	57	P	P	00 11 01.3	-0.2	
SEY	Seymchan	82.08	346	LR	LR	00 43 20.4		
	comp=Z,309nm,20.4s,baz=148,slow=33							
ANMO	Albuquerque	82.09	51	LR	LR	00 40 59.2		
	comp=Z,162nm,19.1s,baz=240,slow=31							
DLBC	Dease Lake	82.32	22	LR	LR	00 40 03.2		
	comp=Z,277nm,20.6s,baz=218,slow=30							
G19K	Purcell Mounta	82.42	7		P	00 11 01.1	-1.5	
G19K				IAmb	IAmb	00 11 11.5		
	comp=Z,12nm,1.4s							
MSO	Missoula	82.69	37		P	00 11 05.0	+0.3	
MSO				IAmb	IAmb	00 11 13.4		
	comp=Z,7.1nm,1.4s							
DLMT	Dillon	82.74	39	P	P	00 11 05.7	+0.7	
DLMT				IAmb	IAmb	00 11 28.4		
	comp=Z,7.5nm,1.2s							
N31M	Braeburn, Yuko	82.74	18	P	P	00 11 05.1	+0.6	
N31M				IAmb	IAmb	00 11 30.1		
	comp=Z,6.7nm,0.8s							
M29M	Somme Creek	82.75	16	P	P	00 11 05.8	+1.1	
LDM	Libby Dam	82.77	35	P	P	00 11 04.1	-0.9	
LDM				IAmb	IAmb	00 11 13.4		
	comp=Z,6.5nm,1.0s							
IL31		82.77	12	P	P	00 11 04.2	-0.2	
IL31				IAmb	IAmb	00 11 25.6		
	comp=Z,6.8nm,1.2s							
ILAR	Eielson Array	82.77	12	P	P	00 11 05.1	+0.5	
	comp=Z,4.1nm,1.3s,baz=210,slow=5.5,SNR=9.3							
ILAR				LR	LR	00 41 14.9		
	comp=Z,163nm,21.8s,baz=220,slow=31							
	comp=Z,4.1nm,1.3s							
ILAR	Eielson Array	82.77	12		P	00 11 03.8	-0.7	
H22K	Ishtalitna Cre	82.99	10		P	00 11 05.0	-0.7	
H22K				IAmb	IAmb	00 11 14.8		
	comp=Z,6.0nm,1.1s							
F19K	Shaleruckik Mo	83.00	7		P	00 11 05.7	0.0	
F19K				IAmb	IAmb	00 11 14.8		
	comp=Z,9.1nm,1.2s							
G21K	Allakaket	83.25	9	P	P	00 11 07.3	+0.3	
G21K				IAmb	IAmb	00 11 19.2		
	comp=Z,13nm,1.4s							
E18K	Tukpahlearik C	83.27	6		P	00 11 06.4	-0.7	
YHL	Hebgen Lake	83.35	40	P	P	00 11 08.1	-0.3	
L29M	L29M	83.38	16	P	P	00 11 08.4	+0.6	
BW06	Boulder Array	83.39	42	P	P	00 11 07.2	-1.3	
PD31	Pinedale Array	83.39	42	P	P	00 11 07.1	-1.4	
PDAR	Pinedale Array	83.39	42	P	P	00 11 10.3	+1.7	
	comp=Z,0.8nm,0.9s,baz=211,slow=2.6,SNR=6.1							
PDAR				LR	LR	00 42 02.2		
	comp=Z,81nm,19.7s,baz=240,slow=31							
	comp=Z,0.8nm,0.9s							
BOZ	Bozeman (W)	83.44	39	P	P	00 11 08.0	-0.6	
BOZ				IAmb	IAmb	00 11 31.3		
	comp=Z,9.4nm,1.4s							
F20K	Avaraart Lake	83.45	8		P	00 11 08.1	+0.1	
F20K				IAmb	IAmb	00 11 23.3		
	comp=Z,12nm,1.4s							
F21K	Alatna River	83.91	8		P	00 11 09.7	-0.7	
F21K				IAmb	IAmb	00 11 12.7		
	comp=Z,11nm,1.5s							
G23K	Bananza Creek	83.96	10		P	00 11 11.1	+0.4	
G23K				IAmb	IAmb	00 11 28.0		
	comp=Z,7.8nm,1.3s							
K29M	Barlow Dome	84.14	16		P	00 11 13.1	+1.3	
K29M				IAmb	IAmb	00 11 34.7		
	comp=Z,13nm,1.5s							
COLD	Coldfoot	84.41	9	P	P	00 11 12.8	0.0	
D19K	Kuna River	84.56	6	P	P	00 11 13.3	-0.3	
PMSA	Palmer Station	84.86	156	LR	LR	00 40 52.2		
	comp=Z,207nm,20.9s,baz=249,slow=30							
D20K	Etivluk River	84.93	7		P	00 11 15.1	-0.4	
E21K	Killik River	84.99	8	P	P	00 11 15.0	-0.8	
E22K	Anaktuvuk Pass	85.00	9	P	P	00 11 16.3	+0.4	
C19K	Lookout Ridge	85.00	6	P	P	00 11 13.8	-2.1	
J30M	Hart River	85.04	16	P	P	00 11 15.7	-0.6	
J30M				IAmb	IAmb	00 11 51.8		
	comp=Z,8.6nm,1.4s							
F24K	Squaw Lake	85.05	10	P	P	00 11 15.8	-0.4	
F24K				IAmb	IAmb	00 11 25.7		
	comp=Z,9.9nm,1.4s							
H27K	Steamboat Moun	85.16	13	P	P	00 11 15.3	-1.4	
H27K				IAmb	IAmb	00 11 19.3		
	comp=Z,10nm,1.4s							
E23K	Chandalar	85.26	9		P	00 11 17.1	-0.2	
E23K				IAmb	IAmb	00 11 30.1		
	comp=Z,8.3nm,1.2s							
G26K	Porcupine Rive	85.31	12	P	P	00 11 16.1	-1.3	
G26K				IAmb	IAmb	00 11 26.1		
	comp=Z,12nm,1.1s							
E24K	Your Creek	85.45	10	P	P	00 11 16.6	-1.6	
E24K				IAmb	IAmb	00 11 52.9		
	comp=Z,8.8nm,1.5s							
CMIG	Matias Romero	85.47	71	LR	LR	00 40 44.7		
	comp=Z,146nm,20.3s,baz=208,slow=30							
F25K	Christian Rive	85.52	11	P	P	00 11 18.3	-0.2	
I30M	Mount Dempster	85.54	15	P	P	00 11 18.9	+0.1	
I30M				IAmb	IAmb	00 11 27.0		
	comp=Z,10nm,1.4s							
HILR	Hailar Array B	86.31	324	LR	LR	00 45 43.4		
	comp=Z,370nm,20.4s,baz=60,slow=33							
H03S2	Juan Fernandez	86.61	124	T	T	01 47 20.8		
	baz=252,slow=75,SNR=11							
H03S1	Juan Fernandez	86.62	124	T	T	01 47 21.0		
	baz=252,slow=75,SNR=14							
H03S3	Juan Fernandez	86.62	124	T	T	01 47 45.7		
	baz=252,slow=75							
H02N2	Juan Fernandez	86.71	124	T	T	01 47 26.4		
	baz=255							
H03N3	Juan Fernandez	86.71	124	T	T	01 47 41.9		
	baz=255							
H03N1	Juan Fernandez	86.73	124	T	T	01 47 32.7		
	baz=255							
MAW	Mawson	87.26	199	LR	LR	00 49 56.6		
	comp=Z,156nm,18.1s,baz=96,slow=35							
XAN	Xi'an	87.27	306	P	P	00 11 25.8	-2.1	
XAN				pmax	pmax			
	comp=Z,4.0nm,0.4s							
YAK	Yakutsk	88.45	337	LR	LR	00 48 14.8		
	comp=Z,107nm,19.9s,baz=126,slow=34							
INK	Inuvik	88.67	14	LR	LR	00 44 35.6		
	comp=Z,136nm,21.2s,baz=228,slow=31							
PLCA	Paso Flores	90.76	133	LR	LR	00 44 18.6		
	comp=Z,195nm,20.8s,baz=236,slow=30							
YKA	Yellowknife Ar	90.77	24	P	P	00 11 45.3	+1.7	
	comp=Z,0.5nm,0.7s,baz=240,slow=4.6,SNR=2.4							
YKA				LR	LR	00 50 04.3		
	comp=Z,134nm,18.1s,baz=250,slow=34							
	comp=Z,0.5nm,0.7s							
CMAR	Chiang Mai Arr	91.02	289	P	P	00 11 47.0	+1.2	
	comp=Z,0.9nm,0.3s,baz=108,slow=3.7,SNR=1.8							
CMAR				LR	LR	00 48 00.5		
	comp=Z,72nm,22.0s,baz=40,slow=33							
	comp=Z,0.9nm,0.3s							
LZH	Lanzhou	91.87	307	*e*P	P	00 11 40.9	-8.7	
LZH				pmax	pmax			
	comp=Z,17nm,1.1s							
LZDM	Lanzhou Array	91.94	307	LR	LR	00 50 14.6		
	comp=Z,95nm,20.5s,baz=100,slow=34							
ELIB	Princess Elisa	91.98	186	*d*P	P	00 11 48.5	-1.0	
	comp=Z,2.3nm,1.6s							
JTS	Las Juntas de	92.87	80	LR	LR	00 44 27.3		
	comp=Z,205nm,20.0s,baz=242,slow=30							
SNAA	Sanae	92.99	178	LR	LR	00 48 21.0		
	comp=Z,255nm,21.9s,baz=196,slow=32							
SONM	Songino Array	93.72	319	P	P	00 12 00.4	+2.6	
	comp=Z,0.2nm,0.4s,baz=90,slow=4.3,SNR=1.5							
SONM				LR	LR	00 52 37.9		
	comp=Z,90nm,19.1s,baz=98,slow=34							
	comp=Z,0.2nm,0.4s							
TIXI	Tiksi	94.55	345	LR	LR	00 49 38.4		
	comp=Z,242nm,21.3s,baz=120,slow=32							
ATAH	Atahualpa	94.59	99	LR	LR	00 44 34.3		
	comp=Z,194nm,21.0s,baz=257,slow=29							
ULM	Lac du Bonnet	94.99	39	LR	LR	00 48 39.8		
	comp=Z,130nm,20.3s,baz=243,slow=32							
TLY	Talaya	96.58	322	LR	LR	00 51 36.0		
	comp=Z,222nm,20.7s,baz=99,slow=33							
MKAR	Makanchi Array	109.62	315	PKiKP	PKiKP	00 17 14.3	+2.5	
	comp=Z,0.4nm,0.7s,baz=79,slow=3.1,SNR=3.2							
KURBB	Kurchatov Arra	112.09	319	PKiKP	PKiKP	00 17 18.8	+2.5	
	comp=Z,0.3nm,0.8s,baz=92,slow=2.1,SNR=4.3							
BVAR	Borovoye Array	116.84	322	PKP	PKPdf	00 17 24.2	-1.2	
	comp=Z,0.6nm,0.6s,baz=127,slow=3.8,SNR=3.1							
BSEG	Bad Segeberg	141.31	355	*e*L	L	01 19 22.4		
	comp=Z,76nm,22.0s							
CLL	Colm	143.58	351	*e*L	L	01 18 45.0		
	comp=Z,164nm,21.8s							
STEB	Steborice	143.98	346	*e*PKP	PKiKP	00 18 19.5	-0.5	
BNN	Bunyan	144.14	317	PKPdf	PKPdf	00 18 16.6	-0.6	
MORC	Moravsky Berou	144.18	346	*e*PKP	PKiKP	00 18 20.4	-0.1	
MOX	Moxa	144.42	353	*e*L	L	01 20 00.3		
	comp=Z,150nm,22.0s							
VRAC	Vranov	144.84	347	*e*PKP	PKiKP	00 18 22.3	+0.5	
BR131	Keskin Array S	145.07	320		PKPbc	00 18 18.1	-0.2	
BRTR	Keskin Array B	145.07	320	PKPbc	PKPbc	00 18 17.9	-0.4	
	comp=Z,2.6nm,0.8s,baz=42,slow=3.0,SNR=16							
BRTR	Keskin Array B	145.07	320		PKPbc	00 18 17.4	-0.8	
KRUC	Moravsky	145.12	347	*e*PKP	PKiKP	00 18 23.1	+0.8	
MLR	Muntele Rosu	145.14	334	PKPbc	PKPab	00 18 18.6	+0.2	
TNS	Taunus Mts	145.14	356	*e*PKPbc	PKiKP	00 18 24.5	+2.0	
	baz=11,slow=2.9							
TNS				*e*L	L	01 22 14.8		
	comp=Z,119nm,20.3s							
ROTZ	Rotzenmuhle	145.20	352	*e*PKPbc	PKiKP	00 18 24.3	+1.8	
	baz=11,slow=2.9							
PSZ	Piszkesteto	145.26	342	PKPbc	PKPbc	00 18 18.2	-0.3	
DOU	Dourbes	145.39	0	*d*PKPdf	PKPbc	00 18 12.4	-6.3	
DOU				*dp*PKP	PKiKP	00 18 24.9	+2.0	
GRF	Grafenberg Arr	145.40	353	*e*PKPbc	PKiKP	00 18 25.0	+2.1	
	baz=11,slow=2.9							
GRF				*e*L	L	01 19 29.1		
	comp=Z,106nm,22.0s							
KHC	Kasperske Hory	145.60	350	*e*PKP	PKPab	00 18 21.4	+1.6	
KHC	Kasperske Hory	145.60	350		PKPab	00 18 20.2	+0.4	
WET	Wettzell	145.71	351	*e*PKPbc	PKiKP	00 18 26.2	+2.6	
	baz=11,slow=2.9							
WET				*e*L	L	01 23 04.3		
	comp=Z,155nm,20.8s							
WLF	Walferdange	145.80	358		PKPab	00 18 21.1	+0.6	
WLF	Walferdange	145.80	358	*d*PKP	PKiKP	00 18 27.1	+3.4	
WLF	Walferdange	145.80	358	*e*PKPbc	PKiKP	00 18 27.2	+3.5	
	baz=11,slow=2.9							
GEC2	GERESS Array S	145.86	350		PKPdf	00 18 19.1	-0.8	
GEC2	GERESS Array S	145.86	350	*e*PKPbc	PKiKP	00 18 26.5	+2.5	
	baz=11,slow=2.9							
GEC2				*e*L	L	01 23 14.6		
	comp=Z,168nm,21.5s							
GERES	GERESS Array B	145.86	350	PKPbc	PKPbc	00 18 20.8	+0.3	
	comp=Z,0.2nm,0.6s,baz=360,slow=2.6,SNR=4.7							
GERES	GERESS Array B	145.86	350		PKPdf	00 18 19.9	-1.0	
WINA	Alland / Wiene	146.09	346	*e*PKiKP	PKPab	00 18 22.8	+1.2	
	comp=Z,11nm,1.4s							
CONA	Conrad Observa	146.31	347	*e*PKiKP	PKPbc	00 18 22.4	+0.6	
	comp=Z,7.0nm,1.2s							
RONA	Rosalia, Austr	146.42	346	*e*PKiKP	PKPab	00 18 23.2	+0.3	
	comp=Z,5.1nm,0.9s							
MOA	Molln	146.71	348	*e*PKiKP	PKPab	00 18 23.8	-0.2	
	comp=Z,5.0nm,1.1s							
FUR	Furstenfeldbru	146.89	352	*e*L	L	01 23 01.0		
	comp=Z,120nm,21.8s							
BIOA	Bad Ischl, Aus	146.98	349	*e*PKiKP	PKPbc	00 18 24.3	+0.6	
	comp=Z,6.3nm,1.3s							
ARSA	Arzberg	147.02	347	*e*PKiKP	PKPbc	00 18 23.1	-0.7	
	comp=Z,5.6nm,1.3s							
BFO	Black Forest	147.03	356	*e*L	L	01 17 15.4		
	comp=Z,96nm,21.6s							
MMAI	Mont Meron Ar	147.24	308	PKPbc	PKPbc	00 18 25.9	+0.9	
	comp=Z,4.2nm,0.7s,baz=58,slow=5.4,SNR=9.2							
SESA	Seetaler Alpe,	147.36	348	*e*PKiKP	PKPbc	00 18 24.6	-0.4	
	comp=Z,7.5nm,1.0s							
CLF	Chambon-Foret	147.39	3		PKPbc	00 18 25.2	+0.5	
LESA	Schwarzleotal	147.41	350	*i* PKiKP	PKPbc	00 18 24.6	-0.3	
	comp=Z,7.0nm,1.7s							
RETA	Reutte	147.63	353	*e*PKiKP	PKPbc	00 18 25.6	0.0	
	comp=Z,6.0nm,1.1s							
KBA	Koelnbreinsper	147.63	349	*e*PKiKP	PKPbc	00 18 25.2	-0.5	
	comp=Z,0.1nm,0.3s							
WATA	Waldviertel	147.66	351	*e*PKiKP	PKPbc	00 18 25.3	-0.5	
	comp=Z,3.6nm,1.0s							
SOKA	Soboth	147.67	347	*ep*PKP	pPKPdf	00 18 26.7	+0.9	
	comp=Z,5.0nm,1.4s							
MOTA	Moosalm	147.72	352	*ep*PKP	PKPbc	00 18 26.6	+0.7	
	comp=Z,3.5nm,1.0s							
WTTA	Wattenberg	147.73	351	*e*PKiKP	PKPbc	00 18 26.4	+0.4	
	comp=Z,3.3nm,0.7s							
SQTA	Sankt Quirin	147.83	352	*ep*PKP	PKPbc	00 18 26.8	+0.6	
	comp=Z,3.0nm,0.2s							
DAVA	Damuels	147.93	354	*e*PKiKP	PKPbc	00 18 26.6	+0.1	
	comp=Z,4.8nm,1.0s							
OBKA	Obir	147.94	347	*e*PKiKP	PKPbc	00 18 25.2	-1.2	
	comp=Z,5.8nm,1.9s							
MYKA	Terra Mystica	148.00	349	*e*PKiKP	PKPbc	00 18 26.7	+0.1	
	comp=Z,2.6nm,0.9s							
FETA	Feichten	148.09	352	*i* pPKP	PKPbc	00 18 27.5	+0.6	
	comp=Z,5.2nm,1.3s							
ABTA	Abfaltersbach	148.09	350	*e*PKiKP	PKPdf	00 18 25.4	+1.7	
	comp=Z,3.9nm,1.4s							
FUORN	Ofenpass-Fuorn	148.54	353		PKPab	00 18 31.4	-0.2	
SABO	M.te Sabotino	148.63	348	PKPdf	PKPdf	00 18 25.1	+0.5	
TUE	Stuetta	148.79	354	PKPab	PKPab	00 18 32.8	+0.2	
ESDC	Sonseca Array	154.61	16	PKPab	PKPab	00 18 58.9	+2.2	
	comp=Z,1.9nm,1.1s,baz=336,slow=4.3,SNR=4.7							
TORD	Torodi Ar. Bea	176.21	126	PKP	PKPdf	00 18 51.1	-1.1	
	comp=Z,1.5nm,1.1s,baz=230,slow=2.6,SNR=4.3							

*IDC **20** 23:59:58.0±0.7, 29.24S×178.35W, h334km±6km, mb2.8/1, mbtmp4.1/3, Error ellipse: s-maj=51.0km s-min=22.6km az=77.0*

ISC 20 23:59:58.3±0.7, 29.62S±0.07×179.4W±0.1, h300km, n28, σ2s22/40, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	1.31	74	P	Pn	00 00 41.1	+0.8
RIZ				S	S	00 01 13.9	+0.2
GLKZ	Green Lake	1.31	75	P	Pn	00 00 40.8	+0.5
GLKZ				S	S	00 01 14.0	+0.3
RAO	Raoul Island	1.32	74	P	Pn	00 00 41.2	+0.9
	619nm,0.3s,baz=270,slow=20,SNR=12						
RAO				S	S	00 01 14.2	+0.5
	282nm,0.3s,baz=180,slow=20,SNR=5.6						
WMGZ	Waiomatatini S	8.38	192	P	Pn	00 02 00.5	+4.1
WMGZ				S	S	00 03 31.7	-0.6
HAZ	Te Kaha	8.45	196	P	Pn	00 02 00.2	+3.0
HAZ				S	S	00 03 35.9	+2.0
PKGZ	Pakihiroa	8.49	194	S	S	00 03 35.7	+0.9
PUZ	Puketiti	8.66	193	P	Pn	00 02 03.2	+3.4
PUZ				S	S	00 03 36.6	-1.9
RUGZ	Raukumara Rang	8.68	196	P	Pn	00 02 03.1	+3.0
RUGZ				S	S	00 03 39.6	+0.5
TWGZ	Tauwhareparae	8.81	194	P	Pn	00 02 05.5	+3.8
TWGZ				S	S	00 03 42.3	+0.2
MWZ	Matawai	9.06	196	P	Pn	00 02 06.5	+1.7
MWZ				S	S	00 03 46.8	-1.0
TKGZ	Te Karaka	9.09	194	S	S	00 03 48.5	+0.1
URZ	Urewera	9.10	198	P	Pn	00 02 07.6	+2.4
URZ				S	S	00 03 46.8	-1.7
RIGZ	Rimuhau	9.37	194	P	Pn	00 02 08.4	-0.2
RIGZ				S	S	00 03 54.0	-0.7
TSZ	Takapari Road	11.09	199	P	Pn	00 02 30.0	+0.3
TSZ				S	S	00 04 29.8	-4.0
DVHZ	Dannevirke	11.26	198	P	Pn	00 02 31.4	-0.3
DVHZ				S	S	00 04 33.5	-4.0
BFZ	Birch Farm	11.60	197	P	Pn	00 02 35.4	-0.4
BFZ				S	S	00 04 40.3	-4.8
OGWZ	Otaki Gorge	12.02	200	P	Pn	00 02 40.3	-0.7
OGWZ				S	S	00 04 49.1	-5.6
MSVF	Nonsavu	12.07	348	P	Pn	00 02 40.0	-1.8
	2.3nm,0.3s,baz=258,slow=23,SNR=7.7						
MSWZ	Moikau Station	12.55	199	P	Pn	00 02 46.4	-1.0
MSWZ				S	S	00 04 59.3	-7.3
TCW	Tory Channel	12.66	202	P	Pn	00 02 47.2	-1.4
TCW				S	S	00 05 00.2	-8.9
TUWZ	Tuamarina	12.97	203	P	Pn	00 02 51.6	-0.7
TUWZ				S	S	00 05 10.1	-5.9
DZM	Mont Dzumac	14.81	297	P	Pn	00 03 18.0	+3.4
	9.5nm,0.6s,baz=169,slow=11,SNR=10.0						
QSPA	South Pole Qui	60.48	180	P	P	00 09 36.3	-0.5
	0.5nm,0.8s,baz=25,slow=18,SNR=1.2						
	0.5nm,0.8s						
ARCES	ARCESS Array B	137.57	347	PKP	PKPdf	00 18 39.7	-5.9
	1.2nm,0.9s,baz=67,slow=3.0,SNR=1.8						
FINES	FINESS Array B	144.00	339	PKP	PKPab	00 18 51.7	-4.0
	1.5nm,0.4s,baz=54,slow=3.7,SNR=26						
HFS	Hagfors	148.24	348	PKPbc	PKPdf	00 19 03.5	-1.0
	0.7nm,0.5s,baz=46,slow=4.2,SNR=8.1						
AKASG	Malin Array Be	149.96	323	PKPbc	PKPdf	00 19 07.1	-0.5
	0.5nm,0.4s,baz=55,slow=1.3,SNR=2.0						
MMAI	Mount Meron Ar	150.18	285	PKPbc	PKPdf	00 19 12.1	+3.4
	1.0nm,0.4s,baz=77,slow=7.8,SNR=1.6						

*DJA **21** 00:11:00.7±0.6, 1.3S×12.4E±, h11km±4km, M4.6/20, mB4.7/2, mb4.6/5, MLv4.6/20, Mw(mB)3.9/2*

*IDC **21** 00:

*NEIC **21** 00:22:00.3±1.1,32.°18S±0.°05×68.°55W±0.°09,h124km±4km, mb4.3/60,Error ellipse: s-maj=11.7km s-min=6.4km az=105.0*
*IDC **21** 00:22:00.8±0.5,32.°05S×68.°45W,h123km±3km,mb3.7/10, mbtmp4.0/14,Error ellipse: s-maj=25.0km s-min=10.9km az=87.0*
*VAO **21** 00:22:03.3±1.1,32.°07S×68.°10W,h129km±3km,mb4.1, Presumed earthquake*

ISC 21 00:22:00.3±0.5,32.°16S±0.°04×68.°49W±0.°04,h126km±4km, h126km:pP-P,n159,σ0:99/178,mb4.3/35,3C,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.60**	**21**	P			**Pn**	**00 22 19.5**	**-0.1**
	93nm,0.3s,baz=277,slow=6.0,SNR=1607								
CFA				S			**Sn**	**00 22 33.8**	**-0.3**
	baz=252,slow=20								
CFA	**Coronel Fontan**	**0.60**	**21**	*i* P			**Pn**	**00 22 19.6**	**-0.1**
CFA				IAML				00 22 35.6	
	comp=Z,2μm,0.2s								
SJA	**San Juan**	**0.64**	**355**	*i* P			**Pn**	**00 22 20.2**	**+0.3**
SJA				*e*S			**Sn**	**00 22 34.9**	**+0.3**
SJA				IAML				00 22 35.2	
	comp=Z,1μm,0.2s								
ZON	**Zonda**	**0.64**	**346**	*i* P			**Pn**	**00 22 19.7**	**-0.1**
ZON				IAML				00 22 35.2	
	comp=Z,2μm,0.7s								
ZON	**Zonda**	**0.64**	**346**				**Pn**	**00 22 19.8**	**-0.1**
ZON					Sn		**Sn**	**00 22 34.0**	**-0.6**
ARCO	**CERRO ARCO**	**0.77**	**209**	*i* P			**Pn**	**00 22 21.1**	**0.0**
ARCO				*e*S			**Sn**	**00 22 34.9**	**-1.8**
ARCO				IAML				00 22 39.0	
	comp=Z,3μm,0.5s								
RTLS	**Leoncito**	**0.77**	**298**	*i* P			**Pn**	**00 22 21.3**	**+0.1**
RTLS				*e*S			**Sn**	**00 22 36.8**	**-0.1**
RTLS				IAML				00 22 38.8	
	comp=Z,5μm,1.0s								
RTLL	**Cerro Villicun**	**0.83**	**1**	*i* P			**Pn**	**00 22 21.5**	**+0.1**
RTLL				*e*S			**Sn**	**00 22 37.3**	**0.0**
RTLL				IAML				00 22 38.8	
	comp=Z,4μm,0.3s								
AAGR	**Agrelo**	**0.96**	**197**	*i* P			**Pn**	**00 22 22.9**	**+0.3**
AAGR				IAML				00 22 40.2	
	comp=Z,933nm,0.4s								
ACAN	**Cantantal**	**1.11**	**96**	*i* P			**Pn**	**00 22 24.7**	**+0.7**
ACAN				*e*S			**Sn**	**00 22 42.1**	**+0.2**
ACAN				IAML				00 22 42.6	
	comp=Z,11μm,0.5s								
AVIZ	**Vizcacheras**	**1.31**	**181**	*i* P			**Pn**	**00 22 26.7**	**+0.6**
ACCO	**Cerro Coronel**	**1.64**	**343**	*i* P			**Pn**	**00 22 30.9**	**+0.8**
ACCO				*e*S			**Sn**	**00 22 54.3**	**+1.5**
ACCO				IAML				00 22 54.7	
	comp=Z,732nm,0.7s								
AVFE	**Valle Fertil**	**1.74**	**31**	*i* P			**Pn**	**00 22 31.4**	**+0.4**
AVFE				IAML				00 22 55.4	
	comp=Z,495nm,0.8s								
MT08	**Bocatoma Ro**	**1.81**	**225**	*i* P			**Pn**	**00 22 33.0**	**+1.0**
MT08				IAML				00 23 04.3	
	comp=Z,417nm,0.8s								
MT08	**Bocatoma Ro**	**1.81**	**225**				**Pn**	**00 22 32.2**	**+0.2**
MT08					Sn		**Sn**	**00 22 56.6**	**+0.4**
VA03	**San Esteban**	**1.84**	**250**	*i* P			**Pn**	**00 22 32.8**	**+0.6**
VA03				IAML				00 23 04.5	
	comp=Z,870nm,0.7s								
VA03	**San Esteban**	**1.84**	**250**				**Pn**	**00 22 32.4**	**+0.2**
VA03					Sn		**Sn**	**00 22 55.5**	**-1.1**
MT04	**Ro Olivares**	**1.86**	**228**	*i* P			**Pn**	**00 22 33.4**	**+0.8**
MT04				IAML				00 23 00.9	
	comp=Z,256nm,1.1s								
ACDV	**Cuesta del Vie**	**2.06**	**345**	*i* P			**Pn**	**00 22 35.9**	**+1.0**
ACDV				*e*S			**Sn**	**00 23 01.5**	**+0.1**
ACDV				IAML				00 23 02.1	
	comp=Z,792nm,1.1s								
PEL	**Peldehue**	**2.09**	**242**				**Pn**	**00 22 34.7**	**-0.5**
CO04	**Los Peladeros**	**2.11**	**273**				**Pn**	**00 22 34.7**	**-1.0**
CO04					Sn		**Sn**	**00 23 00.4**	**-2.4**
MT16	**CCHEN**	**2.12**	**233**				**Pn**	**00 22 35.3**	**-0.4**
AROD	**Rodeo**	**2.16**	**337**	*i* P			**Pn**	**00 22 37.4**	**+1.0**
MT13	**San Alfonso**	**2.18**	**223**	*i* P			**Pn**	**00 22 38.4**	**+2.0**
MT13				IAML				00 23 10.7	
	comp=Z,202nm,0.8s								
MT13	**San Alfonso**	**2.18**	**223**				**Pn**	**00 22 35.8**	**-0.6**
MT05	**Renca**	**2.25**	**236**	*i* P			**Pn**	**00 22 37.7**	**+0.4**
MT05				IAML				00 23 07.4	
	comp=Z,558nm,0.6s								
MT05	**Renca**	**2.25**	**236**				**Pn**	**00 22 37.1**	**-0.2**
CO03	**El Pedregal**	**2.29**	**305**	*i* P			**Pn**	**00 22 38.5**	**+0.6**
CO03				IAML				00 23 13.0	
	comp=Z,469nm,0.8s								
CO03	**El Pedregal**	**2.29**	**305**				**Pn**	**00 22 37.9**	**+0.1**
CO02	**Combarbal**	**2.34**	**293**	*i* P			**Pn**	**00 22 38.4**	**0.0**
CO02				IAML				00 23 09.8	
	comp=Z,634nm,0.6s								
CO02	**Combarbal**	**2.34**	**293**				**Pn**	**00 22 37.9**	**-0.6**
MT02	**Curacav**	**2.48**	**243**	*i* P			**Pn**	**00 22 39.2**	**-0.9**
MT02				IAML				00 23 13.6	
	comp=Z,280nm,0.6s								
MT02	**Curacav**	**2.48**	**243**				**Pn**	**00 22 38.9**	**-1.2**
CO01	**Juntas del Tor**	**2.58**	**327**	*i* P			**Pn**	**00 22 43.3**	**+1.7**
CO01				IAML				00 23 17.1	
	comp=Z,314nm,0.5s								
CO01	**Juntas del Tor**	**2.58**	**327**				**Pn**	**00 22 42.4**	**+0.8**
MT09	**Talagante**	**2.64**	**232**				**Pn**	**00 22 41.3**	**-1.0**
GO04	**Tololo Observa**	**2.80**	**314**	*i* P			**Pn**	**00 22 44.4**	**0.0**
GO04				IAML				00 23 25.6	
	comp=Z,521nm,0.8s								
GO04	**Tololo Observa**	**2.80**	**314**				**Pn**	**00 22 43.7**	**-0.8**
MT01	**Popeta**	**2.87**	**233**	*i* P			**Pn**	**00 22 43.7**	**-1.4**
MT01				IAML				00 23 23.4	
	comp=Z,137nm,0.9s								
MT01	**Popeta**	**2.87**	**233**				**Pn**	**00 22 43.6**	**-1.5**
VA05	**Santo Domingo**	**3.02**	**240**				**Pn**	**00 22 45.5**	**-1.5**
ACLC	**CERRO LA CRUZ**	**3.03**	**26**	*i* P			**Pn**	**00 22 47.4**	**0.0**
ACLC				IAML				00 23 24.9	
	comp=Z,193nm,0.5s								
BO02	**Sierra Bellavi**	**3.25**	**215**	*i* P			**Pn**	**00 22 50.7**	**+0.7**
BO02				IAML				00 23 33.5	
	comp=Z,70nm,0.7s								
BO02	**Sierra Bellavi**	**3.25**	**215**				**Pn**	**00 22 49.5**	**-0.5**
TCA	**Tanti**	**3.42**	**77**	*i* P			**Pn**	**00 22 52.5**	**+0.1**
TCA				IAML				00 23 32.3	
	comp=Z,301nm,1.1s								
VCA	**Vinchina**	**3.42**	**4**	*i* P			**Pn**	**00 22 53.4**	**+0.9**
VCA				IAML				00 23 40.8	
	comp=Z,355nm,0.5s								
AC05	**El Transito**	**3.65**	**335**	*i* P			**Pn**	**00 22 56.7**	**+1.1**
AC05				IAML				00 23 46.1	
	comp=Z,202nm,0.7s								
AC05	**El Transito**	**3.65**	**335**				**Pn**	**00 22 55.0**	**-0.6**
LCO	**Las Campanas**	**3.67**	**328**	*i* P			**Pn**	**00 22 56.1**	**+0.2**
LCO				IAML				00 23 40.9	
	comp=Z,543nm,0.4s								
LCO	**Las Campanas**	**3.67**	**328**				**Pn**	**00 22 55.3**	**-0.6**
GO05	**Hualane**	**4.04**	**224**				**Pn**	**00 22 58.9**	**-1.6**
TINO	**Tinogasta**	**4.16**	**11**	*i* P			**Pn**	**00 23 03.4**	**+1.1**
TINO				IAML				00 23 56.8	
	comp=Z,256nm,0.9s								
ML02	**Panimavida**	**4.34**	**213**				**Pn**	**00 23 02.8**	**-1.6**
AC04	**Llanos de Chal**	**4.53**	**330**	*i* P			**Pn**	**00 23 06.2**	**-0.9**
AC04				IAML				00 24 08.4	
	comp=Z,90nm,0.8s								
AC04	**Llanos de Chal**	**4.53**	**330**				**Pn**	**00 23 05.8**	**-1.3**
GO03	**Copiapo**	**4.80**	**341**				**Pn**	**00 23 08.0**	**-2.7**
BI02	**San Fabin de**	**5.04**	**206**				**Pn**	**00 23 13.1**	**-0.8**
AC02	**Maricunga**	**5.34**	**354**	*i* P			**Pn**	**00 23 19.4**	**+1.0**
AC02				IAML				00 24 22.2	
	comp=Z,68nm,1.1s								
AC02	**Maricunga**	**5.34**	**354**				**Pn**	**00 23 17.9**	**-0.4**
TRQA	**Tornquist**	**7.94**	**140**				**Pn**	**00 23 51.8**	**-1.1**
PLCA	**Paso Flores**	**8.71**	**190**	P			**Pn**	**00 24 06.2**	**+2.9**
	comp=Z,1.8nm,1.0s,baz=250,slow=13,SNR=2.5								
PLCA					Lg		Lg	00 26 36.3	
	comp=Z,0.2nm,0.3s,baz=294,slow=20,SNR=3.3								
H03N1	**Juan Fernandez**	**8.86**	**259**	T			T	00 31 14.3	
	baz=89,slow=72								
H03N3	**Juan Fernandez**	**8.88**	**259**	T			T	00 31 13.0	
	baz=89,slow=72								
H03N2	**Juan Fernandez**	**8.88**	**259**	T			T	00 31 14.3	
	baz=89,slow=72								
ANCO	**Parque Anchore**	**9.07**	**106**	*e*P			**Pn**	**00 24 06.8**	**-1.4**
ANCO				*e*S			**Sn**	**00 25 45.7**	**-2.7**
PSAL	**Palomas, Salto**	**9.34**	**86**	*e*P			**Pn**	**00 24 09.9**	**-1.9**
PSAL				*e*S			**Sn**	**00 25 49.0**	**-6.2**
CPUP	**Villa Florida**	**11.35**	**62**	P			**Pn**	**00 24 38.7**	**0.0**
	comp=Z,0.7nm,0.5s,baz=239,slow=9.3,SNR=3.0								
PB16	**IPOC Station P**	**13.80**	**356**				**Pn**	**00 25 11.6**	**+0.3**
ITAB	**Concordia**	**15.04**	**75**				**Pn**	**00 25 27.2**	**+0.9**
ITAB				IAmb			IAmb	00 25 31.1	
	comp=Z,15nm,1.0s								
ITAB	**Concordia**	**15.04**	**75**	*e*P			**Pn**	**00 25 24.3**	**-2.0**
LPAZ	**La Paz**	**15.81**	**1**	P			**P**	**00 25 37.6**	**-0.2**
	comp=Z,6.3nm,0.6s,baz=172,slow=7.3,SNR=35								
LPAZ	**La Paz**	**15.81**	**1**				**P**	**00 25 37.3**	**-0.6**
LPAZ				IAmb			IAmb	00 25 41.0	
	comp=Z,6.8nm,0.7s								
LPAZ	**La Paz**	**15.81**	**1**	*e*P			**P**	**00 25 38.6**	**+0.7**
PTGB	**Pitanga**	**16.23**	**67**	*e*P			**Pn**	**00 25 41.4**	**+0.2**
BBSD	**Serra de San D**	**16.53**	**27**	*e*P			**Pn**	**00 25 44.0**	**-0.9**
GO08	**Villa O'Higgin**	**16.57**	**190**				**Pn**	**00 25 45.0**	**-0.1**
SIV	**San Ignacio**	**17.46**	**24**	P			**Pn**	**00 25 55.9**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=196,slow=11,SNR=22								
LDASE	**Londrina, Braz**	**17.67**	**65**	*e*P			**P**	**00 25 56.9**	**-0.8**
PTLB	**Pontes e Lacer**	**18.69**	**29**				**Pn**	**00 26 09.5**	**-1.3**
PTLB	**Pontes e Lacer**	**18.69**	**29**	*e*P			**Pn**	**00 26 10.4**	**-0.4**
PTLB						epP	**pP**	**00 26 30.6**	**-1.0**
PP1B	**Ponte de Pedra**	**19.02**	**44**	*e*P			**P**	**00 26 12.1**	**-0.4**
CLDB	**Colider**	**24.21**	**32**	*e*P			**P**	**00 27 05.8**	**+0.3**
CZSB	**Cruzeiro do Su**	**24.62**	**350**				**P**	**00 27 08.8**	**-0.4**
CZSB				IAmb			IAmb	00 27 11.9	
	comp=Z,17nm,0.7s								
CZSB	**Cruzeiro do Su**	**24.62**	**350**	*e*P			**P**	**00 27 09.6**	**+0.4**
VNA2	**Neumayer--Watz**	**50.58**	**158**	⇑P			**P**	**00 30 45.9**	**+0.3**
	comp=Z,3.9nm,0.5s,baz=278,slow=7.5								
SNAA	**Sanae**	**52.18**	**159**	⇑P			**P**	**00 30 57.1**	**-0.6**
	comp=Z,45nm,0.6s								
SNAA	**Sanae**	**52.18**	**159**	P			**P**	**00 30 58.3**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=274,slow=9.4,SNR=4.1								
SNAA				pP			**pP**	**00 31 28.2**	**+1.0**
	comp=Z,3.4nm,0.9s,baz=261,slow=4.4,SNR=5.0								
	comp=Z,2.2nm,0.8s								
TROLL	**Troll, Antarti**	**53.90**	**159**	⇑P			**P**	**00 31 10.9**	**+0.5**
	comp=Z,79nm,0.5s								
TROLL				pP			**pP**	**00 31 41.1**	**+1.1**
	comp=Z,254nm,0.9s								
QSPA	**South Pole Qui**	**58.07**	**180**	P			**P**	**00 31 41.0**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=163,slow=1.3,SNR=14								
QSPA				pP			**pP**	**00 32 11.6**	**+1.4**
	comp=Z,6.6nm,0.9s,baz=142,slow=2.4,SNR=9.1								
	comp=Z,1.6nm,0.6s								
VNDA	**Vanda**	**66.46**	**191**	pP			pP	00 33 07.0	+0.5
	comp=Z,0.5nm,0.5s,baz=132,slow=2.1,SNR=2.2								
833A	**Chaparral WMA,**	**66.95**	**331**	P			**P**	**00 32 39.3**	**0.0**
Y52A	**Lilburn**	**67.29**	**346**	P			**P**	**00 32 41.2**	**-0.2**
Y52A				IAmb			IAmb	00 32 41.9	
	comp=Z,3.5nm,0.8s								
X51A	**Calhoun**	**68.14**	**345**	P			**P**	**00 32 46.7**	**+0.1**
SWET	**Sewanee**	**69.00**	**345**	P			**P**	**00 32 51.1**	**-0.9**
SWET				IAmb			IAmb	00 32 52.8	
	comp=Z,7.0nm,1.1s								
BRDY	**Brady**	**69.40**	**332**				**P**	**00 32 54.5**	**-0.1**
BRDY				IAmb			IAmb	00 32 56.0	
	comp=Z,4.2nm,0.9s								
SAND	**Sanderson**	**69.53**	**329**				**P**	**00 32 55.9**	**+0.4**
SAND				IAmb			IAmb	00 32 57.3	
	comp=Z,5.0nm,0.8s								
TXAR	**Lajitas Array**	**69.69**	**328**	P			**P**	**00 32 57.0**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=155,slow=8.4,SNR=18								
	comp=Z,1.0nm,0.6s								
TXAR	**Lajitas Array**	**69.69**	**328**	P			**P**	**00 32 56.7**	**+0.2**
TX31	**Lajitas Ar. Si**	**69.69**	**328**				**P**	**00 32 56.3**	**-0.2**
V48A	**Smith Brothers**	**69.70**	**344**	P			**P**	**00 32 55.6**	**-0.7**
V48A				IAmb			IAmb	00 32 56.7	
	comp=Z,4.7nm,0.7s								
Z38A	**Mt. Pleasant**	**69.70**	**337**	P			**P**	**00 32 56.1**	**-0.3**
CLTN	**Cedars of Leba**	**69.92**	**345**	P			**P**	**00 32 57.5**	**-0.1**
OZNA	**Ozona**	**69.94**	**330**				**P**	**00 32 58.2**	**+0.2**
WVT	**Waverly**	**70.31**	**343**				**P**	**00 32 59.6**	**-0.4**
ALPN	**Alpine**	**70.56**	**328**	P			**P**	**00 33 02.3**	**+0.4**
GNAR	**Gosnell**	**70.71**	**342**	P			**P**	**00 33 01.9**	**-0.6**
MNHN	**Monahans**	**71.00**	**329**	P			**P**	**00 33 04.1**	**-0.3**
LCAR	**Lake Charles**	**71.12**	**341**	P			**P**	**00 33 04.8**	**-0.1**
LCAR				IAmb			IAmb	00 33 05.8	
	comp=Z,6.7nm,0.7s								
VHRN	**Van Horn**	**71.52**	**327**				**P**	**00 33 07.5**	**-0.1**
ODSA	**Odessa**	**71.58**	**330**	P			**P**	**00 33 08.2**	**+0.3**
APMT	**Aspermont**	**71.64**	**332**	P			**P**	**00 33 08.6**	**+0.4**
TPB28		**72.05**	**328**	P			**P**	**00 33 11.7**	**+0.9**
TPB28				IAmb			IAmb	00 33 26.4	
	comp=Z,3.1nm,0.5s								
TPB11	**China Draw**	**72.07**	**329**	P			**P**	**00 33 11.4**	**+0.6**
DKNS	**Dickens**	**72.26**	**332**	P			**P**	**00 33 11.9**	**0.0**
DKNS				IAmb			IAmb	00 33 12.9	
	comp=Z,3.9nm,0.8s								
CLNB	**Carlsbad**	**72.28**	**329**	P			**P**	**00 33 11.7**	**-0.4**
GDL2	**Guadalupe Moun**	**72.44**	**329**	P			**P**	**00 33 12.9**	**-0.1**
MNTX	**Cornudas Mount**	**72.47**	**328**	P			**P**	**00 33 12.2**	**-1.0**
MNTX				IAmb			IAmb	00 33 13.7	
	comp=Z,2.8nm,0.8s								
CCM	**Cathedral Cave**	**73.01**	**341**				**P**	**00 33 15.8**	**-0.3**
CCM				IAmb			IAmb	00 33 17.1	
	comp=Z,6.0nm,0.9s								
OK048	**Pawnee Station**	**73.24**	**336**	P			**P**	**00 33 17.4**	**-0.1**
OK048				IAmb			IAmb	00 33 18.8	
	comp=Z,10nm,1.1s								
S39A	**Bolivar**	**73.25**	**340**	P			**P**	**00 33 17.3**	**-0.3**
S39A				IAmb			IAmb	00 33 18.8	
	comp=Z,11nm,1.2s								
ACSO	**Alum Creek Sta**	**73.27**	**348**	P			**P**	**00 33 16.9**	**-0.8**
ACSO				IAmb			IAmb	00 33 18.0	
	comp=Z,5.3nm,0.7s								
OK051	**E0350 and S346**	**73.28**	**336**	P			**P**	**00 33 18.0**	**+0.3**
R40A	**Maddies Statio**	**73.51**	**341**	P			**P**	**00 33 19.0**	**-0.1**
BLOK	**Blackwell**	**73.64**	**336**	P			**P**	**00 33 19.9**	**0.0**
319A	**Douglas**	**74.05**	**324**	P			**P**	**00 33 23.0**	**+0.4**
319A				IAmb			IAmb	00 33 24.9	
	comp=Z,6.5nm,0.7s								
MAW	**Mawson**	**74.06**	**163**	P			**P**	**00 33 23.9**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=236,slow=5.6,SNR=5.6								
MAW				pP			**pP**	**00 33 54.1**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=210,slow=7.7,SNR=5.8								
	comp=Z,1.5nm,0.7s								
P40A	**Paris**	**74.61**	**341**				**P**	**00 33 24.7**	**-0.7**
P40A				IAmb			IAmb	00 33 26.3	
	comp=Z,6.4nm,0.8s								
ANMO	**Albuquerque**	**75.69**	**329**	P			**P**	**00 33 32.3**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=152,slow=7.6,SNR=4.1								
	comp=Z,1.3nm,0.7s								
ANMO	**Albuquerque**	**75.69**	**329**				**P**	**00 33 32.0**	**0.0**
L40A	**Anamosa**	**76.77**	**343**				**P**	**00 33 36.5**	**-1.1**
FRNY	**Flat Rock**	**76.77**	**356**	P			**P**	**00 33 37.7**	**+0.1**
FRNY				IAmb			IAmb	00 33 38.5	
	comp=Z,11nm,1.3s								
ECSD	**EROS Data Cent**	**79.79**	**340**				**P**	**00 33 54.1**	**-0.2**
ECSD				IAmb			IAmb	00 33 55.2	
	comp=Z,5.5nm,0.8s								
KNB	**Kanab**	**80.33**	**325**				**P**	**00 33 58.1**	**+0.5**
KNB				IAmb			IAmb	00 34 00.1	
	comp=Z,4.2nm,1.0s								
PKCU	**Pink Cliffs**	**80.42**	**326**	P			**P**	**00 33 57.8**	**-0.5**
PKCU				IAmb			IAmb	00 34 00.8	
	comp=Z,6.5nm,1.3s								
LCMT	**Little Creek M**	**80.53**	**325**	P			**P**	**00 33 58.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**80.78**	**68**	P			**P**	**00 34 00.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=251,slow=4.5,SNR=2.2								
TORD				pP			**pP**	**00 34 30.8**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=267,slow=4.5,SNR=4.3								
	comp=Z,0.5nm,0.7s								
MTPU	**Mount Pierson**	**80.84**	**326**	P			**P**	**00 34 00.0**	**-0.5**
SZCU	**Shurtz Canyon**	**80.92**	**326**	P			**P**	**00 34 00.9**	**+0.2**
SRU	**San Rafael Swe**	**80.95**	**328**	P			**P**	**00 34 01.1**	**+0.3**
CCUT	**Cedar City**	**81.01**	**325**	P			**P**	**00 34 01.4**	**+0.2**
PRN	**Pahroc Range**	**81.72**	**324**	P			**P**	**00 34 05.4**	**+0.5**
PRN				IAmb			IAmb	00 34 08.0	
	comp=Z,4.5nm,1.1s								
RDMU	**Red Mountain**	**81.73**	**330**	P			**P**	**00 34 04.8**	**-0.1**
RDMU				IAmb			IAmb	00 34 06.6	
	comp=Z,4.9nm,1.0s								
WCT	**Wildcat Mounta**	**82.04**	**323**	P			**P**	**00 34 07.0**	**+0.5**
DUG	**Dugway, Tooele**	**82.86**	**327**	P			**P**	**00 34 11.9**	**+1.1**
DUG				IAmb			IAmb	00 34 14.4	
	comp=Z,2.8nm,1.1s								
TPH	**Tonopah**	**83.33**	**323**	P			**P**	**00 34 13.0**	**-0.3**
TPH				IAmb			IAmb	00 34 15.2	
	comp=Z,5.0nm,1.3s								
PD31	**Pinedale Array**	**83.54**	**331**	P			**P**	**00 34 13.7**	**-0.6**
PDAR	**Pinedale Array**	**83.54**	**331**	P			**P**	**00 34 14.3**	**0.0**
	comp=Z,0.8nm,0.8s,baz=145,slow=5.4,SNR=5.6								
	comp=Z,0.8nm,0.8s								
NVAR	**Mina Array Bea**	**84.15**	**323**	P			**P**	**00 34 18.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=141,slow=5.7,SNR=4.7								
	comp=Z,0.9nm,0.7s								
NVAR	**Mina Array Bea**	**84.15**	**323**	P			**P**	**00 34 16.8**	**-0.7**
ELK	**Elko**	**84.43**	**326**	P			**P**	**00 34 19.4**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=148,slow=5.0,SNR=5.2								
	comp=Z,1.0nm,0.6s								
KVN	**Kaiserville**	**84.52**	**323**	P			**P**	**00 34 19.1**	**-0.1**
ULM	**Lac du Bonnet**	**85.57**	**343**	P			**P**	**00 34 23.7**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=122,slow=4.3,SNR=7.0								
	comp=Z,2.8nm,0.7s								
WRA	**Warramunga Arr**	**123.76**	**206**	PKP			**PKPdf**	**00 40 43.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=149,slow=1.7,SNR=2.4								
KURBB	**Kurchatov Arra**	**149.50**	**43**	PKPbc			**PKPbc**	**00 41 35.2**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=300,slow=3.1,SNR=16								
KURBB				pPKPbc			**pPKPbc**	**00 42 08.7**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=293,slow=3.1,SNR=7.3								
ZALV	**Zalesovo Beam**	**151.07**	**33**	PKPbc			**PKPbc**	**00 41 38.7**	**+0.7**
	comp=Z,5.5nm,0.6s,baz=311,slow=3.2,SNR=32								
ZALV				pPKPbc			**pPKPbc**	**00 42 12.1**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=288,slow=3.7,SNR=3.9								
MKAR	**Makanchi Array**	**153.32**	**48**	PKPbc			**PKPbc**	**00 41 43.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=60,slow=2.9,SNR=4.3								
MKAR				pPKPbc			**pPKPbc**	**00 42 17.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=332,slow=1.8,SNR=5.1								
WMQ	**Urumqi**	**158.00**	**51**	*e*PKP			**PKPdf**	**00 41 41.6**	**-0.5**
WMQ				LR			LR		
	comp=Z,80nm,23.9s								
PZH	**PanZhiHua**	**169.78**	**121**	PKP			**PKPdf**	**00 41 52.5**	**-0.9**
HHC	**Hu-ho-hao-te**	**171.33**	**360**	*e*P			**PKPdf**	**00 41 56.8**	**+3.0**

*SOME **21** 00:26:01.4,43.°32N×79.°83E,h0km*
*NNC **21** 00:26:01.9±6.8,43.°06N×79.°95E,h0km,mb2.8,mpv2.4, Error ellipse: s-maj=64.6km s-min=21.2km az=8.0*

ISC 21 00:26:02.0±1.3,43.°19N±0.°06×79.°88E±0.°04,h10km,n12, σ1:56/21,2C-1D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.31**	**265**	*e*P			**Pg**	**00 26 06.9**	**-1.3**
	49nm,0.1s								
SHLS				*e*S			**Sg**	**00 26 09.5**	**-2.9**
	311nm,0.2s								
PDGK	**Podgornoye**	**0.32**	**296**	P			**Pb**	**00 26 10.4**	**+0.5**
	3.7nm,0.2s								
KTMS	**Ketmen**	**0.43**	**53**	*e*P			**Pb**	**00 26 11.3**	**-0.5**
	4.8nm,0.1s								
KTMS				*e*S			**Sb**	**00 26 17.3**	**-1.1**
	23nm,0.2s								
UZB	**Uzynbulak**	**0.63**	**267**	*e*P			**Pb**	**00 26 15.4**	**+0.2**
	2.2nm,0.1s								
UZB				*e*S			**Sb**	**00 26 24.2**	**+0.1**
	23nm,0.2s								
KPKS	**Kokpek**	**0.92**	**288**	*e*P			**Pb**	**00 26 19.8**	**-0.3**
	0.6nm,0.3s								
KPKS				*e*S			**Sg**	**00

ASAR	**Alice Springs**	**44.49**	**256**	P	P	01 18 06.2	-0.2
	1.9nm,0.8s,baz=96,slow=7.7,SNR=15						
	1.9nm,0.8s						
BRTR	**Keskin Array B**	**145.99**	**313**	PKPbc	PKPbc	01 29 21.1	-0.8
	0.3nm,0.6s,baz=61,slow=3.5,SNR=1.5						

*NEIC **21** 01:11:05.7±0.7, 18°.1S±0°.2×177°.7W±0°.1, h589km±10km, mb4.3/14, Error ellipse: s-maj=23.3km s-min=16.5km az=182.0*

*IDC **21** 01:11:09.0±3.6, 17°.88S×178°.30W, h597km±22km, mb3.3/3, mbtmp4.3/4, Error ellipse: s-maj=114.6km s-min=31.8km az=143.0*

ISC 21 01:11:05.7±0.7, 18°.2S±0°.2×177°.7W±0°.1, h600km, n24, σ0s72/26, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTU	**Fugatoga**	**3.86**	**354**	P	**P**	**01 12 28.9**	**-1.4**
MSVF	**Nonsavu**	**4.07**	**275**	P	**P**	**01 12 30.9**	**-0.9**
	45nm,0.6s,baz=117,slow=6.4,SNR=38						
MSVF	**Nonsavu**	**4.07**	**275**	P	**P**	**01 12 30.3**	**-1.4**
NIUE	**Niue**	**7.42**	**98**	P	**P**	**01 12 59.0**	**-0.5**
STKA	**Stephens Creek**	**39.10**	**242**	P	**P**	**01 17 43.8**	**+0.8**
	3.1nm,0.7s,baz=74,slow=7.4,SNR=4.2						
	3.1nm,0.7s						
BBOO	**Buckleboo**	**43.87**	**241**	P	**P**	**01 18 20.9**	**+0.4**
BBOO				IAmb	IAmb	01 18 28.9	
	comp=Z,21nm,1.5s						
WR8	**Warramunga Arr**	**45.10**	**260**	P	**P**	**01 18 29.8**	**-0.3**
WR8				IAmb	IAmb	01 18 31.2	
	comp=Z,10nm,1.3s						
WB0	**Warramunga Arr**	**45.22**	**260**	P	**P**	**01 18 30.6**	**-0.4**
WB0				IAmb	IAmb	01 18 39.4	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**45.25**	**260**	P	**P**	**01 18 30.7**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=96,slow=7.1,SNR=18						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.25**	**260**	P	**P**	**01 18 30.7**	**-0.6**
AS31	**Alice Springs**	**45.37**	**254**	P	**P**	**01 18 31.9**	**-0.2**
ASAR	**Alice Springs**	**45.37**	**254**	P	**P**	**01 18 31.9**	**-0.2**
ASAR				PcP	**PcP**	**01 20 00.1**	**+1.5**
	comp=Z,4.8nm,0.6s,baz=87,slow=8.7,SNR=43						
	comp=Z,0.3nm,0.7s,baz=108,slow=4.0,SNR=4.1						
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**45.37**	**254**	P	**P**	**01 18 31.6**	**-0.6**
ASAR					**PcP**	**01 19 58.7**	**+0.1**
FORT	**Forrest**	**50.51**	**245**	P	**P**	**01 19 09.5**	**-0.6**
FORT				IAmb	IAmb	01 19 47.4	
	comp=Z,8.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.65**	**261**	P	**P**	**01 19 32.6**	**-0.1**
MBWA	**Marble Bar**	**58.67**	**256**	P	**P**	**01 20 07.2**	**0.0**
MBWA				IAmb	IAmb	01 20 38.5	
	comp=Z,24nm,1.4s						
KIWB	**Kanaga Island**	**69.72**	**0**	P	**P**	**01 21 17.0**	**+0.8**
KIWB				IAmb	IAmb	01 21 17.5	
	comp=Z,12nm,1.5s						
JTM	**Tenmabayashi**	**70.05**	**328**	P	**P**	**01 21 18.6**	**+0.2**
SDPT	**Sand Point**	**74.67**	**10**	P	**P**	**01 21 45.1**	**+0.5**
SDPT				IAmb	IAmb	01 21 51.7	
	comp=Z,29nm,1.1s						
WUAZ	**Wupatki**	**82.40**	**49**	P	**P**	**01 22 27.0**	**+0.6**
WUAZ				IAmb	IAmb	01 22 27.8	
	comp=Z,11nm,0.8s						
LOOK	**Love County**	**92.43**	**55**	P	**P**	**01 23 13.2**	**-0.4**
BRTR	**Keskin Array B**	**145.44**	**315**	PKP	**PKPab**	**01 29 39.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=92,slow=3.1,SNR=4.1						
BRTR	**Keskin Array B**	**145.44**	**315**	PKPbc	**PKPab**	**01 29 39.2**	**-0.5**
GERES	**GERESS Array B**	**148.03**	**346**	PKPbc	**PKiKP**	**01 29 46.5**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=46,slow=2.8,SNR=6.7						

*IDC **21** 01:17:05.9±1.1, 30°.33N×94°.60E, h0km, mb3.4/5, mbtmp3.4/8, ML3.7/3, MS3.8/1, Error ellipse: s-maj=56.6km s-min=19.1km az=62.0*

*NEIC **21** 01:17:08.2±1.2, 30°.41N±0°.08×94°.8E±0°.1, h10km±1km, mb4.0/9, Error ellipse: s-maj=19.8km s-min=7.2km az=54.0*

ISC 21 01:17:09.2±0.7, 30°.47N±0°.05×94°.85E±0°.10, h23km, n32, σ1s18/32, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.29**	**258**	Pn	**Pn**	**01 17 59.4**	**-0.5**
TAWA	**Tawang**	**3.87**	**223**	eP	Pb	01 18 21.9	+4.9
TAWA				eS	Sb	01 19 33.5	+30
MOKO	**MOKOCHONG**	**4.14**	**184**	eP	**Pn**	**01 18 12.4**	**+1.2**
MOKO				eS	**Sn**	**01 18 59.0**	**+0.1**
TEZP	**TEZPUR**	**4.24**	**206**	ePN	**Pn**	**01 18 12.7**	**+0.3**
TEZP				i x	x	01 18 24.8	
TEZP				eS	**Sb**	**01 19 16.4**	**+2.6**
SHL	**Shillong**	**5.54**	**209**	Pn	**Pn**	**01 18 28.9**	**-1.5**
SILR	**SILCHAR**	**5.95**	**198**	eP	**Pb**	**01 18 49.3**	**-2.9**
SILR				eS	**Sb**	**01 20 05.7**	**+2.8**
MORE	**Moreh**	**6.22**	**185**	Pn	**Pn**	**01 18 39.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**12.52**	**162**	Pn	**Pn**	**01 20 05.3**	**-0.8**
	0.4nm,0.3s,baz=350,slow=11,SNR=1.2						
	0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.52**	**162**		**P**	**01 20 05.6**	**-0.5**
WUS	**Wushi**	**16.57**	**315**		**P**	**01 21 02.4**	**-0.2**
WUS				IAmb	IAmb	01 21 13.0	
	comp=Z,16nm,1.2s						
PDGK	**Podgornoye**	**17.73**	**321**		**P**	**01 21 15.2**	**-0.2**
MKAR	**Makanchi Array**	**18.98**	**333**	P	**Pn**	**01 21 28.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=5.4						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**18.98**	**333**	P	**Pn**	**01 21 29.6**	**-0.2**
SONM	**Songino Array**	**19.48**	**24**	P	**Pn**	**01 21 37.9**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=162,slow=30,SNR=1.2						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**19.48**	**24**	P	**Pn**	**01 21 35.4**	**-0.5**
AAK	**Ala-Archa**	**20.31**	**312**	P	Pn	01 21 44.7	-1.1
AAK				IAmb	IAmb	01 21 56.7	
	comp=Z,8.2nm,1.1s						
BTK	**Batken**	**21.77**	**303**	P	**P**	**01 21 59.8**	**+0.4**
BTK				IAmb	IAmb	01 22 13.5	
	comp=Z,7.3nm,1.0s						
KBL	**Kabul**	**22.12**	**287**	P	**P**	**01 22 03.0**	**-0.3**
KBL				IAmb	IAmb	01 22 17.0	
	comp=Z,16nm,1.4s						
CHGR	**Chuyangaron**	**22.63**	**298**		**P**	**01 22 08.6**	**0.0**
KURBB	**Kurchatov Arra**	**23.55**	**333**	P	**P**	**01 22 17.9**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=140,slow=10,SNR=8.2						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**23.59**	**334**	P	**P**	**01 22 19.0**	**+0.9**
KURK				IAmb	IAmb	01 22 26.0	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**24.56**	**346**	P	**P**	**01 22 27.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=169,slow=8.8,SNR=4.1						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**24.56**	**346**	P	**P**	**01 22 27.1**	**-0.2**
UOSS	**Minazif**	**34.53**	**270**	P	**P**	**01 23 54.7**	**-1.3**
LEM	**Lembang**	**39.05**	**160**	LR	LR	01 42 34.2	
	comp=Z,137nm,19.0s,baz=316,slow=39						
CY603	**RAF Akrotiri,**	**50.45**	**291**	P	**P**	**01 26 06.2**	**+1.3**
GERES	**GERESS Array B**	**62.19**	**312**	P	**P**	**01 27 29.5**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=61,slow=6.0,SNR=3.8						
	comp=Z,0.3nm,0.7s						
GERES	**GERESS Array B**	**62.19**	**312**	P	**P**	**01 27 29.8**	**+0.9**
WRA	**Warramunga Arr**	**62.88**	**138**	P	**P**	**01 27 34.4**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=320,slow=7.7,SNR=1.6						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**62.88**	**138**	P	**P**	**01 27 33.4**	**-0.3**
ASAR	**Alice Springs**	**65.58**	**141**	P	**P**	**01 27 51.3**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=338,slow=7.7,SNR=4.1						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**65.58**	**141**	P	**P**	**01 27 51.4**	**0.0**

*IDC **21** 01:26:07.3±0.4, 2°.56N×126°.93E, h0km, mb4.5/29, mbtmp4.5/32, ML4.1/2, MS3.6/27, Error ellipse: s-maj=20.5km s-min=10.1km az=77.0*

*BJI **21** 01:26:08.3, 2°.31N×127°.10E, h28km, mB5.0/7, mb4.9/32, Ms4.3/14, Ms7 4.2/15*

*DJA **21** 01:26:11.4±0.3, 3°N±4°×12°7E±°, h10km, M4.6/15, mB5.3/6, mb4.6/14, MLv4.5/15, Mw(mB)4.7/6*

*NEIC **21** 01:26:13.4±1.3, 2°.53N±0°.08×126°.99E±0°.08, h35km±1km, mb4.7/71, Error ellipse: s-maj=14.3km s-min=11.5km az=230.0*

*GFZ **21** 01:26:13.2±0.3, 3°N±3°×12°7E±°, h54km±4km, M4.3/19, mb4.6/19, Error ellipse: s-maj=7.0km s-min=5.1km az=65.3, confirmed*

ISC 21 01:26:12.5±1.4, 2°.60N±0°.04×126°.93E±0°.05, h31km±10km, n237, σ1s30/216, mb4.7/77, MS3.7/31, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.76**	**308**	P	**Pb**	**01 26 43.3**	**-0.9**
SGSI	**Sangihe**	**1.76**	**308**	P	**Pb**	**01 26 43.2**	**-0.9**
TNTI	**Ternate**	**1.87**	**166**	P	**Pb**	**01 26 47.8**	**+1.8**
TNTI	**Ternate**	**1.87**	**166**		**Pn**	**01 26 42.0**	**-0.4**
TNTI	**Ternate**	**1.87**	**166**	P	**Pn**	**01 26 41.2**	**-1.2**
TNTI	**Ternate**	**1.87**	**166**	P	**Pn**	**01 26 41.6**	**-0.8**
MNI	**Manado**	**2.38**	**241**	P	**Pb**	**01 26 52.7**	**-2.0**
MNI				S	**Sb**	**01 27 24.4**	**+0.7**
GTOI	**Gorontalo**	**4.37**	**244**	P	**Pn**	**01 27 21.3**	**+4.5**
SANI	**Sanana**	**4.71**	**191**	P	Pn	01 27 26.4	+4.9
KCP	**Kidapawan**	**4.74**	**337**	*i* P	**Pn**	**01 27 24.8**	**+2.9**
LUWI	**Luwuk**	**5.51**	**229**	P	Pn	01 27 40.1	+7.7
LUWI	**Luwuk**	**5.51**	**229**		**Pn**	**01 27 32.7**	**+0.2**
LUWI	**Luwuk**	**5.51**	**229**	P	**Pn**	**01 27 33.4**	**+1.0**
SIJI	**Sorong**	**5.54**	**128**	Pn	**Pn**	**01 27 32.0**	**-0.9**
	3.2nm,0.3s,baz=298,slow=7.1,SNR=4.8						
SIJI				Sn	**Sn**	**01 28 38.2**	**+2.5**
	baz=110,slow=23						
SIJI				LR	LR	01 30 05.4	
	comp=Z,1μm,19.9s,baz=240,slow=43						
	9.8nm,0.4s						
SIJI	**Sorong**	**5.54**	**128**	P	**Pn**	**01 27 31.7**	**-1.2**
	25nm,0.6s						
SIJI	**Sorong**	**5.54**	**128**	P	**Pn**	**01 27 30.6**	**-2.3**
BIPH	**Bislig**	**5.57**	**354**	eP	**Pn**	**01 27 35.3**	**+2.0**
BIPH				eS	Sn	01 28 24.7	-12
TOLI2	**Tolitoli**	**6.32**	**257**	P	**Pn**	**01 27 47.2**	**+3.7**
TOLI2	**Tolitoli**	**6.32**	**257**		**Pn**	**01 27 43.4**	**-0.1**
TOLI2	**Tolitoli**	**6.32**	**257**	P	**Pn**	**01 27 46.4**	**+2.9**
APSI	**Ampana**	**6.33**	**237**	P	**Pn**	**01 27 47.0**	**+3.3**
FAKI	**Fak Fak**	**7.64**	**136**	P	**Pn**	**01 28 04.6**	**+2.8**
FAKI	**Fak Fak**	**7.64**	**136**	Pn	**Pn**	**01 27 59.3**	**-2.5**
KDI	**Kendari**	**7.81**	**213**	P	**Pn**	**01 28 07.1**	**+3.1**
	3μm25nn,1.1s						
MYLDM	**Lahad Datu**	**8.79**	**287**	P	**Pn**	**01 28 20.1**	**+2.6**
	38nm,0.8s						
MYLDM	**Lahad Datu**	**8.79**	**287**	P	**Pn**	**01 28 19.2**	**+1.7**
BAKI	**Biak**	**9.92**	**112**	P	**Pn**	**01 28 32.0**	**-1.1**
KAPI	**Kappang**	**10.42**	**223**	Pn	**Pn**	**01 28 38.3**	**-1.6**
	2.8nm,0.3s,baz=62,slow=9.4,SNR=4.3						
	4.0nm,0.3s						
KAPI	**Kappang**	**10.42**	**223**	P	**Pn**	**01 28 40.8**	**+0.9**
KKM	**Kota Kinabalu**	**11.21**	**288**	P	**Pn**	**01 28 51.7**	**+0.9**
PLAI	**Plampang**	**14.56**	**219**	P	**Pn**	**01 29 38.8**	**+2.3**
JAY	**Jayapura**	**14.68**	**110**	Pn	**Pn**	**01 29 37.4**	**-0.8**
	2.8nm,0.4s,baz=158,slow=19						
JAY				LR	LR	01 35 28.1	
	comp=Z,153nm,19.0s,baz=346,slow=38						
TWSI	**Taliwang, Sumb**	**15.07**	**222**	P	**Pn**	**01 29 43.8**	**+0.4**
DRS	**Darwin Rock St**	**15.45**	**165**	P	**P**	**01 29 51.6**	**-0.9**
MTN	**Manton Dam**	**15.90**	**165**	Pn	**Pn**	**01 29 54.4**	**+0.2**
MTN	**Manton Dam**	**15.90**	**165**	P	**Pn**	**01 29 55.0**	**+0.9**
KNRA	**Kununurra**	**18.25**	**174**	P	**P**	**01 30 22.3**	**-1.3**
WOJI	**Wonogiri, Jawa**	**19.04**	**237**	P	**Pn**	**01 30 33.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.61**	**183**	P	**P**	**01 30 48.7**	**-0.6**
	4.0nm,0.6s,baz=20,slow=11,SNR=12						
	4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.61**	**183**		**P**	**01 30 48.2**	**-1.1**
FITZ	**Fitzroy Crossi**	**20.61**	**183**	P	**P**	**01 30 46.9**	**-2.3**
YULB	**Yu-li**	**21.37**	**346**		**P**	**01 30 55.3**	**-2.2**
YULB	**Yu-li**	**21.37**	**346**	P	**P**	**01 30 54.3**	**-3.2**
LEM	**Lembang**	**21.43**	**244**	P	**P**	**01 30 57.2**	**-1.2**
	16nm,0.5s,baz=319,slow=22,SNR=1.8						
	16nm,0.5s						
TPUB	**Ta-pu**	**21.46**	**344**		**P**	**01 30 56.7**	**-1.8**
TPUB				IAmb	IAmb	01 31 02.6	
	comp=Z,36nm,0.9s						
TPUB	**Ta-pu**	**21.46**	**344**	P	**P**	**01 30 55.9**	**-2.6**
BBJI	**Bungbulang**	**21.68**	**242**	P	**P**	**01 31 00.0**	**-0.9**
SSLB	**Suanglung**	**21.84**	**345**	P	**P**	**01 31 01.8**	**-0.7**
SSLB				IAmb	IAmb	01 31 04.4	
	comp=Z,19nm,0.7s						
SSLB	**Suanglung**	**21.84**	**345**	P	**P**	**01 31 01.0**	**-1.5**
WB0	**Warramunga Arr**	**23.41**	**162**		**P**	**01 31 16.2**	**-2.8**
WB0				IAmb	IAmb	01 31 18.4	
	comp=Z,16nm,0.6s						
WRA	**Warramunga Arr**	**23.56**	**162**	P	**P**	**01 31 18.1**	**-2.3**
	comp=Z,17nm,0.7s,baz=343,slow=10,SNR=65						
WRA				PcP	**PcP**	**01 35 05.0**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=334,slow=2.0,SNR=2.4						
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**23.56**	**162**		**P**	**01 31 16.7**	**-3.7**
WRA					**PcP**	**01 35 02.9**	**-2.6**
WB1	**Warramunga Ar.**	**23.57**	**162**	P	**P**	**01 31 18.7**	**-1.9**
WR8	**Warramunga Arr**	**23.62**	**162**		**P**	**01 31 18.7**	**-2.3**
WR8				IAmb	IAmb	01 31 19.6	
	comp=Z,21nm,0.7s						
JOW	**Kunigami**	**24.13**	**3**	P	**P**	**01 31 24.1**	**-1.7**
QIS	**Mount Isa**	**26.16**	**152**	P	**P**	**01 31 43.0**	**-1.3**
QIS	**Mount Isa**	**26.16**	**152**	P	**P**	**01 31 42.0**	**-2.3**
AS31	**Alice Springs**	**26.98**	**166**		**P**	**01 31 50.3**	**-1.3**
ASAR	**Alice Springs**	**26.98**	**166**	P	**P**	**01 31 49.9**	**-1.8**
	comp=Z,5.1nm,0.6s,baz=354,slow=7.8,SNR=73						
ASAR				PcP	**PcP**	**01 35 13.0**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=354,slow=2.4,SNR=8.6						
	comp=Z,5.1nm,0.6s						
ASAR	**Alice Springs**	**26.98**	**166**		**P**	**01 31 49.6**	**-2.1**
ASAR					**PcP**	**01 35 12.1**	**-1.0**
AS01	**Alice Springs**	**26.99**	**166**	P	**P**	**01 31 50.0**	**-1.8**
JCJ	**Chichijima**	**28.41**	**30**	LR	LR	01 42 42.3	
	comp=Z,79nm,20.2s,baz=134,slow=35						
CTA	**Charters Tower**	**29.47**	**141**	LR	LR	01 44 55.7	
	comp=Z,199nm,21.1s,baz=315,slow=38						
LHMI	**Lhok Sumawe**	**30.02**	**276**	P	**P**	**01 32 20.5**	**+1.7**
MEEK	**Meekatharra**	**30.16**	**195**	P	**P**	**01 32 20.3**	**+0.4**
MEEK	**Meekatharra**	**30.16**	**195**	P	**P**	**01 32 18.9**	**-1.1**
NJ2	**Nanjing**	**30.26**	**346**	eP	**P**	**01 32 22.4**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,35nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.62**	**302**	P	**P**	**01 32 32.4**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=120,slow=6.9,SNR=12						
	comp=Z,1.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.62**	**302**	P	**P**	**01 32 32.9**	**0.0**
CHTO	**Chiang Mai**	**31.78**	**302**		**P**	**01 32 34.7**	**+0.3**
CHTO	**Chiang Mai**	**31.78**	**302**	P	**P**	**01 32 34.3**	**0.0**
ENH	**Enshi**	**32.10**	**331**	P	**P**	**01 32 35.5**	**-1.5**
JHJ	**Hachijo jima 2**	**32.66**	**20**	LR	LR	01 45 33.7	
	comp=Z,70nm,20.4s,baz=160,slow=36						
INKA	**Innaminka**	**32.97**	**157**		**P**	**01 32 43.4**	**-1.3**
INKA				IAmb	IAmb	01 32 44.1	
	comp=Z,4.3nm,0.6s						
FORT	**Forrest**	**33.21**	**178**	P	**P**	**01 32 45.6**	**-1.1**
FORT				IAmb	IAmb	01 32 51.6	
	comp=Z,8.8nm,0.8s						
PZH	**PanZhiHua**	**33.89**	**317**	P	**P**	**01 32 57.1**	**+4.3**
INU	**Inuyama**	**33.90**	**15**	P	**P**	**01 32 52.0**	**-0.7**
BLDU	**Ballidu**	**34.44**	**196**	P	**P**	**01 32 57.6**	**+0.2**
TIA	**Tai'an**	**34.65**	**346**	P	**P**	**01 33 00.3**	**+1.1**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIA				L	L		
	comp=Z,390nm,18.5s						
TIA				L	L		
	comp=Z,130nm,16.1s						
TIA				L	L		
	comp=Z,360nm,16.5s						
KSRS	**Korea Array**	**34.70**	**1**	P	**P**	**01 32 59.5**	**0.0**
	comp=Z,4.8nm,0.7s,baz=180,slow=9.8,SNR=22						
KSRS				LR	LR	01 48 10.9	
	comp=Z,42nm,21.5s,baz=205,slow=38						
	comp=Z,4.8nm,0.7s						
KLBR	**Kellerberrin**	**35.11**	**194**	P	**P**	**01 33 04.6**	**+1.5**
MJAR	**Matsushiro Arr**	**35.34**	**16**	P	**P**	**01 33 04.1**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=189,slow=8.5,SNR=5.8						
MJAR				LR	LR	01 47 20.8	
	comp=Z,111nm,21.2s,baz=198,slow=36						
	comp=Z,1.1nm,0.3s						
MJAR	**Matsushiro Arr**	**35.34**	**16**	P	**P**	**01 33 03.9**	**-1.2**
XAN	**Xi'an**	**35.51**	**334**	⇓P	**P**	**01 33 05.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				L	L		
	comp=Z,410nm,15.1s						
XAN				L	L		
	comp=Z,230nm,15.1s						
XAN				L	L		
	comp=Z,310nm,15.8s						
CD2	**Chengdu**	**35.67**	**325**	P	**P**	**01 33 07.8**	**-0.3**
CD2				S	**S**	**01 38 45.6**	**+2.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				L	L		
	comp=Z,520nm,10.7s						
CD2				L	L		
	comp=Z,430nm,9.9s						
CD2				L	L		
	comp=Z,470nm,8.0s						
BBOO	**Buckleboo**	**36.27**	**167**	P	**P**	**01 33 11.4**	**-1.7**
DL2	**Dalian**	**36.46**	**353**	P	**P**	**01 33 15.8**	**+1.2**
DL2				pmax	pmax		
	comp=Z,28nm,0.7s						
STKA	**Stephens Creek**	**37.01**	**159**	P	**P**	**01 33 18.2**	**-1.3**
	comp=Z,17nm,0.6s,baz=333,slow=8.9,SNR=35						
	comp=Z,17nm,0.6s						
HTT	**Hallett**	**37.59**	**163**	P	**P**	**01 33 23.4**	**-1.0**
BJI2	**Beijing**	**38.50**	**347**	P	**P**	**01 33 33.3**	**+1.4**
BJI2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BJI2				L	L		
	comp=Z,77nm,12.6s						
BJI2				L	L		
	comp=Z,61nm,15.1s						
BJI2				L	L		
	comp=Z,84nm,13.5s						
BJT	**Baijiatuan**	**38.50**	**347**		**P**	**01 33 33.6**	**+1.6**
BJT				IAmb	IAmb	01 33 35.0	
	comp=Z,13nm,0.8s						
USRK	**Ussuriysk Ar.**	**41.66**	**5**	P	**P**	**01 33 58.3**	**+0.2**
	comp=Z,8.6nm,0.8s,baz=190,slow=8.7,SNR=14						
USRK				LR	LR	01 50 09.2	
	comp=Z,45nm,21.4s,baz=206,slow=35						
	comp=Z,8.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**41.66**	**5**	P	**P**	**01 33 59.0**	**+0.9**
MDJ	**Mudanjiang**	**41.91**	**3**	P	**P**	**01 34 01.1**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,17nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**42.02**	**65**	T	T	02 18 47.2	
	baz=252,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**42.03**	**65**	T	T	02 18 55.6	
	baz=252,slow=74,SNR=7.7						
H11S2	**WAKE ISLAND Hy**	**42.03**	**65**	T	T	02 18 47.3	
	baz=252,slow=74,SNR=12						
XLT	**XiLinHaoTe**	**42.23**	**348**	eP	**P**	**01 34 03.5**	**+0.6**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**42.57**	**63**	T	T	02 19 28.6	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**42.58**	**63**	T	T	02 19 39.1	
	baz=256						
H11N3	**WAKE ISLAND Hy**	**42.59**	**63**	T	T	02 19 38.6	
	baz=256						
BNX	**BinXian**	**42.96**	**0**	⇑P	**P**	**01 34 09.8**	**+1.1**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSA	**Lhasa**	**43.33**	**312**	P	**P**	**01 34 14.2**	**+1.7**
LSA				IAmb	IAmb	01 34 16.4	
	comp=Z,11nm,0.6s						
ASAJ	**Asahikawa**	**43.61**	**16**	LR	LR	01 52 22.2	
	comp=Z,100nm,21.4s,baz=190,slow=36						
GTA2	**Gaotai**	**44.24**	**330**	eP	**P**	**01 34 19.0**	**-0.3**
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA2				L	L		
	comp=Z,150nm,17.8s						
GTA2				L	L		
	comp=Z,120nm,16.5s						
GTA2				L	L		
	comp=Z,200nm,19.7s						
DZM	**Mont Dzumac**	**45.73**	**124**	LR	LR	01 53 48.9	
	comp=Z,72nm,19.9s,baz=147,slow=36						
EVN	**Everest**	**45.82**	**307**		**P**	**01 34 33.4**	**+0.8**
HILR	**Hailar Array B**	**47.18**	**354**	P	**P**	**01 34 41.7**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=165,slow=12,SNR=2.4						
	comp=Z,3.7nm,0.6s						
HEH	**HeiHe**	**47.48**	**0**	eP	**P**	**01 34 44.9**	**+0.5**
HEH				pmax	pmax		
	comp=Z,17nm,1.0s						
SONM	**Songino Array**	**48.42**	**342**	P	**P**	**01 34 51.9**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=167,slow=6.8,SNR=13						
SONM				PcP	**PcP**	**01 36 18.6**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=182,slow=3.8,SNR=3.9						
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**48.42**	**342**	P	**P**	**01 34 52.1**	**+0.2**
SONM					**PcP**	**01 36 18.4**	**+0.4**
TLY	**Talaya**	**52.66**	**342**	P	**P**	**01 35 23.6**	**-0.2**
	comp=Z,6.1nm,0.6s,baz=122,slow=8.2,SNR=3.2						
TLY				LR	LR	02 00 08.7	
	comp=Z,51nm,19.5s,baz=174,slow=39						
	comp=Z,6.1nm,0.6s						
TLY	**Talaya**	**52.66**	**342**	P	**P**	**01 35 24.9**	**+1.1**
TLY				IAmb	IAmb	01 35 32.4	
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**53.76**	**325**	eP	**P**	**01 35 32.8**	**+0.8**
W

comp=Z,7.0nm,1.0s
BVAR Borovoye Array 68.37 327 P **P 01 37 11.3 +0.3**
comp=Z,5.4nm,0.8s,baz=125,slow=9.4,SNR=16
comp=Z,5.4nm,0.8s
BORK Borovoye 68.41 327 P 01 37 11.9 +0.7
BORK IAmb IAmb 01 37 12.3
comp=Z,7.0nm,0.8s
TIXI Tiksi 68.96 1 LR LR 02 06 27.8
comp=Z,48nm,21.7s,baz=190,slow=35
ATKA Atka Island 69.31 34 P 01 37 16.7 -0.1
NRIK Noril'sk 71.56 346 P **P 01 37 30.6 +0.4**
comp=Z,7.5nm,0.7s,baz=355,slow=0.7,SNR=11
comp=Z,7.5nm,0.7s
NRIK Noril'sk 71.56 346 P 01 37 31.0 +0.7
NRIK IAmb IAmb 01 37 31.7
comp=Z,8.2nm,0.8s
AB31 Akbulak array 73.14 321 P 01 37 40.4 +0.3
AB31 IAmb IAmb 01 37 42.0
comp=Z,4.6nm,0.8s
ABKAR Akbulak array 73.14 321 P 01 37 40.3 +0.2
AKTO Aktyubinsk 74.66 322 LR LR 02 15 14.5
comp=Z,49nm,18.7s,baz=6.5,slow=40
ARTI Arti 76.07 328 LR LR 02 12 33.1
comp=Z,33nm,18.4s,baz=192,slow=37
ARTI Arti 76.07 328 P 01 37 56.8 -0.2
L14K Kuka Creek 78.40 28 P P 01 38 10.6 +0.7
L14K IAmb IAmb 01 38 19.2
comp=Z,5.6nm,0.9s
L16K Owhat River 79.98 28 P P 01 38 18.7 +0.2
K17K Iditarod 80.74 27 P 01 38 23.0 +0.4
K17K IAmb IAmb 01 38 30.1
comp=Z,9.3nm,1.1s
RAYN Ar Rayn 81.10 293 P 01 38 25.3 -0.1
J18K Innoko River 81.60 26 P 01 38 28.0 +0.9
J18K IAmb IAmb 01 38 29.1
comp=Z,6.2nm,1.1s
G19K Purcell Mounta 81.98 23 P 01 38 29.9 +0.8
G19K IAmb IAmb 01 38 47.2
comp=Z,8.8nm,1.2s
D19K Kuna River 82.10 21 P 01 38 30.9 +1.2
D19K IAmb IAmb 01 38 38.7
comp=Z,6.1nm,0.9s
H19K Roundabout Mou 82.11 24 P 01 38 30.4 +0.6
H19K IAmb IAmb 01 38 31.8
comp=Z,4.5nm,0.8s
J19K Poorman 82.17 26 P **P 01 38 30.8 +0.6**
J19K IAmb IAmb 01 38 32.6
comp=Z,5.0nm,1.0s
E19K Redstone River 82.19 22 P **P 01 38 30.7 +0.5**
E19K IAmb IAmb 01 38 48.8
comp=Z,13nm,1.4s
VNDA Vanda 82.29 173 P P 01 38 29.9 -0.5
comp=Z,1.3nm,0.7s,baz=327,slow=6.4,SNR=7.5
comp=Z,1.3nm,0.7s
VNDA Vanda 82.29 173 P 01 38 30.2 -0.3
D20K Etivluk River 82.68 21 P 01 38 33.6 +0.8
D20K IAmb IAmb 01 38 39.5
comp=Z,5.7nm,1.0s
KDAK Kodiak Island 82.73 32 LR LR 02 09 03.9
comp=Z,76nm,21.4s,baz=244,slow=31
K20K Telida 82.75 26 P P 01 38 33.7 +0.5
MAW Mawson 82.77 200 P P 01 38 33.0 -0.1
comp=Z,2.1nm,0.6s,baz=60,slow=6.2,SNR=4.5
comp=Z,2.1nm,0.6s
MAW Mawson 82.77 200 P P 01 38 33.2 0.0
J20K Nowinta River 82.84 26 P P 01 38 34.6 +1.0
J20K IAmb IAmb 01 38 35.7
comp=Z,5.4nm,0.9s
M20K Styx River 82.97 28 P P 01 38 35.1 +0.6
IMAR Indian Mountai 83.29 24 P P 01 38 37.2 +1.3
G21K Allakaket 83.47 23 P 01 38 37.7 +0.8
G21K IAmb IAmb 01 38 39.2
comp=Z,4.2nm,1.0s
B21K Ikpikpuk River 83.56 20 P 01 38 38.5 +1.4
B21K IAmb IAmb 01 38 46.6
comp=Z,7.2nm,0.9s
GEVA Gevas 83.58 308 P 01 38 39.6 +1.3
CAST Castle Rocks 83.65 27 P P 01 38 37.7 -0.1
SKT Skwentna 83.73 28 P P 01 38 38.5 +0.2
SKT IAmb IAmb 01 38 39.4
comp=Z,8.1nm,1.0s
KBZ Khabaz 83.89 314 P P 01 38 40.2 +0.8
comp=Z,3.8nm,1.0s,baz=53,slow=1.3,SNR=5.7
comp=Z,3.8nm,1.0s
KVAR Kislovodsk Arr 84.05 314 LR LR 02 20 08.2
comp=Z,34nm,21.0s,baz=312,slow=38
L22K Petersville 84.15 28 P P 01 38 40.8 +0.4
GURO Guroymak-BITLI 84.39 308 P P 01 38 43.6 +1.2
PPT2 Papeete2 84.59 108 *e*LR LR 02 05 13.7
comp=Z,61nm,24.5s
D23K Nanushuk River 84.85 21 P 01 38 44.8 +1.0
COLD Coldfoot 84.85 23 P P 01 38 44.5 +0.7
COLD IAmb IAmb 01 38 54.6
comp=Z,5.0nm,0.8s
G23K Bananza Creek 84.87 23 P 01 38 44.3 +0.3
G23K IAmb IAmb 01 38 46.5
comp=Z,4.7nm,0.9s
C23K Itkillik River 84.97 20 P P 01 38 45.1 +0.8
H23K Yukon River 84.98 24 P P 01 38 45.0 +0.4
I23K Minto, Yukon-K 85.00 25 P P 01 38 44.6 0.0
I23K IAmb IAmb 01 39 01.7
comp=Z,3.6nm,1.0s
E23K Chandalar 85.15 22 P 01 38 46.5 +1.1
E23K IAmb IAmb 01 38 51.7
comp=Z,4.2nm,0.9s
D24K Happy Valley 85.53 21 P P 01 38 48.2 +1.0
D24K IAmb IAmb 01 38 57.0
comp=Z,5.2nm,0.8s
KOPT Kop Dagi 85.60 310 P 01 38 50.0 +1.4
ILAR Eielson Array 86.03 25 P P 01 38 48.5 -1.2
comp=Z,0.2nm,0.5s,baz=245,slow=5.8,SNR=5.5
comp=Z,0.2nm,0.5s
ILAR Eielson Array 86.03 25 P P 01 38 49.5 -0.3
E25K Arctic Village 86.67 22 P P 01 38 53.4 +0.5
E25K IAmb IAmb 01 39 03.0
comp=Z,3.0nm,0.9s
ARPR Arapgir-MALATY 87.28 309 P P 01 38 57.8 +1.1
C27K Jago River 87.36 21 P P 01 38 56.4 +0.2
C27K IAmb IAmb 01 39 02.2
comp=Z,6.8nm,1.2s
K27K Chicken 88.12 26 P P 01 39 00.3 +0.4
K27K IAmb IAmb 01 39 02.4
comp=Z,4.0nm,1.0s
I27K Kandik River 88.25 25 P P 01 39 01.1 +0.5
I27K IAmb IAmb 01 39 02.2
comp=Z,3.4nm,0.9s
MMAI Mount Meron Ar 89.88 303 P P 01 39 08.5 -0.5
comp=Z,1.1nm,0.6s,baz=63,slow=6.6,SNR=2.2
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 90.89 310 P P 01 39 13.4 -0.2
comp=Z,0.6nm,0.6s,baz=107,slow=4.3,SNR=4.3
comp=Z,0.6nm,0.6s
ARCES ARCESS Array B 91.57 340 P P 01 39 15.2 -0.7
comp=Z,4.0nm,0.7s,baz=69,slow=6.6,SNR=15
ARCES LR LR 02 25 11.5
comp=Z,32nm,18.6s,baz=112,slow=39
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 91.57 340 P 01 39 15.2 -0.7
SPITS Spitsbergen Ar 91.62 349 P P 01 39 14.1 -1.9
comp=Z,3.4nm,0.9s,baz=76,slow=6.1,SNR=1.7
comp=Z,3.4nm,0.9s
QSPA South Pole Qui 92.52 180 P P 01 39 20.4 -0.1
comp=Z,1.3nm,0.9s,baz=276,slow=1.2,SNR=8.3
comp=Z,1.3nm,0.9s
QSPA South Pole Qui 92.52 180 P P 01 39 20.6 +0.1
FINES FINESS Array B 92.91 332 P P 01 39 21.4 -0.9
comp=Z,2.0nm,0.8s,baz=67,slow=5.0,SNR=6.5
comp=Z,2.0nm,0.8s
FINES FINESS Array B 92.91 332 P P 01 39 22.1 -0.2
TAOE Nuku Hiva Isla 93.28 99 *e*LR LR 02 09 16.8
comp=Z,76nm,25.0s
V35K Ketchikan 94.38 34 P P 01 39 29.4 +0.2
DLBC Dease Lake 94.60 31 LR LR 02 17 36.4
comp=Z,27nm,20.8s,baz=241,slow=33
MLR Muntele Rosu 95.84 316 LR LR 02 29 22.9
comp=Z,40nm,20.4s,baz=90,slow=40
BUR08 Bucovina Ar. S 95.97 318 P P 01 39 36.6 -0.2
BUR08 IAmb IAmb 01 39 39.5
comp=Z,3.0nm,1.0s
RES Resolute Bay 98.88 10 LR LR 02 32 10.6
comp=Z,11nm,18.0s,baz=14,slow=40
NB2 NORSAR Subarra 99.88 334 P **Pdif 01 39 52.5 -1.5**
comp=Z,1.5nm,0.8s,baz=60,slow=5.1
NOA NORSAR Array B 99.88 334 P Pdif 01 39 52.7 -1.3
comp=Z,0.8nm,0.8s,baz=63,slow=4.6,SNR=3.2
comp=Z,0.8nm,0.8s

TXAR Lajitas Array 122.13 53 PKP **PKiKP 01 45 05.3 +0.2**
comp=Z,0.2nm,0.8s,baz=348,slow=3.4,SNR=2.2
TXAR Lajitas Array 122.13 53 PKPdf 01 45 03.6 -1.4
TORD Torodi Ar. Bea 123.45 288 PKP **PKPdf 01 45 07.6 -0.1**
comp=Z,0.9nm,0.7s,baz=62,slow=1.4,SNR=5.5
TORD Torodi Ar. Bea 123.45 288 PKPdf 01 45 07.5 -0.2
PLCA Paso Flores 138.89 160 PKP **PKPdf 01 45 36.5 +0.2**
comp=Z,3.6nm,1.2s,baz=316,slow=3.5,SNR=2.2
CPUP Villa Florida 156.06 171 PKPdf 01 46 03.6 -0.9
comp=Z,0.3nm,0.3s,baz=331,slow=11,SNR=1.4
CPUP PKPab **PKPab 01 46 31.5 -0.3**
comp=Z,1.6nm,1.0s,baz=153,slow=4.1,SNR=4.5
CPUP Villa Florida 156.06 171 PKPdf 01 46 03.5 -1.1

*IDC **21** 01:33:49.5±0.7,35.41N×82.54E,h0km,mb3.9/17, mbtmp3.9/22,ML3.2/4,MS3.7/11,Error ellipse: s-maj=19.9km s-min=12.7km az=62.0*
*MOS **21** 01:33:50.3±1.2,35.48N×82.57E,h11km,mb4.4/11,Error ellipse: s-maj=9.8km s-min=4.6km az=111.4*
*NEIC **21** 01:33:52.9±1.7,35.56N±0.07×82.55E±0.10,h10km±1km, mb4.2/13,Error ellipse: s-maj=14.4km s-min=10.5km az=63.0*
ISC 21 01:33:53.4±0.5,35.61N±0.05×82.48E±0.06,h10km,n121, σ1.974/117,mb4.1/31,MS3.7/14,8C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
ALCI	**Alchi Leh**	**4.57**	**254**	Rg		Rg	01 36 41.7	
JOSI	**Joshimath**	**5.60**	**207**	Rg		Rg	01 37 12.9	
UTK	**UTTARKASHI**	**5.92**	**216**	*e*Rg		Rg	01 37 24.6	
TSSA	**Tissa**	**5.93**	**244**	*e*P		**Pn**	**01 35 24.7 +3.2**	
TSSA				IAML			01 36 38.0	
	comp=N,31nm,0.7s							
TSSA				IAML			01 36 38.3	
	comp=E,58nm,1.1s							
TSSA				*i* x		x	01 37 24.2	
DHRM	**DHARAMSHALA**	**6.13**	**239**	*e*P		**Pn**	**01 35 27.1 +2.8**	
WUS	**Wushi**	**6.14**	**336**			**Pn**	**01 35 24.8 +0.5**	
PTH	**Pithoragarh**	**6.30**	**198**	*e*P		**Pn**	**01 35 27.7 +1.1**	
PTH				*i* x		x	01 37 55.9	
THN	**Thein Dam**	**6.41**	**242**	*e*P		**Pn**	**01 35 27.5 -0.5**	
THN				IAML			01 36 40.8	
	comp=E,29nm,1.1s							
THN				IAML			01 36 54.7	
	comp=N,34nm,2.0s							
THN				*e*Lg		Lg	01 37 09.6	
THN				*e*Rg		Rg	01 37 45.7	
KSH2	**Kashi**	**6.54**	**305**	Pn		**Pn**	**01 35 29.8 0.0**	
KSH2				Sn		Sn	01 36 35.6 -8.9	
KSH2				smax		smax		
	comp=N,170nm,1.1s							
KSH2				smax		smax		
	comp=E,170nm,1.1s							
JMU	**Jammu**	**6.94**	**248**	Rg		Rg	01 38 08.7	
TARG	**Taragay, Kyrgy**	**7.12**	**331**	P		**Pn**	**01 35 39.6 +1.6**	
TARG	**Taragay, Kyrgy**	**7.12**	**331**			**Pn**	**01 35 39.6 +1.6**	
PRZ	**Przheval'sk**	**7.56**	**336**	P		**Pn**	**01 35 45.7 +1.8**	
PRZ	**Przheval'sk**	**7.56**	**336**			**Pn**	**01 35 45.7 +1.8**	
KDJ	**Kajisay**	**7.71**	**329**	P		**Pn**	**01 35 46.4 +0.4**	
KDJ	**Kajisay**	**7.71**	**329**			**Pn**	**01 35 46.4 +0.4**	
NRN	**Naryn**	**7.72**	**321**	P		**Pn**	**01 35 47.0 +0.8**	
NRN	**Naryn**	**7.72**	**321**			**Pn**	**01 35 46.4 +0.2**	
NIL	**Nilore**	**7.85**	**258**			**Pn**	**01 35 49.0 +1.3**	
PDGK	**Podgornoye**	**8.05**	**344**	P		**Pn**	**01 35 51.6 +1.1**	
PDGK	**Podgornoye**	**8.05**	**344**			**Pn**	**01 35 51.6 +1.1**	
EVN	**Everest**	**8.47**	**153**			**Pn**	**01 35 59.3 +2.5**	
BOOM	**Boomskoye usch**	**8.55**	**325**	P		**Pn**	**01 35 58.6 +1.2**	
BOOM	**Boomskoye usch**	**8.55**	**325**			**Pn**	**01 35 58.6 +1.2**	
MANEM	**Manem**	**8.90**	**286**			**Pn**	**01 36 02.9 +0.6**	
WMQ	**Urumqi**	**9.13**	**24**	Pn		**Pn**	**01 37 49.8 +1.6**	
WMQ				Sn		**Sn**		
WMQ				smax		smax		
	comp=N,36nm,1.7s							
WMQ				smax		smax		
	comp=E,36nm,1.9s							
AAK	**Ala-Archa**	**9.37**	**321**	Pn		**Pn**	**01 36 09.2 +0.7**	
	comp=E,0.4nm,0.3s,baz=145,slow=12,SNR=8.8							
AAK				Pg			01 36 42.4	
	comp=E,1.4nm,0.3s,baz=184,slow=14,SNR=16							
AAK				Lg		Lg	01 38 42.6	
	comp=E,0.9nm,0.3s,baz=3.7,slow=19,SNR=3.7							
AAK				LR		LR	01 40 18.8	
	comp=E,298nm,19.5s,baz=135,slow=41							
	comp=E,1.3nm,0.3s							
AAK	**Ala-Archa**	**9.37**	**321**	*ce*P		**Pn**	**01 36 10.8 +2.2**	
AAK				pmax		pmax		
	comp=Z,9.0nm,1.3s							
AAK	**Ala-Archa**	**9.37**	**321**			**Pn**	**01 36 10.1 +1.5**	
ARSB	**Arslanbob**	**9.38**	**310**	P		**Pn**	**01 36 09.9 +1.1**	
ARSB	**Arslanbob**	**9.38**	**310**			**Pn**	**01 36 08.4 -0.4**	
BTK	**Batken**	**10.24**	**299**	P		**Pn**	**01 36 22.9 +2.4**	
BTK	**Batken**	**10.24**	**299**			**Pn**	**01 36 21.2 +0.7**	
GAR	**Garm**	**10.26**	**293**			**Pn**	**01 36 21.2 +0.3**	
CHGR	**Chuyangaron**	**11.06**	**290**	*i* P		**Pn**	**01 36 34.2 +2.4**	
KBL	**Kabul**	**11.06**	**268**			**Pn**	**01 36 30.7 -1.2**	
MK31	**Makanchi Array**	**11.18**	**359**	*ce*P		**Pn**	**01 36 34.5 +1.2**	
MKAR	**Makanchi Array**	**11.18**	**359**	Pn		**Pn**	**01 36 32.7 -0.5**	
	comp=Z,0.3nm,0.3s,baz=125,slow=8.8,SNR=4.2							
MKAR				Sn		**Sn**	**01 38 40.0 +1.7**	
	comp=Z,0.4nm,0.3s,baz=160,slow=32,SNR=5.4							
MKAR				Lg		Lg	01 39 51.4	
	comp=Z,0.1nm,0.3s,baz=191,slow=28,SNR=1.1							
	comp=Z,7.6nm,0.7s							
MKAR	**Makanchi Array**	**11.18**	**359**	Pn		**Pn**	**01 36 33.7 +0.5**	
MKAR						**Sn**	**01 38 39.0 +0.8**	
MAKZ	**Makanchi**	**11.20**	**358**			**Pn**	**01 36 33.1 -0.5**	
SHAA	**Shahritus**	**11.71**	**284**			**Pn**	**01 36 38.9 -1.7**	
KK31	**Karatay Array**	**11.90**	**313**			**Pn**	**01 36 42.9 -0.3**	
KKAR	**Karatay Array**	**11.90**	**313**			**Pn**	**01 36 42.6 -0.6**	
DGZ	**Jazzator, Alta**	**14.54**	**13**	*i* P		**Pn**	**01 37 19.5 +0.1**	
KURBB	**Kurchatov Arra**	**15.28**	**350**	Pn		**Pn**	**01 37 28.5 -0.6**	
	comp=Z,3.6nm,0.9s,baz=169,slow=11,SNR=10							
KURBB				Sn		**Sn**	**01 40 13.0 -5.3**	
	baz=105,slow=16							
KURBB				Lg		Lg	01 41 59.6	
	baz=170,slow=33,SNR=1.2							
KURK	**Kurchatov**	**15.36**	**351**	*ce*P		**Pn**	**01 37 30.8 +0.7**	
KURK				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KURK	**Kurchatov**	**15.36**	**351**	Pn		**Pn**	**01 37 30.9 +0.7**	
ZAA0	**Zalesovo Array**	**18.41**	**4**			**P**	**01 38 09.1 +0.5**	
ZAA0				IAmb		IAmb	01 38 23.6	
	comp=Z,15nm,1.2s							
ZALV	**Zalesovo Beam**	**18.41**	**4**	P		**P**	**01 38 06.5 -2.1**	
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=9.3							
ZALV				LR		LR	01 45 10.1	
	comp=Z,36nm,19.2s,baz=245,slow=37							
	comp=Z,3.3nm,0.8s							
ZALV	**Zalesovo Beam**	**18.41**	**4**			**P**	**01 38 08.8 +0.2**	
KNGR	**Kungurtug, Tuv**	**18.52**	**31**	*i* P		**P**	**01 38 11.3 +1.3**	
KNGR				pmax		pmax		
	comp=Z,10.0nm,1.1s							
PZH	**PanZhiHua**	**18.81**	**114**	P		**Pn**	**01 38 16.8 +3.0**	
BVAR	**Borovoye Array**	**19.40**	**338**	P		**P**	**01 38 19.8 +0.3**	
	comp=Z,0.1nm,0.3s,baz=138,slow=11,SNR=8.6							
	comp=Z,1.6nm,0.6s							
BORK	**Borovoye**	**19.44**	**338**	P		**P**	**01 38 21.3 +1.5**	
BORK				pmax		pmax		
	comp=Z,15nm,1.0s							
BORK	**Borovoye**	**19.44**	**338**			**P**	**01 38 21.3 +1.5**	
BORK				IAmb		IAmb	01 38 28.1	
	comp=Z,15nm,1.0s							
MOY	**Mondy**	**20.82**	**34**	*e*P		**P**	**01 38 36.5 +1.5**	
MOY				pmax		pmax		
	comp=Z,17nm,1.7s							
ZAK	**Zakamensk**	**21.10**	**39**	*e*P		**P**	**01 38 38.5 +0.4**	
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.9s							
AB31	**Akbulak array**	**21.41**	**317**			**P**	**01 38 40.1 -1.1**	
AB31				IAmb		IAmb	01 38 48.4	
	comp=Z,7.0nm,0.8s							
ABKAR	**Akbulak array**	**21.41**	**317**			**P**	**01 38 40.5 -0.7**	
SONM	**Songino Array**	**21.53**	**48**	P		**P**	**01 38 41.4 -1.4**	
	comp=Z,0.5nm,0.6s,baz=240,slow=8.8,SNR=9.2							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**21.53**	**48**			**P**	**01 38 42.2 -0.6**	
ULN	**Ulaanbaatar**	**21.95**	**49**	*ce*P		**P**	**01 38 47.8 +0.5**	
ULN				pmax		pmax		
	comp=Z,13nm,1.7s							
CMAR	**Chiang Mai Arr**	**22.46**	**135**	P		**P**	**01 38 48.8 -3.9**	
	comp=Z,1.3nm,0.3s,baz=314,slow=11,SNR=8.3							
	comp=Z,1.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**22.46**	**135**	P		**P**	**01 38 49.7 -3.1**	

AKTO Aktyubinsk 23.08 318 LR LR 01 48 38.1
comp=Z,183nm,18.3s,baz=28,slow=38
HHC Hu-ho-hao-te 23.38 68 *e*P **P 01 39 03.3 +0.9**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,48nm,4.4s
HHC LR LR
comp=E,130nm,16.0s
HHC LR LR
comp=Z,200nm,16.4s
UOSS Minazif 24.98 252 P **P 01 39 18.1 +0.7**
UOSS IAmb IAmb 01 39 28.6
comp=Z,7.5nm,1.1s
SVE Sverdlovsk 25.84 332 *e*P **P 01 39 27.3 +2.5**
SVE pmax pmax
comp=Z,16nm,1.0s
SVE MLR MLR
comp=Z,163nm,13.0s
ARTI Arti 26.44 329 *d i*P **P 01 39 32.2 +2.0**
ARTI 01 40 12.5
ARTI 01 42 55.1
ARTI S **S 01 44 03.6 0.0**
ARTI pmax pmax
comp=Z,5.0nm,0.8s
MAK Makhachkala 27.90 296 *e*P **P 01 39 45.2 +1.7**
MAK *e* 01 40 33.1
MAK *e*S **S 01 44 27.8 +0.8**
MAK *e*SS **SnSn 01 45 43.6 +3.3**
MAK MLR MLR
comp=Z,60nm,11.0s
NRIK Noril'sk 33.90 3 P **P 01 40 35.4 -0.7**
comp=Z,2.0nm,0.5s,baz=162,slow=7.7,SNR=3.7
comp=Z,2.0nm,0.5s
NRIK Noril'sk 33.90 3 *i* P **P 01 40 37.1 +1.0**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
NRIK Noril'sk 33.90 3 P **P 01 40 35.4 -0.7**
RAYN Ar Rayn 34.15 260 P **P 01 40 39.2 +0.4**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
RAYN Ar Rayn 34.15 260 P 01 40 38.4 -0.5
RAYN IAmb IAmb 01 40 40.4
comp=Z,4.3nm,0.9s
OBN Obninsk 36.85 317 *e*P **P 01 41 02.3 +0.7**
OBN *e* 01 41 04.4
OBN *e**PP **pP 01 41 09.1 +2.7**
OBN 01 42 27.0
OBN PPP PPP 01 42 46.0
OBN S **S 01 46 51.0 +5.1**
OBN SS **SnSn 01 49 11.0 -6.4**
OBN pmax pmax
comp=Z,20nm,1.7s
OBN MLR MLR
comp=Z,90nm,18.0s
BRTR Keskin Array B 38.50 291 P **P 01 41 15.8 -0.1**
comp=Z,1.3nm,0.8s,baz=82,slow=8.9,SNR=5.2
comp=Z,1.3nm,0.8s
AKASG Malin Array Be 40.77 309 P **P 01 41 33.5 -1.0**
comp=Z,0.8nm,0.7s,baz=76,slow=7.8,SNR=4.5
AKASG LR LR 02 01 33.9
comp=Z,147nm,18.3s,baz=79,slow=41
comp=Z,0.8nm,0.7s
AKASG Malin Array Be 40.77 309 P **P 01 41 33.7 -0.8**
AKASG IAmb IAmb 01 41 43.4
comp=Z,4.6nm,1.4s
AKBB Malin Array Si 40.77 309 *ce*P **P 01 41 34.4 -0.1**
AKBB pmax pmax
comp=Z,5.0nm,1.0s
MNK Minsk 41.74 314 *i* P **P 01 41 45.7 +3.3**
comp=E,9.0nm,0.9s
MNK *i* P **P 01 41 45.7 +3.3**
comp=N,8.0nm,0.9s
MNK *i* P **P 01 41 45.7 +3.3**
comp=Z,14nm,0.9s,baz=94
MNK *i* PP **PP 01 43 19.9 +1.1**
MNK *i* PPP PPP 01 43 49.2
MNK *i* S **S 01 48 00.2 +0.8**
MNK *i* SS **SS 01 51 05.4 +0.7**
MNK *i* SSS SSS 01 52 08.0
MNK *i* LQ LQ 01 56 06.2
MNK *i* LR LR 01 58 19.1
MNK Minsk 41.74 314 *i* P **P 01 41 45.7 +3.3**
MNK *i* 01 43 19.9
MNK *i* 01 43 33.1
MNK *i* PPP PPP 01 43 49.2
MNK *i* S **S 01 48 00.2 +0.8**
MNK *i* SS **SS 01 51 05.4 +0.7**
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=E,9.0nm,0.9s
MNK pmax pmax
comp=Z,14nm,0.9s
MNK MLR MLR
comp=Z,70nm,15.0s
MNK MLR MLR
comp=N,48nm,16.0s
MNK MLR MLR
comp=E,53nm,16.0s
NACGM Naroch 42.40 315 *e*P **P 01 41 48.2 +0.4**
MLR Muntele Rosu 43.27 301 LR LR 02 03 18.5
comp=E,129nm,19.4s,baz=124,slow=41
FINES FINESS Array B 43.53 324 P P 01 41 55.0 -1.9
comp=E,1.0nm,0.7s,baz=54,slow=9.7,SNR=3.9
comp=E,1.0nm,0.7s
FINES FINESS Array B 43.53 324 P P 01 41 55.0 -1.9
FINES FINESS Array B 43.53 324 P **P 01 41 56.2 -0.7**
ARCES ARCESS Array B 45.67 336 P **P 01 42 13.6 -0.3**
comp=E,3.3nm,1.0s,baz=92,slow=9.2,SNR=4.3
comp=E,3.3nm,1.0s
ARCES ARCESS Array B 45.67 336 P **P 01 42 13.6 -0.3**
VRAC Vranov 48.99 308 LR LR 02 06 37.3
comp=E,66nm,21.6s,baz=78,slow=40
HFS Hagfors 49.50 322 P **P 01 42 43.1 -0.7**
comp=E,4.3nm,1.0s,baz=72,slow=4.7,SNR=1.9
comp=E,4.3nm,1.0s
SEY Seymchan 49.95 34 *ce*P **P 01 42 46.2 -0.9**
SEY pmax pmax
comp=Z,4.0nm,1.3s
BRG Berggiesshubel 50.41 310 *e*P **P 01 42 51.7 +1.0**
BRG Amp 01 42 56.0
comp=Z,3.4nm,1.2s
NB2 NORSAR Subarra 50.67 323 P **P 01 42 51.3 -1.4**
comp=Z,1.1nm,0.7s,baz=85,slow=7.4
NOA NORSAR Array B 50.67 323 P **P 01 42 52.2 -0.6**
comp=Z,1.6nm,0.8s,baz=85,slow=7.5,SNR=4.8
comp=Z,1.6nm,0.8s
CLL Collm 50.91 311 *e*P **P 01 42 54.0 -0.6**
GERES GERESS Array B 50.95 308 P **P 01 42 54.4 -0.7**
comp=Z,0.1nm,0.3s,baz=103,slow=3.0,SNR=9.9
comp=Z,0.1nm,0.3s
GERES GERESS Array B 50.95 308 P **P 01 42 53.6 -1.4**
KHC Kasperske Hory 50.97 308 *ce*P **P 01 42 55.7 +0.6**
KHC pmax pmax
comp=Z,3.0nm,1.7s
DAVOX Davos/Dischmat 53.95 306 LR LR 02 09 26.7
comp=Z,62nm,21.2s,baz=78,slow=40
BILL Bilibino 55.23 27 *i* P **P 01 43 26.3 +0.1**
BILL pmax pmax
comp=Z,2.0nm,0.9s
EKA Eskdalemuir Ar 59.26 318 P **P 01 43 53.6 -1.3**
comp=Z,0.4nm,0.6s,baz=76,slow=8.8,SNR=4.3
comp=Z,0.4nm,0.6s
ESDC Sonseca Array 65.95 302 LR LR 02 16 15.9
comp=Z,58nm,18.1s,baz=62,slow=38
ILAR Eielson Array 72.77 20 P **P 01 45 20.7 -0.9**
comp=Z,1.3nm,0.9s,baz=324,slow=6.0,SNR=2.4
comp=Z,1.3nm,0.9s
ILAR Eielson Array 72.77 20 P P 01 45 19.7 -1.9
WRA Warramunga Arr 73.92 130 P P 01 45 26.1 -2.9
comp=Z,1.3nm,0.8s,baz=326,slow=5.7,SNR=8.7
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 73.92 130 P **P** 01 45 26.8 -2.2
TORD Torodi Ar. Bea 75.04 276 P **P 01 45 33.9 -1.8**
comp=Z,1.5nm,0.8s,baz=44,slow=4.9,SNR=5.7
comp=Z,1.5nm,0.8s
TORD Torodi Ar. Bea 75.04 276 P **P 01 45 34.5 -1.1**
TORD IAmb IAmb 01 45 41.3
comp=Z,5.8nm,1.4s
ASAR Alice Springs 76.44 132 P P 01 45 40.5 -3.0
comp=Z,0.8nm,0.8s,baz=314,slow=5.3,SNR=6.3
comp=Z,0.8nm,0.8s
ASAR Alice Springs 76.44 132 P P 01 45 41.3 -2.1
YKA Yellowknife Ar 81.27 8 P P 01 46 07.4 -2.0
comp=Z,1.4nm,0.9s,baz=344,slow=6.3,SNR=3.7

YKA				LR	LR	02 25 53.2		
	comp=Z,43nm,20.0s,baz=326,slow=38							
	comp=Z,1.4nm,0.9s							
YKA	**Yellowknife Ar**	**81.27**	**8**	P	**P**	**01 46 07.9**	**-1.5**	
BOSA	**Boshof**	**83.59**	**228**	P	P	01 46 18.2	-3.9	
	comp=Z,2.6nm,0.9s,baz=40,slow=2.5,SNR=5.4							
	comp=Z,2.6nm,0.9s							
BOSA	**Boshof**	**83.59**	**228**	P	P	01 46 19.0	-3.0	
DBIC	**Dimbokro**	**84.00**	**274**	LR	LR	02 26 56.7		
	comp=Z,77nm,18.4s,baz=109,slow=38							
ULM	**Lac du Bonnet**	**94.50**	**359**	LR	LR	02 32 41.5		
	comp=Z,34nm,19.3s,baz=33,slow=37							
CPUP	**Villa Florida**	**144.52**	**274**	PKP	**PKPab**	**01 53 26.3**	**-2.5**	
	comp=Z,3.0nm,0.8s,baz=82,slow=6.8,SNR=5.9							
CPUP	**Villa Florida**	**144.52**	**274**		**PKPab**	**01 53 27.6**	**-1.2**	
LPAZ	**La Paz**	**147.50**	**299**	PKPbc	**PKPdf**	**01 53 34.6**	**-1.8**	
	comp=Z,1.0nm,0.7s,baz=41,slow=2.4,SNR=4.1							
LPAZ	**La Paz**	**147.50**	**299**		**PKPdf**	**01 53 35.9**	**-0.6**	

RSNC 21 01:51:01.2±0.0, 7°N±2°×7°3W±°, h148km±2km, M2.0, ML1.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**201**	P	Pn	01 51 21.4	-0.2
BARC				S	Sn	01 51 36.5	-0.7
PAMC	**Pamplona, Colo**	**0.66**	**37**	P	Pn	01 51 23.1	-0.7
PAMC				S	Sn	01 51 41.2	+0.2
BRJC	**Barrancabermej**	**0.66**	**284**	P	Pn	01 51 23.2	0.0
BRJC				S	Sn	01 51 40.2	+0.2
RUSC	**La Rusia**	**0.91**	**179**	P	Pn	01 51 25.2	-0.5
RUSC				S	Sn	01 51 43.9	-0.3
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	P	Pn	01 51 28.0	-1.3
PTBC				S	Sn	01 51 49.6	-1.2
OCAC	**Ocana**	**1.44**	**351**	P	Pn	01 51 29.9	-0.2
OCAC				S	Sn	01 51 51.4	-0.9
SPBC	**San Pablo de B**	**1.50**	**220**	P	Pn	01 51 30.6	-0.2
SPBC				S	Sn	01 51 52.1	-1.3
NORC	**Norcasia**	**2.15**	**235**	P	Pn	01 51 36.8	-1.3
NORC				S	Sn	01 52 05.5	-0.9
ROSC	**El Rosal**	**2.30**	**212**	P	Pn	01 51 40.9	+0.7
ROSC				S	Sn	01 52 07.9	-2.3
HELC	**Santa Helena**	**2.49**	**256**	P	Pn	01 51 43.1	+0.6
HELC				S	Sn	01 52 15.0	+0.8
GUY2C	**Guyana, Caldas**	**2.75**	**235**	P	Pn	01 51 47.4	+1.6
GUY2C				S	Sn	01 52 21.8	+1.7
GUY2C	**Guyana, Caldas**	**2.75**	**235**	P	Pn	01 51 47.4	+1.6
GUY2C				S	Sn	01 52 20.8	+0.7
PRAC	**Prado**	**3.55**	**210**	P	Pn	01 51 56.4	+0.7
PRAC				S	Sn	01 52 37.7	-0.2
SJCC	**San Jacinto, C**	**3.69**	**326**	P	Pn	01 51 58.8	+1.3

RSNC 21 01:51:17.0±0.0, 7°N±5°×7°6W±°, h0km±3km, M1.1, ML1.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBBC	**Dabeiba**	**0.08**	**52**	P	Pg	01 51 17.9	-0.6
DBBC				S	Sg	01 51 19.7	+0.2
UREC	**San Jos de Ur**	**1.07**	**43**	P	Pg	01 51 37.2	-0.3
UREC				S	Sb	01 51 52.3	-0.6
HELC	**Santa Helena**	**1.07**	**136**	P	Pg	01 51 35.1	-2.4
CBOC	**Ciudad Bolivar**	**1.13**	**167**	P	Pg	01 51 36.5	-2.2
CBOC				S	Sg	01 51 54.0	+0.7

*SOF **21** 02:00:35.4, 41°.36N±0°.01×22°.70E±0°.01, h13km±2km, MD2.8/7*
*SKO **21** 02:00:35.0, 41°.32N×22°.69E, h20km, ML2.3*
*BEO **21** 02:00:36.0±0.6, 41°.29N×22°.62E, h0km, ML1.9/6*
ISC 21 02:00:35.8±1.0, 41°.34N±0°.04×22°.72E±0°.04, h10km±10km, n20, σ0°72/29, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**259**	*i* Pg	**Pg**	**02 00 38.6**	**0.0**
VAY				*i* Sg	**Sg**	**02 00 40.6**	**+0.1**
VAY				*e*Lg	Lg	02 00 40.7	
	comp=E,2μm,0.2s						
VAY				*e*Lg	Lg	02 00 40.9	
	comp=N,2μm,0.2s						
KKB	**Krupnik**	**0.58**	**31**	Pg	**Pg**	**02 00 47.1**	**-0.1**
KKB				Sg	**Sg**	**02 00 54.5**	**-0.4**
SRS	**Serrai**	**0.69**	**109**	*e*Pg	**Pg**	**02 00 49.2**	**-0.1**
SRS				*e*Sg	**Sb**	**02 00 59.7**	**-0.1**
MMB	**Musomishta**	**0.80**	**75**	Pg	**Pg**	**02 00 51.3**	**+0.1**
MMB				Sg	**Sg**	**02 01 02.1**	**+0.4**
BOSS	**Bosilegrad**	**1.17**	**351**	*e*Pg	**Pn**	**02 00 57.3**	**-1.0**
BOSS				*e*Sg	**Sg**	**02 01 13.5**	**+0.1**
VTS	**Vitosha**	**1.33**	**17**	Pg	**Pg**	**02 01 01.8**	**+0.4**
VTS				Sg	**Sg**	**02 01 18.9**	**+0.3**
VTS	**Vitosha**	**1.33**	**17**	*e*Pg	**Pg**	**02 01 01.7**	**+0.4**
VTS				*e*Sg	**Sg**	**02 01 19.0**	**+0.3**
TRAN	**Tran**	**1.49**	**358**	P	**Pb**	**02 01 03.5**	**-0.2**
RZN	**Rozhen**	**1.56**	**76**	P	**Pb**	**02 01 04.6**	**-0.3**
BLSH	**Balsha**	**1.57**	**15**	P	**Pb**	**02 01 05.0**	**0.0**
BLSH				S	**Sg**	**02 01 26.7**	**+0.4**
PGB	**Panagyurishte**	**1.59**	**42**	P	**Pb**	**02 01 04.6**	**-0.8**
BARS	**Barje**	**1.62**	**336**	*e*Pn	**Pn**	**02 01 04.4**	**-0.1**
PLD	**Plovdiv**	**1.72**	**61**	*e*Pg	**Pb**	**02 01 07.6**	**+0.1**
PLD				*e*Sg	**Sg**	**02 01 32.3**	**+1.3**
ZAPS	**Zavoj**	**1.93**	**358**	*e*Pn	**Pb**	**02 01 11.3**	**+0.1**
KDZ	**Kurdzhali**	**1.99**	**81**	P	**Pg**	**02 01 13.2**	**-0.7**
MPEP	**Malo Peshtene**	**2.15**	**20**	P	**Pg**	**02 01 16.4**	**-0.6**
SELS	**Selova**	**2.22**	**328**	*e*Pn	**Pn**	**02 01 12.5**	**-0.3**
BLKB	**Belogradchik**	**2.28**	**359**	*e*Pn	**Pb**	**02 01 16.7**	**-0.4**
ZAGS	**Zajecar**	**2.49**	**352**	*e*Pn	**Pb**	**02 01 19.3**	**-1.4**
TRUS	**Trudelj**	**3.34**	**330**	*e*Pn	**Pn**	**02 01 30.5**	**+2.3**

*VIE **21** 02:00:54.5±0.3, 50°.12N×18°.42E, h0km, mb2.5/19, ml3.3/15, ms3.4/4, Error ellipse: s-maj=2.9km s-min=2.3km az=158.0 34 km NNE of Ostrava Suspected Mining induced.*
*BGR **21** 02:00:55.7±0.3, 50°.11N×18°.41E, h1km, ML3.3/11, Error ellipse: s-maj=5.6km s-min=3.3km az=1.0*
*IDC **21** 02:00:55.2±1.9, 49°.93N×18°.50E, h0km, mbtmp3.3/6, ML3.1/4, Error ellipse: s-maj=30.3km s-min=7.9km az=131.0*
*IPEC **21** 02:00:55.2±0.1, 50°.10N×18°.45E, h1km, ML3.3/6, Error ellipse: s-maj=1.5km s-min=1.0km az=169.0*
*PRU **21** 02:00:57.9, 50°.07N×18°.29E, h0km*
*DNK **21** 02:01:00.5±1.2, 50°.50N×17°.87E, h0km±53km, ML3.0, Presumed earthquake*
ISC 21 02:00:53.3±0.6, 50°.17N±0°.02×18°.43E±0°.02, h0km, n94, σ1°76/147, 8C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.17**	**240**	*e*PG	**Pg**	**02 00 59.5**	**+2.9**
RAC				*e*SG	**Sg**	**02 01 02.7**	**+3.9**
OKC	**Ostrava-Krasne**	**0.38**	**209**	*e*PG	**Pg**	**02 01 01.9**	**+1.3**
OKC				*e*SG	**Sg**	**02 01 06.3**	**+0.9**
	comp=Z,1μm,0.7s						
OKC	**Ostrava-Krasne**	**0.38**	**209**	*e*Pg	**Pg**	**02 01 01.9**	**+1.3**
OKC				*e*Sg	**Sg**	**02 01 06.7**	**+1.2**
STEB	**Steborice**	**0.48**	**241**	*e*PG	**Pb**	**02 01 04.7**	**0.0**
STEB				*e*SG	**Sb**	**02 01 10.9**	**-1.4**
	comp=Z,2μm,0.3s						
ANAC	**Anensky vrch**	**0.68**	**262**	*e*Pg	**Pb**	**02 01 08.5**	**+0.4**
	baz=87						
ANAC				*e*Sg	**Sg**	**02 01 16.8**	**+1.6**
	536nm,0.4s,baz=87						
MORC	**Moravsky Berou**	**0.69**	**236**	*e*Pg	**Pb**	**02 01 07.9**	**-0.4**
MORC				*e*Sg	**Sb**	**02 01 17.6**	**-0.8**
MORC	**Moravsky Berou**	**0.69**	**236**	*e*Pg	**Pb**	**02 01 07.8**	**-0.5**
	baz=61						
MORC				*e*Sg	**Sg**	**02 01 16.0**	**+0.5**
	648nm,0.6s,baz=61						
MORC	**Moravsky Berou**	**0.69**	**236**	*e*PG	**Pb**	**02 01 07.9**	**-0.4**
MORC				*e*SG	**Sg**	**02 01 16.1**	**+0.5**
LOSC	**Losov**	**0.88**	**232**	*e*Pg	**Pb**	**02 01 11.3**	**-0.1**
	baz=55						
LOSC				*e*Sg	**Sg**	**02 01 21.5**	**+0.1**
	423nm,0.5s,baz=55						
OJC	**Ojcow**	**0.88**	**86**	*e*Pg	**Pb**	**02 01 11.7**	**+0.2**
OJC				*e*Sg	**Sb**	**02 01 24.1**	**+0.2**
OJC	**Ojcow**	**0.88**	**86**	*e*Pg	**Pb**	**02 01 11.8**	**+0.2**
OJC				*e*Sg	**Sb**	**02 01 24.4**	**+0.5**
MAUC	**Maruska**		**0.89**	**206**	*e*PG	**Pb**	**02 01 11.7**	**0.0**
MAUC					*e*SG	**Sb**	**02 01 23.3**	**-0.9**
	comp=Z,295nm,0.3s							
KRLC	**Kraliky**		**1.06**	**266**	*e*PG	**Pb**	**02 01 14.8**	**+0.2**
KRLC					*e*SG	**Sb**	**02 01 28.7**	**-0.4**
	comp=Z,184nm,0.3s							
LANS	**Liptovska Anna**		**1.22**	**146**	*e*PG	**Pg**	**02 01 17.2**	**+0.5**
LANS					*e*SG	**Sb**	**02 01 34.4**	**+0.7**
LANS					*e*LG	Lg	02 01 36.4	
DPC	**Dobruska-Polom**		**1.36**	**278**	*e*PG	**Pb**	**02 01 21.4**	**+1.7**
DPC					*e*SG	**Sn**	**02 01 39.7**	**+1.3**
	comp=Z,442nm,0.4s							
DPC	**Dobruska-Polom**		**1.36**	**278**	*e*Pg	**Pb**	**02 01 21.0**	**+1.3**
DPC					*e*Sg	**Sn**	**02 01 39.6**	**+1.1**
JAVC	**Velka Javorina**		**1.40**	**201**	*e*Pg	**Pg**	**02 01 20.3**	**+0.2**
	baz=22							
JAVC	**Velka Javorina**		**1.40**	**201**	*e*PG	**Pg**	**02 01 20.4**	**+0.3**
NIE	**Niedzica**		**1.43**	**121**	*e*Pg	**Pn**	**02 01 20.8**	**+0.3**
NIE					*e*Sg	**Sn**	**02 01 40.6**	**+0.6**
OSTC	**Ostas**		**1.47**	**286**	*e*PG	**Pb**	**02 01 22.5**	**+1.0**
OSTC					*e*SG	**Sn**	**02 01 43.7**	**+2.7**
	comp=Z,136nm,0.4s							
VRAC	**Vranov**		**1.47**	**235**	Pg	**Pg**	**02 01 21.6**	**+0.2**
	6.9nm,0.3s,baz=61,slow=16,SNR=88							
VRAC					Lg	Lg	02 01 40.2	
	59nm,0.3s,baz=43,slow=14,SNR=8.9							
VRAC	**Vranov**		**1.47**	**235**	⇑P	**Pb**	**02 01 21.9**	**+0.4**
VRAC	**Vranov**		**1.47**	**235**	*e*Pg	**Pg**	**02 01 21.7**	**+0.2**
	baz=56							
VRAC					*e*Sg	**Sg**	**02 01 40.2**	**-0.3**
	304nm,0.5s,baz=56							
KSP	**Ksiaz**		**1.52**	**297**	*e*Pg	**Pg**	**02 01 23.4**	**+1.0**
KSP					*e*Sg	**Sn**	**02 01 45.1**	**+2.9**
KSP	**Ksiaz**		**1.52**	**297**	*e*Pn	**Pg**	**02 01 23.4**	**+1.0**
KSP					*e*Sg	**Sn**	**02 01 45.6**	**+3.4**
KRUC	**Moravsky**		**1.72**	**231**	*e*Pn	**Pb**	**02 01 25.7**	**-0.2**
	baz=51							
KRUC					*e*Sg	**Sb**	**02 01 48.1**	**0.0**
	237nm,0.5s,baz=51							
MODS	**Modra-Piesok**		**1.95**	**203**	*e*PN	**Pn**	**02 01 28.4**	**+0.7**
MODS					*e*SG	**Sn**	**02 01 53.5**	**+0.7**
STHS	**Stebnicka Huta**		**1.98**	**111**	*e*PG	**Pg**	**02 01 31.5**	**+0.3**
STHS					*e*SG	**Sg**	**02 02 00.2**	**+3.5**
STHS					*e*LG	Lg	02 02 03.7	
KECS	**Kecovo**		**2.16**	**141**	*e*PN	**Pn**	**02 01 30.9**	**+0.4**
KECS					*e*SN	**Sn**	**02 01 56.3**	**-1.7**
SRO	**Srobarova**		**2.36**	**182**	*e*SG	**Sg**	**02 02 10.6**	**+1.6**
SRO					*e*LG	Lg	02 02 19.9	
PSZ	**Piszkesteto**		**2.45**	**156**	⇑P	**Pn**	**02 01 35.8**	**+1.1**
PSZ	**Piszkesteto**		**2.45**	**156**	*e*P	**Pn**	**02 01 35.3**	**+0.7**
PRU	**Pruhonice**		**2.51**	**267**	*e*PG	**Pb**	**02 01 40.5**	**+1.3**
PRU					*e*SG	**Sg**	**02 02 12.8**	**-1.1**
	comp=Z,97nm,0.4s							
WINA	**Alland / Wiene**		**2.58**	**218**	Pn	**Pn**	**02 01 36.6**	**+0.3**
	4.8nm,0.2s,SNR=19							
WINA					*e*Sn	**Sn**	**02 02 06.7**	**-1.6**
	18nm,0.3s							
KOLS	**Kolonicke sedl**		**2.79**	**115**	*e*PN	**Pn**	**02 01 41.2**	**+1.9**
KOLS					*e*PG	**Pg**	**02 01 46.3**	**-0.5**
KOLS					*e*SN	**Sn**	**02 02 13.1**	**-0.6**
KOLS					*e*SG	**Sg**	**02 02 25.7**	**+2.7**
KOLS					*e*LG	Lg	02 02 33.1	
RICC	**Richard**		**2.80**	**279**	*e*SG	**Sg**	**02 02 25.2**	**+2.0**
	comp=Z,102nm,0.6s							
CONA	**Conrad Observa**		**2.81**	**218**	Pn	**Pn**	**02 01 39.7**	**+0.2**
	0.7nm,0.2s,SNR=9.9							
CONA					*e*Sn	**Sn**	**02 02 13.8**	**-0.3**
	25nm,0.4s							
ZVC	**Zvikov**		**2.84**	**257**	*e*PG	**Pb**	**02 01 46.4**	**+1.5**
ZVC					*e*SG	**Sg**	**02 02 23.4**	**-1.1**
	comp=Z,51nm,0.3s							
RONA	**Rosalia, Austr**		**2.84**	**210**	Pn	**Pn**	**02 01 40.8**	**+0.9**
	2.7nm,0.3s,SNR=16							
RONA					*e*Sn	**Sn**	**02 02 14.4**	**-0.5**
	7.2nm,0.2s							
BRG	**Berggiesshubel**		**2.95**	**286**	*e*Pg	**Pg**	**02 01 50.2**	**+0.5**
BRG					*e*SG	**Sg**	**02 02 29.3**	**+1.3**
BRG	**Berggiesshubel**		**2.95**	**286**	Pg	**Pg**	**02 01 50.3**	**+0.5**
BRG					Sg	**Sg**	**02 02 29.4**	**+1.5**
BRG					Amp		02 02 35.1	
	comp=Z,45nm,0.4s							
CKRC	**Cesky Krumlov**		**3.00**	**245**	*e*SG	**Sg**	**02 02 28.4**	**-1.4**
	comp=Z,60nm,0.6s							
GKP	**Gorka Klasztor**		**3.19**	**347**	*e*P	**Pn**	**02 01 46.4**	**+1.7**
KHC	**Kasperske Hory**		**3.32**	**254**	*e*PN	**Pn**	**02 01 47.5**	**+1.0**
KHC					*e*PG	**Pg**	**02 01 55.8**	**-1.1**
KHC					*e*SG	**Sg**	**02 02 39.2**	**-0.7**
	comp=Z,68nm,0.4s							
GEC2	**GERESS Array S**		**3.35**	**249**	*e*Pn	**Pn**	**02 01 48.1**	**+1.1**
GEC2					*e*Pg	**Pg**	**02 01 57.0**	**-0.6**
GEC2					*e*Sg	**Sg**	**02 02 40.7**	**-0.2**
GERES	**GERESS Array B**		**3.35**	**249**	Pn	**Pn**	**02 01 48.1**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=71,slow=15,SNR=11							
GERES					Pg	**Pb**	**02 01 55.7**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=69,slow=17,SNR=21							
GERES					Lg	Lg	02 02 39.9	
	comp=Z,1.3nm,0.3s,baz=66,slow=26,SNR=17							
ARSA	**Arzberg**		**3.50**	**214**	*e*Pn	**Pn**	**02 01 50.0**	**+1.1**
	comp=Z,2.2nm,0.3s							
MOA	**Molln**		**3.59**	**231**	*e*Pn	**Pn**	**02 01 50.5**	**+0.2**
	comp=Z,0.3nm,0.1s							
CLL	**Collm**		**3.63**	**290**	*e*Pn	**Pb**	**02 01 56.0**	**-2.3**
CLL					*e*Pg	**Pg**	**02 02 03.0**	**+0.2**
CLL					*ex*	x	02 02 05.0	
CLL					*e*Sg	**Sg**	**02 02 51.0**	**+1.1**
	comp=Z,50nm,0.5s							
WET	**Wettzell**		**3.75**	**256**	*e*Pn	**Pn**	**02 01 53.1**	**+0.7**
WET					*e*Pg	**Pg**	**02 02 05.7**	**+0.6**
WET					*e*Sg	**Sg**	**02 02 51.9**	**-1.7**
TANN	**Tannenbergstha**		**3.83**	**276**	*e*Pn	**Pn**	**02 01 54.3**	**+0.7**
TANN					*e*Pg	**Pg**	**02 02 06.4**	**-0.3**
TANN					*e*Sg	**Sg**	**02 02 54.9**	**-1.5**
NKC	**Novy Kostel**		**3.84**	**273**	*e*SG	**Sg**	**02 02 58.1**	**+1.4**
	comp=Z,58nm,0.4s							
MORH	**Mrgy, Hungar**		**3.96**	**178**	⇓P	**Pn**	**02 01 55.6**	**+0.4**
SESA	**Seetaler Alpe,**		**3.99**	**221**	*i* Pn	**Pn**	**02 01 57.8**	**+1.9**
	comp=Z,2.5nm,0.3s,SNR=8.6							
BIOA	**Bad Ischl, Aus**		**4.01**	**234**	*e*Pn	**Pn**	**02 01 58.5**	**+2.4**
	comp=Z,0.8nm,0.2s							
SOKA	**Soboth**		**4.16**	**214**	*e*Pn	**Pn**	**02 01 59.3**	**+1.2**
	comp=Z,0.9nm,0.4s							
MOX	**Moxa**		**4.38**	**279**	*e*Pn	**Pn**	**02 02 02.8**	**+1.7**
MOX					*e*Sg	**Sg**	**02 03 14.7**	**+0.6**
DRGR			**4.42**	**138**	⇑P	**Pn**	**02 02 02.9**	**+1.2**
SIRR	**Siria**		**4.46**	**150**	⇓P	**Pn**	**02 02 03.0**	**+0.8**
OBKA	**Obir**		**4.48**	**217**	*e*Pn	**Pn**	**02 02 04.2**	**+1.6**
	comp=Z,1.1nm,0.2s,SNR=7.7							
OBKA					*e*Sn	**Sn**	**02 02 56.0**	**+0.6**
	comp=Z,5.5nm,0.5s							
GRF	**Grafenberg Arr**		**4.68**	**267**	*e*Pn	**Pn**	**02 02 06.6**	**+1.4**
MARR	**Marisel-Cluj**		**4.69**	**136**	⇑P	**Pn**	**02 02 07.1**	**+1.7**
LESA	**Schwarzleotal**		**4.69**	**236**	*i* Pn	**Pn**	**02 02 06.4**	**+1.0**
	comp=Z,0.6nm,0.2s							
BZS	**Buzias**		**5.03**	**154**	⇑P	**Pn**	**02 02 10.9**	**+0.9**
BURAR	**Bucovina Array**		**5.16**	**117**	⇑P	**Pn**	**02 02 13.3**	**+1.4**
WATA	**Walderalm**		**5.34**	**241**	*e*Sg	**Sg**	**02 03 42.9**	**-2.1**
	comp=Z,15nm,0.4s							
WTTA	**Wattenberg**		**5.35**	**240**	*e*Sg	**Sg**	**02 03 43.0**	**-2.2**
	comp=Z,12nm,0.4s							
BSD	**Bornholm Skovb**		**5.39**	**338**	*e*P	**Pn**	**02 02 14.9**	**0.0**
BSD	**Bornholm Skovb**		**5.39**	**338**	*i* P	**Pn**	**02 02 16.0**	**+1.0**
BSD					*i* S	**Sn**	**02 03 11.3**	**-6.4**
BSD					IAML		02 03 16.2	
	comp=Z,12nm,0.9s							
GZR	**Gura Zlata**		**5.61**	**147**	⇑P	**Pn**	**02 02 18.8**	**+0.9**
MOTA	**Moosalm**		**5.61**	**243**	*e*Pg	**Pg**	**02 02 40.4**	**-0.3**
	comp=Z,3.8nm,0.6s							
MOTA					*e*Sg	**Sg**	**02 03 49.9**	**-3.5**
	comp=Z,14nm,0.5s							
SQTA	**Sankt Quirin**		**5.62**	**241**	*e*Sg	**Sg**	**02 03 53.6**	**0.0**
	comp=Z,9.5nm,0.4s							
RETA	**Reutte**		**5.73**	**245**	*i* Pn	**Pn**	**02 02 21.3**	**+1.6**
	comp=Z,0.4nm,0.2s							
FETA	**Feichten**		**6.00**	**241**	*e*Sg	**Sg**	**02 04 05.6**	**-0.4**
	comp=Z,5.2nm,0.6s							
LUNU	**Lund**		**6.25**	**333**	*i* P	**Pn**	**02 02 27.9**	**+1.3**
PABE	**Paberze**		**6.31**	**30**	*e*P	**Pn**	**02 02 31.4**	**+3.8**
BLEU	**Blekinge**		**6.34**	**347**	*i* P	**Pn**	**02 02 29.2**	**+1.2**
BLEU					*i* S	**Sn**	**02 03 35.2**	**-5.8**
DAVOX	**Davos/Dischmat**		**6.62**	**242**	Pn	**Pn**	**02 02 34.6**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=120,slow=9.1,SNR=7.7							
DAVOX					Lg	Lg	02 04 22.8	
	comp=Z,1.7nm,0.3s,baz=210,slow=18,SNR=6.9							
	comp=Z,1.2nm,0.4s							
BJUU	**Bjuv**		**6.75**	**333**	*i* P	**Pn**	**02 02 34.7**	**+1.2**
DEL	**Delary**		**6.88**	**338**	*i* P	**Pn**	**02 02 36.0**	**+0.7**
DEL					*i* S	**Sn**	**02 03 46.0**	**-8.1**
KIEV	**Kiev**		**6.91**	**81**	⇑P	**Pn**	**02 02 38.7**	**+2.9**
AKASG	**Malin Array Be**		**6.92**	**81**	Sn	**Sn**	**02 03 51.2**	**-4.1**
	comp=Z,1.3nm,0.3s,baz=260,slow=24,SNR=4.2							
AKASG					Lg	Lg	02 04 33.7	
	comp=Z,0.9nm,0.3s,baz=269,slow=27,SNR=4.6							
NACGM	**Naroch**		**6.96**	**44**	*e*P	**Pn**	**02 02 38.5**	**+2.0**
MTSE	**Matsula**		**9.12**	**18**	*e*P	**Pn**	**02 03 07.6**	**+1.6**
VSU	**Vasula**		**9.62**	**27**	*e*P	**Pn**	**02 03 14.4**	**+1.6**
AAL	**Aland**		**10.07**	**4**	*e*P	**Pn**	**02 03 19.9**	**+0.8**
ARBE	**Arbavere**		**10.25**	**22**	*e*P	**Pn**	**02 03 23.3**	**+1.7**
HFS	**Hagfors**		**10.34**	**347**	Pn	**Pn**	**02 03 23.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=159,slow=13,SNR=4.4							
	comp=Z,1.3nm,0.7s							
MEF	**Metsahovi**		**10.63**	**16**	*e*P	**Pn**	**02 03 27.1**	**+0.5**
RAF	**Rauma**		**11.04**	**9**	*e*P	**Pn**	**02 03 31.9**	**-0.4**
NOA	**NORSAR Array B**		**11.62**	**342**	Pn	**Pn**	**02 03 40.2**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=159,slow=12,SNR=5.0							
FINES	**FINESS Array B**		**12.08**	**18**	Pn	**Pn**	**02 03 45.7**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=198,slow=10,SNR=17							
FINES					Sn	**Sn**	**02 05 56.3**	**-5.5**
	comp=Z,0.2nm,0.3s,baz=197,slow=23,SNR=1.6							
	comp=Z,0.6nm,0.3s							
KEF	**Keuruu**		**12.54**	**14**	*e*P	**Pn**	**02 03 51.9**	**-0.9**
ARCES	**ARCESS Array B**		**19.72**	**7**	Pn	**P**	**02 05 24.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=194,slow=13,SNR=6.1							
	comp=Z,0.8nm,0.7s							

*SKO **21** 02:12:35.7, 41°.32N×22°.69E, h20km, ML2.0*
*SOF **21** 02:12:36.2, 41°.37N±0°.01×22°.70E±0°.02, h10km±3km, MD2.6/5*
*BEO **21** 02:12:36.2±0.7, 41°.30N×22°.60E, h0km, ML1.6/6*
ISC 21 02:12:36.0±1.1, 41°.35N±0°.05×22°.68E±0°.04, h15km±9km, n16, σ0°48/25, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**254**	*i* Pg	**Pg**	**02 12 39.2**	**+0.1**
VAY				*i* Sg	**Sg**	**02 12 41.3**	**+0.1**
VAY				*e*Lg	Lg	02 12 41.3	
	comp=E,1μm,0.2s						
VAY				*e*Lg	Lg	02 12 41.6	
	comp=N,578nm,0.2s						
KKB	**Krupnik**	**0.60**	**34**	Pg	**Pg**	**02 12 47.7**	**-0.1**
KKB				Sg	**Sg**	**02 12 54.8**	**-0.9**
SRS	**Serrai**	**0.72**	**108**	*e*Pg	**Pb**	**02 12 50.0**	**-0.4**
SRS				*e*Sg	**Sb**	**02 13 00.5**	**+0.4**
MMB	**Musomishta**	**0.83**	**76**	Pg	**Pb**	**02 12 52.0**	**-0.2**
MMB				Sg	**Sb**	**02 13 02.9**	**-0.2**
BOSS	**Bosilegrad**	**1.16**	**353**	*e*Pg	**Pg**	**02 12 58.1**	**-0.3**
BOSS				*e*Sg	**Sn**	**02 13 13.9**	**+0.5**
PLNA	**Plana**	**1.26**	**26**	P	**Pb**	**02 12 59.7**	**+0.1**
VTS	**Vitosha**	**1.33**	**18**	P	**Pg**	**02 13 02.6**	**+0.8**
VTS				S	**Sg**	**02 13 19.3**	**+0.1**
VTS	**Vitosha**	**1.33**	**18**	*e*Pg	**Pg**	**02 13 02.6**	**+0.8**
VTS				*e*Sg	**Sg**	**02 13 19.7**	**+0.5**
TRAN	**Tran**	**1.49**	**359**	P	**Pg**	**02 13 04.7**	**0.0**
BLSH	**Balsha**	**1.57**	**16**	P	**Pg**	**02 13 06.2**	**0.0**
RZN	**Rozhen**	**1.58**	**77**	P	**Pg**	**02 13 06.5**	**0.0**
BARS	**Barje**	**1.60**	**337**	*e*Pg	**Pb**	**02 13 05.1**	**-0.3**
BARS				*e*Sg	**Sg**	**02 13 27.3**

comp=Z,6.3nm,0.8s
AQDB Aquidauana 22.18 126 P **P** 02 17 22.7 +1.3
AQDB Aquidauana 22.18 126 *eP* **P** 02 17 22.0 +0.5
AQDB *ep*P **pP** 02 17 49.5 +0.9
ATM1 UHE Belo Monte 22.73 80 P **P** 02 17 26.4 -0.5
BMO2 UHE Belo Monte 22.95 80 P **P** 02 17 32.6 +3.8
BMO1 UHE Belo Monte 23.22 80 P **P** 02 17 31.8 +0.5
SNDB Serra Nova Dou 23.32 102 P **P** 02 17 33.0 +0.7
SNDB Serra Nova Dou 23.32 102 *eP* **P** 02 17 31.2 -1.0
ARAG Araguaiana, MT 23.62 111 *eP* **P** 02 17 35.3 +0.3
AMBA Amambai (Brazi 24.08 131 *eP* **P** 02 17 41.3 +2.2
SJPY San Joaquin 24.55 136 *eP* **P** 02 17 42.7 -0.6
SJPY *ep*P **pP** 02 18 15.0 +1.0
CPUP Villa Florida 24.64 140 P **P** 02 17 43.2 -0.9
comp=Z,1.1nm,0.5s,baz=326,slow=12,SNR=6.0
comp=Z,1.1nm,0.5s
CPUP Villa Florida 24.64 140 P **P** 02 17 43.7 -0.4
CPUP Villa Florida 24.64 140 P **P** 02 17 43.7 -0.4
PRPB Parauapebas 24.67 88 P **P** 02 17 43.8 -0.7
CELP Cerrillos 26.96 17 P **P** 02 18 04.6 -0.5
PTGB Pitanga 27.29 130 P **P** 02 18 10.3 +2.2
PTGB Pitanga 27.29 130 *eP* **P** 02 18 07.5 -0.6
PTGB *ep*P **pP** 02 18 40.6 +1.1
LDASE Londrina, Braz 27.32 127 *eP* **P** 02 18 09.0 +0.7
IPMB Ipameri, GO 27.59 114 P **P** 02 18 11.6 +0.8
IPMB Ipameri, GO 27.59 114 *eP* **P** 02 18 11.9 +1.1
IPMB *ep*P **pP** 02 18 42.9 +0.7
ITAB Concordia 28.72 135 P **P** 02 18 20.2 -0.5
ITAB Concordia 28.72 135 P **P** 02 18 23.2 +2.6
ITAB Concordia 28.72 135 *eP* **P** 02 18 22.7 +2.0
ITAB *ep*P **pP** 02 18 52.5 +0.2
PMNB Patos De Minas 29.36 114 *eP* **P** 02 18 28.1 +1.5
SDBA SAO DESIDERIO 29.58 101 *eP* **P** 02 18 29.6 +1.1
JANB Januaria 30.52 106 *eP* **P** 02 18 37.1 +0.4
PLCA Paso Flores 32.93 174 P **P** 02 18 57.5 -0.1
comp=Z,1.9nm,0.6s,baz=350,slow=11,SNR=11
comp=Z,1.9nm,0.6s
BSFB Barra de Sao F 34.55 112 *eP* **P** 02 19 11.8 0.0
TXAR Lajitas Array 46.37 324 P **P** 02 20 49.2 +0.4
comp=Z,0.3nm,0.6s,baz=154,slow=6.7,SNR=4.2
TXAR PcP **PcP** 02 22 23.0 +1.6
comp=Z,0.2nm,0.6s,baz=113,slow=3.5,SNR=2.0
comp=Z,0.3nm,0.6s
TXAR Lajitas Array 46.37 324 P **P** 02 20 48.5 -0.3
TXAR **PcP** 02 22 20.2 -1.3
PDAR Pinedale Array 59.60 331 P **P** 02 22 27.1 +1.4
comp=Z,0.2nm,0.4s,baz=131,slow=6.7,SNR=4.9
PDAR PcP **PcP** 02 23 11.9 +0.5
comp=Z,0.3nm,0.3s,baz=107,slow=4.2,SNR=5.6
comp=Z,0.2nm,0.4s
PDAR Pinedale Array 59.60 331 P **P** 02 22 25.8 +0.1
PDAR **PcP** 02 23 12.5 +1.1
ULM Lac du Bonnet 60.76 345 P **P** 02 22 33.2 +0.1
comp=Z,2.4nm,0.6s,baz=177,slow=6.2,SNR=6.8
comp=Z,2.4nm,0.6s
ULM Lac du Bonnet 60.76 345 P **P** 02 22 32.9 -0.2
ULM IAmb IAmb 02 22 33.7
comp=Z,2.4nm,0.6s
VNA2 Neumayer--Watz 75.26 162 ⇑P **P** 02 24 03.5 +0.1
comp=Z,1.5nm,0.6s,baz=290,slow=4.8
VNA2 ⇓*p*P **pP** 02 24 42.9 +2.9
comp=Z,1.4nm,0.8s,baz=284,slow=6.0
YKA Yellowknife Ar 76.58 342 P **P** 02 24 11.0 +0.1
comp=Z,0.4nm,0.4s,baz=143,slow=6.0,SNR=4.3
comp=Z,0.4nm,0.4s
YKA Yellowknife Ar 76.58 342 P **P** 02 24 11.5 +0.6
SNAA Sanae 76.88 162 P **P** 02 24 13.5 +0.9
comp=Z,0.9nm,0.7s,baz=271,slow=8.8,SNR=3.5
comp=Z,0.9nm,0.7s
SNAA Sanae 76.88 162 P **P** 02 24 13.3 +0.7
TORD Torodi Ar. Bea 78.59 75 P **P** 02 24 22.9 -0.2
comp=Z,1.0nm,0.6s,baz=284,slow=8.0,SNR=6.3
TORD pP **pP** 02 24 57.7 -2.4
comp=Z,0.5nm,0.6s,baz=280,slow=4.8,SNR=1.7
comp=Z,1.0nm,0.6s
QSPA South Pole Qui 82.25 180 P **P** 02 24 43.2 +1.4
comp=Z,2.9nm,0.8s,baz=141,slow=1.3,SNR=17
comp=Z,2.9nm,0.8s
QSPA South Pole Qui 82.25 180 P **P** 02 24 42.5 +0.7
QSPA IAmb IAmb 02 25 11.8
comp=Z,5.5nm,1.4s
ILAR Eielson Array 89.63 336 P **P** 02 25 18.4 +0.6
comp=Z,0.2nm,0.4s,baz=136,slow=4.1,SNR=5.0
ILAR pP **pP** 02 25 54.1 -1.5
comp=Z,0.4nm,0.8s,baz=145,slow=4.2,SNR=1.3
comp=Z,0.2nm,0.4s
ILAR Eielson Array 89.63 336 P **P** 02 25 18.3 +0.5
ZALV Zalesovo Beam 131.14 16 PKP **PKiKP** 02 31 32.6 +0.2
comp=Z,0.4nm,0.4s,baz=291,slow=4.0,SNR=2.1
ZALV pPKP **pPKPdf** 02 32 11.2 +0.1
comp=Z,0.5nm,0.5s,baz=318,slow=1.9,SNR=3.8
MKAR Makanchi Array 136.46 23 PKP **PKPdf** 02 31 41.4 -0.2
comp=Z,0.2nm,0.4s,baz=298,slow=3.1,SNR=2.5
MKAR pPKP **pPKPdf** 02 32 20.9 -0.4
comp=Z,0.4nm,0.4s,baz=270,slow=1.4,SNR=2.5
MKAR Makanchi Array 136.46 23 **PKPdf** 02 32 40.4 +0.4
ASAR Alice Springs 138.07 221 PKhKP PKPpre 02 31 38.5
comp=Z,0.2nm,0.5s,baz=149,slow=2.0,SNR=1.9
ASAR PKP **PKPdf** 02 31 46.0 +0.7
comp=Z,0.7nm,0.5s,baz=124,slow=1.8,SNR=7.1
ASAR pPKP pPKPdf 02 32 21.6 -3.3
comp=Z,0.5nm,0.6s,baz=134,slow=2.6,SNR=2.1
ASAR Alice Springs 138.07 221 **PKPdf** 02 31 45.0 -0.4
WRA Warramunga Arr 140.31 225 PKhKP PKPpre 02 31 43.7
comp=Z,0.4nm,0.3s,baz=137,slow=2.4,SNR=2.8
WRA PKP **PKPdf** 02 31 50.3 +0.8
comp=Z,0.2nm,0.3s,baz=115,slow=1.9,SNR=6.5
WRA pPKP pPKPdf 02 32 27.9 -1.2
comp=Z,0.6nm,0.6s,baz=137,slow=1.7,SNR=3.2
WRA Warramunga Arr 140.31 225 **PKPdf** 02 31 50.0 +0.5
HHC Hu-ho-hao-te 146.69 351 *eP* **PKiKP** 02 31 53.8 -2.3
PZH PanZhiHua 161.14 10 PKP **PKPdf** 02 32 14.4 -6.4

*IDC **21** 02:15:17.9±0.8, 30.26N×94.78E, h0km, mb4.1/14, mbtmp4.1/18, ML4.2/4, MS3.3/1, Error ellipse: s-maj=24.9km s-min=17.1km az=57.0*
*MOS **21** 02:15:17.6±1.1, 30.26N×95.00E, h10km, mb4.4/11, Error ellipse: s-maj=15.9km s-min=6.6km az=115.1*
*NEIC **21** 02:15:19.6±1.6, 30.19N±0.08×94.76E±0.09, h10km±1km, mb4.4/21, Error ellipse: s-maj=14.1km s-min=12.8km az=150.0*
*NDI **21** 02:15:23.3±1.7, 30.28N×95.01E, h10km, ML2.9, MW3.8, Presumed earthquake*

ISC 21 02:15:21.9±0.5, 30.27N±0.05×94.81E±0.07, h23km, n98, σ1≠40/99, mb4.3/39, MS3.3/3, 9C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.22**	**261**	Pn	**Pn**	**02 16 10.3**	**-1.3**
TAWA	**Tawang**	**3.71**	**225**	*eP*	**Pb**	**02 16 23.8**	**-3.2**
MOKO	**MOKOCHONG**	**3.95**	**184**	*eP*	**Pn**	**02 16 24.1**	**+2.9**
MOKO				*eS*	**Sn**	**02 17 09.7**	**+2.8**
TEZP	**TEZPUR**	**4.05**	**206**	*eP*	**Pn**	**02 16 26.1**	**+3.6**
TEZP				*eS*	**Sn**	**02 17 11.7**	**+2.5**
TEZP				IAML		02 17 34.2	
	comp=E,72nm,0.6s						
TEZP				IAML		02 17 35.6	
	comp=N,30nm,0.2s						
GUWA	**GUWAHATI**	**4.91**	**215**	*eP*	Pn	02 16 39.4	+5.1
GUWA				IAML		02 18 07.0	
	comp=N,10.0nm,0.9s						
GUWA				IAML		02 18 07.2	
	comp=E,13nm,0.9s						
SHL	**Shillong**	**5.36**	**210**	Pn	**Pn**	**02 16 37.0**	**-3.7**
IMP	**Imphal**	**5.47**	**188**	*eP*	**Pn**	**02 16 44.4**	**+2.3**
LZDM	**Lanzhou Array**	**9.36**	**50**	Pn	**Pn**	**02 17 35.8**	**+0.1**
	baz=239,slow=17						
	comp=E,1.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.35**	**161**	Pn	**Pn**	**02 18 13.9**	**-2.5**
	comp=E,2.1nm,0.3s,baz=332,slow=13,SNR=5.0						
	comp=E,2.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.35**	**161**		**Pn**	**02 18 14.2**	**-2.2**
DHRM	**DHARAMSHALA**	**15.95**	**282**	*eP*	**P**	**02 19 08.4**	**-0.1**
WUS	**Wushi**	**16.68**	**315**	Pn	**Pn**	**02 19 13.3**	**-0.9**
WUS				IAmb	IAmb	02 19 18.8	
	comp=Z,59nm,1.2s						
BHPL	**Bhopal**	**17.02**	**250**	*ex*	**P**	**02 19 21.5**	**+1.2**
BHPL				*ex*	x	02 21 25.6	
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**02 19 29.2**	**0.0**
TARG				pmax	pmax		
	comp=Z,13nm,1.0s						
TARG	**Taragay, Kyrgy**	**17.85**	**314**		**Pn**	**02 19 29.2**	**0.0**
PDGK	**Podgornoye**	**17.86**	**321**	P	**Pn**	**02 19 27.4**	**-1.5**
PDGK	**Podgornoye**	**17.86**	**321**	P	**Pn**	**02 19 27.4**	**-1.5**
KSH2	**Kashi**	**18.10**	**304**	P	**P**	**02 19 34.1**	**+1.9**
KSH2				sP	sP	02 19 51.1	+8.1
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PBA	**Port Blair**	**18.62**	**186**	Pn	**P**	**02 19 37.4**	**-0.5**
MK31	**Makanchi Array**	**19.14**	**333**	*deP*	**P**	**02 19 42.6**	**-0.9**
MKAR	**Makanchi Array**	**19.14**	**333**	P	**P**	**02 19 42.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=142,slow=14,SNR=15						
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**19.14**	**333**	*eP*	**P**	**02 19 42.6**	**-0.9**
MKAR	**Makanchi Array**	**19.14**	**333**	P	**P**	**02 19 42.1**	**-1.4**
SONM	**Songino Array**	**19.67**	**24**	P	**P**	**02 19 48.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=214,slow=11,SNR=15						
	comp=Z,4.8nm,1.0s						
SONM	**Songino Array**	**19.67**	**24**	*eP*	**P**	**02 19 49.3**	**-0.1**
ULN	**Ulaanbaatar**	**19.93**	**25**	P	**P**	**02 19 52.2**	**0.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**19.93**	**25**	P	**P**	**02 19 52.2**	**0.0**
DGZ	**Jazzator, Alta**	**20.19**	**346**	*iP*	**P**	**02 19 53.7**	**-1.3**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KNGR	**Kungurtug, Tuv**	**20.41**	**5**	*i* P	**P**	**02 19 56.8**	**-0.6**
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**20.41**	**313**	P	**P**	**02 19 56.2**	**-1.3**
	comp=Z,6.0nm,0.9s,baz=132,slow=11,SNR=12						
	comp=Z,6.0nm,0.9s						
AAK	**Ala-Archa**	**20.41**	**313**	*ceP*	Pn	02 19 58.8	-0.9
AAK				pmax	pmax		
	comp=Z,17nm,1.3s						
MOY	**Mondy**	**21.86**	**10**	*eP*	**P**	**02 20 13.1**	**+0.1**
MOY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CHGR	**Chuyangaron**	**22.69**	**299**	*iP*	**P**	**02 20 21.1**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,55nm,1.0s						
KURBB	**Kurchatov Arra**	**23.70**	**334**	P	**P**	**02 20 31.2**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=142,slow=10,SNR=38						
KURBB				PcP	**PcP**	**02 24 16.0**	**+0.4**
	comp=Z,0.8nm,1.0s,baz=136,slow=1.4,SNR=4.6						
	comp=Z,4.4nm,0.8s						
KURK	**Kurchatov**	**23.74**	**334**	*ceP*	**P**	**02 20 31.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**23.74**	**334**	P	**P**	**02 20 31.3**	**-1.0**
KURK				IAmb	IAmb	02 20 32.5	
	comp=Z,5.3nm,0.8s						
ZALV	**Zalesovo Beam**	**24.74**	**346**	P	**P**	**02 20 40.5**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=162,slow=9.5,SNR=15						
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**24.74**	**346**	*eP*	**P**	**02 20 41.3**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVAR	**Borovoye Array**	**28.89**	**329**	P	**P**	**02 21 19.4**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=134,slow=11,SNR=6.3						
	comp=Z,2.8nm,0.8s						
SVE	**Sverdlovsk**	**35.66**	**328**	*eP*	**P**	**02 22 19.7**	**+1.7**
ARTI	**Arti**	**36.48**	**326**	*iP*	**P**	**02 22 25.5**	**+0.4**
ARTI						02 23 45.1	
ARTI						02 24 47.8	
ARTI				S	**S**	**02 28 05.4**	**-0.2**
ARTI				SS	**SnSn**	**02 30 34.3**	**-0.5**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NRIK	**Noril'sk**	**39.33**	**356**	*iP*	**P**	**02 22 49.3**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ASAJ	**Asahikawa**	**39.95**	**56**	LR	LR	02 41 17.6	
	comp=Z,43nm,18.8s,baz=185,slow=39						
GNI	**Garni**	**41.60**	**298**	*iP*	**P**	**02 23 09.1**	**+0.8**
GNI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIRV	**Kirov**	**41.80**	**326**	*ceP*	**P**	**02 23 10.5**	**+1.1**
KBZ	**Khabaz**	**42.91**	**303**	*ceP*	**P**	**02 23 20.3**	**+1.6**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	**43.07**	**303**	*eP*	**P**	**02 23 21.9**	**+1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHA1	**Shidzhatmaz**	**43.09**	**303**	*ceP*	**P**	**02 23 22.5**	**+2.1**
KLMR	**Klimovskoe**	**47.27**	**327**	*eP*	**P**	**02 23 52.3**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
OBN	**Obninsk**	**47.76**	**319**	⇑*eP*	**P**	**02 23 58.1**	**+1.1**
OBN				PPP	PPP	02 26 38.0	
OBN				S	**S**	**02 30 58.0**	**+6.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,16nm,14.0s						
BRTR	**Keskin Array B**	**50.13**	**298**	P	**P**	**02 24 14.4**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=99,slow=6.4,SNR=4.1						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**50.13**	**298**	*eP*	**P**	**02 24 17.4**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**50.13**	**298**	P	**P**	**02 24 14.7**	**-0.9**
AKASG	**Malin Array Be**	**52.08**	**313**	P	**P**	**02 24 29.2**	**-0.7**
	comp=Z,6.5nm,1.0s,baz=81,slow=6.5,SNR=9.4						
	comp=Z,6.5nm,1.0s						
AKASG	**Malin Array Be**	**52.08**	**313**	*eP*	**P**	**02 24 29.9**	**0.0**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKASG	**Malin Array Be**	**52.08**	**313**	P	**P**	**02 24 29.7**	**-0.2**
AKBB	**Malin Array Si**	**52.08**	**313**	*ceP*	**P**	**02 24 30.2**	**+0.3**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKBB	**Malin Array Si**	**52.08**	**313**	P	**P**	**02 24 30.8**	**+0.9**
MNK	**Minsk**	**52.76**	**318**	*iP*	P	02 24 20.9	-14
	comp=E,8.0nm,0.8s						
MNK				*iP*	P	02 24 20.9	-14
	comp=N,7.0nm,0.8s						
MNK				*iP*	P	02 24 20.9	-14
	comp=Z,3.0nm,0.6s,baz=88						
MNK				*iP*	PcP	02 26 08.0	+24
MNK				*iP*	PPP	02 27 19.5	
MNK				*iS*	S	02 31 35.4	-26
MNK				*iS*	SS	02 35 25.1	-15
MNK				*iSS*	SSS	02 36 39.8	
MNK				*iLQ*	LQ	02 41 24.6	
MNK				*iLR*	LR	02 45 07.4	
MNK	**Minsk**	**52.76**	**318**	*iP*	P	02 24 20.9	-14
MNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,52nm,20.0s						
MNK				MLR	MLR		
	comp=E,79nm,23.0s						
MNK				MLR	MLR		
	comp=Z,19nm,16.0s						
ELL	**Elmali**	**53.59**	**295**	P	**P**	**02 24 41.3**	**-0.1**
ELL				IAmb	IAmb	02 24 42.8	
	comp=Z,8.4nm,1.0s						
FIA1	**FINESS Array S**	**53.79**	**326**	P	**P**	**02 24 43.4**	**+1.1**
FINES	**FINESS Array B**	**53.79**	**326**	P	**P**	**02 24 41.2**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=82,slow=8.9,SNR=12						
	comp=Z,0.8nm,0.5s						
FINES	**FINESS Array B**	**53.79**	**326**	*eP*	**P**	**02 24 42.9**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**53.79**	**326**	P	**P**	**02 24 42.2**	**-0.2**
WINA	**Alland / Wiene**	**60.95**	**311**	*eP*	**P**	**02 25 34.6**	**+1.5**
	comp=Z,2.9nm,1.3s						
NB2	**NORSAR Subarra**	**60.98**	**326**	P	**P**	**02 25 32.6**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=80,slow=6.9						
NOA	**NORSAR Array B**	**60.98**	**326**	P	**P**	**02 25 32.7**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=80,slow=6.6,SNR=6.5						
	comp=Z,1.8nm,0.8s						
CONA	**Conrad Observa**	**61.13**	**311**	*eP*	**P**	**02 25 35.4**	**+0.9**
	comp=Z,3.6nm,0.9s						
SOKA	**Soboth**	**62.00**	**310**	P	**P**	**02 25 40.8**	**+0.5**
	comp=Z,2.1nm,1.0s						
SESA	**Seetaler Alpe,**	**62.19**	**310**	*eP*	**P**	**02 25 41.8**	**+0.1**
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**62.29**	**313**	P	**P**	**02 25 42.5**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=65,slow=6.3,SNR=9.9						
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**62.29**	**313**	*eP*	**P**	**02 25 43.3**	**+1.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**62.29**	**313**	P	**P**	**02 25 42.6**	**+0.3**
KHC	**Kasperske Hory**	**62.30**	**313**	*ceP*	**P**	**02 25 44.0**	**+1.8**
KHC				pmax	pmax		
	comp=Z,2.0nm,1.7s						
LESA	**Schwarzleotal**	**63.34**	**311**	*eP*	**P**	**02 25 49.6**	**+0.4**
	comp=Z,3.3nm,1.3s						
RETA	**Reutte**	**64.56**	**312**	*eP*	**P**	**02 25 57.7**	**+0.4**
	comp=Z,1.9nm,0.8s						
ASAR	**Alice Springs**	**65.46**	**141**	P	**P**	**02 26 02.6**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=325,slow=6.2,SNR=9.8						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**65.46**	**141**	P	**P**	**02 26 03.0**	**-0.3**
C23K	**Itkillik River**	**69.78**	**20**	P	**P**	**02 26 30.0**	**+0.1**
E24K	**Your Creek**	**71.41**	**21**	P	**P**	**02 26 39.9**	**0.0**
E24K				IAmb	IAmb	02 26 42.1	
	comp=Z,2.4nm,0.9s						
C27K	**Jago River**	**71.84**	**18**	P	**P**	**02 26 41.9**	**-0.6**
C27K				IAmb	IAmb	02 26 45.9	
	comp=Z,5.7nm,1.2s						
F25K	**Christian Rive**	**72.56**	**20**	P	**P**	**02 26 46.4**	**-0.5**
E28M	**Babbage River**	**73.65**	**18**	P	**P**	**02 26 53.7**	**+0.5**
E28M				IAmb	IAmb	02 26 54.9	
	comp=Z,3.1nm,0.9s						
ILAR	**Eielson Array**	**73.90**	**23**	P	**P**	**02 26 54.6**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=300,slow=5.2,SNR=13						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**73.90**	**23**	P	**P**	**02 26 54.2**	**-0.5**
H27K	**Steamboat Moun**	**74.68**	**20**		**P**	**02 26 60.0**	**+0.6**
H27K				IAmb	IAmb	02 27 01.8	
	comp=Z,4.3nm,0.9s						
I27K	**Kandik River**	**75.08**	**21**	P	**P**	**02 27 00.9**	**-0.7**
SCRK	**Sand Creek**	**75.38**	**23**	P	**P**	**02 27 02.8**	**-0.6**
SCRK				IAmb	IAmb	02 27 05.3	
	comp=Z,3.0nm,1.0s						
G30M	**tAoh Zraii Nji**	**75.69**	**18**		**P**	**02 27 05.3**	**+0.2**
I28M	**Miner Creek**	**75.70**	**21**	P	**P**	**02 27 04.9**	**-0.3**
I28M				IAmb	IAmb	02 27 09.4	
	comp=Z,4.5nm,1.2s						
I30M	**Mount Dempster**	**76.92**	**20**		**P**	**02 27 11.1**	**-1.1**
I30M				IAmb	IAmb	02 27 15.8	
	comp=Z,3.5nm,1.1s						
H31M	**Peel River**	**77.07**	**19**	P	**P**	**02 27 12.7**	**-0.3**
H31M				IAmb	IAmb	02 27 15.0	
	comp=Z,7.1nm,1.1s						
ESDC	**Sonseca Array**	**77.46**	**309**	P	**P**	**02 27 14.9**	**-0.7**
	comp=Z,1.7nm,1.1s,baz=50,slow=6.7,SNR=5.8						
	comp=Z,1.7nm,1.1s						
ESDC	**Sonseca Array**	**77.46**	**309**	P	**P**	**02 27 15.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**86.12**	**283**	P	**P**	**02 28 00.5**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=34,slow=5.0,SNR=4.9						
	comp=Z,1.5nm,0.9s						
BOSA	**Boshof**	**88.47**	**235**	P	**P**	**02 28 13.4**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=85,slow=18,SNR=2.4						
	comp=Z,2.4nm,1.0s						
BOSA	**Boshof**	**88.47**	**235**	P	**P**	**02 28 09.8**	**-2.9**

IDC 21 02:25:00.1±3.9, 6.69S×154.76E, h0km, mb3.5/2, mbtmp3.5/2, MS3.5/1, Error ellipse: s-maj=204.9km s-min=53.7km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.80**	**234**	P	P	02 30 15.0	+0.2
	2.3nm,0.9s,baz=59,slow=9.3,SNR=8.4						
	2.3nm,0.9s						
ASAR	**Alice Springs**	**26.20**	**228**	P	P	02 30 36.1	-0.7
	0.3nm,0.8s,baz=57,slow=9.5,SNR=2.0						
	0.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.56**	**246**	LR	LR	02 44 14.4	
	comp=Z,73nm,18.2s,baz=2.5,slow=38						
TORD	**Torodi Ar. Bea**	**152.72**	**286**	PKPbc	PKiKP	02 45 00.2	0.0
	0.4nm,0.7s,baz=66,slow=3.9,SNR=3.7						

*ISK **21** 02:25:21.9, 36.03N×31.31E, h6km, ML2.5/16*
*AFAD **21** 02:25:22.9, 36.02N×31.28E, h16km±1km, ML2.5*
*NIC **21** 02:25:25.1, 35.86N×31.55E, h32km±32km, Ml2.2/8*

ISC 21 02:25:22.4±1.2, 35.90N±0.04×31.39E±0.02, h24km±14km, n49, σ1≠37/63, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.82**	**66**	Pg	**Pn**	**02 25 38.5**	**0.0**
GAZI				Sg	**Sn**	**02 25 50.5**	**+0.6**
GAZI	**Gazipasa**	**0.82**	**66**	P	**Pn**	**02 25 39.3**	**+0.8**
ALAN	**Alanya-ANTALYA**	**0.83**	**38**	Pg	**Pb**	**02 25 37.6**	**-0.7**
ALAN				Sg	**Sb**	**02 25 48.9**	**-0.2**
AKUM	**Antalya-Kumluc**	**0.94**	**297**	P	**Pb**	**02 25 38.7**	**-1.4**
AKUM				S	**Sb**	**02 25 50.7**	**-1.5**
AKUM				IAML		02 25 56.0	
	comp=E,131nm,0.4s						
KEPZ	**Antalya-Kepez**	**1.01**	**10**	P	**Pn**	**02 25 41.0**	**-0.2**
ANTB	**Antalya**	**1.16**	**329**	Pg	**Pn**	**02 25 41.4**	**-1.7**
AKMS	**Akamas**	**1.17**	**139**	P	**Pb**	**02 25 43.8**	**-0.3**
AKMS				S	**Sn**	**02 25 57.6**	**-1.0**
AKMS				AML	AML	02 26 07.5	
	0.2nm,0.4s						
AKMS				AML	AML	02 26 07.6	
	0.2nm,0.3s						
ALFC	**Alefka**	**1.24**	**127**	P	**Pn**	**02 25 44.5**	**+0.2**
ALFC				S	**Sn**	**02 25 59.6**	**-0.7**
ALFC				AML	AML	02 26 08.3	
	0.2nm,0.2s						
ALFC				AML	AML	02 26 08.8	
	0.2nm,0.4s						
BOZY	**Bozyazi-Mersin**	**1.30**	**81**	Pn	**Pb**	**02 25 47.9**	**+1.7**
KORT	**Korkueli**	**1.38**	**323**	Pn	**Pn**	**02 25 46.1**	**-0.2**
KORT	**Korkueli**	**1.38**	**323**	P	**Pn**	**02 25 45.9**	**-0.4**
HDMB	**Hadim**	**1.38**	**40**	Pn	**Pb**	**02 25 47.4**	**-0.3**
TEKE	**Tekeli-Mersin**	**1.42**	**80**	Pn	**Pb**	**02 25 48.9**	**+0.7**
ERMK	**Ermenek**	**1.44**	**59**	P	**Pb**	**02 25 50.8**	**+2.1**
ELL	**Elmali**	**1.46**	**306**	Pn	**Pn**	**02 25 47.7**	**+0.3**
ELL	**Elmali**	**1.46**	**306**	P	**Pb**	**02 25 49.4**	**+0.4**
ELL				S	**Sb**	**02 26 10.9**	**+3.7**
ELL				AML	AML	02 26 19.6	
	0.3nm,0

BAGO	Egridir - ISPA	2.14 347	P	Pb	02 25 59.9	-0.6
SABU	Mula-Dalaman	2.16 296	P	Pb	02 25 59.4	-1.5
KONT	Konya--Tatoy	2.18 21	P	Pb	02 25 59.5	-1.8
DOGA	KONYA_Doganhis	2.21 6	P	Pb	02 25 60.0	-1.8
YVAC	Isparta, Yalva	2.37 357	P	Pn	02 26 01.5	+1.6
DALY	Dalyan (Mula)	2.39 293	Pn	Pn	02 26 01.3	+1.3
DALY			Sn	Sn	02 26 30.3	+1.8
DALY	Dalyan (Mula)	2.39 293	P	Pb	02 26 02.3	-2.4
TAVA	DENIZLI_Tavas	2.53 309	P	Pb	02 26 05.1	-2.0
DNIZ	Denizli-Tavas-	2.55 313	P	Pb	02 26 07.4	-0.2
ARG	Arkhangelos	2.66 278	Pn	Pn	02 26 05.6	+1.8
TURN	Turunc	2.68 290	Pn	Pn	02 26 05.5	+1.4
TURN	Turunc	2.68 290	P	Pb	02 26 06.5	-3.2
YER	Yerkesik	2.79 297	Pn	Pn	02 26 06.8	+1.2
PASA	Karahalli, USA	2.87 329	P	Pb	02 26 10.1	-2.9
ESEN	Aydn-Nazilli	3.08 309	P	Pn	02 26 12.2	+2.6
BDRM	Kayabasi	3.38 291	P	Pn	02 26 14.9	+1.2

*WEL **21** 02:48:44.0±1.5, 37.5°×17.9E±°, h8km±6km, M3.7/18, ML3.8/18, MLv3.7/18, Error ellipse: s-maj=11.1km s-min=6.6km az=90.4*

*IDC **21** 02:48:44.2±3.2, 36.96S×178.53E, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=69.2km s-min=29.5km az=115.0*

*NOU **21** 02:48:44.2, 37.45S×179.08E, h10km, MLv4.1/12, Off E. Coast of N. Island, N.Z.*

*NEIC **21** 02:48:45.7±0.9, 37.03S±0.05×178.61E±0.06, h10km±1km, mb4.2/7, Error ellipse: s-maj=11.3km s-min=4.6km az=135.0*

ISC 21 02:48:45.2±1.9, 37.28S±0.05×178.96E±0.07, h13km±10km, n108, σ1°48/111, mb4.2/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	Matakaoa Point	0.59	241	P		Pg	02 48 56.6	-0.2
MXZ	Matakaoa Point	0.59	241			Pb	02 48 56.8	-0.6
MXZ				Sg		Sg	02 49 04.8	+0.1
MXZ	Matakaoa Point	0.59	241	P		Pb	02 48 56.8	-0.6
MXZ				S		Sg	02 49 05.1	+0.4
WMGZ	Waiomatatini S	0.69	218	P		Pn	02 49 00.3	-0.4
WMGZ				S		Sb	02 49 11.3	+2.7
PKGZ	Pakihiroa	0.91	230	P		Pb	02 49 00.3	+0.4
PKGZ				S		Sb	02 49 16.8	+1.8
PUZ	Puketiti	0.97	215	P		Pb	02 49 04.2	+0.3
PUZ				S		Sg	02 49 18.2	+1.6
HAZ	Te Kaha	1.05	243	P		Pg	02 49 04.0	-1.5
HAZ				S		Sb	02 49 20.4	+1.5
TWGZ	Tauwhareparae	1.19	221	P		Pn	02 49 07.5	-0.1
TWGZ				S		Sb	02 49 25.0	+2.0
RUGZ	Raukumara Rang	1.23	236	P		Pn	02 49 08.0	-0.2
CNGZ	Carnagh Statio	1.34	206	P		Pn	02 49 10.0	+0.4
CNGZ				S		Sb	02 49 29.7	+2.3
WIZ	White Island	1.43	259	P		Pb	02 49 11.1	-0.6
TKGZ	Te Karaka	1.46	217	P		Pn	02 49 10.7	-0.5
MWZ	Matawai	1.55	227	P		Pn	02 49 12.1	-0.5
WHRZ	Whale Island	1.68	249	P		Pn	02 49 14.6	+0.3
RAGZ	Rawiri	1.73	225	P		Pn	02 49 15.1	+0.1
URZ	Urewera	1.76	236	Pn		Pn	02 49 15.5	+0.1
	49nm,0.3s,baz=45,slow=5.7,SNR=172							
URZ				Sn		Sn	02 49 37.7	0.0
	51nm,0.3s,baz=149,slow=22,SNR=23							
URZ	Urewera	1.76	236	P		Pn	02 49 15.4	0.0
URZ	Urewera	1.76	236	S		Sn	02 49 38.5	+0.8
URZ	Urewera	1.76	236	P		Pn	02 49 15.5	+0.1
PRGZ	Paritu Road	1.85	207	P		Pn	02 49 16.3	-0.4
EDRZ	Edgecumbe	1.95	244	P		Pn	02 49 18.0	0.0
KNZ	Kokohu	2.02	210	P		Pn	02 49 17.4	-1.5
RTZ	Ruatahuna	2.06	229			Pn	02 49 19.2	-0.3
RTZ				Sn		Sn	02 49 41.5	-3.7
RTZ	Ruatahuna	2.06	229	P		Pn	02 49 19.5	0.0
MUGZ	Murupara	2.11	235	P		Pn	02 49 19.7	-0.4
TARZ	Mount Tarawera	2.17	243	P		Pn	02 49 21.4	+0.3
MYRZ	Mayor Island	2.17	269	P		Pn	02 49 21.7	+0.7
RAHZ	Arahi	2.21	221	P		Pn	02 49 21.4	-0.1
RRRZ	Republican Roa	2.21	241	P		Pn	02 49 21.8	+0.3
OMRZ	Omania	2.21	247	P		Pn	02 49 22.1	+0.5
KARZ	Kaharoa	2.28	250	P		Pn	02 49 22.1	-0.5
HLRZ	Highlands Stat	2.29	244	P		Pn	02 49 23.0	+0.4
MTHZ	Maungataniwha	2.30	226	P		Pn	02 49 22.6	-0.2
PRRZ	Plateau Road	2.37	238	P		Pn	02 49 22.5	-1.3
ALRZ	Allen Road	2.44	237	P		Pn	02 49 24.4	-0.3
KMRZ	Kaimai	2.46	256	P		Pn	02 49 24.4	-0.7
NMHZ	Naumai	2.49	222	P		Pn	02 49 25.3	-0.1
ARHZ	Aropaoanui	2.52	217	P		Pn	02 49 25.3	-0.4
MRHZ	Matea Rd	2.54	231	P		Pn	02 49 25.8	-0.3
BKZ	Black Stump Fm	2.71	225	P		Pn	02 49 27.7	-0.8
BKZ	Black Stump Fm	2.71	225	S		Sn	02 49 59.6	-1.6
TOZ	Tahuroa Road	2.79	260			Pn	02 49 26.0	-3.5
TOZ	Tahuroa Road	2.79	260	P		Pn	02 49 28.7	-0.8
MCHZ	McNeill Hill	2.80	219	P		Pn	02 49 28.6	-1.1
KWHZ	Kaweka Forest	2.93	222	P		Pn	02 49 30.2	-1.3
RITZ	Rihia Road	2.98	234	P		Pn	02 49 32.1	-0.1
GRZ	Great Barrier	2.99	289	P		Pn	02 49 32.5	+0.2
KAHZ	Kahuranaki	3.00	212	P		Pn	02 49 30.5	-1.9
MKAZ	Moumakai	3.04	272	P		Pn	02 49 31.5	-1.4
WIAZ	Waiheke Island	3.10	278	P		Pn	02 49 32.9	-0.8
TMVZ	Te Maari	3.15	233	P		Pn	02 49 33.8	-0.8
ETVZ	East Tongariro	3.16	233	P		Pn	02 49 34.1	-0.7
NTVZ	North Tongariro	3.16	234	P		Pn	02 49 34.0	-0.8
BHHZ	Black Hill Sta	3.17	225	P		Pn	02 49 33.8	-1.1
KRVZ	Karewarewa	3.18	234	P		Pn	02 49 34.5	-0.6
OTVZ	Oturere	3.21	233	P		Pn	02 49 34.8	-0.7
WTVZ	West Tongariro	3.23	234	P		Pn	02 49 35.4	-0.3
SNVZ	South Ngauruho	3.24	233	P		Pn	02 49 34.9	-0.9
ETAZ	East Tamaki Re	3.24	274	P		Pn	02 49 34.7	-1.0
NGZ	Ngauruhoe	3.25	233	P		Pn	02 49 35.4	-0.7
MBAZ	Motutapu North	3.29	278	P		Pn	02 49 35.8	-0.6
MOVZ	Moawhango	3.30	229	P		Pn	02 49 35.7	-0.9
WHVZ	Whangaehu Hut	3.33	242	P		Pn	02 49 36.0	-1.1
FWVZ	Far West T-bar	3.33	233	P		Pn	02 49 36.2	-1.0
MAVZ	Matarangi	3.33	232	P		Pn	02 49 36.5	-0.8
WNVZ	Wahianoa	3.34	231	P		Pn	02 49 36.1	-1.2
ABAZ	Army Bay	3.38	280	P		Pn	02 49 38.5	+0.9
PNHZ	Pukenui	3.41	219	P		Pn	02 49 35.5	-2.6
AWAZ	Awhitu Peninsu	3.46	272	P		Pn	02 49 39.0	+0.4
HIZ	Hauiti	3.47	248	P		Pn	02 49 39.8	+0.9
HIZ	Hauiti	3.47	248	Pn		Pn	02 49 38.4	-0.5
HIZ	Hauiti	3.47	248	P		Pn	02 49 39.6	+0.7
PRHZ	Porangahau	3.50	211	P		Pn	02 49 36.2	-3.1
WTAZ	Waiatarua	3.52	274	P		Pn	02 49 40.5	+0.9
TSZ	Takapari Road	3.64	219	P		Pn	02 49 38.7	-2.5
VRZ	Vera Road	3.79	240	P		Pn	02 49 43.4	+0.1
WCZ	Waipu Caves	3.94	288	P		Pn	02 49 44.7	-0.7
WAZ	Wanganui	3.98	230	P		Pn	02 49 45.8	-0.1
BFZ	Birch Farm	4.00	211	P		Pn	02 49 43.2	-3.0
BFZ	Birch Farm	4.00	211	S		Sn	02 50 28.6	-4.4
BFZ	Birch Farm	4.00	211	Pn		Pn	02 49 42.6	-3.6
MRZ	Mangatainoka R	4.29	217	Pn		Pn	02 49 44.9	-2.2
PKE	Pukeiti	4.36	242	P		Pn	02 49 53.3	+2.2
OUZ	Omahuta	4.80	294	P		Pn	02 49 56.8	-0.3
OUZ	Omahuta	4.80	294	P		Pn	02 49 57.1	0.0
MSWZ	Moikau Station	5.04	214	Pn		Pn	02 49 58.3	-2.1
SNZO	South Karori	5.21	218	Pn		Pn	02 50 03.4	+0.6
QRZ	Quartz Range	6.13	233	P		Pn	02 50 14.9	-0.6
KHZ	Kahutara	6.61	217	P		Pn	02 50 20.5	-1.5
CTZ	Chatham Island	7.28	154	P		Pn	02 50 30.2	-0.9
BBOO	Buckleboo	35.18	264	P		P	02 55 36.7	-2.3
ASAR	Alice Springs	40.77	276	P		P	02 56 24.1	-2.1
	1.4nm,0.9s,baz=119,slow=7.4,SNR=8.4 1.4nm,0.9s							
ASAR	Alice Springs	40.77	276	P		P	02 56 23.6	-2.6
SBA	Scott Base	41.02	184	P		P	02 56 30.0	+2.5
SBA				IAmb	IAmb		02 56 50.1	
	comp=Z,4.4nm,1.4s							
WR8	Warramunga Arr	42.25	282	P		P	02 56 36.0	-2.4
WR8				IAmb	IAmb		02 56 41.8	
	comp=Z,7.8nm,1.2s							
WRA	Warramunga Arr	42.39	281	P		P	02 56 37.2	-2.3
	comp=Z,1.1nm,0.4s,baz=122,slow=7.6,SNR=16 comp=Z,1.1nm,0.4s							
WRA	Warramunga Arr	42.39	281	P		P	02 56 36.6	-2.9
WB0	Warramunga Arr	42.44	282	P		P	02 56 37.6	-2.3
WB0				IAmb	IAmb		02 57 13.7	
	comp=Z,7.3nm,1.4s							
QSPA	South Pole Qui	52.85	180	P		P	02 58 03.4	+3.1
QSPA				IAmb	IAmb		02 58 07.3	
	comp=Z,7.2nm,1.5s							
SNAA	Sanae	71.35	179	P		P	03 00 06.6	+2.3
SNAA				IAmb	IAmb		03 00 10.4	
	comp=Z,2.8nm,1.2s							
H03S2	Juan Fernandez	78.76	124	T		T	04 27 25.6	
	baz=231,slow=74,SNR=4.3							
H03S1	Juan Fernandez	78.77	124	T		T	04 27 23.5	
	baz=231,slow=74,SNR=4.2							
H03S3	Juan Fernandez	78.78	124	T		T	04 27 23.2	
	baz=231,slow=74,SNR=4.0							
H03N3	Juan Fernandez	78.99	124	T		T	04 27 28.2	
	baz=234,slow=72,SNR=9.4							
H03N2	Juan Fernandez	79.00	124	T		T	04 27 22.6	
	baz=234,slow=72,SNR=7.9							
H03N1	Juan Fernandez	79.01	124	T		T	04 27 25.0	
	baz=234,slow=72,SNR=8.0							
FINES	FINESS Array B	150.46	334	PKPbc		PKiKP	03 08 35.3	-1.0
	comp=Z,1.2nm,0.8s,baz=65,slow=4.7,SNR=3.4							
FINES	FINESS Array B	150.46	334	PKPdf		PKPdf	03 08 31.2	+1.0

IDC 21 02:53:47.8±6.7, 22.63S×177.48W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=187.3km s-min=107.0km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	Stephens Creek	37.34	247	P		P	03 01 02.9	+0.7
	1.1nm,0.6s,baz=95,slow=11,SNR=2.9 1.1nm,0.6s							
ASAR	Alice Springs	44.54	259	P		P	03 02 01.2	-0.4
	1.1nm,0.5s,baz=107,slow=8.1,SNR=17 1.1nm,0.5s							
WRA	Warramunga Arr	44.82	264	P		P	03 02 03.5	-0.4
	1.6nm,0.5s,baz=103,slow=8.1,SNR=19 1.6nm,0.5s							
HFS	Hagfors	141.71	351	PKP		PKPdf	03 13 20.6	-0.2
	3.1nm,1.0s,baz=63,slow=6.8,SNR=2.4							

SJA 21 03:13:32.4±0.6, 24.12S×67.11W, h198km±6km, ML3.5, MW3.3, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SALTA		0.71	99	eP		Pn	03 14 01.1	+0.2
SALTA				eS		Sn	03 14 39.0	+16
HJA	Humahuaca	1.81	60	eP		Pn	03 14 10.2	+1.0
FSA	Cafayete	2.23	153	eP		Pn	03 14 13.9	+0.6
PB06	IPOC Station P	2.66	301	eP		Pn	03 14 19.1	+0.9
PB06				eS		Sn	03 14 53.3	-0.6
PB06				IAML			03 14 56.8	
	comp=Z,161nm,0.3s							
PB09	IPOC Station P	3.03	319	eP		Pn	03 14 24.4	+1.8
PB09				eS		Sn	03 15 02.5	+0.8
PB09				IAML			03 15 04.2	
	comp=Z,64nm,0.6s							
PB14	IPOC Station P	3.04	260	eP		Pn	03 14 23.6	+0.8
PB14				eS		Sn	03 15 01.4	-0.7
PB05	IPOC Station P	3.11	293	eP		Pn	03 14 24.1	+0.7
PB05				eS		Sn	03 15 02.1	-0.9
PB03	IPOC Station P	3.19	310	eP		Pn	03 14 25.1	+0.7
PB03				eS		Sn	03 15 03.8	-1.2
PB03				IAML			03 15 07.6	
	comp=Z,116nm,0.1s							
AC02	Maricunga	3.26	214	eP		Pn	03 14 26.9	+1.3
AC02				eS		Sn	03 14 49.0	-18
AC02				IAML			03 14 50.1	
	comp=Z,86nm,0.9s							
PB07	IPOC Station P	3.50	312	eP		Pn	03 14 28.8	+0.7
PB07				eS		Sn	03 15 10.1	-1.6
PB07				IAML			03 15 14.2	
	comp=Z,103nm,0.4s							
AC01	Pan de Azucar	3.75	237	eP		Pn	03 14 31.0	0.0
AC01				eS		Sn	03 15 15.1	-1.9
AC01				IAML			03 15 15.3	
	comp=Z,30nm,0.9s							
PB02	IPOC Station P	3.79	317	eP		Pn	03 14 32.4	+0.7
PB02				eS		Sn	03 15 16.4	-1.8
PB02				IAML			03 15 21.9	
	comp=Z,96nm,0.2s							
TINO	Tinogasta	3.95	186	eP		Pn	03 14 35.6	+2.1
PB08	IPOC Station P	4.39	334	eP		Pn	03 14 40.5	+1.1
PB08				eS		Sn	03 15 31.2	-0.8
VCA	Vinchina	4.70	192	eP		Pn	03 14 45.9	+2.8
GO01	Chusmiza	4.83	336	eP		Pn	03 14 46.6	+1.5
GO01				eS		Sn	03 15 42.8	+0.5
GO01				IAML			03 15 44.3	
	comp=Z,22nm,0.2s							
PB11	IPOC Station P	4.94	331	eP		Pn	03 14 45.9	-0.3
PB11				eP			03 14 46.3	
PB11				eS		Sn	03 15 41.9	-2.4
PB11				IAML			03 15 43.9	
	comp=Z,21nm,0.5s							
ACLC	CERRO LA CRUZ	5.29	178	eP		Pn	03 14 51.4	+0.8
PSGCX	Pisagua	5.30	328	eP		Pn	03 14 50.9	+0.2
PSGCX				eS		Sn	03 15 49.6	-2.9
PSGCX				IAML			03 16 23.6	
	comp=Z,15nm,2.0s							

*IDC **21** 03:40:10.8±4.0, 26.01S×177.66W, h184km±34km, mb3.7/11, mbtmp4.1/12, Error ellipse: s-maj=23.1km s-min=15.1km az=72.0*

ISC 21 03:40:07.8±0.7, 26.05±0.1×177.4W±0.2, h161km, n27, σ0°93/30, mb4.1/14, 3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MSVF	Nonsavu	9.26	332	P		Pn	03 42 19.8	+1.9
	2.0nm,0.6s,baz=77,slow=23,SNR=2.2							
DZM	Mont Dzumac	15.24	282	P		P	03 43 37.7	+1.7
	8.6nm,0.9s,baz=94,slow=16,SNR=5.3							
CTA	Charters Tower	33.85	272	P		P	03 46 34.8	-0.3
	3.2nm,0.4s,baz=92,slow=9.6,SNR=7.3 3.2nm,0.4s							
STKA	Stephens Creek	36.16	251	P		P	03 46 55.8	+1.1
	0.9nm,0.5s,baz=92,slow=11,SNR=3.9							
STKA				PcP		PcP	03 49 17.1	+0.2
	1.0nm,0.6s,baz=119,slow=3.6,SNR=3.6 0.9nm,0.5s							
ASAR	Alice Springs	44.02	262	P		P	03 47 58.1	-1.4
	3.2nm,1.0s,baz=89,slow=7.4,SNR=18 3.2nm,1.0s							
WRA	Warramunga Arr	44.61	267	P		P	03 48 02.5	-1.9
	2.7nm,0.5s,baz=105,slow=7.8,SNR=21							
WRA				PcP		PcP	03 49 43.7	-0.7
	0.8nm,0.8s,baz=106,slow=2.7,SNR=4.4 2.7nm,0.5s							
VNDA	Vanda	52.48	186	P		P	03 49 04.2	+0.6
	0.7nm,0.4s,baz=28,slow=6.5,SNR=8.5 0.7nm,0.4s							
FITZ	Fitzroy Crossi	53.00	266	P		P	03 49 06.8	-1.5
	3.3nm,0.5s,baz=112,slow=7.0,SNR=15 3.3nm,0.5s							
QSPA	South Pole Qui	64.06	180	P		P	03 50 24.9	+0.6
	1.5nm,0.7s,baz=4.1,slow=1.1,SNR=10.0 1.5nm,0.7s							
MAW	Mawson	76.56	200	P		P	03 51 40.4	+0.6
	2.7nm,0.5s,baz=137,slow=9.3,SNR=7.1 2.7nm,0.5s							
KSRS	Korea Array	81.37	319	P		P	03 52 06.1	-0.3
	0.3nm,0.4s,baz=155,slow=8.9,SNR=1.6 0.3nm,0.4s							
PETK	Petropavlovsk-	81.72	345	P		P	03 52 07.8	-0.1
	0.4nm,0.5s,baz=82,slow=11,SNR=4.1 0.4nm,0.5s							
TROLL	Troll, Antarti	82.23	180	⇓P		P	03 52 11.3	+0.7
	comp=Z,307nm,0.6s							
SNAA	Sanae	82.49	178	⇓P		P	03 52 12.7	+0.7
	comp=Z,87nm,1.0s							
SNAA	Sanae	82.49	178	P		P	03 52 11.8	-0.2
	comp=Z,2.4nm,0.7s,baz=164,slow=1.9,SNR=6.8 comp=Z,2.4nm,0.7s							
VNA2	Neumayer--Watz	83.06	177	⇓P		P	03 52 15.4	+0.6
	comp=Z,9.4nm,0.8s,baz=167,slow=4.3							
VNA1	Neumayer--Stat	83.28	176	P		P	03 52 16.7	+0.8
	comp=Z,8.6nm,0.8s							
CMAR	Chiang Mai Arr	92.43	289	P		P	03 53 01.5	+0.7
	comp=Z,2.4nm,0.3s,baz=115,slow=4.0,SNR=9.3							
BOSA	Boshof	121.46	203	PKP		PKiKP	03 58 42.7	-0.1
	comp=Z,2.9nm,1.1s,baz=36,slow=18,SNR=1.9							
ARCES	ARCESS Array B	134.42	349	PKP		PKPdf	03 59 05.4	-0.5
	comp=Z,0.8nm,0.7s,baz=45,slow=1.9,SNR=5.7							
NB2	NORSAR Subarra	144.51	353	PKP		PKPab	03 59 22.8	-0.4
	comp=Z,1.1nm,0.7s,baz=13,slow=3.6							
NOA	NORSAR Array B	144.51	353	PKP		PKPab	03 59 22.4	-0.8
	comp=Z,0.7nm,0.5s,baz=19,slow=4.1,SNR=3.9							
HFS	Hagfors	145.05	350	PKPbc		PKPbc	03 59 24.2	-0.9
	comp=Z,3.8nm,0.6s,baz=94,slow=4.5,SNR=14							
AKASG	Malin Array Be	148.01	327	PKPbc		PKPbc	03 59 32.8	-1.1
	comp=Z,1.6nm,0.7s,baz=46,slow=4.0,SNR=7.2							
MMAI	Mount Meron Ar	150.67	292	PKPbc		PKiKP	03 59 41.4	-0.4
	comp=Z,0.7nm,0.3s,baz=22,slow=8.3,SNR=1.4							
BRTR	Keskin Array B	150.71	306	PKPbc		PKPbc	03 59 40.5	-0.6
	comp=Z,0.7nm,0.6s,baz=126,slow=4.0,SNR=4.3							
BRTR				PKPab		PKPab	03 59 48.5	-0.2
	comp=Z,1.5nm,0.6s,baz=103,slow=3.5,SNR=9.3							
TORD	Torodi Ar. Bea	167.16	176	PKPab		PKPab	04 01 00.3	+0.3
	comp=Z,0.8nm,0.7s,baz=194,slow=4.2,SNR=4.5							

*IDC **21** 03:40:30.1±1.1, 48.82S×121.27E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=66.7km s-min=20.2km az=102.0*

*NEIC **21** 03:40:31.4±1.8, 48.8S±0.1×121.4E±0.3, h10km±1km, mb4.3/10, Error ellipse: s-maj=28.9km s-min=19.2km az=82.0*

ISC 21 03:40:31.6±0.7, 48.76S±0.09×121.4E±0.2, h13km, n22, σ0°74/19, mb3.9/8, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
H01W1	Cape Leeuwin H	14.85	336	T		T	03 59 09.4	
	baz=161,slow=74,SNR=52							
H01W2	Cape Leeuwin H	14.85	336	T		T	03 59 15.4	
	baz=161,slow=74,SNR=54							
H01W3	Cape Leeuwin H	14.86	336	T		T	03 59 19.2	
	baz=161,slow=74,SNR=50							
NWAO	Narrogin (SRO)	16.12	347	Pn		Pn	03 44 18.6	+0.8
NWAO				IAmb	IAmb		03 44 23.9	
	comp=Z,35nm,1.2s							
ASAR	Alice Springs	26.94	26	P		P	03 46 13.6	+0.9
	comp=Z,1.7nm,1.0s,baz=199,slow=11,SNR=7.9 comp=Z,1.7nm,1.0s							
ASAR	Alice Springs	26.94	26	P		P	03 46 13.1	+0.5
MBWA	Marble Bar	27.57	357	P		P	03 46 16.2	-2.1
MBWA				IAmb	IAmb		03 46 17.8	
	comp=Z,34nm,1.4s							
PYZ	Puysegur Point	30.41	102	P		P	03 46 42.9	-0.4
WRA	Warramunga Arr	30.59	25	P		P	03 46 46.0	+0.9
	comp=Z,0.8nm,1.0s,baz=195,slow=12,SNR=2.5 comp=Z,0.8nm,1.0s							
WRA	Warramunga Arr	30.59	25	P		P	03 46 45.7	+0.6
FITZ	Fitzroy Crossi	30.78	8	P		P	03 46 45.9	-0.9
FITZ				IAmb	IAmb		03 46 50.7	
	comp=Z,2.8nm,1.4s							
VNDA	Vanda	32.72	165	P		P	03 47 03.7	+0.4
	comp=Z,1.1nm,0.8s,baz=310,slow=9.5,SNR=6.7 comp=Z,1.1nm,0.8s							
VNDA	Vanda	32.72	165	P		P	03 47 03.5	+0.2
VNDA				IAmb	IAmb		03 47 20.5	
	comp=Z,1.2nm,1.1s							
QSPA	South Pole Qui	41.36	180	P		P	03 48 16.8	-0.1
	comp=Z,0.8nm,0.6s,baz=307,slow=1.9,SNR=7.6 comp=Z,0.8nm,0.6s							
QSPA	South Pole Qui	41.36	180	P		P	03 48 16.6	-0.4
BELA	Belgrano 2	52.77	186	P		P	03 49 45.8	+0.2
BELA				IAmb	IAmb		03 49 51.4	
	comp=Z,10nm,1.5s							
SNAA	Sanae	53.59	199	P		P	03 49 51.5	-0.2
	comp=Z,1.9nm,0.8s,baz=124,slow=4.8,SNR=5.2 comp=Z,1.9nm,0.8s							
SNAA	Sanae	53.59	199	P		P	03 49 51.9	+0.2
SNAA				IAmb	IAmb		03 49 59.2	
	comp=Z,9.1nm,1.4s							
ROCAM	Rodrigues Isla	54.39	281	P		P	03 49 58.2	0.0
EKA	Eskdalemuir Ar	146.05	303	PKPbc		PKPbc	04 00 10.2	+0.1
	comp=Z,0.6nm,0.7s,baz=116,slow=3.2,SNR=4.8							
YKA	Yellowknife Ar	146.72	45	PKPbc		PKPab	04 00 13.0	-0.1
	comp=Z,0.2nm,0.6s,baz=276,slow=2.5,SNR=1.5							
YKA	Yellowknife Ar	146.72	45			PKPdf	04 00 10.5	+0.4

*SJA **21** 04:03:37.2±0.8, 20.69S×70.12W, h43km±16km, ML3.4, MW3.6*

*NEIC **21** 04:03:38.4±1.3, 20.69S±0.03×70.15W±0.04, h39km±28km, ML3.5/28, ML3.3(GUC), Error ellipse: s-maj=6.4km s-min=3.6km az=74.0*

*GUC **21** 04:03:39.2±0.5, 20.69S×70.02W, h43km±2km, ML3.3*

*IDC **21** 04:04:00.2±7.8, 19.39S×69.23W, h196km±67km, mb3.2/1, mbtmp3.5/2, Error ellipse: s-maj=160.4km s-min=86.9km az=126.0*

ISC 21 04:03:36.9±1.0, 20.67S±0.02×70.13W±0.05, h32km±10km, n51, σ1°70/77, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TA02	Huaiquique	0.40	0	eP		Pn	04 03 47.9	+1.4
TA02				IAML			04 03 56.4	
	comp=Z,2μm,0.1s							
TA02	Huaiquique	0.40	0	eP		Pn	04 03 48.2	+1.8
TA02				i S		Sn	04 03 55.5	+2.6
TA02				IAML			04 03 55.9	
	comp=E,

PB09 eS Sb 04 04 21.7 +1.7
PB09 IAML 04 04 22.7
comp=Z,1μm,0.2s
PB09 IPOC Station P 1.39 143 *e*P **Pb 04 04 02.7 +0.3**
PB09 *i* S **Sb 04 04 20.7 +0.7**
PB09 IAML 04 04 23.8
comp=E,2μm,0.4s
PB09 IPOC Station P 1.39 143 Pn **Pb 04 04 02.7 +0.3**
PB03 IPOC Station P 1.41 166 *e*P **Pn 04 04 02.2 +1.6**
PB03 eS **Sb 04 04 20.4 -0.2**
PB03 IAML 04 04 24.5
comp=Z,977nm,0.1s
PB03 IPOC Station P 1.41 166 *e*P **Pn 04 04 02.2 +1.6**
PB03 *i* S **Sb 04 04 20.1 -0.4**
PB03 IAML 04 04 24.5
comp=E,840nm,0.2s
PB03 IPOC Station P 1.41 166 Pn **Pn 04 04 02.0 +1.5**
PB03 IAML 04 04 22.7
comp=E,776nm,0.2s
PB03 IAML 04 04 27.3
comp=N,560nm,0.3s
PB12 IPOC Station P 2.06 355 *e*P **Pn 04 04 11.5 +2.1**
PB12 eS Sn 04 04 11.5 -22
PB12 IAML 04 04 43.4
comp=Z,116nm,0.4s
PB12 IPOC Station P 2.06 355 *e*P **Pn 04 04 11.4 +2.0**
PB12 *i* S **Sn 04 04 35.1 +1.2**
PB12 IAML 04 04 43.4
PB12 IPOC Station P 2.06 355 Pn **Pn 04 04 11.2 +1.9**
PB12 IAML 04 04 43.2
comp=E,278nm,0.3s
PB06 IPOC Station P 2.09 166 *e*P **Pn 04 04 11.1 +1.3**
PB06 eS **Sb 04 04 39.9 0.0**
PB06 IAML 04 04 47.8
comp=Z,234nm,0.7s
PB06 IPOC Station P 2.09 166 *e*P **Pn 04 04 11.3 +1.5**
PB06 *i* S **Sn 04 04 36.6 +1.8**
PB06 IPOC Station P 2.09 166 Pn **Pn 04 04 11.0 +1.2**
PB06 IAML 04 04 44.3
comp=E,349nm,0.2s
PB06 IAML 04 04 47.4
comp=N,335nm,0.3s
PB05 IPOC Station P 2.17 182 *e*P **Pn 04 04 11.6 +0.7**
PB05 eS Sb 04 04 50.9 +8.7
PB05 IPOC Station P 2.17 182 Pn **Pn 04 04 11.0 +0.1**
PB05 IAML 04 04 46.2
comp=N,247nm,0.8s
PB05 IAML 04 04 54.8
comp=E,284nm,0.6s
PB16 IPOC Station P 2.40 14 *e*P **Pn 04 04 17.1 +2.7**
PB16 eS **Sn 04 04 44.9 +1.8**
PB16 eS 04 04 50.9
PB16 IAML 04 04 59.2
comp=Z,112nm,1.2s
PB16 IPOC Station P 2.40 14 *e*P **Pn 04 04 17.2 +2.7**
PB16 IAML 04 04 58.9
comp=E,84nm,0.4s
PB16 IPOC Station P 2.40 14 Pn **Pn 04 04 16.9 +2.4**
AF01 San Pedro de A 2.91 142 *e*P **Pb 04 04 25.5 -2.8**
AF01 San Pedro de A 2.91 142 Pn **Pb 04 04 24.8 -3.4**
PB18 Visviri 3.13 12 *e*P **Pb 04 04 31.1 -1.1**
PB18 IAML 04 05 32.0
comp=N,64nm,0.4s
PB14 IPOC Station P 3.94 184 *e*P **Pn 04 04 36.4 +0.9**
PB14 eS **Sn 04 05 20.7 -0.1**
PB14 IPOC Station P 3.94 184 *e*P **Pn 04 04 36.2 +0.8**
PB14 IPOC Station P 3.94 184 Pn **Pn 04 04 35.6 +0.1**
PB14 IAML 04 05 45.1
comp=E,79nm,0.7s
PB14 IAML 04 05 45.9
comp=N,72nm,0.5s
LPAZ La Paz 4.76 24 P Pn 04 04 53.4 +6.4
comp=N,2.4nm,0.3s,baz=187,slow=6.7,SNR=28
LPAZ S **Sn 04 05 35.3 -6.0**
comp=N,3.6nm,0.8s,baz=176,slow=6.3,SNR=3.8
LPAZ La Paz 4.76 24 Pn Pn 04 04 51.9 +4.9
AC01 Pan de Azucar 5.46 184 Pn **Pn 04 04 55.3 -0.8**
AC02 Maricunga 6.20 172 Pn **Pn 04 05 07.2 +0.5**
AC04 Llanos de Chal 7.55 186 Pn **Pn 04 05 25.9 +1.3**
CO01 Juntas del Tor 9.26 180 Pn **Pn 04 05 52.6 +4.1**
TORD Torodi Ar. Bea 78.16 71 P **P 04 15 31.7 -1.8**
comp=N,0.5nm,0.6s,baz=245,slow=5.8,SNR=2.4
comp=N,0.5nm,0.6s
MKAR Makanchi Array 145.62 34 PKP **PKPdf 04 23 11.9 -0.1**
comp=N,0.8nm,0.9s,baz=328,slow=5.1,SNR=3.3

*IDC **21** 04:18:39.9±0.9,31°.67S×177°.87W,h0km,mb4.2/5, mbtmp4.2/6,ML4.3/1,MS3.3/6,Error ellipse: s-maj=31.0km s-min=21.8km az=99.0*
*NEIC **21** 04:18:42.4±0.8,31°.80S±0°.04×178°.0W±0°.2,h10km±1km, mb4.6/9,Error ellipse: s-maj=25.0km s-min=3.1km az=103.0*
ISC 21 04:18:43.8±0.7,31°.79S±0°.07×178°.0W±0°.1,h24km,n31, σ1s06/31,mb4.5/9,MS3.5/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.54**	**2**	Pn		**Pn**	**04 19 21.6**	**-1.9**
	74nm,0.3s,baz=135,slow=20,SNR=7.5							
RAO				Sn		**Sn**	**04 19 52.8**	**-0.7**
	167nm,0.3s,baz=127,slow=23,SNR=5.8							
RAO				LR		LR	04 20 03.2	
	comp=Z,98nm,19.6s,baz=258,slow=34							
	215nm,0.2s							
RAO	**Raoul Island**	**2.54**	**2**			**Pn**	**04 19 23.1**	**-0.4**
RAO				Sn		**Sn**	**04 19 53.1**	**-0.5**
URZ	**Urewera**	**7.58**	**210**	Pn		**Pn**	**04 20 31.2**	**-1.5**
	1.4nm,0.3s,baz=221,slow=7.1,SNR=5.8							
URZ				Sn		**Sn**	**04 21 54.9**	**-2.9**
	5.3nm,0.3s,baz=202,slow=23,SNR=12							
RTZ	**Ruatahuna**	**7.93**	**210**	Pn		**Pn**	**04 20 37.4**	**-0.3**
MSVF	**Nonsavu**	**14.44**	**345**	LR		LR	04 26 41.2	
	comp=Z,82nm,18.4s,baz=170,slow=34							
STKA	**Stephens Creek**	**34.16**	**259**	P		**P**	**04 25 29.2**	**+2.1**
	1.4nm,0.7s,baz=91,slow=11,SNR=4.6							
STKA				LR		LR	04 37 60.0	
	comp=Z,80nm,18.8s,baz=34,slow=34							
	1.4nm,0.7s							
BBOO	**Buckleboo**	**38.58**	**256**	P		**P**	**04 26 05.3**	**+0.4**
BBOO				IAmb		IAmb	04 26 48.6	
	comp=Z,22nm,1.5s							
PMG	**Port Moresby**	**39.19**	**297**	LR		LR	04 40 19.2	
	comp=Z,39nm,21.7s,baz=117,slow=33							
ASAR	**Alice Springs**	**43.02**	**268**	P		**P**	**04 26 42.1**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=108,slow=7.5,SNR=31							
	comp=Z,1.3nm,0.4s							
WR8	**Warramunga Arr**	**43.99**	**274**	P		**P**	**04 26 49.8**	**+0.3**
WR8				IAmb		IAmb	04 27 09.4	
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**44.13**	**274**	P		**P**	**04 26 51.1**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=113,slow=8.0,SNR=20							
	comp=Z,2.0nm,0.6s							
WRA	**Warramunga Arr**	**44.13**	**274**	P		**P**	**04 26 51.2**	**+0.5**
WB0	**Warramunga Arr**	**44.16**	**274**	P		**P**	**04 26 51.0**	**+0.1**
WB0				IAmb		IAmb	04 26 52.5	
	comp=Z,6.1nm,0.9s							
FITZ	**Fitzroy Crossi**	**52.34**	**271**	LR		LR	04 50 01.3	
	comp=Z,73nm,18.5s,baz=178,slow=36							
FITZ	**Fitzroy Crossi**	**52.34**	**271**	P		**P**	**04 27 54.6**	**+0.7**
CASY	**Casey**	**53.90**	**208**	P		**P**	**04 28 05.8**	**+1.0**
CASY				IAmb		IAmb	04 28 06.3	
	comp=Z,3.6nm,0.6s							
QSPA	**South Pole Qui**	**58.32**	**180**	P		**P**	**04 28 37.6**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=6.6,slow=4.2,SNR=6.2							
QSPA				LR		LR	04 52 02.8	
	comp=Z,49nm,19.0s,baz=4.5,slow=34							
	comp=Z,1.8nm,1.0s							
QSPA	**South Pole Qui**	**58.32**	**180**	P		**P**	**04 28 37.4**	**+0.8**
QSPA				IAmb		IAmb	04 28 49.3	
	comp=Z,11nm,1.2s							
VA02	**Isla de Pascua**	**59.01**	**105**	P		**P**	**04 28 41.5**	**-0.3**
PETK	**Petropavlovsk-**	**87.15**	**346**	P		**P**	**04 31 27.6**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=150,slow=5.8,SNR=5.0							
	comp=Z,4.1nm,0.9s							
PETK	**Petropavlovsk-**	**87.15**	**346**	P		**P**	**04 31 28.3**	**+1.0**
I20K	**Naaghedeneel**	**98.02**	**10**	P		Pdif	04 32 18.5	+1.1
KURK	**Kurchatov**	**121.98**	**313**			**PKPdf**	**04 37 35.8**	**+0.1**
KURBB	**Kurchatov Arra**	**122.02**	**313**	PKP		**PKPdf**	**04 37 35.6**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=118,slow=2.1,SNR=7.1							
FINES	**FINESS Array B**	**146.44**	**339**	PKPbc		**PKPbc**	**04 38 21.9**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=50,slow=4.1,SNR=17							
HFS	**Hagfors**	**150.60**	**348**	PKPbc		**PKPbc**	**04 38 30.8**	**-2.2**
	comp=Z,2.5nm,0.9s,baz=3.8,slow=4.5,SNR=4.4							
MMAI	**Mount Meron Ar**	**151.80**	**282**	PKPbc		**PKPbc**	**04 38 37.1**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=74,slow=8.8,SNR=1.8							
AKASG	**Malin Array Be**	**152.37**	**321**	PKPbc		**PKPbc**	**04 38 36.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=50,slow=4.3,SNR=6.4							
AKASG				PKPab		**sPKPbc**	**04 38 46.0**	**0.0**
	comp=Z,1.0nm,0.6s,baz=50,slow=3.7,SNR=3.1							
BRTR	**Keskin Array B**	**153.21**	**296**	PKPbc		**PKPbc**	**04 38 39.6**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=72,slow=5.2,SNR=5.1							
BRTR	**Keskin Array B**	**153.21**	**296**	PKPdf		**PKPdf**	**04 38 33.2**	**+0.9**
TORD	**Torodi Ar. Bea**	**161.44**	**179**	PKPab		**PKPab**	**04 39 27.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=177,slow=2.4,SNR=4.1							

*IDC **21** 05:08:05.2±1.6,40°.03N×71°.35E,h0km,mb3.6/4, mbtmp3.5/10,ML2.8/5,MS4.0/1,Error ellipse: s-maj=26.0km s-min=12.2km az=152.0*
*KRNET **21** 05:08:09.1±0.1,40°.17N×71°.40E,h16km,mb4.2*
*ISU **21** 05:08:10,40°.15N×71°.42E,h19km*
*NNC **21** 05:08:11.4±2.2,40°.14N×71°.58E,h0km,mb4.2,mpv3.9, Error ellipse: s-maj=17.1km s-min=8.2km az=5.0*
*SOME **21** 05:08:11.1,40°.33N×71°.50E,h5km*
ISC 21 05:08:07.9±1.0,40°.10N±0°.03×71°.63E±0°.02,h16km±7km, n80,σ2s64/128,mb3.6/3,17C-38D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.30**	**24**	P		P	**Pg**	**05 08 16.8**	**+2.5**
FRG				S		S	**Sg**	**05 08 22.5**	**+3.9**
MINT	**Mingtut**	**0.62**	**306**	S		S	**Sn**	**05 08 35.9**	**+4.4**
MINT				Sb		Sb	05 08 43.1	+14
BTK	**Batken**	**0.62**	**266**	⇓*i*P		P	**Pg**	**05 08 18.1**	**-2.0**
BTK				⇓*i*S		S	**Sg**	**05 08 24.5**	**-3.9**
DRK	**Karamyk**	**0.64**	**168**	⇑*i*P		P	**Pn**	**05 08 23.6**	**+1.1**
DRK				⇑*i*S		S	**Sn**	**05 08 33.8**	**+1.4**
TSTA	**Tashata**	**0.81**	**54**	P		P	**Pn**	**05 08 26.7**	**+2.1**
TSTA				S		S	**Sn**	**05 08 39.5**	**+3.3**
OHH	**Osh**	**0.98**	**64**	⇓*i*P		P	**Pn**	**05 08 30.1**	**+3.1**
OHH				⇓*i*S		S	**Sn**	**05 08 44.9**	**+4.3**
KSNS	**Kasansay**	**1.06**	**356**	P		P	**Pn**	**05 08 29.1**	**+1.0**
KSNS				S		S	**Sn**	**05 08 43.7**	**+1.2**
SFK	**Sufi-Kurgan**	**1.44**	**93**	⇑*i*P		P	Pg	05 08 39.1	+3.4
SFK				⇑*i*S		S	**Sn**	**05 09 00.8**	**+8.6**
TRKS	**Terek-Say**	**1.47**	**346**	⇓*i*P		P	**Pn**	**05 08 33.5**	**-0.4**
TRKS				⇓*i*S		S	**Sn**	**05 08 51.2**	**-1.7**
GAR	**Garm**	**1.50**	**223**	⇓*i*P		P	**Pn**	**05 08 35.9**	**+1.8**
GAR				⇓*i*S		S	**Sn**	**05 08 55.2**	**+1.8**
ARSB	**Arslanbob**	**1.60**	**40**	⇓*e*P		P	**Pg**	**05 08 39.6**	**+1.0**
ARSB				⇑eS		S	**Sg**	**05 09 02.1**	**+2.7**
ARK	**Arkit**	**1.71**	**8**	⇓*i*P		P	**Pg**	**05 08 40.3**	**-0.5**
ARK				⇓*i*S		S	**Sg**	**05 09 03.0**	**-0.1**
SALK	**Salom-Alik**	**1.85**	**64**	⇓*i*P		P	**Pg**	**05 08 45.0**	**+1.7**
SALK				⇓*i*S		S	**Sg**	**05 09 11.1**	**+3.8**
CHMG	**Chimgan**	**1.90**	**320**	P		P	**Pn**	**05 08 40.6**	**+0.9**
CHMG				S		S	**Sn**	**05 09 04.5**	**+1.2**
CHRV	**Charvak**	**1.99**	**321**	P		P	**Pn**	**05 08 42.9**	**+2.0**
CHRV				S		S	**Sn**	**05 09 08.1**	**+2.5**
PSK	**Pskem**	**2.06**	**333**	P		P	**Pb**	**05 08 45.3**	**+0.5**
PSK				S		S	**Sb**	**05 09 11.9**	**+1.7**
TVKS	**Tavaksay**	**2.10**	**315**	P		P	**Pn**	**05 08 44.4**	**+2.0**
TVKS				S		S	**Sn**	**05 09 10.9**	**+2.7**
NZBK	**Nazarbek**	**2.21**	**301**	P		P	**Pb**	**05 08 48.4**	**+0.9**
NZBK				S		S	**Sb**	**05 09 17.0**	**+2.4**
IUG	**Iuzhnay**	**2.37**	**330**	Pg		Pb	**Pb**	**05 08 50.7**	**+0.5**
	253nm,0.3s								
IUG				Lg		Lg		05 09 19.1	
	790nm,0.5s								
IUG	**Iuzhnay**	**2.37**	**330**	*e*P		**Pb**	**05 08 50.7**	**+0.5**
	253nm,0.3s								
IUG				*e*S		**Sb**	**05 09 19.1**	**-0.2**
	790nm,0.5s								
CHGR	**Chuyangaron**	**2.40**	**234**	⇓*i*P		P	**Pn**	**05 08 49.5**	**+3.0**
CHGR				⇓*i*S		S	**Sn**	**05 09 18.8**	**+3.3**
MNAS	**Manas**	**2.47**	**15**	⇓*i*P		P	**Pb**	**05 08 50.7**	**-1.3**
MNAS				⇓*i*S		S	**Sb**	**05 09 21.7**	**-0.5**
DZA	**Taraz**	**2.80**	**356**	Pg		Pg	**Pg**	**05 09 00.2**	**-1.3**
	118nm,0.1s								
DZA				Lg		Lg		05 09 35.4	
	930nm,0.6s								
DZA	**Taraz**	**2.80**	**356**	*e*P		**Pg**	**05 09 00.1**	**-1.3**
	118nm,0.1s								
DZA				*e*S		**Sg**	**05 09 35.4**	**-2.3**
	930nm,0.6s								
MRKS	**Merke**	**2.90**	**24**	Pg		Pg	**Pg**	**05 09 02.7**	**-0.8**
	32nm,0.4s								
MRKS				Lg		Lg		05 09 40.5	
	173nm,0.7s								
MRKS	**Merke**	**2.90**	**24**	*e*P		**Pg**	**05 09 02.7**	**-0.8**
	32nm,0.4s								
MRKS				*e*S		**Sg**	**05 09 40.5**	**-0.6**
	173nm,0.7s								
EKS2	**Erkin-Say**	**3.03**	**32**	⇓*e*P		P	**Pb**	**05 09 00.0**	**-1.4**
EKS2				⇓*i*S		S	**Sb**	**05 09 37.1**	**-1.0**
UCH	**Uchtor**	**3.04**	**45**	⇑*i*P		P	**Pb**	**05 09 01.1**	**-0.8**
UCH				⇑*i*S		S	**Sb**	**05 09 38.9**	**0.0**
KK31	**Karatay Array**	**3.11**	**345**	Pn		Pb	**Pb**	**05 09 00.9**	**-1.9**
	1.6nm,0.3s,baz=160,slow=10,SNR=210								
KK31				⇓Sn		**Sb**	**05 09 40.7**	**+0.1**
	359nm,0.8s,baz=160,slow=30								
KSH2	**Kashi**	**3.19**	**106**	Pn		Pb	**Pb**	**05 09 03.8**	**-0.4**
KSH2				Sn		Sg	**Sg**	**05 09 46.3**	**-4.0**
KSH2				smax		smax			
	comp=N,77nm,0.6s								
KSH2				smax		smax			
	comp=E,98nm,0.6s								
AAK	**Ala-Archa**	**3.33**	**39**	Pn		**Pb**	**05 09 05.2**	**-1.3**
	comp=E,3.2nm,0.3s,baz=229,slow=11,SNR=7.1								
AAK				Pg		**Pg**	**05 09 11.4**	**-0.2**
	comp=E,7.2nm,0.3s,baz=222,slow=7.3,SNR=11								
AAK				Lg		Lg		05 09 55.6	
	comp=E,20nm,0.3s,baz=112,slow=19,SNR=12								
	comp=E,7.3nm,0.3s								
AAK	**Ala-Archa**	**3.33**	**39**	⇓Pn		**Pb**	**05 09 04.9**	**-1.7**
	comp=E,11nm,0.6s								
AAK				⇑Sn		**Sb**	**05 09 48.9**	**+2.1**
	comp=E,13nm,0.4s								
AAK	**Ala-Archa**	**3.33**	**39**	⇓*i*P		**Pb**	**05 09 04.7**	**-1.9**
AAK				⇓*i*S		**Sb**	**05 09 45.0**	**-1.8**
FRU1	**Bishkek**	**3.52**	**39**	⇓*e*P		**Pb**	**05 09 07.4**	**-2.4**
FRU1				⇓*i*S		**Sb**	**05 09 49.7**	**-2.7**
KBK	**Karagaybulak**	**3.57**	**43**	⇓*e*P		**Pb**	**05 09 08.2**	**-2.5**
KBK				⇑*i*S		**Sb**	**05 09 51.2**	**-2.7**
NRN	**Naryn**	**3.58**	**67**	⇓*i*P		**Pb**	**05 09 08.7**	**-2.2**
NRN				⇓*i*S		**Sb**	**05 09 52.2**	**-2.0**
AGL	**Agalyk**	**3.70**	**262**	P		Pn	**05 09 04.0**	**-0.4**
CHMS	**Chumysh**	**3.72**	**38**	⇑*i*P		**Pb**	**05 09 09.7**	**-3.5**
CHMS				⇑*i*S		**Sb**	**05 09 54.3**	**-3.8**
USP	**Ospenovka**	**3.82**	**33**	⇑*i*P		**Pb**	**05 09 10.8**	**-4.2**
USP				⇑*i*S		**Sb**	**05 09 56.4**	**-4.6**
BOOM	**Boomskoye usch**	**4.03**	**52**	⇓*e*P		**Pb**	**05 09 10.0**	**-3.5**
BOOM				⇓*i*S		**Sb**	**05 10 02.9**	**-4.2**
SGDS	**Sogindy**	**4.03**	**33**	Pg		**Pg**	**05 09 23.5**	**-1.5**
	comp=E,14nm,0.5s								
SGDS				Lg		Lg		05 10 16.0	
	comp=E,42nm,0.9s								
ULHL	**Ulahol**	**4.09**	**57**	⇓*e*P		**Pb**	**05 09 15.9**	**-3.7**
ULHL				⇓*i*S		**Sb**	**05 10 04.6**	**-4.2**
TKM2	**Tokmak 2**	**4.10**	**45**	⇑*e*P		**Pb**	**05 09 15.3**	**-4.5**
TKM2				⇑*i*S		**Sb**	**05 10 04.0**	**-5.1**
ZRB	**Zarabog**	**4.61**	**246**	P		Pn	**05 09 16.4**	**-0.5**
ZRB				S		Sn	**05 10 16.5**	**+6.3**
KDJ	**Kajisay**	**4.66**	**62**	⇓*e*P		Pb	05 09 24.1	-5.1
KDJ				⇓*i*S		**Sb**	**05 10 18.6**	**-6.5**
KRBS	**Karabastau**	**4.69**	**39**	Pg		**Pg**	**05 09 36.0**	**-1.7**
	comp=E,10.0nm,0.7s								
KRBS				Lg		Lg		05 10 37.1	
	comp=E,47nm,1.0s								
KRBS	**Karabastau**	**4.69**	**39**	*e*P		**Pg**	**05 09 36.0**	**-1.7**
	comp=E,10.0nm,0.7s								
KRBS				*e*S		**Sg**	**05 10 37.1**	**-1.3**
	comp=E,47nm,1.0s								
MTBS	**Maitube**	**4.70**	**48**	Pg		**Pg**	**05 09 37.5**	**-0.4**
	comp=E,3.6nm,0.1s								
MTBS				Lg		Lg		05 10 39.4	
	comp=E,20nm,0.3s								
MTBS	**Maitube**	**4.70**	**48**	*e*P		**Pg**	**05 09 37.5**	**-0.4**
	comp=E,3.6nm,0.1s								
MTBS				*e*S		**Sg**	**05 10 39.4**	**+0.6**
	comp=E,20nm,0.3s								
IZV	**Izvestkoviy**	**4.75**	**50**	Pg		**Pg**	**05 09 37.9**	**-1.0**
	comp=E,8.8nm,0.6s								
IZV				Lg		Lg		05 10 39.9	
	comp=E,31nm,0.7s								
IZV	**Izvestkoviy**	**4.75**	**50**	*e*P		**Pg**	**05 09 37.9**	**-1.0**
	comp=E,8.8nm,0.6s								
IZV				*e*S		**Sg**	**05 10 39.9**	**-0.5**
	comp=E,31nm,0.7s								
TNSS	**Tian-Shan**	**4.95**	**52**	Pg		**Pg**	**05 09 41.7**	**-1.0**
	comp=E,2.3nm,0.6s								
TNSS				Lg		Lg		05 10 46.9	
	comp=E,9.5nm,1.4s								
TNSS	**Tian-Shan**	**4.95**	**52**	*e*P		**Pg**	**05 09 41.7**	**-1.0**
	comp=E,2.3nm,0.6s								
TNSS				*e*S		**Sg**	**05 10 46.9**	**+0.1**
	comp=E,9.5nm,1.4s								
MDOK	**Medeo**	**5.08**	**51**	Pn		Pn	05 09 29.0	+5.5
	comp=E,7.4nm,0.6s								
MDOK				Pg		**Pg**	**05 09 43.4**	**-1.8**
	comp=E,18nm,0.7s								
MDOK				⇓Sn		**Sb**	**05 10 31.3**	**-6.0**
	comp=E,26nm,0.8s								
MDOK				Lg		Lg		05 10 50.5	
	comp=E,53nm,1.1s								
KUU	**Kurty**	**5.16**	**41**	Pg		**Pg**	**05 09 44.6**	**-2.1**
	comp=E,1.2nm,0.1s								
KUU				Lg		Lg		05 10 52.0	
	comp=E,40nm,0.7s								
KUU	**Kurty**	**5.16**	**41**	*e*P		**Pg**	**05 09 44.6**	**-2.1**
	comp=E,1.2nm,0.1s								
KUU				*e*S		**Sg**	**05 10 52.0**	**-1.5**
	comp=E,40nm,0.7s								
BTLS	**Baital**	**5.25**	**19**	Pg		**Pg**	**05 09 45.5**	**-2.8**
	comp=E,16nm,0.6s								
BTLS				Lg		Lg		05 10 53.1	
	comp=E,24nm,0.6s								
BTLS	**Baital**	**5.25**	**19**	*e*P		**Pg**	**05 09 45.5**	**-2.8**
	comp=E,16nm,0.6s								
BTLS				*e*S		**Sg**	**05 10 53.1**	**-3.1**
	comp=E,24nm,0.6s								
ANVS	**Anan'yevo**	**5.27**	**58**	⇓*e*P		Pn	05 09 32.1	+6.0
ANVS				⇓*i*S		**Sn**	**05 10 32.6**	**+6.0**
PRZ	**Przheval'sk**	**5.63**	**63**	⇓*i*P		Pn	05 09 37.3	+6.3
PRZ				⇓*i*S		**Sn**	**05 10 41.6**	**+6.2**
SATY	**Saty**	**5.88**	**58**	Pg		**Pg**	**05 09 59.4**	**-1.0**
	comp=E,1.8nm,0.1s								
SATY				Lg		Lg		05 11 17.1	
	comp=E,12nm,0.6s								
SATY	**Saty**	**5.88**	**58**	*e*P		**Pg**	**05 09 59.4**	**-1.0**
	comp=E,1.8nm,0.1s								
SATY				*e*S		**Sg**	**05 11 17.1**	**+0.6**
	comp=E,12nm,0.6s								
KURS	**Kuram**	**5.95**	**53**	Pg		**Pg**	**05 10 00.2**	**-1.4**
	comp=E,4.7nm,0.7s								
KURS				Lg		Lg		05 11 18.2	
	comp=E,17nm,0.9s								
KURS	**Kuram**	**5.95**	**53**	*e*P		**Pg**	**05 10 00.2**	**-1.4**
	comp=E,4.7nm,0.7s								
KURS				*e*S		**Sg**	**05 11 18.2**	**-0.4**
	comp=E,17nm,0.9s								
KPKS	**Kokpek**	**6.25**	**55**	Pg		**Pg**	**05 10 05.9**	**-1.6**
	comp=E,0.2nm,0.2s								
KPKS				Lg		Lg		05 11 28.8	
	comp=E,11nm,0.8s								
KPKS	**Kokpek**	**6.25**	**55**	*e*P		**Pg**	**05 10 05.9**	**-1.6**
	comp=E,0.2nm,0.2s								
KPKS				*e*S		**Sg**	**05 11 28.8**	**+0.3**
	comp=E,11nm,0.8s								
UZB	**Uzynbulak**	**6.32**	**59**	Pg		**Pg**	**05 10 07.0**	**-1.8**
	comp=E,2.2nm,0.2s								
UZB				Lg		Lg		05 11 30.5	
	comp=E,13nm,0.9s								
UZB	**Uzynbulak**	**6.32**	**59**	*e*P		**Pg**	**05 10 07.0**	**-1.8**
	comp=E,2.2nm,0.2s								
UZB				*e*S		**Sg**	**05 11 30.4**	**-0.2**
	comp=E,13nm,0.9s								
BLB	**Baldybastay**	**6.47**	**50**	Pg		**Pg**	**05 10 09.0**	**-2.7**
	comp=E,8.9nm,0.6s								
BLB				Lg		Lg		05 11 33.8	
	comp=E,16nm,0.8s								
MKAR	**Makanchi Array**	**10.23**	**46**	Pn		**Pn**	**05 10 37.4**	**+3.4**
	comp=E,0.1nm,0.3s,baz=229,slow=14,SNR=2.4								
MKAR				Lg		Lg		05 13 37.1	
	comp=E,0.2nm,0.3s,baz=232,slow=21,SNR=1.9								
	comp=E,0.6nm,0.6s								
KURBB	**Kurchatov Arra**	**11.58**	**22**	Pn		**Pn**	**05 10 51.6**	**-0.7**
	baz=214,slow=13,SNR=6.9								
KURBB				Lg		Lg		05 14 16.2	
	comp=E,0.1nm,0.3s,baz=208,slow=28,SNR=4.4								
	comp=E,0.8nm,0.8s								
AB31	**Akbulak array**	**12.35**	**322**	⇓P		**Pn**	**05 11 05.1**	**+2.2**
	comp=E,0.7nm,0.4s,baz=131,slow=13,SNR=28								
BVAR	**Borovoye Array**	**12.96**	**357**	Pn		**Pn**	**05 11 10.4**	**-0.7**
	baz=179,slow=10,SNR=2.2								
BVAR				Lg		Lg		05 14 57.0	
	baz=179,slow=22,SNR=3.6								
	comp=E,0.5nm,0.4s								
AKTO	**Aktyubinsk**	**14.07**	**322**	Pn		**Pn**	**05 11 23.2**	**-3.1**
	comp=E,0.7nm,0.5s,baz=127,slow=12,SNR=1.3								
AKTO				Sn		Sn	05 13 51.0	-11
	comp=E,0.1nm,0.3s,baz=93,slow=22,SNR=1.1								
AKTO				Lg		Lg		05 15 29.3	
	comp=E,0.1nm,0.3s,baz=280,slow=12,SNR=2.7								
ZALV	**Zalesovo Beam**	**16.47**	**28**	Pn		**P**	**05 12 00.3**	**-0.4**
	comp=E,0.1nm,0.3s,baz=220,slow=11,

PB07				IAML			05 17 58.0	
	comp=Z,881nm,0.1s							
PB07	**IPOC Station P**	**1.20**	**279**	⇑*i*	P	**Pn**	**05 17 36.9**	**+0.3**
PB07				*e*	S	**Sn**	**05 17 54.9**	**-1.0**
PB07				IAML			05 17 56.3	
	comp=E,1μm,0.2s							
PB07	**IPOC Station P**	**1.20**	**279**			**Pn**	**05 17 36.6**	**0.0**
PB07				Sn		**Sn**	**05 17 55.3**	**-0.5**
PB02	**IPOC Station P**	**1.34**	**296**	*e*	P	**Pn**	**05 17 38.3**	**+0.4**
PB02				*e*	S	**Sn**	**05 18 01.3**	**+3.1**
PB02				IAML			05 18 04.8	
	comp=Z,759nm,0.2s							
PB02	**IPOC Station P**	**1.34**	**296**	⇑*i*	P	**Pn**	**05 17 38.1**	**+0.2**
PB02				*e*	S	**Sn**	**05 17 57.4**	**-0.8**
PB02				IAML			05 17 59.5	
	comp=E,872nm,0.2s							
PB02	**IPOC Station P**	**1.34**	**296**			**Pn**	**05 17 38.1**	**+0.2**
PB02				Sn		**Sn**	**05 17 57.4**	**-0.8**
PB05	**IPOC Station P**	**1.75**	**237**	*e*	P	**Pn**	**05 17 43.1**	**+0.6**
PB05				*e*	S	**Sn**	**05 18 07.4**	**+1.0**
PB05				IAML			05 18 12.3	
	comp=Z,334nm,0.3s							
PB05	**IPOC Station P**	**1.75**	**237**	*e*	P	**Pn**	**05 17 43.1**	**+0.6**
PB05				*e*	S	**Sn**	**05 18 05.7**	**-0.7**
PB05				IAML			05 18 10.4	
	comp=N,536nm,0.5s							
PB05	**IPOC Station P**	**1.75**	**237**			**Pn**	**05 17 43.1**	**+0.6**
PB08	**IPOC Station P**	**1.83**	**344**	*e*	P	**Pn**	**05 17 45.4**	**+1.5**
PB08				*e*	S	**Sn**	**05 18 10.9**	**+2.2**
PB08				IAML			05 18 13.3	
	comp=Z,350nm,0.4s							
PB08	**IPOC Station P**	**1.83**	**344**	⇑*i*	P	**Pn**	**05 17 45.3**	**+1.5**
PB08				*e*		**Sn**	**05 18 08.9**	**+0.2**
PB08				*e*	S	**Sn**	**05 18 08.9**	**+0.2**
PB08				IAML			05 18 10.6	
	comp=E,636nm,0.4s							
PB08	**IPOC Station P**	**1.83**	**344**			**Pn**	**05 17 44.9**	**+1.1**
TA02	**Huaiquique**	**2.17**	**319**	*e*	P	**Pn**	**05 17 47.6**	**+0.2**
TA02				IAML			05 18 22.2	
	comp=Z,441nm,0.1s							
TA02	**Huaiquique**	**2.17**	**319**	*e*	P	**Pn**	**05 17 47.7**	**+0.2**
TA02				*e*	S	**Sn**	**05 18 14.1**	**-1.1**
GO01	**Chusmiza**	**2.30**	**346**	*e*	P	**Pn**	**05 17 50.8**	**+1.2**
GO01				*e*	S	**Sn**	**05 18 21.4**	**+2.5**
GO01				IAML			05 18 24.0	
	comp=Z,237nm,0.3s							
GO01	**Chusmiza**	**2.30**	**346**	*e*	P	**Pn**	**05 17 50.8**	**+1.2**
GO01				*e*	S	**Sn**	**05 18 19.5**	**+0.6**
GO01				IAML			05 18 23.9	
	comp=N,1μm,0.1s							
GO01	**Chusmiza**	**2.30**	**346**	Pn		**Pn**	**05 17 50.8**	**+1.2**
PB11	**IPOC Station P**	**2.35**	**335**	*e*	P	**Pn**	**05 17 50.3**	**+0.3**
PB11				*e*	S	**Sn**	**05 18 19.5**	**-0.1**
PB11				IAML			05 18 21.0	
	comp=Z,399nm,0.4s							
PB11	**IPOC Station P**	**2.35**	**335**	*i*	P	**Pn**	**05 17 50.3**	**+0.3**
PB11				*e*	S	**Sn**	**05 18 18.7**	**-0.9**
PB11				IAML			05 18 22.2	
	comp=E,686nm,0.4s							
PB11	**IPOC Station P**	**2.35**	**335**			**Pn**	**05 17 50.3**	**+0.3**
PSGCX	**Pisagua**	**2.71**	**328**	*e*	P	**Pn**	**05 17 53.9**	**-0.4**
PSGCX				*e*	S	**Sn**	**05 18 22.4**	**-5.1**
PSGCX				IAML			05 18 32.3	
	comp=Z,108nm,0.2s							
PSGCX	**Pisagua**	**2.71**	**328**	*e*	P	**Pn**	**05 17 53.7**	**-0.6**
PSGCX				*e*	S	**Sn**	**05 18 26.0**	**-1.5**
PSGCX	**Pisagua**	**2.71**	**328**			**Pn**	**05 17 53.7**	**-0.6**
YJA	**Yavi**	**2.88**	**96**	*e*	P	**Pn**	**05 17 57.7**	**+0.8**
YJA				*e*	S	**Sn**	**05 18 30.2**	**-1.7**
SALTA		**3.11**	**138**	*e*	P	**Pn**	**05 18 03.0**	**+3.2**
PB14	**IPOC Station P**	**3.17**	**211**	*e*	P	**Pn**	**05 18 01.3**	**+0.8**
PB14				*e*	S	Sn	05 18 49.4	+11
PB14				IAML			05 18 50.2	
	comp=Z,119nm,0.2s							
PB14	**IPOC Station P**	**3.17**	**211**	*e*	P	**Pn**	**05 18 01.0**	**+0.6**
PB14	**IPOC Station P**	**3.17**	**211**			**Pn**	**05 18 01.0**	**+0.6**
HJA	**Humahuaca**	**3.22**	**114**	*e*	P	**Pn**	**05 17 58.6**	**-2.6**
PB12	**IPOC Station P**	**3.66**	**333**	*e*	P	**Pn**	**05 18 06.2**	**-0.5**
PB12				*e*	S	**Sn**	**05 18 46.6**	**-3.0**
PB12				IAML			05 19 02.8	
	comp=Z,96nm,0.3s							
PB12	**IPOC Station P**	**3.66**	**333**	*e*	P	**Pn**	**05 18 05.8**	**-0.8**
PB12	**IPOC Station P**	**3.66**	**333**			**Pn**	**05 18 05.9**	**-0.8**
PB16	**IPOC Station P**	**3.66**	**346**	*e*	P	**Pn**	**05 18 08.9**	**+1.8**
PB16				*e*	S	**Sn**	**05 18 53.5**	**+3.2**
PB16				IAML			05 18 55.4	
	comp=Z,39nm,0.3s							
PB16	**IPOC Station P**	**3.66**	**346**	*e*	P	**Pn**	**05 18 09.0**	**+1.8**
PB16	**IPOC Station P**	**3.66**	**346**	Pn		**Pn**	**05 18 08.8**	**+1.8**
SLA	**San Lorenzo**	**3.99**	**135**	*e*	P	**Pn**	**05 18 09.2**	**-1.9**
AC01	**Pan de Azucar**	**4.59**	**203**	*e*	P	**Pn**	**05 18 18.2**	**-0.8**
AC01				IAML			05 19 27.2	
	comp=Z,64nm,0.7s							
AC01	**Pan de Azucar**	**4.59**	**203**			**Pn**	**05 18 18.4**	**-0.6**
FSA	**Cafayete**	**4.82**	**151**	*e*	P	**Pn**	**05 18 20.7**	**-1.5**
AC02	**Maricunga**	**4.92**	**185**	*e*	P	Pn	05 18 18.9	-4.9
AC02				*e*	S	**Sn**	**05 19 24.5**	**+4.2**
AC02				IAML			05 19 58.6	
	comp=Z,19nm,0.6s							
AC02	**Maricunga**	**4.92**	**185**			**Pn**	**05 18 24.8**	**+0.9**
LPAZ	**La Paz**	**5.61**	**5**			**Pn**	**05 18 35.8**	**+2.6**
GO03	**Copiapo**	**5.85**	**194**	Pn		**Pn**	**05 18 34.6**	**-1.2**
AC04	**Llanos de Chal**	**6.65**	**199**	Pn		**Pn**	**05 18 43.8**	**-2.7**
AC05	**El Transito**	**7.06**	**192**			**Pn**	**05 18 50.4**	**-1.7**
LCO	**Las Campanas**	**7.32**	**195**	Pn		**Pn**	**05 18 52.9**	**-2.9**
CO01	**Juntas del Tor**	**8.14**	**189**	Pn		**Pn**	**05 19 05.9**	**-0.9**
GO04	**Tololo Observa**	**8.46**	**193**	Pn		**Pn**	**05 19 08.6**	**-2.4**
CO03	**El Pedregal**	**9.08**	**191**	Pn		**Pn**	**05 19 17.1**	**-2.2**
CO02	**Combarbal**	**9.50**	**193**	Pn		**Pn**	**05 19 21.6**	**-3.3**
PTLB	**Pontes e Lacer**	**11.04**	**56**	Pn		**Pn**	**05 19 44.4**	**-1.0**
MT02	**Curacav**	**11.52**	**191**	Pn		**Pn**	**05 19 51.9**	**+0.1**
MT16	**CCHEN**	**11.60**	**188**	Pn		**Pn**	**05 19 53.6**	**+0.8**
VILB	**Vilhena**	**11.98**	**43**			**Pn**	**05 19 58.0**	**0.0**
ITAB	**Concordia**	**15.89**	**113**			**Pn**	**05 20 47.6**	**0.0**
ITAB				IAmb	IAmb		05 21 06.8	
	comp=Z,9.6nm,1.3s							
CPSB	**Cacapava Do Su**	**16.02**	**125**			**Pn**	**05 20 49.4**	**+0.3**
CPSB				IAmb	IAmb		05 20 52.5	
	comp=Z,6.0nm,0.5s							
TRQA	**Tornquist**	**17.07**	**162**	P	P	**P**	**05 21 01.8**	**+0.3**
GO06	**Curarrehue**	**17.79**	**187**	P	P	**P**	**05 21 09.6**	**+0.2**
GO06				IAmb	IAmb		05 21 36.8	
	comp=Z,12nm,1.4s							
MACA	**Manacapuru-AM**	**20.16**	**24**	P	P	**P**	**05 21 35.9**	**+0.5**
MACA				IAmb	IAmb		05 21 39.2	
	comp=Z,9.4nm,0.6s							
BOAV	**Boa Vista**	**25.42**	**19**	P	P	**P**	**05 22 27.5**	**+0.8**
BOAV				IAmb	IAmb		05 22 51.4	
	comp=Z,5.9nm,1.3s							
GO08	**Villa O'Higgin**	**26.68**	**186**	P	P	**P**	**05 22 38.6**	**+0.8**
BELA	**Belgrano 2**	**58.30**	**172**	P	P	**P**	**05 26 52.2**	**+0.5**
SNAA	**Sanae**	**61.80**	**161**	P	P	**P**	**05 27 15.0**	**-0.6**
SNAA				IAmb	IAmb		05 27 31.2	
	comp=Z,4.0nm,1.4s							
QSPA	**South Pole Qui**	**68.28**	**180**	P	P	**P**	**05 27 57.2**	**-0.5**

*SDD **21** 05:41:07.1±2.6, 19°.16N×69°.94W, h7km±11km, MD2.9, ML2.1, MW2.2, Presumed earthquake*
*OSPL **21** 05:41:08.6±1.5, 18°.99N×69°.98W, h6km±16km, ML2.2, Presumed earthquake*
ISC 21 05:41:06.5±1.2, **19°.10N**±0°.04×**69°.94W**±0°.03, **h8**km±11km, **n11**, σ1°32/18, **9C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LONA1	**Toro Cenizo, N**	**0.29**	**15**	*e*	S		**Sb**	**05 41 21.6**	**+2.6**
HATOM	**Hato Mayor del**	**0.62**	**120**	⇑*i*	P		**Pg**	**05 41 17.9**	**-0.6**
HATOM				⇑*i*	S		**Sg**	**05 41 27.1**	**+0.5**
HATOM				IAML				05 41 28.8	
	comp=N,22nm,0.4s								
SMDR	**Samana, DR**	**0.74**	**75**	⇑*i*	P		**Pg**	**05 41 19.5**	**-1.2**
SMDR				⇑*i*	S		**Sg**	**05 41 30.9**	**+0.6**
SMDR				IAML				05 41 42.0	
	comp=N,66nm,0.7s								
BANI	**BANI**	**0.81**	**209**	⇑*i*	P		**Pg**	**05 41 22.9**	**+0.8**
BANI				⇑*i*	S		**Sb**	**05 41 34.2**	**+0.2**
BANI				IAML				05 41 35.4	
	comp=N,215nm,0.2s								
SC01	**Santiago de lo**	**0.81**	**294**	⇓*i*	P		**Pg**	**05 41 19.8**	**-2.2**
SC01				⇑*i*	S		**Sg**	**05 41 33.2**	**+0.6**
SC01				IAML				05 41 34.1	
	comp=N,47nm,0.5s								
HIDR	**Higuey Centro**	**1.27**	**113**	⇑*i*	P		**Pn**	**05 41 28.8**	**-1.7**
HIDR				⇓*i*	S		**Sb**	**05 41 46.1**	**-1.1**
HIDR				IAML				05 41 51.6	
	comp=N,34nm,0.2s								
REDR	**Restauracion**	**1.37**	**273**	⇑*i*	P		**Pb**	**05 41 33.7**	**+1.3**
REDR				IAML				05 42 06.3	
	comp=N,19nm,0.5s								
LOPP1	**Punta Rusia, P**	**1.40**	**303**	*i*	P		**Pn**	**05 41 32.7**	**+0.3**
LOPP1				*e*	S		**Sb**	**05 41 51.2**	**+0.2**
LOPP1				IAML				05 41 55.5	
	comp=Z,37nm,1.6s								
LONE3	**El Aguacate, B**	**1.52**	**251**	*i*	P		**Pn**	**05 41 32.9**	**-1.2**
LONE3				*e*	S		**Sn**	**05 41 53.1**	**-1.0**
LONE3				IAML				05 41 54.7	
	comp=Z,7.0nm,1.4s								
PCDR	**Punta Cana, DR**	**1.59**	**111**	⇓*i*	P		**Pn**	**05 41 35.6**	**+0.6**
PCDR				IAML				05 42 05.1	
	comp=N,73nm,2.6s								
PCDR	**Punta Cana, DR**	**1.59**	**111**	*i*	P		**Pn**	**05 41 35.3**	**+0.3**
PCDR				IAML				05 42 03.2	
	comp=Z,37nm,1.4s								

*KRNET **21** 05:47:39.9±0.1, 40°.17N×71°.41E, h20km, mb3.4*
*SOME **21** 05:47:40.9, 40°.28N×71°.47E, h5km*
*NNC **21** 05:47:42.1±1.3, 40°.26N×71°.47E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=9.9km s-min=4.5km az=3.0*
*ISU **21** 05:47:44, 40°.18N×71°.42E, h19km*
ISC 21 05:47:40.1±0.8, **40°.19N**±0°.02×**71°.45E**±0°.02, **h10**km, **n45**, σ1°95/76, **26C-17D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.32**	**54**	P		P	**Pb**	**05 47 48.0**	**+0.1**
FRG				S			**Sb**	**05 47 53.5**	**+0.3**
MINT	**Mingtut**	**0.45**	**308**	S			Sb	05 48 10.3	+13
MINT				Sg				05 48 17.2	+22
BTK	**Batken**	**0.50**	**255**	⇓*i*	P		**Pg**	**05 47 49.2**	**-0.6**
BTK				⇓*i*	S		**Sg**	**05 47 55.6**	**-0.8**
DRK	**Karamyk**	**0.76**	**159**	⇓*i*	P		**Pg**	**05 47 54.2**	**-0.5**
DRK				⇓*i*	S		**Sg**	**05 48 04.4**	**-0.3**
TSTA	**Tashata**	**0.88**	**63**	P			**Pb**	**05 47 57.5**	**0.0**
TSTA				S			**Sn**	**05 48 10.4**	**-1.0**
KSNS	**Kasansay**	**0.97**	**3**	P			**Pn**	**05 48 00.6**	**+0.7**
OHH	**Osh**	**1.08**	**71**	⇑*i*	P		**Pg**	**05 48 00.4**	**-0.4**
OHH				⇑*i*	S		**Sb**	**05 48 14.9**	**-0.1**
TRKS	**Terek-Say**	**1.36**	**350**	⇓*i*	P		**Pn**	**05 48 04.2**	**-1.1**
TRKS				⇓*i*	S		**Sb**	**05 48 21.7**	**-1.6**
GAR	**Garm**	**1.47**	**217**	⇑*i*	P		**Pn**	**05 48 06.5**	**-0.3**
GAR				⇑*i*	S		**Sn**	**05 48 25.4**	**-0.8**
SFK	**Sufi-Kurgan**	**1.59**	**96**	⇑*i*	P		**Pb**	**05 48 09.4**	**-0.3**
SFK				⇑*i*	S		**Sg**	**05 48 30.9**	**-0.3**
ARSB	**Arslanbob**	**1.63**	**45**	⇓*i*	P		**Pb**	**05 48 10.2**	**-0.1**
ARSB				⇓*i*	S		**Sg**	**05 48 32.2**	**-0.3**
ARK	**Arkit**	**1.66**	**14**	⇑*i*	P		**Pb**	**05 48 10.6**	**-0.1**
ARK				⇑*i*	S		**Sg**	**05 48 33.0**	**-0.3**
CHMG	**Chimgan**	**1.74**	**322**	P			**Pg**	**05 48 12.9**	**-0.6**
CHMG				S			**Sg**	**05 48 36.1**	**0.0**
CHRV	**Charvak**	**1.84**	**323**	P			**Pb**	**05 48 13.4**	**-0.5**
PSK	**Pskem**	**1.92**	**335**	P			**Pg**	**05 48 16.1**	**-0.7**
PSK				S			**Sg**	**05 48 42.2**	**+0.5**
SALK	**Salom-Alik**	**1.94**	**68**	⇑*i*	P		**Pb**	**05 48 15.0**	**-0.6**
SALK				⇑*i*	S		**Sb**	**05 48 40.4**	**+0.5**
TVKS	**Tavaksay**	**1.94**	**316**	P			**Pb**	**05 48 15.8**	**+0.2**
TVKS				S			**Sg**	**05 48 42.1**	**-0.3**
NZBK	**Nazarbek**	**2.05**	**301**	P			**Pg**	**05 48 18.8**	**-0.5**
NZBK				S			**Sg**	**05 48 47.2**	**+1.3**
IUG	**Iuzhnay**	**2.23**	**332**	Pg			**Pg**	**05 48 21.7**	**-1.1**
	71nm,0.3s								
IUG				Lg			Lg	05 48 51.3	
	152nm,0.4s								
IUG	**Iuzhnay**	**2.23**	**332**	*e*	P		**Pg**	**05 48 21.8**	**-1.1**
	71nm,0.3s								
IUG				*e*	S		**Sg**	**05 48 51.3**	**-0.4**
	152nm,0.4s								
MNAS	**Manas**	**2.43**	**19**	⇑*i*	P		**Pb**	**05 48 21.9**	**-2.1**
MNAS				⇑*i*	S		**Sb**	**05 48 52.3**	**-1.8**
MRKS	**Merke**	**2.88**	**27**	Pg			**Pg**	**05 48 34.4**	**-1.0**
	11nm,0.2s								
MRKS				Lg			Lg	05 49 12.7	
	31nm,0.6s								
MRKS	**Merke**	**2.88**	**27**	*e*	P		**Pg**	**05 48 34.4**	**-1.0**
	11nm,0.2s								
MRKS				*e*	S		**Sg**	**05 49 12.7**	**0.0**
	31nm,0.6s								
KK31	**Karatay Array**	**3.00**	**347**	Pg			**Pb**	**05 48 35.0**	**+1.5**
	3.5nm,0.3s,baz=166,slow=12,SNR=25								
KK31				⇓Lg			Lg	05 49 15.9	
	3.9nm,0.2s,baz=166,slow=27								
UCH	**Uchtor**	**3.08**	**48**	⇓*i*	P		**Pn**	**05 48 31.0**	**+1.8**
UCH				⇓*i*	S		**Sn**	**05 49 08.3**	**+1.9**
AAK	**Ala-Archa**	**3.35**	**42**	⇑Pg			**Pg**	**05 48 42.4**	**-2.0**
	0.9nm,0.4s								
AAK				⇑Lg			Lg	05 49 26.2	
	2.6nm,0.4s								
AAK	**Ala-Archa**	**3.35**	**42**	⇑*i*	P		**Pn**	**05 48 34.7**	**+2.0**
AAK				⇑*i*	S		**Sn**	**05 49 14.5**	**+1.9**
AGL	**Agalyk**	**3.58**	**261**	S			**Sg**	**05 49 31.3**	**-3.6**
KBK	**Karagaybulak**	**3.61**	**46**	⇑*i*	P		**Pn**	**05 48 38.2**	**+2.0**
KBK				⇑*i*	S		**Sn**	**05 49 20.6**	**+1.7**
NRN	**Naryn**	**3.67**	**69**	⇑*i*	P		**Pn**	**05 48 31.8**	**+1.6**
NRN				⇑*i*	S		**Sn**	**05 48 41.8**	**+1.0**
CHMS	**Chumysh**	**3.75**	**40**	⇑*i*	P		**Pn**	**05 48 40.0**	**+2.0**
CHMS				⇑*i*	S		**Sn**	**05 49 23.8**	**+1.7**
USP	**Ospenovka**	**3.83**	**36**	⇑*i*	P		**Pn**	**05 48 41.3**	**+2.1**
USP				⇑*i*	S		**Sn**	**05 49 25.7**	**+1.4**
SGDS	**Sogindy**	**4.04**	**35**	Pg			**Pg**	**05 48 55.1**	**-2.3**
	2.2nm,0.3s								
SGDS				Lg			Lg	05 49 48.6	
	7.3nm,0.6s								
BOOM	**Boomskoye usch**	**4.09**	**54**	⇓*i*	P		**Pn**	**05 48 45.0**	**+2.2**
BOOM				⇓*i*	S		**Sn**	**05 49 32.2**	**+1.3**
TKM2	**Tokmak 2**	**4.14**	**47**	⇓*i*	P		**Pn**	**05 48 45.7**	**+2.1**
TKM2				⇓*i*	S		**Sn**	**05 49 33.5**	**+1.3**
ULHL	**Ulahol**	**4.16**	**59**	⇑*i*	P		**Pn**	**05 48 45.8**	**+2.0**
ULHL				⇑*i*	S		**Sn**	**05 49 34.0**	**+1.4**
KST	**Kastek**	**4.43**	**48**	Pg			**Pg**	**05 49 01.8**	**-3.1**
	1.4nm,0.3s								
KST				Lg			Lg	05 49 59.7	
	8.3nm,0.9s								
KST	**Kastek**	**4.43**	**48**	*e*	P		**Pg**	**05 49 01.8**	**-3.1**
	1.4nm,0.3s								
KST				*e*	S		**Sg**	**05 49 59.7**	**-2.6**
	8.3nm,0.9s								
KRBS	**Karabastau**	**4.72**	**41**	Pg			**Pg**	**05 49 06.6**	**-3.8**
	1.3nm,0.6s								
KRBS				Lg			Lg	05 50 07.9	
	8.2nm,1.0s								
KRBS	**Karabastau**	**4.72**	**41**	*e*	P		**Pg**	**05 49 06.6**	**-3.8**
	1.3nm,0.6s								
KRBS				*e*	S		**Sg**	**05 50 08.0**	**-3.5**
	8.2nm,1.0s								
TARG	**Taragay, Kyrgy**	**5.06**	**70**	⇓*i*	P		**Pn**	**05 48 58.3**	**+2.0**
TARG				⇓*i*	S		**Sn**	**05 49 55.3**	**+0.3**
BTLS	**Baital**	**5.22**	**21**	Pg			**Pb**	**05 49 15.4**	**+4.0**
	1.1nm,0.2s								
BTLS				Lg			Lg	05 50 23.0	
	4.1nm,0.5s								
BTLS	**Baital**	**5.22**	**21**	*e*	P		**Pb**	**05 49 15.4**	**+4.0**
	1.1nm,0.2s								
BTLS				*e*	S		**Sg**	**05 50 23.0**	**-4.5**
	4.1nm,0.5s								
KTBS	**Karatobe**	**5.26**	**46**	Pg			**Pb**	**05 49 16.1**	**+4.0**
	0.5nm,0.2s								
KTBS				Lg			Lg	05 50 24.5	
	12nm,0.6s								
KTBS	**Karatobe**	**5.26**	**46**	*e*	P		**Pb**	**05 49 16.1**	**+4.0**
	0.5nm,0.2s								
KTBS				*e*	S		**Sg**	**05 50 24.5**	**-4.3**
	12nm,0.6s								

*IDC **21** 06:13:44.2±0.6, 0°.91S×23°.81W, h0km, mb4.0/15, mbtmp4.0/15, MS3.5/36, Error ellipse: s-maj=26.5km s-min=15.7km az=136.0*
*NEIC **21** 06:13:45.6±1.9, 0°.95S±0°.09×23°.73W±0°.09, h10km±1km, mb4.6/48, Error ellipse: s-maj=15.6km s-min=14.2km az=156.0*
ISC 21 06:13:45.2±0.4, **1°.02S**±0°.08×**23°.79W**±0°.07, **h12**km, **n104**, σ1°36/74, **mb4.5**/29, **MS3.6**/36, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR1**	**1.47**	**126**	T		T	T	06 28 14.1	
	baz=305,slow=73,SNR=220								
H10N2	**ASCENSION HYDR1**	**1.48**	**126**	T		T	T	06 28 21.2	
	baz=305,slow=73,SNR=265								
H10N1	**ASCENSION HYDR1**	**1.49**	**126**	T		T	T	06 28 20.8	
	baz=305,slow=73,SNR=263								
ASCN	**Ascension**	**11.64**	**126**	Pn			**Pn**	**06 16 30.3**	**-1.0**
RCBR	**Riachuelo**	**12.99**	**248**	Pn			**Pn**	**06 16 47.2**	**-2.7**
	4.7nm,0.3s,baz=82,slow=19,SNR=80								
RCBR				Sn			Sn	06 18 59.8	-15
	1.0nm,0.3s,baz=354,slow=23,SNR=7.8								
RCBR				LR			LR	06 20 50.7	
	comp=Z,83nm,18.7s,baz=67,slow=33								
RCBR	**Riachuelo**	**12.99**	**248**				**Pn**	**06 16 47.8**	**-2.1**
SACV	**Santiago Islan**	**15.89**	**1**	Pn			**Pn**	**06 17 27.2**	**-1.7**
SACV				IAmb			IAmb	06 17 33.8	
	comp=Z,80nm,1.3s								
DBIC	**Dimbokro**	**20.38**	**68**	P			**P**	**06 18 21.3**	**-0.8**
	comp=Z,14nm,1.0s,baz=241,slow=12,SNR=6.4								
DBIC				LR			LR	06 24 44.2	
	comp=Z,148nm,19.8s,baz=254,slow=32								
	comp=Z,14nm,1.0s								
DBIC	**Dimbokro**	**20.38**	**68**	P			**P**	**06 18 20.9**	**-1.2**
DBIC				IAmb			IAmb	06 18 23.2	
	comp=Z,19nm,1.1s								
SHEL	**Horse Pasture**	**23.18**	**131**	P			**P**	**06 18 50.9**	**-1.1**
BDFB	**Brasilia**	**27.97**	**237**	P			**P**	**06 19 35.6**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=35,slow=8.5,SNR=3.3								
BDFB				LR			LR	06 29 42.8	
	comp=Z,186nm,20.5s,baz=38,slow=34								
	comp=Z,1.6nm,0.7s								
BDFB	**Brasilia**	**27.97**	**237**	P			**P**	**06 19 35.3**	**-0.8**
BDFB				IAmb			IAmb	06 19 50.6	
	comp=Z,8.8nm,1.2s								
TORD	**Torodi Ar. Bea**	**28.93**	**60**	P			**P**	**06 19 43.9**	**-0.7**
	comp=Z,1.6nm,1.1s,baz=234,slow=9.9,SNR=4.3								
	comp=Z,1.6nm,1.1s								
TORD	**Torodi Ar. Bea**	**28.93**	**60**	P			**P**	**06 19 43.1**	**-1.5**
MDP	**Montagnes des**	**29.45**	**282**	LR			LR	06 29 16.1	
	comp=Z,66nm,21.7s,baz=95,slow=32								
ITAB	**Concordia**	**37.67**	**224**	P			**P**	**06 21 00.3**	**-0.3**
PTLB	**Pontes e Lacer**	**37.71**	**246**	P			**P**	**06 21 00.6**	**-0.5**
VILB	**Vilhena**	**37.96**	**250**	P			**P**	**06 21 03.0**	**-0.2**
MD01	**Midelt array s**	**38.19**	**26**	P			**P**	**06 21 04.1**	**-1.0**
MDT	**Midelt**	**38.22**	**27**	LR			LR	06 35 33.5	
	comp=Z,73nm,20.7s,baz=232,slow=34								
CMLA	**Cha da Macela**	**38.62**	**358**	P			**P**	**06 21 07.8**	**-0.6**
SIV	**San Ignacio**	**39.65**	**246**	LR			LR	06 37 20.7	
	comp=Z,81nm,18.4s,baz=116,slow=36								
CPUP	**Villa Florida**	**40.91**	**229**	P			**P**	**06 21 28.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=76,slow=8.1,SNR=6.9								
CPUP				LR			LR	06 37 45.0	
	comp=Z,70nm,18.6s,baz=74,slow=35								
	comp=Z,1.2nm,0.7s								
CPUP	**Villa Florida**	**40.91**	**229**	P			**P**	**06 21 28.9**	**+1.2**
SABA	**Saba**	**43.03**	**297**	P			**P**	**06 21 45.3**	**+0.1**
TSUM	**Tsumeb**	**44.37**	**117**	LR			LR	06 36 36.1	
	comp=Z,128nm,18.4s,baz=326,slow=31								
ESDC	**Sonseca Array**	**44.38**	**22**	P			**P**	**06 21 55.9**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=199,slow=8.8,SNR=8.2								
ESDC				LR			LR	06 38 03.4	
	comp=Z,40nm,21.7s,baz=247,slow=33								
	comp=Z,2.1nm,0.9s								
SJG	**San Juan**	**45.80**	**297**	LR			LR	06 38 58.4	
	comp=Z,32nm,18.6s,baz=113,slow=33								
LPAZ	**La Paz**	**46.24**	**248**	P			**P**	**06 22 12.3**	**+0.8**
	comp=Z,4.1nm,0.8s,baz=73,slow=6.7,SNR=22								
	comp=Z,4.1nm,0.8s								
**LPA

ULM	**Lac du Bonnet**	**79.40**	**322**	LR	LR	06 57 04.5		
	comp=Z,18nm,18.2s,baz=110,slow=33							
SAND	**Sanderson**	**80.40**	**300**	P	**P**	**06 25 56.9**	**-0.4**	
UOSS	**Minazif**	**81.36**	**65**	P	**P**	**06 26 00.3**	**-2.1**	
UOSS				IAmb	IAmb	06 26 16.1		
	comp=Z,17nm,1.5s							
TX31	**Lajitas Ar. Si**	**81.67**	**300**	P	**P**	**06 26 03.3**	**-0.8**	
TXAR	**Lajitas Array**	**81.67**	**300**	P	**P**	**06 26 05.0**	**+0.9**	
	comp=Z,0.8nm,0.8s,baz=96,slow=5.9,SNR=7.8							
	comp=Z,0.8nm,0.8s							
TXAR	**Lajitas Array**	**81.67**	**300**	P	**P**	**06 26 03.0**	**-1.1**	
SDCO	**Great Sand Dun**	**84.06**	**308**	P	**P**	**06 26 15.3**	**-1.2**	
ANMO	**Albuquerque**	**84.56**	**305**	LR	LR	07 00 02.8		
	comp=Z,43nm,20.1s,baz=94,slow=33							
LENM	**Lemitar**	**84.92**	**304**	P	**P**	**06 26 18.6**	**-2.2**	
LAO	**LASA Array**	**85.53**	**317**	P	**P**	**06 26 22.9**	**-0.6**	
LAO				IAmb	IAmb	06 26 27.0		
	comp=Z,5.0nm,1.1s							
ARTI	**Arti**	**86.50**	**34**	LR	LR	07 06 52.8		
	comp=Z,21nm,18.8s,baz=288,slow=37							
AB31	**Akbulak array**	**86.67**	**41**	P	**P**	**06 26 28.6**	**-0.3**	
AB31				IAmb	IAmb	06 26 31.8		
	comp=Z,6.9nm,1.5s							
PV21	**Cone Mtn., Par**	**86.85**	**309**	P	**P**	**06 26 30.5**	**+0.1**	
PV21				IAmb	IAmb	06 26 33.4		
	comp=Z,2.9nm,0.8s							
PV10	**Paradox Valley**	**86.89**	**308**	P	**P**	**06 26 30.9**	**+0.3**	
PV10				IAmb	IAmb	06 26 33.7		
	comp=Z,5.3nm,1.0s							
HRA	**Herat**	**87.29**	**56**	P	**P**	**06 26 33.1**	**+0.5**	
HRA				IAmb	IAmb	06 26 35.2		
	comp=Z,6.2nm,0.8s							
PD31	**Pinedale Array**	**87.57**	**313**	P	**P**	**06 26 33.1**	**-0.7**	
PD31				IAmb	IAmb	06 27 15.5		
	comp=Z,3.3nm,1.4s							
PDAR	**Pinedale Array**	**87.57**	**313**	P	**P**	**06 26 34.4**	**+0.6**	
	comp=Z,0.4nm,0.8s,baz=80,slow=5.0,SNR=3.9							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**87.57**	**313**	P	**P**	**06 26 33.1**	**-0.7**	
GCMT	**Greycliff**	**87.84**	**316**	P	**P**	**06 26 33.4**	**-1.5**	
YNE	**Yellowstone No**	**88.03**	**315**	P	**P**	**06 26 36.8**	**+0.8**	
YNE				IAmb	IAmb	06 26 38.5		
	comp=Z,3.9nm,1.1s							
QSPA	**South Pole Qui**	**89.06**	**180**	P	**P**	**06 26 43.3**	**+3.1**	
	comp=Z,1.4nm,0.8s,baz=227,slow=3.9,SNR=3.8							
	comp=Z,1.4nm,0.8s							
QSPA	**South Pole Qui**	**89.06**	**180**	P	**P**	**06 26 41.1**	**+0.9**	
QSPA				IAmb	IAmb	06 26 51.7		
	comp=Z,3.5nm,1.1s							
YKA	**Yellowknife Ar**	**91.27**	**332**	P	**P**	**06 26 50.9**	**+0.5**	
	comp=Z,0.9nm,0.8s,baz=94,slow=5.3,SNR=5.8							
YKA				LR	LR	07 03 03.8		
	comp=Z,49nm,20.8s,baz=32,slow=32							
	comp=Z,0.9nm,0.8s							
NEW	**Newport**	**92.98**	**318**	LR	LR	07 03 30.8		
	comp=Z,35nm,21.4s,baz=102,slow=32							
NVAR	**Mina Array Bea**	**94.17**	**308**	P	**P**	**06 27 06.0**	**+1.4**	
	comp=Z,0.1nm,0.3s,baz=25,slow=4.8,SNR=2.2							
	comp=Z,0.1nm,0.3s							
NVAR	**Mina Array Bea**	**94.17**	**308**	P	**P**	**06 27 05.2**	**+0.5**	
NRIK	**Noril'sk**	**98.38**	**20**	LR	LR	07 14 34.8		
	comp=Z,15nm,18.1s,baz=345,slow=37							
BBB	**Bella Bella**	**99.56**	**323**	LR	LR	07 09 18.9		
	comp=Z,27nm,19.0s,baz=200,slow=34							
ASAR	**Alice Springs**	**147.26**	**140**	PKPbc	**PKPbc**	**06 33 30.4**	**+0.8**	
	comp=Z,1.6nm,0.6s,baz=210,slow=2.3,SNR=20							
ASAR	**Alice Springs**	**147.26**	**140**	PKPdf	**PKPdf**	**06 33 24.8**	**-2.5**	
ASAR				PKPbc	**PKPbc**	**06 33 29.1**	**-0.5**	
ASAR					**sPKPdf**	**06 33 31.6**	**+1.1**	
WRA	**Warramunga Arr**	**150.11**	**135**	PKPbc	**PKPbc**	**06 33 37.0**	**0.0**	
	comp=Z,1.0nm,0.8s,baz=239,slow=2.4,SNR=7.9							

IDC ***21*** *06:18:46.8±0.5, 30°.23N×94°.80E, h0km, mb4.3/30, mbtmp4.3/34, ML4.1/4, MS3.3/12, Error ellipse: s-maj=12.7km s-min=9.2km az=55.0*

MOS ***21*** *06:18:47.2±1.0, 30°.37N×94°.84E, h11km, mb5.0/47, MS4.0/4, Error ellipse: s-maj=7.1km s-min=3.3km az=122.5*

BJI ***21*** *06:18:47.4, 30°.38N×94°.85E, h7km, mB4.7/9, mb4.5/45, ML4.0/8, Ms4.0/35, Ms7 3.8/34*

NDI ***21*** *06:18:48.5±2.0, 30°.51N×94°.87E, h10km, mb4.6, ML4.2, MW4.5, Presumed earthquake*

NEIC ***21*** *06:18:49.0±1.4, 30°.43N±0°.05×94°.83E±0°.07, h10km±1km, mb4.9/204, Error ellipse: s-maj=11.4km s-min=6.6km az=49.0*

GFZ ***21*** *06:18:49.7±0.3, 30°.4°×9°.5E±°, h10km, M4.5/25, mb4.7/25*

ISC 21 06:18:49.1±0.7, 30°.33N±0°.03×94°.87E±0°.03, h13km±4km, n717, σ1°17/710, mb4.9/172, MS3.4/16, 8C-11D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIRO	**ZIRO**	**2.93**	**198**	*e*S	**Pb**	**06 19 44.2**	**+2.9**
ZIRO				IAML		06 19 55.4	
	comp=N,2μm,0.8s						
ZIRO				IAML		06 19 58.1	
	comp=E,1μm,0.5s						
TAWA	**Tawang**	**3.79**	**225**	*e*P	**Pn**	**06 19 49.3**	**+1.8**
MOKO	**MOKOCHONG**	**4.01**	**185**	*e*P	**Pn**	**06 19 52.7**	**+2.4**
MOKO				*i* x	x	06 20 04.4	
MOKO				*e*S	**Sn**	**06 20 40.1**	**+2.8**
TEZP	**TEZPUR**	**4.12**	**207**	*e*P	**Pn**	**06 19 53.6**	**+1.8**
TEZP				*i* x	x	06 20 02.5	
TEZP				*e*S	**Sn**	**06 20 41.5**	**+1.6**
GUWA	**GUWAHATI**	**4.98**	**215**	*e*P	**Pn**	**06 20 05.2**	**+1.6**
GUWA				*i* x	x	06 20 19.6	
GUWA				*e*S	**Sn**	**06 21 00.8**	**-0.3**
SHL	**Shillong**	**5.43**	**210**	P	**Pn**	**06 20 10.5**	**+0.6**
SHL	**Shillong**	**5.43**	**210**	Pn	**Pn**	**06 20 11.0**	**+1.1**
SHL	**Shillong**	**5.43**	**210**	*e*P	**Pn**	**06 20 11.5**	**+1.6**
IMP	**Imphal**	**5.54**	**189**	*e*P	**Pn**	**06 20 12.7**	**+1.4**
SILR	**SILCHAR**	**5.82**	**199**	*e*P	**Pn**	**06 20 16.8**	**+1.7**
SILR				*ex*	x	06 20 40.2	
GOMU	**GeErMu**	**5.85**	**360**	Pn	**Pn**	**06 20 15.9**	**0.0**
GOMU				Sn	**Sn**	**06 21 23.8**	**+0.7**
GOMU				SMN			
	comp=E,32nm,1.4s						
GOMU				SME			
	comp=E,23nm,1.1s						
GOMU				L	L		
	comp=E,1μm,5.5s						
GOMU				L	L		
	comp=E,920nm,4.6s						
DHUB	**DHUBRI**	**6.08**	**226**	*i* x	Pn	06 20 13.1	-5.5
MORE	**Moreh**	**6.09**	**185**	Pn	**Pn**	**06 20 21.6**	**+2.8**
TNCH	**TengChong**	**6.19**	**148**	Pn	**Pn**	**06 20 20.1**	**-0.4**
TNCH				Sg	**Sg**	**06 22 05.3**	**-2.7**
TNCH				SMN			
	comp=E,170nm,0.8s						
TNCH				SME			
	comp=E,330nm,1.5s						
PZH	**PanZhiHua**	**7.16**	**121**	Pn	**Pn**	**06 20 37.5**	**+3.9**
EVN	**Everest**	**7.42**	**253**		**Pn**	**06 20 38.3**	**+0.6**
EVN	**Everest**	**7.42**	**253**	P	**Pn**	**06 20 42.0**	**+4.2**
CD2	**Chengdu**	**7.69**	**83**	Pn	**Pn**	**06 20 43.4**	**+2.6**
CD2				Sn	**Sn**	**06 22 12.3**	**+4.5**
CD2				L	L		
	comp=E,1μm,7.1s						
CD2				L	L		
	comp=E,920nm,8.1s						
CD2				L	L		
	comp=E,1μm,7.4s						
KMI2	**Kunming**	**8.68**	**125**	P	**Pn**	**06 20 56.8**	**+2.2**
KMI2				pmax	pmax		
	comp=E,14nm,1.5s						
KMI2				L	L		
	comp=E,530nm,4.4s						
KMI2				L	L		
	comp=E,470nm,5.8s						
KMI2				L	L		
	comp=E,320nm,8.0s						
LZDM	**Lanzhou Array**	**9.29**	**51**	Pn	**Pn**	**06 21 04.2**	**+1.2**
	baz=216,slow=7.1						
	comp=E,2.6nm,0.4s						
LZH	**Lanzhou**	**9.46**	**50**	*e*P	Pn	06 21 10.4	+5.2
LZH				pP		06 21 15.0	
LZH				pmax	pmax		
	comp=E,30nm,1.3s						
LZH				L	L		
	comp=E,370nm,10.0s						
LZH				L	L		
	comp=E,460nm,10.0s						
LZH				L	L		
	comp=E,430nm,10.6s						
GTA2	**Gaotai**	**9.98**	**22**	*e*P	**Pn**	**06 21 14.3**	**+2.0**
GTA2				pmax	pmax		
	comp=E,3.0nm,1.2s						
GTA2				L	L		
	comp=E,340nm,9.5s						
GTA2				L	L		
	comp=E,290nm,8.3s						
GTA2				L	L		
	comp=E,360nm,9.2s						
GYA	**Guiyang**	**11.08**	**107**	P	**Pn**	**06 21 28.8**	**+1.4**
GYA				pmax	pmax		
	comp=E,36nm,0.9s						
CHTO	**Chiang Mai**	**12.05**	**161**	P	**Pn**	**06 21 42.4**	**+1.8**
CHTO	**Chiang Mai**	**12.05**	**161**		**Pn**	**06 21 42.4**	**+1.8**
CHTO	**Chiang Mai**	**12.05**	**161**	P	**Pn**	**06 21 42.8**	**+2.2**
CMAR	**Chiang Mai Arr**	**12.39**	**162**	Pn	**Pn**	**06 21 44.5**	**-0.8**
	comp=E,0.4nm,0.3s,baz=332,slow=12,SNR=15						
	comp=E,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.39**	**162**	*i* P	**Pn**	**06 21 48.5**	**+3.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.39**	**162**		**Pn**	**06 21 46.4**	**+1.1**
XAN	**Xi'an**	**12.47**	**69**	P	**Pn**	**06 21 46.1**	**-0.2**
XAN				pmax	pmax		
	comp=E,8.0nm,0.8s						
XAN				L	L		
	comp=Z,470nm,10.0s						
XAN				L	L		
	comp=Z,200nm,9.6s						
XAN				L	L		
	comp=Z,320nm,8.2s						
ALBI	**Allahabad**	**12.59**	**250**	*ex*	x	06 25 10.3	
BWNR	**Bhubaneshwar**	**12.94**	**221**	*e*P	**Pn**	**06 21 53.1**	**+0.3**
HNLY	**HANLEY**	**13.77**	**284**	*e*P	**Pn**	**06 22 03.6**	**-1.0**
HNLY				IAmb	IAmb	06 22 16.3	
	comp=Z,12nm,1.6s						
WMQ	**Urumqi**	**14.62**	**339**	*e*P	**Pn**	**06 22 14.8**	**-0.9**
WMQ				S	**Sn**	**06 24 56.3**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
WMQ				L	L		
	comp=Z,260nm,13.1s						
WMQ				L	L		
	comp=Z,140nm,8.1s						
WMQ				L	L		
	comp=Z,64nm,11.9s						
LYN	**LuoYang**	**15.45**	**70**	*e*P	**Pn**	**06 22 26.8**	**+0.1**
LYN				sP	P	06 22 31.6	+0.4
LYN				pmax	pmax		
	comp=Z,14nm,0.7s						
LYN				L	L		
	comp=Z,190nm,7.7s						
LYN				L	L		
	comp=Z,190nm,8.5s						
LYN				L	L		
	comp=Z,280nm,11.0s						
DHRM	**DHARAMSHALA**	**15.99**	**282**	*i* x	**P**	**06 22 38.2**	**+0.7**
DHRM				*ex*	x	06 22 39.1	
DHRM				*ex*	x	06 25 13.5	
BTO2	**Baotou**	**16.02**	**46**	*e*P	**Pn**	**06 22 32.9**	**-1.3**
BTO2				PP	**sP**	**06 22 45.3**	**+0.8**
BTO2				S	**Sn**	**06 25 30.6**	**-1.1**
BTO2				pmax	pmax		
	comp=Z,22nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,240nm,4.6s						
BTO2				L	L		
	comp=Z,320nm,5.1s						
BTO2				L	L		
	comp=Z,330nm,8.3s						
BTO2				L	L		
	comp=Z,420nm,9.8s						
WUS	**Wushi**	**16.67**	**315**	Pn	**Pn**	**06 22 41.8**	**-0.8**
WUS				IAmb	IAmb	06 22 48.2	
	comp=Z,163nm,1.1s						
WHN	**Wuhan**	**16.81**	**84**	P	**Pn**	**06 22 41.3**	**-2.9**
WHN				pmax	pmax		
	comp=Z,94nm,1.1s						
WHN				L	L		
	comp=Z,860nm,8.7s						
WHN				L	L		
	comp=Z,410nm,10.0s						
WHN				L	L		
	comp=Z,1μm,10.8s						
BHPL	**Bhopal**	**17.09**	**250**	*e*P	**P**	**06 22 49.2**	**-0.4**
HHC	**Hu-ho-hao-te**	**17.14**	**48**	*e*P	**Pn**	**06 22 48.0**	**-0.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,83nm,4.6s						
HHC				L	L		
	comp=Z,220nm,9.2s						
HHC				L	L		
	comp=Z,140nm,9.2s						
HHC				L	L		
	comp=Z,200nm,11.1s						
QIZ	**Qiongzhong**	**17.64**	**126**	P	**Pn**	**06 22 54.3**	**-0.3**
QIZ				S	**Sn**	**06 26 10.6**	**-0.5**
QIZ				L	L		
	comp=Z,150nm,7.7s						
QIZ				L	L		
	comp=Z,190nm,7.8s						
QIZ				L	L		
	comp=Z,180nm,10.3s						
SHLS	**Shalkode**	**17.75**	**320**	*e*P	**Pn**	**06 22 53.0**	**-3.0**
SHLS	**Shalkode**	**17.75**	**320**	*e*P	**Pn**	**06 22 53.0**	**-3.0**
PDGK	**Podgornoye**	**17.84**	**321**	P	**Pn**	**06 22 56.1**	**-1.1**
PDGK	**Podgornoye**	**17.84**	**321**		**Pn**	**06 22 55.8**	**-1.4**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**06 22 56.5**	**-1.1**
TARG				pmax	pmax		
	comp=Z,37nm,1.1s						
TARG	**Taragay, Kyrgy**	**17.85**	**314**		**Pn**	**06 22 56.4**	**-1.1**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**P**	**06 22 58.3**	**+0.1**
HNS	**HongShan**	**17.91**	**62**	||P	**Pn**	**06 22 57.3**	**-0.5**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				L	L		
	comp=Z,220nm,11.7s						
HNS				L	L		
	comp=Z,97nm,10.2s						
HNS				L	L		
	comp=Z,190nm,14.1s						
PRZ	**Przheval'sk**	**17.93**	**317**	P	**Pn**	**06 22 56.4**	**-1.9**
PRZ				pmax	pmax		
	comp=Z,146nm,1.2s						
PRZ	**Przheval'sk**	**17.93**	**317**	Pn	**Pn**	**06 22 55.9**	**-2.4**
PRZ				IAmb	IAmb	06 23 04.0	
	comp=Z,146nm,1.2s						
UZB	**Uzynbulak**	**17.98**	**320**	*e*P	**Pn**	**06 22 58.8**	**-0.1**
UZB	**Uzynbulak**	**17.98**	**320**	*e*P	**Pn**	**06 22 58.8**	**-0.1**
KSH2	**Kashi**	**18.11**	**304**	P	**P**	**06 23 02.8**	**+1.9**
KSH2				pmax	pmax		
	comp=Z,14nm,1.2s						
AJM	**Ajmer**	**18.22**	**263**	*e*P	**P**	**06 23 02.9**	**+0.8**
AJM				IAmb	IAmb	06 23 03.4	
	comp=Z,22nm,0.8s						
ASAI	**AK-SAY(Kyrgyzs**	**18.24**	**310**	P	**P**	**06 23 02.7**	**+0.2**
SATY	**Saty**	**18.28**	**319**	*e*P	**Pn**	**06 23 02.3**	**-0.2**
SATY	**Saty**	**18.28**	**319**	*e*P	**Pn**	**06 23 02.3**	**-0.2**
KPKS	**Kokpek**	**18.38**	**320**	*e*P	**Pn**	**06 23 03.3**	**-0.4**
KPKS	**Kokpek**	**18.38**	**320**	*e*P	**Pn**	**06 23 03.4**	**-0.3**
KDJ	**Kajisay**	**18.46**	**314**	P	**P**	**06 23 03.4**	**-1.3**
KDJ				pmax	pmax		
	comp=Z,87nm,1.5s						
KDJ	**Kajisay**	**18.46**	**314**	P	**P**	**06 23 03.1**	**-1.6**
KDJ	**Kajisay**	**18.46**	**314**	P	**Pn**	**06 23 08.0**	**+3.2**
NIL	**Nilore**	**18.63**	**286**	P	**P**	**06 23 04.2**	**-2.2**
NIL				pmax	pmax		
	comp=Z,251nm,2.0s						
NIL	**Nilore**	**18.63**	**286**		**P**	**06 23 04.2**	**-2.2**
NIL				IAmb	IAmb	06 23 11.1	
	comp=Z,251nm,2.0s						
NIL	**Nilore**	**18.63**	**286**	P	**P**	**06 23 04.3**	**-2.2**
ZSN	**Zaisan**	**18.75**	**338**	*e*P	**P**	**06 23 07.7**	**0.0**
ZSN	**Zaisan**	**18.75**	**338**	*e*P	**P**	**06 23 07.7**	**0.0**
NRN	**Naryn**	**18.84**	**311**	P	**P**	**06 23 07.1**	**-1.9**
NRN				pmax	pmax		
	comp=Z,15nm,1.2s						
NRN	**Naryn**	**18.84**	**311**	P	**P**	**06 23 07.0**	**-2.0**
HKPS	**Hong Kong Po S**	**19.03**	**110**	P	**P**	**06 23 09.3**	**-1.6**
MK31	**Makanchi Array**	**19.11**	**333**	*c* *i*P	**P**	**06 23 10.7**	**-1.0**
MK31	**Makanchi Array**	**19.11**	**333**	P	**P**	**06 23 10.9**	**-0.8**
MKAR	**Makanchi Array**	**19.11**	**333**	P	**P**	**06 23 10.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=135,slow=13,SNR=20						
MKAR				S	**S**	**06 26 48.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=159,slow=21,SNR=2.3						
MKAR				LR	LR	06 31 56.6	
	comp=Z,32nm,19.5s,baz=162,slow=41						
	comp=Z,3.7nm,0.7s						
MKAR	**Makanchi Array**	**19.11**	**333**	*i* P	**P**	**06 23 10.8**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**19.11**	**333**		**P**	**06 23 09.5**	**-2.2**
TNSS	**Tian-Shan**	**19.12**	**316**	*e*P	**P**	**06 23 12.0**	**-0.2**
TNSS	**Tian-Shan**	**19.12**	**316**	*e*P	**P**	**06 23 12.0**	**-0.2**
MDOK	**Medeo**	**19.13**	**317**	*e*P	**P**	**06 23 12.2**	**+0.2**
MDOK	**Medeo**	**19.13**	**317**	*e*P	**P**	**06 23 12.2**	**+0.2**
AAA	**Alma-Ata**	**19.24**	**317**	*e*P	**P**	**06 23 13.3**	**+0.2**
AAA	**Alma-Ata**	**19.24**	**317**	*e*P	**P**	**06 23 13.3**	**+0.2**
MAKZ	**Makanchi**	**19.25**	**332**		**P**	**06 23 11.0**	**-2.2**
MAKZ	**Makanchi**	**19.25**	**332**	P	**P**	**06 23 12.1**	**-1.1**
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**P**	**06 23 13.6**	**-1.7**
BOOM				pmax	pmax		
	comp=Z,44nm,1.2s						
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**P**	**06 23 13.7**	**-1.7**
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**Pn**	**06 23 16.9**	**+0.5**
TIA	**Tai'an**	**19.50**	**67**	P	**Pn**	**06 23 18.9**	**+1.7**
TIA				pmax	pmax		
	comp=Z,19nm,1.2s						
TDK	**Taldyqorghan**	**19.55**	**323**	*e*P	**P**	**06 23 16.6**	**+0.2**
TDK	**Taldyqorghan**	**19.55**	**323**	*e*P	**P**	**06 23 16.6**	**+0.2**
SONM	**Songino Array**	**19.60**	**24**	P	**P**	**06 23 17.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=213,slow=10,SNR=55						
SONM				S	**Sn**	**06 27 02.7**	**+4.3**
	comp=Z,0.4nm,0.5s,baz=215,slow=15,SNR=0.9						
SONM				LR	LR	06 31 37.8	
	comp=Z,101nm,20.6s,baz=242,slow=39						
	comp=Z,24nm,1.1s						
SONM	**Songino Array**	**19.60**	**24**	P	**P**	**06 23 14.9**	**-2.2**
UDPR	**Udaipur**	**19.61**	**258**	*e*P	**P**	**06 23 16.9**	**-0.5**
UDPR				IAmb	IAmb	06 23 20.4	
	comp=Z,42nm,0.4s						
HYB	**Hyderabad**	**19.66**	**233**	*e*P	**P**	**06 23 18.4**	**+0.5**
HYB				*e*S	**Sn**	**06 27 01.2**	**+1.2**
ULN	**Ulaanbaatar**	**19.86**	**25**	*i* P	**P**	**06 23 18.8**	**-1.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.1s						
ULN	**Ulaanbaatar**	**19.86**	**25**	P	**P**	**06 23 20.1**	**+0.2**
ULN	**Ulaanbaatar**	**19.86**	**25**	P	**P**	**06 23 20.6**	**+0.6**
BJT	**Baijiatuau**	**19.88**	**55**	P	**P**	**06 23 20.2**	**+0.2**
BJI2	**Beijing**	**19.88**	**55**	P	**Pn**	**06 23 22.5**	**+0.8**
BJI2				S	**Sn**	**06 27 06.0**	**+1.1**
BJI2				L	L		
	comp=Z,140nm,10.6s						
BJI2				L	L		
	comp=Z,150nm,11.8s						
BJI2				L	L		
	comp=Z,230nm,11.8s						
KUU	**Kurty**	**19.98**	**318**	*e*P	**P**	**06 23 21.3**	**+0.2**
KUU	**Kurty**	**19.98**	**318**	*e*P	**P**	**06 23 21.4**	**+0.2**
DGZ	**Jazzator, Alta**	**20.15**	**346**	*e*P	**P**	**06 23 21.7**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**20.41**	**313**	P	**P**	**06 23 26.1**	**+0.1**
	comp=Z,52nm,1.2s,baz=131,slow=7.4,SNR=41						
	comp=Z,52nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**313**	*d* *i*P	Pn	06 23 27.4	-0.8
AAK				pmax	pmax		
	comp=Z,91nm,1.3s						
AAK	**Ala-Archa**	**20.41**	**313**	P	**P**	**06 23 25.6**	**-0.5**
AAK				IAmb	IAmb	06 23 32.6	
	comp=Z,81nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**313**	P	Pn	06 23 27.9	-0.2
FRU1	**Bishkek**	**20.41**	**313**	P	**P**	**06 23 25.6**	**-0.4**
FRU1				pmax	pmax		
	comp=Z,32nm,0.9s						
FRU1	**Bishkek**	**20.41**	**313**	P	**P**	**06 23 25.0**	**-1.0**
MANEM	**Manem**	**20.51**	**297**	P	**P**	**06 23 27.5**	**+0.3**
MANEM				IAmb	IAmb	06 23 32.4	
	comp=Z,76nm,1.1s						
NJ2	**Nanjing**	**20.59**	**79**	*e*P	Pn	06 23 29.6	-0.5
NJ2				pmax	pmax		
	comp=Z,28nm,0.6s						
OHH	**Osh**	**20.62**	**306**	P	**P**	**06 23 28.0**	**-0.2**
OHH	**Osh**	**20.62**	**306**	P	**P**	**06 23 28.0**	**-0.2**
SGDS	**Sogindy**	**20.75**	**315**	*e*P	**P**	**06 23 29.8**	**+0.2**
ARSB	**Arslanbob**	**20.80**	**308**	P	**P**	**06 23 29.2**	**-1.1**
ARSB				pmax	pmax		
	comp=Z,74nm,1.5s						
ARSB	**Arslanbob**	**20.80**	**308**	P	**P**	**06 23 30.0**	**-0.3**
ARSB				IAmb	IAmb	06 23 33.8	
	comp=Z,74nm,1.5s						
DRK	**Karamyk**	**20.96**	**302**	P	**P**	**06 23 31.8**	**-0.3**
DRK				pmax	pmax		
	comp=Z,64nm,1.3s						
DRK	**Karamyk**	**20.96**	**302**	P	**P**	**06 23 32.5**	**+0.3**
DRK				IAmb	IAmb	06 23 34.8	
	comp=Z,64nm,1.3s						
ZAK	**Zakamensk**	**21.00**	**15**	*e*P	**P**	**06 23 32.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,38nm,1.5s						
XLT	**XiLinHaoTe**	**21.59**	**45**	*e*P	**P**	**06 23 40.0**	**+1.3**
XLT				PP	**PnPn**	**06 24 00.8**	**+1.6**
XLT				pmax	pmax		
	comp=Z,27nm,1.0s						
XLT				L	L		
	comp=Z,110nm,8.4s						
XLT				L	L		
	comp=Z,110nm,7.5s						
MOY	**Mondy**	**21.80**	**10**	*e*P	**P**	**06 23 41.9**	**+1.1**
MOY				pmax	pmax		
	comp=Z,51nm,1.7s						
BTK	**Batken**	**21.86**	**303**	P	**P**	**06 23 41.0**	**-0.6**
BTK				pmax	pmax		
	comp=Z,46nm,1.0s						
BTK	**Batken**	**21.86**	**303**	P	**P**	**06 23 41.4**	**-0.2**
BTK				IAmb	IAmb	06 23 45.3	
	comp=Z,46nm,1.0s						
BTK	**Batken**	**21.86**	**303**	P	**P**	**06 23 42.6**	**+0.9**
GAR	**Garm**	**21.92**	**300**		**P**	**06 23 41.7**	**-0.5**
GAR				IAmb	IAmb	06 23 43.7	
	comp=Z,59nm,1.0s						
GAR	**Garm**	**21.92**	**300**	P	**P**	**06 23 41.8**	**-0.5**
BTLS	**Baital**	**21.98**	**318**	*e*P	**P**	**06 23 43.0**	**+0.3**
BTLS	**Baital**	**21.98**	**318**	*e*P	**P**	**06 23 43.1**	**+0.3**
KBL	**Kabul**	**22.17**	**288**	P	**P**	**06 23 44.9**	**-0.2**
KBL				pmax	pmax		
	comp=Z,200nm,1.6s						
KBL	**Kabul**	**22.17**	**288**	P	**P**	**06 23 45.2**	**+0.1**

SHAA IAmb IAmb 06 23 59.5
comp=Z,64nm,1.1s
CHM Chimkent 23.52 308 *e*P **P 06 23 59.3 +0.5**
CHM pmax pmax
comp=Z,9.0nm,0.4s
CHM Chimkent 23.52 308 *e*P **P 06 23 59.3 +0.5**
comp=Z,9.0nm,0.4s
BRLS Boroldaу 23.64 309 *e*P **P 06 24 00.3 +0.3**
BRLS Boroldaу 23.64 309 *e*P **P 06 24 00.4 +0.3**
KURBB Kurchatov Arra 23.68 334 P **P 06 24 00.2 -0.1**
comp=Z,11nm,0.9s,baz=144,slow=10,SNR=38
KURBB PcP **PcP 06 27 44.0 -0.3**
comp=Z,0.9nm,0.3s,baz=167,slow=2.2,SNR=5.0
KURBB S **S 06 28 18.5 +3.8**
comp=Z,0.2nm,0.3s,baz=149,slow=15,SNR=4.9
comp=Z,11nm,0.9s
KURK Kurchatov 23.72 334*c i*P **P 06 23 59.9 -0.7**
KURK pmax pmax
comp=Z,32nm,1.4s
KURK Kurchatov 23.72 334 P **P 06 23 59.9 -0.7**
KURK IAmb IAmb 06 24 02.4
comp=Z,81nm,1.6s
KURK Kurchatov 23.72 334 P **P 06 24 00.2 -0.5**
YULB Yu-li 24.54 100 P **P 06 24 07.5 -1.1**
ZAA0 Zalesovo Array 24.70 346 P **P 06 24 08.3 -1.4**
ZAA0 IAmb IAmb 06 24 11.8
comp=Z,35nm,1.4s
ZALV Zalesovo Beam 24.70 346 P **P 06 24 09.6 -0.2**
comp=Z,5.6nm,0.8s,baz=161,slow=10.0,SNR=15
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 24.70 346 P **P 06 24 08.1 -1.6**
KULM Kulim 25.50 167 P **P 06 24 17.3 +0.1**
KULM Kulim 25.50 167 P **P 06 24 18.3 +1.0**
HILR Hailar Array B 26.86 37 P **P 06 24 30.6 +1.2**
comp=Z,1.4nm,0.4s,baz=196,slow=10,SNR=6.9
comp=Z,1.4nm,0.4s
CN2 Changchun 27.69 52 *e*P **P 06 24 37.6 +0.8**
CN2 *es*P sP 06 24 44.0 0.0
CN2 *e*S **S 06 29 16.3 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,100nm,11.0s
CN2 L L
comp=Z,200nm,11.0s
CN2 L L
comp=Z,200nm,12.0s
HRA Herat 27.78 287 P **P 06 24 37.3 -0.8**
KSRS Korea Array 28.24 67 P **P 06 24 42.2 +0.3**
comp=Z,0.3nm,0.3s,baz=252,slow=11,SNR=4.3
KSRS LR LR 06 36 53.8
comp=Z,30nm,18.3s,baz=275,slow=38
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 28.87 329 P **P 06 24 47.8 +0.5**
comp=Z,6.4nm,0.8s,baz=130,slow=9.1,SNR=22
BVAR PcP **PcP 06 27 56.8 +0.4**
comp=Z,1.7nm,0.8s,baz=126,slow=3.8,SNR=3.9
comp=Z,6.4nm,0.8s
BORK Borovoye 28.91 329*c i*P **P 06 24 48.1 +0.5**
BORK pmax pmax
comp=Z,21nm,1.0s
BORK Borovoye 28.91 329 P **P 06 24 45.9 -1.7**
GSI Gunungsitoli 28.98 174 P **P 06 24 48.3 -0.3**
BNX BinXian 29.64 50 ⇓P **P 06 24 55.3 +1.1**
BNX pmax pmax
comp=Z,11nm,1.7s
HEH HeiHe 31.45 41 *e*P **P 06 25 11.9 +1.8**
USRK Ussuriysk Ar. 32.34 54 LR LR 06 39 02.9
comp=Z,75nm,18.8s,baz=260,slow=38
AB31 Akbulak array 32.43 316 P **P 06 25 19.2 +0.5**
AB31 IAmb IAmb 06 25 21.2
comp=Z,16nm,1.4s
ABKAR Akbulak array 32.43 316 P **P 06 25 18.6 -0.1**
ZEA Zeya 33.08 36 *e*P **P 06 25 26.6 +2.2**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=Z,100nm,11.0s
MYLDM Lahad Datu 33.49 134 P **P 06 25 29.1 +0.8**
MYLDM IAmb IAmb 06 25 37.8
comp=Z,10nm,0.6s
SVE Sverdlovsk 35.64 328 *e*P **P 06 25 47.5 +1.0**
SVE pmax pmax
comp=Z,39nm,1.4s
MAJO Matsushiro 36.46 68 P **P 06 25 53.6 -0.3**
MJAR Matsushiro Arr 36.46 68 P **P 06 25 54.5 +0.6**
comp=Z,0.6nm,0.3s,baz=275,slow=9.6,SNR=4.6
MJAR LR LR 06 40 36.9
comp=Z,25nm,18.2s,baz=258,slow=36
comp=Z,0.6nm,0.3s
MJAR Matsushiro Arr 36.46 68 P **P 06 25 53.6 -0.2**
ARTI Arti 36.47 326 LR LR 06 41 51.9
comp=Z,32nm,18.1s,baz=23,slow=38
ARTI Arti 36.47 326*d i*P **P 06 25 53.7 +0.1**
ARTI 06 27 18.9
ARTI 06 28 17.3
ARTI S **S 06 31 37.4 +2.4**
ARTI SS **SnSn 06 34 05.2 +1.9**
ARTI pmax pmax
comp=Z,23nm,1.4s
ARTI Arti 36.47 326 P **P 06 25 53.5 -0.1**
ARTI IAmb IAmb 06 25 55.8
comp=Z,42nm,1.5s
LKRN Lenkeran, Azer 38.55 295 P **P 06 26 12.3 +0.9**
YAK Yakutsk 38.94 25*c i*P **P 06 26 15.2 +0.8**
YAK pmax pmax
comp=Z,16nm,0.9s
YAK Yakutsk 38.94 25 P **P 06 26 14.6 +0.2**
NRIK Noril'sk 39.28 356 P **P 06 26 17.6 +0.5**
comp=Z,3.3nm,0.6s,baz=165,slow=6.4,SNR=7.0
comp=Z,3.3nm,0.6s
NRIK Noril'sk 39.28 356 *e*P **P 06 26 16.9 -0.2**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
NRIK Noril'sk 39.28 356 P **P 06 26 16.4 -0.8**
BBJI Bungbulang 39.53 160 P **P 06 26 19.5 -0.4**
BBJI IAmb IAmb 06 27 16.7
comp=Z,52nm,1.5s
SEKA Sheki 39.73 299 P **P 06 26 21.6 +0.2**
YSS Yuzhno-Sakhali 40.25 52 *e*P **P 06 26 24.8 -0.8**
YSS *e*PPP PPP 06 28 29.4
YSS *e*S **S 06 32 29.7 -2.7**
YSS pmax pmax
comp=Z,30nm,1.4s
YSS MLR MLR
comp=Z,100nm,15.0s
YSS Yuzhno-Sakhali 40.25 52 P **P 06 26 24.5 -1.0**
YSS IAmb IAmb 06 26 28.1
comp=Z,60nm,1.4s
YSS Yuzhno-Sakhali 40.25 52 P **P 06 26 25.6 0.0**
GANJ Ganja 40.40 298 P **P 06 26 27.1 +0.2**
TYV Tymovskoe 40.82 46 *e*P **P 06 26 32.0 +1.8**
TYV pmax pmax
comp=Z,100nm,4.4s
TYV pmax pmax
comp=Z,10.0nm,1.0s
BELG Belogornoye 40.82 317⇓*i*P **P 06 26 30.0 -0.2**
BELG pmax pmax
comp=Z,3.0nm,1.1s
LUWI Luwuk 40.99 134 **P 06 26 30.9 -1.0**
JCJ Chichijima 41.40 82 LR LR 06 45 33.6
comp=Z,31nm,19.9s,baz=153,slow=39
GNI Garni 41.62 298⇑*i*P **P 06 26 39.0 +1.8**
GNI pmax pmax
comp=Z,30nm,1.5s
GNI Garni 41.62 298 P **P 06 26 36.0 -1.2**
GNI IAmb IAmb 06 26 42.6
comp=Z,28nm,1.2s
GNI Garni 41.62 298 P **P 06 26 36.1 -1.1**
comp=Z,17nm,1.2s
KIRV Kirov 41.78 326 *e*P **P 06 26 38.0 +0.1**
GOF Gofitskoye 42.84 305*ce*P P 06 26 37.9 -9.0
KBZ Khabaz 42.92 303 P **P 06 26 47.5 0.0**
comp=Z,2.4nm,0.7s,baz=117,slow=11,SNR=3.1
comp=Z,2.4nm,0.7s
GEVA Gevas 43.05 295 P **P 06 26 48.2 -0.7**
KIV Kislovodsk 43.08 303 *e*P **P 06 26 49.9 +1.0**
KIV pmax pmax
comp=Z,20nm,1.1s
KIV Kislovodsk 43.08 303 P **P 06 26 47.9 -1.0**
comp=Z,17nm,1.5s
KIV Kislovodsk 43.08 303 P **P 06 26 50.8 +1.9**
SHA1 Shidzhatmaz 43.10 303⇓*e*P **P 06 26 50.3 +1.1**
VRH Novokhopyorsk 44.21 314⇑*e*P **P 06 26 57.5 -0.2**
VRH pmax pmax
comp=Z,24nm,0.9s
RAYN Ar Rayn 44.25 274 P **P 06 26 58.2 -0.4**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
RAYN Ar Rayn 44.25 274 P **P 06 26 58.2 -0.4**
KOPT Kop Dagi 44.88 298 P **P 06 27 02.0 -1.6**
KOPT IAmb IAmb 06 27 17.2
comp=Z,34nm,1.7s
TIXI Tiksi 45.28 14 *e*P **P 06 27 05.6 -0.4**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 45.28 14 P **P 06 27 04.8 -1.2**
VSR Storozhevoye 45.81 314 *e*P **P 06 27 10.3 -0.2**
VSR pmax pmax
comp=Z,24nm,1.1s
VORR Voronezh 45.82 314 *e*P **P 06 27 10.8 +0.2**
VORR pmax pmax
comp=Z,58nm,0.4s
LPSR Galich'ya Gora 46.09 315 *e*P **P 06 27 12.8 +0.1**
LPSR pmax pmax
comp=Z,34nm,1.1s
ARPR Arapgir-MALATY 46.64 297 P **P 06 27 15.6 -1.8**
ARPR IAmb IAmb 06 27 22.1
comp=Z,19nm,1.2s
ANN Anapa 46.83 305⇓*e*P **P 06 27 19.7 +1.1**
ANN pmax pmax
comp=Z,23nm,0.9s
MA2 Magadan 47.22 35 P **P 06 27 22.2 +0.7**
comp=Z,3.4nm,0.3s,baz=215,slow=7.6,SNR=4.7
MA2 LR LR 06 48 31.1
comp=Z,35nm,19.2s,baz=184,slow=38
comp=Z,3.4nm,0.3s
MA2 Magadan 47.22 35 *e*P **P 06 27 20.6 -0.9**
MA2 pmax pmax
comp=Z,28nm,1.5s
MA2 Magadan 47.22 35 P **P 06 27 20.8 -0.7**
MA2 IAmb IAmb 06 27 23.3
comp=Z,18nm,1.1s
MA2 Magadan 47.22 35 P **P 06 27 20.7 -0.7**
comp=Z,20nm,1.4s
MA2 pP **sP 06 27 30.4 +1.6**
comp=Z,20nm,1.4s
MOS Moscow 47.24 320 *e*P **P 06 27 22.9 +1.3**
MOS *e* 06 28 51.1
MOS *e* 06 29 15.8
MOS *e*S **S 06 34 18.6 +4.4**
MOS pmax pmax
comp=Z,57nm,1.0s
MOS MLR MLR
comp=Z,500nm,21.0s
KLMR Klimovskoe 47.25 327 *e*P **P 06 27 19.1 -2.5**
KLMR *e* 06 29 08.8
KLMR pmax pmax
comp=Z,60nm,1.2s
OBN Obninsk 47.76 319⇓*e*P **P 06 27 26.7 +1.1**
OBN 06 28 56.0
OBN pmax pmax
comp=Z,23nm,1.4s
OBN MLR MLR
comp=Z,21nm,14.0s
BNN Bunyan 48.59 297 P **P 06 27 31.9 -0.6**
BNN IAmb IAmb 06 27 35.6
comp=Z,19nm,1.1s
SEY Seymchan 48.76 31 P **P 06 27 33.8 +0.5**
comp=Z,0.7nm,0.3s,baz=282,slow=10,SNR=5.3
SEY PcP **PcP 06 28 58.7 +0.6**
comp=Z,1.4nm,0.7s,baz=354,slow=4.6,SNR=3.7
comp=Z,0.7nm,0.3s
SEY Seymchan 48.76 31 *e*P **P 06 27 34.2 +0.9**
SEY pmax pmax
comp=Z,6.0nm,1.5s
SKR Severo-Kuril's 49.29 47 *e*P **P 06 27 32.8 -4.7**
SKR *e* 06 29 26.1
SKR *e*SS **ScS 06 37 33.8 +4.6**
SKR MLR MLR
comp=Z,100nm,17.0s
BZK Bozkurt 49.56 301 P **P 06 27 39.8 0.0**
BZK Bozkurt 49.56 301 P **P 06 27 39.3 -0.4**
comp=Z,45nm,1.2s
MMAI Mount Meron Ar 50.09 289 P **P 06 27 43.9 -0.1**
comp=Z,0.5nm,0.3s,baz=107,slow=7.7,SNR=1.4
comp=Z,0.5nm,0.3s
BR131 Keskin Array S 50.15 298⇓*i*P **P 06 27 44.6 +0.1**
BR131 Keskin Array S 50.15 298 P **P 06 27 43.4 -1.1**
BRTR Keskin Array B 50.15 298 P **P 06 27 44.3 -0.2**
comp=Z,3.1nm,0.8s,baz=77,slow=5.6,SNR=6.8
comp=Z,3.1nm,0.8s
BRTR Keskin Array B 50.15 298 *i* P **P 06 27 46.5 +2.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 50.15 298 P **P 06 27 43.6 -0.9**
BR106 Keskin Array S 50.16 298 P **P 06 27 43.5 -1.1**
comp=Z,5.3nm,0.9s
PEA0B Petropavlovsk- 50.29 44 P **P 06 27 44.0 -1.1**
PETK Petropavlovsk- 50.29 44 P **P 06 27 46.0 +0.8**
comp=Z,1.4nm,0.7s,baz=227,slow=6.1,SNR=4.2
comp=Z,1.4nm,0.7s
PETK Petropavlovsk- 50.29 44 P **P 06 27 46.0 +0.8**
PETK Petropavlovsk- 50.29 44 P **P 06 27 43.7 -1.5**
GHAJ Ghor Haditha 50.38 287 P **P 06 27 45.5 -0.6**
CY604 RAF Akrotiri, 50.50 291 P **P 06 27 45.7 -1.0**
CY604 IAmb IAmb 06 29 38.0
comp=Z,24nm,1.3s
PET Petropavlovsk 50.87 44 P **P 06 27 47.4 -2.1**
LVZ Lovozero 51.12 335 P **P 06 27 49.9 -1.4**
LVZ IAmb IAmb 06 27 52.4
comp=Z,29nm,1.8s
APA Apatity 51.50 334⇓*e*P **P 06 27 56.6 +2.6**
APA *e* 06 29 55.6
APA pmax pmax
comp=Z,3.0nm,1.3s
MDUB Mudurnu 51.87 300 P **P 06 27 56.8 -0.6**
MDUB PcP **PcP 06 29 08.4 -1.7**
AK09 Malin Array Si 52.05 313 P **P 06 27 57.3 -1.1**
AK10 Malin Array Si 52.07 313 P **P 06 27 57.7 -0.8**
AKASG Malin Array Be 52.08 313 P **P 06 27 58.3 -0.4**
comp=Z,4.6nm,0.7s,baz=78,slow=6.8,SNR=18
AKASG LR LR 06 52 09.0
comp=Z,21nm,18.3s,baz=188,slow=38
comp=Z,4.6nm,0.7s
AKASG Malin Array Be 52.08 313 *i* P **P 06 27 58.2 -0.4**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKASG Malin Array Be 52.08 313 P **P 06 27 58.2 -0.4**
AKASG PcP **PcP 06 29 10.3 -0.3**
AKBB Malin Array Si 52.08 313⇑*i*P **P 06 27 58.4 -0.2**
AKBB pmax pmax
comp=Z,19nm,1.0s
AKBB Malin Array Si 52.08 313 P **P 06 27 57.9 -0.7**
AKBB IAmb IAmb 06 28 00.3
comp=Z,17nm,0.9s
AKBB Malin Array Si 52.08 313 P **P 06 27 57.9 -0.7**
KIEV Kiev 52.09 313 P **P 06 27 58.4 -0.3**
KIEV Kiev 52.09 313 P **P 06 27 58.1 -0.6**
KIEV IAmb IAmb 06 28 00.3
comp=Z,14nm,0.9s
KIEV Kiev 52.09 313 P **P 06 27 57.6 -1.1**
comp=Z,69nm,1.1s
KIEV Kiev 52.09 313 P **P 06 27 58.4 -0.3**
MNK Minsk 52.75 318 *i* P **P 06 28 05.1 +1.6**
comp=E,15nm,0.9s
MNK *i* P **P 06 28 05.1 +1.6**
comp=N,18nm,1.0s
MNK *i* P **P 06 28 05.1 +1.6**
comp=Z,18nm,0.9s,baz=88
MNK *i* PP **PP 06 30 01.6 -1.0**
MNK *i* PPP PPP 06 31 01.7
MNK *i* S **S 06 35 33.8 +2.7**
MNK *i* SS **SS 06 39 13.3 +3.9**
MNK *i* SSS SSS 06 40 40.2
MNK *i* LQ LQ 06 46 40.7
MNK *i* LR LR 06 49 10.3
MNK Minsk 52.75 318 *i* P **P 06 28 05.1 +1.6**
MNK *i* 06 30 01.5
MNK *i* S **S 06 35 33.8 +2.7**
MNK *i* SS **SS 06 39 13.3 +3.9**
MNK pmax pmax
comp=E,15nm,0.9s
MNK pmax pmax
comp=N,18nm,1.0s
MNK pmax pmax
comp=Z,18nm,0.9s
MI28 Mi28,Pidlybu 53.05 313 P **P 06 28 04.1 -1.7**
TIRR Tirgusor 53.27 305 P **P 06 28 07.0 -0.5**
VSU Vasula 53.36 323 P **P 06 28 06.9 -1.1**
VSU Vasula 53.36 323 P **P 06 28 06.9 -1.1**
ELL Elmali 53.61 295 P **P 06 28 09.4 -1.0**
FIA1 FINESS Array S 53.77 326 P **P 06 28 10.8 -0.1**
FINES FINESS Array B 53.77 326 P **P 06 28 10.9 -0.1**
comp=Z,3.4nm,1.0s,baz=87,slow=6.7,SNR=10
comp=Z,3.4nm,1.0s
FINES FINESS Array B 53.77 326 P **P 06 28 10.7 -0.2**
KMPD K-Podol'skiy 54.06 310 P **P 06 28 11.5 -1.7**
RNPP5 Staryi Chortor 54.15 314 P **P 06 28 12.9 -0.9**
VRI Vrincioaia 54.24 307 P **P 06 28 15.6 +1.0**
VRI Vrincioaia 54.24 307 P **P 06 28 15.6 +1.0**
BALB Balikesir 54.53 299 P **P 06 28 16.4 -0.4**
ARCES ARCESS Array B 54.72 336 P **P 06 28 16.4 -1.4**
comp=Z,2.6nm,0.9s,baz=101,slow=6.7,SNR=4.2
ARCES PcP **PcP 06 29 20.5 +0.2**
comp=Z,1.7nm,0.8s,baz=80,slow=2.1,SNR=2.8
ARCES LR LR 06 54 05.0
comp=Z,38nm,18.3s,baz=170,slow=39
comp=Z,2.6nm,0.9s
MLR Muntele Rosu 54.84 307 P **P 06 28 19.5 +0.4**
MLR pmax pmax
comp=Z,44nm,1.3s
MLR Muntele Rosu 54.84 307 P **P 06 28 17.9 -1.2**
MLR Muntele Rosu 54.84 307 P **P 06 28 20.3 +1.1**
PABE Paberze 54.96 319 P **P 06 28 19.0 -0.6**
BURAR Bucovina Array 55.01 309 P **P 06 28 20.2 -0.1**
BURAR pmax pmax
comp=Z,3.0nm,0.9s
BURAR Bucovina Array 55.01 309 P **P 06 28 19.2 -1.1**
BUR08 Bucovina Ar. S 55.02 309 P **P 06 28 19.9 -0.4**
BILL Bilibino 55.30 26 P **P 06 28 22.6 +0.6**
BILL Bilibino 55.30 26 P **P 06 28 21.7 -0.3**
BILL IAmb IAmb 06 28 33.7
comp=Z,12nm,1.1s
SUW Suwalki 55.53 317 P **P 06 28 22.6 -1.2**
RDO Rodhopi 55.95 301 P **P 06 28 27.0 -0.1**
RDO IAmb IAmb 06 28 29.3
comp=Z,16nm,1.4s
RDO PcP **PcP 06 29 24.9 -0.6**
KARP Karpathos 56.06 295 P **P 06 28 26.4 -1.5**
MBWA Marble Bar 56.50 152 P **P 06 28 31.4 +0.4**
FITZ Fitzroy Crossi 56.53 144 P **P 06 28 30.0 -1.3**
comp=Z,2.8nm,0.9s,baz=297,slow=6.8,SNR=3.0
comp=Z,2.8nm,0.9s
FITZ Fitzroy Crossi 56.53 144 P **P 06 28 30.5 -0.8**
TRPA Tarpa 56.71 310 P **P 06 28 33.5 +1.1**
KNT Kendrikon 57.89 302 P **P 06 28 41.1 +0.3**
KECS Kecovo 57.99 311 *e*P **P 06 28 43.0 +1.6**
KECS Kecovo 57.99 311 *e*P **P 06 28 43.0 +1.6**
OJC Ojcow 58.12 313 P **P 06 28 41.0 -1.3**
OJC Ojcow 58.12 313 P **P 06 28 41.5 -0.8**
OJC Ojcow 58.12 313 P **P 06 28 43.3 +1.1**
SPB2 Spitsbergen Ar 58.18 346 P **P 06 28 41.0 -1.3**
SPB2 IAmb IAmb 06 30 38.1
comp=Z,23nm,1.4s
GRG Griva 58.30 302 P **P 06 28 42.6 -1.2**
PSZ Piszkesteto 58.49 310 P **P 06 28 44.0 -1.0**
PSZ pmax pmax
comp=Z,7.0nm,1.1s
PSZ Piszkesteto 58.49 310 P **P 06 28 44.0 -1.0**
IMMV Iera Moni Meta 58.58 295 P **P 06 28 45.6 -0.1**
AGG Agios Georgios 58.85 300 P **P 06 28 46.3 -1.3**
MORC Moravsky Berou 59.63 313 P **P 06 28 51.9 -1.0**
MORC pmax pmax
comp=Z,14nm,1.5s
MORC Moravsky Berou 59.63 313 P **P 06 28 51.9 -1.0**
MORC IAmb IAmb 06 28 55.5
comp=Z,14nm,1.5s
MORC Moravsky Berou 59.63 313 *e*P **P 06 28 52.7 -0.1**
ITM Ithomi 59.67 298 P **P 06 28 52.6 -0.7**
MORH Mrgy, Hungar 59.70 309 P **P 06 28 53.2 0.0**
JAVC Velka Javorina 59.74 312 *e*P **P 06 28 53.8 +0.1**
JAVC Velka Javorina 59.74 312 P **P 06 28 55.5 +1.8**
HFS Hagfors 59.91 325 P **P 06 28 55.0 +0.5**
comp=Z,7.7nm,1.0s,baz=103,slow=6.5,SNR=5.4
comp=Z,7.7nm,1.0s
SMOL Smolenice 59.98 311 *e*P **P 06 28 57.1 +1.9**
MODS Modra-Piesok 60.11 311 *e*P **P 06 28 56.7 +0.6**
MODS Modra-Piesok 60.11 311 *e*P **P 06 28 56.7 +0.6**
VRAC Vranov 60.34 312 P **P 06 28 59.5 +1.8**
VRAC Vranov 60.34 312 *e*P **P 06 28 58.3 +0.6**
VRAC Vranov 60.34 312 P **P 06 28 59.5 +1.8**
KRUC Moravsky 60.52 312 P **P 06 28 59.5 +0.6**
KRUC Moravsky 60.52 312 *e*P **P 06 28 59.5 +0.6**
KRUC Moravsky 60.52 312 P **P 06 28 59.5 +0.6**
KEK Kerkira 60.55 301 P **P 06 28 58.2 -1.0**
NC405 NORSAR Array S 60.70 326 P **P 06 28 59.2 -0.7**
NC602 NORSAR Array S 60.86 326 P **P 06 29 00.2 -0.8**
RONA Rosalia, Austr 60.91 311 *e*pP **P 06 29 02.3 +0.7**
comp=Z,7.5nm,1.1s
NB201 NORSAR Array S 60.92 326 P **P 06 29 00.9 -0.5**
NB201 IAmb IAmb 06 29 02.7
comp=Z,18nm,1.1s
NB2 NORSAR Subarra 60.96 326 P **P 06 29 00.9 -0.8**
comp=Z,11nm,1.0s,baz=80,slow=6.9
NOA NORSAR Array B 60.96 326 P **P 06 29 01.6 -0.1**
comp=Z,4.4nm,0.8s,baz=79,slow=6.8,SNR=5.0
comp=Z,4.4nm,0.8s
BLY Banja Luka 61.06 307 P **P 06 29 02.6 0.0**
BLY IAmb IAmb 06 31 05.4
comp=Z,5.6nm,0.4s
NC204 NORSAR Array S 61.13 327 P **P 06 29 01.6 -1.3**
NC204 IAmb IAmb 06 29 04.3
comp=Z,8.3nm,0.8s
CONA Conrad Observa 61.13 311 *i* pP **P 06 29 03.6 +0.4**
comp=Z,12nm,0.9s,SNR=8.4
NAO01 NORSAR Array S 61.15 326 P **P 06 29 02.1 -0.9**
PRU Pruhonice 61.47 314 P **P 06 29 05.8 +0.4**
PRU Pruhonice 61.47 314 P **P 06 29 05.8 +0.4**
ARSA Arzberg 61.53 310 P **P 06 29 05.2 -0.6**
ARSA Arzberg 61.53 310 *e*pP **P 06 29 06.3 +0.5**
comp=Z,6.8nm,1.2s
BRG Berggiesshubel 61.63 315 *e*P **P 06 29 08.0 +1.6**
BRG Amp 06 29 09.0
comp=Z,3.7nm,0.8s
PERS Pernice 61.96 310 *i* P **P 06 29 08.7 0.0**
CLL Collm 62.10 315 *e*P **P 06 29 08.0 -1.5**
CLL Collm 62.10 315 *e*P **P 06 29 08.0 -1.5**
MOA Molln 62.19 311 *e*pP **P 06 29 10.7 +0.5**
comp=Z,5.6nm,0.8s
GEC2 GERESS Array S 62.29 312 P **P 06 29 10.8 -0.2**
GEC2 IAmb IAmb 06 29 13.1
comp=Z,8.0nm,1.1s
GERES GERESS Array B 62.29 312 P **P 06 29 11.5 +0.5**
comp=Z,2.0nm,0.7s,baz=75,slow=4.9,SNR=18
comp=Z,2.0nm,0.7s
GERES GERESS Array B 62.29 312 P **P 06 29 10.3 -0.7**
KHC Kasperske Hory 62.30 313 P **P 06 29 11.3 +0.3**
KHC pmax pmax
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 62.30 313 P **P 06 29 11.3 +0.3**
OBKA Obir 62.37 310 *e*pP **P 06 29 12.9 +1.3**
comp=Z,5.2nm,1.1s
CEY Cerknica 62.66 309 *i* P **P 06 29 13.5 0.0**
WB0 Warramunga Arr 62.67 138 P **P 06 29 13.8 +0.2**
WB0 IAmb IAmb 06 29 17.1
comp=Z,7.2nm,1.0s
WRA Warramunga Arr 62.77 138 P **P 06 29 14.1 -0.3**
comp=Z,2.0nm,0.8s,baz=323,slow=7.5,SNR=19
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 62.77 138 P **P 06 29 13.2 -1.2**
WR8 Warramunga Arr 62.88 138 P **P 06 29 15.2 +0.1**
WR8 IAmb IAmb 06 29 20.3
comp=Z,18nm,1.6s
KBA Koelnbreinsper 63.01 311 *e*P **P 06 29 16.0 +0.1**
comp=Z,4.9nm,1.1s
TRI Trieste 63.12 309 P **P 06 29 16.1 -0.3**
TRI pmax pmax
comp=Z,11nm,1.0s
TRI Trieste 63.12 309 P **P 06 29 16.1 -0.3**
TRI IAmb IAmb 06 29 18.0
comp=Z,11nm,1.0s
SABO M.te Sabotino 63.15 309 P **P 06 29 15.9 -0.8**
SABO IAmb IAmb 06 29 17.6
comp=Z,16nm,1.4s
LESA Schwarzleotal 63.34 311 *i* pP **P 06 29 18.6 +0.6**
comp=Z,16nm,1.2s,SNR=7.4
AMKA Amchitka 63.64 44 P **P 06 29 19.8 +0.1**
STAL STALIGIAL 63.66 310 P **P 06 29 18.8 -1.3**
STAL IAmb IAmb 06 29 21.3
comp=Z,6.8nm,0.9s
CEL Celeste 63.89 301 P **P 06 29 21.5 -0.3**
WTTA Wattenberg 64.07 311 *e*pP **P 06 29 23.5 +0.6**

comp=Z,8.7nm,1.0s
WATA Walderalm 64.08 311 *e*P P 06 29 23.1 +0.1
comp=Z,5.0nm,0.7s
INTR Introdacqua 64.13 305 P P 06 29 21.8 -1.5
INTR IAmb IAmb 06 29 28.0
comp=Z,16nm,1.2s
SQTA Sankt Quirin 64.36 311 *e*P P 06 29 24.4 -0.3
comp=Z,2.5nm,0.5s
FDMO Fiordimonte 64.39 306 P P 06 29 23.6 -1.3
CTI Castel Tesino 64.42 310 P P 06 29 24.3 -0.9
NRCA Norcia 64.43 306 P P 06 29 24.0 -1.3
NRCA IAmb IAmb 06 29 26.8
comp=Z,7.3nm,1.0s
RETA Reutte 64.57 312 *e*pP P 06 29 27.0 +0.9
comp=Z,8.8nm,1.1s
GAMB Gambell 64.71 29 P P 06 29 26.4 -0.2
baz=288
FETA Feichten 64.73 311 *e*P P 06 29 27.4 +0.1
comp=Z,9.1nm,1.0s
CESX Cesi 64.87 306 P P 06 29 28.0 -0.1
CESX IAmb IAmb 06 29 35.3
comp=Z,5.7nm,0.6s
DAVA Damuels 65.20 312 *e*pP P 06 29 31.2 +1.0
comp=Z,5.7nm,1.0s
SALO Salr 65.31 310 P P 06 29 30.7 -0.2
ZCCA Zocca 65.41 308 P P 06 29 31.1 -0.5
AS31 Alice Springs 65.47 141 P P 06 29 31.3 -0.8
ASAR Alice Springs 65.47 141 P P 06 29 32.2 +0.1
comp=Z,2.9nm,0.8s,baz=326,slow=6.7,SNR=27
comp=Z,2.9nm,0.8s
ASAR Alice Springs 65.47 141 P P 06 29 31.8 -0.3
TNA Tin City 65.69 27 P P 06 29 32.9 0.0
baz=290
C16K Lisburne Hills 65.69 24 P P 06 29 32.5 -0.4
baz=291
TUE Stuetta 65.81 311 P 06 29 33.3 -0.9
F14K Arctic Creek 66.34 27 P P 06 29 36.5 -0.6
baz=291
C17K DeLong Mountai 66.37 23 P P 06 29 36.7 -0.5
baz=293
A19K Wainwright 66.37 21 P P 06 29 36.7 -0.5
baz=294
D17K Noatak River 66.70 24 P P 06 29 39.4 0.0
baz=293
F15K North Star Dit 66.90 26 P P 06 29 40.6 -0.1
baz=293
C18K Utukok River 66.97 23 P P 06 29 40.7 -0.5
baz=294
ANM Nome 67.05 28 P P 06 29 41.3 -0.4
baz=292
SENIN Lac Senin/Sane 67.18 311 P 06 29 41.6 -1.4
SENIN IAmb IAmb 06 29 45.1
comp=Z,5.2nm,0.8s
A21K Barrow 67.22 19 P P 06 29 42.4 -0.2
baz=297
C19K Lookout Ridge 67.30 22 P P 06 29 43.3 0.0
baz=296
E17K Hotham Inlet 67.39 24 P P 06 29 43.9 +0.1
baz=294
G15K Niukluk 67.41 27 P P 06 29 44.1 +0.2
baz=293
SPIA Saint Paul Isl 67.59 36 P P 06 29 45.4 +0.2
baz=291
B20K Meade River 67.66 21 P P 06 29 44.5 -0.9
B20K Meade River 67.66 21 P P 06 29 45.2 -0.2
baz=297
E18K Tukpahlearik C 67.69 24 P P 06 29 45.7 0.0
baz=295
A22K Sinclair Lake 67.84 19 P P 06 29 46.8 +0.3
baz=299
F17K Baldwin Pennin 67.87 25 P P 06 29 46.6 -0.2
baz=295
G16K Koyuk River 67.90 26 P P 06 29 47.2 +0.2
baz=295
D19K Kuna River 68.05 22 P P 06 29 48.2 +0.2
baz=297
M11K Mekoryuk 68.32 32 P P 06 29 49.8 +0.1
baz=293
F18K Selawik 68.38 24 P P 06 29 50.0 +0.1
baz=296
K13K Kusilvak Mount 68.39 30 P P 06 29 48.7 -1.4
K13K Kusilvak Mount 68.39 30 P P 06 29 50.6 +0.5
baz=294
D20K Etivluk River 68.44 22 P 06 29 49.1 -1.3
D20K Etivluk River 68.44 22 P P 06 29 50.0 -0.4
baz=298,SNR=9.1
G17K Kiwalik Mounta 68.50 26 P P 06 29 51.2 +0.4
baz=296
J14K Nanvaranak Lak 68.52 29 P P 06 29 51.0 +0.1
baz=295
B22K Teshekpuk Lake 68.62 20 P 06 29 50.6 -0.9
B22K IAmb IAmb 06 29 53.6
comp=Z,14nm,1.1s
B22K Teshekpuk Lake 68.62 20 P P 06 29 51.8 +0.3
baz=300,SNR=6.3
B21K Ikpikpuk River 68.63 21 P P 06 29 50.9 -0.6
B21K IAmb IAmb 06 29 53.9
comp=Z,11nm,1.1s
B21K Ikpikpuk River 68.63 21 P P 06 29 51.7 +0.2
baz=300
E20K Nigu River 68.80 22 P P 06 29 52.9 +0.2
baz=299
C21K Knifeblade Rid 68.81 21 P P 06 29 53.0 +0.4
baz=300
E19K Redstone River 68.83 23 P P 06 29 52.9 +0.1
E19K IAmb IAmb 06 29 55.3
comp=Z,17nm,1.6s
E19K Redstone River 68.83 23 P P 06 29 53.2 +0.4
baz=298
F19K Shaleruckik Mo 68.94 24 P 06 29 53.1 -0.3
F19K IAmb IAmb 06 29 55.6
comp=Z,17nm,1.4s
F19K Shaleruckik Mo 68.94 24 P P 06 29 53.3 -0.1
baz=298,SNR=6.0
H17K Granite Mounta 69.03 26 P 06 29 53.7 -0.4
H17K Granite Mounta 69.03 26 P P 06 29 54.0 -0.1
baz=297,SNR=5.1
G18K Tagagawik 69.06 25 P P 06 29 54.3 0.0
baz=298
E21K Killik River 69.42 22 P P 06 29 56.0 -0.5
E21K IAmb IAmb 06 29 59.0
comp=Z,14nm,1.1s
E21K Killik River 69.42 22 P P 06 29 56.6 0.0
baz=301
L14K Kuka Creek 69.49 30 P 06 29 57.4 +0.4
L14K IAmb IAmb 06 30 00.3
comp=Z,14nm,1.3s
L14K Kuka Creek 69.49 30 P P 06 29 57.2 +0.2
baz=296
J16K Anvik River 69.50 28 P P 06 29 56.5 -0.5
J16K Anvik River 69.50 28 P P 06 29 57.3 +0.3
baz=297
G19K Purcell Mounta 69.51 24 P P 06 29 57.3 +0.3
baz=299,SNR=5.0
H18K Honhosa River 69.51 26 P P 06 29 56.7 -0.4
baz=298
F20K Avaraart Lake 69.54 23 P P 06 29 56.8 -0.4
baz=300
K15K Wolf Creek Mou 69.56 29 P P 06 29 57.3 -0.2
baz=296
M13K Dall Lake 69.60 31 P P 06 29 57.5 -0.1
M13K Dall Lake 69.60 31 P P 06 29 57.3 -0.3
baz=296
KEST Kesra 69.69 300 P P 06 29 58.9 +0.1
comp=Z,6.6nm,1.1s,baz=83,slow=3.4,SNR=8.5
comp=Z,6.6nm,1.1s
KEST Kesra 69.69 300 P 06 29 57.6 -1.2
KEST IAmb IAmb 06 30 01.3
comp=Z,20nm,1.4s
C23K Itkillik River 69.70 20 P 06 29 57.5 -0.6
C23K Itkillik River 69.70 20 P P 06 29 57.5 -0.6
baz=303,SNR=12
CLF Chambon-Foret 69.75 314 P P 06 29 57.3 -1.5
L15K Ungalak Mounta 69.86 30 P P 06 29 58.9 -0.3
baz=297
EKA Eskdalemuir Ar 69.92 323 P P 06 30 00.1 +0.4
comp=Z,1.4nm,0.7s,baz=80,slow=4.6,SNR=6.9
comp=Z,1.4nm,0.7s
H19K Roundabout Mou 70.04 25 P P 06 30 00.2 -0.1
H19K Roundabout Mou 70.04 25 P P 06 29 59.8 -0.4
baz=300,SNR=11
J17K VABM Dome 70.06 27 P P 06 30 00.2 -0.3
J17K IAmb IAmb 06 30 03.3
comp=Z,21nm,1.4s
J17K VABM Dome 70.06 27 P P 06 29 60.0 -0.5
baz=298
M14K Bethel 70.07 31 P P 06 30 00.9 +0.4
M14K IAmb IAmb 06 30 03.1
comp=Z,18nm,1.2s
M14K Bethel 70.07 31 P P 06 29 59.9 -0.6
baz=297
D23K Nanushuk River 70.16 20 P P 06 30 00.4 -0.7
baz=303,SNR=10
F21K Alatna River 70.21 23 P P 06 30 01.0 -0.3
baz=301
E22K Anaktuvuk Pass 70.27 21 P P 06 30 01.0 -0.7
baz=303
CTAO Charters Tower 70.39 129 P P 06 30 03.3 +0.2
F22K John River 70.49 22 P P 06 30 02.5 -0.5
baz=302
N14K Kuskokwak Cree 70.56 31 P P 06 30 03.4 -0.1
baz=297
G21K Allakaket 70.57 23 IAmb IAmb 06 30 05.8
comp=Z,9.4nm,1.3s
G21K Allakaket 70.57 23 P P 06 30 03.0 -0.6
baz=302,SNR=5.2
D24K Happy Valley 70.61 20 P P 06 30 03.5 -0.3
baz=305
H20K Anotleneega Mo 70.62 25 P P 06 30 03.6 -0.3
baz=301
M15K Kasigluk River 70.65 30 P P 06 30 04.2 +0.1
baz=298,SNR=5.2
TOLK Toolik Lake Re 70.68 20 P P 06 30 03.9 -0.4
baz=304,SNR=6.4
L16K Owhat River 70.69 29 IAmb IAmb 06 30 07.8
comp=Z,22nm,1.6s
L16K Owhat River 70.69 29 P P 06 30 04.3 -0.1
baz=298,SNR=5.3
K17K Iditarod 70.70 28 P P 06 30 04.2 -0.2
baz=299,SNR=11
IMAR Indian Mountai 70.77 24 P P 06 30 03.2 -1.6
UNV Unalaska Valle 70.86 38 P P 06 30 05.2 -0.3
baz=295
J18K Innoko River 70.96 27 P P 06 30 05.3 -0.7
J18K IAmb IAmb 06 30 08.5
comp=Z,15nm,1.2s
J18K Innoko River 70.96 27 P P 06 30 05.6 -0.4
baz=300,SNR=8.1
L17K Donlin 70.98 28 P P 06 30 05.8 -0.3
baz=299
E23K Chandalar 71.00 21 P P 06 30 05.5 -0.8
baz=304
G22K Bettles 71.03 22 P P 06 30 06.1 -0.2
baz=303
O14K Tigyukauivet M 71.06 32 P P 06 30 06.1 -0.5
baz=298
J19K Poorman 71.11 26 P P 06 30 06.9 0.0
J19K IAmb IAmb 06 30 10.5
comp=Z,12nm,1.2s
J19K Poorman 71.11 26 P P 06 30 06.6 -0.3
baz=301,SNR=13
I20K Naaghedeneel 71.13 25 P P 06 30 06.2 -0.7
baz=301
N15K Kwethluk River 71.16 31 IAmb IAmb 06 30 10.6
comp=Z,9.2nm,1.1s
N15K Kwethluk River 71.16 31 P P 06 30 06.2 -1.0
baz=298
D25K Kavik River 71.22 19 P P 06 30 06.5 -1.1
baz=307
M16K Timber Creek 71.24 30 IAmb IAmb 06 30 11.3
comp=Z,15nm,1.3s
M16K Timber Creek 71.24 30 P P 06 30 07.2 -0.5
baz=299
C26K Camden Bay 71.26 18 P P 06 30 06.8 -0.9
baz=308
H21K Melozitna Rive 71.27 24 IAmb IAmb 06 30 11.2
comp=Z,10nm,1.2s
H21K Melozitna Rive 71.27 24 P P 06 30 07.1 -0.8
baz=302,SNR=6.2
COLD Coldfoot 71.28 22 P P 06 30 07.1 -0.8
baz=304
E24K Your Creek 71.33 21 P P 06 30 07.9 -0.4
baz=305
J20K Nowinta River 71.58 26 IAmb IAmb 06 30 12.7
comp=Z,20nm,1.3s
J20K Nowinta River 71.58 26 P P 06 30 09.1 -0.6
baz=302,SNR=8.9
N16K Nishlik Lake 71.59 30 P P 06 30 09.3 -0.6
baz=299
L18K Granite Mounta 71.60 28 P P 06 30 09.3 -0.6
baz=300
G23K Bananza Creek 71.63 22 P P 06 30 09.0 -1.0
baz=304
H22K Ishtalitna Cre 71.64 23 IAmb IAmb 06 30 12.3
comp=Z,9.9nm,1.4s
H22K Ishtalitna Cre 71.64 23 P P 06 30 09.0 -1.0
baz=304,SNR=5.1
M17K Holitna River 71.70 29 IAmb IAmb 06 30 13.8
comp=Z,13nm,1.2s
M17K Holitna River 71.70 29 P P 06 30 09.4 -1.1
baz=300
O15K Ungalikthiuk R 71.75 32 P P 06 30 09.7 -1.1
baz=299
C27K Jago River 71.77 18 P P 06 30 10.3 -0.5
baz=309
I21K Tanana 71.82 24 P P 06 30 10.4 -0.8
baz=303
F24K Squaw Lake 71.85 21 P P 06 30 10.8 -0.6
baz=306
K20K Telida 72.04 26 P P 06 30 12.1 -0.4
baz=302
E25K Arctic Village 72.19 20 IAmb IAmb 06 30 16.2
comp=Z,12nm,1.4s
E25K Arctic Village 72.19 20 P P 06 30 12.5 -0.8
baz=308,SNR=7.9
N17K Nushagak Hills 72.24 30 P P 06 30 13.2 -0.6
baz=300
H23K Yukon River 72.30 23 P P 06 30 13.3 -0.7
baz=305
O16K Kokwok River B 72.32 31 P P 06 30 13.8 -0.4
O16K Kokwok River B 72.32 31 P P 06 30 13.2 -1.0
baz=300
M18K Stony River 72.32 28 P P 06 30 13.3 -0.9
baz=301
MLY Manley 72.34 24 IAmb IAmb 06 30 17.0
comp=Z,8.2nm,1.1s
MLY Manley 72.34 24 P P 06 30 13.8 -0.5
baz=304
L19K White Mountain 72.35 28 IAmb IAmb 06 30 17.5
comp=Z,9.7nm,1.2s
L19K White Mountain 72.35 28 P P 06 30 13.4 -1.0
baz=302,SNR=5.6
CHUM Lake Minchumin 72.41 25 P P 06 30 13.7 -1.0
baz=303
G24K Hadweenzic Riv 72.46 22 P P 06 30 14.2 -0.8
baz=307
F25K Christian Rive 72.49 20 IAmb IAmb 06 30 18.5
comp=Z,13nm,1.2s
F25K Christian Rive 72.49 20 P P 06 30 14.3 -0.9
baz=308,SNR=8.9
CEST Esterri de Car 72.62 309 P P 06 30 15.0 -1.5
CEST IAmb IAmb 06 30 18.7
comp=Z,9.5nm,1.2s
O17K Koliganek Bris 72.67 30 P P 06 30 15.3 -0.9
baz=301
M19K Big River Lodg 72.69 28 P P 06 30 15.3 -1.1
baz=302
N18K Kilae Creek 72.72 29 IAmb IAmb 06 30 19.4
comp=Z,17nm,1.3s
N18K Kilae Creek 72.72 29 P P 06 30 15.7 -0.9
baz=301
I23K Minto, Yukon-K 72.75 23 P P 06 30 15.9 -0.7
baz=306
CAST Castle Rocks 72.76 26 P P 06 30 15.9 -0.9
baz=304
D27M Malcolm River 72.76 18 P P 06 30 15.6 -1.2
baz=312
H24K Noodor Dome 72.85 23 P P 06 30 16.6 -0.8
baz=307
G25K Bearman Lake 72.86 21 P P 06 30 16.6 -0.7
baz=308
F26K Sheenjek River 72.87 20 P P 06 30 16.4 -1.0
baz=309
PPLA Purkeypile 73.01 26 P P 06 30 17.3 -1.2
baz=304
NEA2 Nenana 73.18 24 IAmb IAmb 06 30 21.6
comp=Z,9.1nm,1.1s
NEA2 Nenana 73.18 24 P P 06 30 18.3 -1.0
baz=306,SNR=6.0
M20K Styx River 73.20 27 P P 06 30 18.3 -1.3
baz=303
N19K Bonanza Creek 73.23 29 P P 06 30 18.4 -1.4
baz=302
P17K Kvichak River 73.25 31 P P 06 30 18.9 -0.8
baz=301
S14K Fog Glacier 73.29 34 P P 06 30 19.1 -1.1
baz=300
E27K Coleen River 73.29 19 IAmb IAmb 06 30 22.7
comp=Z,12nm,1.2s
E27K Coleen River 73.29 19 P P 06 30 19.3 -0.6
baz=311,SNR=9.6
SDPT Sand Point 73.29 35 P P 06 30 19.2 -0.8
baz=299
TRF Thorofare Moun 73.41 25 P P 06 30 19.7 -1.1
baz=305
Q16K King Salmon 73.42 31 P P 06 30 19.8 -0.9
baz=301
POKR Poker Plat Res 73.43 23 P P 06 30 19.6 -1.2
baz=307
COLA College 73.43 23 P P 06 30 20.9 +0.2
COLA pmax pmax
comp=Z,28nm,1.3s
COLA College 73.43 23 P P 06 30 20.9 +0.2
COLA College 73.43 23 P P 06 30 19.5 -1.2
baz=307
O18K Koktuh Hills 73.44 30 P P 06 30 19.2 -1.6
baz=302
G26K Porcupine Rive 73.46 21 P P 06 30 19.2 -1.6
baz=310
E28M Babbage River 73.58 18 IAmb IAmb 06 30 24.3
comp=Z,12nm,1.1s
E28M Babbage River 73.58 18 P P 06 30 20.1 -1.5
baz=313
O19K Port Alsworth 73.63 29 P P 06 30 20.4 -1.6
baz=303
P18K Big Mountain, 73.68 30 P P 06 30 20.9 -1.4
baz=302
MCK McKinley 73.73 25 P P 06 30 20.8 -1.8
baz=306
L22K Petersville 73.76 26 P P 06 30 21.3 -1.4
baz=305,SNR=8.1
SKT Skwentna 73.78 27 IAmb IAmb 06 30 25.5
comp=Z,24nm,1.4s
SKT Skwentna 73.78 27 P P 06 30 21.9 -0.9
baz=304,SNR=5.9
PRP Porcupine Dome 73.82 22 IAmb IAmb 06 30 25.9
comp=Z,14nm,1.2s
PRP Porcupine Dome 73.82 22 P P 06 30 22.0 -1.2
baz=309,SNR=9.3
ILAR Eielson Array 73.82 23 P P 06 30 22.5 -0.6
comp=Z,3.9nm,1.1s,baz=296,slow=4.9,SNR=26
ILAR PP PP 06 33 07.8 +0.7
comp=Z,0.4nm,0.7s,baz=314,slow=7.4,SNR=4.1
comp=Z,3.9nm,1.1s
ILAR Eielson Array 73.82 23 P P 06 30 22.4 -0.7
CHGN Chignik 73.83 34 P P 06 30 21.9 -1.3
baz=301
RND Reindeer 73.95 25 P P 06 30 23.5 -0.4
RND pmax pmax
comp=Z,30nm,1.8s
RND Reindeer 73.95 25 P P 06 30 23.5 -0.4
RND IAmb IAmb 06 30 55.7
comp=Z,30nm,1.8s
Q17K Contact Creek 73.99 31 P P 06 30 23.0 -1.3
baz=302
CHNA Chernabura Isl 73.99 35 P P 06 30 22.5 -1.6
baz=300
HDA Harding Lake 74.03 23 P P 06 30 23.0 -1.3
baz=308
R17L Mt. Peulik Vol 74.11 32 P P 06 30 23.5 -1.4
baz=302
F28M Old Crow 74.16 19 P P 06 30 25.2 +0.2
F28M IAmb IAmb 06 30 27.7
comp=Z,10nm,1.1s
F28M Old Crow 74.16 19 P P 06 30 23.2 -1.8
baz=313,SNR=8.4
E29M Blow River 74.16 18 IAmb IAmb 06 30 27.7
comp=Z,15nm,1.2s
E29M Blow River 74.16 18 P P 06 30 23.9 -1.1
baz=314,SNR=8.2
Q18K Katmai Hardscr 74.17 31 P P 06 30 24.1 -1.2
baz=303
G27K Doyon Strip 74.19 20 P P 06 30 25.4 +0.2
G27K IAmb IAmb 06 30 28.2
comp=Z,12nm,1.4s
G27K Doyon Strip 74.19 20 P P 06 30 24.3 -0.9
baz=312,SNR=9.9
P19K Oil Pt 74.39 29 P P 06 30 25.6 -0.9
baz=304
O20K Slope Mountain 74.41 29 P P 06 30 25.6 -1.0
baz=304
WAT1 Susitna Watana 74.41 25 P P 06 30 25.5 -1.0
baz=307
J25K Salcha River, 74.44 23 P P 06 30 25.7 -1.0
baz=309
M22K Willow 74.45 27 P P 06 30 26.2 -0.6
baz=306
H27K Steamboat Moun 74.61 20 IAmb IAmb 06 30 30.8
comp=Z,15nm,1.0s
H27K Steamboat Moun 74.61 20 P P 06 30 26.8 -0.9
baz=312,SNR=17
CAPN Captain Cook N 74.62 28 P P 06 30 26.4 -1.3
baz=305
DHY Denali Highway 74.69 25 P P 06 30 27.2 -1.1
baz=308
I26K Coal Creek Min 74.72 22 P P 06 30 27.4 -0.8
baz=311
K24K Donnelly Dome 74.80 24 P P 06 30 28.2 -0.6
baz=309
WAT6 Susitna Watana 74.86 25 P P 06 30 28.2 -1.1
baz=307
PMR Palmer 74.93 26 IAmb IAmb 06 30 32.0
comp=Z,16nm,1.2s
PMR Palmer 74.93 26 P P 06 30 28.7 -0.8
baz=306
RC01 Rabbit Creek A 74.99 27 P P 06 30 29.2 -0.7
baz=306
I27K Kandik River 75.00 21 IAmb IAmb 06 30 33.2
comp=Z,18nm,1.1s
I27K Kandik River 75.00 21 P P 06 30 29.0 -1.0
baz=312,SNR=13
HOM Homer 75.05 29 P P 06 30 29.6 -0.7
baz=305
SML Sawmill 75.11 26 P P 06 30 30.6 0.0
SML pmax pmax
comp=Z,21nm,1.0s
SML Sawmill 75.11 26 P P 06 30 30.6 0.0
SML IAmb IAmb 06 30 32.9
comp=Z,21nm,1.0s
SML Sawmill 75.11 26 P P 06 30 29.9 -0.8
baz=307,SNR=5.1
RIDG Independent Ri 75.17 23 P P 06 30 30.2 -0.8
RIDG IAmb IAmb 06 32 40.8
comp=Z,13nm,1.0s
RIDG Independent Ri 75.17 23 P P 06 30 29.9 -1.0
baz=310
G29M Pine Creek 75.17 19 IAmb IAmb 06 30 33.6
comp=Z,19nm,1.4s
G29M Pine Creek 75.17 19 P P 06 30 30.2 -0.6
baz=315,SNR=7.0
F30M Barrier River 75.28 18 P P 06 30 31.0 -0.4
F30M IAmb IAmb 06 30 34.2
comp=Z,17nm,1.1s
F30M Barrier River 75.28 18 P P 06 30 30.3 -1.1
baz=316,SNR=8.2
KNK Knik Glacier 75.30 26 P P 06 30 30.8 -0.8
baz=307
SCRK Sand Creek 75.31 23 IAmb IAmb 06 30 33.8
comp=Z,11nm,1.1s
SCRK Sand Creek 75.31 23 P P 06 30 31.0 -0.8
baz=310,SNR=8.6
M23K Glacier View 75.34 26 P P 06 30 31.0 -0.9
baz=308
INK Inuvik 75.35 17 P P 06 30 31.6 -0.2
INK pmax pmax
comp=Z,15nm,1.2s
INK Inuvik 75.35 17 P P 06 30 31.6 -0.2
INK IAmb IAmb 06 30 34.7
comp=Z,15nm,1.2s
INK Inuvik 75.35 17 P P 06 30 30.9 -0.9
baz=318,SNR=6.3
O22K Cooper Landing 75.36 28 P P 06 30 31.3 -0.6
baz=306
BRSE Bradley Lake S 75.38 28 P P 06 30 31.2 -0.9
baz=306
CHIR Chirikof Islan 75.42 33 P P 06 30 31.2 -1.2
baz=303
PAX Paxson 75.44 24 P P 06 30 31.5 -1.0
baz=309
SCM Sheep Creek Mo 75.47 26 P P 06 30 31.6 -1.1
baz=308
H29M Whitestone 75.56 20 IAmb IAmb 06 30 35.5
comp=Z,19nm,1.3s

H29M	**Whitestone**	**75.56**	**20**	P		**P**	**06 30 32.1**	**-1.0**
	baz=314,SNR=8.7								
G30M	**tAoh Zraii Nji**	**75.62**	**18**	P		**P**	**06 30 32.2**	**-1.2**
	baz=316,SNR=12								
I28M	**Miner Creek**	**75.63**	**21**	IAmb		IAmb	06 30 36.0		
	comp=Z,13nm,1.2s								
I28M	**Miner Creek**	**75.63**	**21**	P		**P**	**06 30 32.6**	**-1.0**
	baz=313,SNR=7.6								
PWL	**Port Wells**	**75.68**	**27**	P		**P**	**06 30 32.6**	**-1.3**
	baz=307								
SII	**Sitkinak Islan**	**75.69**	**32**	P		**P**	**06 30 33.0**	**-1.0**
	baz=304								
SEW	**Seward**	**75.69**	**28**	P		**P**	**06 30 32.6**	**-1.3**
	baz=307								
KDAK	**Kodiak Island**	**75.72**	**31**	P		**P**	**06 30 33.0**	**-1.1**
	baz=305								
OHAK	**Old Harbor**	**75.72**	**31**	P		**P**	**06 30 32.8**	**-1.3**
	baz=304								
M24K	**Tolsona, Glenn**	**75.73**	**25**	P		**P**	**06 30 32.4**	**-1.8**
	baz=309								
HARP	**HAARP**	**75.91**	**25**	P		**P**	**06 30 33.8**	**-1.4**
	baz=310								
EPYK	**Eagle Plains**	**75.92**	**19**	P		**P**	**06 30 35.0**	**-0.2**
EPYK				IAmb		IAmb	06 30 37.1		
	comp=Z,12nm,1.1s								
EPYK	**Eagle Plains**	**75.92**	**19**	P		**P**	**06 30 33.8**	**-1.3**
	baz=316,SNR=5.3								
STKA	**Stephens Creek**	**76.11**	**140**	P		**P**	**06 30 35.5**	**-1.0**
	comp=Z,4.1nm,1.0s,baz=326,slow=9.8,SNR=6.1								
	comp=Z,4.1nm,1.0s								
STKA	**Stephens Creek**	**76.11**	**140**	⇑*i*P		**P**	**06 30 38.1**	**+1.5**
L26K	**Log Cabin Wild**	**76.14**	**24**	P		**P**	**06 30 35.3**	**-1.2**
	baz=311								
GLI	**Glacier Island**	**76.15**	**26**	P		**P**	**06 30 35.7**	**-0.8**
	baz=308								
G31M	**Satah River**	**76.19**	**18**	IAmb		IAmb	06 30 38.5		
	comp=Z,14nm,1.1s								
G31M	**Satah River**	**76.19**	**18**	P		**P**	**06 30 35.3**	**-1.2**
	baz=318								
KLU	**Klutina**	**76.21**	**26**	P		**P**	**06 30 35.6**	**-1.4**
	baz=309								
P23K	**Montague Islan**	**76.57**	**27**	P		**P**	**06 30 38.0**	**-1.0**
	baz=308								
N25K	**Chitina, Valde**	**76.62**	**25**	P		**P**	**06 30 37.8**	**-1.5**
	baz=308								
C36M	**Paulatuk**	**76.63**	**13**	P		**P**	**06 30 37.8**	**-1.3**
	baz=326								
L27K	**Beaver Creek,**	**76.64**	**23**	IAmb		IAmb	06 30 42.5		
	comp=Z,21nm,1.4s								
L27K	**Beaver Creek,**	**76.64**	**23**	P		**P**	**06 30 38.2**	**-1.2**
	baz=312,SNR=6.0								
BCAR	**Beaver Creek A**	**76.65**	**23**			**P**	**06 30 38.9**	**-0.5**
M26K	**Nabesna, AK**	**76.68**	**24**	IAmb		IAmb	06 30 42.8		
	comp=Z,29nm,1.7s								
M26K	**Nabesna, AK**	**76.68**	**24**	P		**P**	**06 30 38.3**	**-1.2**
	baz=311								
DAWY	**Dawson**	**76.75**	**22**	P		**P**	**06 30 38.7**	**-1.2**
DAWY	**Dawson**	**76.75**	**22**	P		**P**	**06 30 38.5**	**-1.5**
	baz=314								
I30M	**Mount Dempster**	**76.85**	**20**			**P**	**06 30 40.5**	**-0.1**
I30M				IAmb		IAmb	06 30 43.2		
	comp=Z,15nm,1.3s								
I30M	**Mount Dempster**	**76.85**	**20**	P		**P**	**06 30 39.4**	**-1.2**
	baz=316,SNR=14								
EYAK	**Cordova Ski Ar**	**76.87**	**26**	P		**P**	**06 30 39.7**	**-0.9**
	baz=309								
H31M	**Peel River**	**77.00**	**19**	P		**P**	**06 30 40.2**	**-1.1**
	baz=318,SNR=10								
BMRM	**Bremner River**	**77.03**	**26**	P		**P**	**06 30 40.5**	**-1.1**
	baz=310								
M27K	**Edge Creek, AK**	**77.10**	**24**	IAmb		IAmb	06 30 45.4		
	comp=Z,11nm,1.2s								
M27K	**Edge Creek, AK**	**77.10**	**24**	P		**P**	**06 30 40.9**	**-1.2**
	baz=312								
J30M	**Hart River**	**77.33**	**20**	P		**P**	**06 30 41.8**	**-1.5**
	baz=316,SNR=5.5								
MCARA	**McCarthy VSAT**	**77.34**	**25**	P		**P**	**06 30 42.0**	**-1.3**
	baz=312								
Q23K	**Middleton Isla**	**77.35**	**27**	P		**P**	**06 30 42.0**	**-1.3**
	baz=309								
BVCY	**Beaver Creek**	**77.41**	**23**	P		**P**	**06 30 42.4**	**-1.2**
	baz=313								
ESDC	**Sonseca Array**	**77.46**	**309**	P		**P**	**06 30 44.3**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=53,slow=6.4,SNR=10.0								
	comp=Z,2.2nm,1.0s								
ESDC	**Sonseca Array**	**77.46**	**309**	P		**P**	**06 30 44.0**	**-0.5**
K29M	**Barlow Dome**	**77.50**	**21**	P		**P**	**06 30 43.1**	**-1.1**
K29M	**Barlow Dome**	**77.50**	**21**	P		**P**	**06 30 42.9**	**-1.3**
	baz=316,SNR=8.1								
ILULI	**Ilulissat**	**77.67**	**348**	P		**P**	**06 30 43.0**	**-1.9**
ILULI				IAmb		IAmb	06 30 44.2		
	comp=Z,10.0nm,0.9s								
CRQE	**Cirque**	**77.73**	**25**	P		**P**	**06 30 44.3**	**-1.3**
	baz=312								
KAIM	**Kayak Island**	**77.78**	**26**	P		**P**	**06 30 44.5**	**-1.3**
	baz=311								
L29M	**L29M**	**77.83**	**22**	P		**P**	**06 30 44.8**	**-1.3**
	baz=315								
YUK3	**Moose Creek**	**77.98**	**24**	P		**P**	**06 30 45.7**	**-1.4**
	baz=314								
M29M	**Somme Creek**	**78.19**	**22**	P		**P**	**06 30 46.9**	**-1.2**
	baz=315								
LSZ	**Lusaka**	**78.53**	**245**	P		**P**	**06 30 50.3**	**-0.4**
YUK8	**Steele Glacier**	**78.56**	**24**	P		**P**	**06 30 48.8**	**-1.6**
	baz=314								
M30M	**Minto, Yukon**	**78.64**	**22**	P		**P**	**06 30 49.1**	**-1.4**
	baz=316								
BRWY	**Burwash Landin**	**78.76**	**23**	P		**P**	**06 30 49.7**	**-1.5**
	baz=315								
O28M	**Mount Upton**	**78.77**	**24**	P		**P**	**06 30 49.8**	**-1.8**
	baz=314								
YUK4	**Talbot Arm**	**78.91**	**23**	P		**P**	**06 30 50.2**	**-2.0**
	baz=315								
PINM	**Pinnacle**	**79.22**	**25**	P		**P**	**06 30 52.4**	**-1.4**
	baz=314								
YUK6	**Outpost Mounta**	**79.29**	**23**	P		**P**	**06 30 52.7**	**-1.6**
	baz=315								
N30M	**Aishikik Lake**	**79.35**	**23**	P		**P**	**06 30 52.9**	**-1.6**
	baz=316								
HYT	**Haines Junctio**	**79.67**	**23**	P		**P**	**06 30 54.2**	**-2.1**
	baz=316								
M31M	**Drury Creek, Y**	**79.67**	**21**	P		**P**	**06 30 54.6**	**-1.6**
	baz=318								
N31M	**Braeburn, Yuko**	**79.76**	**22**	P		**P**	**06 30 54.7**	**-1.9**
	baz=317								
O30N	**Mendenhall**	**80.19**	**23**	IAmb		IAmb	06 31 02.8		
	comp=Z,13nm,1.2s								
O30N	**Mendenhall**	**80.19**	**23**	P		**P**	**06 30 57.3**	**-1.7**
	baz=317								
MMPY	**Sheldon Lake,**	**80.30**	**20**	IAmb		IAmb	06 31 02.8		
	comp=Z,15nm,1.4s								
MMPY	**Sheldon Lake,**	**80.30**	**20**	P		**P**	**06 30 58.2**	**-1.4**
	baz=321								
P30M	**Million Dollar**	**80.36**	**24**	P		**P**	**06 30 58.9**	**-1.0**
	baz=316								
P29M	**Windy Craggy**	**80.45**	**24**	P		**P**	**06 30 58.8**	**-1.6**
	baz=316								
WHY	**Whitehorse**	**80.67**	**22**	P		**P**	**06 30 60.0**	**-1.7**
	baz=318								
N32M	**Quiet Lake**	**80.88**	**21**	P		**P**	**06 31 01.1**	**-1.6**
	baz=320								
PLBC	**Pleasant Camp**	**81.06**	**24**	P		**P**	**06 31 02.5**	**-1.0**
	baz=317								
SKAG	**Skagway**	**81.41**	**23**	P		**P**	**06 31 04.1**	**-1.3**
	baz=318								
P33M	**Teslin, Yukon**	**81.68**	**22**	P		**P**	**06 31 05.6**	**-1.4**
	baz=320								
P32M	**Atlin**	**81.86**	**23**	P		**P**	**06 31 06.3**	**-1.6**
	baz=319								
WRGLY	**Wrigley**	**81.91**	**16**	P		**P**	**06 31 06.5**	**-1.4**
	baz=327								
S31K	**Pelican**	**82.20**	**25**	P		**P**	**06 31 08.5**	**-1.1**
	baz=317								
R32K	**Eaglecrest**	**82.58**	**24**	P		**P**	**06 31 10.7**	**-1.0**
	baz=319								
Q32M	**Nakina River**	**82.82**	**23**	P		**P**	**06 31 12.1**	**-1.1**
	baz=320								
R33M	**Jennings River**	**82.91**	**22**	P		**P**	**06 31 12.6**	**-0.9**
	baz=321								
S32K	**Killisnoo**	**83.16**	**24**	P		**P**	**06 31 13.7**	**-0.9**
	baz=319								
SIT	**Sitka**	**83.20**	**25**	P		**P**	**06 31 14.2**	**-0.6**
	baz=318								
DLBC	**Dease Lake**	**83.96**	**22**	LR		LR	07 12 14.5		
	comp=Z,42nm,18.1s,baz=249,slow=38								
DLBC	**Dease Lake**	**83.96**	**22**	P		**P**	**06 31 17.7**	**-1.2**
	baz=322								
S34M	**Telegraph Cree**	**84.01**	**23**	P		**P**	**06 31 18.5**	**-0.6**
	baz=321								
YKA	**Yellowknife Ar**	**84.52**	**13**	P		**P**	**06 31 21.5**	**0.0**
	comp=Z,1.3nm,0.9s,baz=340,slow=4.5,SNR=6.1								
	comp=Z,1.3nm,0.9s								
YKA	**Yellowknife Ar**	**84.52**	**13**	*i* P		**P**	**06 31 22.2**	**+0.7**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.9s								
YKA	**Yellowknife Ar**	**84.52**	**13**	P		**P**	**06 31 20.8**	**-0.7**
YKAW1	**Yellowknife Wh**	**84.55**	**13**	P		**P**	**06 31 20.5**	**-1.1**
YKAW1				IAmb		IAmb	06 31 22.9		
	comp=Z,6.2nm,1.1s								
U33K	**Whale Pass**	**84.72**	**25**	P		**P**	**06 31 21.5**	**-1.1**
	baz=320								
WRAK	**Wrangell Islan**	**84.76**	**24**	P		**P**	**06 31 22.0**	**-0.8**
	baz=321								
T35M	**Bob Quinn**	**85.04**	**23**	P		**P**	**06 31 23.2**	**-1.2**
	baz=322								
CRAG	**Craig**	**85.21**	**25**	P		**P**	**06 31 23.9**	**-1.2**
	baz=320								
V35K	**Ketchikan**	**85.87**	**25**	P		**P**	**06 31 27.0**	**-1.4**
	baz=321								
TORD	**Torodi Ar. Bea**	**86.16**	**283**	P		**P**	**06 31 30.2**	**-0.3**
	comp=Z,6.2nm,1.1s,baz=55,slow=3.7,SNR=13								
	comp=Z,6.2nm,1.1s								
TORD	**Torodi Ar. Bea**	**86.16**	**283**	P		**P**	**06 31 29.9**	**-0.7**
TORD				IAmb		IAmb	06 31 32.4		
	comp=Z,14nm,1.6s								
LBTB	**Lobatse**	**86.19**	**238**	P		**P**	**06 31 30.5**	**-0.1**
LBTB				pmax		pmax			
	comp=Z,54nm,1.9s								
LBTB	**Lobatse**	**86.19**	**238**	P		**P**	**06 31 30.5**	**-0.1**
EDM	**Edmonton**	**93.25**	**17**	P		**P**	**06 32 02.0**	**-1.3**
EDM				pmax		pmax			
	comp=Z,10.0nm,1.3s								
EDM	**Edmonton**	**93.25**	**17**	P		**P**	**06 32 02.0**	**-1.3**
FFC	**Flin Flon**	**94.06**	**10**	P		**P**	**06 32 05.0**	**-2.0**
FFC				pmax		pmax			
	comp=Z,20nm,1.9s								
FFC	**Flin Flon**	**94.06**	**10**	P		**P**	**06 32 06.6**	**-0.4**
TXAR	**Lajitas Array**	**118.09**	**18**	PKP		**PKPdf**	**06 37 35.5**	**-0.9**
	comp=Z,0.4nm,1.0s,baz=40,slow=0.9,SNR=3.5								
TXAR				PP		**PP**	**06 38 51.0**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=186,slow=3.8,SNR=4.0								
ROSC	**El Rosal**	**143.53**	**342**	PKPdf		PKPbc	06 38 22.4	+0.3
MACA	**Manacapuru-AM**	**144.43**	**315**	PKPdf		PKPbc	06 38 24.6	+0.2
VAO	**Valinhos**	**145.24**	**273**	PKPbc		**PKPbc**	**06 38 26.1**	**-0.7**
OTAV	**Otavalo**	**148.94**	**347**	PKPdf		**PKPdf**	**06 38 32.3**	**-1.8**

*SJA **21** 06:34:53.3±0.7,33˚.08S×68˚.36W,h170$^{km}_{\pm 4}$,ML3.8, MW3.6*
*NEIC **21** 06:34:55.0±1.5,33˚.16S±0˚.06×68˚.4W±0˚.1,h157$^{km}_{\pm 9}$, mb4.2/11, Error ellipse: s-maj=13.2km s-min=8.5km az=99.0*
*PTWC **21** 06:34:56,33˚.10S×68˚.60W,h144^{km}, Mwp4.5/4*

ISC 21 06:34:54.9±0.7,33˚.09S±0˚.04×68˚.47W±0˚.05,h169$^{km}_{\pm 6}$, n97,σ1°52/125,mb4.3/4,6D,Magnesia Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
AAGR	**Agrelo**	**0.30**	**270**	*e*P		**Pn**	**06 35 17.0**	**-0.8**
AVIZ	**Vizcacheras**	**0.39**	**186**	*e*P		**Pn**	**06 35 17.3**	**-0.8**
ARCO	**CERRO ARCO**	**0.46**	**302**	*e*P		**Pn**	**06 35 17.4**	**-1.0**
ARCO				*e*S		**Sn**	**06 35 36.1**	**-0.4**
ARCO				IAML			06 35 36.6	
	comp=Z,688nm,0.5s							
ACAN	**Cantantal**	**1.35**	**53**	*e*P		**Pn**	**06 35 23.8**	**-0.7**
ACAN				IAML			06 35 47.9	
	comp=Z,794nm,0.3s							
MT08	**Bocatoma Ro**	**1.35**	**254**	*e*P		**Pn**	**06 35 24.9**	**+0.1**
MT08				*e*P			06 35 25.0	
MT08				*e*S		**Sn**	**06 35 54.7**	**+7.0**
MT08	**Bocatoma Ro**	**1.35**	**254**			**Pn**	**06 35 24.9**	**+0.1**
MT08				Sn		**Sn**	**06 35 48.1**	**+0.4**
MT04	**Ro Olivares**	**1.44**	**257**	*e*P		**Pn**	**06 35 25.6**	**0.0**
MT04				*e*S		Sn	06 36 06.5	+17
MT04	**Ro Olivares**	**1.44**	**257**	*e*P		**Pn**	**06 35 25.5**	**0.0**
RTLS	**Leoncito**	**1.46**	**331**	*e*P		**Pn**	**06 35 25.7**	**-0.2**
RTLS				*e*S		**Sn**	**06 35 48.5**	**-1.3**
RTLS				IAML			06 35 49.1	
	comp=Z,1μm,0.2s							
CFA	**Coronel Fontan**	**1.49**	**7**	*e*P		**Pn**	**06 35 25.0**	**-0.9**
CFA				IAML			06 35 48.1	
	comp=Z,712nm,0.5s							
CFA				*e*S		**Sn**	**06 35 48.2**	**-1.6**
ZON	**Zonda**	**1.55**	**353**	*e*P		**Pn**	**06 35 25.7**	**-0.7**
ZON				*e*S		**Sn**	**06 35 49.4**	**-1.4**
ZON				IAML			06 35 49.7	
	comp=Z,518nm,0.5s							
ZON	**Zonda**	**1.55**	**353**			**Pn**	**06 35 25.8**	**-0.7**
ZON				Sn		**Sn**	**06 35 49.1**	**-1.7**
ZON	**Zonda**	**1.55**	**353**	P		**Pn**	**06 35 25.9**	**-0.6**
MT13	**San Alfonso**	**1.66**	**246**	*e*P		**Pn**	**06 35 27.8**	**+0.1**
MT13	**San Alfonso**	**1.66**	**246**			**Pn**	**06 35 27.6**	**0.0**
MT10	**Hacienda Santa**	**1.75**	**263**	⇓*i*P		**Pn**	**06 35 28.6**	**0.0**
MT10				*i* S		**Sn**	**06 35 53.9**	**-0.7**
MT10				IAML			06 36 01.2	
	comp=N,340nm,0.3s							
RTLL	**Cerro Villicun**	**1.75**	**360**	*e*P		**Pn**	**06 35 27.9**	**-0.7**
RTLL				*e*S		**Sn**	**06 35 52.9**	**-1.7**
RTLL				IAML			06 35 53.0	
	comp=Z,688nm,0.8s							
MT16	**CCHEN**	**1.76**	**258**			**Pn**	**06 35 28.6**	**0.0**
VA03	**San Esteban**	**1.78**	**280**	*e*P		**Pn**	**06 35 29.1**	**+0.1**
VA03				*e*S		**Sn**	**06 35 56.3**	**+1.1**
VA03				IAML			06 35 59.8	
	comp=Z,306nm,0.3s							
VA03	**San Esteban**	**1.78**	**280**	⇓*i*P		**Pn**	**06 35 28.9**	**0.0**
VA03				*i* S		**Sn**	**06 35 55.0**	**-0.2**
VA03				IAML			06 36 01.5	
	comp=E,759nm,0.1s							
VA03	**San Esteban**	**1.78**	**280**			**Pn**	**06 35 29.0**	**+0.1**
PEL	**Peldehue**	**1.86**	**268**			**Pn**	**06 35 29.4**	**-0.3**
PEL	**Peldehue**	**1.86**	**268**	P		**Pn**	**06 35 29.5**	**-0.3**
MT05	**Renca**	**1.93**	**260**	*e*P		**Pn**	**06 35 30.3**	**-0.1**
MT05				*e*S		**Sn**	**06 35 59.4**	**+1.4**
MT05	**Renca**	**1.93**	**260**	⇓*i*P		**Pn**	**06 35 30.2**	**-0.3**
MT05				*i* S		**Sn**	**06 35 56.7**	**-1.3**
MT05				IAML			06 35 58.1	
	comp=N,681nm,0.3s							
MT05	**Renca**	**1.93**	**260**			**Pn**	**06 35 30.2**	**-0.3**
BO04	**La Punta**	**2.00**	**243**	⇓*i*P		**Pn**	**06 35 31.0**	**-0.3**
BO04				*i* S		**Sn**	**06 35 59.9**	**+0.4**
BO04				IAML			06 36 02.2	
	comp=N,220nm,0.2s							
BO04	**La Punta**	**2.00**	**243**			**Pn**	**06 35 31.0**	**-0.3**
ROCH	**El Roble**	**2.14**	**272**	*e*P		**Pn**	**06 35 32.2**	**-0.8**
ROCH				*i* S		**Sn**	**06 36 00.7**	**-1.8**
ROCH				IAML			06 36 03.0	
	comp=N,971nm,0.3s							
MT09	**Talagante**	**2.22**	**251**	*e*P		**Pn**	**06 35 32.7**	**-1.1**
MT09				*i* S		**Sn**	**06 36 01.9**	**-2.1**
MT09				IAML			06 36 03.9	
	comp=N,369nm,0.3s							
MT09	**Talagante**	**2.22**	**251**			**Pn**	**06 35 32.7**	**-1.1**
MT02	**Curacav**	**2.25**	**265**	*e*P		**Pn**	**06 35 33.0**	**-1.0**
MT02				*e*S		**Sn**	**06 36 03.5**	**-0.7**
MT02	**Curacav**	**2.25**	**265**	⇓*i*P		**Pn**	**06 35 32.8**	**-1.2**
MT02				*i* S		**Sn**	**06 36 01.5**	**-2.8**
MT02				IAML			06 36 04.7	
	comp=N,142nm,0.2s							
MT02	**Curacav**	**2.25**	**265**			**Pn**	**06 35 32.8**	**-1.2**
CO04	**Los Peladeros**	**2.36**	**295**	*e*P		**Pn**	**06 35 34.8**	**-0.8**
CO04				*i* S		**Sn**	**06 36 05.0**	**-2.1**
CO04				IAML			06 36 07.4	
	comp=N,1μm,0.3s							
CO04	**Los Peladeros**	**2.36**	**295**			**Pn**	**06 35 34.9**	**-0.8**
MRA	**San Martin**	**2.41**	**75**	*e*P		**Pn**	**06 35 31.9**	**-4.0**
MRA				*e*S		Sn	06 35 56.8	-11
MT01	**Popeta**	**2.46**	**251**	*e*P		**Pn**	**06 35 35.1**	**-1.3**
MT01				*e*S		**Sn**	**06 36 06.3**	**-2.3**
MT01	**Popeta**	**2.46**	**251**			**Pn**	**06 35 34.9**	**-1.5**
AVFE	**Valle Fertil**	**2.57**	**20**	*e*P		**Pn**	**06 35 37.0**	**-0.9**
AVFE				*e*S		Sn	06 36 01.3	-10
AVFE				*e*S			06 36 06.8	
AVFE				IAML			06 36 10.4	
	comp=Z,386nm,0.3s							
BO02	**Sierra Bellavi**	**2.57**	**228**	*e*P		**Pn**	**06 35 37.8**	**-0.1**
BO02				*e*S		**Sn**	**06 36 14.9**	**+3.6**
BO02				IAML			06 36 16.2	
	comp=Z,172nm,0.2s							
BO02	**Sierra Bellavi**	**2.57**	**228**	⇓*i*P		**Pn**	**06 35 37.7**	**-0.1**
BO02				*i* S		**Sn**	**06 36 11.0**	**-0.3**
BO02				IAML			06 36 17.6	
	comp=E,295nm,0.1s							
BO02	**Sierra Bellavi**	**2.57**	**228**			**Pn**	**06 35 37.7**	**-0.1**
VA05	**Santo Domingo**	**2.70**	**257**			**Pn**	**06 35 37.5**	**-1.8**
VA05	**Santo Domingo**	**2.70**	**257**	P		**Pn**	**06 35 37.5**	**-1.8**
EDS3	**Malargue**	**2.79**	**196**	*e*P		**Pn**	**06 35 40.7**	**+0.2**
EDS3				*e*S		**Sn**	**06 36 14.0**	**-2.1**
CO02	**Combarbal**	**2.85**	**310**	*e*P		**Pn**	**06 35 41.3**	**-0.1**
CO02				IAML			06 36 20.1	
	comp=Z,349nm,0.2s							
CO02	**Combarbal**	**2.85**	**310**			**Pn**	**06 35 41.3**	**-0.1**
CO02	**Combarbal**	**2.85**	**310**	P		**Pn**	**06 35 41.3**	**-0.1**
CO02				S		**Sn**	**06 36 15.5**	**-1.9**
CO03	**El Pedregal**	**2.93**	**319**			**Pn**	**06 35 42.9**	**+0.6**
BO03	**Pichilemu**	**3.23**	**243**	*e*P		**Pn**	**06 35 43.7**	**-2.1**
BO03				*i* S		**Sn**	**06 36 21.2**	**-4.4**
BO03				IAML			06 36 28.5	
	comp=N,83nm,0.3s							
CO01	**Juntas del Tor**	**3.40**	**335**			**Pn**	**06 35 49.9**	**+1.6**
GO05	**Hualane**	**3.46**	**235**	*e*P		**Pn**	**06 35 46.4**	**-2.3**
GO05				*i* S		**Sn**	**06 36 25.8**	**-4.9**
GO05				IAML			06 36 28.7	
	comp=E,123nm,0.4s							
GO05	**Hualane**	**3.46**	**235**			**Pn**	**06 35 46.4**	**-2.3**
GO05	**Hualane**	**3.46**	**235**	P		**Pn**	**06 35 46.4**	**-2.3**
GO05				S		**Sn**	**06 36 26.6**	**-4.1**
GO04	**Tololo Observa**	**3.52**	**325**			**Pn**	**06 35 49.7**	**0.0**
GO04	**Tololo Observa**	**3.52**	**325**	P		**Pn**	**06 35 49.8**	**0.0**
ML02	**Panimavida**	**3.62**	**222**			**Pn**	**06 35 49.8**	**-0.9**
BI02	**San Fabin de**	**4.25**	**212**			**Pn**	**06 35 58.4**	**-0.5**
BI02	**San Fabin de**	**4.25**	**212**	P		**Pn**	**06 35 58.1**	**-0.8**
LCO	**Las Campanas**	**4.49**	**334**			**Pn**	**06 36 02.9**	**+0.6**
LCO	**Las Campanas**	**4.49**	**334**	P		**Pn**	**06 36 02.7**	**+0.4**
AC05	**El Transito**	**4.51**	**339**			**Pn**	**06 36 03.3**	**+0.8**
AC05	**El Transito**	**4.51**	**339**	P		**Pn**	**06 36 03.4**	**+1.0**
AC05				S		**Sn**	**06 36 53.9**	**-1.3**
AC04	**Llanos de Chal**	**5.36**	**335**	Pn		**Pn**	**06 36 12.8**	**-0.6**
GO03	**Copiapo**	**5.68**	**344**	Pn		**Pn**	**06 36 18.2**	**+0.6**
AC02	**Maricunga**	**6.25**	**355**	Pn		**Pn**	**06 36 26.4**	**+0.7**
AC02	**Maricunga**	**6.25**	**355**	P		**Pn**	**06 36 26.1**	**+0.5**
GO06	**Curarrehue**	**6.92**	**200**	Pn		**Pn**	**06 36 32.9**	**-1.1**
AC01	**Pan de Azucar**	**7.16**	**344**	Pn		**Pn**	**06 36 37.0**	**-0.1**
TRQA	**Tornquist**	**7.25**	**135**	Pn		**Pn**	**06 36 37.1**	**-1.0**
LR05	**Curire**	**7.68**	**201**	Pn		**Pn**	**06 36 41.8**	**-2.0**
PB14	**IPOC Station P**	**8.60**	**348**	Pn		**Pn**	**06 36 56.3**	**-0.1**
VA04	**Juan Fernndez**	**8.69**	**264**	Pn		**Pn**	**06 36 57.5**	**+0.3**
PB05	**IPOC Station P**	**10.31**	**351**	Pn		**Pn**	**06 37 19.0**	**+0.2**
PB06	**IPOC Station P**	**10.39**	**354**	Pn		**Pn**	**06 37 19.1**	**-0.8**
LL07	**Hotel Espejo d**	**10.50**	**201**	Pn		**Pn**	**06 37 20.2**	**-0.8**
PB03	**IPOC Station P**	**11.05**	**354**	Pn		**Pn**	**06 37 28.5**	**-0.1**
PB09	**IPOC Station P**	**11.27**	**356**	Pn		**Pn**	**06 37 30.4**	**-1.0**
PB07	**IPOC Station P**	**11.38**	**353**	Pn		**Pn**	**06 37 31.9**	**-1.0**
PB02	**IPOC Station P**	**11.79**	**353**	Pn		**Pn**	**06 37 38.5**	**+0.5**
PB11	**IPOC Station P**	**13.31**	**355**	Pn		**Pn**	**06 37 58.0**	**+0.4**
PB16	**IPOC Station P**	**14.72**	**356**	Pn		**Pn**	**06 38 15.4**	**-0.2**
ITAB	**Concordia**	**15.28**	**72**	Pn		**Pn**	**06 38 21.6**	**-0.3**
ITAB				IAmb		IAmb	06 38 58.4	
	comp=Z,9.9nm,1.2s							
GO08	**Villa O'Higgin**	**15.67**	**190**	Pn		**Pn**	**06 38 24.4**	**-2.0**
GO08				IAmb		IAmb	06 38 34.4	
	comp=Z,13nm,1.4s							
LPAZ	**La Paz**	**16.73**	**1**	P		**P**	**06 38 39.1**	**-0.5**
AQDB	**Aquidauana**	**16.94**	**45**	P		**Pn**	**06 38 42.6**	**+0.5**
AQDB				IAmb		IAmb	06 38 44.3	
	comp=Z,4.7nm,0.6s							
TRCB	**Terra Rica**	**17.32**	**58**	P		**P**	**06 38 45.6**	**+0.1**
PTLB	**Pontes e Lacer**	**19.49**	**28**	P		**P**	**06 39 10.5**	**+1.5**
MACA	**Manacapuru-AM**	**30.65**	**15**	P		**P**	**06 40 54.3**	**+0.9**
MACA				IAmb		IAmb	06 41 08.2	
	comp=Z,9.4nm,1.3s							
BOAV	**Boa Vista**	**36.08**	**14**	P		**P**	**06 41 41.1**	**+0.7**
BOAV				IAmb		IAmb

PB18 Visviri 1.47 357 Pn 06 50 13.7 +2.4
PB18 Visviri 1.47 357 P Pn 06 50 11.6 +0.3
PB02 IPOC Station P 2.29 192 eP Pn 06 50 21.7 +0.6
PB02 IPOC Station P 2.29 192 Pn 06 50 21.7 +0.6
PB02 IPOC Station P 2.29 192 P Pn 06 50 22.2 +1.1
PB07 IPOC Station P 2.68 190 eP Pn 06 50 27.6 +1.2
PB07 IPOC Station P 2.68 190 Pn 06 50 26.6 +0.2
PB07 IPOC Station P 2.68 190 P Pn 06 50 26.5 +0.2
PB09 IPOC Station P 2.72 177 eP Pn 06 50 28.2 +1.4
PB09 IPOC Station P 2.72 177 Pn 06 50 28.3 +1.4
PB09 IPOC Station P 2.72 177 P Pn 06 50 27.3 +0.5
PB03 IPOC Station P 2.98 186 eP Pn 06 50 31.5 +1.1
PB03 IPOC Station P 2.98 186 Pn 06 50 30.6 +0.2
PB03 IPOC Station P 2.98 186 P Pn 06 50 29.9 -0.4
LPAZ La Paz 3.02 24 P Pn 06 50 34.0 +2.7
comp=N,232nm,0.5s,baz=214,slow=6.7,SNR=2012
LPAZ S Sn 06 51 08.8 +1.7
comp=N,121nm,0.8s,baz=212,slow=9.1,SNR=4.8
LPAZ LR LR 06 51 26.4
comp=N,187nm,18.8s,baz=284,slow=34
LPAZ La Paz 3.02 24 Pn 06 50 34.2 +2.9
LPAZ La Paz 3.02 24 eP Pn 06 50 29.7 -1.6
LPAZ La Paz 3.02 24 P Pn 06 50 34.4 +3.1
PB06 IPOC Station P 3.62 182 eP Pn 06 50 39.5 +0.6
PB06 IPOC Station P 3.62 182 Pn 06 50 39.2 +0.3
PB06 IPOC Station P 3.62 182 P Pn 06 50 38.8 -0.1
PB05 IPOC Station P 3.84 191 eP Pn 06 50 41.6 -0.2
PB05 IPOC Station P 3.84 191 Pn 06 50 41.8 +0.1
PB05 IPOC Station P 3.84 191 P Pn 06 50 42.1 +0.3
AF01 San Pedro de A 4.03 164 eP Pn 06 50 47.6 +3.1
AF01 San Pedro de A 4.03 164 Pn Pn 06 50 45.8 +1.3
PB14 IPOC Station P 5.61 189 Pn 06 51 04.5 -1.3
PB14 IPOC Station P 5.61 189 P Pn 06 51 03.8 -2.0
SALTA 5.87 151 P Pn 06 51 10.4 +0.8
AC01 Pan de Azucar 7.13 189 Pn Pn 06 51 23.5 -2.8
AC02 Maricunga 7.74 178 Pn 06 51 34.3 -0.6
AC02 Maricunga 7.74 178 P Pn 06 51 33.6 -1.2
SIV San Ignacio 8.52 70 P Pn 06 51 44.1 -1.1
comp=N,37nm,0.5s,baz=256,slow=10,SNR=248
SIV S Sn 06 53 19.8 +0.2
comp=N,8.8nm,0.8s,baz=338,slow=19,SNR=1.5
GO03 Copiapo 8.52 185 Pn Pn 06 51 41.0 -4.2
GO03 Copiapo 8.52 185 P Pn 06 51 45.0 -0.1
BBSD Serra de San D 8.57 79 eP Pn 06 51 44.4 -1.4
AC04 Llanos de Chal 9.22 189 Pn Pn 06 51 50.0 -4.7
AC04 Llanos de Chal 9.22 189 P Pn 06 51 54.6 0.0
AC05 El Transito 9.76 185 Pn Pn 06 51 59.3 -2.7
AC05 El Transito 9.76 185 P Pn 06 52 00.3 -1.7
LCO Las Campanas 9.97 187 Pn Pn 06 52 03.6 -1.4
NNA Nana 10.04 313 P Pn 06 52 07.4 +1.5
comp=N,4.7nm,0.4s,baz=138,slow=15,SNR=1.9
NNA S Sn 06 53 58.6 +1.8
comp=N,7.1nm,0.5s,baz=219,slow=14,SNR=1.9
PTLB Pontes e Lacer 10.45 71 Pn 06 52 09.8 -1.5
PTLB Pontes e Lacer 10.45 71 eP Pn 06 52 09.5 -1.9
VILB Vilhena 10.73 57 Pn 06 52 13.9 -1.4
VILB Vilhena 10.73 57 eP Pn 06 52 13.8 -1.5
CO01 Juntas del Tor 10.88 183 Pn Pn 06 52 15.0 -2.4
CO01 Juntas del Tor 10.88 183 P Pn 06 52 16.0 -1.4
COIM Forte Coimbra 10.99 96 eP Pn 06 52 15.5 -3.2
MURT Porto Murtinho 11.36 105 eP Pn 06 52 21.7 -1.9
CZSB Cruzeiro do Su 11.72 344 Pn Pn 06 52 24.7 -3.8
CZSB Cruzeiro do Su 11.72 344 eP Pn 06 52 26.7 -1.8
CO03 El Pedregal 11.78 185 Pn Pn 06 52 25.5 -3.7
CFA Coronel Fontan 12.53 175 P Pn 06 52 41.0 +1.9
comp=N,1.9nm,0.8s,baz=3.1,slow=13,SNR=6.3
CFA S Sn 06 55 00.3 +3.3
comp=N,1.1nm,0.7s,baz=285,slow=20,SNR=1.8
AQDB Aquidauana 12.98 98 Pn 06 52 43.8 -1.2
AQDB Aquidauana 12.98 98 eP Pn 06 52 43.9 -1.2
CO04 Los Peladeros 13.00 186 Pn Pn 06 52 42.5 -3.1
CPUP Villa Florida 13.28 125 P Pn 06 52 49.4 +0.5
comp=N,0.9nm,0.6s,baz=318,slow=14,SNR=4.7
CPUP Villa Florida 13.28 125 eP Pn 06 52 48.1 -0.8
SALV Santo Antonio 13.45 79 eP Pn 06 52 47.0 -4.3
SJPY San Joaquin 13.67 118 eP P 06 52 54.9 -4.3
VA03 San Esteban 13.68 184 Pn Pn 06 52 52.5 -1.7
AMBA Amambai (Brazi 14.00 108 eP P 06 52 59.2 -3.7
MT02 Curacav 14.22 186 Pn Pn 06 53 01.2 +0.1
MT08 Bocatoma Ro 14.33 182 Pn Pn 06 53 01.5 -1.2
MT16 CCHEN 14.34 184 Pn Pn 06 53 01.1 -1.6
VA05 Santo Domingo 14.66 187 Pn Pn 06 53 04.4 -2.4
MT09 Talagante 14.72 185 Pn Pn 06 53 06.2 -1.4
MT01 Popeta 14.83 186 Pn Pn 06 53 08.0 -0.9
CLDB Colider 15.46 60 eP Pn 06 53 14.5 -2.5
BO02 Sierra Bellavi 15.71 184 Pn Pn 06 53 17.3 -2.8
TRCB Terra Rica 16.10 106 Pn P 06 53 25.6 -0.6
TRCB Terra Rica 16.10 106 eP P 06 53 24.8 -1.5
TRCB Terra Rica 16.10 106 P P 06 53 28.0 +1.8
VA04 Juan Fernndez 16.78 208 Pn Pn 06 53 31.2 -1.9
PTGB Pitanga 17.04 112 eP P 06 53 36.8 +0.1
LDASE Londrina, Braz 17.58 107 eP Pn 06 53 43.4 +0.3
BI02 San Fabin de 17.61 185 P P 06 53 40.7 -2.1
ITAB Concordia 17.83 120 P Pn 06 53 45.5 -0.5
ITAB Concordia 17.83 120 eP Pn 06 53 46.7 +0.7
MACA Manacapuru-AM 17.96 29 P Pn 06 53 45.9 -0.9
MACA IAmb IAmb 06 53 46.6
comp=Z,24nm,0.5s
MACA Manacapuru-AM 17.96 29 eP P 06 53 45.9 -0.9
CPSB Cacapava Do Su 18.35 131 Pn 06 53 52.4 +0.1
SNDB Serra Nova Dou 18.81 71 eP P 06 53 52.9 -3.2
FRTB Fartura 18.98 106 eP Pn 06 53 58.3 -1.5
BB19B Bebedouro 19.71 99 eP Pn 06 54 05.3 -3.0
ITTB Itaituba 19.79 44 eP P 06 54 05.8 -1.0
TRQA Tornquist 20.00 163 P Pn 06 54 09.5 -2.0
TRQA IAmb IAmb 06 54 32.6
comp=Z,31nm,1.5s
IPMB Ipameri, GO 20.12 90 eP P 06 54 09.6 -0.8
SLOR San Lorenzo - 20.29 333 P P 06 54 12.2 -0.5
SLOR IAmb IAmb 06 54 17.6
comp=Z,16nm,0.8s
GO06 Curarrehue 20.52 185 P P 06 54 14.8 +0.2
BDFB Brasilia 20.70 84 P Pn 06 54 17.4 -2.5
comp=Z,6.2nm,0.5s,baz=250,slow=9.6,SNR=18
comp=Z,6.2nm,0.5s
BDFB Brasilia 20.70 84 Pn 06 54 18.1 -1.9
RCLB Rio Claro- Sao 20.72 103 eP Pn 06 54 16.6 -3.5
SPB Sao Paulo 20.95 106 P Pn 06 54 19.5 -3.3
VAO Valinhos 21.30 104 P P 06 54 22.7 -0.3
VAO Valinhos 21.30 104 eP P 06 54 22.9 -0.2
CANS Sao Roque de M 21.70 97 eP P 06 54 26.0 -1.4
PMNB Patos De Minas 21.75 92 eP P 06 54 27.0 -0.8
LL05 Los Muermos 22.54 188 P P 06 54 35.0 -0.7
LL05 IAmb IAmb 06 54 49.1
comp=Z,60nm,1.2s
PRPB Parauapebas 22.98 59 eP P 06 54 39.2 -1.2
BOAV Boa Vista 23.05 23 P P 06 54 40.8 -0.3
BOAV Boa Vista 23.05 23 eP P 06 54 40.4 -0.7
BSCB Bom Sucesso 23.21 99 eP P 06 54 43.7 +1.0
SMTB Santa Maria do 23.45 67 eP P 06 54 44.5 -0.3
JANB Januaria 24.31 84 eP P 06 54 52.3 -0.3
DIAM Diamantina, MG 24.38 92 eP P 06 54 53.8 +0.4
SDBA SAO DESIDERIO 24.48 78 eP P 06 54 53.9 -0.3
COYC Coyhaique 26.52 184 P P 06 55 12.1 -0.2
COYC IAmb IAmb 06 55 17.6
comp=Z,30nm,1.5s
GO08 Villa O'Higgin 29.43 184 P P 06 55 38.7 +0.5
JTS Las Juntas de 32.96 331 LR LR 07 11 16.9
comp=Z,29nm,19.5s,baz=143,slow=39
MG02 Cerro Sombrero 33.65 180 P P 06 56 16.0 +1.0
BIM Bigot 34.37 14 P P 06 56 20.3 -1.4
MG03 Isla Dawson 34.73 181 P P 06 56 24.1 -0.2
MG03 IAmb IAmb 06 56 44.7
comp=Z,22nm,1.2s
RCBR Riachuelo 35.17 72 P P 06 56 29.6 +0.8
MLPR Magueyes Islan 36.88 4 P P 06 56 42.2 -0.9
CRPR Cabo Rojo, PR 36.91 4 P P 06 56 42.3 -1.0
CELP Cerrillos 37.02 4 P P 06 56 43.6 -0.7
TEIG Tepich 43.21 334 P P 06 57 36.7 +1.2
TEIG IAmb IAmb 06 57 44.1
comp=Z,25nm,1.5s
CAMR Camarioca 43.47 344 P P 06 57 38.8 +1.3
PMSA Palmer Station 45.82 177 P P 06 57 55.6 0.0
TLG Tlapa 46.33 320 P P 06 57 59.0 -0.6
DWPF Disney Wildern 48.32 346 P P 06 58 16.9 +1.4
656A Willston 49.79 345 P P 06 58 27.9 +1.2
ZAIG Zacatecas 52.71 321 P P 06 58 48.3 -0.8
ZAIG IAmb IAmb 06 58 52.3
comp=Z,5.7nm,1.0s
ZAIG Zacatecas 52.71 321 P P 06 58 47.2 -1.8
GOGA Godfrey 53.88 345 P P 06 58 57.4 +0.4

GOGA IAmb IAmb 06 59 05.0
comp=Z,5.4nm,1.3s
JSC Jenkinsville 54.24 348 P P 06 59 00.5 +0.9
JSC IAmb IAmb 06 59 00.9
comp=Z,7.5nm,1.0s
HODGE Hodges 54.40 347 P P 06 59 01.1 +0.4
LRAL Lakeview Retre 54.47 342 P P 06 59 00.8 -0.5
LRAL IAmb IAmb 06 59 22.0
comp=Z,11nm,1.4s
Y49A Blount Mountai 55.07 343 P P 06 59 05.6 -0.1
Y49A IAmb IAmb 06 59 27.4
comp=Z,6.2nm,1.3s
KMSC Kings Mountain 55.09 348 P P 06 59 06.9 +1.2
KMSC IAmb IAmb 06 59 07.2
comp=Z,7.9nm,0.8s
833A Chaparral WMA, 55.33 328 P P 06 59 08.8 +1.3
833A IAmb IAmb 06 59 09.7
comp=Z,12nm,0.9s
V55A Taylorsville 55.75 348 P P 06 59 11.8 +1.3
V55A IAmb IAmb 06 59 12.2
comp=Z,10nm,0.8s
X48A Hartselle 55.81 342 P P 06 59 11.7 +0.8
X48A IAmb IAmb 06 59 37.4
comp=Z,3.2nm,0.7s
V53A Saluda 55.90 347 P P 06 59 12.2 +0.6
V53A IAmb IAmb 06 59 28.6
comp=Z,7.0nm,1.4s
CPCT Cooper Cave 56.08 345 P P 06 59 13.3 +0.5
CPCT IAmb IAmb 06 59 13.7
comp=Z,3.6nm,0.8s
U56A King 56.08 349 P P 06 59 13.8 +0.9
U56A IAmb IAmb 06 59 15.3
comp=Z,10nm,1.1s
TKL Tuckaleechee C 56.11 346 P P 06 59 13.2 +0.1
TKL IAmb IAmb 06 59 13.9
comp=Z,5.1nm,0.8s
SWET Sewanee 56.22 344 P P 06 59 13.5 -0.4
SWET IAmb IAmb 06 59 14.5
comp=Z,5.0nm,0.7s
HNDO Hondo 56.26 329 P 06 59 15.2 +1.0
U54A Nelsons Funny 56.52 348 P P 06 59 16.7 +0.7
U54A IAmb IAmb 06 59 17.4
comp=Z,14nm,1.0s
BLA Blacksburg 56.93 350 P P 06 59 20.0 +1.1
BLA IAmb IAmb 06 59 41.2
comp=Z,7.2nm,1.1s
V48A Smith Brothers 56.95 343 P P 06 59 19.3 +0.3
V48A IAmb IAmb 06 59 19.9
comp=Z,6.0nm,0.9s
CLTN Cedars of Leba 57.15 344 P 06 59 20.4 0.0
CLTN IAmb IAmb 06 59 21.2
comp=Z,3.1nm,0.8s
WVT Waverly 57.60 342 P 06 59 23.3 -0.3
WVT IAmb IAmb 06 59 23.7
comp=Z,4.0nm,0.8s
WVT Waverly 57.60 342 P P 06 59 23.1 -0.5
T50A Nancy 57.66 345 IAmb IAmb 06 59 24.1
comp=Z,3.2nm,0.7s
S54A Dingess, Beckl 57.66 349 P P 06 59 24.8 +0.8
S54A IAmb IAmb 06 59 25.3
comp=Z,8.7nm,0.8s
R55A Marlinton 57.93 350 P P 06 59 26.5 +0.6
R55A IAmb IAmb 06 59 40.1
comp=Z,14nm,1.4s
SAND Sanderson 58.05 326 IAmb IAmb 06 59 28.9
comp=Z,4.3nm,1.0s
SLBS Sierra La Lagu 58.05 315 P P 06 59 25.3 -1.8
MIAR Mount Ida 58.06 337 P 06 59 27.5 +0.7
MIAR IAmb IAmb 06 59 28.2
comp=Z,4.9nm,1.1s
T47A Sharon Grove 58.20 343 P P 06 59 28.0 +0.3
T47A IAmb IAmb 06 59 28.5
comp=Z,9.4nm,0.9s
OZNA Ozona 58.31 328 IAmb IAmb 06 59 30.1
comp=Z,8.6nm,1.3s
TXAR Lajitas Array 58.38 325 P P 06 59 30.0 +0.7
comp=Z,1.2nm,0.8s,baz=147,slow=7.2,SNR=12
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 58.38 325 P P 06 59 30.2 +0.9
TX31 Lajitas Ar. Si 58.38 325 P 06 59 30.3 +1.0
ALPN Alpine 59.18 326 IAmb IAmb 06 59 37.4
comp=Z,4.0nm,1.2s
TMB01 Midkiff 59.39 328 IAmb IAmb 06 59 37.7
comp=Z,5.3nm,0.9s
MNHN Monahans 59.48 327 P P 06 59 37.6 +0.8
MNHN IAmb IAmb 06 59 38.6
comp=Z,8.3nm,0.9s
229A Bryant Ranch, 59.50 328 IAmb IAmb 06 59 38.8
comp=Z,6.0nm,1.0s
TPB01 Permian Basin 59.70 326 IAmb IAmb 06 59 40.3
comp=Z,6.7nm,0.7s
HHAR Hobbs 59.74 337 P 06 59 38.9 +0.4
HHAR IAmb IAmb 06 59 39.6
comp=Z,8.3nm,1.4s
APMT Aspermont 59.79 330 P P 06 59 40.0 +1.1
APMT IAmb IAmb 06 59 40.4
comp=Z,6.5nm,0.7s
X34A Smith Ranch, M 59.83 333 P P 06 59 40.4 +1.3
W35A Tecumseh 59.90 334 P P 06 59 39.9 +0.4
W35A IAmb IAmb 06 59 40.4
comp=Z,10nm,1.2s
SN07 Snyder 07 59.96 330 P P 06 59 40.5 +0.4
SN07 IAmb IAmb 06 59 41.0
comp=Z,6.0nm,0.6s
129A Stewart Farms, 60.06 328 P P 06 59 41.6 +0.8
129A IAmb IAmb 06 59 42.8
comp=Z,9.8nm,1.1s
FVM French Village 60.09 341 P 06 59 41.0 +0.2
TUL3 Leonard 60.12 335 P P 06 59 41.7 +0.7
FNO Franklin 60.21 334 P P 06 59 42.4 +0.7
FNO IAmb IAmb 06 59 42.8
comp=Z,9.3nm,0.9s
TPB13 Reeves - Culbe 60.21 326 P P 06 59 41.9 +0.1
VHRN Van Horn 60.23 325 P 06 59 42.9 +0.9
VHRN IAmb IAmb 06 59 43.4
comp=Z,5.1nm,0.6s
DEOK Depew 60.34 335 P P 06 59 43.2 +0.6
TPB28 60.65 326 IAmb IAmb 06 59 47.3
comp=Z,9.2nm,1.3s
OK029 Liberty Lake 60.69 334 P P 06 59 45.5 +0.5
QUOK Quay 60.71 335 P P 06 59 45.7 +0.6
S39A Bolivar 60.78 338 P P 06 59 45.9 +0.4
S39A IAmb IAmb 06 59 46.5
comp=Z,6.0nm,0.9s
MNTX Cornudas Mount 61.14 325 P 06 59 48.6 +0.5
MNTX IAmb IAmb 06 59 49.2
comp=Z,3.3nm,0.9s
MNTX Cornudas Mount 61.14 325 P P 06 59 48.4 +0.3
T35A Sooner Cattle 61.28 335 IAmb IAmb 06 59 50.4
comp=Z,16nm,1.3s
CROK Carrier 61.52 334 P P 06 59 50.5 -0.1
CROK IAmb IAmb 06 59 51.8
comp=Z,12nm,0.9s
MSTX Muleshoe 61.59 329 P P 06 59 51.5 +0.4
MSTX IAmb IAmb 06 59 53.0
comp=Z,9.1nm,0.9s
AMTX Amarillo 61.80 330 P P 06 59 52.9 +0.3
AMTX IAmb IAmb 06 59 54.5
comp=Z,10nm,1.4s
HDIL Hopedale 62.14 343 P P 06 59 54.0 -0.5
HDIL IAmb IAmb 06 59 54.3
comp=Z,6.8nm,0.5s
P38A Dawn 62.59 339 P P 06 59 57.9 +0.3
P38A IAmb IAmb 06 59 58.4
comp=Z,5.2nm,0.6s
VNA1 Neumayer--Stat 62.72 161 P P 07 00 00.5 +2.5
comp=Z,3.9nm,1.1s
VNA2 Neumayer--Watz 63.09 161 ⇓P P 07 00 02.3 +1.7
comp=Z,3.1nm,0.7s,baz=291,slow=8.1
319A Douglas 63.09 322 IAmb IAmb 07 00 03.9
comp=Z,8.3nm,0.8s
121A Cookes Peak, D 63.10 324 IAmb IAmb 07 00 03.7
comp=Z,3.9nm,0.7s
KSU1 Kansas State U 63.22 337 IAmb IAmb 07 00 02.8
comp=Z,8.3nm,0.8s
ANMO Albuquerque 64.22 327 P P 07 00 09.7 +1.1
comp=Z,1.5nm,0.7s,baz=153,slow=7.4,SNR=9.7
comp=Z,1.5nm,0.7s
ANMO Albuquerque 64.22 327 P 07 00 08.4 -0.3
ANMO Albuquerque 64.22 327 P P 07 00 09.2 +0.5
N35A Tabor 64.42 338 P P 07 00 09.8 +0.2
JFWS Jewell Farm 64.59 343 P P 07 00 10.8 +0.1
JFWS IAmb IAmb 07 00 11.1
comp=Z,6.0nm,0.6s
TUC Tucson 64.65 322 P P 07 00 10.8 -0.5

SNAA Sanae 64.72 161 ⇓P P 07 00 12.9 +1.6
comp=Z,65nm,0.6s
SNAA Sanae 64.72 161 P P 07 00 12.5 +1.2
comp=Z,2.3nm,0.6s,baz=280,slow=5.9,SNR=8.8
SNAA pP pP 07 00 40.4 +1.9
comp=Z,1.9nm,0.8s,baz=303,slow=2.7,SNR=3.4
comp=Z,2.3nm,0.6s
SNAA Sanae 64.72 161 P P 07 00 13.2 +1.9
BUKO Buck Lake 64.84 352 P P 07 00 12.8 +0.5
BUKO IAmb IAmb 07 00 16.9
comp=Z,21nm,1.4s
I42A Draeger Farm, 65.15 345 P P 07 00 14.7 +0.4
I42A IAmb IAmb 07 00 14.8
comp=Z,6.8nm,0.6s
L34A Svendsen Farm, 65.65 338 P P 07 00 18.2 +0.6
BGNE Belgrade 65.81 337 P P 07 00 19.2 +0.6
SDCO Great Sand Dun 65.93 329 P P 07 00 21.2 +1.4
SDCO IAmb IAmb 07 00 22.2
comp=Z,5.3nm,0.9s
TROLL Troll, Antarti 66.43 161 ⇓P P 07 00 24.3 +1.9
comp=Z,122nm,0.5s
I37A Lemond, Waseca 66.51 341 IAmb IAmb 07 00 24.0
comp=Z,11nm,1.0s
ISCO Idaho Springs 67.61 331 P 07 00 31.9 +1.4
ISCO Idaho Springs 67.61 331 P P 07 00 29.6 -0.9
PV01 Paradox Valley 67.75 327 P P 07 00 32.4 +1.1
DBIC Dimbokro 68.51 75 P P 07 00 36.0 -0.3
comp=Z,3.6nm,0.7s,baz=236,slow=3.6,SNR=2.4
DBIC pP pP 07 01 03.4 -0.6
comp=Z,3.5nm,0.6s,baz=218,slow=7.1,SNR=3.1
comp=Z,3.6nm,0.7s
DBIC Dimbokro 68.51 75 P P 07 00 35.7 -0.6
DBIC IAmb IAmb 07 00 56.5
comp=Z,15nm,1.4s
HMU Henry Mountain 68.74 326 P P 07 00 37.5 0.0
BELC Belle Mtn. Jos 68.95 320 P P 07 00 39.0 +0.2
PFO Pinyon Flats O 68.97 319 P P 07 00 40.3 +1.5
comp=Z,5.4nm,1.0s,baz=154,slow=6.2,SNR=4.3
comp=Z,5.4nm,1.0s
PFO Pinyon Flats O 68.97 319 P P 07 00 38.6 -0.3
PFO IAmb IAmb 07 00 42.1
comp=Z,6.2nm,1.0s
F33A 5 Mile Ranch, 69.05 340 P P 07 00 39.0 0.0
O20A White River Ci 69.13 329 P P 07 00 40.0 +0.2
MTPU Mount Pierson 69.58 325 P P 07 00 43.8 +1.0
EYMN Ely 69.59 344 P P 07 00 42.3 +0.1
Q16A Castle Valley 69.69 326 P P 07 00 44.3 +1.1
MTPC Mountain Pass 69.69 321 P P 07 00 44.1 +0.8
QSPA South Pole Qui 71.11 180 P P 07 00 53.7 +2.2
comp=Z,1.9nm,0.4s,baz=131,slow=4.1,SNR=24
comp=Z,1.9nm,0.4s
QSPA South Pole Qui 71.11 180 P P 07 00 52.6 +1.1
QSPA IAmb IAmb 07 00 54.5
comp=Z,7.5nm,1.2s
AGMN Agassiz Nation 71.11 342 P P 07 00 52.0 +0.6
DUG Dugway, Tooele 71.49 326 P P 07 00 54.2 +0.1
EPLO Experimental L 71.76 344 P P 07 00 55.7 +0.4
EPLO IAmb IAmb 07 01 00.4
comp=Z,9.5nm,1.3s
PDAR Pinedale Array 71.78 330 P P 07 00 56.6 +0.7
comp=Z,0.5nm,0.5s,baz=134,slow=7.6,SNR=6.9
PDAR pP pP 07 01 24.6 +1.3
comp=Z,0.5nm,0.6s,baz=108,slow=9.5,SNR=2.6
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 71.78 330 P P 07 00 55.7 -0.2
HWUT Hardware Ranch 71.88 328 P P 07 00 57.3 +0.8
HVU Hansel Valley 72.62 327 P P 07 01 01.1 +0.2
ULM Lac du Bonnet 72.87 343 P P 07 01 02.1 +0.3
comp=Z,2.6nm,0.6s,baz=135,slow=7.0,SNR=8.9
comp=Z,2.6nm,0.6s
ULM Lac du Bonnet 72.87 343 P P 07 01 02.4 +0.5
LOHW Long Hollow 72.92 330 P P 07 01 02.4 -0.3
ELK Elko 73.17 325 P P 07 01 05.2 +0.9
comp=Z,0.8nm,0.7s,baz=152,slow=6.3,SNR=4.9
comp=Z,0.8nm,0.7s
ELK Elko 73.17 325 P P 07 01 04.7 +0.4
LHV Little Huntoon 73.30 322 P P 07 01 06.0 +1.4
NVAR Mina Array Bea 73.30 322 P P 07 01 06.7 +1.6
comp=Z,1.6nm,0.8s,baz=148,slow=6.3,SNR=12
NVAR pP pP 07 01 34.5 +2.2
comp=Z,0.7nm,0.8s,baz=144,slow=8.0,SNR=3.3
comp=Z,1.6nm,0.8s
NVAR Mina Array Bea 73.30 322 P P 07 01 05.8 +0.8
FLWY Flagg Ranch 73.32 330 P P 07 01 05.3 +0.3
FLWY IAmb IAmb 07 01 08.0
comp=Z,6.9nm,0.8s
LAO LASA Array 73.40 335 P P 07 01 05.2 0.0
LAO IAmb IAmb 07 01 07.5
comp=Z,8.6nm,1.3s
RLMT Red Lodge 73.46 332 P P 07 01 05.2 -0.6
RLMT IAmb IAmb 07 01 08.3
comp=Z,4.5nm,0.8s
KVN Kaiserville 73.60 322 P P 07 01 05.6 -1.1
YNE Yellowstone No 73.71 331 P P 07 01 08.9 +1.6
YNE IAmb IAmb 07 01 09.9
comp=Z,13nm,0.7s
YMR Madison River 73.89 330 P P 07 01 10.8 +2.4
YMR IAmb IAmb 07 01 11.8
comp=Z,9.8nm,1.3s
YHB Horse Butte 74.06 330 P P 07 01 10.0 +0.6
YHB IAmb IAmb 07 01 12.5
comp=Z,6.2nm,0.7s
DGMT Dagmar 74.07 337 P P 07 01 10.3 +1.3
DGMT IAmb IAmb 07 01 11.5
comp=Z,9.8nm,0.8s
HLID Hailey 74.75 328 P P 07 01 14.2 +0.9
MCMT McKenzie Canyo 74.90 330 P P 07 01 16.5 +2.3
DLMT Dillon 75.18 330 P P 07 01 17.7 +2.0
AFDM Forest Hills D 75.22 321 P P 07 01 17.0 +1.1
MFID Camas Ranch 75.36 327 P P 07 01 18.5 +1.7
BEKR Beckworth 75.45 322 P P 07 01 18.2 +0.8
SUTB Sutter Butte 75.89 321 P P 07 01 21.5 +1.8
SUTB IAmb IAmb 07 01 23.2
comp=Z,15nm,1.4s
ORV Oroville 75.92 321 P P 07 01 20.9 +1.0
EGMT Eagleton 75.93 333 P 07 01 21.3 +1.5
EGMT IAmb IAmb 07 01 21.8
comp=Z,4.2nm,0.7s
LYMT Lyon Mountain 76.23 331 P P 07 01 22.6 +0.8
TORD Torodi Ar. Bea 76.99 71 P P 07 01 25.7 -0.8
comp=Z,1.5nm,0.4s,baz=253,slow=5.2,SNR=10
TORD pP pP 07 01 53.9 -0.7
comp=Z,3.9nm,0.8s,baz=250,slow=5.6,SNR=7.6
comp=Z,1.5nm,0.4s
TORD Torodi Ar. Bea 76.99 71 P P 07 01 25.9 -0.6
BMO Blue Mountains 77.13 327 P P 07 01 27.7 +1.0
EDM Edmonton 81.37 335 P 07 01 50.0 +0.6
EDM IAmb IAmb 07 01 50.8
comp=Z,17nm,0.8s
ESDC Sonseca Array 84.44 45 P P 07 02 06.8 +1.1
comp=Z,1.2nm,0.9s,baz=249,slow=5.8,SNR=3.0
ESDC pP pP 07 02 35.0 +0.7
comp=Z,1.8nm,0.9s,baz=253,slow=6.3,SNR=4.8
comp=Z,1.2nm,0.9s
ESDC Sonseca Array 84.44 45 P P 07 02 06.0 +0.4
ESDC IAmb IAmb 07 02 12.2
comp=Z,8.1nm,1.5s
YKA Yellowknife Ar 88.75 341 P P 07 02 27.0 +1.0
comp=Z,9.6nm,0.7s,baz=134,slow=4.9,SNR=74
YKA pP pP 07 02 54.5 +0.1
comp=Z,2.6nm,0.8s,baz=138,slow=4.8,SNR=5.0
YKA Yellowknife Ar 88.75 341 P P 07 02 26.5 +0.5
H11S2 WAKE ISLAND Hyl 27.08 279 T T 09 28 12.5
baz=101,slow=74,SNR=54
H11S1 WAKE ISLAND Hyl 27.08 279 T T 09 28 12.2
baz=101,slow=74,SNR=30
H11N3 WAKE ISLAND Hyl 27.09 281 T T 09 28 16.1
baz=100,slow=74,SNR=58
H11S3 WAKE ISLAND Hyl 27.09 279 T T 09 28 12.3
baz=101,slow=74,SNR=47
H11N2 WAKE ISLAND Hyl 27.11 281 T T 09 28 14.9
baz=100,slow=74,SNR=63
H11N1 WAKE ISLAND Hyl 27.11 281 T T 09 28 15.3
baz=100,slow=74,SNR=41
AKTO Aktyubinsk 128.11 40 PKP PKiKP 07 08 39.3 +0.3
comp=Z,1.1nm,0.6s,baz=273,slow=2.2,SNR=2.3
ASAR Alice Springs 131.82 209 PKP PKiKP 07 08 47.1 -0.2
comp=Z,0.9nm,0.6s,baz=137,slow=1.7,SNR=16
BVAR Borovoye Array 134.04 33 PKP PKPdf 07 08 49.4 -0.1
comp=Z,1.0nm,0.6s,baz=245,slow=3.0,SNR=3.8
WRA Warramunga Arr 134.78 212 PKP PKiKP 07 08 53.1 -0.3
comp=Z,1.9nm,0.5s,baz=145,slow=1.7,SNR=14
WRA pPKP pPKPdf 07 09 23.3 +1.7
comp=Z,0.7nm,0.7s,baz=153,slow=2.0,SNR=2.3
ZALV Zalesovo Beam 139.94 24 PKP PKiKP 07 09 01.9 -0.9
comp=Z,1.8nm,0.6s,baz=282,slow=1.4,SNR=8.6

ZALV				pPKP		**pPKPdf**	**07 09 30.8**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=307,slow=3.0,SNR=3.4								
ZALV	**Zalesovo Beam**	**139.94**	**24**			**PKiKP**	**07 09 01.7**	**-1.1**
MKAR	**Makanchi Array**	**143.91**	**34**	PKP		**PKPdf**	**07 09 07.0**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=285,slow=2.8,SNR=5.3								
MKAR	**Makanchi Array**	**143.91**	**34**			**PKPdf**	**07 09 06.3**	**-1.4**
TARG	**Taragay, Kyrgy**	**144.14**	**44**	PKPdf		**PKPab**	**07 09 05.7**	**-0.9**
HILR	**Hailar Array B**	**148.71**	**348**	PKPbc		**PKiKP**	**07 09 20.1**	**-0.9**
	comp=Z,3.7nm,0.4s,baz=70,slow=1.8,SNR=7.4								
USRK	**Ussuriysk Ar.**	**149.21**	**329**	PKPbc		**PKiKP**	**07 09 22.6**	**+0.4**
	comp=Z,7.9nm,1.0s,baz=0.0,slow=1.6,SNR=6.3								
MJAR	**Matsushiro Ar**	**150.16**	**311**	PKPbc		**PKiKP**	**07 09 24.9**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=88,slow=2.1,SNR=8.1								
MJAR	**Matsushiro Ar**	**150.16**	**311**			**PKiKP**	**07 09 25.3**	**+0.9**
SONM	**Songino Array**	**151.10**	**6**	PKPbc		**PKiKP**	**07 09 27.1**	**+0.9**
	comp=Z,6.3nm,0.6s,baz=331,slow=1.4,SNR=20								
SONM				pPKPbc		**pPKPbc**	**07 09 55.4**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=332,slow=1.0,SNR=3.0								

*IDC **21** 06:58:54.4±2.7,24°.55N×109°.15W, h0km, mb3.3/1, mbtmp3.1/4, ML3.1/2, Error ellipse: s-maj=51.6km s-min=10.3km az=143.0*
*MEX **21** 06:58:57.9±0.4,25°.06N×109°.64W, h10km, MD4.0*
ISC 21 06:58:52.1±1.3,25°.17N±0°.04×109°.54W±0°.05, h8km±12km, n15, σ2ᵍ51/19, 4C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TSIG	**Topolobambo**	**0.62**	**46**	*i* P		Pn	06 59 11.0	+3.8
TSIG				*i* S		**Sn**	**06 59 20.3**	**+3.0**
EVAR0	**San Evaristo**	**1.09**	**257**	*i* P		**Pn**	**06 59 14.0**	**+0.3**
EVAR0				IAML			06 59 26.7	
	comp=E,654nm,0.4s							
LPIG	**La Paz**	**1.27**	**214**	Pg		**Pn**	**06 59 16.6**	**+0.5**
	comp=E,67nm,0.3s,baz=34,slow=3.2,SNR=19							
LPIG				Lg		Lg	06 59 31.3	
	comp=E,66nm,0.3s,baz=24,slow=20,SNR=6.9							
SLBS	**Sierra La Lagu**	**1.52**	**194**	*e*P		**Pg**	**06 59 22.9**	**+1.6**
SLBS				*e*S		**Sg**	**06 59 40.7**	**-0.2**
SLBS	**Sierra La Lagu**	**1.52**	**194**	*e*P		**Pn**	**06 59 18.8**	**-0.8**
SLBS				*i* S		**Sg**	**06 59 42.5**	**+1.5**
UAGRB	**Rancho Ultima**	**1.60**	**285**	*e*P		**Pn**	**06 59 21.5**	**+0.8**
NE80	**Navojoa**	**1.76**	**9**	*i*P		**Pg**	**06 59 27.2**	**+1.3**
NE80				*e*S		**Sb**	**06 59 47.5**	**+0.6**
NE80				IAML			06 59 53.6	
	comp=N,368nm,0.1s							
NE80				IAML			06 59 54.4	
	comp=E,325nm,0.1s							
NE77	**Loreto B.C.S**	**1.85**	**298**	*e*P		**Pn**	**06 59 25.2**	**+1.2**
NE77				*e*S		**Sn**	**06 59 45.4**	**-2.3**
CSIG	**Choix**	**1.96**	**32**	*e*P		**Pg**	**06 59 29.9**	**+0.2**
CSIG				*e*S		**Sg**	**06 59 54.1**	**-1.1**
SNIRB	**San Nicol¡s**	**2.27**	**308**	*e*P		**Pn**	**06 59 32.0**	**+2.1**
SNIRB				*e*S		**Sn**	**06 59 56.4**	**-1.6**
HPIG		**3.90**	**62**	*e*P		**Pb**	**06 59 58.6**	**-2.6**
HPIG				*i* S		**Sb**	**07 00 44.2**	**-4.6**
TXAR	**Lajitas Array**	**6.67**	**50**	Pn		Pn	07 00 36.9	+6.4
	comp=E,0.1nm,0.3s,baz=223,slow=17,SNR=8.1							
TXAR				Pg		Pg	07 00 53.2	-6.7
	comp=E,0.2nm,0.3s,baz=238,slow=13,SNR=5.5							
TXAR				Sn		**Sn**	**07 01 52.7**	**+5.9**
	comp=E,0.6nm,0.3s,baz=232,slow=16,SNR=11							
TXAR				Lg		Lg	07 02 28.8	
	comp=E,0.6nm,0.3s,baz=234,slow=23,SNR=5.2							
	comp=E,0.2nm,0.3s							
ANMO	**Albuquerque**	**10.11**	**15**	Pn		Pn	07 01 27.4	+10
	comp=E,0.7nm,0.7s,baz=227,slow=19,SNR=1.1							
ANMO				Lg		Lg	07 04 30.8	
	baz=151,slow=19,SNR=1.7							
NVAR	**Mina Array Bea**	**15.17**	**333**	Pn		P	07 02 42.6	+11
	comp=E,0.1nm,0.3s,baz=151,slow=11,SNR=3.0							
	comp=E,0.5nm,0.7s							
ILAR	**Eielson Array**	**46.30**	**339**	P		P	07 07 28.1	+10
	comp=E,0.3nm,0.7s,baz=128,slow=8.3,SNR=5.7							
	comp=E,0.3nm,0.7s							

*IDC **21** 07:10:17.5±0.8,62°.06S×165°.08E, h0km, mb4.3/9, mbtmp4.3/11, ML4.1/1, MS4.0/13, Error ellipse: s-maj=37.4km s-min=16.5km az=74.0*
*NEIC **21** 07:10:19.2±1.0,62°.1S±0°.1×165°.1E±0°.4, h10km±1km, mb4.5/13, Error ellipse: s-maj=36.5km s-min=14.5km az=70.0*
ISC 21 07:10:19.0±0.6,62°.05S±0°.08×165°.1E±0°.2, h10km, n51, σ0ᵍ59/34, mb4.4/12, MS4.0/11, 2D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**8.24**	**334**	Pn		**Pn**	**07 12 18.3**	**-0.1**
VNDA	**Vanda**	**15.58**	**183**	Pn		**Pn**	**07 13 58.2**	**0.0**
	0.7nm,0.3s,baz=353,slow=12,SNR=19							
VNDA				LR		LR	07 18 52.8	
	comp=Z,1µm,20.5s,baz=6.5,slow=33							
	3.0nm,0.5s							
VNDA	**Vanda**	**15.58**	**183**			**Pn**	**07 13 58.6**	**+0.3**
VNDA				IAmb		IAmb	07 14 33.3	
	comp=Z,21nm,1.5s							
SBA	**Scott Base**	**15.89**	**179**			**Pn**	**07 14 02.6**	**+0.3**
SBA				IAmb		IAmb	07 14 10.5	
	comp=Z,43nm,1.2s							
RPZ	**Rata Peaks**	**18.70**	**14**	P		**Pn**	**07 14 38.3**	**+0.6**
	comp=Z,8.7nm,1.2s,baz=236,slow=22,SNR=2.4							
RPZ				LR		LR	07 20 46.4	
	comp=Z,182nm,20.5s,baz=199,slow=34							
URZ	**Urewera**	**24.94**	**23**	LR		LR	07 25 32.2	
	comp=Z,629nm,18.2s,baz=188,slow=37							
QSPA	**South Pole Qui**	**28.04**	**180**	P		**P**	**07 16 10.0**	**-0.1**
	comp=Z,7.1nm,1.0s,baz=12,slow=4.9,SNR=12							
QSPA				LR		LR	07 25 37.2	
	comp=Z,418nm,21.2s,baz=30,slow=33							
	comp=Z,7.1nm,1.0s							
QSPA	**South Pole Qui**	**28.04**	**180**	P		**P**	**07 16 10.0**	**-0.1**
QSPA				IAmb		IAmb	07 16 15.8	
	comp=Z,14nm,1.1s							
STKA	**Stephens Creek**	**33.79**	**322**	P		**P**	**07 17 00.7**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=144,slow=9.1,SNR=5.5							
STKA				LR		LR	07 28 31.8	
	comp=Z,159nm,18.6s,baz=184,slow=32							
	comp=Z,3.2nm,0.9s							
INKA	**Innaminka**	**37.93**	**323**	P		**P**	**07 17 36.5**	**+0.2**
INKA				IAmb		IAmb	07 17 38.7	
	comp=Z,8.8nm,1.4s							
MAW	**Mawson**	**39.06**	**216**	P		**P**	**07 17 45.4**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=94,slow=21,SNR=1.7							
MAW				LR		LR	07 33 45.5	
	comp=Z,271nm,18.1s,baz=102,slow=36							
	comp=Z,0.9nm,0.4s							
H01W1	**Cape Leeuwin H**	**41.74**	**286**	T		T	08 02 52.3	
	baz=146,slow=75,SNR=284							
H01W2	**Cape Leeuwin H**	**41.74**	**286**	T		T	08 02 52.7	
	baz=146,slow=75,SNR=240							
H01W3	**Cape Leeuwin H**	**41.75**	**286**	T		T	08 02 53.6	
	baz=146,slow=75,SNR=251							
NWAO	**Narrogin (SRO)**	**42.02**	**291**	LR		LR	07 31 16.4	
	comp=Z,191nm,19.8s,baz=128,slow=30							
ASAR	**Alice Springs**	**43.82**	**317**	P		**P**	**07 18 24.4**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=162,slow=8.0,SNR=39							
ASAR				PcP		**PcP**	**07 20 10.5**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=145,slow=3.4,SNR=5.1							
	comp=Z,5.4nm,0.8s							
ASAR	**Alice Springs**	**43.82**	**317**			**P**	**07 18 23.9**	**-1.1**
AS31	**Alice Springs**	**43.82**	**317**			**P**	**07 18 24.8**	**-0.3**
TROLL	**Troll, Antarti**	**45.68**	**187**	P		**P**	**07 18 39.7**	**+0.3**
	comp=Z,280nm,0.9s							
SNAA	**Sanae**	**46.29**	**185**	⇓P		**P**	**07 18 44.4**	**+0.2**
	comp=Z,116nm,1.0s							
SNAA	**Sanae**	**46.29**	**185**	P		**P**	**07 18 44.0**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=164,slow=7.9,SNR=11							
SNAA				LR		LR	07 37 22.6	
	comp=Z,318nm,19.8s,baz=178,slow=35							
	comp=Z,4.7nm,0.9s							
SNAA	**Sanae**	**46.29**	**185**	P		**P**	**07 18 43.4**	**-0.8**
WR8	**Warramunga Arr**	**47.11**	**319**	P		**P**	**07 18 49.8**	**-1.2**
WRA	**Warramunga Arr**	**47.17**	**319**	P		**P**	**07 18 50.5**	**-1.0**
	comp=Z,3.6nm,1.2s,baz=155,slow=7.5,SNR=5.1							
	comp=Z,3.6nm,1.2s							
VNA2	**Neumayer--Watz**	**47.20**	**183**	⇓P		**P**	**07 18 51.1**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=166,slow=7.2							
VNA1	**Neumayer--Stat**	**47.50**	**183**	P		**P**	**07 18 53.7**	**+0.3**
	comp=Z,9.7nm,0.9s							
PMSA	**Palmer Station**	**48.32**	**154**	LR		LR	07 35 53.8	
	comp=Z,112nm,19.0s,baz=220,slow=32							
KNRA	**Kununurra**	**52.96**	**314**	P		**P**	**07 19 35.3**	**-0.1**
H03S2	**Juan Fernandez**	**71.50**	**128**	T		T	08 40 23.3	
	baz=204,slow=74,SNR=470							
H03S1	**Juan Fernandez**	**71.50**	**128**	T		T	08 40 24.8	
	baz=204,slow=74,SNR=349							
H03S3	**Juan Fernandez**	**71.52**	**128**	T		T	08 40 24.1	
	baz=204,slow=74,SNR=385							
BO02	**Sierra Bellavi**	**73.52**	**135**	P		**P**	**07 21 52.2**	**+0.4**
CO03	**El Pedregal**	**77.16**	**133**	P		**P**	**07 22 12.7**	**0.0**
SUR	**Sutherland**	**81.58**	**210**	LR		LR	07 56 37.4	
	comp=Z,101nm,19.6s,baz=141,slow=34							
BOSA	**Boshof**	**84.06**	**215**	LR		LR	07 59 39.8	
	comp=Z,50nm,18.4s,baz=182,slow=35							
H08S2	**Diego Garcia H**	**84.54**	**264**	T		T	08 56 33.5	
	baz=151,slow=76,SNR=8.8							
H08S1	**Diego Carcia H**	**84.55**	**264**	T		T	08 56 34.3	
	baz=151,slow=76,SNR=6.3							
H08S3	**Diego Garcia H**	**84.56**	**264**	T		T	08 56 35.0	
	baz=151,slow=76,SNR=21							
CPUP	**Villa Florida**	**85.58**	**143**	P		**P**	**07 22 56.5**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=186,slow=9.4,SNR=3.9							
	comp=Z,0.5nm,0.5s							
CPUP	**Villa Florida**	**85.58**	**143**	IAmb		IAmb	07 23 33.1	
	comp=Z,6.7nm,1.4s							
LBTB	**Lobatse**	**87.38**	**216**	LR		LR	08 01 06.6	
	comp=Z,61nm,18.1s,baz=146,slow=35							
LPAZ	**La Paz**	**91.42**	**130**	P		**P**	**07 23 25.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=180,slow=4.4,SNR=6.0							
	comp=Z,1.2nm,0.8s							
LPAZ	**La Paz**	**91.42**	**130**	IAmb		IAmb	07 23 36.5	
	comp=Z,4.4nm,1.4s							
TSUM	**Tsumeb**	**95.01**	**211**	LR		LR	08 03 52.9	
	comp=Z,76nm,21.8s,baz=151,slow=34							
CMAR	**Chiang Mai Arr**	**95.56**	**299**	P		**P**	**07 23 45.9**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=247,slow=2.8,SNR=2.0							
	comp=Z,1.3nm,0.3s							
TORD	**Torodi Ar. Bea**	**129.73**	**201**	PKP		**PKPdf**	**07 29 28.2**	**0.0**
	comp=Z,1.7nm,1.1s,baz=146,slow=2.8,SNR=4.1							
ILAR	**Eielson Array**	**131.44**	**25**	PKP		**PKiKP**	**07 29 30.7**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=222,slow=1.1,SNR=4.7							
KURBB	**Kurchatov Arra**	**131.46**	**302**	PKP		**PKiKP**	**07 29 31.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=132,slow=1.4,SNR=3.2							
KURK	**Kurchatov**	**131.50**	**302**			**PKiKP**	**07 29 31.6**	**+0.3**
MLR	**Muntele Rosu**	**151.37**	**254**	PKPbc		**PKPbc**	**07 30 11.8**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=156,slow=6.9,SNR=3.0							
ESDC	**Sonseca Array**	**156.62**	**202**	PKPab		**PKPab**	**07 30 42.8**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=160,slow=3.1,SNR=4.6							

*ASRS **21** 07:20:10.0±0.8,53°.62N×87°.83E, h0km, M3.0(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*NNC **21** 07:20:10.5±5.8,53°.66N×88°.04E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=42.8km s-min=26.0km az=77.0, Suspected Mining explosion.*
*IDC **21** 07:20:12.2±2.8,53°.60N×87°.86E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=24.9km s-min=15.5km az=65.0*
ISC 21 07:20:12.2±3.7,53°.7N±0°.1×87°.8E±0°.2, h0km, n7, σ1ᵍ30/8, 2C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**281**	I		I	07 31 44.5	
	0.1nm,0.9s,baz=98,slow=319,SNR=12							
ZAA0	**Zalesovo Array**	**1.79**	**280**	⇑Pn		**Pb**	**07 20 45.0**	**-0.9**
	1.9nm,0.3s,baz=98,slow=15							
ZAA0				⇑Sn		**Sg**	**07 21 10.3**	**+0.6**
	8.4nm,0.3s,baz=96,slow=26							
ZALV	**Zalesovo Beam**	**1.79**	**280**	Pn		**Pn**	**07 20 44.8**	**+0.4**
	4.0nm,0.3s,baz=97,slow=15,SNR=31							
ZALV				Lg		Lg	07 21 10.1	
	8.5nm,0.3s,baz=102,slow=27,SNR=14							
KURBB	**Kurchatov Arra**	**6.47**	**246**	Pn		**Pn**	**07 21 49.4**	**+0.8**
	0.2nm,0.3s,baz=62,slow=14,SNR=6.3							
KURBB				Lg		Lg	07 23 38.5	
	0.1nm,0.3s,baz=57,slow=32,SNR=5.1							
	0.8nm,0.3s							
KURBB	**Kurchatov Arra**	**6.47**	**246**	P		**Pn**	**07 21 49.8**	**+1.3**
	1.3nm,0.4s,baz=64,slow=14							
MK31	**Makanchi Array**	**7.73**	**209**	S		**Sn**	**07 23 34.5**	**+0.5**
	baz=36,slow=24							
MKAR	**Makanchi Array**	**7.73**	**209**	Pn		**Pn**	**07 22 06.7**	**+0.8**
	0.3nm,0.3s,baz=26,slow=12,SNR=8.3							
MKAR				Sn		**Sn**	**07 23 32.1**	**-2.0**
	0.2nm,0.3s,baz=24,slow=15,SNR=1.6							
MKAR				Lg		Lg	07 24 18.7	
	0.2nm,0.3s,baz=28,slow=29,SNR=1.5							
	0.3nm,0.3s							

*ISK **21** 07:20:59.6,38°.27N×38°.80E, h5km, ML3.5/8*
*AFAD **21** 07:21:00.1,38°.27N×38°.82E, h7km±3km, ML3.4*
ISC 21 07:21:00.4±0.9,38°.27N±0°.02×38°.81E±0°.02, h11km±8km, n32, σ0ᵍ71/47, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ESGZ	**Sivrice-Elazig**	**0.25**	**51**	Pg		**Pg**	**07 21 05.4**	**-0.2**
ESGZ				Sg		**Sg**	**07 21 09.5**	**+0.3**
ELZG	**Elazig**	**0.26**	**31**	P		**Pg**	**07 21 05.6**	**-0.2**
ELZG				S		**Sg**	**07 21 10.0**	**+0.5**
ELZG				IAML			07 21 10.0	
	comp=N,9µm,0.2s							
ELZG				IAML			07 21 10.0	
	comp=E,2µm,0.5s							
MAYA	**Malatya/Merkez**	**0.31**	**280**	P		**Pg**	**07 21 06.6**	**-0.1**
MAYA				IAML			07 21 12.0	
	comp=N,6µm,0.4s							
MAYA				IAML			07 21 12.0	
	comp=E,5µm,0.3s							
MAYA				S		**Sb**	**07 21 12.1**	**-1.1**
CNGT	**ngs**	**0.39**	**99**	P		**Pg**	**07 21 07.4**	**-0.7**
CNGT				S		**Sg**	**07 21 13.7**	**+0.5**
CNGT				IAML			07 21 16.0	
	comp=N,2µm,0.6s							
NARI	**Adyaman-Kaht**	**0.39**	**186**	P		**Pg**	**07 21 07.4**	**-0.8**
NARI				S		**Sb**	**07 21 14.4**	**-1.0**
NARI				IAML			07 21 19.0	
	comp=N,2µm,0.7s							
NARI				IAML			07 21 20.0	
	comp=E,1µm,0.6s							
SVRC	**Sivrice-ELAZID**	**0.40**	**75**	Pg		**Pg**	**07 21 07.9**	**-0.5**
SVRC				Sg		**Sg**	**07 21 14.5**	**+0.8**
ESIJ	**Sivrice-Elazig**	**0.43**	**66**	Pg		**Pg**	**07 21 08.8**	**-0.1**
ESIJ				Sg		**Sb**	**07 21 15.5**	**-1.1**
ELZ	**Elazig**	**0.52**	**37**	P		**Pg**	**07 21 10.1**	**-0.4**
ELZ				S		**Sg**	**07 21 18.1**	**+0.7**
ELZ				IAML			07 21 19.0	
	comp=N,2µm,0.3s							
ELZ				IAML			07 21 19.0	
	comp=E,4µm,0.3s							
AZEY	**Adyaman-Merk**	**0.64**	**224**	P		**Pb**	**07 21 13.3**	**-0.4**
AZEY				S		**Sb**	**07 21 23.4**	**+0.8**
MDNT	**Maden**	**0.69**	**80**	P		**Pg**	**07 21 13.1**	**-0.7**
HANM	**anlurfa/Hi**	**0.69**	**176**	P		**Pb**	**07 21 14.0**	**-0.5**
HANM				S		**Sb**	**07 21 23.9**	**-0.3**
HANM				IAML			07 21 28.0	
	comp=N,2µm,0.3s							
HANM				IAML			07 21 29.0	
	comp=E,1µm,0.4s							
AKCD	**Akcadag**	**0.70**	**272**	P		**Pg**	**07 21 13.8**	**-0.1**
AKCD				S		**Sb**	**07 21 24.0**	**-0.4**
AKCD				IAML			07 21 25.0	
	comp=N,3µm,0.6s							
AKCD				IAML			07 21 25.0	
	comp=E,3µm,0.4s							
URFA	**Urfa**	**0.83**	**180**	Pg		**Pg**	**07 21 15.9**	**-0.5**
MCKZ	**Bingol**	**0.85**	**9**	P		**Pg**	**07 21 16.0**	**-0.8**
MCKZ				S		**Sb**	**07 21 28.8**	**0.0**
MCKZ				IAML			07 21 29.0	
	comp=N,916nm,0.3s							
MCKZ				IAML			07 21 29.0	
	comp=E,2µm,0.3s							
KOVA	**Elazig, Kovanc**	**0.90**	**61**	P		**Pg**	**07 21 16.3**	**-1.3**
ARPR	**Arapgir-MALATY**	**0.90**	**336**	Pg		**Pg**	**07 21 17.4**	**-0.3**
ATAB	**Bozova**	**0.90**	**207**	P		**Pb**	**07 21 17.8**	**-0.2**
ATAB				S		**Sn**	**07 21 33.1**	**+1.0**
ATAB				IAML			07 21 34.0	
	comp=N,1µm,0.6s							
ATAB				IAML			07 21 34.0	
	comp=E,1µm,0.5s							
HEKM	**Malatya_Hekimh**	**0.90**	**312**	P		**Pg**	**07 21 17.5**	**-0.2**
HEKM				S		**Sn**	**07 21 31.7**	**-0.7**
HEKM				IAML			07 21 33.0	
	comp=N,1µm,0.3s							
HEKM				IAML			07 21 33.0	
	comp=E,1µm,0.5s							
AKCA	**Adyaman/G¶l**	**1.01**	**242**	P		**Pn**	**07 21 20.2**	**-0.4**
AKCA				S		**Sn**	**07 21 36.1**	**+1.3**
AKCA				IAML			07 21 39.0	
	comp=E,1µm,1.0s							
AKCA				IAML			07 21 40.0	
	comp=N,2µm,0.8s							
TNCL	**Tunceli-Merkez**	**1.01**	**34**	P		**Pg**	**07 21 18.6**	**-1.3**
TNCL				IAML			07 21 38.0	
	comp=N,636nm,0.5s							
DYBB	**Diyarbakir**	**1.09**	**107**	Pn		**Pb**	**07 21 21.2**	**-0.2**
ILIC	**ilic-Erzincan**	**1.19**	**351**	Pn		**Pg**	**07 21 22.9**	**-0.4**
MDIV		**1.21**	**330**	P		**Pg**	**07 21 22.9**	**-0.7**
MDIV				IAML			07 21 47.0	
	comp=E,524nm,0.9s							
ERZN	**Erzincan**	**1.49**	**28**	Pn		**Pb**	**07 21 28.0**	**-0.2**
KHMN	**Narli-Kahraman**	**1.58**	**237**	Pn		**Pb**	**07 21 28.9**	**-0.7**
BNGB	**Bingl**	**1.63**	**63**	Pn		**Pb**	**07 21 29.9**	**-0.6**
GAZ	**Gaziantep**	**1.68**	**230**	Pn		**Pb**	**07 21 30.2**	**+0.4**
KMRS	**Kahramanmaras**	**1.70**	**244**	Pn		**Pb**	**07 21 30.4**	**+0.4**
YEDI	**Yedisu-Bingol**	**1.78**	**49**	Pn		**Pb**	**07 21 32.1**	**+0.8**
SVAN	**Silvan-Diyarba**	**1.88**	**93**	Pn		**Pb**	**07 21 33.5**	**+0.9**
KARO	**Karliova-Bingo**	**2.03**	**59**	Pn		**Pb**	**07 21 35.5**	**+0.8**
GURO	**Guroymak-BITLI**	**2.54**	**83**	Pn		**Pb**	**07 21 42.9**	**+1.2**

*CATAC **21** 07:27:30.3±0.7, 13°.N±3°.×8°.9W±°, h12km±4km, M3.0/12, MLv3.0/12, Error ellipse: s-maj=7.7km s-min=6.2km az=33.7, confirmed*
*SNET **21** 07:27:31.2±2.6, 12°.60N×89°.37W, h16km, ML3.0, Presumed earthquake*
*GCG **21** 07:27:31.1±1.1, 12°.59N×89°.50W, h22km±14km, MD4.5, Presumed earthquake*
ISC 21 07:27:28.6±2.6, 12°.4N±0°.1×89°.35W±0°.07, h21km±5km, n32, σ0ᵍ80/45, 1C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LOMA	**Loma Larga**	**1.21**	**8**	P		**Pn**	**07 27 50.1**	**-0.3**
LOMA				S		**Sn**	**07 28 06.4**	**+0.2**
JAYA	**Jayaque - finc**	**1.21**	**355**	P		**Pb**	**07 27 51.0**	**+0.1**
JAYA				S		**Sb**	**07 28 04.8**	**-1.4**
JAYA	**Jayaque - finc**	**1.21**	**355**	*i* P		**Pn**	**07 27 50.0**	**-0.4**
JAYA	**Jayaque - finc**	**1.21**	**355**	*e*P		**Pn**	**07 27 50.3**	**-0.2**
JAYA				*e*S		**Sn**	**07 28 06.4**	**+0.1**
SJTE	**Alcalda de S**	**1.22**	**16**	*e*P		**Pn**	**07 27 50.6**	**+0.2**
COEG	**Centro de Oper**	**1.26**	**21**	P		**Pb**	**07 27 52.0**	**+0.4**
COEG				S		**Sb**	**07 28 07.8**	**+0.3**
COEG	**Centro de Oper**	**1.26**	**21**	*e*P		**Pn**	**07 27 50.3**	**-0.7**
COEG				*e*S		**Sn**	**07 28 04.8**	**-2.5**
PMON	**Piamonte**	**1.27**	**1**	P		**Pb**	**07 27 52.5**	**+0.7**
PMON				S		**Sb**	**07 28 08.6**	**+0.9**
PMON	**Piamonte**	**1.27**	**1**	*e*P		**Pb**	**07 27 52.4**	**+0.6**
UEES	**Universidad Ev**	**1.27**	**5**	P		**Pn**	**07 27 51.4**	**+0.2**
UEES				S		**Sb**	**07 28 08.1**	**+0.2**
UEES	**Universidad Ev**	**1.27**	**5**	*e*P		**Pn**	**07 27 51.4**	**+0.2**
BOQS	**Boqueron**	**1.29**	**3**	*i*P		**Pb**	**07 27 52.0**	**-0.3**
BOQS				*e*S		**Sn**	**07 28 07.2**	**-1.1**
PAVA	**Las Pavas**	**1.33**	**17**	S		**Sb**	**07 28 09.1**	**-0.4**
TECA	**Tecapa**	**1.33**	**38**	*e*P		**Pn**	**07 27 52.2**	**0.0**
CEVE	**Cerro Verde**	**1.41**	**349**	*e*P		**Pn**	**07 27 53.5**	**+0.3**
PACA	**Pacayal**	**1.43**	**44**	P		**Pb**	**07 27 54.3**	**-0.3**
SNJE	**San Jose**	**1.44**	**350**	*e*P		**Pn**	**07 27 53.6**	**0.0**
RTR	**El Retiro**	**1.48**	**349**	*e*P		**Pn**	**07 27 54.6**	**+0.5**
NUBE	**Las Nubes**	**1.52**	**344**	P		**Pn**	**07 27 55.2**	**+0.6**
NUBE	**Las Nubes**	**1.52**	**344**	*i* P		**Pn**	**07 27 54.4**	**-0.2**
NUBE				*i* S		**Sn**	**07 28 13.2**	**-0.5**
NUBE	**Las Nubes**	**1.52**	**344**	⇓*i*P		**Pn**	**07 27 54.5**	**0.0**
FAME	**Alcaldia de Sa**	**1.54**	**335**	P		**Pn**	**07 27 54.7**	**-0.1**
FAME				S		**Sn**	**07 28 14.1**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.64**	**345**	P		**Pb**	**07 27 57.4**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.64**	**345**	*e*P		**Pb**	**07 27 57.3**	**-0.7**
CNCH	**Conchagua**	**1.69**	**60**	P		**Pb**	**07 27 59.3**	**+0.2**
**

*MAN **21** 07:27:48.0,2.77N×126.94E,h1km,MS4.2*
*NEIC **21** 07:27:49.3±2.4,2.58N±0.07×127.04E±0.09,h35km±1km, mb4.8/86,Error ellipse: s-maj=16.0km s-min=10.2km az=240.0*

ISC 21 07:27:48.2±1.2,2.59N±0.03×127.07E±0.06,h29km±8km, n173,σ1s38/157,mb4.8/82,MS3.8/10,1C-1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.83**	**171**		**Pb**	**07 28 20.4**	**-0.6**
TNTI	**Ternate**	**1.83**	**171**	P	**Pb**	**07 28 21.9**	**+0.9**
TNTI	**Ternate**	**1.83**	**171**	P	**Pn**	**07 28 18.8**	**+1.1**
SGSI	**Sangihe**	**1.88**	**305**	P	**Pn**	**07 28 19.4**	**+1.0**
SGSI	**Sangihe**	**1.88**	**305**	P	**Pn**	**07 28 19.2**	**+0.8**
MNI	**Manado**	**2.50**	**243**	P	**Pb**	**07 28 30.6**	**-1.8**
GTOI	**Gorontalo**	**4.49**	**245**	P	**Pn**	**07 28 57.8**	**+3.5**
DMPH	**Davao City--Mi**	**4.73**	**341**	*e*P	**Pb**	**07 29 09.9**	**-0.5**
DMPH				*i* S	**Sb**	**07 30 09.8**	**+2.9**
KCP	**Kidapawan**	**4.81**	**336**	*i* P	**Pn**	**07 29 01.1**	**+2.2**
SWI	**Sorong**	**5.42**	**129**	P	**Pn**	**07 29 06.4**	**-0.6**
SIJI	**Sorong**	**5.42**	**129**	Pn	**Pn**	**07 29 08.5**	**+1.3**
	1.5nm,0.3s,baz=320,slow=9.2,SNR=7.3						
SIJI				LR	LR	07 31 41.9	
	comp=Z,1μm,20.5s,baz=295,slow=43 5.3nm,0.3s						
SIJI	**Sorong**	**5.42**	**129**	P	**Pn**	**07 29 09.9**	**+2.7**
SIJI	**Sorong**	**5.42**	**129**	P	**Pn**	**07 29 06.3**	**-0.8**
BIPH	**Bislig**	**5.61**	**353**	*e*P	Pn	07 29 16.4	+6.8
BIPH				*e*S	**Sn**	**07 30 10.9**	**-2.2**
LUWI	**Luwuk**	**5.61**	**230**	Pn	**Pn**	**07 29 10.7**	**+1.1**
LUWI	**Luwuk**	**5.61**	**230**	P	**Pn**	**07 29 13.6**	**+4.0**
	2μm141nm,0.8s						
CGP	**Cagayan de Oro**	**6.29**	**338**	*e*P	**Pn**	**07 29 16.8**	**-2.3**
CGP				*e*S	**Sb**	**07 30 47.1**	**-4.7**
APSI	**Ampana**	**6.43**	**237**	P	**Pn**	**07 29 22.7**	**+1.7**
TOLI2	**Tolitoli**	**6.45**	**257**		**Pn**	**07 29 21.9**	**+0.7**
TOLI2	**Tolitoli**	**6.45**	**257**	P	**Pn**	**07 29 22.8**	**+1.6**
MPSI	**Mapaga**	**7.50**	**253**	P	**Pn**	**07 29 38.8**	**+3.1**
MWPI	**Manokwari, Pap**	**7.80**	**117**	P	**Pn**	**07 29 38.5**	**-1.3**
MYLDM	**Lahad Datu**	**8.93**	**287**		**Pn**	**07 29 58.4**	**+3.1**
MYLDM	**Lahad Datu**	**8.93**	**287**	P	**Pn**	**07 29 57.7**	**+2.4**
SPSI	**Sidrap Palu**	**9.77**	**228**	P	**Pn**	**07 30 07.9**	**+1.0**
PMSI	**Majene**	**10.14**	**233**	P	**Pn**	**07 30 14.2**	**+2.2**
KKM	**Kota Kinabalu**	**11.35**	**288**	P	**Pn**	**07 30 30.4**	**+1.8**
JAY	**Jayapura**	**14.55**	**110**	LR	LR	07 37 03.7	
	comp=Z,214nm,18.7s,baz=338,slow=38						
PLAI	**Plampang**	**14.64**	**219**	P	**Pn**	**07 31 14.6**	**+1.1**
TWSI	**Taliwang, Sumb**	**15.15**	**222**	P	**Pn**	**07 31 21.6**	**+1.2**
MTN	**Manton Dam**	**15.85**	**165**	P	**Pn**	**07 31 30.0**	**+0.6**
KNRA	**Kununurra**	**18.22**	**175**		**P**	**07 31 59.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.60**	**184**	P	**P**	**07 32 24.6**	**-0.5**
	1.3nm,0.4s,baz=360,slow=11,SNR=7.1 1.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.60**	**184**	P	**P**	**07 32 24.9**	**-0.3**
KPJI	**Karang Pucung**	**20.61**	**241**	P	**P**	**07 32 25.9**	**+0.7**
TWG	**Pinlang**	**20.94**	**344**	P	**P**	**07 32 26.9**	**-1.9**
YULB	**Yu-li**	**21.42**	**345**		**P**	**07 32 30.3**	**-3.7**
YULB	**Yu-li**	**21.42**	**345**	P	**P**	**07 32 31.2**	**-2.8**
TPUB	**Ta-pu**	**21.52**	**344**	P	**P**	**07 32 33.4**	**-1.6**
BBJI	**Bungbulang**	**21.79**	**243**	P	**P**	**07 32 38.8**	**+0.7**
SSLB	**Suanglung**	**21.89**	**345**	P	**P**	**07 32 38.2**	**-0.8**
SSLB				IAmb	IAmb	07 32 40.7	
	comp=Z,24nm,0.8s						
SSLB	**Suanglung**	**21.89**	**345**	P	**P**	**07 32 37.8**	**-1.3**
YOJ	**Yonaguni jima**	**22.10**	**350**	P	**P**	**07 32 39.3**	**-1.9**
YHNB	**Yeheng**	**22.63**	**346**	P	**P**	**07 32 45.4**	**-1.6**
YHNB	**Yeheng**	**22.63**	**346**	P	**P**	**07 32 46.4**	**-0.6**
COEN	**Coen**	**22.92**	**136**	P	**P**	**07 32 48.4**	**-1.6**
WB0	**Warramunga Arr**	**23.35**	**162**	P	**P**	**07 32 53.2**	**-1.2**
WB0				IAmb	IAmb	07 33 15.2	
	comp=Z,24nm,0.9s						
WRAB	**Tennant Creek**	**23.50**	**163**	P	**P**	**07 32 53.9**	**-1.9**
WRAB				IAmb	IAmb	07 33 10.9	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**23.50**	**163**	P	**P**	**07 32 54.6**	**-1.2**
	comp=Z,12nm,0.8s,baz=343,slow=11,SNR=30						
WRA				PcP	**PcP**	**07 36 41.3**	**0.0**
	comp=Z,1.1nm,0.8s,baz=331,slow=2.3,SNR=1.6						
WRA				S	**S**	**07 37 06.4**	**-1.5**
	comp=Z,1.4nm,1.1s,baz=344,slow=17,SNR=1.8 comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**23.50**	**163**	P	**P**	**07 32 53.3**	**-2.5**
WR8	**Warramunga Arr**	**23.56**	**162**		**P**	**07 32 55.3**	**-1.1**
JOW	**Kunigami**	**24.14**	**3**	P	**P**	**07 33 02.0**	**+2.2**
JOW				IAmb	IAmb	07 33 04.4	
	comp=Z,34nm,1.1s						
JOW	**Kunigami**	**24.14**	**3**	P	**P**	**07 33 01.0**	**-0.8**
MBWA	**Marble Bar**	**24.67**	**197**	P	**P**	**07 33 07.1**	**+0.4**
QIS	**Mount Isa**	**26.08**	**152**	P	**P**	**07 33 18.7**	**-0.8**
AS31	**Alice Springs**	**26.93**	**166**		**P**	**07 33 26.5**	**-0.6**
ASAR	**Alice Springs**	**26.93**	**166**	P	**P**	**07 33 26.2**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=351,slow=7.3,SNR=31						
ASAR				PcP	**PcP**	**07 36 49.2**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=347,slow=2.4,SNR=4.8						
ASAR				S	**S**	**07 37 59.9**	**-2.7**
	comp=Z,0.3nm,0.9s,baz=346,slow=18,SNR=1.8 comp=Z,2.2nm,0.4s						
ASAR	**Alice Springs**	**26.93**	**166**	P	**P**	**07 33 26.9**	**-0.2**
JCJ	**Chichijima**	**28.35**	**29**	LR	LR	07 44 08.6	
	comp=Z,93nm,20.8s,baz=204,slow=34						
MEEK	**Meekatharra**	**30.18**	**195**	P	**P**	**07 33 56.4**	**+0.4**
NJ2	**Nanjing**	**30.31**	**346**	*e*P	**P**	**07 33 58.8**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,25nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.75**	**302**	P	**P**	**07 34 09.2**	**-0.8**
	comp=Z,4.9nm,1.0s,baz=118,slow=7.2,SNR=18 comp=Z,4.9nm,1.0s						
CHTO	**Chiang Mai**	**31.90**	**302**	P	**P**	**07 34 10.5**	**-0.9**
INKA	**Innaminka**	**32.90**	**157**	P	**P**	**07 34 19.6**	**-0.4**
FORT	**Forrest**	**33.19**	**178**	P	**P**	**07 34 21.6**	**-0.9**
FORT				IAmb	IAmb	07 34 31.4	
	comp=Z,11nm,0.7s						
PZH	**PanZhiHua**	**34.00**	**317**	P	**P**	**07 34 31.8**	**+2.1**
TIA	**Tai'an**	**34.70**	**346**	P	**P**	**07 34 37.0**	**+1.5**
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
KSRS	**Korea Array**	**34.71**	**1**	P	**P**	**07 34 36.8**	**+1.3**
	comp=Z,7.3nm,0.9s,baz=179,slow=10.0,SNR=28						
KSRS				PcP	**PcP**	**07 37 09.7**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=181,slow=3.5,SNR=5.1 comp=Z,7.3nm,0.9s						
MAJO	**Matsushiro**	**35.32**	**16**	P	**P**	**07 34 40.4**	**-0.5**
MAJO				IAmb	IAmb	07 34 42.6	
	comp=Z,11nm,1.2s						
MJAR	**Matsushiro Arr**	**35.32**	**16**	P	**P**	**07 34 41.0**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=177,slow=8.8,SNR=5.3						
MJAR				LR	LR	07 48 00.7	
	comp=Z,84nm,21.0s,baz=215,slow=34 comp=Z,0.8nm,0.4s						
MJAR	**Matsushiro Arr**	**35.32**	**16**	IAmb	IAmb	07 34 47.2	
	comp=Z,2.5nm,1.0s						
MJB9	**Matsu-Tunnel**	**35.32**	**16**	P	**P**	**07 34 41.5**	**+0.5**
MJB9				IAmb	IAmb	07 34 43.5	
	comp=Z,10nm,1.2s						
XAN	**Xi'an**	**35.58**	**334**	P	**P**	**07 34 42.3**	**-0.9**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
CD2	**Chengdu**	**35.76**	**324**	P	**P**	**07 34 45.3**	**+0.5**
CD2				S	**S**	**07 40 21.3**	**+1.0**
CD2				L	L		
	comp=Z,210nm,10.8s						
CD2				L	L		
	comp=Z,210nm,11.4s						
CD2				L	L		
	comp=Z,270nm,9.6s						
BBOO	**Buckleboo**	**36.22**	**167**		**P**	**07 34 47.4**	**-1.3**
BBOO				IAmb	IAmb	07 34 50.0	
	comp=Z,21nm,1.3s						
HNS	**HongShan**	**36.46**	**343**	⇑P	**P**	**07 34 52.5**	**+1.9**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HNS				L	L		
	comp=Z,160nm,20.8s						
HNS				L	L		
	comp=Z,170nm,23.9s						
DL2	**Dalian**	**36.49**	**353**	P	**P**	**07 34 52.3**	**+1.5**
DL2				pmax	pmax		
	comp=Z,31nm,0.7s						
NWAO	**Narrogin (SRO)**	**36.53**	**194**	P	**P**	**07 34 49.4**	**-1.8**
STKA	**Stephens Creek**	**36.95**	**159**	P	**P**	**07 34 54.6**	**-0.3**
	comp=Z,19nm,0.9s,baz=333,slow=9.1,SNR=24						
STKA				PcP	**PcP**	**07 37 16.2**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=334,slow=5.4,SNR=2.8 comp=Z,19nm,0.9s						
STKA	**Stephens Creek**	**36.95**	**159**	P	**P**	**07 34 54.8**	**-0.1**
BJI2	**Beijing**	**38.55**	**347**	P	**P**	**07 35 09.3**	**+1.0**
BJI2				pmax	pmax		
	comp=Z,13nm,1.0s						
BJI2				L	L		
	comp=Z,95nm,14.3s						
BJI2				L	L		
	comp=Z,58nm,15.1s						
BJI2				L	L		
	comp=Z,72nm,15.1s						
BJT	**Baijiatuan**	**38.55**	**347**	P	**P**	**07 35 08.9**	**+0.6**
HHC	**Hu-ho-hao-te**	**40.58**	**342**	*e*P	**P**	**07 35 27.3**	**+1.9**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				L	L		
	comp=Z,78nm,16.0s						
HHC				L	L		
	comp=Z,94nm,16.8s						
HHC				L	L		
	comp=Z,170nm,18.3s						
USA0B	**Ussuriysk Arra**	**41.67**	**5**	P	**P**	**07 35 34.9**	**+0.8**
USRK	**Ussuriysk Ar.**	**41.67**	**5**	P	**P**	**07 35 35.6**	**+1.5**
	comp=Z,7.9nm,0.8s,baz=194,slow=7.3,SNR=13						
USRK				LR	LR	07 53 19.0	
	comp=Z,52nm,21.9s,baz=139,slow=37 comp=Z,7.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**41.67**	**5**	P	**P**	**07 35 33.8**	**-0.3**
MDJ	**Mudanjiang**	**41.91**	**3**	P	**P**	**07 35 35.9**	**-0.3**
MDJ				IAmb	IAmb	07 35 39.2	
	comp=Z,23nm,1.0s						
MDJ	**Mudanjiang**	**41.91**	**3**	P	**P**	**07 35 38.0**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
CAN	**Canberra**	**42.95**	**153**	P	**P**	**07 35 45.7**	**+0.9**
CAN				IAmb	IAmb	07 36 51.2	
	comp=Z,30nm,1.3s						
BNX	**BinXian**	**42.98**	**0**	⇓P	**P**	**07 35 45.4**	**+0.7**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA2	**Gaotai**	**44.33**	**329**	*e*P	**P**	**07 35 55.8**	**-0.1**
GTA2				PP	**PP**	**07 37 40.5**	**+0.9**
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA2				L	L		
	comp=Z,170nm,21.6s						
GTA2				L	L		
	comp=Z,130nm,20.9s						
GTA2				L	L		
	comp=Z,210nm,21.6s						
HILR	**Hailar Array B**	**47.21**	**354**	P	**P**	**07 36 19.6**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=203,slow=10,SNR=2.0 comp=Z,1.3nm,0.4s						
HEH	**HeiHe**	**47.50**	**0**	*e*P	**P**	**07 36 21.3**	**+0.8**
HEH				pmax	pmax		
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**48.30**	**342**	P	**P**	**07 36 27.5**	**+0.4**
ULN				IAmb	IAmb	07 36 29.0	
	comp=Z,5.7nm,0.8s						
ULN	**Ulaanbaatar**	**48.30**	**342**	P	**P**	**07 36 26.2**	**-0.8**
SONM	**Songino Array**	**48.48**	**341**	P	**P**	**07 36 29.1**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=154,slow=7.7,SNR=6.9						
SONM				PcP	**PcP**	**07 37 54.5**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=141,slow=3.7,SNR=3.7 comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**48.48**	**341**	P	**P**	**07 36 27.6**	**-0.8**
TLY	**Taiaya**	**52.71**	**342**	LR	LR	08 01 22.9	
	comp=Z,76nm,19.6s,baz=112,slow=38						
WMQ	**Urumqi**	**53.85**	**325**	*e*P	**P**	**07 37 10.4**	**+1.7**
WMQ				L	L		
	comp=Z,95nm,20.3s						
PETK	**Petropavlovsk-**	**56.36**	**22**	P	**P**	**07 37 28.3**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=232,slow=6.8,SNR=2.2 comp=Z,1.2nm,0.5s						
PDGK	**Podgornoye**	**58.50**	**321**	P	**P**	**07 37 41.2**	**-0.8**
MK31	**Makanchi Array**	**58.68**	**325**	P	**P**	**07 37 42.2**	**-0.9**
MKAR	**Makanchi Array**	**58.68**	**325**	P	**P**	**07 37 42.6**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=123,slow=8.4,SNR=35 comp=Z,3.3nm,0.6s						
MKAR	**Makanchi Array**	**58.68**	**325**	P	**P**	**07 37 41.9**	**-1.1**
TARG	**Taragay, Kyrgy**	**58.82**	**318**	P	**P**	**07 37 43.9**	**-0.7**
TARG	**Taragay, Kyrgy**	**58.82**	**318**	P	**P**	**07 37 43.4**	**-1.2**
MAKZ	**Makanchi**	**58.87**	**325**	P	**P**	**07 37 44.1**	**-0.2**
MAKZ				IAmb	IAmb	07 37 44.7	
	comp=Z,5.8nm,0.7s						
KSH2	**Kashi**	**59.22**	**315**	P	**P**	**07 37 47.6**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAI	**AK-SAY(Kyrgyzs**	**59.31**	**317**	P	**P**	**07 37 46.3**	**-1.7**
ZAA0	**Zalesovo Array**	**61.75**	**333**		**P**	**07 38 02.6**	**-1.3**
ZALV	**Zalesovo Beam**	**61.75**	**333**	P	**P**	**07 38 03.2**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=116,slow=6.8,SNR=11 comp=Z,3.4nm,0.9s						
ZALV	**Zalesovo Beam**	**61.75**	**333**	P	**P**	**07 38 02.9**	**-1.0**
KURBB	**Kurchatov Arra**	**62.88**	**328**	P	**P**	**07 38 11.2**	**-0.3**
	comp=Z,6.2nm,0.8s,baz=126,slow=6.0,SNR=56						
KURBB				PcP	**PcP**	**07 38 51.1**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=126,slow=5.6,SNR=4.6 comp=Z,6.2nm,0.8s						
KURK	**Kurchatov**	**62.88**	**328**		**PcP**	**07 38 51.1**	**+1.5**
KURK	**Kurchatov**	**62.88**	**328**		**P**	**07 38 10.9**	**-0.6**
KURK				IAmb	IAmb	07 38 12.0	
	comp=Z,9.8nm,0.8s						
KK31	**Karatay Array**	**64.29**	**317**	P	**P**	**07 38 19.9**	**-1.2**
KK31				IAmb	IAmb	07 38 22.1	
	comp=Z,5.8nm,0.9s						
KKAR	**Karatay Array**	**64.29**	**317**	P	**P**	**07 38 19.7**	**-1.4**
BVAR	**Borovoye Array**	**68.45**	**327**	P	**P**	**07 38 47.3**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=126,slow=7.5,SNR=16 comp=Z,7.1nm,0.9s						
BORK	**Borovoye**	**68.50**	**327**	P	**P**	**07 38 47.4**	**-0.4**
BORK				IAmb	IAmb	07 38 48.6	
	comp=Z,7.8nm,0.8s						
TIXI	**Tiksi**	**68.97**	**1**	P	**P**	**07 38 50.4**	**+0.1**
TIXI				IAmb	IAmb	07 38 52.0	
	comp=Z,12nm,0.9s						
ATKA	**Atka Island**	**69.24**	**34**	P	**P**	**07 38 51.5**	**-0.9**
NRIK	**Noril'sk**	**71.61**	**346**	P	**P**	**07 39 07.1**	**+0.5**
	comp=Z,6.8nm,0.7s,baz=116,slow=5.7,SNR=7.3 comp=Z,6.8nm,0.7s						
NRIK	**Noril'sk**	**71.61**	**346**	IAmb	IAmb	07 39 08.0	
	comp=Z,9.2nm,0.8s						
ABKAR	**Akbulak array**	**73.24**	**321**	P	**P**	**07 39 15.5**	**-1.2**
AKTO	**Aktyubinsk**	**74.76**	**322**	P	**P**	**07 39 25.8**	**+0.3**
	comp=Z,6.9nm,0.8s,baz=97,slow=5.5,SNR=21 comp=Z,6.9nm,0.8s						
ARTI	**Arti**	**76.16**	**328**	P	**P**	**07 39 32.9**	**-0.5**
	comp=Z,13nm,1.0s,baz=124,slow=3.2,SNR=16 comp=Z,13nm,1.0s						
ARTI	**Arti**	**76.16**	**328**	P	**P**	**07 39 32.3**	**-1.1**
L16K	**Owhat River**	**79.93**	**28**	P	**P**	**07 39 55.4**	**+1.2**
L16K				IAmb	IAmb	07 40 21.4	
	comp=Z,34nm,2.0s						
KIRV	**Kirov**	**81.37**	**329**	P	**P**	**07 40 01.5**	**-0.4**
	comp=Z,10.0nm,0.5s,baz=145,slow=8.5,SNR=5.0 comp=Z,10.0nm,0.5s						
BELG	**Belogornoye**	**81.51**	**322**	P	**P**	**07 40 02.9**	**+0.1**
	comp=Z,35nm,0.9s,baz=141,slow=2.0,SNR=12 comp=Z,35nm,0.9s						
C19K	**Lookout Ridge**	**81.69**	**20**	IAmb	IAmb	07 40 07.0	
	comp=Z,14nm,1.1s						
CRZF	**Crozet Islands**	**81.72**	**223**	P	**P**	**07 40 02.6**	**-1.4**
G19K	**Purcell Mounta**	**81.94**	**23**	IAmb	IAmb	07 40 09.5	
	comp=Z,6.5nm,0.9s						
H19K	**Roundabout Mou**	**82.07**	**24**	IAmb	IAmb	07 40 09.0	
	comp=Z,26nm,1.8s						
J19K	**Poorman**	**82.13**	**26**	IAmb	IAmb	07 40 18.7	
	comp=Z,10nm,1.2s						
E19K	**Redstone River**	**82.16**	**22**	IAmb	IAmb	07 40 20.1	
	comp=Z,8.7nm,1.0s						
VNDA	**Vanda**	**82.26**	**173**	P	**P**	**07 40 06.5**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=319,slow=7.2,SNR=4.6 comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**82.26**	**173**	P	**P**	**07 40 06.3**	**0.0**
GNI	**Garni**	**82.47**	**310**	P	**P**	**07 40 08.6**	**+0.2**
	comp=Z,4.9nm,0.4s,baz=275,slow=10,SNR=3.4 comp=Z,4.9nm,0.4s						
K20K	**Telida**	**82.70**	**26**	IAmb	IAmb	07 40 28.0	
	comp=Z,18nm,1.5s						
J20K	**Nowinta River**	**82.80**	**26**	IAmb	IAmb	07 40 12.6	
	comp=Z,12nm,1.3s						
MAW	**Mawson**	**82.81**	**200**	P	**P**	**07 40 09.3**	**0.0**
	comp=Z,2.5nm,0.9s,baz=51,slow=3.6,SNR=2.2 comp=Z,2.5nm,0.9s						
MAW	**Mawson**	**82.81**	**200**	IAmb	IAmb	07 40 11.3	
	comp=Z,4.5nm,1.6s						
M20K	**Styx River**	**82.92**	**28**	IAmb	IAmb	07 40 13.2	
	comp=Z,8.2nm,1.0s						
IMAR	**Indian Mountai**	**83.25**	**24**	P	**P**	**07 40 11.9**	**+0.2**
G21K	**Allakaket**	**83.42**	**23**	IAmb	IAmb	07 40 30.9	
	comp=Z,19nm,1.6s						
B21K	**Ikpikpuk River**	**83.52**	**20**	IAmb	IAmb	07 40 16.1	
	comp=Z,12nm,1.1s						
H21K	**Melozitna Rive**	**83.58**	**24**	IAmb	IAmb	07 40 16.4	
	comp=Z,8.4nm,1.2s						
SKT	**Skwentna**	**83.68**	**28**	IAmb	IAmb	07 40 17.1	
	comp=Z,9.1nm,1.1s						
GEVA	**Gevas**	**83.70**	**308**	P	**P**	**07 40 15.3**	**+0.4**
I21K	**Tanana**	**83.86**	**25**	IAmb	IAmb	07 40 18.4	
	comp=Z,5.7nm,1.1s						
KBZ	**Khabaz**	**84.00**	**314**	P	**P**	**07 40 16.1**	**+0.1**
	comp=Z,6.4nm,1.0s,baz=176,slow=7.7,SNR=5.6 comp=Z,6.4nm,1.0s						
L22K	**Petersville**	**84.09**	**28**	IAmb	IAmb	07 40 18.2	
	comp=Z,8.2nm,0.9s						
H22K	**Ishtalitna Cre**	**84.20**	**24**	IAmb	IAmb	07 40 31.3	
	comp=Z,8.7nm,1.3s						
E22K	**Anaktuvuk Pass**	**84.30**	**22**	IAmb	IAmb	07 40 20.1	
	comp=Z,9.7nm,1.1s						
RC01	**Rabbit Creek A**	**84.45**	**29**	P	**P**	**07 40 18.8**	**+0.9**
COLD	**Coldfoot**	**84.81**	**23**	P	**P**	**07 40 18.4**	**-1.2**
COLD				IAmb	IAmb	07 40 54.1	
	comp=Z,6.9nm,1.1s						
D23K	**Nanushuk River**	**84.81**	**21**	P	**P**	**07 40 21.2**	**+1.6**
G23K	**Bananza Creek**	**84.83**	**23**	P	**P**	**07 40 21.1**	**+1.3**
G23K				IAmb	IAmb	07 40 38.9	
	comp=Z,6.7nm,1.1s						
C23K	**Itkillik River**	**84.93**	**20**	IAmb	IAmb	07 40 23.1	
	comp=Z,9.4nm,1.0s						
E23K	**Chandalar**	**85.11**	**22**	IAmb	IAmb	07 40 39.6	
	comp=Z,12nm,1.4s						
D24K	**Happy Valley**	**85.50**	**21**	IAmb	IAmb	07 40 32.1	
	comp=Z,6.5nm,0.9s						
E25K	**Arctic Village**	**86.63**	**22**	IAmb	IAmb	07 40 48.3	
	comp=Z,17nm,2.0s						
K27K	**Chicken**	**88.07**	**26**	IAmb	IAmb	07 40 40.9	
	comp=Z,5.7nm,1.2s						
E27K	**Coleen River**	**88.12**	**22**	IAmb	IAmb	07 40 59.6	
	comp=Z,17nm,1.9s						
ASF	**Jabal al Asfar**	**88.78**	**302**	P	**P**	**07 40 39.9**	**0.0**
	comp=Z,4.6nm,0.8s,baz=82,slow=7.1,SNR=6.3 comp=Z,4.6nm,0.8s						
ARCES	**ARCESS Array B**	**91.63**	**340**	P	**P**	**07 40 52.0**	**-0.3**
	comp=Z,6.2nm,1.0s,baz=74,slow=5.2,SNR=10 comp=Z,6.2nm,1.0s						
SPITS	**Spitsbergen Ar**	**91.66**	**349**	P	**P**	**07 40 51.8**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=46,slow=4.2,SNR=2.7 comp=Z,2.9nm,0.8s						
QSPA	**South Pole Qui**	**92.50**	**180**	P	**P**	**07 40 55.9**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=265,slow=3.5,SNR=5.3 comp=Z,1.7nm,1.0s						
FINES	**FINESS Array B**	**92.99**	**332**	P	**P**	**07 40 58.6**	**0.0**
	comp=Z,4.1nm,1.2s,baz=108,slow=4.5,SNR=3.6 comp=Z,4.1nm,1.2s						
BURAR	**Bucovina Array**	**96.07**	**318**	P	**P**	**07 41 13.0**	**-0.2**
BURAR				IAmb	IAmb	07 41 19.2	
	comp=Z,3.5nm,1.0s						
BUR08	**Bucovina Ar. S**	**96.08**	**318**		**P**	**07 41 12.1**	**-1.2**
BUR08				IAmb	IAmb	07 41 18.4	
	comp=Z,4.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**123.59**	**288**	PKP	**PKPdf**	**07 46 43.7**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=62,slow=2.6,SNR=4.4						

*NEIC **21** 07:34:22.1±1.9,15.18S±0.09×174.64W±0.03,h10km±1km, mb4.8/41,Error ellipse: s-maj=15.6km s-min=4.8km az=173.0*
*IDC **21** 07:34:24.4±0.6,15.25S×174.77W,h0km,mb4.3/14, mbtmp4.3/15,ML3.9/1,MS4.6/60,Error ellipse: s-maj=25.4km s-min=15.5km az=139.0*
*NOU **21** 07:34:30.0,15.00S×174.99W,h0km,mb4.8/11,Tonga Islands*
*GCMT **21** 07:34:30.1±0.1,15.23S±0.01×174.54W±0.01,h12km, MW5.2/143,Moment Tensor Solution. s94,c146; s143,c266; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.11±.01; Mθθ=0.43±.01; Mϕϕ=0.53±.01; Mrθ=0.14±.03; Mθϕ=0.77±.01; Mϕr=0.12±.03; Best double couple: M=0.92100×10^17 NP1:ϕs=344.00000°,δ80.00000°, λ177.00000°. NP2:ϕs=74.00000°,δ87.00000°,λ10.00000°. Principal axes: T 0.9860, Plg9.0000°, Azm299.0000°; N -0.1300, Plg80.0000°, Azm91.0000°; P -0.8570, Plg5.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 07:34:23.1±0.4,15.20S±0.09×174.56W±0.06,h10km, n165,σ2s15/95,mb4.7/31,MS4.7/57,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.99**	**65**	Pn	**Pn**	**07 35 10.4**	**-0.2**
	66nm,0.3s,baz=33,slow=1.9,SNR=129						
AFI	

comp=Z,22nm,1.3s
KRVT Keravat (AS076 34.60 285 LR LR 07 54 05.0
comp=Z,262nm,19.7s,baz=48,slow=34
CTA Charters Tower 37.59 257 LR LR 07 56 16.2
comp=Z,759nm,18.1s,baz=72,slow=35
PMG Port Moresby 37.80 274 LR LR 07 55 38.3
comp=Z,1μm,19.2s,baz=104,slow=34
H11S2 WAKE ISLAND Hy 38.23 330 T T 08 22 17.7
baz=150,slow=75,SNR=357
H11S3 WAKE ISLAND Hy 38.24 330 T T 08 22 18.6
baz=150,slow=75,SNR=286
H11S1 WAKE ISLAND Hy 38.25 331 T T 08 22 18.5
baz=150,slow=75,SNR=255
H11N3 WAKE ISLAND Hy 39.20 332 T T 08 23 33.8
baz=151,slow=76,SNR=479
H11N1 WAKE ISLAND Hy 39.20 332 T T 08 23 28.7
baz=151,slow=76,SNR=1127
H11N2 WAKE ISLAND Hy 39.21 332 T T 08 23 33.1
baz=151,slow=76,SNR=820
STKA Stephens Creek 43.17 239 P **P 07 42 25.1 +0.9**
comp=Z,5.5nm,1.0s,baz=97,slow=7.6,SNR=6.4
STKA LR LR 08 00 18.5
comp=Z,825nm,19.5s,baz=68,slow=36
comp=Z,5.5nm,1.0s
JAY Jayapura 45.85 281 LR LR 07 59 46.5
comp=Z,688nm,20.9s,baz=116,slow=33
BBOO Buckleboo 47.94 239 P **P 07 43 00.8 -1.3**
WR8 Warramunga Arr 48.65 257 P **P 07 43 05.8 -2.0**
WR8 IAmb IAmb 07 44 36.3
comp=Z,12nm,1.3s
WB0 Warramunga Arr 48.76 257 P **P 07 43 07.6 -1.0**
WB0 IAmb IAmb 07 44 38.8
comp=Z,18nm,1.6s
WRA Warramunga Arr 48.80 257 P **P 07 43 09.1 +0.2**
comp=Z,2.3nm,1.0s,baz=90,slow=7.5,SNR=4.9
comp=Z,2.3nm,1.0s
AS31 Alice Springs 49.10 252 **P 07 43 10.0 -1.3**
ASAR Alice Springs 49.10 252 P **P 07 43 11.8 +0.5**
comp=Z,8.1nm,0.9s,baz=86,slow=8.1,SNR=30
ASAR PcP **PcP 07 44 36.3 +1.4**
comp=Z,1.2nm,0.8s,baz=90,slow=4.1,SNR=1.4
ASAR LR LR 08 02 19.9
comp=Z,1μm,19.3s,baz=94,slow=34
comp=Z,8.1nm,0.9s
ASAR Alice Springs 49.10 252 **P 07 43 09.0 -2.3**
GUMO Guam 49.29 303 LR LR 08 01 10.3
comp=Z,504nm,19.0s,baz=114,slow=33
SIJI Sorong 55.32 280 LR LR 08 06 38.0
comp=Z,1μm,21.8s,baz=113,slow=35
FITZ Fitzroy Crossi 57.15 258 P **P 07 44 11.7 +1.1**
comp=Z,2.1nm,0.9s,baz=131,slow=9.3,SNR=2.1
FITZ LR LR 08 06 53.9
comp=Z,997nm,19.5s,baz=102,slow=34
comp=Z,2.1nm,0.9s
JCJ Chichijima 59.42 315 LR LR 08 05 60.0
comp=Z,1μm,20.1s,baz=134,slow=32
SOEI Soe 59.82 267 P **P 07 44 27.0 -2.4**
BATI Baumata 60.31 267 LR LR 08 08 46.7
comp=Z,826nm,21.7s,baz=127,slow=34
RPN Rapa Nui 61.40 113 LR LR 08 04 42.9
comp=Z,274nm,21.8s,baz=7.0,slow=30
DAV Davao City (W) 63.30 286 LR LR 08 10 57.5
comp=Z,477nm,18.3s,baz=134,slow=35
VNDA Vanda 63.46 186 P **P 07 44 55.8 +2.9**
comp=Z,1.4nm,0.7s,baz=346,slow=7.3,SNR=7.8
VNDA LR LR 08 10 34.7
comp=Z,178nm,18.5s,baz=27,slow=34
comp=Z,1.4nm,0.7s
VNDA Vanda 63.46 186 P **P 07 44 51.4 -1.4**
VNDA IAmb IAmb 07 45 01.7
comp=Z,15nm,1.8s
NWAO Narrogin (SRO) 63.74 241 LR LR 08 12 01.4
comp=Z,804nm,18.1s,baz=101,slow=36
JHJ Hachijo jima 2 64.87 318 LR LR 08 14 24.5
comp=Z,264nm,18.0s,baz=156,slow=37
KAPI Kappang 65.25 271 LR LR 08 10 34.1
comp=Z,229nm,21.6s,baz=90,slow=33
MJAR Matsushiro Arr 68.07 320 LR LR 08 09 36.6
comp=Z,532nm,21.9s,baz=126,slow=31
SHEM Shemya Is, Ala 68.36 353 LR LR 08 11 14.5
comp=Z,349nm,19.1s,baz=144,slow=32
JOW Kunigami 69.47 307 LR LR 08 10 06.1
comp=Z,443nm,21.9s,baz=92,slow=31
TGY Tagaytay City 70.11 291 LR LR 08 11 20.6
comp=Z,2μm,21.7s,baz=134,slow=32
ASAJ Asahikawa 70.79 329 LR LR 08 11 51.9
comp=Z,449nm,21.1s,baz=164,slow=32
JNU Nakatsue 70.85 314 LR LR 08 11 22.0
comp=Z,409nm,21.5s,baz=131,slow=31
PETK Petropavlovsk- 72.11 343 P **P 07 45 49.9 +2.3**
comp=Z,1.6nm,0.8s,baz=131,slow=10,SNR=3.7
comp=Z,1.6nm,0.8s
ISA Isabella, Lake 73.30 45 **P 07 45 53.1 -2.1**
ISA IAmb IAmb 07 46 03.2
comp=Z,9.4nm,1.1s
CMB Columbia Colle 73.36 42 **P 07 45 54.1 -1.4**
CMB IAmb IAmb 07 46 03.2
comp=Z,8.0nm,1.2s
AFDM Forest Hills D 73.52 41 **P 07 45 54.3 -2.0**
ORV Oroville 73.55 40 **P 07 45 53.5 -2.9**
PFO Pinyon Flats O 73.61 48 LR LR 08 12 03.7
comp=Z,706nm,18.9s,baz=244,slow=31
LRMC Laurel Mtn Rad 73.74 45 P **P 07 45 55.0 -2.8**
O03E Paynes Creek 73.80 39 P **P 07 45 55.4 -2.6**
LPIG La Paz 73.89 59 LR LR 08 12 13.5
comp=Z,309nm,18.9s,baz=220,slow=31
YBH Yreka Blue Hor 74.12 38 LR LR 08 11 07.6
comp=Z,522nm,21.5s,baz=245,slow=30
MPMC Manual Prospec 74.19 45 **P 07 45 58.7 -1.8**
MPMC IAmb IAmb 07 46 08.4
comp=Z,9.1nm,1.2s
WAKR Walker 74.24 42 **P 07 45 58.5 -2.3**
WAKR IAmb IAmb 07 46 08.9
comp=Z,18nm,1.5s
MPK Martis Peak 74.32 41 P **P 07 45 58.2 -3.1**
MPK IAmb IAmb 07 46 09.2
comp=Z,16nm,1.2s
BEKR Beckworth 74.44 40 **P 07 46 00.5 -1.4**
BEKR IAmb IAmb 07 46 09.8
comp=Z,8.1nm,1.1s
PNTR Pine Nut 74.47 41 P **P 07 46 00.1 -2.0**
PNTR IAmb IAmb 07 46 10.2
comp=Z,14nm,1.2s
DSP Deep Springs 74.57 44 P **P 07 46 00.2 -2.3**
DSP IAmb IAmb 07 46 10.8
comp=Z,15nm,1.4s
LHV Little Huntoon 74.71 43 P **P 07 46 02.2 -1.0**
LHV IAmb IAmb 07 46 15.0
comp=Z,18nm,1.3s
FURC Furnace Creek, 74.83 45 **P 07 46 02.1 -1.8**
QSPA South Pole Qui 74.84 180 P **P 07 46 06.7 +3.0**
comp=Z,4.3nm,1.0s,baz=9.2,slow=1.3,SNR=6.6
QSPA LR LR 08 15 03.0
comp=Z,269nm,19.7s,baz=42,slow=33
comp=Z,4.3nm,1.0s
QSPA South Pole Qui 74.84 180 P **P 07 46 04.0 +0.2**
NVAR Mina Array Bea 74.94 43 P **P 07 46 08.6 +3.7**
comp=Z,3.7nm,0.9s,baz=230,slow=9.6,SNR=24
NVAR LR LR 08 11 44.9
comp=Z,451nm,20.9s,baz=220,slow=30
comp=Z,3.7nm,0.9s
NV11 Mina Array Sit 75.04 43 P **P 07 46 04.3 -1.0**
NV11 IAmb IAmb 07 46 13.2
comp=Z,15nm,1.3s
KSRS Korea Array 75.24 316 P P 07 46 10.4 +4.1
comp=Z,0.4nm,0.3s,baz=144,slow=3.0,SNR=1.7
KSRS LR LR 08 16 35.2
comp=Z,352nm,19.2s,baz=125,slow=34
comp=Z,0.4nm,0.3s
LEM Lembang 76.52 266 LR LR 08 20 27.3
comp=Z,289nm,19.8s,baz=68,slow=36
USRK Ussuriysk Ar. 76.56 324 LR LR 08 14 12.0
comp=Z,540nm,21.1s,baz=129,slow=31
TUC Tucson 77.14 51 **P 07 46 15.2 -2.2**
BBB Bella Bella 78.22 27 LR LR 08 13 09.9
comp=Z,410nm,20.3s,baz=226,slow=30
MFID Camas Ranch 79.24 39 **P 07 46 26.7 -2.1**
MA2 Magadan 79.64 343 LR LR 08 18 12.8
comp=Z,184nm,20.2s,baz=162,slow=33
J20K Nowinta River 80.68 9 P **P 07 46 34.6 -1.3**
J20K IAmb IAmb 07 46 47.8
comp=Z,9.9nm,1.2s
NEW Newport 81.18 35 LR LR 08 16 21.4
comp=Z,407nm,19.8s,baz=231,slow=31
TXAR Lajitas Array 81.44 57 P P 07 46 45.0 +4.0
comp=Z,3.3nm,1.0s,baz=248,slow=4.9,SNR=19
TXAR LR LR 08 15 21.5
comp=Z,342nm,20.8s,baz=240,slow=30
comp=Z,3.3nm,1.0s
M27K Edge Creek, AK 81.46 15 P **P 07 46 39.0 -1.4**
ANMO Albuquerque 81.54 50 LR LR 08 16 15.7
comp=Z,584nm,19.6s,baz=238,slow=31
ANMO Albuquerque 81.54 50 **P 07 46 39.8 -1.6**
ANMO IAmb IAmb 07 46 48.5
comp=Z,5.9nm,1.1s
DLBC Dease Lake 81.93 22 LR LR 08 15 25.8
comp=Z,491nm,20.9s,baz=212,slow=30
CCB Clear Creek Bu 82.19 11 **P 07 46 44.0 +0.1**
CCB IAmb IAmb 07 46 50.5
comp=Z,8.5nm,0.8s
IMAR Indian Mountai 82.44 8 **P 07 46 43.7 -1.6**
ILAR Eielson Array 82.47 12 P **P 07 46 48.2 +2.8**
comp=Z,1.9nm,0.9s,baz=225,slow=5.1,SNR=15
ILAR LR LR 08 16 42.3
comp=Z,296nm,21.9s,baz=215,slow=31
comp=Z,1.9nm,0.9s
ILAR Eielson Array 82.47 12 **P 07 46 45.4 0.0**
PDAR Pinedale Array 82.87 42 P **P 07 46 51.8 +3.4**
comp=Z,3.6nm,0.8s,baz=221,slow=3.3,SNR=31
PDAR LR LR 08 19 12.7
comp=Z,205nm,18.9s,baz=239,slow=32
comp=Z,3.6nm,0.8s
PDAR Pinedale Array 82.87 42 **P 07 46 47.6 -0.8**
DAWY Dawson 83.51 15 **P 07 46 50.7 -0.2**
DAWY IAmb IAmb 07 46 58.4
comp=Z,8.1nm,1.0s
PMSA Palmer Station 84.81 156 LR LR 08 16 21.9
comp=Z,238nm,21.2s,baz=256,slow=30
CMIG Matias Romero 84.88 71 LR LR 08 17 11.2
comp=Z,203nm,18.5s,baz=256,slow=30
H03S2 Juan Fernandez 86.24 124 T T 09 22 27.2
baz=252,slow=75,SNR=23
H03S1 Juan Fernandez 86.26 124 T T 09 22 27.7
baz=252,slow=75,SNR=21
H03S3 Juan Fernandez 86.26 124 T T 09 22 31.8
baz=252,slow=75,SNR=17
H03N2 Juan Fernandez 86.35 124 T T 09 22 32.7
baz=258,slow=74
H03N3 Juan Fernandez 86.35 124 T T 09 22 34.3
baz=258,slow=74
H03N1 Juan Fernandez 86.36 124 T T 09 22 29.6
baz=258,slow=74
HILR Hailar Array B 86.50 324 LR LR 08 21 24.0
comp=Z,389nm,20.5s,baz=40,slow=33
MAW Mawson 87.62 199 LR LR 08 24 42.5
comp=Z,740nm,18.3s,baz=102,slow=34
YKA Yellowknife Ar 90.37 24 P P 07 47 28.1 +3.9
comp=Z,0.9nm,0.8s,baz=237,slow=4.0,SNR=5.1
YKA LR LR 08 25 04.5
comp=Z,306nm,18.0s,baz=224,slow=34
comp=Z,0.9nm,0.8s
CMAR Chiang Mai Arr 91.49 289 P **P 07 47 33.4 +2.8**
comp=Z,1.5nm,0.3s,baz=88,slow=3.5,SNR=4.1
CMAR LR LR 08 23 26.6
comp=Z,272nm,22.0s,baz=100,slow=32
comp=Z,1.5nm,0.3s
JTS Las Juntas de 92.28 80 LR LR 08 18 02.9
comp=Z,116nm,21.1s,baz=261,slow=28
TROLL Troll, Antarti 92.98 179 P **P 07 47 37.8 +1.2**
comp=Z,90nm,0.9s
SNAA Sanae 93.16 177 LR LR 08 24 59.2
comp=Z,128nm,20.6s,baz=186,slow=33
SONM Songino Array 93.95 318 LR LR 08 24 50.3
comp=Z,222nm,21.9s,baz=114,slow=32
ATAH Atahualpa 94.06 98 LR LR 08 20 14.5
comp=Z,531nm,21.7s,baz=253,slow=29
NNA Nana 94.19 104 LR LR 08 22 45.6
comp=Z,108nm,18.1s,baz=242,slow=31
ULM Lac du Bonnet 94.49 39 LR LR 08 26 10.0
comp=Z,498nm,18.6s,baz=255,slow=33
TIXI Tiksi 94.52 345 LR LR 08 25 32.3
comp=Z,176nm,21.6s,baz=150,slow=32
TLY Talaya 96.78 322 LR LR 08 27 04.9
comp=Z,228nm,20.9s,baz=101,slow=33
TKL Tuckaleechee C 99.33 56 LR LR 08 26 24.0
comp=Z,290nm,21.3s,baz=263,slow=31
MORC Moravsky Berou 144.13 347 *e*PKP **PKiKP 07 54 02.0 -0.8**
VRAC Vranov 144.78 347 *e*PKP **PKiKP 07 54 03.2 -0.9**
JAVC Velka Javorina 144.97 346 *e*PKP **PKiKP 07 54 06.2 +1.6**
KRUC Moravsky 145.06 347 *e*PKP **PKiKP 07 54 05.0 +0.3**
BRTR Keskin Array B 145.29 320 PKPbc **PKiKP 07 54 04.5 -1.1**
comp=Z,2.3nm,0.9s,baz=90,slow=1.4,SNR=5.0
BRTR Keskin Array B 145.29 320 **PKPbc 07 53 59.7 -1.7**
GERES GERESS Array B 145.77 350 PKPbc **PKiKP 07 54 05.7 -0.6**
comp=Z,1.7nm,0.8s,baz=357,slow=2.8,SNR=13
GERES GERESS Array B 145.77 350 **PKPdf 07 53 59.3 -2.9**
WINA Alland / Wiene 146.03 347 *e*PKiKP **PKiKP 07 54 10.7 +3.9**
comp=Z,13nm,1.4s
CONA Conrad Observa 146.25 347 *e*PKP **PKiKP 07 54 07.3 0.0**
comp=Z,7.4nm,1.0s
RONA Rosalia, Austr 146.37 347 *i* PKP **PKiKP 07 54 07.9 +0.4**
comp=Z,3.9nm,0.9s
MOA Moosalm 146.64 349 *e*PKP **PKiKP 07 54 09.1 +1.1**
comp=Z,7.4nm,1.3s
BIOA Bad Ischl, Aus 146.90 350 *e*PKiKP **PKiKP 07 54 11.5 +2.9**
comp=Z,2.0nm,0.5s
ARSA Arzberg 146.96 347 *i* PKP **PKiKP 07 54 08.9 +0.2**
comp=Z,3.2nm,0.8s
SESA Seetaler Alpe, 147.29 348 *e*PKP **PKiKP 07 54 09.8 +0.2**
comp=Z,7.0nm,0.9s
LESA Schwarzleotal 147.31 351 *e*PKiKP **PKiKP 07 54 13.0 +3.5**
comp=Z,6.0nm,1.2s
RETA Reutte 147.51 353 *e*PKP **PKiKP 07 54 12.0 +2.1**
comp=Z,1.5nm,0.5s
KBA Koelnbreinsper 147.54 350 *e*PKP **PKiKP 07 54 10.9 +0.8**
comp=Z,3.2nm,0.8s
MMAI Mount Meron Ar 147.57 309 PKPbc **PKiKP 07 54 10.1 -0.4**
comp=Z,1.1nm,0.3s,baz=166,slow=1.2,SNR=3.7
MOTA Moosalm 147.61 353 *e*PKP **PKiKP 07 54 11.6 +1.4**
comp=Z,6.0nm,1.0s
WTTA Wattenberg 147.62 352 *e*PKP **PKiKP 07 54 12.7 +2.4**
comp=Z,9.2nm,1.2s
SQTA Sankt Quirin 147.72 353 *e*PKiKP **PKPab 07 54 13.8 +3.2**
comp=Z,1.1nm,0.4s
DAVA Damuels 147.80 354 *e*PKiKP **PKPab 07 54 14.1 +3.2**
comp=Z,5.2nm,0.7s
OBKA Obir 147.87 348 *e*PKP **PKPab 07 54 13.4 +2.2**
comp=Z,2.8nm,0.8s
MYKA Terra Mystica 147.93 349 *e*PKP **PKPab 07 54 12.7 +1.4**
comp=Z,4.1nm,0.7s
FETA Feichten 147.97 353 *e*PKiKP **PKPab 07 54 14.5 +2.9**
comp=Z,5.1nm,1.1s
ABTA Abfaltersbach 148.00 351 *e*PKP **PKPab 07 54 13.8 +2.2**
comp=Z,5.7nm,0.9s
TORD Torodi Ar. Bea 175.84 119 PKPab **PKPab 07 56 16.3 +3.2**
comp=Z,2.3nm,1.1s,baz=253,slow=3.8,SNR=4.5

*SNET **21** 07:34:37.0±2.0, 12°.32N×89°.41W, h15km±15km, ML3.2, Presumed earthquake*
*CATAC **21** 07:34:38.1±0.8, 12°.N±4'×8°.9W±°, h16km±8km, M3.1/16, MLv3.1/16, Error ellipse: s-maj=8.7km s-min=4.8km az=27.3, confirmed*
*GCG **21** 07:34:39.0±0.6, 12°.57N×89°.63W, h16km±7km, MD4.1, Presumed earthquake*

ISC 21 07:34:36.9±2.5, 12°.46N±0°.10×89°.40W±0°.05, h17km±10km, n48, σ0°.961/61, 11D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.03**	**4**	P		**Pn**		**07 34 56.6**	**0.0**
JAYA	**Jayaque - finc**	**1.19**	**358**	P		**Pn**		**07 34 58.2**	**-0.7**
JAYA				S		**Sn**		**07 35 15.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.19**	**358**	*i* P		**Pn**		**07 34 58.4**	**-0.5**
JAYA	**Jayaque - finc**	**1.19**	**358**	‖*e*P		**Pn**		**07 34 58.7**	**-0.2**
LOMA	**Loma Larga**	**1.20**	**11**	P		**Pg**		**07 35 00.6**	**+0.5**
LOMA				S		**Sn**		**07 35 15.2**	**+0.2**
LOMA	**Loma Larga**	**1.20**	**11**	‖*e*P		**Pg**		**07 34 59.5**	**-0.6**
SJTE	**Alcalda de S**	**1.21**	**18**	‖*e*P		**Pn**		**07 34 58.9**	**-0.2**
SJTE				*e*S		**Sb**		**07 35 13.8**	**-1.0**
TECO	**Alcaldia de Te**	**1.23**	**29**	S		**Sn**		**07 35 15.7**	**+0.1**
TECO	**Alcaldia de Te**	**1.23**	**29**	‖*e*P		**Pn**		**07 34 58.7**	**-0.6**
PMON	**Piamonte**	**1.25**	**4**	P		**Pb**		**07 34 59.9**	**-0.2**
PMON				S		**Sg**		**07 35 17.2**	**-0.2**
PMON	**Piamonte**	**1.25**	**4**	‖*e*P		**Pb**		**07 34 59.9**	**-0.2**
COEG	**Centro de Oper**	**1.26**	**23**	P		**Pb**		**07 35 00.3**	**0.0**
COEG	**Centro de Oper**	**1.26**	**23**	‖*e*P		**Pn**		**07 34 59.4**	**-0.4**
COEG				*e*S		**Sg**		**07 35 18.1**	**+0.3**
UEES	**Universidad Ev**	**1.26**	**7**	P		**Pg**		**07 35 01.8**	**+0.5**
UEES	**Universidad Ev**	**1.26**	**7**	‖*e*P		**Pb**		**07 35 00.1**	**-0.2**
BOQS	**Boqueron**	**1.28**	**5**	*e*P		**Pb**		**07 35 00.3**	**-0.3**
PIC2	**El Picacho**	**1.29**	**6**	*e*P		**Pb**		**07 35 00.7**	**-0.1**
PAVA	**Las Pavas**	**1.33**	**20**	P		**Pg**		**07 35 03.5**	**+0.9**
PAVA				S		**Sg**		**07 35 19.6**	**-0.3**
PAVA	**Las Pavas**	**1.33**	**20**	‖*e*P		**Pn**		**07 35 00.9**	**+0.2**
TECA	**Tecapa**	**1.35**	**40**	*e*P		**Pn**		**07 35 00.7**	**-0.5**
CEVE	**Cerro Verde**	**1.38**	**351**	P		**Pg**		**07 35 04.6**	**+1.1**
CEVE				S		**Sg**		**07 35 20.8**	**-0.9**
CEVE	**Cerro Verde**	**1.38**	**351**	*e*P		**Pn**		**07 35 01.1**	**-0.5**
SNJE	**San Jose**	**1.42**	**352**	*e*P		**Pn**		**07 35 02.1**	**0.0**
PACA	**Pacayal**	**1.45**	**46**	P		**Pn**		**07 35 02.8**	**+0.3**
PACA				S		**Sn**		**07 35 21.6**	**+0.4**
PACA	**Pacayal**	**1.45**	**46**	*e*P		**Pn**		**07 35 02.2**	**-0.2**
RANC	**El Ranchito**	**1.45**	**48**	P		**Pb**		**07 35 04.0**	**+0.4**
RANC	**El Ranchito**	**1.45**	**48**	*e*P		**Pn**		**07 35 02.1**	**-0.3**
RTR	**El Retiro**	**1.45**	**350**	*e*P		**Pg**		**07 35 04.2**	**-0.7**
VSM	**San Miguel**	**1.46**	**48**	*e*P		**Pn**		**07 35 00.6**	**-2.1**
NUBE	**Las Nubes**	**1.48**	**345**	P		**Pn**		**07 35 02.9**	**0.0**
NUBE				S		**Sb**		**07 35 22.5**	**-0.3**
NUBE	**Las Nubes**	**1.48**	**345**	*i* P		**Pn**		**07 35 02.8**	**-0.2**
NUBE				*i* S		**Sn**		**07 35 21.4**	**-0.6**
NUBE	**Las Nubes**	**1.48**	**345**	‖*i*P		**Pn**		**07 35 03.0**	**0.0**
NUBE				*i* Sg		**Sb**		**07 35 23.0**	**+0.2**
INTP	**Intipuca**	**1.50**	**60**	*e*P		**Pn**		**07 35 02.2**	**-0.9**
FAME	**Alcaldia de Sa**	**1.50**	**336**	P		**Pb**		**07 35 03.8**	**-0.6**
FAME				S		**Sb**		**07 35 23.6**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.60**	**346**	P		**Pb**		**07 35 06.0**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.60**	**346**	*e*P		**Pn**		**07 35 04.8**	**+0.2**
RBDL	**Robledal**	**1.67**	**350**	*e*P		**Pn**		**07 35 06.0**	**+0.5**
LCND	**La Caada**	**1.70**	**60**	P		**Pn**		**07 35 05.6**	**-0.1**
LCND	**La Caada**	**1.70**	**60**	‖*e*P		**Pn**		**07 35 05.3**	**-0.4**
CNCH	**Conchagua**	**1.73**	**62**	P		**Pn**		**07 35 06.3**	**0.0**
CNCH				S		**Sb**		**07 35 29.9**	**+0.1**
CNCH	**Conchagua**	**1.73**	**62**	‖*e*P		**Pn**		**07 35 05.7**	**-0.6**
JUAM	**Asuncion Mita**	**1.89**	**351**	*i* P		**Pn**		**07 35 08.8**	**+0.3**
MTO3	**Montecristo**	**1.93**	**1**	P		**Pb**		**07 35 10.1**	**+0.9**
MTO3	**Montecristo**	**1.93**	**1**	*i* P		**Pn**		**07 35 10.0**	**+0.9**
MTO3	**Montecristo**	**1.93**	**1**	*e*P		**Pn**		**07 35 10.0**	**+0.8**
ESQI	**Esquipulas**	**2.09**	**1**	P		**Pn**		**07 35 12.5**	**+1.3**
ESQI	**Esquipulas**	**2.09**	**1**	*e*P		**Pn**		**07 35 12.5**	**+1.3**
RCON	**San Juan de Ri**	**3.32**	**72**	P		**Pn**		**07 35 28.7**	**+0.5**

*IDC **21** 07:46:44.5±0.7, 15°.69S×174°.75W, h0km, mb3.9/10, mbtmp3.9/10, MS3.6/6, Error ellipse: s-maj=38.0km s-min=20.1km az=133.0*

ISC 21 07:46:46.7±0.7, 15°.8S×0°.2×174°.4W×0°.1, h10km, n32, σ0°.76/12, mb4.0/10, MS3.5/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.14**	**54**	Pn		Pn		07 47 31.0	-5.3
	14nm,0.3s,baz=182,slow=23,SNR=18								
AFI				Sn		Sn		07 48 03.3	-11
	16nm,0.3s,baz=90,slow=20,SNR=5.8								
MSVF	**Nonsavu**	**7.49**	**254**	Pn		**Pn**		**07 48 36.5**	**+0.3**
	baz=53,slow=20								
RAR	**Rarotonga**	**14.89**	**113**	LR		LR		07 55 12.8	
	comp=Z,333nm,19.7s,baz=287,slow=33								
URZ	**Urewera**	**23.61**	**197**	LR		LR		07 59 57.8	
	comp=Z,467nm,18.4s,baz=36,slow=34								
PAE	**Paea**	**23.84**	**98**	*e*T		T		08 17 00.1	
	20nm,0.3s								
PPT	**Papeete**	**23.84**	**98**	LR		LR		07 59 25.8	
	comp=Z,152nm,18.9s,baz=282,slow=32								
PPT2	**Papeete2**	**23.84**	**98**	*e*S		**S**		**07 56 16.6**	**0.0**
	621nm,24.8s								
PPT2				*e*LR		LR		07 57 44.0	
	235nm,25.2s								
PPT2				*e*LR		LR		07 57 51.1	
	403nm,26.8s								
PPT2				*e*T		T		08 16 54.2	
	5.4nm,0.4s								
TIAR	**Tiarei**	**24.07**	**98**	*e*T		T		08 17 04.9	
	131nm,0.3s								
TVO	**Taravao**	**24.16**	**98**	*e*T		T		08 17 14.3	
	18nm,0.4s								
PMOR	**Pomariorio Ree**	**25.56**	**92**	*e*T		T		08 19 15.9	
	5.1nm,0.2s								
HNR	**Honiara**	**25.80**	**281**	LR		LR		08 00 35.1	
	comp=Z,26nm,19.7s,baz=213,slow=33								
TAOE	**Nuku Hiva Isla**	**34.13**	**82**	*e*T		T		08 29 39.0	
	35nm,0.2s								
KRVT	**Keravat (AS076**	**34.90**	**285**	LR		LR		08 06 11.4	
	comp=Z,43nm,18.8s,baz=33,slow=34								
H11S2	**WAKE ISLAND Hy**	**38.80**	**331**	T		T		08 34 38.3	
	baz=149,slow=76,SNR=136								
H11S3	**WAKE ISLAND Hy**	**38.81**	**331**	T		T		08 34 38.5	
	baz=149,slow=76,SNR=137								
H11S1	**WAKE ISLAND Hy**	**38.82**	**331**	T		T		08 34 39.7	
	baz=149,slow=76,SNR=135								
H11N3	**WAKE ISLAND Hy**	**39.77**	**332**	T		T		08 35 52.8	
	baz=151,slow=76,SNR=93								
H11N1	**WAKE ISLAND Hy**	**39.77**	**332**	T		T		08 35 53.2	
	baz=151,slow=76,SNR=90								
H11N2	**WAKE ISLAND Hy**	**39.79**	**332**	T		T		08 35 52.1	
	baz=151,slow=76,SNR=81								
WRA	**Warramunga Arr**	**48.82**	**257**	P		P		07 55 29.3	-3.4
	0.9nm,0.7s,baz=84,slow=7.6,SNR=1.9								
	0.9nm,0.7s								
ASAR	**Alice Springs**	**49.08**	**252**	P		P		07 55 31.4	-3.2
	2.1nm,0.7s,baz=87,slow=8.2,SNR=14								
	2.1nm,0.7s								
VNDA	**Vanda**	**62.91**	**186**	P		**P**		**07 57 12.8**	**+0.1**
	0.8nm,0.9s,baz=29,slow=9.1,SNR=3.6								
	0.8nm,0.9s								
QSPA	**South Pole Qui**	**74.27**	**180**	P		**P**		**07 58 24.0**	**0.0**
	2.5nm,1.0s,baz=54,slow=4.9,SNR=4.4								
	2.5nm,1.0s								
YBH	**Yreka Blue Hor**	**74.48**	**38**	P		**P**		**07 58 26.2**	**+0.7**
	1.5nm,0.9s,baz=209,slow=10,SNR=3.7								
	1.5nm,0.9s								
NVAR	**Mina Array Bea**	**75.25**	**42**	P		**P**		**07 58 30.8**	**+0.5**
	0.9nm,0.8s,baz=225,slow=8.9,SNR=6.8								
	0.9nm,0.8s								
TXAR	**Lajitas Array**	**81.62**	**56**	P		**P**		**07 59 05.5**	**+0.1**
	1.1nm,1.0s,baz=226,slow=5.0,SNR=7.1								
	1.1nm,1.0s								
ILAR	**Eielson Array**	**83.00**	**12**	P		**P**		**07 59 11.2**	**-0.6**
	1.0nm,0.9s,baz=217,slow=6.7,SNR=6.0								
	1.0nm,0.9s								
PDAR	**Pinedale Array**	**83.19**	**42**	P		**P**		**07 59 13.1**	**-0.5**
	1.0nm,0.7s,baz=217,slow=2.8,SNR=13								
	1.0nm,0.7s								
YKA	**Yellowknife Ar**	**90.82**	**24**	P		**P**		**07 59 51.0**	**+1.1**
	0.4nm,0.7s,baz=232,slow=4.5,SNR=2.1								
	0.4nm,0.7s								
NNA	**Nana**	**93.91**	**104**	LR		LR		08 31 06.8	
	comp=Z,45nm,21.1s,baz=182,slow=28								
BRTR	**Keskin Array B**	**145.83**	**320**	PKPbc		**PKPdf**		**08 06 24.8**	**-1.4**
	1.2nm,0.7s,baz=54,slow=2.3,SNR=3.6								
GERES	**GERESS Array B**	**146.36**	**350**	PKPbc		**PKPdf**		**08 06 26.0**	**-0.8**
	0.2nm,0.3s,baz=22,slow=1.1,SNR=4.5								

NOU 21 07:48:18.7, 16°.12S×167°.99E, h132km, MLv4.2/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.61**	**173**	P		Pn		07 48 49.1	+1.0
RTV	**Rentapao**	**1.71**	**166**	P		Pn		07 48 50.2	+0.8
MARNC	**Mare, Loyalty**	**5.33**	**180**	P		Pn		07 49 36.0	-0.3
YATNC	**Mamie plateau,**	**6.00**	**190**	P		Pn		07 49 45.4	+0.2
OUENC	**Ouen Island, N**	**6.36**	**190**	P		Pn		07 49 50.9	+0.8

IDC 21 07:49:12.5±5.0, 18°.72S×175°.53W, h620km±35km, mb3.3/4, mbtmp4.3/6, Error ellipse: s-maj=125.4km s-min=40.7km az=27.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.18**	**278**	P		P		07 50 56.

*ANF **21** 07:49:43.4±0.2,58°.33N×133°.48W,h0km±1km, ML3.5/28, Error ellipse: s-maj=1.3km s-min=1.1km az=78.0*
*NEIC **21** 07:49:43.9±1.6,58°.34N±0°.02×133°.48W±0°.04,h5km±2km, ML3.3/52,ML3.0(AEIC),Error ellipse: s-maj=4.6km s-min=3.0km az=318.0*
*AEIC **21** 07:49:43.8±2.0,58°.36N±0°.02×133°.50W±0°.03,h2km±6km, Error ellipse: s-maj=2.9km s-min=2.0km az=173.0*
*PGC **21** 07:49:43.7±0.0,58°.34N×133°.56W,h1km,ML3.4/17,49km east of Juneau, Alaska, Usa Southeastern Alaska*
*IDC **21** 07:49:44.6±1.1,58°.64N×133°.29W,h0km,mb2.8/2, mbtmp3.2/7,ML2.7/5,MS3.2/1,Error ellipse: s-maj=15.6km s-min=9.2km az=27.0*

ISC 21 07:49:44.0±0.7,58°.36N±0°.02×133°.49W±0°.02,h10km, n127,σ1§48/154,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIS	**Juneau Island**	**0.48**	**260**		**Pg**	**07 49 53.0**	**-0.3**
JIS					**Sg**	**07 49 59.5**	**-0.2**
R32K	**Eaglecrest**	**0.55**	**261**		**Pg**	**07 49 54.3**	**-0.4**
R32K					**Sg**	**07 50 01.7**	**-0.2**
R32K	**Eaglecrest**	**0.55**	**261**	P	**Pg**	**07 49 54.2**	**-0.4**
	baz=85,SNR=36						
R32K				S	**Sg**	**07 50 01.7**	**-0.2**
	baz=85						
BESE	**Bessie Mountai**	**0.75**	**287**	P	**Pg**	**07 49 57.1**	**-1.3**
BESE	**Bessie Mountai**	**0.75**	**287**		**Pg**	**07 49 58.1**	**-0.4**
BESE	**Bessie Mountai**	**0.75**	**287**		**Sg**	**07 50 07.7**	**-0.6**
Q32M	**Nakina River**	**0.87**	**46**	P	**Pg**	**07 50 00.6**	**-0.3**
Q32M	**Nakina River**	**0.87**	**46**		**Pg**	**07 50 00.5**	**-0.3**
Q32M	**Nakina River**	**0.87**	**46**	P	**Pg**	**07 50 00.5**	**-0.3**
	baz=226,SNR=75						
Q32M				S	**Sb**	**07 50 13.1**	**0.0**
	baz=226						
S32K	**Killisnoo**	**1.07**	**213**		**Pb**	**07 50 03.9**	**-0.7**
S32K	**Killisnoo**	**1.07**	**213**		**Sn**	**07 50 19.2**	**-0.5**
S32K	**Killisnoo**	**1.07**	**213**	P	**Pb**	**07 50 03.8**	**-0.7**
	baz=33,SNR=40						
S32K				Sb	**Sn**	**07 50 19.3**	**-0.5**
	baz=33						
R31K	**City Hall, Gus**	**1.19**	**273**	P	**Pb**	**07 50 04.3**	**-2.2**
R31K				S	**Sb**	**07 50 20.6**	**-1.3**
R31K	**City Hall, Gus**	**1.19**	**273**		**Pg**	**07 50 06.3**	**-0.4**
R31K					**Sn**	**07 50 23.4**	**+0.7**
R31K	**City Hall, Gus**	**1.19**	**273**	P	**Pb**	**07 50 05.7**	**-0.9**
	baz=94,SNR=15						
R31K				S	**Sn**	**07 50 22.6**	**-0.2**
	baz=94						
P32M	**Atlin**	**1.24**	**355**	P	**Pn**	**07 50 06.7**	**-0.7**
P32M	**Atlin**	**1.24**	**355**		**Pn**	**07 50 07.0**	**-0.4**
P32M	**Atlin**	**1.24**	**355**		**Sn**	**07 50 24.8**	**+0.6**
P32M	**Atlin**	**1.24**	**355**	P	**Pn**	**07 50 06.8**	**-0.5**
	baz=175,SNR=107						
P32M				S	**Sn**	**07 50 25.3**	**+1.2**
	baz=175						
S34M	**Telegraph Cree**	**1.33**	**109**	P	**Pn**	**07 50 07.7**	**-0.8**
S34M				S	**Sg**	**07 50 26.0**	**-0.7**
S34M	**Telegraph Cree**	**1.33**	**109**		**Pg**	**07 50 08.6**	**-0.9**
S34M				IAML		07 50 31.1	
	comp=E,620nm,0.9s						
S34M				IAML		07 50 33.2	
	comp=N,474nm,1.2s						
S34M	**Telegraph Cree**	**1.33**	**109**		**Sg**	**07 50 26.6**	**-0.1**
S34M	**Telegraph Cree**	**1.33**	**109**	P	**Pn**	**07 50 07.7**	**-0.8**
	baz=289,SNR=148						
S34M				S	**Sg**	**07 50 26.2**	**-0.4**
	baz=289						
SKAG	**Skagway**	**1.46**	**320**		**Pb**	**07 50 10.7**	**-0.4**
SKAG				IAML		07 50 33.6	
	comp=N,252nm,1.0s						
SKAG				IAML		07 50 39.6	
	comp=E,337nm,1.0s						
SKAG	**Skagway**	**1.46**	**320**		**Sg**	**07 50 30.6**	**-0.2**
SKAG	**Skagway**	**1.46**	**320**	P	**Pb**	**07 50 10.7**	**-0.4**
	baz=140,SNR=35						
SKAG				S	**Sg**	**07 50 31.3**	**+0.5**
	baz=140						
S31K	**Pelican**	**1.51**	**256**		**Pn**	**07 50 10.4**	**-0.6**
S31K				IAML		07 50 38.9	
	comp=E,192nm,0.8s						
S31K				IAML		07 50 39.7	
	comp=N,175nm,1.1s						
S31K	**Pelican**	**1.51**	**256**		**Sg**	**07 50 32.0**	**-0.5**
S31K	**Pelican**	**1.51**	**256**	P	**Pb**	**07 50 11.3**	**-0.7**
	baz=75						
S31K				S	**Sg**	**07 50 31.9**	**-0.5**
	baz=75						
T33K	**Petersburg**	**1.58**	**169**		**Pb**	**07 50 12.1**	**-1.1**
T33K					**Sg**	**07 50 34.1**	**-0.5**
T33K	**Petersburg**	**1.58**	**169**	P	**Pb**	**07 50 12.1**	**-1.1**
	baz=349						
T33K				S	**Sg**	**07 50 33.5**	**-1.1**
	baz=349						
SIT	**Sitka**	**1.64**	**218**		**Pn**	**07 50 12.2**	**-0.6**
SIT				IAML		07 50 42.5	
	comp=N,235nm,1.1s						
SIT	**Sitka**	**1.64**	**218**		**Sg**	**07 50 35.4**	**-1.2**
SIT	**Sitka**	**1.64**	**218**	P	**Pb**	**07 50 12.9**	**-1.3**
	baz=37						
SIT				S	**Sb**	**07 50 34.5**	**-0.4**
	baz=37						
R33M	**Jennings River**	**1.67**	**51**	Pn	**Pb**	**07 50 14.2**	**-0.7**
R33M				Sn	**Sg**	**07 50 37.1**	**-0.5**
R33M	**Jennings River**	**1.67**	**51**		**Pb**	**07 50 14.6**	**-0.2**
R33M				IAML		07 50 39.2	
	comp=N,386nm,0.9s						
R33M				IAML		07 50 40.8	
	comp=E,305nm,0.8s						
R33M	**Jennings River**	**1.67**	**51**	P	**Pb**	**07 50 14.1**	**-0.8**
	baz=232,SNR=113						
R33M				S	**Sg**	**07 50 37.1**	**-0.5**
	baz=232						
DLBC	**Dease Lake**	**1.82**	**86**	Pg	**Pb**	**07 50 16.1**	**-1.4**
	comp=E,5.7nm,0.3s,baz=289,slow=14,SNR=174						
DLBC				Lg	Lg	07 50 39.7	
	comp=E,29nm,0.3s,baz=24,slow=20,SNR=20						
DLBC	**Dease Lake**	**1.82**	**86**	Pn	**Pb**	**07 50 16.0**	**-1.4**
DLBC	**Dease Lake**	**1.82**	**86**		**Pn**	**07 50 15.8**	**+0.3**
DLBC	**Dease Lake**	**1.82**	**86**	P	**Pb**	**07 50 16.1**	**-1.4**
	baz=268,SNR=123						
DLBC				S	**Sb**	**07 50 40.6**	**+0.3**
	baz=268						
PLBC	**Pleasant Camp**	**1.85**	**308**	Pn	**Pb**	**07 50 16.7**	**-1.2**
PLBC	**Pleasant Camp**	**1.85**	**308**		**Pb**	**07 50 17.0**	**-0.8**
PLBC	**Pleasant Camp**	**1.85**	**308**	P	**Pb**	**07 50 16.7**	**-1.2**
	baz=126,SNR=70						
PLBC				S	**Sb**	**07 50 41.5**	**+0.4**
	baz=126						
P33M	**Teslin, Yukon**	**1.89**	**10**	Pn	**Pn**	**07 50 17.1**	**+0.8**
P33M	**Teslin, Yukon**	**1.89**	**10**		**Pb**	**07 50 17.6**	**-0.9**
P33M				IAML		07 50 45.5	
	comp=N,141nm,0.8s						
P33M	**Teslin, Yukon**	**1.89**	**10**	P	**Pn**	**07 50 17.1**	**+0.8**
	baz=191,SNR=71						
P33M				S	**Sb**	**07 50 42.0**	**-0.2**
	baz=191						
WRAK	**Wrangell Islan**	**2.04**	**162**	Pn	**Pn**	**07 50 18.5**	**+0.2**
WRAK	**Wrangell Islan**	**2.04**	**162**		**Pn**	**07 50 18.3**	**-0.1**
WRAK				IAML		07 50 49.7	
	comp=N,153nm,0.8s						
WRAK				IAML		07 50 53.4	
	comp=N,230nm,0.7s						
WRAK	**Wrangell Islan**	**2.04**	**162**	P	**Pn**	**07 50 18.3**	**-0.1**
	baz=342,SNR=39						
WRAK				S	**Sb**	**07 50 44.7**	**-1.8**
	baz=342						
T35M	**Bob Quinn**	**2.22**	**127**	Pn	**Pn**	**07 50 21.7**	**+0.8**
T35M	**Bob Quinn**	**2.22**	**127**		**Pb**	**07 50 22.0**	**-2.2**
T35M				IAML		07 50 57.4	
	comp=N,205nm,0.9s						
T35M	**Bob Quinn**	**2.22**	**127**	P	**Pn**	**07 50 21.0**	**+0.1**
	baz=309,SNR=44						
T35M				Sb	**Sg**	**07 50 53.7**	**-1.6**
	baz=309						
U33K	**Whale Pass**	**2.26**	**175**		**Pn**	**07 50 21.3**	**-0.1**
U33K				IAML		07 51 00.5	
	comp=E,204nm,1.2s						
U33K	**Whale Pass**	**2.26**	**175**	P	**Pn**	**07 50 21.2**	**-0.1**
	baz=355						
U33K				S	**Sb**	**07 50 51.0**	**-1.9**
	baz=355						
WHY	**Whitehorse**	**2.41**	**343**	Pn	**Pn**	**07 50 24.1**	**+0.6**
WHY	**Whitehorse**	**2.41**	**343**		**Pn**	**07 50 24.6**	**+1.1**
WHY				IAML		07 51 03.2	
	comp=E,183nm,0.8s						
WHY				IAML		07 51 10.2	
	comp=N,148nm,1.2s						
WHY	**Whitehorse**	**2.41**	**343**	P	**Pn**	**07 50 24.2**	**+0.6**
	baz=163						
WHY				S	**Sb**	**07 50 55.4**	**-1.8**
	baz=163						
P30M	**Million Dollar**	**2.51**	**316**	Pn	**Pn**	**07 50 25.7**	**+0.9**
P30M	**Million Dollar**	**2.51**	**316**	P	**Pn**	**07 50 26.6**	**+1.8**
	baz=134						
P30M				Sb	**Sg**	**07 51 02.6**	**-1.9**
	baz=134						
P29M	**Windy Craggy**	**2.54**	**302**	Pn	**Pn**	**07 50 26.3**	**+1.1**
P29M	**Windy Craggy**	**2.54**	**302**		**Pn**	**07 50 26.6**	**+1.4**
P29M				IAML		07 51 07.9	
	comp=E,105nm,0.8s						
P29M	**Windy Craggy**	**2.54**	**302**	P	**Pn**	**07 50 26.1**	**+0.9**
	baz=119,SNR=7.0						
P29M				Sb	**Sg**	**07 51 03.9**	**-1.6**
	baz=119						
O30N	**Mendenhall**	**2.75**	**332**	Pn	**Pn**	**07 50 29.6**	**+1.4**
O30N	**Mendenhall**	**2.75**	**332**		**Pn**	**07 50 29.2**	**+1.0**
O30N	**Mendenhall**	**2.75**	**332**	IAML		07 51 13.5	
	comp=E,156nm,0.7s						
O30N				IAML		07 51 24.4	
	comp=N,112nm,1.0s						
O30N	**Mendenhall**	**2.75**	**332**	P	**Pn**	**07 50 29.3**	**+1.1**
	baz=151,SNR=21						
O30N				Sb	**Sg**	**07 51 10.3**	**-2.0**
	baz=151						
N32M	**Quiet Lake**	**2.81**	**4**	Pn	**Pn**	**07 50 30.5**	**+1.6**
N32M	**Quiet Lake**	**2.81**	**4**		**Pn**	**07 50 30.9**	**+2.0**
N32M	**Quiet Lake**	**2.81**	**4**	P	**Pn**	**07 50 30.4**	**+1.5**
	baz=185						
CRAG	**Craig**	**2.91**	**176**	Sg	**Sg**	**07 51 17.5**	**+0.3**
	baz=356						
WTLY	**Watson Lake, Y**	**2.98**	**52**	Sb	**Sg**	**07 51 17.3**	**-2.4**
	baz=235						
HYT	**Haines Junctio**	**3.20**	**322**	Pn	**Pn**	**07 50 35.1**	**+0.7**
HYT	**Haines Junctio**	**3.20**	**322**		**Pn**	**07 50 36.0**	**+1.6**
HYT				IAML		07 51 33.7	
	comp=N,98nm,1.2s						
HYT				IAML		07 51 36.2	
	comp=E,91nm,1.2s						
HYT	**Haines Junctio**	**3.20**	**322**	P	**Pn**	**07 50 35.9**	**+1.4**
	baz=139,SNR=7.9						
HYT				Sb	**Sg**	**07 51 23.6**	**-3.1**
	baz=139						
V35K	**Ketchikan**	**3.21**	**161**	P	**Pn**	**07 50 35.0**	**+0.6**
	baz=342						
O29M	**Mount Kennedy**	**3.25**	**309**	Pg	**Pb**	**07 50 42.0**	**+0.1**
O29M	**Mount Kennedy**	**3.25**	**309**	Pb	**Pb**	**07 50 41.9**	**+0.1**
	baz=125						
O29M				Sb	**Sg**	**07 51 25.7**	**-2.6**
	baz=125						
N31M	**Braeburn, Yuko**	**3.34**	**341**	Pn	**Pn**	**07 50 37.6**	**+1.4**
N31M	**Braeburn, Yuko**	**3.34**	**341**		**Pn**	**07 50 37.3**	**+1.1**
N31M	**Braeburn, Yuko**	**3.34**	**341**	P	**Pn**	**07 50 37.6**	**+1.4**
	baz=159,SNR=11						
YUK5	**Granite Creek**	**3.55**	**323**	Sg	**Sg**	**07 51 34.6**	**-3.3**
YUK6	**Outpost Mounta**	**3.58**	**318**	Pg	**Pg**	**07 50 51.2**	**-1.3**
	baz=135						
N30M	**Aishikik Lake**	**3.60**	**331**	Pn	**Pn**	**07 50 41.4**	**+1.6**
N30M				Sg	**Sg**	**07 51 35.8**	**-3.6**
N30M	**Aishikik Lake**	**3.60**	**331**	IAML		07 51 44.0	
	comp=N,72nm,0.7s						
N30M				IAML		07 51 50.9	
	comp=E,80nm,1.4s						
N30M	**Aishikik Lake**	**3.60**	**331**	P	**Pn**	**07 50 41.3**	**+1.6**
	baz=149						
N30M				Sb	**Sg**	**07 51 35.6**	**-3.8**
	baz=149						
M31M	**Drury Creek, Y**	**3.88**	**354**	IAML		07 51 54.7	
	comp=E,54nm,1.2s						
M31M				IAML		07 52 01.4	
	comp=N,41nm,0.9s						
M31M	**Drury Creek, Y**	**3.88**	**354**	P	**Pn**	**07 50 45.6**	**+2.0**
	baz=173,SNR=17						
YUK4	**Talbot Arm**	**3.96**	**321**	Pg	**Pb**	**07 50 55.1**	**+1.1**
YUK4	**Talbot Arm**	**3.96**	**321**	P	**Pn**	**07 50 47.0**	**+2.1**
	baz=139						
BRWY	**Burwash Landin**	**4.11**	**320**	P	**Pn**	**07 50 48.3**	**+1.4**
	baz=135						
O28M	**Mount Upton**	**4.18**	**308**	Pb	**Pb**	**07 50 58.5**	**+0.8**
	baz=123						
YUK8	**Steele Glacier**	**4.32**	**315**	Pb	**Pb**	**07 51 00.4**	**+0.4**
	baz=131						
MMPY	**Sheldon Lake,**	**4.41**	**13**		**Pn**	**07 50 53.2**	**+2.3**
M30M	**Minto, Yukon**	**4.53**	**340**	Pn	**Pn**	**07 50 53.8**	**+1.2**
M30M	**Minto, Yukon**	**4.53**	**340**	IAML		07 52 18.9	
	comp=N,35nm,1.2s						
M30M	**Minto, Yukon**	**4.53**	**340**	P	**Pn**	**07 50 53.6**	**+1.0**
	baz=158,SNR=34						
L29M	**L29M**	**5.28**	**336**	Pn	**Pn**	**07 51 03.7**	**+0.9**
L29M	**L29M**	**5.28**	**336**	P	**Pn**	**07 51 04.0**	**+1.1**
	baz=153,SNR=7.4						
GRIB	**Gribbell Islan**	**5.60**	**152**	Pn	**Pn**	**07 51 08.5**	**+1.2**
K29M	**Barlow Dome**	**5.83**	**342**	Pn	**Pn**	**07 51 11.5**	**+1.0**
K29M	**Barlow Dome**	**5.83**	**342**	P	**Pn**	**07 51 12.0**	**+1.4**
	baz=159,SNR=27						
BCAR	**Beaver Creek A**	**6.23**	**323**	Pn	**Pn**	**07 51 19.3**	**+3.4**
J30M	**Hart River**	**6.38**	**349**	Pn	**Pn**	**07 51 19.8**	**+1.8**
J30M	**Hart River**	**6.38**	**349**	P	**Pn**	**07 51 19.8**	**+1.8**
	baz=167,SNR=14						
DAWY	**Dawson**	**6.39**	**336**	Pn	**Pn**	**07 51 19.6**	**+1.5**
BBB	**Bella Bella**	**6.91**	**151**	Pn	Pn	07 51 29.9	+4.8
	comp=N,0.2nm,0.3s,baz=330,slow=14,SNR=2.0						
BBB				Lg	Lg	07 53 20.0	
	comp=N,0.1nm,0.3s,baz=258,slow=19,SNR=3.5						
	comp=E,4.0nm,0.8s						
I30M	**Mount Dempster**	**7.02**	**350**	Pn	**Pn**	**07 51 29.5**	**+2.7**
I30M	**Mount Dempster**	**7.02**	**350**	P	**Pn**	**07 51 29.3**	**+2.5**
	baz=168,SNR=34						
H31M	**Peel River**	**7.48**	**357**	Pn	**Pn**	**07 51 34.9**	**+1.9**
H31M	**Peel River**	**7.48**	**357**	P	**Pn**	**07 51 34.9**	**+1.9**
	baz=177,SNR=7.5						
I28M	**Miner Creek**	**7.73**	**340**		**Pn**	**07 51 38.9**	**+2.4**
EPYK	**Eagle Plains**	**8.18**	**351**	Pn	**Pn**	**07 51 44.9**	**+2.4**
H29M	**Whitestone**	**8.20**	**346**	Pn	**Pn**	**07 51 45.0**	**+2.1**
H29M	**Whitestone**	**8.20**	**346**	Pn	**Pn**	**07 51 44.9**	**+2.1**
H29M	**Whitestone**	**8.20**	**346**	P	**Pn**	**07 51 44.3**	**+1.4**
	baz=162,SNR=5.4						
G31M	**Satah River**	**8.60**	**358**	Pn	**Pn**	**07 51 50.2**	**+1.8**
G31M	**Satah River**	**8.60**	**358**		**Pn**	**07 51 50.4**	**+2.1**
G31M	**Satah River**	**8.60**	**358**	P	**Pn**	**07 51 50.1**	**+1.8**
	baz=177,SNR=11						
G29M	**Pine Creek**	**8.83**	**348**	Pn	**Pn**	**07 51 53.1**	**+1.7**
ILAR	**Eielson Array**	**9.05**	**321**	Pn	**Pn**	**07 51 54.5**	**+0.1**
	baz=125,slow=11,SNR=5.7						
ILAR				Pg		07 52 14.7	
	baz=109,slow=14,SNR=4.3						
ILAR				Lg	Lg	07 54 26.0	
	comp=N,0.1nm,0.3s,baz=120,slow=27,SNR=12						
	comp=N,0.3nm,0.8s						
INK	**Inuvik**	**9.98**	**360**	Pn	**Pn**	**07 52 04.4**	**-2.8**
	comp=N,0.1nm,0.3s,baz=178,slow=9.8,SNR=5.1						
INK				Lg	Lg	07 54 49.3	
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=1.6						
	comp=N,1.4nm,0.9s						
KDAK	**Kodiak Island**	**10.13**	**275**	Pn	**Pn**	**07 52 10.9**	**+1.6**
	comp=N,0.1nm,0.3s,baz=128,slow=12,SNR=2.2						
	comp=N,3.6nm,0.8s						
YKA	**Yellowknife Ar**	**10.19**	**58**	Pn	**Pn**	**07 52 06.5**	**-3.6**
	baz=252,slow=12,SNR=2.0						
YKA				Lg	Lg	07 54 54.2	
	baz=255,slow=27,SNR=1.5						
	comp=N,0.3nm,0.6s						
E29M	**Blow River**	**10.25**	**351**	P	**Pn**	**07 52 12.7**	**+1.8**
	baz=167,SNR=14						
PDAR	**Pinedale Array**	**21.61**	**126**	P	**P**	**07 54 36.9**	**+2.8**
	comp=N,0.1nm,0.5s,baz=318,slow=12,SNR=2.4						
PDAR				LR	LR	08 02 57.4	
	comp=N,68nm,19.2s,baz=234,slow=36						
	comp=N,0.1nm,0.5s						
NVAR	**Mina Array Bea**	**22.25**	**147**	P	**P**	**07 54 45.9**	**+4.9**
	comp=N,0.8nm,0.8s,baz=316,slow=9.6,SNR=4.7						
	comp=N,0.8nm,0.8s						

*IDC **21** 08:05:08.0±3.5,53°.59N×87°.95E,h0km,mbtmp2.7/2, ML2.3/1,Error ellipse: s-maj=31.2km s-min=18.2km az=52.0*

ASRS 21 08:05:06.0±0.5,53°.62N×87°.87E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.84**	**282**	Pg	Pg	08 05 42.0	+0.8
	1.1nm,0.3s,baz=97,slow=14,SNR=13						
ZALV				Lg	Lg	08 06 08.2	
	1.2nm,0.3s,baz=93,slow=28,SNR=9.2						
I46RU	**ZALESOVO INFRA**	**1.84**	**282**	I	I	08 16 46.7	
	0.1nm,0.8s,baz=99,slow=318,SNR=3.1						
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	08 06 45.7	+3.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.9						
KURBB				Lg	Lg	08 08 34.1	
	baz=66,slow=29,SNR=4.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	08 07 02.6	+3.1
	0.1nm,0.3s,baz=26,slow=16,SNR=1.6						
MKAR				Lg	Lg	08 09 13.4	
	0.1nm,0.3s,baz=39,slow=30,SNR=2.7						

*IDC **21** 08:05:25.0±5.4,53°.47N×91°.09E,h0km,mbtmp3.0/3, ML2.5/3,Error ellipse: s-maj=55.0km s-min=35.8km az=65.0*

ASRS 21 08:05:22.0±0.4,53°.78N×91°.07E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.70**	**275**	I	I	08 27 00.0	
	0.3nm,0.9s,baz=91,slow=318,SNR=6.9						
ZALV	**Zalesovo Beam**	**3.70**	**275**	Pn	Pn	08 06 24.1	+3.6
	0.4nm,0.3s,baz=90,slow=15,SNR=1.6						
ZALV				Pg	Pg	08 06 34.1	+1.1
	0.8nm,0.3s,baz=98,slow=16,SNR=5.4						
ZALV				Lg	Lg	08 07 16.4	
	0.8nm,0.3s,baz=96,slow=28,SNR=4.0						
	1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**8.33**	**253**	Pn	Pn	08 07 26.2	+2.3
	0.1nm,0.3s,baz=62,slow=14,SNR=4.5						
KURBB				Lg	Lg	08 09 45.7	
	baz=64,slow=30,SNR=4.5						
	0.4nm,0.2s						
MKAR	**Makanchi Array**	**8.97**	**222**	Pn	Pn	08 07 32.7	0.0
	0.1nm,0.3s,baz=36,slow=17,SNR=2.8						
	0.3nm,0.4s						

IDC 21 08:11:23.4±1.9,51°.67N×82°.19E,h0km,mbtmp2.2/3, ML1.7/3,Error ellipse: s-maj=18.9km s-min=17.8km az=12.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.53**	**247**	Pn	Pn	08 12 06.2	+0.5
	baz=64,slow=16,SNR=4.3						
KURBB				Lg	Lg	08 12 41.7	
	0.1nm,0.3s,baz=66,slow=32,SNR=11						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**2.78**	**34**	Pn	Pn	08 12 08.2	-1.0
	0.3nm,0.3s,baz=214,slow=15,SNR=5.9						
ZALV				Lg	Lg	08 12 42.7	
	0.1nm,0.3s,baz=214,slow=33,SNR=2.0						
	1.6nm,0.5s						
I46RU	**ZALESOVO INFRA**	**2.78**	**34**	I	I	08 26 00.0	
	baz=216,slow=328,SNR=2.5						
MKAR	**Makanchi Array**	**4.88**	**179**	Pn	Pn	08 12 39.4	+1.3
	0.2nm,0.3s,baz=1.7,slow=11,SNR=7.4						
MKAR				Lg	Lg	08 13 56.9	
	0.1nm,0.3s,baz=6.5,slow=28,SNR=2.1						
	0.8nm,0.5s						

*IDC **21** 08:42:34.3±4.4,30°.56N×94°.90E,h82km±46km,mb3.3/6, mbtmp3.6/9,ML3.1/1,MS3.9/1,Error ellipse: s-maj=40.7km s-min=19.4km az=61.0*

ISC 21 08:42:26.7±0.9,30°.3N±0°.1×94°.9E±0°.2,h23km,n10, σ1§16/9,mb3.5/4,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.32**	**162**	P	**P**	**08 45 31.2**	**-1.5**
	0.7nm,0.3s,baz=344,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**19.18**	**333**	P	**P**	**08 46 48.9**	**+0.2**
	0.1nm,0.3s,baz=162,slow=13,SNR=4.2						
	0.5nm,0.8s						
SONM	**Songino Array**	**19.66**	**24**	P	**P**	**08 46 53.5**	**-0.6**
	0.6nm,0.6s,baz=209,slow=12,SNR=4.1						
AAK	**Ala-Archa**	**20.47**	**313**	P	**P**	**08 47 02.7**	**-0.2**
	1.4nm,0.4s,baz=133,slow=8.9,SNR=6.7						
	1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**23.74**	**334**	P	**P**	**08 47 36.1**	**-0.9**
	0.3nm,0.3s,baz=142,slow=11,SNR=4.8						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**24.77**	**346**	P	**P**	**08 47 46.6**	**+0.1**
	0.4nm,0.4s,baz=168,slow=8.7,SNR=1.2						
	0.4nm,0.4s						
KSRS	**Korea Array**	**28.27**	**66**	LR	LR	09 00 13.4	
	comp=Z,253nm,19.6s,baz=165,slow=38						
AKASG	**Malin Array Be**	**52.14**	**313**	P	**P**	**08 51 34.5**	**-0.5**
	0.9nm,0.6s,baz=81,slow=6.4,SNR=4.2						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**65.41**	**141**	P	**P**	**08 53 09.5**	**+1.8**
	0.6nm,0.9s,baz=340,slow=6.8,SNR=4.3						
	0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**86.18**	**283**	P	**P**	**08 55 07.6**	**+0.9**
	0.8nm,0.8s,baz=70,slow=2.5,SNR=3.0						
	0.8nm,0.8s						

*IDC **21** 08:54:19.6±0.6,30°.10N×130°.94E,h0km,mb4.2/28, mbtmp4.2/33,ML3.5/6,MS4.1/46,Error ellipse: s-maj=16.4km s-min=13.3km az=79.0*
*BJI **21** 08:54:22.4,29°.99N×131°.19E,h28km,mB4.8/22,mb4.5/48, Ms4.6/51,Ms7.4 5/50*
*NIED **21** 08:54:22.4,30°.03N×131°.28E,h23km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.15; Mθθ-0.24; Mφφ-0.91; Mrθ0.37; Mθφ-0.88; Mφr0.20; Fault plane solution: M0 1.41000×10¹⁶ NP1: φs202.00000°,δ38.00000°,λ70.00000°. NP2:φs46.00000°, δ54.00000°,λ105.00000°.*
*JMA **21** 08:54:22.4±0.2,30°.0N±0°.5×131°.3E±0°.7,h23km±1km, MD4.6/25,MW4.7/25,E OFF TANEGASHIMA ISLAND*
*J

JKC ⇓S **Sn** **08 54 55.2 +1.5**
comp=N,22nm,5.1s,comp=E,25nm,1.7s
JTSR Tashiro 2 1.07 348 P **Pb** **08 54 43.6 -0.4**
JTSR A A 08 54 43.6
comp=N,18nm,1.5s,comp=E,17nm,2.0s
JTSR S **Sb** **08 54 58.8 +1.1**
JNN Nakanoshima 1.17 257 P **Pn** **08 54 44.5 -0.2**
JNN A A 08 54 44.5
comp=N,29nm,2.7s,comp=E,49nm,1.6s
JNAR Kushima--Naru 1.41 3 P **Pn** **08 54 48.4 +0.4**
JNAR A A 08 54 48.4
comp=N,30nm,1.5s,comp=E,18nm,2.0s
JSU Suzuyama 1.52 336 **Pn** **08 54 50.0 +0.4**
JSU Suzuyama 1.52 336 P **Pn** **08 54 50.0 +0.4**
JSU Suzuyama 1.52 336 P **Pn** **08 54 49.1 -0.4**
JSU *e*S **Sb** **08 55 10.0 -0.6**
JNKG Nichinankitago 1.55 6 *e*P **Pn** **08 54 50.3 +0.4**
JNKG A A 08 54 50.3
comp=N,16nm,2.2s,comp=E,19nm,3.1s
JNKG S **Sb** **08 55 10.4 -0.9**
JTZ Takazaki 1.78 357 A A 08 54 53.9
comp=N,12nm,2.1s,comp=E,16nm,2.8s
JZO Okuchi 2.08 346 A A 08 54 58.4
comp=N,5.0nm,1.9s,comp=E,4.0nm,5.7s
JZK Kikaishima 2.08 211 A A 08 54 56.6
comp=N,40nm,2.1s,comp=E,37nm,2.8s
JNU Nakatsue 3.01 355 Pn **Pn** **08 55 09.0 -1.0**
comp=E,14nm,0.3s,baz=201,slow=4.7,SNR=87
JNU Sn **Sn** **08 55 45.7 +0.5**
comp=E,18nm,0.3s,baz=57,slow=21,SNR=7.4
comp=E,29nm,0.3s
JOW Kunigami 4.16 219 **Pn** **08 55 25.5 -0.2**
JOW Kunigami 4.16 219 P **Pn** **08 55 24.4 -1.3**
JMN Monobe 4.27 32 **Pn** **08 55 27.8 +0.5**
JMN Monobe 4.27 32 P **Pn** **08 55 27.8 +0.5**
JMZ Minamidaito 2 4.28 180 **Pn** **08 55 28.0 +0.6**
JMZ Minamidaito 2 4.28 180 P **Pn** **08 55 27.3 -0.1**
JTU Tsushima 4.65 341 P **Pn** **08 55 34.2 +1.8**
TJN Taejon 7.02 334⇑ *e*P **Pn** **08 56 05.8 +0.8**
TJN Taejon 7.02 334 **Pn** **08 56 06.0 +1.0**
INU Inuyama 7.16 42 **Pn** **08 56 08.5 +1.5**
INU Inuyama 7.16 42 P **Pn** **08 56 09.5 +2.5**
JSG Sagara 7.46 51 P **Pn** **08 56 12.2 +1.1**
JGF Kuroka 7.54 42 **Pn** **08 56 13.0 +0.8**
JGF Kuroka 7.54 42 P **Pn** **08 56 12.4 +0.1**
KSRS Korea Array 7.81 341 Pn **Pn** **08 56 13.5 -2.4**
comp=E,0.5nm,0.3s,baz=159,slow=14,SNR=38
KS19 Wonju Array Si 7.87 340 **Pn** **08 56 15.3 -1.4**
JHJ Hachijo jima 2 7.92 66 Pn **Pn** **08 56 19.3 +1.9**
comp=E,10nm,0.3s,baz=252,slow=20,SNR=9.2
JHJ Sn **Sn** **08 57 40.4 -5.7**
baz=216,slow=19
comp=E,246nm,1.2s
INCN Inchon 8.27 334 P **Pn** **08 56 23.5 +1.3**
INCN Inchon 8.27 334 P **Pn** **08 56 23.5 +1.3**
SSE Sheshan 8.68 279 P **Pn** **08 56 25.9 -1.9**
SSE S **Sn** **08 58 04.1 -0.6**
SSE pmax pmax
comp=E,11nm,0.6s
SSE L L
comp=E,430nm,17.5s
SSE L L
comp=E,890nm,14.1s
SSE L L
comp=E,1μm,13.6s
MAJO Matsushiro 8.69 41 *c i*P **Pn** **08 56 29.2 +1.2**
MAJO Matsushiro 8.69 41 **Pn** **08 56 29.3 +1.2**
MAJO Matsushiro 8.69 41 P **Pn** **08 56 29.8 +1.8**
MJAR Matsushiro Arr 8.69 41 Pn **Pn** **08 56 29.7 +1.7**
comp=E,0.3nm,0.3s,baz=200,slow=13,SNR=16
comp=E,5.7nm,0.8s
MJB9 Matsu-Tunnel 8.69 41 **Pn** **08 56 30.4 +2.4**
YOJ Yonaguni jima 9.20 234 P **Pn** **08 56 33.4 -1.6**
YOJ Yonaguni jima 9.20 234 P **Pn** **08 56 33.4 -1.6**
JCJ Chichijima 10.12 105 LR LR 09 00 18.7
comp=E,522nm,18.3s,baz=316,slow=35
YHNB Yeheng 10.27 240 P **Pn** **08 56 48.2 -1.5**
NJ2 Nanjing 10.75 283 *e*P **Pn** **08 56 56.5 +0.3**
NJ2 pmax pmax
comp=E,33nm,0.6s
NJ2 L L
comp=E,3μm,16.1s
NJ2 L L
comp=E,2μm,18.9s
NJ2 L L
comp=E,11μm,20.8s
YULB Yu-li 11.08 235 P Pn 08 56 53.0 -7.9
SSLB Suanglung 11.09 238 P **Pn** **08 57 01.4 +0.4**
DL2 Dalian 11.79 321 *e*P **Pn** **08 57 13.5 +3.2**
DL2 S **Sn** **08 59 24.9 +3.9**
DL2 pmax pmax
comp=E,15nm,0.8s
DL2 pmax pmax
comp=E,170nm,4.6s
DL2 L L
comp=E,1μm,14.6s
DL2 L L
comp=E,2μm,13.4s
DL2 L L
comp=E,2μm,13.9s
TIA Tai'an 13.25 301 P **P** **08 57 35.8 -4.2**
TIA S **Sn** **09 00 01.6 +4.7**
TIA pmax pmax
comp=E,32nm,1.2s
TIA pmax pmax
comp=E,200nm,6.3s
TIA L L
comp=E,990nm,12.1s
TIA L L
comp=E,3μm,13.5s
TIA L L
comp=E,3μm,13.0s
USRK Ussuriysk Ar. 14.07 2 Pn **Pn** **08 57 41.0 -0.6**
comp=E,0.3nm,0.3s,baz=175,slow=9.4,SNR=6.8
USRK LR LR 09 02 59.2
comp=E,644nm,21.6s,baz=176,slow=37
comp=E,1.2nm,0.7s
USRK Ussuriysk Ar. 14.07 2 P **Pn** **08 57 41.0 -0.6**
CN2 Changchun 14.40 343 *e*P **Pn** **08 57 49.0 +2.9**
CN2 *es*P P 08 57 59.5 +6.8
CN2 *e*S **Sn** **09 00 29.0 +4.1**
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,100nm,5.0s
CN2 L L
comp=E,1μm,12.0s
CN2 L L
comp=E,400nm,12.0s
CN2 L L
comp=E,1μm,13.0s
HNS HongShan 15.50 302 ⇑P **Pn** **08 58 02.3 +1.5**
HNS S **S** **09 01 02.3 -4.6**
HNS pmax pmax
comp=E,10.0nm,1.3s
HNS L L
comp=E,1μm,14.6s
HNS L L
comp=E,1μm,14.4s
HNS L L
comp=E,2μm,14.0s
BJI2 Beijing 15.75 313 P **P** **08 58 06.0 -1.7**
BJI2 S **Sn** **09 01 01.8 +4.0**
BJI2 pmax pmax
comp=E,6.0nm,0.7s
BJI2 L L
comp=E,590nm,13.9s
BJI2 L L
comp=E,810nm,14.3s
BJI2 L L
comp=E,1μm,13.9s
BJT Baijiatuau 15.76 313 P **Pn** **08 58 05.5 +1.4**
BJT Baijiatuau 15.76 313 P **Pn** **08 58 05.5 +1.4**
BNX BinXian 15.88 350 ⇓P **P** **08 58 09.9 +0.8**
BNX pmax pmax
comp=E,17nm,1.4s
LYN LuoYang 16.43 290 P **Pn** **08 58 11.5 -1.2**
LYN sP pP 08 58 19.9 -2.5
LYN sS S 09 01 22.8 -3.0
LYN pmax pmax
comp=E,290nm,7.3s
LYN L L
comp=E,700nm,13.4s
LYN L L
comp=E,2μm,15.3s
LYN L L
comp=E,3μm,14.5s
ASAJ Asahikawa 16.65 30 Pn **P** **08 58 16.9 -0.8**
comp=E,0.1nm,0.3s,baz=174,slow=10.0,SNR=3.3
ASAJ LR LR 09 05 00.5
comp=E,751nm,21.0s,baz=240,slow=38
comp=E,9.0nm,1.0s
JKA Kamikawa-asahi 16.65 30 **P** **08 58 16.9 -0.8**
JKA Kamikawa-asahi 16.65 30 IAmb IAmb 08 58 18.3
comp=Z,11nm,1.0s
XLT XiLinHaoTe 18.26 323 *e*P **P** **08 58 37.0 +1.5**
XLT pP sP 08 58 47.5 +1.8
XLT sP pP 08 58 51.3 +8.6
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax
comp=Z,170nm,6.9s
XLT L L
comp=Z,1μm,13.5s
XLT L L
comp=Z,1μm,13.5s
ENH Enshi 18.76 276 P **Pn** **08 58 41.4 -0.3**
YSS Yuzhno-Sakhali 19.06 25 *e*P **Pn** **08 58 46.6 +1.6**
YSS *e*S **Sn** **09 02 13.0 -4.6**
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS pmax pmax
comp=Z,100nm,3.4s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzhno-Sakhali 19.06 25 P **Pn** **08 58 45.6 +0.6**
HHC Hu-ho-hao-te 19.20 309 *e*P **P** **08 58 44.6 -1.3**
HHC sP sP 08 58 57.9 +1.9
HHC S **Sn** **09 02 14.3 -7.0**
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,150nm,5.5s
HHC L L
comp=Z,880nm,14.9s
HHC L L
comp=Z,1μm,13.4s
HHC L L
comp=Z,2μm,13.7s
XAN Xi'an 19.26 287 ⇓P **P** **08 58 45.6 -1.0**
XAN pP pP 08 58 51.8 -2.0
XAN pmax pmax
comp=Z,10.0nm,1.3s
XAN L L
comp=Z,1μm,14.4s
XAN L L
comp=Z,950nm,15.1s
XAN L L
comp=Z,1μm,12.4s
BTO2 Baotou 20.30 307 *e*P Pn 08 59 00.3 +0.3
BTO2 S Sn 09 02 47.9 0.0
BTO2 pmax pmax
comp=Z,12nm,0.5s
BTO2 pmax pmax
comp=Z,370nm,6.0s
BTO2 L L
comp=Z,2μm,17.9s
BTO2 L L
comp=Z,2μm,13.0s
BTO2 L L
comp=Z,4μm,15.0s
HEH HeiHe 20.32 353 *e*P **P** **08 58 58.0 +0.1**
HEH pP **pP** **08 59 04.1 -0.8**
HEH S **S** **09 02 44.6 +0.4**
HEH sS **pS** **09 03 00.6 +1.9**
HEH pmax pmax
comp=Z,13nm,1.2s
HEH L L
comp=Z,550nm,12.1s
HEH L L
comp=Z,420nm,13.4s
HEH L L
comp=Z,870nm,13.0s
GUMO Guam 20.74 140 LR LR 09 06 46.6
comp=Z,205nm,18.3s,baz=326,slow=36
HIA Hailar 21.01 339 P **P** **08 59 06.8 +1.3**
HIA Hailar 21.01 339 P **P** **08 59 06.8 +1.3**
HILR Hailar Array B 21.27 339 P **P** **08 59 08.1 -0.1**
comp=Z,6.4nm,0.8s,baz=156,slow=16,SNR=4.2
comp=Z,6.4nm,0.8s
GYA Guiyang 21.89 266 P **P** **08 59 15.9 +0.7**
GYA pmax pmax
comp=Z,19nm,0.8s
QIZ Qiongzhong 22.29 245 P **P** **08 59 20.5 +1.1**
QIZ S **S** **09 03 25.5 +2.2**
QIZ L L
comp=Z,550nm,13.8s
QIZ L L
comp=Z,310nm,15.4s
QIZ L L
comp=Z,690nm,15.2s
TYV Tymovskoe 22.43 19 *e*P P 08 59 30.2 +10
TYV pmax pmax
comp=Z,100nm,4.0s
TYV pmax pmax
comp=Z,17nm,1.3s
DAV Davao City (W) 23.52 194 LR LR 09 08 47.9
comp=Z,252nm,20.1s,baz=346,slow=37
CD2 Chengdu 23.63 279 P **P** **08 59 32.3 -0.8**
CD2 pP pP 08 59 39.6 -0.9
CD2 S **S** **09 03 45.1 -1.0**
CD2 sS sS 09 03 57.1 -1.8
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,140nm,7.6s
CD2 L L
comp=Z,850nm,13.4s
CD2 L L
comp=Z,2μm,11.4s
CD2 L L
comp=Z,2μm,11.7s
LZH Lanzhou 23.63 292 *e*P **P** **08 59 37.8 +4.6**
LZH sP sP 08 59 46.8 +3.1
LZH S **S** **09 03 48.4 +2.1**
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,190nm,4.8s
LZH L L
comp=Z,970nm,13.4s
LZH L L
comp=Z,2μm,13.4s
LZH L L
comp=Z,2μm,13.4s
LZDM Lanzhou Array 23.73 291 LR LR 09 10 07.3
comp=Z,637nm,18.7s,baz=110,slow=40
ZEA Zeya 23.78 354 *e*P P 08 59 26.1 -8.1
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=Z,300nm,10.0s
ULN Ulaanbaatar 25.64 320 *ce*P **P** **08 59 50.2 -1.3**
ULN pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 25.64 320 P **P** **08 59 51.3 -0.2**
SONM Songino Array 25.99 320 P **P** **08 59 53.8 -0.8**
comp=Z,5.2nm,0.9s,baz=131,slow=9.8,SNR=23
SONM LR LR 09 11 02.8
comp=Z,454nm,21.3s,baz=123,slow=39
comp=Z,5.2nm,0.9s
PZH PanZhiHua 26.14 269 P **P** **08 59 57.4 +1.2**
GTA2 Gaotai 27.34 299 *e*P **P** **09 00 08.5 +1.6**
GTA2 sS sS 09 05 01.1 +3.0
GTA2 L L
comp=Z,440nm,18.7s
GTA2 L L
comp=Z,350nm,19.0s
GTA2 L L
comp=Z,360nm,18.7s
MYLDM Lahad Datu 27.54 208 P **P** **09 00 07.4 -1.3**
SKR Severo-Kuril's 27.74 35 *e*P **P** **09 00 10.3 +0.1**
SKR *e* 09 01 00.9
SKR *e*S **S** **09 04 55.4 +4.4**
SKR *e*SS **SnSn** **09 06 03.7 -0.6**
SKR MLR MLR
comp=Z,400nm,16.0s
KKM Kota Kinabalu 27.79 213 P **P** **09 00 10.8 -0.2**
TLY Talaya 29.66 324 LR LR 09 13 07.9
comp=Z,339nm,21.9s,baz=122,slow=38
TLY Talaya 29.66 324⇓ *e*P **P** **09 00 28.7 +1.4**
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY Talaya 29.66 324 P **P** **09 00 27.4 +0.1**
PEA0B Petropavlovsk- 30.03 33⇑ *e*P **P** **09 00 30.8 +0.3**
PETK Petropavlovsk- 30.03 33 P **P** **09 00 30.9 +0.3**
comp=Z,2.1nm,0.9s,baz=243,slow=14,SNR=4.4
comp=Z,2.1nm,0.9s
PET Petropavlovsk 30.43 33⇓ *e*P **P** **09 00 34.5 +0.5**
PET pmax pmax
comp=Z,21nm,1.2s
PET Petropavlovsk 30.43 33 P **P** **09 00 34.1 +0.1**
CHTO Chiang Mai 31.33 256 P **P** **09 00 41.8 -0.6**
CHTO Chiang Mai 31.33 256 P **P** **09 00 41.8 -0.6**
CMAR Chiang Mai Arr 31.49 256 P **P** **09 00 41.2 -2.6**
comp=Z,1.0nm,0.3s,baz=70,slow=11,SNR=5.2
CMAR LR LR 09 15 08.3
comp=Z,371nm,18.5s,baz=70,slow=40
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 31.49 256 *i* P **P** **09 00 44.4 +0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
YAK Yakutsk 31.94 359⇓ *e*P **P** **09 00 48.2 +1.0**
YAK pmax pmax
comp=Z,8.0nm,0.7s
NPW Naypyitaw 33.29 260 P **P** **09 00 59.3 -0.2**
JAY Jayapura 33.70 163 LR LR 09 13 53.9
comp=Z,164nm,18.3s,baz=358,slow=35
H11N2 WAKE ISLAND Hy 33.87 99 T T 09 37 09.1
baz=296,slow=75,SNR=57
H11N1 WAKE ISLAND Hy 33.87 99 T T 09 37 11.1
baz=296,slow=75,SNR=18
H11N3 WAKE ISLAND Hy 33.89 99 T T 09 37 08.5
baz=296,slow=75,SNR=41
H11S3 WAKE ISLAND Hy 34.22 102 T T 09 37 54.5
baz=303,slow=74
H11S1 WAKE ISLAND Hy 34.23 102 T T 09 38 29.7
baz=303,slow=74
H11S2 WAKE ISLAND Hy 34.24 102 T T 09 37 58.6
baz=303
SEY Seymchan 35.56 17⇑ *e*P **P** **09 01 18.6 -0.1**
SEY pmax pmax
comp=Z,8.0nm,1.4s
KAPI Kappang 36.61 199 LR LR 09 18 39.2
comp=Z,69nm,18.1s,baz=341,slow=40
WMQ Urumqi 36.92 304 *e*P **P** **09 01 31.8 +1.1**
WMQ pP sP 09 01 41.5 +0.1
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ L L
comp=Z,330nm,17.1s
WMQ L L
comp=Z,510nm,18.7s
WMQ L L
comp=Z,300nm,21.9s
ZAA0 Zalesovo Array 40.88 319 P **P** **09 02 01.9 -1.7**
ZALV Zalesovo Beam 40.88 319 P **P** **09 02 02.5 -1.1**
comp=Z,1.1nm,0.5s,baz=93,slow=5.0,SNR=8.5
ZALV LR LR 09 21 53.9
comp=Z,98nm,20.2s,baz=96,slow=41
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 40.88 319 *i* P **P** **09 02 02.5 -1.1**
ZALV pmax pmax
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 40.88 319 **P** **09 02 01.7 -1.9**
MK31 Makanchi Array 41.05 308 *d i*P **P** **09 02 04.3 -0.9**
MKAR Makanchi Array 41.05 308 P **P** **09 02 03.7 -1.5**
comp=Z,2.4nm,0.7s,baz=95,slow=10,SNR=17
MKAR PcP **PcP** **09 04 03.9 -0.8**
comp=Z,1.2nm,0.8s,baz=74,slow=5.6,SNR=3.9
MKAR LR LR 09 19 52.0
comp=Z,242nm,20.9s,baz=110,slow=38
comp=Z,2.4nm,0.7s
MKAR Makanchi Array 41.05 308 *i* P **P** **09 02 04.4 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 41.05 308 **P** **09 02 04.0 -1.2**
TIXI Tiksi 41.60 359 LR LR 09 21 30.0
comp=Z,355nm,18.5s,baz=184,slow=39
PDGK Podgornoye 42.84 303 P **P** **09 02 19.6 -0.4**
PDGK Podgornoye 42.84 303 P **P** **09 02 19.6 -0.4**
BILL Bilibino 43.18 18⇑ *e*P **P** **09 02 22.3 +0.2**
BILL pmax pmax
comp=Z,14nm,1.4s
KURK Kurchatov 43.93 313 *de*P **P** **09 02 27.5 -1.0**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 43.93 313 **PcP** **09 04 13.0 -1.0**
KURK Kurchatov 43.93 313 P **P** **09 02 27.4 -1.1**
KURBB Kurchatov Arra 43.98 313 P **P** **09 02 26.8 -2.0**
comp=Z,1.0nm,0.2s,baz=100,slow=8.7,SNR=20
KURBB PcP **PcP** **09 04 13.0 -1.2**
comp=Z,0.2nm,0.3s,baz=106,slow=3.3,SNR=0.9
KURBB LR LR 09 22 35.6
comp=Z,627nm,18.6s,baz=164,slow=39
comp=Z,1.0nm,0.2s
TARG Taragay, Kyrgy 44.12 300 P **P** **09 02 29.8 -0.8**
TARG Taragay, Kyrgy 44.12 300 IAmb IAmb 09 02 32.1
comp=Z,11nm,0.8s
TARG Taragay, Kyrgy 44.12 300 P **P** **09 02 29.8 -0.8**
ASAI AK-SAY(Kyrgyzs 45.13 299 P **P** **09 02 37.6 -1.1**
KSH2 Kashi 46.03 297 P **P** **09 02 46.3 +0.8**
KSH2 pmax pmax
comp=Z,7.0nm,0.7s
KSH2 L L
comp=Z,410nm,18.9s
KSH2 L L
comp=Z,430nm,19.6s
KSH2 L L
comp=Z,480nm,18.5s
NRIK Noril'sk 46.43 340 P **P** **09 02 46.9 -1.1**
comp=Z,1.7nm,0.4s,baz=97,slow=9.1,SNR=3.1
NRIK LR LR 09 24 16.7
comp=Z,524nm,20.2s,baz=138,slow=39
comp=Z,1.7nm,0.4s
NRIK Noril'sk 46.43 340 *ce*P **P** **09 02 46.8 -1.2**
NRIK pmax pmax
comp=Z,6.0nm,1.3s
AAK Ala-Archa 46.53 302 *de*P **P** **09 02 49.2 -0.2**
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 46.53 302 **P** **09 02 49.2 -0.2**
AAK Ala-Archa 46.53 302 P **P** **09 02 49.4 0.0**
FITZ Fitzroy Crossi 48.23 187 LR LR 09 23 56.4
comp=Z,61nm,19.1s,baz=8.5,slow=37
BVAR Borovoye Array 49.22 316 P **P** **09 03 09.3 -0.6**
comp=Z,8.7nm,0.8s,baz=93,slow=9.2,SNR=18
comp=Z,8.7nm,0.8s
BORK Borovoye 49.26 316 P **P** **09 03 10.2 0.0**
BORK pmax pmax
comp=Z,11nm,0.6s
BORK Borovoye 49.26 316 P **P** **09 03 10.2 0.0**
BORK IAmb IAmb 09 03 10.7
comp=Z,11nm,0.6s
KKAR Karatay Array 49.41 303 **P** **09 03 11.3 -0.2**
BTK Batken 49.55 299 P **P** **09 03 08.4 -4.3**
WRA Warramunga Arr 49.86 176 P **P** **09 03 15.0 -0.1**
comp=Z,5.0nm,1.2s,baz=355,slow=8.5,SNR=4.2
comp=Z,5.0nm,1.2s
WRA Warramunga Arr 49.86 176 P **P** **09 03 15.0 -0.1**
WRA Warramunga Arr 49.86 176 P **P** **09 03 15.0 -0.1**
WRA Warramunga Arr 49.86 176 IAmb IAmb 09 03 16.6
comp=Z,0.9nm,1.4s
GAR Garm 50.09 297 P **P** **09 03 16.9 -0.1**
CHGR Chuyangaron 51.04 297⇓ *e*P **P** **09 03 23.9 -0.2**
CHGR pmax pmax
comp=Z,61nm,1.1s
SHAA Shahritus 52.05 296 **P** **09 03 31.8 +0.2**
SHAA IAmb IAmb 09 03 34.8
comp=Z,37nm,1.1s
PALK Pallekele 52.43 255 LR LR 09 27 27.9
comp=Z,192nm,20.8s,baz=58,slow=38
AS31 Alice Springs 53.53 177 P **P** **09 03 43.7 +1.2**
ASAR Alice Springs 53.54 177 P **P** **09 03 42.5 0.0**
comp=Z,3.1nm,1.0s,baz=10,slow=14,SNR=22
ASAR LR LR 09 27 47.4
comp=Z,48nm,18.9s,baz=314,slow=38
comp=Z,3.1nm,1.0s
ASAR Alice Springs 53.54 177 P **P** **09 03 43.3 +0.8**
AB31 Akbulak array 55.97 312 IAmb IAmb 09 03 60.0
comp=Z,9.8nm,1.1s
ABKAR Akbulak array 55.97 312 P **P** **09 03 59.9 0.0**
J19K Poorman 56.04 31 P **P** **09 04 01.6 +1.3**
ARTI Arti 56.13 320 P **P** **09 03 59.3 -1.6**
comp=Z,5.0nm,0.5s,baz=101,slow=2.2,SNR=7.9

ARTI LR LR 09 30 04.9
comp=Z,378nm,19.4s,baz=75,slow=38
comp=Z,5.0nm,0.5s
ARTI Arti 56.13 320 *d* iP **P 09 04 00.0 -0.9**
ARTI 09 04 53.5
ARTI 09 06 03.9
ARTI S **S 09 11 47.4 -0.7**
ARTI SS **SS 09 15 27.7 -6.5**
ARTI pmax pmax
comp=Z,15nm,1.5s
ARTI MLR MLR
comp=Z,739nm,16.0s
ARTI Arti 56.13 320 P **P 09 04 00.6 -0.3**
B21K Ikpikpuk River 56.62 24 P **P 09 04 05.2 +1.0**
B21K IAmb IAmb 09 04 17.6
comp=Z,8.0nm,1.1s
J20K Nowinta River 56.69 30 IAmb IAmb 09 04 23.1
comp=Z,11nm,1.3s
AKTO Aktyubinsk 57.03 313 LR LR 09 30 22.1
comp=Z,708nm,20.7s,baz=80,slow=38
E22K Anaktuvuk Pass 57.60 26 IAmb IAmb 09 04 23.1
comp=Z,13nm,1.2s
H22K Ishtalitna Cre 57.82 28 P **P 09 04 14.3 +1.5**
H22K IAmb IAmb 09 04 25.2
comp=Z,7.2nm,1.1s
KDAK Kodiak Island 57.86 38 P **P 09 04 13.9 +0.8**
E23K Chandalar 58.42 26 P **P 09 04 18.2 +1.1**
E23K IAmb IAmb 09 04 29.2
comp=Z,11nm,1.0s
H23K Yukon River 58.58 28 IAmb IAmb 09 04 36.8
comp=Z,9.7nm,1.2s
D24K Happy Valley 58.66 24 IAmb IAmb 09 04 30.4
comp=Z,13nm,1.0s
E24K Your Creek 58.84 26 IAmb IAmb 09 04 34.6
comp=Z,9.7nm,1.2s
NEA2 Nenana 58.87 30 IAmb IAmb 09 04 34.4
comp=Z,8.6nm,1.0s
RND Reindeer 59.08 31 IAmb IAmb 09 04 39.4
comp=Z,13nm,1.2s
D25K Kavik River 59.52 24 IAmb IAmb 09 04 36.7
comp=Z,6.7nm,1.1s
ILAR Eielson Array 59.79 29 P **P 09 04 27.1 +0.7**
comp=Z,0.4nm,0.7s,baz=285,slow=5.6,SNR=6.9
comp=Z,0.4nm,0.7s
F25K Christian Rive 59.96 26 P **P 09 04 29.5 +1.8**
C27K Jago River 60.43 24 IAmb IAmb 09 04 42.9
comp=Z,7.8nm,1.1s
F26K Sheenjek River 60.52 26 P **P 09 04 33.3 +1.9**
F26K IAmb IAmb 09 04 44.1
comp=Z,8.3nm,1.0s
KIRV Kirov 60.65 324 P **P 09 04 31.8 -0.6**
comp=Z,13nm,0.6s,baz=126,slow=5.7,SNR=3.5
KIRV LR LR 09 33 47.6
comp=Z,281nm,19.4s,baz=78,slow=39
comp=Z,13nm,0.6s
SCRK Sand Creek 61.15 30 IAmb IAmb 09 05 04.3
comp=Z,7.8nm,1.2s
E27K Coleen River 61.40 25 IAmb IAmb 09 04 49.6
comp=Z,7.1nm,1.0s
D27M Malcolm River 61.44 24 IAmb IAmb 09 04 50.3
comp=Z,13nm,1.2s
I27K Kandik River 61.85 28 IAmb IAmb 09 04 52.8
comp=Z,13nm,1.1s
STKA Stephens Creek 62.44 170 P **P 09 04 44.4 -0.3**
comp=Z,1.7nm,0.7s,baz=327,slow=8.7,SNR=5.0
STKA LR LR 09 32 39.9
comp=Z,70nm,18.9s,baz=12,slow=37
comp=Z,1.7nm,0.7s
STKA Stephens Creek 62.44 170‖ *e*P **P 09 04 45.1 +0.4**
I28M Miner Creek 62.57 28 IAmb IAmb 09 04 57.6
comp=Z,11nm,1.2s
BELG Belogornoye 63.00 317 LR LR 09 34 44.2
comp=Z,390nm,18.5s,baz=89,slow=39
BELG Belogornoye 63.00 317 *d* iP **P 09 04 47.4 -0.9**
BELG pmax pmax
comp=Z,4.0nm,0.9s
H29M Whitestone 63.02 27 P **P 09 04 50.2 +1.9**
H29M IAmb IAmb 09 05 00.0
comp=Z,8.7nm,1.1s
EPYK Eagle Plains 63.63 27 IAmb IAmb 09 05 04.1
comp=Z,12nm,0.9s
L29M L29M 63.90 30 P **P 09 04 56.2 +2.0**
K29M Barlow Dome 63.97 30 P **P 09 04 56.3 +1.5**
K29M IAmb IAmb 09 05 24.6
comp=Z,9.7nm,1.4s
I30M Mount Dempster 64.07 28 P **P 09 04 56.2 +0.8**
I30M IAmb IAmb 09 05 07.3
comp=Z,9.7nm,1.1s
INK Inuvik 64.29 24 LR LR 09 34 41.7
comp=Z,93nm,19.5s,baz=342,slow=38
INK Inuvik 64.29 24 P **P 09 04 58.0 +1.4**
INK AP **sP 09 05 06.8 -0.7**
INK Inuvik 64.29 24 P **P 09 04 58.0 +1.4**
INK pP **sP 09 05 06.8 -0.7**
H31M Peel River 64.72 27 P **P 09 05 00.6 +1.1**
H31M IAmb IAmb 09 05 13.4
comp=Z,7.5nm,0.8s
KLMR Klimovskoe 64.98 327 *e*P **P 09 04 59.1 -2.1**
KLMR pmax pmax
comp=Z,14nm,1.6s
KLMR MLR MLR
comp=Z,316nm,16.0s
SPITS Spitsbergen Ar 65.58 348 P **P 09 05 04.1 -0.8**
comp=Z,2.3nm,0.6s,baz=46,slow=6.2,SNR=6.3
SPITS LR LR 09 35 53.4
comp=Z,156nm,19.6s,baz=63,slow=38
comp=Z,2.3nm,0.6s
KEV Kevo 66.79 338 P **P 09 05 12.7 0.0**
KEV pmax pmax
comp=Z,67nm,1.9s
KEV Kevo 66.79 338 P **P 09 05 12.7 0.0**
ARCES ARCESS Array B 67.36 338 P **P 09 05 15.9 -0.5**
comp=Z,1.9nm,0.8s,baz=63,slow=7.1,SNR=9.7
ARCES LR LR 09 40 12.4
comp=Z,343nm,18.9s,baz=90,slow=41
comp=Z,1.9nm,0.8s
OBN Obninsk 68.38 322 LR LR 09 38 16.5
comp=Z,307nm,18.4s,baz=225,slow=39
OBN Obninsk 68.38 322‖ iP **P 09 05 21.7 -1.2**
OBN *i* *PP **sP 09 05 34.6 +0.5**
OBN *i* 09 05 48.0
OBN 09 07 58.0
OBN S **S 09 14 23.0 +0.6**
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,406nm,16.0s
KBZ Khabaz 68.74 309 P **P 09 05 24.4 -1.1**
comp=Z,9.8nm,1.0s,baz=85,slow=4.1,SNR=9.1
KBZ LR LR 09 39 04.0
comp=Z,114nm,18.5s,baz=90,slow=39
comp=Z,9.8nm,1.0s
KBZ Khabaz 68.74 309‖ *e*P **P 09 05 25.1 -0.3**
KBZ pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 68.80 309 *e*P **P 09 05 26.2 +0.2**
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,144nm,17.0s
KIV Kislovodsk 68.80 309 P **P 09 05 26.9 +0.9**
SHA1 Shidzhatmaz 68.90 309 *de*P **P 09 05 26.7 -0.1**
LABN Labinsk 69.84 310 *e*P P 09 05 18.6 -14
LABN pmax pmax
comp=Z,39nm,0.7s
FIA1 FINESS Array S 70.78 331 P **P 09 05 37.3 -0.3**
FINES FINESS Array B 70.78 331 P **P 09 05 36.1 -1.5**
comp=Z,2.5nm,0.4s,baz=61,slow=5.6,SNR=24
FINES LR LR 09 41 40.0
comp=Z,298nm,18.6s,baz=63,slow=40
comp=Z,2.5nm,0.4s
RES Resolute Bay 71.24 12 LR LR 09 39 48.8
comp=Z,78nm,18.7s,baz=33,slow=38
DAG Danmarks Havn 71.75 353 *i* P **P 09 05 43.0 -0.3**
DAG IAmb IAmb 09 05 44.9
comp=Z,2.7nm,0.9s
ANN Anapa 71.93 312 *e*P P 09 05 53.1 +8.2
ANN pmax pmax
comp=Z,72nm,1.1s
NEEM North Greenlan 72.68 1 *i* P **P 09 05 49.0 -0.2**
NEEM IAmb IAmb 09 05 49.4
comp=Z,6.0nm,0.9s
MNK Minsk 73.19 324 *i* P **P 09 05 51.5 -0.8**
MNK pmax pmax
comp=N,2.0nm,0.7s
MNK *i* P **P 09 05 51.5 -0.8**
comp=Z,9.0nm,0.8s,baz=62
MNK *i* PcP **PcP 09 06 08.1 -0.7**
MNK *i* PP **PP 09 08 34.0 -1.0**
MNK *i* PPP PPP 09 10 24.0
MNK *i* S **S 09 15 18.5 +0.1**
MNK *i* SS **SS 09 20 02.1 +2.8**
MNK *i* SSS SSS 09 23 28.8
MNK *i* LQ LQ 09 32 34.8
MNK *i* LR LR 09 38 03.4
MNK *i* LRM MLR 09 42 16.6
comp=Z,253nm,15.6s
MNK *i* LRM MLR 09 42 18.5
comp=N,220nm,16.2s
MNK Minsk 73.19 324 *i* P **P 09 05 51.4 -0.8**
MNK *i* 09 06 08.0
MNK *i* 09 08 34.0
MNK *i* PPP PPP 09 10 23.9
MNK *i* S **S 09 15 18.5 +0.1**
MNK *i* SS **SS 09 20 02.1 +2.8**
MNK pmax pmax
comp=E,8.0nm,1.0s
MNK pmax pmax
comp=N,2.0nm,0.7s
MNK pmax pmax
comp=Z,9.0nm,0.8s
MNK MLR MLR
comp=Z,253nm,16.0s
MNK MLR MLR
comp=N,220nm,16.0s
YKA Yellowknife Ar 73.91 26 P **P 09 05 56.2 -0.1**
comp=N,0.8nm,0.8s,baz=286,slow=4.7,SNR=4.3
YKA LR LR 09 38 39.1
comp=N,39nm,21.6s,baz=3.0,slow=36
comp=N,0.8nm,0.8s
SIM Simferopol' 73.99 313 *e*P P 09 06 06.6 +9.4
SIM pmax pmax
comp=Z,50nm,7.2s
DBG Daneborg 74.14 352 *i* P **P 09 05 56.8 -0.7**
DBG IAmb IAmb 09 05 57.6
comp=Z,6.5nm,1.1s
AKASG Malin Array Be 74.27 320 P **P 09 05 57.3 -1.4**
comp=Z,0.4nm,0.3s,baz=56,slow=5.8,SNR=8.2
AKASG LR LR 09 40 51.2
comp=Z,144nm,19.2s,baz=62,slow=38
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 74.27 320 *i* P **P 09 05 57.9 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 74.27 320 IAmb IAmb 09 05 58.8
comp=Z,3.9nm,1.1s
AKBB Malin Array Si 74.27 320‖ *e*P **P 09 05 58.0 -0.7**
RAYN Ar Rayn 75.05 289 P **P 09 06 04.1 +0.3**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 75.05 289 P **P 09 06 04.1 +0.3**
RAYN Ar Rayn 75.05 289 P **P 09 06 02.6 -1.2**
KULLO Kullorsuaq 75.42 2 *i* P **P 09 06 04.3 -0.6**
KULLO IAmb IAmb 09 06 05.3
comp=Z,12nm,1.1s
HFS Hagfors 76.59 333 P **P 09 06 11.6 -0.2**
comp=Z,1.9nm,0.5s,baz=101,slow=6.2,SNR=7.6
HFS LR LR 09 43 06.5
comp=Z,177nm,19.0s,baz=46,slow=38
comp=Z,1.9nm,0.5s
BR131 Keskin Array S 76.70 308‖ *e*P **P 09 06 13.0 -0.1**
BRTR Keskin Array B 76.70 308 P **P 09 06 12.6 -0.5**
comp=Z,2.6nm,0.8s,baz=101,slow=6.7,SNR=8.0
BRTR LR LR 09 44 50.9
comp=Z,104nm,20.7s,baz=116,slow=40
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 76.70 308 *i* P **P 09 06 12.8 -0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 76.70 308 P **P 09 06 13.2 +0.1**
NC405 NORSAR Array S 76.74 334 P **P 09 06 13.0 +0.4**
NC405 IAmb IAmb 09 07 58.2
comp=Z,16nm,1.2s
NB201 NORSAR Array S 76.94 334 P **P 09 06 14.0 +0.2**
NB2 NORSAR Subarra 76.97 334 P **P 09 06 13.4 -0.6**
comp=Z,2.1nm,0.7s,baz=50,slow=5.9
NB2 NORSAR Subarra 76.97 334 P **P 09 06 12.1 -1.9**
NB2 pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 76.97 334 P **P 09 06 13.2 -0.9**
comp=Z,2.6nm,0.6s,baz=49,slow=4.9,SNR=7.8
NOA LR LR 09 43 52.7
comp=Z,94nm,18.1s,baz=50,slow=39
comp=Z,2.6nm,0.6s
SUMG Summit 77.34 357 P **P 09 06 15.2 -1.1**
SUMG Summit 77.34 357 P **P 09 06 15.2 -1.1**
SUMG Summit 77.34 357 *i* P **P 09 06 16.0 -0.3**
SUMG IAmb IAmb 09 06 17.5
comp=Z,5.4nm,0.7s
BURAR Bucovina Array 78.09 318 P **P 09 06 20.4 -0.2**
BURAR pmax pmax
comp=Z,1.0nm,0.8s
BURAR Bucovina Array 78.09 318 P **P 09 06 20.4 -0.2**
MLR Muntele Rosu 78.78 316 LR LR 09 45 06.9
comp=Z,152nm,18.2s,baz=70,slow=39
MSBI Mazada 79.47 300 P **P 09 06 30.0 +1.7**
PINE Pine Mountain 81.27 44 P **P 09 06 38.6 +0.5**
PINE IAmb IAmb 09 07 18.3
comp=Z,10nm,1.4s
VRAC Vranov 81.87 323 LR LR 09 47 46.3
comp=Z,144nm,19.7s,baz=76,slow=39
CLL Collm 82.43 326 *e*P **P 09 06 47.0 +3.2**
CLL Collm 82.43 326 *e*Px Px 09 06 47.0
CLL *e*pP pP 09 06 53.0 +1.0
CLL *e*PP **PP 09 09 53.0 +0.7**
CLL *e*SS SS 09 22 12.0 -6.3
SFJD Kangerlussuaq 83.19 1 LR LR 09 46 08.7
comp=Z,70nm,18.4s,baz=328,slow=37
SFJD Kangerlussuaq 83.19 1 *i* P **P 09 06 47.4 0.0**
SFJD IAmb IAmb 09 06 50.0
comp=Z,11nm,0.9s
GERES GERESS Array B 83.65 324 P **P 09 06 47.7 -2.6**
comp=Z,0.2nm,0.2s,baz=29,slow=4.4,SNR=1.9
comp=Z,0.2nm,0.2s
FRB Frobisher Bay 85.16 9 LR LR 09 46 14.3
comp=Z,137nm,20.8s,baz=311,slow=37
NVAR Mina Array Bea 85.95 48 P **P 09 07 02.8 +0.6**
comp=Z,0.6nm,0.6s,baz=292,slow=5.3,SNR=7.5
comp=Z,0.6nm,0.6s
EKA Eskdalemuir Ar 86.35 336 P **P 09 07 02.2 -1.4**
comp=Z,0.7nm,0.4s,baz=44,slow=4.9,SNR=3.7
EKA LR LR 09 47 39.2
comp=Z,97nm,21.8s,baz=51,slow=37
comp=Z,0.7nm,0.4s
DAVOX Davos/Dischmat 86.95 324 LR LR 09 51 41.8
comp=Z,331nm,18.4s,baz=59,slow=40
HWUT Hardware Ranch 88.12 42 P **P 09 07 12.6 -0.1**
PDAR Pinedale Array 88.51 40 P **P 09 07 15.8 +1.2**
comp=Z,0.7nm,0.9s,baz=45,slow=0.2,SNR=6.0
comp=Z,0.7nm,0.9s
VAE Valguarnera 90.46 315 LR LR 09 53 58.8
comp=Z,178nm,18.8s,baz=110,slow=40
PV10 Paradox Valley 91.69 43 P **P 09 07 31.6 +2.1**
PV19 Morning Glory 91.77 43 P **P 09 07 30.1 +0.2**
SCHQ Schefferville 93.99 10 LR LR 09 52 26.3
comp=Z,66nm,19.8s,baz=308,slow=37
KEST Kesra 94.69 316 LR LR 09 57 12.0
comp=Z,164nm,18.4s,baz=341,slow=40
ESDC Sonseca Array 99.01 327 LR LR 09 59 13.2
comp=Z,102nm,18.9s,baz=20,slow=39

IDC ***21*** *09:43:04.1±0.7, 16.47S×173.31W, h0km, mb4.2/13, mbtmp4.2/14, ML3.7/1, MS3.5/22, Error ellipse: s-maj=27.3km s-min=16.0km az=135.0*
NEIC ***21*** *09:43:05.0±1.9, 16.46S±0.07×173.06W±0.08, h10km±1km, mb4.6/15, Error ellipse: s-maj=13.6km s-min=12.3km az=76.0*
ISC 21 09:43:08.3±0.5, 16°62S±0.08×173°16W±0.07, h32km, n60, σ0.98/43, mb4.5/21, MS3.6/19, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.00**	**27**	Pn	Pn	09 43 48.2	-5.6
	25nm,0.3s,baz=73,slow=1.7,SNR=28						
AFI				Sn	Sn	09 44 17.5	-11
	56nm,0.3s,baz=225,slow=12,SNR=7.3						
AFI				LR	LR	09 45 03.0	
	comp=Z,323nm,20.6s,baz=260,slow=40						
AFI	**Afiamalu**	**3.00**	**27**	Pn	Pn	09 43 48.1	-5.7
NIUE	**Niue**	**3.93**	**129**	Pn	**Pn**	**09 44 06.6**	**+0.1**
FUTU	**Fugatoga**	**5.31**	**295**	Pn	**Pn**	**09 44 24.4**	**-1.0**
MSVF	**Nonsavu**	**8.48**	**261**	Pn	Pn	09 45 16.9	+7.9
	0.6nm,0.3s,baz=117,slow=16,SNR=11						
MSVF				LR	LR	09 48 04.3	
	comp=Z,519nm,19.8s,baz=51,slow=36						
MSVF	**Nonsavu**	**8.48**	**261**	Pn	**Pn**	**09 45 08.0**	**-1.0**
RAO	**Raoul Island**	**13.31**	**198**	Pn	**Pn**	**09 46 15.2**	**+0.1**
RAR	**Rarotonga**	**13.46**	**112**	Pn	**Pn**	**09 46 14.8**	**-2.4**
	5.1nm,0.3s,baz=268,slow=9.3,SNR=8.7						
RAR				LR	LR	09 50 19.6	
	comp=Z,164nm,21.1s,baz=294,slow=32						
RAR	**Rarotonga**	**13.46**	**112**	Pn	**Pn**	**09 46 15.2**	**-2.0**
DZM	**Mont Dzumac**	**19.99**	**251**	P	**P**	**09 47 38.0**	**-0.4**
	0.2nm,0.3s,baz=87,slow=19,SNR=4.7						
	9.0nm,1.1s						
PPT	**Papeete**	**22.56**	**96**	LR	LR	09 54 26.7	
	comp=Z,88nm,20.4s,baz=266,slow=30						
URZ	**Urewera**	**23.19**	**200**	P	**P**	**09 48 12.6**	**+0.3**
	3.9nm,0.5s,baz=27,slow=10,SNR=5.9						
	3.9nm,0.5s						
TOZ	**Tahuroa Road**	**23.29**	**203**	P	**P**	**09 48 12.9**	**-0.4**
TOZ				IAmb	IAmb	09 48 30.0	
	comp=Z,17nm,1.1s						
HNR	**Honiara**	**27.14**	**282**	LR	LR	09 57 56.4	
	comp=Z,18nm,21.2s,baz=200,slow=33						
LTZ	**Lake Taylor**	**28.89**	**203**	P	**P**	**09 49 03.9**	**-0.4**
ARMA	**Armidale**	**34.93**	**240**	P	**P**	**09 49 57.8**	**+0.3**
ARMA				IAmb	IAmb	09 50 14.1	
	comp=Z,10nm,0.9s						
CTA	**Charters Tower**	**38.61**	**258**	LR	LR	10 04 30.6	
	comp=Z,94nm,18.2s,baz=58,slow=33						
H11N3	**WAKE ISLAND Hy**	**41.08**	**331**	T	T	10 34 20.4	
	baz=150,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**41.09**	**331**	T	T	10 34 30.7	
	baz=150,slow=76,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**41.10**	**331**	T	T	10 34 26.0	
	baz=150,slow=76,SNR=6.4						
STKA	**Stephens Creek**	**43.64**	**241**	P	**P**	**09 51 09.3**	**-0.8**
	comp=Z,7.2nm,0.9s,baz=66,slow=8.7,SNR=13						
	comp=Z,7.2nm,0.9s						
BBOO	**Buckleboo**	**48.41**	**241**	P	**P**	**09 51 48.4**	**+0.8**
BBOO				IAmb	IAmb	09 51 54.1	
	comp=Z,7.8nm,1.1s						
WR0	**Warramunga Arr**	**49.61**	**258**	P	**P**	**09 51 55.8**	**-1.3**
WB0	**Warramunga Arr**	**49.77**	**258**	P	**P**	**09 51 57.5**	**-0.8**
WB0				IAmb	IAmb	09 52 08.6	
	comp=Z,4.1nm,1.0s						
WRA	**Warramunga Arr**	**49.80**	**258**	P	**P**	**09 51 57.9**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=91,slow=7.0,SNR=6.4						
WRA				PcP	**PcP**	**09 53 19.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=115,slow=1.8,SNR=1.8						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**49.80**	**258**	P	**P**	**09 51 58.7**	**+0.2**
WRA				PcP	**PcP**	**09 53 19.3**	**+0.2**
AS31	**Alice Springs**	**49.96**	**253**		**P**	**09 51 59.0**	**-0.7**
ASAR	**Alice Springs**	**49.97**	**253**	P	**P**	**09 51 58.8**	**-0.9**
	comp=Z,13nm,0.8s,baz=88,slow=8.4,SNR=66						
ASAR				PcP	**PcP**	**09 53 20.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=95,slow=3.6,SNR=1.2						
ASAR				LR	LR	10 12 11.4	
	comp=Z,89nm,18.6s,baz=279,slow=35						
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**49.97**	**253**	P	**P**	**09 51 59.1**	**-0.6**
ASAR					**PcP**	**09 53 20.8**	**+1.2**
FORT	**Forrest**	**55.08**	**244**	P	**P**	**09 52 36.8**	**-0.7**
FORT				IAmb	IAmb	09 52 48.6	
	comp=Z,5.5nm,1.1s						
SIJI	**Sorong**	**56.89**	**280**	P	**P**	**09 52 49.9**	**-0.8**
	comp=Z,11nm,0.5s,baz=37,slow=7.2,SNR=5.3						
SIJI				LR	LR	10 17 32.8	
	comp=Z,51nm,19.1s,baz=200,slow=36						
	comp=Z,11nm,0.5s						
SOEI	**Soe**	**61.11**	**268**	P	**P**	**09 53 20.5**	**+0.4**
MBWA	**Marble Bar**	**63.25**	**254**	P	**P**	**09 53 34.0**	**-0.2**
MBWA				IAmb	IAmb	09 53 37.1	
	comp=Z,7.3nm,1.1s						
DAV	**Davao City (W)**	**64.99**	**286**	LR	LR	10 21 27.8	
	comp=Z,45nm,18.3s,baz=192,slow=36						
JHJ2	**Mitsune**	**66.80**	**318**	P	**P**	**09 53 56.5**	**-0.4**
JHJ	**Hachijo jima 2**	**66.82**	**318**	LR	LR	10 17 01.2	
	comp=Z,23nm,20.4s,baz=0.0,slow=31						
TOLI2	**Tolitoli**	**67.45**	**278**	P	**P**	**09 54 00.8**	**-0.7**
TOLI2				IAmb	IAmb	09 54 05.1	
	comp=Z,5.8nm,0.7s						
SHEM	**Shemya Is, Ala**	**69.94**	**352**	LR	LR	10 17 27.7	
	comp=Z,34nm,21.9s,baz=12,slow=30						
MJAR	**Matsushiro Arr**	**70.02**	**320**	LR	LR	10 19 58.1	
	comp=Z,34nm,21.1s,baz=136,slow=32						
JKA	**Kamikawa-asahi**	**72.69**	**328**	P	**P**	**09 54 32.5**	**-0.5**
JKA				IAmb	IAmb	09 54 34.5	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**73.43**	**180**	P	**P**	**09 54 40.1**	**+2.8**
	comp=Z,1.7nm,0.7s,baz=27,slow=0.8,SNR=9.4						
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**73.43**	**180**	P	**P**	**09 54 39.0**	**+1.7**
QSPA				IAmb	IAmb	09 54 60.0	
	comp=Z,4.5nm,1.1s						
LPIG	**La Paz**	**73.48**	**58**	LR	LR	10 18 19.0	
	comp=Z,50nm,20.6s,baz=208,slow=29						
PETK	**Petropavlovsk-**	**73.86**	**342**	P	**P**	**09 54 39.8**	**+0.2**
	comp=Z,7.3nm,0.9s,baz=120,slow=6.4,SNR=11						
	comp=Z,7.3nm,0.9s						
YBH	**Yreka Blue Hor**	**74.43**	**37**	LR	LR	10 23 46.7	
	comp=Z,37nm,18.1s,baz=115,slow=33						
NVAR	**Mina Array Bea**	**75.08**	**42**	P	**P**	**09 54 48.4**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=226,slow=11,SNR=9.6						
NVAR				LR	LR	10 21 24.6	
	comp=Z,50nm,19.5s,baz=180,slow=31						
	comp=Z,1.0nm,0.8s						
KDAK	**Kodiak Island**	**76.06**	**11**	LR	LR	10 21 40.3	
	comp=Z,34nm,21.6s,baz=183,slow=30						
KSRS	**Korea Array**	**77.19**	**316**	P	**P**	**09 55 00.1**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=153,slow=6.1,SNR=2.0						
KSRS				LR	LR	10 23 30.3	
	comp=Z,14nm,21.8s,baz=305,slow=32						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**81.10**	**56**	P	**P**	**09 55 22.0**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=244,slow=5.5,SNR=3.7						
	comp=Z,0.1nm,0.4s						
ANMO	**Albuquerque**	**81.41**	**50**	LR	LR	10 27 04.2	
	comp=Z,37nm,18.1s,baz=327,slow=32						
PDAR	**Pinedale Array**	**83.01**	**42**	P	**P**	**09 55 30.8**	**0.0**
	comp=Z,1.2nm,0.7s,baz=208,slow=3.2,SNR=13						
	comp=Z,1.2nm,0.7s						
ILAR	**Eielson Array**	**83.59**	**11**	P	**P**	**09 55 32.1**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=203,slow=5.2,SNR=18						
	comp=Z,0.7nm,0.7s						
JTS	**Las Juntas de**	**91.20**	**80**	LR	LR	10 29 09.0	
	comp=Z,24nm,18.6s,baz=30,slow=30						
CMAR	**Chiang Mai Arr**	**93.22**	**288**	P	**P**	**09 56 21.4**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=101,slow=2.7,SNR=7.3						
	comp=Z,0.7nm,0.3s						
ULM	**Lac du Bonnet**	**94.73**	**39**	LR	LR	10 32 48.4	
	comp=Z,30nm,19.4s,baz=256,slow=32						
TLY	**Talaya**	**98.73**	**321**	LR	LR	10 35 35.2	
	comp=Z,18nm,20.7s,baz=161,slow=32						
TKL	**Tuckaleechee C**	**99.01**	**56**	LR	LR	10 36 35.5	
	comp=Z,19nm,18.5s,baz=345,slow=32						
MORC	**Moravsky Berou**	**145.81**	**348**	*e*PKP	**PKPab**	**10 02 44.7**	**0.0**
BRTR	**Keskin Array B**	**147.24**	**320**	PKPbc	**PKPbc**	**10 02 49.3**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=55,slow=3.5,SNR=6.1						
GERES	**GERESS Array B**	**147.37**	**352**	PKPbc	**PKPbc**	**10 02 49.1**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=8.1,slow=2.8,SNR=6.4						

IDC ***21*** *09:44:15.9±0.7, 37.50N×113.57W, h0km, mb3.3/1, mbtmp3.4/10, ML3.3/8, MS2.9/1, Error ellipse: s-maj=8.7km s-min=7.3km az=63.0*
UUSS ***21*** *09:44:15.4±1.5, 37.50N±0.01×113.49W±0.03, h9km±8km, Error ellipse: s-maj=3.1km s-min=1.6km az=88.0*
NEIC ***21*** *09:44:15.4±0.8, 37.49N±0.01×113.56W±0.04, h5km±1km, ML3.8/176, Mwr3.7/96, ML3.8/18(UUSS), Error ellipse: s-maj=5.1km s-min=2.9km az=281.0, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-0.10; Mθθ-0.77; Mφφ 0.87; Mrθ-0.20; Mrφ 5.01; Mθφ1.08; Fault plane solution: M0 5.19000×10^14 NP1:φs85.22000°, δ77.84000°, λ-1.49000°. NP2:φs175.53000°, δ88.54000°, λ-167.84000°. Principal axes: T 5.2175, Plg8.0000°, Azm310.0000°; N -0.0484, Plg78.0000°, Azm182.0000°; P -5.1691, Plg10.0000°, Azm41.0000°;*
NEIC ***21*** *09:44:15.5, 37.49N×113.51W, h5km*
ISC 21 09:44:16.3±0.9, 37°53N±0.03×113°42W±0.03, h10km±6km, n70, σ1.54/51, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCUT	**Cedar City**	**0.05**	**61**		**Pg**	**09 44 18.6**	**0.0**
CCUT				Sg	**Sg**	**09 44 20.4**	**+0.2**
CCUT				IAML		09 44 20.7	
	comp=N,38μm,0.6s						
CCUT				IAML		09 44 20.7	
	comp=E,22μm,0.4s						
SZCU	**Shurtz Canyon**	**0.28**	**75**		**Pb**	**09 44 22.1**	**-1.4**
SZCU	**Shurtz Canyon**	**0.28**	**75**	Sg	**Sg**	**09 44 26.5**	**+0.7**
SZCU				IAML		09 44 29.4	
	comp=E,9μm,0.3s						
SZCU				IAML		09 44 33.8	
	comp=N,6μm,0.3s						
LCMT	**Little Creek M**	**0.53**	**164**		**Pg**	**09 44 25.8**	**-0.9**
LCMT	**Little Creek M**	**0.53**	**164**	Sg	**Sg**	**09 44 33.1**	**-0.6**
LCMT				IAML		09 44 33.6	
	comp=N,5μm,0.4s						
LCMT				IAML		09 44 34.0	
	comp=E,8μm,0.3s						
ICU	**Indian Springs**	**0.55**	**227**		**Pg**	**09 44 25.0**	**-1.9**
DWU	**Dry Willow Pea**	**0.67**	**30**		**Pb**	**09 44 29.4**	**-0.9**
KNB	**Kanab**	**0.70**	**136**		**Sb**	**09 44 39.0**	**-1.3**
KNB				IAML		09 44 39.9	
	comp=E,2μm,0.5s						
KNB	**Kanab**	**0.70**	**136**		**Pb**	**09 44 29.4**	**-1.2**
PKCU	**Pink Cliffs**	**0.89**	**95**	Pg	**Pb**	**09 44 34.1**	**+0.1**
PKCU				IAML		09 44 50.9	
	comp=N,4μm,0.9s						
PKCU				IAML		09 44 57.1	
	comp=E,5μm,0.4s						
WLD	**Wild Horse Can**	**1.03**	**25**		**Pb**	**09 44 35.8**	**-0.5**
WLD					**Pn**	**09 44 36.0**	**-1.0**
LWA	**Lower Mag Wash**	**1.06**	**25**		**Pn**	**09 44 36.9**	**-0.5**
PSUT	**Pine Spring**	**1.06**	**341**	Pg	**Pb**	**09 44 35.9**	**-1.0**
PSUT				IAML		09 44 54.1	
	comp=N,3μm,0.4s						
PSUT				IAML		09 44 58.8	
	comp=E,3μm,0.7s						
NMUT	**North Mineral**	**1.09**	**24**		**Pb**	**09 44 36.9**	**-0.5**
MTPU	**Mount Pierson**	**1.11**	**62**		**Pn**	**09 44 38.1**	**0.0**
MTPU				IAML		09 44 59.2	
	comp=N,1μm,0.6s						
IMU	**Iron Mountain**	**1.13**	**11**		**Pn**	**09 44 37.8**	**-0.4**
BTU	**Barney Top**	**1.25**	**79**		**Pn**	**09 44 41.0**	**+0.8**
PRN	**Pahroc Range**	**1.30**	**265**	Pg	**Pg**	**09 44 39.5**	**-1.7**
PRN				IAML		09 45 01.7	
	comp=E,3μm,0.7s						
TCRU	**Three Creeks R**	**1.33**	**35**		**Pb**	**09 44 41.7**	**+0.3**
TCRU				IAML		09 45 04.3	
	comp=E,1μm,0.9s						
TCRU				IAML		09 45 08.3	
	comp=N,1μm,1.0s						
U15A	**North Rim**	**1.42**	**140**		**Pg**	**09 44 42.6**	**-1.0**
U15A	**North Rim**	**1.42**	**140**	IAML		09 45 03.2	
	comp=N,2μm,0.4s						
U15A				IAML		09 45 04.8	
	comp=E,2μm,0.7s						
PGAZ	**Page**	**1.68**	**111**		**Pg**	**09 44 47.9**	**-0.7**
WCU	**Willow Creek**	**1.78**	**36**		**Pb**	**09 44 48.9**	**-0.3**
S11A	**Rachel**	**1.85**	**274**		**Pn**	**09 44 47.7**	**-0.5**
HMU	**Henry Mountain**	**2.17**	**78**		**Pb**	**09 44 55.5**	**-0.2**
Q16A	**Castle Valley**	**2.25**	**51**		**Pb**	**09 44 56.1**	**-1.1**
Q16A				IAML		09 45 29.7	
	comp=E,261nm,0.6s						
TPNV	**Topopah Spring**	**2.33**	**257**		**Pn**	**09 44 54.1**	**-0.6**
TPNV				IAML		09 45 31.9	
	comp=E,1μm,0.7s						
TPNV				IAML		09 45 40.8	
	comp=E,1μm,0.8s						
W13A	**Hualapai Mount**	**2.45**	**189**		**Pn**	**09 44 56.9**	**+0.4**
W13A				IAML		09 45 34.6	
	comp=E,387nm,0.6s						
W13A				IAML		09 45 39.9	
	comp=N,362nm,0.7s						
WUAZ	**Wupatki**	**2.60**	**140**	Pn	**Pn**	**09 45 00.1**	**+1.7**
NLU	**North Lily Min**	**2.65**	**23**		**Pb**	**09 45 01.5**	**-2.4**
WCT	**Wildcat Mounta**	**2.66**	**255**		**Pn**	**09 44 58.9**	**-0.4**
WCT				IAML		09 45 51.6	
	comp=N,284nm,0.7s						
WCT				IAML		09 45 52.7	
	comp=E,397nm,0.8s						
MTPC	**Mountain Pass**	**2.66**	**221**		**Pn**	**09 44 59.4**	**0.0**
DUG	**Dugway, Tooele**	**2.71**	**10**	Pn	**Pn**	**09 45 00.2**	**+0.2**
DUG				IAML		09 45 46.8	
	comp=E,289nm,1.0s						
DUG				IAML		09 45 48.4	
	comp=E,276nm,1.0s						
ELU	**Electric Lake**	**2.74**	**39**		**Pb**	**09 45 03.9**	**-1.6**
SRU	**San Rafael Swe**	**2.78**	**54**	IAML		09 45 46.4	
	comp=N,168nm,0.8s						
SRU				IAML		09 45 48.2	
	comp=E,239nm,0.6s						
MPU	**Maple Canyon**	**2.85**	**29**	Pn	**Pn**	**09 45 03.8**	**+1.8**
P17A	**Butcher Ranch,**	**2.87**	**46**		**Pb**	**09 45 05.2**	**-2.4**
GWY	**Greenwater Val**	**2.93**	**244**		**Pn**	**09 45 02.7**	**-0.3**
GWY				IAML		09 45 46.9	
	comp=N,377nm,0.6s						
GWY				IAML		09 45 50.7	
	comp=E,452nm,0.7s						
FURC	**Furnace Creek,**	**2.95**	**250**		**Pn**	**09 45 03.6**	**+0.5**
TPH	**Tonopah**	**3.06**	**282**		**Pn**	**09 45 04.7**	**-0.2**
TPH				IAML		09 45 52.5	
	comp=E,387nm,0.4s						
TPH				IAML		09 45 54.7	
	comp=N,356nm,0.5s						
GMN	**Gold Mountain**	**3.06**	**267**	IAML		09 45 58.9	
	comp=E,183nm,0.6s						
GMN				IAML		09 46 00.8	
	comp=N,305nm,0.8s						
P18A	**Preston Nutter**	**3.26**	**49**	IAML		09 46 07.6	
	comp=N,111nm,0.8s						
DANC	**Danby, Needles**	**3.29**	**209**	IAML		09 46 01.2	
	comp=E,300nm,0.7s						
DANC				IAML		09 46 19.8	
	comp=N,380nm,0.9s						
X16A	**Lo Mia Camp, P**	**3.49**	**152**	IAML		09 46 06.2	
	comp=E,301nm,0.7s						
X16A				IAML		09 46 07.9	
	comp=N,180nm,1.0s						
ELK	**Elko**	**3.51**	**337**	Pn	**Pn**	**09 45 11.3**	**+0.2**
	comp=N,1.1nm,0.3s,baz=157,slow=14,SNR=38						
ELK				Lg	Lg	09 46 04.8	
	comp=N,18nm,0.3s,baz=33,slow=18,SNR=19 comp=N,2.4nm,0.2s						
GSC	**Goldstone, Bar**	**3.52**	**232**	IAML		09 46 09.6	
	comp=N,161nm,0.8s						
GSC				IAML		09 46 09.8	
	comp=E,212nm,0.8s						
MPMC	**Manual Prospec**	**3.58**	**247**	IAML		09 46 08.8	
	comp=E,128nm,0.6s						
MPMC				IAML		09 46 14.0	
	comp=N,114nm,0.8s						
DSP	**Deep Springs**	**3.62**	**269**	IAML		09 46 16.9	
	comp=N,159nm,1.0s						
DSP				IAML		09 46 23.0	
	comp=E,145nm,1.2s						
IRM	**Iron Mountain**	**3.64**	**203**	IAML		09 46 14.1	
	comp=E,127nm,0.6s						
CCCA	**Chr Cany lake**	**3.75**	**239**	IAML		09 46 31.6	
	comp=N,248nm,1.4s						
CCCA				IAML		09 46 34.9	
	comp=E,191nm,1.2s						
PV22	**Blue Mesa, Par**	**3.80**	**73**	IAML		09 46 21.0	
	comp=N,301nm,1.2s						
BLYC	**Blythe**	**3.87**	**194**	IAML		09 46 31.9	
	comp=E,143nm,0.8s						
BLYC				IAML		09 46 32.1	
	comp=N,142nm,0.9s						
NVAR	**Mina Array Bea**	**3.96**	**285**	Pn	**Pn**	**09 45 16.8**	**-0.5**
	comp=N,1.9nm,0.3s,baz=110,slow=14,SNR=44						
NVAR				Lg	Lg	09 46 16.6	
	comp=N,30nm,0.3s,baz=353,slow=26,SNR=9.5						
NVAR				LR	LR	09 47 01.9	
	comp=N,161nm,18.3s,baz=3.5,slow=44 comp=N,2.9nm,0.5s						
LRMC	**Laurel Mtn Rad**	**3.99**	**241**	IAML		09 46 28.5	
	comp=N,83nm,0.6s						
BELC	**Belle Mtn. Jos**	**4.09**	**212**	IAML		09 46 28.5	
	comp=E,89nm,1.2s						
BELC				IAML		09 46 33.8	
	comp=N,82nm,0.9s						
BC3	**Big Chuckawall**	**4.20**	**204**	IAML		09 46 32.3	
	comp=E,87nm,0.7s						
BC3				IAML		09 46 33.4	
	comp=N,116nm,0.8s						
HWUT	**Hardware Ranch**	**4.32**	**19**	IAML		09 46 38.0	
	comp=N,68nm,1.2s						
HWUT				IAML		09 46 42.5	
	comp=N,64nm,1.1s						
GLA	**Glamis**	**4.61**	**195**	IAML		09 46 48.7	
	comp=N,155nm,0.8s						
PFO	**Pinyon Flats O**	**4.62**	**213**	Pn	**Pn**	**09 45 26.4**	**+0.1**
	comp=N,0.8nm,0.3s,baz=30,slow=15,SNR=15						
PFO				Pg	**Pb**	**09 45 39.4**	**+1.9**
	comp=N,5.0nm,0.3s,baz=17,slow=12,SNR=20						
PFO				Lg	Lg	09 46 39.9	
	comp=N,2.1nm,0.3s,baz=240,slow=13,SNR=5.2 comp=N,6.1nm,0.6s						
DNR	**Dunn Ranch,Anz**	**4.74**	**214**	IAML		09 46 55.5	
	comp=N,97nm,0.9s						
DNR				IAML		09 46 56.7	
	comp=E,161nm,1.0s						
BFSC	**Mount Baldy Ra**	**4.75**	**228**	IAML		09 46 49.1	
	comp=N,39nm,1.0s						
O20A	**White River Ci**	**4.81**	**56**	IAML		09 47 01.1	
	comp=N,125nm,1.1s						
O20A				IAML		09 47 22.9	
	comp=N,117nm,1.1s						
MWC	**Mount Wilson**	**5.00**	**230**	IAML		09 46 59.3	
	comp=N,33nm,0.9s						
MWC				IAML		09 47 01.5	
	comp=E,38nm,1.8s						
PDAR	**Pinedale Array**	**6.01**	**28**	Pn	**Pn**	**09 45 49.1**	**+3.7**
	comp=E,0.4nm,0.3s,baz=199,slow=16,SNR=31						
PDAR				Lg	Lg	09 47 26.2	
	comp=E,0.6nm,0.3s,baz=210,slow=32,SNR=2.2 comp=E,3.4nm,0.7s						
ANMO	**Albuquerque**	**6.19**	**112**	Pn	**Pn**	**09 45 51.7**	**+3.8**
	comp=E,0.4nm,0.3s,baz=291,slow=12,SNR=12						
ANMO				Pg	**Pg**	**09 46 10.4**	**-4.3**
	comp=E,1.8nm,0.3s,baz=316,slow=14,SNR=12						
ANMO				Lg	Lg	09 47 28.6	
	comp=E,2.7nm,0.3s,baz=195,slow=18,SNR=7.4 comp=E,1.2nm,0.4s						
YBH	**Yreka Blue Hor**	**8.31**	**303**	Pn	**Pn**	**09 46 18.7**	**+1.9**
	comp=E,0.1nm,0.3s,baz=148,slow=13,SNR=1.8						
YBH				Lg	Lg	09 48 33.3	
	baz=246,slow=22,SNR=1.2 comp=E,0.7nm,0.5s						
NEW	**Newport**	**11.07**	**347**	Pn	**Pn**	**09 46 57.9**	**+3.3**
	comp=E,0.1nm,0.3s,baz=188,slow=15,SNR=3.0						
NEW				Lg	Lg	09 50 03.8	
	comp=E,0.1nm,0.3s,baz=82,slow=20,SNR=1.5 comp=E,1.7nm,1.0s						
TXAR	**Lajitas Array**	**11.53**	**132**	Pn	Pn	09 47 06.0	+5.0
	baz=307,slow=12,SNR=8.0						
TXAR				Pg		09 47 46.0	
	comp=E,0.1nm,0.3s,baz=342,slow=12,SNR=4.4						
TXAR				Lg	Lg	09 50 20.5	
	comp=E,0.1nm,0.3s,baz=94,slow=19,SNR=4.2 comp=E,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**17.88**	**39**	P	**P**	**09 48 26.1**	**+0.5**
	comp=E,1.4nm,0.6s,baz=231,slow=12,SNR=3.2						
YKA	**Yellowknife Ar**	**25.01**	**359**	P	**P**	**09 49 41.9**	**+1.9**
	comp=E,0.4nm,0.6s,baz=174,slow=10,SNR=3.0 comp=E,0.4nm,0.6s						

NIED ***21*** *09:58:27.8, 36°.23N×137°.64E, h3km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.83; $M_{\theta\theta}$9.81; $M_{\phi\phi}$-5.99; $M_{r\theta}$0.33; $M_{\theta\phi}$-1.11; $M_{\phi r}$4.25; Fault plane solution: $M_0$9.62000×10^{14} NP1: ϕ_s132.00000°, δ64.00000°, λ-28.00000°. NP2: ϕ_s236.00000°, δ65.00000°, λ-151.00000°.*

JMA 21 09:58:27.8±0.1, 36°.2N±0°.2×137°.6E±0°.1, h3km±1km, MV3.5/20, 4D, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.26**	**268**	P	Pg	09 58 33.1	+0.2
JGN				eS	Sg	09 58 37.1	+0.7
JNG	**Nsakai**	**0.41**	**65**	*i* P	Pg	09 58 35.9	+0.2
JNG				eS	Sg	09 58 41.4	+0.4
JTT	**Ttatey**	**0.45**	**326**	⇓*i* P	Pg	09 58 37.0	+0.6
JTT				⇓S	Sg	09 58 43.2	+1.0
JNT	**Takato**	**0.54**	**132**	⇓*i* P	Pg	09 58 38.1	-0.1
JNT				⇓S	Sg	09 58 45.4	+0.2
MAT	**Matsushiro**	**0.55**	**56**	*i* P	Pg	09 58 38.3	-0.1
MAT				S	Sg	09 58 45.4	-0.2

IDC 21 09:58:51.1±8.3, 4.71S×152°.30E, h110km±57km, mb3.2/3, mbtmp3.6/4, MS3.4/1, Error ellipse: s-maj=97.6km s-min=39.1km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.91**	**227**	P	Pn	10 00 29.0	-0.8
	12nm,0.9s,baz=47,slow=14,SNR=1.7						
PMG				S	Sn	10 01 49.1	+2.2
	29nm,0.6s,baz=155,slow=18,SNR=6.5 0.7nm,0.4s						
WRA	**Warramunga Arr**	**23.13**	**228**	P	P	10 03 47.8	-0.2
	0.7nm,0.4s,baz=52,slow=9.5,SNR=9.5 0.7nm,0.4s						
ASAR	**Alice Springs**	**25.88**	**222**	P	P	10 04 12.8	-0.1
	0.2nm,0.4s,baz=55,slow=8.6,SNR=6.8 0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**57.39**	**295**	LR	LR	10 33 39.9	
	comp=Z,30nm,18.7s,baz=205,slow=36						
MKAR	**Makanchi Array**	**79.93**	**319**	P	P	10 10 48.2	+0.2
	0.3nm,0.5s,baz=96,slow=7.3,SNR=4.4 0.3nm,0.5s						

PGC 21 10:03:32.0±0.0, 58°.35N×133°.49W, h9km, ML2.4/9, 53km east of Juneau, Alaska, Usa Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.75**	**288**	P	Pg	10 03 45.4	-1.1
Q32M	**Nakina River**	**0.88**	**46**	P	Pg	10 03 47.7	-1.3
Q32M				S	Sg	10 04 00.7	+0.2
R31K	**City Hall, Gus**	**1.19**	**274**	S	Sb	10 04 09.2	-0.8
P32M	**Atlin**	**1.25**	**355**	P	Pn	10 03 54.0	-1.7
S34M	**Telegraph Cree**	**1.33**	**108**	P	Pn	10 03 55.8	-0.9
R33M	**Jennings River**	**1.68**	**50**	Pn	Pn	10 04 01.2	-0.4
R33M				Sn	Sn	10 04 23.6	+0.3
DLBC	**Dease Lake**	**1.83**	**86**	Pn	Pn	10 04 03.5	-0.1
PLBC	**Pleasant Camp**	**1.86**	**308**	Pn	Pn	10 04 04.7	+0.7
PLBC				Sn	Sn	10 04 28.4	+0.8
P33M	**Teslin, Yukon**	**1.90**	**10**	Pn	Pn	10 04 04.8	+0.2
T35M	**Bob Quinn**	**2.22**	**127**	Sg	Sb	10 04 41.4	+1.6
P30M	**Million Dollar**	**2.51**	**316**	Sg	Sb	10 04 49.6	+1.3
O30N	**Mendenhall**	**2.76**	**332**	Sg	Sb	10 04 57.5	+2.0
WTLY	**Watson Lake, Y**	**2.99**	**52**	Sg	Sb	10 05 04.9	+2.9

AEIC ***21*** *10:04:09.5±1.0, 58°.36N±0°.01×133°.55W±0°.03, h5km±6km, Error ellipse: s-maj=2.8km s-min=1.0km az=130.0*

NEIC 21 10:04:09.2±0.8, 58°.370N±0°.008×133°.50W±0°.03, h5km±2km, ML2.7/30, ML2.4(AEIC), Error ellipse: s-maj=3.0km s-min=2.9km az=124.0, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.47**	**259**		Pg	10 04 18.3	+0.1
JIS					Sg	10 04 24.9	+0.5
R32K	**Eaglecrest**	**0.54**	**260**		Pg	10 04 19.9	+0.2
R32K				Sg	Sg	10 04 26.0	-0.6
BESE	**Bessie Mountai**	**0.74**	**287**		Pg	10 04 23.5	+0.1
BESE	**Bessie Mountai**	**0.74**	**287**		Sg	10 04 31.8	-1.2
BESE				IAML		10 04 41.8	
	comp=E,130nm,0.9s						
BESE				IAML		10 04 41.9	
	comp=N,114nm,1.2s						
Q32M	**Nakina River**	**0.88**	**47**	Pg	Pg	10 04 25.5	-0.5
Q32M				Sg	Sb	10 04 38.6	-0.5
Q32M				IAML		10 04 44.1	
	comp=N,137nm,1.0s						
S32K	**Killisnoo**	**1.07**	**213**		Pg	10 04 29.6	0.0
S32K					Sb	10 04 44.0	-0.3
S32K				IAML		10 04 46.7	
	comp=N,154nm,0.6s						
S32K				IAML		10 04 47.5	
	comp=E,179nm,0.6s						
R31K	**City Hall, Gus**	**1.18**	**273**		Pg	10 04 31.6	-0.1
R31K					Sb	10 04 48.0	+0.5
P32M	**Atlin**	**1.23**	**355**		Pg	10 04 32.7	0.0
P32M					Sn	10 04 50.3	+0.3
S34M	**Telegraph Cree**	**1.34**	**109**		Sn	10 04 52.6	-0.1
S34M	**Telegraph Cree**	**1.34**	**109**		Pn	10 04 34.6	+0.1
S34M	**Telegraph Cree**	**1.34**	**109**	IAML		10 04 56.1	
	comp=N,191nm,0.7s						
S34M				IAML		10 04 57.2	
	comp=E,230nm,0.6s						
SKAG	**Skagway**	**1.45**	**320**	Pn	Pn	10 04 36.0	+0.1
SKAG				IAML		10 05 01.6	
	comp=N,92nm,0.9s						
SKAG				IAML		10 05 01.7	
	comp=E,109nm,1.0s						
S31K	**Pelican**	**1.50**	**255**		Pn	10 04 36.7	0.0
S31K	**Pelican**	**1.50**	**255**	IAML		10 04 59.7	
	comp=N,62nm,1.1s						
S31K				IAML		10 05 04.3	
	comp=E,56nm,0.7s						
SIT	**Sitka**	**1.64**	**217**		Pn	10 04 38.6	0.0
SIT	**Sitka**	**1.64**	**217**	IAML		10 05 02.6	
	comp=N,80nm,0.7s						
SIT				IAML		10 05 04.5	
	comp=E,88nm,0.7s						
R33M	**Jennings River**	**1.67**	**51**		Pn	10 04 39.8	+0.6
R33M	**Jennings River**	**1.67**	**51**	IAML		10 05 05.3	
	comp=E,89nm,0.9s						
N32M	**Quiet Lake**	**2.80**	**4**		Pn	10 04 54.2	-0.4
CRAG	**Craig**	**2.92**	**176**	Pn	Pn	10 04 55.9	-0.3
CRAG				IAML		10 05 56.5	
	comp=N,19nm,1.3s						
CRAG				IAML		10 06 00.5	
	comp=E,20nm,1.1s						
N30M	**Aishikik Lake**	**3.59**	**331**	IAML		10 06 11.1	
	comp=N,19nm,0.8s						
M31M	**Drury Creek, Y**	**3.87**	**354**	IAML		10 06 21.8	
	comp=E,15nm,1.1s						
M31M				IAML		10 06 22.9	
	comp=N,13nm,0.7s						
M30M	**Minto, Yukon**	**4.52**	**340**	Pn	Pn	10 05 19.1	+0.8
M30M				IAML		10 06 48.9	
	comp=N,9.6nm,1.4s						

JMA 21 10:37:55.0±0.2, 36°.2N±0°.5×137°.7E±0°.6, h10km±3km, MV0.6/26, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.28**	**269**	*eP*	Pg	10 38 00.9	+0.1
JNG	**Nsakai**	**0.39**	**63**	*eP*	Pg	10 38 02.9	+0.1
JNG				*eS*	Sg	10 38 08.2	+0.2
JNT	**Takato**	**0.52**	**133**	*eS*	Sg	10 38 12.2	+0.2
MAT	**Matsushiro**	**0.54**	**54**	*eP*	Pg	10 38 05.3	-0.2

NOU ***21*** *10:40:01.2, 41°.81S×174°.50E, h8km, MLv4.1/16, Cook Strait, New Zealand*

WEL ***21*** *10:40:02.5, 41°.63S×174°.26E, ML3.9, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}3.77; $M_{\theta\theta}$1.73; $M_{\phi\phi}$1.04; $M_{r\theta}$-0.88; $M_{\theta\phi}$-0.22; $M_{\phi r}$-0.52; Fault plane solution: $M_0$3.20000×10^{14} NP1: ϕ_s218.00000°, δ62.00000°, λ104.00000°. NP2: ϕ_s9.00000°, δ31.00000°, λ65.00000°. Principal axes: T 1.9770, Plg69.0000°, Azm158.0000°; N -0.5500, Plg13.0000°, Azm31.0000°; P -1.4280, Plg16.0000°, Azm298.0000°; Stations used: KHZ MRZ NNZ QRZ THZ WEL REVERSE FAULTING*

WEL ***21*** *10:40:02.5±0.3, 42°.S±2°.×17°.4E±°, h9km±2km, M3.9/66, ML3.7/16, MLv3.9/66 Error ellipse: s-maj=2.9km s-min=1.7km az=147.6*

ISC 21 10:40:02.4±0.8, 41°.69S±0°.02×174°.33E±0°.02, h15km±5km, n148, σ1s14/166, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.10**	**237**	P	**Pg**	**10 40 05.9**	**+0.2**
CMWZ				S	**Sg**	**10 40 09.1**	**+1.2**
SDNS	**Seddon**	**0.14**	**282**	P	**Pg**	**10 40 05.9**	**-0.3**
SEDS	**Seddon Fire St**	**0.19**	**277**	P	**Pg**	**10 40 06.4**	**-0.5**
WDFS	**Ward Fire Stat**	**0.19**	**227**	P	**Pg**	**10 40 07.5**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.34**	**266**	P	**Pg**	**10 40 08.8**	**-0.6**
BSWZ				S	**Sg**	**10 40 13.8**	**-0.3**
KEKS	**Kekerengu Vall**	**0.37**	**225**	P	**Pb**	**10 40 10.5**	**-0.1**
TUWZ	**Tuamarina**	**0.39**	**312**	P	**Pb**	**10 40 10.2**	**-0.1**
TUWZ				S	**Sg**	**10 40 15.4**	**-0.3**
BWRS	**Waikakaho Road**	**0.41**	**309**	P	**Pg**	**10 40 09.7**	**-0.9**
BWRS				S	**Sg**	**10 40 15.2**	**-1.0**
GLOS	**29 km south-we**	**0.41**	**246**	P	**Pg**	**10 40 10.5**	**-0.2**
QCCS	**Picton Queen C**	**0.47**	**331**	P	**Pg**	**10 40 10.7**	**-1.1**
QCCS				S	**Sg**	**10 40 16.5**	**-1.7**
SNZO	**South Karori**	**0.48**	**37**	P	**Pb**	**10 40 11.9**	**-0.5**
SNZO	**South Karori**	**0.48**	**37**	S	**Sb**	**10 40 19.2**	**0.0**
TCW	**Tory Channel**	**0.48**	**356**	P	**Pg**	**10 40 11.3**	**-0.8**
TCW				S	**Sg**	**10 40 17.6**	**-1.0**
WNHS	**Wellington Hig**	**0.52**	**41**	P	**Pb**	**10 40 13.0**	**-0.2**
WNHS				S	**Sb**	**10 40 20.7**	**+0.3**
TRTW	**Torrens Terrac**	**0.52**	**41**	P	**Pb**	**10 40 12.9**	**-0.2**
TRTW				S	**Sb**	**10 40 20.7**	**+0.3**
WEL	**Wellington**	**0.53**	**39**	P	**Pb**	**10 40 13.1**	**-0.2**
WEL				S	**Sb**	**10 40 21.0**	**+0.3**
TEPS	**Wellington Te**	**0.53**	**40**	P	**Pb**	**10 40 13.1**	**-0.2**
MISS	**Wellington Mir**	**0.53**	**44**	P	**Pb**	**10 40 13.3**	**-0.1**
SEAW	**Seatoun School**	**0.53**	**46**	P	**Pb**	**10 40 13.4**	**-0.1**
WEMS	**Wellington Eme**	**0.54**	**39**	P	**Pb**	**10 40 13.4**	**-0.1**
TFSS	**Wellington Tho**	**0.54**	**39**	P	**Pb**	**10 40 13.5**	**-0.1**
TFSS				S	**Sb**	**10 40 21.7**	**+0.7**
MKBS	**Makara Bunker**	**0.55**	**31**	P	**Pg**	**10 40 13.0**	**-0.1**
HAVS	**Havelock**	**0.59**	**316**	P	**Pg**	**10 40 12.8**	**-1.1**
NEWS	**Newlands**	**0.59**	**39**	P	**Pb**	**10 40 14.1**	**-0.3**
NEWS				S	**Sb**	**10 40 22.7**	**+0.1**
SOMS	**Somes Island**	**0.59**	**43**	P	**Pb**	**10 40 14.1**	**-0.3**
PHHS	**Point Howard**	**0.62**	**45**	P	**Pb**	**10 40 14.6**	**-0.3**
WDAS	**Wainuiomata Bu**	**0.64**	**47**	P	**Pb**	**10 40 15.1**	**-0.1**
ARKS	**Wainuiomata Ar**	**0.65**	**46**	P	**Pb**	**10 40 15.1**	**-0.2**
FAIS	**Fairfield**	**0.67**	**44**	P	**Pb**	**10 40 15.5**	**-0.3**
LOKS	**Mount Lookout**	**0.71**	**243**	P	**Pg**	**10 40 16.4**	**+0.2**
PLWZ	**Palliser**	**0.71**	**80**	P	**Pn**	**10 40 17.6**	**-0.3**
PLWZ				S	**Sn**	**10 40 29.1**	**+0.7**
MSWZ	**Moikau Station**	**0.75**	**68**	P	**Pn**	**10 40 17.8**	**-0.5**
UHCS	**Upper Hutt Col**	**0.78**	**44**	P	**Pb**	**10 40 17.4**	**-0.2**
CAW	**Cannon Point**	**0.81**	**44**	P	**Pb**	**10 40 17.9**	**-0.2**
CAW				S	**Sb**	**10 40 29.3**	**+0.5**
NNZ	**Nelson**	**0.86**	**304**	P	**Pg**	**10 40 17.6**	**-1.4**
PAWZ	**Paruwai Farm**	**0.88**	**70**	P	**Pn**	**10 40 20.1**	**-0

ANWZ	Angora Road	2.04	53	P		Pn	10 40 35.2	-0.9
TSZ	Takapari Road	2.05	38	P		Pn	10 40 35.9	-0.4
LREZ	Lake Rotokare	2.23	2	P		Pb	10 40 41.4	-1.0
OKCZ	Okains Bay	2.23	204	P		Pn	10 40 37.3	-1.5
PRHZ	Porangahau	2.26	52	P		Pn	10 40 38.2	-0.9
PNHZ	Pukenui	2.28	39	P		Pn	10 40 38.7	-0.8
WPHZ	Waipukurau	2.29	45	P		Pn	10 40 38.8	-0.7
NMEZ	Namu Road	2.30	351	P		Pb	10 40 42.5	-1.1
OXZ	Oxford	2.35	225	P		Pn	10 40 38.6	-1.8
PREZ	Palmer Road	2.35	357	P		Pb	10 40 43.6	-0.8
MQZ	McQueen's Vall	2.36	211	P		Pn	10 40 38.2	-2.3
KHEZ	Kahui Hut	2.41	354	P		Pb	10 40 44.2	-1.3
KHEZ	Kahui Hut	2.41	354	S		Sb	10 41 14.9	-0.1
KHEZ	Kahui Hut	2.41	354	P		Pb	10 40 44.1	-1.3
AKCZ	Akaroa Harbour	2.41	205	P		Pn	10 40 39.6	-1.6
NEZ	North Egmont	2.43	356	P		Pb	10 40 44.9	-0.8
NBEZ	Newall Road No	2.45	352	P		Pn	10 40 44.0	+2.3
MTVZ	Mangateitei	2.47	21	P		Pn	10 40 43.5	+1.5
DREZ	Durham Road	2.50	358	P		Pb	10 40 45.6	-1.4
PKE	Pukeiti	2.51	354	P		Pb	10 40 45.7	-1.4
PKVZ	Pokaka	2.52	18	P		Pn	10 40 44.7	+1.8
MOVZ	Moawhango	2.53	26	P		Pn	10 40 43.0	+0.1
PXZ	Pawanui	2.54	50	P		Pn	10 40 41.5	-1.5
WNVZ	Wahianoa	2.56	23	P		Pn	10 40 44.2	+0.8
TRVZ	Turoa	2.57	22	P		Pn	10 40 44.9	+1.3
BHHZ	Black Hill Sta	2.57	32	P		Pn	10 40 43.3	-0.2
KRHZ	Kereru	2.57	38	P		Pn	10 40 42.6	-0.9
VRZ	Vera Road	2.59	7	P		Pn	10 40 45.6	+1.9
RACZ	Rakaia	2.59	218	P		Pn	10 40 42.3	-1.4
WHVZ	Whangaehu Hut	2.59	22	P		Pn	10 40 44.9	+0.9
MAVZ	Matarangi	2.60	22	P		Pb	10 40 48.9	+0.1
FWVZ	Far West T-bar	2.61	21	P		Pn	10 40 45.2	+1.1
TUVZ	Tukino	2.63	23	P		Pn	10 40 45.3	+0.9
COVZ	Chateau Observ	2.66	21	P		Pb	10 40 49.1	-0.6
NGZ	Ngauruhoe	2.70	22	P		Pn	10 40 46.4	+1.1
SNVZ	South Ngauruho	2.70	22	P		Pn	10 40 46.5	+1.2
KAHZ	Kahuranaki	2.71	46	P		Pn	10 40 44.4	-1.0
OTVZ	Oturere	2.73	22	P		Pn	10 40 47.0	+1.3
MHCZ	Mount Hutt	2.74	227	P		Pn	10 40 44.2	-1.7
WTVZ	West Tongariro	2.75	21	P		Pn	10 40 47.2	+1.2
TWVZ	Taurewa	2.75	18	P		Pn	10 40 47.5	+1.4
ETVZ	East Tongariro	2.77	23	P		Pn	10 40 47.2	+1.0
KWHZ	Kaweka Forest	2.77	36	P		Pn	10 40 45.9	-0.4
TMVZ	Te Maari	2.78	23	P		Pn	10 40 47.2	+0.8
KRVZ	Karewarewa	2.78	22	P		Pn	10 40 48.2	+1.7
NTVZ	North Tongarir	2.79	22	P		Pn	10 40 47.5	+0.9
MCHZ	McNeill Hill	2.88	40	P		Pn	10 40 46.7	-1.0
WACZ	Wakanui South	2.90	218	P		Pn	10 40 46.4	-1.5
KATZ	Kakaramea	2.91	22	P		Pb	10 40 53.7	-0.3
WVZ	Waitaha Valley	3.00	241	P		Pn	10 40 49.2	-0.1
BKZ	Black Stump Fm	3.02	34	P		Pn	10 40 49.1	-0.5
BKZ	Black Stump Fm	3.02	34	S		Sn	10 41 27.1	+1.6
BKZ	Black Stump Fm	3.02	34	P		Pn	10 40 48.7	-0.9
RPZ	Rata Peaks	3.15	229	P		Pn	10 40 49.8	-1.5
RPZ	Rata Peaks	3.15	229	P		Pn	10 40 50.1	-1.2
HIZ	Hauiti	3.20	7	P		Pn	10 40 53.5	+1.4
HIZ	Hauiti	3.20	7	S		Sn	10 41 33.3	+3.3
HIZ	Hauiti	3.20	7	P		Pn	10 40 54.0	+1.9
ARCZ	Arundel	3.23	225	P		Pn	10 40 51.4	-1.1
MRHZ	Matea Rd	3.27	30	P		Pn	10 40 51.9	-1.3
MTHZ	Maungataniwha	3.43	35	P		Pn	10 40 54.9	-0.4
RAHZ	Arahi	3.49	38	P		Pn	10 40 55.7	-0.3
TLZ	Tolley Road	3.49	16	P		Pb	10 41 00.3	-3.5
PRRZ	Plateau Road	3.56	27	P		Pb	10 41 04.4	-0.7
TMZ	Timaru	3.63	221	P		Pn	10 40 56.6	-1.3
KNZ	Kokohu	3.70	45	P		Pn	10 40 57.4	-1.5
MUGZ	Murupara	3.72	31	P		Pn	10 40 59.3	+0.1
FOZ	Fox Glacier	3.80	240	P		Pn	10 40 59.9	-0.4
URZ	Urewera	4.04	33	P		Pn	10 41 04.1	+0.5
URZ	Urewera	4.04	33	P		Pn	10 41 02.9	-0.8
LBZ	Lake Benmore	4.06	227	P		Pn	10 41 03.9	0.0
TOZ	Tahuroa Road	4.06	13	P		Pn	10 41 07.1	+3.2
ODZ	Otahua Downs	4.29	217	P		Pn	10 41 05.3	-1.8
ODZ	Otahua Downs	4.29	217	P		Pn	10 41 05.2	-1.8
TWGZ	Tauwhareparae	4.50	40	P		Pn	10 41 09.1	-0.9
MKAZ	Moumakai	4.63	8	P		Pn	10 41 12.5	+0.8
AWAZ	Awhitu Peninsu	4.63	3	P		Pn	10 41 14.4	+2.6
JCZ	Jackson Bay	4.71	238	P		Pn	10 41 14.6	+1.6
JCZ	Jackson Bay	4.71	238	P		Pn	10 41 16.6	+3.7
ETAZ	East Tamaki Re	4.76	6	P		Pn	10 41 14.8	+1.3
MBAZ	Motutapu North	4.94	5	P		Pn	10 41 19.2	+3.2

*IDC **21** 10:59:39.6±3.7,22°.44S×174°.71W,h191km±40km, mb3.9/5, mbtmp4.4/8, MS2.8/1, Error ellipse: s-maj=44.3km s-min=36.5km az=128.0*

*NEIC **21** 10:59:49.0±0.8,23°.0S±0°.1×176°.1W±0°.1,h167km±9km, mb4.4/15, Error ellipse: s-maj=19.6km s-min=13.9km az=136.0*

ISC 21 10:59:47.8±0.6,23°.12S±0°.08×176°.18W±0°.07,h150km, n32,σ1$57/34,mb4.3/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	6.30	194	Pn	Pn	11 01 20.6	+2.1
NIUE	Niue	7.09	57	Pn	Pn	11 01 29.7	+0.6
NIUE				Sn	Sn	11 02 51.8	+3.2
MSVF	Nonsavu	7.61	314	P	Pn	11 01 36.5	+0.3
	7.9nm,0.6s,baz=128,slow=16,SNR=18						
MSVF	Nonsavu	7.61	314		Pn	11 01 36.4	+0.3
MSVF				Sn	Sn	11 03 05.2	+3.9
AFI	Afiamalu	10.07	25	P	Pn	11 01 45.1	-24
	6.9nm,0.3s,baz=135,slow=4.5,SNR=7.9						
MARNC	Mare, Loyalty	14.70	273		P	11 03 10.3	-0.5
URZ	Urewera	16.15	199	P	P	11 03 28.1	+1.5
	4.3nm,0.5s,baz=29,slow=12,SNR=1.5						
RTZ	Ruatahuna	16.51	199	P	Pn	11 03 31.3	+0.5
RTZ				IAmb	IAmb	11 04 09.2	
	comp=Z,27nm,1.2s						
MSWZ	Moikau Station	19.61	200	P	P	11 04 05.2	+0.7
TUWZ	Tuamarina	20.05	202	P	P	11 04 09.9	+0.8
CTA	Charters Tower	34.99	268	P	P	11 06 25.8	-0.2
	comp=Z,8.0nm,0.4s,baz=93,slow=9.7,SNR=34						
	comp=Z,8.0nm,0.4s						
CTAO	Charters Tower	34.99	268	P	P	11 06 26.2	+0.1
CTAO				IAmb	IAmb	11 06 27.0	
	comp=Z,15nm,1.1s						
STKA	Stephens Creek	38.26	247	P	P	11 06 53.5	-0.1
	comp=Z,0.9nm,0.5s,baz=86,slow=8.4,SNR=3.6						
	comp=Z,0.9nm,0.5s						
INKA	Innaminka	39.03	254		P	11 07 00.1	+0.1
INKA				IAmb	IAmb	11 07 14.0	
	comp=Z,5.4nm,1.4s						
BBOO	Buckleboo	42.97	246	P	P	11 07 31.4	-0.9
BBOO				IAmb	IAmb	11 07 43.0	
	comp=Z,23nm,1.5s						
AS31	Alice Springs	45.62	259	P	P	11 07 52.5	-1.0
ASAR	Alice Springs	45.62	259	P	P	11 07 52.4	-1.1
	comp=Z,4.5nm,0.8s,baz=96,slow=6.9,SNR=42						
	comp=Z,4.5nm,0.8s						
ASAR	Alice Springs	45.62	259	P	P	11 07 51.9	-1.6
WR8	Warramunga Arr	45.81	264	P	P	11 07 53.5	-1.5
WR8				IAmb	IAmb	11 07 54.9	
	comp=Z,4.3nm,0.9s						
WR8				pP	pwP	11 08 30.8	-0.2
WB0	Warramunga Arr	45.95	264	P	P	11 07 54.8	-1.3
WB0				IAmb	IAmb	11 07 55.2	
	comp=Z,21nm,1.5s						
WB0				sP	sP	11 08 47.6	+2.2
WRA	Warramunga Arr	45.96	264	P	P	11 07 54.3	-1.9
	comp=Z,3.7nm,0.5s,baz=101,slow=7.8,SNR=34						
	comp=Z,3.7nm,0.5s						
WRA	Warramunga Arr	45.96	264	P	P	11 07 54.1	-2.0
WRA				sP	sP	11 08 46.6	+1.2
DAH	Dandelion	46.73	27	P	P	11 07 59.4	-3.0
FORT	Forrest	49.86	249	P	P	11 08 24.2	-1.7
FORT				IAmb	IAmb	11 08 54.1	
	comp=Z,8.3nm,1.2s						
KNRA	Kununurra	52.21	268	P	P	11 08 43.0	-0.7
KNRA				IAmb	IAmb	11 08 49.3	
	comp=Z,14nm,1.2s						
GUMO	Guam	52.77	310	LR	LR	11 29 22.0	
	comp=Z,8.3nm,19.5s,baz=153,slow=33						
FITZ	Fitzroy Crossi	54.39	264	P	P	11 08 58.3	-1.3
	comp=Z,3.4nm,0.4s,baz=100,slow=8.6,SNR=4.5						
	comp=Z,3.4nm,0.4s						
FITZ	Fitzroy Crossi	54.39	264	P	P	11 08 58.6	-1.0
MBWA	Marble Bar	58.96	258	P	P	11 09 31.1	-0.8
MORW	Morawa	60.43	249	P	P	11 09 41.0	-0.8
QSPA	South Pole Qui	66.96	180	P	P	11 10 28.5	+4.3
QSPA				IAmb	IAmb	11 10 49.6	
	comp=Z,6.9nm,1.4s						
HOPS	Hopland Field	79.28	39	P	P	11 11 34.9	-1.7

KRSC 21 11:02:55.9±1.5,48°.73N×156°.20E,h30km±21km,MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.96	358	eP	Pn	11 03 27.5	+0.5
SKR				eS	Sn	11 03 51.8	+1.3
PAU	Pauzhetka	2.77	8	eS	Sb	11 04 15.0	-3.2
KDTR	Khodutka, Kamc	3.31	21	eP	Pn	11 03 49.1	+3.5
KDTR				eS	Sb	11 04 28.9	-4.8
ASAK	Asacha	3.82	16	eP	Pn	11 03 56.7	+4.1
MTVR	Mutnovka	3.97	18	eP	Pn	11 03 58.8	+4.1
MTVR				eS	Sn	11 04 46.3	+6.0
RUS	Russkaya	3.99	21	eP	Pn	11 03 58.3	+3.4
RUS				eS	Sn	11 04 46.3	+5.6
GRL	Gorelyy	4.01	17	eP	Pn	11 03 59.7	+4.4
PET	Petropavlovsk	4.58	19	eS	Sn	11 05 01.2	+6.2
DALK	Dalny	4.60	20	eS	Sn	11 05 01.2	+5.5
UGLR	Uglovaya	4.79	19	eP	Pn	11 04 10.0	+4.1
AVH	Avacha	4.82	18	eP	Pn	11 04 12.0	+5.6
KOK	Koryaka	4.82	18	eP	Pn	11 04 11.7	+5.3
NLC	Nalytchevo	4.88	23	eS	Sn	11 05 05.7	+3.4
KRX	Arik	4.89	17	eP	Pn	11 04 12.2	+4.8
SPN	Mys Shipunski	5.00	27	eP	Pn	11 04 13.7	+5.0
SPN				eS	Sn	11 05 11.7	+6.2
GNL	Ganaly	5.10	12	eP	Pn	11 04 15.1	+4.9

*GFZ **21** 11:03:28.3±0.2,22°.2S±4°.4W±°,h573km, M4.7/23, mb4.7/23*

*NOU **21** 11:03:29.5,22°.19S×179°.53W,h580km, mb4.6/65, South of Fiji Islands*

*NEIC **21** 11:03:29.1±1.5,22°.1S±0°.1×179°.5W±0°.1, h573km±8km, mb4.4/160, Error ellipse: s-maj=19.0km s-min=17.9km az=85.0*

*IDC **21** 11:03:29.3±0.8,22°.21S×179°.59W,h577km±8km,mb3.8/21, mbtmp4.8/25, Error ellipse: s-maj=10.2km s-min=9.2km az=108.0*

ISC 21 11:03:30.1±0.3,22°.24S±0°.05×179°.52W±0°.05,h592km, n331,σ1$31/295,mb4.4/113,14C-3D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.04	10	P	P	11 04 53.7	-1.7
LKBA	Tubou, Lakemba	4.04	10	S	S	11 06 02.6	-2.1
MSVF	Nonsavu	5.03	333	P	P	11 05 01.2	-1.7
	351nm,0.6s,baz=210,slow=4.8,SNR=504						
MSVF				S	S	11 06 16.3	-2.4
	30nm,0.9s,baz=117,slow=17,SNR=4.2						
MSVF	Nonsavu	5.03	333	P	P	11 05 01.5	-1.5
MSVF	Nonsavu	5.03	333	S	S	11 06 16.5	-2.1
MSVF	Nonsavu	5.03	333		P	11 05 01.9	-1.1
MSVF	Nonsavu	5.03	333		P	11 05 01.9	-1.1
DGTI	Dogotuki	5.95	353	P	P	11 05 08.7	-1.9
RAO	Raoul Island	7.13	169	P	P	11 05 19.0	-1.8
	207nm,0.3s,baz=54,slow=12,SNR=6.1						
RAO				S	S	11 06 50.3	-1.2
	127nm,0.4s,baz=272,slow=22,SNR=1.7						
RAO	Raoul Island	7.13	169	P	P	11 05 19.9	-0.9
RAO	Raoul Island	7.13	169	P	P	11 05 19.9	-0.9
GLKZ	Green Lake	7.14	169	P	P	11 05 19.2	-1.7
GLKZ				S	S	11 06 48.5	-3.2
FUTU	Fugatoga	8.00	10		P	11 05 28.2	-1.0
FUTU	Fugatoga	8.00	10	P	P	11 05 28.3	-1.0
NIUE	Niue	9.52	72	P	P	11 05 41.7	-2.3
NIUE				S	S	11 07 36.2	+2.4
AFI	Afiamalu	11.08	43	P	P	11 05 55.3	-4.4
	22nm,0.5s,baz=214,slow=3.4,SNR=4.7						
AFI				S	S	11 07 52.1	-11
	10nm,0.3s,baz=268,slow=21,SNR=5.3						
AFI	Afiamalu	11.08	43	P	P	11 05 54.8	-5.0
AFI	Afiamalu	11.08	43	P	P	11 05 54.5	-5.2
MARNC	Mare, Loyalty	11.59	271	P	P	11 06 03.9	-0.8
MARNC	Mare, Loyalty	11.59	271	S	S	11 08 10.1	-1.6
MARNC	Mare, Loyalty	11.59	271		P	11 06 04.3	-0.4
YATNC	Mamie plateau,	12.60	268	P	P	11 06 14.1	-0.8
DZM	Mont Dzumac	13.01	268	P	P	11 06 17.9	-1.3
	9.3nm,0.6s,baz=132,slow=21,SNR=9.7						
OUZ	Omahuta	14.27	203	P	P	11 06 30.8	-0.7
OUZ	Omahuta	14.27	203	P	P	11 06 33.3	+1.8
WCZ	Waipu Caves	14.66	200	P	P	11 06 34.1	-1.1
ABAZ	Army Bay	15.13	198	P	P	11 06 41.4	+1.9
WMGZ	Waiomatatini S	15.63	186	P	P	11 06 42.9	-1.3
WMGZ				S	S	11 09 20.7	-1.8
HAZ	Te Kaha	15.64	188	P	P	11 06 43.6	-0.6
HAZ				S	S	11 09 17.5	-5.1
RUGZ	Raukumara Rang	15.86	188	P	P	11 06 45.7	-0.7
RUGZ				S	S	11 09 23.5	-3.0
TGRZ	Tauranga	15.86	192	P	P	11 06 47.9	+1.6
PUZ	Puketiti	15.89	186	P	P	11 06 46.7	0.0
PUZ				S	S	11 09 23.5	-3.4
TOZ	Tahuroa Road	16.02	194	P	P	11 06 49.2	+1.4
TWGZ	Tauwhareparae	16.03	187	P	P	11 06 48.0	+0.1
TWGZ				S	S	11 09 28.4	-0.7
KMRZ	Kaimai	16.04	193	P	P	11 06 49.7	+1.7
KARZ	Kaharoa	16.14	192	P	P	11 06 49.3	+0.3
URZ	Urewera	16.23	190	P	P	11 06 47.8	-1.9
	50nm,0.5s,baz=259,slow=3.3,SNR=23						
URZ				S	S	11 09 24.8	-7.5
	23nm,0.7s,baz=196,slow=21,SNR=15						
URZ	Urewera	16.23	190	P	P	11 06 49.5	-0.2
URZ	Urewera	16.23	190	S	S	11 09 32.9	+0.6
URZ	Urewera	16.23	190	P	P	11 06 47.9	-1.7
URZ				S	S	11 09 25.8	-6.5
URZ	Urewera	16.23	190	P	P	11 06 45.8	-3.9
MWZ	Matawai	16.24	188	P	P	11 06 49.2	-0.6
MWZ				S	S	11 09 27.4	-5.2
CNGZ	Carnagh Statio	16.31	186	P	P	11 06 51.0	+0.6
TLZ	Tolley Road	16.59	194	P	P	11 06 54.1	+1.1
RTZ	Ruatahuna	16.59	190	P	P	11 06 52.0	-1.2
HIZ	Hauiti	16.92	195	P	P	11 06 58.5	+2.4
BKZ	Black Stump Fm	17.21	191	P	P	11 06 58.9	+0.2
BKZ	Black Stump Fm	17.21	191	S	S	11 09 49.9	+1.4
NGZ	Ngauruhoe	17.39	193	P	P	11 07 01.0	+0.5
NGZ				S	S	11 09 53.4	+1.9
VRZ	Vera Road	17.53	195	P	P	11 07 03.5	+1.9
WAZ	Wanganui	18.07	194	P	P	11 07 07.3	+0.7
TSZ	Takapari Road	18.17	191	P	P	11 07 06.8	-0.6
TSZ				S	S	11 10 03.8	-0.2
BFZ	Birch Farm	18.73	190	P	P	11 07 12.4	-0.1
BFZ	Birch Farm	18.73	190	S	S	11 10 15.1	+2.2
BFZ	Birch Farm	18.73	190	P	P	11 07 11.7	-0.8
MRZ	Mangatainoka R	18.83	192	P	P	11 07 12.1	-1.2
MRZ				S	S	11 10 15.2	+0.8
SNZO	South Karori	19.63	193	P	P	11 07 21.4	+0.8
SNZO	South Karori	19.63	193	S	S	11 10 29.5	+2.4
QRZ	Quartz Range	19.71	198	P	P	11 07 22.3	+0.9
QRZ	Quartz Range	19.71	198	P	P	11 07 22.0	+0.6
NNZ	Nelson	19.84	196	P	P	11 07 22.4	-0.1
KHZ	Kahutara	20.94	195	P	P	11 07 32.5	+0.1
ALEG	Aligegeo Malai	23.27	302	P	P	11 07 54.4	+0.8
JCZ	Jackson Bay	23.82	201	P	P	11 07 58.2	0.0
TATA	Tatamba Isabel	24.19	302	P	P	11 08 00.6	-1.1
EIDS	Eidsvold	27.05	258	P	P	11 08 26.8	0.0
EIDS	Eidsvold	27.05	258	P	P	11 08 27.4	+0.6
ARMA	Armidale	27.05	246	P	P	11 08 27.7	+0.8
ARMA	Armidale	27.05	246	P	P	11 08 28.4	+1.5
ARMA				IAmb	IAmb	11 08 29.5	
	comp=Z,16nm,0.9s						
CAN	Canberra	30.38	238	P	P	11 08 56.4	+0.9
CAN	Canberra	30.38	238	P	P	11 08 56.7	+1.2
CTA	Charters Tower	31.95	267	P	P	11 09 08.7	-0.4
	comp=Z,38nm,1.0s,baz=89,slow=11,SNR=26						
	comp=Z,38nm,1.0s						
CTA	Charters Tower	31.95	267	P	P	11 09 09.2	+0.1
CTAO	Charters Tower	31.95	267	P	P	11 09 09.2	+0.1
CTAO	Charters Tower	31.95	267	P	P	11 09 09.4	+0.3
CTAO	Charters Tower	31.95	267	P	P	11 09 09.5	+0.4
CMSA	Cobar Meteorol	32.27	246	P	P	11 09 12.3	+0.7
CMSA	Cobar Meteorol	32.27	246	P	P	11 09 09.0	-2.6
QLP	Quilpie	33.22	255	P	P	11 09 19.7	0.0
QLP	Quilpie	33.22	255	P	P	11 09 18.1	-1.6
TOO	Toolangi	33.74	235		P	11 09 25.0	+1.1
TOO				IAmb	IAmb	11 09 26.1	
	comp=Z,7.8nm,0.7s						
MTSU	Mount Surprise	34.14	270	P	P	11 09 27.8	+0.3
MTSU	Mount Surprise	34.14	270	P	P	11 09 26.5	-0.9
PMG	Port Moresby	34.41	286	P	P	11 09 29.6	-0.1
	comp=Z,37nm,0.8s,baz=89,slow=3.2,SNR=6.9						
	comp=Z,37nm,0.8s						
PMG	Port Moresby	34.41	286	P	P	11 09 29.7	-0.1
PMG	Port Moresby	34.41	286	P	P	11 09 30.4	+0.6
	comp=Z,60nm,0.9s						
STKA	Stephens Creek	35.77	246	P	P	11 09 41.1	+0.3
	comp=Z,19nm,0.7s,baz=89,slow=9.8,SNR=37						
	comp=Z,19nm,0.7s						
STKA	Stephens Creek	35.77	246	P	P	11 09 41.6	+0.8
STKA	Stephens Creek	35.77	246	P	P	11 09 40.2	-0.7
INKA	Innaminka	36.32	253	P	P	11 09 46.1	+0.8
INKA				IAmb	IAmb	11 09 48.0	
	comp=Z,8.4nm,0.9s						
QIS	Mount Isa	38.02	265	P	P	11 09 59.5	+0.2
HTT	Hallett	38.18	244	P	P	11 10 00.9	+0.4
BBOO	Buckleboo	40.52	245	P	P	11 10 19.3	0.0
BBOO	Buckleboo	40.52	245		P	11 10 19.2	0.0
BBOO	Buckleboo	40.52	245	P	P	11 10 18.5	-0.7
AS01	Alice Springs	42.73	259	P	P	11 10 36.3	-0.4
AS31	Alice Springs	42.77	259		P	11 10 37.0	0.0
AS31				IAmb	IAmb	11 10 38.5	
	comp=Z,8.3nm,0.9s						
ASAR	Alice Springs	42.77	259	P	P	11 10 36.8	-0.3
	comp=Z,29nm,0.8s,baz=91,slow=8.2,SNR=170						
ASAR				PcP	PcP	11 12 15.7	+1.0
	comp=Z,2.4nm,0.6s,baz=109,slow=3.9,SNR=6.6						
ASAR				ScP	ScP	11 15 13.6	+3.7
	comp=Z,1.2nm,0.7s,baz=117,slow=4.3,SNR=5.3						
ASAR				S	S	11 16 18.4	-0.9
	comp=Z,2.0nm,0.9s,baz=90,slow=16,SNR=11						
	comp=Z,29nm,0.8s						
WR8	Warramunga Arr	42.84	264		P	11 10 36.8	-0.8
WR8				IAmb	IAmb	11 10 38.1	
	comp=Z,23nm,1.1s						
WB0	Warramunga Arr	42.97	264		P	11 10 38.2	-0.5
WRA	Warramunga Arr	42.99	264	P	P	11 10 37.8	-1.0
	comp=Z,24nm,0.9s,baz=94,slow=7.8,SNR=133						
WRA				ScP	ScP	11 15 14.5	+3.7
	comp=Z,4.4nm,0.9s,baz=100,slow=4.5,SNR=7.5						
WRA				S	S	11 16 20.2	-2.3
	comp=Z,0.9nm,0.7s,baz=99,slow=14,SNR=1.4						
	comp=Z,24nm,0.9s						
WRA	Warramunga Arr	42.99	264		P	11 10 38.2	-0.6
JAY	Jayapura	43.30	291	P	P	11 10 41.3	0.0
	comp=Z,35nm,0.9s						
FORT	Forrest	47.32	248		P	11 11 11.4	-0.2
POHA	Pohakuloa	47.87	31	P	P	11 11 15.7	-0.3
BAKI	Biak	47.94	290	P	P	11 11 17.8	+1.3
	comp=Z,57nm,0.9s						
KNRA	Kununurra	49.16	268		P	11 11 25.0	-0.4
FITZ	Fitzroy Crossi	51.42	264	P	P	11 11 42.0	+0.1
	comp=Z,6.9nm,0.4s,baz=78,slow=7.1,SNR=56						
	comp=Z,6.9nm,0.4s						
FITZ	Fitzroy Crossi	51.42	264	P	P	11 11 41.1	-0.7
FITZ	Fitzroy Crossi	51.42	264	P	P	11 11 41.2	-0.6
SIJI	Sorong	52.35	287	P	P	11 11 48.8	+0.2
SOEI	Soe	55.17	274	P	P	11 12 08.7	+0.2
SOEI	Soe	55.17	274	P	P	11 12 10.3	+1.8
SOEI	Soe	55.17	274	P	P	11 12 08.2	-0.3
MEEK	Meekatharra	56.03	252	P	P	11 12 14.1	-0.1
KLBR	Kellerberrin	56.05	246	P	P	11 12 14.7	+0.4
VNDA	Vanda	56.06	185	P	P	11 12 14.8	+1.3
	comp=Z,3.6nm,0.9s,baz=13,slow=7.2,SNR=14						
	comp=Z,3.6nm,0.9s						
VNDA	Vanda	56.06	185		P	11 12 15.7	+2.2
MBWA	Marble Bar	56.11	259	P	P	11 12 14.7	-0.1
MBWA	Marble Bar	56.11	259	P	P	11 12 14.5	-0.3
MBWA	Marble Bar	56.11	259	P	P	11 12 14.9	0.0
NWAO	Narrogin (SRO)	56.34	244	P	P	11 12 16.3	+0.1
TNTI	Ternate	56.56	287		P	11 12 17.8	-0.2
TNTI				IAmb	IAmb	11 12 18.9	
	comp=Z,31nm,0.9s						
TNTI	Ternate	56.56	287	P	P	11 12 18.4	+0.4
BLDU	Ballidu	57.06	247	P	P	11 12 21.1	-0.1
MMRI	Maumere	57.43	274	P	P	11 12 24.3	+0.3
	comp=Z,51nm,1.0s						
MORW	Morawa	57.87	249	P	P	11 12 26.9	+0.2
MORW	Morawa	57.87	249

PETK	Petropavlovsk-	77.60	346			P		11 14 26.1	+0.3
BELA	Belgrano 2	78.02	173			P		11 14 28.5	+0.6
BELA					IAmb	IAmb	11 14 29.5		
	comp=Z,13nm,0.9s								
MAW	Mawson	79.45	200	P		P		11 14 36.0	+0.5
	comp=Z,5.6nm,0.9s,baz=116,slow=5.5,SNR=7.4								
	comp=Z,5.6nm,0.9s								
MAW	Mawson	79.45	200	P		P		11 14 37.5	+1.9
USRK	Ussuriysk Ar.	79.62	327	P		P		11 14 36.1	-0.7
	comp=Z,5.6nm,0.9s,baz=134,slow=4.2,SNR=6.4								
	comp=Z,5.6nm,0.9s								
O02D	Mt. Diablo Mer	81.51	40	IAmb	IAmb	IAmb	11 14 49.8		
	comp=Z,13nm,0.9s								
KHBM	Hayfork Bally	81.56	40	IAmb	IAmb	IAmb	11 14 49.6		
	comp=Z,10nm,0.9s								
O03E	Paynes Creek	82.18	41	IAmb	IAmb	IAmb	11 14 52.2		
	comp=Z,20nm,1.2s								
M02C	Callahan	82.23	39	IAmb	IAmb	IAmb	11 14 53.3		
	comp=Z,8.8nm,0.8s								
BELC	Belle Mtn. Jos	82.32	49	IAmb	IAmb	IAmb	11 14 53.3		
	comp=Z,13nm,1.4s								
YBH	Yreka Blue Hor	82.53	39	IAmb	IAmb	IAmb	11 14 54.4		
	comp=Z,7.5nm,0.9s								
WAKR	Walker	82.58	43	IAmb	IAmb	IAmb	11 14 54.6		
	comp=Z,7.2nm,0.8s								
MPK	Martis Peak	82.67	42	IAmb	IAmb	IAmb	11 14 55.0		
	comp=Z,9.8nm,0.7s								
PNTR	Pine Nut	82.81	43	IAmb	IAmb	IAmb	11 14 56.1		
	comp=Z,12nm,0.8s								
LHV	Little Huntoon	83.02	44	IAmb	IAmb	IAmb	11 14 56.7		
	comp=Z,7.8nm,1.0s								
BNX	BinXian	83.04	326	⇑P		P		11 14 55.0	+0.8
BNX					pmax	pmax			
	comp=Z,14nm,0.7s								
L04D	Klamath Falls	83.07	39	IAmb	IAmb	IAmb	11 14 56.9		
	comp=Z,13nm,1.0s								
113A	Mohawk Valley,	83.23	51	IAmb	IAmb	IAmb	11 14 58.0		
	comp=Z,8.5nm,1.1s								
NVAR	Mina Array Bea	83.26	44	P		P		11 14 56.8	+1.1
	comp=Z,3.5nm,0.9s,baz=225,slow=8.7,SNR=21								
	comp=Z,3.5nm,0.9s								
NVAR	Mina Array Bea	83.26	44	P		P		11 14 56.5	+0.8
PAHR	Pah Rah Range	83.31	42	IAmb	IAmb	IAmb	11 14 57.8		
	comp=Z,8.3nm,1.1s								
TIA	Tai'an	83.42	313	P		P		11 14 57.9	+1.6
TIA					pmax	pmax			
	comp=Z,18nm,1.0s								
TPNV	Topopah Spring	83.77	46	IAmb	IAmb	IAmb	11 15 00.3		
	comp=Z,8.6nm,1.3s								
K05A	Summer Lake	84.20	39	IAmb	IAmb	IAmb	11 15 02.8		
	comp=Z,13nm,1.1s								
S11A	Rachel	84.48	46	IAmb	IAmb	IAmb	11 15 03.0		
	comp=Z,12nm,1.3s								
ELIB	Princess Elisa	84.75	187	*d*P		P		11 15 02.7	+0.1
	comp=Z,10nm,1.0s								
ELIB				*d*pP		pwP		11 17 11.2	0.0
PINE	Pine Mountain	84.82	38	IAmb		IAmb	11 15 05.7		
	comp=Z,10nm,1.0s								
TUC	Tucson	85.16	52	P		P		11 15 05.4	+0.3
WVOR	Wild Horse Val	85.37	40	P		P		11 15 05.5	-0.4
K15K	Wolf Creek Mou	85.46	8	IAmb		IAmb	11 15 07.5		
	comp=Z,6.2nm,0.8s								
319A	Douglas	85.82	54	IAmb		IAmb	11 15 11.3		
	comp=Z,11nm,1.0s								
I07A	Izee	85.83	39	IAmb		IAmb	11 15 09.8		
	comp=Z,5.3nm,1.0s								
TROLL	Troll, Antarti	85.99	181	⇑P		P		11 15 08.5	+0.1
	comp=Z,166nm,0.4s								
J08A	Circle Bar Ran	86.00	40	IAmb		IAmb	11 15 10.9		
	comp=Z,15nm,1.3s								
HEH	HeiHe	86.06	329	*e*P		P		11 15 09.6	+0.9
HEH					pmax	pmax			
	comp=Z,10.0nm,0.6s								
KNB	Kanab	86.11	47	IAmb		IAmb	11 15 12.0		
	comp=Z,6.0nm,1.1s								
GNW	Green Mountain	86.12	35	IAmb		IAmb	11 15 10.8		
	comp=Z,5.2nm,1.0s								
U15A	North Rim	86.17	48	IAmb		IAmb	11 15 12.4		
	comp=Z,7.2nm,0.9s								
SNAA	Sanae	86.31	179	⇑P		P		11 15 09.8	-0.1
	comp=Z,42nm,0.7s								
SNAA	Sanae	86.31	179	P		P		11 15 09.6	-0.2
	comp=Z,1.8nm,0.7s,baz=180,slow=7.1,SNR=5.6								
	comp=Z,1.8nm,0.7s								
L19K	White Mountain	86.41	11	IAmb		IAmb	11 15 11.8		
	comp=Z,9.5nm,0.9s								
G08A	Pilot Rock	86.85	38	IAmb		IAmb	11 15 14.9		
	comp=Z,7.7nm,0.9s								
MXC	Moxie City	86.87	36	IAmb		IAmb	11 15 14.8		
	comp=Z,5.4nm,0.8s								
VNA2	Neumayer--Watz	86.92	177	⇑P		P		11 15 13.5	+0.9
	comp=Z,5.4nm,0.6s,baz=178,slow=3.9								
VNA2	Neumayer--Watz	86.92	177	P		P		11 15 11.6	-1.1
PMR	Palmer	87.04	14	P		P		11 15 13.2	+0.1
MTPU	Mount Pierson	87.08	47	IAmb		IAmb	11 15 18.9		
	comp=Z,10nm,1.4s								
VNA1	Neumayer--Stat	87.16	177	P		P		11 15 14.2	+0.5
	comp=Z,7.8nm,0.9s								
HAWA	Hanford	87.18	37	IAmb		IAmb	11 15 16.4		
	comp=Z,8.5nm,0.9s								
J18K	Innoko River	87.28	10	IAmb		IAmb	11 15 15.2		
	comp=Z,5.1nm,0.8s								
L22K	Petersville	87.52	13	IAmb		IAmb	11 15 15.8		
	comp=Z,11nm,0.9s								
MFID	Camas Ranch	87.62	41	IAmb		IAmb	11 15 18.5		
	comp=Z,6.8nm,1.0s								
K20K	Telida	87.64	11	IAmb		IAmb	11 15 16.6		
	comp=Z,4.5nm,0.6s								
EPH	Ephrata	87.72	36	IAmb		IAmb	11 15 18.5		
	comp=Z,6.3nm,0.8s								
D08A	Wollman Farm,	87.92	37	IAmb		IAmb	11 15 19.7		
	comp=Z,6.3nm,0.9s								
F10A	Beach Ranch, E	88.24	38	IAmb		IAmb	11 15 20.7		
	comp=Z,7.7nm,0.9s								
J20K	Nowinta River	88.38	11	IAmb		IAmb	11 15 20.1		
	comp=Z,3.3nm,0.7s								
PLID	Pearl Lake	88.45	39			P		11 15 20.5	+0.1
PLID					IAmb	IAmb	11 15 22.0		
	comp=Z,10nm,1.4s								
B08A	Colville Reser	88.46	35	IAmb		IAmb	11 15 21.4		
	comp=Z,5.5nm,0.8s								
HLID	Hailey	88.56	41	IAmb		IAmb	11 15 23.1		
	comp=Z,4.0nm,0.8s								
HLID	Hailey	88.56	41	P		P		11 15 22.6	+1.7
HVU	Hansel Valley	88.64	43	IAmb		IAmb	11 15 23.2		
	comp=Z,5.2nm,0.9s								
RND	Reindeer	88.70	13			P		11 15 21.1	+0.1
SRU	San Rafael Swe	88.74	47	IAmb		IAmb	11 15 23.8		
	comp=Z,6.4nm,0.9s								
P17A	Butcher Ranch,	88.78	46	IAmb		IAmb	11 15 24.9		
	comp=Z,7.8nm,1.3s								
VHRN	Van Horn	88.80	56	IAmb		IAmb	11 15 24.7		
	comp=Z,4.8nm,0.8s								
KMI2	Kunming	88.89	298	P		P		11 15 24.9	+2.0
KMI2					pmax	pmax			
	comp=Z,14nm,1.2s								
MNTX	Cornudas Mount	88.91	55	IAmb		IAmb	11 15 24.9		
	comp=Z,5.3nm,0.8s								
MNTX	Cornudas Mount	88.91	55	P		P		11 15 23.9	+1.3
TXAR	Lajitas Array	89.18	58	P		P		11 15 25.6	+1.5
	comp=Z,3.2nm,0.9s,baz=214,slow=5.7,SNR=32								
	comp=Z,3.2nm,0.9s								
TXAR	Lajitas Array	89.18	58			P		11 15 24.9	+0.9
P18A	Preston Nutter	89.19	46	IAmb		IAmb	11 15 26.0		
	comp=Z,3.1nm,0.9s								
HWUT	Hardware Ranch	89.32	44	IAmb		IAmb	11 15 25.9		
	comp=Z,3.5nm,0.8s								
CMAR	Chiang Mai Arr	89.37	290	P		P		11 15 26.6	+1.6
	comp=Z,7.2nm,0.8s,baz=133,slow=3.3,SNR=43								
	comp=Z,7.2nm,0.8s								
CMAR	Chiang Mai Arr	89.37	290					11 15 27.1	+2.1
PV19	Morning Glory	89.40	48	IAmb		IAmb	11 15 26.6		
	comp=Z,8.0nm,1.3s								
CHTO	Chiang Mai	89.51	290			P		11 15 27.7	+2.1
CHTO	Chiang Mai	89.51	290	P		P		11 15 26.9	+1.2
CHTO	Chiang Mai	89.51	290	P		P		11 15 25.4	-0.3
PV12	Saucer Basin,	89.52	48	IAmb		IAmb	11 15 27.9		
	comp=Z,9.9nm,1.4s								
HHC	Hu-ho-hao-te	89.56	315	*e*P		P		11 15 24.8	-0.7
HHC					pmax	pmax			
	comp=Z,10.0nm,0.6s								
HHC					pmax	pmax			
	comp=Z,44nm,4.4s								
ANMO	Albuquerque	89.59	52			P		11 15 27.0	+1.1
ANMO	Albuquerque	89.59	52	P		P		11 15 25.1	-0.8
ALPN	Alpine	89.66	57	IAmb		IAmb	11 15 28.4		
	comp=Z,4.3nm,0.7s								
TPB01	Permian Basin	89.80	56	IAmb		IAmb	11 15 28.8		
	comp=Z,3.6nm,0.8s								
HDA	Harding Lake	89.99	14	IAmb		IAmb	11 15 27.7		
	comp=Z,3.6nm,0.5s								
CCB	Clear Creek Bu	90.02	13	IAmb		IAmb	11 15 27.2		
	comp=Z,8.7nm,1.3s								
COLA	College	90.21	13	P		P		11 15 27.7	0.0
COLA	College	90.21	13	P		P		11 15 27.9	+0.1
COLA				IAmb		IAmb	11 15 28.2		
	comp=Z,4.4nm,0.7s								
AHID	Auburn Hatcher	90.21	43	IAmb		IAmb	11 15 31.2		
	comp=Z,3.6nm,0.8s								
AHID	Auburn Hatcher	90.21	43	P		P		11 15 29.9	+1.2
PZH	PanZhiHua	90.28	298	P		P		11 15 29.8	+0.6
ILAR	Eielson Array	90.32	13	P		P		11 15 27.7	-0.7
	comp=Z,1.1nm,0.7s,baz=220,slow=4.2,SNR=15								
	comp=Z,1.1nm,0.7s								
H22K	Ishtalitna Cre	90.44	11	IAmb		IAmb	11 15 29.6		
	comp=Z,3.2nm,0.7s								
S22A	4UR Ranch, Cre	90.62	49	IAmb		IAmb	11 15 32.8		
	comp=Z,5.0nm,1.2s								
PDAR	Pinedale Array	91.19	44	P		P		11 15 33.4	+0.2
	comp=Z,1.4nm,0.9s,baz=219,slow=3.8,SNR=12								
	comp=Z,1.4nm,0.9s								
PDAR	Pinedale Array	91.19	44			P		11 15 33.6	+0.4
ZALV	Zalesovo Beam	110.95	321	PKiKP		PKiKP		11 20 55.9	-0.7
	comp=Z,1.2nm,0.6s,baz=293,slow=0.5,SNR=5.8								
MKAR	Makanchi Array	111.36	313	PKiKP		PKiKP		11 20 57.1	-0.5
	comp=Z,0.6nm,0.5s,baz=150,slow=1.1,SNR=6.3								
KURBB	Kurchatov Arra	114.35	317	PKP		PKPdf	11 21 02.5	-0.7	
	comp=Z,1.0nm,0.5s,baz=107,slow=1.8,SNR=8.6								
KKAR	Karatay Array	119.21	308	PKPdf		PKiKP		11 21 13.0	+0.1
BVAR	Borovoye Array	119.48	319	PKP		PKiKP		11 21 12.8	-0.3
	comp=Z,3.4nm,0.4s,baz=104,slow=2.8,SNR=13								
SPITS	Spitsbergen Ar	123.50	356	PKP		PKPdf		11 21 19.5	-0.6
	comp=Z,3.5nm,0.6s,baz=21,slow=2.4,SNR=7.9								
SPITS				PP		PP		11 23 13.0	+1.1
	comp=Z,0.7nm,0.4s,baz=324,slow=11,SNR=7.9								
ARCES	ARCESS Array B	130.36	349	PKP		PKPdf		11 21 32.7	-0.6
	comp=Z,1.8nm,0.4s,baz=21,slow=1.2,SNR=19								
ARCES				SKPbc		SKPab		11 24 03.3	+0.7
	comp=Z,5.9nm,1.0s,baz=19,slow=7.7,SNR=7.3								
FINES	FINESS Array B	137.01	342	PKhKP		PKPpre	11 21 35.8		
	comp=Z,0.9nm,0.5s,baz=90,slow=5.7,SNR=6.8								
FINES				PKP		PKPdf		11 21 46.0	0.0
	comp=Z,1.6nm,0.6s,baz=50,slow=2.2,SNR=6.4								
FINES				SKPbc		SKPbc		11 24 25.0	+1.0
	comp=Z,0.8nm,0.5s,baz=17,slow=2.0,SNR=4.5								
NB2	NORSAR Subarra	140.51	352	PKP		PKPpre	11 21 46.4		
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6								
HFS	Hagfors	141.01	350	PKhKP		PKPpre	11 21 47.7		
	comp=Z,3.7nm,0.5s,baz=8.1,slow=2.0,SNR=25								
HFS				SKPbc		SKiKP		11 24 36.5	-0.2
	comp=Z,2.9nm,0.8s,baz=198,slow=4.4,SNR=4.7								
AK03	Malin Array Si	143.79	329	PKP		PKPbc	11 21 57.0	-0.7	
AKASG	Malin Array Be	143.81	329	PKP		PKPbc	11 21 56.8	-1.0	
	comp=Z,4.6nm,0.3s,baz=42,slow=4.4,SNR=46								
AKASG				SKPbc		SKiKP		11 24 44.0	+1.2
	comp=Z,4.7nm,1.0s,baz=55,slow=1.8,SNR=8.1								
AKASG	Malin Array Be	143.81	329			PKPdf		11 21 57.8	-0.6
AKBB	Malin Array Si	143.81	329			PKPbc	11 21 57.2	-0.6	
AKBB	Malin Array Si	143.81	329	PKP		PKPbc	11 21 57.2	-0.5	
KIEV	Kiev	143.82	329	PKP		PKPbc	11 21 57.1	-0.7	
MI28	Mi28,Pidlybu	144.38	330	PKP		PKPdf		11 21 58.4	-1.1
RNPP9	Sopachiv	144.84	332	PKP		PKPbc	11 22 00.1	-0.8	
LUBAR	Lubar, Ukraine	145.03	329	PKP		PKPdf		11 22 00.4	-0.2
BNN	Bunyan	145.59	307			PKPbc		11 22 03.5	-0.3
KMPD	K-Podol'skiy	146.57	328	PKP		PKPdf		11 22 03.2	0.0
EKA	Eskdalemuir Ar	146.84	4	PKPbc		PKPbc		11 22 06.2	-0.2
	comp=Z,4.0nm,0.7s,baz=338,slow=2.2,SNR=17								
BRTR	Keskin Array B	146.90	309	PKPbc		PKPbc		11 22 07.5	+0.2
	comp=Z,3.2nm,0.6s,baz=68,slow=3.1,SNR=8.4								
BRTR	Keskin Array B	146.90	309			PKPbc		11 22 07.1	-0.2
MMAI	Mount Meron Ar	147.39	297	PKPbc		PKiKP		11 22 09.6	-0.6
	comp=Z,4.8nm,0.4s,baz=64,slow=5.8,SNR=11								
KOLS	Kolonicke sedl	148.24	332	*e*PKP		PKiKP		11 22 11.7	+0.3
STHS	Stebnicka Huta	148.29	334	*e*PKP		PKiKP		11 22 11.0	-0.5
OSTC	Ostas	149.17	340⇑	*e*PKP		PKiKP		11 22 14.0	+0.7
STEB	Steborice	149.19	338⇑	*e*PKP		PKiKP		11 22 13.5	+0.2
CHVC	Chvalec	149.19	340⇑	*e*PKP		PKiKP		11 22 13.5	+0.1
UPC	Upice	149.27	340⇑	*e*PKP		PKiKP		11 22 13.7	+0.2
DPC	Dobruska-Polom	149.31	340⇑	*e*PKP		PKiKP		11 22 14.0	+0.4
CLL	Collm	149.39	344	*i* PKPbc		PKiKP		11 22 13.5	-0.2
CLL				*i* PKPab		PKPab		11 22 20.3	+0.1
	comp=Z,13nm,0.8s								
CLL				*e*pPKPab		pPKPab		11 24 30.0	-0.1
MORC	Moravsky Berou	149.40	338	*e*PKP		PKiKP		11 22 13.2	-0.6
KRLC	Kraliky	149.40	339⇑	*e*PKP		PKiKP		11 22 14.0	+0.2
BRG	Berggiesshubel	149.55	343	*i* PKPb			11 22 14.2		
BRG				Amp			11 22 14.7		
	comp=Z,16nm,0.6s								
BRG				PKPab		PKPab		11 22 21.6	+0.7
BRG				Amp			11 22 22.1		
	comp=Z,4.9nm,0.6s								
MAUC	Maruska	149.65	337⇑	*e*PKP		PKiKP		11 22 15.0	+0.7
VRAC	Vranov	150.12	339	*e*PKP		PKiKP		11 22 15.2	-0.1
JAVC	Velka Javorina	150.13	337	*e*PKP		PKiKP		11 22 16.1	+0.7
PRU	Pruhonice	150.18	342⇑	*e*PKP		PKiKP		11 22 15.8	+0.4
KRUC	Moravsky	150.40	339	*e*PKP		PKiKP		11 22 15.6	-0.3
MODS	Modra-Piesok	150.68	337	*e*PKP		PKiKP		11 22 17.4	+0.9
KHC	Kasperske Hory	151.22	342⇑	*e*PKP		PKiKP		11 22 18.1	+0.5
KHC				*e*PKPAB		PKPab		11 22 29.0	+0.9
WINA	Alland / Wiene	151.33	338	*e*PKiKP		PKiKP		11 22 18.6	+0.8
	comp=Z,5.3nm,0.5s								
GERES	GERESS Array B	151.44	342	PKPbc		PKiKP		11 22 17.8	-0.3
	comp=Z,2.3nm,0.5s,baz=28,slow=1.6,SNR=16								
CONA	Conrad Observa	151.56	338	*e*PKiKP		PKiKP		11 22 18.7	+0.3
	comp=Z,5.6nm,0.7s								
RONA	Rosalia, Austr	151.60	337	*e*PKiKP		PKiKP		11 22 18.7	+0.3
	comp=Z,8.0nm,0.5s								
MOA	Molln	152.16	340	*e*PKP		PKPab		11 22 33.6	+1.5
	comp=Z,3.8nm,0.8s								
SESA	Seetaler Alpe,	152.70	339	*e*PKiKP		PKiKP		11 22 21.1	+0.1
	comp=Z,13nm,0.8s								
SESA				*e*PKP		PKPab		11 22 35.6	+0.9
	comp=Z,15nm,0.6s								
LESA	Schwarzleotal	153.02	342	*e*PKP		PKPab		11 22 37.6	+1.8
	comp=Z,1.8nm,0.4s								
KBA	Koelnbreinsper	153.13	340	*e*PKiKP		PKiKP		11 22 21.7	-0.1
	comp=Z,2.0nm,0.6s								
KBA				*e*PKP		PKPab		11 22 37.6	+1.2
	comp=Z,2.7nm,0.8s								
OBKA	Obir	153.24	338	*i* PKP		PKPab		11 22 37.7	+1.0
	comp=Z,1.9nm,0.5s								
WATA	Walderalm	153.41	343	*e*PKP		PKPab		11 22 38.0	+0.5
	comp=Z,3.5nm,0.5s								
MYKA	Terra Mystica	153.43	339	*e*PKP		PKPab		11 22 37.6	0.0
	comp=Z,2.7nm,0.7s								
WTTA	Wattenberg	153.46	343	*e*PKP		PKPab		11 22 38.4	+0.6
	comp=Z,6.2nm,0.5s								
MOTA	Moosalm	153.53	344	*e*PKP		PKPab		11 22 38.7	+0.6
	comp=Z,2.6nm,0.6s								
ABTA	Abfaltersbach	153.68	341	*e*PKP		PKPbc		11 22 22.3	-0.5
	comp=Z,2.6nm,0.7s								
ABTA				*e*PKP		PKPab		11 22 38.9	+0.3
	comp=Z,4.4nm,0.7s								
TORD	Torodi Ar. Bea	170.88	187	PKP		PKPdf		11 22 31.0	-1.0
	comp=Z,1.6nm,0.9s,baz=135,slow=0.4,SNR=6.6								
TORD				PKPab		PKPab		11 23 54.8	+0.2
	comp=Z,1.5nm,0.8s,baz=194,slow=4.5,SNR=6.6								

*IDC **21** 11:20:00.8±2.4, 26.˚71S×69.˚82W, h80km±22km, mb3.6/8, mbtmp3.8/11, Error ellipse: s-maj=27.1km s-min=14.6km az=87.0*
*GUC **21** 11:20:00.3±0.8, 26.˚78S×69.˚98W, h82km±4km, ML4.2*
*NEIC **21** 11:20:00.7±0.8, 26.˚79S±0.˚03×69.˚99W±0.˚02, h76km±7km, mb4.4/6, ML4.2(GUC), Error ellipse: s-maj=5.0km s-min=2.3km az=166.0*

ISC 21 11:19:59.7±0.7, **26.˚76S**±0.˚04×**69.˚99W**±0.˚04, **h74**km±7km, **n58**,σ1°**53**/66, **mb4.0**/9, **2C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	Maricunga	0.77	95	*i* P	P	11 20 17.3	+1.1
AC02				*e*S	Sn	11 20 29.7	+1.3
AC02				IAML		11 20 29.9	
	comp=N,27μm,0.2s						
AC02	Maricunga	0.77	95		P	11 20 17.3	+1.1
AC02				Sn	Sn	11 20 29.5	+1.1
AC01	Pan de Azucar	0.82	318	*i* P	Pn	11 20 17.6	+1.3
AC01				*e*S	Sn	11 20 30.4	+1.7
AC01				IAML		11 20 31.5	
	comp=E,4μm,0.2s						
AC01	Pan de Azucar	0.82	318		Pn	11 20 17.8	+1.4
AC01					Sn	11 20 30.3	+1.7
GO03	Copiapo	0.85	195	⇑*i* P	Pn	11 20 17.4	+0.6
GO03				*e*S	Sn	11 20 30.2	+0.8
GO03				IAML		11 20 31.6	
	comp=N,5μm,0.3s						
GO03	Copiapo	0.85	195		Pn	11 20 17.3	+0.6
GO03				Sn	Sn	11 20 30.0	+0.6
AC04	Llanos de Chal	1.73	214	*e*P	Pn	11 20 28.7	+0.8
AC04				*e*S	Sn	11 20 51.2	+2.0
AC04				IAML		11 20 58.3	
	comp=E,5μm,0.5s						
AC04	Llanos de Chal	1.73	214		Pn	11 20 28.7	+0.8
AC05	El Transito	2.08	187	*e*P	Pn	11 20 33.8	+1.1
AC05				IAML		11 21 05.4	
	comp=N,2μm,0.3s						
AC05	El Transito	2.08	187		Pn	11 20 33.8	+1.1
PB14	IPOC Station P	2.16	350	*e*P	Pn	11 20 35.3	+1.3
PB14				*e*S	Sn	11 21 01.6	+1.6
PB14				IAML		11 21 08.8	
	comp=E,1μm,0.8s						
PB14	IPOC Station P	2.16	350		Pn	11 20 35.3	+1.3
LCO	Las Campanas	2.33	196	*e*P	Pn	11 20 36.8	+0.7
LCO				*e*S	Sn	11 21 06.8	+2.9
LCO	Las Campanas	2.33	196		Pn	11 20 37.1	+1.0
VCA	Vinchina	2.52	142	*e*P	Pn	11 20 42.0	+3.4
CO01	Juntas del Tor	3.20	182	*e*P	Pn	11 20 49.5	+1.5
CO01				IAML		11 21 49.6	
	comp=E,701nm,0.4s						
CO01	Juntas del Tor	3.20	182		Pn	11 20 49.7	+1.7
GO04	Tololo Observa	3.47	192	*e*P	Pn	11 20 51.7	+0.1
GO04	Tololo Observa	3.47	192		Pn	11 20 52.0	+0.4
PB05	IPOC Station P	3.90	357⇑	*e*P	Pn	11 20 56.7	-0.7
PB05	IPOC Station P	3.90	357	Pn	Pn	11 20 57.0	-0.4
PB06	IPOC Station P	4.06	5		Pn	11 20 59.9	+0.3
CO03	El Pedregal	4.11	188		Pn	11 21 00.2	+0.1
AF01	San Pedro de A	4.14	24	*e*P	Pn	11 21 02.9	+2.1
AF01	San Pedro de A	4.14	24		Pn	11 21 02.4	+1.7
AHML	Horco Molle	4.16	91	*e*P	Pn	11 20 57.4	-3.5
CO02	Combarbal	4.51	191		Pn	11 21 05.1	-0.6
SLA	San Lorenzo	4.53	64	*e*P	Pn	11 21 10.5	+4.5
PB09	IPOC Station P	4.99	8	Pn	Pn	11 21 13.0	+0.7
CFA	Coronel Fontan	5.06	163	P	Pn	11 21 14.4	+1.3
	comp=E,9.1nm,0.3s,baz=345,slow=14,SNR=32						
CFA				S	Sn	11 22 12.7	+2.5
	comp=E,42nm,0.7s,baz=255,slow=16,SNR=11						
PSGCX	Pisagua	7.13	359	Pn	Pn	11 21 38.6	-2.9
PB12	IPOC Station P	8.12	358	Pn	Pn	11 21 52.5	-2.5
GO05	Hualane	8.39	191	Pn	Pn	11 21 54.6	-3.9
PB16	IPOC Station P	8.40	3	Pn	Pn	11 21 58.5	-0.8
LPAZ	La Paz	10.57	10	P	Pn	11 22 28.2	-0.7
	comp=E,1.0nm,0.4s,baz=197,slow=7.5,SNR=6.2						
LPAZ	La Paz	10.57	10		Pn	11 22 28.8	-0.1
CPUP	Villa Florida	11.34	91	P	Pn	11 22 37.3	-1.6
	comp=E,0.7nm,0.5s,baz=256,slow=12,SNR=3.4						
CPUP	Villa Florida	11.34	91	Pn	Pn	11 22 39.0	+0.2
TRQA	Tornquist	13.13	151	Pn	Pn	11 23 01.5	-1.6
SIV	San Ignacio	13.55	39	P	Pn	11 23 04.9	-3.9
	comp=E,3.3nm,0.4s,baz=237,slow=10,SNR=12						
BDFB

	2.8nm,0.3s							
KTMS				*e*S		**Sb**	**12 21 14.6**	**+0.3**
	5.2nm,0.5s							
SHLS	**Shalkode**	**2.13**	**300**	*e*P		**Pn**	**12 20 54.0**	**-0.4**
	9.1nm,0.3s							
SHLS				*e*S		**Sn**	**12 21 16.2**	**-4.5**
	32nm,0.4s							
PDGK	**Podgornoye**	**2.20**	**305**	⇓P		**Pg**	**12 21 01.5**	**+0.2**
	4.6nm,0.5s							
PDGK				⇓S		**Sb**	**12 21 25.8**	**-0.2**
	17nm,0.7s							
DJR	**Jarkent**	**2.74**	**325**	*e*P		**Pb**	**12 21 09.7**	**+1.8**
	7.8nm,0.5s							
DJR				*e*S		**Sb**	**12 21 43.3**	**+1.9**
	11nm,0.7s							
KPKS	**Kokpek**	**2.78**	**300**	*e*P		**Pb**	**12 21 09.4**	**+0.9**
	0.3nm,0.3s							
KPKS				*e*S		**Sb**	**12 21 42.8**	**+0.3**
	31nm,0.7s							
SATY	**Saty**	**2.81**	**291**	*e*P		**Pb**	**12 21 09.8**	**+0.8**
	1.8nm,0.2s							
SATY				*e*S		**Sb**	**12 21 43.6**	**+0.3**
	9.9nm,0.6s							
KURS	**Kuram**	**3.12**	**298**	*e*P		**Pb**	**12 21 16.2**	**+1.8**
	2.3nm,0.4s							
KURS				*e*S		**Sb**	**12 21 54.5**	**+2.1**
	4.2nm,0.7s							
ARXS	**Arharly**	**3.70**	**306**	*e*P		**Pb**	**12 21 25.1**	**+1.0**
	1.1nm,0.3s							
ARXS				*e*S		**Sb**	**12 22 10.0**	**+1.1**
	5.9nm,0.5s							
KTBS	**Karatobe**	**4.21**	**294**	*e*P		**Pb**	**12 21 33.9**	**+1.0**
	0.2nm,0.2s							
KTBS				*e*S		**Sb**	**12 22 24.7**	**+1.1**
	6.1nm,0.7s							
MK31	**Makanchi Array**	**4.69**	**3**	Pn		**Pb**	**12 21 42.4**	**+1.3**
	0.5nm,0.6s,baz=190,slow=16,SNR=4.7							
MK31				⇑Lg		Lg	12 22 58.3	
	1.2nm,0.5s,baz=190,slow=29							
MAKZ	**Makanchi**	**4.70**	**360**	⇑Pn		**Pb**	**12 21 41.8**	**+0.5**
	2.4nm,1.1s							
MAKZ				Sn		**Sb**	**12 22 37.5**	**-0.2**
MAKZ				⇑Lg		Lg	12 22 57.5	
	1.2nm,0.6s							

*NEIC **21** 12:28:42.0±1.4,5°.2S±0°.1×103°.3E±0°.2, h56km±12km, mb4.0/8, Error ellipse: s-maj=31.9km s-min=6.2km az=48.0*
*IDC **21** 12:28:43.6±4.1,5°.27S×103°.28E, h66km±29km, mb3.7/10, mbtmp4.0/11, ML3.8/1, Error ellipse: s-maj=68.3km s-min=13.7km az=57.0*
*DJA **21** 12:28:49.0±0.2,5°.5S±3°×10°4E±°, h65km±3km, M4.2/22, mB5.0/1, mb4.3/7, MLv4.1/22, Mw(mB)4.3/1*

ISC 21 12:28:41.5±0.9, 5°.2S±0°.1×103°.3E±0°.1, h50km, n50, σ1§52/36, mb3.8/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.88**	**340**	Pn	**Pn**	**12 28 58.2**	**+0.5**
MNAI	**Manna**	**0.88**	**340**	P	Pn	12 29 09.0	+11
EGSI	**Enggano, Bengk**	**0.99**	**261**	P	Pn	12 29 14.7	+16
KLSI		**1.55**	**71**	P	**Pn**	**12 29 08.6**	**+1.9**
KLSI				S	**Sn**	**12 29 23.8**	**-1.9**
KSI	**Kapahiang**	**1.67**	**337**	P	Pn	12 29 19.6	+11
PPSI	**Pulau Pagai**	**4.04**	**307**	P	Pn	12 29 52.6	+12
LEM	**Lembang**	**4.63**	**111**	P	**Pn**	**12 29 52.5**	**+3.4**
	4.4nm,0.3s,baz=264,slow=19,SNR=4.3						
	21nm,0.6s						
BBJI	**Bungbulang**	**4.91**	**118**	Pn	**Pn**	**12 29 53.1**	**+0.1**
BBJI	**Bungbulang**	**4.91**	**118**	P	**Pn**	**12 29 54.1**	**+1.2**
MYKOM	**Kota Tinggi**	**6.96**	**5**	Pn	**Pn**	**12 30 21.1**	**+0.1**
MYKOM	**Kota Tinggi**	**6.96**	**5**	P	Pn	12 30 27.5	+6.5
	0.1nm19nm,1.0s						
UGM	**Wanagama**	**7.71**	**111**	Pn	**Pn**	**12 30 32.6**	**+1.4**
UGM	**Wanagama**	**7.71**	**111**	P	**Pn**	**12 30 33.5**	**+2.3**
SNJI	**Sawahan-Nganju**	**8.83**	**107**	P	**Pn**	**12 30 49.2**	**+2.5**
JAGI	**Jajag, Banyuwa**	**11.29**	**107**	Pn	**Pn**	**12 31 20.3**	**-0.1**
CM31	**Chiang Mai Arr**	**23.89**	**350**	P	**P**	**12 33 51.1**	**+0.4**
CM31				IAmb	IAmb	12 34 03.4	
	comp=Z,2.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**23.89**	**350**	P	**P**	**12 33 52.1**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=183,slow=8.7,SNR=11						
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**23.89**	**350**	P	**P**	**12 33 49.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**25.35**	**122**	P	**P**	**12 34 03.2**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=297,slow=8.7,SNR=3.2						
	comp=Z,2.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.35**	**122**	P	**P**	**12 34 03.1**	**-1.0**
KNRA	**Kununurra**	**27.12**	**115**	P	**P**	**12 34 18.6**	**-1.6**
H08S2	**Diego Garcia H**	**30.66**	**264**	T	T	13 07 41.2	
	baz=86,slow=74						
H08S3	**Diego Garcia H**	**30.67**	**264**	T	T	13 07 42.2	
	baz=86,slow=74						
H08S1	**Diego Carcia H**	**30.68**	**264**	T	T	13 07 42.2	
	baz=86						
H01W3	**Cape Leeuwin H**	**31.21**	**163**	T	T	13 08 20.2	
	baz=340						
H01W2	**Cape Leeuwin H**	**31.22**	**163**	T	T	13 08 26.4	
	baz=340						
H01W1	**Cape Leeuwin H**	**31.22**	**163**	T	T	13 08 18.7	
	baz=340						
WB0	**Warramunga Arr**	**33.58**	**118**	P	**P**	**12 35 15.9**	**-1.3**
WB0				IAmb	IAmb	12 35 31.1	
	comp=Z,6.5nm,1.3s						
WRA	**Warramunga Arr**	**33.60**	**119**	P	**P**	**12 35 16.5**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=307,slow=8.9,SNR=9.4						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**33.60**	**119**	P	**P**	**12 35 15.4**	**-1.9**
WR8	**Warramunga Arr**	**33.74**	**119**	P	**P**	**12 35 18.0**	**-0.6**
ASAR	**Alice Springs**	**34.76**	**125**	P	**P**	**12 35 27.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=301,slow=8.0,SNR=25						
ASAR				PcP	**PcP**	**12 38 01.3**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=308,slow=2.8,SNR=1.7						
ASAR				ScP	**ScP**	**12 41 37.6**	**-4.1**
	comp=Z,0.3nm,0.9s,baz=301,slow=2.5,SNR=2.5						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**34.76**	**125**	P	**P**	**12 35 25.7**	**-1.8**
AS31	**Alice Springs**	**34.76**	**125**	P	**P**	**12 35 26.2**	**-1.2**
AS31				IAmb	IAmb	12 35 29.7	
	comp=Z,0.6nm,0.5s						
STKA	**Stephens Creek**	**44.61**	**131**	P	**P**	**12 36 49.8**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=309,slow=8.5,SNR=7.5						
	comp=Z,2.4nm,0.4s						
KSRS	**Korea Array**	**48.26**	**26**	P	**P**	**12 37 17.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=220,slow=7.7,SNR=5.5						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**52.88**	**3**	P	**P**	**12 37 53.5**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=183,slow=10.0,SNR=10.0						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**52.88**	**3**	P	**P**	**12 37 52.6**	**+0.2**
SONM				IAmb	IAmb	12 37 54.5	
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**55.00**	**343**	P	**P**	**12 38 08.7**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=162,slow=8.4,SNR=7.6						
	comp=Z,1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**59.54**	**342**	P	**P**	**12 38 40.6**	**+0.8**
	comp=Z,1.2nm,0.2s,baz=148,slow=6.9,SNR=1.6						
	comp=Z,1.2nm,0.2s						
H04N2	**CROZET ISLANDS**	**60.27**	**219**	T	T	13 45 03.7	
	baz=65,slow=75,SNR=12						
H04N1	**CROZET ISLANDS**	**60.28**	**219**	T	T	13 45 04.1	
	baz=65,slow=75,SNR=23						
H04N3	**CROZET ISLANDS**	**60.28**	**219**	T	T	13 45 02.7	
	baz=65,slow=75,SNR=17						
H04S1	**CROZET ISLANDS**	**60.50**	**218**	T	T	13 45 18.7	
	baz=63,slow=72,SNR=6.8						
H04S3	**CROZET ISLANDS**	**60.51**	**218**	T	T	13 45 17.6	
	baz=63,slow=72,SNR=10						
H04S2	**CROZET ISLANDS**	**60.52**	**218**	T	T	13 45 19.6	
	baz=63,slow=72,SNR=8.0						
ZALV	**Zalesovo Beam**	**60.93**	**348**	P	**P**	**12 38 49.8**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=164,slow=5.4,SNR=11						
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**60.93**	**348**	P	**P**	**12 38 48.0**	**-1.1**
ABKAR	**Akbulak array**	**65.99**	**331**	P	**P**	**12 39 23.1**	**+0.4**
TXAR	**Lajitas Array**	**145.01**	**44**	PKPbc	**PKPab**	**12 48 13.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=274,slow=1.2,SNR=6.5						

*AFAD **21** 12:51:01.0, 38°.74N×25°.44E, h7km±4km, ML2.3*
*ISK **21** 12:51:02.4, 38°.78N×25°.52E, h9km, ML2.5/12*
*THE **21** 12:51:04.0, 39°N±2°×2°6E±°, h43km±9km, M2.3/8, MLh2.3/8*
*ATH **21** 12:51:03.3, 38°.70N×25°.62E, h51km±5km, ML2.6/2,*

Latitude uncertainty: 0 km; Longitude uncertainty: 1 km

ISC 21 12:51:03.0±1.0, 38°.75N±0°.02×25°.52E±0°.02, h13km±9km, n43, σ0§76/74, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.56**	**131**	Pg	**Pg**	**12 51 13.9**	**0.0**
CHOS				Sg	**Sg**	**12 51 22.3**	**+1.0**
CHOS	**Chios island**	**0.56**	**131**	P	**Pg**	**12 51 13.9**	**0.0**
CHOS				S	**Sg**	**12 51 22.2**	**+0.9**
CHOS	**Chios island**	**0.56**	**131**	P	**Pg**	**12 51 14.0**	**0.0**
CHOS				S	**Sb**	**12 51 22.5**	**-0.1**
KARB	**zmir-Karabur**	**0.70**	**97**	P	**Pg**	**12 51 16.6**	**-0.1**
KARB				S	**Sb**	**12 51 27.2**	**+0.4**
KARB				IAML		12 51 30.0	
	comp=N,104nm,0.5s						
PRK	**Paraskevi**	**0.77**	**50**	P	**Pg**	**12 51 17.8**	**-0.1**
PRK				S	**Sb**	**12 51 29.1**	**+0.5**
PRK	**Paraskevi**	**0.77**	**50**	P	**Pg**	**12 51 17.6**	**-0.3**
PRK				S	**Sg**	**12 51 28.4**	**+0.4**
SKY	**Skiros Island**	**0.77**	**280**	P	**Pb**	**12 51 19.4**	**+1.1**
SKY	**Skiros Island**	**0.77**	**280**	P	**Pn**	**12 51 19.8**	**+0.1**
SKY				S	**Sn**	**12 51 30.9**	**-0.2**
KRBN	**Karaburun**	**0.82**	**101**	Pg	**Pg**	**12 51 18.2**	**-0.8**
KRBN				Sg	**Sb**	**12 51 30.9**	**+0.6**
GPNR	**Gulpinar-Canak**	**0.85**	**34**	Pg	**Pg**	**12 51 18.8**	**-0.7**
EFSA	**Agios Efstrati**	**0.89**	**332**	P	**Pg**	**12 51 20.6**	**+0.4**
EFSA				S	**Sb**	**12 51 33.2**	**+1.1**
KOCA	**Canakkale, Ayv**	**0.89**	**32**	P	**Pg**	**12 51 19.3**	**-1.0**
KOCA				S	**Sn**	**12 51 34.1**	**0.0**
KOCA				IAML		12 51 35.0	
	comp=N,81nm,0.3s						
KOCA				IAML		12 51 39.0	
	comp=E,124nm,0.4s						
FOCM	**Foa**	**0.95**	**92**	Pg	**Pg**	**12 51 21.1**	**-0.2**
FOCM				Sg	**Sb**	**12 51 34.8**	**+1.0**
BAGT	**Foa**	**1.05**	**95**	P	**Pb**	**12 51 20.5**	**-2.5**
BAGT				S	**Sn**	**12 51 38.8**	**+0.9**
BAGT				IAML		12 51 50.0	
	comp=E,87nm,0.3s						
AYVA	**Ayvalik**	**1.07**	**58**	P	**Pb**	**12 51 22.3**	**-1.1**
AYVA				S	**Sg**	**12 51 37.9**	**+0.3**
AYVA				IAML		12 51 40.0	
	comp=N,146nm,0.4s						
AYVA				IAML		12 51 41.0	
	comp=E,77nm,0.8s						
KARY	**Karystos**	**1.11**	**230**	P	**Pb**	**12 51 23.4**	**-0.8**
KARY				S	**Sb**	**12 51 37.7**	**-0.8**
KARY	**Karystos**	**1.11**	**230**	P	**Pb**	**12 51 23.2**	**-1.0**
KARY				S	**Sb**	**12 51 37.8**	**-0.8**
KYMI	**Kymi, Euboea I**	**1.12**	**264**	P	**Pb**	**12 51 23.9**	**-0.4**
KYMI				S	**Sb**	**12 51 39.0**	**+0.3**
KYMI	**Kymi, Euboea I**	**1.12**	**264**	P	**Pb**	**12 51 23.8**	**-0.4**
KYMI				S	**Sb**	**12 51 38.7**	**0.0**
DKL	**Dikili**	**1.13**	**73**	Pn	**Pb**	**12 51 24.3**	**-0.1**
DKL				Sn	**Sn**	**12 51 40.3**	**+0.4**
BOZC	**Bozcaada**	**1.17**	**21**	Pn	**Pb**	**12 51 24.6**	**-0.5**
BOZC	**Bozcaada**	**1.17**	**21**	P	**Pb**	**12 51 23.6**	**-1.5**
BOZC				S	**Sn**	**12 51 41.6**	**+0.7**
BOZC				IAML		12 51 45.0	
	comp=N,55nm,0.5s						
BOZC				IAML		12 51 50.0	
	comp=E,57nm,0.7s						
LIA	**Limnos Island**	**1.17**	**347**	P	**Pb**	**12 51 25.1**	**-0.1**
LIA				S	**Sb**	**12 51 41.0**	**+0.6**
LIA	**Limnos Island**	**1.17**	**347**	P	**Pb**	**12 51 24.6**	**-0.7**
LIA				S	**Sb**	**12 51 40.4**	**0.0**
ZEDA	**zmir-Bergama**	**1.23**	**80**	P	**Pn**	**12 51 25.1**	**-0.9**
ZEDA				S	**Sb**	**12 51 42.0**	**-0.1**
EZN	**Ezine**	**1.24**	**30**	Pn	**Pn**	**12 51 26.3**	**+0.2**
EZN				Sn	**Sg**	**12 51 43.6**	**+0.5**
BLCB	**Balcova**	**1.25**	**107**	Pn	**Pn**	**12 51 26.6**	**+0.4**
BLCB				Sn	**Sg**	**12 51 44.1**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**1.27**	**39**	P	**Pn**	**12 51 25.2**	**-1.3**
BAYC				S	**Sg**	**12 51 44.4**	**+0.4**
BAYC				IAML		12 51 48.0	
	comp=N,26nm,0.3s						
BAYC				IAML		12 51 48.0	
	comp=E,26nm,0.5s						
DGB	**zmir**	**1.28**	**123**	P	**Pn**	**12 51 25.9**	**-0.7**
DGB				S	**Sg**	**12 51 44.4**	**+0.2**
DGB				IAML		12 51 46.0	
	comp=E,35nm,0.3s						
GMLD	**Gumuldur**	**1.29**	**121**	Pn	**Pn**	**12 51 27.0**	**+0.3**
AOS	**Alonnisos**	**1.34**	**289**	P	**Sg**	**12 51 46.5**	**+0.1**
AOS				S	**Sn**	**12 51 46.4**	**+1.1**
AOS2	**Alonnisos-2**	**1.37**	**287**	P	**Pn**	**12 51 27.7**	**-0.1**
AOS2				S	**Sb**	**12 51 45.2**	**-0.6**
CAMT	**Merkez**	**1.40**	**90**	P	**Pn**	**12 51 29.0**	**+0.6**
CAMT				S	**Sb**	**12 51 47.9**	**+1.0**
CAMT				IAML		12 51 52.0	
	comp=E,37nm,0.4s						
CAMT				IAML		12 51 57.0	
	comp=N,56nm,0.9s						
DION	**Dionisos Attik**	**1.42**	**242**	P	**Pn**	**12 51 27.9**	**-0.7**
DION	**Dionisos Attik**	**1.42**	**242**	P	**Pn**	**12 51 27.4**	**-1.2**
BUHA	**Balikesir, Bur**	**1.42**	**58**	P	**Pn**	**12 51 28.4**	**-0.2**
BUHA				S	**Sg**	**12 51 49.7**	**+0.8**
BUHA				IAML		12 51 54.0	
	comp=E,75nm,0.4s						
BUHA				IAML		12 51 57.0	
	comp=N,52nm,0.5s						
GOAD	**anakkale-G¶**	**1.44**	**12**	P	**Pn**	**12 51 28.1**	**-0.7**
GOAD				S	**Sb**	**12 51 49.0**	**+0.9**
GOAD				IAML		12 51 53.0	
	comp=N,52nm,0.5s						
GOAD				IAML		12 51 59.0	
	comp=E,51nm,0.5s						
PTL	**Penteli**	**1.48**	**242**	P	**Pn**	**12 51 28.4**	**-1.0**
STFN	**Stefani**	**1.65**	**250**	P	**Pg**	**12 51 35.2**	**+0.4**
GCAM	**G?zelcaml?**	**1.71**	**127**	Pn	**Pn**	**12 51 33.3**	**+0.7**
SMTH	**Samothraki Isl**	**1.72**	**0**	P	**Pn**	**12 51 31.6**	**-1.1**
GOMA	**Golmarmara-Man**	**1.88**	**91**	Pn	**Pn**	**12 51 35.7**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.03**	**113**	Pn	**Pn**	**12 51 37.8**	**+0.7**

*NOU **21** 13:18:14.1, 42°.64S×172°.62E, h0km, MLv3.7/10, South Island, New Zealand*
*WEL **21** 13:18:16.0±0.3, 43°.3S±2°×17°3E±°, h30km±2km, M3.1/13, ML2.9/11, MLv3.1/13, Error ellipse: s-maj=3.4km s-min=2.6km az=113.4*

ISC 21 13:18:16.9±1.1, 42°.69S±0°.02×172°.85E±0°.03, h36km±1km, n87, σ0§97/97, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIGC	**Waiau Gorge**	**0.04**	**254**	P	**Pn**	**13 18 22.7**	**-0.1**
WIGC				S	**Sn**	**13 18 27.1**	**+0.3**
CULC	**Culverden Airl**	**0.08**	**207**	P	**Pn**	**13 18 23.1**	**+0.2**
WTMC	**Te Mara Farm W**	**0.17**	**65**	P	**Pn**	**13 18 23.4**	**-2.1**
WTMC				S	Sn	13 18 28.4	-4.6
HSES	**Hanmer Springs**	**0.17**	**355**	P	**Pn**	13 18 22.9	-2.6
HSES				S	Sn	13 18 27.5	-5.5
SCAC	**Scargill**	**0.25**	**168**	P	**Pn**	**13 18 24.8**	**+0.1**
LSRC	**Lake Sumner Ro**	**0.29**	**232**	P	**Pn**	**13 18 25.3**	**+0.5**
LSRC				S	**Sn**	**13 18 31.7**	**+0.5**
WAKC	**Waikari**	**0.29**	**201**	P	**Pn**	**13 18 25.3**	**+0.4**
WAKC				S	**Sn**	**13 18 31.7**	**+0.4**
GVZ	**Greta Valley S**	**0.31**	**154**	P	**Pn**	**13 18 25.4**	**+0.4**
GVZ				S	**Sn**	**13 18 31.9**	**+0.5**
CECS	**Cheviot Emerge**	**0.34**	**112**	P	**Pn**	**13 18 25.4**	**+0.2**
CECS				S	**Sn**	**13 18 32.2**	**+0.7**
LTZ	**Lake Taylor**	**0.44**	**258**	P	**Pn**	**13 18 26.9**	**+0.4**
LTZ				S	**Sn**	**13 18 34.1**	**+0.7**
AMBC	**Amberley HDC**	**0.47**	**191**	P	**Pn**	**13 18 27.7**	**+0.7**
AMCZ	**Amberley**	**0.51**	**197**	P	**Pn**	**13 18 28.1**	**+0.5**
AMCZ				S	**Sn**	**13 18 36.7**	**+1.7**
KHZ	**Kahutara**	**0.58**	**62**	P	**Pn**	**13 18 27.5**	**-1.1**
KHZ	**Kahutara**	**0.58**	**62**	S	**Sn**	**13 18 36.9**	**+0.1**
KHZ	**Kahutara**	**0.58**	**62**	P	**Pn**	**13 18 27.9**	**-0.8**
SJFS	**Springs Juncti**	**0.61**	**305**	P	**Pn**	**13 18 28.8**	**-0.3**
MOLW	**Molesworth Sta**	**0.67**	**27**	P	**Pn**	**13 18 29.0**	**-1.0**
MOLW				S	**Sn**	**13 18 38.3**	**-1.0**
SMHS	**Summerhill**	**0.68**	**213**	P	**Pn**	**13 18 30.6**	**+0.6**
CSTC	**Cust School**	**0.71**	**209**	P	**Pn**	**13 18 30.6**	**+0.2**
NNBS	**New Brighton**	**0.81**	**187**	P	**Pn**	**13 18 32.0**	**+0.2**
LOKS	**Mount Lookout**	**0.82**	**35**	P	**Pn**	**13 18 31.6**	**-0.5**
CACS	**Harewood**	**0.83**	**196**	P	**Pn**	**13 18 32.3**	**+0.3**
DALS	**Dallington**	**0.83**	**189**	P	**Pn**	**13 18 32.3**	**+0.3**
SAGC	**St Andrews Col**	**0.83**	**192**	P	**Pn**	**13 18 32.4**	**+0.4**
PRPC	**Pages Road Pum**	**0.84**	**188**	P	**Pn**	**13 18 32.5**	**+0.4**
REHS	**Christchurch**	**0.85**	**191**	P	**Pn**	**13 18 32.7**	**+0.4**
OXZ	**Oxford**	**0.87**	**223**	P	**Pn**	**13 18 32.4**	**-0.2**
RCBS	**Redcliffs Bore**	**0.87**	**186**	P	**Pn**	**13 18 32.5**	**-0.1**
MENS	**Menlo Terrace**	**0.87**	**187**	P	**Pn**	**13 18 32.5**	**-0.1**
HUNS	**Huntsbury**	**0.90**	**189**	P	**Pn**	**13 18 32.8**	**-0.2**
TPLC	**Templeton Scho**	**0.90**	**198**	P	**Pn**	**13 18 33.1**	**+0.1**
LPDS	**Lyttelton Port**	**0.92**	**186**	P	**Pn**	**13 18 33.0**	**-0.3**
THZ	**Tophouse**	**0.93**	**3**	P	**Pn**	**13 18 32.5**	**-0.9**
THZ				S	**Sn**	**13 18 43.9**	**-1.6**
SPRS	**Springfield Vo**	**0.93**	**226**	P	**Pn**	**13 18 33.3**	**-0.2**
DHSS	**Diamond Harbou**	**0.94**	**185**	P	**Pn**	**13 18 33.3**	**-0.3**
MNZS	**Menzies Bay Ba**	**0.95**	**175**	P	**Pn**	**13 18 33.5**	**-0.1**
ROLC	**Rolleston Scho**	**0.96**	**201**	P	**Pn**	**13 18 33.9**	**0.0**
MCASZ	**Murchison**	**0.97**	**336**	P	**Pn**	**13 18 34.6**	**+0.7**
CSHS	**Castle Hill**	**0.99**	**237**	P	**Pn**	**13 18 34.4**	**+0.2**
MQZ	**McQueen's Vall**	**1.02**	**188**	P	**Pn**	**13 18 33.9**	**-0.8**
INZ	**Inchbonnie**	**1.04**	**268**	P	**Pn**	**13 18 35.5**	**+0.6**
INZ				S	**Sn**	**13 18 48.8**	**+0.7**
OKCZ	**Okains Bay**	**1.04**	**172**	P	**Pn**	**13 18 34.7**	**-0.3**
OKCZ				S	**Sn**	**13 18 48.3**	**0.0**
INGS	**Inangahua Fire**	**1.07**	**321**	P	**Pn**	**13 18 35.4**	**+0.1**
DSLC	**Dunsandel Scho**	**1.09**	**206**	P	**Pn**	**13 18 35.4**	**-0.2**
GLOS	**29 km south-we**	**1.10**	**41**	P	**Pn**	**13 18 35.5**	**-0.3**
RACZ	**Rakaia**	**1.16**	**206**	P	**Pn**	**13 18 36.1**	**-0.4**
AKCZ	**Akaroa Harbour**	**1.18**	**178**	P	**Pn**	**13 18 36.4**	**-0.5**
SBRC	**Southbridge Sc**	**1.20**	**201**	P	**Pn**	**13 18 37.0**	**0.0**
DSZ	**Denniston Nort**	**1.22**	**320**	P	**Pn**	**13 18 37.2**	**-0.2**
MTHS	**Methven North**	**1.23**	**224**	P	**Pn**	**13 18 37.4**	**-0.1**
BSWZ	**Blackbirch Sta**	**1.24**	**38**	P	**Pn**	**13 18 37.3**	**-0.3**
MHCZ	**Mount Hutt**	**1.26**	**228**	P	**Pn**	**13 18 37.7**	**-0.3**
MATW	**Matariki Wadsw**	**1.27**	**355**	P	**Pn**	**13 18 38.2**	**+0.2**
MRNZ	**Matariki Terra**	**1.29**	**357**	P	**Pn**	**13 18 38.4**	**0.0**
CMWZ	**Cape Campbell**	**1.38**	**48**	P	**Pn**	**13 18 42.7**	**+3.1**
WACZ	**Wakanui South**	**1.45**	**210**	P	**Pn**	**13 18 40.1**	**-0.5**
TUWZ	**Tuamarina**	**1.50**	**33**	P	**Pn**	**13 18 41.6**	**+0.4**
NNZ	**Nelson**	**1.52**	**15**	P	**Pn**	**13 18 41.6**	**+0.1**
WVZ	**Waitaha Valley**	**1.60**	**255**	P	**Pn**	**13 18 43.2**	**+0.7**
TKNZ	**Takaka Hill**	**1.66**	**3**	P	**Pn**	**13 18 43.9**	**+0.5**
RPZ	**Rata Peaks**	**1.67**	**231**	P	**Pn**	**13 18 43.5**	**0.0**
RPZ	**Rata Peaks**	**1.67**	**231**	S	**Sn**	**13 19 03.5**	**-0.1**
RPZ	**Rata Peaks**	**1.67**	**231**	P	**Pn**	**13 18 43.3**	**-0.2**
ARCZ	**Arundel**	**1.75**	**224**	P	**Pn**	**13 18 44.3**	**-0.4**
TCW	**Tory Channel**	**1.82**	**36**	P	**Pn**	**13 18 44.6**	**-1.1**
QRZ	**Quartz Range**	**1.88**	**353**	P	**Pn**	**13 18 45.9**	**-0.5**
QRZ	**Quartz Range**	**1.88**	**353**	S	**Sn**	**13 19 10.2**	**+1.3**
QRZ	**Quartz Range**	**1.88**	**353**	P	**Pn**	**13 18 46.1**	**-0.3**
SNZO	**South Karori**	**1.95**	**46**	P	**Pn**	**13 18 50.9**	**+3.5**
DUWZ	**D'Urville Isla**	**2.05**	**23**	P	**Pn**	**13 18 49.6**	**+0.8**
PLWZ	**Palliser**	**2.11**	**59**	P	**Pn**	**13 18 48.2**	**-1.5**
TMZ	**Timaru**	**2.16**	**218**	P	**Pn**	**13 18 49.7**	**-0.6**
CAW	**Cannon Point**	**2.29**	**47**	P	**Pn**	**13 18 50.4**	**-1.7**
KIW	**Kapiti Island**	**2.39**	**41**	P	**Pn**	**13 18 52.8**	**-0.7**
MTW	**Mount Morrison**	**2.50**	**53**	P	**Pn**	**13 18 56.1**	**+1.1**
LBZ	**Lake Benmore**	**2.57**	**228**	P	**Pn**	**13 18 56.0**	**0.0**
ODZ	**Otahua Downs**	**2.84**	**213**	P	**Pn**	**13 18 58.9**	**-0.8**
ODZ	**Otahua Downs**	**2.84**	**213**	P	**Pn**	**13 18 58.8**	**-0.9**
MRZ	**Mangatainoka R**	**2.88**	**46**	P	**Pn**	**13 18 58.3**	**-1.9**
KHEZ	**Kahui Hut**	**3.51**	**15**	P	**Pn**	**13 19 10.4**	**+1.5**
PKE	**Pukeiti**	**3.60**	**14**	P	**Pn**	**13 19 11.6**	**+1.5**
EAZ	**Earnscleugh**	**3.60**	**224**	P	**Pn**	**13 19 09.6**	**-0.5**
VRZ	**Vera Road**	**3.84**	**23**	P	**Pn**	**13 19 14.2**	**+0.7**
WNVZ	**Wahianoa**	**3.95**	**33**	P	**Pn**	**13 19 17.0**	**+1.9**
TUZ	**Tuapeka**	**4.00**	**214**	P	**Pn**	**13 19 15.0**	**-0.5**
TUVZ	**Tukino**	**4.03**	**33**	P	**Pn**	**13 19 20.1**	**+4.0**
HIZ

HHC pmax pmax
comp=Z,11nm,0.5s
HHC pmax pmax
comp=Z,64nm,4.3s
PDGK Podgornoye 17.75 321 P **Pn** **13 30 23.9 -1.1**
PDGK Podgornoye 17.75 321 Pn **Pn** 13 30 23.9 -1.1
TARG Taragay, Kyrgy 17.75 314 P **P** **13 30 26.3 +0.2**
TARG pmax pmax
comp=Z,20nm,1.0s
TARG Taragay, Kyrgy 17.75 314 **P** **13 30 26.3 +0.2**
KSH2 Kashi 18.02 304 P **P** **13 30 30.6 +1.8**
KSH2 pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 18.36 314 P **P** **13 30 32.6 0.0**
KDJ pmax pmax
comp=Z,17nm,1.1s
KDJ Kajisay 18.36 314 P **P** **13 30 32.6 0.0**
NIL Nilore 18.55 286 P **P** **13 30 33.3 -1.3**
NIL pmax pmax
comp=Z,19nm,0.9s
NIL Nilore 18.55 286 **P** **13 30 33.3 -1.3**
MK31 Makanchi Array 19.02 333⇑ *i*P **P** **13 30 39.5 -0.1**
MKAR Makanchi Array 19.02 333 P **P** **13 30 39.2 -0.3**
comp=Z,0.3nm,0.3s,baz=139,slow=13,SNR=25
comp=Z,4.5nm,0.8s
MKAR Makanchi Array 19.02 333 *i* P **P** **13 30 39.5 -0.1**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 19.02 333 P **P** **13 30 39.0 -0.6**
MAKZ Makanchi 19.16 332 P **Pn** **13 30 41.6 -0.4**
MAKZ pmax pmax
comp=Z,15nm,1.3s
MAKZ Makanchi 19.16 332 P **Pn** **13 30 41.6 -0.4**
TIA Tai'an 19.52 67 P **P** **13 30 40.4 -4.7**
TIA pmax pmax
comp=Z,5.0nm,0.4s
SONM Songino Array 19.55 24 P **Pn** **13 30 46.5 -0.4**
comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=16
comp=Z,4.0nm,1.0s
SONM Songino Array 19.55 24 P **P** **13 30 44.9 -0.6**
HYB Hyderabad 19.66 233 *eP* **P** **13 30 47.0 +0.1**
HYB *eS* **Sn** **13 34 29.5 +0.8**
ULN Ulaanbaatar 19.81 25*c i*P **Pn** **13 30 49.3 -0.7**
ULN pmax pmax
comp=Z,6.0nm,1.1s
ULN Ulaanbaatar 19.81 25 P **P** **13 30 48.6 +0.2**
BJI2 Beijing 19.88 55 P **P** **13 30 46.4 -2.6**
BJI2 pmax pmax
comp=Z,2.0nm,0.7s
BJI2 L L
comp=Z,50nm,9.3s
BJI2 L L
comp=Z,42nm,10.9s
BJI2 L L
comp=Z,82nm,12.6s
DGZ Jazzator, Alta 20.06 346 *i* P **P** **13 30 51.3 +0.2**
DGZ *i* *PP Pn 13 30 54.4 +1.5
DGZ pmax pmax
comp=Z,4.0nm,1.1s
KNGR Kungurtug, Tuv 20.28 5 *eP* Pn 13 30 54.5 -0.9
KNGR pmax pmax
comp=Z,2.0nm,0.3s
AAK Ala-Archa 20.32 312 P Pn 13 30 56.0 -0.1
comp=Z,14nm,0.9s,baz=121,slow=7.3,SNR=22
comp=Z,14nm,0.9s
AAK Ala-Archa 20.32 312*d i*P Pn 13 30 56.7 +0.6
AAK pmax pmax
comp=Z,43nm,1.3s
MANEM Manem 20.42 297 **P** **13 30 55.9 +0.7**
MANEM IAmb IAmb 13 31 03.2
comp=Z,85nm,1.4s
NJ2 Nanjing 20.63 79 *eP* **P** **13 30 56.8 -0.4**
NJ2 pmax pmax
comp=Z,22nm,0.6s
DRK Karamyk 20.87 302 P **P** **13 31 01.1 +1.0**
DRK pmax pmax
comp=Z,16nm,0.6s
DRK Karamyk 20.87 302 P **P** **13 31 01.1 +1.0**
DRK IAmb IAmb 13 31 05.5
comp=Z,16nm,0.6s
ZAK Zakamensk 20.94 15 *eP* **P** **13 31 01.1 +0.5**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
MOY Mondy 21.73 10 *eP* **P** **13 31 10.2 +1.2**
MOY pmax pmax
comp=Z,9.0nm,1.4s
BTK Batken 21.77 303 P **P** **13 31 10.6 +1.0**
BTK pmax pmax
comp=Z,30nm,1.1s
BTK Batken 21.77 303 P **P** **13 31 10.6 +1.0**
BTK IAmb IAmb 13 31 13.2
comp=Z,30nm,1.1s
GAR Garm 21.83 300 P **P** **13 31 10.5 +0.2**
KBL Kabul 22.10 288 P **P** **13 31 13.8 +0.6**
KBL pmax pmax
comp=Z,47nm,1.1s
KBL Kabul 22.10 288 **P** **13 31 13.8 +0.6**
TLY Talaya 22.24 15 LR LR 13 40 48.8
comp=Z,43nm,19.3s,baz=200,slow=39
TLY Talaya 22.24 15 *eP* **P** **13 31 15.1 +0.7**
TLY pmax pmax
comp=Z,2.0nm,0.8s
CHGR Chuyangaron 22.62 298*d i*P **P** **13 31 19.1 +0.4**
CHGR *i* *PP **pP** **13 31 22.7 -3.7**
CHGR pmax pmax
comp=Z,79nm,1.1s
CHGR Chuyangaron 22.62 298 P **P** **13 31 18.3 -0.3**
KK31 Karatay Array 23.13 310 P **P** **13 31 24.1 +0.3**
KK31 pmax pmax
comp=Z,13nm,1.4s
KK31 Karatay Array 23.13 310 P **P** **13 31 24.1 +0.3**
KKAR Karatay Array 23.13 310 P **P** **13 31 24.9 +1.0**
KKAR Karatay Array 23.13 310 P **P** **13 31 24.9 +1.0**
KURBB Kurchatov Arra 23.58 334 P **P** **13 31 28.3 +0.1**
comp=Z,5.4nm,0.7s,baz=142,slow=11,SNR=49
KURBB PcP **PcP** **13 35 12.6 -0.2**
comp=Z,1.1nm,0.9s,baz=155,slow=2.0,SNR=7.5
comp=Z,5.4nm,0.7s
KURK Kurchatov 23.62 334*c i*P **P** **13 31 28.5 -0.1**
KURK *i* *PP **pP** **13 31 32.0 -4.8**
KURK pmax pmax
comp=Z,11nm,1.0s
KURK Kurchatov 23.62 334 **PcP** **13 35 12.6 -0.3**
KURK Kurchatov 23.62 334 P **P** **13 31 28.4 -0.1**
KURK IAmb IAmb 13 31 29.8
comp=Z,7.8nm,0.8s
ZAA0 Zalesovo Array 24.61 346 P **P** **13 31 37.9 +0.2**
ZALV Zalesovo Beam 24.61 346 P **P** **13 31 38.0 +0.2**
comp=Z,4.4nm,0.7s,baz=159,slow=9.0,SNR=22
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 24.61 346 *i* P **P** **13 31 38.5 +0.8**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 24.61 346 P **P** **13 31 37.9 +0.2**
KSRS Korea Array 28.26 67 P **P** **13 32 11.3 +0.5**
comp=Z,0.4nm,0.5s,baz=263,slow=9.7,SNR=2.2
comp=Z,0.4nm,0.5s
BVAR Borovoye Array 28.77 329 P **P** **13 32 16.3 +1.0**
comp=Z,5.8nm,1.0s,baz=120,slow=8.8,SNR=7.4
comp=Z,5.8nm,1.0s
BORK Borovoye 28.82 329*c i*P **P** **13 32 17.0 +1.4**
BORK pmax pmax
comp=Z,10.0nm,1.1s
BORK Borovoye 28.82 329 P **P** **13 32 16.9 +1.4**
BORK IAmb IAmb 13 32 18.2
comp=Z,6.5nm,0.9s
ZEA Zeya 33.05 36 *eP* **P** **13 32 54.2 +1.3**
SVE Sverdlovsk 35.54 328 *eP* **P** **13 33 16.6 +2.1**
ARTI Arti 36.37 326*c i*P **P** **13 33 22.5 +0.9**
ARTI 13 34 39.4
ARTI 13 35 42.8
ARTI S **S** **13 39 05.9 +4.5**
ARTI SS **SnSn** **13 41 32.9 +3.4**
ARTI pmax pmax
comp=Z,4.0nm,0.6s
ARTI Arti 36.37 326 P **P** **13 33 22.2 +0.6**
ARTI IAmb IAmb 13 33 23.3
comp=Z,7.4nm,0.6s
YAK Yakutsk 38.90 25 *i* P **P** **13 33 42.7 -0.1**
YAK pmax pmax
comp=Z,11nm,0.7s
NRIK Noril'sk 39.19 356⇑ *i*P **P** **13 33 46.4 +1.1**
NRIK pmax pmax
comp=Z,8.0nm,1.4s
YSS Yuzhno-Sakhali 40.25 52 *eP* **P** **13 33 54.8 +0.5**
YSS pmax pmax
comp=Z,10.0nm,1.0s
BELG Belogornoye 40.73 316*d i*P **P** **13 33 59.2 +1.0**
BELG pmax pmax
comp=Z,2.0nm,0.8s
KIRV Kirov 41.68 326*d i*P **P** **13 34 06.6 +0.7**
KBZ Khabaz 42.83 303 *eP* **P** **13 34 17.1 +1.5**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 42.99 303 *eP* **P** **13 34 19.0 +2.0**
KIV pmax pmax
comp=Z,11nm,1.0s
SHA1 Shidzhatmaz 43.01 303⇓ *i*P **P** **13 34 17.9 +0.6**
TIXI Tiksi 45.22 14 *eP* **P** **13 34 33.9 -0.4**
TIXI pmax pmax
comp=Z,5.0nm,1.1s
MOS Moscow 47.14 320 *eP* **P** **13 34 51.8 +2.2**
MOS *e* 13 36 43.6
KLMR Klimovskoe 47.15 327 *eP* **P** **13 34 49.5 -0.2**
KLMR *e* 13 36 39.2
KLMR pmax pmax
comp=Z,20nm,1.0s
OBN Obninsk 47.66 319⇑ *eP* **P** **13 34 53.9 +0.2**
OBN *e* 13 35 00.1
OBN pmax pmax
comp=Z,14nm,1.7s
OBN MLR MLR
comp=Z,16nm,16.0s
BR131 Keskin Array S 50.06 298 *eP* **P** **13 35 12.7 +0.1**
AKASG Malin Array Be 51.99 313 P **P** **13 35 26.6 -0.1**
comp=Z,4.9nm,0.8s,baz=78,slow=7.0,SNR=15
comp=Z,4.9nm,0.8s
AKASG Malin Array Be 51.99 313 *i* P **P** **13 35 27.2 +0.5**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 51.99 313 IAmb IAmb 13 35 28.0
comp=Z,3.8nm,1.0s
AKBB Malin Array Si 51.99 313 *i* P **P** **13 35 27.4 +0.7**
AKBB pmax pmax
comp=Z,10.0nm,1.0s
AKBB Malin Array Si 51.99 313 P **P** **13 35 27.1 +0.4**
AKBB IAmb IAmb 13 35 27.8
comp=Z,8.8nm,0.9s
FINES FINESS Array B 53.68 326 P **P** **13 35 39.3 +0.3**
comp=Z,1.3nm,0.5s,baz=90,slow=7.6,SNR=14
comp=Z,1.3nm,0.5s
FINES FINESS Array B 53.68 326 *i* P **P** **13 35 39.7 +0.7**
FINES pmax pmax
comp=Z,1.0nm,0.5s
BURAR Bucovina Array 54.92 309 P **P** **13 35 48.8 +0.4**
BURAR pmax pmax
comp=Z,2.0nm,0.9s
BURAR Bucovina Array 54.92 309 P **P** **13 35 48.8 +0.4**
BILL Bilibino 55.26 26 *eP* **P** **13 35 50.8 +0.4**
BILL pmax pmax
comp=Z,3.0nm,1.1s
KNRA Kununurra 56.29 140 P **P** **13 35 57.6 -0.8**
NC405 NORSAR Array S 60.61 326 P **P** **13 36 29.0 +0.9**
NB2 NORSAR Subarra 60.86 326 P **P** **13 36 29.9 +0.1**
comp=Z,1.4nm,0.6s,baz=79,slow=6.9
NOA NORSAR Array B 60.86 326 P **P** **13 36 29.6 -0.1**
comp=Z,2.1nm,0.7s,baz=79,slow=6.5,SNR=7.6
comp=Z,2.1nm,0.7s
NC204 NORSAR Array S 61.03 327 P **P** **13 36 31.7 +0.7**
GERES GERESS Array B 62.20 312 P **P** **13 36 40.1 +1.0**
comp=Z,1.3nm,0.7s,baz=64,slow=6.1,SNR=5.6
comp=Z,1.3nm,0.7s
WB0 Warramunga Arr 62.76 138 P **P** **13 36 42.8 -0.2**
WB0 IAmb IAmb 13 36 45.0
comp=Z,6.8nm,1.2s
WRA Warramunga Arr 62.87 138 P **P** **13 36 41.8 -1.9**
comp=Z,0.8nm,0.6s,baz=323,slow=6.5,SNR=3.2
comp=Z,0.8nm,0.6s
DAVOX Davos/Dischmat 65.27 311 P **P** **13 36 58.9 -0.6**
comp=Z,3.8nm,0.8s,baz=60,slow=8.1,SNR=4.1
comp=Z,3.8nm,0.8s
ASAR Alice Springs 65.56 141 P **P** **13 37 00.2 -1.2**
comp=Z,2.0nm,0.9s,baz=323,slow=6.7,SNR=16
comp=Z,2.0nm,0.9s
B21K Ikpikpuk River 68.57 21 P **P** **13 37 20.7 +0.9**
B21K IAmb IAmb 13 37 29.1
comp=Z,6.1nm,1.2s
C23K Itkillik River 69.65 20 P **P** **13 37 27.6 +1.0**
D23K Nanushuk River 70.11 20 P **P** **13 37 30.4 +1.0**
D23K IAmb IAmb 13 37 31.5
comp=Z,4.1nm,1.1s
J19K Poorman 71.07 26 P **P** **13 37 36.2 +0.9**
J19K IAmb IAmb 13 37 37.8
comp=Z,4.4nm,1.0s
E24K Your Creek 71.28 21 IAmb IAmb 13 37 38.9
comp=Z,3.4nm,0.9s
C27K Jago River 71.72 18 IAmb IAmb 13 37 41.8
comp=Z,3.9nm,0.9s
F25K Christian Rive 72.44 20 IAmb IAmb 13 37 46.4
comp=Z,3.3nm,0.9s
CAST Castle Rocks 72.71 26 IAmb IAmb 13 37 47.2
comp=Z,3.4nm,1.0s
E27K Coleen River 73.23 19 IAmb IAmb 13 37 50.6
comp=Z,3.5nm,0.9s
E28M Babbage River 73.52 18 IAmb IAmb 13 37 52.2
comp=Z,3.1nm,0.9s
L22K Petersville 73.71 26 P **P** **13 37 51.3 +0.1**
L22K IAmb IAmb 13 37 52.6
comp=Z,5.6nm,1.0s
ILAR Eielson Array 73.77 23 P **P** **13 37 51.5 +0.1**
comp=Z,1.5nm,0.9s,baz=297,slow=5.3,SNR=17
comp=Z,1.5nm,0.9s
A36M Sachs Harbour 74.16 12 P **P** **13 37 54.5 +0.9**
H27K Steamboat Moun 74.56 20 IAmb IAmb 13 37 58.7
comp=Z,5.5nm,0.9s
I27K Kandik River 74.95 21 IAmb IAmb 13 38 01.1
comp=Z,7.0nm,1.0s
SCRK Sand Creek 75.26 23 IAmb IAmb 13 38 02.2
comp=Z,4.0nm,0.9s
INK Inuvik 75.29 17 P **P** **13 38 00.9 +0.8**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 75.29 17 P **P** **13 38 00.9 +0.8**
INK IAmb IAmb 13 38 02.0
comp=Z,4.5nm,1.1s
I28M Mims Creek 75.57 21 IAmb IAmb 13 38 07.1
comp=Z,4.1nm,1.2s
STKA Stephens Creek 76.20 140 P **P** **13 38 05.1 -0.7**
comp=Z,2.0nm,0.8s,baz=339,slow=8.6,SNR=3.5
comp=Z,2.0nm,0.8s
I30M Mount Dempster 76.79 20 IAmb IAmb 13 38 11.0
comp=Z,4.9nm,1.1s
H31M Peel River 76.94 19 IAmb IAmb 13 38 11.3
comp=Z,6.0nm,1.1s
ESDC Sonseca Array 77.37 309 P **P** **13 38 12.9 +0.3**
comp=Z,1.6nm,1.1s,baz=67,slow=7.5,SNR=4.9
comp=Z,1.6nm,1.1s
ESDC Sonseca Array 77.37 309 IAmb IAmb 13 38 16.0
comp=Z,9.9nm,1.4s
K29M Barlow Dome 77.44 21 IAmb IAmb 13 38 14.7
comp=Z,3.7nm,1.1s
TORD Torodi Ar. Bea 86.09 283 P **P** **13 38 59.0 +0.1**
comp=Z,2.4nm,0.9s,baz=62,slow=4.6,SNR=6.2
comp=Z,2.4nm,0.9s
CASY Casey 97.13 174 P Pdif 13 39 49.8 +0.7

*TAP **21** 13:31:45.9,25.59N×122.82E,h257km,ML3.8,D*
*JMA **21** 13:31:48.5±0.3,25.3N±3.7×122.6E±0.8,h240km±3km,*
MV3.3/18,NW OFF ISHIGAKIJIMA IS
ISC 21 13:31:48.2±2.0,25.46N±0.08×122.68E±0.04,
h243km±11km,n95,σ0870/161,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu**	**0.58**	**287**	P	**Pn**	**13 32 20.1**	**-0.4**
PCYT				S	**S**	**13 32 45.1**	**-0.9**
TWB1	**Santiao Chiao**	**0.77**	**235**	*i* P	**Pn**	**13 32 21.7**	**+0.3**
TWB1				S	**S**	**13 32 46.9**	**-0.5**
SXI1	**Grass Mountain**	**0.81**	**244**	P	**Pn**	**13 32 22.0**	**+0.4**
TNOU	**National Taiwa**	**0.88**	**250**	*eP*	**Pn**	**13 32 22.1**	**+0.3**
TIPB	**Shuangxi**	**0.91**	**238**	*i* P	**Pn**	**13 32 22.4**	**+0.2**
TIPB				S	**S**	**13 32 49.0**	**+0.4**
NWRT	**Kuosheng**	**0.96**	**255**	P	**Pn**	**13 32 22.1**	**-0.2**
NWRT				S	**S**	**13 32 48.6**	**-0.3**
NTC	**Toucheng**	**0.98**	**232**	P	**Pn**	**13 32 22.4**	**0.0**
NTC				S	**S**	**13 32 49.1**	**-0.1**
TWY	**Chenhua**	**0.99**	**260**	P	**Pn**	**13 32 23.2**	**+0.7**
YM08	**YM08**	**1.02**	**255**	*eP*	**Pn**	**13 32 22.3**	**-0.4**
JYNG	**Yonagunijimaku**	**1.03**	**166**	P	**Pn**	**13 32 22.7**	**0.0**
YOJ	**Yonaguni jima**	**1.03**	**163**	P	**Pn**	**13 32 22.9**	**+0.1**
YOJ	**Yonaguni jima**	**1.03**	**163**	*eP*	**Pn**	**13 32 22.9**	**+0.1**
YM01	**YM01**	**1.05**	**253**	*eP*	**Pn**	**13 32 23.9**	**+1.0**
YM01				*eS*	**S**	**13 32 51.6**	**+1.6**
ZUZH	**Zhuzihu**	**1.07**	**254**	*eP*	**Pn**	**13 32 22.4**	**-0.6**
EOS2	**EOS2**	**1.11**	**202**	P	**Pn**	**13 32 23.4**	**+0.3**
EOS2				S	**S**	**13 32 51.4**	**+1.0**
TWC	**Suao**	**1.13**	**222**	P	**Pn**	**13 32 23.5**	**+0.2**
TWE	**Neicheng**	**1.18**	**232**	P	**Pn**	**13 32 24.7**	**+1.1**
NDS	**Dongshan**	**1.20**	**227**	P	**Pn**	**13 32 24.5**	**+0.7**
NDS				S	**S**	**13 32 52.7**	**+1.0**
FUSB	**Fushanzhiwuyua**	**1.21**	**235**	P	**Pn**	**13 32 23.7**	**-0.2**
FUSB				S	**S**	**13 32 52.1**	**+0.1**
EOS3	**EOS3**	**1.21**	**196**	P	**Pn**	**13 32 24.1**	**+0.4**
EOS3				*eS*	**S**	**13 32 52.6**	**+1.1**
NWLT	**Wulai**	**1.27**	**238**	P	**Pn**	**13 32 24.5**	**+0.3**
NWLT				S	**S**	**13 32 52.5**	**0.0**
EWUT	**Wuta**	**1.30**	**219**	*i* P	**Pn**	**13 32 24.5**	**+0.1**
EWUT				S	**S**	**13 32 53.0**	**+0.1**
ENA	**Nanau**	**1.33**	**220**	P	**Pn**	**13 32 23.2**	**-1.5**
ENA				S	**S**	**13 32 52.3**	**-1.1**
NDT	**Datong Townshi**	**1.36**	**231**	*eP*	**Pn**	**13 32 25.3**	**+0.4**
NDT				*eS*	**S**	**13 32 54.3**	**+0.6**
EOS4	**EOS4**	**1.37**	**194**	P	**Pn**	**13 32 24.9**	**+0.3**
EOS4				*eS*	**S**	**13 32 53.2**	**+0.1**
LATG	**Datong**	**1.39**	**229**	*eP*	**Pn**	**13 32 25.7**	**+0.5**
LATG				*eS*	**S**	**13 32 55.0**	**+0.7**
EAHA	**Aohua**	**1.41**	**218**	*eP*	**Pn**	**13 32 25.4**	**+0.1**
YHNB	**Yeheng**	**1.42**	**237**	P	**Pn**	**13 32 25.2**	**-0.2**
YHNB	**Yeheng**	**1.42**	**237**	P	**Pn**	**13 32 25.0**	**-0.4**
YHNB				S	**S**	**13 32 53.5**	**-1.1**
NSK	**Sanguang**	**1.43**	**237**	*eP*	**Pn**	**13 32 25.1**	**-0.4**
NSK				S	**S**	**13 32 54.1**	**-0.6**
NCUH	**Zhongli**	**1.44**	**251**	P	**Pn**	**13 32 25.6**	**+0.2**
IRIF	**Iriomote-Funau**	**1.47**	**139**	P	**Pn**	**13 32 25.6**	**-0.1**
IRIF				S	**S**	**13 32 54.7**	**-0.3**
KSHI	**Guanxi Townshi**	**1.52**	**244**	*eP*	**Pn**	**13 32 25.5**	**-0.6**
KSHI				S	**S**	**13 32 56.7**	**+0.9**
NNS	**Nan Shan**	**1.56**	**230**	P	**Pn**	**13 32 26.7**	**+0.2**
NNS				S	**S**	**13 32 56.9**	**+0.3**
NNSB	**Datong**	**1.56**	**229**	P	**Pn**	**13 32 26.5**	**0.0**
NNSB				S	**S**	**13 32 56.8**	**+0.2**
ETL	**Fush Village**	**1.61**	**217**	P	**Pn**	**13 32 26.8**	**0.0**
ETL				*eS*	**S**	**13 32 57.5**	**+0.3**
NACB	**Ninganchiao**	**1.61**	**218**	P	**Pn**	**13 32 26.5**	**-0.3**
NACB	**Ninganchiao**	**1.61**	**218**	S	**S**	**13 32 54.9**	**-2.3**
NACB	**Ninganchiao**	**1.61**	**218**	P	**Pn**	**13 32 26.6**	**-0.2**
NACB				S	**S**	**13 32 56.6**	**-0.6**
NFF	**Wufeng Townshi**	**1.64**	**240**	P	**Pn**	**13 32 26.7**	**-0.4**
NFF				*eS*	**S**	**13 32 56.7**	**-0.9**
ETLH	**Xiulin Townshi**	**1.65**	**221**	P	**Pn**	**13 32 27.2**	**-0.1**
ETLH				S	**S**	**13 32 57.4**	**-0.5**
TWD	**Chiawan**	**1.69**	**216**	P	**Pn**	**13 32 27.2**	**-0.3**
TWD				*eS*	**S**	**13 32 57.5**	**-0.7**
JKRS	**Kuro-shima**	**1.71**	**135**	P	**Pn**	**13 32 28.1**	**+0.5**
JKRS				S	**S**	**13 32 58.7**	**+0.1**
JISG	**Ishigakijimahi**	**1.71**	**120**	P	**Pn**	**13 32 27.7**	**+0.1**
JISG				S	**S**	**13 32 58.1**	**-0.5**
LIOB	**Emei**	**1.71**	**242**	P	**Pn**	**13 32 27.6**	**0.0**
LIOB				S	**S**	**13 32 58.3**	**-0.3**
JIJ	**Ishigaki jima**	**1.72**	**129**	P	**Pn**	**13 32 27.7**	**+0.1**
JIJ				S	**S**	**13 32 57.5**	**-1.1**
HATJ	**Hateruma jima**	**1.73**	**144**	*eP*	**Pn**	**13 32 28.5**	**+0.7**
HATJ				*eS*	**S**	**13 32 58.7**	**-0.2**
NSTT	**Nanjuang**	**1.73**	**242**	P	**Pn**	**13 32 27.6**	**-0.2**
NSTT				*eS*	**S**	**13 32 58.6**	**-0.3**
TWT	**Tachien**	**1.82**	**229**	*eP*	**Pn**	**13 32 29.7**	**+0.9**
TWT				S	**S**	**13 33 00.9**	**+0.4**
TDCB	**Techi**	**1.83**	**229**	*eP*	**Pn**	**13 32 29.2**	**+0.4**
TDCB				S	**S**	**13 33 00.8**	**+0.1**
WHF	**Hehuan Shan**	**1.83**	**225**	P	**Pn**	**13 32 29.6**	**+0.5**
WHF				S	**S**	**13 33 01.4**	**+0.1**
ETM	**Tongmen**	**1.84**	**216**	P	**Pn**	**13 32 28.2**	**-0.6**
LXIB	**Xiulin Townshi**	**1.84**	**219**	P	**Pn**	**13 32 28.5**	**-0.4**
LXIB				*eS*	**S**	**13 32 59.8**	**-1.0**
SHUL	**Shoufeng**	**1.95**	**212**	P	**Pn**	**13 32 29.8**	**+0.1**
SHUL				*eS*	**S**	**13 33 02.9**	**+0.6**
WHP	**Taichung City**	**1.97**	**234**	P	**Pn**	**13 32 29.9**	**-0.1**
WHP				S	**S**	**13 33 02.4**	**-0.3**
JTJ	**Tarama**	**2.00**	**113**	P	**Pn**	**13 32 30.9**	**+0.7**
JTJ				S	**S**	**13 33 03.2**	**+0.1**
TEGC	**Jichi Village**	**2.03**	**211**	P	**Pn**	**13 32 30.9**	**+0.5**
OWD	**Renai**	**2.03**	**223**	P	**Pn**	**13 32 31.1**	**+0.5**
OWD				S	**S**	**13 33 04.1**	**+0.2**
WUSB	**Renai**	**2.04**	**225**	P	**Pn**	**13 32 31.1**	**+0.4**
WUSB				S	**S**	**13 33 04.3**	**+0.3**
WARBT	**Fenglin Townsh**	**2.10**	**215**	P	**Pn**	**13 32 30.1**	**-1.0**
WARBT				S	**S**	**13 33 02.7**	**-2.1**
WCS	**Beigang Elemen**	**2.13**	**229**	*i* P	**Pn**	**13 32 31.5**	**+0.1**
WCS				*i* S	**S**	**13 33 05.0**	**-0.2**
VWDT	**VWDT**	**2.20**	**220**	P	**Pn**	**13 32 32.8**	**+0.7**
VWDT				*eS*	**S**	**13 33 07.2**	**+0.7**
SMLT	**Sun Moon Lake**	**2.25**	**226**	P	**Pn**	**13 32 32.9**	**+0.2**
SMLT				*eS*	**S**	**13 33 07.7**	**0.0**
HGSD	**Ruisui**	**2.27**	**211**	P	**Pn**	**13 32 33.4**	**+0.6**
HGSD				*eS*	**S**	**13 33 07.3**	**-0.4**
TYC	**Yuchr**	**2.27**	**227**	P	**Pn**	**13 32 32.9**	**+0.2**
TYC				S	**S**	**13 33 07.5**	**-0.2**
SSLB	**Suanglung**	**2.29**	**224**	P	**Pn**	**13 32 32.8**	**-0.2**
SSLB	**Suanglung**	**2.29**	**224**	S	**S**	**13 33 06.1**	**-2.0**
SSLB	**Suanglung**	**2.29**	**224**	*i* P	**Pn**	**13 32 33.1**	**+0.1**
SSLB				S	**S**	**13 33 07.8**	**-0.4**
EHYH	**Wanrong**	**2.30**	**212**	*eP*	**Pn**	**13 32 32.2**	**-0.9**
EHYH				*eS*	**S**	**13 33 05.4**	**-3.0**
EHY	**Hungye**	**2.30**	**213**	*eP*	**Pn**	**13 32 33.8**	**+0.7**
JIRJ	**Irabujima**	**2.36**	**105**	P	**Pn**	**13 32 34.0**	**+0.5**
JIRJ				*eS*	**S**	**13 33 08.4**	**-0.9**
WJS	**Zhushan**	**2.41**	**228**	S	**S**	**13 33 10.5**	**+0.3**
YULB	**Yu-li**	**2.41**	**212**	P	**Pn**	**13 32 33.3**	**-0.8**
YULB	**Yu-li**	**2.41**	**212**	P	**Pn**	**13 32 33.4**	**-0.8**
YULB				*eS*	**S**	**13 33 07.4**	**-3.0**
WHYT	**Xinyi Township**	**2.42**	**224**	*i* P	**Pn**	**13 32 34.4**	**+0.1**
WHYT				S	**S**	**13 33 10.7**	**+0.2**
JMJ	**Miyako jima 2**	**2.45**	**105**	P	**Pn**	**13 32 35.6**	**+1.1**
JMJ2	**Miyako jima3**	**2.50**	**106**	P	**Pn**	**13 32 35.9**	**+0.9**
JMJ2				*eS*	**S**	**13 33 11.9**	**0.0**
JOGS	**Gusukube**	**2.57**	**105**	P	**Pn**	**13 32 36.5**	**+0.8**
JOGS				*eS*	**S**	**13 33 12.9**	**-0.1**
FULB	**Fuli**	**2.58**	**210**	P	**Pn**	**13 32 35.7**	**+0.2**
FULB				*eS*	**S**	**13 33 14.0**	**+0.5**
ALS	**Alishan**	**2.58**	**222**	*i* P	**Pn**	**13 32 36.5**	**+0.2**
ALS				S	**S**	**13 33 14.6**	**+0.6**
CHN5	**Tsauling**	**2.60**	**225**	*i* P	**Pn**	**13 32 36.4**	**+0.2**
CHN5				S	**S**	**13 33 14.5**	**+0.6**
CHKT	**Chengkung**	**2.64**	**207**	*eP*	**Pn**	**13 32 36.6**	**+0.1**
WCKO	**Fanlu**	**2.76**	**224**	P	**Pn**	**13 32 37.9**	**+0.2**
WCKO				*eS*	**S**	**13 33 16.5**	**-0.4**
CHN4	**Tsaushan**	**2.83**	**223**	*i* P	**Pn**	**13 32 38.7**	**+0.2**
CHN4				S	**S**	**13 33 18.0**	**-0.2**
TPUB	**Ta-pu**	**2.85**	**221**	P	**Pn**	**13 32 38.7**	**0.0**
TPUB	**Ta-pu**	**2.85**	**221**	P	**Pn**	**13 32 38.6**	**0.0**
TPUB				S	**S**	**13 33 18.7**	**+0.1**
WTP	**Ta-pu**	**2.90**	**221**	*i* P	**Pn**	**13 32 39.4**	**+0.1**
WTP				S	**S**	**13 33 19.5**	**-0.1**
TWK	**Hsinying**	**2.96**	**223**	*i* P	**Pn**	**13 32 40.2**	**+0.3**
TWK				S	**S**	**13 33 21.5**	**+0.8**
CHN1	**Nanshi**	**3.00**	**221**	*i* P	**Pn**	**13 32 40.5**	**+0.2**
CHN1				*i* S	**S**	**13 33 21.2**	**-0.2**
SGST	**Jiashian**	**3.04**	**219**	P	**Pn**	**13 32 40.6**	**-0.3**
SSD	**Sandimen**	**3.29**	**215**	P	**Pn**	**13 32 44.3**	**+0.8**
MASBT	**Mashibuluo**	**3.40**	**214**	*i* P	**Pn**	**13 32 45.4**	**+0.7**
MASBT				S	**S**	**13 33 28.8**	**-0.7**
SCZT	**Fangliau**	**3.60**	**212**	*eP*	**Pn**	**13 32 47.7**	**+0.6**
JKE	**Kume jima 2**	**3.80**	**76**	*eS*	**S**	**13 33 35.9**	**-1.8**

*NAO **21** 13:32:20.5,37.16N×20.81E,h10km,MB4.2*
*MOS **21** 13:32:26.2±1.2,37.96N±20.36E,h12km,mb4.5/15,Error ellipse: s-maj=8.5km s-min=4.1km az=68.3*
*IDC **21** 13:32:26.1±0.9,38.01N×20.34E,h0km,mb4.1/17, mbtmp4.0/27,ML3.4/8,MS3.4/21,Error ellipse: s-maj=17.7km s-min=13.4km az=30.0*
*GFZ **21** 13:32:29.0±0.4,38°N±4'×2°0E±', h10km,M4.2/13, mb4.5/13*
*ATH **21** 13:32:29.3,38.06N×20.39E,h17km,ML4.0/29,Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*NEIC **21** 13:32:29.6±2.4,38.12N±0.06×20.47E±0.08,h10km±1km,*

mb4.4/29,Error ellipse: s-maj=12.6km s-min=6.3km az=229.0
MCSM ***21*** *13:32:30.4±0.6,38°№.7'×.2"0E±°,h10km,mb4.2,MLv4.0*
BEO ***21*** *13:32:30.1±0.6,38°.00N×.20°.34E,h18km×4km,ML3.8/11*
PDG ***21*** *13:32:31.7±0.6,38°.06N×.20°.49E,h2km×1km,ML4.0/12,*
Error ellipse: s-maj=1.2km s-min=1.3km az=0.0
THE ***21*** *13:32:31.3,38°№.1'×.2"1E±°,h16km,M3.9/20,MLh3.9/20*
ISC 21 13:32:29.7±0.7,**38°.09N**±0'.02×**20°.41E**±0'.03,**h20**km±2km,
n366,σ1§**43**/406,**mb4.3**/40,**MS3.4**/19,**22C-15D,Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
LXR1	**Lixouri, Cepha**	**0.11**	**11**	P	**Pg**	**13 32 34.6**	**+0.8**
LXR1				S	**Sg**	**13 32 37.7**	**+1.2**
VLS	**Valsamata**	**0.17**	**58**	P	**Pg**	**13 32 34.5**	**0.0**
VLS				S	**Sg**	**13 32 37.0**	**-0.6**
VLS	**Valsamata**	**0.17**	**58**	P	**Pg**	**13 32 34.4**	**0.0**
VLS				S	**Sg**	**13 32 37.0**	**-0.6**
VLS	**Valsamata**	**0.17**	**58**	P	**Pg**	**13 32 34.5**	**0.0**
VLS				S	**Sg**	**13 32 37.4**	**-0.2**
RTZL	**Ratzakli, Kefa**	**0.29**	**93**	P	**Pg**	**13 32 35.9**	**-0.3**
RTZL				S	**Sg**	**13 32 40.0**	**-0.5**
RTZL	**Ratzakli, Kefa**	**0.29**	**93**	P	**Pg**	**13 32 35.8**	**-0.3**
RTZL				S	**Sg**	**13 32 40.1**	**-0.4**
ORTH	**Orthonies,Zaky**	**0.33**	**136**	P	**Pg**	**13 32 36.4**	**-0.5**
ORTH				S	**Sg**	**13 32 41.1**	**-0.6**
FSK	**Fiskardo**	**0.39**	**18**	P	**Pb**	**13 32 38.2**	**+0.2**
FSK				S	**Sb**	**13 32 44.0**	**+0.4**
KYPS	**Kipseli, Zakin**	**0.42**	**129**	P	**Pg**	**13 32 38.4**	**-0.1**
KYPS				S	**Sg**	**13 32 44.2**	**-0.2**
LTHK	**Lithakia**	**0.51**	**138**	P	**Pg**	**13 32 39.3**	**-0.7**
LTHK				S	**Sg**	**13 32 45.6**	**-0.4**
EVGI	**Lefkada island**	**0.56**	**20**	P	**Pb**	**13 32 41.2**	**+0.3**
EVGI	**Lefkada island**	**0.56**	**20**	P	**Pb**	**13 32 41.2**	**+0.3**
EVGI				S	**Sg**	**13 32 48.5**	**-0.3**
CLEM	**Kyllini,Ilia,G**	**0.60**	**109**	P	**Pb**	**13 32 41.2**	**-0.4**
CLEM				S	**Sg**	**13 32 50.1**	**+0.2**
DRAG	**Dragano-Lefkad**	**0.61**	**12**	P	**Pg**	**13 32 41.8**	**0.0**
DRAG	**Dragano-Lefkad**	**0.61**	**12**	P	**Pg**	**13 32 41.9**	**0.0**
DRAG				S	**Sg**	**13 32 51.1**	**+1.1**
NYDR	**Nydri-Lefkada**	**0.66**	**20**	P	**Pb**	**13 32 42.7**	**+0.1**
LKD2	**Lefkada island**	**0.72**	**15**	P	**Pb**	**13 32 43.9**	**+0.2**
LKD2	**Lefkada island**	**0.72**	**15**	P	**Pg**	**13 32 44.1**	**0.0**
LKD2	**Lefkada island**	**0.72**	**15**	P	**Pg**	**13 32 44.0**	**0.0**
LKD2				S	**Sg**	**13 32 54.5**	**+0.8**
TSLK	**Tsoukalades, L**	**0.76**	**15**	P	**Pg**	**13 32 44.7**	**0.0**
TSLK	**Tsoukalades, L**	**0.76**	**15**	P	**Pg**	**13 32 44.6**	**0.0**
TSLK				S	**Sg**	**13 32 55.5**	**+0.7**
AXS	**Araxos**	**0.77**	**82**	P	**Pb**	**13 32 43.5**	**-0.9**
AXS				S	**Sg**	**13 32 55.5**	**+0.4**
RLS	**Riolos of Patr**	**0.83**	**92**	P	**Pb**	**13 32 45.1**	**-0.5**
RLS	**Riolos of Patr**	**0.83**	**92**	P	**Pb**	**13 32 44.9**	**-0.6**
RLS				S	**Sg**	**13 32 57.3**	**+0.2**
PLEV	**Plevrona-Mesol**	**0.85**	**67**	P	**Pb**	**13 32 45.6**	**-0.2**
PLEV	**Plevrona-Mesol**	**0.85**	**67**	P	**Pb**	**13 32 45.6**	**-0.2**
PLEV				S	**Sg**	**13 32 58.1**	**+0.6**
PVO	**Paravola**	**1.02**	**59**	P	**Pn**	**13 32 49.2**	**+0.3**
PVO	**Paravola**	**1.02**	**59**	P	**Pb**	**13 32 49.0**	**+0.3**
PVO				S	**Sg**	**13 33 03.5**	**+0.4**
DRO	**Drossia**	**1.04**	**97**	P	**Pb**	**13 32 48.5**	**-0.4**
DRO	**Drossia**	**1.04**	**97**	P	**Pb**	**13 32 48.6**	**-0.4**
DRO				S	**Sg**	**13 33 03.7**	**+0.2**
AMPL	**Ampelaki**	**1.04**	**37**	P	**Pb**	**13 32 49.0**	**-0.1**
AMPL	**Ampelaki**	**1.04**	**37**	P	**Pb**	**13 32 49.0**	**-0.1**
PATG	**Patra B**	**1.05**	**81**	P	**Pb**	**13 32 49.4**	**+0.2**
AGRP	**Agrapidokambos**	**1.08**	**73**	P	**Pb**	**13 32 49.3**	**-0.4**
PATC	**Patra C**	**1.08**	**80**	P	**Pb**	**13 32 50.0**	**+0.3**
ZARO	**Zacharo**	**1.15**	**121**	P	**Pb**	**13 32 51.4**	**+0.5**
AMT	**Artemida-Makis**	**1.17**	**118**	P	**Pb**	**13 32 51.7**	**+0.4**
PRGA	**Parga**	**1.20**	**360**	P	**Pb**	**13 32 51.9**	**+0.2**
EFP	**Efpalio**	**1.23**	**74**	P	**Pb**	**13 32 51.8**	**0.0**
EFP	**Efpalio**	**1.23**	**74**	P	**Pn**	**13 32 51.7**	**0.0**
MG00	**Magoula, Dorid**	**1.25**	**74**	P	**Pn**	**13 32 52.3**	**+0.2**
ANX	**Ano Chora**	**1.29**	**67**	P	**Pn**	**13 32 53.2**	**+0.5**
ANX	**Ano Chora**	**1.29**	**67**	P	**Pn**	**13 32 53.0**	**+0.3**
PYRG	**Pyrgos, Dorida**	**1.30**	**75**	P	**Pn**	**13 32 53.1**	**+0.2**
AGEO	**AgiosGiorgios,**	**1.31**	**82**	P	**Pn**	**13 32 53.1**	**+0.1**
SERG	**Sergoula**	**1.34**	**75**	P	**Pn**	**13 32 53.6**	**+0.3**
TEME	**Temeni, Aigial**	**1.35**	**83**	P	**Pn**	**13 32 53.8**	**+0.3**
EVR	**Evrytania**	**1.37**	**53**	P	**Pg**	**13 32 55.8**	**-0.4**
EVR	**Evrytania**	**1.37**	**53**	P	**Pn**	**13 32 54.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.38**	**91**	P	**Pn**	**13 32 54.2**	**+0.4**
KLV	**Kalavryta, Ach**	**1.38**	**91**	P	**Pn**	**13 32 54.1**	**+0.3**
KALE	**Kalithea**	**1.40**	**77**	P	**Pn**	**13 32 54.4**	**+0.2**
PSARO	**Psaromita, Dor**	**1.41**	**80**	P	**Pn**	**13 32 54.8**	**+0.5**
TETR	**Tetrakomo, Epi**	**1.42**	**28**	P	**Pn**	**13 32 55.2**	**+0.6**
IGT	**Igoumenitsa**	**1.44**	**358**	P	**Pn**	**13 32 55.0**	**+0.3**
IGT	**Igoumenitsa**	**1.44**	**358**	*e*Pg	**Pb**	**13 32 56.7**	**+0.8**
IGT				e	**Sg**	**13 33 19.4**	**+3.0**
IGT	**Igoumenitsa**	**1.44**	**358**	P	**Pb**	**13 32 55.7**	**-0.2**
ITM	**Ithomi**	**1.51**	**127**	P	**Pn**	**13 32 56.1**	**+0.5**
ITM				S	**Sb**	**13 33 16.5**	**+0.8**
ITM	**Ithomi**	**1.51**	**127**	P	**Pb**	**13 32 56.9**	**-0.1**
ITM	**Ithomi**	**1.51**	**127**		**Pb**	**13 32 56.9**	**-0.1**
ITM	**Ithomi**	**1.51**	**127**	P	**Pn**	**13 32 56.1**	**+0.5**
ITM	**Ithomi**	**1.51**	**127**	P	**Pn**	**13 32 56.1**	**+0.5**
GUR	**Goura**	**1.53**	**95**	P	**Pn**	**13 32 56.2**	**+0.2**
PRMD	**Pramanda**	**1.54**	**20**	P	**Pg**	**13 32 58.7**	**-0.6**
PRMD	**Pramanda**	**1.54**	**20**	P	**Pb**	**13 32 57.5**	**-0.1**
PYL	**PYLOS**	**1.59**	**138**	P	**Pn**	**13 32 57.3**	**+0.5**
KEK	**Kerkira**	**1.69**	**344**	P	**Pn**	**13 32 59.1**	**+1.0**
KEK	**Kerkira**	**1.69**	**344**		**Pn**	**13 32 59.0**	**+0.9**
KEK	**Kerkira**	**1.69**	**344**		**Pn**	**13 32 58.8**	**+0.7**
KEK	**Kerkira**	**1.69**	**344**	P	**Pn**	**13 32 58.9**	**+0.7**
AGG	**Agios Georgios**	**1.77**	**58**	P	**Pn**	**13 32 59.0**	**-0.3**
AGG	**Agios Georgios**	**1.77**	**58**	P	**Pb**	**13 33 01.7**	**+0.2**
AGG	**Agios Georgios**	**1.77**	**58**	P	**Pn**	**13 32 59.9**	**+0.6**
THAL	**Thalero**	**1.78**	**91**	P	**Pn**	**13 32 59.6**	**+0.3**
SRN	**Sarande**	**1.82**	**350**	P	**Pb**	**13 33 02.0**	**-0.2**
AXAR	**Agios Charalam**	**1.89**	**68**	P	**Pb**	**13 33 04.0**	**+0.4**
THL	**Klokotos Trika**	**1.93**	**40**	P	**Pn**	**13 33 02.3**	**+0.8**
ACOR	**Acrocorinthos**	**1.95**	**95**	P	**Pn**	**13 33 02.2**	**+0.4**
KPRO	**Kipourio**	**2.01**	**21**	P	**Pn**	**13 33 03.5**	**+0.9**
LTK	**Loutraki**	**2.02**	**91**	P	**Pb**	**13 33 04.5**	**-1.2**
LOUT	**Loutraki**	**2.03**	**92**	P	**Pn**	**13 33 03.4**	**+0.6**
LKR	**Lokris**	**2.11**	**74**	P	**Pb**	**13 33 06.2**	**-1.1**
LKR	**Lokris**	**2.11**	**74**	P	**Pn**	**13 33 04.6**	**+0.7**
ATAL	**Atalanti**	**2.14**	**73**	P	**Pn**	**13 33 05.1**	**+0.8**
TYRN	**Tyrnavos**	**2.15**	**41**	P	**Pn**	**13 33 05.5**	**+1.0**
VIL2	**Platees**	**2.26**	**86**	P	**Pn**	**13 33 06.0**	**+0.9**
MET3	**Ano Fanari,Met**	**2.29**	**102**	P	**Pn**	**13 33 06.3**	**-0.1**
KZN	**Kozani**	**2.45**	**25**	P	**Pn**	**13 33 09.0**	**+0.3**
KZN	**Kozani**	**2.45**	**25**	P	**Pn**	**13 33 09.5**	**+0.8**
VLO	**Vlora**	**2.48**	**344**	P	**Pb**	**13 33 11.7**	**-1.9**
VLO	**Vlora**	**2.48**	**344**	P	**Pb**	**13 33 11.7**	**-1.9**
NEO	**Neokhori**	**2.52**	**60**	P	**Pn**	**13 33 10.1**	**+0.6**
XOR	**Xorichti**	**2.52**	**59**	P	**Pn**	**13 33 11.1**	**+1.5**
XOR	**Xorichti**	**2.52**	**59**	P	**Pn**	**13 33 10.3**	**+0.7**
KTHA	**Kythira Island**	**2.80**	**130**	P	**Pn**	**13 33 13.1**	**-0.3**
OHR	**Ohrid**	**3.03**	**6**	*i* Pn	**Pb**	**13 33 20.3**	**-2.7**
TIP	**Timpagrande**	**3.06**	**292**	⇓P	**Pn**	**13 33 19.0**	**+2.0**
TIP	**Timpagrande**	**3.06**	**292**		**Pn**	**13 33 18.9**	**+1.9**
TIP	**Timpagrande**	**3.06**	**292**	P	**Pn**	**13 33 19.0**	**+2.0**
TIP	**Timpagrande**	**3.06**	**292**	P	**Pn**	**13 33 17.7**	**+0.7**
TIP	**Timpagrande**	**3.06**	**292**	P	**Pn**	**13 33 18.4**	**+1.4**
PAIG	**Paliouri**	**3.14**	**53**	P	**Pn**	**13 33 19.9**	**+1.9**
PAIG	**Paliouri**	**3.14**	**53**	P	**Pn**	**13 33 19.9**	**+1.9**
THE	**Thessaloniki**	**3.22**	**37**	P	**Pn**	**13 33 21.6**	**+2.4**
THE	**Thessaloniki**	**3.22**	**37**	P	**Pn**	**13 33 21.6**	**+2.4**
GRG	**Griva**	**3.25**	**28**	P	**Pn**	**13 33 21.6**	**+2.0**
GRG	**Griva**	**3.25**	**28**	P	**Pn**	**13 33 21.6**	**+2.0**
HORT	**Hortiatis**	**3.26**	**39**	P	**Pn**	**13 33 21.9**	**+2.1**
SOH	**Sokhos**	**3.56**	**39**	P	**Pn**	**13 33 26.5**	**+2.7**
SOH	**Sokhos**	**3.56**	**39**	P	**Pn**	**13 33 26.5**	**+2.7**
CEL	**Celeste**	**3.56**	**274**		**Pn**	**13 33 25.2**	**+1.3**
CEL	**Celeste**	**3.56**	**274**	P	**Pn**	**13 33 25.5**	**+1.6**
CEL	**Celeste**	**3.56**	**274**	P	**Pn**	**13 33 22.5**	**-1.4**
PHP	**Peshkopia**	**3.59**	**0**	P	**Pn**	**13 33 26.8**	**+2.5**
PHP	**Peshkopia**	**3.59**	**0**	P	**Pn**	**13 33 26.8**	**+2.5**
KNT	**Kendrikon**	**3.62**	**31**	P	**Pn**	**13 33 26.2**	**+1.6**
KNT	**Kendrikon**	**3.62**	**31**	P	**Pn**	**13 33 26.3**	**+1.6**
VAY	**Valandovo**	**3.63**	**27**	*i* Pn	**Pn**	**13 33 28.4**	**+3.6**
MATE	**Matera**	**3.84**	**313**	⇑P	**Pn**	**13 33 28.9**	**+1.2**
MATE	**Matera**	**3.84**	**313**	P	**Pn**	**13 33 29.4**	**+1.7**
KNDR	**Palaiochora Ch**	**3.85**	**137**	P	**Pn**	**13 33 29.0**	**+1.3**
IMMV	**Iera Moni Meta**	**3.89**	**131**	P	**Pn**	**13 33 29.9**	**+1.6**
SRS	**Serrai**	**3.90**	**38**	P	**Pn**	**13 33 30.3**	**+1.8**
SRS	**Serrai**	**3.90**	**38**	*e*Pn	**Pn**	**13 33 30.3**	**+1.8**
SRS	**Serrai**	**3.90**	**38**	P	**Pn**	**13 33 30.5**	**+2.0**
SKO	**Skopje**	**3.96**	**11**	*i* Pn	**Pn**	**13 33 31.8**	**+2.5**
ULC	**Ulcinj**	**3.97**	**347**	*e*Pn	**Pn**	**13 33 30.7**	**+1.2**
ULC				*i* Sn	**Sn**	**13 34 15.7**	**+0.2**
PEHC	**Pehcevo**	**4.15**	**27**	*i* Pn	**Pn**	**13 33 32.1**	**0.0**
DRME	**Dracevica, Mon**	**4.20**	**347**	*e*Pn	**Pn**	**13 33 33.8**	**+1.2**
DRME	**Dracevica, Mon**	**4.20**	**347**	*e*Pn	**Pn**	**13 33 33.5**	**+0.9**
DRME				*i* Sn	**Sn**	**13 34 21.1**	**0.0**
MARCO	**Tramutola**	**4.20**	**303**	P	**Pn**	**13 33 34.0**	**+1.2**
KKB	**Krupnik**	**4.29**	**28**	P	**Pn**	**13 33 36.0**	**+2.1**
MMB	**Musomishta**	**4.30**	**36**	P	**Pn**	**13 33 36.2**	**+2.1**
BUM	**Brajici-Budva**	**4.36**	**345**	*e*Pn	**Pn**	**13 33 36.1**	**+1.2**
BUM				*i* Sn	**Sn**	**13 34 25.0**	**-0.3**
GVD	**Gavdhos**	**4.39**	**136**	*e*P	**Pn**	**13 33 37.7**	**+2.4**
PDG	**Podgorica**	**4.42**	**349**	⇑P	**Pn**	**13 33 36.7**	**+1.1**
PDG	**Podgorica**	**4.42**	**349**	Pn	**Pn**	**13 33 37.8**	**+2.1**
PDG	**Podgorica**	**4.42**	**349**	*e*Pn	**Pn**	**13 33 36.8**	**+1.1**
PDG				*e*Sn	**Sn**	**13 34 28.8**	**+2.2**
PDG	**Podgorica**	**4.42**	**349**	⇑*i*Pn	**Pn**	**13 33 36.5**	**+0.8**
PDG	**Podgorica**	**4.42**	**349**	⇓*i*Pn	**Pn**	**13 33 37.0**	**+1.3**
PDG				*i* Sn	**Sn**	**13 34 26.5**	**-0.1**
CHOS	**Chios island**	**4.46**	**84**	*e*P	**Pn**	**13 33 37.7**	**+1.5**
PVY	**Plav**	**4.51**	**356**	*e*Pn	**Pn**	**13 33 38.2**	**+1.1**
PVY				*i* Sn	**Sn**	**13 34 28.6**	**-0.4**
IDI	**Anoyia**	**4.56**	**126**	Pn	**Pn**	**13 33 38.0**	**+0.4**
IDI	9.5nm,0.8s,baz=266,slow=8.1,SNR=9.3			Sn		**13 34 30.6**	**+0.5**
	9.2nm,0.3s,baz=341,slow=22,SNR=10						
IDI	**Anoyia**	**4.56**	**126**	*e*P	**Pn**	**13 33 39.3**	**+1.7**
IDI	**Anoyia**	**4.56**	**126**	Pn	**Pn**	**13 33 39.2**	**+1.7**
HCY	**Herceg Novi**	**4.59**	**342**	*e*Pn	**Pn**	**13 33 38.0**	**0.0**
HCY	**Herceg Novi**	**4.59**	**342**	*e*Pn	**Pn**	**13 33 38.9**	**+0.9**
HCY				*i* Sn	**Sn**	**13 34 30.5**	**-0.3**
CEME	**Cevo**	**4.60**	**346**	*e*Pn	**Pn**	**13 33 39.2**	**+1.1**
CEME				*i* Sn	**Sn**	**13 34 30.5**	**-0.5**
BOSS	**Bosilegrad**	**4.68**	**19**	*e*Pn	**Pn**	**13 33 41.1**	**+1.9**
BOZC	**Bozcaada**	**4.73**	**67**	*e*P	**Pn**	**13 33 41.9**	**+1.9**
IVA	**Berane**	**4.79**	**355**	*e*Pn	**Pn**	**13 33 42.1**	**+1.2**
IVA				*i* Sn	**Sn**	**13 34 35.2**	**-0.7**
NKME	**Niksic**	**4.80**	**347**	*e*Pn	**Pn**	**13 33 42.3**	**+1.3**
NKME				*i* Sn	**Sn**	**13 34 35.5**	**-0.5**
KOME	**Kolasin**	**4.80**	**352**	*e*Pn	**Pn**	**13 33 42.3**	**+1.3**
KOME				*i* Sn	**Sn**	**13 34 35.5**	**-0.7**
BARS	**Barje**	**4.84**	**12**	*e*Pn	**Pn**	**13 33 43.0**	**+1.5**
BARS				*e*Sn	**Sn**	**13 34 38.5**	**+1.5**
RAFF	**Raffo Rosso**	**4.88**	**262**		**Sn**	**13 34 40.7**	**+2.9**
TREB	**Trebinje**	**4.88**	**342**	*e*Pn	**Pn**	**13 33 42.3**	**+0.3**
TREB	**Trebinje**	**4.88**	**342**	⇑*i*Pn	**Pn**	**13 33 41.8**	**-0.2**
RZN	**Rozhen**	**4.90**	**41**	P	**Pn**	**13 33 44.5**	**+2.0**
EZN	**Ezine**	**4.93**	**68**	P	**Pn**	**13 33 44.0**	**+1.4**
PLNA	**Plana**	**4.95**	**27**	P	**Pn**	**13 33 46.0**	**+2.9**
RDO	**Rodhopi**	**5.00**	**51**		**Pn**	**13 33 45.3**	**+1.7**
RDO	**Rodhopi**	**5.00**	**51**	P	**Pn**	**13 33 45.8**	**+2.2**
VTS	**Vitosha**	**5.01**	**25**	P	**Pn**	**13 33 47.5**	**+3.6**
VTS	**Vitosha**	**5.01**	**25**	*e*Pn	**Pn**	**13 33 47.0**	**+3.1**
BRY	**Bratogost**	**5.01**	**344**	⇑*i*Pn	**Pn**	**13 33 43.9**	**0.0**
BRY	**Bratogost**	**5.01**	**344**	*e*Pn	**Pn**	**13 33 44.4**	**+0.5**
BRY				*i* Sn	**Sn**	**13 34 40.4**	**-1.0**
SGRT	**San Giovanni R**	**5.12**	**317**		**Pn**	**13 33 46.6**	**+1.2**
SELS	**Selova**	**5.15**	**6**	*e*Pn	**Pn**	**13 33 47.0**	**+1.2**
SELS				*e*Sn	**Sn**	**13 34 45.4**	**+0.7**
SJES	**Sjenica**	**5.18**	**356**	*e*Pn	**Pn**	**13 33 48.5**	**+2.3**
SJES				*e*Sn	**Sn**	**13 34 46.4**	**+1.0**
SJES	**Sjenica**	**5.18**	**356**	⇑*i*Pn	**Pn**	**13 33 47.8**	**+1.6**
ALN	**Alexandroupoli**	**5.18**	**55**	Pn	**Pn**	**13 33 48.0**	**+1.9**
KDZ	**Kurdzhali**	**5.19**	**45**	P	**Pn**	**13 33 48.1**	**+1.9**
STON	**Ston**	**5.21**	**337**	*e*Pn	**Pn**	**13 33 46.9**	**+0.5**
STON				*e*Sn	**Sn**	**13 34 44.0**	**-1.8**
PLE	**Pljevlja**	**5.29**	**352**	*e*Pn	**Pn**	**13 33 48.4**	**+0.7**
PLE				*i* Sn	**Sn**	**13 34 47.2**	**-1.0**
ZAPS	**Zavoj**	**5.45**	**17**	*e*Pn	**Pn**	**13 33 51.9**	**+2.1**
GOCS	**Kraljevo Serbi**	**5.48**	**4**	*e*Pn	**Pn**	**13 33 51.8**	**+1.5**
GOCS				*e*Sn	**Sn**	**13 34 52.7**	**-0.1**
IVAS	**Ivanjica**	**5.49**	**358**	*e*Pn	**Pn**	**13 33 51.2**	**+0.9**
IVAS				*e*Sn	**Sn**	**13 34 53.5**	**+0.6**
ZKR	**Zakros**	**5.53**	**121**	*e*P	**Pn**	**13 33 53.8**	**+2.8**
BOVS	**Bovan**	**5.63**	**10**	⇑P	**Pn**	**13 33 53.1**	**+0.9**
GRUS	**Gruza**	**5.80**	**2**	*e*Pn	**Pn**	**13 33 55.4**	**+0.8**
GRUS				*e*Sn	**Sn**	**13 35 01.0**	**+0.5**
BBLS	**Lazi&#263i**	**5.82**	**353**	*e*Pn	**Pn**	**13 33 56.6**	**+1.6**
BBLS				*e*Sn	**Sn**	**13 35 01.4**	**+0.2**
BBLS	**Lazi&#263i**	**5.82**	**353**	*e*Pn	**Pn**	**13 33 56.2**	**+1.1**
MPEP	**Malo Peshtene**	**5.84**	**25**	P	**Pn**	**13 33 57.3**	**+2.2**
ZAGS	**Zajecar**	**5.88**	**13**	*e*Pn	**Pn**	**13 33 57.0**	**+1.3**
KARP	**Karpathos**	**5.98**	**113**	Pn	**Pn**	**13 33 59.0**	**+1.9**
DIVS	**Divibare**	**6.01**	**357**	*e*Pn	**Pn**	**13 33 58.0**	**+0.4**
DIVS				*e*Sn	**Sn**	**13 35 04.6**	**-1.3**
TRUS	**Trudelj**	**6.13**	**360**	*e*Pn	**Pn**	**13 33 59.7**	**+0.6**
TRUS				*e*Sn	**Sn**	**13 35 09.2**	**+0.6**
PLVB	**Pleven**	**6.18**	**30**	⇓P	**Pn**	**13 34 01.8**	**+2.0**
INTR	**Introdacqua**	**6.34**	**310**		**Pn**	**13 34 04.1**	**+1.9**
TEKS	**Tekeris**	**6.49**	**354**	*e*Pn	**Pn**	**13 34 04.0**	**-0.1**
TEKS				*e*Sn	**Sn**	**13 35 15.7**	**-1.8**
TEKS	**Tekeris**	**6.49**	**354**	⇑*i*Pn	**Pn**	**13 34 03.4**	**-0.7**
MDVR	**Moldovita**	**6.76**	**8**	⇓P	**Pn**	**13 34 08.9**	**+1.1**
MDVR	**Moldovita**	**6.76**	**8**	*e*Pn	**Pn**	**13 34 08.3**	**+0.5**
AQU	**L'Aquila**	**6.85**	**311**	P	**Pn**	**13 34 10.7**	**+1.7**
AQU	**L'Aquila**	**6.85**	**311**	P	**Pn**	**13 34 11.9**	**+2.9**
	0.1nm18m,0.8s						
AQU	**L'Aquila**	**6.85**	**311**	P	**Pn**	**13 34 10.7**	**+1.7**
FRGS	**Fruska Gora**	**7.08**	**357**	*e*Pn	**Pn**	**13 34 10.8**	**-1.4**
BLY	**Banja Luka**	**7.08**	**341**	*e*Pn	**Pn**	**13 34 11.9**	**-0.3**
BLY	**Banja Luka**	**7.08**	**341**	P	**Pn**	**13 34 12.2**	**0.0**
NRCA	**Norcia**	**7.31**	**313**		**Pn**	**13 34 17.9**	**+2.6**
YLV	**Yalova**	**7.38**	**68**	P	**Pn**	**13 34 17.5**	**+1.2**
	0.1nm22nm,0.9s						
FDMO	**Fiordimonte**	**7.45**	**314**		**Pn**	**13 34 19.1**	**+1.9**
GZR	**Gura Zlata**	**7.51**	**13**	⇑P	**Pn**	**13 34 19.9**	**+1.8**
GZR	**Gura Zlata**	**7.51**	**13**	⇑P	**Pn**	**13 34 19.9**	**+1.8**
GZR	**Gura Zlata**	**7.51**	**13**	*e*Pn	**Pn**	**13 34 19.2**	**+1.1**
BZS	**Buzias**	**7.58**	**6**	⇑P	**Pn**	**13 34 20.6**	**+1.6**
BZS	**Buzias**	**7.58**	**6**	⇑P	**Pn**	**13 34 20.6**	**+1.6**
VOIR		**8.12**	**24**	⇓P	**Pn**	**13 34 27.8**	**+1.3**
VOIR		**8.12**	**24**	⇓P	**Pn**	**13 34 27.8**	**+1.3**
VOIR		**8.12**	**24**	P	**Pn**	**13 34 28.0**	**+1.5**
	14nm,0.9s						
VOIR		**8.12**	**24**	P	**Pn**	**13 34 29.1**	**+2.6**
MORH	**Mrgy, Hungar**	**8.22**	**351**	⇓P	**Pn**	**13 34 28.0**	**+0.2**
MORH	**Mrgy, Hungar**	**8.22**	**351**	*e*Pn	**Pn**	**13 34 26.9**	**-0.9**
BOJS	**Bojanci**	**8.35**	**334**	*e*Pn	**Pn**	**13 34 31.3**	**+1.7**
BOJS				*e*Sn	**Sn**	**13 36 01.4**	**-1.8**
ISR	**Istrita**	**8.39**	**31**	P	**Pn**	**13 34 31.6**	**+1.4**
	31nm,0.9s						
MLR	**Muntele Rosu**	**8.47**	**27**	Pn	**Pn**	**13 34 33.8**	**+2.4**
	0.4nm,0.3s,baz=201,slow=3.7,SNR=12						
MLR				LR	LR	13 38 36.3	
	comp=Z,374nm,19.5s,baz=182,slow=43						
	17nm,0.9s						
MLR	**Muntele Rosu**	**8.47**	**27**	⇑P	**Pn**	**13 34 31.8**	**+0.4**
MLR	**Muntele Rosu**	**8.47**	**27**	Pn	**Pn**	**13 34 31.9**	**+0.6**
MLR	**Muntele Rosu**	**8.47**	**27**	P	**Pn**	**13 34 33.0**	**+1.7**
	24nm,0.8s						
MLR	**Muntele Rosu**	**8.47**	**27**	P	**Pn**	**13 34 33.0**	**+1.7**
DOPR	**Dopca**	**8.70**	**24**	⇓P	**Pn**	**13 34 34.7**	**+0.3**
SKDS	**Skadanscina**	**8.85**	**329**	*e*Pn	**Pn**	**13 34 36.9**	**+0.5**
SKDS				*e*Sn	**Sn**	**13 36 11.8**	**-3.7**
CEY	**Cerknica**	**8.85**	**332**	*e*Pn	**Pn**	**13 34 37.5**	**+1.1**
CEY				*e*Sn	**Sn**	**13 36 12.7**	**-2.8**
VRI	**Vrincioaia**	**9.08**	**29**	P	**Pn**	**13 34 41.5**	**+1.9**
VRI	**Vrincioaia**	**9.08**	**29**	P	**Pn**	**13 34 41.1**	**+1.5**
	12nm,0.9s						
VRI	**Vrincioaia**	**9.08**	**29**	P	**Pn**	**13 34 41.5**	**+1.9**
SABO	**M.te Sabotino**	**9.37**	**329**	Pn	**Pn**	**13 34 44.0**	**+0.4**
SOKA	**Soboth**	**9.46**	**337**	*e*Pn	**Pn**	**13 34 46.7**	**+1.8**
	6.3nm,0.4s						
OBKA	**Obir**	**9.46**	**335**	*e*Pn	**Pn**	**13 34 46.5**	**+1.6**
	3.5nm,0.4s,SNR=5.0						
OBKA	**Obir**	**9.46**	**335**	P	**Pn**	**13 34 46.6**	**+1.6**
ARSA	**Arzberg**	**9.84**	**340**	P	**Pn**	**13 34 50.9**	**+1.0**
MYKA	**Terra Mystica**	**9.89**	**332**	*e*PN	**Pn**	**13 34 54.0**	**+3.2**
SESA	**Seetaler Alpe,**	**9.99**	**336**	*i* Pn	**Pn**	**13 34 52.3**	**+0.1**
	9.1nm,0.4s,SNR=5.7						
KBA	**Koelnbreinsper**	**10.38**	**332**	*e*Pn	**Pn**	**13 34 59.6**	**+2.0**
	0.7nm,0.2s						
BR131	**Keskin Array S**	**10.44**	**77**	*de*P	**Pn**	**13 34 58.7**	**+0.3**
BRTR	**Keskin Array B**	**10.44**	**77**	Pn	**Pn**	**13 35 00.5**	**+2.1**
	0.2nm,0.3s,baz=265,slow=16,SNR=1.9						
BRTR				LR	LR	13 39 22.5	
	comp=Z,88nm,19.5s,baz=304,slow=40						
	0.9nm,0.5s						
BRTR	**Keskin Array B**	**10.44**	**77**		**Pn**	**13 34 58.9**	**+0.5**
MOA	**Molln**	**10.74**	**337**	*e*Pn	**Pn**	**13 35 03.8**	**+1.5**
MOA	**Molln**	**10.74**	**337**	P	**Pn**	**13 35 02.1**	**-0.2**
LESA	**Schwarzleotal**	**10.92**	**331**	*e*Pn	**Pn**	**13 35 06.4**	**+1.5**
	3.4nm,0.3s,SNR=8.1						
RJOB	**Jochberg**	**11.13**	**332**	P	**Pn**	**13 35 08.9**	**+1.1**
KMPD	**K-Podol'skiy**	**11.35**	**21**	P	**Pn**	**13 35 12.0**	**+1.3**
DAVOX	**Davos/Dischmat**	**11.65**	**322**	Pn	**Pn**	**13 35 14.2**	**

ARTI	**Arti**	**31.08**	**42**	LR	LR	13 53 05.8		
	comp=Z,61nm,18.6s,baz=252,slow=40							
ARTI	**Arti**	**31.08**	**42**	*c i*P	**P**	**13 38 45.6**	**-0.7**	
ARTI						13 39 45.7		
ARTI						13 41 36.0		
ARTI				S	**S**	**13 43 50.7**	**+0.3**	
ARTI				pmax	pmax			
	comp=Z,5.0nm,0.7s							
ARTI	**Arti**	**31.08**	**42**	P	**P**	**13 38 45.8**	**-0.5**	
ARCES	**ARCESS Array B**	**31.63**	**3**	P	**P**	**13 38 50.5**	**-0.5**	
	comp=Z,2.4nm,0.8s,baz=186,slow=9.5,SNR=5.5							
ARCES				LR	LR	13 52 55.0		
	comp=Z,77nm,18.4s,baz=120,slow=39							
	comp=Z,2.4nm,0.8s							
ARCES	**ARCESS Array B**	**31.63**	**3**	P	**P**	**13 38 50.5**	**-0.5**	
ARCES				IAmb	IAmb	13 39 01.1		
	comp=Z,8.8nm,1.4s							
BVAR	**Borovoye Array**	**37.24**	**50**	P	**P**	**13 39 39.9**	**+0.1**	
	comp=Z,2.0nm,0.7s,baz=268,slow=5.2,SNR=5.9							
	comp=Z,2.0nm,0.7s							
CHGR	**Chuyangaron**	**37.86**	**74**⇑	*e*P	**P**	**13 39 45.1**	**-0.2**	
CHGR				pmax	pmax			
	comp=Z,10.0nm,0.7s							
KK31	**Karatay Array**	**37.91**	**66**	P	**P**	**13 39 45.8**	**+0.3**	
KKAR	**Karatay Array**	**37.91**	**66**	P	**P**	**13 39 45.8**	**+0.2**	
DBIC	**Dimbokro**	**38.77**	**223**	LR	LR	13 56 10.4		
	comp=Z,44nm,19.3s,baz=74,slow=37							
AAK	**Ala-Archa**	**40.87**	**66**	P	**P**	**13 40 11.9**	**+1.4**	
	comp=Z,1.3nm,0.3s,baz=283,slow=8.1,SNR=4.1							
	comp=Z,1.3nm,0.3s							
AAK	**Ala-Archa**	**40.87**	**66**	IAmb	IAmb	13 40 13.6		
	comp=Z,2.6nm,0.6s							
BOOM	**Boomskoye usch**	**41.95**	**66**	P	**P**	**13 40 21.2**	**+1.9**	
BOOM				pmax	pmax			
	comp=Z,11nm,1.1s							
BOOM	**Boomskoye usch**	**41.95**	**66**	P	**P**	**13 40 21.2**	**+1.9**	
BOOM				IAmb	IAmb	13 40 45.9		
	comp=Z,11nm,1.1s							
KURBB	**Kurchatov Arra**	**42.35**	**53**	P	**P**	**13 40 21.5**	**-0.7**	
	comp=Z,1.7nm,0.7s,baz=281,slow=8.7,SNR=21							
	comp=Z,1.7nm,0.7s							
KURK	**Kurchatov**	**42.40**	**53**	*de*P	**P**	**13 40 22.2**	**-0.4**	
KURK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KURK	**Kurchatov**	**42.40**	**53**	P	**P**	**13 40 21.5**	**-1.1**	
KURK	**Kurchatov**	**42.40**	**53**	IAmb	IAmb	13 40 22.8		
	comp=Z,2.3nm,0.9s							
MK31	**Makanchi Array**	**45.42**	**58**	*d i*P	**P**	**13 40 46.6**	**-0.4**	
MKAR	**Makanchi Array**	**45.42**	**58**	P	**P**	**13 40 46.5**	**-0.6**	
	comp=Z,2.4nm,0.4s,baz=278,slow=6.8,SNR=31							
	comp=Z,2.4nm,0.4s							
MKAR	**Makanchi Array**	**45.42**	**58**	P	**P**	**13 40 46.3**	**-0.7**	
ZAA0	**Zalesovo Array**	**45.81**	**48**	P	**P**	**13 40 49.4**	**-0.6**	
ZALV	**Zalesovo Beam**	**45.81**	**48**	P	**P**	**13 40 49.5**	**-0.5**	
	comp=Z,10nm,0.6s,baz=275,slow=8.5,SNR=47							
ZALV				LR	LR	14 02 33.6		
	comp=Z,33nm,18.6s,baz=247,slow=39							
	comp=Z,10nm,0.6s							
ZALV	**Zalesovo Beam**	**45.81**	**48**	*i* P	**P**	**13 40 49.7**	**-0.3**	
ZALV				pmax	pmax			
	comp=Z,10.0nm,0.6s							
ZALV	**Zalesovo Beam**	**45.81**	**48**	P	**P**	**13 40 49.3**	**-0.6**	
NRIK	**Noril'sk**	**46.91**	**27**	LR	LR	14 03 32.4		
	comp=Z,42nm,18.2s,baz=314,slow=40							
DGZ	**Jazzator, Alta**	**48.15**	**53**⇓	*e*P	**P**	**13 41 08.4**	**-0.1**	
DGZ				pmax	pmax			
	comp=Z,3.0nm,1.0s							
WMQ	**Urumqi**	**49.88**	**61**	*e*P	**P**	**13 41 24.8**	**+3.1**	
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.7s							
TLY	**Talaya**	**57.41**	**47**	LR	LR	14 09 07.7		
	comp=Z,31nm,18.1s,baz=302,slow=38							
TIXI	**Tiksi**	**59.76**	**20**	LR	LR	14 12 19.0		
	comp=Z,141nm,18.2s,baz=330,slow=40							
SONM	**Songino Array**	**60.58**	**50**	P	**P**	**13 42 38.6**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=292,slow=9.2,SNR=7.8							
	comp=Z,1.7nm,0.8s							
SONM	**Songino Array**	**60.58**	**50**	P	**P**	**13 42 38.7**	**-0.2**	
ULN	**Ulaanbaatar**	**60.97**	**50**⇑	*e*P	**P**	**13 42 41.5**	**-0.1**	
ULN				pmax	pmax			
	comp=Z,2.0nm,0.9s							
LBTB	**Lobatse**	**62.96**	**175**	LR	LR	14 15 26.2		
	comp=Z,55nm,20.4s,baz=93,slow=41							
YAK	**Yakutsk**	**65.23**	**29**	*ce*P	**P**	**13 43 09.3**	**-0.1**	
YAK				pmax	pmax			
	comp=Z,13nm,0.7s							
YAK	**Yakutsk**	**65.23**	**29**	P	**P**	**13 43 09.4**	**0.0**	
BOSA	**Boshof**	**66.51**	**175**	LR	LR	14 13 53.1		
	comp=Z,106nm,18.0s,baz=18,slow=37							
HHC	**Hu-ho-hao-te**	**67.16**	**55**	*e*P	**P**	**13 43 22.8**	**+0.5**	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,71nm,5.1s							
A36M	**Sachs Harbour**	**67.60**	**349**	P	**P**	**13 43 26.5**	**+2.1**	
PZH	**PanZhiHua**	**67.72**	**73**	P	**P**	**13 43 27.8**	**+1.7**	
CMAR	**Chiang Mai Arr**	**69.99**	**82**	P	**P**	**13 43 39.8**	**-0.4**	
	comp=Z,1.0nm,0.7s,baz=304,slow=7.1,SNR=8.2							
	comp=Z,1.0nm,0.7s							
HEH	**HeiHe**	**71.16**	**40**	*e*P	**P**	**13 43 47.8**	**+1.0**	
C27K	**Jago River**	**71.96**	**354**	P	**P**	**13 43 53.4**	**+2.0**	
C27K				IAmb	IAmb	13 44 12.1		
	comp=Z,2.9nm,1.1s							
C23K	**Itkillik River**	**72.19**	**357**	P	**P**	**13 43 55.0**	**+2.4**	
C23K				IAmb	IAmb	13 43 56.1		
	comp=Z,3.7nm,0.9s							
SEY	**Seymchan**	**72.25**	**21**⇓	*e*P	**P**	**13 43 53.9**	**+0.8**	
SEY				pmax	pmax			
	comp=Z,1.0nm,0.4s							
C16K	**Lisburne Hills**	**73.87**	**2**	P	**P**	**13 44 04.4**	**+1.9**	
MA2	**Magadan**	**74.41**	**24**	LR	LR	14 20 53.7		
	comp=Z,19nm,18.5s,baz=269,slow=39							
MA2	**Magadan**	**74.41**	**24**⇑	*e*P	**P**	**13 44 05.4**	**-0.5**	
MA2				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MA2	**Magadan**	**74.41**	**24**	P	**P**	**13 44 07.7**	**+1.8**	
H29M	**Whitestone**	**74.74**	**351**	P	**P**	**13 44 09.0**	**+1.3**	
H29M				IAmb	IAmb	13 44 10.3		
	comp=Z,2.3nm,0.8s							
F19K	**Shaleruckik Mo**	**75.39**	**359**	P	**P**	**13 44 13.1**	**+1.6**	
F19K				IAmb	IAmb	13 44 16.5		
	comp=Z,3.8nm,1.1s							
ULM	**Lac du Bonnet**	**75.72**	**324**	P	**P**	**13 44 14.8**	**+1.2**	
	comp=Z,1.9nm,0.7s,baz=46,slow=6.1,SNR=4.0							
	comp=Z,1.9nm,0.7s							
ULM	**Lac du Bonnet**	**75.72**	**324**	IAmb	IAmb	13 44 58.9		
	comp=Z,6.0nm,1.3s							
DAWY	**Dawson**	**76.93**	**351**	P	**P**	**13 44 22.1**	**+1.7**	
NJ2	**Nanjing**	**76.94**	**60**	*e*P	**P**	**13 44 20.5**	**-0.4**	
NJ2				pmax	pmax			
	comp=Z,21nm,0.5s							
ILAR	**Eielson Array**	**76.99**	**354**	P	**P**	**13 44 21.8**	**+1.2**	
	comp=Z,0.5nm,0.8s,baz=11,slow=6.6,SNR=6.0							
	comp=Z,0.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**77.40**	**43**	P	**P**	**13 44 23.2**	**-0.1**	
	comp=Z,1.0nm,0.6s,baz=325,slow=3.1,SNR=2.2							
	comp=Z,1.0nm,0.6s							
BCAR	**Beaver Creek A**	**78.18**	**352**	P	**P**	**13 44 28.6**	**+1.2**	
M29M	**Somme Creek**	**78.37**	**350**	IAmb	IAmb	13 44 32.1		
	comp=Z,3.2nm,0.8s							
KSAR	**Wonju Array Be**	**79.44**	**51**	P	**P**	**13 44 34.6**	**0.0**	
KSRS	**Korea Array**	**79.45**	**51**	P	**P**	**13 44 35.1**	**+0.5**	
	comp=Z,1.6nm,0.7s,baz=313,slow=4.7,SNR=12							
KSRS				LR	LR	14 23 46.1		
	comp=Z,21nm,18.6s,baz=230,slow=39							
	comp=Z,1.6nm,0.7s							
M17K	**Holitna River**	**80.84**	**359**	P	**P**	**13 44 43.9**	**+2.1**	
M17K				IAmb	IAmb	13 45 08.1		
	comp=Z,6.5nm,1.1s							
PETK	**Petropavlovsk-**	**81.92**	**24**	LR	LR	14 24 30.2		
	comp=Z,25nm,21.3s,baz=236,slow=38							
ASAJ	**Asahikawa**	**82.91**	**38**	LR	LR	14 26 11.5		
	comp=Z,32nm,18.6s,baz=109,slow=39							
ASAR	**Alice Springs**	**122.25**	**96**	PKP	**PKPdf**	**13 51 23.1**	**-0.4**	
	comp=Z,0.3nm,1.0s,baz=315,slow=2.1,SNR=1.7							

*IDC **21** 13:57:02.7±7.8, 37.36N×70.51E, h183km±64km, mb3.1/1, mbtmp3.4/5, MS3.1/1, Error ellipse: s-maj=135.9km s-min=47.4km az=140.0*

ISC 21 13:57:02.2±1.9, 37.1N±0.2×71.0E±0.2, h200km, n7, σ1§29/7, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.01**	**356**	P	Pn	13 58 31.8	+2.3
	0.8nm,0.2s,baz=177,slow=12,SNR=18						
KK31				⇑S	**Sn**	**13 59 39.2**	**+0.6**
	4.2nm,0.4s,baz=177,slow=21						
AAK	**Ala-Archa**	**6.14**	**25**	P	**Pn**	**13 58 31.9**	**+0.5**
	1.8nm,0.3s,baz=211,slow=11,SNR=2.3						
AAK				S	**Sn**	**13 59 40.3**	**-1.7**
	1.6nm,0.3s,baz=19,slow=18,SNR=5.8						
MKAR	**Makanchi Array**	**12.80**	**37**	P	**Pn**	**13 59 58.0**	**+0.8**
	0.2nm,0.3s,baz=221,slow=13,SNR=5.4						
KURBB	**Kurchatov Arra**	**14.55**	**19**	P	**P**	**14 00 19.2**	**-0.7**
	0.5nm,0.5s,baz=206,slow=10,SNR=5.1						
ZALV	**Zalesovo Beam**	**19.37**	**25**	P	**P**	**14 01 13.9**	**+1.4**
	0.5nm,0.3s,baz=222,slow=10,SNR=3.9						
VRAC	**Vranov**	**40.66**	**305**	LR	LR	14 23 31.1	
	comp=Z,24nm,19.0s,baz=358,slow=40						
TORD	**Torodi Ar. Bea**	**65.74**	**268**	P	**P**	**14 07 25.4**	**-0.5**
	0.3nm,0.4s,baz=45,slow=6.2,SNR=1.9						
	0.3nm,0.4s						

*IPEC **21** 14:33:31.5±0.1, 50.13N×19.29E, h1km, ML2.3/6, Error ellipse: s-maj=1.7km s-min=0.8km az=1.0*

PRU 21 14:33:32.5, 50.20N×19.23E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.37**	**87**	*e*Pg	Pg	14 33 38.6	-0.9
OJC				*e*Sg	Sg	14 33 43.3	-0.9
OJC				*e*Sg	Sb	14 33 43.5	-4.6
OKC	**Ostrava-Krasne**	**0.79**	**243**	*e*PG	Pg	14 33 46.9	-0.7
OKC				*e*SG	Sg	14 33 58.7	+1.0
	comp=Z,30nm,0.4s						
STEB	**Steborice**	**0.98**	**255**	*e*PG	Pg	14 33 51.4	+0.2
STEB				*e*SG	Sb	14 34 04.9	-0.8
	comp=Z,65nm,0.5s						
NIE	**Niedzica**	**1.04**	**138**	*e*Pg	Pg	14 33 50.1	-2.4
NIE				*e*Sg	Sg	14 34 06.3	+0.3
LANS	**Liptovska Anna**	**1.06**	**172**	*e*PG	Pg	14 33 50.5	-2.3
LANS				*e*SG	Sg	14 34 03.9	-2.7
LANS	**Liptovska Anna**	**1.06**	**172**	*e*SG	Sn	14 34 09.8	-0.4
MORC	**Moravsky Berou**	**1.17**	**249**	*e*Pg	Pg	14 33 54.3	-0.6
	baz=72						
MORC				*e*Sg	Sg	14 34 08.5	-1.5
	49nm,0.5s,baz=72						
ANAC	**Anensky vrch**	**1.20**	**265**	*e*Pg	Pg	14 33 55.1	-0.3
	baz=87						
ANAC				*e*Sg	Sg	14 34 09.9	-1.0
	31nm,0.4s,baz=87						
MAUC	**Maruska**	**1.23**	**228**	*e*PG	Pg	14 33 54.5	-1.6
LOSC	**Losov**	**1.33**	**245**	*e*Pg	Pg	14 33 56.6	-1.4
	baz=67						
LOSC				*e*Sg	Sg	14 34 13.4	-1.9
	33nm,0.4s,baz=67						
STHS	**Stebnicka Huta**	**1.52**	**120**	*e*PG	Pn	14 33 59.6	-1.4
STHS				*e*SG	Sg	14 34 20.3	-1.1
STHS	**Stebnicka Huta**	**1.52**	**120**	*e*SG	Sn	14 34 23.8	+2.3
KRLC	**Kraliky**	**1.58**	**266**	*e*PG	Pn	14 34 00.6	-1.2
KRLC				*e*SG	Sn	14 34 21.9	-1.1
	comp=Z,14nm,0.6s						
JAVC	**Velka Javorina**	**1.68**	**218**	*e*Pn	Pn	14 34 01.4	-1.8
	baz=39						
JAVC	**Velka Javorina**	**1.68**	**218**	*e*PN	Pn	14 34 01.5	-1.7
DPC	**Dobruska-Polom**	**1.87**	**276**	*e*PG	Pn	14 34 06.6	+0.8
DPC				*e*SG	Sb	14 34 31.6	+0.1
	comp=Z,16nm,0.4s						
KECS	**Kecovo**	**1.91**	**154**	*e*PG	Pn	14 34 04.9	-1.3
KECS				*e*SG	Sn	14 34 28.4	-2.5
KECS	**Kecovo**	**1.91**	**154**	*e*SG	Sn	14 34 31.1	+0.2
VRAC	**Vranov**	**1.93**	**243**	*e*Pn	Pn	14 34 05.4	-1.2
	baz=64						
VRAC				*e*Sg	Sn	14 34 32.0	+0.5
	14nm,0.6s,baz=64						
VRAC	**Vranov**	**1.93**	**243**	*e*PN	Pn	14 34 05.5	-1.1
VRAC				*e*SG	Sn	14 34 32.1	+0.6
OSTC	**Ostas**	**1.96**	**282**	*e*SG	Sb	14 34 34.6	+0.5
	comp=Z,11nm,0.5s						
KSP	**Ksiaz**	**1.98**	**290**	*e*Pg	Pg	14 34 12.3	+1.8
KSP				*e*Sg	Sg	14 34 36.9	+0.8
KRUC	**Moravsky**	**2.17**	**239**	*e*Pn	Pn	14 34 08.3	-1.5
	baz=59						
KRUC				*e*Sg	Sb	14 34 39.2	-0.8
	13nm,0.7s,baz=59						
MODS	**Modra-Piesok**	**2.23**	**216**	*e*SN	Sn	14 34 37.7	-1.3
KOLS	**Kolonicke sedl**	**2.35**	**121**	*e*PG	Pb	14 34 14.7	-1.0
KOLS				*e*SN	Sn	14 34 38.4	-3.6
KOLS				*e*SG	Sg	14 34 47.3	-0.7
PRU	**Pruhonice**	**3.03**	**268**	*e*SG	Sg	14 35 07.5	-2.2
	comp=Z,4.7nm,0.4s						
BRG	**Berggiesshubel**	**3.44**	**283**	Sg	Sg	14 35 22.1	-0.9
BRG				Amp		14 35 26.9	
	comp=Z,3.3nm,0.4s						
CKRC	**Cesky Krumlov**	**3.49**	**249**	*e*SG	Sg	14 35 23.1	-1.5
	comp=Z,6.1nm,0.4s						
KHC	**Kasperske Hory**	**3.82**	**256**	*e*SG	Sg	14 35 32.5	-2.8
	comp=Z,4.9nm,0.5s						

*NEIC **21** 14:36:05.8±1.9, 24.13S±0.10×179.78W±0.1, h486km±7km, mb4.3/65, Error ellipse: s-maj=16.7km s-min=13.7km az=116.0*

*IDC **21** 14:36:05.5±0.9, 24.12S×179.81W, h488km±10km, mb3.6/12, mbtmp4.4/16, Error ellipse: s-maj=13.4km s-min=11.1km az=145.0*

ISC 21 14:36:06.8±0.3, 24.23S±0.05×179.70W±0.06, h512km, n137, σ1§85/139, mb4.3/48, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.25**	**163**	P	**P**	**14 37 36.5**	**0.0**
RAO	**Raoul Island**	**5.25**	**163**	P	**P**	**14 37 35.9**	**-0.7**
	600nm,0.3s,baz=70,slow=8.4,SNR=13						
RAO				S	**S**	**14 38 48.1**	**-1.9**
	448nm,0.3s,baz=93,slow=22,SNR=5.4						
RAO	**Raoul Island**	**5.25**	**163**	P	**P**	**14 37 35.5**	**-1.1**
GLKZ	**Green Lake**	**5.26**	**163**	P	**P**	**14 37 36.4**	**-0.2**
MSVF	**Nonsavu**	**6.79**	**342**	P	**P**	**14 37 49.0**	**-2.5**
	8.7nm,0.4s,baz=160,slow=10,SNR=43						
MSVF	**Nonsavu**	**6.79**	**342**		**P**	**14 37 48.9**	**-2.6**
NIUE	**Niue**	**10.43**	**62**	P	**P**	**14 38 26.5**	**-2.3**
NIUE				S	**S**	**14 40 25.4**	**-0.4**
MARNC	**Mare, Loyalty**	**11.64**	**281**	P	**P**	**14 38 40.4**	**-1.1**
OUENC	**Ouen Island, N**	**12.50**	**276**	P	**P**	**14 38 50.3**	**-0.3**
AFI	**Afiamalu**	**12.70**	**38**	P	**P**	**14 38 50.0**	**-2.9**
	20nm,0.7s,baz=177,slow=8.6,SNR=6.6						
AFI				S	**S**	**14 41 04.1**	**-5.6**
	16nm,0.6s,baz=59,slow=22,SNR=6.9						
AFI	**Afiamalu**	**12.70**	**38**	P	P	14 38 46.5	-6.4
AFI	**Afiamalu**	**12.70**	**38**	P	P	14 38 47.4	-5.5
AFI				S	**S**	**14 41 02.1**	**-7.6**
DZM	**Mont Dzumac**	**12.93**	**277**	P	**P**	**14 38 52.7**	**-2.5**
	19nm,0.8s,baz=94,slow=18,SNR=16						
HAZ	**Te Kaha**	**13.66**	**188**	P	**P**	**14 39 02.5**	**0.0**
HAZ				S	**S**	**14 41 25.3**	**-2.2**
PUZ	**Puketiti**	**13.91**	**187**	P	**P**	**14 39 04.4**	**-0.9**
PUZ				S	**S**	**14 41 28.4**	**-4.0**
URZ	**Urewera**	**14.25**	**190**	P	**P**	**14 39 07.6**	**-1.1**
	5.4nm,0.4s,baz=0.0,slow=12,SNR=13						
URZ				S	**S**	**14 41 39.4**	**+0.6**
	6.7nm,0.6s,baz=220,slow=23,SNR=6.2						
URZ	**Urewera**	**14.25**	**190**	P	**P**	**14 39 07.3**	**-1.4**
URZ				S	**S**	**14 41 34.0**	**-4.9**
MWZ	**Matawai**	**14.26**	**189**	P	**P**	**14 39 08.6**	**-0.3**
MWZ				S	**S**	**14 41 35.6**	**-3.6**
MUGZ	**Murupara**	**14.52**	**191**	P	**P**	**14 39 11.5**	**-0.1**
RTZ	**Ruatahuna**	**14.62**	**190**	P	**P**	**14 39 10.8**	**-1.9**
RTZ	**Ruatahuna**	**14.62**	**190**	P	**P**	**14 39 12.7**	**-0.1**
TWVZ	**Taurewa**	**15.36**	**194**	P	**P**	**14 39 22.2**	**+1.7**
MCHZ	**McNeill Hill**	**15.48**	**191**	P	**P**	**14 39 22.2**	**+0.6**
MCHZ				S	**S**	**14 42 00.5**	**-1.6**
WNVZ	**Wahianoa**	**15.57**	**194**	P	**P**	**14 39 19.2**	**-3.6**
VRZ	**Vera Road**	**15.58**	**196**	P	**P**	**14 39 26.0**	**+3.4**
KAHZ	**Kahuranaki**	**15.79**	**190**	P	**P**	**14 39 24.4**	**-0.5**
KAHZ				S	**S**	**14 42 07.3**	**-0.7**
TSZ	**Takapari Road**	**16.20**	**192**	P	**P**	**14 39 27.0**	**-2.2**
TSZ				S	**S**	**14 42 13.5**	**-2.0**
ANWZ	**Angora Road**	**16.50**	**190**	P	**P**	**14 39 32.3**	**+0.2**
ANWZ				S	**S**	**14 42 18.5**	**-2.1**
MRZ	**Mangatainoka R**	**16.86**	**192**	P	**P**	**14 39 31.8**	**-3.9**
MRZ	**Mangatainoka R**	**16.86**	**192**	P	**P**	**14 39 31.9**	**-3.8**
OGWZ	**Otaki Gorge**	**17.09**	**193**	P	**P**	**14 39 34.2**	**-3.8**
OGWZ				S	**S**	**14 42 28.2**	**-2.4**
CAW	**Cannon Point**	**17.39**	**193**	P	**P**	**14 39 39.1**	**-1.7**
CAW				S	**S**	**14 42 35.1**	**-0.5**
TCW	**Tory Channel**	**17.67**	**195**	P	**P**	**14 39 42.5**	**-0.9**
TCW				S	**S**	**14 42 41.3**	**+1.3**
QRZ	**Quartz Range**	**17.79**	**200**	P	**P**	**14 39 43.7**	**-0.7**
NNZ	**Nelson**	**17.91**	**197**	P	**P**	**14 39 43.1**	**-2.4**
THZ	**Tophouse**	**18.54**	**198**	P	**P**	**14 39 51.0**	**-0.4**
THZ				S	**S**	**14 42 49.8**	**-4.5**
KHZ	**Kahutara**	**18.99**	**196**	P	**P**	**14 39 54.6**	**-0.7**
LTZ	**Lake Taylor**	**19.66**	**198**	P	**P**	**14 40 00.0**	**-1.5**
INZ	**Inchbonnie**	**19.85**	**200**	P	**P**	**14 40 02.5**	**-0.7**
INZ	**Inchbonnie**	**19.85**	**200**	P	**P**	**14 40 02.3**	**-0.9**
RPZ	**Rata Peaks**	**20.87**	**199**	P	**P**	**14 40 12.0**	**-0.5**
EIDS	**Eidsvold**	**26.53**	**261**	P	**P**	**14 41 03.3**	**+0.1**
EIDS				IAmb	IAmb	14 41 43.1	
	comp=Z,17nm,1.3s						
CAN	**Canberra**	**29.22**	**240**	P	**P**	**14 41 27.7**	**+1.0**
CTA	**Charters Tower**	**31.75**	**271**	P	**P**	**14 41 48.5**	**-0.2**
	comp=Z,19nm,0.4s,baz=96,slow=9.1,SNR=54						
	comp=Z,19nm,0.4s						
CTAO	**Charters Tower**	**31.75**	**271**		**P**	**14 41 48.9**	**+0.3**
STKA	**Stephens Creek**	**34.86**	**249**	P	**P**	**14 42 14.8**	**0.0**
	comp=Z,3.9nm,0.5s,baz=95,slow=9.5,SNR=11						
	comp=Z,3.9nm,0.5s						
PMG	**Port Moresby**	**34.86**	**289**		**P**	**14 42 10.4**	**-4.5**
INKA	**Innaminka**	**35.62**	**256**		**P**	**14 42 20.9**	**-0.3**
COEN	**Coen**	**36.44**	**279**	P	**P**	**14 42 28.5**	**+0.5**
COEN				IAmb	IAmb	14 42 32.5	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	**39.57**	**247**	P	**P**	**14 42 52.8**	**-0.7**
BBOO				IAmb	IAmb	14 43 11.5	
	comp=Z,15nm,1.4s						
AS31	**Alice Springs**	**42.25**	**261**		**P**	**14 43 14.4**	**-0.6**
ASAR	**Alice Springs**	**42.25**	**261**	P	**P**	**14 43 14.3**	**-0.6**
	comp=Z,4.1nm,0.5s,baz=95,slow=7.4,SNR=134						
ASAR				ScP	**ScP**	**14 48 01.4**	**+2.4**
	comp=Z,1.7nm,0.7s,baz=100,slow=3.7,SNR=9.6						
ASAR				S	**S**	**14 48 58.7**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=96,slow=15,SNR=2.1						
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**42.25**	**261**	P	**P**	**14 43 14.2**	**-0.8**
WR8	**Warramunga Arr**	**42.51**	**266**		**P**	**14 43 16.1**	**-0.9**
WR8				IAmb	IAmb	14 43 17.5	
	comp=Z,6.2nm,0.6s						
WB0	**Warramunga Arr**	**42.65**	**267**		**P**	**14 43 17.2**	**-1.0**
WB0				IAmb	IAmb	14 43 19.4	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**42.66**	**266**	P	**P**	**14 43 17.2**	**-1.0**
	comp=Z,7.5nm,0.6s,baz=91,slow=5.9,SNR=40						
WRA				ScP	**ScP**	**14 48 02.1**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=106,slow=3.8,SNR=4.6						
	comp=Z,7.5nm,0.6s						
WRA	**Warramunga Arr**	**42.66**	**266**		**P**	**14 43 17.1**	**-1.1**
FORT	**Forrest**	**46.45**	**250**	P	**P**	**14 43 46.5**	**-0.8**
FORT				IAmb	IAmb	14 43 47.1	
	comp=Z,7.3nm,0.7s						
MTN	**Manton Dam**	**47.75**	**275**	P	**P**	**14 43 56.3**	**-1.0**
MTN				IAmb	IAmb	14 44 22.8	
	comp=Z,13nm,1.5s						
KNRA	**Kununurra**	**48.96**	**270**	P	**P**	**14 44 05.9**	**-0.4**
KNRA				IAmb	IAmb	14 44 07.7	
	comp=Z,21nm,1.4s						
KHLU	**Kahalu`u**	**49.34**	**30**	P	**P**	**14 44 09.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**51.08**	**266**	P	**P**	**14 44 21.8**	**-0.1**
NWAO	**Narrogin (SRO)**	**55.35**	**246**	P	**P**	**14 44 51.9**	**-0.2**
NWAO				IAmb	IAmb	14 44 52.6	
	comp=Z,38nm,1.4s						
MBWA	**Marble Bar**	**55.59**	**260**	P	**P**	**14 44 53.2**	**-0.7**
MBWA				IAmb	IAmb	14 45 24.0	
	comp=Z,21nm,1.5s						
MORW	**Morawa**	**57.02**	**250**	P	**P**	**14 45 03.3**	**-0.4**
MORW				IAmb	IAmb	14 45 12.6	
	comp=Z,19nm,1.5s						
CASY	**Casey**	**59.94**	**206**	P	**P**	**14 45 23.5**	**+0.8**
GIRL	**Giralia**	**60.11**	**257**	P	**P**	**14 45 25.0**	**+0.3**
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**14 46 02.9**	**+1.8**
	comp=Z,2.0nm,0.6s,baz=35,slow=6.6,SNR=18						
	comp=Z,2.0nm,0.6s						
QSPA	**South Pole Qui**	**65.86**	**180**	IAmb	IAmb	14 46 04.3

TXAR	**Lajitas Array**	**90.37**	**58**	P		**P**		**14 48 15.3**	**+1.9**
	comp=Z,2.1nm,0.7s,baz=212,slow=6.4,SNR=29								
	comp=Z,2.1nm,0.7s								
HHC	**Hu-ho-hao-te**	**90.84**	**315**	*e*P		**P**		**14 48 18.4**	**+3.0**
HHC				pmax	pmax				
	comp=Z,11nm,0.5s								
HHC				pmax	pmax				
	comp=Z,68nm,5.7s								
PZH	**PanZhiHua**	**91.08**	**299**	P		**P**		**14 48 18.9**	**+2.1**
ILAR	**Eielson Array**	**92.28**	**13**	P		**P**		**14 48 21.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=220,slow=5.4,SNR=8.4								
	comp=Z,0.6nm,0.8s								
PDAR	**Pinedale Array**	**92.73**	**44**	P		**P**		**14 48 25.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=198,slow=4.4,SNR=7.7								
	comp=Z,0.7nm,0.6s								
MKAR	**Makanchi Array**	**112.57**	**313**	PKiKP		**PKiKP**		**14 53 44.5**	**0.0**
	comp=Z,0.3nm,0.4s,baz=232,slow=3.4,SNR=5.6								
KURK	**Kurchatov**	**115.62**	**316**			**PKPdf**		**14 53 50.0**	**-0.2**
KURBB	**Kurchatov Arra**	**115.67**	**316**	PKP		**PKPdf**		**14 53 50.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=111,slow=1.9,SNR=10								
BVAR	**Borovoye Array**	**120.86**	**319**	PKP		**PKPdf**		**14 54 00.3**	**0.0**
	comp=Z,1.5nm,0.4s,baz=85,slow=3.2,SNR=6.6								
SPITS	**Spitsbergen Ar**	**125.46**	**356**	PKP		**PKiKP**		**14 54 08.7**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=32,slow=5.8,SNR=2.8								
ARCES	**ARCESS Array B**	**132.26**	**348**	PKP		**PKPdf**		**14 54 21.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=22,slow=1.3,SNR=13								
FINES	**FINESS Array B**	**138.84**	**341**	PKiKP	PKPpre			14 54 25.9	
	comp=Z,1.4nm,0.7s,baz=220,slow=20,SNR=4.6								
HFS	**Hagfors**	**142.92**	**349**	PKhKP	PKPpre			14 54 38.5	
	comp=Z,5.3nm,0.4s,baz=48,slow=2.2,SNR=36								
AKASG	**Malin Array Be**	**145.39**	**327**	PKPbc		**PKPbc**		**14 54 47.0**	**0.0**
	comp=Z,1.2nm,0.3s,baz=46,slow=3.9,SNR=12								
AKBB	**Malin Array Si**	**145.39**	**327**	PKPdf		**PKPbc**		**14 54 47.0**	**0.0**
MMAI	**Mount Meron Ar**	**148.08**	**294**	PKPbc		**PKiKP**		**14 54 56.6**	**+0.3**
	comp=Z,3.3nm,0.4s,baz=74,slow=4.6,SNR=3.6								
EKA	**Eskdalemuir Ar**	**148.82**	**4**	PKPbc		**PKPbc**		**14 54 56.2**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=348,slow=2.8,SNR=9.2								
KOLS	**Kolonicke sedl**	**149.89**	**331**	*e*PKP		**PKiKP**		**14 55 00.5**	**+1.1**
CLL	**Collm**	**151.24**	**343**	*i* PKPbc		**PKiKP**		**14 55 02.8**	**+0.7**
	comp=Z,9.0nm,0.8s								
BRG	**Berggiesshubel**	**151.38**	**342**	⇑*i*PKPb				14 55 03.5	
BRG	**Berggiesshubel**	**151.38**	**342**	Amp				14 55 04.1	
	comp=Z,5.6nm,0.5s								
GERES	**GERESS Array B**	**153.25**	**340**	PKPbc		**PKiKP**		**14 55 07.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=41,slow=2.2,SNR=3.7								
ESDC	**Sonseca Array**	**164.18**	**12**	PKPab		**PKPab**		**14 56 08.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=316,slow=4.1,SNR=5.9								
ESDC	**Sonseca Array**	**164.18**	**12**			**PKPab**		**14 56 10.2**	**+1.6**
TORD	**Torodi Ar. Bea**	**168.90**	**187**	PKP		**PKPdf**		**14 55 15.6**	**0.0**
	comp=Z,1.7nm,1.2s,baz=198,slow=1.8,SNR=5.2								

*NEIC **21** 14:43:35.9±2.2, 16°.15S±0°.05×172°.95W±0°.08, h10km±1km, mb4.6/14, Error ellipse: s-maj=14.1km s-min=7.5km az=115.0*

*IDC **21** 14:43:35.2±0.8, 16°.02S×173°.43W, h0km, mb4.1/7, mbtmp4.0/8, ML3.4/1, MS3.4/10, Error ellipse: s-maj=44.0km s-min=19.2km az=138.0*

ISC 21 14:43:38.2±0.6, 16°.14S±0°.07×173°.08W±0°.09, h26km, n43, σ1ᵎ49/29, mb4.4/14, MS3.6/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.55**	**30**	Pn		**Pn**	**14 44 17.2**	**-0.7**
	7.7nm,0.3s,baz=221,slow=2.0,SNR=18							
AFI				Sn		**Sn**	**14 44 45.2**	**-2.9**
	32nm,0.3s,baz=35,slow=12,SNR=10							
AFI				LR		LR	14 45 02.6	
	comp=Z,88nm,18.1s,baz=232,slow=33							
	20nm,0.3s							
AFI	**Afiamalu**	**2.55**	**30**			**Pn**	**14 44 17.1**	**-0.8**
NIUE	**Niue**	**4.20**	**135**			**Pn**	**14 44 39.1**	**-1.4**
MSVF	**Nonsavu**	**8.63**	**258**	Pn		Pn	14 45 49.4	+7.8
	0.4nm,0.3s,baz=107,slow=11,SNR=14							
MSVF	**Nonsavu**	**8.63**	**258**	Pn		**Pn**	**14 45 43.4**	**+1.9**
RAR	**Rarotonga**	**13.58**	**114**	LR		LR	14 50 49.0	
	comp=Z,151nm,21.7s,baz=272,slow=31							
DZM	**Mont Dzumac**	**20.22**	**250**	P		Pn	14 48 13.6	+0.1
	19nm,0.9s,baz=80,slow=17,SNR=8.4							
PPT2	**Papeete2**	**22.54**	**97**	*e*LR		LR	14 53 50.5	
	201nm,24.2s							
PPT2				*e*LR		LR	14 53 59.2	
	160nm,24.2s							
RTZ	**Ruatahuna**	**24.04**	**199**	P		**P**	**14 48 50.5**	**-0.7**
RTZ				IAmb		IAmb	14 48 51.3	
	comp=Z,43nm,1.4s							
HNR	**Honiara**	**27.11**	**281**	LR		LR	14 58 29.9	
	comp=Z,17nm,19.9s,baz=224,slow=33							
CTA	**Charters Tower**	**38.78**	**258**	LR		LR	15 04 42.5	
	comp=Z,112nm,20.8s,baz=76,slow=33							
PMG	**Port Moresby**	**39.30**	**275**	P		**P**	**14 51 05.3**	**0.0**
PMG				IAmb		IAmb	14 51 33.3	
	comp=Z,36nm,1.2s							
H11N3	**WAKE ISLAND Hy**	**40.70**	**330**	T		T	15 33 55.8	
	baz=150,slow=76,SNR=2.9							
H11N1	**WAKE ISLAND Hy**	**40.70**	**330**	T		T	15 34 02.1	
	baz=150,slow=76,SNR=3.7							
H11N2	**WAKE ISLAND Hy**	**40.72**	**330**	T		T	15 34 07.5	
	baz=150,slow=76,SNR=4.3							
STKA	**Stephens Creek**	**43.94**	**241**	P		**P**	**14 51 42.0**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=85,slow=12,SNR=4.3							
	comp=Z,1.5nm,0.6s							
MCQ	**Macquarie Isla**	**43.98**	**203**	P		**P**	**14 51 42.0**	**-1.1**
INKA	**Innaminka**	**44.13**	**247**	P		**P**	**14 51 44.5**	**-0.2**
BBOO	**Buckleboo**	**48.71**	**240**	P		**P**	**14 52 19.5**	**-1.2**
BBOO				IAmb		IAmb	14 52 22.4	
	comp=Z,16nm,1.4s							
WR8	**Warramunga Arr**	**49.83**	**257**	P		**P**	**14 52 29.4**	**0.0**
WB0	**Warramunga Arr**	**49.94**	**258**	P		**P**	**14 52 30.2**	**-0.1**
WB0				IAmb		IAmb	14 52 42.4	
	comp=Z,6.3nm,1.1s							
WRA	**Warramunga Arr**	**49.98**	**257**	P		**P**	**14 52 29.0**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=95,slow=7.4,SNR=2.4							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**49.98**	**257**	IAmb		IAmb	14 52 31.5	
	comp=Z,0.3nm,1.1s							
AS31	**Alice Springs**	**50.18**	**252**	P		**P**	**14 52 29.5**	**-2.5**
AS31				IAmb		IAmb	14 52 34.4	
	comp=Z,1.6nm,0.7s							
ASAR	**Alice Springs**	**50.18**	**252**	P		**P**	**14 52 30.5**	**-1.6**
	comp=Z,7.0nm,0.7s,baz=90,slow=7.4,SNR=60							
ASAR				LR		LR	15 12 57.4	
	comp=Z,86nm,19.6s,baz=66,slow=35							
	comp=Z,7.0nm,0.7s							
ASAR	**Alice Springs**	**50.18**	**252**	P		**P**	**14 52 29.6**	**-2.5**
GUMO	**Guam**	**50.99**	**303**	P		**P**	**14 52 36.9**	**-1.2**
SIJI	**Sorong**	**56.88**	**280**	LR		LR	15 16 27.2	
	comp=Z,42nm,20.3s,baz=128,slow=35							
JOW	**Kunigami**	**71.16**	**306**	LR		LR	15 20 38.3	
	comp=Z,44nm,21.7s,baz=279,slow=31							
QSPA	**South Pole Qui**	**73.91**	**180**	P		**P**	**14 55 12.5**	**+1.7**
	comp=Z,2.0nm,0.8s,baz=26,slow=1.4,SNR=7.6							
	comp=Z,2.0nm,0.8s							
QSPA	**South Pole Qui**	**73.91**	**180**	P		**P**	**14 55 11.4**	**+0.5**
QSPA				IAmb		IAmb	14 55 49.7	
	comp=Z,2.7nm,1.2s							
YULB	**Yu-li**	**75.20**	**300**	P		**P**	**14 55 18.4**	**-0.5**
YULB				IAmb		IAmb	14 55 29.8	
	comp=Z,7.0nm,1.1s							
USRK	**Ussuriysk Ar.**	**78.15**	**323**	LR		LR	15 23 23.4	
	comp=Z,29nm,20.4s,baz=79,slow=31							
CRAG	**Craig**	**78.91**	**22**	P		**P**	**14 55 39.6**	**+0.6**
TXAR	**Lajitas Array**	**80.77**	**56**	P		**P**	**14 55 52.8**	**+2.9**
	comp=Z,0.9nm,1.1s,baz=238,slow=4.3,SNR=4.7							
	comp=Z,0.9nm,1.1s							
PDAR	**Pinedale Array**	**82.61**	**42**	P		**P**	**14 56 01.4**	**+2.0**
	comp=Z,1.7nm,0.9s,baz=208,slow=2.9,SNR=10							
	comp=Z,1.7nm,0.9s							
PDAR	**Pinedale Array**	**82.61**	**42**	P		**P**	**14 56 00.6**	**+1.1**
N31M	**Braeburn, Yuko**	**82.85**	**17**	P		**P**	**14 56 00.9**	**+0.9**
N31M				IAmb		IAmb	14 56 33.2	
	comp=Z,13nm,1.4s							
ILAR	**Eielson Array**	**83.11**	**11**	P		**P**	**14 56 02.2**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=220,slow=5.5,SNR=5.9							
	comp=Z,0.3nm,0.5s							
ILAR	**Eielson Array**	**83.11**	**11**	P		**P**	**14 56 01.5**	**+0.3**
ULM	**Lac du Bonnet**	**94.31**	**39**	LR		LR	15 32 25.4	
	comp=Z,22nm,19.3s,baz=18,slow=31							
TLY	**Talaya**	**98.40**	**321**	LR		LR	15 39 46.4	
	comp=Z,16nm,18.7s,baz=129,slow=34							
GERES	**GERESS Array B**	**146.91**	**352**	PKPbc		**PKPab**	**15 03 19.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=9.7,slow=4.4,SNR=3.6							

*BJI **21** 14:49:48.5, 25°.72S×177°.32W, h160km, mB5.3/12, mb5.3/46*

*NOU **21** 14:49:49.1, 26°.26S×177°.09W, h180km, mb5.1/80, South of Fiji Islands*

*MOS **21** 14:49:49.5±0.9, 26°.11S×177°.62W, h171km, mb5.3/19, Error ellipse: s-maj=11.7km s-min=8.4km az=103.9*

*NEIC **21** 14:49:50.2±1.4, 26°.09S±0°.07×177°.5W±0°.1, h172km±5km, mb4.9/240, Mww5.0/15, Error ellipse: s-maj=16.3km s-min=10.0km az=91.0*

*IDC **21** 14:49:50.8±0.5, 26°.10S×177°.61W, h174km±4km, mb4.5/21, mbtmp5.0/22, MS3.7/4, Error ellipse: s-maj=11.2km s-min=7.9km az=105.0*

*GFZ **21** 14:49:51.3±0.2, 26°.5S±3°×17°.8W±°, h174km, M5.0/42, mb5.2/42*

*GCMT **21** 14:49:51.2±0.2, 26°.08S±0°.01×177°.25W±0°.02, h178km±1km, MW5.0/119, Moment Tensor Solution. s58,c71; s119,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.66±.10; $M_{\theta\theta}$-4.31±.11; $M_{\phi\phi}$0.64±.11; $M_{r\theta}$0.29±.10; $M_{r\phi}$0.96±.10; $M_{\theta\phi}$2.09±.08; Best double couple: $M_0$4.63800×10^{16} NP1:$\phi_8$76.00000°, δ51.00000°, λ53.00000°. NP2:$\phi_8$306.00000°, δ52.00000°, λ127.00000°. Principal axes: T 4.7830, Plg62.0000°, Azm279.0000°; N -0.2980, Plg28.0000°, Azm101.0000°; P -4.4920, Plg1.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 14:49:50.2±0.3, 26°.33S±0°.04×177°.53W±0°.05, h173km±2km, h173km:pP-P, n981, σ1ᵎ65/911, mb4.9/207, 61C-44D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.93**	**187**	P		**Pn**	**14 50 39.6**	**+2.0**
	3μm,0.3s,baz=10,slow=1.7,SNR=79							
RAO				S		**Sn**	**14 51 19.4**	**+4.8**
	5μm,0.5s,baz=81,slow=23,SNR=6.7							
RAO				LR		LR	14 51 51.0	
	comp=Z,1μm,18.3s,baz=163,slow=38							
RAO	**Raoul Island**	**2.93**	**187**	P		**Pn**	**14 50 39.8**	**+2.2**
RAO	**Raoul Island**	**2.93**	**187**	P		**Pn**	**14 50 39.9**	**+2.2**
GLKZ	**Green Lake**	**2.94**	**187**	P		**Pn**	**14 50 40.0**	**+2.2**
GLKZ				S		**Sn**	**14 51 20.4**	**+5.6**
LKBA	**Tubou, Lakemba**	**8.15**	**351**	P		**Pn**	**14 51 42.7**	**-2.9**
MSVF	**Nonsavu**	**9.49**	**334**	P		**Pn**	**14 52 02.1**	**-1.2**
	177nm,1.1s,baz=147,slow=12,SNR=75							
MSVF	**Nonsavu**	**9.49**	**334**	P		**Pn**	**14 52 02.4**	**-0.9**
MSVF	**Nonsavu**	**9.49**	**334**	*ce*P		**Pn**	**14 52 01.0**	**-2.3**
MSVF	**Nonsavu**	**9.49**	**334**			**Pn**	**14 52 02.5**	**-0.9**
MSVF	**Nonsavu**	**9.49**	**334**	P		**Pn**	**14 52 02.9**	**-0.5**
NIUE	**Niue**	**10.07**	**46**	P		Pn	14 52 04.0	-6.9
	comp=Z,1μm,0.8s							
NIUE	**Niue**	**10.07**	**46**	P		Pn	14 52 04.0	-6.9
NIUE	**Niue**	**10.07**	**46**	P		Pn	14 52 03.6	-7.3
NIUE				S		Sn	14 53 45.9	-17
DGTI	**Dogotuki**	**10.30**	**345**	P		**Pn**	**14 52 11.6**	**-2.3**
OUZ	**Omahuta**	**11.68**	**219**	P		**P**	**14 52 35.9**	**-2.1**
OUZ	**Omahuta**	**11.68**	**219**	P		**P**	**14 52 36.3**	**-1.7**
MXZ	**Matakaoa Point**	**11.74**	**196**	P		**Pn**	**14 52 10.9**	**+1.5**
MXZ	**Matakaoa Point**	**11.74**	**196**	S		**Sn**	**14 54 37.7**	**-4.8**
WMGZ	**Waiomatatini S**	**11.95**	**196**	P		Pn	14 52 29.1	-6.1
WMGZ				S		**Sn**	**14 54 39.8**	**-7.9**
HAZ	**Te Kaha**	**12.06**	**198**	P		Pn	14 52 30.1	-6.4
HAZ				S		**Sn**	**14 54 45.7**	**-4.6**
PKGZ	**Pakihiroa**	**12.08**	**197**	P		Pn	14 52 29.4	-7.5
PKGZ				S		**Sn**	**14 54 45.1**	**-5.8**
PUZ	**Puketiti**	**12.23**	**196**	P		Pn	14 52 30.7	-8.1
PUZ				S		**Sn**	**14 54 46.0**	**-8.5**
RUGZ	**Raukumara Rang**	**12.28**	**198**	P		Pn	14 52 34.1	-5.5
RUGZ				S		**Sn**	**14 54 48.5**	**-7.3**
ETAZ	**East Tamaki Re**	**12.38**	**209**	P		P	14 52 51.3	+5.6
TWGZ	**Tauwhareparae**	**12.40**	**197**	P		Pn	14 52 34.6	-6.4
TWGZ				S		**Sn**	**14 54 51.5**	**-7.1**
AWAZ	**Awhitu Peninsu**	**12.60**	**210**	P		**P**	**14 52 52.5**	**+4.3**
CNGZ	**Carnagh Statio**	**12.64**	**195**	P		Pn	14 52 37.2	-6.8
CNGZ				S		**Sn**	**14 54 56.8**	**-7.3**
MWZ	**Matawai**	**12.67**	**198**	P		Pn	14 52 36.8	-7.6
MWZ				S		**Sn**	**14 54 56.1**	**-8.9**
TKGZ	**Te Karaka**	**12.68**	**197**	P		Pn	14 52 37.3	-7.3
TKGZ				S		**Sn**	**14 54 57.3**	**-7.9**
URZ	**Urewera**	**12.72**	**199**	P		Pn	14 52 40.2	-4.8
	comp=Z,6.7nm,0.3s,baz=229,slow=3.4,SNR=8.9							
URZ				S		**Sn**	**14 54 59.7**	**-6.4**
	comp=Z,64nm,0.4s,baz=131,slow=21,SNR=11							
URZ	**Urewera**	**12.72**	**199**	P		**Pn**	**14 52 43.0**	**-2.0**
URZ	**Urewera**	**12.72**	**199**	P		Pn	14 52 38.3	-6.7
URZ	**Urewera**	**12.72**	**199**	P		**Pn**	**14 52 46.3**	**+1.3**
TOZ	**Tahuroa Road**	**12.80**	**206**	P		**P**	**14 52 50.4**	**0.0**
RAGZ	**Rawiri**	**12.85**	**198**	P		**Pn**	**14 52 42.3**	**-4.5**
RAGZ				S		**Sn**	**14 55 01.4**	**-8.0**
TARZ	**Mount Tarawera**	**12.89**	**202**	P		**P**	**14 52 52.7**	**+1.2**
RIGZ	**Rimuhau**	**12.96**	**197**	P		**Pn**	**14 52 45.3**	**-2.7**
RIGZ				S		Sn	14 55 02.6	-9.3
MUGZ	**Murupara**	**13.03**	**200**	P		Pn	14 52 43.2	-5.7
MUGZ				S		**Sn**	**14 55 06.3**	**-7.1**
RTZ	**Ruatahuna**	**13.09**	**199**	P		Pn	14 52 43.0	-6.7
RTZ				S		Sn	14 55 03.1	-12
HRRZ	**Handcock Road**	**13.10**	**202**	P		**P**	**14 52 54.7**	**+0.9**
PRGZ	**Paritu Road**	**13.13**	**196**	P		**Pn**	**14 52 47.7**	**-2.5**
PRGZ				S		Sn	14 55 06.0	-10
PRRZ	**Plateau Road**	**13.16**	**201**	P		**P**	**14 52 52.9**	**-1.6**
PRRZ				S		**Sn**	**14 55 11.5**	**-5.3**
KNZ	**Kokohu**	**13.28**	**196**	P		Pn	14 52 47.3	-4.8
KNZ				S		Sn	14 55 09.0	-10
TLZ	**Tolley Road**	**13.31**	**204**	P		**P**	**14 52 58.7**	**+2.6**
RAHZ	**Arahi**	**13.34**	**198**	P		**Pn**	**14 52 50.8**	**-2.0**
RAHZ				S		Sn	14 55 11.9	-9.1
MHGZ	**Mahia Peninsul**	**13.34**	**196**	P		Pn	14 52 46.8	-6.1
MHGZ				S		Sn	14 55 11.0	-10
MTHZ	**Maungataniwha**	**13.35**	**199**	P		Pn	14 52 47.3	-5.7
MTHZ				S		**Sn**	**14 55 12.9**	**-8.4**
KUTZ	**Kaahu Road**	**13.35**	**203**	P		**Pn**	**14 52 54.2**	**+1.2**
WHHZ	**Waihua**	**13.45**	**198**	P		**Pn**	**14 52 53.4**	**-0.8**
WHHZ				S		Sn	14 55 14.5	-9.0
MRHZ	**Matea Rd**	**13.46**	**201**	P		**Pn**	**14 52 53.2**	**-1.2**
AFI	**Afiamalu**	**13.49**	**25**	P		Pn	14 52 44.1	-11
	comp=Z,570nm,0.7s,baz=355,slow=1.8,SNR=121							
AFI				S		Sn	14 55 00.0	-25
	comp=Z,177nm,0.8s,baz=193,slow=23,SNR=4.2							
AFI	**Afiamalu**	**13.49**	**25**	P		Pn	14 52 44.3	-11
AFI	**Afiamalu**	**13.49**	**25**			Pn	14 52 44.2	-11
WATZ	**Wairara**	**13.58**	**203**	P		**P**	**14 52 59.9**	**+0.8**
NMHZ	**Naumai**	**13.59**	**199**	P		**Pn**	**14 52 52.5**	**-3.5**
RATZ	**Rangitukua**	**13.71**	**203**	P		**P**	**14 53 02.0**	**+1.5**
HIZ	**Hauiti**	**13.73**	**206**	P		**P**	**14 52 59.5**	**-1.2**
HIZ	**Hauiti**	**13.73**	**206**	Pn		**P**	**14 52 59.2**	**-1.6**
HIZ	**Hauiti**	**13.73**	**206**	P		**P**	**14 52 59.5**	**-1.2**
BKZ	**Black Stump Fm**	**13.74**	**200**	P		**Pn**	**14 52 58.3**	**+0.3**
MCHZ	**McNeill Hill**	**13.94**	**199**	P		**Pn**	**14 52 58.6**	**-1.8**
TMVZ	**Te Maari**	**13.95**	**202**	P		**Pn**	**14 52 59.2**	**-1.5**
ETVZ	**East Tongariro**	**13.97**	**202**	P		**P**	**14 53 03.1**	**-0.4**
WTVZ	**West Tongariro**	**13.99**	**203**	P		**P**	**14 53 04.1**	**+0.3**
KWHZ	**Kaweka Forest**	**14.00**	**200**	P		**Pn**	**14 52 59.6**	**-1.7**
TWVZ	**Taurewa**	**14.00**	**203**	P		**P**	**14 53 04.8**	**+0.9**
OTVZ	**Oturere**	**14.01**	**202**	P		**P**	**14 53 02.4**	**-1.6**
SNVZ	**South Ngauruho**	**14.04**	**202**	P		**P**	**14 53 04.1**	**-0.3**
NGZ	**Ngauruhoe**	**14.04**	**203**	P		**P**	**14 53 05.1**	**+0.8**
MARNC	**Mare, Loyalty**	**14.06**	**287**	P		**P**	**14 53 04.5**	**0.0**
MARNC	**Mare, Loyalty**	**14.06**	**287**			**P**	**14 53 04.9**	**+0.4**
COVZ	**Chateau Observ**	**14.08**	**203**	P		**P**	**14 53 04.3**	**-0.4**
TUVZ	**Tukino**	**14.11**	**202**	P		**Pn**	**14 53 01.1**	**-1.5**
FWVZ	**Far West T-bar**	**14.13**	**203**	P		**Pn**	**14 53 00.5**	**-2.5**
WHVZ	**Whangaehu Hut**	**14.14**	**202**	P		**Pn**	**14 53 03.6**	**+0.4**
TRVZ	**Turoa**	**14.17**	**202**	P		**Pn**	**14 53 03.7**	**+0.1**
WNVZ	**Wahianoa**	**14.18**	**202**	P		**Pn**	**14 53 02.6**	**-0.9**
MOVZ	**Moawhango**	**14.20**	**202**	P		**Pn**	**14 53 02.1**	**-1.6**
KAHZ	**Kahuranaki**	**14.21**	**198**	P		Pn	14 52 58.4	-5.4
KRHZ	**Kereru**	**14.22**	**200**	P		**Pn**	**14 52 59.3**	**-4.6**
PKVZ	**Pokaka**	**14.23**	**203**	P		**Pn**	**14 53 03.6**	**-0.5**
MTVZ	**Mangateitei**	**14.27**	**203**	P		**P**	**14 53 07.8**	**+0.9**
VRZ	**Vera Road**	**14.30**	**205**	P		**P**	**14 53 06.8**	**-0.2**
PXZ	**Pawanui**	**14.44**	**198**	P		**Pn**	**14 53 02.1**	**-4.5**
PNHZ	**Pukenui**	**14.52**	**200**	P		Pn	14 53 00.3	-7.4
WPHZ	**Waipukurau**	**14.59**	**199**	P		**Pn**	**14 53 05.6**	**-2.8**
PRHZ	**Porangahau**	**14.72**	**198**	P		Pn	14 53 04.1	-6.0
TSZ	**Takapari Road**	**14.72**	**200**	P		Pn	14 53 04.6	-5.6
KHEZ	**Kahui Hut**	**14.74**	**207**	P		**P**	**14 53 12.9**	**+0.9**
OUENC	**Ouen Island, N**	**14.76**	**282**	P		**P**	**14 53 14.5**	**+2.2**
OUENC	**Ouen Island, N**	**14.76**	**282**			**P**	**14 53 14.7**	**+2.4**
WAZ	**Wanganui**	**14.77**	**203**	P		**Pn**	**14 53 09.8**	**-1.0**
YATNC	**Mamie plateau,**	**14.83**	**283**	P		**P**	**14 53 15.4**	**+2.3**
DVHZ	**Dannevirke**	**14.88**	**199**	P		**Pn**	**14 53 09.0**	**-3.2**
ANWZ	**Angora Road**	**14.94**	**198**	P		**Pn**	**14 53 11.0**	**-1.9**
POWZ	**Post Office Ro**	**15.09**	**200**	P		**Pn**	**14 53 12.2**	**-2.4**
ONTNC	**Ouen Toro**	**15.13**	**282**	P		**P**	**14 53 21.3**	**+4.8**
ONTNC	**Ouen Toro**	**15.13**	**282**	P		**P**	**14 53 18.9**	**+2.4**
PRWZ	**Pori Road**	**15.18**	**199**	P		**Pn**	**14 53 13.3**	**-2.4**
BFZ	**Birch Farm**	**15.21**	**198**	P		**Pn**	**14 53 09.7**	**-6.4**
DZM	**Mont Dzumac**	**15.22**	**283**	P		**P**	**14 53 20.3**	**+2.8**
	comp=Z,76nm,0.8s,baz=70,slow=17,SNR=43							
NOUC	**Port Laguerre**	**15.33**	**283**	P		**P**	**14 53 22.2**	**+3.5**
MRZ	**Mangatainoka R**	**15.39**	**200**	P		**Pn**	**14 53 11.3**	**-7.1**
RTV	**Rentapao**	**15.53**	**300**	P		**P**	**14 53 23.5**	**+2.6**
HOWZ	**Holdsworth Sta**	**15.63**	**200**	P		**Pn**	**14 53 20.8**	**-0.4**
OGWZ	**Otaki Gorge**	**15.66**	**201**	P		**Pn**	**14 53 14.6**	**-7.1**
TMWZ	**Te Maipa**	**15.71**	**199**	P		**Pn**	**14 53 18.0**	**-4.2**
DVP	**Devils Point**	**15.76**	**300**	P		**P**	**14 53 27.0**	**+3.6**
KIW	**Kapiti Island**	**15.79**	**202**	P		**Pn**	**14 53 16.8**	**-6.4**
MTW	**Mount Morrison**	**15.87**	**200**	P		**Pn**	**14 53 20.7**	**-3.5**
CAW	**Cannon Point**	**15.96**	**201**	P		**Pn**	**14 53 18.3**	**-7.0**
TRWZ	**Traveller**	**16.04**	**199**	P		**Pn**	**14 53 25.6**	**-0.6**
DUWZ	**D'Urville Isla**	**16.08**	**204**	P		**Pn**	**14 53 24.0**	**-2.7**
MSWZ	**Moikau Station**	**16.18**	**200**	P		**P**	**14 53 21.9**	**-6.0**
SNZO	**South Karori**	**16.26**	**201**	P		**P**	**14 53 27.8**	**-0.9**
TCW	**Tory Channel**	**16.31**	**202**	P		P	14 53 21.7	-7.6
PLWZ	**Palliser**	**16.32**	**200**	P		**P**	**14 53 27.4**	**-2.1**
PLWZ	**Palliser**	**16.32**	**200**	P		**P**	**14 53 28.6**	**-0.8**
TUWZ	**Tuamarina**	**16.62**	**203**	P		**P**	**14 53 28.2**	**-4.5**
QRZ	**Quartz Range**	**16.64**	**207**	P		**Pn**	**14 53 32.9**	**-0.6**
NNZ	**Nelson**	**16.64**	**205**	P		**P**	**14 53 29.6**	**-3.3**
CMWZ	**Cape Campbell**	**16.81**	**202**	P		**P**	**14 53 34.1**	**-0.7**
BSWZ	**Blackbirch Sta**	**16.90**	**203**	P		**P**	**14 53 34.6**	**-1.1**
MRNZ	**Matariki Terra**	**17.03**	**206**	P		**P**	**14 53 34.9**	**-2.4**
THZ	**Tophouse**	**17.29**	**205**	P		**P**	**14 53 37.0**	**-3.1**
CTZ	**Chatham Island**	**17.38**	**178**	P		**Pn**	**14 53 41.4**	**-0.9**
CTZ	**Chatham Island**	**17.38**	**178**			**Pn**	**14 53 44.5**	**

AS01 Alice Springs 43.85 263 P **P** **14 57 40.0 +0.4**
AS09 Alice Springs 43.85 262 P **P** **14 57 40.0 +0.4**
comp=Z,57nm,0.8s
AS31 Alice Springs 43.89 263 P **P** **14 57 40.4 +0.4**
comp=Z,13nm,0.7s
AS31 Alice Springs 43.89 263 P **P** **14 57 40.1 +0.2**
ASAR Alice Springs 43.89 263 P **P** **14 57 40.2 +0.3**
comp=Z,41nm,0.8s,baz=106,slow=7.8,SNR=215
ASAR PcP **PcP** **14 59 23.4 +0.4**
comp=Z,5.1nm,0.8s,baz=97,slow=4.0,SNR=4.8
ASAR S **S** **15 03 57.2 -1.2**
comp=Z,1.4nm,1.0s,baz=103,slow=15,SNR=4.5
comp=Z,41nm,0.8s
ASAR Alice Springs 43.89 263 P **P** **14 57 39.9 -0.1**
AS15 Alice Springs 43.89 263 P **P** **14 57 40.4 +0.4**
comp=Z,62nm,1.0s
WR8 Warramunga Arr 44.36 268 P **P** **14 57 43.3 -0.4**
WRAB Tennant Creek 44.50 268 P **P** **14 57 44.7 -0.1**
WRA Warramunga Arr 44.51 268 P **P** **14 57 44.6 -0.3**
comp=Z,56nm,0.5s,baz=103,slow=7.5,SNR=110
WRA PcP **PcP** **14 59 25.5 +0.3**
comp=Z,9.2nm,0.8s,baz=106,slow=4.0,SNR=8.9
WRA S **S** **15 04 05.5 -1.8**
comp=Z,1.4nm,0.9s,baz=101,slow=12,SNR=2.5
comp=Z,56nm,0.5s
WRA Warramunga Arr 44.51 268 P **P** **14 57 44.1 -0.8**
WB0 Warramunga Arr 44.52 268 P **P** **14 57 44.4 -0.5**
GENI Genyem 46.93 293 P **P** **14 58 03.4 -0.4**
comp=Z,1µmcomp=Z,93nm,0.9s
GENI Genyem 46.93 293 P **P** **14 58 03.7 -0.1**
FORT Forrest 47.61 251 P **P** **14 58 08.6 -0.3**
comp=Z,134nm,0.6s
FORT Forrest 47.61 251 P **P** **14 58 08.4 -0.5**
DRV Dumont d'Urvil 48.05 201 P **P** **14 58 13.0 +1.2**
DRV sP **sP** **14 59 09.3 +1.0**
WRKA Warakurna 48.53 259 P **P** **14 58 14.5 -1.6**
comp=Z,25nm,1.0s
KDU Kakadu 48.75 276 P **P** **14 58 17.5 -0.3**
comp=Z,20nm,0.7s
MTN Manton Dam 49.89 275 P **P** **14 58 25.4 -1.1**
comp=Z,7.9nm,0.6s
MTN Manton Dam 49.89 275 P **P** **14 58 25.9 -0.6**
MTN lAmb lAmb 14 59 45.8
comp=Z,42nm,2.0s
DRS Darwin Rock St 50.26 276 P **P** **14 58 29.2 -0.1**
SRPI Serui, Papua 50.59 291 P **P** **14 58 31.8 0.0**
comp=Z,146nm,1.1s
KNRA Kununurra 50.94 271 P **P** **14 58 35.0 +0.8**
comp=Z,246nm,0.7s
KNRA Kununurra 50.94 271 P **P** **14 58 34.1 -0.1**
BAKI Biak 51.07 292 P **P** **14 58 36.6 +1.2**
comp=Z,1µmcomp=Z,128nm,1.1s
SBA Scott Base 52.11 184 P **P** **14 58 46.1 +4.0**
SBA Scott Base 52.11 184 P **P** **14 58 46.0 +4.0**
SBA Scott Base 52.11 184 P P 14 58 47.3 +5.2
VNDA Vanda 52.17 186 P **P** **14 58 45.9 +3.3**
comp=Z,6.4nm,0.9s,baz=6.1,slow=7.5,SNR=22
comp=Z,6.4nm,0.9s
VNDA Vanda 52.17 186 P **P** **14 58 39.2 -3.4**
VNDA Vanda 52.17 186 P P 14 58 47.8 +5.2
VNDA sP sP 14 59 45.5 +5.6
KMBL Kambalda 52.73 249 P **P** **14 58 45.9 -1.5**
comp=Z,21nm,1.3s
FITZ Fitzroy Crossi 52.90 267 P **P** **14 58 49.6 +0.8**
comp=Z,14nm,0.8s
FITZ Fitzroy Crossi 52.90 267 P **P** **14 58 49.3 +0.5**
FITZ Fitzroy Crossi 52.90 267 P **P** **14 58 48.7 0.0**
FITZ lAmb lAmb 14 58 52.4
comp=Z,9.5nm,0.7s
FITZ Fitzroy Crossi 52.90 267 P **P** **14 58 48.3 -0.5**
FAKI Fak Fak 53.43 287 P **P** **14 58 52.9 +0.2**
FAKI Fak Fak 53.43 287 P **P** **14 58 51.5 -1.2**
SIJI Sorong 55.33 289 P **P** **14 59 05.5 -0.9**
comp=Z,934nmcomp=Z,120nm,0.9s
KLBR Kellerberrin 56.14 248 P **P** **14 59 11.9 -0.1**
comp=Z,147nm,0.8s
KLBR Kellerberrin 56.14 248 P **P** **14 59 11.8 -0.2**
KLBR Kellerberrin 56.14 248 P **P** **14 59 12.0 -0.1**
NWAO Narrogin (SRO) 56.30 247 P **P** **14 59 13.9 +0.8**
NWAO Narrogin (SRO) 56.30 247 P **P** **14 59 12.7 -0.4**
NWAO pmax pmax
comp=Z,49nm,1.4s
NWAO Narrogin (SRO) 56.30 247 P **P** **14 59 12.7 -0.4**
MEEK Meekatharra 56.58 254 P **P** **14 59 14.6 -0.7**
comp=Z,31nm,0.8s
MEEK Meekatharra 56.58 254 P **P** **14 59 14.7 -0.6**
MEEK Meekatharra 56.58 254 P **P** **14 59 14.6 -0.6**
MBWA Marble Bar 57.18 261 P **P** **14 59 19.2 -0.3**
comp=Z,44nm,1.1s
MBWA Marble Bar 57.18 261 P **P** **14 59 19.2 -0.3**
MBWA Marble Bar 57.18 261 P **P** **14 59 18.8 -0.6**
MBWA Marble Bar 57.18 261 P **P** **14 59 19.2 -0.3**
MBWA Marble Bar 57.18 261 P **P** **14 59 19.1 -0.3**
MBWA PcP **PcP** **15 00 12.8 +0.7**
BLDU Ballidu 57.23 249 P **P** **14 59 19.7 -0.1**
comp=Z,74nm,1.0s
BLDU Ballidu 57.23 249 P **P** **14 59 19.2 -0.5**
BLDU Ballidu 57.23 249 P **P** **14 59 19.6 -0.1**
SOEI Soe 57.29 275 P **P** **14 59 21.1 +0.7**
comp=Z,59nm,1.1s
SOEI Soe 57.29 275 P **P** **14 59 18.4 -2.1**
MUN Mundaring 57.34 248 P **P** **14 59 20.7 +0.2**
comp=Z,39nm,1.0s
MUN Mundaring 57.34 248 P **P** **14 59 20.5 0.0**
MORW Morawa 58.17 251 P **P** **14 59 26.4 +0.1**
comp=Z,75nm,0.7s
MORW Morawa 58.17 251 P **P** **14 59 26.1 -0.2**
MORW Morawa 58.17 251 P **P** **14 59 26.2 -0.2**
MORW Morawa 58.17 251 P **P** **14 59 26.3 +0.1**
CASY Casey 58.93 207 P **P** **14 59 32.1 +1.2**
CASY Casey 58.93 207 P **P** **14 59 32.4 +1.5**
CASY Casey 58.93 207 P **P** **14 59 32.8 +1.9**
SANI Sanana 59.27 284 P **P** **14 59 33.7 -0.4**
TNTI Ternate 59.50 288 P **P** **14 59 34.8 -0.8**
TNTI Ternate 59.50 288 P **P** **14 59 35.6 0.0**
comp=Z,685nmcomp=Z,54nm,0.8s
TNTI Ternate 59.50 288 P **P** **14 59 34.9 -0.8**
MMRI Maumere 59.57 276 P **P** **14 59 35.5 -0.6**
WSI Waingapu 60.88 274 P **P** **14 59 45.3 +0.3**
GIRL Giralia 61.55 257 P **P** **14 59 50.2 +0.7**
LBFI Labuhan Bajo, 61.74 275 P **P** **14 59 50.5 -0.3**
LUWI Luwuk 62.56 283 P **P** **14 59 55.4 -0.8**
PLAI Plampang 63.48 273 P **P** **15 00 02.0 -0.4**
PLAI Plampang 63.48 273 P **P** **15 00 02.4 0.0**
comp=Z,92nm,0.9s
PLAI Plampang 63.48 273 P **P** **15 00 02.4 0.0**
QSPA South Pole Qui 63.76 180 P **P** **15 00 06.0 +2.5**
comp=Z,20nm,0.8s,baz=47,slow=1.9,SNR=68
comp=Z,20nm,0.8s
QSPA South Pole Qui 63.76 180 P **P** **15 00 06.1 +2.5**
QSPA South Pole Qui 63.76 180 P **P** **15 00 06.7 +3.2**
TOLI2 Tolitoli 65.35 284 P **P** **15 00 14.9 +0.5**
TOLI2 Tolitoli 65.35 284 P **P** **15 00 13.2 -1.2**
TOLI2 lAmb lAmb 15 00 17.3
comp=Z,19nm,0.7s
TOLI2 Tolitoli 65.35 284 P **P** **15 00 13.3 -1.2**
JAGI Jajag, Banyuwa 66.88 272 P **P** **15 00 23.3 -1.0**
JAGI Jajag, Banyuwa 66.88 272 P **P** **15 00 23.1 -1.2**
SNJI Sawahan-Nganju 69.32 271 P **P** **15 00 41.1 +1.5**
comp=Z,82nm,1.2s
UGM Wanagama 70.37 271 P **P** **15 00 46.1 +0.2**
UGM Wanagama 70.37 271 P **P** **15 00 44.3 -1.6**
KKM Kota Kinabalu 71.74 287 P **P** **15 00 52.8 -1.4**
KKM lAmb lAmb 15 00 56.3
comp=Z,19nm,1.0s
SMAI San Martin Ant 73.04 158 P **P** **15 01 02.3 +1.5**
BBJI Bungbulang 73.14 270 P **P** **15 01 02.5 0.0**
BBJI Bungbulang 73.14 270 P **P** **15 01 00.1 -2.3**
BBJI lAmb lAmb 15 01 03.6
comp=Z,23nm,0.7s
BELA Belgrano 2 73.75 172 P **P** **15 01 06.3 +1.4**
BELA lAmb lAmb 15 01 07.3
comp=Z,16nm,0.8s
JOW Kunigami 74.27 311 P **P** **15 01 08.1 -0.5**
JOW Kunigami 74.27 311 P **P** **15 01 07.6 -1.1**
INU Inuyama 74.90 323 P **P** **15 01 08.8 -3.2**
INU lAmb lAmb 15 01 12.9
comp=Z,12nm,0.8s
JGF Kuroka 74.90 323 P **P** **15 01 12.5 +0.4**
JGF Kuroka 74.90 323 lAmb lAmb 15 01 12.7
comp=Z,13nm,0.7s
JGF Kuroka 74.90 323 P **P** **15 01 10.7 -1.5**
MJAR Matsushiro Arr 75.16 324 P **P** **15 01 12.1 -1.4**
comp=Z,6.6nm,0.8s,baz=160,slow=5.7,SNR=23
comp=Z,6.6nm,0.8s
MJAR Matsushiro Arr 75.16 324 P **P** **15 01 10.3 -3.2**
MAJO Matsushiro 75.17 324*de*P **P** **15 01 12.8 -0.8**
MAJO pmax pmax
comp=Z,13nm,0.9s
MAJO Matsushiro 75.17 324 P **P** **15 01 12.8 -0.8**
JSU Suzuyama 75.97 316 P **P** **15 01 19.4 +1.1**
JSU Suzuyama 75.97 316 lAmb lAmb 15 01 20.3
comp=Z,20nm,0.7s
MAW Mawson 76.25 200 P **P** **15 01 22.1 +2.7**
comp=Z,6.6nm,0.6s
MAW Mawson 76.25 200 P **P** **15 01 21.7 +2.4**
comp=Z,21nm,0.5s,baz=135,slow=6.7,SNR=86
comp=Z,21nm,0.5s
MAW Mawson 76.25 200 P **P** **15 01 21.6 +2.4**
MAW Mawson 76.25 200 P **P** **15 01 22.0 +2.7**
YOJ Yonaguni jima 76.47 306 P **P** **15 01 21.6 +0.4**
YOJ Yonaguni jima 76.47 306 P **P** **15 01 21.4 +0.2**
JNU Nakatsue 76.82 318 P **P** **15 01 22.1 -1.0**
comp=Z,11nm,0.8s,baz=192,slow=3.7,SNR=6.0
comp=Z,11nm,0.8s
JNU Nakatsue 76.82 318 lAmb lAmb 15 02 11.7
comp=Z,24nm,0.9s
YULB Yu-li 77.09 304 P **P** **15 01 24.3 -0.4**
YULB Yu-li 77.09 304 P **P** **15 01 22.0 -2.7**
NMR Nemuro--Hokkai 77.14 333 *e*P **P** **15 01 22.3 -2.2**
NACB Ninganchiao 77.33 305 P **P** **15 01 26.8 +0.8**
TPUB Ta-pu 77.53 304 P **P** **15 01 25.7 -1.5**
TPUB Ta-pu 77.53 304 P **P** **15 01 25.3 -1.9**
SSLB Suanglung 77.58 304 P **P** **15 01 26.6 -0.8**
YUK Yuzh-Kuril'sk 77.64 334 *e*P **P** **15 01 30.0 +2.7**
YUK *i*S **pP** **15 02 10.5 +1.8**
YUK pmax pmax
comp=Z,41nm,0.5s
YUK pmax pmax
comp=N,81nm,0.6s
YUK pmax pmax
comp=E,35nm,0.3s
YHNB Yeheng 77.79 305 lAmb lAmb 15 01 30.9
comp=Z,19nm,0.8s
YHNB Yeheng 77.79 305 P **P** **15 01 29.7 +1.1**
ADK Adak 77.88 1 P **P** **15 01 27.2 -1.1**
ADK Adak 77.88 1 P **P** **15 01 27.3 -1.1**
ADK pmax pmax
comp=Z,55nm,0.8s
ADK Adak 77.88 1 P **P** **15 01 27.3 -1.1**
ADK Adak 77.88 1 P **P** **15 01 27.6 -0.8**
ATKA Atka Island 78.25 2 P **P** **15 01 29.2 -1.3**
ATKA Atka Island 78.25 2 P **P** **15 01 29.1 -1.3**
JKA Kamikawa-asahi 79.04 332 P **P** **15 01 36.1 +1.1**
ASAJ Asahikawa 79.05 332 LR LR 15 31 56.1
comp=Z,50nm,21.1s,baz=157,slow=32
KSI Kapahiang 79.32 271 P **P** **15 01 36.6 -0.7**
SKR Severo-Kuril's 80.14 343⇓*e*P **P** **15 01 40.9 +0.2**
UNV Unalaska Valle 80.41 7 P **P** **15 01 40.8 -1.3**
UNV Unalaska Valle 80.41 7 P **P** **15 01 40.9 -1.3**
baz=190
MYKOM Kota Tinggi 80.60 277 lAmb lAmb 15 01 45.2
comp=Z,18nm,0.8s
MYKOM Kota Tinggi 80.60 277 P **P** **15 01 43.6 -0.5**
comp=Z,29nm,0.9s
MYKOM Kota Tinggi 80.60 277 P **P** **15 01 44.3 +0.2**
ELIB Princess Elisa 80.92 186 *d*P **P** **15 01 46.8 +1.8**
comp=Z,18nm,0.7s
TJN Taejon 81.15 318⇓*e*P **P** **15 01 47.0 +0.5**
DLV Lat 81.28 288 P **P** **15 01 48.9 +1.0**
YSS Yuzhno-Sakhali 81.29 334 P **P** **15 01 47.6 +0.7**
YSS Yuzhno-Sakhali 81.29 334*oe*P **P** **15 01 47.4 +0.5**
YSS *e*S **S** **15 11 43.3 +0.5**
YSS *e* 15 11 51.3
YSS pmax pmax
comp=Z,80nm,1.1s
YSS pmax pmax
comp=Z,100nm,2.6s
YSS pmax pmax
comp=N,100nm,5.7s
YSS pmax pmax
comp=E,100nm,7.3s
YSS smax smax
comp=N,100nm,2.9s
YSS Yuzhno-Sakhali 81.29 334 P **P** **15 01 47.7 +0.8**
YSS Yuzhno-Sakhali 81.29 334 P **P** **15 01 47.7 +0.8**
KSRS Korea Array 81.54 319 P **P** **15 01 48.1 -0.3**
comp=N,4.4nm,0.7s,baz=132,slow=5.8,SNR=26
comp=N,4.4nm,0.7s
KSAR Wonju Array Be 81.56 319 P **P** **15 01 48.1 -0.4**
KSAR Wonju Array Be 81.56 319 P **P** **15 01 48.1 -0.4**
KS19 Wonju Array Si 81.61 319 lAmb lAmb 15 01 51.8
comp=Z,71nm,2.0s
PET Petropavlovsk 81.70 346 P **P** **15 01 48.3 -0.6**
TROLL Troll, Antarti 81.92 180⇑P **P** **15 01 52.1 +1.9**
comp=Z,1µm,0.5s
TROLL ⇓pP **pwP** **15 02 33.3 -1.1**
comp=Z,484nm,0.9s
PEA0B Petropavlovsk- 82.00 345*de*P **P** **15 01 49.3 -1.2**
PEA0B Petropavlovsk- 82.00 345 P **P** **15 01 49.7 -0.8**
PETK Petropavlovsk- 82.00 345 P **P** **15 01 49.9 -0.6**
comp=Z,8.4nm,0.7s,baz=102,slow=6.2,SNR=48
comp=Z,8.4nm,0.7s
PETK Petropavlovsk- 82.00 345 P **P** **15 01 49.6 -0.9**
SNAA Sanae 82.19 178⇑P **P** **15 01 53.0 +1.5**
comp=Z,362nm,0.7s
SNAA Sanae 82.19 178 P **P** **15 01 52.9 +1.4**
comp=Z,16nm,0.8s,baz=180,slow=4.4,SNR=45
comp=Z,16nm,0.8s
SNAA Sanae 82.19 178*ce*P **P** **15 01 52.6 +1.0**
SNAA pmax pmax
comp=Z,27nm,1.1s
SNAA Sanae 82.19 178 P **P** **15 01 52.9 +1.4**
SNAA lAmb lAmb 15 01 54.2
comp=Z,29nm,1.0s
SNAA Sanae 82.19 178 P **P** **15 01 53.3 +1.7**
CHNA Chernabura Isl 82.29 10 P **P** **15 01 50.8 -1.1**
baz=196
SDPT Sand Point 82.65 10 P **P** **15 01 53.0 -0.8**
baz=195
VNA2 Neumayer--Watz 82.76 177⇑P **P** **15 01 56.1 +1.7**
comp=Z,46nm,0.6s,baz=172,slow=4.5
VNA2 Neumayer--Watz 82.76 177 P **P** **15 01 56.3 +1.9**
TPO Tropo Hills 82.79 45 lAmb lAmb 15 01 56.9
comp=Z,20nm,1.2s
LL02 Futaleuf 82.91 135 P **P** **15 01 57.8 +2.1**
NVL N'lazarevskaya 82.94 183⇓*i*P **P** **15 01 56.7 +1.4**
NVL *e*SSS SSS 15 21 06.9
NVL pmax pmax
comp=Z,28nm,0.9s
VNA1 Neumayer--Stat 82.99 176⇑P **P** **15 01 57.3 +1.8**
comp=Z,47nm,0.8s
VNA1 pP **pwP** **15 02 38.9 -1.1**
comp=Z,19nm,0.9s
PFO Pinyon Flats O 83.16 47⇑*e*P **P** **15 01 56.6 -0.6**
PFO pmax pmax
comp=Z,19nm,1.4s
VLA Vladivostok 83.30 325*d i*P **P** **15 01 57.3 -0.1**
VLA pmax pmax
comp=Z,16nm,1.0s
CMB Columbia Colle 83.47 42 P **P** **15 01 57.5 -1.1**
CMB pmax pmax
comp=Z,11nm,1.0s
CMB Columbia Colle 83.47 42 P **P** **15 01 57.5 -1.1**
O02D Mt. Diablo Mer 83.49 39 lAmb lAmb 15 02 00.8
comp=Z,17nm,0.9s
PSTR Posyet 83.52 324*de*P **P** **15 01 58.9 +0.3**
S14K Fog Glacier 83.70 10 P **P** **15 01 59.2 -0.1**
baz=196
BELC Belle Mtn. Jos 83.70 47 lAmb lAmb 15 02 01.7
comp=Z,17nm,1.2s
AFDM Forest Hills D 83.72 41 P **P** **15 01 58.6 -1.1**
BC3 Big Chuckawall 83.85 48 lAmb lAmb 15 02 02.8
comp=Z,20nm,1.4s
CHGN Chignik 83.90 11 P **P** **15 01 59.9 -0.3**
baz=197
NJ2 Nanjing 83.93 310*e*P **P** **15 02 00.9 0.0**
NJ2 pmax pmax
comp=Z,31nm,0.6s
GSC Goldstone, Bar 83.97 46 lAmb lAmb 15 02 02.9
comp=Z,20nm,1.4s
USA0B Ussuriysk Arra 84.02 326*ce*P **P** **15 02 01.1 0.0**
USRK Ussuriysk Ar. 84.02 326 P **P** **15 02 01.3 +0.3**
comp=Z,24nm,0.9s,baz=117,slow=3.3,SNR=23
comp=Z,24nm,0.9s
USRK Ussuriysk Ar. 84.02 326 P **P** **15 02 01.0 -0.1**
O03E Paynes Creek 84.13 39 lAmb lAmb 15 02 47.5
comp=Z,28nm,1.2s
M02C Callahan 84.28 38 lAmb lAmb 15 02 04.1
comp=Z,12nm,0.9s
HSIG 84.30 54 lAmb lAmb 15 02 04.0
comp=Z,14nm,0.9s
IRM Iron Mountain 84.36 48 lAmb lAmb 15 02 05.2
comp=Z,22nm,1.3s
TYV Tymovskoe 84.52 336*e*P **P** **15 02 03.5 +0.1**
TYV *e*S **S** **15 12 13.0 -2.2**
TYV pmax pmax
comp=Z,23nm,1.0s
TYV pmax pmax
comp=Z,100nm,4.4s
TYV smax smax
comp=N,200nm,9.0s
TYV smax smax
comp=E,200nm,9.0s
YBH Yreka Blue Hor 84.58 38 P **P** **15 02 04.5 +0.3**
comp=E,8.0nm,0.9s,baz=225,slow=5.0,SNR=14
comp=E,8.0nm,0.9s
M03C McCloud 84.60 39 lAmb lAmb 15 02 05.6
comp=Z,27nm,0.9s
PNTR Pine Nut 84.62 41 lAmb lAmb 15 02 05.9
comp=Z,21nm,0.9s
HATC Hat Creek Radi 84.67 39 lAmb lAmb 15 02 06.0
comp=Z,26nm,1.0s
BEKR Beckworth 84.68 41 P **P** **15 02 03.3 -1.5**
SII Sitkinak Islan 84.91 13 P **P** **15 02 05.1 -0.2**
baz=201
GMN Gold Mountain 84.92 44 lAmb lAmb 15 05 20.3
comp=Z,11nm,0.3s
NVAR Mina Array Bea 84.98 43 P **P** **15 02 06.5 +0.1**
comp=Z,9.4nm,0.9s,baz=222,slow=8.4,SNR=42
NVAR pP **pP** **15 02 49.0 +0.3**
comp=Z,5.3nm,0.9s,baz=226,slow=8.2,SNR=5.1
comp=Z,9.4nm,0.9s
KULM Kulim 85.02 278 P **P** **15 02 06.4 -0.4**
KULM lAmb lAmb 15 02 56.6
comp=Z,47nm,1.4s
L04D Klamath Falls 85.14 38 lAmb lAmb 15 02 08.2
comp=Z,18nm,1.0s
TPH Tonopah 85.42 43 lAmb lAmb 15 02 09.8
comp=Z,16nm,1.0s
PSI Prapat 85.45 275 P **P** **15 02 07.6 -1.6**
comp=Z,19nm,1.1s
R17L Mt. Peulik Vol 85.51 11 P **P** **15 02 08.1 -0.2**
baz=199
MDJ Mudanjiang 85.53 325 P **P** **15 02 09.1 +0.5**
MDJ pmax pmax
comp=Z,42nm,0.9s
MDJ Mudanjiang 85.53 325 P **P** **15 02 09.4 +0.8**
MDJ pP **pP** **15 02 50.9 +0.1**
OHAK Old Harbor 85.71 13 P **P** **15 02 09.1 0.0**
baz=202
GSI Gunungsitoli 85.99 273 P **P** **15 02 13.1 +1.4**
GSI Gunungsitoli 85.99 273 P **P** **15 02 12.7 +1.0**
comp=Z,56nm,0.8s
GSI Gunungsitoli 85.99 273 P **P** **15 02 12.7 +1.0**
S11A Rachel 86.08 45 lAmb lAmb 15 03 27.7
comp=Z,31nm,1.6s
Q17K Contact Creek 86.19 11 P **P** **15 02 11.1 -0.7**
baz=199
WHN Wuhan 86.25 307 P **P** **15 02 12.9 +0.4**
WHN pmax pmax
comp=Z,38nm,0.7s
K05A Summer Lake 86.25 38 lAmb lAmb 15 02 14.2
comp=Z,49nm,1.8s
TUC Tucson 86.26 51 P **P** **15 02 14.0 +1.4**
TUC Tucson 86.26 51 P **P** **15 02 14.0 +1.4**
TUC pP **pP** **15 02 56.6 +1.5**
DL2 Dalian 86.26 317 P **P** **15 02 12.9 +0.5**
DL2 pmax pmax
comp=Z,41nm,1.1s
O14K Tigyukauivet M 86.33 8 P **P** **15 02 11.9 -0.2**
baz=194
KDAK Kodiak Island 86.37 13 P **P** **15 02 12.1 -0.3**
baz=202
PRN Pahroc Range 86.37 45 lAmb lAmb 15 02 59.6
comp=Z,18nm,1.1s
O15K Ungalikthiuk R 86.45 9 P **P** **15 02 11.2 -1.6**
O15K lAmb lAmb 15 02 13.2
comp=Z,43nm,1.9s
O15K Ungalikthiuk R 86.45 9 P **P** **15 02 12.1 -0.6**
baz=196
Q16K King Salmon 86.46 11 P **P** **15 02 12.2 -0.5**
baz=199
BI02 San Fabin de 86.55 129 P **P** **15 02 15.6 +1.5**
P16K Nushagak River 86.58 10 P **P** **15 02 12.9 -0.4**
baz=197
Q18K Hatmai Hardscr 86.71 12 P **P** **15 02 13.6 -0.7**
baz=200
M11K Mekoryuk 86.90 6 P **P** **15 02 14.9 0.0**
baz=190
N14K Kuskokwak Cree 86.92 8 P **P** **15 02 15.4 +0.3**
baz=194,SNR=12
P17K Kvichak River 86.98 11 P **P** **15 02 14.8 -0.5**
baz=199
X16A Lo Mia Camp, P 87.00 49 lAmb lAmb 15 02 18.5
comp=Z,12nm,1.1s
Q16K Kokwok River B 87.10 10 P **P** **15 02 14.2 -1.7**
O16K lAmb lAmb 15 02 15.6
comp=Z,8.4nm,0.8s
O16K Kokwok River B 87.10 10 P **P** **15 02 14.8 -1.1**
baz=197
CN2 Changchun 87.17 323⇑P **P** **15 02 16.6 0.0**
CN2 *ep*P pP 15 02 58.0 -0.8
CN2 *eS* **S** **15 12 40.6 -0.8**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
M13K Dall Lake 87.21 7 P **P** **15 02 16.4 +0.1**
baz=193
WVOR Wild Horse Val 87.33 39 P **P** **15 02 17.7 +0.1**
N15K Kwethluk River 87.37 9 P **P** **15 02 17.6 +0.3**
baz=196,SNR=12
P18K Big Mountain, 87.38 11 P **P** **15 02 16.4 -0.9**
baz=200
BNX BinXian 87.42 325⇓P **P** **15 02 17.6 -0.2**
BNX pmax pmax
comp=Z,32nm,0.8s
O17K Koliganek Bris 87.43 10 P **P** **15 02 16.8 -0.6**
baz=198
TIA Tai'an 87.52 313 P **P** **15 02 19.1 +0.6**
TIA pP **pP** **15 02 58.0 -2.7**
TIA pmax pmax
comp=Z,32nm,1.0s
U15A North Rim 87.58 47 lAmb lAmb 15 03 05.7
comp=Z,9.1nm,1.0s
M14K Bethel 87.70 8 lAmb lAmb 15 02 21.8
comp=Z,11nm,0.8s
M14K Bethel 87.70 8 P **P** **15 02 18.8 +0.1**
baz=194
M15K Kasigluk River 87.80 8 P **P** **15 02 19.4 +0.2**
baz=195,SNR=7.8
O18K Koktuh Hills 87.82 11 P **P** **15 02 19.1 -0.3**
baz=200,SNR=5.4
N16K Nishlik Lake 87.84 9 P **P** **15 02 19.8 +0.3**
baz=197,SNR=9.5
MT01 Popeta 87.97 127 P **P** **15 02 21.3 +0.4**
P19K Oil Pt 87.98 12 P **P** **15 02 20.3 +0.1**
baz=202
N17K Nushagak Hills 88.13 10 P **P** **15 02 20.8 0.0**
baz=198
L14K Kuka Creek 88.19 7 P **P** **15 02 19.5 -1.5**
L14K lAmb lAmb 15 02 22.1
comp=Z,36nm,1.7s
L14K Kuka Creek 88.19 7 P **P** **15 02 21.1 +0.1**
baz=193
ELK Elko 88.27 42 P **P** **15 02 21.8 -0.5**
comp=Z,2.4nm,0.9s,baz=235,slow=2.8,SNR=8.1
ELK pP **pP** **15 03 04.9 -0.3**
comp=Z,1.5nm,0.9s,baz=119,slow=3.2,SNR=2.7
comp=Z,2.4nm,0.9s
O19K Port Alsworth 88.29 11 P **P** **15 02 20.8 -0.7**
baz=201,SNR=6.6
M16K Timber Creek 88.34 9 P **P** **15 02 22.0 +0.2**
baz=197
GNW Green Mountain 88.48 34 lAmb lAmb 15 02 24.2
comp=Z,12nm,0.9s
N18K Kilae Creek 88.48 10 P **P** **15 02 20.9 -1.6**
N18K lAmb lAmb 15 02 22.6
comp=Z,24nm,1.7s
N18K Kilae Creek 88.48 10 P **P** **15 02 22.0 -0.5**
baz=199
O20K Slope Mountain 88.50 12 P **P** **15 02 22.2 -0.5**
baz=202
W18A Petrified Fore 88.55 49 lAmb lAmb 15 02 26.3
comp=Z,15nm,1.3s

K13K	**Kusilvak Mount**	88.57	6	P		P		15 02 23.1	+0.3
	baz=192								
L15K	**Ungalak Mounta**	88.65	8	P		P		15 02 23.0	-0.3
	baz=194,SNR=6.4								
N19K	**Bonanza Creek**	88.84	11	IAmb		IAmb		15 02 24.1	
	comp=Z,11nm,1.0s								
N19K	**Bonanza Creek**	88.84	11	P		P		15 02 24.0	-0.3
	baz=200								
M17K	**Holitna River**	88.93	10	P		P		15 02 25.0	+0.5
	baz=198,SNR=7.2								
L16K	**Owhat River**	88.94	8	IAmb		IAmb		15 02 25.8	
	comp=Z,14nm,1.1s								
L16K	**Owhat River**	88.94	8	P		P		15 02 24.7	+0.2
	baz=196,SNR=6.7								
G08A	**Pilot Rock**	88.98	37	IAmb		IAmb		15 02 26.7	
	comp=Z,19nm,1.1s								
CBB	**Campbell River**	88.98	31	IAmb		IAmb		15 02 26.8	
	comp=Z,16nm,1.1s								
SEW	**Seward**	89.15	14	P		P		15 02 25.2	-0.3
	baz=205								
K15K	**Wolf Creek Mou**	89.25	7	IAmb		IAmb		15 02 26.9	
	comp=Z,14nm,0.8s								
K15K	**Wolf Creek Mou**	89.25	7	P		P		15 02 26.3	+0.3
	baz=194,SNR=8.7								
M18K	**Stony River**	89.26	10	P		P		15 02 25.8	-0.3
	baz=199								
LTY	**Liberty**	89.36	35	IAmb		IAmb		15 02 28.0	
	comp=Z,11nm,0.9s								
HAWA	**Hanford**	89.39	36	IAmb		IAmb		15 02 28.5	
	comp=Z,15nm,1.0s								
HMU	**Henry Mountain**	89.46	47	IAmb		IAmb		15 02 29.1	
	comp=Z,19nm,1.8s								
J14K	**Nanvaranak Lak**	89.47	6	P		P		15 02 26.9	-0.1
	baz=192								
MA2	**Magadan**	89.50	344	*c*	*i*	P		P	15 02 26.4 -0.8
MA2						pmax		pmax	
	comp=Z,26nm,1.7s								
MA2	**Magadan**	89.50	344			P		P	15 02 26.5 -0.7
MA2						IAmb		IAmb	15 02 27.6
	comp=Z,14nm,0.8s								
MA2	**Magadan**	89.50	344			P		P	15 02 26.6 -0.7
MA2	**Magadan**	89.50	344			P		P	15 02 26.7 -0.5
MA2						pP		pP	15 03 10.9 +1.2
L17K	**Donlin**	89.50	9	P		P		15 02 27.6	+0.4
	baz=197,SNR=9.9								
P23K	**Montague Islan**	89.51	15	P		P		15 02 27.3	0.0
	baz=207								
E08A	**Dider Farm, El**	89.70	36	IAmb		IAmb		15 02 29.8	
	comp=Z,12nm,1.0s								
LYN	**LuoYang**	89.75	309			P		P	15 02 29.9 +0.8
LYN						pmax		pmax	
	comp=Z,30nm,0.9s								
LYN						pmax		pmax	
	comp=Z,210nm,4.7s								
HNS	**HongShan**	89.79	313	⇑		P		P	15 02 30.1 +1.0
HNS						pmax		pmax	
	comp=Z,30nm,1.2s								
L18K	**Granite Mounta**	89.82	10	IAmb		IAmb		15 02 29.9	
	comp=Z,11nm,1.0s								
L18K	**Granite Mounta**	89.82	10	P		P		15 02 28.7	0.0
	baz=199,SNR=5.4								
Y22A	**Socorro**	89.83	52	IAmb		IAmb		15 02 31.5	
	comp=Z,14nm,1.1s								
TXAR	**Lajitas Array**	89.84	57	P		P		15 02 30.3	+0.6
	comp=Z,3.0nm,0.9s,baz=208,slow=5.1,SNR=9.0								
TXAR						pP		pP	15 03 14.2 +1.7
	comp=Z,1.4nm,0.9s,baz=206,slow=8.3,SNR=2.2								
	comp=Z,3.0nm,0.9s								
GAMB	**Gambell**	89.92	3	P		P		15 02 28.9	-0.2
	baz=185								
STLK	**Strandline Lak**	89.96	12	P		P		15 02 28.2	-1.3
STLK						IAmb		IAmb	15 02 28.9
	comp=Z,8.3nm,0.8s								
EPH	**Ephrata**	89.98	35	IAmb		IAmb		15 02 30.9	
	comp=Z,12nm,1.0s								
RC01	**Rabbit Creek A**	89.99	13	IAmb		IAmb		15 02 30.1	
	comp=Z,23nm,1.1s								
RC01	**Rabbit Creek A**	89.99	13	P		P		15 02 28.8	-0.7
	baz=205,SNR=6.0								
K17K	**Iditarod**	90.06	9	P		P		15 02 29.6	-0.2
	baz=197								
L19K	**White Mountain**	90.07	10	IAmb		IAmb		15 02 30.9	
	comp=Z,26nm,1.2s								
L19K	**White Mountain**	90.07	10	P		P		15 02 29.6	-0.3
	baz=200,SNR=11								
PWL	**Port Wells**	90.08	14	P		P		15 02 29.2	-0.7
	baz=206,SNR=8.7								
M20K	**Styx River**	90.08	11	P		P		15 02 28.7	-1.3
	baz=202								
D08A	**Wollman Farm,**	90.14	36	IAmb		IAmb		15 02 31.9	
	comp=Z,20nm,0.9s								
KAIM	**Kayak Island**	90.15	16	P		P		15 02 29.8	-0.5
	baz=209								
E09A	**Wood Farm, Sta**	90.20	36	IAmb		IAmb		15 02 31.8	
	comp=Z,18nm,1.0s								
SRU	**San Rafael Swe**	90.26	46	P		P		15 02 31.4	-0.2
SRU						pmax		pmax	
	comp=Z,16nm,1.5s								
SRU	**San Rafael Swe**	90.26	46			P		15 02 31.4	-0.2
SRU						IAmb		IAmb	15 03 16.7
	comp=Z,16nm,1.5s								
V35K	**Ketchikan**	90.30	24	P		P		15 02 31.1	+0.1
	baz=220								
BJI2	**Beijing**	90.32	315	P		P		15 02 32.3	+0.8
BJI2						pmax		pmax	
	comp=Z,8.0nm,1.0s								
J16K	**Anvik River**	90.32	8	P		P		15 02 30.9	0.0
	baz=195								
F10A	**Beach Ranch, E**	90.35	37			P		15 02 30.7	-1.0
F10A						IAmb		IAmb	15 02 32.2
	comp=Z,17nm,0.9s								
GLI	**Glacier Island**	90.36	14	P		P		15 02 30.7	-0.5
	baz=207,SNR=6.9								
U33K	**Whale Pass**	90.37	23	P		P		15 02 31.2	-0.2
	baz=219								
EYAK	**Cordova Ski Ar**	90.38	15	P		P		15 02 30.8	-0.5
	baz=208								
HVU	**Hansel Valley**	90.38	43	IAmb		IAmb		15 02 33.3	
	comp=Z,11nm,1.2s								
SKT	**Skwentna**	90.46	12	P		P		15 02 30.2	-1.5
	baz=203								
HLID	**Hailey**	90.46	40	P		P		15 02 32.9	+0.5
HEH	**HeiHe**	90.48	328	*eP*		P		15 02 31.8	-0.2
HEH				pP		pwP		15 03 16.8	-0.7
HEH				S		S		15 13 12.9	+0.9
HEH				pmax		pmax			
	comp=Z,15nm,1.1s								
PLID	**Pearl Lake**	90.48	39	IAmb		IAmb		15 02 33.4	
	comp=Z,14nm,1.1s								
KNK	**Knik Glacier**	90.55	14	IAmb		IAmb		15 02 32.8	
	comp=Z,22nm,1.1s								
KNK	**Knik Glacier**	90.55	14	P		P		15 02 31.5	-0.7
	baz=206								
PMR	**Palmer**	90.57	13	P		P		15 02 31.8	-0.4
	baz=205								
PV05	**Paradox Valley**	90.61	47	IAmb		IAmb		15 02 34.9	
	comp=Z,8.6nm,1.2s								
J17K	**VABM Dome**	90.61	8	P		P		15 02 32.2	-0.1
	baz=196								
ANMO	**Albuquerque**	90.72	51	P		P		15 02 33.9	+0.1
	comp=Z,3.2nm,0.9s,baz=219,slow=6.0,SNR=9.2								
ANMO						pP		pP	15 03 16.7 +0.1
	comp=Z,4.7nm,0.9s,baz=223,slow=5.3,SNR=4.2								
ANMO						LR		LR	15 36 45.5
	comp=Z,34nm,19.0s,baz=254,slow=31								
	comp=Z,3.2nm,0.9s								
ANMO	**Albuquerque**	90.72	51	*c*	*i*	P		P	15 02 33.7 -0.1
ANMO						pmax		pmax	
	comp=Z,5.0nm,1.0s								
ANMO	**Albuquerque**	90.72	51	P		P		15 02 33.3	-0.5
ANMO	**Albuquerque**	90.72	51	P		P		15 02 34.3	+0.5
B08A	**Colville Reser**	90.76	35	IAmb		IAmb		15 02 33.9	
	comp=Z,7.5nm,0.9s								
S31K	**Pelican**	90.80	21	P		P		15 02 32.8	-0.5
	baz=216								
PV19	**Morning Glory**	90.81	47	IAmb		IAmb		15 03 21.6	
	comp=Z,28nm,1.7s								
PV18	**Skein Mesa, Pa**	90.83	47	IAmb		IAmb		15 02 35.3	
	comp=Z,14nm,1.3s								
TCUT	**Toone Canyon**	90.84	44	IAmb		IAmb		15 02 35.7	
	comp=Z,18nm,1.2s								
PV20	**West Nyswonger**	90.84	47	IAmb		IAmb		15 02 35.4	
	comp=Z,6.9nm,1.0s								
WRAK	**Wrangell Islan**	90.88	23	P		P		15 02 32.9	-0.8
	baz=220								
I17K	**Unalakleet**	90.89	7	P		P		15 02 33.5	-0.1
	baz=195								
BSUT	**Blindstream Ca**	90.91	44	IAmb		IAmb		15 02 36.8	
	comp=Z,9.8nm,1.1s								
PV02	**Paradox Valley**	90.92	47	IAmb		IAmb		15 03 19.8	
	comp=Z,8.8nm,1.1s								
PV12	**Saucer Basin,**	90.94	47	IAmb		IAmb		15 02 36.5	
	comp=Z,13nm,1.2s								
S32K	**Killisnoo**	90.94	22	P		P		15 02 33.8	-0.2
	baz=218								
J18K	**Innoko River**	91.00	9	IAmb		IAmb		15 02 35.0	
	comp=Z,11nm,0.8s								
J18K	**Innoko River**	91.00	9	P		P		15 02 33.9	-0.3
	baz=198,SNR=8.3								
LLLB	**Lillooet**	91.00	32	IAmb		IAmb		15 02 35.0	
	comp=Z,7.5nm,0.9s								
BMRM	**Bremner River**	91.02	15	P		P		15 02 34.1	-0.2
	baz=209,SNR=6.0								
L22K	**Petersville**	91.10	12	IAmb		IAmb		15 02 34.5	
	comp=Z,9.7nm,1.0s								
L22K	**Petersville**	91.10	12	P		P		15 02 33.4	-1.3
	baz=204,SNR=9.0								
SCM	**Sheep Creek Mo**	91.17	14	P		P		15 02 34.8	-0.3
	baz=207								
KLU	**Klutina**	91.17	15	IAmb		IAmb		15 02 35.8	
	comp=Z,14nm,1.3s								
KLU	**Klutina**	91.17	15	P		P		15 02 34.6	-0.5
	baz=208								
PPLA	**Purkeypile**	91.19	11	P		P		15 02 34.3	-0.9
	baz=202								
CRQE	**Cirque**	91.20	16	P		P		15 02 34.4	-0.9
	baz=210								
K20K	**Telida**	91.30	10	P		P		15 02 35.0	-0.5
	baz=201								
PINM	**Pinnacle**	91.38	18	P		P		15 02 35.2	-0.9
	baz=213								
H16K	**Elim**	91.45	7	P		P		15 02 36.1	-0.1
	baz=194								
TIY	**Taiyuan**	91.47	312	*eP*		P		15 02 38.3	+1.2
TIY						pmax		pmax	
	comp=Z,63nm,0.7s								
VRDI	**Verde Repeater**	91.52	16	IAmb		IAmb		15 02 37.7	
	comp=Z,11nm,1.0s								
N25K	**Chitina, Valde**	91.58	15	P		P		15 02 36.7	-0.3
	baz=209,SNR=5.5								
GLB	**Gilahina Butte**	91.62	15	IAmb		IAmb		15 02 38.5	
	comp=Z,19nm,1.4s								
G15K	**Niukluk**	91.63	6	P		P		15 02 36.3	-0.7
	baz=192								
J19K	**Poorman**	91.66	9	P		P		15 02 36.7	-0.5
	baz=200								
M24K	**Tolsona, Glenn**	91.66	14	P		P		15 02 36.9	-0.4
	baz=208								
CAST	**Castle Rocks**	91.69	11	IAmb		IAmb		15 02 36.5	
	comp=Z,5.7nm,0.8s								
CAST	**Castle Rocks**	91.69	11	P		P		15 02 35.6	-1.8
	baz=203,SNR=7.6								
WAT6	**Susitna Watana**	91.75	13	P		P		15 02 37.0	-0.9
	baz=206								
MCARA	**McCarthy VSAT**	91.76	16	P		P		15 02 37.5	-0.2
	baz=210								
BARN	**Barnard Glacie**	91.82	17	IAmb		IAmb		15 02 39.2	
	comp=Z,19nm,1.1s								
TNA	**Tin City**	91.90	4	P		P		15 02 38.1	-0.1
	baz=188								
F14K	**Arctic Creek**	91.92	5	P		P		15 02 38.1	-0.2
	baz=190								
S22A	**4UR Ranch, Cre**	91.94	48	IAmb		IAmb		15 03 25.8	
	comp=Z,9.1nm,1.2s								
O28M	**Mount Upton**	91.96	17	P		P		15 02 38.9	-0.1
	baz=213								
AHID	**Auburn Hatcher**	91.96	42	IAmb		IAmb		15 02 40.7	
	comp=Z,12nm,1.2s								
PLBC	**Pleasant Camp**	91.97	20	P		P		15 02 38.8	+0.1
	baz=216								
XAN	**Xi'an**	91.99	307	⇑		P		P	15 02 40.3 +0.8
XAN						pmax		pmax	
	comp=Z,24nm,0.8s								
H17K	**Granite Mounta**	92.00	7	P		P		15 02 38.5	-0.3
	baz=196								
TRF	**Thorofare Moun**	92.04	12	IAmb		IAmb		15 02 40.0	
	comp=Z,9.9nm,0.9s								
TRF	**Thorofare Moun**	92.04	12	P		P		15 02 38.1	-1.1
	baz=204,SNR=8.8								
J20K	**Nowinta River**	92.06	10	P		P		15 02 38.5	-0.6
	baz=201								
SEY	**Seymchan**	92.13	347	*ce*		P		P	15 02 38.8 -0.5
SEY						pmax		pmax	
	comp=Z,12nm,0.9s								
HARP	**HAARP**	92.14	14	P		P		15 02 38.8	-0.7
	baz=209								
G16K	**Koyuk River**	92.18	6	P		P		15 02 39.2	-0.3
	baz=194								
GCSA	**Galena City Sc**	92.20	9	P		P		15 02 39.1	-0.5
	baz=198								
DHY	**Denali Highway**	92.27	13	P		P		15 02 39.7	-0.6
	baz=207								
RND	**Reindeer**	92.27	12	IAmb		IAmb		15 02 41.0	
	comp=Z,13nm,1.0s								
F15K	**North Star Dit**	92.28	5	P		P		15 02 39.5	-0.5
	baz=192								
KMI2	**Kunming**	92.37	297	⇑		P		P	15 02 43.1 +1.4
KMI2						pmax		pmax	
	comp=Z,21nm,0.9s								
CMAR	**Chiang Mai Arr**	92.45	289	P		P		15 02 43.5	+1.6
	comp=Z,9.7nm,0.8s,baz=140,slow=3.4,SNR=60								
	comp=Z,9.7nm,0.8s								
CMAR	**Chiang Mai Arr**	92.45	289	*i*		P		P	15 02 43.9 +2.0
CMAR						pmax		pmax	
	comp=Z,10.0nm,0.8s								
S34M	**Telegraph Cree**	92.45	23	P		P		15 02 40.6	-0.4
	baz=221								
G17K	**Kiwalik Mounta**	92.46	7	P		P		15 02 40.4	-0.4
	baz=195								
FXWY	**Fox Creek**	92.50	42	IAmb		IAmb		15 02 43.3	
	comp=Z,9.5nm,1.3s								
MCK	**McKinley**	92.55	12	IAmb		IAmb		15 02 42.0	
	comp=Z,6.2nm,1.0s								
MCK	**McKinley**	92.55	12	P		P		15 02 40.3	-1.1
	baz=205								
DLMT	**Dillon**	92.57	40	IAmb		IAmb		15 02 43.3	
	comp=Z,8.8nm,1.1s								
PAX	**Paxson**	92.58	14	IAmb		IAmb		15 02 41.1	
	comp=Z,8.4nm,1.4s								
PAX	**Paxson**	92.58	14	P		P		15 02 40.7	-0.9
	baz=208								
XLT	**XiLinHaoTe**	92.58	318	*eP*		P		15 02 41.8	-0.3
XLT				PP		PP		15 06 31.9	+5.5
XLT				pmax		pmax			
	comp=Z,14nm,0.9s								
YUK6	**Outpost Mounta**	92.60	18	P		P		15 02 41.5	-0.4
	baz=214								
CHTO	**Chiang Mai**	92.61	290	P		P		15 02 43.8	+1.1
CHTO	**Chiang Mai**	92.61	290	P		P		15 02 44.2	+1.5
M26K	**Nabesna, AK**	92.64	15	P		P		15 02 42.0	+0.1
	baz=211								
YUK3	**Moose Creek**	92.74	17	P		P		15 02 42.3	-0.3
	baz=213								
LOHW	**Long Hollow**	92.74	42	IAmb		IAmb		15 02 44.1	
	comp=Z,9.5nm,1.4s								
HYT	**Haines Junctio**	92.75	18	P		P		15 02 42.4	-0.1
	baz=215								
MSTX	**Muleshoe**	92.83	53	IAmb		IAmb		15 02 44.3	
	comp=Z,7.7nm,0.9s								
YUK4	**Talbot Arm**	92.86	18	P		P		15 02 42.8	-0.2
	baz=214								
Q32M	**Nakina River**	92.87	22	P		P		15 02 43.1	-0.1
	baz=220								
M27K	**Edge Creek, AK**	92.88	16	IAmb		IAmb		15 02 44.2	
	comp=Z,9.6nm,1.0s								
M27K	**Edge Creek, AK**	92.88	16	P		P		15 02 43.2	+0.2
	baz=212,SNR=7.4								
P32M	**Atlin**	92.89	21	P		P		15 02 43.3	+0.2
	baz=218								
PDAR	**Pinedale Array**	92.91	43	P		P		15 02 43.5	-0.3
	comp=Z,3.1nm,0.8s,baz=207,slow=3.3,SNR=28								
PDAR						pP		pP	15 03 26.6 +0.1
	comp=Z,1.4nm,0.8s,baz=222,slow=2.0,SNR=4.0								
PDAR						PKKPbc		PKKPdf	15 19 53.7 +0.6
	comp=Z,0.3nm,0.7s,baz=177,slow=3.0,SNR=4.4								
	comp=Z,3.1nm,0.8s								
PDAR	**Pinedale Array**	92.91	43	P		P		15 02 42.5	-1.3
LDM	**Libby Dam**	92.91	36	IAmb		IAmb		15 02 45.8	
	comp=Z,5.0nm,0.9s								
ZEA	**Zeya**	92.91	331	*eP*		P		15 02 43.2	0.0
ZEA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
MENT	**Mentasta**	92.94	15	IAmb		IAmb		15 02 43.9	
	comp=Z,5.8nm,0.8s								
FLWY	**Flagg Ranch**	92.95	42	IAmb		IAmb		15 02 45.5	
	comp=Z,10nm,0.9s								
H19K	**Roundabout Mou**	93.00	9	P		P		15 02 43.0	-0.3
	baz=199								
G18K	**Tagagawik**	93.07	8	P		P		15 02 43.3	-0.4
	baz=197								
YHL	**Hebgen Lake**	93.10	41	IAmb		IAmb		15 02 46.5	
	comp=Z,8.7nm,1.1s								
L26K	**Log Cabin Wild**	93.10	15	P		P		15 02 43.5	-0.4
	baz=210								
O30N	**Mendenhall**	93.11	19	P		P		15 02 43.7	-0.3
	baz=216								
BVCY	**Beaver Creek**	93.18	16	P		P		15 02 44.0	-0.2
	baz=212								
H20K	**Anotleneega Mo**	93.18	9	P		P		15 02 44.0	-0.2
	baz=200								
DLBC	**Dease Lake**	93.23	23	P		P		15 02 44.3	-0.3
	baz=222								
K24K	**Donnelly Dome**	93.25	14	P		P		15 02 44.3	-0.3
	baz=208								
BOZ	**Bozeman (W)**	93.26	40	IAmb		IAmb		15 02 46.5	
	comp=Z,4.5nm,0.9s								
POST	**Post**	93.31	55	IAmb		IAmb		15 02 46.0	
	comp=Z,8.6nm,0.9s								
N30M	**Aishikik Lake**	93.38	18	P		P		15 02 45.2	-0.1
	baz=216								
RIDG	**Independent Ri**	93.39	14	IAmb		IAmb		15 02 45.7	
	comp=Z,8.4nm,1.0s								
RIDG	**Independent Ri**	93.39	14	P		P		15 02 44.3	-0.9
	baz=209								
MLY	**Manley**	93.41	11	P		P		15 02 44.8	-0.5
	baz=204								
L27K	**Beaver Creek,**	93.49	15	P		P		15 02 44.9	-0.8
	baz=212								
G19K	**Purcell Mounta**	93.50	8	P		P		15 02 44.8	-0.9
	baz=198								
HDA	**Harding Lake**	93.55	13	IAmb		IAmb		15 02 45.8	
	comp=Z,7.0nm,0.6s								
HDA	**Harding Lake**	93.55	13	P		P		15 02 44.8	-1.1
	baz=207								
CCB	**Clear Creek Bu**	93.59	12	IAmb		IAmb		15 02 45.8	
	comp=Z,12nm,1.4s								
R33M	**Jennings River**	93.64	22	P		P		15 02 45.9	-0.7
	baz=221								
HHC	**Hu-ho-hao-te**	93.71	314	*eP*		P		15 02 46.6	-0.8
HHC						pmax		pmax	
	comp=Z,19nm,0.6s								
HHC						pmax		pmax	
	comp=Z,60nm,3.8s								
I23K	**Minto, Yukon-K**	93.76	12	P		P		15 02 46.5	-0.3
	baz=205								
N31M	**Braeburn, Yuko**	93.78	19	P		P		15 02 46.5	-0.6
	baz=217								
SCRK	**Sand Creek**	93.79	14	IAmb		IAmb		15 02 47.7	
	comp=Z,6.4nm,1.1s								
SCRK	**Sand Creek**	93.79	14	P		P		15 02 46.5	-0.6
	baz=210								
COLA	**College**	93.79	12	*de*		P		P	15 02 45.9 -1.1
COLA						pmax		pmax	
	comp=Z,7.0nm,1.1s								
COLA	**College**	93.79	12	P		P		15 02 45.9	-1.1
PZH	**PanZhiHua**	93.80	298	P		P		15 02 48.3	+0.2
M29M	**Somme Creek**	93.82	17	P		P		15 02 46.9	-0.5
	baz=214								
YNE	**Yellowstone No**	93.88	41	IAmb		IAmb		15 02 49.8	
	comp=Z,5.5nm,1.1s								
E17K	**Hotham Inlet**	93.88	6	P		P		15 02 46.9	-0.5
	baz=194								
ILAR	**Eielson Array**	93.88	13	P		P		15 02 46.1	-1.3
	comp=Z,2.2nm,0.8s,baz=222,slow=5.4,SNR=29								
ILAR						pP		pP	15 03 30.2 -0.1
	comp=Z,0.9nm,0.9s,baz=209,slow=6.0,SNR=2.1								
	comp=Z,2.2nm,0.8s								
ILAR	**Eielson Array**	93.88	13	P		P		15 02 45.8	-1.7
J25K	**Salcha River,**	94.05	13	IAmb		IAmb		15 02 48.5	
	comp=Z,5.3nm,0.8s								
J25K	**Salcha River,**	94.05	13	P		P		15 02 47.4	-0.9
	baz=209								
F19K	**Shaleruckik Mo**	94.07	8	P		P		15 02 47.5	-0.7
	baz=198								
POKR	**Poker Plat Res**	94.09	12	P		P		15 02 47.2	-1.1
	baz=207								
H22K	**Ishtalitna Cre**	94.10	10	P		P		15 02 47.5	-0.9
	baz=203								
CD2	**Chengdu**	94.27	302	P		P		15 02 48.8	-1.3
CD2				pmax		pmax			
	comp=Z,20nm,0.8s								
CD2				pmax		pmax			
	comp=Z,150nm,7.6s								
E18K	**Tukpahlearik C**	94.33	6	P		P		15 02 48.9	-0.5
	baz=195								
H23K	**Yukon River**	94.34	11	P		P		15 02 49.2	-0.4
	baz=205								
G21K	**Allakket**	94.34	9	P		P		15 02 49.0	-0.5
	baz=201								
D17K	**Noatak River**	94.37	5	P		P		15 02 49.3	-0.3
	baz=193								
M30M	**Minto, Yukon**	94.37	18	P		P		15 02 49.4	-0.4
	baz=216								
L29M	**L29M**	94.45	17	IAmb		IAmb		15 02 51.3	
	comp=Z,5.4nm,1.1s								
L29M	**L29M**	94.45	17	P		P		15 02 49.8	-0.3
	baz=215								
F20K	**Avaraart Lake**	94.54	8	P		P		15 02 50.2	-0.2
	baz=200								
E19K	**Redstone River**	94.74	8	P		P		15 02 51.2	-0.1
	baz=198								
BTO2	**Baotou**	94.75	313	*eP*		P		15 02 47.4	-4.8
BTO2						pmax		pmax	
	comp=Z,29nm,0.6s								
BTO2						pmax		pmax	
	comp=Z,230nm,5.8s								
PRP	**Porcupine Dome**	94.82	13	IAmb		IAmb		15 02 52.6	
	comp=Z,4.6nm,1.0s								
PRP	**Porcupine Dome**	94.82	13	P		P		15 02 51.5	-0.3
	baz=208								
WTLY	**Watson Lake, Y**	94.90	22	P		P		15 02 51.9	-0.3
	baz=223								
DAWY	**Dawson**	94.93	16	P		P		15 02 52.1	-0.2
	baz=214								
G22K	**Bettles**	95.

A19K Wainwright 96.98 6 P **P** 15 03 01.5 +0.1
baz=195
F26K Sheenjek River 96.99 12 P **P** 15 03 01.6 0.0
baz=210
D23K Nanushuk River 97.03 9 P Pdif 15 03 01.8 +0.1
baz=204
E25K Arctic Village 97.11 12 P **P** 15 03 02.0 0.0
baz=209
B21K Ikpikpuk River 97.11 8 P **P** 15 03 02.0 +0.1
baz=201
B20K Meade River 97.18 7 P **P** 15 03 02.0 -0.3
baz=198
H31M Peel River 97.61 17 P **P** 15 03 04.4 0.0
baz=218
G29M Pine Creek 97.61 15 P **P** 15 03 04.2 -0.2
baz=215
YAK Yakutsk 97.66 338 P **P** 15 03 03.4 -1.2
comp=Z,11nm,0.7s,baz=128,slow=1.2,SNR=6.5
comp=Z,11nm,0.7s
YAK Yakutsk 97.66 338 *de*P **P** 15 03 03.6 -1.0
YAK pmax pmax
comp=Z,11nm,0.8s
YAK Yakutsk 97.66 338 P **P** 15 03 03.4 -1.2
F28M Old Crow 97.78 14 P **P** 15 03 04.8 -0.3
baz=214
C23K Itkillik River 97.84 9 P **P** 15 03 05.3 0.0
baz=204
E27K Coleen River 97.91 13 IAmb IAmb 15 03 06.8
comp=Z,8.3nm,1.6s
E27K Coleen River 97.91 13 P **P** 15 03 05.3 -0.4
baz=212
B22K Teshekpuk Lake 97.93 8 P **P** 15 03 05.4 -0.2
baz=202
D25K Kavik River 98.03 11 P **P** 15 03 05.9 -0.3
baz=208
G30M tAoh Zraii Nji 98.08 15 IAmb IAmb 15 03 07.8
comp=Z,4.9nm,1.1s
G30M tAoh Zraii Nji 98.08 15 P **P** 15 03 06.2 -0.3
baz=217
A22K Sinclair Lake 98.36 7 P **P** 15 03 07.3 -0.3
baz=200
G31M Satah River 98.50 16 P **P** 15 03 07.8 -0.4
baz=218
E28M Babbage River 98.68 13 IAmb IAmb 15 03 10.2
comp=Z,3.0nm,1.1s
E28M Babbage River 98.68 13 P **P** 15 03 08.5 -0.6
baz=214
F30M Barrier River 98.69 15 P **P** 15 03 08.4 -0.7
baz=217
C27K Jago River 98.75 11 P **P** 15 03 08.8 -0.6
baz=210
INK Inuvik 99.77 15 P **Pdif** 15 03 13.3 -0.5
baz=219
ULN Ulaanbaatar 100.02 319 ⇓*e*P **Pdif** 15 03 15.4 -0.4
ULN pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Arrav 100.40 318 P **Pdif** 15 03 16.9 -0.5
comp=Z,0.9nm,0.6s,baz=134,slow=4.3,SNR=5.8
SONM PKKPbc **PKKPbc** 15 19 33.0 -1.2
comp=Z,0.2nm,0.4s,baz=294,slow=1.5,SNR=4.2
GTA2 Gaotai 101.03 309 *e*P **Pdif** 15 03 20.3 -0.1
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
WMQ Urumqi 111.00 309 *e*PKP **PKiKP** 15 08 06.3 +3.3
ZALV Zalesovo Beam 115.24 320 PKP **PKPdf** 15 08 09.8 -0.9
comp=Z,3.9nm,0.6s,baz=96,slow=2.9,SNR=27
MK31 Makanchi Array 115.44 312 *c i*PKIKP **PKPdf** 15 08 10.0 -1.3
MKAR Makanchi Array 115.44 312 PKP **PKPdf** 15 08 10.2 -1.1
comp=Z,5.1nm,0.7s,baz=90,slow=2.3,SNR=36
MKAR pPKP **pPKiKP** 15 08 56.5 +0.7
comp=Z,1.4nm,0.8s,baz=194,slow=1.0,SNR=2.9
MKAR PKKPbc **PKKPbc** 15 18 46.9 +0.4
comp=Z,0.5nm,0.5s,baz=272,slow=4.0,SNR=3.8
MAKZ Makanchi 115.65 311 ⇑PKIKP **PKPdf** 15 08 10.9 -0.8
NRIK Noril'sk 116.09 337 PKP **PKPdf** 15 08 11.1 -0.8
comp=Z,3.7nm,0.8s,baz=98,slow=2.1,SNR=4.3
KURK Kurchatov 118.50 315 *c i*PKIKP **PKPdf** 15 08 15.9 -1.1
KURK pmax pmax
comp=Z,13nm,1.3s
KURBB Kurchatov Arra 118.54 315 PKP **PKPdf** 15 08 15.7 -1.5
comp=Z,5.3nm,0.6s,baz=102,slow=1.8,SNR=66
KURBB pPKP **pPKPdf** 15 09 02.3 +0.7
comp=Z,1.7nm,0.7s,baz=101,slow=1.6,SNR=3.2
AAK Ala-Archa 120.14 306 *d i*PKIKP **PKPdf** 15 08 20.4 -0.3
AAK pmax pmax
comp=Z,5.0nm,1.3s
BOSA Boshof 121.15 203 PKP **PKiKP** 15 08 23.6 +0.3
comp=Z,8.1nm,1.0s,baz=168,slow=2.7,SNR=8.4
BVAR Borovoye Array 123.74 318 PKP **PKPdf** 15 08 26.4 -0.7
comp=Z,15nm,0.7s,baz=79,slow=2.1,SNR=40
KBS Kingsbay 127.16 358 *c i*PKIKP **PKiKP** 15 08 33.5 0.0
KBS pmax pmax
comp=Z,15nm,1.7s
SPITS Spitsbergen Ar 127.69 356 PKP **PKPdf** 15 08 33.1 -0.9
comp=Z,14nm,0.8s,baz=21,slow=2.4,SNR=11
ARTI Arti 130.27 323 PKP **PKPdf** 15 08 39.3 -0.2
comp=Z,13nm,0.7s,baz=86,slow=1.3,SNR=18
ARTI pPKP **pPKPdf** 15 09 26.5 +2.6
comp=Z,2.6nm,0.5s,baz=196,slow=8.9,SNR=2.3
ARTI Arti 130.27 323 *i* PKIKP **PKPdf** 15 08 39.2 -0.2
ARTI 15 10 52.9
AKTO Aktyubinsk 131.59 315 PKP **PKPdf** 15 08 42.1 0.0
comp=Z,5.7nm,0.6s,baz=109,slow=0.8,SNR=23
KIRV Kirov 134.16 328 PKP **PKPdf** 15 08 46.5 -0.2
comp=Z,14nm,0.7s,baz=35,slow=2.4,SNR=5.7
KIRV Kirov 134.16 328 *d i*PKIKP **PKPdf** 15 08 46.6 0.0
APA Apatity 134.65 344 ⇓*e*PKIKP **PKPdf** 15 08 44.4 -2.9
APA *e* 15 11 32.1
APA MLR MLR
comp=Z,137nm,4.4s
ARA0 ARCESS Array S 134.71 349 *e*P **PKPdf** 15 08 47.2 -0.2
ARCES ARCESS Array B 134.71 349 PKhKP PKPpre 15 08 36.3
comp=Z,2.0nm,0.7s,baz=328,slow=4.3,SNR=3.8
ARCES PKP **PKPdf** 15 08 47.1 -0.4
comp=Z,11nm,0.8s,baz=24,slow=1.2,SNR=20
KTK1 Kautokeino 135.55 349 *e*P **PKPdf** 15 08 49.8 +0.8
TRO Tromso 135.61 352 *e*P **PKPdf** 15 08 48.1 -1.0
KLMR Klimovskoe 137.34 334 *e*PKIKP **PKPdf** 15 08 49.0 -3.5
KLMR *e* 15 09 35.7
KLMR pmax pmax
comp=Z,21nm,1.2s
BELG Belogornoye 137.43 320 PKP **PKPdf** 15 08 52.2 -0.7
comp=Z,30nm,0.7s,baz=85,slow=2.5,SNR=7.2
BELG Belogornoye 137.43 320 *d i*PKIKP **PKPdf** 15 08 52.7 -0.2
LOF Lofoten 137.65 354 *e*P **PKPdf** 15 08 51.7 -1.2
STEI Steigen 137.67 353 *e*P **PKPdf** 15 08 51.8 -1.1
STOK Stokkvaagen 139.45 353 *e*P **PKiKP** 15 08 57.5 -1.1
LEIR Leirfjorden 139.65 353 *e*P **PKiKP** 15 08 58.7 -0.3
MAK Makhachkala 139.92 306 *e*P **Pdif** 15 06 10.4 -2.6
MAK *i* 15 09 56.7
MAK *e* 15 09 42.7
MAK *e* 15 11 51.4
MAK *e* 15 15 51.3
MAK *e*SS SS 15 29 57.7 -6.5
MAK *e*SSS SSS 15 35 10.4
MAK pmax pmax
comp=Z,102nm,0.7s
RAYN Ar Rayn 141.00 275 ⇓PKHKP PKPpre 15 08 55.8
MOS Moscow 141.15 329 *i* PKIKP **PKPdf** 15 08 59.1 -0.5
MOS *e* 15 09 43.4
VRH Novokhopyorsk 141.27 320 *e*PKIKP **PKPdf** 15 08 55.6 -4.4
VRH pmax pmax
comp=Z,12nm,0.5s
NSS Namsos 141.31 353 *e*P **PKPdf** 15 08 58.1 -1.6
FINES FINESS Array B 141.45 342 PKhKP PKPpre 15 08 53.3
comp=Z,2.7nm,0.4s,baz=50,slow=3.3,SNR=24
OBN Obninsk 142.00 328 ⇓*e*PKIKP **PKPdf** 15 08 57.7 -3.4
OBN 15 09 45.0
OBN 15 10 04.0
OBN 15 12 16.0
OBN SS SS 15 30 21.0 -6.1
OBN SSS SSS 15 35 38.8
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN pmax pmax
comp=Z,29nm,1.5s
OBN MLR MLR
comp=Z,19nm,16.0s
LPSR Galich'ya Gora 142.17 324 *e*PKHKP PKPpre 15 08 55.8
LPSR pmax pmax
comp=Z,15nm,0.7s
VORR Voronezh 142.47 322 *e*PKHKP PKPpre 15 08 56.2
VORR pmax pmax
comp=Z,48nm,0.4s
VSR Storozhevoye 142.71 322 *e*PKHKP PKPpre 15 08 56.6
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 142.75 321 *e*PKHKP PKPpre 15 08 56.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
KBZ Khabaz 143.04 309 PKhKP PKPpre 15 09 00.0
comp=Z,5.5nm,0.9s,baz=82,slow=2.1,SNR=5.5
KIV Kislovodsk 143.13 309 *e*PKIKP PKPbc 15 09 01.5 +0.4
KIV pmax pmax
comp=Z,11nm,1.1s
GEVA Gevas 143.95 300 PKPbc 15 09 03.8 +0.1
DOMB Dombas 144.02 355 *e*P **PKPab** 15 09 02.3 -0.2
AKN Aaknes 144.03 356 *e*P **PKPab** 15 09 02.1 -0.3
ERBR Yeremizino-Bor 144.11 313 *i* PKIKP **PKPab** 15 09 03.2 -0.1
ERBR *e* 15 09 49.4
ERBR pmax pmax
comp=Z,30nm,0.8s
BATM Batumi 144.41 305 ⇓P PKPbc 15 09 05.0 +0.2
BATM Batumi 144.41 305 ⇓PKIKP PKPbc 15 09 05.0 +0.2
NC204 NORSAR Array S 144.62 353 **PKPab** 15 09 03.6 -1.2
NC405 NORSAR Array S 144.67 352 **PKPab** 15 09 03.9 -1.0
FOO Floro 144.70 358 *e*P **PKPab** 15 09 04.3 -0.6
NB201 NORSAR Array S 144.78 353 PKPbc 15 09 04.4 -0.9
NB2 NORSAR Subarra 144.80 353 PKP PKPbc 15 09 04.3 -1.1
comp=Z,68nm,0.8s,baz=12,slow=3.7
NB2 NORSAR Subarra 144.80 353 PKP PKPbc 15 09 04.3 -1.1
NOA NORSAR Array B 144.80 353 PKP PKPbc 15 09 04.2 -1.2
comp=Z,48nm,0.9s,baz=16,slow=2.4,SNR=43
NC602 NORSAR Array S 145.05 352 *e*P **PKPbc** 15 09 05.1 -1.1
NC602 NORSAR Array S 145.05 352 **PKPbc** 15 09 04.9 -1.2
HYA Hoyanger 145.09 357 *e*P **PKPbc** 15 09 05.7 -0.5
SUE Sulen 145.25 358 *e*P **PKPdf** 15 09 06.0 -0.7
SUE IAmb IAmb 15 09 07.0
comp=Z,103nm,0.9s
SOC Sochi 145.30 309 *e*PKIKP **PKPdf** 15 09 06.6 -0.7
SOC *e* 15 12 27.6
SOC *e*PPP PPP 15 15 42.9
SOC *e*SS SS 15 31 05.7 -0.4
SOC *e*SSS SSS 15 36 33.2
SOC pmax pmax
comp=Z,32nm,0.7s
HFS Hagfors 145.34 350 PKPbc **PKPdf** 15 09 06.0 -0.9
comp=Z,27nm,0.5s,baz=31,slow=1.7,SNR=59
HFS Hagfors 145.34 350 PKP2 **PKPdf** 15 09 06.0 -0.9
SKAR Skarslia 145.43 355 *e*P **PKPdf** 15 09 07.0 -0.1
ASK Askoy 145.81 358 *e*P **PKPdf** 15 09 08.1 +0.5
BER Bergen 145.91 357 *e*P **PKPdf** 15 09 08.0 +0.2
OSL Oslo 145.93 353 *e*P **PKPdf** 15 09 08.3 +0.5
LRW Lerwick 146.12 3 *e*P **PKPdf** 15 09 08.7 +0.5
MNK Minsk 146.22 333 *i* PKP **PKPdf** 15 09 08.6 +0.1
comp=E,36nm,0.8s
MNK *i* PKP **PKPdf** 15 09 08.6 +0.1
comp=N,16nm,0.8s
MNK *i* PKP **PKPdf** 15 09 08.6 +0.1
comp=Z,69nm,0.8s,baz=44
MNK *i* pPKP pPKPbc 15 09 53.7 -0.1
MNK *i* sPKP **sPKPdf** 15 10 04.7 -5.7
MNK *i* PP **PP** 15 12 35.4 +2.0
MNK *i* PPP PPP 15 15 17.2
MNK *i* SKS **SKSdf** 15 15 56.3 -4.7
MNK *i* SS **SS** 15 31 15.6 +0.6
MNK *i* SSS SSS 15 36 13.6
MNK *i* LR LR 16 13 41.4
MNK Minsk 146.22 333 *i* PKP2 **PKPdf** 15 09 08.6 +0.1
MNK *i* 15 12 35.3
MNK *i* 15 15 56.2
MNK *i* SS SS 15 31 15.6 +0.6
MNK pmax pmax
comp=N,16nm,0.8s
MNK pmax pmax
comp=E,36nm,0.8s
MNK pmax pmax
comp=Z,69nm,0.8s
ODD1 Odda 146.31 356 *e*P **PKPbc** 15 09 10.3 +0.2
KONO Kongsberg 146.33 353 *de*PKP2 **PKPdf** 15 09 08.9 +0.3
KONO Kongsberg 146.33 353 *e*P **PKPdf** 15 09 09.3 +0.7
ANN Anapa 146.45 312 *i* PKP2 **PKPbc** 15 09 10.2 -0.7
ANN pmax pmax
comp=Z,66nm,0.8s
STRU Stroemstad 146.75 352 *i* P **PKPdf** 15 09 10.3 +1.0
BLS5 Blasjo 146.81 356 *e*P **PKPbc** 15 09 11.2 -0.3
BLS5 IAmb IAmb 15 09 11.9
comp=Z,29nm,1.1s
KMY Karmoy 147.08 357 *e*P **PKPbc** 15 09 12.1 -0.1
KMY IAmb IAmb 15 09 12.6
comp=Z,62nm,0.8s
TJOU Tjoern 147.66 351 *i* P **PKPbc** 15 09 13.2 -0.6
HOMB Homborsund 147.80 354 *e*P **PKPbc** 15 09 14.3 +0.1
HOMB IAmb IAmb 15 09 15.0
comp=Z,107nm,1.3s
HOMB Homborsund 147.80 354 *i* P **PKPbc** 15 09 14.0 -0.2
AK03 Malin Array Si 148.20 327 PKP **PKPdf** 15 09 11.2 -0.8
AKASG Malin Array Be 148.22 327 PKPbc **PKPbc** 15 09 14.4 -1.1
comp=Z,22nm,0.6s,baz=43,slow=3.7,SNR=50
AKBB Malin Array Si 148.22 327 *ce*PKP2 **PKPbc** 15 09 14.4 -1.1
KIEV Kiev 148.23 327 ⇑P **PKPbc** 15 09 14.7 -0.9
KIEV Kiev 148.23 327 ⇑PKP2 **PKPbc** 15 09 14.7 -0.9
ONAU Onsala 148.23 350 *i* P **PKPbc** 15 09 14.6 -0.7
AK09 Malin Array Si 148.24 327 PKP **PKPdf** 15 09 11.3 -0.7
SUW Suwalki 148.38 337 *e*PKP **PKPbc** 15 09 15.9 +0.1
KPL Plockton 148.48 8 *e*P **PKPbc** 15 09 15.3 -0.7
FABU Falkenberg 148.49 349 *i* P **PKPbc** 15 09 15.1 -0.8
MCD Coleburn Disti 148.51 6 *e*P **PKPbc** 15 09 15.1 -1.0
BLEU Blekinge 148.54 346 *i* P **PKPbc** 15 09 15.3 -0.9
SIM Simferopol' 148.55 314 *ce*PKP2 **PKPbc** 15 09 17.0 +0.4
SIM pmax pmax
comp=Z,87nm,0.8s
DEL Delary 148.78 348 *i* P **PKPbc** 15 09 16.2 -0.6
MI28 Mi28,Pidlybu 148.81 329 PKP **PKPdf** 15 09 12.2 -0.7
DRUM Mains of Drumt 149.24 5 *e*P **PKPbc** 15 09 17.1 -0.8
RNPP9 Sopachiv 149.28 331 PKP **PKPdf** 15 09 12.9 -0.8
BJUU Bjuv 149.31 348 *i* P **PKPbc** 15 09 17.2 -0.8
LUBAR Lubar, Ukraine 149.44 327 PKP **PKPdf** 15 09 13.2 -0.8
LAWE Loch Awe, Argy 149.56 9 *e*P **PKPbc** 15 09 18.0 -0.7
INVG Invergeldie, C 149.56 7 *e*P **PKPbc** 15 09 18.2 -0.5
EAB Aberfoyle 149.77 8 *e*P **PKPbc** 15 09 18.8 -0.6
COP Copenhagen 149.79 349 *i* P **PKPbc** 15 09 18.7 -0.6
BZK Bozkurt 149.81 309 ⇑P **PKPbc** 15 09 20.2 +0.4
BSD Bornholm Skovb 149.84 346 *i* P **PKPbc** 15 09 19.1 -0.3
SORM Soroca 150.28 324 ⇓P **PKPbc** 15 09 20.3 -0.4
SORM Soroca 150.28 324 ⇓PKIKP **PKPbc** 15 09 20.3 -0.4
IDGL Inch Island, C 150.37 12 PKP **PKPbc** 15 09 19.6 -1.1
R9F13 Warsaw-Wawer 150.56 336 *e*PKPdf **PKiKP** 15 09 21.8 0.0
CIDE Kastamonu/Cide 150.57 310 ⇓P **PKPbc** 15 09 21.3 -0.3
CLGH Cloghs, Cushen 150.60 10 *e*P **PKPdf** 15 09 17.9 +2.3
MMAI Mount Meron Ar 150.70 291 PKPbc **PKiKP** 15 09 23.2 +0.3
comp=Z,27nm,0.5s,baz=72,slow=6.2,SNR=48
EKA Eskdalemuir Ar 150.74 7 PKP **PKPdf** 15 09 13.8 -2.0
comp=Z,0.7nm,0.6s,baz=354,slow=1.4,SNR=4.9
EKA PKPbc **PKPbc** 15 09 20.4 -1.1
comp=Z,4.9nm,0.7s,baz=0.0,slow=2.3,SNR=19
ESK Eskdalemuir 150.75 7 *e*P **PKPbc** 15 09 20.7 -0.9
KIRS Kirsehir-Merke 150.78 304 ⇑P **PKPbc** 15 09 22.2 -0.1
BRTR Keskin Array B 150.81 305 PKPbc **PKPbc** 15 09 22.1 -0.3
comp=Z,13nm,0.6s,baz=63,slow=3.2,SNR=26
GKP Gorka Klasztor 150.92 342 *e*PKP **PKiKP** 15 09 22.7 +0.2
KMPD K-Podol'skiy 150.98 326 PKP **PKPdf** 15 09 15.7 -0.7
BEL Belsk 151.00 336 *e*PKP **PKiKP** 15 09 23.3 +0.5
GAL1 Galloway 151.01 9 *e*P **PKPbc** 15 09 21.1 -1.0
EDMD Edmundbyers 151.34 5 *e*P **PKPbc** 15 09 22.1 -0.8
KESW Keswick, Cumbr 151.48 7 *e*P **PKPbc** 15 09 22.6 -0.7
IGLA Glengowla, Co 151.54 15 PKP **PKPbc** 15 09 22.1 -1.3
ILTH Belurgan, Co L 151.58 11 PKP **PKPbc** 15 09 22.5 -1.0
IOMK Kirk Michael 151.62 9 *e*P **PKPbc** 15 09 23.0 -0.4
TLCR 151.72 319 ⇑P **PKiKP** 15 09 24.4 -0.1
VLDR Vladesti 151.78 320 ⇑P **PKiKP** 15 09 24.6 0.0
BSEG Bad Segeberg 151.82 350 *e*PKPbc **PKiKP** 15 09 24.3 -0.1
baz=16,slow=2.1
BSEG *e*PKPab **PKPab** 15 09 32.6 -1.0
baz=16,slow=4.4
PRAR RASCA 151.88 324 ⇑P **PKiKP** 15 09 24.9 +0.1
JURR Jurilovca 151.91 318 ⇓P **PKiKP** 15 09 24.9 0.0
KWP Kalwaria Pacla 151.97 331 *e*PKP **PKiKP** 15 09 25.4 +0.5
GIRR Girov 151.99 324 ⇑P **PKPbc** 15 09 23.8 -0.9
GHRR 152.04 321 ⇓P **PKiKP** 15 09 25.9 +0.8
CFR Carcaliu 152.13 319 ⇑P **PKPbc** 15 09 25.2 +0.1
TPGR Topolog 152.13 318 ⇓P **PKiKP** 15 09 25.5 +0.1
TESR Tescani 152.19 323 ⇑P **PKiKP** 15 09 25.0 -0.2
BIZ Bicaz 152.21 324 ⇓P **PKiKP** 15 09 26.2 +0.7
BURAR Bucovina Array 152.23 326 ⇑P **PKiKP** 15 09 26.4 +0.8
TIRR Tirgusor 152.35 318 ⇑P **PKPbc** 15 09 25.5 0.0
ODBI Odobesti 152.41 321 ⇓P **PKiKP** 15 09 26.5 +0.6
EFOR EFORIE 152.42 317 ⇑P **PKiKP** 15 09 26.0 0.0
SAHE Sakarya_HENDEK 152.42 309 ⇑P **PKPbc** 15 09 25.9 0.0
ONER Baraj Valea Uz 152.43 323 ⇑P **PKiKP** 15 09 26.5 +0.5
TLBR Topalu 152.53 318 ⇓P **PKiKP** 15 09 26.5 +0.3
VRI Vrincioaia 152.54 321 ⇓P **PKPbc** 15 09 25.5 -0.5
GORT1 Trebel 152.56 348 *e*PKPbc **PKiKP** 15 09 26.1 +0.3
baz=16,slow=2.1
MANR Mangalia 152.58 316 ⇓P **PKiKP** 15 09 26.9 +0.6
PLOR Plostina 152.59 322 ⇓P **PKPbc** 15 09 25.5 -0.7
SAHR Sahastru 152.64 321 ⇓P **PKiKP** 15 09 26.7 +0.2
OJC Ojcow 152.68 335 *e*PKP **PKPbc** 15 09 26.2 0.0
KOLS Kolonicke sedl 152.68 331 *e*PKIKP **PKPdf** 15 09 19.6 +0.6
KOLS Kolonicke sedl 152.68 331 *e*PKP **PKPdf** 15 09 19.6 +0.6
KOLS *e* 15 09 27.3
COVR Voineasa-Covas 152.84 322 ⇑P **PKPbc** 15 09 26.7 0.0
OZUR 152.91 323 ⇓P **PKPbc** 15 09 23.4 -3.4
BOSR Bodos 152.99 323 ⇑P **PKiKP** 15 09 27.3 +0.1
NEHR Nehoiu 153.04 321 ⇓P **PKPbc** 15 09 24.6 -2.6
RETH Rethem/Aller, 153.12 351 *e*PKPbc **PKPbc** 15 09 27.0 +0.1
baz=16,slow=2.1
NIE Niedzica 153.13 334 *e*PKP **PKiKP** 15 09 28.8 +1.4
FOEL Foel Wylfa 153.14 8 *e*P **PKPbc** 15 09 26.2 -0.9
MLR Muntele Rosu 153.20 322 PKPbc **PKPbc** 15 09 26.5 -1.1
comp=Z,5.5nm,0.7s,baz=57,slow=4.0,SNR=8.0
MLR Muntele Rosu 153.20 322 ⇑P **PKPbc** 15 09 27.0 -0.6
FLTG Flechtingen 153.21 348 *e*PKPbc **PKPbc** 15 09 27.1 -0.1
baz=16,slow=2.1
FLTG *e*PKPab **PKPab** 15 09 38.4 -1.2
baz=16,slow=4.4
DOPR Dopca 153.21 323 ⇑P **PKiKP** 15 09 28.2 +0.6
KSP Ksiaz 153.34 340 *e*PKP **PKiKP** 15 09 28.6 +0.9
ASSE Asse, Remlinge 153.50 349 *e*PKPbc **PKiKP** 15 09 28.2 +0.4
baz=16,slow=2.1
HLM1 Long Mynd 153.54 7 *e*P **PKPbc** 15 09 27.1 -0.9
OSTC Ostas 153.61 340 ⇑*e*PKP **PKiKP** 15 09 29.0 +0.7
OSTC *e*PKPAB **PKPab** 15 09 42.3 +0.9
STEB Steborice 153.64 337 ⇑*e*PKP **PKPbc** 15 09 28.3 0.0
STEB *e*PKPAB **PKPab** 15 09 41.4 -0.2
CJR Cluj-Napoca 153.65 326 ⇑P **PKiKP** 15 09 28.7 +0.1
UPC Upice 153.72 340 ⇑*e*PKP **PKiKP** 15 09 29.0 +0.5
VOIR 153.73 322 ⇑P **PKiKP** 15 09 29.2 +0.4
IBBN Ibbenburen 153.75 353 *e*PKPbc **PKiKP** 15 09 28.5 0.0
baz=16,slow=2.1
DPC Dobruska-Polom 153.76 340 ⇑*e*PKP **PKiKP** 15 09 29.1 +0.5
DPC *e*PKPAB **PKPab** 15 09 42.5 +0.4
CLL Collm 153.80 345 ⇑*i*PKIKP **PKPdf** 15 09 20.6 +0.1
CLL *i* 15 09 41.5
CLL pmax pmax
comp=Z,24nm,0.9s
CLL pmax pmax
comp=Z,19nm,0.9s
CLL Collm 153.80 345 *i* PKPdf **PKPdf** 15 09 20.6 +0.1
CLL ⇑*i*PKPbc **PKPbc** 15 09 28.5 0.0
comp=Z,24nm,0.9s
CLL *i* x x 15 09 31.9
comp=Z,22nm,0.9s
CLL ⇓*i*PKPab **PKPab** 15 09 41.5 -0.7
comp=Z,19nm,0.9s
CLL *e*pPKPbc **pPKPbc** 15 10 13.0 +0.1
CLL *e*pPKPab **sPKPdf** 15 10 22.0 -0.5
CLL *ex* x 15 10 27.0
CLZ Clausthal 153.83 349 *e*PKPbc **PKiKP** 15 09 28.9 +0.2
baz=16,slow=2.1
CLZ *e*PKPab **PKPab** 15 09 41.4 -0.9
baz=16,slow=4.4
KRLC Kraliky 153.85 339 ⇑*e*PKP **PKiKP** 15 09 28.9 +0.1
MORC Moravsky Berou 153.85 338 ⇓P **PKPbc** 15 09 28.5 -0.3
MORC Moravsky Berou 153.85 338 *e*PKP **PKPdf** 15 09 20.5 -0.2
MORC *e* 15 09 28.5
MORC *e* 15 09 42.5
MARR Marisel-Cluj 153.92 326 ⇓P **PKiKP** 15 09 29.3 +0.2
BRG Berggiesshubel 153.97 343 *e*PKPdf **PKPdf** 15 09 20.8 0.0
baz=24,slow=1.2
BRG *e*PKPab **PKPab** 15 09 42.4 -0.5
baz=16,slow=4.4
BRG Berggiesshubel 153.97 343 ⇓*e*PKPf 15 09 20.8
BRG Berggiesshubel 153.97 343 Amp 15 09 21.9
comp=Z,4.9nm,0.9s
BRG Berggiesshubel 153.97 343 ⇑PKPb 15 09 29.1
BRG Berggiesshubel 153.97 343 Amp 15 09 31.9
comp=Z,9.7nm,0.7s
BRG Berggiesshubel 153.97 343 PKPab **PKPab** 15 09 42.7 -0.2
BRG Berggiesshubel 153.97 343 Amp 15 09 43.4
comp=Z,14nm,0.8s
MAUC Maruska 154.10 337 ⇑*e*PKP **PKiKP** 15 09 29.9 +0.5
NEUB Neuenburg 154.16 346 *e*PKPbc **PKiKP** 15 09 29.7 +0.3
baz=16,slow=2.1
NEUB *e*PKPab **PKPab** 15 09 43.2 -0.5
baz=16,slow=4.4
GTTG Gottingen 154.19 349 *e*PKPbc **PKiKP** 15 09 29.5 +0.1
baz=16,slow=2.1
GTTG *e*PKPab **PKPab** 15 09 43.3 -0.5
baz=16,slow=4.4
MONM Monmouth 154.22 8 *e*P **PKPbc** 15 09 28.6 -0.8
VRAC Vranov 154.58 338 PKPab **PKPab** 15 09 45.3 -0.2
comp=Z,7.5nm,0.8s,baz=37,slow=4.2,SNR=4.7
VRAC Vranov 154.58 338 *e*PKP **PKPdf** 15 09 21.6 -0.1
VRAC *e* 15 09 45.6
JAVC Velka Javorina 154.58 336 *e*PKP **PKPdf** 15 09 21.2 -0.6
JAVC *e* 15 09 31.2
JAVC *e* 15 09 46.6
BUG Bochum--Univer 154.66 353 *e*PKPab **PKPab** 15 09 44.7 -1.1
baz=16,slow=4.4
MOX Moxa 154.73 346 *e*PKPdf **PKPdf** 15 09 21.5 -0.4
baz=24,slow=1.2
MOX *e*PKPab **PKPab** 15 09 45.2 -0.9
baz=16,slow=4.4
MOX *e*L L 16 10 40.3
comp=Z,28nm,20.1s
KASTN Kahler Asten 154.75 351 *e*PKPdf **PKPdf** 15 09 21.6 -0.3
baz=24,slow=1.2
KASTN *e*PKPbc **PKPbc** 15 09 30.6 -0.1
baz=16,slow=2.1
KASTN *e*PKPab **PKPab** 15 09 45.2 -1.0
baz=16,slow=4.4
TANN Tannenbergstha 154.76 345 *e*PKPdf **PKPdf** 15 09 21.6 -0.4
baz=24,slow=1.2
TANN *e*PKPab **PKPab** 15 09 45.8 -0.6
baz=16,slow=4.4
PLN Plauen 154.76 345 *e*PKPdf **PKPdf** 15 09 21.8 -0.1
baz=24,slow=1.2
PLN *e*PKPab **PKPab** 15 09 45.7 -0.7
baz=16,slow=4.4
KRUC Moravsky 154.86 338 *e*PKP **PKPdf** 15 09 21.5 -0.6
KRUC *e* 15 09 30.6
KRUC *e* 15 09 46.7
SIRR Siria 154.92 327 ⇓P **PKiKP** 15 09 31.6 +0.5
GZR Gura Zlata 154.97 325 ⇓P **PKPbc** 15 09 31.2 -0.2
MODS Modra-Piesok 155.13 336 *e*PKIKP **PKPdf** 15 09 23.3 +0.8
MODS Modra-Piesok 155.13 336 *e*PKP **PKPdf** 15 09 23.3 +0.8
MODS *e* 15 09 32.7
MODS *e* 15 09 48.1
ROTZ Rotzenmuhle 155.42 345 *e*PKPab **PKPab** 15 09 48.6 -0.5
baz=16,slow=4.4
HERR Herculane 155.50 324 ⇓P PKPbc 15 09 32.6
KHC Kasperske Hory 155.66 342 *ce*PKIKP **PKPdf** 15 09 22.4 -0.8
KHC Kasperske Hory 155.66 342 *e*PKPDF **PKPdf** 15 09 23.3 +0.1
KHC ⇑*e*PKP PKPbc 15 09 32.5
KHC *e*PKPAB **PKPab** 15 09 50.0 -0.2
CAVK Edirne/Enez-Ca 155.69 312 ⇑P **PKPdf** 15 09 24.4 +1.0
TNS Taunus Mts 155.71 351 *e*PKPdf **PKPdf** 15 09 23.8 +0.5
baz=24,slow=1.2
TNS *e*PKPab **PKPab** 15 09 49.0 -1.5
baz=16,slow=4.4
GRF Grafenberg Arr 155.71 346 *e*PKPab **PKPab** 15 09 49.9 -0.5
baz=16,slow=4.4
GRF *e*L L 16 17 38.6
comp=Z,31nm,18.4s
CKRC Cesky Krumlov 155.73 341 ⇑*e*PKP PKPbc 15 09 36.3
WINA Alland / Wiene 155.79 337 *i* PKP **PKPab** 15 09 51.0 +0.3
comp=Z,3.6nm,0.5s
WET Wettzell 155.83 343 *e*PKPab **PKPab** 15 09 50.9 -0.1
baz=16,slow=4.4
GEC2 GERESS Array S 155.88 342 *e*PKPdf **PKPdf** 15 09 23.0 -0.6
baz=24,slow=1.2
GEC2 *e*PKPab **PKPab** 15 09 50.9 -0.3
baz=16,slow=4.4
GERES GERESS Array B 155.88 342 PKP **PKPdf** 15 09 22.4 -1.2
comp=Z,0.8nm,0.8s,baz=37,slow=1.2,SNR=6.8
GERES PKPab **PKPab** 15 09 50.4 -0.9
comp=Z,3.2nm,0.7s,baz=20,slow=4.3,SNR=12
BMRD Maredsous 156.00 356 *d*PKP **PKPab** 15 09 50.8 -0.8
CONA Conrad Observa 156.01 337 *i* PKP **PKPab** 15 09 52.0 +0.1
comp=Z,4.3nm,0.7s
RONA Rosalia, Austr 156.06 337 *e*PKP **PKPab** 15 09 52.2 +0.2

comp=Z,9.4nm,0.7s,SNR=5.0
DOU Dourbes 156.22 357 *d*PKP **PKPab 15 09 51.1 -1.4**
MORH Mrgy, Hungar 156.34 331 ⇑P **PKPdf 15 09 23.4 -0.7**
WLF Walferdange 156.53 354 *e*PKPab **PKPab 15 09 53.5 -0.4**
baz=16,slow=4.4
MOA Molln 156.60 340 *i* PKP **PKPab 15 09 54.3 0.0**
comp=Z,2.3nm,0.6s
ARSA Arzberg 156.71 337 *i* PKP **PKPab 15 09 54.7 -0.2**
comp=Z,4.9nm,0.8s
BIOA Bad Ischl, Aus 156.94 340 *e*PKP **PKPab 15 09 55.8 0.0**
comp=Z,14nm,0.7s,SNR=7.1
FUR Furstenfeldbru 157.14 345 *e*PKPab **PKPab 15 09 56.7 +0.1**
baz=16,slow=4.4
RJOB Jochberg 157.14 342 *e*PKPab **PKPab 15 09 56.8 +0.1**
baz=16,slow=4.4
SESA Seetaler Alpe, 157.16 338 *e*PKP **PKPab 15 09 56.7 -0.3**
comp=Z,12nm,0.6s,SNR=9.9
SOKA Soboth 157.38 337 *i* PKP **PKPab 15 09 57.4 -0.4**
comp=Z,6.3nm,0.6s
PERS Pernice 157.38 337 *e*PKPdf **PKPdf 15 09 24.5 -1.0**
PERS *i* PKPab **PKPab 15 09 56.8 -1.0**
LESA Schwarzleotal 157.46 342 *e*PKP **PKPab 15 09 57.8 -0.3**
comp=Z,22nm,1.3s,SNR=6.9
BFO Black Forest 157.57 350 *e*PKPdf **PKPdf 15 09 25.0 -0.7**
baz=24,slow=1.2
BFO *e*PKPab **PKPab 15 09 57.4 -1.0**
baz=16,slow=4.4
KBA Koelnbreinsper 157.58 340 *i* PKP **PKPab 15 09 58.5 -0.2**
comp=Z,6.0nm,0.6s
VAY Valandovo 157.66 317 *i* P **PKPab 15 09 59.3 +0.2**
OBKA Obir 157.69 338 *i* PKP **PKPab 15 09 58.2 -0.9**
comp=Z,4.5nm,0.7s
WATA Walderalm 157.84 343 *i* PKP **PKPab 15 09 59.3 -0.5**
comp=Z,12nm,0.9s
GCIS Gornji Cirnik 157.85 335 *e*PKPdf **PKPdf 15 09 25.5 -0.6**
GCIS *e*PKPab **PKPab 15 09 59.1 -0.6**
MYKA Terra Mystica 157.88 339 *i* PKP **PKPab 15 09 58.8 -1.1**
comp=Z,5.5nm,0.7s
WTTA Wattenberg 157.89 343 *i* PKP **PKPab 15 09 59.7 -0.4**
comp=Z,15nm,0.7s,SNR=5.7
RETA Reutte 157.89 345 *e*PKP **PKPab 15 09 59.7 -0.3**
comp=Z,4.0nm,0.5s
MOTA Moosalm 157.95 344 *e*PKP **PKPab 15 09 59.7 -0.6**
comp=Z,9.2nm,0.8s,SNR=5.2
SQTA Sankt Quirin 158.04 344 *i* PKP **PKPab 15 09 60.0 -0.7**
comp=Z,8.7nm,0.8s
ABTA Abfaltersbach 158.12 341 *i* PKP **PKPab 15 10 00.1 -0.9**
comp=Z,9.5nm,0.7s
GBAS Gorenja Brezov 158.22 337 *i* PKPdf **PKPdf 15 09 25.7 -0.8**
GBAS *i* PKPab **PKPab 15 10 00.2 -1.2**
DAVA Damuels 158.28 346 *e*PKP **PKPab 15 10 00.6 -1.1**
comp=Z,8.1nm,0.7s
FETA Feichten 158.34 345 *i* PKP **PKPab 15 10 01.4 -0.6**
comp=Z,4.7nm,0.8s
DAVOX Davos/Dischmat 158.76 346 PKPab **PKPab 15 10 02.7 -1.2**
comp=Z,6.3nm,0.7s,baz=14,slow=7.4,SNR=8.5
OHR Ohrid 158.85 319 *i* P **PKPab 15 10 04.9 +0.5**
DBIC Dimbokro 159.24 159 PKP **PKPdf 15 09 28.8 +0.1**
comp=Z,15nm,1.3s,baz=295,slow=4.4,SNR=2.3
DBIC PKPab **PKPab 15 10 07.8 +1.3**
comp=Z,7.6nm,0.8s,baz=180,slow=2.0,SNR=5.5
MATE Matera 161.47 324 ⇑P **PKPdf 15 09 30.7 +0.4**
ESDC Sonseca Array 165.65 20 PKP **PKPdf 15 09 33.7 -0.7**
comp=Z,1.6nm,1.0s,baz=321,slow=2.7,SNR=6.4
ESDC PKPab **PKPab 15 10 33.1 -1.0**
comp=Z,1.8nm,0.9s,baz=323,slow=3.6,SNR=7.0
TORD Torodi Ar. Bea 166.86 177 PKP **PKPdf 15 09 35.1 -0.8**
comp=Z,3.6nm,0.7s,baz=169,slow=1.4,SNR=17
TORD PKPab **PKPab 15 10 41.2 +1.4**
comp=Z,6.8nm,1.0s,baz=183,slow=3.3,SNR=13

PRE 21 15:22:29.9±1.2, 26°29S×30°08E, h0km, ML2.2,
Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRLN	**Carolina, Mapu**	**0.30**	**350**	*e*P	Pg	15 22 35.4	-0.2
CRLN				*e*S	Sg	15 22 37.5	-1.9
CRLN				IAML		15 22 39.7	
	comp=Z,174nm,0.2s						
CRLN	**Carolina, Mapu**	**0.30**	**350**	*e*P	Pg	15 22 34.9	-0.7
CRLN				*e*S	Sg	15 22 39.3	-0.1
CRLN				IAML		15 22 39.7	
	comp=Z,174nm,0.2s						
HRAO	**HartRAO**	**2.19**	**280**	*e*P	Pn	15 23 08.9	+1.2
HRAO				*e*S	Sn	15 23 34.3	-1.2
HRAO				IAML		15 23 37.0	
	comp=Z,25nm,0.2s						
HRAO	**HartRAO**	**2.19**	**280**	*e*P	Pb	15 23 09.2	-1.3
HRAO				*e*S	Sn	15 23 36.0	+0.5
HRAO				IAML		15 23 37.0	
	comp=Z,25nm,0.2s						
MOPA	**Mopani**	**3.01**	**24**	*e*P	Pn	15 23 19.3	+0.5
MOPA				*e*S	Sn	15 23 55.4	-0.2
MOPA				IAML		15 23 56.2	
	comp=Z,41nm,0.3s						
LEPH	**Lephalale, Lim**	**3.18**	**319**	*e*P	Pn	15 23 19.9	-1.4
LEPH				*e*S	Sn	15 23 52.1	-7.9
LEPH				IAML		15 23 53.4	
	comp=Z,2.5nm,0.2s						
LEPH	**Lephalale, Lim**	**3.18**	**319**	*e*P	Pn	15 23 23.1	+1.7
LEPH				*e*S	Sn	15 23 59.9	-0.1
LEPH				IAML		15 24 13.7	
	comp=Z,22nm,0.4s						
LBTB	**Lobatse**	**4.24**	**286**	*e*P	Pn	15 23 37.6	+1.7
LBTB				*e*S	Sn	15 24 26.1	0.0
LBTB				IAML		15 24 45.4	
	comp=Z,8.0nm,0.3s						
KSTD	**Kokstad**	**4.37**	**189**	*e*P	Pn	15 23 38.8	+1.2
KSTD				*e*S	Sn	15 24 29.2	-0.2
KSTD				IAML		15 24 46.2	
	comp=Z,2.3nm,0.3s						
BOSA	**Boshof**	**4.87**	**241**	*e*P	Pn	15 23 44.9	+0.3
BOSA				*e*S	Sn	15 24 40.7	-1.1
BOSA				IAML		15 25 06.6	
	comp=Z,4.5nm,0.3s						
GRAF	**Camdeboo Natio**	**7.71**	**218**	*e*P	Pn	15 24 25.4	+1.9
GRAF				*e*S	Sn	15 25 47.6	-4.0
GRAF				IAML		15 25 58.8	
	comp=Z,1.5nm,0.6s						
BRAK	**Brakfontein**	**8.33**	**227**	*e*P	Pn	15 24 32.5	+0.4
BRAK				*e*S	Sn	15 26 03.1	-3.9
BRAK				IAML		15 26 09.0	
	comp=Z,1.4nm,0.3s						
GRAN	**Grantham**	**9.14**	**227**	*e*P	Pn	15 24 44.1	+1.0
GRAN				*e*S	Sn	15 26 21.9	-4.8
GRAN				IAML		15 26 25.8	
	comp=Z,1.5nm,0.3s						
FRAZ	**Fraserburg**	**9.44**	**231**	*e*P	Pn	15 24 47.8	+0.6
FRAZ				*e*S	Sn	15 26 29.8	-4.3
FRAZ				IAML		15 26 45.7	
	comp=Z,1.4nm,0.6s						

*IDC **21** 16:00:23.1±1.3, 43°83N×86°80E, h0km, mb3.6/2,*
mbtmp3.6/7, ML3.1/5, MS2.9/2, Error ellipse: s-maj=30.3km
s-min=13.3km az=45.0
*SOME **21** 16:00:25.7, 44°10N×85°32E, h5km*
*NNC **21** 16:00:28.0±6.3, 43°80N×86°26E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=46.7km s-min=27.4km az=115.0
ISC 21 16:00:21.7±1.2, 43.77N±0.05×85.40E±0.06, h10km, n26,
σ1s38/33, 4C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.68**	**267**	*e*P	**Pg**	**16 01 31.6**	**-0.6**
	1.0nm,0.3s						
KTMS				*e*S	**Sg**	**16 02 18.6**	**-1.2**
	3.5nm,0.3s						
ZSN	**Zaisan**	**3.70**	**354**	Pg	Pg	16 01 39.2	+6.7
	15nm,0.4s						
ZSN				Lg	Lg	16 02 24.5	
	31nm,0.7s						
ZSN	**Zaisan**	**3.70**	**354**	*e*P	**Pb**	**16 01 27.3**	**+0.1**
	6.7nm,0.2s						
ZSN				*e*S	**Sb**	**16 02 11.6**	**-0.4**
	23nm,0.5s						
MK31	**Makanchi Array**	**3.73**	**325**	Pn	**Pg**	**16 01 32.7**	**-0.5**
	0.8nm,0.2s,baz=137,slow=14,SNR=173						
MK31				⇑Sn	**Sg**	**16 02 22.3**	**+0.7**
	7.4nm,0.7s,baz=133,slow=25						
MK31				⇓Lg	Lg	16 02 40.1	
	7.9nm,0.5s,baz=134,slow=32						
MKAR	**Makanchi Array**	**3.73**	**325**	Pn	**Pg**	**16 01 33.0**	**-0.2**
	2.5nm,0.3s,baz=134,slow=14,SNR=146						
MKAR				Pg	Pb	16 01 42.7	+15
	1.5nm,0.3s,baz=128,slow=16,SNR=6.6						
MKAR				Sn	**Sg**	**16 02 22.3**	**+0.7**
	3.0nm,0.3s,baz=134,slow=25,SNR=7.5						
MKAR				Lg	Lg	16 02 41.6	
	5.8nm,0.3s,baz=126,slow=29,SNR=5.1						
	3.3nm,0.3s						
MAKZ	**Makanchi**	**3.88**	**323**	⇑Pn	**Pg**	**16 01 35.2**	**-0.8**
	3.5nm,0.3s						
MAKZ				⇑Sn	**Sg**	**16 02 26.6**	**+0.4**
	6.2nm,0.6s						
MAKZ				⇓Lg	Lg	16 02 44.9	
	17nm,0.8s						
DJR	**Jarkent**	**4.08**	**280**	Pg	**Pg**	**16 01 43.2**	**+3.4**
	1.1nm,0.2s						
DJR				Lg	Lg	16 02 38.9	
	3.4nm,0.5s						
DJR	**Jarkent**	**4.08**	**280**	*e*P	**Pg**	**16 01 38.2**	**-1.7**
	1.1nm,0.2s						
DJR				*e*S	**Sg**	**16 02 30.6**	**-2.1**
	3.4nm,0.5s						
PDGK	**Podgornoye**	**4.32**	**266**	⇑Pn	**Pg**	**16 01 45.4**	**+1.1**
	2.2nm,0.5s						
PDGK				⇓Sn	**Sg**	**16 02 42.5**	**+2.3**
	11nm,0.7s						
SHLS	**Shalkode**	**4.36**	**264**	*e*P	**Pb**	**16 01 39.3**	**+0.8**
	2.2nm,0.1s						
SHLS				*e*S	**Sb**	**16 02 31.9**	**+0.6**
	6.8nm,0.1s						
KNOS	**Konyrlen**	**4.52**	**280**	Pg	**Pg**	**16 01 47.3**	**-0.9**
	1.3nm,0.2s						
KNOS				Lg	Lg	16 02 46.3	
	5.4nm,0.4s						
KAPS	**Kapalarasan**	**4.58**	**291**	Pg	**Pg**	**16 01 49.7**	**+0.4**
	1.9nm,0.1s						
KAPS				Lg	Lg	16 02 50.0	
	15nm,0.2s						
KAPS				Lg	Lg	16 02 50.2	
	9.7nm,0.2s						
KAPS	**Kapalarasan**	**4.58**	**291**	*e*P	**Pg**	**16 01 47.4**	**-1.9**
	1.9nm,0.1s						
KAPS				*e*S	**Sg**	**16 02 46.4**	**-2.2**
	15nm,0.2s						
UZB	**Uzynbulak**	**4.68**	**265**	Pg	**Pg**	**16 01 51.0**	**-0.4**
	1.9nm,0.2s						
UZB				Lg	Lg	16 02 52.5	
	3.3nm,0.4s						
UZB	**Uzynbulak**	**4.68**	**265**	*e*P	**Pg**	**16 01 51.0**	**-0.4**
	1.9nm,0.2s						
UZB				*e*S	**Sg**	**16 02 52.5**	**+0.5**
	3.3nm,0.4s						
SATY	**Saty**	**5.14**	**264**	Pg	**Pg**	**16 01 58.8**	**-1.4**
	0.6nm,0.1s						
SATY				Lg	Lg	16 03 05.9	
	5.1nm,0.2s						
SATY	**Saty**	**5.14**	**264**	*e*P	**Pg**	**16 01 58.8**	**-1.4**
	0.6nm,0.1s						
SATY				*e*S	**Sg**	**16 03 05.9**	**-0.9**
	5.1nm,0.2s						
ARXS	**Arharly**	**5.48**	**277**	Pg	**Pg**	**16 02 08.0**	**+1.3**
	1.4nm,0.2s						
ARXS				Lg	Lg	16 03 13.5	
	17nm,0.2s						
AAK	**Ala-Archa**	**8.04**	**266**	Lg	Lg	16 05 07.2	
	0.4nm,0.3s,baz=81,slow=8.7,SNR=1.9						
KURBB	**Kurchatov Arra**	**8.29**	**328**	Pn	Pn	16 02 31.6	+10
	0.2nm,0.3s,baz=132,slow=13,SNR=1.2						
KURBB				Lg	Lg	16 05 02.1	
	0.1nm,0.3s,baz=142,slow=27,SNR=4.7						
	1.2nm,0.2s						
ZALV	**Zalesovo Beam**	**10.19**	**358**	Pn	**Pn**	**16 02 50.6**	**+2.6**
	0.5nm,0.3s,baz=173,slow=13,SNR=17						
ZALV				Sn	**Sn**	**16 04 41.1**	**-1.2**
	0.5nm,0.3s,baz=166,slow=26,SNR=3.6						
ZALV				Lg	Lg	16 05 47.4	
	baz=176,slow=26						
ZALV				LR	LR	16 07 24.7	
	comp=Z,18nm,21.3s,baz=58,slow=41						
	2.3nm,0.5s						
BVAR	**Borovoye Array**	**13.58**	**318**	Pn	**P**	**16 03 42.6**	**-0.8**
	baz=110,slow=12,SNR=1.7						
BVAR				Lg	Lg	16 07 46.5	
	baz=62,slow=10,SNR=3.6						
	0.4nm,0.4s						
SONM	**Songino Array**	**15.19**	**67**	Pn	Pn	16 03 47.6	-8.7
	0.2nm,0.3s,baz=262,slow=10.0,SNR=1.7						
SONM				Lg	Lg	16 07 54.9	
	0.1nm,0.3s,baz=259,slow=29,SNR=1.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**77.65**	**133**	P	**P**	**16 12 17.6**	**-0.8**
	0.3nm,0.7s,baz=331,slow=5.0,SNR=5.0						
	0.3nm,0.7s						
SCHQ	**Schefferville**	**78.97**	**344**	LR	LR	16 52 03.6	
	comp=Z,21nm,19.1s,baz=108,slow=39						
ASAR	**Alice Springs**	**80.51**	**136**	P	**P**	**16 12 33.2**	**-0.8**
	0.7nm,1.1s,baz=330,slow=5.6,SNR=2.2						
	0.7nm,1.1s						

*IDC **21** 16:05:34.4±3.1, 8°05S×117°86E, h0km, mb3.5/3,*
mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=256.7km
s-min=24.6km az=52.0
ISC 21 16:05:42.5±2.3, 8.5S±0.8×118.0E±0.8, h35km, n6, σ0s49/5,
mb3.8/4, 1D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.52**	**127**	P	**Pn**	**16 10 08.7**	**+0.2**
	0.1nm,0.3s,baz=304,slow=12,SNR=2.6						
WRA				S	**Sn**	**16 13 46.5**	**-0.1**
	0.2nm,0.6s,baz=338,slow=16,SNR=1.6						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**21.47**	**136**	P	**P**	**16 10 28.1**	**-0.1**
	0.3nm,0.4s,baz=314,slow=10.0,SNR=28						
	0.3nm,0.4s						
MK31	**Makanchi Array**	**63.54**	**333**	Pn	**P**	**16 16 09.0**	**-0.5**
	0.9nm,0.9s,baz=136,slow=14,SNR=2.9						
MK31				⇓Lg	Lg	16 16 58.6	
	0.3nm,0.7s,baz=139,slow=29						
MKAR	**Makanchi Array**	**63.54**	**333**	P	P	16 16 04.6	-4.9
	0.4nm,0.6s,baz=140,slow=6.3,SNR=4.1						
	0.4nm,0.6s						
MAKZ	**Makanchi**	**63.69**	**333**	Pn	**P**	**16 16 10.9**	**+0.4**
ZALV	**Zalesovo Beam**	**68.21**	**340**	P	P	16 16 32.8	-6.4
	0.5nm,0.5s,baz=163,slow=5.3,SNR=2.5						
	0.5nm,0.5s						

NOU 21 16:11:57.8, 14°86S×166°86E, h0km, MLv4.5/13, Vanuatu
Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.12**	**156**	P	Pn	16 12 49.5	+1.2
MARNC	**Mare, Loyalty**	**6.68**	**171**	P	Pn	16 13 37.7	+0.5
YATNC	**Mamie plateau,**	**7.16**	**180**	P	Pn	16 13 43.6	-0.3
NOUC	**Port Laguerre**	**7.22**	**184**	P	Pn	16 13 44.9	+0.2
OUENC	**Ouen Island, N**	**7.52**	**180**	P	Pn	16 13 49.0	+0.2

*DNK **21** 16:12:49.5±2.2, 81°25N×2°80W, h4km±21km, ML2.0,*
Presumed earthquake
*KOLA **21** 16:12:53.1, 80°97N×3°79W, h0km, ML1.7, Error ellipse:*
s-maj=78.3km s-min=13.9km az=40.0, Greenland
sea, Knipovich ridge, north
*BER **21** 16:12:53.9±2.5, 81°31N×2°98W, h26km±35km, Mw3.6,*
ML2.0(DNK), Confirmed Earthquake
*FCIAR **21** 16:12:57.0, 81°17N×1°95E, h10km, station OMEGA has*
station magnitude of 4.00
ISC 21 16:12:49.4±1.8, 81.3N±0.1×2.79W±0.08, h10km, n21,
σ1s77/26, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.10**	**286**	*e*P	**Pn**	**16 13 24.6**	**+0.1**
NOR				*e*S	Sn	16 13 44.9	-5.8
NOR				IAMLHF		16 13 54.6	
	comp=Z,2.0nm,0.2s						
NOR	**Nord**	**2.10**	**286**	*i* P	**Pn**	**16 13 24.3**	**-0.3**
KBS	**Kingsbay**	**3.46**	**125**	*e*P	**Pn**	**16 13 44.2**	**+1.0**
KBS				IAML		16 13 45.2	
	comp=Z,9.0nm,0.2s						
KBS				*e*S	**Sn**	**16 14 20.9**	**-3.3**
KBS	**Kingsbay**	**3.46**	**125**	P	**Pn**	**16 13 44.0**	**+0.8**
KBS				S	Sn	16 14 20.1	-4.1
KBS	**Kingsbay**	**3.46**	**125**	*i* P	**Pn**	**16 13 44.2**	**+1.0**
KBS				*i* S	**Sn**	**16 14 22.8**	**-1.4**
BRBB	**Barentsburg B**	**4.40**	**128**	*e*P	**Pn**	**16 13 58.8**	**+2.7**
BRBB				*e*S	**Sn**	**16 14 45.4**	**-1.9**
BRBB	**Barentsburg B**	**4.40**	**128**	P	**Pn**	**16 13 58.4**	**+2.3**
BRBB				S	**Sn**	**16 14 46.0**	**-1.2**
BRBA	**Barentsburg A**	**4.43**	**128**	*e*P	**Pn**	**16 13 59.3**	**+2.8**
BRBA				IAML		16 13 59.4	
	comp=Z,10nm,0.1s						
BRBA				*e*S	**Sn**	**16 14 45.5**	**-2.4**
SPA0	**Spitsbergen Ar**	**4.60**	**123**	*e*P	**Pn**	**16 14 00.7**	**+1.8**
SPA0				IAML		16 14 01.6	
	comp=Z,3.6nm,0.4s						
SPA0				*e*S	**Sn**	**16 14 50.5**	**-1.8**
SPA0	**Spitsbergen Ar**	**4.60**	**123**	*e*P	**Pn**	**16 14 00.5**	**+1.6**
SPA0				*e*S	Sn	16 14 48.6	-3.7
SPITS	**Spitsbergen Ar**	**4.60**	**123**	P	**Pn**	**16 14 00.1**	**+1.2**
SPITS				S	**Sn**	**16 14 50.9**	**-1.4**
DAG	**Danmarks Havn**	**5.42**	**222**	*e*P	**Pn**	**16 14 10.8**	**+0.7**
DAG				*e*S	Sn	16 15 07.6	-4.7
DAG				IAMLHF		16 15 14.1	
	comp=Z,5.9nm,0.1s						
DAG	**Danmarks Havn**	**5.42**	**222**	*i* P	**Pn**	**16 14 10.1**	**0.0**
DAG				*i* S	Sn	16 15 07.9	-4.4
DAG				IAML		16 15 11.9	
	comp=Z,6.4nm,0.2s						
HSPB	**Hornsund (broa**	**5.48**	**132**	*e*P	**Pn**	**16 14 12.9**	**+2.0**
HSPB				IAML		16 14 13.2	
	comp=Z,2.0nm,0.3s						
HSPB				*e*S	**Sn**	**16 15 13.3**	**-0.5**
HSPB	**Hornsund (broa**	**5.48**	**132**	P	**Pn**	**16 14 12.7**	**+1.8**
HSPB				S	**Sn**	**16 15 12.0**	**-1.8**
HOPEN	**Hopen**	**7.09**	**117**	*e*P	**Pn**	**16 14 34.0**	**+1.1**
HOPEN				*e*S	Sn	16 15 48.5	-4.8
HOPEN				IAMLHF		16 15 52.8	
	comp=Z,1.4nm,0.2s						
HOPEN	**Hopen**	**7.09**	**117**	*e*P	Pn	16 14 32.4	-0.5
HOPEN				*e*S	Sn	16 15 46.7	-6.7
OMEGA	**Omega**	**7.69**	**68**	*e*P	Pn	16 14 39.0	-2.2
OMEGA				*e*S	Sn	16 15 59.5	-8.7
	comp=Z,39nm,2.5s						
DBG	**Daneborg**	**7.86**	**217**	*e*P	**Pn**	**16 14 43.8**	**+0.3**
DBG				*e*S	Sn	16 16 05.0	-7.4
DBG				IAMLHF		16 16 12.6	
	comp=Z,1.3nm,0.2s						
DBG	**Daneborg**	**7.86**	**217**	*i* P	Pn	16 14 43.1	-0.5
DBG				*i* S	Sn	16 16 05.7	-6.6
DBG				IAML		16 16 38.0	
	comp=Z,3.5nm,1.0s						
NEEM	**North Greenlan**	**9.40**	**272**	*i* P	Pn	16 15 02.1	-2.8
NEEM				*i* S	Sn	16 16 43.0	-7.7
NEEM				IAML		16 17 24.2	
	comp=Z,5.3nm,3.0s						

*NOU **21** 16:19:44.8, 40°85S×176°61E, h14km, MLv3.6/11, North*
Island, New Zealand
*WEL **21** 16:19:47.8±0.4, 41°S±2°×17°6E±°, h26km±3km, M3.0/36,*
ML3.1/15, MLv3.0/36, Error ellipse: s-maj=4.3km
s-min=2.7km az=111.7
ISC 21 16:19:47.7±1.0, 40.83S±0.03×176.34E±0.04, h32km±5km,
n93, σ1s11/105, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPFS	**Castlepoint Fi**	**0.11**	**231**	P	**Pb**	**16 19 54.3**	**+0.9**
CPFS				S	**Sb**	**16 19 59.2**	**+2.0**
CPWZ	**Castlepoint**	**0.13**	**232**	P	**Pb**	**16 19 54.4**	**+0.8**
CPWZ				S	**Sb**	**16 19 59.6**	**+2.1**
BFZ	**Birch Farm**	**0.16**	**334**	P	**Pb**	**16 19 53.0**	**-0.8**
BFZ	**Birch Farm**	**0.16**	**334**	P	**Pb**	**16 19 53.2**	**-0.5**
BFZ				S	**Sb**	**16 19 57.0**	**-0.9**
TRMS	**Tiraumea**	**0.31**	**301**	P	**Pb**	**16 19 54.5**	**-0.9**
TRMS				S	**Sb**	**16 19 59.3**	**-1.4**
TIWZ	**Tintock**	**0.35**	**278**	P	**Pb**	**16 19 55.4**	**-0.6**
ANWZ	**Angora Road**	**0.38**	**16**	P	**Pb**	**16 19 56.8**	**+0.4**
ANWZ				S	**Sn**	**16 20 03.7**	**+0.5**
PRWZ	**Pori Road**	**0.39**	**314**	P	**Pb**	**16 19 55.9**	**-0.6**
WBFS	**Weber Fire Sta**	**0.43**	**357**	P	**Pb**	**16 19 57.0**	**-0.1**
TMWZ	**Te Maipa**	**0.44**	**230**	P	**Pn**	**16 19 57.8**	**-0.1**
TMWZ				S	**Sn**	**16 20 05.7**	**+0.9**
EKTS	**Eketahuna Scho**	**0.51**	**290**	P	**Pb**	**16 19 57.5**	**-0.9**
WRCS	**Masterton Wair**	**0.54**	**257**	P	**Pb**	**16 19 58.8**	**0.0**
DVHZ	**Dannevirke**	**0.54**	**346**	P	**Pb**	**16 19 58.3**	**-0.7**
DVHZ				S	**Sb**	**16 20 06.1**	**-0.6**
MRZ	**Mangatainoka R**	**0.60**	**286**	P	**Pb**	**16 19 58.8**	**-1.0**
MRZ				S	**Sb**	**16 20 06.7**	**-1.5**
PRHZ	**Porangahau**	**0.60**	**22**	P	**Pb**	**16 19 59.9**	**0.0**
WDPS	**Woodville Poli**	**0.60**	**324**	P	**Pn**	**16 19 59.1**	**-1.0**
POWZ	**Post Office Ro**	**0.61**	**315**	P	**Pn**	**16 19 59.2**	**-1.0**
POWZ				S	**Sb**	**16 20 07.6**	**-0.9**
HOWZ	**Holdsworth Sta**	**0.63**	**263**	P	**Pn**	**16 19 59.7**	**-0.7**
HOWZ				S	**Sb**	**16 20 08.2**	**-0.8**
DVHS	**Dannevirke Hig**	**0.65**	**344**	P	**Pn**	**16 20 00.2**	**-0.6**
MTW	**Mount Morrison**	**0.71**	**242**	P	**Pn**	**16 20 01.1**	**-0.5**
PNMS	**Monrad Interme**	**0.73**	**309**	P	**Pn**	**16 20 01.2**	**-0.6**
PNBS	**Palmerston Nor**	**0.73**	**310**	P	**Pn**	**16 20 01.3**	**-0.5**
TRWZ	**Traveller**	**0.75**	**221**	P	**Pn**	**16 20 01.8**	**-0.3**
MAVS	**Martinborough**	**0.77**	**240**	P	**Pn**	**16 20 01.8**	**-0.5**
WPHZ	**Waipukurau**	**0.77**	**6**	P	**Pn**	**16 20 02.3**	**0.0**
WPHZ				S	**Sb**	**16 20 13.9**	**+1.1**
TSZ	**Takapari Road**	**0.82**	**339**	P	**Pn**	**16 20 02.5**	**-0.6**
TSZ				S	**Sn**	**16 20 13.0**	**-1.1**
OGWZ	**Otaki Gorge**	**0.89**	**270**	P	**Pn**	**16 20 03.5**	**-0.5**
PXZ	**Pawanui**	**0.89**	**27**	P	**Pn**	**16 20 04.0**	**0.0**
WPWS	**Waipawa Distri**	**0.90**	**12**	P	**Pn**	**16 20 04.3**	**+0.1**
PNHZ	**Pukenui**	**0.92**	**353**	P	**Pn**	**16 20 04.2**	**-0.3**
OHWZ	**Ohakea**	**1.00**	**308**	P	**Pn**	**16 20 06.2**	**+0.7**
CAW	**Cannon Point**	**1.00**	**253**	P	**Pn**	**16 20 05.1**	**-0.5**
MSWZ	**Moikau Station**	**1.01**	**234**	P	**Pn**	**16 20 04.9**	**-0.8**
PAPS	**Paraparaumu Pr**	**1.01**	**265**	P	**Pn**	**16 20 05.3**	**-0.4**
KIW	**Kapiti Island**	**1.08**	**268**	P	**Pn**	**16 20 06.3**	**-0.4**
PLWZ	**Palliser**	**1.10**	**227**	P	**Pn**	**16 20 06.0**	**-1.0**
KAHZ	**Kahuranaki**	**1.11**	**22**	P	**Pn**	**16 20 07.2**	**+0.1**
KRHZ	**Kereru**	**1.18**	**1**	P	**Pn**	**16 20 08.0**	**-0.1**
WEL	**Wellington**	**1.27**	**248**	P	**Pn**	**16 20 08.8**	**-0.5**
SNZO	**South Karori**	**1.32**	**248**	P	**Pn**	**16 20 09.6**	**-0.4**
KWHZ	**Kaweka Forest**	**1.40**	**3**	P	**Pn**	**16 20 11.2**	**0.0**
MCHZ	**McNeill Hill**	**1.41**	**11**	P	**Pn**	**

URZ	**Urewera**	**2.63**	**13**	S		**Sn**	**16 20 57.5**	**-1.3**
MWZ	**Matawai**	**2.66**	**21**	P		**Pn**	**16 20 27.3**	**-1.0**
THZ	**Tophouse**	**2.75**	**249**	P		**Pn**	**16 20 29.8**	**+0.2**
MRNZ	**Matariki Terra**	**2.77**	**257**	P		**Pn**	**16 20 30.3**	**+0.5**
QRZ	**Quartz Range**	**2.89**	**269**	P		**Pn**	**16 20 33.3**	**+1.8**
QRZ	**Quartz Range**	**2.89**	**269**	P		**Pn**	**16 20 33.5**	**+2.0**
RUGZ	**Raukumara Rang**	**3.04**	**20**	P		**Pn**	**16 20 33.0**	**-0.7**
LTZ	**Lake Taylor**	**3.61**	**236**	P		**Pn**	**16 20 41.2**	**-0.3**

*NEIC **21** 17:22:35.5±1.7, 47°.57N±0°.04×92°.56W±0°.06, h0km±2km, mb_Lg2.8/29, ML3.0/18, Error ellipse: s-maj=7.7km s-min=6.9km az=177.0*

*IDC **21** 17:22:37.7±3.2, 47°.44N×92°.98W, h0km, mbtmp2.6/2, ML0.8/1, Error ellipse: s-maj=63.0km s-min=17.1km az=71.0*

ISC 21 17:22:32.8±0.9, **47°.38N**±0°.04×**92°.60W**±0°.04, **h0**km, **n28, σ2s26/24, Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.94**	**53**		**Pb**	**17 22 50.7**	**-1.2**
EYMN				IAML		17 23 05.0	
	557nm,0.8s						
E38A	**The Farm, Brul**	**1.06**	**137**		**Pn**	**17 22 56.5**	**+1.6**
E38A				IAML		17 23 22.9	
	297nm,0.5s						
SPMN	**Marine on St.**	**2.16**	**184**		**Pg**	**17 23 14.5**	**+0.3**
SPMN				IAmb_Lg		17 23 48.7	
	comp=Z,53nm,0.8s						
AGMN	**Agassiz Nation**	**2.38**	**294**		**Pn**	**17 23 13.6**	**+0.5**
AGMN				IAML		17 23 47.6	
	comp=Z,165nm,0.7s						
AGMN				IAML		17 23 49.8	
	comp=Z,129nm,0.6s						
EPLO	**Experimental L**	**2.41**	**342**		**Pn**	**17 23 14.1**	**+0.6**
TBO	**Thunder Bay**	**2.49**	**58**		**Pn**	**17 23 14.3**	**-0.2**
TBO				IAML		17 23 50.5	
	comp=N,92nm,0.8s						
TBO				IAmb_Lg		17 23 55.1	
	comp=Z,46nm,1.1s						
TBO				IAML		17 24 02.1	
	comp=E,90nm,1.2s						
G40A	**Rib Lake**	**2.69**	**141**		**Pb**	**17 23 21.1**	**-0.7**
G40A				IAML		17 24 04.7	
	comp=E,33nm,0.7s						
G40A				IAML		17 24 15.2	
	comp=E,38nm,0.4s						
F33A	**5 Mile Ranch,**	**2.98**	**240**		**Pb**	**17 23 25.4**	**-1.2**
I37A	**Lemond, Waseca**	**3.42**	**190**		**Pb**	**17 23 32.5**	**-1.6**
I37A				IAmb_Lg		17 24 29.5	
	comp=Z,23nm,0.7s						
ULM	**Lac du Bonnet**	**3.59**	**324**	Pn	**Pb**	**17 23 30.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=137,slow=18,SNR=1.5						
ULM				Pg	**Pb**	**17 23 38.7**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=144,slow=16,SNR=11						
ULM				Sn	**Sn**	**17 24 09.1**	**-3.7**
	comp=Z,0.7nm,0.3s,baz=110,slow=19,SNR=5.6						
ULM				Lg	Lg	17 24 22.9	
	comp=Z,0.8nm,0.3s,baz=234,slow=19,SNR=4.8 comp=Z,0.6nm,0.4s						
ULM	**Lac du Bonnet**	**3.59**	**324**		**Pn**	**17 23 29.8**	**+0.1**
ULM				IAmb_Lg		17 24 24.9	
	comp=Z,30nm,1.1s						
ULM				IAML		17 24 25.1	
	comp=N,23nm,1.0s						
ULM				IAML		17 24 29.2	
	comp=E,22nm,1.3s						
I10CA	**LAC DU BONNET**	**3.62**	**323**	I	I	17 42 50.0	
	comp=E,0.1nm,0.8s,baz=142,slow=313,SNR=0.4						
I40A	**Norwalk**	**3.76**	**158**		**Pb**	**17 23 36.1**	**-3.9**
I42A	**Draeger Farm,**	**4.35**	**142**		**Pn**	**17 23 43.4**	**+3.3**
I42A				IAmb_Lg		17 24 54.4	
	comp=Z,17nm,0.7s						
H43A	**Windswept, Lux**	**4.46**	**129**		**Pn**	**17 23 43.9**	**+2.4**
H43A				IAmb_Lg		17 24 56.4	
	comp=Z,17nm,0.8s						
ECSD	**EROS Data Cent**	**4.61**	**219**		**Pn**	**17 23 44.6**	**+0.9**
ECSD	**EROS Data Cent**	**4.61**	**219**	IAmb_Lg		17 25 04.6	
	comp=Z,14nm,0.9s						
MDND	**Maddock**	**4.76**	**278**	Pn	**Pn**	**17 23 45.4**	**-0.3**
MDND				IAmb_Lg		17 25 13.6	
	comp=Z,16nm,0.7s						
JFWS	**Jewell Farm**	**4.77**	**159**		**Pn**	**17 23 47.7**	**+1.8**
JFWS	**Jewell Farm**	**4.77**	**159**	IAmb_Lg		17 25 10.7	
	comp=Z,24nm,0.7s						
L40A	**Anamosa**	**5.41**	**169**	Pn	**Pn**	**17 23 58.7**	**+4.0**
L40A				IAmb_Lg		17 25 29.3	
	comp=Z,18nm,0.8s						
E28A	**Huff**	**5.60**	**265**	Pn	**Pn**	**17 24 01.6**	**+4.4**
E28A				IAmb_Lg		17 25 33.6	
	comp=Z,22nm,0.8s						
L42A	**Oliver, Polo**	**5.77**	**158**	Pn	**Pn**	**17 23 58.0**	**-1.6**
L42A				IAmb_Lg		17 25 53.1	
	comp=Z,13nm,0.8s						
L34A	**Svendsen Farm,**	**6.05**	**208**	Pn	**Pn**	**17 24 01.7**	**-1.7**
N38A	**Joes South For**	**6.60**	**184**	IAmb_Lg		17 26 20.0	
	comp=Z,14nm,0.7s						
KSU1	**Kansas State U**	**8.78**	**201**	IAmb_Lg		17 27 31.9	
	comp=Z,10nm,0.9s						
I56US	**NEWPORT INFRAS**	**16.48**	**282**	I	I	19 04 50.0	
	baz=82,slow=310,SNR=4.6						
TXAR	**Lajitas Array**	**19.96**	**209**	P	**Pn**	**17 27 10.2**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=21,slow=11,SNR=1.8						

*ANF **21** 17:37:38.4±0.3, 58°.34N×133°.43W, h1km±2km, ML3.5/28, Error ellipse: s-maj=2.0km s-min=1.8km az=77.0*

*NEIC **21** 17:37:38.3±1.7, 58°.36N±0°.01×133°.46W±0°.03, h2km±5km, ML3.3/77, ML3.1(AEIC), Error ellipse: s-maj=2.8km s-min=1.6km az=124.0*

*AEIC **21** 17:37:38.6±1.2, 58°.351N±0°.007×133°.48W±0°.03, h1km±6km, Error ellipse: s-maj=2.5km s-min=0.9km az=96.0*

*PGC **21** 17:37:39.4, 58°.33N×133°.47W, h1km, ML3.5/16, ML3.3(NEIC), 54km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 21 17:37:37.8±1.1, **58°.35N**±0°.02×**133°.45W**±0°.02, **h1**km±10km, **n136, σ1s22/170, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIS	**Juneau Island**	**0.50**	**261**	P	**Pg**	**17 37 47.5**	**+0.2**
JIS	**Juneau Island**	**0.50**	**261**	S	**Sg**	**17 37 54.4**	**+0.7**
JIS	**Juneau Island**	**0.50**	**261**		**Pg**	**17 37 48.0**	**+0.7**
JIS					**Sg**	**17 37 54.5**	**+0.7**
R32K	**Eaglecrest**	**0.57**	**262**		**Pg**	**17 37 48.4**	**-0.3**
R32K				Sg	**Sg**	**17 37 56.1**	**+0.1**
R32K	**Eaglecrest**	**0.57**	**262**	P	**Pg**	**17 37 49.1**	**+0.5**
	baz=82,SNR=34						
R32K				S	**Sg**	**17 37 56.5**	**+0.4**
	baz=82						
BESE	**Bessie Mountai**	**0.77**	**288**	P	**Pg**	**17 37 52.6**	**+0.1**
BESE	**Bessie Mountai**	**0.77**	**288**		**Pg**	**17 37 52.4**	**-0.2**
BESE				Sg	**Sg**	**17 38 01.5**	**-1.1**
Q32M	**Nakina River**	**0.87**	**45**	P	**Pg**	**17 37 55.0**	**+0.6**
Q32M	**Nakina River**	**0.87**	**45**		**Pg**	**17 37 54.2**	**-0.2**
Q32M	**Nakina River**	**0.87**	**45**		**Sn**	**17 38 09.7**	**-1.1**
Q32M	**Nakina River**	**0.87**	**45**	IAML		17 38 16.0	
	comp=N,404nm,1.4s						
Q32M				IAML		17 38 19.3	
	comp=E,361nm,1.5s						
Q32M	**Nakina River**	**0.87**	**45**	P	**Pg**	**17 37 55.2**	**+0.8**
	baz=226,SNR=106						
Q32M				S	**Sg**	**17 38 05.8**	**+0.2**
	baz=226						
S32K	**Killisnoo**	**1.07**	**215**		**Pg**	**17 37 58.2**	**-0.1**
S32K				Sg	**Sb**	**17 38 13.3**	**-0.2**
S32K	**Killisnoo**	**1.07**	**215**	P	**Pg**	**17 37 58.6**	**+0.3**
	baz=33,SNR=58						
S32K				S	**Sn**	**17 38 13.9**	**-1.5**
	baz=33						
R31K	**City Hall, Gus**	**1.21**	**274**	S	**Sn**	**17 38 17.9**	**-0.8**
	baz=92						
P32M	**Atlin**	**1.25**	**354**	P	**Pn**	**17 38 01.5**	**-0.9**
P32M				S	**Sn**	**17 38 19.6**	**-0.3**
P32M	**Atlin**	**1.25**	**354**		**Pn**	**17 38 01.4**	**-1.0**
P32M				Sg	**Sn**	**17 38 19.2**	**-0.8**
P32M	**Atlin**	**1.25**	**354**	P	**Pn**	**17 38 01.8**	**-0.7**
	baz=174,SNR=125						
P32M				S	**Sn**	**17 38 19.4**	**-0.5**
	baz=174						
S34M	**Telegraph Cree**	**1.31**	**109**	P	**Pn**	**17 38 02.6**	**-0.5**
S34M				S	**Sg**	**17 38 20.8**	**+1.1**
S34M	**Telegraph Cree**	**1.31**	**109**		**Pn**	**17 38 02.4**	**-0.8**
S34M				Sg	**Sn**	**17 38 20.1**	**-1.1**
S34M				IAML		17 38 26.1	
	comp=E,686nm,0.9s						
S34M				IAML		17 38 28.8	
	comp=N,486nm,1.1s						
S34M	**Telegraph Cree**	**1.31**	**109**	P	**Pn**	**17 38 02.8**	**-0.4**
	baz=290						
S34M				S	**Sg**	**17 38 21.2**	**+1.5**
	baz=290						
SKAG	**Skagway**	**1.48**	**319**	P	**Pb**	**17 38 05.6**	**-0.5**
SKAG	**Skagway**	**1.48**	**319**		**Pn**	**17 38 05.4**	**-0.1**
SKAG				Sg	**Sn**	**17 38 24.6**	**-0.9**
SKAG				IAML		17 38 34.5	
	comp=E,342nm,1.0s						
SKAG	**Skagway**	**1.48**	**319**	P	**Pb**	**17 38 05.5**	**-0.5**
	baz=138,SNR=71						
SKAG				S	**Sg**	**17 38 25.6**	**+0.4**
	baz=138						
S31K	**Pelican**	**1.53**	**256**		**Pn**	**17 38 05.7**	**-0.5**
S31K	**Pelican**	**1.53**	**256**		**Sg**	**17 38 26.9**	**+0.1**
S31K	**Pelican**	**1.53**	**256**	IAML		17 38 33.8	
	comp=E,202nm,0.8s						
S31K				IAML		17 38 34.7	
	comp=N,172nm,1.1s						
S31K	**Pelican**	**1.53**	**256**	P	**Pn**	**17 38 05.9**	**-0.2**
	baz=74						
S31K				S	**Sg**	**17 38 26.9**	**+0.1**
	baz=74						
T33K	**Petersburg**	**1.57**	**170**	S	**Sb**	**17 38 27.5**	**-0.3**
T33K	**Petersburg**	**1.57**	**170**		**Pb**	**17 38 07.6**	**+0.1**
SIT	**Sitka**	**1.64**	**219**	P	**Pn**	**17 38 07.6**	**-0.2**
SIT	**Sitka**	**1.64**	**219**	S	**Sb**	**17 38 29.8**	**-0.2**
SIT	**Sitka**	**1.64**	**219**		**Pn**	**17 38 07.5**	**-0.2**
SIT				IAML		17 38 37.4	
	comp=N,243nm,1.1s						
SIT	**Sitka**	**1.64**	**219**	P	**Pn**	**17 38 07.8**	**+0.1**
	baz=37						
SIT				S	**Sb**	**17 38 29.8**	**-0.2**
	baz=37						
R33M	**Jennings River**	**1.66**	**50**	P	**Pb**	**17 38 08.9**	**-0.3**
R33M	**Jennings River**	**1.66**	**50**		**Pn**	**17 38 08.3**	**+0.1**
R33M				IAML		17 38 35.3	
	comp=N,389nm,0.8s						
R33M				IAML		17 38 36.9	
	comp=E,333nm,0.8s						
R33M	**Jennings River**	**1.66**	**50**	P	**Pn**	**17 38 08.1**	**-0.1**
	baz=232,SNR=105						
R33M				S	**Sg**	**17 38 31.5**	**+0.5**
	baz=232						
DLBC	**Dease Lake**	**1.80**	**86**	Pn	**Pb**	**17 38 11.1**	**-0.6**
DLBC	**Dease Lake**	**1.80**	**86**		**Pb**	**17 38 10.8**	**-0.8**
DLBC	**Dease Lake**	**1.80**	**86**	P	**Pn**	**17 38 10.4**	**+0.3**
	baz=269,SNR=115						
DLBC				S	**Sb**	**17 38 35.0**	**+0.3**
	baz=269						
PLBC	**Pleasant Camp**	**1.87**	**307**	Pn	**Pn**	**17 38 11.5**	**+0.6**
PLBC	**Pleasant Camp**	**1.87**	**307**		**Pb**	**17 38 12.0**	**-0.8**
PLBC	**Pleasant Camp**	**1.87**	**307**	P	**Pb**	**17 38 12.0**	**-0.8**
	baz=125,SNR=100						
PLBC				S	**Sb**	**17 38 36.2**	**-0.5**
	baz=125						
P33M	**Teslin, Yukon**	**1.89**	**10**	Pn	**Pb**	**17 38 12.1**	**-1.1**
P33M				Sn	**Sb**	**17 38 36.5**	**-0.9**
P33M	**Teslin, Yukon**	**1.89**	**10**		**Pn**	**17 38 11.5**	**+0.2**
P33M	**Teslin, Yukon**	**1.89**	**10**	P	**Pb**	**17 38 12.0**	**-1.1**
	baz=191,SNR=85						
P33M				S	**Sb**	**17 38 36.2**	**-1.1**
	baz=191						
WRAK	**Wrangell Islan**	**2.03**	**162**	Pn	**Pn**	**17 38 13.5**	**+0.4**
WRAK	**Wrangell Islan**	**2.03**	**162**		**Pn**	**17 38 13.2**	**+0.1**
WRAK				IAML		17 38 44.6	
	comp=E,171nm,0.8s						
WRAK				IAML		17 38 48.4	
	comp=E,253nm,0.6s						
WRAK	**Wrangell Islan**	**2.03**	**162**	P	**Pn**	**17 38 13.3**	**+0.3**
	baz=343,SNR=18						
WRAK				S	**Sb**	**17 38 40.6**	**-0.6**
	baz=343						
T35M	**Bob Quinn**	**2.20**	**127**	Pn	**Pb**	**17 38 17.1**	**-1.3**
T35M	**Bob Quinn**	**2.20**	**127**		**Pn**	**17 38 15.8**	**+0.3**
T35M				IAML		17 38 52.9	
	comp=N,221nm,0.8s						
T35M	**Bob Quinn**	**2.20**	**127**	P	**Pn**	**17 38 15.9**	**+0.3**
	baz=310,SNR=51						
T35M				Sb	**Sg**	**17 38 48.5**	**0.0**
	baz=310						
U33K	**Whale Pass**	**2.25**	**175**		**Pn**	**17 38 16.0**	**-0.2**
U33K				IAML		17 38 55.5	
	comp=E,212nm,1.2s						
U33K	**Whale Pass**	**2.25**	**175**	P	**Pn**	**17 38 16.2**	**0.0**
	baz=355						
U33K				S	**Sb**	**17 38 45.5**	**-2.0**
	baz=355						
WHY	**Whitehorse**	**2.43**	**343**	Pn	**Pn**	**17 38 19.7**	**+1.0**
WHY	**Whitehorse**	**2.43**	**343**		**Pn**	**17 38 19.2**	**+0.5**
WHY				IAML		17 38 58.1	
	comp=E,195nm,0.8s						
WHY				IAML		17 39 06.4	
	comp=N,154nm,1.2s						
WHY	**Whitehorse**	**2.43**	**343**	P	**Pn**	**17 38 18.8**	**+0.1**
	baz=162,SNR=6.7						
WHY				S	**Sn**	**17 38 49.6**	**+0.6**
	baz=162						
P30M	**Million Dollar**	**2.53**	**316**	Pn	**Pn**	**17 38 20.8**	**+0.7**
P30M	**Million Dollar**	**2.53**	**316**		**Pn**	**17 38 21.0**	**+1.0**
P30M	**Million Dollar**	**2.53**	**316**	IAML		17 39 01.0	
	comp=E,126nm,0.9s						
P30M				IAML		17 39 10.4	
	comp=N,142nm,1.1s						
P30M	**Million Dollar**	**2.53**	**316**	P	**Pn**	**17 38 21.4**	**+1.4**
	baz=133,SNR=39						
P30M				Sb	**Sb**	**17 38 57.0**	**+1.4**
	baz=133						
P29M	**Windy Craggy**	**2.56**	**302**		**Pn**	**17 38 20.8**	**+0.4**
P29M				IAML		17 39 02.8	
	comp=E,109nm,0.8s						
P29M	**Windy Craggy**	**2.56**	**302**	P	**Pn**	**17 38 21.3**	**+0.8**
	baz=118,SNR=12						
P29M				Sb	**Sg**	**17 38 58.6**	**-1.4**
	baz=118						
O30N	**Mendenhall**	**2.77**	**332**	Pn	**Pn**	**17 38 24.6**	**+1.2**
O30N	**Mendenhall**	**2.77**	**332**		**Pn**	**17 38 23.8**	**+0.4**
O30N				IAML		17 39 12.1	
	comp=N,120nm,0.8s						
O30N	**Mendenhall**	**2.77**	**332**	P	**Pn**	**17 38 24.3**	**+0.9**
	baz=150,SNR=22						
O30N				Sb	**Sb**	**17 39 04.7**	**+2.1**
	baz=150						
N32M	**Quiet Lake**	**2.81**	**4**	Pn	**Pn**	**17 38 25.7**	**+1.8**
N32M	**Quiet Lake**	**2.81**	**4**	P	**Pn**	**17 38 25.1**	**+1.2**
	baz=184						
CRAG	**Craig**	**2.90**	**176**	P	**Pn**	**17 38 25.6**	**+0.6**
CRAG	**Craig**	**2.90**	**176**	Pn	**Pn**	**17 38 25.2**	**+0.2**
CRAG				IAML		17 39 14.9	
	comp=N,78nm,1.0s						
CRAG				IAML		17 39 21.0	
	comp=E,82nm,1.0s						
CRAG	**Craig**	**2.90**	**176**	S	**Sn**	**17 39 01.4**	**+1.0**
	baz=356						
WTLY	**Watson Lake, Y**	**2.97**	**52**		**Pn**	**17 38 26.9**	**+0.8**
U35K	**Hyder**	**3.08**	**141**	Pn	**Pn**	**17 38 27.6**	**+0.2**
U35K	**Hyder**	**3.08**	**141**	Sb	**Sg**	**17 39 14.5**	**-2.0**
	baz=324						
V35K	**Ketchikan**	**3.20**	**161**		**Pn**	**17 38 29.2**	**+0.1**
V35K				IAML		17 39 28.3	
	comp=E,62nm,0.8s						
V35K				IAML		17 39 31.1	
	comp=N,59nm,1.0s						
V35K	**Ketchikan**	**3.20**	**161**	S	**Sn**	**17 39 09.1**	**+1.3**
	baz=342						
HYT	**Haines Junctio**	**3.22**	**322**	Pn	**Pn**	**17 38 31.4**	**+1.7**
HYT	**Haines Junctio**	**3.22**	**322**		**Pn**	**17 38 29.9**	**+0.2**
HYT				IAML		17 39 29.2	
	comp=N,92nm,1.0s						
HYT				IAML		17 39 31.2	
	comp=E,90nm,1.2s						
HYT	**Haines Junctio**	**3.22**	**322**	P	**Pn**	**17 38 31.3**	**+1.7**
	baz=139,SNR=9.3						
HYT				Sb	**Sg**	**17 39 19.0**	**-2.2**
	baz=139						
O29M	**Mount Kennedy**	**3.27**	**309**	Sg	**Sg**	**17 39 21.1**	**-1.8**
O29M	**Mount Kennedy**	**3.27**	**309**		**Pn**	**17 38 29.6**	**-0.7**
O29M				IAML		17 39 27.1	
	comp=E,101nm,0.8s						
O29M				IAML		17 39 30.7	
	comp=N,101nm,0.8s						
O29M	**Mount Kennedy**	**3.27**	**309**	Pb	**Pb**	**17 38 36.6**	**-0.1**
	baz=125,SNR=38						
O29M				Sb	**Sg**	**17 39 20.4**	**-2.5**
	baz=125						
N31M	**Braeburn, Yuko**	**3.35**	**341**	Pn	**Pn**	**17 38 32.6**	**+1.3**
N31M				Sg	**Sg**	**17 39 24.3**	**-1.2**
N31M	**Braeburn, Yuko**	**3.35**	**341**		**Pn**	**17 38 32.1**	**+0.7**
N31M	**Braeburn, Yuko**	**3.35**	**341**	P	**Pn**	**17 38 32.4**	**+1.1**
	baz=159,SNR=13						
N31M				Sg	**Sg**	**17 39 28.1**	**+2.7**
	baz=159						
YUK5	**Granite Creek**	**3.57**	**323**	Pn	**Pn**	**17 38 35.8**	**+1.4**
YUK5				Sg	**Sg**	**17 39 30.3**	**-2.1**
YUK6	**Outpost Mounta**	**3.60**	**318**	Sg	**Sg**	**17 39 36.5**	**+3.2**
	baz=134						
N30M	**Aishikik Lake**	**3.61**	**331**	Pn	**Pn**	**17 38 36.3**	**+1.3**
N30M				Sg	**Sg**	**17 39 30.8**	**-3.0**
N30M	**Aishikik Lake**	**3.61**	**331**		**Pn**	**17 38 36.0**	**+1.0**
N30M				IAML		17 39 39.0	
	comp=N,74nm,0.7s						
N30M				IAML		17 39 45.8	
	comp=E,79nm,1.4s						
N30M	**Aishikik Lake**	**3.61**	**331**	P	**Pn**	**17 38 36.2**	**+1.3**
	baz=148,SNR=14						
N30M				Sb	**Sb**	**17 39 30.0**	**+3.2**
	baz=148						
PCA	**Pinnacle**	**3.91**	**299**		**Pn**	**17 38 39.3**	**+0.3**
PCA				IAML		17 39 43.9	
	comp=N,68nm,0.7s						
YUK4	**Talbot Arm**	**3.98**	**321**	Pn	**Pn**	**17 38 42.2**	**+2.0**
YUK4	**Talbot Arm**	**3.98**	**321**	P	**Pn**	**17 38 41.9**	**+1.8**
	baz=138,SNR=8.7						
O28M	**Mount Upton**	**4.20**	**308**		**Pn**	**17 38 45.5**	**+2.3**
O28M				IAML		17 40 01.6	
	comp=E,43nm,1.0s						
O28M	**Mount Upton**	**4.20**	**308**	Pb	**Pb**	**17 38 52.8**	**+0.2**
	baz=122,SNR=7.4						
MMPY	**Sheldon Lake,**	**4.41**	**13**		**Pn**	**17 38 47.6**	**+1.6**
MMPY				IAML		17 40 09.1	
	comp=E,43nm,1.2s						
MMPY				IAML		17 40 16.3	
	comp=N,29nm,1.2s						
M30M	**Minto, Yukon**	**4.55**	**340**	Pn	**Pn**	**17 38 48.8**	**+1.0**
M30M	**Minto, Yukon**	**4.55**	**340**		**Pn**	**17 38 48.2**	**+0.5**
M30M				IAML		17 40 13.9	
	comp=N,36nm,1.2s						
M30M	**Minto, Yukon**	**4.55**	**340**	P	**Pn**	**17 38 48.6**	**+0.8**
	baz=157,SNR=8.2						
LOGN	**Logan Glacier**	**4.57**	**306**		**Pn**	**17 38 50.1**	**+2.0**
LOGN				IAML		17 40 21.1	
	comp=E,28nm,1.3s						
M29M	**Somme Creek**	**4.80**	**331**	Pn	**Pn**	**17 38 52.4**	**+1.2**
M29M				Sg	**Sg**	**17 40 06.8**	**-5.0**
M29M	**Somme Creek**	**4.80**	**331**		**Pn**	**17 38 52.2**	**+1.0**
M29M	**Somme Creek**	**4.80**	**331**	P	**Pn**	**17 38 52.3**	**+1.2**
	baz=147						
GRNC	**Granite Creek**	**4.85**	**303**	Pn	**Pn**	**17 38 51.9**	**-0.1**
GRNC				IAML		17 40 18.3	
	comp=E,16nm,2.3s						
GRNC				IAML		17 40 52.5	
	comp=N,28nm,1.5s						
BARN	**Barnard Glacie**	**4.96**	**307**		**Pn**	**17 38 55.7**	**+2.1**
BARN				IAML		17 40 25.4	
	comp=E,15nm,1.4s						
DIB	**Dawson Inlet,**	**5.19**	**174**	Pn	**Pn**	**17 38 56.7**	**+0.1**
DIB				IAML		17 40 16.8	
	comp=N,23nm,3.7s						
DIB				IAML		17 41 05.6	
	comp=E,22nm,3.9s						
MOBC	**Moresby Island**	**5.29**	**170**	Pn	**Pn**	**17 38 58.1**	**+0.2**
L29M	**L29M**	**5.29**	**336**		**Pn**	**17 38 58.2**	**+0.2**
L29M	**L29M**	**5.29**	**336**	P	**Pn**	**17 38 58.7**	**+0.8**
	baz=152						
TGL	**Tana Glacier**	**5.34**	**301**		**Pn**	**17 38 58.7**	**-0.1**
TGL				IAML		17 39 49.6	
	comp=E,17nm,2.9s						
TGL				IAML		17 40 44.8	
	comp=N,18nm,3.3s						
MCARA	**McCarthy VSAT**	**5.70**	**306**		**Pn**	**17 39 05.5**	**+2.0**
M27K	**Edge Creek, AK**	**5.80**	**317**		**Pn**	**17 39 06.4**	**+1.4**
K29M	**Barlow Dome**	**5.85**	**342**		**Pn**	**17 39 06.1**	**+0.4**
KAIM	**Kayak Island**	**5.86**	**290**	Pn	**Pn**	**17 39 06.6**	**+0.9**
HG4B	**Hotspring**	**6.21**	**167**	Pn	**Pn**	**17 39 11.3**	**+0.8**
BCAR	**Beaver Creek A**	**6.25**	**323**		**Pn**	**17 39 12.6**	**+1.5**
L27K	**Beaver Creek,**	**6.26**	**323**		**Pn**	**17 39 11.5**	**+0.3**
J30M	**Hart River**	**6.39**	**349**		**Pn**	**17 39 14.0**	**+0.8**
J30M	**Hart River**	**6.39**	**349**	P	**Pn**	**17 39 14.7**	**+1.6**
	baz=166,SNR=16						
KLU	**Klutina**	**7.01**	**302**		**Pn**	**17 39 23.5**	**+1.9**
I30M	**Mount Dempster**	**7.03**	**350**		**Pn**	**17 39 24.3**	**+2.4**
I30M	**Mount Dempster**	**7.03**	**350**	P	**Pn**	**17 39 24.2**	**+2.4**
	baz=167,SNR=40						
H31M	**Peel River**	**7.49**	**357**		**Pn**	**17 39 27.4**	**-0.7**
H31M	**Peel River**	**7.49**	**357**	P	**Pn**	**17 39 29.8**	**+1.8**
	baz=176,SNR=11						
I28M	**Miner Creek**	**7.75**	**340**		**Pn**	**17 39 31.2**	**-0.5**
EPYK	**Eagle Plains**	**8.19**	**351**	P	**Pn**	**17 39 38.4**	**+0.8**
	baz=168,SNR=11						
H29M	**Whitestone**	**8.22**	**346**	P	**Pn**	**17 39 39.4**	**+1.4**
	baz=162						
I26K	**Coal Creek Min**	**8.34**	**331**	P	**Pn**	**17 39 40.8**	**+1.1**
	baz=142,SNR=7.8						
G31M	**Satah River**	**8.61**	**358**		**Pn**	**17 39 42.4**	**-0.9**
G31M	**Satah River**	**8.61**	**358**	P	**Pn**	**17 39 44.3**	**+1.0**
	baz=177,SNR=8.9						
H27K	**Steamboat Moun**	**8.75**	**338**	P	**Pn**	**17 39 47.0**	**+1.7**
	baz=151						
G30M	**tAoh Zraii Nji**	**8.75**	**353**	P	**Pn**	**17 39 47.8**	**+2.4**
	baz=170						
G29M	**Pine Creek**	**8.84**	**348**	P	**Pn**	**17 39 47.9**	**+1.3**
	baz=164						
F30M	**Barrier River**	**9.35**	**354**	P	**Pn**	**17 39 54.7**	**+1.2**
	baz=172,SNR=7.5						
L22K	**Petersville**	**9.52**	**303**	P	**Pn**	**17 39 57.9**	**+2.0**
	baz=108						
E29M	**Blow River**	**10.27**	**351**	P	**Pn**	**17 40 07.5**	**+1.5**
	baz=167						

*IDC **21** 17:44:14.2±

H08S1	**Diego Carcia H**	**28.62**	**258**	T	T	18 19 29.7		
	baz=81,slow=75,SNR=3.1							
WRA	**Warramunga Arr**	**37.21**	**121**	P	**P**	**17 51 28.9**	**-0.1**	
	comp=Z,0.5nm,0.5s,baz=303,slow=9.1,SNR=8.0							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**37.21**	**121**	P	**P**	**17 51 28.6**	**-0.4**	
WR8	**Warramunga Arr**	**37.36**	**120**	P	**P**	**17 51 29.5**	**-0.7**	
AS31	**Alice Springs**	**38.48**	**126**	P	**P**	**17 51 40.1**	**+0.4**	
ASAR	**Alice Springs**	**38.48**	**126**	P	**P**	**17 51 40.2**	**+0.5**	
	comp=Z,1.2nm,0.6s,baz=302,slow=7.9,SNR=38							
ASAR				PcP	**PcP**	**17 53 52.4**	**+0.3**	
	comp=Z,0.3nm,0.6s,baz=311,slow=2.4,SNR=4.1							
	comp=Z,1.2nm,0.6s							
ASAR	**Alice Springs**	**38.48**	**126**	P	**P**	**17 51 39.5**	**-0.2**	
MSEY	**Mahe Island**	**45.21**	**266**	P	**P**	**17 52 33.8**	**-0.9**	
INKA	**Innaminka**	**45.83**	**127**	P	**P**	**17 52 40.6**	**+1.1**	
INKA				IAmb	IAmb	17 53 15.1		
	comp=Z,4.0nm,1.4s							
CTAO	**Charters Tower**	**47.81**	**115**	P	**P**	**17 52 54.5**	**-0.6**	
STKA	**Stephens Creek**	**48.40**	**132**	P	**P**	**17 52 59.2**	**-0.3**	
	comp=Z,0.4nm,0.3s,baz=315,slow=10.0,SNR=1.4							
	comp=Z,0.4nm,0.3s							
PDGK	**Podgornoye**	**49.30**	**340**	P	**P**	**17 53 06.6**	**+0.3**	
SONM	**Songino Array**	**50.20**	**5**	P	**P**	**17 53 12.8**	**-0.2**	
	comp=Z,0.3nm,0.4s,baz=186,slow=7.2,SNR=2.1							
	comp=Z,0.3nm,0.4s							
SONM	**Songino Array**	**50.20**	**5**	P	**P**	**17 53 13.0**	**0.0**	
SONM				IAmb	IAmb	17 53 35.9		
	comp=Z,3.4nm,1.4s							
MKAR	**Makanchi Array**	**51.53**	**344**	P	**P**	**17 53 23.2**	**+0.3**	
	comp=Z,2.2nm,0.6s,baz=154,slow=8.0,SNR=26							
	comp=Z,2.2nm,0.6s							
MKAR	**Makanchi Array**	**51.53**	**344**	P	**P**	**17 53 22.7**	**-0.2**	
KURBB	**Kurchatov Array**	**56.06**	**343**	P	**P**	**17 53 55.7**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=166,slow=7.0,SNR=6.8							
	comp=Z,0.5nm,0.6s							
KURK	**Kurchatov**	**56.12**	**343**	P	**P**	**17 53 55.7**	**-0.6**	
KURK	**Kurchatov**	**56.12**	**343**	IAmb	IAmb	17 53 57.7		
	comp=Z,2.3nm,1.1s							
ZAA0	**Zalesovo Array**	**57.62**	**349**	P	**P**	**17 54 06.1**	**-0.7**	
ZALV	**Zalesovo Beam**	**57.62**	**349**	P	**P**	**17 54 06.7**	**-0.2**	
	comp=Z,0.9nm,0.3s,baz=145,slow=5.4,SNR=12							
	comp=Z,0.9nm,0.3s							
ZALV	**Zalesovo Beam**	**57.62**	**349**	P	**P**	**17 54 06.4**	**-0.5**	
BVAR	**Borovoye Array**	**60.73**	**340**	P	**P**	**17 54 27.4**	**-1.0**	
	comp=Z,0.7nm,0.5s,baz=130,slow=8.4,SNR=4.1							
	comp=Z,0.7nm,0.5s							
AB31	**Akbulak array**	**62.27**	**331**	P	**P**	**17 54 38.9**	**+0.1**	
AB31				IAmb	IAmb	17 54 39.5		
	comp=Z,0.9nm,0.8s							
ABKAR	**Akbulak array**	**62.27**	**331**	P	**P**	**17 54 38.6**	**-0.2**	
ARCES	**ARCESS Array B**	**87.02**	**340**	P	**P**	**17 57 00.6**	**-1.2**	
	comp=Z,1.0nm,0.9s,baz=92,slow=3.8,SNR=4.6							
	comp=Z,1.0nm,0.9s							
ARCES	**ARCESS Array B**	**87.02**	**340**	P	**P**	**17 57 02.3**	**+0.5**	
ARCES				IAmb	IAmb	17 57 40.0		
	comp=Z,4.0nm,1.2s							
TXAR	**Lajitas Array**	**144.52**	**38**	PKP	**PKPdf**	**18 03 53.1**	**-0.8**	
	comp=Z,0.6nm,0.7s,baz=327,slow=1.7,SNR=9.0							

*JMA **21** 18:00:13.5±0.2,24˚N±1˚×122˚3E±0˚.3, h75km±2km, MV2.3/12, TAIWAN REGION*
*TAP **21** 18:00:13.4,24˚.56N×122˚.28E, h77km, ML3.1, C*
ISC 21 18:00:13.1±1.2,24˚.57N±0˚.03×122˚.29E±0˚.02, h79km±5km, n130, σ1§10/235, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.16**	**200**	P	**Pn**	**18 00 25.3**	**+0.8**
EOS2				*e*S	**Sn**	**18 00 34.3**	**+1.4**
EOS3	**EOS3**	**0.28**	**176**	P	**Pn**	**18 00 25.9**	**+0.9**
EOS3				*e*S	**Sn**	**18 00 34.1**	**+0.3**
TWC	**Suao**	**0.41**	**275**	P	**Pn**	**18 00 25.9**	**-0.1**
TWC				S	**Sn**	**18 00 34.2**	**-1.4**
ESAO	**Su ao**	**0.41**	**271**	P	**Pn**	**18 00 26.1**	**+0.1**
ESAO				S	**Sn**	**18 00 35.0**	**-0.6**
EOS4	**EOS4**	**0.45**	**177**	*e*P	**Pn**	**18 00 26.2**	**+0.3**
EOS4				S	**Sn**	**18 00 35.6**	**+0.2**
EWUT	**Wuta**	**0.49**	**255**	*i* P	**Pn**	**18 00 26.7**	**+0.1**
EWUT				S	**Sn**	**18 00 36.5**	**-0.1**
TWB1	**Santiao Chiao**	**0.52**	**328**	P	**Pn**	**18 00 26.9**	**-0.1**
TWB1				S	**Sn**	**18 00 36.6**	**-0.5**
ENA	**Nanau**	**0.52**	**254**	*i* P	**Pn**	**18 00 25.5**	**-1.4**
ENA				S	**Sn**	**18 00 35.7**	**-1.5**
NDS	**Dongshan**	**0.53**	**277**	P	**Pn**	**18 00 27.3**	**+0.2**
NDS				S	**Sn**	**18 00 36.6**	**-0.8**
ILA	**Ilan**	**0.53**	**291**	P	**Pn**	**18 00 27.5**	**+0.4**
ILA				S	**Sn**	**18 00 37.4**	**0.0**
EAHA	**Aohua**	**0.56**	**245**	P	**Pn**	**18 00 27.4**	**+0.1**
EAHA				S	**Sn**	**18 00 37.5**	**-0.3**
TIPB	**Shuangxi**	**0.58**	**313**	P	**Pn**	**18 00 27.6**	**0.0**
TIPB				S	**Sn**	**18 00 37.7**	**-0.6**
TWE	**Neicheng**	**0.59**	**285**	*i* P	**Pn**	**18 00 27.9**	**+0.3**
TWE				S	**Sn**	**18 00 38.3**	**0.0**
JYNG	**Yonagunijimaku**	**0.60**	**101**	P	**Pn**	**18 00 28.0**	**+0.3**
JYNG				*e*S	**Sn**	**18 00 38.6**	**0.0**
SXI1	**Grass Mountain**	**0.65**	**324**	P	**Pn**	**18 00 28.5**	**+0.3**
SXI1				S	**Sn**	**18 00 39.4**	**0.0**
YOJ	**Yonaguni jima**	**0.66**	**99**	*i* P	**Pn**	**18 00 28.5**	**+0.3**
YOJ				*i* S	**Sn**	**18 00 39.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.66**	**99**	P	**Pn**	**18 00 28.6**	**+0.3**
YOJ				*e*S	**Sn**	**18 00 39.5**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.67**	**286**	*i* P	**Pn**	**18 00 28.6**	**+0.4**
FUSB				S	**Sn**	**18 00 39.7**	**-0.2**
NWF	**Wu-fen Shan**	**0.68**	**317**	P	**Pn**	**18 00 28.9**	**+0.3**
NWF				S	**Sn**	**18 00 39.9**	**-0.2**
WFSB	**Wu-fen Shan**	**0.68**	**317**	P	**Pn**	**18 00 28.9**	**+0.3**
WFSB				*e*S	**Sn**	**18 00 39.8**	**-0.2**
LATG	**Datong**	**0.70**	**267**	*i* P	**Pn**	**18 00 29.1**	**+0.3**
LATG				S	**Sn**	**18 00 40.9**	**+0.4**
NDT	**Datong Townshi**	**0.71**	**273**	P	**Pn**	**18 00 29.6**	**+0.7**
NDT				S	**Sn**	**18 00 41.1**	**+0.6**
ETL	**Fush Village**	**0.74**	**236**	P	**Pn**	**18 00 28.8**	**-0.4**
ETL				S	**Sn**	**18 00 42.4**	**+1.3**
TNOU	**National Taiwa**	**0.75**	**321**	*i* P	**Pn**	**18 00 29.4**	**+0.2**
TNOU				S	**Sn**	**18 00 40.8**	**-0.4**
NWLT	**Wulai**	**0.75**	**286**	P	**Pn**	**18 00 29.8**	**+0.5**
NWLT				S	**Sn**	**18 00 40.8**	**-0.4**
NACB	**Ninganchiao**	**0.75**	**238**	P	**Pn**	**18 00 28.5**	**-0.7**
NACB	**Ninganchiao**	**0.75**	**238**	*i* P	**Pn**	**18 00 28.7**	**-0.5**
NACB				S	**Sn**	**18 00 40.2**	**-1.0**
TWA	**Mucha**	**0.76**	**302**	P	**Pn**	**18 00 29.6**	**+0.2**
TWA				S	**Sn**	**18 00 40.9**	**-0.7**
NHDH	**Xindian Distri**	**0.80**	**299**	P	**Pn**	**18 00 30.1**	**+0.3**
NHDH				S	**Sn**	**18 00 41.7**	**-0.5**
TWD	**Chiawan**	**0.80**	**233**	P	**Pn**	**18 00 29.6**	**-0.2**
TWD				S	**Sn**	**18 00 41.7**	**-0.5**
NHY	**Taipei**	**0.81**	**305**	P	**Pn**	**18 00 30.2**	**+0.3**
NHY				S	**Sn**	**18 00 42.4**	**+0.1**
ETLH	**Xiulin Townshi**	**0.82**	**244**	*i* P	**Pn**	**18 00 30.1**	**-0.1**
ETLH				*i* S	**Sn**	**18 00 42.2**	**-0.6**
TATO	**Taipei**	**0.84**	**299**	P	Pn	18 00 35.1	+4.9
YHNB	**Yeheng**	**0.84**	**277**	P	**Pn**	**18 00 30.9**	**+0.6**
YHNB	**Yeheng**	**0.84**	**277**	*i* P	**Pn**	**18 00 30.9**	**+0.6**
YHNB				S	**Sn**	**18 00 43.5**	**+0.4**
NNSB	**Datong**	**0.84**	**260**	P	**Pn**	**18 00 30.6**	**+0.2**
NNSB				S	**Sn**	**18 00 43.1**	**-0.1**
NNS	**Nan Shan**	**0.85**	**261**	P	**Pn**	**18 00 30.8**	**+0.3**
NNS				S	**Sn**	**18 00 43.6**	**+0.2**
TAP	**Taipei**	**0.85**	**303**	S	**Sn**	**18 00 42.6**	**-0.6**
NSK	**Sanguang**	**0.86**	**277**	*i* P	**Pn**	**18 00 31.0**	**+0.5**
NSK				S	**Sn**	**18 00 43.8**	**+0.3**
HWA	**Hwalien**	**0.86**	**227**	*i* P	**Pn**	**18 00 30.5**	**0.0**
HWA				S	**Sn**	**18 00 43.6**	**+0.2**
YM01	**YM01**	**0.87**	**311**	P	**Pn**	**18 00 30.8**	**+0.1**
YM01				S	**Sn**	**18 00 43.0**	**-0.7**
YM08	**YM08**	**0.89**	**314**	P	**Pn**	**18 00 30.8**	**0.0**
YM08				S	**Sn**	**18 00 43.0**	**-1.0**
ZUZH	**Zhuzihu**	**0.90**	**311**	*i* P	**Pn**	**18 00 31.1**	**+0.1**
ZUZH				S	**Sn**	**18 00 43.4**	**-0.9**
ANP	**Anpu**	**0.93**	**311**	P	**Pn**	**18 00 31.5**	**+0.1**
ANP				S	**Sn**	**18 00 44.0**	**-1.0**
TWY	**Chenhua**	**0.94**	**318**	*e*P	**Pn**	**18 00 31.8**	**+0.4**
TWY				S	**Sn**	**18 00 45.3**	**+0.2**
ETM	**Tongmen**	**0.95**	**231**	P	**Pn**	**18 00 31.2**	**-0.2**
ETM				S	**Sn**	**18 00 44.7**	**-0.5**
TWS1	**Kuangyinshan**	**0.95**	**304**	*e*P	**Pn**	**18 00 32.0**	**+0.4**
TWS1				S	**Sn**	**18 00 45.5**	**+0.1**
NTST	**Danshui**	**0.97**	**308**	P	**Pn**	**18 00 32.0**	**+0.3**
NTST				S	**Sn**	**18 00 45.7**	**+0.1**
LXIB	**Xiulin Townshi**	**0.97**	**236**	*i* P	**Pn**	**18 00 31.6**	**-0.3**
LXIB				S	**Sn**	**18 00 44.7**	**-1.2**
SHUL	**Shoufeng**	**1.03**	**221**	P	**Pn**	**18 00 32.3**	**-0.1**
SHUL				S	**Sn**	**18 00 46.4**	**-0.5**
WHF	**Hehuan Shan**	**1.03**	**246**	P	**Pn**	**18 00 33.1**	**+0.2**
WHF				*e*S	**Sn**	**18 00 47.1**	**-0.5**
KSHI	**Guanxi Townshi**	**1.04**	**282**	P	**Pn**	**18 00 33.5**	**+0.9**
KSHI				S	**Sn**	**18 00 48.1**	**+1.0**
TWT	**Tachien**	**1.07**	**253**	P	**Pn**	**18 00 34.0**	**+0.9**
TWT				S	**Sn**	**18 00 48.5**	**+0.4**
NFF	**Wufeng Townshi**	**1.07**	**273**	P	**Pn**	**18 00 33.8**	**+0.7**
NFF				S	**Sn**	**18 00 48.3**	**+0.4**
PCYT	**Pengchaiyu**	**1.07**	**349**	P	**Pn**	**18 00 32.7**	**-0.3**
TDCB	**Techi**	**1.08**	**253**	*i* P	**Pn**	**18 00 34.0**	**+0.8**
TDCB				S	**Sn**	**18 00 48.2**	**-0.1**
NCUH	**Zhongli**	**1.08**	**292**	P	**Pn**	**18 00 33.8**	**+0.7**
NCUH				S	**Sn**	**18 00 49.0**	**+0.9**
TEGC	**Jichi Village**	**1.10**	**219**	*e*P	**Pn**	**18 00 33.5**	**+0.2**
TEGC				*e*S	**Sn**	**18 00 48.1**	**-0.3**
LIOB	**Emei**	**1.17**	**274**	P	**Pn**	**18 00 34.9**	**+0.8**
LIOB				S	**Sn**	**18 00 50.5**	**+0.6**
NSTT	**Nanjuang**	**1.18**	**273**	P	**Pn**	**18 00 34.9**	**+0.6**
NSTT				S	**Sn**	**18 00 50.5**	**+0.3**
WARBT	**Fenglin Townsh**	**1.19**	**224**	*i* P	**Pn**	**18 00 33.7**	**-0.8**
WARBT				S	**Sn**	**18 00 48.7**	**-1.7**
OWD	**Renai**	**1.19**	**239**	*i* P	**Pn**	**18 00 34.8**	**+0.2**
OWD				S	**Sn**	**18 00 49.6**	**-1.1**
WUSB	**Renai**	**1.22**	**242**	*i* P	**Pn**	**18 00 35.5**	**+0.6**
WUSB				S	**Sn**	**18 00 51.1**	**-0.2**
HSN	**Hsinchu**	**1.23**	**281**	*e*S	**Sn**	**18 00 50.7**	**-0.5**
WHP	**Taichung City**	**1.26**	**257**	P	**Pn**	**18 00 36.9**	**+1.5**
WHP				S	**Sn**	**18 00 52.9**	**+0.7**
IRIF	**Iriomote-Funau**	**1.33**	**100**	P	**Pn**	**18 00 36.4**	**+0.2**
IRIF				*e*S	**Sn**	**18 00 53.6**	**0.0**
VWDT	**VWDT**	**1.33**	**233**	*i* P	**Pn**	**18 00 36.6**	**+0.4**
VWDT				S	**Sn**	**18 00 52.5**	**-1.1**
HGSD	**Ruisui**	**1.34**	**217**	P	**Pn**	**18 00 36.1**	**-0.2**
HGSD				S	**Sn**	**18 00 53.3**	**-0.4**
WCS	**Beigang Elemen**	**1.36**	**248**	P	**Pn**	**18 00 37.7**	**+1.2**
WCS				S	**Sn**	**18 00 55.8**	**+1.5**
NMLH	**Miaoli**	**1.37**	**269**	*e*P	**Pn**	**18 00 37.8**	**+1.1**
NMLH				*e*S	**Sn**	**18 00 55.4**	**+0.9**
EHYH	**Wanrong**	**1.38**	**219**	*e*P	**Pn**	**18 00 36.2**	**-0.6**
EHYH				*e*S	**Sn**	**18 00 52.9**	**-1.8**
EHY	**Hungye**	**1.38**	**220**	P	**Pn**	**18 00 36.2**	**-0.7**
EHY				S	**Sn**	**18 00 52.6**	**-2.3**
TWQ1	**Liyutan**	**1.40**	**261**	S	**Sn**	**18 00 56.2**	**+0.9**
SMLT	**Sun Moon Lake**	**1.45**	**242**	*e*P	**Pn**	**18 00 38.9**	**+1.1**
SMLT				*e*S	**Sn**	**18 00 58.9**	**+2.5**
SSLB	**Suanglung**	**1.45**	**238**	P	**Pn**	**18 00 38.2**	**+0.4**
SSLB	**Suanglung**	**1.45**	**238**	P	**Pn**	**18 00 38.1**	**+0.4**
SSLB				*e*S	**Sn**	**18 00 56.2**	**-0.2**
ECBN	**Changbin**	**1.47**	**212**	*e*P	**Pn**	**18 00 37.5**	**-0.5**
ECBN				S	**Sn**	**18 00 55.7**	**-1.0**
TYC	**Yuchr**	**1.47**	**243**	P	**Pn**	**18 00 39.1**	**+1.1**
TYC				*e*S	**Sn**	**18 00 57.6**	**+0.8**
HATJ	**Hateruma jima**	**1.47**	**110**	*e*P	**Pn**	**18 00 39.2**	**+1.3**
YULB	**Yu-li**	**1.49**	**218**	P	**Pn**	**18 00 37.3**	**-0.9**
YULB	**Yu-li**	**1.49**	**218**	P	**Pn**	**18 00 37.5**	**-0.8**
YULB				S	**Sn**	**18 00 55.1**	**-2.0**
WHYT	**Xinyi Township**	**1.58**	**237**	P	**Pn**	**18 00 40.6**	**+1.2**
WHYT				*e*S	**Sn**	**18 01 00.4**	**+1.0**
JKRS	**Kuro-shima**	**1.60**	**102**	*e*P	**Pn**	**18 00 40.4**	**+0.7**
JKRS				S	**Sn**	**18 01 00.5**	**+0.7**
CHKH	**Chenggong**	**1.60**	**211**	P	**Pn**	**18 00 39.4**	**-0.3**
CHKH				*e*S	**Sn**	**18 00 57.8**	**-2.0**
WJS	**Zhushan**	**1.61**	**243**	P	**Pn**	**18 00 41.8**	**+1.9**
WJS				S	**Sn**	**18 01 02.0**	**+1.9**
WNT	**Mingjian**	**1.62**	**245**	*e*P	**Pn**	**18 00 41.6**	**+1.6**
WNT				*e*S	**Sn**	**18 01 02.6**	**+2.2**
FULB	**Fuli**	**1.64**	**214**	P	**Pn**	**18 00 40.1**	**-0.3**
FULB				S	**Sn**	**18 01 00.2**	**-0.7**
WCH1	**Changhua City**	**1.67**	**253**	*e*S	**Sn**	**18 01 02.4**	**+0.9**
CHKT	**Chengkung**	**1.69**	**210**	P	**Pn**	**18 00 40.0**	**-1.0**
CHKT				*e*S	**Sn**	**18 00 59.2**	**-2.8**
JIJ	**Ishigaki jima**	**1.70**	**97**	P	**Pn**	**18 00 41.4**	**+0.4**
JIJ				S	**Sn**	**18 01 01.3**	**-0.8**
ALS	**Alishan**	**1.72**	**233**	P	**Pn**	**18 00 42.9**	**+1.3**
ALS				S	**Sn**	**18 01 03.6**	**+0.5**
EHD	**Haiduan**	**1.73**	**215**	P	**Pn**	**18 00 40.7**	**-0.8**
EHD				*e*S	**Sn**	**18 01 01.2**	**-1.8**
CHN5	**Tsauling**	**1.77**	**237**	*i* P	**Pn**	**18 00 43.5**	**+1.5**
CHN5				S	**Sn**	**18 01 05.9**	**+2.1**
ECS	**Chishang**	**1.77**	**214**	P	**Pn**	**18 00 42.5**	**+0.6**
ELDTW	**Lidau**	**1.81**	**221**	*i* P	**Pn**	**18 00 42.1**	**-0.4**
ELDTW				S	**Sn**	**18 01 03.6**	**-1.4**
WDLH	**Douliu**	**1.83**	**242**	P	**Pn**	**18 00 44.0**	**+1.3**
WDLH				*e*S	**Sn**	**18 01 07.0**	**+1.8**
JISG	**Ishigakijimahi**	**1.84**	**89**	P	**Pn**	**18 00 43.4**	**+0.6**
JISG				*e*S	**Sn**	**18 01 05.6**	**+0.3**
WRL	**Guolierlin Hig**	**1.87**	**250**	*e*S	**Sn**	**18 01 06.1**	**-0.1**
WCKO	**Fanlu**	**1.91**	**234**	P	**Pn**	**18 00 45.6**	**+1.7**
WCKO				S	**Sn**	**18 01 09.4**	**+2.2**
STYH	**Taoyuan**	**1.97**	**225**	P	**Pn**	**18 00 45.9**	**+1.3**
STYH				S	**Sn**	**18 01 09.5**	**+1.0**
CHN4	**Tsaushan**	**1.97**	**232**	P	**Pn**	**18 00 46.5**	**+1.9**
CHN4				S	**Sn**	**18 01 10.8**	**+2.1**
TPUB	**Ta-pu**	**1.98**	**231**	P	**Pn**	**18 00 46.4**	**+1.7**
TPUB	**Ta-pu**	**1.98**	**231**	P	**Pn**	**18 00 46.0**	**+1.3**
TPUB				S	**Sn**	**18 01 10.7**	**+1.9**
CHY	**Chiayi**	**2.02**	**238**	P	**Pn**	**18 00 46.8**	**+1.6**
CHY				*e*S	**Sn**	**18 01 11.6**	**+2.0**
WTP	**Ta-pu**	**2.03**	**230**	P	**Pn**	**18 00 47.1**	**+1.7**
WTP				*e*S	**Sn**	**18 01 12.1**	**+2.1**
TWGBT	**Beinan**	**2.07**	**213**	P	**Pn**	**18 00 46.0**	**0.0**
TWGBT				S	**Sn**	**18 01 09.9**	**-1.1**
TWG	**Pinlang**	**2.07**	**213**	*e*P	**Pn**	**18 00 45.5**	**-0.4**
TWG				S	**Sn**	**18 01 10.0**	**-1.0**
TWK	**Hsinying**	**2.10**	**232**	P	**Pn**	**18 00 48.3**	**+1.9**
TWK				*e*S	**Sn**	**18 01 14.2**	**+2.4**
WSF	**Szhu**	**2.11**	**244**	S	**Sn**	**18 01 12.9**	**+1.1**
CHN1	**Nanshi**	**2.12**	**230**	P	**Pn**	**18 00 48.5**	**+1.8**
CHN1				S	**Sn**	**18 01 14.7**	**+2.3**
SGST	**Jiashian**	**2.16**	**227**	P	**Pn**	**18 00 48.0**	**+0.9**
SGST				S	**Sn**	**18 01 14.5**	**+1.5**
WSL	**Shuilin Townsh**	**2.16**	**241**	P	**Pn**	**18 00 47.9**	**+0.8**
WSL				S	**Sn**	**18 01 14.0**	**+1.0**
SLGT	**Liugui**	**2.18**	**224**	S	**Sn**	**18 01 15.1**	**+1.5**
ECL	**Taimali**	**2.32**	**212**	*e*S	**Sn**	**18 01 15.2**	**-1.7**
SSD	**Sandimen**	**2.37**	**220**	P	**Pn**	**18 01 51.6**	**+1.7**
SSD				*i* S	**Sn**	**18 01 40.0**	**+2.1**
MASBT	**Mashibuluo**	**2.48**	**218**	P	**Pn**	**18 00 53.2**	**+1.9**
MASBT				S	**Sn**	**18 01 22.1**	**+1.4**
EAST	**Anshuo**	**2.55**	**212**	*e*P	**Pn**	**18 00 52.0**	**-0.4**
VWUC	**VWUC**	**2.62**	**280**	P	**Pn**	**18 00 53.3**	**0.0**
VWUC				*i* S	**Sn**	**18 01 21.9**	**-2.2**
LYUB	**Lan-yu**	**2.64**	**194**	S	**Sn**	**18 01 21.2**	**-3.4**
MATB	**Ma-tsu**	**2.64**	**307**	P	**Pn**	**18 00 53.9**	**+0.3**
MATB				S	**Sn**	**18 01 24.1**	**-0.7**
SCZT	**Fangliau**	**2.67**	**215**	*e*P	**Pn**	**18 00 56.6**	**+2.5**
PNG	**Penghu**	**2.69**	**249**	P	**Pn**	**18 00 53.6**	**-0.7**
PNG				S	**Sn**	**18 01 24.0**	**-2.0**
PHUB	**P'eng-hu**	**2.70**	**248**	P	**Pn**	**18 00 53.7**	**-0.7**
PHUB				S	**Sn**	**18 01 24.6**	**-1.6**
WDGT	**Dungji**	**2.74**	**242**	P	**Pn**	**18 00 55.3**	**+0.4**
WDGT				*e*S	**Sn**	**18 01 25.9**	**-1.2**
SMST	**Manzhou Townsh**	**2.87**	**208**	P	**Pn**	**18 00 56.9**	**+0.2**
SMST				S	**Sn**	**18 01 28.7**	**-1.5**
PTMZ	**Houxiangcun**	**2.92**	**280**	P	**Pn**	**18 00 57.6**	**+0.3**
PTMZ				S	**Sn**	**18 01 28.9**	**-2.5**
VCHM	**Qimei**	**2.95**	**243**	*e*S	**Sn**	**18 01 30.3**	**-1.9**
LYJJ	**Jianjiangzhen**	**3.02**	**311**	S	**Sn**	**18 01 33.6**	**-0.2**
KNMB	**Chin-men Tao**	**3.56**	**269**	*e*S	**Sn**	**18 01 44.0**	**-3.0**
AXDP	**Jialang**	**3.94**	**276**	S	**Sn**	**18 01 53.5**	**-2.8**

*SJA **21** 18:01:58.4±0.6,22˚.15S×68˚.57W, h136km, ML4.7, MW4.5*
*GFZ **21** 18:01:59.3±0.2,22˚S±2˚×6˚9W±˚, h142km, M4.9/14, mb5.1/14*
*GFZ **21** 18:01:59.6,22˚.27S×68˚.47W, h121km, Mw4.7/22, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr~0.14; Mθθ~0.17; Mϕϕ0.31; Mrθ0.07; Mθϕ~0.14; Mϕr~1.26; Fault plane solution: M₀1.29779×10¹⁶ NP1: ϕs133.00495°, δ7.30977°, λ~134.11854°. NP2: ϕs357.35719°, δ84.75922°, λ~84.89708°. Principal axes: T 1.3798, Plg39.5515°, Azm82.6785°; N -0.1835, Plg5.0815°, Azm176.8899°; P -1.1963, Plg49.9914°, Azm272.9713°;*

*NEIC **21** 18:02:00.5,22˚.17S×68˚.60W, h118km*
*NEIC **21** 18:02:00.1±2.1,22˚.20S±0˚.04×68˚.57W±0˚.05, h122km±4km, mb4.8/202, Mww4.9/10, Mwr4.7(GUC), Error ellipse: s-maj=7.7km s-min=5.4km az=62.0*
*GUC **21** 18:02:00.9±0.8,22˚.16S×68˚.59W, h120km±5km, ML4.6*
*IDC **21** 18:02:01.2±0.6,22˚.09S×68˚.30W, h125km±5km, mb4.2/14, mbtmp4.6/19, MS3.5/13, Error ellipse: s-maj=15.5km s-min=11.4km az=60.0*
*NEIC **21** 18:02:02,22˚.37S×68˚.70W, h130km, Moment Tensor Solution. Duration: 1§4 Moment tensor: Scale 10¹⁶Nm; Mrr0.58; Mθθ-2.26; Mϕϕ1.68; Mrθ-0.57; Mθϕ0.89; Mϕr~1.26; Fault plane solution: M₀2.62000×10¹⁶ NP1: ϕs142.20000°, δ62.89000°, λ160.13000°. NP2: ϕs241.56000°, δ72.39000°, λ28.57000°. Principal axes: T 2.7305, Plg32.0000°, Azm104.0000°; N -0.2478, Plg57.0000°, Azm271.0000°; P -2.4827, Plg6.0000°, Azm10.0000°;*
*GCMT **21** 18:02:03.1±0.4,22˚.21S±0˚.03×68˚.53W±0˚.03, h135km±5km, MW4.8/82, Moment Tensor Solution. s8,c8; s82,c94; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~0.96±.11; Mθθ0.18±.13; Mϕϕ0.78±.17; Mrθ0.12±.06; Mθϕ~0.39±.22; Mϕr~2.09±.09; Best double couple: M₀2.30500×10¹⁶ NP1:ϕs138.00000°, δ14.00000°, λ~125.00000°. NP2: ϕs354.00000°, δ78.00000°, λ~82.00000°. Principal axes: T 2.2520, Plg33.0000°, Azm77.0000°; N 0.1070, Plg8.0000°, Azm172.0000°; P -2.3590, Plg56.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **21** 18:02:03.8±0.3,21˚.95S×68˚.04W, h140km±1km, mb5.2, Presumed earthquake*
ISC 21 18:01:59.2±0.4,22˚.13S±0˚.03×68˚.45W±0˚.03, h119km±3km, h121km:pP-P, n400, σ1§87/352, mb4.8/98, 8C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.80**	**294**	*e*P	**Pn**	**18 02 20.6**	**+1.1**
PB09				IAML		18 02 39.8	
	comp=Z,16μm,0.6s						
PB09	**IPOC Station P**	**0.80**	**294**	↑*e*P	**Pn**	**18 02 20.5**	**+1.1**
PB09				*e*S	**Sn**	**18 02 35.5**	**+0.5**
PB09				IAML		18 02 36.4	
	comp=N,41μm,0.3s						
PB09	**IPOC Station P**	**0.80**	**294**		**Pn**	**18 02 20.4**	**+0.9**
PB09				Sn	**Sn**	**18 02 35.4**	**+0.5**
PB09	**IPOC Station P**	**0.80**	**294**	P	**Pn**	**18 02 20.6**	**+1.1**
AF01	**San Pedro de A**	**0.86**	**163**	*e*P	**Pn**	**18 02 21.8**	**+1.6**
AF01				IAML		18 02 52.9	
	comp=Z,38μm,0.8s						
AF01	**San Pedro de A**	**0.86**	**163**	↓*i*P	**Pn**	**18 02 21.7**	**+1.6**
AF01	**San Pedro de A**	**0.86**	**163**		**Pn**	**18 02 21.7**	**+1.5**
AF01				Sn	**Sn**	**18 02 37.4**	**+1.4**
PB06	**IPOC Station P**	**1.19**	**241**	*e*P	**Pn**	**18 02 23.3**	**+0.1**
PB06				*e*S	**Sn**	**18 02 42.1**	**+0.7**
PB06				IAML		18 02 44.3	
	comp=Z,11μm,0.5s						
PB06	**IPOC Station P**	**1.19**	**241**	↑*e*

comp=Z,2µm,1.5s
PB14 IPOC Station P 3.07 215 ⇑*e*P **Pn 18 02 45.2 -1.4**
PB14 IPOC Station P 3.07 215 *e*P **Pn 18 02 44.8 -1.8**
PB14 IPOC Station P 3.07 215 P **Pn 18 02 45.4 -1.2**
SLA San Lorenzo 3.74 134 *e*P **Pn 18 02 59.7 +4.3**
SLA San Lorenzo 3.74 134 *e*P **Pn 18 02 59.0 +3.6**
PB16 IPOC Station P 3.90 345 *e*P **Pn 18 02 59.6 +1.7**
PB16 *e*S Sn 18 03 30.0 -13
PB16 IPOC Station P 3.90 345 *e*P **Pn 18 02 59.0 +1.0**
PB16 IAML 18 03 56.6
comp=E,302nm,0.3s
PB16 IPOC Station P 3.90 345 Pn 18 02 58.5 +0.6
PB16 IPOC Station P 3.90 345 P **Pn 18 02 59.4 +1.5**
PB12 IPOC Station P 3.91 333 *e*P **Pn 18 02 56.2 -1.5**
PB12 IPOC Station P 3.91 333 Pn 18 02 56.1 -1.5
PB12 IPOC Station P 3.91 333 P **Pn 18 02 56.9 -0.7**
AP01 Chacalluta 4.14 334 *e*P **Pn 18 02 59.3 -1.2**
AP01 Chacalluta 4.14 334 Pn 18 02 59.6 -0.9
AP01 Chacalluta 4.14 334 P **Pn 18 03 04.2 +3.7**
AC01 Pan de Azucar 4.46 206 *e*P **Pn 18 03 03.1 -1.7**
AC01 *e*S **Sn 18 03 51.5 -4.4**
AC01 IAML 18 04 13.8
comp=Z,988nm,0.4s
AC01 Pan de Azucar 4.46 206 ⇑*i*P **Pn 18 03 02.4 -2.4**
AC01 Pan de Azucar 4.46 206 Pn 18 03 02.3 -2.6
AC01 Pan de Azucar 4.46 206 P **Pn 18 03 02.6 -2.2**
FSA Cafayete 4.57 151 *e*P **Pn 18 03 09.2 +2.8**
PB18 Visviri 4.62 348 Pn 18 03 10.0 +2.5
PB18 Visviri 4.62 348 P Pn 18 03 13.2 +5.7
AC02 Maricunga 4.73 187 *e*P **Pn 18 03 08.9 0.0**
AC02 *e*S **Sn 18 04 10.0 +7.0**
AC02 IAML 18 04 38.6
comp=Z,546nm,0.7s
AC02 Maricunga 4.73 187 *e*P **Pn 18 03 08.5 -0.4**
AC02 Maricunga 4.73 187 Pn 18 03 08.2 -0.7
AC02 Maricunga 4.73 187 P **Pn 18 03 08.8 -0.1**
GO03 Copiapo 5.68 196 Pn 18 03 18.2 -3.1
GO03 Copiapo 5.68 196 P **Pn 18 03 18.6 -2.7**
LPAZ La Paz 5.81 3 P **Pn 18 03 26.1 +2.4**
comp=Z,45nm,0.3s,baz=199,slow=3.0,SNR=257
LPAZ S Sn 18 04 19.7 -10
comp=Z,40nm,0.8s,baz=189,slow=11,SNR=4.1
LPAZ LR LR 18 06 38.5
comp=Z,210nm,19.3s,baz=240,slow=48
LPAZ La Paz 5.81 3 Pn 18 03 25.7 +1.9
LPAZ La Paz 5.81 3 *e*P **Pn 18 03 25.9 +2.2**
LPAZ La Paz 5.81 3 P **Pn 18 03 26.6 +2.9**
AC04 Llanos de Chal 6.50 201 Pn 18 03 27.8 -4.6
AC04 Llanos de Chal 6.50 201 P **Pn 18 03 28.2 -4.1**
AC05 El Transito 6.88 193 Pn 18 03 34.1 -3.5
AC05 El Transito 6.88 193 P **Pn 18 03 34.7 -2.9**
LCO Las Campanas 7.15 196 Pn 18 03 37.1 -4.2
CO01 Juntas del Tor 7.96 190 Pn 18 03 49.0 -3.3
CO01 Juntas del Tor 7.96 190 P **Pn 18 03 50.4 -1.9**
GO04 Tololo Observa 8.29 194 Pn 18 03 51.9 -4.8
GO04 Tololo Observa 8.29 194 P **Pn 18 03 52.3 -4.4**
BBSD Serra de San D 8.87 58 *e*P **Pn 18 04 02.5 -2.0**
CO03 El Pedregal 8.90 193 Pn 18 04 00.2 -4.7
CO03 El Pedregal 8.90 193 P **Pn 18 04 00.3 -4.6**
CO06 Fray Jorge 8.98 198 Pn 18 03 59.4 -6.5
SIV San Ignacio 9.27 50 P **Pn 18 04 08.6 -1.2**
comp=Z,155nm,0.5s,baz=248,slow=9.4,SNR=517
SIV S **Sn 18 05 47.7 -4.7**
comp=Z,32nm,0.4s,baz=344,slow=23,SNR=8.6
CO02 Combarbal 9.32 194 Pn 18 04 04.9 -5.7
ZON Zonda 9.38 181 Pn 18 04 08.0 -3.3
ZON Zonda 9.38 181 P **Pn 18 04 11.7 +0.3**
CFA Coronel Fontan 9.44 179 P **Pn 18 04 09.6 -2.6**
comp=Z,5.5nm,0.3s,baz=354,slow=14,SNR=17
CFA S **Sn 18 05 49.2 -7.3**
comp=Z,9.1nm,0.5s,baz=231,slow=21,SNR=2.0
MURT Porto Murtinho 10.08 89 *e*P **Pn 18 04 19.3 -1.4**
CO04 Los Peladeros 10.13 192 Pn 18 04 15.7 -6.0
COIM Forte Coimbra 10.20 79 *e*P **Pn 18 04 19.6 -2.8**
COIM *e*S **Sn 18 06 09.7 -5.2**
VA03 San Esteban 10.76 190 Pn 18 04 23.7 -6.2
CPUP Villa Florida 10.98 115 P **Pn 18 04 32.2 -0.6**
comp=Z,7.6nm,0.8s,baz=286,slow=13,SNR=22
CPUP LR LR 18 08 54.6
comp=Z,94nm,21.8s,baz=266,slow=38
CPUP Villa Florida 10.98 115 Pn 18 04 27.1 -5.7
CPUP Villa Florida 10.98 115 *e*P **Pn 18 04 31.9 -0.9**
CPUP Villa Florida 10.98 115 P **Pn 18 04 32.4 -0.5**
PTLB Pontes e Lacer 11.04 55 Pn 18 04 30.9 -2.8
PTLB Pontes e Lacer 11.04 55 *e*P **Pn 18 04 31.7 -2.0**
PTLB *e*S **Sn 18 06 28.8 -6.5**
PEL Peldehue 11.15 190 Pn **Pn** 18 04 30.2 -4.9
VA01 Torpederas 11.22 194 Pn **Pn** 18 04 28.1 -7.8
MT02 Curacav 11.34 192 Pn 18 04 30.1 -7.6
MT08 Bocatoma Ro 11.36 187 Pn 18 04 31.0 -7.1
MT13 San Alfonso 11.69 188 Pn 18 04 34.6 -7.7
MT09 Talagante 11.82 190 Pn 18 04 37.2 -6.8
MT01 Popeta 11.95 191 Pn 18 04 38.1 -7.5
AQDB Aquidauana 12.00 84 Pn 18 04 43.1 -3.3
AQDB Aquidauana 12.00 84 *e*P **Pn 18 04 44.4 -2.0**
AQDB Aquidauana 12.00 84 P **Pn 18 04 44.9 -1.6**
VILB Vilhena 12.04 42 Pn 18 04 45.4 -1.7
VILB Vilhena 12.04 42 *e*P **Pn 18 04 46.2 -0.9**
AMBA Amambai (Brazi 12.47 96 *e*P **Pn 18 04 51.8 -0.8**
BO02 Sierra Bellavi 12.79 189 Pn 18 04 53.0 -3.6
NNA Nana 12.88 320 P **P 18 05 02.2 -1.8**
comp=Z,27nm,0.9s,baz=159,slow=9.0,SNR=7.4
PSAL Palomas, Salto 13.17 135 *e*P **Pn 18 05 01.0 -0.6**
GO05 Hualane 13.19 193 Pn **Pn 18 04 58.2 -3.7**
PP1B Ponte de Pedra 13.54 73 *e*P **Pn 18 05 04.9 -1.5**
SALV Santo Antonio 13.56 65 *e*P **Pn 18 05 04.9 -1.9**
H03N1 Juan Fernandez 14.57 217 T T 18 19 35.5
baz=42,slow=72,SNR=4.5
H03N2 Juan Fernandez 14.58 217 T T 18 19 35.5
baz=42,slow=72,SNR=4.2
H03N3 Juan Fernandez 14.59 217 T T 18 19 35.5
baz=42,slow=72,SNR=4.8
TRCB Terra Rica 14.64 96 Pn 18 05 21.9 +1.3
TRCB Terra Rica 14.64 96 *e*P **Pn 18 05 19.9 -0.7**
VA04 Juan Fernndez 14.68 216 Pn **Pn 18 05 17.2 -3.7**
BI02 San Fabin de 14.69 189 Pn 18 05 19.1 -2.1
BI02 San Fabin de 14.69 189 P **Pn 18 05 20.6 -0.6**
CZSB Cruzeiro do Su 14.89 343 *e*P **P 18 05 25.5 -0.9**
C2SB Chapadao do Su 15.01 80 *e*P **Pn 18 05 23.0 -2.2**
C2SB Chapadao do Su 15.01 80 P **P 18 05 26.8 -0.9**
ANCO Parque Anchore 15.22 145 *e*P **P 18 05 29.0 -0.9**
PTGB Pitanga 15.26 103 *e*P **Pn 18 05 28.9 +0.5**
ITAB Concordia 15.68 112 Pn 18 05 32.2 -1.3
ITAB Concordia 15.68 112 *e*P **Pn 18 05 33.7 +0.2**
ITAB Concordia 15.68 112 P **Pn 18 05 33.8 +0.2**
CPSB Cacapava Do Su 15.78 125 Pn 18 05 33.2 -1.5
CPSB Cacapava Do Su 15.78 125 *e*P **Pn 18 05 33.4 -1.3**
CPSB *e*S **Sn 18 08 29.1 -0.5**
CPSB Cacapava Do Su 15.78 125 P **Pn 18 05 34.2 -0.5**
LDASE Londrina, Braz 16.04 98 *e*P **Pn 18 05 37.9 -0.1**
CLDB Colider 16.49 49 *e*P **Pn 18 05 43.4 -0.2**
CLDB *e*S **Sn 18 08 41.6 -5.4**
CLDB Colider 16.49 49 P **P 18 05 44.5 +0.4**
TRQA Tornquist 16.83 162 Pn 18 05 45.6 -1.9
ARAG Araguaiana, MT 16.98 71 *e*P **P 18 05 49.3 -0.2**
CNLB Canela 17.39 118 *e*P **P 18 05 53.5 -0.5**
CNLB Canela 17.39 118 P **P 18 05 53.6 -0.3**
FRTB Fartura 17.47 98 *e*P **P 18 05 54.0 -0.9**
GO06 Curarrehue 17.59 188 P **P 18 05 53.2 -3.0**
ATAH Atahualpa 17.72 326 P **Pn 18 06 00.9 +1.9**
comp=Z,3.8nm,0.6s,baz=142,slow=6.4,SNR=3.8
LR05 Currie 18.30 189 P **P 18 06 02.5 -1.3**
BB19B Bebedouro 18.56 90 *e*P **P 18 06 07.3 +0.4**
TEFE Tefe 18.87 12 *e*P **P 18 06 10.0 -0.3**
TEFE *e*S **S 18 09 35.0 -3.6**
SNDB Serra Nova Dou 19.24 61 *e*P **P 18 06 13.6 -0.7**
RCLB Rio Claro- Sao 19.37 95 *e*P **P 18 06 15.7 0.0**
SPB Sao Paulo 19.43 98 P 18 06 16.0 -0.2
SPB Sao Paulo 19.43 98 *e*P **P 18 06 16.6 +0.4**
SPB Sao Paulo 19.43 98 P **P 18 06 17.1 +0.9**
IPMB Ipameri, GO 19.45 81 *e*P **P 18 06 16.6 -0.1**
IPMB *e*S **S 18 09 44.8 -5.5**
PET01 Itanhaem-SP 19.58 100 *e*P **P 18 06 18.2 +0.3**
PET01 *e*S **S 18 09 48.5 -4.2**
NPGB Novo Progresso 19.61 42 *e*P **P 18 06 17.2 -1.0**
VAO Valinhos 19.86 97 P 18 06 20.7 -0.4
VAO Valinhos 19.86 97 *e*P **P 18 06 20.6 -0.4**
VAO *e*S **S 18 09 53.5 -4.8**
MACA Manacapuru-AM 20.30 23 P 18 06 25.0 -0.8
MACA Manacapuru-AM 20.30 23 *e*P **P 18 06 25.3 -0.5**
MACA *e*S **S 18 10 03.3 -3.7**

BDFB Brasilia 20.38 75 P **P 18 06 26.7 0.0**
comp=Z,57nm,0.4s,baz=245,slow=15,SNR=49
BDFB LR LR 18 15 31.0
comp=Z,134nm,18.8s,baz=213,slow=40
comp=Z,57nm,0.4s
BDFB Brasilia 20.38 75 P 18 06 25.7 -1.0
CANS Sao Roque de M 20.65 89 *e*P **P 18 06 29.2 -0.3**
PMNB Patos De Minas 20.95 84 *e*P **P 18 06 31.8 -0.9**
PMNB Patos De Minas 20.95 84 P **P 18 06 32.4 -0.4**
LL02 Futaleuf 21.20 187 P 18 06 35.0 -0.1
ITTB Itaituba 21.53 37 *e*P **P 18 06 37.7 -1.2**
SGC2 Sao Gabriel da 21.89 4 *e*P **P 18 06 42.5 -0.2**
BSCB Bom Sucesso 22.05 92 *e*P **P 18 06 44.1 -0.4**
BSCB Bom Sucesso 22.05 92 P **P 18 06 44.4 -0.1**
DIAM Diamantina, MG 23.56 85 *e*P **P 18 06 58.7 -0.4**
JANB Januaria 23.92 77 *e*P **P 18 07 01.5 -0.8**
PRPB Parauapebas 24.00 51 *e*P **P 18 07 02.0 -0.9**
SMTB Santa Maria do 24.00 60 *e*P **P 18 07 02.2 -0.8**
DUB01 Friburgo-RJ 24.16 95 *e*P **P 18 07 03.9 -0.5**
OTAV Otavalo 24.27 335 *e*P **P 18 07 08.4 +2.5**
SDBA SAO DESIDERIO 24.44 71 *e*P **P 18 07 06.2 -0.9**
CAM01 Campos-RJ 24.84 94 *e*P **P 18 07 10.0 -0.6**
BOAV Boa Vista 25.57 19 P 18 07 18.4 +1.2
BOAV Boa Vista 25.57 19 *e*P **P 18 07 18.5 +1.2**
SJMB Sao Joao De Ma 25.77 87 *e*P **P 18 07 19.4 +0.4**
RIB01 Linhares ES 26.38 89 *e*P **P 18 07 24.3 -0.2**
GO08 Vila Higgin 26.49 186 P 18 07 25.9 +0.8
ROSC El Rosal 27.41 347 LR LR 18 21 39.6
comp=Z,90nm,18.2s,baz=118,slow=43
GUA01 Guaratinga, BA 27.56 84 *e*P **P 18 07 35.2 +0.1**
CMC01 Camacan, BA 28.18 81 *e*P **P 18 07 40.5 -0.1**
NBIT Itapeh - BA 28.39 80 *e*P **P 18 07 42.6 +0.1**
NBPN Ponto Novo - B 29.26 72 *e*P **P 18 07 47.7 -2.6**
MG02 Cerro Sombrero 30.61 181 P P 18 08 02.7 +1.0
SDV Santo Domingo 30.89 356 LR LR 18 22 18.0
comp=Z,50nm,20.4s,baz=82,slow=39
MDP Montagnes des 31.18 32 LR LR 18 20 10.2
comp=Z,79nm,20.3s,baz=133,slow=35
MPGF Montagnes des 31.18 32 P P 18 08 07.8 +0.7
NBPS Pedro II - PI 31.55 60 *e*P **P 18 08 09.3 -1.2**
MG03 Isla Dawson 31.71 182 P P 18 08 12.3 +1.0
NBTA Tacaratu-PE 31.91 71 *e*P **P 18 08 13.2 -0.4**
NBMA Muriti-CE 32.15 67 *e*P **P 18 08 15.7 -0.1**
NBMO Morrinhos-CE 33.31 60 *e*P **P 18 08 25.3 -0.4**
GRGR Grenville 34.69 12 P P 18 08 40.5 +2.9
RCBR Riachuelo 35.38 68 P P 18 08 44.1 +0.5
RCBR Riachuelo 35.38 68 *e*P **P 18 08 41.5 -2.2**
RCBR *e*p**P pP 18 09 12.5 +1.0**
NBPV Pedro Velho 35.61 69 *e*P **P 18 08 43.6 -2.0**
MPOM Morne Pois Mar 37.10 12 P P 18 08 59.8 +1.7
FDFM Morne la Roset 37.32 12 P P 18 09 01.5 +1.5
CXM Morne La Croix 37.40 12 P P 18 09 02.1 +1.3
ILAM Ilet Lapin Mar 37.42 12 P P 18 09 02.8 +2.0
MAGL Barre de l'ile 38.49 11 P P 18 09 09.9 +0.2
GDSD La Dsirade Is 38.88 11 P P 18 09 13.8 +0.7
CRPR Cabo Rojo, PR 39.91 2 P P 18 09 21.9 +0.3
PDPR Patillas Dam, 39.97 4 P P 18 09 21.3 -0.8
CELP Cerrillos 40.00 3 P P 18 09 22.3 0.0
CELP IAmb IAmb 18 09 54.5
comp=Z,26nm,1.0s
HOPE Hope Point 40.13 151 P P 18 09 22.8 -0.2
AOPR Arecibo Observ 40.26 2 P P 18 09 24.3 -0.2
DR12 Loma Pena Alta 40.67 359 P P 18 09 28.0 0.0
MTO3 Montecristo 41.69 329 P P 18 09 35.1 -1.4
MTO3 IAmb IAmb 18 09 39.8
comp=Z,12nm,1.0s
ZAIG Zacatecas 55.63 321 P P 18 11 24.1 +0.8
ZAIG IAmb IAmb 18 11 27.0
comp=Z,17nm,1.0s
250A Grady 56.44 342 P P 18 11 28.7 +0.3
BELA Belgrano 2 58.07 172 P P 18 11 39.7 +0.3
X48A Hartselle 58.98 342 P P 18 11 46.2 0.0
CPCT Cooper Cave 59.25 345 P P 18 11 47.7 -0.3
CPCT IAmb IAmb 18 11 49.1
comp=Z,6.6nm,1.1s
TKL Tuckaleechee C 59.27 346 P P 18 11 47.7 -0.5
TKL IAmb IAmb 18 11 49.6
comp=Z,8.0nm,0.9s
HNDO Hondo 59.32 329 P 18 11 47.6 -1.0
SWET Sewanee 59.39 343 IAmb IAmb 18 11 49.8
comp=Z,6.2nm,0.7s
VNA1 Neumayer--Stat 59.55 160 P P 18 11 51.4 +1.8
comp=Z,6.1nm,1.0s
VNA2 Neumayer--Watz 59.92 161 ⇓P **P 18 11 53.5 +1.3**
comp=Z,6.8nm,0.6s,baz=278,slow=7.2
V48A Smith Brothers 60.12 343 P P 18 11 54.0 0.0
V48A IAmb IAmb 18 11 54.9
comp=Z,8.3nm,0.9s
S57A Dark Hollow, R 60.38 350 IAmb IAmb 18 11 58.1
comp=Z,11nm,1.0s
R58B Mineral 60.42 351 IAmb IAmb 18 11 58.4
comp=Z,18nm,1.3s
BRDY Brady 60.65 330 IAmb IAmb 18 11 59.5
comp=Z,9.8nm,0.9s
WVT Waverly 60.77 342 P P 18 11 57.4 -0.9
WVT IAmb IAmb 18 11 59.2
comp=Z,12nm,1.1s
WVT Waverly 60.77 342 P P 18 11 58.4 +0.1
MIAR Mount Ida 61.21 336 P P 18 12 01.1 -0.2
MIAR IAmb IAmb 18 12 03.3
comp=Z,15nm,1.2s
OZNA Ozona 61.36 328 P P 18 12 02.9 +0.3
T47A Sharon Grove 61.37 343 IAmb IAmb 18 12 03.7
comp=Z,16nm,1.1s
TXAR Lajitas Array 61.38 325 P P 18 12 04.1 +1.3
comp=Z,1.1nm,0.6s,baz=144,slow=11,SNR=9.1
comp=Z,1.1nm,0.6s
SNAA Sanae 61.55 161 ⇓P **P 18 12 04.5 +1.2**
comp=Z,194nm,0.8s
SNAA Sanae 61.55 161 P P 18 12 04.6 +1.2
comp=Z,5.5nm,0.6s,baz=283,slow=7.1,SNR=22
comp=Z,5.5nm,0.6s
SNAA Sanae 61.55 161 P P 18 12 03.5 +0.2
SNAA IAmb IAmb 18 12 05.3
comp=Z,6.5nm,0.7s
Q56A Snyder Ridge, 61.67 351 P P 18 12 05.3 +0.9
Q56A IAmb IAmb 18 12 07.3
comp=Z,10nm,0.9s
ALPN Alpine 62.19 326 IAmb IAmb 18 12 10.8
comp=Z,25nm,1.6s
TMB01 Midkiff 62.44 328 IAmb IAmb 18 12 11.8
comp=Z,9.8nm,0.9s
MNHN Monahans 62.52 327 IAmb IAmb 18 12 12.7
comp=Z,14nm,0.8s
APMT Aspermont 62.87 330 IAmb IAmb 18 12 14.6
comp=Z,15nm,0.8s
TPB06 Permian Basin 62.99 327 IAmb IAmb 18 12 15.8
comp=Z,24nm,1.3s
129A Stewart Farms, 63.12 329 IAmb IAmb 18 12 16.8
comp=Z,14nm,1.1s
FVM French Village 63.26 341 IAmb IAmb 18 12 16.4
comp=Z,13nm,0.9s
TROLL Troll, Antarti 63.27 161 ⇓P **P 18 12 16.3 +1.4**
comp=Z,372nm,0.5s
POST Post 63.30 329 P P 18 12 15.0 -0.5
POST IAmb IAmb 18 12 18.2
comp=Z,14nm,0.8s
DKNS Dickens 63.53 330 IAmb IAmb 18 12 18.5
comp=Z,7.8nm,0.7s
CCM Cathedral Cave 63.58 340 P P 18 12 17.6 +0.5
S39A Bolivar 63.94 338 IAmb IAmb 18 12 20.6
comp=Z,8.9nm,0.7s
R40A Maddies Statio 64.12 339 IAmb IAmb 18 12 45.2
comp=Z,7.0nm,0.6s
T35A Sooner Cattle 64.42 335 IAmb IAmb 18 12 24.6
comp=Z,13nm,1.1s
AMTX Amarillo 64.88 330 IAmb IAmb 18 12 28.2
comp=Z,9.9nm,1.1s
J59A Pisco 65.50 355 IAmb IAmb 18 12 32.1
comp=Z,16nm,1.1s
P38A Dawn 65.75 339 IAmb IAmb 18 12 43.3
comp=Z,15nm,1.0s
ANMO Albuquerque 67.25 327 P P 18 12 42.4 +1.3
ANMO IAmb IAmb 18 12 44.1
comp=Z,10nm,0.8s
ANMO Albuquerque 67.25 327 P P 18 12 43.1 +2.0
TASM ASL Pad, Albuq 67.25 327 IAmb IAmb 18 12 44.2
comp=Z,11nm,0.8s
TUC Tucson 67.59 322 P P 18 12 45.3 +2.2
T25A Trinidad 68.00 330 IAmb IAmb 18 12 48.9
comp=Z,16nm,1.3s
QSPA South Pole Qui 68.07 180 P P 18 12 47.5 +1.8
comp=Z,11nm,0.5s,baz=323,slow=0.8,SNR=158
comp=Z,11nm,0.5s
QSPA South Pole Qui 68.07 180 P P 18 12 46.9 +1.2

QSPA South Pole Qui 68.07 180 P P 18 12 47.8 +2.0
TRQ Mont Tremblant 68.25 355 IAmb IAmb 18 12 49.0
comp=Z,21nm,1.2s
DBIC Dimbokro 68.51 73 P P 18 12 49.9 +0.8
comp=Z,8.1nm,0.4s,baz=254,slow=6.6,SNR=10
comp=Z,8.1nm,0.4s
DBIC Dimbokro 68.51 73 P P 18 12 49.6 +0.5
DBIC Dimbokro 68.51 73 P P 18 12 50.1 +1.0
D62A Allapoint, All 68.88 360 IAmb IAmb 18 13 07.7
comp=Z,14nm,0.7s
SDCO Great Sand Dun 69.00 329 IAmb IAmb 18 12 55.2
comp=Z,13nm,0.9s
W18A Petrified Fore 69.10 325 IAmb IAmb 18 12 56.0
comp=Z,17nm,1.0s
Q24A Divide 69.81 330 IAmb IAmb 18 13 00.1
comp=Z,22nm,1.1s
WUAZ Wupatki 70.28 324 IAmb IAmb 18 13 03.6
comp=Z,22nm,1.1s
ISCO Idaho Springs 70.70 330 IAmb IAmb 18 13 05.5
comp=Z,19nm,1.4s
PV01 Paradox Valley 70.80 327 IAmb IAmb 18 13 06.5
comp=Z,23nm,1.3s
PV15 Paradox Valley 70.92 328 IAmb IAmb 18 13 07.4
comp=Z,26nm,1.1s
PV02 Paradox Valley 70.94 327 IAmb IAmb 18 13 08.0
comp=Z,17nm,1.1s
PV13 Radium Mtn., P 70.94 327 IAmb IAmb 18 13 07.1
comp=Z,20nm,1.2s
PV05 Paradox Valley 71.02 327 IAmb IAmb 18 13 07.4
comp=Z,16nm,1.2s
PV03 Paradox Valley 71.03 327 IAmb IAmb 18 13 07.7
comp=Z,20nm,1.6s
PV18 Skein Mesa, Pa 71.06 327 IAmb IAmb 18 13 07.7
comp=Z,25nm,1.3s
PV12 Saucer Basin, 71.06 327 IAmb IAmb 18 13 07.3
comp=Z,13nm,1.0s
PV07 Paradox Valley 71.07 328 IAmb IAmb 18 13 07.9
comp=Z,13nm,1.2s
PV11 David Mesa, Pa 71.08 327 IAmb IAmb 18 13 07.9
comp=Z,30nm,1.5s
PV22 Blue Mesa, Par 71.22 328 IAmb IAmb 18 13 08.8
comp=Z,26nm,1.3s
PV10 Paradox Valley 71.22 327 IAmb IAmb 18 13 08.2
comp=Z,23nm,1.1s
PV23 Carpenter Ridg 71.27 327 IAmb IAmb 18 13 09.0
comp=Z,13nm,1.0s
IRM Iron Mountain 71.45 320 pP 18 13 38.7 +1.0
IRM IAmb IAmb 18 13 55.8
comp=Z,15nm,1.4s
U15A North Rim 71.46 324 P 18 13 08.5 +1.4
U15A IAmb IAmb 18 13 11.0
comp=Z,15nm,1.1s
U15A **pP 18 13 38.1 +0.1**
HMU Henry Mountain 71.75 326 IAmb IAmb 18 13 12.7
comp=Z,14nm,1.0s
HAYD Hayden 72.03 330 P **P 18 13 12.3 +2.0**
HAYD IAmb IAmb 18 13 14.1
comp=Z,23nm,1.7s
O20A White River Ci 72.19 329 IAmb IAmb 18 13 14.5
comp=Z,22nm,1.0s
SRU San Rafael Swe 72.53 327 IAmb IAmb 18 13 16.4
comp=Z,16nm,0.9s
P18A Preston Nutter 72.78 327 IAmb IAmb 18 13 18.4
comp=Z,14nm,0.9s
CCUT Cedar City 72.86 324 IAmb IAmb 18 13 19.6
comp=Z,12nm,1.1s
CCUT pP 18 13 47.2 +0.7
P17A Butcher Ranch, 72.91 327 IAmb IAmb 18 13 18.8
comp=Z,20nm,1.0s
RDMU Red Mountain 73.17 328 IAmb IAmb 18 13 19.5
comp=Z,8.7nm,0.8s
K22A Casper 73.40 332 IAmb IAmb 18 13 21.3
comp=Z,17nm,1.4s
RSSD Black Hills 73.54 334 P **P 18 13 21.1 +1.9**
PRN Pahroc Range 73.69 323 P **P 18 13 21.1 +1.0**
BSUT Blindstream Ca 73.73 328 IAmb IAmb 18 13 24.0
comp=Z,10nm,0.9s
NLU North Lily Min 73.95 327 IAmb IAmb 18 13 25.3
comp=Z,23nm,1.7s
DUG Dugway, Tooele 74.51 326 IAmb IAmb 18 13 28.3
comp=Z,14nm,1.2s
PDAR Pinedale Array 74.86 330 P **P 18 13 28.2 +1.4**
comp=Z,0.8nm,0.6s,baz=142,slow=7.5,SNR=9.4
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 74.86 330 P **P 18 13 26.9 0.0**
PDAR pP **pP 18 13 58.1 +0.1**
EPLO Experimental L 74.93 343 IAmb IAmb 18 13 28.5
comp=Z,14nm,1.2s
SBA Scott Base 75.29 190 P **P 18 13 29.5 +0.9**
SBA Scott Base 75.29 190 P **P 18 13 31.5 +2.9**
ULM Lac du Bonnet 76.04 342 P **P 18 13 33.9 +0.8**
comp=Z,3.0nm,0.5s,baz=136,slow=6.6,SNR=7.4
comp=Z,3.0nm,0.5s
ULM Lac du Bonnet 76.04 342 IAmb IAmb 18 13 57.1
comp=Z,9.5nm,0.5s
NVAR Mina Array Bea 76.25 322 P **P 18 13 37.0 +2.2**
comp=Z,2.1nm,0.9s,baz=156,slow=7.6,SNR=9.4
NVAR pP **pP 18 14 08.4 +2.2**
comp=Z,2.3nm,1.0s,baz=151,slow=7.2,SNR=3.6
comp=Z,2.1nm,0.9s
NVAR Mina Array Bea 76.25 322 P **P 18 13 36.1 +1.2**
NVAR pP **pP 18 14 07.0 +0.8**
VNDA Vanda 76.31 190 P **P 18 13 36.5 +2.1**
comp=Z,2.0nm,0.9s,baz=130,slow=3.8,SNR=11
comp=Z,2.0nm,0.9s
VNDA Vanda 76.31 190 P 18 13 36.3 +1.9
VNDA Vanda 76.31 190 P **P 18 13 37.2 +2.8**
FLWY Flagg Ranch 76.41 330 IAmb IAmb 18 13 39.3
comp=Z,24nm,1.1s
RLMT Red Lodge 76.56 332 IAmb IAmb 18 13 39.9
comp=Z,37nm,1.7s
SCHQ Schefferville 76.66 1 LR LR 18 50 50.0
comp=Z,20nm,18.0s,baz=158,slow=38
YNE Yellowstone No 76.80 331 IAmb IAmb 18 13 41.1
comp=Z,21nm,1.2s
TORD Torodi Ar. Bea 77.17 70 P **P 18 13 40.6 +0.4**
comp=Z,14nm,0.4s,baz=249,slow=5.8,SNR=56
TORD pP **pP 18 14 12.7 +0.8**
comp=Z,6.6nm,0.8s,baz=255,slow=5.0,SNR=1.8
comp=Z,14nm,0.4s
TORD Torodi Ar. Bea 77.17 70 P **P 18 13 39.7 -0.5**
YHL Hebgen Lake 77.22 330 IAmb IAmb 18 13 44.3
comp=Z,24nm,1.6s
PAHR Pah Rah Range 77.73 322 IAmb IAmb 18 13 46.1
comp=Z,11nm,0.8s
HLID Hailey 77.80 328 IAmb IAmb 18 13 47.1
comp=Z,16nm,1.1s
MCMT McKenzie Canyo 77.97 329 P **P 18 13 45.3 +0.9**
MCMT **pP 18 14 16.0 +0.3**
DLMT Dillon 78.26 330 IAmb IAmb 18 13 49.3
comp=Z,15nm,1.3s
BEKR Beckworth 78.39 322 IAmb IAmb 18 13 50.1
comp=Z,17nm,1.6s
ORV Oroville 78.85 321 IAmb IAmb 18 13 52.4
comp=Z,12nm,1.1s
TSUM Tsumeb 79.45 106 LR LR 18 45 13.6
comp=Z,47nm,19.5s,baz=167,slow=33
TSUM Tsumeb 79.45 106 P **P 18 13 54.0 +0.9**
TSUM IAmb IAmb 18 13 55.8
comp=Z,15nm,1.1s
TSUM Tsumeb 79.45 106 P **P 18 13 55.0 +1.9**
PLID Pearl Lake 79.69 328 IAmb IAmb 18 13 56.7
comp=Z,12nm,0.9s
J08A Circle Bar Ran 79.73 325 IAmb IAmb 18 13 58.0
comp=Z,32nm,1.9s
BMO Blue Mountains 80.17 327 IAmb IAmb 18 13 59.3
comp=Z,13nm,1.1s
K05A Summer Lake 80.60 324 IAmb IAmb 18 14 02.1
comp=Z,14nm,1.0s
PINE Pine Mountain 81.34 324 IAmb IAmb 18 14 05.9
comp=Z,14nm,1.0s
I05D Terrebonne, OR 81.92 325 IAmb IAmb 18 14 08.6
comp=Z,15nm,0.8s
CCD Concordia, Ant 82.71 183 P **P 18 14 11.6 +2.0**
BOSA Boshof 82.78 118 P **P 18 14 11.6 +1.1**
comp=Z,2.6nm,0.5s,baz=268,slow=2.4,SNR=5.9
comp=Z,2.6nm,0.5s
MAW Mawson 83.61 163 P **P 18 14 15.4 +1.6**
comp=Z,2.7nm,0.5s,baz=209,slow=7.3,SNR=10
comp=Z,2.7nm,0.5s
LBTB Lobatse 84.37 115 LR LR 18 47 45.8
comp=Z,17nm,21.0s,baz=184,slow=33
ESDC Sonseca Array 85.98 44 P **P 18 14 27.7 +1.5**
comp=Z,1.1nm,1.0s,baz=240,slow=4.4,SNR=7.2
ESDC LR LR 18 50 47.4
comp=Z,16nm,18.4s,baz=258,slow=34
comp=Z,1.1nm,1.0s
MATP Matopo 88.59 111 LR LR 18 52 41.3

comp=Z,36nm,19.7s,baz=106,slow=34
LSZ Lusaka 90.31 107 LR LR 18 53 28.1
comp=Z,64nm,18.1s,baz=172,slow=34
CASY Casey 91.87 180 P **P** **18 14 54.1 +0.6**
YKA Yellowknife Ar 91.92 340 P **P** **18 14 54.6 +1.1**
comp=Z,3.9nm,0.7s,baz=139,slow=4.6,SNR=18
YKA sP **sP** **18 15 40.2 +1.6**
comp=Z,1.7nm,0.8s,baz=132,slow=4.6,SNR=2.8
comp=Z,3.9nm,0.7s
YKA Yellowknife Ar 91.92 340 P **P** **18 14 54.0 +0.4**
YKAW3 Yellowknife Wh 91.97 340 P **P** **18 14 54.6 +0.9**
YKAW3 IAmb IAmb 18 14 55.8
comp=Z,12nm,1.3s
AFI Afiamalu 96.78 252 P **P** **18 15 15.2 -1.9**
DAVOX Davos/Dischmat 98.23 43 LR LR 18 59 10.4
comp=Z,18nm,18.3s,baz=259,slow=35
RNPP2 Kostyukhnivka 109.61 42 P **Pdif** **18 16 14.1 +0.8**
H11S2 WAKE ISLAND Hy 128.37 277 T T 20 41 15.5
baz=105,slow=74,SNR=62
H11S1 WAKE ISLAND Hy 128.38 277 T T 20 41 22.7
baz=105,slow=74,SNR=36
H11S3 WAKE ISLAND Hy 128.39 277 T T 20 41 19.8
baz=105,slow=74,SNR=44
H11N3 WAKE ISLAND Hy 128.47 278 T T 20 41 25.8
baz=104,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 128.48 278 T T 20 41 27.0
baz=104,slow=75,SNR=28
H11N1 WAKE ISLAND Hy 129.49 278 T T 20 41 28.4
baz=104,slow=75,SNR=12
ASAR Alice Springs 129.55 207 PKP **PKiKP** **18 20 55.5 +0.1**
comp=Z,4.1nm,0.9s,baz=151,slow=2.2,SNR=28
ASAR pPKP **pPKPdf** **18 21 29.8 +1.9**
comp=Z,0.6nm,0.8s,baz=163,slow=1.0,SNR=1.7
ASAR Alice Springs 129.55 207 **PKPdf** **18 20 54.8 +0.1**
WRA Warramunga Arr 132.63 210 PKP **PKiKP** **18 21 01.6 -0.1**
comp=Z,2.4nm,0.7s,baz=162,slow=1.8,SNR=23
WRA Warramunga Arr 132.63 210 **PKiKP** **18 21 02.0 +0.2**
PETK Petropavlovsk- 133.32 323 PKP **PKiKP** **18 21 02.8 +0.8**
comp=Z,0.8nm,0.5s,baz=52,slow=2.6,SNR=5.4
BVAR Borovoye Array 136.06 35 PKP **PKiKP** **18 21 07.2 -0.4**
comp=Z,0.7nm,0.6s,baz=282,slow=2.9,SNR=4.3
BVAR pPKP **pPKPdf** **18 21 36.4 -3.2**
comp=Z,0.9nm,0.6s,baz=323,slow=0.7,SNR=3.7
KURK Kurchatov 141.61 34 **PKPdf** **18 21 15.5 -0.6**
KURBB Kurchatov Arra 141.62 34 PKP **PKPdf** **18 21 15.5 -0.6**
comp=Z,0.5nm,0.6s,baz=298,slow=2.7,SNR=7.5
ZAA0 Zalesovo Array 142.33 26 **PKPdf** **18 21 16.0 -1.3**
ZALV Zalesovo Beam 142.33 26 PKP **PKPdf** **18 21 16.6 -0.7**
comp=Z,1.8nm,0.5s,baz=302,slow=1.6,SNR=10
ZALV Zalesovo Beam 142.33 26 **PKPdf** **18 21 15.3 -2.0**
NRN Naryn 144.50 49 **PKPdf** **18 21 21.6 -0.3**
KSH2 Kashi 144.98 53 PKPbc **PKiKP** **18 21 25.0 -1.5**
KSH2 pPKP pPKPdf 18 21 57.4 +1.1
KSH2 sPKP 18 22 02.8
MAKZ Makanchi 145.70 37 **PKPdf** **18 21 22.6 -0.9**
MKAR Makanchi Array 145.88 37 PKPbc **PKPab** **18 21 25.4 +0.1**
comp=Z,2.6nm,0.8s,baz=315,slow=2.1,SNR=22
MKAR pPKPbc **pPKPdf** **18 21 57.4 0.0**
comp=Z,1.6nm,0.8s,baz=304,slow=3.3,SNR=2.1
MKAR Makanchi Array 145.88 37 **PKPdf** **18 21 24.0 +0.2**
HEH HeiHe 145.28 340 PKPbc **PKPbc** **18 21 33.8 +0.1**
HILR Hailar Array B 151.87 349 PKPbc **PKiKP** **18 21 41.2 +1.0**
comp=Z,6.3nm,0.6s,baz=25,slow=3.8,SNR=5.0
USRK Ussuriysk Ar. 152.26 327 PKPbc **PKiKP** **18 21 41.8 +0.7**
comp=Z,2.6nm,0.6s,baz=67,slow=2.9,SNR=5.3
MJAR Matsushiro Arr 152.79 308 PKPbc **PKiKP** **18 21 43.0 +0.5**
comp=Z,3.8nm,0.9s,baz=86,slow=1.1,SNR=11
MJAR PKPab **PKPab** **18 21 54.5 +0.9**
comp=Z,2.3nm,0.9s,baz=80,slow=2.0,SNR=5.2
MJAR Matsushiro Arr 152.79 308 **PKPdf** **18 21 32.4 -2.7**
MJAR PKPbc **PKPbc** **18 21 40.9 -1.4**
MJAR **PKPab** **18 21 51.6 -2.1**
SONM Songino Array 154.02 8 PKP **PKPdf** **18 21 38.1 +1.5**
comp=Z,1.1nm,0.6s,baz=321,slow=1.8,SNR=6.1
SONM PKPbc **PKiKP** **18 21 46.3 +1.4**
comp=Z,1.0nm,0.6s,baz=346,slow=1.8,SNR=5.1
SONM PKPab **PKPab** **18 22 01.1 +2.5**
comp=Z,2.1nm,0.5s,baz=343,slow=4.6,SNR=3.6
SONM Songino Array 154.02 8 **PKPdf** **18 21 35.1 -1.6**
SONM **PKPbc** **18 21 44.2 -0.6**
SONM **PKPab** **18 22 00.5 +1.9**
KSRS Korea Array 159.19 321 PKP **PKPdf** **18 21 45.2 +1.8**
comp=Z,1.2nm,1.0s,baz=70,slow=1.8,SNR=8.9
KSRS PKPab **PKPab** **18 22 22.8 +1.8**
comp=Z,1.3nm,0.8s,baz=66,slow=4.7,SNR=7.3
HHC Hu-ho-hao-te 161.33 360 *eP* **PKPdf** **18 21 47.8 +1.9**
XAN Xi'an 167.91 10 PKP **PKPdf** **18 21 51.9 +0.1**
NJ2 Nanjing 168.17 328 *eP* **PKPdf** **18 21 52.1 +0.2**
NJ2 Nanjing 168.17 328 pmax pmax
comp=Z,23nm,0.5s
PZH PanZhiHua 170.05 62 PKP **PKPdf** **18 21 52.5 -0.9**

*JMA **21** 18:19:50.6±0.2,25°N×122°E±0.7,h32km±2km, MV2.0/11, NW OFF ISHIGAKIJIMA IS*
TAP 21 18:19:49.6,24.82N×122.69E,h10km,ML2.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.44**	**147**	P			Pb	18 19 59.1	-0.4
JYNG					*eS*		Sg	18 20 05.0	+0.9
YOJ	**Yonaguni jima**	**0.47**	**141**	*i* P			Pb	18 19 59.5	-0.4
YOJ				*i* S			Sg	18 20 05.9	+1.0
YOJ	**Yonaguni jima**	**0.47**	**141**	P			Pb	18 19 59.5	-0.4
YOJ				S			Sg	18 20 05.8	+0.9
EOS2	**EOS2**	**0.58**	**226**	*i* P			Pb	18 20 01.9	+0.2
EOS2				*i* S			Sb	18 20 10.5	+0.6
EOS3	**EOS3**	**0.63**	**212**	P			Pb	18 20 02.9	+0.2
EOS3				S			Sb	18 20 12.6	+1.1
EOS4	**EOS4**	**0.78**	**206**	P			Pb	18 20 05.4	+0.4
EOS4				S			Sb	18 20 16.2	+0.8
SXI1	**Grass Mountain**	**0.78**	**290**	P			Pb	18 20 05.2	-0.2
SXI1				*eS*			Sb	18 20 16.2	+0.1
TWC	**Suao**	**0.79**	**254**	P			Pb	18 20 05.4	0.0
TWC				S			Sg	18 20 15.5	+0.3
TIPB	**Shuangxi**	**0.79**	**281**	P			Pg	18 20 05.2	+0.2
TIPB				S			Sb	18 20 16.5	+0.1
WFSB	**Wu-fen Shan**	**0.86**	**287**	P			Pn	18 20 07.3	-0.4
WFSB				*eS*			Sn	18 20 19.7	-0.6
NDS	**Dongshan**	**0.90**	**258**	P			Pg	18 20 07.0	0.0
NDS				S			Sn	18 20 20.7	-0.7
EWUT	**Wuta**	**0.91**	**246**	P			Pb	18 20 07.4	0.0
EWUT				S			Sb	18 20 19.7	+0.2
TWE	**Neicheng**	**0.93**	**264**	P			Pg	18 20 07.5	0.0
TWE				S			Sb	18 20 21.1	+0.9
ENA	**Nanau**	**0.94**	**246**	*eP*			Pg	18 20 06.2	-1.7
ENA				*eS*			Sg	18 20 18.5	-1.7
PCYT	**Pengchaiyu**	**0.98**	**325**	P			Pg	18 20 08.3	-0.1
PCYT				S			Sn	18 20 23.1	-0.2
EAHA	**Aohua**	**0.99**	**240**	*eP*			Pg	18 20 08.4	-0.4
EAHA				S			Sb	18 20 22.2	+0.2
FUSB	**Fushanzhiwuyua**	**1.00**	**267**	P			Pb	18 20 09.2	+0.2
YM01	**YM01**	**1.06**	**288**	*eP*			Pg	18 20 09.9	-0.2
IRIF	**Iriomote-Funau**	**1.07**	**117**	P			Pg	18 20 08.7	-1.5
IRIF				*eS*			Sg	18 20 23.3	-0.8
NWLT	**Wulai**	**1.08**	**268**	P			Pn	18 20 11.1	+0.3
NWLT				S			Sn	18 20 25.4	-0.4
NDT	**Datong Townshi**	**1.09**	**259**	*eP*			Pn	18 20 10.9	0.0
NDT				*eS*			Sb	18 20 25.3	+0.5
LATG	**Datong**	**1.09**	**255**	P			Pn	18 20 10.9	-0.2
LATG				S			Sb	18 20 25.6	+0.6
NACB	**Ninganchiao**	**1.19**	**237**	P			Pb	18 20 12.1	-0.1
NACB				S			Sb	18 20 27.4	-0.1
YHNB	**Yeheng**	**1.20**	**263**	P			Pb	18 20 12.3	-0.2
YHNB				*eS*			Sn	18 20 28.9	0.0
NSK	**Sanguang**	**1.22**	**263**	P			Pn	18 20 12.6	-0.2
NSK				*eS*			Sn	18 20 29.5	+0.2
NNSB	**Datong**	**1.25**	**252**	P			Pb	18 20 13.5	+0.1
NNSB				*eS*			Sn	18 20 31.1	+0.9
NNSH	**Datong**	**1.25**	**252**	P			Pn	18 20 13.1	-0.2
NNSH				S			Sn	18 20 30.1	-0.1
ETLH	**Xiulin Townshi**	**1.26**	**241**	P			Pg	18 20 14.1	+0.4
ETLH				*eS*			Sg	18 20 30.1	0.0
JKRS	**Kuro-shima**	**1.34**	**116**	P			Pn	18 20 13.1	-1.3
KSHI	**Guanxi Townshi**	**1.37**	**268**	*eP*			Pg	18 20 16.7	+0.7
JIJ	**Ishigaki jima**	**1.40**	**109**	P			Pn	18 20 13.5	-1.8
LXIB	**Xiulin Townshi**	**1.41**	**236**	P			Pg	18 20 16.4	-0.3
SHUL	**Shoufeng**	**1.45**	**225**	*eP*			Pb	18 20 16.4	-0.4
SHUL				*eS*			Sg	18 20 36.4	-0.1
JISG	**Ishigakijimahi**	**1.50**	**99**	*eP*			Pn	18 20 14.8	-1.7
WARBT	**Fenglin Townsh**	**1.62**	**227**	P			Pn	18 20 17.8	-0.4
WARBT				*eS*			Sb	18 20 39.9	-0.2
WUSB	**Renai**	**1.65**	**240**	*eP*			Pb	18 20 20.3	+0.1
WUSB				*eS*			Sg	18 20 42.3	-0.5
HGSD	**Ruisui**	**1.76**	**221**	P			Pn	18 20 20.3	+0.2
SSLB	**Suanglung**	**1.89**	**237**	*eP*			Pb	18 20 24.1	0.0
YULB	**Yu-li**	**1.91**	**222**	P			Pn	18 20 22.0	-0.2
YULB				*eS*			Sb	18 20 47.8	-0.7
JIKM	**Ikemajima**	**2.33**	**87**	*i* S			Sn	18 20 56.2	-0.4

IDC 21 18:22:17.8±343.0,54.26N×41.44E,h0km,Error ellipse: s-maj=140.9km s-min=73.1km az=140.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.44**	**317**	I		I		18 44 20.0	
	0.1nm,0.9s,baz=132,slow=318,SNR=5.1								
I31KZ	**AKTYUBINSK INF**	**10.86**	**104**	I		I		19 28 25.0	
	baz=294,slow=310,SNR=4.0								
I26DE	**FREYUNG INFRAS**	**18.00**	**264**	I		I		20 03 50.0	
	baz=62,slow=321,SNR=1.1								
I37NO	**I37NO**	**18.19**	**333**	I		I		20 13 40.0	
	baz=135,slow=321,SNR=1.8								

*NEIC **21** 18:30:03.9±1.7,4.43S±0.07×153.70E±0.09,h86km±7km, mb4.2/16,Error ellipse: s-maj=14.2km s-min=9.6km az=67.0*
*IDC **21** 18:30:10.1±8.1,4.57S×153.48E,h137km±59km,mb3.5/6, mbtmp4.0/7,Error ellipse: s-maj=58.3km s-min=29.8km az=66.0*
ISC 21 18:30:03.3±0.7,4.44S±0.08×153.71E±0.10,h85km,n31, σ1s09/31,mb4.0/10,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.56**	**279**				**Pn**	**18 30 30.9**	**+1.3**
RABL						Sn	**Sn**	**18 30 49.7**	**+0.1**
PMG	**Port Moresby**	**8.16**	**232**	P			**Pn**	**18 32 02.7**	**+3.7**
	18nm,0.5s,baz=51,slow=9.4,SNR=21								
PMG				S			**Sn**	**18 33 29.1**	**-0.6**
	16nm,0.5s,baz=133,slow=21,SNR=6.7								
PMG	**Port Moresby**	**8.16**	**232**				**Pn**	**18 32 00.7**	**+1.7**
PATS	**Pohnpei**	**12.11**	**22**	Pn			**Pn**	**18 32 53.0**	**+0.2**
WR8	**Warramunga Arr**	**24.25**	**229**	P			**P**	**18 35 12.4**	**-0.1**
WR8				IAmb		IAmb		18 35 30.7	
	comp=Z,14nm,1.5s								
WRA	**Warramunga Arr**	**24.36**	**229**	P			**P**	**18 35 13.7**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=54,slow=9.9,SNR=38								
WRA				PcP			**PcP**	**18 38 51.1**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=51,slow=3.3,SNR=2.6								
	comp=Z,3.4nm,0.5s								
WRA	**Warramunga Arr**	**24.36**	**229**	P			**P**	**18 35 13.1**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**26.14**	**29**	T		T		19 05 01.2	
	baz=202,slow=74								
H11S2	**WAKE ISLAND Hy**	**26.14**	**29**	T		T		19 05 00.2	
	baz=202,slow=74								
H11S1	**WAKE ISLAND Hy**	**26.15**	**29**	T		T		19 05 01.3	
	baz=202								
INKA	**Innaminka**	**26.26**	**207**	P			**P**	**18 35 30.5**	**-0.1**
KNRA	**Kununurra**	**26.94**	**244**	P			**P**	**18 35 36.5**	**-0.4**
ASAR	**Alice Springs**	**27.03**	**223**	P			**P**	**18 35 37.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=57,slow=9.0,SNR=6.5								
ASAR				PcP			**PcP**	**18 38 57.1**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=61,slow=3.1,SNR=2.3								
	comp=Z,0.3nm,0.4s								
STKA	**Stephens Creek**	**29.57**	**201**	P			**P**	**18 36 00.1**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=19,slow=10,SNR=3.2								
	comp=Z,1.5nm,0.6s								
FITZ	**Fitzroy Crossi**	**30.62**	**241**	P			**P**	**18 36 08.5**	**-1.2**
FORT	**Forrest**	**35.64**	**220**	P			**P**	**18 36 52.7**	**-0.4**
MORW	**Morawa**	**43.27**	**231**	P			**P**	**18 37 55.4**	**-1.3**
KULM	**Kulim**	**53.87**	**280**	P			**P**	**18 39 17.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**58.55**	**295**	P			**P**	**18 39 52.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=127,slow=5.4,SNR=5.1								
	comp=Z,0.5nm,0.7s								
CMAR	**Chiang Mai Arr**	**58.55**	**295**	P			**P**	**18 39 51.6**	**+0.1**
CASY	**Casey**	**68.62**	**197**	P			**P**	**18 40 56.5**	**-0.5**
CASY				IAmb		IAmb		18 41 36.8	
	comp=Z,3.4nm,1.1s								
VNDA	**Vanda**	**73.16**	**178**	P			**P**	**18 41 24.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=325,slow=8.3,SNR=3.9								
	comp=Z,0.6nm,0.7s								
VNDA	**Vanda**	**73.16**	**178**	IAmb		IAmb		18 41 34.9	
	comp=Z,3.1nm,1.4s								
M14K	**Bethel**	**73.55**	**21**	P			**P**	**18 41 26.6**	**-0.1**
OHAK	**Old Harbor**	**74.82**	**27**	P			**P**	**18 41 33.8**	**-0.4**
CNPM	**China Poot**	**77.00**	**25**	P			**P**	**18 41 46.3**	**-0.3**
E19K	**Redstone River**	**79.58**	**17**	P			**P**	**18 42 01.9**	**+1.2**
E19K				IAmb		IAmb		18 42 05.1	
	comp=Z,3.6nm,1.2s								
D23K	**Nanushuk River**	**82.44**	**17**	P			**P**	**18 42 17.7**	**+1.8**
D23K				IAmb		IAmb		18 42 41.6	
	comp=Z,4.4nm,1.4s								
QSPA	**South Pole Qui**	**85.52**	**180**	P			**P**	**18 42 32.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=39,slow=1.9,SNR=2.0								
	comp=Z,1.0nm,0.8s								
QSPA	**South Pole Qui**	**85.52**	**180**	P			**P**	**18 42 31.8**	**+0.1**
QSPA				IAmb		IAmb		18 43 12.9	
	comp=Z,5.2nm,1.4s								
TORD	**Torodi Ar. Bea**	**151.05**	**289**	PKPbc			**PKPbc**	**18 49 45.8**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=77,slow=2.8,SNR=6.5								

*IDC **21** 18:33:51.8±0.7,15.10S×173.63W,h0km,mb4.0/11, mbtmp4.0/11,MS3.4/17,Error ellipse: s-maj=30.6km s-min=18.5km az=128.0*
*NEIC **21** 18:33:52.3±2.1,15.11S±0.09×173.2W±0.1,h10km±1km, mb4.4/15,Error ellipse: s-maj=20.7km s-min=10.9km az=302.0*
ISC 21 18:33:54.8±0.5,15.17S±0.06×173.22W±0.08,h29km,n61, σ1s77/42,mb4.1/15,MS3.5/15,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.88**	**48**	Pn			**Pn**	**18 34 25.5**	**+0.5**
	248nm,0.3s,baz=193,slow=2.7,SNR=50								
AFI				Sn			**Sn**	**18 34 44.6**	**-3.2**
	700nm,0.3s,baz=52,slow=24,SNR=29								
AFI				LR		LR	LR	18 35 23.4	
	comp=Z,483nm,20.0s,baz=222,slow=43								
AFI	**Afiamalu**	**1.88**	**48**				**Pn**	**18 34 25.2**	**+0.2**
AFI				Sn			**Sn**	**18 34 44.4**	**-3.4**
NIUE	**Niue**	**5.01**	**141**				**Pn**	**18 35 09.3**	**+1.3**
NIUE				Sn			**Sn**	**18 36 00.5**	**-4.4**
MSVF	**Nonsavu**	**8.75**	**252**	Pn			Pn	18 36 07.4	+7.9
	0.2nm,0.3s,baz=95,slow=12,SNR=6.1								
MSVF				LR		LR	LR	18 38 57.4	
	comp=Z,360nm,21.1s,baz=97,slow=36								
MSVF	**Nonsavu**	**8.75**	**252**				Pn	18 36 04.8	+5.3
MARNC	**Mare, Loyalty**	**18.86**	**248**	P			**P**	**18 38 13.0**	**+0.2**
DZM	**Mont Dzumac**	**20.44**	**247**	P			Pn	18 38 34.5	+2.1
	5.8nm,0.8s,baz=90,slow=17,SNR=2.3								
PPT	**Papeete**	**22.81**	**99**	LR		LR	LR	18 45 39.0	
	comp=Z,23nm,19.9s,baz=356,slow=30								
PLWZ	**Palliser**	**28.14**	**199**	P			**P**	**18 39 44.2**	**-0.2**
QRZ	**Quartz Range**	**28.41**	**203**	P			**P**	**18 39 47.0**	**+0.2**
EIDS	**Eidsvold**	**34.89**	**247**	P			**P**	**18 40 42.8**	**-1.2**
EIDS				IAmb		IAmb	IAmb	18 40 53.2	
	comp=Z,9.8nm,1.1s								
H11S2	**WAKE ISLAND Hy**	**38.85**	**329**	T		T		19 22 31.7	
	baz=146,slow=75								
CTA	**Charters Tower**	**38.86**	**257**	LR		LR	LR	18 54 29.6	
	comp=Z,62nm,20.7s,baz=118,slow=32								
H11S3	**WAKE ISLAND Hy**	**38.86**	**329**	T		T		19 22 38.7	
	baz=146,slow=75								
H11S1	**WAKE ISLAND Hy**	**38.87**	**329**	T		T		19 22 30.6	
	baz=146,slow=75								
CAN	**Canberra**	**39.31**	**232**	P			**P**	**18 41 19.4**	**-2.0**
H11N3	**WAKE ISLAND Hy**	**39.79**	**330**	T		T		19 23 58.0	
	baz=149,slow=76								
H11N1	**WAKE ISLAND Hy**	**39.80**	**330**	T		T		19 23 49.2	
	baz=149,slow=76								
H11N2	**WAKE ISLAND Hy**	**39.81**	**330**	T		T		19 24 04.3	
	baz=149,slow=76								
STKA	**Stephens Creek**	**44.30**	**240**	P			**P**	**18 42 00.7**	**-1.5**
	comp=Z,0.0nm,0.8s,baz=67,slow=5.4,SNR=3.6								
	comp=Z,2.0nm,0.8s								
INKA	**Innaminka**	**44.39**	**246**	P			**P**	**18 42 02.2**	**-0.9**
JAY	**Jayapura**	**47.11**	**281**	LR		LR	LR	19 00 56.2	
	comp=Z,42nm,18.2s,baz=300,slow=35								
BBOO	**Buckleboo**	**49.08**	**240**	P			**P**	**18 42 38.3**	**-1.4**
WR8	**Warramunga Arr**	**49.91**	**257**	P			**P**	**18 42 44.6**	**-1.7**
WR8				IAmb		IAmb	IAmb	18 42 59.7	
	comp=Z,4.2nm,1.1s								
WRA	**Warramunga Arr**	**50.06**	**257**	P			**P**	**18 42 45.5**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=92,slow=7.2,SNR=13								
	comp=Z,0.6nm,0.5s								
WRA	**Warramunga Arr**	**50.06**	**257**	P			**P**	**18 42 44.8**	**-2.6**
AS31	**Alice Springs**	**50.34**	**252**	P			**P**	**18 42 47.8**	**-1.7**
AS31				IAmb		IAmb	IAmb	18 43 00.2	
	comp=Z,1.9nm,0.7s								
ASAR	**Alice Springs**	**50.34**	**252**	P			**P**	**18 42 47.9**	**-1.7**
	comp=Z,4.0nm,0.6s,baz=87,slow=8.2,SNR=89								
ASAR				LR		LR	LR	19 02 14.9	
	comp=Z,96nm,20.0s,baz=108,slow=34								
	comp=Z,4.0nm,0.6s								
ASAR	**Alice Springs**	**50.34**	**252**	P			**P**	**18 42 47.5**	**-2.0**
FITZ	**Fitzroy Crossi**	**58.42**	**258**	LR		LR	LR	19 06 37.6	
	comp=Z,69nm,18.4s,baz=16,slow=34								
VNDA	**Vanda**	**63.62**	**186**	P			**P**	**18 44 24.7**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=9.0,slow=6.0,SNR=5.8								
	comp=Z,1.1nm,0.8s								
VNDA	**Vanda**	**63.62**	**186**	P			**P**	**18 44 23.5**	**+0.9**
VNDA				IAmb		IAmb	IAmb	18 44 26.3	
	comp=Z,2.5nm,1.1s								
NWAO	**Narrogin (SRO)**	**64.88**	**240**	P			**P**	**18 44 32.6**	**+0.9**
MJAR	**Matsushiro Arr**	**68.87**	**320**	LR		LR	LR	19 08 59.1	
	comp=Z,20nm,20.5s,baz=146,slow=31								
PEA0B	**Petropavlovsk-**	**72.46**	**342**	P			**P**	**18 45 18.6**	**+0.3**
PETK	**Petropavlovsk-**	**72.46**	**342**	P			**P**	**18 45 19.0**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=175,slow=6.6,SNR=2.5								
PETK				LR			LR	19 09 12.2	
	comp=Z,8.8nm,21.3s,baz=179,slow=29								
	comp=Z,2.1nm,0.9s								
PETK	**Petropavlovsk-**	**72.46**	**342**	P			**P**	**18 45 19.1**	**+0.8**
PFO	**Pinyon Flats O**	**72.64**	**47**	LR		LR		19 09 12.6	
	comp=Z,51nm,20.6s,baz=150,slow=29								
YBH	**Yreka Blue Hor**	**73.31**	**37**	LR		LR		19 09 34.8	
	comp=Z,30nm,20.9s,baz=171,slow=29								
NVAR	**Mina Array Bea**	**74.04**	**42**	P			**P**	**18 45 30.4**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=247,slow=7.6,SNR=4.0								
NVAR				LR			LR	19 10 04.0	
	comp=Z,36nm,21.3s,baz=208,slow=29								
	comp=Z,0.8nm,0.7s								
KDAK	**Kodiak Island**	**74.66**	**11**	LR		LR	LR	19 11 27.8	
	comp=Z,30nm,19.8s,baz=179,slow=30								
QSPA	**South Pole Qui**	**74.88**	**180**	P			**P**	**18 45 34.8**	**+2.1**
	comp=Z,3.8nm,0.8s,baz=20,slow=0.5,SNR=12								
	comp=Z,3.8nm,0.8s								
QSPA	**South Pole Qui**	**74.88**	**180**	P			**P**	**18 45 34.0**	**+1.3**
QSPA				IAmb		IAmb	IAmb	18 45 35.9	
	comp=Z,6.2nm,0.9s								
MA2	**Magadan**	**79.99**	**342**	LR		LR		19 18 46.7	
	comp=Z,9.3nm,19.4s,baz=151,slow=34								
TXAR	**Lajitas Array**	**80.34**	**56**	P			**P**	**18 46 07.0**	**+3.2**
	comp=Z,0.3nm,0.8s,baz=252,slow=4.5,SNR=3.7								
	comp=Z,0.3nm,0.8s								
TXAR	**Lajitas Array**	**80.34**	**56**	P			**P**	**18 46 02.5**	**-1.2**
CCB	**Clear Creek Bu**	**81.90**	**11**	P			**P**	**18 46 11.4**	**+0.3**
CCB				IAmb		IAmb	IAmb	18 46 14.2	
	comp=Z,4.3nm,0.9s								
PDAR	**Pinedale Array**	**81.98**	**42**	P			**P**	**18 46 14.3**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=241,slow=4.3,SNR=5.7								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**81.98**	**42**	P			**P**	**18 46 11.4**	**-1.0**
ILAR	**Eielson Array**	**82.18**	**11**	P			**P**	**18 46 14.6**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=204,slow=4.0,SNR=6.6								
	comp=Z,0.5nm,0.7s								
ILAR	**Eielson Array**	**82.18**	**11**	P			**P**	**18 46 12.6**	**0.0**
INK	**Inuvik**	**88.00**	**14**	LR		LR	LR	19 23 06.3	
	comp=Z,19nm,18.3s,baz=310,slow=34								
MAW	**Mawson**	**88.07**	**199**	P			**P**	**18 46 43.4**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=180,slow=6.1,SNR=2.3								
	comp=Z,2.3nm,0.7s								
MAW	**Mawson**	**88.07**	**199**	IAmb		IAmb	IAmb	18 46 44.1	
	comp=Z,0.6nm,0.8s								
YAK	**Yakutsk**	**88.97**	**337**	LR		LR	LR	19 23 07.8	
	comp=Z,13nm,19.8s,baz=110,slow=33								
TKL	**Tuckaleechee C**	**98.24**	**55**	LR		LR	LR	19 23 52.8	
	comp=Z,31nm,22.0s,baz=136,slow=30								
ARCES	**ARCESS Array B**	**124.40**	**352**	PKP			**PKiKP**	**18 52 51.2**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=38,slow=6.1,SNR=3.8								
GERES	**GER

KBN	Korca	0.99	19	Pg	Pb	18 35 04.0	-0.1
KBN				Sg	Sn	18 35 18.6	-0.1
KBN				AML	AML	18 35 28.3	
	5.7nm,0.6s						
KBN	Korca	0.99	19	P	Pb	18 35 03.7	-0.4
KBN	Korca	0.99	19	P	Pn	18 35 04.8	0.0
NYDR	Nydri-Lefkada	1.00	165	P	Pb	18 35 03.5	-0.7
AMPL	Ampelaki	1.00	139	P	Pb	18 35 03.7	-0.5
AMPL	Ampelaki	1.00	139	P	Pb	18 35 04.0	-0.2
AMPL				S	Sg	18 35 18.5	+1.0
DRAG	Dragano-Lefkad	1.01	171	P	Pb	18 35 03.8	-0.5
DRAG	Dragano-Lefkad	1.01	171	P	Pb	18 35 03.9	-0.5
DRAG				S	Sg	18 35 18.4	+0.7
VLO	Vlora	1.03	320	Pg	Pn	18 35 06.6	+1.5
VLO				AML	AML	18 35 33.0	
	20nm,0.4s						
VLO	Vlora	1.03	320	P	Pn	18 35 08.4	+3.3
EVGI	Lefkada island	1.08	168	P	Pb	18 35 05.0	-0.7
EVGI	Lefkada island	1.08	168	P	Pb	18 35 04.9	-0.7
FSK	Fiskardo	1.23	173	P	Pn	18 35 07.3	-0.5
FSK	Fiskardo	1.23	173	P	Pn	18 35 07.4	-0.5
KZN	Kozani	1.25	59	P	Pn	18 35 06.9	-1.3
KZN	Kozani	1.25	59	P	Pn	18 35 07.5	-0.6
THL	Klokotos Trika	1.28	95	Pg	Pn	18 35 08.2	-0.3
THL				Sg	Sg	18 35 27.0	+0.8
THL	Klokotos Trika	1.28	95	P	Pn	18 35 08.2	-0.3
THL	Klokotos Trika	1.28	95	P	Pn	18 35 08.1	-0.3
EVR	Evrytania	1.35	124	P	Pn	18 35 09.9	+0.2
EVR	Evrytania	1.35	124	P	Pn	18 35 10.0	+0.3
PVO	Paravola	1.39	139	P	Pb	18 35 11.5	+0.6
PVO	Paravola	1.39	139	P	Pn	18 35 10.5	+0.4
DMLN	Damoulianata-K	1.44	180	P	Pb	18 35 11.5	-0.2
TYRN	Tyrnavos	1.44	88	P	Pb	18 35 10.6	-0.1
TYRN	Tyrnavos	1.44	88	P	Pn	18 35 10.9	+0.2
OHR	Ohrid	1.47	13	*i* Pn	Pg	18 35 13.5	+0.2
PLEV	Plevrona-Mesol	1.50	147	P	Pb	18 35 12.9	+0.1
PLEV	Plevrona-Mesol	1.50	147	P	Pn	18 35 11.9	+0.3
VLS	Valsamata	1.51	173	P	Pn	18 35 12.4	+0.7
VLS	Valsamata	1.51	173	P	Pn	18 35 12.4	+0.7
ANX	Ano Chora	1.62	131	P	Pb	18 35 15.4	+0.5
ANX	Ano Chora	1.62	131	P	Pn	18 35 13.8	+0.4
RTZL	Ratzakli, Kefa	1.63	169	P	Pn	18 35 13.7	+0.3
AGG	Agios Georgios	1.66	113	P	Pn	18 35 14.8	+1.0
AGG	Agios Georgios	1.66	113	P	Pb	18 35 15.9	+0.4
AGG	Agios Georgios	1.66	113	P	Pn	18 35 14.6	+0.8
AGPP	Agrapidokambos	1.66	140	P	Pn	18 35 14.3	+0.5
AXS	Araxos	1.68	152	P	Pb	18 35 14.5	-0.3
AXS	Araxos	1.68	152	P	Pn	18 35 14.2	+0.1
LIT	Litokhoron	1.69	75	P	Pn	18 35 14.3	+0.1
LIT	Litokhoron	1.69	75	P	Pb	18 35 15.6	-0.3
LIT	Litokhoron	1.69	75	P	Pn	18 35 14.1	0.0
TIR	Tirane	1.71	347	Pn	Pg	18 35 17.2	-0.6
TIR				Sn	Sg	18 35 41.0	+1.0
TIR				AML	AML	18 35 56.3	
	2.9nm,1.2s						
TIR				AML	AML	18 35 57.8	
	3.1nm,0.7s						
SERG	Sergoula	1.83	133	P	Pb	18 35 18.6	+0.4
RLS	Riolos of Patr	1.83	152	P	Pb	18 35 18.4	+0.1
RLS	Riolos of Patr	1.83	152	P	Pn	18 35 18.3	+0.6
ORTH	Orthonies,Zaky	1.84	172	P	Pn	18 35 16.5	+0.2
KALE	Kalithea	1.89	132	P	Pb	18 35 19.8	+0.4
AGEO	AgiosGiorgios,	1.94	136	P	Pn	18 35 18.5	+0.9
TEME	Temeni, Aigial	1.99	136	P	Pn	18 35 18.9	+0.6
AXAR	Agios Charalam	2.00	116	P	Pn	18 35 19.6	+1.1
PHP	Peshkopia	2.00	2	Pn	Pb	18 35 21.4	+0.1
PHP				Sn	Sg	18 35 48.5	-1.0
PHP				AML	AML	18 35 58.8	
	5.1nm,1.1s						
GRG	Griva	2.01	50	P	Pb	18 35 20.8	-0.7
DRO	Drossia	2.02	148	P	Pb	18 35 20.8	-0.7
DRO	Drossia	2.02	148	P	Pn	18 35 19.6	+0.9
MESG	Mesagne	2.13	296	P	Pn	18 35 20.7	+0.4
KLV	Kalavryta, Ach	2.15	139	Pg	Pb	18 35 23.3	-0.5
KLV				Sg	Sg	18 35 54.7	+0.6
KLV	Kalavryta, Ach	2.15	139	P	Pn	18 35 21.3	+0.8
THE	Thessaloniki	2.21	64	P	Pb	18 35 24.1	-0.6
THE	Thessaloniki	2.21	64	P	Pn	18 35 21.9	+0.6
XOR	Xorichti	2.21	97	P	Pb	18 35 24.1	-0.7
XOR	Xorichti	2.21	97	P	Pn	18 35 22.2	+0.9
ATAL	Atalanti	2.29	115	P	Pn	18 35 23.3	+0.9
HORT	Hortiatis	2.29	66	P	Pb	18 35 24.6	-1.6
LKR	Lokris	2.29	116	P	Pn	18 35 23.3	+0.9
GUR	Goura	2.33	138	P	Pn	18 35 23.7	+0.7
VAY	Valandovo	2.35	45	*i* Pn	Pn	18 35 25.2	+2.0
SKO	Skopje	2.43	19	*i* Pn	Pb	18 35 27.0	-1.6
THAL	Thalero	2.43	132	P	Pn	18 35 25.3	+1.0
KNT	Kendrikon	2.43	52	P	Pb	18 35 27.6	-1.0
KNT	Kendrikon	2.43	52	P	Pn	18 35 24.9	+0.5
ULC	Ulcinj	2.43	340	*e*Pn	Pn	18 35 26.1	+1.6
ULC				*i* Sn	Sb	18 35 56.5	-2.0
SDA	Shkodra	2.46	345	Pn	Pn	18 35 25.8	+1.1
SOH	Sokhos	2.56	63	P	Pb	18 35 28.7	-1.8
SOH	Sokhos	2.56	63	P	Pn	18 35 26.7	+0.6
PAIG	Paliouri	2.56	83	P	Pn	18 35 28.0	+1.8
LTK	Loutraki	2.62	128	P	Pn	18 35 27.1	+0.1
LOUT	Loutraki	2.65	129	P	Pn	18 35 27.9	+0.5
ACOR	Acrocorinthos	2.65	132	P	Pn	18 35 27.3	-0.1
DRME	Dracevica, Mon	2.66	341	*e*Pn	Pn	18 35 29.2	+1.7
DRME	Dracevica, Mon	2.66	341	*e*Pn	Pn	18 35 29.1	+1.6
DRME				*i* Sn	Sn	18 36 01.9	+2.3
VIL2	Platees	2.70	122	P	Pn	18 35 29.5	+1.4
NOCI	Noci	2.76	295	P	Pn	18 35 29.1	+0.2
ITM	Ithomi	2.78	153	Pn	Pn	18 35 31.7	+2.4
TIP	Timpagrande	2.84	261	⇑P	Pn	18 35 30.3	+0.2
TIP				⇑S	Sn	18 36 03.7	-0.4
TIP	Timpagrande	2.84	261	P	Pn	18 35 31.6	+1.5
TIP	Timpagrande	2.84	261	P	Pn	18 35 29.6	-0.4
BUM	Brajici-Budva	2.84	337	⇓*i*Pn	Pn	18 35 31.6	+1.5
BUM				*i* Sn	Sn	18 36 06.2	+2.0
PEHC	Pehcevo	2.85	42	*i* Pn	Pn	18 35 28.7	-1.5
SRS	Serrai	2.85	59	*e*Pn	Pn	18 35 32.0	+1.8
SRS				*e*Sg	Sn	18 36 05.3	+1.0
SRS	Serrai	2.85	59	P	Pn	18 35 32.4	+2.2
PDG	Podgorica	2.87	343	⇑P	Pn	18 35 32.9	+2.4
PDG				⇑S	Sn	18 36 07.4	+2.6
PDG	Podgorica	2.87	343	P	Pn	18 35 32.9	+2.4
PDG	Podgorica	2.87	343	*e*Pn	Pn	18 35 32.8	+2.4
PDG	Podgorica	2.87	343	*e*Pn	Pn	18 35 32.2	+1.8
PDG	Podgorica	2.87	343	*e*Pn	Pn	18 35 32.1	+1.7
PDG				*i* Sn	Sn	18 36 07.1	+2.3
STFN	Stefani	2.90	120	P	Pn	18 35 31.2	+0.3
PVY	Plav	2.93	354	⇓*i*Pn	Pn	18 35 33.0	+1.7
PVY				*i* Sn	Sn	18 36 08.5	+2.1
MATE	Matera	2.97	290	⇑P	Pn	18 35 32.8	+1.1
PYL	PYLOS	2.98	158	P	Pn	18 35 32.0	0.0
KKB	Krupnik	3.01	43	P	Pn	18 35 34.8	+2.4
CEME	Cevo	3.06	340	⇑*i*Pn	Pn	18 35 34.2	+1.0
CEME				*i* Sn	Sn	18 36 11.6	+1.9
KYMI	Kymi, Euboea I	3.09	109	P	Pn	18 35 34.1	+0.8
HCY	Herceg Novi	3.10	333	*e*Pn	Pn	18 35 33.3	-0.4
HCY	Herceg Novi	3.10	333	*e*Pn	Pn	18 35 34.7	+1.0
HCY				*i* Sn	Sn	18 36 12.4	+1.8
ATH	Athens Observa	3.12	122	P	Pn	18 35 34.7	+0.8
MMB	Musomishta	3.18	53	P	Pn	18 35 37.7	+3.0
PTL	Penteli	3.18	120	P	Pn	18 35 35.1	+0.4
IVA	Berane	3.21	354	*e*Pn	Pn	18 35 36.9	+1.8
IVA				*i* Sn	Sn	18 36 15.2	+2.0
KOME	Kolasin	3.23	349	*e*Pn	Pn	18 35 37.3	+1.8
KOME				*i* Sn	Sn	18 36 15.7	+1.9
BOSS	Bosilegrad	3.23	29	*e*Pn	Pn	18 35 37.9	+2.5
VLY	Voula,Athens	3.24	123	P	Pn	18 35 36.2	+0.7
NKME	Niksic	3.26	341	*e*Pn	Pn	18 35 37.5	+1.6
NKME				*i* Sn	Sn	18 36 16.3	+1.8
BARS	Barje	3.32	19	*e*Pn	Pn	18 35 38.6	+2.0
TREB	Trebinje	3.39	334	*e*Pn	Pn	18 35 38.2	+0.6
TREB	Trebinje	3.39	334	*e*Pn	Pn	18 35 37.2	-0.4
BRY	Bratogost	3.50	337	*e*Pn	Pn	18 35 40.6	+1.4
BRY	Bratogost	3.50	337	*e*Pn	Pn	18 35 40.7	+1.5
BRY				*i* Sn	Sn	18 36 22.0	+1.5
SELS	Selova	3.58	9	*e*Pn	Pn	18 35 42.0	+1.8
VLI	Veliai	3.58	145	P	Pn	18 35 40.6	+0.4
SJES	Sjenica	3.59	355	*e*Pn	Pn	18 35 42.6	+2.2
SJES	Sjenica	3.59	355	*e*Pn	Pn	18 35 42.7	+2.3
VTS	Vitosha	3.65	36	P	Pn	18 35 45.0	+3.8
VTS	Vitosha	3.65	36	*e*Pn	Pn	18 35 42.7	+1.5
PLE	Plievlja	3.72	349	*e*Pn	Pn	18 35 43.9	+1.7
PLE				*i* Sn	Sn	18 36 27.3	+1.4
CEL	Celeste	3.76	249	P	Pn	18 35 45.5	+2.8
CEL	Celeste	3.76	249	P	Pn	18 35 43.1	+0.3
STON	Ston	3.77	329	*e*Pn	Pn	18 35 43.7	+1.0
BLSH	Balsha	3.86	34	P	Pn	18 35 48.3	+4.2
RZN	Rozhen	3.88	57	P	Pn	18 35 44.1	-0.4
IVAS	Ivanjica	3.90	358	*e*Pn	Pn	18 35 45.6	+1.0
GOCS	Kraljevo Serbi	3.90	5	*e*Pn	Pn	18 35 45.9	+1.3
ZAPS	Zavoj	3.97	25	*e*Pn	Pn	18 35 48.4	+2.8
PLD	Plovdiv	4.13	52	*e*Pn	Pn	18 35 49.8	+2.0
RDO	Rodhopi	4.21	68	P	Pn	18 35 52.8	+4.0
RDO	Rodhopi	4.21	68	P	Pn	18 35 49.2	+0.4
GRUS	Gruza	4.21	3	*e*Pn	Pn	18 35 50.2	+1.3
BBLS	Lazi&#263i	4.24	351	*e*Pn	Pn	18 35 51.3	+1.9
BBLS	Lazi&#263i	4.24	351	*e*Pn	Pn	18 35 51.5	+2.1
BLKB	Belogradchik	4.30	23	*e*Pn	Pn	18 35 52.4	+2.3
ZAGS	Zajecar	4.36	18	*e*Pn	Pn	18 35 53.2	+2.3
DIVS	Divibare	4.42	356	*e*Pn	Pn	18 35 50.6	-1.2
MPEP	Malo Peshtene	4.46	34	P	Pn	18 35 56.0	+3.7
TRUS	Trudelj	4.54	0	*e*Pn	Pn	18 35 54.6	+1.2
KUBS	Kucevo	4.83	11	*e*Pn	Pn	18 35 57.2	-0.1
PLVB	Pleven	4.89	39	⇓P	Pn	18 36 01.3	+3.1
TEKS	Tekeris	4.90	353	*e*Pn	Pn	18 35 58.7	+0.3
TEKS	Tekeris	4.90	353	*e*Pn	Pn	18 35 58.5	+0.1
MDVR	Moldovita	5.19	11	⇓P	Pn	18 36 04.5	+2.1
MDVR	Moldovita	5.19	11	*e*Pn	Pn	18 36 04.1	+1.7
HERR	Herculane	5.41	16	⇑P	Pn	18 36 08.0	+2.7
VRSS	Vrsac	5.48	7	*e*Pn	Pn	18 36 07.6	+1.3
FRGS	Fruska Gora	5.49	356	*e*Pn	Pn	18 36 06.9	+0.5
FRGS	Fruska Gora	5.49	356	*e*Pn	Pn	18 36 07.0	+0.5
BLY	Banja Luka	5.59	336	⇓P	Pn	18 36 08.7	+0.9
BLY	Banja Luka	5.59	336	*e*Pn	Pn	18 36 08.4	+0.7
BLY	Banja Luka	5.59	336	*e*Pn	Pn	18 36 08.4	+0.7
BLY	Banja Luka	5.59	336	P	Pn	18 36 08.8	+1.0
IDI	Anoyia	5.67	139	Pn	Pn	18 36 09.0	0.0
	3.1nm,0.3s,baz=245,slow=7.0,SNR=10						
IDI				Sn	Sn	18 37 08.5	-5.4
	2.2nm,0.3s,baz=340,slow=6.7,SNR=3.1						
AQU	L'Aquila	5.91	299	*e*Pn	Pn	18 36 10.8	-1.4
AQU	L'Aquila	5.91	299	P	Pn	18 36 15.6	+3.4
GZR	Gura Zlata	5.98	17	⇑P	Pn	18 36 16.4	+3.2
BZS	Buzias	6.00	8	⇓P	Pn	18 36 15.5	+2.0
BZS	Buzias	6.00	8	*e*Pn	Pn	18 36 14.1	+0.6
BZS	Buzias	6.00	8	P	Pn	18 36 14.8	+1.3
SIRR	Siria	6.65	8	*e*Pn	Pn	18 36 23.8	+1.4
MORH	Mrgy, Hungar	6.65	350	⇑P	Pn	18 36 24.5	+2.2
MORH	Mrgy, Hungar	6.65	350	*e*Pn	Pn	18 36 20.2	-2.1
MORH	Mrgy, Hungar	6.65	350	P	Pn	18 36 25.8	+3.4
VOIR		6.71	29	⇑P	Pn	18 36 27.0	+3.7
VOIR		6.71	29	P	Pn	18 36 26.0	+2.7
BOJS	Bojanci	6.93	329	*e*Pn	Pn	18 36 26.8	+0.6
MLR	Muntele Rosu	7.12	34	Pn	Pn	18 36 31.3	+2.4
	1.1nm,0.3s,baz=183,slow=7.1,SNR=9.4						
MLR				Sn	Sn	18 37 51.8	+2.2
	0.1nm,0.3s,baz=223,slow=21,SNR=0.7						
MLR				LR	LR	18 39 27.3	
	comp=Z,61nm,18.8s,baz=248,slow=40 7.9nm,0.9s						
MLR	Muntele Rosu	7.12	34	⇓P	Pn	18 36 32.7	+3.8
MLR	Muntele Rosu	7.12	34	*e*Pn	Pn	18 36 30.6	+1.7
MLR	Muntele Rosu	7.12	34	P	Pn	18 36 32.3	+3.5
CEY	Cerknica	7.47	326	*e*Pn	Pn	18 36 33.8	+0.2
SKDS	Skadanscina	7.50	323	*e*Pn	Pn	18 36 33.4	-0.6
PLOR	Plostina	7.70	35	⇓P	Pn	18 36 40.8	+3.9
VRI	Vrincioaia	7.75	35	⇓P	Pn	18 36 41.3	+3.9
VRI	Vrincioaia	7.75	35	P	Pn	18 36 41.5	+4.1
MPLH	Magyarpolny	7.76	346	P	Pn	18 36 41.6	+4.0
TPGR	Topolog	7.90	46	⇓P	Pn	18 36 42.6	+3.1
SOKA	Soboth	8.00	333	*e*Pn	Pn	18 36 41.2	+0.2
	0.3nm,0.1s						
OBKA	Obir	8.04	330	*e*Pn	Pn	18 36 41.6	+0.1
	1.1nm,0.3s						
OBKA	Obir	8.04	330	P	Pn	18 36 42.7	+1.2
ARSA	Arzberg	8.34	337	*e*Pn	Pn	18 36 45.3	-0.3
SESA	Seetaler Alpe,	8.54	332	*e*Pn	Pn	18 36 48.4	0.0
	2.6nm,0.4s						
KECS	Kecovo	8.80	1	*e*PN	Pn	18 36 53.8	+2.0
CONA	Conrad Observa	8.86	340	*e*Pn	Pn	18 36 53.7	+1.0
	0.3nm,0.3s						
KBA	Koelnbreinsper	8.98	328	*i* Pn	Pn	18 36 55.3	+0.8
	0.7nm,0.4s						
KBA	Koelnbreinsper	8.98	328	P	Pn	18 36 57.5	+3.0
MOA	Molln	9.28	334	*e*Pn	Pn	18 36 59.1	+0.7
MOA	Molln	9.28	334	*e*Pn	Pn	18 36 59.2	+0.7
	0.2nm,0.2s						
KOLS	Kolonicke sedl	9.35	8	*e*PN	Pn	18 37 03.2	+3.8
LESA	Schwarzleotal	9.54	327	*e*Pn	Pn	18 37 02.5	+0.5
	2.4nm,0.5s						
RJOB	Jochberg	9.74	328	P	Pn	18 37 06.4	+1.7
WTTA	Wattenberg	9.88	323	*e*Pn	Pn	18 37 07.4	+0.6
	0.7nm,0.3s						
WTTA	Wattenberg	9.88	323	P	Pn	18 37 09.0	+2.2
WATA	Walderalm	9.96	323	*e*Pn	Pn	18 37 08.2	+0.4
	0.4nm,0.2s						
MOTA	Moosalm	10.19	322	*e*Pn	Pn	18 37 11.4	+0.4
	0.3nm,0.2s						
GERES	GERESS Array B	10.33	335	Pn	Pn	18 37 14.1	+1.3
	baz=158,slow=14,SNR=6.7						
GERES				Sn	Sn	18 39 05.1	-3.3
	baz=151,slow=25,SNR=1.8 0.6nm,0.5s						
DAVOX	Davos/Dischmat	10.43	316	Pn	Pn	18 37 15.8	+1.5
	0.7nm,0.3s,baz=109,slow=13,SNR=5.9						
DAVOX				Sn	Sn	18 39 11.0	-0.1
	0.3nm,0.3s,baz=315,slow=20,SNR=3.8 0.9nm,0.3s						
DAVA	Damuels	10.76	318	*e*Pn	Pn	18 37 19.6	+0.9
	2.9nm,0.6s						
MMAI	Mount Meron Ar	13.82	114	Pn	Pn	18 37 59.3	-1.2
	1.1nm,0.3s,baz=317,slow=12,SNR=2.3 0.5nm,0.3s						
EIL	Elat	15.59	125	Pn	Pn	18 38 22.8	-1.6
	0.3nm,0.3s,baz=327,slow=17,SNR=1.9						
EIL				Sn	Sn	18 41 04.7	-12
	0.4nm,0.3s,baz=342,slow=16,SNR=2.5 2.0nm,0.4s						
KBZ	Khabaz	17.29	69	P	P	18 38 49.0	+1.7
	2.8nm,0.8s,baz=297,slow=13,SNR=3.8						
GNI	Garni	18.70	81	LR	LR	18 47 33.5	
	comp=Z,32nm,18.7s,baz=198,slow=41						
ESDC	Sonseca Array	18.72	278	P	Pn	18 39 05.7	+2.1
	0.1nm,0.3s,baz=74,slow=11,SNR=5.5 1.1nm,0.8s						
HFS	Hagfors	20.90	351	P	P	18 39 26.5	-0.3
	2.3nm,0.6s,baz=160,slow=9.5,SNR=7.8 2.3nm,0.6s						
FINES	FINESS Array B	22.07	7	P	P	18 39 38.6	-0.7
	1.3nm,0.5s,baz=187,slow=10.0,SNR=10 1.3nm,0.5s						
NB2	NORSAR Subarra	22.12	348	P	P	18 39 39.2	-0.8
	comp=Z,3.6nm,1.0s,baz=158,slow=10						
NOA	NORSAR Array B	22.12	348	P	P	18 39 39.4	-0.5
	comp=Z,3.5nm,0.8s,baz=159,slow=10.0,SNR=7.5 comp=Z,3.5nm,0.8s						
EKA	Eskdalemuir Ar	22.15	323	P	P	18 39 39.6	-0.6
	comp=Z,1.4nm,0.6s,baz=123,slow=9.3,SNR=10.0 comp=Z,1.4nm,0.6s						
ARCES	ARCESS Array B	30.04	4	P	P	18 40 51.8	-1.5
	comp=Z,0.2nm,0.4s,baz=187,slow=9.3,SNR=5.8						
ARCES				LR	LR	18 53 53.5	
	comp=Z,25nm,19.0s,baz=239,slow=38 comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	31.14	217	P	P	18 41 04.9	+1.5
	comp=Z,1.6nm,0.7s,baz=28,slow=9.5,SNR=9.1 comp=Z,1.6nm,0.7s						
DBIC	Dimbokro	39.93	221	LR	LR	18 59 59.4	
	comp=Z,41nm,18.2s,baz=115,slow=38						
KURBB	Kurchatov Arra	41.45	55	P	P	18 42 30.2	-0.9
	comp=Z,0.4nm,0.8s,baz=289,slow=8.7,SNR=4.2 comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	44.63	60	P	P	18 42 56.3	-0.7
	comp=Z,1.9nm,0.6s,baz=282,slow=7.4,SNR=7.6 comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	44.79	49	P	P	18 42 57.4	-0.8
	comp=Z,1.4nm,0.5s,baz=275,slow=8.9,SNR=9.7 comp=Z,1.4nm,0.5s						
CMAR	Chiang Mai Arr	69.81	82	P	P	18 45 53.9	-1.5
	comp=Z,0.2nm,0.4s,baz=304,slow=6.1,SNR=1.7 comp=Z,0.2nm,0.4s						

*IDC **21** 18:49:11.5±1.9, 7.°66S×127.°51E, h164km±17km, mb3.5/8, mbtmp4.2/13, MS3.2/2, Error ellipse: s-maj=27.1km s-min=13.6km az=78.0*
*NEIC **21** 18:49:11.6±2.6, 7.°70S±0.°07×127.°68E±0.°04, h169km±7km, mb4.1/16, Error ellipse: s-maj=9.8km s-min=6.0km az=165.0*

*DJA **21** 18:49:12.4±0.2, 8.°3S×12.°8E±.°, h174km±6km, M4.3/20, mb4.3/18, mB4.8/7, MLv4.5/20, Mw(mB)4.1/7*

ISC 21 18:49:12.6±0.5, **7.°87S**±0.°04×**127.°71E**±0.°05, **h200**km, **n57,** σ2.°63/68, **mb3.9**/14, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.56	92	P	Pn	Pn	18 50 08.6	-0.4
SAUI				S	Sn	Sn	18 50 53.2	0.0
SOEI	Soe	3.88	241		Pn	Pn	18 50 13.2	+0.1
SOEI				Sn	Sn	Sn	18 50 56.2	-4.3
SOEI	Soe	3.88	241	P	Pn	Pn	18 50 13.7	+0.6
SOEI				S	Sn	Sn	18 50 58.8	-1.7
BATI	Baumata	4.62	240	P	Pn	Pn	18 50 19.6	-2.7
	314nm,0.6s,baz=130,slow=3.0,SNR=67							
BATI				S	Sn	Sn	18 51 12.6	-4.4
	170nm,0.4s,baz=61,slow=22,SNR=10							
BATI	Baumata	4.62	240	P	Pn	Pn	18 50 19.7	-2.5
BATI				S	Sn	Sn	18 51 13.1	-3.9
MMRI	Maumere	5.47	262	Pn	Pn	Pn	18 50 32.3	-0.7
MMRI					Sn	Sn	18 51 32.0	-4.5
MMRI	Maumere	5.47	262	P	Pn	Pn	18 50 31.8	-1.2
	0.3nm47nm,0.8s							
MTN	Manton Dam	5.98	146		Pn	Pn	18 50 41.0	+1.3
MTN				Sn	Sn	Sn	18 51 46.6	-1.9
KDI	Kendari	6.38	307	P	Pn	Pn	18 50 44.8	0.0
FAKI	Fak Fak	6.68	43	Pn	Pn	Pn	18 50 46.0	-2.7
FAKI				Sn	Sn	Sn	18 51 56.6	-8.4
FAKI	Fak Fak	6.68	43	P	Pn	Pn	18 50 46.1	-2.7
	0.2nm37nm,1.3s							
WSI	Waingapu	7.54	256	P	Pn	Pn	18 50 58.2	-1.7
LBFI	Labuhan Bajo,	7.76	265	P	Pn	Pn	18 51 02.7	-0.1
SIJI	Sorong	7.81	27	P	Pn	Pn	18 51 02.2	-1.3
	22nm,0.3s,baz=213,slow=11,SNR=44							
SIJI				S	Sn	Sn	18 52 26.0	-5.6
	3.8nm,0.4s,baz=98,slow=22,SNR=1.7							
SIJI	Sorong	7.81	27	P	Pn	Pn	18 51 01.8	-1.6
	0.2nm1µm19nm,0.4s							
KNRA	Kununurra	7.83	173		Pn	Pn	18 51 05.5	+1.9
KNRA				Sn	Sn	Sn	18 52 29.0	-3.1
PLAI	Plampang	9.87	264	P	Pn	Pn	18 51 28.9	-1.4
	18nm,0.8s							
FITZ	Fitzroy Crossi	10.36	191	P	Pn	Pn	18 51 37.2	+0.7
	19nm,0.4s,baz=23,slow=10.0,SNR=86							
FITZ				S	Sn	Sn	18 53 27.7	-4.7
	14nm,0.4s,baz=335,slow=18,SNR=5.8							
FITZ	Fitzroy Crossi	10.36	191		Pn	Pn	18 51 37.1	+0.5
FITZ					Sn	Sn	18 53 28.5	-3.9
BAKI	Biak	10.68	52	P	Pn	Pn	18 51 41.4	+0.7
	13nm,0.8s							
WB0	Warramunga Arr	13.49	152		P	P	18 52 18.4	-0.4
WRA	Warramunga Arr	13.61	153	P	P	P	18 52 19.8	-0.5
	2.6nm,0.5s,baz=322,slow=14,SNR=51							
WRA				S	S	S	18 54 43.6	-6.0
	7.6nm,0.8s,baz=329,slow=22,SNR=11							
WRA	Warramunga Arr	13.61	153		P	P	18 52 19.3	-0.9
WRA					P	S	18 54 44.9	-4.8
WR8	Warramunga Arr	13.70	152		P	P	18 52 20.3	-0.9
MBWA	Marble Bar	15.29	209	Pn	Pn	Pn	18 52 37.6	-0.9
MBWA				IAmb	IAmb	IAmb	18 53 14.3	
	comp=Z,5.7nm,0.9s							
AS31	Alice Springs	16.79	160	

DZM	**Mont Dzumac**	**19.76**	**249**	P		**Pn**	19 07 20.4	**+2.3**
	comp=Z,14nm,0.9s,baz=74,slow=17,SNR=5.6							
CTAO	**Charters Tower**	**38.29**	**258**	P		**P**	19 10 02.6	**-1.8**
COEN	**Coen**	**41.72**	**267**	P		**P**	19 10 30.3	**-2.5**
COEN				IAmb		IAmb	19 10 58.5	
	comp=Z,16nm,1.2s							
STKA	**Stephens Creek**	**43.53**	**240**	P		**P**	19 10 46.3	**-0.9**
	comp=Z,2.2nm,0.8s,baz=106,slow=5.7,SNR=4.5							
	comp=Z,2.2nm,0.8s							
INKA	**Innaminka**	**43.68**	**247**	P		**P**	19 10 47.5	**-1.0**
BBOO	**Buckleboo**	**48.30**	**240**			**P**	19 11 22.8	**-2.0**
WR8	**Warramunga Arr**	**49.34**	**257**	P		**P**	19 11 30.4	**-2.5**
WR8				IAmb		IAmb	19 12 03.6	
	comp=Z,5.2nm,1.1s							
WB0	**Warramunga Arr**	**49.45**	**258**	P		**P**	19 11 31.6	**-2.2**
WB0				IAmb		IAmb	19 11 60.0	
	comp=Z,6.0nm,1.2s							
WRA	**Warramunga Arr**	**49.49**	**257**	P		**P**	19 11 32.2	**-1.8**
	comp=Z,2.3nm,0.7s,baz=91,slow=6.5,SNR=15							
WRA				PcP		**PcP**	19 12 53.9	**-0.9**
	comp=Z,0.2nm,0.6s,baz=98,slow=3.6,SNR=1.6							
	comp=Z,2.3nm,0.7s							
WRA	**Warramunga Arr**	**49.49**	**257**			**PcP**	19 12 51.6	**-3.1**
AS31	**Alice Springs**	**49.70**	**252**	P		**P**	19 11 33.4	**-2.3**
ASAR	**Alice Springs**	**49.71**	**252**	P		**P**	19 11 33.8	**-1.9**
	comp=Z,7.6nm,0.8s,baz=87,slow=8.2,SNR=61							
ASAR				PcP		**PcP**	19 12 54.9	**-0.6**
	comp=Z,0.3nm,0.6s,baz=90,slow=4.9,SNR=1.0							
	comp=Z,7.6nm,0.8s							
ASAR	**Alice Springs**	**49.71**	**252**	P		**P**	19 11 33.0	**-2.7**
ASAR						**PcP**	19 12 53.6	**-1.9**
KNRA	**Kununurra**	**55.26**	**262**	P		**P**	19 12 15.9	**-0.7**
FITZ	**Fitzroy Crossi**	**57.86**	**258**	P		**P**	19 12 34.4	**-0.8**
VNDA	**Vanda**	**62.73**	**186**	P		**P**	19 13 10.2	**+2.9**
	comp=Z,0.7nm,0.9s,baz=19,slow=9.6,SNR=3.6							
	comp=Z,0.7nm,0.9s							
MBWA	**Marble Bar**	**62.97**	**254**	P		**P**	19 13 08.3	**-1.6**
QSPA	**South Pole Qui**	**74.01**	**180**	P		**P**	19 14 18.8	**+0.8**
NVAR	**Mina Array Bea**	**74.94**	**42**	P		**P**	19 14 24.7	**+0.8**
	comp=Z,2.1nm,0.9s,baz=254,slow=5.8,SNR=4.5							
	comp=Z,2.1nm,0.9s							
MCK	**McKinley**	**81.78**	**11**			**P**	19 15 00.9	**+0.1**
MCK				IAmb		IAmb	19 15 02.2	
	comp=Z,4.4nm,0.8s							
CCB	**Clear Creek Bu**	**82.83**	**11**			**P**	19 15 05.7	**-0.4**
CCB				IAmb		IAmb	19 15 07.3	
	comp=Z,3.5nm,0.9s							
PDAR	**Pinedale Array**	**82.88**	**42**	P		**P**	19 15 08.2	**+1.0**
	comp=Z,2.6nm,0.8s,baz=210,slow=3.0,SNR=7.7							
	comp=Z,2.6nm,0.8s							
PDAR	**Pinedale Array**	**82.88**	**42**	P		**P**	19 15 06.9	**-0.4**
ILAR	**Eielson Array**	**83.11**	**11**	P		**P**	19 15 07.5	**-0.1**
	comp=Z,0.6nm,0.7s,baz=222,slow=6.1,SNR=6.8							
	comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**83.11**	**11**	P		**P**	19 15 07.3	**-0.3**
G23K	**Bananza Creek**	**84.35**	**9**			**P**	19 15 13.9	**0.0**
G23K				IAmb		IAmb	19 15 16.5	
	comp=Z,4.3nm,1.2s							
E22K	**Anaktuvuk Pass**	**85.42**	**8**	P		**P**	19 15 19.0	**-0.2**
E22K				IAmb		IAmb	19 15 21.4	
	comp=Z,5.8nm,1.1s							
G26K	**Porcupine Rive**	**85.64**	**11**			**P**	19 15 19.9	**-0.3**
G26K				IAmb		IAmb	19 15 22.8	
	comp=Z,6.0nm,1.2s							

DJA 21 19:08:01.6±0.2, 0°S±3°×12°4E±°, h65km±6km, M3.8/19, mb3.9/7, MLv3.8/19, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.66**	**234**	P	Pn	19 08 27.9	-0.6
MNI	**Manado**	**1.67**	**26**	P	Pn	19 08 30.7	+2.0
PCI	**Palu**	**4.36**	**259**	P	Pn	19 09 05.2	-0.2
MMSI	**Mamuju**	**5.82**	**243**	P	Pn	19 09 25.1	-0.3
	0.1nm8.8nm,0.8s						
SIJI	**Sorong**	**7.19**	**96**	P	Pn	19 09 45.0	+0.8
FAKI	**Fak Fak**	**8.60**	**109**	P	Pn	19 10 01.9	-1.6

*NEIC **21** 19:09:21.6±2.6, 24°.97N±0°.04×100°.93W±0°.07, h10km±1km, mb4.2/67, Md4.5/40(MEX), Error ellipse: s-maj=10.9km s-min=5.5km az=246.0*

*IDC **21** 19:09:21.6±1.2, 24°.92N×100°.70W, h0km, mb4.1/9, mbtmp4.0/14, ML3.8/4, MS3.3/23, Error ellipse: s-maj=30.1km s-min=22.9km az=41.0*

*GFZ **21** 19:09:22.5±0.3, 25°N±4°×10°1W±°, h10km, M4.1/19, mb4.1/19*

*MEX **21** 19:09:27.6±0.8, 25°.05N×101°.06W, h10km, MD4.5*

ISC 21 19:09:21.5±0.4, 24°.96N±0°.03×100°.87W±0°.03, h10km, n225, σ2°52/221, mb4.3/17, MS3.4/17, 1C, Central Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNIG	**Linares**	**1.27**	**92**	*eP*	**Pg**	19 09 49.9	**+3.9**
	baz=273,slow=16						
LNIG				*eS*	**Sn**	19 10 08.3	**+5.8**
LNIG	**Linares**	**1.27**	**92**		**Pg**	19 09 49.9	**+3.9**
LNIG					**Sn**	19 10 08.3	**+5.8**
GTIG	**Gomez Farias**	**2.44**	**140**	*eP*	**Pg**	19 10 07.6	**-0.7**
GTIG				*eS*	**Sg**	19 10 37.9	**-2.0**
GTIG	**Gomez Farias**	**2.44**	**140**		**Pg**	19 10 07.6	**-0.7**
GTIG					**Sg**	19 10 37.9	**-2.0**
ZAIG	**Zacatecas**	**2.68**	**216**	*eP*	**Pb**	19 10 09.7	**0.0**
ZAIG				*eS*	**Sn**	19 10 40.4	**+2.8**
ZAIG	**Zacatecas**	**2.68**	**216**		**Pn**	19 10 04.7	**-0.3**
ZAIG	**Zacatecas**	**2.68**	**216**	P	**Pn**	19 10 07.5	**+2.5**
HBVL	**Hebbronville**	**2.88**	**43**		**Pb**	19 10 10.4	**-2.7**
MCIG	**Muzquiz**	**2.96**	**349**	*eP*	**Pn**	19 10 10.2	**+1.6**
MCIG				*eS*	**Sn**	19 10 43.4	**-0.9**
MCIG	**Muzquiz**	**2.96**	**349**		**Pn**	19 10 10.2	**+1.6**
MCIG					**Sn**	19 10 43.4	**-0.9**
RPIG	**Rio Verde**	**3.16**	**165**	*eP*	**Pb**	19 10 17.4	**-0.6**
RPIG				*eS*	**Sb**	19 10 56.1	**-0.5**
RPIG	**Rio Verde**	**3.16**	**165**		**Pb**	19 10 17.4	**-0.6**
RPIG					**Sb**	19 10 56.1	**-0.5**
833A	**Chaparral WMA,**	**3.60**	**21**		**Pn**	19 10 19.1	**+1.7**
KVTX	**Kingsville**	**3.71**	**45**		**Pn**	19 10 19.2	**+0.3**
KVTX	**Kingsville**	**3.71**	**45**	P	**Pn**	19 10 19.4	**+0.5**
CTUV	**Llano Grande**	**4.17**	**146**	*e*	**Pg**	19 10 42.2	**+0.8**
CTUV				*e*		19 11 41.9	
IGIG	**Irapuato, Guan**	**4.21**	**186**	*eP*	**Pb**	19 10 33.0	**-2.8**
IGIG				*eS*	**Sn**	19 11 22.2	**+6.9**
IGIG	**Irapuato, Guan**	**4.21**	**186**		**Pb**	19 10 33.0	**-2.8**
EF02	**Christine**	**4.34**	**28**		**Pn**	19 10 27.8	**+0.3**
HPIG		**4.75**	**296**		**Pn**	19 10 33.3	**-0.1**
HPIG		**4.75**	**296**	P	**Pn**	19 10 37.4	**+4.0**
HNDO	**Hondo**	**4.77**	**17**		**Pn**	19 10 34.9	**+1.4**
BCIG	**La Boquilla**	**4.83**	**303**	*eP*	**Pn**	19 10 35.5	**+1.1**
BCIG				*eS*	**Sn**	19 11 27.3	**-3.2**
BCIG	**La Boquilla**	**4.83**	**303**		**Pn**	19 10 35.5	**+1.1**
BCIG					**Sn**	19 11 27.3	**-3.2**
DEIG	**Demacu**	**4.93**	**160**	*eP*	**Pb**	19 10 44.8	**-3.3**
DEIG				*eS*	**Sb**	19 11 42.3	**-5.4**
DHIG	**Demacu**	**4.93**	**160**		**Pb**	19 10 44.8	**-3.4**
TX31	**Lajitas Ar. Si**	**5.02**	**331**		**Pn**	19 10 37.2	**+0.2**
TXAR	**Lajitas Array**	**5.02**	**331**	Pn	**Pn**	19 10 38.9	**+1.8**
	2.0nm,0.3s,baz=159,slow=14,SNR=98						
TXAR				Sn	**Sn**	19 11 38.8	**+3.6**
	9.2nm,0.3s,baz=148,slow=20,SNR=5.4						
TXAR				Lg	Lg	19 11 55.3	
	24nm,0.3s,baz=159,slow=28,SNR=7.0						
TXAR				LR	LR	19 13 00.7	
	comp=Z,217nm,21.2s,baz=134,slow=43						
	9.3nm,0.5s						
TXAR	**Lajitas Array**	**5.02**	**331**		**Pn**	19 10 37.4	**+0.3**
EF04	**Eagle Ford 04**	**5.05**	**32**		**Pn**	19 10 37.9	**+0.6**
SAND	**Sanderson**	**5.10**	**348**		**Pn**	19 10 39.5	**+1.4**
MOIG	**Morelia**	**5.26**	**183**	*eP*	**Pb**	19 10 51.1	**-2.7**
MOIG				*eS*	**Sb**	19 11 54.2	**-3.0**
MOIG	**Morelia**	**5.26**	**183**		**Pn**	19 10 41.0	**+0.5**
JCT	**Junction City**	**5.58**	**9**		**Pn**	19 10 44.9	**+0.2**
CXUV	**Coxquihui**	**5.64**	**147**	*e*	Pb	19 10 54.1	-6.0
CXUV				*e*		19 12 09.1	
ESTA	**Talpa de Allen**	**5.84**	**220**	*eP*	**Pn**	19 10 50.9	**+2.5**
ESTA				*eS*	**Sn**	19 11 58.7	**+3.1**
ESTA	**Talpa de Allen**	**5.84**	**220**		**Pn**	19 10 50.9	**+2.5**
MLDN	**Muldoon**	**5.87**	**34**		**Pn**	19 10 48.1	**-0.6**
ALPN	**Alpine**	**5.93**	**336**		**Pn**	19 10 49.3	**-0.2**
OZNA	**Ozona**	**5.95**	**358**		**Pn**	19 10 51.1	**+1.3**
YELA	**Yelapa**	**6.16**	**224**	*eP*	**Pn**	19 10 55.4	**+2.8**
YELA				*eS*	**Sn**	19 12 08.4	**+5.3**
YELA	**Yelapa**	**6.16**	**224**		**Pn**	19 10 55.4	**+2.8**
PPM	**Popocatepetl**	**6.22**	**160**	*eP*	Pn	19 11 02.7	+8.8
PPM				*eS*	Sb	19 12 16.2	-8.7
YAIG	**Yautepec**	**6.29**	**164**	*eP*	Pn	19 11 02.1	+7.6
YAIG				*eS*	**Sn**	**19 12 15.6**	**+9.0**
TPB05	**Hovey Rd**	**6.33**	**340**		**Pn**	**19 10 51.7**	**-3.3**
TOMAT	**Tomatlan**	**6.41**	**220**	*eP*	**Pn**	**19 10 59.0**	**+2.9**
TOMAT				*eS*	**Sn**	**19 12 13.2**	**+3.8**
435B	**Jarrell**	**6.49**	**26**		**Pn**	**19 10 58.2**	**+1.1**
BRDY	**Brady**	**6.52**	**14**		**Pn**	**19 10 57.7**	**+0.2**
MNHN	**Monahans**	**6.58**	**346**		**Pn**	**19 10 59.0**	**+0.6**
LVIG	**Laguna Verde**	**6.64**	**141**	*eP*	Pn	19 11 08.3	+9.1
LVIG				*eS*	Sn	19 12 24.9	+10
HKT	**Hockley**	**6.69**	**41**		**Pn**	**19 11 01.2**	**+1.5**
HKT	**Hockley**	**6.69**	**41**	P	**Pn**	**19 11 00.1**	**+0.3**
CIHU	**Emiliano Zapat**	**6.70**	**213**	*eP*	**Pn**	**19 11 01.9**	**+1.8**
CIHU				*eS*	**Sn**	**19 12 18.7**	**+2.1**
CIHU	**Emiliano Zapat**	**6.70**	**213**		**Pn**	**19 11 01.9**	**+1.8**
CIHU					**Sn**	**19 12 18.7**	**+2.1**
JAUV	**Jalcomulco**	**6.72**	**145**	*eP*	Pn	19 11 07.7	+7.4
JAUV				*eS*	**Sn**	**19 12 21.9**	**+5.0**
JAUV	**Jalcomulco**	**6.72**	**145**		**Sn**	**19 12 21.9**	**+5.0**
TMB01	**Midkiff**	**6.77**	**351**		**Pn**	**19 11 02.1**	**+1.0**
VHRN	**Van Horn**	**6.86**	**329**		**Pn**	**19 11 03.6**	**+1.3**
PECS	**Pecos**	**6.92**	**338**		**Pn**	**19 11 00.1**	**-3.0**
SGCY	**Sterling City**	**6.94**	**358**		**Pn**	**19 11 02.8**	**-0.5**
TPB06	**Permian Basin**	**6.98**	**343**		**Pn**	**19 11 01.3**	**-2.6**
229A	**Bryant Ranch,**	**7.03**	**353**		**Pn**	**19 11 04.7**	**+0.1**
ODSA	**Odessa**	**7.29**	**349**		**Pn**	**19 11 07.7**	**-0.5**
TPB11	**China Draw**	**7.49**	**339**		**Pn**	**19 11 10.7**	**-0.2**
HNVL	**Huntsville, TX**	**7.50**	**38**		**Pn**	**19 11 08.7**	**-2.3**
WHTX	**Lake Whitney,**	**7.62**	**22**		**Pn**	**19 11 13.1**	**+0.5**
129A	**Stewart Farms,**	**7.70**	**354**		**Pn**	**19 11 09.4**	**-4.3**
ABTX	**Abilene, Hawle**	**7.71**	**8**		**Pn**	**19 11 11.1**	**-2.9**
CLNB	**Carlsbad**	**7.75**	**341**		**Pn**	**19 11 13.5**	**-1.0**
128A	**Castleberry Fa**	**7.77**	**350**		**Pn**	**19 11 15.7**	**+1.0**
MNTX	**Cornudas Mount**	**7.80**	**330**		**Pn**	**19 11 17.1**	**+1.8**
MNTX	**Cornudas Mount**	**7.80**	**330**	P	**Pn**	**19 11 19.5**	**+4.3**
GDL2	**Guadalupe Moun**	**7.84**	**338**		**Pn**	**19 11 19.0**	**+3.1**
FW13	**Cleburne**	**7.96**	**21**		**Pn**	**19 11 15.8**	**-1.5**
SN07	**Snyder 07**	**8.11**	**360**		**Pn**	**19 11 20.5**	**+1.2**
PLPT	**Palo Pinto**	**8.14**	**15**		**Pn**	**19 11 20.8**	**+1.0**
SLBS	**Sierra La Lagu**	**8.38**	**263**	P	**Pn**	**19 11 26.8**	**+3.7**
CPRX	**Cap Rock**	**8.46**	**343**		**Pn**	**19 11 28.5**	**+4.2**
FW06	**Azle**	**8.49**	**19**		**Pn**	**19 11 24.9**	**+0.3**
LPIG	**La Paz**	**8.64**	**266**	Pn	**Pn**	**19 11 29.7**	**+3.0**
	8.2nm,0.3s,baz=198,slow=4.0,SNR=1.9						
	16nm,0.3s						
DKNS	**Dickens**	**8.68**	**360**		**Pn**	**19 11 26.7**	**-0.5**
WTFS	**Witchita Falls**	**9.02**	**13**		**Pn**	**19 11 33.0**	**+1.1**
MSTX	**Muleshoe**	**9.13**	**350**		**Pn**	**19 11 33.9**	**+0.4**
LOOK	**Love County**	**9.56**	**19**		**Pn**	**19 11 38.9**	**-0.3**
CMIG	**Matias Romero**	**9.61**	**143**	LR	LR	19 15 38.5	
	comp=Z,72nm,20.4s,baz=314,slow=40						
121A	**Cookes Peak, D**	**9.68**	**323**		**Pn**	**19 11 40.3**	**-0.8**
319A	**Douglas**	**9.80**	**313**		**Pn**	**19 11 44.3**	**+1.7**
WMOK	**Wichita Mounta**	**9.91**	**10**		**Pn**	**19 11 44.5**	**+0.4**
WMOK	**Wichita Mounta**	**9.91**	**10**	P	**Pn**	**19 11 45.5**	**+1.4**
X34A	**Smith Ranch, M**	**9.96**	**15**		**Pn**	**19 11 45.0**	**+0.2**
PH02	**Texas Public H**	**10.44**	**355**		**Pn**	**19 11 49.8**	**-1.6**
W35A	**Tecumseh**	**10.73**	**18**		**Pn**	**19 11 54.3**	**-1.0**
ANMO	**Albuquerque**	**11.07**	**335**	Pn	**Pn**	**19 12 02.5**	**+2.4**
	0.1nm,0.3s,baz=159,slow=9.1,SNR=1.7						
ANMO				Lg	Lg	19 15 04.1	
	0.4nm,0.3s,baz=352,slow=8.1,SNR=6.8						
ANMO				LR	LR	19 16 05.4	
	comp=Z,202nm,21.2s,baz=156,slow=36						
	0.6nm,0.5s						
ANMO	**Albuquerque**	**11.07**	**335**		**Pn**	**19 11 56.8**	**-3.3**
ANMO	**Albuquerque**	**11.07**	**335**	P	**Pn**	**19 12 04.3**	**+4.2**
TUC	**Tucson**	**11.38**	**312**		**Pn**	**19 12 06.9**	**+2.7**
TUC	**Tucson**	**11.38**	**312**	P	**Pn**	**19 12 08.2**	**+4.0**
MIAR	**Mount Ida**	**11.46**	**32**		**Pn**	**19 12 04.4**	**-0.8**
MIAR	**Mount Ida**	**11.46**	**32**	P	**Pn**	**19 12 06.6**	**-0.7**
RTBA	**Rita Blanca**	**11.56**	**352**		**Pn**	**19 12 06.3**	**-0.4**
QUOK	**Quay**	**11.74**	**17**		**Pn**	**19 12 07.5**	**-1.5**
OK048	**Pawnee Station**	**11.91**	**16**		**Pn**	**19 12 10.5**	**-0.9**
CCAR	**Cane Creek**	**11.93**	**39**		**Pn**	**19 12 11.2**	**-0.5**
GC02	**Grant County #**	**12.13**	**12**		**Pn**	**19 12 12.4**	**-2.0**
UALR	**University of**	**12.26**	**35**		**Pn**	**19 12 15.7**	**-0.5**
T35A	**Sooner Cattle**	**12.49**	**16**		**Pn**	**19 12 18.6**	**-0.8**
TEIG	**Tepich**	**12.54**	**110**	P	**Pn**	**19 12 17.0**	**-3.1**
FCAR	**Ozark Folk Cen**	**13.24**	**33**		**Pn**	**19 12 28.0**	**-1.6**
Y45A	**Yeager Farm, C**	**13.27**	**45**		**Pn**	**19 12 29.6**	**-0.3**
Y14A	**Wickenburg**	**13.84**	**313**		**Pn**	**19 12 37.8**	**-0.1**
MVCO	**Mesa Verde**	**13.85**	**334**	P	**P**	**19 12 43.2**	**-3.4**
Z47A	**Carrollton**	**13.87**	**51**		**Pn**	**19 12 37.2**	**-1.0**
LCAR	**Lake Charles**	**13.87**	**35**		**Pn**	**19 12 36.1**	**-2.1**
LRAL	**Lakeview Retre**	**14.55**	**53**		**Pn**	**19 12 45.9**	**-1.7**
T42A	**Van Buren**	**14.65**	**32**		**Pn**	**19 12 44.8**	**-4.1**
PBMO	**Poplar Bluff**	**14.79**	**35**		**Pn**	**19 12 47.2**	**-3.6**
PV13	**Radium Mtn., P**	**14.79**	**335**		**Pn**	**19 12 47.5**	**-3.5**
PV18	**Skein Mesa, Pa**	**14.90**	**335**		**Pn**	**19 12 48.2**	**-4.3**
PV16	**Nyswonger Mesa**	**14.96**	**335**		Pn	19 12 47.3	-6.0
PV07	**Paradox Valley**	**14.97**	**336**		Pn	19 12 48.8	-4.7
U15A	**North Rim**	**15.06**	**322**		**Pn**	**19 12 50.5**	**-4.2**
U15A				IAmb	IAmb	19 13 06.0	
	comp=Z,5.0nm,0.9s						
R40A	**Maddies Statio**	**15.16**	**27**		**Pn**	**19 12 51.2**	**-4.6**
R40A				IAmb	IAmb	19 13 09.5	
	comp=Z,13nm,0.8s						
X48A	**Hartselle**	**15.27**	**49**		**Pn**	**19 12 54.9**	**-2.3**
X48A				IAmb	IAmb	19 13 09.7	
	comp=Z,9.3nm,0.8s						
ISCO	**Idaho Springs**	**15.33**	**346**	IAmb	IAmb	19 13 19.4	
	comp=Z,5.7nm,0.9s						
ISCO	**Idaho Springs**	**15.33**	**346**	P	**P**	**19 13 03.4**	**+0.3**
BC3	**Big Chuckawall**	**15.38**	**308**		**Pn**	**19 12 54.2**	**-4.6**
BC3				IAmb	IAmb	19 13 10.5	
	comp=Z,12nm,1.4s						
CCM	**Cathedral Cave**	**15.41**	**30**		**Pn**	**19 12 55.0**	**-4.0**
CCM				IAmb	IAmb	19 13 13.2	
	comp=Z,8.4nm,0.8s						
CCM	**Cathedral Cave**	**15.41**	**30**	P	**Pn**	**19 12 58.0**	**-1.0**
WVT	**Waverly**	**15.80**	**42**		**Pn**	**19 13 01.0**	**-3.1**
WVT				IAmb	IAmb	19 13 16.2	
	comp=Z,7.7nm,0.8s						
WVT	**Waverly**	**15.80**	**42**	P	**Pn**	**19 13 04.5**	**+0.5**
P38A	**Dawn**	**15.88**	**21**		**Pn**	**19 12 59.8**	**-5.2**
P38A				IAmb	IAmb	19 13 25.0	
	comp=Z,9.6nm,0.6s						
OGNE	**Ogallala**	**15.97**	**357**	IAmb	IAmb	19 13 42.7	
	comp=Z,20nm,0.7s						
PMD	**Palm Desert**	**16.05**	**306**		**Pn**	**19 13 05.1**	**-2.3**
V48A	**Smith Brothers**	**16.18**	**45**		**Pn**	**19 13 05.8**	**-3.3**
P40A	**Paris**	**16.32**	**25**		**Pn**	**19 13 06.3**	**-4.4**
P40A				IAmb	IAmb	19 13 20.8	
	comp=Z,19nm,0.8s						
SWET	**Sewanee**	**16.46**	**48**		**Pn**	**19 13 09.7**	**-2.9**
SWET				IAmb	IAmb	19 13 22.9	
	comp=Z,11nm,0.8s						
SOR	**Soroa**	**16.48**	**94**	P	**Pn**	**19 13 09.7**	**-3.3**
P18A	**Preston Nutter**	**16.62**	**334**		**Pn**	**19 13 10.5**	**-4.5**
T47A	**Sharon Grove**	**16.80**	**41**	P	**P**	**19 13 17.9**	**-1.2**
T47A				IAmb	IAmb	19 13 26.9	
	comp=Z,30nm,1.0s						
PRN	**Pahroc Range**	**17.33**	**319**		**Pn**	**19 13 23.2**	**-0.5**
GOGA	**Godfrey**	**17.36**	**57**	P	**P**	**19 13 24.2**	**-1.1**
CPCT	**Cooper Cave**	**17.55**	**50**		**Pn**	**19 13 26.1**	**-0.2**
CPCT				IAmb	IAmb	19 13 35.9	
	comp=Z,16nm,1.1s						
W52A	**Murphy**	**17.79**	**51**	P	**Pn**	**19 13 28.5**	**-0.8**
N41A	**Harden Midland**	**17.80**	**26**		**Pn**	**19 13 28.3**	**-1.0**
N41A				IAmb	IAmb	19 13 37.0	
	comp=Z,15nm,0.7s						
TKL	**Tuckaleechee C**	**18.18**	**50**	S	**Sn**	**19 16 50.5**	**-6.6**
	comp=Z,1.0nm,0.4s,baz=135,slow=15,SNR=4.0						
TKL	**Tuckaleechee C**	**18.18**	**50**		**Pn**	**19 13 31.7**	**-2.4**
DUG	**Dugway, Tooele**	**18.20**	**329**	P	**P**	**19 13 38.6**	**+3.9**
P46A	**Rosedale**	**18.59**	**35**	P	**P**	**19 13 36.7**	**-2.1**
P46A				IAmb	IAmb	19 13 48.2	
	comp=Z,26nm,1.0s						
TZTN	**Tazewell**	**18.81**	**48**	P	**P**	**19 13 35.4**	**-5.9**
TZTN				IAmb	IAmb	19 13 50.7	
	comp=Z,25nm,1.1s						
TZTN	**Tazewell**	**18.81**	**48**	P	**P**	**19 13 40.2**	**-1.1**
HWUT	**Hardware Ranch**	**18.83**	**334**	P	**Pn**	**19 13 45.8**	**+3.6**
L40A	**Anamosa**	**18.84**	**23**		**P**	**19 13 39.3**	**-2.2**
L40A				IAmb	IAmb	19 13 47.6	
	comp=Z,12nm,0.7s						
V53A	**Saluda**	**18.86**	**51**		**P**	**19 13 40.9**	**-1.0**
ECSD	**EROS Data Cent**	**19.05**	**9**		**P**	**19 13 43.2**	**-0.7**
ECSD				IAmb	IAmb	19 13 50.9	
	comp=Z,7.2nm,0.7s						
ECSD	**EROS Data Cent**	**19.05**	**9**	P	**Pn**	**19 13 46.0**	**+1.3**
PDAR	**Pinedale Array**	**19.15**	**340**	P	**Pn**	**19 13 47.5**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=153,slow=10.0,SNR=4.2						
PDAR				Lg	Lg	19 19 17.4	
	comp=Z,0.1nm,0.3s,baz=144,slow=31,SNR=2.8						
PDAR				LR	LR	19 21 39.1	
	comp=Z,96nm,21.1s,baz=152,slow=38						
PDAR	**Pinedale Array**	**19.15**	**340**	P	**P**	**19 13 42.9**	**-2.4**
RSSD	**Black Hills**	**19.29**	**353**	P	**Pn**	**19 13 48.4**	**+0.7**
R50A	**Paris**	**19.32**	**43**		**Pn**	**19 13 47.0**	**-0.9**
R50A				IAmb	IAmb	19 13 54.2	
	comp=Z,20nm,1.0s						
ELK	**Elko**	**19.80**	**326**	P	**Pn**	**19 13 56.4**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=139,slow=8.9,SNR=14						
ELK				LR	LR	19 22 52.4	
	comp=Z,34nm,18.6s,baz=124,slow=41						
	comp=Z,4.2nm,0.9s						
ELK	**Elko**	**19.80**	**326**		**P**	**19 13 50.8**	**-1.5**
JFWS	**Jewell Farm**	**19.93**	**23**	P	**P**	**19 13 51.8**	**-1.6**
NVAR	**Mina Array Bea**	**19.97**	**316**	P	**Pn**	**19 13 58.0**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=108,slow=9.7,SNR=7.2						
NVAR				LR	LR	19 22 47.3	
	comp=Z,46nm,19.6s,baz=142,slow=40						
	comp=Z,1.6nm,0.7s						
NVAR	**Mina Array Bea**	**19.97**	**316**	P	**P**	**19 13 51.9**	**-2.3**
PKD	**Bear Valley Ra**	**20.15**	**308**		**P**	**19 13 53.8**	**-2.2**
KVN	**Kaiserville**	**20.23**	**318**		**P**	**19 13 54.4**	**-2.5**
LOHW	**Long Hollow**	**20.25**	**339**		**P**	**19 13 54.9**	**-2.3**
LOHW				IAmb	IAmb	19 14 05.4	
	comp=Z,8.4nm,0.9s						
FXWY	**Fox Creek**	**20.41**	**338**	P	**P**	**19 13 56.7**	**-2.3**
FXWY				IAmb	IAmb	19 14 08.2	
	comp=Z,9.6nm,1.2s						
BMN	**Battle Mountai**	**20.62**	**322**		**P**	**19 13 59.3**	**-1.9**
WAKR	**Walker**	**20.73**	**315**		**P**	**19 14 00.8**	**-1.6**
WAKR				IAmb	IAmb	19 14 12.9	
	comp=Z,12nm,1.5s						
N49A	**Columbus Grove**	**21.14**	**37**		**P**	**19 14 05.5**	**-1.2**
SPMN	**Marine on St.**	**21.25**	**16**	P	**P**	**19 14 05.1**	**-2.6**
SPMN				IAmb	IAmb	19 14 18.0	
	comp=Z,13nm,1.0s						
BLA	**Blacksburg**	**21.30**	**50**		**P**	**19 14 07.0**	**-1.5**
ACSO	**Alum Creek Sta**	**21.36**	**40**		**P**	**19 14 04.0**	**-5.1**
PAHR	**Pah Rah Range**	**21.41**	**318**		**P**	**19 14 07.5**	**-2.2**
PAHR				IAmb	IAmb	19 14 17.2	
	comp=Z,5.2nm,0.8s

PDGK	**Podgornoye**	**1.87**	**314**	⇑P		**Pg**	**19 23 58.2**	**+1.1**
	1.3nm,0.8s							
PDGK				⇑S		**Sg**	**19 24 22.4**	**+1.1**
	2.6nm,0.5s							
SATY	**Saty**	**2.39**	**296**	*eP*		**Pb**	**19 24 06.4**	**+2.5**
	0.5nm,0.1s							
SATY				*eS*		**Sb**	**19 24 35.6**	**+2.4**
	2.0nm,0.1s							
KPKS	**Kokpek**	**2.41**	**307**	*eP*		**Pb**	**19 24 05.5**	**+1.2**
	0.3nm,0.1s							
KPKS				*eS*		**Sb**	**19 24 34.2**	**+0.4**
	4.8nm,0.2s							
MAKZ	**Makanchi**	**4.78**	**5**	⇑Pn		**Pb**	**19 24 45.8**	**+1.2**
	4.0nm,1.9s							
MAKZ				⇑Sn		**Sb**	**19 25 43.6**	**+1.8**
	2.1nm,1.2s							
MK31	**Makanchi Array**	**4.79**	**8**	⇓Pn		**Pb**	**19 24 44.9**	**+0.1**
	0.3nm,0.7s,baz=198,slow=14,SNR=6.7							
MK31				⇑Sn		**Sb**	**19 25 44.1**	**+1.9**
	0.2nm,0.4s,baz=195,slow=22							

NOU 21 19:30:18.3, 16.71S × 167.06E, h0 km, mb4.1/6, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**1.48**	**133**	P		Pn	19 30 45.9	-0.3
RTV	**Rentapao**	**1.69**	**130**	P		Pn	19 30 49.2	+0.1
YATNC	**Mamie plateau,**	**5.32**	**182**	P		Pn	19 31 38.6	-0.5
ONTNC	**Ouen Toro**	**5.60**	**186**	P		Pn	19 31 43.7	+0.8

*SOME **21** 19:45:24.2, 42.30N × 81.25E, h15 km*
*NNC **21** 19:45:26.3 ± 5.6, 41.96N × 80.69E, h0 km, mb2.9, mpv2.6, Error ellipse: s-maj=43.1km s-min=24.8km az=13.0*
ISC 21 19:45:18.9 ± 3.3, 42.1N ± 0.2 × 81.37E ± 0.09, h10 km, n7, σ 2 s 07/14, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	**Shalkode**	**1.78**	**308**	*eP*		**Pn**	**19 45 49.1**	**-0.7**
	3.2nm,0.3s							
SHLS				*eS*		**Sn**	**19 46 07.1**	**-5.5**
	7.8nm,0.2s							
PDGK	**Podgornoye**	**1.87**	**313**	⇑P		**Pg**	**19 45 55.6**	**+0.8**
	1.5nm,0.7s							
PDGK				⇑S		**Sb**	**19 46 18.1**	**+1.3**
	3.4nm,0.5s							
SATY	**Saty**	**2.40**	**295**	*eP*		**Pg**	**19 46 05.7**	**+0.8**
	2.8nm,0.2s							
SATY				*eS*		**Sg**	**19 46 35.5**	**-0.5**
	7.7nm,0.3s							
KPKS	**Kokpek**	**2.42**	**306**	*eP*		**Pg**	**19 46 04.9**	**-0.4**
	0.2nm,0.1s							
KPKS				*eS*		**Sb**	**19 46 34.5**	**+2.0**
	8.2nm,0.3s							
ARXS	**Arharly**	**3.36**	**311**	*eP*		**Pb**	**19 46 20.6**	**+1.9**
	0.9nm,0.3s							
ARXS				*eS*		**Sb**	**19 47 01.1**	**+1.5**
	2.8nm,0.6s							
MAKZ	**Makanchi**	**4.76**	**5**	⇑Pn		**Pb**	**19 46 42.8**	**+0.3**
	2.2nm,1.0s							
MAKZ				⇑Sn		**Sb**	**19 47 41.1**	**+1.4**
	1.3nm,1.2s							
MK31	**Makanchi Array**	**4.77**	**8**	⇑Pn		**Pb**	**19 46 43.0**	**+0.4**
	1.1nm,1.1s,baz=187,slow=13,SNR=7.7							
MK31				⇓Sn		**Sb**	**19 47 41.3**	**+1.2**
	0.2nm,0.3s,baz=188,slow=21							

*MAN **21** 19:48:21.0, 3.84N × 126.30E, h116 km, MS3.8*
*IDC **21** 19:48:23.4 ± 5.0, 3.84N × 126.47E, h78 km ± 55 km, mb3.2/7, mbtmp3.5/8, ML3.5/1, Error ellipse: s-maj=50.3km s-min=19.7km az=71.0*
ISC 21 19:48:25.0 ± 0.8, 3.87N ± 0.09 × 126.5E ± 0.1, h100 km, n11, σ 1 s 47/13, mb3.4/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**3.44**	**335**	*eP*		**Pn**	**19 49 16.5**	**-0.2**
KCP				*i* S		Sn	19 50 05.5	+8.9
CTBH	**Cotabato--PC H**	**4.04**	**326**	*eP*		**Pn**	**19 49 21.6**	**-3.1**
BIPH	**Bislig**	**4.29**	**358**	*eP*		**Pn**	**19 49 27.8**	**-0.3**
BIPH				*eS*		**Sn**	**19 50 15.8**	**-1.3**
SIJI	**Sorong**	**6.67**	**135**	P		**Pn**	**19 49 58.7**	**-1.7**
	0.9nm,0.3s,baz=318,slow=18,SNR=1.3							
SIJI				S		**Sn**	**19 51 14.6**	**-0.4**
	5.2nm,0.5s,baz=306,slow=19,SNR=1.7							
	3.7nm,0.4s							
WRA	**Warramunga Arr**	**24.87**	**162**	P		**P**	**19 53 38.6**	**+0.2**
	0.3nm,0.4s,baz=344,slow=11,SNR=4.9							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**28.29**	**166**	P		**P**	**19 54 10.6**	**+1.4**
	0.2nm,0.7s,baz=341,slow=7.7,SNR=1.5							
	0.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**30.64**	**300**	P		**P**	**19 54 31.2**	**+1.2**
	0.4nm,0.5s,baz=102,slow=6.9,SNR=4.0							
	0.4nm,0.5s							
KSRS	**Korea Array**	**33.45**	**2**	P		**P**	**19 54 56.2**	**+1.8**
	0.8nm,0.6s,baz=182,slow=9.6,SNR=7.7							
	0.8nm,0.6s							
SONM	**Songino Array**	**47.11**	**342**	P		**P**	**19 56 47.5**	**+0.4**
	0.3nm,0.5s,baz=155,slow=11,SNR=1.7							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**57.34**	**325**	P		**P**	**19 58 02.5**	**-0.1**
	0.3nm,0.5s,baz=121,slow=7.2,SNR=6.4							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**61.52**	**327**	P		**P**	**19 58 31.2**	**-0.1**
	0.3nm,0.5s,baz=129,slow=6.5,SNR=4.8							
	0.3nm,0.5s							

*TAP **21** 19:51:12.9, 24.57N × 122.54E, h13 km, ML2.7, C*
*JMA **21** 19:51:13.6 ± 0.1, 25.2N ± 0.2 × 122.6E ± 0.5, h24 km ± 1 km, MV2.0/11, NW OFF ISHIGAKIJIMA IS*
ISC 21 19:51:13.1 ± 1.0, 24.55N ± 0.02 × 122.55E ± 0.02, h18 km ± 4 km, n72, σ 0 s 58/126, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS2	**EOS2**	**0.32**	**247**	P		**Pg**	**19 51 20.2**	**+0.2**
EOS2				S		**Sb**	**19 51 25.5**	**+0.4**
EOS3	**EOS3**	**0.34**	**220**	P		**Pg**	**19 51 20.3**	**+0.1**
EOS3				*eS*		**Sb**	**19 51 25.6**	**0.0**
JYNG	**Yonagunijimaku**	**0.37**	**105**	P		**Pg**	**19 51 21.0**	**+0.2**
JYNG				S		**Sb**	**19 51 26.7**	**+0.1**
YOJ	**Yonaguni jima**	**0.42**	**101**	*i* P		**Pg**	**19 51 22.0**	**+0.2**
YOJ				S		**Sb**	**19 51 28.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.42**	**101**	P		**Pg**	**19 51 22.0**	**+0.2**
YOJ				*eS*		**Sb**	**19 51 28.2**	**0.0**
EOS4	**EOS4**	**0.47**	**207**	P		**Pb**	**19 51 22.8**	**+0.1**
EOS4				*eS*		**Sb**	**19 51 29.3**	**0.0**
TWC	**Suao**	**0.65**	**276**	P		**Pb**	**19 51 24.8**	**-1.1**
TWC				*eS*		**Sg**	**19 51 34.7**	**+0.2**
ESAO	**Su ao**	**0.65**	**273**	*eP*		**Pb**	**19 51 25.0**	**-0.9**
ESAO				S		**Sb**	**19 51 34.3**	**-0.3**
TWB1	**Santiao Chiao**	**0.69**	**312**	*eS*		**Sb**	**19 51 35.7**	**-0.2**
EWUT	**Wuta**	**0.71**	**262**	*eP*		**Pb**	**19 51 26.7**	**-0.3**
EWUT				*eS*		**Sb**	**19 51 35.6**	**-0.9**
NTC	**Toucheng**	**0.73**	**295**	S		**Sg**	**19 51 37.5**	**+0.3**
ENA	**Nanau**	**0.75**	**261**	P		**Pb**	**19 51 26.1**	**-1.6**
ENA				*eS*		**Sb**	**19 51 36.0**	**-1.6**
ILA	**Ilan**	**0.77**	**287**	P		**Pb**	**19 51 27.5**	**-0.4**
ILA				S		**Sb**	**19 51 38.0**	**0.0**
NDS	**Dongshan**	**0.77**	**277**	P		**Pb**	**19 51 27.6**	**-0.3**
NDS				*eS*		**Sb**	**19 51 38.3**	**+0.2**
EAHA	**Aohua**	**0.77**	**254**	S		**Sb**	**19 51 38.1**	**-0.2**
TIPB	**Shuangxi**	**0.79**	**303**	P		**Pg**	**19 51 28.6**	**+0.1**
TIPB				*eS*		**Sb**	**19 51 38.3**	**-0.4**
SXI1	**Grass Mountain**	**0.82**	**312**	P		**Pg**	**19 51 29.5**	**+0.2**
SXI1				*eS*		**Sg**	**19 51 40.5**	**+0.2**
TWE	**Neicheng**	**0.83**	**282**	P		**Pb**	**19 51 28.8**	**-0.2**
TWE				S		**Sg**	**19 51 40.5**	**+0.2**
WFSB	**Wu-fen Shan**	**0.88**	**307**	S		**Sg**	**19 51 42.0**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.91**	**284**	P		**Pb**	**19 51 30.6**	**+0.2**
FUSB				S		**Sb**	**19 51 42.5**	**+0.4**
TNOU	**National Taiwa**	**0.93**	**310**	P		**Pb**	**19 51 30.9**	**+0.1**
TNOU				*eS*		**Sb**	**19 51 43.0**	**+0.2**
ETL	**Fush Village**	**0.93**	**246**	*eP*		**Pb**	**19 51 31.0**	**+0.2**
ETL				*eS*		**Sb**	**19 51 43.2**	**+0.3**
LATG	**Datong**	**0.94**	**270**	*eP*		**Pb**	**19 51 30.9**	**0.0**
LATG				S		**Sg**	**19 51 43.7**	**-0.1**
NACB	**Ninganchiao**	**0.95**	**247**	*i* P		**Pb**	**19 51 30.9**	**-0.2**
NACB				S		**Sg**	**19 51 44.3**	**+0.1**
NDT	**Datong Townshi**	**0.95**	**274**	P		**Pg**	**19 51 31.9**	**+0.2**
NDT				S		**Sn**	**19 51 44.6**	**-0.1**
TWA	**Mucha**	**0.98**	**296**	P		**Pb**	**19 51 31.3**	**-0.4**
TWA				S		**Sb**	**19 51 44.8**	**+0.5**
NWLT	**Wulai**	**0.98**	**284**	P		**Pb**	**19 51 31.8**	**+0.1**
NWLT				S		**Sb**	**19 51 44.9**	**+0.5**
TWD	**Chiawan**	**0.99**	**242**	*eS*		**Sn**	**19 51 46.6**	**+1.0**
ETLH	**Xiulin Townshi**	**1.03**	**251**	P		**Pb**	**19 51 32.5**	**-0.1**
ETLH				S		**Sn**	**19 51 46.5**	**-0.5**
NNSB	**Datong**	**1.07**	**264**	P		**Pn**	**19 51 33.5**	**+0.1**
NNSB				*eS*		**Sb**	**19 51 45.7**	**-1.3**
YM01	**YM01**	**1.08**	**304**	P		**Pn**	**19 51 33.4**	**0.0**
YM01				*eS*		**Sb**	**19 51 47.2**	**+0.2**
YHNB	**Yeheng**	**1.08**	**277**	P		**Pg**	**19 51 33.9**	**-0.2**
YHNB				*eS*		**Sb**	**19 51 47.3**	**+0.2**
NNS	**Nan Shan**	**1.08**	**265**	P		**Pn**	**19 51 33.7**	**+0.2**
NNS				*eS*		**Sb**	**19 51 47.2**	**0.0**
IRIF	**Iriomote-Funau**	**1.09**	**101**	P		**Pb**	**19 51 33.0**	**-0.5**
NSK	**Sanguang**	**1.10**	**277**	P		**Pn**	**19 51 34.0**	**+0.3**
NSK				S		**Sn**	**19 51 48.2**	**-0.2**
ZUZH	**Zhuzihu**	**1.10**	**304**	*eP*		**Pn**	**19 51 33.6**	**-0.1**
ETM	**Tongmen**	**1.13**	**239**	P		**Pb**	**19 51 34.3**	**+0.2**
ETM				*eS*		**Sg**	**19 51 49.9**	**+0.1**
TWY	**Chenhua**	**1.13**	**310**	*eP*		**Pn**	**19 51 34.2**	**+0.1**
TWY				*eS*		**Sb**	**19 51 48.1**	**-0.5**
LXIB	**Xiulin Townshi**	**1.16**	**244**	P		**Pg**	**19 51 35.5**	**-0.3**
LXIB				S		**Sg**	**19 51 51.9**	**+0.8**
SHUL	**Shoufeng**	**1.18**	**230**	*eP*		**Pb**	**19 51 35.3**	**+0.4**
WHF	**Hehuan Shan**	**1.24**	**252**	P		**Pb**	**19 51 36.5**	**+0.1**
KSHI	**Guanxi Townshi**	**1.27**	**281**	*eP*		**Pb**	**19 51 36.5**	**-0.1**
KSHI				S		**Sg**	**19 51 53.9**	**-0.6**
TWT	**Tachien**	**1.29**	**257**	*eS*		**Sg**	**19 51 54.7**	**-0.3**
TDCB	**Techi**	**1.30**	**257**	*eP*		**Pg**	**19 51 38.2**	**-0.2**
TDCB				*eS*		**Sb**	**19 51 54.5**	**+0.8**
NFF	**Wufeng Townshi**	**1.31**	**274**	*eP*		**Pb**	**19 51 37.5**	**+0.3**
NFF				S		**Sg**	**19 51 54.9**	**-0.8**
WARBT	**Fenglin Townsh**	**1.35**	**233**	P		**Pn**	**19 51 37.1**	**0.0**
WARBT				*eS*		**Sb**	**19 51 55.1**	**+0.3**
JKRS	**Kuro-shima**	**1.36**	**103**	P		**Pn**	**19 51 37.3**	**+0.1**
OWD	**Renai**	**1.39**	**245**	P		**Pb**	**19 51 38.8**	**+0.1**
OWD				*eS*		**Sb**	**19 51 56.5**	**+0.3**
LIOB	**Emei**	**1.40**	**274**	*eP*		**Pb**	**19 51 38.8**	**0.0**
LIOB				*eS*		**Sg**	**19 51 58.2**	**-0.4**
NSTT	**Nanjuang**	**1.42**	**274**	*eP*		**Pb**	**19 51 39.3**	**+0.2**
NSTT				*eS*		**Sg**	**19 51 58.5**	**-0.5**
WUSB	**Renai**	**1.42**	**248**	P		**Pb**	**19 51 39.6**	**+0.3**
WUSB				S		**Sb**	**19 51 57.8**	**+0.7**
JIJ	**Ishigaki jima**	**1.46**	**97**	*eP*		**Pn**	**19 51 38.3**	**-0.3**
HGSD	**Ruisui**	**1.47**	**225**	*eP*		**Pn**	**19 51 37.7**	**-1.1**
HGSD				*eS*		**Sn**	**19 51 57.4**	**-0.2**
WHP	**Taichung City**	**1.49**	**260**	P		**Pg**	**19 51 41.6**	**-0.3**
WHP				*eS*		**Sb**	**19 52 00.1**	**+1.1**
VWDT	**VWDT**	**1.51**	**239**	*eS*		**Sb**	**19 51 59.2**	**-0.3**
EHYH	**Wanrong**	**1.52**	**227**	*eP*		**Pn**	**19 51 38.6**	**-0.9**
EHYH				*eS*		**Sb**	**19 51 59.9**	**+0.1**
WCS	**Beigang Elemen**	**1.57**	**252**	*eP*		**Pb**	**19 51 41.8**	**0.0**
JISG	**Ishigakijimahi**	**1.60**	**88**	*eP*		**Pn**	**19 51 40.6**	**0.0**
YULB	**Yu-li**	**1.62**	**225**	P		**Pn**	**19 51 41.0**	**+0.1**
YULB				S		**Sn**	**19 52 01.7**	**+0.4**
SSLB	**Suanglung**	**1.65**	**243**	*eP*		**Pn**	**19 51 41.5**	**+0.3**
SSLB				*eS*		**Sb**	**19 52 03.5**	**+0.1**
SMLT	**Sun Moon Lake**	**1.65**	**247**	P		**Pb**	**19 51 43.0**	**-0.1**
SMLT				*eS*		**Sb**	**19 52 03.9**	**+0.4**
TYC	**Yuchr**	**1.68**	**248**	*eS*		**Sb**	**19 52 04.7**	**+0.5**
FULB	**Fuli**	**1.77**	**221**	P		**Pn**	**19 51 42.8**	**-0.1**
FULB				S		**Sn**	**19 52 05.5**	**+0.6**
WHYT	**Xinyi Township**	**1.77**	**242**	*eP*		**Pb**	**19 51 44.4**	**-0.7**
WHYT				*eS*		**Sb**	**19 52 07.0**	**0.0**
ALS	**Alishan**	**1.90**	**238**	P		**Pb**	**19 51 47.1**	**-0.4**
ELDTW	**Lidau**	**1.95**	**227**	P		**Pn**	**19 51 45.5**	**0.0**
CHN5	**Tsauling**	**1.96**	**242**	P		**Pb**	**19 51 48.8**	**+0.4**
CHN5				*eS*		**Sb**	**19 52 12.9**	**+0.5**
WCKO	**Fanlu**	**2.10**	**239**	P		**Pb**	**19 51 50.1**	**-0.5**
WCKO				S		**Sb**	**19 52 15.8**	**-0.5**
STYH	**Taoyuan**	**2.13**	**230**	P		**Pn**	**19 51 49.3**	**+1.5**
STYH				S		**Sb**	**19 52 15.5**	**-1.7**
CHN4	**Tsaushan**	**2.15**	**237**	*eP*		**Pn**	**19 51 49.8**	**+1.7**
CHN4				*eS*		**Sb**	**19 52 18.2**	**+0.3**
TPUB	**Ta-pu**	**2.15**	**235**	*eP*		**Pb**	**19 51 50.4**	**-1.2**
TPUB				*eS*		**Sb**	**19 52 18.0**	**0.0**
MASBT	**Mashibuluo**	**2.61**	**223**	*eP*		**Pn**	**19 51 56.2**	**+1.8**
MASBT				*eS*		**Sb**	**19 52 28.9**	**-2.2**

*FUNV **21** 20:09:31.9, 8.48N × 70.36W, h4 km, MW3.3, Presumed earthquake*
*RSNC **21** 20:09:35.7 ± 0.0, 8.1N ± 7.7 × 71.1W ± , h200 km ± 12 km, M3.1, mb3.7, ML2.8*
ISC 21 20:09:31.9 ± 1.6, 8.42N ± 0.05 × 70.6W ± 0.1, h7 km, n16, σ 1 s 20/23, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SDV	**Santo Domingo**	**0.47**	**353**	*eP*		**Pg**	**20 09 41.7**	**+0.7**
SDV				*eS*		**Sg**	**20 09 48.1**	**+0.9**
PAMC	**Pamplona, Colo**	**2.37**	**243**	P		**Pn**	**20 10 10.8**	**-0.8**
PAMC				S		**Sn**	**20 10 39.9**	**-1.2**
OCAC	**Ocana**	**2.72**	**266**	P		**Pn**	**20 10 15.9**	**-0.4**
OCAC				S		**Sn**	**20 10 50.7**	**+1.1**
BARC	**Barichara**	**3.16**	**235**	P		**Pn**	**20 10 23.0**	**+0.8**
BARC				S		**Sn**	**20 10 58.5**	**0.0**
BRJC	**Barrancabermej**	**3.46**	**246**	P		**Pn**	**20 10 26.6**	**+0.4**
RUSC	**La Rusia**	**3.54**	**225**	P		**Pn**	**20 10 28.0**	**+0.2**
RUSC	**La Rusia**	**3.54**	**225**	*eP*		**Pn**	**20 10 28.0**	**+0.2**
RUSC				*eS*		**Sn**	**20 11 12.1**	**+2.0**
URIC	**Uribia, Colomb**	**3.55**	**337**	P		**Pn**	**20 10 27.5**	**0.0**
URIC	**Uribia, Colomb**	**3.55**	**337**	*eP*		**Pn**	**20 10 27.8**	**+0.3**
URIC				*eS*		**Sn**	**20 11 07.3**	**-2.4**
PTBC	**PUERTO BERRIO,**	**4.28**	**244**	P		**Pn**	**20 10 35.9**	**-1.7**
PTGC	**Puerto Gaitan,**	**4.47**	**200**	P		**Pn**	**20 10 38.6**	**-1.6**
SJCC	**San Jacinto, C**	**4.78**	**288**	P		**Pn**	**20 10 44.4**	**-0.1**
SJCC				S		**Sn**	**20 11 38.6**	**-1.6**
CHIC	**Chingaza**	**4.90**	**220**	P		**Pn**	**20 10 46.0**	**-0.5**
NORC	**Norcasia**	**5.12**	**237**	P		**Pn**	**20 10 47.0**	**-2.2**
GUY2C	**Guyana, Caldas**	**5.72**	**237**	P		**Pn**	**20 10 58.1**	**+0.3**
	19nm,0.6s							
ORTC	**Ortega, Tolima**	**6.45**	**226**	P		**Pn**	**20 11 07.3**	**-0.2**

*MDD **21** 20:16:29.4 ± 0.7, 36.64N × 11.27W, h30 km, Mb4.3/12, M_mb3.7/12, Error ellipse: s-maj=5.6km s-min=3.6km az=84.0*
*IGIL **21** 20:16:30.8, 36.67N × 11.24W, h29 km, ML2.4*
*INMG **21** 20:16:31.8 ± 1.3, 36.63N × 11.18W, h40 km, ML2.5, Error ellipse: s-maj=5.1km s-min=3.1km az=88.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **21** 20:16:33.6, 36.23N × 10.81W, h25 km, ML3.5*
ISC 21 20:16:28.9 ± 2.1, 36.59N ± 0.04 × 11.1W ± 0.1, h35 km, n77, σ 2 s 22/142, 11C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.92**	**73**	Pn		**Pn**	**20 17 01.0**	**+1.9**
PFVI				Sn		**Sn**	**20 17 22.8**	**+0.8**
PFVI	**Vila Bisbo**	**1.92**	**73**	*i* P		**Pn**	**20 17 01.0**	**+1.9**
PFVI				*eS*		**Sn**	**20 17 22.9**	**+0.8**
PFVI				*i* IAML			20 17 24.3	
PFVI				*i* IAML			20 17 24.3	
PFVI				*i* IAML			20 17 24.5	
PFVI	**Vila Bisbo**	**1.92**	**73**	P		**Pn**	**20 17 01.0**	**+1.9**
PFVI				S		**Sn**	**20 17 26.5**	**+4.5**
MORF	**Marmelete**	**2.10**	**69**	*eP*		**Pn**	**20 17 03.5**	**+1.9**
MORF				*eS*		**Sn**	**20 17 27.7**	**+1.1**
MORF				IAML			20 17 29.9	
	comp=E,48nm,0.2s							
MORF	**Marmelete**	**2.10**	**69**	*eP*		**Pn**	**20 17 03.4**	**+1.8**
MORF				*eS*		**Sn**	**20 17 27.6**	**+1.1**
MORF				*i* IAML			20 17 29.4	
MORF				*i* IAML			20 17 30.1	
MORF				*i* IAML			20 17 33.0	
PTEO	**Sao Teotonio**	**2.14**	**63**	*eP*		**Pn**	**20 17 04.3**	**+2.2**
PTEO				*eS*		**Sn**	**20 17 28.8**	**+1.3**
PTEO				*i* IAML			20 17 29.0	
PTEO				*i* IAML			20 17 30.9	
PTEO				*i* IAML			20 17 31.2	
PLOUS	**Minas do Lousa**	**2.59**	**55**	*eS*		**Sn**	**20 17 38.6**	**+0.1**
PLOUS				*i* IAML			20 17 41.1	
PLOUS				*i* IAML			20 17 41.8	
PLOUS				*i* IAML			20 17 42.0	

MESJ	**Messejana**	**2.63**	**61**	*eP*		**Pn**	**20 17 10.7**	**+1.8**
MESJ				*eS*		**Sn**	**20 17 39.8**	**+0.3**
MESJ				IAML			20 17 42.2	
	comp=N,6.9nm,0.2s							
MESJ	**Messejana**	**2.63**	**61**	*eP*		**Pn**	**20 17 10.7**	**+1.8**
MESJ				*eS*		**Sn**	**20 17 40.0**	**+0.4**
MESJ				*i* IAML			20 17 48.5	
MESJ				*i* IAML			20 17 50.9	
MESJ				*i* IAML			20 17 52.9	
PBDV	**Barranco-do-Ve**	**2.64**	**75**	Pn		**Pn**	**20 17 11.4**	**+2.4**
PBDV				Sn		**Sn**	**20 17 40.7**	**+0.9**
PBDV	**Barranco-do-Ve**	**2.64**	**75**	*eP*		**Pn**	**20 17 11.4**	**+2.4**
PBDV				*eS*		**Sn**	**20 17 41.7**	**+1.9**
PBDV				*i* IAML			20 17 43.1	
PBDV				*i* IAML			20 17 47.1	
PBDV				*i* IAML			20 17 47.2	
PCVE	**Castro Verde**	**2.67**	**66**	Pn		**Pn**	**20 17 11.5**	**+2.0**
PCVE				Sn		**Sn**	**20 17 41.2**	**+0.5**
PCVE	**Castro Verde**	**2.67**	**66**	*eP*		**Pn**	**20 17 11.5**	**+2.0**
PCVE				*eS*		**Sn**	**20 17 41.8**	**+1.1**
PCVE				*i* IAML			20 17 41.9	
PCVE				*i* IAML			20 17 43.4	
PCVE				*i* IAML			20 17 53.1	
PVAQ	**Vaqueiros**	**2.84**	**72**	*eP*		**Pn**	**20 17 14.1**	**+2.3**
PVAQ				*eS*		**Sn**	**20 17 46.0**	**+1.1**
PVAQ				*i* IAML			20 17 47.2	
PVAQ				*i* IAML			20 17 47.7	
PVAQ				*i* IAML			20 17 56.5	
PVAQ	**Vaqueiros**	**2.84**	**72**	P		**Pn**	**20 17 14.5**	**+2.7**
PVAQ				S		**Sn**	**20 17 47.6**	**+2.7**
MOE	**Montemor**	**2.93**	**48**	*eP*		**Pn**	**20 17 14.2**	**+1.2**
MOE				*eS*		**Sn**	**20 17 46.5**	**-0.4**
MOE				*i* IAML			20 17 47.6	
MOE				*i* IAML			20 17 49.4	
MOE				*i* IAML			20 17 49.8	
PBEJ	**Beja**	**2.96**	**60**	*eS*		**Sn**	**20 17 47.8**	**0.0**
PBEJ				*i* IAML			20 17 52.7	
PBEJ				*i* IAML			20 17 53.0	
PBEJ				*i* IAML			20 17 58.2	
EGRO	**El Granado**	**3.06**	**71**	Pn		**Pn**	**20 17 17.4**	**+2.6**
EGRO				Sn		**Sn**	**20 17 51.3**	**+1.2**
EGRO	**El Granado**	**3.06**	**71**	P		**Pn**	**20 17 17.0**	**+2.2**
EGRO				⇑*i*Vmb_VC			20 17 22.4	
	comp=N,333nm,SNR=3.4							
EGRO				S		**Sn**	**20 17 50.3**	**+0.2**
EVO	**Evora**	**3.14**	**51**	Pn		**Pn**	**20 17 17.9**	**+2.0**
EVO				Sn		**Sn**	**20 17 51.3**	**-0.8**
EVO	**Evora**	**3.14**	**51**	*eP*		**Pn**	**20 17 17.9**	**+2.0**
EVO				*eS*		**Sn**	**20 17 51.6**	**-0.5**
EVO				*i* IAML			20 17 53.5	
EVO				*i* IAML			20 17 55.5	
EVO				*i* IAML			20 17 56.6	
PARRA	**Arraiolos**	**3.30**	**47**	*eP*		**Pn**	**20 17 19.2**	**+1.1**
PARRA				*eS*		**Sn**	**20 17 55.5**	**-0.7**
PARRA				*i* IAML			20 17 58.0	
PARRA				*i* IAML			20 17 58.5	
PARRA				*i* IAML			20 17 58.9	
PMTG	**Montargil**	**3.37**	**42**	*eP*		**Pn**	**20 17 20.6**	**+1.5**
PMTG				*eS*		**Sn**	**20 17 57.4**	**-0.5**
PMTG				*i* IAML			20 18 01.8	
PMTG				*i* IAML			20 18 02.1	
PMTG				*i* IAML			20 18 02.4	
PSBE	**So Bento**	**3.45**	**31**	*eP*		**Pn**	**20 17 22.4**	**+1.8**
PSBE				*eS*		**Sn**	**20 17 59.5**	**-0.3**
PESTR	**Estremoz**	**3.60**	**50**	Pn		**Pn**	**20 17 24.9**	**+2.6**
PESTR				Sn		**Sn**	**20 18 03.5**	**-0.2**
PESTR	**Estremoz**	**3.60**	**50**	*eS*		**Sn**	**20 18 03.4**	**-0.2**
PESTR				*i* IAML			20 18 10.5	
PESTR				*i* IAML			20 18 16.9	
PESTR				*i* IAML			20 18 18.3	
PBAR	**Barrancos**	**3.62**	**63**	Pn		**Pn**	**20 17 24.8**	**+2.4**
PBAR				Sn		**

LCRM	**LCR**	**5.89**	**118**	P		**Pn**	**20 17 55.4**	**+1.5**
LCRM				S		**Sn**	**20 18 59.4**	**-0.9**
OUK	**Oukaimeden**	**6.01**	**152**	P		**Pn**	**20 17 56.0**	**+0.2**
OUK				S		**Sn**	**20 18 57.6**	**-5.9**
ELGU	**Los Guajares,**	**6.03**	**85**	P		**Pn**	**20 17 58.4**	**+2.8**
ELGU				⇑*i*	IVmb_VC		20 18 04.2	
	comp=N,195nm,SNR=1.1							
ELGU				S		**Sn**	**20 19 01.5**	**-1.9**
PAB	**San Pablo**	**6.10**	**59**	P		**Pn**	**20 17 57.0**	**+0.3**
PAB				⇑*i*	IVmb_VC		20 18 06.1	
	comp=N,77nm,SNR=1.5							
PAB				S		**Sn**	**20 19 02.0**	**-3.3**
CZD	**Col de Zad**	**6.13**	**124**	P		**Pn**	**20 17 57.9**	**+0.6**
CZD				S		**Sn**	**20 19 03.3**	**-3.1**
TISM	**Timmit**	**6.22**	**140**	P		**Pn**	**20 17 57.5**	**-0.6**
TISM				S		**Sn**	**20 19 04.6**	**-3.4**
PBRG	**Braganca**	**6.22**	**32**	*e*S		**Sn**	**20 19 04.4**	**-3.6**
PBRG				*i*	IAML		20 19 05.6	
PBRG				*i*	IAML		20 19 06.4	
PBRG				*i*	IAML		20 19 08.3	
PSIM	**Granatula de C**	**6.25**	**67**	P		**Pn**	**20 18 00.4**	**+1.7**
PSIM				S		**Sn**	**20 19 06.4**	**-2.4**
AKLM	**AKL**	**6.27**	**107**	P		**Pn**	**20 18 00.7**	**+1.7**
AKLM				S		**Sn**	**20 19 04.7**	**-4.8**
ECAL	**Calabor**	**6.33**	**31**	Pn		**Pn**	**20 18 03.8**	**+4.0**
ECAL	**Calabor**	**6.33**	**31**	P		**Pn**	**20 17 59.0**	**-0.8**
ECAL				⇑*i*	IVmb_VC		20 18 07.2	
	comp=N,235nm,SNR=1.0							
ECAL				S		**Sn**	**20 19 06.1**	**-4.8**
MD31	**MD31**	**6.42**	**123**	P		**Pn**	**20 18 02.4**	**+1.3**
MD31				S		**Sn**	**20 19 10.0**	**-3.1**
TIO	**Tiouine**	**6.50**	**149**	Pn		**Pn**	**20 18 04.1**	**+1.9**
TIO				Sn		**Sn**	**20 19 11.3**	**-3.9**
EQES	**Quesada**	**6.54**	**77**	P		**Pn**	**20 18 03.5**	**+0.8**
EQES				⇑*i*	IVmb_VC		20 18 05.2	
	comp=N,120nm,SNR=1.4							
EQES				S		**Sn**	**20 19 15.3**	**-0.8**
EMAZ	**Mazaricos**	**6.56**	**14**	S		Sn	20 19 06.4	-10
EAGO	**Agolada(Pontev**	**6.63**	**20**	P		**Pn**	**20 18 03.4**	**-0.5**
EAGO				⇑*i*	IVmb_VC		20 18 06.1	
	comp=N,266nm,SNR=1.9							
EAGO				S		**Sn**	**20 19 12.1**	**-6.1**
OUZM	**OUZ**	**6.73**	**146**	P		**Pn**	**20 18 06.0**	**+0.7**
OUZM				S		**Sn**	**20 19 16.3**	**-4.6**
GUD	**Guadarrama**	**6.79**	**51**	P		**Pn**	**20 18 07.0**	**+0.9**
GUD				⇑*i*	IVmb_VC		20 18 09.8	
	comp=N,72nm,SNR=1.4							
GUD				S		**Sn**	**20 19 20.2**	**-2.1**
EPON	**Pontenova**	**7.39**	**23**	P		**Pn**	**20 18 12.7**	**-1.5**
EPON				S		**Sn**	**20 19 32.8**	**-4.0**
TZRR	**Tazzarine**	**7.41**	**140**	P		**Pn**	**20 18 14.6**	**-0.1**
TZRR				S		**Sn**	**20 19 33.8**	**-3.8**
ZGR	**Zagora**	**7.92**	**143**	P		**Pn**	**20 18 21.9**	**+0.1**
ZGR				S		**Sn**	**20 19 46.7**	**-3.6**

*IDC **21** 20:21:10.7±1.9,30˚.39N×94˚.83E, h0km, mb3.7/6, mbtmp3.6/9, ML3.3/3, MS3.0/1, Error ellipse: s-maj=47.3km s-min=30.4km az=76.0*

ISC 21 20:21:13.9±1.1,**30˚.4N**±0˚.1×**94˚.9E**±0˚.2,**h23**km,**n10,** σ0**s77/9,mb3.6/4,Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.44**	**162**	Pn		**Pn**	**20 24 09.6**	**-0.1**
	0.4nm,0.3s,baz=338,slow=13,SNR=4.3							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**19.07**	**333**	P		**P**	**20 25 33.5**	**-1.1**
	baz=152,slow=14,SNR=5.2							
	0.5nm,0.8s							
SONM	**Songino Array**	**19.53**	**24**	P		**P**	**20 25 40.0**	**+0.2**
	baz=215,slow=13,SNR=3.7							
	0.9nm,1.1s							
AAK	**Ala-Archa**	**20.39**	**312**	P		**P**	**20 25 49.7**	**+0.5**
	1.3nm,0.3s,baz=125,slow=9.2,SNR=6.9							
	1.3nm,0.3s							
KURBB	**Kurchatov Arra**	**23.63**	**333**	P		**P**	**20 26 23.1**	**-0.1**
	0.7nm,0.7s,baz=142,slow=11,SNR=9.1							
	0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**24.64**	**346**	P		**P**	**20 26 33.0**	**+0.4**
	0.7nm,0.5s,baz=142,slow=7.5,SNR=5.7							
	0.7nm,0.5s							
BVAR	**Borovoye Array**	**28.82**	**329**	P		**P**	**20 27 11.0**	**+0.8**
	1.6nm,0.8s,baz=144,slow=10,SNR=4.2							
	1.6nm,0.8s							
KBZ	**Khabaz**	**42.91**	**303**	LR		LR	20 48 27.5	
	comp=Z,19nm,19.2s,baz=180,slow=38							
AKASG	**Malin Array Be**	**52.06**	**313**	P		**P**	**20 30 20.7**	**-1.0**
	1.0nm,0.8s,baz=78,slow=6.9,SNR=5.0							
	1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**86.17**	**283**	P		**P**	**20 33 54.2**	**+0.4**
	0.4nm,0.8s,baz=42,slow=7.5,SNR=2.6							
	0.4nm,0.8s							

*IDC **21** 20:32:01.4±5.7,36˚.67N×71˚.24E, h200km±54km, mb3.0/3, mbtmp3.5/9, Error ellipse: s-maj=45.0km s-min=27.2km az=16.0*

*NNC **21** 20:32:03.0±5.9,37˚.13N×70˚.44E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=47.8km s-min=37.3km az=160.0*

ISC 21 20:32:00.8±0.9,**36˚.60N**±0˚.07×**71˚.3E**±0˚.1,**h200**km,**n17,** σ2**s11/22,1C-3D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMU	**Jammu**	**4.78**	**142**	IAML			20 33 34.2	
	comp=E,49nm,0.2s							
JMU				IAML			20 33 34.2	
	comp=N,43nm,0.3s							
TSSA	**Tissa**	**5.47**	**132**	*e*P		**Pn**	**20 33 22.3**	**+0.8**
TSSA				*e*S		**Sn**	**20 34 23.2**	**-1.8**
TSSA				IAML			20 34 27.2	
	comp=E,57nm,0.2s							
TSSA				IAML			20 34 27.4	
	comp=N,47nm,0.3s							
THN	**Thein Dam**	**5.53**	**137**	*e*P		**Pn**	**20 33 23.7**	**+1.5**
THN				*e*S		**Sn**	**20 34 25.1**	**-1.2**
THN				IAML			20 34 27.1	
	comp=E,23nm,0.5s							
THN				IAML			20 34 27.4	
	comp=N,21nm,0.3s							
AAK	**Ala-Archa**	**6.50**	**21**	P		**Pn**	**20 33 35.7**	**+1.1**
	comp=N,4.1nm,0.5s,baz=209,slow=8.0,SNR=9.0							
AAK				S		**Sn**	**20 34 47.7**	**-1.3**
	comp=N,3.2nm,0.5s,baz=140,slow=22,SNR=9.3							
AAK	**Ala-Archa**	**6.50**	**21**	⇓P		**Pn**	**20 33 37.7**	**+3.1**
	comp=N,2.8nm,0.7s							
AAK				⇑S		**Sn**	**20 34 50.3**	**+1.3**
	comp=N,2.8nm,0.6s							
KK31	**Karatay Array**	**6.52**	**355**	⇓P		**Pn**	**20 33 33.3**	**-1.4**
	comp=N,4.0nm,0.2s,baz=181,slow=14,SNR=98							
KK31				⇓S		**Sn**	**20 34 43.9**	**-5.4**
	comp=N,3.4nm,0.3s,baz=184,slow=20							
SMLA	**Simla**	**7.31**	**137**	*e*P		**Pn**	**20 33 45.8**	**+0.8**
SMLA				*e*S		**Sn**	**20 35 04.6**	**-3.2**
SMLA				IAML			20 35 06.6	
	comp=E,9.9nm,0.2s							
SMLA				IAML			20 35 22.4	
	comp=E,23nm,0.2s							
KLP	**Kalpa**	**7.65**	**129**	*e*S		**Sn**	**20 35 12.8**	**-3.7**
KLP				IAML			20 35 15.4	
	comp=N,13nm,0.1s							
KLP				IAML			20 35 16.6	
	comp=E,25nm,0.2s							
MKAR	**Makanchi Array**	**13.05**	**35**	P		**Pn**	**20 34 59.8**	**+1.0**
	comp=E,0.3nm,0.7s,baz=221,slow=15,SNR=2.9							
KURBB	**Kurchatov Arra**	**14.94**	**18**	P		**Pn**	**20 35 21.9**	**-0.2**
	comp=E,0.3nm,0.7s,baz=209,slow=10,SNR=4.0							
AB31	**Akbulak array**	**15.12**	**330**	P		**P**	**20 35 26.0**	**+1.2**
	comp=E,0.5nm,0.4s,baz=147,slow=12,SNR=14							
BVAR	**Borovoye Array**	**16.43**	**358**	P		**Pn**	**20 35 40.4**	**+0.3**
	comp=E,0.9nm,0.6s,baz=156,slow=9.6,SNR=4.6							
AKTO	**Aktyubinsk**	**16.82**	**329**	P		**Pn**	**20 35 43.6**	**-1.1**
	comp=E,1.4nm,0.5s,baz=136,slow=6.9,SNR=4.3							
ZALV	**Zalesovo Beam**	**19.71**	**24**	P		**P**	**20 36 15.1**	**+0.3**
	comp=E,0.7nm,0.5s,baz=210,slow=12,SNR=3.5							
TORD	**Torodi Ar. Bea**	**65.98**	**269**	P		**P**	**20 42 25.7**	**-0.3**
	comp=E,0.1nm,0.3s,baz=62,slow=5.7,SNR=1.6							
	comp=E,0.1nm,0.3s							
WRA	**Warramunga Arr**	**81.82**	**122**	P		**P**	**20 43 58.5**	**+0.9**
	comp=E,0.3nm,0.5s,baz=324,slow=4.9,SNR=8.1							
	comp=E,0.3nm,0.5s							
ASAR	**Alice Springs**	**84.10**	**125**	P		**P**	**20 44 10.8**	**+1.5**
	comp=E,0.4nm,0.6s,baz=306,slow=4.8,SNR=7.4							
	comp=E,0.4nm,0.6s							

*IPGP **21** 20:56:24.0,20˚.83S×178˚.57W, h620km, Mw6.1, Fault plane solution: NP1:ϕs299.00000°,δ31.00000°, λ-38.00000°. NP2:ϕs62.00000°,δ72.00000°, λ-115.00000°.*

*MOS **21** 20:56:24.6±0.9,20˚.79S×178˚.68W, h609km, mb5.5/35, Error ellipse: s-maj=7.9km s-min=6.7km az=97.6*

*NEIC **21** 20:56:24.5,20˚.89S×178˚.55W, h601km*

*PTWC **21** 20:56:24, 20˚.90S×178˚.50W, h633km, Mwp5.9/8, FIJI REGION*

*BJI **21** 20:56:25.1,20˚.75S×178˚.54W, h600km, mB5.9/72, mb5.7/85*

*NEIC **21** 20:56:25.2±2.0,20˚.80S±0˚.08×178˚.63W±0˚.09, h605km±2km, mb5.5/671, Mwb6.1/131, Mww6.0/21, Error ellipse: s-maj=11.8km s-min=10.7km az=114.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.98; Mθθ1.09; Mϕϕ-0.10; Mrθ-0.87; Mθϕ0.01; Mϕr-0.66; Fault plane solution: M₀1.51000×10¹⁸ NP1: ϕs289.74000°,δ28.11000°,λ-48.67000°. NP2:ϕs64.83000°, δ69.28000°,λ-109.43000°. Principal axes: T 1.4444, Plg22.0000°, Azm170.0000°; N 0.1226, Plg18.0000°, Azm72.0000°; P -1.5670, Plg61.0000°, Azm306.0000°;*

*GFZ **21** 20:56:25.7±0.2,21˚.S±2˚.×17˚.9W±˚, h604km±3km, M5.7/108, mB6.0/96, mb5.7/108, Mw(mB)5.7/96*

*GFZ **21** 20:56:25.7,20˚.83S×178˚.67W, h619km, Mw6.0/72, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.73; Mθθ0.92; Mϕϕ-0.19; Mrθ-0.66; Mθϕ0.03; Mϕr-0.51; Fault plane solution: M₀1.18557×10¹⁸ NP1:ϕs63.75265°, δ69.20723°,λ-112.40510°. NP2:ϕs293.02255°, δ30.19723°,λ-44.89211°. Principal axes: T 1.1865, Plg21.1086°, Azm170.5448°; N -0.0020, Plg20.8749°, Azm72.0789°; P -1.1846, Plg59.5608°, Azm301.6131°;*

*NEIC **21** 20:56:25.4,20˚.84S×178˚.47W, h617km*

*IDC **21** 20:56:26.6±0.3,20˚.81S×178˚.70W, h616km±3km, mb4.9/33, mbtmp5.9/35, Error ellipse: s-maj=8.3km s-min=7.8km az=120.0*

*NOU **21** 20:56:26.0,20˚.85S×178˚.65W, h611km, ML5.6/253, Fiji Islands Region*

*NEIC **21** 20:56:28.8,20˚.74S×178˚.47W, h600km, Moment Tensor Solution. Duration: 5s0 Moment tensor: Scale 10¹⁸Nm; Mrr-0.67; Mθθ0.99; Mϕϕ-0.33; Mrθ-0.58; Mθϕ-0.18; Mϕr-0.46; Fault plane solution: M₀1.16000×10¹⁸ NP1: ϕs307.95000°,δ38.37000°,λ-36.31000°. NP2:ϕs67.89000°, δ68.44000°,λ-122.54000°. Principal axes: T 1.1745, Plg17.0000°, Azm181.0000°; N -0.0278, Plg30.0000°, Azm81.0000°; P -1.1468, Plg55.0000°, Azm297.0000°;*

*GCMT **21** 20:56:29.2±0.1,20˚.74S±0˚.01×178˚.69W±0˚.01, h626km, MW6.0/149, Moment Tensor Solution. s149,c352; s131,c158; Duration: 2s6 Moment tensor: Scale 10¹⁸Nm; Mrr-0.73±.01; Mθθ1.06±.01; Mϕϕ-0.32±.01; Mrθ-0.83±.01; Mθϕ0.05±.01; Mϕr-0.69±.01; Best double couple: M₀1.43700×10¹⁸ NP1:ϕs297.00000°,δ30.00000°, λ-36.00000°. NP2:ϕs59.00000°,δ73.00000°, λ-115.00000°. Principal axes: T 1.4420, Plg24.0000°, Azm169.0000°; N -0.0130, Plg24.0000°, Azm67.0000°; P -1.4310, Plg55.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 21 20:56:25.3±0.2,**20˚.88S**±0˚.03×**178˚.52W**±0˚.03, **h616**km±1km,**h617**km:**pP-P,n2182,**σ1s**41**/2459,**mb5.6**/547, **92C-233D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**2.65**	**354**	P		**P**	**20 57 44.6**	**+0.5**
LKBA	**Tubou, Lakemba**	**2.65**	**354**	S		**S**	**20 58 48.1**	**+0.1**
LKBA	**Tubou, Lakemba**	**2.65**	**354**	P		**P**	**20 57 44.9**	**+0.8**
MSVF	**Nonsavu**	**4.50**	**313**	P		**P**	**20 57 56.2**	**+0.6**
	6μm,0.8s,baz=151,slow=11,SNR=2187							
MSVF				S		**S**	**20 59 09.5**	**+0.3**
	897nm,0.9s,baz=93,slow=23,SNR=0.6							
MSVF	**Nonsavu**	**4.50**	**313**	P		**P**	**20 57 55.8**	**+0.1**
MSVF	**Nonsavu**	**4.50**	**313**	*c*	iP	**P**	**20 57 56.0**	**+0.4**
MSVF	**Nonsavu**	**4.50**	**313**	P		**P**	**20 57 56.1**	**+0.4**
MSVF				S		**S**	**20 59 08.4**	**-0.9**
MSVF	**Nonsavu**	**4.50**	**313**	P		**P**	**20 57 56.3**	**+0.6**
MSVF	**Nonsavu**	**4.50**	**313**	P		**P**	**20 57 56.3**	**+0.6**
DGTI	**Dogotuki**	**4.84**	**340**	P		**P**	**20 57 58.0**	**-0.2**
DGTI	**Dogotuki**	**4.84**	**340**	S		**S**	**20 59 13.8**	**0.0**
DGTI	**Dogotuki**	**4.84**	**340**	P		**P**	**20 57 58.5**	**+0.3**
FUTU	**Fugatoga**	**6.54**	**3**	P		**P**	**20 58 11.9**	**-0.3**
	54μm,1.1s							
FUTU	**Fugatoga**	**6.54**	**3**			**P**	**20 58 12.1**	**-0.1**
FUTU				S		**S**	**20 59 38.4**	**-0.9**
FUTU	**Fugatoga**	**6.54**	**3**	P		**P**	**20 58 12.3**	**+0.2**
FUTU	**Fugatoga**	**6.54**	**3**	P		**P**	**20 58 12.3**	**+0.2**
NIUE	**Niue**	**8.28**	**79**	P		**P**	**20 58 28.4**	**+0.5**
	comp=Z,4μm,0.9s,comp=Z,0.0nm							
NIUE	**Niue**	**8.28**	**79**	P		**P**	**20 58 28.2**	**+0.2**
	comp=Z,4μm,0.9s							
NIUE	**Niue**	**8.28**	**79**	S		**S**	**21 00 11.9**	**+3.6**
	comp=Z,4μm,0.9s							
NIUE	**Niue**	**8.28**	**79**			**P**	**20 58 28.1**	**+0.2**
NIUE				S		**S**	**21 00 05.7**	**-2.6**
NIUE	**Niue**	**8.28**	**79**	P		**P**	**20 58 28.6**	**+0.7**
NIUE	**Niue**	**8.28**	**79**	P		**P**	**20 58 28.6**	**+0.7**
NIUE				S		**S**	21 00 20.8	+13
NIUE	**Niue**	**8.28**	**79**	⇓P		**P**	**20 58 28.4**	**+0.5**
NIUE	**Niue**	**8.28**	**79**	P		**P**	**20 58 28.6**	**+0.7**
RIZ	**Raoul Island**	**8.35**	**176**	P		**P**	**20 58 26.8**	**-1.6**
RIZ				S		**S**	**21 00 05.6**	**-3.7**
RAO	**Raoul Island**	**8.36**	**176**	P		**P**	**20 58 28.0**	**-0.5**
	comp=Z,679nm,0.4s,baz=71,slow=19,SNR=6.9							
RAO				S		**S**	**21 00 04.7**	**-4.8**
	comp=Z,3μm,0.5s,baz=98,slow=23,SNR=8.9							
RAO	**Raoul Island**	**8.36**	**176**	P		**P**	**20 58 28.2**	**-0.2**
	comp=Z,2μm,0.6s							
RAO	**Raoul Island**	**8.36**	**176**	P		**S**	**21 00 09.4**	**0.0**
	comp=Z,2μm,0.6s							
RAO	**Raoul Island**	**8.36**	**176**	P		**S**	**20 58 27.3**	**-1.1**
RAO	**Raoul Island**	**8.36**	**176**			**P**	**20 58 27.3**	**-1.1**
RAO	**Raoul Island**	**8.36**	**176**	P		**P**	**20 58 28.1**	**-0.3**
RAO	**Raoul Island**	**8.36**	**176**	P		**P**	**20 58 28.3**	**-0.2**
RAO				S		**S**	**21 00 06.2**	**-3.3**
RAO	**Raoul Island**	**8.36**	**176**	P		**P**	**20 58 28.2**	**-0.2**
GLKZ	**Green Lake**	**8.37**	**176**	P		**P**	**20 58 27.9**	**-0.6**
GLKZ				S		**S**	**21 00 02.3**	**-7.3**
AFI	**Afiamalu**	**9.46**	**44**	P		**P**	**20 58 37.5**	**-1.8**
	comp=Z,1μm,0.8s,baz=339,slow=1.0,SNR=149							
AFI				S		**S**	**21 00 22.0**	**-7.2**
	comp=Z,945nm,0.6s,baz=31,slow=20,SNR=13							
AFI	**Afiamalu**	**9.46**	**44**			**P**	**20 58 37.4**	**-2.0**
AFI	**Afiamalu**	**9.46**	**44**	P		**P**	**20 58 37.3**	**-2.0**
AFI				S		**S**	**21 00 22.2**	**-7.0**
FUNA	**Funafuti**	**12.47**	**350**	P		**P**	**20 59 07.1**	**-1.8**
	comp=Z,2μm,1.1s							
FUNA	**Funafuti**	**12.47**	**350**	P		**P**	**20 59 06.7**	**-2.1**
FUNA	**Funafuti**	**12.47**	**350**	P		**P**	**20 59 06.9**	**-2.0**
FUNA	**Funafuti**	**12.47**	**350**	⇑P		**P**	**20 59 06.9**	**-2.0**
FUNA	**Funafuti**	**12.47**	**350**	P		**P**	**20 59 07.1**	**-1.8**
MARNC	**Mare, Loyalty**	**12.56**	**265**	P		**P**	**20 59 09.0**	**-0.6**
	comp=Z,4μm,0.9s							
MARNC	**Mare, Loyalty**	**12.56**	**265**	P		**S**	**21 01 22.7**	**-1.7**
	comp=Z,4μm,0.9s							
MARNC	**Mare, Loyalty**	**12.56**	**265**			**P**	**20 59 08.2**	**-1.4**
MARNC	**Mare, Loyalty**	**12.56**	**265**	P		**P**	**20 59 08.5**	**-1.1**
RTV	**Rentapao**	**12.70**	**282**	P		**P**	**20 59 11.8**	**+0.8**
	comp=Z,5μm,1.1s							
DVP	**Devils Point**	**12.93**	**282**	P		**P**	**20 59 14.0**	**+0.7**
	comp=Z,17μm,1.0s							
DVP	**Devils Point**	**12.93**	**282**	S		**S**	**21 01 32.4**	**+1.3**
	comp=Z,17μm,1.0s							
DVP	**Devils Point**	**12.93**	**282**	P		**P**	**20 59 12.9**	**-0.4**
YATNC	**Mamie plateau,**	**13.63**	**262**	P		**P**	**20 59 19.9**	**-0.3**
	comp=Z,372nm,1.1s							
YATNC	**Mamie plateau,**	**13.63**	**262**	S		**S**	**21 01 42.9**	**-0.4**
	comp=Z,372nm,1.1s							
OUENC	**Ouen Island, N**	**13.70**	**261**	P		**P**	**20 59 21.2**	**+0.4**
	comp=Z,395nm,1.2s							
OUENC	**Ouen Island, N**	**13.70**	**261**			**P**	**20 59 19.9**	**-0.9**
DZM	**Mont Dzumac**	**14.05**	**262**	P		**P**	**20 59 23.8**	**-0.5**
	comp=Z,413nm,0.9s,baz=83,slow=16,SNR=124							
DZM				S		**S**	**21 01 45.3**	**-5.1**
	comp=Z,140nm,1.1s,baz=34,slow=18,SNR=5.1							
ONTNC	**Ouen Toro**	**14.05**	**261**	P		**P**	**20 59 24.7**	**+0.5**
	comp=Z,462nm,1.1s							
ONTNC	**Ouen Toro**	**14.05**	**261**	S		**S**	**21 01 51.6**	**+1.3**
	comp=Z,462nm,1.1s							
ONTNC	**Ouen Toro**	**14.05**	**261**			**P**	**20 59 23.3**	**-0.9**
ONTNC	**Ouen Toro**	**14.05**	**261**	P		**P**	**20 59 23.7**	**-0.5**
NOUC	**Port Laguerre**	**14.18**	**262**	P		**P**	**20 59 25.2**	**-0.2**
	comp=Z,456nm,1.1s							
NOUC	**Port Laguerre**	**14.18**	**262**	S		**S**	**21 01 53.6**	**+1.2**
	comp=Z,456nm,1.1s							
NFK	**Norfolk Island**	**14.72**	**234**	P		**P**	**20 59 32.4**	**+2.2**
	comp=Z,394nm,1.0s							
OUZ	**Omahuta**	**15.88**	**204**	P		**P**	**20 59 43.6**	**+2.9**
	comp=Z,5μm,1.0s							
OUZ	**Omahuta**	**15.88**	**204**	P		**P**	**20 59 43.6**	**+2.9**
OUZ				S		**S**	**21 02 25.1**	**+5.3**
OUZ	**Omahuta**	**15.88**	**204**	⇑P		**P**	**20 59 44.0**	**+3.3**
KOUNC	**Koumac, New Ca**	**16.09**	**268**	P		**P**	**20 59 44.4**	**+1.5**
	comp=Z,2μm,1.3s							
KOUNC	**Koumac, New Ca**	**16.09**	**268**	S		**S**	**21 02 26.2**	**+2.5**
	comp=Z,2μm,1.3s							
KOUNC	**Koumac, New Ca**	**16.09**	**268**			**P**	**20 59 44.1**	**+1.2**
KOUNC	**Koumac, New Ca**	**16.09**	**268**	P		**P**	**20 59 44.6**	**+1.7**
GRZ	**Great Barrier**	**16.20**	**198**	P		**P**	**20 59 44.3**	**+0.7**
GRZ				S		**S**	**21 02 25.1**	**+0.1**
WCZ	**Waipu Caves**	**16.25**	**201**	P		**P**	**20 59 47.5**	**+3.3**
WCZ				S		**S**	**21 02 27.7**	**+1.8**
MXZ	**Matakaoa Point**	**16.85**	**189**	P		**P**	**20 59 49.9**	**+0.3**
	comp=Z,244nm,0.6s							
MXZ	**Matakaoa Point**	**16.85**	**189**	S		**S**	**21 02 37.3**	**+1.6**
	comp=Z,244nm,0.6s							
MXZ	**Matakaoa Point**	**16.85**	**189**			**P**	**20 59 49.0**	**-0.6**
MXZ	**Matakaoa Point**	**16.85**	**189**	P		**P**	**20 59 49.3**	**-0.3**
WIZ	**White Island**	**17.00**	**192**	P		**P**	**20 59 52.7**	**+1.8**
ETAZ	**East Tamaki Re**	**17.00**	**198**	P		**P**	**20 59 53.9**	**+2.9**
MKAZ	**Moumakai**	**17.08**	**197**	P		**P**	**20 59 54.1**	**+2.5**
WMGZ	**Waiomatatini S**	**17.09**	**188**	P		**P**	**20 59 52.2**	**+0.4**
WMGZ				S		**S**	**21 02 34.9**	**-4.7**
HAZ	**Te Kaha**	**17.12**	**190**	P		**P**	**20 59 51.2**	**-0.8**
HAZ				S		**S**	**21 02 35.1**	**-4.9**
PKGZ	**Pakihiroa**	**17.18**	**189**	P		**P**	**20 59 51.7**	**-0.9**
PKGZ				S		**S**	**21 02 38.7**	**-2.4**
RUGZ	**Raukumara Rang**	**17.34**	**190**	P		**P**	**20 59 53.2**	**-1.0**
RUGZ				S		**S**	**21 02 38.3**	**-5.6**
PUZ	**Puketiti**	**17.36**	**189**	P		**P**	**20 59 54.9**	**+0.6**
PUZ				S		**S**	**21 02 41.3**	**-2.6**
WHRZ	**Whale Island**	**17.36**	**192**	P		**P**	**20 59 55.4**	**+1.1**
TGRZ	**Tauranga**	**17.39**	**194**	P		**P**	**20 59 56.8**	**+2.3**
TWGZ	**Tauwhareparae**	**17.50**	**189**	P		**P**	**20 59 55.5**	**-0.1**
TWGZ				S		**S**	**21 02 43.5**	**-2.8**
TOZ	**Tahuroa Road**	**17.58**	**196**			**P**	**20 59 57.8**	**+1.6**
TOZ	**Tahuroa Road**	**17.58**	**196**	P		**P**	**20 59 57.8**	**+1.6**
EDRZ	**Edgecumbe**	**17.65**	**192**	P		**P**	**20 59 57.6**	**+0.8**
MWZ	**Matawai**	**17.73**	**190**	P		**P**	**20 59 56.5**	**-1.1**
MWZ				S		**S**	**21 02 45.4**	**-4.6**
URZ	**Urewera**	**17.73**	**191**	P		**P**	**20 59 56.2**	**-1.4**
	comp=Z,670nm,0.7s,baz=352,slow=4.3,SNR=142							
URZ				S		**S**	**21 02 45.9**	**-3.9**
	comp=Z,94nm,0.6s,baz=88,slow=19,SNR=6.3							
URZ				ScP		**ScP**	**21 06 40.2**	**+1.3**
	comp=Z,69nm,0.8s,baz=312,slow=4.0,SNR=4.8							
URZ	**Urewera**	**17.73**	**191**	P		**P**	**20 59 56.6**	**-1.0**
	comp=Z,1μm,0.8s							
URZ	**Urewera**	**17.73**	**191**	P		**P**	**20 59 56.3**	**-1.3**
URZ	**Urewera**	**17.73**	**191**	⇓P		**P**	**20 59 55.6**	**-2.0**
URZ	**Urewera**	**17.73**	**191**	P		**P**	**20 59 56.3**	**-1.3**
CNGZ	**Carnagh Statio**	**17.77**	**188**	P		**P**	**20 59 57.4**	**-0.6**
CNGZ				S		**S**	**21 02 50.2**	**-0.3**
RAGZ	**Rawiri**	**17.91**	**190**	P		**P**	**20 59 59.1**	**-0.2**
MUGZ	**Murupara**	**18.00**	**192**	P		**P**	**20 59 60.0**	**-0.1**
MUGZ				S		**S**	**21 02 46.4**	**-7.9**
RTZ	**Ruatahuna**	**18.10**	**191**	P		**P**	**20 59 59.5**	**-1.5**
RTZ	**Ruatahuna**	**18.10**	**191**	P		**P**	**20 59 59.1**	**-2.0**
TLZ	**Tolley Road**	**18.13**	**195**	P		**P**	**21 00 04.1**	**+2.7**
KNZ	**Kokohu**	**18.38**	**189**	P		**P**	**21 00 03.8**	**+0.3**
KNZ				S		**S**	**21 02 56.5**	**-3.8**
HIZ	**Hauiti**	**18.48**	**197**	P		**P**	**21 00 07.0**	**+2.5**
	comp=Z,1μm,1.4

comp=Z,374nm,0.8s
RPZ Rata Peaks 24.38 199 P **P** 21 00 58.7 +1.6
comp=Z,250nm,1.4s
RPZ Rata Peaks 24.38 199 P **P** 21 00 57.0 0.0
FOZ Fox Glacier 24.60 201 P **P** 21 00 57.6 -1.3
LBZ Lake Benmore 25.25 199 P **P** 21 01 02.5 -2.3
JCZ Jackson Bay 25.43 202 P **P** 21 01 07.4 +1.0
comp=Z,625nm,1.4s
JCZ Jackson Bay 25.43 202 S **S** 21 04 51.4 -0.1
comp=Z,625nm,1.4s
ODZ Otahua Downs 25.71 198 P **P** 21 01 10.3 +1.5
comp=Z,133nm,2.2s
ODZ Otahua Downs 25.71 198 ⇑P **P** 21 01 09.1 +0.3
ODZ Otahua Downs 25.71 198 P **P** 21 01 08.9 +0.1
WKZ Wanaka 26.01 200 P **P** 21 01 09.9 -1.6
GC1S Gold Coast 1 S 26.42 249 P **P** 21 01 15.4 +0.2
AUBSH Beerwah State 26.72 252 P **P** 21 01 18.2 +0.3
comp=Z,482nm,1.1s
PAE Paea 27.49 88 *e*P **P** 21 01 25.4 +0.7
PAE comp=Z,109nm,0.9s *e*pP **pP** 21 02 54.7 -3.9
comp=Z,675nm,1.5s
SYZ Scrubby Hill 27.51 199 P **P** 21 01 25.9 +1.5
comp=Z,205nm,2.2s
PPT2 Papeete2 27.51 88 *e*P **P** 21 01 23.2 -1.8
comp=Z,125nm,1.1s
PPT2 *e*pP **pP** 21 02 54.7 -4.2
comp=Z,433nm,1.4s
PPT2 *e*S **S** 21 05 17.9 -6.7
comp=Z,1µm,25.8s
PPT2 *es*S **sS** 21 08 21.3 -2.4
comp=Z,5µm,26.0s
PPT Papeete 27.51 88 P **P** 21 01 27.8 +2.9
comp=Z,85nm,0.7s,baz=113,slow=22,SNR=5.2
PPT ScP **ScP** 21 07 08.6 +3.4
comp=Z,81nm,0.5s,baz=288,slow=4.1,SNR=7.6
comp=Z,85nm,0.7s
PPTF Pamatai, Papee 27.52 88 P **P** 21 01 24.3 -0.7
PPTF *e*pP **pP** 21 02 55.1 -3.9
TW1H Toowoomba 1 Ha 27.67 250 P **P** 21 01 26.6 +0.3
comp=Z,1µm,1.0s
AUTOO Toowoomba Stat 27.68 250 P **P** 21 01 27.4 +1.1
comp=Z,2µm,1.0s
AUTOO Toowoomba Stat 27.68 250 S **S** 21 05 27.6 +0.6
comp=Z,2µm,1.0s
TIAR Tiarei 27.73 88 *e*P **P** 21 01 28.6 +1.8
TIAR comp=Z,355nm,0.8s *e*pP **pP** 21 02 58.7 -2.2
comp=Z,2µm,1.3s
TVO Taravao 27.77 89 epP pP 21 02 59.0 -2.3
comp=Z,739nm,1.5s
PYZ Puysegur Point 27.98 202 P **P** 21 01 29.5 +0.9
comp=Z,289nm,0.9s
PYZ Puysegur Point 27.98 202 P **P** 21 01 28.2 -0.4
GD1S Gladstone Soft 28.16 258 P **P** 21 01 30.5 +0.1
comp=Z,138nm,0.9s
EIDS Eidsvold 28.28 255 P **P** 21 01 31.2 -0.3
comp=Z,446nm,1.2s
EIDS Eidsvold 28.28 255 P **P** 21 01 31.4 -0.1
comp=Z,446nm,1.2s
EIDS Eidsvold 28.28 255 S **S** 21 05 36.0 -0.2
comp=Z,446nm,1.2s
EIDS Eidsvold 28.28 255 P **P** 21 01 31.2 -0.3
EIDS Eidsvold 28.28 255 ⇓P **P** 21 01 31.5 +0.1
EIDS Eidsvold 28.28 255 P **P** 21 01 31.7 +0.2
ARMA Armidale 28.46 244 P **P** 21 01 34.0 +0.8
comp=Z,275nm,0.9s
ARMA Armidale 28.46 244 P **P** 21 01 34.3 +1.2
comp=Z,275nm,0.9s
ARMA Armidale 28.46 244 S **S** 21 05 39.3 +0.1
comp=Z,275nm,0.9s
ARMA Armidale 28.46 244 P **P** 21 01 33.8 +0.6
ARMA Armidale 28.46 244 ⇓P **P** 21 01 34.4 +1.3
ARMA Armidale 28.46 244 P **P** 21 01 34.5 +1.4
AUNRC North Rockhamp 28.75 259 P **P** 21 01 35.6 0.0
comp=Z,331nm,1.0s
AUNRC North Rockhamp 28.75 259 S **S** 21 05 43.3 -0.2
comp=Z,331nm,1.0s
AUPHS Peel High Scho 29.23 243 P **P** 21 01 41.0 +1.3
comp=Z,262nm,1.3s
AUPHS Peel High Scho 29.23 243 S **S** 21 05 51.1 +0.2
comp=Z,262nm,1.3s
AUKHS Kincumber High 29.45 238 P **P** 21 01 43.1 +1.6
comp=Z,601nm,1.2s
MGCD Mangrove Creek 29.59 239 P **P** 21 01 43.3 +0.6
comp=Z,168nm,1.0s
SYDH Sydney Hard Ro 30.05 238 P **P** 21 01 47.2 +0.6
comp=Z,228nm,0.9s
WOLH Wollongong Har 30.14 237 P **P** 21 01 48.1 +0.7
comp=Z,85nm,1.0s
RMQ Roma 30.43 253 P **P** 21 01 50.9 +0.9
comp=Z,176nm,1.0s
RMQ Roma 30.43 253 P **P** 21 01 50.7 +0.7
comp=Z,176nm,1.0s
RMQ Roma 30.43 253 S **S** 21 06 10.8 +1.5
comp=Z,176nm,1.0s
RMQ Roma 30.43 253 P **P** 21 01 51.3 +1.4
XMAS Kiritimati 30.74 45 P **P** 21 01 51.6 -1.2
XMAS IAmb IAmb 21 01 56.0
comp=Z,155nm,1.2s
AUDCS Dubbo College 31.36 242 P **P** 21 01 58.4 +0.6
comp=Z,160nm,1.3s
AUDCS Dubbo College 31.36 242 S **S** 21 06 24.7 +1.3
comp=Z,160nm,1.3s
AULRC Lightning Ridg 31.41 248 P **P** 21 01 58.0 -0.2
comp=Z,704nm,1.2s
AULRC Lightning Ridg 31.41 248 S **S** 21 06 23.7 -0.4
comp=Z,704nm,1.2s
CNB Canberra Magne 31.61 236 P **P** 21 02 00.9 +0.9
comp=Z,6.0nm,1.2s
AUDAR Daramalan Coll 31.76 236 P **P** 21 02 02.2 +1.0
comp=Z,209nm,1.2s
AUMHS Melrose High S 31.84 236 P **P** 21 02 02.7 +0.8
comp=Z,247nm,1.1s
AUMTS Mt Stromlo 31.89 236 P **P** 21 02 02.5 +0.2
comp=Z,183nm,1.2s
AUMTS Mt Stromlo 31.89 236 S **S** 21 06 33.8 +2.3
comp=Z,183nm,1.2s
CAN Canberra 31.89 236 P **P** 21 02 02.7 +0.3
comp=Z,249nm,1.2s
CAN Canberra 31.89 236 S **S** 21 06 33.8 +2.3
comp=Z,249nm,1.2s
CAN Canberra 31.89 236 P **P** 21 02 01.4 -1.0
CAN pmax pmax 21 02 01.4 -1.0
comp=Z,177nm,1.1s
CAN Canberra 31.89 236 P **P** 21 02 01.4 -1.0
CAN IAmb IAmb 21 02 04.6
comp=Z,177nm,1.1s
CAN Canberra 31.89 236 ⇑P **P** 21 02 03.1 +0.7
CAN Canberra 31.89 236 P **P** 21 02 03.5 +1.2
AUAYR Ayr State High 31.96 266 P **P** 21 02 02.7 -0.3
comp=Z,600nm,1.1s
MILA Mila 32.35 233 P **P** 21 02 06.8 +0.6
comp=Z,20nm,1.8s
CTA Charters Tower 32.97 265 P **P** 21 02 11.8 +0.3
comp=Z,432nm,0.9s,comp=Z,0.0nm
CTA Charters Tower 32.97 265 P **P** 21 02 11.8 +0.3
comp=Z,669nm,0.7s,baz=91,slow=12
comp=Z,669nm,0.7s
CTA Charters Tower 32.97 265 P **P** 21 02 11.3 -0.3
comp=Z,32nm,0.9s
CTA Charters Tower 32.97 265 S **S** 21 06 47.3 -0.8
comp=Z,32nm,0.9s
CTAO Charters Tower 32.97 265 P **P** 21 02 11.4 -0.2
comp=Z,396nm,0.9s
CTAO Charters Tower 32.97 265 S **S** 21 06 47.4 -0.7
comp=Z,396nm,0.9s
CTAO Charters Tower 32.97 265 P **P** 21 02 11.6 +0.1
CTAO pmax pmax
comp=Z,850nm,0.9s
CTAO Charters Tower 32.97 265 P **P** 21 02 11.6 +0.1
CTAO Charters Tower 32.97 265 ⇓P **P** 21 02 11.9 +0.4
CTAO Charters Tower 32.97 265 P **P** 21 02 12.1 +0.5
RABL Rabaul 32.97 296 P **P** 21 02 09.2 -2.5
RABL Rabaul 32.97 296 ⇑P **P** 21 02 09.3 -2.3
CMSA Cobar Meteorol 33.68 244 P **P** 21 02 17.8 +0.4
comp=Z,480nm,1.1s
CMSA Cobar Meteorol 33.68 244 P **P** 21 02 17.4 0.0
comp=Z,480nm,1.1s
CMSA Cobar Meteorol 33.68 244 S **S** 21 06 57.4 -1.1
comp=Z,480nm,1.1s
CMSA Cobar Meteorol 33.68 244 P **P** 21 02 18.2 +0.8
BULU Kimbe 33.85 292 P **P** 21 02 18.5 -0.5
comp=Z,44µm,0.9s
QLP Quilpie 34.48 253 P **P** 21 02 24.3 +0.2
comp=Z,2µm,1.1s
QLP Quilpie 34.48 253 P **P** 21 02 24.0 -0.1
comp=Z,2µm,1.1s
QLP Quilpie 34.48 253 S **S** 21 07 09.1 -1.5
comp=Z,2µm,1.1s
QLP Quilpie 34.48 253 ⇓P **P** 21 02 24.4 +0.3
QLP Quilpie 34.48 253 P **P** 21 02 24.6 +0.5
PMG Port Moresby 34.95 284 P **P** 21 02 28.2 +0.1
comp=Z,1µm,1.0s
PMG Port Moresby 34.95 284 S **S** 21 07 16.6 -1.4
comp=Z,1µm,1.0s
PMG Port Moresby 34.95 284 *d*P **P** 21 02 27.8 -0.3
PMG pmax pmax
comp=Z,1µm,0.9s
PMG Port Moresby 34.95 284 P **P** 21 02 27.6 -0.5
PMG Port Moresby 34.95 284 ⇓P **P** 21 02 28.2 +0.1
PMG Port Moresby 34.95 284 P **P** 21 02 27.8 -0.3
comp=Z,5µmcomp=Z,13µmcomp=Z,1µm,1.0s
PMG Port Moresby 34.95 284 P **P** 21 02 28.4 +0.2
MTSU Mount Surprise 35.09 268 P **P** 21 02 29.2 0.0
comp=Z,495nm,0.9s
MTSU Mount Surprise 35.09 268 P **P** 21 02 29.4 +0.2
comp=Z,495nm,0.9s
MTSU Mount Surprise 35.09 268 P **P** 21 02 29.7 +0.4
AUMAG Moama Anglican 35.43 237 P **P** 21 02 32.6 +0.8
comp=Z,181nm,1.2s
CORO Coronation Par 35.50 227 P **P** 21 02 33.5 +1.3
comp=Z,40nm,0.8s
PATS Pohnpei 35.73 318 P **P** 21 02 35.0 +0.5
comp=Z,551nm,1.5s
PATS Pohnpei 35.73 318 P **P** 21 02 34.8 +0.3
comp=Z,595nm,1.5s
PATS Pohnpei 35.73 318 P **P** 21 02 35.3 +0.8
TAU Tasmania Unive 36.01 225 P **P** 21 02 36.1 -0.4
TAU pmax pmax
comp=Z,89nm,1.4s
TAU Tasmania Unive 36.01 225 P **P** 21 02 36.1 -0.4
BRAT Ballarat 36.46 235 P **P** 21 02 40.7 +0.5
comp=Z,143nm,1.0s
COEN Coen 37.12 274 P **P** 21 02 45.9 0.0
comp=Z,620nm,1.0s
COEN Coen 37.12 274 P **P** 21 02 45.5 -0.4
comp=Z,620nm,1.0s
COEN Coen 37.12 274 P **P** 21 02 46.0 0.0
COEN Coen 37.12 274 ⇓P **P** 21 02 46.4 +0.5
COEN Coen 37.12 274 P **P** 21 02 46.6 +0.7
STKA Stephens Creek 37.18 245 P **P** 21 02 46.9 +0.7
comp=Z,2µm,1.1s
STKA Stephens Creek 37.18 245 P **P** 21 02 47.2 +1.0
comp=Z,247nm,0.8s,baz=89,slow=9.1,SNR=366
STKA ScP **ScP** 21 07 40.7 +2.0
comp=Z,22nm,0.9s,baz=245,slow=2.5,SNR=3.2
STKA S **S** 21 07 48.6 -2.1
comp=Z,24nm,1.0s,baz=228,slow=18,SNR=4.4
comp=Z,247nm,0.8s
STKA Stephens Creek 37.18 245 P **P** 21 02 46.7 +0.5
comp=Z,90nm,1.1s
STKA Stephens Creek 37.18 245 *d*P **P** 21 02 46.9 +0.7
STKA Stephens Creek 37.18 245 P **P** 21 02 47.3 +1.1
MCQ Macquarie Isla 37.66 201 P **P** 21 02 52.0 +2.4
comp=Z,200nm,1.4s
MCQ Macquarie Isla 37.66 201 IAmb IAmb 21 02 53.4
comp=Z,260nm,1.2s
MANU Manus Island 38.16 295 ⇓P **P** 21 02 54.9 +0.5
JOHN Johnston Islan 38.40 14 P **P** 21 02 56.8 +0.7
JOHN IAmb IAmb 21 02 59.7
comp=Z,182nm,1.0s
MGBR Mount Gambier 39.08 235 P **P** 21 03 01.6 +0.2
MGBR IAmb IAmb 21 03 03.4
comp=Z,214nm,1.6s
QIS Mount Isa 39.09 263 P **P** 21 03 00.8 -0.9
comp=Z,294nm,1.3s,comp=Z,0.0nm
QIS Mount Isa 39.09 263 P **P** 21 03 00.9 -0.9
comp=Z,294nm,1.3s
QIS Mount Isa 39.09 263 P **P** 21 03 01.5 -0.2
AUMBR Murray Bridge 39.57 240 P **P** 21 03 05.6 +0.3
comp=Z,674nm,1.0s
HTT Hallett 39.62 242 P **P** 21 03 06.0 +0.1
comp=Z,206nm,1.0s
HTT Hallett 39.62 242 P **P** 21 03 06.0 +0.1
comp=Z,512nm,1.0s
HTT Hallett 39.62 242 P **P** 21 03 05.9 +0.1
HTT Hallett 39.62 242 ⇓P **P** 21 03 06.4 +0.6
AUJCS Jamestown Cent 39.85 243 P **P** 21 03 08.1 +0.4
comp=Z,439nm,1.0s
AUMAR Marden Senior 40.05 240 P **P** 21 03 09.6 +0.4
comp=Z,302nm,1.1s
GHSS Government Hou 40.09 240 P **P** 21 03 10.2 +0.7
comp=Z,225nm,0.9s
PTPS Port Pirie 40.36 243 P **P** 21 03 12.1 +0.5
comp=Z,618nm,0.9s
BBOO Buckleboo 41.94 244 P **P** 21 03 24.0 -0.1
comp=Z,622nm,1.0s
BBOO Buckleboo 41.94 244 P **P** 21 03 24.3 +0.1
comp=Z,623nm,1.0s
BBOO Buckleboo 41.94 244 P **P** 21 03 24.2 +0.1
BBOO Buckleboo 41.94 244 P **P** 21 03 24.7 +0.5
AUCAS Cummins Area S 42.36 242 P **P** 21 03 28.0 +0.6
comp=Z,300nm,1.1s
WAKE Wake Island 42.47 339 P **P** 21 03 28.5 +0.1
comp=Z,326nm,1.0s
WAKE Wake Island 42.47 339 P **P** 21 03 27.8 -0.5
WAKE Wake Island 42.47 339 P **P** 21 03 28.4 +0.1
H11N3 WAKE ISLAND Hy 42.79 340 P **P** 21 03 30.6 0.0
baz=179,slow=10,SNR=13
H11N1 WAKE ISLAND Hy 42.79 340 P **P** 21 03 30.6 0.0
baz=179,slow=10,SNR=9.2
H11N2 WAKE ISLAND Hy 42.81 340 P **P** 21 03 30.4 -0.3
baz=179,slow=10,SNR=11
JAY Jayapura 43.70 289 S **S** 21 09 22.8 -2.5
comp=Z,34nm,1.0s,baz=268,slow=22,SNR=10
JAY Jayapura 43.70 289 P **P** 21 03 37.9 -0.2
comp=Z,19µmcomp=Z,2µm,1.0s
AS17 Alice Springs 43.88 257 P **P** 21 03 39.4 +0.1
comp=Z,2µm,1.0s
AS01 Alice Springs 43.91 257 P **P** 21 03 39.6 0.0
comp=Z,2µm,1.0s
AS31 Alice Springs 43.95 257 P **P** 21 03 39.6 -0.4
AS31 PcP **PcP** 21 05 11.3 -0.5
ASAR Alice Springs 43.96 257 P **P** 21 03 40.2 +0.2
comp=Z,1µm,0.9s,baz=96,slow=7.8,SNR=5212
ASAR PcP **PcP** 21 05 12.4 +0.6
comp=Z,53nm,0.7s,baz=99,slow=3.7,SNR=4.9
ASAR ScP **ScP** 21 08 07.0 +1.2
comp=Z,16nm,0.8s,baz=109,slow=4.3,SNR=4.5
ASAR S **S** 21 09 23.1 -5.5
comp=Z,18nm,1.0s,baz=92,slow=16,SNR=4.6
ASAR PKP2bc 21 35 36.7
comp=Z,1.7nm,1.0s,baz=283,slow=4.1,SNR=6.9
ASAR P4KPbc 21 41 25.6
comp=Z,0.4nm,0.5s,baz=100,slow=4.8,SNR=5.3
comp=Z,1µm,0.9s
ASAR Alice Springs 43.96 257 P **P** 21 03 39.4 -0.6
ASAR PcP **PcP** 21 05 11.4 -0.4
AUALC St Philip's Co 43.97 257 P **P** 21 03 40.1 0.0
comp=Z,1µm,1.1s
WRA Warramunga Arr 44.06 263 P **P** 21 03 40.2 -0.6
comp=Z,660nm,0.8s,baz=96,slow=7.0,SNR=799
WRA PcP **PcP** 21 05 13.0 +0.9
comp=Z,52nm,1.0s,baz=98,slow=4.0,SNR=5.4
WRA S **S** 21 09 26.1 -4.1
comp=Z,89nm,1.0s,baz=95,slow=12,SNR=17
comp=Z,660nm,0.8s
WRA Warramunga Arr 44.06 263 P **P** 21 03 39.8 -1.0
WRA IAmb IAmb 21 03 41.5
comp=Z,159nm,1.0s
WRA PcP **PcP** 21 05 12.2 +0.1
GENI Genyem 44.14 289 P **P** 21 03 41.9 +0.5
comp=Z,2µm,1.1s
GENI Genyem 44.14 289 ⇓P **P** 21 03 41.7 +0.3
GENI Genyem 44.14 289 P **P** 21 03 40.6 -0.8
GENI Genyem 44.14 289 P **P** 21 03 41.9 +0.5
OVEH Oceanview Est 45.60 31 P **P** 21 03 52.4 -0.2
OVEH IAmb IAmb 21 03 54.3
comp=Z,93nm,1.0s
KHLU Kahalu`u 45.92 30 P **P** 21 03 53.9 -1.0
KHLU IAmb IAmb 21 03 56.4
comp=Z,123nm,1.0s
KHLU Kahalu`u 45.92 30 P **P** 21 03 56.0 +1.1
TRH Trail 45.93 31 P **P** 21 03 54.3 -1.1
TRH PcP **PcP** 21 05 18.7 -0.4
PWH Poliokeawe Pal 45.97 31 P **P** 21 03 53.9 -1.3
PUH Pauahi 46.05 31 IAmb IAmb 21 03 59.4
comp=Z,101nm,0.9s
MLH Mauna Loa 46.08 31 P **P** 21 03 56.5 +0.2
MLH pmax pmax
comp=Z,222nm,1.2s
MLH Mauna Loa 46.08 31 P **P** 21 03 56.9 +0.6
MLH IAmb IAmb 21 03 59.4
comp=Z,222nm,1.2s
STCH Steam Cracks 46.11 31 IAmb IAmb 21 03 57.8
comp=Z,100nm,0.9s
JOKA Jonika Flow 46.21 31 IAmb IAmb 21 03 58.9
comp=Z,225nm,1.6s
POHA Pohakuloa 46.23 31 P **P** 21 03 58.4 +1.0
comp=Z,62nm,1.0s
POHA Pohakuloa 46.23 31 P **P** 21 03 56.6 -0.8
KEKH Kekaha 46.39 24 P **P** 21 03 58.4 +0.2
KEKH IAmb IAmb 21 03 59.8
comp=Z,189nm,0.9s
MHA Mahukona 46.43 30 P **P** 21 03 59.3 +0.7
MHA Mahukona 46.43 30 P **P** 21 03 59.3 +0.7
HON Honolulu 46.49 27 P **P** 21 03 58.5 -0.5
HON pmax pmax
comp=Z,150nm,0.9s
HON Honolulu 46.49 27 P **P** 21 03 58.5 -0.5
HON IAmb IAmb 21 04 01.2
comp=Z,150nm,0.9s
KIP Kipapa 46.57 27⇑*e*P **P** 21 04 01.0 +1.3
KIP pmax pmax
comp=Z,165nm,2.5s
HLK Haleakala 46.76 29 P **P** 21 04 00.3 -1.1
HLK IAmb IAmb 21 04 04.4
comp=Z,177nm,1.1s
KHLH Kahului Airpor 46.80 29 P **P** 21 04 00.9 -0.5
KHLH IAmb IAmb 21 04 03.9
comp=Z,152nm,1.0s
KHLH Kahului Airpor 46.80 29 P **P** 21 04 02.0 +0.6
KDU Kakadu 47.47 272 P **P** 21 04 05.9 -0.7
comp=Z,422nm,1.1s
SRPI Serui, Papua 47.96 287 P **P** 21 04 10.4 +0.2
comp=Z,5µmcomp=Z,11µmcomp=Z,797nm,1.1s
BAKI Biak 48.38 288 P **P** 21 04 14.6 +1.2
comp=Z,6µmcomp=Z,15µmcomp=Z,1µm,1.1s
MTN Manton Dam 48.68 271 P **P** 21 04 14.7 -0.8
comp=Z,412nm,0.9s,comp=Z,0.0nm
FORT Forrest 48.70 247 P **P** 21 04 15.3 -0.1
comp=Z,436nm,1.0s
FORT Forrest 48.70 247 P **P** 21 04 14.3 -1.1
WRKA Warakurna 48.89 255 P **P** 21 04 15.7 -1.3
comp=Z,505nm,1.0s
DRS Darwin Rock St 49.01 271 P **P** 21 04 18.0 0.0
comp=Z,480nm,0.9s
GUMO Guam 49.67 310 P **P** 21 04 22.3 -0.4
comp=Z,892nm,1.0s,baz=169,slow=6.5,SNR=34
comp=Z,892nm,1.0s
GUMO Guam 49.67 310 P **P** 21 04 22.9 +0.2
comp=Z,691nm,1.2s
GUMO Guam 49.67 310 P **P** 21 04 21.7 -1.0
GUMO PcP **PcP** 21 05 31.6 -0.7
GUMO Guam 49.67 310 ⇓P **P** 21 04 22.8 +0.1
GUMO Guam 49.67 310 P **P** 21 04 23.0 +0.3
SAUI Saumlaki 50.06 277 P **P** 21 04 25.8 +0.2
comp=Z,2µm,1.1s
SAUI Saumlaki 50.06 277 ⇓P **P** 21 04 26.3 +0.7
SAUI Saumlaki 50.06 277 P **P** 21 04 26.3 +0.7
SAUI Saumlaki 50.06 277 P **P** 21 04 26.5 +0.8
KNRA Kununurra 50.15 267 P **P** 21 04 26.2 -0.1
comp=Z,672nm,1.2s,comp=Z,0.0nm
DPSS Saipan 50.16 313 P **P** 21 04 25.6 -0.7
DPSS PcP **PcP** 21 05 31.4 -2.7
MWPI Manokwari, Pap 50.34 287 P **P** 21 04 28.1 +0.4
comp=Z,12µmcomp=Z,902nm,0.9s
FAKI Fak Fak 51.11 284 P **P** 21 04 33.1 -0.2
comp=Z,706nm,1.2s
FAKI Fak Fak 51.11 284 P **P** 21 04 31.8 -1.4
FAKI Fak Fak 51.11 284 ⇓P **P** 21 04 32.8 -0.5
FAKI Fak Fak 51.11 284 P **P** 21 04 32.8 -0.5
comp=Z,6µmcomp=Z,9µmcomp=Z,705nm,1.2s
FAKI Fak Fak 51.11 284 P **P** 21 04 33.1 -0.2
FITZ Fitzroy Crossi 52.49 263 P **P** 21 04 43.1 0.0
comp=Z,82nm,1.5s
FITZ Fitzroy Crossi 52.49 263 P **P** 21 04 43.2 +0.1
comp=Z,810nm,1.5s
FITZ Fitzroy Crossi 52.49 263 IAmb IAmb 21 04 44.7
comp=Z,266nm,1.7s
FITZ Fitzroy Crossi 52.49 263 ⇓P **P** 21 04 43.2 +0.1
FITZ Fitzroy Crossi 52.49 263 P **P** 21 04 43.5 +0.4
BNDI Bandanaira 52.61 281 P **P** 21 04 44.4 +0.4
comp=Z,2µm,1.2s
BNDI Bandanaira 52.61 281 ⇓P **P** 21 04 43.9 -0.1
BNDI Bandanaira 52.61 281 P **P** 21 04 44.2 +0.2
BNDI Bandanaira 52.61 281 P **P** 21 04 44.2 +0.2
DRV Dumont d'Urvil 52.84 199 P **P** 21 04 45.8 +1.1
SIJI Sorong 52.86 285 P **P** 21 04 45.4 -0.4
KMBL Kambalda 53.96 246 P **P** 21 04 52.7 -0.6
comp=Z,99nm,1.2s
SOEI Soe 56.02 272 P **P** 21 05 09.2 +1.2
comp=Z,3µm,0.9s
SOEI Soe 56.02 272 P **P** 21 05 09.4 +1.4
SOEI Soe 56.02 272 ⇓P **P** 21 05 09.4 +1.4
SOEI Soe 56.02 272 P **P** 21 05 09.0 +1.0
SOEI Soe 56.02 272 P **P** 21 05 09.6 +1.6
BATI Baumata 56.45 271 P **P** 21 05 08.2 -2.5
comp=Z,6µmcomp=Z,9µmcomp=Z,782nm,1.0s
AUALB St Joseph's Co 57.05 241 P **P** 21 05 15.0 +0.5
comp=Z,368nm,1.1s
TNTI Ternate 57.08 285 P **P** 21 05 15.1 0.0
comp=Z,1µm,1.1s
TNTI Ternate 57.08 285 ⇓P **P** 21 05 15.0 0.0
TNTI Ternate 57.08 285 P **P** 21 05 14.6 -0.4
comp=Z,3µmcomp=Z,11µmcomp=Z,1µm,1.0s
TNTI Ternate 57.08 285 P **P** 21 05 15.2 0.0
SANI Sanana 57.17 281 P **P** 21 05 15.7 0.0
comp=Z,912nm,1.2s
SANI Sanana 57.17 281 P **P** 21 05 15.1 -0.5
SANI Sanana 57.17 281 ⇓P **P** 21 05 15.2 -0.5
SANI Sanana 57.17 281 P **P** 21 05 15.2 -0.5
comp=Z,6µmcomp=Z,10µmcomp=Z,909nm,1.1s
SANI Sanana 57.17 281 P **P** 21 05 15.5 -0.2
MBWA Marble Bar 57.29 258 P **P** 21 05 15.7 -0.8
comp=Z,579nm,1.1s
MBWA Marble Bar 57.29 258 P **P** 21 05 16.1 -0.3
comp=Z,333nm,1.1s
MBWA Marble Bar 57.29 258 P **P** 21 05 15.4 -1.0
MBWA S **S** 21 12 24.6 -2.8
MBWA Marble Bar 57.29 258 P **P** 21 05 15.6 -0.8
MBWA PcP **PcP** 21 06 00.9 -0.9
MBWA Marble Bar 57.29 258 ⇓P **P** 21 05 16.1 -0.3
MBWA Marble Bar 57.29 258 P **P** 21 05 16.1 -0.3
MBWA S **S** 21 12 24.5 -2.8
MBWA Marble Bar 57.29 258 P **P** 21 05 16.3 -0.1
MEEK Meekatharra 57.33 251 P **P** 21 05 15.6 -1.0
comp=Z,251nm,1.3s
MEEK Meekatharra 57.33 251 P **P** 21 05 16.1 -0.5
comp=Z,251nm,1.3s
MEEK Meekatharra 57.33 251 P **P** 21 05 16.2 -0.4
KLBR Kellerberrin 57.45 245 P **P** 21 05 17.2 -0.1
comp=Z,1µm,0.9s
KLBR Kellerberrin 57.45 245 P **P** 21 05 17.5 +0.2
comp=Z,1µm,0.9s
KLBR Kellerberrin 57.45 245 P **P** 21 05 17.6 +0.2
SBA Scott Base 57.47 184 P **P** 21 05 19.2 +2.7
SBA pmax pmax
comp=Z,295nm,1.2s
SBA Scott Base 57.47 184 P **P** 21 05 19.2 +2.7
SBA IAmb IAmb 21 05 21.8
comp=Z,295nm,1.2s
VNDA Vanda 57.49 185 P **P** 21 05 19.5 +2.8
comp=Z,37nm,0.8s,baz=0.6,slow=7.3,SNR=187
VNDA ScP **ScP** 21 09 05.9 +2.9
comp=Z,24nm,0.8s,baz=338,slow=3.9,SNR=12
VNDA PKP2bc **P'P'bc** 21 35 05.0 -0.5
comp=Z,1.2nm,1.1s,baz=245,slow=5.1,SNR=7.3
comp=Z,37nm,0.8s
VNDA Vanda 57.49 185 P **P** 21 05 19.3 +2.5
VNDA **ScP** 21 09 04.2 +1.1
NWAO Narrogin (SRO) 57.76 244 P **P** 21 05 19.4 +0.1
comp=Z,307nm,1.1s
NWAO Narrogin (SRO) 57.76 244 P **P** 21 05 19.8 +0.4
comp=Z,176nm,1.1s
NWAO Narrogin (SRO) 57.76 244 P **P** 21 05 18.6 -0.8
NWAO pmax pmax
comp=Z,518nm,1.3s
NWAO Narrogin (SRO) 57.76 244 P **P** 21 05 19.3 -0.1
NWAO Narrogin (SRO) 57.76 244 P **P** 21 05 18.6 -0.8
NWAO IAmb IAmb 21 05 21.0
comp=Z,518nm,1.3s
RKGY Rocky Gully 57.83 242 P **P** 21 05 20.6 +0.7
comp=Z,579nm,1.2s
MMRI Maumere 58.28 273 P **P** 21 05 23.0 -0.2
comp=Z,864nm,0.9s
MMRI Maumere 58.28 273 ⇓P **P** 21 05 22.7 -0.4

MMRI **Maumere** 58.28 273 P **P** 21 05 22.6 -0.5
comp=Z,4µmcomp=Z,11µmcomp=Z,852nm,0.9s
MMRI **Maumere** 58.28 273 P **P** 21 05 23.0 -0.2
BLDU **Ballidu** 58.45 246 P **P** 21 05 23.9 -0.2
comp=Z,335nm,1.3s
BLDU **Ballidu** 58.45 246 P **P** 21 05 24.1 0.0
comp=Z,335nm,1.3s
BLDU **Ballidu** 58.45 246 P **P** 21 05 24.2 +0.2
MUN **Mundaring** 58.72 245 P **P** 21 05 26.2 +0.3
comp=Z,436nm,1.1s
MUN **Mundaring** 58.72 245 P **P** 21 05 26.4 +0.6
comp=Z,436nm,1.1s
MUN **Mundaring** 58.72 245 P **P** 21 05 26.1 +0.3
AUHAR **St Anne's Scho** 58.87 243 P **P** 21 05 28.1 +1.3
comp=Z,473nm,1.8s
MORW **Morawa** 59.23 248 P **P** 21 05 29.0 -0.3
comp=Z,307nm,1.5s
MORW **Morawa** 59.23 248 P **P** 21 05 29.3 0.0
comp=Z,307nm,1.5s
MORW **Morawa** 59.23 248 IAmb IAmb 21 05 30.6
comp=Z,419nm,1.2s
MORW **Morawa** 59.23 248 ⇓P **P** 21 05 29.3 0.0
MORW **Morawa** 59.23 248 P **P** 21 05 29.5 +0.2
KDI **Kendari** 59.55 278 P **P** 21 05 31.1 -0.5
comp=Z,4µmcomp=Z,5µmcomp=Z,341nm,1.3s
WSI **Waingapu** 59.76 271 P **P** 21 05 33.0 0.0
SGSI **Sangihe** 60.01 287 P **P** 21 05 34.1 -0.5
comp=Z,13µmcomp=Z,1µm,1.2s
H01W1 **Cape Leeuwin H** 60.12 241 P **P** 21 05 36.5 +1.7
baz=108,slow=8.5,SNR=7.3
H01W3 **Cape Leeuwin H** 60.14 241 P **P** 21 05 36.8 +1.9
baz=108,slow=8.5,SNR=11
H01W2 **Cape Leeuwin H** 60.14 241 P **P** 21 05 37.1 +2.2
baz=108,slow=8.5,SNR=6.0
LUWI **Luwuk** 60.52 281 P **P** 21 05 38.5 +0.5
comp=Z,1µm,1.2s
LUWI **Luwuk** 60.52 281 P **P** 21 05 38.5 +0.5
LUWI **Luwuk** 60.52 281 ⇑P **P** 21 05 38.4 +0.5
LUWI **Luwuk** 60.52 281 P **P** 21 05 38.2 +0.2
comp=Z,15µmcomp=Z,1µm,1.2s
LUWI **Luwuk** 60.52 281 P **P** 21 05 38.7 +0.7
LBFI **Labuhan Bajo,** 60.52 272 P **P** 21 05 37.0 -1.0
GTOI **Gorontalo** 60.98 283 P **P** 21 05 41.5 +0.5
comp=Z,9µmcomp=Z,798nm,1.0s
JCJ **Chichijima** 61.01 320 P **P** 21 05 39.4 -1.5
comp=Z,225nm,0.8s,baz=143,slow=3.1,SNR=13
comp=Z,225nm,0.8s
JCJ **Chichijima** 61.01 320 P **P** 21 05 40.9 0.0
comp=Z,448nm,1.0s
JCJ **Chichijima** 61.01 320 ⇓P **P** 21 05 40.6 -0.3
JCJ **Chichijima** 61.01 320 P **P** 21 05 40.9 0.0
DAV **Davao City (W)** 61.51 291 P **P** 21 05 45.4 +1.0
comp=Z,810nm,0.9s
DAV **Davao City (W)** 61.51 291 P **P** 21 05 43.3 -1.1
DAV **Davao City (W)** 61.51 291 P **P** 21 05 44.1 -0.4
DAV **Davao City (W)** 61.51 291 P **P** 21 05 44.8 +0.3
comp=Z,10µmcomp=Z,810nm,0.9s
DAV **Davao City (W)** 61.51 291 P **P** 21 05 44.6 +0.2
DAV **Davao City (W)** 61.51 291 P **P** 21 05 44.7 +0.3
DAV **Davao City (W)** 61.51 291 P **P** 21 05 42.0 -2.4
KAPI **Kappang** 61.83 276 P **P** 21 05 46.8 +0.3
comp=Z,93nm,1.3s
KAPI **Kappang** 61.83 276 *d* iP **P** 21 05 46.3 -0.2
KAPI pmax pmax
comp=Z,246nm,1.4s
KAPI **Kappang** 61.83 276 P **P** 21 05 45.8 -0.8
KAPI S **S** 21 13 21.9 -2.2
KAPI **Kappang** 61.83 276 P **P** 21 05 46.0 -0.5
KAPI IAmb IAmb 21 05 47.9
comp=Z,356nm,1.5s
KAPI **Kappang** 61.83 276 ⇓P **P** 21 05 46.5 0.0
KAPI **Kappang** 61.83 276 P **P** 21 05 46.3 -0.2
KAPI **Kappang** 61.83 276 P **P** 21 05 46.6 0.0
KAPI S **S** 21 13 23.4 -0.7
KAPI **Kappang** 61.83 276 P **P** 21 05 46.6 +0.1
GIRL **Giralia** 61.98 255 P **P** 21 05 48.3 +0.9
comp=Z,343nm,1.1s
GIRL **Giralia** 61.98 255 IAmb IAmb 21 05 49.7
comp=Z,440nm,1.2s
CCD **Concordia, Ant** 61.98 194 P **P** 21 05 48.7 +1.8
CCD pP **pwP** 21 07 47.5 -1.2
PLAI **Plampang** 62.39 271 P **P** 21 05 50.1 0.0
comp=Z,1µm,1.0s
PLAI **Plampang** 62.39 271 P **P** 21 05 49.5 -0.6
comp=Z,4µmcomp=Z,13µmcomp=Z,1µm,1.1s
PLAI **Plampang** 62.39 271 P **P** 21 05 50.1 0.0
TOLI2 **Tolitoli** 63.20 282 P **P** 21 05 55.3 -0.1
comp=Z,542nm,1.1s
TOLI2 **Tolitoli** 63.20 282 P **P** 21 05 54.2 -1.2
TOLI2 **Tolitoli** 63.20 282 P **P** 21 05 55.1 -0.3
PCI **Palu** 63.27 280 P **P** 21 05 56.9 +1.1
comp=Z,15µmcomp=Z,2µm,1.1s
CASY **Casey** 63.41 205 P **P** 21 05 55.7 0.0
CASY **Casey** 63.41 205 ⇑P **P** 21 05 57.0 +1.2
CASY **Casey** 63.41 205 P **P** 21 05 56.2 +0.4
CASY **Casey** 63.41 205 P **P** 21 05 56.9 +1.2
CASY pP **pwP** 21 07 59.4 +1.2
CASY S **S** 21 13 40.7 -0.8
MMSI **Mamuju** 63.46 278 P **P** 21 05 57.1 +0.1
KHKI **Kahang-Kahang** 64.56 271 P **P** 21 06 03.9 -0.1
comp=Z,5µmcomp=Z,382nm,1.1s
IGBI **Denpasar** 64.85 270 P **P** 21 06 05.7 0.0
comp=Z,13µmcomp=Z,1µm,1.1s
BKB **Balikpapan** 65.86 278 P **P** 21 06 13.1 +1.1
comp=Z,292nm,1.2s
BKB **Balikpapan** 65.86 278 P **P** 21 06 12.4 +0.4
BKB IAmb IAmb 21 06 14.8
comp=Z,200nm,0.8s
BKB **Balikpapan** 65.86 278 P **P** 21 06 14.2 +2.2
comp=Z,5µmcomp=Z,5µmcomp=Z,287nm,1.2s
BKB **Balikpapan** 65.86 278 P **P** 21 06 14.3 +2.2
JAGI **Jajag, Banyuwa** 65.89 270 P **P** 21 06 11.7 -0.6
comp=Z,566nm,1.1s
JAGI **Jajag, Banyuwa** 65.89 270 P **P** 21 06 10.8 -1.5
JAGI **Jajag, Banyuwa** 65.89 270 ⇓P **P** 21 06 11.0 -1.3
JAGI **Jajag, Banyuwa** 65.89 270 P **P** 21 06 11.0 -1.3
comp=Z,3µmcomp=Z,6µmcomp=Z,562nm,1.1s
JAGI **Jajag, Banyuwa** 65.89 270 P **P** 21 06 11.3 -1.0
JHJ2 **Mitsune** 66.81 323 P **P** 21 06 17.9 +0.5
comp=Z,1µm,1.1s
JHJ2 **Mitsune** 66.81 323 ⇓P **P** 21 06 17.7 +0.2
JHJ2 **Mitsune** 66.81 323 P **P** 21 06 18.0 +0.5
JHJ **Hachijo jima 2** 66.84 323 P **P** 21 06 17.8 +0.2
comp=Z,745nm,0.9s,baz=184,slow=7.7,SNR=35
comp=Z,745nm,0.9s
TARAI **Tarakan** 67.03 283 P **P** 21 06 20.4 +1.1
comp=Z,12µmcomp=Z,804nm,1.2s
JMZ **Minamidaito 2** 67.33 311 P **P** 21 06 21.3 +0.5
comp=Z,382nm,1.6s
JMZ **Minamidaito 2** 67.33 311 ⇑P **P** 21 06 21.1 +0.3
JMZ **Minamidaito 2** 67.33 311 P **P** 21 06 21.3 +0.5
JMZ **Minamidaito 2** 67.33 311 P **P** 21 06 20.5 -0.3
SNJI **Sawahan-Nganju** 68.35 270 P **P** 21 06 28.2 +0.7
comp=Z,4µmcomp=Z,7µmcomp=Z,591nm,1.6s
JOD2 **Odawara 2** 68.80 324 P **P** 21 06 29.1 -0.4
JSG **Sagara** 68.88 323 P **P** 21 06 30.7 +0.8
comp=Z,945nm,1.1s
JSG **Sagara** 68.88 323 ⇓P **P** 21 06 30.9 +0.9
JSG **Sagara** 68.88 323 P **P** 21 06 31.1 +1.1
JSG **Sagara** 68.88 323 P **P** 21 06 30.9 +1.1
JYT **Yasato** 68.92 325 P **P** 21 06 30.7 +0.6
QSPA **South Pole Qui** 69.19 180 P **P** 21 06 33.7 +2.2
comp=Z,136nm,0.9s,baz=17,slow=1.1,SNR=427
QSPA pP **pwP** 21 08 36.5 +0.1
comp=Z,76nm,1.1s,baz=22,slow=1.7,SNR=7.7
QSPA S **S** 21 14 48.6 -1.0
comp=Z,4.6nm,1.1s,baz=27,slow=5.6,SNR=4.2
QSPA PKPPKP **P'P'df** 21 34 33.4 -1.0
comp=Z,9.5nm,1.1s,baz=194,slow=0.8,SNR=7.0
comp=Z,136nm,0.9s
QSPA **South Pole Qui** 69.19 180 P **P** 21 06 32.5 +0.9
QSPA IAmb IAmb 21 06 35.0
comp=Z,282nm,1.2s
QSPA **pP** 21 08 34.9 +0.6
QSPA **South Pole Qui** 69.19 180 ⇑P **P** 21 06 33.7 +2.2
QSPA **South Pole Qui** 69.19 180 P **P** 21 06 33.8 +2.3
QSPA **South Pole Qui** 69.19 180 P **P** 21 06 33.8 +2.2
KKM **Kota Kinabalu** 69.38 285 P **P** 21 06 33.7 +0.1
comp=Z,590nm,1.2s
KKM **Kota Kinabalu** 69.38 285 ⇓P **P** 21 06 33.9 +0.4
KKM **Kota Kinabalu** 69.38 285 P **P** 21 06 33.6 0.0
comp=Z,8µmcomp=Z,590nm,1.2s
KKM **Kota Kinabalu** 69.38 285 P **P** 21 06 34.2 +0.7
JRY **Ryogami san** 69.46 324 P **P** 21 06 33.8 +0.4
UGM **Wanagama** 69.47 269 P **P** 21 06 34.0 0.0
comp=Z,712nm,1.2s
UGM **Wanagama** 69.47 269 P **P** 21 06 34.0 0.0
comp=Z,5µmcomp=Z,9µmcomp=Z,711nm,1.2s
UGM **Wanagama** 69.47 269 P **P** 21 06 34.2 +0.2
JIE **Ise** 69.52 322 P **P** 21 06 34.4 +0.6
YOGI **Yogyakarta** 69.71 269 P **P** 21 06 35.7 +0.3
comp=Z,4µmcomp=Z,8µmcomp=Z,741nm,1.1s
SMRI **Semarang** 69.83 270 P **P** 21 06 36.4 +0.3
comp=Z,505nm,1.3s
SMRI **Semarang** 69.83 270 ⇓P **P** 21 06 36.7 +0.5
SMRI **Semarang** 69.83 270 P **P** 21 06 36.5 +0.3
comp=Z,8µmcomp=Z,502nm,1.3s
SMRI **Semarang** 69.83 270 P **P** 21 06 36.8 +0.7
JMM **Marumori** 69.84 327 P **P** 21 06 35.9 +0.3
JGF **Kuroka** 70.02 323 P **P** 21 06 36.9 +0.1
comp=Z,184nm,1.3s
JGF **Kuroka** 70.02 323 IAmb IAmb 21 06 37.5
comp=Z,121nm,0.9s
JGF **Kuroka** 70.02 323 P **P** 21 06 36.9 +0.1
JGF **Kuroka** 70.02 323 P **P** 21 06 36.8 +0.1
INU **Inuyama** 70.03 322 P **P** 21 06 37.1 +0.3
comp=Z,175nm,1.1s
INU **Inuyama** 70.03 322 P **P** 21 06 36.2 -0.5
INU IAmb IAmb 21 06 38.3
comp=Z,123nm,0.9s
INU **Inuyama** 70.03 322 ⇓P **P** 21 06 36.9 +0.2
INU **Inuyama** 70.03 322 P **P** 21 06 37.1 +0.3
INU **Inuyama** 70.03 322 P **P** 21 06 36.9 +0.2
INU pP **pP** 21 08 43.7 +3.5
INU S **S** 21 14 59.7 0.0
JOW **Kunigami** 70.03 310 P **P** 21 06 37.5 +0.5
comp=Z,402nm,1.4s
JOW **Kunigami** 70.03 310 ⇓P **P** 21 06 37.8 +0.8
JOW **Kunigami** 70.03 310 P **P** 21 06 38.0 +1.0
JOW **Kunigami** 70.03 310 P **P** 21 06 37.9 +0.8
JAM **Amami Oshima** 70.07 313 P **P** 21 06 38.2 +1.0
MJAR **Matsushiro Arr** 70.22 324 P **P** 21 06 37.8 -0.2
comp=Z,68nm,0.7s,baz=158,slow=6.0,SNR=188
MJAR pP **pP** 21 08 42.6 +0.9
comp=Z,20nm,1.0s,baz=163,slow=6.4,SNR=6.9
comp=Z,68nm,0.7s
MJAR **Matsushiro Arr** 70.22 324 P **P** 21 06 37.6 -0.4
MJAR IAmb IAmb 21 06 38.6
comp=Z,112nm,0.8s
MJAR **pP** 21 08 40.2 -1.5
MAJO **Matsushiro** 70.23 324 P **P** 21 06 38.1 +0.1
comp=Z,204nm,1.2s
MAJO **Matsushiro** 70.23 324 *d* iP **P** 21 06 37.9 0.0
MAJO pmax pmax
comp=Z,147nm,0.8s
MAJO **Matsushiro** 70.23 324 P **P** 21 06 37.3 -0.6
MAJO IAmb IAmb 21 06 38.7
comp=Z,137nm,0.8s
MAJO **Matsushiro** 70.23 324 ⇓P **P** 21 06 38.0 +0.1
MAJO **Matsushiro** 70.23 324 P **P** 21 06 38.0 +0.1
MAJO S **S** 21 15 07.1 +5.1
MAJO **Matsushiro** 70.23 324 P **P** 21 06 38.1 +0.1
MAJO **Matsushiro** 70.23 324 P **P** 21 06 38.0 +0.1
MAJO pP **pP** 21 08 44.1 +2.4
MAT **Matsushiro** 70.23 324 P **P** 21 06 38.0 +0.1
MJB9 **Matsu-Tunnel** 70.23 324 IAmb IAmb 21 06 39.7
comp=Z,130nm,0.8s
JGN **Niukaw** 70.49 323 P **P** 21 06 39.6 +0.1
JMN **Monobe** 70.75 319 P **P** 21 06 42.0 +0.9
comp=Z,366nm,1.1s
JMN **Monobe** 70.75 319 P **P** 21 06 42.2 +1.1
JMN **Monobe** 70.75 319 P **P** 21 06 42.0 +0.9
JOM **Ohasama** 70.81 328 P **P** 21 06 41.7 +0.4
JWT **Wachi** 70.91 321 P **P** 21 06 42.5 +0.5
JYA **Atsumi** 70.94 326 P **P** 21 06 43.0 +0.9
SZP **Santa** 70.97 298 P **P** 21 06 43.1 +0.4
comp=Z,123nm,1.3s
SZP **Santa** 70.97 298 P **P** 21 06 46.1 +3.4
JAD **Aida** 71.40 320 P **P** 21 06 45.7 +0.8
JSU **Suzuyama** 71.45 316 P **P** 21 06 45.6 +0.4
comp=Z,373nm,1.1s
JSU **Suzuyama** 71.45 316 P **P** 21 06 45.8 +0.6
JSU **Suzuyama** 71.45 316 P **P** 21 06 45.6 +0.4
ERM **Erimo** 71.91 331 *d* iP **P** 21 06 48.3 +0.7
ERM pmax pmax
comp=Z,106nm,1.0s
ERM **Erimo** 71.91 331 P **P** 21 06 48.8 +1.3
ERM **Erimo** 71.91 331 P **P** 21 06 48.7 +1.1
ERM **Erimo** 71.91 331 pP pP 21 08 55.2 +3.7
JEM **Erimo** 71.91 331 P **P** 21 06 48.2 +0.6
comp=Z,76nm,1.0s
JTM **Tenmabayashi** 71.93 329 P **P** 21 06 48.2 +0.4
comp=Z,315nm,1.2s
JTM **Tenmabayashi** 71.93 329 IAmb IAmb 21 06 49.2
comp=Z,207nm,0.9s
JTM **Tenmabayashi** 71.93 329 P **P** 21 06 48.5 +0.8
JTM **Tenmabayashi** 71.93 329 P **P** 21 06 48.4 +0.7
AMKA **Amchka** 71.97 359 IAmb IAmb 21 06 49.1
comp=Z,168nm,0.9s
JHS **Saijyo** 72.07 320 P **P** 21 06 49.5 +0.8
JNU **Nakatsue** 72.22 317 P **P** 21 06 49.7 +0.1
comp=Z,240nm,0.9s,baz=96,slow=3.2,SNR=144
comp=Z,240nm,0.9s
JNU **Nakatsue** 72.22 317 P **P** 21 06 49.8 +0.1
BBJI **Bungbulang** 72.30 269 P **P** 21 06 50.0 -0.6
comp=Z,310nm,1.0s
BBJI **Bungbulang** 72.30 269 IAmb IAmb 21 06 51.0
comp=Z,231nm,0.9s
BBJI **Bungbulang** 72.30 269 P **P** 21 06 49.7 -0.9
comp=Z,313nm,1.0s
BBJI **Bungbulang** 72.30 269 P **P** 21 06 50.0 -0.6
YUK **Yuzh-Kuril'sk** 72.37 334 *de* P **P** 21 06 50.0 -0.2
JOT **Ohata** 72.40 329 P **P** 21 06 51.1 +0.7
KIWB **Kanaga Island** 72.42 1 P **P** 21 06 50.6 +0.3
ADK **Adak** 72.46 1 P **P** 21 06 50.7 +0.2
comp=Z,219nm,1.4s
ADK **Adak** 72.46 1 P **P** 21 06 50.2 -0.3
ADK pmax pmax
comp=Z,256nm,0.8s
ADK **Adak** 72.46 1 P **P** 21 06 50.2 -0.3
ADK **Adak** 72.46 1 ⇓P **P** 21 06 50.5 -0.1
ADK **Adak** 72.46 1 P **P** 21 06 50.7 +0.2
ADK **Adak** 72.46 1 P **P** 21 06 50.4 -0.1
YOJ **Yonaguni jima** 72.55 305 P **P** 21 06 52.0 +0.3
comp=Z,614nm,1.1s
YOJ **Yonaguni jima** 72.55 305 P **P** 21 06 51.5 -0.2
YOJ **Yonaguni jima** 72.55 305 ⇓P **P** 21 06 51.6 0.0
YOJ **Yonaguni jima** 72.55 305 P **P** 21 06 52.0 +0.3
KUR **Kuril'sk** 72.57 336 *c* iP **P** 21 06 51.9 +0.6
KUR pmax pmax
comp=Z,403nm,1.0s
GSTR **Great Sitkin T** 72.69 2 P **P** 21 06 51.3 -0.6
ATKA **Atka Island** 72.86 3 P **P** 21 06 52.4 -0.4
comp=Z,549nm,1.3s
KSM **Kuching** 72.98 278 P **P** 21 06 55.0 +0.6
comp=Z,0.7nm,1.0s
KSM **Kuching** 72.98 278 P **P** 21 06 55.8 +1.4
KSM **Kuching** 72.98 278 P **P** 21 06 55.7 +1.4
XMI **Christmas Isla** 73.16 265 P **P** 21 06 56.1 +0.6
comp=Z,443nm,1.3s
TWGBT **Beinan** 73.17 303 P **P** 21 06 53.8 -1.4
comp=Z,354nm,0.7s
TWG **Pinlang** 73.17 303 P **P** 21 06 53.7 -1.6
JFU **Fukue jima 2** 73.29 316 P **P** 21 06 56.0 +0.3
YULB **Yu-li** 73.30 304 P **P** 21 06 54.8 -1.2
comp=Z,184nm,0.8s
YULB **Yu-li** 73.30 304 IAmb IAmb 21 06 55.8
comp=Z,124nm,0.8s
YULB **Yu-li** 73.30 304 P **P** 21 06 54.5 -1.5
JMP **Maruseppu** 73.41 332 P **P** 21 06 57.5 +1.3
NACB **Ninganchiao** 73.48 305 P **P** 21 06 56.8 -0.2
comp=Z,563nm,1.2s
NACB **Ninganchiao** 73.48 305 P **P** 21 06 56.5 -0.5
SMY **Shemya** 73.58 355 P **P** 21 06 57.6 +0.8
comp=Z,446nm,1.4s
SMY **Shemya** 73.58 355 P **P** 21 06 56.7 -0.1
CLES **Cleveland East** 73.77 5 P **P** 21 06 57.5 -0.5
TPUB **Ta-pu** 73.77 303 P **P** 21 06 57.6 -1.1
comp=Z,1µm,0.9s
TPUB **Ta-pu** 73.77 303 P **P** 21 06 57.8 -0.9
SSLB **Suanglung** 73.77 304 P **P** 21 06 57.7 -1.0
comp=Z,411nm,1.2s
SSLB **Suanglung** 73.77 304 P **P** 21 06 57.7 -1.0
JKA **Kamikawa-asahi** 73.82 332 IAmb IAmb 21 07 01.1
comp=Z,230nm,0.9s
JKA **Kamikawa-asahi** 73.82 332 P **P** 21 07 00.6 +2.1
ASAJ **Asahikawa** 73.83 332 P **P** 21 07 01.0 +2.5
comp=Z,206nm,1.0s,baz=214,slow=7.8,SNR=63
comp=Z,206nm,1.0s
ASAJ **Asahikawa** 73.83 332 P **P** 21 07 00.3 +1.8
JSH **Shimam** 73.85 329 P **P** 21 06 59.8 +1.2
TPI **Tanjungpandan** 73.91 273 P **P** 21 06 59.9 +0.2
comp=Z,4µmcomp=Z,5µmcomp=Z,395nm,1.3s
YHNB **Yeheng** 73.92 305 P **P** 21 06 59.8 +0.3
comp=Z,383nm,1.0s
YHNB **Yeheng** 73.92 305 P **P** 21 06 59.3 -0.3
TATO **Taipei** 73.99 305 P **P** 21 06 59.9 0.0
comp=Z,796nm,1.3s
TATO **Taipei** 73.99 305 P **P** 21 06 59.5 -0.4
TATO **Taipei** 73.99 305 P **P** 21 06 58.8 -1.0
TATO **Taipei** 73.99 305 P **P** 21 06 59.7 -0.2
JTU **Tsushima** 74.06 317 P **P** 21 07 00.5 +0.5
comp=Z,67nm,0.8s
JTU **Tsushima** 74.06 317 ⇓P **P** 21 06 59.9 -0.1
JTU **Tsushima** 74.06 317 P **P** 21 07 00.2 +0.2
JTU **Tsushima** 74.06 317 P **P** 21 06 59.9 -0.1
SKR **Severo-Kuril's** 74.68 344 *e* P **P** 21 07 03.1 0.0
SKR *e**PP **sP** 21 10 07.3 -3.8
SKR *e*S **S** 21 15 49.8 -0.6
SKR pmax pmax
comp=Z,168nm,1.2s
SKR pmax pmax
comp=Z,700nm,5.9s
SKR MLR MLR
comp=Z,300nm,19.0s
UNV **Unalaska Valle** 75.13 7 P **P** 21 07 05.0 -0.5
comp=Z,256nm,0.9s
UNV **Unalaska Valle** 75.13 7 IAmb IAmb 21 07 06.3
comp=Z,222nm,1.1s
UNV **Unalaska Valle** 75.13 7 P **P** 21 07 05.3 -0.2
baz=192,SNR=53
LVA **Lava Point** 75.50 8 IAmb IAmb 21 07 07.9
comp=Z,126nm,0.7s
AKUT **Akutan** 75.51 8 P **P** 21 07 07.3 -0.3
comp=Z,188nm,1.2s
AKUT **Akutan** 75.51 8 ⇓P **P** 21 07 07.3 -0.3
KLSI 75.97 270 P **P** 21 07 09.8 -1.3
YSS **Yuzhno-Sakhali** 76.01 334 P **P** 21 07 11.8 +1.2
comp=Z,269nm,1.3s
YSS **Yuzhno-Sakhali** 76.01 334 *k iP* **P** 21 07 11.8 +1.2
YSS *e**PP **pwP** 21 09 20.8 +1.1
YSS *e**SP **PP** 21 10 15.5 +2.2
YSS *e*S **S** 21 16 04.6 -0.3
YSS *e* 21 16 18.7
YSS *e* 21 16 43.2
YSS pmax pmax
comp=Z,140nm,1.1s
YSS pmax pmax
comp=Z,2µm,4.3s
YSS pmax pmax
comp=N,800nm,3.9s
YSS pmax pmax
comp=E,500nm,2.0s
YSS smax smax
comp=E,2µm,6.0s
YSS **Yuzhno-Sakhali** 76.01 334 P **P** 21 07 10.8 +0.3
YSS IAmb IAmb 21 07 12.6
comp=Z,202nm,1.0s
YSS **Yuzhno-Sakhali** 76.01 334 ⇑P **P** 21 07 11.9 +1.3
YSS **Yuzhno-Sakhali** 76.01 334 P **P** 21 07 12.1 +1.6
YSS **Yuzhno-Sakhali** 76.01 334 P **P** 21 07 12.2 +1.6
YSS pP **pwP** 21 09 21.0 +1.2
YSS sP **sP** 21 10 24.3 +5.3
KNMB **Chin-men Tao** 76.12 303 IAmb IAmb 21 07 13.0
comp=Z,199nm,0.8s
QZH2 **Quanzhou** 76.21 304 ⇓*i* P **P** 21 07 12.9 +0.7
QZH2 S **S** 21 16 07.1 -0.8
QZH2 ScS **ScS** 21 16 29.6 -1.8
QZH2 pmax pmax
comp=Z,410nm,1.1s
QZH2 pmax pmax
comp=Z,3µm,3.4s
PET **Petropavlovsk** 76.21 346 P **P** 21 07 12.0 +0.5
comp=Z,470nm,1.7s
PET **Petropavlovsk** 76.21 346 *d* iP **P** 21 07 10.6 -0.9
PET *e**PP **pP** 21 09 18.5 +0.6
PET *e**SP **sP** 21 10 17.9 -2.5
PET *e*S **S** 21 16 06.9 +0.2
PET *e*SS **SS** 21 21 16.5 -2.9
PET pmax pmax
comp=Z,132nm,2.1s
PET pmax pmax
comp=Z,1µm,4.5s
PET pmax pmax
comp=Z,600nm,10.0s
PET MLR MLR
comp=Z,400nm,13.0s
PET **Petropavlovsk** 76.21 346 P **P** 21 07 10.8 -0.7
PET IAmb IAmb 21 07 12.2
comp=Z,100nm,0.9s
PET **Petropavlovsk** 76.21 346 P **P** 21 07 11.6 +0.1
comp=Z,3µmcomp=Z,116nm,1.7s
PET **Petropavlovsk** 76.21 346 P **P** 21 07 11.5 +0.1
PET **Petropavlovsk** 76.21 346 P **P** 21 07 10.3 -1.2
PET pP **pP** 21 09 17.8 -0.1
PEA0B **Petropavlovsk-** 76.51 346 *d* iP **P** 21 07 13.6 +0.4
PETK **Petropavlovsk-** 76.51 346 P **P** 21 07 13.6 +0.4
comp=Z,151nm,0.8s,baz=125,slow=6.2,SNR=218
PETK pP **pwP** 21 09 21.0 -0.8
comp=Z,14nm,0.9s,baz=130,slow=6.7,SNR=4.6
comp=Z,151nm,0.8s
PETK **Petropavlovsk-** 76.51 346 P **P** 21 07 12.5 -0.7
PETK pP **pP** 21 09 18.3 -1.3
TJN **Taejon** 76.52 318 P **P** 21 07 14.6 +1.0
comp=Z,329nm,1.2s
TJN **Taejon** 76.52 318 *d* iP **P** 21 07 13.5 -0.1
PMBI **Palembang** 76.54 272 P **P** 21 07 15.8 +1.5
comp=Z,1µm,1.2s
PMBI **Palembang** 76.54 272 P **P** 21 07 15.4 +1.1
comp=Z,4µmcomp=Z,11µmcomp=Z,996nm,1.2s
PMBI **Palembang** 76.54 272 P **P** 21 07 15.2 +0.9
KSRS **Korea Array** 76.85 319 P **P** 21 07 16.4 +1.1
comp=Z,44nm,0.8s,baz=141,slow=6.2,SNR=240
KSRS PP **PP** 21 10 17.0 -3.3
comp=Z,8.0nm,1.1s,baz=132,slow=8.8,SNR=4.9
comp=Z,44nm,0.8s
KSAR **Wonju Array Be** 76.86 319 P **P** 21 07 15.3 -0.2
KSAR **Wonju Array Be** 76.86 319 P **P** 21 07 15.3 -0.2
KS19 **Wonju Array Si** 76.91 319 IAmb IAmb 21 07 17.3
comp=Z,114nm,1.1s
CNBA **Chernabura Isl** 77.11 11 IAmb IAmb 21 07 17.9
comp=Z,242nm,1.2s
CHNA **Chernabura Isl** 77.13 11 P **P** 21 07 17.3 +0.9
comp=Z,200nm,1.3s
CHNA **Chernabura Isl** 77.13 11 P **P** 21 07 16.7 +0.2
baz=198,SNR=13
SDPT **Sand Point** 77.47 10 P **P** 21 07 18.9 +0.7
comp=Z,463nm,1.1s
SDPT **Sand Point** 77.47 10 P **P** 21 07 18.3 0.0
baz=197,SNR=20
SSE **Sheshan** 77.56 310 P **P** 21 07 19.3 0.0
SSE sP **PP** 21 10 22.4 -3.9
SSE S **S** 21 16 21.6 -0.2
SSE SKS **SKSac** 21 16 36.1 +1.2
SSE sS **sS** 21 20 09.8 +1.4
SSE pmax pmax
comp=Z,54nm,1.0s
SSE pmax pmax
comp=Z,550nm,6.2s
SSE **Sheshan** 77.56 310 P **P** 21 07 19.2 0.0
SSE sP **PP** 21 10 23.0 -3.3
INCN **Inchon** 77.66 318 P **P** 21 07 20.5 +0.7
comp=Z,235nm,1.4s
INCN **Inchon** 77.66 318 P **P** 21 07 19.7 -0.1
INCN pmax pmax
comp=Z,332nm,1.3s
INCN **Inchon** 77.66 318 P **P** 21 07 20.5 +0.7
INCN **Inchon** 77.66 318 P **P** 21 07 19.7 -0.1
INCN IAmb IAmb 21 07 22.2
comp=Z,332nm,1.3s
INCN **Inchon** 77.66 318 P **P** 21 07 20.9 +1.1
MNAI **Manna** 77.74 270 P **P** 21 07 21.7 +0.9
comp=Z,755nm,0.8s
MNAI **Manna** 77.74 270 ⇑P **P** 21 07 20.3 -0.5
MNAI **Manna** 77.74 270 P **P** 21 07 21.1 +0.3
comp=Z,754nm,0.8s
MNAI **Manna** 77.74 270 P **P** 21 07 20.0 -0.8
UGL **Uglegorsk** 77.99 335 ⇓*i* P **P** 21 07 22.1 +0.9
UGL *e*S **S** 21 16 28.8 +3.3
UGL pmax pmax
comp=Z,2µm,6.1s
UGL pmax pmax
comp=Z,300nm,0.9s
UGL smax smax

comp=N,800nm,3.9s
JMBI JAMBI 78.05 273 P **P** **21 07 24.3 +1.9**
SPIA Saint Paul Isl 78.06 5 P **P** **21 07 22.4 +1.0**
comp=N,402nm,1.1s
SPIA Saint Paul Isl 78.06 5 P **P** **21 07 22.1 +0.7**
baz=188,SNR=19
FARB Farallon Islan 78.22 42 IAmb IAmb 21 07 25.7
comp=Z,105nm,0.9s
VLA Vladivostok 78.31 325*c i* P **P** **21 07 24.3 +1.2**
VLA pmax pmax
comp=Z,214nm,1.1s
KSI Kapahiang 78.33 271 P **P** **21 07 23.4 -0.6**
MSHR Mys Shultsa 78.34 325 *i* P **P** **21 07 24.6 +1.4**
MSHR pmax pmax
comp=Z,208nm,1.0s
SMAI San Martin Ant 78.43 159 P **P** **21 07 24.5 +1.2**
HKC Hong Kong Obse 78.43 299 ⇑P **P** **21 07 26.0 +1.8**
HKPS Hong Kong Po S 78.45 299 P **P** **21 07 25.4 +1.1**
comp=Z,518nm,1.1s
HKPS Hong Kong Po S 78.45 299 P **P** **21 07 26.0 +1.7**
S14K Fog Glacier 78.52 11 P **P** **21 07 24.8 +0.8**
baz=198,SNR=20
HJU Haeju 78.57 318 P **P** **21 07 27.0 +2.4**
HJU AmB
comp=Z,732nm,1.5s
PSTR Posyet 78.58 324*d i* P **P** **21 07 25.4 +0.9**
HHU Hamhung 78.66 321 P **P** **21 07 27.8 +2.8**
HHU AmB
comp=Z,1μm,2.6s
CHGN Chignik 78.74 11 IAmb IAmb 21 07 26.5
comp=Z,232nm,1.0s
CHGN Chignik 78.74 11 P **P** **21 07 25.4 +0.4**
baz=199,SNR=34
DLV Lat 78.76 287 P **P** **21 07 27.8 +1.4**
comp=Z,281nm,1.2s
DLV Lat 78.76 287 IAmb IAmb 21 07 29.0
comp=Z,265nm,1.1s
DLV Lat 78.76 287 P **P** **21 07 27.7 +1.3**
CVS Carmenet Viney 78.95 42 IAmb IAmb 21 07 30.0
comp=Z,121nm,0.9s
HOPS Hopland Field 78.97 41 IAmb IAmb 21 07 30.4
comp=Z,145nm,0.9s
USA0B Ussuriysk Arra 79.00 326*d i* P **P** **21 07 27.6 +0.9**
USRK Ussuriysk Ar. 79.00 326 P **P** **21 07 27.9 +1.2**
comp=Z,187nm,0.9s,baz=128,slow=3.4,SNR=162
comp=Z,187nm,0.9s
USRK Ussuriysk Ar. 79.00 326 P **P** **21 07 27.6 +0.9**
BTDF Bukit Timah Da 79.00 276 P **P** **21 07 27.9 +0.4**
comp=Z,302nm,1.3s
MYKOM Kota Tinggi 79.09 276 P **P** **21 07 29.0 +1.1**
comp=Z,495nm,1.3s
MYKOM Kota Tinggi 79.09 276 P **P** **21 07 28.3 +0.4**
comp=Z,6μmcomp=Z,495nm,1.3s
MYKOM Kota Tinggi 79.09 276 P **P** **21 07 28.8 +0.9**
KCPM Cahto Peak 79.10 40 IAmb IAmb 21 07 31.4
comp=Z,139nm,0.9s
PYAG Pyongyang 79.17 319 P **P** **21 07 30.7 +2.9**
PYAG pP **pwP** **21 09 37.0 -1.2**
PYAG S **S** **21 16 39.6 +1.3**
PYAG AmB
comp=Z,1μm,2.5s
PYAG AMS AMS
comp=Z,129nm,6.5s
TYV Tymovskoe 79.18 336 *e* P **P** **21 07 28.8 +1.3**
TYV *e* S **S** **21 16 34.5 -3.4**
TYV pmax pmax
comp=Z,2μm,4.1s
TYV pmax pmax
comp=Z,254nm,1.3s
TYV smax smax
comp=N,19nm,1.8s
TYV smax smax
comp=E,27nm,1.8s
TYV smax smax
comp=N,800nm,4.6s
TYV smax smax
comp=E,2μm,4.6s
KMPM Mount Pierce 79.23 39 IAmb IAmb 21 07 32.2
comp=Z,240nm,1.0s
MWC Mount Wilson 79.42 47 IAmb IAmb 21 09 48.8
comp=Z,185nm,1.3s
GZH2 Guangzhou 79.49 300 P **P** **21 07 31.1 +1.3**
GZH2 S **S** **21 16 43.8 +1.6**
GZH2 pmax pmax
comp=Z,560nm,1.1s
GZH2 pmax pmax
comp=Z,2μm,5.5s
JCC Jacoby Creek, 79.54 39 IAmb IAmb 21 07 33.6
comp=Z,283nm,1.4s
VES Vestal, Richgr 79.64 45 IAmb IAmb 21 07 33.5
comp=Z,131nm,1.0s
TPO Tropico Hills 79.67 47 IAmb IAmb 21 07 34.2
comp=Z,132nm,1.2s
NJ2 Nanjing 79.74 310⇓ *i* P **P** **21 07 32.0 +1.1**
NJ2 sP **sP** **21 10 42.3 +1.9**
NJ2 S **S** **21 16 43.5 -0.9**
NJ2 pmax pmax
comp=Z,540nm,1.0s
KHMM Horse Mountain 79.75 39 IAmb IAmb 21 07 34.4
comp=Z,118nm,1.0s
SII Sitkinak Islan 79.82 13 P **P** **21 07 31.7 +1.0**
comp=Z,331nm,1.1s
SII Sitkinak Islan 79.82 13 IAmb IAmb 21 07 33.0
comp=Z,293nm,1.0s
SII Sitkinak Islan 79.82 13 P **P** **21 07 31.8 +1.0**
baz=203
O02D Mt. Diablo Mer 79.88 40 IAmb IAmb 21 07 35.2
comp=Z,143nm,0.9s
LPIG La Paz 80.02 59 P **P** **21 07 35.1 +2.6**
comp=Z,16nm,0.4s,baz=230,slow=5.5,SNR=4.5
comp=Z,16nm,0.4s
YUH Yuha Desert 80.05 50 P **P** **21 07 33.6 +1.1**
SLBS Sierra La Lagu 80.12 60 P **P** **21 07 34.6 +1.5**
SLBS Sierra La Lagu 80.12 60 P **P** **21 07 36.0 +2.8**
PFO Pinyon Flats O 80.19 48 P **P** **21 07 35.5 +2.2**
comp=Z,22nm,0.9s,baz=257,slow=4.2,SNR=21
comp=Z,22nm,0.9s
PFO Pinyon Flats O 80.19 48*de* P **P** **21 07 35.0 +1.6**
PFO pmax pmax
comp=Z,78nm,1.1s
PFO Pinyon Flats O 80.19 48 P **P** **21 07 34.6 +1.3**
R17L Mt. Peulik Vol 80.37 12 P **P** **21 07 34.7 +1.1**
baz=201
MDJ Mudanjiang 80.55 325 P **P** **21 07 36.1 +1.4**
comp=Z,338nm,1.1s
MDJ Mudanjiang 80.55 325 IAmb IAmb 21 07 37.5
comp=Z,261nm,1.0s
MDJ Mudanjiang 80.55 325 P **P** **21 07 36.3 +1.5**
MDJ pP pP 21 09 44.4 +1.8
MDJ PP **PP** **21 10 49.3 -1.2**
MDJ S **SKSac** **21 16 56.1 +1.3**
MDJ pmax pmax
comp=Z,290nm,0.8s
MDJ pmax pmax
comp=Z,3μm,5.2s
MDJ Mudanjiang 80.55 325 P **P** **21 07 36.2 +1.4**
MDJ pP **pwP** **21 09 46.8 +0.2**
O03E Paynes Creek 80.55 40 IAmb IAmb 21 07 38.5
comp=Z,374nm,1.3s
QIZ Qiongzhong 80.56 294 P **P** **21 07 36.1 +0.6**
comp=Z,68nm,2.0s
QIZ Qiongzhong 80.56 294 P **P** **21 07 36.3 +0.8**
QIZ sP **sP** **21 10 46.8 +1.9**
QIZ S **SKSac** **21 16 57.1 +1.0**
QIZ sS **sS** **21 20 40.3 -1.9**
QIZ pmax pmax
comp=Z,65nm,1.0s
QIZ pmax pmax
comp=Z,1μm,5.1s
SUJ Sinuiju 80.59 319 P **P** **21 07 38.4 +3.3**
SUJ AmB
comp=Z,2μm,2.6s
M02C Callahan 80.59 39 IAmb IAmb 21 07 39.5
comp=Z,200nm,1.1s
CCCA Chr Cany lake 80.62 46 IAmb IAmb 21 07 39.1
comp=Z,145nm,1.2s
OHAK Old Harbor 80.63 14 P **P** **21 07 35.7 +0.8**
comp=Z,112nm,1.8s
OHAK Old Harbor 80.63 14 P **P** **21 07 35.9 +1.0**
baz=204
L02F Cave Junction 80.63 38 IAmb IAmb 21 07 39.4
comp=Z,148nm,1.3s
COCO West Island 80.81 260 P **P** **21 07 37.9 +1.1**
comp=Z,288nm,1.2s
COCO West Island 80.81 260 P **P** **21 07 37.9 +1.1**
COCO pmax pmax
comp=Z,608nm,1.2s
COCO West Island 80.81 260 P **P** **21 07 37.9 +1.1**
COCO West Island 80.81 260 P **P** **21 07 39.0 +2.2**
comp=Z,4μmcomp=Z,289nm,1.2s
COCO West Island 80.81 260 P **P** **21 07 38.9 +2.0**
YBH Yreka Blue Hor 80.89 39 P **P** **21 07 39.4 +2.6**
comp=Z,87nm,0.8s,baz=185,slow=2.7,SNR=155
YBH pP **pwP** **21 09 47.2 -1.2**
comp=Z,12nm,1.0s,baz=209,slow=4.6,SNR=5.4
comp=Z,87nm,0.8s
YBH Yreka Blue Hor 80.89 39 IAmb IAmb 21 07 40.6
comp=Z,129nm,0.9s
YBH pP 21 09 44.4 -0.4
TIN Tinemaha, Big 80.90 45 IAmb IAmb 21 07 40.4
comp=Z,183nm,0.9s
BC3 Big Chuckawall 80.92 49 IAmb IAmb 21 07 41.3
comp=Z,293nm,2.0s
K02D Willamette Mer 80.94 38 IAmb IAmb 21 07 40.8
comp=Z,97nm,1.1s
MPK Martis Peak 81.04 42 IAmb IAmb 21 07 41.4
comp=Z,210nm,1.1s
GLA Glamis 81.04 50 IAmb IAmb 21 07 41.8
comp=Z,119nm,0.9s
MAW Mawson 81.05 200 P **P** **21 07 38.0 +1.0**
comp=Z,6.5nm,0.7s,baz=128,slow=5.9,SNR=12
MAW pP **pwP** **21 09 47.4 -0.8**
comp=Z,29nm,1.0s,baz=107,slow=6.5,SNR=7.6
MAW Mawson 81.05 200 P **P** **21 07 38.0 +1.0**
MAW **pP** **21 09 45.8 +0.6**
PPSI Pulau Pagai 81.05 270 P **P** **21 07 40.0 +1.9**
comp=Z,1μm,1.2s
Q17K Contact Creek 81.06 12 P **P** **21 07 37.7 +0.5**
baz=201
J01E Myrtle Point 81.08 37 IAmb IAmb 21 07 41.3
comp=Z,156nm,1.0s
O14K Tigyukauivet M 81.09 9 P **P** **21 07 37.8 +0.6**
baz=196,SNR=5.8
PMSA Palmer Station 81.14 157 P **P** **21 07 37.2 -0.4**
PMSA Palmer Station 81.14 157⇓ P **P** **21 07 40.0 +2.5**
BEKR Beckworth 81.17 41 IAmb IAmb 21 07 41.8
comp=Z,199nm,1.4s
BKNI Bangkinang 81.18 274 P **P** **21 07 39.6 +0.8**
comp=Z,424nm,1.2s
BKNI Bangkinang 81.18 274 P **P** **21 07 39.2 +0.4**
BKNI Bangkinang 81.18 274 P **P** **21 07 39.6 +0.8**
comp=Z,3μmcomp=Z,6μmcomp=Z,401nm,1.2s
BKNI Bangkinang 81.18 274 P **P** **21 07 39.3 +0.5**
PNTR Pine Nut 81.19 42 IAmb IAmb 21 07 42.0
comp=Z,208nm,0.9s
O15K Ungalikthiuk R 81.23 10 P **P** **21 07 38.4 +0.5**
baz=198,SNR=22
PIX Pinacate 81.25 52 IAmb IAmb 21 07 42.2
comp=Z,92nm,1.0s
KDAK Kodiak Island 81.30 14*d i* P **P** **21 07 39.1 +0.8**
KDAK pmax pmax
comp=Z,274nm,1.5s
KDAK Kodiak Island 81.30 14 P **P** **21 07 38.9 +0.6**
KDAK IAmb IAmb 21 07 40.7
comp=Z,353nm,1.6s
KDAK Kodiak Island 81.30 14 P **P** **21 07 39.3 +1.0**
baz=204
KDAK Kodiak Island 81.30 14 P **P** **21 07 39.5 +1.2**
Q16K King Salmon 81.30 11 P **P** **21 07 39.1 +0.8**
baz=201,SNR=16
P16K Nushagak River 81.39 11 P **P** **21 07 39.4 +0.7**
baz=199,SNR=33
IRM Iron Mountain 81.40 49 IAmb IAmb 21 07 43.5
comp=Z,219nm,1.6s
LHV Little Huntoon 81.40 44 IAmb IAmb 21 07 43.1
comp=Z,105nm,1.0s
L04D Klamath Falls 81.43 39 IAmb IAmb 21 07 43.0
comp=Z,249nm,1.0s
PPI Padang Panjang 81.50 273 P **P** **21 07 39.5 -0.9**
Q18K Katmai Hardscr 81.59 12 P **P** **21 07 40.5 +0.6**
baz=202,SNR=73
M11K Mekoryuk 81.59 6 P **P** **21 07 41.7 +2.0**
baz=192,SNR=12
GRNR Gornyy 81.62 333⇓ *i* P **P** **21 07 41.6 +1.5**
GRNR pmax pmax
comp=N,30nm,1.2s
GRNR pmax pmax
comp=E,20nm,1.2s
GRNR pmax pmax
comp=Z,120nm,1.1s
NVAR Mina Array Bea 81.63 44 P **P** **21 07 42.8 +2.0**
comp=Z,53nm,0.9s,baz=224,slow=8.7,SNR=132
NVAR pP **pwP** **21 09 52.3 -0.1**
comp=Z,6.5nm,1.0s,baz=228,slow=8.7,SNR=3.7
NVAR PKKPbc **PKKPbc** **21 26 10.2 +1.1**
comp=Z,1.4nm,0.7s,baz=71,slow=3.3,SNR=7.4
NVAR PKPPKP **P'P'df** **21 34 17.4 +5.8**
comp=Z,2.6nm,0.9s,baz=91,slow=3.7,SNR=8.7
comp=Z,53nm,0.9s
NVAR Mina Array Bea 81.63 44 P **P** **21 07 41.9 +1.1**
DL2 Dalian 81.67 317 *i* P **P** **21 07 41.5 +0.9**
DL2 pP **pwP** **21 09 54.6 +2.3**
DL2 sP **sP** **21 10 50.3 -0.5**
DL2 PP **PP** **21 10 58.8 -0.8**
DL2 SKS **SKSac** **21 17 00.3 -2.2**
DL2 S **SKKSac** **21 17 06.3 -0.9**
DL2 SS **SS** **21 22 39.3 -1.3**
DL2 pmax pmax
comp=Z,190nm,1.2s
DL2 pmax pmax
comp=Z,2μm,5.8s
N14K Kuskokwak Cree 81.68 8 P **P** **21 07 41.6 +1.5**
baz=196,SNR=35
PAHR Pah Rah Range 81.69 42 IAmb IAmb 21 07 44.3
comp=Z,105nm,1.0s
I02E Swisshome, OR 81.73 36 IAmb IAmb 21 07 44.1
comp=Z,210nm,1.2s
I03D Drain, OR 81.75 37 IAmb IAmb 21 07 44.6
comp=Z,235nm,1.3s
P17K Kvichak River 81.83 11 P **P** **21 07 41.5 +0.6**
baz=201,SNR=100
O16K Kokwok River B 81.91 10 P **P** **21 07 40.7 -0.6**
O16K IAmb IAmb 21 07 42.5
comp=Z,156nm,0.9s
O16K Kokwok River B 81.91 10 P **P** **21 07 41.4 0.0**
baz=199,SNR=76
M13K Dall Lake 81.94 8 IAmb IAmb 21 07 43.9
comp=Z,182nm,1.1s
M13K Dall Lake 81.94 8 P **P** **21 07 43.2 +1.8**
baz=194,SNR=15
K04D Chiloquin, OR 82.00 39 IAmb IAmb 21 07 46.0
comp=Z,171nm,1.0s
TPH Tonopah 82.14 44 IAmb IAmb 21 07 46.6
comp=Z,125nm,1.0s
N15K Kwethluk River 82.14 9 P **P** **21 07 44.0 +1.5**
baz=197,SNR=142
TPNV Topopah Spring 82.16 46 IAmb IAmb 21 07 46.8
comp=Z,94nm,0.9s
SNY Shenyang 82.18 320⇓ P **P** **21 07 43.4 +0.2**
SNY S **SKSac** **21 17 01.4 -4.3**
SNY pmax pmax
comp=Z,130nm,0.7s
SNY pmax pmax
comp=Z,1μm,3.3s
CNSH ChangSha 82.21 304 P **P** **21 07 43.1 -0.6**
CNSH PP **PP** **21 11 04.8 +0.6**
CNSH S **SKSac** **21 17 03.3 -3.3**
CNSH pmax pmax
comp=Z,110nm,1.3s
P18K Big Mountain, 82.23 12 P **P** **21 07 43.4 +0.3**
baz=202,SNR=32
O17K Koliganek Bris 82.25 11 P **P** **21 07 43.3 +0.2**
baz=200
BUCK Buck Mountain 82.27 37 IAmb IAmb 21 07 47.5
comp=Z,254nm,1.1s
WHN Wuhan 82.27 307⇓ *i* P **P** **21 07 44.9 +1.0**
WHN sP **sP** **21 10 53.1 -1.1**
WHN PP **PP** **21 11 05.3 +0.6**
WHN SKS **SKSac** **21 17 05.8 -1.0**
WHN S **SKKSac** **21 17 12.5 +0.4**
WHN sS **sS** **21 20 59.1 -1.1**
WHN SS **SS** **21 22 58.6 +8.9**
WHN pmax pmax
comp=Z,650nm,1.2s
WHN pmax pmax
comp=Z,5μm,4.2s
CN2 Changchun 82.30 323⇓ P **P** **21 07 44.4 +0.7**
CN2 epP pwP 21 09 55.5 -0.5
CN2 eS **S** **21 17 12.3 +2.7**
CN2 *e*sS sS 21 20 57.9 -2.1
CN2 pmax pmax
comp=Z,200nm,0.9s
CN2 pmax pmax
comp=Z,2μm,4.0s
COR Corvallis 82.34 36 P **P** **21 07 44.7 +0.8**
COR pmax pmax
comp=Z,107nm,1.0s
COR Corvallis 82.34 36 P **P** **21 07 44.7 +0.8**
COR IAmb IAmb 21 07 47.7
comp=Z,107nm,0.9s
COR Corvallis 82.34 36 P **P** **21 07 46.7 +2.8**
I04A Tendick Farm, 82.34 37 IAmb IAmb 21 07 46.6
comp=Z,99nm,0.9s
M14K Bethel 82.44 8 IAmb IAmb 21 07 46.0
comp=Z,191nm,0.9s
M14K Bethel 82.44 8 P **P** **21 07 45.4 +1.4**
baz=196,SNR=55
BNX BinXian 82.45 325⇓ P **P** **21 07 44.9 +0.5**
BNX pP **pwP** **21 09 56.8 +0.7**
BNX sP **sP** **21 10 53.6 -1.0**
BNX PP **PP** **21 11 05.0 -0.8**
BNX S **S** **21 17 14.3 +3.3**
BNX sS **sS** **21 21 03.3 +1.8**
BNX SS **SS** **21 22 53.6 +1.8**
BNX pmax pmax
comp=Z,260nm,0.8s
BNX pmax pmax
comp=Z,2μm,3.5s
M15K Kasigluk River 82.56 9 P **P** **21 07 46.0 +1.3**
baz=197,SNR=118
K05A Summer Lake 82.56 39 IAmb IAmb 21 07 49.1
comp=Z,244nm,0.9s
Q09A Carvers 82.59 44 IAmb IAmb 21 07 48.7
comp=Z,167nm,0.9s
H04D Lebanon 82.61 37 IAmb IAmb 21 07 49.0
comp=Z,160nm,1.0s
N16K Nishlik Lake 82.64 10 P **P** **21 07 46.6 +1.6**
baz=199,SNR=133
O18K Koktuh Hills 82.67 12 P **P** **21 07 45.9 +0.6**
baz=202,SNR=54
G03D McMinnville, O 82.76 36 P **P** **21 07 47.4 +1.4**
G03D IAmb IAmb 21 07 49.0
comp=Z,123nm,1.0s
WIFE Three Sisters- 82.84 37 IAmb IAmb 21 07 50.2
comp=Z,137nm,0.9s
P19K Oil Pt 82.87 13 P **P** **21 07 46.8 +0.5**
baz=204
GULI GuiLin 82.90 300⇓ P **P** **21 07 46.6 -0.6**
GULI S **SKSac** **21 17 08.3 -2.9**
GULI pmax pmax
comp=Z,310nm,1.1s
L14K Kuka Creek 82.92 8 IAmb IAmb 21 07 48.4
comp=Z,163nm,1.0s
L14K Kuka Creek 82.92 8 P **P** **21 07 47.7 +1.3**
baz=195,SNR=58
N17K Nushagak Hills 82.94 10 P **P** **21 07 47.3 +0.8**
baz=200,SNR=16
H04A Detroit Lake 83.02 37 IAmb IAmb 21 07 49.8
comp=Z,103nm,0.9s
F03A Seaside 83.05 35 IAmb IAmb 21 07 50.4
comp=Z,114nm,0.9s
M16K Timber Creek 83.13 9 P **P** **21 07 49.3 +1.8**
baz=198,SNR=106
TIA Tai'an 83.17 313 P **P** **21 07 49.1 +0.8**
TIA sP **sP** **21 10 57.9 -0.8**
TIA SKS **SKSac** **21 17 12.5 +0.1**
TIA S **S** **21 17 18.1 -0.5**
TIA pmax pmax
comp=Z,200nm,1.2s
TIA pmax pmax
comp=Z,2μm,6.5s
CNPM China Poot 83.18 14 IAmb IAmb 21 07 49.2
comp=Z,158nm,0.9s
G04A Mulino 83.18 36 IAmb IAmb 21 07 52.5
comp=Z,203nm,0.9s
PRN Pahroc Range 83.21 46 IAmb IAmb 21 07 52.4
comp=Z,112nm,1.1s
HOM Homer 83.21 13 P **P** **21 07 48.9 +1.0**
baz=205
RADR Rader Ridge 83.24 35 IAmb IAmb 21 07 52.1
comp=Z,390nm,1.8s
K13K Kusilvak Mount 83.27 7 IAmb IAmb 21 07 50.9
comp=Z,197nm,1.1s
K13K Kusilvak Mount 83.27 7 P **P** **21 07 49.6 +1.5**
baz=193,SNR=46
I05D Terrebonne, OR 83.29 37 P **P** **21 07 50.0 +1.3**
I05D IAmb IAmb 21 07 52.1
comp=Z,124nm,0.9s
MG05 Puerto Natales 83.31 143 P **P** **21 07 50.8 +2.0**
MG05 Puerto Natales 83.31 143 P **P** **21 07 51.3 +2.6**
N18K Kilae Creek 83.31 11 P **P** **21 07 48.8 +0.4**
baz=201,SNR=19
KULM Kulim 83.34 278 P **P** **21 07 50.4 +0.8**
comp=Z,274nm,1.3s
KULM Kulim 83.34 278 P **P** **21 07 49.7 0.0**
KULM IAmb IAmb 21 07 51.5
comp=Z,166nm,0.8s
KULM Kulim 83.34 278 P **P** **21 07 50.9 +1.3**
O20K Slope Mountain 83.39 13 P **P** **21 07 49.2 +0.3**
baz=204,SNR=17
L15K Ungalak Mounta 83.40 8 P **P** **21 07 49.7 +0.9**
baz=196,SNR=58
F04D Rainier, OR 83.44 35 IAmb IAmb 21 07 52.7
comp=Z,147nm,0.8s
BMN Battle Mountai 83.46 42 P **P** **21 07 51.1 +1.3**
BMN pmax pmax
comp=Z,82nm,1.0s
BMN Battle Mountai 83.46 42 P **P** **21 07 51.1 +1.3**
GO10 Punta Arenas 83.47 145 IAmb IAmb 21 07 53.5
comp=Z,64nm,0.8s
BRLK Bradley Lake 83.47 14 IAmb IAmb 21 07 51.0
comp=Z,190nm,0.9s
MG03 Isla Dawson 83.48 145 P **P** **21 07 51.2 +1.7**
BRSE Bradley Lake S 83.48 14 P **P** **21 07 50.1 +0.8**
baz=206
TUC Tucson 83.60 52 P **P** **21 07 53.0 +2.4**
TUC pmax pmax
comp=Z,76nm,1.0s
TUC Tucson 83.60 52 P **P** **21 07 53.0 +2.4**
TUC Tucson 83.60 52 P **P** **21 07 53.5 +3.0**
TUC Tucson 83.60 52 P **P** **21 07 53.6 +3.0**
TUC pP **pP** **21 10 00.7 +0.9**
TUC sP **sP** **21 11 06.4 +5.1**
RED Redoubt Volcan 83.67 13 IAmb IAmb 21 07 51.4
comp=Z,180nm,1.0s
N19K Bonanza Creek 83.70 12 IAmb IAmb 21 07 51.0
comp=Z,91nm,0.9s
N19K Bonanza Creek 83.70 12 P **P** **21 07 50.2 -0.2**
baz=203,SNR=40
WISH Wishkah 83.70 34 IAmb IAmb 21 07 53.9
comp=Z,130nm,1.0s
HG4B Hotspring 83.70 27 IAmb IAmb 21 07 53.6
comp=Z,84nm,1.0s
L16K Owhat River 83.71 9 IAmb IAmb 21 07 53.2
comp=Z,161nm,1.2s
L16K Owhat River 83.71 9 P **P** **21 07 51.5 +1.2**
baz=198,SNR=52
HOOD Mount Hood Mea 83.71 36 IAmb IAmb 21 07 53.4
comp=Z,112nm,1.1s
M17K Holitna River 83.73 10 IAmb IAmb 21 07 53.6
comp=Z,191nm,1.1s
M17K Holitna River 83.73 10 P **P** **21 07 52.2 +1.8**
baz=200,SNR=69
WVOR Wild Horse Val 83.73 40 IAmb IAmb 21 07 54.6
comp=Z,95nm,1.1s
WVOR Wild Horse Val 83.73 40 P **P** **21 07 52.8 +1.7**
C03A Quillayute Air 83.82 33 IAmb IAmb 21 07 55.3
comp=Z,191nm,1.0s
NLWA Neilton Lookou 83.82 34 IAmb IAmb 21 07 54.8
comp=Z,108nm,0.9s
H02S1 DAWSON INLET T 83.83 26 P **P** **21 07 52.7 +1.7**
SNR=19
H02S2 DAWSON INLET T 83.83 26 P **P** **21 07 53.0 +1.9**
SNR=19
HOLB Holberg 83.89 30 IAmb IAmb 21 07 53.9
comp=Z,82nm,0.9s
K15K Wolf Creek Mou 83.98 8 P **P** **21 07 53.1 +1.5**
baz=196,SNR=71
RPSI Rantau Prapat 84.00 275 P **P** **21 07 52.4 -0.5**
MA2 Magadan 84.02 345 P **P** **21 07 51.8 -0.1**
comp=Z,192nm,1.8s
MA2 Magadan 84.02 345*d i* P **P** **21 07 51.7 -0.1**
MA2 pmax pmax
comp=Z,174nm,1.1s
MA2 Magadan 84.02 345 P **P** **21 07 51.0 -0.9**
MA2 IAmb IAmb 21 07 52.6
comp=Z,160nm,1.1s
MA2 Magadan 84.02 345 P **P** **21 07 51.8 -0.1**

comp=Z,4µmcomp=Z,188nm,1.8s
MA2 Magadan 84.02 345 P **P** **21 07 52.0 +0.1**
MA2 Magadan 84.02 345 P **P** **21 07 51.8 -0.1**
MA2 pP **pP** **21 10 01.5 -0.4**
PSI Prapat 84.04 275 P **P** **21 07 52.9 -0.3**
comp=Z,318nm,1.2s
PSI Prapat 84.04 275 P **P** **21 07 52.4 -0.8**
PSI pmax pmax
comp=Z,246nm,1.0s
PSI Prapat 84.04 275 P **P** **21 07 52.4 -0.8**
comp=Z,4µmcomp=Z,294nm,1.2s
M18K Stony River 84.08 11 P **P** **21 07 53.2 +1.0**
baz=201,SNR=35
SEW Seward 84.10 14 IAmb IAmb 21 07 53.9
comp=Z,95nm,0.9s
SEW Seward 84.10 14 P **P** **21 07 52.6 +0.4**
baz=207,SNR=15
J14K Nanvaranak Lak 84.18 7 IAmb IAmb 21 07 54.2
comp=Z,107nm,1.4s
J14K Nanvaranak Lak 84.18 7 P **P** **21 07 53.5 +0.9**
baz=194,SNR=13
I07A Izee 84.19 38 IAmb IAmb 21 07 56.2
comp=Z,103nm,1.0s
G06A Carlson Farm, 84.23 37 IAmb IAmb 21 07 55.9
comp=Z,108nm,1.2s
Q23K Middleton Isla 84.26 16 P **P** **21 07 53.9 +0.9**
baz=210
319A Douglas 84.27 53 IAmb IAmb 21 07 58.2
comp=Z,139nm,1.0s
L17K Donlin 84.29 9 P **P** **21 07 54.8 +1.6**
baz=199,SNR=40
CAPN Captain Cook N 84.32 13 P **P** **21 07 54.9 +1.7**
baz=206
J08A Circle Bar Ran 84.37 39 IAmb IAmb 21 07 57.6
comp=Z,135nm,1.2s
B04A Port Angeles 84.44 34 IAmb IAmb 21 07 57.2
comp=Z,105nm,1.1s
GNW Green Mountain 84.48 34 IAmb IAmb 21 07 57.1
comp=Z,76nm,1.0s
P23K Montague Islan 84.49 15 IAmb IAmb 21 07 56.0
comp=Z,210nm,1.2s
P23K Montague Islan 84.49 15 P **P** **21 07 54.8 +0.6**
baz=209,SNR=12
SPCR Spurr Chakacha 84.50 12 P **P** **21 07 54.0 -0.3**
baz=205,SNR=14
GAMB Gambell 84.54 3 IAmb IAmb 21 07 56.9
comp=Z,116nm,1.2s
GAMB Gambell 84.54 3 P **P** **21 07 55.6 +1.4**
baz=186,SNR=13
U15A North Rim 84.58 48 IAmb IAmb 21 07 59.2
comp=Z,100nm,0.9s
CLRS Cowichan Lake 84.61 33 IAmb IAmb 21 07 58.2
comp=Z,90nm,1.0s
L18K Granite Mounta 84.62 10 IAmb IAmb 21 07 57.4
comp=Z,121nm,1.0s
L18K Granite Mounta 84.62 10 P **P** **21 07 56.2 +1.4**
baz=200,SNR=57
MG02 Cerro Sombrero 84.62 145 P **P** **21 07 57.2 +2.1**
MG02 IAmb IAmb 21 07 59.0
comp=Z,143nm,0.9s
GO08 Villa O'Higgin 84.65 140 P **P** **21 07 57.8 +2.4**
GO08 Villa O'Higgin 84.65 140 P **P** **21 07 58.5 +3.0**
M19K Big River Lodg 84.72 11 IAmb IAmb 21 07 56.8
comp=Z,55nm,0.8s
M19K Big River Lodg 84.72 11 P **P** **21 07 55.7 +0.4**
baz=203
GSI Gunungsitoli 84.76 273 P **P** **21 07 58.2 +1.6**
comp=Z,768nm,1.3s
GSI Gunungsitoli 84.76 273 P **P** **21 07 57.2 +0.6**
GSI Gunungsitoli 84.76 273 P **P** **21 07 57.7 +1.1**
comp=Z,758nm,1.3s
GSI Gunungsitoli 84.76 273 P **P** **21 07 58.2 +1.6**
CBB Campbell River 84.79 31 IAmb IAmb 21 07 59.2
comp=Z,193nm,1.4s
K17K Iditarod 84.84 9 IAmb IAmb 21 07 58.4
comp=Z,133nm,1.4s
K17K Iditarod 84.84 9 P **P** **21 07 57.0 +1.1**
baz=199,SNR=19
PGC Sidney 84.84 33 IAmb IAmb 21 07 58.7
comp=Z,96nm,1.0s
STLK Strandline Lak 84.84 12 IAmb IAmb 21 07 56.6
comp=Z,70nm,0.9s
ELK Elko 84.89 43 P **P** **21 07 58.5 +1.6**
comp=Z,20nm,0.8s,baz=254,slow=5.0,SNR=18
comp=Z,20nm,0.8s
L19K White Mountain 84.90 11 IAmb IAmb 21 07 58.5
comp=Z,214nm,1.2s
L19K White Mountain 84.90 11 P **P** **21 07 57.0 +0.9**
baz=202,SNR=95
RC01 Rabbit Creek A 84.92 14 P **P** **21 07 56.8 +0.6**
baz=207,SNR=46
M20K Styx River 84.94 12 P **P** **21 07 56.2 -0.2**
baz=204,SNR=18
BBB Bella Bella 84.97 28 P **P** **21 07 58.3 +1.7**
comp=Z,53nm,1.0s,baz=249,slow=4.5,SNR=15
comp=Z,53nm,1.0s
BBB Bella Bella 84.97 28 IAmb IAmb 21 07 59.1
comp=Z,90nm,1.1s
BBB Bella Bella 84.97 28 P **P** **21 07 58.5 +1.9**
F07A Phinny Hill Vi 85.02 37 IAmb IAmb 21 08 00.5
comp=Z,106nm,1.2s
PWL Port Wells 85.03 14 P **P** **21 07 57.2 +0.4**
baz=208,SNR=60
HPIG 85.04 59 P **P** **21 08 00.1 +2.2**
HIN Hinchinbrook I 85.06 15 IAmb IAmb 21 07 58.9
comp=Z,150nm,1.1s
J16K Anvik River 85.06 8 IAmb IAmb 21 07 59.4
comp=Z,159nm,1.4s
J16K Anvik River 85.06 8 P **P** **21 07 58.1 +1.2**
baz=197,SNR=14
KAIM Kayak Island 85.19 16 IAmb IAmb 21 08 00.2
comp=Z,164nm,1.0s
KAIM Kayak Island 85.19 16 P **P** **21 07 58.9 +1.4**
baz=212,SNR=8.6
G08A Pilot Rock 85.21 38 IAmb IAmb 21 08 01.5
comp=Z,135nm,1.0s
MXC Moxie City 85.23 36 IAmb IAmb 21 08 01.4
comp=Z,71nm,0.9s
CRAG Craig 85.26 24 P **P** **21 07 59.7 +1.8**
comp=Z,115nm,1.0s
CRAG Craig 85.26 24 IAmb IAmb 21 08 01.3
comp=Z,78nm,0.9s
CRAG Craig 85.26 24 P **P** **21 08 00.0 +2.1**
baz=222,SNR=8.9
A04D Lummi Island 85.27 33 P **P** **21 08 00.2 +2.1**
GLI Glacier Island 85.34 15 P **P** **21 07 58.6 +0.3**
baz=209,SNR=87
SKT Skwentna 85.34 12 P **P** **21 07 57.5 -0.7**
baz=205,SNR=27
FID Port Fidalgo 85.37 15 IAmb IAmb 21 08 00.1
comp=Z,178nm,1.1s
J17K VABM Dome 85.37 9 IAmb IAmb 21 08 00.1
comp=Z,109nm,1.4s
J17K VABM Dome 85.37 9 P **P** **21 07 59.5 +1.2**
baz=198,SNR=19
HEH HeiHe 85.37 329 *e*P **P** **21 07 59.3 +0.6**
HEH pP **pP** **21 10 14.0 +4.9**
HEH SKS **SKSac** **21 17 24.8 -0.7**
HEH S **ScS** **21 17 43.8 -1.7**
HEH pmax pmax
comp=Z,210nm,1.1s
HEH pmax pmax
comp=Z,2µm,5.9s
EYAK Cordova Ski Ar 85.38 16 P **P** **21 07 59.4 +1.0**
comp=Z,118nm,1.4s
EYAK Cordova Ski Ar 85.38 16 IAmb IAmb 21 08 00.5
comp=Z,109nm,1.0s
EYAK Cordova Ski Ar 85.38 16 P **P** **21 07 59.2 +0.8**
baz=210,SNR=19
M22K Willow 85.43 13 P **P** **21 07 58.9 +0.3**
baz=206,SNR=13
LTY Liberty 85.44 35 IAmb IAmb 21 08 01.4
comp=Z,89nm,1.1s
HNS HongShan 85.44 313 ⇓P **P** **21 08 00.5 +1.2**
HNS sP **sP** **21 11 11.1 +0.6**
HNS SKS **SKSac** **21 17 26.3 -0.2**
HNS S **SKKSac** **21 17 37.8 +2.2**
HNS pmax pmax
comp=Z,190nm,1.0s
HNS pmax pmax
comp=Z,2µm,5.4s
E07A Sunnyside 85.46 36 IAmb IAmb 21 08 02.7
comp=Z,125nm,0.9s
KNK Knik Glacier 85.49 14 P **P** **21 07 59.7 +0.7**
baz=208,SNR=30
PMR Palmer 85.50 14 P **P** **21 07 59.8 +0.8**
comp=Z,169nm,1.4s
PMR Palmer 85.50 14 P **P** **21 07 59.6 +0.6**
baz=207,SNR=18
RAGM Ragged Mountai 85.51 16 IAmb IAmb 21 08 01.5
comp=Z,235nm,1.3s
HAWA Hanford 85.54 37 IAmb IAmb 21 08 03.0
comp=Z,151nm,1.0s
LYN LuoYang 85.61 309 ⇓*i*P **P** **21 08 01.5 +1.3**
LYN sP sP 21 11 11.1 -0.3
LYN SKS **SKSac** **21 17 27.0 -0.7**
LYN S **ScS** **21 17 47.6 -0.7**
LYN SS **SS** **21 23 42.8 +4.7**
LYN pmax pmax
comp=Z,410nm,1.0s
LYN pmax pmax
comp=Z,3µm,6.0s
I17K Unalakleet 85.63 8 P **P** **21 08 00.6 +1.1**
baz=197
SIT Sitka 85.66 22 P **P** **21 08 01.2 +1.4**
comp=Z,80nm,1.9s
SIT Sitka 85.66 22 P **P** **21 08 00.1 +0.3**
SIT pmax pmax
comp=Z,113nm,1.3s
SIT Sitka 85.66 22 P **P** **21 08 00.1 +0.3**
SIT IAmb IAmb 21 08 02.2
comp=Z,113nm,1.3s
SIT Sitka 85.66 22 P **P** **21 08 01.5 +1.7**
baz=220,SNR=5.2
V35K Ketchikan 85.74 25 IAmb IAmb 21 08 03.5
comp=Z,119nm,1.0s
V35K Ketchikan 85.74 25 P **P** **21 08 02.0 +1.8**
baz=223,SNR=16
U33K Whale Pass 85.74 24 IAmb IAmb 21 08 03.5
comp=Z,143nm,1.0s
U33K Whale Pass 85.74 24 P **P** **21 08 02.2 +2.0**
baz=222,SNR=26
A05A Maple Falls 85.76 33 IAmb IAmb 21 08 02.7
comp=Z,69nm,1.1s
ANM Nome 85.77 6 P **P** **21 08 00.8 +0.5**
baz=192
BERG Berg Lake 85.77 17 IAmb IAmb 21 08 02.2
comp=Z,176nm,1.1s
J18K Innoko River 85.79 10 IAmb IAmb 21 08 02.5
comp=Z,149nm,1.1s
J18K Innoko River 85.79 10 P **P** **21 08 01.2 +0.8**
baz=200,SNR=68
ZAIG Zacatecas 85.81 64 P **P** **21 08 03.1 +1.4**
ZAIG Zacatecas 85.81 64 P **P** **21 08 04.5 +2.7**
BJI2 Beijing 85.81 316 P **P** **21 08 01.9 +0.9**
BJI2 sP **sP** **21 11 13.6 +1.5**
BJI2 SKS **SKSac** **21 17 27.1 -1.6**
BJI2 S **ScS** **21 17 49.6 0.0**
BJI2 sS **sS** **21 21 36.8 +0.9**
BJI2 pmax pmax
comp=Z,53nm,0.7s
BJI2 pmax pmax
comp=Z,880nm,3.7s
BJT Baijiatuao 85.81 316 P **P** **21 08 02.5 +1.5**
comp=Z,107nm,2.3s
BJT Baijiatuao 85.81 316 IAmb IAmb 21 08 02.6
comp=Z,82nm,0.9s
BJT Baijiatuao 85.81 316 P **P** **21 08 01.8 +0.8**
BJT pP **pwP** **21 10 17.3 +1.8**
TPTI 85.83 275 P **P** **21 08 02.1 +0.4**
comp=Z,4µmcomp=Z,206nm,1.4s
ENH Enshi 85.85 304 P **P** **21 08 01.8 +0.3**
comp=Z,609nm,1.3s
ENH Enshi 85.85 304 P **P** **21 08 02.9 +1.4**
E08A Dider Farm, El 85.86 37 IAmb IAmb 21 08 04.4
comp=Z,100nm,1.0s
SML Sawmill 85.87 14 P **P** **21 08 01.3 +0.5**
baz=208,SNR=19
BMO Blue Mountains 85.92 39 IAmb IAmb 21 08 03.9
comp=Z,72nm,1.0s
121A Cookes Peak, D 85.93 53 IAmb IAmb 21 08 06.2
comp=Z,69nm,1.2s
CUT Chulitna 85.98 13 P **P** **21 08 01.5 +0.3**
baz=206,SNR=33
MFID Camas Ranch 85.99 40 IAmb IAmb 21 08 05.2
comp=Z,83nm,1.1s
BMRM Bremner River 86.03 16 IAmb IAmb 21 08 03.7
comp=Z,157nm,1.0s
BMRM Bremner River 86.03 16 P **P** **21 08 02.5 +0.9**
baz=212,SNR=50
S31K Pelican 86.04 21 IAmb IAmb 21 08 04.1
comp=Z,87nm,1.0s
S31K Pelican 86.04 21 P **P** **21 08 03.5 +1.8**
baz=219,SNR=10
PPLA Purkeypile 86.05 12 IAmb IAmb 21 08 02.1
comp=Z,158nm,1.8s
PPLA Pueypile 86.05 12 P **P** **21 08 00.9 -0.9**
baz=205,SNR=11
EPH Ephrata 86.08 36 IAmb IAmb 21 08 04.6
comp=Z,103nm,0.9s
SCM Sheep Creek Mo 86.12 14 P **P** **21 08 02.9 +0.9**
baz=209,SNR=81
K20K Telida 86.13 11 P **P** **21 08 02.7 +0.7**
baz=203,SNR=70
KLU Klutina 86.15 15 IAmb IAmb 21 08 03.6
comp=Z,102nm,1.1s
KLU Klutina 86.15 15 P **P** **21 08 02.9 +0.7**
baz=210,SNR=40
DUG Dugway, Tooele 86.16 44 P **P** **21 08 04.5 +1.6**
H16K Elim 86.17 7 P **P** **21 08 02.8 +0.8**
baz=195,SNR=8.7
ELIB Princess Elisa 86.21 187 *d*P **P** **21 08 03.5 +0.9**
comp=Z,41nm,0.7s
ELIB *d*pP **pP** **21 10 12.9 -0.7**
CRQM Cirque 86.23 17 IAmb IAmb 21 08 05.0
comp=Z,171nm,1.1s
CRQE Cirque 86.24 17 P **P** **21 08 03.7 +1.0**
baz=213,SNR=39
WRAK Wrangell Islan 86.26 24 IAmb IAmb 21 08 05.8
comp=Z,113nm,1.0s
WRAK Wrangell Islan 86.26 24 P **P** **21 08 04.6 +1.9**
baz=222,SNR=21
D08A Wollman Farm, 86.27 36 IAmb IAmb 21 08 05.8
comp=Z,135nm,1.0s
TGL Tana Glacier 86.31 17 IAmb IAmb 21 08 05.3
comp=Z,137nm,1.0s
G15K Niukluk 86.32 6 P **P** **21 08 03.5 +0.7**
baz=194,SNR=24
T33K Petersburg 86.33 23 P **P** **21 08 04.9 +1.9**
baz=222
E09A Wood Farm, Sta 86.39 37 IAmb IAmb 21 08 06.6
comp=Z,155nm,1.1s
GYA Guiyang 86.41 300 ⇓P **P** **21 08 05.3 +1.0**
GYA SKS **SKSac** **21 17 33.0 -0.2**
GYA S **S** **21 17 48.9 -1.4**
GYA pmax pmax
comp=Z,150nm,1.1s
GYA pmax pmax
comp=Z,2µm,3.3s
J19K Poorman 86.46 10 IAmb IAmb 21 08 05.2
comp=Z,73nm,1.1s
J19K Poorman 86.46 10 P **P** **21 08 04.5 +1.0**
baz=201,SNR=48
PCA Pinnacle 86.49 18 IAmb IAmb 21 08 06.1
comp=Z,132nm,1.0s
PINM Pinnacle 86.49 18 P **P** **21 08 04.9 +1.1**
baz=216,SNR=18
CAST Castle Rocks 86.54 12 P **P** **21 08 03.3 -0.7**
baz=205,SNR=96
EPT El Paso 86.55 54 IAmb IAmb 21 08 08.6
comp=Z,100nm,1.1s
VRDI Verde Repeater 86.55 16 IAmb IAmb 21 08 06.5
comp=Z,203nm,1.3s
R31K City Hall, Gus 86.56 21 P **P** **21 08 05.9 +1.8**
baz=220
N25K Chitina, Valde 86.58 16 P **P** **21 08 05.2 +1.0**
baz=212,SNR=100
F14K Arctic Creek 86.58 5 P **P** **21 08 04.8 +0.8**
baz=191,SNR=9.6
GRNC Granite Creek 86.59 17 IAmb IAmb 21 08 06.8
comp=Z,150nm,1.0s
SLVN Son La 86.59 294 P **P** **21 08 05.8 +0.6**
comp=Z,74nm,1.9s
SLVN Son La 86.59 294 P **P** **21 08 06.3 +1.1**
SLVN IAmb IAmb 21 08 09.6
comp=Z,88nm,1.2s
M24K Tolsona, Glenn 86.62 15 P **P** **21 08 05.6 +1.2**
baz=210,SNR=24
SEY Seymchan 86.63 347 *d i*P **P** **21 08 04.7 +0.4**
SEY pmax pmax
comp=Z,353nm,1.7s
WAT6 Susitna Watana 86.68 14 P **P** **21 08 05.3 +0.5**
baz=209,SNR=112
WAT1 Susitna Watana 86.72 13 P **P** **21 08 05.3 +0.4**
baz=208
H17K Granite Mounta 86.73 8 P **P** **21 08 05.3 +0.5**
baz=197,SNR=15
LHMI Lhok Sumawe 86.75 277 P **P** **21 08 07.2 +1.2**
comp=Z,624nm,1.1s
LHMI Lhok Sumawe 86.75 277 P **P** **21 08 06.0 -0.1**
LHMI Lhok Sumawe 86.75 277 P **P** **21 08 07.3 +1.2**
comp=Z,7µmcomp=Z,618nm,1.1s
LHMI Lhok Sumawe 86.75 277 P **P** **21 08 07.5 +1.4**
U35K Hyder 86.78 25 P **P** **21 08 06.9 +1.8**
baz=224
MCARA McCarthy VSAT 86.79 16 IAmb IAmb 21 08 07.6
comp=Z,191nm,1.2s
MCARA McCarthy VSAT 86.79 16 P **P** **21 08 06.3 +1.1**
baz=213,SNR=31
B08A Colville Reser 86.82 35 IAmb IAmb 21 08 08.1
comp=Z,135nm,1.0s
R32K Eaglecrest 86.87 22 P **P** **21 08 07.3 +1.8**
baz=221,SNR=13
P29M Windy Craggy 86.87 19 IAmb IAmb 21 08 08.6
comp=Z,142nm,1.1s
P29M Windy Craggy 86.87 19 P **P** **21 08 07.3 +1.8**
baz=218,SNR=39
J20K Nowinta River 86.87 10 IAmb IAmb 21 08 06.8
comp=Z,83nm,1.0s
J20K Nowinta River 86.87 10 P **P** **21 08 06.2 +0.8**
baz=203,SNR=68
LLLB Lillooet 86.87 32 IAmb IAmb 21 08 08.7
comp=Z,74nm,0.8s
G16K Koyuk River 86.89 7 P **P** **21 08 06.2 +0.8**
baz=195,SNR=11
KTH Kantishna Hill 86.89 12 IAmb IAmb 21 08 06.3
comp=Z,149nm,1.0s
JIS Juneau Island 86.92 22 P **P** **21 08 07.2 +1.5**
comp=Z,73nm,1.2s
TRF Thorofare Moun 86.92 12 P **P** **21 08 05.9 0.0**
baz=206,SNR=132
CHUM Lake Minchumin 86.92 11 P **P** **21 08 05.5 -0.1**
baz=204,SNR=18
HLID Hailey 86.93 41 P **P** **21 08 08.8 +2.4**
F15K North Star Dit 86.96 6 P **P** **21 08 06.4 +0.6**
baz=193,SNR=5.6
GCSA Galena City Sc 86.97 9 P **P** **21 08 06.6 +0.8**
baz=200
SPUT South Promonto 86.98 44 IAmb IAmb 21 08 10.1
comp=Z,133nm,1.6s
BESE Bessie Mountai 86.99 21 IAmb IAmb 21 08 09.2
comp=Z,111nm,1.0s
HVU Hansel Valley 87.01 43 IAmb IAmb 21 08 10.3
comp=Z,132nm,1.5s
SBM South Baldy 87.05 52 P **P** **21 08 07.5 0.0**
O28M Mount Upton 87.06 18 IAmb IAmb 21 08 09.1
comp=Z,160nm,0.9s
O28M Mount Upton 87.06 18 P **P** **21 08 08.0 +1.3**
baz=216,SNR=61
HARP HAARP 87.12 15 P **P** **21 08 06.9 +0.3**
HARP IAmb IAmb 21 08 08.8
comp=Z,119nm,0.9s
HARP HAARP 87.12 15 P **P** **21 08 07.8 +1.1**
baz=211,SNR=13
SRU San Rafael Swe 87.14 46 IAmb IAmb 21 08 10.7
comp=Z,82nm,1.1s
H18K Honhosa River 87.14 8 IAmb IAmb 21 08 08.3
comp=Z,114nm,1.6s
H18K Honhosa River 87.14 8 P **P** **21 08 06.8 +0.1**
baz=199,SNR=12
O29M Mount Kennedy 87.15 19 IAmb IAmb 21 08 09.1
comp=Z,92nm,1.1s
O29M Mount Kennedy 87.15 19 P **P** **21 08 08.4 +1.4**
baz=217,SNR=27
TIY Taiyuan 87.17 312 *e*P **P** **21 08 08.8 +1.3**
TIY sP **sP** **21 11 22.0 +2.7**
TIY PP **PP** **21 11 41.9 -1.7**
TIY SKS **SKSac** **21 17 37.4 +0.3**
TIY S **S** **21 17 56.6 -0.2**
TIY sS **sS** **21 21 46.3 -3.4**
TIY pmax pmax
comp=Z,170nm,1.1s
TIY pmax pmax
comp=Z,1µm,5.2s
PLBC Pleasant Camp 87.17 20 P **P** **21 08 08.6 +1.7**
baz=219,SNR=43
P17A Butcher Ranch, 87.17 46 IAmb IAmb 21 08 11.3
comp=Z,100nm,1.3s
TLIG Tlapa 87.17 70 P **P** **21 08 09.8 +1.8**
G17K Kiwalik Mounta 87.19 7 P **P** **21 08 07.5 +0.6**
baz=197,SNR=30
DHY Denali Highway 87.20 14 IAmb IAmb 21 08 09.0
comp=Z,201nm,1.5s
DHY Denali Highway 87.20 14 P **P** **21 08 07.7 +0.5**
baz=209,SNR=49
VHRN Van Horn 87.27 56 IAmb IAmb 21 08 12.1
comp=Z,86nm,1.0s
TROLL Troll, Antarti 87.35 180 ⇑P **P** **21 08 08.6 +0.7**
comp=Z,902nm,0.6s
TROLL ⇓pP **pP** **21 10 19.7 +0.8**
comp=Z,2µm,0.8s
TROLL ⇑SKSac **SKSac** **21 17 37.2 -0.3**
comp=N,528nm,1.3s
TROLL ⇓S **S** **21 17 55.7 -1.9**
comp=E,724nm,1.3s
TROLL ⇓PKKPbc **PKKPbc** **21 25 53.9 -2.7**
comp=Z,151nm,0.7s
MNTX Cornudas Mount 87.37 55 IAmb IAmb 21 08 12.2
comp=Z,65nm,1.0s
MNTX Cornudas Mount 87.37 55 P **P** **21 08 11.0 +2.5**
I20K Naaghedeneel 87.39 10 P **P** **21 08 08.9 +1.1**
baz=202,SNR=10
LL02 Futaleuf 87.40 135 P **P** **21 08 10.6 +2.0**
LL02 Futaleuf 87.40 135 P **P** **21 08 11.4 +2.8**
MCK McKinley 87.45 13 P **P** **21 08 08.4 +0.2**
baz=208,SNR=96
T35M Bob Quinn 87.46 24 P **P** **21 08 10.4 +2.0**
baz=224,SNR=14
P30M Million Dollar 87.50 19 P **P** **21 08 10.4 +1.9**
baz=218
SKAG Skagway 87.50 20 P **P** **21 08 10.4 +1.9**
comp=Z,91nm,1.6s
SKAG Skagway 87.50 20 P **P** **21 08 10.6 +2.1**
baz=220,SNR=14
PAX Paxson 87.54 14 IAmb IAmb 21 08 09.6
comp=Z,58nm,1.0s
PAX Paxson 87.54 14 P **P** **21 08 08.9 +0.2**
baz=211,SNR=42
TCUT Toone Canyon 87.55 44 IAmb IAmb 21 08 12.8
comp=Z,150nm,1.2s
YUK8 Steele Glacier 87.60 18 P **P** **21 08 10.7 +1.4**
baz=216,SNR=147
MVCO Mesa Verde 87.61 49 P **P** **21 08 11.2 +1.4**
SNAA Sanae 87.65 179 ⇑P **P** **21 08 09.6 +0.4**
comp=Z,113nm,0.5s
SNAA ⇓pP **pP** **21 10 18.8 -1.4**
comp=Z,366nm,1.0s
SNAA ⇑SKSac **SKSac** **21 17 39.1 0.0**
comp=N,566nm,0.9s
SNAA ⇑PKKPbc **PKKPbc** **21 25 52.6 -3.1**
comp=Z,25nm,0.4s
SNAA Sanae 87.65 179 P **P** **21 08 09.6 +0.4**
comp=Z,5.1nm,0.6s,baz=193,slow=8.9,SNR=14
SNAA pP **pP** **21 10 21.6 +1.3**
comp=Z,45nm,1.2s,baz=177,slow=4.6,SNR=11
SNAA S **SKSac** **21 17 37.3 -1.7**
comp=Z,6.8nm,0.9s,baz=177,slow=22,SNR=22
SNAA PKPPKP **P'P'df** **21 33 56.2 -4.9**
comp=Z,2.4nm,1.0s,baz=258,slow=4.1,SNR=4.3
comp=Z,5.1nm,0.6s
SNAA Sanae 87.65 179 *c i*P **P** **21 08 09.5 +0.3**
SNAA pmax pmax
comp=Z,16nm,1.3s
SNAA Sanae 87.65 179 **pP** **21 10 19.4 -0.8**
SNAA IAmb IAmb 21 10 25.1
comp=Z,127nm,1.6s
SNAA Sanae 87.65 179 P **P** **21 08 09.8 +0.5**
M26K Nabesna, AK 87.65 16 IAmb IAmb 21 08 11.6
comp=Z,132nm,1.0s
M26K Nabesna, AK 87.65 16 P **P** **21 08 10.2 +1.0**
baz=213,SNR=63
TX31 Lajitas Ar. Si 87.67 58 IAmb IAmb 21 08 14.1
comp=Z,72nm,0.9s
TXAR Lajitas Array 87.67 58 P **P** **21 08 12.7 +2.5**
comp=Z,50nm,0.9s,baz=219,slow=5.5,SNR=329
TXAR pP **pwP** **21 10 23.7 -0.9**
comp=Z,17nm,1.1s,baz=207,slow=5.3,SNR=11
TXAR PKKPbc **PKKPbc** **21 25 55.8 +1.4**
comp=Z,2.6nm,0.8s,baz=97,slow=2.1,SNR=17
comp=Z,50nm,0.9s
TXAR Lajitas Array 87.67 58 P **P** **21 08 11.7 +1.6**

TXAR	**Lajitas Array**	**87.67**	**58**	P		**P**		**21 08 11.7**	**+1.6**
TXAR						**pP**		**21 10 22.0**	**+0.9**
BSUT	**Blindstream Ca**	**87.69**	**45**	IAmb		IAmb		21 08 13.7	
	comp=Z,131nm,1.3s								
HWUT	**Hardware Ranch**	**87.70**	**44**	P		**P**		**21 08 11.7**	**+1.6**
ZEA	**Zeya**	**87.72**	**331**	*e*P		**P**		**21 08 10.6**	**+1.0**
ZEA				*e*'PP		**pwP**		**21 10 24.9**	**+1.7**
ZEA				*e*'SP		**sP**		**21 11 25.2**	**+3.3**
ZEA				*e*S		**S**		**21 18 05.3**	**+4.3**
ZEA				pmax		pmax			
	comp=N,30nm,0.9s								
ZEA				pmax		pmax			
	comp=Z,80nm,1.1s								
ZEA				smax		smax			
	comp=N,300nm,4.6s								
ZEA				smax		smax			
	comp=E,500nm,8.0s								
YUK6	**Outpost Mounta**	**87.73**	**18**	P		**P**		**21 08 10.9**	**+1.1**
	baz=217,SNR=32								
H19K	**Roundabout Mou**	**87.77**	**9**	IAmb		IAmb		21 08 11.8	
	comp=Z,142nm,1.1s								
H19K	**Roundabout Mou**	**87.77**	**9**	P		**P**		**21 08 10.6**	**+1.0**
	baz=201,SNR=85								
PV10	**Paradox Valley**	**87.79**	**47**	IAmb		IAmb		21 08 12.8	
	comp=Z,69nm,1.0s								
PV19	**Morning Glory**	**87.80**	**48**	IAmb		IAmb		21 08 13.6	
	comp=Z,151nm,1.4s								
PV17	**East Wray Mesa**	**87.80**	**48**	IAmb		IAmb		21 08 13.7	
	comp=Z,72nm,1.4s								
YUK3	**Moose Creek**	**87.80**	**17**	P		**P**		**21 08 11.4**	**+1.3**
	baz=215,SNR=270								
S34M	**Telegraph Cree**	**87.80**	**23**	IAmb		IAmb		21 08 13.3	
	comp=Z,134nm,1.0s								
S34M	**Telegraph Cree**	**87.80**	**23**	P		**P**		**21 08 12.0**	**+2.1**
	baz=224,SNR=39								
G18K	**Tagagawik**	**87.81**	**8**	IAmb		IAmb		21 08 11.4	
	comp=Z,65nm,1.1s								
G18K	**Tagagawik**	**87.81**	**8**	P		**P**		**21 08 10.2**	**+0.4**
	baz=199,SNR=44								
PV20	**West Nyswonger**	**87.82**	**48**	IAmb		IAmb		21 08 13.7	
	comp=Z,73nm,1.1s								
PV23	**Carpenter Ridg**	**87.85**	**47**	IAmb		IAmb		21 08 14.0	
	comp=Z,65nm,0.9s								
PV11	**David Mesa, Pa**	**87.87**	**48**	IAmb		IAmb		21 08 14.1	
	comp=Z,72nm,1.3s								
BRWY	**Burwash Landin**	**87.87**	**18**	P		**P**		**21 08 11.9**	**+1.7**
	baz=216,SNR=38								
HYT	**Haines Junctio**	**87.89**	**19**	IAmb		IAmb		21 08 13.1	
	comp=Z,70nm,0.9s								
HYT	**Haines Junctio**	**87.89**	**19**	P		**P**		**21 08 12.0**	**+1.5**
	baz=218,SNR=55								
XLT	**XiLinHaoTe**	**87.90**	**319**	*e*P		**P**		**21 08 11.1**	**+0.3**
XLT				pP		pwP		21 10 26.1	-0.2
XLT				PP		**PP**		**21 11 46.8**	**-2.5**
XLT				S		**S**		**21 18 04.0**	**+0.7**
XLT				sS		sS		21 21 52.8	-4.1
XLT				pmax		pmax			
	comp=Z,88nm,1.1s								
XLT				pmax		pmax			
	comp=Z,870nm,7.2s								
M27K	**Edge Creek, AK**	**87.91**	**16**	P		**P**		**21 08 11.9**	**+1.4**
	baz=214,SNR=208								
PV02	**Paradox Valley**	**87.92**	**48**	IAmb		IAmb		21 08 13.5	
	comp=Z,62nm,1.1s								
PV12	**Saucer Basin,**	**87.93**	**48**	IAmb		IAmb		21 08 14.4	
	comp=Z,138nm,1.3s								
MENT	**Mentasta**	**87.93**	**15**	P		**P**		**21 08 11.5**	**+1.0**
	comp=Z,121nm,1.0s								
MENT	**Mentasta**	**87.93**	**15**	IAmb		IAmb		21 08 12.7	
	comp=Z,76nm,0.9s								
BCYI	**Bear Canyon**	**87.95**	**41**	IAmb		IAmb		21 08 14.1	
	comp=Z,65nm,1.1s								
NEW	**Newport**	**87.96**	**36**	P		**P**		**21 08 12.2**	**+1.2**
	comp=Z,25nm,0.8s,baz=231,slow=3.3,SNR=41								
	comp=Z,25nm,0.8s								
NEW	**Newport**	**87.96**	**36**	P		**P**		**21 08 12.4**	**+1.4**
YUK4	**Talbot Arm**	**87.97**	**18**	P		**P**		**21 08 12.6**	**+1.7**
	baz=217,SNR=46								
XAN	**Xi'an**	**87.97**	**308**	⇓P		**P**		**21 08 12.6**	**+1.2**
XAN				S		**S**		**21 18 09.3**	**+5.0**
XAN				pmax		pmax			
	comp=Z,350nm,0.9s								
XAN				pmax		pmax			
	comp=Z,2μm,6.0s								
XAN	**Xi'an**	**87.97**	**308**	P		**P**		**21 08 12.6**	**+1.2**
XAN				pP		**pP**		**21 10 23.4**	**+1.0**
H20K	**Anotleneega Mo**	**87.97**	**10**	P		**P**		**21 08 11.6**	**+1.0**
	baz=202,SNR=121								
TASM	**ASL Pad, Albuq**	**88.02**	**51**	IAmb		IAmb		21 08 14.9	
	comp=Z,56nm,1.1s								
ANMO	**Albuquerque**	**88.02**	**51**	P		**P**		**21 08 13.6**	**+1.9**
	comp=Z,37nm,1.0s,baz=219,slow=4.8,SNR=67								
ANMO				pP		**pwP**		**21 10 25.0**	**-1.2**
	comp=Z,12nm,1.1s,baz=224,slow=4.2,SNR=9.6								
	comp=Z,37nm,1.0s								
ANMO	**Albuquerque**	**88.02**	**51**	*d iP*		**P**		**21 08 13.5**	**+1.7**
ANMO				pmax		pmax			
	comp=Z,65nm,1.1s								
ANMO	**Albuquerque**	**88.02**	**51**	P		**P**		**21 08 12.7**	**+1.0**
ANMO						**pP**		**21 10 22.6**	**-0.3**
ANMO	**Albuquerque**	**88.02**	**51**	P		**P**		**21 08 13.7**	**+1.9**
ANMO	**Albuquerque**	**88.02**	**51**	P		**P**		**21 08 13.4**	**+1.7**
ANMO				pP		**pwP**		**21 10 25.1**	**-1.1**
ANMO				sP		**sP**		**21 11 27.6**	**+3.7**
F17K	**Baldwin Pennin**	**88.02**	**7**	IAmb		IAmb		21 08 12.7	
	comp=Z,95nm,1.0s								
F17K	**Baldwin Pennin**	**88.02**	**7**	P		**P**		**21 08 11.5**	**+0.8**
	baz=196,SNR=10								
TPB28		**88.03**	**55**	IAmb		IAmb		21 08 15.4	
	comp=Z,35nm,1.1s								
L26K	**Log Cabin Wild**	**88.09**	**15**	IAmb		IAmb		21 08 13.5	
	comp=Z,83nm,1.1s								
L26K	**Log Cabin Wild**	**88.09**	**15**	P		**P**		**21 08 12.3**	**+1.1**
	baz=213,SNR=32								
ALPN	**Alpine**	**88.14**	**57**	IAmb		IAmb		21 08 15.8	
	comp=Z,63nm,1.0s								
P32M	**Atlin**	**88.14**	**21**	IAmb		IAmb		21 08 13.8	
	comp=Z,63nm,1.1s								
P32M	**Atlin**	**88.14**	**21**	P		**P**		**21 08 13.1**	**+1.6**
	baz=221,SNR=31								
Q32M	**Nakina River**	**88.16**	**22**	IAmb		IAmb		21 08 14.3	
	comp=Z,64nm,0.9s								
Q32M	**Nakina River**	**88.16**	**22**	P		**P**		**21 08 13.7**	**+1.8**
	baz=222,SNR=34								
I21K	**Tanana**	**88.17**	**11**	P		**P**		**21 08 12.0**	**+0.5**
	baz=205,SNR=23								
NEA2	**Nenana**	**88.19**	**12**	IAmb		IAmb		21 08 13.0	
	comp=Z,71nm,1.0s								
NEA2	**Nenana**	**88.19**	**12**	P		**P**		**21 08 11.2**	**-0.4**
	baz=207,SNR=49								
K24K	**Donnelly Dome**	**88.19**	**14**	P		**P**		**21 08 12.5**	**+0.9**
	baz=210,SNR=79								
BVCY	**Beaver Creek**	**88.22**	**17**	P		**P**		**21 08 13.1**	**+1.3**
	baz=215,SNR=48								
VNA2	**Neumayer--Watz**	**88.23**	**177**	⇑P		**P**		**21 08 12.7**	**+0.8**
	comp=Z,43nm,0.6s,baz=184,slow=3.8								
VNA2				⇓pP		**pwP**		**21 10 26.0**	**+0.1**
	comp=Z,44nm,0.9s,baz=174,slow=2.4								
VNA2				⇑SKSac		**SKSac**		**21 17 42.4**	**0.0**
	comp=E,20nm,1.2s,baz=175,slow=6.6								
VNA2				⇓S		**S**		**21 18 02.9**	**-2.5**
	comp=E,7.5nm,1.2s								
VNA2	**Neumayer--Watz**	**88.23**	**177**	P		**P**		**21 08 13.0**	**+1.1**
G19K	**Purcell Mounta**	**88.26**	**9**	P		**P**		**21 08 12.5**	**+0.7**
	baz=200,SNR=72								
MLY	**Manley**	**88.26**	**11**	P		**P**		**21 08 11.7**	**-0.3**
	baz=206,SNR=60								
TPB01	**Permian Basin**	**88.27**	**56**	IAmb		IAmb		21 08 16.2	
	comp=Z,64nm,0.9s								
O30N	**Mendenhall**	**88.28**	**19**	IAmb		IAmb		21 08 14.3	
	comp=Z,76nm,0.8s								
O30N	**Mendenhall**	**88.28**	**19**	P		**P**		**21 08 13.5**	**+1.4**
	baz=219,SNR=70								
NVL	**N'lazarevskaya**	**88.31**	**183**	*e*P		**P**		**21 08 10.6**	**-1.6**
NVL				*e*S		**SKSac**		**21 17 41.7**	**-1.1**
NVL				*e*SS		**SS**		**21 24 16.1**	**+2.4**
NVL				*e*SSS		SSS		21 27 57.0	
NVL				pmax		pmax			
	comp=Z,34nm,0.7s								
RIDG	**Independent Ri**	**88.34**	**14**	IAmb		IAmb		21 08 14.3	
	comp=Z,122nm,1.0s								
RIDG	**Independent Ri**	**88.34**	**14**	P		**P**		**21 08 13.0**	**+0.6**
	baz=211,SNR=61								
F18K	**Selawik**	**88.36**	**7**	P		**P**		**21 08 12.5**	**+0.2**
	baz=198,SNR=22								
BSI	**Banda Aceh**	**88.38**	**276**	P		**P**		**21 08 13.7**	**0.0**
	comp=Z,5μmcomp=Z,590nm,1.1s								
HDA	**Harding Lake**	**88.46**	**13**	P		**P**		**21 08 13.2**	**+0.3**
	baz=209,SNR=56								
H21K	**Melozitna Rive**	**88.46**	**10**	IAmb		IAmb		21 08 14.3	
	comp=Z,68nm,0.9s								
H21K	**Melozitna Rive**	**88.46**	**10**	P		**P**		**21 08 13.7**	**+0.9**
	baz=204,SNR=32								
VNA1	**Neumayer--Stat**	**88.46**	**177**	⇑P		**P**		**21 08 13.9**	**+1.0**
	comp=Z,69nm,0.9s								
VNA1				⇓pP		**pP**		**21 10 24.8**	**+0.6**
	comp=Z,73nm,1.0s								
TPB13	**Reeves - Culbe**	**88.48**	**55**	IAmb		IAmb		21 08 17.1	
	comp=Z,80nm,0.7s								
RDMU	**Red Mountain**	**88.49**	**45**	IAmb		IAmb		21 08 16.8	
	comp=Z,54nm,0.9s								
TPB11	**China Draw**	**88.50**	**55**	IAmb		IAmb		21 10 31.6	
	comp=Z,127nm,1.7s								
L27K	**Beaver Creek,**	**88.50**	**16**	IAmb		IAmb		21 08 15.4	
	comp=Z,68nm,1.1s								
L27K	**Beaver Creek,**	**88.50**	**16**	P		**P**		**21 08 14.1**	**+0.9**
	baz=214								
N30M	**Aishikik Lake**	**88.51**	**19**	IAmb		IAmb		21 08 15.1	
	comp=Z,42nm,0.9s								
N30M	**Aishikik Lake**	**88.51**	**19**	P		**P**		**21 08 14.4**	**+1.2**
	baz=218,SNR=35								
BCAR	**Beaver Creek A**	**88.52**	**16**	P		**P**		**21 08 13.7**	**+0.5**
ECR	**Eagle Creek**	**88.56**	**43**	IAmb		IAmb		21 08 18.6	
	comp=Z,49nm,1.1s								
WHY	**Whitehorse**	**88.57**	**20**	P		**P**		**21 08 15.1**	**+1.5**
	baz=220,SNR=37								
E17K	**Hotham Inlet**	**88.58**	**6**	P		**P**		**21 08 14.1**	**+0.8**
	baz=196,SNR=26								
AHID	**Auburn Hatcher**	**88.58**	**43**	IAmb		IAmb		21 08 17.5	
	comp=Z,98nm,1.1s								
AHID	**Auburn Hatcher**	**88.58**	**43**	P		**P**		**21 08 16.2**	**+2.0**
DLBC	**Dease Lake**	**88.59**	**23**	P		**P**		**21 08 15.5**	**+1.8**
	baz=224,SNR=30								
IMAR	**Iman Mountai**	**88.61**	**10**	P		**P**		**21 08 13.3**	**-0.2**
I23K	**Minto, Yukon-K**	**88.62**	**12**	IAmb		IAmb		21 08 14.7	
	comp=Z,121nm,1.4s								
I23K	**Minto, Yukon-K**	**88.62**	**12**	P		**P**		**21 08 13.3**	**-0.3**
	baz=207,SNR=58								
LR03	**Panguipulli**	**88.63**	**132**	P		**P**		**21 08 15.8**	**+1.3**
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.7**	**-0.1**
	comp=Z,156nm,1.1s								
COLA	**College**	**88.68**	**13**	*d iP*		**P**		**21 08 13.7**	**-0.1**
COLA				pmax		pmax			
	comp=Z,207nm,0.9s								
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.3**	**-0.5**
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.6**	**-0.2**
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.8**	**+0.1**
	baz=208								
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.9**	**+0.1**
COLA	**College**	**88.68**	**13**	P		**P**		**21 08 13.9**	**+0.1**
COLA				pP		**pP**		**21 10 26.2**	**+1.0**
HIA	**Hailar**	**88.72**	**325**	P		**P**		**21 08 14.9**	**+0.5**
	comp=Z,97nm,1.1s								
HIA	**Hailar**	**88.72**	**325**	IAmb		IAmb		21 08 15.5	
	comp=Z,57nm,0.8s								
SCRK	**Sand Creek**	**88.75**	**14**	IAmb		IAmb		21 08 17.6	
	comp=Z,64nm,1.0s								
SCRK	**Sand Creek**	**88.75**	**14**	P		**P**		**21 08 15.2**	**+0.8**
	baz=212,SNR=56								
ILAR	**Eielson Array**	**88.79**	**13**	P		**P**		**21 08 14.3**	**-0.1**
	comp=Z,500nm,0.9s,baz=230,slow=5.4,SNR=319								
ILAR				pP		**pP**		**21 10 26.7**	**+1.0**
	comp=Z,6.7nm,1.0s,baz=230,slow=5.3,SNR=5.2								
ILAR				PKIKP		**PKiKP**		**21 13 09.9**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=252,slow=3.3,SNR=9.9								
ILAR				SKKPbc		SKKPbc		21 28 31.6	-5.1
	comp=Z,0.6nm,0.7s,baz=0.7,slow=4.8,SNR=5.0								
ILAR				PKPPKP		**P'P'df**		**21 33 59.7**	**+3.3**
	comp=Z,0.4nm,0.6s,baz=277,slow=1.0,SNR=4.9								
	comp=Z,500nm,0.9s								
ILAR	**Eielson Array**	**88.79**	**13**	P		**P**		**21 08 13.6**	**-0.8**
ILAR						**pP**		**21 10 25.4**	**-0.4**
F19K	**Shaleruckik Mo**	**88.82**	**8**	IAmb		IAmb		21 08 16.2	
	comp=Z,102nm,1.0s								
F19K	**Shaleruckik Mo**	**88.82**	**8**	P		**P**		**21 08 15.0**	**+0.6**
	baz=199,SNR=78								
HILR	**Hailar Array B**	**88.88**	**325**	P		**P**		**21 08 15.8**	**+0.6**
	comp=Z,72nm,0.7s,baz=128,slow=9.6,SNR=59								
	comp=Z,72nm,0.7s								
M29M	**Somme Creek**	**88.90**	**17**	P		**P**		**21 08 16.4**	**+1.3**
	baz=217,SNR=164								
P33M	**Teslin, Yukon**	**88.90**	**21**	P		**P**		**21 08 16.2**	**+1.1**
	baz=222,SNR=31								
H22K	**Ishtalitna Cre**	**88.92**	**11**	P		**P**		**21 08 15.6**	**+0.6**
	baz=205,SNR=169								
N31M	**Braeburn, Yuko**	**88.93**	**19**	P		**P**		**21 08 16.4**	**+1.3**
	baz=219,SNR=47								
R33M	**Jennings River**	**88.94**	**22**	IAmb		IAmb		21 08 18.5	
	comp=Z,131nm,1.4s								
R33M	**Jennings River**	**88.94**	**22**	P		**P**		**21 08 17.2**	**+1.9**
	baz=224,SNR=40								
J25K	**Salcha River,**	**88.98**	**14**	IAmb		IAmb		21 08 17.0	
	comp=Z,108nm,1.1s								
J25K	**Salcha River,**	**88.98**	**14**	P		**P**		**21 08 15.9**	**+0.6**
	baz=211,SNR=108								
POKR	**Poker Plat Res**	**88.98**	**13**	P		**P**		**21 08 15.2**	**-0.1**
	baz=209								
DLMT	**Dillon**	**88.99**	**40**	IAmb		IAmb		21 08 19.3	
	comp=Z,71nm,1.1s								
TPB06	**Permian Basin**	**89.01**	**56**	IAmb		IAmb		21 08 19.4	
	comp=Z,48nm,1.2s								
S22A	**4UR Ranch, Cre**	**89.03**	**49**	IAmb		IAmb		21 08 19.9	
	comp=Z,88nm,1.4s								
E18K	**Tukpahlearik C**	**89.04**	**7**	P		**P**		**21 08 16.4**	**+0.9**
	baz=197,SNR=45								
D17K	**Noatak River**	**89.05**	**6**	P		**P**		**21 08 16.5**	**+1.0**
	baz=194,SNR=25								
FXWY	**Fox Creek**	**89.07**	**42**	IAmb		IAmb		21 08 20.0	
	comp=Z,130nm,1.6s								
KMI2	**Kunming**	**89.09**	**297**	⇓P		**P**		**21 08 18.8**	**+1.8**
KMI2				pP		pP		21 10 27.4	-0.8
KMI2				sP		sP		21 11 30.3	+1.1
KMI2				PP		**PP**		**21 11 57.5**	**-1.6**
KMI2				SKS		**SKSac**		**21 17 49.6**	**+0.3**
KMI2				sS		sS		21 22 03.0	-6.3
KMI2				pmax		pmax			
	comp=Z,210nm,1.0s								
KMI2				pmax		pmax			
	comp=Z,1μm,4.6s								
G21K	**Allakaket**	**89.14**	**10**	P		**P**		**21 08 16.7**	**+0.7**
	baz=203,SNR=123								
O20A	**White River Ci**	**89.17**	**46**	IAmb		IAmb		21 08 20.0	
	comp=Z,67nm,1.0s								
H23K	**Yukon River**	**89.19**	**12**	P		**P**		**21 08 16.1**	**-0.2**
	baz=207								
GO06	**Curarrehue**	**89.26**	**132**	P		**P**		**21 08 19.2**	**+1.7**
GO06	**Curarrehue**	**89.26**	**132**	P		**P**		**21 08 19.9**	**+2.5**
HHC	**Hu-ho-hao-te**	**89.27**	**315**	*e*P		**P**		**21 08 18.3**	**+1.0**
HHC				pP		pP		21 10 30.5	+1.9
HHC				sP		sP		21 11 22.4	-7.1
HHC				SKS		**SKSac**		**21 17 48.5**	**-0.8**
HHC				S		**ScS**		**21 18 17.6**	**-1.0**
HHC				pmax		pmax			
	comp=Z,110nm,1.3s								
HHC				pmax		pmax			
	comp=Z,950nm,6.9s								
F20K	**Avaraart Lake**	**89.30**	**9**	IAmb		IAmb		21 08 18.7	
	comp=Z,105nm,1.0s								
F20K	**Avaraart Lake**	**89.30**	**9**	P		**P**		**21 08 17.4**	**+0.8**
	baz=201,SNR=112								
LOHW	**Long Hollow**	**89.32**	**42**	IAmb		IAmb		21 08 20.2	
	comp=Z,41nm,0.9s								
BILL	**Bilibino**	**89.36**	**354**	*d iP*		**P**		**21 08 17.4**	**+0.5**
BILL				pmax		pmax			
	comp=Z,90nm,1.1s								
BILL	**Bilibino**	**89.36**	**354**	P		**P**		**21 08 17.1**	**+0.2**
BILL				IAmb		IAmb		21 08 18.9	
	comp=Z,68nm,1.0s								
RDOG	**Red Dog Mine**	**89.41**	**6**	IAmb		IAmb		21 08 19.3	
	comp=Z,76nm,1.0s								
RDOG	**Red Dog Mine**	**89.41**	**6**	P		**P**		**21 08 18.1**	**+0.9**
	baz=195,SNR=18								
C16K	**Lisburne Hills**	**89.42**	**5**	IAmb		IAmb		21 08 19.1	
	comp=Z,119nm,1.1s								
C16K	**Lisburne Hills**	**89.42**	**5**	P		**P**		**21 08 17.8**	**+0.6**
	baz=192								
M30M	**Minto, Yukon**	**89.48**	**18**	P		**P**		**21 08 18.9**	**+1.2**
	baz=218								
E19K	**Redstone River**	**89.48**	**8**	P		**P**		**21 08 18.4**	**+0.9**
	baz=200,SNR=152								
FLWY	**Flagg Ranch**	**89.50**	**42**	IAmb		IAmb		21 08 22.1	
	comp=Z,95nm,1.0s								
N32M	**Quiet Lake**	**89.52**	**20**	IAmb		IAmb		21 08 20.8	
	comp=Z,123nm,1.4s								
N32M	**Quiet Lake**	**89.52**	**20**	P		**P**		**21 08 19.4**	**+1.5**
	baz=222								
L29M	**L29M**	**89.52**	**17**	P		**P**		**21 08 19.4**	**+1.5**
	baz=217,SNR=178								
H24K	**Noodor Dome**	**89.53**	**12**	P		**P**		**21 08 16.9**	**-0.9**
	baz=208,SNR=20								
YHB	**Horse Butte**	**89.53**	**41**	IAmb		IAmb		21 08 22.4	
	comp=Z,54nm,1.0s								
YPP	**Pitchstone Pla**	**89.53**	**42**	IAmb		IAmb		21 08 22.6	
	comp=Z,77nm,1.8s								
BW06	**Boulder Array**	**89.57**	**43**	IAmb		IAmb		21 08 21.4	
	comp=Z,59nm,0.9s								
PD31	**Pinedale Array**	**89.57**	**43**	IAmb		IAmb		21 08 21.3	
	comp=Z,59nm,0.9s								
PDAR	**Pinedale Array**	**89.57**	**43**	P		**P**		**21 08 20.1**	**+1.2**
	comp=Z,41nm,0.8s,baz=207,slow=3.0,SNR=152								
PDAR				pP		**pwP**		**21 10 33.0**	**-0.6**
	comp=Z,6.3nm,1.1s,baz=208,slow=2.9,SNR=5.4								
PDAR				PKKPbc		**PKKPbc**		**21 25 50.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=97,slow=4.0,SNR=8.0								
	comp=Z,41nm,0.8s								
PDAR	**Pinedale Array**	**89.57**	**43**	P		**P**		**21 08 19.6**	**+0.8**
PDAR						**pP**		**21 10 29.4**	**-1.1**
YFT	**Old Faithful**	**89.60**	**41**	IAmb		IAmb		21 08 23.4	
	comp=Z,50nm,1.0s								
YMR	**Madison River**	**89.63**	**41**	IAmb		IAmb		21 08 22.3	
	comp=Z,68nm,1.2s								
PRP	**Porcupine Dome**	**89.73**	**13**	IAmb		IAmb		21 08 20.4	
	comp=Z,113nm,1.3s								
PRP	**Porcupine Dome**	**89.73**	**13**	P		**P**		**21 08 19.1**	**+0.2**
	baz=211,SNR=38								
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P		**P**		**21 08 21.9**	**+1.9**
	comp=Z,129nm,0.9s,baz=123,slow=3.0,SNR=573								
CMAR				PP		**PP**		**21 12 06.0**	**+1.6**
	comp=Z,12nm,1.0s,baz=127,slow=6.3,SNR=6.6								
CMAR				PKKPbc		**PKKPbc**		**21 25 51.0**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=281,slow=4.5,SNR=7.5								
	comp=Z,129nm,0.9s								
CMAR	**Chiang Mai Arr**	**89.78**	**290**	*i* P		**P**		**21 08 21.8**	**+1.7**
CMAR				pmax		pmax			
	comp=Z,133nm,0.9s								
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P		**P**		**21 08 21.7**	**+1.7**
F21K	**Alatna River**	**89.80**	**9**	IAmb		IAmb		21 08 20.8	
	comp=Z,139nm,1.6s								
F21K	**Alatna River**	**89.80**	**9**	P		**P**		**21 08 19.5**	**+0.5**
	baz=203,SNR=48								
C17K	**DeLong Mountai**	**89.80**	**6**	P		**P**		**21 08 19.6**	**+0.6**
	baz=194,SNR=12								
G22K	**Bettles**	**89.84**	**10**	P		**P**		**21 08 20.1**	**+0.9**
	baz=205,SNR=97								
TMB01	**Midkiff**	**89.89**	**56**	IAmb		IAmb		21 10 37.9	
	comp=Z,31nm,1.3s								
M31M	**Drury Creek, Y**	**89.90**	**19**	P		**P**		**21 08 20.2**	**+0.6**
	baz=221,SNR=16								
G23K	**Bananza Creek**	**89.90**	**11**	IAmb		IAmb		21 08 21.7	
	comp=Z,91nm,1.3s								
G23K	**Bananza Creek**	**89.90**	**11**	P		**P**		**21 08 20.3**	**+0.8**
	baz=206,SNR=62								
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 21.9**	**+1.3**
	comp=Z,171nm,1.3s								
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 21.5**	**+0.8**
CHTO				pmax		pmax			
	comp=Z,161nm,0.8s								
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 22.0**	**+1.3**
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 21.5**	**+0.8**
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 21.7**	**+1.1**
	comp=Z,4μmcomp=Z,286nm,1.3s								
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 22.2**	**+1.6**
CHTO	**Chiang Mai**	**89.91**	**290**	P		**P**		**21 08 22.4**	**+1.7**
DAWY	**Dawson**	**89.96**	**16**	P		**P**		**21 08 20.9**	**+1.1**
	baz=216,SNR=51								
128A	**Castleberry Fa**	**89.98**	**55**	IAmb		IAmb		21 10 38.5	
	comp=Z,51nm,1.2s								
HAYD	**Hayden**	**90.02**	**46**	IAmb		IAmb		21 08 24.1	
	comp=Z,43nm,1.0s								
C18K	**Utukok River**	**90.16**	**6**	IAmb		IAmb		21 08 22.4	
	comp=Z,91nm,1.1s								
C18K	**Utukok River**	**90.16**	**6**	P		**P**		**21 08 21.1**	**

	comp=Z,125nm,1.5s							
I28M	**Miner Creek**	**90.94**	**15**	IAmb	IAmb	21 08 25.7		
	comp=Z,45nm,0.8s							
I28M	**Miner Creek**	**90.94**	**15**	P	**P**	**21 08 25.0**	**+0.6**	
	baz=216,SNR=85							
F24K	**Squaw Lake**	**91.01**	**11**	IAmb	IAmb	21 08 26.4		
	comp=Z,41nm,1.1s							
F24K	**Squaw Lake**	**91.01**	**11**	P	**P**	**21 08 25.6**	**+1.0**	
	baz=208,SNR=42							
J30M	**Hart River**	**91.17**	**17**	P	**P**	**21 08 26.5**	**+1.0**	
	baz=219,SNR=34							
E23K	**Chandalar**	**91.18**	**10**	P	**P**	**21 08 25.6**	**+0.1**	
E23K				IAmb	IAmb	21 08 27.6		
	comp=Z,63nm,1.1s							
E23K	**Chandalar**	**91.18**	**10**	P	**P**	**21 08 26.2**	**+0.7**	
	baz=207,SNR=37							
MMPY	**Sheldon Lake,**	**91.19**	**20**	IAmb	IAmb	21 08 27.6		
	comp=Z,36nm,1.1s							
MMPY	**Sheldon Lake,**	**91.19**	**20**	P	**P**	**21 08 26.9**	**+1.3**	
	baz=223,SNR=32							
H27K	**Steamboat Moun**	**91.21**	**14**	IAmb	IAmb	21 08 27.9		
	comp=Z,61nm,1.1s							
H27K	**Steamboat Moun**	**91.21**	**14**	P	**P**	**21 08 26.6**	**+0.9**	
	baz=214,SNR=65							
HNDO	**Hondo**	**91.24**	**59**	IAmb	IAmb	21 08 29.9		
	comp=Z,74nm,0.9s							
G26K	**Porcupine Rive**	**91.32**	**13**	IAmb	IAmb	21 08 29.3		
	comp=Z,83nm,1.1s							
G26K	**Porcupine Rive**	**91.32**	**13**	P	**P**	**21 08 27.1**	**+1.1**	
	baz=212,SNR=63							
E24K	**Your Creek**	**91.39**	**11**	P	**P**	**21 08 27.2**	**+0.8**	
	baz=208,SNR=21							
TGTN	**Hyland Airport**	**91.40**	**22**	P	**P**	**21 08 28.0**	**+1.4**	
	baz=226,SNR=5.6							
C21K	**Knifeblade Rid**	**91.40**	**8**	P	**P**	**21 08 27.5**	**+1.2**	
	baz=202,SNR=57							
K22A	**Casper**	**91.49**	**45**	IAmb	IAmb	21 08 30.2		
	comp=Z,47nm,1.0s							
F25K	**Christian Rive**	**91.50**	**12**	IAmb	IAmb	21 08 29.7		
	comp=Z,72nm,1.6s							
F25K	**Christian Rive**	**91.50**	**12**	P	**P**	**21 08 28.1**	**+1.2**	
	baz=211,SNR=27							
AMTX	**Amarillo**	**91.53**	**53**	IAmb	IAmb	21 10 46.7		
	comp=Z,77nm,1.6s							
G27K	**Doyon Strip**	**91.66**	**14**	P	**P**	**21 08 28.6**	**+0.9**	
	baz=214,SNR=25							
I30M	**Mount Dempster**	**91.67**	**16**	IAmb	IAmb	21 08 29.7		
	comp=Z,57nm,0.9s							
I30M	**Mount Dempster**	**91.67**	**16**	P	**P**	**21 08 28.6**	**+0.8**	
	baz=219,SNR=66							
A19K	**Wainwright**	**91.67**	**6**	P	**P**	**21 08 28.4**	**+0.8**	
	baz=196							
TOLK	**Toolik Lake Re**	**91.71**	**10**	P	**P**	**21 08 28.7**	**+0.9**	
	baz=207,SNR=22							
D23K	**Nanushuk River**	**91.83**	**10**	IAmb	IAmb	21 08 30.8		
	comp=Z,68nm,1.1s							
D23K	**Nanushuk River**	**91.83**	**10**	P	**P**	**21 08 29.4**	**+1.1**	
	baz=206,SNR=53							
B21K	**Ikpikpuk River**	**91.86**	**8**	P	**P**	**21 08 29.2**	**+0.9**	
	baz=202,SNR=21							
F26K	**Sheenjek River**	**91.88**	**12**	P	**P**	**21 08 29.9**	**+1.2**	
	baz=212,SNR=26							
B20K	**Meade River**	**91.90**	**7**	P	**P**	**21 08 29.5**	**+0.9**	
	baz=200							
H29M	**Whitestone**	**91.95**	**15**	P	**P**	**21 08 29.8**	**+0.8**	
	baz=217,SNR=80							
E25K	**Arctic Village**	**91.97**	**12**	P	**P**	**21 08 30.1**	**+1.0**	
	baz=211,SNR=30							
MT01	**Popeta**	**91.98**	**127**	P	**P**	**21 08 30.4**	**+0.4**	
MT01				IAmb	IAmb	21 10 45.2		
	comp=Z,125nm,1.8s							
KOTAN	**Kotaneelee Air**	**91.99**	**24**	P	**P**	**21 08 30.4**	**+1.1**	
	baz=230							
APMT	**Aspermont**	**92.08**	**55**	IAmb	IAmb	21 10 47.1		
	comp=Z,120nm,1.6s							
BRDY	**Brady**	**92.15**	**57**	IAmb	IAmb	21 10 49.5		
	comp=Z,84nm,1.9s							
YAK	**Yakutsk**	**92.28**	**338**	*d* *i* P	**P**	**21 08 30.1**	**-0.4**	
YAK				pmax	pmax			
	comp=Z,186nm,1.0s							
YAK	**Yakutsk**	**92.28**	**338**	P	**P**	**21 08 29.6**	**-0.9**	
YAK	**Yakutsk**	**92.28**	**338**	P	**P**	**21 08 30.3**	**-0.2**	
D24K	**Happy Valley**	**92.29**	**10**	IAmb	IAmb	21 08 32.1		
	comp=Z,37nm,1.1s							
D24K	**Happy Valley**	**92.29**	**10**	P	**P**	**21 08 31.5**	**+1.1**	
	baz=208							
EPYK	**Eagle Plains**	**92.48**	**16**	IAmb	IAmb	21 08 32.7		
	comp=Z,56nm,0.9s							
EPYK	**Eagle Plains**	**92.48**	**16**	P	**P**	**21 08 32.0**	**+0.6**	
	baz=219,SNR=35							
TNCH	**TengChong**	**92.58**	**296**	⇓ *i* P	**P**	**21 08 34.0**	**+1.0**	
TNCH				PP	**PP**	**21 12 24.3**	**-1.9**	
TNCH				SKS	**SKSac**	**21 18 09.9**	**+1.2**	
TNCH				S	**S**	**21 18 45.0**	**-1.0**	
TNCH				pmax	pmax			
	comp=Z,110nm,1.4s							
TNCH				pmax	pmax			
	comp=Z,690nm,3.1s							
G29M	**Pine Creek**	**92.59**	**15**	IAmb	IAmb	21 08 33.1		
	comp=Z,55nm,1.1s							
G29M	**Pine Creek**	**92.59**	**15**	P	**P**	**21 08 32.4**	**+0.5**	
	baz=218,SNR=35							
LZH	**Lanzhou**	**92.61**	**308**	*e*P	**P**	**21 08 34.3**	**+1.4**	
LZH				sP	sP	21 11 48.9	+3.5	
LZH				SKS	**SKSac**	**21 18 07.9**	**-0.5**	
LZH				S	**ScS**	**21 18 48.3**	**+1.5**	
LZH				sS	sS	21 22 33.8	-8.7	
LZH				pmax	pmax			
	comp=Z,160nm,1.2s							
LZH				pmax	pmax			
	comp=Z,670nm,4.5s							
C23K	**Itkillik River**	**92.62**	**9**	IAmb	IAmb	21 08 33.6		
	comp=Z,54nm,1.0s							
C23K	**Itkillik River**	**92.62**	**9**	P	**P**	**21 08 32.7**	**+0.8**	
	baz=206,SNR=37							
H31M	**Peel River**	**92.66**	**17**	IAmb	IAmb	21 08 35.4		
	comp=Z,48nm,1.5s							
H31M	**Peel River**	**92.66**	**17**	P	**P**	**21 08 32.5**	**+0.2**	
	baz=221,SNR=13							
LZDM	**Lanzhou Array**	**92.67**	**307**	P	**P**	**21 08 34.7**	**+1.3**	
	comp=Z,45nm,0.8s,baz=106,slow=4.8,SNR=24							
	comp=Z,45nm,0.8s							
B22K	**Teshekpuk Lake**	**92.68**	**8**	IAmb	IAmb	21 08 34.3		
	comp=Z,93nm,1.2s							
B22K	**Teshekpuk Lake**	**92.68**	**8**	P	**P**	**21 08 33.0**	**+0.9**	
	baz=203,SNR=12							
EDM	**Edmonton**	**92.69**	**33**	IAmb	IAmb	21 08 34.7		
	comp=Z,114nm,1.4s							
F28M	**Old Crow**	**92.72**	**14**	P	**P**	**21 08 33.2**	**+0.7**	
	baz=216,SNR=14							
NPW	**Naypyitaw**	**92.73**	**290**	P	**P**	**21 08 35.1**	**+1.6**	
E27K	**Coleen River**	**92.82**	**13**	IAmb	IAmb	21 08 34.7		
	comp=Z,31nm,1.1s							
E27K	**Coleen River**	**92.82**	**13**	P	**P**	**21 08 34.0**	**+1.0**	
	baz=214,SNR=35							
D25K	**Kavik River**	**92.86**	**11**	P	**P**	**21 08 33.2**	**+0.1**	
	baz=210,SNR=18							
PBA	**Port Blair**	**92.92**	**281**	P	**P**	**21 08 32.6**	**-2.0**	
PBA	**Port Blair**	**92.92**	**281**	IAmb	IAmb	21 08 45.8		
	comp=Z,47nm,0.9s							
PBA	**Port Blair**	**92.92**	**281**	P	**P**	**21 08 35.4**	**+0.8**	
G30M	**tAoh Zraii Nji**	**93.08**	**15**	P	**P**	**21 08 34.7**	**+0.5**	
	baz=219,SNR=77							
A22K	**Sinclair Lake**	**93.10**	**8**	P	**P**	**21 08 35.0**	**+1.0**	
	baz=202,SNR=14							
A21K	**Barrow**	**93.20**	**7**	P	**P**	**21 08 35.2**	**+0.7**	
	baz=200							
PLPT	**Palo Pinto**	**93.28**	**56**	P	**P**	**21 08 36.3**	**+0.5**	
LAO	**LASA Array**	**93.51**	**41**	IAmb	IAmb	21 08 40.0		
	comp=Z,30nm,0.8s							
G31M	**Satah River**	**93.53**	**16**	P	**P**	**21 08 36.7**	**+0.6**	
	baz=221,SNR=68							
E28M	**Babbage River**	**93.60**	**13**	IAmb	IAmb	21 08 38.5		
	comp=Z,51nm,1.0s							
E28M	**Babbage River**	**93.60**	**13**	P	**P**	**21 08 37.3**	**+0.8**	
	baz=216,SNR=48							
C27K	**Jago River**	**93.61**	**12**	IAmb	IAmb	21 08 38.6		
	comp=Z,34nm,1.0s							
C27K	**Jago River**	**93.61**	**12**	P	**P**	**21 08 37.5**	**+1.0**	
	baz=212,SNR=16							
C26K	**Camden Bay**	**93.64**	**11**	P	**P**	**21 08 37.9**	**+1.4**	
	baz=211							
WMOK	**Wichita Mounta**	**93.66**	**54**	P	**P**	**21 08 38.1**	**+0.6**	
F30M	**Barrier River**	**93.68**	**15**	IAmb	IAmb	21 08 40.1		
	comp=Z,39nm,1.0s							
F30M	**Barrier River**	**93.68**	**15**	P	**P**	**21 08 37.3**	**+0.5**	
	baz=220,SNR=20							
RSSD	**Black Hills**	**93.77**	**44**	P	**P**	**21 08 38.3**	**+0.3**	
RSSD	**Black Hills**	**93.77**	**44**	P	**P**	**21 08 38.3**	**+0.3**	
RSSD	**Black Hills**	**93.77**	**44**	P	**P**	**21 08 39.1**	**+1.0**	
OGNE	**Ogallala**	**93.77**	**48**	IAmb	IAmb	21 08 40.6		
	comp=Z,38nm,1.2s							
E29M	**Blow River**	**93.79**	**14**	P	**P**	**21 08 37.6**	**+0.3**	
	baz=218,SNR=15							
D27M	**Malcolm River**	**93.83**	**13**	IAmb	IAmb	21 08 39.3		
	comp=Z,32nm,1.1s							
D27M	**Malcolm River**	**93.83**	**13**	P	**P**	**21 08 38.5**	**+1.0**	
	baz=215,SNR=18							
F31M	**Tsiigehtchic**	**94.06**	**16**	P	**P**	**21 08 39.1**	**+0.7**	
	baz=221,SNR=18							
HKT	**Hockley**	**94.17**	**60**	*de*P	**P**	**21 08 41.6**	**+1.8**	
HKT				pmax	pmax			
	comp=Z,22nm,1.6s							
WRGLY	**Wrigley**	**94.21**	**22**	P	**P**	**21 08 40.6**	**+1.3**	
	baz=230							
MTO3	**Montecristo**	**94.26**	**76**	P	**P**	**21 08 42.0**	**+1.0**	
D28M	**Stokes Point**	**94.36**	**13**	P	**P**	**21 08 40.4**	**+0.6**	
	baz=217							
CBKS	**Cedar Bluff**	**94.53**	**50**	IAmb	IAmb	21 08 44.1		
	comp=Z,52nm,1.2s							
INK	**Inuvik**	**94.76**	**15**	IAmb	IAmb	21 08 43.1		
	comp=Z,34nm,1.0s							
INK	**Inuvik**	**94.76**	**15**	P	**P**	**21 08 42.0**	**+0.3**	
	baz=222							
INK	**Inuvik**	**94.76**	**15**	P	**P**	**21 08 42.0**	**+0.3**	
ULN	**Ulaanbaatar**	**95.33**	**319**	*d* *i* P	**P**	**21 08 44.5**	**-0.5**	
ULN				pmax	pmax			
	comp=Z,28nm,1.1s							
ULN	**Ulaanbaatar**	**95.33**	**319**	P	**P**	**21 08 44.4**	**-0.5**	
ULN	**Ulaanbaatar**	**95.33**	**319**	P	**P**	**21 08 44.3**	**-0.6**	
ULN				IAmb	IAmb	21 08 45.6		
	comp=Z,23nm,1.1s							
ULN	**Ulaanbaatar**	**95.33**	**319**	P	**P**	**21 08 44.8**	**-0.2**	
	comp=Z,2μmcomp=Z,112nm,1.1s							
ULN	**Ulaanbaatar**	**95.33**	**319**	P	**P**	**21 08 45.0**	**0.0**	
SONM	**Songino Array**	**95.72**	**319**	P	**P**	**21 08 46.3**	**-0.3**	
	comp=Z,7.4nm,0.9s,baz=116,slow=2.5,SNR=36							
SONM				pP	**pP**	**21 11 00.8**	**+1.5**	
	comp=Z,3.6nm,1.0s,baz=92,slow=2.5,SNR=3.8							
SONM				PP	**PP**	**21 12 46.9**	**-2.7**	
	comp=Z,5.7nm,0.9s,baz=128,slow=5.7,SNR=5.5							
SONM				PKKPbc	**PKKPbc**	**21 25 34.4**	**-0.4**	
	comp=Z,0.4nm,0.6s,baz=248,slow=1.6,SNR=3.9							
SONM				SKKPbc	SKKPbc	21 28 23.0	+4.4	
	comp=Z,0.2nm,0.3s,baz=226,slow=3.9,SNR=4.0							
	comp=Z,7.4nm,0.9s							
SONM	**Songino Array**	**95.72**	**319**	P	**P**	**21 08 45.8**	**-0.9**	
SONM					**pP**	**21 10 59.3**	**0.0**	
T35A	**Sooner Cattle**	**96.18**	**53**	IAmb	IAmb	21 11 06.9		
	comp=Z,58nm,1.4s							
IMP	**Imphal**	**96.39**	**294**	*e*P	**P**	**21 08 49.5**	**-0.7**	
GTA2	**Gaotai**	**96.90**	**310**	*e*P	**P**	**21 08 52.6**	**+0.4**	
GTA2				pP	pP	21 11 05.6	+1.0	
GTA2				SKS	**SKSac**	**21 18 29.1**	**-1.6**	
GTA2				SS	**SS**	**21 26 16.8**	**-1.4**	
GTA2				pmax	pmax			
	comp=Z,36nm,1.5s							
GTA2				pmax	pmax			
	comp=Z,370nm,9.5s							
YKA	**Yellowknife Ar**	**97.06**	**25**	P	**P**	**21 08 52.6**	**+0.5**	
	comp=Z,6.3nm,0.8s,baz=245,slow=4.4,SNR=31							
YKA				pP	**pwP**	**21 11 06.9**	**-0.4**	
	comp=Z,2.5nm,0.9s,baz=242,slow=4.2,SNR=7.1							
YKA				PKiKP	**PKiKP**	**21 13 23.7**	**0.0**	
	comp=Z,1.1nm,0.6s,baz=243,slow=1.0,SNR=5.7							
YKA				PKPPKP	**P'P'df**	**21 33 42.4**	**+1.0**	
	comp=Z,0.6nm,0.7s,baz=352,slow=2.8,SNR=3.9							
	comp=Z,6.3nm,0.8s							
YKA	**Yellowknife Ar**	**97.06**	**25**	P	Pdif	21 08 51.5	-0.7	
YKAW1	**Yellowknife Wh**	**97.10**	**25**	P	**P**	**21 08 52.4**	**+0.1**	
C36M	**Paulatuk**	**97.95**	**17**	P	**P**	**21 08 56.0**	**0.0**	
	baz=230							
SHL	**Shillong**	**98.40**	**294**	*e*P	**P**	**21 09 00.3**	**+1.1**	
ECSD	**EROS Data Cent**	**98.55**	**47**	P	**P**	**21 09 00.2**	**+0.9**	
ZAK	**Zakamensk**	**98.61**	**321**	*e*P	Pdif	21 08 57.5	-2.0	
ZAK				pmax	pmax			
	comp=Z,17nm,1.9s							
TLY	**Talaya**	**98.89**	**322**	*d* *i* P	Pdif	21 09 00.0	-0.6	
TIXI	**Tiksi**	**98.98**	**345**	⇓ *e*P	Pdif	21 08 59.5	-1.0	
TIXI				pmax	pmax			
	comp=Z,21nm,1.5s							
TAWA	**Tawang**	**99.07**	**296**	*e*P	**Pdif**	**21 09 04.3**	**+1.9**	
A36M	**Sachs Harbour**	**99.36**	**15**	P	**Pdif**	**21 09 02.8**	**+0.6**	
	baz=230							
GOMU	**GeErMu**	**99.45**	**305**	P	**Pdif**	**21 09 02.8**	**-1.1**	
GOMU				pmax	pmax			
	comp=Z,12nm,1.1s							
OTAV	**Otavalo**	**99.50**	**93**	P	**Pdif**	**21 09 05.5**	**+0.7**	
ULM	**Lac du Bonnet**	**101.23**	**40**	P	**Pdif**	**21 09 11.3**	**+0.3**	
	comp=Z,0.6nm,0.4s,baz=209,slow=6.4,SNR=3.2							
ULM	**Lac du Bonnet**	**101.23**	**40**	⇑ *e*P	**Pdif**	**21 09 10.2**	**-0.8**	
KNGR	**Kungurtug, Tuv**	**102.14**	**320**	⇑ *e*P	**Pdif**	**21 09 15.2**	**0.0**	
KNGR				pmax	pmax			
	comp=Z,9.0nm,1.4s							
LPAZ	**La Paz**	**102.37**	**113**	PP	**PP**	**21 13 42.0**	**+2.1**	
	comp=Z,0.8nm,0.6s,baz=270,slow=7.1,SNR=4.9							
LPAZ				PKKPbc	**PKKPbc**	**21 25 16.0**	**-0.2**	
	comp=Z,2.7nm,0.7s,baz=90,slow=4.1,SNR=6.6							
CPUP	**Villa Florida**	**106.16**	**127**	PP	**PP**	**21 14 07.8**	**+1.4**	
	comp=Z,0.8nm,0.4s,baz=263,slow=13,SNR=3.5							
CPUP				PKKPbc	**PKKPbc**	**21 25 03.8**	**-0.7**	
	comp=Z,1.3nm,0.6s,baz=101,slow=3.8,SNR=4.6							
WMQ	**Urumqi**	**106.80**	**311**	Pdif	**Pdif**	**21 09 36.8**	**+0.8**	
WMQ				PPMZ				
	comp=Z,350nm,4.3s							
WMQ				L	L			
	comp=Z,250nm,21.3s							
WMQ				L	L			
	comp=Z,260nm,20.3s							
WMQ				L	L			
	comp=Z,190nm,24.3s							
HYB	**Hyderabad**	**107.76**	**282**	*e*Pdif	**Pdif**	**21 09 40.1**	**-0.7**	
HYB				*e*SKSac	**SKSac**	**21 19 20.6**	**-1.2**	
SIV	**San Ignacio**	**108.52**	**116**	PP	**PP**	**21 14 25.8**	**+2.0**	
	comp=Z,0.5nm,0.4s,baz=237,slow=9.3,SNR=6.1							
SIV				PKKPbc	**PKKPbc**	**21 24 57.1**	**0.0**	
	comp=Z,4.5nm,0.7s,baz=63,slow=3.7,SNR=7.8							
PTH	**Pithoragarh**	**109.47**	**295**	*i* x	P	**21 14 35.0**	**+4.0**	
ZSN	**Zaisan**	**109.47**	**314**	*e*PKiKP	**PKiKP**	**21 13 46.6**	**-0.3**	
ZALV	**Zalesovo Beam**	**110.48**	**321**	Pdiff	**Pdif**	**21 09 50.8**	**-1.2**	
	comp=Z,0.5nm,0.5s,baz=90,slow=7.6,SNR=5.1							
ZALV				PKiKP	**PKiKP**	**21 13 47.8**	**-0.8**	
	comp=Z,15nm,0.6s,baz=137,slow=0.6,SNR=62							
ZALV				PP	**PP**	**21 14 36.5**	**-0.7**	
	comp=Z,5.5nm,0.9s,baz=101,slow=7.7,SNR=4.2							
NRIK	**Noril'sk**	**110.73**	**338**	PKiKP	**PKiKP**	**21 13 47.9**	**-0.7**	
	comp=Z,5.7nm,0.7s,baz=57,slow=3.0,SNR=6.1							
NRIK	**Noril'sk**	**110.73**	**338**	*d* PKiKP	**PKiKP**	**21 13 48.3**	**-0.3**	
MK31	**Makanchi Array**	**111.10**	**313**	*d* PKiKP	**PKiKP**	**21 13 49.0**	**-1.0**	
MKAR	**Makanchi Array**	**111.10**	**313**	Pdiff	**Pdif**	**21 09 55.0**	**0.0**	
	comp=Z,3.2nm,0.7s,baz=94,slow=5.5,SNR=26							
MKAR				PKiKP	**PKiKP**	**21 13 49.4**	**-0.6**	
	comp=Z,13nm,0.7s,baz=293,slow=0.3,SNR=49							
MKAR				PKKPbc	**PKKPbc**	**21 24 50.0**	**+0.6**	
	comp=Z,1.8nm,0.7s,baz=267,slow=4.3,SNR=5.6							
MAKZ	**Makanchi**	**111.31**	**313**	⇑ PKiKP	**PKiKP**	**21 13 49.7**	**-0.7**	
KLP	**Kalpa**	**111.54**	**297**	*e*P	**PKiKP**	**21 13 51.7**	**0.0**	
KLP				*i* x	x	21 14 31.9		
SMLA	**Simla**	**112.36**	**296**	*e*P	**PKiKP**	**21 13 52.4**	**-0.4**	
SMLA				*i* x	x	21 14 47.2		
SHLS	**Shalkode**	**112.58**	**309**	*i* PKiKP	**PKiKP**	**21 13 51.8**	**-1.3**	
SHLS	**Shalkode**	**112.58**	**309**	*e*PKiKP	**PKiKP**	**21 13 51.9**	**-1.3**	
UZB	**Uzynbulak**	**112.89**	**309**	*i* PKiKP	**PKiKP**	**21 13 53.0**	**-0.7**	
UZB				*e*		21 14 53.6		
UZB	**Uzynbulak**	**112.89**	**309**	*e*PKiKP	**PKiKP**	**21 13 53.1**	**-0.7**	
UZB				*e*PP	**PP**	**21 14 53.6**	**-1.1**	
BHK	**Bhakra**	**113.07**	**296**	*ex*	**PKiKP**	**21 13 54.6**	**+0.4**	
KPKS	**Kokpek**	**113.18**	**309**	*i* PKiKP	**PKiKP**	**21 13 53.6**	**-0.6**	
KPKS	**Kokpek**	**113.18**	**309**	*e*PKiKP	**PKiKP**	**21 13 53.7**	**-0.6**	
SATY	**Saty**	**113.33**	**309**	*i* PKiKP	**PKiKP**	**21 13 54.0**	**-0.6**	
SATY				*e*		21 14 56.8		
SATY	**Saty**	**113.33**	**309**	*e*PKiKP	**PKiKP**	**21 13 54.0**	**-0.6**	
SATY				*e*PP	**PP**	**21 14 56.9**	**-0.9**	
TSSA	**Tissa**	**113.53**	**298**	*e*P	**PKiKP**	**21 13 53.9**	**-1.5**	
TSSA				*i* x	x	21 14 58.0		
TDK	**Taldyqorghan**	**113.56**	**311**	*i* PKiKP	**PKiKP**	**21 13 54.2**	**-0.6**	
TDK				*e*		21 14 58.5		
TDK	**Taldyqorghan**	**113.56**	**311**	*e*PKiKP	**PKiKP**	**21 13 54.2**	**-0.6**	
TDK				*e*PP	**PP**	**21 14 58.6**	**-0.6**	
AJM	**Ajmer**	**113.57**	**291**	*ex*	x	21 13 44.5		
THN	**Thein Dam**	**113.79**	**297**	*e*P	**PKiKP**	**21 13 56.0**	**+0.4**	
THN				*i* x	x	21 14 59.4		
KURK	**Kurchatov**	**113.94**	**317**	*d* *i* PKiKP	**PKiKP**	**21 13 54.3**	**-1.0**	
KURK				pmax	pmax			
	comp=Z,35nm,0.8s							
KURK	**Kurchatov**	**113.94**	**317**	P	**PKiKP**	**21 13 54.3**	**-1.0**	
KURBB	**Kurchatov Arra**	**113.99**	**317**	Pdiff	**Pdif**	**21 10 08.7**	**+0.9**	
	comp=Z,0.4nm,0.6s,baz=108,slow=3.2,SNR=4.9							
KURBB				PKiKP	**PKiKP**	**21 13 54.6**	**-0.7**	
	comp=Z,20nm,0.7s,baz=98,slow=1.9,SNR=109							
KURBB				PP	**PP**	**21 15 01.3**	**-0.6**	
	comp=Z,11nm,1.0s,baz=96,slow=6.7,SNR=6.7							
KURBB				SKP	**SKPdf**	**21 16 34.1**	**+0.8**	
	comp=Z,7.1nm,0.8s,baz=106,slow=2.0,SNR=6.8							
KURBB				PKKPbc	**PKKPbc**	**21 24 41.1**	**+1.3**	
	comp=Z,1.2nm,0.7s,baz=270,slow=4.0,SNR=7.1							
KURBB				SKKPbc	**SKKPbc**	**21 27 26.3**	**-1.9**	
	comp=Z,2.4nm,0.8s,baz=272,slow=3.7,SNR=13							
MDOK	**Medeo**	**114.33**	**309**	*i* PKiKP	PKPdf	21 13 55.8	-0.7	
MDOK				*e*		21 15 03.7		
MDOK	**Medeo**	**114.33**	**309**	*e*PKiKP	PKPdf	21 13 55.8	-0.7	
MDOK				*e*PP	**PP**	**21 15 03.7**	**-1.0**	
TNSS	**Tian-Shan**	**114.39**	**309**	*i* PKiKP	PKPdf	21 13 55.9	-1.0	
TNSS	**Tian-Shan**	**114.39**	**309**	*e*PKiKP	PKPdf	21 13 55.1	-1.8	
AAA	**Alma-Ata**	**114.43**	**309**	*i* PKiKP	PKPdf	21 13 55.9	-0.7	
AAA	**Alma-Ata**	**114.43**	**309**	*e*PKiKP	PKPdf	21 13 55.1	-1.5	
TULEG	**Thule**	**114.73**	**14**	*i* P	**PKiKP**	**21 13 56.3**	**+0.2**	
ULHL	**Ulahol**	**114.82**	**308**	P	**PKiKP**	**21 13 57.8**	**+0.2**	
	SNR=5.4							
KUU	**Kurty**	**114.92**	**310**	*i* PKiKP	PKPdf	21 13 57.0	-0.4	
KUU	**Kurty**	**114.92**	**310**	*e*PKiKP	PKPdf	21 13 57.0	-0.4	
KSH2	**Kashi**	**114.97**	**304**	PKP	PKPdf	21 13 57.6	-0.3	
KSH2				PPMZ				
	comp=Z,630nm,5.5s							
TKM2	**Tokmak 2**	**115.36**	**309**	P	**PKPdf**	**21 13 58.2**	**-0.4**	
	SNR=19							
CHMS	**Chumysh**	**115.99**	**309**	P	**PKPdf**	**21 13 59.2**	**-0.3**	
	SNR=7.4							
SGDS	**Sogindy**	**116.11**	**309**	*e*PKiKP	**PKPdf**	**21 13 59.3**	**-0.5**	
AAK	**Ala-Archa**	**116.15**	**308**	*d* *i* PKiKP	**PKPdf**	**21 13 59.6**	**-0.4**	
AAK				pmax	pmax			
	comp=Z,21nm,1.7s							
AAK	**Ala-Archa**	**116.15**	**308**	P	**PKPdf**	**21 13 58.7**	**-1.3**	
AAK	**Ala-Archa**	**116.15**	**308**		**PKPdf**	**21 13 58.3**	**-1.8**	
USP	**Ospenovka**	**116.19**	**309**	P	**PKPdf**	**21 13 59.8**	**-0.1**	
	SNR=13							
SJG	**San Juan**	**116.61**	**80**	PKiKP	**PKPdf**	**21 14 00.8**	**-0.6**	
SJG	**San Juan**	**116.61**	**80**		**PKPdf**	**21 14 00.8**	**-0.6**	
BTLS	**Baital**	**116.64**	**311**	*i* PKiKP	**PKPdf**	**21 14 00.4**	**-0.3**	
BTLS				*e*		21 15 19.6		
BTLS	**Baital**	**116.64**	**311**	*e*PKiKP	**PKPdf**	**21 14 00.4**	**-0.3**	
BTLS				*e*PP	**PP**	**21 15 19.7**	**-0.7**	
EKS2	**Erkin-Say**	**116.67**	**308**	P	**PKiKP**	**21 14 01.1**	**+0.1**	
	SNR=15							
HUMP	**Col San Antoni**	**116.90**	**80**		**PKPdf**	**21 14 01.3**	**-0.6**	
NEEM	**North Greenlan**	**118.04**	**11**	*i* P	**PKPdf**	**21 14 02.8**	**-0.1**	
DZA	**Taraz**	**118.49**	**308**	*i* PKiKP	**PKPdf**	**21 14 04.0**	**-0.3**	
DZA	**Taraz**	**118.49**	**308**	*e*PKiKP	**PKPdf**	**21 14 04.0**	**-0.3**	
VOI	**Vohitsoka**	**118.64**	**229**	P	**PKPdf**	**21 14 04.3**	**-1.1**	
VOI	**Vohitsoka**	**118.64**	**229**		**PKPdf**	**21 14 03.5**	**-2.0**	
VOI	**Vohitsoka**	**118.64**	**229**	P	**PKPdf**	**21 14 06.1**	**+0.6**	
NOR	**Nord**	**118.76**	**3**	*i* P	**PKPdf**	**21 14 03.4**	**-0.4**	
BVAR	**Borovoye Array**	**119.05**	**320**	PKP	**PKPdf**	**21 14 04.8**	**-0.2**	
	comp=Z,46nm,0.6s,baz=111,slow=1.3,SNR=127							
BVAR				PP	**PP**	**21 15 34.3**	**-2.2**	
	comp=Z,4.7nm,0.7s,baz=92,slow=8.9,SNR=4.8							
BVAR				SKP	**SKPdf**	**21 16 44.4**	**+1.4**	
	comp=Z,8.6nm,0.8s,baz=64,slow=3.4,SNR=4.1							
BORK	**Borovoye**	**119.09**	**320

JLN	Jalan Bani Buh	126.38	283		P		PKPdf	21 14 20.0	-0.1
WBK	Wadi Bani Khal	126.86	283		P		PKiKP	21 14 21.4	-0.2
IVI	Ivigtut	127.09	28	*i*	P		PKPdf	21 14 17.4	-2.8
LESE	Lesego, Limpop	127.24	213		P		PKiKP	21 14 25.3	+2.8
WSAR	Wadi Sarin	127.27	284		P		PKPdf	21 14 19.0	-2.8
MHTO	MHTO	127.49	281		P		PKiKP	21 14 23.0	+0.2
	SNR=6.0								
JMDO	Jabal Madar	127.61	283		P		PKPdf	21 14 22.2	-0.2
DQM	DQM	127.68	280		P		PKPdf	21 14 22.6	0.0
SMDO	Samad	127.77	283		P		PKPdf	21 14 22.7	-0.1
	SNR=7.7								
BIDO	Bidbid	127.77	284		P		PKPdf	21 14 22.9	+0.2
	SNR=5.0								
VADS	Vadso	128.00	348		*e*PKPdf		PKPdf	21 14 21.7	0.0
VADS					*e*PP		PP	21 16 35.3	+0.7
VADS					*e*			21 19 37.5	
VADS					*i*			21 20 59.6	
VADS					*e*PS		PS	21 26 49.9	-2.0
VADS					*e*SS		SS	21 33 03.1	+2.1
NRS	Narsarsuaq	128.29	27	*i*	P		PKPdf	21 14 21.7	-0.7
NBPN	Ponto Novo - B	128.31	124		PKP		PKPdf	21 14 24.2	+0.2
MAKGR	Makgori	128.36	207	*i*	P		PKiKP	21 14 24.7	0.0
SOEG	Soedalen	128.47	15	*i*	P		PKPdf	21 14 22.6	0.0
SCO	Scoresbysund	128.47	10	*i*	P		PKPdf	21 14 22.8	+0.2
BSY	Bisya	128.49	283		P		PKPdf	21 14 23.4	-0.7
HOQ	Hoqain	128.52	284		P		PKPdf	21 14 22.6	-1.5
ANGG	Ammassalik, Gr	128.57	20	*i*	P		PKPdf	21 14 21.8	-1.1
LVZ	Lovozero	128.62	345		PKiKP		PKPdf	21 14 22.7	-0.3
LVZ	Lovozero	128.62	345				PKPdf	21 14 22.7	-0.3
LBTB	Lobatse	128.71	208		P		PKiKP	21 14 25.4	0.0
KEV	Kevo	128.74	349		PKiKP		PKPdf	21 14 22.7	-0.4
KEV	Kevo	128.74	349				PKPdf	21 14 22.6	-0.4
KEV	Kevo	128.74	349		PKP		PKPdf	21 14 23.1	0.0
KIRV	Kirov	129.04	330	*d*	*i*PKiKP		PKPdf	21 14 23.8	-0.2
APA	Apatity	129.18	345	⇓	*e*PKiKP		PKPdf	21 14 21.9	-2.1
APA					*e*			21 16 38.2	
APA					*e*SS		SS	21 33 11.2	-4.3
ARQ	Araqi	129.20	284		P		PKPdf	21 14 25.2	-0.2
ARA0	ARCESS Array S	129.20	349		*e*PKPdf		PKPdf	21 14 24.0	0.0
ARA0					IVmB_BB			21 14 24.6	
	comp=Z,882nm,1.6s								
ARA0					*e*PP		PP	21 16 42.6	+0.2
ARA0					*e*			21 19 41.7	
ARA0					*i*			21 21 08.8	
ARA0					*e*SP		SP	21 25 53.8	+2.8
ARA0					*e*SS		SS	21 33 18.6	+2.9
ARCES	ARCESS Array B	129.20	349		PKhKP		PKPpre	21 14 12.2	
	comp=Z,9.3nm,1.2s,baz=10,slow=0.5,SNR=7.9								
ARCES					PKP		PKPdf	21 14 23.7	-0.4
	comp=Z,26nm,0.6s,baz=47,slow=1.3,SNR=68								
ARCES					SKPbc		SKPbc	21 16 51.4	+2.4
	comp=Z,18nm,0.9s,baz=35,slow=4.4,SNR=9.2								
ARCES					SKP		SKPdf	21 17 03.9	+2.1
	comp=Z,15nm,0.9s,baz=29,slow=2.8,SNR=5.1								
SOHO	SOHO	129.30	285	*i*	PKiKP		PKPdf	21 14 25.1	-0.5
	SNR=32								
SOHO	SOHO	129.30	285		P		PKPdf	21 14 24.9	-0.7
JNW	Jan Mayen West	129.50	4	*e*	PKPdf		PKiKP	21 14 25.1	-0.3
JNW				*ep*	PKPdf		PP	21 16 44.3	+0.1
JNW				*i*				21 21 08.8	
JMIC	Jan Mayen	129.54	4	*e*	PKPdf		PKiKP	21 14 25.4	0.0
JMIC				*ep*	PKPdf		PP	21 16 44.0	-0.5
JMIC				*i*				21 21 08.8	
JNE	Jan Mayen East	129.55	4	*e*	PKPdf		PKiKP	21 14 25.4	0.0
JNE				*ep*	PKPdf		PP	21 16 44.3	-0.2
JNE				*i*				21 21 10.6	
JMI	Jan Mayen	129.58	4	*ep*	PKPdf		pPKPdf	21 16 44.3	-1.8
JMI				*i*				21 21 10.6	
DMTO	DMTO	129.62	276		P		PKPdf	21 14 25.8	-0.5
MDH	Madha	129.66	286		P		PKPdf	21 14 21.6	-4.6
UOSS	Minazif	129.70	286		PKiKP		PKPdf	21 14 25.6	-0.7
UOSS	Minazif	129.70	286		P		PKPdf	21 14 24.2	-2.2
UOSS	Minazif	129.70	286				PKPdf	21 14 24.4	-1.9
UOSS	Minazif	129.70	286		PKP		PKPdf	21 14 26.1	-0.2
HATD	Hatta, Dubai	129.75	285	*i*	PKiKP		PKPdf	21 14 26.0	-0.5
	SNR=10								
HATD	Hatta, Dubai	129.75	285		P		PKPdf	21 14 25.4	-1.0
MSFE	Esma-Masafi	129.79	286	*i*	PKiKP		PKPdf	21 14 26.3	-0.2
	SNR=6.7								
ASHO	Ashiyiah	129.80	285	*i*	PKiKP		PKPdf	21 14 26.3	-0.3
	SNR=13								
ASHO	Ashiyiah	129.80	285		P		PKPdf	21 14 25.0	-1.6
SKOMA	Sekoma	129.87	207	*i*	P		PKiKP	21 14 27.6	-0.1
SHME	Shamm	129.89	287		PKiKP		PKPdf	21 14 26.2	-0.4
SHME	Shamm	129.89	287		P		PKPdf	21 14 24.8	-1.8
JETT	Jettan, Norway	129.98	351	*e*	PKPdf		PKPdf	21 14 24.4	-1.1
JETT				*ep*	PKPdf		pPKPdf	21 16 45.0	-1.9
JETT				*i*				21 21 14.0	
ALNE	Al Ain	130.00	284	*i*	PKiKP		PKPdf	21 14 26.5	-0.4
	SNR=13								
ALNE	Al Ain	130.00	284		P		PKPdf	21 14 27.3	+0.4
	SNR=7.4								
KTK1	Kautokeino	130.04	350	*e*	PKPdf		PKiKP	21 14 26.4	-0.1
KTK1				*ep*	PKPdf		pPKPdf	21 16 45.3	-1.7
KTK1				*e*				21 19 48.6	
KTK1				*i*				21 21 10.6	
TRO	Tromso	130.10	352	*e*	PKPdf		PKiKP	21 14 26.8	+0.2
TRO				*e*	PP		PP	21 16 49.0	+0.9
TRO				*e*				21 19 52.0	
TRO				*i*				21 21 12.3	
TRO				*e*SS		SS		21 33 29.7	+3.3
NAZ	Nazwa, Dubai	130.20	286	*i*	PKPdf		PKPdf	21 14 26.3	-0.9
	SNR=11								
NAZ	Nazwa, Dubai	130.20	286		P		PKPdf	21 14 26.8	-0.5
	SNR=7.2								
FAQ	Al Faqa, Dubai	130.23	285	*i*	PKiKP		PKPdf	21 14 27.0	-0.3
	SNR=6.4								
ADZR	Andozero	130.44	340	*e*	PKiKP		PKPdf	21 14 22.9	-3.6
ADZR					pmax		pmax		
	comp=Z,45nm,1.0s								
ASUD	Al Ashush, Dub	130.45	285	*i*	PKiKP		PKPdf	21 14 27.4	-0.3
	SNR=6.5								
ASUD	Al Ashush, Dub	130.45	285		P		PKiKP	21 14 28.4	-0.3
	SNR=6.2								
KDWAN	Kaudwane	130.55	208	*i*	P		PKiKP	21 14 29.2	0.0
AJN	Ajban	130.75	285	*i*	PKiKP		PKPdf	21 14 27.6	-0.7
	SNR=7.9								
AJN	Ajban	130.75	285		P		PKPdf	21 14 28.6	+0.3
	SNR=5.2								
WHFO	Wadi Hawf	130.76	276		P		PKPdf	21 14 27.8	-0.7
NBPS	Pedro II - PI	130.98	116		PKP		PKPdf	21 14 29.3	+0.1
NBTA	Tacaratu-PE	131.02	124		PKP		PKiKP	21 14 30.0	-0.2
MZR	Muzera	131.92	283	*i*	PKiKP		PKPdf	21 14 30.7	+0.2
	SNR=11								
KLMR	Klimovskoe	132.03	336	*e*	PKiKP		PKPdf	21 14 28.8	-0.8
KLMR				*e*				21 16 57.9	
KLMR					pmax		pmax		
	comp=Z,141nm,1.4s								
LOF	Lofoten	132.15	354	*e*	PKPdf		PKiKP	21 14 30.4	-0.4
LOF				*e*	PP		PP	21 17 01.6	+0.6
LOF				*e*	PKSdf		PKSdf	21 18 07.0	+1.5
LOF				*e*				21 20 00.5	
LOF				*i*				21 21 17.4	
LOF				*e*SS		SS		21 33 54.9	+3.9
STEI	Steigen	132.16	353	*e*	PKPdf		PKPdf	21 14 29.4	-0.2
STEI				*e*	PP		PP	21 17 01.9	+0.8
STEI				*e*				21 20 03.9	
STEI				*i*				21 21 19.1	
SBBR	Sobral	132.32	116		PKP		PKPdf	21 14 31.9	+0.3
BELG	Belogornoye	132.61	323	*d*	*i*PKiKP		PKPdf	21 14 30.7	-0.2
FAUS	Fauske	132.68	353	*e*	PKPdf		PKPdf	21 14 29.8	-0.9
FAUS				*e*	PP		PP	21 17 04.9	+0.5
FAUS				*e*				21 20 07.4	
FAUS				*e*	SKSdf		SKSdf	21 20 45.3	+1.3
FAUS				*i*				21 21 20.8	
FAUS				*e*SS		SS		21 33 60.0	+2.6
JRN	Qarnain Island	132.73	285		P		PKPdf	21 14 31.1	-0.9
KOOLE	Kule	132.73	204	*i*	P		PKiKP	21 14 33.9	+0.2
NBMO	Morrinhos-CE	132.74	116		PKP		PKPdf	21 14 33.0	+0.6
VAGH	Vaagaholmen	133.54	354	*e*	PKPdf		PKPdf	21 14 32.7	+0.5
VAGH				*ep*	PKPdf		pPKPdf	21 16 52.0	-1.7
VAGH				*e*	PKSdf		PKSdf	21 18 09.9	+1.8
VAGH				*e*				21 20 10.8	
VAGH				*i*				21 21 24.2	
VAGH				*e*SS		SS		21 34 10.4	+2.9
BORG	Borgarnes	133.62	13		PKP		PKPdf	21 14 33.0	+0.6
	comp=Z,25nm,0.9s,baz=334,slow=1.3,SNR=19								
BORG					SKPbc		SKPab	21 17 06.6	-1.2
	comp=Z,13nm,0.9s,baz=217,slow=1.8,SNR=8.4								
BORG	Borgarnes	133.62	13		PKiKP		PKPdf	21 14 33.0	+0.6
BORG	Borgarnes	133.62	13				PKPdf	21 14 32.4	0.0
RAUS	Rausandaksla	133.74	353	*e*	PKPdf		PKiKP	21 14 33.4	-0.7
RAUS				*e*	PP		PP	21 17 11.9	+0.9
RAUS				*e*	PKSdf		PKSdf	21 18 08.2	-0.4
RAUS				*e*				21 20 14.2	
RAUS				*e*	SKSac		SKSac	21 20 48.8	+1.5
RAUS				*i*				21 21 24.2	
RAUS				*e*SS		SS		21 34 13.7	+3.7
KONS	Konsvik	133.78	354	*e*	PKPdf		PKiKP	21 14 33.7	-0.4
KONS				*e*	PP		PP	21 17 12.2	+1.0
KONS				*e*	PKSdf		PKSdf	21 18 09.7	+1.1
KONS				*e*				21 20 15.9	
KONS				*i*				21 21 24.2	
KONS				*e*SS		SS		21 34 11.8	+1.5
GRTLG	Ghanzi	133.80	206	*i*	P		PKPdf	21 14 34.7	+0.4
MOR8	Moi Rana	133.94	353	*e*	PKPdf		PKPdf	21 14 33.1	0.0
MOR8				*e*	SKPdf		SKiKP	21 17 11.9	-1.1
MOR8				*e*	PKSdf		PKSdf	21 18 09.7	+0.6
MOR8				*e*				21 20 14.2	
MOR8				*i*				21 21 25.9	
MOR8				*e*SS		SS		21 34 13.7	+1.2
STOK	Stokkvaagen	133.95	354	*e*	PKPdf		PKPdf	21 14 33.7	+0.7
STOK				*e*	SKPdf		SKiKP	21 17 11.9	-1.0
STOK				*e*	PKSdf		PKSdf	21 18 08.8	-0.1
STOK				*e*				21 20 17.6	
STOK				*e*	SKSac		SKSac	21 20 49.6	+1.8
STOK				*i*				21 21 25.9	
STOK				*e*SS		SS		21 34 15.5	+3.2
LEIR	Leirfjorden	134.15	353	*e*	PKPdf		PKPdf	21 14 34.1	+0.7
LEIR				*e*	SKPdf		SKiKP	21 17 12.2	-1.2
LEIR				*e*	PKSdf		PKSdf	21 18 09.7	+0.4
LEIR				*e*				21 20 17.6	
LEIR				*i*				21 21 27.6	
LEIR				*e*SS		SS		21 34 17.6	+2.8
KSANE	Kasane	135.09	213	*i*	P		PKPdf	21 14 37.0	+0.2
ONGWA	Qangwa	135.45	207	*i*	P		PKiKP	21 14 38.7	-0.5
LSZ	Lusaka	135.51	218		P		PKPdf	21 14 37.8	+0.2
LKRN	Lenkeran, Azer	135.79	304		PKiKP		PKPdf	21 14 37.0	-0.3
NSS	Namsos	135.81	354	*e*	PKPdf		PKPdf	21 14 37.1	+0.5
NSS				*e*	SKPdf		SKPdf	21 17 15.2	+1.2
NSS				*e*				21 20 26.1	
NSS				*i*				21 21 34.5	
MAK	Makhachkala	135.82	311	*e*	P		Pdif	21 11 45.6	+0.6
MAK				*i*				21 14 37.7	
MAK				*e*				21 17 24.0	
MAK				*e*SSS		SSS		21 39 56.2	
MAK					pmax		pmax		
	comp=Z,163nm,0.8s								
MOS	Moscow	135.99	331	*i*	PKiKP		PKPdf	21 14 38.0	+0.9
MOS				*e*				21 16 57.0	
MOS				*e*				21 17 25.8	
MOS				*e*	PPP		PPP	21 20 30.7	
MOS				*e*				21 20 53.0	
MOS				*e*SS		SS		21 34 41.4	+4.1
MOS					pmax		pmax		
	comp=Z,80nm,0.9s								
FINES	FINESS Array B	135.99	343		PKhKP		PKPpre	21 14 24.4	
	comp=Z,2.6nm,0.6s,baz=64,slow=3.8,SNR=15								
FINES					PKP		PKPdf	21 14 36.5	-0.5
	comp=Z,5.5nm,0.5s,baz=100,slow=3.0,SNR=7.0								
FINES					SKPbc		SKPbc	21 17 13.7	+1.8
	comp=Z,54nm,0.8s,baz=62,slow=4.5,SNR=29								
FINES					SKKPbc		SKKPbc	21 26 15.8	+1.1
	comp=Z,1.6nm,0.8s,baz=204,slow=4.2,SNR=3.5								
PUL	Pulkovo	136.06	339	⇑	*i*PKiKP		PKiKP	21 14 38.7	-0.2
PUL					pmax		pmax		
	comp=Z,42nm,0.5s								
VRH	Novokhopyorsk	136.42	324	*e*	PKHKP		PKPpre	21 14 26.4	
VRH					pmax		pmax		
	comp=Z,6.0nm,0.5s								
SEKA	Sheki	136.48	308		PKiKP		PKPdf	21 14 38.3	-0.3
MNGR	Mingechevir, A	136.66	308		PKiKP		PKPdf	21 14 38.6	-0.3
OBN	Obninsk	136.85	331	⇑	P		PKPdf	21 14 38.8	0.0
OBN	Obninsk	136.85	331	*d*	*i*PKiKP		PKPdf	21 14 38.7	0.0
OBN				*i*				21 17 27.4	
OBN				*i*	PPP		PPP	21 20 35.5	
OBN				*i*				21 20 58.1	
OBN					pmax		pmax		
	comp=Z,59nm,0.9s								
OBN					pmax		pmax		
	comp=Z,94nm,0.8s								
OBN	Obninsk	136.85	331				PKPpre	21 14 27.4	
OBN					PKPdf		PKPdf	21 14 37.6	-1.2
TSUM	Tsumeb	137.16	203				PKPdf	21 14 39.2	-1.4
LPSR	Galich'ya Gora	137.19	327	*e*	PKiKP		PKPdf	21 14 37.0	-2.4
LPSR					pmax		pmax		
	comp=Z,70nm,1.0s								
GANJ	Ganja	137.25	308		PKiKP		PKPdf	21 14 39.7	-0.3
KIBK	Kibwezi	137.40	242		PKP		PKPdf	21 14 41.7	+0.5
KIBK	Kibwezi	137.40	242		P		PKiKP	21 14 42.3	-1.0
VORR	Voronezh	137.54	326	*e*	PKiKP		PKPdf	21 14 38.2	-1.9
VORR					pmax		pmax		
	comp=Z,90nm,0.8s								
VSR	Storozhevoye	137.80	325	*e*	PKiKP		PKPdf	21 14 38.0	-2.6
VSR					pmax		pmax		
	comp=Z,50nm,1.0s								
VORD	Divnogorie	137.87	325	*e*	PKiKP		PKPdf	21 14 38.4	-2.3
VORD					pmax		pmax		
	comp=Z,60nm,0.9s								
MOL	Molde	138.13	356	*e*	PKPdf		PKPpre	21 14 33.7	
MOL				*e*	SKPdf		SKPdf	21 17 19.5	+1.3
MOL				*e*	PP		PP	21 17 38.8	+0.8
MOL				*e*				21 20 43.2	
MOL				*i*				21 21 41.3	
NAX	Nakhchivan	138.21	306		PKiKP		PKPdf	21 14 41.5	-0.4
DOMB	Dombas	138.53	355	*e*	PKPdf		PKPpre	21 14 34.4	
DOMB				*e*	SKPdf		SKPbc	21 17 20.2	+0.9
DOMB				*e*				21 20 43.2	
DOMB				*i*				21 21 41.3	
GNI	Garni	138.55	307		PKiKP		PKPdf	21 14 43.4	+0.8
AKN	Aaknes	138.55	356	*e*	PKPdf		PKPpre	21 14 33.7	
AKN				*e*	SKPdf		SKPbc	21 17 19.9	+0.5
AKN				*e*				21 20 43.2	
AKN				*i*				21 21 41.3	
KBZ	Khabaz	138.80	313		PKhKP		PKPpre	21 14 35.4	
	comp=Z,5.2nm,0.8s,baz=199,slow=6.5,SNR=5.6								
KBZ					SKPbc		SKiKP	21 17 23.1	-0.5
	comp=Z,5.6nm,0.8s,baz=108,slow=6.4,SNR=4.0								
KBZ					PP		PP	21 17 42.3	-0.9
	comp=Z,13nm,1.0s,baz=82,slow=11,SNR=5.0								
KIV	Kislovodsk	138.86	314	⇑	P		PKPdf	21 14 37.4	-5.5
KIV	Kislovodsk	138.86	314	*i*	PKPdf		PKPdf	21 14 43.2	+0.2
	SNR=6.1								
KIV	Kislovodsk	138.86	314	*e*	PKHKP		PKPpre	21 14 34.3	
KIV				*i*				21 14 42.2	
KIV				*e*				21 17 40.0	
KIV				*e*	PPP		PPP	21 20 49.4	
KIV				*e*				21 20 52.6	
KIV				*e*SS		SS		21 35 08.0	-4.2
KIV				*e*SSS		SSS		21 40 34.7	
KIV					pmax		pmax		
	comp=Z,24nm,1.0s								
FOO	Floro	139.24	357	*e*	PKPdf		PKPpre	21 14 35.4	
FOO				*e*	SKPdf		SKPbc	21 17 21.2	+0.1
FOO				*e*	PKSdf		PKSdf	21 18 19.9	+1.4
FOO				*e*				21 20 51.8	
FOO				*i*				21 21 41.3	
FOO				*e*SS		SS		21 35 15.9	+1.7
RAYN	Ar Rayn	139.27	282	⇑	PKHKP		PKPpre	21 14 36.7	
RAYN	Ar Rayn	139.27	282				PKPpre	21 14 35.3	
NB2	NORSAR Subarra	139.29	353		PKP		PKPpre	21 14 35.0	
	comp=Z,9.9nm,0.8s,baz=16,slow=3.2								
NB2					SKPa			21 17 23.1	
	comp=Z,387nm,2.5s,baz=12,slow=2.9								
NOA	NORSAR Array B	139.29	353		PKhKP		PKPpre	21 14 34.8	
	comp=Z,1.8nm,0.6s,baz=16,slow=3.0,SNR=34								
NOA					PKP		PKPdf	21 14 43.0	-0.1
	comp=Z,1.3nm,0.5s,baz=14,slow=2.4,SNR=3.8								
NOA					SKPbc		SKiKP	21 17 23.4	-0.8
	comp=Z,17nm,0.9s,baz=14,slow=4.4,SNR=6.5								
NC602	NORSAR Array S	139.55	352	*e*			PKPpre	21 14 35.1	
NC602				*e*	SKPdf		SKPbc	21 17 22.2	+0.2
NC602				*e*	PKSdf		PKSdf	21 18 19.9	+0.8
NC602				*e*				21 20 50.0	
NC602				*i*				21 21 46.4	
NC602				*e*SS		SS		21 35 21.4	+3.4
HYA	Hoyanger	139.61	356	*e*	PKPdf		PKPpre	21 14 36.1	
HYA				*e*	SKPdf		SKPbc	21 17 21.9	-0.3
HYA				*e*	PKSdf		PKSdf	21 18 19.4	+0.2
HYA				*e*				21 20 50.0	
HYA				*e*	SKSdf		SKSdf	21 20 56.9	+0.8
HYA				*i*				21 21 44.7	
HYA				*e*SS		SS		21 35 21.0	+2.4
ERBR	Yeremizino-Bor	139.63	317	*i*	PKHKP		PKPpre	21 14 36.7	
ERBR					pmax		pmax		
	comp=Z,41nm,0.7s								
SUE	Sulen	139.79	358	*e*	PKPdf		PKPpre	21 14 36.4	
SUE				*e*	SKPdf		SKPbc	21 17 22.2	-0.4
SUE				*e*				21 20 51.8	
SUE				*i*				21 21 44.7	
HFS	Hagfors	139.83	351		PKhKP		PKPpre	21 14 36.7	
	comp=Z,25nm,0.4s,baz=62,slow=3.5,SNR=104								
HFS					SKPbc		SKiKP	21 17 24.7	-0.6
	comp=Z,31nm,0.8s,baz=333,slow=1.7,SNR=14								
LABN	Labinsk	139.91	315	*i*	PKHKP		PKPpre	21 14 38.9	
LABN					pmax		pmax		
	comp=Z,16nm,0.6s								
SKAR	Skarslia	139.94	355	*e*			PKPpre	21 14 34.1	
SKAR				*e*	SKPdf		SKPdf	21 17 22.3	+0.7
SKAR				*e*	PKSdf		PKSdf	21 18 19.9	-0.1
SKAR				*e*				21 20 53.5	
SKAR				*e*	SKSdf		SKSdf	21 20 58.1	+1.3
SKAR				*i*				21 21 46.4	
SKAR				*e*SS		SS		21 35 25.9	+3.3
ASK	Askoy	140.34	357	*e*	PKPdf		PKPpre	21 14 38.7	
ASK				*e*	SKPdf		SKPbc	21 17 23.2	-0.9
ASK				*e*	PKSdf		PKSdf	21 18 21.6	+1.1
ASK				*e*				21 20 53.5	
ASK				*e*	SKSdf		SKSdf	21 20 58.0	+0.6
ASK				*i*				21 21 48.1	
ASK				*e*SS		SS		21 35 28.6	+1.6
BER	Bergen	140.44	357	*e*	PKPdf		PKPdf	21 14 38.4	-6.7
BER				*e*	SKPdf		SKPbc	21 17 23.5	-0.8
BER				*e*	PKSdf		PKSdf	21 18 21.9	+1.2
BER				*e*	SKSdf		SKSdf	21 20 58.8	+1.4
BER				*i*				21 21 48.1	
BER				*e*SS		SS		21 35 31.5	+3.5
LRW	Lerwick	140.73	2	*e*	P		PKPdf	21 14 39.0	-6.6
ODD1	Odda	140.83	356	*e*	PKPdf		PKPdf	21 14 40.0	-5.9
ODD1				*e*	SKPdf		SKPbc	21 17 24.5	-0.9
ODD1				*i*				21 21 46.4	
KONO	Kongsberg	140.83	353	⇓	PKHKP		PKPpre	21 14 40.1	
KONO	Kongsberg	140.83	353	*e*	PKPdf		PKPdf	21 14 40.4	-5.5
KONO				*e*	SKPdf		SKPdf	21 17 23.9	+0.8
KONO				*e*	SKSdf		SKSdf	21 20 59.5	+1.4
KONO				*i*				21 21 46.4	
KONO				*e*SS		SS		21 35 36.5	+3.9
KONO	Kongsberg	140.83	353				PKPpre	21 14 40.6	
MNK	Minsk	140.92	336	*i*	PKP		PKPdf	21 14 42.0	-4.2
	comp=E,26nm,1.0s								
MNK				*i*	PKP		PKPdf	21 14 42.0	-4.2
	comp=N,11nm,0.9s								
MNK				*i*	PKP		PKPdf	21 14 42.0	-4.2
	comp=Z,84nm,0.9s,baz=41								
MNK				*i*	pPKP		pPKPdf	21 17 01.3	-6.3
MNK				*i*	PP		PP	21 17 52.4	-2.8
MNK				*i*	sPKP		sPKPdf	21 17 58.5	-7.7
MNK				*i*	SKS		SKSdf	21 20 54.1	-4.5
MNK				*i*	PPP		PPP	21 21 05.9	
MNK				*i*	SKKS		SKKSdf	21 30 14.4	-10
MNK				*i*	SS		SS	21 35 31.9	-2.4
MNK				*i*	SSS		SSS	21 40 48.6	
MNK				*i*	LR		LR	22 05 38.4	
MNK	Minsk	140.92	336	*i*	PKHKP		PKPpre	21 14 41.9	
MNK				*i*				21 17 58.5	
MNK				*i*				21 20 54.0	
MNK				*i*	PPP		PPP	21 21 05.8	
MNK				*i*	SS		SS	21 35 31.9	-2.4
MNK					pmax		pmax		
	comp=N,11nm,0.9s								
MNK					pmax		pmax		
	comp=E,26nm,1.0s								
MNK					pmax		pmax		
	comp=Z,84nm,0.9s								
STRU	Stroemstad	141.25	352	*i*	P		PKPdf	21 14 41.7	-4.9
BLS5	Blasjo	141.33	356	*e*	PKPdf		PKPdf	21 14 40.4	-6.4
BLS5				*e*	SKPdf		SKPdf	21 17 24.9	+0.9
BLS5				*e*	PKSdf		PKSdf	21 18 22.2	-0.1
BLS5				*e*	SKSac		SKSac	21 21 07.3	+1.9
BL

baz=18,slow=1.5
BSEG e PKPbc **PKPbc 21 14 58.9 +0.9**
baz=17,slow=2.4
IOMK Kirk Michael 146.35 6 e **PKPdf 21 14 55.3 -0.3**
ILTH Belurgan, Co L 146.37 8 PKPdf **PKPdf 21 14 56.7 +1.1**
ILTH PKP **PKPbc 21 14 57.2 -0.9**
ILTH Belurgan, Co L 146.37 8 e **PKPdf 21 14 56.7 +1.1**
IGLA Glengowla, Co 146.46 12 PKPdf **PKPdf 21 14 56.3 +0.5**
IGLA PKP **PKPbc 21 14 58.5 +0.1**
GDLE Glaisdale, N Y 146.46 2 e **PKPdf 21 14 56.1 +0.4**
H07S1 FLORES T-PHASE 146.50 49 PKPbc **PKPbc 21 14 59.9 +0.8**
SNR=7.8
VASR Vaslui 146.54 326 ⇑P **PKPbc 21 14 59.9 +1.0**
BEIL Beino 146.57 301 e **PKPbc 21 15 00.3 +1.0**
KWP Kalwaria Pacla 146.71 335 e PKP **PKPdf 21 14 56.6 +0.2**
BR131 Keskin Array S 146.72 312 d i PKIKP **PKPdf 21 14 56.0 -0.9**
BR131 Keskin Array S 146.72 312 **PKPdf 21 14 55.8 -1.1**
BRTR Keskin Array B 146.73 312 PKP **PKPdf 21 14 56.4 -0.5**
comp=Z,67nm,0.7s,baz=139,slow=2.9,SNR=112
BRTR PKPbc **PKPbc 21 14 59.3 -0.5**
comp=Z,68nm,0.7s,baz=138,slow=4.3,SNR=103
BRTR pPKPbc **pPKPdf 21 17 19.8 +1.3**
comp=Z,2.8nm,0.6s,baz=107,slow=1.3,SNR=2.3
BRTR SKKPbc SKKPbc 21 25 31.4 +0.2
comp=Z,2.5nm,0.8s,baz=198,slow=3.6,SNR=5.2
BRTR Keskin Array B 146.73 312 **PKPdf 21 14 54.7 -2.2**
KIRS Kirsehir-Merke 146.77 310 ⇑P **PKPbc 21 15 00.2 +0.3**
HWQ Hawqa 146.83 301 e **PKPbc 21 15 00.6 +0.4**
PRAR RASCA 146.84 329 ⇑P **PKPbc 21 15 00.2 +0.5**
BIR Birlad 146.88 326 ⇑P **PKiKP 21 15 00.9 -0.7**
BIR Birlad 146.88 326 ⇑PKP2 **PKiKP 21 15 00.9 -0.7**
HPK Haverah Park 146.89 3 e **PKPdf 21 14 56.8 +0.3**
VLDR Vladesti 146.91 325 ⇑P **PKPbc 21 15 00.7 +0.8**
TLCR 146.92 323 ⇓P **PKPbc 21 15 00.4 +0.5**
TLCR 146.92 323 ⇓PKP2 **PKPbc 21 15 00.4 +0.5**
ZAHL Zahle 146.98 300 e **PKPbc 21 15 01.3 +0.7**
GIRR Girov 146.99 328 ⇓P **PKPbc 21 15 00.7 +0.7**
RUE Ruedersdorf 147.04 346 e PKPdf **PKPdf 21 14 58.0 +1.2**
baz=18,slow=1.5
RUE e PKPbc **PKiKP 21 15 00.9 -0.8**
baz=17,slow=2.4
GORT1 Trebel 147.06 349 e PKPdf **PKPdf 21 14 57.7 +1.0**
baz=18,slow=1.5
GORT1 e PKPbc **PKiKP 21 15 01.1 -0.6**
baz=17,slow=2.4
SCTR Scanteiesti 147.06 325 ⇓P **PKiKP 21 15 01.5 -0.5**
GIUM Giurgiulesti 147.07 324 ⇑P **PKiKP 21 15 01.2 -0.8**
TATR Tatarca 147.09 325 ⇓P **PKiKP 21 15 01.2 -0.8**
RCY Rachaya 147.11 300 e **PKPbc 21 15 01.7 +0.7**
DSB Dublin 147.13 9 PKP **PKPdf 21 14 56.8 -0.1**
DSB Dublin 147.13 9 PKPdf **PKPdf 21 14 56.9 -0.1**
DSB PKP **PKPbc 21 14 57.5 -2.7**
BURAR Bucovina Array 147.14 330 ⇓P **PKiKP 21 15 01.5 -0.8**
BURAR Bucovina Array 147.14 330 ⇓PKP2 **PKiKP 21 15 01.5 -0.8**
BURAR Bucovina Array 147.14 330 **PKPdf 21 14 55.7 -1.6**
BURAR PKPbc **PKPbc 21 15 00.0 -0.6**
JURR Jurilovca 147.15 323 ⇓P **PKPbc 21 15 01.1 +0.6**
BHL Bhannes 147.16 301 e **PKPbc 21 15 01.7 +0.7**
BIZ Bicaz 147.20 328 ⇓P **PKiKP 21 15 01.7 -0.5**
SHBL Chebaa 147.22 299 e **PKiKP 21 15 02.1 -0.8**
NEGRR Negrea 147.22 325 ⇓P **PKiKP 21 15 01.6 -0.7**
TESR Tescani 147.22 327 ⇓P **PKPbc 21 15 01.2 +0.6**
QRWL Qaraoun 147.22 300 e **PKPbc 21 15 02.0 +0.8**
DQRL Deir Qamar 147.27 300 e **PKiKP 21 15 02.4 -0.6**
IZVR Izvoarele 147.27 325 ⇑P **PKiKP 21 15 01.9 -0.5**
SCHLR Schela 147.28 325 ⇓P **PKPbc 21 15 01.1 +0.8**
TUDR 147.29 325 ⇑P **PKiKP 21 15 02.1 -0.3**
CFR Carcaliu 147.30 324 ⇑P **PKPbc 21 15 01.3 +0.4**
CFR Carcaliu 147.30 324 ⇑PKP2 **PKPbc 21 15 01.3 +0.4**
COSR Cosmesti PH 147.31 326 ⇑P **PKiKP 21 15 02.2 -0.2**
OJC Ojcow 147.33 338 e PKP **PKPdf 21 14 57.6 +0.2**
WLF1 Llynfaes 147.33 7 e **PKPdf 21 14 57.4 +0.1**
TPGR Topolog 147.35 323 ⇓P **PKPbc 21 15 01.7 +0.7**
PANC Panciu 147.39 326 ⇓P **PKiKP 21 15 02.3 -0.3**
LBWR Ladybower, Pea 147.44 4 e **PKPdf 21 14 57.8 +0.4**
KOLS Kolonicke sedl 147.44 334 e PKIKP **PKPdf 21 14 58.7 +1.1**
KOLS e 21 15 02.5
KOLS Kolonicke sedl 147.44 334 e PKP **PKPdf 21 14 58.7 +1.1**
KOLS e 21 15 02.5
STHS Stebnicka Huta 147.46 336 e PKP2 **PKPbc 21 15 01.9 +0.7**
STHS Stebnicka Huta 147.46 336 e PKP **PKPbc 21 15 01.9 +0.7**
STHS e 21 15 07.0
STHS e 21 17 23.9
ONER Baraj Valea Uz 147.47 327 ⇓P **PKiKP 21 15 02.8 -0.1**
ODBI Odobesti 147.51 326 ⇑P **PKiKP 21 15 03.1 +0.2**
MMAI Mount Meron Ar 147.57 299 PKP **PKPdf 21 14 57.6 -0.8**
comp=Z,219nm,0.7s,baz=37,slow=8.5,SNR=21
MMAI PKPbc **PKiKP 21 15 02.9 -0.7**
comp=Z,226nm,0.7s,baz=59,slow=5.6,SNR=176
MMAI pPKPbc **pPKPab 21 17 23.0 +1.7**
comp=Z,30nm,0.8s,baz=56,slow=6.2,SNR=4.7
VRI Vrincioaia 147.61 326 ⇓P **PKPbc 21 15 02.0 +0.3**
VRI Vrincioaia 147.61 326 ⇓PKP2 **PKPbc 21 15 02.0 +0.3**
RETH Rethem/Aller, 147.62 351 e PKPdf **PKPdf 21 14 58.2 +0.6**
baz=18,slow=1.5
RETH e PKPbc **PKiKP 21 15 02.3 -0.5**
baz=17,slow=2.4
TSCT Constanta Port 147.64 322 ⇓P **PKiKP 21 15 02.8 -0.4**
PLOR Plostina 147.66 326 ⇓P **PKPbc 21 15 01.8 -0.1**
PLOR Plostina 147.66 326 ⇓PKP2 **PKPbc 21 15 01.8 -0.1**
VAL Valentia 147.68 14 PKP **PKPdf 21 14 58.1 +0.3**
VAL Valentia 147.68 14 PKPdf **PKPdf 21 14 58.2 +0.3**
VAL PKP **PKPbc 21 14 59.1 -2.5**
EFOR EFORIE 147.70 322 ⇓P **PKiKP 21 15 02.9 -0.4**
FLTG Flechtingen 147.70 349 e PKPdf **PKPdf 21 14 58.2 +0.3**
baz=18,slow=1.5
FLTG e PKPbc **PKPbc 21 15 02.3 +0.6**
baz=17,slow=2.4
FLTG e PKPab **PKPab 21 15 06.7 +0.4**
baz=14,slow=4.2
STNC Stoke 147.72 4 e **PKPdf 21 14 58.5 +0.6**
SAHR Sahastru 147.73 326 ⇓P **PKiKP 21 15 02.9 -0.6**
TLBR Topalu 147.75 323 ⇓P **PKiKP 21 15 02.8 -0.6**
NIE Niedzica 147.81 337 e PKP **PKPdf 21 14 59.1 +0.9**
FOEL Foel Wylfa 147.84 5 e **PKPdf 21 14 58.5 +0.3**
TURR Turia 147.85 327 ⇑P **PKiKP 21 15 03.5 -0.1**
MANR Mangalia 147.88 322 ⇓P **PKiKP 21 15 03.4 -0.3**
CVDA Cernavoda 147.88 323 ⇓P **PKiKP 21 15 03.5 -0.2**
BMR Baia Mare 147.89 332 ⇓P **PKiKP 21 15 03.2 -0.4**
BMR Baia Mare 147.89 332 ⇓PKP2 **PKiKP 21 15 03.3 -0.4**
COVR Voineasa-Covas 147.90 327 ⇓P **PKPbc 21 15 02.6 +0.1**
KSP Ksiaz 147.90 342 e PKP **PKPdf 21 14 59.0 +0.7**
IWEX Carrickbyrne, 147.91 10 PKPdf **PKPdf 21 14 58.4 +0.2**
IWEX PKP **PKPbc 21 14 59.0 -3.2**
IWEX Carrickbyrne, 147.91 10 e **PKPdf 21 14 58.5 +0.2**
ARCR ARCALIA 147.93 330 ⇓P **PKiKP 21 15 03.4 -0.4**
OZUR 147.94 327 ⇓P **PKiKP 21 15 03.5 -0.4**
RAC Raciborz 147.99 340 e PKP **PKPdf 21 14 59.3 +0.9**
RAC Raciborz 147.99 340 e PKHKP **PKPdf 21 14 59.3 +0.9**
ASSE Asse, Remlinge 148.00 349 e PKPdf **PKPdf 21 14 58.9 +0.6**
baz=18,slow=1.5
ASSE e PKPbc **PKiKP 21 15 03.3 -0.3**
baz=17,slow=2.4
BOSR Bodos 148.01 327 ⇑P **PKiKP 21 15 03.8 -0.2**
STBN Sutton Boningt 148.03 3 e **PKPdf 21 14 58.6 +0.2**
SAHE Sakarya_HENDEK 148.10 315 ⇑P **PKPbc 21 15 03.5 +0.4**
AMRR Amara 148.10 324 ⇓P **PKiKP 21 15 03.9 -0.3**
AMRR Amara 148.10 324 ⇓PKP2 **PKiKP 21 15 03.9 -0.3**
PGOR Pogoanele 148.10 325 ⇑P **PKiKP 21 15 03.8 -0.3**
CWF Charnwood Fore 148.12 3 e **PKPdf 21 14 58.6 +0.1**
NEHR Nehoiu 148.13 326 ⇑P **PKiKP 21 15 03.8 -0.5**
ICOR Ion Corvin 148.15 323 ⇑P **PKiKP 21 15 04.0 -0.3**
OSTC Ostas 148.18 342 e PKHKP **PKPdf 21 14 59.6 +0.8**
OSTC Ostas 148.18 342 e PKPDF **PKPdf 21 14 59.6 +0.8**
OSTC ⇑e PKP **PKiKP 21 15 04.0 -0.2**
CHVC Chvalec 148.20 342 e PKP2 **PKiKP 21 15 04.3 +0.1**
CHVC Chvalec 148.20 342 ⇑e PKP **PKiKP 21 15 04.3 +0.1**
WACR West Acre 148.20 1 e **PKPdf 21 14 59.7 +1.0**
ISR Istrita 148.20 325 ⇓P **PKiKP 21 15 04.0 -0.5**
ISR Istrita 148.20 325 ⇓PKP2 **PKiKP 21 15 04.0 -0.5**
OKC Ostrava-Krasne 148.22 339 e PKP2 **PKiKP 21 15 03.9 -0.3**
OKC Ostrava-Krasne 148.22 339 ⇑e PKP **PKiKP 21 15 03.9 -0.3**
OKC e PKPAB **PKPab 21 15 09.8 +1.3**
DOPR Dopca 148.23 328 ⇑P **PKiKP 21 15 04.3 -0.1**
HLM1 Long Mynd 148.24 5 e **PKPdf 21 14 58.6 -0.2**
IBBN Ibbenburen 148.25 353 e PKPdf **PKPdf 21 14 59.4 +0.6**
baz=18,slow=1.5
IBBN e PKPbc **PKiKP 21 15 03.9 -0.3**
baz=17,slow=2.4
IBBN e PKPab **PKPab 21 15 08.5 0.0**
baz=14,slow=4.2
STEB Steborice 148.25 340 ⇑e PKP **PKiKP 21 15 04.2 -0.1**
STEB e PKPAB **PKPab 21 15 09.5 +0.8**
STEB e pPKP **pPKPab 21 17 26.2 +2.4**
PSN Preselentsi 148.25 322 P **PKPdf 21 14 59.3 +0.2**
TGMR Targu Mures 148.26 329 ⇑P **PKiKP 21 15 04.5 0.0**
MLR Muntele Rosu 148.27 326 ⇑P **PKPbc 21 15 03.7 +0.2**
MLR Muntele Rosu 148.27 326 ⇑PKP2 **PKPbc 21 15 03.7 +0.2**
UPC Upice 148.28 342 e PKP2 **PKiKP 21 15 04.1 -0.3**
UPC Upice 148.28 342 ⇑e PKP **PKiKP 21 15 04.1 -0.3**
UPC e pPKP **pPKPab 21 17 26.3 +2.1**
UPC e x x 21 28 39.5
CLL Collm 148.31 346 ⇓e PKHKP **PKPdf 21 14 59.0 +0.1**
CLL i 21 15 09.3
CLL pmax pmax
comp=Z,326nm,1.0s
CLL pmax pmax
comp=Z,202nm,1.0s
CLL Collm 148.31 346 e PKPdf **PKPdf 21 14 59.4 +0.5**
baz=18,slow=1.5
CLL e PKPbc **PKiKP 21 15 04.1 -0.3**
baz=17,slow=2.4
CLL e PKPab **PKPab 21 15 09.5 +0.7**
baz=14,slow=4.2
CLL Collm 148.31 346 e PKPdf **PKPdf 21 14 59.0 +0.1**
CLL ⇓i PKPbc **PKiKP 21 15 04.0 -0.3**
comp=Z,326nm,1.0s
CLL e PKPlp 21 15 05.0
comp=Z,500nm,21.3s
CLL i PKPab **PKPab 21 15 09.3 +0.5**
comp=Z,202nm,1.0s
CLL e pPKPbc **pPKPab 21 17 24.0 -0.2**
CLL e pPKPab **pPKPbc 21 17 25.0 +2.2**
CLL e SKPdf **SKPdf 21 17 34.0 -1.3**
CLL i SKPbc **SKPbc 21 17 40.1 -2.9**
CLL e s PKPdf **sPKPbc 21 18 23.0 +1.1**
CLL i PP **PP 21 18 35.8 -2.4**
CLL e pPP 21 20 45.0
CLL e sPP 21 21 42.0
CLL e SKKSac **SKKSac 21 24 34.0 +5.4**
CLL e Sdif 21 26 30.0
CLL e s SKKSac 21 28 38.0
CLL e PSKS 21 29 04.0
CLL e SKKSdf **SKKSdf 21 30 07.0 -3.0**
CLL e s Sdif 21 30 29.0
CLL e pPPPrev 21 31 12.0
CLL e PPS PPS 21 31 36.0
CLL e s PPS 21 34 18.0
CLL ex x 21 35 52.0
CLL e SS **SS 21 36 55.0 -2.0**
CLL e PSS PSS 21 37 48.0
CLL e s SS 21 40 49.0
CLL e s PSPS 21 41 37.0
CLL e SSS SSS 21 42 24.0
CLL e SSSS 21 46 32.0
CLZ Clausthal 148.32 349 e PKPdf **PKPdf 21 14 59.7 +0.7**
baz=18,slow=1.5
CLZ e PKPbc **PKiKP 21 15 04.4 0.0**
baz=17,slow=2.4
DPC Dobruska-Polom 148.33 342 e PKHKP **PKPdf 21 15 00.1 +1.0**
DPC Dobruska-Polom 148.33 342 e PKPDF **PKPdf 21 15 00.1 +1.0**
DPC ⇑e PKP **PKiKP 21 15 04.4 -0.1**
DPC e s PKP **sPKPbc 21 18 20.9 -1.1**
DPC ex x 21 28 46.2
DPC ex x 21 31 59.2
CEI Carei 148.34 333 ⇓P **PKiKP 21 15 04.3 -0.2**
CEI Carei 148.34 333 ⇓PKP2 **PKiKP 21 15 04.3 -0.2**
LANS Liptovska Anna 148.34 337 e PKHKP **PKPdf 21 15 00.4 +1.3**
LANS Liptovska Anna 148.34 337 e PKP **PKPdf 21 15 00.4 +1.3**
LANS e 21 15 05.4
LANS e 21 15 10.9
LANS e 21 17 27.8
KRLC Kraliky 148.44 341 e PKP2 **PKiKP 21 15 04.8 0.0**
KRLC Kraliky 148.44 341 ⇑e PKP **PKiKP 21 15 04.8 0.0**
KRLC ex x 21 28 42.6
MORC Moravsky Berou 148.46 340 ⇓P **PKiKP 21 15 04.5 -0.3**
MORC Moravsky Berou 148.46 340 ⇓PKP2 **PKiKP 21 15 04.5 -0.3**
MORC Moravsky Berou 148.46 340 e PKP **PKPdf 21 14 59.4 +0.1**
MORC e 21 15 04.6
LEHL Lehliu 148.47 324 ⇑P **PKiKP 21 15 04.6 -0.3**
BRG Berggiesshubel 148.50 345 e PKPdf **PKPdf 21 14 59.8 +0.6**
baz=18,slow=1.5
BRG e PKPbc **PKiKP 21 15 04.7 -0.1**
baz=17,slow=2.4
BRG e PKPab **PKPab 21 15 10.1 +0.5**
baz=14,slow=4.2
BRG Berggiesshubel 148.50 345 ⇓e PKPf 21 14 59.7
BRG Amp 21 15 01.4
comp=Z,65nm,1.4s
BRG ⇑PKPb 21 15 04.8
BRG Amp 21 15 06.1
comp=Z,171nm,1.0s
BRG PKPab **PKPab 21 15 10.4 +0.8**
BRG Amp 21 15 11.2
comp=Z,112nm,1.0s
BRG pPKP pPKPab 21 17 26.4 +1.4
BRG Amp 21 17 28.1
comp=Z,49nm,1.2s
BRG Berggiesshubel 148.50 345 PP PP 21 18 28.0 -11
BRG Amp 21 18 41.7
comp=Z,13nm,1.1s
KECS Kecovo 148.51 335 e PKP2 **PKiKP 21 15 05.4 +0.5**
KECS Kecovo 148.51 335 e PKP **PKiKP 21 15 05.3 +0.4**
KECS e 21 15 11.1
MESR Meseseni 148.53 331 ⇓P **PKiKP 21 15 04.7 -0.3**
CICN Ciocanesti 148.54 324 ⇓P **PKiKP 21 15 04.6 -0.4**
CJR Cluj-Napoca 148.56 330 ⇓P **PKiKP 21 15 04.9 -0.2**
CJR Cluj-Napoca 148.56 330 ⇓PKP2 **PKiKP 21 15 04.9 -0.2**
PCED Cedros 148.59 49 e PKP **PKiKP 21 15 05.2 -0.2**
MDB Medias 148.60 329 ⇓P **PKiKP 21 15 05.4 +0.2**
MDB Medias 148.60 329 ⇓PKP2 **PKiKP 21 15 05.4 +0.2**
RSBS Rosebush, Pemb 148.61 7 e **PKPdf 21 14 59.6 +0.2**
CALA Caldeira 148.61 49 e PKP **PKiKP 21 15 05.5 0.0**
SULR 148.65 325 ⇓P **PKiKP 21 15 04.8 -0.4**
NEUB Neuenburg 148.67 348 e PKPdf **PKPdf 21 15 00.2 +0.7**
baz=18,slow=1.5
NEUB e PKPbc **PKiKP 21 15 05.1 0.0**
baz=17,slow=2.4
NEUB e PKPab **PKPab 21 15 11.0 +0.7**
baz=14,slow=4.2
GTTG Gottingen 148.68 350 e PKPdf **PKPdf 21 15 00.1 +0.6**
baz=18,slow=1.5
GTTG e PKPbc **PKiKP 21 15 05.1 0.0**
baz=17,slow=2.4
GTTG e PKPab **PKPab 21 15 11.3 +1.0**
baz=14,slow=4.2
HOR Horta 148.68 49 e PKP **PKiKP 21 15 05.5 0.0**
MAUC Maruska 148.73 339 e PKPDF **PKPdf 21 15 00.8 +1.1**
MAUC ⇑e PKP **PKiKP 21 15 05.9 +0.5**
SILY Sile 148.74 317 ⇑P **PKPbc 21 15 05.8 +0.5**
MCH1 Michaelchurch 148.74 5 e **PKPdf 21 14 59.6 0.0**
RICC Richard 148.76 344 ⇑e PKP **PKiKP 21 15 05.1 -0.2**
VOIR 148.77 327 ⇑P **PKPbc 21 15 03.1 -1.6**
LTVH Ltavrtes, Hu 148.81 333 ⇓P **PKiKP 21 15 05.6 +0.1**
MARR Marisel-Cluj 148.81 331 ⇓P **PKPbc 21 15 05.2 +0.5**
PCAN Candelaria 148.81 49 e PKP **PKiKP 21 15 05.5 -0.3**
PICO Pico 148.84 49 e PKP **PKiKP 21 15 06.5 +0.5**
ROSA Rosais 148.87 49 e PKP **PKiKP 21 15 05.7 -0.3**
DRGR 148.91 331 ⇓P **PKiKP 21 15 05.5 -0.4**
DRGR 148.91 331 ⇓PKHKP **PKiKP 21 15 05.5 -0.4**
PGRA Graciosa 148.91 48 e PKP **PKiKP 21 15 06.3 +0.3**
MONM Monmouth 148.92 5 e **PKPdf 21 15 00.1 +0.3**
PPNO Prainha do Nor 148.96 49 e PKP **PKiKP 21 15 07.0 +0.8**
TNR Turnu Rosu 149.00 328 ⇑P **PKiKP 21 15 06.2 +0.1**
TNR Turnu Rosu 149.00 328 ⇑PKP2 **PKiKP 21 15 06.2 +0.1**
PMAN Manadas 149.02 49 e PKP **PKiKP 21 15 06.3 0.0**
BORR Bors 149.09 333 ⇓P **PKiKP 21 15 06.4 +0.3**
SGRR Singureni 149.10 325 ⇓P **PKPbc 21 15 06.0 -0.3**
PRU Pruhonice 149.16 343 e PKHKP **PKPbc 21 15 05.9 +0.5**
PRU Pruhonice 149.16 343 ⇑e PKP **PKPbc 21 15 05.9 +0.5**
PRU ex x 21 21 47.4
PRU ex x 21 32 05.1
BUG Bochum--Univer 149.16 353 e PKPdf **PKPdf 21 15 01.0 +0.7**
baz=18,slow=1.5
BUG e PKPbc **PKiKP 21 15 06.0 -0.1**
baz=17,slow=2.4
VRAC Vranov 149.17 341 pPKPbc pPKPbc 21 17 27.2 +1.9
comp=Z,12nm,1.0s,baz=40,slow=2.9,SNR=3.0
VRAC Vranov 149.17 341 ⇓P **PKiKP 21 15 06.3 +0.1**
VRAC Vranov 149.17 341 e PKP **PKPdf 21 15 00.2 -0.2**
VRAC e 21 15 06.3
PSZ Piszkesteto 149.20 335 ⇓P **PKiKP 21 15 06.3 -0.1**
PSZ Piszkesteto 149.20 335 ⇓PKHKP PKPpre 21 15 06.3
JAVC Velka Javorina 149.22 339 e PKP **PKPdf 21 15 01.7 +1.1**
JAVC e 21 15 07.6
RAZG Razgrad 149.23 323 ⇓P **PKiKP 21 15 06.2 -0.3**
MOX Moxa 149.24 347 e PKPdf **PKPdf 21 15 00.9 +0.5**
baz=18,slow=1.5
MOX e PKPbc **PKiKP 21 15 06.4 0.0**
baz=17,slow=2.4
MOX e L L 22 01 42.7
comp=Z,193nm,20.4s
KASTN Kahler Asten 149.25 351 e PKPdf **PKPdf 21 15 01.0 +0.5**
baz=18,slow=1.5
KASTN e PKPbc **PKiKP 21 15 06.4 0.0**
baz=17,slow=2.4
TANN Tannenbergstha 149.27 346 e PKPdf **PKPdf 21 15 01.1 +0.5**
baz=18,slow=1.5
TANN e PKPbc **PKiKP 21 15 06.7 +0.2**
baz=17,slow=2.4
TANN e PKPab **PKPab 21 15 13.7 +0.8**
baz=14,slow=4.2
PLN Plauen 149.27 347 e PKPdf **PKPdf 21 15 00.8 +0.3**
baz=18,slow=1.5
PLN e PKPbc **PKiKP 21 15 06.5 +0.1**
baz=17,slow=2.4
PLN e PKPab **PKPab 21 15 13.6 +0.7**
baz=14,slow=4.2
SWN1 Swindon 149.32 4 e **PKPdf 21 15 01.2 +0.7**
UBBA Unterbreizbach 149.37 349 e PKPdf **PKPdf 21 15 00.8 +0.3**
baz=18,slow=1.5
UBBA e PKPbc **PKiKP 21 15 06.4 0.0**
baz=17,slow=2.4
LOT Lotru 149.40 328 ⇑P **PKPbc 21 15 06.4 +0.2**
HUMR Humele 149.43 326 ⇑P **PKPbc 21 15 06.0 -0.2**
RMVG GOVORA 149.43 327 ⇑P **PKiKP 21 15 07.9 +1.0**
NKC Novy Kostel 149.44 346 e PKHKP **PKiKP 21 15 07.0 +0.2**
NKC e 21 15 14.5
NKC Novy Kostel 149.44 346 ⇑e PKP **PKiKP 21 15 07.0 +0.2**
NKC e PKPAB **PKPab 21 15 14.5 +0.9**
KRUC Moravsky 149.45 341 e PKP **PKPdf 21 15 00.7 -0.1**
KRUC e 21 15 06.8
PSBA Serra de Santa 149.49 48 e PKP **PKiKP 21 15 07.2 0.0**
DEV Deva 149.50 330 ⇓P **PKiKP 21 15 06.8 -0.2**
DEV Deva 149.50 330 ⇓PKHKP **PKiKP 21 15 06.8 -0.2**
TREC Trest 149.52 342 e PKHKP **PKPdf 21 15 01.7 +0.7**
TREC Trest 149.52 342 e PKPDF **PKPdf 21 15 01.7 +0.7**
TREC ⇑e PKP **PKiKP 21 15 06.9 -0.1**
TREC e PP **sPKPab 21 18 27.6 -1.4**
WOL Wolverton 149.55 3 e **PKPdf 21 15 01.2 +0.3**
BSZH Besenyszg 149.56 334 ⇓P **PKiKP 21 15 07.3 +0.3**
COPA Copaceanca 149.56 325 ⇓P **PKPbc 21 15 06.6 +0.1**
HTL Hartland 149.58 7 e **PKPdf 21 15 01.3 +0.3**
PAGU Agualva, Azore 149.59 48 e PKP **PKiKP 21 15 07.4 0.0**
SMOL Smolenice 149.60 339 e PKHKP **PKPdf 21 15 02.2 +1.1**
ADH Angra Heroismo 149.60 48 e PKP **PKiKP 21 15 07.2 -0.2**
PSCM Serra do Cume 149.66 48 e PKP **PKiKP 21 15 07.6 0.0**
SZH Strazhitsa 149.72 323 P **PKPdf 21 15 01.1 -0.3**
ZVC Zvikov 149.75 343 e PKPDF **PKPdf 21 15 01.8 +0.5**
ZVC ⇑e PKP **PKiKP 21 15 07.3 -0.1**
ZVC e s PKP **sPKPab 21 18 29.0 -1.1**
ZVC ex x 21 28 48.4
MODS Modra-Piesok 149.77 339 e PKHKP **PKPdf 21 15 02.3 +0.9**
MODS Modra-Piesok 149.77 339 e PKP **PKPdf 21 15 02.3 +0.9**
MODS e 21 15 08.1
MODS e 21 16 5
MODS e 21 17 31.0
SIRR Siria 149.78 332 ⇓P **PKiKP 21 15 07.8 +0.2**
SRO Srobarova 149.88 337 e PKHKP **PKPbc 21 15 07.9 +0.8**
SRO Srobarova 149.88 337 e PKP **PKPbc 21 15 07.9 +0.8**
SRO e 21 15 16.8
SRO e 21 17 34.7
GZR Gura Zlata 149.92 329 ⇓P **PKiKP 21 15 07.8 -0.2**
GZR Gura Zlata 149.92 329 ⇓PKHKP **PKiKP 21 15 07.8 -0.2**
ROTZ Rotzenmuhle 149.94 346 e PKPdf **PKPdf 21 15 01.6 0.0**
baz=18,slow=1.5
ROTZ e PKPbc **PKiKP 21 15 08.1 +0.3**
baz=17,slow=2.4
ROTZ e PKPab **PKPab 21 15 16.2 +0.5**
baz=14,slow=4.2
BEBN Eben Emael 149.96 355 d PKPdf **PKPdf 21 15 01.7 +0.2**
BEBN d PKP **PKiKP 21 15 07.9 +0.1**
BEBN d PKPab **PKPab 21 15 14.6 -1.1**
SBD Saint Breward 149.98 8 e **PKPdf 21 15 02.1 +0.5**
UCC Uccle 150.05 356 d PKPdf **PKPdf 21 15 02.4 +0.7**
UCC d PKP **PKiKP 21 15 08.0 0.0**
UCC d PKPab **PKPab 21 15 16.2 +0.1**
VLAD Vladila 150.09 326 ⇑P **PKiKP 21 15 08.6 +0.3**
MEM Membach 150.12 354 d PKPdf **PKPdf 21 15 01.9 +0.1**
MEM d PKP **PKPbc 21 15 07.4 -0.2**
MEM d PKPab **PKPab 21 15 16.6 +0.2**
AMBH Ambrzfalva 150.12 333 ⇑P **PKiKP 21 15 09.0 +0.7**
BTNL Ternell 150.12 354 d PKPdf **PKPdf 21 15 02.5 +0.6**
BTNL d PKP **PKiKP 21 15 08.2 0.0**
BAND Balkesir-Ban 150.15 317 ⇑P **PKPbc 21 15 08.2 +0.1**
CRAR CRAIOVA 150.18 327 ⇑P **PKiKP 21 15 08.9 +0.4**
CRAR CRAIOVA 150.18 327 ⇑PKIKP **PKiKP 21 15 08.9 +0.4**
BSTI Sart Tilman 150.18 355 d PKPdf **PKPdf 21 15 02.8 +0.9**
BSTI d PKiKP **PKiKP 21 15 08.5 +0.2**
BSTI d PKPab **PKPab 21 15 17.0 +0.4**
DYA Yadsworthy 150.19 7 e **PKPdf 21 15 02.2 +0.3**
KHC Kasperske Hory 150.20 344 e PKIKP **PKPdf 21 15 02.5 +0.5**
KHC e 21 15 17.8
KHC Kasperske Hory 150.20 344 e PKPDF **PKPdf 21 15 02.5 +0.5**
KHC ⇑e PKP **PKiKP 21 15 08.8 +0.4**
KHC e PKPAB **PKPab 21 15 17.8 +1.0**
KHC e pPKP **pPKPab 21 17 32.0 +0.2**
KHC e s PKP **sPKPab 21 18 29.0 -2.9**
KHC ex x 21 21 46.5
KHC ex x 21 28 58.3
KHC ex x 21 32 10.5
TNS Taunus Mts 150.20 351 e PKPdf **PKPdf 21 15 02.2 +0.2**
baz=18,slow=1.5
TNS e PKPbc **PKiKP 21 15 08.8 +0.4**
baz=17,slow=2.4
TNS e PKPab **PKPab 21 15 16.9 +0.1**
baz=14,slow=4.2
GRF Grafenberg Arr 150.22 347 e PKPdf **PKPdf 21 15 02.4 +0.3**
baz=18,slow=1.5
GRF e PKPbc **PKiKP 21 15 08.9 +0.5**
baz=17,slow=2.4
GRF e PKPab **PKPab 21 15 18.1 +1.3**
baz=14,slow=4.2
GRF e L L 21 52 34.4
comp=Z,203nm,21.0s
GRFO Grafenberg 150.22 347 PKIKP **PKPdf 21 15 00.9 -1.1**
GRFO Grafenberg 150.22 347 **PKPdf 21 15 00.9 -1.1**
GRFO PKPbc **PKPbc 21 15 07.9 0.0**
SRE Strehaia 150.24 328 ⇓P **PKiKP 21 15 09.2 +0.6**
CCA1 Carnmenellis 150.27 9 e **PKPdf 21 15 01.4 -0.6**
CKRC Cesky Krumlov 150.28 343 e PKIKP **PKPdf 21 15 02.6 +0.4**
CKRC Cesky Krumlov 150.28 343 e PKPDF **PKPdf 21 15 02.6 +0.4**
CKRC ⇑e PKP **PKiKP 21 15 09.0 +0.4**
CKRC e pPKP **pPKPab 21 17 30.5 -1.3**
CKRC ex x 21 28 56.1
BZS Buzias 150.29 331 ⇓P **PKiKP 21 15 08.6 -0.1**
BZS Buzias 150.29 331 ⇓PKIKP **PKiKP 21 15 08.6 -0.1**
WET Wettzell 150.36 345 e PKPdf **PKPdf 21 15 02.5 +0.2**
baz=18,slow=1.5
WET e PKPbc **PKiKP 21 15 09.0 +0.3**
baz=17,slow=2.4
WET e PKPab **PKPab 21 15 18.6 +1.1**
baz=14,slow=4.2
BCLA Clavier 150.36 355 d PKP **PKPbc 21 15 07.9 -0.3**
BCLA d PKPab **PKPab 21 15 17.6 +0.2**
BHOU Houvegnez 150.37 354 d PKPdf **PKPdf 21 15 03.0 +0.7**
BHOU d PKP **PKiKP 21 15 09.2 +0.5**
BHOU d PKPab **PKPab 21 15 17.8 +0.4**
TIM Timisoara 150.38 331 ⇓P **PKiKP 21 15 09.6 +0.8**
TIM Timisoara 150.38 331 ⇓PKIKP **PKiKP 21 15 09.6 +0.8**
PLVB Pleven 150.39 325 ⇓P **PKiKP 21 15 09.2 +0.2**
WINA Alland / Wiene 150.40 340 e PKP **PKPdf 21 15 02.5 +0.2**
comp=Z,28nm,1.3s,SNR=16
WINA i PKiKP **PKiKP 21 15 09.3 +0.5**
comp=Z,87nm,0.8s
WINA e PKP **PKPab 21 15 18.3 +0.7**
comp=Z,80nm,1.0s
WINA e pPKP **pPKPdf 21 17 24.0 -0.1**
comp=Z,5.4nm,0.9s
WINA e SKP **SKPdf 21 17 37.9 -0.6**
comp=Z,58nm,1.4s
BGES Gesves 150.42 355 d PKPdf **PKPdf 21 14 59.4 -2.9**
BGES d PKPab **PKPab 21 15 17.6 -0.1**
GEC2 GERESS Array S 150.43 344 e PKPdf **PKPdf 21 15 02.5 0.0**
baz=18,slow=1.5
GEC2 e PKPbc **PKiKP 21 15 09.2 +0.2**
baz=17,slow=2.4

GERES	**GERESS Array B**	150.43	344	PKP	**PKPdf**	21 15 02.4	0.0
	comp=Z,5.4nm,0.9s,baz=315,slow=0.2,SNR=57						
GERES				PKPbc	**PKiKP**	21 15 09.0	0.0
	comp=Z,67nm,0.8s,baz=14,slow=1.8,SNR=144						
GERES				PKPab	**PKPab**	21 15 18.5	+0.7
	comp=Z,7.9nm,0.9s,baz=359,slow=4.9,SNR=9.1						
GERES				pPKPbc	**pPKPab**	21 17 30.9	-1.9
	comp=Z,7.1nm,0.9s,baz=90,slow=0.5,SNR=4.8						
GERES	**GERESS Array B**	150.43	344		**PKPdf**	21 15 01.5	-1.0
GERES				PKPbc	**PKPbc**	21 15 07.5	-1.0
GERES				PKPab	**PKPab**	21 15 16.9	-0.9
GERES					**pPKPdf**	21 17 21.8	-2.4
HERR	**Herculane**	150.47	329	⇓P	**PKiKP**	21 15 09.0	-0.1
RMGR	**Halanga-Turnu**	150.49	328	⇓P	**PKiKP**	21 15 09.2	+0.1
BMRD	**Maredsous**	150.52	356	*d*PKPdf	**PKPdf**	21 15 02.9	+0.4
BMRD				*d*PKP	**PKiKP**	21 15 09.2	+0.2
BMRD				*d*PKPab	**PKPab**	21 15 18.0	0.0
CONA	**Conrad Observa**	150.62	340	*e*PKP	**PKPdf**	21 15 02.6	-0.2
	comp=Z,20nm,1.3s,SNR=14						
CONA				*i* PKiKP	**PKiKP**	21 15 09.7	+0.3
	comp=Z,87nm,0.7s						
CONA				*e*PKP	**PKPab**	21 15 19.4	+0.7
	comp=Z,168nm,1.4s						
CONA				*ep*PKP	**pPKPdf**	21 17 24.0	-0.6
	comp=Z,11nm,1.2s						
CONA				*e*SKP	**SKPdf**	21 17 38.2	-0.7
	comp=Z,54nm,1.1s						
BAIL	**Bailesti**	150.62	327	⇓P	**PKiKP**	21 15 09.8	+0.4
RCHB	**Rochefort**	150.63	355	*d*PKPdf	**PKPdf**	21 15 02.7	+0.1
RCHB				*d*PKP	**PKiKP**	21 15 09.3	+0.1
RCHB				*d*PKPab	**PKPab**	21 15 17.8	-0.8
PUNG	**Punghina**	150.65	328	⇓P	**PKiKP**	21 15 09.3	-0.2
RONA	**Rosalia, Austr**	150.68	339	*e*PKP	**PKPdf**	21 15 02.7	-0.2
	comp=Z,18nm,1.4s,SNR=13						
RONA				*i* PKiKP	**PKiKP**	21 15 09.8	+0.3
	comp=Z,97nm,0.6s						
RONA				*e*PKP	**PKPab**	21 15 19.5	+0.5
	comp=Z,74nm,0.8s						
RONA				*ep*PKP	**pPKPdf**	21 17 24.0	-0.6
	comp=Z,3.5nm,1.1s						
BANR	**Banloc**	150.69	331	⇓P	**PKiKP**	21 15 10.3	+0.9
DOU	**Dourbes**	150.74	356	*d*PKPdf	**PKPdf**	21 15 03.3	+0.5
DOU				*d*PKP	**PKiKP**	21 15 09.4	0.0
DOU				*d*PKPab	**PKPab**	21 15 17.4	-1.6
VALD	**Valchedram**	150.81	326	P	**PKPdf**	21 15 03.5	+0.4
MDVR	**Moldovita**	150.88	330	⇓P	**PKiKP**	21 15 09.9	0.0
MPEP	**Malo Peshtene**	150.88	325	P	**PKiKP**	21 15 10.3	+0.3
WLF	**Walferdange**	151.03	354	PKP	**PKPdf**	21 15 04.2	+1.0
WLF	**Walferdange**	151.03	354	*d*PKPdf	**PKPdf**	21 15 04.2	+1.0
WLF				*d*PKP	**PKiKP**	21 15 10.8	+0.7
WLF				*d*PKPab	**PKPab**	21 15 18.9	-1.3
WLF	**Walferdange**	151.03	354	*e*PKPdf	**PKPdf**	21 15 04.1	+0.9
	baz=18,slow=1.5						
WLF				*e*PKPbc	**PKiKP**	21 15 11.1	+1.0
	baz=17,slow=2.4						
MORH	**Mrgy, Hungar**	151.09	335	⇑P	**PKiKP**	21 15 10.5	+0.3
MORH	**Mrgy, Hungar**	151.09	335	*e*P	**PKPdf**	21 15 03.0	-0.4
PDA	**Ponta Delgada**	151.12	48	*e*PKP	**PKPbc**	21 15 08.2	-2.1
MOA	**Molln**	151.18	342	*e*PKP	**PKPdf**	21 15 03.2	-0.4
	comp=Z,12nm,1.2s,SNR=9.4						
MOA				*i* PKP	**PKiKP**	21 15 10.4	-0.1
	comp=Z,34nm,0.7s						
MOA				*e*PKP	**PKPab**	21 15 20.8	-0.1
	comp=Z,115nm,1.4s						
MOA				*ep*PKP	**pPKPdf**	21 17 25.2	-0.1
	comp=Z,8.1nm,1.5s						
MOA				*e*SKP	**SKPdf**	21 17 38.9	-0.7
	comp=Z,55nm,2.2s						
CAVK	**Edirne/Enez-Ca**	151.18	319	⇓P	**PKPbc**	21 15 10.1	-0.3
PGB	**Panagyurishte**	151.21	324	P	**PKPdf**	21 15 03.2	-0.6
PGRON	**Lagoa das Cont**	151.31	48	*e*PKP	**PKPbc**	21 15 10.3	-0.5
ARSA	**Arzberg**	151.33	340	*e*PKP	**PKPdf**	21 15 03.5	-0.3
	comp=Z,14nm,1.2s						
ARSA				*e*PKP	**PKPbc**	21 15 10.6	+0.1
	comp=Z,23nm,0.9s						
ARSA				*i* PKP	**PKPab**	21 15 21.9	+0.2
	comp=Z,62nm,1.1s						
ARSA				*ep*PKP	**pPKPdf**	21 17 24.9	-0.7
	comp=Z,5.8nm,1.1s						
RZN	**Rozhen**	151.42	322	P	**PKPdf**	21 15 03.4	-0.9
FRGS	**Fruska Gora**	151.45	332	*e*P	**PKPdf**	21 15 03.4	-0.7
STU	**Stuttgart**	151.49	349	*e*PKPdf	**PKPdf**	21 15 04.5	+0.5
	baz=18,slow=1.5						
STU				*e*PKPbc	**PKiKP**	21 15 11.7	+0.7
	baz=17,slow=2.4						
STU				*e*PKPab	**PKPab**	21 15 21.8	-0.4
	baz=14,slow=4.2						
BIOA	**Bad Ischl, Aus**	151.50	343	*e*PKP	**PKPdf**	21 15 03.5	-0.6
	comp=Z,21nm,1.3s,SNR=15						
BIOA				*i* PKP	**PKPbc**	21 15 10.9	0.0
	comp=Z,33nm,0.8s						
BIOA				*i* PKP	**PKPab**	21 15 23.1	+0.8
	comp=Z,209nm,1.1s						
BIOA				*ep*PKP	**pPKPdf**	21 17 24.9	-1.0
	comp=Z,14nm,1.5s						
BIOA				*e*SKP	**SKPdf**	21 17 39.4	-0.6
	comp=Z,17nm,1.1s						
BIOA				*e*SKS	**SKSdf**	21 21 10.2	-3.8
	comp=Z,3.0nm,1.3s						
BEHE	**Becsehely**	151.58	337	*e*P	**PKPdf**	21 15 03.9	-0.3
JSA	**Saint Aubin**	151.60	5	*e*P	**PKPbc**	21 15 09.7	-1.3
FUR	**Furstenfeldbru**	151.65	346	*e*PKPdf	**PKPdf**	21 15 04.4	+0.1
	baz=18,slow=1.5						
FUR				*e*PKPbc	**PKiKP**	21 15 11.9	+0.4
	baz=17,slow=2.4						
FUR				*e*PKPab	**PKPab**	21 15 23.7	+0.8
	baz=14,slow=4.2						
VTS	**Vitosha**	151.66	325	P	**PKPdf**	21 15 05.9	+1.3
RJOB	**Jochberg**	151.68	344	*e*PKPdf	**PKPdf**	21 15 04.2	-0.2
	baz=18,slow=1.5						
RJOB				*e*PKPbc	**PKiKP**	21 15 11.7	+0.1
	baz=17,slow=2.4						
RJOB				*e*PKPab	**PKPab**	21 15 24.2	+1.0
	baz=14,slow=4.2						
SESA	**Seetaler Alpe,**	151.75	341	*e*PKP	**PKPdf**	21 15 03.9	-0.7
	comp=Z,60nm,1.1s,SNR=24						
SESA				*i* PKP	**PKPbc**	21 15 11.6	-0.1
	comp=Z,193nm,0.7s						
SESA				*e*PKP	**PKPab**	21 15 23.9	+0.3
	comp=Z,260nm,0.8s						
SESA				*e*SKP	**SKPdf**	21 17 39.9	-0.7
	comp=Z,82nm,1.4s						
KOGS	**Kog**	151.78	338	*i* PKPdf	**PKPdf**	21 15 04.1	-0.4
KOGS				*i* PKPbc	**PKPbc**	21 15 11.4	-0.1
KOGS				*i* PKPab	**PKPab**	21 15 23.6	+0.1
KOGS				*e*		21 48 09.3	
SOKA	**Soboth**	151.99	340	*i* PKP	**PKPdf**	21 15 04.3	-0.6
	comp=Z,20nm,1.3s,SNR=23						
SOKA				*i* PKP	**PKPbc**	21 15 11.9	-0.2
	comp=Z,94nm,1.1s						
SOKA				*e*PKP	**PKPab**	21 15 24.5	0.0
	comp=Z,81nm,1.3s						
SOKA				*ep*PKP	**pPKPdf**	21 17 25.7	-1.1
	comp=Z,7.3nm,1.5s						
SOKA				*e*SKP	**SKPdf**	21 17 40.4	-0.4
	comp=Z,31nm,1.2s						
SOKA				*e*SKS	**SKSdf**	21 21 10.8	-4.0
	comp=Z,3.3nm,1.5s						
LESA	**Schwarzleotal**	152.00	344	*i* PKP	**PKPdf**	21 15 04.5	-0.4
	comp=Z,33nm,1.3s,SNR=21						
LESA				*i* PKP	**PKPbc**	21 15 12.0	-0.1
	comp=Z,61nm,0.8s						
LESA				*e*PKP	**PKPab**	21 15 25.0	+0.5
	comp=Z,161nm,1.1s						
LESA				*ep*PKP	**pPKPdf**	21 17 25.7	-1.1
	comp=Z,14nm,1.4s						
LESA				*e*SKP	**SKPdf**	21 17 40.6	-0.2
	comp=Z,28nm,1.0s						
LESA				*e*SKS	**SKSdf**	21 21 11.2	-3.6
	comp=Z,2.5nm,1.1s						
TEKS	**Tekeris**	152.06	332	*e*P	**PKPdf**	21 15 04.3	-0.7
BFO	**Black Forest**	152.06	350	PKIKP	**PKPbc**	21 15 11.2	-0.9
BFO						21 15 23.1	
BFO	**Black Forest**	152.06	350		**PKPdf**	21 15 03.5	-1.3
BFO				PKPbc	**PKPbc**	21 15 11.2	-0.9
BFO				PKPab	**PKPab**	21 15 23.1	-1.6
BFO	**Black Forest**	152.06	350	*e*PKPdf	**PKPdf**	21 15 04.7	-0.1
	baz=18,slow=1.5						
BFO				*e*PKPbc	**PKiKP**	21 15 12.7	+0.4
	baz=17,slow=2.4						
BFO				*e*PKPab	**PKPab**	21 15 24.9	+0.2
	baz=14,slow=4.2						
MMB	**Musomishta**	152.09	323	P	**PKPdf**	21 15 04.2	-0.9
KBA	**Koelnbreinsper**	152.14	342	*e*PKP	**PKPdf**	21 15 04.4	-0.8
	comp=Z,18nm,1.2s,SNR=17						
KBA				*i* PKP	**PKPbc**	21 15 12.0	-0.5
	comp=Z,65nm,0.9s						
KBA				*i* PKP	**PKPab**	21 15 25.4	+0.2
	comp=Z,49nm,0.7s						
KBA				*ep*PKP	**pPKPdf**	21 17 26.2	-0.9
	comp=Z,12nm,0.9s						
KBA				*e*SKP	**SKPdf**	21 17 40.6	-0.5
	comp=Z,23nm,0.9s						
KBA				*e*SKS	**SKSdf**	21 21 12.3	-2.9
	comp=Z,6.1nm,1.4s						
KKB	**Krupnik**	152.24	324	P	**PKPdf**	21 15 04.8	-0.5
OBKA	**Obir**	152.29	340	*i* PKP	**PKPdf**	21 15 04.6	-0.7
	comp=Z,9.8nm,1.3s,SNR=8.3						
OBKA				*i* PKP	**PKPbc**	21 15 12.4	-0.4
	comp=Z,17nm,0.8s						
OBKA				*i* PKP	**PKPab**	21 15 25.3	-0.5
	comp=Z,30nm,1.1s						
OBKA				*ep*PKP	**pPKPdf**	21 17 26.6	-0.6
	comp=Z,5.2nm,1.1s						
OBKA				*e*SKP	**SKPdf**	21 17 40.9	-0.3
	comp=Z,15nm,1.0s						
OBKA				*e*SKS	**SKSdf**	21 21 11.8	-3.4
	comp=Z,2.6nm,1.1s						
WATA	**Walderalm**	152.36	345	*i* PKP	**PKPdf**	21 15 05.1	-0.4
	comp=Z,11nm,0.9s,SNR=15						
WATA				*i* PKP	**PKPbc**	21 15 13.0	0.0
	comp=Z,101nm,1.1s						
WATA				*e*PKP	**PKPab**	21 15 26.6	+0.4
	comp=Z,99nm,1.0s						
WATA				*ep*PKP	**pPKPdf**	21 17 27.4	0.0
	comp=Z,4.4nm,0.9s						
WATA				*e*SKP	**SKPdf**	21 17 44.3	+2.9
	comp=Z,12nm,1.2s						
RETA	**Reutte**	152.41	346	*i* PKP	**PKPdf**	21 15 05.3	-0.2
	comp=Z,7.9nm,0.9s,SNR=8.6						
RETA				*e*PKP	**PKiKP**	21 15 13.1	+0.1
	comp=Z,24nm,0.8s						
RETA				*i* PKP	**PKPab**	21 15 26.7	+0.5
	comp=Z,71nm,0.8s						
RETA				*e*SKP	**SKPdf**	21 17 44.1	+2.8
	comp=Z,29nm,1.4s						
WTTA	**Wattenberg**	152.41	345	*i* PKP	**PKPdf**	21 15 05.5	-0.1
	comp=Z,18nm,1.0s,SNR=20						
WTTA				*i* PKiKP	**PKiKP**	21 15 13.4	+0.1
	comp=Z,115nm,0.8s						
WTTA				*e*PKP	**PKPab**	21 15 26.8	+0.3
	comp=Z,126nm,0.7s						
WTTA				*ep*PKP	**pPKPdf**	21 17 27.6	0.0
	comp=Z,20nm,1.6s						
WTTA				SKP	**SKPdf**	21 17 44.3	+2.8
	comp=Z,26nm,1.3s						
WTTA				*e*SKS	**SKSdf**	21 21 12.5	-3.0
	comp=Z,6.7nm,1.3s						
MYKA	**Terra Mystica**	152.46	342	*e*PKP	**PKPdf**	21 15 04.7	-0.9
	comp=Z,13nm,1.1s,SNR=14						
MYKA				*i* PKP	**PKPbc**	21 15 12.6	-0.5
	comp=Z,32nm,0.7s						
MYKA				*e*PKP	**PKPab**	21 15 26.2	-0.4
	comp=Z,53nm,0.8s						
MYKA				*ep*PKP	**pPKPdf**	21 17 26.9	-0.5
	comp=Z,5.0nm,0.9s						
MYKA				*e*SKP	**SKPdf**	21 17 41.3	-0.1
	comp=Z,15nm,1.0s						
MYKA				*e*SKS	**SKSdf**	21 21 13.7	-1.7
MOTA	**Moosalm**	152.47	346	*i* PKP	**PKPdf**	21 15 05.3	-0.4
	comp=Z,34nm,1.0s,SNR=19						
MOTA				*i* PKP	**PKiKP**	21 15 13.3	-0.1
	comp=Z,104nm,0.9s						
MOTA				*i* PKP	**PKPab**	21 15 26.8	+0.2
	comp=Z,102nm,0.9s						
MOTA				*ep*PKP	**pPKPdf**	21 17 27.4	-0.2
	comp=Z,11nm,1.1s						
MOTA				*e*SKP	**SKPdf**	21 17 44.2	+2.7
	comp=Z,39nm,1.2s						
LEGS	**Legarje**	152.54	339	*i* PKPbc	**PKiKP**	21 15 13.4	+0.1
SQTA	**Sankt Quirin**	152.56	346	*i* PKP	**PKPdf**	21 15 05.6	-0.1
	comp=Z,16nm,1.0s,SNR=20						
SQTA				*i* PKP	**PKiKP**	21 15 13.6	+0.1
	comp=Z,86nm,0.8s						
SQTA				*i* PKP	**PKPab**	21 15 27.1	+0.2
	comp=Z,66nm,1.0s						
SQTA				*ep*PKP	**pPKPdf**	21 17 27.3	-0.4
	comp=Z,7.7nm,0.8s						
SQTA				*e*SKP	**SKPdf**	21 17 44.7	+3.1
	comp=Z,23nm,1.5s						
SQTA				*e*SKS	**SKSdf**	21 21 13.7	-1.8
	comp=Z,2.3nm,0.9s						
BBLS	**Lazi&#263i**	152.65	331	*e*P	**PKPdf**	21 15 06.1	+0.2
ABTA	**Abfaltersbach**	152.67	343	*i* PKP	**PKPdf**	21 15 05.3	-0.5
	comp=Z,43nm,1.0s,SNR=40						
ABTA				*i* PKP	**PKPbc**	21 15 13.3	-0.3
	comp=Z,122nm,0.8s						
ABTA				*i* PKP	**PKPab**	21 15 27.1	-0.3
	comp=Z,62nm,0.8s						
ABTA				*e*SKP	**SKPdf**	21 17 44.1	+2.4
	comp=Z,27nm,1.2s						
LJU	**Ljubljana**	152.71	340	*i* PKPdf	**PKPdf**	21 15 05.9	0.0
LJU				*i* PKPbc	**PKiKP**	21 15 13.9	+0.3
LJU				*i* PKPab	**PKPab**	21 15 27.8	+0.3
LJU				*ep*PKPbc	**pPKPbc**	21 17 34.5	+0.2
LJU				*e*PP	**PP**	21 19 03.3	+0.1
LJU				*ep*PP		21 21 12.9	
LJU				*e*		21 22 13.8	
DAVA	**Damuels**	152.78	347	*i* PKP	**PKPdf**	21 15 06.0	-0.1
	comp=Z,14nm,1.1s,SNR=12						
DAVA				*e*PKiKP	**PKiKP**	21 15 14.3	+0.3
	comp=Z,98nm,1.2s						
DAVA				*i* PKP	**PKPab**	21 15 28.0	0.0
	comp=Z,57nm,0.9s						
DAVA				*ep*PKP	**pPKPdf**	21 17 28.2	+0.2
	comp=Z,11nm,1.1s						
DAVA				*e*SKP	**SKPdf**	21 17 45.3	+3.4
	comp=Z,46nm,1.5s						
SJES	**Sjenica**	152.85	329	*e*P	**PKPdf**	21 15 06.1	-0.2
FETA	**Feichten**	152.86	346	*i* PKP	**PKPdf**	21 15 06.3	0.0
	comp=Z,23nm,0.9s,SNR=28						
FETA				*e*PKiKP	**PKiKP**	21 15 14.5	+0.3
	comp=Z,81nm,0.9s						
FETA				*i* PKP	**PKPab**	21 15 28.6	+0.3
	comp=Z,49nm,1.0s						
FETA				*ep*PKP	**pPKPdf**	21 17 28.0	-0.2
	comp=Z,9.0nm,1.2s						
FETA				*e*SKP	**SKPdf**	21 17 45.7	+3.7
	comp=Z,16nm,0.9s						
FETA				*e*SKS	**SKSdf**	21 21 15.1	-0.9
	comp=Z,7.0nm,1.6s						
BLY	**Banja Luka**	152.88	335	⇓P	**PKiKP**	21 15 14.4	+0.4
BLY	**Banja Luka**	152.88	335	*e*P	**PKPdf**	21 15 05.9	-0.2
VAY	**Valandovo**	152.90	323	*i* P	**PKPbc**	21 15 13.4	-0.7
SKO	**Skopje**	153.06	326	*i* P	**PKiKP**	21 15 14.7	+0.2
PLE	**Pljevlja**	153.07	330	⇓*i*PKP	**PKPdf**	21 15 06.2	-0.4
IVA	**Berane**	153.18	329	⇓*i*PKP	**PKPdf**	21 15 06.2	-0.5
DAVOX	**Davos/Dischmat**	153.27	347	PKP	**PKPdf**	21 15 07.1	+0.3
	comp=Z,18nm,0.9s,baz=276,slow=0.8,SNR=35						
DAVOX				PKPbc	**PKiKP**	21 15 15.6	+0.6
	comp=Z,69nm,0.6s,baz=171,slow=2.1,SNR=65						
DAVOX				PKPab	**PKPab**	21 15 30.4	+0.3
	comp=Z,72nm,0.9s,baz=273,slow=3.1,SNR=12						
PVY	**Plav**	153.36	329	⇓*i*PKP	**PKPdf**	21 15 06.5	-0.5
KOME	**Kolasin**	153.38	329	⇓*i*PKP	**PKPdf**	21 15 06.7	-0.3
NKME	**Niksic**	153.71	330	⇓*i*PKP	**PKPdf**	21 15 06.8	-0.6
BRY	**Bratogost**	153.79	331	*e*P	**PKPdf**	21 15 06.6	-1.1
BRY	**Bratogost**	153.79	331	⇓*i*PKP	**PKPdf**	21 15 06.9	-0.8
PDG	**Podgorica**	153.82	329	⇑P	**PKPbc**	21 15 15.9	-0.2
PDG	**Podgorica**	153.82	329	*e*P	**PKPdf**	21 15 06.8	-0.7
PDG	**Podgorica**	153.82	329	⇓*i*PKP	**PKPdf**	21 15 07.2	-0.3
CEME	**Cevo**	153.89	330	⇓*i*PKP	**PKPdf**	21 15 07.0	-0.7
OHR	**Ohrid**	154.01	325	*i* P	**PKPdf**	21 15 08.2	+0.2
TREB	**Trebinje**	154.02	331	*e*P	**PKPbc**	21 15 15.8	-0.7
DRME	**Dracevica, Mon**	154.04	329	*e*P	**PKPdf**	21 15 07.1	-0.7
DRME	**Dracevica, Mon**	154.04	329	⇓*i*PKP	**PKPdf**	21 15 07.8	0.0
BUM	**Brajici-Budva**	154.09	329	⇓*i*PKP	**PKPdf**	21 15 07.5	-0.5
HCY	**Herceg Novi**	154.17	330	*e*P	**PKiKP**	21 15 16.6	-0.2
HCY	**Herceg Novi**	154.17	330	⇓*i*PKP	**PKPdf**	21 15 07.3	-0.7
TEOL	**Teolo**	154.18	343		**PKPdf**	21 15 06.7	-1.3
TEOL				PKPbc	**PKiKP**	21 15 16.1	-0.6
TEOL				PKPab	**PKPab**	21 15 33.8	0.0
ULC	**Ulcinj**	154.18	328	⇓*i*PKP	**PKPdf**	21 15 07.5	-0.6
AQU	**L'Aquila**	156.35	338	PKP	**PKPdf**	21 15 11.1	+0.1
PGAV	**Gavieira, Arco**	157.42	19	*e*PKPdf	**PKPdf**	21 15 12.9	+0.5
PGAV				*e*SS	SS	21 38 43.9	+8.4
TIP	**Timpagrande**	157.53	328	⇓P	**PKPdf**	21 15 12.7	+0.1
PCAB	**Cabril**	157.73	19	*e*PKPdf	**PKPdf**	21 15 13.7	+1.0
PCAB				*e*PKPab	**PKPab**	21 15 50.3	+1.0
ECAL	**Calabor**	157.88	16	PKP	**PKPdf**	21 15 14.3	+1.4
PBRG	**Braganca**	158.01	17	*e*PKPdf	**PKPdf**	21 15 13.4	+0.4
PBRG				*e*PKPab	**PKPab**	21 15 51.0	+0.5
POLO	**Lamas de Olo**	158.11	19	*e*PKPdf	**PKPdf**	21 15 13.8	+0.6
POLO				*e*PKPab	**PKPab**	21 15 51.7	+0.7
POLO				*e*PP	**PP**	21 19 32.3	-0.5
PVRL	**Vila Real**	158.22	19	*e*PKPdf	**PKPdf**	21 15 14.1	+0.7
PVRL				*e*PKPab	**PKPab**	21 15 52.6	+1.2
EJON	**La Jonquera**	158.46	357	PKP	**PKPdf**	21 15 13.8	+0.3
CEL	**Celeste**	158.66	327		**PKPdf**	21 15 11.1	-2.8
CEL					**PKPab**	21 15 51.4	-2.1
PVIS	**Viseu**	158.68	20	*e*PKPdf	**PKPdf**	21 15 14.5	+0.6
PVIS				*e*PKPab	**PKPab**	21 15 54.1	+0.6
PCAS	**Casmilo, Conde**	159.07	22	*e*PKPdf	**PKPdf**	21 15 14.9	+0.6
PCAS				*e*PKPab	**PKPab**	21 15 55.6	+0.4
MTE	**Manteigas**	159.07	20	*e*PKPdf	**PKPdf**	21 15 14.7	+0.3
MTE				*e*PKPab	**PKPab**	21 15 55.6	+0.4
MTE				*e*PP	**PP**	21 19 36.4	-1.6
MTE				*e*SS	SS	21 39 15.3	+23
PSBE	**So Bento**	159.44	23	*e*PKPdf	**PKPdf**	21 15 15.9	+1.2
PSBE				*e*PKPab	**PKPab**	21 15 57.4	+0.5
PSARD	**Sardoal**	159.59	22	*e*PKPdf	**PKPdf**	21 15 15.7	+0.8
PSARD				*e*PKPab	**PKPab**	21 15 57.7	+0.2
PCBR	**Castelo Branco**	159.60	20	*e*PKPdf	**PKPdf**	21 15 16.1	+1.2
LIS	**Lisbon**	160.00	25	*e*PKPab	**PKPab**	21 16 00.3	+1.1
PMRV	**Marv??o**	160.00	20	*e*PKPdf	**PKPdf**	21 15 16.2	+0.8
PMRV				*e*PKPab	**PKPab**	21 15 59.8	+0.5
PMTG	**Montargil**	160.04	23	*e*PKPdf	**PKPdf**	21 15 16.0	+0.6
PMTG				*e*PKPab	**PKPab**	21 15 59.7	+0.3
UCM	**Universidad Co**	160.22	11	PKP	**PKPdf**	21 15 17.1	+1.4
PARRA	**Arraiolos**	160.33	23	*e*PKPdf	**PKPdf**	21 15 16.6	+0.9
PARRA				*e*PKPab	**PKPab**	21 16 00.9	+0.2
PARRA				*e*PP	**PP**	21 19 43.9	-0.7
PESTR	**Estremoz**	160.44	22	PKP	**PKPdf**	21 15 16.8	+0.9
PESTR	**Estremoz**	160.44	22	*e*PKPdf	**PKPdf**	21 15 16.5	+0.7
PESTR				*e*PKPab	**PKPab**	21 16 01.5	+0.3
MOE	**Montemor**	160.48	24	*e*PKPdf	**PKPdf**	21 15 16.6	+0.7
MOE				*e*PKPab	**PKPab**	21 16 01.5	+0.2
MOE				*e*PP	**PP**	21 19 44.8	-0.6
EVO	**Evora**	160.59	23	PKP	**PKPdf**	21 15 16.9	+0.9
EVO	**Evora**	160.59	23	*e*PKPdf	**PKPdf**	21 15 16.9	+0.9
EVO				*e*PKPab	**PKPab**	21 16 02.4	+0.6
EVO				*e*PP	**PP**	21 19 45.7	-0.3
ESDC	**Sonseca Array**	160.69	13	PKP	**PKPdf**	21 15 17.0	+0.8
	comp=Z,5.8nm,1.1s,baz=355,slow=3.6,SNR=21						
ESDC				PKPab	**PKPab**	21 16 02.7	+0.4
	comp=Z,34nm,1.0s,baz=342,slow=4.1,SNR=42						
ESDC				pPKPab	**pPKPab**	21 18 18.2	+2.7
	comp=Z,2.4nm,1.1s,baz=341,slow=4.5,SNR=3.6						
ESDC				PP	**PP**	21 19 43.8	-2.6
	comp=Z,7.5nm,1.1s,baz=0.9,slow=5.0,SNR=8.0						
ESDC	**Sonseca Array**	160.69	13		**PKPdf**	21 15 14.2	-1.9
ESDC					**PKPab**	21 16 02.1	-0.2
PAB	**San Pablo**	160.73	14	PKP2	**PKPab**	21 16 01.8	-0.7
PAB						22 15 14.2	
PAB	**San Pablo**	160.73	14		**PKPdf**	21 15 14.2	-2.1
PAB					**PKPab**	21 16 01.8	-0.7
PLOUS	**Minas do Lousa**	160.88	24	*e*PKPdf	**PKPdf**	21 15 17.3	+1.0
PLOUS				*e*PKPab	**PKPab**	21 16 03.8	+0.7
MAHO	**Mahon**	160.89	353	PKP	**PKPdf**	21 15 17.1	+0.8
PBEJ	**Beja**	161.09	23	*e*PKPdf	**PKPdf**	21 15 17.3	+0.7
PBEJ				*e*PKPab	**PKPab**	21 16 04.8	+0.8
PBEJ				⇑*e*PP	**PP**	21 19 50.1	+1.5
MESJ	**Messejana**	161.12

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.68**	**229**	*eP*	**Pn**	**21 04 50.0**	**+0.9**
PB09				IAML		21 05 06.5	
	comp=Z,7μm,0.4s						
PB09	**IPOC Station P**	**0.68**	**229⇑**	*iP*	**Pn**	**21 04 49.8**	**+0.7**
PB09				*eS*	**Sn**	**21 05 03.1**	**+0.5**
PB09				IAML		21 05 04.9	
	comp=N,9μm,0.3s						
PB09	**IPOC Station P**	**0.68**	**229**	Pn	**Pn**	**21 04 49.8**	**+0.7**
PB09				Sn	**Sn**	**21 05 02.4**	**-0.2**
PB09	**IPOC Station P**	**0.68**	**229**	P	**Pn**	**21 04 50.1**	**+0.9**
PB02	**IPOC Station P**	**1.12**	**271**	*eP*	**Pn**	**21 04 54.1**	**+0.5**
PB02				*eS*	**Sn**	**21 05 11.3**	**+1.0**
PB02				IAML		21 05 12.2	
	comp=Z,16μm,0.3s						
PB02	**IPOC Station P**	**1.12**	**271⇑**	*iP*	**Pn**	**21 04 53.9**	**+0.3**
PB02				*eS*	**Sn**	**21 05 10.6**	**+0.3**
PB02				IAML		21 05 11.7	
	comp=E,19μm,0.5s						
PB02	**IPOC Station P**	**1.12**	**271**	Pn	**Pn**	**21 04 54.0**	**+0.4**
PB02				Sn	**Sn**	**21 05 10.2**	**-0.1**
PB02	**IPOC Station P**	**1.12**	**271**	P	**Pn**	**21 04 54.1**	**+0.5**
PB07	**IPOC Station P**	**1.18**	**251**	*eP*	**Pn**	**21 04 54.6**	**+0.4**
PB07				*eS*	**Sn**	**21 05 12.5**	**+1.1**
PB07				IAML		21 05 13.1	
	comp=Z,6μm,0.7s						
PB07	**IPOC Station P**	**1.18**	**251⇑**	*iP*	**Pn**	**21 04 54.5**	**+0.3**
PB07				*eS*	**Sn**	**21 05 11.3**	**-0.2**
PB07				IAML		21 05 12.1	
	comp=N,13μm,0.3s						
PB07	**IPOC Station P**	**1.18**	**251**	Pn	**Pn**	**21 04 54.1**	**-0.1**
PB07				Sn	**Sn**	**21 05 11.2**	**-0.3**
PB07	**IPOC Station P**	**1.18**	**251**	P	**Pn**	**21 04 54.6**	**+0.4**
PB03	**IPOC Station P**	**1.21**	**235**	*eP*	**Pn**	**21 04 55.0**	**+0.5**
PB03				*eS*	**Sn**	**21 05 12.8**	**+0.7**
PB03				IAML		21 05 15.4	
	comp=Z,6μm,0.5s						
PB03	**IPOC Station P**	**1.21**	**235⇑**	*iP*	**Pn**	**21 04 54.9**	**+0.3**
PB03				*eS*	**Sn**	**21 05 11.9**	**-0.2**
PB03				IAML		21 05 12.8	
	comp=E,8μm,0.2s						
PB03	**IPOC Station P**	**1.21**	**235**	Pn	**Pn**	**21 04 54.8**	**+0.3**
PB03				Sn	**Sn**	**21 05 11.9**	**-0.2**
PB03	**IPOC Station P**	**1.21**	**235**	P	**Pn**	**21 04 55.1**	**+0.5**
PB08	**IPOC Station P**	**1.28**	**340**	*eP*	**Pn**	**21 04 57.6**	**+2.0**
PB08				*eS*	**Sn**	**21 05 17.5**	**+3.6**
PB08	**IPOC Station P**	**1.28**	**340⇓**	*iP*	**Pn**	**21 04 57.5**	**+1.9**
PB08				*eS*	**Sn**	**21 05 16.2**	**+2.3**
PB08				IAML		21 05 17.9	
	comp=N,2μm,0.3s						
PB08	**IPOC Station P**	**1.28**	**340**	Pn	**Pn**	**21 04 57.2**	**+1.6**
PB08				Sn	**Sn**	**21 05 16.0**	**+2.1**
PB08	**IPOC Station P**	**1.28**	**340**	P	**Pn**	**21 04 56.6**	**+1.0**
PB06	**IPOC Station P**	**1.58**	**211**	*eP*	**Pn**	**21 04 59.5**	**+0.6**
PB06				*eS*	**Sn**	**21 05 20.8**	**+1.0**
PB06				IAML		21 05 28.9	
	comp=Z,3μm,0.5s						
PB06	**IPOC Station P**	**1.58**	**211⇑**	*iP*	**Pn**	**21 04 59.5**	**+0.6**
PB06				*eS*	**Sn**	**21 05 20.0**	**+0.2**
PB06				IAML		21 05 21.9	
	comp=E,6μm,0.3s						
PB06	**IPOC Station P**	**1.58**	**211**	Pn	**Pn**	**21 04 59.4**	**+0.5**
PB06				Sn	**Sn**	**21 05 19.6**	**-0.2**
PB06	**IPOC Station P**	**1.58**	**211**	P	**Pn**	**21 04 59.7**	**+0.8**
AF01	**San Pedro de A**	**1.66**	**164**	*eP*	**Pn**	**21 05 02.8**	**+2.7**
AF01				IAML		21 05 52.5	
	comp=Z,3μm,0.5s						
AF01	**San Pedro de A**	**1.66**	**164**	*eP*	**Pn**	**21 05 01.1**	**+1.0**
AF01				IAML		21 05 41.7	
	comp=E,4μm,0.6s						
AF01	**San Pedro de A**	**1.66**	**164**	Pn	**Pn**	**21 05 02.4**	**+2.3**
TA02	**Huaiquique**	**1.73**	**308**	*eP*	**Pn**	**21 05 01.6**	**+1.0**
TA02				*eS*	**Sn**	**21 05 24.6**	**+1.7**
TA02				IAML		21 05 27.7	
	comp=Z,2μm,0.3s						
TA02	**Huaiquique**	**1.73**	**308**	*eP*	**Pn**	**21 05 01.2**	**+0.6**
TA02	**Huaiquique**	**1.73**	**308**	P	**Pn**	**21 05 01.4**	**+0.8**
GO01	**Chusmiza**	**1.74**	**344**	*eP*	**Pn**	**21 05 03.6**	**+2.3**
GO01	**Chusmiza**	**1.74**	**344⇓**	*iP*	**Pn**	**21 05 03.0**	**+1.7**
GO01				*eS*	**Sn**	**21 05 26.9**	**+2.9**
GO01				IAML		21 05 32.7	
	comp=N,3μm,0.2s						
GO01	**Chusmiza**	**1.74**	**344**	Pn	**Pn**	**21 05 03.2**	**+1.9**
GO01	**Chusmiza**	**1.74**	**344**	P	**Pn**	**21 05 02.5**	**+1.2**
PB11	**IPOC Station P**	**1.82**	**330**	*eP*	**Pn**	**21 05 03.5**	**+1.5**
PB11				*eS*	**Sn**	**21 05 27.9**	**+2.5**
PB11				IAML		21 05 31.3	
	comp=Z,1μm,0.5s						
PB11	**IPOC Station P**	**1.82**	**330⇓**	*iP*	**Pn**	**21 05 03.1**	**+1.1**
PB11				*eS*	**Sn**	**21 05 27.1**	**+1.7**
PB11				IAML		21 05 32.3	
	comp=E,3μm,0.3s						
PB11	**IPOC Station P**	**1.82**	**330**	Pn	**Pn**	**21 05 03.0**	**+1.1**
PB11	**IPOC Station P**	**1.82**	**330**	P	**Pn**	**21 05 03.4**	**+1.3**
PB05	**IPOC Station P**	**2.05**	**223**	*eP*	**Pn**	**21 05 04.8**	**-0.1**
PB05				*eS*	**Sn**	**21 05 32.0**	**+1.6**
PB05				IAML		21 05 37.6	
	comp=Z,1μm,0.4s						
PB05	**IPOC Station P**	**2.05**	**223⇑**	*iP*	**Pn**	**21 05 04.5**	**-0.3**
PB05				IAML		21 05 36.7	
	comp=E,3μm,0.4s						
PB05	**IPOC Station P**	**2.05**	**223**	Pn	**Pn**	**21 05 04.3**	**-0.5**
PB05	**IPOC Station P**	**2.05**	**223**	P	**Pn**	**21 05 04.7**	**-0.1**
PSGCX	**Pisagua**	**2.20**	**322⇑**	*iP*	**Pn**	**21 05 07.2**	**+0.4**
PSGCX	**Pisagua**	**2.20**	**322**	Pn	**Pn**	**21 05 06.5**	**-0.3**
PSGCX	**Pisagua**	**2.20**	**322**	P	**Pn**	**21 05 07.4**	**+0.6**
YJA	**Yavi**	**3.06**	**106**	*eP*	**Pn**	**21 05 22.4**	**+3.9**
YJA	**Yavi**	**3.06**	**106**	*eP*	**Pn**	**21 05 21.8**	**+3.3**
PB16	**IPOC Station P**	**3.10**	**345**	*eP*	**Pn**	**21 05 22.0**	**+3.0**
PB16				*eS*	**Sn**	**21 05 47.4**	**-8.3**
PB16	**IPOC Station P**	**3.10**	**345**	*eP*	**Pn**	**21 05 21.3**	**+2.2**
PB16				IAML		21 06 08.5	
	comp=E,305nm,0.5s						
PB16	**IPOC Station P**	**3.10**	**345**	Pn	**Pn**	**21 05 20.6**	**+1.6**
PB16	**IPOC Station P**	**3.10**	**345**	P	**Pn**	**21 05 21.3**	**+2.2**
PB12	**IPOC Station P**	**3.13**	**330**	*eP*	Pn	21 05 05.0	-14
PB12				*eS*	**Sn**	**21 05 55.6**	**-0.1**
PB12				IAML		21 06 03.6	
	comp=Z,564nm,0.6s						
PB12	**IPOC Station P**	**3.13**	**330**	*eP*	**Pn**	**21 05 18.9**	**-0.2**
PB12				IAML		21 06 08.7	
	comp=E,968nm,0.3s						
PB12	**IPOC Station P**	**3.13**	**330**	Pn	**Pn**	**21 05 18.9**	**-0.2**
PB12	**IPOC Station P**	**3.13**	**330**	P	**Pn**	**21 05 18.5**	**-0.6**
AP01	**Chacalluta**	**3.35**	**332**	*eP*	**Pn**	**21 05 24.9**	**+3.1**
AP01				*eS*	**Sn**	**21 05 54.6**	**-6.2**
AP01				IAML		21 06 17.9	
	comp=Z,726nm,0.3s						
AP01	**Chacalluta**	**3.35**	**332**	*eP*	**Pn**	**21 05 22.0**	**+0.2**
AP01	**Chacalluta**	**3.35**	**332**	Pn	**Pn**	**21 05 22.5**	**+0.7**
AP01	**Chacalluta**	**3.35**	**332**	P	**Pn**	**21 05 24.3**	**+2.5**
SALTA		**3.59**	**143**	*eP*	**Pn**	**21 05 23.8**	**-1.7**
SALTA				*eP*		21 05 24.3	
PB14	**IPOC Station P**	**3.62**	**206**	*eP*	**Pn**	**21 05 25.1**	**-0.7**
PB14				*eS*	**Sn**	**21 06 06.8**	**-1.0**
PB14				IAML		21 06 17.8	
	comp=Z,862nm,1.4s						
PB14	**IPOC Station P**	**3.62**	**206**	*eP*	**Pn**	**21 05 24.3**	**-1.4**
PB14	**IPOC Station P**	**3.62**	**206**	P	**Pn**	**21 05 26.8**	**+1.0**
PB18	**Visviri**	**3.82**	**349**	*eP*	**Pn**	**21 05 29.4**	**+0.8**
PB18	**Visviri**	**3.82**	**349**	Pn	**Pn**	**21 05 29.3**	**+0.7**
PB18	**Visviri**	**3.82**	**349**	P	**Pn**	**21 05 30.0**	**+1.4**
SLA	**San Lorenzo**	**4.46**	**139**	*eP*	Pn	21 05 23.5	-13
LPAZ	**La Paz**	**5.07**	**6**	P	**Pn**	**21 05 49.3**	**+3.8**
	comp=Z,52nm,0.4s,baz=202,slow=5.3,SNR=262						
LPAZ				LR	LR	21 08 13.8	
	comp=Z,141nm,18.9s,baz=178,slow=44						
LPAZ	**La Paz**	**5.07**	**6**	*eP*	**Pn**	**21 05 48.7**	**+3.2**
LPAZ	**La Paz**	**5.07**	**6**	Pn	**Pn**	**21 05 48.5**	**+2.9**
LPAZ	**La Paz**	**5.07**	**6**	*eP*	**Pn**	**21 05 46.5**	**+1.0**
LPAZ	**La Paz**	**5.07**	**6**	P	**Pn**	**21 05 47.6**	**+2.1**
AC01	**Pan de Azucar**	**5.08**	**200**	*eP*	**Pn**	**21 05 42.6**	**-2.6**
AC01	**Pan de Azucar**	**5.08**	**200**	P	**Pn**	**21 05 43.7**	**-1.5**
AC02	**Maricunga**	**5.47**	**184**	*eP*	**Pn**	**21 05 51.5**	**+0.6**
AC02				*eS*	**Sn**	**21 06 54.8**	**+1.9**
AC02				IAML		21 07 35.0	
	comp=Z,194nm,0.6s						
AC02	**Maricunga**	**5.47**	**184**	Pn	**Pn**	**21 05 50.4**	**-0.5**
AC02	**Maricunga**	**5.47**	**184**	P	**Pn**	**21 05 51.4**	**+0.5**
GO03	**Copiapo**	**6.37**	**192**	Pn	**Pn**	**21 05 60.0**	**-2.7**
GO03	**Copiapo**	**6.37**	**192**	P	**Pn**	**21 06 03.3**	**+0.6**
AC05	**El Transito**	**7.59**	**191**	Pn	**Pn**	**21 06 16.0**	**-3.3**
AC05	**El Transito**	**7.59**	**191**	P	**Pn**	**21 06 17.3**	**-2.1**
BBSD	**Serra de San D**	**8.68**	**63**	*eP*	**Pn**	**21 06 32.3**	**-1.8**
CO01	**Juntas del Tor**	**8.68**	**188**	Pn	**Pn**	**21 06 31.2**	**-3.0**
CO01	**Juntas del Tor**	**8.68**	**188**	P	**Pn**	**21 06 33.8**	**-0.4**
SIV	**San Ignacio**	**8.97**	**55**	P	**Pn**	**21 06 36.5**	**-1.6**
	comp=Z,126nm,0.5s,baz=242,slow=11,SNR=528						
GO04	**Tololo Observa**	**8.99**	**192**	Pn	**Pn**	**21 06 34.0**	**-4.4**
GO04	**Tololo Observa**	**8.99**	**192**	P	**Pn**	**21 06 35.0**	**-3.4**
CO03	**El Pedregal**	**9.62**	**190**	P	**Pn**	**21 06 45.9**	**-0.9**
CO02	**Combarbal**	**10.03**	**191**	Pn	Pn	21 06 47.4	-5.1
COIM	**Forte Coimbra**	**10.31**	**84**	*eP*	**Pn**	**21 06 52.8**	**-3.4**
MURT	**Porto Murtinho**	**10.32**	**94**	*eP*	**Pn**	**21 06 54.3**	**-2.0**
PTLB	**Pontes e Lacer**	**10.80**	**59**	Pn	**Pn**	**21 07 01.0**	**-1.9**
PTLB	**Pontes e Lacer**	**10.80**	**59**	*eP*	**Pn**	**21 07 01.1**	**-1.9**
CPUP	**Villa Florida**	**11.52**	**118**	P	**Pn**	**21 07 10.9**	**-1.6**
	comp=Z,1.9nm,0.5s,baz=314,slow=13,SNR=7.3						
CPUP	**Villa Florida**	**11.52**	**118**	Pn	**Pn**	**21 07 09.4**	**-3.0**
VILB	**Vilhena**	**11.64**	**46**	Pn	**Pn**	**21 07 12.4**	**-1.8**
VILB	**Vilhena**	**11.64**	**46**	*eP*	**Pn**	**21 07 13.3**	**-0.9**
MT02	**Curacav**	**12.06**	**190**	Pn	**Pn**	**21 07 15.9**	**-3.7**
SJPY	**San Joaquin**	**12.13**	**110**	*eP*	**Pn**	**21 07 20.6**	**-0.1**
AQDB	**Aquidauana**	**12.17**	**88**	Pn	**Pn**	**21 07 21.5**	**+0.3**
AQDB	**Aquidauana**	**12.17**	**88**	*eP*	**Pn**	**21 07 20.0**	**-1.2**
AQDB	**Aquidauana**	**12.17**	**88**	P	**Pn**	**21 07 20.0**	**-1.2**
MT09	**Talagante**	**12.54**	**189**	Pn	**Pn**	**21 07 22.2**	**-4.0**
AMBA	**Amambai (Brazi**	**12.79**	**100**	*eP*	**Pn**	**21 07 27.2**	**-2.2**
SALV	**Santo Antonio**	**13.46**	**68**	*eP*	**Pn**	**21 07 37.9**	**-0.1**
PP1B	**Ponte de Pedra**	**13.55**	**76**	*eP*	**Pn**	**21 07 37.2**	**-2.1**
TRCB	**Terra Rica**	**14.95**	**98**	*eP*	**Pn**	**21 07 55.9**	**-1.4**
PTGB	**Pitanga**	**15.66**	**106**	*eP*	**Pn**	**21 08 05.5**	**-0.8**
CLDB	**Colider**	**16.17**	**52**	*eP*	**Pn**	**21 08 11.5**	**-1.2**
CLDB	**Colider**	**16.17**	**52**	P	**Pn**	**21 08 11.9**	**-0.7**
ITAB	**Concordia**	**16.19**	**114**		**P**	**21 08 13.9**	**0.0**
ITAB	**Concordia**	**16.19**	**114**	*eP*	**Pn**	**21 08 11.5**	**-1.2**
LDASE	**Londrina, Braz**	**16.38**	**100**	*eP*	**Pn**	**21 08 13.8**	**-1.4**
CPSB	**Cacapava Do Su**	**16.41**	**126**	Pn	**P**	**21 08 15.8**	**-0.5**
CPSB				IAmb	IAmb	21 08 18.2	
	comp=Z,11nm,0.5s						
CPSB	**Cacapava Do Su**	**16.41**	**126**	*eP*	**Pn**	**21 08 12.3**	**-3.1**
CPSB	**Cacapava Do Su**	**16.41**	**126**	P	**Pn**	**21 08 14.0**	**-1.4**
ARAG	**Araguaiana, MT**	**16.96**	**73**	*eP*	**Pn**	**21 08 21.8**	**-0.4**
BB19B	**Bebedouro**	**18.80**	**93**	*eP*	**P**	**21 08 40.9**	**-1.9**
SNDB	**Serra Nova Dou**	**19.08**	**64**	*eP*	**P**	**21 08 45.4**	**-0.4**
NPGB	**Novo Progresso**	**19.19**	**44**	*eP*	**P**	**21 08 45.7**	**-1.3**
IPMB	**Ipameri, GO**	**19.57**	**84**	*eP*	**P**	**21 08 50.8**	**-0.4**
RCLB	**Rio Claro- Sao**	**19.66**	**97**	*eP*	**P**	**21 08 51.7**	**-0.5**
MACA	**Manacapuru-AM**	**19.69**	**24**	P	**P**	**21 08 50.4**	**-1.9**
BDFB	**Brasilia**	**20.41**	**77**	P	**P**	**21 08 59.4**	**-0.8**
	comp=Z,5.8nm,0.5s,baz=252,slow=12,SNR=8.7						
	comp=Z,5.8nm,0.5s						
BDFB	**Brasilia**	**20.41**	**77**	P	**P**	**21 08 59.5**	**-0.8**
CANS	**Sao Roque de M**	**20.87**	**91**	*eP*	**P**	**21 09 04.4**	**-0.8**
ITTB	**Itaituba**	**21.05**	**38**	*eP*	**P**	**21 09 06.2**	**-0.9**
BSCB	**Bom Sucesso**	**22.30**	**93**	*eP*	**P**	**21 09 19.9**	**-0.5**
BSCB	**Bom Sucesso**	**22.30**	**93**	P	**P**	**21 09 18.4**	**-2.0**
PRPB	**Parauapebas**	**23.70**	**53**	*eP*	**P**	**21 09 32.6**	**-1.1**
SMTB	**Santa Maria do**	**23.82**	**62**	*eP*	**P**	**21 09 35.2**	**+0.5**
JANB	**Jataria**	**23.97**	**79**	*eP*	**P**	**21 09 35.3**	**-1.0**
SDBA	**SAO DESIDERIO**	**24.41**	**72**	*eP*	**P**	**21 09 38.9**	**-1.4**
BOAV	**Boa Vista**	**24.92**	**20**	P	**P**	**21 09 45.6**	**+0.8**
BOAV				IAmb	IAmb	21 09 46.3	
	comp=Z,11nm,0.6s						
BOAV	**Boa Vista**	**24.92**	**20**	*eP*	**P**	**21 09 45.8**	**+1.0**
GO08	**Villa O'Higgin**	**27.23**	**186**	P	**P**	**21 10 05.4**	**+0.1**
RCBR	**Riachuelo**	**35.30**	**69**	P	**P**	**21 11 17.5**	**+0.9**
RCBR				IAmb	IAmb	21 11 20.3	
	comp=Z,23nm,1.1s						
PDPR	**Patillas Dam,**	**39.21**	**4**	P	**P**	**21 11 48.2**	**-1.2**
PDPR				IAmb	IAmb	21 11 51.6	
	comp=Z,8.9nm,1.0s						
HOPE	**Hope Point**	**40.91**	**152**	P	**P**	**21 12 01.2**	**-1.9**
SNAA	**Sanae**	**62.35**	**161**	⇓P	**P**	**21 14 43.6**	**+1.2**
	comp=Z,93nm,0.7s						
SNAA	**Sanae**	**62.35**	**161**	P	**P**	**21 14 44.0**	**+1.6**
	comp=Z,3.8nm,0.7s,baz=287,slow=8.2,SNR=5.7						
	comp=Z,3.8nm,0.7s						
SNAA	**Sanae**	**62.35**	**161**	P	**P**	**21 14 43.4**	**+1.0**
SNAA				IAmb	IAmb	21 14 44.8	
	comp=Z,4.8nm,0.8s						
TROLL	**Troll, Antarti**	**64.07**	**161**	P	**P**	**21 14 55.3**	**+1.5**
	comp=Z,210nm,0.5s						
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**	**21 15 26.6**	**+2.3**
	comp=Z,3.5nm,0.5s,baz=310,slow=1.1,SNR=23						
	comp=Z,3.5nm,0.5s						
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**	**21 15 26.4**	**+2.1**
QSPA				IAmb	IAmb	21 15 27.0	
	comp=Z,5.4nm,0.7s						
NVAR	**Mina Array Bea**	**75.50**	**322**	P	**P**	**21 16 07.4**	**+2.9**
	comp=Z,1.0nm,0.8s,baz=136,slow=4.7,SNR=3.6						
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**21 16 14.6**	**+0.8**
	comp=Z,6.9nm,0.7s,baz=254,slow=5.1,SNR=29						
	comp=Z,6.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**21 16 14.2**	**+0.4**
TORD				IAmb	IAmb	21 16 15.1	
	comp=Z,4.2nm,0.7s						
MAW	**Mawson**	**84.41**	**163**	P	**P**	**21 16 53.1**	**+1.4**
	comp=Z,3.1nm,0.5s,baz=201,slow=6.1,SNR=8.0						
	comp=Z,3.1nm,0.5s						
MAW	**Mawson**	**84.41**	**163**	P	**P**	**21 16 53.3**	**+1.6**
LBTB	**Lobatse**	**84.89**	**115**	P	**P**	**21 16 51.2**	**-3.9**
LBTB				IAmb	IAmb	21 16 52.6	
	comp=Z,9.6nm,0.9s						
YKA	**Yellowknife Ar**	**91.12**	**341**	P	**P**	**21 17 25.2**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=135,slow=4.6,SNR=9.3						
	comp=Z,1.2nm,0.5s						
CLF	**Chambon-Foret**	**93.67**	**39**	P	**P**	**21 17 37.2**	**+1.3**
BRG	**Berggiesshubel**	**101.79**	**40**	P	**Pdif**	**21 18 13.5**	**+1.1**
BRG				Amp		21 18 14.8	
	comp=Z,12nm,1.0s						
ASAR	**Alice Springs**	**130.14**	**207**	PKP	**PKiKP**	**21 23 31.5**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=123,slow=1.9,SNR=6.9						
ASAR	**Alice Springs**	**130.14**	**207**		**PKiKP**	**21 23 30.9**	**+0.3**
WRA	**Warramunga Arr**	**133.18**	**210**	PKP	**PKPdf**	**21 23 36.1**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=160,slow=1.7,SNR=11						
WRA	**Warramunga Arr**	**133.18**	**210**	PKPdf	**PKiKP**	**21 23 36.8**	**0.0**
ZALV	**Zalesovo Beam**	**141.73**	**25**	PKP	**PKPdf**	**21 23 51.5**	**+1.3**
	comp=Z,9.9nm,0.5s,baz=287,slow=3.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**141.73**	**25**	PKPdf	**PKiKP**	**21 23 51.9**	**-1.2**
MKAR	**Makanchi Array**	**145.39**	**36**	PKPbc	**PKPab**	**21 23 59.0**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=327,slow=3.7,SNR=8.1						
MKAR				pPKPbc	pPKPbc	21 24 28.3	+1.3
	comp=Z,2.9nm,0.9s,baz=316,slow=3.2,SNR=7.4						
MKAR	**Makanchi Array**	**145.39**	**36**	PKPdf	**PKPab**	**21 23 58.6**	**+1.2**
MJAR	**Matsushiro Arr**	**152.14**	**309**	PKPbc	**PKiKP**	**21 24 15.8**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=86,slow=5.2,SNR=4.7						
HHC	**Hu-ho-hao-te**	**160.56**	**359**	*eP*	**PKPdf**	**21 24 19.8**	**+0.7**
PZH	**PanZhiHua**	**169.86**	**58**	PKP	**PKPdf**	**21 24 26.3**	**-1.0**

*ANF **21** 21:19:38.4±0.3, 66°.55N×172°.37W, h0km, ML4.2/17, Error ellipse: s-maj=3.6km s-min=2.2km az=90.0*
*NERS **21** 21:19:38.6, 66°.37N×173°.73W, h3km*
ISC 21 21:19:36.5±0.9, 66°.56N±0°.04×172°.95W±0°.04, h10km, n65, σ0.982/86, Near north coast of eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNA	**Tin City**	**2.28**	**114**	P	**Pn**	**21 20 13.4**	**-0.8**
	baz=301,SNR=9.8						
TNA				S	**Sn**	**21 20 42.5**	**+0.2**
	baz=301						
GAMB	**Gambell**	**2.85**	**169**	P	**Pb**	**21 20 25.7**	**-1.7**
	baz=354,SNR=18						
GAMB				S	**Sb**	**21 21 02.9**	**+0.7**
	baz=354						
F14K	**Arctic Creek**	**2.92**	**109**	P	**Pn**	**21 20 22.2**	**-0.7**
	baz=296,SNR=7.1						
C16K	**Lisburne Hills**	**3.40**	**56**	P	**Pn**	**21 20 29.4**	**-0.2**
	baz=241						
C16K				S	**Sn**	**21 21 11.3**	**+1.4**
	baz=241						
F15K	**North Star Dit**	**3.48**	**100**	P	**Pn**	**21 20 29.9**	**-0.8**
	baz=289,SNR=5.4						
F15K				S	**Sn**	**21 21 12.5**	**+0.5**
	baz=289						
ANM	**Nome**	**3.73**	**119**	P	**Pn**	**21 20 33.8**	**-0.3**
	baz=308						
G15K	**Niukluk**	**4.00**	**109**	P	**Pn**	**21 20 37.3**	**-0.5**
	baz=298,SNR=12						
G15K				S	**Sn**	**21 21 23.6**	**-1.0**
	baz=298						
D17K	**Noatak River**	**4.02**	**69**	P	**Pn**	**21 20 37.3**	**-0.7**
	baz=257						
D17K				S	**Sn**	**21 21 24.2**	**-0.8**
	baz=257						
RDOG	**Red Dog Mine**	**4.17**	**64**	P	**Pn**	**21 20 39.9**	**-0.2**
	baz=252,SNR=6.1						
RDOG				S	**Sn**	**21 21 28.5**	**-0.4**
	baz=252						
C17K	**DeLong Mountai**	**4.21**	**58**	P	**Pn**	**21 20 40.7**	**0.0**
	baz=246						
ANDR	**Anadyr'**	**4.36**	**250**	*eP*	**Pn**	**21 20 41.9**	**-0.8**
ANDR				*ePg*	**Pb**	**21 20 52.8**	**-0.3**
ANDR				Pgmax		21 20 54.9	
	290nm,0.6s						
ANDR				*eSg*	**Sb**	**21 21 43.4**	**-2.3**
ANDR				Sgmax		21 21 55.8	
	2μm,0.6s						
E17K	**Hotham Inlet**	**4.43**	**78**	P	**Pn**	**21 20 43.0**	**-0.7**
	baz=268						
E17K				S	**Sn**	**21 21 34.4**	**-0.8**
	baz=268						
G16K	**Koyuk River**	**4.49**	**100**	P	**Pn**	**21 20 43.9**	**-0.6**
	baz=290,SNR=6.2						
G16K				S	**Sn**	**21 21 35.5**	**-1.2**
	baz=290						
E18K	**Tukpahlearik C**	**4.92**	**74**	P	**Pn**	**21 20 49.8**	**-0.6**
	baz=265						
E18K				S	**Sn**	**21 21 46.5**	**-0.8**
	baz=265						
C18K	**Utukok River**	**4.96**	**60**	P	**Pn**	**21 20 50.7**	**-0.3**
	baz=249,SNR=5.2						
G17K	**Kiwalik Mounta**	**5.13**	**96**	P	**Pn**	**21 20 52.5**	**-0.8**
	baz=288						
J14K	**Nanvaranak Lak**	**5.56**	**129**	P	**Pn**	**21 20 59.2**	**+0.1**
	baz=319						
H17K	**Granite Mounta**	**5.62**	**101**	P	**Pn**	**21 20 59.3**	**-0.7**
	baz=293						
C19K	**Lookout Ridge**	**5.66**	**57**	P	**Pn**	**21 21 00.9**	**+0.3**
	baz=248						
C19K				S	**Sn**	**21 22 05.5**	**-0.2**
	baz=248						
A19K	**Wainwright**	**5.71**	**45**	P	**Pn**	**21 21 02.0**	**+0.9**
	baz=234						
A19K				S	**Sn**	**21 22 07.2**	**+0.6**
	baz=234						
G18K	**Tagagawik**	**5.82**	**90**	P	**Pn**	**21 21 02.9**	**+0.1**
	baz=283						
K13K	**Kusilvak Mount**	**5.88**	**138**	P	**Pn**	**21 21 03.1**	**-0.5**
	baz=327						
D19K	**Kuna River**	**6.01**	**64**	P	**Pn**	**21 21 04.8**	**-0.5**
	baz=257						
F19K	**Shaleruckik Mo**	**6.03**	**80**	P	**Pn**	**21 21 04.8**	**-0.8**
	baz=274						
H18K	**Honhosa River**	**6.15**	**97**	P	**Pn**	**21 21 06.7**	**-0.6**
	baz=290						
H18K				Sg	**Sg**	**21 22 52.8**	**-0.9**
	baz=290						
J16K	**Anvik River**	**6.19**	**116**	P	**Pn**	**21 21 08.1**	**+0.2**
	baz=308						
J16K				Sg	**Sg**	**21 22 54.7**	**-0.3**
	baz=308						
E19K	**Redstone River**	**6.22**	**75**	P	**Pn**	**21 21 07.9**	**-0.4**
	baz=268						
G19K	**Purcell Mounta**	**6.40**	**86**	P	**Pn**	**21 21 10.5**	**-0.2**

NNA	**Nana**	**5.08**	**323**	P		**Pn**	**21 27 39.1**	**-1.0**
	79nm,0.3s,baz=143,slow=12,SNR=15							
NNA				S		**Sn**	**21 28 39.0**	**+1.4**
	111nm,0.4s,baz=240,slow=23,SNR=6.0							
NNA	**Nana**	**5.08**	**323**	P		**Pn**	**21 27 40.3**	**+0.2**
PB11	**IPOC Station P**	**5.32**	**134**	P		**Pn**	**21 27 41.9**	**-1.6**
LPAZ	**La Paz**	**5.37**	**93**	P		**Pn**	**21 27 42.8**	**-1.8**
	12nm,0.3s,baz=316,slow=7.9,SNR=146							
LPAZ	**La Paz**	**5.37**	**93**	P		**Pn**	**21 27 44.0**	**-0.5**
TA02	**Huaiquique**	**5.38**	**141**	P		**Pn**	**21 27 43.0**	**-1.1**
TA01	**Diego Aracena**	**5.58**	**144**	P		**Pn**	**21 27 45.8**	**-1.1**
GO01	**Chusmiza**	**5.59**	**130**	P		**Pn**	**21 27 46.1**	**-1.3**
PB08	**IPOC Station P**	**5.93**	**134**	P		**Pn**	**21 27 50.6**	**-1.4**
PB02	**IPOC Station P**	**6.34**	**146**	P		**Pn**	**21 27 56.6**	**-0.8**
PB07	**IPOC Station P**	**6.68**	**148**	P		**Pn**	**21 28 01.2**	**-0.8**
PB03	**IPOC Station P**	**7.02**	**148**	P		**Pn**	**21 28 05.9**	**-0.7**
PB09	**IPOC Station P**	**7.09**	**144**	P		**Pn**	**21 28 06.2**	**-1.3**
PB05	**IPOC Station P**	**7.51**	**154**	P		**Pn**	**21 28 12.3**	**-0.9**
PB06	**IPOC Station P**	**7.66**	**150**	P		**Pn**	**21 28 14.6**	**-0.8**
PB14	**IPOC Station P**	**9.05**	**160**	P		**Pn**	**21 28 32.7**	**-1.6**
ATAH	**Atahualpa**	**10.00**	**332**	P		**Pn**	**21 28 49.0**	**+1.5**
	5.8nm,0.5s,baz=189,slow=8.6,SNR=10.0							
AC01	**Pan de Azucar**	**10.43**	**164**	P		**Pn**	**21 28 50.8**	**-2.0**
SALTA		**10.65**	**141**	P		**Pn**	**21 28 55.8**	**-0.6**
AC02	**Maricunga**	**11.52**	**159**	P		**Pn**	**21 29 08.3**	**+0.3**
GO03	**Copiapo**	**11.90**	**165**	P		**Pn**	**21 29 11.6**	**-1.1**
SIV	**San Ignacio**	**12.15**	**91**	P		Pn	21 29 09.3	-6.8
	2.9nm,0.5s,baz=283,slow=9.6,SNR=11							
LCO	**Las Campanas**	**13.17**	**168**	P		**Pn**	**21 29 29.7**	**+0.1**
CO01	**Juntas del Tor**	**14.23**	**167**	P		**P**	**21 29 44.7**	**-3.0**
GO04	**Tololo Observa**	**14.28**	**170**	P		**P**	**21 29 45.9**	**-2.4**
CO03	**El Pedregal**	**14.95**	**170**	P		**P**	**21 29 55.0**	**-0.6**
CO02	**Combarbal**	**15.26**	**171**	P		**P**	**21 29 57.0**	**-2.0**
CO04	**Los Peladeros**	**16.09**	**172**	P		**P**	**21 30 08.2**	**-0.2**
CFA	**Coronel Fontan**	**16.24**	**163**	P		**P**	**21 30 11.2**	**+1.4**
	1.1nm,0.4s,baz=336,slow=13,SNR=4.1							
VA05	**Santo Domingo**	**17.61**	**174**	P		**Pn**	**21 30 26.7**	**+1.5**
AQDB	**Aquidauana**	**17.65**	**107**	P		**Pn**	**21 30 30.3**	**+4.4**
CPUP	**Villa Florida**	**18.35**	**126**	P		**P**	**21 30 32.5**	**-0.5**
	0.8nm,0.6s,baz=312,slow=16,SNR=1.8							
CPUP	**Villa Florida**	**18.35**	**126**	P		**Pn**	**21 30 35.5**	**+1.3**
BO02	**Sierra Bellavi**	**18.82**	**173**	P		**Pn**	**21 30 41.5**	**+1.7**
BI02	**San Fabin de**	**20.62**	**174**	P		Pn	21 31 02.1	+1.3
ITAB	**Concordia**	**22.89**	**123**	P		**P**	**21 31 26.2**	**+4.7**
CPSB	**Cacapava Do Su**	**23.40**	**131**	P		P	21 31 33.1	+6.7
TXAR	**Lajitas Array**	**53.62**	**327**	P		**P**	**21 35 38.1**	**+0.5**
	0.3nm,0.5s,baz=155,slow=9.9,SNR=4.1							
TXAR				pP		**pP**	**21 36 01.1**	**-1.2**
	0.1nm,0.4s,baz=152,slow=8.1,SNR=2.3							
	0.3nm,0.5s							
QSPA	**South Pole Qui**	**74.08**	**180**	P		**P**	**21 37 53.9**	**+2.6**
	1.1nm,0.5s,baz=238,slow=0.6,SNR=6.0							
QSPA				pP		**pwP**	**21 38 17.8**	**+1.4**
	0.9nm,0.7s,baz=233,slow=10,SNR=1.8							
	1.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**80.00**	**73**	P		**P**	**21 38 23.2**	**-2.0**
	5.8nm,0.7s,baz=246,slow=5.4,SNR=43							
TORD				pP		**pP**	**21 38 48.6**	**-3.1**
	0.7nm,0.7s,baz=248,slow=5.3,SNR=3.0							
	5.8nm,0.7s							
ESDC	**Sonseca Array**	**85.31**	**47**	P		**P**	**21 38 52.0**	**-0.3**
	0.9nm,0.7s,baz=258,slow=6.5,SNR=6.5							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**132.16**	**215**	PKP		**PKiKP**	**21 45 30.5**	**+0.2**
	0.2nm,0.3s,baz=127,slow=2.8,SNR=1.7							
ZALV	**Zalesovo Beam**	**138.66**	**19**	PKP		**PKiKP**	**21 45 40.8**	**-1.7**
	0.4nm,0.3s,baz=328,slow=5.3,SNR=4.4							
SONM	**Songino Array**	**148.33**	**360**	PKPbc		**PKiKP**	**21 46 01.3**	**-1.5**
	0.8nm,0.5s,baz=13,slow=2.3,SNR=2.6							
SONM				pPKPbc		**pPKPbc**	**21 46 26.9**	**-2.3**
	0.4nm,0.4s,baz=29,slow=3.3,SNR=1.8							
KSRS	**Korea Array**	**151.38**	**322**	PKPbc		**PKiKP**	**21 46 09.8**	**+0.6**
	0.3nm,0.4s,baz=42,slow=2.0,SNR=6.7							
KSRS				pPKPbc		**pPKPbc**	**21 46 35.1**	**-1.6**
	0.5nm,0.5s,baz=29,slow=2.9,SNR=2.2							

MAN ***21*** *21:33:08.0,2°.67N×125°.42E,h139km,MS3.8*
DJA ***21*** *21:33:10.2±0.5,3°N±4°×12°.5E±°,h141km±5km,M4.2/18, mB4.8/3,mb4.3/5,MLv4.2/18,Mw(mB)4.0/3*
NEIC ***21*** *21:33:10.6±2.2,2°.69N±0°.09×125°.25E±0°.09,h163km±8km, mb4.2/25,Error ellipse: s-maj=13.8km s-min=12.8km az=191.0*
IDC ***21*** *21:33:16.5±4.0,2°.66N×125°.31E,h232km±42km,mb3.5/9, mbtmp4.2/10,Error ellipse: s-maj=34.0km s-min=11.8km az=79.0*

ISC 21 21:33:08.6±0.5,**2°.69N**±0°.04×**125°.40E**±0°.07,**h150**km,**n54,** σ**1**s**55**/57,**mb4.1**/20,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.00**	**7**	P	**Pn**	**21 33 34.1**	**+0.7**
SGSI				S	**Sn**	**21 33 53.0**	**+0.6**
MNI	**Manado**	**1.35**	**204**	P	**Pn**	**21 33 37.9**	**+1.2**
TNTI	**Ternate**	**2.74**	**134**		**Pn**	**21 33 53.9**	**+1.3**
TNTI	**Ternate**	**2.74**	**134**	P	**Pn**	**21 33 54.1**	**+1.5**
TNTI				S	**Sn**	**21 34 27.0**	**+0.3**
GTOI	**Gorontalo**	**3.14**	**230**	P	**Pn**	**21 33 59.0**	**+1.3**
KCP	**Kidapawan**	**4.31**	**356**	*eP*	**Pn**	**21 34 14.4**	**+1.5**
KCP				*eS*	**Sn**	**21 35 08.6**	**+5.5**
LUWI	**Luwuk**	**4.54**	**215**	Pn	**Pn**	**21 34 19.9**	**+3.0**
LUWI	**Luwuk**	**4.54**	**215**	Pn	Pn	21 34 19.7	+3.8
SANI	**Sanana**	**4.74**	**173**	P	**Pn**	**21 34 17.9**	**-0.7**
TOLI2	**Tolitoli**	**4.87**	**251**	Pn	**Pn**	**21 34 20.6**	**+0.3**
CDOP	**Cateel, Davao**	**5.17**	**12**	*eP*	**Pn**	**21 34 24.6**	**+0.4**
CDOP				*i* S	**Sn**	**21 35 20.2**	**-3.2**
BIPH	**Bislig**	**5.55**	**10**	*eP*	**Pn**	**21 34 31.1**	**+1.8**
BIPH				*eS*	**Sn**	**21 35 31.6**	**-0.7**
CGP	**Cagayan de Oro**	**5.78**	**353**	*eP*	Pn	21 34 38.4	+6.0
SOEI	**Soe**	**12.41**	**185**	P	**P**	**21 36 07.8**	**+1.6**
BATI	**Baumata**	**12.92**	**188**	P	**P**	**21 36 11.0**	**-0.9**
	19nm,0.4s,baz=90,slow=1.8,SNR=5.7						
MTN	**Manton Dam**	**16.45**	**160**	P	**P**	**21 36 49.8**	**-1.1**
MTN				lAmb	lAmb	21 37 21.8	
	comp=Z,13nm,1.2s						
KNRA	**Kununurra**	**18.55**	**170**	P	**Pn**	**21 37 14.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**20.65**	**179**	P	Pn	21 37 38.3	-2.4
	comp=Z,4.6nm,0.5s,baz=18,slow=8.8,SNR=10.0						
	comp=Z,4.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.65**	**179**	P	**P**	**21 37 37.1**	**+0.5**
WB0	**Warramunga Arr**	**24.00**	**159**	P	**P**	**21 38 10.1**	**+0.6**
WRAB	**Tennant Creek**	**24.14**	**159**	P	**P**	**21 38 11.8**	**+1.0**
WRAB				lAmb	lAmb	21 38 13.8	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**24.14**	**159**	P	**P**	**21 38 11.8**	**+1.0**
	comp=Z,4.4nm,0.6s,baz=338,slow=10,SNR=43						
	comp=Z,4.4nm,0.6s						
WRA	**Warramunga Arr**	**24.14**	**159**	P	**P**	**21 38 11.2**	**+0.3**
JOW	**Kunigami**	**24.17**	**6**	P	**P**	**21 38 09.8**	**-1.3**
WR8	**Warramunga Arr**	**24.21**	**159**	P	**P**	**21 38 12.2**	**+0.7**
WR8				lAmb	lAmb	21 38 14.3	
	comp=Z,8.9nm,1.1s						
MBWA	**Marble Bar**	**24.34**	**193**	P	**P**	**21 38 13.5**	**+0.9**
MBWA				lAmb	lAmb	21 38 14.9	
	comp=Z,11nm,1.1s						
ASAR	**Alice Springs**	**27.47**	**163**	P	**P**	**21 38 42.0**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=342,slow=7.5,SNR=11						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**27.47**	**163**	P	**P**	**21 38 41.9**	**+1.0**
JMN	**Monobe**	**31.89**	**13**	P	**P**	**21 39 20.9**	**+1.2**
FORT	**Forrest**	**33.37**	**176**	P	**P**	**21 39 33.2**	**+0.5**
FORT				lAmb	lAmb	21 39 46.8	
	comp=Z,6.9nm,1.1s						
MJAR	**Matsushiro Arr**	**35.71**	**18**	P	**P**	**21 39 52.4**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=194,slow=9.0,SNR=7.5						
	comp=Z,1.5nm,0.7s						
BBOO	**Buckleboo**	**36.72**	**165**	P	**P**	**21 40 01.5**	**+0.2**
STKA	**Stephens Creek**	**37.66**	**157**	P	**P**	**21 40 10.7**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=337,slow=11,SNR=4.3						
	comp=Z,1.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**41.75**	**7**	P	**P**	**21 40 44.0**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=202,slow=8.3,SNR=5.1						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**57.66**	**326**	P	**P**	**21 42 42.6**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=120,slow=8.0,SNR=31						
MKAR				PcP	**PcP**	**21 43 33.9**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=111,slow=4.8,SNR=6.5						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**57.66**	**326**	P	**P**	**21 42 42.5**	**-0.8**
MAKZ	**Makanchi**	**57.85**	**326**	P	**P**	**21 42 42.7**	**-1.9**
MAKZ				lAmb	lAmb	21 42 45.0	
	comp=Z,1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**61.91**	**328**	P	**P**	**21 43 11.1**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=133,slow=5.7,SNR=4.3						
	comp=Z,0.7nm,0.3s						
KURK	**Kurchatov**	**61.91**	**328**	P	**P**	**21 43 11.2**	**-0.9**
KURK				lAmb	lAmb	21 43 12.7	
	comp=Z,2.0nm,0.3s						
AB31	**Akbulak array**	**72.12**	**321**	P	**P**	**21 44 15.6**	**-1.1**
ABKAR	**Akbulak array**	**72.12**	**321**	P	**P**	**21 44 15.6**	**-1.1**
L16K	**Owhat River**	**80.62**	**28**	P	**P**	**21 45 06.2**	**+1.9**
L16K				lAmb	lAmb	21 45 29.5	
	comp=Z,5.4nm,1.3s						
L18K	**Granite Mounta**	**82.00**	**28**	P	**P**	**21 45 13.3**	**+1.7**
L18K				lAmb	lAmb	21 45 14.7	
	comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**82.57**	**173**	P	**P**	**21 45 11.8**	**-2.5**
	comp=Z,1.1nm,0.3s,baz=309,slow=3.5,SNR=26						
	comp=Z,1.1nm,0.3s						
VNDA	**Vanda**	**82.57**	**173**	P	**P**	**21 45 11.6**	**-2.7**
H19K	**Roundabout Mou**	**82.66**	**24**	P	**P**	**21 45 16.8**	**+1.9**
H19K				lAmb	lAmb	21 45 17.7	
	comp=Z,3.2nm,0.8s						
J20K	**Nowinta River**	**83.43**	**26**	P	**P**	**21 45 20.8**	**+1.8**
J20K				lAmb	lAmb	21 45 55.1	
	comp=Z,4.5nm,1.4s						
IMAR	**Indian Mountai**	**83.83**	**24**	P	**P**	**21 45 22.4**	**+1.4**
L22K	**Petersville**	**84.78**	**28**	P	**P**	**21 45 26.1**	**+0.2**
L22K				lAmb	lAmb	21 45 27.5	
	comp=Z,4.0nm,1.3s						
C23K	**Itkillik River**	**85.42**	**20**	P	**P**	**21 45 30.4**	**+1.6**
C23K				lAmb	lAmb	21 46 03.7	
	comp=Z,5.5nm,1.5s						
C27K	**Jago River**	**87.81**	**21**	P	**P**	**21 45 41.6**	**+1.1**
E27K	**Coleen River**	**88.65**	**22**	P	**P**	**21 45 44.5**	**0.0**
BCAR	**Beaver Creek A**	**88.91**	**27**	P	**P**	**21 45 47.5**	**+1.6**
BURAR	**Bucovina Array**	**94.89**	**318**	P	**P**	**21 46 12.6**	**-1.3**

CATAC ***21*** *21:40:10.8±0.8,7°N±3°×7°3W±°,h174km±9km,M4.9/11, mB4.8/6,mb5.1/4,MLv5.3/11,Mw(mB)4.1/6,confirmed*
IDC ***21*** *21:40:10.9±0.4,7°.00N×72°.85W,h172km±4km,mb3.9/18, mbtmp4.5/24,MS3.6/2,Error ellipse: s-maj=10.0km s-min=6.5km az=127.0*
NEIC ***21*** *21:40:11.2±2.3,6°.95N±0°.07×72°.84W±0°.08,h173km±6km, mb4.6/385,Error ellipse: s-maj=11.7km s-min=9.8km az=119.0*
VAO ***21*** *21:40:11.3±0.4,6°.92N×72°.88W,h169km±2km,mb4.6, Presumed earthquake*
GFZ ***21*** *21:40:11.6±0.7,7°N±3°×7°3W±°,h174km±7km,M4.6/23, mb4.7/23*
RSNC ***21*** *21:40:12.1±0.0,7°N±1°×7°3W±°,h164km±1km,M5.0, mB5.5,mb5.2,ML4.6,MLv5.3,Mw(mB)5.0*
FUNV ***21*** *21:40:13.6,7°.36N×73°.09W,h5km,MW4.6,Presumed earthquake*
UCR ***21*** *21:40:16.3±1.1,7°.58N×73°.52W,h20km±999km,MW4.2, Presumed earthquake*

ISC 21 21:40:10.5±0.4,**7°.02N**±0°.03×**72°.96W**±0°.03,**h170**km±3km, **h170**km:**pP-P,n635,**σ1s**28**/558,**mb4.6**/192,**2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.41**	**39**	P	**Pn**	**21 40 35.5**	**+1.2**
PAMC				S	**Sn**	**21 40 53.0**	**+0.4**
BARC	**Barichara**	**0.48**	**207**	P	**Pn**	**21 40 35.0**	**+0.7**
BARC				S	**Sn**	**21 40 52.0**	**-0.6**
BRJC	**Barrancabermej**	**0.78**	**267**	P	**Pn**	**21 40 36.4**	**+0.8**
BRJC				S	**Sn**	**21 40 55.3**	**+0.5**
RUSC	**La Rusia**	**1.13**	**186**	P	**Pn**	**21 40 39.6**	**+0.8**
RUSC	**La Rusia**	**1.13**	**186**	P	**Pn**	**21 40 39.5**	**+0.8**
RUSC				S	**Sn**	**21 41 00.3**	**-0.3**
RUSC	**La Rusia**	**1.13**	**186**	*eP*	**Pn**	**21 40 39.4**	**+0.6**
RUSC				*eS*	**Sn**	**21 40 59.9**	**-0.6**
OCAC	**Ocana**	**1.26**	**344**	P	**Pn**	**21 40 40.1**	**+0.6**
OCAC				S	**Sn**	**21 41 02.0**	**0.0**
PTBC	**PUERTO BERRIO,**	**1.56**	**252**	P	**Pn**	**21 40 42.0**	**-0.2**
PTBC				S	**Sn**	**21 41 05.9**	**-0.7**
SPBC	**San Pablo de B**	**1.75**	**219**	P	**Pn**	**21 40 44.8**	**+0.5**
SPBC				S	**Sn**	**21 41 10.0**	**-0.4**
NORC	**Norcasia**	**2.38**	**233**	P	**Pn**	**21 40 51.6**	**+0.3**
NORC				S	**Sn**	**21 41 21.7**	**-1.3**
CHIC	**Chingaza**	**2.50**	**198**	P	**Pn**	**21 40 53.6**	**+0.6**
CHIC				S	**Sn**	**21 41 25.3**	**-0.7**
ROSC	**El Rosal**	**2.55**	**212**	P	**Pn**	**21 40 55.7**	**+2.0**
	2μm,0.4s,baz=46,slow=5.3,SNR=331						
ROSC				S	**Sn**	**21 41 28.0**	**+0.9**
	7μm,0.5s,baz=54,slow=18,SNR=29						
ROSC				LR	LR	21 42 11.4	
	comp=Z,858nm,18.5s,baz=207,slow=46						
ROSC	**El Rosal**	**2.55**	**212**		**Pn**	**21 40 55.2**	**+1.6**
ROSC	**El Rosal**	**2.55**	**212**	P	**Pn**	**21 40 55.5**	**+1.9**
ROSC				S	**Sn**	**21 41 26.3**	**-0.8**
UREC	**San Jos de Ur**	**2.65**	**286**	P	**Pn**	**21 40 53.3**	**-1.1**
UREC				S	**Sn**	**21 41 25.8**	**-2.7**
HELC	**Santa Helena**	**2.68**	**252**	P	**Pn**	**21 40 54.9**	**-0.2**
HELC	**Santa Helena**	**2.68**	**252**	P	**Pn**	**21 40 54.7**	**-0.4**
HELC				S	**Sn**	**21 41 28.4**	**-1.3**
HELC	**Santa Helena**	**2.68**	**252**	*eP*	**Pn**	**21 40 56.5**	**+1.4**
HELC				*eS*	**Sn**	**21 41 29.2**	**-0.5**
MEDEC	**Medelln, Ant**	**2.71**	**254**	P	**Pn**	**21 40 56.4**	**+1.1**
CVER	**Cruz Verde, Cu**	**2.72**	**204**	P	**Pn**	**21 40 57.1**	**+1.4**
CVER				S	**Sn**	**21 41 29.1**	**-1.7**
PTGC	**Puerto Gaitan,**	**2.92**	**164**	P	**Pn**	**21 40 58.1**	**+0.4**
SDV	**Santo Domingo**	**2.96**	**51**	P	**Pn**	**21 40 59.7**	**+1.4**
	2μm,0.3s,baz=232,slow=9.4,SNR=938						
SDV				S	**Sn**	**21 41 34.5**	**-1.1**
	1μm,0.3s,baz=62,slow=21,SNR=15						
SDV	**Santo Domingo**	**2.96**	**51**	Pn	**Pn**	**21 40 59.1**	**+0.7**
SDV	**Santo Domingo**	**2.96**	**51**	*eP*	**Pn**	**21 40 59.8**	**+1.4**
SDV				*eS*	**Sn**	**21 41 32.9**	**-2.6**
SDV	**Santo Domingo**	**2.96**	**51**	*eP*	**Pn**	**21 40 59.3**	**+1.0**
SDV				*eS*	**Sn**	**21 41 34.8**	**-0.7**
VILC	**Villavicencio,**	**2.98**	**194**	P	**Pn**	**21 40 58.9**	**+0.3**
VILC				S	**Sn**	**21 41 35.3**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.98**	**233**	P	**Pn**	**21 40 59.5**	**+0.6**
GUY2C				S	**Sn**	**21 41 35.7**	**-0.8**
ARGC	**Ariguani, Magd**	**3.09**	**336**	P	**Pn**	**21 41 01.0**	**+1.2**
ARGC				S	**Sn**	**21 41 37.9**	**-0.4**
DBBC	**Dabeiba**	**3.22**	**270**	P	**Pn**	**21 41 01.8**	**+0.3**
DBBC				S	**Sn**	**21 41 39.5**	**-1.7**
CBOC	**Ciudad Bolivar**	**3.24**	**249**	P	**Pn**	**21 41 02.7**	**+0.9**
SJCC	**San Jacinto, C**	**3.60**	**323**	P	**Pn**	**21 41 05.8**	**-0.4**
SJCC	**San Jacinto, C**	**3.60**	**323**	P	**Pn**	**21 41 05.6**	**-0.7**
SJCC	**San Jacinto, C**	**3.60**	**323**	*eP*	**Pn**	**21 41 05.2**	**-1.1**
SJCC				*eS*	**Sn**	**21 41 42.0**	**-7.8**
APAC	**Apartado, Choc**	**3.69**	**284**	P	**Pn**	**21 41 07.7**	**+0.4**
APAC				S	**Sn**	**21 41 48.9**	**-2.8**
PRAC	**Prado**	**3.80**	**210**	P	**Pn**	**21 41 08.9**	**0.0**
PRAC	**Prado**	**3.80**	**210**	P	**Pn**	**21 41 08.6**	**-0.2**
PRAC				S	**Sn**	**21 41 54.1**	**-0.3**
LCBC	**Los crdobas,**	**3.83**	**299**	P	**Pn**	**21 41 08.8**	**-0.4**
LCBC				S	**Sn**	**21 41 53.7**	**-1.3**
ORTC	**Ortega, Tolima**	**3.84**	**216**	P	**Pn**	**21 41 09.8**	**+0.5**
SMRC	**Santa Marta, M**	**4.30**	**343**	P	**Pn**	**21 41 15.1**	**-0.1**
GUVC	**San Jose del G**	**4.46**	**176**	P	**Pn**	**21 41 16.7**	**-0.6**
GUVC				S	**Sn**	**21 42 09.9**	**+0.4**
SOLC	**Bahia Solano**	**4.49**	**260**	P	**Pn**	**21 41 17.9**	**+0.3**
SOLC				S	**Sn**	**21 42 10.2**	**+0.2**
URI	**Uribia**	**4.75**	**12**	P	**Pn**	**21 41 20.2**	**-0.7**
URIC	**Uribia, Colomb**	**4.75**	**12**	P	**Pn**	**21 41 20.1**	**-0.9**
URIC	**Uribia, Colomb**	**4.75**	**12**	*eP*	**Pn**	**21 41 20.0**	**-0.9**
URIC				*eS*	**Sn**	**21 42 09.4**	**-6.9**
PTAC	**Punta Ardita,**	**4.81**	**272**	P	**Pn**	**21 41 20.8**	**-1.0**
PTAC				S	**Sn**	**21 42 16.5**	**-1.1**
PIZC	**Pizarro, Choco**	**4.83**	**245**	P	**Pn**	**21 41 23.2**	**+1.2**
PIZC				S	**Sn**	**21 42 18.0**	**0.0**
MACC	**Macarena, Meta**	**4.92**	**190**	P	**Pn**	**21 41 22.2**	**-1.1**
BETC	**Betania**	**4.97**	**210**	P	**Pn**	**21 41 23.5**	**-0.4**
JAMC	**Jamundi, Valle**	**5.29**	**225**	P	**Pn**	**21 41 27.9**	**-0.3**
	2.3nm6μm366nm,0.5s						
GARC	**Garzon, Huila**	**5.42**	**208**	P	**Pn**	**21 41 29.1**	**-1.0**
POPC	**Popayan, Colom**	**5.79**	**220**	P	**Pn**	**21 41 35.1**	**+0.3**
	3μm263nm,0.6s						
GR1C	**Gorgona, Isla**	**6.54**	**233**	P	**Pn**	**21 41 43.6**	**-1.0**
BBAC	**Balboa, Cauca**	**6.55**	**221**	P	**Pn**	**21 41 44.9**	**0.0**
	6μm395nm,0.5s						
CRUC	**La Cruz**	**6.72**	**216**	P	**Pn**	**21 41 47.9**	**+0.6**
PTLC	**Puerto Leguiza**	**7.05**	**195**	P	**Pn**	**21 41 53.0**	**+1.7**
	2μm280nm,0.8s						
ZANG	**Zanguenga, Cho**	**7.10**	**286**	*eP*	**Pn**	**21 41 51.8**	**-0.2**
BCIP	**Isla Barro Col**	**7.13**	**288**	Pn	**Pn**	**21 41 50.8**	**-1.6**
BCIP	**Isla Barro Col**	**7.13**	**288**	P	**Pn**	**21 41 51.0**	**-1.4**
	1μm138nm,0.6s						
BCIP	**Isla Barro Col**	**7.13**	**288**	*eP*	**Pn**	**21 41 50.9**	**-1.4**
BCIP	**Isla Barro Col**	**7.13**	**288**	P	**Pn**	**21 41 51.3**	**-1.1**
AZU	**Azuero**	**7.29**	**276**	P	**Pn**	**21 41 54.2**	**-0.3**
	4μm329nm,0.6s						
AZU	**Azuero**	**7.29**	**276**	*i*P	**Pn**	**21 41 54.1**	**-0.4**
AZU				*e*S	**Sn**	**21 43 10.4**	**-6.1**
TULM	**Tulcn-Chalpat**	**7.90**	**218**	P	**Pn**	**21 42 04.7**	**+1.7**
	201nm,0.6s						
CASC	**Dorado de Casc**	**8.11**	**213**	P	**Pn**	**21 42 05.9**	**+0.4**
	851nm100nm,0.6s						
GMAL	**Guarumal, Vera**	**8.24**	**276**	P	**Pn**	**21 42 08.3**	**+1.3**
	7μm274nm,0.8s						
GMAL	**Guarumal, Vera**	**8.24**	**276**	*i*P	**Pn**	**21 42 08.0**	**+1.0**
CUSE	**Cuicocha Este**	**8.60**	**219**	P	**Pn**	**21 42 13.3**	**+1.1**
	8μm152nm,0.6s						
OTAV	**Otavalo**	**8.68**	**219**	Pn	**Pn**	**21 42 12.6**	**-0.7**
OTAV	**Otavalo**	**8.68**	**219**	P	**Pn**	**21 42 12.7**	**-0.7**
	660nm65nm,0.6s						
OTAV	**Otavalo**	**8.68**	**219**	*eP*	**Pn**	**21 42 12.6**	**-0.7**
OTAV				*eS*	**Sn**	**21 43 50.4**	**-0.1**
OTAV	**Otavalo**	**8.68**	**219**	P	**Pn**	**21 42 13.4**	**0.0**
PAC1	**Pacto, Paraso**	**8.88**	**221**	P	**Pn**	**21 42 14.2**	**-1.4**
KKNTU	**Kakint[e]**	**8.95**	**282**	*eP*	**Pn**	**21 42 16.3**	**-0.1**
ANTS	**Antisana-Sarah**	**9.10**	**215**	P	**Pn**	**21 42 19.9**	**+1.0**
SGC2	**Sao Gabriel da**	**9.29**	**140**	*eP*	**Pn**	**21 42 18.7**	**-2.3**
SGC2				*eS*	**Sn**	**21 44 02.6**	**-1.9**
SLOR	**San Lorenzo -**	**9.47**	**216**	Pn	**Pn**	**21 42 21.7**	**-2.1**
BQTLY	**Boquete Panama**	**9.57**	**281**	*eP*	**Pn**	**21 42 25.8**	**+1.1**
BRU2	**Volcan**	**9.80**	**281**	Pn	**Pn**	**21 42 28.4**	**+0.7**
BRU2	**Volcan**	**9.80**	**281**	*eP*	**Pn**	**21 42 28.2**	**+0.5**
BRU2	**Volcan**	**9.80**	**281**	P	**Pn**	**21 42 29.2**	**+1.5**
ALCO	**Alturas Coton,**	**9.96**	**282**	*eP*	**Pn**	**21 42 30.2**	**+0.2**
DRK0	**Durika**	**10.42**	**283**	P	Pn	21 42 26.0	-10
LCOCO	**El Coco**	**10.91**	**287**	*eP*	**Pn**	**21 42 42.9**	**+0.7**
ABRB	**Las Abras (San**	**11.04**	**286**	*eP*	**Pn**	**21 42 45.3**	**+1.2**
CVTQ	**Turrialba Volc**	**11.09**	**286**	*eP*	**Pn**	**21 42 45.3**	**+0.5**
PCJ	**Portland Cotta**	**11.41**	**339**	*i* P	**Pn**	**21 42 51.1**	**+2.5**
HOJ	**Hope**	**11.53**	**342**	*i* P	**Pn**	**21 42 51.7**	**+1.6**
HOJ				*i* P		**P**	**21 42 53.0**	**-0.7**
BANI	**BANI**	**11.58**	**12**	Pn	**Pn**	**21 42 51.7**	**+0.7**
GWJ	**Greenwich**	**11.58**	**342**	*i* P	**Pn**	**21 42 53.1**	**+2.1**
STH	**Stony Hill**	**11.61**	**342**	*i* P	**Pn**	**21 42 53.2**	**+1.9**
STH				*i* P	**Pn**	**21 42 53.2**	**+1.9**
STH			

LRAL **Lakeview Retre** 28.98 335 P **P** 21 45 56.3 +2.1
LRAL IAmb IAmb 21 45 57.5
comp=Z,17nm,0.8s
BG3 **Lake Jocassee** 29.31 343 IAmb IAmb 21 46 00.7
comp=Z,18nm,1.3s
V55A **Taylorsville** 29.68 346 IAmb IAmb 21 46 03.6
comp=Z,11nm,0.9s
FPAL **Fort Paine** 29.77 339 IAmb IAmb 21 46 04.2
comp=Z,8.7nm,1.1s
SMTB **Santa Maria do** 29.81 122 *e*P **P** **21 46 02.5 +0.7**
SMTB *e*pP **pP** **21 46 36.4 -0.9**
SMTB *e*S **S** **21 50 46.3 +0.2**
V53A **Saluda** 29.91 344 P **P** **21 46 03.9 +1.5**
V53A IAmb IAmb 21 46 05.8
comp=Z,8.7nm,0.8s
TKL **Tuckaleechee C** 30.18 342 IAmb IAmb 21 46 07.8
comp=Z,20nm,1.5s
CPCT **Cooper Cave** 30.22 341 P **P** **21 46 06.7 +1.6**
CPCT IAmb IAmb 21 46 08.4
comp=Z,15nm,0.8s
W50A **Signal Mountai** 30.26 340 IAmb IAmb 21 46 08.8
comp=Z,15nm,0.8s
SWET **Sewanee** 30.49 339 IAmb IAmb 21 46 10.0
comp=Z,5.8nm,0.7s
ARAG **Araguaiana, MT** 30.80 137 *e*P **P** **21 46 10.0 -0.4**
ARAG *e*S **S** **21 51 01.8 +0.3**
BLA **Blacksburg** 30.81 348 IAmb IAmb 21 46 13.4
comp=Z,17nm,1.1s
TZTN **Tazewell** 30.94 343 P **P** **21 46 12.7 +1.3**
TZTN IAmb IAmb 21 46 14.5
comp=Z,7.3nm,0.8s
S57A **Dark Hollow, R** 31.08 351 IAmb IAmb 21 46 15.3
comp=Z,14nm,0.6s
CLTN **Cedars of Leba** 31.42 339 IAmb IAmb 21 46 18.7
comp=Z,20nm,1.4s
HBVL **Hebbronville** 31.52 312 P **P** **21 46 18.0 +1.3**
HBVL IAmb IAmb 21 46 19.6
comp=Z,12nm,0.7s
U49A **Red Boiling Sp** 31.61 340 IAmb IAmb 21 46 19.6
comp=Z,6.7nm,0.7s
T50A **Nancy** 31.76 342 IAmb IAmb 21 46 21.9
comp=Z,16nm,1.0s
R55A **Marlinton** 31.79 349 IAmb IAmb 21 46 22.4
comp=Z,11nm,0.8s
S51A **Beattyville** 31.97 344 IAmb IAmb 21 46 23.5
comp=Z,11nm,0.8s
WVT **Waverly** 32.01 337 P **P** **21 46 21.9 +1.1**
Q56A **Snyder Ridge,** 32.37 351 IAmb IAmb 21 46 27.6
comp=Z,16nm,1.1s
Q54A **Coxs Mills** 32.60 349 IAmb IAmb 21 46 29.2
comp=Z,13nm,0.8s
R50A **Paris** 32.78 343 P **P** **21 46 29.3 +1.8**
WUPA **West Chester U** 32.85 356 IAmb IAmb 21 46 31.6
comp=Z,9.6nm,0.9s
Q52A **Bidwell** 32.89 347 IAmb IAmb 21 46 31.6
comp=Z,24nm,0.9s
X40A **Basin Creek Fa** 32.91 329 IAmb IAmb 21 46 30.7
comp=Z,14nm,0.8s
MVL **Millersville** 32.98 355 IAmb IAmb 21 46 32.2
comp=Z,32nm,1.4s
R49A **Shelbyville** 33.04 342 IAmb IAmb 21 46 32.4
comp=Z,9.8nm,0.6s
P53A **Whipple** 33.20 348 P **P** **21 46 32.0 +0.9**
P53A IAmb IAmb 21 46 33.9
comp=Z,10nm,0.8s
Q51A **Peebles** 33.21 345 IAmb IAmb 21 46 34.5
comp=Z,16nm,0.8s
PAGS **Pennsylvania G** 33.24 355 IAmb IAmb 21 46 34.3
comp=Z,21nm,0.8s
WHAR **Wooly Hollow** 33.27 330 IAmb IAmb 21 46 34.5
comp=Z,15nm,0.7s
WCI **Wyandotte Cave** 33.33 341 P **P** **21 46 33.1 +0.8**
WCI **Wyandotte Cave** 33.33 341 P **P** **21 46 34.3 +2.0**
MIAR **Mount Ida** 33.34 328 IAmb IAmb 21 46 34.0
comp=Z,7.5nm,0.8s
MIAR **Mount Ida** 33.34 328 P **P** **21 46 33.2 +0.7**
LCAR **Lake Charles** 33.37 333 IAmb IAmb 21 46 35.0
comp=Z,12nm,0.6s
BDFB **Brasilia** 33.43 132 P **P** **21 46 34.1 +0.5**
comp=Z,4.8nm,0.6s,baz=295,slow=9.2,SNR=7.0
comp=Z,4.8nm,0.6s
BDFB **Brasilia** 33.43 132 P **P** **21 46 33.5 -0.1**
BDFB IAmb IAmb 21 46 34.7
comp=Z,20nm,1.4s
NBPS **Pedro II - PI** 33.44 109 *e*P **P** **21 46 33.7 +0.1**
NBPS *e*pP **pP** **21 47 09.1 -0.4**
FCAR **Ozark Folk Cen** 33.67 331 IAmb IAmb 21 46 37.1
comp=Z,23nm,0.9s
N58A **Sunbury** 33.84 355 IAmb IAmb 21 46 39.7
comp=Z,19nm,0.9s
AC02 **Maricunga** 33.86 174 P **P** **21 46 36.8 -0.8**
AC02 IAmb IAmb 21 46 37.6
comp=Z,9.8nm,0.7s
AC02 **Maricunga** 33.86 174 P **P** **21 46 37.2 -0.3**
O53A **New Philadelph** 33.90 349 IAmb IAmb 21 46 40.2
comp=Z,14nm,0.7s
SDBA **SAO DESIDERIO** 33.92 125 *e*P **P** **21 46 38.0 +0.3**
T42A **Van Buren** 34.14 334 P **P** **21 46 40.6 +1.3**
ACSO **Alum Creek Sta** 34.27 346 IAmb IAmb 21 46 43.5
comp=Z,22nm,1.0s
BRDY **Brady** 34.28 318 IAmb IAmb 21 46 42.9
comp=Z,7.1nm,0.7s
PAMR **Moraine State** 34.37 350 IAmb IAmb 21 46 44.6
comp=Z,21nm,0.9s
KSCT **Kent School, K** 34.56 359 IAmb IAmb 21 46 45.0
comp=Z,13nm,0.8s
PAOC **Oil Creek Stat** 34.87 351 IAmb IAmb 21 46 49.2
comp=Z,25nm,1.1s
HHAR **Hobbs** 34.87 330 IAmb IAmb 21 46 47.1
comp=Z,12nm,0.7s
Q44A **Meyer Farm, Va** 34.89 338 IAmb IAmb 21 46 48.2
comp=Z,14nm,0.7s
CCM **Cathedral Cave** 35.06 334 P **P** **21 46 47.9 +0.7**
CCM **Cathedral Cave** 35.06 334 P **P** **21 46 48.4 +1.2**
L59A **Walton** 35.07 357 IAmb IAmb 21 46 50.1
comp=Z,17nm,0.8s
BINY **Binghamton** 35.14 356 P **P** **21 46 50.2 +2.4**
N49A **Columbus Grove** 35.21 345 IAmb IAmb 21 46 51.0
comp=Z,20nm,1.1s
U38A **Gravette** 35.22 329 IAmb IAmb 21 46 49.4
comp=Z,9.0nm,0.7s
L61B **Northampton** 35.28 0 P **P** **21 46 50.0 +1.0**
L61B IAmb IAmb 21 46 52.2
comp=Z,8.9nm,0.8s
K62A **Royalston** 35.51 1 IAmb IAmb 21 46 53.7
comp=Z,13nm,1.0s
ABTX **Abilene, Hawle** 35.55 319 IAmb IAmb 21 46 53.5
comp=Z,14nm,0.9s
TUL3 **Leonard** 35.55 327 P **P** **21 46 51.8 +0.3**
TUL3 IAmb IAmb 21 46 52.8
comp=Z,17nm,0.7s
WTFS **Witchita Falls** 35.56 322 IAmb IAmb 21 46 53.4
comp=Z,15nm,0.7s
W35A **Tecumseh** 35.59 325 IAmb IAmb 21 46 53.4
comp=Z,7.2nm,0.7s
S39A **Bolivar** 35.69 332 IAmb IAmb 21 46 55.7
comp=Z,12nm,0.6s
AC05 **El Transito** 35.74 176 IAmb IAmb 21 46 53.3
comp=Z,14nm,0.6s
J59A **Piesco** 36.32 358 P **P** **21 46 59.2 +1.3**
J59A IAmb IAmb 21 47 02.0
comp=Z,9.0nm,0.9s
J57A **Williamstown** 36.34 356 P **P** **21 46 59.1 +1.1**
OK029 **Liberty Lake** 36.39 325 IAmb IAmb 21 46 59.8
comp=Z,17nm,0.9s
WMOK **Wichita Mounta** 36.42 323 IAmb IAmb 21 46 59.9
comp=Z,9.9nm,0.7s
WMOK **Wichita Mounta** 36.42 323 P **P** **21 46 59.1 +0.3**
TXAR **Lajitas Array** 36.45 311 P **P** **21 47 00.5 +1.2**
comp=Z,3.2nm,0.6s,baz=126,slow=9.3,SNR=62
comp=Z,3.2nm,0.6s
CPUP **Villa Florida** 36.46 156 pP pP 21 47 34.8 -1.4
comp=Z,1.7nm,0.6s,baz=337,slow=9.2,SNR=4.2
229A **Bryant Ranch,** 36.59 317 IAmb IAmb 21 47 02.8
comp=Z,21nm,0.8s
TMB01 **Midkiff** 36.60 316 IAmb IAmb 21 47 02.2
comp=Z,7.5nm,0.7s
T35A **Sooner Cattle** 36.69 328 P **P** **21 47 01.7 +0.6**
T35A IAmb IAmb 21 47 02.0
comp=Z,9.9nm,0.6s
NCB **Newcomb** 36.82 358 IAmb IAmb 21 47 05.0
comp=Z,30nm,1.3s
MNHN **Monahans** 36.88 315 IAmb IAmb 21 47 04.5
comp=Z,7.7nm,0.9s
PECO **Prince Edward** 36.94 355 P **P** **21 47 04.0 +1.0**
I63A **Otisfield** 36.94 3 IAmb IAmb 21 47 05.7
comp=Z,12nm,0.7s

129A **Stewart Farms,** 37.02 317 IAmb IAmb 21 47 06.1
comp=Z,24nm,1.3s
CFNY **Clifton-Fine,** 37.04 358 IAmb IAmb 21 47 06.0
comp=Z,8.9nm,0.7s
DKNS **Dickens** 37.04 320 IAmb IAmb 21 47 06.2
comp=Z,8.2nm,0.8s
TPB05 **Hovey Rd** 37.05 314 IAmb IAmb 21 47 06.2
comp=Z,17nm,0.7s
LBNH **Lisbon** 37.09 1 IAmb IAmb 21 47 07.0
comp=Z,14nm,0.8s
CROK **Carrier** 37.19 326 P **P** **21 47 04.9 -0.4**
CROK IAmb IAmb 21 47 06.6
comp=Z,12nm,0.8s
TPB06 **Permian Basin** 37.38 315 IAmb IAmb 21 47 10.0
comp=Z,7.8nm,0.7s
TPB01 **Permian Basin** 37.39 314 IAmb IAmb 21 47 08.9
comp=Z,8.2nm,0.7s
LONY **Lake Ozonia** 37.48 358 IAmb IAmb 21 47 10.4
comp=Z,6.8nm,0.8s
DELO **Deloro Mine** 37.57 355 IAmb IAmb 21 47 10.7
comp=Z,16nm,0.6s
FRNY **Flat Rock** 37.67 359 IAmb IAmb 21 47 11.9
comp=Z,15nm,0.8s
CANS **Sao Roque de M** 37.67 137 *e*P **P** **21 47 09.4 -0.3**
CANS *e*pP **pP** **21 47 45.0 -1.3**
ELIS **Ellis County** 37.70 324 P **P** **21 47 09.9 +0.2**
ELIS IAmb IAmb 21 47 11.4
comp=Z,24nm,1.0s
CO03 **El Pedregal** 37.71 177 IAmb IAmb 21 47 19.7
comp=Z,18nm,1.4s
EMMW **East Machias** 37.85 6 IAmb IAmb 21 47 13.0
comp=Z,12nm,0.6s
SADO **Sadowa** 37.99 353 IAmb IAmb 21 47 14.2
comp=Z,20nm,0.8s
G62A **West of Eustis** 38.11 3 P **P** **21 47 14.3 +1.4**
G62A IAmb IAmb 21 47 15.8
comp=Z,16nm,0.6s
AMTX **Amarillo** 38.30 320 IAmb IAmb 21 47 16.8
comp=Z,20nm,1.1s
G65A **Princeton** 38.32 6 IAmb IAmb 21 47 17.2
comp=Z,14nm,0.9s
MSTX **Muleshoe** 38.44 318 P **P** **21 47 15.9 0.0**
MSTX IAmb IAmb 21 47 18.1
comp=Z,10nm,0.7s
L40A **Anamosa** 38.47 338 IAmb IAmb 21 47 16.9
comp=Z,13nm,0.7s
ZON **Zonda** 38.57 174 IAmb IAmb 21 47 57.4
comp=Z,29nm,1.4s
BUKO **Buck Lake** 38.68 353 IAmb IAmb 21 47 19.6
comp=Z,13nm,0.7s
CO04 **Los Peladeros** 38.89 177 IAmb IAmb 21 47 19.9
comp=Z,12nm,0.6s
F64A **Sherman** 38.90 5 P **P** **21 47 20.8 +1.3**
F64A IAmb IAmb 21 47 21.7
comp=Z,7.4nm,0.8s
MNTX **Cornudas Mount** 38.95 313 P **P** **21 47 20.9 +0.8**
MNTX IAmb IAmb 21 47 23.0
comp=Z,11nm,0.8s
MNTX **Cornudas Mount** 38.95 313 P **P** **21 47 21.6 +1.4**
TRQ **Mont Tremblant** 39.08 358 IAmb IAmb 21 47 24.3
comp=Z,8.2nm,0.7s
I40A **Norwalk** 39.85 340 IAmb IAmb 21 47 28.8
comp=Z,15nm,0.9s
CMC01 **Camacan, BA** 39.91 124 *e*P **P** **21 47 28.0 -0.2**
RTBA **Rita Blanca** 39.95 321 IAmb IAmb 21 47 30.5
comp=Z,7.8nm,0.7s
D62A **Allapoint, All** 40.06 4 P **P** **21 47 30.6 +1.6**
MT08 **Bocatoma Ro** 40.34 176 P **P** **21 47 31.9 +0.1**
MT08 IAmb IAmb 21 48 12.7
comp=Z,15nm,1.2s
LMQ **La Malbaie** 40.45 3 P **P** **21 47 33.0 +0.8**
MT09 **Talagante** 40.62 177 P **P** **21 47 32.2 -1.7**
MT09 IAmb IAmb 21 47 34.2
comp=Z,12nm,0.5s
LDAQ **Lac Daran** 40.82 2 P **P** **21 47 36.2 +0.8**
RIB01 **Linhares ES** 41.40 130 *e*P **P** **21 47 39.2 -1.2**
ANMO **Albuquerque** 41.48 317 LR LR 22 08 00.9
comp=Z,92nm,19.4s,baz=292,slow=40
ANMO **Albuquerque** 41.48 317 P **P** **21 47 40.1 -1.0**
BO02 **Sierra Bellavi** 41.64 177 P **P** **21 47 40.5 -1.6**
BO02 IAmb IAmb 21 48 23.1
comp=Z,16nm,1.1s
ECSD **EROS Data Cent** 42.04 334 IAmb IAmb 21 47 46.4
comp=Z,18nm,1.3s
ECSD **EROS Data Cent** 42.04 334 P **P** **21 47 45.2 0.0**
DUN6 **Lazy B Ranch** 42.09 312 IAmb IAmb 21 47 48.8
comp=Z,12nm,0.6s
TUC **Tucson** 43.24 311 P **P** **21 47 55.7 +0.4**
TUC **Tucson** 43.24 311 P **P** **21 47 57.0 +1.7**
F33A **5 Mile Ranch,** 43.62 336 IAmb IAmb 21 47 58.8
comp=Z,20nm,1.2s
EYMN **Ely** 43.73 342 P **P** **21 47 59.5 +0.7**
W18A **Petrified Fore** 43.84 315 IAmb IAmb 21 48 03.1
comp=Z,13nm,0.9s
ISCO **Idaho Springs** 43.84 323 P **P** **21 48 00.5 +0.3**
ISCO **Idaho Springs** 43.84 323 P **P** **21 48 02.2 +2.0**
MVCO **Mesa Verde** 44.11 318 P **P** **21 48 00.1 -2.2**
PV15 **Paradox Valley** 44.74 320 P **P** **21 48 08.2 +0.9**
PV15 IAmb IAmb 21 48 10.3
comp=Z,20nm,0.8s
PV02 **Paradox Valley** 44.83 319 IAmb IAmb 21 48 10.8
comp=Z,22nm,0.7s
PV13 **Radium Mtn., P** 44.86 319 IAmb IAmb 21 48 10.9
comp=Z,16nm,0.7s
PV12 **Saucer Basin,** 44.93 319 IAmb IAmb 21 48 30.0
comp=Z,16nm,0.8s
PV18 **Skein Mesa, Pa** 44.96 319 IAmb IAmb 21 48 13.9
comp=Z,17nm,0.7s
PV05 **Paradox Valley** 44.99 319 IAmb IAmb 21 48 11.7
comp=Z,12nm,0.7s
PV16 **Nyswonger Mesa** 45.00 319 IAmb IAmb 21 48 51.3
comp=Z,6.8nm,0.4s
PV22 **Blue Mesa, Par** 45.05 320 IAmb IAmb 21 48 12.2
comp=Z,8.2nm,0.7s
PV20 **West Nyswonger** 45.05 319 IAmb IAmb 21 48 13.5
comp=Z,15nm,1.2s
PV23 **Carpenter Ridg** 45.15 319 IAmb IAmb 21 48 14.5
comp=Z,7.9nm,0.7s
WUAZ **Wupatki** 45.19 314 IAmb IAmb 21 48 14.2
comp=Z,15nm,0.8s
AGMN **Agassiz Nation** 45.50 339 IAmb IAmb 21 48 14.2
comp=Z,20nm,0.6s
AGMN **Agassiz Nation** 45.50 339 P **P** **21 48 13.5 +0.7**
RSSD **Black Hills** 45.85 329 P **P** **21 48 16.2 +0.3**
EPLO **Experimental L** 45.95 341 P **P** **21 48 16.5 +0.2**
EPLO IAmb IAmb 21 48 17.6
comp=Z,17nm,0.7s
HMU **Henry Mountain** 46.00 318 IAmb IAmb 21 48 20.6
comp=Z,17nm,1.1s
E28A **Huff** 46.05 334 P **P** **21 48 17.2 0.0**
E28A IAmb IAmb 21 48 18.9
comp=Z,27nm,0.8s
KNB **Kanab** 46.95 315 IAmb IAmb 21 48 27.6
comp=Z,11nm,0.8s
ULM **Lac du Bonnet** 47.15 340 P **P** **21 48 25.8 +0.1**
comp=Z,19nm,0.5s,baz=145,slow=8.6,SNR=40
comp=Z,19nm,0.5s
ULM **Lac du Bonnet** 47.15 340 IAmb IAmb 21 48 27.0
comp=Z,22nm,0.7s
SZCU **Shurtz Canyon** 47.42 316 P **P** **21 48 29.2 +1.0**
TCRU **Three Creeks R** 47.50 317 IAmb IAmb 21 48 31.6
comp=Z,12nm,0.8s
SCHQ **Schefferville** 47.93 5 P **P** **21 48 32.5 +0.9**
comp=Z,32nm,0.7s,baz=188,slow=6.4,SNR=50
comp=Z,32nm,0.7s
PDAR **Pinedale Array** 48.01 324 P **P** **21 48 33.5 +0.8**
comp=Z,4.5nm,1.0s,baz=120,slow=8.8,SNR=20
comp=Z,4.5nm,1.0s
PDAR **Pinedale Array** 48.01 324 P **P** **21 48 32.7 0.0**
TCUT **Toone Canyon** 48.17 321 IAmb IAmb 21 48 36.2
comp=Z,14nm,0.7s
HWUT **Hardware Ranch** 48.54 321 P **P** **21 48 37.7 +1.0**
DUG **Dugway, Tooele** 48.57 319 P **P** **21 48 38.7 +1.8**
GSC **Goldstone, Bar** 49.05 311 P **P** **21 48 41.9 +1.3**
BGU **Big Grassy Mou** 49.09 320 IAmb IAmb 21 48 42.9
comp=Z,11nm,0.7s
CCCA **Chr Cany lake** 49.56 311 IAmb IAmb 21 48 46.8
comp=Z,6.3nm,0.6s
HLID **Hailey** 51.38 322 P **P** **21 48 58.8 +0.8**
HLID **Hailey** 51.38 322 P **P** **21 48 59.7 +1.6**
EGMT **Eagleton** 51.42 329 IAmb IAmb 21 49 00.5
comp=Z,20nm,1.4s
NVAR **Mina Array Bea** 51.46 314 P **P** **21 49 00.4 +1.6**
comp=Z,2.0nm,0.7s,baz=120,slow=7.1,SNR=14
comp=Z,2.0nm,0.7s
NVAR **Mina Array Bea** 51.46 314 P **P** **21 48 59.6 +0.9**

MFID **Camas Ranch** 52.17 321 IAmb IAmb 21 49 07.1
comp=Z,6.6nm,0.8s
WVOR **Wild Horse Val** 53.48 319 IAmb IAmb 21 49 17.0
comp=Z,7.8nm,1.1s
FCC **Fort Churchill** 54.12 347 IAmb IAmb 21 49 18.6
comp=Z,23nm,1.2s
F10A **Beach Ranch, E** 54.36 323 P **P** **21 49 19.8 +0.1**
G08A **Pilot Rock** 55.06 322 IAmb IAmb 21 49 26.8
comp=Z,8.3nm,1.0s
PINE **Pine Mountain** 55.60 319 IAmb IAmb 21 49 31.4
comp=Z,9.1nm,0.7s
WIFE **Three Sisters-** 56.29 319 IAmb IAmb 21 49 36.9
comp=Z,5.5nm,0.8s
EPH **Ephrata** 56.46 324 IAmb IAmb 21 49 36.9
comp=Z,6.5nm,0.9s
B08A **Colville Reser** 56.82 325 IAmb IAmb 21 49 38.2
comp=Z,4.2nm,0.8s
LTY **Liberty** 57.05 323 IAmb IAmb 21 49 41.0
comp=Z,4.8nm,0.8s
YKAW1 **Yellowknife Wh** 63.08 340 P **P** **21 50 19.3 -0.2**
YKAW1 IAmb IAmb 21 50 20.8
comp=Z,9.4nm,0.8s
YKA **Yellowknife Ar** 63.13 340 P **P** **21 50 20.2 +0.4**
comp=Z,12nm,0.7s,baz=134,slow=6.9,SNR=79
YKA pP **pP** **21 51 00.8 +0.9**
comp=Z,3.9nm,0.9s,baz=133,slow=7.3,SNR=2.6
comp=Z,12nm,0.7s
YKA **Yellowknife Ar** 63.13 340 P **P** **21 50 20.0 +0.2**
YKAW3 **Yellowknife Wh** 63.18 340 P **P** **21 50 20.2 +0.1**
GDH **Godhavn** 63.45 8 *i* P P 21 50 16.0 -5.7
GDH IAmb IAmb 21 50 17.2
comp=Z,55nm,0.7s
SAATT **Saattut** 65.14 8 *i* P **P** **21 50 32.6 -0.1**
SAATT IAmb IAmb 21 50 33.4
comp=Z,15nm,0.7s
LIRD **Liard River Hi** 65.86 333 P **P** **21 50 39.1 +1.4**
baz=120
T35M **Bob Quinn** 66.72 330 P **P** **21 50 44.4 +1.3**
baz=115
V35K **Ketchikan** 66.75 328 P **P** **21 50 44.9 +1.6**
baz=113
DLBC **Dease Lake** 67.22 331 P **P** **21 50 47.6 +1.2**
baz=115
WTLY **Watson Lake, Y** 67.40 333 IAmb IAmb 21 50 49.5
comp=Z,11nm,0.7s
WTLY **Watson Lake, Y** 67.40 333 P **P** **21 50 48.8 +1.3**
baz=117
WRAK **Wrangell Islan** 67.55 329 P **P** **21 50 49.7 +1.4**
baz=112
CRAG **Craig** 67.60 328 P **P** **21 50 50.1 +1.5**
baz=111
TGTN **Hyland Airport** 67.83 335 P **P** **21 50 51.7 +1.5**
baz=118
R33M **Jennings River** 68.07 332 P **P** **21 50 53.2 +1.4**
baz=115
Q32M **Nakina River** 68.51 331 P **P** **21 50 55.9 +1.3**
baz=113
SUMG **Summit** 68.76 11 P **P** **21 50 55.6 -0.6**
SUMG **Summit** 68.76 11 *i* P **P** **21 50 56.5 +0.4**
SUMG IAmb IAmb 21 50 57.4
comp=Z,33nm,0.7s
S32K **Killisnoo** 69.08 329 P **P** **21 50 59.1 +1.4**
baz=111
P33M **Teslin, Yukon** 69.26 333 P **P** **21 51 00.4 +1.4**
baz=113
SIT **Sitka** 69.31 329 P **P** **21 51 00.5 +1.3**
baz=110
R32K **Eaglecrest** 69.33 330 P **P** **21 51 00.8 +1.4**
baz=111
P32M **Atlin** 69.44 332 P **P** **21 51 01.3 +1.3**
baz=112
TULEG **Thule** 69.51 1 *i* P **P** **21 51 00.6 +0.4**
MMPY **Sheldon Lake,** 69.58 335 P **P** **21 51 02.1 +1.2**
baz=116
N32M **Quiet Lake** 69.76 333 IAmb IAmb 21 51 04.8
comp=Z,14nm,0.9s
N32M **Quiet Lake** 69.76 333 P **P** **21 51 03.4 +1.4**
baz=113
WHY **Whitehorse** 70.38 333 P **P** **21 51 06.8 +0.9**
baz=112
C36M **Paulatuk** 70.45 343 P **P** **21 51 07.5 +1.6**
baz=125
PLBC **Pleasant Camp** 70.65 331 P **P** **21 51 08.8 +1.4**
baz=110
M31M **Drury Creek, Y** 70.74 334 P **P** **21 51 09.5 +1.6**
baz=112
O30N **Mendenhall** 70.97 332 IAmb IAmb 21 51 12.1
comp=Z,10nm,0.9s
O30N **Mendenhall** 70.97 332 P **P** **21 51 11.0 +1.6**
baz=110,SNR=7.7
N31M **Braeburn, Yuko** 71.09 333 IAmb IAmb 21 51 13.2
comp=Z,8.9nm,0.8s
N31M **Braeburn, Yuko** 71.09 333 P **P** **21 51 11.6 +1.5**
baz=111
P30M **Million Dollar** 71.16 332 P **P** **21 51 11.9 +1.4**
baz=110
NEEM **North Greenlan** 71.34 5 *i* P **P** **21 51 12.1 +0.5**
NEEM IAmb IAmb 21 51 13.0
comp=Z,74nm,0.6s
P29M **Windy Craggy** 71.37 331 P **P** **21 51 13.1 +1.4**
baz=109
HYT **Haines Junctio** 71.64 332 P **P** **21 51 14.9 +1.4**
baz=109
N30M **Aishikik Lake** 71.67 333 IAmb IAmb 21 51 16.4
comp=Z,8.6nm,0.9s
N30M **Aishikik Lake** 71.67 333 P **P** **21 51 15.2 +1.7**
baz=110,SNR=7.1
M30M **Minto, Yukon** 71.92 334 IAmb IAmb 21 51 17.2
comp=Z,12nm,0.8s
M30M **Minto, Yukon** 71.92 334 P **P** **21 51 16.3 +1.2**
baz=110
O29M **Mount Kennedy** 71.98 332 P **P** **21 51 16.2 +0.7**
baz=108
YUK6 **Outpost Mounta** 72.08 332 P **P** **21 51 17.3 +1.0**
baz=108
H31M **Peel River** 72.15 338 IAmb IAmb 21 51 18.5
comp=Z,8.7nm,0.9s
H31M **Peel River** 72.15 338 P **P** **21 51 17.5 +1.2**
baz=114,SNR=6.2
A36M **Sachs Harbour** 72.28 345 P **P** **21 51 17.5 +0.6**
A36M **Sachs Harbour** 72.28 345 P **P** **21 51 17.7 +0.8**
baz=124,SNR=5.0
YUK4 **Talbot Arm** 72.34 333 P **P** **21 51 18.9 +1.2**
baz=108
J30M **Hart River** 72.45 336 P **P** **21 51 19.5 +1.3**
baz=111
G31M **Satah River** 72.58 339 IAmb IAmb 21 51 20.6
comp=Z,8.0nm,0.8s
G31M **Satah River** 72.58 339 P **P** **21 51 19.8 +1.1**
baz=114,SNR=6.8
F31M **Tsiigehtchic** 72.60 339 P **P** **21 51 20.0 +1.2**
baz=115
M29M **Somme Creek** 72.61 334 P **P** **21 51 20.5 +1.3**
baz=109
K29M **Barlow Dome** 72.67 335 P **P** **21 51 20.8 +1.3**
baz=110
L29M **L29M** 72.68 334 P **P** **21 51 20.7 +1.2**
baz=109
I30M **Mount Dempster** 72.70 337 P **P** **21 51 20.9 +1.2**
baz=112,SNR=8.4
EKA **Eskdalemuir Ar** 72.81 34 P **P** **21 51 20.3 -0.1**
comp=Z,0.4nm,0.5s,baz=252,slow=1.3,SNR=5.4
EKA pP **pP** **21 52 03.6 +1.7**
comp=Z,0.4nm,0.6s,baz=269,slow=3.3,SNR=2.3
comp=Z,0.4nm,0.5s
YUK8 **Steele Glacier** 72.83 332 P **P** **21 51 21.7 +1.0**
baz=107
O28M **Mount Upton** 72.88 332 P **P** **21 51 21.7 +0.6**
baz=107
INK **Inuvik** 72.90 340 IAmb IAmb 21 51 22.2
comp=Z,6.4nm,0.8s
INK **Inuvik** 72.90 340 P **P** **21 51 21.4 +0.8**
baz=115,SNR=6.7
EPYK **Eagle Plains** 73.26 338 P **P** **21 51 23.7 +0.9**
baz=112
YUK3 **Moose Creek** 73.30 333 P **P** **21 51 24.6 +1.2**
baz=107,SNR=12
G30M **tAoh Zraii Nji** 73.31 338 P **P** **21 51 24.2 +1.1**
baz=112
F30M **Barrier River** 73.39 339 P **P** **21 51 23.9 +0.3**
F30M IAmb IAmb 21 51 25.6
comp=Z,14nm,1.1s
F30M **Barrier River** 73.39 339 P **P** **21 51 24.7 +1.2**
baz=113,SNR=7.6
TORD **Torodi Ar. Bea** 73.54 78 P **P** **21 51 23.8 -1.7**
comp=Z,0.3nm,0.4s,baz=283,slow=6.1,SNR=9.2
TORD pP **pP** **21 52 07.0 -0.1**
comp=Z,1.7nm,0.8s,baz=286,slow=5.9,SNR=5.5

comp=Z,0.3nm,0.4s
TORD Torodi Ar. Bea 73.54 78 P **P** **21 51 23.2 -2.2**
BVCY Beaver Creek 73.66 333 P **P** **21 51 26.5 +1.3**
baz=106
H29M Whitestone 73.83 337 IAmb IAmb 21 51 28.0
comp=Z,7.8nm,0.8s
H29M Whitestone 73.83 337 P **P** **21 51 27.4 +1.2**
baz=110,SNR=5.1
G29M Pine Creek 73.94 338 IAmb IAmb 21 51 28.6
comp=Z,6.1nm,0.8s
G29M Pine Creek 73.94 338 P **P** **21 51 27.7 +0.9**
baz=110
M27K Edge Creek, AK 74.10 333 IAmb IAmb 21 51 30.7
comp=Z,8.6nm,0.8s
M27K Edge Creek, AK 74.10 333 P **P** **21 51 29.3 +1.4**
baz=106,SNR=8.3
I28M Miner Creek 74.19 336 P **P** **21 51 29.3 +1.0**
baz=108,SNR=7.7
BCAR Beaver Creek A 74.25 334 P **P** **21 51 29.6 +0.9**
L27K Beaver Creek, 74.27 334 P **P** **21 51 30.0 +1.2**
baz=106
MCARA McCarthy VSAT 74.37 332 P **P** **21 51 30.9 +1.5**
baz=104
E29M Blow River 74.42 340 IAmb IAmb 21 51 31.3
comp=Z,11nm,0.8s
E29M Blow River 74.42 340 P **P** **21 51 30.6 +1.1**
baz=111,SNR=14
M26K Nabesna, AK 74.61 333 P **P** **21 51 31.7 +0.9**
baz=105
KAIM Kayak Island 74.70 330 P **P** **21 51 32.0 +0.8**
baz=103
F28M Old Crow 74.86 339 P **P** **21 51 32.9 +0.8**
baz=109
I27K Kandik River 74.90 336 IAmb IAmb 21 51 34.3
comp=Z,6.2nm,0.8s
I27K Kandik River 74.90 336 P **P** **21 51 33.3 +0.9**
baz=107
L26K Log Cabin Wild 74.93 334 IAmb IAmb 21 51 35.2
comp=Z,9.8nm,0.5s
BMRM Bremner River 75.02 331 P **P** **21 51 33.9 +0.7**
baz=103
H27K Steamboat Moun 75.05 337 P **P** **21 51 33.8 +0.5**
baz=107
E28M Babbage River 75.06 340 IAmb IAmb 21 51 34.4
comp=Z,6.8nm,0.9s
E28M Babbage River 75.06 340 P **P** **21 51 34.1 +0.9**
baz=109,SNR=6.4
N25K Chitina, Valde 75.16 332 P **P** **21 51 35.1 +1.1**
baz=103
G27K Doyon Strip 75.27 338 P **P** **21 51 35.4 +1.0**
baz=107
DAG Danmarks Havn 75.43 11 *i* P **P** **21 51 34.5 -0.6**
DAG IAmb IAmb 21 51 35.6
comp=Z,9.7nm,0.7s
SCRK Sand Creek 75.44 334 P **P** **21 51 36.4 +0.8**
baz=104
EYAK Cordova Ski Ar 75.48 331 P **P** **21 51 36.6 +0.9**
baz=102
Q23K Middleton Isla 75.56 330 P **P** **21 51 37.0 +0.8**
baz=101
E27K Coleen River 75.65 339 P **P** **21 51 37.5 +0.9**
baz=107,SNR=8.5
KLU Klutina 75.75 332 P **P** **21 51 38.2 +0.8**
baz=102
RIDG Independent Ri 75.76 334 P **P** **21 51 38.2 +0.9**
RIDG IAmb IAmb 21 51 39.7
comp=Z,12nm,1.0s
RIDG Independent Ri 75.76 344 P **P** **21 51 38.4 +1.1**
baz=103
PAX Paxson 75.86 333 P **P** **21 51 38.8 +0.9**
baz=102
M24K Tolsona, Glenn 76.00 332 P **P** **21 51 39.6 +0.9**
baz=102
G26K Porcupine Rive 76.11 337 P **P** **21 51 40.2 +1.1**
baz=105
K24K Donnelly Dome 76.17 334 P **P** **21 51 40.6 +0.9**
baz=102
J25K Salcha River, 76.18 335 P **P** **21 51 40.8 +1.1**
baz=103
P23K Montague Islan 76.19 330 P **P** **21 51 40.7 +1.0**
baz=100
GLI Glacier Island 76.19 331 P **P** **21 51 40.9 +1.2**
baz=100
F26K Sheenjek River 76.44 338 P **P** **21 51 42.0 +0.9**
baz=105
PRP Porcupine Dome 76.45 336 IAmb IAmb 21 51 43.0
comp=Z,6.5nm,0.8s
PRP Porcupine Dome 76.45 336 P **P** **21 51 42.0 +0.7**
baz=103,SNR=6.6
SCM Sheep Creek Mo 76.48 332 IAmb IAmb 21 51 43.6
comp=Z,11nm,0.8s
SCM Sheep Creek Mo 76.48 332 P **P** **21 51 42.5 +1.0**
baz=100
M23K Glacier View 76.66 332 P **P** **21 51 43.3 +0.9**
baz=100
DHY Denali Highway 76.73 333 P **P** **21 51 43.8 +0.8**
baz=101
PWL Port Wells 76.79 331 P **P** **21 51 44.1 +0.9**
baz=99
C27K Jago River 76.80 340 P **P** **21 51 44.2 +1.1**
baz=106
HDA Harding Lake 76.80 335 P **P** **21 51 44.3 +1.2**
baz=101
WAT6 Susitna Watana 76.80 333 P **P** **21 51 44.1 +0.7**
baz=100
ILAR Eielson Array 76.85 335 P **P** **21 51 43.9 +0.5**
comp=Z,1.5nm,0.7s,baz=115,slow=4.6,SNR=16
comp=Z,1.5nm,0.7s
ILAR Eielson Array 76.85 335 P **P** **21 51 43.2 -0.2**
KNK Knik Glacier 76.94 331 P **P** **21 51 45.0 +1.0**
baz=99
SML Sawmill 76.94 332 P **P** **21 51 45.1 +1.1**
baz=100
G25K Bearman Lake 76.96 337 P **P** **21 51 45.0 +1.1**
baz=103
F25K Christian Rive 76.97 338 P **P** **21 51 45.1 +1.0**
baz=103
E25K Arctic Village 77.07 338 P **P** **21 51 45.7 +1.1**
baz=104
POKR Poker Plat Res 77.15 335 P **P** **21 51 46.0 +1.0**
baz=101
GHO Glory Hole Cre 77.22 332 IAmb IAmb 21 51 47.5
comp=Z,10nm,0.9s
WAT1 Susitna Watana 77.22 333 P **P** **21 51 46.5 +1.0**
baz=100
RND Reindeer 77.45 333 IAmb IAmb 21 51 49.2
comp=Z,15nm,1.0s
H24K Noodor Dome 77.47 336 P **P** **21 51 47.8 +0.9**
baz=101
G24K Hadweenzic Riv 77.48 337 P **P** **21 51 48.0 +1.2**
baz=101
RC01 Rabbit Creek A 77.50 331 P **P** **21 51 48.1 +1.0**
baz=98
MCK McKinley 77.54 334 P **P** **21 51 48.6 +1.3**
baz=99
D25K Kavik River 77.63 340 IAmb IAmb 21 51 49.6
comp=Z,7.1nm,0.9s
D25K Kavik River 77.63 340 P **P** **21 51 48.8 +1.0**
baz=103
NEA2 Nenana 77.74 335 P **P** **21 51 48.2 -0.1**
NEA2 IAmb IAmb 21 51 50.1
comp=Z,11nm,1.2s
NEA2 Nenana 77.74 335 P **P** **21 51 49.2 +0.8**
baz=100
F24K Squaw Lake 77.80 338 P **P** **21 51 49.8 +1.2**
baz=101
BRSE Bradley Lake S 77.81 330 P **P** **21 51 49.7 +0.8**
baz=97
I23K Minto, Yukon-K 77.95 335 P **P** **21 51 50.6 +1.1**
baz=99
TRF Thorofare Moun 78.09 333 IAmb IAmb 21 51 52.1
comp=Z,6.1nm,0.9s
TRF Thorofare Moun 78.09 333 P **P** **21 51 51.4 +0.9**
baz=98
E24K Your Creek 78.13 338 P **P** **21 51 51.6 +1.1**
baz=101
H23K Yukon River 78.14 336 P **P** **21 51 51.4 +0.9**
baz=99
CAPN Captain Cook N 78.14 331 P **P** **21 51 51.5 +0.9**
baz=97
L22K Petersville 78.18 332 P **P** **21 51 51.9 +1.0**
baz=98
HOM Homer 78.26 329 P **P** **21 52 51.1 +0.9**
baz=96
NOR Nord 78.40 7 *i* P **P** **21 51 51.9 +0.3**
NOR IAmb IAmb 21 51 52.6
comp=Z,4.7nm,0.7s
D24K Happy Valley 78.45 339 P **P** **21 51 53.2 +1.1**
baz=101
SKT Skwentna 78.47 332 P **P** **21 51 53.5 +1.1**
baz=97
G23K Bananza Creek 78.48 337 P **P** **21 51 53.9 +1.4**
baz=99
MLY Manley 78.51 335 P **P** **21 51 53.9 +1.2**
baz=98
E23K Chandalar 78.54 338 P **P** **21 51 53.8 +1.0**
baz=100
KDAK Kodiak Island 78.56 327 P **P** **21 51 53.8 +0.9**
baz=95
COLD Coldfoot 78.63 337 P **P** **21 51 54.4 +1.2**
baz=99
TOLK Toolik Lake Re 78.63 339 P **P** **21 51 54.4 +1.2**
baz=100
O20K Slope Mountain 78.79 330 P **P** **21 51 54.8 +0.5**
baz=95
PPLA Purkeypile 78.88 333 P **P** **21 51 55.5 +0.7**
PPLA IAmb IAmb 21 51 56.0
comp=Z,7.7nm,0.7s
PPLA Purkeypile 78.88 333 P **P** **21 51 55.2 +0.4**
baz=96
CAST Castle Rocks 78.89 333 IAmb IAmb 21 51 56.1
comp=Z,6.0nm,0.8s
CAST Castle Rocks 78.89 333 P **P** **21 51 55.4 +0.7**
baz=96
OHAK Old Harbor 78.89 327 P **P** **21 51 55.6 +0.8**
baz=94
H22K Ishtalitna Cre 78.90 336 P **P** **21 51 55.4 +0.7**
baz=98
CHUM Lake Minchumin 79.05 334 P **P** **21 51 56.3 +0.8**
baz=96
I21K Tanana 79.06 335 P **P** **21 51 56.1 +0.6**
baz=97
P19K Oil Pt 79.06 329 P **P** **21 51 56.2 +0.5**
baz=95
D23K Nanushuk River 79.08 339 P **P** **21 51 56.8 +1.2**
baz=99
G22K Bettles 79.09 337 P **P** **21 51 56.9 +1.3**
baz=98
C23K Itkillik River 79.19 340 IAmb IAmb 21 51 58.4
comp=Z,7.8nm,0.8s
C23K Itkillik River 79.19 340 P **P** **21 51 57.1 +1.0**
baz=99
M20K Styx River 79.21 332 P **P** **21 51 57.3 +0.7**
baz=95
SII Sitkinak Islan 79.34 326 P **P** **21 51 57.8 +0.5**
baz=93
E22K Anaktuvuk Pass 79.37 338 P **P** **21 51 58.2 +1.0**
baz=98
F22K John River 79.42 337 P **P** **21 51 58.1 +0.6**
baz=97
H21K Melozitna Rive 79.45 335 P **P** **21 51 58.3 +0.6**
baz=96
N19K Bonanza Creek 79.77 330 P **P** **21 52 00.2 +0.6**
baz=94
K20K Telida 79.77 333 P **P** **21 52 00.1 +0.6**
baz=95
M19K Big River Lodg 79.81 332 P **P** **21 52 00.3 +0.6**
baz=94
G21K Allakaket 79.83 336 P **P** **21 52 00.5 +0.8**
baz=96
J20K Nowinta River 79.88 334 P **P** **21 52 00.6 +0.6**
baz=95
F21K Alatna River 79.89 337 P **P** **21 52 01.3 +1.2**
F21K Alatna River 79.89 337 P **P** **21 52 01.0 +0.9**
baz=96
L19K White Mountain 80.04 332 P **P** **21 52 01.5 +0.5**
baz=94
P18K Big Mountain, 80.06 329 P **P** **21 52 01.6 +0.5**
baz=93
O18K Koktuh Hills 80.07 329 P **P** **21 52 01.6 +0.4**
baz=93
E21K Killik River 80.20 338 P **P** **21 52 02.4 +0.6**
baz=96
B22K Teshekpuk Lake 80.22 340 P **P** **21 52 02.8 +1.1**
baz=96
H20K Anotleneega Mo 80.30 335 P **P** **21 52 02.8 +0.6**
baz=94
Q17K Contact Creek 80.35 328 P **P** **21 52 03.1 +0.4**
baz=92
N18K Kilae Creek 80.45 330 P **P** **21 52 03.6 +0.4**
baz=93
M18K Stony River 80.46 331 P **P** **21 52 03.8 +0.7**
baz=93
J19K Poorman 80.51 334 P **P** **21 52 04.1 +0.7**
baz=93
B21K Ikpikpuk River 80.55 339 IAmb IAmb 21 52 05.0
comp=Z,6.8nm,0.6s
B21K Ikpikpuk River 80.55 339 P **P** **21 52 04.3 +0.9**
baz=95
C21K Knifeblade Rid 80.57 339 P **P** **21 52 04.6 +1.0**
baz=95
R17L Mt. Peulik Vol 80.58 327 P **P** **21 52 04.5 +0.6**
baz=92
P17K Kvichak River 80.67 329 P **P** **21 52 04.8 +0.6**
baz=92
F20K Avaraart Lake 80.75 337 P **P** **21 52 05.4 +0.8**
baz=94
A22K Sinclair Lake 80.80 341 P **P** **21 52 05.6 +0.9**
baz=95
L18K Granite Mounta 80.90 332 P **P** **21 52 06.3 +0.8**
baz=92
H19K Roundabout Mou 80.95 335 P **P** **21 52 06.5 +0.8**
baz=93
J18K Innoko River 80.97 333 P **P** **21 52 06.7 +0.8**
baz=92
E20K Nigu River 81.01 338 P **P** **21 52 06.8 +0.8**
baz=94
O17K Koliganek Bris 81.02 329 P **P** **21 52 06.9 +0.8**
baz=91
NB2 NORSAR Subarra 81.08 29 P **P** **21 52 06.6 +0.1**
comp=Z,0.9nm,0.6s,baz=268,slow=5.6
NB2 NORSAR Subarra 81.08 29 P **P** **21 52 06.6 +0.1**
NOA NORSAR Array B 81.08 29 P **P** **21 52 06.7 +0.2**
comp=Z,0.6nm,0.4s,baz=267,slow=5.3,SNR=6.0
comp=Z,0.6nm,0.4s
N17K Nushagak Hills 81.09 330 P **P** **21 52 07.2 +0.7**
baz=92
D20K Etivluk River 81.19 338 P **P** **21 52 07.9 +1.0**
baz=93
M17K Holitna River 81.23 331 P **P** **21 52 08.0 +0.7**
baz=91
G19K Purcell Mounta 81.24 336 P **P** **21 52 08.2 +1.0**
baz=92
E19K Redstone River 81.36 337 P **P** **21 52 08.9 +1.1**
baz=92
B20K Meade River 81.46 340 P **P** **21 52 09.5 +1.2**
baz=93
P16K Nushagak River 81.47 329 P **P** **21 52 09.1 +0.6**
baz=91
O16K Kokwok River B 81.52 329 P **P** **21 52 09.7 +0.9**
baz=90
F19K Shaleruckik Mo 81.55 337 P **P** **21 52 09.8 +1.1**
baz=92
L17K Donlin 81.66 332 P **P** **21 52 10.5 +1.0**
baz=91
K17K Iditarod 81.67 332 P **P** **21 52 10.4 +0.8**
baz=91
CHGN Chignik 81.68 326 P **P** **21 52 10.7 +1.0**
baz=90
D19K Kuna River 81.73 338 IAmb IAmb 21 52 12.3
comp=Z,9.2nm,0.9s
D19K Kuna River 81.73 338 P **P** **21 52 10.8 +1.0**
baz=92
H18K Honhosa River 81.74 335 P **P** **21 52 10.8 +1.0**
baz=91
N16K Nishlik Lake 81.87 330 P **P** **21 52 11.2 +0.5**
baz=90
G18K Tagagawik 81.88 336 P **P** **21 52 11.5 +0.9**
baz=91
M16K Timber Creek 81.96 331 P **P** **21 52 12.0 +0.8**
baz=90
J17K VABM Dome 82.03 333 P **P** **21 52 12.5 +1.1**
baz=90
LEIR Leirfjorden 82.04 24 *eP* **P** **21 52 12.1 +0.8**
VAGH Vaagaholmen 82.11 24 *eP* **P** **21 52 11.8 +0.1**
VAGH IAmb IAmb 21 52 15.2
comp=Z,106nm,2.6s
KBS Kingsbay 82.17 11 *eP* **P** **21 52 13.5 +1.6**
L16K Owhat River 82.21 331 P **P** **21 52 13.4 +1.1**
baz=90
LOF Lofoten 82.23 22 *eP* **P** **21 52 12.6 +0.3**
C19K Lookout Ridge 82.28 339 P **P** **21 52 13.9 +1.3**
C19K IAmb IAmb 21 52 15.4
comp=Z,14nm,1.1s
C19K Lookout Ridge 82.28 339 P **P** **21 52 13.8 +1.1**
baz=90
F18K Selawik 82.29 336 P **P** **21 52 13.6 +1.0**
baz=90
HFS Hagfors 82.29 30 P **P** **21 52 11.9 -0.9**
comp=Z,1.3nm,0.6s,baz=267,slow=3.0,SNR=4.9
comp=Z,1.3nm,0.6s
CHNA Chernabura Isl 82.37 324 P **P** **21 52 14.2 +0.9**
baz=89
H17K Granite Mounta 82.39 335 P **P** **21 52 14.3 +1.1**
baz=90
O15K Ungalikthiuk R 82.41 329 P **P** **21 52 14.3 +0.9**
baz=89
N15K Kwethluk River 82.53 330 P **P** **21 52 15.1 +1.0**
baz=89
GERES GERESS Array B 82.57 42 P **P** **21 52 13.5 -1.1**
comp=Z,0.8nm,0.7s,baz=259,slow=5.0,SNR=7.1
comp=Z,0.8nm,0.7s
E18K Tukpahlearik C 82.66 337 P **P** **21 52 15.6 +1.0**
baz=89
G17K Kiwalik Mounta 82.70 335 P **P** **21 52 15.8 +0.9**
baz=89
J16K Anvik River 82.72 333 P **P** **21 52 15.7 +0.8**
baz=89
A19K Wainwright 82.80 340 P **P** **21 52 16.1 +0.9**
baz=89
M15K Kasigluk River 82.81 330 P **P** **21 52 16.3 +0.8**
baz=88
C18K Utukok River 82.87 338 P **P** **21 52 16.5 +0.8**
baz=89
F17K Baldwin Pennin 82.93 336 P **P** **21 52 16.6 +0.7**
baz=89
SPA0 Spitsbergen Ar 83.04 12 IAmb IAmb 21 52 17.5
comp=Z,22nm,1.4s
SPA0 *eP* **P** **21 52 17.6 +1.1**
SPITS Spitsbergen Ar 83.04 12 P **P** **21 52 16.7 +0.3**
comp=Z,4.9nm,0.7s,baz=178,slow=3.3,SNR=15
comp=Z,4.9nm,0.7s
E17K Hotham Inlet 83.14 337 P **P** **21 52 17.7 +0.7**
baz=88
O14K Tigyukauivet M 83.15 329 P **P** **21 52 17.7 +0.4**
baz=88
K15K Wolf Creek Mou 83.17 332 P **P** **21 52 17.9 +0.6**
baz=88
L15K Ungalak Mounta 83.17 331 P **P** **21 52 17.7 +0.4**
baz=88
H16K Elim 83.40 334 P **P** **21 52 18.9 +0.5**
baz=88
G16K Koyuk River 83.42 335 P **P** **21 52 19.1 +0.6**
baz=88
M14K Bethel 83.44 330 P **P** **21 52 19.1 +0.4**
baz=87
D17K Noatak River 83.60 337 P **P** **21 52 20.0 +0.6**
baz=87
TRO Tromso 84.13 21 *eP* **P** **21 52 22.2 +0.2**
JETT Jettan, Norway 84.65 21 *eP* **P** **21 52 25.0 +0.3**
JETT IAmb IAmb 21 52 26.3
comp=Z,38nm,1.5s
SRO Srobarova 85.71 43 *eP* **P** **21 52 31.2 +0.8**
TNA Tin City 85.72 335 P **P** **21 52 30.5 +0.5**
baz=82
KTK1 Kautokeino 85.72 21 *eP* **P** **21 52 30.4 +0.4**
KTK1 IAmb IAmb 21 52 31.9
comp=Z,14nm,1.3s
ARA0 ARCESS Array S 86.43 20 *eP* **P** **21 52 33.7 +0.2**
ARCES ARCESS Array B 86.43 20 P **P** **21 52 33.5 0.0**
comp=Z,1.3nm,0.5s,baz=286,slow=4.5,SNR=20
comp=Z,1.3nm,0.5s
ARCES ARCESS Array B 86.43 20 P **P** **21 52 33.2 -0.3**
ARCES IAmb IAmb 21 52 41.2
comp=Z,12nm,1.5s
UNV Unalaska Valle 86.48 324 P **P** **21 52 34.4 +0.4**
baz=83
GAMB Gambell 87.61 334 P **P** **21 52 39.4 +0.3**
baz=79
FINES FINESS Array B 88.19 28 P **P** **21 52 41.7 -0.3**
comp=Z,2.8nm,0.9s,baz=234,slow=1.6,SNR=6.5
comp=Z,2.8nm,0.9s
FINES FINESS Array B 88.19 28 P **P** **21 52 41.2 -0.8**
SNAA Sanae 90.48 163 P **P** **21 52 51.8 -0.8**
comp=Z,29nm,0.7s
TROLL Troll, Antarti 92.19 162 P **P** **21 53 00.1 -0.5**
comp=Z,64nm,0.5s
ZALV Zalesovo Beam 116.44 14 PKP **PKPdf** **21 58 33.7 -0.3**
comp=Z,0.8nm,0.5s,baz=290,slow=4.3,SNR=5.1
ZALV Zalesovo Beam 116.44 14 **PKPdf** **21 58 34.0 0.0**
MKAR Makanchi Array 122.08 20 PKP **PKPdf** **21 58 44.6 -0.5**
comp=Z,0.5nm,0.5s,baz=308,slow=2.6,SNR=10
MKAR Makanchi Array 122.08 20 PKPdf **PKPdf** **21 58 44.2 -0.9**
KSH2 Kashi 125.59 30 PKP **PKiKP** **21 58 54.6 +1.9**
HHC Hu-ho-hao-te 132.19 355 *eP* **PKiKP** **21 59 05.8 0.0**
NJ2 Nanjing 139.54 344 *eP* **PKPdf** **21 59 16.4 -2.0**
NJ2 pmax pmax
comp=Z,13nm,0.5s
PZH PanZhiHua 146.28 9 PKPbc **PKPdf** **21 59 28.4 -2.3**
ASAR Alice Springs 149.35 234 PKP **PKPdf** **21 59 35.2 -0.5**
comp=Z,1.5nm,0.5s,baz=116,slow=1.5,SNR=27
ASAR PKPbc **PKPbc** **21 59 40.5 +0.3**
comp=Z,1.6nm,0.6s,baz=137,slow=2.4,SNR=11
ASAR pPKPbc **pPKPbc** **22 00 24.1 -0.8**
comp=Z,1.6nm,0.5s,baz=117,slow=3.4,SNR=2.9
ASAR Alice Springs 149.35 234 **PKPdf** **21 59 36.3 +0.7**
WRA Warramunga Arr 150.57 241 PKP **PKPdf** **21 59 39.2 +1.6**
comp=Z,1.9nm,0.7s,baz=108,slow=2.2,SNR=23
WRA PKPbc **PKiKP** **21 59 43.5 -0.3**
comp=Z,2.4nm,0.5s,baz=108,slow=2.7,SNR=32
WRA pPKPbc **pPKPbc** **22 00 28.2 +0.2**
comp=Z,3.0nm,0.6s,baz=109,slow=2.6,SNR=3.9
WRA Warramunga Arr 150.57 241 PKPdf **PKPdf** **21 59 37.7 +0.1**
CMAR Chiang Mai Arr 153.45 17 PKPbc **PKPbc** **21 59 49.4 -0.4**
comp=Z,1.3nm,0.4s,baz=322,slow=3.2,SNR=9.1
CMAR pPKPbc **pPKPbc** **22 00 35.4 +0.1**
comp=Z,0.8nm,0.3s,baz=336,slow=2.7,SNR=1.7

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*IDC **21** 21:41:52.1±1.0,34.3°S×179.2°W,h0km,mb4.0/3, mbtmp4.1/4,ML4.2/1,Error ellipse: s-maj=35.2km s-min=32.8km az=106.0*
*WEL **21** 21:41:54.4±0.7,35.5°S±6.6°×17.9°W±1.3,h12km,M4.3/13, mB4.7/1,ML4.3/13,MLv4.3/13,Mw(mB)3.9/1,Error ellipse: s-maj=17.8km s-min=4.0km az=113.0*
*NEIC **21** 21:41:54.3±1.1,34.5°S±0.1×179.36°W±0.05,h10km±1km, mb4.1/7,Error ellipse: s-maj=18.2km s-min=7.1km az=7.0*
*NOU **21** 21:42:00.7,35.24°S×178.93W,h149km,MLv4.6/7,East of North Island, N.Z.*

ISC 21 21:41:59.5±0.7,34.67°S±0.07°×179.3°W±0.1,h61km,n60, σ1.8s66/73,mb4.0/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.47**	**213**	P	**Pn**	**21 42 50.7**	**-0.2**
MXZ	**Matakaoa Point**	**3.47**	**213**	Pn	**Pn**	**21 42 50.2**	**-0.8**
MXZ	**Matakaoa Point**	**3.47**	**213**	P	**Pn**	**21 42 50.8**	**-0.2**
MXZ				S	**Sn**	**21 43 29.0**	**-1.7**
WMGZ	**Waiomatatini S**	**3.64**	**210**	P	**Pn**	**21 42 53.3**	**0.0**
WMGZ				S	**Sn**	**21 43 33.9**	**-1.0**
HAZ	**Te Kaha**	**3.87**	**216**	P	**Pn**	**21 42 56.3**	**-0.2**
HAZ				S	**Sn**	**21 43 40.7**	**+0.1**
PUZ	**Puketiti**	**3.92**	**209**	P	**Pn**	**21 42 56.5**	**-0.6**
PUZ				S	**Sn**	**21 43 39.3**	**-2.5**
RUGZ	**Raukumara Rang**	**4.08**	**216**	P	**Pn**	**21 42 59.3**	**-0.2**
RUGZ				S	**Sn**	**21 43 45.4**	**-0.7**
TWGZ	**Tauwhareparae**	**4.12**	**211**	P	**Pn**	**21 43 01.1**	**+1.1**
TWGZ				S	**Sn**	**21 43 44.7**	**-2.2**
CNGZ	**Carnagh Statio**	**4.29**	**207**	P	**Pn**	**21 43 02.8**	**+0.5**
TKGZ	**Te Karaka**	**4.40**	**210**	P	**Pn**	**21 43 03.5**	**-0.2**
MWZ	**Matawai**	**4.45**	**214**	P	**Pn**	**21 43 03.8**	**-0.7**
MWZ				S	**Sn**	**21 43 53.1**	**-1.9**
URZ	**Urewera**	**4.59**	**218**	Pn	**Pn**	**21 43 05.6**	**-0.8**
	10nm,0.3s,baz=37,slow=3.4,SNR=29						
URZ				Sn	**Sn**	**21 43 57.4**	**-0.9**
	11nm,0.3s,baz=75,slow=23,SNR=10.0						
	29nm,0.4s						
URZ	**Urewera**	**4.59**	**218**	P	**Pn**	**21 43 05.5**	**-0.8**
URZ	**Urewera**	**4.59**	**218**	S	**Sn**	**21 43 57.5**	**-0.9**
URZ	**Urewera**	**4.59**	**218**	P	**Pn**	**21 43 05.7**	**-0.7**
URZ				S	**Sn**	**21 43 56.7**	**-1.7**
RAGZ	**Rawiri**	**4.63**	**214**	P	**Pn**	**21 43 06.8**	**-0.2**
RAGZ				S	**Sn**	**21 43 57.4**	**-2.1**
RIGZ	**Rimuhau**	**4.66**	**209**	P	**Pn**	**21 43 07.1**	**-0.2**
RIGZ				S	**Sn**	**21 43 58.0**	**-2.1**
KARZ	**Kaharoa**	**4.90**	**226**	P	**Pn**	**21 43 10.7**	**+0.1**
MUGZ	**Murupara**	**4.93**	**218**	P	**Pn**	**21 43 10.2**	**-0.8**
MUGZ				S	**Sn**	**21 44 04.7**	**-2.0**
RTZ	**Ruatahuna**	**4.93**	**216**	Pn	**Pn**	**21 43 09.7**	**-1.4**
RTZ	**Ruatahuna**	**4.93**	**216**	P	**Pn**	**21 43 10.1**	**-1.0**

RAHZ	**Arahi**	**5.12**	**213**	P		**Pn**	**21 43 13.6**	**-0.1**
RAHZ				S		**Sn**	**21 44 10.0**	**-1.5**
TOZ	**Tahuroa Road**	**5.18**	**232**	Pn		**Pn**	**21 43 14.5**	**0.0**
WCZ	**Waipu Caves**	**5.33**	**254**	P		**Pn**	**21 43 18.4**	**+1.9**
ARHZ	**Aropaoanui**	**5.45**	**212**	P		**Pn**	**21 43 17.1**	**-1.0**
GLKZ	**Green Lake**	**5.52**	**13**	P		Pn	21 43 12.1	-7.0
GLKZ				S		**Sn**	**21 44 14.0**	**-7.3**
BKZ	**Black Stump Fm**	**5.60**	**216**	P		**Pn**	**21 43 19.3**	**-0.9**
BKZ	**Black Stump Fm**	**5.60**	**216**	S		**Sn**	**21 44 19.9**	**-3.3**
OUZ	**Omahuta**	**5.84**	**263**	P		**Pn**	**21 43 24.1**	**+0.6**
HIZ	**Hauiti**	**6.05**	**229**	P		**Pn**	**21 43 26.7**	**+0.3**
HIZ	**Hauiti**	**6.05**	**229**	Pn		**Pn**	**21 43 25.9**	**-0.5**
BFZ	**Birch Farm**	**6.95**	**209**	P		**Pn**	**21 43 35.8**	**-2.9**
BFZ	**Birch Farm**	**6.95**	**209**	Pn		**Pn**	**21 43 34.9**	**-3.8**
MRZ	**Mangatainoka R**	**7.22**	**213**	Pn		**Pn**	**21 43 37.6**	**-4.8**
CTZ	**Chatham Island**	**9.29**	**168**	Pn		**Pn**	**21 44 11.3**	**+0.6**
AS31	**Alice Springs**	**41.96**	**272**	P		**P**	**21 49 44.4**	**-0.2**
AS31				IAmb		IAmb	21 49 45.8	
	comp=Z,1.6nm,1.1s							
ASAR	**Alice Springs**	**41.96**	**272**	P		**P**	**21 49 44.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=114,slow=8.1,SNR=19							
	comp=Z,1.5nm,0.7s							
ASAR	**Alice Springs**	**41.96**	**272**	P		**P**	**21 49 44.6**	**-0.1**
WR8	**Warramunga Arr**	**43.20**	**277**	P		**P**	**21 49 54.2**	**-0.4**
WR8				IAmb		IAmb	21 50 14.9	
	comp=Z,6.8nm,1.1s							
WRA	**Warramunga Arr**	**43.34**	**277**	P		**P**	**21 49 56.0**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=117,slow=7.8,SNR=39							
	comp=Z,1.5nm,0.4s							
WRA	**Warramunga Arr**	**43.34**	**277**	P		**P**	**21 49 55.1**	**-0.7**
WB0	**Warramunga Arr**	**43.38**	**278**	P		**P**	**21 49 55.6**	**-0.5**
WB0				IAmb		IAmb	21 50 34.9	
	comp=Z,8.1nm,1.3s							
FITZ	**Fitzroy Crossi**	**51.38**	**274**	P		**P**	**21 50 58.3**	**0.0**
FITZ				IAmb		IAmb	21 51 40.7	
	comp=Z,1.8nm,1.3s							
QSPA	**South Pole Qui**	**55.45**	**180**	P		**P**	**21 51 31.1**	**+3.5**
	comp=Z,1.6nm,1.0s,baz=277,slow=4.8,SNR=5.4							
	comp=Z,1.6nm,1.0s							
QSPA	**South Pole Qui**	**55.45**	**180**	P		**P**	**21 51 30.4**	**+2.8**
MJAR	**Matsushiro Arr**	**81.14**	**327**	P		**P**	**21 54 08.8**	**+0.5**
MJAR				IAmb		IAmb	21 54 45.4	
	comp=Z,2.6nm,1.3s							
MKAR	**Makanchi Array**	**119.61**	**309**	PKP		**PKPdf**	**22 00 42.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=186,slow=1.1,SNR=5.8							
MKAR	**Makanchi Array**	**119.61**	**309**			**PKiKP**	**22 00 42.6**	**+0.5**
MAKZ	**Makanchi**	**119.81**	**309**	PKPdf		**PKPdf**	**22 00 42.5**	**+0.1**
PDGK	**Podgornoye**	**120.26**	**304**	PKPdf		**PKiKP**	**22 00 44.0**	**+0.3**
ZALV	**Zalesovo Beam**	**120.43**	**317**	PKP		**PKiKP**	**22 00 43.7**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=144,slow=2.0,SNR=4.4							
ZALV	**Zalesovo Beam**	**120.43**	**317**	PKPdf		**PKPdf**	**22 00 43.5**	**+0.1**
KURBB	**Kurchatov Arra**	**123.16**	**312**	PKP		**PKiKP**	**22 00 49.1**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=120,slow=1.7,SNR=6.9							
KKAR	**Karatay Array**	**126.42**	**301**	PKPdf		**PKiKP**	**22 00 56.1**	**+0.5**
BVAR	**Borovoye Array**	**128.60**	**314**	PKP		**PKPdf**	**22 00 59.0**	**0.0**
	comp=Z,1.7nm,0.5s,baz=147,slow=1.8,SNR=8.1							
FINES	**FINESS Array B**	**148.69**	**337**	PKPbc		**PKiKP**	**22 01 40.1**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=43,slow=4.2,SNR=19							
FINES	**FINESS Array B**	**148.69**	**337**	PKPbc		**PKPbc**	**22 01 39.7**	**+0.7**
MMAI	**Mount Meron Ar**	**151.19**	**277**	PKPbc		**PKiKP**	**22 01 48.0**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=126,slow=4.2,SNR=5.4							
AKASG	**Malin Array Be**	**153.82**	**316**	PKPbc		**PKiKP**	**22 01 52.2**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=51,slow=2.8,SNR=9.9							
AKASG	**Malin Array Be**	**153.82**	**316**			**PKiKP**	**22 01 52.6**	**+1.2**

*SOME **21** 21:44:17.7,41°.90N×79°.58E,h15km*
*NNC **21** 21:44:17.0±2.0,41°.85N×79°.68E,h0km,mb3.4,mpv3.1,*
Error ellipse: s-maj=13.4km s-min=9.8km az=160.0
*KRNET **21** 21:44:17.6±0.1,41°.78N×79°.55E,h16km,mb2.9*
ISC 21 21:44:15.8±2.0,41°.76N±0°.06×79°.55E±0°.05,h9km±11km, n33,σ0s97/59,8C-12D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.12**	**311**	⇓*i*P	**Pn**	**21 44 38.4**	**+0.5**
PRZ				⇓*i*S	**Sn**	**21 44 53.6**	**0.0**
TARG	**Taragay, Kyrgy**	**1.31**	**269**	⇓*i*P	**Pg**	**21 44 41.9**	**+1.0**
TARG				⇓*i*S	**Sn**	**21 44 59.7**	**+1.3**
SHLS	**Shalkode**	**1.40**	**357**	P	**Pg**	**21 44 43.0**	**+0.3**
	11nm,0.2s						
SHLS				S	**Sg**	**21 45 01.5**	**+0.6**
	27nm,0.1s						
SHLS	**Shalkode**	**1.40**	**357**	*e*P	**Pg**	**21 44 43.0**	**+0.3**
	11nm,0.2s						
SHLS				*e*S	**Sg**	**21 45 01.5**	**+0.6**
	27nm,0.1s						
UZB	**Uzynbulak**	**1.44**	**344**	P	**Pg**	**21 44 43.5**	**0.0**
	11nm,0.2s						
UZB				S	**Sg**	**21 45 02.5**	**+0.2**
	42nm,0.3s						
UZB	**Uzynbulak**	**1.44**	**344**	*e*P	**Pg**	**21 44 43.5**	**0.0**
UZB				*e*S	**Sg**	**21 45 02.5**	**+0.2**
SATY	**Saty**	**1.55**	**327**	P	**Pg**	**21 44 45.7**	**+0.1**
	17nm,0.4s						
SATY				S	**Sg**	**21 45 06.0**	**+0.2**
	31nm,0.1s						
SATY	**Saty**	**1.55**	**327**	*e*P	**Pg**	**21 44 45.7**	**+0.1**
	17nm,0.4s						
SATY				*e*S	**Sg**	**21 45 06.0**	**+0.2**
	31nm,0.1s						
PDGK	**Podgornoye**	**1.57**	**358**	⇓P	**Pb**	**21 44 45.1**	**-0.1**
	5.5nm,0.3s						
PDGK				⇓S	**Sb**	**21 45 05.6**	**+0.4**
	25nm,0.4s						
ANVS	**Anan'yevo**	**1.73**	**307**	⇑*i*P	**Pg**	**21 44 49.3**	**+0.2**
ANVS				⇑*i*S	**Sg**	**21 45 12.6**	**+1.0**
KTMS	**Ketmen**	**1.79**	**19**	P	**Pn**	**21 44 46.1**	**-0.9**
	2.8nm,0.1s						
KTMS				S	**Sn**	**21 45 06.8**	**-3.2**
	14nm,0.3s						
KTMS	**Ketmen**	**1.79**	**19**	*e*P	**Pn**	**21 44 47.4**	**+0.4**
	2.8nm,0.1s						
KTMS				*e*S	**Sn**	**21 45 08.9**	**-1.0**
	14nm,0.3s						
KDJ	**Kajisay**	**1.81**	**283**	⇓*i*P	**Pg**	**21 44 50.3**	**-0.2**
KDJ				⇓*i*S	**Sg**	**21 45 14.3**	**+0.4**
KPKS	**Kokpek**	**1.82**	**340**	P	**Pg**	**21 44 50.5**	**-0.3**
	0.4nm,0.1s						
KPKS				S	**Sg**	**21 45 14.1**	**-0.4**
	91nm,0.3s						
KPKS	**Kokpek**	**1.82**	**340**	*e*P	**Pg**	**21 44 50.5**	**-0.3**
	0.4nm,0.1s						
KPKS				*e*S	**Sg**	**21 45 14.1**	**-0.4**
	91nm,0.3s						
KURS	**Kuram**	**2.01**	**330**	Pg	**Pg**	**21 44 53.6**	**-0.7**
	4.2nm,0.4s						
KURS				Lg	Lg	21 45 19.9	
	12nm,0.3s						
KURS	**Kuram**	**2.01**	**330**	*e*P	**Pg**	**21 44 53.6**	**-0.7**
	4.2nm,0.4s						
KURS				*e*S	**Sg**	**21 45 19.4**	**-1.0**
	12nm,0.3s						
TNSS	**Tian-Shan**	**2.31**	**304**	Pg	**Pg**	**21 44 59.6**	**-0.6**
	0.8nm,0.2s						
TNSS				Lg	Lg	21 45 29.9	
	3.9nm,0.3s						
TNSS	**Tian-Shan**	**2.31**	**304**	*e*P	**Pg**	**21 44 59.6**	**-0.6**
	0.8nm,0.2s						
TNSS				*e*S	**Sg**	**21 45 29.6**	**-0.6**
	3.9nm,0.3s						
MDOK	**Medeo**	**2.32**	**308**	Pg	**Pg**	**21 44 58.9**	**-1.4**
	6.9nm,0.3s						
MDOK				Lg	Lg	21 45 28.5	
	11nm,0.3s						
MDOK	**Medeo**	**2.32**	**308**	*e*P	**Pg**	**21 44 58.9**	**-1.4**
	6.9nm,0.3s						
MDOK				*e*S	**Sg**	**21 45 28.5**	**-2.0**
	11nm,0.3s						
ULHL	**Ulahol**	**2.51**	**282**	⇑*i*P	**Pb**	**21 45 00.5**	**-0.7**
ULHL				⇑*i*S	**Sb**	**21 45 32.1**	**-0.3**
IZV	**Izvestkoviy**	**2.52**	**301**	Pg	**Pb**	**21 45 01.9**	**+0.5**
	2.7nm,0.1s						
IZV				Lg	Lg	21 45 33.3	
	7.7nm,0.1s						
IZV	**Izvestkoviy**	**2.52**	**301**	*e*P	**Pb**	**21 45 01.9**	**+0.5**
IZV				*e*S	**Sb**	**21 45 33.3**	**+0.7**
DJR	**Jarkent**	**2.58**	**4**	Pg	**Pn**	**21 45 00.1**	**+2.2**
	4.1nm,0.3s						
DJR				Lg	Lg	21 45 30.6	
	2.9nm,0.3s						
DJR	**Jarkent**	**2.58**	**4**	*e*P	**Pb**	**21 45 01.3**	**-1.0**
	4.1nm,0.3s						
DJR				*e*S	**Sb**	**21 45 32.8**	**-1.3**
	2.9nm,0.3s						
KNOS	**Konyrlen**	**2.62**	**354**	Pg	**Pb**	**21 45 02.6**	**-0.4**
	1.3nm,0.2s						
KNOS				Lg	Lg	21 45 34.8	
	6.0nm,0.2s						
NRN	**Naryn**	**2.68**	**264**	⇑*i*P	**Pb**	**21 45 03.3**	**-0.9**
NRN				⇑*i*S	**Sb**	**21 45 36.8**	**-0.5**
ARXS	**Arharly**	**2.76**	**333**	Pg	**Pb**	**21 45 06.0**	**+0.6**
	1.8nm,0.2s						
ARXS				Lg	Lg	21 45 40.7	
	8.3nm,0.3s						
ARXS	**Arharly**	**2.76**	**333**	*e*P	**Pb**	**21 45 06.0**	**+0.6**
	1.8nm,0.2s						
ARXS				*e*S	**Sb**	**21 45 40.7**	**+1.4**
	8.3nm,0.3s						
BOOM	**Boomskoye usch**	**2.78**	**286**	⇓*e*P	**Pb**	**21 45 04.7**	**-1.1**
BOOM				⇓*e*S	**Sb**	**21 45 38.5**	**-1.6**
MAKZ	**Makanchi**	**5.34**	**18**	⇑Pn	**Pn**	**21 45 37.4**	**+1.6**
	2.0nm,1.7s						
MAKZ				⇑Sn	**Sn**	**21 46 36.9**	**-0.5**
	2.4nm,1.7s						
MK31	**Makanchi Array**	**5.41**	**20**	⇓Pn	**Pn**	**21 45 38.0**	**+1.3**
	baz=200,slow=13,SNR=3.1						
MK31				⇓Sn	**Sn**	**21 46 40.0**	**+1.1**
	0.3nm,0.6s,baz=205,slow=24						

*SJA **21** 21:57:24.6±0.7,19°.01S×67°.51W,h262km±10km,ML3.9, MW3.7*
*SCB **21** 21:57:25.4±1.3,19°.06S×67°.45W,h244km±14km,ML3.9/2, Error ellipse: s-maj=5.2km s-min=3.4km az=1.0*
ISC 21 21:57:23.9±1.9,18°.99S±0°.04×67°.47W±0°.05, h254km±15km,n45,σ1s87/67,7C-2D,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEO	**Opoqueri**	**0.58**	**317**	P	**Pn**	**21 57 58.9**	**+0.8**
GO01	**Chusmiza**	**1.77**	**247**	*e*P	**Pn**	**21 58 06.7**	**+1.5**
GO01	**Chusmiza**	**1.77**	**247**	P	**Pn**	**21 58 06.4**	**+1.2**
PB08	**IPOC Station P**	**1.96**	**234**	*e*P	**Pn**	**21 58 08.2**	**+1.4**
PB08				*e*S	**S**	**21 58 42.1**	**+1.6**
PB08	**IPOC Station P**	**1.96**	**234**	⇑*e*P	**Pn**	**21 58 08.0**	**+1.3**
PB08				*e*S	**S**	**21 58 41.4**	**+0.8**
PB08				IAML		21 58 46.4	
	comp=N,99nm,0.3s						
PB08	**IPOC Station P**	**1.96**	**234**	P	**Pn**	**21 58 08.1**	**+1.4**
PB16	**IPOC Station P**	**2.04**	**288**	*e*P	**Pn**	**21 58 09.8**	**+2.2**
PB16	**IPOC Station P**	**2.04**	**288**	⇑*e*P	**Pn**	**21 58 09.7**	**+2.0**
PB16				*e*S	**S**	**21 58 43.5**	**+1.4**
PB16	**IPOC Station P**	**2.04**	**288**	P	**Pn**	**21 58 09.7**	**+2.0**
BBOJ	**La Paz, Jacaqu**	**2.12**	**341**	P	**Pn**	**21 58 10.8**	**+2.4**
SOEJ	**Jacaque**	**2.12**	**341**	P	**Pn**	**21 58 11.0**	**+2.6**
PB11	**IPOC Station P**	**2.20**	**249**	*e*P	**Pn**	**21 58 09.5**	**+0.8**
PB11				*e*S	**S**	**21 58 43.3**	**-0.8**
PB11	**IPOC Station P**	**2.20**	**249**	⇑*e*P	**Pn**	**21 58 09.5**	**+0.8**
PB11				*e*S	**S**	**21 58 42.4**	**-1.7**
PB11				IAML		21 58 44.2	
	comp=N,158nm,0.2s						
PB11	**IPOC Station P**	**2.20**	**249**	P	**Pn**	**21 58 09.5**	**+0.8**
PB11				S	**S**	**21 58 43.4**	**-0.7**
PB11				IAML		21 58 45.2	
	comp=N,138nm,0.2s						
AOEA	**Aiquile**	**2.27**	**70**	P	**Pn**	**21 58 10.1**	**+0.6**
AOEA	**Aiquile**	**2.27**	**70**	P	**Pn**	**21 58 10.6**	**+1.1**
BBOD	**La Paz, Gloria**	**2.57**	**335**	P	**Pn**	**21 58 15.2**	**+2.4**
PSGCX	**Pisagua**	**2.58**	**256**	*e*P	**Pn**	**21 58 12.8**	**+0.5**
PSGCX				*e*S	**S**	**21 58 50.1**	**-0.5**
PSGCX	**Pisagua**	**2.58**	**256**	⇑*e*P	**Pn**	**21 58 12.9**	**+0.6**
PSGCX				*e*S	**S**	**21 58 47.5**	**-3.1**
PX02	**IPOC Station P**	**2.58**	**270**	⇓*e*P	**Pn**	**21 58 12.5**	**+0.1**
PX02				*e*S	**S**	**21 58 47.7**	**-2.9**
PX02				IAML		21 58 51.6	
	comp=N,129nm,0.3s						
PB12	**IPOC Station P**	**2.73**	**277**	*e*P	**Pn**	**21 58 14.7**	**+0.8**
PB12				*e*S	**S**	**21 58 52.0**	**-1.5**
PB12				IAML		21 58 52.8	
	comp=Z,218nm,0.4s						
PB12	**IPOC Station P**	**2.73**	**277**	⇑*e*P	**Pn**	**21 58 14.5**	**+0.6**
PB12				*e*S	**S**	**21 58 51.3**	**-2.1**
PB12				IAML		21 58 52.9	
	comp=E,450nm,0.3s						
LPAZ	**La Paz**	**2.76**	**347**	*e*P	**Pn**	**21 58 16.7**	**+1.9**
LPAZ				*e*S	**S**	**21 58 49.4**	**-5.5**
LPAZ	**La Paz**	**2.76**	**347**	P	**Pn**	**21 58 16.4**	**+1.6**
AP01	**Chacalluta**	**2.79**	**282**	*e*P	**Pn**	**21 58 15.7**	**+1.3**
AP01				*e*S	**S**	**21 58 54.5**	**+0.2**
AP01				IAML		21 59 03.9	
	comp=Z,227nm,0.2s						
AP01	**Chacalluta**	**2.79**	**282**	⇑*e*P	**Pn**	**21 58 15.3**	**+0.9**
AP01				*e*S	**S**	**21 58 52.7**	**-1.6**
AP01				IAML		21 58 54.9	
	comp=E,471nm,0.2s						
TA02	**Huaiquique**	**2.82**	**243**	*e*P	**Pn**	**21 58 15.7**	**+1.1**
TA02				*e*S	**S**	**21 58 52.2**	**-2.6**
TA02				IAML		21 58 57.9	
	comp=Z,301nm,0.1s						
MOCB	**Mochara**	**2.83**	**143**	P	**Pn**	**21 58 16.7**	**+1.4**
BBOB	**La Paz, Bander**	**2.90**	**347**	P	**Pn**	**21 58 18.1**	**+2.0**
PB09	**IPOC Station P**	**3.25**	**210**	*e*P	**Pn**	**21 58 21.4**	**+1.8**
PB09	**IPOC Station P**	**3.25**	**210**	⇓*i*P	**Pn**	**21 58 21.3**	**+1.8**
PB09				*i* S	**S**	**21 59 03.4**	**-0.2**
PB09	**IPOC Station P**	**3.25**	**210**	P	**Pn**	**21 58 20.8**	**+1.3**
PB02	**IPOC Station P**	**3.25**	**224**	*e*P	**Pn**	**21 58 20.4**	**+0.9**
PB02				IAML		21 59 06.7	
	comp=Z,294nm,0.3s						
PB02	**IPOC Station P**	**3.25**	**224**	⇑*e*P	**Pn**	**21 58 21.4**	**+2.0**
PB02				*e*S	**S**	**21 59 01.3**	**-2.2**
PB02	**IPOC Station P**	**3.25**	**224**	P	**Pn**	**21 58 21.2**	**+1.8**
PB02				S	**S**	**21 59 01.4**	**-2.2**
PB02				IAML		21 59 04.9	
	comp=Z,385nm,0.3s						
PB07	**IPOC Station P**	**3.55**	**219**	*e*P	**Pn**	**21 58 24.0**	**+1.2**
PB07				*e*S	**S**	**21 59 07.8**	**-1.8**
PB07				IAML		21 59 09.9	
	comp=Z,92nm,0.5s						
YJA	**Yavi**	**3.66**	**150**	*e*P	**Pn**	**21 58 26.3**	**+1.9**
YJA				*e*S	**S**	**21 59 07.5**	**-4.9**
YJA	**Yavi**	**3.66**	**150**	P	**Pn**	**21 58 25.9**	**+1.5**
PB03	**IPOC Station P**	**3.72**	**215**	*e*P	**Pn**	**21 58 26.3**	**+1.5**
PB03				IAML		21 59 18.3	
	comp=Z,76nm,0.2s						
PB03	**IPOC Station P**	**3.72**	**215**	*e*P	**Pn**	**21 58 26.0**	**+1.2**
PB03				*e*S	**S**	**21 59 10.5**	**-2.7**
PB06	**IPOC Station P**	**4.19**	**208**	*e*P	**Pn**	**21 58 31.5**	**+1.3**
PB06				IAML		21 59 24.5	
	comp=Z,96nm,0.3s						
PB06	**IPOC Station P**	**4.19**	**208**	P	**Pn**	**21 58 31.5**	**+1.3**
PB05	**IPOC Station P**	**4.62**	**213**	*e*P	**Pn**	**21 58 36.5**	**+1.2**
PB05				IAML		21 59 35.6	
	comp=Z,39nm,0.2s						
HJA	**Humahuaca**	**4.62**	**156**	*e*P	**Pn**	**21 58 37.8**	**+2.3**
HJA				*e*S	**S**	**21 59 32.9**	**+0.3**
PB14	**IPOC Station P**	**6.24**	**205**	P	**Pn**	**21 58 56.3**	**+1.0**

*TEH **21** 22:07:11.5,34°.49N×45°.40E,h16km±41km,ML2.9, Presumed earthquake*
*ISN **21** 22:07:13.3±2.3,34°.49N×45°.40E,h16km,ML3.2, Presumed earthquake*
ISC 21 22:07:12.5±1.5,34°.50N±0°.10×45°.39E±0°.09,h18km,n9, σ0s91/11,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.84**	**76**	Pg	**Pb**	**22 07 27.4**	**-1.4**
IDHR				Sg	**Sb**	**22 07 40.0**	**+0.1**
IGHG	**Ghaleghazi**	**0.99**	**99**	Pg	**Pb**	**22 07 30.8**	**-0.4**
ILBA	**Ilam Banvizeh**	**1.10**	**142**	Pg	**Pb**	**22 07 32.0**	**-1.2**
KCHF	**Cheshme Sefid,**	**1.38**	**99**	Pg	**Pb**	**22 07 37.8**	**-0.1**
BHD	**Baghdad**	**1.49**	**215**	*i* P	**Pg**	**22 07 41.5**	**+0.4**
BHD				*i* S	**Sb**	**22 07 57.9**	**-0.3**
	baz=35						
BHD				IAML		22 08 01.4	
	comp=E,565nm,0.3s						
BHD				IAML		22 08 02.5	
	comp=N,286nm,0.5s						
SNJK	**Sanadaj _Korde**	**1.67**	**56**	Pg	**Pb**	**22 07 42.3**	**-0.6**
SNQR	**Sonqor, Kerman**	**1.88**	**78**	Pn	**Pb**	**22 07 45.4**	**-1.1**
IBZA	**Bozab**	**2.04**	**90**	Pn	**Pn**	**22 07 47.2**	**+1.0**
IALM	**Almabolaq**	**2.32**	**80**	Pn	**Pn**	**22 07 50.6**	**+0.6**

IDC 21 22:10:33.0±1.9,16°.60N×95°.03E,h0km,mb3.4/3, mbtmp3.4/4,ML3.5/1,Error ellipse: s-maj=42.9km s-min=25.5km az=55.0,Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**4.17**	**63**	Pn	Pn	22 11 38.5	+0.6
	0.7nm,0.3s,baz=244,slow=13,SNR=4.3						
CMAR				Sn	Sn	22 12 27.4	0.0
	1.0nm,0.3s,baz=248,slow=22,SNR=4.5						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**31.91**	**343**	P	P	22 17 00.4	+0.1
	0.2nm,0.5s,baz=166,slow=9.3,SNR=6.1						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**38.12**	**350**	P	P	22 17 53.2	-0.4
	0.2nm,0.3s,baz=171,slow=10,SNR=1.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**53.01**	**132**	P	P	22 19 51.9	-0.1
	0.3nm,0.4s,baz=312,slow=7.4,SNR=6.1						
	0.3nm,0.4s						

*NNC **21** 22:18:58.1±4.3,41°.92N×80°.76E,h0km,mb2.8,mpv2.6, Error ellipse: s-maj=33.8km s-min=22.0km az=4.0*
*SOME **21** 22:19:00.5,42°.47N×81°.00E,h0km*
ISC 21 22:18:48.4±3.6,42°.3N±0°.2×81°.8E±0°.1,h10km,n5,σ1s12/9, 3C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.94**	**297**	*e*P	**Pn**	**22 19 20.9**	**-0.7**
	3.5nm,0.2s						
SHLS				*e*S	Sn	22 19 35.5	-10
	7.3nm,0.2s						
PDGK	**Podgornoye**	**2.00**	**302**	⇑Pn	**Pg**	**22 19 28.8**	**+2.0**
	1.2nm,0.8s						
PDGK				⇑Sn	**Sg**	**22 19 52.3**	**-0.4**
	2.3nm,0.4s						
KPKS	**Kokpek**	**2.59**	**298**	*e*P	**Pg**	**22 19 38.4**	**+0.5**
	0.1nm,0.0s						
KPKS				*e*S	**Sb**	**22 20 05.5**	**-1.3**
	4.6nm,0.2s						
MK31	**Makanchi Array**	**4.51**	**4**	Pn	**Pg**	**22 20 14.8**	**+0.1**
	baz=198,slow=13,SNR=9.8						
MK31				⇓Sn	**Sg**	**22 21 13.9**	**+0.8**
	0.2nm,0.4s,baz=188,slow=24						
MAKZ	**Makanchi**	**4.51**	**1**	⇑Pn	**Pg**	**22 20 15.3**	**+0.5**
	5.2nm,1.9s						
MAKZ				⇓Sn	**Sg**	**22 21 13.2**	**-0.1**
	2.6nm,1.4s						

*IGQ **21** 22:25:10.2±0.2,2°.S±1°.8°0W±°,h5km±1km,M4.3/47, Mjma4.3/47,MLv4.3/47,Ms(BB)4.4/37*
ISC 21 22:25:09.6±1.4,1°.67S±0°.03×80°.41W±0°.03,h10km±12km, n92,σ1s63/99,19C-4D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIPI	**JIPIJAPA**	**0.34**	**334**	⇑P	**Pb**	**22 25 19.5**	**+1.5**
PPLP	**Puerto Lpez**	**0.39**	**289**	⇑P	**Pb**	**22 25 19.5**	**+0.7**
PPLP				⇑P	**Pb**	**22 25 19.5**	**+0.7**
PPLP				S	**Sb**	**22 25 28.1**	**+3.2**
PPLP	**Puerto Lpez**	**0.39**	**289**	P	**Pb**	**22 25 19.4**	**+0.7**
PPLP				S	**Sb**	**22 25 26.3**	**+1.5**
AC07	**Ecuador-Guayaq**	**0.64**	**138**	⇓P	**Pb**	**22 25 23.2**	**+0.3**
AC07				S	**Sb**	**22 25 32.6**	**+0.7**
GYE3	**Ecuador-Guayaq**	**0.70**	**133**	P	**Pg**	**22 25 22.8**	**-0.3**
SALI	**Salinas**	**0.77**	**229**	⇑P	**Pb**	**22 25 25.3**	**+0.1**
ISPT	**Isla de la Pla**	**0.78**	**302**	⇓P	**Pb**	**22 25 24.4**	**-1.0**
AMNT	**Manta-Manabi**	**0.80**	**336**	P	**Pb**	**22 25 25.5**	**-0.2**
ABAB	**Ecuador-Univer**	**0.90**	**98**	⇑P	**Pg**	**22 25 26.8**	**-0.2**
PECV	**Mancha de Ca P**	**0.96**	**22**	⇑P	**Pg**	**22 25 26.0**	**-2.1**
MORR	**Playas El Morr**	**0.96**	**176**	⇓P	**Pb**	**22 25 28.3**	**-0.1**
ABH2	**Ecuador-Univer**	**1.01**	**1**	⇑P	**Pg**	**22 25 28.8**	**-0.2**
ABH3	**Manabi, Bahia**	**1.07**	**359**	P	**Pg**	**22 25 30.0**	**-0.2**
AQUE	**Quevedo**	**1.11**	**56**	P	**Pg**	**22 25 30.4**	**-0.6**
CAB1	**Cabo Pasado-Ma**	**1.28**	**359**	⇑P	**Pn**	**22 25 32.6**	**-1.1**
ISPG	**Isla Puna-Puer**	**1.31**	**170**	⇑P	**Pb**	**22 25 34.9**	**+0.5**
JSCH	**Cashca Tororas**	**1.43**	**92**	⇑P	**Pn**	**22 25 35.1**	**-0.9**
CHSH	**Refugio Sur-Vo**	**1.55**	**83**	⇑P	**Pn**	**22 25 37.8**	**-0.1**
TAMH	**Tambohuasha Ch**	**1.63**	**85**	⇑P	**Pn**	**22 25 38.8**	**-0.1**
PORT	**Chimborazo Vol**	**1.65**	**83**	⇑P	**Pn**	**22 25 39.1**	**-0.1**
ACH2	**Ecuador

IDC ***21*** *22:37:04.9±0.7,53˚.55S×140˚.93E, h0km, mb4.3/8, mbtmp4.3/8, MS4.1/35, Error ellipse: s-maj=53.3km s-min=15.7km az=84.0*
GFZ ***21*** *22:37:05.7±0.2, 54˚.3S×14˚.1E±˚, h10km, M4.7/20, mb4.7/20*
NEIC ***21*** *22:37:06.5±1.9, 53˚.68S±0˚.09×140˚.1E±0˚.3, h10km±1km, mb4.7/23, Error ellipse: s-maj=33.3km s-min=15.6km az=86.0*
GCMT ***21*** *22:37:08.5±0.3, 53˚.60S±0˚.01×140˚.67E±0˚.04, h16km±1km, MW5.0/98, Moment Tensor Solution. s12,c13; s98,c132; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.82±.19; Mθθ 1.05±.14; Mϕϕ -0.22±.17; Mrθ -2.09±.52; Mrϕ -3.15±.12; Mθϕ 0.11±.40; Best double couple: M0 3.84900×10^16 NP1: ϕs 88.00000°, δ 84.00000°, λ -145.00000°. NP2: ϕs 354.00000°, δ 55.00000°, λ -7.00000°. Principal axes: T 4.2160, Plg 19.0000°, Azm 216.0000°; N -0.7320, Plg 55.0000°, Azm 96.0000°; P -3.4810, Plg 29.0000°, Azm 317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 22:37:06.3±0.4,**53˚.67S**±0˚.06×**140˚.6E**±0˚.1,**h10km**,**n187,** σ 18**39**/142,**mb4.6**/18,**MS4.2**/41,**West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUTAR	**Taroona High S**	**11.64**	**25**	P	**Pn**	**22 39 55.4**	**+3.0**
MOO	**Moorlands**	**12.07**	**24**	P	**Pn**	**22 39 59.9**	**+1.7**
MOO	**Moorlands**	**12.07**	**24**	P	**Pn**	**22 39 55.8**	**-2.4**
GLAD	**Gladstone**	**13.64**	**25**	P	**Pn**	**22 40 20.5**	**+0.8**
BRAT	**Ballarat**	**16.29**	**10**	P	**Pn**	**22 40 55.1**	**+0.1**
TOO	**Toolangi**	**16.45**	**14**	Pn	**P**	**22 40 58.7**	**-1.2**
TOO	comp=Z,48nm,1.1s			IAmb	IAmb	22 41 06.0	
MILA	**Mila**	**17.65**	**23**	P	**Pn**	**22 41 10.2**	**-2.0**
AUMBR	**Murray Bridge**	**18.55**	**357**	P	**Pn**	**22 41 23.5**	**+0.3**
AUMHS	**Melrose High S**	**19.26**	**22**	P	**Pn**	**22 41 32.4**	**+0.6**
CAN	**Canberra**	**19.28**	**21**	P	**Pn**	**22 41 34.4**	**+2.3**
CAN	**Canberra**	**19.28**	**21**	P	**Pn**	**22 41 32.3**	**+0.2**
CAN	comp=Z,70nm,1.1s			IAmb	IAmb	22 41 39.7	
CAN	**Canberra**	**19.28**	**21**	P	**P**	**22 41 31.2**	**+0.1**
AUMTS	**Mt Stromlo**	**19.28**	**21**	P	**Pn**	**22 41 34.5**	**+2.4**
CASY	**Casey**	**19.37**	**218**	P	**P**	**22 41 30.0**	**-1.8**
CASY	**Casey**	**19.37**	**218**	P	**P**	**22 41 31.4**	**-0.4**
HTT	**Hallett**	**20.26**	**356**	P	**P**	**22 41 42.2**	**+0.4**
AUJCS	**Jamestown Cent**	**20.51**	**355**	P	**P**	**22 41 44.0**	**-0.5**
BBOO	**Buckleboo**	**21.10**	**349**	P	**P**	**22 41 49.9**	**-0.9**
BBOO	**Buckleboo**	**21.10**	**349**	P	**P**	**22 41 50.3**	**-0.5**
BBOO	comp=Z,41nm,0.9s			IAmb	IAmb	22 42 00.2	
BBOO	**Buckleboo**	**21.10**	**349**	P	**P**	**22 41 51.6**	**+0.7**
STKA	**Stephens Creek**	**21.79**	**2**	P	**P**	**22 41 57.8**	**-0.5**
STKA	comp=Z,28nm,1.0s,baz=170,slow=11,SNR=39			LR	LR	22 48 46.3	
STKA	**Stephens Creek**	**21.79**	**2**	P	**P**	**22 41 58.7**	**+0.5**
STKA	**Stephens Creek**	**21.79**	**2**	P	**P**	**22 41 58.8**	**+0.5**
AUDCS	**Dubbo College**	**22.19**	**18**	P	**P**	**22 42 03.0**	**+0.4**
CMSA	**Cobar Meteorol**	**22.42**	**12**	P	**P**	**22 42 05.9**	**+0.9**
CMSA	**Cobar Meteorol**	**22.42**	**12**	P	**P**	**22 42 05.1**	**+0.1**
AUPHS	**Peel High Scho**	**23.76**	**22**	P	**P**	**22 42 19.3**	**+0.6**
KHZ	**Kahutara**	**24.52**	**76**	P	**P**	**22 42 25.8**	**+0.1**
ARMA	**Armidale**	**24.58**	**23**	P	**P**	**22 42 28.8**	**+2.3**
ARMA	**Armidale**	**24.58**	**23**	P	**P**	**22 42 28.1**	**+1.5**
ARMA	comp=Z,20nm,0.9s			IAmb	IAmb	22 42 32.1	
ARMA	**Armidale**	**24.58**	**23**	P	**P**	**22 42 26.4**	**-0.1**
FORT	**Forrest**	**24.61**	**333**	P	**P**	**22 42 25.1**	**-1.5**
AULRC	**Lightning Ridg**	**24.82**	**16**	P	**P**	**22 42 29.9**	**+1.4**
QRZ	**Quartz Range**	**24.97**	**72**	P	**P**	**22 42 28.9**	**-0.9**
VNDA	**Vanda**	**25.17**	**169**	P	**P**	**22 42 31.1**	**-0.2**
VNDA	comp=Z,2.0nm,0.7s,baz=329,slow=8.3,SNR=16			LR	LR	22 51 26.5	
VNDA	**Vanda**	**25.17**	**169**	P	**P**	**22 42 31.0**	**-0.3**
VNDA	comp=Z,452nm,18.3s,baz=333,slow=34 comp=Z,2.0nm,0.7s			IAmb	IAmb	22 42 47.1	
INKA	**Innaminka**	**25.90**	**0**	P	**P**	**22 42 37.6**	**-0.7**
INKA	comp=Z,15nm,1.1s			IAmb	IAmb	22 42 46.9	
SBA	**Scott Base**	**26.03**	**168**	P	**P**	**22 42 40.8**	**+1.8**
SBA	comp=Z,41nm,1.1s			IAmb	IAmb	22 43 09.2	
H01W1	**Cape Leeuwin H**	**26.40**	**305**	T	T	23 10 23.4	
H01W2	baz=143,slow=76,SNR=45 **Cape Leeuwin H**	**26.40**	**305**	T	T	23 10 20.4	
H01W3	baz=143,slow=76,SNR=46 **Cape Leeuwin H**	**26.41**	**305**	T	T	23 10 21.6	
NWAO	baz=143,slow=76,SNR=37 **Narrogin (SRO)**	**26.58**	**312**	LR	LR	22 50 47.0	
QLP	comp=Z,630nm,20.4s,baz=104,slow=31 **Quilpie**	**27.19**	**7**	P	**P**	**22 42 50.8**	**+0.8**
QLP	**Quilpie**	**27.19**	**7**	P	**P**	**22 42 48.1**	**-1.8**
URZ	**Urewera**	**29.31**	**73**	LR	LR	22 54 09.8	
URZ	comp=Z,464nm,18.9s,baz=222,slow=35 **Urewera**	**29.31**	**73**	P	**P**	**22 43 07.7**	**-1.1**
EIDS	**Eidsvold**	**29.34**	**20**	P	**P**	**22 43 06.7**	**-2.4**
AS01	**Alice Springs**	**30.38**	**348**	P	**P**	**22 43 17.6**	**-0.8**
ASAR	**Alice Springs**	**30.38**	**348**	P	**P**	**22 43 17.0**	**-1.4**
ASAR	comp=Z,3.2nm,0.6s,baz=166,slow=9.9,SNR=34			LR	LR	22 54 51.9	
ASAR	comp=Z,232nm,18.2s,baz=166,slow=35 comp=Z,3.2nm,0.6s **Alice Springs**	**30.38**	**348**	P	**P**	**22 43 16.4**	**-2.0**
AS31	**Alice Springs**	**30.38**	**348**	P	**P**	**22 43 16.3**	**-2.1**
AS31	comp=Z,5.8nm,0.6s			IAmb	IAmb	22 43 23.8	
MEEK	**Meekatharra**	**31.53**	**320**	P	**P**	**22 43 27.5**	**-1.0**
QIS	**Mount Isa**	**33.06**	**358**	P	**P**	**22 43 42.6**	**+0.6**
QIS	**Mount Isa**	**33.06**	**358**	P	**P**	**22 43 40.2**	**-1.8**
CTA	**Charters Tower**	**33.80**	**10**	LR	LR	22 56 24.1	
WR8	comp=Z,320nm,19.8s,baz=189,slow=34 **Warramunga Arr**	**33.97**	**350**	P	**P**	**22 43 47.3**	**-2.6**
WB1	**Warramunga Ar.**	**33.99**	**349**	P	**P**	**22 43 48.8**	**-1.2**
WRA	**Warramunga Arr**	**34.00**	**349**	P	**P**	**22 43 48.4**	**-1.8**
WRA	comp=Z,6.6nm,0.8s,baz=171,slow=7.9,SNR=41 comp=Z,6.6nm,0.8s **Warramunga Arr**	**34.00**	**349**	P	**P**	**22 43 48.4**	**-1.8**
WRAB	**Tennant Creek**	**34.01**	**349**	P	**P**	**22 43 48.5**	**-1.7**
WB0	**Warramunga Arr**	**34.17**	**350**	P	**P**	**22 43 49.9**	**-1.7**
MTSU	**Mount Surprise**	**35.58**	**6**	P	**P**	**22 44 03.6**	**-0.2**
QSPA	**South Pole Qui**	**36.45**	**180**	P	**P**	**22 44 11.0**	**0.0**
QSPA	comp=Z,4.1nm,1.0s,baz=290,slow=4.5,SNR=11			LR	LR	22 58 36.5	
QSPA	comp=Z,606nm,20.7s,baz=2.5,slow=35 comp=Z,4.1nm,1.0s **South Pole Qui**	**36.45**	**180**	P	**P**	**22 44 10.4**	**-0.6**
QSPA	comp=Z,16nm,1.2s			IAmb	IAmb	22 44 31.3	
QSPA	**South Pole Qui**	**36.45**	**180**	P	**P**	**22 44 09.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**37.34**	**336**	LR	LR	22 58 03.8	
FITZ	comp=Z,402nm,21.8s,baz=172,slow=34 **Fitzroy Crossi**	**37.34**	**336**	P	**P**	**22 44 17.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**37.34**	**336**	P	**P**	**22 44 18.6**	**-0.2**
MAW	**Mawson**	**37.73**	**218**	LR	LR	22 58 47.7	
COEN	comp=Z,806nm,19.0s,baz=85,slow=34 **Coen**	**39.67**	**4**	P	**P**	**22 44 37.4**	**-1.1**
MTN	**Manton Dam**	**41.41**	**346**	P	**P**	**22 44 51.3**	**-1.5**
MTN	comp=Z,9.3nm,0.8s			IAmb	IAmb	22 44 58.2	
MTN	**Manton Dam**	**41.41**	**346**	P	**P**	**22 44 52.2**	**-0.6**
PMG	**Port Moresby**	**44.46**	**9**	LR	LR	23 02 24.2	
BATI	comp=Z,280nm,20.7s,baz=198,slow=34 **Baumata**	**45.42**	**336**	LR	LR	23 05 17.2	
MSVF	comp=Z,300nm,18.5s,baz=196,slow=37 **Nonsavu**	**46.10**	**54**	LR	LR	23 00 54.6	
HNR	comp=Z,423nm,19.9s,baz=212,slow=31 **Honiara**	**46.79**	**27**	LR	LR	23 02 36.2	
MMRI	comp=Z,12nm,18.7s,baz=278,slow=33 **Maumere**	**47.28**	**335**	P	**P**	**22 45 43.5**	**+3.7**
KRVT	**Keravat (AS076**	**50.09**	**15**	LR	LR	23 05 22.4	
GENI	comp=Z,96nm,21.0s,baz=82,slow=34 **Genyem**	**50.91**	**359**	P	**P**	**22 46 08.2**	**+0.6**
GENI	**Genyem**	**50.91**	**359**	P	**P**	**22 46 06.9**	**-0.7**
GENI	comp=Z,42nm,1.2s **Genyem**	**50.91**	**359**	P	**P**	**22 46 07.1**	**-0.5**
TROLL	**Troll, Antarti**	**51.22**	**195**	P	**P**	**22 46 09.4**	**0.0**
	comp=Z,178nm,1.0s						
KAPI	**Kappang**	**51.40**	**333**	LR	LR	23 07 20.5	
SNAA	comp=Z,227nm,19.7s,baz=153,slow=35 **Sanae**	**52.32**	**194**	P	**P**	**22 46 20.6**	**+3.0**
SNAA	comp=Z,3.9nm,1.1s,baz=158,slow=11,SNR=4.1			LR	LR	23 08 10.5	
SNAA	comp=Z,790nm,20.0s,baz=116,slow=36 comp=Z,3.9nm,1.1s **Sanae**	**52.32**	**194**	P	**P**	**22 46 16.3**	**-1.3**
SNAA				IAmb	IAmb	22 46 37.0	
SNAA	comp=Z,14nm,1.3s **Sanae**	**52.32**	**194**	P	**P**	**22 46 15.8**	**-1.9**
SIJI	**Sorong**	**53.18**	**348**	LR	LR	23 07 33.1	
H04S1	comp=Z,88nm,21.3s,baz=245,slow=34 **CROZET ISLANDS**	**53.56**	**239**	T	T	23 45 11.5	
H04S2	baz=129,slow=75,SNR=20 **CROZET ISLANDS**	**53.56**	**239**	T	T	23 45 01.6	
H04S3	baz=129,slow=75,SNR=17 **CROZET ISLANDS**	**53.58**	**239**	T	T	23 45 10.3	
LEM	baz=129,slow=75,SNR=21 **Lembang**	**53.79**	**318**	LR	LR	23 06 17.3	
AFI	comp=Z,145nm,19.9s,baz=170,slow=32 **Afiamalu**	**54.46**	**62**	LR	LR	23 05 39.8	
RAR	comp=Z,198nm,21.5s,baz=221,slow=32 **Rarotonga**	**55.28**	**78**	LR	LR	23 05 36.0	
SMAI	comp=Z,92nm,21.5s,baz=215,slow=31 **San Martin Ant**	**56.79**	**168**	P	**P**	**22 46 51.3**	**+1.3**
TOLI2	**Tolitoli**	**57.02**	**336**	P	**P**	**22 46 51.7**	**-0.6**
TOLI2	**Tolitoli**	**57.02**	**336**	P	**P**	**22 46 51.2**	**-1.0**
TOLI2	**Tolitoli**	**57.02**	**336**	P	**P**	**22 46 51.6**	**-0.6**
DAV	**Davao City (W)**	**61.82**	**343**	LR	LR	23 13 45.7	
MYKOM	comp=Z,80nm,21.1s,baz=167,slow=36 **Kota Tinggi**	**63.14**	**318**	P	**P**	**22 47 32.7**	**-1.5**
MYKOM				IAmb	IAmb	22 47 46.3	
PPT2	comp=Z,9.5nm,1.0s **Papeete2**	**64.09**	**85**	*e*LR	LR	23 06 43.7	
PPT2	comp=Z,309nm,32.2s			*e*LR	LR	23 06 56.1	
PPT	comp=Z,144nm,29.0s **Papeete**	**64.11**	**85**	LR	LR	23 09 41.6	
GUMO	comp=Z,75nm,20.0s,baz=88,slow=31 **Guam**	**67.09**	**5**	LR	LR	23 17 15.8	
H08S2	comp=Z,50nm,19.2s,baz=142,slow=36 **Diego Garcia H**	**70.95**	**283**	T	T	00 06 00.4	
H08S1	baz=144,slow=76,SNR=23 **Diego Garcia H**	**70.96**	**283**	T	T	00 06 01.2	
H08S3	baz=144,slow=76,SNR=9.3 **Diego Garcia H**	**70.97**	**283**	T	T	00 06 01.8	
PALK	baz=144,slow=76,SNR=21 **Pallekele**	**78.74**	**299**	LR	LR	23 18 47.4	
SUR	comp=Z,171nm,18.8s,baz=138,slow=32 **Sutherland**	**79.72**	**228**	LR	LR	23 18 05.9	
CM31	comp=Z,216nm,19.9s,baz=149,slow=31 **Chiang Mai Arr**	**80.25**	**320**	P	**P**	**22 49 17.2**	**+0.2**
CM31				IAmb	IAmb	22 49 35.3	
CMAR	comp=Z,10nm,1.4s **Chiang Mai Arr**	**80.25**	**320**	P	**P**	**22 49 18.5**	**+1.5**
CMAR	comp=Z,0.7nm,0.3s,baz=170,slow=4.7,SNR=6.0			LR	LR	23 22 45.5	
CMAR	comp=Z,82nm,20.6s,baz=165,slow=34 comp=Z,0.7nm,0.3s **Chiang Mai Arr**	**80.25**	**320**	P	**P**	**22 49 16.3**	**-0.7**
JCJ	**Chichijima**	**80.44**	**1**	LR	LR	23 22 51.0	
CHTO	comp=Z,62nm,22.0s,baz=145,slow=34 **Chiang Mai**	**80.58**	**320**	P	**P**	**22 49 17.7**	**-1.1**
CHTO	**Chiang Mai**	**80.58**	**320**	P	**P**	**22 49 17.8**	**-1.0**
CHTO	**Chiang Mai**	**80.58**	**320**	P	**P**	**22 49 18.7**	**-0.1**
BOSA	**Boshof**	**80.84**	**234**	LR	LR	23 18 02.8	
LBTB	comp=Z,181nm,21.4s,baz=177,slow=30 **Lobatse**	**83.69**	**236**	LR	LR	23 20 38.7	
MATP	comp=Z,170nm,19.8s,baz=154,slow=31 **Matopo**	**86.04**	**241**	LR	LR	23 23 50.8	
PZH	comp=Z,192nm,18.1s,baz=119,slow=32 **PanZhiHua**	**86.64**	**326**	P	**P**	**22 49 51.8**	**+1.9**
NJ2	**Nanjing**	**87.42**	**342**	*e*P	**P**	**22 49 54.6**	**+1.3**
NJ2	comp=Z,25nm,0.6s			pmax	pmax		
MJAR	**Matsushiro Arr**	**89.86**	**358**	P	**P**	**22 50 04.5**	**-0.3**
MJAR	comp=Z,1.0nm,0.7s,baz=195,slow=6.1,SNR=5.0 comp=Z,30nm,18.0s,baz=158,slow=37 comp=Z,1.0nm,0.7s			LR	LR	23 31 59.2	
LSZ	**Lusaka**	**90.47**	**243**	LR	LR	23 26 41.3	
KSRS	comp=Z,236nm,18.1s,baz=150,slow=33 **Korea Array**	**91.41**	**350**	LR	LR	23 30 43.7	
TSUM	comp=Z,42nm,21.0s,baz=175,slow=35 **Tsumeb**	**92.49**	**233**	LR	LR	23 24 42.3	
HHC	comp=Z,153nm,21.9s,baz=154,slow=31 **Huo-hao-te**	**97.40**	**338**	*e*P	Pdif	22 50 41.4	+1.8
ASAJ	**Asahikawa**	**97.42**	**1**	LR	LR	23 32 35.8	
USRK	comp=Z,54nm,21.9s,baz=176,slow=34 **Ussuriysk Ar.**	**97.77**	**354**	LR	LR	23 32 29.5	
NVAR	comp=Z,59nm,21.6s,baz=175,slow=34 **Mina Array Bea**	**125.99**	**72**	PKP	**PKiKP**	**22 56 09.2**	**+0.6**
KVN	comp=Z,0.9nm,0.7s,baz=225,slow=3.1,SNR=3.7 **Kaiserville**	**126.53**	**72**	PKPdf	**PKiKP**	**22 56 09.6**	**-0.1**
PSUT	**Pine Spring**	**128.60**	**75**	PKPdf	**PKPdf**	**22 56 13.0**	**-0.2**
YKA	**Yellowknife Ar**	**141.49**	**46**	PKiKP	PKPpre	22 56 32.1	
S44A	comp=Z,7nm,0.7s,baz=250,slow=4.2,SNR=4.0 **Carbondale**	**142.55**	**95**	PKPpre	PKPpre	22 56 32.4	
L40A	**Anamosa**	**144.14**	**87**	PKPdf	PKPbc	22 56 40.1	+0.5
CESX	**Cesi**	**144.34**	**274**	PKPdf	**PKPab**	**22 56 39.9**	**0.0**
WCI	**Wyandotte Cave**	**144.65**	**97**	PKPdf	**PKPab**	**22 56 39.0**	**-2.2**
T50A	**Nancy**	**144.70**	**99**		**PKPab**	**22 56 39.2**	**-2.3**
MODS	**Modra-Piesok**	**144.76**	**285**	*e*PKP	**PKPdf**	**22 56 42.5**	**+0.1**
JAVC	**Velka Javorina**	**144.78**	**286**	*e*PKP	PKPbc	22 56 41.8	+0.3
RONA	**Rosalia, Austr**	**144.98**	**283**	*e*PKP	**PKPab**	**22 56 41.7**	**-0.5**
SOKA	comp=Z,7.9nm,1.3s,SNR=7.4 **Soboth**	**145.18**	**281**	*e*PKP	**PKPdf**	**22 56 43.3**	**0.0**
ARSA	comp=Z,7.4nm,1.3s,SNR=10 **Arzberg**	**145.20**	**282**	PKPdf	**PKPbc**	**22 56 42.1**	**-0.7**
ARSA	**Arzberg**	**145.20**	**282**	*e*PKP	**PKPbc**	**22 56 42.7**	**-0.2**
JFWS	comp=Z,13nm,1.3s,SNR=9.8 **Jewell Farm**	**145.23**	**87**	PKPdf	**PKPbc**	**22 56 41.4**	**-1.6**
STEB	**Steborice**	**145.25**	**288**	*e*PKP	**PKPdf**	**22 56 44.1**	**+0.9**
STEB				*ex*	x	22 56 53.4	
MORC	**Moravsky Berou**	**145.31**	**287**		**PKPbc**	**22 56 42.2**	**-0.9**
MORC	**Moravsky Berou**	**145.31**	**287**	*e*PKP	**PKPbc**	**22 56 42.4**	**-0.8**
CONA	**Conrad Observa**	**145.35**	**283**	*e*PKP	**PKPbc**	**22 56 42.7**	**-0.7**
OBKA	comp=Z,8.8nm,1.4s,SNR=7.2 **Obir**	**145.38**	**281**	*e*PKP	**PKPab**	**22 56 43.7**	**-0.1**
TRI	comp=Z,5.3nm,1.8s **Trieste**	**145.41**	**279**		**PKPbc**	**22 56 42.5**	**-1.0**
FINES	**FINESS Array B**	**145.42**	**310**	PKPbc	**PKPab**	**22 56 44.5**	**+1.2**
FINES	comp=Z,2.7nm,0.7s,baz=193,slow=7.4,SNR=4.5 **FINESS Array B**	**145.42**	**310**		**PKPdf**	**22 56 42.8**	**-0.3**
KRUC	**Moravsky**	**145.61**	**286**	*e*PKP	**PKPdf**	**22 56 43.8**	**0.0**
VRAC	**Vranov**	**145.62**	**286**	*e*PKP	**PKPdf**	**22 56 43.7**	**-0.1**
SESA	**Seetaler Alpe,**	**145.69**	**281**	*e*PKP	**PKPbc**	**22 56 44.5**	**-0.1**
ULM	comp=Z,22nm,1.5s,SNR=11 **Lac du Bonnet**	**145.83**	**72**	PKPbc	**PKPdf**	**22 56 44.2**	**+0.1**
ULM	comp=Z,1.4nm,0.6s,baz=301,slow=4.4,SNR=5.2 **Lac du Bonnet**	**145.83**	**72**	PKPdf	**PKPdf**	**22 56 44.4**	**+0.3**
KRLC	**Kraliky**	**145.88**	**287**	*e*PKP	**PKiKP**	**22 56 52.0**	**+3.6**
P48A	**Milroy**	**145.97**	**96**	PKPdf	**PKPdf**	**22 56 44.8**	**0.0**
MYKA	**Tea Mystica**	**145.97**	**280**	*e*PKP	**PKPbc**	**22 56 45.2**	**-0.2**
MOA	comp=Z,24nm,1.5s,SNR=10.0 **Molln**	**146.24**	**282**	*e*PKP	**PKPab**	**22 56 46.4**	**-0.5**
DPC	comp=Z,1.5nm,0.7s **Dobruska-Polom**	**146.27**	**288**	*e*PKP	**PKPab**	**22 56 47.3**	**+0.4**
DPC				*ex*	x	22 56 55.1	
DPC	comp=Z,100nm,16.0s			AMS	AMS	00 21 20.0	
KBA	**Koelnbreinsper**	**146.38**	**281**	*e*PKP	**PKPbc**	**22 56 47.0**	**+0.3**
OSTC	comp=Z,3.7nm,1.1s **Ostas**	**146.43**	**288**	*e*PKP	**PKPdf**	**22 56 45.2**	**0.0**
BIOA	**Bad Ischl, Aus**	**146.52**	**282**	*e*PKP	**PKPab**	**22 56 47.4**	**-0.6**
CKRC	comp=Z,2.1nm,0.9s **Cesky Krumlov**	**146.69**	**284**	*e*PKP	**PKiKP**	**22 56 55.1**	**+5.0**
CKRC	comp=Z,100nm,18.5s			AMS	AMS	00 18 40.0	
ABTA	**Abfaltersbach**	**146.70**	**280**	*e*PKP	**PKPbc**	**22 56 47.5**	**-0.1**
LESA	comp=Z,6.8nm,1.2s **Schwarzleotal**	**146.95**	**281**	*e*PKP	**PKPbc**	**22 56 48.3**	**0.0**
GEC2	comp=Z,4.2nm,0.9s **GERESS Array S**	**147.06**	**284**	*e*PKP	**PKPbc**	**22 56 48.6**	**0.0**
GERES	baz=117,slow=2.8 **GERESS Array B**	**147.06**	**284**	PKPbc	**PKPbc**	**22 56 48.4**	**-0.1**
GERES	comp=Z,2.0nm,0.9s,baz=160,slow=4.3,SNR=16 **GERESS Array B**	**147.06**	**284**	PKPdf	**PKPdf**	**22 56 46.8**	**+0.4**
PRU	**Pruhonice**	**147.12**	**286**	AMS	AMS	00 20 00.0	
ARCES	comp=Z,100nm,20.6s **ARCESS Array B**	**147.25**	**324**	PKPbc	**PKPbc**	**22 56 47.1**	**-1.2**
ARCES	comp=Z,1.3nm,0.6s,baz=110,slow=3.2,SNR=5.1 **ARCESS Array B**	**147.25**	**324**	PKPdf	**PKPdf**	**22 56 47.0**	**+1.1**
KHC	**Kasperske Hory**	**147.27**	**284**	*e*PKP	**PKiKP**	**22 56 52.8**	**+1.5**
KHC				AMS	AMS	00 19 20.0	
	comp=Z,100nm,12.8s						
WTTA	**Wattenberg**	**147.48**	**280**	*e*pPKP	**PKPbc**	**22 56 50.7**	**+0.9**
SQTA	comp=Z,6.5nm,0.9s **Sankt Quirin**	**147.71**	**279**	*e*PKP	**PKPbc**	**22 56 49.9**	**-0.5**
MOTA	comp=Z,6.5nm,1.1s **Moosalm**	**147.83**	**280**	*e*pPKP	**PKPbc**	**22 56 50.8**	**0.0**
BRG	comp=Z,5.0nm,1.0s **Berggiesshubel**	**147.86**	**287**	*e*PKP	**PKPab**	**22 56 54.3**	**+1.2**
BRG				Amp		22 56 55.5	
BRG	comp=Z,1.2nm,0.7s **Berggiesshubel**	**147.86**	**287**	P	**PKPab**	**22 56 59.4**	**+6.3**
BRG				Amp		22 57 00.0	
FETA	comp=Z,4.6nm,0.8s **Feichten**	**147.88**	**279**	*e*PKP	**PKPbc**	**22 56 50.8**	**-0.1**
RETA	comp=Z,7.0nm,1.1s **Reutte**	**148.10**	**280**	*e*PKP	**PKPbc**	**22 56 50.7**	**-0.7**
DAVA	comp=Z,3.1nm,0.9s **Damuels**	**148.52**	**279**	*e*PKP	**PKPbc**	**22 56 52.4**	**-0.2**
CLL	comp=Z,8.6nm,1.3s **Collm**	**148.58**	**287**	*e*PKPbc	**PKPbc**	**22 56 52.0**	**-0.4**
CLL				*e*PKPab	**sPKPbc**	**22 56 55.0**	**-0.5**
CLL				AMS	AMS	00 19 00.0	
CLL	comp=N,100nm,21.3s			AMS	AMS	00 19 00.0	
CLL	comp=E,100nm,18.9s			AMS	AMS	00 21 00.0	
SPITS	comp=Z,100nm,18.7s **Spitsbergen Ar**	**148.80**	**341**	PKPbc	**PKPbc**	**22 56 51.6**	**-0.6**
GRF	comp=Z,7.8nm,0.9s,baz=114,slow=9.3,SNR=3.5 **Grafenberg Arr**	**148.89**	**284**	*e*PKP	**PKPab**	**22 56 58.7**	**+1.4**
GRF	baz=117,slow=2.8			*e*L	L	00 07 50.1	
MOX	comp=Z,59nm,20.4s **Moxa**	**149.09**	**285**	*e*L	L	00 06 57.0	
ESDC	comp=Z,52nm,21.8s **Sonseca Array**	**152.26**	**254**	PKPbc	**PKiKP**	**22 57 01.9**	**-0.1**
ESDC	comp=Z,1.2nm,0.9s,baz=79,slow=1.6,SNR=5.9 **Sonseca Array**	**152.26**	**254**		**PKiKP**	**22 57 02.2**	**+0.3**

NNC ***21*** *23:10:36.7±10.0, 41˚.93N×80˚.85E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=83.1km s-min=49.3km az=8.0*
SOME ***21*** *23:10:37.3, 42˚.33N×81˚.03E, h5km*

ISC 21 23:10:35.4±3.3,**41˚.8N**±0˚.2×**80˚.6E**±0˚.1,**h10km**,**n6,** σ 0**55**/12,**3C-3D**,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**1.79**	**332**	⇑P	**Pb**	**23 11 08.1**	**-0.3**
PDGK	1.5nm,0.6s			⇑S	**Sb**	**23 11 30.6**	**-0.4**
UZB	3.4nm,0.5s **Uzunbulak**	**1.84**	**320**	*e*P	**Pg**	**23 11 10.5**	**-0.2**
UZB	1.7nm,0.1s			*e*S	**Sg**	**23 11 34.5**	**0.0**
KPKS	3.4nm,0.2s **Kokpek**	**2.24**	**321**	*e*P	**Pb**	**23 11 16.2**	**+0.1**
KPKS	0.3nm,0.2s			*e*S	**Sb**	**23 11 44.3**	**+0.4**
ARXS	7.2nm,0.2s **Arharly**	**3.21**	**321**	*e*P	**Pb**	**23 11 32.5**	**-0.1**
ARXS	0.9nm,0.2s			*e*S	**Sb**	**23 12 12.0**	**+0.3**
MAKZ	2.7nm,0.4s **Makanchi**	**5.15**	**10**	⇓Pn	**Pn**	**23 11 52.3**	**-0.3**
MAKZ	3.8nm,1.1s			⇑Sn	**Sn**	**23 12 51.1**	**-0.8**
MK31	2.4nm,1.3s **Makanchi Array**	**5.18**	**13**	⇓Pn	**Pn**	**23 11 53.3**	**+0.3**
MK31	1.4nm,1.0s,baz=180,slow=13,SNR=5.0			⇓Sn	**Sn**	**23 12 53.9**	**+1.2**
	3.0nm,1.4s,baz=179,slow=25						

IDC ***21*** *23:46:39.3±0.7,3˚.74N×31˚.48W, h0km, mb4.1/17, mbtmp4.0/18, ML3.7/1, MS3.7/39, Error ellipse: s-maj=26.4km s-min=14.6km az=138.0*
NEIC ***21*** *23:46:41.4±1.3,3˚.8N±0˚.1×31˚.5W±0˚.2, h10km±1km, mb4.6/13, Error ellipse: s-maj=31.7km s-min=15.1km az=120.0*

ISC 21 23:46:41.0±0.5,**3˚.87N**±0˚.10×**31˚.58W**±0˚.10,**h10km**,**n91,** σ 18**34**/56,**mb4.3**/35,**MS3.8**/38,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.55**	**204**	Pn	**Pn**	**23 49 10.2**	**-2.4**
RCBR	0.5nm,0.3s,baz=22,slow=20,SNR=8.9			LR	LR	23 52 17.4	
RCBR	comp=Z,268nm,21.3s,baz=56,slow=32 2.0nm,0.4s **Riachuelo**	**10.55**	**204**		**Pn**	**23 49 09.7**	**-2.8**
NBMO	**Morrinhos-CE**	**11.06**	**230**	*e*P	**Pn**	**23 49 16.1**	**-3.4**
NBMO				*e*pP		23 49 19.2	
NBMO				*e*S	Sn	23 51 07.5	-16
NBPS	**Pedro II - PI**	**12.83**	**230**	*e*P	**Pn**	**23 49 39.9**	**-3.8**
NBPS				*e*S	Sn	23 51 50.7	-16
NBMA	**Muriti-CE**	**13.26**	**213**	*e*P	**Pn**	**23 49 48.4**	**-1.2**
SACV	**Santiago Islan**	**13.54**	**35**	Pn	**Pn**	**23 49 50.3**	**-

KEST Kesra 49.28 45 LR LR 00 15 58.1
comp=Z,172nm,20.9s,baz=326,slow=36
TSUM Tsumeb 53.51 117 LR LR 00 14 29.0
comp=Z,85nm,19.1s,baz=332,slow=31
VAE Valguarnera 53.70 45 LR LR 00 18 05.2
comp=Z,195nm,20.8s,baz=320,slow=35
D62A Allapoint, All 53.84 329 P **P** **23 56 05.5 +1.3**
D62A IAmb IAmb 23 56 16.7
comp=Z,6.7nm,1.0s
NRCA Norcia 55.45 39 P **P** **23 56 15.8 -0.3**
NRCA IAmb IAmb 23 56 33.5
comp=Z,4.4nm,1.0s
DAVOX Davos/Dischmat 55.77 33 LR LR 00 17 03.3
comp=Z,51nm,21.0s,baz=258,slow=33
DAVA Damuels 56.07 33 *eP* **P** **23 56 20.8 +0.2**
comp=Z,1.6nm,0.7s
EKA Eskdalemuir Ar 56.19 19 P **P** **23 56 21.4 +0.4**
comp=Z,1.1nm,0.8s,baz=225,slow=7.0,SNR=4.1
EKA LR LR 00 16 05.1
comp=Z,60nm,19.6s,baz=246,slow=31
comp=Z,1.1nm,0.8s
CTI Castel Tesino 56.33 35 P **P** **23 56 22.8 +0.4**
CTI IAmb IAmb 23 56 32.4
comp=Z,5.7nm,0.8s
FETA Feichten 56.38 34 *i* P **P** **23 56 23.0 +0.2**
comp=Z,4.8nm,1.0s
RETA Reutte 56.67 33 *eP* **P** **23 56 24.1 -0.6**
comp=Z,3.4nm,1.1s
SQTA Sankt Quirin 56.76 34 *eP* **P** **23 56 25.4 -0.1**
comp=Z,4.2nm,1.2s
MOTA Moosalm 56.78 33 *eP* **P** **23 56 25.3 -0.3**
comp=Z,1.7nm,0.7s
WTTA Wattenberg 57.02 34 *eP* **P** **23 56 27.4 0.0**
comp=Z,2.2nm,1.0s
WATA Walderalm 57.03 34 *eP* **P** **23 56 27.9 +0.5**
comp=Z,3.9nm,1.0s
STAL STALIGIAL 57.06 35 P **P** **23 56 28.2 +0.7**
STAL IAmb IAmb 23 56 31.2
comp=Z,5.5nm,1.2s
ABTA Abfaltersbach 57.22 35 *eP* **P** **23 56 29.2 +0.6**
comp=Z,2.1nm,0.7s
SABO M.te Sabotino 57.42 36 P **P** **23 56 31.0 +1.0**
SABO IAmb IAmb 23 56 40.9
comp=Z,5.0nm,0.9s
TKL Tuckaleechee C 57.52 310 LR LR 00 17 34.3
comp=Z,33nm,19.6s,baz=92,slow=32
LESA Schwarzleotal 57.70 34 *eP* **P** **23 56 31.7 -0.3**
comp=Z,2.9nm,0.8s
MYKA Terra Mystica 57.80 35 *eP* **P** **23 56 33.5 +0.8**
comp=Z,4.4nm,1.3s
SADO Sadowa 58.23 322 LR LR 00 16 08.9
comp=Z,75nm,21.0s,baz=102,slow=30
OBKA Obir 58.26 36 *eP* **P** **23 56 36.7 +0.7**
comp=Z,1.3nm,0.8s
SCHQ Schefferville 58.26 337 P **P** **23 56 38.4 +2.6**
comp=Z,5.2nm,0.8s,baz=84,slow=7.2,SNR=4.1
comp=Z,5.2nm,0.8s
SOKA Soboth 58.63 36 *eP* **P** **23 56 39.1 +0.5**
comp=Z,1.8nm,0.7s
GEC2 GERESS Array S 59.06 33 P **P** **23 56 41.6 +0.1**
GERES GERESS Array B 59.06 33 P **P** **23 56 41.5 0.0**
comp=Z,1.0nm,0.8s,baz=228,slow=5.2,SNR=9.3
comp=Z,1.0nm,0.8s
GERES GERESS Array B 59.06 33 P **P** **23 56 41.1 -0.5**
RONA Rosalia, Austr 59.90 35 *eP* **P** **23 56 46.9 -0.4**
comp=Z,2.2nm,1.0s
VRAC Vranov 60.91 34 LR LR 00 20 44.3
comp=Z,23nm,21.2s,baz=276,slow=34
SUR Sutherland 61.35 130 LR LR 00 19 26.1
comp=Z,61nm,18.1s,baz=267,slow=32
LBTB Lobatse 62.45 121 LR LR 00 18 52.4
comp=Z,76nm,20.4s,baz=274,slow=31
BOSA Boshof 63.38 125 LR LR 00 20 09.4
comp=Z,62nm,18.4s,baz=310,slow=32
MLR Muntele Rosu 64.88 41 LR LR 00 24 25.4
comp=Z,63nm,20.0s,baz=276,slow=35
MLR Muntele Rosu 64.88 41 P **P** **23 57 21.0 +0.2**
NOA NORSAR Array B 65.49 21 P **P** **23 57 24.8 +0.5**
comp=Z,2.9nm,0.7s,baz=230,slow=6.2,SNR=3.6
NOA LR LR 00 22 56.4
comp=Z,52nm,19.5s,baz=235,slow=33
comp=Z,2.9nm,0.7s
HFS Hagfors 65.83 23 LR LR 00 21 06.2
comp=Z,37nm,20.8s,baz=256,slow=31
EIL Elat 67.74 60 LR LR 00 27 49.7
comp=Z,44nm,18.3s,baz=298,slow=36
BRTR Keskin Array B 68.58 49 P **P** **23 57 45.6 +1.1**
comp=Z,1.4nm,0.8s,baz=280,slow=9.1,SNR=3.7
BRTR LR LR 00 27 40.9
comp=Z,44nm,21.9s,baz=270,slow=36
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 68.83 37 LR LR 00 26 40.3
comp=Z,39nm,19.5s,baz=292,slow=35
ASF Jabal al Asfar 69.76 57 LR LR 00 29 55.5
comp=Z,47nm,18.4s,baz=207,slow=37
ULM Lac du Bonnet 70.78 322 LR LR 00 24 31.9
comp=Z,56nm,19.6s,baz=32,slow=32
FINES FINESS Array B 71.62 25 P **P** **23 58 01.3 -1.2**
comp=Z,2.7nm,1.0s,baz=243,slow=12,SNR=5.2
FINES LR LR 00 28 02.2
comp=Z,54nm,18.4s,baz=246,slow=35
comp=Z,2.7nm,1.0s
TXAR Lajitas Array 72.51 299 P **P** **23 58 08.6 -0.1**
comp=Z,0.6nm,0.9s,baz=118,slow=7.2,SNR=4.3
comp=Z,0.6nm,0.9s
TXAR Lajitas Array 72.51 299 P **P** **23 58 08.8 +0.1**
ARCES ARCESS Array B 75.32 18 P **P** **23 58 23.5 -0.8**
comp=Z,2.3nm,0.8s,baz=263,slow=7.0,SNR=4.9
ARCES LR LR 00 28 34.9
comp=Z,22nm,19.2s,baz=235,slow=33
comp=Z,2.3nm,0.8s
ANMO Albuquerque 75.40 305 LR LR 00 29 39.4
comp=Z,47nm,18.3s,baz=90,slow=34
KBZ Khabaz 76.13 46 LR LR 00 33 44.0
comp=Z,20nm,19.5s,baz=90,slow=37
PDAR Pinedale Array 78.56 313 P **P** **23 58 43.5 +0.1**
comp=Z,0.5nm,0.7s,baz=81,slow=12,SNR=4.6
PDAR LR LR 00 29 42.6
comp=Z,24nm,21.0s,baz=78,slow=33
comp=Z,0.5nm,0.7s
KIRV Kirov 82.02 31 LR LR 00 32 36.2
comp=Z,70nm,21.2s,baz=278,slow=34
ELK Elko 82.69 310 LR LR 00 33 01.0
comp=Z,34nm,19.6s,baz=108,slow=34
YKA Yellowknife Ar 83.36 332 P **P** **23 59 09.4 +1.2**
comp=Z,0.6nm,0.7s,baz=100,slow=5.6,SNR=4.4
comp=Z,0.6nm,0.7s
PFO Pinyon Flats O 83.62 303 LR LR 00 34 25.8
comp=Z,53nm,19.6s,baz=72,slow=34
NVAR Mina Array Bea 85.05 308 LR LR 00 34 55.1
comp=Z,32nm,20.2s,baz=104,slow=34
ILAR Eielson Array 97.02 337 P Pdif 00 00 14.8 +1.8
comp=Z,0.5nm,0.8s,baz=61,slow=4.7,SNR=4.9
comp=Z,0.5nm,0.8s
AAK Ala-Archa 99.13 46 LR LR 00 50 14.3
comp=Z,29nm,18.6s,baz=224,slow=38

*DJA **21** 23:47:38.2±0.6,8˚S±2˚×10˚7E±˚, h26km±6km, M4.3/26, mB5.3/1, mb5.0/4, MLv4.0/26, Mw(mB)4.7/1*
*IDC **21** 23:47:42.1±4.2, 7.84S×107.49E, h102km±27km, mb3.5/5, mbtmp3.9/5, MS3.4/1, Error ellipse: s-maj=93.8km s-min=16.7km az=53.0*
ISC 21 23:47:37.9±1.2, 8˚16S±0.˝10×107˚3E±0.˝1, h62km, n14, σ1§54/15, mb3.7/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BBJI	**Bungbulang**	**0.78**	**27**	P		**Pn**	**23 47 52.6**	**-0.7**
BBJI				S		**Sn**	**23 48 02.2**	**-2.4**
LEM	**Lembang**	**1.36**	**14**	P		**Pn**	**23 48 02.6**	**+1.6**
	179nm,0.4s,baz=354,slow=23,SNR=31							
LEM				LR		LR	23 48 13.5	
	comp=Z,50nm,19.2s,baz=194,slow=31							
LEM				S		**Sn**	**23 48 19.2**	**+1.0**
	403nm,0.4s,baz=333,slow=23,SNR=14							
LEM	**Lembang**	**1.36**	**14**	P		**Pn**	**23 48 02.4**	**+1.4**
UGM	**Wanagama**	**3.21**	**86**	P		**Pn**	**23 48 25.4**	**-0.5**
KLSI		**4.29**	**323**	P		**Pn**	**23 48 42.5**	**+1.8**
SNJI	**Sawahan-Nganju**	**4.44**	**85**	P		**Pn**	**23 48 44.8**	**+2.0**
MNAI	**Manna**	**5.73**	**311**	P		**Pn**	**23 49 01.0**	**+0.5**
	384nm,1.0s							
JAGI	**Jajag, Banyuwa**	**6.79**	**93**	P		**Pn**	**23 49 15.9**	**+0.9**
	2um75nm,0.5s							
FITZ	**Fitzroy Crossi**	**20.39**	**121**	P		**P**	**23 52 10.7**	**+0.9**
	4.0nm,0.6s,baz=321,slow=13,SNR=11							
	4.0nm,0.6s							
WRA	**Warramunga Arr**	**28.68**	**117**	P		**P**	**23 53 29.0**	**-0.2**
	0.9nm,1.1s,baz=294,slow=9.0,SNR=2.3							
	0.9nm,1.1s							
STKA	**Stephens Creek**	**39.65**	**131**	P		**P**	**23 55 05.2**	**+1.3**
	3.0nm,0.4s,baz=312,slow=8.3,SNR=9.1							
	3.0nm,0.4s							
MKAR	**Makanchi Array**	**59.07**	**340**	P		**P**	**23 57 30.0**	**-1.6**
	0.4nm,0.5s,baz=145,slow=8.9,SNR=11							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**63.64**	**340**	P		**P**	**23 58 00.6**	**-1.7**
	0.4nm,0.6s,baz=155,slow=5.8,SNR=5.8							
	0.4nm,0.6s							
AKTO	**Aktyubinsk**	**72.27**	**329**	LR		LR	00 35 11.1	
	comp=Z,27nm,20.1s,baz=28,slow=40							

*IDC **21** 23:52:11.8±0.6,22˚.59S×176˚.23E, h0km, mb4.4/14, mbtmp4.4/15, ML6.7/1, MS3.7/30, Error ellipse: s-maj=23.5km s-min=17.3km az=122.0*
*GFZ **21** 23:52:15.3±0.2,22˚.S±3˚×17˚6E±˚, h10km, M4.9/14, mb4.9/14, Error ellipse: s-maj=9.9km s-min=5.8km az=104.9, confirmed*
*NEIC **21** 23:52:15.6±2.0,22˚.4S±0˚.1×175˚.82E±0˚.10, h10km±1km, mb4.8/61, Error ellipse: s-maj=20.5km s-min=12.9km az=151.0*
*NOU **21** 23:52:16.1,22˚.23S×175˚.74E, h8km, ML4.8/11, South of Fiji Islands*
*GCMT **21** 23:52:18.6±0.4,22˚.53S±0˚.02×175˚.79E±0˚.03, h34km±1km, MW4.9/70, Moment Tensor Solution. s22,c25; s70,c82; Duration: 0 Moment tensor: Scale 10^16^Nm; M~rr~1.60±.24; M~θθ~-2.23±.15; M~φφ~0.63±.15; M~rθ~-0.83±.13; M~rφ~1.25±.07; M~θφ~-0.63±.15; Best double couple: M~o~2.53800×10^16^ NP1:φ~s~142.00000°, δ49.00000°, λ141.00000°. NP2: φ~s~261.00000°, δ62.00000°, λ49.00000°. Principal axes: T 2.3040, Plg54.0000°, Azm119.0000°; N 0.4720, Plg35.0000°, Azm283.0000°; P -2.7730, Plg8.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 23:52:16.8±0.6,22˚.41S±0˚.05×175˚.82E±0˚.06, h24km±3km, h24km:pP-P, n265, σ1§21/226, mb4.8/44, MS3.8/26, 42C-25D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.10**	**25**	Pn		**Pn**	**23 53 30.2**	**-1.6**
	87nm,0.3s,baz=218,slow=10,SNR=314							
MSVF				Sn		**Sn**	**23 54 28.4**	**-1.7**
	62nm,0.3s,baz=144,slow=24,SNR=4.7							
MSVF				LR		LR	23 55 01.8	
	comp=Z,438nm,18.5s,baz=255,slow=33							
	172nm,0.4s							
MSVF	**Nonsavu**	**5.10**	**25**	P		**Pn**	**23 53 31.4**	**-0.5**
MSVF	**Nonsavu**	**5.10**	**25**	S		**Sn**	**23 54 29.6**	**-0.5**
MSVF	**Nonsavu**	**5.10**	**25**			**Pn**	**23 53 30.6**	**-1.2**
MSVF	**Nonsavu**	**5.10**	**25**	P		**Pn**	**23 53 30.8**	**-1.0**
LKBA	**Tubou, Lakemba**	**6.53**	**51**	P		**Pn**	**23 53 50.8**	**-0.5**
DGTI	**Dogotuki**	**7.11**	**32**	P		**Pn**	**23 53 59.6**	**+0.2**
DGTI	**Dogotuki**	**7.11**	**32**	P		**Sn**	**23 55 20.1**	**+0.5**
MARNC	**Mare, Loyalty**	**7.29**	**276**	P		**Pn**	**23 54 02.0**	**+0.2**
MARNC	**Mare, Loyalty**	**7.29**	**276**	Pn		**Pn**	**23 54 01.8**	**0.0**
YATNC	**Mamie plateau,**	**8.28**	**271**	P		**Pn**	**23 54 14.8**	**-0.6**
OUENC	**Ouen Island, N**	**8.31**	**268**	P		**Pn**	**23 54 15.5**	**-0.3**
OUENC	**Ouen Island, N**	**8.31**	**268**	Pn		**Pn**	**23 54 14.6**	**-1.2**
ONTNC	**Ouen Toro**	**8.67**	**269**	P		**Pn**	**23 54 21.3**	**+0.6**
ONTNC	**Ouen Toro**	**8.67**	**269**	Pn		**Pn**	**23 54 20.0**	**-0.8**
DZM	**Mont Dzumac**	**8.69**	**270**	Pn		**Pn**	**23 54 20.8**	**-0.3**
	7.4nm,0.3s,baz=23,slow=3.1,SNR=73							
DZM				Sn		**Sn**	**23 55 54.2**	**-4.3**
	5.6nm,0.3s,baz=225,slow=23,SNR=5.6							
DZM				LR		LR	23 57 17.7	
	comp=Z,825nm,21.4s,baz=174,slow=34							
NOUC	**Port Laguerre**	**8.82**	**270**	P		**Pn**	**23 54 22.7**	**-0.1**
NFK	**Norfolk Island**	**9.70**	**225**	P		**Pn**	**23 54 34.2**	**-0.6**
FUTU	**Fugatoga**	**9.90**	**37**	Pn		**Pn**	**23 54 38.8**	**+1.2**
FUTU	**Fugatoga**	**9.90**	**37**	P		**Pn**	**23 54 36.9**	**-0.8**
OUZ	**Omahuta**	**12.91**	**188**	P		**Pn**	**23 55 22.4**	**+3.7**
OUZ	**Omahuta**	**12.91**	**188**	P		**Pn**	**23 55 19.6**	**+0.9**
FUNA	**Funafuti**	**14.18**	**14**	P		**Pn**	**23 55 35.4**	**-0.9**
AFI	**Afiamalu**	**14.50**	**56**	LR		LR	23 59 59.2	
	comp=Z,188nm,20.4s,baz=186,slow=33							
URZ	**Urewera**	**15.84**	**176**	LR		LR	00 00 29.6	
	comp=Z,688nm,20.8s,baz=5.0,slow=32							
URZ	**Urewera**	**15.84**	**176**	P		**P**	**23 56 00.3**	**-1.4**
RTZ	**Ruatahuna**	**16.18**	**177**			**P**	**23 56 09.2**	**+3.6**
BKZ	**Black Stump Fm**	**16.71**	**178**	P		**P**	**23 56 11.8**	**+0.3**
MRZ	**Mangatainoka R**	**18.20**	**181**	P		**Pn**	**23 56 27.7**	**0.0**
MRZ				IAmb		IAmb	23 56 35.7	
	comp=Z,71nm,1.2s							
BFZ	**Birch Farm**	**18.22**	**179**			**Pn**	**23 56 27.8**	**-0.2**
BFZ				IAmb		IAmb	23 56 34.0	
	comp=Z,50nm,0.9s							
BFZ	**Birch Farm**	**18.22**	**179**	P		**P**	**23 56 28.7**	**+0.6**
NNZ	**Nelson**	**18.86**	**186**	P		**P**	**23 56 34.8**	**-0.4**
NNZ				IAmb		IAmb	23 56 45.0	
	comp=Z,93nm,1.2s							
HNR	**Honiara**	**19.96**	**308**	LR		LR	00 03 13.5	
	comp=Z,14nm,20.1s,baz=246,slow=32							
KHZ	**Kahutara**	**20.04**	**185**	P		Pn	23 56 49.2	-0.7
LTZ	**Lake Taylor**	**20.53**	**187**	P		**P**	**23 56 54.1**	**+0.7**
RPZ	**Rata Peaks**	**21.61**	**189**	P		**P**	**23 57 06.2**	**+1.2**
RAR	**Rarotonga**	**22.69**	**92**	LR		LR	00 06 03.2	
	comp=Z,110nm,18.3s,baz=276,slow=37							
EIDS	**Eidsvold**	**22.80**	**258**	P		**P**	**23 57 17.4**	**-0.5**
EIDS				IAmb		IAmb	23 57 30.1	
	comp=Z,52nm,1.4s							
EIDS	**Eidsvold**	**22.80**	**258**	P		**P**	**23 57 18.2**	**+0.3**
ODZ	**Otahua Downs**	**22.97**	**189**	P		**P**	**23 57 21.2**	**+1.7**
WKZ	**Wanaka**	**23.05**	**192**	P		**P**	**23 57 21.5**	**+1.2**
ARMA	**Armidale**	**23.05**	**245**	P		**P**	**23 57 21.8**	**+1.2**
ARMA	**Armidale**	**23.05**	**245**	P		**P**	**23 57 21.4**	**+0.8**
MLZ	**Mavora Lakes**	**23.75**	**194**	P		**P**	**23 57 29.1**	**+1.9**
CTA	**Charters Tower**	**27.63**	**269**	LR		LR	00 08 42.9	
	comp=Z,350nm,18.1s,baz=70,slow=35							
CMSA	**Cobar Meteorol**	**28.27**	**245**	P		**P**	**23 58 08.4**	**+0.1**
QLP	**Quilpie**	**29.00**	**255**	P		**P**	**23 58 14.3**	**-0.6**
KRVT	**Keravat (AS076**	**29.23**	**305**	LR		LR	00 09 45.1	
	comp=Z,37nm,20.4s,baz=82,slow=36							
PMG	**Port Moresby**	**30.37**	**291**	LR		LR	00 09 52.9	
	comp=Z,220nm,19.0s,baz=128,slow=34							
PMG	**Port Moresby**	**30.37**	**291**	P		**P**	**23 58 27.1**	**+0.1**
STKA	**Stephens Creek**	**31.77**	**245**	P		**P**	**23 58 41.2**	**+1.9**
	comp=Z,3.5nm,0.9s,baz=90,slow=6.9,SNR=4.5							
	comp=Z,3.5nm,0.9s							
STKA	**Stephens Creek**	**31.77**	**245**	P		**P**	**23 58 40.0**	**+0.7**
COEN	**Coen**	**32.08**	**280**	P		**P**	**23 58 41.7**	**-0.4**
INKA	**Innaminka**	**32.14**	**253**	P		**P**	**23 58 44.0**	**+1.4**
PPT2	**Papeete2**	**32.82**	**88**	*e*LR		LR	00 07 19.9	
	comp=Z,175nm,30.0s							
PPT2				*e*LR		LR	00 07 20.0	
	comp=Z,294nm,27.2s							
PPT	**Papeete**	**32.83**	**88**	LR		LR	00 08 52.0	
	comp=Z,84nm,21.2s,baz=306,slow=31							
PATS	**Pohnpei**	**33.75**	**327**	P		**P**	**23 58 56.5**	**-0.1**
BBOO	**Buckleboo**	**36.54**	**245**	P		**P**	**23 59 22.1**	**+1.4**
BBOO				IAmb		IAmb	23 59 26.2	
	comp=Z,14nm,0.9s							
BBOO	**Buckleboo**	**36.54**	**245**	P		**P**	**23 59 21.6**	**+0.9**
AS31	**Alice Springs**	**38.49**	**260**	P		**P**	**23 59 38.2**	**+0.8**
ASAR	**Alice Springs**	**38.49**	**260**	P		**P**	**23 59 40.0**	**+2.7**
	comp=Z,5.2nm,0.9s,baz=87,slow=8.6,SNR=31							
ASAR				PcP		**PcP**	**00 01 48.7**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=105,slow=4.2,SNR=5.1							
	comp=Z,2.0nm,0.9s							
ASAR	**Alice Springs**	**38.49**	**260**	P		**P**	**23 59 37.4**	**0.0**
WB0	**Warramunga Arr**	**38.66**	**266**	P		**P**	**23 59 39.6**	**+0.9**
WB0				IAmb		IAmb	23 59 55.3	
	comp=Z,26nm,1.7s							
WRA	**Warramunga Arr**	**38.67**	**266**	P		**P**	**23 59 40.5**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=101,slow=8.0,SNR=5.6							
	comp=Z,0.9nm,0.7s							
WRA	**Warramunga Arr**	**38.67**	**266**	P		**P**	**23 59 38.6**	**-0.3**
JAY	**Jayapura**	**39.40**	**295**	P		**P**	**23 59 45.4**	**+0.4**
JOHN	**Johnston Islan**	**41.46**	**21**	P		**P**	**00 00 01.3**	**-0.5**
FORT	**Forrest**	**43.25**	**248**	P		**P**	**00 00 19.0**	**+2.5**
FORT				IAmb		IAmb	00 00 37.7	
	comp=Z,14nm,0.9s							
GUMO	**Guam**	**46.91**	**317**	LR		LR	00 17 45.1	
	comp=Z,75nm,21.3s,baz=130,slow=32							
FITZ	**Fitzroy Crossi**	**47.10**	**266**	P		**P**	**00 00 48.5**	**+1.3**
	comp=Z,2.7nm,0.9s,baz=182,slow=6.7,SNR=4.3							
	comp=Z,2.7nm,0.9s							
FITZ	**Fitzroy Crossi**	**47.10**	**266**	P		**P**	**00 00 47.7**	**+0.5**
BATI	**Baumata**	**51.27**	**275**	LR		LR	00 22 36.1	
	comp=Z,371nm,20.2s,baz=152,slow=35							
MBWA	**Marble Bar**	**51.84**	**260**	P		**P**	**00 01 24.1**	**+0.8**
MBWA				IAmb		IAmb	00 01 28.4	
	comp=Z,12nm,0.8s							
VNDA	**Vanda**	**55.57**	**184**	LR		LR	00 22 43.9	
	comp=Z,136nm,18.9s,baz=17,slow=33							
VNDA	**Vanda**	**55.57**	**184**	P		**P**	**00 01 49.8**	**0.0**
VNDA				IAmb		IAmb	00 02 05.2	
	comp=Z,13nm,1.8s							
SBA	**Scott Base**	**55.66**	**182**	P		**P**	**00 01 51.1**	**+0.7**
KAPI	**Kappang**	**56.80**	**279**	LR		LR	00 28 59.0	
	comp=Z,86nm,18.2s,baz=120,slow=39							
DAV	**Davao City (W)**	**57.24**	**295**	LR		LR	00 26 23.2	
	comp=Z,27nm,18.4s,baz=130,slow=36							
JCJ	**Chichijima**	**59.00**	**325**	LR		LR	00 22 37.2	
	comp=Z,41nm,21.6s,baz=133,slow=31							
CASY	**Casey**	**59.79**	**205**	P		**P**	**00 02 18.4**	**-1.1**
CASY				IAmb		IAmb	00 02 19.4	
	comp=Z,7.2nm,0.9s							
JHJ	**Hachijo jima 2**	**65.05**	**327**	LR		LR	00 29 46.2	
	comp=Z,48nm,18.6s,baz=78,slow=34							
JOW	**Kunigami**	**67.17**	**314**	LR		LR	00 28 08.2	
	comp=Z,63nm,20.6s,baz=3.0,slow=32							
QSPA	**South Pole Qui**	**67.66**	**180**	P		**P**	**00 03 10.8**	**-0.9**
	comp=Z,25nm,0.9s,baz=4.9,slow=1.1,SNR=101							
QSPA				LR		LR	00 29 56.5	
	comp=Z,76nm,18.5s,baz=44,slow=34							
	comp=Z,25nm,0.9s							
QSPA	**South Pole Qui**	**67.66**	**180**	P		**P**	**00 03 11.0**	**-0.7**
MJAR	**Matsushiro Arr**	**68.55**	**328**	P		**P**	**00 03 17.6**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=153,slow=6.7,SNR=4.9							
MJAR				LR		LR	00 27 50.5	
	comp=Z,44nm,20.1s,baz=138,slow=31							
	comp=Z,0.9nm,0.3s							
ASAJ	**Asahikawa**	**72.87**	**336**	LR		LR	00 30 52.3	
	comp=Z,74nm,21.2s,baz=164,slow=32							
KSRS	**Korea Array**	**74.68**	**322**	LR		LR	00 36 46.5	
	comp=Z,22nm,18.1s,baz=135,slow=36							
SHEM	**Shemya Is, Ala**	**74.83**	**359**	LR		LR	00 30 15.7	
	comp=Z,47nm,21.6s,baz=86,slow=30							
PETK	**Petropavlovsk-**	**76.83**	**349**	P		**P**	**00 04 08.0**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=86,slow=6.1,SNR=5.2							
	comp=Z,4.5nm,0.8s							
MAW	**Mawson**	**77.77**	**201**	P		**P**	**00 04 09.5**	**-2.0**
	comp=Z,4.4nm,0.8s,baz=94,slow=7.7,SNR=6.6							
	comp=Z,4.4nm,0.8s							
MAW	**Mawson**	**77.77**	**201**	P		**P**	**00 04 10.8**	**-0.6**
BELA	**Belgrano 2**	**78.35**	**174**	P		**P**	**00 04 13.0**	**-1.7**
SMAI	**San Martin Ant**	**78.83**	**160**	P		**P**	**00 04 16.3**	**-1.1**
ELIB	**Princess Elisa**	**84.01**	**188**	*d*P		**P**	**00 04 43.2**	**-1.8**
	comp=Z,6.5nm,0.8s							
MA2	**Magadan**	**84.24**	**347**	LR		LR	00 38 40.0	
	comp=Z,26nm,19.5s,baz=139,slow=33							
CMB	**Columbia Colle**	**84.83**	**45**	P		**P**	**00 04 50.0**	**+0.5**
CMB				IAmb		IAmb	00 04 51.6	
	comp=Z,6.6nm,1.0s							
ISA	**Isabella, Lake**	**84.84**	**48**	P		**P**	**00 04 50.7**	**+1.1**
AFDM	**Forest Hills D**	**84.96**	**44**	P		**P**	**00 04 51.2**	**+1.2**
AFDM				IAmb		IAmb	00 04 52.8	
	comp=Z,6.8nm,1.1s							
ORV	**Oroville**	**84.96**	**44**	P		**P**	**00 04 51.2**	**+1.2**
ORV				IAmb		IAmb	00 04 52.3	
	comp=Z,7.3nm,1.2s							
CMAR	**Chiang Mai Arr**	**85.40**	**292**	P		**P**	**00 04 53.5**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=128,slow=4.7,SNR=6.0							
	comp=Z,1.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**85.40**	**292**	P		**P**	**00 04 52.6**	**-0.1**
MDPB	**Devils Postpil**	**85.48**	**46**	P		**P**	**00 04 54.0**	**+1.0**
MDPB				IAmb		IAmb	00 04 55.9	
	comp=Z,12nm,1.2s							
CHTO	**Chiang Mai**	**85.55**	**292**	P		**P**	**00 04 53.9**	**+0.4**
CHTO				IAmb		IAmb	00 05 00.5	
	comp=Z,8.2nm,0.8s							
WAKR	**Walker**	**85.71**	**45**	P		**P**	**00 04 54.7**	**+0.6**
WAKR				IAmb		IAmb	00 04 56.6	
	comp=Z,7.0nm,1.0s							
BELC	**Belle Mtn. Jos**	**85.72**	**51**	IAmb		IAmb	00 04 56.3	
	comp=Z,7.8nm,0.9s							
TROLL	**Troll, Antarti**	**85.72**	**182**	⇑P		**P**	**00 04 51.8**	**-1.8**
	comp=Z,297nm,0.5s							
MPMC	**Manual Prospec**	**85.72**	**48**	P		**P**	**00 04 54.7**	**+0.5**
MPMC				IAmb		IAmb	00 04 56.3	
	comp=Z,6.0nm,1.1s							
SNAA	**Sanae**	**86.16**	**180**	⇑P		**P**	**00 04 53.5**	**-2.2**
	comp=Z,62nm,0.6s							
SNAA	**Sanae**	**86.16**	**180**	P		**P**	**00 04 53.1**	**-2.6**
	comp=Z,2.9nm,0.8s,baz=172,slow=3.8,SNR=8.8							
SNAA				LR		LR	00 42 24.6	
	comp=Z,50nm,18.1s,baz=269,slow=35							
	comp=Z,2.9nm,0.8s							
LHV	**Little Huntoon**	**86.19**	**46**	P		**P**	**00 04 56.4**	**+0.3**
LHV				IAmb		IAmb	00 06 25.4	
	comp=Z,11nm,1.2s							
NVAR	**Mina Array Bea**	**86.42**	**46**	P		**P**	**00 04 57.7**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=226,slow=7.6,SNR=7.0							
	comp=Z,1.7nm,0.7s							
NVAR	**Mina Array Bea**	**86.42**	**46**	P		**P**	**00 04 56.6**	**-1.0**
PZH	**PanZhiHua**	**86.60**	**300**	P		**P**	**00 05 01.8**	**+3.2**
HHC	**Hu-ho-hao-te**	**86.68**	**317**	*e*P		**P**	**00 05 01.6**	**+2.9**
HHC				pmax		pmax		
	comp=Z,12nm,0.6s							
HHC				pmax		pmax		
	comp=Z,49nm,5.0s							
VNA2	**Neumayer--Watz**	**86.89**	**179**	⇑P		**P**	**00 04 57.5**	**-1.7**
	comp=Z,7.5nm,0.6s,baz=179,slow=5.3							
TPNV	**Topopah Spring**	**87.04**	**48**	IAmb		IAmb	00 05 02.7	
	comp=Z,7.4nm,1.1s							
**BM

BRTR	**Keskin Array B**	**143.62 307**	PKP	PKPab	00 11 47.0	+0.4		
	comp=Z,2.4nm,0.8s,baz=169,slow=2.5,SNR=6.8							
BRTR	**Keskin Array B**	**143.62 307**	PKPpre	PKPpre	00 11 45.1			
TLCR		**144.77 318**	⇓P	**PKPab**	**00 11 50.3**	**-0.2**		
BEL	**Belsk**	**144.86 333**	*e*PKP	**PKPab**	**00 11 50.3**	**-0.3**		
VLDR	**Vladesti**	**144.89 320**	⇑P	**PKPab**	**00 11 50.6**	**-0.3**		
GKP	**Gorka Klasztor**	**145.13 337**	*e*PKP	**PKPbc**	**00 11 51.2**	**-0.3**		
PRAR	**RASCA**	**145.14 323**	⇑P	**PKiKP**	**00 11 57.5**	**+1.4**		
TPGR	**Topolog**	**145.18 318**	⇓P	**PKPbc**	**00 11 51.4**	**-0.6**		
GHRR		**145.18 320**	⇑P	**PKPab**	**00 11 52.2**	**+0.3**		
CFR	**Carcaliu**	**145.19 319**	⇑P	**PKPbc**	**00 11 51.7**	**-0.2**		
SAHE	**Sakarya_HENDEK**	**145.26 310**	⇑P	**PKPbc**	**00 11 51.2**	**-1.1**		
TESR	**Tescani**	**145.38 321**	⇑P	**PKPbc**	**00 11 51.4**	**-1.1**		
BIZ	**Bicaz**	**145.45 322**	⇑P	**PKPdf**	**00 11 52.5**	**-0.3**		
BURAR	**Bucovina Array**	**145.55 324**	⇓P	**PKPdf**	**00 11 53.1**	**+0.1**		
KWP	**Kalwaria Pacla**	**145.55 329**	*e*PKP	**PKPdf**	**00 11 52.0**	**-0.9**		
ONER	**Baraj Valea Uz**	**145.62 321**	⇑P	**PKPdf**	**00 11 53.3**	**+0.3**		
VRI	**Vrincioaia**	**145.69 320**	⇑P	**PKPdf**	**00 11 52.7**	**-0.5**		
COVR	**Voineasa-Covas**	**146.00 321**	⇑P	**PKPdf**	**00 11 53.1**	**-0.6**		
OZUR		**146.11 321**	⇓P	**PKPdf**	**00 11 54.3**	**+0.4**		
ISR	**Istrita**	**146.19 319**	⇓P	**PKPdf**	**00 11 54.5**	**+0.4**		
ARCR	**ARCALIA**	**146.34 324**	⇑P	**PKPbc**	**00 11 55.1**	**-0.4**		
MLR	**Muntele Rosu**	**146.35 320**	⇑P	**PKPdf**	**00 11 54.7**	**+0.2**		
DOPR	**Dopca**	**146.41 322**	⇑P	**PKPbc**	**00 11 55.5**	**-0.2**		
OJC	**Ojcow**	**146.48 332**	*e*PKP	**PKPdf**	**00 11 55.1**	**+0.8**		
BSEG	**Bad Segeberg**	**146.66 344**	*e*PKPbc	**PKPbc**	**00 11 55.5**	**-0.6**		
	baz=30,slow=2.5							
NIE	**Niedzica**	**146.83 330**	*e*PKP	**PKPbc**	**00 11 56.9**	**0.0**		
MDB	**Medias**	**146.88 323**	⇑P	**PKPbc**	**00 11 56.9**	**-0.2**		
VOIR		**146.90 321**	⇓P	**PKPbc**	**00 11 57.6**	**+0.3**		
RUE	**Ruedersdorf**	**146.96 340**	*e*PKPbc	**PKPbc**	**00 11 56.4**	**-0.6**		
	baz=30,slow=2.5							
CJR	**Cluj-Napoca**	**146.97 324**	⇓P	**PKPbc**	**00 11 56.9**	**-0.4**		
MESR	**Meseseni**	**147.05 325**	⇓P	**PKPdf**	**00 11 55.9**	**+0.4**		
EKA	**Eskdalemuir Ar**	**147.12 359**	PKPbc	**PKPdf**	**00 11 55.9**	**+0.6**		
	comp=Z,2.0nm,0.7s,baz=359,slow=2.1,SNR=9.2							
GORT1	**Trebel**	**147.25 343**	*e*PKPbc	**PKPbc**	**00 11 57.4**	**-0.3**		
	baz=30,slow=2.5							
MARR	**Marisel-Cluj**	**147.26 324**	⇑P	**PKPdf**	**00 11 57.2**	**+1.3**		
DRGR		**147.40 325**	⇓P	**PKPbc**	**00 11 57.8**	**-0.8**		
KSP	**Ksiaz**	**147.43 336**	*e*PKP	**PKPbc**	**00 11 58.1**	**-0.3**		
HUMR	**Humele**	**147.45 320**	⇑P	**PKPdf**	**00 11 57.2**	**+1.0**		
STEB	**Steborice**	**147.56 333**	⇑*e*PKP	**PKPbc**	**00 11 58.4**	**-0.4**		
STEB			*e*PKPAB	**pPKPbc**	**00 12 04.6**	**-0.7**		
STEB			*ep*PKP	**sPKPab**	**00 12 10.8**	**+1.2**		
LOT	**Lotru**	**147.64 322**	⇓P	**PKPdf**	**00 11 57.6**	**+1.0**		
ZIMR		**147.68 318**	⇓P	**PKPdf**	**00 11 56.2**	**-0.4**		
OSTC	**Ostas**	**147.69 335**	⇑*e*PKP	**PKPbc**	**00 11 59.3**	**+0.1**		
CHVC	**Chvalec**	**147.73 336**	⇑*e*PKP	**PKPbc**	**00 11 58.9**	**-0.4**		
MORC	**Moravsky Berou**	**147.77 333**	⇓P	**PKPdf**	**00 11 56.0**	**-0.6**		
MORC	**Moravsky Berou**	**147.77 333**	*e*PKP	**PKPbc**	**00 11 58.7**	**-0.8**		
UPC	**Upice**	**147.81 336**	⇑*e*PKP	**PKPbc**	**00 11 58.9**	**-0.6**		
DPC	**Dobruska-Polom**	**147.82 335**	⇑*e*PKP	**PKPbc**	**00 11 58.9**	**-0.7**		
DPC			*e*PKPAB	**pPKPbc**	**00 12 05.8**	**-0.3**		
DPC			*ep*PKP	**sPKPab**	**00 12 11.5**	**+0.8**		
KRLC	**Kraliky**	**147.85 334**	⇑*e*PKP	**PKPbc**	**00 11 59.2**	**-0.5**		
KRLC			*e*PKPAB	**pPKPbc**	**00 12 05.5**	**-0.7**		
KRLC			*ep*PKP	**sPKPab**	**00 12 11.7**	**+0.8**		
FLTG	**Flechtingen**	**147.86 342**	*e*PKPbc	**PKPbc**	**00 11 58.6**	**-0.9**		
	baz=30,slow=2.5							
FLTG			*ep*PKPbc	**sPKPdf**	**00 12 05.0**	**-0.4**		
MAUC	**Maruska**	**147.97 332**	⇑*e*PKP	**PKPbc**	**00 11 59.8**	**-0.2**		
MAUC			*e*PKPAB	**pPKPbc**	**00 12 06.4**	**-0.1**		
RETH	**Rethem/Aller,**	**147.99 344**	*e*PKPbc	**PKPbc**	**00 11 59.2**	**-0.6**		
	baz=30,slow=2.5							
ASSE	**Asse, Remlinge**	**148.20 343**	*e*PKPbc	**PKPbc**	**00 11 59.8**	**-0.6**		
	baz=30,slow=2.5							
CLL	**Collm**	**148.21 339**	*e*PKPbc	**PKPbc**	**00 11 59.7**	**-0.8**		
	baz=30,slow=2.5							
CLL	**Collm**	**148.21 339**	⇑*i*PKPbc	**PKPbc**	**00 11 59.6**	**-0.9**		
	comp=Z,15nm,0.9s							
CLL			*i* PKiKP	**pPKPbc**	**00 12 06.0**	**-1.0**		
	comp=Z,10.0nm,0.8s							
CLL			*i* x	x	00 12 12.1			
GZR	**Gura Zlata**	**148.23 323**	⇓P	**PKPbc**	**00 11 59.7**	**-1.2**		
BRG	**Berggiesshubel**	**148.26 338**	*e*PKPbc	**PKPbc**	**00 12 00.0**	**-0.6**		
	baz=30,slow=2.5							
BRG	**Berggiesshubel**	**148.26 338**	⇑*i*PKPb		00 12 00.3			
BRG			Amp		00 12 01.1			
	comp=Z,12nm,1.0s							
BRG			PKPab	**PKPab**	**00 12 06.6**	**+2.9**		
BRG			Amp		00 12 07.5			
	comp=Z,8.1nm,1.0s							
PLVB	**Pleven**	**148.28 318**	⇑P	**PKPbc**	**00 12 00.3**	**-0.6**		
SIRR	**Siria**	**148.30 325**	⇑P	**PKPbc**	**00 12 00.2**	**-0.7**		
BSZH	**Besenyszg**	**148.33 328**	⇑P	PKPdf	00 11 44.7	-13		
JAVC	**Velka Javorina**	**148.41 332**	*e*PKP	**PKPbc**	**00 12 01.4**	**+0.2**		
VRAC	**Vranov**	**148.53 334**	⇑P	**PKPbc**	**00 12 00.9**	**-0.5**		
VRAC	**Vranov**	**148.53 334**	*e*PKP	**PKPbc**	**00 12 00.7**	**-0.7**		
CLZ	**Clausthal**	**148.54 343**	*e*PKPbc	**PKPbc**	**00 12 00.9**	**-0.5**		
	baz=30,slow=2.5							
CLZ			*ep*PKPbc	**pPKPbc**	**00 12 07.1**	**-0.8**		
NEUB	**Neuenburg**	**148.69 341**	*e*PKPbc	**PKPbc**	**00 12 01.0**	**-0.7**		
	baz=30,slow=2.5							
BZS	**Buzias**	**148.73 324**	⇑P	**PKPbc**	**00 12 00.9**	**-1.2**		
AMBH	**Ambrzfalva**	**148.74 326**	⇓P	**PKPbc**	**00 12 01.8**	**-0.2**		
HERR	**Herculane**	**148.74 322**	⇓P	**PKPbc**	**00 12 01.0**	**-1.1**		
IBBN	**Ibbenburen**	**148.77 346**	*e*PKPbc	**PKPbc**	**00 12 01.2**	**-0.7**		
	baz=30,slow=2.5							
PRU	**Pruhonice**	**148.78 336**	⇑*e*PKP	**PKPbc**	**00 12 01.5**	**-0.5**		
PRU			*e*PKPAB	**pPKPbc**	**00 12 07.9**	**-0.7**		
KRUC	**Moravsky**	**148.80 333**	*e*PKP	**PKPbc**	**00 12 01.1**	**-1.0**		
GTTG	**Gottingen**	**148.92 343**	*e*PKPbc	**PKPbc**	**00 12 01.8**	**-0.5**		
	baz=30,slow=2.5							
GTTG			*ep*PKPbc	**pPKPbc**	**00 12 08.7**	**-0.1**		
BANR	**Banloc**	**149.14 324**	⇑P	**PKPdf**	**00 11 60.0**	**+1.1**		
TANN	**Tannenbergstha**	**149.16 339**	*e*PKPbc	**PKPbc**	**00 12 02.4**	**-0.6**		
	baz=30,slow=2.5							
PLN	**Plauen**	**149.19 339**	*e*PKPbc	**PKPbc**	**00 12 02.4**	**-0.7**		
	baz=30,slow=2.5							
MDVR	**Moldovita**	**149.20 323**	⇑P	**PKPbc**	**00 12 02.3**	**-1.0**		
MOX	**Moxa**	**149.23 340**	*e*PKPbc	**PKPbc**	**00 12 02.4**	**-0.8**		
	baz=30,slow=2.5							
MOX			*e*L	L	01 18 36.9			
	comp=Z,33nm,19.2s							
ZVC	**Zvikov**	**149.37 336**	⇑*e*PKP	**PKPbc**	**00 12 02.9**	**-0.6**		
ZVC			*e*PKPAB	**pPKPbc**	**00 12 09.6**	**-0.5**		
KASTN	**Kahler Asten**	**149.63 344**	*e*PKPbc	**PKPbc**	**00 12 03.5**	**-0.7**		
	baz=30,slow=2.5							
WINA	**Alland / Wiene**	**149.68 333**	*i* pPKP	**PKPbc**	**00 12 03.8**	**-0.6**		
	comp=Z,16nm,1.6s,SNR=5.1							
ROTZ	**Rotzenmuhle**	**149.80 339**	*e*PKPbc	**PKPbc**	**00 12 04.0**	**-0.6**		
	baz=30,slow=2.5							
CKRC	**Cesky Krumlov**	**149.83 335**	⇑*e*PKP	**PKPbc**	**00 12 04.0**	**-0.7**		
CKRC			*e*PKPAB	**pPKPbc**	**00 12 10.5**	**-0.7**		
CKRC			*ep*PKP	**pPKPab**	**00 12 16.0**	**-0.6**		
KHC	**Kasperske Hory**	**149.85 336**	⇑*e*PKP	**PKPbc**	**00 12 04.1**	**-0.7**		
KHC			*e*PKPAB	**pPKPbc**	**00 12 10.9**	**-0.4**		
MORH	**Mrgy, Hungar**	**149.89 328**	⇓P	**PKPbc**	**00 12 03.6**	**-1.3**		
RONA	**Rosalia, Austr**	**149.89 332**	*i* pPKP	**PKPbc**	**00 12 04.1**	**-0.8**		
	comp=Z,15nm,0.7s,SNR=15							
CONA	**Conrad Observa**	**149.91 333**	*i* pPKP	**PKPbc**	**00 12 04.1**	**-0.9**		
	comp=Z,12nm,0.8s,SNR=15							
GEC2	**GERESS Array S**	**150.04 336**	*e*PKPbc	**PKPbc**	**00 12 04.4**	**-0.9**		
	baz=30,slow=2.5							
GERES	**GERESS Array B**	**150.04 336**	PKPbc	**PKPbc**	**00 12 04.4**	**-0.9**		
	comp=Z,7.7nm,0.8s,baz=39,slow=0.9,SNR=73							
WET	**Wettzell**	**150.09 337**	*e*PKPbc	**PKPbc**	**00 12 04.7**	**-0.6**		
	baz=30,slow=2.5							
WET			*e*L	L	01 18 06.1			
	comp=Z,54nm,18.9s							
GRF	**Grafenberg Arr**	**150.18 340**	*e*L	L	01 12 18.2			
	comp=Z,29nm,21.5s							
TNS	**Taunus Mts**	**150.52 343**	*e*PKPbc	**PKPbc**	**00 12 05.6**	**-0.8**		
	baz=30,slow=2.5							
MOA	**Molln**	**150.63 334**	*ep*PKP	**PKPbc**	**00 12 05.5**	**-1.2**		
	comp=Z,5.6nm,0.6s							
MEM	**Membach**	**150.75 347**	*d*PKP	**PKPbc**	**00 12 05.9**	**-0.9**		
BSTI	**Sart Tilman**	**150.86 347**	*d*PKP	**PKPbc**	**00 12 06.3**	**-0.7**		
UCC	**Uccle**	**150.89 349**	*d*PKP	**PKPbc**	**00 12 06.3**	**-0.8**		
BIOA	**Bad Ischl, Aus**	**151.00 335**	*ep*PKP	**PKPbc**	**00 12 06.1**	**-1.5**		
	comp=Z,5.0nm,0.6s							
SESA	**Seetaler Alpe,**	**151.09 333**	*i* pPKP	**PKPbc**	**00 12 06.5**	**-1.6**		
	comp=Z,37nm,0.7s,SNR=16							
SOKA	**Soboth**	**151.23 332**	*i* pPKP	pPKPdf	00 12 06.6	-2.2		
	comp=Z,12nm,1.2s,SNR=10.0							
BMRD	**Maredsous**	**151.29 348**	*d*PKP	**PKPbc**	**00 12 06.1**	**-2.0**		
RJOB	**Jochberg**	**151.29 336**	*e*PKPbc	**PKPbc**	**00 12 06.8**	**-1.5**		
	baz=30,slow=2.5							
DOU	**Dourbes**	**151.52 348**	*d*PKP	**PKPbc**	**00 12 08.1**	**-0.6**		
OBKA	**Obir**	**151.57 332**	*ep*PKP	pPKPdf	00 12 07.1	-2.2		
	comp=Z,2.5nm,0.7s							
LESA	**Schwarzleotal**	**151.60 336**	*i* pPKP	pPKPdf	00 12 07.4	-2.0		
	comp=Z,7.5nm,0.6s,SNR=7.3							
WLF	**Walferdange**	**151.60 346**	*d*PKP	**PKPbc**	**00 12 08.6**	**-0.2**		
WLF	**Walferdange**	**151.60 346**	*e*PKPbc	**PKPbc**	**00 12 08.6**	**-0.2**		
	baz=30,slow=2.5							
KBA	**Koelnbreinsper**	**151.62 334**	*i* pPKP	pPKPdf	00 12 07.2	-2.3		
	comp=Z,6.4nm,0.8s,SNR=9.7							
STU	**Stuttgart**	**151.62 341**	*e*PKPbc	**PKPbc**	**00 12 08.1**	**-0.9**		
	baz=30,slow=2.5							
BLY	**Banja Luka**	**151.65 327**	⇑P	**PKPbc**	**00 12 07.9**	**-1.2**		
MYKA	**Terra Mystica**	**151.86 333**	*i* pPKP	pPKPdf	00 12 07.6	-2.2		
	comp=Z,7.1nm,0.7s,SNR=6.9							
PDG	**Podgorica**	**152.06 321**	⇑P	**PKPdf**	**00 12 06.6**	**+3.1**		
WATA	**Walderalm**	**152.08 337**	*i* pPKP	pPKPdf	00 12 08.7	-1.4		
	comp=Z,6.1nm,0.6s,SNR=6.1							
WTTA	**Wattenberg**	**152.12 337**	*i* pPKP	pPKPdf	00 12 09.0	-1.3		
	comp=Z,12nm,0.7s,SNR=8.2							
ABTA	**Abfaltersbach**	**152.22 335**	*i* pPKP	pPKPdf	00 12 08.4	-1.9		
	comp=Z,9.3nm,0.6s,SNR=7.3							
RETA	**Reutte**	**152.25 338**	*ep*PKP	pPKPdf	00 12 08.9	-1.4		
	comp=Z,4.3nm,0.7s							
MOTA	**Moosalm**	**152.25 337**	*i* pPKP	pPKPdf	00 12 08.9	-1.5		
	comp=Z,12nm,1.0s,SNR=8.6							
BFO	**Black Forest**	**152.27 342**	*e*PKPbc	**PKPbc**	**00 12 09.3**	**-1.1**		
	baz=30,slow=2.5							
SQTA	**Sankt Quirin**	**152.31 337**	*i* pPKP	pPKPdf	00 12 09.3	-1.1		
	comp=Z,8.5nm,0.6s,SNR=7.1							
FETA	**Feichten**	**152.66 337**	*ep*PKP	pPKPdf	00 12 10.3	-0.8		
	comp=Z,6.5nm,0.8s							
DAVA	**Damuels**	**152.72 339**	*ep*PKP	pPKPdf	00 12 10.2	-0.9		
	comp=Z,3.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**169.22 212**	PKPab	**PKPab**	**00 13 32.6**	**-2.1**		
	comp=Z,1.9nm,1.0s,baz=127,slow=2.5,SNR=5.7							

*NNC **21** 23:56:18.1±6.7, 41.˚90N×80.˚90E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=51.8km s-min=31.5km az=178.0*
*SOME **21** 23:56:22.8, 42.˚43N×81.˚12E, h15km*

ISC 21 23:56:22.1±2.9, 42.˚7N±0.˚1×81.˚54E±0.˚10, h10km, n6, σ0s83/12, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**1.62**	**293**	⇑Pn		**Pn**		**23 56 50.4**	**-0.5**
	3.1nm,1.1s								
PDGK				⇑Sn		**Sg**		**23 57 13.8**	**-0.5**
	3.0nm,0.5s								
KPKS	**Kokpek**	**2.22**	**291**	*e*P		**Pn**		**23 57 00.4**	**+1.3**
	1.8nm,0.4s								
KPKS				*e*S		**Sn**		**23 57 27.5**	**+0.8**
	2.6nm,0.3s								
SATY	**Saty**	**2.33**	**280**	*e*P		**Pn**		**23 57 01.0**	**+0.4**
	1.9nm,0.4s								
SATY				*e*S		**Sn**		**23 57 28.7**	**-0.7**
	5.3nm,0.1s								
ARXS	**Arharly**	**3.09**	**300**	*e*P		**Pb**		**23 57 16.7**	**-0.5**
	0.8nm,0.3s								
ARXS				*e*S		**Sb**		**23 57 55.4**	**+0.4**
	2.0nm,0.3s								
MAKZ	**Makanchi**	**4.11**	**4**	⇑Pn		**Pb**		**23 57 34.7**	**+0.2**
	4.0nm,1.6s								
MAKZ				⇑Sn		**Sg**		**23 58 33.1**	**-0.8**
	2.5nm,1.4s								
MK31	**Makanchi Array**	**4.11**	**7**	⇓Pn		**Pb**		**23 57 33.6**	**-1.0**
	0.2nm,0.6s,baz=195,slow=14,SNR=11								
MK31				⇑Sn		**Sg**		**23 58 35.0**	**+0.8**
	0.2nm,0.4s,baz=185,slow=25								

IDC 21 23:58:22.6±78.0, 52.˚00S×138.˚55E±˚, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=1448.0km s-min=176.7km az=144.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**20.23**	**7**	P		P	P	00 02 59.2	+0.1
	1.0nm,0.7s,baz=180,slow=10,SNR=2.1								
	1.0nm,0.7s								
ASAR	**Alice Springs**	**28.52**	**351**	P		P	P	00 04 19.2	-0.5
	0.4nm,0.6s,baz=173,slow=9.2,SNR=3.1								
	0.4nm,0.6s								
WRA	**Warramunga Arr**	**32.17**	**353**	P		P	P	00 04 52.4	+0.4
	0.4nm,0.6s,baz=173,slow=8.2,SNR=4.9								
	0.4nm,0.6s								

DJA 22 00:22:49.2±0.4, 10.˚S±3.˚×117.˚3E±˚, h10km, M3.9/14, mb4.0/1, MLv3.9/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.67**	**50**	P		P	Pn	00 23 17.4	-1.1
JAGI				S		S	Sn	00 23 38.6	-1.4
SNJI	**Sawahan-Nganju**	**2.07**	**328**	P		P	Pn	00 23 24.1	-0.1
IGBI	**Denpasar**	**2.37**	**72**	P		P	Pn	00 23 28.1	-0.1
UGM	**Wanagama**	**2.83**	**305**	P		P	Pn	00 23 34.1	-0.4
KHKI	**Kahang-Kahang**	**2.96**	**67**	P		P	Pn	00 23 37.2	+0.9
BBJI	**Bungbulang**	**5.55**	**292**	P		P	Pn	00 24 12.5	+0.4

*IDC **22** 00:22:54.0±2.6, 6.˚73S×130.˚88E, h51km±28km, mb3.6/4, mbtmp4.0/9, ML4.0/5, Error ellipse: s-maj=42.5km s-min=24.2km az=91.0*
*DJA **22** 00:22:54.9±0.3, 7.˚5S±3.˚×13.˚1E±˚, h10km, M4.4/13, mB5.1/3, mb4.3/6, MLv4.4/13, Mw(mB)4.4/3*

ISC 22 00:22:52.1±0.8, 6.˚85S±0.˚05×131.˚09E±0.˚09, h50km, n15, σ3s19/20, mb3.8/4, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.15**	**170**	P		P	Pn	00 23 21.1	+9.2
BNDI	**Bandanaira**	**2.59**	**333**	P		P	Pn	**00 23 35.2**	**+3.6**
FAKI	**Fak Fak**	**4.07**	**17**	P		P	Pn	**00 23 53.9**	**+2.0**
FAKI				S		S	Sn	**00 24 35.6**	**-2.7**
KMPI	**Kaimana, Papua**	**4.10**	**40**	P		P	Pn	**00 23 53.9**	**+1.6**
SIJI	**Sorong**	**5.94**	**2**	P		P	Pn	**00 24 17.1**	**-0.5**
	4.3nm,0.3s,baz=48,slow=18,SNR=13								
SIJI				S		S	Sn	**00 25 18.1**	**-6.3**
	31nm,0.2s,baz=138,slow=23,SNR=12								
	13nm,0.3s								
SIJI	**Sorong**	**5.94**	**2**	P		P	Pn	**00 24 18.8**	**+1.2**
SOEI	**Soe**	**7.35**	**246**	P		P	Pn	**00 24 41.0**	**+4.0**
BATI	**Baumata**	**8.07**	**245**	P		P	Pn	**00 24 48.7**	**+1.8**
	9.8nm,0.3s,baz=230,slow=15,SNR=2.3								
BATI				S		S	Sn	**00 26 13.4**	**-3.3**
	26nm,0.3s,baz=108,slow=22,SNR=2.1								
	22nm,0.3s								
FITZ	**Fitzroy Crossi**	**12.38**	**205**	P		P	Pn	**00 25 47.9**	**+2.1**
	1.5nm,0.3s,baz=25,slow=14,SNR=25								
FITZ				S		S	Sn	**00 27 58.5**	**-3.9**
	6.3nm,0.3s,baz=177,slow=22,SNR=11								
	4.8nm,0.4s								
WRA	**Warramunga Arr**	**13.39**	**167**	P		P	Pn	**00 26 02.0**	**+2.4**
	0.4nm,0.3s,baz=339,slow=13,SNR=7.5								
WRA				S		S	Sn	**00 28 23.2**	**-3.9**
	2.7nm,0.4s,baz=262,slow=8.0,SNR=12								
	0.8nm,0.7s								
ASAR	**Alice Springs**	**16.94**	**171**	P		P	P	**00 26 49.5**	**+2.3**
	0.2nm,0.3s,baz=342,slow=11,SNR=6.5								
ASAR				S		S	Sn	**00 29 48.0**	**-5.3**
	0.9nm,0.5s,baz=356,slow=25,SNR=6.2								
	0.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**40.47**	**309**	P		P	P	**00 30 26.4**	**+0.1**
	0.9nm,0.4s,baz=119,slow=8.3,SNR=5.5								
	0.9nm,0.4s								
MKAR	**Makanchi Array**	**68.70**	**326**	P		P	P	**00 33 51.4**	**+0.8**
	1.0nm,0.5s,baz=126,slow=6.3,SNR=11								
	1.0nm,0.5s								
KURBB	**Kurchatov Arra**	**72.95**	**328**	P		P	P	**00 34 16.4**	**+0.1**
	0.3nm,0.5s,baz=124,slow=4.9,SNR=5.1								
	0.3nm,0.5s								
BVAR	**Borovoye Array**	**78.51**	**327**	P		P	P	**00 34 48.2**	**+0.1**
	0.4nm,0.5s,baz=107,slow=5.9,SNR=2.6								
	0.4nm,0.5s								

*IDC **22** 00:22:08.8±1.0, 17.˚99S×179.˚06W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=62.0km s-min=41.0km az=109.0*

ISC 22 00:23:08.9±1.0, 18.˚4S±0.˚3×178.˚6W±0.˚4, h550km, n8, σ1s09/8, mb3.3/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**71.68**	**180**	P		P	P	**00 33 34.8**	**-0.4**
	0.6nm,0.8s,baz=251,slow=5.4,SNR=1.1								
	0.6nm,0.8s								
ILAR	**Eielson Array**	**86.38**	**13**	P		P	P	**00 34 51.4**	**-1.3**
	0.3nm,0.4s,baz=220,slow=5.6,SNR=5.0								
	0.3nm,0.4s								
TXAR	**Lajitas Array**	**86.41**	**58**	P		**P**		**00 34 54.8**	**+1.1**
	0.6nm,0.8s,baz=215,slow=5.0,SNR=8.2								
	0.6nm,0.8s								
PDAR	**Pinedale Array**	**87.82**	**43**	P		**P**		**00 34 59.8**	**-0.5**
	0.1nm,0.4s,baz=235,slow=4.6,SNR=1.9								
	0.1nm,0.4s								
BVAR	**Borovoye Array**	**117.08**	**321**	PKP		**PKiKP**		**00 40 52.5**	**+1.0**
	0.6nm,0.4s,baz=72,slow=2.7,SNR=4.4								
BRTR	**Keskin Array B**	**144.97**	**314**	PKP		**PKPab**		**00 41 46.9**	**+1.2**
	1.4nm,0.5s,baz=49,slow=2.6,SNR=3.0								
MMAI	**Mount Meron Ar**	**146.23**	**302**	PKPbc		**PKPab**		**00 41 50.3**	**-0.5**
	2.3nm,0.6s,baz=79,slow=4.3,SNR=5.0								
GERES	**GERESS Array B**	**148.01**	**345**	PKPbc		**PKiKP**		**00 41 54.4**	**+0.2**
	0.9nm,0.7s,baz=14,slow=2.0,SNR=10								

IDC 22 00:46:36.7±4.6, 11.˚46S×122.˚48E, h78km±53km, mb3.0/1, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=66.0km s-min=18.2km az=93.0, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.70**	**43**	P		P	Pn	00 47 03.8	-0.9
	96nm,0.4s,baz=273,slow=1.5,SNR=9.0								
BATI				S			Sn	00 47 26.1	+0.2
	100nm,0.3s,baz=21,slow=22,SNR=21								
FITZ	**Fitzroy Crossi**	**7.27**	**156**	P		P	Pn	00 48 20.8	+0.5
	0.3nm,0.3s,baz=336,slow=12,SNR=8.8								
FITZ				S			Sn	00 49 34.8	-6.5
	5.8nm,0.3s,baz=356,slow=17,SNR=14								
	1.6nm,0.5s								
WRA	**Warramunga Arr**	**14.18**	**128**	P		P	Pn	00 49 52.9	-1.0
	0.3nm,0.3s,baz=307,slow=14,SNR=13								
WRA				S			Sn	00 52 20.7	-9.3
	0.7nm,0.3s,baz=272,slow=20,SNR=7.2								
	1.3nm,0.5s								
ASAR	**Alice Springs**	**16.29**	**140**	P		P	Pn	00 50 21.2	+0.5
	0.1nm,0.3s,baz=324,slow=13,SNR=5.8								
ASAR				S			Sn	00 53 12.7	-8.4
	1.6nm,0.6s,baz=308,slow=21,SNR=5.6								
	0.7nm,0.8s								
MKAR	**Makanchi Array**	**68.22**	**331**	P		P	P	00 57 29.0	+0.1

ellipse: s-maj=12.2km s-min=6.2km az=121.5
NEIC ***22*** *01:02:22.3±2.1,30°.32N±0°.08×94°.7E±0°.1,h10km±2km, mb4.1/17,Error ellipse: s-maj=20.1km s-min=6.0km az=47.0*

ISC 22 01:02:22.7±0.6,30°.42N±0°.07×94°.73E±0°.09,h10km,n80, σ1§21/78,mb4.1/21,8C-3D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.19**	**258**	P	**Pn**	**01 03 11.6**	**-1.7**
LSA	**Lhasa**	**3.19**	**258**	Pn	**Pn**	**01 03 11.6**	**-1.7**
TAWA	**Tawang**	**3.77**	**222**	*e*P	**Pn**	**01 03 23.7**	**+2.5**
SHL	**Shillong**	**5.45**	**208**	P	**Pn**	**01 03 43.0**	**-1.2**
SHL	**Shillong**	**5.45**	**208**	Pn	**Pn**	**01 03 43.0**	**-1.2**
IMP	**Imphal**	**5.61**	**187**	*e*P	**Pn**	**01 03 47.5**	**+1.2**
EVN	**Everest**	**7.34**	**252**	Pn	**Pn**	**01 04 09.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**12.51**	**161**	Pn	**Pn**	**01 05 19.7**	**-1.2**
	0.1nm,0.3s,baz=336,slow=14,SNR=6.6 0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.51**	**161**	*i* P	Pn	01 05 24.7	+3.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.51**	**161**		**Pn**	**01 05 18.9**	**-2.0**
WUS	**Wushi**	**16.53**	**315**	P	**P**	**01 06 16.6**	**-0.8**
TARG	**Taragay, Kyrgy**	**17.70**	**314**	P	**Pn**	**01 06 30.3**	**+0.5**
TARG				pmax	pmax		
	comp=Z,13nm,1.2s						
TARG	**Taragay, Kyrgy**	**17.70**	**314**	P	**Pn**	**01 06 30.3**	**+0.5**
TARG				IAmb	IAmb	01 06 38.6	
	comp=Z,13nm,1.2s						
PDGK	**Podgornoye**	**17.70**	**321**	P	**Pn**	**01 06 29.3**	**-0.1**
PDGK	**Podgornoye**	**17.70**	**321**	P	**Pn**	**01 06 29.3**	**-0.1**
NIL	**Nilore**	**18.49**	**286**	P	**P**	**01 06 37.8**	**-1.2**
NIL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NIL	**Nilore**	**18.49**	**286**	P	**P**	**01 06 37.8**	**-1.2**
NIL				IAmb	IAmb	01 06 42.1	
	comp=Z,8.1nm,1.0s						
MK31	**Makanchi Array**	**18.98**	**333**	*de*P	**P**	**01 06 45.2**	**+0.9**
MKAR	**Makanchi Array**	**18.98**	**333**	P	**P**	**01 06 45.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=7.4 comp=Z,1.4nm,0.9s						
MKAR	**Makanchi Array**	**18.98**	**333**	*e*P	**Pn**	**01 06 45.5**	**+0.5**
MKAR	**Makanchi Array**	**18.98**	**333**	P	**P**	**01 06 42.8**	**-1.5**
MAKZ	**Makanchi**	**19.12**	**332**	P	**P**	**01 06 45.4**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MAKZ	**Makanchi**	**19.12**	**332**	P	**P**	**01 06 45.4**	**-0.4**
BOOM	**Boomskoye usch**	**19.28**	**314**	P	**P**	**01 06 47.4**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOOM	**Boomskoye usch**	**19.28**	**314**	P	**P**	**01 06 47.4**	**-0.3**
BOOM				IAmb	IAmb	01 06 54.6	
	comp=Z,9.9nm,1.2s						
SONM	**Songino Array**	**19.57**	**24**	P	**P**	**01 06 50.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=216,slow=13,SNR=18 comp=Z,5.9nm,1.1s						
SONM	**Songino Array**	**19.57**	**24**	*e*P	**Pn**	**01 06 53.2**	**+1.1**
SONM	**Songino Array**	**19.57**	**24**	P	**P**	**01 06 48.7**	**-2.1**
ULN	**Ulaanbaatar**	**19.83**	**25**	*ce*P	**P**	**01 06 53.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN	**Ulaanbaatar**	**19.83**	**25**	P	**P**	**01 06 51.4**	**-2.3**
DGZ	**Jazzator, Alta**	**20.03**	**346**	*e*P	Pn	01 06 58.3	+0.6
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AAK	**Ala-Archa**	**20.27**	**313**	P	Pn	01 07 00.6	+0.1
	comp=Z,1.6nm,0.4s,baz=76,slow=21,SNR=8.6 comp=Z,1.6nm,0.4s						
AAK	**Ala-Archa**	**20.27**	**313**	*de*P	Pn	01 07 02.2	+1.7
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**20.27**	**313**		**P**	**01 06 58.9**	**+0.3**
AAK				IAmb	IAmb	01 07 05.6	
	comp=Z,16nm,1.4s						
KNGR	**Kungurtug, Tuv**	**20.27**	**5**	*e*P	**P**	**01 06 59.0**	**+0.6**
KNGR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MANEM	**Manem**	**20.36**	**297**	P	**P**	**01 07 00.6**	**+0.8**
MANEM				IAmb	IAmb	01 07 09.4	
	comp=Z,26nm,1.4s						
BTK	**Batken**	**21.71**	**303**	P	**P**	**01 07 14.6**	**+0.5**
BTK				pmax	pmax		
	comp=Z,12nm,1.1s						
BTK	**Batken**	**21.71**	**303**	P	**P**	**01 07 14.6**	**+0.5**
BTK				IAmb	IAmb	01 07 21.7	
	comp=Z,12nm,1.1s						
GAR	**Garm**	**21.77**	**300**	P	**P**	**01 07 14.2**	**-0.6**
KBL	**Kabul**	**22.03**	**287**	P	**P**	**01 07 18.4**	**+0.7**
KBL				pmax	pmax		
	comp=Z,14nm,0.9s						
KBL	**Kabul**	**22.03**	**287**	P	**P**	**01 07 18.4**	**+0.7**
KBL				IAmb	IAmb	01 07 21.8	
	comp=Z,14nm,0.9s						
CHGR	**Chuyangaron**	**22.56**	**298**	*e*P	**P**	**01 07 23.9**	**+0.7**
CHGR				pmax	pmax		
	comp=Z,39nm,1.1s						
CHGR	**Chuyangaron**	**22.56**	**298**	P	**P**	**01 07 23.1**	**-0.1**
KK31	**Karatay Array**	**23.07**	**310**	P	**P**	**01 07 29.0**	**+0.6**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KK31	**Karatay Array**	**23.07**	**310**	P	**P**	**01 07 29.0**	**+0.6**
KKAR	**Karatay Array**	**23.07**	**310**	P	**P**	**01 07 29.1**	**+0.6**
KKAR	**Karatay Array**	**23.07**	**310**	P	**P**	**01 07 29.1**	**+0.6**
SHAA	**Shahritus**	**23.13**	**295**	P	**P**	**01 07 29.8**	**+0.7**
SHAA				IAmb	IAmb	01 07 44.2	
	comp=Z,14nm,1.0s						
KURBB	**Kurchatov Arra**	**23.54**	**334**	P	**P**	**01 07 33.9**	**+0.8**
	comp=Z,3.8nm,1.1s,baz=143,slow=9.8,SNR=20 comp=Z,3.8nm,1.1s						
KURK	**Kurchatov**	**23.58**	**334**	*de*P	**P**	**01 07 34.4**	**+1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	**Kurchatov**	**23.58**	**334**		**P**	**01 07 33.4**	**0.0**
KURK				IAmb	IAmb	01 07 36.1	
	comp=Z,9.7nm,1.4s						
ZAA0	**Zalesovo Array**	**24.59**	**346**		**P**	**01 07 42.6**	**-0.2**
ZAA0				IAmb	IAmb	01 07 46.2	
	comp=Z,4.4nm,1.2s						
ZALV	**Zalesovo Beam**	**24.59**	**346**	P	**P**	**01 07 43.6**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=165,slow=12,SNR=7.1 comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**24.59**	**346**	*e*P	**P**	**01 07 45.9**	**+3.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**24.59**	**346**		**P**	**01 07 42.7**	**-0.1**
BVAR	**Borovoye Array**	**28.73**	**329**	P	**P**	**01 08 21.8**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=128,slow=9.6,SNR=7.2 comp=Z,1.0nm,0.7s						
BORK	**Borovoye**	**28.77**	**329**	P	**P**	**01 08 20.8**	**+0.3**
BORK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BORK	**Borovoye**	**28.77**	**329**	P	**P**	**01 08 20.8**	**+0.3**
BORK				IAmb	IAmb	01 08 24.4	
	comp=Z,3.9nm,1.0s						
ABKAR	**Akbulak array**	**32.28**	**316**	P	**P**	**01 08 51.2**	**-0.4**
SVE	**Sverdlovsk**	**35.50**	**328**	*e*P	**P**	**01 09 22.0**	**+2.6**
SVE				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARTI	**Arti**	**36.33**	**326**	*c* P	**P**	**01 09 26.5**	**0.0**
ARTI						01 10 45.2	
ARTI				S	**S**	**01 15 03.7**	**-3.5**
ARTI				SS	**SnSn**	**01 17 32.3**	**-1.9**
ARTI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIRV	**Kirov**	**41.64**	**326**	*ce*P	**P**	**01 10 13.1**	**+2.2**
KIV	**Kislovodsk**	**42.93**	**303**	*e*P	**P**	**01 10 23.0**	**+1.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHA1	**Shidzhatmaz**	**42.95**	**303**	*ce*P	**P**	**01 10 22.1**	**0.0**
KLMR	**Klimovskoe**	**47.11**	**327**	*e*P	**P**	**01 10 54.0**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN	**Obninsk**	**47.61**	**319**	*e*P	**P**	**01 10 59.6**	**+1.0**
OBN				*e*		01 11 06.6	
OBN				*e*		01 12 26.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**51.94**	**313**	P	**P**	**01 11 31.9**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=84,slow=6.1,SNR=6.6 comp=Z,2.5nm,0.9s						
AKASG	**Malin Array Be**	**51.94**	**313**	*e*P	**P**	**01 11 32.6**	**+1.0**
AKBB	**Malin Array Si**	**51.94**	**313**	*ce*P	**P**	**01 11 33.4**	**+1.8**
FINES	**FINESS Array B**	**53.64**	**326**	P	**P**	**01 11 44.2**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=119,slow=11,SNR=6.9 comp=Z,4.4nm,0.9s						
FINES	**FINESS Array B**	**53.64**	**326**	*e*P	**P**	**01 11 44.1**	**+0.1**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	**FINESS Array B**	**53.64**	**326**	P	**P**	**01 11 45.0**	**+0.9**
GERES	**GERESS Array B**	**62.15**	**312**	P	**P**	**01 12 44.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=54,slow=6.8,SNR=5.4 comp=Z,0.2nm,0.3s						
GERES	**GERESS Array B**	**62.15**	**312**	*e*P	**P**	**01 12 46.6**	**+2.5**
GERES	**GERESS Array B**	**62.15**	**312**	P	**P**	**01 12 44.7**	**+0.5**
WRA	**Warramunga Arr**	**62.92**	**138**	P	**P**	**01 12 47.9**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=320,slow=6.8,SNR=3.1 comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**65.61**	**141**	P	**P**	**01 13 06.3**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=335,slow=5.7,SNR=4.7 comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array**	**73.79**	**23**	P	**P**	**01 13 56.5**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=297,slow=5.3,SNR=5.3 comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**73.79**	**23**	*e*P	**P**	**01 13 57.0**	**0.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**86.03**	**283**	P	**P**	**01 15 04.2**	**+0.2**
	comp=Z,1.2nm,1.1s,baz=42,slow=4.2,SNR=4.4 comp=Z,1.2nm,1.1s						

AEIC ***22*** *01:20:57.4±2.1,51°.8N±0°.1×176°.33E±0°.09,h114km±6km, Error ellipse: s-maj=16.7km s-min=6.5km az=196.0*
IDC ***22*** *01:20:59.2±1.7,52°.29N×176°.54E,h112km±13km, mb3.6/10,mbtmp4.0/12,Error ellipse: s-maj=21.3km s-min=16.8km az=159.0*
NEIC ***22*** *01:20:59.3±1.1,52°.2N±0°.1×176°.50E±0°.08,h114km±7km, mb3.8/13,ML3.7/10,ML3.4(AEIC),Error ellipse: s-maj=17.6km s-min=6.3km az=193.0*

ISC 22 01:20:59.0±0.8,52°.2N±0°.1×176°.46E±0°.04,h115km±7km, n65,σ0§96/66,mb3.8/14,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**1.29**	**100**		**Pn**	**01 21 23.8**	**+0.2**
LSNW					**Sn**	**01 21 43.4**	**+1.1**
LSPA	**Little Sitkin**	**1.33**	**101**		**Pn**	**01 21 24.5**	**+0.4**
LSPA					**Sn**	**01 21 44.0**	**+1.0**
LSSE	**Little Sitkin**	**1.33**	**102**		**Pn**	**01 21 24.3**	**+0.3**
SHEM	**Shemya Is, Ala**	**1.53**	**290**	P	**Pn**	**01 21 26.7**	**+0.4**
	407nm,0.3s,baz=103,slow=3.1,SNR=226			S			
SHEM					**Sn**	**01 21 47.6**	**+0.4**
	1μm,0.3s,baz=241,slow=20,SNR=73						
SHEM				LR	LR	01 21 54.8	
	comp=Z,78nm,18.1s,baz=118,slow=36						
SHEM	**Shemya Is, Ala**	**1.53**	**290**	Pn	**Pn**	**01 21 26.8**	**+0.5**
SHEM				Sn	**Sn**	**01 21 47.8**	**+0.6**
SHEM				IAML		01 21 49.2	
	comp=E,1μm,0.5s						
SHEM				IAML		01 21 49.9	
	comp=N,1μm,0.5s						
SMY	**Shemya**	**1.53**	**290**		**Pn**	**01 21 26.7**	**+0.3**
SMY				Sn	**Sn**	**01 21 47.3**	**+0.1**
CESW	**Semis' Southwe**	**1.94**	**98**		**Pn**	**01 21 31.3**	**0.0**
AMKA	**Amchitka**	**1.96**	**114**		**Pn**	**01 21 30.2**	**-1.3**
AMKA					**Sn**	**01 21 54.0**	**-2.4**
AMKA				IAML		01 21 55.4	
	comp=E,388nm,0.5s						
AMKA				IAML		01 21 55.7	
	comp=N,430nm,0.5s						
CERB	**Semis' Cerberu**	**1.98**	**97**		**Pn**	**01 21 32.4**	**+0.6**
CEPE	**Semis' Perret**	**1.98**	**96**		**Pn**	**01 21 32.1**	**+0.2**
GANO	**Gareloi North**	**2.95**	**96**		**Pn**	**01 21 44.4**	**-0.1**
GALAA	**Gareloi Lava P**	**2.98**	**97**		**Pn**	**01 21 44.9**	**+0.1**
GALEA	**Gareloi East**	**2.99**	**97**		**Pn**	**01 21 45.0**	**0.0**
GAKI	**Gareloi-Kavalg**	**3.00**	**101**		**Pn**	**01 21 44.5**	**-0.6**
TANO	**Tanaga North**	**3.36**	**93**		**Pn**	**01 21 50.0**	**+0.2**
TASE	**Tanaga Southea**	**3.42**	**94**		**Pn**	**01 21 50.8**	**+0.1**
TAFP	**Tanaga Falls P**	**3.44**	**93**		**Pn**	**01 21 50.7**	**-0.2**
KIWB	**Kanaga Island**	**3.96**	**93**	Pn	**Pn**	**01 21 57.7**	**-0.1**
KIWB				IAML		01 23 08.0	
	comp=N,48nm,0.7s						
KIWB				IAML		01 23 21.1	
	comp=E,49nm,1.2s						
ADK	**Adak**	**4.25**	**92**	Pn	**Pn**	**01 22 00.9**	**-0.7**
ATKA	**Atka Island**	**5.75**	**86**		**Pn**	**01 22 21.6**	**-0.2**
SPIA	**Saint Paul Isl**	**9.15**	**52**	Pn	**Pn**	**01 23 09.2**	**+1.3**
UNV	**Unalaska Valle**	**10.39**	**74**	Pn	**Pn**	**01 23 25.7**	**+1.1**
LVA	**Lava Point**	**10.68**	**73**	Pn	**Pn**	**01 23 27.7**	**-0.9**
PEA0B	**Petropavlovsk-**	**11.43**	**282**	Pn	**Pn**	**01 23 39.3**	**+0.8**
PETK	**Petropavlovsk-**	**11.43**	**282**	P	**Pn**	**01 23 40.4**	**+1.9**
	comp=E,4.9nm,0.4s,baz=98,slow=19,SNR=70						
PETK				S	**Sn**	**01 25 39.7**	**-4.5**
	comp=E,0.8nm,0.4s,baz=80,slow=22,SNR=1.5						
PETK	**Petropavlovsk-**	**11.43**	**282**	Pn	**Pn**	**01 23 40.2**	**+1.7**
M17K	**Holitna River**	**16.88**	**47**		**Pn**	**01 24 47.0**	**-0.9**
M17K				IAmb	IAmb	01 24 50.3	
	comp=Z,8.3nm,1.3s						
N19K	**Bonanza Creek**	**18.05**	**50**	P	**P**	**01 25 01.6**	**+0.5**
N19K				IAmb	IAmb	01 25 06.2	
	comp=Z,6.0nm,1.1s						
OHAK	**Old Harbor**	**18.08**	**62**	P	**P**	**01 25 00.4**	**-1.0**
OHAK				IAmb	IAmb	01 25 21.6	
	comp=Z,12nm,1.1s						
KDAK	**Kodiak Island**	**18.50**	**60**	P	**P**	**01 25 05.3**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=246,slow=3.5,SNR=10						
KDAK	**Kodiak Island**	**18.50**	**60**	P	**P**	**01 25 05.1**	**-0.8**
J20K	**Nowinta River**	**19.35**	**40**	P	**P**	**01 25 15.7**	**+0.5**
CNPM	**China Poot**	**19.39**	**55**	P	**P**	**01 25 15.5**	**-0.1**
CAST	**Castle Rocks**	**19.92**	**44**	P	**P**	**01 25 19.8**	**-1.5**
CAST				IAmb	IAmb	01 25 23.0	
	comp=Z,4.7nm,1.3s						
E22K	**Anaktuvuk Pass**	**22.03**	**32**	P	**P**	**01 25 43.2**	**-0.6**
C23K	**Itkillik River**	**23.29**	**28**	P	**P**	**01 25 54.4**	**-1.7**
C23K				IAmb	IAmb	01 26 12.6	
	comp=Z,5.3nm,1.2s						
D25K	**Kavik River**	**24.34**	**31**	P	**P**	**01 26 06.1**	**+0.4**
D25K				IAmb	IAmb	01 26 25.0	
	comp=Z,3.1nm,1.2s						
YAK	**Yakutsk**	**26.64**	**310**	P	**P**	**01 26 27.1**	**+0.8**
	comp=Z,44nm,0.4s,baz=43,slow=4.0,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**33.27**	**197**	T	T	02 02 52.0	
	baz=11,slow=76,SNR=57						
H11N3	**WAKE ISLAND Hy**	**33.29**	**197**	T	T	02 02 51.6	
	baz=11,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**33.29**	**197**	T	T	02 02 56.9	
	baz=11,slow=76,SNR=39						
H11S1	**WAKE ISLAND Hy**	**34.51**	**196**	T	T	02 04 24.6	
	baz=11,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**34.52**	**197**	T	T	02 04 27.3	
	baz=11,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**34.52**	**196**	T	T	02 04 25.0	
	baz=11,slow=76,SNR=5.3						
YKA	**Yellowknife Ar**	**36.78**	**46**	P	**P**	**01 27 54.7**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=285,slow=8.5,SNR=1.8 comp=Z,0.4nm,0.9s						
SPITS	**Spitsbergen Ar**	**49.30**	**355**	P	**P**	**01 29 35.0**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=39,slow=4.4,SNR=6.6 comp=Z,1.4nm,0.4s						
MKAR	**Makanchi Array**	**57.17**	**305**	P	**P**	**01 30 33.6**	**0.0**
	comp=Z,0.3nm,0.4s,baz=45,slow=5.9,SNR=3.2 comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**57.17**	**305**	P	**P**	**01 30 33.2**	**-0.3**
BVAR	**Borovoye Array**	**58.30**	**317**	P	**P**	**01 30 42.1**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=51,slow=7.8,SNR=5.6 comp=Z,1.0nm,0.4s						
TX31	**Lajitas Ar. Si**	**61.40**	**78**	P	**P**	**01 31 02.9**	**-0.1**
TX31				IAmb	IAmb	01 31 04.2	
	comp=Z,1.6nm,1.4s						
TXAR	**Lajitas Array**	**61.40**	**78**	P	**P**	**01 31 03.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=310,slow=6.2,SNR=9.4 comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**61.40**	**78**	P	**P**	**01 31 02.8**	**-0.2**
FINES	**FINESS Array B**	**64.25**	**345**	P	**P**	**01 31 21.0**	**-0.2**
	comp=Z,14nm,1.3s,baz=309,slow=3.9,SNR=6.6 comp=Z,14nm,1.3s						
FINES	**FINESS Array B**	**64.25**	**345**	P	**P**	**01 31 20.9**	**-0.2**
ABKAR	**Akbulak array**	**65.44**	**320**	P	**P**	**01 31 29.3**	**+0.2**
KKAR	**Karatay Array**	**65.61**	**309**	P	**P**	**01 31 31.2**	**+0.8**
HFS	**Hagfors**	**67.14**	**351**	P	**P**	**01 31 39.9**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=18,slow=7.2,SNR=2.1 comp=Z,2.3nm,0.9s						
EKA	**Eskdalemuir Ar**	**72.81**	**360**	P	**P**	**01 32 15.3**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=357,slow=5.4,SNR=1.5 comp=Z,0.3nm,0.5s						
WB0	**Warramunga Arr**	**80.50**	**220**	P	**P**	**01 32 58.2**	**+0.1**
WRA	**Warramunga Arr**	**80.68**	**220**	P	**P**	**01 32 59.6**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=32,slow=6.2,SNR=11 comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**80.68**	**220**	P	**P**	**01 32 58.9**	**-0.1**
ASAR	**Alice Springs**	**84.21**	**219**	P	**P**	**01 33 18.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=25,slow=5.6,SNR=5.9 comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**84.21**	**219**	P	**P**	**01 33 17.9**	**+0.5**
QSPA	**South Pole Qui**	**141.97**	**180**	PKP	**PKPdf**	**01 40 15.5**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=63,slow=4.5,SNR=6.8						
MAW	**Mawson**	**145.34**	**218**	PKPbc	**PKPab**	**01 40 22.2**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=70,slow=15,SNR=2.2						

IDC 22 01:31:01.9±62.0,55°.06S×143°.47E,h0km,mb3.5/3, mbtmp3.6/3,Error ellipse: s-maj=1217.0km s-min=205.4km az=132.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**23.21**	**356**	P	P	01 36 10.3	0.0
	2.0nm,0.7s,baz=168,slow=12,SNR=3.9 2.0nm,0.7s						
ASAR	**Alice Springs**	**32.15**	**343**	P	P	01 37 30.9	-0.2
	0.3nm,0.3s,baz=171,slow=7.8,SNR=4.3 0.3nm,0.3s						
WRA	**Warramunga Arr**	**35.74**	**345**	P	P	01 38 02.2	0.0
	0.2nm,0.5s,baz=170,slow=8.3,SNR=6.0 0.2nm,0.5s						

NNC ***22*** *01:40:05.9±0.6,44°.23N×79°.14E,h7km±6km,mb3.5, mpv2.8,Error ellipse: s-maj=4.6km s-min=4.3km az=60.0*
SOME ***22*** *01:40:08.0,44°.25N×79°.13E,h15km*

ISC 22 01:40:06.7±0.9,44°.24N±0°.03×79°.15E±0°.02,h13km±8km, n21,σ0§82/42,2C,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNOS	**Konyrlen**	**0.12**	**10**	P	**Pb**	**01 40 10.8**	**-0.1**
	11nm,0.1s						
KNOS				S	**Sg**	**01 40 13.0**	**+0.6**
	145nm,0.1s						
DJR	**Jarkent**	**0.47**	**79**	P	**Pg**	**01 40 16.5**	**+0.6**
	10nm,0.1s						
DJR				S	**Sg**	**01 40 22.7**	**+0.6**
	17nm,0.2s						
DJR	**Jarkent**	**0.47**	**79**	*e*P	**Pg**	**01 40 16.5**	**+0.6**
	10nm,0.1s						
DJR				*e*S	**Sg**	**01 40 22.7**	**+0.6**
	17nm,0.2s						
BLB	**Baldybastay**	**0.51**	**253**	P	**Pg**	**01 40 17.0**	**+0.3**
	3.0nm,0.1s						
BLB				S	**Sg**	**01 40 23.7**	**+0.2**
	7.8nm,0.1s						
KPKS	**Kokpek**	**0.85**	**204**	P	**Pb**	**01 40 23.7**	**+0.3**
	0.2nm,0.1s						
KPKS				S	**Sb**	**01 40 35.1**	**+0.4**
	2.6nm,0.1s						
KPKS	**Kokpek**	**0.85**	**204**	*e*P	**Pb**	**01 40 23.7**	**+0.3**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**01 40 35.1**	**+0.4**
	2.6nm,0.1s						
PDGK	**Podgornoye**	**0.95**	**165**	⇑P	**Pg**	**01 40 23.3**	**-1.7**
	0.8nm,0.3s						
PDGK				⇑S	**Sg**	**01 40 37.5**	**+0.1**
	2.9nm,0.4s						
ARXS	**Arharly**	**0.95**	**269**	P	**Pg**	**01 40 24.6**	**-0.4**
	5.7nm,0.3s						
ARXS				S	**Sg**	**01 40 36.8**	**-0.8**
	4.6nm,0.3s						
ARXS	**Arharly**	**0.95**	**269**	*e*P	**Pg**	**01 40 24.6**	**-0.4**
	5.7nm,0.3s						
ARXS				*e*S	**Sg**	**01 40 36.8**	**-0.8**
	4.6nm,0.3s						
KAPS	**Kapalarasan**	**1.05**	**8**	P	**Pb**	**01 40 26.1**	**-0.7**
	2.6nm,0.1s						
KAPS				S	**Sg**	**01 40 39.3**	**-1.3**
	13nm,0.1s						
KAPS	**Kapalarasan**	**1.05**	**8**	*e*P	**Pb**	**01 40 26.1**	**-0.7**
	2.6nm,0.1s						
KAPS				*e*S	**Sg**	**01 40 39.3**	**-1.3**
	13nm,0.1s						
UZB	**Uzynbulak**	**1.10**	**185**	P	**Pb**	**01 40 27.5**	**-0.2**
	2.1nm,0.1s						
UZB				S	**Sg**	**01 40 41.4**	**-0.8**
	3.2nm,0.1s						
UZB	**Uzynbulak**	**1.10**	**185**	*e*P	**Pb**	**01 40 27.5**	**-0.2**
	2.1nm,0.1s						
UZB				*e*S	**Sg**	**01 40 41.4**	**-0.8**
	3.2nm,0.1s						
SHLS	**Shalkode**	**1.11**	**168**	P	**Pn**	**01 40 29.4**	**+1.3**
	2.9nm,0.2s						
SHLS				S	**Sn**	**01 40 44.5**	**+1.2**
	21nm,0.3s						
SHLS	**Shalkode**	**1.11**	**168**	*e*P	**Pn**	**01 40 29.4**	**+1.3**
	2.9nm,0.2s						
SHLS				*e*S	**Sn**	**01 40 44.5**	**+1.2**
	21nm,0.3s						
KTMS	**Ketmen**	**1.18**	**132**	P	**Pb**	**01 40 28.4**	**-0.6**
	0.5nm,0.2s						
KTMS				S	**Sb**	**01 40 42.9**	**-1.4**
	3.4nm,0.1s						
KTMS	**Ketmen**	**1.18**	**132**	*e*P	**Pb**	**01 40 28.4**	**-0.6**
	0.5nm,0.2s						
KTMS				*e*S	**Sb**	**01 40 42.9**

DPC eSg Sg 01 47 11.8 -0.5
DPC Dobruska-Polom 1.22 174 P Pg 01 46 56.7 +0.2
PIVO Bartosovice 1.40 169 ePg Pn 01 47 00.0 0.0
baz=350
PIVO eSg Sg 01 47 16.7 -1.5
302nm,0.4s,baz=350
BRG Berggiesshubel 1.54 244 ePn Pn 01 47 01.9 0.0
BRG ePg Pg 01 47 03.4 +0.8
BRG eSg Sn 01 47 23.3 +0.8
BRG Berggiesshubel 1.54 244 P Pn 01 47 01.9 0.0
BRG Berggiesshubel 1.54 244 Pn Pn 01 47 01.8 0.0
BRG Pg Pg 01 47 03.2 +0.6
BRG Sg Sn 01 47 23.4 +0.9
BRG Amp 01 47 25.3
comp=Z,352nm,0.3s
KRLC Kraliky 1.54 164 ePG Pg 01 47 02.9 +0.2
KRLC eSG Sg 01 47 22.1 -0.6
comp=Z,296nm,0.6s
KRLC Kraliky 1.54 164 P Pb 01 47 02.3 -0.4
ANAC Anensky vrch 1.69 152 ePn Pn 01 47 04.2 +0.3
baz=332
ANAC eSg Sn 01 47 25.8 -0.5
comp=Z,239nm,0.5s,baz=332
RUE Ruedersdorf 1.72 303 ePn Pb 01 47 05.2 -0.4
RUE eSn Sg 01 47 30.4 +2.1
RUE Ruedersdorf 1.72 303 eP Pb 01 47 05.4 -0.2
RUE Ruedersdorf 1.72 303 P Pb 01 47 05.3 -0.2
RYBC Ceska Rybna 1.76 181 ePn Pn 01 47 05.1 +0.3
baz=1.9
RYBC eSg Sn 01 47 27.9 0.0
comp=Z,238nm,0.4s,baz=1.9
GKP Gorka Klasztor 1.84 21 eP Pg 01 47 10.4 +2.0
FBE Freiberg 1.86 251 ePn Pn 01 47 06.5 +0.3
FBE ePg Pg 01 47 09.1 +0.4
FBE eSg Sg 01 47 33.6 +0.7
PRU Pruhonice 1.87 213 ePN Pn 01 47 06.3 -0.1
PRU ePG Pb 01 47 08.3 +0.1
PRU eSG Sb 01 47 32.1 0.0
comp=Z,108nm,0.3s
PRU Pruhonice 1.87 213 P Pn 01 47 06.5 +0.1
STEB Steborice 1.94 147 ePG Pb 01 47 09.7 +0.4
STEB eSG Sb 01 47 34.3 +0.4
CLL Collm 1.97 264 ePn Pn 01 47 08.2 +0.4
CLL ePg Pg 01 47 11.4 +0.4
CLL eSn Sg 01 47 36.1 -0.4
CLL eSg Sb 01 47 37.5 +2.5
CLL Collm 1.97 264 ePn Pn 01 47 08.0 +0.2
CLL ePg Pg 01 47 11.0 0.0
CLL /x x 01 47 15.4
CLL eSg Sg 01 47 37.0 +0.5
comp=Z,215nm,1.1s
RAC Raciborz 1.98 138 ePG Pg 01 47 11.4 +0.4
RAC eSG Sg 01 47 38.3 +1.7
MORC Moravsky Berou 2.00 153 ePn Pn 01 47 08.5 +0.3
MORC eSg Sb 01 47 36.3 +0.4
MORC Moravsky Berou 2.00 153 ePn Pn 01 47 08.5 +0.3
baz=334
MORC eSg Sb 01 47 35.5 -0.4
comp=Z,180nm,0.7s,baz=334
MORC Moravsky Berou 2.00 153 P Pn 01 47 08.6 +0.3
OKC Ostrava-Krasne 2.15 143 eSG Sb 01 47 40.8 +0.7
OKC Ostrava-Krasne 2.15 143 ePn Pn 01 47 10.5 +0.2
OKC ePg Pg 01 47 14.7 +0.3
OKC eSg Sg 01 47 41.3 -0.9
OKC Ostrava-Krasne 2.15 143 P Pg 01 47 14.5 +0.1
LNIZ Loecknitz 2.26 330 P Pn 01 47 12.9 +1.1
VRAC Vranov 2.28 172 Pn Pn 01 47 12.6 +0.6
comp=Z,6.6nm,0.3s,baz=327,slow=13,SNR=35
VRAC Lg Lg 01 47 41.3
comp=Z,12nm,0.3s,baz=72,slow=20,SNR=5.7
VRAC LR LR 01 48 15.4
comp=Z,69nm,18.3s,baz=318,slow=44
comp=Z,13nm,0.3s
VRAC Vranov 2.28 172 ePn Pn 01 47 12.4 +0.4
baz=353
VRAC eSg Sb 01 47 43.9 +0.1
comp=Z,163nm,0.7s,baz=353
VRAC Vranov 2.28 172 P Pn 01 47 12.5 +0.4
TREC Trest 2.31 191 ePG Pb 01 47 16.1 +0.5
TREC eSG Sb 01 47 45.3 +0.6
comp=Z,119nm,0.3s
TREC Trest 2.31 191 P Pn 01 47 13.1 +0.7
ZVC Zvikov 2.46 211 ePN Pn 01 47 14.8 +0.3
ZVC ePG Pg 01 47 20.1 -0.2
ZVC eSG Sg 01 47 51.5 -0.6
KRUC Moravsky 2.51 176 ePn Pn 01 47 15.5 +0.3
baz=356
KRUC eSg Sb 01 47 51.5 +1.1
comp=Z,166nm,0.9s,baz=356
KRUC Moravsky 2.51 176 P Pn 01 47 15.7 +0.5
TANN Tannenbergstha 2.59 245 ePn Pn 01 47 17.0 +0.7
TANN ePg Pg 01 47 24.0 +1.3
TANN eSg Sg 01 47 56.0 -0.2
TANN Tannenbergstha 2.59 245 P Pn 01 47 17.0 +0.7
STAC Stalkov 2.59 192 ePn Pn 01 47 16.9 +0.6
baz=12
STAC eSg Sb 01 47 54.1 +1.3
comp=Z,185nm,0.7s,baz=12
WERD Werda 2.66 247 ePn Pn 01 47 18.0 +0.7
WERD ePg Pg 01 47 24.8 +0.7
WERD eSg Sg 01 47 57.8 -0.8
NKC Novy Kostel 2.68 242 ePN Pn 01 47 18.6 +0.9
NKC ePG Pg 01 47 25.3 +0.7
NKC eSG Sg 01 48 01.3 +2.0
comp=Z,180nm,0.3s
NKC Novy Kostel 2.68 242 P Pn 01 47 18.5 +0.9
OJC Ojcow 2.68 119 ePn Pn 01 47 16.8 -0.8
OJC ePg Pg 01 47 25.8 +1.2
OJC eSg Sg 01 48 01.7 +2.4
OJC Ojcow 2.68 119 P Pn 01 47 18.8 +1.3
JAVC Velka Javorina 2.88 159 ePn Pn 01 47 20.8 +0.5
baz=340
JAVC Velka Javorina 2.88 159 ePN Pn 01 47 20.9 +0.6
JAVC Velka Javorina 2.88 159 P Pb 01 47 25.2 -0.2
WIMM Wimmelburg 2.89 271 P Pb 01 47 23.4 -2.1
BEL Belsk 2.91 83 P Pb 01 47 24.3 -1.6
KHC Kasperske Hory 2.93 215 ePN Pn 01 47 21.2 +0.1
KHC ePG Pb 01 47 27.6 +1.3
KHC eSN Sn 01 47 56.0 -0.9
KHC eSG Sg 01 48 06.2 -1.1
comp=Z,103nm,0.6s
KHC Kasperske Hory 2.93 215 P Pn 01 47 21.1 +0.1
CKRC Cesky Krumlov 2.98 204 ePN Pn 01 47 22.9 +1.2
CKRC ePG Pb 01 47 28.3 +1.1
CKRC eSG Sg 01 48 06.8 -2.2
comp=Z,132nm,0.7s
MOX Moxa 2.99 254 ePn Pn 01 47 22.5 +0.7
MOX ePg Pg 01 47 31.0 +0.5
MOX eSg Sg 01 48 09.3 +0.1
MOX Moxa 2.99 254 P Pn 01 47 22.5 +0.7
ROTZ Rotzenmuhle 3.08 236 ePn Pn 01 47 23.6 +0.6
ROTZ eSg Sg 01 48 12.0 +0.1
GEC2 GERESS Array S 3.13 211 ePn Pn 01 47 24.3 +0.4
GEC2 eSg Sg 01 48 12.6 -1.2
GERES GERESS Array B 3.13 211 Pn Pn 01 47 24.2 +0.4
comp=Z,0.8nm,0.3s,baz=30,slow=12,SNR=143
GERES Lg Lg 01 48 06.8
comp=Z,1.0nm,0.3s,baz=24,slow=26,SNR=5.7
comp=Z,10nm,0.5s
WET Wettzell 3.19 222 ePn Pn 01 47 25.1 +0.4
WET Wettzell 3.19 222 P Pn 01 47 25.0 +0.4
LANS Liptovska Anna 3.22 137 ePG Pg 01 47 37.3 +2.4
LANS eSG Sg 01 48 15.0 -1.7
MODS Modra-Piesok 3.28 166 P Pb 01 47 30.7 -1.4
MODS Modra-Piesok 3.28 166 ePG Pg 01 47 36.4 +0.5
MODS eSG Sg 01 48 19.4 +1.0
NIE Niedzica 3.42 127 ePn Pn 01 47 29.5 +1.8
NIE ePg Pg 01 47 38.9 +0.3
NIE eSg Sg 01 48 22.2 -0.8
WINA Alland / Wiene 3.46 181 ePn Pn 01 47 29.1 +0.9
comp=Z,6.2nm,0.3s
WINA eSg Sg 01 48 24.4 +0.2
comp=Z,146nm,0.5s
GRA3 Grafenberg Arr 3.55 241 P Pn 01 47 30.8 +1.3
GRB1 Grafenberg Arr 3.59 235 P Pn 01 47 31.5 +1.4
GRB4 Grafenberg Arr 3.59 236 P Pn 01 47 31.9 +1.9
CLZ Clausthal 3.59 277 P Pn 01 47 32.0 +1.9
BSD Bornholm Skovb 3.63 349 eP Pn 01 47 32.2 +1.6
BSD Bornholm Skovb 3.63 349 iP Pn 01 47 32.0 +1.5
BSD iS Sn 01 48 14.0 -0.1
BSD IAML 01 48 32.0
comp=Z,22nm,0.6s
CONA Conrad Observa 3.64 183 iPn Pn 01 47 31.8 +1.0
comp=Z,2.6nm,0.3s,SNR=11
CONA eSg Sg 01 48 29.3 -0.8
comp=Z,76nm,0.4s
GRA1 Grafenberg Arr 3.64 241 P Pn 01 47 32.0 +1.2
GRFO Grafenberg 3.64 241 P Pn 01 47 32.0 +1.2
GRB2 Grafenberg Arr 3.66 233 P Pn 01 47 32.6 +1.6
GRB5 Grafenberg Arr 3.76 231 P Pn 01 47 33.4 +1.0
GRC4 Grafenberg Arr 3.85 232 P Pn 01 47 34.4 +0.8
RONA Rosalia, Austr 3.87 178 ePn Pn 01 47 34.7 +0.8
comp=Z,2.3nm,0.2s
RONA eSg Sg 01 48 36.2 -1.1
comp=Z,27nm,0.3s
SOP Sopron 3.89 176 P Pn 01 47 35.7 +1.5
MOA Molln 3.91 199 iPn Pn 01 47 35.2 +0.7
comp=Z,3.0nm,0.2s,SNR=16
MOA eSg Sg 01 48 40.0 +1.4
comp=Z,46nm,0.5s
MOA Molln 3.91 199 P Pn 01 47 35.4 +0.9
STHS Stebnicka Huta 3.91 121 ePG Pg 01 47 50.8 +2.8
STHS eSG Sg 01 48 44.3 +5.7
GRC1 Grafenberg Arr 3.92 231 P Pn 01 47 35.0 +0.5
UBBA Unterbreizbach 3.93 261 P Pn 01 47 36.2 +1.6
GRC3 Grafenberg Arr 3.96 229 P Pn 01 47 35.9 +0.8
SRO Srobarova 4.01 158 ePG Pg 01 47 51.0 +1.0
SRO eSG Sb 01 48 34.4 +0.8
GRC2 Grafenberg Arr 4.07 230 P Pn 01 47 37.4 +0.7
BIOA Bad Ischl, Aus 4.20 204 iPn Pn 01 47 39.1 +0.6
comp=Z,6.5nm,0.3s,SNR=15
BSEG Bad Segeberg 4.26 306 P Pn 01 47 39.6 +0.5
RETH Rethem/Aller, 4.33 288 P Pn 01 47 42.2 +2.1
ARSA Arzberg 4.33 185 iPn Pn 01 47 41.9 +1.6
comp=Z,2.4nm,0.3s
LUNU Lund 4.38 340 iP Pn 01 47 41.1 +0.3
LUNU eS Sn 01 48 31.8 -0.7
PSZ Piszkesteto 4.39 145 eP Pn 01 47 42.4 +1.4
PSZ Piszkesteto 4.39 145 P Pn 01 47 42.4 +1.4
RJOB Jochberg 4.40 211 P Pn 01 47 42.9 +1.7
LLD Lille Linde 4.44 330 iP Pn 01 47 42.6 +0.9
LLD iS Sn 01 48 34.4 +0.3
LLD IAML 01 48 38.0
comp=Z,33nm,0.4s
MPLH Magyarpolny 4.49 168 P Pn 01 47 43.7 +1.3
SESA Seetaler Alpe, 4.57 194 iPn Pn 01 47 44.8 +1.1
comp=Z,16nm,0.3s,SNR=25
FUR Furstenfeldbru 4.63 225 P Pn 01 47 45.5 +1.2
COP Copenhagen 4.68 333 iP Pn 01 47 48.5 +3.6
COP iS Sn 01 48 39.8 -0.2
COP IAML 01 48 43.6
comp=Z,61nm,0.7s
LESA Schwarzleotal 4.71 210 ePn Pn 01 47 46.2 +0.6
comp=Z,1.7nm,0.3s
KOLS Kolonicke sedl 4.74 121 P Pn 01 47 47.3 +1.5
KOLS Kolonicke sedl 4.74 121 ePG Pg 01 48 05.9 +2.0
KOLS eSG Sg 01 49 03.5 -1.8
BLEU Blekinge 4.76 358 P Pn 01 47 47.3 +1.3
BLEU Blekinge 4.76 358 P Pn 01 47 47.3 +1.3
BLEU iP Pb 01 47 47.7 -10
BLEU iS Sn 01 48 41.3 -0.4
KBA Koelnbreinsper 4.84 203 iPn Pn 01 47 48.5 +1.1
comp=Z,7.1nm,0.4s,SNR=17
KBA Koelnbreinsper 4.84 203 P Pn 01 47 48.3 +0.9
BJUU Bjuv 4.88 339 iP Pn 01 47 47.9 +0.2
BJUU iS Sn 01 48 43.8 -1.0
SOKA Soboth 4.94 189 ePn Pn 01 47 49.8 +1.1
comp=Z,1.3nm,0.5s
TNS Taunus Mts 5.04 258 P Pn 01 47 51.1 +1.0
DEL Delary 5.09 346 iP Pn 01 47 51.5 +0.8
DEL iS Sn 01 48 48.5 -1.6
OBKA Obir 5.16 192 ePn Pn 01 47 52.5 +0.8
comp=Z,0.6nm,0.3s
WATA Walderalm 5.17 217 iPn Pn 01 47 53.2 +1.3
comp=Z,7.4nm,0.5s,SNR=9.3
WATA eSn Sn 01 48 52.5 +0.3
comp=Z,6.7nm,0.3s
WTTA Wattenberg 5.21 216 iPn Pn 01 47 54.0 +1.6
comp=Z,4.8nm,0.5s,SNR=8.0
WTTA Wattenberg 5.21 216 P Pn 01 47 54.2 +1.8
IBBN Ibbenburen 5.24 281 P Pn 01 47 54.6 +2.0
STU Stuttgart 5.26 241 P Pn 01 47 52.6 -0.3
MOTA Moosalm 5.34 220 ePn Pn 01 47 54.9 +0.6
comp=Z,3.2nm,0.5s
RETA Reutte 5.37 223 iPn Pn 01 47 54.8 +0.2
comp=Z,1.6nm,0.2s,SNR=9.0
ABTA Abfaltersbach 5.37 208 iPn Pn 01 47 56.1 +1.5
comp=Z,1.7nm,0.4s,SNR=6.8
TRPA Tarpa 5.38 127 P Pn 01 47 56.2 +1.6
SQTA Sankt Quirin 5.40 218 iPn Pn 01 47 56.1 +1.0
comp=Z,2.1nm,0.2s,SNR=7.7
KOE Koeppel 5.42 261 ePn Pn 01 47 56.1 +0.8
KOE eSn Sn 01 48 59.1 +0.7
comp=Z,30nm,0.8s
SSRD Sdr. Stenderup 5.52 318 iP Pn 01 47 56.5 +0.1
SSRD iS Sn 01 48 59.3 -1.2
SSRD IAML 01 49 04.1
comp=Z,40nm,0.7s
HOBG Hohbusch 5.55 267 ePn Pn 01 47 57.7 +0.7
HOBG eSn Sn 01 49 03.4 +1.9
comp=Z,45nm,2.1s
MORH Mrgy, Hungar 5.60 162 P Pn 01 47 58.9 +1.3
OSKU Oskarshamn 5.64 360 P Pn 01 47 60.0 +1.8
OSKU Oskarshamn 5.64 360 P Pn 01 47 60.0 +1.8
BGG Burgeitz 5.73 260 ePn Pn 01 48 00.0 +0.6
BYXU Byxelkrok 5.76 5 P Pn 01 48 01.9 +2.1
BYXU Byxelkrok 5.76 5 P Pn 01 48 01.9 +2.1
FABU Falkenberg 5.80 341 P Pn 01 48 00.8 +0.4
FABU Falkenberg 5.80 341 P Pn 01 48 00.8 +0.4
FABU iP Pb 01 48 01.0 -14
FABU iS Sn 01 49 07.0 -0.6
GNOU Gnosjoe 5.91 347 P Pn 01 48 02.8 +1.0
GNOU Gnosjoe 5.91 347 P Pn 01 48 02.8 +1.0
DAVA Damuels 5.91 226 ePn Pn 01 48 02.1 +0.1
comp=Z,1.1nm,0.3s
DAVA Damuels 5.91 226 P Pn 01 48 03.2 +1.1
STB Steinbach 5.94 264 ePn Pn 01 48 02.7 +0.5
EKSU Eksjoe 6.04 356 P Pn 01 48 05.2 +1.6
baz=174
EKSU S Sn 01 49 09.8 -3.7
EKSU Eksjoe 6.04 356 P Pn 01 48 05.2 +1.6
baz=174
EKSU S Sn 01 49 09.8 -3.7
HILG Hillesheim 6.11 262 ePn Pn 01 48 05.7 +1.0
PABE Paberze 6.12 47 eP Pn 01 48 07.8 +3.1
FUORN Ofenpass-Fuorn 6.27 220 P Pn 01 48 09.5 +2.5
DAVOX Davos/Dischmat 6.30 223 Pn Pn 01 48 07.9 +0.5
comp=Z,1.1nm,0.3s,baz=58,slow=9.7,SNR=12
DAVOX Sn Sn 01 49 17.2 -2.9
comp=Z,0.5nm,0.3s,baz=340,slow=20,SNR=1.4
DAVOX Lg Lg 01 49 42.5
comp=Z,0.5nm,0.3s,baz=0.0,slow=20,SNR=3.8
comp=Z,3.8nm,0.5s
ONAU Onsala 6.34 339 iP Pn 01 48 09.6 +1.9
ONAU iS Sn 01 49 18.5 -2.3
DRGR 6.43 135 P Pn 01 48 10.3 +1.1
MEM Membach 6.45 265 P Pn 01 48 11.8 +2.6
WLF Walferdange 6.63 257 P Pn 01 48 17.1 +5.4
TJOU Tjoern 6.99 340 iP Pn 01 48 18.6 +2.0
TJOU iS Sn 01 49 31.0 -5.7
RCHB Rochefort 7.04 263 P Pn 01 48 16.9 -0.6
NACGM Naroch 7.22 58 eP Pn 01 48 24.9 +5.1
comp=Z,111nm,0.8s,baz=247
MNK Minsk 7.67 63 iP Pn 01 48 19.8 -6.2
comp=E,111nm,0.8s
MNK iP Pn 01 48 19.8 -6.2
comp=N,10.0nm,0.9s
MNK iP Pn 01 48 19.8 -6.2
comp=Z,4.0nm,0.8s,baz=254
MNK iPP PnPn 01 48 28.2 -5.1
MNK iPPP PPP 01 48 33.6
MNK iS Sn 01 49 42.8 -11
MNK iSS SnSn 01 49 53.9 -11
MNK iSSS SSS 01 50 05.8
MNK iLQ LQ 01 50 21.7
MNK iLR LR 01 50 41.2
MNK iLRM MLR 01 50 47.8
MNK iLRM MLR 01 50 54.0
MNK iLRM MLR 01 50 55.4
STRU Stroemstad 8.00 341 eP Pn 01 48 30.3 -0.2
STRU Stroemstad 8.00 341 iP Pn 01 48 30.5 0.0
STRU iS Sn 01 49 54.3 -7.3
HOMB Homborsund 8.03 330 eP Pn 01 48 29.4 -1.4
HOMB eS Sn 01 49 57.3 -4.9
HOMB Homborsund 8.03 330 iS Sn 01 49 57.3 -4.9
KIEV Kiev 8.28 91 P Pn 01 48 36.1 +1.7

AKASG Malin Array Be 8.28 91 Pn Pn 01 48 34.4 -0.1
comp=Z,2.5nm,0.3s,baz=282,slow=12,SNR=14
AKASG Sn Sn 01 50 04.8 -3.8
comp=Z,0.9nm,0.3s,baz=277,slow=24,SNR=2.1
AKASG Lg Lg 01 50 55.7
comp=Z,0.2nm,0.3s,baz=278,slow=28,SNR=1.6
comp=Z,3.1nm,0.6s
MTSE Matsula 8.41 29 eP Pn 01 48 38.4 +2.4
HFS Hagfors 8.70 352 Pn Pn 01 48 40.1 0.0
comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=9.0
HFS Sn Sn 01 50 15.1 -3.7
comp=Z,0.4nm,0.3s,baz=171,slow=29,SNR=1.6
HFS LR LR 01 52 00.5
comp=Z,24nm,18.9s,baz=245,slow=37
comp=Z,1.7nm,0.5s
AAL Aland 8.90 13 eP Pn 01 48 43.6 +0.7
VSU Vasula 9.21 37 eP Pn 01 48 48.1 +1.1
NC602 NORSAR Array S 9.54 346 eP Pn 01 48 50.9 -0.8
NOA NORSAR Array B 9.88 346 Pn Pn 01 48 54.6 -1.8
baz=165,slow=12,SNR=6.2
comp=Z,0.5nm,0.5s
RAF Rauma 9.98 16 eP Pn 01 48 58.2 +0.5
FINES FINESS Array B 11.31 25 Pn Pn 01 49 14.4 -1.4
comp=Z,0.4nm,0.3s,baz=206,slow=9.3,SNR=14
FINES Sn Sn 01 51 13.8 -9.0
comp=Z,0.6nm,0.3s,baz=218,slow=22,SNR=6.5
comp=Z,3.4nm,0.6s
KEF Keuruu 11.64 21 eP Pn 01 49 21.4 +1.0
VAF Ylistaro 12.03 14 eP Pn 01 49 26.4 +0.8
EKA Eskdalemuir Ar 12.10 296 Pn Pn 01 49 23.5 -3.1
baz=99,slow=14
NSS Namsos 13.19 352 eP Pn 01 49 40.7 -0.7
LEIR Leirfjorden 14.68 355 eP Pn 01 50 01.9 +0.2
STOK Stokkvaagen 14.90 355 eP Pn 01 50 03.3 -1.5
KONS Konsvik 15.06 355 eP Pn 01 50 07.2 +0.3
FAUS Fauske 15.88 359 eP P 01 50 21.9 +0.4
KTK1 Kautokeino 17.84 8 eP Pn 01 50 41.3 -1.1
JETT Jettan, Norway 18.17 5 eP P 01 50 48.0 +1.1
TRO Tromso 18.18 3 eP Pn 01 50 45.4 -1.2
ARA0 ARCESS Array S 18.57 10 eP P 01 50 49.2 -2.1
ARCES ARCESS Array B 18.57 10 Pn P 01 50 48.2 -3.1
comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=13
comp=Z,1.3nm,0.4s
SPITS Spitsbergen Ar 26.73 0 P P 01 52 14.4 +0.6
comp=Z,3.3nm,0.8s,baz=163,slow=9.8,SNR=1.9
comp=Z,3.3nm,0.8s
BVAR Borovoye Array 32.56 66 P P 01 53 08.3 +2.6
comp=Z,1.6nm,0.5s,baz=308,slow=7.3,SNR=6.4
comp=Z,1.6nm,0.5s
KURBB Kurchatov Arra 38.14 66 P P 01 53 55.8 +2.1
comp=Z,0.7nm,0.7s,baz=300,slow=8.9,SNR=7.4
comp=Z,0.7nm,0.7s
TORD Torodi Ar. Bea 40.05 202 P P 01 54 10.8 +0.8
comp=Z,0.9nm,0.8s,baz=12,slow=8.6,SNR=5.0
comp=Z,0.9nm,0.8s
MKAR Makanchi Array 42.18 69 P P 01 54 30.3 +3.0
comp=Z,0.6nm,0.7s,baz=310,slow=9.4,SNR=4.1
comp=Z,0.6nm,0.7s
SONM Songino Array 54.88 55 P P 01 56 07.3 +2.1
comp=Z,0.4nm,0.5s,baz=267,slow=31,SNR=4.9
comp=Z,0.4nm,0.5s
YKA Yellowknife Ar 59.81 336 P P 01 56 41.5 +1.8
comp=Z,1.0nm,0.7s,baz=30,slow=6.8,SNR=8.2
comp=Z,1.0nm,0.7s
BBB Bella Bella 72.32 338 LR LR 02 30 27.9
comp=Z,15nm,18.8s,baz=200,slow=36
TXAR Lajitas Array 83.69 310 P P 01 59 04.3 +0.5
comp=Z,0.1nm,0.6s,baz=37,slow=3.8,SNR=2.1
comp=Z,0.1nm,0.6s

*MEX **22** 01:53:31.0±0.5, 14.86N×92.60W, h84km±5km, MD3.1*
*GCG **22** 01:53:33.2±0.5, 15.01N×92.30W, h68km±5km, MD3.7,*
Presumed earthquake
ISC 22 01:53:30.4±4.8, **14.9N**±0.2×**92.6W**±0.3, **h79**km±20km, **n8,**
σ0.33/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.30**	**88**	*eP*	**Pn**	**01 53 42.5**	**-0.1**
THIG				*eS*	**Sn**	**01 53 51.2**	**-0.4**
PATR	**El Naranjo**	**0.40**	**57**	*eP*	**Pn**	**01 53 43.6**	**0.0**
PATR				*eS*	**Sn**	**01 53 53.1**	**-0.2**
PAVE	**Pavencul**	**0.49**	**53**	*eP*	**Pn**	**01 53 44.5**	**+0.2**
PAVE				*eS*	**Sn**	**01 53 55.0**	**+0.6**
CHUJ	**Union Juarez**	**0.49**	**67**	*eP*	**Pn**	**01 53 44.2**	**-0.2**
CHUJ				*eS*	**Sn**	**01 53 54.6**	**0.0**
RTAL	**Retalhuleu**	**0.93**	**113**	*eP*	**Pn**	**01 53 48.9**	**+0.3**
RTAL				*eS*	**Sn**	**01 54 02.4**	**+0.1**
STG8	**El Palmar, Qui**	**1.27**	**110**	*iP*	Pn	01 53 49.0	-4.0
STG5	**El Palmar, Qui**	**1.29**	**112**	*iP*	Pn	01 53 49.1	-4.0
STG5				*iS*	Sn	01 54 01.7	-8.5
APG	**El Apazote**	**2.05**	**87**	*iP*	**Pn**	**01 54 02.8**	**-0.3**

*ISK **22** 01:59:34.1, 41.79N×43.80E, h16km, ML1.9/5*
*DRS **22** 01:59:34.2, 41.54N×43.95E, h0km*
*AFAD **22** 01:59:34.9, 41.79N×43.66E, h7km±2km, ML1.8*
*NORS **22** 01:59:35.2, 41.83N×43.83E, h11km, MPVA3.3*
ISC 22 01:59:34.4±1.1, **41.78N**±0.03×**43.82E**±0.03, **h10**km±11km,
n16, σ0.63/29, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBLG	**Delisi**	**0.69**	**94**	Pg	**Pg**	**01 59 48.1**	**+0.3**
TBLG				Sg	**Sb**	**01 59 58.8**	**+0.6**
EPOS	**Posof**	**0.86**	**252**	P	**Pg**	**01 59 50.1**	**-0.9**
EPOS				S	**Sg**	**02 00 02.9**	**+0.6**
EPOS				IAML		02 00 03.0	
	comp=N,77nm,0.5s						
EPOS				IAML		02 00 03.0	
	comp=E,51nm,0.4s						
AHAN	**Ardahan-Merkez**	**1.09**	**236**	P	**Pb**	**01 59 55.1**	**-0.3**
AHAN				S	**Sg**	**02 00 09.9**	**+0.4**
AHAN				IAML		02 00 14.0	
	comp=E,31nm,0.4s						
AHAN				IAML		02 00 20.0	
	comp=N,12nm,0.9s						
LACR	**Lac**	**1.10**	**19**	*eP*	**Pb**	**01 59 54.9**	**-0.7**
LACR				*eSg*	**Sg**	**02 00 09.7**	**-0.3**
EAK	**Akyaka**	**1.11**	**188**	P	**Pb**	**01 59 54.8**	**-0.9**
EAK				IAML		02 00 10.0	
	comp=N,39nm,0.8s						
EAK				S	**Sb**	**02 00 10.7**	**+0.5**
EAK				IAML		02 00 11.0	
	comp=E,14nm,0.4s						
DIGR	**Digorskoe uzhe**	**1.13**	**351**	*eP*	**Pb**	**01 59 55.3**	**-0.8**
DIGR				*eSg*	**Sg**	**02 00 10.9**	**+0.1**
KARS	**Kars**	**1.28**	**206**	Pn	**Pn**	**01 59 58.2**	**-0.2**
GOLE	**Ardahan-GÎ¶le**	**1.32**	**225**	P	**Pn**	**01 59 58.8**	**-0.2**
GOLE				S	**Sb**	**02 00 16.9**	**+0.5**
GOLE				IAML		02 00 17.0	
	comp=N,20nm,0.2s						
GOLE				IAML		02 00 17.0	
	comp=E,24nm,0.5s						
KORR	**Kora**	**1.32**	**8**	*eP*	**Pg**	**01 59 59.8**	**+0.1**
KORR				*eSg*	**Sg**	**02 00 17.8**	**+1.0**
DAGI	**Agillar**	**1.59**	**244**	P	**Pn**	**02 00 03.2**	**+0.5**
DAGI				S	**Sb**	**02 00 24.8**	**+0.6**
DAGI				IAML		02 00 25.0	
	comp=E,9.5nm,0.7s						
DAGI				IAML		02 00 30.0	
	comp=N,7.3nm,0.7s						
BATM	**Batumi**	**1.60**	**264**	Pn	**Pn**	**02 00 02.4**	**-0.3**
BATM				Sn	**Sn**	**02 00 22.9**	**-0.5**
SENK	**Senkaya-Erzuru**	**1.65**	**223**	Pn	**Pn**	**02 00 03.0**	**-0.5**
DBOC	**Borcka**	**1.67**	**256**	P	**Pn**	**02 00 04.6**	**+0.9**
DBOC				S	**Sb**	**02 00 26.7**	**+0.4**
DBOC				IAML		02 00 36.0	
	comp=E,4.6nm,0.2s						
DBAD	**Bademkaya**	**1.77**	**245**	P	**Pn**	**02 00 06.2**	**+1.1**
DBAD				S	**Sb**	**02 00 29.7**	**+0.5**
DBAD				IAML		02 00 32.0	
	comp=N,18nm,0.4s						
DBAD				IAML		02 00 37.0	
	comp=E,14nm,0.6s						
DDEM	**Demirkent**	**1.79**	**241**	P	**Pb**	**02 00 07.3**	**0.0**
DDEM				S	**Sb**	**02 00 30.8**	**+0.9**
DDEM				IAML		02 00 34.0	
	comp=N,22nm,0.4s						
DDEM				IAML		02 00 38.0	
	comp=E,16nm,0.4s						
TASB	**TASBURUN-IGDIR**	**1.82**	**170**	Pn	**Pn**	**02 00 05.9**	**0.0**

IDC 22 02:00:15.6±35.0, 55°64S×143°29E, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=641.9km s-min=208.1km az=140.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**23.79**	**356**	P	P	02 05 29.9	+0.2
	2.6nm,0.6s,baz=169,slow=10,SNR=7.4						
	2.6nm,0.6s						
ASAR	**Alice Springs**	**32.68**	**344**	P	P	02 06 49.6	+0.2
	1.2nm,0.6s,baz=167,slow=10,SNR=16						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**36.27**	**346**	P	P	02 07 19.9	-0.7
	1.2nm,0.6s,baz=176,slow=8.3,SNR=2.3						
	1.2nm,0.6s						

*NEIC **22** 02:02:29.9±1.3, 7.97S±0.08×147.98E±0.1, h94km±7km, mb4.4/25, Error ellipse: s-maj=18.2km s-min=6.0km az=127.0*

*IDC **22** 02:02:29.1±0.7, 8.00S×147.98E, h93km±4km, mb4.0/14, mbtmp4.3/15, MS3.1/5, Error ellipse: s-maj=21.6km s-min=7.8km az=108.0*

ISC 22 02:02:29.8±0.5, 8.04S±0.05×147.83E±0.09, h100km, n85, σ1s37/92, mb4.4/25, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.51**	**206**	P	**Pn**	**02 02 56.7**	**+0.4**
	306nm,0.3s,baz=358,slow=6.5,SNR=68						
PMG				S	**Sn**	**02 03 16.9**	**+0.6**
	762nm,0.3s,baz=343,slow=24,SNR=8.9						
PMG	**Port Moresby**	**1.51**	**206**	S	**Sn**	**02 03 16.6**	**+0.3**
PMG	**Port Moresby**	**1.51**	**206**	P	**Pn**	**02 02 57.3**	**+1.0**
PMG	**Port Moresby**	**1.51**	**206**	S	**Sn**	**02 03 17.2**	**+0.9**
PMG	**Port Moresby**	**1.51**	**206**		**Pn**	**02 02 57.1**	**+0.9**
PMG				Sn	**Sn**	**02 03 16.4**	**+0.1**
RABL	**Rabaul**	**5.76**	**49**		**Pn**	**02 03 51.9**	**-1.0**
COEN	**Coen**	**7.45**	**217**	P	**Pn**	**02 04 16.9**	**+1.0**
COEN	**Coen**	**7.45**	**217**	S	**Sn**	**02 05 37.8**	**-1.1**
COEN	**Coen**	**7.45**	**217**	Pn	**Pn**	**02 04 16.4**	**+0.5**
COEN				Sn	**Sn**	**02 05 37.4**	**-1.5**
TATA	**Tatamba Isabel**	**11.86**	**93**	P	Pn	02 05 23.6	+7.9
SAVO	**Savo Central**	**11.90**	**96**	P	Pn	02 05 23.9	+7.6
CTA	**Charters Tower**	**12.08**	**187**	LR	LR	02 09 29.9	
	comp=Z,73nm,18.6s,baz=34,slow=35						
CTAO	**Charters Tower**	**12.08**	**187**	Pn	**Pn**	**02 05 21.0**	**+2.4**
QIS	**Mount Isa**	**14.77**	**212**	P	**Pn**	**02 05 54.8**	**+1.0**
MTN	**Manton Dam**	**17.10**	**252**		**P**	**02 06 24.1**	**+1.2**
WB0	**Warramunga Arr**	**17.48**	**227**		**P**	**02 06 28.2**	**+1.0**
WB0				IAmb	IAmb	02 06 50.2	
	comp=Z,20nm,1.1s						
EIDS	**Eidsvold**	**17.51**	**170**	P	**Pn**	**02 06 28.5**	**+0.8**
WRA	**Warramunga Arr**	**17.63**	**226**	P	**P**	**02 06 29.4**	**+0.6**
	comp=Z,4.3nm,0.3s,baz=52,slow=11,SNR=85						
WRA				S	**Sn**	**02 09 39.8**	**-5.9**
	comp=Z,5.9nm,1.0s,baz=51,slow=21,SNR=6.4						
WRA	**Warramunga Arr**	**17.63**	**226**		**P**	**02 06 29.2**	**+0.4**
QLP	**Quilpie**	**18.76**	**190**	P	**Pn**	**02 06 44.0**	**+1.4**
KNRA	**Kununurra**	**20.13**	**246**	P	**P**	**02 06 56.1**	**0.0**
AS01	**Alice Springs**	**20.46**	**219**	P	**P**	**02 07 00.6**	**+1.0**
AS31	**Alice Springs**	**20.49**	**219**		**P**	**02 07 01.5**	**+1.6**
AS31				IAmb	IAmb	02 07 04.4	
	comp=Z,8.2nm,0.3s						
ASAR	**Alice Springs**	**20.49**	**219**	P	**P**	**02 07 01.7**	**+1.8**
	comp=Z,8.5nm,0.4s,baz=53,slow=8.8,SNR=86						
ASAR				S	**S**	**02 10 40.8**	**-3.1**
	comp=Z,2.3nm,0.9s,baz=36,slow=23,SNR=7.8						
	comp=Z,8.5nm,0.4s						
ASAR	**Alice Springs**	**20.49**	**219**		**P**	**02 07 01.3**	**+1.3**
INKA	**Innaminka**	**20.71**	**198**		**P**	**02 07 03.6**	**+1.3**
GUMO	**Guam**	**21.69**	**352**	LR	LR	02 14 45.3	
	comp=Z,19nm,18.7s,baz=134,slow=34						
ARMA	**Armidale**	**22.55**	**171**	P	**P**	**02 07 22.3**	**+0.5**
ARMA				IAmb	IAmb	02 07 41.7	
	comp=Z,14nm,1.2s						
CMSA	**Cobar Meteorol**	**23.46**	**185**	P	**P**	**02 07 31.9**	**+1.4**
FITZ	**Fitzroy Crossi**	**23.79**	**243**	LR	LR	02 16 24.1	
	comp=Z,63nm,19.5s,baz=12,slow=35						
FITZ	**Fitzroy Crossi**	**23.79**	**243**	P	**P**	**02 07 34.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**23.79**	**243**	P	**P**	**02 07 33.6**	**+0.1**
STKA	**Stephens Creek**	**24.42**	**193**	P	**P**	**02 07 40.3**	**+1.2**
	comp=Z,7.2nm,0.5s,baz=353,slow=9.0,SNR=22						
STKA				LR	LR	02 17 36.2	
	comp=Z,35nm,18.4s,baz=24,slow=37						
	comp=Z,7.2nm,0.5s						
STKA	**Stephens Creek**	**24.42**	**193**	P	**P**	**02 07 40.8**	**+1.7**
MMRI	**Maumere**	**25.33**	**267**	P	**P**	**02 07 47.3**	**-0.3**
HTT	**Hallett**	**26.58**	**197**	P	**P**	**02 08 00.8**	**+2.1**
BBOO	**Buckleboo**	**26.96**	**202**	P	**P**	**02 08 03.9**	**+1.8**
BBOO	**Buckleboo**	**26.96**	**202**	P	**P**	**02 08 01.8**	**-0.3**
BBOO				IAmb	IAmb	02 08 14.3	
	comp=Z,18nm,1.3s						
FORT	**Forrest**	**29.21**	**217**	P	**P**	**02 08 22.8**	**+0.6**
FORT				IAmb	IAmb	02 08 23.6	
	comp=Z,7.2nm,0.6s						
TOO	**Toolangi**	**29.48**	**184**	P	**P**	**02 08 25.2**	**+0.8**
MBWA	**Marble Bar**	**30.09**	**241**	P	**P**	**02 08 30.7**	**+0.7**
BBJI	**Bungbulang**	**39.81**	**268**	P	**P**	**02 09 53.6**	**-0.1**
MJAR	**Matsushiro Arr**	**45.26**	**349**	P	**P**	**02 10 36.2**	**-1.1**
	comp=Z,5.0nm,0.8s,baz=170,slow=8.4,SNR=11						
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**45.26**	**349**	P	**P**	**02 10 37.1**	**-0.3**
MJAR				IAmb	IAmb	02 10 38.7	
	comp=Z,3.4nm,0.8s						
SSE	**Sheshan**	**46.54**	**328**	P	**P**	**02 10 48.3**	**+0.8**
SSE				S	**S**	**02 17 31.3**	**+2.6**
SSE				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,26nm,3.0s						
SSE				LR	LR		
	comp=N,180nm,13.5s						
SSE				LR	LR		
	comp=E,140nm,13.7s						
KSRS	**Korea Array**	**48.94**	**339**	P	**P**	**02 11 06.4**	**+0.5**
	comp=E,2.0nm,0.7s,baz=158,slow=8.6,SNR=11						
KSRS				pP	**pP**	**02 11 28.9**	**-0.8**
	comp=E,1.2nm,0.8s,baz=154,slow=9.0,SNR=2.6						
	comp=E,1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**53.94**	**346**	P	**P**	**02 11 43.4**	**+0.3**
	comp=E,2.0nm,0.8s,baz=181,slow=11,SNR=4.1						
	comp=E,2.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.94**	**346**	P	**P**	**02 11 42.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**54.95**	**299**	P	**P**	**02 11 52.5**	**+1.6**
CMAR				pP	**pP**	**02 12 14.5**	**-1.0**
	comp=E,1.2nm,0.3s,baz=108,slow=6.1,SNR=4.6						
	comp=E,0.9nm,0.3s,baz=131,slow=5.3,SNR=1.6						
	comp=E,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**54.95**	**299**	P	**P**	**02 11 51.5**	**+0.6**
PZH	**PanZhiHua**	**56.37**	**309**	P	**P**	**02 12 04.8**	**+3.6**
HHC	**Hu-ho-hao-te**	**58.99**	**328**	*eP*	**P**	**02 12 23.3**	**+4.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
LZH	**Lanzhou**	**60.29**	**320**	*eP*	**P**	**02 12 26.5**	**-1.8**
LZH				pP	pP	02 12 44.5	-8.5
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
PEA0B	**Petropavlovsk-**	**61.49**	**7**	P	**P**	**02 12 35.4**	**-0.4**
PETK	**Petropavlovsk-**	**61.49**	**7**	P	**P**	**02 12 35.7**	**-0.1**
	comp=Z,5.8nm,0.9s,baz=183,slow=8.3,SNR=8.3						
	comp=Z,5.8nm,0.9s						
PETK	**Petropavlovsk-**	**61.49**	**7**	P	**P**	**02 12 35.4**	**-0.5**
LSA	**Lhasa**	**66.12**	**307**	P	**P**	**02 13 08.1**	**+0.8**
SONM	**Songino Array**	**66.58**	**331**	P	**P**	**02 13 10.4**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=138,slow=7.6,SNR=6.5						
	comp=Z,1.2nm,0.9s						
SONM	**Songino Array**	**66.58**	**331**	P	**P**	**02 13 09.5**	**+0.1**
SONM				IAmb	IAmb	02 13 11.4	
	comp=Z,4.1nm,1.3s						
WMQ	**Urumqi**	**74.87**	**319**	*eP*	**P**	**02 14 01.4**	**+1.6**
WMQ				PcP	**PcP**	**02 14 13.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
MKAR	**Makanchi Array**	**79.59**	**321**	P	**P**	**02 14 26.6**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=108,slow=6.5,SNR=19						
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	**79.59**	**321**		**P**	**02 14 26.0**	**0.0**
MAKZ	**Makanchi**	**79.79**	**320**	P	**P**	**02 14 26.9**	**-0.2**
MAKZ				IAmb	IAmb	02 14 28.7	
	comp=Z,5.0nm,0.9s						
PDGK	**Podgornoye**	**80.11**	**316**	P	**P**	**02 14 29.3**	**+0.2**
TIXI	**Tiksi**	**80.51**	**354**	LR	LR	02 47 16.7	
	comp=Z,34nm,21.9s,baz=193,slow=33						
ZALV	**Zalesovo Beam**	**81.17**	**328**	P	**P**	**02 14 33.5**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=72,slow=4.8,SNR=7.4						
	comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**81.94**	**180**	P	**P**	**02 14 39.0**	**+0.6**
	comp=Z,8.1nm,0.6s,baz=266,slow=0.5,SNR=59						
QSPA				pP	**pP**	**02 15 03.5**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=62,slow=0.9,SNR=2.6						
	comp=Z,8.1nm,0.6s						
QSPA	**South Pole Qui**	**81.94**	**180**	P	**P**	**02 14 38.9**	**+0.5**
QSPA				IAmb	IAmb	02 14 39.8	
	comp=Z,7.1nm,0.7s						
BOOM	**Boomskoye usch**	**82.29**	**315**	P	**P**	**02 14 40.4**	**-0.3**
BOOM				IAmb	IAmb	02 14 42.7	
	comp=Z,5.1nm,0.8s						
KURK	**Kurchatov**	**83.33**	**323**	P	**P**	**02 14 45.5**	**-0.1**
KURK				IAmb	IAmb	02 14 46.9	
	comp=Z,5.0nm,1.1s						
KURBB	**Kurchatov Arra**	**83.35**	**323**	P	**P**	**02 14 45.4**	**-0.3**
	comp=Z,2.2nm,1.0s,baz=112,slow=4.0,SNR=15						
	comp=Z,2.2nm,1.0s						
E19K	**Redstone River**	**84.77**	**18**	P	**P**	**02 14 52.9**	**+0.3**
E19K				IAmb	IAmb	02 15 20.7	
	comp=Z,3.6nm,0.8s						
C19K	**Lookout Ridge**	**85.06**	**17**	P	**P**	**02 14 54.2**	**+0.2**
C19K				IAmb	IAmb	02 15 26.9	
	comp=Z,7.5nm,1.2s						
KKAR	**Karatay Array**	**86.30**	**314**	P	**P**	**02 15 00.2**	**-0.5**
ILAR	**Eielson Array**	**87.02**	**23**	P	**P**	**02 15 01.7**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=261,slow=5.4,SNR=4.7						
ILAR				pP	**pP**	**02 15 26.2**	**-3.1**
	comp=Z,0.8nm,0.8s,baz=253,slow=5.2,SNR=4.9						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**87.02**	**23**	P	**P**	**02 15 03.0**	**-0.8**
BVAR	**Borovoye Array**	**88.89**	**324**	P	**P**	**02 15 12.3**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=102,slow=6.1,SNR=3.1						
	comp=Z,0.8nm,0.6s						
TROLL	**Troll, Antarti**	**96.95**	**190**	P	**P**	**02 15 49.7**	**-0.2**
	comp=Z,54nm,0.5s						
GERES	**GERESS Array B**	**124.04**	**325**	PKP	**PKPdf**	**02 21 15.2**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=49,slow=2.6,SNR=4.2						
CPUP	**Villa Florida**	**138.00**	**145**	PKP	**PKPdf**	**02 21 43.2**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=181,slow=6.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**146.35**	**282**	PKPbc	**PKPbc**	**02 22 00.7**	**+0.5**
	comp=Z,6.1nm,0.8s,baz=78,slow=2.9,SNR=30						
TORD				pPKPbc	**pPKPdf**	**02 22 26.4**	**0.0**
	comp=Z,1.8nm,0.8s,baz=74,slow=2.9,SNR=2.9						
BDFB	**Brasilia**	**151.72**	**146**	PKPbc	**PKPbc**	**02 22 13.9**	**0.0**
	comp=Z,7.5nm,0.8s,baz=244,slow=2.0,SNR=11						
BDFB				pPKPbc	**pPKPbc**	**02 22 40.0**	**-1.4**
	comp=Z,4.7nm,0.6s,baz=218,slow=3.8,SNR=5.2						
BDFB	**Brasilia**	**151.72**	**146**		**PKPbc**	**02 22 13.1**	**-0.9**
DBIC	**Dimbokro**	**152.88**	**269**	PKPbc	**PKPbc**	**02 22 16.7**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=149,slow=1.8,SNR=4.4						
DBIC	**Dimbokro**	**152.88**	**269**		**PKPbc**	**02 22 15.6**	**-0.9**

*IDC **22** 02:11:03.3±2.4, 23.62S×179.90W, h520km±26km, mb3.4/6, mbtmp4.3/7, Error ellipse: s-maj=39.0km s-min=22.4km az=168.0*

ISC 22 02:11:04.2±1.2, 23.5S±0.2×179.9W±0.2, h532km, n7, σ0s93/8, mb3.9/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.08**	**341**	P	**P**	**02 12 42.4**	**-0.5**
	2.8nm,0.4s,baz=248,slow=23,SNR=8.9						
CTA	**Charters Tower**	**31.54**	**270**	P	**P**	**02 16 43.9**	**+0.8**
	11nm,0.5s,baz=88,slow=11,SNR=18						
	11nm,0.5s						
ASAR	**Alice Springs**	**42.16**	**260**	P	**P**	**02 18 10.3**	**0.0**
	2.2nm,0.5s,baz=100,slow=7.3,SNR=24						
ASAR				ScP	**ScP**	**02 22 53.9**	**+1.6**
	0.5nm,0.6s,baz=102,slow=4.8,SNR=2.6						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**42.50**	**266**	P	**P**	**02 18 12.5**	**-0.4**
	3.6nm,0.5s,baz=93,slow=8.5,SNR=61						
	3.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.92**	**265**	P	**P**	**02 19 16.1**	**-0.5**
	2.3nm,0.5s,baz=103,slow=7.5,SNR=6.6						
	2.3nm,0.5s						
QSPA	**South Pole Qui**	**66.54**	**180**	P	**P**	**02 21 00.5**	**-0.6**
	1.0nm,0.8s,baz=45,slow=1.4,SNR=2.1						
	1.0nm,0.8s						
TXAR	**Lajitas Array**	**90.19**	**58**	P	**P**	**02 23 08.6**	**+0.5**
	0.4nm,0.8s,baz=222,slow=6.2,SNR=6.2						
	0.4nm,0.8s						

*JSN **22** 02:26:48.5±0.7, 18.97N×76.92W, h28km±6km, MD3.9, Presumed earthquake*

*SSNC **22** 02:26:49.1±1.2, 18.96N×76.90W, h20km±10km, MD3.4, MW3.5, Presumed earthquake*

ISC 22 02:26:44.7±1.3, 19.01N±0.03×76.89W±0.05, h7km±14km, n20, σ1s13/30, 7C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNJ	**Bonny Gate**	**0.69**	**185**	⇑*iP*	**Pn**	**02 27 00.4**	**-0.5**
BNJ				⇓*iS*	**Sb**	**02 27 09.2**	**+0.4**
STH	**Stony Hill**	**0.93**	**175**	⇑*iP*	**Pb**	**02 27 03.6**	**+0.4**
STH				⇑*iP*	**Pb**	**02 27 03.7**	**+0.4**
GWJ	**Greenwich**	**0.94**	**171**	⇑*iP*	**Pb**	**02 27 04.0**	**+0.6**
GWJ				*iP*	**Pb**	**02 27 04.0**	**+0.6**
CVJ	**Coleyville**	**0.99**	**218**	⇑*iP*	**Pg**	**02 27 04.4**	**+0.6**
CVJ				*iS*	**Sg**	**02 27 17.0**	**+0.2**
MTDJ	**Mount Denham**	**0.99**	**218**	*iP*	**Pg**	**02 27 04.3**	**+0.5**
MTDJ				*ePg*	**Pn**	**02 27 05.5**	**+0.3**
MTDJ				*eS*	**Sg**	**02 27 15.8**	**-0.9**
MTDJ				*eSg*	**Sb**	**02 27 17.6**	**0.0**
HOJ	**Hope**	**1.01**	**173**	⇓*iP*	**Pb**	**02 27 05.2**	**-0.1**
HOJ				⇓*iP*	**Pb**	**02 27 05.7**	**+1.2**
LMGC	**Las Mercedes**	**1.05**	**354**	*eP*	**Pn**	**02 27 06.3**	**+0.4**
CHIV	**Chivirico**	**1.06**	**25**	*iP*	**Pn**	**02 27 07.0**	**+1.0**
CHIV				*eS*	**Sg**	**02 27 17.9**	**-1.0**
PCJ	**Portland Cotta**	**1.29**	**192**	⇑*iP*	**Pn**	**02 27 08.9**	**-0.2**
MCJ	**Malvern**	**1.32**	**215**	*iP*	**Pn**	**02 27 09.6**	**-0.1**
MCJ				⇑*iS*	**Sb**	**02 27 24.8**	**-2.2**
YAR	**Yar**	**1.44**	**20**	*iP*	**Pg**	**02 27 12.7**	**+0.3**
GTBY	**Guantanamo Bay**	**1.91**	**61**	⇓*iP*	**Pb**	**02 27 19.1**	**-0.8**
GTBY	**Guantanamo Bay**	**1.91**	**61**	*iP*	**Pb**	**02 27 19.0**	**-0.8**
HLGC	**Holguin**	**2.02**	**22**	*iP*	**Pb**	**02 27 21.8**	**-0.1**
QMBU	**Quimbuelo**	**2.29**	**58**	*iP*	**Pn**	**02 27 23.7**	**+0.8**
CCCC	**Cccc**	**2.33**	**339**	*iP*	**Pn**	**02 27 24.1**	**+0.7**
NMDO	**Nuevo Mundo**	**2.36**	**49**	*iP*	**Pb**	**02 27 26.4**	**-1.2**
LCCY	**Blossom Villag**	**3.09**	**283**	*iP*	**Pn**	**02 27 32.8**	**-1.1**
FSCY	**Frank Sound, G**	**4.07**	**275**	*iP*	**Pn**	**02 27 45.5**	**-1.9**
CAMR	**Camarioca**	**5.81**	**315**	*iP*	**Pn**	**02 28 14.9**	**+3.6**

IDC 22 02:53:06.0±4.7, 19.07S×177.23W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=195.0km s-min=39.0km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.08**	**243**	P	P	03 00 35.1	0.0
	0.8nm,0.5s,baz=78,slow=9.3,SNR=1.9						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**45.53**	**260**	P	P	03 01 27.9	0.0
	0.6nm,0.3s,baz=97,slow=7.4,SNR=9.9						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**45.57**	**255**	P	P	03 01 27.8	-0.4
	0.8nm,0.5s,baz=90,slow=7.7,SNR=14						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**86.77**	**13**	P	P	03 05 51.6	0.0
	0.1nm,0.5s,baz=208,slow=4.7,SNR=1.5						
	0.1nm,0.5s						

IDC 22 03:06:14.3±1.7, 5.69S×126.41E, h0km, mb3.8/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=166.2km s-min=28.8km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.13**	**152**	Pn	Pn	03 10 02.3	-0.3
	0.2nm,0.3s,baz=330,slow=11,SNR=6.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**19.27**	**159**	P	P	03 10 40.9	+0.2
	0.1nm,0.3s,baz=340,slow=11,SNR=1.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**65.21**	**328**	P	P	03 16 57.3	-0.3
	0.6nm,0.7s,baz=132,slow=6.0,SNR=4.6						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**69.56**	**330**	P	P	03 17 25.5	+0.4
	0.4nm,0.3s,baz=117,slow=7.4,SNR=3.1						
	0.4nm,0.3s						

*BER **22** 03:13:23.3±2.1, 78.69N×5.03E, h18km±11km, Mw3.5, ML1.7(DNK), Confirmed Earthquake*

*DNK **22** 03:13:24.3±2.8, 78.72N×5.20E, h36km±23km, ML1.7, Presumed earthquake*

ISC 22 03:13:21.2±2.0, 78.73N±0.07×4.72E±0.04, h32km±19km, n16, σ2s29/28, 1C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.42**	**79**	⇑*iP*	**Pn**	**03 13 45.5**	**+0.7**
KBS				IAML		03 13 46.3	
	comp=Z,46nm,0.6s						
KBS				*eS*	**Sn**	**03 14 01.4**	**-0.9**
KBS	**Kingsbay**	**1.42**	**79**	*i* P	**Pn**	**03 13 45.5**	**+0.7**
KBS				*i* S	**Sn**	**03 14 00.9**	**-1.4**
BRBB	**Barentsburg B**	**2.02**	**104**	*eP*	**Pn**	**03 13 54.0**	**+1.1**
BRBB				*ePg*	**Pb**	**03 13 55.6**	**-1.6**
BRBB				*eS*	**Sn**	**03 14 16.1**	**-1.0**
BRBA	**Barentsburg A**	**2.04**	**105**	*eP*	**Pn**	**03 13 54.8**	**+1.6**
BRBA				IAML		03 13 56.0	
	comp=Z,18nm,0.3s						
BRBA				*eS*	**Sn**	**03 14 16.4**	**-1.1**
SPA0	**Spitsbergen Ar**	**2.41**	**98**	*eP*	**Pn**	**03 14 00.3**	**+1.9**
SPA0				IAML		03 14 00.8	
	comp=Z,20nm,0.3s						
SPA0				*eS*	**Sn**	**03 14 26.4**	**-0.3**
HSPB	**Hornsund (broa**	**2.87**	**122**	*eS*	**Sn**	**03 14 36.3**	**-1.6**
NOR	**Nord**	**4.63**	**318**	*eP*	Pn	03 14 27.7	-1.0
NOR				*eS*	**Sn**	**03 15 22.3**	**+1.1**
NOR	**Nord**	**4.63**	**318**	*eP*	**Pn**	**03 14 30.1**	**+1.3**
NOR				*i* S	**Sn**	**03 15 20.6**	**-0.7**
NOR				IAML		03 15 23.2	
	comp=Z,3.6nm,0.5s						
HOPEN	**Hopen**	**4.88**	**107**	*eS*	**Sn**	**03 15 25.1**	**-2.5**
DAG	**Danmarks Havn**	**5.32**	**260**	*eP*	**Pn**	**03 14 40.3**	**+2.0**
DAG				*eS*	**Sn**	**03 15 35.9**	**-2.4**
DAG	**Danmarks Havn**	**5.32**	**260**	*i* P	**Pn**	**03 14 40.4**	**+2.1**
DAG				*i* S	**Sn**	**03 15 35.6**	**-2.8**
DAG				IAML		03 15 41.6	
	comp=Z,3.5nm,0.4s						
DBG	**Daneborg**	**7.26**	**245**	*eP*	**Pn**	**03 15 07.1**	**+2.3**
DBG				*eS*	**Sn**	**03 16 22.0**	**-3.9**
DBG				IAMLHF		03 16 26.1	
	comp=Z,0.4nm,0.2s						
DBG	**Daneborg**	**7.26**	**245**	*i* P	**Pn**	**03 15 08.3**	**+3.5**
DBG				*i* S	**Sn**	**03 16 21.8**	**-4.2**
DBG				IAML		03 16 25.3	
	comp=Z,1.2nm,0.3s						
JNW	**Jan Mayen West**	**8.44**	**210**	*eP*	**Pn**	**03 15 24.9**	**+3.9**
JNE	**Jan Mayen East**	**8.46**	**210**	*eP*	**Pn**	**03 15 24.5**	**+3.2**
JNE				*eS*	**Sn**	**03 16 55.1**	**-0.4**
NEEM	**North Greenlan**	**11.21**	**291**	*i* P	**Pn**	**03 15 58.8**	**-0.4**
NEEM				*i* S	Sn	03 17 54.1	-9.1
NEEM				IAML		03 18 02.8	
	comp=Z,2.3nm,0.9s						

*IDC **22** 03:15:36.0±1.4, 2.60S×127.54E, h0km, mb3.6/4, mbtmp3.7/5, ML3.6/1, MS2.8/3, Error ellipse: s-maj=128.9km s-min=22.2km az=69.0*

*DJA **22** 03:15:40.0±1.1, 3.3S±4.1×12.7E±1.1, h18km±11km, M3.9/9, mB4.6/1, mb4.4/2, MLv3.7/9, Mw(mB)3.9/1*

ISC 22 03:15:39.2±1.2, 3.15S±0.09×125.9E±0.1, h21km, n10, σ2s06/9, mb3.8/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**1.09**	**4**	P	**Pn**	**03 15 59.0**	**-0.3**
SANI				S	**Sb**	**03 16 12.8**	**-0.4**
GTOI	**Gorontalo**	**4.74**	**322**	P	**Pb**	**03 16 59.2**	**-2.5**
GTOI				S	**Sb**	**03 17 58.6**	**+0.3**
SIJI	**Sorong**	**5.82**	**67**	LR	LR	03 19 03.2	
	comp=Z,71nm,19.3s,baz=224,slow=51						
WRA	**Warramunga Arr**	**18.61**	**154**	P	**P**	**03 19 53.2**	**-2.2**
	0.2nm,0.3s,baz=339,slow=11,SNR=8.9						
	2.8nm,0.9s						
ASAR	**Alice Springs**	**21.82**	**160**	P	**P**	**03 20 29.5**	**-0.7**
	1.1nm,0.6s,baz=343,slow=10,SNR=11						
	1.1nm,0.6s						
KSRS	**Korea Array**	**40.44**	**2**	LR	LR	03 42 58.5	
	comp=Z,6.8nm,18.8s,baz=190,slow=41						
SONM	**Songino Array**	**53.57**	**344**	P	**P**	**03 24 59.7**	**+0.9**
	0.6nm,0.7s,baz=146,slow=8.0,SNR=3.7						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**62.80**	**328

ARGC S Sn 03 17 35.8 -1.2
SDV Santo Domingo 2.68 140 P Pn 03 17 19.7 +1.6
2µm,0.5s,baz=331,slow=5.3,SNR=1198
SDV S Sn 03 17 50.5 +0.2
11µm,0.4s,baz=6.2,slow=19,SNR=49
SDV Santo Domingo 2.68 140 Pn 03 17 19.7 +1.6
SDV Sn 03 17 49.2 -1.0
SDV Santo Domingo 2.68 140 *eP* Pn 03 17 20.7 +2.6
SDV *eS* Sn 03 17 52.7 +2.4
SDV Santo Domingo 2.68 140 *eP* Pn 03 17 23.6 +2.4
SDV *eS* Sn 03 17 50.9 +0.6
OCAC Ocana 2.85 199 P Pn 03 17 21.8 +1.5
OCAC S Sn 03 17 56.1 +2.0
SJCC San Jacinto, C 2.94 249 P Pn 03 17 21.7 +0.3
SJCC S Sn 03 17 56.3 +0.2
SJCC San Jacinto, C 2.94 249 *eP* Pn 03 17 21.9 +0.6
SJCC *eS* Sn 03 17 55.5 -0.6
PAMC Pamplona, Colo 3.60 185 P Pn 03 17 32.7 +2.1
PAMC S Sn 03 18 08.5 -4.1
BRJC Barrancabermej 4.17 199 P Pn 03 17 39.7 +1.8
BRJC S Sn 03 18 27.7 +2.0
BARC Barichara 4.40 190 P Pn 03 17 43.7 +2.5
BARC S Sn 03 18 31.6 +0.1
LCBC Los crdobas, 4.44 242 P Pn 03 17 42.8 +1.4
LCBC S Sn 03 18 28.5 -3.6
UREC San Jos de Ur 4.44 225 P Pn 03 17 43.4 +1.9
UREC S Sn 03 18 32.7 +0.5
PTBC PUERTO BERRIO, 4.84 205 P Pn 03 17 47.3 +0.4
PTBC S Sn 03 18 41.8 0.0
RUSC La Rusia 5.07 188 P Pn 03 17 51.9 +1.4
6µm32µm4µm,0.9s
RUSC S Sn 03 18 51.2 +3.0
6µm32µm4µm,0.9s
RUSC La Rusia 5.07 188 *eP* Pn 03 17 52.5 +2.0
RUSC *eS* Sn 03 18 48.7 +0.6
APAC Apartado, Choc 5.13 234 P Pn 03 17 51.8 +1.0
7µm9µm1µm,0.8s
APAC S Sn 03 18 47.5 -1.3
7µm9µm1µm,0.8s
DBBC Dabeiba 5.43 224 P Pn 03 17 56.1 +1.1
DBBC S Sn 03 18 55.2 -1.1
FUNV FUNVISIS 5.50 94 *eP* Pn 03 17 55.1 -0.8
FUNV *eS* Sn 03 18 52.6 -5.5
SPBC San Pablo de B 5.52 198 P Pn 03 17 57.4 +1.2
9µm16µm965nm,0.5s
SPBC S Sn 03 18 59.9 +1.4
9µm16µm965nm,0.5s
MEDEC Medelln, Ant 5.62 215 P Pn 03 18 01.7 +4.1
MEDEC S Sn 03 19 03.3 +2.3
NORC Norcasia 5.89 205 P Pn 03 18 02.1 +0.9
10µm607nm,0.5s
NORC S Sn 03 19 07.7 +0.3
10µm607nm,0.5s
CBOC Ciudad Bolivar 6.20 216 P Pn 03 18 07.6 +2.2
10µm521nm,0.5s
CBOC S Sn 03 19 18.5 +3.5
10µm521nm,0.5s
ROSC El Rosal 6.37 198 P Pn 03 18 10.0 +2.1
1µm,0.7s,baz=12,slow=5.2,SNR=120
ROSC S Sn 03 19 10.0 -9.5
1µm,0.7s,baz=228,slow=22,SNR=4.9
ROSC El Rosal 6.37 198 Pn 03 18 10.1 +2.1
ROSC El Rosal 6.37 198 P Pn 03 18 10.5 +2.6
4µm16µm2µm,0.9s
ROSC S Sn 03 19 22.5 +3.1
4µm16µm2µm,0.9s
GUY2C Guyana, Caldas 6.41 208 P Pn 03 18 10.0 +1.4
16µm2µm,0.7s
GUY2C S Sn 03 19 20.5 -0.1
16µm2µm,0.7s
CHIC Chingaza 6.42 192 P Pn 03 18 10.5 +1.8
11µm1µm,0.9s
CHIC S Sn 03 19 24.5 +3.7
11µm1µm,0.9s
PTAC Punta Ardita, 6.55 235 P Pn 03 18 11.2 +1.1
12µm716nm,0.9s
PTAC S Sn 03 19 19.4 -4.0
12µm716nm,0.9s
CVER Cruz Verde, Cu 6.60 195 P Pn 03 18 14.1 +2.9
CVER S Sn 03 19 28.5 +3.2
CMAN1 Manizales, Cal 6.62 208 P Pn 03 18 16.2 +5.0
CMAN1 S Sn 03 19 31.4 +6.0
SOLC Bahia Solano 6.83 227 P Pn 03 18 15.7 +1.8
SOLC S Sn 03 19 30.0 -0.2
VILC Villavicencio, 6.92 191 P Pn 03 18 16.8 +1.6
VILC S Sn 03 19 34.6 +2.1
BCIP Isla Barro Col 7.55 257 Pn 03 18 22.1 -1.5
BCIP Isla Barro Col 7.55 257 P Pn 03 18 22.0 -1.6
6µm569nm,0.8s
BCIP S Sn 03 19 41.8 -5.8
6µm569nm,0.8s
BCIP Isla Barro Col 7.55 257 *eP* Pn 03 18 22.7 -0.9
BCIP *eS* Sn 03 19 43.3 -4.3
BCIP Isla Barro Col 7.55 257 P Pn 03 18 23.0 -0.6
PRAC Prado 7.61 199 P Pn 03 18 25.2 +0.7
7µm7µm713nm,0.9s
PRAC S Sn 03 19 51.3 +2.2
7µm7µm713nm,0.9s
ZANG Zanguenga, Cho 7.63 256 *eP* Pn 03 18 24.0 -0.8
ZANG *eS* Sn 03 19 44.1 -5.5
BANI BANI 7.65 15 Pn 03 18 21.6 -3.6
PIZC Pizarro, Choco 7.72 220 P Pn 03 18 28.2 +2.2
5µm493nm,1.0s
PIZC S Sn 03 19 53.7 +1.9
5µm493nm,1.0s
SDD Santo Domingo 7.84 17 Pn 03 18 24.9 -2.6
RNCC Cayo Roncador, 7.97 290 P Pn 03 18 24.0 -5.3
RNCC S Sn 03 19 48.0 -10
SDDR Presa de Saban 8.05 7 P Pn 03 18 32.2 +1.7
SDDR Presa de Saban 8.05 7 ||*iS* Sn 03 19 53.0 -7.0
SDDR Presa de Saban 8.05 7 *iP* Pn 03 18 31.1 +0.6
PCJ Portland Cotta 8.18 326 ‖*eP* Pn 03 18 30.6 -1.5
HOJ Hope 8.19 329 *eP* Pn 03 18 31.2 -1.1
GWJ Greenwich 8.23 330 *eP* Pn 03 18 31.2 -1.9
GWJ *eP* 03 18 31.3
GWJ *iS* Sn 03 19 54.7 -10
STH Stony Hill 8.28 329 *eP* Pn 03 18 31.8 -1.7
STH *eP* 03 18 31.9
DR12 Loma Pena Alta 8.32 20 Pn 03 18 30.1 -4.0
AZU Azuero 8.39 249 P Pn 03 18 34.3 -0.8
3µm304nm,0.8s
AZU Azuero 8.39 249 ||*iP* Pn 03 18 34.5 -0.5
PCDR Punta Cana, DR 8.46 27 Pn 03 18 33.1 -2.8
SERC Banco Serrana, 8.46 294 P Pn 03 18 32.4 -3.6
4µm318nm,1.1s
SERC S Sn 03 19 59.4 -10
4µm318nm,1.1s
BNJ Bonny Gate 8.55 329 *eP* Pn 03 18 35.7 -1.6
BNJ *iS* Sn 03 20 01.5 -11
SC01 Santiago de lo 8.58 11 Pn 03 18 37.8 +0.2
MCJ Malvern 8.62 324 *eP* Pn 03 18 37.5 -0.8
CRPR Cabo Rojo, PR 8.68 35 Pn 03 18 34.2 -4.7
MLPR Magueyes Islan 8.69 36 Pn 03 18 34.2 -4.6
BETC Betania 8.76 200 P Pn 03 18 39.6 -0.5
MTDJ Mount Denham 8.78 326 Pn 03 18 38.9 -1.5
MTDJ Mount Denham 8.78 326 P Pn 03 18 38.2 -2.2
4µm234nm,0.8s
MTDJ Mount Denham 8.78 326 *iP* Pn 03 18 38.7 -1.7
MTDJ *eS* Sn 03 20 06.1 -12
MTDJ Mount Denham 8.78 326 P Pn 03 18 39.6 -0.8
CVJ Coleyville 8.78 326 *eP* Pn 03 18 38.6 -1.8
CVJ *iS* Sn 03 20 07.1 -11
JAMC Jamundi, Valle 8.78 209 P Pn 03 18 40.7 +0.1
3µm2µm282nm,0.9s
JAMC S Sn 03 20 16.0 -2.0
3µm2µm282nm,0.9s
PRSN Puerto Rico Se 8.83 34 Pn 03 18 36.8 -4.2
MACC Macarena, Meta 8.87 190 P Pn 03 18 41.4 -0.2
OBIP Obispado Ponce 9.00 38 Pn 03 18 38.7 -4.6
PRVC Isla de Provid 9.10 286 P Pn 03 18 41.0 -3.7
PRVC Isla de Provid 9.10 286 *eP* Pn 03 18 40.3 -4.4
AOPR Arecibo Observ 9.15 36 Pn 03 18 41.2 -4.2
GARC Garzon, Huila 9.24 200 P Pn 03 18 47.7 +0.9
6µm399nm,0.9s
GMAL Guarumal, Vera 9.28 251 P Pn 03 18 46.6 -0.6
3µm169nm,1.0s
GMAL Guarumal, Vera 9.28 251 *eP* Pn 03 18 46.9 -0.4
GTBY Guantanamo Bay 9.30 344 P Pn 03 18 46.1 -1.3
7µm369nm,1.3s
GTBY Guantanamo Bay 9.30 344 ||*iP* Pn 03 18 46.2 -1.3
GTBY Guantanamo Bay 9.30 344 *iP* Pn 03 18 46.0 -1.3
GTBY Guantanamo Bay 9.30 344 P Pn 03 18 46.0 -1.3
SJG San Juan 9.33 40 P Pn 03 18 43.7 -4.1
306nm,0.4s,baz=218,slow=12,SNR=228
SJG S Sn 03 20 18.6 -12
472nm,0.4s,baz=351,slow=20,SNR=16
SJG San Juan 9.33 40 Pn 03 18 43.0 -4.9
SJG San Juan 9.33 40 P Pn 03 18 42.6 -5.3
SJG San Juan 9.33 40 *eP* Pn 03 18 41.2 -6.6
SJG x 03 20 16.9
03 20 16.9
SJG San Juan 9.33 40 *e* 03 18 43.0 -4.9
SJG San Juan 9.33 40 P Pn 03 18 42.8 -5.2
PDPR Patillas Dam, 9.35 41 Pn 03 18 45.5 -5.3
POPC Popayan, Colom 9.38 207 P Pn 03 18 48.4 -0.3
2µm4µm369nm,1.0s
QMBU Quimbuelo 9.49 346 *i* P Pn 03 18 47.5 -2.5
KKNTU Kakint⁰ 9.51 258 *eP* Pn 03 18 48.3 -2.1
HUMP Col San Antoni 9.55 41 Pn 03 18 45.5 -5.3
CHIV Chivirico 9.78 337 Pn 03 18 51.0 -2.9
CHIV Chivirico 9.78 337 *i* P Pn 03 18 51.4 -2.4
FLOC Florencia 9.86 199 P Pn 03 18 54.2 -0.8
4µm459nm,1.1s
NMDO Nuevo Mundo 9.87 346 Pn 03 18 52.9 -2.2
NMDO Nuevo Mundo 9.87 346 *i* P Pn 03 18 53.0 -2.2
NMDO ||*iS* Sn 03 20 20.2 -24
MOAC Moa 9.96 346 *i* P Pn 03 18 54.7 -1.7
LMGC Las Mercedes 10.09 334 ||*iP* Pn 03 18 55.9 -2.2
BBAC Balboa, Cauca 10.10 209 P Pn 03 18 59.3 +0.8
2µm185nm,0.9s
YAR Yar 10.12 338 *i* P Pn 03 18 55.5 -2.9
BQTLY Boquete Panama 10.16 259 *eP* Pn 03 18 58.3 -1.0
BRU2 Volcan 10.38 259 *eP* Pn 03 19 01.1 -1.1
BRU2 Volcan 10.38 259 P Pn 03 19 01.5 -0.7
ALCO Alturas Coton, 10.48 260 *eP* Pn 03 19 02.7 -0.9
HLGC Holguin 10.49 341 *i* P Pn 03 19 03.8 +0.2
GRTK Grand Turk 10.57 6 P Pn 03 19 04.9 +0.2
GRGR Grenville 10.59 83 Pn 03 18 59.8 -5.1
GRGR Grenville 10.59 83 *eP* Pn 03 19 00.3 -4.7
GRGR *eS* Sn 03 20 46.6 -15
GRGR Grenville 10.59 83 *eP* Pn 03 18 58.1 -6.8
GRGR x 03 20 51.9
GRGR Grenville 10.59 83 P Pn 03 19 02.2 -4.7
GRSS Sisters 10.64 82 *eP* Pn 03 19 55.0 -11
GRSS *eS* Sn 03 20 54.6 -8.3
NELY Ciudad Neily 10.65 259 *eP* Pn 03 19 05.3 -0.5
TRN Trinidad (W) 10.80 91 *eP* Pn 03 19 04.2 -3.6
TRN *eS* Sn 03 20 52.7 -14
TRN Trinidad (W) 10.80 91 *eP* Pn 03 19 05.2 -2.6
TRN *eS* Sn 03 21 02.9 -3.8
GCMP Grenada, Carri 10.84 81 *eP* Pn 03 19 03.5 -5.0
GCMP Grenada, Carri 10.84 81 *eP* Pn 03 19 05.2 -3.2
FITO Golfito 10.86 259 *eP* Pn 03 19 07.6 -1.0
BURE Buenos Aires 10.93 262 *eP* Pn 03 19 08.7 -0.9
PTLC Puerto Leguiza 10.97 193 P Pn 03 19 13.1 +2.9
3µm302nm,0.8s
LCOCO El Coco 11.02 267 *eP* Pn 03 19 09.7 -1.0
SAJE San Jernim 11.06 263 *eP* Pn 03 19 09.2 -2.3
SABA Saba 11.07 52 Pn 03 19 07.7 -3.7
SABA Saba 11.07 52 *eP* Pn 03 19 06.1 -5.3
SABA *eS* Sn 03 20 59.2 -14
SABA Saba 11.07 52 P Pn 03 19 09.0 -2.4
PANP Palmar Norte 11.08 261 *eP* Pn 03 19 11.9 +0.2
PIRO Carate, Puerto 11.09 258 Pn 03 19 08.7 -3.0
PIRO Carate, Puerto 11.09 258 *eP* Pn 03 19 10.3 -1.4
RESJ San Isidro (Tu 11.11 266 *eP* Pn 03 19 10.5 -1.6
EDPE Pejibaye, P 11.15 262 *eP* Pn 03 19 12.6 -0.1
TRT2 Tortugero 11.16 269 *eP* Pn 03 19 10.6 -2.0
VERB Verbena 11.17 266 *eP* Pn 03 19 11.3 -1.6
ABRB Las Abras (San 11.18 266 *eP* Pn 03 19 11.3 -1.9
VTCV VTCV, Calle Va 11.19 266 *eP* Pn 03 19 11.5 -1.8
SEUS St. Eustatius 11.20 53 *eP* P 03 19 23.5 +0.3
SEUS *eS* Sn 03 21 01.6 -15
BLUN Bluefields 11.21 276 P Pn 03 19 12.1 -1.2
CVTR Volcan Turrial 11.22 266 *eP* Pn 03 19 13.4 -0.4
VTR0 Volcan Turrial 11.22 266 *eP* Pn 03 19 13.8 -0.1
CVTQ Turrialba Volc 11.23 266 *eP* Pn 03 19 12.6 -1.4
SKI Saint Kitts 11.30 55 *eP* P 03 19 26.2 +1.8
SKI *eS* Sn 03 21 04.1 -15
VICA Volcano Irazu 11.31 266 *eP* Pn 03 19 14.0 -1.1
CVIMO Finca Echandi 11.40 266 *eP* Pn 03 19 17.9 +1.7
LCCY Blossom Villag 11.41 320 *iP* Pn 03 19 13.4 -2.5
CCCC Cccc 11.42 334 *iP* Pn 03 19 13.2 -2.9
SMRT St. Maarten 11.45 51 Pn 03 19 13.0 -3.5
SMRT St. Maarten 11.45 51 *eP* Pn 03 19 10.2 -6.3
SMRT x 03 21 09.9
SMRT St. Maarten 11.45 51 P Pn 03 19 13.0 -3.5
TULM Tulcn-Chalpat 11.50 208 P Pn 03 19 17.8 +0.2
4µm526nm,1.1s
TBG Guadaloupe-3 11.53 64 *eP* Pn 03 19 21.7 +4.1
TBG *eS* Sn 03 21 15.1 -9.4
VBV1 V. Barva 11.54 267 *eP* Pn 03 19 16.1 -2.0
SLBI Saint Lucia, B 11.56 74 *eP* Pn 03 19 05.8 -12
SLBI *eS* Sn 03 21 11.5 -14
HDC Heredia 11.57 266 Pn 03 19 15.6 -2.7
HDC Heredia 11.57 266 *eP* Pn 03 19 19.1 +0.8
HDC Heredia 11.57 266 *eP* Pn 03 19 20.4 +2.1
HDC Heredia 11.57 266 P Pn 03 19 19.5 +1.2
DSLB Salisbury 11.57 66 *eP* Pn 03 19 09.9 -8.2
DSLB *eS* Sn 03 21 13.5 -12
FDFM Morne la Roset 11.58 70 Pn 03 19 11.3 -7.0
MMLZ Guadeloupe Bro 11.59 63 *eP* Pn 03 19 15.0 -3.4
MMLZ *eS* Sn 03 21 13.3 -12
BIM Bigot 11.60 71 *eP* Pn 03 19 12.4 -6.2
BIM *eS* Sn 03 21 08.6 -18
BIM Bigot 11.60 71 *eP* Pn 03 19 19.0 +0.5
BIM *eS* Sn 03 21 16.0 -10
BIM Bigot 11.60 71 P Pn 03 19 14.9 -3.6
DHSZ Broadband at M 11.60 62 *eP* Pn 03 19 16.9 -1.6
DHSZ *eS* Sn 03 21 13.2 -13
SLAC Saint Lucia, A 11.60 74 *eP* Pn 03 19 14.9 -3.7
SLAC *eS* Sn 03 21 17.5 -8.7
SVN Savane Anatole 11.60 69 *eP* P 03 19 30.3 +2.5
SVN *eS* Sn 03 21 15.5 -11
CBE Ff, Capester 11.65 63 Pn 03 19 16.1 -3.2
PICV PH. Pirrs 11.69 265 *eP* Pn 03 19 20.8 +1.0
DWS Wesley 11.72 66 *eP* P 03 19 26.1 -2.9
DWS *eS* Sn 03 21 25.9 -3.2
CASC Dorado de Casc 11.82 205 P Pn 03 19 21.6 0.0
3µm301nm,1.0s
ATEO Atenas 11.84 266 *eP* Pn 03 19 21.9 +0.1
FSCY Frank Sound, G 11.88 315 *iP* Pn 03 19 17.8 -4.4
TRB2 Turrubares 11.91 266 *eP* Pn 03 19 23.3 +0.6
VACR Volcan Arenal 12.09 269 *eP* Pn 03 19 25.6 +0.6
CEDE Laguna Cedeo 12.11 269 *eP* Pn 03 19 26.3 +0.9
ARE1 Arenal 1 12.13 269 *eP* Pn 03 19 26.0 +0.4
VARE2 V. Arenal 12.13 269 *eP* Pn 03 19 26.3 +0.6
CUSE Cuicocha Este 12.15 210 P Pn 03 19 26.3 +0.1
2µm93nm,0.7s
TABAC Tabacon 12.17 269 *eP* Pn 03 19 26.8 +0.6
DSDZ La Diserade, G 12.22 63 *eP* Pn 03 19 25.2 -1.6
DSDZ *eS* Sn 03 21 27.5 -14
GDSD La Dsirade Is 12.22 63 Pn 03 19 21.6 -5.2
OTAV Otavalo 12.23 210 Pn 03 19 26.3 -1.1
OTAV Otavalo 12.23 210 P Pn 03 19 27.3 -0.1
2µm926nm76nm,1.0s
OTAV Otavalo 12.23 210 *eP* Pn 03 19 26.8 -0.5
OTAV Otavalo 12.23 210 P Pn 03 19 27.5 +0.1
ANWB Willy Bob 12.25 56 Pn 03 19 26.3 -0.9
ANWB Willy Bob 12.25 56 *eP* Pn 03 19 25.2 -2.0
ANWB x 03 21 26.0
ANWB Willy Bob 12.25 56 P Pn 03 19 26.7 -0.4
COTE Lago Cote 12.31 269 *eP* Pn 03 19 26.8 -1.3
JTS Las Juntas de 12.37 268 P Pn 03 19 29.2 +0.4
32nm,0.9s,baz=87,slow=13,SNR=19
JTS S Sn 03 21 36.0 -8.8
47nm,0.6s,baz=296,slow=22,SNR=5.8
JTS Las Juntas de 12.37 268 Pn 03 19 27.5 -1.3
JTS Las Juntas de 12.37 268 P Pn 03 19 29.0 +0.2
JTS Las Juntas de 12.37 268 *eP* Pn 03 19 29.3 +0.5
JTS Las Juntas de 12.37 268 P Pn 03 19 29.7 +0.9
TENO El Achiote 12.37 270 *eP* Pn 03 19 29.7 +0.8
TILA Tilaran 12.37 269 *eP* Pn 03 19 28.2 -0.6
UPAL Upala 12.40 271 *eP* Pn 03 19 28.2 -0.9
SIUN Universidad Ur 12.41 284 Pn 03 19 25.5 -3.5
TIMP Tierras Morena 12.41 269 *eP* Pn 03 19 28.9 -0.5
CLARA Aguas Claras 12.56 270 *eP* Pn 03 19 31.2 -0.1
BUAI Buenos Aires 12.71 271 *eP* Pn 03 19 33.0 -0.3
BBGH Gun Hill 12.74 79 *eP* Pn 03 19 28.6 -5.0
BBGH *eS* Sn 03 21 36.6 -17
LAPC Finca la Perla 12.81 270 *eP* Pn 03 19 33.2 -1.5
ALIBA Liberia Airpor 12.93 270 *eP* Pn 03 19 37.0 +0.9
JUD3 Juan Diaz 3 12.95 268 Pn 03 19 36.1 -0.4
JUD3 Juan Diaz 3 12.95 268 *eP* Pn 03 19 35.8 -0.7

BOAB BOACO BROADBAN 13.09 278 Pn 03 19 37.4 -0.9
BOAB BOACO BROADBAN 13.09 278 P Pn 03 19 37.2 -1.0
SLOR San Lorenzo - 13.10 208 Pn 03 19 38.0 -0.8
PIAT Ana Tenorio 13.23 207 P Pn 03 19 41.4 +1.0
2µm106nm,0.9s
MGV Manicaragua 13.26 328 *i* P Pn 03 19 40.7 +0.3
CNGN Cerro Negro 14.10 278 P Pn 03 19 51.0 -0.4
BOAV Boa Vista 14.52 125 Pn 03 19 55.8 -1.0
BOAV Boa Vista 14.52 125 P Pn 03 19 55.4 -1.4
BOAV Boa Vista 14.52 125 *eP* Pn 03 19 55.6 -1.2
BOAV *eS* Sn 03 22 36.5 -0.5
CAMR Camaroca 14.78 326 *iP* P 03 20 06.0 +2.8
SOR Soroa 15.54 321 *iP* P 03 20 12.3 +0.6
MTO3 Montecristo 16.91 283 Pn 03 20 26.2 -0.5
ESQI Esquipulas 16.92 284 Pn 03 20 26.5 -0.3
TEIG Tepich 17.85 303 P P 03 20 37.2 0.0
TEIG Tepich 17.85 303 P Pn 03 20 39.5 +1.5
APG El Apazote 18.07 285 P Pn 03 20 41.0 +0.2
4.1nm,1.2s,baz=114,slow=12,SNR=20
MACA Manacapuru-AM 18.23 140 P 03 20 41.9 +0.6
MACA Manacapuru-AM 18.23 140 *eP* P 03 20 41.2 -0.2
MACA *epP* pP 03 21 02.2 +1.3
MACA *eS* S 03 23 56.8 -7.9
CZSB Cruzeiro do Su 18.56 181 P 03 20 45.0 0.0
CZSB Cruzeiro do Su 18.56 181 *eP* P 03 20 44.7 -0.3
CZSB *eS* S 03 24 08.2 -3.1
ATAH Atahualpa 18.93 199 P Pn 03 20 50.9 -0.5
418nm,0.8s,baz=18,slow=6.0,SNR=104
ATAH S S 03 24 20.1 +0.6
26nm,1.0s,baz=114,slow=21,SNR=3.1
ATAH LR LR 03 29 42.4
comp=Z,845nm,20.6s,baz=21,slow=42
MDP Montagnes des 20.39 105 P P 03 21 04.0 -1.0
71nm,0.7s,baz=22,slow=9.7,SNR=3.5
MDP S S 03 24 44.6 -3.1
9.8nm,0.9s,baz=210,slow=23,SNR=1.2
71nm,0.7s
BBSR BB Station 22.47 17 P P 03 21 26.4 -0.4
BBSR BB Station 22.47 17 P P 03 21 28.5 +1.8
ITTB Itaituba 22.50 132 *eP* P 03 21 26.3 -1.0
ITTB *eS* S 03 25 24.5 -2.4
CMIG Matias Romero 22.65 288 LR LR 03 32 11.5
comp=Z,137nm,18.4s,baz=68,slow=41
NNA Nana 23.21 191 LR LR 03 32 32.7
comp=Z,522nm,20.5s,baz=358,slow=41
NNA Nana 23.21 191 P P 03 21 34.8 +0.5
NNA Nana 23.21 191 P P 03 21 34.9 +0.6
154A Montrose 23.71 337 P P 03 21 39.7 +1.1
Y58A Scranton 23.80 345 P P 03 21 39.2 -0.1
X58A Rowland 24.34 346 P P 03 21 44.1 -0.1
152A Waverly Hall 24.41 334 P P 03 21 45.1 +0.2
250A Grady 24.54 331 P P 03 21 46.0 -0.1
GOGA Godfrey 24.56 337 P 03 21 46.3 +0.1
GOGA Godfrey 24.56 337 P P 03 21 48.1 +1.9
Z47A Carrollton 26.41 329 IAmb IAmb 03 22 32.5
comp=Z,64nm,1.0s
VILB Vilhena 26.65 153 P 03 22 06.1 +0.7
VILB Vilhena 26.65 153 *eP* P 03 22 05.1 -0.3
VILB *eS* S 03 26 30.2 -2.8
TKL Tuckaleechee C 26.68 339 LR LR 03 34 16.3
comp=Z,215nm,18.6s,baz=154,slow=40
CPCT Cooper Cave 26.77 338 P 03 22 05.5 -0.7
U54A Nelsons Funny 26.85 343 IAmb IAmb 03 22 48.2
comp=Z,36nm,1.0s
CLDB Colider 27.24 142 *eP* P 03 22 09.6 -1.0
CLDB Colider 27.24 142 P P 03 22 09.2 -1.5
LPAZ La Paz 27.39 171 P P 03 22 12.1 -0.6
comp=Z,111nm,0.5s,baz=340,slow=5.2,SNR=62
LPAZ LR LR 03 33 27.2
comp=Z,180nm,20.5s,baz=2.0,slow=37
comp=Z,11nm,0.5s
LPAZ La Paz 27.39 171 P 03 22 11.7 -0.9
LPAZ IAmb IAmb 03 22 59.9
comp=Z,38nm,0.8s
LPAZ La Paz 27.39 171 *eP* P 03 22 11.1 -1.5
LPAZ *epP* pP 03 22 38.0 +2.1
LPAZ La Paz 27.39 171 P P 03 22 12.2 -0.5
TZTN Tazewell 27.41 340 P P 03 22 13.6 +1.6
R55A Marlinton 28.08 347 IAmb IAmb 03 23 12.9
comp=Z,45nm,1.6s
PRPB Parauapebas 28.18 126 *eP* P 03 22 18.8 -0.3
PRPB *epP* pP 03 22 45.8 +3.4
T50A Nancy 28.28 339 IAmb IAmb 03 23 04.4
comp=Z,53nm,1.9s
PB18 Visviri 28.50 174 IAmb IAmb 03 23 21.5
comp=Z,46nm,0.9s
PB18 Visviri 28.50 174 P P 03 22 21.1 -1.3
WVT Waverly 28.70 333 P 03 22 22.4 -1.1
WVT Waverly 28.70 333 P P 03 22 24.7 +1.2
SIV San Ignacio 29.02 157 LR LR 03 34 29.9
comp=Z,229nm,20.1s,baz=356,slow=37
PB16 IPOC Station P 29.24 174 P P 03 22 27.0 -2.0
PTLB Pontes e Lacer 29.33 153 *eP* P 03 22 28.3 -0.9
PTLB *epP* pP 03 22 55.6 +3.1
PB12 IPOC Station P 29.45 176 P P 03 22 27.6 -2.7
HBVL Hebbronville 29.47 307 IAmb IAmb 03 22 57.7
comp=Z,40nm,0.9s
P53A Whipple 29.53 346 P 03 22 28.4 -2.3
N58A Sunbury 30.01 353 IAmb IAmb 03 23 34.6
comp=Z,65nm,1.7s
WSPT Westport, CT 30.11 359 IAmb IAmb 03 23 26.0
comp=Z,97nm,2.0s
O53A New Philadelph 30.21 347 IAmb IAmb 03 23 18.2
comp=Z,31nm,1.1s
WHAR Wooly Hollow 30.24 326 IAmb IAmb 03 23 04.4
comp=Z,29nm,1.1s
BBSD Serra de San D 30.29 157 *eP* P 03 22 36.9 -0.8
BBSD *epP* pP 03 23 04.0 +2.9
M63A Gales Ferry 30.34 1 P P 03 22 37.1 -0.7
PSGCX Pisagua 30.44 176 IAmb IAmb 03 22 38.7
comp=Z,20nm,0.7s
M57A Sunshine Farm, 30.55 353 IAmb IAmb 03 23 18.4
comp=Z,24nm,1.1s
GO01 Chusmiza 30.59 174 P P 03 22 39.0 -1.8
KSPA Keystone Colle 30.63 355 IAmb IAmb 03 22 42.7
comp=Z,20nm,0.8s
PAMR Moraine State 30.64 348 IAmb IAmb 03 23 19.1
comp=Z,86nm,1.7s
ACSO Alum Creek Sta 30.64 344 IAmb IAmb 03 22 43.3
comp=Z,20nm,0.9s
S44A Carbondale 30.64 333 IAmb IAmb 03 23 09.3
comp=Z,18nm,0.7s
PB11 IPOC Station P 30.64 175 P P 03 22 38.4 -2.4
SNDB Serra Nova Dou 30.95 137 *eP* P 03 22 43.2 -0.3
T42A Van Buren 30.96 330 IAmb IAmb 03 23 10.6
comp=Z,17nm,0.8s
OLIL Olney 31.02 336 IAmb IAmb 03 22 45.9
comp=Z,28nm,0.9s
PB08 IPOC Station P 31.06 174 IAmb IAmb 03 22 46.1
comp=Z,22nm,0.9s
PB08 IPOC Station P 31.06 174 P P 03 22 43.6 -1.2
ZAIG Zacatecas 31.11 296 IAmb IAmb 03 23 13.4
comp=Z,67nm,1.5s
ZAIG Zacatecas 31.11 296 P P 03 22 47.1 +1.8
PAOC Oil Creek Stat 31.11 349 IAmb IAmb 03 23 12.5
comp=Z,43nm,1.3s
BINY Binghamton 31.29 355 IAmb IAmb 03 23 24.7
comp=Z,24nm,1.1s
BINY Binghamton 31.29 355 P P 03 22 47.8 +1.5
WES Weston 31.33 2 IAmb IAmb 03 22 48.9
comp=Z,42nm,1.0s
L61B Northampton 31.38 360 IAmb IAmb 03 23 24.0
comp=Z,37nm,1.6s
SALV Santo Antonio 31.38 148 *eP* P 03 22 46.4 -1.0
SALV *epP* pP 03 23 14.0 +3.2
L56A Greenwood 31.39 353 IAmb IAmb 03 22 49.5
comp=Z,31nm,1.1s
FVM French Village 31.40 332 IAmb IAmb 03 23 14.7
comp=Z,38nm,1.1s
P46A Rosedale 31.44 338 IAmb IAmb 03 22 50.3
comp=Z,23nm,0.8s
HRV Adam Dziewonsk 31.44 1 P P 03 22 48.0 +0.5
HRV IAmb IAmb 03 23 46.2
comp=Z,30nm,0.9s
HRV Adam Dziewonsk 31.44 1 P P 03 22 49.1 +1.5
HRV Adam Dziewonsk 31.44 1 P P 03 22 48.8 +1.2
HRV pP pP 03 23 11.6 +0.5
Q44A Meyer Farm, Va 31.54 335 IAmb IAmb 03 23 17.1
comp=Z,18nm,0.8s
SMTB Santa Maria do 31.56 128 *eP* P 03 22 48.7 -0.3
SMTB *eS* S 03 27 47.9 -2.3
K62A Royalston 31.59 0 IAmb IAmb 03 22 51.2
comp=Z,32nm,1.2s
N49A Columbus Grove 31.61 343 IAmb IAmb 03 22 51.0

comp=Z,14nm,0.6s
CCM Cathedral Cave 31.84 331 P P 03 22 52.4 +1.2
CCM pP **pP 03 23 17.1 +2.5**
K57A Scipio Center 31.86 354 IAmb IAmb 03 22 53.4
comp=Z,32nm,1.0s
MMNY Mt. Morris Dam 32.02 352 IAmb IAmb 03 23 30.6
comp=Z,31nm,1.2s
N47A Urbana 32.04 341 IAmb IAmb 03 22 54.5
comp=Z,29nm,1.1s
PB02 IPOC Station P 32.16 176 IAmb IAmb 03 22 54.9
comp=Z,35nm,0.8s
PB02 IPOC Station P 32.16 176 P P **03 22 53.1 -1.1**
J61A Chester 32.27 360 IAmb IAmb 03 22 57.6
comp=Z,27nm,1.1s
J59A Piesco 32.45 357 IAmb IAmb 03 23 34.5
comp=Z,34nm,1.3s
J57A Williamstown 32.49 355 IAmb IAmb 03 22 58.6
comp=Z,21nm,0.9s
R40A Maddies Statio 32.52 330 IAmb IAmb 03 23 24.0
comp=Z,23nm,1.0s
MEDO Medina 32.52 352 IAmb IAmb 03 22 59.0
comp=Z,31nm,0.9s
PB07 IPOC Station P 32.57 176 IAmb IAmb 03 22 57.0
comp=Z,24nm,0.9s
S39A Bolivar 32.59 328 IAmb IAmb 03 23 24.8
comp=Z,20nm,0.9s
TUL3 Leonard 32.66 323 IAmb IAmb 03 23 25.7
comp=Z,16nm,0.9s
PB09 IPOC Station P 32.69 175 IAmb IAmb 03 24 14.5
comp=Z,30nm,1.1s
W35A Tecumseh 32.80 321 IAmb IAmb 03 23 26.8
comp=Z,55nm,1.4s
PB03 IPOC Station P 32.90 175 IAmb IAmb 03 23 00.2
comp=Z,24nm,0.8s
PB03 IPOC Station P 32.90 175 P P **03 22 59.3 -1.4**
K50A Casco 32.94 346 IAmb IAmb 03 23 02.5
comp=Z,25nm,1.0s
NCB Newcomb 32.94 358 IAmb IAmb 03 23 39.7
comp=Z,32nm,1.0s
HDIL Hopedale 33.06 336 IAmb IAmb 03 23 02.7
comp=Z,10nm,0.6s
LBNH Lisbon 33.17 1 IAmb IAmb 03 23 05.2
comp=Z,40nm,1.0s
PP1B Ponte de Pedra 33.23 148 *e*P P **03 23 02.9 -0.6**
PP1B epP **pP 03 23 30.5 +3.5**
M44A Midewin, Midew 33.30 338 IAmb IAmb 03 23 05.2
comp=Z,26nm,0.8s
OK052 Battle Ridge R 33.32 322 IAmb IAmb 03 23 30.9
comp=Z,34nm,1.0s
P40A Paris 33.40 332 IAmb IAmb 03 23 31.4
comp=Z,23nm,1.0s
ARAG Araguaiana, MT 33.41 142 *e*P P **03 23 04.1 -1.0**
ARAG *e*pP **pP 03 23 31.6 +2.9**
ARAG *e*S **S 03 28 15.4 -3.5**
H62A Milan 33.52 2 IAmb IAmb 03 24 15.8
comp=Z,20nm,0.9s
WVL Waterville 33.58 4 IAmb IAmb 03 24 17.9
comp=Z,18nm,1.0s
LONY Lake Ozonia 33.60 357 IAmb IAmb 03 23 44.6
comp=Z,35nm,1.4s
OK048 Pawnee Station 33.69 323 P P **03 23 07.3 0.0**
OK048 IAmb IAmb 03 23 34.1
comp=Z,45nm,1.3s
WMOK Wichita Mounta 33.74 319 P P **03 23 07.5 -0.3**
WMOK Wichita Mounta 33.74 319 P P **03 23 07.8 0.0**
DELO Deloro Mine 33.75 353 IAmb IAmb 03 23 45.4
comp=Z,22nm,1.2s
FRNY Flat Rock 33.78 358 IAmb IAmb 03 23 10.2
comp=Z,26nm,1.1s
N41A Harden Midland 33.83 334 IAmb IAmb 03 23 09.8
comp=Z,33nm,1.1s
COIM Forte Coimbra 33.87 155 *e*P P **03 23 08.6 -0.4**
COIM *e*pP **pP 03 23 33.7 +1.1**
EMMW East Machias 33.90 6 IAmb IAmb 03 24 21.2
comp=Z,49nm,1.2s
J47A Sunmer 33.94 344 IAmb IAmb 03 23 11.1
comp=Z,29nm,0.8s
P38A Dawn 34.18 330 IAmb IAmb 03 23 39.3
comp=Z,16nm,0.9s
SADO Sadowa 34.20 351 LR LR 03 36 36.0
comp=Z,117nm,20.8s,baz=188,slow=35
SADO Sadowa 34.20 351 IAmb IAmb 03 23 49.2
comp=Z,26nm,1.2s
PKME Peaks-Kenny Pk 34.30 4 IAmb IAmb 03 23 14.7
comp=Z,26nm,0.9s
TMB01 Midkiff 34.31 311 IAmb IAmb 03 23 40.1
comp=Z,22nm,0.9s
NBPS Pedro II - PI 34.37 115 *e*P P **03 23 12.2 -1.3**
NBPS *e*S **S 03 28 32.0 -1.8**
GGN Saint George 34.38 7 IAmb IAmb 03 23 15.5
comp=Z,27nm,0.8s
G65A Princeton 34.38 6 IAmb IAmb 03 24 27.9
comp=Z,30nm,1.0s
HAL Halifax 34.41 11 IAmb IAmb 03 23 15.1
comp=Z,25nm,1.1s
TXAR Lajitas Array 34.43 307 P P **03 23 14.4 +0.5**
comp=Z,0.8nm,0.4s,baz=129,slow=8.7,SNR=26
TXAR pPcP 03 26 13.9
comp=Z,3.4nm,1.0s,baz=131,slow=4.7,SNR=4.9
TXAR ScP **ScP 03 29 22.1 -0.9**
comp=Z,2.3nm,1.1s,baz=124,slow=6.2,SNR=5.5
TXAR LR LR 03 41 14.4
comp=Z,36nm,18.2s,baz=117,slow=43
TXAR Lajitas Array 34.43 307 P P **03 23 13.6 -0.3**
TXAR **ScP 03 29 22.4 -0.6**
TX31 Lajitas Ar. Si 34.43 307 P P **03 23 14.1 +0.2**
MNTQ Montreal, Queb 34.45 358 IAmb IAmb 03 23 15.9
comp=Z,39nm,1.2s
DKNS Dickens 34.55 315 IAmb IAmb 03 23 43.3
comp=Z,22nm,1.2s
MNHN Monahans 34.65 310 IAmb IAmb 03 23 42.4
comp=Z,15nm,0.9s
KAN01 Argonia South 34.67 323 IAmb IAmb 03 23 41.3
comp=Z,22nm,0.9s
TPB05 Hovey Rd 34.88 309 IAmb IAmb 03 23 45.4
comp=Z,24nm,1.1s
F64A Sherman 34.96 5 IAmb IAmb 03 23 20.1
comp=Z,17nm,0.9s
ELIS Ellis County 34.98 320 P P **03 23 18.1 -0.4**
L40A Anamosa 35.11 335 IAmb IAmb 03 23 46.2
comp=Z,21nm,0.6s
NBMO Morrinhos-CE 35.17 112 *e*P P **03 23 19.9 -0.4**
TRQ Mont Tremblant 35.20 357 IAmb IAmb 03 23 58.3
comp=Z,21nm,1.0s
TPB01 Permian Basin 35.23 309 IAmb IAmb 03 23 48.3
comp=Z,23nm,1.4s
AQDB Aquidauana 35.28 152 P P **03 23 21.2 0.0**
AQDB Aquidauana 35.28 152 *e*P P **03 23 20.3 -0.8**
AQDB Aquidauana 35.28 152 P P **03 23 21.4 +0.3**
PB14 IPOC Station P 35.41 177 P P **03 23 21.8 -0.7**
JFWS Jewell Farm 35.44 337 IAmb IAmb 03 23 23.5
comp=Z,22nm,0.8s
SALTA 35.46 170 P P **03 23 21.7 -1.5**
MURT Porto Murtinho 35.51 156 *e*P P **03 23 21.9 -1.2**
AMTX Amarillo 35.75 316 IAmb IAmb 03 23 53.4
comp=Z,49nm,1.5s
BDFB Brasilia 35.78 137 P P **03 23 25.4 -0.2**
comp=Z,6.0nm,0.7s,baz=304,slow=10,SNR=12
BDFB LR LR 03 39 40.2
comp=Z,134nm,21.7s,baz=302,slow=39
comp=Z,6.0nm,0.7s
I42A Draeger Farm, 35.80 339 IAmb IAmb 03 23 26.7
comp=Z,18nm,0.8s
SDBA SAO DESIDERIO 35.83 130 *e*P P **03 23 24.8 -1.2**
MSTX Muleshoe 36.00 314 IAmb IAmb 03 23 55.4
comp=Z,26nm,1.0s
VHRN Van Horn 36.09 308 IAmb IAmb 03 23 55.8
comp=Z,35nm,1.4s
TPB28 36.11 310 IAmb IAmb 03 23 56.4
comp=Z,12nm,1.2s
D62A Allapoint, All 36.12 4 IAmb IAmb 03 23 30.3
comp=Z,22nm,1.0s
I40A Norwalk 36.41 338 IAmb IAmb 03 23 31.8
comp=Z,25nm,0.9s
MNTX Cornudas Mount 36.80 309 IAmb IAmb 03 24 01.9
comp=Z,37nm,1.6s
MNTX Cornudas Mount 36.80 309 P P **03 23 35.1 +1.1**
LDAQ Lac Daran 36.91 1 IAmb IAmb 03 23 36.8
comp=Z,26nm,1.0s
VLDQ Val d'Or 37.28 354 IAmb IAmb 03 23 40.4
comp=Z,31nm,1.1s
G40A Rib Lake 37.45 339 IAmb IAmb 03 24 06.6
comp=Z,16nm,1.1s
AC02 Maricunga 37.69 175 P P **03 23 41.5 -0.6**
AC02 Maricunga 37.69 175 P P **03 23 42.2 +0.1**
AMBA Amambai (Brazi 37.74 153 *e*P P **03 23 41.0 -1.0**
AMBA *e*pP **pP 03 24 09.0 +3.0**

SLBS Sierra La Lagu 37.90 295 P P **03 23 43.2 -0.3**
SLBS Sierra La Lagu 37.90 295 P P **03 23 46.2 +2.7**
NBMA Muriti-CE 38.09 117 *e*P P **03 23 45.2 0.0**
NBMA *e*pP **pP 03 24 12.5 +3.3**
LPIG La Paz 38.32 295 LR LR 03 40 26.8
comp=Z,82nm,20.1s,baz=91,slow=37
GO03 Copiapo 38.37 177 IAmb IAmb 03 23 47.3
comp=Z,29nm,0.8s
GO03 Copiapo 38.37 177 P P **03 23 46.9 -0.4**
NBPN Ponto Novo - B 38.63 123 *e*P P **03 23 49.1 -0.6**
NBPN *e*pP **pP 03 24 18.1 +4.4**
NBPN *e*S **S 03 29 34.5 -4.2**
TRCB Terra Rica 38.72 150 P P **03 23 50.1 -0.2**
TRCB IAmb IAmb 03 24 18.6
comp=Z,15nm,0.5s
TRCB Terra Rica 38.72 150 *e*P P **03 23 49.1 -1.2**
TRCB *e*S **S 03 29 35.6 -4.2**
TRCB Terra Rica 38.72 150 P P **03 23 50.6 +0.3**
PMNB Patos De Minas 38.91 139 *e*P P **03 23 51.3 -0.7**
PMNB *e*pP **pP 03 24 18.9 +2.8**
PMNB *e*S **S 03 29 39.0 -3.9**
121A Cookes Peak, D 38.99 309 IAmb IAmb 03 24 30.4
comp=Z,18nm,1.0s
E38A The Farm, Brul 39.08 339 IAmb IAmb 03 23 54.5
comp=Z,30nm,1.0s
SJPY San Joaquin 39.10 156 *e*P P **03 23 51.8 -1.6**
ANMO Albuquerque 39.11 313 LR LR 03 41 50.9
comp=Z,64nm,20.8s,baz=124,slow=39
ANMO Albuquerque 39.11 313 P P **03 23 55.2 +1.4**
ANMO Albuquerque 39.11 313 P P **03 23 55.5 +1.8**
ANMO Albuquerque 39.11 313 P P **03 23 55.1 +1.4**
AC05 El Transito 39.61 177 P P **03 23 57.6 -0.1**
319A Douglas 39.69 306 IAmb IAmb 03 24 41.1
comp=Z,19nm,1.0s
LCO Las Campanas 39.76 178 P P **03 23 58.1 -1.0**
CPUP Villa Florida 39.85 159 P P **03 23 57.0 -2.6**
comp=Z,5.9nm,0.7s,baz=339,slow=9.9,SNR=22
CPUP ScP **ScP 03 29 43.7 +0.7**
comp=Z,1.0nm,0.6s,baz=332,slow=3.4,SNR=3.2
CPUP LR LR 03 41 38.2
comp=Z,157nm,19.0s,baz=351,slow=38
CPUP Villa Florida 39.85 159 P P **03 23 56.5 -3.1**
CPUP Villa Florida 39.85 159 P P **03 23 58.3 -1.3**
CPUP Villa Florida 39.85 159 P P **03 23 57.2 -2.3**
SDCO Great Sand Dun 39.91 318 P P **03 23 59.8 -0.5**
RCBR Riachuelo 39.96 113 LR LR 03 40 31.3
comp=Z,60nm,18.3s,baz=274,slow=36
LDASE Londrina, Braz 39.98 149 *e*P P **03 24 00.0 -0.8**
LDASE *e*pP **pP 03 24 28.0 +3.1**
PTGB Pitanga 40.62 151 *e*P P **03 24 04.6 -1.5**
CO01 Juntas del Tor 40.75 177 P P **03 24 07.5 +0.3**
CO01 IAmb IAmb 03 24 08.4
comp=Z,22nm,1.1s
CO01 Juntas del Tor 40.75 177 P P **03 24 07.7 +0.4**
FRTB Fartura 40.75 147 *e*P P **03 24 06.8 -0.3**
FRTB *e*pP **pP 03 24 33.7 +2.4**
FRTB Fartura 40.75 147 P P **03 24 07.0 -0.1**
S22A 4UR Ranch, Cre 40.79 317 IAmb IAmb 03 24 37.6
comp=Z,22nm,1.3s
GO04 Tololo Observa 40.91 178 P P **03 24 07.8 -0.8**
GO04 IAmb IAmb 03 24 09.6
comp=Z,35nm,0.8s
GO04 Tololo Observa 40.91 178 P P **03 24 08.2 -0.4**
ISCO Idaho Springs 41.13 320 P P **03 24 11.0 +0.5**
TUC Tucson 41.23 307 P P **03 24 10.7 -0.3**
TUC Tucson 41.23 307 P P **03 24 12.4 +1.3**
X18A Snowflake 41.48 311 IAmb IAmb 03 24 42.6
comp=Z,59nm,1.5s
NBIT Itapeh - BA 41.56 128 *e*P P **03 24 13.1 -0.7**
NBIT *e*pP **pP 03 24 40.0 +1.9**
CO03 El Pedregal 41.58 178 P P **03 24 13.3 -0.5**
CO03 El Pedregal 41.58 178 P P **03 24 12.8 -1.0**
MVCO Mesa Verde 41.66 315 P P **03 24 16.8 +2.0**
CMC01 Camacan, BA 41.75 128 *e*P P **03 24 14.3 -1.1**
CMC01 *e*pP **pP 03 24 41.4 +1.7**
CMC01 *e*S **S 03 30 19.6 -5.5**
CO02 Combarbal 41.93 178 IAmb IAmb 03 24 18.1
comp=Z,34nm,0.9s
CO02 Combarbal 41.93 178 P P **03 24 17.4 +0.7**
AGMN Agassiz Nation 42.10 337 P P **03 24 18.5 +0.7**
GUA01 Guaratinga, BA 42.27 130 *e*P P **03 24 19.1 -0.5**
GUA01 *e*S **S 03 30 30.2 -2.6**
PV13 Radium Mtn., P 42.36 316 IAmb IAmb 03 25 04.0
comp=Z,54nm,1.3s
PV07 Paradox Valley 42.38 316 IAmb IAmb 03 24 50.5
comp=Z,17nm,0.9s
ZON Zonda 42.40 175 P P **03 24 20.8 +0.3**
PV03 Paradox Valley 42.42 316 IAmb IAmb 03 24 50.9
comp=Z,36nm,1.1s
PV18 Skein Mesa, Pa 42.46 316 IAmb IAmb 03 24 58.3
comp=Z,40nm,1.0s
EPLO Experimental L 42.46 340 IAmb IAmb 03 24 47.5
comp=Z,31nm,1.0s
PV11 David Mesa, Pa 42.46 316 IAmb IAmb 03 24 51.2
comp=Z,39nm,1.0s
PV16 Nyswonger Mesa 42.50 316 IAmb IAmb 03 24 51.4
comp=Z,46nm,1.3s
PV05 Paradox Valley 42.51 316 IAmb IAmb 03 24 51.1
comp=Z,39nm,1.1s
PV22 Blue Mesa, Par 42.52 316 IAmb IAmb 03 24 51.5
comp=Z,31nm,1.3s
PV04 Paradox Valley 42.53 316 IAmb IAmb 03 24 51.7
comp=Z,35nm,1.1s
PV20 West Nyswonger 42.55 316 P P **03 24 21.8 0.0**
ITAB Concordia 42.74 153 P P **03 24 22.9 -0.4**
ITAB Concordia 42.74 153 *e*P P **03 24 21.7 -1.6**
ITAB *e*S **S 03 30 34.9 -4.5**
PET01 Itanhaem-SP 42.76 145 *e*P P **03 24 22.6 -0.8**
CO04 Los Peladeros 42.77 178 P P **03 24 23.4 -0.3**
MDND Maddock 43.30 333 P P **03 24 26.6 -0.9**
MDND IAmb IAmb 03 24 55.9
comp=Z,25nm,0.8s
VA03 San Esteban 43.50 178 P P **03 24 29.6 +0.1**
RIB01 Linhares ES 43.57 133 *e*P P **03 24 28.9 -1.2**
RIB01 *e*pP **pP 03 24 57.8 +3.3**
HMU Henry Mountain 43.58 315 IAmb IAmb 03 25 00.1
comp=Z,45nm,1.3s
ULM Lac du Bonnet 43.70 338 P P **03 24 30.3 -0.4**
comp=Z,14nm,0.8s,baz=138,slow=8.2,SNR=23
ULM pP **pP 03 24 55.1 -0.1**
comp=Z,39nm,1.0s,baz=122,slow=4.9,SNR=14
ULM LR LR 03 44 42.0
comp=Z,161nm,18.2s,baz=141,slow=39
comp=Z,14nm,0.8s
ULM Lac du Bonnet 43.70 338 P P **03 24 29.6 -1.1**
ULM **pP 03 24 53.6 -1.6**
ULM IAmb IAmb 03 24 57.4
comp=Z,31nm,0.8s
VA01 Torpederas 43.73 179 P P **03 24 30.9 -0.2**
PEL Peldehue 43.88 178 IAmb IAmb 03 24 33.1
comp=Z,20nm,0.7s
PEL Peldehue 43.88 178 P P **03 24 29.4 -3.0**
MT02 Curacav 43.98 178 IAmb IAmb 03 24 33.6
comp=Z,12nm,0.6s
SRU San Rafael Swe 43.98 316 IAmb IAmb 03 25 03.1
comp=Z,22nm,1.1s
SCHQ Schefferville 43.99 5 P P **03 24 33.3 +0.3**
comp=Z,16nm,0.5s,baz=186,slow=6.7,SNR=59
comp=Z,16nm,0.5s
U15A North Rim 44.02 312 P P **03 24 33.3 -0.5**
U15A IAmb IAmb 03 25 02.5
comp=Z,18nm,0.9s
P18A Preston Nutter 44.05 317 IAmb IAmb 03 25 04.0
comp=Z,20nm,1.0s
PSAL Palomas, Salto 44.14 162 *e*P P **03 24 31.8 -2.6**
PSAL *e*S **S 03 30 56.6 -2.9**
MT08 Bocatoma Ro 44.20 177 IAmb IAmb 03 24 37.6
comp=Z,21nm,0.8s
P17A Butcher Ranch, 44.31 317 IAmb IAmb 03 25 05.8
comp=Z,33nm,1.2s
MT13 San Alfonso 44.49 178 IAmb IAmb 03 24 38.7
comp=Z,26nm,0.7s
MT01 Popeta 44.58 179 IAmb IAmb 03 24 38.7
comp=Z,15nm,0.7s
MTPU Mount Pierson 44.64 314 P P **03 24 39.0 +0.2**
KNB Kanab 44.65 312 IAmb IAmb 03 25 07.4
comp=Z,17nm,1.0s
W13A Hualapai Mount 44.67 309 P P **03 24 39.2 +0.2**
GLA Glamis 44.67 306 IAmb IAmb 03 25 07.0
comp=Z,18nm,0.9s
BO04 La Punta 44.72 178 IAmb IAmb 03 24 40.3
comp=Z,47nm,1.2s
BSUT Blindstream Ca 44.85 318 IAmb IAmb 03 25 10.3
comp=Z,40nm,1.2s

CPSB Cacapava Do Su 44.98 157 P P **03 24 39.2 -1.9**
CPSB IAmb IAmb 03 24 40.3
comp=Z,37nm,0.9s
CPSB Cacapava Do Su 44.98 157 *e*P P **03 24 39.0 -2.1**
CPSB *e*S **S 03 31 07.5 -4.3**
CPSB Cacapava Do Su 44.98 157 P P **03 24 39.3 -1.8**
MPU Maple Canyon 45.17 317 IAmb IAmb 03 25 12.6
comp=Z,29nm,1.2s
BO03 Pichilemu 45.20 180 P P **03 24 42.7 0.0**
BW06 Boulder Array 45.26 321 IAmb IAmb 03 25 11.2
comp=Z,29nm,1.8s
PDAR Pinedale Array 45.26 321 P P **03 24 44.0 +0.5**
comp=Z,1.9nm,0.9s,baz=114,slow=10.0,SNR=10
PDAR pP **pP 03 25 07.7 -0.5**
comp=Z,2.9nm,0.8s,baz=129,slow=9.7,SNR=7.1
PDAR pPcP 03 26 50.6
comp=Z,2.8nm,0.6s,baz=120,slow=6.0,SNR=7.4
PDAR ScP **ScP 03 30 04.5 -0.5**
comp=Z,0.8nm,0.7s,baz=106,slow=5.3,SNR=4.3
PDAR Pinedale Array 45.26 321 P P **03 24 42.3 -1.2**
PDAR **pP 03 25 07.2 -0.9**
PDAR **ScP 03 30 03.9 -1.0**
BO02 Sierra Bellavi 45.52 178 P P **03 24 45.2 -0.1**
HWUT Hardware Ranch 45.91 319 IAmb IAmb 03 25 17.8
comp=Z,22nm,1.1s
HWUT Hardware Ranch 45.91 319 P P **03 24 49.2 +0.6**
DUG Dugway, Tooele 46.05 316 P P **03 24 51.7 +1.9**
PFO Pinyon Flats O 46.15 306 LR LR 03 46 33.8
comp=Z,44nm,19.4s,baz=158,slow=39
SPUT South Promonto 46.34 318 IAmb IAmb 03 25 21.6
comp=Z,46nm,1.6s
LOHW Long Hollow 46.36 322 IAmb IAmb 03 25 22.0
comp=Z,26nm,1.4s
SNOW Snow King Moun 46.37 321 IAmb IAmb 03 25 20.8
comp=Z,26nm,0.9s
RLMT Red Lodge 46.41 324 P P **03 24 51.9 -0.7**
ML02 Panimavida 46.47 179 IAmb IAmb 03 25 04.7
comp=Z,23nm,0.7s
FXWY Fox Creek 46.63 321 IAmb IAmb 03 25 22.5
comp=Z,38nm,1.7s
ANCO Parque Anchore 47.02 164 *e*P P **03 24 53.5 -3.5**
ANCO *e*S **S 03 31 36.9 -3.9**
BI02 San Fabin de 47.37 179 IAmb IAmb 03 25 01.9
comp=Z,29nm,0.7s
BI02 San Fabin de 47.37 179 P P **03 24 59.6 -0.2**
CCCA Chr Cany lake 47.48 309 IAmb IAmb 03 25 29.0
comp=Z,37nm,1.2s
SACV Santiago Islan 47.63 80 P P **03 25 03.2 +1.0**
SACV Santiago Islan 47.63 80 P P **03 25 03.5 +1.3**
SACV Santiago Islan 47.63 80 P P **03 25 03.0 +0.8**
PCED Cedros 47.66 47 *e*P P **03 25 04.0 +1.9**
PCED *i* IAmb IAmb 03 25 06.7
comp=Z,63nm,0.9s
PCAN Candelaria 47.75 47 *e*P P **03 25 04.0 +1.2**
PCAN *i* IAmb IAmb 03 25 05.7
comp=Z,73nm,0.5s
PICO Pico 47.81 47 *e*P P **03 25 04.6 +1.3**
PICO *i* IAmb IAmb 03 25 06.4
comp=Z,133nm,0.9s
PPNO Prainha do Nor 47.91 47 *e*P P **03 25 05.9 +1.8**
PPNO *i* IAmb IAmb 03 25 07.0
comp=Z,117nm,1.6s
ROSA Rosais 48.02 47 *e*P P **03 25 06.5 +1.6**
ROSA *i* IAmb IAmb 03 25 08.0
comp=Z,163nm,1.4s
ROSA Rosais 48.02 47 P P **03 25 07.2 +2.3**
BOZ Bozeman (W) 48.06 323 IAmb IAmb 03 25 34.7
comp=Z,23nm,1.1s
PMAN Manadas 48.10 47 *e*P P **03 25 07.1 +1.7**
PMAN *i* IAmb IAmb 03 25 08.6
comp=Z,106nm,1.9s
PGRA Graciosa 48.33 47 *e*P P **03 25 09.1 +1.8**
EGMT Eagleton 48.41 327 IAmb IAmb 03 25 36.8
comp=Z,35nm,1.2s
BCYI Bear Canyon 48.45 321 IAmb IAmb 03 25 38.7
comp=Z,42nm,1.4s
ADH Angra Heroismo 48.73 48 *e*P P **03 25 12.6 +2.4**
ADH *i* IAmb IAmb 03 25 13.6
comp=Z,80nm,1.2s
NVAR Mina Array Bea 49.20 312 P P **03 25 15.1 +1.0**
comp=Z,0.3nm,0.3s,baz=120,slow=6.0,SNR=6.0
NVAR pP **pP 03 25 40.0 +0.9**
comp=Z,1.9nm,0.8s,baz=123,slow=6.4,SNR=4.8
NVAR PP **PP 03 27 04.3 -4.5**
comp=Z,2.3nm,0.7s,baz=138,slow=5.4,SNR=4.6
NVAR Mina Array Bea 49.20 312 P P **03 25 13.1 -1.1**
NVAR **pP 03 25 35.8 -3.4**
NVAR **PP 03 27 07.2 -1.7**
FFC Flin Flon 49.53 338 P P **03 25 16.2 +0.1**
FFC IAmb IAmb 03 25 42.8
comp=Z,20nm,0.9s
FFC Flin Flon 49.53 338 P P **03 25 16.1 0.0**
FFC Flin Flon 49.53 338 P P **03 25 15.9 -0.2**
FFC pP **pP 03 25 42.3 +1.2**
PDA Ponta Delgada 49.56 49 *e*P P **03 25 17.7 +1.1**
PDA *i* IAmb IAmb 03 25 19.5
comp=Z,203nm,1.3s
CMLA Cha da Macela 49.67 49 *e*P P **03 25 18.3 +0.9**
CMLA *i* IAmb IAmb 03 25 20.1
comp=Z,91nm,1.2s
CMLA Cha da Macela 49.67 49 P P **03 25 19.0 +1.5**
CMLA Cha da Macela 49.67 49 P P **03 25 19.6 +2.1**
CMLA Cha da Macela 49.67 49 P P **03 25 19.0 +1.5**
PGRON Lagoa das Cont 49.78 49 *e*P P **03 25 19.9 +1.5**
PGRON *i* IAmb IAmb 03 25 21.2
comp=Z,199nm,1.2s
BART Pico Bartolome 49.94 49 *i* IAmb IAmb 03 25 22.2
comp=Z,153nm,2.0s
WAKR Walker 50.06 311 IAmb IAmb 03 25 50.0
comp=Z,18nm,1.6s
GO06 Curarrehue 50.28 179 P P **03 25 21.5 -0.6**
PLID Pearl Lake 50.44 321 IAmb IAmb 03 25 52.6
comp=Z,44nm,1.8s
WVOR Wild Horse Val 50.98 317 P P **03 25 30.9 +3.5**
NEW Newport 52.66 324 IAmb IAmb 03 26 09.5
comp=Z,19nm,1.2s
NEW Newport 52.66 324 P P **03 25 40.8 +1.0**
FRB Frobisher Bay 52.78 2 LR LR 03 46 46.6
comp=Z,216nm,21.5s,baz=186,slow=34
LL02 Futaleuf 53.88 180 P P **03 25 48.0 -0.5**
SOK Sop, Niakhar 54.57 80 P P **03 25 55.8 +1.7**
MACI Morro de la Ar 54.91 63 P P **03 25 58.7 +2.1**
MACI Morro de la Ar 54.91 63 P P **03 25 59.1 +2.5**
SFJD Kangerlussuaq 57.86 10 LR LR 03 48 49.6
comp=Z,116nm,21.9s,baz=198,slow=33
GO08 Villa O'Higgin 59.15 180 IAmb IAmb 03 26 28.1
comp=Z,16nm,0.8s
GO08 Villa O'Higgin 59.15 180 P P **03 26 27.4 +1.5**
ANGG Ammassalik, Gr 59.56 16 P P **03 26 28.1 -0.2**
ANGG Ammassalik, Gr 59.56 16 P P **03 26 28.6 +0.2**
ANGG Ammassalik, Gr 59.56 16 *i* P P **03 26 28.0 -0.4**
ANGG IAmb IAmb 03 26 29.2
comp=Z,50nm,0.8s
YKA Yellowknife Ar 59.68 339 P P **03 26 29.0 -0.3**
comp=Z,4.3nm,0.6s,baz=129,slow=7.1,SNR=34
YKA pP **pP 03 26 53.9 -1.2**
comp=Z,23nm,1.0s,baz=129,slow=7.3,SNR=14
YKA LR LR 03 54 18.3
comp=Z,81nm,19.1s,baz=116,slow=38
comp=Z,4.3nm,0.6s
YKA Yellowknife Ar 59.68 339 P P **03 26 28.8 -0.5**
YKA **pP 03 26 53.7 -1.4**
ILULI Ilulissat 59.80 9 P P **03 26 29.7 -0.3**
ILULI Ilulissat 59.80 9 P P **03 26 29.8 -0.2**
ILULI Ilulissat 59.80 9 *i* P P **03 26 29.4 -0.6**
ILULI IAmb IAmb 03 26 30.5
comp=Z,40nm,0.9s
SAQQ Saqqaq 60.42 8 *i* P P **03 26 34.6 +0.4**
SAQQ IAmb IAmb 03 26 34.7
comp=Z,24nm,1.0s
BBB Bella Bella 60.71 324 LR LR 03 55 25.5
comp=Z,60nm,20.6s,baz=178,slow=38
SAATT Saattut 61.20 8 *i* P P **03 26 39.0 -0.4**
SAATT IAmb IAmb 03 26 40.0
comp=Z,29nm,1.0s
NUUG Nuugaatsiaq 61.68 7 *i* P P **03 26 42.3 -0.4**
NUUG IAmb IAmb 03 26 43.5
comp=Z,23nm,1.1s
KOTAN Kotaneelee Air 62.08 334 P P **03 26 45.9 +0.3**
baz=119
LIS Lisbon 62.39 52 *e*P P **03 26 49.5 +1.5**
PFVI Vila Bisbo 62.43 54 *e*P P **03 26 50.3 +1.9**
UPNV Upernavik 62.55 5 *i* P P **03 26 47.0 -1.5**
UPNV IAmb IAmb 03 26 48.7
comp=Z,18nm,1.1s

PTEO Sao Teotonio 62.56 53 *e*P **P** **03 26 50.8 +1.6**
PTEO *i* IAmb IAmb 03 26 52.1
comp=Z,80nm,1.7s
MORF Marmelete 62.59 54 *e*P **P** **03 26 50.0 +0.5**
MORF IAmb IAmb 03 26 52.5
comp=Z,77nm,1.0s
PSBE So Bento 62.78 51 *e*P **P** **03 26 52.1 +1.4**
PSBE *i* IAmb IAmb 03 26 53.1
comp=Z,75nm,1.3s
PLOUS Minas do Lousa 62.86 53 *e*P **P** **03 26 52.4 +1.2**
PLOUS *i* IAmb IAmb 03 26 53.8
comp=Z,91nm,1.2s
MOE Montemor 62.98 52 *e*P **P** **03 26 53.3 +1.3**
MOE *i* IAmb IAmb 03 26 54.4
comp=Z,104nm,1.3s
MESJ Messejana 62.99 53 *e*P **P** **03 26 52.5 +0.4**
MESJ IAmb IAmb 03 26 54.3
comp=Z,77nm,1.1s
MESJ Messejana 62.99 53 *e*P **P** **03 26 53.4 +1.3**
MESJ *i* IAmb IAmb 03 26 54.9
comp=Z,78nm,1.4s
MESJ *e*pP **pP** **03 27 19.2 +1.0**
PCAS Casmilo, Conde 63.08 51 *e*P **P** **03 26 54.0 +1.3**
PCAS *i* IAmb IAmb 03 26 55.8
comp=Z,132nm,1.6s
PCVE Castro Verde 63.11 53 *e*P **P** **03 26 54.7 +1.8**
PCVE *i* IAmb IAmb 03 26 55.8
comp=Z,64nm,1.7s
SOEG Soedalen 63.14 16 *i* P **P** **03 26 52.5 +0.1**
SOEG IAmb IAmb 03 26 53.5
comp=Z,8.2nm,1.0s
PBDV Barranco-do-Ve 63.15 54 *e*P **P** **03 26 55.0 +1.8**
PBDV *i* IAmb IAmb 03 26 56.5
comp=Z,70nm,1.4s
PMTG Montargil 63.15 52 *e*P **P** **03 26 54.0 +0.9**
PMTG *i* IAmb IAmb 03 26 54.9
comp=Z,50nm,0.9s
TIO Tiouine 63.16 61 P **P** **03 26 55.4 +1.9**
PTO Porto 63.17 49 *e*P **P** **03 26 53.9 +0.7**
PTO *i* IAmb IAmb 03 26 55.3
comp=Z,64nm,1.2s
AVE Averroes 63.19 58 P **P** **03 26 55.6 +2.2**
EVO Evora 63.24 52 *e*P **P** **03 26 54.7 +0.9**
EVO *i* IAmb IAmb 03 26 56.2
comp=Z,75nm,1.1s
PARRA Arraiolos 63.26 52 *e*P **P** **03 26 54.6 +0.8**
PARRA *i* IAmb IAmb 03 26 56.2
comp=Z,44nm,1.3s
PSARD Sardoal 63.27 51 *e*P **P** **03 26 54.4 +0.4**
PSARD *i* IAmb IAmb 03 26 56.0
comp=Z,74nm,1.3s
PBEJ Beja 63.30 53 *e*P **P** **03 26 55.4 +1.2**
PBEJ *i* IAmb IAmb 03 26 56.7
comp=Z,56nm,1.2s
PVAQ Vaqueiros 63.34 54 *e*P **P** **03 26 55.6 +1.3**
PVAQ *i* IAmb IAmb 03 26 57.3
comp=Z,67nm,1.3s
PVAQ *e*S **S** **03 35 24.2 +5.5**
PVAQ Vaqueiros 63.34 54 P **P** **03 26 56.0 +1.6**
PGAV Gavieira, Arco 63.55 49 *e*P **P** **03 26 56.3 +0.5**
PGAV *i* IAmb IAmb 03 26 57.9
comp=Z,53nm,1.2s
PESTR Estremoz 63.62 52 *e*P **P** **03 26 58.2 +2.0**
PESTR *i* IAmb IAmb 03 26 58.7
comp=Z,46nm,1.2s
PESTR Estremoz 63.62 52 IAmb IAmb 03 26 58.5
comp=Z,36nm,1.1s
PESTR Estremoz 63.62 52 P **P** **03 26 57.6 +1.4**
PVIS Viseu 63.64 50 *e*P **P** **03 26 56.9 +0.6**
T35M Bob Quinn 63.64 329 P **P** **03 26 56.4 +0.4**
baz=112
PCAB Cabril 63.69 49 *e*P **P** **03 26 57.2 +0.5**
PCAB *i* IAmb IAmb 03 26 59.4
comp=Z,74nm,1.5s
V35K Ketchikan 63.77 327 P **P** **03 26 56.1 -0.8**
baz=110
POLO Lamas de Olo 63.81 49 *e*P **P** **03 26 58.0 +0.4**
POLO *i* IAmb IAmb 03 26 59.6
comp=Z,50nm,1.3s
PCBR Castelo Branco 63.83 51 *e*P **P** **03 26 58.2 +0.6**
PCBR *i* IAmb IAmb 03 27 00.4
comp=Z,79nm,1.4s
PMRV Marv??o 63.84 51 *e*P **P** **03 26 58.5 +0.8**
PMRV *i* IAmb IAmb 03 27 00.4
comp=Z,59nm,1.4s
PMRV *e*pP **pP** **03 27 23.6 -0.2**
PVRL Vila Real 63.85 49 *e*P **P** **03 26 58.6 +0.8**
PVRL *i* IAmb IAmb 03 26 59.9
comp=Z,103nm,1.3s
MTE Manteigas 63.85 50 *e*P **P** **03 26 58.5 +0.7**
MTE *i* IAmb IAmb 03 27 00.5
comp=Z,52nm,1.7s
MTE *e*S **S** **03 35 26.8 +1.6**
MTE Manteigas 63.85 50 P **P** **03 26 58.8 +1.0**
PBAR Barrancos 63.96 53 *e*P **P** **03 26 59.2 +0.8**
PBAR *i* IAmb IAmb 03 27 01.0
comp=Z,36nm,1.2s
DLBC Dease Lake 64.09 330 LR LR 03 56 25.4
comp=Z,92nm,19.0s,baz=90,slow=37
DLBC Dease Lake 64.09 330 P **P** **03 26 59.3 +0.3**
baz=113
KULLO Kullorsuaq 64.19 4 P **P** **03 26 59.2 -0.1**
KULLO Kullorsuaq 64.19 4 *i* P **P** **03 26 58.6 -0.6**
KULLO IAmb IAmb 03 26 59.8
comp=Z,29nm,1.1s
BORG Borgarnes 64.20 22 LR LR 03 49 56.2
comp=Z,62nm,21.6s,baz=237,slow=31
BORG Borgarnes 64.20 22 P **P** **03 27 00.8 +1.3**
BORG IAmb IAmb 03 27 02.1
comp=Z,15nm,0.8s
BORG Borgarnes 64.20 22 P **P** **03 27 01.0 +1.5**
VAL Valentia 64.39 37 P **P** **03 27 01.4 +0.5**
S34M Telegraph Cree 64.43 330 P **P** **03 27 01.6 +0.5**
baz=112
MG03 Isla Dawson 64.56 179 P **P** **03 27 02.8 +0.9**
MG03 IAmb IAmb 03 27 03.2
comp=Z,22nm,0.7s
CRAG Craig 64.63 327 P **P** **03 27 02.6 +0.2**
baz=108
PBRG Braganca 64.65 49 *e*P **P** **03 27 04.0 +1.0**
PBRG *i* IAmb IAmb 03 27 05.1
comp=Z,43nm,1.6s
ECAL Calabor 64.68 49 P **P** **03 27 04.5 +1.3**
SUMG Summit 64.82 11 P **P** **03 27 04.2 +0.3**
SUMG Summit 64.82 11 P **P** **03 27 04.2 +0.3**
SUMG Summit 64.82 11 *i* P **P** **03 27 04.1 +0.2**
SUMG IAmb IAmb 03 27 05.1
comp=Z,56nm,0.9s
U33K Whale Pass 64.83 327 P **P** **03 27 04.4 +0.6**
baz=109
R33M Jennings River 64.91 331 P **P** **03 27 05.2 +0.8**
baz=112
RES Resolute Bay 64.97 354 LR LR 03 55 19.6
comp=Z,84nm,20.1s,baz=210,slow=36
IFR Ifrane 65.11 58 P **P** **03 27 08.3 +2.0**
IGLA Glengowla, Co 65.30 36 P **P** **03 27 07.2 +0.4**
Q32M Nakina River 65.37 330 P **P** **03 27 08.0 +0.5**
baz=111
MD01 Midelt array s 65.39 59 P **P** **03 27 09.9 +1.8**
TULEG Thule 65.60 1 P **P** **03 27 09.1 +0.7**
TULEG Thule 65.60 1 *i* P **P** **03 27 07.7 -0.7**
TULEG IAmb IAmb 03 27 09.4
comp=Z,45nm,1.0s
EMAL Malaga-Limoner 65.89 55 P **P** **03 27 11.6 +0.6**
S32K Killisnoo 66.02 328 P **P** **03 27 12.0 +0.6**
baz=108
P33M Teslin, Yukon 66.08 332 P **P** **03 27 12.4 +0.6**
baz=111
PAB San Pablo 66.19 52 P **P** **03 27 14.0 +1.0**
PAB San Pablo 66.19 52 P **P** **03 27 14.1 +1.0**
R32K Eaglecrest 66.25 329 P **P** **03 27 12.2 -0.6**
baz=108
P32M Atlin 66.28 331 P **P** **03 27 13.7 +0.5**
baz=110
SIT Sitka 66.28 328 P **P** **03 27 12.6 -0.5**
baz=107
MMPY Sheldon Lake, 66.29 334 P **P** **03 27 13.8 +0.6**
baz=113
ESDC Sonseca Array 66.50 52 P **P** **03 27 15.7 +0.8**
comp=Z,26nm,0.9s,baz=269,slow=6.6,SNR=96
ESDC LR LR 03 51 07.4
comp=Z,50nm,20.8s,baz=252,slow=31
ESDC PKP2bc **P'P'bc** **03 55 46.8 -4.3**
comp=Z,1.5nm,0.9s,baz=59,slow=3.0,SNR=6.6
comp=Z,26nm,0.9s

ESDC Sonseca Array 66.50 52 P **P** **03 27 15.8 +0.8**
N32M Quiet Lake 66.53 333 P **P** **03 27 15.5 +0.7**
baz=111
IWEX Carrickbyrne, 66.57 37 P **P** **03 27 14.5 -0.5**
DBIC Dimbokro 66.76 87 P **P** **03 27 17.3 +0.4**
comp=Z,39nm,0.7s,baz=291,slow=6.2,SNR=58
DBIC pP **pP** **03 27 42.1 -1.1**
comp=Z,17nm,0.8s,baz=250,slow=7.2,SNR=3.7
comp=Z,39nm,0.7s
DBIC Dimbokro 66.76 87 P **P** **03 27 17.4 +0.4**
DBIC Dimbokro 66.76 87 P **P** **03 27 17.6 +0.6**
DBIC Dimbokro 66.76 87 P **P** **03 27 17.2 +0.4**
IDGL Inch Island, C 66.78 35 P **P** **03 27 16.9 +0.6**
C36M Paulatuk 66.89 342 P **P** **03 27 17.7 +1.0**
baz=123
DSB Dublin 67.00 37 P **P** **03 27 18.0 +0.3**
S31K Pelican 67.02 329 P **P** **03 27 18.7 +1.0**
baz=107
SKAG Skagway 67.02 330 P **P** **03 27 18.6 +0.9**
baz=108
CCA1 Carmenellis 67.07 40 *e*P **P** **03 27 18.8 +0.6**
CCA1 IAmb IAmb 03 27 20.0
comp=Z,8.0nm,0.8s
UCM Universidad Co 67.11 51 P **P** **03 27 20.1 +1.4**
SCO Scoresbysund 67.17 16 P **P** **03 27 19.0 +0.5**
SCO Scoresbysund 67.17 16 *i* P **P** **03 27 18.5 0.0**
SCO IAmb IAmb 03 27 19.9
comp=Z,11nm,1.1s
WHY Whitehorse 67.19 332 P **P** **03 27 19.6 +0.6**
baz=109
ILTH Belurgan, Co L 67.20 36 P **P** **03 27 19.4 +0.5**
ILTH Belurgan, Co L 67.20 36 P **P** **03 27 18.8 -0.1**
ILTH Belurgan, Co L 67.20 36 *e*P **P** **03 27 18.9 -0.1**
ILTH IAmb IAmb 03 27 20.8
comp=Z,32nm,0.8s
NEEM North Greenlan 67.40 5 *i* P **P** **03 27 20.4 +0.2**
NEEM IAmb IAmb 03 27 21.3
comp=Z,59nm,0.9s
SBD Saint Breward 67.48 40 *e*P **P** **03 27 21.2 +0.4**
SBD IAmb IAmb 03 27 23.0
comp=Z,25nm,0.8s
M31M Drury Creek, Y 67.49 333 IAmb IAmb 03 27 50.0
comp=Z,33nm,1.3s
M31M Drury Creek, Y 67.49 333 P **P** **03 27 21.6 +0.8**
baz=110,SNR=5.2
PLBC Pleasant Camp 67.52 330 P **P** **03 27 21.8 +0.9**
baz=107
CLGH Cloghs, Cushen 67.57 35 P **P** **03 27 22.2 +0.9**
CLGH Cloghs, Cushen 67.57 35 *e*P **P** **03 27 21.7 +0.4**
CLGH IAmb IAmb 03 27 23.4
comp=Z,20nm,0.9s
HTL Hartland 67.68 39 P **P** **03 27 23.3 +1.2**
HTL Hartland 67.68 39 *e*P **P** **03 27 22.9 +0.9**
HTL IAmb IAmb 03 27 24.4
comp=Z,51nm,0.9s
RSBS Rosebush, Pemb 67.70 38 *e*P **P** **03 27 22.9 +0.7**
RSBS IAmb IAmb 03 27 24.1
comp=Z,32nm,0.7s
O30N Mendenhall 67.79 332 IAmb IAmb 03 27 52.9
comp=Z,25nm,1.2s
O30N Mendenhall 67.79 332 P **P** **03 27 23.3 +0.6**
baz=108,SNR=7.8
N31M Braeburn, Yuko 67.87 332 IAmb IAmb 03 27 53.1
comp=Z,33nm,1.0s
N31M Braeburn, Yuko 67.87 332 P **P** **03 27 24.0 +0.8**
baz=109,SNR=11
DYA Yadsworthy 67.93 40 *e*P **P** **03 27 24.2 +0.5**
DYA IAmb IAmb 03 27 25.4
comp=Z,13nm,0.8s
P30M Million Dollar 68.01 331 P **P** **03 27 24.6 +0.5**
baz=107
LAWE Loch Awe, Argy 68.23 34 *e*P **P** **03 27 24.9 -0.5**
LAWE IAmb IAmb 03 27 26.5
comp=Z,5.8nm,0.8s
P29M Windy Craggy 68.24 330 P **P** **03 27 26.6 +1.1**
baz=106
IOMK Kirk Michael 68.26 36 P **P** **03 27 26.6 +1.0**
IOMK Kirk Michael 68.26 36 *e*P **P** **03 27 25.9 +0.3**
IOMK IAmb IAmb 03 27 27.4
comp=Z,8.5nm,0.7s
GAL1 Galloway 68.31 35 *e*P **P** **03 27 26.3 +0.4**
GAL1 IAmb IAmb 03 27 27.8
comp=Z,34nm,0.8s
KPL Plockton 68.35 32 *e*P **P** **03 27 25.4 -0.7**
KPL IAmb IAmb 03 27 27.5
comp=Z,13nm,0.9s
N30M Aishikik Lake 68.46 332 P **P** **03 27 27.8 +0.9**
baz=107
HYT Haines Junctio 68.47 331 IAmb IAmb 03 27 57.1
comp=Z,22nm,1.3s
HYT Haines Junctio 68.47 331 P **P** **03 27 27.7 +0.7**
baz=107
NEWG New Galloway 68.63 35 *e*P **P** **03 27 28.1 +0.2**
NEWG IAmb IAmb 03 27 29.8
comp=Z,36nm,0.8s
PGBU Glenifferbraes 68.64 34 *e*P **P** **03 27 28.0 0.0**
PGBU IAmb IAmb 03 27 29.8
comp=Z,86nm,0.9s
A36M Sachs Harbour 68.66 345 P **P** **03 27 27.8 0.0**
baz=123
M30M Minto, Yukon 68.67 333 P **P** **03 27 28.9 +0.8**
baz=108
H31M Peel River 68.76 337 IAmb IAmb 03 28 00.7
comp=Z,46nm,1.4s
H31M Peel River 68.76 337 P **P** **03 27 29.5 +0.8**
baz=112,SNR=5.8
MCH1 Michaelchurch 68.77 38 *e*P **P** **03 27 28.9 0.0**
MCH1 IAmb IAmb 03 27 30.7
comp=Z,25nm,0.8s
EAB Aberfoyle 68.79 34 *e*P **P** **03 27 28.8 -0.1**
EAB IAmb IAmb 03 27 30.4
comp=Z,21nm,0.9s
FOEL Foel Wylfa 68.80 37 P **P** **03 27 29.7 +0.6**
FOEL Foel Wylfa 68.80 37 *e*P **P** **03 27 28.6 -0.5**
FOEL IAmb IAmb 03 27 30.4
comp=Z,19nm,0.7s
O29M Mount Kennedy 68.83 331 P **P** **03 27 30.3 +1.0**
baz=106
MONM Monmouth 68.86 39 *e*P **P** **03 27 29.9 +0.5**
MONM IAmb IAmb 03 27 31.5
comp=Z,48nm,0.8s
YUK6 Outpost Mounta 68.91 331 P **P** **03 27 31.5 +1.6**
baz=106,SNR=6.0
HLM1 Long Mynd 68.93 38 *e*P **P** **03 27 29.8 -0.1**
HLM1 IAmb IAmb 03 27 31.3
comp=Z,16nm,0.8s
INVG Invergeldie, C 69.01 34 *e*P **P** **03 27 30.0 -0.2**
INVG IAmb IAmb 03 27 31.7
comp=Z,19nm,1.3s
J30M Hart River 69.12 335 P **P** **03 27 31.8 +0.8**
baz=109
YUK4 Talbot Arm 69.15 332 P **P** **03 27 32.5 +1.2**
baz=106
G31M Satah River 69.15 338 P **P** **03 27 31.9 +0.9**
baz=112
F31M Tsiigehtchic 69.16 339 P **P** **03 27 31.5 +0.6**
baz=113
KESW Keswick, Cumbr 69.17 36 P **P** **03 27 31.7 +0.4**
ATE Arette 69.24 48 P **P** **03 27 33.3 +1.3**
ESK Eskdalemuir 69.25 35 P **P** **03 27 32.4 +0.7**
ESK Eskdalemuir 69.25 35 P **P** **03 27 32.2 +0.5**
ESK Eskdalemuir 69.25 35 *e*P **P** **03 27 31.4 -0.3**
ESK IAmb IAmb 03 27 33.5
comp=Z,26nm,0.8s
ESK Eskdalemuir 69.25 35 P **P** **03 27 31.7 0.0**
STRD Stroud 69.25 39 *e*P **P** **03 27 32.1 +0.3**
STRD IAmb IAmb 03 27 33.8
comp=Z,45nm,0.8s
EKA Eskdalemuir Ar 69.28 35 P **P** **03 27 32.1 +0.2**
comp=Z,33nm,0.8s,baz=261,slow=5.5,SNR=73
EKA pP **pP** **03 27 57.5 -0.9**
comp=Z,11nm,0.8s,baz=258,slow=6.3,SNR=4.9
EKA LR LR 03 52 57.4
comp=Z,31nm,21.9s,baz=253,slow=32
comp=Z,33nm,0.8s
BRWY Burwash Landin 69.33 332 P **P** **03 27 33.4 +1.1**
baz=106
I30M Mount Dempster 69.35 336 IAmb IAmb 03 28 01.5
comp=Z,26nm,1.1s
I30M Mount Dempster 69.35 336 P **P** **03 27 33.2 +0.8**
baz=109,SNR=8.0
M29M Somme Creek 69.37 333 P **P** **03 27 32.9 +0.3**
baz=106,SNR=5.7
K29M Barlow Dome 69.38 335 P **P** **03 27 31.3 -1.3**
K29M IAmb IAmb 03 28 01.7
comp=Z,22nm,1.2s

K29M Barlow Dome 69.38 335 P **P** **03 27 33.0 +0.4**
baz=108,SNR=8.6
L29M L29M 69.42 334 P **P** **03 27 33.5 +0.7**
baz=107
INK Inuvik 69.42 340 LR LR 03 58 46.7
comp=Z,108nm,18.2s,baz=102,slow=36
INK Inuvik 69.42 340 IAmb IAmb 03 28 01.0
comp=Z,30nm,1.3s
INK Inuvik 69.42 340 P **P** **03 27 33.4 +0.8**
baz=113
INK Inuvik 69.42 340 P **P** **03 27 32.7 +0.1**
PINM Pinnacle 69.59 330 P **P** **03 27 34.6 +0.7**
baz=104
YUK8 Steele Glacier 69.65 332 P **P** **03 27 35.3 +0.8**
baz=105
WOL Wolverton 69.76 39 *e*P **P** **03 27 35.7 +0.7**
WOL IAmb IAmb 03 27 37.1
comp=Z,20nm,0.8s
LBWR Ladybower, Pea 69.77 37 P **P** **03 27 36.1 +1.1**
LBWR Ladybower, Pea 69.77 37 *e*P **P** **03 27 35.8 +0.8**
LBWR IAmb IAmb 03 27 37.8
comp=Z,77nm,0.9s
DBG Daneborg 69.78 13 P **P** **03 27 35.2 +0.5**
DBG Daneborg 69.78 13 *i* P **P** **03 27 35.0 +0.3**
DBG IAmb IAmb 03 27 36.1
comp=Z,23nm,1.1s
EDMD Edmundbyers 69.86 35 *e*P **P** **03 27 35.6 0.0**
EDMD IAmb IAmb 03 27 38.2
comp=Z,12nm,0.8s
EPYK Eagle Plains 69.87 337 IAmb IAmb 03 28 04.6
comp=Z,42nm,1.2s
EPYK Eagle Plains 69.87 337 P **P** **03 27 36.1 +0.7**
baz=110,SNR=5.6
G30M tAoh Zrail Nji 69.89 338 P **P** **03 27 36.2 +0.6**
baz=110
CWF Charnwood Fore 69.91 38 P **P** **03 27 36.6 +0.7**
CWF Charnwood Fore 69.91 38 *e*P **P** **03 27 36.0 +0.1**
CWF IAmb IAmb 03 27 37.4
comp=Z,22nm,0.8s
HPK Haverah Park 69.91 36 *e*P **P** **03 27 36.0 +0.2**
DRUM Mains of Drumt 69.95 33 *e*P **P** **03 27 36.5 +0.4**
DRUM IAmb IAmb 03 27 38.3
comp=Z,22nm,0.8s
F30M Barrier River 69.95 339 P **P** **03 27 36.5 +0.6**
F30M Barrier River 69.95 339 P **P** **03 27 36.5 +0.6**
baz=111,SNR=10
YUK3 Moose Creek 70.10 332 P **P** **03 27 38.0 +0.8**
baz=104,SNR=9.1
DAWY Dawson 70.23 335 P **P** **03 27 38.5 +0.8**
baz=106
BVCY Beaver Creek 70.44 333 P **P** **03 27 39.7 +0.7**
baz=104
H29M Whitestone 70.45 337 IAmb IAmb 03 28 08.2
comp=Z,26nm,1.0s
H29M Whitestone 70.45 337 P **P** **03 27 39.9 +0.9**
baz=108,SNR=10
GDLE Glaisdale, N Y 70.45 36 *e*P **P** **03 27 39.9 +0.8**
GDLE IAmb IAmb 03 27 41.3
comp=Z,58nm,0.9s
GRNC Granite Creek 70.46 331 IAmb IAmb 03 28 09.5
comp=Z,20nm,1.0s
G29M Pine Creek 70.53 338 IAmb IAmb 03 28 08.6
comp=Z,39nm,1.1s
G29M Pine Creek 70.53 338 P **P** **03 27 40.2 +0.8**
baz=108,SNR=9.8
HMNX Herstmonceux 70.68 40 *e*P **P** **03 27 41.5 +0.9**
HMNX IAmb IAmb 03 27 42.8
comp=Z,61nm,0.8s
I28M Miner Creek 70.84 336 IAmb IAmb 03 28 10.7
comp=Z,21nm,1.1s
I28M Miner Creek 70.84 336 P **P** **03 27 42.4 +0.9**
baz=106,SNR=6.5
M27K Edge Creek, AK 70.89 332 IAmb IAmb 03 28 11.8
comp=Z,40nm,1.2s
M27K Edge Creek, AK 70.89 332 P **P** **03 27 42.8 +1.0**
baz=103,SNR=10
E29M Blow River 70.97 339 P **P** **03 27 42.8 +0.7**
baz=109,SNR=19
BCAR Beaver Creek A 71.01 333 P **P** **03 27 43.5 +1.0**
L27K Beaver Creek, 71.03 333 IAmb IAmb 03 28 12.2
comp=Z,22nm,1.1s
L27K Beaver Creek, 71.03 333 P **P** **03 27 43.6 +1.1**
baz=104,SNR=7.8
CRQE Cirque 71.11 331 P **P** **03 27 43.8 +0.6**
baz=102
MCARA McCarthy VSAT 71.20 331 P **P** **03 27 44.1 +0.5**
baz=102
ELMS Elmsett, Ipswi 71.22 39 *e*P **P** **03 27 44.0 +0.1**
ELMS IAmb IAmb 03 27 45.7
comp=Z,60nm,0.8s
M26K Nabesna, AK 71.41 332 P **P** **03 27 45.8 +1.0**
baz=102
F28M Old Crow 71.43 338 IAmb IAmb 03 28 14.0
comp=Z,44nm,1.1s
F28M Old Crow 71.43 338 P **P** **03 27 45.4 +0.5**
baz=107,SNR=6.6
ACRG Accra 71.49 88 P **P** **03 27 45.6 -0.6**
ACRG Accra 71.49 88 P **P** **03 27 46.1 -0.1**
DAG Danmarks Havn 71.49 11 P **P** **03 27 44.7 -0.3**
DAG P **pP** **03 28 10.6 -1.1**
DAG Danmarks Havn 71.49 11 *i* P **P** **03 27 44.0 -1.0**
DAG IAmb IAmb 03 27 45.5
comp=Z,25nm,1.0s
I27K Kandik River 71.56 336 IAmb IAmb 03 28 14.9
comp=Z,23nm,1.1s
I27K Kandik River 71.56 336 P **P** **03 27 46.5 +0.7**
baz=104,SNR=6.6
D28M Stokes Point 71.56 340 P **P** **03 27 46.2 +0.7**
baz=108
KAIM Kayak Island 71.60 330 P **P** **03 27 46.2 +0.2**
baz=100
E28M Babbage River 71.61 339 IAmb IAmb 03 28 14.3
comp=Z,41nm,1.1s
E28M Babbage River 71.61 339 P **P** **03 27 46.1 +0.2**
baz=108,SNR=14
CLF Chambon-Foret 71.67 43 P **P** **03 27 48.0 +1.4**
CLF Chambon-Foret 71.67 43 P **P** **03 27 47.8 +1.2**
H27K Steamboat Moun 71.68 336 P **P** **03 27 46.8 +0.4**
baz=105
ALE Alert 71.69 1 P **P** **03 27 45.9 -0.3**
ALE pP **pP** **03 28 12.7 -0.1**
L26K Log Cabin Wild 71.69 333 IAmb IAmb 03 28 16.5
comp=Z,26nm,1.1s
L26K Log Cabin Wild 71.69 333 P **P** **03 27 47.0 +0.4**
baz=102,SNR=6.1
SJAF Saint Jean de 71.84 49 P **P** **03 27 49.2 +1.4**
EJON La Jonquera 71.84 49 P **P** **03 27 49.4 +1.6**
BMRM Bremner River 71.88 331 P **P** **03 27 48.1 +0.4**
baz=100
G27K Doyon Strip 71.88 337 P **P** **03 27 47.9 +0.3**
baz=105
N25K Chitina, Valde 71.99 331 P **P** **03 27 48.9 +0.5**
baz=100
I26K Coal Creek Min 72.11 335 P **P** **03 27 49.3 +0.3**
baz=103
SCRK Sand Creek 72.17 334 IAmb IAmb 03 28 19.1
comp=Z,27nm,1.2s
SCRK Sand Creek 72.17 334 P **P** **03 27 50.2 +0.7**
baz=102,SNR=5.6
E27K Coleen River 72.22 338 IAmb IAmb 03 28 18.6
comp=Z,41nm,1.1s
E27K Coleen River 72.22 338 P **P** **03 27 50.2 +0.6**
baz=105,SNR=17
TORD Torodi Ar. Bea 72.24 80 P **P** **03 27 51.0 +0.3**
comp=Z,39nm,0.6s,baz=292,slow=6.5,SNR=329
TORD pP **pP** **03 28 16.7 -0.6**
comp=Z,18nm,1.0s,baz=289,slow=6.7,SNR=5.2
comp=Z,39nm,0.6s
D27M Malcolm River 72.29 340 P **P** **03 27 50.5 +0.5**
baz=106
EYAK Cordova Ski Ar 72.36 330 P **P** **03 27 50.9 +0.4**
baz=99
Q23K Middleton Isla 72.49 329 P **P** **03 27 51.6 +0.4**
baz=98
RIDG Independent Ri 72.50 334 IAmb IAmb 03 28 21.1
comp=Z,29nm,1.2s
RIDG Independent Ri 72.50 334 P **P** **03 27 52.0 +0.6**
baz=101
KLU Klutina 72.59 331 P **P** **03 27 52.0 0.0**
baz=99
PAX Paxson 72.64 333 P **P** **03 27 52.3 0.0**
baz=100
G26K Porcupine Rive 72.73 337 P **P** **03 27 53.3 +0.7**
baz=103
M24K Tolsona, Glenn 72.81 332 P **P** **03 27 54.2 +0.9**
baz=99
J25K Salcha River, 72.89 334 P **P** **03 27 54.2 +0.5**

baz=101
K24K Donnelly Dome 72.92 334 P P 03 27 54.4 +0.5
baz=100
F26K Sheenjek River 73.03 338 P P 03 27 54.9 +0.5
baz=103
GLI Glacier Island 73.06 330 P P 03 27 54.5 -0.2
baz=98
P23K Montague Islan 73.09 330 P P 03 27 55.0 +0.1
baz=98
SSB Saint Sauveur 73.11 46 IAmb IAmb 03 27 57.9
comp=Z,23nm,1.1s
SSB Saint Sauveur 73.11 46 P P 03 27 56.7 +1.3
SSB Saint Sauveur 73.11 46 P P 03 27 56.6 +1.2
SSB pP pP 03 28 22.5 +0.4
PRP Porcupine Dome 73.12 335 P P 03 27 55.0 -0.1
baz=101,SNR=6.7
UCC Uccle 73.22 40 IAmb IAmb 03 27 57.3
comp=Z,38nm,1.0s
UCC Uccle 73.22 40 *d*P P 03 27 56.2 +0.5
comp=Z,25nm,1.0s
UCC Uccle 73.22 40 P P 03 27 56.5 +0.7
SCM Sheep Creek Mo 73.31 331 P P 03 27 57.1 +0.9
baz=98,SNR=5.2
C27K Jago River 73.33 340 IAmb IAmb 03 28 25.3
comp=Z,35nm,1.1s
C27K Jago River 73.33 340 P P 03 27 56.9 +0.8
baz=104
DOU Dourbes 73.33 41 *d*P P 03 27 56.6 +0.1
comp=Z,23nm,1.0s
DOU *dp*P pP 03 28 23.3 +0.1
DOU *ds*P sP 03 28 31.9 -2.6
BMRD Maredsous 73.45 41 *d*P P 03 27 57.8 +0.6
comp=Z,24nm,1.0s
M23K Glacier View 73.49 331 P P 03 27 58.0 +0.8
baz=98
DHY Denali Highway 73.51 333 P P 03 27 58.0 +0.5
baz=98
HDA Harding Lake 73.53 334 P P 03 27 57.9 +0.5
baz=99
ILAR Eielson Array 73.56 334 P P 03 27 57.5 0.0
comp=Z,1.5nm,0.9s,baz=101,slow=3.9,SNR=11
ILAR pP pP 03 28 25.2 +0.9
comp=Z,2.9nm,0.9s,baz=107,slow=4.4,SNR=8.5
ILAR LR LR 04 02 40.5
comp=Z,64nm,18.0s,baz=74,slow=38
ILAR Eielson Array 73.56 334 P P 03 27 56.6 -0.9
ILAR 03 28 21.8 -2.5
F25K Christian Rive 73.57 337 P P 03 27 57.4 -0.2
F25K pP pP 03 28 23.7 -0.6
F25K Christian Rive 73.57 337 P P 03 27 58.1 +0.5
baz=101,SNR=7.0
G25K Bearman Lake 73.59 337 P P 03 27 58.5 +0.8
baz=101
WAT6 Susitna Watana 73.61 332 P P 03 27 58.6 +0.5
baz=98
E25K Arctic Village 73.65 338 P P 03 27 58.1 +0.1
E25K pP pP 03 28 24.2 -0.6
E25K IAmb IAmb 03 28 27.5
comp=Z,23nm,1.1s
E25K Arctic Village 73.65 338 P P 03 27 58.8 +0.8
baz=102,SNR=6.7
BGES Gesves 73.66 41 *d*P P 03 27 59.1 +0.7
comp=Z,18nm,0.9s
PWL Port Wells 73.66 330 P P 03 27 58.6 +0.4
baz=97
RCHB Rochefort 73.74 41 *d*P P 03 27 59.3 +0.5
comp=Z,30nm,1.0s
RCHB *dp*P pP 03 28 24.8 -0.8
RCHB Rochefort 73.74 41 P P 03 27 58.5 -0.4
RUSF Rustrel 73.77 47 P P 03 28 01.1 +1.9
SML Sawmill 73.78 331 IAmb IAmb 03 28 28.8
comp=Z,46nm,1.1s
SML Sawmill 73.78 331 P P 03 27 59.5 +0.6
baz=97
KNK Knik Glacier 73.79 331 P P 03 27 59.8 +0.8
baz=97
BCLA Clavier 73.80 41 *d*P P 03 27 59.6 +0.4
comp=Z,14nm,0.9s
C26K Camden Bay 73.80 340 P P 03 27 59.6 +0.8
baz=103
POKR Poker Plat Res 73.84 335 P P 03 27 59.7 +0.5
baz=99
BSTI Sart Tilman 73.97 40 *d*P P 03 28 01.3 +1.0
comp=Z,6.8nm,1.0s
WAT1 Susitna Watana 74.01 332 P P 03 28 00.7 +0.4
baz=97
BEBN Eben Emael 74.05 40 *d*P P 03 28 01.3 +0.7
comp=Z,38nm,1.1s
G24K Hadweenzic Riv 74.12 336 P P 03 28 01.4 +0.6
baz=99
SEW Seward 74.13 329 P P 03 28 01.3 +0.4
baz=96
PMR Palmer 74.13 331 P P 03 28 01.1 +0.2
baz=96
H24K Noodor Dome 74.14 336 P P 03 28 01.5 +0.5
baz=99,SNR=6.5
OPLO Oplo 74.17 39 P P 03 28 02.6 +1.3
D25K Kavik River 74.18 339 P P 03 28 01.7 +0.5
baz=101
HGN Heimansgroeve 74.21 40 P P 03 28 02.6 +1.0
BHOU Houvegnez 74.25 41 *d*P P 03 28 03.0 +1.2
comp=Z,36nm,1.1s
MEM Membach 74.26 40 *d*P P 03 28 02.8 +0.9
comp=Z,29nm,1.1s
MEM Membach 74.26 40 P P 03 28 03.0 +1.2
MCK McKinley 74.30 333 P P 03 28 02.2 +0.4
baz=97
WLF Walferdange 74.32 41 *d*P P 03 28 03.3 +1.1
comp=Z,32nm,1.0s
WLF Walferdange 74.32 41 *e*P P 03 28 03.5 +1.2
comp=Z,67nm,1.1s,baz=272,slow=5.7
WLF Walferdange 74.32 41 P P 03 28 03.6 +1.3
BTNL Ternell 74.33 40 *d*P P 03 28 03.5 +1.1
comp=Z,7.6nm,1.2s
GIMEL St. Georges / 74.34 45 P P 03 28 03.1 +0.5
RC01 Rabbit Creek A 74.37 331 P P 03 28 02.9 +0.7
baz=96
F24K Squaw Lake 74.41 337 P P 03 28 03.2 +0.7
baz=99,SNR=8.1
NOR Nord 74.45 7 P P 03 28 02.4 -0.1
NOR Nord 74.45 7 *i* P P 03 28 01.5 -0.9
NOR IAmb IAmb 03 28 03.2
comp=Z,18nm,1.2s
NEA2 Nenana 74.46 334 P P 03 28 03.3 +0.5
baz=97
M22K Willow 74.62 331 P P 03 28 04.3 +0.7
baz=96
I23K Minto, Yukon-K 74.66 335 P P 03 28 04.5 +0.6
baz=97,SNR=5.1
E24K Your Creek 74.72 338 P P 03 28 05.1 +0.8
baz=99
BRSE Bradley Lake S 74.74 329 P P 03 28 05.4 +0.9
baz=94
CUT Chulitna 74.75 332 P P 03 28 05.3 +0.9
baz=96
TAM Tamanrasset 74.78 69 P P 03 28 08.0 +2.3
TAM Tamanrasset 74.78 69 P P 03 28 07.9 +2.3
TAM pP pP 03 28 34.6 +2.2
WTSB Winterswijk 74.80 39 P P 03 28 06.1 +1.2
CALF Calern 74.81 48 P P 03 28 06.5 +1.2
H23K Yukon River 74.82 335 P P 03 28 05.6 +0.7
baz=97
TRF Thorofare Moun 74.86 333 IAmb IAmb 03 28 35.0
comp=Z,36nm,1.0s
TRF Thorofare Moun 74.86 333 P P 03 28 06.0 +0.7
baz=96,SNR=6.3
ISO Isola 74.89 47 P P 03 28 07.1 +1.3
ECH Echery 74.96 43 P P 03 28 06.6 +0.6
ECH Echery 74.96 43 P P 03 28 06.7 +0.6
ECH pP pP 03 28 32.7 -0.1
HYA Hoyanger 74.97 29 *e*P P 03 28 06.8 +1.1
HYA IAmb IAmb 03 28 07.6
comp=Z,28nm,1.1s
BLS5 Blasjo 74.97 31 *e*P P 03 28 07.2 +1.4
BLS5 IAmb IAmb 03 28 08.0
comp=Z,42nm,1.0s
L22K Petersville 74.99 332 P P 03 28 06.3 +0.3
baz=95
BOURR Bourrignon 75.01 44 P P 03 28 06.8 +0.4
D24K Happy Valley 75.01 339 P P 03 28 06.1 +0.2
baz=99
CAPN Captain Cook N 75.03 330 P P 03 28 06.4 +0.4
baz=94
SENIN Lac Senin/Sane 75.06 45 IAmb IAmb 03 28 09.2
comp=Z,22nm,0.8s
BUG Bochum--Univer 75.08 40 *e*P P 03 28 07.5 +1.0
comp=Z,44nm,1.0s,baz=272,slow=5.7
BUG Bochum--Univer 75.08 40 P P 03 28 07.6 +1.1
ODD1 Odda 75.09 31 *e*P P 03 28 07.9 +1.4
ODD1 IAmb IAmb 03 28 08.7
comp=Z,34nm,1.0s
G23K Bananza Creek 75.12 336 P P 03 28 06.9 +0.3
baz=97,SNR=6.9
ESCA l'Escarene 75.13 47 P P 03 28 08.3 +1.2
E23K Chandalar 75.14 338 IAmb IAmb 03 28 36.1
comp=Z,22nm,1.2s
E23K Chandalar 75.14 338 P P 03 28 06.9 +0.2
baz=98
HOM Homer 75.19 329 P P 03 28 07.5 +0.4
baz=94
TOLK Toolik Lake Re 75.20 338 P P 03 28 07.4 +0.4
baz=98
MLY Manley 75.22 335 IAmb IAmb 03 28 36.3
comp=Z,32nm,1.7s
MLY Manley 75.22 335 P P 03 28 07.5 +0.3
baz=96
COLD Coldfoot 75.25 337 P P 03 28 07.8 +0.5
baz=97
SKT Skwentna 75.30 331 P P 03 28 07.9 +0.2
baz=94
IBBN Ibbenburen 75.39 39 *e*P P 03 28 09.5 +1.1
comp=Z,63nm,1.2s,baz=272,slow=5.7
IBBN Ibbenburen 75.39 39 P P 03 28 09.6 +1.3
AKN Aaknes 75.43 28 *e*P P 03 28 09.8 +1.4
AKN IAmb IAmb 03 28 10.4
comp=Z,54nm,1.2s
H22K Ishtalitna Cre 75.57 335 P P 03 28 09.0 -0.2
baz=96
KDAK Kodiak Island 75.58 327 P P 03 28 09.7 +0.4
baz=92
D23K Nanushuk River 75.64 339 IAmb IAmb 03 28 39.2
comp=Z,33nm,1.1s
D23K Nanushuk River 75.64 339 P P 03 28 10.2 +0.7
baz=97,SNR=6.9
CAST Castle Rocks 75.67 333 IAmb IAmb 03 28 38.9
comp=Z,26nm,1.1s
CAST Castle Rocks 75.67 333 P P 03 28 09.9 +0.1
baz=94,SNR=8.6
PPLA Purkeypile 75.67 332 IAmb IAmb 03 28 39.4
comp=Z,38nm,1.0s
PPLA Purkeypile 75.67 332 P P 03 28 10.2 +0.2
baz=94
O20K Slope Mountain 75.71 329 P P 03 28 09.9 -0.3
baz=93
G22K Bettles 75.73 336 P P 03 28 10.2 +0.2
baz=96
C23K Itkillik River 75.73 339 P P 03 28 10.0 +0.1
baz=97
BFO Black Forest 75.74 43 P P 03 28 10.0 -0.5
BFO IAmb IAmb 03 28 11.9
comp=Z,24nm,1.1s
BFO Black Forest 75.74 43 *e*P P 03 28 10.9 +0.4
comp=Z,21nm,1.1s,baz=272,slow=5.7
I21K Tana 75.76 335 P P 03 28 10.3 +0.1
baz=95
PMSA Palmer Station 75.77 176 LR LR 04 00 49.2
comp=Z,42nm,18.2s,baz=1.5,slow=35
KASTN Kahler Asten 75.79 40 *e*P P 03 28 11.5 +0.8
comp=Z,13nm,0.9s,baz=272,slow=5.7
CHUM Lake Minchumin 75.80 333 P P 03 28 10.4 -0.1
baz=94
TNS Taunus Mts 75.81 41 *e*P P 03 28 11.9 +1.0
comp=Z,42nm,1.1s,baz=272,slow=5.7
TNS Taunus Mts 75.81 41 P P 03 28 12.0 +1.1
BNALP Bannalp 75.83 44 P P 03 28 12.0 +0.8
SLE Schleitheim 75.86 43 P P 03 28 12.1 +0.9
OHAK Old Harbor 75.94 326 P P 03 28 11.7 +0.3
baz=92
E22K Anaktuvuk Pass 75.97 338 P P 03 28 11.7 +0.3
baz=96
SKAR Skarslia 75.97 30 *e*P P 03 28 12.8 +1.3
SKAR IAmb IAmb 03 28 13.6
comp=Z,93nm,1.8s
P19K Oil Pt 76.00 329 P P 03 28 11.6 -0.1
baz=92
F22K John River 76.04 337 P P 03 28 12.5 +0.6
baz=95
M20K Styx River 76.05 331 P P 03 28 12.6 +0.6
baz=93
H21K Melozitna Rive 76.14 335 IAmb IAmb 03 28 41.5
comp=Z,24nm,1.2s
H21K Melozitna Rive 76.14 335 P P 03 28 13.0 +0.6
baz=94,SNR=6.1
MUD Monsted U'grnd 76.29 34 *i* P P 03 28 14.5 +1.1
MUD IAmb IAmb 03 28 15.7
comp=Z,53nm,0.9s
STU Stuttgart 76.31 42 *e*P P 03 28 14.5 +0.8
comp=Z,104nm,0.9s,baz=272,slow=5.7
STU Stuttgart 76.31 42 P P 03 28 14.5 +0.8
RETH Rethem/Aller, 76.38 38 *e*P P 03 28 15.4 +1.6
comp=Z,30nm,1.0s,baz=272,slow=5.7
RETH Rethem/Aller, 76.38 38 P P 03 28 15.4 +1.6
SKMB Sankelmark Bun 76.42 36 P P 03 28 16.0 +1.9
TUE Stuetta 76.47 45 IAmb IAmb 03 28 17.6
comp=Z,38nm,1.2s
TUE Stuetta 76.47 45 P P 03 28 16.3 +1.4
G21K Allakaket 76.49 336 IAmb IAmb 03 28 44.1
comp=Z,21nm,1.1s
G21K Allakaket 76.49 336 P P 03 28 15.0 +0.6
baz=94,SNR=5.6
F21K Alatna River 76.52 337 P P 03 28 15.3 +0.7
baz=94
IMAR Indian Mountai 76.55 335 P P 03 28 15.6 +0.9
K20K Telida 76.55 333 P P 03 28 15.2 +0.5
baz=92
J20K Nowinta River 76.62 334 P P 03 28 15.7 +0.6
baz=93,SNR=17
M19K Big River Lodg 76.65 331 P P 03 28 16.0 +0.7
baz=92
N19K Bonanza Creek 76.66 330 P P 03 28 15.9 +0.4
baz=92
B22K Teshekpuk Lake 76.74 340 P P 03 28 16.0 +0.4
baz=95
GTTG Gottingen 76.76 39 *e*P P 03 28 17.6 +1.4
comp=Z,51nm,1.2s,baz=272,slow=5.7
GTTG Gottingen 76.76 39 P P 03 28 17.6 +1.4
E21K Killik River 76.79 338 P P 03 28 16.2 +0.1
baz=94
UBBA Unterbreizbach 76.80 40 *e*P P 03 28 17.3 +1.1
comp=Z,46nm,1.6s,baz=272,slow=5.7
VSL Villasalto 76.80 52 P P 03 28 18.2 +1.6
DAVA Damuels 76.81 44 *i* P P 03 28 17.9 +1.2
comp=Z,60nm,0.9s,SNR=33
DAVA Damuels 76.81 44 P P 03 28 18.1 +1.3
DAVOX Davos/Dischmat 76.83 44 P P 03 28 18.3 +1.5
comp=Z,30nm,0.8s,baz=281,slow=4.7,SNR=65
comp=Z,30nm,0.8s
L19K White Mountain 76.87 331 P P 03 28 16.9 +0.3
baz=92
Q18K Katmai Hardscr 76.89 328 P P 03 28 17.0 +0.1
baz=90
BSEG Bad Segeberg 76.94 37 *e*P P 03 28 18.3 +1.2
comp=Z,16nm,0.8s,baz=272,slow=5.7
BSEG Bad Segeberg 76.94 37 P P 03 28 18.3 +1.2
H20K Anotleneega Mo 76.99 335 P P 03 28 17.5 +0.3
baz=92
O18K Koktuh Hills 77.00 329 P P 03 28 17.6 +0.2
baz=91
CLZ Clausthal 77.01 39 *e*P P 03 28 18.9 +1.3
comp=Z,21nm,0.9s,baz=272,slow=5.7
CLZ Clausthal 77.01 39 P P 03 28 18.9 +1.3
KEST Kesra 77.02 56 P P 03 28 19.3 +1.3
comp=Z,26nm,0.9s,baz=305,slow=3.9,SNR=24
KEST pP pP 03 28 45.2 +0.3
comp=Z,26nm,0.9s,baz=174,slow=7.6,SNR=5.8
KEST LR LR 04 00 02.2
comp=Z,37nm,19.1s,baz=271,slow=34
comp=Z,26nm,0.9s
KEST Kesra 77.02 56 P P 03 28 18.0 0.0
KEST pP 03 28 44.8 -0.2
B21K Ikpikpuk River 77.10 339 P P 03 28 18.5 +0.8
baz=93
FUORN Ofenpass-Fuorn 77.10 45 P P 03 28 20.0 +1.5
C21K Knifeblade Rid 77.13 339 P P 03 28 18.4 +0.6
baz=93
NC204 NORSAR Array S 77.18 29 IAmb IAmb 03 28 20.7
comp=Z,30nm,0.9s
ASSE Asse, Remlinge 77.19 39 *e*P P 03 28 19.9 +1.5
comp=Z,41nm,1.1s,baz=272,slow=5.7
ASSE Asse, Remlinge 77.19 39 P P 03 28 20.0 +1.6
CHIR Chirikof Islan 77.23 325 P P 03 28 19.2 +0.6
baz=89
NAO01 NORSAR Array S 77.24 30 P P 03 28 20.2 +1.5
J19K Poorman 77.27 333 P P 03 28 19.4 +0.7
baz=91
A22K Sinclair Lake 77.30 341 P P 03 28 19.5 +0.8
baz=93
M18K Stony River 77.32 331 P P 03 28 19.6 +0.5
baz=90
N18K Kilae Creek 77.35 330 P P 03 28 19.9 +0.6
baz=90
Q17K Contact Creek 77.35 327 P P 03 28 19.9 +0.4
baz=90
F20K Avaraart Lake 77.39 336 P P 03 28 20.1 +0.8
baz=92
FETA Feichten 77.40 44 *i* P P 03 28 21.3 +1.2
comp=Z,60nm,0.9s,SNR=63
NB2 NORSAR Subarra 77.40 30 P P 03 28 20.6 +1.0
comp=Z,60nm,1.0s,baz=269,slow=5.9
NB2 NORSAR Subarra 77.40 30 P P 03 28 20.6 +1.0
NOA NORSAR Array B 77.40 30 P P 03 28 20.9 +1.3
comp=Z,23nm,0.9s,baz=271,slow=5.8,SNR=18
NOA pP pP 03 28 46.7 +0.1
comp=Z,1.5nm,0.9s,baz=279,slow=7.2,SNR=2.4
NOA LR LR 04 02 23.2
comp=Z,17nm,18.3s,baz=265,slow=36
comp=Z,23nm,0.9s
RETA Reutte 77.40 44 *i* P P 03 28 21.0 +1.0
comp=Z,37nm,1.1s,SNR=29
NC303 NORSAR Array S 77.48 30 IAmb IAmb 03 28 22.4
comp=Z,37nm,1.1s
FLTG Flechtingen 77.53 39 *e*P P 03 28 21.4 +1.0
comp=Z,41nm,1.0s,baz=272,slow=5.7
GORT1 Trebel 77.55 38 *e*P P 03 28 21.7 +1.2
comp=Z,50nm,1.4s,baz=272,slow=5.7
NC602 NORSAR Array S 77.56 30 *e*P P 03 28 21.9 +1.5
NC602 IAmb IAmb 03 28 22.8
comp=Z,56nm,1.0s
E20K Nigu River 77.60 338 P P 03 28 21.4 +0.7
baz=92
R17L Mt. Peulik Vol 77.61 327 P P 03 28 21.7 +0.9
baz=89
GRFO Grafenberg 77.61 41 P P 03 28 21.7 +0.7
GRA1 Grafenberg Arr 77.61 41 P P 03 28 21.4 +0.4
GRA1 Grafenberg Arr 77.61 41 P P 03 28 21.7 +0.7
GRF Grafenberg Arr 77.61 41 *e*P P 03 28 21.6 +0.6
comp=Z,31nm,1.4s,baz=272,slow=5.7
GRF *e*L L 04 01 31.1
comp=Z,42nm,18.0s
P17K Kvichak River 77.63 328 P P 03 28 21.4 +0.6
baz=89
MOTA Moosalm 77.64 44 *i* P P 03 28 22.2 +0.8
comp=Z,26nm,0.9s,SNR=18
H19K Roundabout Mou 77.65 335 IAmb IAmb 03 28 50.5
comp=Z,31nm,1.1s
H19K Roundabout Mou 77.65 335 P P 03 28 21.5 +0.7
baz=91,SNR=6.8
GRA3 Grafenberg Arr 77.67 41 P P 03 28 22.6 +1.3
ZCCA Zocca 77.71 47 P P 03 28 21.3 -0.4
FUR Furstenfeldbru 77.72 43 *e*P P 03 28 22.9 +1.3
comp=Z,26nm,0.9s,baz=272,slow=5.7
FUR Furstenfeldbru 77.72 43 P P 03 28 23.2 +1.6
SQTA Sankt Quirin 77.72 44 *i* P P 03 28 22.8 +1.0
comp=Z,41nm,0.9s,SNR=25
CASP Castiglione de 77.72 48 IAmb IAmb 03 28 23.5
comp=Z,46nm,1.1s
WIMM Wimmelburg 77.72 39 P P 03 28 22.8 +1.3
L18K Granite Mounta 77.73 332 P P 03 28 21.8 +0.5
baz=90
J18K Innoko River 77.75 333 P P 03 28 21.7 +0.2
baz=90
GRC2 Grafenberg Arr 77.75 42 ⇓P P 03 28 22.2 +0.4
Q16K King Salmon 77.75 328 P P 03 28 21.8 +0.3
baz=89
NSS Namsos 77.76 26 *e*P P 03 28 22.5 +1.1
NSS IAmb IAmb 03 28 23.2
comp=Z,17nm,0.9s
D20K Etivluk River 77.77 338 P P 03 28 21.8 +0.3
baz=91
MOX Moxa 77.83 40 *e*P P 03 28 23.0 +0.9
comp=Z,24nm,1.4s,baz=272,slow=5.7
MOX *e*L L 04 00 30.7
comp=Z,61nm,19.1s
MOX Moxa 77.83 40 P P 03 28 23.2 +1.0
GRC1 Grafenberg Arr 77.84 42 P P 03 28 23.5 +1.2
GRB4 Grafenberg Arr 77.84 42 P P 03 28 23.6 +1.3
GRC3 Grafenberg Arr 77.89 42 P P 03 28 23.3 +0.8
NEUB Neuenburg 77.91 40 *e*P P 03 28 23.8 +1.3
comp=Z,41nm,1.1s,baz=272,slow=5.7
NEUB Neuenburg 77.91 40 P P 03 28 23.8 +1.3
GRB1 Grafenberg Arr 77.91 42 P P 03 28 23.9 +1.3
G19K Purcell Mounta 77.92 336 P P 03 28 22.9 +0.6
baz=90,SNR=5.3
GRB2 Grafenberg Arr 77.92 42 P P 03 28 24.1 +1.4
O17K Koliganek Bris 77.96 329 P P 03 28 22.9 +0.3
baz=89
WATA Walderalm 77.96 44 *i* P P 03 28 23.8 +0.7
comp=Z,21nm,1.1s,SNR=9.4
E19K Redstone River 77.98 337 P P 03 28 22.9 +0.3
baz=90
N17K Nushagak Hills 77.99 330 P P 03 28 22.9 0.0
baz=89
B20K Meade River 77.99 340 P P 03 28 22.9 +0.3
baz=91
WTTA Wattenberg 78.00 44 *i* P P 03 28 24.3 +0.9
comp=Z,21nm,0.9s,SNR=18
WTTA Wattenberg 78.00 44 P P 03 28 24.5 +1.0
GRB3 Grafenberg Arr 78.01 42 P P 03 28 24.5 +1.3
LLD Lille Linde 78.01 36 *i* P P 03 28 23.9 +0.9
LLD IAmb IAmb 03 28 24.7
comp=Z,73nm,0.8s
CTI Castel Tesino 78.08 45 P P 03 28 23.5 -0.3
M17K Holitna River 78.10 331 P P 03 28 23.8 +0.4
baz=89
TEOL Teolo 78.14 46 P P 03 28 22.8 -1.1
PLN Plauen 78.18 41 *e*P P 03 28 25.2 +1.1
comp=Z,11nm,1.1s,baz=272,slow=5.7
F19K Shaleruckik Mo 78.19 336 P P 03 28 23.8 0.0
F19K pP pP 03 28 49.8 -1.0
F19K Shaleruckik Mo 78.19 336 P P 03 28 24.0 +0.2
baz=90
STOK Stokkvaagen 78.20 24 *e*P P 03 28 25.4 +1.5
KBS Kingsbay 78.23 11 *e*P P 03 28 25.3 +1.5
KBS IAmb IAmb 03 28 26.1
comp=Z,20nm,1.0s
KBS Kingsbay 78.23 11 *i* P P 03 28 23.9 0.0
LEIR Leirfjorden 78.25 24 *e*P P 03 28 25.3 +1.3
LEIR IAmb IAmb 03 28 26.1
comp=Z,30nm,1.1s
ROTZ Rotzenmuhle 78.25 41 *e*P P 03 28 25.8 +1.3
comp=Z,9.8nm,1.3s,baz=272,slow=5.7
D19K Kuna River 78.32 338 P P 03 28 24.8 +0.2
baz=90
TANN Tannenbergstha 78.38 41 *e*P P 03 28 26.5 +1.3
comp=Z,41nm,1.3s,baz=272,slow=5.7
TANN Tannenbergstha 78.38 41 P P 03 28 26.6 +1.3
NKC Novy Kostel 78.38 41 *e*P P 03 28 26.6 +1.4
NKC Novy Kostel 78.38 41 P P 03 28 26.6 +1.4
LOF Lofoten 78.40 22 *e*P P 03 28 26.0 +1.1
H18K Honhosa River 78.45 335 P P 03 28 25.5 +0.2
baz=89
O16K Kokwok River B 78.47 329 P P 03 28 25.6 +0.2
baz=88
K17K Iditarod 78.48 332 P P 03 28 25.4 -0.1
K17K pP pP 03 28 51.7 -0.8
K17K IAmb IAmb 03 28 55.5
comp=Z,34nm,1.1s
K17K Iditarod 78.48 332 P P 03 28 25.7 +0.2
baz=88
L17K Donlin 78.49 331 P P 03 28 25.6 +0.1
baz=88
G18K Tagagawik 78.56 335 P P 03 28 26.6 +0.7
G18K pP pP 03 28 52.8 -0.1
G18K IAmb IAmb 03 28 55.7
comp=Z,21nm,1.0s
G18K Tagagawik 78.56 335 P P 03 28 26.2 +0.4
baz=88,SNR=6.5
RAUS Rausandaksla 78.61 24 *e*P P 03 28 27.7 +1.6
ABTA Abfaltersbach 78.64 44 *i* P P 03 28 27.6 +0.8
comp=Z,34nm,0.8s,SNR=31
HFS Hagfors 78.64 31 P P 03 28 26.9 +0.5
comp=Z,12nm,0.8s,baz=252,slow=3.0,SNR=18
HFS LR LR 03 57 24.6
comp=Z,104nm,22.0s,baz=277,slow=31
comp=Z,12nm,0.8s
CLL Collm 78.67 40 *e*P P 03 28 27.9 +1.2
comp=Z,32nm,1.2s,baz=272,slow=5.7
CLL *e*L L 03 57 50.0
comp=Z,38nm,21.6s
LESA Schwarzleotal 78.70 44 *i* P P 03 28 27.7 +0.5

comp=Z,17nm,0.8s,SNR=19
WET Wettzell 78.72 42 *e*P **P 03 28 28.4 +1.3**
comp=Z,30nm,1.2s,baz=272,slow=5.7
WET Wettzell 78.72 42 P **P 03 28 28.3 +1.1**
RJOB Jochberg 78.76 43 *e*P **P 03 28 28.0 +0.5**
comp=Z,14nm,1.5s,baz=272,slow=5.7
RJOB Jochberg 78.76 43 P **P 03 28 28.1 +0.7**
N16K Nishlik Lake 78.78 330 P **P 03 28 26.8 -0.3**
baz=88
MOR8 Moi Rana 78.78 24 *e*P **P 03 28 29.1 +2.0**
STAL STALIGIAL 78.81 45 P **P 03 28 27.2 -0.5**
STAL IAmb IAmb 03 28 29.4
comp=Z,38nm,1.0s
STAL pP **pP 03 28 52.4 -2.3**
J17K VABM Dome 78.81 333 P **P 03 28 27.9 +0.6**
baz=88
M16K Timber Creek 78.84 330 P **P 03 28 27.6 0.0**
baz=88
C19K Lookout Ridge 78.85 339 P **P 03 28 27.7 +0.2**
baz=89
MURB Monte Urbino 78.90 48 P **P 03 28 27.7 -0.6**
MURB IAmb IAmb 03 28 29.0
comp=Z,32nm,0.8s
HSPB Hornsund (broa 78.94 13 P **P 03 28 29.6 +1.9**
HSPB pP **pP 03 28 56.1 +1.4**
F18K Selawik 78.94 336 P **P 03 28 27.9 0.0**
baz=88
SMAI San Martin Ant 78.97 178 P **P 03 28 27.8 -0.1**
SMAI IAmb IAmb 03 28 29.7
comp=Z,22nm,1.3s
CESX Cesi 79.00 49 P **P 03 28 28.2 -0.5**
FUSE Fusea 79.00 45 P **P 03 28 29.4 +0.7**
FUSE pP **pP 03 28 54.8 -0.9**
STEI Steigen 79.04 23 *e*P **P 03 28 29.3 +0.9**
STEI IAmb IAmb 03 28 30.1
comp=Z,23nm,1.1s
L16K Owhat River 79.06 331 P **P 03 28 28.7 +0.1**
baz=87
FAUS Fauske 79.08 23 *e*P **P 03 28 29.6 +0.9**
RUE Ruedersdorf 79.08 38 *e*P **P 03 28 30.0 +1.1**
comp=Z,30nm,0.8s,baz=272,slow=5.7
SPA0 Spitsbergen Ar 79.10 12 *e*P **P 03 28 29.5 +0.9**
SPA0 IAmb IAmb 03 28 30.2
comp=Z,44nm,1.0s
SPITS Spitsbergen Ar 79.10 12 P **P 03 28 29.4 +0.7**
comp=Z,25nm,0.8s,baz=193,slow=3.3,SNR=16
SPITS pP **pP 03 28 55.0 -0.7**
comp=Z,7.6nm,0.8s,baz=168,slow=8.5,SNR=2.7
SPITS LR LR 04 01 27.9
comp=Z,83nm,22.0s,baz=287,slow=34
comp=Z,25nm,0.8s
SPB2 Spitsbergen Ar 79.10 12 P **P 03 28 28.5 -0.1**
SPB2 IAmb IAmb 03 28 30.4
comp=Z,31nm,0.9s
H17K Granite Mounta 79.11 334 P **P 03 28 28.9 0.0**
baz=88
KBA Koelnbreinsper 79.18 44 *i*P **P 03 28 30.6 +0.8**
comp=Z,37nm,1.2s,SNR=27
KBA Koelnbreinsper 79.18 44 P **P 03 28 30.7 +0.8**
KHC Kasperske Hory 79.18 42 *e*P **P 03 28 30.6 +0.9**
KHC epP **pP 03 28 57.8 +1.1**
KHC Kasperske Hory 79.18 42 P **P 03 28 28.9 -0.7**
KHC IAmb IAmb 03 28 32.0
comp=Z,37nm,1.1s
KHC Kasperske Hory 79.18 42 P **P 03 28 30.9 +1.3**
E18K Tukpahlearik C 79.28 337 P **P 03 28 29.9 +0.1**
baz=87
GEC2 GERESS Array S 79.28 42 *e*P **P 03 28 31.3 +1.0**
comp=Z,22nm,0.9s,baz=272,slow=5.7
GERES GERESS Array B 79.28 42 P **P 03 28 31.1 +0.8**
comp=Z,14nm,0.8s,baz=261,slow=5.3,SNR=142
GERES pP **pP 03 28 57.0 -0.3**
comp=Z,8.0nm,0.8s,baz=263,slow=5.4,SNR=8.9
comp=Z,14nm,0.8s
GERES GERESS Array B 79.28 42 P **P 03 28 30.1 -0.3**
BRG Berggiesshubel 79.29 40 *e*P **P 03 28 31.3 +1.2**
comp=Z,25nm,1.2s,baz=272,slow=5.7
BRG Berggiesshubel 79.29 40 P **P 03 28 31.5 +1.3**
BRG Berggiesshubel 79.29 40 *i*P **P 03 28 31.4 +1.3**
BRG Amp 03 28 32.6
comp=Z,18nm,1.1s
BRG pP **pP 03 28 57.3 +0.1**
BRG Amp 03 28 59.1
comp=Z,7.9nm,0.9s
BRG sP **sP 03 29 08.1 -0.5**
BRG Amp 03 29 10.4
comp=Z,5.8nm,1.0s
BRG Berggiesshubel 79.29 40 S **S 03 38 25.0 +3.0**
A19K Wainwright 79.33 340 P **P 03 28 30.0 0.0**
baz=88
FDMO Fiordimonte 79.33 48 P **P 03 28 29.8 -0.8**
FDMO IAmb IAmb 03 28 32.0
comp=Z,26nm,1.0s
BIOA Bad Ischl, Aus 79.33 43 *i*P **P 03 28 31.2 +0.7**
comp=Z,26nm,0.9s,SNR=16
NRCA Norcia 79.37 48 P **P 03 28 29.0 -1.8**
O15K Ungalikthiuk R 79.37 328 P **P 03 28 30.1 -0.3**
baz=86
PRED Cave del Predi 79.38 45 P **P 03 28 30.7 -0.1**
PRED IAmb IAmb 03 28 32.9
comp=Z,26nm,0.9s
G17K Kiwalik Mounta 79.40 335 P **P 03 28 30.6 +0.1**
baz=87
MYKA Terra Mystica 79.42 44 *i*P **P 03 28 31.8 +0.8**
comp=Z,23nm,0.8s,SNR=14
SABO M.te Sabotino 79.44 45 P **P 03 28 31.2 0.0**
C18K Utukok River 79.45 338 P **P 03 28 30.9 +0.2**
baz=87
N15K Kwethluk River 79.45 329 P **P 03 28 30.8 0.0**
baz=86
J16K Anvik River 79.50 333 P **P 03 28 30.5 -0.5**
baz=87
I17K Unalakleet 79.51 333 P **P 03 28 30.9 -0.2**
baz=87
GUMA Gualdo di Mace 79.51 48 P **P 03 28 31.0 -0.6**
CHNA Chernabura Isl 79.53 324 P **P 03 28 31.4 0.0**
baz=86
TRI Trieste 79.58 45 P **P 03 28 31.9 +0.1**
TRI IAmb IAmb 03 28 33.8
comp=Z,29nm,0.8s
F17K Baldwin Pennin 79.59 336 P **P 03 28 31.7 +0.3**
baz=87
AQU L'Aquila 79.62 49 P **P 03 28 31.6 -0.6**
AQU IAmb IAmb 03 29 08.8
comp=Z,25nm,1.1s
AQU L'Aquila 79.62 49 P **P 03 28 33.2 +0.9**
M15K Kasigluk River 79.71 330 P **P 03 28 32.0 -0.2**
baz=86
MOA Molln 79.74 43 *i*P **P 03 28 33.5 +0.8**
comp=Z,20nm,0.9s,SNR=14
MOA Molln 79.74 43 P **P 03 28 33.6 +0.8**
PRU Pruhonice 79.74 41 *e*P **P 03 28 34.1 +1.5**
PRU epP **pP 03 29 01.5 +1.8**
PRU Pruhonice 79.74 41 P **P 03 28 34.1 +1.5**
E17K Hothham Inlet 79.78 337 P **P 03 28 33.2 +0.7**
baz=86
CLTB Caltabellotta 79.95 54 P **P 03 28 35.3 +1.2**
K15K Wolf Creek Mou 80.00 332 P **P 03 28 33.7 0.0**
baz=86
SDPT Sand Point 80.00 325 P **P 03 28 33.6 -0.3**
baz=85
SESA Seetaler Alpe, 80.01 44 *i*P **P 03 28 34.6 +0.2**
comp=Z,25nm,1.0s,SNR=12
L15K Ungalak Mounta 80.02 331 P **P 03 28 34.2 +0.4**
baz=86
INTR Introdacqua 80.03 49 P **P 03 28 33.9 -0.5**
INTR IAmb IAmb 03 29 16.1
comp=Z,23nm,1.1s
OBKA Obir 80.05 44 *i*P **P 03 28 35.2 +0.7**
comp=Z,17nm,1.5s,SNR=13
OBKA Obir 80.05 44 P **P 03 28 35.3 +0.7**
O14K Tigyukauivet M 80.11 329 P **P 03 28 34.5 +0.1**
baz=85
G16K Koyuk River 80.12 335 P **P 03 28 34.7 +0.4**
baz=85
RDOG Red Dog Mine 80.12 338 P **P 03 28 34.8 +0.5**
RDOG IAmb IAmb 03 29 04.0
comp=Z,25nm,1.0s
RDOG Red Dog Mine 80.12 338 P **P 03 28 34.9 +0.6**
baz=85
H16K Elim 80.13 334 P **P 03 28 34.6 +0.2**
baz=85
C17K DeLong Mountai 80.19 338 P **P 03 28 35.1 +0.5**
baz=85
D17K Noatak River 80.22 337 P **P 03 28 35.6 +0.8**
baz=85

N14K Kuskokwak Cree 80.26 329 P **P 03 28 35.8 +0.6**
baz=85
TRO Tromso 80.28 21 *e*P **P 03 28 36.2 +1.2**
TRO IAmb IAmb 03 28 36.8
comp=Z,29nm,1.0s
M14K Bethel 80.33 330 P **P 03 28 35.5 +0.1**
baz=85
SOKA Soboth 80.37 44 *i*P **P 03 28 36.5 +0.3**
comp=Z,5.9nm,0.7s,SNR=11
TREC Trest 80.42 42 *e*P **P 03 28 37.4 +1.1**
TREC Trest 80.42 42 P **P 03 28 37.6 +1.3**
L14K Kuka Creek 80.62 331 P **P 03 28 37.6 +0.5**
baz=84
PAOL Paolisi 80.63 50 P **P 03 28 36.4 -1.2**
PAOL IAmb IAmb 03 28 39.7
comp=Z,25nm,1.3s
UPC Upice 80.63 40 *e*P **P 03 28 39.0 +1.5**
UPC Upice 80.63 40 P **P 03 28 38.9 +1.5**
ARSA Arzberg 80.64 44 P **P 03 28 36.7 -0.9**
ARSA IAmb IAmb 03 28 39.4
comp=Z,19nm,1.0s
ARSA Arzberg 80.64 44 *i*P **P 03 28 38.2 +0.6**
comp=Z,16nm,0.9s,SNR=8.3
ARSA Arzberg 80.64 44 P **P 03 28 38.5 +0.9**
CHVC Chvalec 80.65 40 *e*P **P 03 28 38.9 +1.4**
OSTC Ostas 80.76 40 *e*P **P 03 28 39.2 +1.1**
OSTC epP **pP 03 29 06.9 +1.7**
JETT Jettan, Norway 80.80 21 *e*P **P 03 28 39.0 +1.0**
JETT IAmb IAmb 03 28 39.8
comp=Z,33nm,0.8s
CONA Conrad Observa 80.80 43 *i*P **P 03 28 39.5 +1.0**
comp=Z,19nm,0.9s,SNR=19
DPC Dobruska-Polom 80.85 40 *e*P **P 03 28 40.1 +1.5**
DPC Dobruska-Polom 80.85 40 P **P 03 28 40.2 +1.6**
G15K Niukluk 80.86 335 P **P 03 28 38.5 +0.2**
baz=84
J14K Nanvaranak Lak 80.89 332 P **P 03 28 38.7 +0.3**
baz=84
RAFF Raffo Rosso 80.90 54 P **P 03 28 39.8 +0.7**
VAE Valguarnera 80.91 54 LR LR 03 59 11.2
comp=Z,45nm,20.7s,baz=312,slow=32
WINA Aland / Wiene 80.92 43 *i*P **P 03 28 40.2 +1.2**
comp=Z,18nm,1.1s,SNR=11
C16K Lisburne Hills 81.01 338 P **P 03 28 39.3 +0.3**
baz=83
KRUC Moravsky 81.03 42 *e*P **P 03 28 39.8 +0.2**
KRUC Moravsky 81.03 42 P **P 03 28 40.8 +1.2**
F15K North Star Dit 81.04 335 P **P 03 28 39.5 +0.3**
baz=83
M13K Dall Lake 81.04 330 P **P 03 28 39.5 +0.2**
baz=84
RONA Rosalia, Austr 81.12 43 *i*P **P 03 28 41.1 +1.0**
comp=Z,26nm,1.0s,SNR=12
VRAC Vranov 81.13 41 P **P 03 28 40.9 +0.8**
comp=Z,8.7nm,0.9s,baz=274,slow=7.2,SNR=16
VRAC LR LR 03 59 06.0
comp=Z,24nm,21.1s,baz=271,slow=31
comp=Z,8.7nm,0.9s
VRAC Vranov 81.13 41 ⇓P **P 03 28 41.2 +1.1**
VRAC Vranov 81.13 41 *e*P **P 03 28 40.5 +0.4**
VRAC Vranov 81.13 41 P **P 03 28 41.4 +1.2**
KRLC Kraliky 81.17 41 *e*P **P 03 28 41.8 +1.5**
KRLC Kraliky 81.17 41 P **P 03 28 42.1 +1.8**
SOP Sopron 81.30 43 P **P 03 28 42.2 +1.2**
SGRT San Giovanni R 81.42 49 P **P 03 28 40.9 -1.0**
SGRT IAmb IAmb 03 28 42.6
comp=Z,20nm,0.8s
ANM Nome 81.48 334 P **P 03 28 41.6 0.0**
baz=83
K13K Kusilvak Mount 81.49 331 P **P 03 28 42.0 +0.3**
baz=83
BEHE Becsehely 81.59 44 P **P 03 28 43.3 +0.7**
BEHE IAmb IAmb 03 28 45.3
comp=Z,29nm,1.1s
BEHE Becsehely 81.59 44 ⇑*i*P **P 03 28 44.4 +1.9**
BEHE Becsehely 81.59 44 P **P 03 28 44.2 +1.6**
MODS Modra-Piesok 81.69 42 P **P 03 28 44.7 +1.6**
MODS Modra-Piesok 81.69 42 *e*P **P 03 28 44.7 +1.6**
MORC Moravsky Berou 81.69 41 ⇑P **P 03 28 44.4 +1.3**
MORC Moravsky Berou 81.69 41 P **P 03 28 42.9 -0.2**
MORC IAmb IAmb 03 28 45.9
comp=Z,21nm,1.1s
MORC Moravsky Berou 81.69 41 *e*P **P 03 28 44.1 +1.0**
MORC Moravsky Berou 81.69 41 P **P 03 28 44.8 +1.7**
F14K Arctic Creek 81.76 335 P **P 03 28 43.2 +0.2**
baz=82
STEB Steborice 81.82 41 *e*P **P 03 28 45.3 +1.6**
STEB epP **pP 03 29 11.9 +1.0**
KTK1 Kautokeino 81.87 21 *e*P **P 03 28 44.5 +0.9**
KTK1 IAmb IAmb 03 28 45.2
comp=Z,31nm,0.8s
JAVC Velka Javorina 81.89 42 *e*P **P 03 28 45.9 +1.7**
JAVC Velka Javorina 81.89 42 P **P 03 28 46.8 +2.6**
MAUC Maruska 81.93 41 *e*P **P 03 28 46.5 +2.2**
EDA Edea 81.98 88 P **P 03 28 47.1 +1.9**
MPLH Magyarpolny 82.02 44 P **P 03 28 45.9 +1.1**
OKC Ostrava-Krasne 82.07 41 *e*P **P 03 28 46.7 +1.7**
OKC Ostrava-Krasne 82.07 41 P **P 03 28 46.9 +1.8**
BLY Banja Luka 82.09 46 ⇓P **P 03 28 46.6 +1.5**
BLY Banja Luka 82.09 46 P **P 03 28 45.5 +0.3**
BLY IAmb IAmb 03 28 47.7
comp=Z,28nm,1.1s
BLY Banja Luka 82.09 46 ⇑*i*P **P 03 28 46.7 +1.5**
BLY Banja Luka 82.09 46 P **P 03 28 46.3 +1.1**
MATE Matera 82.28 50 P **P 03 28 46.4 +0.2**
TNA Tin City 82.40 335 P **P 03 28 46.8 +0.4**
baz=80
M11K Mekoryuk 82.45 330 P **P 03 28 47.4 +0.7**
baz=81
TIP Timpagrande 82.52 52 P **P 03 28 46.3 -1.4**
TIP IAmb IAmb 03 28 49.4
comp=Z,17nm,0.9s
TIP Timpagrande 82.52 52 P **P 03 28 47.6 -0.1**
ARA0 ARCESS Array S 82.57 21 *e*P **P 03 28 47.4 +0.2**
ARCES ARCESS Array B 82.57 21 P **P 03 28 47.6 +0.3**
comp=Z,14nm,0.8s,baz=305,slow=4.3,SNR=35
ARCES pP **pP 03 29 14.7 +0.2**
comp=Z,4.4nm,0.9s,baz=276,slow=2.3,SNR=3.1
ARCES LR LR 04 03 22.4
comp=Z,12nm,19.0s,baz=280,slow=34
comp=Z,14nm,0.8s
ARCES ARCESS Array B 82.57 21 P **P 03 28 47.6 +0.3**
ARCES IAmb IAmb 03 28 48.3
comp=Z,19nm,0.9s
ARCES pP **pP 03 29 13.1 -1.4**
DOB Doboj 82.74 46 *e*P P 03 28 43.4 -5.2
MORH Mrgy, Hungar 82.90 44 ⇑P **P 03 28 50.7 +1.3**
MORH Mrgy, Hungar 82.90 44 ⇑*i*P **P 03 28 50.4 +1.0**
MORH Mrgy, Hungar 82.90 44 P **P 03 28 50.7 +1.3**
BUD Budapest 82.98 43 P **P 03 28 49.3 -0.5**
LANS Liptovska Anna 83.02 41 *e*P **P 03 28 52.5 +2.5**
OJC Ojcow 83.08 40 P **P 03 28 50.4 +0.1**
OJC Ojcow 83.08 40 P **P 03 28 52.0 +1.8**
TREB Trebinje 83.21 48 ⇓*i*P **P 03 28 52.2 +1.1**
BRY Bratogost 83.32 48 ⇑*i*P **P 03 28 53.2 +1.4**
BRY Bratogost 83.32 48 ⇓*i*P **P 03 28 53.0 +1.2**
HCY Herceg Novi 83.36 48 *e*P **P 03 28 51.8 0.0**
SGF Sodankyl 83.37 23 P **P 03 28 52.1 +0.7**
BEL Belsk 83.44 39 P **P 03 28 54.3 +2.2**
PSZ Piszkesteto 83.49 43 ⇓P **P 03 28 54.1 +1.6**
PSZ Piszkesteto 83.49 43 P **P 03 28 52.6 +0.1**
PSZ IAmb IAmb 03 28 56.4
comp=Z,24nm,1.3s
PSZ Piszkesteto 83.49 43 P **P 03 28 54.2 +1.7**
OUL Oulu 83.62 25 P **P 03 28 53.4 +0.7**
NKME Niksic 83.64 48 ⇓*i*P **P 03 28 54.7 +1.4**
CEME Cevo 83.65 48 ⇓*i*P **P 03 28 54.5 +1.1**
UNV Unalaska Valle 83.67 324 P **P 03 28 53.2 +0.1**
baz=80
BUM Brajici-Budva 83.67 48 ⇓*i*P **P 03 28 54.5 +1.0**
VADS Vadso 83.75 20 *e*P **P 03 28 54.1 +0.9**
VADS IAmb IAmb 03 28 55.3
comp=Z,11nm,0.8s
TEKS Tekeris 83.77 46 *e*P **P 03 28 55.2 +1.3**
BBLS Lazi&#263i 83.79 47 ⇑*i*P **P 03 28 55.3 +1.2**
PLE Pljevlja 83.87 47 ⇓*i*P **P 03 28 55.9 +1.3**
FRGS Fruska Gora 83.87 45 ⇑*i*P **P 03 28 54.9 +0.5**
DRME Dracevica, Mon 83.90 48 ⇑*i*P **P 03 28 55.5 +0.9**
DRME Dracevica, Mon 83.90 48 ⇓*i*P **P 03 28 54.5 -0.1**
PDG Podgorica 83.91 48 ⇓P **P 03 28 56.0 +1.4**
PDG Podgorica 83.91 48 P **P 03 28 54.7 0.0**
PDG IAmb IAmb 03 28 56.8
comp=Z,19nm,0.9s
PDG Podgorica 83.91 48 *e*P **P 03 28 55.1 +0.5**

PDG Podgorica 83.91 48 P **P 03 28 56.2 +1.5**
PDG Podgorica 83.91 48 ⇓*i*P **P 03 28 56.1 +1.4**
KOME Kolasin 84.04 48 ⇓*i*P **P 03 28 57.1 +1.7**
STHS Stebnicka Huta 84.13 41 *e*P **P 03 28 57.2 +1.6**
SJES Sjenica 84.30 47 *e*P **P 03 28 57.8 +1.0**
IVA Berane 84.31 48 ⇓*i*P **P 03 28 58.1 +1.3**
AMBH Ambrzfalva 84.31 44 P **P 03 28 58.9 +2.3**
ABAH Abaujker 84.32 42 P **P 03 28 58.7 +2.1**
GAMB Gambell 84.35 334 P **P 03 28 56.7 +0.3**
baz=77
PVY Plav 84.40 48 ⇓*i*P **P 03 28 58.8 +1.5**
SUW Suwalki 84.48 36 P **P 03 28 56.9 -0.4**
FINES FINESS Array B 84.49 29 P **P 03 28 57.8 +0.7**
comp=Z,14nm,0.9s,baz=302,slow=4.3,SNR=22
FINES LR LR 04 01 46.8
comp=Z,42nm,21.9s,baz=268,slow=32
comp=Z,14nm,0.9s
FINES FINESS Array B 84.49 29 P **P 03 28 56.8 -0.3**
FIA1 FINESS Array S 84.49 29 P **P 03 28 58.0 +0.9**
KEK Kerkira 84.77 51 P **P 03 28 58.7 -0.3**
KOLS Kolonicke sedl 84.88 41 P **P 03 29 02.0 +2.6**
KOLS Kolonicke sedl 84.88 41 *e*P **P 03 29 01.7 +2.3**
ARBE Arbavere 84.89 31 P **P 03 28 58.4 -0.8**
PHP Peshkopia 84.91 49 P **P 03 29 01.9 +2.1**
LTVH Ltavrtes, Hu 84.92 43 P **P 03 28 59.5 -0.2**
SIRR Siria 84.96 44 ⇑P **P 03 29 01.3 +1.4**
BZS Buzias 85.05 45 ⇑P **P 03 29 01.9 +1.6**
BZS Buzias 85.05 45 P **P 03 29 02.1 +1.7**
SPIA Saint Paul Isl 85.11 327 P **P 03 29 00.3 0.0**
baz=78
TRPA Tarpa 85.20 42 P **P 03 29 02.6 +1.6**
MDVR Moldovita 85.27 45 ⇓P **P 03 29 02.7 +1.2**
OHR Ohrid 85.28 49 *i*P **P 03 29 04.0 +2.3**
KBN Korca 85.35 50 P **P 03 29 04.6 +2.5**
VSU Vasula 85.48 31 P **P 03 29 01.9 -0.2**
DRGR 85.58 43 ⇑P **P 03 29 04.0 +1.0**
DRGR 85.58 43 P **P 03 29 04.4 +1.4**
HERR Herculane 85.74 45 ⇑P **P 03 29 05.3 +1.5**
MARR Marisel-Cluj 85.87 43 ⇓P **P 03 29 05.9 +1.4**
DEV Deva 85.88 44 P **P 03 29 04.0 -0.5**
GZR Gura Zlata 85.89 45 ⇑P **P 03 29 06.1 +1.5**
BMR Baia Mare 85.92 42 P **P 03 29 05.2 +0.5**
CJR Cluj-Napoca 86.19 43 ⇓P **P 03 29 07.5 +1.5**
LVZ Lovozero 86.23 21 P **P 03 29 05.8 +0.1**
LVZ IAmb IAmb 03 29 07.0
comp=Z,26nm,1.0s
LVZ Lovozero 86.23 21 P **P 03 29 06.4 +0.6**
LVZ Lovozero 86.23 21 P **P 03 29 06.6 +0.8**
LVZ pP **pP 03 29 34.8 +1.6**
NACGM Naroch 86.35 35 ⇓*i*P **P 03 29 07.7 +1.1**
comp=Z,112nm,0.9s,baz=284
GRG Griva 86.50 49 P **P 03 29 09.6 +1.9**
VAY Valandovo 86.55 49 *i*P **P 03 29 10.2 +2.4**
LOT Lotru 86.57 45 ⇑P **P 03 29 09.1 +1.1**
LOT Lotru 86.57 45 P **P 03 29 08.6 +0.6**
ARCR ARCALIA 86.62 43 ⇓P **P 03 29 09.9 +1.8**
RNPP8 Varash 86.64 38 P **P 03 29 08.6 +0.6**
RNPP9 Sopachiv 86.64 38 P **P 03 29 08.2 +0.2**
LIT Litokhoron 86.73 50 P **P 03 29 09.0 +0.3**
LIT pP **pP 03 29 35.3 -0.9**
LIT Litokhoron 86.73 50 P **P 03 29 07.8 -1.0**
KNT Kendrikon 86.82 49 P **P 03 29 11.9 +2.7**
AGG Agios Georgios 86.82 51 P **P 03 29 11.0 +1.7**
MDB Medias 86.84 44 ⇑P **P 03 29 11.2 +2.1**
ITM Ithomi 86.87 53 P **P 03 29 10.9 +1.4**
THE Thessaloniki 86.98 49 P **P 03 29 11.3 +1.4**
BUR08 Bucovina Ar. S 87.06 42 P **P 03 29 10.2 -0.1**
BURAR Bucovina Array 87.07 42 ⇓P **P 03 29 12.2 +1.8**
BURAR Bucovina Array 87.07 42 P **P 03 29 10.3 -0.1**
HORT Hortiatis 87.09 49 P **P 03 29 12.2 +1.6**
SOH Sokhos 87.23 49 P **P 03 29 13.1 +1.9**
SRS Serrai 87.34 49 P **P 03 29 13.2 +1.5**
XOR Xorichti 87.41 51 P **P 03 29 13.2 +1.1**
VOIR 87.45 44 ⇓P **P 03 29 13.7 +1.5**
VOIR 87.45 44 P **P 03 29 13.6 +1.4**
DOPR Dopca 87.56 44 ⇑P **P 03 29 14.3 +1.7**
PLVB Pleven 87.60 46 ⇑P **P 03 29 14.1 +1.3**
PAIG Paliouri 87.66 50 P **P 03 29 14.9 +1.7**
KMPD K-Podol'skiy 87.67 41 P **P 03 29 13.0 0.0**
BIZ Bicaz 87.82 43 ⇓P **P 03 29 15.9 +2.0**
MI28 Mi28,Pidlybu 87.84 39 P **P 03 29 14.1 +0.3**
MLR Muntele Rosu 88.05 44 P **P 03 29 16.7 +1.6**
comp=Z,24nm,0.8s,baz=295,slow=2.5,SNR=59
MLR LR LR 04 05 41.6
comp=Z,10.0nm,19.1s,baz=345,slow=34
comp=Z,24nm,0.8s
MLR Muntele Rosu 88.05 44 ⇑P **P 03 29 16.4 +1.2**
MLR Muntele Rosu 88.05 44 P **P 03 29 15.4 +0.3**
MLR pP **pP 03 29 41.9 -0.7**
MLR Muntele Rosu 88.05 44 P **P 03 29 16.9 +1.8**
MI29 MI29, Kamyanyy 88.09 39 P **P 03 29 15.6 +0.6**
COVR Voineasa-Covas 88.14 44 ⇓P **P 03 29 17.3 +1.9**
LUBAR Lubar, Ukraine 88.16 40 P **P 03 29 15.3 0.0**
VRI Vrincioaia 88.49 44 ⇑P **P 03 29 19.0 +2.0**
VRI Vrincioaia 88.49 44 P **P 03 29 19.1 +2.0**
SAHR Sahastru 88.50 44 ⇑P **P 03 29 18.7 +1.6**
AK22 Malin Array Si 88.75 39 P **P 03 29 18.2 +0.1**
RDO Rodhopi 88.77 48 P **P 03 29 19.7 +1.3**
KIEV Kiev 88.85 39 ⇑P **P 03 29 19.2 +0.6**
KIEV Kiev 88.85 39 P **P 03 29 19.4 +0.8**
AKASG Malin Array Be 88.86 39 P **P 03 29 19.1 +0.5**
comp=Z,3.1nm,0.7s,baz=271,slow=4.3,SNR=19
AKASG pP **pP 03 29 46.3 +0.1**
comp=Z,2.0nm,0.8s,baz=270,slow=4.1,SNR=1.8
AKASG LR LR 04 06 32.8
comp=Z,33nm,19.6s,baz=274,slow=34
comp=Z,3.1nm,0.7s
AKASG Malin Array Be 88.86 39 P **P 03 29 17.6 -1.1**
AKBB Malin Array Si 88.86 39 P **P 03 29 18.2 -0.4**
AKBB IAmb IAmb 03 29 20.4
comp=Z,13nm,1.1s
AKBB Malin Array Si 88.86 39 P **P 03 29 18.7 +0.1**
SORM Soroca 88.99 41 ⇓P **P 03 29 20.2 +0.9**
ALN Alexandroupoli 89.20 49 P **P 03 29 20.3 -0.2**
ALN Alexandroupoli 89.20 49 P **P 03 29 21.7 +1.2**
CFR Carcaliu 89.62 44 ⇑P **P 03 29 22.8 +0.5**
JURR Jurilovca 90.24 44 ⇓P **P 03 29 27.0 +1.8**
BELA Belgrano 2 91.17 173 P **P 03 29 29.1 +0.4**
RAR Rarotonga 91.49 249 LR LR 04 02 07.9
comp=Z,56nm,21.9s,baz=97,slow=30
VNA1 Neumayer--Stat 92.01 163 ⇓P **P 03 29 35.2 +2.5**
comp=Z,35nm,1.0s
VNA2 Neumayer--Watz 92.39 163 ⇓P **P 03 29 36.5 +1.9**
comp=Z,5.6nm,0.6s,baz=302,slow=5.3
VNA2 Neumayer--Watz 92.39 163 P **P 03 29 36.3 +1.8**
SAHE Sakarya_HENDEK 92.73 48 ⇓P **P 03 29 37.7 +0.8**
ELL Elmali 93.19 52 P **P 03 29 39.3 +0.1**
SNAA Sanae 94.04 163 ⇓P **P 03 29 44.0 +1.8**
comp=Z,153nm,0.7s
SNAA Sanae 94.04 163 P **P 03 29 43.6 +1.4**
comp=Z,9.6nm,0.9s,baz=300,slow=2.9,SNR=19
SNAA LR LR 04 11 31.7
comp=Z,32nm,21.3s,baz=274,slow=35
comp=Z,9.6nm,0.9s
SNAA Sanae 94.04 163 P **P 03 29 43.7 +1.4**
SNAA Sanae 94.04 163 P **P 03 29 43.8 +1.6**
KKUL Konya-Kulu 94.75 49 P **P 03 29 47.7 +1.4**
SHEM Shemya Is, Ala 95.07 326 LR LR 04 16 10.4
comp=Z,30nm,18.0s,baz=196,slow=38
BR131 Keskin Array S 95.10 48 P **P 03 29 48.5 +0.6**
BR131 pP **pP 03 30 14.1 -1.5**
BRTR Keskin Array B 95.10 48 P **P 03 29 48.7 +0.7**
comp=Z,11nm,0.8s,baz=267,slow=4.0,SNR=37
BRTR pP **pP 03 30 15.2 -0.5**
comp=Z,7.7nm,0.8s,baz=266,slow=3.5,SNR=10
BRTR LR LR 04 13 16.5
comp=Z,13nm,18.2s,baz=268,slow=36
comp=Z,11nm,0.8s
BRTR Keskin Array B 95.10 48 P **P 03 29 48.4 +0.4**
BRTR pP **pP 03 30 14.2 -1.4**
TROLL Troll, Antarti 95.74 162 ⇓P **P 03 29 51.9 +1.9**
comp=Z,545nm,0.8s
TROLL ⇑pP **pP 03 30 19.4 +1.6**
comp=Z,225nm,0.8s
TIXI Tiksi 96.37 353 LR LR 04 13 54.3
comp=Z,28nm,20.2s,baz=22,slow=36
BNN Bunyan 97.01 48 P **P 03 29 57.3 +0.6**
BNN pP **pP 03 30 24.2 -0.1**
SUR Sutherland 98.45 121 LR LR 04 11 19.8
comp=Z,28nm,18.1s,baz=216,slow=33
NRIK Noril'sk 98.68 7 LR LR 04 13 41.1
comp=Z,71nm,21.9s,baz=356,slow=35
EIL Elat 99.31 57 LR LR 04 14 18.7

comp=Z,39nm,20.0s,baz=272,slow=35
KVAR Kislovodsk Arr 99.80 42 LR LR 04 13 41.3
comp=Z,14nm,20.2s,baz=340,slow=34
KBZ Khabaz 100.03 42 P **Pdif 03 30 11.4 +1.6**
comp=Z,1.5nm,0.6s,baz=28,slow=4.4,SNR=3.9
QSPA South Pole Qui 100.94 180 P **Pdif 03 30 14.8 +1.4**
comp=Z,7.7nm,1.0s,baz=167,slow=2.5,SNR=12
QSPA South Pole Qui 100.94 180 Pdif **Pdif 03 30 12.8 -0.6**
KURBB Kurchatov Arra 113.65 20 PP **PP 03 35 53.5 -1.5**
comp=Z,0.2nm,0.2s,baz=325,slow=8.3,SNR=5.1
MKAR Makanchi Array 118.21 19 PKP **PKPdf 03 35 10.0 -1.3**
comp=Z,0.3nm,0.4s,baz=348,slow=1.9,SNR=5.2
MKAR PP **PP 03 36 24.2 -2.9**
comp=Z,1.7nm,1.1s,baz=336,slow=2.7,SNR=3.8
MKAR Makanchi Array 118.21 19 PKPdf 03 35 10.4 -0.9
SONM Songino Array 121.47 1 PKKPbc PKKPbc 03 45 17.9 -2.1
comp=Z,0.4nm,0.4s,baz=194,slow=5.6,SNR=3.8
WMQ Urumqi 122.55 17 *e*PKP **PKiKP 03 35 19.9 -0.1**
WMQ LR LR
comp=Z,97nm,24.1s
HHC Hu-ho-hao-te 128.33 356 *e*P **PKPdf 03 35 29.4 -1.6**
BTO2 Baotou 128.52 358 *e*PKP **PKPdf 03 35 30.4 -1.0**
BTO2 PP **PP 03 37 38.6 +2.3**
BTO2 Baotou 128.52 358 SS SS 03 54 47.6 +3.8
BTO2 pmax pmax
comp=Z,26nm,0.6s
BTO2 pmax pmax
comp=Z,200nm,5.2s
BTO2 LR LR
comp=N,170nm,5.0s
BTO2 LR LR
comp=E,130nm,4.7s
BTO2 LR LR
comp=Z,130nm,5.2s
GTA2 Gaotai 129.29 8 *e*P **PKiKP 03 35 33.8 +0.2**
GTA2 sP pPKPdf 03 36 02.8 +1.0
GTA2 pmax pmax
comp=Z,7.0nm,0.9s
XAN Xi'an 135.24 358 PKP **PKPdf 03 35 44.5 +0.3**
NJ2 Nanjing 135.91 346 *e*P **PKPdf 03 35 45.9 +0.5**
NJ2 pmax pmax
comp=Z,31nm,0.5s
PZH PanZhiHua 142.34 9 PKP **PKPdf 03 35 56.6 -0.8**
STKA Stephens Creek 142.37 231 P **PKPdf 03 35 54.5 -2.6**
STKA Stephens Creek 142.37 231 PKhKP PKPpre 03 35 49.7
comp=Z,3.7nm,0.8s,baz=96,slow=2.1,SNR=7.5
GYA Guiyang 142.80 1 ⇑PKP **PKPdf 03 35 56.3 -2.0**
HTT Hallett 143.62 227 P PKPbc 03 35 57.9 +0.8
MTSU Mount Surprise 143.81 254 P **PKPdf 03 35 59.6 -0.5**
COEN Coen 145.16 261 P **PKPdf 03 36 03.9 +1.5**
BBOO Buckleboo 145.99 226 P **PKPab 03 36 05.3 +0.3**
BBOO Buckleboo 145.99 226 PKPdf **PKPdf 03 36 03.6 +0.2**
PALK Pallekele 147.67 57 PKPdf **PKPdf 03 36 06.2 -0.8**
QIS Mount Isa 147.82 249 P **PKiKP 03 36 10.9 -0.8**
CHTO Chiang Mai 149.21 16 **PKPbc 03 36 12.2 -1.2**
CMAR Chiang Mai Arr 149.55 16 PKP **PKPdf 03 36 10.8 +1.1**
comp=Z,9.1nm,0.9s,baz=296,slow=2.3,SNR=7.5
CMAR PKPbc **PKiKP 03 36 14.8 -0.6**
comp=Z,8.7nm,0.9s,baz=13,slow=1.9,SNR=7.6
CMAR pPKPbc **pPKPbc 03 36 43.2 +0.1**
comp=Z,5.2nm,0.8s,baz=326,slow=3.7,SNR=2.7
CMAR Chiang Mai Arr 149.55 16 PKPdf **PKPdf 03 36 10.0 +0.3**
CMAR **PKiKP 03 36 14.9 -0.5**
AS17 Alice Springs 151.88 240 P **PKiKP 03 36 20.8 +0.7**
AS31 Alice Springs 151.91 240 P **PKiKP 03 36 20.6 +0.5**
AS31 Alice Springs 151.96 240 P **PKiKP 03 36 20.9 +0.7**
AS31 Alice Springs 151.96 240 **PKPbc 03 36 19.4 -0.5**
ASAR Alice Springs 151.96 240 PKP **PKPdf 03 36 14.4 +1.1**
comp=Z,0.7nm,0.8s,baz=94,slow=1.9,SNR=4.8
ASAR PKPbc **PKiKP 03 36 20.5 +0.3**
comp=Z,20nm,0.8s,baz=112,slow=2.3,SNR=137
ASAR pPKPbc **pPKPbc 03 36 48.1 -0.8**
comp=Z,12nm,0.8s,baz=113,slow=2.4,SNR=5.0
ASAR Alice Springs 151.96 240 **PKPbc 03 36 18.9 -1.0**
AS15 Alice Springs 151.96 240 P **PKiKP 03 36 20.8 +0.5**
WR0 Warramunga Arr 152.58 248 P **PKiKP 03 36 22.2 +0.6**
WR8 Warramunga Arr 152.62 248 **PKPbc 03 36 21.0 -0.4**
FORT Forrest 152.63 221 P **PKiKP 03 36 21.4 +0.7**
FORT Forrest 152.63 221 **PKiKP 03 36 21.6 +0.3**
WB2 Warramunga Arr 152.75 248 P **PKiKP 03 36 22.6 +0.7**
WB9 Warramunga Arr 152.76 248 P **PKiKP 03 36 22.6 +0.6**
WR1 Warramunga Arr 152.76 248 P **PKiKP 03 36 22.6 +0.6**
WRA Warramunga Arr 152.77 248 PKPbc **PKiKP 03 36 22.4 +0.4**
comp=Z,18nm,0.8s,baz=102,slow=2.5,SNR=114
WRA pPKPbc **pPKPbc 03 36 50.2 -0.5**
comp=Z,10nm,0.8s,baz=103,slow=2.7,SNR=4.8
WRA Warramunga Arr 152.77 248 PKPdf **PKPdf 03 36 13.3 -1.3**
WRA **PKPbc 03 36 21.6 -0.1**

*BER **22** 03:20:37.6±2.1, 78°.70N×5°.02E, h15km±11km, Mw3.8, ML1.5(DNK), Confirmed Earthquake*
*DNK **22** 03:20:38.6±1.9, 78°.73N×5°.21E, h36km±15km, ML1.5, Presumed earthquake*
ISC 22 03:20:35.9±2.0, 78°.71N±0°.07×4°.67E±0°.04, h28km±20km, n16, σ2s13/29, 2C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.44**	**78**	⇑*i*P		**Pn**	**03 21 00.2**	**+0.2**
KBS				IAML			03 21 01.0	
	comp=Z,62nm,0.1s							
KBS				*e*S		**Sn**	**03 21 16.4**	**-1.5**
KBS	**Kingsbay**	**1.44**	**78**	*i* P		**Pn**	**03 21 00.2**	**+0.2**
KBS				*i* S		**Sn**	**03 21 15.2**	**-2.7**
BRBB	**Barentsburg B**	**2.02**	**103**	*e*P		**Pn**	**03 21 08.3**	**+0.3**
BRBB				*e*Pg		**Pb**	**03 21 10.1**	**-1.9**
BRBB				*e*S		**Sn**	**03 21 30.6**	**-1.7**
BRBA	**Barentsburg A**	**2.04**	**104**	*e*P		**Pn**	**03 21 10.0**	**+1.8**
BRBA				*e*S		**Sn**	**03 21 31.3**	**-1.4**
BRBA				IAMLHF			03 21 35.6	
	comp=Z,7.1nm,0.1s							
SPA0	**Spitsbergen Ar**	**2.41**	**97**	⇑*i*P		**Pn**	**03 21 15.0**	**+1.6**
SPA0				IAML			03 21 15.5	
	comp=Z,24nm,0.3s							
SPA0				*e*S		**Sn**	**03 21 41.5**	**-0.5**
HSPB	**Hornsund (broa**	**2.86**	**121**	*e*S		**Sn**	**03 21 51.6**	**-1.4**
NOR	**Nord**	**4.64**	**319**	*e*P		**Pn**	**03 21 45.3**	**+1.4**
NOR				*e*S		**Sn**	**03 22 37.0**	**+0.2**
NOR	**Nord**	**4.64**	**319**	*i* P		**Pn**	**03 21 44.2**	**+0.2**
NOR				*i* S		**Sn**	**03 22 35.8**	**-1.0**
NOR				IAML			03 22 38.7	
	comp=Z,1.7nm,0.3s							
HOPEN	**Hopen**	**4.88**	**107**	*e*P		**Pn**	**03 21 48.2**	**+1.0**
HOPEN				*e*S		**Sn**	**03 22 40.2**	**-2.5**
DAG	**Danmarks Havn**	**5.31**	**260**	*e*P		**Pn**	**03 21 55.0**	**+1.9**
DAG				*e*S		**Sn**	**03 22 51.1**	**-2.0**
DAG				IAMLHF			03 22 58.4	
	comp=Z,2.4nm,0.2s							
DAG	**Danmarks Havn**	**5.31**	**260**	*i* P		**Pn**	**03 21 54.9**	**+1.8**
DAG				*i* S		**Sn**	**03 22 50.9**	**-2.3**
DAG				IAML			03 22 57.4	
	comp=Z,2.8nm,0.4s							
DBG	**Daneborg**	**7.24**	**245**	*e*P		**Pn**	**03 22 21.4**	**+1.8**
DBG				*e*S		**Sn**	**03 23 36.8**	**-3.8**
DBG				IAMLHF			03 23 42.9	
	comp=Z,0.7nm,0.2s							
DBG	**Daneborg**	**7.24**	**245**	*i* P		**Pn**	**03 22 21.1**	**+1.6**
DBG				*i* S		**Sn**	**03 23 36.8**	**-3.8**
DBG				IAML			03 23 46.1	
	comp=Z,1.0nm,0.4s							
JNW	**Jan Mayen West**	**8.41**	**210**	*e*P		**Pn**	**03 22 39.4**	**+3.8**
JNE	**Jan Mayen East**	**8.43**	**210**	*e*P		**Pn**	**03 22 39.6**	**+3.7**
NEEM	**North Greenlan**	**11.21**	**292**	*i* P		**Pn**	**03 23 13.3**	**-0.9**

*IDC **22** 03:34:37.6±2.1, 3°.80S×153°.02E, h0km, mb4.1/3, mbtmp4.1/3, MS3.6/2, Error ellipse: s-maj=74.1km s-min=46.6km az=125.0*
*NEIC **22** 03:34:44.1±1.5, 4°.2S±0°.1×152°.99E±0°.02, h25km±7km, mb4.4/10, Error ellipse: s-maj=18.6km s-min=3.2km az=180.0*
ISC 22 03:34:44.5±0.8, 4°.1S±0°.1×153°.0E±0°.1, h35km, n31, σ0s86/19, mb4.4/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.80**	**264**			**Pn**	**03 34 59.9**	**+0.6**
RABL				Sg		**Sn**	**03 35 10.3**	**+0.4**
KRVT	**Keravat (AS076**	**0.95**	**258**	LR		LR	03 35 21.1	
	comp=Z,61nm,21.0s,baz=213,slow=39							
MANU	**Manus Island**	**5.95**	**290**			Pn	03 36 15.1	+5.0
HNR	**Honiara**	**8.73**	**128**	LR		LR	03 40 32.3	
	comp=Z,5.0nm,18.3s,baz=8.5,slow=40							
PATS	**Pohnpei**	**12.11**	**26**	Pn		**Pn**	**03 37 34.5**	**-0.1**
WB0	**Warramunga Arr**	**23.88**	**228**	P		**P**	**03 39 55.4**	**+0.4**
WB0				IAmb		IAmb	03 40 12.1	
	comp=Z,6.7nm,1.0s							
WR8	**Warramunga Arr**	**23.91**	**227**	P		**P**	**03 39 55.9**	**+0.5**
WR8				IAmb		IAmb	03 40 07.1	
	comp=Z,16nm,1.4s							
WRA	**Warramunga Arr**	**24.02**	**228**	P		**P**	**03 39 57.1**	**+0.7**
	comp=Z,5.1nm,0.4s,baz=53,slow=9.8,SNR=41							
	comp=Z,5.1nm,0.4s							
WRA	**Warramunga Arr**	**24.02**	**228**	P		**P**	**03 39 56.3**	**-0.1**
H11S3	**WAKE ISLAND Hy**	**26.22**	**31**	T		T	04 07 44.8	
	baz=208,slow=74,SNR=13							
H11S2	**WAKE ISLAND Hy**	**26.22**	**31**	T		T	04 07 47.0	
	baz=208,slow=74,SNR=17							
H11S1	**WAKE ISLAND Hy**	**26.23**	**31**	T		T	04 07 42.6	
	baz=208,SNR=17							
ASAR	**Alice Springs**	**26.77**	**222**	P		**P**	**03 40 21.9**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=54,slow=8.8,SNR=6.6							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**26.77**	**222**	P		**P**	**03 40 21.7**	**+0.4**
H11N1	**WAKE ISLAND Hy**	**27.35**	**30**	T		T	04 09 10.6	
	baz=218,slow=74							
H11N3	**WAKE ISLAND Hy**	**27.36**	**30**	T		T	04 09 13.5	
	baz=218							
H11N2	**WAKE ISLAND Hy**	**27.36**	**30**	T		T	04 09 09.5	
	baz=218,slow=74							
FITZ	**Fitzroy Crossi**	**30.13**	**240**	P		**P**	**03 40 51.2**	**0.0**
FORT	**Forrest**	**35.42**	**219**	P		**P**	**03 41 36.8**	**-0.6**
FORT				IAmb		IAmb	03 42 01.5	
	comp=Z,7.7nm,0.9s							
GIRL	**Giralia**	**41.74**	**240**	P		**P**	**03 42 28.6**	**-1.9**
LTZ	**Lake Taylor**	**42.17**	**159**	P		**P**	**03 42 34.5**	**+0.7**
MORW	**Morawa**	**42.90**	**231**	P		**P**	**03 42 39.4**	**-0.5**
MORW				IAmb		IAmb	03 42 57.3	
	comp=Z,7.3nm,1.1s							
KSAR	**Wonju Array Be**	**47.46**	**333**	P		**P**	**03 43 16.0**	**+0.1**
BJT	**Baijiatuan**	**55.39**	**326**	P		**P**	**03 44 16.1**	**+0.8**
BJT				IAmb		IAmb	03 44 19.3	
	comp=Z,9.9nm,0.6s							
VNDA	**Vanda**	**73.52**	**178**	LR		LR	04 14 50.5	
	comp=Z,23nm,18.0s,baz=140,slow=33							
H02S1	**DAWSON INLET T**	**84.09**	**36**	T		T	05 20 07.0	
	SNR=12							
H02S2	**DAWSON INLET T**	**84.09**	**36**	T		T	05 20 07.1	
	SNR=12							
AAK	**Ala-Archa**	**84.31**	**313**	LR		LR	04 25 05.0	
	comp=Z,36nm,19.6s,baz=330,slow=36							
QSPA	**South Pole Qui**	**85.85**	**180**	P		**P**	**03 47 20.8**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=55,slow=0.4,SNR=6.1							
	comp=Z,1.0nm,0.8s							
QSPA	**South Pole Qui**	**85.85**	**180**	P		**P**	**03 47 21.1**	**+0.6**
QSPA				IAmb		IAmb	03 47 43.1	
	comp=Z,3.2nm,1.1s							
TORD	**Torodi Ar. Bea**	**150.23**	**289**	PKPbc		**PKPbc**	**03 54 31.0**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=70,slow=3.4,SNR=9.5							

*IDC **22** 04:09:30.1±3.0, 44°.88N×149°.11E, h0km, mb3.7/8, mbtmp3.7/9, ML2.2/1, MS2.8/1, Error ellipse: s-maj=77.3km s-min=30.9km az=177.0*
*MOS **22** 04:09:31.9±1.6, 44°.68N×149°.36E, h34km, mb4.3/1, Error ellipse: s-maj=18.0km s-min=15.3km az=47.3*
*JMA **22** 04:09:32.8±1.2, 45°.N±5°.×14°.9E±°, h30km, MV4.1/13, SE OFF ETOROFU*
*SKHL **22** 04:09:34.2±0.8, 44°.50N×149°.30E, h56km±6km, mb4.7/4*
ISC 22 04:09:33.4±0.9, 44°.49N±0°.07×149°.28E±0°.08, h35km, n42, σ0s97/42, mb3.8/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
REI	**Reidovoe**	**1.19**	**311**	*e*P		**Pn**	**04 09 53.1**	**-0.3**
REI				AMB		AMB	04 09 54.4	
	100nm,0.2s							
REI				*e*S		**Sn**	**04 10 07.9**	**-0.4**
REI				A		A	04 10 08.6	
	650nm,0.3s							
REI				A		A	04 10 08.6	
	350nm,0.3s							
KUR	**Kuril'sk**	**1.25**	**307**	*e*PN		**Pn**	**04 09 54.2**	**-0.1**
KUR				*i* S		**Sn**	**04 10 09.5**	**-0.4**
KUR				pmax		pmax		
	comp=Z,717nm,0.4s							
KUR				pmax		pmax		
	comp=N,273nm,0.3s							
KUR				pmax		pmax		
	comp=E,168nm,0.3s							
KUR				smax		smax		
	comp=E,1μm,0.6s							
KUR				smax		smax		
	comp=N,1μm,0.5s							
KUR	**Kuril'sk**	**1.25**	**307**	*e*P		**Pn**	**04 09 54.2**	**-0.1**
KUR				AMB		AMB	04 09 56.1	
	comp=N,700nm,0.4s							
KUR				*e*S		**Sn**	**04 10 08.6**	**-1.3**
KUR				A		A	04 10 11.9	
	comp=N,1μm,0.3s							
KUR				A		A	04 10 11.9	
	comp=N,2μm,0.3s							
SHO	**Shikotan**	**1.87**	**251**	*e*P		Pn	04 10 15.4	+13
SHO				AMB		AMB	04 10 17.4	
	comp=N,70nm,0.2s							
SHO				*e*S		Sn	04 10 37.2	+12
SHO				A		A	04 10 40.3	
	comp=N,290nm,0.3s							
SHO				A		A	04 10 40.3	
	comp=N,320nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.50**	**261**	*e*PN		**Pn**	**04 10 12.6**	**+1.1**
YUK				*i* S		**Sn**	**04 10 41.6**	**+0.9**
YUK				pmax		pmax		
	comp=N,58nm,0.2s							
YUK				pmax		pmax		
	comp=E,130nm,0.2s							
YUK				pmax		pmax		
	comp=Z,286nm,0.2s							
YUK				smax		smax		
	comp=N,426nm,0.3s							
YUK				smax		smax		
	comp=E,511nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.50**	**261**	*e*P		**Pn**	**04 10 12.7**	**+1.2**
YUK				AMB		AMB	04 10 13.5	
	comp=E,180nm,0.4s							
YUK				*e*S		**Sn**	**04 10 40.0**	**-0.7**
YUK				A		A	04 10 43.8	
	comp=E,310nm,0.3s							
YUK				A		A	04 10 43.8	
	comp=E,490nm,0.3s							
NEM2	**Nemuro 2**	**2.79**	**247**	*e*P		**Pn**	**04 10 15.1**	**-0.4**
NEM2				*e*S		**Sn**	**04 10 46.6**	**-1.4**
NMR	**Nemuro--Hokkai**	**2.80**	**248**	*e*PN		**Pn**	**04 10 15.0**	**-0.6**
NMR	**Nemuro--Hokkai**	**2.80**	**248**	*e*P		**Pn**	**04 10 15.5**	**-0.1**
NMR				*e*S		**Sn**	**04 10 47.6**	**-0.5**
RUSJ	**Misakicho**	**2.92**	**264**	*e*PN		**Pn**	**04 10 18.4**	**+1.1**
RUSJ				*i* S		**Sn**	**04 10 54.2**	**+3.1**
JRA	**Rausu**	**3.04**	**261**	*e*P		**Pn**	**04 10 20.1**	**+1.1**
JRA				*e*S		**Sn**	**04 10 53.7**	**-0.3**
JNK	**Nakash**	**3.41**	**256**	*e*P		**Pn**	**04 10 24.4**	**+0.4**
JNK				*e*S		**Sn**	**04 11 02.4**	**-0.8**
AKK	**Akkeshi**	**3.54**	**247**	*e*P		**Pn**	**04 10 26.0**	**+0.2**
JAK	**Akkeshi**	**3.64**	**247**	*e*P		**Pn**	**04 10 27.1**	**-0.1**
JAK				*e*S		**Sn**	**04 11 07.9**	**-1.0**
JTKR	**Abashiri--Toko**	**3.89**	**264**	*e*P		**Pn**	**04 10 29.5**	**-1.2**
JAR	**Ashorobuto**	**4.16**	**255**	*e*P		**Pn**	**04 10 35.9**	**+1.6**
JAR				*e*S		**Sn**	**04 11 21.9**	**+0.2**
JOB	**Onbets**	**4.25**	**250**	*e*P		**Pn**	**04 10 36.4**	**+0.8**
JCH	**Churui**	**4.69**	**248**	*e*P		**Pn**	**04 10 42.1**	**+0.5**
JNBK	**Urakawa-nobuka**	**5.24**	**247**	P		**Pn**	**04 10 49.6**	**+0.3**
JANG	**Nango**	**7.06**	**237**	P		**Pn**	**04 11 12.2**	**-2.1**
PETK	**Petropavlovsk-**	**10.25**	**30**	Pn		Pn	04 11 54.2	-3.7
	comp=E,0.1nm,0.3s,baz=206,slow=13,SNR=1.6							
	comp=E,1.0nm,0.8s							
JCJ	**Chichijima**	**18.27**	**201**	LR		LR	04 18 37.4	
	comp=E,33nm,20.6s,baz=187,slow=29							
H11N2	**WAKE ISLAND Hy**	**28.72**	**144**	T		T	04 46 17.8	
	baz=334,slow=76,SNR=130							
H11N1	**WAKE ISLAND Hy**	**28.74**	**144**	T		T	04 46 16.1	
	baz=334,slow=76,SNR=89							
H11N3	**WAKE ISLAND Hy**	**28.74**	**144**	T		T	04 46 20.7	
	baz=334,slow=76,SNR=92							
H11S1	**WAKE ISLAND Hy**	**29.73**	**145**	T		T	04 47 34.8	
	baz=335,slow=76,SNR=138							
H11S3	**WAKE ISLAND Hy**	**29.74**	**145**	T		T	04 47 35.9	
	baz=335,slow=76,SNR=85							
H11S2	**WAKE ISLAND Hy**	**29.75**	**145**	T		T	04 47 39.2	
	baz=335,slow=76,SNR=83							
ILAR	**Eielson Array**	**39.98**	**37**	P		**P**	**04 17 04.1**	**-0.1**
	comp=E,0.2nm,0.4s,baz=267,slow=9.4,SNR=4.3							
	comp=E,0.2nm,0.4s							
KURK	**Kurchatov**	**46.38**	**304**	P		**P**	**04 17 56.1**	**+0.1**
KURK	**Kurchatov**	**46.38**	**304**	*e*P		**P**	**04 17 56.1**	**+0.1**
KURBB	**Kurchatov Arra**	**46.47**	**304**	P		**P**	**04 17 56.1**	**-0.6**
	comp=E,0.4nm,0.4s,baz=72,slow=8.1,SNR=4.3							
	comp=E,0.4nm,0.4s							
FINES	**FINESS Array B**	**64.90**	**334**	P		**P**	**04 20 08.4**	**-0.3**
	comp=E,0.5nm,0.5s,baz=33,slow=11,SNR=5.7							
	comp=E,0.5nm,0.5s							
NB2	**NORSAR Subarra**	**69.45**	**340**	P		**P**	**04 20 37.3**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.45**	**340**	P		**P**	**04 20 37.0**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=40,slow=7.7,SNR=5.9							
	comp=Z,1.6nm,1.0s							
HFS	**Hagfors**	**69.59**	**338**	P		**P**	**04 20 37.9**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=64,slow=6.8,SNR=7.0							
	comp=Z,3.1nm,0.9s							
AKASG	**Malin Array Be**	**71.88**	**325**	P		**P**	**04 20 51.9**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=41,slow=6.3,SNR=4.1							
	comp=Z,0.5nm,0.3s							
EKA	**Eskdalemuir Ar**	**77.84**	**344**	P		**P**	**04 21 27.3**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=11,slow=3.9,SNR=3.5							
	comp=Z,0.2nm,0.4s							
TXAR	**Lajitas Array**	**80.96**	**58**	P		**P**	**04 21 46.0**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=301,slow=4.3,SNR=6.6							
	comp=Z,0.1nm,0.5s							
H03N2	**Juan Fernandez**	**141.43**	**90**	T		T	07 07 02.4	
	baz=304							
H03N3	**Juan Fernandez**	**141.45**	**90**	T		T	07 06 58.6	
	baz=304							
H03N1	**Juan Fernandez**	**141.45**	**90**	T		T	07 07 01.9	
	baz=304							

*SJA **22** 04:11:12.7±0.9, 21°.99S×68°.58W, h135km, ML3.7, MW3.6*
*NEIC **22** 04:11:16.2±1.8, 21°.83S±0°.04×68°.72W±0°.07, h125km±5km, mb4.3/8, Mwr4.0(GUC), Error ellipse: s-maj=10.1km s-min=5.4km az=78.0*
*GUC **22** 04:11:16.9±0.8, 21°.81S×68°.68W, h112km±4km, ML3.5*
ISC 22 04:11:16.0±0.8, 21°.83S±0°.03×68°.67W±0°.05, h125km±7km, n62, σ1s54/81, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.53**	**274**	*e*P		**Pn**	**04 11 35.0**	**+0.1**
PB09				*e*S		**Sn**	**04 11 50.1**	**+1.0**
PB09				IAML			04 11 51.3	
	comp=Z,1μm,0.2s							
PB09	**IPOC Station P**	**0.53**	**274**	⇑*i*P		**Pn**	**04 11 35.0**	**+0.1**
PB09				*e*S		**Sn**	**04 11 48.4**	**-0.7**
PB09				IAML			04 11 50.0	
	comp=N,817nm,0.2s							
PB09	**IPOC Station P**	**0.53**	**274**			**Pn**	**04 11 34.4**	**-0.5**
PB09				Sn		**Sn**	**04 11 47.9**	**-1.3**
PB03	**IPOC Station P**	**1.03**	**258**	*e*P		**Pn**	**04 11 38.0**	**-0.9**
PB03				*e*S		**Sn**	**04 11 53.5**	**-2.7**
PB03				IAML			04 11 56.2	
	comp=Z,2μm,0.3s							
PB03	**IPOC Station P**	**1.03**	**258**	⇑*i*P		**Pn**	**04 11 39.4**	**+0.5**
PB03				*e*S		**Sn**	**04 11 56.0**	**-0.3**
PB03	**IPOC Station P**	**1.03**	**258**			**Pn**	**04 11 39.0**	**+0.1**
PB03				Sn		**Sn**	**04 11 55.6**	**-0.6**
PB07	**IPOC Station P**	**1.13**	**275**	*e*P		**Pn**	**04 11 39.4**	**-0.7**
PB07				*e*S		**Sn**	**04 11 59.5**	**+1.4**
PB07				IAML			04 12 00.1	
	comp=Z,1μm,0.2s							
PB07	**IPOC Station P**	**1.13**	**275**	*e*P		**Pn**	**04 11 39.3**	**-0.7**
PB07				*e*S		**Sn**	**04 11 58.0**	**-0.1**
PB07				IAML			04 11 59.7	
	comp=N,1μm,0.2s							
PB07	**IPOC Station P**	**1.13**	**275**	Pn		**Pn**	**04 11 40.1**	**+0.1**
AF01	**San Pedro de A**	**1.20**	**158**	*e*P		**Pn**	**04 11 37.0**	**-3.9**
AF01				*e*S		Sn	04 11 49.6	-10
AF01				IAML			04 12 17.5	
	comp=Z,371nm,1.2s							
AF01	**San Pedro de A**	**1.20**	**158**	*e*P		**Pn**	**04 11 41.9**	**+1.0**
AF01	**San Pedro de A**	**1.20**	**158**	Pn		**Pn**	**04 11 41.7**	**+0.9**
PB06	**IPOC Station P**	**1.20**	**224**	*e*P		**Pn**	**04 11 41.4**	**+0.7**
PB06				*e*S		**Sn**	**04 12 00.1**	**+0.7**
PB06				IAML			04 12 02.9	
	comp=Z,838nm,0.4s							
PB06	**IPOC Station P**	**1.20**	**224**	*i* P		**Pn**	**04 11 41.5**	**+0.9**
PB06				*e*S		**Sn**	**04 11 60.0**	**+0.5**
PB06				IAML			04 12 01.3	
	comp=E,2μm,0.3s							
PB06	**IPOC Station P**	**1.20**	**224**			**Pn**	**04 11 41.6**	**+0.9**
PB02	**IPOC Station P**	**1.25**	**294**	*e*P		**Pn**	**04 11 40.5**	**-0.6**
PB02				*e*S		**Sn**	**04 12 00.8**	**+0.7**
PB02				IAML			04 12 04.6	
	comp=Z,992nm,0.3s							
PB02	**IPOC Station P**	**1.25**	**294**	*e*P		**Pn**	**04 11 41.5**	**+0.3**
PB02				*e*S		**Sn**	**04 12 00.2**	**+0.1**
PB02				IAML			04 12 04.8	
	comp=E,1μm,0.2s							
PB02	**IPOC Station P**	**1.25**	**294**			**Pn**	**04 11 41.3**	**+0.2**
PB05	**IPOC Station P**	**1.74**	**234**	*e*P		**Pn**	**04 11 44.0**	**-2.7**
PB05				*e*S		**Sn**	**04 12 10.8**	**+0.7**
PB05				IAML			04 12 19.4	
	comp=Z,272nm,0.4s							
PB05	**IPOC Station P**	**1.74**	**234**	*e*P		**Pn**	**04 11 47.8**	**+1.1**
PB05				*e*S		**Sn**	**04 12 11.1**	**+1.0**
PB05				IAML			04 12 15.7	
	comp=N,432nm,0.1s							
PB05	**IPOC Station P**	**1.74**	**234**			**Pn**	**04 11 46.5**	**-0.2**
PB08	**IPOC Station P**	**1.74**	**345**	*e*P		Pn	04 11 34.1	-13
PB08				*e*S		**Sn**	**04 12 12.5**	**+1.9**
PB08				IAML			04 12 13.0	
	comp=Z,561nm,0.3s							
PB08	**IPOC Station P**	**1.74**	**345**	⇓

LPAZ	**La Paz**	**5.54**	**5**		**Pn**	04 12 35.9	**-1.0**
GO03	**Copiapo**	**5.91**	**194**	Pn	**Pn**	04 12 39.7	**-1.6**
AC05	**El Transito**	**7.12**	**191**		**Pn**	04 12 56.0	**-1.8**
CO01	**Juntas del Tor**	**8.21**	**189**	Pn	**Pn**	04 13 11.1	**-1.5**
ITAB	**Concordia**	**15.98**	**113**		**Pn**	04 14 54.5	**+0.7**
ITAB				IAmb	IAmb	04 15 27.2	
	comp=Z,22nm,1.5s						
CPSB	**Cacapava Do Su**	**16.11**	**125**	Pn	**Pn**	04 14 54.6	**-0.9**
CPSB				IAmb	IAmb	04 14 57.8	
	comp=Z,7.2nm,0.5s						
TRQA	**Tornquist**	**17.17**	**162**	P	**P**	04 15 08.3	**+0.3**
TRQA				IAmb	IAmb	04 15 48.8	
	comp=Z,34nm,1.4s						
MACA	**Manacapuru-AM**	**20.12**	**24**	P	**P**	04 15 39.6	**-0.7**
BOAV	**Boa Vista**	**25.36**	**19**	P	**P**	04 16 32.3	**+0.6**
MG02	**Cerro Sombrero**	**30.90**	**181**	P	**P**	04 17 20.1	**-0.4**
SNAA	**Sanae**	**61.89**	**161**	P	**P**	04 21 22.3	**+0.4**
SNAA				IAmb	IAmb	04 21 32.2	
	comp=Z,5.0nm,1.5s						
QSPA	**South Pole Qui**	**68.36**	**180**	P	**P**	04 22 03.6	**-0.2**

IDC 22 04:16:58.0±1.3, 30°28N×103°15E, h0km, mb3.5/4, mbtmp3.6/5, ML4.4/1, Error ellipse: s-maj=70.2km s-min=22.2km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.37**	**199**	Pn	Pn	04 19 57.0	+1.5
	0.7nm,0.3s,baz=12,slow=13,SNR=4.8						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**23.09**	**321**	P	P	04 22 05.2	-0.1
	0.6nm,0.5s,baz=129,slow=9.7,SNR=6.0						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**27.42**	**325**	P	P	04 22 45.3	+0.1
	0.2nm,0.4s,baz=136,slow=11,SNR=5.0						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**58.26**	**145**	P	P	04 26 54.9	+0.4
	1.0nm,0.8s,baz=330,slow=7.5,SNR=4.9						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**61.23**	**148**	P	P	04 27 13.9	-1.0
	0.2nm,0.3s,baz=325,slow=7.5,SNR=1.7						
	0.2nm,0.3s						

*ANF **22** 04:34:41.6±0.2, 58°34N×133°47W, h3km±1km, ML3.5/28, Error ellipse: s-maj=0.9km s-min=0.7km az=76.0*
*NEIC **22** 04:34:41.7±0.7, 58°34N±0°03×133°47W±0°02, h5km±2km, ML3.2/66, Error ellipse: s-maj=4.7km s-min=3.0km az=344.0*

ISC 22 04:34:41.4±1.1, 58°35N±0°02×133°47W±0°02, h4km±10km, n71, σ0°87/91, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R32K	**Eaglecrest**	**0.56**	**263**		**Pg**	04 34 52.3	**+0.1**
R32K				Sg	**Sg**	04 34 59.5	**+0.1**
R32K	**Eaglecrest**	**0.56**	**263**	P	**Pg**	04 34 52.2	**+0.1**
	baz=83,SNR=19						
R32K				S	**Sg**	04 34 59.9	**+0.5**
	baz=83						
BESE	**Bessie Mountai**	**0.77**	**288**	Pg	**Pg**	04 34 56.0	**-0.1**
BESE				Sg	**Sg**	04 35 06.4	**+0.4**
Q32M	**Nakina River**	**0.88**	**45**		**Pg**	04 34 58.5	**+0.2**
Q32M				Sg	**Sg**	04 35 10.2	**+0.6**
Q32M	**Nakina River**	**0.88**	**45**	P	**Pg**	04 34 58.5	**+0.2**
	baz=225,SNR=110						
Q32M				S	**Sb**	04 35 11.1	**-0.3**
	baz=225						
S32K	**Killisnoo**	**1.06**	**214**		**Pg**	04 35 01.8	**+0.1**
S32K	**Killisnoo**	**1.06**	**214**	P	**Pg**	04 35 01.7	**+0.1**
	baz=34,SNR=55						
S32K				S	**Sn**	04 35 16.7	**-1.4**
	baz=34						
R31K	**City Hall, Gus**	**1.20**	**274**	S	**Sn**	04 35 21.5	**0.0**
	baz=93						
P32M	**Atlin**	**1.25**	**354**		**Pn**	04 35 04.8	**-0.9**
P32M				IAML		04 35 25.0	
	comp=E,269nm,0.5s						
P32M	**Atlin**	**1.25**	**354**	P	**Pn**	04 35 05.0	**-0.7**
	baz=174,SNR=85						
P32M				S	**Sn**	04 35 23.5	**+0.4**
	baz=174						
S34M	**Telegraph Cree**	**1.31**	**108**	Pn	**Pn**	04 35 05.6	**-0.8**
S34M				IAML		04 35 26.8	
	comp=N,394nm,0.8s						
S34M				IAML		04 35 29.2	
	comp=E,423nm,0.8s						
S34M	**Telegraph Cree**	**1.31**	**108**	P	**Pn**	04 35 05.8	**-0.6**
	baz=290,SNR=123						
S34M				S	**Sg**	04 35 24.2	**+0.7**
	baz=290						
SKAG	**Skagway**	**1.48**	**320**		**Pb**	04 35 09.1	**-0.3**
SKAG				IAML		04 35 36.3	
	comp=N,226nm,0.8s						
SKAG				IAML		04 35 36.3	
	comp=E,235nm,1.0s						
SKAG	**Skagway**	**1.48**	**320**	P	**Pn**	04 35 08.8	**+0.1**
	baz=139,SNR=54						
SKAG				S	**Sg**	04 35 29.4	**+0.5**
	baz=139						
S31K	**Pelican**	**1.52**	**256**	Pn	**Pn**	04 35 08.9	**-0.3**
S31K				IAML		04 35 37.0	
	comp=E,191nm,0.8s						
S31K	**Pelican**	**1.52**	**256**	P	**Pn**	04 35 09.0	**-0.2**
	baz=74						
S31K				S	**Sb**	04 35 29.8	**+0.2**
	baz=74						
T33K	**Petersburg**	**1.56**	**170**	P	**Pn**	04 35 10.0	**+0.2**
	baz=350						
T33K				S	**Sg**	04 35 31.7	**+0.2**
	baz=350						
SIT	**Sitka**	**1.63**	**218**		**Pn**	04 35 10.7	**-0.1**
SIT	**Sitka**	**1.63**	**218**	P	**Pn**	04 35 10.7	**-0.1**
	baz=37						
SIT				S	**Sb**	04 35 33.0	**+0.1**
	baz=37						
R33M	**Jennings River**	**1.67**	**50**	Pn	**Pb**	04 35 12.0	**-0.8**
R33M				IAML		04 35 38.4	
	comp=N,309nm,0.8s						
R33M				IAML		04 35 38.9	
	comp=E,297nm,0.9s						
R33M	**Jennings River**	**1.67**	**50**	P	**Pb**	04 35 12.0	**-0.8**
	baz=232,SNR=144						
R33M				S	**Sg**	04 35 34.9	**-0.2**
	baz=232						
DLBC	**Dease Lake**	**1.81**	**86**	P	**Pn**	04 35 13.9	**+0.5**
	baz=268,SNR=112						
DLBC				S	**Sb**	04 35 38.5	**+0.3**
	baz=268						
PLBC	**Pleasant Camp**	**1.87**	**308**	P	**Pn**	04 35 14.8	**+0.6**
	baz=126,SNR=105						
PLBC				Sb	**Sg**	04 35 41.8	**+0.3**
	baz=126						
P33M	**Teslin, Yukon**	**1.90**	**10**		**Pn**	04 35 15.1	**+0.5**
P33M	**Teslin, Yukon**	**1.90**	**10**	P	**Pn**	04 35 15.2	**+0.5**
	baz=190,SNR=72						
P33M				S	**Sb**	04 35 40.1	**-0.6**
	baz=190						
WRAK	**Wrangell Islan**	**2.02**	**162**		**Pn**	04 35 16.4	**+0.2**
WRAK				IAML		04 35 49.9	
	comp=E,158nm,0.7s						
WRAK	**Wrangell Islan**	**2.02**	**162**	P	**Pn**	04 35 16.6	**+0.4**
	baz=343						
WRAK				S	**Sb**	04 35 43.3	**-0.8**
	baz=343						
T35M	**Bob Quinn**	**2.20**	**127**		**Pn**	04 35 19.4	**+0.7**
T35M	**Bob Quinn**	**2.20**	**127**	P	**Pn**	04 35 19.4	**+0.7**
	baz=310						
T35M				Sb	**Sg**	04 35 51.6	**-0.5**
	baz=310						
U33K	**Whale Pass**	**2.25**	**175**		**Pn**	04 35 19.1	**-0.1**
U33K				IAML		04 35 58.7	
	comp=E,118nm,1.1s						
U33K	**Whale Pass**	**2.25**	**175**	P	**Pn**	04 35 19.3	**+0.1**
	baz=355						
U33K				Sb	**Sg**	04 35 52.6	**-0.8**
	baz=355						
WHY	**Whitehorse**	**2.43**	**343**		**Pn**	04 35 21.9	**0.0**
WHY				IAML		04 36 00.4	
	comp=E,160nm,0.5s						
WHY				IAML		04 36 08.4	
	comp=N,141nm,1.1s						
WHY	**Whitehorse**	**2.43**	**343**	P	**Pn**	04 35 22.3	**+0.3**
	baz=162						
WHY				Sb	**Sg**	04 35 58.5	**-0.9**
	baz=162						
P30M	**Million Dollar**	**2.53**	**316**	P	**Pn**	04 35 23.8	**+0.5**
	baz=134						
P30M				Sb	**Sg**	04 36 01.1	**-1.5**
	baz=134						
P29M	**Windy Craggy**	**2.56**	**302**		**Pn**	04 35 23.7	**+0.1**
P29M				IAML		04 36 05.7	
	comp=E,84nm,0.5s						
P29M	**Windy Craggy**	**2.56**	**302**	P	**Pn**	04 35 24.5	**+0.8**
	baz=119,SNR=13						
P29M				Sb	**Sg**	04 36 02.3	**-1.3**
	baz=119						
O30N	**Mendenhall**	**2.77**	**332**		**Pn**	04 35 27.1	**+0.5**
O30N				IAML		04 36 15.4	
	comp=N,78nm,0.8s						
O30N	**Mendenhall**	**2.77**	**332**	P	**Pn**	04 35 27.4	**+0.8**
	baz=150,SNR=24						
O30N				Sb	**Sg**	04 36 08.5	**-2.0**
	baz=150						
N32M	**Quiet Lake**	**2.82**	**4**		**Pn**	04 35 27.4	**+0.2**
N32M	**Quiet Lake**	**2.82**	**4**	P	**Pn**	04 35 28.6	**+1.3**
	baz=184						
CRAG	**Craig**	**2.89**	**176**	Pn	**Pn**	04 35 28.5	**+0.4**
CRAG				IAML		04 36 26.9	
	comp=N,50nm,1.0s						
V35K	**Ketchikan**	**3.19**	**161**	Pn	**Pn**	04 35 32.8	**+0.5**
V35K				IAML		04 36 31.4	
	comp=E,52nm,0.8s						
V35K				IAML		04 36 34.3	
	comp=N,39nm,0.9s						
V35K	**Ketchikan**	**3.19**	**161**	P	**Pn**	04 35 32.7	**+0.5**
	baz=342						
HYT	**Haines Junctio**	**3.23**	**322**	Pn	**Pn**	04 35 33.0	**+0.2**
HYT				IAML		04 36 31.9	
	comp=N,77nm,1.2s						
HYT				IAML		04 36 33.9	
	comp=E,60nm,1.1s						
HYT	**Haines Junctio**	**3.23**	**322**	P	**Pn**	04 35 34.3	**+1.5**
	baz=139						
HYT				Sb	**Sg**	04 36 22.3	**-2.6**
	baz=139						
O29M	**Mount Kennedy**	**3.27**	**309**	Pn	**Pn**	04 35 34.5	**+1.0**
O29M				IAML		04 36 31.6	
	comp=E,75nm,1.1s						
O29M				IAML		04 36 37.7	
	comp=N,65nm,0.8s						
O29M	**Mount Kennedy**	**3.27**	**309**	Pb	**Pb**	04 35 40.3	**+0.3**
	baz=125						
O29M				Sb	**Sg**	04 36 23.7	**-2.7**
	baz=125						
N31M	**Braeburn, Yuko**	**3.36**	**341**		**Pn**	04 35 35.3	**+0.7**
N31M	**Braeburn, Yuko**	**3.36**	**341**	P	**Pn**	04 35 36.0	**+1.4**
	baz=159						
YUK6	**Outpost Mounta**	**3.60**	**318**	Pb	**Pb**	04 35 46.3	**+0.7**
	baz=134						
N30M	**Aishikik Lake**	**3.62**	**331**		**Pn**	04 35 39.0	**+0.9**
N30M				IAML		04 36 42.2	
	comp=N,65nm,0.7s						
N30M				IAML		04 36 50.5	
	comp=E,45nm,1.1s						
N30M	**Aishikik Lake**	**3.62**	**331**	P	**Pn**	04 35 39.4	**+1.2**
	baz=148						
M31M	**Drury Creek, Y**	**3.90**	**354**		**Pn**	04 35 42.9	**+0.9**
M31M				IAML		04 37 00.0	
	comp=N,31nm,0.9s						
M31M	**Drury Creek, Y**	**3.90**	**354**	P	**Pn**	04 35 43.5	**+1.6**
	baz=173						
PINM	**Pinnacle**	**3.91**	**300**	Pb	**Pb**	04 35 51.4	**+0.7**
	baz=114						
PCA	**Pinnacle**	**3.91**	**300**	Pn	**Pn**	04 35 42.4	**+0.3**
PCA				IAML		04 37 09.6	
	comp=N,49nm,1.2s						
YUK4	**Talbot Arm**	**3.98**	**321**	Pb	**Pb**	04 35 53.4	**+1.2**
	baz=138						
O28M	**Mount Upton**	**4.20**	**308**	IAML		04 37 01.8	
	comp=N,40nm,1.1s						
O28M				IAML		04 37 04.9	
	comp=E,29nm,1.0s						
M30M	**Minto, Yukon**	**4.55**	**340**	IAML		04 37 17.1	
	comp=N,30nm,1.1s						
M30M	**Minto, Yukon**	**4.55**	**340**	P	**Pn**	04 35 51.8	**+0.8**
	baz=157,SNR=21						
LOGN	**Logan Glacier**	**4.57**	**306**	IAML		04 37 23.2	
	comp=E,15nm,1.0s						
LOGN				IAML		04 37 25.7	
	comp=N,16nm,1.2s						
M29M	**Somme Creek**	**4.80**	**331**	P	**Pn**	04 35 55.5	**+1.1**
	baz=147						
BARN	**Barnard Glacie**	**4.96**	**307**	IAML		04 37 29.1	
	comp=E,11nm,0.9s						
BARN				IAML		04 39 17.8	
	comp=N,12nm,0.8s						
L29M	**L29M**	**5.30**	**336**	P	**Pn**	04 36 02.1	**+0.9**
	baz=152						
TGL	**Tana Glacier**	**5.34**	**301**	IAML		04 37 52.1	
	comp=E,11nm,1.2s						
TGL				IAML		04 37 56.2	
	comp=N,14nm,1.2s						
K29M	**Barlow Dome**	**5.86**	**342**	P	**Pn**	04 36 09.8	**+0.9**
	baz=159,SNR=6.7						
J30M	**Hart River**	**6.40**	**349**	P	**Pn**	04 36 17.4	**+1.0**
	baz=166,SNR=8.0						
I30M	**Mount Dempster**	**7.04**	**350**	P	**Pn**	04 36 27.0	**+1.9**
	baz=167						
H31M	**Peel River**	**7.50**	**357**	P	**Pn**	04 36 32.6	**+1.2**
	baz=176,SNR=7.1						
EPYK	**Eagle Plains**	**8.19**	**351**	P	**Pn**	04 36 42.3	**+1.4**
	baz=168						
G31M	**Satah River**	**8.62**	**358**	P	**Pn**	04 36 47.8	**+1.1**
	baz=177,SNR=6.9						

*VIE **22** 04:40:55.5±0.7, 51°61N×16°30E, h0km, mb2.2/3, ml2.7/4, Error ellipse: s-maj=5.9km s-min=3.9km az=31.0 76 km NW of Wroclaw Suspected Mining induced.*
*IPEC **22** 04:40:55.4±0.2, 51°62N×16°11E, h1km, ML2.2/8, Error ellipse: s-maj=2.0km s-min=1.2km az=70.0*
*PRU **22** 04:40:57.7, 51°54N×16°08E, h0km*

ISC 22 04:40:54.4±0.8, 51°68N±0°03×16°08E±0°03, h0km, n39, σ1§29/70, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.85**	**171**	*e*Pg	**Pg**	04 41 10.9	**+0.3**
KSP				*e*Sg	**Sg**	04 41 21.2	**-0.4**
CHVC	**Chvalec**	**1.09**	**181**	*e*PG	**Pg**	04 41 15.6	**+0.3**
CHVC				*e*SG	**Sg**	04 41 28.8	**-0.7**
	comp=Z,35nm,0.4s						
OSTC	**Ostas**	**1.13**	**175**	*e*PG	**Pb**	04 41 16.8	**0.0**
OSTC				*e*SG	**Sg**	04 41 29.5	**-1.1**
	comp=Z,39nm,0.3s						
UPC	**Upice**	**1.18**	**182**	*e*PG	**Pg**	04 41 17.0	**+0.1**
UPC				*e*SG	**Sg**	04 41 31.2	**-0.9**
	comp=Z,37nm,0.3s						
DPC	**Dobruska-Polom**	**1.34**	**173**	*e*PG	**Pg**	04 41 19.5	**-0.6**
DPC				*e*SG	**Sg**	04 41 35.7	**-1.7**
	comp=Z,17nm,0.3s						
PIVO	**Bartosovice**	**1.53**	**169**	*e*Pg	**Pn**	04 41 22.7	**-0.2**
	baz=349						
PIVO				*e*Sg	**Sg**	04 41 41.5	**-1.9**
	24nm,0.3s,baz=349						
BRG	**Berggiesshubel**	**1.56**	**240**	Pg	**Pn**	04 41 24.8	**+1.3**
BRG				Sg	**Sn**	04 41 45.0	**+0.6**
BRG				Amp		04 41 46.7	
	comp=Z,22nm,0.3s						
KRLC	**Kraliky**	**1.67**	**164**	*e*PG	**Pn**	04 41 25.7	**+0.8**
KRLC				*e*SG	**Sn**	04 41 46.4	**-0.6**
	comp=Z,24nm,0.5s						
ANAC	**Anensky vrch**	**1.81**	**152**	*e*Pn	**Pn**	04 41 26.5	**-0.3**
	baz=333						
ANAC				*e*Sg	**Sn**	04 41 50.1	**-0.4**
	comp=Z,20nm,0.4s,baz=333						
RYBC	**Ceska Rybna**	**1.88**	**180**	*e*Pn	**Pn**	04 41 27.7	**0.0**
	baz=0.9						
RYBC				*e*Sg	**Sn**	04 41 52.4	**+0.3**
	comp=Z,18nm,0.1s,baz=0.9						
PRU	**Pruhonice**	**1.95**	**210**	*e*SG	**Sb**	04 41 55.3	**-0.4**
	comp=Z,11nm,0.3s						
CLL	**Collm**	**1.96**	**260**	*i* Pn	**Pn**	04 41 29.0	**+0.2**
CLL				*e*Pg	**Pb**	04 41 32.0	**+1.1**
CLL				*i* x	x	04 41 35.7	
CLL				*e*Sg	**Sg**	04 41 58.0	**+0.8**
	comp=Z,9.0nm,0.4s						
STEB	**Steborice**	**2.05**	**148**	*e*PG	**Pb**	04 41 33.1	**+0.6**
STEB				*e*SG	**Sb**	04 41 58.3	**-0.3**
	comp=Z,32nm,0.5s						
MORC	**Moravsky Berou**	**2.12**	**153**	*e*Pn	**Pn**	04 41 30.8	**-0.3**
	baz=334						
MORC				*e*Sg	**Sb**	04 42 00.1	**-0.5**
	comp=Z,15nm,0.3s,baz=334						
OKC	**Ostrava-Krasne**	**2.27**	**144**	*e*SG	**Sb**	04 42 04.8	**+0.1**
	comp=Z,15nm,0.5s						
VRAC	**Vranov**	**2.40**	**172**	*e*Pn	**Pn**	04 41 35.1	**+0.2**
	baz=353						
VRAC				*e*Sg	**Sb**	04 42 08.7	**+0.2**
	comp=Z,9.0nm,0.3s,baz=353						
TREC	**Trest**	**2.42**	**189**	*e*SG	**Sb**	04 42 09.4	**+0.3**
ZVC	**Zvikov**	**2.55**	**209**	*e*PN	**Pn**	04 41 37.6	**+0.7**
ZVC				*e*PG	**Pg**	04 41 42.9	**-0.3**
ZVC				*e*SG	**Sg**	04 42 14.5	**-1.6**
	comp=Z,7.2nm,0.2s						
MAUC	**Maruska**	**2.57**	**154**	*e*SG	**Sg**	04 42 16.4	**-0.6**
KRUC	**Moravsky**	**2.63**	**175**	*e*Pn	**Pn**	04 41 38.2	**+0.2**
	baz=356						
KRUC				*e*Sg	**Sb**	04 42 15.9	**+0.8**
	comp=Z,6.9nm,0.4s,baz=356						
KRUC	**Moravsky**	**2.63**	**175**	*e*PN	**Pn**	04 41 38.3	**+0.2**
KRUC				*e*SG	**Sb**	04 42 16.0	**+0.8**
STAC	**Stalkov**	**2.70**	**191**	*e*Pn	**Pn**	04 41 39.0	**-0.1**
	baz=11						
STAC				*e*Sg	**Sb**	04 42 18.1	**+0.9**
	comp=Z,11nm,0.3s,baz=11						
NKC	**Novy Kostel**	**2.71**	**239**	*e*PN	**Pn**	04 41 40.3	**+1.0**
NKC				*e*PG	**Pg**	04 41 46.1	**-0.3**
NKC				*e*SG	**Sg**	04 42 22.1	**+0.6**
	comp=Z,12nm,0.3s						
OJC	**Ojcow**	**2.77**	**120**	*e*Pg	**Pg**	04 41 48.9	**+1.5**
OJC				*e*Sg	**Sg**	04 42 24.2	**+0.8**
JAVC	**Velka Javorina**	**3.00**	**159**	*e*Pn	**Pn**	04 41 43.3	**0.0**
	baz=341						
JAVC	**Velka Javorina**	**3.00**	**159**	*e*PN	**Pn**	04 41 43.4	**+0.1**
KHC	**Kasperske Hory**	**3.01**	**213**	*e*PN	**Pn**	04 41 44.0	**+0.6**
KHC				*e*PG	**Pb**	04 41 49.8	**+0.9**
KHC				*e*SG	**Sg**	04 42 29.1	**-2.0**
	comp=Z,4.0nm,0.3s						
CKRC	**Cesky Krumlov**	**3.08**	**202**	*e*SG	**Sb**	04 42 29.8	**+1.6**
LANS	**Liptovska Anna**	**3.33**	**138**	*e*PG	**Pg**	04 41 59.8	**+1.5**
LANS				*e*SG	**Sg**	04 42 41.0	**-0.5**
LANS				*e*LG	Lg	04 42 44.6	
BSD	**Bornholm Skovb**	**3.51**	**349**	*i* P	**Pn**	04 41 51.0	**+0.9**
BSD				*i* S	**Sn**	04 42 30.9	**-1.4**
BSD				IAML		04 42 38.1	
	comp=Z,1.7nm,0.4s						
WINA	**Alland / Wiene**	**3.58**	**180**	*e*Pn	**Pn**	04 41 51.6	**+0.5**
	comp=Z,1.1nm,0.2s						
CONA	**Conrad Observa**	**3.76**	**182**	*i* S	**Sg**	04 42 53.0	**-2.1**
	comp=Z,2.0nm,0.3s						
MOA	**Molln**	**4.01**	**198**	*e*S	**Sg**	04 43 01.1	**-2.1**
	comp=Z,3.7nm,0.6s						
LUNU	**Lund**	**4.26**	**339**	*i* P	**Pn**	04 42 01.3	**+0.9**
LUNU				*i* S	**Sn**	04 42 49.5	**-1.2**
ARSA	**Arzberg**	**4.45**	**185**	*e*Sn	**Sn**	04 42 56.6	**+1.0**
	comp=Z,0.5nm,0.3s						
COP	**Copenhagen**	**4.56**	**333**	*i* P	**Pn**	04 42 07.3	**+2.8**
BLEU	**Blekinge**	**4.64**	**358**	*i* P	**Pn**	04 42 07.1	**+1.5**
BLEU				*i* S	**Sn**	04 42 58.3	**-1.8**
BJUU	**Bjuv**	**4.76**	**339**	*i* P	**Pn**	04 42 07.1	**-0.2**
BJUU				*i* S	**Sn**	04 42 58.5	**-4.6**
DEL	**Delary**	**4.97**	**346**	*i* P	**Pn**	04 42 10.9	**+0.7**
DEL				*i* S	**Sn**	04 43 03.4	**-4.9**

*IDC **22** 04:45:31.8±0.8, 22°38N×99°86E, h0km, mb4.0/9, mbtmp3.9/10, ML3.9/1, MS3.2/10, Error ellipse: s-maj=32.2km s-min=13.1km az=79.0*
*BJI **22** 04:45:32.7, 22°39N×99°83E, h10km, mB4.3/1, mb4.2/6, ML4.2/6, Ms4.0/9, Ms7 3.7/9*
*NEIC **22** 04:45:33.0±1.4, 22°36N±0°05×99°87E±0°07, h10km±1km, mb4.5/15, Error ellipse: s-maj=11.3km s-min=8.1km az=278.0*
*BKK **22** 04:45:38.1±1.2, 22°N±7°×10°0E±°, h9km±4km, M4.9/16, Mjma4.6/16, ML5.1/11, MLv4.9/9*

ISC 22 04:45:33.7±0.5, 22°33N±0°03×99°72E±0°05, h10km, n70, σ1§48/71, mb4.5/28, MS3.2/10, 1C, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAI	**Chiengmai2**	**2.47**	**195**	Pn	**Pn**	04 46 14.0	**-0.1**
CMAI				Pg	**Pb**	04 46 19.3	**+1.0**
TNCH	**TengChong**	**2.90**	**338**	Pn	**Pn**	04 46 19.8	**-0.3**
TNCH				Pg	**Pb**	04 46 25.5	**-0.1**
TNCH				Sn	**Sn**	04 46 52.3	**-2.8**
TNCH				Sg	**Sb**	04 47 04.8	**+3.6**
TNCH				SMN			
	6μm,0.9s						
TNCH				SME			
	5μm,0.5s						
CHTO	**Chiang Mai**	**3.57**	**192**	P	**Pn**	04 46 29.3	**+0.1**
CHTO				Pn	**Pn**	04 46 29.5	**+0.3**
CHTO	**Chiang Mai**	**3.57**	**192**		**Pn**	04 46 29.0	**-0.2**
CM31	**Chiang Mai Arr**	**3.92**	**191**		**Pn**	04 46 33.9	**-0.1**
CMAR	**Chiang Mai Arr**	**3.92**	**191**	Pn	**Pn**	04 46 34.8	**+0.7**
	1.9nm,0.3s,baz=4.6,slow=13,SNR=33						
CMAR				Pg	**Pb**	04 46 45.0	**+2.1**
	19nm,0.3s,baz=11,slow=66,SNR=66						
CMAR				Lg	Lg	04 47 39.2	
	90nm,0.3s,baz=334,slow=2.7,SNR=10						
	4.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**3.92**	**191**		**Pn**	04 46 33.4	**-0.6**
CM09	**Chiang Mai Arr**	**3.93**	**190**	Pn	**Pn**	04 46 34.9	**+0.8**
CM09				Pg	Pb	04 46 48.4	+5.3
CM15	**Chiang Mai Arr**	**3.93**	**191**	Pn	**Pn**	04 46 34.5	**+0.4**
CM02	**Chiang Mai Arr**	**3.94**	**191**	P	**Pn**	04 46 34.8	**+0.5**
KMI2	**Kunming**	**3.95**	**44**	⇑Pg	**Pb**	04 46 44.9	**+1.4**
KMI2				Sg	**Sb**	04 47 36.6	**+5.2**
KMI2				SMN			
	220nm,1.0s						
KMI2				SME			
	180nm,1.1s						
KMI2				L	L		
	comp=N,900nm,4.5s						
KMI2				L	L		
	comp=E,370nm,3.5s						
KMI2				L	L		
	comp=Z,570nm,4.8s						
CM01	**Chiang Mai Arr**	**3.96**	**190**	P	**Pn**	04 46 35.0	**+0.5**
CM13	**Chiang Mai Arr**	**3.96**	**191**	P	**Pn**	04 46 35.4	**+0.8**
CM04	**Chiang Mai Arr**	**3.97**	**190**	P	**Pn**	04 46 35.7	**+1.0**
CM05	**Chiang Mai Arr**	**3.98**	**191**	P	**Pn**	04 46 35.0	**+0.2**
SLVN	**Son La**	**4.02**	**104**		**Pn**	04 46 32.7	**-2.6**
PZH	**PanZhiHua**	**4.54**	**24**	Pn	**Pn**	04 46 40.5	**-2.2**
PZH				Pg	**Pb**	04 46 55.1	**+1.5**
PZH				Sn	**Sn**	04 47 37.8	**+2.1**
PZH				Sg	**Sb**	04 47 53.0	**+4.4**
PZH				SMN			
	260nm,1.0s						
PZH				SME			

NIL IAmb IAmb 04 51 06.8
comp=Z,22nm,0.8s
SONM Songino Array 26.00 10 P P 04 51 06.5 -0.4
comp=Z,0.5nm,0.5s,baz=196,slow=7.4,SNR=4.7
comp=Z,0.5nm,0.5s
SONM Songino Array 26.00 10 P P 04 51 04.8 -2.1
MKAR Makanchi Array 28.18 334 P P 04 51 26.2 -0.2
comp=Z,2.2nm,0.7s,baz=147,slow=9.1,SNR=12
MKAR LR LR 05 03 16.7
comp=Z,37nm,18.6s,baz=150,slow=38
comp=Z,2.2nm,0.7s
MKAR Makanchi Array 28.18 334 P P 04 51 25.6 -0.7
KSRS Korea Array 28.59 52 LR LR 05 02 54.1
comp=Z,24nm,19.6s,baz=225,slow=37
AAK Ala-Archa 29.18 320 LR LR 05 05 16.4
comp=Z,30nm,21.3s,baz=296,slow=40
TLY Talaya 29.45 5 LR LR 05 04 27.1
comp=Z,56nm,21.6s,baz=178,slow=39
KURBB Kurchatov Arra 32.74 335 P P 04 52 06.2 -0.2
comp=Z,0.9nm,0.6s,baz=140,slow=9.2,SNR=8.3
comp=Z,0.9nm,0.6s
KURK Kurchatov 32.78 335 P P 04 52 06.7 -0.1
KURK IAmb IAmb 04 52 39.3
comp=Z,1.4nm,0.5s
ZAA0 Zalesovo Array 33.53 344 P 04 52 13.2 -0.2
ZAA0 IAmb IAmb 04 52 14.5
comp=Z,6.9nm,0.9s
ZALV Zalesovo Beam 33.53 344 P P 04 52 13.5 +0.2
comp=Z,5.4nm,0.8s,baz=147,slow=9.8,SNR=23
comp=Z,5.4nm,0.8s
ZALV Zalesovo Beam 33.53 344 P 04 52 13.2 -0.2
USRK Ussuriysk Ar. 34.36 43 LR LR 05 06 23.6
comp=Z,47nm,18.2s,baz=204,slow=37
BVAR Borovoye Array 37.94 331 P P 04 52 51.2 0.0
comp=Z,1.1nm,0.4s,baz=141,slow=9.6,SNR=5.0
comp=Z,1.1nm,0.4s
AB31 Akbulak array 41.27 321 P P 04 53 18.3 -0.7
AB31 IAmb IAmb 04 53 20.4
comp=Z,5.2nm,1.3s
ABKAR Akbulak array 41.27 321 P P 04 53 18.7 -0.3
KBZ Khabaz 51.13 309 LR LR 05 17 52.8
comp=Z,22nm,18.1s,baz=115,slow=38
PETK Petropavlovsk- 53.32 40 LR LR 05 18 39.1
comp=Z,31nm,18.6s,baz=227,slow=37
WB0 Warramunga Arr 53.84 138 P P 04 54 56.0 -1.0
WB0 IAmb IAmb 04 55 25.3
comp=Z,7.9nm,1.3s
WRA Warramunga Arr 53.94 139 P P 04 54 56.8 -1.0
comp=Z,1.4nm,0.9s,baz=328,slow=7.6,SNR=7.0
comp=Z,1.4nm,0.9s
WRA Warramunga Arr 53.94 139 P P 04 54 55.7 -2.1
WB2 Warramunga Arr 53.94 139 P P 04 54 56.9 -0.9
WB2 IAmb IAmb 04 55 01.3
comp=Z,10nm,1.2s
WR8 Warramunga Arr 54.04 138 P P 04 54 57.5 -1.1
WR8 IAmb IAmb 04 55 03.2
comp=Z,11nm,1.4s
PMG Port Moresby 56.18 119 P P 04 55 11.4 -2.7
AS31 Alice Springs 56.53 142 P P 04 55 13.3 -3.2
ASAR Alice Springs 56.53 142 P P 04 55 15.8 -0.7
comp=Z,1.2nm,0.6s,baz=336,slow=6.5,SNR=13
comp=Z,1.2nm,0.6s
ASAR Alice Springs 56.53 142 P P 04 55 15.1 -1.4
NWAO Narrogin (SRO) 57.44 163 P P 04 55 21.6 -1.1
RABL Rabaul 57.63 111 P P 04 55 20.8 -3.7
FINES FINESS Array B 62.83 329 LR LR 05 23 46.7
comp=Z,21nm,21.8s,baz=134,slow=36
CONA Conrad Observa 69.74 315 *eP* **P 04 56 43.6 -0.5**
comp=Z,1.3nm,0.6s
NOA NORSAR Array B 70.01 329 P P 04 56 44.3 -1.1
comp=Z,0.6nm,0.6s,baz=94,slow=5.3,SNR=1.7
NOA LR LR 05 29 29.6
comp=Z,16nm,18.1s,baz=100,slow=38
comp=Z,0.6nm,0.6s
ARSA Arzberg 70.10 314 *eP* **P 04 56 45.8 -0.5**
comp=Z,1.8nm,0.5s
SESA Seetaler Alpe, 70.77 314 *eP* **P 04 56 49.8 -0.7**
comp=Z,4.4nm,0.7s
GERES GERESS Array B 70.97 316 P P 04 56 51.5 -0.1
comp=Z,1.2nm,0.7s,baz=64,slow=3.1,SNR=8.6
comp=Z,1.2nm,0.7s
GERES GERESS Array B 70.97 316 P P 04 56 50.6 -1.0
KBA Koelnbreinsper 71.59 314 *eP* **P 04 56 54.6 -0.8**
comp=Z,2.1nm,0.6s
LESA Schwarzleotal 71.95 315 *eP* **P 04 56 56.9 -0.6**
comp=Z,3.8nm,0.6s
STAL STALIGIAL 72.20 313 P P 04 56 58.1 -0.9
STAL IAmb IAmb 04 56 58.7
comp=Z,4.5nm,0.7s
WTTA Wattenberg 72.68 315 *eP* **P 04 57 01.1 -0.9**
comp=Z,2.3nm,0.5s
SQTA Sankt Quirin 72.97 315 *eP* **P 04 57 02.9 -0.7**
comp=Z,4.8nm,0.7s
MOTA Moosalm 73.01 315 *eP* **P 04 57 03.2 -0.7**
comp=Z,5.8nm,1.0s
RETA Reutte 73.20 315 *eP* **P 04 57 04.4 -0.5**
comp=Z,4.1nm,0.9s
FETA Feichten 73.34 314 *eP* **P 04 57 05.1 -0.8**
comp=Z,1.4nm,0.7s

*IDC **22** 04:56:37.1±1.1,5.°06S×153.°75E,h0km,mb4.1/12, mbtmp4.1/13,MS3.0/4, Error ellipse: s-maj=33.2km s-min=18.9km az=98.0*
*NEIC **22** 04:56:40.1±1.8,5.°19S±0.°09×153.°8E±0.°1,h21km±7km, mb4.3/14, Error ellipse: s-maj=19.0km s-min=11.3km az=60.0*
ISC 22 04:56:37.9±0.7,5.°16S±0.°07×153.°8E±0.°1,h10km,n40, σ0s97/35,mb4.3/16,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.91**	**300**		**Pn**	**04 57 11.0**	**+0.5**
RABL				Sn	**Sn**	**04 57 33.8**	**-0.9**
KRVT	**Keravat (AS076**	**1.98**	**295**	LR	LR	04 58 04.7	
	comp=Z,222nm,18.9s,baz=273,slow=47						
PMG	**Port Moresby**	**7.84**	**237**	Pn	**Pn**	**04 58 32.4**	**+0.4**
	6.0nm,0.4s,baz=158,slow=9.2,SNR=1.9						
PMG				Sn	**Sn**	**05 00 01.5**	**+0.5**
	3.9nm,0.3s,baz=287,slow=22,SNR=5.9						
PMG				LR	LR	05 01 12.4	
	comp=Z,136nm,20.9s,baz=243,slow=35						
PMG	**Port Moresby**	**7.84**	**237**		**Pn**	**04 58 32.0**	**-0.1**
CTA	**Charters Tower**	**16.57**	**206**	LR	LR	05 06 38.0	
	comp=Z,41nm,18.4s,baz=55,slow=36						
EIDS	**Eidsvold**	**20.27**	**187**	P	**P**	**05 01 12.6**	**-1.1**
EIDS				IAmb	IAmb	05 01 22.7	
	comp=Z,41nm,1.4s						
GUMO	**Guam**	**20.64**	**335**	LR	LR	05 08 57.3	
	comp=Z,18nm,20.4s,baz=122,slow=36						
DZM	**Mont Dzumac**	**20.79**	**145**	LR	LR	05 08 43.3	
	comp=Z,76nm,18.9s,baz=7.5,slow=35						
WB0	**Warramunga Arr**	**23.84**	**231**	P	**P**	**05 01 51.8**	**+0.3**
WB0				IAmb	IAmb	05 02 08.7	
	comp=Z,16nm,1.4s						
WR8	**Warramunga Arr**	**23.87**	**230**	P	**P**	**05 01 50.6**	**-1.2**
WR8				IAmb	IAmb	05 01 55.4	
	comp=Z,8.1nm,1.1s						
WRA	**Warramunga Arr**	**23.98**	**231**	P	**P**	**05 01 53.9**	**+0.9**
	comp=Z,3.4nm,0.7s,baz=54,slow=9.7,SNR=25						
	comp=Z,3.4nm,0.7s						
WRA	**Warramunga Arr**	**23.98**	**231**	P	**P**	**05 01 51.9**	**-1.0**
ARMA	**Armidale**	**25.21**	**184**	P	**P**	**05 02 01.1**	**-2.9**
ARMA				IAmb	IAmb	05 02 06.1	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**26.59**	**224**	P	**P**	**05 02 15.4**	**-1.2**
ASAR	**Alice Springs**	**26.59**	**224**	P	**P**	**05 02 17.7**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=61,slow=9.1,SNR=5.8						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**26.59**	**224**	P	**P**	**05 02 16.5**	**0.0**
H11S3	**WAKE ISLAND Hy**	**26.71**	**28**	T	T	05 30 44.4	
	baz=208,slow=73,SNR=12						
H11S2	**WAKE ISLAND Hy**	**26.71**	**28**	T	T	05 30 42.3	
	baz=208,slow=73,SNR=10						
H11S1	**WAKE ISLAND Hy**	**26.73**	**28**	T	T	05 30 42.6	
	baz=208,slow=73,SNR=4.9						
FITZ	**Fitzroy Crossi**	**30.39**	**243**	P	**P**	**05 02 50.1**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=62,slow=7.6,SNR=11						
	comp=Z,3.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.39**	**243**	P	**P**	**05 02 50.2**	**-0.3**
QRZ	**Quartz Range**	**39.28**	**157**	P	**P**	**05 04 07.1**	**+0.2**
JOW	**Kunigami**	**40.28**	**323**	P	**P**	**05 04 15.2**	**-0.2**
MORW	**Morawa**	**42.92**	**232**	P	**P**	**05 04 37.1**	**0.0**
KSRS	**Korea Array**	**48.78**	**332**	P	**P**	**05 05 22.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=159,slow=9.4,SNR=4.5						
	comp=Z,0.5nm,0.3s						

CMAR Chiang Mai Arr 58.95 295 P P 05 06 39.1 +1.1
comp=Z,1.3nm,0.5s,baz=112,slow=5.2,SNR=9.4
comp=Z,1.3nm,0.5s
CMAR Chiang Mai Arr 58.95 295 P P 05 06 37.7 -0.3
LZDM Lanzhou Array 62.23 315 P P 05 07 01.4 +0.9
comp=Z,3.4nm,0.4s,baz=140,slow=7.8,SNR=6.8
comp=Z,3.4nm,0.4s
SONM Songino Array 67.17 327 P P 05 07 32.5 +0.2
comp=Z,0.7nm,0.4s,baz=134,slow=6.2,SNR=3.1
comp=Z,0.7nm,0.4s
SONM Songino Array 67.17 327 P P 05 07 32.2 0.0
SONM IAmb IAmb 05 08 03.2
comp=Z,0.7nm,0.7s
VNDA Vanda 72.44 178 P P 05 08 06.5 +2.5
comp=Z,0.3nm,0.5s,baz=353,slow=5.6,SNR=1.9
comp=Z,0.3nm,0.5s
VNDA Vanda 72.44 178 P P 05 08 03.0 -1.1
VNDA IAmb IAmb 05 08 18.3
comp=Z,3.0nm,1.4s
MKAR Makanchi Array 81.26 319 P P 05 08 54.8 +0.3
comp=Z,0.7nm,0.5s,baz=100,slow=8.2,SNR=5.1
comp=Z,0.7nm,0.5s
MKAR Makanchi Array 81.26 319 P P 05 08 54.2 -0.2
KURK Kurchatov 84.67 322 P P 05 09 11.7 -0.3
KURK IAmb IAmb 05 09 45.4
comp=Z,1.4nm,0.7s
KURBB Kurchatov Arra 84.71 322 P P 05 09 11.9 -0.3
comp=Z,0.3nm,0.3s,baz=113,slow=3.9,SNR=7.1
comp=Z,0.3nm,0.3s
QSPA South Pole Qui 84.80 180 P P 05 09 13.6 +1.1
comp=Z,0.8nm,0.6s,baz=309,slow=0.5,SNR=12
comp=Z,0.8nm,0.6s
QSPA South Pole Qui 84.80 180 P P 05 09 13.1 +0.6
QSPA IAmb IAmb 05 09 31.2
comp=Z,3.8nm,0.9s
BVAR Borovoye Array 90.14 323 P P 05 09 37.3 -1.1
comp=Z,1.4nm,0.6s,baz=72,slow=4.8,SNR=3.9
comp=Z,1.4nm,0.6s
TORD Torodi Ar. Bea 151.38 288 PKPbc PKPbc 05 16 33.3 +0.2
comp=Z,1.2nm,0.4s,baz=84,slow=2.2,SNR=20

IDC 22 04:59:15.4±1.7,1.°50N×125.°85E,h0km,mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=184.4km s-min=22.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.88**	**159**	P	P	05 04 20.8	-0.1
	1.2nm,0.5s,baz=336,slow=10,SNR=9.0						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.22**	**163**	P	P	05 04 52.0	-0.2
	0.3nm,0.5s,baz=355,slow=8.6,SNR=4.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	05 09 17.1	+0.8
	0.4nm,0.3s,baz=107,slow=7.1,SNR=2.6						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.14**	**328**	P	P	05 09 44.6	-0.4
	0.9nm,0.5s,baz=126,slow=5.8,SNR=6.7						
	0.9nm,0.5s						

*SNET **22** 05:25:02.7±0.9, 13.°69N×90.°11W,h74km,ML2.6, Presumed earthquake*
*CATAC **22** 05:25:02.3±0.7, 13.°NL±5.°×9.°0W±.°, h29km±4km, M2.8/13, MLv2.8/13, Error ellipse: s-maj=11.6km s-min=4.4km az=11.4, confirmed*
*GCG **22** 05:25:03.4±0.3, 13.°84N×90.°05W,h71km±4km, MD3.7, Presumed earthquake*
ISC 22 05:25:03.6±1.8,13.°7N±0.°1×90.°12W±0.°07,h72km±13km, n26,σ0s94/36,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.18**	**33**	P	**Pn**	**05 25 13.6**	**-0.8**
NUBE	**Las Nubes**	**0.39**	**57**	P	**Pn**	**05 25 15.2**	**-0.6**
NUBE				S	**Sn**	**05 25 25.6**	**+0.7**
NUBE	**Las Nubes**	**0.39**	**57**	*i* P	**Pn**	**05 25 15.1**	**-0.8**
LOAL	**Lomas de Alarc**	**0.45**	**47**	P	**Pn**	**05 25 15.8**	**-0.5**
LOAL				S	**Sn**	**05 25 26.6**	**+1.0**
SLOZ	**Alcaldia de Sa**	**0.47**	**44**	P	**Pn**	**05 25 15.8**	**-0.6**
SLOZ				S	**Sn**	**05 25 26.9**	**+1.2**
CEVE	**Cerro Verde**	**0.50**	**74**	P	**Pn**	**05 25 16.1**	**-0.8**
CEVE				S	**Sn**	**05 25 27.6**	**+0.9**
SBLS	**San Blas**	**0.50**	**73**	*eP*	**Pn**	**05 25 16.2**	**-0.7**
SNJE	**San Jose**	**0.53**	**70**	*eP*	**Pn**	**05 25 16.2**	**-0.9**
UNIC	**Universidad Ca**	**0.63**	**62**	P	**Pn**	**05 25 17.1**	**-0.8**
UNIC				S	**Sn**	**05 25 28.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.65**	**93**	P	**Pn**	**05 25 17.4**	**-1.0**
JAYA				S	**Sn**	**05 25 29.3**	**+0.2**
JAYA	**Jayaque - finc**	**0.65**	**93**	*i* P	**Pn**	**05 25 17.3**	**-1.0**
JAYA				*i* S	**Sn**	**05 25 28.2**	**-0.9**
JAYA	**Jayaque - finc**	**0.65**	**93**	*eP*	**Pn**	**05 25 17.2**	**-1.1**
FG16	**Alotenango, Sa**	**0.69**	**327**	*i* P	Pn	05 25 22.6	+3.7
FG8	**Yepocapa, Chim**	**0.71**	**323**	*i* P	Pn	05 25 22.9	+3.9
PMON	**Piamonte**	**0.78**	**88**	P	**Pn**	**05 25 19.0**	**-0.7**
PMON				S	**Sn**	**05 25 33.2**	**+1.5**
PMON	**Piamonte**	**0.78**	**88**	*eP*	**Pn**	**05 25 18.7**	**-1.0**
PMON				*eS*	**Sn**	**05 25 32.4**	**+0.7**
UEES	**Universidad Ev**	**0.85**	**88**	P	**Pn**	**05 25 20.3**	**-0.3**
UEES				S	**Sn**	**05 25 34.3**	**+1.2**
SEMO	**Seminario San**	**0.87**	**89**	P	**Pn**	**05 25 20.6**	**-0.1**
SEMO				S	**Sn**	**05 25 34.8**	**+1.4**
LOMA	**Loma Larga**	**0.92**	**93**	P	**Pn**	**05 25 20.8**	**-0.6**
LOMA	**Loma Larga**	**0.92**	**93**	*eP*	**Pn**	**05 25 21.0**	**-0.4**
LOMA				*eS*	**Sn**	**05 25 35.5**	**+0.9**
PAVA	**Las Pavas**	**1.15**	**89**	P	**Pn**	**05 25 23.0**	**-1.1**
COEG	**Centro de Oper**	**1.21**	**93**	P	**Pn**	**05 25 24.0**	**-0.9**
COEG				S	**Sn**	**05 25 42.4**	**+1.6**
APG	**El Apazote**	**1.35**	**346**	*i* P	**Pn**	**05 25 25.7**	**-1.2**
STG5	**El Palmar, Qui**	**1.39**	**301**	*i* P	Pn	05 25 31.7	+4.4
STG8	**El Palmar, Qui**	**1.42**	**303**	*i* P	Pn	05 25 32.5	+4.7
STG8				*i* S	Sn	05 25 55.2	+9.3
RTAL	**Retalhuleu**	**1.74**	**299**	P	**Pn**	**05 25 32.0**	**+0.1**
RTAL				S	**Sn**	**05 25 53.7**	**+0.4**

*IDC **22** 05:29:16.8±1.6,9.°63S×160.°64E,h125km±7km, mb3.6/7, mbtmp4.0/8, Error ellipse: s-maj=33.4km s-min=21.8km az=111.0*
*NEIC **22** 05:29:16.2±1.1,9.°6S±0.°1×160.°84E±0.°07,h119km±6km, mb4.2/12, Error ellipse: s-maj=18.7km s-min=7.3km az=204.0*
ISC 22 05:29:14.0±0.8,9.°55S±0.°09×160.°9E±0.°1,h100km,n28, σ1s94/22,mb3.9/12,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.95**	**277**	P	**Pn**	**05 29 37.0**	**+3.1**
	10.0nm,0.3s,baz=201,slow=22,SNR=17						
HNR				S	**Sn**	**05 29 52.9**	**+3.9**
	87nm,0.4s,baz=157,slow=12,SNR=6.3						
DZM	**Mont Dzumac**	**13.54**	**158**	P	**Pn**	**05 32 25.7**	**+3.6**
	4.3nm,0.8s,baz=288,slow=17,SNR=0.9						
DZM				S	**Sn**	**05 34 51.8**	**+0.6**
	7.9nm,1.1s,baz=103,slow=19,SNR=1.6						
EIDS	**Eidsvold**	**18.30**	**209**	P	**P**	**05 33 19.5**	**-0.8**
EIDS				IAmb	IAmb	05 34 02.0	
	comp=Z,36nm,1.4s						
WR8	**Warramunga Arr**	**27.51**	**245**	P	**P**	**05 34 49.7**	**-1.7**
WR8				IAmb	IAmb	05 34 49.9	
	comp=Z,12nm,1.5s						
WB0	**Warramunga Arr**	**27.55**	**245**	P	**P**	**05 34 50.1**	**-1.6**
WB0				IAmb	IAmb	05 35 21.5	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**27.65**	**245**	P	**P**	**05 34 50.7**	**-2.0**
	comp=Z,1.5nm,0.5s,baz=76,slow=9.2,SNR=18						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**27.65**	**245**	IAmb	IAmb	05 34 54.1	
	comp=Z,0.3nm,1.5s						
CAN	**Canberra**	**27.86**	**201**	P	**P**	**05 34 53.4**	**-1.0**
RAO	**Raoul Island**	**27.89**	**138**	P	**P**	**05 34 53.0**	**-1.7**
H11S2	**WAKE ISLAND Hy**	**28.44**	**12**	T	T	06 04 14.7	
	baz=194,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**28.44**	**12**	T	T	06 04 06.1	
	baz=194,slow=76,SNR=32						
H11S1	**WAKE ISLAND Hy**	**28.46**	**12**	T	T	06 04 07.2	
	baz=194,slow=76,SNR=20						
STKA	**Stephens Creek**	**28.54**	**216**	P	**P**	**05 34 59.0**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=65,slow=13,SNR=4.4						
	comp=Z,1.3nm,0.5s						
FAKI	**Fak Fak**	**29.22**	**281**	P	**P**	**05 35 04.9**	**-1.8**
ASAR	**Alice Springs**	**29.36**	**238**	P	**P**	**05 35 05.1**	**-2.8**
	comp=Z,0.6nm,0.5s,baz=63,slow=10,SNR=7.9						
	comp=Z,0.6nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**29.67**	**11**	T	T	06 05 40.9	
	baz=193,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**29.68**	**11**	T	T	06 05 47.1	
	baz=193,slow=76,SNR=39						
H11N2	**WAKE ISLAND Hy**	**29.69**	**11**	T	T	06 05 42.8	
	baz=193,slow=76,SNR=56						
BBOO	**Buckleboo**	**32.59**	**221**	P	**P**	**05 35 34.3**	**-1.8**
BBOO				IAmb	IAmb	05 35 40.9	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	**35.23**	**252**	P	**P**	**05 35 58.5**	**-0.7**
FITZ				IAmb	IAmb	05 36 32.0	
	comp=Z,3.5nm,1.5s						
USRK	**Ussuriysk Ar.**	**59.57**	**336**	P	**P**	**05 39 07.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**67.16**	**295**	P	**P**	**05 39 57.1**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=104,slow=7.7,SNR=1.4						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**74.69**	**325**	P	**P**	**05 40 43.6**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=134,slow=6.4,SNR=3.7						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**74.69**	**325**	IAmb	IAmb	05 40 44.3	
	comp=Z,1.2nm,0.7s						
CAST	**Castle Rocks**	**81.06**	**19**	P	**P**	**05 41 18.3**	**+0.6**
E19K	**Redstone River**	**82.46**	**15**	P	**P**	**05 41 25.5**	**+0.5**
E19K				IAmb	IAmb	05 41 26.5	
	comp=Z,4.8nm,1.4s						
ILAR	**Eielson Array**	**83.67**	**20**	P	**P**	**05 41 31.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=237,slow=4.7,SNR=4.8						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**89.20**	**318**	P	**P**	**05 41 57.2**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=111,slow=6.6,SNR=4.0						
	comp=Z,0.4nm,0.5s						

*IDC **22** 05:36:48.6±0.9,58.°68S×25.°24W,h0km,mb4.0/4, mbtmp4.0/5,ML4.1/1,MS3.3/2, Error ellipse: s-maj=43.3km s-min=22.4km az=85.0*
*NEIC **22** 05:36:54.0±1.4,58.°8S±0.°1×25.°1W±0.°3,h35km±2km, mb4.3/10, Error ellipse: s-maj=28.7km s-min=15.7km az=234.0*
ISC 22 05:36:50.0±0.9,58.°7S±0.°1×25.°0W±0.°2,h10km,n32, σ0s81/19,mb4.3/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.76**	**300**	Pn	**Pn**	**05 38 44.0**	**+1.1**
VNA1	**Neumayer--Stat**	**13.87**	**156**	P	**Pn**	**05 40 05.7**	**-0.7**
	comp=Z,1.1nm,0.2s						
VNA2	**Neumayer--Watz**	**14.27**	**156**	P	**Pn**	**05 40 10.9**	**-0.9**
	comp=Z,1.7nm,0.2s,baz=324,slow=14						
SNAA	**Sanae**	**15.82**	**154**	P	**Pn**	**05 40 32.3**	**-0.3**
	comp=Z,25nm,0.2s						
SNAA	**Sanae**	**15.82**	**154**	Pn	**Pn**	**05 40 32.1**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=330,slow=16,SNR=9.5						
	comp=Z,1.4nm,0.3s						
SNAA	**Sanae**	**15.82**	**154**		**Pn**	**05 40 32.3**	**-0.3**
TROLL	**Troll, Antarti**	**17.33**	**151**	P	**Pn**	**05 40 52.4**	**+0.6**
	comp=Z,31nm,0.2s						
PMSA	**Palmer Station**	**19.21**	**235**	P	**P**	**05 41 13.8**	**+0.1**
BELA	**Belgrano 2**	**19.53**	**186**	P	**P**	**05 41 17.6**	**+0.4**
QSPA	**South Pole Qui**	**31.54**	**180**	P	**P**	**05 43 12.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=203,slow=2.9,SNR=9.7						
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**31.54**	**180**	IAmb	IAmb	05 43 13.7	
	comp=Z,3.2nm,0.9s						
MT09	**Talagante**	**39.29**	**289**	P	**P**	**05 44 18.1**	**-0.8**
MT09				IAmb	IAmb	05 44 40.6	
	comp=Z,16nm,1.5s						
MT01	**Popeta**	**39.35**	**288**	P	**P**	**05 44 18.1**	**-1.2**
MT01				IAmb	IAmb	05 44 32.0	
	comp=Z,17nm,1.4s						
MT02	**Curacav**	**39.78**	**289**	P	**P**	**05 44 22.3**	**-0.6**
VNDA	**Vanda**	**43.96**	**182**	P	**P**	**05 44 57.6**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=192,slow=7.6,SNR=9.7						
VNDA				LR	LR	06 02 41.3	
	comp=Z,26nm,18.0s,baz=198,slow=35						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**43.96**	**182**	IAmb	IAmb	05 45 13.2	
	comp=Z,5.3nm,1.4s						
H04S2	**CROZET ISLANDS**	**45.43**	**110**	T	T	06 34 35.4	
	baz=225,slow=75,SNR=10						
H04S3	**CROZET ISLANDS**	**45.44**	**110**	T	T	06 34 36.6	
	baz=225,slow=75,SNR=8.7						
H04S1	**CROZET ISLANDS**	**45.45**	**110**	T	T	06 34 37.8	
	baz=225,slow=75,SNR=5.8						
LBTB	**Lobatse**	**48.74**	**69**	LR	LR	06 01 51.9	
	comp=Z,40nm,19.2s,baz=152,slow=31						
H10S2	**ASCENSION HYDR**	**50.26**	**13**	T	T	06 40 06.7	
	baz=32,slow=74,SNR=19						
H10S3	**ASCENSION HYDR**	**50.26**	**13**	T	T	06 40 06.6	
	baz=188,slow=74,SNR=16						
H10N1	**ASCENSION HYDR**	**51.38**	**13**	T	T	06 41 30.2	
	baz=181,slow=72,SNR=3.4						
H10N3	**ASCENSION HYDR**	**51.38**	**13**	T	T	06 41 34.4	
	baz=181,slow=72,SNR=12						
H10N2	**ASCENSION HYDR**	**51.40**	**13**	T	T	06 41 37.1	
	baz=181,slow=72,SNR=10						
LPAZ	**La Paz**	**52.89**	**305**	P	**P**	**05 46 05.8**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=147,slow=8.1,SNR=5.6						
	comp=Z,0.6nm,0.5s						
LPAZ	**La Paz**	**52.89**	**305**	IAmb	IAmb	05 46 31.6	
	comp=Z,1.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**74.83**	**27**	P	**P**	**05 48 31.5**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=200,slow=6.6,SNR=18						
	comp=Z,0.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**74.83**	**27**	IAmb	IAmb	05 49 07.2	
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**138.93**	**315**	PKP	**PKPdf**	**05 56 14.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=137,slow=2.1,SNR=5.3						
SONM	**Songino Array**	**149.62**	**89**	PKPbc	**PKPbc**	**05 56 38.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=207,slow=1.9,SNR=4.0						
ILAR	**Eielson Array**	**152.74**	**307**	PKPbc	**PKPbc**	**05 56 44.7**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=147,slow=2.6,SNR=19						

KRSC 22 05:58:21.9±1.7,49.°89N×156.°12E,h85km±19km,MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.79**	**0**	*eP*	Pn	05 58 39.5	+0.6
SKR				*eS*	Sn	05 58 52.9	+1.4
PAU	**Pauzhetka**	**1.64**	**15**	*eP*	Pn	05 58 49.8	+0.7
PAU				*eS*	Sn	05 59 11.6	+1.9
KDTR	**Khodutka, Kamc**	**2.29**	**32**	*eP*	Pn	05 58 59.0	+1.3
KDTR				*eS*	Sn	05 59 27.3	+2.3
MIPR	**Malaya Ipel'ka**	**2.42**	**9**	*eP*	Pn	05 59 00.2	+0.7

M_{rr}3.11; $M_{\theta\theta}$-2.43; $M_{\phi\phi}$-0.68; $M_{r\theta}$4.07; $M_{r\phi}$-1.33; $M_{\theta\phi}$2.26; Fault plane solution: M_o5.60686×10^{20} NP1:ϕ_s61.08983°, δ73.02879°, λ89.65303°. NP2:ϕ_s242.27836°, δ16.97465°, λ91.13676°. Principal axes: T 5.5882, Plg61.9697°, Azm330.5678°; N 0.0371, Plg0.3319°, Azm61.1911°; P -5.6253, Plg28.0280°, Azm151.3678°;

*IPGP **22** 06:12:42.0, 55.11N×158.48W, h33km, Mw7.8, Fault plane solution: NP1:ϕ_s240.00000°, δ19.00000°, λ85.00000°. NP2:ϕ_s64.00000°, δ72.00000°, λ92.00000°.*

*NEIC **22** 06:12:44.8±2.0, 55.07N±0.06×158.60W±0.07, h28km±1km, mb6.9/921, ML7.1/36, Ms_20 7.7/559, Mww7.8/261, ML7.8(AEIC), Error ellipse: s-maj=9.7km s-min=6.9km az=162.0*

*NEIC **22** 06:12:44.6, 55.03N×158.52W, h28km*

*GFZ **22** 06:12:45.8±0.1, 55°N±2°×15°9W±°, h30km, M7.6/321, mB7.6/321, mb6.8/319, Mw(mB)7.7/321, MwMwp7.5/312, Mwp7.2/312, Error ellipse: s-maj=3.4km s-min=2.8km az=161.3, confirmed*

*BGR **22** 06:12:52.5, 55.95N×159.31W, h33km, mb7.1, mB_BB7.4, Ms7.6*

*GCMT **22** 06:13:15.7±0.1, 54.83N×159.28W, h36km, MW7.8/175, Moment Tensor Solution. s165,c412; s175,c737; Duration: 20s4 Moment tensor: Scale 10^{20}Nm; M_{rr}4.15±.01; $M_{\theta\theta}$-3.23±.01; $M_{\phi\phi}$-0.91±.01; $M_{r\theta}$5.38±.06; $M_{r\phi}$-1.65±.01; $M_{\theta\phi}$2.93±.05; Best double couple: M_o7.38200×10^{20} NP1:ϕ_s243.00000°, δ17.00000°, λ92.00000°. NP2:ϕ_s62.00000°, δ73.00000°, λ89.00000°. Principal axes: T 7.4130, Plg62.0000°, Azm331.0000°; N -0.0600, Plg0.0000°, Azm62.0000°; P -7.3510, Plg28.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **22** 06:13:52.6, 54.83N×159.22W, h24km, Moment Tensor Solution. Duration: 82s2 Moment tensor: Scale 10^{20}Nm; M_{rr}4.48; $M_{\theta\theta}$-3.16; $M_{\phi\phi}$-1.32; $M_{r\theta}$5.16; $M_{r\phi}$-1.67; $M_{\theta\phi}$1.60; Fault plane solution: M_o6.92000×10^{20} NP1: ϕ_s231.80000°, δ20.03000°, λ73.23000°. NP2:ϕ_s69.59000°, δ70.85000°, λ96.01000°. Principal axes: T 7.1370, Plg64.0000°, Azm349.0000°; N -0.4596, Plg6.0000°, Azm248.0000°; P -6.6773, Plg26.0000°, Azm155.0000°;*

ISC 22 06:12:43.5±0.3, 55.01N±0.03×158.56W±0.02, h23km±1km, h23km:pP-P, n3184, s170/2922, mb6.9/753, MS7.7/497, 366C-80D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CHNA	**Chernabura Isl**	**0.62**	**254**	P		**Pb**	**06 12 56.2**	**+0.6**
CHNA	**Chernabura Isl**	**0.62**	**254**	P		**Pb**	**06 12 55.0**	**-0.6**
CHNA	**Chernabura Isl** baz=66,SNR=1000	**0.62**	**254**	P		**Pb**	**06 12 54.8**	**-0.8**
CNBA	**Chernabura Isl**	**0.62**	**253**			**Sn**	**06 13 06.7**	**+0.5**
CNBA	**Chernabura Isl**	**0.62**	**253**			**Pb**	**06 12 56.0**	**+0.3**
CNBA	**Chernabura Isl** comp=E,974μm,0.7s	**0.62**	**253**	IAML			06 13 10.1	
CNBA	comp=N,1253μm,1.5s			IAML			06 13 10.2	
VNKR	**Veniaminof 5**	**1.13**	**336**			**Pn**	**06 13 04.1**	**+0.2**
SDPT	**Sand Point**	**1.15**	**288**	P		**Pn**	**06 13 03.3**	**-0.9**
SDPT	**Sand Point**	**1.15**	**288**	S		**Sb**	**06 13 14.4**	**-4.8**
SDPT	**Sand Point**	**1.15**	**288**			**Sn**	**06 13 20.3**	**+1.0**
SDPT	**Sand Point**	**1.15**	**288**			**Pn**	**06 13 04.4**	**+0.2**
SDPT	**Sand Point**	**1.15**	**288**	P		**Pn**	**06 13 03.4**	**-0.8**
SDPT	**Sand Point** baz=101,SNR=1000	**1.15**	**288**	P		**Pn**	**06 13 03.4**	**-0.8**
CHGN	**Chignik**	**1.30**	**4**			**Sb**	**06 13 25.4**	**+1.9**
CHGN	**Chignik**	**1.30**	**4**			**Pb**	**06 13 06.9**	**-0.4**
CHGN	**Chignik**	**1.30**	**4**	P		**Pb**	**06 13 07.1**	**-0.1**
CHGN	**Chignik** baz=182,SNR=1000	**1.30**	**4**	P		**Pn**	**06 13 05.5**	**-0.8**
VNSS	**Veniaminof 8**	**1.32**	**338**			**Pb**	**06 13 07.8**	**0.0**
S14K	**Fog Glacier** baz=152,SNR=1000	**1.40**	**337**	P		**Pn**	**06 13 07.5**	**-0.3**
VNFG	**Fog Glacier, M**	**1.40**	**337**			**Pb**	**06 13 09.1**	**+0.1**
VNFG	**Fog Glacier, M**	**1.40**	**337**			**Pb**	**06 13 09.2**	**+0.2**
VNFG	comp=N,1833μm,0.8s			IAML			06 13 35.5	
VNFG	comp=E,1860μm,1.1s			IAML			06 13 53.2	
VNFG	**Fog Glacier, M**	**1.40**	**337**	P		**Pb**	**06 13 09.1**	**+0.1**
BPBCA	**Veniaminof**	**1.59**	**2**			**Pb**	**06 13 11.4**	**-0.8**
ANPB	**Aniakchak Plen**	**1.81**	**5**			**Pn**	**06 13 14.0**	**+0.7**
CHIR	**Chirikof Islan**	**1.86**	**63**	P		**Pn**	**06 13 13.3**	**-0.7**
CHIR	**Chirikof Islan**	**1.86**	**63**	S		**Sb**	**06 13 38.7**	**-1.0**
CHIR	**Chirikof Islan**	**1.86**	**63**			**Pn**	**06 13 14.4**	**+0.4**
CHIR	comp=E,2078μm,1.3s			IAML			06 14 17.8	
CHIR	comp=N,1924μm,1.0s			IAML			06 14 18.1	
CHIR	**Chirikof Islan**	**1.86**	**63**	P		**Pn**	**06 13 13.1**	**-1.0**
CHIR	**Chirikof Islan** baz=247,SNR=471	**1.86**	**63**	P		**Pn**	**06 13 13.0**	**-1.0**
PS1A	**Pavlof South-1**	**1.87**	**284**			**Pn**	**06 13 14.5**	**+0.4**
DOL	**Dolgoi Island**	**1.90**	**276**			**Pn**	**06 13 14.6**	**0.0**
PS4A	**Pavlof South-4**	**1.92**	**282**			**Pn**	**06 13 14.8**	**0.0**
ANNW	**Aniakchak Nort**	**1.98**	**6**			**Pn**	**06 13 17.0**	**+1.4**
PN7A	**Pavlof North-7**	**2.02**	**284**			**Pn**	**06 13 16.5**	**+0.3**
R17L	**Mt. Peulik Vol** baz=206	**2.90**	**24**	P		**Pn**	**06 13 29.1**	**+0.7**
SII	**Sitkinak Islan**	**2.92**	**56**	P		**Pn**	**06 13 28.0**	**-0.6**
SII	**Sitkinak Islan**	**2.92**	**56**	S		**Sn**	**06 14 03.5**	**+0.6**
SII	**Sitkinak Islan**	**2.92**	**56**			**Pn**	**06 13 28.6**	**+0.1**
SII	comp=N,1063μm,1.1s			IAML			06 14 54.0	
SII	**Sitkinak Islan**	**2.92**	**56**	P		**Pn**	**06 13 27.9**	**-0.6**
SII	**Sitkinak Islan** baz=241,SNR=451	**2.92**	**56**	P		**Pn**	**06 13 27.7**	**-0.8**
SSBA	**Shishaldin**	**3.22**	**268**	P		**Pn**	**06 13 33.9**	**+1.2**
Q17K	**Contact Creek** baz=205	**3.58**	**23**	P		**Pn**	**06 13 37.7**	**0.0**
ACHA	**Angle Creek He**	**3.68**	**28**			**Pn**	**06 13 39.4**	**+0.4**
OHAK	**Old Harbor**	**3.69**	**51**	P		**Pn**	**06 13 38.2**	**-0.9**
OHAK	**Old Harbor**	**3.69**	**51**			**Pn**	**06 13 39.3**	**+0.1**
OHAK	comp=N,257μm,1.8s			IAML			06 15 08.6	
OHAK	comp=E,235μm,1.4s			IAML			06 15 24.5	
OHAK	**Old Harbor**	**3.69**	**51**	P		**Pn**	**06 13 38.2**	**-0.9**
OHAK	**Old Harbor** baz=236,SNR=766	**3.69**	**51**	P		**Pn**	**06 13 38.1**	**-1.1**
KAKN	**Katmai Knife C**	**3.82**	**29**	P		**Pn**	**06 13 41.2**	**+0.2**
Q16K	**King Salmon** baz=196,SNR=1000	**3.83**	**15**	P		**Pn**	**06 13 41.3**	**+0.4**
P16K	**Nushagak River**	**4.05**	**4**			**Pn**	**06 13 45.3**	**+1.3**
P16K	comp=N,485μm,2.8s			IAML			06 15 56.7	
P16K	**Nushagak River** baz=184,SNR=539	**4.05**	**4**	P		**Pn**	**06 13 44.3**	**+0.3**
Q18K	**Katmai Hardscr** baz=210,SNR=670	**4.14**	**27**	P		**Pn**	**06 13 45.2**	**-0.2**
O15K	**Ungalikthiuk R**	**4.24**	**351**			**Pn**	**06 13 47.5**	**+0.9**
O15K	comp=E,160μm,1.6s			IAML			06 15 26.8	
O15K	**Ungalikthiuk R** baz=169,SNR=1000	**4.24**	**351**	P		**Pn**	**06 13 47.1**	**+0.5**
AKUT	**Akutan**	**4.29**	**261**	P		**Pn**	**06 13 48.6**	**+1.3**
AKUT	**Akutan**	**4.29**	**261**			**Pn**	**06 13 48.7**	**+1.5**
AKUT	**Akutan**	**4.29**	**261**	P		**Pn**	**06 13 48.5**	**+1.3**
AKUT	**Akutan**	**4.29**	**261**	⇑P		**Pn**	**06 13 48.3**	**+1.1**
KDAK	**Kodiak Island** comp=E,181nm,0.3s,baz=233,slow=14,SNR=639	**4.33**	**48**	Pn		**Pn**	**06 13 46.8**	**-1.2**
KDAK	comp=E,3μm,0.3s,baz=253,slow=13,SNR=9.1			Sn		**Sn**	**06 14 33.6**	**-4.0**
KDAK	comp=E,3μm,0.3s,baz=193,slow=18,SNR=5.6 comp=E,1μm,0.7s			Lg		Lg	06 15 02.7	
KDAK	**Kodiak Island**	**4.33**	**48**	*c iP*		**Pn**	**06 13 46.6**	**-1.3**
KDAK	comp=Z,1190μm,2.0s			MLR		MLR		
KDAK	**Kodiak Island**	**4.33**	**48**			**Pn**	**06 13 48.4**	**+0.5**
KDAK	comp=Z,206μm,1.6s			IAML			06 15 29.9	
KDAK	comp=Z,196μm,1.6s			IAML			06 15 34.7	
KDAK	**Kodiak Island**	**4.33**	**48**	P		**Pn**	**06 13 46.9**	**-1.0**
KDAK	**Kodiak Island**	**4.33**	**48**	⇑P		**Pn**	**06 13 46.7**	**-1.2**
KDAK	**Kodiak Island** baz=233	**4.33**	**48**	P		**Pn**	**06 13 46.8**	**-1.2**
KDAK	**Kodiak Island**	**4.33**	**48**	P		**Pn**	**06 13 46.9**	**-1.0**
P17K	**Kvichak River**	**4.36**	**15**			**Pn**	**06 13 48.7**	**+0.5**
P17K	**Kvichak River** baz=196,SNR=670	**4.36**	**15**	P		**Pn**	**06 13 48.5**	**+0.3**
O14K	**Tigyukauivet M**	**4.51**	**342**			**Pn**	**06 13 51.7**	**+1.5**
O14K	comp=N,157μm,1.3s			IAML			06 15 29.8	
O14K	comp=E,172μm,1.9s			IAML			06 15 36.5	
O14K	**Tigyukauivet M** baz=159,SNR=1000	**4.51**	**342**	P		**Pn**	**06 13 50.9**	**+0.7**
O16K	**Kokwok River B**	**4.61**	**3**			**Pn**	**06 13 52.8**	**+1.2**
O16K	comp=E,120μm,2.7s			IAML			06 16 09.8	
O16K	**Kokwok River B** baz=183,SNR=593	**4.61**	**3**	P		**Pn**	**06 13 52.0**	**+0.3**
P18K	**Big Mountain,** baz=204,SNR=754	**4.76**	**21**	P		**Pn**	**06 13 53.8**	**0.0**
UNV	**Unalaska Valle**	**4.78**	**259**	P		**Pn**	**06 13 54.5**	**+0.4**
UNV	**Unalaska Valle**	**4.78**	**259**			**Pn**	**06 13 56.2**	**+2.2**
UNV	comp=N,236μm,1.8s			IAML			06 15 32.9	
UNV	**Unalaska Valle**	**4.78**	**259**	P		**Pn**	**06 13 52.4**	**-1.7**
UNV	**Unalaska Valle** baz=72,SNR=1000	**4.78**	**259**	P		**Pn**	**06 13 54.0**	**0.0**
O17K	**Koliganek Bris** baz=190	**4.85**	**9**	P		**Pn**	**06 13 55.1**	**+0.2**
MNAT	**Makushin Natee**	**4.87**	**260**	P		**Pn**	**06 13 56.0**	**+0.7**
MGOD	**Makushin Gods**	**5.00**	**259**	P		**Pn**	**06 13 57.5**	**+0.3**
MAPS	**Pakushin South**	**5.04**	**260**	P		**Pn**	**06 13 58.9**	**+1.3**
O18K	**Koktuh Hills** comp=N,85μm,2.2s	**5.19**	**19**	IAML			06 16 02.0	
O18K	comp=E,87μm,3.3s			IAML			06 16 37.7	
O18K	**Koktuh Hills** baz=202,SNR=869	**5.19**	**19**	P		**Pn**	**06 14 00.2**	**+0.5**
AUL	**Augustine Lava**	**5.20**	**30**	P		**Pn**	**06 14 01.3**	**+1.5**
N14K	**Kuskokwak Cree** baz=159,SNR=1000	**5.21**	**342**	P		**Pn**	**06 14 00.7**	**+0.8**
N15K	**Kwethluk River** comp=E,200μm,2.1s	**5.24**	**352**	IAML			06 16 02.4	
N15K	comp=N,149μm,2.0s			IAML			06 16 27.9	
N15K	**Kwethluk River** baz=170,SNR=1000	**5.24**	**352**	P		**Pn**	**06 14 01.3**	**+0.9**
P19K	**Oil Pt** baz=214	**5.48**	**30**	P		**Pn**	**06 14 03.7**	**0.0**
N16K	**Nishlik Lake** baz=178,SNR=1000	**5.49**	**359**	P		**Pn**	**06 14 04.6**	**+0.8**
N17K	**Nushagak Hills** baz=188,SNR=911	**5.59**	**7**	P		**Pn**	**06 14 05.3**	**+0.2**
O19K	**Port Alsworth** baz=205,SNR=416	**5.68**	**22**	P		**Pn**	**06 14 06.8**	**+0.4**
OKFG	**Magazine Ridge**	**5.71**	**258**	P		**Pn**	**06 14 07.9**	**+1.0**
M15K	**Kasiglux River** baz=167,SNR=1000	**5.82**	**350**	P		**Pn**	**06 14 08.7**	**+0.4**
OKNC	**Okmok New Cone**	**5.82**	**258**	P		**Pn**	**06 14 09.1**	**+0.8**
OKCE	**Okmok Cone E**	**5.85**	**258**	P		**Pn**	**06 14 09.9**	**+1.1**
N18K	**Kilae Creek** baz=195,SNR=670	**5.87**	**13**	P		**Pn**	**06 14 09.3**	**+0.4**
HOM	**Homer** baz=222,SNR=26	**5.98**	**36**	P		**Pn**	**06 14 10.4**	**-0.2**
M13K	**Dall Lake** baz=152,SNR=1000	**6.00**	**337**	P		**Pn**	**06 14 11.8**	**+1.1**
O20K	**Slope Mountain** baz=215,SNR=162	**6.01**	**30**	P		**Pn**	**06 14 11.1**	**+0.1**
M16K	**Timber Creek** baz=177,SNR=1000	**6.04**	**358**	P		**Pn**	**06 14 12.2**	**+0.8**
M14K	**Bethel** baz=160,SNR=1000	**6.04**	**344**	P		**Pn**	**06 14 11.7**	**+0.4**
N19K	**Bonanza Creek** baz=202,SNR=1000	**6.21**	**19**	P		**Pn**	**06 14 14.4**	**+0.5**
BRLK	**Bradley Lake**	**6.32**	**38**	P		**Pn**	**06 14 14.3**	**-0.9**
BRSE	**Bradley Lake S** baz=225,SNR=100	**6.36**	**38**	P		**Pn**	**06 14 14.7**	**-1.0**
M17K	**Holitna River** baz=185,SNR=1000	**6.44**	**5**	P		**Pn**	**06 14 17.3**	**+0.4**
M18K	**Stony River** baz=194,SNR=1000	**6.66**	**11**	P		**Pn**	**06 14 20.1**	**+0.2**
L14K	**Kuka Creek** baz=159,SNR=1000	**6.72**	**343**	P		**Pn**	**06 14 20.5**	**-0.1**
L16K	**Owhat River** baz=175,SNR=1000	**6.74**	**356**	P		**Pn**	**06 14 21.0**	**0.0**
M11K	**Mekoryuk**	**6.77**	**326**			**Pn**	**06 14 23.0**	**+1.7**
M11K	**Mekoryuk** baz=139,SNR=639	**6.77**	**326**	P		**Pn**	**06 14 21.4**	**+0.1**
L15K	**Ungalak Mounta** baz=165,SNR=1000	**6.87**	**348**	P		**Pn**	**06 14 22.2**	**-0.4**
SPIA	**Saint Paul Isl**	**6.89**	**293**	P		**Pn**	**06 14 21.8**	**-1.2**
SPIA	**Saint Paul Isl**	**6.89**	**293**			**Pn**	**06 14 24.7**	**+1.7**
SPIA	**Saint Paul Isl**	**6.89**	**293**	P		**Pn**	**06 14 24.5**	**+1.5**
SPIA	**Saint Paul Isl** baz=102,SNR=642	**6.89**	**293**	P		**Pn**	**06 14 24.2**	**+1.2**
CAPN	**Captain Cook N** baz=218	**7.00**	**31**	P		**Pn**	**06 14 25.2**	**+0.8**
CLES	**Cleveland East**	**7.04**	**257**			**Pn**	**06 14 28.5**	**+3.4**
SPCR	**Spurr Chakacha** baz=211,SNR=196	**7.06**	**26**	P		**Pn**	**06 14 25.1**	**-0.3**
SEW	**Seward** baz=228,SNR=174	**7.08**	**40**	P		**Pn**	**06 14 24.1**	**-1.4**
SLKM	**Skilak Lake**	**7.09**	**36**	P		Pn	06 14 18.5	-7.3
L17K	**Donlin** baz=181,SNR=1000	**7.15**	**1**	P		**Pn**	**06 14 26.9**	**+0.3**
O22K	**Cooper Landing** baz=225,SNR=61	**7.24**	**37**	P		**Pn**	**06 14 26.9**	**-0.9**
M19K	**Big River Lodg** baz=199	**7.25**	**16**	P		**Pn**	**06 14 28.6**	**+0.6**
L18K	**Granite Mounta** baz=188	**7.30**	**7**	P		**Pn**	**06 14 28.7**	**+0.1**
L19K	**White Mountain** baz=196,SNR=1000	**7.45**	**14**	P		**Pn**	**06 14 30.7**	**0.0**
M20K	**Styx River** baz=205	**7.46**	**20**	P		**Pn**	**06 14 31.7**	**+0.8**
K15K	**Wolf Creek Mou** baz=166,SNR=1000	**7.47**	**349**	P		**Pn**	**06 14 31.1**	**+0.1**
K13K	**Kusilvak Mount** baz=152,SNR=1000	**7.64**	**338**	P		**Pn**	**06 14 33.5**	**+0.2**
RC01	**Rabbit Creek A**	**7.68**	**34**			**Pn**	**06 14 35.2**	**+1.3**
RC01	**Rabbit Creek A** baz=221,SNR=233	**7.68**	**34**	P		**Pn**	**06 14 33.1**	**-0.8**
K17K	**Idid** baz=181,SNR=1000	**7.74**	**1**	P		**Pn**	**06 14 34.7**	**+0.1**
P23K	**Montague Islan** baz=235,SNR=130	**7.81**	**46**	P		**Pn**	**06 14 34.4**	**-1.3**
SKT	**Skwentna** baz=211,SNR=693	**7.90**	**25**	P		**Pn**	**06 14 36.0**	**-0.9**
Q23K	**Middleton Isla** baz=242,SNR=125	**7.97**	**51**	P		**Pn**	**06 14 36.3**	**-1.5**
PWL	**Port Wells** baz=228,SNR=607	**8.00**	**39**	P		**Pn**	**06 14 36.6**	**-1.6**
M22K	**Willow** baz=217,SNR=250	**8.08**	**30**	P		**Pn**	**06 14 38.7**	**-0.6**
J14K	**Nanvaranak Lak** baz=159,SNR=810	**8.18**	**344**	P		**Pn**	**06 14 40.1**	**-0.6**
PMR	**Palmer**	**8.26**	**33**	P		**Pn**	**06 14 41.3**	**-0.4**
PMR	**Palmer**	**8.26**	**33**	P		**Pn**	**06 14 41.2**	**-0.4**
PMR	**Palmer**	**8.26**	**33**	P		**Pn**	**06 14 38.0**	**-3.7**
PMR	**Palmer** baz=221,SNR=140	**8.26**	**33**	P		**Pn**	**06 14 40.3**	**-1.4**
KNK	**Knik Glacier** baz=224,SNR=94	**8.34**	**36**	P		**Pn**	**06 14 41.6**	**-1.3**
J16K	**Anvik River** baz=172,SNR=1000	**8.37**	**354**	P		**Pn**	**06 14 42.9**	**-0.3**
J17K	**VABM Dome** baz=178,SNR=773	**8.42**	**358**	P		**Pn**	**06 14 43.5**	**-0.5**
GLI	**Glacier Island** baz=231,SNR=69	**8.47**	**41**	P		**Pn**	**06 14 42.8**	**-1.8**
J18K	**Innoko River** baz=187,SNR=1000	**8.54**	**6**	P		**Pn**	**06 14 45.6**	**0.0**
L22K	**Peluville** baz=212,SNR=245	**8.55**	**25**	P		**Pn**	**06 14 45.5**	**-0.4**
PPLA	**Purkeypile** baz=205	**8.57**	**20**	P		**Pn**	**06 14 46.4**	**+0.3**
CUT	**Chulitna** baz=214,SNR=78	**8.58**	**27**	P		**Pn**	**06 14 45.2**	**-0.9**
SML	**Sawmill**	**8.67**	**34**	P		**Pn**	**06 14 43.6**	**-3.9**
SML	**Sawmill** baz=223,SNR=172	**8.67**	**34**	P		**Pn**	**06 14 46.0**	**-1.5**
K20K	**Telida** baz=197	**8.69**	**14**	P		**Pn**	**06 14 47.1**	**-0.5**
EYAK	**Cordova Ski Ar**	**8.81**	**46**	P		**Pn**	**06 14 48.5**	**-0.7**
EYAK	**Cordova Ski Ar**	**8.81**	**46**			**Pn**	**06 14 48.6**	**-0.7**
EYAK	**Cordova Ski Ar** baz=237,SNR=459	**8.81**	**46**	P		**Pn**	**06 14 47.7**	**-1.5**
M23K	**Glacier View** baz=225,SNR=181	**8.86**	**35**	P		**Pn**	**06 14 48.8**	**-1.3**
I17K	**Unalakleet** baz=172,SNR=921	**8.97**	**354**	P		**Pn**	**06 14 51.8**	**+0.2**
SCM	**Sheep Creek Mo**	**9.02**	**36**	P		**Pn**	**06 14 51.1**	**-1.2**
CAST	**Castle Rocks** baz=204,SNR=1000	**9.06**	**19**	P		**Pn**	**06 14 52.6**	**-0.2**
KAIM	**Kayak Island** baz=244,SNR=1000	**9.07**	**51**	P		**Pn**	**06 14 52.1**	**-0.8**
J19K	**Poorman** baz=190,SNR=601	**9.14**	**8**	P		**Pn**	**06 14 53.7**	**-0.1**
KLU	**Kluting** baz=231,SNR=910	**9.30**	**41**	P		**Pn**	**06 14 54.6**	**-1.5**
WAT1	**Susitna Watana** baz=218	**9.39**	**29**	P		**Pn**	**06 14 55.1**	**-2.1**
WAT6	**Susitna Watana** baz=221,SNR=104	**9.43**	**32**	P		**Pn**	**06 14 56.5**	**-1.5**
CHUM	**Lake Minchumin** baz=202,SNR=650	**9.45**	**17**	P		**Pn**	**06 14 58.5**	**+0.5**
TRF	**Thorofare Moun** baz=210,SNR=284	**9.46**	**23**	P		**Pn**	**06 14 57.0**	**-1.3**
J20K	**Nowinta River** baz=196,SNR=210	**9.46**	**12**	P		**Pn**	**06 14 58.4**	**+0.1**
BMRM	**Bremner River** baz=238,SNR=295	**9.51**	**45**	P		**Pn**	**06 14 57.3**	**-1.6**
M24K	**Tolsona, Glenn** baz=228,SNR=255	**9.61**	**37**	P		**Pn**	**06 14 59.2**	**-1.1**
ATKA	**Atka Island**	**9.71**	**260**	P		**Pn**	**06 15 02.6**	**+1.0**
ATKA	**Atka Island**	**9.71**	**260**	⇑P		**Pn**	**06 15 02.0**	**+0.4**
GCSA	**Galena City Sc** baz=185,SNR=212	**9.81**	**4**	P		**Pn**	**06 15 03.3**	**+0.4**
H16K	**Elim** baz=167,SNR=250	**9.84**	**351**	P		**Pn**	**06 15 03.9**	**+0.6**
N25K	**Chitina, Valde** baz=234,SNR=154	**9.87**	**42**	P		**Pn**	**06 15 03.0**	**-1.0**
DHY	**Denali Highway** baz=220,SNR=792	**9.92**	**31**	P		**Pn**	**06 15 02.6**	**-2.1**
H17K	**Granite Mounta** baz=175,SNR=1000	**9.99**	**357**	P		**Pn**	**06 15 06.0**	**+0.6**
MCK	**McKinley** baz=214,SNR=167	**10.02**	**25**	P		**Pn**	**06 15 04.1**	**-1.8**
I20K	**Naaghedeneel** baz=193,SNR=106	**10.03**	**10**	P		**Pn**	**06 15 06.3**	**+0.3**
CRQE	**Cirque** baz=242,SNR=712	**10.04**	**49**	P		**Pn**	**06 15 04.7**	**-1.5**
HARP	**HAARP** baz=229,SNR=98	**10.16**	**38**	P		**Pn**	**06 15 06.9**	**-0.9**
ANM	**Nome**	**10.18**	**343**	P		**Pn**	**06 15 09.4**	**+1.4**
ANM	**Nome**	**10.18**	**343**			**Pn**	**06 15 09.4**	**+1.4**
ANM	**Nome** baz=157,SNR=106	**10.18**	**343**	P		**Pn**	**06 15 08.5**	**+0.5**
H18K	**Honhosa River** baz=180,SNR=503	**10.18**	**0**	P		**Pn**	**06 15 09.0**	**+0.9**
MCARA	**McCarthy VSAT** baz=239,SNR=91	**10.38**	**46**	P		**Pn**	**06 15 09.6**	**-1.2**
G15K	**Niukluk** baz=162,SNR=681	**10.38**	**347**	P		**Pn**	**06 15 11.2**	**+0.4**
PAX	**Paxson** baz=226,SNR=440	**10.44**	**35**	P		**Pn**	**06 15 10.2**	**-1.5**
G17K	**Kiwalik Mounta** baz=173,SNR=326	**10.58**	**355**	P		**Pn**	**06 15 14.2**	**+0.6**
G16K	**Koyuk River** baz=168	**10.59**	**351**	P		**Pn**	**06 15 15.2**	**+1.6**
H19K	**Roundabout Mou** baz=186,SNR=620	**10.61**	**5**	P		**Pn**	**06 15 14.6**	**+0.7**
H20K	**Anotleneega Mo** baz=191,SNR=830	**10.68**	**8**	P		**Pn**	**06 15 15.5**	**+0.6**
I21K	**Tanana** baz=201,SNR=203	**10.71**	**15**	P		**Pn**	**06 15 15.2**	**-0.1**
NEA2	**Nenana** baz=211,SNR=298	**10.72**	**22**	P		**Pn**	**06 15 12.5**	**-3.0**
MLY	**Manley** baz=205,SNR=294	**10.78**	**18**	P		**Pn**	**06 15 14.9**	**-1.4**
G18K	**Tagagawik** baz=180,SNR=475	**10.93**	**360**	P		**Pn**	**06 15 19.7**	**+1.4**
K24K	**Donnelly Dome** baz=222,SNR=601	**10.94**	**31**	P		**Pn**	**06 15 17.6**	**-1.0**
M26K	**Nabesna, AK** baz=235,SNR=110	**10.95**	**41**	P		**Pn**	**06 15 17.7**	**-1.0**
MENT	**Mentasta**	**11.01**	**38**	P		**Pn**	**06 15 18.0**	**-1.5**
GAMB	**Gambell**	**11.03**	**328**			**Pn**	**06 15 21.2**	**+1.5**
GAMB	**Gambell**	**11.03**	**328**	⇑P		**Pn**	**06 15 20.3**	**+0.7**
GAMB	**Gambell** baz=136,SNR=100	**11.03**	**328**	P		**Pn**	**06 15 20.4**	**+0.7**
H21K	**Melozitna Rive** baz=197,SNR=807	**11.05**	**13**	P		**Pn**	**06 15 20.2**	**+0.2**
PINM	**Pinnacle** baz=251,SNR=344	**11.06**	**55**	P		**Pn**	**06 15 19.5**	**-0.7**
HDA	**Harding Lake** baz=217,SNR=320	**11.08**	**27**	P		**Pn**	**06 15 17.5**	**-2.8**
F15K	**North Star Dit** baz=161,SNR=454	**11.14**	**347**	P		**Pn**	**06 15 22.1**	**+0.9**
I23K	**Minto, Yukon-K** baz=208,SNR=182	**11.15**	**20**	P		**Pn**	**06 15 18.6**	**-2.6**
YKU2	**Yakutat**	**11.17**	**58**	P		**Pn**	**06 15 23.1**	**+1.6**
F14K	**Arctic Creek** baz=156,SNR=132	**11.18**	**343**	P		**Pn**	**06 15 22.8**	**+1.1**
RIDG	**Independent Ri** baz=225,SNR=320	**11.18**	**33**	P		**Pn**	**06 15 19.9**	**-1.9**
G19K	**Purcell Mounta** baz=184,SNR=458	**11.20**	**3**	P		**Pn**	**06 15 22.7**	**+0.7**
L26K	**Log Cabin Wild** baz=231,SNR=379	**11.20**	**38**	P		**Pn**	**06 15 21.1**	**-1.0**
I53US	**FAIRBANKS INFR** baz=214,slow=18	**11.24**	**24**	Pn		**Pn**	**06 15 23.1**	**+0.6**
COLA	**College**	**11.24**	**24**	P		**Pn**	**06 15 19.2**	**-3.3**
COLA	**College**	**11.24**	**24**	*i/P*		**Pn**	**06 15 20.3**	**-2.2**
COLA	**College**	**11.24**	**24**			**Pn**	**06 15 23.3**	**-2.2**
COLA	**College**	**11.24**	**24**	⇑P		**Pn**	**06 15 18.6**	**-3.9**
COLA	**College**	**11.24**	**24**	P		**Pn**	**06 15 19.0**	**-3.5**
COLA	**College** baz=213	**11.24**	**24**	P		**Pn**	**06 15 19.5**	**-3.0**
COLA	**College**	**11.24**	**24**	P		**Pn**	**06 15 19.8**	**-2.7**
ADK	**Adak**	**11.25**	**261**	P		**Pn**	**06 15 23.3**	**+0.6**
ADK	**Adak**	**11.25**	**261**			**Pn**	**06 15 23.6**	**+0.9**
ADK	**Adak**	**11.25**	**261**	⇑P		**Pn**	**06 15 21.9**	**-0.8**
ADK	**Adak**	**11.25**	**261**	P		**Pn**	**06 15 23.8**	**+1.1**
IMAR	**Indian Mountai**	**11.26**	**10**			**Pn**	**06 15 23.4**	**+

P29M	Windy Craggy	12.15	59	P		Pn	06 15 34.1	-0.9	
	baz=257,SNR=481								
F20K	Avaraart Lake	12.16	5	P		Pn	06 15 36.3	+1.2	
	baz=188								
E17K	Hotham Inlet	12.22	354	P		Pn	06 15 37.7	+1.8	
	baz=171,SNR=266								
YUK6	Outpost Mounta	12.23	53	P		Pn	06 15 36.4	+0.1	
	baz=250,SNR=112								
YUK4	Talbot Arm	12.25	51	P		Pn	06 15 37.5	+1.0	
	baz=248,SNR=236								
PRP	Porcupine Dome	12.34	26	P		Pn	06 15 34.0	-3.6	
	baz=217,SNR=279								
G23K	Bananza Creek	12.44	16	P		Pn	06 15 36.3	-2.7	
	baz=203,SNR=194								
F21K	Alatna River	12.49	9	P		Pn	06 15 40.4	+0.7	
	baz=194								
E18K	Tukpahlearik C	12.50	356	P		Pn	06 15 41.5	+1.8	
	baz=174,SNR=328								
E19K	Redstone River	12.51	2			Pn	06 15 42.2	+2.3	
E19K	Redstone River	12.51	2	P		Pn	06 15 40.9	+1.0	
	baz=183,SNR=799								
HYT	Haines Junctio	12.59	54	P		Pn	06 15 40.7	-0.4	
	baz=252,SNR=163								
P30M	Million Dollar	12.65	57	P		Pn	06 15 41.6	-0.3	
	baz=256								
S31K	Pelican	12.67	67			Pn	06 15 41.1	-1.1	
S31K	Pelican	12.67	67	P		Pn	06 15 40.3	-1.8	
	baz=266,SNR=133								
M29M	Somme Creek	12.78	46	P		Pn	06 15 42.8	-1.0	
	baz=244,SNR=742								
PLBC	Pleasant Camp	12.80	61	P		Pn	06 15 43.3	-0.5	
	baz=260,SNR=260								
I26K	Coal Creek Min	12.82	30	P		Pn	06 15 41.0	-3.1	
	baz=224								
G24K	Hadweenzic Riv	12.88	20	P		Pn	06 15 40.5	-4.5	
	baz=210,SNR=92								
COLD	Coldfoot	12.89	15	P		Pn	06 15 43.3	-1.8	
	baz=202								
F22K	John River	12.90	11	P		Pn	06 15 45.4	+0.2	
	baz=196								
D17K	Noatak River	12.91	352	P		Pn	06 15 47.0	+1.6	
	baz=168,SNR=187								
R31K	City Hall, Gus	12.97	65	P		Pn	06 15 45.2	-0.9	
	baz=265,SNR=15								
N30M	Aishikik Lake	12.99	51	P		Pn	06 15 45.8	-0.7	
	baz=250								
SIT	Sitka	13.14	72	P		Pn	06 15 49.4	+0.9	
SIT	Sitka	13.14	72	P		Pn	06 15 47.7	-0.8	
SIT	Sitka	13.14	72	P		Pn	06 15 47.1	-1.4	
	baz=271,SNR=21								
G25K	Bearman Lake	13.22	22	P		Pn	06 15 44.8	-4.8	
	baz=213,SNR=44								
L29M	L29M	13.23	44	P		Pn	06 15 48.7	-1.1	
	baz=242,SNR=247								
O30N	Mendenhall	13.23	55	P		Pn	06 15 49.4	-0.5	
	baz=254,SNR=120								
DAWY	Dawson	13.25	39			Pn	06 15 51.1	+1.1	
DAWY	Dawson	13.25	39	P		Pn	06 15 48.9	-1.1	
	baz=236,SNR=522								
RDOG	Red Dog Mine	13.25	353	P		Pn	06 15 51.1	+1.1	
	baz=169,SNR=394								
SKAG	Skagway	13.32	61	P		Pn	06 15 51.2	+0.3	
SKAG	Skagway	13.32	61	⇑P		Pn	06 15 51.3	+0.3	
SKAG	Skagway	13.32	61	P		Pn	06 15 51.1	+0.3	
	baz=261,SNR=243								
E20K	Nigu River	13.35	4	P		Pn	06 15 52.7	+1.4	
	baz=186,SNR=274								
I27K	Kandik River	13.48	31	P		Pn	06 15 50.2	-3.0	
	baz=226,SNR=82								
F24K	Squaw Lake	13.53	18	P		Pn	06 15 50.0	-3.8	
	baz=207,SNR=50								
M30M	Minto, Yukon	13.54	47	P		Pn	06 15 53.5	-0.5	
	baz=246,SNR=140								
D19K	Kuna River	13.54	1	P		Pn	06 15 54.7	+0.8	
	baz=181,SNR=131								
S32K	Killisnoo	13.54	70	P		Pn	06 15 53.4	-0.5	
	baz=270,SNR=89								
N31M	Braeburn, Yuko	13.59	52	P		Pn	06 15 54.1	-0.5	
	baz=252,SNR=514								
R32K	Eaglecrest	13.60	66	P		Pn	06 15 54.3	-0.5	
	baz=267,SNR=210								
E21K	Killik River	13.65	7	P		Pn	06 15 56.0	+0.5	
	baz=191								
JIS	Juneau Island	13.67	66	P		Pn	06 15 56.4	+0.7	
C16K	Lisburne Hills	13.69	349	P		Pn	06 15 57.0	+1.2	
	baz=163,SNR=126								
C17K	DeLong Mountai	13.69	353	P		Pn	06 15 56.8	+0.9	
	baz=168,SNR=610								
AMKA	Amchitka	13.74	264			Pn	06 15 57.0	+0.3	
C18K	Utukok River	13.75	356	P		Pn	06 15 57.6	+0.8	
	baz=173,SNR=266								
E23K	Chandalar	13.75	14	P		Pn	06 15 54.6	-2.2	
	baz=202,SNR=123								
WHY	Whitehorse	13.78	56	P		Pn	06 15 57.1	-0.2	
	baz=256,SNR=250								
D20K	Etivluk River	13.79	3	P		Pn	06 15 58.2	+0.9	
	baz=184,SNR=146								
K29M	Barlow Dome	13.83	42	P		Pn	06 15 57.5	-0.5	
	baz=240,SNR=169								
J29N	Klondike Camp	13.89	39	P		Pn	06 15 57.6	-1.1	
	baz=237,SNR=72								
I28M	Miner Creek	13.90	34	P		Pn	06 15 57.3	-1.6	
	baz=230,SNR=195								
G26K	Porcupine Rive	13.90	25	P		Pn	06 15 53.8	-5.0	
	baz=218								
E24K	Your Creek	13.93	16	P		Pn	06 15 56.4	-2.9	
	baz=205								
H27K	Steamboat Moun	13.95	30	P		Pn	06 15 56.1	-3.5	
	baz=224,SNR=147								
F25K	Christian Rive	14.02	21			Pn	06 15 57.3	-3.3	
F25K	Christian Rive	14.02	21	P		Pn	06 15 55.8	-4.7	
	baz=212,SNR=142								
P32M	Atlin	14.15	61	P		Pn	06 16 02.2	-0.1	
	baz=262,SNR=99								
C19K	Lookout Ridge	14.16	358	P		Pn	06 16 02.1	-0.3	
	baz=177,SNR=162								
TOLK	Toolik Lake Re	14.30	13	P		Pn	06 16 01.9	-2.4	
	baz=201,SNR=39								
C21K	Knifeblade Rid	14.31	5	P		Pn	06 16 03.9	-0.5	
	baz=189,SNR=97								
G27K	Doyon Strip	14.34	28	P		Pn	06 15 59.4	-5.5	
	baz=223,SNR=70								
U33K	Whale Pass	14.41	75	P		Pn	06 16 04.3	-1.6	
	baz=277,SNR=29								
F26K	Sheenjek River	14.42	22	P		Pn	06 16 00.7	-5.3	
	baz=215,SNR=44								
M31M	Drury Creek, Y	14.44	50	P		Pn	06 16 05.7	-0.6	
	baz=251,SNR=178								
T33K	Petersburg	14.45	72	P		Pn	06 16 06.1	-0.2	
	baz=274								
D23K	Nanushuk River	14.47	11	P		Pn	06 16 05.3	-1.3	
	baz=198,SNR=164								
E25K	Arctic Village	14.49	20	P		Pn	06 16 02.3	-4.6	
	baz=211,SNR=41								
CRAG	Craig	14.50	78	P		Pn	06 16 07.5	+0.5	
CRAG	Craig	14.50	78			Pn	06 16 06.9	-0.1	
CRAG	Craig	14.50	78	⇑P		Pn	06 16 05.8	-1.2	
CRAG	Craig	14.50	78	P		Pn	06 16 06.5	-0.5	
	baz=279,SNR=42								
J30M	Hart River	14.65	40	P		Pn	06 16 09.2	0.0	
	baz=240,SNR=515								
P33M	Teslin, Yukon	14.69	59	P		Pn	06 16 09.7	0.0	
	baz=261,SNR=152								
N32M	Quiet Lake	14.75	55	P		Pn	06 16 10.7	+0.1	
	baz=257								
B21K	Ikpikpuk River	14.78	5	P		Pn	06 16 10.1	-0.7	
	baz=189								
WRAK	Wrangell Islan	14.81	74	⇓P		Pn	06 16 11.1	-0.2	
WRAK	Wrangell Islan	14.81	74	P		Pn	06 16 11.4	+0.2	
	baz=276,SNR=55								
Q32M	Nakina River	14.82	64	P		Pn	06 16 12.1	+0.5	
	baz=266,SNR=217								
D24K	Happy Valley	14.88	14	P		Pn	06 16 08.7	-3.4	
	baz=202								
H29M	Whitestone	14.89	33	P		Pn	06 16 09.5	-2.8	
	baz=231,SNR=139								
I30M	Mount Dempster	14.97	38	P		Pn	06 16 12.5	-1.0	
	baz=237,SNR=182								
B20K	Meade River	15.07	2	P		Pn	06 16 13.9	-0.8	
	baz=183								
A19K	Wainwright	15.30	357	P		Pn	06 16 16.8	-0.8	
	baz=174,SNR=137								
C23K	Itkillik River	15.31	10	P		Pn	06 16 15.1	-2.7	
	baz=197,SNR=222								
V35K	Ketchikan	15.37	78	P		Pn	06 16 17.2	-1.4	
	baz=280,SNR=40								
DIB	Dawson Inlet,	15.38	86			Pn	06 16 19.9	+1.1	
H02S1	DAWSON INLET T	15.38	86	T		T	06 33 19.8		
	SNR=80								
H02S2	DAWSON INLET T	15.38	86	T		T	06 33 19.7		
	SNR=80								
S34M	Telegraph Cree	15.39	68	P		Pn	06 16 19.3	+0.3	
	baz=271,SNR=275								
D25K	Kavik River	15.40	16	P		Pn	06 16 14.6	-4.4	
	baz=207								
E27K	Colleen River	15.40	24	P		Pn	06 16 12.7	-6.4	
	baz=219,SNR=54								
F28M	Old Crow	15.40	28	P		Pn	06 16 13.7	-5.4	
	baz=224,SNR=96								
G29M	Pine Creek	15.44	31	P		Pn	06 16 16.7	-3.0	
	baz=229,SNR=302								
EPYK	Eagle Plains	15.51	34	P		Pn	06 16 17.9	-2.6	
	baz=233,SNR=744								
R33M	Jennings River	15.52	62	P		Pn	06 16 21.1	+0.3	
	baz=266,SNR=259								
B22K	Teshekpuk Lake	15.56	6	P		Pn	06 16 19.6	-1.4	
	baz=191,SNR=240								
T35M	Bob Quinn	15.91	71	P		Pn	06 16 26.3	+0.5	
	baz=275,SNR=109								
MMPY	Sheldon Lake,	15.96	50	P		Pn	06 16 27.3	+1.0	
	baz=254,SNR=669								
DLBC	Dease Lake	15.97	66	Pn		P	06 16 28.6	-1.4	
	comp=N,2.1nm,0.3s,baz=256,slow=13,SNR=27								
DLBC				LR		LR	06 22 14.0		
	comp=N,454µm,21.4s,baz=256,slow=36								
	comp=N,136nm,1.0s								
DLBC	Dease Lake	15.97	66	P		Pn	06 16 27.2	+0.6	
	baz=270,SNR=215								
H31M	Peel River	16.00	38	P		Pn	06 16 25.7	-1.1	
	baz=239,SNR=242								
G30M	tAoh Zrali Nji	16.04	33	P		Pn	06 16 24.6	-2.8	
	baz=232,SNR=1000								
C27K	Jago River	16.13	19	P		Pn	06 16 23.4	-5.1	
	baz=212,SNR=23								
A22K	Sinclair Lake	16.14	4	P		Pn	06 16 26.6	-1.9	
	baz=187								
U35K	Hyder	16.16	75	P		Pn	06 16 29.6	+0.7	
	baz=279								
C26K	Camden Bay	16.17	17	P		Pn	06 16 24.6	-4.3	
	baz=209								
E28M	Babbage River	16.22	25	P		Pn	06 16 24.6	-4.9	
	baz=222								
SHEM	Shemya Is, Ala	16.25	273	Pn		Pn	06 16 28.0	-1.9	
	comp=N,21nm,0.3s,baz=354,slow=4.0,SNR=31								
SHEM				Sn		Sn	06 19 29.1	-0.2	
	comp=N,6.6nm,0.3s,baz=57,slow=17,SNR=1.0								
SHEM				LR		LR	06 22 47.3		
	comp=N,4130µm,21.0s,baz=82,slow=38								
	comp=N,687nm,0.9s								
SMY	Shemya	16.25	273	P		Pn	06 16 29.8	-0.2	
SMY	Shemya	16.25	273	P		Pn	06 16 29.4	-0.6	
SMY	Shemya	16.25	273	⇑P		Pn	06 16 28.2	-1.8	
RUBB	Prince Rupert	16.35	81			Pn	06 16 32.0	+0.7	
D27M	Malcolm River	16.37	22	P		Pn	06 16 26.5	-5.1	
	baz=218								
A21K	Barrow	16.40	2	P		Pn	06 16 29.8	-2.0	
	baz=184,SNR=273								
HG4B	Hotspring	16.41	88	P		P	06 16 34.7	0.0	
E29M	Blow River	16.48	27	P		Pn	06 16 28.2	-4.7	
	baz=226,SNR=86								
F30M	Barrier River	16.56	31	P		Pn	06 16 33.6	-0.3	
F30M	Barrier River	16.56	31	P		Pn	06 16 30.8	-3.2	
	baz=232,SNR=153								
G31M	Satah River	16.63	35	P		Pn	06 16 32.1	-2.6	
	baz=236,SNR=245								
WTLY	Watson Lake, Y	16.68	60	P		P	06 16 36.6	-1.1	
	baz=266,SNR=65								
D28M	Stokes Point	16.95	24	P		Pn	06 16 34.6	-4.1	
	baz=222,SNR=33								
F31M	Tsiigehtchic	17.09	33	P		Pn	06 16 37.6	-3.0	
	baz=235,SNR=128								
INK	Inuvik	17.66	31	Pn		Pn	06 16 45.1	-2.5	
	comp=N,7.9nm,0.3s,baz=228,slow=14,SNR=66								
INK				LR		LR	06 24 22.0		
	comp=N,3294µm,21.5s,baz=228,slow=40								
	comp=N,352nm,0.8s								
INK	Inuvik	17.66	31	⇑P		Pn	06 16 43.5	-4.2	
INK	Inuvik	17.66	31	P		Pn	06 16 44.0	-3.6	
	baz=234,SNR=362								
INK	Inuvik	17.66	31	P		Pn	06 16 45.2	-2.5	
LIRD	Liard River Hi	18.01	63	P		P	06 16 53.2	+0.8	
	baz=270,SNR=250								
BBB	Bella Bella	18.22	86	Pn		P	06 16 54.9	+0.1	
	comp=N,1.2nm,0.3s,baz=293,slow=11,SNR=22								
BBB	Bella Bella	18.22	86	⇑P		P	06 16 56.0	+1.3	
BBB	Bella Bella	18.22	86	P		P	06 16 56.7	+2.0	
KOTAN	Kotaneelee Air	19.05	60	P		Pn	06 17 05.3	+0.6	
	baz=270,SNR=14								
WRGLY	Wrigley	19.57	51	P		P	06 17 09.3	-0.1	
	baz=262,SNR=93								
BILL	Bilibino	20.85	323	⇑*i*P		P	06 17 22.0	-1.3	
BILL				pmax		pmax			
	comp=Z,2µm,1.3s								
BILL				MLR		MLR			
	comp=Z,3713µm,18.0s								
BILL	Bilibino	20.85	323	P		P	06 17 22.6	-0.8	
BILL				IAmb		IAmb	06 17 38.7		
	comp=Z,7µm,1.8s								
BILL				IAMs_20		IAMs_20	06 26 35.9		
	comp=Z,3861µm,18.0s								
C36M	Paulatuk	21.14	34	P		P	06 17 25.8	-0.7	
	baz=245,SNR=576								
A36M	Sachs Harbour	22.09	27	P		P	06 17 34.8	-1.7	
A36M	Sachs Harbour	22.09	27	P		P	06 17 35.0	-1.6	
	baz=237,SNR=89								
NLWA	Neilton Lookou	22.84	95	⇑P		P	06 17 47.6	+2.8	
YKA	Yellowknife Ar	23.58	54	P		P	06 17 51.1	-1.0	
	comp=Z,178nm,1.0s,baz=276,slow=9.8,SNR=179								
YKA				P3KPbc			06 51 07.7		
	comp=Z,0.9nm,0.7s,baz=15,slow=2.2,SNR=3.9								
	comp=Z,178nm,1.0s								
YKAW1	Yellowknife Wh	23.64	54	IAmb		IAmb	06 18 16.3		
	comp=Z,4µm,1.4s								
F03A	Seaside	23.83	98	IAmb		IAmb	06 18 19.4		
	comp=Z,5µm,1.4s								
COR	Corvallis	24.77	100	P		P	06 18 06.0	+2.7	
COR				pmax		pmax			
	comp=Z,1µm,1.3s								
COR				MLR		MLR			
	comp=Z,3045µm,20.0s								
COR	Corvallis	24.77	100	P		P	06 18 06.0	+2.7	
COR				IAmb		IAmb	06 18 36.4		
	comp=Z,1µm,1.2s								
COR	Corvallis	24.77	100	IAMs_20		IAMs_20	06 25 54.2		
	comp=Z,3045µm,20.0s								
COR	Corvallis	24.77	100	⇓P		P	06 18 06.5	+3.2	
COR	Corvallis	24.77	100	P		P	06 18 07.0	+3.7	
PET	Petropavlovsk	24.93	283	P		P	06 18 03.9	-0.7	
PET	Petropavlovsk	24.93	283	*e*P		P	06 18 03.4	-1.2	
PET	Petropavlovsk	24.93	283	IAMs_20		IAMs_20	06 27 40.5		
	comp=Z,2355µm,21.0s								
HOOD	Mount Hood Mea	25.28	97	IAmb		IAmb	06 18 42.2		
	comp=Z,5µm,1.3s								
I44RU	PETROPAVLOVSK	25.43	284	P		P	06 18 10.1	+1.0	
	baz=75,slow=17,SNR=4.5								
PEA0B	Petropavlovsk-	25.44	284	⇑*i*P		P	06 18 08.1	-1.1	
PETK	Petropavlovsk-	25.44	284	P		P	06 18 07.8	-1.5	
	comp=Z,962nm,0.8s,baz=73,slow=11,SNR=205								
	comp=Z,962nm,0.8s								
PETK	Petropavlovsk-	25.44	284	P		P	06 18 07.9	-1.4	
PETK	Petropavlovsk-	25.44	284	P		P	06 18 07.9	-1.4	
HAWA	Hanford	25.88	93	⇑P		P	06 18 14.7	+1.3	
SEY	Seymchan	25.90	308	LR		LR	06 28 54.0		
	comp=Z,4487µm,21.4s,baz=96,slow=38								
SEY	Seymchan	25.90	308	⇑*i*P		P	06 18 12.0	-1.3	
SEY				pmax		pmax			
	comp=Z,2µm,0.9s								
SEY				MLR		MLR			
	comp=Z,4113µm,21.0s								
E08A	Dider Farm, El	26.10	93	IAmb		IAmb	06 18 47.8		
	comp=Z,4µm,1.8s								
I56US	NEWPORT INFRAS	26.27	88	P		P	06 18 16.6	-0.3	
	baz=281,slow=15,SNR=2.6								
NEW	Newport	26.27	88	⇑P		P	06 18 17.8	+0.9	
NEW	Newport	26.27	88	⇑P		P	06 18 17.9	+0.9	
NEW	Newport	26.27	88	P		P	06 18 18.1	+1.2	
J04A	Umpqua Nationa	26.29	101	IAmb		IAmb	06 18 53.4		
	comp=Z,6µm,1.9s								
JCC	Jacoby Creek,	26.82	108	IAMs_20		IAMs_20	06 26 57.4		
	comp=Z,2658µm,19.0s								
YBH	Yreka Blue Hor	26.93	105	P3KPbc			06 50 55.9		
	comp=Z,7.7nm,0.7s,baz=78,slow=8.5,SNR=5.6								
MA2	Magadan	27.20	301	P		P	06 18 24.4	-0.7	
MA2	Magadan	27.20	301	⇑*i*P		P	06 18 23.6	-1.5	
MA2				pmax		pmax			
	comp=Z,1s								
MA2				MLR		MLR			
	comp=Z,1972µm,20.0s								
MA2	Magadan	27.20	301	P		P	06 18 25.0	-0.2	
MA2				IAmb		IAmb	06 18 45.4		
	comp=Z,3µm,1.4s								
MA2				IAMs_20		IAMs_20	06 29 13.5		
	comp=Z,1983µm,21.0s								
MA2	Magadan	27.20	301	⇑P		P	06 18 23.6	-1.5	
MA2	Magadan	27.20	301	P		P	06 18 24.9	-0.2	
	comp=Z,110µmcomp=Z,2µm,1.1s								
MA2	Magadan	27.20	301	P		P	06 18 24.0	-1.1	
SKR	Severo-Kuril's	27.33	280	*e*P		P	06 18 26.1	-0.2	
SKR				pmax		pmax			
	comp=Z,2µm,1.3s								
SKR				pmax		pmax			
	comp=Z,99µm,12.7s								
SKR				MLR		MLR			
	comp=Z,1919µm,21.0s								
BMO	Blue Mountains	28.04	94	IAMs_20		IAMs_20	06 28 17.4		
	comp=Z,1644µm,21.0s								
BMO	Blue Mountains	28.04	94	⇑P		P	06 18 33.4	+0.5	
O03E	Paynes Creek	28.41	106	IAmb		IAmb	06 19 29.1		
	comp=Z,3µm,1.3s								
O03E				IAMs_20		IAMs_20	06 28 03.7		
	comp=Z,2157µm,20.0s								
HOPS	Hopland Field	28.63	109	IAmb		IAmb	06 19 20.4		
	comp=Z,3µm,1.4s								
HOPS				IAMs_20		IAMs_20	06 27 48.1		
	comp=Z,1524µm,21.0s								
WVOR	Wild Horse Val	28.77	99	IAMs_20		IAMs_20	06 28 36.9		
	comp=Z,1941µm,20.0s								
WVOR	Wild Horse Val	28.77	99	⇑P		P	06 18 40.8	+1.4	
WVOR	Wild Horse Val	28.77	99	P		P	06 18 41.5	+2.0	
MSO	Missoula	28.86	88	⇑P		P	06 18 40.5	+0.3	
ORV	Oroville	29.09	107	IAMs_20		IAMs_20	06 28 14.4		
	comp=Z,1764µm,20.0s								
SUTB	Sutter Butte	29.16	107	IAMs_20		IAMs_20	06 28 14.2		
	comp=Z,1629µm,21.0s								
MCCM	Marconi Confer	29.34	110	IAMs_20		IAMs_20	06 28 05.1		
	comp=Z,2089µm,21.0s								
MCCM	Marconi Confer	29.34	110	⇓P		P	06 18 46.5	+2.1	
CVS	Carmenet Viney	29.43	109	IAmb		IAmb	06 19 27.3		
	comp=Z,3µm,1.2s								
CVS				IAMs_20		IAMs_20	06 28 10.3		
	comp=Z,2161µm,22.0s								
FARB	Farallon Islan	29.60	111	IAmb		IAmb	06 19 51.1		
	comp=Z,4µm,2.0s								
FARB				IAMs_20		IAMs_20	06 28 10.1		
	comp=Z,2300µm,21.0s								
MFID	Camas Ranch	29.76	95	IAmb		IAmb	06 19 42.3		
	comp=Z,3µm,1.6s								
MFID				IAMs_20		IAMs_20	06 29 20.9		
	comp=Z,1426µm,21.0s								
MIDW	Midway	30.04	215	P		P	06 18 55.5	+4.9	
MIDW	Midway	30.04	215	P		P	06 18 52.9	+2.3	
MIDW				IAMs_20		IAMs_20	06 28 11.6		
	comp=Z,2163µm,21.0s								
MIDW	Midway	30.04	215	⇓P		P	06 18 52.1	+1.6	
MIDW	Midway	30.04	215	P		P	06 18 54.6	+4.0	
BUT	Butte	30.11	88	IAmb		IAmb	06 19 50.4		
	comp=Z,3µm,1.8s								
JRSC	Jasper Ridge	30.23	110	IAmb		IAmb	06 19 34.0		
	comp=Z,3µm,1.4s								
JRSC				IAMs_20		IAMs_20	06 28 29.7		
	comp=Z,2382µm,21.0s								
WELL	Weller Preserv	30.31	107	IAMs_20		IAMs_20	06 28 59.5		
	comp=Z,2146µm,21.0s								
PNTR	Pine Nut	30.47	105	IAmb		IAmb	06 19 37.4		
	comp=Z,3µm,1.1s								
HLID	Hailey	30.48	93	IAMs_20		IAMs_20	06 30 03.9		
	comp=Z,1285µm,20.0s								
HLID	Hailey	30.48	93	⇑P		P	06 18 55.6	+1.0	
HLID	Hailey	30.48	93	P		P	06 18 56.0	+1.4	
MHC	Mount Hamilton	30.60	110	IAmb		IAmb	06 19 33.0		
	comp=Z,3µm,1.9s								
MHC				IAMs_20		IAMs_20	06 28 54.4		
	comp=Z,1695µm,19.0s								
EGMT	Eagleton	30.62	83	IAmb		IAmb	06 19 56.5		
	comp=Z,5µm,1.6s								
EGMT				IAMs_20		IAMs_20	06 30 30.0		
	comp=Z,1176µm,19.0s								
EGMT	Eagleton	30.62	83	⇑P		P	06 18 56.0	+0.2	
CMB	Columbia Colle	30.78	108	⇑P		P	06 18 59.7	+2.5	
CMB	Columbia Colle	30.78	108	IAMs_20		IAMs_20	06 29 13.2		
	comp=Z,2260µm,21.0s								
BOZ	Bozeman (W)	30.88	88	IAmb		IAmb	06 19 39.3		
	comp=Z,3µm,1.8s								
BOZ	Bozeman (W)	30.88	88	⇑P		P	06 18 58.6	+0.5	
WAKR	Walker	30.97	106	IAmb		IAmb	06 19 41.8		
	comp=Z,2µm,1.4s								
FORD	Fort Ord Natur	31.00	111	IAMs_20		IAMs_20	06 28 40.2		
	comp=Z,2136µm,21.0s								
SAO	San Andreas Ge	31.13	110	IAMs_20		IAMs_20	06 28 56.4		
	comp=Z,2255µm,21.0s								
SAO	San Andreas Ge	31.13	110	⇓P		P	06 19 02.4	+2.2	
RES	Resolute Bay	31.14	27	LR		LR	06 32 48.1		
	comp=Z,892µm,21.0s,baz=266,slow=39								
RES	Resolute Bay	31.14	27	⇑P		P	06 18 59.0	-0.9	
RES

comp=Z,1686µm,20.0s
CWC Cottonwood Cre 33.20 107 IAmb IAmb 06 20 01.2
comp=Z,3µm,1.6s
CWC IAMs_20 IAMs_20 06 30 38.2
comp=Z,1865µm,22.0s
HWUT Hardware Ranch 33.34 94 IAMs_20 IAMs_20 06 31 56.7
comp=Z,1200µm,20.0s
HWUT Hardware Ranch 33.34 94 P **P** **06 19 22.0 +2.2**
LAO LASA Array 33.37 82 IAmb IAmb 06 20 04.6
comp=Z,3µm,1.4s
LAO LASA Array 33.37 82 ⇑P **P** **06 19 21.0 +1.2**
KIP Kipapa 33.53 179 P **P** **06 19 25.6 +4.3**
KIP Kipapa 33.53 179 *ce*P **P** **06 19 24.2 +2.9**
KIP pmax pmax
comp=Z,362nm,1.7s
KIP Kipapa 33.53 179 P **P** **06 19 23.1 +1.7**
KIP Kipapa 33.53 179 IAMs_20 IAMs_20 06 30 44.6
comp=Z,1050µm,19.0s
DUG Dugway, Tooele 33.55 97 ⇑P **P** **06 19 23.1 +1.6**
DUG Dugway, Tooele 33.55 97 IAmb IAmb 06 20 16.5
comp=Z,3µm,1.3s
DUG Dugway, Tooele 33.55 97 ⇑P **P** **06 19 23.1 +1.6**
DUG Dugway, Tooele 33.55 97 P **P** **06 19 23.4 +1.8**
ISA Isabella, Lake 33.56 108 IAmb IAmb 06 20 07.8
comp=Z,2µm,1.4s
ISA IAMs_20 IAMs_20 06 30 54.6
comp=Z,1573µm,19.0s
S11A Rachel 33.64 103 IAmb IAmb 06 20 05.8
comp=Z,3µm,1.3s
BW06 Boulder Array 33.77 91 ⇑P **P** **06 19 24.1 +0.6**
PDAR Pinedale Array 33.77 91 P **P** **06 19 24.1 +0.6**
comp=Z,43nm,0.7s,baz=312,slow=4.4,SNR=180
PDAR LR LR 06 32 43.7
comp=Z,289µm,19.0s,baz=304,slow=36
PDAR P3KPbc 06 50 30.9
comp=Z,17nm,1.2s,baz=120,slow=5.8,SNR=13
comp=Z,43nm,0.7s
PDAR Pinedale Array 33.77 91 P **P** **06 19 23.1 -0.4**
MPMC Manual Prospec 33.81 107 IAmb IAmb 06 20 06.3
comp=Z,2µm,1.4s
MPMC IAMs_20 IAMs_20 06 30 56.3
comp=Z,1918µm,21.0s
TPNV Topopah Spring 33.85 104 ⇓P **P** **06 19 25.8 +1.6**
TIXI Tiksi 33.91 327 LR LR 06 33 52.4
comp=Z,602µm,20.9s,baz=114,slow=38
TIXI Tiksi 33.91 327 *i* P **P** **06 19 22.9 -1.2**
TIXI pmax pmax
comp=Z,3µm,1.1s
TIXI MLR MLR
comp=Z,2438µm,18.0s
TIXI Tiksi 33.91 327 P **P** **06 19 23.4 -0.8**
TIXI IAmb IAmb 06 19 46.3
comp=Z,3µm,1.1s
PSUT Pine Spring 34.08 100 IAmb IAmb 06 20 25.9
comp=Z,3µm,1.8s
KHLH Kahului Airpor 34.09 176 IAmb IAmb 06 20 13.4
comp=Z,2µm,1.3s
KHLH Kahului Airpor 34.09 176 P **P** **06 19 29.3 +3.1**
LRMC Laurel Mtn Rad 34.13 108 IAmb IAmb 06 20 08.5
comp=Z,3µm,1.6s
LRMC IAMs_20 IAMs_20 06 31 23.8
comp=Z,1227µm,21.0s
GWY Greenwater Val 34.17 106 IAmb IAmb 06 20 09.1
comp=Z,3µm,1.4s
PRN Pahroc Range 34.20 103 IAmb IAmb 06 20 16.8
comp=Z,3µm,1.3s
OSI Osito Audit: C 34.20 110 IAmb IAmb 06 20 13.7
comp=Z,2µm,1.2s
OSI IAMs_20 IAMs_20 06 30 39.9
comp=Z,1895µm,22.0s
FCC Fort Churchill 34.21 57 IAmb IAmb 06 20 22.8
comp=Z,2µm,1.0s
QSM Queen of Sheba 34.22 106 IAmb IAmb 06 20 09.5
comp=Z,3µm,1.5s
HLK Haleakala 34.24 176 P **P** **06 19 30.7 +2.9**
TPO Tropico Hills 34.27 109 IAmb IAmb 06 20 09.7
comp=Z,4µm,1.7s
NKL Nikolayevsk 34.72 293 *e*P **P** **06 19 30.1 -1.2**
NKL *e*S **S** **06 25 01.4 +1.7**
NKL pmax pmax
comp=N,4µm,1.1s
NKL pmax pmax
comp=E,991nm,1.1s
NKL smax smax
comp=E,27µm,6.6s
NKL smax smax
comp=N,24µm,5.1s
NKL MLR MLR
comp=E,1592µm,19.0s
NKL MLR MLR
comp=N,2862µm,17.0s
NKL MLR MLR
comp=Z,4955µm,18.0s
GSC Goldstone, Bar 34.74 107 IAmb IAmb 06 20 15.0
comp=Z,4µm,1.6s
TYV Tymovskoe 34.76 288 *e*P **P** **06 19 32.2 +0.4**
TYV *e*S **S** **06 25 01.9 +1.3**
TYV pmax pmax
comp=Z,700nm,0.9s
TYV pmax pmax
comp=Z,33µm,4.9s
TYV smax smax
comp=N,383nm,2.4s
TYV smax smax
comp=E,418nm,2.4s
TYV smax smax
comp=N,62µm,8.0s
TYV smax smax
comp=E,98µm,8.0s
PASC Pasadena Art C 34.83 110 IAmb IAmb 06 20 14.5
comp=Z,5µm,1.9s
PASC IAMs_20 IAMs_20 06 31 10.4
comp=Z,1644µm,21.0s
TCRU Three Creeks R 34.83 99 IAmb IAmb 06 20 20.0
comp=Z,5µm,1.9s
MWC Mount Wilson 34.86 110 IAmb IAmb 06 20 16.0
comp=Z,4µm,1.5s
MWC IAMs_20 IAMs_20 06 31 11.2
comp=Z,1689µm,20.0s
KUR Kuril'sk 34.90 276 *c i*P **P** **06 19 31.0 -2.0**
KUR *e**PP **pP** **06 19 39.8 0.0**
KUR *e* 06 20 45.9
KUR *e* 06 22 06.6
KUR *e*S **S** **06 24 57.0 -5.8**
KUR *e* 06 29 52.1
KUR pmax pmax
comp=Z,3µm,1.4s
KUR pmax pmax
comp=E,3µm,1.7s
KUR pmax pmax
comp=N,1µm,1.3s
KUR pmax pmax
comp=Z,80µm,13.5s
KUR MLR MLR
comp=E,626µm,19.0s
KUR MLR MLR
comp=Z,722µm,19.0s
KUR MLR MLR
comp=N,541µm,18.0s
BFSC Mount Baldy Ra 35.06 109 IAmb IAmb 06 20 18.0
comp=Z,2µm,1.4s
BFSC IAMs_20 IAMs_20 06 31 30.5
comp=Z,1811µm,21.0s
MTPC Mountain Pass 35.30 106 IAmb IAmb 06 20 19.0
comp=Z,3µm,1.6s
MTPU Mount Pierson 35.37 99 IAmb IAmb 06 20 26.3
comp=Z,4µm,1.9s
KHLU Kahalu'u 35.41 176 P P 06 19 42.5 +4.8
HMH Humu'ula Sheep 35.42 175 P **P** **06 19 39.6 +1.6**
MLOA Mauna Loa Obse 35.48 175 IAmb IAmb 06 20 41.2
comp=Z,3µm,1.2s
MLOA Mauna Loa Obse 35.48 175 P **P** **06 19 41.6 +2.9**
JOKA Jonika Flow 35.62 174 IAmb IAmb 06 20 42.5
comp=Z,1µm,1.2s
BYL Byron's Ledge 35.62 175 IAmb IAmb 06 20 33.1
comp=Z,2µm,1.2s
ELS Elsinore Mount 35.64 110 IAmb IAmb 06 20 22.5
comp=Z,3µm,1.6s
STCH Steam Cracks 35.66 174 IAmb IAmb 06 20 30.7
comp=Z,3µm,1.5s
PUH Pauahi 35.66 175 IAmb IAmb 06 20 49.2
comp=Z,2µm,1.0s
ILON Igloolik, Nuna 35.79 36 P **P** **06 19 41.2 +0.9**
OVEH Öceanview Est 35.85 175 P **P** **06 19 43.2 +1.6**
OVEH IAmb IAmb 06 20 16.7
comp=Z,3µm,1.4s
UGL Uglegorsk 36.02 286 ⇑ *i*P **P** **06 19 42.7 +0.1**
UGL *e* 06 21 06.8
UGL *e*S **S** **06 25 16.5 -3.4**
UGL *e*SS **SnSn** **06 27 49.0 +4.3**
UGL pmax pmax
comp=Z,36µm,6.9s
UGL pmax pmax
comp=Z,2µm,0.9s
UGL smax smax
comp=N,119µm,11.0s
UGL smax smax
comp=E,121µm,11.0s
UGL MLR MLR
comp=N,370µm,15.0s
POIN Pond Inlet 36.09 30 P **P** **06 19 43.0 +0.1**
POIN IAmb IAmb 06 20 26.4
comp=Z,1µm,1.0s
RSSD Black Hills 36.11 84 P **P** **06 19 44.4 +0.7**
RSSD pmax pmax
comp=Z,4µm,1.7s
RSSD MLR MLR
comp=Z,1000µm,21.0s
RSSD Black Hills 36.11 84 P **P** **06 19 44.4 +0.7**
RSSD IAmb IAmb 06 20 24.5
comp=Z,4µm,1.6s
RSSD Black Hills 36.11 84 IAMs_20 IAMs_20 06 33 40.3
comp=Z,1000µm,21.0s
RSSD Black Hills 36.11 84 P **P** **06 19 44.4 +0.7**
DNR Dunn Ranch,Anz 36.13 109 IAmb IAmb 06 20 25.9
comp=Z,3µm,1.1s
BELC Belle Mtn. Jos 36.15 108 IAmb IAmb 06 20 25.7
comp=Z,5µm,1.9s
BELC IAMs_20 IAMs_20 06 33 23.3
comp=Z,1434µm,18.0s
PFO Pinyon Flats O 36.19 109 LR LR 06 32 46.8
comp=Z,2207µm,19.8s,baz=312,slow=33
PFO Pinyon Flats O 36.19 109 P **P** **06 19 44.5 +0.1**
PFO pmax pmax
comp=Z,3µm,1.6s
PFO Pinyon Flats O 36.19 109 P **P** **06 19 44.5 +0.1**
PFO IAmb IAmb 06 20 26.2
comp=Z,3µm,1.6s
PFO Pinyon Flats O 36.19 109 P **P** **06 19 45.4 +1.1**
PFO pP **sP** **06 19 57.8 +3.9**
PMD Palm Desert 36.21 109 IAmb IAmb 06 20 25.9
comp=Z,2µm,1.4s
YAK Yakutsk 36.30 311 *e*P **P** **06 19 43.1 -1.8**
YAK *e**PP **pP** **06 19 46.0 -5.6**
YAK *e* 06 21 04.1
YAK *e* 06 22 08.3
YAK *e*S **S** **06 25 23.8 -0.2**
YAK *e* 06 30 00.3
YAK pmax pmax
comp=Z,198nm,0.9s
YAK pmax pmax
comp=N,37nm,1.1s
YAK pmax pmax
comp=E,160nm,1.7s
YAK pmax pmax
comp=Z,38µm,7.6s
YAK pmax pmax
comp=N,22µm,8.0s
YAK pmax pmax
comp=E,31µm,6.3s
YAK smax smax
comp=E,37µm,5.3s
YAK smax smax
comp=N,14µm,4.0s
YAK MLR MLR
comp=N,1052µm,18.0s
YAK MLR MLR
comp=E,3726µm,26.0s
YAK Yakutsk 36.30 311 P **P** **06 19 43.7 -1.1**
YAK Yakutsk 36.30 311 ⇑P **P** **06 19 42.4 -2.4**
YAK Yakutsk 36.30 311 P **P** **06 19 43.5 -1.4**
YAK Yakutsk 36.30 311 P **P** **06 19 41.4 -3.5**
U15A North Rim 36.44 101 IAmb IAmb 06 20 35.2
comp=Z,4µm,1.8s
BORC Borrego Spring 36.47 109 IAmb IAmb 06 20 28.8
comp=Z,2µm,1.4s
W13A Hualapai Mount 36.51 104 IAmb IAmb 06 20 29.2
comp=Z,4µm,1.7s
HAYD Hayden 36.53 92 IAmb IAmb 06 20 38.2
comp=Z,1µm,1.1s
E28A Huff 36.57 79 IAMs_20 IAMs_20 06 34 35.8
comp=Z,1231µm,21.0s
ALE Alert 36.67 13 P P 06 19 42.7 -5.0
BC3 Big Chuckawall 36.71 108 IAmb IAmb 06 20 30.3
comp=Z,4µm,2.0s
BC3 IAMs_20 IAMs_20 06 33 41.1
comp=Z,1420µm,18.0s
YUK Yuzh-Kuril'sk 36.77 276 *e*P **P** **06 19 47.6 -1.4**
YUK *i* 06 21 15.2
YUK *i* PPP PPP 06 21 35.5
YUK 06 22 13.5
YUK *i* S **S** **06 25 27.1 -4.3**
YUK *i* SS **SnSn** **06 28 03.7 +0.8**
YUK *i* SSS SSS 06 28 33.8
YUK pmax pmax
comp=Z,13µm,1.9s
YUK pmax pmax
comp=Z,11µm,1.2s
YUK pmax pmax
comp=E,3µm,1.3s
YUK pmax pmax
comp=N,2µm,1.1s
BAR Barrett 36.78 110 IAmb IAmb 06 20 31.5
comp=Z,4µm,1.6s
BAR IAMs_20 IAMs_20 06 31 32.1
comp=Z,1079µm,22.0s
YSS Yuzhno-Sakhali 36.81 282 *ce*P **P** **06 19 49.3 -0.1**
YSS *e*S **S** **06 25 31.1 -0.9**
YSS *e*SSS SSS 06 28 25.2
YSS pmax pmax
comp=N,14µm,5.3s
YSS pmax pmax
comp=Z,38µm,5.3s
YSS pmax pmax
comp=E,19µm,3.7s
YSS pmax pmax
comp=Z,2µm,0.8s
YSS smax smax
comp=N,32µm,6.7s
YSS smax smax
comp=E,93µm,6.2s
YSS Yuzhno-Sakhali 36.81 282 P **P** **06 19 49.2 -0.1**
YSS IAmb IAmb 06 20 19.6
comp=Z,2µm,0.8s
YSS IAMs_20 IAMs_20 06 36 25.1
comp=Z,1269µm,20.0s
YSS Yuzhno-Sakhali 36.81 282 ⇑P **P** **06 19 48.6 -0.8**
YSS Yuzhno-Sakhali 36.81 282 P **P** **06 19 49.4 0.0**
YSS Yuzhno-Sakhali 36.81 282 P **P** **06 19 46.8 -2.6**
YSS pP **pP** **06 19 55.6 -0.5**
PV23 Carpenter Ridg 36.90 96 IAmb IAmb 06 20 32.8
comp=Z,4µm,1.4s
I18DK QAANAAQ INFRAS 36.94 21 P **P** **06 19 51.2 +1.1**
baz=274,slow=16,SNR=3.6
PV10 Paradox Valley 36.94 96 IAmb IAmb 06 20 36.1
comp=Z,2µm,1.1s
PV22 Blue Mesa, Par 36.97 95 IAmb IAmb 06 20 33.3
comp=Z,2µm,1.1s
PV20 West Nyswonger 37.00 96 IAmb IAmb 06 20 36.3
comp=Z,1µm,0.8s
PV17 East Wray Mesa 37.05 96 IAmb IAmb 06 20 54.9
comp=Z,2µm,1.2s
PV16 Nyswonger Mesa 37.05 96 IAmb IAmb 06 20 36.8
comp=Z,1µm,1.0s
CBX Cerro Bola 37.07 110 IAmb IAmb 06 20 34.2
comp=Z,3µm,1.2s
PV11 David Mesa, Pa 37.09 96 IAmb IAmb 06 20 34.1
comp=Z,1µm,0.9s
PV18 Skein Mesa, Pa 37.10 96 IAmb IAmb 06 20 34.3
comp=Z,3µm,1.1s
PV12 Saucer Basin, 37.11 96 IAmb IAmb 06 20 41.1
comp=Z,2µm,1.1s
PV07 Paradox Valley 37.12 95 IAmb IAmb 06 20 33.3
comp=Z,6µm,1.9s
I10CA LAC DU BONNET 37.15 71 P P 06 19 57.1 +4.9
baz=30,slow=14,SNR=0.9
ULM Lac du Bonnet 37.21 71 P **P** **06 19 52.8 +0.1**
comp=Z,129nm,0.9s,baz=298,slow=8.3,SNR=69
ULM LR LR 06 36 22.9
comp=Z,421µm,20.0s,baz=304,slow=38
ULM P3KPbc 06 50 15.6
comp=Z,13nm,1.0s,baz=108,slow=5.9,SNR=4.6
comp=Z,129nm,0.9s
ULM Lac du Bonnet 37.21 71 *c i*P **P** **06 19 53.2 +0.5**
PV13 Radium Mtn., P 37.21 96 IAmb IAmb 06 20 43.9
comp=Z,2µm,1.0s
YUH Yuha Desert 37.21 109 IAmb IAmb 06 20 34.9
comp=Z,5µm,1.9s
PV15 Paradox Valley 37.28 95 IAmb IAmb 06 20 48.4
comp=Z,2µm,1.0s
TULEG Thule 37.32 23 IAmb IAmb 06 20 27.4
comp=Z,5µm,1.5s
TULEG IAMs_20 IAMs_20 06 37 11.1
comp=Z,1077µm,21.0s
TULEG Thule 37.32 23 ⇑P **P** **06 19 52.5 -0.9**
TULEG Thule 37.32 23 P **P** **06 19 52.9 -0.5**
TULEG Thule 37.32 23 *i* P **P** **06 19 52.2 -1.2**
TULEG IAmb IAmb 06 20 02.7
comp=Z,670nm,0.9s
GLA Glamis 37.51 108 IAmb IAmb 06 20 37.4
comp=Z,5µm,1.7s
WUAZ Wupatki 37.62 101 IAMs_20 IAMs_20 06 34 00.2
comp=Z,1432µm,20.0s
WUAZ Wupatki 37.62 101 ⇑P **P** **06 19 58.2 +1.7**
ESJX Sierra Juarez 37.69 110 IAmb IAmb 06 20 39.4
comp=Z,4µm,1.8s
Y14A Wickenburg 37.85 105 IAmb IAmb 06 20 40.2
comp=Z,3µm,1.7s
ISCO Idaho Springs 37.95 91 ⇑P **P** **06 20 00.3 +0.9**
ISCO Idaho Springs 37.95 91 P **P** **06 20 01.4 +2.0**
MVCO Mesa Verde 38.05 97 IAmb IAmb 06 20 44.8
comp=Z,4µm,1.9s
MVCO Mesa Verde 38.05 97 ⇑P **P** **06 20 00.7 +0.5**
MVCO Mesa Verde 38.05 97 P **P** **06 20 01.6 +1.3**
GRNR Gornyy 38.19 291 ⇑ *i*P **P** **06 20 00.3 -0.7**
GRNR pmax pmax
comp=E,110nm,0.7s
GRNR pmax pmax
comp=Z,190nm,0.9s
JMP Maruseppu 38.21 278 P **P** **06 20 00.8 -0.5**
VTX Valle De La Tr 38.25 110 IAmb IAmb 06 20 44.1
comp=Z,3µm,1.9s
AGMN Agassiz Nation 38.29 73 IAmb IAmb 06 21 05.5
comp=Z,2µm,1.1s
AGMN Agassiz Nation 38.29 73 ⇑P **P** **06 20 01.4 -0.5**
AGMN Agassiz Nation 38.29 73 P **P** **06 20 02.4 +0.5**
113A Mohawk Valley, 38.30 107 IAmb IAmb 06 20 43.9
comp=Z,4µm,1.7s
X16A Lo Mia Camp, P 38.38 103 IAmb IAmb 06 20 45.4
comp=Z,4µm,1.7s
JKA Kamikawa-asahi 38.58 279 P **P** **06 20 04.0 -0.3**
JKA Kamikawa-asahi 38.58 279 P **P** **06 20 04.2 -0.1**
ASAJ Asahikawa 38.58 279 LR LR 06 37 40.5
comp=Z,777µm,19.3s,baz=66,slow=39
ASAJ Asahikawa 38.58 279 P **P** **06 20 04.0 -0.4**
ASAJ pmax pmax
comp=Z,6µm,1.2s
ASAJ Asahikawa 38.58 279 P **P** **06 20 03.9 -0.5**
S22A 4UR Ranch, Cre 38.64 95 IAmb IAmb 06 20 51.8
comp=Z,4µm,2.0s
S22A IAMs_20 IAMs_20 06 34 40.8
comp=Z,899µm,21.0s
SUSD Miller 38.82 80 IAMs_20 IAMs_20 06 35 42.3
comp=Z,864µm,20.0s
JOHN Johnston Islan 39.12 197 P P 06 20 13.8 +4.7
JOHN Johnston Islan 39.12 197 P **P** **06 20 09.4 +0.3**
JOHN IAmb IAmb 06 21 00.6
comp=Z,3µm,1.1s
JOHN Johnston Islan 39.12 197 ⇓P **P** **06 20 10.3 +1.2**
JOHN Johnston Islan 39.12 197 P **P** **06 20 12.2 +3.1**
X18A Snowflake 39.13 101 IAmb IAmb 06 21 08.9
comp=Z,3µm,1.5s
OGNE Ogallala 39.26 87 IAmb IAmb 06 20 51.1
comp=Z,3µm,1.2s
OGNE Ogallala 39.26 87 ⇑P **P** **06 20 10.8 +0.7**
PIX Pinacate 39.39 108 IAmb IAmb 06 20 53.0
comp=Z,3µm,1.7s
SDCO Great Sand Dun 39.40 93 IAMs_20 IAMs_20 06 35 56.0
comp=Z,960µm,19.0s
SDCO Great Sand Dun 39.40 93 ⇑P **P** **06 20 12.4 +0.8**
K30B Basset 39.54 83 IAMs_20 IAMs_20 06 35 59.9
comp=Z,990µm,20.0s
JEM Erimo 39.58 276 P **P** **06 20 12.3 -0.4**
JEM Erimo 39.58 276 P **P** **06 20 12.6 0.0**
ERM Erimo 39.58 276 P **P** **06 20 12.4 -0.3**
ERM Erimo 39.58 276 *i* P **P** **06 20 11.9 -0.8**
ERM pmax pmax
comp=Z,5µm,1.2s
ERM MLR MLR
comp=Z,2243µm,25.0s
ERM Erimo 39.58 276 P **P** **06 20 12.8 +0.1**
ERM IAmb IAmb 06 20 36.4
comp=Z,4µm,1.1s
ERM Erimo 39.58 276 ⇑P **P** **06 20 11.5 -1.2**
ERM Erimo 39.58 276 P **P** **06 20 11.5 -1.2**
ERM S **S** **06 26 09.7 -4.2**
ERM Erimo 39.58 276 P **P** **06 20 12.8 +0.1**
ERM Erimo 39.58 276 P **P** **06 20 11.1 -1.6**
TUC Tucson 40.30 104 P **P** **06 20 20.9 +1.9**
TUC IAmb IAmb 06 21 01.0
comp=Z,4µm,1.8s
TUC Tucson 40.30 104 ⇑P **P** **06 20 20.6 +1.7**
TUC Tucson 40.30 104 P **P** **06 20 20.8 +1.9**
T25A Trinidad 40.45 93 IAmb IAmb 06 21 01.6
comp=Z,3µm,1.3s
NEEM North Greenlan 40.56 19 *i* P **P** **06 20 19.4 -1.5**
NEEM IAmb IAmb 06 20 30.2
comp=Z,3µm,1.1s
ECSD EROS Data Cent 40.58 80 IAMs_20 IAMs_20 06 36 47.0
comp=Z,887µm,20.0s
ECSD EROS Data Cent 40.58 80 ⇑P **P** **06 20 20.0 -1.0**
ECSD EROS Data Cent 40.58 80 P **P** **06 20 20.4 -0.7**
KULLO Kullorsuaq 40.77 24 ⇑P **P** **06 20 21.8 -0.4**
KULLO Kullorsuaq 40.77 24 P **P** **06 20 22.1 -0.2**
KULLO Kullorsuaq 40.77 24 *i* P **P** **06 20 22.1 -0.2**
KULLO IAmb IAmb 06 20 38.6
comp=Z,4µm,1.4s
ANMO Albuquerque 40.82 97 LR LR 06 36 53.8
comp=Z,1093µm,18.7s,baz=305,slow=36
ANMO Albuquerque 40.82 97 ⇑ *i*P **P** **06 20 22.7 -0.6**
ANMO pmax pmax
comp=Z,199nm,1.1s
ANMO MLR MLR
comp=Z,1067µm,19.0s
ANMO Albuquerque 40.82 97 P **P** **06 20 24.8 +1.5**
ANMO Albuquerque 40.82 97 IAMs_20 IAMs_20 06 36 32.8
comp=Z,1061µm,19.0s
ANMO Albuquerque 40.82 97 ⇓P **P** **06 20 24.1 +0.8**
ANMO Albuquerque 40.82 97 P **P** **06 20 24.9 +1.6**
ALQ Albuquerque 40.82 97 IAMs_20 IAMs_20 06 36 32.8
comp=Z,1061µm,19.0s
ALQ Albuquerque 40.82 97 IAMs_20 IAMs_20 06 36 32.8
comp=Z,1057µm,19.0s
EYMN Ely 40.89 71 IAmb IAmb 06 21 10.4
comp=Z,2µm,0.8s
EYMN Ely 40.89 71 ⇑P **P** **06 20 22.8 -0.7**
EYMN Ely 40.89 71 P **P** **06 20 24.1 +0.6**
JSH Shimam 40.95 279 P **P** **06 20 22.9 -1.2**
BGNE Belgrade 41.19 83 IAMs_20 IAMs_20 06 36 41.2
comp=Z,1021µm,22.0s
JOT Ohata 41.19 277 P **P** **06 20 25.2 -0.8**
ZEA Zeya 41.34 300 *e*P **P** **06 20 25.8 -1.4**
ZEA *e* 06 22 21.7
ZEA *e*S **S** **06 26 33.0 -7.0**
ZEA pmax pmax
comp=E,18µm,10.3s
ZEA pmax pmax
comp=N,10µm,9.2s
ZEA pmax pmax
comp=Z,33µm,10.1s
ZEA pmax pmax
comp=E,350nm,1.0s
ZEA pmax pmax
comp=N,210nm,0.7s
ZEA pmax pmax
comp=Z,760nm,1.5s
ZEA smax smax
comp=N,36µm,13.7s
ZEA smax smax
comp=E,44µm,14.2s
JTM Tenmabayashi 41.57 276 P **P** **06 20 28.8 -0.4**
JTM Tenmabayashi 41.57 276 ⇑P **P** **06 20 27.7 -1.5**
JTM Tenmabayashi 41.57 276 P **P** **06 20 28.6 -0.6**
JTM Tenmabayashi 41.57 276 P **P** **06 20 28.3 -0.8**
L34A Svendsen Farm, 41.84 81 IAmb IAmb 06 21 46.5
comp=Z,3µm,1.0s
L34A IAMs_20 IAMs_20 06 37 24.4
comp=Z,936µm,20.0s

319A	**Douglas**	**41.85**	**104**		IAmb	IAmb	06 21 21.1		
	comp=Z,5μm,1.7s								
UPNV	**Upernavik**	**41.98**	**26**		P	**P**	**06 20 32.4**	**+0.2**	
UPNV	**Upernavik**	**41.98**	**26**	*i*	P	**P**	**06 20 31.1**	**-1.0**	
UPNV					IAmb	IAmb	06 20 42.0		
	comp=Z,2μm,1.4s								
CBKS	**Cedar Bluff**	**41.99**	**88**	⇑	P	**P**	**06 20 33.1**	**+0.3**	
NOR	**Nord**	**42.11**	**8**		P	**P**	**06 20 32.8**	**-0.3**	
NOR	**Nord**	**42.11**	**8**	*i*	P	**P**	**06 20 33.5**	**+0.3**	
NOR					IAmb	IAmb	06 20 46.2		
	comp=Z,2μm,1.4s								
NOR					IAMs_20	IAMs_20	06 38 51.6		
	comp=Z,1918μm,18.9s								
NOR					IVMs_BB	IVMs_BB	06 39 23.4		
	comp=Z,654μm,17.6s								
I37A	**Lemond, Waseca**	**42.22**	**77**		IAmb	IAmb	06 21 38.4		
	comp=Z,3μm,1.1s								
I37A					IAMs_20	IAMs_20	06 38 20.2		
	comp=Z,873μm,19.0s								
JOM	**Ohasama**	**42.31**	**274**		P	**P**	**06 20 35.0**	**-0.2**	
HSIG		**42.72**	**108**		IAmb	IAmb	06 21 20.4		
	comp=Z,3μm,1.6s								
HSIG		**42.72**	**108**	⇑	P	**P**	**06 20 40.7**	**+1.9**	
FRB	**Frobisher Bay**	**42.94**	**41**		LR	LR	06 39 23.6		
	comp=Z,1271μm,20.2s,baz=302,slow=37								
FRB	**Frobisher Bay**	**42.94**	**41**	⇓	P	**P**	**06 20 39.4**	**-0.6**	
FRB	**Frobisher Bay**	**42.94**	**41**		P	**P**	**06 20 40.5**	**+0.5**	
N35A	**Tabor**	**42.98**	**82**		IAMs_20	IAMs_20	06 37 48.6		
	comp=Z,1112μm,22.0s								
PH02	**Texas Public H**	**43.09**	**93**		IAmb	IAmb	06 21 22.2		
	comp=Z,4μm,1.6s								
G40A	**Rib Lake**	**43.22**	**73**		P	**P**	**06 20 42.3**	**-0.3**	
HEH	**HeiHe**	**43.24**	**296**	*e*	P	**P**	**06 20 40.3**	**-2.3**	
HEH					pP	**pP**	**06 20 43.4**	**-6.1**	
HEH					S	**S**	**06 27 07.4**	**-0.6**	
HEH					pmax	pmax			
	comp=Z,100nm,1.2s								
HEH					L	L			
	comp=Z,818μm,20.6s								
HEH					L	L			
	comp=Z,2441μm,20.1s								
SRIG	**Santa Rosalia**	**43.35**	**110**		P	**P**	**06 20 44.3**	**+0.5**	
SRIG	**Santa Rosalia**	**43.35**	**110**		P	**P**	**06 20 46.2**	**+2.4**	
NUUG	**Nuugaatsiaq**	**43.43**	**27**	⇑	P	**P**	**06 20 43.4**	**-0.6**	
NUUG	**Nuugaatsiaq**	**43.43**	**27**	*i*	P	**P**	**06 20 43.2**	**-0.7**	
NUUG					IAmb	IAmb	06 21 00.4		
	comp=Z,1μm,0.9s								
KSU1	**Kansas State U**	**43.60**	**85**	⇑	P	**P**	**06 20 45.1**	**-0.6**	
AMTX	**Amarillo**	**43.60**	**93**		IAmb	IAmb	06 21 26.4		
	comp=Z,6μm,1.9s								
AMTX					IAMs_20	IAMs_20	06 38 31.8		
	comp=Z,793μm,19.0s								
AMTX	**Amarillo**	**43.60**	**93**	⇑	P	**P**	**06 20 46.0**	**+0.1**	
MSTX	**Muleshoe**	**43.63**	**95**		IAMs_20	IAMs_20	06 37 51.6		
	comp=Z,1157μm,22.0s								
SCIA	**State Center**	**43.67**	**79**		P	**P**	**06 20 46.3**	**0.0**	
SCIA					IAmb	IAmb	06 21 26.8		
	comp=Z,5μm,1.6s								
SCIA					IAMs_20	IAMs_20	06 38 33.8		
	comp=Z,884μm,21.0s								
SCIA	**State Center**	**43.67**	**79**	⇑	P	**P**	**06 20 45.7**	**-0.5**	
JMM	**Marumori**	**43.69**	**273**		P	**P**	**06 20 45.9**	**-0.5**	
NIAQ	**Niaqornat**	**43.76**	**28**	*i*	P	**P**	**06 20 46.9**	**+0.4**	
NIAQ					IAmb	IAmb	06 21 08.2		
	comp=Z,695nm,1.1s								
MNTX	**Cornudas Mount**	**43.80**	**100**	⇑	P	**P**	**06 20 48.3**	**+0.9**	
MNTX	**Cornudas Mount**	**43.80**	**100**		P	**P**	**06 20 48.5**	**+1.1**	
JYA	**Atsumi**	**43.81**	**275**		P	**P**	**06 20 48.7**	**+1.4**	
H11N2	**WAKE ISLAND Hy**	**43.84**	**230**		P	P	06 20 52.8	+5.3	
	baz=38,slow=2.7,SNR=56								
H11N2					T	T	07 07 13.3		
	baz=28,slow=76,SNR=86								
H11N3	**WAKE ISLAND Hy**	**43.84**	**230**		P	P	06 20 52.8	+5.3	
	baz=38,slow=2.7,SNR=101								
H11N3					T	T	07 07 13.8		
	baz=28,slow=76,SNR=72								
I40A	**Norwalk**	**43.85**	**75**		P	**P**	**06 20 47.1**	**-0.5**	
H11N1	**WAKE ISLAND Hy**	**43.85**	**230**		P	P	06 20 52.8	+5.1	
	baz=38,slow=2.7,SNR=62								
H11N1					T	T	07 07 23.4		
	baz=28,slow=76,SNR=78								
F42A	**Maple Grove Fa**	**44.05**	**72**		IAmb	IAmb	06 21 43.5		
	comp=Z,2μm,0.8s								
ELIS	**Ellis County**	**44.07**	**90**		IAmb	IAmb	06 21 30.0		
	comp=Z,6μm,1.9s								
OK038	**West end E0370**	**44.17**	**89**		IAmb	IAmb	06 21 30.5		
	comp=Z,3μm,1.6s								
KAN01	**Argonia South**	**44.27**	**88**		IAmb	IAmb	06 21 30.8		
	comp=Z,4μm,1.7s								
SAATT	**Saattut**	**44.28**	**27**	*i*	P	**P**	**06 20 51.2**	**+0.5**	
SAATT					IAmb	IAmb	06 21 07.2		
	comp=Z,1μm,1.1s								
TPB28		**44.33**	**99**		IAmb	IAmb	06 22 19.8		
	comp=Z,1μm,1.4s								
WAKE	**Wake Island**	**44.34**	**230**		P	**P**	**06 20 54.7**	**+3.0**	
WAKE	**Wake Island**	**44.34**	**230**		P	**P**	**06 20 54.0**	**+2.3**	
WAKE	**Wake Island**	**44.34**	**230**	⇑	P	**P**	**06 20 53.0**	**+1.2**	
WAKE	**Wake Island**	**44.34**	**230**		P	**P**	**06 20 54.1**	**+2.3**	
N38A	**Joes South For**	**44.39**	**80**		IAmb	IAmb	06 22 06.2		
	comp=Z,2μm,0.9s								
N38A					IAMs_20	IAMs_20	06 39 05.9		
	comp=Z,966μm,21.0s								
USA0B	**Ussuriysk Arra**	**44.49**	**286**	⇑	*i* P	**P**	**06 20 50.9**	**-1.9**	
USA0B	**Ussuriysk Arra**	**44.49**	**286**		P	**P**	**06 20 51.1**	**-1.7**	
USRK	**Ussuriysk Ar.**	**44.49**	**286**		P	**P**	**06 20 51.0**	**-1.8**	
	comp=Z,43nm,0.8s,baz=56,slow=7.1,SNR=40								
USRK					LR	LR	06 39 45.5		
	comp=Z,1046μm,21.9s,baz=57,slow=37								
	comp=Z,43nm,0.8s								
USRK	**Ussuriysk Ar.**	**44.49**	**286**		P	**P**	**06 20 51.0**	**-1.8**	
JFWS	**Jewell Farm**	**44.69**	**76**		IAmb	IAmb	06 21 46.0		
	comp=Z,2μm,1.1s								
JFWS	**Jewell Farm**	**44.69**	**76**		IAMs_20	IAMs_20	06 39 49.5		
	comp=Z,712μm,18.0s								
JFWS	**Jewell Farm**	**44.69**	**76**	⇑	P	**P**	**06 20 53.0**	**-1.3**	
SAQQ	**Saqqaq**	**44.69**	**28**	*i*	P	**P**	**06 20 53.6**	**-0.4**	
SAQQ					IAmb	IAmb	06 21 10.9		
	comp=Z,3μm,1.8s								
L40A	**Anamosa**	**44.70**	**78**		IAmb	IAmb	06 21 52.1		
	comp=Z,1μm,0.9s								
L40A					IAMs_20	IAMs_20	06 40 34.8		
	comp=Z,884μm,18.0s								
VHRN	**Van Horn**	**44.71**	**100**		IAmb	IAmb	06 22 03.0		
	comp=Z,3μm,1.4s								
GDH	**Godhavn**	**44.73**	**29**	*i*	P	**P**	**06 20 53.9**	**-0.3**	
GDH					IAmb	IAmb	06 21 04.8		
	comp=Z,2μm,1.6s								
128A	**Castleberry Fa**	**44.78**	**96**		IAmb	IAmb	06 21 46.6		
	comp=Z,2μm,1.4s								
I42A	**Draeger Farm,**	**44.80**	**74**		IAmb	IAmb	06 21 47.5		
	comp=Z,1μm,0.9s								
I42A					IAMs_20	IAMs_20	06 39 53.3		
	comp=Z,746μm,19.0s								
H11S1	**WAKE ISLAND Hy**	**45.00**	**230**		T	T	07 08 51.2		
	baz=28,slow=76,SNR=368								
P38A	**Dawn**	**45.01**	**82**		IAmb	IAmb	06 21 40.8		
	comp=Z,2μm,0.8s								
P38A					IAMs_20	IAMs_20	06 39 13.2		
	comp=Z,1041μm,21.0s								
H11S2	**WAKE ISLAND Hy**	**45.01**	**230**		T	T	07 08 46.8		
	baz=28,slow=76,SNR=430								
H11S3	**WAKE ISLAND Hy**	**45.02**	**230**		T	T	07 09 00.2		
	baz=28,slow=76,SNR=424								
ODSA	**Odessa**	**45.11**	**97**		IAmb	IAmb	06 21 43.1		
	comp=Z,4μm,1.7s								
T35A	**Sooner Cattle**	**45.15**	**87**		IAmb	IAmb	06 21 47.6		
	comp=Z,3μm,1.5s								
BOD	**Bodaibo**	**45.23**	**311**	*e*	P	**P**	**06 20 57.3**	**-1.1**	
BOD					pmax	pmax			
	comp=Z,3μm,1.3s								
VLA	**Vladivostok**	**45.25**	**285**	*d*	*i* P	**P**	**06 20 57.9**	**-0.9**	
VLA					pmax	pmax			
	comp=Z,4μm,1.9s								
VLA					MLR	MLR			
	comp=Z,775μm,19.0s								
OK048	**Pawnee Station**	**45.25**	**88**		IAmb	IAmb	06 21 43.3		
	comp=Z,2μm,1.1s								
OK051	**E0350 and S346**	**45.25**	**88**		IAmb	IAmb	06 21 43.2		
	comp=Z,1μm,1.2s								
SN07	**Snyder 07**	**45.35**	**94**		IAmb	IAmb	06 21 41.3		
	comp=Z,4μm,1.9s								
WMOK	**Wichita Mounta**	**45.38**	**91**		IAmb	IAmb	06 21 44.9		
	comp=Z,3μm,1.8s								
WMOK	**Wichita Mounta**	**45.38**	**91**	⇑	P	**P**	**06 20 59.8**	**-0.2**	
WMOK	**Wichita Mounta**	**45.38**	**91**		P	**P**	**06 20 60.0**	**0.0**	
ILULI	**Ilulissat**	**45.43**	**29**		IAmb	IAmb	06 21 31.3		
	comp=Z,1μm,1.1s								
ILULI	**Ilulissat**	**45.43**	**29**	⇑	P	**P**	**06 20 59.0**	**-0.9**	
ILULI	**Ilulissat**	**45.43**	**29**		P	**P**	**06 21 00.2**	**+0.3**	
ILULI	**Ilulissat**	**45.43**	**29**	*i*	P	**P**	**06 20 60.0**	**+0.1**	
ILULI					IAmb	IAmb	06 21 09.4		
	comp=Z,211nm,1.0s								
MDJ	**Mudanjiang**	**45.55**	**288**		P	**P**	**06 21 00.0**	**-1.2**	
MDJ	**Mudanjiang**	**45.55**	**288**		P	**P**	**06 20 59.6**	**-1.6**	
MDJ					S	**S**	**06 27 39.6**	**-2.1**	
MDJ					ScS	**ScS**	**06 30 54.6**	**-1.1**	
MDJ					pmax	pmax			
	comp=Z,120nm,1.7s								
MDJ					L	L			
	comp=Z,441μm,20.2s								
TPB05	**Hovey Rd**	**45.55**	**99**		IAmb	IAmb	06 21 57.0		
	comp=Z,514nm,1.0s								
QUOK	**Quay**	**45.56**	**88**		IAmb	IAmb	06 21 45.6		
	comp=Z,2μm,1.0s								
L42A	**Oliver, Polo**	**45.61**	**77**		IAmb	IAmb	06 22 08.7		
	comp=Z,2μm,1.2s								
L42A					IAMs_20	IAMs_20	06 41 20.8		
	comp=Z,829μm,19.0s								
APMT	**Aspermont**	**45.62**	**93**		IAmb	IAmb	06 22 19.5		
	comp=Z,3μm,1.9s								
OK052	**Battle Ridge R**	**45.63**	**88**		IAmb	IAmb	06 21 46.2		
	comp=Z,2μm,1.0s								
OKCSW	**OKLAHOMA CITY**	**45.68**	**89**		IAmb	IAmb	06 21 42.1		
	comp=Z,3μm,1.4s								
TMB01	**Midkiff**	**45.71**	**97**		IAmb	IAmb	06 21 59.4		
	comp=Z,403nm,1.0s								
N41A	**Harden Midland**	**45.80**	**79**		IAmb	IAmb	06 21 58.0		
	comp=Z,3μm,1.2s								
N41A					IAMs_20	IAMs_20	06 41 18.0		
	comp=Z,853μm,19.0s								
FNO	**Franklin**	**45.80**	**89**		IAmb	IAmb	06 21 43.3		
	comp=Z,2μm,1.3s								
K43A	**Burlington**	**45.89**	**75**		IAMs_20	IAMs_20	06 40 41.3		
	comp=Z,648μm,18.0s								
DEOK	**Depew**	**45.91**	**88**		IAmb	IAmb	06 21 54.5		
	comp=Z,2μm,1.1s								
P40A	**Paris**	**45.91**	**81**		IAMs_20	IAMs_20	06 39 53.2		
	comp=Z,1104μm,21.0s								
BNX	**BinXian**	**46.02**	**291**	⇑	P	**P**	**06 21 03.4**	**-1.4**	
BNX					pP	**pP**	**06 21 12.6**	**+0.8**	
BNX					sP	**sP**	**06 21 16.8**	**+2.3**	
BNX					PP	**PP**	**06 22 50.6**	**-2.0**	
BNX					S	**S**	**06 27 44.4**	**-4.1**	
BNX					sS	**sS**	**06 28 02.3**	**+2.5**	
BNX					pmax	pmax			
	comp=Z,1μm,1.6s								
BNX					pmax	pmax			
	comp=Z,70μm,7.3s								
BNX					L	L			
	comp=Z,484μm,20.6s								
BNX					L	L			
	comp=Z,1513μm,20.0s								
X34A	**Smith Ranch, M**	**46.02**	**90**		IAmb	IAmb	06 21 45.5		
	comp=Z,4μm,1.6s								
DAG	**Danmarks Havn**	**46.06**	**12**	⇑	P	**P**	**06 21 03.9**	**-0.9**	
DAG	**Danmarks Havn**	**46.06**	**12**		P	**P**	**06 21 04.1**	**-0.7**	
DAG	**Danmarks Havn**	**46.06**	**12**	*i*	P	**P**	**06 21 04.0**	**-0.8**	
DAG					IAmb	IAmb	06 21 13.9		
	comp=Z,2μm,1.0s								
JRY	**Ryogami san**	**46.06**	**273**		P	**P**	**06 21 05.3**	**0.0**	
MJAR	**Matsushiro Arr**	**46.09**	**274**		P	**P**	**06 21 05.3**	**-0.2**	
	comp=Z,154nm,0.9s,baz=44,slow=6.2,SNR=164								
MJAR					LR	LR	06 39 36.6		
	comp=Z,820μm,21.9s,baz=56,slow=35								
	comp=Z,154nm,0.9s								
MJAR	**Matsushiro Arr**	**46.09**	**274**		P	**P**	**06 21 05.6**	**0.0**	
MJAR					pmax	pmax			
	comp=Z,4μm,1.5s								
MJAR	**Matsushiro Arr**	**46.09**	**274**		P	**P**	**06 21 05.6**	**0.0**	
MAJO	**Matsushiro**	**46.09**	**274**		P	**P**	**06 21 05.3**	**-0.3**	
MAJO	**Matsushiro**	**46.09**	**274**	*c*	*i* P	**P**	**06 21 04.4**	**-1.2**	
MAJO					pmax	pmax			
	comp=Z,5μm,1.2s								
MAJO	**Matsushiro**	**46.09**	**274**		P	**P**	**06 21 05.7**	**+0.1**	
MAJO	**Matsushiro**	**46.09**	**274**		IAMs_20	IAMs_20	06 38 50.9		
	comp=Z,1057μm,22.0s								
MAJO	**Matsushiro**	**46.09**	**274**	⇑	P	**P**	**06 21 04.9**	**-0.7**	
MAJO	**Matsushiro**	**46.09**	**274**		P	**P**	**06 21 04.2**	**-1.4**	
MAJO					S	**S**	**06 27 48.6**	**-1.1**	
MAJO	**Matsushiro**	**46.09**	**274**		P	**P**	**06 21 05.1**	**-0.5**	
MAT	**Matsushiro**	**46.09**	**274**		P	**P**	**06 21 05.6**	**+0.1**	
SUMG	**Summit**	**46.18**	**21**		P	**P**	**06 21 06.3**	**-0.1**	
SUMG	**Summit**	**46.18**	**21**		IAMs_20	IAMs_20	06 43 32.2		
	comp=Z,838μm,20.0s								
SUMG	**Summit**	**46.18**	**21**	⇑	P	**P**	**06 21 05.9**	**-0.4**	
SUMG	**Summit**	**46.18**	**21**		P	**P**	**06 21 06.2**	**-0.1**	
SUMG	**Summit**	**46.18**	**21**	*i*	P	**P**	**06 21 05.7**	**-0.6**	
SUMG					IAmb	IAmb	06 21 15.8		
	comp=Z,4μm,1.4s								
SUMG					IAMs_20	IAMs_20	06 40 31.8		
	comp=Z,1394μm,25.3s								
I45A	**Fountain**	**46.18**	**72**		IAmb	IAmb	06 21 49.9		
	comp=Z,1μm,0.8s								
KBS	**Kingsbay**	**46.20**	**3**	*ce*	P	**P**	**06 21 07.1**	**+1.2**	
KBS					pmax	pmax			
	comp=Z,763nm,1.7s								
KBS	**Kingsbay**	**46.20**	**3**	*e*	P	**P**	**06 21 05.5**	**-0.4**	
KBS					IVmB_BB		06 21 32.7		
	comp=Z,46μm,3.6s								
KBS					*e*S	**S**	**06 27 51.2**	**+0.8**	
KBS					*e*SS	**SS**	**06 31 20.5**	**+5.4**	
KBS					IVMs_BB	IVMs_BB	06 40 08.8		
	comp=Z,480μm,19.7s								
KBS	**Kingsbay**	**46.20**	**3**		P	**P**	**06 21 06.8**	**+0.9**	
KBS	**Kingsbay**	**46.20**	**3**	⇑	P	**P**	**06 21 06.0**	**+0.1**	
KBS	**Kingsbay**	**46.20**	**3**		P	**P**	**06 21 07.3**	**+1.4**	
KBS	**Kingsbay**	**46.20**	**3**	*i*	P	**P**	**06 21 06.0**	**+0.1**	
WTFS	**Witchita Falls**	**46.26**	**92**		IAmb	IAmb	06 21 46.7		
	comp=Z,4μm,2.0s								
TUL3	**Leonard**	**46.27**	**87**		IAmb	IAmb	06 21 51.1		
	comp=Z,1μm,1.1s								
ABTX	**Abilene, Hawle**	**46.41**	**94**		IAmb	IAmb	06 21 48.1		
	comp=Z,2μm,1.2s								
S39A	**Bolivar**	**46.44**	**84**		IAMs_20	IAMs_20	06 40 15.4		
	comp=Z,666μm,20.0s								
L44A	**Lake County Fo**	**46.47**	**75**		IAmb	IAmb	06 22 12.9		
	comp=Z,2μm,1.0s								
JOD2	**Odawara 2**	**46.48**	**272**		P	**P**	**06 21 08.7**	**+0.1**	
RLO	**Rose Lookout**	**46.53**	**87**		IAmb	IAmb	06 21 48.2		
	comp=Z,1μm,1.1s								
TXAR	**Lajitas Array**	**46.55**	**100**		P	**P**	**06 21 10.2**	**+0.8**	
	comp=Z,117nm,0.9s,baz=306,slow=5.2,SNR=432								
TXAR					LR	LR	06 40 11.6		
	comp=Z,1992μm,19.5s,baz=308,slow=35								
TXAR					PKPPKP		06 52 31.1		
	comp=Z,5.0nm,0.8s,baz=146,slow=5.9,SNR=6.0								
	comp=Z,117nm,0.9s								
TXAR	**Lajitas Array**	**46.55**	**100**		P	**P**	**06 21 10.1**	**+0.7**	
R40A	**Maddies Statio**	**46.63**	**82**		IAmb	IAmb	06 21 49.2		
	comp=Z,1μm,1.2s								
R40A					IAMs_20	IAMs_20	06 40 13.3		
	comp=Z,982μm,20.0s								
U38A	**Gravette**	**46.70**	**86**		IAmb	IAmb	06 21 50.7		
	comp=Z,3μm,1.6s								
HDIL	**Hopedale**	**46.78**	**78**		IAMs_20	IAMs_20	06 41 58.0		
	comp=Z,883μm,18.0s								
HDIL	**Hopedale**	**46.78**	**78**	⇑	P	**P**	**06 21 09.8**	**-1.1**	
OZNA	**Ozona**	**46.81**	**97**		IAmb	IAmb	06 21 59.5		
	comp=Z,3μm,1.8s								
JGN	**Niukaw**	**46.83**	**274**		P	**P**	**06 21 11.4**	**0.0**	
LOOK	**Love County**	**46.83**	**90**		IAmb	IAmb	06 22 21.0		
	comp=Z,2μm,1.1s								
M44A	**Miwin, Midew**	**46.93**	**76**		IAMs_20	IAMs_20	06 42 30.7		
	comp=Z,590μm,19.0s								
LPIG	**La Paz**	**46.96**	**111**		LR	LR	06 39 20.6		
	comp=Z,494μm,18.2s,baz=332,slow=34								
SFJD	**Kangerlussuaq**	**47.01**	**31**		LR	LR	06 42 55.5		
	comp=Z,356μm,21.6s,baz=316,slow=39								
SFJD	**Kangerlussuaq**	**47.01**	**31**		P	**P**	**06 21 12.2**	**-0.1**	
SFJD					pmax	pmax			
	comp=Z,8μm,1.6s								
SFJD					MLR	MLR			
	comp=Z,467μm,19.0s								
SFJD	**Kangerlussuaq**	**47.01**	**31**		P	**P**	**06 21 12.2**	**-0.1**	
SFJD	**Kangerlussuaq**	**47.01**	**31**	⇑	P	**P**	**06 21 11.6**	**-0.8**	
SFJD	**Kangerlussuaq**	**47.01**	**31**		P	**P**	**06 21 09.7**	**-2.6**	
SFJD					S	**S**	**06 27 59.4**	**-2.7**	
SFJD	**Kangerlussuaq**	**47.01**	**31**		P	**P**	**06 21 13.0**	**+0.6**	
SFJD	**Kangerlussuaq**	**47.01**	**31**		P	**P**	**06 21 11.9**	**-0.4**	
SFJD	**Kangerlussuaq**	**47.01**	**31**	*i*	P	**P**	**06 21 14.1**	**+1.7**	
SFJD					IAmb	IAmb	06 21 21.0		
	comp=Z,697nm,0.8s								
PLPT	**Palo Pinto**	**47.03**	**92**		IAmb	IAmb	06 22 31.2		
	comp=Z,1μm,1.1s								
SPA0	**Spitsbergen Ar**	**47.04**	**1**	*e*	P	**P**	**06 21 12.1**	**-0.4**	
SPA0					IVmB_BB		06 21 54.7		
	comp=Z,33μm,4.1s								
SPA0					*e*S	**S**	**06 27 58.9**	**-3.5**	
SPA0					*e*SS	**SS**	**06 31 32.1**	**+3.4**	
SPA0					IVMs_BB	IVMs_BB	06 41 21.9		
	comp=Z,368μm,18.8s								
SPITS	**Spitsbergen Ar**	**47.04**	**1**		P	**P**	**06 21 11.8**	**-0.7**	
	comp=Z,78nm,0.5s,baz=358,slow=7.4,SNR=73								
SPITS					LR	LR	06 41 43.0		
	comp=Z,967μm,18.5s,baz=344,slow=37								
	comp=Z,78nm,0.5s								
NRIK	**Noril'sk**	**47.05**	**334**		P	**P**	**06 21 11.8**	**-0.8**	
	comp=Z,847nm,0.6s,baz=60,slow=6.7,SNR=195								
NRIK					LR	LR	06 44 00.4		
	comp=Z,1395μm,20.4s,baz=54,slow=40								
	comp=Z,847nm,0.6s								
NRIK	**Noril'sk**	**47.05**	**334**	*i*	P	**P**	**06 21 11.8**	**-0.8**	
NRIK					pmax	pmax			
	comp=Z,2μm,1.0s								
HHAR	**Hobbs**	**47.07**	**86**		IAmb	IAmb	06 21 51.9		
	comp=Z,1μm,1.1s								
JGF	**Kuroka**	**47.24**	**273**		P	**P**	**06 21 14.6**	**0.0**	
JGF	**Kuroka**	**47.24**	**273**	⇑	P	**P**	**06 21 13.8**	**-0.8**	
JGF	**Kuroka**	**47.24**	**273**		P	**P**	**06 21 14.3**	**-0.3**	
HPIG		**47.27**	**104**		P	**P**	**06 21 17.0**	**+1.8**	
HPIG		**47.27**	**104**	⇑	P	**P**	**06 21 16.2**	**+1.1**	
HPIG		**47.27**	**104**		P	**P**	**06 21 16.4**	**+1.3**	
P43A	**Skaggs, Pawnee**	**47.27**	**79**		IAmb	IAmb	06 22 03.5		
	comp=Z,2μm,0.9s								
P43A					IAMs_20	IAMs_20	06 42 05.0		
	comp=Z,756μm,19.0s								
FW06	**Azle**	**47.35**	**92**		IAmb	IAmb	06 21 55.4		
	comp=Z,3μm,1.6s								
CCM	**Cathedral Cave**	**47.38**	**82**		IAMs_20	IAMs_20	06 40 37.3		
	comp=Z,1043μm,21.0s								
JSG	**Sagara**	**47.42**	**272**		P	**P**	**06 21 17.3**	**+1.3**	
JSG	**Sagara**	**47.42**	**272**	⇑	P	**P**	**06 21 16.3**	**+0.3**	
JSG	**Sagara**	**47.42**	**272**		P	**P**	**06 21 15.9**	**-0.1**	
J47A	**Summer**	**47.48**	**72**		IAmb	IAmb	06 22 31.4		
	comp=Z,907nm,1.0s								
SLBS	**Sierra La Lagu**	**47.49**	**111**		P	**P**	**06 21 18.3**	**+1.5**	
SLBS					IAmb	IAmb	06 22 05.9		
	comp=Z,2μm,1.5s								
SLBS	**Sierra La Lagu**	**47.49**	**111**	⇑	P	**P**	**06 21 18.8**	**+2.0**	
SLBS	**Sierra La Lagu**	**47.49**	**111**		P	**P**	**06 21 19.3**	**+2.5**	
HILR	**Hailar Array B**	**47.58**	**299**		P	**P**	**06 21 15.7**	**-1.4**	
	comp=Z,35nm,0.4s,baz=56,slow=8.7,SNR=24								
HILR					LR	LR	06 42 02.5		
	comp=Z,974μm,21.0s,baz=70,slow=37								
HILR					PKPPKP	**P'P'df**	**06 52 29.4**	**-7.1**	
	comp=Z,1.7nm,0.4s,baz=184,slow=5.9,SNR=2.6								
	comp=Z,35nm,0.4s								
JHJ2	**Mitsune**	**47.61**	**269**		P	**P**	**06 21 18.1**	**+0.7**	
JHJ2	**Mitsune**	**47.61**	**269**	⇑	P	**P**	**06 21 17.1**	**-0.3**	
JHJ2	**Mitsune**	**47.61**	**269**		P	**P**	**06 21 18.1**	**+0.7**	
INU	**Inuyama**	**47.62**	**273**		P	**P**	**06 21 16.9**	**-0.6**	
INU	**Inuyama**	**47.62**	**273**		IAmb	IAmb	06 22 10.6		
	comp=Z,1μm,1.0s								
INU					IAMs_20	IAMs_20	06 38 50.1		
	comp=Z,657μm,22.0s								
INU	**Inuyama**	**47.62**	**273**	⇑	P	**P**	**06 21 16.2**	**-1.3**	
INU	**Inuyama**	**47.62**	**273**		P	**P**	**06 21 16.8**	**-0.7**	
INU	**Inuyama**	**47.62**	**273**		P	**P**	**06 21 15.9**	**-1.5**	
JHJ	**Hachijo jima 2**

HBAR Harrisburg 49.47 84 IAmb IAmb 06 22 27.3
comp=Z,2µm,1.1s
SADO Sadowa 49.53 67 LR LR 06 43 34.9
comp=Z,533µm,18.3s,baz=338,slow=37
SADO PKPPKP 06 52 27.1
comp=Z,11nm,1.0s,baz=183,slow=0.5,SNR=4.9
GNAR Gosnell 49.54 83 IAmb IAmb 06 22 44.7
comp=Z,2µm,1.4s
JAD Aida 49.54 275 P **P** **06 21 32.5 +0.2**
T45A Paducah 49.58 81 IAMs_20 IAMs_20 06 42 06.3
comp=Z,1043µm,21.0s
M50A Fremont 49.69 73 IAMs_20 IAMs_20 06 42 53.6
comp=Z,567µm,19.0s
HHU Hamhung 49.81 285 P **P** **06 21 34.1 -0.2**
HHU S **S** **06 28 40.4 -1.9**
HHU AmB
comp=Z,9µm,5.0s
HHU AMS AMS
comp=Z,290µm,20.1s
Z41A Richland Creek 49.88 88 IAmb IAmb 06 22 14.6
comp=Z,2µm,1.5s
EF02 Christine 49.90 96 IAmb IAmb 06 22 35.3
comp=Z,2µm,1.1s
NATX Nacogdoches 49.91 90 IAmb IAmb 06 22 37.9
comp=Z,1µm,0.8s
NATX Nacogdoches 49.91 90 ⇑P **P** **06 21 35.5 +0.4**
EF04 Eagle Ford 04 50.00 95 IAmb IAmb 06 22 36.6
comp=Z,2µm,1.2s
WCI Wyandotte Cave 50.07 78 IAMs_20 IAMs_20 06 44 00.9
comp=Z,730µm,19.0s
WCI Wyandotte Cave 50.07 78 ⇑P **P** **06 21 34.9 -1.3**
WCI Wyandotte Cave 50.07 78 P **P** **06 21 35.2 -1.1**
JHS Saijyo 50.10 276 P **P** **06 21 36.8 +0.1**
735A Kenedy 50.26 96 IAmb IAmb 06 22 41.8
comp=Z,1µm,1.1s
735A IAMs_20 IAMs_20 06 42 02.1
comp=Z,798µm,21.0s
N51A Ashland 50.39 73 IAmb IAmb 06 22 24.1
comp=Z,2µm,1.5s
N51A IAMs_20 IAMs_20 06 43 25.2
comp=Z,604µm,19.0s
T47A Sharon Grove 50.48 80 IAMs_20 IAMs_20 06 42 54.9
comp=Z,890µm,20.0s
DELO Deloro Mine 50.51 66 IAmb IAmb 06 22 18.2
comp=Z,4µm,1.8s
M52A Chesterland 50.52 72 IAmb IAmb 06 22 32.4
comp=Z,748nm,0.8s
M52A IAMs_20 IAMs_20 06 45 47.5
comp=Z,779µm,19.0s
ACSO Alum Creek Sta 50.53 74 IAMs_20 IAMs_20 06 43 33.9
comp=Z,643µm,18.0s
ACSO Alum Creek Sta 50.53 74 ⇑P **P** **06 21 38.4 -1.3**
HKT Hockley 50.57 93 P **P** **06 21 41.8 +1.7**
HKT pmax pmax
comp=Z,3µm,1.6s
HKT MLR MLR
comp=Z,1637µm,21.0s
HKT Hockley 50.57 93 P **P** **06 21 41.8 +1.7**
HKT IAmb IAmb 06 22 25.5
comp=Z,3µm,1.6s
HKT Hockley 50.57 93 ⇑P **P** **06 21 40.5 +0.4**
HKT Hockley 50.57 93 P **P** **06 21 41.8 +1.7**
JMN Monobe 50.58 274 P **P** **06 21 40.5 +0.3**
JMN Monobe 50.58 274 ⇑P **P** **06 21 40.2 0.0**
JMN Monobe 50.58 274 P **P** **06 21 40.8 +0.6**
JMN Monobe 50.58 274 P **P** **06 21 40.7 +0.5**
R49A Shelbyville 50.66 77 IAmb IAmb 06 22 26.8
comp=Z,2µm,1.5s
R49A IAMs_20 IAMs_20 06 44 19.4
comp=Z,913µm,18.0s
WVT Waverly 50.67 81 P **P** **06 21 40.2 -0.7**
WVT pmax pmax
comp=Z,2µm,1.0s
WVT MLR MLR
comp=Z,1113µm,21.0s
WVT Waverly 50.67 81 P **P** **06 21 40.2 -0.7**
WVT IAmb IAmb 06 22 44.7
comp=Z,2µm,0.9s
WVT Waverly 50.67 81 ⇑P **P** **06 21 39.1 -1.8**
WVT Waverly 50.67 81 P **P** **06 21 40.2 -0.7**
SNY Shenyang 50.68 289 ⇑P **P** **06 21 40.5 -0.3**
SNY S **S** **06 28 54.4 0.0**
SNY pmax pmax
comp=Z,3µm,1.6s
SNY pmax pmax
comp=Z,79µm,11.0s
SNY L L
comp=Z,675µm,18.4s
SNY L L
comp=Z,1559µm,21.2s
JCJ Chichijima 50.74 262 LR LR 06 41 02.4
comp=Z,353µm,21.9s,baz=38,slow=34
JCJ Chichijima 50.74 262 P **P** **06 21 41.6 +0.2**
JCJ Chichijima 50.74 262 ⇑P **P** **06 21 41.3 -0.1**
JCJ Chichijima 50.74 262 P **P** **06 21 41.6 +0.2**
BJO1 Bjornoya 50.76 1 *e*P **P** **06 21 40.7 -0.3**
BJO1 IVmB_BB 06 22 26.6
comp=Z,50µm,10.6s
BJO1 *e*S **S** **06 28 57.0 +2.3**
BJO1 *e*SS **SS** **06 32 30.2 +1.8**
BJO1 IVMs_BB IVMs_BB 06 41 34.5
comp=Z,260µm,22.1s
GAC Glen Almond 50.82 64 ⇓P **P** **06 21 41.2 -0.6**
ERPA Erie 50.87 70 IAmb IAmb 06 22 23.4
comp=Z,2µm,1.4s
ERPA Erie 50.87 70 ⇑P **P** **06 21 41.0 -1.3**
OXF Oxford 50.93 84 IAMs_20 IAMs_20 06 42 33.1
comp=Z,612µm,22.0s
OXF Oxford 50.93 84 ⇑P **P** **06 21 41.7 -1.1**
TRQ Mont Tremblant 50.95 63 IAmb IAmb 06 22 29.2
comp=Z,4µm,1.4s
MEDO Medina 50.98 68 IAmb IAmb 06 22 35.8
comp=Z,1µm,0.8s
P51A Williamsport 51.00 75 IAmb IAmb 06 22 28.9
comp=Z,4µm,1.8s
SCO Scoresbysund 51.01 17 IAmb IAmb 06 22 22.6
comp=Z,3µm,1.3s
SCO Scoresbysund 51.01 17 ⇑P **P** **06 21 42.5 -0.4**
SCO Scoresbysund 51.01 17 P **P** **06 21 43.0 +0.1**
SCO Scoresbysund 51.01 17 *i*P **P** **06 21 42.6 -0.4**
SCO IAmb IAmb 06 21 53.0
comp=Z,1µm,1.3s
SOEG Soedalen 51.08 22 *i*P **P** **06 21 42.6 -0.9**
SOEG IAmb IAmb 06 21 53.4
comp=Z,1µm,1.1s
ALLY Allegheny Colle 51.11 71 IAmb IAmb 06 22 36.7
comp=Z,2µm,0.7s
HBVL Hebbronville 51.12 98 IAmb IAmb 06 22 52.1
comp=Z,2µm,1.4s
R50A Paris 51.13 77 IAMs_20 IAMs_20 06 44 43.1
comp=Z,675µm,18.0s
Q51A Peebles 51.16 75 IAMs_20 IAMs_20 06 47 00.8
comp=Z,544µm,18.0s
KVTX Kingsville 51.20 97 ⇑P **P** **06 21 46.7 +1.8**
KVTX Kingsville 51.20 97 P **P** **06 21 48.0 +3.1**
PECO Prince Edward 51.23 66 IAmb IAmb 06 23 11.7
comp=Z,1µm,1.0s
O52A Adamsville 51.24 73 IAmb IAmb 06 22 31.4
comp=Z,3µm,1.2s
O52A IAMs_20 IAMs_20 06 43 49.7
comp=Z,704µm,19.0s
KS19 Wonju Array Si 51.31 282 IAmb IAmb 06 22 15.6
comp=Z,2µm,1.1s
N53A Lisbon 51.31 72 IAmb IAmb 06 22 38.2
comp=Z,936nm,0.9s
N53A IAMs_20 IAMs_20 06 46 15.5
comp=Z,664µm,19.0s
KSRS Korea Array 51.31 282 P **P** **06 21 45.3 -0.3**
comp=Z,329nm,0.8s,baz=50,slow=7.1,SNR=253
KSRS LR LR 06 44 34.5
comp=Z,531µm,19.9s,baz=55,slow=37
KSRS PKP2bc **P'P'bc** **06 52 38.5 -7.5**
comp=Z,4.3nm,0.9s,baz=210,slow=1.9,SNR=6.0
KSRS P4KPbc 06 59 12.2
comp=Z,2.1nm,0.9s,baz=66,slow=2.4,SNR=7.1
comp=Z,329nm,0.8s
KSAR Wonju Array Be 51.34 282 P **P** **06 21 46.0 +0.1**
KSAR Wonju Array Be 51.34 282 P **P** **06 21 46.0 +0.1**
SUJ Sinuiju 51.37 287 P **P** **06 21 45.9 -0.2**
SUJ AmB
comp=Z,20µm,4.0s
PYAG Pyongyang 51.40 285 P **P** **06 21 46.9 +0.6**
PYAG S **S** **06 29 03.7 -0.7**
PYAG AmB
comp=Z,272nm,4.3s
PYAG AMS AMS
comp=Z,355µm,20.3s
WBO Williamsburg 51.40 64 IAmb IAmb 06 22 32.8
comp=Z,2µm,1.1s
P52A Corning 51.41 74 IAmb IAmb 06 22 31.7
comp=Z,3µm,1.6s
LDAQ Lac Daran 51.44 59 IAmb IAmb 06 22 44.8
comp=Z,2µm,1.3s
PAOC Oil Creek Stat 51.45 70 IAmb IAmb 06 22 38.9
comp=Z,879nm,0.8s
O53A New Philadelph 51.49 73 IAmb IAmb 06 22 32.4
comp=Z,3µm,1.6s
441A DeRidder 51.50 90 IAmb IAmb 06 22 46.6
comp=Z,3µm,1.4s
V48A Smith Brothers 51.52 81 IAmb IAmb 06 22 39.7
comp=Z,5µm,2.0s
V48A IAMs_20 IAMs_20 06 43 15.7
comp=Z,1030µm,21.0s
CLTN Cedars of Leba 51.55 80 IAmb IAmb 06 22 32.3
comp=Z,2µm,1.2s
U49A Red Boiling Sp 51.56 79 IAmb IAmb 06 22 31.3
comp=Z,2µm,1.5s
U49A IAMs_20 IAMs_20 06 43 39.7
comp=Z,772µm,20.0s
MMNY Mt. Morris Dam 51.57 68 IAmb IAmb 06 22 56.9
comp=Z,2µm,1.4s
PAMR Moraine State 51.62 71 IAmb IAmb 06 22 33.5
comp=Z,3µm,1.7s
ANGG Ammassalik, Gr 51.63 27 IAMs_20 IAMs_20 06 47 11.4
comp=Z,650µm,19.0s
ANGG Ammassalik, Gr 51.63 27 ⇑P **P** **06 21 46.0 -1.6**
ANGG Ammassalik, Gr 51.63 27 P **P** **06 21 46.8 -0.9**
ANGG Ammassalik, Gr 51.63 27 *i*P **P** **06 21 45.3 -2.3**
ANGG IAmb IAmb 06 21 56.0
comp=Z,494nm,1.0s
T50A Nancy 51.74 78 IAmb IAmb 06 22 27.7
comp=Z,2µm,1.3s
T50A IAMs_20 IAMs_20 06 45 03.2
comp=Z,791µm,18.0s
Q52A Bidwell 51.81 75 IAmb IAmb 06 22 34.8
comp=Z,4µm,1.8s
Q52A IAMs_20 IAMs_20 06 44 20.8
comp=Z,541µm,18.0s
IVI Ivigtut 51.83 35 IAMs_20 IAMs_20 06 46 52.0
comp=Z,716µm,18.0s
IVI Ivigtut 51.83 35 ⇑P **P** **06 21 48.8 -0.3**
IVI Ivigtut 51.83 35 P **P** **06 21 50.1 +1.0**
IVI Ivigtut 51.83 35 *i*P **P** **06 21 48.0 -1.2**
IVI IAmb IAmb 06 21 57.7
comp=Z,482nm,0.8s
P53A Whipple 51.93 73 IAmb IAmb 06 22 35.7
comp=Z,4µm,1.8s
P53A IAMs_20 IAMs_20 06 44 10.8
comp=Z,748µm,19.0s
O54A Avella 52.00 72 IAmb IAmb 06 22 40.6
comp=Z,1µm,0.9s
O54A IAMs_20 IAMs_20 06 46 36.6
comp=Z,820µm,20.0s
S51A Beattyville 52.00 77 IAmb IAmb 06 22 43.5
comp=Z,980nm,0.9s
S51A IAMs_20 IAMs_20 06 45 19.0
comp=Z,472µm,18.0s
INCN Inchon 52.02 283 P **P** **06 21 50.7 -0.3**
INCN Inchon 52.02 283 P **P** **06 21 51.2 +0.2**
INCN pmax pmax
comp=Z,2µm,1.2s
INCN MLR MLR
comp=Z,366µm,19.0s
INCN Inchon 52.02 283 P **P** **06 21 50.0 -1.0**
INCN P **P** **06 21 50.0 -1.0**
INCN P **P** **06 21 50.0 -1.0**
INCN S **S** **06 29 11.7 -1.3**
INCN S **S** **06 29 11.7 -1.3**
INCN S **S** **06 29 11.7 -1.3**
INCN Inchon 52.02 283 P **P** **06 21 51.2 +0.2**
INCN IAmb IAmb 06 22 42.8
comp=Z,2µm,1.1s
INCN Inchon 52.02 283 ⇑P **P** **06 21 50.5 -0.5**
INCN Inchon 52.02 283 P **P** **06 21 51.1 +0.1**
LONY Lake Ozonia 52.02 64 IAmb IAmb 06 22 36.4
comp=Z,4µm,1.9s
LONY IAMs_20 IAMs_20 06 44 49.8
comp=Z,600µm,20.0s
LONY Lake Ozonia 52.02 64 ⇑P **P** **06 21 49.2 -1.7**
CFNY Clifton-Fine, 52.09 65 IAmb IAmb 06 22 38.3
comp=Z,2µm,1.1s
J57A Williamstown 52.12 66 IAmb IAmb 06 22 37.5
comp=Z,1µm,1.0s
J57A IAMs_20 IAMs_20 06 45 19.4
comp=Z,648µm,19.0s
HJU Haeju 52.13 284 P **P** **06 21 52.0 +0.3**
HJU S **S** **06 29 13.4 -1.0**
HJU AmB
comp=Z,513nm,2.6s
HJU AMS AMS
comp=Z,268µm,23.5s
L56A Greenwood 52.17 68 IAmb IAmb 06 22 44.6
comp=Z,2µm,0.9s
L56A IAMs_20 IAMs_20 06 46 29.9
comp=Z,735µm,19.0s
LMQ La Malbaie 52.17 59 IAmb IAmb 06 22 37.1
comp=Z,2µm,1.5s
ZAIG Zacatecas 52.27 105 P **P** **06 21 54.6 +1.3**
ICQ Pointe Anglais 52.30 55 IAmb IAmb 06 22 30.4
comp=Z,1µm,1.1s
K57A Scipio Center 52.31 67 IAmb IAmb 06 23 03.3
comp=Z,4µm,1.8s
K57A IAMs_20 IAMs_20 06 46 15.6
comp=Z,540µm,19.0s
X48A Hartselle 52.32 82 IAMs_20 IAMs_20 06 43 47.9
comp=Z,731µm,20.0s
TJN Taejon 52.39 282 P **P** **06 21 53.5 -0.2**
TJN Taejon 52.39 282 P **P** **06 21 54.2 +0.5**
SWET Sewanee 52.41 80 IAmb IAmb 06 22 32.4
comp=Z,4µm,1.9s
JNW Jan Mayen West 52.48 12 *e*P **P** **06 21 54.9 +1.0**
JNW IVmB_BB 06 22 18.8
comp=Z,66µm,9.4s
JNW *e*S **S** **06 29 20.3 +1.9**
JNW *e*SS **SS** **06 33 01.2 +5.7**
JNW IVMs_BB IVMs_BB 06 44 51.9
comp=Z,367µm,20.3s
JMIC Jan Mayen 52.51 12 LR LR 06 45 25.2
comp=Z,1198µm,20.3s,baz=340,slow=37
JMIC Jan Mayen 52.51 12 *e*P **P** **06 21 53.9 -0.2**
JMIC IVmB_BB 06 22 16.5
comp=Z,53µm,5.1s
JMIC *e*S **S** **06 29 19.7 +0.8**
JMIC *e*SS **SS** **06 32 59.6 +3.6**
JMIC IVMs_BB IVMs_BB 06 44 52.8
comp=Z,368µm,20.3s
JNE Jan Mayen East 52.53 12 *e*P **P** **06 21 53.9 -0.3**
JNE IVmB_BB 06 22 19.1
comp=Z,60µm,9.7s
JNE *e*S **S** **06 29 20.3 +1.2**
JNE *e*SS **SS** **06 33 01.2 +4.8**
JNE IVMs_BB IVMs_BB 06 44 53.0
comp=Z,384µm,20.5s
JMI Jan Mayen 52.54 12 *e*P **P** **06 21 54.9 +0.6**
JMI IVmB_BB 06 22 19.0
comp=Z,59µm,9.5s
JMI *e*S **S** **06 29 20.3 +1.1**
JMI *e*SS **SS** **06 32 57.4 +0.9**
JMI IVMs_BB IVMs_BB 06 44 53.5
comp=Z,355µm,20.4s
JTU Tsushima 52.57 278 P **P** **06 21 55.8 +0.8**
JTU Tsushima 52.57 278 ⇑P **P** **06 21 54.6 -0.4**
JTU Tsushima 52.57 278 P **P** **06 21 56.0 +1.0**
JTU Tsushima 52.57 278 P **P** **06 21 55.2 +0.2**
Q54A Coxs Mills 52.59 74 IAmb IAmb 06 22 49.1
comp=Z,2µm,1.3s
Q54A IAMs_20 IAMs_20 06 44 41.3
comp=Z,794µm,19.0s
Z47A Carrollton 52.65 84 IAmb IAmb 06 22 59.3
comp=Z,1µm,0.8s
MCWV Mont Chateau 52.66 72 IAMs_20 IAMs_20 06 47 07.1
comp=Z,703µm,19.0s
NCB Newcomb 52.66 65 IAmb IAmb 06 22 54.2
comp=Z,1µm,1.1s
JNU Nakatsue 52.74 276 LR LR 06 44 03.4
comp=Z,788µm,21.8s,baz=54,slow=36
JNU Nakatsue 52.74 276 P **P** **06 21 56.6 +0.2**
NRS Narsarsuaq 52.76 34 IAmb IAmb 06 22 34.0
comp=Z,3µm,1.2s
NRS Narsarsuaq 52.76 34 ⇑P **P** **06 21 55.5 -0.6**
NRS Narsarsuaq 52.76 34 P **P** **06 21 56.5 +0.4**
NRS Narsarsuaq 52.76 34 *i*P **P** **06 21 53.7 -2.4**
NRS IAmb IAmb 06 22 05.1
comp=Z,806nm,1.4s
NRS IVMs_BB IVMs_BB 06 47 42.7
comp=Z,329µm,16.0s
NRS IAMs_20 IAMs_20 06 47 46.2
comp=Z,892µm,16.0s
W50A Signal Mountai 52.77 80 IAmb IAmb 06 22 43.6
comp=Z,1µm,1.0s
W50A IAMs_20 IAMs_20 06 44 04.6
comp=Z,943µm,20.0s
XMAS Kiritimati 52.80 179 P **P** **06 22 01.3 +4.4**
XMAS Kiritimati 52.80 179 P **P** **06 21 58.9 +2.0**
XMAS IAmb IAmb 06 22 50.7
comp=Z,2µm,1.1s
XMAS Kiritimati 52.80 179 IAMs_20 IAMs_20 06 41 32.1
comp=Z,641µm,20.0s
XMAS Kiritimati 52.80 179 ⇓P **P** **06 21 57.5 +0.7**
XMAS Kiritimati 52.80 179 P **P** **06 21 59.3 +2.4**
TZTN Tazewell 52.80 78 IAmb IAmb 06 22 40.4
comp=Z,2µm,1.3s
TZTN Tazewell 52.80 78 ⇑P **P** **06 21 55.6 -1.2**
TZTN Tazewell 52.80 78 P **P** **06 21 55.9 -0.9**
M57A Sunshine Farm, 52.95 69 IAmb IAmb 06 22 43.8
comp=Z,3µm,1.5s
M57A IAMs_20 IAMs_20 06 46 56.8
comp=Z,816µm,18.0s
BINY Binghamton 52.96 67 IAmb IAmb 06 22 51.0
comp=Z,1µm,0.9s
BINY Binghamton 52.96 67 ⇑P **P** **06 21 56.9 -1.0**
BINY Binghamton 52.96 67 P **P** **06 21 57.1 -0.8**
IRK Irkutsk 53.10 310 *e*P **P** **06 21 58.1 -0.7**
IRK pmax pmax
comp=Z,2µm,3.2s
Y49A Blount Mountai 53.11 82 IAmb IAmb 06 23 01.3
comp=Z,3µm,1.6s
Y49A IAMs_20 IAMs_20 06 44 11.9
comp=Z,704µm,20.0s
D62A Allapoint, All 53.12 59 IAMs_20 IAMs_20 06 46 00.5
comp=Z,516µm,20.0s
S54A Ingess, Beckl 53.16 75 IAMs_20 IAMs_20 06 45 21.1
comp=Z,443µm,18.0s
346A Big Creek Wild 53.17 86 IAmb IAmb 06 23 22.7
comp=Z,2µm,1.1s
XLT XiLinHaoTe 53.24 296 *e*P **P** **06 22 00.0 0.0**
XLT S **S** **06 29 26.6 -3.1**
XLT pmax pmax
comp=Z,550nm,1.2s
XLT pmax pmax
comp=Z,70µm,7.7s
XLT L L
comp=Z,750µm,20.5s
XLT L L
comp=Z,1039µm,21.2s
TKL Tuckaleechee C 53.31 79 LR LR 06 45 46.1
comp=Z,553µm,18.9s,baz=325,slow=37
TKL Tuckaleechee C 53.31 79 IAmb IAmb 06 23 07.1
comp=Z,2µm,1.3s
TKL Tuckaleechee C 53.31 79 ⇑P **P** **06 21 58.9 -1.7**
LRAL Lakeview Retre 53.38 83 IAMs_20 IAMs_20 06 43 59.8
comp=Z,574µm,22.0s
LRAL Lakeview Retre 53.38 83 ⇓P **P** **06 21 59.3 -1.7**
Q56A Snyder Ridge, 53.45 72 IAmb IAmb 06 22 47.2
comp=Z,3µm,1.7s
Q56A IAMs_20 IAMs_20 06 47 32.2
comp=Z,652µm,20.0s
L59A Walton 53.47 67 IAmb IAmb 06 22 41.5
comp=Z,2µm,1.1s
R55A Marlinton 53.48 74 IAmb IAmb 06 22 56.1
comp=Z,4µm,1.8s
R55A IAMs_20 IAMs_20 06 45 07.9
comp=Z,654µm,19.0s
N58A Sunbury 53.52 69 IAmb IAmb 06 22 47.9
comp=Z,2µm,1.3s
N58A IAMs_20 IAMs_20 06 45 53.9
comp=Z,835µm,19.0s
KSPA Keystone Colle 53.53 68 IAmb IAmb 06 23 20.7
comp=Z,1µm,1.4s
W52A Murphy 53.63 79 IAmb IAmb 06 22 41.5
comp=Z,2µm,1.3s
LBNH Lisbon 53.66 63 IAMs_20 IAMs_20 06 45 59.0
comp=Z,676µm,20.0s
LBNH Lisbon 53.66 63 ⇑P **P** **06 22 01.5 -1.5**
G62A West of Eustis 53.68 61 IAmb IAmb 06 22 45.2
comp=Z,2µm,1.4s
G62A IAMs_20 IAMs_20 06 47 39.5
comp=Z,530µm,20.0s
TLY Talaya 53.77 310 LR LR 06 46 37.9
comp=Z,1008µm,20.9s,baz=38,slow=38
TLY Talaya 53.77 310 *c*P **P** **06 22 02.8 -0.9**
TLY pmax pmax
comp=Z,2µm,1.5s
TLY MLR MLR
comp=Z,887µm,17.0s
TLY Talaya 53.77 310 P **P** **06 22 03.6 -0.2**
TLY P **P** **06 22 03.6 -0.2**
TLY P **P** **06 22 03.6 -0.2**
TLY S **S** **06 29 41.6 +5.0**
TLY S **S** **06 29 41.6 +5.0**
TLY S **S** **06 29 41.6 +5.0**
TLY Talaya 53.77 310 P **P** **06 22 03.6 -0.2**
TLY IAmb IAmb 06 22 43.7
comp=Z,836nm,0.9s
TLY Talaya 53.77 310 ⇑P **P** **06 22 02.5 -1.2**
TLY Talaya 53.77 310 P **P** **06 22 03.8 +0.1**
P57A Homestead Farm 53.78 71 IAmb IAmb 06 22 47.2
comp=Z,1µm,1.0s
P57A IAMs_20 IAMs_20 06 47 13.8
comp=Z,809µm,19.0s
DL2 Dalian 53.79 288 P **P** **06 22 02.5 -1.4**
DL2 S **S** **06 29 35.0 -2.0**
DL2 ScS **ScS** **06 31 47.6 -4.1**
DL2 pmax pmax
comp=Z,2µm,1.0s
DL2 pmax pmax
comp=Z,82µm,11.7s
DL2 L L
comp=Z,853µm,21.0s
DL2 L L
comp=Z,1530µm,19.6s
U54A Nelsons Funny 53.79 76 IAmb IAmb 06 22 49.2
comp=Z,2µm,1.2s
U54A IAMs_20 IAMs_20 06 46 00.3
comp=Z,542µm,18.0s
TRY Troy 53.81 65 IAmb IAmb 06 23 02.1
comp=Z,4µm,1.9s
H62A Milan 53.82 62 IAmb IAmb 06 22 54.0
comp=Z,1µm,0.9s
H62A IAMs_20 IAMs_20 06 47 46.2
comp=Z,704µm,19.0s
V53A Saluda 53.84 78 IAMs_20 IAMs_20 06 46 27.9
comp=Z,849µm,19.0s
HNH Hanover 53.85 64 IAMs_20 IAMs_20 06 46 06.1
comp=Z,770µm,20.0s
J61A Chester 53.96 64 IAmb IAmb 06 22 53.7
comp=Z,2µm,1.5s
J61A IAMs_20 IAMs_20 06 45 58.1
comp=Z,660µm,21.0s
BLA Blacksburg 54.08 75 IAmb IAmb 06 23 02.2
comp=Z,1µm,1.0s
BLA IAMs_20 IAMs_20 06 47 20.8
comp=Z,478µm,18.0s
BLA Blacksburg 54.08 75 ⇑P **P** **06 22 04.9 -1.2**
JSU Suzuyama 54.17 275 P **P** **06 22 06.5 -0.4**
JSU IAmb IAmb 06 22 40.9
comp=Z,2µm,1.1s
JSU Suzuyama 54.17 275 ⇑P **P** **06 22 06.1 -0.8**
JSU Suzuyama 54.17 275 P **P** **06 22 06.9 +0.1**
JSU Suzuyama 54.17 275 P **P** **06 22 07.0 +0.1**
I62A Tamworth 54.22 63 IAMs_20 IAMs_20 06 46 15.8
comp=Z,651µm,20.0s
BG3 Lake Jocassee 54.27 78 IAmb IAmb 06 22 51.0
comp=Z,2µm,1.2s
PKME Peaks-Kenny Pk 54.27 60 IAmb IAmb 06 23 05.4
comp=Z,2µm,1.4s
PKME IAMs_20 IAMs_20 06 47 45.1
comp=Z,811µm,20.0s
JFU Fukue jima 2 54.30 277 P **P** **06 22 07.8 +0.1**
MVL Millersville 54.32 70 IAmb IAmb 06 22 53.4
comp=Z,1µm,1.3s
F64A Sherman 54.32 59 IAmb IAmb 06 23 05.5
comp=Z,3µm,1.4s
F64A IAMs_20 IAMs_20 06 47 38.3
comp=Z,723µm,18.0s
BATG Bathurst New B 54.44 57 IAmb IAmb 06 23 06.8
comp=Z,1µm,1.0s
I63A Otisfield 54.48 62 IAmb IAmb 06 23 13.1
comp=Z,3µm,1.6s

I63A IAMs_20 IAMs_20 06 46 32.7
comp=Z,533µm,20.0s
S57A Dark Hollow, R 54.49 73 IAmb IAmb 06 23 03.6
comp=Z,2µm,1.5s
S57A IAMs_20 IAMs_20 06 45 50.8
comp=Z,803µm,18.0s
L61B Northampton 54.53 65 IAMs_20 IAMs_20 06 46 17.2
comp=Z,504µm,20.0s
250A Grady 54.57 83 IAmb IAmb 06 23 05.8
comp=Z,2µm,1.0s
WVL Waterville 54.59 61 IAmb IAmb 06 22 51.5
comp=Z,2µm,1.6s
WVL IAMs_20 IAMs_20 06 47 46.3
comp=Z,534µm,19.0s
K62A Royalston 54.61 65 IAmb IAmb 06 22 46.4
comp=Z,890nm,0.9s
K62A IAMs_20 IAMs_20 06 46 19.2
comp=Z,520µm,19.0s
V55A Taylorsville 54.61 76 IAMs_20 IAMs_20 06 46 44.1
comp=Z,629µm,19.0s
KSCT Kent School, K 54.62 66 IAmb IAmb 06 22 49.8
comp=Z,1µm,0.9s
U56A King 54.72 75 IAmb IAmb 06 23 26.1
comp=Z,982nm,1.0s
BRAL Brewton 54.72 85 IAmb IAmb 06 23 30.4
comp=Z,2µm,1.2s
BRAL IAMs_20 IAMs_20 06 45 24.6
comp=Z,531µm,20.0s
BRAL Brewton 54.72 85 ⇑P **P** **06 22 10.4 -0.5**
ZAK Zakamensk 54.86 309 *e*P **P** **06 22 11.2 -0.5**
ZAK pmax pmax
comp=Z,1µm,1.8s
PAL Palisades 54.91 67 IAmb IAmb 06 23 30.7
comp=Z,1µm,1.1s
ULN Ulaanbaatar 54.92 305 *c i*P **P** **06 22 11.3 -1.0**
ULN pmax pmax
comp=Z,1µm,1.4s
ULN MLR MLR
comp=Z,2880µm,19.0s
ULN Ulaanbaatar 54.92 305 P **P** **06 22 11.8 -0.5**
ULN P **P** **06 22 11.8 -0.5**
ULN P **P** **06 22 11.8 -0.5**
ULN S **S** **06 29 51.4 -1.1**
ULN S **S** **06 29 51.4 -1.1**
ULN S **S** **06 29 51.4 -1.1**
ULN Ulaanbaatar 54.92 305 P **P** **06 22 11.7 -0.6**
ULN IAmb IAmb 06 23 02.1
comp=Z,1µm,1.1s
ULN Ulaanbaatar 54.92 305 ⇑P **P** **06 22 11.4 -1.0**
ULN Ulaanbaatar 54.92 305 P **P** **06 22 11.7 -0.6**
ULN Ulaanbaatar 54.92 305 P **P** **06 22 11.5 -0.9**
MOY Mondy 54.94 312 *e*P **P** **06 22 12.2 -0.1**
MOY pmax pmax
comp=Z,1µm,2.2s
R58B Mineral 54.94 72 IAmb IAmb 06 23 06.8
comp=Z,2µm,1.3s
R58B IAMs_20 IAMs_20 06 48 26.5
comp=Z,718µm,20.0s
152A Waverly Hall 54.95 82 IAMs_20 IAMs_20 06 44 49.4
comp=Z,814µm,22.0s
CPNY Central Park 55.03 67 IAmb IAmb 06 23 11.0
comp=Z,2µm,1.5s
CBN Corbin Frederi 55.04 72 IAmb IAmb 06 23 05.3
comp=Z,985nm,0.9s
CBN IAMs_20 IAMs_20 06 48 26.2
comp=Z,762µm,21.0s
CBN Corbin Frederi 55.04 72 ⇑P **P** **06 22 11.8 -1.3**
VADS Vadso 55.05 357 *e*P **P** **06 22 11.5 -1.1**
VADS IVmB_BB 06 22 56.9
comp=Z,34µm,10.8s
VADS *e*S **S** **06 29 55.2 +2.0**
VADS *e*SS **SS** **06 33 40.0 +4.0**
VADS IVMs_BB IVMs_BB 06 44 46.8
comp=Z,486µm,22.2s
KMSC Kings Mountain 55.06 77 IAmb IAmb 06 22 57.1
comp=Z,1µm,1.0s
HRV Adam Dziewonsk 55.07 64 P **P** **06 22 12.9 -0.3**
HRV pmax pmax
comp=Z,2µm,1.7s
HRV MLR MLR
comp=Z,540µm,21.0s
HRV Adam Dziewonsk 55.07 64 P **P** **06 22 12.9 -0.3**
HRV IAmb IAmb 06 23 17.6
comp=Z,2µm,1.6s
HRV Adam Dziewonsk 55.07 64 IAMs_20 IAMs_20 06 46 41.5
comp=Z,540µm,21.0s
HRV Adam Dziewonsk 55.07 64 ⇑P **P** **06 22 12.7 -0.6**
HRV Adam Dziewonsk 55.07 64 P **P** **06 22 13.5 +0.3**
WSPT Westport, CT 55.10 67 IAmb IAmb 06 23 05.7
comp=Z,2µm,1.0s
G65A Princeton 55.18 59 IAMs_20 IAMs_20 06 47 15.1
comp=Z,691µm,20.0s
N62A Caumsett State 55.20 67 IAmb IAmb 06 23 12.6
comp=Z,2µm,1.2s
HODGE Hodges 55.20 79 IAmb IAmb 06 22 57.8
comp=Z,1µm,1.2s
SONM Songino Array 55.26 305 P **P** **06 22 14.1 -0.6**
comp=Z,138nm,0.6s,baz=49,slow=6.3,SNR=240
SONM LR LR 06 48 27.3
comp=Z,1333µm,18.2s,baz=40,slow=39
SONM PKPPKP 06 52 20.9
comp=Z,3.9nm,1.0s,baz=193,slow=3.9,SNR=5.0
SONM P4KPbc 06 59 28.0
comp=Z,0.3nm,0.3s,baz=45,slow=4.8,SNR=1.3
comp=Z,138nm,0.6s
SONM Songino Array 55.26 305 P **P** **06 22 14.2 -0.5**
SONM pmax pmax
comp=Z,3µm,1.4s
SONM Songino Array 55.26 305 P **P** **06 22 14.2 -0.5**
SONM IAmb IAmb 06 22 37.4
comp=Z,3µm,1.4s
WES Weston 55.28 64 IAmb IAmb 06 22 51.0
comp=Z,996nm,0.9s
WES IAMs_20 IAMs_20 06 46 48.0
comp=Z,538µm,20.0s
P61A Hammonton 55.39 69 IAmb IAmb 06 24 00.4
comp=Z,3µm,1.5s
P61A IAMs_20 IAMs_20 06 47 09.2
comp=Z,763µm,19.0s
BCX Boston College 55.40 64 IAmb IAmb 06 23 19.7
comp=Z,3µm,2.0s
BCX IAMs_20 IAMs_20 06 46 52.0
comp=Z,503µm,20.0s
KEV Kevo 55.48 358 P **P** **06 22 15.4 -0.4**
KEV IAmb IAmb 06 22 39.2
comp=Z,1µm,0.7s
KEV IAMs_20 IAMs_20 06 44 46.8
comp=Z,797µm,22.0s
KEV Kevo 55.48 358 ⇑P **P** **06 22 14.5 -1.3**
KEV Kevo 55.48 358 P **P** **06 22 14.3 -1.4**
KEV S **S** **06 29 57.5 -1.4**
KEV Kevo 55.48 358 P **P** **06 22 15.8 0.0**
KEV Kevo 55.48 358 P **P** **06 22 14.0 -1.8**
MOIG Morelia 55.51 106 IAmb IAmb 06 23 08.9
comp=Z,2µm,1.1s
EMMW East Machias 55.59 60 IAmb IAmb 06 23 02.1
comp=Z,855nm,0.8s
EMMW IAMs_20 IAMs_20 06 48 34.8
comp=Z,747µm,19.0s
GGN Saint George 55.60 59 IAmb IAmb 06 23 04.5
comp=Z,2µm,1.5s
M63A Gales Ferry 55.60 66 IAmb IAmb 06 23 09.3
comp=Z,2µm,0.9s
M63A IAMs_20 IAMs_20 06 47 42.7
comp=Z,656µm,18.0s
TRO Tromso 55.66 1 *e*P **P** **06 22 16.3 -0.7**
TRO IVmB_BB 06 23 04.4
comp=Z,44µm,5.7s
TRO *e*S **S** **06 30 02.9 +1.7**
TRO *e*SS **SS** **06 33 47.8 +2.2**
TRO IVMs_BB IVMs_BB 06 44 02.3
comp=Z,367µm,23.3s
352A Blakely 55.71 83 IAmb IAmb 06 22 55.8
comp=Z,2µm,1.2s
JSC Jenkinsville 55.73 78 IAmb IAmb 06 23 09.9
comp=Z,2µm,1.4s
ARA0 ARCESS Array S 55.73 358 *e*P **P** **06 22 16.3 -1.3**
ARA0 IVmB_BB 06 23 02.4
comp=Z,36µm,9.4s
ARA0 *e*S **S** **06 30 02.9 +0.6**
ARA0 *e*SS **SS** **06 33 51.6 +4.7**
ARA0 IVMs_BB IVMs_BB 06 44 03.6
comp=Z,269µm,23.9s
ARCES ARCESS Array B 55.73 358 P **P** **06 22 16.3 -1.4**
comp=Z,98nm,0.8s,baz=3.3,slow=8.5,SNR=75
ARCES LR LR 06 48 18.9
comp=Z,585µm,19.1s,baz=353,slow=38
ARCES PKPPKP 06 52 21.3
comp=Z,9.9nm,0.9s,baz=195,slow=3.8,SNR=5.9
ARCES PKP2ab **P'P'ab** **06 52 53.6 -6.2**
comp=Z,23nm,1.0s,baz=199,slow=2.6,SNR=4.8
ARCES P4KPbc 06 59 28.8
comp=Z,0.5nm,0.5s,baz=212,slow=15,SNR=5.1
comp=Z,98nm,0.8s
ARCES ARCESS Array B 55.73 358 P **P** **06 22 17.2 -0.5**
ARCES pmax pmax
comp=Z,1µm,1.2s
ARCES ARCESS Array B 55.73 358 P **P** **06 22 17.1 -0.5**
ARCES IAmb IAmb 06 22 42.0
comp=Z,1µm,1.1s
JETT Jettan, Norway 55.74 0 *e*P **P** **06 22 16.8 -1.0**
JETT IVmB_BB 06 22 59.3
comp=Z,39µm,6.3s
JETT *e*S **S** **06 30 03.6 +1.0**
JETT *e*SS **SS** **06 33 51.6 +4.5**
JETT IVMs_BB IVMs_BB 06 43 40.1
comp=Z,162µm,24.4s
W57A Gilead 55.80 76 IAmb IAmb 06 23 02.8
comp=Z,2µm,1.5s
V58A Windy Hill, Pi 55.82 75 IAMs_20 IAMs_20 06 49 53.1
comp=Z,497µm,18.0s
T59A Double "B" Far 55.83 73 IAMs_20 IAMs_20 06 46 41.2
comp=Z,768µm,18.0s
L64A Middleborough 55.85 64 IAmb IAmb 06 23 23.0
comp=Z,1µm,1.4s
L64A IAMs_20 IAMs_20 06 47 06.2
comp=Z,492µm,20.0s
451A Vernon 55.88 84 IAmb IAmb 06 23 38.2
comp=Z,2µm,1.2s
154A Montrose 55.91 81 IAmb IAmb 06 23 17.8
comp=Z,2µm,1.0s
BIRD Birdtown, Kers 55.91 77 IAmb IAmb 06 23 02.4
comp=Z,1µm,1.5s
BJI2 Beijing 55.94 293 P **P** **06 22 19.4 -0.1**
BJI2 S **S** **06 30 03.0 -2.9**
BJI2 pmax pmax
comp=Z,110nm,0.9s
BJI2 pmax pmax
comp=Z,34µm,11.6s
BJI2 L L
comp=Z,414µm,20.6s
BJI2 L L
comp=Z,452µm,18.6s
BJI2 L L
comp=Z,799µm,20.2s
BJT Baijiatuan 55.94 293 P **P** **06 22 18.9 -0.6**
LMN Caledonia Moun 56.07 57 IAmb IAmb 06 23 18.2
comp=Z,1µm,1.0s
BORG Borgarnes 56.16 21 LR LR 06 46 53.6
comp=Z,535µm,21.9s,baz=336,slow=37
BORG Borgarnes 56.16 21 P **P** **06 22 22.3 +1.6**
BORG pmax pmax
comp=Z,4µm,1.2s
BORG MLR MLR
comp=Z,495µm,21.0s
BORG Borgarnes 56.16 21 P **P** **06 22 22.3 +1.6**
BORG Borgarnes 56.16 21 IAMs_20 IAMs_20 06 47 03.7
comp=Z,495µm,21.0s
BORG Borgarnes 56.16 21 ⇑P **P** **06 22 21.3 +0.6**
BORG Borgarnes 56.16 21 P **P** **06 22 22.5 +1.8**
M65A Busby, Falmout 56.22 64 IAMs_20 IAMs_20 06 47 17.9
comp=Z,454µm,18.0s
M65A Busby, Falmout 56.22 64 P **P** **06 22 20.5 -0.9**
baz=316
KTK1 Kautokeino 56.29 359 *e*P **P** **06 22 20.2 -1.4**
KTK1 IVmB_BB 06 23 08.3
comp=Z,33µm,5.4s
KTK1 *e*S **S** **06 30 10.7 +0.9**
KTK1 *e*SS **SS** **06 33 59.4 +3.8**
KTK1 IVMs_BB IVMs_BB 06 43 26.7
comp=Z,144µm,25.4s
Y57A Sumter 56.41 77 IAmb IAmb 06 23 07.1
comp=Z,2µm,1.4s
Y57A IAMs_20 IAMs_20 06 48 33.8
comp=Z,502µm,19.0s
TIGA Tifton 56.50 82 IAmb IAmb 06 23 05.9
comp=Z,1µm,1.4s
TIGA IAMs_20 IAMs_20 06 45 57.5
comp=Z,684µm,22.0s
X58A Rowland 56.60 76 IAMs_20 IAMs_20 06 47 46.9
comp=Z,506µm,18.0s
W59A Clinton 56.66 75 IAmb IAmb 06 23 08.0
comp=Z,1µm,1.2s
W59A IAMs_20 IAMs_20 06 50 18.2
comp=Z,567µm,19.0s
Y58A Scranton 56.90 77 IAmb IAmb 06 23 10.8
comp=Z,1µm,0.9s
Y58A IAMs_20 IAMs_20 06 48 13.2
comp=Z,742µm,18.0s
UNM Universidad Na 56.91 104 IAMs_20 IAMs_20 06 45 49.8
comp=Z,585µm,20.0s
UNM Universidad Na 56.91 104 P **P** **06 22 29.5 +2.5**
553A Crawfordville 56.95 84 IAMs_20 IAMs_20 06 50 30.6
comp=Z,477µm,21.0s
DRLN Deer Lake 56.97 50 IAmb IAmb 06 23 20.8
comp=Z,1µm,1.0s
DRLN Deer Lake 56.97 50 ⇓P **P** **06 22 25.2 -1.5**
JAM Amami Oshima 56.97 273 P **P** **06 22 27.2 +0.2**
LVZ Lovozero 57.02 354 *c i*P **P** **06 22 25.5 -1.4**
LVZ pmax pmax
comp=Z,3µm,1.0s
LVZ MLR MLR
comp=Z,1186µm,21.0s
LVZ Lovozero 57.02 354 P **P** **06 22 26.3 -0.6**
LVZ Lovozero 57.02 354 P **P** **06 22 26.5 -0.4**
comp=Z,59µmcomp=Z,3µm,1.0s
LVZ Lovozero 57.02 354 P **P** **06 22 25.9 -1.0**
LOF Lofoten 57.04 4 *e*P **P** **06 22 25.1 -1.8**
LOF IVmB_BB 06 22 50.0
comp=Z,39µm,20.9s
LOF *e*S **S** **06 30 22.3 +2.7**
LOF *e*SS **SS** **06 34 11.0 +3.7**
LOF IVMs_BB IVMs_BB 06 48 55.4
comp=Z,186µm,18.2s
NHSC New Hope 57.20 78 ⇑P **P** **06 22 27.4 -1.1**
KNGR Kungurtug, Tuv 57.20 313 *c i*P **P** **06 22 29.1 +0.6**
KNGR pmax pmax
comp=Z,1µm,1.0s
KNGR MLR MLR
comp=Z,875µm,16.0s
V61A Roper 57.23 73 IAMs_20 IAMs_20 06 49 59.3
comp=Z,749µm,19.0s
LANU Lannavaara 57.26 360 *e*P **P** **06 22 26.2 -2.4**
STEI Steigen 57.29 3 *e*P **P** **06 22 27.1 -1.6**
STEI IVmB_BB 06 22 51.9
comp=Z,33µm,10.3s
STEI *e*S **S** **06 30 22.3 -0.7**
STEI *e*SS **SS** **06 34 14.9 +3.5**
STEI IVMs_BB IVMs_BB 06 43 32.2
comp=Z,241µm,25.6s
RGRS Roger Stewart 57.34 78 IAmb IAmb 06 23 10.1
comp=Z,2µm,1.3s
CSU Charleston Sou 57.35 78 IAmb IAmb 06 23 18.2
comp=Z,2µm,1.1s
APA Apatity 57.42 355 *i* P **P** **06 22 28.2 -1.4**
APA *i* S **S** **06 30 22.4 -2.3**
APA *i* SS **SS** **06 34 21.2 +7.9**
APA pmax pmax
comp=Z,568nm,0.9s
HAL Halifax 57.54 57 IAmb IAmb 06 23 39.5
comp=Z,923nm,1.1s
257A Skidaway Islan 57.56 80 IAmb IAmb 06 23 14.3
comp=Z,2µm,1.1s
Y60A Bolivia 57.64 76 IAMs_20 IAMs_20 06 50 34.2
comp=Z,465µm,21.0s
HHC Hu-ho-hao-te 57.76 296 ⇑ *i*P **P** **06 22 32.0 -0.5**
HHC sP sP 06 22 45.0 +2.7
HHC S **S** **06 30 26.3 -3.8**
HHC sS pS 06 30 38.9 +0.3
HHC pmax pmax
comp=Z,1µm,1.5s
HHC L L
comp=Z,674µm,19.3s
HHC L L
comp=Z,1137µm,23.0s
SGF Sodankyl 57.81 358 P **P** **06 22 31.7 -0.7**
SGF Sodankyl 57.81 358 P **P** **06 22 31.8 -0.5**
FAUS Fauske 57.84 3 *e*P **P** **06 22 31.4 -1.1**
FAUS IVmB_BB 06 22 55.8
comp=Z,36µm,13.4s
FAUS *e*S **S** **06 30 30.1 -0.2**
FAUS *e*SS **SS** **06 34 22.6 +2.6**
FAUS IVMs_BB IVMs_BB 06 44 00.4
comp=Z,269µm,24.8s
456A Hilliard 57.92 81 IAmb IAmb 06 23 31.6
comp=Z,2µm,1.4s
GBN Guysborough 57.97 56 IAmb IAmb 06 23 20.8
comp=Z,2µm,1.2s
JMZ Minamidaito 2 58.01 270 P **P** **06 22 34.7 +0.4**
JMZ Minamidaito 2 58.01 270 P **P** **06 22 34.3 0.0**
JMZ Minamidaito 2 58.01 270 ⇑P **P** **06 22 33.4 -0.9**
JMZ Minamidaito 2 58.01 270 P **P** **06 22 37.2 +2.9**
TIA Tai'an 58.20 289 P **P** **06 22 35.4 -0.2**
TIA S **S** **06 30 36.6 +0.8**
TIA pmax pmax
comp=Z,130nm,1.3s
TIA pmax pmax
comp=Z,84µm,11.7s
TIA L L
comp=Z,285µm,22.0s
TIA L L
comp=Z,1267µm,24.0s
TIA L L
comp=Z,1715µm,23.1s
TARA Tarawa 58.31 214 P **P** **06 22 40.3 +3.8**
TARA Tarawa 58.31 214 P **P** **06 22 38.4 +1.9**
VAGH Vaagaholmen 58.43 4 *e*P **P** **06 22 35.9 -0.8**
VAGH IVmB_BB 06 23 24.1
comp=Z,38µm,6.7s
VAGH *e*PP **PP** **06 24 46.2 +0.8**
VAGH *e*S **S** **06 30 37.8 0.0**
VAGH *e*SS **SS** **06 34 34.3 +5.1**
VAGH IVMs_BB IVMs_BB 06 45 08.4
comp=Z,191µm,22.7s
HNS HongShan 58.63 291 ⇑P **P** **06 22 38.3 -0.2**
HNS sP **sP** **06 22 52.0 +3.7**
HNS S **S** **06 30 38.8 -2.5**
HNS pmax pmax
comp=Z,1µm,0.9s
HNS pmax pmax
comp=Z,33µm,6.9s
HNS L L
comp=Z,594µm,19.6s
HNS L L
comp=Z,1346µm,20.6s
656A Willston 58.65 83 IAmb IAmb 06 23 37.0
comp=Z,1µm,1.2s
656A IAMs_20 IAMs_20 06 48 19.5
comp=Z,460µm,20.0s
KONS Konsvik 58.65 4 *e*P **P** **06 22 37.3 -0.9**
KONS IVmB_BB 06 23 01.7
comp=Z,33µm,10.4s
KONS *e*PP **PP** **06 24 48.5 +1.0**
KONS *e*S **S** **06 30 41.7 +0.9**
KONS *e*SS **SS** **06 34 34.3 +1.5**
KONS IVMs_BB IVMs_BB 06 45 15.5
comp=Z,201µm,22.4s
TLIG Tlapa 58.67 105 IAmb IAmb 06 23 35.1
comp=Z,2µm,1.4s
BTO2 Baotou 58.70 297 *e*P **P** **06 22 38.0 -1.2**
BTO2 sP **pP** **06 22 46.0 -0.2**
BTO2 PP **PP** **06 24 46.4 -2.3**
BTO2 S **S** **06 30 43.1 +0.6**
BTO2 SS **SS** **06 34 36.0 +1.1**
BTO2 pmax pmax
comp=Z,410nm,1.2s
BTO2 pmax pmax
comp=Z,165µm,11.9s
BTO2 L L
comp=Z,1717µm,18.6s
BTO2 L L
comp=Z,1723µm,18.8s
BTO2 L L
comp=Z,1765µm,21.2s
RAUS Rausandaksla 58.75 3 *e*P **P** **06 22 38.3 -0.7**
RAUS IVmB_BB 06 23 00.0
comp=Z,34µm,3.7s
RAUS *e*PP **PP** **06 24 49.9 +1.5**
RAUS *e*S **S** **06 30 41.7 -0.4**
RAUS *e*SS **SS** **06 34 38.1 +3.8**
RAUS IVMs_BB IVMs_BB 06 50 05.2
comp=Z,182µm,18.4s
STOK Stokkvaagen 58.82 4 *e*P **P** **06 22 38.4 -1.0**
STOK IVmB_BB 06 23 02.7
comp=Z,44µm,10.0s
STOK *e*PP **PP** **06 24 50.3 +1.4**
STOK *e*S **S** **06 30 41.7 -1.2**
STOK *e*SS **SS** **06 34 38.9 +3.6**
STOK IVMs_BB IVMs_BB 06 45 19.2
comp=Z,209µm,22.9s
JOW Kunigami 58.93 273 LR LR 06 46 23.8
comp=Z,317µm,21.6s,baz=40,slow=34
JOW Kunigami 58.93 273 P **P** **06 22 40.5 -0.3**
JOW Kunigami 58.93 273 ⇑P **P** **06 22 40.0 -0.8**
JOW Kunigami 58.93 273 P **P** **06 22 40.3 -0.5**
MOR8 Moi Rana 59.03 3 *e*P **P** **06 22 38.8 -2.1**
MOR8 IVmB_BB 06 23 03.1
comp=Z,34µm,10.2s
MOR8 *e*PP **PP** **06 24 51.7 +0.9**
MOR8 *e*S **S** **06 30 43.4 -2.4**
MOR8 *e*SS **SS** **06 34 39.5 +0.8**
MOR8 IVMs_BB IVMs_BB 06 44 30.5
comp=Z,176µm,24.1s
LEIR Leirfjorden 59.04 4 *e*P **P** **06 22 40.3 -0.7**
LEIR IVmB_BB 06 23 01.6
comp=Z,36µm,5.5s
LEIR *e*PP **PP** **06 24 52.9 +2.0**
LEIR *e*S **S** **06 30 45.6 -0.3**
LEIR *e*SS **SS** **06 34 42.0 +3.2**
LEIR IVMs_BB IVMs_BB 06 45 37.8
comp=Z,214µm,23.3s
PATS Pohnpei 59.06 232 P **P** **06 22 43.8 +2.1**
PATS Pohnpei 59.06 232 P **P** **06 22 43.8 +2.1**
I46RU ZALESOVO INFRA 59.55 322 P **P** **06 22 42.2 -2.5**
baz=24,slow=5.3,SNR=1.7
ZAA0 Zalesovo Array 59.55 322 P **P** **06 22 44.4 -0.3**
ZAA0 IAmb IAmb 06 23 07.5
comp=Z,2µm,1.5s
ZALV Zalesovo Beam 59.55 322 P **P** **06 22 43.9 -0.8**
comp=Z,112nm,0.6s,baz=45,slow=4.6,SNR=188
ZALV LR LR 06 49 58.8
comp=Z,934µm,20.9s,baz=43,slow=38
ZALV PKPPKP P'P'bc 06 52 13.8 -17
comp=Z,8.7nm,0.9s,baz=241,slow=3.1,SNR=9.6
ZALV PKP2ab 06 52 35.0
comp=Z,14nm,1.0s,baz=223,slow=3.3,SNR=7.5
comp=Z,112nm,0.6s
ZALV Zalesovo Beam 59.55 322 P **P** **06 22 44.9 +0.2**
ZALV Zalesovo Beam 59.55 322 P **P** **06 22 44.9 +0.2**
TIY Taiyuan 59.61 293 P **P** **06 22 45.9 +0.4**
TIY ScP **ScP** **06 27 26.9 -4.8**
TIY S **S** **06 30 50.8 -3.4**
TIY pmax pmax
comp=Z,320nm,0.9s
TIY pmax pmax
comp=Z,34µm,6.5s
TIY L L
comp=Z,464µm,15.1s
TIY L L
comp=Z,797µm,22.4s
SSE Sheshan 59.75 282 P **P** **06 22 44.9 -1.5**
SSE pP **pP** **06 22 53.8 +0.4**
SSE S **S** **06 30 53.5 -2.5**
SSE sS **sS** **06 31 08.1 +0.5**
SSE pmax pmax
comp=Z,5µm,6.1s
GUMO Guam 60.04 250 LR LR 06 45 26.8
comp=Z,262µm,21.9s,baz=42,slow=33
GUMO Guam 60.04 250 P **P** **06 22 48.3 -0.2**
GUMO Guam 60.04 250 P **P** **06 22 48.8 +0.3**
GUMO Guam 60.04 250 ⇑P **P** **06 22 45.9 -2.6**
GUMO Guam 60.04 250 P **P** **06 22 48.1 -0.4**
OUL Oulu 60.19 358 P **P** **06 22 47.9 -1.0**
OUL Oulu 60.19 358 P **P** **06 22 48.2 -0.7**
DWPF Disney Wildern 60.23 83 P **P** **06 22 49.0 -0.7**
DWPF IAmb IAmb 06 23 48.7
comp=Z,1µm,1.3s
DWPF Disney Wildern 60.23 83 IAMs_20 IAMs_20 06 49 27.4
comp=Z,443µm,19.0s
DWPF Disney Wildern 60.23 83 ⇑P **P** **06 22 48.8 -0.9**
DWPF Disney Wildern 60.23 83 *e*P P 06 22 44.8 -4.9
DWPF Disney Wildern 60.23 83 P **P** **06 22 49.8 +0.1**
NJ2 Nanjing 60.34 284 ⇑P **P** **06 22 50.0 -0.4**
NJ2 pP **pP** **06 22 57.0 -0.5**
NJ2 S **S** **06 31 04.9 +1.4**
NJ2 pmax pmax
comp=Z,800nm,0.8s

NJ2 pmax pmax
comp=Z,142µm,9.0s
NJ2 L L
comp=Z,1480µm,21.8s
NJ2 L L
comp=Z,1367µm,24.6s
NSS Namsos 60.57 5 *e*P **P 06 22 50.5 -1.0**
NSS IVmB_BB 06 23 14.8
comp=Z,39µm,10.3s
NSS *e*PP **PP 06 25 04.5 +0.1**
NSS *e*S **S 06 31 05.0 -0.6**
NSS *e*SS **SS 06 35 05.3 +2.4**
NSS IVMs_BB IVMs_BB 06 46 33.4
comp=Z,193µm,23.0s
ADZR Andozero 60.68 352*c i*P **P 06 22 51.2 -1.0**
ADZR S **S 06 31 04.5 -2.5**
ADZR pmax pmax
comp=Z,3µm,1.5s
ADZR pmax pmax
comp=Z,21µm,4.5s
ADZR MLR MLR
comp=Z,1378µm,22.0s
CMIG Matias Romero 61.12 102 LR LR 06 47 31.9
comp=Z,565µm,21.6s,baz=316,slow=34
CMIG PKP2bc 06 52 20.0
comp=Z,9.3nm,1.0s,baz=139,slow=6.3,SNR=7.4
SOFL Sornfelli, Far 61.15 15⇑*e*P **P 06 22 55.6 +0.1**
SOFL IAMs_20 IAMs_20 06 49 13.5
comp=Z,1846µm,20.7s
060A Indiantown 61.66 83 P **P 06 22 59.4 0.0**
060A IAmb IAmb 06 24 09.1
comp=Z,1µm,0.8s
060A IAMs_20 IAMs_20 06 49 09.3
comp=Z,681µm,22.0s
LYN LuoYang 61.97 291⇑*i*P **P 06 23 01.8 +0.4**
LYN pP pP 06 23 09.0 +0.5
LYN S **S 06 31 25.1 +0.9**
LYN sS pS 06 31 33.0 +0.1
LYN pmax pmax
comp=Z,1µm,1.0s
LYN pmax pmax
comp=Z,98µm,8.1s
LYN L L
comp=Z,944µm,19.9s
LYN L L
comp=Z,1024µm,20.4s
LYN L L
comp=Z,1598µm,22.2s
DGZ Jazzator, Alta 62.00 318*c i*P **P 06 23 01.3 -0.3**
DGZ pmax pmax
comp=Z,2µm,1.7s
DGZ MLR MLR
comp=Z,2941µm,20.0s
JOF Joensuu 62.16 355 *e*P **P 06 23 02.1 -0.2**
JMJ Miyako jima 2 62.19 274 P **P 06 23 05.1 +2.1**
MOL Molde 62.26 7 *e*P **P 06 23 02.4 -0.5**
MOL IVmB_BB 06 23 26.8
comp=Z,45µm,10.4s
MOL *e*S **S 06 31 24.3 -2.7**
MOL *e*SS **SS 06 35 32.4 +3.1**
MOL IVMs_BB IVMs_BB 06 47 57.5
comp=Z,152µm,25.4s
VAF Ylistaro 62.28 359 *e*P **P 06 23 02.1 -1.0**
TEIG Tepich 62.39 94 P **P 06 23 04.2 -0.2**
TEIG IAmb IAmb 06 23 44.8
comp=Z,1µm,1.4s
TEIG Tepich 62.39 94 P **P 06 23 05.9 +1.5**
comp=Z,356µmcomp=Z,38µmcomp=Z,442nm,1.1s
TEIG Tepich 62.39 94 P **P 06 23 04.9 +0.5**
SUF Sumiainen 62.55 358 *e*P **P 06 23 03.4 -1.5**
AKN Aaknes 62.61 8 *e*P **P 06 23 04.8 -0.5**
AKN IVmB_BB 06 23 27.3
comp=Z,50µm,4.5s
AKN *e*S **S 06 31 32.1 +0.6**
AKN *e*SS **SS 06 35 36.3 +1.5**
AKN IVMs_BB IVMs_BB 06 48 05.9
comp=Z,172µm,26.7s
DOMB Dombas 62.89 7 *e*P **P 06 23 06.2 -1.0**
DOMB IVmB_BB 06 23 30.6
comp=Z,47µm,21.1s
DOMB *e*S **S 06 31 36.0 +0.9**
DOMB *e*SS **SS 06 35 40.1 +0.9**
DOMB IVMs_BB IVMs_BB 06 48 03.6
comp=Z,203µm,25.1s
FOO Floro 63.02 9 *e*P **P 06 23 07.3 -0.7**
FOO IVmB_BB 06 23 31.8
comp=Z,37µm,19.6s
FOO *e*S **S 06 31 39.8 +3.2**
FOO *e*SS **SS 06 35 44.7 +3.5**
FOO IVMs_BB IVMs_BB 06 49 28.7
comp=Z,161µm,22.6s
KEF Keuruu 63.14 358 *e*P **P 06 23 07.4 -1.4**
SOR Soroa 63.42 88 *e*P **P 06 23 07.8 -3.5**
SOR Soroa 63.42 88 P **P 06 23 11.0 -0.3**
SUE Sulen 63.53 9 *e*P **P 06 23 10.2 -1.1**
SUE IVmB_BB 06 23 35.3
comp=Z,42µm,20.6s
SUE *e*PP **PP 06 25 31.4 +0.9**
SUE *e*S **S 06 31 41.5 -1.4**
SUE *e*SS **SS 06 35 53.3 +4.2**
SUE IVMs_BB IVMs_BB 06 49 43.2
comp=Z,121µm,23.2s
HYA Hoyanger 63.55 8 *e*P **P 06 23 11.2 -0.3**
HYA IVmB_BB 06 23 33.2
comp=Z,38µm,4.8s
HYA *e*PP **PP 06 25 31.9 +1.2**
HYA *e*S **S 06 31 43.1 -0.1**
HYA *e*SS **SS 06 35 52.6 +3.3**
HYA IVMs_BB IVMs_BB 06 49 44.7
comp=Z,136µm,22.2s
KLMR Klimovskoe 63.60 350*c i*P **P 06 23 10.7 -1.1**
KLMR PPP PPP 06 26 59.2
KLMR S **S 06 31 44.8 +1.0**
KLMR SS **SS 06 35 52.4 +2.2**
KLMR pmax pmax
comp=Z,3µm,1.2s
KLMR MLR MLR
comp=Z,294µm,20.0s
YOJ Yonaguni jima 63.77 276 P **P 06 23 12.4 -1.1**
YOJ Yonaguni jima 63.77 276 P **P 06 23 12.3 -1.3**
YOJ Yonaguni jima 63.77 276 P **P 06 23 12.2 -1.3**
LRW Lerwick 63.80 12⇑*e*P **P 06 23 13.3 +0.2**
LRW IAMs_20 IAMs_20 06 48 59.6
comp=Z,878µm,23.6s
FINES FINESS Array B 63.84 358 P **P 06 23 12.7 -0.7**
comp=Z,364nm,0.7s,baz=15,slow=8.1,SNR=154
FINES LR LR 06 51 53.6
comp=Z,354µm,20.9s,baz=18,slow=37
FINES PKPPKP **P'P'df 06 52 07.8 -6.4**
comp=Z,13nm,0.9s,baz=190,slow=5.8,SNR=8.0
FINES P4KPbc 07 00 00.2
comp=Z,7.2nm,1.0s,baz=223,slow=10,SNR=4.5
comp=Z,364nm,0.7s
WHN Wuhan 63.99 287⇑P **P 06 23 14.3 -0.6**
WHN pP **pP 06 23 22.9 +0.9**
WHN sP **sP 06 23 28.3 +3.6**
WHN S **S 06 31 49.4 -0.1**
WHN SS **SS 06 35 59.5 +1.8**
WHN pmax pmax
comp=Z,5µm,1.1s
WHN pmax pmax
comp=Z,121µm,6.5s
WHN L L
comp=Z,1007µm,15.6s
WHN L L
comp=Z,1202µm,17.0s
NB2 NORSAR Subarra 64.02 6 P **P 06 23 14.9 +0.2**
comp=Z,3µm,1.2s,baz=354,slow=6.9
NB2 NORSAR Subarra 64.02 6 P **P 06 23 14.9 +0.2**
NOA NORSAR Array B 64.02 6 P **P 06 23 14.0 -0.6**
comp=Z,158nm,1.1s,baz=64,slow=20,SNR=69
NOA LR LR 06 49 37.0
comp=Z,412µm,21.8s,baz=0.0,slow=35
NOA PKPPKP 06 52 07.5
comp=Z,8.1nm,0.9s,baz=160,slow=2.4,SNR=5.7
comp=Z,158nm,1.1s
SVE Sverdlovsk 64.06 337*de*P **P 06 23 14.7 -0.3**
SVE *e* 06 25 43.7
SVE *e*S **S 06 31 51.0 +1.2**
SVE pmax pmax
comp=Z,4µm,1.4s
SVE pmax pmax
comp=Z,63µm,18.0s
PETF Flores 64.10 98 IAmb IAmb 06 24 06.4
comp=Z,913nm,1.2s

ASK Askoy 64.14 9 *e*P **P 06 23 14.6 -0.7**
ASK IVmB_BB 06 23 37.2
comp=Z,40µm,4.7s
ASK *e*PP **PP 06 25 35.5 -0.3**
ASK *e*S **S 06 31 51.5 +1.0**
ASK *e*SS **SS 06 35 59.5 +1.0**
ASK IVMs_BB IVMs_BB 06 50 01.8
comp=Z,146µm,23.0s
CAMR Camarioca 64.15 86 *e*P P 06 23 10.3 -5.8
SKAR Skarslia 64.19 7 *e*P **P 06 23 15.6 -0.2**
SKAR IVmB_BB 06 23 39.7
comp=Z,44µm,19.6s
SKAR *e*S **S 06 31 51.9 +0.5**
SKAR *e*SS **SS 06 36 02.7 +3.1**
SKAR IVMs_BB IVMs_BB 06 49 06.2
comp=Z,189µm,25.1s
NAO01 NORSAR Array S 64.19 6 P **P 06 23 16.1 +0.3**
BER Bergen 64.25 9 *e*P **P 06 23 15.6 -0.5**
BER IVmB_BB 06 23 40.3
comp=Z,43µm,21.5s
BER *e*PP **PP 06 25 37.7 +0.9**
BER *e*S **S 06 31 51.5 -0.4**
BER *e*SS **SS 06 36 03.4 +3.1**
BER IVMs_BB IVMs_BB 06 50 04.2
comp=Z,135µm,23.0s
TATO Taipei 64.25 277 P **P 06 23 18.0 +1.3**
TATO Taipei 64.25 277 P **P 06 23 15.8 -0.9**
TATO P **P 06 23 15.8 -0.9**
TATO S **S 06 31 49.6 -3.3**
TATO S **S 06 31 49.6 -3.3**
TATO Taipei 64.25 277 P **P 06 23 17.7 +1.0**
TATO IAmb IAmb 06 24 04.2
comp=Z,1µm,1.1s
TATO Taipei 64.25 277 P **P 06 23 13.3 -3.4**
XAN Xi'an 64.25 293⇑P **P 06 23 16.1 -0.6**
XAN pP pP 06 23 23.8 0.0
XAN S **S 06 31 51.6 -1.3**
XAN sS pS 06 32 00.5 -1.1
XAN pmax pmax
comp=Z,2µm,1.4s
XAN pmax pmax
comp=Z,98µm,11.9s
XAN L L
comp=Z,611µm,18.6s
XAN L L
comp=Z,710µm,20.6s
XAN L L
comp=Z,845µm,22.0s
XAN Xi'an 64.25 293 P **P 06 23 13.8 -2.8**
RAF Rauma 64.31 360 *e*P **P 06 23 14.7 -1.8**
NC602 NORSAR Array S 64.34 5 *e*P **P 06 23 15.6 -1.1**
NC602 IVmB_BB 06 23 40.3
comp=Z,41µm,10.0s
NC602 *e*PP **PP 06 25 39.0 +1.4**
NC602 *e*S **S 06 31 51.5 -1.6**
NC602 *e*SS **SS 06 36 03.4 +1.7**
NC602 IVMs_BB IVMs_BB 06 50 05.1
comp=Z,179µm,21.9s
KURK Kurchatov 64.38 324*c i*P **P 06 23 16.6 -0.5**
KURK pmax pmax
comp=Z,2µm,0.9s
KURK MLR MLR
comp=Z,2865µm,18.0s
KURK Kurchatov 64.38 324 P **P 06 23 17.3 +0.1**
KURK P **P 06 23 17.3 +0.1**
KURK S **S 06 31 53.4 -0.4**
KURK S **S 06 31 53.4 -0.4**
KURK Kurchatov 64.38 324 P **P 06 23 17.2 +0.1**
KURK IAmb IAmb 06 23 37.9
comp=Z,1µm,0.8s
KURK Kurchatov 64.38 324 P **P 06 23 16.6 -0.5**
KURK Kurchatov 64.38 324 P **P 06 23 16.1 -1.1**
KURBB Kurchatov Arra 64.48 324 P **P 06 23 16.9 -0.9**
comp=Z,178nm,0.9s,baz=27,slow=6.3,SNR=298
KURBB PKPPKP 06 52 04.4
comp=Z,5.3nm,1.0s,baz=226,slow=3.0,SNR=5.2
KURBB LR LR 06 54 06.8
comp=Z,1704µm,18.4s,baz=38,slow=39
comp=Z,178nm,0.9s
KIRV Kirov 64.54 344 LR LR 06 56 48.7
comp=Z,544µm,18.4s,baz=22,slow=41
KIRV Kirov 64.54 344*c i*P **P 06 23 16.9 -1.2**
YHNB Yeheng 64.55 277 P **P 06 23 19.2 +0.5**
YHNB Yeheng 64.55 277 IAmb IAmb 06 24 12.3
comp=Z,903nm,1.0s
YHNB Yeheng 64.55 277 P **P 06 23 19.3 +0.5**
GTA2 Gaotai 64.69 303 P **P 06 23 18.6 -1.0**
GTA2 S **S 06 31 55.8 -2.6**
GTA2 pmax pmax
comp=Z,510nm,1.3s
GTA2 pmax pmax
comp=Z,34µm,6.4s
NACB Ninganchiao 64.81 277 P **P 06 23 20.0 -0.3**
NACB Ninganchiao 64.81 277 P **P 06 23 18.9 -1.5**
ODD1 Odda 64.82 8 *e*P **P 06 23 19.0 -0.9**
ODD1 IVmB_BB 06 23 44.1
comp=Z,44µm,21.3s
ODD1 *e*PP **PP 06 25 43.2 +1.3**
ODD1 *e*S **S 06 31 57.9 -1.2**
ODD1 *e*SS **SS 06 36 12.6 +3.2**
ODD1 IVMs_BB IVMs_BB 06 49 09.2
comp=Z,127µm,25.4s
ZSN Zaisan 64.82 318*c i*P **P 06 23 20.4 +0.3**
ZSN *e*S **S 06 32 01.2 +1.7**
ZSN pmax pmax
comp=Z,3µm,2.0s
ZSN Zaisan 64.82 318⇑*i*P **P 06 23 20.5 +0.3**
comp=Z,3µm,2.0s
ZSN *e*S **S 06 32 01.2 +1.7**
ARTI Arti 64.96 338 LR LR 06 54 46.7
comp=Z,1078µm,21.7s,baz=16,slow=39
ARTI Arti 64.96 338*c i*P **P 06 23 19.9 -1.0**
ARTI 06 23 51.9
ARTI 06 25 42.1
ARTI S **S 06 31 59.8 -1.0**
ARTI SS **SS 06 36 15.9 +4.3**
ARTI SSS SSS 06 39 04.3
ARTI pmax pmax
comp=Z,568nm,0.8s
ARTI pmax pmax
comp=Z,27µm,8.1s
ARTI MLR MLR
comp=Z,1299µm,21.0s
ARTI Arti 64.96 338 P **P 06 23 20.9 0.0**
BVAR Borovoye Array 64.98 330 P **P 06 23 20.4 -0.7**
comp=Z,150nm,0.7s,baz=27,slow=5.8,SNR=132
BVAR PKPPKP 06 52 03.2
comp=Z,7.1nm,0.9s,baz=191,slow=1.5,SNR=4.4
comp=Z,150nm,0.7s
RTAL Retalhuleu 64.98 101 IAmb IAmb 06 24 12.6
comp=Z,2µm,1.4s
BORK Borovoye 64.98 330*c i*P **P 06 23 20.1 -1.0**
BORK pmax pmax
comp=Z,3µm,1.5s
BORK MLR MLR
comp=Z,955µm,18.0s
BORK Borovoye 64.98 330 P **P 06 23 21.1 0.0**
BORK IAmb IAmb 06 24 10.0
comp=Z,1µm,0.8s
HFS Hagfors 65.04 4 P **P 06 23 20.8 -0.5**
comp=Z,628nm,0.7s,baz=358,slow=6.5,SNR=101
HFS LR LR 06 50 21.9
comp=Z,335µm,21.6s,baz=1.5,slow=35
HFS PKPPKP 06 52 03.9
comp=Z,2.9nm,0.7s,baz=172,slow=4.5,SNR=3.6
comp=Z,628nm,0.7s
OSL Oslo 65.09 6 *e*P **P 06 23 21.0 -0.6**
OSL IVmB_BB 06 23 45.7
comp=Z,44µm,9.7s
OSL *e*PP **PP 06 25 44.6 +0.5**
OSL *e*S **S 06 32 03.5 +1.2**
OSL *e*SS **SS 06 36 17.1 +3.8**
OSL IVMs_BB IVMs_BB 06 54 10.4
comp=Z,159µm,18.6s
MEF Metsahovi 65.10 358 *e*P **P 06 23 20.0 -1.7**
AAL Aland 65.16 1 *e*P **P 06 23 20.0 -2.0**
LINV Loch Inver, As 65.17 15⇑*e*P **P 06 23 22.1 0.0**
LINV IAMs_20 IAMs_20 06 51 21.4
comp=Z,1504µm,21.3s
BLS5 Blasjo 65.29 8 *e*P **P 06 23 22.9 0.0**
BLS5 IVmB_BB 06 23 44.9
comp=Z,32µm,4.8s
BLS5 *e*PP **PP 06 25 46.2 +0.2**
BLS5 *e*S **S 06 32 05.6 +0.7**
BLS5 *e*SS **SS 06 36 20.6 +3.9**
BLS5 IVMs_BB IVMs_BB 06 50 34.4
comp=Z,147µm,24.0s
APG El Apazote 65.30 99 LR LR 06 51 02.8
comp=Z,37µm,21.9s,baz=80,slow=35
APG PKPPKP 06 52 04.5
comp=Z,0.7nm,1.0s,baz=184,slow=12,SNR=6.0
KONO Kongsberg 65.30 7 *e*P **P 06 23 22.9 -0.1**
KONO IVmB_BB 06 23 45.1
comp=Z,48µm,4.5s
KONO *e*PP **PP 06 25 47.1 +1.0**
KONO IVMs_BB IVMs_BB 06 49 41.1
comp=Z,177µm,24.8s
KONO Kongsberg 65.30 7 P **P 06 23 23.5 +0.5**
KONO Kongsberg 65.30 7 IAMs_20 IAMs_20 06 52 26.5
comp=Z,431µm,21.0s
KONO Kongsberg 65.30 7 P **P 06 23 24.2 +1.2**
KONO Kongsberg 65.30 7 P **P 06 23 23.4 +0.3**
LZH Lanzhou 65.31 298 P **P 06 23 23.1 -0.6**
LZH pP pP 06 23 32.0 +1.2
LZH PcP **PcP 06 23 57.0 +1.2**
LZH PP **PP 06 25 49.6 +2.6**
LZH S **S 06 32 04.0 -2.1**
LZH sS sS 06 32 18.8 +0.9
LZH SS **SS 06 36 22.9 +4.4**
LZH pmax pmax
comp=Z,480nm,1.4s
LZH pmax pmax
comp=Z,35µm,5.5s
PUL Pulkovo 65.35 355*i* P **P 06 23 23.1 -0.2**
PUL Pulkovo 65.35 355 *e*P **P 06 23 22.7 -0.6**
PUL Pulkovo 65.35 355 P **P 06 23 26.5 +3.2**
KMY Karmoy 65.39 9 *e*P **P 06 23 22.9 -0.6**
KMY *e*PP **PP 06 25 46.9 0.0**
KMY *e*S **S 06 32 08.0 +1.9**
KMY *e*SS **SS 06 36 21.4 +3.2**
KMY IVMs_BB IVMs_BB 06 51 00.6
comp=Z,118µm,22.1s
UPP Uppsala 65.44 2 *e*P **P 06 23 22.0 -1.9**
TAOE Nuku Hiva Isla 65.47 160 P P 06 23 30.1 +5.4
SSLB Suanglung 65.48 277 P **P 06 23 24.0 -0.7**
SSLB Suanglung 65.48 277 IAMs_20 IAMs_20 06 54 48.8
comp=Z,374µm,20.0s
SSLB Suanglung 65.48 277 P **P 06 23 23.9 -0.9**
LZDM Lanzhou Array 65.49 298 P **P 06 23 24.6 -0.5**
comp=Z,135nm,0.5s,baz=37,slow=7.1,SNR=59
LZDM PKPPKP **P'P'df 06 52 04.9 -4.4**
comp=Z,4.1nm,0.3s,baz=35,slow=27,SNR=5.7
LZDM LR LR 06 56 09.2
comp=Z,1057µm,18.2s,baz=40,slow=40
comp=Z,135nm,0.5s
YULB Yu-li 65.59 276 P **P 06 23 25.0 -0.4**
YULB Yu-li 65.59 276 IAMs_20 IAMs_20 06 49 46.8
comp=Z,427µm,22.0s
YULB Yu-li 65.59 276 P **P 06 23 24.0 -1.5**
MGV Manicaragua 65.69 86 *e*P **P 06 23 23.4 -2.7**
ARBE Arbavere 65.85 357 *e*P **P 06 23 25.3 -1.2**
ARBE Arbavere 65.85 357 P **P 06 23 26.6 +0.1**
KPL Plockton 65.88 16⇑*e*P **P 06 23 26.7 0.0**
KPL IAMs_20 IAMs_20 06 51 54.7
comp=Z,1507µm,21.1s
QZH2 Quanzhou 65.92 279⇑*i*P **P 06 23 26.8 -0.7**
QZH2 S **S 06 32 13.3 -0.1**
QZH2 pmax pmax
comp=Z,2µm,1.3s
QZH2 pmax pmax
comp=Z,73µm,11.7s
QZH2 L L
comp=Z,267µm,22.1s
QZH2 L L
comp=Z,192µm,21.4s
QZH2 L L
comp=Z,371µm,21.6s
FUNA Funafuti 65.98 204 P **P 06 23 32.5 +4.6**
FUNA Funafuti 65.98 204 P **P 06 23 29.1 +1.2**
FUNA IAmb IAmb 06 24 53.2
comp=Z,1µm,1.3s
MCD Coleburn Disti 66.00 14⇑*e*P **P 06 23 27.5 -0.1**
MCD IAMs_20 IAMs_20 06 51 19.6
comp=Z,830µm,22.0s
STRU Stroemstad 66.01 6 *e*P **P 06 23 26.6 -0.9**
STRU Stroemstad 66.01 6 *i* P **P 06 23 27.9 +0.4**
TPUB Ta-pu 66.04 277 P **P 06 23 28.6 +0.2**
TPUB Ta-pu 66.04 277 IAmb IAmb 06 24 39.9
comp=Z,1µm,1.0s
TPUB IAMs_20 IAMs_20 06 53 53.8
comp=Z,387µm,20.0s
TPUB Ta-pu 66.04 277 P **P 06 23 27.0 -1.3**
TWGBT Beinan 66.16 276 P **P 06 23 31.5 +2.4**
TWG Pinlang 66.16 276 IAMs_20 IAMs_20 06 50 15.3
comp=Z,532µm,22.0s
TWG Pinlang 66.16 276 P **P 06 23 29.3 +0.2**
BBSR BB Station 66.25 67 P **P 06 23 28.9 -0.6**
BBSR IAmb IAmb 06 24 12.7
comp=Z,2µm,1.4s
BBSR BB Station 66.25 67 P **P 06 23 29.1 -0.5**
ESQI Esquipulas 66.29 99 IAmb IAmb 06 24 19.7
comp=Z,1µm,1.2s
MK31 Makanchi Array 66.35 319*c i*P **P 06 23 29.2 -0.8**
MKAR Makanchi Array 66.35 319 P **P 06 23 29.3 -0.7**
comp=Z,170nm,0.6s,baz=46,slow=6.9,SNR=152
MKAR PKPPKP 06 52 03.4
comp=Z,7.4nm,0.9s,baz=225,slow=1.4,SNR=8.0
MKAR LR LR 06 55 16.3
comp=Z,1436µm,20.4s,baz=26,slow=39
comp=Z,170nm,0.6s
MTO3 Montecristo 66.41 99 IAmb IAmb 06 24 20.8
comp=Z,885nm,1.3s
KNMB Chin-men Tao 66.41 279 IAmb IAmb 06 24 14.3
comp=Z,2µm,1.4s
MAKZ Makanchi 66.46 319 P **P 06 23 29.8 -0.9**
MAKZ IAmb IAmb 06 24 11.3
comp=Z,2µm,1.3s
MAKZ Makanchi 66.46 319 P **P 06 23 29.8 -0.9**
MAKZ Makanchi 66.46 319 P **P 06 23 28.9 -1.8**
CNSH ChangSha 66.59 286 P **P 06 23 31.9 +0.1**
CNSH S **S 06 32 22.8 +1.3**
CNSH pmax pmax
comp=Z,66µm,15.1s
CNSH L L
comp=Z,383µm,17.5s
CNSH L L
comp=Z,300µm,20.8s
HOMB Homborsund 66.60 7 *e*P **P 06 23 30.8 -0.6**
HOMB IVmB_BB 06 23 55.6
comp=Z,52µm,10.0s
HOMB *e*PP **PP 06 25 57.6 +0.2**
HOMB *e*S **S 06 32 22.5 +1.9**
HOMB *e*SS **SS 06 36 39.8 +3.0**
HOMB IVMs_BB IVMs_BB 06 50 29.6
comp=Z,154µm,25.3s
HOMB Homborsund 66.60 7 *i* P **P 06 23 31.8 +0.5**
MTSE Matsula 66.62 359 *e*P **P 06 23 30.0 -1.5**
MTSE Matsula 66.62 359 P **P 06 23 32.0 +0.6**
WMQ Urumqi 66.67 314⇑P **P 06 23 32.8 +0.6**
WMQ S **S 06 32 23.4 +1.2**
WMQ sS sS 06 32 33.3 -0.7
WMQ pmax pmax
comp=Z,310nm,1.1s
WMQ pmax pmax
comp=Z,30µm,4.9s
WMQ L L
comp=Z,429µm,24.3s
WMQ L L
comp=Z,361µm,21.3s
WMQ L L
comp=Z,471µm,24.3s
WMQ Urumqi 66.67 314 P **P 06 23 31.2 -1.0**
DRUM Mains of Drumt 66.76 14 P **P 06 23 33.4 +1.0**
DRUM Mains of Drumt 66.76 14⇑*e*P **P 06 23 32.0 -0.4**
DRUM IAMs_20 IAMs_20 06 51 29.1
comp=Z,813µm,22.0s
VSU Vasula 66.81 357*c i*P **P 06 23 31.5 -1.2**
VSU pmax pmax
comp=Z,2µm,0.7s
VSU MLR MLR
comp=Z,1068µm,23.0s
VSU Vasula 66.81 357 *e*P **P 06 23 30.6 -2.0**
VSU Vasula 66.81 357 P **P 06 23 32.0 -0.7**
ENH Enshi 66.86 290 P **P 06 23 33.3 -0.2**
ENH Enshi 66.86 290 P **P 06 23 33.4 -0.1**
LAWE Loch Awe, Argy 66.95 16⇑*e*P **P 06 23 33.5 -0.1**
LAWE IAMs_20 IAMs_20 06 52 37.6
comp=Z,1604µm,21.5s
INVG Invergeldie, C 67.00 15⇑*e*P **P 06 23 33.8 -0.1**

INVG IAMs_20 IAMs_20 06 52 14.1
comp=Z,1362µm,21.7s
TJOU Tjoern 67.04 6 *i* P **P 06 23 34.0 -0.1**
EAB Aberfoyle 67.19 15⇑ *eP* **P 06 23 35.1 0.0**
EAB IAMs_20 IAMs_20 06 52 32.0
comp=Z,1493µm,21.5s
PGBU Glenifferbraes 67.53 15⇑ *eP* **P 06 23 37.1 -0.3**
PGBU IAMs_20 IAMs_20 06 52 41.2
comp=Z,2841µm,21.8s
GGERF Dalmarnock 67.54 15 *eP* **P 06 23 37.3 -0.1**
GGERF IAMs_20 IAMs_20 06 52 41.3
comp=Z,1420µm,21.9s
LCCY Blossom Villag 67.55 88 *eP* **P 06 23 38.4 +0.4**
CCCC Cccc 67.67 85 *eP* **P 06 23 37.9 -0.8**
CCCC IAmb IAmb 06 24 06.8
comp=Z,3µm,2.3s
CBCY The Bluff, Cay 67.68 87 *eP* **P 06 23 36.3 -2.5**
CBCY IAmb IAmb 06 24 06.3
comp=Z,806nm,1.0s
ONAU Onsala 67.69 6 *i* P **P 06 23 37.9 -0.4**
SLIT Slitere, Latvi 67.72 360 *eP* **P 06 23 37.3 -1.2**
SLIT Slitere, Latvi 67.72 360 P **P 06 23 38.9 +0.4**
IDGL Inch Island, C 67.74 18 P **P 06 23 39.8 +1.1**
IDGL Inch Island, C 67.74 18 P **P 06 23 40.1 +1.4**
IDGL Inch Island, C 67.74 18⇑ *eP* **P 06 23 38.7 +0.1**
TGUH Tegucigalpa,Un 67.88 97 IAMs_20 IAMs_20 06 51 40.3
comp=Z,436µm,22.0s
GOET G??ttrup 67.88 7 *i* P **P 06 23 40.8 +1.3**
GOET IAmb IAmb 06 23 47.8
comp=Z,2µm,1.6s
I43RU DUBNA INFRASON 67.89 351 P **P 06 23 37.3 -2.3**
baz=42,slow=3.8,SNR=24
CLGH Cloghs, Cushen 67.97 17 P **P 06 23 41.2 +1.1**
CLGH Cloghs, Cushen 67.97 17⇑ *eP* **P 06 23 40.3 +0.2**
CLGH IAMs_20 IAMs_20 06 52 09.7
comp=Z,1476µm,23.2s
FABU Falkenberg 68.13 5 *i* P **P 06 23 39.9 -1.1**
EKA Eskdalemuir Ar 68.19 15 P **P 06 23 41.4 -0.1**
comp=Z,45nn,0.5s,baz=340,slow=5.0,SNR=119
EKA PKP2bc 06 51 58.6
comp=Z,6.3nm,1.0s,baz=162,slow=3.2,SNR=4.6
EKA LR LR 06 53 17.5
comp=Z,972µm,21.8s,baz=340,slow=36
comp=Z,45nm,0.5s
EKA Eskdalemuir Ar 68.19 15 P **P 06 23 41.5 0.0**
EKA pmax pmax
comp=Z,1µm,0.9s
ESK Eskdalemuir 68.20 15 P **P 06 23 42.3 +0.8**
ESK Eskdalemuir 68.20 15 P **P 06 23 42.7 +1.2**
ESK Eskdalemuir 68.20 15⇑ *eP* **P 06 23 41.5 -0.1**
ESK IAMs_20 IAMs_20 06 52 48.9
comp=Z,1128µm,21.9s
NEWG New Galloway 68.24 16⇑ *eP* **P 06 23 41.6 -0.2**
NEWG IAMs_20 IAMs_20 06 53 13.7
comp=Z,1327µm,21.6s
GAL1 Galloway 68.40 16⇑ *eP* **P 06 23 43.0 +0.2**
GAL1 IAMs_20 IAMs_20 06 53 30.6
comp=Z,1335µm,21.2s
MUD Monsted U'grnd 68.45 7 *i* P **P 06 23 43.7 +0.7**
MUD IAmb IAmb 06 23 55.3
comp=Z,2µm,1.3s
MUD IAMs_20 IAMs_20 06 51 29.3
comp=Z,629µm,24.3s
DEL Delary 68.71 4 *i* P **P 06 23 44.2 -0.5**
MOS Moscow 68.83 350 *eP* **P 06 23 45.8 +0.4**
MOS *e* 06 24 11.1
MOS *e* 06 26 18.0
MOS *e*PPP PPP 06 27 58.0
MOS *e*S **S 06 32 48.2 +0.7**
MOS *e*SS **SS 06 37 14.9 +3.5**
MOS pmax pmax
comp=Z,35µm,6.5s
MOS pmax pmax
comp=N,22µm,5.9s
MOS pmax pmax
comp=Z,5µm,1.6s
MOS pmax pmax
comp=N,4µm,1.5s
MOS MLR MLR
comp=N,749µm,23.0s
MOS MLR MLR
comp=Z,938µm,23.0s
EDMD Edmundbyers 68.85 14 P **P 06 23 46.8 +1.1**
EDMD Edmundbyers 68.85 14⇑ *eP* **P 06 23 45.7 +0.1**
EDMD IAMs_20 IAMs_20 06 52 43.8
comp=Z,706µm,22.9s
HLGC Holguin 68.90 84 *eP* **P 06 23 44.5 -1.9**
KESW Keswick, Cumbr 68.92 15 P **P 06 23 47.2 +1.1**
KESW Keswick, Cumbr 68.92 15⇑ *eP* **P 06 23 45.8 -0.3**
KESW IAMs_20 IAMs_20 06 53 21.9
comp=Z,1168µm,21.7s
ILTH Belurgan, Co L 68.94 17 P **P 06 23 46.5 +0.3**
ILTH Belurgan, Co L 68.94 17 P **P 06 23 47.1 +1.0**
ILTH Belurgan, Co L 68.94 17⇑ *eP* **P 06 23 45.9 -0.3**
BLEU Blekinge 68.95 3 *i* P **P 06 23 45.7 -0.5**
IGLA Glengowla, Co 68.98 19 P **P 06 23 46.3 -0.1**
IGLA Glengowla, Co 68.98 19 P **P 06 23 47.5 +1.1**
IGLA Glengowla, Co 68.98 19⇑ *eP* **P 06 23 46.8 +0.4**
LMGC Las Mercedes 69.00 85 *eP* **P 06 23 44.3 -2.8**
IOMK Kirk Michael 69.01 16 P **P 06 23 47.6 +0.9**
IOMK Kirk Michael 69.01 16⇑ *eP* **P 06 23 46.4 -0.3**
IOMK IAMs_20 IAMs_20 06 53 48.5
comp=Z,601µm,21.5s
BJUU Bjuv 69.07 5 *i* P **P 06 23 46.8 -0.2**
CRIN San Cristobal 69.09 98 P **P 06 23 47.2 -0.5**
YAR Yar 69.13 84 *eP* **P 06 23 47.5 -0.4**
TDK Taldyqorghan 69.31 321 *c i*P **P 06 23 48.9 +0.2**
TDK *e*S **S 06 32 55.4 +1.8**
TDK pmax pmax
comp=Z,5µm,2.6s
TDK MLR MLR
comp=Z,756µm,19.0s
TDK Taldyqorghan 69.31 321⇑ *i*P **P 06 23 49.0 +0.2**
comp=Z,5µm,2.6s
TDK *e*S **S 06 32 55.5 +1.8**
TDK LR LR 06 56 42.6
comp=Z,756µm,18.8s
PBUR Paburge 69.33 360 P **P 06 23 49.1 +0.6**
GDLE Glaisdale, N Y 69.41 14⇑ *eP* **P 06 23 49.1 0.0**
GDLE IAMs_20 IAMs_20 06 54 18.3
comp=Z,582µm,21.2s
CD2 Chengdu 69.41 295 P **P 06 23 48.8 -0.8**
CD2 pP pP 06 23 57.0 +0.3
CD2 sP sP 06 24 01.3 +1.9
CD2 PP **PP 06 26 21.0 -1.7**
CD2 S **S 06 32 55.0 -0.3**
CD2 SKS **SKSac 06 33 44.8 -3.6**
CD2 pmax pmax
comp=Z,660nm,0.9s
CD2 pmax pmax
comp=Z,46µm,7.3s
CD2 L L
comp=Z,914µm,20.4s
CD2 L L
comp=Z,1084µm,20.8s
CHIV Chivirico 69.41 84 IAmb IAmb 06 24 33.7
comp=Z,828nm,0.8s
COP Copenhagen 69.42 5 P **P 06 23 50.8 +1.7**
COP Copenhagen 69.42 5 IAmb IAmb 06 24 00.8
comp=Z,2µm,1.0s
COP Copenhagen 69.42 5 *i* P **P 06 23 48.8 -0.3**
PACPP Pamplona Cagay 69.43 273 *eP* **P 06 23 50.1 +0.4**
SSRD Sdr. Stenderup 69.45 7 *i* P **P 06 23 49.0 -0.3**
SSRD IAmb IAmb 06 24 01.5
comp=Z,3µm,1.4s
SSRD IAMs_20 IAMs_20 06 51 57.9
comp=Z,648µm,25.0s
CNGN Cerro Negro 69.46 98 P **P 06 23 50.1 +0.1**
LUNU Lund 69.53 5 *i* P **P 06 23 49.3 -0.5**
OBN Obninsk 69.54 351 PKP2bc 06 51 56.9
comp=Z,18nm,0.7s,baz=272,slow=4.7,SNR=4.1
OBN LR LR 06 59 11.0
comp=Z,603µm,20.2s,baz=356,slow=40
OBN Obninsk 69.54 351 *c i*P **P 06 23 48.7 -1.2**
OBN *i* 06 24 11.4
OBN *e* 06 26 20.4
OBN *e*PPP PPP 06 28 05.0
OBN *e*S **S 06 32 55.8 -0.1**
OBN *e*SS **SS 06 37 22.9 +0.5**
OBN pmax pmax
comp=Z,5µm,1.4s
OBN MLR MLR
comp=Z,896µm,23.0s
OBN Obninsk 69.54 351 P **P 06 23 49.8 -0.1**
OBN Obninsk 69.54 351 P **P 06 23 49.4 -0.5**
comp=Z,46µmcomp=Z,3µm,1.2s
OBN Obninsk 69.54 351 P **P 06 23 50.0 +0.1**
GOMU GeErMu 69.68 304 P **P 06 23 50.6 -0.9**
GOMU sP pP 06 23 56.0 -2.7
GOMU pmax pmax
comp=Z,92nm,1.2s
GOMU L L
comp=Z,415µm,18.2s
GOMU L L
comp=Z,894µm,18.7s
DSB Dublin 69.69 17 P **P 06 23 50.9 +0.1**
DSB Dublin 69.69 17 IAmb IAmb 06 24 39.3
comp=Z,920nm,1.1s
DSB Dublin 69.69 17 P **P 06 23 51.8 +1.0**
DSB Dublin 69.69 17⇑ *eP* **P 06 23 50.6 -0.3**
MOAC Moa 69.71 83 *eP* **P 06 23 49.4 -2.0**
ISAL Salakas 69.72 357 *eP* **P 06 23 51.2 +0.3**
GZH2 Guangzhou 69.73 282 P **P 06 23 51.5 0.0**
GZH2 S **S 06 33 00.4 +1.4**
GZH2 SS **SS 06 37 28.8 +1.8**
GZH2 pmax pmax
comp=Z,310nm,1.0s
GZH2 pmax pmax
comp=Z,35µm,7.3s
GZH2 L L
comp=Z,543µm,22.4s
GZH2 L L
comp=Z,550µm,24.3s
HPK Haverah Park 69.75 14⇑ *eP* **P 06 23 51.2 +0.1**
HPK IAMs_20 IAMs_20 06 53 20.9
comp=Z,709µm,23.5s
LLD Lille Linde 69.76 6 *i* P **P 06 23 51.3 +0.1**
NMDO Nuevo Mundo 69.77 83 IAmb IAmb 06 24 36.2
comp=Z,1µm,1.0s
NMDO Nuevo Mundo 69.77 83 *eP* **P 06 23 50.6 -1.2**
PABE Paberze 69.83 358 IAmb IAmb 06 24 26.8
comp=Z,1µm,0.9s
PABE IAMs_20 IAMs_20 06 53 14.2
comp=Z,384µm,22.0s
PABE Paberze 69.83 358 *eP* **P 06 23 51.2 -0.4**
PABE Paberze 69.83 358 P **P 06 23 52.2 +0.6**
WME Mynedd Eilian 69.89 16 *eP* **P 06 23 52.6 +0.6**
WLF1 Llynfaes 69.98 16 P **P 06 23 52.3 -0.3**
WLF1 Llynfaes 69.98 16⇑ *eP* **P 06 23 52.4 -0.1**
WLF1 IAMs_20 IAMs_20 06 52 42.1
comp=Z,2217µm,23.8s
MGAN Managua 70.00 97 P P 06 24 02.6 +9.3
BOAB BOACO BROADBAN 70.09 97 P **P 06 23 53.3 -0.5**
BSD Bornholm Skovb 70.11 4 *eP* **P 06 23 53.9 +0.5**
BSD Bornholm Skovb 70.11 4 P **P 06 23 54.2 +0.8**
BSD Bornholm Skovb 70.11 4 *i* P **P 06 23 54.0 +0.6**
BSD IAmb IAmb 06 24 04.6
comp=Z,780nm,1.0s
BSD IAMs_20 IAMs_20 06 52 11.3
comp=Z,473µm,23.5s
CVJ Coleyville 70.15 86 *i* P **P 06 23 53.7 -0.6**
MTDJ Mount Denham 70.15 86 *eP* **P 06 23 52.8 -1.5**
MTDJ Mount Denham 70.15 86 P **P 06 23 55.0 +0.6**
QMBU Quimbuelo 70.16 83 *eP* **P 06 23 51.9 -2.4**
SKMB Sankelmark Bun 70.19 7 P **P 06 23 55.6 +1.8**
GTBY Guantanamo Bay 70.20 83 IAmb IAmb 06 24 54.2
comp=Z,1µm,1.2s
GTBY Guantanamo Bay 70.20 83⇓ *i*P **P 06 23 53.8 -0.7**
GTBY Guantanamo Bay 70.20 83 *eP* P 06 23 44.8 -10
GTBY Guantanamo Bay 70.20 83 P **P 06 23 54.9 +0.4**
VAL Valentia 70.22 20 P **P 06 23 54.5 +0.5**
VAL Valentia 70.22 20 P **P 06 23 54.7 +0.6**
VAL Valentia 70.22 20 P **P 06 23 55.3 +1.2**
GULI GuiLin 70.27 286 P **P 06 23 52.8 -2.1**
GULI S **S 06 33 02.6 -2.8**
GULI pmax pmax
comp=Z,130nm,1.2s
GULI L L
comp=Z,279µm,19.5s
GULI L L
comp=Z,552µm,20.1s
GULI L L
comp=Z,409µm,17.4s
LBWR Ladybower, Pea 70.27 14 P **P 06 23 55.6 +1.1**
LBWR Ladybower, Pea 70.27 14⇑ *eP* **P 06 23 54.1 -0.3**
LBWR IAMs_20 IAMs_20 06 53 49.4
comp=Z,825µm,23.3s
MCJ Malvern 70.30 87 *i* P **P 06 23 52.7 -2.5**
NACGM Naroch 70.36 357⇓ *i*P **P 06 23 53.7 -1.3**
comp=Z,2µm,0.9s,baz=3.4
BNJ Bonny Gate 70.41 86 *i* P **P 06 23 56.5 +0.6**
LMK Market Rasen 70.42 14 P **P 06 23 56.6 +1.3**
LMK Market Rasen 70.42 14⇑ *eP* **P 06 23 55.9 +0.6**
LMK IAMs_20 IAMs_20 06 54 59.9
comp=Z,641µm,21.3s
IWEX Carrickbyrne, 70.45 18 P **P 06 23 55.5 0.0**
IWEX Carrickbyrne, 70.45 18 P **P 06 23 56.8 +1.3**
IWEX Carrickbyrne, 70.45 18⇑ *eP* **P 06 23 55.4 -0.1**
HKC Hong Kong Obse 70.50 281⇑ P **P 06 23 57.0 +0.8**
SHLS Shalkode 70.50 319 *c i*P **P 06 23 55.4 -0.7**
SHLS *e*S **S 06 33 07.6 -0.2**
SHLS pmax pmax
comp=Z,2µm,1.6s
SHLS Shalkode 70.50 319⇑ *i*P **P 06 23 55.5 -0.7**
comp=Z,2µm,1.6s
SHLS *e*S **S 06 33 07.7 -0.2**
STNC Stoke 70.51 15 P **P 06 23 57.4 +1.5**
STNC Stoke 70.51 15⇑ *eP* **P 06 23 56.0 +0.1**
STNC IAMs_20 IAMs_20 06 54 08.8
comp=Z,1184µm,22.5s
KPKS Kokpek 70.53 319 *eP* **P 06 23 56.7 +0.4**
KPKS *e*S **S 06 33 10.0 +1.9**
KPKS Kokpek 70.53 319 *eP* **P 06 23 56.8 +0.4**
KPKS *e*S **S 06 33 10.1 +1.9**
HKPS Hong Kong Po S 70.53 281 P **P 06 23 57.3 +0.8**
HKPS Hong Kong Po S 70.53 281 IAmb IAmb 06 24 34.5
comp=Z,2µm,1.4s
HKPS Hong Kong Po S 70.53 281 P **P 06 23 59.6 +3.2**
FOEL Foel Wylfa 70.55 16 P **P 06 23 57.5 +1.4**
FOEL Foel Wylfa 70.55 16⇑ *eP* **P 06 23 56.2 +0.1**
FOEL IAMs_20 IAMs_20 06 54 32.7
comp=Z,1150µm,21.8s
AKTO Aktyubinsk 70.58 336 PKP2bc 06 51 51.3
comp=Z,2.0nm,0.5s,baz=125,slow=3.8,SNR=3.6
AKTO LR LR 06 58 40.4
comp=Z,773µm,21.6s,baz=19,slow=39
HLG Helgoland 70.60 8 *eP* **P 06 23 58.1 +1.7**
comp=Z,4µm,1.1s,baz=354,slow=5.8
RGN Rugen 70.61 5 IAMs_20 IAMs_20 06 53 09.7
comp=Z,353µm,22.0s
RGN Rugen 70.61 5 *eP* **P 06 23 57.9 +1.5**
comp=Z,6µm,1.2s,baz=354,slow=5.8
RGN Rugen 70.61 5 P **P 06 23 58.6 +2.2**
SZP Santa 70.66 273 P **P 06 23 58.9 +1.6**
UZB Uzunbulak 70.67 319 *c i*P **P 06 23 57.5 +0.2**
UZB *e*S **S 06 33 11.2 +1.3**
UZB pmax pmax
comp=Z,2µm,2.3s
UZB Uzunbulak 70.67 319⇑ *i*P **P 06 23 57.5 +0.2**
comp=Z,2µm,2.3s
UZB *e*S **S 06 33 11.3 +1.3**
STH Stony Hill 70.69 86 *i* P **P 06 23 57.7 +0.2**
STH ⇑ *i*P **P 06 23 57.8 +0.2**
STH Stony Hill 70.69 86 *eP* **P 06 23 54.4 -3.1**
MNK Minsk 70.73 356 *i* SSS SSS 06 40 58.8
MNK Minsk 70.73 356 *i* P **P 06 23 57.1 -0.1**
MNK *i* 06 24 18.1
MNK *i* 06 26 32.9
MNK *i* PPP PPP 06 28 15.1
MNK *i* S **S 06 33 10.8 +1.0**
MNK *i* SS **SS 06 37 42.8 +2.2**
MNK pmax pmax
comp=E,676nm,1.0s
MNK pmax pmax
comp=Z,2µm,0.9s
MNK pmax pmax
comp=N,505nm,0.9s
MNK Minsk 70.73 356 *i* P **P 06 23 57.1 -0.1**
comp=N,505nm,0.9s
MNK Minsk 70.73 356 *i* P **P 06 23 57.1 -0.1**
comp=E,676nm,1.0s
MNK Minsk 70.73 356 *i* P **P 06 23 57.1 -0.1**
comp=Z,2µm,0.9s,baz=4.0
MNK Minsk 70.73 356 *i* PcP **PcP 06 24 18.2 +0.3**
MNK Minsk 70.73 356 *i* PP PP 06 26 32.9 -0.3
MNK Minsk 70.73 356 *i* PPP PPP 06 28 15.2
MNK Minsk 70.73 356 *i* S **S 06 33 10.8 +1.0**
MNK Minsk 70.73 356 *i* SS SS 06 37 42.8 +2.2
GWJ Greenwich 70.74 86 *i* P **P 06 23 59.2 +1.3**
KLNR Kaliningrad 70.75 1 *i* P **P 06 23 57.8 +0.5**
BELG Belogornoye 70.78 343 PKP2bc 06 51 51.3
comp=Z,15nm,0.8s,baz=70,slow=7.6,SNR=3.6
BELG LR LR 07 00 01.5
comp=Z,642µm,19.4s,baz=20,slow=40
BELG Belogornoye 70.78 343 *c i*P **P 06 23 56.0 -1.5**
BELG pmax pmax
comp=Z,2µm,1.4s
BELG MLR MLR
comp=Z,169µm,24.0s
BTLS Baital 70.83 323 *eP* **P 06 23 58.3 +0.4**
BTLS Baital 70.83 323 *eP* **P 06 23 58.4 +0.4**
STBN Sutton Boningt 70.89 14 *eP* **P 06 23 58.0 -0.2**
STBN IAMs_20 IAMs_20 06 54 07.8
comp=Z,693µm,23.7s
HLM1 Long Mynd 70.96 15⇑ *eP* **P 06 23 58.6 0.0**
HLM1 IAMs_20 IAMs_20 06 54 33.5
comp=Z,1153µm,22.2s
SATY Saty 70.98 319 *c i*P **P 06 23 59.3 +0.2**
SATY *e*S **S 06 33 14.9 +1.4**
SATY pmax pmax
comp=Z,3µm,2.3s
SATY Saty 70.98 319⇑ *i*P **P 06 23 59.4 +0.2**
comp=Z,3µm,2.3s
SATY *e*S **S 06 33 14.9 +1.4**
CWF Charnwood Fore 70.98 14 P **P 06 23 59.8 +1.1**
CWF Charnwood Fore 70.98 14⇑ *eP* **P 06 23 58.8 +0.1**
CWF IAMs_20 IAMs_20 06 54 10.7
comp=Z,776µm,23.7s
MCO Taipa Grande 70.99 281 P **P 06 23 59.0 -0.2**
FUTU Fugatoga 71.00 200 P P 06 24 04.2 +5.0
FUTU Fugatoga 71.00 200 P **P 06 24 03.9 +4.7**
KUU Kurty 71.02 321 *eP* **P 06 23 59.5 +0.4**
KUU MLR MLR
comp=Z,475µm,16.0s
KUU Kurty 71.02 321 *eP* **P 06 23 59.6 +0.4**
KUU LR LR 06 57 36.2
comp=Z,475µm,16.4s
BSEG Bad Segeberg 71.04 7 *eP* **P 06 24 00.3 +1.3**
comp=Z,1µm,1.1s,baz=354,slow=5.8
BSEG *e*L L 06 54 00.2
comp=Z,195µm,21.9s
BSEG Bad Segeberg 71.04 7 P **P 06 23 59.5 +0.5**
ABKAR Akbulak array 71.21 334 P **P 06 23 60.0 -0.2**
RSBS Rosebush, Pemb 71.21 17 *eP* **P 06 24 00.3 +0.1**
RSBS IAMs_20 IAMs_20 06 53 56.0
comp=Z,1112µm,24.4s
GRTK Grand Turk 71.21 79 IAMs_20 IAMs_20 06 56 40.0
comp=Z,535µm,19.0s
GRTK Grand Turk 71.21 79 *eP* **P 06 23 59.4 -1.2**
GRTK Grand Turk 71.21 79 P **P 06 24 04.4 +3.8**
WACR West Acre 71.26 13 P **P 06 24 01.6 +1.2**
WACR West Acre 71.26 13⇑ *eP* **P 06 24 00.2 -0.2**
WACR IAMs_20 IAMs_20 06 55 25.5
comp=Z,587µm,21.8s
SUW Suwalki 71.34 359 IAMs_20 IAMs_20 06 56 08.1
comp=Z,552µm,22.0s
SUW Suwalki 71.34 359 *eP* **P 06 23 59.9 -1.0**
GYA Guiyang 71.38 289⇑ P **P 06 24 01.9 +0.1**
GYA S **S 06 33 16.8 -1.8**
GYA pmax pmax
comp=Z,260nm,1.1s
GYA pmax pmax
comp=Z,34µm,6.3s
GYA L L
comp=Z,622µm,19.6s
GYA L L
comp=Z,363µm,21.0s
GYA L L
comp=Z,1020µm,25.0s
MDOK Medeo 71.39 320 *eP* **P 06 24 01.7 +0.1**
MDOK *e*S **S 06 33 19.8 +1.5**
MDOK Medeo 71.39 320 *eP* **P 06 24 01.8 +0.1**
MDOK *e*S **S 06 33 19.8 +1.5**
MDOK LR LR 06 57 53.4
AAA Alma-Ata 71.40 321 *eP* **P 06 24 01.9 +0.3**
AAA pmax pmax
comp=Z,2µm,1.4s
AAA MLR MLR
comp=Z,892µm,19.0s
AAA Alma-Ata 71.40 321 *eP* **P 06 24 01.9 +0.3**
comp=Z,2µm,1.4s
AAA LR LR 06 57 51.3
comp=Z,892µm,19.4s
MCH1 Michaelchurch 71.45 16⇑ *eP* **P 06 24 01.6 0.0**
MCH1 IAMs_20 IAMs_20 06 54 59.4
comp=Z,983µm,21.7s
PRZ Przheval'sk 71.48 319 P **P 06 24 03.5 +1.3**
BLUN Bluefields 71.53 95 P **P 06 24 02.5 -0.1**
RABL Rabaul 71.61 233 IAmb IAmb 06 25 14.8
comp=Z,1µm,1.3s
MONM Monmouth 71.63 16⇑ *eP* **P 06 24 02.6 -0.1**
MONM IAMs_20 IAMs_20 06 55 04.9
comp=Z,1039µm,21.7s
LNIZ Loecknitz 71.70 5 P **P 06 24 04.3 +1.3**
KRVT Keravat (AS076 71.77 233 LR LR 06 51 24.9
comp=Z,116µm,20.4s,baz=308,slow=32
LPSR Galich'ya Gora 71.78 349 *c i*P **P 06 24 02.3 -1.3**
LPSR *e* 06 26 46.8
LPSR *e*PPP PPP 06 28 29.6
LPSR *e*SSS SSS 06 41 01.2
LPSR pmax pmax
comp=Z,16µm,4.9s
LPSR pmax pmax
comp=Z,774nm,0.8s
LPSR MLR MLR
comp=Z,732µm,23.0s
STRD Stroud 71.79 15⇑ *eP* **P 06 24 03.8 +0.2**
STRD IAMs_20 IAMs_20 06 54 58.3
comp=Z,1229µm,22.4s
OLDB Oldbury-Upon-S 71.84 15⇑ *eP* **P 06 24 03.9 0.0**
OLDB IAMs_20 IAMs_20 06 55 11.4
comp=Z,1097µm,21.6s
ELMS Elmsett, Ipswi 71.92 13⇑ *eP* **P 06 24 04.0 -0.4**
ELMS IAMs_20 IAMs_20 06 55 46.0
comp=Z,527µm,21.4s
SGDS Sogindy 72.01 322⇑ *i*P **P 06 24 05.6 +0.3**
GKP Gorka Klasztor 72.03 3 *eP* **P 06 24 04.5 -0.5**
GORT1 Trebel 72.04 6 *eP* **P 06 24 06.4 +1.4**
comp=Z,4µm,1.3s,baz=354,slow=5.8
TATA Tatamba Isabel 72.09 224 P **P 06 24 07.4 +1.6**
SWN1 Swindon 72.10 15⇑ *eP* **P 06 24 05.8 +0.3**
SWN1 IAMs_20 IAMs_20 06 55 07.5
comp=Z,1202µm,22.8s
TKM2 Tokmak 2 72.13 321 P **P 06 24 07.2 +1.1**
SNR=132
RETH Rethem/Aller, 72.16 8 *eP* **P 06 24 07.1 +1.4**
comp=Z,3µm,1.5s,baz=354,slow=5.8
RETH Rethem/Aller, 72.16 8 P **P 06 24 06.2 +0.4**
HTL Hartland 72.18 17 P **P 06 24 07.2 +1.3**
HTL Hartland 72.18 17⇑ *eP* **P 06 24 05.9 -0.1**
HTL IAMs_20 IAMs_20 06 54 36.5
comp=Z,1165µm,23.3s
USP Ospenovka 72.22 322 P **P 06 24 07.6 +1.1**
SNR=40
JTS Las Juntas de 72.24 98 LR LR 06 59 33.5
comp=Z,161µm,18.9s,baz=329,slow=39
JTS Las Juntas de 72.24 98 P **P 06 24 05.3 -1.6**
JTS pmax pmax
comp=Z,282nm,1.1s
JTS MLR MLR
comp=Z,244µm,21.0s
KDJ Kajisay 72.24 320 IAmb IAmb 06 24 46.5
comp=Z,2µm,1.0s
KDJ Kajisay 72.24 320 P **P 06 24 07.4 +0.7**
WUS Wushi 72.27 318 P **P 06 24 05.3 -1.5**
WUS PcP **PcP 06 24 24.8 -0.1**
BUW Bucklebury Wes 72.29 15⇑ *eP* **P 06 24 06.6 0.0**
TARG Taragay, Kyrgy 72.35 319 IAmb IAmb 06 25 09.0
comp=Z,1µm,1.0s
TARG Taragay, Kyrgy 72.35 319 P **P 06 24 08.6 +0.9**
CHMS Chumysh 72.37 322 P **P 06 24 08.6 +1.3**
SNR=156
WOL Wolverton 72.38 15⇑ *eP* **P 06 24 07.4 +0.2**
WOL IAMs_20 IAMs_20 06 55 03.8
comp=Z,987µm,23.9s
BOOM Boomskoye usch 72.38 321 IAmb IAmb 06 25 02.5
comp=Z,1µm,0.8s
BOOM Boomskoye usch 72.38 321 P **P 06 24 07.9 +0.3**
GQP Guinayangan 72.42 269 *eP* **P 06 24 08.3 +0.4**
IBBN Ibbenburen 72.45 9 *eP* **P 06 24 08.9 +1.4**
comp=Z,8µm,2.1s,baz=354,slow=5.8
IBBN Ibbenburen 72.45 9 P **P 06 24 08.4 +0.9**
ULHL Ulahol 72.48 320 P **P 06 24 05.0 -3.3**

SNR=66
SBD Saint Breward 72.56 17⇑ *e*P **P 06 24 07.9 -0.3**
SBD IAMs_20 IAMs_20 06 54 48.0
comp=Z,1002µm,23.0s
KBK Karagaybulak 72.59 322 P **P 06 24 10.2 +1.3**
SNR=148
VORR Voronezh 72.67 349 *e*P **P 06 24 10.8 +1.9**
VORR *e* 06 24 11.0
VORR pmax pmax
comp=Z,680nm,0.7s
VORR MLR MLR
comp=Z,397µm,18.0s
PPT Papeete 72.69 171 P **P 06 24 12.0 +2.7**
comp=Z,89nm,1.1s,baz=77,slow=3.7,SNR=4.7
PPT LR LR 06 48 43.8
comp=Z,206µm,21.3s,baz=344,slow=30
RUE Ruedersdorf 72.69 5 *e*P **P 06 24 10.1 +1.1**
comp=Z,4µm,1.2s,baz=354,slow=5.8
RUE Ruedersdorf 72.69 5 P **P 06 24 10.2 +1.3**
FLTG Flechtingen 72.70 7 *e*P **P 06 24 09.6 +0.6**
comp=Z,1µm,1.1s,baz=354,slow=5.8
WTSB Winterswijk 72.70 9 P **P 06 24 10.1 +1.1**
PPTF Pamatai, Papee 72.71 171 P **P 06 24 13.8 +4.3**
AAK Ala-Archa 72.77 322 LR LR 06 59 33.3
comp=Z,2601µm,18.2s,baz=32,slow=39
AAK Ala-Archa 72.77 322 P **P 06 24 09.8 -0.1**
SNR=171
AAK Ala-Archa 72.77 322 *i* P **P 06 24 10.2 +0.2**
SNR=232
AAK Ala-Archa 72.77 322 *c i* P **P 06 24 09.8 -0.1**
AAK pmax pmax
comp=Z,2µm,0.9s
AAK MLR MLR
comp=Z,2346µm,18.0s
AAK Ala-Archa 72.77 322 P **P 06 24 10.6 +0.6**
AAK S **S** **06 33 31.1 -3.1**
AAK Ala-Archa 72.77 322 P **P 06 24 10.1 +0.2**
AAK IAmb IAmb 06 24 48.4
comp=Z,1µm,0.9s
AAK Ala-Archa 72.77 322 P **P 06 24 09.9 -0.1**
AAK S **S** **06 33 33.9 -0.2**
AAK Ala-Archa 72.77 322 P **P 06 24 10.1 +0.2**
AAK Ala-Archa 72.77 322 P **P 06 24 08.7 -1.2**
SAVO Savo Central 72.78 223 P **P 06 24 11.4 +1.5**
LQP Lukban 72.78 270 *e*P **P 06 24 10.1 -0.2**
DYA Yadsworthy 72.81 17⇑ *e*P **P 06 24 09.5 -0.2**
DYA IAMs_20 IAMs_20 06 54 41.6
comp=Z,914µm,24.7s
VRH Novokhopyorsk 72.82 347 *c i* P **P 06 24 08.5 -1.3**
VRH *e* 06 26 52.5
VRH *e*PPP PPP 06 28 37.2
VRH *e*S **S** **06 33 26.4 -7.6**
VRH pmax pmax
comp=Z,17µm,5.0s
VRH pmax pmax
comp=Z,477nm,0.8s
VRH MLR MLR
comp=Z,1193µm,24.0s
CCA1 Carnmenellis 72.83 18 P **P 06 24 10.9 +1.0**
CCA1 Carnmenellis 72.83 18⇑ *e*P **P 06 24 09.9 0.0**
CCA1 IAMs_20 IAMs_20 06 57 02.8
comp=Z,896µm,19.5s
ASSE Asse, Remlinge 72.86 7 *e*P **P 06 24 10.9 +1.0**
comp=Z,2µm,1.4s,baz=354,slow=5.8
ASSE Asse, Remlinge 72.86 7 P **P 06 24 10.1 +0.1**
ELSH Elham, Standar 72.87 13 P **P 06 24 11.3 +1.2**
ELSH Elham, Standar 72.87 13⇑ *e*P **P 06 24 10.0 -0.1**
ELSH IAMs_20 IAMs_20 06 56 26.5
comp=Z,525µm,21.5s
DOV Dover Castle, 72.91 13⇑ *e*P **P 06 24 10.3 0.0**
HDC Heredia 72.95 97 *e*P **P 06 24 11.3 +0.1**
HDC Heredia 72.95 97 P **P 06 24 11.3 +0.1**
OPLO Oploo 72.98 10 P **P 06 24 12.4 +1.7**
HNR Honiara 72.98 223 LR LR 06 50 53.5
comp=Z,31µm,21.6s,baz=96,slow=31
HNR Honiara 72.98 223 IAMs_20 IAMs_20 06 50 19.9
comp=Z,593µm,22.0s
HNR Honiara 72.98 223 P **P 06 24 10.1 -1.1**
EKS2 Erkin-Say 73.01 322 P **P 06 24 12.6 +1.3**
SNR=206
HMNX Herstmonceux 73.04 14 P **P 06 24 12.3 +1.3**
HMNX Herstmonceux 73.04 14⇑ *e*P **P 06 24 11.6 +0.5**
HMNX IAMs_20 IAMs_20 06 54 36.1
comp=Z,698µm,23.9s
VSR Storozhevoye 73.12 348 *c i* P **P 06 24 10.3 -1.3**
VSR *e* 06 26 57.3
VSR *e*PPP PPP 06 28 37.2
VSR *e*S **S** **06 33 33.1 -4.3**
VSR pmax pmax
comp=Z,22µm,5.2s
VSR pmax pmax
comp=Z,932nm,0.8s
VSR MLR MLR
comp=Z,692µm,22.0s
CLZ Clausthal 73.12 7 *e*P **P 06 24 13.0 +1.3**
comp=Z,3µm,1.4s,baz=354,slow=5.8
CLZ Clausthal 73.12 7 P **P 06 24 12.1 +0.5**
UCH Uchtor 73.13 322 P **P 06 24 12.9 +0.5**
SNR=171
SDDR Presa de Saban 73.13 81 IAmb IAmb 06 24 56.1
comp=Z,1µm,1.2s
SDDR Presa de Saban 73.13 81 *e*P **P 06 24 08.7 -3.5**
SDDR Presa de Saban 73.13 81 P **P 06 24 12.5 +0.3**
TGY Tagaytay City 73.13 271 LR LR 06 53 57.4
comp=Z,303µm,20.9s,baz=29,slow=34
R9F13 Warsaw-Wawer 73.14 0 *e*P **P 06 24 12.5 +0.8**
comp=Z,35nm,0.7s
R9F13 *e*pP **sP** **06 24 22.1 +0.6**
R9F13 *e*S **SKiKP** **06 33 51.6 +10**
R9F13 *e*SKS **ScS** **06 34 20.2 +2.1**
PLP Palo 73.17 265 *e*P **P 06 24 11.4 -1.0**
HURO Huro Makira 73.17 221 P **P 06 24 14.4 +2.2**
BUG Bochum--Univer 73.27 9 *e*P **P 06 24 13.3 +0.9**
comp=Z,3µm,1.3s,baz=354,slow=5.8
BUG Bochum--Univer 73.27 9 P **P 06 24 13.4 +1.0**
VORD Divnogorie 73.35 348 *e*P **P 06 24 12.0 -0.9**
VORD *e* 06 24 15.0
VORD pmax pmax
comp=Z,1µm,0.9s
VORD MLR MLR
comp=Z,339µm,21.0s
DGTI Dogotuki 73.38 202 P **P 06 24 17.5 +4.1**
GTTG Gottingen 73.39 7 *e*P **P 06 24 14.6 +1.4**
comp=Z,2µm,1.0s,baz=354,slow=5.8
GTTG Gottingen 73.39 7 P **P 06 24 14.2 +1.0**
WIMM Wimmelburg 73.52 6 P **P 06 24 13.9 0.0**
BEL Belsk 73.53 0 P **P 06 24 15.6 +1.6**
ASAI AK-SAY(Kyrgyzs 73.53 320 P **P 06 24 15.1 +0.4**
KASTN Kahler Asten 73.61 8 *e*P **P 06 24 15.5 +1.0**
comp=Z,1µm,1.2s,baz=354,slow=5.8
UCC Uccle 73.61 11 IAmb IAmb 06 25 00.2
comp=Z,2µm,1.4s
UCC Uccle 73.61 11 *d*P **P 06 24 14.1 -0.4**
comp=Z,514nm,1.3s
UCC Uccle 73.61 11 P **P 06 24 15.3 +0.9**
DZA Taraz 73.64 324 *e*P **P 06 24 15.1 +0.2**
DZA Taraz 73.64 324 *e*P **P 06 24 15.2 +0.2**
KK31 Karatay Array 73.73 325 IAmb IAmb 06 24 54.1
comp=Z,2µm,1.0s
KKAR Karatay Array 73.73 325 P **P 06 24 14.9 -0.5**
KKAR Karatay Array 73.73 325 P **P 06 24 14.9 -0.5**
BEBN Eben Emael 73.75 10 *d*P **P 06 24 15.1 -0.2**
comp=Z,587nm,1.1s
HGN Heimansgroeve 73.81 10 P **P 06 24 15.6 -0.1**
CLL Collm 73.82 6 *e*P **P 06 24 15.0 -0.7**
CLL *i* 06 24 25.8
CLL *e*S **S** **06 33 51.0 +5.6**
CLL pmax pmax
comp=Z,1µm,1.1s
CLL Collm 73.82 6 *e*P **P 06 24 16.4 +0.7**
comp=Z,1µm,1.1s,baz=354,slow=5.8
CLL *e*L L 07 00 12.1
comp=Z,317µm,19.7s
CLL Collm 73.82 6 *e*P **P 06 24 15.0 -0.7**
comp=Z,1µm,1.1s
CLL *e*Pmax 06 24 17.0
CLL *e*P(2) 06 24 20.0
comp=Z,322nm,1.0s
CLL *i* pP **sP** **06 24 25.8 +0.2**
comp=Z,1µm,1.4s
CLL *e*Plp 06 24 34.0
comp=Z,78µm,23.8s
CLL *i* Pmax 06 24 36.3
comp=Z,1µm,1.1s
CLL *e*PP PP 06 27 12.0 +12
CLL *e*S **S** **06 33 51.0 +5.6**
CLL *e*Smax 06 34 11.0
CLL *e*PPS PPS 06 34 30.0
CLL *e*PPSmax 06 35 00.0
CLL *e*SS **SS** **06 38 30.0 +2.0**
CLL *e*SSmax 06 39 36.0
CLL *e*SSS SSS 06 41 54.0
CLL *e*SSSmax 06 42 42.0
CLL *e*PKPPKPdf **P'P'df** **06 51 50.0 -6.8**
CLL *e*AMS AMS 06 54 05.0
CLL *e*SKPPKPdf 06 55 25.0
CLL AMS AMS 07 00 00.0
comp=Z,316µm,19.8s
CLL R2 09 14 00.0
CLL R2 09 23 00.0
CLL R3 09 54 00.0
comp=N,5µm,27.9s
CLL R3 09 54 00.0
comp=Z,7µm,26.6s
CLL R3 10 09 00.0
comp=Z,6µm,22.2s
CLL R3 10 11 00.0
CLL R 10 41 00.0
NEUB Neuenburg 73.85 6 *e*P **P 06 24 16.9 +1.1**
comp=Z,2µm,1.1s,baz=354,slow=5.8
NEUB Neuenburg 73.85 6 P **P 06 24 16.7 +0.8**
RNPP9 Sopachiv 73.89 357 P **P 06 24 16.0 -0.1**
BSTI Sart Tilman 73.95 10 *d*P **P 06 24 16.9 +0.5**
comp=Z,177nm,0.9s
RNPP8 Varash 73.96 357 P **P 06 24 16.7 +0.2**
MEM Membach 73.97 10 *d*P **P 06 24 16.9 +0.3**
comp=Z,706nm,1.1s
MEM Membach 73.97 10 P **P 06 24 17.1 +0.5**
PZH PanZhiHua 73.99 293 P **P 06 24 17.3 +0.1**
PZH PcP **PcP** **06 24 30.4 -2.1**
PZH S **S** **06 33 47.1 -1.2**
PZH SKS **SKSac** **06 34 17.6 -5.6**
PZH pmax pmax
comp=Z,570nm,1.2s
PZH pmax pmax
comp=Z,87µm,8.9s
PZH L L
comp=Z,279µm,19.8s
PZH L L
comp=Z,487µm,21.4s
PZH L L
comp=Z,412µm,23.5s
SCPH Surigao 73.99 264 *e*P **P 06 24 17.0 -0.2**
BTNL Ternell 74.00 10 *d*P **P 06 24 17.1 +0.3**
comp=Z,402nm,1.1s
BRLS Boroldav 74.02 325 *c i* P **P 06 24 18.9 +1.8**
BRLS Boroldav 74.02 325⇑ *i* P **P 06 24 18.9 +1.8**
MSLP Maasin 74.06 265 *i* P **P 06 24 17.7 +0.1**
RNPP5 Staryi Chortor 74.07 357 P **P 06 24 17.3 +0.2**
BCLA Clavier 74.08 11 *d*P **P 06 24 17.3 +0.1**
BGES Gesves 74.09 11 *d*P **P 06 24 17.5 +0.1**
comp=Z,382nm,0.9s
UBBA Unterbreizbach 74.11 8 *e*P **P 06 24 18.2 +0.9**
comp=Z,1µm,1.6s,baz=354,slow=5.8
UBBA Unterbreizbach 74.11 8 P **P 06 24 17.6 +0.3**
BMRD Maredsous 74.14 11 *d*P **P 06 24 17.7 +0.1**
comp=Z,713nm,1.1s
TSSP Tandag City 74.18 263 *e*P **P 06 24 19.1 +0.8**
BHOU Houvegnez 74.22 10 *d*P **P 06 24 18.0 -0.1**
comp=Z,378nm,1.2s
JSA Saint Aubin 74.30 16⇑ *e*P **P 06 24 18.7 +0.2**
JSA IAMs_20 IAMs_20 06 56 49.0
comp=Z,812µm,21.8s
BRG Berggiesshubel 74.31 5 *e*P **P 06 24 19.4 +0.9**
comp=Z,1µm,1.1s,baz=354,slow=5.8
BRG Berggiesshubel 74.31 5 P **P 06 24 18.5 0.0**
BRG Berggiesshubel 74.31 5 *e*P **P 06 24 19.4 +0.9**
BRG Amp 06 24 20.9
comp=Z,218nm,1.4s
BRG pP **pP** **06 24 22.8 -2.9**
BRG Amp 06 24 24.4
comp=Z,357nm,1.1s
BRG sP **sP** **06 24 29.2 +0.8**
BRG Amp 06 24 30.7
comp=Z,911nm,1.1s
BRG Berggiesshubel 74.31 5 S **S** **06 33 57.0 +6.1**
BRG Berggiesshubel 74.31 5 Amp 06 51 59.0
comp=Z,19nm,1.2s
BRG Berggiesshubel 74.31 5 Amp 06 52 06.2
comp=Z,21nm,1.2s
BRG Berggiesshubel 74.31 5 P **P'P'df** **06 51 58.0 +2.1**
MI28 Mi28,Pidlybu 74.31 356 P **P 06 24 17.1 -1.4**
DOU Dourbes 74.32 11 *d*P **P 06 24 18.4 -0.2**
comp=Z,493nm,1.0s
RCHB Rochefort 74.33 11 *d*P **P 06 24 18.5 -0.2**
comp=Z,650nm,1.0s
RCHB Rochefort 74.33 11 P **P 06 24 18.7 0.0**
AK21 Malin Array Si 74.40 355 P **P 06 24 18.2 -0.9**
MOX Moxa 74.40 6 *e*P **P 06 24 20.2 +1.1**
comp=Z,2µm,1.1s,baz=354,slow=5.8
MOX *e*L L 06 56 36.3
comp=Z,415µm,21.7s
MOX Moxa 74.40 6 P **P 06 24 19.2 +0.1**
AK23 Malin Array Si 74.41 355 P **P 06 24 18.3 -0.8**
AK22 Malin Array Si 74.41 355 P **P 06 24 18.3 -0.8**
LLP Lapu-Lapu 74.43 266 *e*P **P 06 24 18.5 -1.3**
LLP *e*S **S** **06 33 53.3 +0.1**
AK18 Malin Array Si 74.45 355 P **P 06 24 18.6 -0.8**
AKASG Malin Array Be 74.46 355 P **P 06 24 18.3 -1.1**
comp=Z,442nm,0.6s,baz=5.5,slow=6.0,SNR=311
AKASG PKPPKP 06 51 47.1
comp=Z,1.6nm,0.8s,baz=223,slow=1.2,SNR=4.2
AKASG LR LR 06 57 06.2
comp=Z,834µm,21.9s,baz=12,slow=36
comp=Z,442nm,0.6s
AKASG Malin Array Be 74.46 355 P **P 06 24 18.5 -0.9**
AKASG pmax pmax
comp=Z,3µm,1.0s
AKASG Malin Array Be 74.46 355 P **P 06 24 18.5 -0.9**
AKBB Malin Array Si 74.46 355 *c i* P **P 06 24 18.2 -1.2**
AKBB pmax pmax
comp=Z,5µm,1.4s
AKBB MLR MLR
comp=Z,1357µm,22.0s
AKBB Malin Array Si 74.46 355 P **P 06 24 18.6 -0.8**
ARSB Arslanbob 74.46 322 IAmb IAmb 06 25 11.1
comp=Z,2µm,1.2s
KIEV Kiev 74.47 355 *i* P **P 06 24 18.1 -1.4**
SNR=429
KIEV Kiev 74.47 355 P **P 06 24 18.3 -1.2**
KIEV pmax pmax
comp=Z,3µm,1.0s
KIEV MLR MLR
comp=Z,1035µm,21.0s
KIEV Kiev 74.47 355 P **P 06 24 18.3 -1.2**
KIEV Kiev 74.47 355 P **P 06 24 18.6 -0.9**
comp=Z,234µmcomp=Z,12µm,1.2s
KIEV Kiev 74.47 355 P **P 06 24 18.5 -0.9**
KIEV Kiev 74.47 355 P **P 06 24 17.1 -2.4**
AK15 Malin Array Si 74.47 355 P **P 06 24 18.8 -0.7**
KMI2 Kunming 74.54 292⇑ P **P 06 24 20.3 -0.3**
KMI2 pP pP 06 24 28.5 +0.7
KMI2 S **S** **06 33 53.5 -1.2**
KMI2 pmax pmax
comp=Z,1µm,1.6s
KMI2 pmax pmax
comp=Z,70µm,12.4s
KMI2 L L
comp=Z,598µm,18.9s
KMI2 L L
comp=Z,503µm,19.5s
KMI2 L L
comp=Z,718µm,23.9s
TNS Taunus Mts 74.58 9 *e*P **P 06 24 21.3 +1.0**
comp=Z,1µm,1.2s,baz=354,slow=5.8
TNS *e*L L 07 00 58.2
comp=Z,329µm,20.1s
TNS Taunus Mts 74.58 9 P **P 06 24 20.9 +0.6**
PLN Plauen 74.59 6 *e*P **P 06 24 21.2 +1.0**
comp=Z,1µm,1.8s,baz=354,slow=5.8
RICC Richard 74.64 5 *e*P **P 06 24 21.8 +1.3**
RICC *e*pP **pP** **06 24 25.3 -2.4**
RICC AMS AMS 06 54 30.0
comp=Z,431µm,24.6s
CHVC Chvalec 74.68 4 *e*P **P 06 24 21.3 +0.5**
CHVC MLR MLR
comp=Z,517µm,23.9s
CHVC Chvalec 74.68 4 *e*P **P 06 24 21.3 +0.5**
CHVC AMS AMS 06 54 30.0
comp=Z,517µm,23.9s
TANN Tannenbergstha 74.68 6 *e*P **P 06 24 21.8 +1.0**
comp=Z,3µm,1.9s,baz=354,slow=5.8
TANN Tannenbergstha 74.68 6 P **P 06 24 20.9 +0.1**
PIRO Carate, Puerto 74.69 97 IAmb IAmb 06 25 11.8
comp=Z,2µm,1.2s
OSTC Ostas 74.72 3 *e*P **P 06 24 21.6 +0.6**
OSTC *e**PP **pP** **06 24 25.8 -2.4**
OSTC MLR MLR
comp=Z,487µm,24.1s
OSTC Ostas 74.72 3 *e*P **P 06 24 21.6 +0.6**
OSTC *e*pP **pP** **06 24 25.8 -2.4**
OSTC AMS AMS 06 54 20.0
comp=Z,487µm,24.1s
CHM Chimkent 74.73 325 *e*P **P 06 24 21.4 +0.2**
CHM *e*S **S** **06 33 57.4 +1.5**
CHM pmax pmax
comp=Z,8µm,3.1s
CHM MLR MLR
comp=Z,683µm,18.0s
CHM Chimkent 74.73 325 *e*P **P 06 24 21.4 +0.2**
comp=Z,8µm,3.1s
CHM *e*S **S** **06 33 57.5 +1.5**
CHM LR LR 06 59 34.4
comp=Z,683µm,18.2s
BRU2 Volcan 74.74 97 IAmb IAmb 06 25 05.8
comp=Z,1µm,1.3s
BRU2 Volcan 74.74 97 P **P 06 24 22.4 +0.6**
IUG luzhnay 74.75 325 *e*P **P 06 24 21.5 +0.1**
IUG pmax pmax
comp=Z,2µm,1.5s
IUG luzhnay 74.75 325 *e*P **P 06 24 21.6 +0.1**
comp=Z,2µm,1.5s
UPC Upice 74.76 4 *e*P **P 06 24 21.7 +0.5**
UPC *e**PP **pP** **06 24 25.8 -2.6**
UPC MLR MLR
comp=Z,565µm,23.8s
UPC Upice 74.76 4 *e*P **P 06 24 21.7 +0.5**
UPC *e*pP **pP** **06 24 25.8 -2.6**
UPC AMS AMS 06 54 20.0
comp=Z,565µm,23.8s
UPC Upice 74.76 4 P **P 06 24 21.2 0.0**
BIPH Bislig 74.78 262 *e*P P 06 24 26.7 +4.9
NKC Novy Kostel 74.86 6 *e*P **P 06 24 22.5 +0.7**
NKC *e**PP **pP** **06 24 26.5 -2.6**
NKC *e*S **S** **06 33 59.1 +1.9**
NKC MLR MLR
comp=Z,497µm,24.3s
NKC Novy Kostel 74.86 6 *e*P **P 06 24 22.5 +0.7**
NKC *e*pP **pP** **06 24 26.5 -2.6**
NKC *e*S **S** **06 33 59.1 +1.9**
NKC AMS AMS 06 54 50.0
comp=Z,497µm,24.3s
NKC Novy Kostel 74.86 6 P **P 06 24 22.6 +0.8**
NGOA Tingoa Renbel 74.87 222 P **P 06 24 25.6 +3.4**
WLF Walferdange 74.92 10 P **P 06 24 22.6 +0.5**
WLF Walferdange 74.92 10 P **P 06 24 22.7 +0.6**
WLF Walferdange 74.92 10 IAmb IAmb 06 25 22.3
comp=Z,1µm,1.0s
WLF IAMs_20 IAMs_20 06 57 40.8
comp=Z,422µm,21.0s
WLF Walferdange 74.92 10 *d*P **P 06 24 22.4 +0.3**
comp=Z,841nm,1.1s
WLF Walferdange 74.92 10 *e*P **P 06 24 23.6 +1.5**
comp=Z,2µm,1.4s,baz=354,slow=5.8
WLF Walferdange 74.92 10 P **P 06 24 23.6 +1.5**
DPC Dobruska-Polom 74.93 3 *e*P **P 06 24 22.7 +0.5**
DPC MLR MLR
comp=Z,424µm,22.0s
DPC Dobruska-Polom 74.93 3 *e*P **P 06 24 22.7 +0.5**
DPC AMS AMS 06 55 40.0
comp=Z,424µm,22.0s
DPC Dobruska-Polom 74.93 3 P **P 06 24 22.5 +0.3**
LKBA Tubou, Lakemba 74.96 200 P **P 06 24 24.9 +2.3**
TBP Tagbilaran 75.00 265 *i* P **P 06 24 22.4 -0.6**
TBP *e*S **S** **06 34 01.9 +2.4**
CDOP Cateel, Davao 75.06 262 *i* P **P 06 24 22.1 -1.3**
CDOP *i* S **SKiKP** **06 33 44.6 -0.9**
OJC Ojcow 75.14 1 P **P 06 24 23.9 +0.5**
comp=Z,41µmcomp=Z,943nm,1.4s
OJC Ojcow 75.14 1 P **P 06 24 23.1 -0.3**
MSVF Nonsavu 75.14 203 LR LR 06 50 46.2
comp=Z,891µm,21.9s,baz=15,slow=30
MSVF Nonsavu 75.14 203 P **P 06 24 26.1 +2.4**
MSVF Nonsavu 75.14 203⇓ *i* P **P 06 24 26.8 +3.1**
MSVF pmax pmax
comp=Z,857nm,1.2s
MSVF MLR MLR
comp=Z,267µm,18.0s
MSVF Nonsavu 75.14 203 P **P 06 24 24.8 +1.0**
MSVF Nonsavu 75.14 203 P **P 06 24 27.1 +3.3**
KRLC Kraliky 75.22 3 *e*P **P 06 24 24.4 +0.5**
KRLC *e**PP **pP** **06 24 28.3 -2.8**
KRLC MLR MLR
comp=Z,374µm,20.8s
KRLC Kraliky 75.22 3 *e*P **P 06 24 24.4 +0.5**
KRLC *e*pP **pP** **06 24 28.3 -2.8**
KRLC AMS AMS 06 56 00.0
comp=Z,374µm,20.8s
KRLC Kraliky 75.22 3 P **P 06 24 24.0 +0.1**
PRU Pruhonice 75.22 5 *e*P **P 06 24 24.4 +0.6**
PRU *e**PP **pP** **06 24 28.2 -2.9**
PRU MLR MLR
comp=Z,514µm,24.6s
PRU Pruhonice 75.22 5 *e*P **P 06 24 24.4 +0.6**
PRU *e*pP **pP** **06 24 28.2 -2.9**
PRU AMS AMS 06 54 40.0
comp=Z,514µm,24.6s
PRU Pruhonice 75.22 5 P **P 06 24 23.9 +0.1**
OHH Osh 75.24 322 P **P 06 24 23.8 -0.5**
JAP San Jose, Anti 75.25 268 *e*P **P 06 24 27.6 +3.1**
RAC Raciborz 75.25 2 *e*P **P 06 24 24.2 +0.2**
RAC *e*S **S** **06 33 58.6 -2.8**
RAC AMS AMS 06 59 52.0
comp=Z,617nm,21.7s
RAC Raciborz 75.25 2 *e*P **P 06 24 24.2 +0.2**
RAC *e*S **S** **06 33 58.6 -2.8**
RAC MLR MLR
comp=Z,617µm,21.7s
GRA3 Grafenberg Arr 75.26 7 P **P 06 24 24.8 +0.7**
LUBAR Lubar, Ukraine 75.31 356 P **P 06 24 23.3 -1.1**
ROTZ Rotzenmuhle 75.31 6 *e*P **P 06 24 25.6 +1.2**
comp=Z,1µm,1.9s,baz=354,slow=5.8
GRA1 Grafenberg Arr 75.32 7 IAmb IAmb 06 25 10.5
comp=Z,2µm,1.1s
GRA1 IAMs_20 IAMs_20 06 56 53.5
comp=Z,424µm,22.0s
GRA1 Grafenberg Arr 75.32 7 P **P 06 24 25.5 +1.0**
GRF Grafenberg Arr 75.32 7 *e*P **P 06 24 25.7 +1.2**
comp=Z,8µm,1.9s,baz=354,slow=5.8
GRF *e*L L 06 57 04.6
comp=Z,389µm,21.9s
GRFO Grafenberg 75.32 7 P **P 06 24 25.3 +0.8**
GRFO pmax pmax
comp=Z,1µm,1.0s
GRFO MLR MLR
comp=Z,374µm,21.0s
GRFO Grafenberg 75.32 7 P **P 06 24 25.3 +0.8**
GRFO IAmb IAmb 06 25 10.4
comp=Z,1µm,1.0s
GRFO IAMs_20 IAMs_20 06 57 05.5
comp=Z,374µm,21.0s
GRFO Grafenberg 75.32 7 P **P 06 24 25.5 +1.0**
STEB Steborice 75.39 2 *e*P **P 06 24 25.1 +0.3**
STEB *e*pP **pP** **06 24 29.3 -2.7**
KSH2 Kashi 75.44 319 P **P 06 24 25.4 -0.1**
KSH2 pP pP 06 24 32.8 +0.1
KSH2 S **S** **06 34 08.4 +4.2**
KSH2 pmax pmax
comp=Z,1µm,1.1s
KSH2 pmax pmax
comp=Z,74µm,14.1s
KSH2 L L
comp=Z,734µm,22.0s
KSH2 L L
comp=Z,1050µm,17.9s
KSH2 L L
comp=Z,1559µm,21.3s
OKC Ostrava-Krasne 75.49 2 *e*P **P 06 24 25.5 +0.1**
OKC *e**PP **pP** **06 24 29.7 -2.9**
OKC MLR MLR
comp=Z,454µm,21.9s
OKC Ostrava-Krasne 75.49 2 *e*P **P 06 24 25.5 +0.1**
OKC *e*pP **pP** **06 24 29.7 -2.9**
OKC AMS AMS 06 56 30.0

comp=Z,454µm,21.9s
OKC Ostrava-Krasne 75.49 2 P **P** **06 24 25.5 +0.1**
CGP Cagayan de Oro 75.52 264 *eP* **P** **06 24 28.9 +2.9**
MORC Moravsky Berou 75.54 3 ⇑P **P** **06 24 26.2 +0.4**
MORC Moravsky Berou 75.54 3 P **P** **06 24 26.1 +0.4**
MORC Moravsky Berou 75.54 3 IAmb IAmb 06 25 30.9
comp=Z,1µm,1.2s
MORC Moravsky Berou 75.54 3 *eP* **P** **06 24 25.3 -0.5**
MORC *eS* **SKiKP** **06 33 53.1 +7.5**
MORC *e*PKPPKP 06 51 52.3
MORC Moravsky Berou 75.54 3 P **P** **06 24 25.7 -0.1**
QIZ Qiongzhong 75.54 282 P **P** **06 24 26.3 +0.2**
QIZ Qiongzhong 75.54 282 IAmb IAmb 06 25 00.8
comp=Z,2µm,1.4s
QIZ Qiongzhong 75.54 282 IAMs_20 IAMs_20 06 56 47.6
comp=Z,382µm,22.0s
QIZ Qiongzhong 75.54 282 P **P** **06 24 26.6 +0.5**
QIZ sP **PcP** **06 24 37.6 -1.5**
QIZ PP **PP** **06 27 14.1 -1.1**
QIZ S **S** **06 34 06.1 +0.6**
QIZ SS **SS** **06 39 00.5 +4.6**
QIZ pmax pmax
comp=Z,640nm,1.3s
QIZ pmax pmax
comp=Z,71µm,12.8s
QIZ L L
comp=Z,237µm,20.7s
QIZ L L
comp=Z,380µm,22.6s
QIZ L L
comp=Z,417µm,21.2s
QIZ Qiongzhong 75.54 282 P **P** **06 24 29.4 +3.3**
GRB4 Grafenberg Arr 75.57 7 P **P** **06 24 27.1 +1.2**
SNPH Sibulan 75.64 266 *eP* **P** **06 24 26.8 0.0**
GRB1 Grafenberg Arr 75.65 7 P **P** **06 24 27.6 +1.2**
GRB3 Grafenberg Arr 75.71 6 P **P** **06 24 27.1 +0.4**
KWP Kalwaria Pacla 75.73 359 P **P** **06 24 26.9 +0.1**
comp=Z,66µmcomp=Z,3µm,1.0s
ZVC Zvikov 75.75 5 *eP* **P** **06 24 27.4 +0.5**
ZVC AMS AMS 06 54 50.0
comp=Z,590µm,25.8s
GRB2 Grafenberg Arr 75.77 7 P **P** **06 24 27.3 +0.2**
JAY Jayapura 75.78 244 LR LR 06 55 27.1
comp=Z,166µm,19.3s,baz=14,slow=34
JAY Jayapura 75.78 244 P **P** **06 24 27.8 +0.3**
comp=Z,257µmcomp=Z,844nm,1.4s
RAR Rarotonga 75.92 181 LR LR 06 54 30.5
comp=Z,260µm,18.5s,baz=344,slow=33
RAR Rarotonga 75.92 181 P **P** **06 24 32.3 +4.3**
RAR Rarotonga 75.92 181 IAMs_20 IAMs_20 06 55 05.2
comp=Z,286µm,19.0s
GRB5 Grafenberg Arr 75.93 7 P **P** **06 24 28.6 +0.6**
GRC4 Grafenberg Arr 75.94 7 P **P** **06 24 29.1 +1.0**
STHS Stebnicka Huta 75.95 0 *eP* **P** **06 24 28.8 +0.7**
STHS pmax pmax
comp=Z,504nm,0.9s
STHS Stebnicka Huta 75.95 0 *eP* **P** **06 24 28.8 +0.7**
TREC Trest 75.95 4 P **P** **06 24 28.4 +0.3**
TREC Trest 75.95 4 AMS AMS 06 55 10.0
comp=Z,542µm,25.3s
TREC Trest 75.95 4 P **P** **06 24 27.9 -0.2**
MAUC Maruska 75.96 2 *eP* **P** **06 24 27.9 -0.2**
MAUC *ep*P **pP** **06 24 32.8 -2.6**
WET Wettzell 75.97 6 *eP* **P** **06 24 29.4 +1.1**
comp=Z,6µm,2.2s,baz=354,slow=5.8
WET *eL* L 07 01 45.8
comp=Z,328µm,20.5s
WET Wettzell 75.97 6 P **P** **06 24 28.4 +0.2**
VRAC Vranov 75.98 3 ⇓P **P** **06 24 28.7 +0.4**
VRAC Vranov 75.98 3 P **P** **06 24 28.6 +0.4**
VRAC Vranov 75.98 3 *eP* **P** **06 24 28.0 -0.2**
VRAC *eS* **S** **06 34 04.7 -4.8**
VRAC *e*PKPPKP **P'P'df** **06 51 51.0 -1.9**
VRAC Vranov 75.98 3 P **P** **06 24 28.3 0.0**
KHC Kasperske Hory 76.03 5*d* *i*P **P** **06 24 28.0 -0.5**
KHC pmax pmax
comp=Z,2µm,1.8s
KHC MLR MLR
comp=Z,474µm,23.0s
KHC Kasperske Hory 76.03 5 *eP* **P** **06 24 29.0 +0.4**
KHC *ep*P **pP** **06 24 33.6 -2.2**
KHC *e*PP PP 06 27 28.0 +10
KHC *eS* **S** **06 34 14.1 +4.0**
KHC AMS AMS 06 55 20.0
comp=Z,592µm,25.0s
KHC Kasperske Hory 76.03 5 IAmb IAmb 06 25 27.6
comp=Z,1µm,1.0s
KHC IAMs_20 IAMs_20 06 57 06.1
comp=Z,411µm,22.0s
KHC Kasperske Hory 76.03 5 P **P** **06 24 28.9 +0.4**
GRC1 Grafenberg Arr 76.04 7 P **P** **06 24 29.7 +1.1**
CLF Chambon-Foret 76.08 13 IAMs_20 IAMs_20 06 58 45.6
comp=Z,536µm,22.0s
CLF Chambon-Foret 76.08 13 P **P** **06 24 29.4 +0.7**
BCIP Isla Barro Col 76.08 94 IAMs_20 IAMs_20 06 58 04.1
comp=Z,304µm,22.0s
BCIP Isla Barro Col 76.08 94 P **P** **06 24 29.2 0.0**
comp=Z,271µmcomp=Z,38µmcomp=Z,352nm,2.0s
BCIP Isla Barro Col 76.08 94 P **P** **06 24 28.8 -0.4**
STU Stuttgart 76.08 8 P **P** **06 24 29.1 +0.3**
STU Stuttgart 76.08 8 IAmb IAmb 06 25 08.9
comp=Z,1µm,1.0s
STU Stuttgart 76.08 8 *eP* **P** **06 24 28.4 -0.4**
STU Stuttgart 76.08 8 *eP* **P** **06 24 29.9 +1.1**
comp=Z,3µm,1.0s,baz=354,slow=5.8
STU Stuttgart 76.08 8 P **P** **06 24 30.0 +1.2**
PRSN Puerto Rico Se 76.09 78 IAmb IAmb 06 25 24.6
comp=Z,3µm,1.7s
GENI Genyem 76.12 244 P **P** **06 24 31.5 +2.1**
GENI Genyem 76.12 244 P **P** **06 24 29.9 +0.5**
comp=Z,334µmcomp=Z,70µmcomp=Z,2µm,2.1s
GENI Genyem 76.12 244 P **P** **06 24 30.5 +1.0**
DAV Davao City (W) 76.14 262 LR LR 06 53 45.2
comp=Z,234µm,21.8s,baz=44,slow=32
DAV Davao City (W) 76.14 262 P **P** **06 24 30.7 +1.1**
DAV Davao City (W) 76.14 262 P **P** **06 24 29.2 -0.3**
DAV S **S** **06 34 15.7 +3.6**
DAV Davao City (W) 76.14 262 P **P** **06 24 29.4 -0.2**
comp=Z,70µmcomp=Z,2µm,1.2s
DAV Davao City (W) 76.14 262 P **P** **06 24 29.0 -0.6**
DAV S **S** **06 34 12.6 +0.5**
DAV Davao City (W) 76.14 262 P **P** **06 24 29.0 -0.6**
GRC3 Grafenberg Arr 76.14 7 P **P** **06 24 29.9 +0.8**
GRC2 Grafenberg Arr 76.15 7 P **P** **06 24 30.2 +0.9**
DMPH Davao City--Mi 76.17 263 *i* P **P** **06 24 29.6 -0.1**
DMPH *i* S **S** **06 34 17.2 +4.8**
DCPH Dipolog City 76.18 265 *i* P **P** **06 24 28.9 -0.9**
LANS Liptovska Anna 76.20 1 *eP* **P** **06 24 31.1 +1.5**
LANS Liptovska Anna 76.20 1 *eP* **P** **06 24 31.1 +1.5**
KRUC Moravsky 76.22 3 P **P** **06 24 29.9 +0.3**
KRUC Moravsky 76.22 3 *eP* **P** **06 24 29.3 -0.3**
KRUC *eS* **S** **06 34 05.9 -6.2**
KRUC *e*PKPPKP **P'P'df** **06 51 50.7 -1.7**
KRUC Moravsky 76.22 3 P **P** **06 24 29.4 -0.2**
CRPR Cabo Rojo, PR 76.28 78 IAmb IAmb 06 25 25.3
comp=Z,2µm,1.3s
UUPR Utuado, UPR, P 76.30 78 IAmb IAmb 06 25 15.9
comp=Z,1µm,1.0s
GEC2 GERESS Array S 76.32 5 IAmb IAmb 06 24 58.5
comp=Z,1µm,1.2s
GEC2 GERESS Array S 76.32 5 *eP* **P** **06 24 31.3 +1.0**
comp=Z,1µm,1.2s,baz=354,slow=5.8
GEC2 *eL* L 07 05 07.8
comp=Z,386µm,21.5s
GERES GERESS Array B 76.32 5 P **P** **06 24 30.0 -0.3**
comp=Z,91nm,0.8s,baz=347,slow=4.1,SNR=133
GERES PKPPKP **P'P'df** **06 51 45.6 -6.8**
comp=Z,2.5nm,0.9s,baz=177,slow=2.5,SNR=5.7
comp=Z,91nm,0.8s
BTK Batken 76.34 323 P **P** **06 24 30.4 -0.2**
CKRC Cesky Krumlov 76.37 5 *eP* **P** **06 24 30.7 +0.2**
CKRC MLR MLR
comp=Z,516µm,24.7s
CKRC Cesky Krumlov 76.37 5 *eP* **P** **06 24 30.7 +0.2**
CKRC *eS* **SKiKP** **06 33 51.1 +4.2**
CKRC AMS AMS 06 55 20.0
comp=Z,516µm,24.7s
GMAL Guarumal, Vera 76.41 96 P **P** **06 24 32.4 +1.2**
comp=Z,27µmcomp=Z,374nm,2.0s
KOLS Kolonicke sedl 76.43 359 *eP* **P** **06 24 35.3 +4.5**
KOLS pmax pmax
comp=Z,395nm,0.9s
KOLS Kolonicke sedl 76.43 359 P **P** **06 24 32.3 +1.5**
KOLS Kolonicke sedl 76.43 359 *eP* **P** **06 24 35.3 +4.5**
ECPR Experimental S 76.45 78 IAmb IAmb 06 25 21.0
comp=Z,880nm,1.0s
BFO Black Forest 76.45 9 P **P** **06 24 30.8 -0.1**
BFO pmax pmax
comp=Z,703nm,0.9s
BFO MLR MLR
comp=Z,298µm,22.0s
BFO Black Forest 76.45 9 P **P** **06 24 30.8 -0.1**
BFO IAMs_20 IAMs_20 06 58 04.3
comp=Z,298µm,22.0s
BFO Black Forest 76.45 9 *eP* **P** **06 24 31.8 +0.8**
comp=Z,3µm,1.9s,baz=354,slow=5.8
BFO *eL* L 06 58 26.5
comp=Z,235µm,22.0s
BFO Black Forest 76.45 9 P P 06 24 26.1 -4.9
ECH Echery 76.45 10 P **P** **06 24 30.8 -0.2**
ECH Echery 76.45 10 IAmb IAmb 06 25 13.1
comp=Z,1µm,1.1s
ECH Echery 76.45 10 P **P** **06 24 30.9 0.0**
ECH Echery 76.45 10 P **P** **06 24 28.9 -2.1**
JAVC Velka Javorina 76.46 3 *eP* **P** **06 24 31.9 +0.9**
JAVC *e*PKPPKP **P'P'df** **06 51 49.9 -2.2**
JAVC Velka Javorina 76.46 3 P **P** **06 24 32.2 +1.1**
KCP Kidapawan 76.47 263 *eP* **P** **06 24 34.8 +3.2**
DRK Karamyk 76.52 322 P **P** **06 24 32.7 +0.9**
CELP Cerrillos 76.52 78 IAmb IAmb 06 25 17.4
comp=Z,1µm,1.0s
SJG San Juan 76.73 77 P **P** **06 24 32.8 -0.1**
SJG pmax pmax
comp=Z,874nm,0.9s
SJG MLR MLR
comp=Z,355µm,20.0s
SJG San Juan 76.73 77 P **P** **06 24 32.8 -0.1**
SJG IAmb IAmb 06 25 18.6
comp=Z,874nm,0.8s
SJG San Juan 76.73 77 IAMs_20 IAMs_20 07 01 41.1
comp=Z,355µm,20.0s
SJG San Juan 76.73 77 P **P** **06 24 33.5 +0.6**
UZHM Uzhgorod 76.73 359 P **P** **06 24 33.1 +0.6**
LSA Lhasa 76.75 303 P **P** **06 24 32.2 -1.3**
SMOL Smolenice 76.80 3 *eP* P 06 24 38.2 +5.3
SMOL pmax pmax
comp=Z,88nm,0.9s
FUR Furstenfeldbru 76.84 7 *eP* **P** **06 24 34.3 +1.1**
comp=Z,12µm,2.4s,baz=354,slow=5.8
FUR *eL* L 06 58 00.7
comp=Z,346µm,21.7s
FUR Furstenfeldbru 76.84 7 P **P** **06 24 34.4 +1.3**
TNCH TengChong 76.88 295 ⇑*i*P **P** **06 24 33.8 -0.1**
TNCH S **S** **06 34 17.6 -2.8**
TNCH SKS SKSac 06 34 33.9 -11
TNCH pmax pmax
comp=Z,180nm,1.0s
TNCH pmax pmax
comp=Z,32µm,5.8s
TNCH L L
comp=Z,202µm,19.4s
TNCH L L
comp=Z,215µm,20.9s
TNCH L L
comp=Z,473µm,26.9s
HUMP Col San Antoni 76.88 77 IAmb IAmb 06 25 24.3
comp=Z,811nm,0.9s
PDPR Patillas Dam, 76.88 77 IAmb IAmb 06 25 28.4
comp=Z,1µm,1.4s
KECS Kecovo 76.88 1 *eP* **P** **06 24 37.3 +4.0**
KECS pmax pmax
comp=Z,100nm,0.9s
KECS Kecovo 76.88 1 P **P** **06 24 35.1 +1.7**
KECS Kecovo 76.88 1 *eP* **P** **06 24 37.3 +4.0**
MODS Modra-Piesok 76.93 3 *eP* **P** **06 24 35.3 +1.6**
MODS pmax pmax
comp=Z,1µm,2.1s
MODS Modra-Piesok 76.93 3 P **P** **06 24 34.4 +0.7**
MODS Modra-Piesok 76.93 3 *eP* **P** **06 24 35.3 +1.6**
AZU Azuero 76.94 95 P **P** **06 24 33.7 -0.4**
comp=Z,230µmcomp=Z,29µmcomp=Z,280nm,1.3s
SLVN Son La 76.98 288 P **P** **06 24 34.4 0.0**
SLE Schleitheim 77.02 9 P **P** **06 24 34.0 -0.2**
SLE Schleitheim 77.02 9 P **P** **06 24 33.9 -0.3**
DRBR Darabani 77.07 356 ⇑P **P** **06 24 36.2 +1.8**
SORM Soroca 77.07 355 P **P** **06 24 33.6 -0.8**
comp=Z,53µmcomp=Z,2µm,0.8s
ABAH Abaujker 77.07 0 P **P** **06 24 34.9 +0.5**
BAKI Biak 77.08 249 P **P** **06 24 36.0 +1.1**
comp=Z,307µmcomp=Z,48µmcomp=Z,1µm,1.2s
WINA Alland / Wiene 77.16 4 *eP* **P** **06 24 35.1 +0.1**
comp=Z,29µm,7.9s,SNR=179
WINA S **S** **06 34 23.7 +1.2**
comp=Z,6.3nm,1.1s
BAL3X Bal3x, Balta 77.20 354 P **P** **06 24 34.5 -0.6**
TRPA Tarpa 77.23 359 P **P** **06 24 35.6 +0.3**
PGRA Graciosa 77.25 37 *eP* **P** **06 24 35.6 0.0**
PGRA *i* IAmb IAmb 06 24 40.0
comp=Z,521nm,0.9s
PGRA *eS* **S** **06 34 29.5 +5.8**
PGRA *e*LR LR 06 49 55.2
PGRA *i* IAMs_20 IAMs_20 06 51 42.7
comp=Z,43µm,20.9s
BOURR Bourrignon 77.27 10 P **P** **06 24 36.3 +0.7**
CONA Conrad Observa 77.33 4 *i* pP **P** **06 24 36.3 +0.3**
comp=Z,9µm,3.1s,SNR=330
CONA *e*PP **PP** **06 27 26.9 -2.5**
comp=Z,222nm,1.8s
CONA *eS* **S** **06 34 30.7 +6.2**
comp=Z,68nm,1.7s
MOA Molln 77.34 5 *eP* **P** **06 24 35.5 -0.4**
comp=Z,497nm,1.7s,SNR=109
MOA *e*PP **PP** **06 27 27.4 -2.0**
comp=Z,29nm,0.7s
MOA *eS* **S** **06 34 26.3 +1.8**
comp=Z,14nm,1.6s
MOA Molln 77.34 5 P **P** **06 24 35.9 -0.1**
PCED Cedros 77.35 38 *eP* **P** **06 24 35.9 -0.2**
PCED *i* IAmb IAmb 06 24 38.2
comp=Z,137nm,0.8s
RJOB Jochberg 77.37 6 *eP* **P** **06 24 37.4 +1.2**
comp=Z,812nm,0.8s,baz=354,slow=5.8
RJOB Jochberg 77.37 6 P **P** **06 24 36.4 +0.2**
CALA Caldeira 77.39 38 *eP* **P** **06 24 37.1 +0.6**
CALA *i* IAmb IAmb 06 24 42.8
comp=Z,506nm,0.9s
ROSA Rosais 77.43 38 *eP* **P** **06 24 37.3 +0.6**
ROSA *i* IAmb IAmb 06 24 42.9
comp=Z,355nm,1.2s
ROSA *eS* **S** **06 34 32.5 +6.8**
ROSA *e*LR LR 06 49 54.1
ROSA *i* IAMs_20 IAMs_20 06 51 46.3
comp=Z,41µm,18.5s
ROSA Rosais 77.43 38 P **P** **06 24 38.0 +1.4**
PSZ Piszkesteto 77.44 1 ⇑P **P** **06 24 37.7 +1.0**
PSZ Piszkesteto 77.44 1 P **P** **06 24 37.6 +1.0**
PSZ Piszkesteto 77.44 1 IAmb IAmb 06 25 05.2
comp=Z,1µm,1.0s
PSZ Piszkesteto 77.44 1 *eP* **P** **06 24 36.4 -0.2**
PSZ Piszkesteto 77.44 1 P **P** **06 24 37.1 +0.5**
BIOA Bad Ischl, Aus 77.46 5 *eP* **P** **06 24 36.7 0.0**
comp=Z,796nm,2.3s,SNR=64
BIOA *eS* **S** **06 34 28.8 +3.0**
comp=Z,18nm,1.1s
HOR Horta 77.47 38 *eP* **P** **06 24 36.9 +0.2**
HOR *i* IAmb IAmb 06 24 42.9
comp=Z,528nm,1.2s
HOR *eS* **S** **06 34 28.4 +2.4**
HOR *e*LR LR 06 49 49.8
HOR *i* IAMs_20 IAMs_20 06 50 50.0
comp=Z,25µm,18.5s
RETA Reutte 77.48 7 *i* P **P** **06 24 36.3 -0.6**
comp=Z,503nm,1.2s,SNR=100
RETA *eS* **S** **06 34 29.7 +3.6**
comp=Z,0.3nm,0.3s
SRO Srobarova 77.52 2 *eP* P 06 24 41.7 +4.8
SRO pmax pmax
comp=Z,442nm,1.5s
SRO Srobarova 77.52 2 P **P** **06 24 39.1 +2.2**
SRO Srobarova 77.52 2 *eP* P 06 24 41.7 +4.8
PICO Pico 77.56 38 *eP* **P** **06 24 37.2 -0.2**
PICO *i* IAmb IAmb 06 24 43.4
comp=Z,456nm,1.6s
PICO *eS* **S** **06 34 30.0 +2.7**
PICO *e*LR LR 06 49 49.8
PICO *i* IAMs_20 IAMs_20 06 51 12.5
comp=Z,29µm,22.1s
PMAN Manadas 77.56 38 *eP* **P** **06 24 39.1 +1.8**
PMAN *i* IAmb IAmb 06 24 41.5
comp=Z,317nm,1.0s
PMAN *eS* **S** **06 34 30.9 +3.7**
PCAN Candelaria 77.57 38 *eP* **P** **06 24 38.6 +1.2**
PCAN *i* IAmb IAmb 06 24 39.8
comp=Z,120nm,0.7s
RONA Rosalia, Austr 77.58 4 *ep*P **P** **06 24 37.9 +0.6**
comp=Z,255nm,1.2s,SNR=129
RONA S **S** **06 34 31.9 +4.8**
comp=Z,24nm,1.2s
SRPI Serui, Papua 77.58 248 P **P** **06 24 37.4 -0.3**
comp=Z,230µmcomp=Z,37µmcomp=Z,791nm,1.0s
SOP Sopron 77.60 3 P **P** **06 24 38.0 +0.6**
SOP Sopron 77.60 3 P **P** **06 24 38.5 +1.2**
DAVA Damuels 77.61 8 *i* P **P** **06 24 37.5 -0.2**
comp=Z,487nm,1.3s,SNR=70
DAVA *eS* **S** **06 34 30.5 +2.7**
comp=Z,50nm,1.7s
DAVA Damuels 77.61 8 P **P** **06 24 37.8 +0.1**
PPNO Prainha do Nor 77.64 38 *eP* **P** **06 24 38.5 +0.6**
PPNO *i* IAmb IAmb 06 24 40.0
comp=Z,231nm,0.8s
MOTA Moosalm 77.65 7 *eP* **P** **06 24 37.7 -0.2**
comp=Z,948nm,1.6s,SNR=200
MOTA *eS* **S** **06 34 31.1 +2.9**
comp=Z,37nm,1.6s
BUR08 Bucovina Ar. S 77.67 357 IAmb IAmb 06 25 03.1
comp=Z,869nm,0.9s
LESA Schwarzleotal 77.67 6 *ep*P **P** **06 24 38.2 +0.3**
comp=Z,1000nm,1.7s,SNR=191
LESA PP **PP** **06 27 36.2 +3.9**
comp=Z,0.7nm,0.3s
LESA *eS* **S** **06 34 31.3 +3.0**
comp=Z,26nm,1.4s
BMR Baia Mare 77.68 359 ⇓P **P** **06 24 39.1 +1.2**
BMR Baia Mare 77.68 359 P **P** **06 24 39.0 +1.2**
BMR Baia Mare 77.68 359 P **P** **06 24 39.1 +1.2**
WATA Walderalm 77.69 7 *i* P **P** **06 24 37.9 -0.2**
comp=Z,717nm,1.4s,SNR=140
WATA *eS* **S** **06 34 30.5 +1.9**
comp=Z,13nm,0.8s
BURAR Bucovina Array 77.70 357 ⇓P **P** **06 24 38.2 +0.1**
BURAR Bucovina Array 77.70 357 P **P** **06 24 38.2 +0.1**
BURAR Bucovina Array 77.70 357 P **P** **06 24 38.1 0.0**
PSBA Serra de Santa 77.71 37 *eP* **P** **06 24 38.3 +0.2**
PSBA *i* IAmb IAmb 06 24 42.5
comp=Z,451nm,1.0s
PSBA *eS* **S** **06 34 34.4 +5.7**
PAGU Agualva, Azore 77.76 37 *eP* **P** **06 24 39.2 +0.8**
PAGU *i* IAmb IAmb 06 24 44.9
comp=Z,346nm,2.1s
PAGU *eS* **S** **06 34 30.0 +0.7**
PAGU *e*LR LR 06 49 46.5
PAGU *i* IAMs_20 IAMs_20 06 51 34.0
comp=Z,22µm,19.1s
WTTA Wattenberg 77.77 7 *i* P **P** **06 24 38.2 -0.4**
comp=Z,794nm,0.9s,SNR=220
WTTA *eS* **S** **06 34 31.6 +2.1**
comp=Z,2.4nm,0.5s
WTTA Wattenberg 77.77 7 P **P** **06 24 38.8 +0.2**
SQTA Sankt Quirin 77.78 7 *eP* **P** **06 24 38.4 -0.2**
comp=Z,2µm,2.1s,SNR=229
SQTA *e*PP **PP** **06 27 37.3 +4.0**
comp=Z,88nm,1.1s
SQTA *eS* **S** **06 34 33.3 +3.8**
comp=Z,41nm,1.1s
ADH Angra Heroismo 77.84 37 *eP* **P** **06 24 39.1 +0.2**
ADH *i* IAmb IAmb 06 24 43.8
comp=Z,246nm,1.0s
ADH *eS* **S** **06 34 31.5 +1.4**
ADH *e*LR LR 06 49 38.8
ADH *i* IAMs_20 IAMs_20 06 51 34.6
comp=Z,22µm,23.3s
PSCM Serra do Cume 77.84 37 *eP* **P** **06 24 40.5 +1.6**
PSCM *i* IAmb IAmb 06 24 45.0
comp=Z,348nm,1.3s
PSCM *eS* **S** **06 34 38.7 +8.5**
BUD Budapest 77.86 2 P **P** **06 24 39.3 +0.5**
BUD Budapest 77.86 2 P **P** **06 24 40.1 +1.2**
PPR Puerto Princes 77.88 270 *i* P **P** **06 24 40.5 +1.1**
BNALP Bannalp 77.90 9 P **P** **06 24 39.6 +0.3**
PRAR RASCA 77.92 357 ⇑P **P** **06 24 39.6 +0.4**
FETA Feichten 77.94 7 *ep*P **P** **06 24 39.7 +0.2**
comp=Z,976nm,1.8s,SNR=139
FETA *eS* **S** **06 34 34.7 +3.3**
comp=Z,15nm,1.4s
WAMI Wamena 77.97 245 P **P** **06 24 41.4 +1.6**
comp=Z,301µmcomp=Z,715nm,1.4s
LTVH Ltavrtes, Hu 77.98 360 ⇑P **P** **06 24 40.4 +0.9**
LTVH Ltavrtes, Hu 77.98 360 P **P** **06 24 41.5 +2.0**
MWPI Manokwari, Pap 77.98 251 P **P** **06 24 40.8 +0.9**
comp=Z,285µmcomp=Z,87µmcomp=Z,3µm,1.6s
ARSA Arzberg 77.99 4 IAmb IAmb 06 25 23.4
comp=Z,1µm,1.1s
ARSA Arzberg 77.99 4 *ep*P **P** **06 24 39.9 +0.3**
comp=Z,118nm,0.9s,SNR=166
ARSA *e*PP **PP** **06 27 30.7 -4.3**
comp=Z,192nm,1.3s
ARSA *eS* **S** **06 34 35.2 +3.6**
comp=Z,12nm,1.2s
ARSA Arzberg 77.99 4 P **P** **06 24 40.1 +0.5**
GIMEL St. Georges / 78.02 11 P **P** **06 24 40.2 +0.3**
IASR Iasi 78.06 356 ⇑P **P** **06 24 39.9 -0.1**
KBA Koelnbreinsper 78.06 6 *ep*P **P** **06 24 40.3 +0.1**
comp=Z,461nm,0.8s,SNR=448
KBA PP **PP** **06 27 39.7 +4.0**
comp=Z,251nm,1.5s
KBA *eS* **S** **06 34 35.5 +2.9**
comp=Z,24nm,1.6s
KBA Koelnbreinsper 78.06 6 P **P** **06 24 40.7 +0.5**
BSZH Besenyszg 78.06 1 P **P** **06 24 42.7 +2.8**
SESA Seetaler Alpe, 78.09 5 *ep*P **P** **06 24 40.6 +0.2**
comp=Z,2µm,1.6s,SNR=417
SESA *eS* **S** **06 34 36.3 +3.3**
comp=Z,170µm,17.0s
DAVOX Davos/Dischmat 78.12 8 LR LR 06 58 56.7
comp=Z,245µm,21.7s,baz=4.0,slow=36
MPLH Magyarpolny 78.14 3 P **P** **06 24 41.0 +0.6**
TAWA Tawang 78.15 301 *ex* x 06 24 46.4
CHGR Chuyangaron 78.17 324*c* *i*P **P** **06 24 40.1 -0.7**
CHGR pmax pmax
comp=Z,5µm,1.0s
CHGR MLR MLR
comp=Z,2081µm,20.0s
SJCC San Jacinto, C 78.17 90 P **P** **06 24 42.0 +0.9**
comp=Z,267µmcomp=Z,26µmcomp=Z,505nm,1.4s
KIS Kishinev 78.18 355 ⇑P **P** **06 24 41.4 +0.8**
KIS Kishinev 78.18 355 P **P** **06 24 41.4 +0.8**
MESR Meseneti 78.21 359 ⇑P **P** **06 24 42.1 +1.4**
ARCR ARCALIA 78.25 358 ⇑P **P** **06 24 42.2 +1.2**
MANEM Manem 78.28 321 IAmb IAmb 06 25 37.0
comp=Z,7µm,1.2s
SENIN Lac Senin/Sane 78.30 10 IAmb IAmb 06 25 29.2
comp=Z,3µm,2.0s
SENIN IAMs_20 IAMs_20 07 04 03.3
comp=Z,394µm,19.0s
FUORN Ofenpass-Fuorn 78.31 8 P **P** **06 24 42.4 +0.7**
GIRR Girov 78.32 356 ⇓P **P** **06 24 41.6 +0.2**
ABTA Abfaltersbach 78.34 6 *eP* **P** **06 24 41.4 -0.2**
comp=Z,559nm,1.1s,SNR=104
ABTA *e*PP **PP** **06 27 31.4 -6.5**
comp=Z,235nm,1.1s
ABTA *eS* **S** **06 34 37.0 +1.6**
comp=Z,2.8nm,0.7s
BIZ Bicaz 78.35 357 ⇑P **P** **06 24 42.6 +1.0**
ERBR Yeremizino-Bor 78.36 347 *eP* **P** **06 24 41.9 +0.2**
ERBR *e* 06 27 33.6
ERBR *eS* **S** **06 34 34.8 -0.7**
ERBR pmax pmax
comp=Z,2µm,1.2s
ERBR pmax pmax
comp=N,660nm,0.9s
ERBR pmax pmax
comp=E,291nm,1.1s
ERBR pmax pmax
comp=Z,35µm,5.1s
ERBR pmax pmax
comp=N,11µm,4.1s
ERBR pmax pmax
comp=E,5µm,5.2s
ERBR smax smax
comp=N,71µm,10.9s
ERBR smax smax
comp=E,14µm,5.2s
ERBR MLR MLR
comp=Z,1179µm,21.0s
ERBR MLR MLR

ERBR MLR MLR
comp=N,1590µm,21.0s
TUE Stuetta 78.38 8 IAmb IAmb 06 25 22.7
comp=Z,789nm,0.9s
TUE Stuetta 78.38 8 P **P 06 24 42.6 +0.6**
SMRT St. Maarten 78.50 75 IAmb IAmb 06 25 35.3
comp=Z,1µm,1.1s
SMRT IAMs_20 IAMs_20 07 01 55.8
comp=Z,424µm,20.0s
SMRT St. Maarten 78.50 75 *e*P **P 06 24 41.4 -1.4**
SMRT St. Maarten 78.50 75 P **P 06 24 42.9 +0.1**
PMG Port Moresby 78.51 235 P **P 06 24 40.7 -2.0**
comp=Z,48nm,0.9s,baz=29,slow=8.5,SNR=14
PMG LR LR 06 56 21.1
comp=Z,155µm,19.6s,baz=38,slow=33
comp=Z,48nm,0.9s
PMG Port Moresby 78.51 235 P **P 06 24 43.3 +0.5**
PMG Port Moresby 78.51 235 P **P 06 24 44.1 +1.3**
PMG Port Moresby 78.51 235*c i*P **P 06 24 42.5 -0.3**
PMG pmax pmax
comp=Z,740nm,1.0s
PMG MLR MLR
comp=Z,133µm,19.0s
PMG Port Moresby 78.51 235 P **P 06 24 42.8 0.0**
PMG IAmb IAmb 06 25 43.3
comp=Z,2µm,1.1s
PMG Port Moresby 78.51 235 P **P 06 24 43.2 +0.5**
comp=Z,303µmcomp=Z,31µmcomp=Z,1µm,1.4s
PMG Port Moresby 78.51 235 P **P 06 24 43.0 +0.2**
MYKA Terra Mystica 78.52 5 *e*P **P 06 24 42.3 -0.4**
comp=Z,226nm,1.1s,SNR=106
MYKA *e*PP **PP 06 27 32.7 -6.7**
comp=Z,161nm,1.2s
MYKA *e*S **S 06 34 38.5 +1.1**
comp=Z,25nm,1.7s
SOKA Soboth 78.55 4 *e*P **P 06 24 42.8 +0.1**
comp=Z,8µm,2.9s,SNR=560
SOKA *e*PP **PP 06 27 33.3 -6.3**
comp=Z,156nm,1.3s
SOKA *e*S **S 06 34 39.1 +1.4**
comp=Z,33nm,1.8s
URIC Uribia, Colomb 78.55 86 P **P 06 24 44.0 +0.9**
comp=Z,258µmcomp=Z,24µmcomp=Z,408nm,1.8s
DRGR 78.57 359 ⇑P **P 06 24 43.8 +0.9**
DRGR 78.57 359 P **P 06 24 43.8 +0.9**
DRGR 78.57 359 P **P 06 24 43.4 +0.5**
VASR Vaslui 78.58 356 ⇓P **P 06 24 43.2 +0.3**
CJR Cluj-Napoca 78.64 358 ⇑P **P 06 24 44.4 +1.1**
CJR Cluj-Napoca 78.64 358 P **P 06 24 44.3 +1.1**
GOF Gofitskoye 78.64 345*c i*P **P 06 24 42.8 -0.4**
GOF *e*S **S 06 34 42.9 +4.4**
MARR Marisel-Cluj 78.68 359 ⇓P **P 06 24 44.8 +1.3**
OBKA Obir 78.69 5 *e*P **P 06 24 43.4 -0.2**
comp=Z,800nm,0.7s,SNR=451
OBKA *e*S **S 06 34 41.0 +1.8**
comp=Z,23nm,1.5s
OBKA Obir 78.69 5 P **P 06 24 43.8 +0.2**
ARGC Ariguani, Magd 78.74 89 P **P 06 24 44.8 +0.6**
comp=Z,249µmcomp=Z,35µmcomp=Z,215nm,1.1s
SABA Saba 78.75 75 IAmb IAmb 06 25 47.1
comp=Z,2µm,1.1s
SABA IAMs_20 IAMs_20 07 02 26.3
comp=Z,365µm,21.0s
SABA Saba 78.75 75 *e*P **P 06 24 40.3 -4.0**
SABA Saba 78.75 75 P **P 06 24 44.4 +0.1**
TESR Tescani 78.76 356 ⇓P **P 06 24 44.2 +0.3**
TESR Tescani 78.76 356 P **P 06 24 43.4 -0.5**
TGMR Targu Mures 78.81 358 ⇓P **P 06 24 45.7 +1.6**
BEHE Becsehely 78.82 3*i*⇑P **P 06 24 44.8 +0.6**
BEHE Becsehely 78.82 3 P **P 06 24 45.8 +1.6**
STAL STALIGIAL 78.84 6 IAmb IAmb 06 25 30.5
comp=Z,2µm,1.7s
PTAC Punta Ardita, 78.88 93 P **P 06 24 45.0 +0.1**
comp=Z,231µmcomp=Z,29µmcomp=Z,461nm,1.4s
SGSI Sangihe 78.92 261 P **P 06 24 44.7 -0.4**
ONER Baraj Valea Uz 78.95 357 ⇓P **P 06 24 45.6 +0.7**
BIR Birlad 78.97 356 ⇓P **P 06 24 46.8 +1.9**
BIR Birlad 78.97 356 P **P 06 24 46.8 +1.9**
APAC Apartado, Choc 78.98 92 P **P 06 24 46.7 +1.2**
comp=Z,299µmcomp=Z,43µmcomp=Z,713nm,2.3s
SEUS St. Eustatius 79.00 75 IAmb IAmb 06 25 43.1
comp=Z,2µm,1.2s
SEUS IAMs_20 IAMs_20 07 02 11.1
comp=Z,413µm,21.0s
SEUS St. Eustatius 79.00 75 *e*P **P 06 24 41.9 -3.6**
SEUS St. Eustatius 79.00 75 P **P 06 24 46.0 +0.4**
AMBH Ambrzfalva 79.02 1 ⇑P **P 06 24 45.4 +0.2**
AMBH Ambrzfalva 79.02 1 P **P 06 24 47.5 +2.3**
SSB Saint Sauveur 79.07 12 P **P 06 24 46.1 +0.5**
SSB Saint Sauveur 79.07 12 IAmb IAmb 06 25 30.1
comp=Z,2µm,1.4s
SSB Saint Sauveur 79.07 12 P **P 06 24 45.8 +0.2**
SIRR Siria 79.10 360 ⇓P **P 06 24 47.1 +1.3**
ALCI Alchi Leh 79.12 316 *e*P **P 06 24 46.8 +0.3**
MORH Mrgy, Hungar 79.12 2 ⇓P **P 06 24 46.6 +0.8**
MORH Mrgy, Hungar 79.12 2*i*⇑P **P 06 24 45.8 0.0**
MORH Mrgy, Hungar 79.12 2 P **P 06 24 45.7 -0.1**
GHRR 79.18 356 ⇑P **P 06 24 47.1 +0.9**
GHRR 79.18 356 P **P 06 24 47.6 +1.5**
MDB Medias 79.19 358 ⇑P **P 06 24 47.8 +1.6**
MDB Medias 79.19 358 P **P 06 24 47.8 +1.6**
PDA Ponta Delgada 79.20 36 *e*P **P 06 24 47.4 +1.0**
PDA *i* IAmb IAmb 06 24 50.9
comp=Z,629nm,1.2s
PDA *e*S **S 06 34 47.8 +3.1**
PDA *e*LR LR 06 49 45.4
PDA *i* IAMs_20 IAMs_20 06 51 22.3
comp=Z,23µm,20.9s
OZUR 79.20 357 ⇑P **P 06 24 47.7 +1.4**
BOSR Bodos 79.23 357 ⇑P **P 06 24 47.7 +1.2**
CMLA Cha da Macela 79.23 36 *e*P **P 06 24 47.7 +1.1**
CMLA *i* IAmb IAmb 06 24 51.9
comp=Z,294nm,2.0s
CMLA *e*S **S 06 34 44.7 -0.4**
CMLA Cha da Macela 79.23 36 P **P 06 24 48.4 +1.8**
CMLA pmax pmax
comp=Z,8µm,1.8s
CMLA Cha da Macela 79.23 36 P **P 06 24 48.4 +1.8**
CMLA Cha da Macela 79.23 36 P **P 06 24 48.9 +2.3**
TURR Turia 79.24 357 ⇑P **P 06 24 48.1 +1.6**
SKI Saint Kitts 79.27 75 *e*P **P 06 24 47.0 -0.1**
PGRON Lagoa das Cont 79.27 36 *e*P **P 06 24 48.3 +1.4**
PGRON *i* IAmb IAmb 06 24 53.7
comp=Z,361nm,1.0s
SALO Salr 79.32 8 IAmb IAmb 06 25 26.6
comp=Z,1µm,1.0s
BART Pico Bartolome 79.34 36 *e*P **P 06 24 47.2 0.0**
BART *i* IAmb IAmb 06 24 53.5
comp=Z,1µm,1.0s
BART *e*S **S 06 34 42.7 -3.7**
DOPR Dopca 79.34 357 ⇑P **P 06 24 48.3 +1.2**
VLDR Vladesti 79.37 355 ⇓P **P 06 24 48.0 +0.8**
PANC Panciu 79.38 356 ⇓P **P 06 24 48.8 +1.6**
LABN Labinsk 79.38 346 *e*P **P 06 24 48.9 +1.6**
LABN *e*S **S 06 34 43.5 -3.0**
LABN pmax pmax
comp=E,42nm,0.5s
LABN pmax pmax
comp=N,283nm,1.4s
LABN pmax pmax
comp=Z,774nm,1.4s
LABN pmax pmax
comp=Z,62µm,7.6s
LABN pmax pmax
comp=E,12µm,6.4s
LABN pmax pmax
comp=N,22µm,6.6s
LABN smax smax
comp=E,13µm,3.8s
LABN smax smax
comp=N,59µm,8.1s
LABN MLR MLR
comp=Z,1036µm,21.0s
LABN MLR MLR
comp=E,384µm,25.0s
LABN MLR MLR
comp=N,1442µm,22.0s
COSR Cosmesti PH 79.39 356 ⇓P **P 06 24 48.7 +1.5**
IMP Imphal 79.39 298 *e*P **P 06 24 48.4 +0.7**
GUWA GUWAHATI 79.40 301 *e*P **P 06 24 47.6 0.0**
VRI Vrincioaia 79.40 356 ⇓P **P 06 24 47.7 +0.4**
VRI Vrincioaia 79.40 356 P **P 06 24 47.7 +0.4**
VRI Vrincioaia 79.40 356 P **P 06 24 47.6 +0.2**

VRI Vrincioaia 79.40 356 P **P 06 24 47.8 +0.4**
PLOR Plostina 79.42 356 ⇓P **P 06 24 47.8 +0.2**
PLOR Plostina 79.42 356 P **P 06 24 47.7 +0.2**
COVR Voineasa-Covas 79.44 357 ⇑P **P 06 24 48.8 +1.1**
TRI Trieste 79.45 5 IAmb IAmb 06 25 26.1
comp=Z,3µm,2.0s
SIJI Sorong 79.45 253 LR LR 06 56 14.4
comp=Z,163µm,20.1s,baz=40,slow=33
SIJI Sorong 79.45 253 P **P 06 24 48.3 +0.3**
DEV Deva 79.48 359 P **P 06 24 48.9 +1.1**
ODBI Oddebesti 79.49 356 ⇑P **P 06 24 49.3 +1.5**
SHAA Shahritus 79.50 324 IAmb IAmb 06 25 51.9
comp=Z,7µm,1.2s
ANWB Willy Bob 79.53 74 *e*P **P 06 24 45.3 -3.1**
ANWB x x 06 34 38.6
ANWB Willy Bob 79.53 74 P **P 06 24 48.3 -0.1**
SCTR Scanteiesti 79.54 355 ⇓P **P 06 24 49.1 +1.0**
SAHR Sahastru 79.54 356 ⇓P **P 06 24 49.1 +0.9**
TATR Tatarca 79.61 355 ⇑P **P 06 24 50.0 +1.5**
HNLY HANLEY 79.64 314 *e*P **P 06 24 49.8 +0.2**
TUDR 79.64 356 ⇓P **P 06 24 50.3 +1.7**
ANN Anapa 79.64 348 *e*P **P 06 24 48.0 -0.7**
ANN *e* 06 27 56.7
ANN *e*S **S 06 34 47.8 -1.3**
ANN *e*SS **SS 06 39 56.4 +0.3**
ANN pmax pmax
comp=E,190nm,0.9s
ANN pmax pmax
comp=Z,2µm,1.3s
ANN pmax pmax
comp=N,229nm,0.8s
ANN pmax pmax
comp=Z,112µm,15.5s
ANN pmax pmax
comp=N,27µm,10.4s
ANN pmax pmax
comp=E,14µm,12.5s
ANN smax smax
comp=E,18µm,9.6s
ANN MLR MLR
comp=E,80µm,15.0s
ANN MLR MLR
comp=N,1349µm,24.0s
ANN MLR MLR
comp=Z,650µm,25.0s
IZVR Izvoarele 79.68 355 ⇓P **P 06 24 49.3 +0.5**
NEGRR Negrea 79.68 355 ⇓P **P 06 24 49.8 +1.0**
TNR Turnu Rosu 79.69 358 ⇑P **P 06 24 50.0 +1.1**
TNR Turnu Rosu 79.69 358 P **P 06 24 50.0 +1.1**
UREC San Jos de Ur 79.70 91 P **P 06 24 48.6 -0.8**
comp=Z,259µmcomp=Z,20µmcomp=Z,266nm,0.8s
MORE Moreh 79.71 298 IAmb IAmb 06 25 31.4
comp=Z,1µm,0.7s
GIUM Giurgiulesti 79.72 355 ⇓P **P 06 24 50.0 +0.9**
SCHL Schela 79.72 355 ⇓P **P 06 24 50.2 +1.1**
BZS Buzias 79.75 360 ⇑P **P 06 24 49.1 -0.2**
BZS Buzias 79.75 360 P **P 06 24 49.1 -0.2**
BZS Buzias 79.75 360 P **P 06 24 49.2 0.0**
SCHLR Schela 79.75 355 ⇓P **P 06 24 50.7 +1.5**
KVAR Kislovodsk Arr 79.77 345 LR LR 07 03 57.1
comp=Z,396µm,21.2s,slow=39
KIV Kislovodsk 79.77 345 ⇓P **P 06 24 50.5 +0.9**
KIV Kislovodsk 79.77 345 *i* P **P 06 24 49.4 -0.1**
SNR=166
KIV Kislovodsk 79.77 345 *e*P **P 06 24 49.0 -0.5**
KIV *e* 06 27 47.8
KIV *e*PPP PPP 06 29 41.3
KIV *e*S **S 06 34 50.9 +0.1**
KIV *e*SS **SS 06 40 01.4 +3.2**
KIV *e*SSS SSS 06 43 26.1
KIV pmax pmax
comp=Z,5µm,4.2s
KIV pmax pmax
comp=Z,896nm,1.0s
KIV MLR MLR
comp=Z,418µm,19.0s
KIV Kislovodsk 79.77 345 P **P 06 24 49.8 +0.3**
KIV S **S 06 34 51.7 +0.9**
KIV Kislovodsk 79.77 345 P **P 06 24 49.8 +0.3**
KIV Kislovodsk 79.77 345 P **P 06 24 49.2 -0.3**
KIV Kislovodsk 79.77 345 P **P 06 24 50.3 +0.8**
MLR Muntele Rosu 79.80 357 PKPPKP 06 51 36.3
comp=Z,3.8nm,0.8s,baz=258,slow=4.9,SNR=4.3
MLR LR LR 07 00 51.1
comp=Z,556µm,21.8s,baz=20,slow=36
MLR Muntele Rosu 79.80 357 ⇓P **P 06 24 51.0 +1.3**
MLR Muntele Rosu 79.80 357 P **P 06 24 51.0 +1.3**
MLR Muntele Rosu 79.80 357 P **P 06 24 50.1 +0.4**
SHL Shillong 79.82 300 P **P 06 24 49.1 -1.1**
SNR=117
SHL Shillong 79.82 300 IAmb IAmb 06 25 25.3
comp=Z,933nm,0.7s
SHL Shillong 79.82 300*i*⇑P **P 06 24 49.2 -1.1**
SHL IAmb IAmb 06 24 58.6
comp=Z,532nm,1.0s
SIM Simferopol' 79.84 351*c i*P **P 06 24 50.2 +0.5**
SIM *e* 06 27 56.0
SIM *e*S **S 06 34 52.0 +0.7**
SIM *e*PS 06 35 39.0
SIM *e*SS **SS 06 40 07.0 +8.0**
NEHR Nehoiu 79.86 357 ⇓P **P 06 24 50.6 +0.7**
GRER 79.88 356 ⇑P **P 06 24 51.6 +1.6**
VOIR 79.88 357 ⇓P **P 06 24 50.9 +0.8**
VOIR 79.88 357 P **P 06 24 50.9 +0.8**
VOIR 79.88 357 P **P 06 24 50.1 0.0**
LOT Lotru 79.90 358 ⇓P **P 06 24 50.8 +0.5**
LOT Lotru 79.90 358 P **P 06 24 49.5 -0.7**
MAK Makhachkala 79.91 341*c i*P **P 06 24 47.0 -3.1**
MAK *e* 06 28 00.0
MAK *e*S **S 06 34 48.2 -3.8**
MAK *e*SS **SS 06 39 57.0 -3.2**
MAK *e*SSS SSS 06 43 21.8
MAK pmax pmax
comp=Z,21µm,1.5s
MAK smax smax
comp=E,22µm,6.3s
MAK smax smax
comp=N,54µm,7.8s
KBZ Khabaz 79.96 344 P **P 06 24 50.7 +0.3**
comp=N,391nm,0.9s,baz=19,slow=6.2,SNR=72
KBZ PKKPbc **PKKPbc 06 43 33.5 +0.8**
comp=N,5.6nm,0.9s,baz=161,slow=3.6,SNR=2.8
KBZ PKPPKP 06 51 38.3
comp=N,4.7nm,1.0s,baz=343,slow=7.5,SNR=4.7
KBZ LR LR 07 03 59.8
comp=N,534µm,21.6s,baz=7.0,slow=38
comp=N,391nm,0.9s
GZR Gura Zlata 79.97 359 ⇑P **P 06 24 51.3 +0.8**
GZR Gura Zlata 79.97 359 P **P 06 24 51.3 +0.8**
BANR Banloc 79.98 0 ⇑P **P 06 24 51.9 +1.4**
TLCR 79.99 355 ⇑P **P 06 24 50.8 +0.3**
TLCR 79.99 355 P **P 06 24 50.8 +0.3**
SHA1 Shidzhatmaz 79.99 345*c i*P **P 06 24 50.4 -0.5**
SILR SILCHAR 80.02 299 *ex* x 06 24 53.5
CFR Carcaliu 80.03 355 ⇓P **P 06 24 50.8 0.0**
CFR Carcaliu 80.03 355 P **P 06 24 50.7 0.0**
PSMN Pico do Norte, 80.07 36 *e*P **P 06 24 51.1 0.0**
PSMN *e*S **S 06 34 49.9 -4.1**
NCK Nalchik 80.08 344*c i*P **P 06 24 52.1 +1.0**
NCK pmax pmax
comp=Z,6µm,1.3s
MTUR Matau 80.09 357 ⇑P **P 06 24 52.0 +0.7**
MTUR Matau 80.09 357 P **P 06 24 51.9 +0.7**
PGAV Gavieira, Arco 80.13 22*i*⇑P **P 06 24 52.3 +0.8**
PGAV *i* IAmb IAmb 06 25 19.2
comp=Z,2µm,1.3s
PGAV *e*PP **PP 06 27 56.5 +3.5**
PGAV *e*S **S 06 34 59.5 +4.9**
PGAV *e*SS SS 06 40 31.7 +28
PGAV *e*LR LR 06 51 43.0
PGAV *i* IAMs_20 IAMs_20 07 02 03.6
comp=Z,437µm,20.0s
ISR Istrita 80.16 356 ⇓P **P 06 24 52.1 +0.5**
ISR Istrita 80.16 356 P **P 06 24 52.0 +0.5**
FRGS Fruska Gora 80.20 1*i*⇑P **P 06 24 51.9 +0.2**
SRNI Srinagar 80.20 317 *e*P **P 06 24 55.3 +3.2**
TNTI Ternate 80.27 257 P **P 06 24 54.6 +2.1**
TNTI Ternate 80.27 257 IAmb IAmb 06 26 10.1
comp=Z,4µm,1.8s
TNTI Ternate 80.27 257 P **P 06 24 52.5 +0.1**
comp=Z,158µmcomp=Z,877nm,2.2s
TNTI Ternate 80.27 257 P **P 06 24 53.6 +1.2**
EVN Everest 80.28 305 P **P 06 24 52.9 -0.3**

TPGR Topolog 80.33 355 ⇓P **P 06 24 52.6 +0.1**
PGOR Pogoanele 80.35 356 ⇓P **P 06 24 53.0 +0.6**
DHUB DHUBRI 80.38 302 *e*P **P 06 24 52.6 -0.4**
JURR Jurilovca 80.40 355 ⇑P **P 06 24 52.8 0.0**
COBR COOCHBEHAR 80.41 302 *e*P **P 06 24 53.2 +0.1**
PCAB Cabril 80.43 22⇑*e*P **P 06 24 53.7 +0.7**
PCAB *i* IAmb IAmb 06 25 57.3
comp=Z,3µm,1.6s
ISO Isola 80.43 10 P **P 06 24 53.9 +0.8**
KMPI Kaimana, Papua 80.44 249 P **P 06 24 53.9 +0.5**
comp=Z,295µmcomp=Z,57µmcomp=Z,2µm,2.6s
ATE Arette 80.48 16 P **P 06 24 53.5 +0.2**
ECAL Calabor 80.48 21 P **P 06 24 53.9 +0.5**
ECAL Calabor 80.48 21 P **P 06 24 55.0 +1.6**
HERR Herculane 80.48 359 ⇑P **P 06 24 54.1 +0.9**
RUSF Rustrel 80.50 12 P **P 06 24 55.1 +1.7**
BLY Banja Luka 80.55 3 ⇑P **P 06 24 53.6 0.0**
BLY Banja Luka 80.55 3 IAMs_20 IAMs_20 06 59 55.9
comp=Z,305µm,22.0s
BLY Banja Luka 80.55 3*i*⇑P **P 06 24 53.9 +0.3**
BLY Banja Luka 80.55 3 P **P 06 24 54.1 +0.5**
JPG JALPAIGURI 80.56 303 *e*P **P 06 24 56.5 +2.6**
SOC Sochi 80.56 347*c i*P **P 06 24 53.8 +0.2**
SOC *e*PPP PPP 06 29 49.0
SOC *e*S **S 06 35 01.5 +2.6**
SOC pmax pmax
comp=Z,2µm,1.0s
SOC MLR MLR
comp=Z,926µm,21.0s
OCAC Ocana 80.58 89 P **P 06 24 53.7 -0.6**
comp=Z,256µmcomp=Z,27µmcomp=Z,963nm,1.5s
MDVR Moldovita 80.59 360 ⇓P **P 06 24 53.8 0.0**
SULR 80.61 357 ⇑P **P 06 24 55.2 +1.4**
SULR 80.61 357 P **P 06 24 55.0 +1.1**
PBRG Braganca 80.61 21⇑*i*P **P 06 24 55.0 +1.0**
PBRG *i* IAmb IAmb 06 25 36.2
comp=Z,1µm,1.4s
FAKI Fak Fak 80.62 251 P **P 06 24 54.5 +0.2**
FAKI Fak Fak 80.62 251 IAmb IAmb 06 25 42.6
comp=Z,2µm,1.0s
FAKI Fak Fak 80.62 251 P **P 06 24 54.2 -0.1**
comp=Z,308µmcomp=Z,55µmcomp=Z,2µm,1.0s
FAKI Fak Fak 80.62 251 P **P 06 24 54.8 +0.5**
AMRR Amara 80.63 356 ⇓P **P 06 24 54.2 +0.1**
AMRR Amara 80.63 356 P **P 06 24 54.1 +0.1**
VSLR Vesyoloye 80.64 346*c i*P **P 06 24 54.8 +0.7**
VSLR pmax pmax
comp=Z,2µm,1.1s
ABD La Joyeuse, An 80.66 75 IAMs_20 IAMs_20 07 04 23.5
comp=Z,311µm,20.0s
ABD La Joyeuse, An 80.66 75 P **P 06 24 54.8 +0.2**
DHSZ Broadband at M 80.67 75 *e*P **P 06 24 54.2 -0.4**
DHSZ x x 06 34 54.6
GDHS Morne Mazeau, 80.67 75 IAMs_20 IAMs_20 07 03 27.8
comp=Z,373µm,20.0s
TIRR Tirgusor 80.73 355 ⇓P **P 06 24 54.9 +0.3**
TIRR Tirgusor 80.73 355 P **P 06 24 54.8 +0.3**
TIRR Tirgusor 80.73 355 IAmb IAmb 06 25 46.5
comp=Z,2µm,1.0s
TIRR Tirgusor 80.73 355 P **P 06 24 55.1 +0.6**
TSSA Tissa 80.74 316 *e*P **P 06 24 55.2 +0.2**
TSSA IAmb IAmb 06 24 59.9
comp=Z,794nm,0.8s
HUMR Humele 80.79 357 ⇓P **P 06 24 55.5 +0.6**
HUMR Humele 80.79 357 P **P 06 24 55.0 +0.1**
POLO Lamas de Olo 80.80 22⇑*i*P **P 06 24 55.6 +0.5**
POLO *i* IAmb IAmb 06 25 35.3
comp=Z,1µm,1.2s
TEKS Tekeris 80.81 1*i*⇑P **P 06 24 54.6 -0.4**
ESCA l'Escarene 80.81 10 P **P 06 24 56.2 +1.1**
CALF Calern 80.84 11 P **P 06 24 56.4 +1.1**
PTO Porto 80.85 23⇑*e*P **P 06 24 55.9 +0.6**
PTO *i* IAmb IAmb 06 25 34.9
comp=Z,3µm,1.4s
CVDA Cernavoda 80.88 355 ⇑P **P 06 24 57.0 +1.7**
MMLZ Guadeloupe Bro 80.91 75 *e*P **P 06 24 56.0 +0.1**
PVRL Vila Real 80.91 22⇑*e*P **P 06 24 55.6 0.0**
PVRL *i* IAmb IAmb 06 25 35.7
comp=Z,2µm,1.3s
MON Monaco 80.92 10 P **P 06 24 57.6 +2.1**
CBE Ff, Capester 80.92 75 IAMs_20 IAMs_20 07 03 35.9
comp=Z,360µm,19.0s
CBE Ff, Capester 80.92 75 P **P 06 24 56.8 +0.8**
ARBF Arbois 80.92 12 P **P 06 24 57.5 +1.9**
CBOC Ciudad Bolivar 80.95 93 P **P 06 24 56.6 +0.2**
comp=Z,256µmcomp=Z,26µmcomp=Z,160nm,0.5s
KLP Kalpa 81.02 314 *e*P **P 06 24 56.2 -0.5**
CRAR CRAIOVA 81.02 358 ⇓P **P 06 24 56.3 +0.2**
CRAR CRAIOVA 81.02 358 P **P 06 24 56.3 +0.2**
DSDZ La Diserade, G 81.03 75 *e*P **P 06 24 55.5 -1.0**
DSDZ x x 06 34 55.8
GDSD La Dsirade Is 81.03 75 IAmb IAmb 06 25 49.9
comp=Z,2µm,1.1s
GDSD IAMs_20 IAMs_20 07 02 44.3
comp=Z,279µm,21.0s
CICN Ciocanesti 81.06 356 ⇑P **P 06 24 57.7 +1.4**
SGRR Singureni 81.07 357 ⇑P **P 06 24 56.4 +0.1**
TBG Guadaloupe-3 81.08 75 *e*P **P 06 24 57.0 +0.2**
PUNG Punghina 81.08 359 ⇓P **P 06 24 57.1 +0.7**
TDBA Terre de Bas, 81.08 75 P **P 06 24 57.4 +0.5**
EFOR EFORIE 81.10 355 ⇑P **P 06 24 57.8 +1.3**
ICOR Ion Corvin 81.10 355 ⇑P **P 06 24 57.9 +1.3**
MNI Manado 81.14 260 P **P 06 24 56.0 -1.2**
NIL Nilore 81.16 318 P **P 06 24 57.3 +0.2**
NIL pmax pmax
comp=Z,5µm,1.1s
NIL MLR MLR
comp=Z,1031µm,20.0s
NIL Nilore 81.16 318 **P 06 24 57.3 +0.2**
COPA Copaceanca 81.18 357 ⇑P **P 06 24 58.1 +1.1**
DHRM DHARAMSHALA 81.19 315 *e*P **P 06 24 57.2 -0.3**
DHRM IAmb IAmb 06 25 13.0
comp=Z,1µm,0.8s
DHRM DHARAMSHALA 81.19 315 IAmb IAmb 06 28 52.8
comp=Z,338nm,0.7s
MAGL Barre de l'ile 81.20 75 IAMs_20 IAMs_20 07 03 34.2
comp=Z,279µm,21.0s
MAGL Barre de l'ile 81.20 75 *e*P **P 06 24 55.1 -2.3**
MAGL x x 06 34 59.4
MAGL Barre de l'ile 81.20 75 P **P 06 25 01.1 +3.7**
THN Thein Dam 81.24 316 *e*P **P 06 24 57.8 +0.3**
THN IAmb IAmb 06 25 06.3
comp=Z,4µm,1.8s
CEST Esterri de Car 81.26 15 IAmb IAmb 06 25 25.7
comp=Z,2µm,1.1s
PTBC PUERTO BERRIO, 81.30 91 P **P 06 24 58.3 +0.3**
comp=Z,247µmcomp=Z,27µmcomp=Z,478nm,1.2s
JMU Jammu 81.31 317 *e*P **P 06 24 58.8 +0.9**
JOSI Joshimath 81.31 312 *e*P **P 06 24 57.7 -0.5**
BAIL Bailesti 81.33 359 ⇑P **P 06 24 58.5 +0.8**
VLAD Vladila 81.34 358 ⇓P **P 06 24 58.5 +0.7**
MARNC Mare, Loyalty 81.36 211 P **P 06 25 00.6 +2.7**
MARNC Mare, Loyalty 81.36 211 IAmb IAmb 06 25 33.7
comp=Z,1µm,1.1s
MANR Mangalia 81.36 355 ⇓P **P 06 24 58.8 +0.9**
PVIS Viseu 81.41 22⇑*i*P **P 06 24 58.0 -0.3**
BBLS Lazi&#263i 81.49 1⇑*i*P **P 06 24 59.8 +1.1**
DWS Wesley 81.49 75 *e*P **P 06 24 57.0 -2.0**
DWS x x 06 35 04.1
DSLB Salisbury 81.54 75 *e*P **P 06 24 57.0 -2.2**
DSLB x x 06 35 04.1
PSN Preselentsi 81.56 355⇑*i*P **P 06 24 59.5 +0.5**
TLWR Talawar 81.59 316 *e*P **P 06 24 59.6 +0.2**
SJAF Saint Jean de 81.60 14 P **P 06 24 59.9 +0.7**
SDV Santo Domingo 81.60 87 LR LR 07 03 40.3
comp=Z,135µm,19.8s,baz=340,slow=38
SDV Santo Domingo 81.60 87 P **P 06 24 59.5 -0.3**
SDV Santo Domingo 81.60 87 P **P 06 24 58.0 -1.8**
SDV S **S 06 35 03.0 -7.9**
SDV Santo Domingo 81.60 87 *e*P **P 06 24 58.8 -1.1**
SDV *e*pP **sP 06 25 08.8 -0.9**
TBLG Delisi 81.60 343 P **P 06 24 59.8 +0.5**
UTK UTTARKASHI 81.63 313 *e*P **P 06 24 59.5 -0.3**
UTK IAmb IAmb 06 25 12.3
comp=Z,679nm,0.7s
EJON La Jonquera 81.64 14 P **P 06 24 59.9 +0.5**
EJON La Jonquera 81.64 14 P **P 06 25 00.7 +1.3**
ZIMR 81.65 357 ⇓P **P 06 24 59.8 +0.3**
ZIMR 81.65 357 P **P 06 24 59.7 +0.3**
KOUNC Koumac, New Ca 81.66 215 P **P 06 25 03.3 +3.7**
PAMC Pamplona, Colo 81.67 89 P **P 06 24 59.5 -1.0**
RAZG Razgrad 81.71 356 ⇑P **P 06 25 00.0 +0.3**
CHTO Chiang Mai 81.72 291 P **P 06 24 59.4 -0.8**

CHTO **Chiang Mai** 81.72 291 P **P** 06 24 59.7 -0.5
CHTO pmax pmax
comp=Z,2µm,1.5s
CHTO MLR MLR
comp=Z,556µm,20.0s
CHTO Chiang Mai 81.72 291 P **P** 06 24 59.7 -0.5
CHTO S **SKSac** 06 35 16.8 -2.0
CHTO Chiang Mai 81.72 291 P **P** 06 24 59.7 -0.5
CHTO IAmb IAmb 06 25 30.1
comp=Z,2µm,1.4s
CHTO Chiang Mai 81.72 291 P **P** 06 24 59.2 -1.0
comp=Z,50µmcomp=Z,1µm,1.5s
CHTO Chiang Mai 81.72 291 P **P** 06 24 58.7 -1.5
CHTO S **S** 06 35 07.4 -4.2
CHTO Chiang Mai 81.72 291 P **P** 06 24 59.2 -1.0
MYLDM Lahad Datu 81.73 267 P **P** 06 25 01.5 +1.3
MYLDM Lahad Datu 81.73 267 IAmb IAmb 06 26 11.5
comp=Z,2µm,1.2s
MYLDM Lahad Datu 81.73 267 P **P** 06 25 01.5 +1.3
comp=Z,71µmcomp=Z,1µm,1.8s
MYLDM Lahad Datu 81.73 267 P **P** 06 25 01.8 +1.6
MTE Manteigas 81.79 22 *e*P **P** 06 25 00.9 +0.5
MTE *i* IAmb IAmb 06 25 40.4
comp=Z,4µm,1.3s
MTE *e*PP PP 06 28 20.3 +14
MTE *e*S **SKSac** 06 35 15.0 -3.8
MTE *e*SS **SS** 06 40 34.2 +5.8
MTE *e*LR LR 06 51 55.0
MTE *i* IAMs_20 IAMs_20 07 00 54.6
comp=Z,421µm,22.0s
MTE Manteigas 81.79 22 IAmb IAmb 06 25 41.8
comp=Z,2µm,1.0s
MTE IAMs_20 IAMs_20 07 00 19.8
comp=Z,506µm,22.0s
MTE Manteigas 81.79 22 *e*P **P** 06 25 01.7 +1.3
MTE Manteigas 81.79 22 P **P** 06 25 02.0 +1.7
SMLA Simla 81.82 314 *e*P **P** 06 25 00.7 +0.2
GUY2C Guyana, Caldas 81.84 93 P **P** 06 25 01.9 +0.5
comp=Z,255µmcomp=Z,23µmcomp=Z,263nm,1.0s
PTH Pithoragarh 81.88 311 *e*P **P** 06 25 00.8 -0.3
PCAS Casmilo, Conde 81.91 23⇑ *i*P **P** 06 25 01.0 +0.1
PCAS *i* IAmb IAmb 06 25 46.5
comp=Z,3µm,1.5s
KBL Kabul 81.91 322 P **P** 06 25 00.4 -0.9
KBL pmax pmax
comp=Z,2µm,1.2s
KBL Kabul 81.91 322 P **P** 06 24 59.7 -1.6
SNR=351
KBL S **S** 06 35 16.1 +2.4
KBL Kabul 81.91 322 P **P** 06 25 00.4 -0.9
KBL IAmb IAmb 06 25 51.9
comp=Z,2µm,1.1s
KBL Kabul 81.91 322 P **P** 06 25 00.4 -0.9
PLVB Pleven 81.94 358 ⇓P **P** 06 25 02.0 +1.0
CORI Orista 81.99 14 IAmb IAmb 06 25 46.2
comp=Z,2µm,1.4s
BARC Barichara 81.99 90 P **P** 06 25 03.4 +1.5
MPEP Malo Peshtene 81.99 358 P **P** 06 25 01.6 +0.3
DLV Lat 82.01 279 P **P** 06 25 02.7 +0.8
DLV Lat 82.01 279 IAmb IAmb 06 25 41.5
comp=Z,1µm,1.1s
DLV IAMs_20 IAMs_20 07 08 28.3
comp=Z,357µm,20.0s
DLV Lat 82.01 279 P **P** 06 25 02.8 +0.8
CM31 Chiang Mai Arr 82.02 291 P **P** 06 25 01.4 -0.3
SNR=485
CM31 S **S** 06 35 14.3 -0.4
CMAR Chiang Mai Arr 82.02 291 P **P** 06 25 01.1 -0.7
comp=Z,377nm,1.0s,baz=16,slow=5.1,SNR=265
CMAR PKKPbc **PKKPbc** 06 43 28.4 +0.2
comp=Z,1.3nm,0.4s,baz=238,slow=4.9,SNR=4.1
CMAR LR LR 07 05 09.9
comp=Z,463µm,19.7s,baz=40,slow=38
comp=Z,377nm,1.0s
CMAR Chiang Mai Arr 82.02 291 P **P** 06 25 02.2 +0.5
CMAR Chiang Mai Arr 82.02 291 P **P** 06 25 02.2 +0.5
STMR SITAMARHI 82.02 306 *e*P **P** 06 25 02.1 +0.5
STMR IAmb IAmb 06 25 11.7
comp=Z,2µm,1.0s
PLE Pljevlja 82.02 2⇑ *i*P **P** 06 25 02.6 +1.0
SZH Strazhitsa 82.03 357⇑ *i*P **P** 06 25 01.6 +0.1
SZH Strazhitsa 82.03 357 P **P** 06 25 00.6 -0.8
FDMO Fiordimonte 82.07 6 IAmb IAmb 06 25 33.2
comp=Z,3µm,1.5s
SJES Sjenica 82.10 1⇑ *i*P **P** 06 25 02.4 +0.4
UPM Unac-Piva 82.14 2 *e*P **P** 06 24 59.8 -2.5
UPM Unac-Piva 82.14 2⇑ *i*P **P** 06 25 01.8 -0.5
EPOS Posof 82.16 344 P **P** 06 25 03.9 +1.5
CASP Castiglione de 82.16 8 IAmb IAmb 06 25 28.4
comp=Z,1µm,1.0s
SVN Savane Anatole 82.16 75 *e*P **P** 06 25 03.8 +1.2
KLINJ Klinje 82.17 2⇑ *i*P **P** 06 25 02.9 +0.6
CXM Morne La Croix 82.19 75 IAmb IAmb 06 25 56.1
comp=Z,1µm,0.8s
SHBG Sahibganj 82.19 303 *e*P **P** 06 25 02.2 -0.3
SHBG IAmb IAmb 06 25 12.3
comp=Z,1µm,1.2s
PVL Pavlikeni 82.19 357⇑ *i*P **P** 06 25 02.5 +0.2
BATM Batumi 82.22 345 ⇑P **P** 06 25 03.0 +0.5
BATM Batumi 82.22 345 P **P** 06 25 03.0 +0.5
SPBC San Pablo de B 82.24 91 P **P** 06 25 03.6 +0.5
comp=Z,254µmcomp=Z,20µmcomp=Z,378nm,2.2s
YATNC Mamie plateau, 82.24 212 P **P** 06 25 05.9 +3.3
FDFM Morne la Roset 82.25 76 IAmb IAmb 06 25 55.8
comp=Z,2µm,1.3s
FDFM Morne la Roset 82.25 76 IAMs_20 IAMs_20 07 05 17.0
comp=Z,239µm,19.0s
NRCA Norcia 82.28 6 IAmb IAmb 06 25 44.0
comp=Z,2µm,1.1s
CGRH CHANDIGARH 82.33 314 *e*P **P** 06 25 04.8 +1.6
PCBR Castelo Branco 82.34 22⇑ *e*P **P** 06 25 03.8 +0.6
PCBR *i* IAmb IAmb 06 25 42.8
comp=Z,2µm,1.3s
KKM Kota Kinabalu 82.34 270 P **P** 06 25 04.3 +0.7
KKM Kota Kinabalu 82.34 270 IAmb IAmb 06 25 41.9
comp=Z,1µm,1.0s
KKM Kota Kinabalu 82.34 270 P **P** 06 25 04.0 +0.4
comp=Z,54µmcomp=Z,1µm,2.3s
KKM Kota Kinabalu 82.34 270 P **P** 06 25 04.3 +0.7
BRDH Bariadhala 82.35 299 LR LR 07 04 41.2
comp=Z,523µm,21.2s,baz=30,slow=38
PSBE So Bento 82.36 23⇑ *e*P **P** 06 25 04.2 +0.9
PSBE *i* IAmb IAmb 06 25 45.4
comp=Z,3µm,1.7s
DZM Mont Dzumac 82.39 212 LR LR 06 56 38.4
comp=Z,795µm,19.7s,baz=9.0,slow=32
PSARD Sardoal 82.42 23⇑ *e*P **P** 06 25 04.1 +0.5
PSARD *i* IAmb IAmb 06 25 35.7
comp=Z,3µm,1.4s
PSARD *e*S **SKSac** 06 35 21.4 -1.6
NPW Naypyitaw 82.43 294 P **P** 06 25 03.8 -0.1
BRY Bratogost 82.43 2⇑ *i*P **P** 06 25 03.2 -0.6
BRY Bratogost 82.43 2⇑ *i*P **P** 06 25 03.1 -0.7
NOUC Port Laguerre 82.46 213 P **P** 06 25 08.6 +3.0
BIM Bigot 82.48 76 IAMs_20 IAMs_20 07 05 14.0
comp=Z,306µm,19.0s
BIM Bigot 82.48 76 *e*P **P** 06 25 00.8 -3.5
BIM Bigot 82.48 76 P **P** 06 25 04.6 +0.4
IVA Berane 82.49 1⇑ *i*P **P** 06 25 04.3 +0.3
KOME Kolasin 82.50 1⇑ *i*P **P** 06 25 04.0 -0.1
NKME Niksic 82.58 2⇑ *i*P **P** 06 25 04.4 0.0
OUENC Ouen Island, N 82.60 212 P **P** 06 25 08.1 +3.7
OUENC Ouen Island, N 82.60 212 IAmb IAmb 06 26 03.2
comp=Z,968nm,1.3s
ONTNC Ouen Toro 82.61 212 P **P** 06 25 08.6 +4.1
RUSC La Rusia 82.61 90 P **P** 06 25 06.3 +0.8
comp=Z,260µmcomp=Z,30µmcomp=Z,1µm,1.6s
TREB Trebinje 82.61 2⇑ *i*P **P** 06 25 03.3 -1.2
MPOM Morne Pois Mar 82.66 75 IAmb IAmb 06 25 51.4
comp=Z,992nm,1.0s
MPOM IAMs_20 IAMs_20 07 05 38.6
comp=Z,290µm,19.0s
MPOM Morne Pois Mar 82.66 75 P **P** 06 25 05.5 +0.4
JAMC Jamundi, Valle 82.72 95 P **P** 06 25 06.7 +1.0
comp=Z,258µmcomp=Z,32µmcomp=Z,733nm,1.3s
VTS Vitosha 82.74 359⇑ *i*P **P** 06 25 06.8 +1.4
VTS Vitosha 82.74 359 P **P** 06 25 06.4 +1.1
UCM Universidad Co 82.74 19 P **P** 06 25 05.8 +0.6
UCM Universidad Co 82.74 19 P **P** 06 25 06.6 +1.3
PMRV Marv??o 82.75 22⇑ *i*P **P** 06 25 05.5 +0.1
PMRV *i* IAmb IAmb 06 25 19.1
comp=Z,2µm,1.8s
PMRV *e*PP PP 06 28 23.7 +9.2
PMRV *e*S **SKSac** 06 35 24.6 -0.6
PMRV *e*SS **SS** 06 40 52.7 +10
PMRV *e*LR LR 06 52 54.3
PMRV *i* IAMs_20 IAMs_20 07 03 42.7
comp=Z,392µm,20.0s
ROSC El Rosal 82.75 92 P **P** 06 25 06.0 -0.1
comp=Z,9.3nm,0.4s,baz=314,slow=6.2,SNR=25
ROSC LR LR 07 06 23.7
comp=Z,102µm,18.3s,baz=350,slow=39
ROSC El Rosal 82.75 92 IAmb IAmb 06 26 17.1
comp=Z,993nm,1.3s
ROSC El Rosal 82.75 92 P **P** 06 25 08.6 +2.5
comp=Z,323µmcomp=Z,29µmcomp=Z,424nm,1.8s
PVY Plav 82.76 1⇑ *i*P **P** 06 25 05.4 -0.1
AQU L'Aquila 82.77 6 P **P** 06 25 06.2 +0.7
AQU L'Aquila 82.77 6 P **P** 06 25 05.7 +0.3
AQU L'Aquila 82.77 6⇑ *i*P **P** 06 25 06.1 +0.7
AQU L'Aquila 82.77 6 P **P** 06 25 06.7 +1.2
JMB Yambol 82.78 356⇑ *i*P **P** 06 25 05.8 +0.4
JMB Yambol 82.78 356 P **P** 06 25 04.8 -0.6
CEME Cevo 82.80 2⇑ *i*P **P** 06 25 05.8 +0.2
BZK Bozkurt 82.81 351 IAmb IAmb 06 26 10.1
comp=Z,1µm,1.1s
PGB Panagyurishte 82.83 358⇑ *i*P **P** 06 25 05.5 -0.2
TKRD Thakurdwara 82.84 312 *e*P **P** 06 25 05.8 -0.1
TKRD IAmb IAmb 06 25 15.0
comp=Z,1µm,0.4s
GTOI Gorontalo 82.84 261 P **P** 06 25 04.8 -1.3
comp=Z,323µmcomp=Z,35µmcomp=Z,812nm,2.2s
PLNA Plana 82.88 359 *i* P **P** 06 25 06.8 +0.7
GKPR Gorakhpur 82.88 307 *e*P **P** 06 25 05.6 -0.6
GKPR IAmb IAmb 06 25 14.6
comp=Z,2µm,0.9s
HCY Herceg Novi 82.89 2⇑ *i*P **P** 06 25 04.9 -1.1
HCY Herceg Novi 82.89 2⇑ *i*P **P** 06 25 06.0 0.0
PMTG Montargil 82.91 23⇑ *i*P **P** 06 25 06.7 +0.6
PMTG *i* IAmb IAmb 06 25 47.7
comp=Z,2µm,1.5s
PDG Podgorica 82.92 2 ⇑P **P** 06 25 06.9 +0.8
PDG Podgorica 82.92 2 IAmb IAmb 06 25 50.9
comp=Z,1µm,0.9s
PDG Podgorica 82.92 2⇑ *i*P **P** 06 25 06.6 +0.5
PDG Podgorica 82.92 2 P **P** 06 25 06.9 +0.8
PDG Podgorica 82.92 2⇑ *i*P **P** 06 25 06.5 +0.5
SLBI Saint Lucia, B 82.94 76 *e*P **P** 06 25 03.8 -2.7
KKR Kurukshetra 82.98 314 *e*P **P** 06 25 07.2 +0.5
KKR IAmb IAmb 06 25 15.0
comp=Z,2µm,0.8s
CIDE Kastamonu/Cide 82.98 351 ⇑P **P** 06 25 06.6 +0.2
BRCI Bahraich 83.00 309 *e*P **P** 06 25 06.9 +0.1
LIS Lisbon 83.04 24 *e*P **P** 06 25 07.1 +0.3
LIS *e*S **S** 06 35 24.5 0.0
LIS IAMs_20 IAMs_20 07 00 07.8
comp=Z,769µm,24.9s
LIS Lisbon 83.04 24⇑ *e*P **P** 06 25 08.1 +1.3
LIS *i* IAmb IAmb 06 25 48.9
comp=Z,5µm,1.4s
LIS Lisbon 83.04 24 *e*P **P** 06 25 07.1 +0.3
LIS Lisbon 83.04 24⇑ *e*P **P** 06 25 08.0 +1.3
LIS *e*S **S** 06 35 24.5 0.0
BUM Brajici-Budva 83.04 2⇑ *i*P **P** 06 25 06.9 +0.1
SLAC Saint Lucia, A 83.08 76 *e*P **P** 06 25 07.3 0.0
KTUT Trabzon 83.10 346 ⇑P **P** 06 25 08.6 +1.5
DIGO Kars 83.12 343 P **P** 06 25 09.4 +1.9
JMUI Jamui 83.12 304 *e*P **P** 06 25 07.5 +0.1
JMUI Jamui 83.12 304 *ex* x 06 28 26.7
GNI Garni 83.14 342 LR LR 07 08 42.9
comp=Z,402µm,19.0s,baz=16,slow=40
GNI Garni 83.14 342 P **P** 06 25 08.2 +0.6
GNI Garni 83.14 342 *c* iP **P** 06 25 08.1 +0.6
GNI pmax pmax
comp=Z,3µm,1.3s
GNI MLR MLR
comp=Z,631µm,23.0s
GNI Garni 83.14 342 P **P** 06 25 08.3 +0.8
GNI S **SKSac** 06 35 28.6 +0.5
GNI Garni 83.14 342 P **P** 06 25 09.0 +1.4
GNI Garni 83.14 342 P **P** 06 25 09.3 +1.7
INTR Introdacqua 83.14 6 IAmb IAmb 06 26 16.9
comp=Z,2µm,1.3s
CVER Cruz Verde, Cu 83.16 92 P **P** 06 25 08.7 +0.4
comp=Z,279µmcomp=Z,48µmcomp=Z,343nm,1.9s
DRME Dracevica, Mon 83.16 2⇑ *i*P **P** 06 25 07.5 +0.1
DRME Dracevica, Mon 83.16 2⇑ *i*P **P** 06 25 07.8 +0.4
PLD Plovdiv 83.18 358 *e*P **P** 06 25 08.6 +1.1
PLD Plovdiv 83.18 358 P **P** 06 25 08.2 +0.8
PARRA Arraiolos 83.20 23⇑ *i*P **P** 06 25 07.8 +0.1
PARRA *i* IAmb IAmb 06 25 49.2
comp=Z,2µm,1.6s
ESBB Sonseca Array 83.22 19 IAmb IAmb 06 25 52.1
comp=Z,2µm,1.1s
ESDC Sonseca Array 83.22 19 P **P** 06 25 07.8 0.0
comp=Z,399nm,1.1s,baz=341,slow=4.7,SNR=376
ESDC PKKPbc **PKKPbc** 06 43 24.9 -0.6
comp=Z,4.2nm,1.0s,baz=181,slow=6.3,SNR=4.5
ESDC PKKPKP **P'P'df** 06 51 33.2 -6.1
comp=Z,3.2nm,1.0s,baz=165,slow=1.2,SNR=6.5
ESDC LR LR 07 02 12.3
comp=Z,552µm,21.8s,baz=3.5,slow=36
comp=Z,399nm,1.1s
ESDC Sonseca Array 83.22 19 P **P** 06 25 08.1 +0.3
BNDI Bandanaira 83.23 252 P **P** 06 25 10.7 +2.7
BNDI Bandanaira 83.23 252 P **P** 06 25 09.0 +1.0
BNDI Bandanaira 83.23 252 P **P** 06 25 11.0 +2.9
PESTR Estremoz 83.25 22 P **P** 06 25 08.1 +0.2
PESTR Estremoz 83.25 22⇑ *i*P **P** 06 25 08.4 +0.5
PESTR *i* IAmb IAmb 06 25 21.5
comp=Z,2µm,1.7s
PESTR Estremoz 83.25 22 IAmb IAmb 06 25 33.2
comp=Z,1µm,0.9s
PESTR Estremoz 83.25 22 P **P** 06 25 08.9 +1.0
DIM Dimitrovgrad 83.26 357 P **P** 06 25 09.5 +1.6
CHIC Chingaza 83.27 92 P **P** 06 25 10.3 +1.5
comp=Z,236µmcomp=Z,25µmcomp=Z,426nm,2.3s
PAB San Pablo 83.27 20 P **P** 06 25 08.2 +0.1
PAB pmax pmax
comp=Z,2µm,1.2s
PAB MLR MLR
comp=Z,752µm,22.0s
PAB San Pablo 83.27 20 P **P** 06 25 08.2 +0.1
PAB IAmb IAmb 06 25 52.4
comp=Z,2µm,1.2s
PAB San Pablo 83.27 20 P **P** 06 25 09.6 +1.5
POPC Popayan, Colom 83.27 95 P **P** 06 25 08.0 -0.6
comp=Z,236µmcomp=Z,21µmcomp=Z,369nm,0.9s
PRAC Prado 83.34 93 P **P** 06 25 08.3 -0.4
comp=Z,240µmcomp=Z,26µmcomp=Z,496nm,2.1s
SANI Sanana 83.36 257 P **P** 06 25 09.2 +0.5
SANI Sanana 83.36 257 P **P** 06 25 07.5 -1.2
SANI Sanana 83.36 257 P **P** 06 25 07.3 -1.4
comp=Z,284µmcomp=Z,53µmcomp=Z,2µm,1.7s
SANI Sanana 83.36 257 P **P** 06 25 08.8 0.0
BBAC Balboa, Cauca 83.36 96 P **P** 06 25 10.2 +1.2
comp=Z,276µmcomp=Z,29µmcomp=Z,254nm,2.0s
ULC Ulcinj 83.39 2⇑ *i*P **P** 06 25 08.4 -0.2
SKO Skopje 83.39 360 *i* P **P** 06 25 09.9 +1.3
MOE Montemor 83.41 23⇑ *e*P **P** 06 25 09.5 +0.8
MOE *i* IAmb IAmb 06 25 22.6
comp=Z,4µm,1.6s
PTCN Pitcairn Islan 83.41 154 IAMs_20 IAMs_20 06 53 32.8
comp=Z,291µm,22.0s
EDRB Edirne 83.41 356 *e*P P 06 25 03.5 -5.2
MERT Meerut 83.46 313 *e*P **P** 06 25 08.3 -0.9
EVO Evora 83.47 23 P **P** 06 25 09.1 0.0
EVO Evora 83.47 23⇑ *e*P **P** 06 25 09.3 +0.3
EVO *i* IAmb IAmb 06 25 22.9
comp=Z,3µm,1.6s
EBAD Badajoz 83.48 22 P **P** 06 25 09.2 +0.1
SGRT San Giovanni R 83.49 4 IAmb IAmb 06 25 56.2
comp=Z,2µm,1.6s
KKB Krupnik 83.51 359⇑ *i*P **P** 06 25 10.2 +1.0
KKB Krupnik 83.51 359 P **P** 06 25 09.6 +0.4
PEHC Pehcevo 83.58 359 *i* P **P** 06 25 10.2 +0.6
PHSR Pinarhisar 83.59 355 *e*P **P** 06 25 07.5 -2.1
GNR GANAUR 83.63 313 *e*P **P** 06 25 08.9 -1.1
RZN Rozhen 83.63 358⇑ *i*P **P** 06 25 10.6 +0.6
RZN Rozhen 83.63 358 P **P** 06 25 10.0 0.0
ASOR Ausora 83.64 313 *e*P **P** 06 25 09.5 -0.5
PHP Peshkopia 83.68 1 P **P** 06 25 10.0 -0.1
PHP Peshkopia 83.68 1 P **P** 06 25 09.9 -0.1
KDZ Kurdzhali 83.68 357 *e*P **P** 06 25 07.5 -2.6
KDZ Kurdzhali 83.68 357 P **P** 06 25 11.1 +1.1
GAYA Gaya 83.70 305⇑ *i*P **P** 06 25 09.9 -0.5
CTYL Yalikoy Yolu 83.71 355 *e*P **P** 06 25 08.0 -2.2
TOLI2 Tolitoli 83.73 263 P **P** 06 25 10.2 -0.4
TOLI2 Tolitoli 83.73 263 P **P** 06 25 09.7 -0.9
TARAI Tarakan 83.77 267 P **P** 06 25 11.7 +0.8
comp=Z,334µmcomp=Z,73µmcomp=Z,897nm,1.3s
MMB Musomishta 83.80 358⇑ *i*P **P** 06 25 11.4 +0.7
MMB Musomishta 83.80 358 P **P** 06 25 11.7 +1.0
ECHE Chera 83.84 17 P **P** 06 25 11.6 +0.7
PLOUS Minas do Lousa 83.86 23⇑ *e*P **P** 06 25 10.8 -0.2
PLOUS *i* IAmb IAmb 06 25 24.8
comp=Z,3µm,1.7s
KLYT Kilyos 83.89 354 *e*P **P** 06 25 13.8 +2.7
PAC1 Pacto, Paraso 83.91 98 P **P** 06 25 11.5 -0.3
comp=Z,240µmcomp=Z,23µmcomp=Z,241nm,1.7s
CMBC Cumbal 83.91 97 P **P** 06 25 12.9 +0.8
GCMP Grenada, Carri 83.93 77 *e*P **P** 06 25 07.9 -3.8
NDI New Delhi 83.94 313 *e*P **P** 06 25 10.7 -0.9
NDI IAmb IAmb 06 25 19.4
comp=Z,560nm,0.7s
NDI New Delhi 83.94 313 IAmb IAmb 06 28 39.4
comp=Z,107nm,0.8s
CTKS Kestenelik-??a 83.94 355 *e*P **P** 06 25 14.7 +3.3
BISR Bishrakh 83.94 313 *e*P **P** 06 25 10.8 -0.8
SILT Sile 83.96 354 ⇑P **P** 06 25 07.7 -3.8
SLVT Silivri 83.96 355 *e*P **P** 06 25 09.7 -1.8
UGON Onchagaon 83.97 312 *e*P **P** 06 25 09.9 -1.8
UGON Onchagaon 83.97 312 *ex* x 06 28 38.0
BGKT Bogazkoy 83.98 354 *e*P **P** 06 25 13.4 +1.8
GRSS Sisters 83.98 77 *e*P **P** 06 25 08.7 -3.2
PBEJ Beja 83.99 23⇑ *e*P **P** 06 25 11.9 +0.2
PBEJ *i* IAmb IAmb 06 25 57.8
comp=Z,2µm,1.9s
KELT Kelkit 84.00 346 P **P** 06 25 13.6 +1.7
NPLP NPLP New Delhi 84.00 313 *e*P **P** 06 25 12.0 +0.2
JMIU JAMIA UNIVERSI 84.00 313 *e*P **P** 06 25 11.2 -0.7
JMIU IAmb IAmb 06 25 19.9
comp=Z,1µm,1.2s
LKN LUCKNOW 84.01 309 *e*P **P** 06 25 11.4 -0.6
LDR Lodi Road 84.02 313 *e*P **P** 06 25 10.7 -1.3
PBAR Barrancos 84.03 22 P **P** 06 25 12.3 +0.4
PBAR Barrancos 84.03 22 *e*tx tx 06 25 12.6
PBAR *e*P **P** 06 25 13.1 +1.2
PBAR *i* IAmb IAmb 06 25 45.7
comp=Z,5µm,1.4s
VAY Valandovo 84.04 359 *i* P **P** 06 25 13.1 +1.2
BHGR Bahadurgarh 84.05 313 *e*P **P** 06 25 12.2 0.0
KAVV Kandilli-Istan 84.08 354 *e*P **P** 06 25 14.8 +2.7
CRLT Corlu 84.09 355 *e*P **P** 06 25 16.2 +4.1
MESJ Messejana 84.09 23 *e*P **P** 06 25 12.4 +0.2
MESJ *e*SKSac **SKSac** 06 35 33.4 -0.5
MESJ IAMs_20 IAMs_20 07 00 52.3
comp=Z,763µm,21.3s
MESJ Messejana 84.09 23⇑ *e*P **P** 06 25 12.7 +0.5
MESJ *i* IAmb IAmb 06 25 54.1
comp=Z,1µm,1.6s
MESJ Messejana 84.09 23 *e*P **P** 06 25 12.4 +0.2
MESJ *e* 06 35 33.4
MESJ Messejana 84.09 23 IAmb IAmb 06 25 41.2
comp=Z,991nm,1.0s
GRGR Grenville 84.09 77 IAMs_20 IAMs_20 07 03 31.8
comp=Z,262µm,22.0s
GRGR Grenville 84.09 77 P P 06 25 18.9 +6.4
GRGR Grenville 84.09 77 *e*P **P** 06 25 09.6 -3.0
CUSE Cuicocha Este 84.10 98 P **P** 06 25 14.3 +1.2
comp=Z,311µmcomp=Z,50µmcomp=Z,404nm,1.7s
TULM Tulcn-Chalpat 84.12 97 P **P** 06 25 13.7 +0.5
comp=Z,248µmcomp=Z,23µmcomp=Z,277nm,1.4s
CAL Calcutta 84.12 301 *e*P **P** 06 25 12.4 -0.2
OTAV Otavalo 84.13 98 P **P** 06 25 13.3 +0.1
OTAV pmax pmax
comp=Z,893nm,1.5s
OTAV MLR MLR
comp=Z,133µm,22.0s
OTAV Otavalo 84.13 98 P **P** 06 25 13.3 +0.1
OTAV IAmb IAmb 06 26 02.5
comp=Z,893nm,1.4s
OTAV Otavalo 84.13 98 P **P** 06 25 13.5 +0.3
OTAV Otavalo 84.13 98 P **P** 06 25 12.2 -1.1
OTAV S **SKSac** 06 35 36.2 +0.6
OTAV Otavalo 84.13 98 *e*P **P** 06 25 12.0 -1.2
OTAV Otavalo 84.13 98 P **P** 06 25 13.9 +0.6
UKOP Uzunkopru-Edir 84.13 356 *e*P **P** 06 25 08.0 -4.4
RDO Rodhopi 84.16 357 P **P** 06 25 12.9 +0.4
SAHE Sakarya_HENDEK 84.17 353 ⇑P **P** 06 25 13.5 +0.9
KNT Kendrikon 84.20 359 P **P** 06 25 14.3 +1.6
KNT Kendrikon 84.20 359 P **P** 06 25 14.2 +1.4
SRGN SRI GANGA NAGA 84.21 316 *e*P **P** 06 25 14.8 +1.8
SRS Serrai 84.23 358 P **P** 06 25 13.6 +0.7
SRS Serrai 84.23 358 P **P** 06 25 13.1 +0.2
TKR Tekirdag 84.23 355 *e*P **P** 06 25 09.9 -3.0
GARC Garzon, Huila 84.23 94 P **P** 06 25 13.5 0.0
comp=Z,249µmcomp=Z,28µmcomp=Z,319nm,1.6s
BOK Bokaro 84.24 304⇑ *i*P **P** 06 25 13.2 0.0
BOK IAmb IAmb 06 25 23.0
comp=Z,775nm,1.2s
JHJR Jhajjar 84.24 313 *e*P **P** 06 25 12.8 -0.4
OHR Ohrid 84.25 0 *i* P **P** 06 25 14.6 +1.5
PTEO Sao Teotonio 84.25 24⇑ *e*P **P** 06 25 13.1 +0.1
PTEO *i* IAmb IAmb 06 25 26.9
comp=Z,3µm,1.6s
BRGA Burgazada-Ista 84.26 354 *e*P **P** 06 25 15.9 +2.9
ETOS Mallorca 84.26 14 P **P** 06 25 13.5 +0.5
HYBA Heybeliada-Ist 84.27 354 *e*P P 06 25 17.3 +4.9
BUYA Buyukada-Istan 84.27 354 *e*P **P** 06 25 16.9 +3.9
TUZL Tuzla-Istanbul 84.32 354 *e*P **P** 06 25 19.4 +6.1
PCVE Castro Verde 84.33 23 P **P** 06 25 13.8 +0.3
PCVE Castro Verde 84.33 23⇑ *e*P **P** 06 25 13.9 +0.5
PCVE *i* IAmb IAmb 06 25 58.8
comp=Z,3µm,1.6s
PCVE *e*S **S** 06 35 37.6 -0.1
MAHO Mahon 84.33 13 P **P** 06 25 13.5 +0.1
MAHO Mahon 84.33 13 P **P** 06 25 14.7 +1.3
KAVA Kavala 84.33 358 *e*P **P** 06 25 14.5 +1.1
KAVA Kavala 84.33 358 P **P** 06 25 14.2 +0.8
VAR Varanasi 84.34 307 *e*P **P** 06 25 12.2 -1.5
VAR IAmb IAmb 06 25 22.4
comp=Z,1µm,0.8s
LUWI Luwuk 84.35 260 P **P** 06 25 14.6 +0.8
LUWI Luwuk 84.35 260 P **P** 06 25 12.0 -1.8
LUWI Luwuk 84.35 260 IAMs_20 IAMs_20 06 57 08.5
comp=Z,281µm,22.0s
LUWI Luwuk 84.35 260 P **P** 06 25 12.8 -1.0
comp=Z,305µmcomp=Z,50µmcomp=Z,2µm,1.5s
LUWI Luwuk 84.35 260 P **P** 06 25 13.3 -0.5
COEN Coen 84.36 236 P **P** 06 25 15.5 +1.8
COEN Coen 84.36 236 P **P** 06 25 15.3 +1.6
ALN Alexandroupoli 84.39 356 *e*P **P** 06 25 13.8 +0.1
ALN Alexandroupoli 84.39 356 P **P** 06 25 13.8 +0.1
ALN Alexandroupoli 84.39 356 P **P** 06 25 14.3 +0.7
GRG Griva 84.41 359 P **P** 06 25 14.7 +0.9
GRG Griva 84.41 359 P **P** 06 25 14.3 +0.5
BBGH Gun Hill 84.44 75 IAMs_20 IAMs_20 07 07 26.2
comp=Z,394µm,19.0s
BBGH Gun Hill 84.44 75 *e*P P 06 25 01.4 -13
ECAB El Cabril 84.47 21 P **P** 06 25 14.6 +0.4
GAZK Gazikoy-TEKIRD 84.48 356 *e*P **P** 06 25 13.3 -0.8
EMIN Mina Concepcio 84.50 22 P **P** 06 25 14.6 +0.3
MORF Marmelete 84.50 24 *e*P **P** 06 25 14.5 +0.1
MORF *e*SKSac **SKSac** 06 35 36.3 -0.5
MORF IAMs_20 IAMs_20 07 01 56.8
comp=Z,851µm,29.0s
MORF Marmelete 84.50 24 *e*P **P** 06 25 14.5 +0.1
MORF *e* 06 35 36.3
SOH Sokhos 84.53 359 P **P** 06 25 14.7 +0.3
SOH Sokhos 84.53 359 P **P** 06 25 14.6 +0.1
ENEZ Enez 84.54 356 *e*P **P** 06 25 15.5 +1.1
ENEZ Enez 84.54 356 P **P** 06 25 14.5 0.0
EGRO El Granado 84.55 23 P **P** 06 25 15.1 +0.6
EADA Adamuz 84.55 20 P **P** 06 25 15.2 +0.6
RKY Sarkoy-Tekirda 84.55 356 *e*P **P** 06 25 14.5 -0.1
ARMT Armutlu 84.59 354 *e*P P 06 25 20.4 +5.7
CAVK Edirne/Enez-Ca 84.59 356 ⇑P **P** 06 25 16.4 +1.8
ERIK Erikli-Kesan 84.60 356 *e*P **P** 06 25 16.2 +1.5
MRMT Marmara Adasi 84.62 355 *e*P **P** 06 25 14.7 -0.2
PVAQ Vaqueiros 84.62 23⇑ *e*P **P** 06 25 15.6 +0.7
PVAQ *i* IAmb IAmb 06 25 28.9
comp=Z,4µm,1.7s
PVAQ *e*PP **PP** 06 28 37.5 +7.7
PVAQ *e*SS SS 06 41 17.7 +7.4
PVAQ *e*LR LR 06 53 37.4
PVAQ *i* IAMs_20 IAMs_20 07 01 46.5
comp=Z,578µm,22.0s
PVAQ Vaqueiros 84.62 23 P **P** 06 25 16.5 +1.6
PFVI Vila Bisbo 84.62 24 P **P** 06 25 15.2 +0.2

PFVI **Vila Bisbo** 84.62 24⇑ *e*P P 06 25 15.0 +0.1
PFVI *i* IAmb IAmb 06 25 44.1
comp=Z,3µm,1.2s
PFVI **Vila Bisbo** 84.62 24 P P 06 25 16.4 +1.5
MATE **Matera** 84.63 4 *e*P P 06 25 15.0 +0.1
MATE **Matera** 84.63 4 P P 06 25 16.1 +1.3
ETOB **Tobarra** 84.66 18 P P 06 25 15.8 +0.6
KUDL **Kundal** 84.71 313 *e*P P 06 25 15.2 -0.3
THAS **Thassos island** 84.72 357 P P 06 25 15.8 +0.5
THE **Thessaloniki** 84.72 359 P P 06 25 15.4 +0.1
THE **Thessaloniki** 84.72 359 P P 06 25 15.7 +0.3
PBDV **Barranco-do-Ve** 84.72 23 P P 06 25 16.3 +0.8
PBDV **Barranco-do-Ve** 84.72 23⇑ *e*P P 06 25 15.4 +0.9
PBDV *i* IAmb IAmb 06 26 02.2
comp=Z,4µm,2.1s
KBN **Korca** 84.74 0 P P 06 25 15.7 +0.1
HORT **Hortiatis** 84.76 359 P P 06 25 15.1 -0.5
HORT **Hortiatis** 84.76 359 P P 06 25 15.8 +0.1
EIBI **Ibiza** 84.77 16 P P 06 25 16.0 +0.4
MDNY **Mudanya-Bursa** 84.78 354 *e*P P 06 25 20.1 +4.4
BAND **Balkesír-Ban** 84.84 355 ⇑P P 06 25 16.6 +0.7
KRBG **Karabiga-Canak** 84.84 356 *e*P P 06 25 17.7 +1.8
ALBI **Allahabad** 84.85 308 *e*P P 06 25 15.1 -1.1
EDC **Edincik** 84.86 355 *e*P P 06 25 19.0 +2.9
GELI **Tayfur-Gelibol** 84.87 356 *e*P P 06 25 18.7 +2.6
VLO **Vlora** 84.88 1 P P 06 25 18.0 +1.9
AGRA **Agra** 84.90 312 ⇑*i*P P 06 25 16.6 +0.1
KCTX **Karacabey (Bur** 84.92 355 *e*P P 06 25 17.3 +0.9
MARCO **Tramutola** 84.95 4 P P 06 25 17.2 +0.6
KTI **Kastanea** 84.97 359 P P 06 25 17.6 +0.8
OUR **Ouranopolis** 85.01 358 P P 06 25 17.1 +0.3
BR131 **Keskin Array S** 85.06 351 *c i*P P 06 25 17.0 -0.3
BR131 **Keskin Array S** 85.06 351 P P 06 25 17.6 +0.3
SNR=291
BR131 S **SKSac** 06 35 40.7 +0.2
BR131 **Keskin Array S** 85.06 351 IAmb IAmb 06 26 02.4
comp=Z,887nm,0.9s
BRTR **Keskin Array B** 85.06 351 P P 06 25 17.4 +0.1
comp=Z,290nm,0.9s,baz=23,slow=1.9,SNR=106
BRTR PKKPbc **PKKPbc** 06 43 21.1 -0.4
comp=Z,6.5nm,0.9s,baz=168,slow=4.4,SNR=5.6
BRTR PKPPKP **P'P'df** 06 51 30.7 -5.5
comp=Z,5.8nm,0.9s,baz=204,slow=2.2,SNR=5.9
BRTR LR LR 07 08 31.1
comp=Z,432µm,20.1s,baz=360,slow=39
comp=Z,290nm,0.9s
GADA **Gvkgeada** 85.10 357 *e*P P 06 25 20.4 +3.2
GADA **Gvkgeada** 85.10 357 P P 06 25 16.9 -0.3
ARNO **Arenosillo** 85.13 22 P P 06 25 19.1 +1.7
ARNO **Arenosillo** 85.13 22 P P 06 25 19.7 +2.3
KNTI **KHUNTI** 85.16 304 *e*P P 06 25 16.9 -0.9
KNTI IAmb IAmb 06 25 22.0
comp=Z,398nm,1.3s
ARPR **Arapgir-MALATY** 85.16 347 P P 06 25 19.9 +2.1
GONE **Gonen-Balikesi** 85.17 355 *e*P P 06 25 18.7 +1.1
COMU **Canakkale** 85.17 356 *e*P P 06 25 19.9 +2.3
MACC **Macarena, Meta** 85.21 93 P P 06 25 17.1 -1.1
comp=Z,210µmcomp=Z,18µmcomp=Z,355nm,1.0s
CANM **Can-anakkale** 85.23 356 *e*P P 06 25 21.1 +3.2
SUSR **Susurluk-Balik** 85.23 355 *e*P P 06 25 20.8 +2.8
PIAT **Ana Tenorio** 85.24 99 P P 06 25 19.4 +0.6
comp=Z,249µmcomp=Z,18µmcomp=Z,208nm,1.1s
LIT **Litokhoron** 85.26 359 P P 06 25 18.0 -0.1
LIT **Litokhoron** 85.26 359 P P 06 25 17.9 -0.2
YENI **Yenice-Canakka** 85.30 356 *e*P P 06 25 24.0 +5.7
VSL **Villasalto** 85.30 9 IAmb IAmb 06 25 43.9
comp=Z,1µm,1.1s
VSL **Villasalto** 85.30 9 P P 06 25 18.4 +0.1
SAUI **Saumlaki** 85.35 249 P P 06 25 20.6 +1.8
SAUI **Saumlaki** 85.35 249 P P 06 25 19.7 +0.9
BNDA **BANDA** 85.37 309 ⇑*i*P P 06 25 16.8 -2.1
KPRO **Kipourio** 85.41 0 P P 06 25 18.6 -0.3
PAIG **Paliouri** 85.42 358 P P 06 25 18.5 -0.4
PAIG **Palioui** 85.42 358 P P 06 25 19.2 +0.4
BOZC **Bozcaada** 85.44 356 *e*P P 06 25 21.5 +2.5
TRN **Trinidad (W)** 85.44 78 *e*P P 06 25 16.9 -2.4
EZN **Ezine** 85.45 356 *e*P P 06 25 19.0 0.0
EZN **Ezine** 85.45 356 P P 06 25 20.6 -0.4
BALY **Balya** 85.48 355 P P 06 25 20.2 +0.9
SRN **Sarande** 85.48 1 P P 06 25 19.6 +0.4
SRN **Sarande** 85.48 1 P P 06 25 20.2 +1.1
EZNE **Ezine-Canakkal** 85.51 356 *e*P P 06 25 26.1 +6.8
ESPR **Espera** 85.54 22 P P 06 25 20.4 +0.9
RAO **Raoul Island** 85.55 197 LR LR 06 56 52.9
comp=Z,362µm,21.7s,baz=34,slow=31
KIRS **Kirsehir-Merke** 85.62 350 ⇑P P 06 25 21.6 +1.6
KEK **Kerkira** 85.64 1 P P 06 25 20.2 +0.2
TYRN **Tyrnavos** 85.65 359 P P 06 25 19.1 -0.9
EGOR **Sierra Gorda,** 85.67 20 P P 06 25 21.0 +0.7
KKUL **Konya-Kulu** 85.68 351 P P 06 25 21.0 +0.7
EQTA **Presa de Quent** 85.70 20 P P 06 25 20.7 +0.2
CART **Cartagena** 85.79 18 P P 06 25 20.6 -0.1
IGT **Igoumenitsa** 85.83 1 P P 06 25 21.8 +0.9
PRMD **Pramanda** 85.83 1 P P 06 25 22.2 +1.2
HAKT **HAKKARI** 85.84 342 P P 06 25 21.9 +0.5
SFS **San Fernando** 85.85 22 P P 06 25 22.3 +1.2
LFKM **Lefkimmi** 85.91 1 P P 06 25 25.4 +4.1
PCI **Palu** 85.91 263 P P 06 25 20.9 -0.7
comp=Z,279µmcomp=Z,39µmcomp=Z,1µm,2.0s
EMAL **Malaga-Limoner** 85.94 21 P P 06 25 21.7 +0.2
EMAL **Malaga-Limoner** 85.94 21 P P 06 25 22.9 +1.5
CNIL **Conil** 85.98 22 P P 06 25 22.6 +0.9
XOR **Xorichti** 85.99 359 P P 06 25 20.4 -1.3
XOR **Xorichti** 85.99 359 P P 06 25 22.3 +0.6
ELGU **Los Guajares,** 86.00 20 P P 06 25 22.2 +0.3
EMIJ **Mijas** 86.06 21 P P 06 25 22.3 +0.2
TIP **Timpagrande** 86.10 4 ⇓P P 06 25 22.8 +0.4
TIP **Timpagrande** 86.10 4 IAMs_20 IAMs_20 07 11 25.6
comp=Z,350µm,20.0s
TIP **Timpagrande** 86.10 4 P P 06 25 22.3 0.0
EBER **Berja** 86.11 19 P P 06 25 22.7 +0.1
BKNR **BIKANER** 86.14 316 *e*P P 06 25 21.8 -0.9
JHNI **Jhansi** 86.15 310 *e*P P 06 25 21.0 -1.8
ENIJ **Nijar** 86.17 19 P P 06 25 22.6 0.0
AOS **Alonnisos** 86.17 358 P P 06 25 21.9 -0.7
PTLC **Puerto Leguiza** 86.27 95 P P 06 25 25.2 +1.8
comp=Z,234µmcomp=Z,32µmcomp=Z,542nm,1.2s
AGG **Agios Georgios** 86.34 359 P P 06 25 23.4 0.0
AGG **Agios Georgios** 86.34 359 P P 06 25 23.5 0.0
AMPL **Ampelaki** 86.44 0 P P 06 25 24.4 +0.5
PMOZ **Porto Moniz, M** 86.44 32 P P 06 25 24.3 +0.1
PMOZ **Porto Moniz, M** 86.44 32⇑ *e*P P 06 25 24.2 +0.1
PMOZ *i* IAmb IAmb 06 26 38.4
comp=Z,2µm,1.4s
PMOZ *e*PP PP 06 28 59.4 +15
PMOZ *e*S S 06 35 58.8 -0.1
PMOZ *e*SS SS 06 41 52.8 +15
PMOZ *e*LR LR 06 56 00.1
PMOZ *i* IAMs_20 IAMs_20 07 03 17.0
comp=Z,353µm,20.0s
PMPST **Porto Santo, M** 86.46 31⇑ *e*P P 06 25 23.8 -0.3
PMPST *i* IAmb IAmb 06 26 05.7
comp=Z,2µm,2.3s
PMPS **Porto Santo** 86.48 31 *e*P P 06 25 25.3 +1.0
PMPS *i* IAmb IAmb 06 26 07.0
comp=Z,2µm,1.8s
TSLK **Tsoukalades, L** 86.54 1 P P 06 25 24.0 -0.4
LKD2 **Lefkada island** 86.57 1 P P 06 25 24.0 -0.6
LKD2 **Lefkada island** 86.57 1 P P 06 25 25.1 +0.5
AXAR **Agios Charalam** 86.59 359 P P 06 25 23.0 -1.7
PMAR **Madeira** 86.62 32⇑ *e*P P 06 25 25.4 +0.3
PMAR *i* IAmb IAmb 06 25 52.6
comp=Z,4µm,2.0s
NYDR **Nydri-Lefkada** 86.65 1 P P 06 25 25.4 +0.4
ATAL **Atalanti** 86.66 359 P P 06 25 23.8 -1.2
DRAG **Dragano-Lefkad** 86.68 1 P P 06 25 24.4 -0.7
EVGI **Lefkada island** 86.74 1 P P 06 25 25.5 +0.1
PVO **Paravola** 86.75 360 P P 06 25 25.9 +0.5
KDI **Kendari** 86.82 259 P P 06 25 26.5 +0.4
comp=Z,295µmcomp=Z,40µmcomp=Z,848nm,1.6s
BLCB **Balcova** 86.85 356 P P 06 25 25.4 -0.6
CHOS **Chios island** 86.89 356 P P 06 25 26.1 -0.2
CHOS **Chios island** 86.89 356 P P 06 25 27.0 +0.8
ANDN **Andirin** 86.90 348 P P 06 25 27.2 +0.9
FSK **Fiskardo** 86.90 1 P P 06 25 25.9 -0.3
EFP **Efpalio** 86.94 360 P P 06 25 27.0 +0.7
SERG **Sergoula** 86.95 360 P P 06 25 26.2 -0.3
PLEV **Plevrona-Mesol** 86.95 0 P P 06 25 26.9 +0.5
KALE **Kalithea** 86.97 359 P P 06 25 26.5 -0.2
CEL **Celeste** 86.98 4 IAMs_20 IAMs_20 07 08 36.0
comp=Z,272µm,22.0s
CEL **Celeste** 86.98 4 P P 06 25 25.6 -1.1

AJM **Ajmer** 87.00 314 ⇑*i*P P 06 25 24.6 -2.3
EALB **Alboran** 87.01 20 P P 06 25 25.9 -0.8
MCRA **Macar, Loja** 87.04 102 P P 06 25 27.2 0.0
comp=Z,25µmcomp=Z,382nm,1.6s
AXS **Araxos** 87.17 0 P P 06 25 27.6 +0.1
STFN **Stefani** 87.17 358 P P 06 25 27.2 -0.4
VILL **Villia** 87.18 359 P P 06 25 27.0 -0.6
ABA **Alger-Bouzarea** 87.20 15 P P 06 25 28.3 +0.6
EBNH **Beni Haoua** 87.25 16 P P 06 25 28.7 +0.8
MAGU **Magoula** 87.27 358 P P 06 25 27.4 -0.5
BWNR **Bhubaneshwar** 87.28 302 *e*P P 06 25 28.3 0.0
RTZL **Ratzakli, Kefa** 87.28 1 P P 06 25 28.1 +0.1
KARY **Karystos** 87.29 358 P P 06 25 27.6 -0.5
THAL **Thalero** 87.32 359 P P 06 25 27.6 -0.6
AUAYR **Ayr State High** 87.32 230 P P 06 25 30.2 +2.0
LTK **Loutraki** 87.33 359 P P 06 25 27.3 -1.0
ABKD **Sidi Amar** 87.36 15 P P 06 25 28.8 +0.4
ATHU **Athens Univers** 87.37 358 P P 06 25 27.2 -1.4
DRO **Drossia** 87.41 360 P P 06 25 29.7 +0.9
GUNA **GUNA** 87.42 311 *e*P P 06 25 27.9 -1.1
GUNA IAmb IAmb 06 25 35.7
comp=Z,2µm,1.4s
GUR **Goura** 87.42 359 P P 06 25 28.7 -0.2
BLSP **Bilaspur** 87.44 306 *e*P P 06 25 28.0 -1.1
MTSU **Mount Surprise** 87.45 233 P P 06 25 29.3 +0.3
MTSU **Mount Surprise** 87.45 233 P P 06 25 29.6 +0.7
EBNR **Beni Rached** 87.47 16 P P 06 25 30.7 +1.6
CLTB **Caltabellotta** 87.51 7 P P 06 25 30.8 +0.5
AYDN **Tasoluk** 87.53 355 P P 06 25 30.4 +1.0
EARB **Arib** 87.54 16 P P 06 25 30.2 +0.8
WMELI **Melilla** 87.63 20 P P 06 25 28.7 -1.1
EMLI **Melilla** 87.65 20 P P 06 25 28.9 -0.9
CBOS **Bilal Ibnou Ra** 87.65 12 P P 06 25 30.0 +0.2
LTHK **Lithakia** 87.65 0 P P 06 25 29.0 -0.8
EHRZ **Djelida** 87.66 16 P P 06 25 30.0 +0.1
VAE **Valguarnera** 87.69 6 LR LR 07 04 25.8
comp=Z,285µm,21.7s,baz=6.0,slow=35
ATKJ **Tikjda** 87.71 14 P P 06 25 30.4 +0.1
CAEH **'Ain El Ouahch** 87.72 12 P P 06 25 34.7 +4.5
CTCHA **Tamokra** 87.79 13 P P 06 25 29.8 -0.8
AMT **Artemida-Makis** 87.83 360 P P 06 25 30.2 -0.5
DFRA **Djebel Bou Aff** 87.84 12 P P 06 25 31.8 +0.9
EDDR **Deurdeur** 87.86 15 P P 06 25 30.4 -0.6
CBHR **Beni Haroun da** 87.87 12 P P 06 25 30.9 0.0
BKB **Balikpapan** 87.88 265 P P 06 25 32.8 +1.6
BKB **Balikpapan** 87.88 265 P P 06 25 31.9 +0.7
BKB **Balikpapan** 87.88 265 P P 06 25 32.3 +1.1
MMSI **Mamuju** 87.89 262 P P 06 25 30.5 -0.8
comp=Z,258µmcomp=Z,34µmcomp=Z,1µm,0.9s
RAFF **Raffo Rosso** 87.94 6 IAmb IAmb 06 26 44.9
comp=Z,952nm,1.2s
CMAH **Djebel Manchou** 87.94 11 P P 06 25 31.2 -0.2
YER **Yerkesik** 88.04 355 P P 06 25 31.3 -0.5
JASL **Jaisalmer** 88.06 317 *e*P P 06 25 31.1 -0.8
AKET **Djebel Ketaf** 88.06 14 P P 06 25 32.9 +0.8
CKFL **Kef-Lekhel** 88.08 12 P P 06 25 32.4 +0.3
BODT **Bodrum** 88.16 355 P P 06 25 31.3 -1.0
ITM **Ithomi** 88.18 360 P P 06 25 32.0 -0.4
CASM **Ain Smara** 88.20 12 P P 06 25 36.1 +3.6
COAT **Oued Athmania** 88.20 12 P P 06 25 33.1 +0.5
EBGR **Bougara** 88.25 16 P P 06 25 33.2 +0.4
CTA **Charters Tower** 88.28 231 P P 06 25 32.7 -0.2
comp=Z,128nm,0.9s,baz=24,slow=6.5,SNR=44
CTA LR LR 06 59 42.4
comp=Z,217µm,22.0s,baz=25,slow=32
comp=Z,128nm,0.9s
CTA **Charters Tower** 88.28 231 P P 06 25 33.5 +0.6
CTAO **Charters Tower** 88.28 231 P P 06 25 33.5 +0.6
CTAO **Charters Tower** 88.28 231 P P 06 25 33.3 +0.4
CTAO pmax pmax
comp=Z,728nm,1.1s
CTAO **Charters Tower** 88.28 231 P P 06 25 33.3 +0.4
CTAO IAmb IAmb 06 25 56.9
comp=Z,728nm,1.1s
CTAO **Charters Tower** 88.28 231 P P 06 25 33.5 +0.6
ABSA **Djebel Ababsia** 88.30 11 P P 06 25 38.0 +4.9
ABRIN **Birine** 88.37 15 P P 06 25 33.1 -0.3
CTEI **Djebel Teioual** 88.38 12 P P 06 25 34.5 +1.0
PYL **PYLOS** 88.46 360 P P 06 25 32.3 -1.4
AFDJ **Sidi Ladjel** 88.51 15 P P 06 25 33.9 -0.2
CJSR **Ain Djasser** 88.52 13 P P 06 25 34.1 0.0
PMSI **Majene** 88.55 262 P P 06 25 34.5 +0.1
comp=Z,252µmcomp=Z,44µmcomp=Z,2µm,1.8s
BHPL **Bhopal** 88.61 310 ⇑*i*P P 06 25 33.6 -1.1
BHPL IAmb IAmb 06 25 38.4
comp=Z,1µm,1.3s
AVE **Averroes** 88.62 24 P P 06 25 34.5 0.0
AVE **Averroes** 88.62 24 IAMs_20 IAMs_20 07 04 44.8
comp=Z,409µm,21.0s
AVE **Averroes** 88.62 24 P P 06 25 36.0 +1.4
AKAS **Kas** 88.86 353 P P 06 25 36.4 +0.6
IFR **Ifrane** 88.92 22 P P 06 25 35.9 -0.3
IFR **Ifrane** 88.92 22 P P 06 25 36.8 +0.7
ARG **Arkhangelos** 88.96 355 P P 06 25 36.3 +0.2
UDPR **Udaipur** 89.02 314 *e*P P 06 25 35.8 -0.7
UDPR IAmb IAmb 06 25 44.4
comp=Z,273nm,1.2s
KEST **Kesra** 89.03 10 P P 06 25 37.1 +0.6
comp=Z,296nm,1.0s,baz=342,slow=3.0,SNR=45
KEST LR LR 07 06 31.0
comp=Z,502µm,22.0s,baz=354,slow=36
comp=Z,296nm,1.0s
KEST **Kesra** 89.03 10 P P 06 25 37.5 +1.0
SNR=112
KEST S **SKSac** 06 36 05.5 +0.7
KEST **Kesra** 89.03 10 IAmb IAmb 06 26 14.6
comp=Z,634nm,0.9s
KTHA **Kythira Island** 89.09 359 P P 06 25 37.0 +0.3
DRS **Darwin Rock St** 89.28 247 P P 06 25 39.8 +2.1
RAGD **RAYAGADA** 89.28 303 *e*P P 06 25 37.5 -0.3
KAPI **Kappang** 89.31 260 LR LR 07 01 27.2
comp=Z,88µm,21.5s,baz=24,slow=33
KAPI **Kappang** 89.31 260 P P 06 25 38.3 +0.4
KAPI **Kappang** 89.31 260 *c i*P P 06 25 37.2 -0.7
KAPI pmax pmax
comp=Z,2µm,1.2s
KAPI **Kappang** 89.31 260 P P 06 25 37.8 -0.1
KAPI **Kappang** 89.31 260 P P 06 25 38.0 0.0
KAPI **Kappang** 89.31 260 P P 06 25 37.9 -0.1
comp=Z,165µmcomp=Z,24µmcomp=Z,544nm,1.3s
KAPI **Kappang** 89.31 260 P P 06 25 36.9 -1.0
KAPI S S 06 36 23.0 -3.3
KAPI **Kappang** 89.31 260 P P 06 25 38.1 +0.2
AUNRC **North Rockhamp** 89.33 226 P P 06 25 40.2 +2.5
GD1S **Gladstone Soft** 89.51 225 P P 06 25 40.9 +2.4
MD01 **Midelt array s** 89.63 22 P P 06 25 39.2 -0.3
KARP **Karpathos** 89.68 355 IAMs_20 IAMs_20 07 09 39.4
comp=Z,424µm,22.0s
KARP **Karpathos** 89.68 355 P P 06 25 39.6 +0.2
NGP **Nagpur** 89.69 308 *e*P P 06 25 38.2 -1.6
NGP *i* x x 06 28 50.5
MDT **Midelt** 89.71 22 LR LR 07 06 10.7
comp=Z,228µm,21.8s,baz=358,slow=36
CSS **Mathiatis** 89.81 350 IAMs_20 IAMs_20 07 11 47.0
comp=Z,297µm,22.0s
CSS **Mathiatis** 89.81 350 P P 06 25 40.8 +0.7
IMMV **Iera Moni Meta** 89.87 358 P P 06 25 41.3 +0.9
BEIL **Beino** 89.92 348 *e*P P 06 25 40.5 -0.1
IDI **Anoyia** 90.02 357 LR LR 07 06 59.9
comp=Z,254µm,21.9s,baz=360,slow=36
KNDR **Palaiochora Ch** 90.10 358 P P 06 25 41.1 -0.3
ZKR **Zakros** 90.10 356 P P 06 25 42.0 +0.3
ATAH **Atahualpa** 90.19 102 LR LR 07 05 25.2
comp=Z,89µm,18.9s,baz=320,slow=35
HWQ **Hawqa** 90.20 348 *e*P P 06 25 42.2 +0.1
GVD **Gavdhos** 90.49 358 P P 06 25 43.9 +0.6
BHL **Bhannes** 90.61 348 *e*P P 06 25 44.5 +0.5
VIS **Vishakhapatnam** 90.65 303 *e*P P 06 25 44.0 -0.2
SOEI **Soe** 90.66 254 P P 06 25 45.7 +1.4
SOEI **Soe** 90.66 254 P P 06 25 43.2 -1.1
SOEI **Soe** 90.66 254 IAmb IAmb 06 26 28.6
comp=Z,755nm,0.9s
SOEI **Soe** 90.66 254 P P 06 25 43.5 -0.8
comp=Z,242µmcomp=Z,21µmcomp=Z,564nm,0.9s
SOEI **Soe** 90.66 254 P P 06 25 43.8 -0.5
DQRL **Deir Qamar** 90.81 348 *e*P P 06 25 49.2 +4.3
MMRI **Maumere** 90.87 256 P P 06 25 46.6 +1.4
MMRI **Maumere** 90.87 256 IAmb IAmb 06 26 54.1
comp=Z,553nm,1.0s
MMRI **Maumere** 90.87 256 P P 06 25 44.3 -0.9
comp=Z,192µmcomp=Z,18µmcomp=Z,352nm,1.1s
MMRI **Maumere** 90.87 256 P P 06 25 46.2 +1.0
EIDS **Eidsvold** 90.90 224 P P 06 25 47.9 +2.9

EIDS **Eidsvold** 90.90 224 IAmb IAmb 06 27 03.3
comp=Z,864nm,1.7s
EIDS **Eidsvold** 90.90 224 P P 06 25 47.9 +2.9
TIO **Tiouine** 90.93 24 P P 06 25 45.5 -0.1
TIO **Tiouine** 90.93 24 P P 06 25 46.5 +0.9
QRWL **Qaraoun** 90.96 348 *e*P P 06 25 48.2 +2.6
PBA **Port Blair** 90.96 292 P P 06 25 45.5 -0.2
SNR=71
PBA **Port Blair** 90.96 292 *e*P P 06 25 44.9 -0.8
RCY **Rachaya** 90.99 348 *e*P P 06 25 49.5 +3.7
AKL **Akola** 91.01 309 ⇑*i*P P 06 25 45.4 -0.5
AKL IAmb IAmb 06 26 06.3
comp=Z,420nm,1.2s
SHBL **Chebaa** 91.15 348 *e*P P 06 25 49.4 +2.9
BATI **Baumata** 91.36 254 LR LR 07 03 42.5
comp=Z,61µm,21.9s,baz=40,slow=34
BATI **Baumata** 91.36 254 P P 06 25 45.6 -1.9
comp=Z,165µmcomp=Z,17µmcomp=Z,480nm,0.8s
EOSO **Osorio** 91.37 32 P P 06 25 48.2 +0.7
AUBSH **Beerwah State** 91.50 222 P P 06 25 51.8 +4.1
MMAI **Mount Meron Ar** 91.52 348 P P 06 25 48.8 +0.6
comp=Z,114nm,1.1s,baz=350,slow=3.4,SNR=29
MMAI LR LR 07 09 04.4
comp=Z,238µm,21.9s,baz=5.5,slow=37
comp=Z,114nm,1.1s
QIS **Mount Isa** 91.75 236 P P 06 25 49.5 +0.4
QIS **Mount Isa** 91.75 236 P P 06 25 48.8 -0.3
BHUJ **Bhuj** 91.84 317 ⇑*i*P P 06 25 49.9 +0.2
BHUJ IAmb IAmb 06 25 59.4
comp=Z,198nm,0.9s
BHUJ *i* x x 06 28 54.1
KULM **Kulim** 91.86 282 P P 06 25 50.0 +0.1
KULM **Kulim** 91.86 282 IAMs_20 IAMs_20 07 10 54.7
comp=Z,320µm,21.0s
KULM **Kulim** 91.86 282 P P 06 25 50.0 +0.1
comp=Z,262µmcomp=Z,25µmcomp=Z,654nm,1.4s
KULM **Kulim** 91.86 282 P P 06 25 50.5 +0.6
RPN **Rapa Nui** 92.03 138 LR LR 06 58 06.7
comp=Z,169µm,21.5s,baz=332,slow=30
LBFI **Labuhan Bajo,** 92.06 258 P P 06 25 52.0 +1.3
MMLI **Mount Malkishu** 92.08 348 P P 06 25 52.3 +1.6
ASF **Jabal al Asfar** 92.16 347 LR LR 07 11 19.6
comp=Z,255µm,21.2s,baz=20,slow=38
GC1S **Gold Coast 1 S** 92.46 221 P P 06 25 56.5 +4.4
TW1H **Toowoomba 1 Ha** 92.50 222 P P 06 25 56.7 +4.3
AUTOO **Toowoomba Stat** 92.50 222 P P 06 25 56.3 +3.8
UJAP **Al Uja** 92.56 348 P P 06 25 54.1 +1.3
BOAV **Boa Vista** 92.67 82 P P 06 25 53.9 +0.3
comp=Z,11µmcomp=Z,128nm,2.2s
BOAV **Boa Vista** 92.67 82 P P 06 25 51.7 -1.9
BOAV S S 06 36 50.7 -6.4
BOAV **Boa Vista** 92.67 82 *e*P P 06 25 53.4 -0.2
WSI **Waingapu** 92.80 257 P P 06 25 55.6 +1.5
comp=Z,181µmcomp=Z,28µmcomp=Z,1µm,1.9s
RMQ **Roma** 92.84 226 P P 06 25 57.8 +3.8
MYKOM **Kota Tinggi** 92.91 277 P P 06 25 55.9 +1.2
MYKOM **Kota Tinggi** 92.91 277 P P 06 25 55.2 +0.5
comp=Z,240µmcomp=Z,22µmcomp=Z,418nm,1.3s
MYKOM **Kota Tinggi** 92.91 277 P P 06 25 55.4 +0.7
VJD **Vijayawada** 92.98 304 *e*P P 06 26 01.2 +6.2
VJD IAmb IAmb 06 26 09.4
comp=Z,1µm,2.0s
KBD **Kabd** 93.17 337 P P 06 25 55.7 -0.1
KBD S **SKSac** 06 36 26.4 -2.1
HYB **Hyderabad** 93.18 307 *e*P P 06 25 54.9 -1.1
HYB *i* x x 06 29 38.9
HYB **Hyderabad** 93.18 307 *ex* x x 06 29 46.7
HYB **Hyderabad** 93.18 307 *e*P P 06 25 55.1 -0.8
HYB *e*PP **PP** 06 29 38.5 -0.3
HYB *e*SKSac **SKSac** 06 36 27.8 -1.0
HYB *e*S S 06 37 00.5 -1.2
GHAJ **Ghor Haditha** 93.19 348 IAmb IAmb 06 26 32.5
comp=Z,552nm,1.3s
GHAJ IAMs_20 IAMs_20 07 10 43.4
comp=Z,408µm,22.0s
GHAJ **Ghor Haditha** 93.19 348 P P 06 25 56.3 +0.6
MSBI **Mazada** 93.20 348 P P 06 25 56.3 +0.5
BTDF **Bukit Timah Da** 93.30 277 P P 06 25 57.6 +1.1
BTDF **Bukit Timah Da** 93.30 277 P P 06 25 57.1 +0.6
comp=Z,111µmcomp=Z,198nm,1.4s
PLAI **Plampang** 93.54 260 P P 06 25 58.1 +0.6
PLAI **Plampang** 93.54 260 P P 06 25 57.6 +0.1
comp=Z,175µmcomp=Z,16µmcomp=Z,586nm,1.9s
PLAI **Plampang** 93.54 260 P P 06 25 58.0 +0.4
WB0 **Warramunga Arr** 93.62 240 IAmb IAmb 06 26 25.1
comp=Z,745nm,1.3s
WR8 **Warramunga Arr** 93.73 240 IAmb IAmb 06 26 25.5
comp=Z,810nm,1.4s
WRAB **Tennant Creek** 93.78 240 IAMs_20 IAMs_20 07 05 49.3
comp=Z,284µm,22.0s
WRA **Warramunga Arr** 93.80 240 P P 06 25 57.0 -1.5
comp=Z,54nm,1.0s,baz=39,slow=5.0,SNR=71
WRA LR LR 07 05 59.0
comp=Z,96µm,19.6s,baz=17,slow=34
comp=Z,54nm,1.0s
CZSB **Cruzeiro do Su** 93.90 98 P P 06 25 59.6 +0.4
CZSB **Cruzeiro do Su** 93.90 98 P P 06 25 58.2 -1.0
CZSB S S 06 37 01.2 -6.6
CZSB **Cruzeiro do Su** 93.90 98 *e*P P 06 25 58.0 -1.1
SHME **Shamm** 93.96 329 *i* P P 06 25 58.6 -0.8
SNR=19
SHME **Shamm** 93.96 329 P P 06 25 58.9 -0.5
SNR=7.3
SHME S **SKSac** 06 36 30.0 -2.9
LHMI **Lhok Sumawe** 93.99 285 P P 06 26 01.2 +1.5
LHMI **Lhok Sumawe** 93.99 285 IAmb IAmb 06 26 40.9
comp=Z,703nm,0.9s
LHMI IAMs_20 IAMs_20 07 08 09.7
comp=Z,326µm,22.0s
LHMI **Lhok Sumawe** 93.99 285 P P 06 26 00.3 +0.6
comp=Z,260µmcomp=Z,564nm,1.6s
LHMI **Lhok Sumawe** 93.99 285 P P 06 26 01.6 +1.9
BANOM **Banah** 94.03 329 P P 06 25 58.8 -1.0
BANOM S **SKSac** 06 36 32.8 -0.5
POO **Poona** 94.31 311 ⇑*i*P P 06 25 59.9 -1.3
POO *i* x x 06 29 42.9
KHKI **Kahang-Kahang** 94.40 262 P P 06 26 00.7 -0.7
comp=Z,175µmcomp=Z,14µmcomp=Z,483nm,2.6s
TPI **Tanjungpandan** 94.42 272 P P 06 26 01.3 -0.3
comp=Z,203µmcomp=Z,18µmcomp=Z,421nm,1.9s
HRFI **Mount Harif** 94.50 348 P P 06 26 02.1 +0.3
MASF **Masafi** 94.59 329 P P 06 26 01.9 -0.5
UMQ **Umm Al-Quwin** 94.59 329 P P 06 26 02.4 +0.1
UMQ **Umm Al-Quwin** 94.59 329 P P 06 26 02.0 -0.3
UMQ S **SKSac** 06 36 33.7 -2.6
MSFE **Esma-Masafi** 94.60 329 P P 06 26 01.2 -1.2
MDH **Madha** 94.62 329 P P 06 26 00.5 -2.0
BSI **Banda Aceh** 94.68 286 P P 06 26 03.7 +0.8
comp=Z,232µmcomp=Z,12µmcomp=Z,221nm,1.4s
QLP **Quilpie** 94.84 229 P P 06 26 05.4 +2.2
QLP **Quilpie** 94.84 229 P P 06 26 04.8 +1.6
EIL **Elat** 94.87 348 LR LR 07 13 13.3
comp=Z,184µm,21.5s,baz=22,slow=38
EIL **Elat** 94.87 348 P P 06 26 04.0 +0.4
PSI **Prapat** 94.88 282 P P 06 26 03.5 -0.4
PSI **Prapat** 94.88 282 P P 06 26 03.4 -0.4
comp=Z,242µmcomp=Z,21µmcomp=Z,728nm,1.3s
MDP **Montagnes des** 94.89 74 PKKPbc PKKPbc 06 42 56.7 -0.2
comp=Z,16nm,0.8s,baz=205,slow=2.4,SNR=5.9
MDP LR LR 07 09 37.4
comp=Z,177µm,21.0s,baz=331,slow=36
UOSS **Minazif** 94.98 329 *i* P P 06 26 02.5 -1.6
SNR=6.6
UOSS **Minazif** 94.98 329 P P 06 26 02.6 -1.5
UOSS P **PcP** 06 26 02.9 -1.6
UOSS S **SKSac** 06 36 36.2 -2.3
UOSS **Minazif** 94.98 329 IAmb IAmb 06 26 54.0
comp=Z,350nm,0.9s
UOSS **Minazif** 94.98 329 IAMs_20 IAMs_20 07 17 00.6
comp=Z,191µm,20.0s
UOSS **Minazif** 94.98 329 P P 06 26 02.2 -1.9
UOSS **Minazif** 94.98 329 P P 06 26 04.6 +0.5
NNA **Nana** 95.02 104 LR LR 07 06 33.4
comp=Z,87µm,18.7s,baz=326,slow=34
NNA **Nana** 95.02 104 P P 06 26 04.7 +0.4
NNA **Nana** 95.02 104 IAmb IAmb 06 26 45.3
comp=Z,691nm,1.5s
IGBI **Denpasar** 95.03 262 P P 06 26 04.7 +0.4
comp=Z,184µmcomp=Z,11µmcomp=Z,305nm,1.1s
NAZ **Nazwa, Dubai** 95.10 329 *i* P P 06 26 03.7 -1.0
SNR=14
NAZ **Nazwa, Dubai** 95.10 329 P P 06 26 03.5 -1.1
SNR=11
NAZ S **SKSac** 06 36 41.6 +2.5

HATD	**Hatta, Dubai**	**95.11**	**329**	*i* P		**P**	**06 26 03.3**	**-1.5**
	SNR=14							
HATD	**Hatta, Dubai**	**95.11**	**329**	P		**P**	**06 26 03.2**	**-1.5**
	SNR=14							
HATD				S		**SKSac**	**06 36 43.2**	**+4.1**
ARMA	**Armidale**	**95.20**	**221**	P		**P**	**06 26 07.8**	**+2.9**
ARMA	**Armidale**	**95.20**	**221**	IAmb		IAmb	06 26 45.1	
	comp=Z,913nm,1.6s							
ARMA	**Armidale**	**95.20**	**221**	P		**P**	**06 26 07.0**	**+2.1**
URZ	**Urewera**	**95.21**	**199**	LR		LR	07 02 58.0	
	comp=Z,557µm,20.3s,baz=20,slow=32							
KAD	**Karad**	**95.25**	**310**	*eP*		**P**	**06 26 04.4**	**-1.1**
KAD	**Karad**	**95.25**	**310**	*ex*		x	06 29 53.2	
ASHO	**Ashiyiah**	**95.27**	**329**	*i* P		**P**	**06 26 04.2**	**-1.3**
	SNR=11							
ASHO	**Ashiyiah**	**95.27**	**329**	P		**P**	**06 26 03.5**	**-1.9**
	SNR=15							
ASHO				S		**SKSac**	**06 36 38.7**	**-1.3**
JAGI	**Jajag, Banyuwa**	**95.31**	**263**	P		**P**	**06 26 05.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**95.31**	**263**	P		**P**	**06 26 05.0**	**-0.7**
	comp=Z,160µmcomp=Z,10µmcomp=Z,186nm,1.2s							
JAGI	**Jajag, Banyuwa**	**95.31**	**263**	P		**P**	**06 26 05.3**	**-0.4**
FAQ	**Al Faqa, Dubai**	**95.35**	**329**	*i* P		**P**	**06 26 05.0**	**-0.8**
	SNR=9.9							
FAQ	**Al Faqa, Dubai**	**95.35**	**329**	P		**P**	**06 26 03.8**	**-2.0**
	SNR=13							
FAQ				S		**SKSac**	**06 36 41.8**	**+1.5**
TPTI		**95.48**	**284**	P		**P**	**06 26 06.3**	**-0.2**
	comp=Z,230µmcomp=Z,14µmcomp=Z,146nm,1.1s							
ASUD	**Al Ashush, Dub**	**95.54**	**329**	*i* P		**P**	**06 26 05.9**	**-0.8**
	SNR=28							
ASUD	**Al Ashush, Dub**	**95.54**	**329**	P		**P**	**06 26 05.2**	**-1.5**
	SNR=23							
ASUD				S		**SKSac**	**06 36 37.7**	**-3.6**
SAKB	**Bahrain**	**95.57**	**334**	P		**P**	**06 26 06.0**	**-0.8**
SAKB				S		**SKSac**	**06 36 37.0**	**-4.5**
SOHO	**SOHO**	**95.64**	**328**	*i* P		**P**	**06 26 05.4**	**-1.7**
	SNR=11							
SOHO	**SOHO**	**95.64**	**328**	P		**P**	**06 26 05.4**	**-1.7**
AJN	**Ajban**	**95.70**	**330**	*i* P		**P**	**06 26 06.3**	**-1.0**
	SNR=11							
AJN	**Ajban**	**95.70**	**330**	P		**P**	**06 26 05.3**	**-2.1**
	SNR=10.0							
AJN				S		**SKSac**	**06 36 42.0**	**-0.2**
BKNI	**Bangkinang**	**95.70**	**279**	P		**P**	**06 26 08.6**	**+1.1**
BKNI	**Bangkinang**	**95.70**	**279**	P		**P**	**06 26 07.4**	**-0.1**
BKNI	**Bangkinang**	**95.70**	**279**	IAMs_20		IAMs_20	07 10 49.7	
	comp=Z,225µm,21.0s							
BKNI	**Bangkinang**	**95.70**	**279**	P		**P**	**06 26 07.2**	**-0.3**
	comp=Z,202µmcomp=Z,18µmcomp=Z,497nm,1.4s							
BKNI	**Bangkinang**	**95.70**	**279**	P		**P**	**06 26 10.4**	**+2.9**
BIDO	**Bidbid**	**95.72**	**327**	P		**P**	**06 26 05.9**	**-1.6**
	SNR=17							
AULRC	**Lightning Ridg**	**95.76**	**225**	P		**P**	**06 26 09.9**	**+2.6**
JMBI	**JAMBI**	**95.81**	**275**	P		**P**	**06 26 06.7**	**-1.3**
	comp=Z,207µmcomp=Z,21µmcomp=Z,591nm,1.1s							
WSAR	**Wadi Sarin**	**95.82**	**326**	P		**P**	**06 26 07.0**	**-1.0**
	SNR=28							
WSAR				S		**SKSac**	**06 36 41.1**	**-1.9**
HIZ	**Hauiti**	**95.90**	**201**	IAMs_20		IAMs_20	07 02 01.3	
	comp=Z,372µm,22.0s							
HOQ	**Hoqain**	**95.92**	**327**	P		**P**	**06 26 06.9**	**-1.6**
	SNR=19							
JRN	**Qarnain Island**	**95.94**	**332**	P		**P**	**06 26 07.7**	**-0.8**
	SNR=9.7							
ALNE	**Al Ain**	**95.95**	**329**	*i* P		**P**	**06 26 08.0**	**-0.6**
	SNR=18							
ALNE	**Al Ain**	**95.95**	**329**	P		**P**	**06 26 08.3**	**-0.2**
	SNR=25							
AUPHS	**Peel High Scho**	**96.09**	**222**	P		**P**	**06 26 11.8**	**+3.0**
SNJI	**Sawahan-Nganju**	**96.13**	**265**	P		**P**	**06 26 10.1**	**+0.5**
SMDO	**Samad**	**96.18**	**326**	P		**P**	**06 26 09.0**	**-0.7**
	SNR=25							
SMDO				S		**SKSac**	**06 36 45.0**	**0.0**
BKZ	**Black Stump Fm**	**96.20**	**199**	P		P	06 26 13.9	+4.8
PMBI	**Palembang**	**96.22**	**274**	P		**P**	**06 26 07.6**	**-2.2**
SMRI	**Semarang**	**96.29**	**267**	P		**P**	**06 26 11.9**	**+1.7**
SMRI	**Semarang**	**96.29**	**267**	P		**P**	**06 26 12.7**	**+2.5**
	comp=Z,164µmcomp=Z,25µmcomp=Z,722nm,2.2s							
SMRI	**Semarang**	**96.29**	**267**	P		**P**	**06 26 11.9**	**+1.7**
WBK	**Wadi Bani Khal**	**96.30**	**326**	P		**P**	**06 26 09.4**	**-0.8**
	SNR=21							
ARQ	**Araqi**	**96.39**	**328**	P		**P**	**06 26 10.2**	**-0.4**
	SNR=52							
JLN	**Jalan Bani Buh**	**96.58**	**325**	P		**P**	**06 26 10.2**	**-1.2**
	SNR=21							
JLN				S		**SKSac**	**06 36 45.7**	**-1.2**
PPI	**Padang Panjang**	**96.71**	**279**	P		**P**	**06 26 12.3**	**+0.2**
	comp=Z,205µmcomp=Z,10µmcomp=Z,122nm,0.9s							
BSY	**Bisya**	**96.74**	**327**	P		**P**	**06 26 11.4**	**-0.8**
	SNR=43							
BSY				S		**SKSac**	**06 36 48.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**96.77**	**248**	LR		LR	07 10 52.9	
	comp=Z,101µm,19.5s,baz=36,slow=36							
FITZ	**Fitzroy Crossi**	**96.77**	**248**	P		**P**	**06 26 14.0**	**+1.9**
MZWR	**Madinat Zayed**	**96.77**	**330**	P		**P**	**06 26 11.0**	**-1.3**
MZWR				S		**SKSac**	**06 36 48.7**	**+0.9**
JMDO	**Jabal Madar**	**96.80**	**326**	P		**P**	**06 26 11.9**	**-0.6**
	SNR=25							
GHWR	**Ruwais**	**96.86**	**331**	P		**P**	**06 26 10.9**	**-1.7**
GHWR				S		**SKSac**	**06 36 48.0**	**-0.2**
GSI	**Gunungsitoli**	**96.86**	**282**	P		**P**	**06 26 13.7**	**+0.9**
GSI	**Gunungsitoli**	**96.86**	**282**	IAMs_20		IAMs_20	07 17 58.2	
	comp=Z,280µm,19.0s							
GSI	**Gunungsitoli**	**96.86**	**282**	P		**P**	**06 26 14.2**	**+1.4**
GSI	**Gunungsitoli**	**96.86**	**282**	P		**P**	**06 26 13.2**	**+0.4**
UGM	**Wanagama**	**96.94**	**266**	P		**P**	**06 26 15.0**	**+1.9**
UGM	**Wanagama**	**96.94**	**266**	P		**P**	**06 26 13.4**	**+0.3**
	comp=Z,161µmcomp=Z,605nm,1.7s							
YOGI	**Yogyakarta**	**97.00**	**266**	P		**P**	**06 26 13.5**	**+0.2**
	comp=Z,167µmcomp=Z,19µmcomp=Z,586nm,2.4s							
GOA	**Goa**	**97.01**	**310**	*eP*		**P**	**06 26 11.2**	**-2.2**
GOA				*i* PP		**PP**	**06 30 07.9**	**-0.6**
GOA	**Goa**	**97.01**	**310**	*ex*		x	06 30 15.0	
SLWR	**Sila**	**97.09**	**332**	P		**P**	**06 26 11.1**	**-2.6**
SLWR				S		**SKSac**	**06 36 48.8**	**-0.7**
MACA	**Manacapuru-AM**	**97.10**	**85**	P		**P**	**06 26 11.5**	**-2.4**
MACA				S		S	06 37 26.1	-10
MACA	**Manacapuru-AM**	**97.10**	**85**	*eP*		**P**	**06 26 13.4**	**-0.5**
MACA				*epP*		**sP**	**06 26 22.9**	**-1.0**
AS01	**Alice Springs**	**97.12**	**239**	P		P	**06 26 13.6**	**-0.1**
ASAR	**Alice Springs**	**97.15**	**239**	P		P	**06 26 13.2**	**-0.6**
	comp=Z,18nm,0.9s,baz=34,slow=4.8,SNR=50							
ASAR				PKKPbc		**PKKPbc**	**06 42 51.7**	**+0.1**
	comp=Z,12nm,1.1s,baz=201,slow=3.8,SNR=4.5							
ASAR				LR		LR	07 08 06.2	
	comp=Z,323µm,19.5s,baz=30,slow=34							
	comp=Z,18nm,0.9s							
UMZA	**Um Al Zommool**	**97.39**	**329**	P		**P**	**06 26 13.7**	**-1.4**
UMZA				S		**SKSac**	**06 36 53.1**	**+2.0**
MZR	**Muzera**	**97.61**	**330**	*i* P		**P**	**06 26 14.9**	**-1.2**
	SNR=56							
MZR	**Muzera**	**97.61**	**330**	P		Pdif	06 26 16.7	+0.5
	SNR=27							
KLSI		**97.67**	**273**	P		Pdif	06 26 16.5	0.0
LEM	**Lembang**	**97.74**	**269**	LR		LR	07 09 31.2	
	comp=Z,55µm,21.1s,baz=29,slow=35							
LEM	**Lembang**	**97.74**	**269**	P		**P**	**06 26 14.4**	**-2.5**
	comp=Z,130µmcomp=Z,10µmcomp=Z,91nm,1.0s							
AUDCS	**Dubbo College**	**97.97**	**223**	P		Pdif	06 26 20.3	+3.0
KSI	**Kapahiang**	**98.06**	**275**	P		**P**	**06 26 18.1**	**-0.1**
	comp=Z,179µmcomp=Z,14µmcomp=Z,263nm,1.7s							
MHTO	**MHTO**	**98.14**	**326**	P		**P**	**06 26 18.0**	**-0.5**
	SNR=18							
BBJI	**Bungbulang**	**98.23**	**269**	P		Pdif	06 26 21.1	+2.1
BBJI	**Bungbulang**	**98.23**	**269**	P		**P**	**06 26 17.1**	**-1.9**
CMSA	**Cobar Meteorol**	**98.55**	**226**	P		Pdif	06 26 22.5	+2.6
CMSA	**Cobar Meteorol**	**98.55**	**226**	P		Pdif	06 26 22.5	+2.7
PPSI	**Pulau Pagai**	**98.81**	**278**	P		**P**	**06 26 19.8**	**-1.7**
	comp=Z,675nm,1.5s							
RAYN	**Ar Rayn**	**99.11**	**338**	*i* P		**Pdif**	**06 26 22.6**	**-0.3**
	SNR=97							
RAYN	**Ar Rayn**	**99.11**	**338**	P		**Pdif**	**06 26 23.6**	**+0.7**
RAYN	**Ar Rayn**	**99.11**	**338**	P		**Pdif**	**06 26 22.9**	**0.0**
RAYN	**Ar Rayn**	**99.11**	**338**	IAmb		IAmb	06 27 17.7	
	comp=Z,546nm,0.9s							
RAYN	**Ar Rayn**	**99.11**	**338**	P		**Pdif**	**06 26 23.5**	**+0.7**
DQM	**DQM**	**99.26**	**326**	P		**Pdif**	**06 26 23.8**	**+0.3**
EGSI	**Enggano, Bengk**	**99.62**	**274**	P		**Pdif**	**06 26 23.4**	**-1.7**
	comp=Z,149µmcomp=Z,12µmcomp=Z,197nm,1.3s							
KOD	**Kodaikanal**	**99.94**	**304**	*eP*		**Pdif**	**06 26 26.8**	**-0.1**
KOD				*i* x		x	06 30 31.4	
KOD	**Kodaikanal**	**99.94**	**304**	*ex*		x	06 30 36.1	
MALK	**Mahakanadarawa**	**100.03**	**300**	P		**Pdif**	**06 26 27.0**	**+0.1**
STKA	**Stephens Creek**	**100.56**	**228**	P		**Pdif**	**06 26 29.7**	**+0.9**
	comp=Z,6.8nm,0.7s,baz=24,slow=4.8,SNR=12							
STKA				PKKPbc		**PKKPbc**	**06 42 41.7**	**-0.5**
	comp=Z,13nm,1.0s,baz=13,slow=1.6,SNR=2.9							
STKA	**Stephens Creek**	**100.56**	**228**	P		**Pdif**	**06 26 32.0**	**+3.2**
SACV	**Santiago Islan**	**100.58**	**44**	IAMs_20		IAMs_20	07 12 14.9	
	comp=Z,193µm,20.0s							
PALK	**Pallekele**	**100.91**	**300**	P		**Pdif**	**06 26 30.9**	**-0.1**
PALK	**Pallekele**	**100.91**	**300**	P		**Pdif**	**06 26 31.4**	**+0.5**
PALK	**Pallekele**	**100.91**	**300**	IAMs_20		IAMs_20	07 20 43.8	
	comp=Z,119µm,21.0s							
PALK	**Pallekele**	**100.91**	**300**	P		**Pdif**	**06 26 31.7**	**+0.7**
PALK	**Pallekele**	**100.91**	**300**	P		**Pdif**	**06 26 28.3**	**-2.7**
ITTB	**Itaituba**	**100.92**	**82**	P		**Pdif**	**06 26 29.9**	**-1.0**
ITTB	**Itaituba**	**100.92**	**82**	*eP*		**Pdif**	**06 26 29.6**	**-1.3**
TAM	**Tamanrasset**	**101.33**	**15**	IAMs_20		IAMs_20	07 12 33.9	
	comp=Z,239µm,22.0s							
SHAO	**Shalim**	**101.66**	**327**	P		**Pdif**	**06 26 34.5**	**+0.3**
AUSMG	**Snowy Mountain**	**101.68**	**221**	P		**Pdif**	**06 26 37.6**	**+3.8**
ATM1	**UHE Belo Monte**	**102.03**	**78**	P		**Pdif**	**06 26 35.2**	**-0.6**
DMTO	**DMTO**	**102.16**	**327**	P		**Pdif**	**06 26 35.4**	**-1.0**
BMO1	**UHE Belo Monte**	**102.18**	**78**	P		**Pdif**	**06 26 35.5**	**-1.0**
WHFO	**Wadi Hawf**	**102.33**	**329**	P		**Pdif**	**06 26 35.8**	**-1.5**
MBWA	**Marble Bar**	**102.46**	**251**	P		**Pdif**	**06 26 38.3**	**+0.8**
MBWA	**Marble Bar**	**102.46**	**251**	P		**Pdif**	**06 26 35.3**	**-2.2**
MBWA	**Marble Bar**	**102.46**	**251**	P		**Pdif**	**06 26 35.8**	**-1.7**
RBK	**Rabkut**	**102.59**	**328**	P		**Pdif**	**06 26 37.4**	**-1.0**
AUJCS	**Jamestown Cent**	**103.00**	**230**	P		**Pdif**	**06 26 43.0**	**+3.4**
ODZ	**Otahua Downs**	**103.04**	**202**	P		**Pdif**	**06 26 44.1**	**+4.6**
HTT	**Hallett**	**103.06**	**230**	P		**Pdif**	**06 26 42.7**	**+2.8**
LPAZ	**La Paz**	**103.42**	**99**	Pdiff		**Pdif**	**06 26 44.2**	**+1.5**
	comp=Z,6.5nm,1.2s,baz=354,slow=6.8,SNR=7.8							
LPAZ				PKKP		**PKKPdf**	**06 42 39.1**	**-3.4**
	comp=Z,11nm,0.9s,baz=26,slow=2.1,SNR=3.6							
LPAZ	**La Paz**	**103.42**	**99**	P		**Pdif**	**06 26 41.6**	**-1.0**
LPAZ	**La Paz**	**103.42**	**99**	*eP*		**Pdif**	**06 26 41.2**	**-1.4**
BBOO	**Buckleboo**	**103.81**	**232**	P		**Pdif**	**06 26 45.2**	**+1.9**
VILB	**Vilhena**	**105.29**	**91**	P		**Pdif**	**06 26 30.8**	**-0.6**
VILB	**Vilhena**	**105.29**	**91**	*eP*		**Pdif**	**06 26 49.7**	**-0.6**
VILB				*epP*		**sPdif**	**06 26 59.6**	**-0.7**
PRPB	**Parauapebas**	**105.75**	**78**	P		**Pdif**	**06 26 49.5**	**-2.9**
PRPB	**Parauapebas**	**105.75**	**78**	*eP*		**Pdif**	**06 26 51.3**	**-1.1**
PB08	**IPOC Station P**	**105.91**	**102**	P		**Pdif**	**06 26 55.4**	**+2.1**
CLDB	**Colider**	**106.15**	**86**	P		**Pdif**	**06 26 51.6**	**-2.5**
CLDB	**Colider**	**106.15**	**86**	*eP*		**Pdif**	**06 26 53.7**	**-0.5**
SIV	**San Ignacio**	**107.22**	**93**	PKKPbc		PKKPbc	06 42 21.0	-0.7
	comp=Z,5.6nm,0.8s,baz=117,slow=5.7,SNR=9.3							
PTLB	**Pontes e Lacer**	**107.90**	**91**	*eP*		**Pdif**	**06 27 01.9**	**+0.1**
BBSD	**Serra de San D**	**108.44**	**94**	*eP*		**Pdif**	**06 27 03.3**	**-0.9**
NBMO	**Morrinhos-CE**	**108.75**	**68**	*eP*		**Pdif**	**06 27 04.8**	**-1.0**
NBPS	**Pedro II - PI**	**108.91**	**70**	*eP*		**Pdif**	**06 27 05.3**	**-1.2**
SMTB	**Santa Maria do**	**109.20**	**78**	*eP*		**Pdif**	**06 27 07.0**	**-0.7**
SNDB	**Serra Nova Dou**	**109.62**	**83**	*eP*		**Pdif**	**06 27 08.9**	**-0.6**
SNDB				*epP*		**pPdif**	**06 27 18.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**110.09**	**21**	Pdiff		**Pdif**	**06 27 13.8**	**+2.0**
	comp=Z,2.2nm,0.9s,baz=324,slow=6.0,SNR=8.4							
TORD				PKKPbc		**PKKPbc**	**06 42 12.0**	**-0.6**
	comp=Z,10nm,0.9s,baz=147,slow=2.9,SNR=5.4							
SALV	**Santo Antonio**	**110.24**	**89**	*eP*		**Pdif**	**06 27 12.4**	**+0.2**
H03N2	**Juan Fernandez**	**111.20**	**118**	T		T	08 32 50.1	
	baz=185,slow=74							
GO03	**Copiapo**	**111.20**	**108**	IAMs_20		IAMs_20	07 08 57.9	
	comp=Z,174µm,20.0s							
H03N1	**Juan Fernandez**	**111.21**	**118**	T		T	08 32 14.0	
H03N3	**Juan Fernandez**	**111.22**	**118**	T		T	08 32 47.0	
	baz=322,slow=74							
AC04	**Llanos de Chal**	**111.22**	**109**	IAMs_20		IAMs_20	07 08 30.4	
	comp=Z,189µm,21.0s							
NTVB	**Natividade**	**111.47**	**80**	P		**Pdif**	**06 27 16.0**	**-1.8**
H03S3	**Juan Fernandez**	**111.52**	**118**	T		T	08 32 40.7	
	SNR=102							
H03S2	**Juan Fernandez**	**111.52**	**118**	T		T	08 32 43.5	
	SNR=166							
H03S1	**Juan Fernandez**	**111.53**	**118**	T		T	08 32 44.9	
	SNR=188							
LCO	**Las Campanas**	**112.06**	**109**	IAMs_20		IAMs_20	07 09 29.6	
	comp=Z,265µm,22.0s							
PP1B	**Ponte de Pedra**	**112.06**	**89**	*eP*		**Pdif**	**06 27 20.1**	**-0.3**
AC05	**El Transito**	**112.15**	**109**	IAMs_20		IAMs_20	07 08 59.1	
	comp=Z,213µm,21.0s							
COIM	**Forte Coimbra**	**112.21**	**93**	*eP*		**Pdif**	**06 27 20.7**	**-0.2**
NBMA	**Muriti-CE**	**112.83**	**69**	P		**Pdif**	**06 27 23.6**	**-0.3**
GO04	**Tololo Observa**	**112.91**	**110**	IAMs_20		IAMs_20	07 08 18.2	
	comp=Z,216µm,21.0s							
RCBR	**Riachuelo**	**113.06**	**66**	IAMs_20		IAMs_20	07 18 11.8	
	comp=Z,260µm,21.0s							
RCBR	**Riachuelo**	**113.06**	**66**	P		**Pdif**	**06 27 26.0**	**+1.1**
CO01	**Juntas del Tor**	**113.14**	**109**	IAMs_20		IAMs_20	07 08 29.2	
	comp=Z,243µm,21.0s							
SDBA	**SAO DESIDERIO**	**113.60**	**78**	P		**Pdif**	**06 27 27.1**	**-0.2**
AQDB	**Aquidauana**	**113.86**	**92**	P		**Pdif**	**06 27 29.3**	**+1.1**
NBPV	**Pedro Velho**	**113.88**	**65**	P		**Pdif**	**06 27 29.6**	**+1.0**
C2SB	**Chapadao do Su**	**114.16**	**88**	P		**Pdif**	**06 27 28.7**	**-0.9**
CO04	**Los Peladeros**	**114.27**	**111**	IAMs_20		IAMs_20	07 09 01.2	
	comp=Z,278µm,21.0s							
BDFB	**Brasilia**	**114.44**	**82**	PKKPbc		PKKPbc	06 41 58.7	+0.4
	comp=Z,5.5nm,0.6s,baz=181,slow=2.4,SNR=4.2							
FURI	**Furi**	**114.71**	**341**	IAMs_20		IAMs_20	07 27 08.0	
	comp=Z,212µm,20.0s							
DBIC	**Dimbokro**	**114.75**	**29**	PKP		PKPdf	06 31 23.4	+1.2
	comp=Z,27nm,1.0s,baz=333,slow=3.1,SNR=4.4							
DBIC				PKKPbc		**PKKPbc**	**06 41 57.4**	**+0.2**
	comp=Z,9.7nm,0.6s,baz=182,slow=3.6,SNR=8.8							
DBIC	**Dimbokro**	**114.75**	**29**	P		**Pdif**	**06 27 32.2**	**-0.3**
NBPN	**Ponto Novo - B**	**114.94**	**72**	P		**Pdif**	**06 27 32.1**	**-1.1**
VA05	**Santo Domingo**	**115.17**	**113**	IAMs_20		IAMs_20	07 09 01.2	
	comp=Z,244µm,20.0s							
PEL	**Peldehue**	**115.27**	**112**	IAMs_20		IAMs_20	07 11 40.9	
	comp=Z,252µm,20.0s							
CFA	**Coronel Fontan**	**115.41**	**109**	PKKPab		PKKPab	06 41 58.5	-1.9
	comp=Z,17nm,1.1s,baz=325,slow=7.7,SNR=26							
MT01	**Popeta**	**115.52**	**113**	IAMs_20		IAMs_20	07 09 12.5	
	comp=Z,236µm,22.0s							
BO04	**La Punta**	**115.96**	**113**	IAMs_20		IAMs_20	07 10 16.0	
	comp=Z,263µm,22.0s							
GO05	**Hualane**	**116.04**	**114**	IAMs_20		IAMs_20	07 11 33.3	
	comp=Z,190µm,20.0s							
BO02	**Sierra Bellavi**	**116.48**	**113**	IAMs_20		IAMs_20	07 12 26.9	
	comp=Z,174µm,20.0s							
BI05	**Punta Hualpn**	**116.72**	**116**	IAMs_20		IAMs_20	07 14 02.2	
	comp=Z,190µm,20.0s							
ML02	**Panimavida**	**116.89**	**114**	IAMs_20		IAMs_20	07 11 57.6	
	comp=Z,182µm,22.0s							
CPUP	**Villa Florida**	**117.47**	**97**	PKP		**PKPdf**	**06 31 25.6**	**-1.4**
	comp=Z,7.6nm,0.8s,baz=299,slow=4.6,SNR=8.2							
CPUP				PKKPab		**PKKPab**	**06 41 52.0**	**-0.1**
	comp=Z,32nm,1.1s,baz=142,slow=3.8,SNR=8.8							
BI02	**San Fabin de**	**117.65**	**115**	IAMs_20		IAMs_20	07 13 11.8	
	comp=Z,201µm,19.0s							
LR04	**Corral**	**118.97**	**119**	IAMs_20		IAMs_20	07 12 14.0	
	comp=Z,197µm,20.0s							
CMC01	**Camacan, BA**	**119.01**	**75**	*eP*		**PKiKP**	**06 31 30.3**	**+0.1**
DIAM	**Diamantina, MG**	**119.04**	**80**	*eP*		**PKPdf**	**06 31 27.9**	**-2.5**
CANS	**Sao Roque de M**	**119.07**	**84**	*eP*		**PKPdf**	**06 31 29.3**	**-1.1**
PTGB	**Pitanga**	**119.25**	**92**	*eP*		**PKPdf**	**06 31 31.3**	**-0.3**
FRTB	**Fartura**	**119.63**	**89**	*eP*		**PKiKP**	**06 31 31.8**	**+0.5**
GO06	**Curarrehue**	**119.75**	**117**	IAMs_20		IAMs_20	07 12 20.3	
	comp=Z,160µm,20.0s							
GUA01	**Guaratinga, BA**	**119.84**	**76**	*eP*		**PKiKP**	**06 31 32.0**	**+0.2**
LR05	**Currie**	**119.96**	**118**	IAMs_20		IAMs_20	07 13 26.0	
	comp=Z,143µm,20.0s							
RCLB	**Rio Claro- Sao**	**120.08**	**86**	*eP*		**PKiKP**	**06 31 33.1**	**+0.9**
LL05	**Los Muermos**	**120.10**	**120**	IAMs_20		IAMs_20	07 14 03.6	
	comp=Z,176µm,20.0s							
BSCB	**Bom Sucesso**	**120.55**	**83**	PKP		**PKPdf**	**06 31 31.3**	**-1.9**
BSCB	**Bom Sucesso**	**120.55**	**83**	*eP*		**PKiKP**	**06 31 33.3**	**+0.1**
EDA	**Edea**	**120.68**	**13**	IAMs_20		IAMs_20	07 25 46.8	
	comp=Z,261µm,22.0s							
SJMB	**Sao Joao De Ma**	**120.77**	**78**	PKP		**PKPdf**	**06 31 32.9**	**-0.6**
SJMB	**Sao Joao De Ma**	**120.77**	**78**	*eP*		**PKPdf**	**06 31 33.2**	**-0.3**
PSAL	**Palomas, Salto**	**120.92**	**101**	*eP*		**PKiKP**	**06 31 33.6**	**+0.1**
SPB	**Sao Paulo**	**121.05**	**87**	IAMs_20		IAMs_20	07 25 54.5	
	comp=Z,229µm,22.0s							
SPB	**Sao Paulo**	**121.05**	**87**	*eP*		**PKPdf**	**06 31 33.5**	**-0.4**
BSFB	**Barra de Sao F**	**121.06**	**78**	PKP		**PKPdf**	**06 31 29.5**	**-4.6**
BSFB	**Barra de Sao F**	**121.06**	**78**	*eP*		**PKPdf**	**06 31 33.2**	**-0.9**
ITAB	**Concordia**	**121.14**	**94**	*eP*		**PKiKP**	**06 31 35.1**	**+1.0**
LL07	**Hotel Espejo d**	**121.16**	**121**	IAMs_20		IAMs_20	07 14 35.7	
	comp=Z,163µm,21.0s							
ABR01	**Abrolhos, BA**	**121.58**	**76**	*eP*		**PKPdf**	**06 31 34.5**	**-0.5**
PET01	**Itanhaem-SP**	**121.68**	**88**	PKP		**PKiKP**	**06 31 35.5**	**+0.2**
PET01	**Itanhaem-SP**	**121.68**	**88**	*eP*		**PKPdf**	**06 31 34.5**	**-0.6**
RIB01	**Linhares ES**	**121.71**	**78**	PKP		**PKPdf**	**06 31 33.2**	**-2.1**
RIB01	**Linhares ES**	**121.71**	**78**	*eP*		**PKPdf**	**06 31 34.4**	**-0.9**
LL02	**Futaleuf**	**122.23**	**120**	IAMs_20		IAMs_20	07 15 21.0	
	comp=Z,191µm,22.0s							
ALF01	**Guarapari-ES**	**122.56**	**79**	PKP		**PKPdf**	**06 31 34.6**	**-2.2**
ALF01	**Guarapari-ES**	**122.56**	**79**	*eP*		**PKiKP**	**06 31 36.9**	**-0.1**
DUB01	**Friburgo-RJ**	**122.77**	**82**	PKP		**PKPdf**	**06 31 36.9**	**-0.5**
DUB01	**Friburgo-RJ**	**122.77**	**82**	*eP*		**PKiKP**	**06 31 37.6**	**+0.1**
CPSB	**Cacapava Do Su**	**122.78**	**97**	PKP		**PKPdf**	**06 31 36.6**	**-0.5**
CPSB	**Cacapava Do Su**	**122.78**	**97**	*eP*		**PKPdf**	**06 31 36.9**	**-0.1**
CAM01	**Campos-RJ**	**122.98**	**81**	PKP		**PKPdf**	**06 31 34.5**	**-3.1**
CAM01	**Campos-RJ**	**122.98**	**81**	*eP*		**PKPdf**	**06 31 37.5**	**-0.1**
ANCO	**Parque Anchore**	**123.09**	**104**	*eP*		**PKPdf**	**06 31 36.9**	**-0.5**
TRQA	**Tornquist**	**123.64**	**110**	PKP		**PKPdf**	**06 31 34.8**	**-3.7**
TRQA	**Tornquist**	**123.64**	**110**	*eP*		**PKiKP**	**06 31 39.0**	**+0.3**
AY03	**Cochrane**	**124.81**	**124**	IAMs_20		IAMs_20	07 14 32.3	
	comp=Z,221µm,20.0s							
MBAR	**Mbarara**	**125.24**	**349**	IAMs_20		IAMs_20	07 36 59.7	
	comp=Z,202µm,20.0s							
MBAR	**Mbarara**	**125.24**	**349**	P		**PKiKP**	**06 31 43.6**	**+0.7**
MBAR				PP		**PP**	**06 33 29.4**	**-2.1**
KIBK	**Kibwezi**	**125.78**	**339**	PKP		**PKiKP**	**06 31 43.8**	**-0.1**
**MG05

PVV	Pavlof Volcano	1.65	287		Pn		06 16 46.0	-0.4
PS4A	Pavlof South-4	1.68	286		Pn		06 16 46.7	-0.1
BPBCA	Veniaminof	1.71	11		Pn		06 16 42.8	-4.4
PN7A	Pavlof North-7	1.78	288		Pn		06 16 48.2	0.0
DTNA	Dutton South F	1.87	278		Pn		06 16 49.1	-0.3
CHIR	Chirikof Islan	2.15	64	Pn	Pn		06 16 52.3	-0.9
CHIR				IAML			06 17 38.4	
	comp=E,127μm,1.2s							
CHIR				IAML			06 17 50.0	
	comp=N,104μm,1.1s							
SII	Sitkinak Islan	3.20	57	Pn	Pn		06 17 07.2	-0.5
ACHA	Angle Creek He	3.89	30	Pn	Pn		06 17 17.2	0.0
OHAK	Old Harbor	3.96	52	Pn	Pn		06 17 18.8	+0.7
OHAK				IAML			06 18 37.1	
	comp=N,16μm,1.1s							
AKUT	Akutan	4.01	261	Pn	Pn		06 17 19.3	+0.5
AKUT				IAML			06 18 35.6	
	comp=N,14μm,1.0s							
O15K	Ungalikthiuk R	4.29	355	Pn	Pn		06 17 22.4	-0.3
O15K				IAML			06 17 57.4	
	comp=N,10μm,0.9s							
O15K				IAML			06 18 21.7	
	comp=E,10μm,1.2s							
UNV	Unalaska Valle	4.50	259	Pn	Pn		06 17 25.9	+0.4
UNV				IAML			06 18 33.5	
	comp=E,6μm,0.8s							
O14K	Tigyukauivet M	4.51	345	Pn	Pn		06 17 26.1	+0.4
O14K				IAML			06 18 01.9	
	comp=E,13μm,1.1s							
O14K				IAML			06 19 06.0	
	comp=N,15μm,1.1s							
N15K	Kwethluk River	5.30	354	Pn	Pn		06 17 36.2	-0.3
M16K	Timber Creek	6.12	0	Pn	Pn		06 17 46.3	-1.5
N19K	Bonanza Creek	6.39	20	Pn	Pn		06 17 51.5	-0.1
SPIA	Saint Paul Isl	6.68	294	Pn	Pn		06 17 55.8	+0.4
B22K	Teshekpuk Lake	15.68	7		Pn		06 19 60.0	+1.9
B22K				IAmb	IAmb		06 20 07.3	
	comp=Z,1μm,1.0s							
SHEM	Shemya Is, Ala	15.98	273	Pn	Pn		06 20 03.6	+1.6
C27K	Jago River	16.30	19	Pn	Pn		06 20 06.5	+0.4
RUBB	Prince Rupert	16.63	80		Pn		06 20 12.6	+2.3
G31M	Satah River	16.85	35		Pn		06 20 14.9	+1.9
BILL	Bilibino	20.76	323	P	P		06 20 58.5	+0.5
BILL				IAmb	IAmb		06 21 07.0	
	comp=Z,762nm,1.1s							
C36M	Paulatuk	21.37	34	P	P		06 21 04.7	+0.2
I02E	Swisshome, OR	25.01	101	P	P		06 21 40.9	-0.2
I02E				IAmb	IAmb		06 21 48.7	
	comp=Z,386nm,1.2s							
PEA0B	Petropavlovsk-	25.20	284	P	P		06 21 42.0	-0.8
PETK	Petropavlovsk-	25.20	284	P	P		06 21 42.0	-0.8
BUCK	Buck Mountain	25.44	100	P	P		06 21 45.1	-0.1
BUCK				IAmb	IAmb		06 21 50.3	
	comp=Z,432nm,1.1s							
HOOD	Mount Hood Mea	25.53	96	P	P		06 21 44.5	-1.6
MJAR	Matsushiro Arr	45.83	273	P	P		06 24 39.6	+0.3
MJB9	Matsu-Tunnel	45.83	273	P	P		06 24 39.4	+0.1
MJB9				IAmb	IAmb		06 24 56.3	
	comp=Z,271nm,1.1s							
MAJO	Matsushiro	45.83	273	P	P		06 24 38.8	-0.5
MAJO				IAmb	IAmb		06 24 55.3	
	comp=Z,274nm,1.1s							
KBS	Kingsbay	46.30	2	P	P		06 24 43.8	+1.3
SUMG	Summit	46.36	21	P	P		06 24 44.9	+1.3
TXAR	Lajitas Array	46.80	100	P	P		06 24 47.2	+0.1
JGF	Kuroka	46.98	273	P	P		06 24 47.6	-0.8
JGF				IAmb	IAmb		06 24 57.4	
	comp=Z,151nm,0.9s							
NRIK	Noril'sk	47.01	334	P	P		06 24 48.1	0.0
CN2	Changchun	48.11	290	P	P		06 24 51.5	-5.5
CN2				pmax	pmax			
	comp=Z,210nm,0.9s							
M52A	Chesterland	50.81	71	P	P		06 25 18.0	+0.3
M52A				IAmb	IAmb		06 25 32.1	
	comp=Z,283nm,1.0s							
KS19	Wonju Array Si	51.07	282	P	P		06 25 18.1	-1.5
KS19				IAmb	IAmb		06 25 33.0	
	comp=Z,233nm,1.1s							
ANGG	Ammassalik, Gr	51.83	27	P	P		06 25 24.5	-0.4
ANGG				IAmb	IAmb		06 25 27.4	
	comp=Z,296nm,1.1s							
M57A	Sunshine Farm,	53.24	69	P	P		06 25 35.4	-0.4
M57A				IAmb	IAmb		06 25 39.5	
	comp=Z,246nm,1.1s							
DL2	Dalian	53.56	288	eP	P		06 25 28.9	-9.2
DL2				pmax	pmax			
	comp=Z,270nm,1.0s							
SONM	Songino Array	55.09	305	P	P		06 25 47.9	-1.4
SONM				IAmb	IAmb		06 26 01.0	
	comp=Z,215nm,1.2s							
G65A	Princeton	55.46	59	P	P		06 25 51.9	0.0
G65A				IAmb	IAmb		06 26 00.2	
	comp=Z,182nm,1.0s							
KEV	Kevo	55.56	357	P	P		06 25 52.1	0.0
KEV				IAmb	IAmb		06 26 10.9	
	comp=Z,248nm,1.0s							
BCX	Boston College	55.68	64	P	P		06 25 53.3	-0.1
BJI2	Beijing	55.73	292	P	P		06 25 53.8	0.0
BJI2				pmax	pmax			
	comp=Z,130nm,1.6s							
ARCES	ARCESS Array B	55.81	358	P	P		06 25 54.3	+0.3
ARCES				IAmb	IAmb		06 25 54.7	
	comp=Z,160nm,1.1s							
LVZ	Lovozero	57.08	354	P	P		06 26 03.1	0.0
HHC	Hu-ho-hao-te	57.55	296	eP	P		06 26 06.8	-0.2
HNS	HongShan	58.41	291	⇑P	P		06 26 15.6	+2.7
HNS				pmax	pmax			
	comp=Z,570nm,1.3s							
BTO2	Baotou	58.50	297	eP	P		06 26 12.0	-1.6
BTO2				S	S		06 34 16.4	-0.6
BTO2				pmax	pmax			
	comp=Z,310nm,1.5s							
NJ2	Nanjing	60.10	284	eP	P		06 26 24.1	-0.5
NJ2				pmax	pmax			
	comp=Z,460nm,0.7s							
FINES	FINESS Array B	63.91	357	P	P		06 26 49.9	+0.2
LZH	Lanzhou	65.11	298	eP	P		06 26 58.8	+0.5
LZH				pP	pP		06 27 04.6	+3.1
LZH				sP	sP		06 27 09.6	+6.9
LZH				pmax	pmax			
	comp=Z,600nm,1.3s							
WMQ	Urumqi	66.53	314	eP	P		06 27 04.5	-2.7
WMQ				pmax	pmax			
	comp=Z,300nm,1.7s							
EKB	Eskdalemuir	68.34	15	P	P		06 27 18.9	+0.5
MTDJ	Mount Denham	70.43	86	P	P		06 27 31.8	-0.1
RGN	Rugen	70.72	5	eP	P		06 27 34.0	+1.0
	comp=Z,1μm,1.6s,baz=353,slow=5.7							
HLG	Helgoland	70.73	0	eP	P		06 27 33.3	+0.3
	comp=Z,1μm,1.4s,baz=353,slow=5.7							
ABKAR	Akbulak array	71.17	334	P	P		06 27 34.9	-1.0
BOOM	Boomskoye usch	72.28	321	P	P		06 27 42.7	-0.2
BOOM				IAmb	IAmb		06 28 00.1	
	comp=Z,253nm,1.1s							
RETH	Rethem/Aller,	72.28	7	eP	P		06 27 42.8	+0.4
	comp=Z,716nm,1.5s,baz=353,slow=5.7							
IBBN	Ibbenburen	72.58	8	eP	P		06 27 43.6	-0.6
	comp=Z,745nm,1.5s,baz=353,slow=5.7							
RUE	Ruedersdorf	72.80	5	eP	P		06 27 46.1	+0.6
	comp=Z,842nm,1.2s,baz=353,slow=5.7							
FLTG	Flechtingen	72.81	6	eP	P		06 27 45.3	-0.3
	comp=Z,726nm,1.7s,baz=353,slow=5.7							
BUG	Bochum--Univer	73.40	9	eP	P		06 27 49.2	+0.1
	comp=Z,2μm,1.9s,baz=353,slow=5.7							
SDDR	Presa de Saban	73.41	81	P	P		06 27 49.0	-0.7
SDDR				IAmb	IAmb		06 27 58.9	
	comp=Z,194nm,1.1s							
GTTG	Gottingen	73.51	7	eP	P		06 27 49.7	-0.1
	comp=Z,1μm,1.6s,baz=353,slow=5.7							
PZH	PanZhiHua	73.77	293	P	P		06 27 51.3	-0.6
BANI	BANI	74.41	80	P	P		06 27 55.3	-0.4
MOX	Moxa	74.52	6	eP	P		06 27 55.4	-0.3
	comp=Z,925nm,1.7s,baz=353,slow=5.7							
MOX				eL	L		07 05 39.1	
	comp=Z,258μm,18.6s							
KSH2	Kashi	75.33	319	P	P		06 28 00.9	+0.1
KSH2				pmax	pmax			
	comp=Z,370nm,1.7s							
GRF	Grafenberg Arr	75.44	7	eP	P		06 28 01.2	+0.1
	comp=Z,1μm,1.7s,baz=353,slow=5.7							
GRF				eL	L		07 06 18.1	
	comp=Z,265μm,18.9s							
OBIP	Obispado Ponce	76.81	78	P	P		06 28 07.7	-1.6
FUR	Furstenfeldbru	76.97	7	eP	P		06 28 08.5	-1.3
	comp=Z,1μm,1.7s,baz=353,slow=5.7							
BUR08	Bucovina Ar. S	77.75	357	P	P		06 28 14.5	+0.2
BUR08				IAmb	IAmb		06 28 15.2	
	comp=Z,227nm,0.9s							
HYB	Hyderabad	93.01	306	eP	P		06 29 31.0	-0.1
HYB				eSKSac	SKSac		06 40 04.0	-1.3
HYB				eS	S		06 40 35.4	-2.0

JMA 22 06:19:10.2±0.2, 41.6N±0.6×139.6E±0.8, h11km±3km, MV1.3/8, SW OFF HOKKAIDO, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOMM	Oshimamatsumae	0.30	107	P	Pg	06 19 16.3	+0.1
JOMM				S	Sg	06 19 20.7	+0.4
JOSM	Okushiri--Mats	0.48	347	eP	Pg	06 19 19.6	0.0
JSR	Shiriuchi	0.60	98	eP	Pg	06 19 21.8	0.0
JSR				eS	Sg	06 19 30.4	+0.6
JYM2	Yakumo 2	0.75	48	eP	Pg	06 19 24.5	-0.2
JYM2				eS	Sg	06 19 34.8	+0.3

IDC 22 06:20:04.3±1.1, 54.89N×159.08W, h0km, mb5.0/22, mbtmp5.0/24, ML5.2/2, Error ellipse: s-maj=27.6km s-min=12.4km az=149.0
MOS 22 06:20:05.9±1.8, 54.59N×158.70W, h29km, mb5.7/20, Error ellipse: s-maj=17.2km s-min=10.5km az=85.0
NEIC 22 06:20:07.9±2.6, 54.75N±0.07×158.88W±0.06, h25km±1km, mb5.6/18, ML5.8/26, ML5.2(AEIC), Error ellipse: s-maj=10.0km s-min=5.0km az=168.0
AEIC 22 06:20:07.4±3.8, 54.77N±0.05×158.96W±0.05, h10km±4km, Error ellipse: s-maj=7.0km s-min=4.4km az=184.0
BJI 22 06:20:07.6, 54.70N×158.90W, h20km, mb5.7/16

ISC 22 06:20:09.3±0.5, 54.70N±0.07×158.86W±0.04, h35km, n143, σ1§98/130, mb5.4/51, 2C, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	Chernabura Isl	0.44	286	Pg	Pn	06 20 15.4	-3.7
CNBA	Chernabura Isl	0.44	286		Sn	06 20 22.1	-3.8
SDPT	Sand Point	1.14	306		Pn	06 20 26.3	-2.4
SDPT				IAML		06 21 00.2	
	comp=N,113μm,1.3s						
SDPT	Sand Point	1.14	306		Sn	06 20 41.5	-1.5
VNWF	Veniaminof 8	1.51	345		Pn	06 20 32.7	-1.2
VNSS	Veniaminof 8	1.57	348		Pn	06 20 34.8	0.0
CHGN	Chignik	1.63	9		Pn	06 20 34.5	-0.9
CHGN					Sn	06 20 52.3	-2.8
CHGN				IAML		06 20 57.0	
	comp=N,102μm,0.7s						
VNFG	Fog Glacier, M	1.64	346	Pn	Pn	06 20 35.3	-0.4
VNFG				IAML		06 21 04.8	
	comp=N,176μm,0.7s						
VNFG	Fog Glacier, M	1.64	346		Pn	06 20 34.9	-0.8
DOL	Dolgoi Island	1.79	286		Pn	06 20 36.2	-1.5
DOL					Sn	06 21 00.0	+0.8
PS1A	Pavlof South-1	1.81	295		Pn	06 20 36.9	-1.0
PS4A	Pavlof South-4	1.85	292		Pn	06 20 37.8	-0.6
PN7A	Pavlof North-7	1.95	293		Pn	06 20 40.2	+0.3
DTNA	Dutton South F	2.01	284		Pn	06 20 39.8	-0.9
DT1	Dutton Round H	2.02	283		Pn	06 20 39.6	-1.2
CHIR	Chirikof Islan	2.17	57	Pn	Pn	06 20 43.7	+0.9
CHIR				IAML		06 21 19.9	
	comp=E,45μm,0.8s						
CHIR				IAML		06 21 25.0	
	comp=N,43μm,0.8s						
AZAC	Aniakchak	2.23	9		Pn	06 20 42.8	-1.0
SII	Sitkinak Islan	3.24	53	Pn	Pn	06 20 57.9	+0.3
SII				IAML		06 22 01.3	
	comp=E,33μm,1.2s						
SII				IAML		06 22 12.1	
	comp=N,25μm,0.9s						
OHAK	Old Harbor	4.02	49	Pn	Pn	06 21 08.7	+0.4
OHAK				IAML		06 22 16.6	
	comp=N,5μm,1.6s						
ACHA	Angle Creek He	4.03	28	Pn	Pn	06 21 08.4	-0.1
P16K	Nushagak River	4.37	6	Pn	Pn	06 21 12.8	-0.3
O15K	Ungalikthiuk R	4.52	354	Pn	Pn	06 21 14.8	-0.3
O15K				IAML		06 21 57.4	
	comp=E,9μm,4.8s						
O15K				IAML		06 23 02.2	
	comp=N,9μm,4.8s						
KDAK	Kodiak Island	4.67	46	Pn	Pn	06 21 15.5	-1.7
	comp=N,37nm,0.3s,baz=204,slow=2.6,SNR=7.6						
KDAK				Sn	Sn	06 22 02.7	-7.3
	comp=N,180nm,0.3s,baz=320,slow=6.9,SNR=2.4						
KDAK				Lg	Lg	06 22 27.6	
	comp=N,124nm,0.3s,baz=66,slow=20,SNR=3.7						
	comp=N,458nm,0.9s						
KDAK	Kodiak Island	4.67	46		Pn	06 21 16.7	-0.5
KDAK				IAML		06 21 52.3	
	comp=N,7μm,4.8s						
KDAK				IAML		06 22 22.0	
	comp=N,6μm,4.5s						
P17K	Kvichak River	4.70	15		Pn	06 21 19.4	+1.8
O14K	Tigyukauivet M	4.75	345	Pn	Pn	06 21 18.8	+0.5
O14K				IAML		06 22 16.1	
	comp=N,13μm,4.5s						
O14K				IAML		06 22 28.8	
	comp=E,10μm,4.5s						
N14K	Kuskokwak Cree	5.46	345	Pn	Pn	06 21 28.4	+0.4
N15K	Kwethluk River	5.53	354	Pn	Pn	06 21 28.5	-0.5
O18K	Koktuh Hills	5.54	19	Pn	Pn	06 21 29.4	+0.3
O19K	Port Alsworth	6.03	22	Pn	Pn	06 21 36.4	+0.6
M16K	Timber Creek	6.34	360	Pn	Pn	06 21 40.4	+0.3
N19K	Bonanza Creek	6.56	19	Pn	Pn	06 21 45.2	+2.0
RED	Redoubt Volcan	6.60	27	Pn	Pn	06 21 45.7	+1.9
M17K	Holitna River	6.76	6	Pn	Pn	06 21 45.4	-0.6
SPIA	Saint Paul Isl	6.86	296	Pn	Pn	06 21 46.2	-1.1
L16K	Owhat River	7.04	358	Pn	Pn	06 21 49.6	-0.1
SEW	Seward	7.42	39	Pn	Pn	06 21 54.4	-0.6
L19K	White Mountain	7.79	14	Pn	Pn	06 21 59.8	-0.3
RC01	Rabbit Creek A	8.03	33	Pn	Pn	06 22 02.7	-0.6
PWL	Port Wells	8.34	38	Pn	Pn	06 22 06.8	-0.8
J16K	Anvik River	8.66	355	Pn	Pn	06 22 11.8	0.0
COLA	College	11.59	24	eP	Pn	06 22 54.3	+2.4
ILAR	Eielson Array	11.74	26	Pn	Pn	06 22 51.0	-3.0
	comp=E,20nm,0.3s,baz=216,slow=13,SNR=6.9						
ILAR				Sn	Sn	06 24 53.2	-10
	comp=E,1.5nm,0.3s,baz=337,slow=29,SNR=1.1						
ILAR	Eielson Array	11.74	26	eP	Pn	06 22 56.0	+2.0
ILAR				pmax	pmax		
	comp=Z,20nm,0.3s						
DLBC	Dease Lake	16.26	65	Pn	P	06 23 59.4	+1.9
	comp=Z,3.9nm,0.3s,baz=264,slow=19,SNR=1.4						
INK	Inuvik	18.02	31	P	Pn	06 24 15.3	-1.2
	comp=Z,16nm,0.3s,baz=225,slow=11,SNR=1.8						
INK				S	Sn	06 27 36.4	+0.3
	comp=Z,60nm,1.1s,baz=179,slow=30,SNR=1.3						
	comp=Z,278nm,1.1s						
INK	Inuvik	18.02	31	IAmb	IAmb	06 24 17.4	
	comp=Z,388nm,1.1s						
BILL	Bilibino	21.00	323	i P	Pn	06 24 52.7	+0.8
BILL				pmax	pmax		
	comp=Z,411nm,1.3s						
YKA	Yellowknife Ar	23.90	53	P	P	06 25 19.7	+0.4
	comp=Z,22nm,0.7s,baz=273,slow=10.0,SNR=2.9						
	comp=Z,22nm,0.7s						
PET	Petropavlovsk	24.84	284	eP	P	06 25 34.5	+6.5
PET				pmax	pmax		
	comp=Z,97nm,0.9s						
PEA0B	Petropavlovsk-	25.35	284	i P	P	06 25 35.2	+2.6
PETK	Petropavlovsk-	25.35	284	P	P	06 25 31.8	-0.8
	comp=Z,21nm,0.7s,baz=77,slow=14,SNR=5.0						
	comp=Z,21nm,0.7s						
PETK	Petropavlovsk-	25.35	284	P	P	06 25 34.1	+1.5
PETK	Petropavlovsk-	25.35	284	P	P	06 25 34.1	+1.5
WAH2	Wahluke Slope	25.82	92	P	P	06 25 35.8	-1.1
WAH2				IAmb	IAmb	06 26 00.1	
	comp=Z,162nm,1.2s						
SEY	Seymchan	25.96	308	i P	P	06 25 41.4	+3.4
SEY				pmax	pmax		
	comp=Z,343nm,1.5s						
KHMM	Horse Mountain	27.02	106	P	P	06 25 47.8	-0.3
KHMM				IAmb	IAmb	06 25 58.9	
	comp=Z,138nm,1.2s						
MA2	Magadan	27.21	301	i P	P	06 25 52.7	+3.4
MA2				pmax	pmax		
	comp=Z,155nm,1.5s						
AFDM	Forest Hills D	29.88	106	P	P	06 26 12.9	-0.4
LHV	Little Huntoon	31.75	104	P	P	06 26 29.6	-0.1
PDAR	Pinedale Array	33.94	90	P	P	06 26 54.4	+5.2
	comp=Z,7.9nm,0.6s,baz=319,slow=8.3,SNR=1.8						
TIXI	Tiksi	34.07	327	i P	P	06 26 51.6	+1.9
TIXI				pmax	pmax		
	comp=Z,112nm,1.1s						
YSS	Yuzhno-Sakhali	36.71	283	i P	P	06 27 12.3	-0.3
YSS				pmax	pmax		
	comp=Z,94nm,1.3s						
ULM	Lac du Bonnet	37.48	70	eP	P	06 27 20.1	+1.0
ANMO	Albuquerque	40.95	97	eP	P	06 27 50.0	+1.5
ANMO				pmax	pmax		
	comp=Z,111nm,1.4s						
USA0B	Ussuriysk Arra	44.41	286	eP	P	06 28 18.0	+1.7
MAJO	Matsushiro	45.94	274	P	P	06 28 27.5	-1.0
MAJO				pmax	pmax		
	comp=Z,125nm,1.0s						
MAJO	Matsushiro	45.94	274	P	P	06 28 27.5	-1.0
MJAR	Matsushiro Arr	45.94	274	P	P	06 28 27.4	-1.1
	comp=Z,18nm,1.0s,baz=39,slow=7.1,SNR=1.2						
	comp=Z,18nm,1.0s						
MJB9	Matsu-Tunnel	45.94	274	P	P	06 28 28.4	0.0
MJB9				IAmb	IAmb	06 28 52.4	
	comp=Z,121nm,1.0s						
KBS	Kingsbay	46.52	2	eP	P	06 28 36.9	+4.4
KBS				pmax	pmax		
	comp=Z,60nm,1.0s						
KBS	Kingsbay	46.52	2	P	P	06 28 31.7	-0.7
KBS				IAmb	IAmb	06 28 52.2	
	comp=Z,110nm,1.1s						
SUMG	Summit	46.53	21	P	P	06 28 29.8	-3.3
SUMG				pmax	pmax		
	comp=Z,90nm,1.1s						
SUMG	Summit	46.53	21	P	P	06 28 29.8	-3.3
SUMG				IAmb	IAmb	06 28 35.6	
	comp=Z,90nm,1.1s						
TXAR	Lajitas Array	46.67	100	P	P	06 28 36.1	+1.7
	comp=Z,11nm,0.9s,baz=322,slow=7.6,SNR=1.7						
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	46.67	100	P	P	06 28 34.0	-0.4
TXAR	Lajitas Array	46.67	100	P	P	06 28 34.0	-0.4
NRIK	Noril'sk	47.25	334	P	P	06 28 36.9	-1.3
	comp=Z,22nm,0.6s,baz=54,slow=7.1,SNR=4.5						
	comp=Z,22nm,0.6s						
NRIK	Noril'sk	47.25	334	eP	P	06 28 42.7	+4.4
NRIK				pmax	pmax		
	comp=Z,119nm,1.0s						
NRIK	Noril'sk	47.25	334	P	P	06 28 36.2	-2.0
HHAR	Hobbs	47.27	85	P	P	06 28 37.6	-1.3
HHAR				IAmb	IAmb	06 29 00.9	
	comp=Z,68nm,1.2s						
SPITS	Spitsbergen Ar	47.35	1	P	P	06 28 37.7	-1.3
	comp=Z,149nm,1.2s,baz=33,slow=9.0,SNR=6.8						
	comp=Z,149nm,1.2s						
SPITS	Spitsbergen Ar	47.35	1	P	P	06 28 37.6	-1.4
SPITS				pmax	pmax		
	comp=Z,105nm,1.1s						
CN2	Changchun	48.28	290	P	P	06 28 53.8	+7.2
CN2				pmax	pmax		
	comp=Z,150nm,1.3s						
KSRS	Korea Array	51.21	282	P	P	06 29 08.2	-0.8
	comp=Z,11nm,0.7s,baz=50,slow=7.1,SNR=6.1						
	comp=Z,11nm,0.7s						
XLT	XiLinHaoTe	53.22	296	eP	P	06 29 31.8	+7.9
XLT				sP	sP	06 29 42.9	+4.4
XLT				PcS	PcS	06 34 33.8	+3.5
XLT				pmax	pmax		
	comp=Z,150nm,1.3s						
DL2	Dalian	53.72	288	eP	P	06 29 22.8	-4.7
DL2				pmax	pmax		
	comp=Z,110nm,1.2s						
ULN	Ulaanbaatar	54.96	305	eP	P	06 29 39.4	+2.8
ULN				pmax	pmax		
	comp=Z,47nm,1.2s						
SONM	Songino Array	55.30	305	P	P	06 29 37.6	-1.4
	comp=Z,6.4nm,0.5s,baz=43,slow=5.8,SNR=7.1						
	comp=Z,6.4nm,0.5s						
SONM	Songino Array	55.30	305	IAmb	IAmb	06 29 48.1	
	comp=Z,52nm,0.9s						
ARCES	ARCESS Array B	56.03	358	P	P	06 29 42.4	-1.4
	comp=Z,20nm,0.9s,baz=355,slow=7.2,SNR=4.8						
	comp=Z,20nm,0.9s						
ARCES	ARCESS Array B	56.03	358	IAmb	IAmb	06 29 49.4	
	comp=Z,80nm,1.1s						
APA	Apatity	57.71	354	eP	P	06 29 55.2	-0.5
APA				pmax	pmax		
	comp=Z,51nm,1.1s						
HHC	Hu-ho-hao-te	57.74	296	eP	P	06 29 55.0	-1.5
HNS	HongShan	58.59	291	⇑P	P	06 30 01.3	-1.0
BTO2	Baotou	58.69	297	eP	P	06 30 02.6	-0.5
BTO2				sP	pP	06 30 12.8	-0.9
BTO2				PP	PP	06 32 12.8	+0.1
BTO2				S	S	06 38 06.5	+1.3
BTO2				pmax	pmax		
	comp=Z,73nm,1.7s						
NJ2	Nanjing	60.25	284	eP	P	06 30 14.3	+0.5
NJ2				pmax	pmax		
	comp=Z,190nm,1.6s						
DGZ	Jazzator, Alta	62.11	318	eP	P	06 30 28.7	+2.3
DGZ				pmax	pmax		
	comp=Z,38nm,1.0s						
FINES	FINESS Array B	64.14	357	P	P	06 30 38.4	-1.0
	comp=Z,17nm,0.8s,baz=9.7,slow=8.1,SNR=6.6						
	comp=Z,17nm,0.8s						
NOA	NORSAR Array B	64.34	5	P	P	06 30 40.0	-0.8
	comp=Z,12nm,0.8s,baz=353,slow=6.8,SNR=3.2						
	comp=Z,12nm,0.8s						
KURK	Kurchatov	64.52	324	eP	P	06 30 43.6	+1.5
KURK				pmax	pmax		
	comp=Z,36nm,0.9s						
KURK	Kurchatov	64.52	324	P	P	06 30 42.2	+0.1
KURBB	Kurchatov Arra	64.63	324	P	P	06 30 42.3	-0.6
	comp=Z,7.3nm,1.0s,baz=24,slow=7.0,SNR=0.8						
	comp=Z,7.3nm,1.0s						
GTA2	Gaotai	64.72	303	eP	P	06 30 52.0	+8.2
GTA2				pmax	pmax		
	comp=Z,160nm,1.2s						
BVAR	Borovoye Array	65.16	330	P	P	06 30 45.2	-1.0
	comp=Z,12nm,0.7s,baz=42,slow=4.4,SNR=6.3						
	comp=Z,12nm,0.7s						
LZH	Lanzhou	65.31	298	eP	P	06 30 54.6	+6.9
LZH				sP	sP	06 31 06.5	+4.0
LZH				pmax	pmax		

GOF	Gofitskoye	78.89	344	*ce*P		P	06 32 14.5	+6.0
PCAB	Cabril	80.78	22	*e*P		P	06 32 21.5	+2.6
PVRL	Vila Real	81.26	22	*e*P		P	06 32 27.6	+6.1
PVIS	Viseu	81.76	22	*e*P		P	06 32 29.9	+5.8
CMAR	Chiang Mai Arr	81.96	290	P		P	06 32 24.7	-0.8
	comp=Z,9.3nm,0.8s,baz=18,slow=5.2,SNR=8.2							
	comp=Z,9.3nm,0.8s							
PCAS	Casmilo, Conde	82.26	23	*e*P		P	06 32 32.5	+5.8
PCBR	Castelo Branco	82.69	22	*e*P		P	06 32 34.8	+5.9
ESDC	Sonseca Array	83.56	19	P		P	06 32 33.8	+0.3
	comp=Z,6.7nm,0.8s,baz=340,slow=5.0,SNR=9.8							
	comp=Z,6.7nm,0.8s							
ESDC	Sonseca Array	83.56	19	IAmb	IAmb		06 32 38.1	
	comp=Z,3.8nm,0.7s							
PLOUS	Minas do Lousa	84.21	23	*e*P		P	06 32 43.0	+6.3
PBAR	Barrancos	84.38	22	*e*P		P	06 32 43.6	+6.0
BRTR	Keskin Array B	85.34	350	P		P	06 32 44.0	+1.3
	comp=Z,8.4nm,0.9s,baz=11,slow=2.2,SNR=3.7							
	comp=Z,8.4nm,0.9s							
BRTR	Keskin Array B	85.34	350	P		P	06 32 44.0	+1.3
HYB	Hyderabad	93.22	306	*e*P		P	06 33 19.6	-0.5
HYB				*e*PP		PP	06 37 02.7	-0.6
HYB				*e*SKSac		SKSac	06 43 52.4	+0.7
HYB				*e*S		S	06 44 24.5	-0.3
MATP	Matopo	145.33	348	PKPbc		PKPbc	06 39 41.4	-1.8
	comp=Z,73nm,0.7s,baz=15,slow=3.2,SNR=8.5							
LBTB	Lobatse	150.17	352	PKPbc		PKPdf	06 39 53.6	+2.4
	comp=Z,41nm,1.1s,baz=352,slow=2.7,SNR=2.0							
BOSA	Boshof	153.76	352	PKPbc		PKiKP	06 40 06.2	+1.8
	comp=Z,24nm,1.1s,baz=0.0,slow=3.0,SNR=1.2							
NVL	N'lazarevskaya	163.35	169	*e*PKiKP		PKPdf	06 39 59.3	-7.1
NVL				pmax		pmax		
	comp=Z,36nm,1.0s							

PRU 22 06:21:50.6, 50.23N × 19.14E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	Moravsky Berou	1.13	247	*e*PG	Pg	06 22 11.1	-1.1
MORC				*e*SG	Sg	06 22 25.1	-1.6
MAUC	Maruska	1.21	225	*e*SG	Sg	06 22 28.4	-1.1
KRLC	Kraliky	1.52	265	*e*SG	Sg	06 22 38.3	-1.3
	comp=Z,6.9nm,0.3s						
DPC	Dobruska-Polom	1.81	275	*e*SG	Sb	06 22 47.9	0.0
	comp=Z,6.1nm,0.6s						

*AEIC **22** 06:26:10.0±1.0, 54.79N±0.08×158.8W±0.1, h44km±9km, Error ellipse: s-maj=11.9km s-min=8.3km az=161.0*

NEIC 22 06:26:09.5±1.2, 54.69N±0.08×158.87W±0.09, h33km±9km, ML4.0/16, ML3.9(AEIC), Error ellipse: s-maj=11.3km s-min=7.7km az=173.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.44	288		Sn	06 26 28.2	+2.0
CNBA	Chernabura Isl	0.44	288		Pn	06 26 20.1	+0.6
CNBA	Chernabura Isl	0.44	288	IAML		06 26 29.8	
	comp=N,5μm,0.9s						
CNBA				IAML		06 26 30.4	
	comp=E,3μm,1.2s						
SDPT	Sand Point	1.14	306		Sn	06 26 43.2	-0.4
SDPT	Sand Point	1.14	306		Pn	06 26 28.5	-0.6
SDPT	Sand Point	1.14	306	IAML		06 26 44.8	
	comp=N,3μm,0.9s						
SDPT				IAML		06 27 00.7	
	comp=E,2μm,0.8s						
VNKR	Veniaminof 5	1.38	348		Pn	06 26 32.1	-0.3
VNSG	Veniaminof 6	1.45	355		Pn	06 26 32.6	-0.8
VNSS	Veniaminof 8	1.58	348		Pn	06 26 34.4	-0.9
CHGN	Chignik	1.64	9		Pn	06 26 35.0	-0.9
CHGN				IAML		06 26 55.3	
	comp=N,3μm,0.6s						
VNFG	Fog Glacier, M	1.65	347		Pn	06 26 36.4	+0.2
VNFG	Fog Glacier, M	1.65	347		Pn	06 26 37.0	+0.8
ANPB	Aniakchak Plen	2.15	9		Pn	06 26 43.0	0.0
CHIR	Chirikof Islan	2.18	57		Pn	06 26 43.3	-0.1
CHIR	Chirikof Islan	2.18	57	IAML		06 27 21.8	
	comp=E,2μm,1.0s						
CHIR				IAML		06 27 26.2	
	comp=N,539nm,0.7s						
SII	Sitkinak Islan	3.25	53	Pn	Pn	06 26 59.0	+0.9
SII				IAML		06 27 56.2	
	comp=N,442nm,0.8s						
SII				IAML		06 28 24.2	
	comp=E,313nm,0.5s						
OHAK	Old Harbor	4.04	49	Pn	Pn	06 27 08.7	-0.2
ACHA	Angle Creek He	4.04	28	Pn	Pn	06 27 08.6	-0.5
P16K	Nushagak River	4.38	6	Pn	Pn	06 27 13.3	-0.4
P16K				IAML		06 28 10.9	
	comp=E,83nm,0.4s						
O15K	Ungalikthiuk R	4.53	354	Pn	Pn	06 27 15.2	-0.5
UNV	Unalaska Valle	4.56	262	Pn	Pn	06 27 14.9	-1.1
KDAK	Kodiak Island	4.68	46	Pn	Pn	06 27 17.4	-0.3
P17K	Kvichak River	4.71	15	Pn	Pn	06 27 18.5	+0.4
O14K	Tigyukauivet M	4.76	345		Pn	06 27 18.8	0.0
O16K	Kokwok River B	4.94	5	Pn	Pn	06 27 21.5	+0.2
N14K	Kuskokwak Cree	5.47	345	Pn	Pn	06 27 28.6	+0.1
O18K	Koktuh Hills	5.55	19	Pn	Pn	06 27 30.2	+0.6
ILSW	Iliamna Southw	6.15	28	Pn	Pn	06 27 37.4	-0.5
N18K	Kilae Creek	6.22	14	Pn	Pn	06 27 40.0	+1.1
M13K	Dall Lake	6.23	339	Pn	Pn	06 27 39.6	+0.7
M14K	Bethel	6.30	346	Pn	Pn	06 27 40.0	+0.1
RED	Redoubt Volcan	6.62	27	Pn	Pn	06 27 44.8	+0.4
L16K	Owhat River	7.05	358	Pn	Pn	06 27 50.3	+0.1
K17K	Iditarod	8.06	2	Pn	Pn	06 28 04.0	-0.1
J16K	Anvik River	8.67	355	Pn	Pn	06 28 12.1	-0.3
HIN	Hinchinbrook I	8.77	44	Pn	Pn	06 28 13.1	-0.6
I17K	Unalakleet	9.28	355	Pn	Pn	06 28 20.7	0.0
IL31		11.76	26	Pn	Pn	06 28 52.3	-2.3
F20K	Avaraart Lake	12.50	6	Pn	Pn	06 29 05.0	+0.3
C36M	Paulatuk	21.51	34	P	P	06 30 54.7	-0.4

*IDC **22** 06:29:58.0±1.3, 55.07N×159.24W, h0km, mb4.2/12, mbtmp4.2/14, ML4.0/2, Error ellipse: s-maj=34.1km s-min=16.8km az=165.0*

*NEIC **22** 06:30:02.5±1.5, 54.88N±0.08×158.90W±0.08, h28km±6km, mb4.2/7, ML4.1/33, ML4.0(AEIC), Error ellipse: s-maj=12.3km s-min=6.6km az=165.0*

*AEIC **22** 06:30:03.6±9.0, 55.85N±0.06×159.44W±0.04, h5km±4km, Error ellipse: s-maj=9.0km s-min=3.7km az=175.0*

ISC 22 06:30:00.1±0.6, 54.96N±0.07×158.88W±0.05, h10km, n78, σ1§50/75, mb4.2/13, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.43	252		Pg	06 30 09.9	+1.3
CNBA				IAML		06 30 18.2	
	comp=E,7μm,0.7s						
CNBA				IAML		06 30 18.3	
	comp=N,8μm,0.6s						
SDPT	Sand Point	1.00	294	Pn	Pg	06 30 19.5	+0.2
SDPT				IAML		06 30 56.6	
	comp=E,9μm,0.9s						
SDPT				IAML		06 30 59.6	
	comp=N,6μm,1.0s						
CHGN	Chignik	1.37	11		Pn	06 30 26.5	+1.2
CHGN				Sn	Sn	06 30 45.3	+1.8
CHGN				IAML		06 30 54.1	
	comp=E,5μm,0.4s						
CHGN				IAML		06 30 56.7	
	comp=N,4μm,0.7s						
VNFG	Fog Glacier, M	1.39	344		Pn	06 30 26.9	+1.3
DOL	Dolgoi Island	1.73	278		Pn	06 30 30.1	-0.1
PS4A	Pavlof South-4	1.75	284		Pn	06 30 31.5	+0.9
DTNA	Dutton South F	1.95	277		Pn	06 30 33.6	+0.4
DT1	Dutton Round H	1.97	276		Pn	06 30 33.6	+0.1
CHIR	Chirikof Islan	2.05	64	Pn	Pn	06 30 35.9	+1.3
CHIR				IAML		06 31 15.3	
	comp=N,2μm,1.0s						
CHIR				IAML		06 31 21.9	
	comp=E,2μm,1.1s						
ISNN	Isanotski Nort	2.83	269		Pn	06 30 48.2	+2.8
SII	Sitkinak Islan	3.10	57		Pn	06 30 50.1	+1.1
ACHA	Angle Creek He	3.81	30	Pn	Pn	06 30 59.7	+0.9
OHAK	Old Harbor	3.87	52	Pn	Pn	06 30 59.9	+0.4
OHAK				IAML		06 32 34.8	
	comp=E,216nm,1.4s						
AKUT	Akutan	4.10	261	Pn	Pn	06 31 03.8	+1.0
P16K	Nushagak River	4.11	6	Pn	Pn	06 31 04.8	+1.9
AKBBA	Akutan Broad B	4.20	261		Pn	06 31 05.3	+1.2
O15K	Ungalikthiuk R	4.26	353	Pn	Pn	06 31 06.0	+1.0
O15K				IAML		06 32 50.3	
	comp=E,148nm,1.0s						
P17K	Kvichak River	4.45	16	Pn	Pn	06 31 10.2	+2.6
KDAK	Kodiak Island	4.50	48	Pn	Pn	06 31 05.9	-2.4
	comp=E,4.4nm,0.3s,baz=231,slow=9.0,SNR=2.3						
KDAK				Sn	Sn	06 31 59.0	-1.6
	comp=E,8.3nm,0.3s,baz=205,slow=11,SNR=1.9						
KDAK				Lg	Lg	06 32 23.7	
	comp=E,8.6nm,0.3s,baz=188,slow=6.2,SNR=4.5						
	comp=E,17nm,0.5s						
KDAK	Kodiak Island	4.50	48	IAML		06 31 45.5	
	comp=E,84nm,0.9s						
O14K	Tigyukauivet M	4.50	344	Pn	Pn	06 31 09.3	+1.1
O14K				IAML		06 32 48.3	
	comp=E,181nm,0.8s						
O14K				IAML		06 33 07.4	
	comp=N,137nm,1.0s						
UNV	Unalaska Valle	4.60	259		Pn	06 31 09.6	+0.1
O16K	Kokwok River B	4.67	5	Pn	Pn	06 31 11.3	+0.7
O16K				IAML		06 32 45.3	
	comp=E,103nm,0.9s						
N14K	Kuskokwak Cree	5.21	344	Pn	Pn	06 31 19.0	+1.1
N14K				IAML		06 32 59.8	
	comp=N,160nm,1.0s						
N15K	Kwethluk River	5.27	353	Pn	Pn	06 31 20.6	+1.8
N15K				IAML		06 32 45.4	
	comp=N,91nm,1.2s						
N15K				IAML		06 34 10.3	
	comp=E,37nm,0.8s						
O18K	Koktuh Hills	5.29	20	Pn	Pn	06 31 21.4	+2.2
N17K	Nushagak Hills	5.66	8	Pn	Pn	06 31 26.4	+2.2
O19K	Port Alsworth	5.79	23	Pn	Pn	06 31 28.1	+2.1
ILSW	Iliamna Southw	5.91	29	Pn	Pn	06 31 29.6	+1.9
N18K	Kilae Creek	5.96	14	Pn	Pn	06 31 28.9	+0.6
M13K	Dall Lake	5.97	338	Pn	Pn	06 31 29.4	+1.0
M14K	Bethel	6.04	345		Pn	06 31 30.8	+1.5
M16K	Timber Creek	6.08	360	Pn	Pn	06 31 32.6	+2.6
N19K	Bonanza Creek	6.32	20	Pn	Pn	06 31 35.0	+1.7
RED	Redoubt Volcan	6.38	28	Pn	Pn	06 31 34.3	+0.2
BRLK	Bradley Lake	6.47	39	Pn	Pn	06 31 36.1	+0.8
M17K	Holitna River	6.51	6	Pn	Pn	06 31 37.5	+1.7
M11K	Mekoryuk	6.71	327	Pn	Pn	06 31 39.4	+0.8
L14K	Kuka Creek	6.71	344	Pn	Pn	06 31 40.2	+1.6
SPIA	Saint Paul Isl	6.75	294	Pn	Pn	06 31 39.5	+0.5
L16K	Owhat River	6.78	358	Pn	Pn	06 31 41.9	+2.4
L18K	Granite Mounta	7.37	8	Pn	Pn	06 31 48.6	+1.0
K15K	Wolf Creek Mou	7.49	350	Pn	Pn	06 31 50.6	+1.4
L19K	White Mountain	7.54	15	Pn	Pn	06 31 51.6	+1.6
K13K	Kusilvak Mount	7.62	339	Pn	Pn	06 31 52.3	+1.3
K17K	Iditarod	7.79	2	Pn	Pn	06 31 55.3	+1.9
RC01	Rabbit Creek A	7.83	35	Pn	Pn	06 31 55.3	+1.4
P23K	Montague Islan	7.98	46	Pn	Pn	06 31 57.2	+1.3
PWL	Port Wells	8.15	39	Pn	Pn	06 31 59.6	+1.3
J16K	Anvik River	8.40	355	Pn	Pn	06 32 03.3	+1.6
ILAR	Eielson Array	11.51	26	Pn	Pn	06 32 40.5	-3.9
	comp=E,0.7nm,0.3s,baz=217,slow=14,SNR=4.3						
ILAR				Sn	Sn	06 34 42.2	-11
	baz=142,slow=33						
G29M	Pine Creek	15.58	32	Pn	Pn	06 33 42.3	+2.8
B22K	Teshekpuk Lake	15.63	7	Pn	Pn	06 33 41.5	+1.4
H31M	Peel River	16.15	38	Pn	Pn	06 33 48.1	+1.3
F30M	Barrier River	16.70	32	Pn	Pn	06 33 55.4	+1.6
G31M	Satah River	16.77	35	Pn	Pn	06 33 56.2	+1.5
G31M				IAmb	IAmb	06 34 12.4	
	comp=Z,25nm,1.1s						
INK	Inuvik	17.80	31	P	Pn	06 34 07.0	-0.5
	comp=Z,0.6nm,0.3s,baz=219,slow=16,SNR=6.5						
	comp=Z,28nm,1.1s						
INK	Inuvik	17.80	31		Pn	06 34 08.2	+0.7
INK				IAmb	IAmb	06 34 27.6	
	comp=Z,17nm,0.8s						
C36M	Paulatuk	21.29	34	P	P	06 34 46.6	+0.3
C36M				IAmb	IAmb	06 34 46.6	
	comp=Z,6.0nm,0.5s						
YKA	Yellowknife Ar	23.76	54	P	P	06 35 12.3	+0.1
	comp=Z,2.5nm,0.8s,baz=270,slow=9.9,SNR=4.4						
	comp=Z,2.5nm,0.8s						
PETK	Petropavlovsk-	25.27	284	P	P	06 35 22.0	-4.2
	comp=Z,12nm,1.1s,baz=81,slow=13,SNR=6.4						
	comp=Z,12nm,1.1s						
PETK	Petropavlovsk-	25.27	284	P	P	06 35 26.6	+0.4
PAHR	Pah Rah Range	30.32	104	P	P	06 36 12.1	+0.4
MCMT	McKenzie Canyo	30.80	90	P	P	06 36 16.4	+0.4
TXAR	Lajitas Array	46.72	100	P	P	06 38 30.6	+1.4
	comp=Z,0.7nm,0.5s,baz=295,slow=6.5,SNR=8.7						
	comp=Z,0.7nm,0.5s						
KSRS	Korea Array	51.15	282	P	P	06 39 01.6	-1.3
	comp=Z,1.1nm,0.5s,baz=40,slow=6.6,SNR=4.7						
	comp=Z,1.1nm,0.5s						
ARCES	ARCESS Array B	55.77	358	P	P	06 39 35.4	-1.1
	comp=Z,4.2nm,1.0s,baz=23,slow=6.6,SNR=4.3						
	comp=Z,4.2nm,1.0s						
ARCES	ARCESS Array B	55.77	358	IAmb	IAmb	06 39 39.8	
	comp=Z,1.2nm,0.8s						
HHC	Hu-ho-hao-te	57.62	296	*e*P	P	06 39 52.3	+2.2
FINES	FINESS Array B	63.88	357	P	P	06 40 31.4	-0.8
	comp=Z,3.6nm,0.8s,baz=355,slow=6.3,SNR=4.6						
	comp=Z,3.6nm,0.8s						
BVAR	Borovoye Array	64.93	330	P	P	06 40 38.3	-1.1
	comp=Z,2.2nm,0.7s,baz=29,slow=6.5,SNR=2.1						
	comp=Z,2.2nm,0.7s						
HFS	Hagfors	65.10	4	P	P	06 40 39.3	-1.0
	comp=Z,2.4nm,0.6s,baz=0.0,slow=6.5,SNR=5.4						
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	66.27	319	P	P	06 40 46.1	-2.0
	comp=Z,0.9nm,0.7s,baz=35,slow=6.9,SNR=1.3						
	comp=Z,0.9nm,0.7s						
EKA	Eskdalemuir Ar	68.28	15	P	P	06 41 00.5	-0.2
	comp=Z,1.4nm,0.7s,baz=344,slow=4.7,SNR=4.2						
	comp=Z,1.4nm,0.7s						
PZH	PanZhiHua	73.84	293	P	P	06 41 35.6	+0.6
AKASG	Malin Array Be	74.50	355	P	P	06 41 36.9	-1.3
	comp=Z,1.0nm,0.4s,baz=11,slow=6.0,SNR=5.1						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	74.50	355	IAmb	IAmb	06 41 42.6	
	comp=Z,2.5nm,1.1s						
ESDC	Sonseca Array	83.32	19	P	P	06 42 25.7	-1.2
	comp=Z,2.0nm,0.8s,baz=338,slow=4.8,SNR=4.9						
	comp=Z,2.0nm,0.8s						

*IDC **22** 06:33:44.7±1.0, 54.92N×158.55W, h0km, mb4.1/12, mbtmp4.1/14, ML3.8/2, Error ellipse: s-maj=26.5km s-min=14.9km az=175.0*

*NEIC **22** 06:33:47.7±2.7, 54.88N±0.05×158.35W±0.07, h20km±5km, mb4.6/9, ML4.5/36, ML4.1(AEIC), Error ellipse: s-maj=9.8km s-min=2.0km az=143.0*

*AEIC **22** 06:33:50.7±4.9, 55.04N±0.06×158.68W±0.06, h10km±4km, Error ellipse: s-maj=8.8km s-min=4.8km az=167.0*

ISC 22 06:33:46.0±0.6, 54.86N±0.07×158.25W±0.04, h10km, n78, σ1§41/78, mb4.3/16, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.78	267		Pg	06 34 01.4	+0.5
CNBA				IAML		06 34 13.5	
	comp=N,16μm,0.6s						
CNBA	Chernabura Isl	0.78	267		Sb	06 34 12.4	+0.3
VNKR	Veniaminof 5	1.33	332		Pn	06 34 10.2	-0.5
SDPT	Sand Point	1.37	292		Pn	06 34 09.8	-1.3
SDPT				IAML		06 34 33.0	
	comp=E,6μm,0.9s						
SDPT				IAML		06 34 34.5	
	comp=N,6μm,1.1s						
SDPT	Sand Point	1.37	292		Sb	06 34 27.5	-1.7
CHGN	Chignik	1.45	356		Pn	06 34 11.7	-0.4
VNWF	Veniaminof 8	1.49	330		Pn	06 34 12.8	-0.1
VNSS	Veniaminof 8	1.53	334		Pn	06 34 13.7	+0.2
VNFG	Fog Glacier, M	1.61	333		Pn	06 34 14.6	+0.1
VNFG				IAML		06 34 48.9	
	comp=N,10μm,1.0s						
VNFG				IAML		06 34 55.4	
	comp=E,7μm,1.0s						
VNFG	Fog Glacier, M	1.61	333		Pn	06 34 14.4	-0.1
CHIR	Chirikof Islan	1.78	56		Pn	06 34 16.4	-0.3
ANPB	Aniakchak Plen	1.94	359		Pb	06 34 21.9	+0.4
DOL	Dolgoi Island	2.10	279		Pn	06 34 21.2	0.0
PS4A	Pavlof South-4	2.13	285		Pn	06 34 22.0	+0.4
PN7A	Pavlof North-7	2.23	286		Pn	06 34 24.5	+1.5
SII	Sitkinak Islan	2.86	52		Pn	06 34 32.0	+0.4
SII				IAML		06 35 23.2	
	comp=E,2μm,3.4s						
SII				IAML		06 35 56.9	
	comp=N,2μm,4.8s						
OHAK	Old Harbor	3.65	48		Pn	06 34 41.8	-0.7
P16K	Nushagak River	4.18	2	Pn	Pn	06 34 52.1	+2.4
KDAK	Kodiak Island	4.30	45	Pn	Pn	06 34 50.5	-0.9
	comp=N,1.6nm,0.3s,baz=79,slow=13,SNR=1.0						
KDAK				Sn	Sn	06 35 37.8	-3.8
	comp=N,4.9nm,0.3s,baz=213,slow=14,SNR=1.7						
KDAK				Lg	Lg	06 36 04.6	
	comp=N,3.3nm,0.3s,baz=104,slow=12,SNR=4.7						
	comp=N,6.7nm,0.5s						
O15K	Ungalikthiuk R	4.41	349	Pn	Pn	06 34 52.5	-0.3
O15K				IAML		06 35 57.4	
	comp=N,526nm,4.8s						
O15K				IAML		06 36 16.5	
	comp=E,341nm,3.5s						
AKUT	Akutan	4.45	264	Pn	Pn	06 34 53.2	-0.1
AKUT				IAML		06 36 46.1	
	comp=E,438nm,4.9s						
O14K	Tigyukauivet M	4.70	341		Pn	06 34 56.3	-0.5
O14K				IAML		06 35 43.5	
	comp=E,387nm,4.8s						
O14K				IAML		06 36 42.4	
	comp=N,384nm,4.0s						
O16K	Kokwok River B	4.75	1	Pn	Pn	06 34 59.8	+2.3
O16K				IAML		06 35 47.9	
	comp=E,343nm,4.2s						
O16K				IAML		06 37 13.1	
	comp=N,315nm,4.8s						
UNV	Unalaska Valle	4.94	261	Pn	Pn	06 34 59.8	-0.3
UNV				IAML		06 35 46.8	
	comp=E,406nm,4.9s						
UNV				IAML		06 36 11.9	
	comp=N,281nm,4.3s						
MNAT	Makushin Natee	5.03	262		Pn	06 35 03.3	+1.9
O18K	Koktuh Hills	5.27	17	Pn	Pn	06 35 07.2	+2.5
O18K				IAML		06 36 57.4	
	comp=N,393nm,4.4s						
O18K				IAML		06 38 40.1	
	comp=E,168nm,4.7s						
N14K	Kuskokwak Cree	5.40	341	Pn	Pn	06 35 07.4	+0.9
N15K	Kwethluk River	5.41	350	Pn	Pn	06 35 08.0	+1.4
N17K	Nushagak Hills	5.71	5	Pn	Pn	06 35 12.7	+2.0
N18K	Kilae Creek	5.97	11	Pn	Pn	06 35 16.2	+1.9
M16K	Timber Creek	6.19	357	Pn	Pn	06 35 18.7	+1.4
M13K	Dall Lake	6.20	336	Pn	Pn	06 35 18.3	+0.8
M14K	Bethel	6.23	343		Pn	06 35 18.1	+0.3
RED	Redoubt Volcan	6.30	26	Pn	Pn	06 35 20.1	+1.3
BRLK	Bradley Lake	6.33	36	Pn	Pn	06 35 21.1	+1.9
L16K	Owhat River	6.90	355	Pn	Pn	06 35 28.0	+1.0
L14K	Kuka Creek	6.91	342		Pn	06 35 27.4	+0.3
SPIA	Saint Paul Isl	7.12	294	Pn	Pn	06 35 29.4	-0.6
K15K	Wolf Creek Mou	7.65	348	Pn	Pn	06 35 39.2	+1.9
K13K	Kusilvak Mount	7.84	337	Pn	Pn	06 35 40.6	+0.7
PWL	Port Wells	8.00	37	Pn	Pn	06 35 42.9	+0.7
J16K	Anvik River	8.53	353		Pn	06 35 50.7	+1.3
J17K	VABM Dome	8.57	357	Pn	Pn	06 35 51.7	+1.8
EYAK	Cordova Ski Ar	8.78	44	Pn	Pn	06 35 53.0	+0.2
SCM	Sheep Creek Mo	9.03	35	Pn	Pn	06 35 56.4	+0.1
RAGM	Raggedy Mountai	9.14	47	Pn	Pn	06 35 58.5	+0.8
J19K	Poorman	9.26	7	Pn	Pn	06 36 01.1	+1.7
ATKA	Atka Island	9.86	261	Pn	Pn	06 36 06.9	-0.8
CRQM	Cirque	9.98	48	Pn	Pn	06 36 09.9	+0.5
NEA2	Nenana	10.79	22	Pn	Pn	06 36 22.3	+2.0
ILAR	Eielson Array	11.44	25	Pn	Pn	06 36 27.2	-2.0
	comp=E,0.1nm,0.3s,baz=220,slow=9.6,SNR=3.5						
ILAR				Sn	Sn	06 38 35.7	-1.2
	baz=44,slow=45						
INK	Inuvik	17.69	31	P	Pn	06 37 50.9	-1.2
	comp=E,0.6nm,0.3s,baz=213,slow=12,SNR=4.2						
	comp=E,5.9nm,0.9s						
INK	Inuvik	17.69	31	IAmb	IAmb	06 37 58.9	
	comp=Z,45nm,1.3s						
C36M	Paulatuk	21.16	34	P	P	06 38 30.5	-0.3
C36M				IAmb	IAmb	06 38 42.4	
	comp=Z,27nm,1.0s						
A36M	Sachs Harbour	22.14	27	P	P	06 38 42.1	+0.8
YKA	Yellowknife Ar	23.52	53	P	P	06 38 55.9	+0.1
	comp=Z,2.9nm,0.9s,baz=275,slow=10,SNR=1.5						
	comp=Z,2.9nm,0.9s						
B08A	Colville Reser	24.77	89	P	P	06 39 06.9	-0.7
PEA0B	Petropavlovsk-	25.65	284	P	P	06 39 14.0	-1.5
PETK	Petropavlovsk-	25.65	284	P	P	06 39 12.8	-2.7
	comp=Z,8.0nm,0.8s,baz=83,slow=14,SNR=7.2						
	comp=Z,8.0nm,0.8s						
PETK	Petropavlovsk-	25.65	284	P	P	06 39 13.6	-1.8
WIFE	Three Sisters-	25.74	100	P	P	06 39 14.9	-1.7
EDM	Edmonton	26.08	75	P	P	06 39 19.1	-0.3
EDM				IAmb	IAmb	06 39 36.0	
	comp=Z,14nm,1.2s						
NVAR	Mina Array Bea	31.44	105	P	P	06 40 09.7	+2.2
	comp=Z,2.0nm,0.8s,baz=308,slow=8.8,SNR=5.5						
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	33.59	91	P	P	06 40 28.0	+1.7
	comp=Z,0.9nm,0.7s,baz=310,slow=8.4,SNR=2.6						
	comp=Z,0.9nm,0.7s						
MJAR	Matsushiro Arr	46.28	274	P	P	06 42 10.2	-1.3
	comp=Z,0.9nm,0.3s,baz=50,slow=7.5,SNR=2.0						
	comp=Z,0.9nm,0.3s						
MJAR	Mats

SII IAML 06 42 11.9
comp=N,547nm,3.7s
AKUT Akutan 3.85 261 Pn **Pn** **06 40 11.3 0.0**
AKUT Sn **Sn** **06 40 57.4 +2.2**
AKUT IAML 06 41 12.5
comp=E,501nm,3.0s
AKUT IAML 06 42 08.6
comp=N,287nm,4.0s
ACHA Angle Creek He 3.97 32 Pn **Pn** **06 40 14.2 +1.2**
OHAK Old Harbor 4.09 53 Pn **Pn** **06 40 17.9 +3.3**
OHAK IAML 06 43 01.8
comp=N,181nm,4.9s
P16K Nushagak River 4.19 9 Pn **Pn** **06 40 16.3 +0.4**
UNV Unalaska Valle 4.34 259 Pn **Pn** **06 40 18.1 0.0**
UNV IAML 06 41 11.3
comp=E,108nm,4.7s
KDAK Kodiak Island 4.71 50 Pn Pn 06 40 18.5 -4.7
comp=E,0.3nm,0.3s,baz=101,slow=18,SNR=1.1
KDAK Sn **Sn** **06 41 12.0 -4.6**
comp=E,0.6nm,0.3s,baz=133,slow=15,SNR=1.7
KDAK Lg Lg 06 41 36.4
comp=E,1.0nm,0.3s,baz=143,slow=8.0,SNR=1.5
comp=E,4.4nm,0.7s
KDAK Kodiak Island 4.71 50 **Pn** **06 40 22.4 -0.8**
KDAK Kodiak Island 4.71 50 IAML 06 43 15.2
comp=E,91nm,2.8s
KDAK IAML 06 43 17.7
comp=E,231nm,5.0s
O16K Kokwok River B 4.73 8 Pn **Pn** **06 40 25.1 +1.6**
O16K IAML 06 41 15.6
comp=E,116nm,4.5s
O16K IAML 06 42 03.8
comp=N,87nm,3.1s
N14K Kuskokwak Cree 5.18 347 **Pn** **06 40 30.7 +1.1**
N15K Kwethluk River 5.28 356 **Pn** **06 40 32.2 +1.2**
M13K Dall Lake 5.92 340 **Pn** **06 40 41.1 +1.4**
M14K Bethel 6.02 347 **Pn** **06 40 41.6 +0.5**
ILSW Iliamna Southw 6.07 31 **Pn** **06 40 44.2 +2.3**
M16K Timber Creek 6.12 2 Pn **Pn** **06 40 43.4 +0.8**
CNPM China Poot 6.37 40 Pn **Pn** **06 40 48.3 +2.4**
SPIA Saint Paul Isl 6.53 295 Pn **Pn** **06 40 49.2 +1.1**
L14K Kuka Creek 6.68 346 **Pn** **06 40 50.8 +0.6**
L16K Owhat River 6.81 359 **Pn** **06 40 53.0 +1.0**
K15K Wolf Creek Mou 7.49 352 Pn **Pn** **06 41 02.8 +1.6**
K13K Kusilvak Mount 7.57 340 **Pn** **06 41 03.1 +0.7**
L19K White Mountain 7.65 16 Pn **Pn** **06 41 05.2 +1.8**
M20K Styx River 7.70 22 Pn **Pn** **06 41 06.0 +1.8**
SKT Skwentna 8.17 27 Pn **Pn** **06 41 12.5 +1.9**
J16K Anvik River 8.42 356 **Pn** **06 41 14.2 +0.2**
J18K Innoko River 8.68 8 Pn **Pn** **06 41 18.2 +0.7**
PPLA Purkeypile 8.80 22 Pn **Pn** **06 41 21.5 +2.1**
K20K Telida 8.88 15 Pn **Pn** **06 41 21.8 +1.5**
I17K Unalakleet 9.02 356 **Pn** **06 41 22.7 +0.5**
CAST Castle Rocks 9.29 21 Pn **Pn** **06 41 26.9 +1.0**
J19K Poorman 9.29 10 Pn **Pn** **06 41 26.7 +0.8**
KLU Klutina 9.65 42 Pn **Pn** **06 41 33.1 +2.3**
H19K Roundabout Mou 10.74 6 Pn **Pn** **06 41 45.7 0.0**
KIWB Kanaga Island 11.09 261 Pn **Pn** **06 41 51.1 +0.5**
RIDG Independent Ri 11.49 34 Pn **Pn** **06 41 57.6 +1.5**
ILAR Eielson Array 11.66 27 Pn Pn 06 41 51.9 -6.4
comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=2.2
comp=N,0.5nm,0.5s
ILAR Eielson Array 11.66 27 **Pn** **06 41 58.3 -0.1**
H24K Noodor Dome 12.30 23 Pn **Pn** **06 42 08.5 +1.4**
H29M Whitestone 15.20 34 Pn **Pn** **06 42 48.3 +1.9**
H29M IAmb IAmb 06 43 06.6
comp=Z,6.2nm,0.7s
C23K Itkillik River 15.48 11 Pn **Pn** **06 42 51.4 +1.4**
C23K IAmb IAmb 06 43 00.6
comp=Z,2.8nm,0.7s
EPYK Eagle Plains 15.82 35 **P** **06 42 57.9 0.0**
EPYK IAmb IAmb 06 42 58.1
comp=Z,56nm,1.5s
INK Inuvik 17.96 32 P **Pn** **06 43 18.3 -2.9**
comp=Z,0.4nm,0.3s,baz=224,slow=6.5,SNR=4.1
comp=Z,2.2nm,0.5s
PETK Petropavlovsk- 25.04 284 P **P** **06 44 35.4 +0.2**
comp=Z,1.2nm,0.5s,baz=68,slow=8.9,SNR=4.0
comp=Z,1.2nm,0.5s
TXAR Lajitas Array 46.96 100 P **P** **06 47 40.8 -1.3**
comp=Z,0.6nm,0.6s,baz=323,slow=6.7,SNR=7.2
comp=Z,0.6nm,0.6s
ARCES ARCESS Array B 55.80 358 P **P** **06 48 46.8 -0.8**
comp=Z,2.6nm,0.9s,baz=15,slow=8.4,SNR=2.2
comp=Z,2.6nm,0.9s
FINES FINESS Array B 63.90 357 P **P** **06 49 42.5 -0.8**
comp=Z,0.6nm,0.5s,baz=5.9,slow=6.6,SNR=4.2
comp=Z,0.6nm,0.5s
BVAR Borovoye Array 64.84 329 P **P** **06 49 49.6 +0.1**
comp=Z,3.7nm,1.0s,baz=32,slow=6.4,SNR=3.7
comp=Z,3.7nm,1.0s
HFS Hagfors 65.16 4 P **P** **06 49 51.0 -0.5**
comp=Z,1.7nm,0.8s,baz=348,slow=6.1,SNR=1.3
comp=Z,1.7nm,0.8s

*IDC **22** 06:40:19.8±1.5,54.°72N×160.°92W,h0km,mb3.9/6, mbtmp3.9/8,ML3.8/2,Error ellipse: s-maj=39.6km s-min=22.6km az=172.0*
*AEIC **22** 06:40:23.1±2.4,54.°57N±0.°05×160.°71W±0.°04,h11km±4km, Error ellipse: s-maj=7.1km s-min=3.4km az=185.0*
*NEIC **22** 06:40:24.6±2.7,54.°52N±0.°07×160.°69W±0.°04,h35km±2km, ML3.8/12,ML3.8(AEIC),Error ellipse: s-maj=11.3km s-min=3.3km az=169.0*

ISC 22 06:40:21.6±0.8,54.°53N±0.°07×160.°63W±0.°04,h13km,n51,
σ1§36/54,mb4.0/6,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.67**	**64**			**Pn**	**06 40 37.1**	**+0.4**
CNBA						**Sn**	**06 40 46.6**	**-0.5**
CNBA	**Chernabura Isl**	**0.67**	**64**	IAML			06 40 51.4	
comp=E,2μm,0.8s								
SDPT	**Sand Point**	**0.82**	**6**	IAML			06 40 52.3	
comp=N,3μm,0.6s								
SDPT				IAML			06 40 54.7	
comp=E,5μm,0.6s								
SDPT	**Sand Point**	**0.82**	**6**			**Pn**	**06 40 38.6**	**-0.3**
SDPT						**Sg**	**06 40 48.9**	**+0.5**
DOL	**Dolgoi Island**	**0.94**	**311**			**Pb**	**06 40 39.7**	**-0.2**
PS4A	**Pavlof South-4**	**1.08**	**320**			**Pg**	**06 40 42.2**	**-0.2**
PS4A						**Sb**	**06 40 55.2**	**-0.9**
PS1A	**Pavlof South-1**	**1.10**	**325**			**Pb**	**06 40 42.3**	**-0.1**
PS1A						**Sb**	**06 40 55.7**	**-1.0**
DT1	**Dutton Round H**	**1.12**	**302**			**Pb**	**06 40 42.1**	**-0.7**
DTNA	**Dutton South F**	**1.12**	**304**			**Pb**	**06 40 42.5**	**-0.4**
PN7A	**Pavlof North-7**	**1.20**	**319**			**Pg**	**06 40 44.7**	**0.0**
VNKR	**Veniaminof 5**	**1.67**	**25**			**Pb**	**06 40 52.2**	**0.0**
VNSS	**Veniaminof 8**	**1.83**	**21**			**Pb**	**06 40 54.9**	**-0.1**
VNFG	**Fog Glacier, M**	**1.86**	**19**			**Pb**	**06 40 55.8**	**+0.2**
CHGN	**Chignik**	**2.18**	**35**			**Pb**	**06 40 59.6**	**-1.2**
CHGN				IAML			06 41 18.4	
comp=N,922nm,0.4s								
AKUT	**Akutan**	**3.04**	**265**	Pn		**Pn**	**06 41 08.7**	**-0.5**
AKUT				IAML			06 42 05.3	
comp=N,126nm,0.5s								
O15K	**Ungalikthiuk R**	**4.68**	**5**	Pn		**Pn**	**06 41 33.6**	**+1.8**
O15K				IAML			06 43 09.1	
comp=E,62nm,0.9s								
ACHA	**Angle Creek He**	**4.72**	**36**	Pn		**Pn**	**06 41 34.1**	**+1.6**
N14K	**Kuskokwak Cree**	**5.44**	**354**	Pn		**Pn**	**06 41 43.9**	**+1.7**
KDAK	**Kodiak Island**	**5.55**	**51**	Pn		**Pn**	**06 41 42.1**	**-1.7**
comp=E,1.8nm,0.3s,baz=241,slow=13,SNR=4.5								
KDAK					Sn	**Sn**	**06 42 44.7**	**-2.7**
comp=E,2.0nm,0.3s,baz=344,slow=21,SNR=1.4								
KDAK					Lg	Lg	06 43 10.7	
comp=E,6.4nm,0.3s,baz=100,slow=4.6,SNR=4.7								
comp=E,34nm,0.8s								
M14K	**Bethel**	**6.28**	**354**			**Pn**	**06 41 55.4**	**+1.7**
M16K	**Timber Creek**	**6.57**	**7**	Pn		**Pn**	**06 41 59.4**	**+1.6**
M11K	**Mekoryuk**	**6.59**	**335**	Pn		**Pn**	**06 42 00.2**	**+2.2**
O19K	**Port Alsworth**	**6.62**	**28**	Pn		**Pn**	**06 42 00.1**	**+1.6**
ILSW	**Iliamna Southw**	**6.81**	**34**	Pn		**Pn**	**06 42 02.5**	**+1.4**
M17K	**Holitna River**	**7.09**	**13**	Pn		**Pn**	**06 42 06.0**	**+1.0**
N19K	**Bonanza Creek**	**7.11**	**25**	Pn		**Pn**	**06 42 07.5**	**+2.3**
L16K	**Owhat River**	**7.23**	**4**	Pn		**Pn**	**06 42 08.5**	**+1.8**
K13K	**Kusilvak Mount**	**7.72**	**346**	Pn		**Pn**	**06 42 15.7**	**+2.2**
L18K	**Granite Mounta**	**7.98**	**13**	Pn		**Pn**	**06 42 18.7**	**+1.6**
M19K	**Big River Lodg**	**8.09**	**21**	Pn		**Pn**	**06 42 21.6**	**+3.0**
SEW	**Seward**	**8.23**	**43**	Pn		**Pn**	**06 42 21.7**	**+1.2**
J14K	**Nanvaranak Lak**	**8.38**	**351**	Pn		**Pn**	**06 42 24.1**	**+1.5**
PWL	**Port Wells**	**9.13**	**41**	Pn		**Pn**	**06 42 32.7**	**-0.2**
HIN	**Hinchinbrook I**	**9.61**	**47**	Pn		**Pn**	**06 42 40.7**	**+1.2**
J19K	**Poorman**	**9.83**	**13**	Pn		**Pn**	**06 42 43.4**	**+1.0**
EYAK	**Cordova Ski Ar**	**10.00**	**47**	Pn		**Pn**	**06 42 45.0**	**+0.2**
SCM	**Sheep Creek Mo**	**10.13**	**38**	Pn		**Pn**	**06 42 47.2**	**+0.6**
KIWB	**Kanaga Island**	**10.27**	**262**	Pn		**Pn**	**06 42 48.9**	**+0.4**
ANM	**Nome**	**10.35**	**349**	Pn		**Pn**	**06 42 50.1**	**+0.6**
KLU	**Klutina**	**10.45**	**42**			**Pn**	**06 42 51.6**	**+0.6**
F15K	**North Star Dit**	**11.39**	**352**	Pn		**Pn**	**06 43 05.4**	**+1.7**
ILAR	**Eielson Array**	**12.36**	**28**	Pn		**Pn**	**06 43 15.2**	**-1.9**
comp=E,0.2nm,0.3s,baz=214,slow=14,SNR=5.0								
I30M	**Mount Dempster**	**16.09**	**39**	P		**P**	**06 44 12.7**	**+2.0**
INK	**Inuvik**	**16.70**	**32**	P		**P**	**06 44 39.0**	**-0.2**
comp=E,0.4nm,0.3s,baz=224,slow=12,SNR=8.3								
comp=E,5.2nm,1.0s								
PETK	**Petropavlovsk-**	**24.39**	**284**	P		**P**	**06 45 38.7**	**-0.6**
comp=E,2.4nm,0.6s,baz=78,slow=13,SNR=4.6								
comp=E,2.4nm,0.6s								
YKA	**Yellowknife Ar**	**24.83**	**53**	P		**P**	**06 45 44.3**	**+1.2**
comp=E,0.7nm,0.6s,baz=273,slow=8.6,SNR=1.7								
comp=E,0.7nm,0.6s								
TXAR	**Lajitas Array**	**47.66**	**98**	P		**P**	**06 48 59.8**	**+2.2**
comp=E,0.5nm,0.8s,baz=289,slow=4.7,SNR=3.9								
comp=E,0.5nm,0.8s								
FINES	**FINESS Array B**	**64.25**	**356**	P		**P**	**06 50 54.4**	**-1.3**
comp=E,0.9nm,0.4s,baz=18,slow=6.8,SNR=5.7								
comp=E,0.9nm,0.4s								
HFS	**Hagfors**	**65.59**	**3**	P		**P**	**06 51 03.6**	**-0.9**
comp=E,2.3nm,0.6s,baz=0.0,slow=6.0,SNR=4.5								
comp=E,2.3nm,0.6s								
MKAR	**Makanchi Array**	**65.91**	**318**	P		**P**	**06 51 05.1**	**-1.8**
comp=E,0.4nm,0.4s,baz=29,slow=5.9,SNR=1.2								
comp=E,0.4nm,0.4s								
QSPA	**South Pole Qui**	**144.31**	**180**	PKP		**PKPab**	**06 59 53.7**	**-0.1**
comp=E,1.5nm,0.8s,baz=60,slow=2.0,SNR=5.2								

*BER **22** 06:42:52.5±2.9,80.°14N×0.°10W,h10km,Mw3.4, ML2.9(NAO),Confirmed Earthquake*
*DNK **22** 06:42:53.2±1.2,80.°13N×0.°15E,h33km±10km,ML2.1, Presumed earthquake*
*KOLA **22** 06:42:54.7,80.°65N×3.°87E,h0km,ML2.2,Error ellipse: s-maj=101.9km s-min=31.5km az=50.0,Greenland sea*
*FCIAR **22** 06:42:57.0,80.°07N×4.°02E,h10km,station OMEGA has station magnitude of 4.50*

ISC 22 06:42:48.6±1.1,80.°06N±0.°07×0.°22W±0.°04,h10km,n31,
σ2§98/56,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.50**	**111**	Pn		**Pn**	**06 43 31.3**	**+2.1**
KBS					Sn	**Sn**	**06 43 58.2**	**-1.5**
KBS	**Kingsbay**	**2.50**	**111**	*e*P		**Pn**	**06 43 31.2**	**+2.0**
KBS				*e*S		**Sn**	**06 43 58.2**	**-1.5**
KBS				IAML			06 44 01.1	
comp=Z,14nm,0.3s								
KBS	**Kingsbay**	**2.50**	**111**	P		**Pn**	**06 43 31.1**	**+1.8**
KBS				S		**Sn**	**06 43 58.0**	**-1.7**
KBS	**Kingsbay**	**2.50**	**111**	*i* P		**Pn**	**06 43 30.9**	**+1.7**
KBS				*i* S		**Sn**	**06 43 58.4**	**-1.3**
NOR	**Nord**	**3.05**	**308**	Pn		**Pn**	**06 43 39.0**	**+2.3**
NOR	**Nord**	**3.05**	**308**	*e*P		**Pn**	**06 43 39.3**	**+2.6**
NOR				*e*S		**Sn**	**06 44 12.0**	**-1.2**
NOR	**Nord**	**3.05**	**308**	*e*P		**Pn**	**06 43 38.8**	**+2.1**
BRBB	**Barentsburg B**	**3.38**	**119**	Pn		**Pn**	**06 43 45.3**	**+4.1**
BRBB				S		**Sn**	**06 44 22.6**	**+1.4**
BRBB	**Barentsburg B**	**3.38**	**119**	*e*P		**Pn**	**06 43 45.7**	**+4.5**
BRBB				*e*S		**Sn**	**06 44 21.5**	**+0.3**
BRBB				IAML			06 44 24.9	
comp=Z,15nm,0.5s								
BRBB	**Barentsburg B**	**3.38**	**119**	P		**Pn**	**06 43 45.5**	**+4.3**
BRBB				S		**Sn**	**06 44 22.5**	**+1.4**
BRBA	**Barentsburg A**	**3.40**	**119**	*e*P		**Pn**	**06 43 45.7**	**+4.2**
BRBA				*e*S		**Sn**	**06 44 22.5**	**+0.7**
SPA0	**Spitsbergen Ar**	**3.66**	**113**	Pn		**Pn**	**06 43 48.1**	**+3.0**
baz=306,slow=11								
SPA0					Sn	**Sn**	**06 44 26.9**	**-1.4**
baz=317,slow=14								
SPA0	**Spitsbergen Ar**	**3.66**	**113**	*e*P		**Pn**	**06 43 48.0**	**+2.8**
SPA0				IAML			06 43 49.5	
comp=Z,11nm,0.1s								
SPA0				*e*S		**Sn**	**06 44 26.8**	**-1.5**
SPA0	**Spitsbergen Ar**	**3.66**	**113**	*e*P		**Pn**	**06 43 47.1**	**+2.0**
SPA0				*e*S		**Sn**	**06 44 23.8**	**-4.4**
SPITS	**Spitsbergen Ar**	**3.66**	**113**	P		**Pn**	**06 43 47.8**	**+2.6**
SPITS				S		**Sn**	**06 44 27.1**	**-1.1**
HSPB	**Hornsund (broa**	**4.38**	**126**	Pn		**Pn**	**06 43 58.3**	**+3.3**
HSPB				Sn		**Sn**	**06 44 45.8**	**-0.1**
HSPB	**Hornsund (broa**	**4.38**	**126**	*e*P		**Pn**	**06 43 58.6**	**+3.6**
HSPB				IAML			06 44 00.2	
comp=Z,4.0nm,0.2s								
HSPB				*e*S		**Sn**	**06 44 45.9**	**-0.1**
HSPB	**Hornsund (broa**	**4.38**	**126**	*e*P		**Pn**	**06 43 57.1**	**+2.2**
HSPB				*e*S		**Sn**	**06 44 44.8**	**-1.2**
HSPB	**Hornsund (broa**	**4.38**	**126**	P		**Pn**	**06 43 58.5**	**+3.5**
HSPB				S		**Sn**	**06 44 47.0**	**+1.0**
DAG	**Danmarks Havn**	**4.95**	**238**	*e*P		**Pn**	**06 44 04.7**	**+1.9**
DAG				*e*S		**Sn**	**06 44 57.6**	**-2.2**
DAG	**Danmarks Havn**	**4.95**	**238**	*i* P		**Pn**	**06 44 05.0**	**+2.2**
DAG				*i* S		**Sn**	**06 44 58.4**	**-1.5**
DAG				IAML			06 45 02.9	
comp=Z,8.9nm,0.3s								
HOPEN	**Hopen**	**6.19**	**112**	*e*S		**Sn**	**06 45 26.9**	**-3.6**
DBG	**Daneborg**	**7.23**	**228**	Pn		**Pn**	**06 44 36.2**	**+2.1**
DBG				Sn		**Sn**	**06 45 51.1**	**-4.9**
DBG	**Daneborg**	**7.23**	**228**	*e*P		**Pn**	**06 44 36.1**	**+2.0**
DBG				*e*S		**Sn**	**06 45 51.2**	**-4.9**
DBG	**Daneborg**	**7.23**	**228**	*i* P		**Pn**	**06 44 35.9**	**+1.8**
DBG				*i* S		**Sn**	**06 45 53.0**	**-3.1**
DBG				IAML			06 45 56.7	
comp=Z,5.6nm,0.4s								
OMEGA	**Omega**	**7.83**	**61**	*e*P		**Pn**	**06 44 41.9**	**-0.4**
OMEGA				*e*S		**Sn**	**06 46 03.8**	**-7.0**
comp=Z,128nm,11.1s								
JNW	**Jan Mayen West**	**9.29**	**197**	*e*P		**Pn**	**06 45 06.5**	**+4.1**
JNW				*e*S		**Sn**	**06 46 42.8**	**-3.9**
JNE	**Jan Mayen East**	**9.33**	**197**	*e*P		**Pn**	**06 45 06.7**	**+3.9**
JNE				*e*S		**Sn**	**06 46 42.2**	**-5.3**
JMIC	**Jan Mayen**	**9.34**	**197**	*e*P		**Pn**	**06 45 06.9**	**+3.9**
JMIC				*e*			06 46 47.0	
JMI	**Jan Mayen**	**9.41**	**197**	*e*P		**Pn**	**06 45 08.1**	**+4.1**
NEEM	**North Greenlan**	**9.96**	**281**	*i* P		**Pn**	**06 45 11.6**	**-0.1**
NEEM				*i* S		Sn	06 46 53.3	-10
NEEM				IAML			06 46 59.8	
comp=Z,4.2nm,0.5s								

*IDC **22** 06:53:49.7±0.7,55.°30N×158.°53W,h0km,mb4.1/24, mbtmp4.1/26,ML4.0/2,Error ellipse: s-maj=19.4km s-min=12.3km az=179.0*
*AEIC **22** 06:53:53.6±2.4,55.°11N±0.°04×158.°32W±0.°06,h29km±4km, Error ellipse: s-maj=6.2km s-min=4.0km az=136.0*
*NEIC **22** 06:53:55.5±2.2,55.°16N±0.°04×158.°34W±0.°07,h46km±7km, mb4.4/6,ML4.4/40,ML4.2(AEIC),Error ellipse: s-maj=6.7km s-min=5.0km az=153.0*

ISC 22 06:53:54.0±0.5,55.°17N±0.°06×158.°35W±0.°04,h30km,
n110,σ1§39/111,mb4.2/26,1D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.79**	**245**	P		**Pn**	**06 54 08.3**	**-0.8**
CHNA	**Chernabura Isl**	**0.79**	**245**	S		**Sb**	**06 54 19.2**	**-0.4**
CNBA	**Chernabura Isl**	**0.80**	**244**			**Pn**	**06 54 08.6**	**-0.5**
CNBA					Sn	**Sb**	**06 54 19.9**	**+0.2**
CNBA				IAML			06 54 20.6	
comp=N,12μm,0.3s								
CNBA				IAML			06 54 21.1	
comp=E,13μm,0.7s								
VNKR	**Veniaminof 5**	**1.04**	**327**			**Pn**	**06 54 12.7**	**+0.2**
CHGN	**Chignik**	**1.13**	**358**			**Pn**	**06 54 14.1**	**+0.3**
CHGN				IAML			06 54 30.9	
comp=E,10μm,0.5s								
CHGN				IAML			06 54 31.2	
comp=N,7μm,0.3s								
CHGN	**Chignik**	**1.13**	**358**			**Sn**	**06 54 28.9**	**+0.7**
VNSW	**Veniaminof 7**	**1.13**	**323**			**Pn**	**06 54 14.7**	**+0.8**
VNSS	**Veniaminof 8**	**1.23**	**330**			**Pn**	**06 54 16.0**	**+0.7**
SDPT	**Sand Point**	**1.23**	**279**	P		**Pn**	**06 54 15.1**	**0.0**
SDPT	**Sand Point**	**1.23**	**279**	S		**Sn**	**06 54 31.0**	**+0.3**
SDPT	**Sand Point**	**1.23**	**279**			**Pn**	**06 54 15.1**	**0.0**
SDPT					Sn	**Sn**	**06 54 29.2**	**-1.5**
SDPT				IAML			06 54 32.1	
comp=E,7μm,1.2s								
VNFG	**Fog Glacier, M**	**1.31**	**329**			**Pn**	**06 54 17.9**	**+1.6**
VNFG	**Fog Glacier, M**	**1.31**	**329**			**Sn**	**06 54 35.3**	**+2.5**
VNFG	**Fog Glacier, M**	**1.31**	**329**			**Pn**	**06 54 17.7**	**+1.4**
ANPB	**Aniakchak Plen**	**1.64**	**1**			**Pn**	**06 54 22.7**	**+2.0**
CHIR	**Chirikof Islan**	**1.68**	**66**	P		**Pn**	**06 54 21.4**	**+0.1**
CHIR	**Chirikof Islan**	**1.68**	**66**	S		**Sn**	**06 54 43.9**	**+2.0**
CHIR	**Chirikof Islan**	**1.68**	**66**			**Pn**	**06 54 21.4**	**+0.1**
CHIR					Sn	**Sn**	**06 54 40.9**	**-0.9**
CHIR				IAML			06 54 55.4	
comp=E,3μm,1.2s								
CHIR				IAML			06 54 58.8	
comp=N,2μm,1.0s								
PVV	**Pavlof Volcano**	**1.98**	**277**			**Pn**	**06 54 26.0**	**+0.6**
DOL	**Dolgoi Island**	**2.02**	**271**			**Pn**	**06 54 26.3**	**+0.4**
SII	**Sitkinak Islan**	**2.73**	**58**	P		**Pn**	**06 54 36.3**	**+0.6**
SII	**Sitkinak Islan**	**2.73**	**58**			**Pn**	**06 54 36.1**	**+0.4**
SII				IAML			06 55 31.9	
comp=N,2μm,0.9s								
SII				IAML			06 55 39.1	
comp=E,1μm,1.5s								
PLK5	**Peulik 5**	**2.95**	**15**			**Pn**	**06 54 39.8**	**+1.1**
ISNN	**Isanotski Nort**	**3.15**	**266**			**Pn**	**06 54 42.6**	**+1.2**
SSBA	**Shishaldin**	**3.35**	**266**			**Pn**	**06 54 45.4**	**+1.0**
ACHA	**Angle Creek He**	**3.47**	**27**	Pn		**Pn**	**06 54 47.0**	**+0.9**
OHAK	**Old Harbor**	**3.50**	**52**	P		**Pn**	**06 54 46.2**	**0.0**
OHAK	**Old Harbor**	**3.50**	**52**			**Pn**	**06 54 46.5**	**+0.3**
P16K	**Nushagak River**	**3.88**	**3**			**Pn**	**06 54 52.9**	**+1.5**
P16K				IAML			06 56 13.2	
comp=E,754nm,1.4s								
O15K	**Ungalikthiuk R**	**4.09**	**349**			**Pn**	**06 54 55.2**	**+0.7**
O15K					Sn	**Sn**	**06 55 38.9**	**-2.4**
KDAK	**Kodiak Island**	**4.13**	**48**	Pn		**Pn**	**06 54 54.1**	**-0.8**
comp=E,3.5nm,0.3s,baz=195,slow=8.5,SNR=16								
KDAK					Sn	**Sn**	**06 55 38.6**	**-3.6**
comp=E,8.4nm,0.3s,baz=282,slow=7.9,SNR=5.3								
KDAK					Lg	Lg	06 55 59.9	
comp=E,3.4nm,0.3s,baz=48,slow=13,SNR=3.5								
comp=E,6.7nm,0.3s								
KDAK	**Kodiak Island**	**4.13**	**48**			**Pn**	**06 54 55.2**	**+0.2**
P17K	**Kvichak River**	**4.17**	**14**			**Pn**	**06 54 57.5**	**+2.0**
O14K	**Tigyukauivet M**	**4.39**	**340**			**Pn**	**06 54 59.5**	**+1.0**
O14K				IAML			06 56 26.3	
comp=E,243nm,5.0s								
O14K				IAML			06 56 37.7	
comp=N,372nm,4.2s								
AKUT	**Akutan**	**4.43**	**259**	P		**Pn**	**06 55 00.3**	**+1.2**
AKUT	**Akutan**	**4.43**	**259**	Pn		**Pn**	**06 55 01.1**	**+1.9**
AKUT				IAML			06 56 09.3	
comp=E,398nm,1.1s								
O16K	**Kokwok River B**	**4.44**	**2**			**Pn**	**06 55 00.8**	**+1.6**
O16K				IAML			06 56 26.9	
comp=E,209nm,4.9s								
LVA	**Lava Point**	**4.58**	**260**	Pn		**Pn**	**06 55 03.3**	**+2.2**
LVA				IAML			06 56 27.7	
comp=E,366nm,4.3s								
UNV	**Unalaska Valle**	**4.94**	**258**	P		**Pn**	**06 55 07.5**	**+1.5**
UNV	**Unalaska Valle**	**4.94**	**258**			**Pn**	**06 55 06.7**	**+0.7**
UNV				IAML			06 56 23.5	
comp=E,180nm,4.7s								
UNV				IAML			06 56 24.3	
comp=N,326nm,4.6s								
O18K	**Koktuh Hills**	**4.99**	**19**			**Pn**	**06 55 08.4**	**+1.6**
O18K				IAML			06 56 47.5	
comp=E,137nm,4.7s								
N14K	**Kuskokwak Cree**	**5.09**	**341**			**Pn**	**06 55 09.2**	**+1.0**
N15K	**Kwethluk River**	**5.10**	**350**	IAML			06 56 40.9	
comp=E,308nm,1.3s								
N15K				IAML			06 56 54.3	
comp=N,312nm,3.8s								
N17K	**Nushagak Hills**	**5.41**	**6**			**Pn**	**06 55 14.6**	**+2.1**
ILSW	**Iliamna Southw**	**5.58**	**28**			**Pn**	**06 55 17.0**	**+2.0**
N18K	**Kilae Creek**	**5.68**	**12**			**Pn**	**06 55 17.9**	**+1.7**
CNPM	**China Poot**	**5.82**	**39**	Pn		**Pn**	**06 55 20.3**	**+2.2**
M13K	**Dall Lake**	**5.89**	**335**			**Pn**	**06 55 21.0**	**+1.8**
M14K	**Bethel**	**5.92**	**343**			**Pn**	**06 55 20.2**	**+0.8**
RED	**Redoubt Volcan**	**6.05**	**27**			**Pn**	**06 55 23.1**	**+1.8**
M17K	**Holitna River**	**6.27**	**4**			**Pn**	**06 55 26.4**	**+2.1**
SEW	**Seward**	**6.87**	**40**	Pn		**Pn**	**06 55 33.9**	**+1.4**
SPIA	**Saint Paul Isl**	**6.94**	**292**	P		**Pn**	**06 55 34.6**	**+1.1**
SPIA	**Saint Paul Isl**	**6.94**	**292**			**Pn**	**06 55 34.9**	**+1.4**
L18K	**Granite Mounta**	**7.12**	**6**	Pn		**Pn**	**06 55 38.6**	**+2.7**
L19K	**White Mountain**	**7.26**	**13**			**Pn**	**06 55 39.4**	**+1.4**
SKT	**Skwentna**	**7.70**	**25**	Pn		**Pn**	**06 55 46.1**	**+2.1**
J17K	**VABM Dome**	**8.26**	**358**			**Pn**	**06 55 51.6**	**0.0**
J18K	**Innoko River**	**8.36**	**5**			**Pn**	**06 55 55.4**	**+2.4**
KLU	**Klutina**	**9.09**	**41**			**Pn**	**06 56 04.5**	**+1.4**
H17K	**Granite Mounta**	**9.83**	**356**			**Pn**	**06 56 14.1**	**+1.1**

comp=Z,1.8nm,0.9s,baz=19,slow=6.8,SNR=5.9
comp=Z,1.8nm,0.9s
ARTI Arti 64.85 338 P **P** 07 04 28.6 -0.9
comp=Z,2.4nm,0.5s,baz=52,slow=6.2,SNR=3.8
comp=Z,2.4nm,0.5s
HFS Hagfors 64.87 4 P **P** 07 04 28.9 -0.8
comp=Z,4.5nm,0.9s,baz=23,slow=4.8,SNR=11
comp=Z,4.5nm,0.9s
BVAR Borovoye Array 64.90 330 P **P** 07 04 29.4 -0.5
comp=Z,3.0nm,0.7s,baz=33,slow=7.1,SNR=4.3
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 66.31 319 P **P** 07 04 37.8 -1.4
comp=Z,0.6nm,0.5s,baz=41,slow=6.0,SNR=5.7
comp=Z,0.6nm,0.5s
EKA Eskdalemuir Ar 68.00 15 P **P** 07 04 48.8 -0.9
comp=Z,0.8nm,0.6s,baz=352,slow=5.5,SNR=1.8
comp=Z,0.8nm,0.6s
AKTO Aktyubinsk 70.47 336 P **P** 07 05 04.2 -0.9
comp=Z,1.5nm,0.3s,baz=356,slow=4.3,SNR=4.8
comp=Z,1.5nm,0.3s
PZH PanZhiHua 74.03 293 P **P** 07 05 26.8 -0.1
AKASG Malin Array Be 74.31 355 P **P** 07 05 26.8 -1.2
comp=Z,0.8nm,0.3s,baz=7.6,slow=5.9,SNR=9.0
comp=Z,0.8nm,0.3s
GERES GERESS Array B 76.14 5 P **P** 07 05 39.1 +0.4
comp=Z,0.3nm,0.4s,baz=339,slow=5.2,SNR=2.2
comp=Z,0.3nm,0.4s
CMAR Chiang Mai Arr 82.07 291 P **P** 07 06 11.0 -0.5
comp=Z,0.8nm,0.3s,baz=35,slow=5.8,SNR=2.0
comp=Z,0.8nm,0.3s
ESDC Sonseca Array 83.02 20 P **P** 07 06 16.2 0.0
comp=Z,1.7nm,1.1s,baz=348,slow=5.2,SNR=4.9
comp=Z,1.7nm,1.1s
QSPA South Pole Qui 144.95 180 PKPbc PKPbc 07 13 24.9 -1.1
comp=Z,2.5nm,0.6s,baz=58,slow=3.5,SNR=14

IDC 22 06:55:26.1±2.6, 54°24N×85°82E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=18.4km s-min=10.8km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.66**	**244**	I	I	07 00 50.0	
	baz=66,slow=316,SNR=2.0						
ZALV	**Zalesovo Beam**	**0.66**	**244**	Pg	Pg	06 55 37.1	-1.7
	0.7nm,0.3s,baz=62,slow=18,SNR=6.3						
ZALV				Lg	Lg	06 55 48.8	
	2.4nm,0.3s,baz=61,slow=28,SNR=8.0						
KURBB	**Kurchatov Arra**	**5.75**	**234**	Pn	Pn	06 56 53.6	+1.0
	0.1nm,0.3s,baz=51,slow=14,SNR=3.2						
KURBB				Lg	Lg	06 58 27.6	
	baz=42,slow=30,SNR=1.1						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**7.79**	**198**	Pn	Pn	06 57 22.1	+1.4
	0.2nm,0.3s,baz=18,slow=14,SNR=5.6						
	0.5nm,0.4s						

IDC 22 06:58:57.3±0.9, 54°57N×161°14W, h0km, mb4.3/25, mbtmp4.3/27, ML4.1/2, Error ellipse: s-maj=23.6km s-min=12.5km az=180.0
NEIC 22 06:58:57.2±2.5, 54°20N±0°04×161°13W±0°08, h10km±1km, mb4.2/26, ML4.0/21, ML3.9(AEIC), Error ellipse: s-maj=8.3km s-min=6.6km az=237.0
AEIC 22 06:59:01.5±3.8, 54°46N±0°05×161°03W±0°07, h9km±4km, Error ellipse: s-maj=7.3km s-min=5.5km az=214.0
ISC 22 06:58:58.8±1.1, 54°27N±0°06×161°09W±0°04, h19km±4km, n122, σ1§22/116, mb4.3/25, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**0.99**	**333**		**Pg**	**06 59 17.8**	**-0.2**
DOL					**Sb**	**06 59 29.6**	**-0.4**
CNBA	**Chernabura Isl**	**1.03**	**57**		**Pb**	**06 59 17.7**	**-0.3**
CNBA				IAML		06 59 38.8	
	comp=E,2μm,0.6s						
DT1	**Dutton Round H**	**1.09**	**321**		**Pg**	**06 59 19.5**	**-0.4**
DT1					**Sg**	**06 59 33.8**	**-0.4**
DTNA	**Dutton South F**	**1.11**	**323**		**Pg**	**06 59 20.0**	**-0.3**
DTNA					**Sn**	**06 59 34.1**	**0.0**
SDPT	**Sand Point**	**1.14**	**18**	Pn	**Pn**	**06 59 19.1**	**-0.5**
SDPT				IAML		06 59 33.7	
	comp=N,4μm,0.7s						
SDPT				IAML		06 59 38.1	
	comp=E,3μm,0.6s						
PS4A	**Pavlof South-4**	**1.17**	**338**		**Pg**	**06 59 20.9**	**-0.5**
PS4A					**Sg**	**06 59 36.4**	**-0.3**
PS1A	**Pavlof South-1**	**1.21**	**342**		**Pb**	**06 59 21.6**	**+0.5**
PS1A					**Sg**	**06 59 37.7**	**-0.5**
PN7A	**Pavlof North-7**	**1.28**	**336**		**Pg**	**06 59 23.5**	**0.0**
ISNN	**Isanotski Nort**	**1.67**	**291**		**Pg**	**06 59 29.7**	**-1.1**
SSLN	**Shishaldin Nor**	**1.78**	**289**		**Pg**	**06 59 31.8**	**-1.2**
VNFG	**Fog Glacier, M**	**2.20**	**23**		**Pn**	**06 59 35.3**	**+1.0**
AKUT	**Akutan**	**2.76**	**269**		**Pn**	**06 59 40.6**	**-1.2**
AKUT				IAML		07 00 46.2	
	comp=N,607nm,4.8s						
UNV	**Unalaska Valle**	**3.22**	**265**		**Pn**	**06 59 43.7**	**-4.5**
CHIR	**Chirikof Islan**	**3.51**	**61**		**Pn**	**06 59 52.2**	**0.0**
CHIR				IAML		07 00 52.8	
	comp=E,389nm,1.4s						
CHIR				IAML		07 00 53.7	
	comp=N,415nm,4.3s						
SII	**Sitkinak Islan**	**4.55**	**57**	Pn	**Pn**	**07 00 06.3**	**-0.3**
O15K	**Ungalikthiuk R**	**4.97**	**8**		**Pn**	**07 00 13.2**	**+0.9**
O15K				IAML		07 01 54.6	
	comp=N,94nm,1.1s						
O15K				IAML		07 01 57.7	
	comp=E,70nm,0.9s						
O14K	**Tigyukauivet M**	**5.00**	**359**		**Pn**	**07 00 13.1**	**+0.5**
O14K				IAML		07 01 48.1	
	comp=E,124nm,1.3s						
ACHA	**Angle Creek He**	**5.09**	**37**		**Pn**	**07 00 13.7**	**-0.3**
OHAK	**Old Harbor**	**5.30**	**53**		**Pn**	**07 00 16.1**	**-0.7**
OHAK				IAML		07 01 40.5	
	comp=N,77nm,3.8s						
OHAK				IAML		07 01 43.5	
	comp=E,111nm,4.4s						
P17K	**Kvichak River**	**5.56**	**25**	Pn	**Pn**	**07 00 21.8**	**+1.5**
O16K	**Kokwok River B**	**5.58**	**16**		**Pn**	**07 00 21.7**	**+1.0**
N14K	**Kuskokwak Cree**	**5.68**	**357**		**Pn**	**07 00 23.2**	**+1.2**
KDAK	**Kodiak Island**	**5.92**	**50**	Pn	**Pn**	**07 00 24.1**	**-1.2**
	comp=E,3.1nm,0.3s,baz=220,slow=4.4,SNR=5.0						
KDAK				Sn	**Sn**	**07 01 28.0**	**-4.6**
	baz=311,slow=3.2						
KDAK				Lg	Lg	07 01 57.4	
	comp=E,2.6nm,0.3s,baz=282,slow=16,SNR=4.8						
	comp=E,9.3nm,0.4s						
KDAK	**Kodiak Island**	**5.92**	**50**		**Pn**	**07 00 24.7**	**-0.6**
N15K	**Kwethluk River**	**5.94**	**5**		**Pn**	**07 00 26.8**	**+1.2**
SPIA	**Saint Paul Isl**	**5.94**	**303**	Pn	**Pn**	**07 00 24.3**	**-1.2**
O18K	**Koktuh Hills**	**6.45**	**27**		**Pn**	**07 00 33.7**	**+1.1**
M14K	**Bethel**	**6.52**	**356**		**Pn**	**07 00 34.9**	**+1.4**
N17K	**Nushagak Hills**	**6.62**	**17**	Pn	**Pn**	**07 00 36.3**	**+1.5**
O19K	**Port Alsworth**	**6.98**	**29**		**Pn**	**07 00 43.2**	**+3.4**
L14K	**Kuka Creek**	**7.14**	**354**		**Pn**	**07 00 42.0**	**0.0**
N19K	**Bonanza Creek**	**7.46**	**26**		**Pn**	**07 00 49.0**	**+2.6**
RED	**Redoubt Volcan**	**7.62**	**33**		**Pn**	**07 00 50.5**	**+1.7**
L18K	**Granite Mounta**	**8.30**	**14**	Pn	**Pn**	**07 00 59.4**	**+1.5**
SEW	**Seward**	**8.60**	**42**	Pn	**Pn**	**07 01 02.1**	**+0.1**
J14K	**Nanvaranak Lak**	**8.60**	**352**	Pn	**Pn**	**07 01 03.5**	**+1.5**
J16K	**Anvik River**	**9.04**	**1**		**Pn**	**07 01 09.4**	**+1.3**
SKT	**Skwentna**	**9.22**	**29**	Pn	**Pn**	**07 01 12.9**	**+2.3**
PWL	**Port Wells**	**9.50**	**41**		**Pn**	**07 01 14.5**	**0.0**
I17K	**Unalakleet**	**9.65**	**1**	Pn	**Pn**	**07 01 17.2**	**+0.9**
HIN	**Hinchinbrook I**	**9.98**	**46**		**Pn**	**07 01 20.6**	**-0.3**
SCM	**Sheep Creek Mo**	**10.50**	**38**	Pn	**Pn**	**07 01 27.6**	**-0.5**
DIV	**Divide**	**10.68**	**44**	Pn	**Pn**	**07 01 30.1**	**-0.5**
KAIM	**Kayak Island**	**10.68**	**51**		**Pn**	**07 01 29.8**	**-0.6**
KLU	**Klutina**	**10.82**	**42**		**Pn**	**07 01 32.0**	**-0.5**
M24K	**Tolsona, Glenn**	**11.09**	**39**	Pn	**Pn**	**07 01 36.1**	**-0.1**
F15K	**North Star Dit**	**11.61**	**353**	Pn	**Pn**	**07 01 44.7**	**+1.5**
GLB	**Gilahina Butte**	**11.64**	**45**	Pn	**Pn**	**07 01 42.8**	**-0.9**
VRDI	**Verde Repeater**	**11.69**	**46**	Pn	**Pn**	**07 01 43.7**	**-0.8**
PAX	**Paxson**	**11.89**	**37**	Pn	**Pn**	**07 01 46.8**	**-0.4**
MLY	**Manley**	**11.97**	**22**	Pn	**Pn**	**07 01 48.9**	**+0.7**
H21K	**Melozitna Rive**	**12.14**	**16**	Pn	**Pn**	**07 01 51.5**	**+1.1**
GRNC	**Granite Creek**	**12.21**	**50**		**Pn**	**07 01 51.7**	**0.0**
K24K	**Donnelly Dome**	**12.35**	**33**	Pn	**Pn**	**07 01 53.9**	**+0.6**
I23K	**Minto, Yukon-K**	**12.38**	**24**	Pn	**Pn**	**07 01 53.0**	**-0.7**
H22K	**Ishtalitna Cre**	**12.60**	**19**	Pn	**Pn**	**07 01 58.4**	**+1.6**
RIDG	**Independent Ri**	**12.61**	**35**	Pn	**Pn**	**07 01 56.6**	**-0.4**
ILAR	**Eielson Array**	**12.72**	**29**	Pn	**Pn**	**07 01 55.2**	**-3.1**
	comp=E,0.3nm,0.3s,baz=220,slow=12,SNR=9.0						
ILAR				Sn	Sn	07 04 07.2	-12
	baz=215,slow=7.8,SNR=1.3						
G21K	**Allakaket**	**12.83**	**14**	Pn	**Pn**	**07 02 01.5**	**+1.7**
L27K	**Beaver Creek,**	**13.29**	**41**	Pn	**Pn**	**07 02 05.3**	**-0.8**
P29M	**Windy Craggy**	**13.78**	**58**		**Pn**	**07 02 14.1**	**+1.2**
S31K	**Pelican**	**14.31**	**65**	Pn	**Pn**	**07 02 19.7**	**-0.4**
SKAG	**Skagway**	**14.96**	**59**		**Pn**	**07 02 30.7**	**+1.9**
SKAG				IAmb	IAmb	07 02 55.1	
	comp=Z,15nm,1.2s						
BESE	**Bessie Mountai**	**15.09**	**63**	Pn	**Pn**	**07 02 31.9**	**+1.1**
BESE				IAmb	IAmb	07 02 42.1	
	comp=Z,9.3nm,0.8s						
G27K	**Doyon Strip**	**15.69**	**29**		**P**	**07 02 41.2**	**-1.2**
P32M	**Atlin**	**15.79**	**59**	Pn	**Pn**	**07 02 41.5**	**+1.6**
P32M				IAmb	IAmb	07 02 47.8	
	comp=Z,19nm,1.1s						
J30M	**Hart River**	**16.16**	**41**		**Pn**	**07 02 45.9**	**+1.3**
J30M				IAmb	IAmb	07 02 51.3	
	comp=Z,19nm,0.7s						
C23K	**Itkillik River**	**16.33**	**13**	Pn	**Pn**	**07 02 47.0**	**+0.4**
C23K				IAmb	IAmb	07 03 19.5	
	comp=Z,20nm,1.2s						
I30M	**Mount Dempster**	**16.46**	**38**		**Pn**	**07 02 48.6**	**+0.2**
I30M				IAmb	IAmb	07 02 54.3	
	comp=Z,22nm,0.8s						
F28M	**Old Crow**	**16.75**	**29**	Pn	**Pn**	**07 02 51.7**	**-0.2**
G29M	**Pine Creek**	**16.84**	**32**		**P**	**07 02 54.8**	**-0.4**
G29M				IAmb	IAmb	07 03 06.7	
	comp=Z,39nm,1.4s						
EPYK	**Eagle Plains**	**16.95**	**35**		**P**	**07 02 55.7**	**-0.7**
H31M	**Peel River**	**17.48**	**38**		**P**	**07 03 01.9**	**-0.4**
INK	**Inuvik**	**19.06**	**32**	P	**P**	**07 03 17.9**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=264,slow=8.2,SNR=9.4						
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**24.19**	**284**	P	**P**	**07 04 14.2**	**+0.5**
	comp=Z,10nm,0.6s,baz=77,slow=13,SNR=15						
	comp=Z,10nm,0.6s						
YKA	**Yellowknife Ar**	**25.20**	**52**	P	**P**	**07 04 23.9**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=275,slow=10,SNR=9.7						
	comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**32.92**	**101**	P	**P**	**07 05 34.9**	**+3.0**
	comp=Z,1.4nm,0.7s,baz=315,slow=10,SNR=6.3						
	comp=Z,1.4nm,0.7s						
PDAR	**Pinedale Array**	**35.25**	**87**	P	**P**	**07 05 53.6**	**+1.6**
	comp=Z,1.2nm,1.0s,baz=281,slow=3.1,SNR=2.9						
	comp=Z,1.2nm,1.0s						
PV03	**Paradox Valley**	**38.54**	**93**	P	**P**	**07 06 18.7**	**-1.4**
ULM	**Lac du Bonnet**	**38.84**	**68**	P	**P**	**07 06 22.8**	**+0.6**
	comp=Z,2.5nm,0.5s,baz=307,slow=5.8,SNR=4.7						
	comp=Z,2.5nm,0.5s						
ULM	**Lac du Bonnet**	**38.84**	**68**	IAmb	IAmb	07 06 51.7	
	comp=Z,5.7nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**42.24**	**228**	T	T	07 52 05.1	
	baz=28,slow=74						
H11N3	**WAKE ISLAND Hy**	**42.25**	**228**	T	T	07 52 09.9	
	baz=28						
H11N1	**WAKE ISLAND Hy**	**42.26**	**228**	T	T	07 52 06.9	
	baz=28,slow=74						
H11S1	**WAKE ISLAND Hy**	**43.41**	**227**	T	T	07 53 31.1	
	baz=27,slow=76,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**43.42**	**227**	T	T	07 53 47.0	
	baz=27,slow=76,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**43.43**	**227**	T	T	07 53 36.3	
	baz=27,slow=76,SNR=8.1						
TXAR	**Lajitas Array**	**47.89**	**97**	P	**P**	**07 07 37.2**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=304,slow=6.1,SNR=11						
	comp=Z,0.3nm,0.5s						
HDIL	**Hopedale**	**48.38**	**76**	P	**P**	**07 07 39.0**	**-0.1**
KSRS	**Korea Array**	**50.02**	**281**	P	**P**	**07 07 52.9**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=59,slow=6.9,SNR=6.9						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**54.47**	**304**	P	**P**	**07 08 25.4**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=39,slow=7.4,SNR=3.3						
	comp=Z,1.4nm,0.6s						
BATG	**Bathurst New B**	**56.07**	**55**	P	**P**	**07 08 36.0**	**-0.1**
KEV	**Kevo**	**56.14**	**357**	P	**P**	**07 08 35.6**	**-0.7**
ARCES	**ARCESS Array B**	**56.41**	**357**	P	**P**	**07 08 37.4**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=4.9,slow=7.8,SNR=7.2						
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**56.41**	**357**	P	**P**	**07 08 37.5**	**-0.8**
ARCES				IAmb	IAmb	07 09 01.4	
	comp=Z,2.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**56.75**	**295**	*e*P	**P**	**07 08 39.5**	**-1.7**
ZALV	**Zalesovo Beam**	**59.22**	**321**	P	**P**	**07 08 58.2**	**0.0**
	comp=Z,1.5nm,0.6s,baz=38,slow=7.7,SNR=5.2						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**64.08**	**322**	P	**P**	**07 09 31.8**	**+0.8**
KURBB	**Kurchatov Arra**	**64.19**	**322**	P	**P**	**07 09 31.8**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=20,slow=6.8,SNR=7.9						
	comp=Z,1.8nm,0.9s						
FINES	**FINESS Array B**	**64.49**	**356**	P	**P**	**07 09 32.9**	**-0.6**
	comp=Z,2.6nm,0.4s,baz=16,slow=7.6,SNR=28						
	comp=Z,2.6nm,0.4s						
BVAR	**Borovoye Array**	**64.86**	**329**	P	**P**	**07 09 36.3**	**+0.2**
	comp=Z,4.7nm,0.6s,baz=41,slow=7.8,SNR=13						
	comp=Z,4.7nm,0.6s						
NB2	**NORSAR Subarra**	**64.87**	**4**	P	**P**	**07 09 35.9**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=356,slow=6.5						
NOA	**NORSAR Array B**	**64.87**	**4**	P	**P**	**07 09 36.1**	**0.0**
	comp=Z,4.6nm,0.8s,baz=356,slow=6.6,SNR=8.0						
	comp=Z,4.6nm,0.8s						
ARTI	**Arti**	**65.08**	**337**	P	**P**	**07 09 36.7**	**-0.7**
	comp=Z,3.5nm,0.4s,baz=26,slow=6.6,SNR=3.9						
	comp=Z,3.5nm,0.4s						
HFS	**Hagfors**	**65.87**	**3**	P	**P**	**07 09 41.9**	**-0.6**
	comp=Z,8.6nm,0.6s,baz=2.6,slow=6.3,SNR=23						
	comp=Z,8.6nm,0.6s						
MKAR	**Makanchi Array**	**65.93**	**318**	P	**P**	**07 09 43.0**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=51,slow=6.3,SNR=7.6						
	comp=Z,1.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**69.26**	**13**	P	**P**	**07 10 04.1**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=336,slow=4.8,SNR=10						
	comp=Z,2.5nm,0.6s						
AKTO	**Aktyubinsk**	**70.64**	**335**	P	**P**	**07 10 12.6**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=20,slow=4.2,SNR=5.1						
	comp=Z,1.3nm,0.3s						
AB31	**Akbulak array**	**71.22**	**333**	P	**P**	**07 10 16.4**	**+0.4**
BOOM	**Boomskoye usch**	**72.00**	**319**	P	**P**	**07 10 21.8**	**+0.6**
AAK	**Ala-Archa**	**72.42**	**320**	P	**P**	**07 10 24.4**	**+0.8**
	comp=Z,3.6nm,0.5s,baz=30,slow=6.4,SNR=5.2						
	comp=Z,3.6nm,0.5s						
AAK	**Ala-Archa**	**72.42**	**320**	IAmb	IAmb	07 10 25.5	
	comp=Z,4.6nm,0.7s						
AKASG	**Malin Array Be**	**75.04**	**353**	P	**P**	**07 10 38.0**	**-0.6**
	comp=Z,4.6nm,0.4s,baz=10,slow=5.9,SNR=22						
	comp=Z,4.6nm,0.4s						
AKASG	**Malin Array Be**	**75.04**	**353**	IAmb	IAmb	07 10 48.0	
	comp=Z,2.0nm,1.0s						
GERES	**GERESS Array B**	**77.16**	**4**	P	**P**	**07 10 50.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=352,slow=3.0,SNR=6.3						
	comp=Z,0.6nm,0.5s						
KBZ	**Khabaz**	**80.25**	**343**	P	**P**	**07 11 08.3**	**+0.6**
	comp=Z,5.1nm,0.9s,baz=31,slow=5.9,SNR=6.4						
	comp=Z,5.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**80.88**	**289**	P	**P**	**07 11 12.2**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=20,slow=5.4,SNR=7.2						
	comp=Z,1.1nm,0.3s						
ESDC	**Sonseca Array**	**84.38**	**18**	P	**P**	**07 11 30.2**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=350,slow=4.6,SNR=7.0						
	comp=Z,1.8nm,0.9s						
H03N2	**Juan Fernandez**	**112.17**	**117**	T	T	09 19 23.2	
	baz=323,slow=77,SNR=4.7						
H03N1	**Juan Fernandez**	**112.18**	**117**	T	T	09 19 27.1	
	baz=323,slow=77,SNR=6.2						
H03N3	**Juan Fernandez**	**112.18**	**117**	T	T	09 19 26.4	
	baz=323,slow=77,SNR=5.1						
QSPA	**South Pole Qui**	**144.04**	**180**	PKP	**PKPdf**	**07 18 31.0**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=182,slow=1.9,SNR=7.7						

ASRS 22 06:59:40.0±1.3, 54°14N×86°46E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 22 06:59:42.1±3.1, 54°15N×86°61E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=23.8km s-min=13.8km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**260**	I	I	07 06 14.3	
	baz=80,slow=315,SNR=1.8						
ZALV	**Zalesovo Beam**	**1.07**	**260**	Pg	Pg	07 00 01.3	-1.4
	1.0nm,0.3s,baz=78,slow=17,SNR=6.0						
ZALV				Lg	Lg	07 00 18.5	
	1.9nm,0.3s,baz=77,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.08**	**238**	Pn	Pn	07 01 13.6	+0.5
	0.1nm,0.3s,baz=55,slow=13,SNR=4.4						
KURBB				Lg	Lg	07 02 54.7	
	baz=52,slow=32,SNR=1.9						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.86**	**202**	Pn	Pn	07 01 39.3	+1.6
	0.1nm,0.3s,baz=19,slow=14,SNR=0.7						
MKAR				Sn	Sn	07 03 06.5	-0.8
	baz=20,slow=25,SNR=1.1						
	0.3nm,0.4s						

IDC 22 07:02:43.1±4.2, 55°54N×158°70W, h0km, mb3.8/7, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=103.1km s-min=19.2km az=159.0
NEIC 22 07:02:47.0±1.5, 55°09N±0°03×158°28W±0°07, h35km±2km, ML3.6/36, ML3.7(AEIC), Error ellipse: s-maj=7.8km s-min=3.1km az=305.0
AEIC 22 07:02:46.0±1.4, 55°12N±0°05×158°33W±0°06, h26km±7km, Error ellipse: s-maj=8.1km s-min=4.5km az=155.0
ISC 22 07:02:45.2±0.9, 55°10N±0°08×158°29W±0°04, h30km, n65, σ1§49/68, mb4.1/7, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.80**	**250**		**Pn**	**07 03 00.7**	**+0.3**
CNBA				IAML		07 03 13.2	
	comp=N,1μm,0.5s						
CNBA				IAML		07 03 13.3	
	comp=E,974nm,0.4s						
CNBA	**Chernabura Isl**	**0.80**	**250**		**Sb**	**07 03 11.9**	**+0.9**
VNKR	**Veniaminof 5**	**1.11**	**327**		**Pn**	**07 03 04.7**	**0.0**
CHGN	**Chignik**	**1.21**	**357**		**Pn**	**07 03 05.9**	**0.0**
CHGN	**Chignik**	**1.21**	**357**		**Sn**	**07 03 21.1**	**-0.2**
SDPT	**Sand Point**	**1.28**	**282**		**Pn**	**07 03 07.0**	**+0.1**
SDPT				IAML		07 03 24.1	
	comp=E,1μm,1.3s						
SDPT				IAML		07 03 32.2	
	comp=N,2μm,1.1s						
SDPT	**Sand Point**	**1.28**	**282**		**Sn**	**07 03 23.4**	**+0.4**
VNSS	**Veniaminof 8**	**1.31**	**330**		**Pn**	**07 03 08.8**	**+1.2**
VNFG	**Fog Glacier, M**	**1.39**	**329**		**Pn**	**07 03 09.8**	**+1.2**
VNFG					**Sn**	**07 03 27.4**	**+1.5**
VNFG	**Fog Glacier, M**	**1.39**	**329**		**Pn**	**07 03 09.8**	**+1.2**
CHIR	**Chirikof Islan**	**1.68**	**63**		**Pn**	**07 03 13.8**	**+1.3**
CHIR				Sn	**Sn**	**07 03 34.1**	**+1.1**
CHIR				IAML		07 03 45.6	
	comp=E,894nm,0.7s						
CHIR				IAML		07 03 53.3	
	comp=N,942nm,0.7s						
ANPB	**Aniakchak Plen**	**1.71**	**0**		**Pn**	**07 03 14.7**	**+1.8**
DOL	**Dolgoi Island**	**2.05**	**273**		**Pn**	**07 03 18.4**	**+0.7**
PS4A	**Pavlof South-4**	**2.06**	**278**		**Pn**	**07 03 18.5**	**+0.8**
PN7A	**Pavlof North-7**	**2.15**	**280**		**Pn**	**07 03 20.5**	**+1.5**
DTNA	**Dutton South F**	**2.28**	**273**		**Pn**	**07 03 21.9**	**+1.2**
DT1	**Dutton Round H**	**2.29**	**272**		**Pn**	**07 03 21.8**	**+0.9**
SII	**Sitkinak Islan**	**2.74**	**56**	Pn	**Pn**	**07 03 28.7**	**+1.7**
SII				Sn	**Sn**	**07 03 58.9**	**-0.2**
PLK1	**Peulik 1**	**2.86**	**18**		**Pn**	**07 03 30.1**	**+1.4**
ISNN	**Isanotski Nort**	**3.18**	**267**		**Pn**	**07 03 36.2**	**+3.1**
OHAK	**Old Harbor**	**3.51**	**51**	Pn	**Pn**	**07 03 38.2**	**+0.6**
ACHA	**Angle Creek He**	**3.52**	**26**	Pn	**Pn**	**07 03 39.4**	**+1.6**
P16K	**Nushagak River**	**3.94**	**2**	Pn	**Pn**	**07 03 45.1**	**+1.5**
KDAK	**Kodiak Island**	**4.15**	**47**	Pn	**Pn**	**07 03 46.7**	**+0.2**
	comp=N,2.0nm,0.3s,baz=223,slow=14,SNR=8.1						
KDAK				Sn	**Sn**	**07 04 30.6**	**-3.3**
	comp=N,4.0nm,0.3s,baz=230,slow=12,SNR=1.5						
KDAK				Lg	Lg	07 04 51.5	
	comp=N,1.2nm,0.3s,baz=272,slow=17,SNR=1.5						
	comp=N,4.3nm,0.3s						
KDAK	**Kodiak Island**	**4.15**	**47**	Pn	**Pn**	**07 03 48.0**	**+1.6**
O15K	**Ungalikthiuk R**	**4.17**	**349**	Pn	**Pn**	**07 03 47.4**	**+0.7**
O15K				IAML		07 04 38.8	
	comp=N,70nm,0.9s						
O15K				IAML		07 04 39.8	
	comp=E,44nm,0.5s						
AKUT	**Akutan**	**4.46**	**261**	Pn	**Pn**	**07 03 52.0**	**+1.4**
AKUT				IAML		07 04 50.5	
	comp=N,23nm,0.5s						
AKUT				IAML		07 05 05.4	
	comp=E,35nm,0.7s						
O14K	**Tigyukauivet M**	**4.47**	**340**	IAML		07 05 15.4	
	comp=E,29nm,0.8s						
O14K				IAML		07 05 26.0	
	comp=N,43nm,1.3s						
O16K	**Kokwok River B**	**4.51**	**1**	Pn	**

0.1nm,0.3s,baz=159,slow=14,SNR=6.4
0.5nm,0.7s
PDAR Pinedale Array 19.71 356 P P 07 13 42.0 +0.4
baz=172,slow=11,SNR=3.8
0.3nm,0.6s

IDC ***22*** *07:17:29.1±0.8,55°.35N×158°.64W,h0km,mb4.1/24, mbtmp4.1/26,ML4.1/2,Error ellipse: s-maj=22.1km s-min=12.2km az=175.0*
AEIC ***22*** *07:17:32.3±2.1,55°.14N±0°.06×158°.38W±0°.05,h12km±4km, Error ellipse: s-maj=9.2km s-min=2.3km az=157.0*
NEIC ***22*** *07:17:34.1±1.7,55°.12N±0°.05×158°.37W±0°.07,h35km±2km, mb4.2/15,ML4.2/40,ML4.0(AEIC),Error ellipse: s-maj=8.9km s-min=5.6km az=147.0*

ISC 22 07:17:33.3±0.5,55°.18N±0°.06×158°.41W±0°.05,h30km, n118,σ1§27/114,mb4.2/27,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.77**	**243**		**Pb**	**07 17 46.9**	**-1.2**
CNBA					**Sn**	**07 17 58.5**	**0.0**
CNBA	**Chernabura Isl**	**0.77**	**243**	IAML		07 18 00.1	
	comp=E,10μm,0.6s						
CNBA				IAML		07 18 00.4	
	comp=N,7μm,0.5s						
VNKR	**Veniaminof 5**	**1.01**	**328**		**Pn**	**07 17 51.4**	**0.0**
CHGN	**Chignik**	**1.13**	**360**		**Pn**	**07 17 52.8**	**-0.2**
CHGN				IAML		07 18 13.1	
	comp=N,5μm,0.6s						
CHGN	**Chignik**	**1.13**	**360**		**Sn**	**07 18 08.3**	**+0.9**
SDPT	**Sand Point**	**1.20**	**279**		**Pn**	**07 17 53.7**	**-0.2**
SDPT					**Sn**	**07 18 09.4**	**+0.3**
SDPT	**Sand Point**	**1.20**	**279**	IAML		07 18 16.3	
	comp=N,4μm,1.3s						
SDPT				IAML		07 18 17.4	
	comp=E,4μm,0.6s						
VNSS	**Veniaminof 8**	**1.21**	**331**		**Pn**	**07 17 55.4**	**+1.1**
VNFG	**Fog Glacier, M**	**1.28**	**330**		**Pn**	**07 17 56.3**	**+1.1**
VNFG					**Sn**	**07 18 14.0**	**+2.5**
VNFG	**Fog Glacier, M**	**1.28**	**330**		**Pn**	**07 17 56.7**	**+1.4**
ANPB	**Aniakchak Plen**	**1.63**	**2**		**Pn**	**07 18 01.7**	**+1.7**
CHIR	**Chirikof Islan**	**1.71**	**67**		**Pn**	**07 18 01.4**	**+0.4**
CHIR				IAML		07 18 33.0	
	comp=E,2μm,0.7s						
CHIR				IAML		07 18 39.4	
	comp=N,2μm,0.8s						
ANNE	**Aniakchak Nort**	**1.75**	**6**		**Pn**	**07 18 02.6**	**+1.0**
PS1A	**Pavlof South-1**	**1.92**	**279**		**Pn**	**07 18 04.9**	**+1.0**
PS4A	**Pavlof South-4**	**1.98**	**276**		**Pn**	**07 18 05.0**	**+0.3**
DOL	**Dolgoi Island**	**1.98**	**271**		**Pn**	**07 18 05.2**	**+0.5**
PN7A	**Pavlof North-7**	**2.07**	**279**		**Pn**	**07 18 07.5**	**+1.6**
DTNA	**Dutton South F**	**2.21**	**271**		**Pn**	**07 18 08.2**	**+0.4**
SII	**Sitkinak Islan**	**2.75**	**58**		**Pn**	**07 18 16.5**	**+1.1**
SII				IAML		07 19 06.3	
	comp=E,1μm,1.1s						
SII				IAML		07 19 20.6	
	comp=N,1μm,0.7s						
ISNN	**Isanotski Nort**	**3.11**	**266**		**Pn**	**07 18 21.8**	**+1.5**
ACHA	**Angle Creek He**	**3.48**	**28**		**Pn**	**07 18 26.4**	**+0.9**
OHAK	**Old Harbor**	**3.52**	**52**		**Pn**	**07 18 25.8**	**0.0**
P16K	**Nushagak River**	**3.87**	**3**		**Pn**	**07 18 31.8**	**+1.1**
O15K	**Ungalikthiuk R**	**4.08**	**350**		**Pn**	**07 18 34.7**	**+1.1**
KDAK	**Kodiak Island**	**4.15**	**49**	Pn	**Pn**	**07 18 34.3**	**-0.2**
	comp=N,4.1nm,0.3s,baz=243,slow=6.8,SNR=5.6						
KDAK				Sn	**Sn**	**07 19 19.7**	**-2.3**
	comp=N,5.9nm,0.3s,baz=187,slow=5.7,SNR=1.5						
KDAK				Lg	Lg	07 19 41.3	
	comp=N,8.0nm,0.3s,baz=296,slow=23,SNR=5.8						
	comp=N,19nm,0.5s						
KDAK	**Kodiak Island**	**4.15**	**49**		**Pn**	**07 18 34.9**	**+0.3**
KDAK				IAML		07 19 52.0	
	comp=N,188nm,4.7s						
P17K	**Kvichak River**	**4.17**	**14**	Pn	**Pn**	**07 18 36.3**	**+1.6**
O14K	**Tigyukauivet M**	**4.37**	**340**		**Pn**	**07 18 38.7**	**+1.2**
O14K				IAML		07 19 32.1	
	comp=E,143nm,0.7s						
O14K				IAML		07 20 10.0	
	comp=N,194nm,3.9s						
AKUT	**Akutan**	**4.40**	**259**	Pn	**Pn**	**07 18 38.9**	**+1.0**
AKUT				IAML		07 21 20.2	
	comp=E,292nm,0.6s						
AKUT				IAML		07 21 22.5	
	comp=N,393nm,4.3s						
O16K	**Kokwok River B**	**4.43**	**2**		**Pn**	**07 18 39.0**	**+0.7**
LVA	**Lava Point**	**4.54**	**260**	Pn	**Pn**	**07 18 41.4**	**+1.5**
UNV	**Unalaska Valle**	**4.90**	**258**	Pn	**Pn**	**07 18 44.7**	**-0.1**
UNV				IAML		07 20 06.2	
	comp=E,139nm,3.9s						
UNV				IAML		07 21 31.9	
	comp=N,136nm,3.4s						
O18K	**Koktuh Hills**	**5.00**	**19**		**Pn**	**07 18 47.5**	**+1.3**
O18K				IAML		07 20 20.4	
	comp=E,100nm,4.6s						
N14K	**Kuskokwak Cree**	**5.08**	**341**		**Pn**	**07 18 48.0**	**+0.9**
N14K				IAML		07 20 41.4	
	comp=E,210nm,1.0s						
N15K	**Kwethluk River**	**5.09**	**350**		**Pn**	**07 18 48.9**	**+1.5**
N15K				IAML		07 20 39.1	
	comp=E,154nm,1.5s						
N15K				IAML		07 20 39.3	
	comp=N,164nm,4.8s						
O19K	**Port Alsworth**	**5.49**	**22**		**Pn**	**07 18 54.2**	**+1.3**
ILSW	**Iliamna Southw**	**5.59**	**28**		**Pn**	**07 18 55.5**	**+1.2**
CNPM	**China Poot**	**5.84**	**39**		**Pn**	**07 18 58.2**	**+0.6**
M13K	**Dall Lake**	**5.88**	**335**		**Pn**	**07 18 59.4**	**+1.3**
RED	**Redoubt Volcan**	**6.06**	**28**		**Pn**	**07 19 01.9**	**+1.1**
M17K	**Holitna River**	**6.26**	**4**		**Pn**	**07 19 04.9**	**+1.4**
SPU	**Mount Spurr**	**6.89**	**27**		**Pn**	**07 19 14.8**	**+2.6**
SPIA	**Saint Paul Isl**	**6.91**	**292**		**Pn**	**07 19 13.3**	**+1.0**
L18K	**Granite Mounta**	**7.12**	**7**		**Pn**	**07 19 15.6**	**+0.3**
STLK	**Strandline Lak**	**7.22**	**26**		**Pn**	**07 19 17.3**	**+0.6**
L19K	**White Mountain**	**7.26**	**13**		**Pn**	**07 19 18.9**	**+1.6**
RC01	**Rabbit Creek A**	**7.49**	**34**		**Pn**	**07 19 22.8**	**+2.4**
SKT	**Skwentna**	**7.71**	**25**		**Pn**	**07 19 24.8**	**+1.4**
PMR	**Palmer**	**8.06**	**33**	Pn	**Pn**	**07 19 28.9**	**+0.8**
J16K	**Anvik River**	**8.21**	**353**		**Pn**	**07 19 31.4**	**+1.3**
J18K	**Innoko River**	**8.36**	**5**		**Pn**	**07 19 33.4**	**+1.2**
FID	**Port Fidalgo**	**8.44**	**44**	Pn	**Pn**	**07 19 32.9**	**-0.5**
KAIM	**Kayak Island**	**8.89**	**52**	Pn	**Pn**	**07 19 41.0**	**+1.5**
TRF	**Thorofare Moun**	**9.27**	**23**	Pn	**Pn**	**07 19 44.8**	**0.0**
J20K	**Nowinta River**	**9.28**	**12**	Pn	**Pn**	**07 19 47.0**	**+2.2**
RND	**Reindeer**	**9.58**	**27**	Pn	**Pn**	**07 19 48.9**	**-0.1**
GLB	**Gilahina Butte**	**9.90**	**45**		**Pn**	**07 19 55.0**	**+1.5**
VRDI	**Verde Repeater**	**9.94**	**46**	Pn	**Pn**	**07 19 55.1**	**+1.1**
H18K	**Honhosa River**	**10.01**	**0**		**Pn**	**07 19 56.4**	**+1.5**
PAK	**Paxson**	**10.25**	**35**		**Pn**	**07 19 58.5**	**+0.4**
H19K	**Roundabout Mou**	**10.43**	**5**		**Pn**	**07 20 01.6**	**+1.0**
GRNC	**Granite Creek**	**10.44**	**51**		**Pn**	**07 20 01.4**	**+0.5**
G18K	**Tagagawik**	**10.76**	**359**		**Pn**	**07 20 06.4**	**+1.3**
RIDG	**Independent Ri**	**10.99**	**33**		**Pn**	**07 20 09.4**	**+1.1**
F15K	**North Star Dit**	**11.00**	**346**		**Pn**	**07 20 10.2**	**+1.8**
IMAR	**Indian Mountai**	**11.08**	**10**	Pn	**Pn**	**07 20 09.8**	**+0.4**
ILAR	**Eielson Array**	**11.20**	**26**	Pn	Pn	07 20 07.6	-3.5
	comp=N,0.9nm,0.3s,baz=221,slow=13,SNR=20						
ILAR				Sn	Sn	07 22 09.1	-5.9
	comp=N,0.2nm,0.3s,baz=206,slow=6.6,SNR=0.8						
ILAR	**Eielson Array**	**11.20**	**26**	Pn	**Pn**	**07 20 11.8**	**+0.7**
ADK	**Adak**	**11.36**	**261**	Pn	**Pn**	**07 20 14.9**	**+1.5**
J25K	**Salcha River,**	**11.48**	**29**		**Pn**	**07 20 13.9**	**-1.1**
G21K	**Allakaket**	**11.62**	**10**		**Pn**	**07 20 18.9**	**+2.0**
O29M	**Mount Kennedy**	**11.75**	**56**		**Pn**	**07 20 20.5**	**+1.7**
PRP	**Porcupine Dome**	**12.14**	**26**		**Pn**	**07 20 23.2**	**-0.9**
M29M	**Somme Creek**	**12.60**	**47**		**Pn**	**07 20 31.1**	**+0.7**
D19K	**Kuna River**	**13.37**	**0**		**Pn**	**07 20 43.1**	**+2.4**
D20K	**Etivluk River**	**13.61**	**3**		**Pn**	**07 20 46.3**	**+2.3**
P33M	**Teslin, Yukon**	**14.53**	**59**		**Pn**	**07 21 00.8**	**+4.2**
C23K	**Itkillik River**	**15.12**	**10**	IAmb	IAmb	07 21 09.9	
	comp=Z,9.5nm,0.6s						
G29M	**Pine Creek**	**15.25**	**31**	IAmb	IAmb	07 21 12.4	
	comp=Z,21nm,0.8s						
MMPY	**Sheldon Lake,**	**15.78**	**51**		**Pn**	**07 21 15.3**	**+2.2**
MMPY				IAmb	IAmb	07 21 19.6	
	comp=Z,8.3nm,0.8s						
H31M	**Peel River**	**15.81**	**38**	IAmb	IAmb	07 21 22.7	
	comp=Z,12nm,0.7s						
DLBC	**Dease Lake**	**15.82**	**66**	Pn	**P**	**07 21 18.5**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=262,slow=15,SNR=3.6						
G30M	**tAoh Zraii Nji**	**15.85**	**33**			**07 21 14.9**	**+1.0**
G30M				IAmb	IAmb	07 21 18.7	
	comp=Z,19nm,0.7s						
F30M	**Barrier River**	**16.37**	**32**	IAmb	IAmb	07 21 32.9	
	comp=Z,11nm,1.1s						
INK	**Inuvik**	**17.47**	**31**	P	**Pn**	**07 21 32.8**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=231,slow=10,SNR=13						
	comp=Z,3.3nm,0.3s						
C36M	**Paulatuk**	**20.95**	**34**		**P**	**07 22 13.4**	**+0.2**
YKA	**Yellowknife Ar**	**23.41**	**54**	P	**P**	**07 22 39.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=271,slow=8.0,SNR=10						
	comp=Z,0.8nm,0.7s						
PETK	**Petropavlovsk-**	**25.48**	**284**	P	**P**	**07 22 57.1**	**-1.4**
	comp=Z,5.2nm,0.6s,baz=76,slow=12,SNR=10						
	comp=Z,5.2nm,0.6s						
SEY	**Seymchan**	**25.87**	**307**	P	**P**	**07 22 59.6**	**-2.2**
	comp=Z,1.2nm,0.4s,baz=88,slow=9.5,SNR=6.9						
	comp=Z,1.2nm,0.4s						
NVAR	**Mina Array Bea**	**31.61**	**105**	P	**P**	**07 23 55.3**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=324,slow=11,SNR=1.6						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**33.68**	**91**	P	**P**	**07 24 13.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=318,slow=4.2,SNR=4.9						
	comp=Z,0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**46.17**	**274**	P	**P**	**07 25 54.1**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=34,slow=8.3,SNR=5.4						
	comp=Z,1.6nm,0.5s						
MJAR	**Matsushiro Arr**	**46.17**	**274**	IAmb	IAmb	07 26 03.4	
	comp=Z,3.4nm,1.3s						
TXAR	**Lajitas Array**	**46.50**	**101**	P	**P**	**07 25 59.2**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=309,slow=5.0,SNR=6.0						
TXAR				PcP	**PcP**	**07 27 31.4**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=312,slow=4.4,SNR=1.9						
	comp=Z,0.3nm,0.5s						
NRIK	**Noril'sk**	**46.93**	**334**	P	**P**	**07 25 59.1**	**-1.4**
	comp=Z,6.4nm,0.8s,baz=54,slow=7.4,SNR=4.0						
	comp=Z,6.4nm,0.8s						
KSRS	**Korea Array**	**51.36**	**282**	P	**P**	**07 26 34.6**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=43,slow=7.0,SNR=14						
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**55.23**	**305**	P	**P**	**07 27 02.5**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=53,slow=6.5,SNR=7.5						
SONM				PcP	**PcP**	**07 28 04.4**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=56,slow=3.4,SNR=5.1						
	comp=Z,2.1nm,0.6s						
SONM	**Songino Array**	**55.23**	**305**	IAmb	IAmb	07 27 16.0	
	comp=Z,0.8nm,0.8s						
ARCES	**ARCESS Array B**	**55.56**	**358**	P	**P**	**07 27 03.8**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=6.1,slow=6.3,SNR=8.5						
	comp=Z,1.1nm,0.6s						
HHC	**Hu-ho-hao-te**	**57.76**	**296**	*eP*	**P**	**07 27 22.9**	**+1.6**
ZALV	**Zalesovo Beam**	**59.47**	**322**	P	**P**	**07 27 32.0**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=32,slow=8.7,SNR=4.3						
	comp=Z,0.9nm,0.5s						
FINES	**FINESS Array B**	**63.67**	**358**	P	**P**	**07 28 00.3**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=17,slow=10.0,SNR=8.8						
	comp=Z,2.8nm,0.6s						
NB2	**NORSAR Subarra**	**63.84**	**6**	P	**P**	**07 28 01.7**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=354,slow=6.9						
NOA	**NORSAR Array B**	**63.84**	**6**	P	**P**	**07 28 01.7**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=354,slow=6.6,SNR=4.9						
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**64.29**	**324**	P	**P**	**07 28 05.3**	**0.0**
KURK	**Kurchatov**	**64.29**	**324**	IAmb	IAmb	07 28 06.0	
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**64.40**	**324**	P	**P**	**07 28 05.3**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=24,slow=6.5,SNR=5.8						
	comp=Z,1.2nm,0.7s						
GTA2	**Gaotai**	**64.67**	**303**	*eP*	**P**	**07 28 07.3**	**-0.9**
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HFS	**Hagfors**	**64.86**	**4**	P	**P**	**07 28 08.2**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=355,slow=6.6,SNR=7.9						
	comp=Z,3.7nm,0.7s						
BVAR	**Borovoye Array**	**64.88**	**330**	P	**P**	**07 28 08.3**	**-0.8**
	comp=Z,2.9nm,0.5s,baz=30,slow=6.5,SNR=9.7						
	comp=Z,2.9nm,0.5s						
MKAR	**Makanchi Array**	**66.28**	**319**	P	**P**	**07 28 17.1**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=46,slow=4.7,SNR=7.1						
	comp=Z,1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**68.00**	**15**	P	**P**	**07 28 28.8**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=341,slow=5.3,SNR=6.7						
	comp=Z,1.4nm,0.6s						
AKASG	**Malin Array Be**	**74.30**	**355**	P	**P**	**07 29 06.0**	**-1.2**
	comp=Z,2.0nm,0.3s,baz=8.9,slow=5.7,SNR=14						
	comp=Z,2.0nm,0.3s						
KSH2	**Kashi**	**75.36**	**319**	P	**P**	**07 29 14.6**	**+0.8**
KSH2				pmax	pmax		
	comp=Z,3μm,0.8s						
GERES	**GERESS Array B**	**76.14**	**5**	P	**P**	**07 29 17.5**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=0.0,slow=5.3,SNR=2.2						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**82.04**	**291**	P	**P**	**07 29 50.1**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=34,slow=6.1,SNR=6.7						
	comp=Z,1.4nm,0.5s						
ESDC	**Sonseca Array**	**83.02**	**20**	P	**P**	**07 29 55.8**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=341,slow=4.7,SNR=7.9						
	comp=Z,1.6nm,0.8s						
BRTR	**Keskin Array B**	**84.91**	**351**	P	**P**	**07 30 05.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=9.5,slow=5.2,SNR=3.7						
	comp=Z,1.3nm,0.7s						

IDC ***22*** *07:17:32.1±3.6,19°.28N×108°.41W,h0km,mb2.9/3, mbtmp3.1/5,ML3.5/2,Error ellipse: s-maj=73.9km s-min=38.7km az=35.0*

ISC 22 07:17:35.1±2.3,19°.3N±0°.3×108°.4W±0°.2,h22km,n6, σ1§35/6,mb3.3/3,Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**10.90**	**22**	Pn	**Pn**	**07 20 09.6**	**-0.4**
	0.1nm,0.3s,baz=203,slow=14,SNR=6.6						
	0.2nm,0.5s						
CMIG	**Matias Romero**	**12.98**	**97**	Pn	**Pn**	**07 20 37.9**	**-0.4**
	0.2nm,0.3s,baz=281,slow=14,SNR=4.3						
	1.5nm,0.7s						
NVAR	**Mina Array Bea**	**20.97**	**338**	P	**P**	**07 22 16.3**	**-0.6**
	0.2nm,0.5s,baz=151,slow=11,SNR=3.9						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**23.46**	**358**	P	**P**	**07 22 44.8**	**+1.6**
	0.2nm,0.6s,baz=176,slow=5.7,SNR=2.4						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**52.20**	**340**	P	**P**	**07 26 43.0**	**-0.9**
	0.3nm,0.7s,baz=140,slow=7.1,SNR=2.9						
	0.3nm,0.7s						
HFS	**Hagfors**	**88.11**	**25**	P	**P**	**07 30 25.1**	**+1.2**
	3.3nm,0.8s,baz=312,slow=4.6,SNR=4.9						

IDC ***22*** *07:19:42.0±1.6,54°.78N×161°.16W,h0km,mb3.9/7, mbtmp3.9/9,ML3.2/2,Error ellipse: s-maj=44.4km s-min=21.6km az=179.0*
NEIC ***22*** *07:19:44.1±2.7,54°.8N±0°.1×160°.8W±0°.1,h10km±2km, ML3.6/16,Error ellipse: s-maj=18.3km s-min=6.0km az=155.0*

ISC 22 07:19:43.5±0.9,54°.7N±0°.1×160°.83W±0°.06,h10km,n25, σ1§13/26,mb4.0/7,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.65**	**18**		**Pb**	**07 19 56.8**	**-0.1**
CNBA	**Chernabura Isl**	**0.73**	**83**		**Pg**	**07 19 56.2**	**-1.3**
CHGN	**Chignik**	**2.08**	**40**	Pn	**Pn**	**07 20 18.9**	**+0.4**
CHGN				IAML		07 20 56.6	
	comp=N,314nm,0.9s						
CHGN				IAML		07 20 56.8	
	comp=E,530nm,1.0s						
AKUT	**Akutan**	**2.95**	**260**	Pn	**Pn**	**07 20 32.1**	**+1.8**
LVA	**Lava Point**	**3.09**	**261**	Pn	**Pn**	**07 20 33.3**	**+0.9**
CHIR	**Chirikof Islan**	**3.17**	**68**	Pn	**Pn**	**07 20 35.1**	**+1.7**
CHIR				IAML		07 21 34.3	
	comp=N,116nm,0.8s						
CHIR				IAML		07 21 37.3	
	comp=E,138nm,1.1s						
UNV	**Unalaska Valle**	**3.44**	**257**	Pn	**Pn**	**07 20 38.0**	**+0.9**
UNV				IAML		07 21 32.7	
	comp=E,115nm,1.2s						
UNV				IAML		07 21 37.4	
	comp=N,96nm,0.8s						
SII	**Sitkinak Islan**	**4.18**	**61**	Pn	**Pn**	**07 20 47.0**	**-0.4**
SII				IAML		07 22 07.2	
	comp=N,94nm,0.7s						
SII				IAML		07 22 13.2	
	comp=E,106nm,0.7s						
KDAK	**Kodiak Island**	**5.52**	**53**	Pn	**Pn**	**07 21 06.9**	**+1.3**
	comp=E,0.2nm,0.3s,baz=90,slow=21,SNR=0.5						
KDAK				Sn	**Sn**	**07 22 09.8**	**+0.8**
	comp=E,0.5nm,0.3s,baz=231,slow=13,SNR=1.5						
KDAK				Lg	Lg	07 22 36.9	
	comp=E,0.9nm,0.3s,baz=87,slow=20,SNR=3.8						
	comp=E,16nm,1.0s						
M14K	**Bethel**	**6.06**	**355**	Pn	**Pn**	**07 21 14.3**	**+1.3**
ILAR	**Eielson Array**	**12.24**	**29**	Pn	**Pn**	**07 22 37.8**	**+0.1**
	baz=217,slow=13						
E18K	**Tukpahlearik C**	**12.73**	**0**	Pn	**Pn**	**07 22 45.3**	**+1.0**
D20K	**Etivluk River**	**14.16**	**6**	Pn	**Pn**	**07 23 05.4**	**+1.5**
DAWY	**Dawson**	**14.29**	**41**	Pn	**Pn**	**07 23 05.0**	**-0.8**
I28M	**Miner Creek**	**14.87**	**36**	Pn	**Pn**	**07 23 14.7**	**+1.1**
C23K	**Itkillik River**	**15.84**	**13**	Pn	**Pn**	**07 23 26.6**	**+0.4**
INK	**Inuvik**	**18.58**	**32**	P	**Pn**	**07 24 01.8**	**+1.2**
	comp=E,0.1nm,0.3s,baz=241,slow=10,SNR=2.4						
	comp=E,2.3nm,0.8s						
PEA0B	**Petropavlovsk-**	**24.22**	**283**	P	**P**	**07 24 58.8**	**-1.4**
PETK	**Petropavlovsk-**	**24.22**	**283**	P	**P**	**07 24 59.0**	**-1.1**
	comp=E,1.9nm,0.5s,baz=73,slow=9.5,SNR=8.8						
	comp=E,1.9nm,0.5s						
NVAR	**Mina Array Bea**	**32.87**	**102**	P	**P**	**07 26 19.3**	**+1.6**
	comp=E,0.6nm,0.7s,baz=315,slow=8.0,SNR=5.1						
	comp=E,0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**63.91**	**322**	P	**P**	**07 30 15.4**	**-0.6**
	comp=E,0.6nm,0.8s,baz=37,slow=6.6,SNR=2.5						
	comp=E,0.6nm,0.8s						
BVAR	**Borovoye Array**	**64.54**	**329**	P	**P**	**07 30 19.7**	**-0.5**
	comp=E,1.3nm,0.5s,baz=38,slow=5.6,SNR=4.0						
	comp=E,1.3nm,0.5s						
MKAR	**Makanchi Array**	**65.68**	**318**	P	**P**	**07 30 26.3**	**-1.4**
	comp=E,0.9nm,0.7s,baz=47,slow=7.1,SNR=4.4						
	comp=E,0.9nm,0.7s						
AKASG	**Malin Array Be**	**74.59**	**353**	P	**P**	**07 31 21.3**	**-0.9**
	comp=E,1.0nm,0.5s,baz=10,slow=5.7,SNR=5.6						
	comp=E,1.0nm,0.5s						
ESDC	**Sonseca Array**	**83.89**	**18**	P	**P**	**07 32 13.4**	**+0.1**
	comp=E,0.7nm,0.8s,baz=342,slow=4.7,SNR=3.6						
	comp=E,0.7nm,0.8s						

IDC ***22*** *07:30:41.0±2.2,15°.43S×166°.40E,h43km±20km,mb4.4/20, mbtmp4.6/24,ML4.8/4,Error ellipse: s-maj=16.8km s-min=13.0km az=89.0*
NOU ***22*** *07:30:41.7,15°.36S×166°.40E,h43km,mb5.2/66,Vanuatu Islands*
BJI ***22*** *07:30:41.3,14°.87S×166°.65E,h46km,mb5.1/45*
NEIC ***22*** *07:30:42.4±1.8,15°.40S±0°.06×166°.36E±0°.09,h47km±5km, mb5.1/146,Error ellipse: s-maj=12.2km s-min=8.9km az=74.0*
GFZ ***22*** *07:30:44.8±0.2,15°S±4°×16°6E±°,h66km,M5.1/23, mb5.1/23,confirmed*

ISC 22 07:30:39.8±0.3,15°.37S±0°.04×166°.38E±0°.05,h29km,n444, σ0§95/396,mb5.1/123,4C-2D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.92**	**144**	P	**Pn**	**07 31 25.5**	**+1.2**
DVP	**Devils Point**	**2.92**	**144**	S	**Sn**	**07 31 59.9**	**+1.6**
RTV	**Rentapao**	**3.11**	**141**	P	**Pn**	**07 31 28.5**	**+1.6**
RTV	**Rentapao**	**3.11**	**141**	S	**Sn**	**07 32 04.9**	**+1.8**
KOUNC	**Koumac, New Ca**	**5.53**	**201**	P	**Pn**	**07 32 03.0**	**+2.8**
KOUNC	**Koumac, New Ca**	**5.53**	**201**	S	**Sn**	**07 33 03.5**	**+0.7**
KOUNC	**Koumac, New Ca**	**5.53**	**201**		**Pn**	**07 32 02.6**	**+2.5**
MARNC	**Mare, Loyalty**	**6.28**	**166**	Pn	**Pn**	**07 32 12.0**	**+1.5**
HURO	**Huro Makira**	**6.54**	**318**	P	**Pn**	**07 32 14.9**	**+0.8**
HURO	**Huro Makira**	**6.54**	**318**	S	**Sn**	**07 33 29.2**	**+1.4**
DZM	**Mont Dzumac**	**6.67**	**179**	P	**Pn**	**07 32 16.6**	**+0.6**
	15nm,0.3s,baz=341,slow=17,SNR=135						
DZM				S	**Sn**	**07 33 27.8**	**-3.2**
	35nm,0.5s,baz=325,slow=21,SNR=1.2						
	56nm,0.3s						
YATNC	**Mamie plateau,**	**6.67**	**176**	P	**Pn**	**07 32 16.8**	**+0.9**
YATNC	**Mamie plateau,**	**6.67**	**176**	S	**Sn**	**07 33 31.3**	**+0.2**
NOUC	**Port Laguerre**	**6.70**	**181**	P	**Pn**	**07 32 18.7**	**+2.4**
NOUC	**Port Laguerre**	**6.70**	**181**	S	**Sn**	**07 33 33.3**	**+1.7**
ONTNC	**Ouen Toro**	**6.90**	**179**	P	**Pn**	**07 32 21.4**	**+2.3**
ONTNC	**Ouen Toro**	**6.90**	**179**	S	**Sn**	**07 33 36.8**	**+0.1**
ONTNC	**Ouen Toro**	**6.90**	**179**		**Pn**	**07 32 20.8**	**+1.7**
OUENC	**Ouen Island, N**	**7.03**	**176**	P	**Pn**	**07 32 23.4**	**+2.6**
OUENC	**Ouen Island, N**	**7.03**	**176**	S	**

WR8 Warramunga Arr 30.69 257 P **P** **07 36 51.1 -1.2**
WR8 Warramunga Arr 30.69 257 P **P** **07 36 51.1 -1.2**
WR8 IAmb IAmb 07 37 13.7
comp=Z,48nm,1.9s
WR7 Warramunga Arr 30.71 257 P **P** **07 36 51.3 -1.2**
WB0 Warramunga Arr 30.78 257 P **P** **07 36 51.8 -1.3**
WR2 Warramunga Arr 30.82 257 P **P** **07 36 52.2 -1.3**
WRA Warramunga Arr 30.84 257 P **P** **07 36 52.0 -1.7**
comp=Z,5.0nm,0.8s,baz=85,slow=8.6,SNR=35
WRA PcP **PcP** **07 39 49.5 -1.0**
comp=Z,5.4nm,0.9s,baz=84,slow=2.7,SNR=13
comp=Z,5.0nm,0.8s
AS17 Alice Springs 31.56 250 P **P** **07 36 59.1 -0.9**
comp=Z,17nm,1.1s
AS01 Alice Springs 31.60 250 P **P** **07 36 59.4 -1.0**
AS09 Alice Springs 31.62 250 P **P** **07 36 59.6 -0.9**
comp=Z,29nm,0.8s
AS15 Alice Springs 31.63 250 P **P** **07 36 59.6 -1.0**
comp=Z,16nm,1.1s
AS31 Alice Springs 31.64 250 P **P** **07 36 59.8 -1.0**
comp=Z,7.0nm,0.7s
AS31 Alice Springs 31.64 250 **P** **07 36 59.4 -1.4**
ASAR Alice Springs 31.64 250 P **P** **07 36 59.5 -1.2**
comp=Z,12nm,0.8s,baz=71,slow=10,SNR=166
ASAR PcP **PcP** **07 39 51.2 -1.3**
comp=Z,4.5nm,0.9s,baz=102,slow=3.1,SNR=10
comp=Z,12nm,0.8s
ASAR Alice Springs 31.64 250 **P** **07 36 59.0 -1.7**
ASAR PcP **07 39 51.0 -1.6**
AUALC St Philip's Co 31.67 250 P **P** **07 37 00.1 -0.8**
BBOO Buckleboo 32.51 232 P **P** **07 37 08.0 -0.2**
comp=Z,26nm,0.8s
BBOO Buckleboo 32.51 232 P **P** **07 37 08.7 +0.5**
BBOO Buckleboo 32.51 232 P **P** **07 37 07.7 -0.5**
BBOO IAmb IAmb 07 37 09.5
comp=Z,16nm,0.7s
BBOO Buckleboo 32.51 232 P **P** **07 37 08.0 -0.2**
KDU Kakadu 32.98 270 P **P** **07 37 11.7 -0.8**
comp=Z,6.0nm,1.9s
MTN Manton Dam 34.25 270 P **P** **07 37 22.4 -1.2**
KNRA Kununurra 36.22 264 P **P** **07 37 39.6 -0.9**
comp=Z,26nm,1.3s
KNRA Kununurra 36.22 264 **P** **07 37 38.7 -1.8**
WRKA Warakurna 36.90 249 P **P** **07 37 44.1 -2.3**
FORT Forrest 38.23 240 P **P** **07 37 56.8 -0.6**
FORT Forrest 38.23 240 P **P** **07 37 57.1 -0.3**
FORT IAmb IAmb 07 37 58.2
comp=Z,21nm,0.7s
FITZ Fitzroy Crossi 39.05 260 P **P** **07 38 03.6 -0.9**
comp=Z,6.4nm,1.2s
FITZ Fitzroy Crossi 39.05 260 P **P** **07 38 04.0 -0.5**
FITZ Fitzroy Crossi 39.05 260 P **P** **07 38 03.4 -1.0**
FITZ Fitzroy Crossi 39.05 260 P **P** **07 38 03.1 -1.3**
KMBL Kambalda 43.53 241 P **P** **07 38 40.9 -0.2**
comp=Z,12nm,1.3s
MBWA Marble Bar 44.55 255 P **P** **07 38 49.1 -0.3**
MBWA IAmb IAmb 07 39 11.5
comp=Z,45nm,1.6s
MEEK Meekatharra 45.75 248 P **P** **07 38 58.5 -0.4**
comp=Z,50nm,0.7s
MEEK Meekatharra 45.75 248 P **P** **07 38 58.3 -0.6**
MEEK Meekatharra 45.75 248 P **P** **07 38 58.6 -0.4**
KAPI Kappang 46.93 278 P **P** **07 39 08.8 +0.4**
NWAO Narrogin (SRO) 47.69 239 P **P** **07 39 13.7 -0.2**
comp=Z,64nm,1.7s
NWAO Narrogin (SRO) 47.69 239 P **P** **07 39 13.7 -0.2**
comp=Z,105nm,1.7s
NWAO Narrogin (SRO) 47.69 239 P **P** **07 39 14.2 +0.2**
NWAO Narrogin (SRO) 47.69 239 P **P** **07 39 12.9 -1.0**
NWAO Narrogin (SRO) 47.69 239 P **P** **07 39 13.6 -0.4**
MORW Morawa 48.22 245 P **P** **07 39 18.0 -0.2**
comp=Z,32nm,0.9s
MORW Morawa 48.22 245 P **P** **07 39 17.9 -0.2**
MORW Morawa 48.22 245 P **P** **07 39 17.3 -0.8**
MORW IAmb IAmb 07 39 18.5
comp=Z,22nm,0.8s
MORW Morawa 48.22 245 P **P** **07 39 17.9 -0.2**
JCJ Chichijima 48.31 331 P **P** **07 39 18.2 -0.5**
KKM Kota Kinabalu 54.05 289 P **P** **07 40 03.1 +0.8**
KKM Kota Kinabalu 54.05 289 P **P** **07 40 03.2 +0.9**
comp=Z,44nm,1.1s
KKM Kota Kinabalu 54.05 289 P **P** **07 40 02.8 +0.5**
DRV Dumont d'Urvil 54.14 193 P **P** **07 40 01.2 -0.7**
JOW Kunigami 55.94 318 P **P** **07 40 15.7 +0.2**
JOW Kunigami 55.94 318 P **P** **07 40 16.2 +0.7**
JMN Monobe 57.83 328 P **P** **07 40 28.9 +0.1**
JMN Monobe 57.83 328 **P** **07 40 28.8 0.0**
JMN Monobe 57.83 328 P **P** **07 40 29.9 +1.1**
BBJI Bungbulang 57.96 271 P **P** **07 40 29.5 -0.7**
BBJI IAmb IAmb 07 40 49.8
comp=Z,17nm,1.0s
MJAR Matsushiro Arr 58.08 333 P **P** **07 40 29.7 -0.8**
comp=Z,7.5nm,0.9s,baz=165,slow=7.7,SNR=13
comp=Z,7.5nm,0.9s
MJAR Matsushiro Arr 58.08 333 IAmb IAmb 07 40 30.6
comp=Z,7.0nm,1.0s
MAJO Matsushiro 58.08 333 P **P** **07 40 30.0 -0.5**
MAJO IAmb IAmb 07 40 30.8
comp=Z,15nm,1.1s
MAJO Matsushiro 58.08 333 P **P** **07 40 29.8 -0.8**
MJB9 Matsu-Tunnel 58.09 333 P **P** **07 40 30.1 -0.5**
MJB9 IAmb IAmb 07 40 31.8
comp=Z,15nm,1.1s
YULB Yu-li 58.54 310 P **P** **07 40 34.0 0.0**
NACB Ninganchiao 58.79 311 P **P** **07 40 35.5 -0.2**
NACB Ninganchiao 58.79 311 P **P** **07 40 36.4 +0.6**
TPUB Ta-pu 58.98 310 P **P** **07 40 36.4 -0.7**
YHNB Yeheng 59.25 312 P **P** **07 40 39.0 0.0**
YHNB Yeheng 59.25 312 P **P** **07 40 38.6 -0.4**
YHNB Yeheng 59.25 312 P **P** **07 40 39.1 0.0**
VNDA Vanda 62.21 181 P **P** **07 40 58.0 -0.3**
comp=Z,1.6nm,0.9s,baz=348,slow=4.4,SNR=6.3
comp=Z,1.6nm,0.9s
VNDA Vanda 62.21 181 P **P** **07 40 57.7 -0.5**
VNDA IAmb IAmb 07 40 59.3
comp=Z,18nm,1.8s
VNDA Vanda 62.21 181 P **P** **07 40 58.3 0.0**
SBA Scott Base 62.50 180 P **P** **07 41 00.8 +0.6**
SBA IAmb IAmb 07 41 02.2
comp=Z,12nm,1.1s
SBA Scott Base 62.50 180 P **P** **07 41 01.1 +0.9**
CASY Casey 62.62 202 P **P** **07 41 00.1 -1.1**
CASY IAmb IAmb 07 41 01.0
comp=Z,9.0nm,0.8s
CASY Casey 62.62 202 P **P** **07 40 59.9 -1.2**
CASY Casey 62.62 202 P **P** **07 41 00.4 -0.7**
JKA Kamikawa-asahi 63.05 341 P **P** **07 41 05.2 +0.9**
KSRS Korea Array 63.79 327 P **P** **07 41 09.5 +0.3**
comp=Z,4.7nm,0.9s,baz=139,slow=7.0,SNR=23
comp=Z,4.7nm,0.9s
KSAR Wonju Array Be 63.80 326 **P** **07 41 09.2 -0.1**
CCD Concordia, Ant 64.11 191 P **P** **07 41 11.1 -0.3**
NJ2 Nanjing 65.54 317 *eP* **P** **07 41 22.9 +2.1**
NJ2 pmax pmax
comp=Z,23nm,0.5s
USA0B Ussuriysk Arra 67.07 334 P **P** **07 41 30.3 -0.1**
USA0B IAmb IAmb 07 41 32.2
comp=Z,33nm,1.1s
USRK Ussuriysk Ar. 67.07 334 P **P** **07 41 30.5 +0.1**
comp=Z,22nm,1.0s,baz=134,slow=4.2,SNR=16
comp=Z,22nm,1.0s
WHN Wuhan 67.73 313 P **P** **07 41 34.8 -0.1**
DL2 Dalian 68.30 324 P **P** **07 41 38.4 +0.2**
DL2 pmax pmax
comp=Z,52nm,0.9s
MDJ Mudanjiang 68.44 333 IAmb IAmb 07 41 40.7
comp=Z,22nm,1.0s
MDJ Mudanjiang 68.44 333 P **P** **07 41 39.8 +0.8**
MDJ Mudanjiang 68.44 333 P **P** **07 41 40.0 +1.0**
PETK Petropavlovsk- 68.60 354 P **P** **07 41 39.4 -0.5**
comp=Z,4.1nm,0.9s,baz=123,slow=5.5,SNR=5.1
comp=Z,4.1nm,0.9s
RPSI Rantau Prapat 69.07 279 P **P** **07 41 42.5 -1.1**
RPSI IAmb IAmb 07 41 43.8
comp=Z,14nm,0.9s
PSI Prapat 69.11 279 P **P** **07 41 43.8 -0.2**
PSI Prapat 69.11 279 P **P** **07 41 43.5 -0.5**
comp=Z,19nm,0.9s
CN2 Changchun 69.75 330 P **P** **07 41 47.1 -0.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
BNX BinXian 70.29 332 ⇑P **P** **07 41 49.9 -0.5**
BNX pmax pmax
comp=Z,16nm,0.7s
ENH Enshi 71.11 310 P **P** **07 41 56.1 +0.3**
ENH Enshi 71.11 310 P **P** **07 41 55.1 -0.7**
ENH IAmb IAmb 07 41 56.8
comp=Z,23nm,0.9s
ENH Enshi 71.11 310 P **P** **07 41 55.9 +0.1**
LYN LuoYang 71.32 315 P **P** **07 41 57.3 +0.4**
LYN pP PcP 07 42 13.0 -3.6
LYN pmax pmax
comp=Z,45nm,1.0s
HNS HongShan 71.51 319 ⇓P **P** **07 41 59.0 +1.0**
HNS pmax pmax
comp=Z,18nm,1.5s
BJI2 Beijing 72.22 322 P **P** **07 42 02.8 +0.6**
BJI2 pmax pmax
comp=Z,9.0nm,1.2s
BJT Baijiatuau 72.22 322 P **P** **07 42 02.2 -0.1**
BJT IAmb IAmb 07 42 03.9
comp=Z,22nm,1.1s
BJT Baijiatuau 72.22 322 P **P** **07 42 02.9 +0.7**
BSI Banda Aceh 73.36 281 P **P** **07 42 10.3 +0.7**
XAN Xi'an 73.49 313 ⇑P **P** **07 42 10.3 +0.3**
XAN pmax pmax
comp=Z,20nm,0.8s
XAN Xi'an 73.49 313 P **P** **07 42 10.5 +0.5**
HEH HeiHe 73.77 335 *eP* **P** **07 42 11.3 +0.1**
KMI2 Kunming 73.92 302 P **P** **07 42 14.8 +1.9**
KMI2 pmax pmax
comp=Z,25nm,0.8s
CMAR Chiang Mai Arr 74.43 295 **P** **07 42 15.2 -0.5**
CHTO Chiang Mai 74.56 295 P **P** **07 42 16.6 +0.1**
XLT XiLinHaoTe 74.72 325 *eP* **P** **07 42 17.8 +0.8**
XLT PcP **pwP** **07 42 29.8 +0.8**
XLT pmax pmax
comp=Z,22nm,1.2s
PZH PanZhiHua 75.32 303 P **P** **07 42 22.3 +1.4**
HHC Hu-ho-hao-te 75.52 320 *eP* **P** **07 42 23.5 +1.8**
CD2 Chengdu 75.72 308 P **P** **07 42 23.1 +0.1**
BTO2 Baotou 76.51 319 *eP* **P** **07 42 29.6 +2.2**
BTO2 S **S** **07 52 13.6 +2.1**
BTO2 pmax pmax
comp=Z,32nm,0.6s
HILR Hailar Array B 76.61 331 P **P** **07 42 27.7 +0.1**
comp=Z,1.2nm,0.4s,baz=142,slow=7.4,SNR=4.2
comp=Z,1.2nm,0.4s
LZH Lanzhou 78.11 313 *eP* **P** **07 42 38.0 +1.5**
LZH pP pwP 07 42 50.1 +1.4
LZH sP sP 07 42 56.6 +8.8
LZH pmax pmax
comp=Z,39nm,1.3s
LZDM Lanzhou Array 78.16 313 P **P** **07 42 37.7 +0.8**
comp=Z,1.8nm,0.3s,baz=134,slow=6.4,SNR=5.7
comp=Z,1.8nm,0.3s
O15K Ungalikthiuk R 79.22 17 P **P** **07 42 42.4 +0.5**
baz=213
N14K Kuskokwak Cree 79.35 16 P **P** **07 42 43.1 +0.6**
baz=211
P16K Nushagak River 79.63 18 P **P** **07 42 44.5 +0.5**
baz=215
Q17K Contact Creek 79.65 19 P **P** **07 42 44.2 -0.1**
baz=217
OHAK Old Harbor 79.69 21 P **P** **07 42 44.9 +0.4**
baz=219
Q16K King Salmon 79.74 19 P **P** **07 42 45.3 +0.6**
baz=216
N15K Kwethluk River 79.98 16 **P** **07 42 46.0 0.0**
N15K Kwethluk River 79.98 16 P **P** **07 42 46.5 +0.5**
baz=213
P17K Kvichak River 80.23 18 P **P** **07 42 47.6 +0.4**
baz=216
Q18K Katmai Hardscr 80.23 19 P **P** **07 42 47.5 0.0**
baz=218
M15K Kasigluk River 80.27 16 P **P** **07 42 48.4 +0.9**
baz=212
L14K Kuka Creek 80.32 15 P **P** **07 42 48.8 +1.1**
baz=210
K13K Kusilvak Mount 80.38 13 P **P** **07 42 49.3 +1.2**
baz=208
O17K Koliganek Bris 80.50 18 P **P** **07 42 49.4 +0.7**
baz=216
N16K Nishlik Lake 80.60 17 P **P** **07 42 49.7 +0.4**
baz=214
GAMB Gambell 80.70 10 P **P** **07 42 49.9 +0.2**
baz=201
P18K Big Mountain, 80.76 19 P **P** **07 42 50.8 +0.6**
baz=217
L15K Ungalak Mounta 80.90 15 P **P** **07 42 51.4 +0.5**
baz=211
MAW Mawson 80.97 202 P **P** **07 42 51.2 -0.1**
comp=Z,7.2nm,0.9s,baz=110,slow=3.0,SNR=9.2
comp=Z,7.2nm,0.9s
MAW Mawson 80.97 202 P **P** **07 42 51.2 -0.1**
M16K Timber Creek 81.00 16 P **P** **07 42 52.3 +0.8**
baz=214
O18K Kokhuh Hills 81.13 19 P **P** **07 42 53.0 +0.8**
baz=217
J14K Nanvaranak Lak 81.34 13 P **P** **07 42 53.6 +0.4**
baz=209
K15K Wolf Creek Mou 81.42 15 IAmb IAmb 07 44 16.6
comp=Z,16nm,0.8s
K15K Wolf Creek Mou 81.42 15 P **P** **07 42 53.8 +0.2**
baz=211
L16K Owhat River 81.44 16 P **P** **07 42 54.3 +0.5**
baz=213
O19K Port Alsworth 81.67 19 P **P** **07 42 55.3 +0.3**
baz=218
M17K Holitna River 81.73 17 P **P** **07 42 56.2 +0.8**
baz=215
L17K Donlin 82.11 16 P **P** **07 42 58.3 +1.1**
baz=214
ULN Ulaanbaatar 82.14 324 P **P** **07 42 58.2 +0.2**
ULN IAmb IAmb 07 42 59.6
comp=Z,26nm,1.1s
ULN Ulaanbaatar 82.14 324 P **P** **07 42 58.4 +0.4**
ULN Ulaanbaatar 82.14 324 P **P** **07 42 58.7 +0.7**
M18K Stony River 82.26 17 P **P** **07 42 59.2 +1.1**
baz=217
BRSE Bradley Lake S 82.48 20 P **P** **07 42 59.8 +0.5**
baz=222
J16K Anvik River 82.49 14 P **P** **07 43 00.3 +1.1**
baz=212
SONM Songino Array 82.50 324 P **P** **07 42 59.7 -0.1**
comp=Z,8.7nm,0.9s,baz=140,slow=5.8,SNR=26
comp=Z,8.7nm,0.9s
SONM Songino Array 82.50 324 IAmb IAmb 07 43 01.3
comp=Z,17nm,1.1s
GTA2 Gaotai 82.56 314 *eP* **P** **07 43 01.3 +0.9**
GTA2 pP pwP 07 43 13.1 +0.5
GTA2 pmax pmax
comp=Z,33nm,1.1s
K17K Iditarod 82.59 16 P **P** **07 43 00.8 +1.1**
baz=214
L18K Granite Mounta 82.61 16 IAmb IAmb 07 43 13.5
comp=Z,21nm,1.2s
L18K Granite Mounta 82.61 16 P **P** **07 43 01.0 +1.1**
baz=216
M19K Big River Lodg 83.00 18 P **P** **07 43 02.7 +0.8**
baz=218
L19K White Mountain 83.09 17 P **P** **07 43 03.3 +0.9**
baz=218
SEW Seward 83.18 21 IAmb IAmb 07 43 14.8
comp=Z,34nm,1.2s
SEW Seward 83.18 21 P **P** **07 43 02.9 +0.1**
baz=223
F14K Arctic Creek 83.19 11 P **P** **07 43 02.9 +0.1**
baz=206
M20K Styx River 83.36 18 P **P** **07 43 03.5 -0.4**
baz=219
O22K Cooper Landing 83.37 20 P **P** **07 43 03.9 +0.1**
baz=222
J18K Innoko River 83.62 16 P **P** **07 43 05.5 +0.4**
baz=216
P23K Montague Islan 83.81 21 P **P** **07 43 06.3 +0.1**
baz=224
RC01 Rabbit Creek A 83.82 20 P **P** **07 43 06.3 +0.1**
baz=222
G16K Koyuk River 83.91 13 P **P** **07 43 06.7 +0.2**
baz=210
SKT Skwentna 83.92 19 P **P** **07 43 06.2 -0.4**
baz=221
H17K Granite Mounta 84.06 14 P **P** **07 43 07.4 +0.1**
baz=213
PWL Port Wells 84.11 20 P **P** **07 43 07.5 -0.2**
baz=224,SNR=6.7
M22K Willow 84.19 19 P **P** **07 43 08.1 +0.1**
baz=222,SNR=6.1
K20K Telida 84.25 17 IAmb IAmb 07 43 10.2
comp=Z,22nm,1.3s
K20K Telida 84.25 17 P **P** **07 43 08.7 +0.4**
baz=218,SNR=8.2
J19K Poorman 84.33 16 IAmb IAmb 07 44 34.1
comp=Z,11nm,0.8s
J19K Poorman 84.33 16 P **P** **07 43 09.2 +0.5**
baz=217
G17K Kiwalik Mounta 84.37 13 P **P** **07 43 09.4 +0.6**
baz=212
PMR Palmer 84.39 20 P **P** **07 43 08.5 -0.5**
PMR Palmer 84.39 20 P **P** **07 43 09.2 +0.2**
baz=223,SNR=8.3
KNK Knik Glacier 84.48 20 IAmb IAmb 07 43 21.7
comp=Z,19nm,1.0s
KNK Knik Glacier 84.48 20 P **P** **07 43 09.5 -0.1**
baz=223
GLI Glacier Island 84.55 21 P **P** **07 43 10.2 +0.3**
baz=225
L22K Petersville 84.57 18 IAmb IAmb 07 43 09.5
comp=Z,37nm,1.6s
L22K Petersville 84.57 18 P **P** **07 43 09.2 -0.8**
baz=221,SNR=6.0
CUT Chulitna 84.63 19 P **P** **07 43 10.4 +0.2**
baz=222
SML Sawmill 84.81 20 P **P** **07 43 09.7 -1.5**
SML Sawmill 84.81 20 P **P** **07 43 11.2 0.0**
baz=224
KAIM Kayak Island 84.84 23 P **P** **07 43 11.1 -0.3**
baz=227
CAST Castle Rocks 84.86 17 P **P** **07 43 11.3 -0.1**
baz=220
J20K Nowinta River 84.87 16 IAmb IAmb 07 43 23.8
comp=Z,10nm,1.0s
J20K Nowinta River 84.87 16 P **P** **07 43 11.6 +0.2**
baz=218,SNR=10
M23K Glacier View 84.99 20 P **P** **07 43 12.8 +0.6**
baz=224
F17K Baldwin Pennin 85.05 12 P **P** **07 43 12.9 +0.7**
baz=211
CHUM Lake Minchumin 85.15 17 P **P** **07 43 13.2 +0.4**
baz=220
G18K Tagagawik 85.15 14 P **P** **07 43 12.9 0.0**
baz=214
SCM Sheep Creek Mo 85.15 20 P **P** **07 43 13.0 0.0**
baz=224
I20K Naaghedeneel 85.28 16 P **P** **07 43 14.0 +0.6**
baz=218
KTH Kantishna Hill 85.30 18 IAmb IAmb 07 43 24.8
comp=Z,23nm,1.1s
H19K Roundabout Mou 85.37 15 IAmb IAmb 07 43 26.9
comp=Z,26nm,1.3s
H19K Roundabout Mou 85.37 15 P **P** **07 43 14.0 +0.2**
baz=216
KLU Klutina 85.39 21 P **P** **07 43 14.0 -0.2**
baz=226
TRF Thorofare Moun 85.41 18 IAmb IAmb 07 44 55.1
comp=Z,12nm,0.8s
TRF Thorofare Moun 85.41 18 P **P** **07 43 14.3 0.0**
baz=222
WAT1 Susitna Watana 85.48 19 P **P** **07 43 14.7 +0.1**
baz=223
E17K Hotham Inlet 85.48 12 P **P** **07 43 14.8 +0.4**
baz=211
BMRM Bremner River 85.48 22 P **P** **07 43 15.1 +0.4**
baz=227
F18K Selawik 85.52 13 P **P** **07 43 14.9 +0.3**
baz=213
WAT6 Susitna Watana 85.56 19 P **P** **07 43 15.4 +0.3**
baz=224
G19K Purcell Mounta 85.72 14 IAmb IAmb 07 43 28.7
comp=Z,21nm,1.1s
G19K Purcell Mounta 85.72 14 P **P** **07 43 16.0 +0.4**
baz=215,SNR=9.9
H20K Anotleneega Mo 85.73 15 P **P** **07 43 16.6 +0.9**
baz=217,SNR=7.5
D17K Noatak River 85.77 11 P **P** **07 43 16.5 +0.7**
baz=210
CRQE Cirque 85.89 22 P **P** **07 43 16.9 +0.2**
baz=228
N25K Chitina, Valde 85.92 21 P **P** **07 43 17.3 +0.5**
baz=227
E18K Tukpahlearik C 86.02 12 IAmb IAmb 07 43 18.6
comp=Z,6.1nm,0.8s
E18K Tukpahlearik C 86.02 12 P **P** **07 43 17.8 +0.7**
baz=212
MCK McKinley 86.02 18 P **P** **07 43 17.1 -0.1**
baz=223,SNR=5.7
DHY Denali Highway 86.03 19 IAmb IAmb 07 43 32.2
comp=Z,13nm,1.2s
DHY Denali Highway 86.03 19 P **P** **07 43 17.7 +0.3**
baz=224
TLY Talaya 86.04 326 P **P** **07 43 17.1 -0.5**
comp=Z,8.9nm,0.8s,baz=119,slow=5.2,SNR=5.0
comp=Z,8.9nm,0.8s
RDOG Red Dog Mine 86.12 11 P **P** **07 43 18.2 +0.6**
baz=210
F19K Shaleruckik Mo 86.13 13 IAmb IAmb 07 43 30.5
comp=Z,20nm,1.4s
F19K Shaleruckik Mo 86.13 13 P **P** **07 43 17.8 +0.2**
baz=214,SNR=6.5
I21K Tanana 86.24 16 P **P** **07 43 18.2 0.0**
baz=220
MCARA McCarthy VSAT 86.33 22 P **P** **07 43 18.6 -0.1**
baz=228
H21K Melozitna Rive 86.39 16 IAmb IAmb 07 43 32.0
comp=Z,20nm,1.2s
H21K Melozitna Rive 86.39 16 P **P** **07 43 19.4 +0.4**
baz=219,SNR=6.9
IMAR Indian Mountai 86.40 15 P **P** **07 43 18.7 -0.3**
MLY Manley 86.47 17 IAmb IAmb 07 43 31.6
comp=Z,11nm,1.2s
MLY Manley 86.47 17 P **P** **07 43 19.5 +0.1**
baz=221,SNR=5.4
PAX Paxson 86.57 20 P **P** **07 43 20.6 +0.6**
baz=226
NEA2 Nenana 86.62 18 IAmb IAmb 07 43 32.4
comp=Z,15nm,1.2s
NEA2 Nenana 86.62 18 P **P** **07 43 19.0 -1.1**
baz=223,SNR=5.7
E19K Redstone River 86.77 13 IAmb IAmb 07 43 43.7
comp=Z,12nm,1.1s
E19K Redstone River 86.77 13 P **P** **07 43 20.8 0.0**
baz=215,SNR=6.5
F20K Avaraart Lake 86.77 14 IAmb IAmb 07 43 34.4
comp=Z,19nm,1.5s
F20K Avaraart Lake 86.77 14 P **P** **07 43 21.1 +0.3**
baz=216
G21K Allakaket 86.88 15 IAmb IAmb 07 43 34.0
comp=Z,13nm,1.1s
G21K Allakaket 86.88 15 P **P** **07 43 21.4 +0.1**
baz=218
I23K Minto, Yukon-K 86.94 17 P **P** **07 43 21.2 -0.5**
baz=222
H22K Ishtalitna Cre 86.95 16 IAmb IAmb 07 45 13.5
comp=Z,9.9nm,1.1s
H22K Ishtalitna Cre 86.95 16 P **P** **07 43 22.2 +0.5**
baz=220,SNR=6.7
C18K Utukok River 86.95 11 IAmb IAmb 07 43 46.7
comp=Z,11nm,1.0s
C18K Utukok River 86.95 11 P **P** **07 43 21.8 0.0**
baz=211
M26K Nabesna, AK 87.02 21 IAmb IAmb 07 45 03.8
comp=Z,9.0nm,0.5s
M26K Nabesna, AK 87.02 21 P **P** **07 43 22.3 +0.1**
baz=228
CCB Clear Creek Bu 87.03 18 P **P** **07 43 21.7 -0.4**
CCB IAmb IAmb 07 45 16.9
comp=Z,12nm,1.5s
K24K Donnelly Dome 87.06 19 P **P** **07 43 22.4 +0.1**
baz=226
HDA Harding Lake 87.12 18 IAmb IAmb 07 43 33.9
comp=Z,10nm,1.0s
HDA Harding Lake 87.12 18 P **P** **07 43 22.7 +0.2**
baz=225,SNR=6.6
COLA College 87.18 18 P **P** **07 43 22.2 -0.6**
COLA College 87.18 18 P **P** **07 43 23.0 +0.2**
baz=224
COLA College 87.18 18 P **P** **07 43 22.8 0.0**
RIDG Independent Ri 87.31 20 P **P** **07 43 23.3 -0.2**
baz=227
M27K Edge Creek, AK 87.39 22 IAmb IAmb 07 43 36.6
comp=Z,9.0nm,1.1s
M27K Edge Creek, AK 87.39 22 P **P** **07 43 23.7 -0.4**
baz=229
H23K Yukon River 87.40 17 IAmb IAmb 07 43 37.2
comp=Z,16nm,1.5s
H23K Yukon River 87.40 17 P **P** **07 43 24.1 +0.2**
baz=222
ILAR Eielson Array 87.40 18 P **P** **07 43 22.0 -1.9**
comp=Z,2.3nm,0.7s,baz=237,slow=4.7,SNR=20

comp=Z,2.3nm,0.7s
D19K **Kuna River** 87.43 12 IAmb IAmb 07 43 49.6
comp=Z,13nm,1.2s
D19K **Kuna River** 87.43 12 P P 07 43 24.1 0.0
baz=214
F21K **Alatna River** 87.44 15 P P 07 43 24.6 +0.5
baz=218
YUK8 **Steele Glacier** 87.47 23 P P 07 43 24.4 -0.3
baz=231
YUK3 **Moose Creek** 87.52 22 P P 07 43 24.1 -0.7
baz=231
E20K **Nigu River** 87.65 13 P P 07 43 25.3 +0.2
baz=216,SNR=6.1
C19K **Lookout Ridge** 87.65 12 P P 07 43 25.3 +0.2
baz=213
J25K **Salcha River,** 87.75 19 IAmb IAmb 07 43 37.8
comp=Z,13nm,1.0s
J25K **Salcha River,** 87.75 19 P P 07 43 25.7 +0.1
baz=226
SCRK **Sand Creek** 87.75 20 P P 07 43 25.6 -0.1
baz=227
L27K **Beaver Creek,** 87.86 21 P P 07 43 26.1 -0.1
baz=229
D20K **Etivluk River** 87.93 13 IAmb IAmb 07 43 27.2
comp=Z,14nm,1.1s
D20K **Etivluk River** 87.93 13 P P 07 43 26.8 +0.4
baz=216,SNR=9.9
G23K **Bananza Creek** 87.93 16 IAmb IAmb 07 43 40.5
comp=Z,18nm,1.4s
G23K **Bananza Creek** 87.93 16 P P 07 43 26.6 +0.2
baz=222
F22K **John River** 87.98 15 P P 07 43 26.8 +0.2
baz=220
PAHR **Pah Rah Range** 88.02 48 P P 07 43 27.5 -0.2
H04A **Detroit Lake** 88.02 43 IAmb IAmb 07 43 27.5
comp=Z,10nm,1.0s
HYT **Haines Junctio** 88.06 24 P P 07 43 26.5 -0.8
baz=233
EVN **Everest** 88.18 299 P P 07 43 29.5 +0.2
COLD **Coldfoot** 88.27 16 P P 07 43 27.5 -0.5
baz=222
E21K **Killik River** 88.29 14 IAmb IAmb 07 43 51.1
comp=Z,13nm,1.2s
E21K **Killik River** 88.29 14 P P 07 43 28.6 +0.5
baz=218
PRP **Porcupine Dome** 88.33 18 P P 07 43 28.8 +0.3
baz=226
NVAR **Mina Array Bea** 88.34 49 P P 07 43 29.7 +0.4
comp=Z,2.0nm,0.8s,baz=228,slow=7.2,SNR=14
comp=Z,2.0nm,0.8s
G24K **Hadweenzic Riv** 88.61 17 IAmb IAmb 07 45 26.9
comp=Z,6.7nm,1.1s
G24K **Hadweenzic Riv** 88.61 17 P P 07 43 30.2 +0.6
baz=224,SNR=5.9
C21K **Knifeblade Rid** 88.68 13 P P 07 43 30.4 +0.5
baz=217,SNR=6.5
GNW **Green Mountain** 88.79 40 IAmb IAmb 07 43 31.7
comp=Z,6.4nm,0.9s
I26K **Coal Creek Min** 88.91 19 IAmb IAmb 07 43 44.6
comp=Z,19nm,1.5s
I26K **Coal Creek Min** 88.91 19 P P 07 43 31.0 -0.1
baz=228
E23K **Chandalar** 89.04 15 P P 07 43 32.5 +0.8
baz=222
B21K **Ikpikpuk River** 89.09 13 P P 07 43 32.7 +1.0
baz=217
F24K **Squaw Lake** 89.09 16 P P 07 43 32.5 +0.6
baz=224
S34M **Telegraph Cree** 89.13 28 P P 07 43 32.8 +0.5
baz=239
L29M **L29M** 89.20 22 P P 07 43 31.3 -1.2
baz=233
E24K **Your Creek** 89.34 15 P P 07 43 33.0 -0.1
baz=223
DAWY **Dawson** 89.34 21 P P 07 43 32.7 -0.5
baz=232
ELIB **Princess Elisa** 89.43 191 *dP* P 07 43 33.0 -0.8
comp=Z,5.4nm,1.1s
D23K **Nanushuk River** 89.46 14 P 07 43 34.5 +0.9
D23K IAmb IAmb 07 43 35.5
comp=Z,12nm,1.2s
D23K **Nanushuk River** 89.46 14 P P 07 43 34.7 +1.1
baz=221
TOLK **Toolik Lake Re** 89.49 15 P P 07 43 34.5 +0.7
baz=222
WVOR **Wild Horse Val** 89.54 46 IAmb IAmb 07 43 35.8
comp=Z,11nm,1.2s
WVOR **Wild Horse Val** 89.54 46 P P 07 43 35.1 +0.4
I07A **Izee** 89.56 44 IAmb IAmb 07 43 36.3
comp=Z,15nm,1.1s
I27K **Kandik River** 89.59 19 P P 07 43 34.7 +0.4
baz=230
F25K **Christian Rive** 89.75 17 P P 07 43 35.4 +0.3
baz=226
G26K **Porcupine Rive** 89.83 18 IAmb IAmb 07 43 49.0
comp=Z,7.8nm,1.1s
G26K **Porcupine Rive** 89.83 18 P P 07 43 35.8 +0.5
baz=228
K29M **Barlow Dome** 89.86 22 P P 07 43 35.4 -0.3
baz=233
DLBC **Dease Lake** 89.90 28 P P 07 43 35.8 -0.2
baz=240
B22K **Teshekpuk Lake** 89.91 13 P P 07 43 36.0 +0.4
baz=219
R33M **Jennings River** 89.97 27 P P 07 43 36.0 -0.3
baz=239
MXC **Moxie City** 89.99 41 IAmb IAmb 07 43 49.1
comp=Z,17nm,1.8s
LTY **Liberty** 90.01 41 IAmb IAmb 07 43 37.1
comp=Z,6.8nm,0.9s
N32M **Quiet Lake** 90.01 25 P P 07 43 36.6 +0.3
baz=237
H27K **Steamboat Moun** 90.03 19 P P 07 43 36.9 +0.5
baz=230
I28M **Miner Creek** 90.03 20 P P 07 43 37.2 +0.8
baz=231
D24K **Happy Valley** 90.05 15 P P 07 43 37.1 +0.8
baz=223
A22K **Sinclair Lake** 90.12 12 P P 07 43 37.7 +1.2
baz=217
C23K **Itkillik River** 90.14 14 P P 07 43 38.1 +1.4
baz=221
E25K **Arctic Village** 90.14 16 P P 07 43 37.7 +0.9
baz=226
F26K **Sheenjek River** 90.24 17 P P 07 43 38.3 +1.0
baz=227
G27K **Doyon Strip** 90.37 18 P P 07 43 38.0 +0.1
baz=230
HAWA **Hanford** 90.40 42 IAmb IAmb 07 43 39.5
comp=Z,12nm,1.0s
PRN **Pahroc Range** 90.41 51 IAmb IAmb 07 43 40.0
comp=Z,8.3nm,1.0s
EPH **Ephrata** 90.72 41 IAmb IAmb 07 43 40.7
comp=Z,11nm,1.1s
D25K **Kavik River** 90.78 15 P P 07 43 40.9 +1.1
baz=225
D08A **Wollman Farm,** 91.04 41 IAmb IAmb 07 43 42.9
comp=Z,13nm,1.3s
E27K **Coleen River** 91.28 17 P P 07 43 42.9 +0.7
baz=230
BMO **Blue Mountains** 91.31 44 IAmb IAmb 07 44 08.6
comp=Z,9.2nm,1.9s
F10A **Beach Ranch, E** 91.75 43 IAmb IAmb 07 43 45.0
comp=Z,9.1nm,0.9s
TROLL **Troll, Antarti** 92.16 185 P P 07 43 45.1 -1.3
comp=Z,670nm,0.8s
HYB **Hyderabad** 92.49 287 eP P 07 43 48.0 -0.9
HYB ePKiKP **PKiKP** 07 48 36.3 -1.6
HYB eSKSac **SKSac** 07 54 16.5 -4.5
WMQ **Urumqi** 92.56 315 eP P 07 43 48.8 +0.1
WMQ pP pwP 07 44 04.8 +3.8
WMQ pmax pmax
comp=Z,25nm,1.7s
NEW **Newport** 92.60 41 P P 07 43 48.1 -0.6
SNAA **Sanae** 92.87 183 ⇑P P 07 43 48.5 -1.1
comp=Z,96nm,0.8s
SNAA **Sanae** 92.87 183 P P 07 43 48.5 -1.1
comp=Z,7.7nm,1.0s,baz=184,slow=4.5,SNR=9.9
comp=Z,7.7nm,1.0s
SNAA **Sanae** 92.87 183 IAmb IAmb 07 43 49.9
comp=Z,13nm,1.2s
VNA2 **Neumayer--Watz** 93.82 182 P P 07 43 53.3 -0.6
comp=Z,7.6nm,0.7s,baz=167,slow=4.2
VNA1 **Neumayer--Stat** 94.12 182 ⇑P P 07 43 52.7 -2.6
comp=Z,7.1nm,0.8s
BSUT **Blindstream Ca** 94.54 49 P P 07 43 57.6 -0.7
PDAR **Pinedale Array** 96.01 47 P P 07 44 03.2 -1.5
comp=Z,0.4nm,0.8s,baz=240,slow=2.9,SNR=4.2
comp=Z,0.4nm,0.8s
MKAR **Makanchi Array** 97.07 316 P P 07 44 08.4 -0.8
comp=Z,7.2nm,0.7s,baz=120,slow=7.2,SNR=4.4
comp=Z,3.2nm,0.7s
MKAR **Makanchi Array** 97.07 316 P P 07 44 07.2 -2.0
MAKZ **Makanchi** 97.28 316 P P 07 44 09.0 -1.1
MAKZ **Makanchi** 97.28 316 P P 07 44 09.2 -1.0
TXAR **Lajitas Array** 97.34 62 P P 07 44 10.4 -0.5
comp=Z,0.2nm,0.7s,baz=276,slow=3.1,SNR=4.1
comp=Z,0.2nm,0.7s
YKA **Yellowknife Ar** 98.51 27 P P 07 44 13.4 -1.8
comp=Z,3.1nm,1.0s,baz=252,slow=4.7,SNR=13
comp=Z,3.1nm,1.0s
LPAZ **La Paz** 117.68 118 PKP PKPdf 07 49 24.2 -0.7
comp=Z,1.3nm,1.0s,baz=250,slow=1.3,SNR=3.9
ARCES **ARCESS Array B** 120.65 345 PKP PKPdf 07 49 27.1 -1.2
comp=Z,1.2nm,0.4s,baz=33,slow=2.4,SNR=14
FINES **FINESS Array B** 125.99 338 PKP PKPdf 07 49 37.4 -1.4
comp=Z,2.0nm,0.8s,baz=42,slow=2.8,SNR=4.7
AKASG **Malin Array Be** 130.77 325 PKP PKPdf 07 49 47.2 -0.9
comp=Z,0.2nm,0.3s,baz=65,slow=2.0,SNR=4.9
AK10 **Malin Array Si** 130.81 325 PKP PKPdf 07 49 48.6 +0.4
AK21 **Malin Array Si** 130.83 325 PKP PKPdf 07 49 48.1 -0.2
AK16 **Malin Array Si** 130.85 325 PKP PKPdf 07 49 48.1 -0.2
RNPP8 **Varash** 132.24 327 PKP PKPdf 07 49 51.3 +0.4
GEC2 **GERESS Array S** 139.81 332 PKPdf 07 50 04.6 -0.6
TUE **Stuetta** 143.53 333 PKPbc 07 50 09.2 -0.2
INTR **Introdacqua** 144.41 324 PKPab 07 50 11.9 +0.1
SENIN **Lac Senin/Sane** 144.49 335 PKPab 07 50 11.9 -0.2
KEST **Kesra** 151.14 319 PKPbc PKPbc 07 50 30.7 -0.1
comp=Z,11nm,1.0s,baz=56,slow=3.6,SNR=7.3
TORD **Torodi Ar. Bea** 164.99 263 PKP PKPdf 07 50 40.3 -1.8
comp=Z,1.5nm,0.9s,baz=39,slow=2.1,SNR=5.9
TORD PKPab PKPab 07 51 37.6 -1.2
comp=Z,2.5nm,0.9s,baz=100,slow=4.0,SNR=8.9

*NOU **22** 07:34:36.4, 11.°58S×162.°84E, h0km, MLv4.7/12, Solomon Islands*
*IDC **22** 07:34:41.1±3.3, 11.°65S×162.°67E, h41km±27km, mb3.8/6, mbtmp4.0/9, ML3.7/3, Error ellipse: s-maj=30.5km s-min=17.0km az=68.0*
ISC 22 07:34:39.7±0.9, 11.°64S±0.°08×162.°9E±0.°1, h35km, n26, σ1§09/22, mb3.9/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	1.49	321	P	Pn	07 35 02.6	-1.4
HURO	**Huro Makira**	1.49	321	S	Sn	07 35 21.1	-1.2
NGOA	**Tingoa Renbel**	2.74	271	P	Pn	07 35 22.0	+0.9
HNR	**Honiara**	3.60	307	P	Pn	07 35 33.5	+0.5
	3.8nm,0.3s,baz=236,slow=22,SNR=20						
HNR				S	Sn	07 36 12.5	-1.9
	9.6nm,0.3s,baz=173,slow=22,SNR=7.9						
	18nm,0.5s						
HNR	**Honiara**	3.60	307	P	Pn	07 35 34.0	+1.0
HNR	**Honiara**	3.60	307	S	Sn	07 36 14.9	+0.5
SAVO	**Savo Central**	3.88	309	P	Pn	07 35 38.4	+1.5
SAVO	**Savo Central**	3.88	309	S	Sn	07 36 22.1	+0.8
TATA	**Tatamba Isabel**	4.41	317	P	Pn	07 35 44.7	+0.5
NOUC	**Port Laguerre**	10.92	163	P	Pn	07 37 14.5	+1.0
DZM	**Mont Dzumac**	10.93	162	P	Pn	07 37 14.7	+0.9
	0.5nm,0.3s,baz=41,slow=7.9,SNR=22						
DZM				S	Sn	07 39 13.0	-1.9
	4.0nm,0.6s,baz=296,slow=22,SNR=1.4						
	3.5nm,0.4s						
MARNC	**Mare, Loyalty**	10.97	154	P	Pn	07 37 14.3	0.0
OUENC	**Ouen Island, N**	11.38	161	P	Pn	07 37 20.8	+1.0
CTA	**Charters Tower**	18.03	240	P	P	07 38 47.4	-0.5
	0.3nm,0.3s,baz=65,slow=12,SNR=1.7						
	2.9nm,0.8s						
STKA	**Stephens Creek**	28.10	221	P	P	07 40 28.0	-0.3
	1.3nm,0.5s,baz=31,slow=5.8,SNR=1.6						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	28.62	250	P	P	07 40 32.6	-0.5
	0.5nm,0.5s,baz=75,slow=8.8,SNR=2.3						
	0.5nm,0.5s						
ASAR	**Alice Springs**	30.00	243	P	P	07 40 44.8	-0.5
	1.4nm,0.8s,baz=60,slow=11,SNR=4.8						
	1.4nm,0.8s						
H11S2	**WAKE ISLAND Hy**	30.18	7	T	T	08 11 47.5	
	baz=183,slow=74						
H11S3	**WAKE ISLAND Hy**	30.18	7	T	T	08 12 22.0	
	baz=183						
H11S1	**WAKE ISLAND Hy**	30.19	7	T	T	08 12 01.6	
	baz=183,slow=74						
H11N1	**WAKE ISLAND Hy**	31.41	7	T	T	08 13 41.5	
	baz=188,slow=76,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	31.41	7	T	T	08 13 40.6	
	baz=188,slow=76,SNR=37						
H11N2	**WAKE ISLAND Hy**	31.42	7	T	T	08 13 41.7	
	baz=188,slow=76,SNR=7.2						
SONM	**Songino Array**	77.49	325	P	P	07 46 31.7	-0.1
	2.1nm,0.8s,baz=123,slow=4.8,SNR=4.5						
	2.1nm,0.8s						
ILAR	**Eielson Array**	84.99	19	P	P	07 47 12.8	+1.7
	0.5nm,0.6s,baz=219,slow=4.8,SNR=4.8						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	92.02	317	P	P	07 47 44.5	-0.5
	1.5nm,0.6s,baz=96,slow=5.0,SNR=4.6						
	1.5nm,0.6s						

*ASRS **22** 07:41:39.0±2.1, 53.°74N×91.°10E, h0km, M3.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **22** 07:41:48.6±3.0, 53.°49N×90.°59E, h0km, mbtmp3.6/3, ML3.3/3, Error ellipse: s-maj=26.4km s-min=21.4km az=59.0*
*NNC **22** 07:41:54.2±2.5, 53.°38N×90.°14E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=19.7km s-min=16.3km az=71.0, Suspected Mining explosion.*
ISC 22 07:41:49.4±3.9, 53.°6N±0.°1×90.°4E±0.°2, h0km, n9, σ1§63/14, 6C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	3.30	278	I	I	08 03 25.0	
	0.1nm,1.1s,baz=91,slow=319,SNR=11						
ZAA0	**Zalesovo Array**	3.30	278	⇑Pn	Pb	07 42 47.0	-1.8
	15nm,0.8s						
ZAA0				⇓Lg	Lg	07 43 37.7	
	173nm,1.0s						
ZALV	**Zalesovo Beam**	3.30	278	Pn	Pn	07 42 43.8	+1.5
	4.6nm,0.3s,baz=92,slow=10.0,SNR=30						
ZALV				Lg	Lg	07 43 37.9	
	7.2nm,0.3s,baz=93,slow=27,SNR=13						
	4.8nm,0.3s						
KURK	**Kurchatov**	7.78	253	⇑Pn	Pn	07 43 45.3	+1.6
	1.7nm,1.0s						
KURK				⇑Sn	Sn	07 45 11.4	-1.0
	7.3nm,0.7s						
KURK				⇓Lg	Lg	07 45 55.0	
	16nm,0.8s						
KURBB	**Kurchatov Arra**	7.87	252	Pn	Pn	07 43 45.7	+0.7
	0.4nm,0.3s,baz=66,slow=15,SNR=18						
KURBB				Sn	Sn	07 45 14.3	-0.3
	0.1nm,0.3s,baz=66,slow=26,SNR=4.5						
KURBB				Lg	Lg	07 46 03.5	
	0.1nm,0.3s,baz=69,slow=30,SNR=8.2						
	1.7nm,0.3s						
KURBB	**Kurchatov Arra**	7.87	252	⇑Pn	Pn	07 43 46.0	+1.0
	2.1nm,0.3s						
KURBB				⇓Sn	Sn	07 45 16.1	+1.4
	52nm,0.7s						
KURBB				⇓Lg	Lg	07 45 57.0	
	150nm,1.2s						
MK31	**Makanchi Array**	8.56	220	Pn	Pn	07 43 55.4	+0.8
	4.1nm,0.8s,baz=31,slow=12,SNR=23						
MK31				⇑Sn	Sn	07 45 32.8	+1.1
	7.8nm,1.1s,baz=36,slow=23,SNR=4.8						
MK31				⇓Lg	Lg	07 46 18.2	
	22nm,1.0s,baz=65,slow=14,SNR=3.5						
MKAR	**Makanchi Array**	8.56	220	Pn	Pn	07 43 54.5	-0.1
	0.8nm,0.3s,baz=36,slow=12,SNR=19						
MKAR				Sn	Sn	07 45 29.0	-2.7
	0.3nm,0.3s,baz=37,slow=24,SNR=5.7						
MKAR				Lg	Lg	07 46 22.3	
	baz=35,slow=32						
	1.1nm,0.3s						
MAKZ	**Makanchi**	8.67	222	⇑Pn	Pn	07 43 56.2	+0.1
	6.7nm,1.0s						
MAKZ				⇓Sn	Sn	07 45 37.2	+2.8
	10nm,1.5s						
MAKZ				⇓Lg	Lg	07 46 21.7	
	20nm,1.0s						

*IDC **22** 07:42:07.6±1.0, 55.°04N×160.°45W, h0km, mb4.0/18, mbtmp4.0/21, ML3.9/3, Error ellipse: s-maj=25.1km s-min=14.2km az=177.0*
*NEIC **22** 07:42:14.2±2.1, 54.°85N±0.°03×160.°3W±0.°1, h52km±7km, mb4.1/19, ML4.0/38, Error ellipse: s-maj=9.6km s-min=1.1km az=115.0*
ISC 22 07:42:13.1±0.5, 54.°94N±0.°06×160.°25W±0.°04, h35km, n99, σ1§95/85, mb4.1/19, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	0.40	107		Pn	07 42 22.0	-0.3
CNBA				Sn	Sn	07 42 27.7	-0.9
CNBA				IAML		07 42 28.6	
	comp=E,6μm,0.7s						
SDPT	**Sand Point**	0.43	343		Pn	07 42 23.9	+1.1
SDPT					Sn	07 42 24.0	-5.5
SDPT				IAML		07 42 36.6	
	comp=E,8μm,0.5s						
VNFG	**Fog Glacier, M**	1.41	16		Pn	07 42 39.0	+2.7
CHGN	**Chignik**	1.72	37		Pn	07 42 42.5	+2.1
CHGN				Sn	Sn	07 43 05.0	+3.9
CHGN				IAML		07 43 09.8	
	comp=N,2μm,0.4s						
CHIR	**Chirikof Islan**	2.79	70	P	Pn	07 42 56.3	+1.2
CHIR	**Chirikof Islan**	2.79	70	S	Sn	07 43 29.0	+1.6
CHIR	**Chirikof Islan**	2.79	70		Pn	07 42 56.4	+1.4
CHIR				Sn	Sn	07 43 28.6	+1.2
CHIR				IAML		07 43 53.3	
	comp=E,807nm,1.0s						
CHIR				IAML		07 43 55.8	
	comp=N,455nm,0.7s						
AKUT	**Akutan**	3.32	258	P	Pn	07 43 03.8	+1.4
AKUT	**Akutan**	3.32	258	S	Sn	07 43 43.4	+2.9
AKUT	**Akutan**	3.32	258		Pn	07 43 03.6	+1.3
AKUT				IAML		07 43 56.2	
	comp=E,343nm,0.7s						
AKUT				IAML		07 43 59.6	
	comp=N,266nm,1.1s						
LVA	**Lava Point**	3.46	259	Pn	Pn	07 43 06.2	+1.8
LVA				IAML		07 44 03.3	
	comp=E,260nm,0.6s						
LVA				IAML		07 44 03.9	
	comp=N,502nm,0.7s						
SII	**Sitkinak Islan**	3.79	62	P	Pn	07 43 10.2	+1.2
SII	**Sitkinak Islan**	3.79	62		Pn	07 43 10.3	+1.4
UNV	**Unalaska Valle**	3.82	256	P	Pn	07 43 09.6	+0.4
UNV	**Unalaska Valle**	3.82	256		Pn	07 43 09.7	+0.5
O15K	**Ungalikthiuk R**	4.26	3		Pn	07 43 17.1	+1.8
O15K				IAML		07 44 10.8	
	comp=E,113nm,3.0s						
O15K				IAML		07 44 14.6	
	comp=N,109nm,4.1s						
ACHA	**Angle Creek He**	4.26	38		Pn	07 43 18.2	+2.7
P16K	**Nushagak River**	4.29	16		Pn	07 43 18.3	+2.6
P16K				IAML		07 44 46.0	
	comp=N,275nm,0.7s						
O14K	**Tigyukauivet M**	4.36	353		Pn	07 43 18.6	+1.8
OHAK	**Old Harbor**	4.52	57	P	Pn	07 43 19.5	+0.6
OHAK	**Old Harbor**	4.52	57		Pn	07 43 19.8	+0.8
OHAK				IAML		07 44 33.8	
	comp=N,114nm,0.8s						
P17K	**Kvichak River**	4.75	24		Pn	07 43 25.1	+3.1
O16K	**Kokwok River B**	4.81	13		Pn	07 43 25.1	+2.2
O16K				IAML		07 45 01.6	
	comp=N,76nm,4.7s						
N14K	**Kuskokwak Cree**	5.06	352		Pn	07 43 28.1	+1.8
N14K				IAML		07 45 06.9	
	comp=E,103nm,4.7s						
N14K				IAML		07 45 24.3	
	comp=N,128nm,1.5s						
KDAK	**Kodiak Island**	5.13	53	Pn	Pn	07 43 27.1	-0.2
	comp=N,3.5nm,0.3s,baz=217,slow=5.1,SNR=20						
KDAK				Sn	Sn	07 44 23.2	-1.9
	comp=N,2.1nm,0.3s,baz=265,slow=12,SNR=1.4						
KDAK				Lg	Lg	07 44 48.9	
	comp=N,12nm,0.3s,baz=103,slow=22,SNR=7.2						
	comp=N,11nm,0.5s						
KDAK	**Kodiak Island**	5.13	53		Pn	07 43 28.4	+1.2
KDAK				IAML		07 44 51.4	
	comp=N,105nm,0.6s						
KDAK				IAML		07 45 00.4	
	comp=N,133nm,5.0s						
N15K	**Kwethluk River**	5.25	1	IAML		07 45 14.4	
	comp=N,81nm,0.7s						
N15K				IAML		07 45 16.0	
	comp=E,110nm,2.9s						
M14K	**Bethel**	5.90	352		Pn	07 43 39.3	+1.5
SPIA	**Saint Paul Isl**	6.03	296	P	Pn	07 43 41.2	+1.5
SPIA	**Saint Paul Isl**	6.03	296		Pn	07 43 41.5	+1.8
N18K	**Kilae Creek**	6.21	20		Pn	07 43 44.4	+2.3
ILSW	**Iliamna Southw**	6.35	34		Pn	07 43 47.4	+3.3
M17K	**Holitna River**	6.65	12		Pn	07 43 50.5	+2.3
CNPM	**China Poot**	6.71	43		Pn	07 43 51.7	+2.6
RED	**Redoubt Volcan**	6.80	33		Pn	07 43 53.5	+3.2
SPU	**Mount Spurr**	7.62	31		Pn	07 44 04.5	+3.1
STLK	**Strandline Lak**	7.93	31		Pn	07 44 09.2	+3.4
SKT	**Skwentna**	8.40	29		Pn	07 44 16.2	+4.0
J17K	**VABM Dome**	8.51	4		Pn	07 44 14.6	+1.0
L22K	**Petersville**	9.06	29		Pn	07 44 23.9	+2.7
GHO	**Glory Hole Cre**	9.07	36		Pn	07 44 23.3	+2.0
EYAK	**Cordova Ski Ar**	9.56	48	P	Pn	07 44 29.4	+1.4
SCM	**Sheep Creek Mo**	9.67	39		Pn	07 44 30.6	+1.0
J20K	**Nowinta River**	9.77	16		Pn	07 44 32.8	+2.0
KLU	**Klutina**	10.00	43		Pn	07 44 35.4	+1.3
M24K	**Tolsona, Glenn**	10.27	40		Pn	07 44 39.6	+1.9
ADK	**Adak**	10.28	259	P	Pn	07 44 38.9	+1.1
H19K	**Roundabout Mou**	10.79	8		Pn	07 44 46.5	+1.7
H22K	**Ishtalitna Cre**	11.82	18		Pn	07 45 01.7	+2.8
ILAR	**Eielson Array**	11.90	29	Pn	Pn	07 44 58.1	-1.9
	comp=E,0.4nm,0.3s,baz=222,slow=13,SNR=13						
ILAR				Sn	Sn	07 47 02.2	-9.1
	comp=E,0.1nm,0.3s,baz=208,slow=8.5,SNR=2.3						
M27K	**Edge Creek, AK**	12.08	45		Pn	07 45 04.9	+2.3
J25K	**Salcha River,**	12.22	32		Pn	07 45 04.6	+0.2
DAWY	**Dawson**	13.92	41		Pn	07 45 29.4	+1.8
L29M	**L29M**	13.96	45	Pn	Pn	07 45 30.5	+2.4
I27K	**Kandik River**	14.06	33		Pn	07 45 31.8	+2.3
E25K	**Arctic Village**	14.90	22	Pn	Pn	07 45 43.4	+2.7
M31M	**Drury Creek, Y**	15.24	51	IAmb	IAmb	07 45 53.8	
	comp=Z,8.4nm,0.8s						
H29M	**Whitestone**	15.49	34	IAmb	IAmb	07 45 54.4	
	comp=Z,8.0nm,0.7s						
C23K	**Itkillik River**	15.57	12	IAmb	IAmb	07 46 08.9	
	comp=Z,18nm,1.3s						
B22K	**Teshekpuk Lake**	15.76	9	IAmb	IAmb	07 45 55.9	
	comp=Z,6.3nm,0.7s						
G29M	**Pine Creek**	16.02	33	IAmb	IAmb	07 46 02.2	
	comp=Z,16nm,0.8s						
EPYK	**Eagle Plains**	16.12	35	IAmb	IAmb	07 46 12.8	
	comp=Z,12nm,0.6s						
G30M	**tAoh Zrali Nji**	16.63	34	IAmb	IAmb	07 46 08.4	
	comp=Z,11nm,0.6s						
H31M	**Peel River**	16.66	39	IAmb	IAmb	07 46 07.9	
	comp=Z,12nm,0.9s						
DLBC	**Dease Lake**	16.89	66	Pn	Pn	07 46 07.4	+0.9
	comp=Z,0.1nm,0.3s,baz=250,slow=13,SNR=2.8						
	comp=Z,1.7nm,0.9s						
G31M	**Satah River**	17.24	36		Pn	07 46 11.5	+0.8
G31M				IAmb	IAmb	07 46 17.1	
	comp=Z,6.3nm,0.6s						
INK	**Inuvik**	18.23	32	P	P	07 46 21.1	-1.7
	comp=Z,0.5nm,0.3s,baz=246,slow=14,SNR=18						
	comp=Z,2.3nm,0.5s						
YKA	**Yellowknife Ar**	24.41	53	P	P	07 47 27.8	+0.1
	comp=Z,1.1nm,0.6s,baz=273,slow=8.7,SNR=13						
YKA				PcP	PcP	07 51 05.4	-0.4
	comp=Z,0.3nm,0.4s,baz=270,slow=2.1,SNR=7.5						
	comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-**	24.51	283	P	P	07 47 28.0	-0.7
	comp=Z,2.6nm,0.5s,baz=79,slow=13,SNR=11						
	comp=Z,2.6nm,0.5s						
PDAR	**Pinedale Array**	34.74	89	P	P	07 49 00.8	+1.0
	comp=Z,0.2nm,0.4s,baz=315,slow=9.7,SNR=2.1						
	comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	38.15	70	P	P	07 49 28.6	+0.1
	comp=Z,0.9nm,0.4s,baz=306,slow=3.4,SNR=4.6						
	comp=Z,0.9nm,0.4s						
ULM	**Lac du Bonnet**	38.15	70	IAmb	IAmb	07 49 30.8	
	comp=Z,3.4nm,1.1s						
H11N2	**WAKE ISLAND Hy**	43.05	228	T	T	08 36 07.6	
	baz=28						
H11N3	**WAKE ISLAND Hy**	43.06	228	T	T	08 36 09.1	
	baz=28						

H11N1	**WAKE ISLAND Hy**	**43.07**	**228**	T	T	08 36 08.3		
	baz=28							
H11S1	**WAKE ISLAND Hy**	**44.22**	**228**	T	T	08 36 32.7		
	baz=27,slow=74							
H11S2	**WAKE ISLAND Hy**	**44.23**	**228**	T	T	08 36 43.9		
	baz=27							
H11S3	**WAKE ISLAND Hy**	**44.24**	**228**	T	T	08 36 39.6		
	baz=27,slow=74							
SPITS	**Spitsbergen Ar**	**47.13**	**1**	P	**P**	**07 50 39.5**	**-1.6**	
	comp=Z,0.5nm,0.3s,baz=2.1,slow=7.7,SNR=4.5							
	comp=Z,0.5nm,0.3s							
TXAR	**Lajitas Array**	**47.50**	**99**	P	**P**	**07 50 45.2**	**+0.5**	
	comp=Z,0.7nm,0.6s,baz=301,slow=6.4,SNR=18							
	comp=Z,0.7nm,0.6s							
SONM	**Songino Array**	**54.50**	**304**	P	**P**	**07 51 35.5**	**-1.5**	
	comp=Z,0.6nm,0.5s,baz=32,slow=8.7,SNR=2.3							
	comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**54.50**	**304**	IAmb	IAmb	07 51 35.9		
	comp=Z,0.6nm,0.8s							
ARCES	**ARCESS Array B**	**55.77**	**358**	P	**P**	**07 51 44.2**	**-1.5**	
	comp=Z,1.2nm,0.6s,baz=4.0,slow=7.3,SNR=8.5							
	comp=Z,1.2nm,0.6s							
ARCES	**ARCESS Array B**	**55.77**	**358**	IAmb	IAmb	07 51 44.4		
	comp=Z,20nm,1.5s							
HHC	**Hu-ho-hao-te**	**56.91**	**295**	*e*P	**P**	**07 51 57.3**	**+2.9**	
FINES	**FINESS Array B**	**63.85**	**357**	P	**P**	**07 52 40.0**	**-1.4**	
	comp=Z,1.2nm,0.4s,baz=15,slow=7.7,SNR=19							
	comp=Z,1.2nm,0.4s							
NOA	**NORSAR Array B**	**64.17**	**5**	P	**P**	**07 52 43.0**	**-0.5**	
	comp=Z,0.8nm,0.7s,baz=353,slow=6.6,SNR=3.4							
	comp=Z,0.8nm,0.7s							
BVAR	**Borovoye Array**	**64.55**	**329**	P	**P**	**07 52 45.5**	**-0.5**	
	comp=Z,2.5nm,0.6s,baz=43,slow=6.7,SNR=6.4							
	comp=Z,2.5nm,0.6s							
ARTI	**Arti**	**64.66**	**337**	P	**P**	**07 52 45.5**	**-1.2**	
	comp=Z,3.4nm,0.5s,baz=322,slow=6.1,SNR=4.5							
	comp=Z,3.4nm,0.5s							
ARTI	**Arti**	**64.66**	**337**	IAmb	IAmb	07 52 46.2		
	comp=Z,15nm,0.3s							
HFS	**Hagfors**	**65.17**	**3**	P	**P**	**07 52 49.4**	**-0.6**	
	comp=Z,2.9nm,0.6s,baz=0.0,slow=6.5,SNR=8.3							
	comp=Z,2.9nm,0.6s							
MKAR	**Makanchi Array**	**65.76**	**318**	P	**P**	**07 52 52.7**	**-1.3**	
	comp=Z,0.8nm,0.8s,baz=45,slow=6.0,SNR=2.7							
	comp=Z,0.8nm,0.8s							
EKA	**Eskdalemuir Ar**	**68.50**	**14**	P	**P**	**07 53 11.4**	**+0.3**	
	comp=Z,1.6nm,0.6s,baz=332,slow=4.7,SNR=5.9							
	comp=Z,1.6nm,0.6s							
AKASG	**Malin Array Be**	**74.43**	**354**	P	**P**	**07 53 45.9**	**-1.1**	
	comp=Z,0.5nm,0.2s,baz=12,slow=5.9,SNR=5.2							
	comp=Z,0.5nm,0.2s							
AKASG	**Malin Array Be**	**74.43**	**354**	IAmb	IAmb	07 54 14.3		
	comp=Z,3.0nm,1.3s							
KSH2	**Kashi**	**74.85**	**318**	P	**P**	**07 53 50.8**	**+0.9**	
KSH2				pmax	pmax			
	comp=Z,2μm,0.8s							
CMAR	**Chiang Mai Arr**	**81.12**	**289**	P	**P**	**07 54 24.0**	**-0.8**	
	comp=Z,0.7nm,0.3s,baz=19,slow=4.7,SNR=5.8							
	comp=Z,0.7nm,0.3s							
ESDC	**Sonseca Array**	**83.59**	**18**	P	**P**	**07 54 37.7**	**+0.3**	
	comp=Z,1.0nm,0.6s,baz=341,slow=5.2,SNR=5.9							
	comp=Z,1.0nm,0.6s							
QSPA	**South Pole Qui**	**144.71**	**180**	PKP	**PKPab**	**08 01 42.4**	**-0.9**	
	comp=Z,1.7nm,0.6s,baz=61,slow=1.8,SNR=12							

MOS ***22*** *07:56:54.4,42.°64N×48.°32E,h21km,MPVA3.7*
TIF ***22*** *07:56:55.0,42.°67N×48.°37E,h26km±1km*
DRS ***22*** *07:56:55.1,42.°64N×48.°35E,h6km*

ISC 22 07:56:53.4±2.3,42.°64N±0.°05×48.°43E±0.°08,h2km±12km, n18,σ0°976/36,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGKR	**Sergokala**	**0.60**	**252**	*e*Pg	**Pb**	**07 57 06.3**	**-0.3**
SGKR				*e*Sg	**Sb**	**07 57 14.8**	**-0.7**
DRN	**Derbent**	**0.62**	**187**	*e*Pg	**Pn**	**07 57 08.7**	**-0.4**
DRN				*e*Sg	**Sn**	**07 57 18.6**	**-1.0**
MAK	**Makhachkala**	**0.75**	**295**	*e*Pg	**Pb**	**07 57 09.2**	**0.0**
MAK				*e*Sg	**Sb**	**07 57 19.8**	**-0.1**
BUJR	**Buynaksk**	**0.99**	**281**	*e*Pg	**Pb**	**07 57 12.9**	**-0.3**
BUJR				*e*Sg	**Sb**	**07 57 26.6**	**-0.2**
ARKR	**Arakani**	**1.06**	**268**	*e*Pg	**Pb**	**07 57 14.2**	**-0.3**
ARKR				*e*Sg	**Sb**	**07 57 28.7**	**-0.1**
KSMR	**Kasumkent**	**1.06**	**192**	*e*Pg	**Pb**	**07 57 15.3**	**+0.8**
KSMR				*e*Sg	**Sn**	**07 57 30.5**	**-0.2**
GNBR	**Gunib**	**1.12**	**257**	*e*Pg	**Pb**	**07 57 15.3**	**-0.1**
GNBR				*e*Sg	**Sb**	**07 57 30.7**	**+0.4**
KRNR	**Karanay**	**1.14**	**280**	*e*Pg	**Pb**	**07 57 15.6**	**-0.3**
KRNR				*e*Sg	**Sb**	**07 57 31.1**	**0.0**
UNCR	**Uncukul**	**1.21**	**274**	*e*Pg	**Pg**	**07 57 16.7**	**+0.1**
UNCR				*e*Sg	**Sb**	**07 57 32.5**	**-0.6**
DBC	**Dubki**	**1.24**	**288**	*e*Pg	**Pg**	**07 57 16.8**	**-0.3**
DBC				*e*Sg	**Sb**	**07 57 33.5**	**-0.4**
XNZR	**Khunzakh**	**1.28**	**266**	*e*Pg	**Pg**	**07 57 17.6**	**-0.3**
XNZR				*e*Sg	**Sb**	**07 57 34.6**	**-0.6**
BTLR	**Botlikh**	**1.63**	**271**	*e*Pg	**Pn**	**07 57 23.6**	**+0.4**
BTLR				*e*Sg	**Sg**	**07 57 45.1**	**-0.7**
TLTR	**Tlyarata**	**1.63**	**251**	*e*Pg	**Pb**	**07 57 24.0**	**-0.2**
TLTR				*e*Sg	**Sg**	**07 57 45.6**	**-0.2**
VSHL	**Vashlovani**	**2.07**	**228**	P	**Pg**	**07 57 33.0**	**0.0**
VSHL				S	**Sg**	**07 58 02.1**	**+2.2**
DGRG	**David-gareji**	**2.57**	**243**	P	**Pb**	**07 57 38.5**	**-1.7**
DGRG				S	**Sb**	**07 58 11.6**	**-0.7**
CHRG	**Chargali**	**2.61**	**264**	P	**Pn**	**07 57 37.7**	**+1.0**
CHRG				S	**Sb**	**07 58 14.2**	**+0.6**
LACR	**Lac**	**3.05**	**275**	*e*Pn	**Pb**	**07 57 47.4**	**-1.0**
LACR				*e*Sn	**Sn**	**07 58 21.5**	**+1.6**
KBZ	**Khabaz**	**4.19**	**287**	*e*Pn	**Pn**	**07 57 59.0**	**+0.8**
KBZ				*e*Sn	**Sn**	**07 58 47.4**	**-0.3**

IDC ***22*** *08:00:10.9±3.2,53.°53N×87.°67E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=33.4km s-min=20.0km az=84.0*

ASRS 22 08:00:07.0±1.0,53.°55N×87.°68E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**284**	I	I	08 11 20.0	
	0.1nm,0.9s,baz=101,slow=318,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.75**	**284**	Pn	Pg	08 00 42.4	+1.9
	1.3nm,0.3s,baz=102,slow=13,SNR=16						
ZALV				Sn	Sg	08 01 05.2	+2.2
	2.0nm,0.3s,baz=103,slow=28,SNR=10						
KURBB	**Kurchatov Arra**	**6.36**	**246**	Pn	Pn	08 01 46.3	+4.4
	0.1nm,0.3s,baz=62,slow=14,SNR=3.1						
KURBB				Lg	Lg	08 03 30.9	
	baz=58,slow=32,SNR=1.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	08 02 03.8	+4.8
	0.2nm,0.3s,baz=31,slow=14,SNR=5.2						
MKAR				Lg	Lg	08 04 11.0	
	0.1nm,0.3s,baz=31,slow=32,SNR=2.3						
	0.3nm,0.4s						

IDC ***22*** *08:04:32.5±0.9,55.°39N×159.°58W,h0km,mb3.8/19, mbtmp3.9/21,ML4.0/2,Error ellipse: s-maj=26.9km s-min=14.5km az=4.0*
NEIC ***22*** *08:04:38.3±2.4,55.°17N±0.°03×159.°32W±0.°09,h44km±7km, mb4.0/18,ML3.9/40,Error ellipse: s-maj=8.1km s-min=0.8km az=117.0*

ISC 22 08:04:37.5±0.5,55.°18N±0.°05×159.°26W±0.°04,h35km, n103,σ1°950/95,mb4.1/21,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.40**	**209**	P	**Pn**	**08 04 45.6**	**-1.0**
CHNA	**Chernabura Isl**	**0.40**	**209**	S	**Sn**	**08 04 52.1**	**-0.8**
CNBA	**Chernabura Isl**	**0.40**	**208**		**Pn**	**08 04 45.8**	**-1.0**
CNBA					**Sn**	**08 04 52.5**	**-0.6**
CNBA				IAML		08 04 52.7	
	comp=N,7μm,0.3s						
CNBA				IAML		08 04 55.9	
	comp=E,6μm,0.2s						
SDPT	**Sand Point**	**0.72**	**284**	P	**Pn**	**08 04 51.0**	**-0.1**
SDPT	**Sand Point**	**0.72**	**284**	S	**Sn**	**08 05 01.2**	**+0.4**
SDPT	**Sand Point**	**0.72**	**284**		**Pn**	**08 04 51.0**	**-0.1**
SDPT				IAML		08 05 01.5	
	comp=N,5μm,0.6s						
SDPT				Sn	**Sn**	**08 05 01.0**	**+0.2**
SDPT				IAML		08 05 07.5	
	comp=E,3μm,0.5s						
VNFG	**Fog Glacier, M**	**1.12**	**352**		**Pn**	**08 04 58.1**	**+1.3**
CHGN	**Chignik**	**1.23**	**23**		**Pn**	**08 04 58.1**	**0.0**
CHGN				Sn	**Sn**	**08 05 13.6**	**+0.2**
CHIR	**Chirikof Islan**	**2.17**	**71**	P	**Pn**	**08 05 11.2**	**+0.2**
CHIR	**Chirikof Islan**	**2.17**	**71**	S	**Sn**	**08 05 38.6**	**+2.0**
CHIR	**Chirikof Islan**	**2.17**	**71**		**Pn**	**08 05 11.4**	**+0.3**
SII	**Sitkinak Islan**	**3.18**	**62**	P	**Pn**	**08 05 25.3**	**+0.4**
SII	**Sitkinak Islan**	**3.18**	**62**	S	**Sn**	**08 06 03.7**	**+2.1**
SII	**Sitkinak Islan**	**3.18**	**62**	Pn	**Pn**	**08 05 25.6**	**+0.7**
SII				IAML		08 06 27.8	
	comp=E,403nm,1.0s						
ACHA	**Angle Creek He**	**3.74**	**34**		**Pn**	**08 05 34.0**	**+1.4**
OHAK	**Old Harbor**	**3.92**	**56**	P	**Pn**	**08 05 35.0**	**0.0**
OHAK	**Old Harbor**	**3.92**	**56**	S	**Sn**	**08 06 21.9**	**+2.2**
OHAK	**Old Harbor**	**3.92**	**56**		**Pn**	**08 05 34.6**	**-0.4**
AKUT	**Akutan**	**3.92**	**257**	P	**Pn**	**08 05 36.6**	**+1.5**
AKUT	**Akutan**	**3.92**	**257**	S	**Sn**	**08 06 23.0**	**+3.1**
AKUT	**Akutan**	**3.92**	**257**		**Pn**	**08 05 36.3**	**+1.2**
AKUT				IAML		08 06 37.1	
	comp=N,155nm,0.6s						
AKUT				IAML		08 06 43.0	
	comp=E,133nm,2.3s						
P16K	**Nushagak River**	**3.93**	**10**		**Pn**	**08 05 36.3**	**+1.1**
P16K				IAML		08 06 58.3	
	comp=E,253nm,0.9s						
P16K				IAML		08 07 01.2	
	comp=N,185nm,0.8s						
O15K	**Ungalikthiuk R**	**4.02**	**356**		**Pn**	**08 05 37.4**	**+0.9**
LVA	**Lava Point**	**4.06**	**258**		**Pn**	**08 05 38.4**	**+1.3**
LVA				IAML		08 06 49.2	
	comp=E,147nm,0.7s						
O14K	**Tigyukauivet M**	**4.23**	**346**		**Pn**	**08 05 40.7**	**+1.4**
P17K	**Kvichak River**	**4.31**	**20**		**Pn**	**08 05 41.8**	**+1.4**
UNV	**Unalaska Valle**	**4.43**	**255**	P	**Pn**	**08 05 42.5**	**+0.5**
UNV	**Unalaska Valle**	**4.43**	**255**	S	**Sn**	**08 06 35.3**	**+3.0**
UNV	**Unalaska Valle**	**4.43**	**255**		**Pn**	**08 05 42.9**	**+0.9**
UNV				IAML		08 07 04.2	
	comp=N,98nm,1.1s						
UNV				IAML		08 07 06.8	
	comp=E,79nm,4.8s						
O16K	**Kokwok River B**	**4.47**	**8**		**Pn**	**08 05 43.9**	**+1.2**
KDAK	**Kodiak Island**	**4.53**	**52**	Pn	**Pn**	**08 05 42.5**	**-0.9**
	comp=E,2.9nm,0.3s,baz=223,slow=1.5,SNR=24						
KDAK				Sn	**Sn**	**08 06 32.8**	**-2.0**
	comp=E,1.6nm,0.3s,baz=260,slow=12,SNR=1.7						
	comp=E,6.9nm,0.3s						
KDAK	**Kodiak Island**	**4.53**	**52**		**Pn**	**08 05 43.3**	**-0.2**
KDAK				IAML		08 07 04.5	
	comp=E,98nm,1.1s						
KDAK				IAML		08 07 10.0	
	comp=E,109nm,2.5s						
N14K	**Kuskokwak Cree**	**4.94**	**346**	IAML		08 07 27.0	
	comp=N,123nm,1.3s						
N14K				IAML		08 07 32.6	
	comp=E,99nm,1.3s						
N15K	**Kwethluk River**	**5.03**	**355**		**Pn**	**08 05 52.0**	**+1.7**
N15K				IAML		08 07 28.2	
	comp=N,68nm,3.5s						
N15K				IAML		08 07 45.7	
	comp=E,72nm,4.7s						
O18K	**Koktuh Hills**	**5.17**	**23**		**Pn**	**08 05 54.0**	**+1.7**
O18K				IAML		08 07 04.2	
	comp=N,64nm,0.9s						
O18K				IAML		08 07 04.3	
	comp=E,49nm,1.1s						
ILSW	**Iliamna Southw**	**5.83**	**32**		**Pn**	**08 06 02.6**	**+1.2**
CNPM	**China Poot**	**6.15**	**42**		**Pn**	**08 06 07.2**	**+1.5**
RED	**Redoubt Volcan**	**6.29**	**31**		**Pn**	**08 06 09.8**	**+2.0**
SPIA	**Saint Paul Isl**	**6.46**	**293**	P	**Pn**	**08 06 10.6**	**+0.8**
SPIA	**Saint Paul Isl**	**6.46**	**293**	S	**Sn**	**08 07 25.7**	**+3.5**
SPIA	**Saint Paul Isl**	**6.46**	**293**		**Pn**	**08 06 11.0**	**+1.1**
SLKM	**Skilak Lake**	**7.20**	**38**		**Pn**	**08 06 21.9**	**+1.9**
SEW	**Seward**	**7.21**	**43**		**Pn**	**08 06 21.3**	**+1.0**
STLK	**Strandline Lak**	**7.44**	**29**		**Pn**	**08 06 26.6**	**+3.1**
RC01	**Rabbit Creek A**	**7.78**	**36**		**Pn**	**08 06 29.3**	**+1.3**
J14K	**Nanvaranak Lak**	**7.91**	**346**		**Pn**	**08 06 30.7**	**+0.9**
SKT	**Skwentna**	**7.92**	**27**		**Pn**	**08 06 32.7**	**+2.7**
M22K	**Willow**	**8.14**	**32**		**Pn**	**08 06 32.6**	**-0.4**
PMR	**Palmer**	**8.34**	**35**	P	**Pn**	**08 06 35.8**	**+0.1**
L22K	**Petersville**	**8.58**	**27**		**Pn**	**08 06 40.5**	**+1.5**
K20K	**Telida**	**8.62**	**16**		**Pn**	**08 06 40.5**	**+0.9**
EYAK	**Cordova Ski Ar**	**8.98**	**48**	P	**Pn**	**08 06 45.7**	**+1.2**
BMRM	**Bremner River**	**9.68**	**47**		**Pn**	**08 06 54.2**	**+0.1**
H18K	**Honhosa River**	**10.02**	**2**		**Pn**	**08 07 00.3**	**+1.6**
GLB	**Gilahina Butte**	**10.25**	**46**		**Pn**	**08 07 03.7**	**+1.8**
VRDI	**Verde Repeater**	**10.30**	**48**		**Pn**	**08 07 03.8**	**+1.1**
G19K	**Purcell Mounta**	**11.05**	**5**		**Pn**	**08 07 13.6**	**+0.7**
MENT	**Mentasta**	**11.13**	**39**		**Pn**	**08 07 15.2**	**+1.2**
COLA	**College**	**11.25**	**26**	P	**Pn**	**08 07 17.0**	**+1.5**
IL31		**11.42**	**28**		**Pn**	**08 07 16.8**	**-1.0**
ILAR	**Eielson Array**	**11.42**	**28**	Pn	Pn	08 07 13.9	-3.9
	comp=E,0.6nm,0.3s,baz=215,slow=13,SNR=36						
ILAR				Sn	Sn	08 09 12.2	-12
	baz=196,slow=16						
ILAR	**Eielson Array**	**11.42**	**28**	Pn	**Pn**	**08 07 17.4**	**-0.5**
O28M	**Mount Upton**	**11.55**	**53**		**Pn**	**08 07 21.2**	**+1.3**
DAWY	**Dawson**	**13.37**	**40**		**Pn**	**08 07 44.5**	**+0.1**
L29M	**L29M**	**13.39**	**45**		**Pn**	**08 07 46.5**	**+1.8**
I27K	**Kandik River**	**13.55**	**33**		**Pn**	**08 07 45.9**	**-1.1**
M30M	**Minto, Yukon**	**13.72**	**48**		**Pn**	**08 07 50.9**	**+1.6**
JIS	**Juneau Island**	**13.97**	**67**	P	**Pn**	**08 07 53.3**	**+0.6**
N32M	**Quiet Lake**	**14.98**	**56**	IAmb	IAmb	08 08 27.2	
	comp=Z,5.2nm,0.8s						
I30M	**Mount Dempster**	**15.09**	**39**	IAmb	IAmb	08 08 24.6	
	comp=Z,8.6nm,0.8s						
C23K	**Itkillik River**	**15.22**	**11**	IAmb	IAmb	08 08 14.7	
	comp=Z,17nm,0.9s						
B22K	**Teshekpuk Lake**	**15.44**	**7**	IAmb	IAmb	08 08 17.4	
	comp=Z,8.7nm,1.0s						
H31M	**Peel River**	**16.11**	**39**	IAmb	IAmb	08 08 26.4	
	comp=Z,7.1nm,0.5s						
G30M	**tAoh Zraii Nji**	**16.11**	**34**	IAmb	IAmb	08 08 25.8	
	comp=Z,9.4nm,0.7s						
F30M	**Barrier River**	**16.63**	**32**	IAmb	IAmb	08 08 31.3	
	comp=Z,11nm,1.3s						
INK	**Inuvik**	**17.73**	**32**	Pn	**Pn**	**08 08 39.4**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=236,slow=15,SNR=17						
	comp=Z,1.9nm,0.4s						
C36M	**Paulatuk**	**21.23**	**34**		**P**	**08 09 18.9**	**-0.9**
YKA	**Yellowknife Ar**	**23.80**	**54**	P	**P**	**08 09 46.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=273,slow=9.1,SNR=9.3						
	comp=Z,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**25.00**	**283**	P	**P**	**08 09 56.4**	**-1.3**
	comp=Z,3.4nm,0.6s,baz=77,slow=12,SNR=6.4						
	comp=Z,3.4nm,0.6s						
NVAR	**Mina Array Bea**	**32.09**	**104**	P	**P**	**08 11 04.9**	**+3.7**
	comp=Z,0.1nm,0.4s,baz=314,slow=10.0,SNR=1.8						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**34.17**	**90**	P	**P**	**08 11 21.9**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=328,slow=5.8,SNR=4.4						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**46.98**	**100**	P	**P**	**08 13 05.3**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=301,slow=7.0,SNR=4.2						
TXAR				PcP	**PcP**	**08 14 36.9**	**0.0**
	baz=314,slow=1.9,SNR=3.8						
	comp=Z,0.1nm,0.5s						
KSRS	**Korea Array**	**50.88**	**282**	P	**P**	**08 13 33.4**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=50,slow=6.6,SNR=7.6						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**54.83**	**305**	P	**P**	**08 14 01.8**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=54,slow=7.5,SNR=5.0						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**54.83**	**305**	IAmb	IAmb	08 14 03.8	
	comp=Z,1.1nm,0.8s						
ARCES	**ARCESS Array B**	**55.55**	**358**	P	**P**	**08 14 07.6**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=23,slow=6.6,SNR=4.6						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**55.55**	**358**	IAmb	IAmb	08 14 08.3	
	comp=Z,9.8nm,1.4s						
HHC	**Hu-ho-hao-te**	**57.32**	**296**	*e*P	**P**	**08 14 26.3**	**+4.6**
ZALV	**Zalesovo Beam**	**59.17**	**322**	P	**P**	**08 14 32.9**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=12,slow=7.6,SNR=4.7						
	comp=Z,0.5nm,0.3s						
FINES	**FINESS Array B**	**63.65**	**357**	P	**P**	**08 15 03.2**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=23,slow=6.4,SNR=8.7						
	comp=Z,0.8nm,0.4s						
KURK	**Kurchatov**	**64.00**	**323**	P	**P**	**08 15 05.6**	**-1.2**
KURK	**Kurchatov**	**64.00**	**323**	IAmb	IAmb	08 15 06.3	
	comp=Z,2.5nm,1.1s						
KURBB	**Kurchatov Arra**	**64.11**	**323**	P	**P**	**08 15 05.6**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=19,slow=6.8,SNR=5.2						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**64.63**	**329**	P	**P**	**08 15 09.6**	**-1.3**
	comp=Z,2.5nm,0.7s,baz=36,slow=8.0,SNR=5.8						
	comp=Z,2.5nm,0.7s						
HFS	**Hagfors**	**64.90**	**4**	P	**P**	**08 15 11.3**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=13,slow=3.0,SNR=5.7						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**65.96**	**319**	P	**P**	**08 15 18.2**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=26,slow=5.3,SNR=3.6						
	comp=Z,0.4nm,0.4s						
EKA	**Eskdalemuir Ar**	**68.13**	**14**	P	**P**	**08 15 32.9**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=334,slow=4.7,SNR=7.8						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**74.25**	**354**	P	**P**	**08 16 09.2**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=8.1,slow=5.3,SNR=5.8						
	comp=Z,0.6nm,0.3s						
AKASG	**Malin Array Be**	**74.25**	**354**	IAmb	IAmb	08 16 22.5	
	comp=Z,3.1nm,1.4s						
KSH2	**Kashi**	**75.05**	**319**	P	**P**	**08 16 15.4**	**0.0**
KSH2				pmax	pmax		
	comp=Z,2μm,0.9s						
GERES	**GERESS Array B**	**76.18**	**5**	P	**P**	**08 16 21.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=325,slow=6.5,SNR=4.0						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**81.58**	**290**	P	**P**	**08 16 50.8**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=17,slow=5.9,SNR=9.5						
	comp=Z,1.9nm,0.7s						
ESDC	**Sonseca Array**	**83.19**	**19**	P	**P**	**08 16 59.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=325,slow=3.8,SNR=6.7						
	comp=Z,0.8nm,0.6s						

MOS ***22*** *08:13:26.8±0.8,55.°31N×159.°49W,h32km,mb6.4/101, MS6.4/12,Error ellipse: s-maj=7.5km s-min=4.6km az=100.9*
BJI ***22*** *08:13:27.3,55.°42N×160.°19W,h21km,mB6.5/14, mb6.3/88,Ms6.3/25,Ms7 6.3/23*
AEIC ***22*** *08:13:28.7±3.6,55.°17N±0.°04×159.°32W±0.°06,h14km±1km, Error ellipse: s-maj=6.2km s-min=4.1km az=151.0*
GFZ ***22*** *08:13:28.7±0.2,55.°5N±2.°×15.°9W±.°,h30km±1km,M6.5/300, mb6.2/300,mB6.7/25,Mw(mB)6.5/100,Error ellipse: s-maj=4.3km s-min=3.0km az=166.3,confirmed*
IDC ***22*** *08:13:29.3±0.6,55.°28N×159.°51W,h36km±4km,mb5.9/41, mbtmp6.0/46,ML4.8/6,MS5.7/5,Error ellipse: s-maj=9.6km s-min=7.5km az=175.0*
ANF ***22*** *08:13:29.9±0.5,55.°19N×159.°27W,h49km±6km,ML6.1/24, Error ellipse: s-maj=5.4km s-min=3.5km az=32.0*
NEIC ***22*** *08:13:29,55.°19N×159.°33W,h32km*
NEIC ***22*** *08:13:30.2±2.4,55.°20N±0.°05×159.°32W±0.°07,h45km±4km, mb5.8/904,ML6.0/40,Mwr5.7/39,ML5.8(AEIC),Error ellipse: s-maj=7.7km s-min=4.9km az=151.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.75; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$0.15; $M_{r\theta}$4.09; $M_{\theta\phi}$-0.25; $M_{r\phi}$1.95; Fault plane solution: $M_0$4.61000×10^{17} NP1: ϕ276.05000°,δ6.05000°,λ121.33000°. NP2:ϕ64.58000°, δ84.83000°,λ86.85000°. Principal axes: T 4.5362, Plg50.0000°, Azm331.0000°; N 0.1503, Plg3.0000°, Azm65.0000°; P -4.6864, Plg40.0000°, Azm157.0000°;*
BGR ***22*** *08:13:35.5,56.°13N×160.°14W,h33km,mb6.3,mB_BB6.4, Ms6.5*

ISC 22 08:13:29.3±0.2,55.°22N±0.°03×159.°36W±0.°02,h40km±2km, h40km:pP-P,n2316,σ1°06/2081,mb6.0/805,MS6.5/84, 240C-49D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.41**	**199**	P	**Pn**	**08 13 37.8**	**-1.0**
CHNA	**Chernabura Isl**	**0.41**	**199**	P	**Pn**	**08 13 37.2**	**-1.6**
	baz=18,SNR=1000						
CHNA				S	**Sn**	**08 13 44.0**	**-1.5**
	baz=18						
CHNA	**Chernabura Isl**	**0.42**	**198**		**Pn**	**08 13 37.3**	**-1.6**
CNBA				Sn	**Sn**	**08 13 44.3**	**-1.3**
SDPT	**Sand Point**	**0.65**	**282**	P	**Pn**	**08 13 42.5**	**+0.4**
SDPT	**Sand Point**	**0.65**	**282**	S	**Sn**	**08 13 52.7**	**+1.5**
SDPT	**Sand Point**	**0.

comp=N,11µm,1.1s
O14K Tigyukauivet M 4.18 346 P Pn 08 14 31.5 +1.1
baz=165,SNR=1000
Q18K Katmai Hardscr 4.19 33 P Pn 08 14 31.9 +1.2
baz=217,SNR=814
P17K Kvichak River 4.29 21 Pn 08 14 33.6 +1.5
P17K Kvichak River 4.29 21 P Pn 08 14 33.4 +1.4
baz=203,SNR=592
UNV Unalaska Valle 4.38 255 P Pn 08 14 34.4 +1.2
UNV Unalaska Valle 4.38 255 IAML 08 15 41.0
comp=N,15µm,1.1s
UNV IAML 08 15 53.6
comp=E,11µm,0.9s
UNV Unalaska Valle 4.38 255 P Pn 08 14 34.5 +1.2
baz=69
O16K Kokwok River B 4.44 8 Pn 08 14 35.6 +1.5
O16K Kokwok River B 4.44 8 P Pn 08 14 35.2 +1.1
baz=199,SNR=981
KDAK Kodiak Island 4.55 53 Pn Pn 08 14 34.8 -0.8
comp=E,50nm,0.3s,baz=229,slow=7.0,SNR=150
KDAK Sn Sn 08 15 25.1 -2.0
comp=E,111nm,0.3s,baz=219,slow=12,SNR=4.1
comp=E,236nm,0.4s
KDAK Kodiak Island 4.55 53 *i* P Pn 08 14 35.4 -0.2
KDAK Kodiak Island 4.55 53 Pn 08 14 35.4 -0.2
KDAK Sn Sn 08 15 28.5 +1.3
KDAK IAML 08 15 56.9
comp=E,14µm,1.6s
KDAK IAML 08 15 57.8
comp=E,15µm,1.6s
KDAK Kodiak Island 4.55 53 P Pn 08 14 35.1 -0.4
baz=238
KDAK Kodiak Island 4.55 53 P Pn 08 14 35.3 -0.3
O17K Koliganek Bris 4.73 14 P Pn 08 14 39.4 +1.4
baz=196
O17K S Sn 08 15 33.0 +1.4
baz=196
P18K Big Mountain, 4.75 26 P Pn 08 14 39.8 +1.4
baz=210,SNR=667
P18K S Sn 08 15 33.7 +1.6
baz=210
N14K Kuskokwak Cree 4.88 346 Pn 08 14 41.8 +1.7
N14K Kuskokwak Cree 4.88 346 P Pn 08 14 41.8 +1.7
baz=164,SNR=1000
N15K Kwethluk River 4.98 356 Pn 08 14 43.4 +1.9
N15K IAML 08 16 15.6
comp=E,12µm,1.1s
N15K IAML 08 16 20.9
comp=N,8µm,1.1s
N15K Kwethluk River 4.98 356 P Pn 08 14 43.3 +1.8
baz=175,SNR=1000
O18K Koktuh Hills 5.16 24 Pn 08 14 45.5 +1.5
O18K IAML 08 15 55.8
comp=E,7µm,1.7s
O18K Koktuh Hills 5.16 24 P Pn 08 14 45.2 +1.2
baz=208,SNR=1000
O18K S Sn 08 15 42.3 +0.1
baz=208
N16K Nishlik Lake 5.28 3 P Pn 08 14 46.9 +1.2
baz=184,SNR=1000
N16K S Sn 08 15 45.9 +0.7
baz=184
N17K Nushagak Hills 5.45 11 Pn 08 14 49.1 +1.2
N17K Nushagak Hills 5.45 11 P Pn 08 14 49.0 +1.1
baz=193,SNR=1000
N17K S Sn 08 15 49.3 0.0
baz=193
M15K Kasigluk River 5.54 353 P Pn 08 14 50.5 +1.3
baz=172,SNR=1000
M15K S Sn 08 15 52.0 +0.5
baz=172
P19K Oil Pt 5.54 34 P Pn 08 14 50.9 +1.7
baz=219
M13K Dall Lake 5.63 339 P Pn 08 14 52.6 +2.2
baz=156,SNR=1000
O19K Port Alsworth 5.68 26 P Pn 08 14 52.7 +1.7
baz=211,SNR=717
M14K Bethel 5.72 347 P Pn 08 14 53.0 +1.4
baz=165,SNR=1000
N18K Kilae Creek 5.78 17 P Pn 08 14 53.9 +1.4
baz=200,SNR=577
M16K Timber Creek 5.83 2 Pn Pn 08 14 54.9 +1.8
M16K Timber Creek 5.83 2 P Pn 08 14 54.8 +1.6
baz=182,SNR=1000
ILSW Iliamna Southw 5.83 32 Pn 08 14 54.5 +1.2
O20K Slope Mountain 6.07 34 P Pn 08 14 57.9 +1.4
baz=220,SNR=201
HOM Homer 6.10 40 P Pn 08 14 58.8 +2.0
baz=226,SNR=96
CNPM China Poot 6.16 42 Pn 08 14 58.4 +0.7
N19K Bonanza Creek 6.18 23 P Pn 08 15 00.0 +2.0
baz=207,SNR=950
M17K Holitna River 6.29 8 P Pn 08 15 01.1 +1.7
baz=190,SNR=1000
M11K Mekoryuk 6.34 328 P Pn 08 15 01.4 +1.4
baz=142,SNR=475
SPIA Saint Paul Isl 6.39 292 P Pn 08 15 00.1 -0.6
SPIA Saint Paul Isl 6.39 292 Pn 08 15 02.2 +1.4
SPIA Saint Paul Isl 6.39 292 P Pn 08 15 02.1 +1.4
baz=103,SNR=334
L14K Kuka Creek 6.39 345 P Pn 08 15 02.1 +1.4
baz=163,SNR=1000
BRSE Bradley Lake S 6.49 42 P Pn 08 15 02.9 +0.7
baz=230,SNR=130
L16K Owhat River 6.51 360 P Pn 08 15 03.6 +1.1
baz=180,SNR=1000
M18K Stony River 6.56 15 P Pn 08 15 04.8 +1.7
baz=198,SNR=1000
L15K Ungalak Mounta 6.58 351 P Pn 08 15 03.8 +0.4
baz=169,SNR=1000
CLES Cleveland East 6.65 253 Pn 08 15 07.2 +2.8
L17K Donlin 6.96 4 P Pn 08 15 09.8 +1.1
baz=185,SNR=1000
CAPN Captain Cook N 7.07 35 P Pn 08 15 11.1 +1.0
baz=222
SPCR Spurr Chakacha 7.09 29 P Pn 08 15 11.6 +1.1
baz=215,SNR=244
L18K Granite Mounta 7.16 10 P Pn 08 15 12.4 +1.0
baz=192,SNR=836
K15K Wolf Creek Mou 7.19 352 P Pn 08 15 13.1 +1.4
baz=170,SNR=1000
SEW Seward 7.22 43 P Pn 08 15 12.3 0.0
baz=232,SNR=121
K13K Kusilvak Mount 7.28 340 P Pn 08 15 14.5 +1.5
baz=155,SNR=1000
O22K Cooper Landing 7.36 40 P Pn 08 15 15.3 +1.2
baz=228,SNR=60
L19K White Mountain 7.37 17 P Pn 08 15 15.6 +1.3
baz=201,SNR=1000
M20K Styx River 7.43 23 P Pn 08 15 17.4 +2.2
baz=209
K17K Iditarod 7.54 4 P Pn 08 15 17.9 +1.3
baz=185,SNR=1000
RC01 Rabbit Creek A 7.78 37 P Pn 08 15 20.5 +0.7
baz=225,SNR=132
J14K Nanvaranak Lak 7.86 346 P Pn 08 15 21.8 +0.9
baz=162,SNR=600
SKT Skwentna 7.91 28 P Pn 08 15 21.8 +0.1
baz=215,SNR=622
P23K Montague Islan 8.01 48 P Pn 08 15 22.7 -0.3
baz=238,SNR=45
J16K Anvik River 8.12 356 P Pn 08 15 25.3 +0.9
baz=175,SNR=1000
PWL Port Wells 8.13 41 P Pn 08 15 24.7 0.0
baz=231,SNR=312
M22K Willow 8.14 33 P Pn 08 15 24.9 +0.1
baz=221,SNR=174
Q23K Middleton Isla 8.21 54 P Pn 08 15 24.6 -1.1
baz=245,SNR=11
J17K VABM Dome 8.21 1 P Pn 08 15 26.0 +0.3
baz=181,SNR=576
PMR Palmer 8.34 36 P Pn 08 15 27.0 -0.5
PMR Palmer 8.34 36 S Sn 08 17 00.1 -0.2
PMR Palmer 8.34 36 P Pn 08 15 26.3 -1.2
baz=225,SNR=130
J18K Innoko River 8.38 8 P Pn 08 15 28.6 +0.5
baz=190,SNR=1000
KNK Knik Glacier 8.45 38 P Pn 08 15 28.7 -0.3
baz=228,SNR=131
PPLA Purkeypile 8.54 23 P Pn 08 15 32.3 +2.0
baz=209
L22K Petersville 8.57 28 P Pn 08 15 30.6 -0.1
baz=215,SNR=262
K20K Telida 8.60 16 P Pn 08 15 31.5 +0.4
baz=201,SNR=422
CUT Chulitna 8.61 29 P Pn 08 15 30.7 -0.4
baz=217,SNR=235

GLI Glacier Island 8.62 44 P Pn 08 15 31.2 -0.2
baz=234,SNR=61
I17K Unalakleet 8.72 356 P Pn 08 15 33.8 +1.1
baz=175,SNR=1000
SML Sawmill 8.76 37 P Pn 08 15 32.0 -1.4
baz=226,SNR=214
M23K Glacier View 8.96 38 P Pn 08 15 35.2 -0.9
baz=228,SNR=199
EYAK Cordova Ski Ar 9.00 48 P Pn 08 15 36.1 -0.4
EYAK Cordova Ski Ar 9.00 48 S Sn 08 17 15.8 -0.6
EYAK Cordova Ski Ar 9.00 48 P Pn 08 15 35.9 -0.6
baz=240,SNR=59
J19K Poorman 9.01 11 P Pn 08 15 38.2 +1.6
baz=194,SNR=1000
CAST Castle Rocks 9.02 21 P Pn 08 15 38.4 +1.5
baz=208
SCM Sheep Creek Mo 9.13 39 P Pn 08 15 38.4 -0.1
baz=229,SNR=344
ATKA Atka Island 9.30 257 P Pn 08 15 41.8 +1.1
KAIM Kayak Island 9.30 53 P Pn 08 15 40.9 +0.2
baz=246,SNR=142
J20K Nowinta River 9.36 14 P Pn 08 15 42.2 +0.7
baz=199,SNR=307
RAGM Ragged Mountai 9.39 51 Pn 08 15 41.2 -0.7
CHUM Lake Minchumin 9.39 19 P Pn 08 15 43.2 +1.3
baz=206
WAT1 Susitna Watana 9.44 32 P Pn 08 15 41.2 -1.4
baz=221
KLU Klutina 9.45 43 P Pn 08 15 42.6 -0.2
baz=234,SNR=965
TRF Thorofare Moun 9.46 26 P Pn 08 15 42.6 -0.4
baz=213
WAT6 Susitna Watana 9.51 34 P Pn 08 15 41.6 -2.0
baz=224,SNR=293
H16K Elim 9.56 353 P Pn 08 15 45.7 +1.5
baz=170,SNR=316
GCSA Galena City Sc 9.64 6 P Pn 08 15 46.3 +1.0
baz=189,SNR=160
BMRM Bremner River 9.70 48 Pn 08 15 45.4 -0.8
BMRM Bremner River 9.70 48 P Pn 08 15 45.5 -0.6
baz=240,SNR=73
M24K Tolsona, Glenn 9.73 39 P Pn 08 15 46.0 -0.6
baz=231,SNR=195
H17K Granite Mounta 9.76 359 P Pn 08 15 48.4 +1.5
baz=178,SNR=1000
ANM Nome 9.85 345 P Pn 08 15 49.5 +1.4
ANM Nome 9.85 345 P Pn 08 15 49.2 +1.1
baz=160,SNR=110
I20K Naaghedeneel 9.91 12 P Pn 08 15 50.2 +1.2
baz=196,SNR=103
DHY Denali Highway 9.98 33 P Pn 08 15 48.4 -1.8
baz=223,SNR=355
H18K Honhosa River 9.98 2 P Pn 08 15 51.3 +1.3
baz=183,SNR=373
N25K Chitina, Valde 10.03 44 P Pn 08 15 50.2 -0.6
baz=237,SNR=197
MCK McKinley 10.04 28 P Pn 08 15 49.4 -1.3
baz=216,SNR=64
G15K Niukluk 10.08 349 P Pn 08 15 52.1 +0.8
baz=165,SNR=261
CRQE Cirque 10.25 51 P Pn 08 15 53.2 -0.6
baz=244,SNR=87
HARP HAARP 10.28 40 P Pn 08 15 54.8 +0.7
baz=232,SNR=105
VRDI Verde Repeater 10.31 48 Pn 08 15 54.1 -0.6
G17K Kiwalik Mounta 10.34 357 P Pn 08 15 56.2 +1.4
baz=176,SNR=437
GSTR Great Sitkin T 10.39 259 Pn 08 15 57.6 +2.0
H19K Roundabout Mou 10.44 7 P Pn 08 15 57.3 +1.1
baz=189,SNR=1000
PAX Paxson 10.54 37 P Pn 08 15 57.1 -0.6
baz=229,SNR=1000
H20K Anotleneega Mo 10.54 10 P Pn 08 15 58.7 +1.0
baz=194,SNR=1000
MCARA McCarthy VSAT 10.57 48 P Pn 08 15 58.4 +0.3
baz=242,SNR=81
GAMB Gambell 10.61 329 Pn 08 16 00.1 +1.5
GAMB Gambell 10.61 329 P Pn 08 15 59.1 +0.5
baz=138,SNR=46
I21K Tanana 10.64 17 P Pn 08 16 00.1 +1.2
baz=204,SNR=86
NEA2 Nenana 10.71 24 P Pn 08 15 58.1 -1.9
baz=213,SNR=83
G18K Tagagawik 10.72 2 P Pn 08 16 01.1 +1.1
baz=182,SNR=465
MLY Maley 10.73 20 P Pn 08 15 59.9 -0.4
baz=209,SNR=980
ADK Adak 10.83 259 P Pn 08 16 02.7 +1.1
ADK Adak 10.83 259 S Sn 08 18 01.1 -0.2
ADK Adak 10.83 259 P Pn 08 16 02.5 +0.9
ADK Adak 10.83 259 Pn 08 16 02.5 +0.9
ADK Adak 10.83 259 P Pn 08 16 02.8 +1.1
F15K North Star Dit 10.84 348 P Pn 08 16 03.4 +1.7
baz=164,SNR=194
F14K Arctic Creek 10.84 344 P Pn 08 16 03.2 +1.4
baz=158,SNR=73
H21K Melozitna Rive 10.96 14 P Pn 08 16 04.2 +0.9
baz=200,SNR=721
K24K Donnelly Dome 11.01 33 P Pn 08 16 03.7 -0.4
baz=225,SNR=400
G19K Purcell Mounta 11.02 5 P Pn 08 16 05.3 +1.1
baz=187,SNR=548
M26K Nabesna, AK 11.10 43 P Pn 08 16 05.7 +0.4
baz=237,SNR=157
HDA Harding Lake 11.11 29 P Pn 08 16 02.5 -2.9
baz=220,SNR=34
I23K Minto, Yukon-K 11.12 22 P Pn 08 16 04.2 -1.3
baz=211,SNR=245
MENT Mentasta 11.14 40 P Pn 08 16 06.7 +0.9
MENT Mentasta 11.14 40 S Sn 08 18 08.5 -0.4
IMAR Indian Mountai 11.14 12 Pn 08 16 06.9 +1.0
TNA Tin City 11.19 341 Pn 08 16 08.4 +1.9
TNA Tin City 11.19 341 P Pn 08 16 08.3 +1.8
baz=154,SNR=103
I53US FAIRBANKS INFR 11.24 26 Pn Pn 08 16 10.9 +3.8
baz=218,slow=26
COLA College 11.24 26 P Pn 08 16 05.8 -1.4
COLA College 11.24 26 S Sn 08 18 10.6 -0.7
COLA College 11.24 26 P Pn 08 16 07.2 0.0
COLA College 11.24 26 Pn 08 16 07.2 0.0
COLA College 11.24 26 P Pn 08 16 06.3 -0.9
baz=216
COLA College 11.24 26 P Pn 08 16 04.7 -2.5
RIDG Independent Ri 11.26 35 P Pn 08 16 06.7 -0.9
baz=227,SNR=201
F17K Baldwin Pennin 11.30 356 Pn 08 16 09.3 +1.3
F17K Baldwin Pennin 11.30 356 P Pn 08 16 09.4 +1.5
baz=174,SNR=263
PCA Pinnacle 11.32 57 Pn 08 16 07.9 -0.5
PINM Pinnacle 11.32 57 P Pn 08 16 08.5 +0.1
baz=253,SNR=76
L26K Log Cabin Wild 11.33 40 P Pn 08 16 08.8 +0.4
baz=234,SNR=124
H22K Ishtalitna Cre 11.40 17 P Pn 08 16 10.4 +1.1
baz=204,SNR=278
ILAR Eielson Array 11.41 28 Pn Pn 08 16 05.6 -3.9
comp=E,3.6nm,0.3s,baz=219,slow=13,SNR=232
ILAR Sn Sn 08 18 03.4 -12
baz=220,slow=14
ILAR LR LR 08 21 01.0
comp=E,18µm,20.3s,baz=290,slow=40
ILAR ScP ScP 08 25 29.1 -0.2
comp=E,8.9nm,1.1s,baz=217,slow=1.5,SNR=5.9
comp=E,27nm,0.6s
ILAR Eielson Array 11.41 28 P Pn 08 16 06.6 -2.9
ILAR Eielson Array 11.41 28 Pn 08 16 06.6 -2.9
F18K Selawik 11.42 359 P Pn 08 16 11.0 +1.4
baz=179,SNR=433
YKU2 Yakutat 11.45 60 P Pn 08 16 10.6 +0.5
YKU2 Yakutat 11.45 60 S Sn 08 18 18.1 +1.6
M27K Edge Creek, AK 11.52 45 P Pn 08 16 11.2 0.0
baz=240,SNR=184
POKR Poker Plat Res 11.54 26 P Pn 08 16 09.6 -1.8
baz=216
O28M Mount Upton 11.57 53 P Pn 08 16 11.9 -0.1
baz=250,SNR=107
H23K Yukon River 11.67 20 P Pn 08 16 11.9 -1.1
baz=209
F19K Shaleruckik Mo 11.68 3 P Pn 08 16 14.6 +1.4
baz=184,SNR=1000
G21K Allakaket 11.68 12 P Pn 08 16 14.2 +0.9
baz=197,SNR=506
SCRK Sand Creek 11.70 35 P Pn 08 16 11.8 -1.8
baz=228,SNR=107
J25K Salcha River, 11.72 31 P Pn 08 16 11.2 -2.6
baz=223,SNR=378
YUK3 Moose Creek 11.84 49 P Pn 08 16 15.6 0.0
baz=245,SNR=246
L27K Beaver Creek, 11.91 42 P Pn 08 16 15.9 -0.5
baz=237,SNR=357
BCAR Beaver Creek A 11.93 42 Pn 08 16 15.8 -0.9
YUK8 Steele Glacier 11.95 51 P Pn 08 16 17.4 +0.2
baz=248,SNR=168
BVCY Beaver Creek 11.96 45 P Pn 08 16 17.4 +0.3
baz=241,SNR=320
E17K Hotham Inlet 11.96 355 P Pn 08 16 18.9 +1.8
baz=173,SNR=225
F20K Avaraart Lake 12.00 7 P Pn 08 16 19.0 +1.5
baz=190
H24K Noodor Dome 12.03 23 P Pn 08 16 15.8 -2.2
baz=213,SNR=86
O29M Mount Kennedy 12.19 57 P Pn 08 16 20.3 +0.1
baz=254,SNR=202
E18K Tukpahlearik C 12.26 358 P Pn 08 16 23.5 +2.4
baz=177,SNR=440
BRWY Burwash Landin 12.31 52 P Pn 08 16 21.2 -0.6
baz=249
E19K Redstone River 12.33 4 P Pn 08 16 24.4 +2.4
baz=186,SNR=1000
PRP Porcupine Dome 12.36 28 P Pn 08 16 19.8 -2.7
baz=220,SNR=156
F21K Alatna River 12.37 11 P Pn 08 16 24.3 +1.8
baz=196,SNR=556
G23K Bananza Creek 12.37 18 Pn 08 16 23.5 +0.9
G23K Bananza Creek 12.37 18 P Pn 08 16 21.9 -0.7
baz=206,SNR=532
P29M Windy Craggy 12.44 60 P Pn 08 16 23.5 -0.1
baz=259,SNR=89
YUK6 Outpost Mounta 12.47 54 P Pn 08 16 24.3 0.0
baz=252,SNR=64
YUK4 Talbot Arm 12.47 52 P Pn 08 16 25.1 +0.9
baz=250,SNR=20
D17K Noatak River 12.65 354 P Pn 08 16 28.1 +1.8
baz=170,SNR=205
F22K John River 12.79 13 P Pn 08 16 29.5 +1.2
baz=199
COLD Coldfoot 12.81 16 P Pn 08 16 27.1 -1.5
baz=204,SNR=174
HYT Haines Junctio 12.84 55 P Pn 08 16 28.4 -0.7
baz=254,SNR=38
G24K Hadweenzic Riv 12.85 22 P Pn 08 16 26.1 -3.0
baz=212,SNR=122
I26K Coal Creek Min 12.87 32 P Pn 08 16 26.7 -2.7
baz=226
P30M Million Dollar 12.93 59 P Pn 08 16 30.3 0.0
baz=258
M29M Somme Creek 12.97 48 P Pn 08 16 30.7 -0.2
baz=246,SNR=532
RDOG Red Dog Mine 12.99 354 P Pn 08 16 34.0 +2.9
baz=171,SNR=730
S31K Pelican 13.02 68 P Pn 08 16 30.5 -1.0
baz=268,SNR=49
PLBC Pleasant Camp 13.10 62 P Pn 08 16 32.7 +0.2
baz=261,SNR=84
E20K Nigu River 13.17 5 P Pn 08 16 35.8 +2.2
baz=188,SNR=1000
G25K Bearman Lake 13.21 23 P Pn 08 16 29.2 -4.7
baz=215,SNR=20
N30M Aishikik Lake 13.22 53 P Pn 08 16 33.7 -0.5
baz=252
R31K City Hall, Gus 13.30 66 P Pn 08 16 36.4 +1.1
baz=266
AMKA Amchitka 13.31 262 Pn 08 16 35.5 0.0
D19K Kuna River 13.34 2 P Pn 08 16 37.0 +1.1
baz=183,SNR=171
DAWY Dawson 13.38 40 Pn 08 16 35.6 -0.8
DAWY Dawson 13.38 40 P Pn 08 16 35.9 -0.5
baz=238,SNR=430
C16K Lisburne Hills 13.40 350 P Pn 08 16 39.0 +2.5
baz=165
L29M L29M 13.40 45 P Pn 08 16 36.5 -0.2
baz=244,SNR=246
C17K DeLong Mountai 13.42 354 P Pn 08 16 39.9 +3.0
baz=171,SNR=370
F24K Squaw Lake 13.48 19 P Pn 08 16 36.2 -1.6
baz=209,SNR=65
O30N Mendenhall 13.49 56 P Pn 08 16 37.8 -0.2
baz=256,SNR=50
E21K Killik River 13.51 9 P Pn 08 16 39.0 +0.9
baz=193
C18K Utukok River 13.51 357 P Pn 08 16 39.9 +1.8
baz=176,SNR=333
SIT Sitka 13.51 72 P Pn 08 16 37.4 -0.8
SIT Sitka 13.51 72 S Sn 08 19 09.0 +2.3
SIT Sitka 13.51 72 P Pn 08 16 38.2 0.0
SIT Sitka 13.51 72 P Pn 08 16 36.4 -1.8
baz=272
I27K Kandik River 13.55 33 P Pn 08 16 35.6 -3.2
baz=228,SNR=58
D20K Etivluk River 13.61 4 P Pn 08 16 39.7 +0.2
baz=187,SNR=873
SKAG Skagway 13.62 62 P Pn 08 16 40.3 +0.6
SKAG Skagway 13.62 62 P Pn 08 16 40.0 +0.3
baz=262,SNR=61
E23K Chandalar 13.66 16 P Pn 08 16 38.6 -1.7
baz=204,SNR=115
M30M Minto, Yukon 13.74 48 P Pn 08 16 41.2 -0.1
baz=248,SNR=146
N31M Braeburn, Yuko 13.83 53 P Pn 08 16 42.3 -0.2
baz=254,SNR=92
E24K Your Cesek 13.86 17 P Pn 08 16 40.2 -2.8
baz=207
S32K Killisnoo 13.90 71 P Pn 08 16 42.4 -1.1
baz=271,SNR=15
G26K Porcupine Rive 13.91 26 P Pn 08 16 39.9 -3.6
baz=220
C19K Lookout Ridge 13.94 360 P Pn 08 16 44.3 +0.3
baz=180,SNR=136
R32K Eaglecrest 13.94 67 P Pn 08 16 44.3 +0.3
baz=268,SNR=21
K29M Barlow Dome 13.98 43 P Pn 08 16 43.7 -0.9
baz=242,SNR=257
I28M Miner Creek 13.98 35 P Pn 08 16 41.8 -2.9
baz=232,SNR=140
F25K Christian Rive 13.99 22 P Pn 08 16 39.6 -5.1
baz=214,SNR=24
H27K Steamboat Moun 14.00 31 P Pn 08 16 42.1 -2.8
baz=226,SNR=58
JIS Juneau Island 14.01 67 P Pn 08 16 46.0 +1.0
J29N Klondike Camp 14.02 40 P Pn 08 16 44.2 -1.0
baz=239,SNR=31
WHY Whitehorse 14.05 57 P Pn 08 16 45.2 -0.4
baz=258,SNR=35
C21K Knifeblade Rid 14.15 7 P Pn 08 16 46.9 +0.1
baz=191,SNR=220
TOLK Toolik Lake Re 14.21 15 P Pn 08 16 47.6 0.0
baz=203,SNR=150
D23K Nanushuk River 14.36 13 P Pn 08 16 49.5 -0.2
baz=200
G27K Doyon Strip 14.37 29 P Pn 08 16 47.6 -2.2
baz=225,SNR=30
F26K Sheenjek River 14.41 24 P Pn 08 16 48.8 -1.6
baz=217,SNR=63
E25K Arctic Village 14.45 21 P Pn 08 16 49.0 -1.9
baz=213,SNR=190
P32M Atlin 14.45 62 P Pn 08 16 50.7 -0.3
baz=264,SNR=36
B21K Ikpikpuk River 14.62 7 P Pn 08 16 52.9 -0.2
baz=191
M31M Drury Creek, Y 14.67 51 P Pn 08 16 53.6 -0.3
baz=253,SNR=80
D24K Happy Valley 14.79 15 P Pn 08 16 55.2 -0.2
baz=204
J30M Hart River 14.79 41 P Pn 08 16 55.1 -0.4
baz=242,SNR=554
U33K Whale Pass 14.81 76 P Pn 08 16 55.2 -0.5
baz=278
B20K Meade River 14.88 3 P Pn 08 16 56.5 -0.1
baz=185
CRAG Craig 14.90 78 P Pn 08 16 58.4 +1.4
CRAG Craig 14.90 78 P Pn 08 16 56.4 -0.6
baz=280
H29M Whitestone 14.97 34 P Pn 08 16 55.5 -2.3
baz=233,SNR=507
P33M Teslin, Yukon 14.98 60 P Pn 08 16 57.8 -0.3
baz=262,SNR=239
N32M Quiet Lake 15.01 56 P Pn 08 16 58.9 +0.5
baz=258
A19K Wainwright 15.06 358 P Pn 08 16 59.8 +0.8
baz=176,SNR=200
I30M Mount Dempster 15.09 39 IAmb IAmb 08 17 07.3
comp=Z,930nm,1.1s
I30M Mount Dempster 15.09 39 P Pn 08 16 58.3 -1.3
baz=239,SNR=161
Q32M Nakina River 15.14 65 P Pn 08 17 00.9 +0.6

baz=268,SNR=41
C23K Itkillik River 15.19 12 P Pn 08 16 59.6 -1.0
baz=199,SNR=1000
WRAK Wrangell Islan 15.20 74 Pn Pn 08 17 02.2 +1.4
WRAK Wrangell Islan 15.20 74 P Pn 08 17 00.2 -0.7
baz=277
D25K Kavik River 15.33 18 P Pn 08 17 01.8 -0.8
baz=209,SNR=179
E27K Coleen River 15.40 25 P Pn 08 17 01.2 -2.3
baz=221,SNR=69
B22K Teshekpuk Lake 15.41 8 P Pn 08 17 02.4 -1.1
baz=193,SNR=907
F28M Old Crow 15.43 29 P Pn 08 16 59.4 -4.6
baz=226,SNR=120
G29M Pine Creek 15.51 32 P Pn 08 17 01.3 -3.6
baz=231,SNR=61
EPYK Eagle Plains 15.60 35 P Pn 08 17 04.5 -1.6
baz=235,SNR=148
S34M Telegraph Cree 15.74 69 P Pn 08 17 08.9 +1.0
baz=272,SNR=163
V35K Ketchikan 15.77 78 P Pn 08 17 08.7 +0.3
baz=281
SHEM Shemya Is, Ala 15.78 272 Pn Pn 08 17 05.6 -2.8
comp=Z,18nm,0.3s,baz=360,slow=4.0,SNR=22
SHEM Sn Sn 08 20 01.6 -0.3
comp=Z,0.6nm,0.3s,baz=309,slow=14,SNR=1.6
comp=Z,101nm,0.9s
SMY Shemya 15.78 272 P Pn 08 17 07.9 -0.5
SMY Shemya 15.78 272 P P 08 17 11.7 0.0
SMY pmax pmax
comp=Z,424nm,1.2s
DIB Dawson Inlet, 15.82 86 Pn 08 17 08.8 -0.1
H02S1 DAWSON INLET T 15.82 86 T T 08 17 28.3
SNR=48
H02S1 T T 08 33 06.3
SNR=3.1
H02S2 DAWSON INLET T 15.82 86 T T 08 17 28.3
SNR=51
H02S2 T T 08 33 07.9
SNR=3.0
R33M Jennings River 15.84 63 P Pn 08 17 09.8 +0.6
baz=267,SNR=101
A22K Sinclair Lake 15.96 5 P Pn 08 17 09.4 -1.2
baz=189
C27K Jago River 16.08 20 P Pn 08 17 09.2 -3.0
baz=214
C26K Camden Bay 16.11 18 P Pn 08 17 09.9 -2.6
baz=211,SNR=18
G30M tAoh Zraii Nji 16.11 34 P Pn 08 17 09.9 -2.8
baz=234,SNR=76
H31M Peel River 16.12 39 IAmb IAmb 08 17 21.2
comp=Z,1μm,1.1s
H31M Peel River 16.12 39 P Pn 08 17 10.9 -1.8
baz=241,SNR=638
MOBC Moresby Island 16.13 86 Pn 08 17 13.2 +0.3
MMPY Sheldon Lake, 16.18 51 IAmb IAmb 08 17 19.6
comp=Z,574nm,1.0s
MMPY Sheldon Lake, 16.18 51 P Pn 08 17 14.3 +0.7
baz=256,SNR=681
A21K Barrow 16.21 3 P Pn 08 17 12.7 -1.1
baz=186,SNR=399
E28M Babbage River 16.23 26 P Pn 08 17 12.2 -1.9
baz=224,SNR=63
T35M Bob Quinn 16.28 72 P Pn 08 17 13.6 -1.3
baz=276
DLBC Dease Lake 16.31 67 Pn P 08 17 17.0 -0.7
comp=Z,1.0nm,0.3s,baz=250,slow=13,SNR=30
comp=Z,67nm,0.9s
DLBC Dease Lake 16.31 67 P Pn 08 17 13.1 -2.1
baz=271,SNR=83
D27M Malcolm River 16.36 24 P Pn 08 17 13.3 -2.5
baz=220
E29M Blow River 16.51 28 P Pn 08 17 12.2 -5.4
baz=228,SNR=126
F30M Barrier River 16.62 32 P Pn 08 17 16.2 -2.9
baz=233,SNR=252
G31M Satah River 16.72 36 IAmb IAmb 08 17 25.9
comp=Z,879nm,0.9s
G31M Satah River 16.72 36 P Pn 08 17 16.9 -3.3
baz=238,SNR=417
D28M Stokes Point 16.95 25 P Pn 08 17 23.9 +0.8
baz=224
WTLY Watson Lake, Y 16.97 61 P Pn 08 17 24.1 +0.6
baz=267,SNR=77
F31M Tsiigehtchic 17.17 34 P Pn 08 17 23.6 -2.3
baz=237,SNR=42
INK Inuvik 17.73 32 P Pn 08 17 31.3 -1.4
comp=Z,6.3nm,0.3s,baz=227,slow=16,SNR=90
INK S Sn 08 20 49.0 +0.1
comp=Z,68nm,1.1s,baz=232,slow=19,SNR=1.8
INK ScP ScP 08 25 40.0 -0.2
comp=Z,32nm,1.0s,baz=208,slow=8.1,SNR=4.4
comp=Z,423nm,0.8s
INK Inuvik 17.73 32 IAmb IAmb 08 17 34.9
comp=Z,618nm,1.0s
INK Inuvik 17.73 32 P Pn 08 17 30.0 -2.7
baz=235,SNR=516
INK Inuvik 17.73 32 P Pn 08 17 30.6 -2.1
LIRD Liard River Hi 18.32 63 P Pn 08 17 41.3 +1.2
baz=271,SNR=56
BBB Bella Bella 18.66 86 P Pn 08 17 44.4 +0.1
comp=Z,0.8nm,0.3s,baz=293,slow=13,SNR=8.6
BBB PcP PcP 08 22 10.9 +0.5
comp=Z,31nm,1.0s,baz=342,slow=3.2,SNR=3.0
BBB Bella Bella 18.66 86 P Pn 08 17 44.8 +0.6
BBB Bella Bella 18.66 86 P Pn 08 17 45.9 +1.6
KOTAN Kotaneelee Air 19.35 61 P Pn 08 17 52.1 -0.3
baz=271,SNR=89
WRGLY Wrigley 19.80 52 IAmb IAmb 08 18 04.5
comp=Z,945nm,1.1s
WRGLY Wrigley 19.80 52 P P 08 17 56.3 +0.3
baz=263,SNR=33
BILL Bilibino 20.41 322*c iP* P 08 18 02.3 -0.2
BILL pmax pmax
comp=Z,520nm,1.1s
BILL Bilibino 20.41 322 P P 08 18 02.8 +0.3
BILL IAmb IAmb 08 18 17.3
comp=Z,2μm,1.7s
C36M Paulatuk 21.23 34 P P 08 18 10.0 -1.3
baz=246,SNR=136
A36M Sachs Harbour 22.11 28 P P 08 18 19.0 -1.8
A36M IAmb IAmb 08 18 20.7
comp=Z,596nm,0.9s
A36M Sachs Harbour 22.11 28 P P 08 18 18.7 -2.0
baz=239,SNR=23
LLLB Lillooet 22.87 86 IAmb IAmb 08 18 42.6
comp=Z,502nm,1.4s
A04D Lummi Island 23.29 91 P P 08 18 34.7 +1.5
A04D IAmb IAmb 08 18 46.5
comp=Z,252nm,1.0s
NLWA Neilton Lookou 23.32 95 P P 08 18 35.7 +2.1
NLWA IAmb IAmb 08 18 47.5
comp=Z,368nm,1.1s
A05A Maple Falls 23.51 90 IAmb IAmb 08 18 51.5
comp=Z,378nm,1.4s
WISH Wishkah 23.53 95 IAmb IAmb 08 18 59.8
comp=Z,423nm,1.3s
YKAW3 Yellowknife Wh 23.82 54 IAmb IAmb 08 18 40.8
comp=Z,326nm,1.2s
YKA Yellowknife Ar 23.83 54 P P 08 18 37.9 -0.3
comp=Z,153nm,0.9s,baz=272,slow=8.9,SNR=233
YKA S S 08 22 52.4 +1.4
comp=Z,24nm,1.3s,baz=278,slow=19,SNR=2.1
YKA ScP ScP 08 25 54.9 -0.2
comp=Z,15nm,0.9s,baz=278,slow=2.3,SNR=12
YKA P3KPbc 08 51 52.1
comp=Z,3.4nm,0.9s,baz=102,slow=5.0,SNR=20
comp=Z,153nm,0.9s
YKA Yellowknife Ar 23.83 54 P P 08 18 37.7 -0.6
YKAW1 Yellowknife Wh 23.89 54 P P 08 18 38.6 -0.2
YKAW1 IAmb IAmb 08 18 41.3
comp=Z,337nm,1.1s
F03A Seaside 24.32 97 IAmb IAmb 08 18 59.1
comp=Z,461nm,1.2s
PET Petropavlovsk 24.44 282 P P 08 18 43.5 -0.4
PET Petropavlovsk 24.44 282 *eP* P 08 18 42.5 -1.4
PET *eS* S 08 22 59.1 -1.9
PET pmax pmax
comp=Z,639nm,0.9s
PET Petropavlovsk 24.44 282 P P 08 18 42.7 -1.2
PET IAmb IAmb 08 18 46.3
comp=Z,558nm,1.0s
PET Petropavlovsk 24.44 282 P P 08 18 42.9 -1.0
D05A Enumclaw 24.50 93 IAmb IAmb 08 18 58.6
comp=Z,630nm,1.2s
F04D Rainier, OR 24.54 97 P P 08 18 46.0 +1.1
F04D IAmb IAmb 08 18 59.1
comp=Z,205nm,0.9s

PEA0B Petropavlovsk- 24.94 283⇑ *iP* P 08 18 47.4 -1.1
PEA0B Petropavlovsk- 24.94 283 P P 08 18 47.7 -0.9
PETK Petropavlovsk- 24.94 283 P P 08 18 47.7 -0.9
comp=Z,616nm,0.8s,baz=75,slow=12,SNR=571
PETK PcP PcP 08 22 23.2 +0.4
comp=Z,40nm,0.9s,baz=74,slow=2.8,SNR=6.3
PETK S S 08 23 07.0 -2.1
comp=Z,6.8nm,0.9s,baz=70,slow=22,SNR=1.4
PETK ScP ScP 08 25 59.0 +0.6
comp=Z,20nm,0.9s,baz=81,slow=9.2,SNR=10
comp=Z,616nm,0.8s
PETK Petropavlovsk- 24.94 283 P P 08 18 48.0 -0.5
PETK Petropavlovsk- 24.94 283 P P 08 18 48.0 -0.5
LTY Liberty 25.22 92 IAmb IAmb 08 19 04.2
comp=Z,293nm,1.3s
COR Corvallis 25.27 100 P P 08 18 52.6 +1.1
COR pmax pmax
comp=Z,173nm,1.1s
COR Corvallis 25.27 100 P P 08 18 52.6 +1.1
COR Corvallis 25.27 100 P P 08 18 54.4 +2.8
G04A Mulino 25.36 98 IAmb IAmb 08 19 16.7
comp=Z,221nm,1.0s
B08A Colville Reser 25.41 89 IAmb IAmb 08 19 05.9
comp=Z,259nm,1.1s
SEY Seymchan 25.41 307 ScP ScP 08 26 00.2 +0.7
comp=Z,30nm,1.0s,baz=73,slow=3.0,SNR=11
SEY LR LR 08 29 52.1
comp=Z,25μm,19.5s,baz=37,slow=39
SEY Seymchan 25.41 307*c iP* P 08 18 51.3 -1.4
SEY pmax pmax
comp=Z,449nm,0.8s
BUCK Buck Mountain 25.68 100 P P 08 18 57.5 +2.0
HOOD Mount Hood Mea 25.76 97 IAmb IAmb 08 19 09.4
comp=Z,369nm,1.2s
EPH Ephrata 25.79 91 IAmb IAmb 08 19 08.9
comp=Z,318nm,1.2s
J01E Myrtle Point 25.81 103 IAmb IAmb 08 19 12.5
comp=Z,250nm,0.9s
MXC Moxie City 25.81 93 IAmb IAmb 08 19 09.9
comp=Z,337nm,1.6s
WAH2 Wahluke Slope 26.13 92 IAmb IAmb 08 19 12.3
comp=Z,448nm,1.3s
I04A Tendick Farm, 26.26 100 P P 08 19 02.5 +1.9
HAWA Hanford 26.35 93 IAmb IAmb 08 19 14.6
comp=Z,368nm,1.2s
F07A Phinny Hill Vi 26.41 94 IAmb IAmb 08 19 15.2
comp=Z,286nm,1.2s
WIFE Three Sisters- 26.43 99 IAmb IAmb 08 19 18.1
comp=Z,327nm,1.6s
E08A Dider Farm, El 26.57 92 IAmb IAmb 08 19 16.3
comp=Z,268nm,1.2s
EDM Edmonton 26.60 75 P P 08 19 03.6 -0.1
EDM pmax pmax
comp=Z,197nm,0.9s
EDM Edmonton 26.60 75 P P 08 19 03.6 -0.1
EDM IAmb IAmb 08 19 23.9
comp=Z,197nm,0.9s
MA2 Magadan 26.69 300 P P 08 19 03.4 -1.0
MA2 Magadan 26.69 300⇑ *iP* P 08 19 03.3 -1.1
MA2 pmax pmax
comp=Z,236nm,1.0s
MA2 Magadan 26.69 300 P P 08 19 03.3 -1.1
MA2 IAmb IAmb 08 19 07.8
comp=Z,228nm,1.0s
MA2 Magadan 26.69 300 P P 08 19 03.2 -1.1
comp=Z,261nm,0.9s
MA2 Magadan 26.69 300 P P 08 19 03.6 -0.8
NEW Newport 26.72 87 P P 08 19 06.3 +1.5
NEW Newport 26.72 87 IAmb IAmb 08 19 17.5
comp=Z,203nm,1.1s
NEW Newport 26.72 87 P P 08 19 06.5 +1.7
J04A Umpqua Nationa 26.78 101 IAmb IAmb 08 19 18.7
comp=Z,197nm,1.0s
SKR Severo-Kuril's 26.84 279*c iP* P 08 19 04.3 -1.4
E09A Wood Farm, Sta 27.08 91 IAmb IAmb 08 19 20.7
comp=Z,370nm,1.3s
PINE Pine Mountain 27.09 99 P P 08 19 10.3 +2.0
YBH Yreka Blue Hor 27.43 104 LR LR 08 28 03.2
comp=Z,17μm,20.4s,baz=342,slow=32
YBH P3KPbc 08 51 36.7
comp=Z,3.5nm,0.9s,baz=91,slow=4.8,SNR=5.8
KMPM Mount Pierce 27.55 108 IAmb IAmb 08 19 26.0
comp=Z,204nm,1.2s
F10A Beach Ranch, E 27.91 92 P P 08 19 16.9 +1.4
BMO Blue Mountains 28.52 94 P P 08 19 22.8 +1.9
O03E Paynes Creek 28.91 105 IAmb IAmb 08 19 36.9
comp=Z,202nm,1.1s
HOPS Hopland Field 29.13 109 IAmb IAmb 08 19 39.3
comp=Z,205nm,1.1s
WVOR Wild Horse Val 29.26 99 P P 08 19 29.1 +1.6
WVOR Wild Horse Val 29.26 99 P P 08 19 29.4 +1.8
MSO Missoula 29.31 87 IAmb IAmb 08 19 40.4
comp=Z,407nm,1.9s
CVS Carmenet Viney 29.93 109 IAmb IAmb 08 19 46.2
comp=Z,188nm,1.1s
BUT Butte 30.56 88 P P 08 19 40.5 +1.4
MPK Martis Peak 30.59 105 IAmb IAmb 08 19 53.0
comp=Z,199nm,1.0s
JRSC Jasper Ridge 30.73 110 IAmb IAmb 08 19 52.9
comp=Z,176nm,1.1s
DLMT Dillon 30.91 89 IAmb IAmb 08 19 54.9
comp=Z,274nm,1.6s
HLID Haley 30.95 93 P P 08 19 44.4 +1.8
PNTR Pine Nut 30.97 105 IAmb IAmb 08 19 56.1
comp=Z,228nm,0.9s
BCYI Bear Canyon 31.07 91 IAmb IAmb 08 19 56.5
comp=Z,378nm,1.6s
MHC Mount Hamilton 31.10 109 IAmb IAmb 08 19 56.8
comp=Z,331nm,1.9s
RES Resolute Bay 31.16 28 P P 08 19 43.5 -0.4
RES Resolute Bay 31.16 28 P P 08 19 43.4 -0.4
CMB Columbia Colle 31.28 107 P P 08 19 46.9 +1.5
BOZ Bozeman (W) 31.33 88 P P 08 19 47.0 +1.2
SAO San Andreas Ge 31.63 110 P P 08 19 49.5 +1.1
BLKN Baker Lake 31.83 48 IAmb IAmb 08 19 51.1
comp=Z,274nm,1.0s
BBGB Big Mountain B 31.99 110 IAmb IAmb 08 20 05.0
comp=Z,316nm,1.1s
YHL Hebgen Lake 32.02 88 IAmb IAmb 08 20 04.9
comp=Z,116nm,0.9s
YHB Horse Butte 32.08 89 IAmb IAmb 08 20 05.2
comp=Z,160nm,1.0s
FFC Flin Flon 32.14 67 P P 08 19 52.7 0.0
FFC pmax pmax
comp=Z,59nm,1.2s
FFC Flin Flon 32.14 67 P P 08 19 52.7 0.0
FFC Flin Flon 32.14 67 P P 08 19 52.9 +0.2
NVAR Mina Array Bea 32.15 104 P P 08 19 55.1 +1.9
comp=Z,9.7nm,0.8s,baz=300,slow=8.3,SNR=71
NVAR pP pP 08 20 04.8 +0.6
comp=Z,57nm,0.9s,baz=316,slow=6.9,SNR=42
NVAR PcP PcP 08 22 42.0 +0.7
comp=Z,15nm,0.8s,baz=286,slow=3.2,SNR=7.8
NVAR ScP ScP 08 26 21.5 +0.1
comp=Z,2.3nm,0.9s,baz=348,slow=4.4,SNR=3.2
NVAR LR LR 08 30 36.6
comp=Z,23μm,20.6s,baz=21,slow=32
NVAR P3KPbc 08 51 18.2
comp=Z,2.5nm,1.0s,baz=141,slow=5.3,SNR=12
NVAR Mina Array Bea 32.15 104 P P 08 19 54.4 +1.2
LHV Little Huntoon 32.17 105 IAmb IAmb 08 20 06.6
comp=Z,177nm,1.1s
YMR Madison River 32.26 89 IAmb IAmb 08 20 06.9
comp=Z,198nm,0.8s
ELK Elko 32.29 98 P P 08 19 55.9 +1.5
MDPB Devils Postpil 32.29 106 IAmb IAmb 08 20 07.9
comp=Z,122nm,1.0s
HULI Fort Hunter Li 32.30 110 IAmb IAmb 08 20 07.5
comp=Z,339nm,1.5s
YNR Norris Junctio 32.39 88 IAmb IAmb 08 20 08.6
comp=Z,186nm,1.0s
YFT Old Faithful 32.46 89 IAmb IAmb 08 20 11.1
comp=Z,136nm,0.9s
YNE Yellowstone No 32.60 87 IAmb IAmb 08 20 09.8
comp=Z,141nm,0.9s
LKWY Lake 32.64 88 IAmb IAmb 08 20 11.5
comp=Z,143nm,0.8s
H17A Grant Village 32.64 89 IAmb IAmb 08 20 14.2
comp=Z,183nm,1.1s
YMP Mirror Lake Pl 32.68 88 IAmb IAmb 08 20 10.9
comp=Z,175nm,1.2s
FLWY Flagg Ranch 32.76 89 IAmb IAmb 08 20 16.9
comp=Z,155nm,1.0s
RLMT Red Lodge 32.96 87 IAmb IAmb 08 20 13.3
comp=Z,205nm,1.1s
TPH Tonopah 33.00 104 IAmb IAmb 08 20 13.5
comp=Z,140nm,1.0s
HVU Hansel Valley 33.01 94 IAmb IAmb 08 20 13.8
comp=Z,138nm,1.1s
DSP Deep Springs 33.09 105 IAmb IAmb 08 20 14.9
comp=Z,115nm,1.0s
SNOW Snow King Moun 33.11 90 IAmb IAmb 08 20 15.2
comp=Z,216nm,1.8s
TIN Tinemaha, Big 33.17 106 IAmb IAmb 08 20 15.7
comp=Z,345nm,1.3s
AHID Auburn Hatcher 33.34 91 P P 08 20 05.6 +2.1
TIXI Tiksi 33.48 327 LR LR 08 33 38.5
comp=Z,14μm,21.3s,baz=23,slow=36
TIXI Tiksi 33.48 327*c iP* P 08 20 02.9 -1.2
TIXI pmax pmax
comp=Z,447nm,1.0s
TIXI Tiksi 33.48 327 P P 08 20 03.0 -1.2
KIP Kipapa 33.76 178 P P 08 20 09.2 +2.2
KIP Kipapa 33.76 178 *eP* P 08 20 08.0 +1.0
KIP pmax pmax
comp=Z,80nm,1.3s
KIP Kipapa 33.76 178 P P 08 20 08.1 +1.1
KIP IAmb IAmb 08 20 20.0
comp=Z,319nm,1.8s
LAO LASA Array 33.79 82 IAmb IAmb 08 20 22.7
comp=Z,98nm,1.1s
HWUT Hardware Ranch 33.82 93 IAmb IAmb 08 20 20.9
comp=Z,282nm,1.9s
HWUT Hardware Ranch 33.82 93 P P 08 20 10.1 +2.4
DUG Dugway, Tooele 34.03 96 P P 08 20 11.5 +2.0
DUG Dugway, Tooele 34.03 96 IAmb IAmb 08 20 22.6
comp=Z,191nm,1.1s
DUG Dugway, Tooele 34.03 96 P P 08 20 11.5 +2.0
S11A Rachel 34.13 103 IAmb IAmb 08 20 24.7
comp=Z,176nm,1.1s
TCUT Toone Canyon 34.23 94 IAmb IAmb 08 20 24.2
comp=Z,124nm,1.2s
BW06 Boulder Array 34.23 90 IAmb IAmb 08 20 25.5
comp=Z,298nm,2.0s
PD31 Pinedale Array 34.23 90 IAmb IAmb 08 20 25.5
comp=Z,293nm,2.0s
PDAR Pinedale Array 34.23 90 P P 08 20 12.1 +0.8
comp=Z,3.7nm,0.7s,baz=305,slow=4.9,SNR=32
PDAR pP pP 08 20 22.1 -0.1
comp=Z,27nm,0.7s,baz=310,slow=8.3,SNR=57
PDAR ScP ScP 08 26 28.8 +0.1
comp=Z,4.8nm,1.1s,baz=304,slow=3.1,SNR=4.8
PDAR P3KPbc 08 51 10.7
comp=Z,3.3nm,1.0s,baz=121,slow=5.7,SNR=23
WCT Wildcat Mounta 34.25 105 IAmb IAmb 08 20 24.6
comp=Z,192nm,1.6s
TYV Tymovskoe 34.26 287 *eP* P 08 20 10.6 -0.6
TYV *eS* S 08 25 34.2 -0.9
TYV pmax pmax
comp=Z,382nm,0.9s
TYV smax smax
comp=N,12nm,1.2s
TYV smax smax
comp=E,9.0nm,1.2s
TYV smax smax
comp=E,1μm,5.8s
MPMC Manual Prospec 34.31 106 IAmb IAmb 08 20 25.1
comp=Z,123nm,1.0s
FURC Furnace Creek, 34.35 105 IAmb IAmb 08 20 25.5
comp=Z,190nm,1.1s
FCC Fort Churchill 34.48 57 IAmb IAmb 08 20 14.6
comp=Z,290nm,1.3s
LRMC Laurel Mtn Rad 34.63 107 IAmb IAmb 08 20 27.3
comp=Z,95nm,1.0s
GWY Greenwater Val 34.67 105 IAmb IAmb 08 20 27.9
comp=Z,157nm,1.1s
PRN Pahroc Range 34.69 102 IAmb IAmb 08 20 28.3
comp=Z,161nm,1.1s
QSM Queen of Sheba 34.72 106 IAmb IAmb 08 20 28.3
comp=Z,140nm,1.0s
BSUT Blindstream Ca 34.98 94 IAmb IAmb 08 20 33.6
comp=Z,96nm,1.0s
GSC Goldstone, Bar 35.24 107 IAmb IAmb 08 20 32.9
comp=Z,138nm,1.1s
TCRU Three Creeks R 35.32 98 IAmb IAmb 08 20 36.0
comp=Z,107nm,1.0s
MWC Mount Wilson 35.36 109 IAmb IAmb 08 20 34.1
comp=Z,151nm,1.2s
UGL Uglegorsk 35.52 285⇑ *iP* P 08 20 21.7 -0.3
UGL pmax pmax
comp=Z,2μm,1.1s
UGL pmax pmax
comp=Z,160nm,0.9s
CCUT Cedar City 35.54 100 IAmb IAmb 08 20 35.8
comp=Z,143nm,1.6s
BFSC Mount Baldy Ra 35.57 109 IAmb IAmb 08 20 35.2
comp=Z,98nm,1.0s
RDMU Red Mountain 35.63 93 IAmb IAmb 08 20 36.2
comp=Z,118nm,1.0s
HMH Humu'ula Sheep 35.68 174 IAmb IAmb 08 20 26.6
comp=Z,155nm,1.1s
P17A Butcher Ranch, 35.70 96 IAmb IAmb 08 20 36.1
comp=Z,334nm,2.0s
MLOA Mauna Loa Obse 35.74 174 IAmb IAmb 08 20 27.3
comp=Z,204nm,1.1s
MLOA Mauna Loa Obse 35.74 174 P P 08 20 26.0 +1.4
YAK Yakutsk 35.82 310 *eP* P 08 20 23.0 -1.5
YAK *e**PP pP 08 20 32.5 -3.0
YAK *e* 08 21 40.0
YAK *e*PPP PPP 08 21 59.0
YAK *e* 08 22 50.8
YAK *eS* S 08 25 57.9 -0.9
YAK *e**SS sS 08 26 15.9 -1.2
YAK *eSS* SnSn 08 28 20.3 -3.1
YAK *eSSS* SSS 08 28 46.2
YAK *e* 08 30 37.7
YAK pmax pmax
comp=Z,407nm,1.1s
YAK pmax pmax
comp=N,118nm,1.5s
YAK pmax pmax
comp=E,332nm,1.9s
YAK pmax pmax
comp=Z,4μm,10.6s
YAK pmax pmax
comp=N,2μm,11.6s
YAK pmax pmax
comp=E,2μm,6.2s
YAK smax smax
comp=N,828nm,7.4s
YAK smax smax
comp=E,1μm,11.0s
YAK MLR MLR
comp=Z,17μm,26.0s
YAK MLR MLR
comp=N,8μm,25.0s
YAK MLR MLR
comp=E,7μm,27.0s
YAK Yakutsk 35.82 310 P P 08 20 23.0 -1.5
YAK Yakutsk 35.82 310 P P 08 20 23.0 -1.5
YAK Yakutsk 35.82 310 P P 08 20 22.9 -1.6
YAK PcP PcP 08 22 51.2 +0.1
Q16A Castle Valley 35.83 97 IAmb IAmb 08 20 38.4
comp=Z,214nm,1.1s
HATHI Halema'uma'u T 35.87 173 IAmb IAmb 08 20 27.7
comp=Z,161nm,1.1s
JOKA Jonika Flow 35.88 173 IAmb IAmb 08 20 27.3
comp=Z,152nm,1.1s
P18A Preston Nutter 35.88 95 IAmb IAmb 08 20 38.7
comp=Z,188nm,1.4s
BYL Byron's Ledge 35.88 173 IAmb IAmb 08 20 46.8
comp=Z,82nm,0.9s
ILON Igloolik, Nuna 35.89 36 P P 08 20 25.3 +0.3
STCH Steam Cracks 35.91 173 IAmb IAmb 08 20 27.7
comp=Z,154nm,1.1s
PUH Pauahi 35.92 173 IAmb IAmb 08 20 28.0
comp=Z,153nm,1.0s
DES Desert 35.95 174 P P 08 20 27.6 +1.6
WOH Wood Valley 36.02 174 P P 08 20 27.3 +0.6
K22A Casper 36.04 88 IAmb IAmb 08 20 38.8
comp=Z,155nm,1.1s
POIN Pond Inlet 36.14 30 P P 08 20 26.8 -0.2
POIN IAmb IAmb 08 20 43.5
comp=Z,249nm,1.2s
PKCU Pink Cliffs 36.20 99 IAmb IAmb 08 20 41.9
comp=Z,121nm,1.0s
YSS Yuzhno-Sakhali 36.32 282 P P 08 20 28.9 0.0
YSS Yuzhno-Sakhali 36.32 282 *eP* P 08 20 28.4 -0.5
YSS *e**PP pP 08 20 38.4 -1.5
YSS *e* 08 22 53.4
YSS *eS* S 08 26 04.6 -2.2
YSS pmax pmax

comp=Z,160nm,1.3s
YSS Yuzhno-Sakhali 36.32 282 P **P** **08 20 29.1 +0.2**
YSS IAmb IAmb 08 20 31.9
comp=Z,294nm,1.3s
YSS Yuzhno-Sakhali 36.32 282 P **P** **08 20 29.2 +0.3**
YSS Yuzhno-Sakhali 36.32 282 P **P** **08 20 29.2 +0.3**
YSS PcP **PcP** **08 22 53.4 +0.6**
RSSD Black Hills 36.55 84 P **P** **08 20 31.9 +0.7**
RSSD pmax pmax
comp=Z,94nm,0.9s
RSSD Black Hills 36.55 84 P **P** **08 20 31.9 +0.7**
RSSD IAmb IAmb 08 20 45.3
comp=Z,94nm,0.9s
RSSD Black Hills 36.55 84 P **P** **08 20 32.1 +0.9**
ALE Alert 36.56 13 P **P** **08 20 30.1 -0.5**
ALE PcP **PcP** **08 22 53.8 +0.8**
DNR Dunn Ranch,Anz 36.63 108 IAmb IAmb 08 20 44.7
comp=Z,184nm,1.0s
PFO Pinyon Flats O 36.69 108⇑ *i*P **P** **08 20 33.6 +1.2**
PFO pmax pmax
comp=Z,58nm,1.3s
PFO Pinyon Flats O 36.69 108 P **P** **08 20 33.6 +1.2**
PFO IAmb IAmb 08 20 45.0
comp=Z,106nm,1.1s
PFO Pinyon Flats O 36.69 108 P **P** **08 20 33.2 +0.8**
PFO PcP **PcP** **08 22 55.4 +1.0**
PMD Palm Desert 36.71 108 IAmb IAmb 08 20 44.8
comp=Z,98nm,1.1s
DPP Dos Picos Cty 36.90 109 IAmb IAmb 08 20 47.1
comp=Z,155nm,1.1s
BORC Borrego Spring 36.98 108 IAmb IAmb 08 20 47.7
comp=Z,125nm,1.1s
E28A Huff 36.98 78 IAmb IAmb 08 20 46.9
comp=Z,188nm,1.0s
HAYD Hayden 36.99 91 IAmb IAmb 08 20 47.5
comp=Z,222nm,1.6s
IRM Iron Mountain 37.00 106 IAmb IAmb 08 20 48.0
comp=Z,177nm,1.0s
W13A Hualapai Mount 37.01 104 IAmb IAmb 08 20 48.1
comp=Z,117nm,1.1s
BAR Barrett 37.29 109 IAmb IAmb 08 20 50.4
comp=Z,101nm,1.1s
TULEG Thule 37.30 23 IAmb IAmb 08 20 54.1
comp=Z,245nm,1.4s
TULEG Thule 37.30 23 P **P** **08 20 36.4 -0.6**
TULEG Thule 37.30 23 *i* P **P** **08 20 36.1 -0.8**
TULEG IAmb IAmb 08 20 37.6
comp=Z,237nm,1.4s
PV23 Carpenter Ridg 37.38 95 IAmb IAmb 08 20 50.0
comp=Z,186nm,1.3s
PV10 Paradox Valley 37.42 95 IAmb IAmb 08 20 51.6
comp=Z,262nm,1.1s
PV04 Paradox Valley 37.48 95 IAmb IAmb 08 20 51.7
comp=Z,293nm,1.7s
PV20 West Nyswonger 37.48 95 IAmb IAmb 08 20 52.4
comp=Z,118nm,0.9s
PV19 Morning Glory 37.49 95 IAmb IAmb 08 20 52.6
comp=Z,109nm,1.0s
PV11 David Mesa, Pa 37.56 95 IAmb IAmb 08 20 55.5
comp=Z,81nm,0.8s
CBX Cerro Bola 37.57 110 IAmb IAmb 08 20 53.1
comp=Z,209nm,1.0s
ULM Lac du Bonnet 37.57 70 P **P** **08 20 39.6 +0.1**
comp=Z,42nm,0.9s,baz=299,slow=8.6,SNR=45
ULM pP **pP** **08 20 50.3 -0.3**
comp=Z,74nm,0.9s,baz=310,slow=10.0,SNR=15
ULM P3KPbc 08 50 56.2
comp=Z,5.0nm,1.0s,baz=65,slow=3.3,SNR=7.0
comp=Z,42nm,0.9s
PV18 Skein Mesa, Pa 37.58 95 IAmb IAmb 08 20 53.4
comp=Z,194nm,1.1s
PV05 Paradox Valley 37.59 96 IAmb IAmb 08 20 51.9
comp=Z,88nm,0.9s
PV12 Saucer Basin, 37.59 95 IAmb IAmb 08 20 52.6
comp=Z,172nm,1.1s
BLYC Blythe 37.65 106 IAmb IAmb 08 20 53.4
comp=Z,208nm,1.1s
GRNR Gornyy 37.69 291⇓ *i*P **P** **08 20 39.4 -1.1**
GRNR pmax pmax
comp=E,80nm,0.9s
GRNR pmax pmax
comp=Z,200nm,0.8s
PV13 Radium Mtn., P 37.69 95 IAmb IAmb 08 20 53.2
comp=Z,170nm,0.9s
PV15 Paradox Valley 37.76 95 IAmb IAmb 08 20 58.7
comp=Z,104nm,0.9s
PV01 Paradox Valley 37.85 95 IAmb IAmb 08 20 54.6
comp=Z,257nm,1.5s
CCX Cicese 37.91 110 IAmb IAmb 08 20 55.7
comp=Z,172nm,1.1s
GLA Glamis 38.01 107 IAmb IAmb 08 20 56.3
comp=Z,131nm,1.1s
JKA Kamikawa-asahi 38.09 278 P **P** **08 20 42.5 -1.5**
JKA Kamikawa-asahi 38.09 278 P **P** **08 20 43.6 -0.4**
ASAJ Asahikawa 38.10 278 P **P** **08 20 42.5 -1.5**
ASAJ pmax pmax
comp=Z,334nm,0.9s
WUAZ Wupatki 38.11 101 IAmb IAmb 08 20 57.5
comp=Z,117nm,1.1s
ISCO Idaho Springs 38.41 91 P **P** **08 20 49.8 +2.7**
ISCO Idaho Springs 38.41 91 P **P** **08 20 49.8 +2.7**
MVCO Mesa Verde 38.53 96 P **P** **08 20 49.9 +1.8**
AGMN Agassiz Nation 38.67 73 IAmb IAmb 08 21 07.9
comp=Z,118nm,0.9s
AGMN Agassiz Nation 38.67 73 P **P** **08 20 48.8 0.0**
EPLO Experimental L 39.05 70 IAmb IAmb 08 21 07.7
comp=Z,98nm,0.9s
ERM Erimo 39.10 275 P **P** **08 20 52.4 0.0**
ERM Erimo 39.10 275⇑ *i*P **P** **08 20 52.2 -0.2**
ERM pmax pmax
comp=Z,868nm,1.3s
ERM Erimo 39.10 275 P **P** **08 20 52.4 0.0**
ERM Erimo 39.10 275 P **P** **08 20 52.4 0.0**
ERM Erimo 39.10 275 P **P** **08 20 52.2 -0.2**
ERM PcP **PcP** **08 23 02.9 +1.4**
JEM Erimo 39.10 275 P **P** **08 20 52.7 +0.3**
X18A Snowflake 39.63 101 IAmb IAmb 08 21 10.4
comp=Z,135nm,1.1s
OGNE Ogallala 39.71 86 IAmb IAmb 08 21 09.5
comp=Z,144nm,0.8s
SDCO Great Sand Dun 39.87 93 IAmb IAmb 08 21 12.1
comp=Z,214nm,1.7s
NEEM North Greenlan 40.51 19 *i* P **P** **08 21 03.4 -0.7**
NEEM IAmb IAmb 08 21 04.6
comp=Z,209nm,1.0s
KSCO Kaye Shedlock' 40.65 89 IAmb IAmb 08 21 18.4
comp=Z,191nm,0.9s
KULLO Kullorsuaq 40.77 24 P **P** **08 21 05.8 0.0**
KULLO Kullorsuaq 40.77 24 *i* P **P** **08 21 05.9 0.0**
KULLO IAmb IAmb 08 21 06.9
comp=Z,339nm,1.1s
TUC Tucson 40.80 104 P **P** **08 21 07.7 +0.9**
TUC pmax pmax
comp=Z,85nm,1.2s
TUC Tucson 40.80 104 P **P** **08 21 07.7 +0.9**
TUC Tucson 40.80 104 P **P** **08 21 08.3 +1.5**
ZEA Zeya 40.84 299 *e*P **P** **08 21 05.0 -1.7**
ZEA *e* 08 23 07.4
ZEA pmax pmax
comp=E,60nm,0.9s
ZEA pmax pmax
comp=N,40nm,0.8s
ZEA pmax pmax
comp=Z,180nm,0.8s
T25A Trinidad 40.92 93 IAmb IAmb 08 21 20.7
comp=Z,214nm,1.4s
ECSD EROS Data Cent 41.00 79 P **P** **08 21 07.3 -0.8**
ECSD EROS Data Cent 41.00 79 P **P** **08 21 07.8 -0.4**
JTM Tenmabayashi 41.09 275 P **P** **08 21 08.7 -0.2**
JTM Tenmabayashi 41.09 275 P **P** **08 21 08.2 -0.8**
EYMN Ely 41.25 71 P **P** **08 21 10.4 +0.2**
EYMN IAmb IAmb 08 21 26.4
comp=Z,195nm,0.8s
EYMN Ely 41.25 71 P **P** **08 21 10.6 +0.3**
ANMO Albuquerque 41.30 97 P3KPbc 08 50 41.1
comp=Z,0.8nm,0.8s,baz=200,slow=4.7,SNR=4.3
ANMO Albuquerque 41.30 97 P **P** **08 21 12.2 +1.2**
ANMO pmax pmax
comp=Z,90nm,1.4s
ANMO Albuquerque 41.30 97 P **P** **08 21 12.2 +1.2**
ANMO Albuquerque 41.30 97 P **P** **08 21 12.9 +1.9**
DUN6 Lazy B Ranch 41.57 102 IAmb IAmb 08 21 28.2
comp=Z,187nm,1.0s
BGNE Belgrade 41.62 83 IAmb IAmb 08 21 25.3
comp=Z,320nm,0.9s
Y22A Socorro 41.74 98 IAmb IAmb 08 21 28.0
comp=Z,192nm,1.2s
NOR Nord 41.96 8 *i* P **P** **08 21 14.8 -0.8**
NOR IAmb IAmb 08 21 17.4
comp=Z,190nm,1.1s
UPNV Upernavik 41.99 26 P **P** **08 21 15.8 0.0**
UPNV Upernavik 41.99 26 *i* P **P** **08 21 15.4 -0.5**
UPNV IAmb IAmb 08 21 16.8
comp=Z,314nm,0.9s
E38A The Farm, Brul 42.03 72 P **P** **08 21 16.7 +0.1**
E38A IAmb IAmb 08 21 32.5
comp=Z,141nm,0.8s
L34A Svendsen Farm, 42.26 81 IAmb IAmb 08 21 36.8
comp=Z,278nm,1.0s
121A Cookes Peak, D 42.32 101 IAmb IAmb 08 21 32.4
comp=Z,194nm,1.2s
CBKS Cedar Bluff 42.44 87 IAmb IAmb 08 21 32.6
comp=Z,348nm,1.1s
I37A Lemond, Waseca 42.62 77 IAmb IAmb 08 21 34.5
comp=Z,268nm,1.0s
HEH HeiHe 42.73 295 *e*P **P** **08 21 19.8 -2.4**
HEH PcP **PcP** **08 23 13.3 +0.2**
HEH pmax pmax
comp=Z,230nm,0.9s
NUUG Nuugaatsiaq 43.45 26 *i* P **P** **08 21 27.5 -0.3**
NUUG IAmb IAmb 08 21 32.5
comp=Z,703nm,1.1s
PH02 Texas Public H 43.56 93 IAmb IAmb 08 21 41.4
comp=Z,234nm,1.3s
H11N2 WAKE ISLAND Hy 43.62 229 P **P** **08 21 30.6 +1.2**
baz=354,slow=4.7,SNR=3.3
H11N2 T T 09 07 55.2
baz=28,slow=76,SNR=137
H11N3 WAKE ISLAND Hy 43.63 229 P **P** **08 21 30.5 +1.0**
baz=354,slow=4.7,SNR=5.9
H11N3 T T 09 07 55.6
baz=28,slow=76,SNR=123
H11N1 WAKE ISLAND Hy 43.64 229 P **P** **08 21 30.7 +1.1**
baz=354,slow=4.7,SNR=3.4
H11N1 T T 09 07 56.4
baz=28,slow=76,SNR=93
NIAQ Niaqornat 43.78 27 *i* P **P** **08 21 31.0 +0.6**
NIAQ IAmb IAmb 08 21 32.1
comp=Z,207nm,1.1s
USA0B Ussuriysk Arra 43.99 285*c* *i*P **P** **08 21 30.7 -1.8**
USRK Ussuriysk Ar. 43.99 285 P **P** **08 21 30.7 -1.8**
comp=Z,30nm,0.8s,baz=63,slow=7.3,SNR=43
USRK PcP **PcP** **08 23 17.7 +0.3**
comp=Z,41nm,0.9s,baz=69,slow=1.2,SNR=15
comp=Z,30nm,0.8s
USRK Ussuriysk Ar. 43.99 285 P **P** **08 21 30.5 -2.0**
KSU1 Kansas State U 44.03 84 IAmb IAmb 08 21 44.2
comp=Z,116nm,0.8s
I40A Norwalk 44.24 75 IAmb IAmb 08 21 53.8
comp=Z,115nm,0.5s
MNTX Cornudas Mount 44.29 99 P **P** **08 21 37.5 +2.5**
SAATT Saattut 44.30 27 *i* P **P** **08 21 34.3 -0.2**
SAATT IAmb IAmb 08 21 36.0
comp=Z,421nm,0.9s
NOKA Waynoka 44.41 89 IAmb IAmb 08 21 48.1
comp=Z,313nm,1.5s
F42A Maple Grove Fa 44.41 71 IAmb IAmb 08 21 51.9
comp=Z,232nm,1.1s
OK038 West end E0370 44.63 89 IAmb IAmb 08 21 49.7
comp=Z,140nm,1.1s
KAN01 Argonia South 44.72 87 IAmb IAmb 08 21 49.8
comp=Z,161nm,1.3s
SAQQ Saqqaq 44.72 28 *i* P **P** **08 21 37.9 0.0**
SAQQ IAmb IAmb 08 21 39.1
comp=Z,416nm,1.0s
BOD Bodaibo 44.74 311 *e*P **P** **08 21 36.5 -1.8**
BOD pmax pmax
comp=Z,220nm,1.5s
VLA Vladivostok 44.75 284*d* *i*P **P** **08 21 37.6 -0.9**
VLA pmax pmax
comp=Z,258nm,1.4s
GDH Godhavn 44.77 29⇓ *i*P **P** **08 21 38.5 +0.2**
GDH IAmb IAmb 08 21 39.6
comp=Z,234nm,1.1s
H11S1 WAKE ISLAND Hy 44.79 229 T T 09 09 22.7
baz=28,slow=76,SNR=51
H11S2 WAKE ISLAND Hy 44.80 229 T T 09 09 13.2
baz=28,slow=76,SNR=54
H11S3 WAKE ISLAND Hy 44.80 229 T T 09 09 33.9
baz=28,slow=76,SNR=50
N38A Joes South For 44.81 80 IAmb IAmb 08 21 50.3
comp=Z,186nm,0.9s
TPB28 44.81 98 IAmb IAmb 08 21 52.6
comp=Z,174nm,1.4s
TPB11 China Draw 44.88 98 IAmb IAmb 08 21 52.6
comp=Z,291nm,1.5s
MDJ Mudanjiang 45.04 287 P **P** **08 21 39.9 -0.9**
MDJ Mudanjiang 45.04 287 IAmb IAmb 08 21 40.7
comp=Z,138nm,0.9s
MDJ Mudanjiang 45.04 287 P **P** **08 21 38.8 -2.0**
MDJ pmax pmax
comp=Z,120nm,1.1s
MDJ Mudanjiang 45.04 287 P **P** **08 21 39.2 -1.6**
MDJ Mudanjiang 45.04 287 P **P** **08 21 39.7 -1.2**
MDJ PcP **PcP** **08 23 21.7 +0.6**
L40A Anamosa 45.10 77 IAmb IAmb 08 21 53.5
comp=Z,136nm,1.0s
I42A Draeger Farm, 45.19 74 IAmb IAmb 08 21 58.0
comp=Z,95nm,0.7s
VHRN Van Horn 45.20 100 IAmb IAmb 08 21 55.6
comp=Z,311nm,1.4s
128A Castleberry Fa 45.26 96 IAmb IAmb 08 21 55.0
comp=Z,195nm,1.2s
P38A Dawn 45.43 82 IAmb IAmb 08 21 55.0
comp=Z,205nm,0.8s
H43A Windswept, Lux 45.44 72 IAmb IAmb 08 22 01.8
comp=Z,171nm,1.0s
ILULI Ilulissat 45.46 28 IAmb IAmb 08 21 44.8
comp=Z,161nm,1.0s
ILULI Ilulissat 45.46 28 P **P** **08 21 43.7 -0.1**
ILULI Ilulissat 45.46 28 *i* P **P** **08 21 43.7 -0.1**
ILULI IAmb IAmb 08 21 44.5
comp=Z,165nm,1.0s
POST Post 45.49 94 IAmb IAmb 08 21 56.5
comp=Z,119nm,1.1s
BNX BinXian 45.51 290⇑ P **P** **08 21 43.3 -1.2**
BNX PcP **PcP** **08 23 23.3 +0.6**
BNX pmax pmax
comp=Z,270nm,0.9s
MAJO Matsushiro 45.62 273 P **P** **08 21 45.3 -0.2**
MAJO Matsushiro 45.62 273*c* *i*P **P** **08 21 45.4 -0.1**
MAJO pmax pmax
comp=Z,645nm,1.2s
MAJO Matsushiro 45.62 273 P **P** **08 21 45.3 -0.2**
MAJO Matsushiro 45.62 273 P **P** **08 21 45.6 0.0**
MAJO Matsushiro 45.62 273 P **P** **08 21 45.5 0.0**
MAJO PcP **PcP** **08 23 23.5 +0.3**
MJAR Matsushiro Arr 45.62 273 P **P** **08 21 45.3 -0.3**
comp=Z,188nm,1.1s,baz=35,slow=6.3,SNR=251
MJAR PcP **PcP** **08 23 23.3 +0.1**
comp=Z,50nm,1.1s,baz=341,slow=2.0,SNR=5.6
comp=Z,188nm,1.1s
MJAR Matsushiro Arr 45.62 273 P **P** **08 21 45.2 -0.3**
OK051 E0350 and S346 45.70 87 IAmb IAmb 08 21 57.6
comp=Z,118nm,1.0s
OK048 Pawnee Station 45.70 87 IAmb IAmb 08 21 57.6
comp=Z,192nm,1.0s
WMOK Wichita Mounta 45.84 91 P **P** **08 21 47.7 +0.4**
WMOK Wichita Mounta 45.84 91 P **P** **08 21 47.7 +0.4**
OK029 Liberty Lake 45.84 88 IAmb IAmb 08 21 58.9
comp=Z,200nm,1.2s
DAG Danmarks Havn 45.95 12 P **P** **08 21 46.5 -1.1**
DAG pmax pmax
comp=Z,558nm,1.0s
DAG Danmarks Havn 45.95 12 P **P** **08 21 47.1 -0.4**
DAG Danmarks Havn 45.95 12 *i* P **P** **08 21 46.7 -0.8**
DAG IAmb IAmb 08 21 48.8
comp=Z,383nm,0.8s
L42A Oliver, Polo 46.01 76 IAmb IAmb 08 21 59.7
comp=Z,107nm,1.1s
QUOK Quay 46.01 87 IAmb IAmb 08 21 59.9
comp=Z,224nm,0.9s
KBS Kingsbay 46.01 2*c* *i*P **P** **08 21 48.8 +0.7**
KBS pmax pmax
comp=Z,526nm,1.1s
KBS Kingsbay 46.01 2 *e*P **P** **08 21 48.6 +0.5**
KBS IAmb IAmb 08 21 49.8
comp=Z,488nm,1.1s
KBS IAMs_20 IAMs_20 08 59 28.8
comp=Z,27µm,22.7s
KBS Kingsbay 46.01 2 P **P** **08 21 48.5 +0.5**
KBS Kingsbay 46.01 2 P **P** **08 21 48.9 +0.9**
KBS Kingsbay 46.01 2 *i* P **P** **08 21 49.0 +0.9**
KBS PcP **PcP** **08 23 25.5 +1.6**
KBS ScP **ScP** **08 27 14.9 +1.4**
KBS Kingsbay 46.01 2 *i* P **P** **08 21 48.4 +0.3**
OK052 Battle Ridge R 46.08 88 IAmb IAmb 08 22 00.5
comp=Z,179nm,0.8s
E46A Sault Ste Mari 46.09 68 IAmb IAmb 08 22 00.5
comp=Z,97nm,0.8s
APMT Aspermont 46.09 93 IAmb IAmb 08 22 00.9
comp=Z,146nm,1.6s
OKCSW OKLAHOMA CITY 46.13 89 IAmb IAmb 08 22 01.3
comp=Z,298nm,1.3s
SUMG Summit 46.15 21 P **P** **08 21 49.4 -0.3**
SUMG Summit 46.15 21 P **P** **08 21 49.4 -0.3**
SUMG pmax pmax
comp=Z,400nm,1.1s
SUMG Summit 46.15 21 P **P** **08 21 49.9 +0.3**
SUMG Summit 46.15 21 *i* P **P** **08 21 50.0 +0.3**
SUMG IAmb IAmb 08 21 51.1
comp=Z,602nm,1.2s
TMB01 Midkiff 46.19 96 IAmb IAmb 08 22 02.2
comp=Z,50nm,1.1s
N41A Harden Midland 46.21 78 IAmb IAmb 08 22 08.9
comp=Z,104nm,0.9s
FNO Franklin 46.26 89 IAmb IAmb 08 22 02.3
comp=Z,104nm,1.0s
ALPN Alpine 46.27 99 IAmb IAmb 08 22 03.4
comp=Z,200nm,1.9s
K43A Burlington 46.28 75 IAmb IAmb 08 22 09.3
comp=Z,160nm,1.0s
P40A Paris 46.33 81 IAmb IAmb 08 22 01.9
comp=Z,130nm,0.8s
DEOK Depew 46.36 88 IAmb IAmb 08 22 02.8
comp=Z,178nm,1.0s
SGCY Sterling City 46.55 95 IAmb IAmb 08 22 04.7
comp=Z,93nm,1.0s
I45A Fountain 46.56 72 IAmb IAmb 08 22 08.8
comp=Z,122nm,0.7s
W35A Tecumseh 46.63 89 IAmb IAmb 08 22 05.2
comp=Z,290nm,1.4s
NRIK Noril'sk 46.65 333 P **P** **08 21 52.9 -0.2**
comp=Z,568nm,0.9s,baz=56,slow=6.5,SNR=273
NRIK PcP **PcP** **08 23 26.7 +0.4**
comp=Z,121nm,0.9s,baz=88,slow=3.5,SNR=4.6
comp=Z,568nm,0.9s
NRIK Noril'sk 46.65 333*c* *i*P **P** **08 21 53.0 -0.2**
NRIK pmax pmax
comp=Z,848nm,1.1s
NRIK Noril'sk 46.65 333 P **P** **08 21 53.0 -0.2**
TUL3 Leonard 46.72 87 IAmb IAmb 08 22 05.4
comp=Z,119nm,0.8s
JGF Kuroka 46.77 273 P **P** **08 21 54.7 +0.1**
JGF Kuroka 46.77 273 P **P** **08 21 54.6 0.0**
SPA0 Spitsbergen Ar 46.84 1 *e*P **P** **08 21 53.7 -0.9**
SPA0 IAmb IAmb 08 21 55.6
comp=Z,558nm,1.2s
SPA0 IAMs_20 IAMs_20 08 58 40.5
comp=Z,30µm,26.2s
SPITS Spitsbergen Ar 46.84 1 P **P** **08 21 54.0 -0.5**
comp=Z,452nm,1.2s,baz=24,slow=9.1,SNR=64
SPITS PcP **PcP** **08 23 27.4 +0.5**
comp=Z,76nm,0.8s,baz=69,slow=4.6,SNR=7.7
comp=Z,452nm,1.2s
L44A Lake County Fo 46.86 75 IAmb IAmb 08 22 06.8
comp=Z,146nm,1.1s
RLO Rose Lookout 46.98 86 IAmb IAmb 08 22 07.2
comp=Z,141nm,1.0s
TXAR Lajitas Array 47.04 100 P **P** **08 21 57.6 +0.8**
comp=Z,14nm,0.9s,baz=302,slow=5.7,SNR=44
TXAR pP **pP** **08 22 08.4 +0.3**
comp=Z,35nm,0.7s,baz=321,slow=7.3,SNR=56
TXAR PcP **PcP** **08 23 30.2 +1.7**
comp=Z,22nm,0.9s,baz=255,slow=0.9,SNR=5.6
SFJD Kangerlussuaq 47.06 31 P **P** **08 21 56.7 +0.3**
SFJD pmax pmax
comp=Z,745nm,1.3s
SFJD Kangerlussuaq 47.06 31 P **P** **08 21 56.7 +0.3**
SFJD Kangerlussuaq 47.06 31 P **P** **08 21 57.0 +0.6**
SFJD Kangerlussuaq 47.06 31 P **P** **08 21 57.0 +0.6**
SFJD PcP **PcP** **08 23 28.5 +0.8**
SFJD Kangerlussuaq 47.06 31 *i* P **P** **08 21 56.6 +0.2**
SFJD IAmb IAmb 08 21 57.9
comp=Z,841nm,1.3s
HILR Hailar Array B 47.08 299 P **P** **08 21 56.1 -0.7**
comp=Z,42nm,0.6s,baz=67,slow=8.3,SNR=36
HILR PcP **PcP** **08 23 28.4 +0.2**
comp=Z,81nm,1.0s,baz=96,slow=6.0,SNR=9.0
comp=Z,42nm,0.6s
INU Inuyama 47.14 273 P **P** **08 21 57.0 -0.5**
INU Inuyama 47.14 273 IAmb IAmb 08 21 58.1
comp=Z,271nm,1.4s
INU Inuyama 47.14 273 P **P** **08 21 56.9 -0.5**
INU Inuyama 47.14 273 P **P** **08 21 56.7 -0.8**
INU PcP **PcP** **08 23 28.9 +0.3**
U38A Gravette 47.15 85 IAmb IAmb 08 22 08.2
comp=Z,128nm,0.8s
JHJ2 Mitsune 47.15 268 P **P** **08 21 57.9 +0.4**
JHJ2 Mitsune 47.15 268 P **P** **08 21 57.5 0.0**
HIA Hailar 47.27 298 P **P** **08 21 57.4 -0.9**
HIA Hailar 47.27 298 P **P** **08 21 56.7 -1.6**
OZNA Ozona 47.29 96 IAmb IAmb 08 22 10.7
comp=Z,344nm,1.9s
LOOK Love County 47.29 90 IAmb IAmb 08 22 15.2
comp=Z,87nm,0.9s
M44A Midewin, Midew 47.32 76 IAmb IAmb 08 22 11.1
comp=Z,149nm,0.9s
SAND Sanderson 47.45 98 IAmb IAmb 08 22 12.3
comp=Z,206nm,1.8s
LPIG La Paz 47.47 111 P **P** **08 22 00.7 +0.6**
comp=Z,26nm,0.9s,baz=202,slow=1.3,SNR=4.6
comp=Z,266nm,0.9s
PLPT Palo Pinto 47.50 92 IAmb IAmb 08 22 11.9
comp=Z,136nm,1.2s
HHAR Hobbs 47.51 85 IAmb IAmb 08 22 10.8
comp=Z,67nm,0.8s
P43A Skaggs, Pawnee 47.68 79 IAmb IAmb 08 22 12.6
comp=Z,123nm,0.8s
Z35A Perchaven, San 47.73 91 IAmb IAmb 08 22 13.8
comp=Z,81nm,1.0s
HPIG 47.77 104 IAmb IAmb 08 22 15.6
comp=Z,124nm,1.4s
HPIG 47.77 104 P **P** **08 22 03.8 +1.2**
HPIG pP **pP** **08 22 13.9 -0.1**
CCM Cathedral Cave 47.80 81 P **P** **08 22 01.1 -1.5**
CCM pmax pmax
comp=Z,60nm,1.1s
CCM Cathedral Cave 47.80 81 P **P** **08 22 01.1 -1.5**
FW06 Azle 47.82 91 IAmb IAmb 08 22 14.7
comp=Z,125nm,1.4s
CN2 Changchun 47.83 289 P **P** **08 22 01.8 -0.9**
CN2 pmax pmax
comp=Z,690nm,0.9s
DBG Daneborg 47.89 14 P **P** **08 22 02.3 -0.4**
DBG Daneborg 47.89 14 *i* P **P** **08 22 02.1 -0.6**
DBG IAmb IAmb 08 22 03.3
comp=Z,272nm,1.0s
SLM Saint Louis 47.97 80 IAmb IAmb 08 22 14.8
comp=Z,159nm,1.1s
SLBS Sierra La Lagu 48.00 110 P **P** **08 22 05.4 +1.1**
SLBS IAmb IAmb 08 22 17.3
comp=Z,208nm,1.6s
SLBS Sierra La Lagu 48.00 110 P **P** **08 22 06.1 +1.7**
SLBS pP **pP** **08 22 16.1 +0.5**
HSPB Hornsund (broa 48.01 2 P **P** **08 22 03.3 -0.3**
FVM French Village 48.32 81 IAmb IAmb 08 22 17.4
comp=Z,106nm,1.0s
FW13 Cleburne 48.34 92 IAmb IAmb 08 22 18.8
comp=Z,154nm,1.2s
JCT Junction City 48.38 95 IAmb IAmb 08 22 18.8
comp=Z,174nm,1.0s
I49A Point Hope 48.47 70 IAmb IAmb 08 22 23.2
comp=Z,63nm,0.9s
Q44A Meyer Farm, Va 48.47 79 IAmb IAmb 08 22 25.4
comp=Z,182nm,1.2s
HOPEN Hopen 48.51 359 *e*P **P** **08 22 07.1 -0.4**
HOPEN IAmb IAmb 08 22 08.2
comp=Z,670nm,1.0s
HOPEN IAMs_20 IAMs_20 09 01 52.7
comp=Z,30µm,21.1s
VLDQ Val d'Or 48.52 62 IAmb IAmb 08 22 07.1
comp=Z,141nm,1.1s
SFIN Lafayette 48.53 76 IAmb IAmb 08 22 20.8
comp=Z,130nm,1.0s
NUUK Nuuk 48.64 34 P **P** **08 22 09.6 +0.9**
NUUK Nuuk 48.64 34 *i* P **P** **08 22 09.2 +0.6**
NUUK IAmb IAmb 08 22 10.5

comp=Z,281nm,1.0s
FCAR Ozark Folk Cen 48.83 84 IAmb IAmb 08 22 20.4
comp=Z,126nm,1.1s
TREL Terrell 48.84 90 IAmb IAmb 08 22 22.4
comp=Z,194nm,1.1s
MIAR Mount Ida 48.96 87 IAmb IAmb 08 22 23.0
comp=Z,127nm,0.9s
MIAR Mount Ida 48.96 87 P **P** **08 22 11.4 -0.1**
MIAR pP **pP** **08 22 21.6 -1.2**
P46A Rosedale 48.99 77 IAmb IAmb 08 22 24.3
comp=Z,127nm,0.9s
Z38A Mt. Pleasant 49.08 89 IAmb IAmb 08 22 27.9
comp=Z,121nm,1.4s
WHAR Wooly Hollow 49.16 85 IAmb IAmb 08 22 23.4
comp=Z,317nm,1.9s
PBMO Poplar Bluff 49.16 82 IAmb IAmb 08 22 28.2
comp=Z,94nm,1.1s
SCHQ Schefferville 49.17 50 P **P** **08 22 12.7 -0.2**
comp=Z,91nm,1.1s,baz=311,slow=7.6,SNR=34
comp=Z,91nm,1.1s
SCHQ Schefferville 49.17 50 IAmb IAmb 08 22 13.6
comp=Z,182nm,1.3s
BUKO Buck Lake 49.28 66 IAmb IAmb 08 22 14.6
comp=Z,128nm,1.1s
HHU Hamhung 49.31 284 P **P** **08 22 13.7 -0.4**
HHU AmB
comp=Z,1μm,1.3s
BLO Bloomington 49.69 77 IAmb IAmb 08 22 29.3
comp=Z,136nm,1.0s
O48B Farmland 49.69 75 IAmb IAmb 08 22 16.8
comp=Z,181nm,1.2s
N49A Columbus Grove 49.77 74 IAmb IAmb 08 22 26.1
comp=Z,130nm,1.0s
SADO Sadowa 49.87 67 IAmb IAmb 08 22 28.8
comp=Z,74nm,0.9s
PEBM Pemiscott Bayo 49.95 82 IAmb IAmb 08 22 29.7
comp=Z,162nm,0.9s
GNAR Gosnell 49.97 82 IAmb IAmb 08 22 32.5
comp=Z,157nm,1.2s
P48A Milroy 50.10 76 IAmb IAmb 08 22 31.7
comp=Z,150nm,1.0s
JMN Monobe 50.10 274 P **P** **08 22 20.4 +0.1**
JMN Monobe 50.10 274 P **P** **08 22 20.9 +0.6**
GLAT Glass 50.17 82 IAmb IAmb 08 22 35.2
comp=Z,169nm,0.9s
SNY Shenyang 50.18 288 ⇑P **P** **08 22 20.3 -0.4**
SNY pmax pmax
comp=Z,810nm,0.8s
O49A Covington 50.20 74 IAmb IAmb 08 22 20.9
comp=Z,235nm,1.9s
833A Chaparral WMA, 50.23 97 IAmb IAmb 08 22 33.6
comp=Z,176nm,1.4s
JCJ Chichijima 50.31 261 P **P** **08 22 21.9 0.0**
JCJ Chichijima 50.31 261 P **P** **08 22 21.1 -0.8**
JCJ Chichijima 50.31 261 P **P** **08 22 22.1 +0.1**
Z41A Richland Creek 50.33 87 IAmb IAmb 08 22 33.6
comp=Z,107nm,1.0s
WCI Wyandotte Cave 50.47 78 P **P** **08 22 21.6 -1.4**
WCI pmax pmax
comp=Z,58nm,1.2s
WCI Wyandotte Cave 50.47 78 P **P** **08 22 21.6 -1.4**
WCI Wyandotte Cave 50.47 78 P **P** **08 22 21.7 -1.3**
EF04 Eagle Ford 04 50.48 95 IAmb IAmb 08 22 35.4
comp=Z,147nm,1.0s
BJO1 Bjornoya 50.56 1 *e*P **P** **08 22 23.0 -0.1**
BJO1 IAmb IAmb 08 22 24.1
comp=Z,383nm,1.1s
BJO1 IAMs_20 IAMs_20 08 50 59.1
comp=Z,28μm,25.3s
N51A Ashland 50.77 72 IAmb IAmb 08 22 25.3
comp=Z,83nm,1.1s
KSRS Korea Array 50.82 281 P **P** **08 22 25.9 +0.3**
comp=Z,255nm,0.9s,baz=52,slow=6.8,SNR=785
KSRS PcP **PcP** **08 23 42.8 +0.9**
comp=Z,81nm,0.9s,baz=55,slow=4.3,SNR=9.6
KSRS P4KPbc 08 59 55.8
comp=Z,0.4nm,0.3s,baz=55,slow=3.8,SNR=6.3
comp=Z,255nm,0.9s
DELO Deloro Mine 50.84 66 IAmb IAmb 08 22 26.6
comp=Z,92nm,1.1s
KSAR Wonju Array Be 50.85 281 P **P** **08 22 25.9 +0.1**
KSAR Wonju Array Be 50.85 281 P **P** **08 22 25.9 +0.1**
SUJ Sinuiju 50.87 286 P **P** **08 22 25.5 -0.4**
M52A Chesterland 50.89 71 IAmb IAmb 08 22 34.0
comp=Z,78nm,1.0s
T47A Sharon Grove 50.89 79 IAmb IAmb 08 22 37.3
comp=Z,84nm,0.8s
PYAG Pyongyang 50.91 284 P **P** **08 22 26.3 +0.1**
PYAG pP **pP** **08 22 41.7 +4.1**
PYAG S **S** **08 29 40.9 +1.2**
PYAG AmB
comp=Z,2μm,1.1s
SCO Scoresbysund 50.95 17 P **P** **08 22 26.0 -0.1**
SCO Scoresbysund 50.95 17 P **P** **08 22 26.1 +0.1**
SCO Scoresbysund 50.95 17 *i*P **P** **08 22 26.0 -0.1**
SCO IAmb IAmb 08 22 27.5
comp=Z,386nm,1.3s
HKT Hockley 51.04 92 P **P** **08 22 28.3 +1.1**
HKT pmax pmax
comp=Z,236nm,1.6s
HKT Hockley 51.04 92 P **P** **08 22 28.3 +1.1**
HKT IAmb IAmb 08 22 40.0
comp=Z,236nm,1.6s
HKT Hockley 51.04 92 P **P** **08 22 28.0 +0.8**
SOEG Soedalen 51.06 22 *i*P **P** **08 22 27.1 +0.1**
SOEG IAmb IAmb 08 22 28.1
comp=Z,732nm,0.9s
WVT Waverly 51.09 81 P **P** **08 22 27.4 -0.3**
WVT pmax pmax
comp=Z,183nm,0.8s
WVT Waverly 51.09 81 P **P** **08 22 27.4 -0.3**
WVT Waverly 51.09 81 P **P** **08 22 27.4 -0.3**
OTT Ottawa 51.23 64 P **P** **08 22 27.5 -1.0**
TRQ Mont Tremblant 51.26 62 IAmb IAmb 08 22 29.2
comp=Z,202nm,1.1s
MEDO Medina 51.33 68 IAmb IAmb 08 22 45.6
comp=Z,100nm,0.8s
P51A Williamsport 51.39 74 IAmb IAmb 08 22 30.1
comp=Z,96nm,1.2s
H06N1 SOCORRO T-PHAS 51.41 115 T T 09 17 37.5
SNR=61
ALLY Allegheny Colle 51.47 70 IAmb IAmb 08 22 45.5
comp=Z,132nm,0.9s
INCN Inchon 51.52 282 P **P** **08 22 30.6 -0.3**
INCN Inchon 51.52 282 P **P** **08 22 30.7 -0.2**
INCN pmax pmax
comp=Z,535nm,1.1s
INCN Inchon 51.52 282 P **P** **08 22 27.4 -3.5**
INCN Inchon 51.52 282 P **P** **08 22 30.7 -0.2**
INCN Inchon 51.52 282 P **P** **08 22 30.9 0.0**
H06S1 SOCORRO T 51.53 115 T T 09 17 35.7
SNR=2.7
R50A Paris 51.53 76 IAmb IAmb 08 22 43.2
comp=Z,114nm,0.9s
PECO Prince Edward 51.57 66 IAmb IAmb 08 22 32.1
comp=Z,117nm,1.2s
O52A Adamsville 51.62 73 IAmb IAmb 08 22 31.8
comp=Z,102nm,1.1s
HJU Haeju 51.63 284 P **P** **08 22 31.6 -0.1**
HJU AmB
comp=Z,3μm,1.1s
ANGG Ammassalik, Gr 51.65 27 P **P** **08 22 30.8 -0.6**
ANGG Ammassalik, Gr 51.65 27 *i*P **P** **08 22 30.4 -1.0**
ANGG IAmb IAmb 08 22 31.6
comp=Z,687nm,1.2s
N53A Lisbon 51.68 71 IAmb IAmb 08 22 40.3
comp=Z,100nm,1.0s
LDAQ Lac Daran 51.72 59 IAmb IAmb 08 22 32.9
comp=Z,113nm,1.2s
WBO Williamsburg 51.73 64 IAmb IAmb 08 22 32.7
comp=Z,122nm,1.0s
PAOC Oil Creek Stat 51.81 70 IAmb IAmb 08 22 44.1
comp=Z,364nm,2.0s
TJN Taejon 51.90 281 P **P** **08 22 33.5 -0.1**
TJN Taejon 51.90 281 *c*P **P** **08 22 33.6 -0.1**
TJN pmax pmax
comp=Z,28nm,1.0s
MMNY Mt. Morris Dam 51.92 68 IAmb IAmb 08 22 44.8
comp=Z,257nm,1.8s
IVI Ivigtut 51.92 35 IAmb IAmb 08 22 35.1
comp=Z,191nm,1.0s
IVI Ivigtut 51.92 35 P **P** **08 22 34.0 +0.5**
IVI Ivigtut 51.92 35 *i*P **P** **08 22 33.4 0.0**
IVI IAmb IAmb 08 22 34.9
comp=Z,158nm,0.9s
V48A Smith Brothers 51.94 80 IAmb IAmb 08 22 46.9
comp=Z,78nm,0.9s
CLTN Cedars of Leba 51.97 80 IAmb IAmb 08 22 45.8
comp=Z,116nm,0.9s
JTU Tsushima 52.08 278 P **P** **08 22 35.2 +0.2**
JTU Tsushima 52.08 278 P **P** **08 22 35.3 +0.2**
MNTQ Montreal, Queb 52.23 63 IAmb IAmb 08 22 35.7
comp=Z,108nm,1.0s
JNW Jan Mayen West 52.37 12 *e*P **P** **08 22 37.3 +0.7**
JNW IAmb IAmb 08 22 38.6
comp=Z,400nm,1.2s
JNW IAMs_20 IAMs_20 08 58 13.5
comp=Z,21μm,21.0s
O54A Avella 52.37 72 IAmb IAmb 08 22 44.8
comp=Z,111nm,0.9s
JMIC Jan Mayen 52.40 12 *e*P **P** **08 22 37.4 +0.5**
JMIC IAmb IAmb 08 22 38.0
comp=Z,178nm,1.0s
JMIC IAMs_20 IAMs_20 08 58 03.2
comp=Z,22μm,21.6s
S51A Beattyville 52.40 76 IAmb IAmb 08 22 54.7
comp=Z,129nm,1.2s
JNE Jan Mayen East 52.42 12 *e*P **P** **08 22 37.1 +0.1**
JNE IAmb IAmb 08 22 38.9
comp=Z,524nm,1.6s
JNE IAMs_20 IAMs_20 08 58 24.0
comp=Z,21μm,20.6s
CFNY Clifton-Fine, 52.42 65 IAmb IAmb 08 22 38.2
comp=Z,146nm,1.0s
JMI Jan Mayen 52.42 12 *e*P **P** **08 22 38.1 +1.0**
JMI IAmb IAmb 08 22 38.8
comp=Z,173nm,1.1s
JMI IAMs_20 IAMs_20 08 57 50.6
comp=Z,23μm,21.5s
J57A Williamstown 52.45 66 IAmb IAmb 08 22 38.5
comp=Z,128nm,1.0s
LMQ La Malbaie 52.46 59 IAmb IAmb 08 22 37.9
comp=Z,87nm,1.0s
L56A Greenwood 52.52 68 IAmb IAmb 08 22 54.5
comp=Z,169nm,1.1s
ICQ Pointe Anglais 52.56 55 IAmb IAmb 08 22 38.8
comp=Z,158nm,1.0s
IRK Irkutsk 52.61 310 *e*P **P** **08 22 36.8 -2.0**
IRK *e* 08 22 54.6
IRK pmax pmax
comp=Z,236nm,1.2s
K57A Scipio Center 52.65 67 IAmb IAmb 08 22 40.0
comp=Z,118nm,1.2s
FRNY Flat Rock 52.71 63 IAmb IAmb 08 22 39.4
comp=Z,76nm,1.0s
XLT XiLinHaoTe 52.73 295 *e*P **P** **08 22 39.9 0.0**
XLT pP pP 08 22 50.8 -0.6
XLT sP sP 08 22 56.0 0.0
XLT PcP **PcP** **08 23 48.9 -0.2**
XLT pmax pmax
comp=Z,870nm,0.7s
X48A Hartselle 52.75 82 IAmb IAmb 08 22 50.5
comp=Z,72nm,0.8s
ZAIG Zacatecas 52.77 104 pP pP 08 22 50.8 -1.3
NRS Narsarsuaq 52.84 34 P **P** **08 22 40.3 0.0**
NRS Narsarsuaq 52.84 34 IAmb IAmb 08 22 41.7
comp=Z,209nm,1.2s
NRS Narsarsuaq 52.84 34 P **P** **08 22 40.5 +0.2**
NRS Narsarsuaq 52.84 34 *i*P **P** **08 22 40.4 0.0**
NRS IAmb IAmb 08 22 41.4
comp=Z,199nm,1.2s
NCB Newcomb 52.98 64 IAmb IAmb 08 22 42.5
comp=Z,138nm,1.1s
MCWV Mont Chateau 53.03 72 IAmb IAmb 08 22 49.9
comp=Z,97nm,0.9s
XMAS Kiritimati 53.03 178 P **P** **08 22 45.1 +2.9**
XMAS Kiritimati 53.03 178 pP pP 08 22 52.8 -0.9
W50A Signal Mountai 53.18 80 IAmb IAmb 08 22 54.1
comp=Z,108nm,0.9s
J59A Piesco 53.19 65 IAmb IAmb 08 22 43.8
comp=Z,82nm,0.9s
TZTN Tazewell 53.20 77 IAmb IAmb 08 22 54.1
comp=Z,63nm,0.8s
TZTN Tazewell 53.20 77 P **P** **08 22 42.9 -0.5**
TLY Talaya 53.28 310 *c*P **P** **08 22 43.4 -0.3**
TLY pmax pmax
comp=Z,243nm,1.0s
TLY Talaya 53.28 310 P **P** **08 22 43.5 -0.3**
TLY Talaya 53.28 310 P **P** **08 22 43.3 -0.5**
TLY IAmb IAmb 08 22 45.4
comp=Z,184nm,1.0s
TLY Talaya 53.28 310 P **P** **08 22 43.7 -0.1**
DL2 Dalian 53.28 287 ⇑*i*P **P** **08 22 43.3 -0.6**
DL2 PcP **PcP** **08 23 51.0 -0.1**
DL2 S **S** **08 30 12.3 0.0**
DL2 pmax pmax
comp=Z,440nm,0.9s
DL2 pmax pmax
comp=Z,2μm,3.5s
DL2 L L
comp=Z,7μm,20.9s
DL2 L L
comp=Z,9μm,21.4s
DL2 L L
comp=Z,21μm,22.5s
BINY Binghamton 53.30 67 IAmb IAmb 08 22 55.6
comp=Z,153nm,1.1s
BINY Binghamton 53.30 67 P **P** **08 22 43.8 -0.3**
M57A Sunshine Farm, 53.31 69 IAmb IAmb 08 22 54.8
comp=Z,72nm,1.0s
D62A Allapoint, All 53.41 58 IAmb IAmb 08 22 45.2
comp=Z,132nm,1.0s
FPAL Fort Paine 53.49 80 IAmb IAmb 08 22 56.2
comp=Z,76nm,0.8s
Y49A Blount Mountai 53.54 82 IAmb IAmb 08 22 56.2
comp=Z,109nm,0.8s
JSU Suzuyama 53.69 274 P **P** **08 22 46.5 -0.5**
JSU Suzuyama 53.69 274 P **P** **08 22 46.9 -0.2**
L59A Walton 53.81 66 IAmb IAmb 08 22 48.9
comp=Z,133nm,1.0s
N58A Sunbury 53.88 69 IAmb IAmb 08 22 49.0
comp=Z,108nm,1.3s
X51A Calhoun 53.90 80 IAmb IAmb 08 22 59.3
comp=Z,169nm,1.3s
LBNH Lisbon 53.97 63 IAmb IAmb 08 22 49.5
comp=Z,80nm,1.0s
G62A West of Eustis 53.98 61 IAmb IAmb 08 22 49.5
comp=Z,144nm,1.0s
W52A Murphy 54.04 79 IAmb IAmb 08 23 06.3
comp=Z,97nm,1.0s
H62A Milan 54.12 62 IAmb IAmb 08 22 50.5
comp=Z,125nm,1.0s
TRY Troy 54.14 65 IAmb IAmb 08 22 51.1
comp=Z,80nm,0.9s
P57A Homestead Farm 54.15 71 IAmb IAmb 08 22 50.8
comp=Z,105nm,1.0s
HNH Hanover 54.16 63 IAmb IAmb 08 22 51.1
comp=Z,78nm,1.0s
U54A Nelsons Funny 54.18 76 IAmb IAmb 08 22 51.5
comp=Z,88nm,1.0s
V53A Saluda 54.25 77 IAmb IAmb 08 22 51.8
comp=Z,115nm,1.1s
J61A Chester 54.28 64 IAmb IAmb 08 22 52.1
comp=Z,106nm,1.0s
PAGS Pennsylvania G 54.31 69 IAmb IAmb 08 23 07.2
comp=Z,123nm,1.1s
ZAK Zakamensk 54.37 309 *e*P **P** **08 22 50.8 -1.0**
ZAK pmax pmax
comp=Z,99nm,1.4s
ULN Ulaanbaatar 54.43 304 *c*P **P** **08 22 52.0 -0.3**
ULN pmax pmax
comp=Z,147nm,0.9s
ULN Ulaanbaatar 54.43 304 P **P** **08 22 50.6 -1.7**
ULN Ulaanbaatar 54.43 304 P **P** **08 22 51.7 -0.6**
ULN IAmb IAmb 08 22 53.6
comp=Z,171nm,1.1s
ULN Ulaanbaatar 54.43 304 P **P** **08 22 51.9 -0.5**
ULN Ulaanbaatar 54.43 304 P **P** **08 22 52.1 -0.3**
ULN PcP **PcP** **08 23 56.0 +0.5**
PKME Peaks-Kenny Pk 54.57 60 IAmb IAmb 08 22 53.6
comp=Z,108nm,1.1s
F64A Sherman 54.61 59 IAmb IAmb 08 22 53.6
comp=Z,146nm,1.0s
BG3 Lake Jocassee 54.67 78 IAmb IAmb 08 23 05.1
comp=Z,133nm,1.3s
SONM Songino Array 54.76 305 P **P** **08 22 54.5 -0.2**
comp=Z,209nm,0.8s,baz=49,slow=6.9,SNR=469
SONM PcP **PcP** **08 23 57.4 +0.6**
comp=Z,111nm,0.9s,baz=50,slow=2.8,SNR=14
SONM ScP **ScP** **08 27 53.6 +1.8**
comp=Z,8.9nm,0.8s,baz=70,slow=3.4,SNR=5.3
comp=Z,209nm,0.8s
SONM Songino Array 54.76 305 P **P** **08 22 54.5 -0.2**
I63A Otisfield 54.79 62 IAmb IAmb 08 22 55.6
comp=Z,142nm,1.2s
VADS Vadso 54.81 356 *e*P **P** **08 22 53.9 -0.7**
VADS IAmb IAmb 08 22 54.8
VADS comp=Z,438nm,0.9s IAMs_20 IAMs_20 09 08 36.8
comp=Z,36μm,20.0s
Y52A Lilburn 54.86 80 IAmb IAmb 08 23 06.1
comp=Z,79nm,1.1s
WVL Waterville 54.88 61 IAmb IAmb 08 22 55.7
comp=Z,98nm,1.0s
K62A Royalston 54.93 64 IAmb IAmb 08 22 56.9
comp=Z,126nm,0.9s
KSCT Kent School, K 54.95 66 IAmb IAmb 08 22 57.2
comp=Z,165nm,1.0s
250A Grady 55.00 83 IAmb IAmb 08 23 07.0
comp=Z,138nm,0.9s
KEV Kevo 55.25 357 P **P** **08 22 56.4 -1.3**
KEV pmax pmax
comp=Z,427nm,0.8s
KEV Kevo 55.25 357 P **P** **08 22 56.4 -1.3**
KEV Kevo 55.25 357 P **P** **08 22 57.1 -0.6**
KEV Kevo 55.25 357 P **P** **08 22 57.1 -0.6**
KEV PcP **PcP** **08 23 58.7 +0.6**
PAL Palisades 55.25 67 IAmb IAmb 08 23 09.0
comp=Z,100nm,1.1s
R58B Mineral 55.31 72 IAmb IAmb 08 22 59.6
comp=Z,110nm,1.3s
CPNY Central Park 55.38 67 IAmb IAmb 08 23 00.1
comp=Z,117nm,1.2s
HRV Adam Dziewonsk 55.39 64 P **P** **08 22 58.8 -0.4**
HRV pmax pmax
comp=Z,63nm,1.0s
HRV Adam Dziewonsk 55.39 64 P **P** **08 22 58.8 -0.4**
HRV Adam Dziewonsk 55.39 64 P **P** **08 22 59.0 -0.2**
CBN Corbin Frederi 55.41 71 IAmb IAmb 08 23 10.6
comp=Z,293nm,1.8s
WSPT Westport, CT 55.43 66 IAmb IAmb 08 23 00.3
comp=Z,155nm,1.0s
BJI2 Beijing 55.44 292 P **P** **08 22 58.9 -0.6**
BJI2 pmax pmax
comp=Z,65nm,1.1s
BJI2 L L
comp=Z,5μm,16.8s
BJI2 L L
comp=Z,4μm,18.5s
BJI2 L L
comp=Z,5μm,17.7s
BJT Baijiatuao 55.44 292 P **P** **08 22 59.2 -0.4**
BJT Baijiatuao 55.44 292 IAmb IAmb 08 23 00.5
comp=Z,170nm,1.1s
BJT Baijiatuao 55.44 292 P **P** **08 22 59.2 -0.4**
BJT Baijiatuao 55.44 292 P **P** **08 22 59.7 +0.2**
TRO Tromso 55.45 1 *e*P **P** **08 22 59.0 -0.2**
TRO IAmb IAmb 08 22 59.9
TRO comp=Z,513nm,1.0s IAMs_20 IAMs_20 08 51 27.2
comp=Z,42μm,25.2s
KMSC Kings Mountain 55.46 77 IAmb IAmb 08 22 60.0
comp=Z,85nm,1.1s
G65A Princeton 55.47 59 IAmb IAmb 08 22 60.0
comp=Z,108nm,1.0s
ARA0 ARCESS Array S 55.51 358 *e*P **P** **08 22 58.7 -1.0**
ARA0 IAmb IAmb 08 22 59.7
ARA0 comp=Z,296nm,0.9s IAMs_20 IAMs_20 09 03 23.6
comp=Z,40μm,19.8s
ARA0 IAMs_20 IAMs_20 09 03 24.6
comp=Z,40μm,19.8s
ARCES ARCESS Array B 55.51 358 P **P** **08 22 58.6 -1.0**
comp=Z,200nm,0.8s,baz=1.9,slow=7.3,SNR=284
ARCES PcP **PcP** **08 23 59.1 -0.1**
comp=Z,116nm,0.8s,baz=358,slow=4.0,SNR=10
ARCES ScP **ScP** **08 27 55.7 +1.2**
comp=Z,7.8nm,0.9s,baz=337,slow=5.9,SNR=4.2
ARCES P4KPbc 09 00 07.2
comp=Z,3.5nm,0.8s,baz=12,slow=2.7,SNR=6.2
comp=Z,200nm,0.8s
ARCES ARCESS Array B 55.51 358 P **P** **08 22 58.8 -0.8**
ARCES pmax pmax
comp=Z,277nm,1.0s
ARCES ARCESS Array B 55.51 358 P **P** **08 22 58.8 -0.8**
GOGA Godfrey 55.53 80 P **P** **08 22 58.6 -1.7**
GOGA Godfrey 55.53 80 P **P** **08 22 58.8 -1.5**
N62A Caumsett State 55.53 66 IAmb IAmb 08 23 01.0
comp=Z,150nm,1.0s
JETT Jettan, Norway 55.53 0 *e*P **P** **08 22 59.5 -0.3**
JETT IAmb IAmb 08 23 00.7
comp=Z,520nm,1.0s
JETT IAMs_20 IAMs_20 09 03 52.0
comp=Z,24μm,20.2s
WES Weston 55.60 64 IAmb IAmb 08 23 01.5
comp=Z,133nm,0.9s
HODGE Hodges 55.61 78 IAmb IAmb 08 23 11.3
comp=Z,76nm,0.8s
BCX Boston College 55.72 64 IAmb IAmb 08 23 02.2
comp=Z,82nm,1.1s
EMMW East Machias 55.88 59 IAmb IAmb 08 23 02.8
comp=Z,130nm,1.0s
GGN Saint George 55.88 59 IAmb IAmb 08 23 02.7
comp=Z,96nm,1.0s
KTK1 Kautokeino 56.07 359 *e*P **P** **08 23 02.6 -1.0**
KTK1 IAmb IAmb 08 23 03.8
comp=Z,274nm,0.9s
KTK1 IAMs_20 IAMs_20 09 00 12.8
comp=Z,38μm,21.4s
BORG Borgarnes 56.12 20 P **P** **08 23 05.3 +1.3**
BORG pmax pmax
comp=Z,803nm,1.2s
BORG Borgarnes 56.12 20 P **P** **08 23 05.3 +1.3**
BORG Borgarnes 56.12 20 P **P** **08 23 05.4 +1.4**
BORG Borgarnes 56.12 20 P **P** **08 23 05.4 +1.3**
352A Blakely 56.13 82 IAmb IAmb 08 23 17.3
comp=Z,178nm,1.2s
T59A Double "B" Far 56.21 73 IAmb IAmb 08 23 05.8
comp=Z,118nm,1.1s
V58A Windy Hill, Pi 56.21 75 IAmb IAmb 08 23 05.7
comp=Z,109nm,1.1s
154A Montrose 56.32 80 IAmb IAmb 08 23 15.7
comp=Z,140nm,1.0s
KNGR Kungurtug, Tuv 56.72 312 *c*P **P** **08 23 09.1 +0.4**
KNGR pmax pmax
comp=Z,373nm,1.0s
LVZ Lovozero 56.76 354 *c*P **P** **08 23 08.0 -0.6**
LVZ pmax pmax
comp=Z,810nm,1.0s
LVZ Lovozero 56.76 354 P **P** **08 23 07.9 -0.6**
LVZ Lovozero 56.76 354 P **P** **08 23 07.7 -0.9**
comp=Z,868nm,1.0s
LVZ Lovozero 56.76 354 P **P** **08 23 08.2 -0.5**
LVZ Lovozero 56.76 354 P **P** **08 23 08.1 -0.6**
Y57A Sumter 56.81 77 IAmb IAmb 08 23 20.0
comp=Z,97nm,1.1s
LOF Lofoten 56.85 3 *e*P **P** **08 23 08.3 -0.9**
LOF IAmb IAmb 08 23 11.4
LOF comp=Z,132nm,1.0s IAMs_20 IAMs_20 09 01 24.6
comp=Z,33μm,20.3s
TIGA Tifton 56.92 81 IAmb IAmb 08 23 20.1
comp=Z,100nm,1.3s
STEI Steigen 57.10 2 *e*P **P** **08 23 10.4 -0.6**
STEI IAmb IAmb 08 23 11.4
STEI comp=Z,250nm,1.0s IAMs_20 IAMs_20 08 51 51.6
comp=Z,42μm,23.5s
APA Apatity 57.16 354 *e*P **P** **08 23 09.2 -2.2**
APA *e* 08 24 04.0
APA *e* 08 25 14.1
APA *e*S **S** **08 30 57.5 -5.9**
APA *e*SS **SS** **08 34 51.6 -0.1**
APA pmax pmax
comp=Z,132nm,1.0s
APA MLR MLR
comp=Z,20μm,22.9s
DRLN Deer Lake 57.18 50 IAmb IAmb 08 23 12.2
comp=Z,134nm,1.0s
HHC Hu-ho-hao-te 57.25 296 ⇑*i*P **P** **08 23 12.3 -0.3**
HHC sP pP 08 23 27.8 +3.6
HHC pmax pmax
comp=Z,230nm,0.9s
HHC L L
comp=Z,4μm,23.6s
HHC L L
comp=Z,6μm,18.5s
HHC L L

comp=Z,8μm,21.9s
JMZ Minamidaito 2 57.55 269 P **P** **08 23 14.6 -0.1**
JMZ Minamidaito 2 57.55 269 P **P** **08 23 14.8 +0.1**
SGF Sodankyl 57.58 357 P **P** **08 23 13.7 -0.6**
SGF pmax pmax
comp=Z,645nm,1.1s
SGF Sodankyl 57.58 357 P **P** **08 23 14.2 -0.1**
FAUS Fauske 57.65 2 *eP* **P** **08 23 14.3 -0.6**
FAUS IAmb IAmb 08 23 15.4
comp=Z,319nm,0.9s
FAUS IAMs_20 IAMs_20 08 51 12.3
comp=Z,38μm,23.5s
TIA Tai'an 57.70 288 P **P** **08 23 15.3 -0.4**
TIA pmax pmax
comp=Z,370nm,1.2s
RGRS Roger Stewart 57.74 78 IAmb IAmb 08 23 32.5
comp=Z,166nm,1.2s
HAL Halifax 57.81 57 IAmb IAmb 08 23 16.6
comp=Z,82nm,1.0s
HNS HongShan 58.13 291 ⇑P **P** **08 23 18.8 +0.2**
HNS pmax pmax
comp=Z,1μm,0.9s
BTO2 Baotou 58.20 297 *eP* **P** **08 23 18.4 -0.8**
BTO2 sP **sP** **08 23 36.4 +1.0**
BTO2 PP **PP** **08 25 25.8 -2.2**
BTO2 S **S** **08 31 15.3 -2.7**
BTO2 pmax pmax
comp=Z,400nm,1.1s
BTO2 pmax pmax
comp=Z,5μm,6.2s
BTO2 L L
comp=Z,28μm,20.4s
BTO2 L L
comp=Z,10μm,14.5s
BTO2 L L
comp=Z,22μm,17.1s
VAGH Vaagaholmen 58.25 3 *eP* **P** **08 23 18.5 -0.5**
VAGH IAmb IAmb 08 23 19.6
comp=Z,194nm,0.9s
VAGH IAMs_20 IAMs_20 08 54 36.9
comp=Z,39μm,21.0s
JOW Kunigami 58.46 272 P **P** **08 23 20.9 -0.2**
JOW Kunigami 58.46 272 P **P** **08 23 21.3 +0.2**
KONS Konsvik 58.47 4 *eP* **P** **08 23 20.2 -0.4**
KONS IAmb IAmb 08 23 21.2
comp=Z,213nm,1.0s
KONS IAMs_20 IAMs_20 08 54 29.8
comp=Z,37μm,21.2s
RAUS Rausandaksla 58.57 3 *eP* **P** **08 23 20.8 -0.4**
RAUS IAmb IAmb 08 23 21.9
comp=Z,499nm,1.0s
RAUS IAMs_20 IAMs_20 08 50 54.2
comp=Z,37μm,23.5s
STOK Stokkvaagen 58.64 4 *eP* **P** **08 23 21.3 -0.4**
STOK IAmb IAmb 08 23 22.6
comp=Z,330nm,1.0s
STOK IAMs_20 IAMs_20 08 54 02.9
comp=Z,34μm,21.9s
PATS Pohnpei 58.83 231 P **P** **08 23 23.8 +0.1**
comp=Z,239nm,1.3s
PATS Pohnpei 58.83 231 P **P** **08 23 24.1 +0.4**
PATS Pohnpei 58.83 231 P **P** **08 23 23.9 +0.1**
PATS Pohnpei 58.83 231 P **P** **08 23 23.9 +0.2**
MOR8 Moi Rana 58.84 3 *eP* **P** **08 23 21.7 -1.6**
MOR8 IAmb IAmb 08 23 22.7
comp=Z,209nm,0.9s
MOR8 IAMs_20 IAMs_20 08 55 45.8
comp=Z,26μm,22.4s
LEIR Leirfjorden 58.86 4 *eP* **P** **08 23 23.1 -0.2**
LEIR IAmb IAmb 08 23 24.2
comp=Z,341nm,1.1s
LEIR IAMs_20 IAMs_20 08 59 33.0
comp=Z,34μm,20.9s
ZALV Zalesovo Beam 59.10 322 P **P** **08 23 24.9 -0.3**
comp=Z,304nm,1.0s,baz=35,slow=5.2,SNR=272
ZALV PcP **PcP** **08 24 13.7 +0.2**
comp=Z,62nm,0.9s,baz=22,slow=4.7,SNR=2.5
comp=Z,304nm,1.0s
TIY Taiyuan 59.11 293 *eP* **P** **08 23 25.9 +0.3**
TIY pmax pmax
comp=Z,220nm,1.0s
TLIG Tlapa 59.17 104 IAmb IAmb 08 23 38.3
comp=Z,58nm,1.0s
SSE Sheshan 59.26 281 P **P** **08 23 26.3 -0.3**
SSE pmax pmax
comp=Z,160nm,0.9s
SSE pmax pmax
comp=Z,2μm,5.1s
GUMO Guam 59.68 249 P **P** **08 23 29.9 +0.3**
GUMO Guam 59.68 249 P **P** **08 23 27.8 -1.9**
GUMO pmax pmax
comp=Z,239nm,1.1s
GUMO Guam 59.68 249 P **P** **08 23 27.8 -1.9**
NJ2 Nanjing 59.84 284⇑*iP* **P** **08 23 30.0 -0.6**
NJ2 sP **pP** **08 23 45.4 +3.2**
NJ2 PcP **PcP** **08 24 16.3 -0.5**
NJ2 pmax pmax
comp=Z,680nm,1.0s
OUL Oulu 59.96 357 P **P** **08 23 29.9 -1.0**
OUL pmax pmax
comp=Z,519nm,1.0s
OUL Oulu 59.96 357 P **P** **08 23 30.4 -0.4**
NSS Namsos 60.40 4 *eP* **P** **08 23 33.3 -0.6**
NSS IAmb IAmb 08 23 34.5
comp=Z,317nm,1.0s
NSS IAMs_20 IAMs_20 08 58 36.7
comp=Z,42μm,20.1s
ADZR Andozero 60.41 351*c iP* **P** **08 23 33.3 -0.6**
ADZR pmax pmax
comp=Z,779nm,1.2s
SOFL Sornfelli, Far 61.06 14⇑*eP* **P** **08 23 39.2 +0.7**
SOFL IAmb IAmb 08 23 41.3
comp=Z,458nm,1.0s
LYN LuoYang 61.46 290⇑*iP* **P** **08 23 41.9 +0.3**
LYN pmax pmax
comp=Z,2μm,0.9s
LYN L L
comp=Z,22μm,19.2s
LYN L L
comp=Z,15μm,20.7s
LYN L L
comp=Z,32μm,22.8s
DGZ Jazzator, Alta 61.53 317*c iP* **P** **08 23 42.3 +0.2**
DGZ pmax pmax
comp=Z,322nm,1.3s
JMJ Miyako jima 2 61.72 273 P **P** **08 23 43.8 +0.4**
VAF Ylistaro 62.07 359 P **P** **08 23 44.4 -0.8**
VAF pmax pmax
comp=Z,230nm,1.1s
MOL Molde 62.11 7 *eP* **P** **08 23 45.2 -0.2**
MOL IAmb IAmb 08 23 46.5
comp=Z,321nm,1.1s
MOL IAMs_20 IAMs_20 08 54 18.0
comp=Z,51μm,21.4s
AKN Aaknes 62.46 7 *eP* **P** **08 23 48.2 +0.3**
AKN IAmb IAmb 08 23 49.3
comp=Z,614nm,1.1s
AKN IAMs_20 IAMs_20 08 54 07.0
comp=Z,51μm,20.6s
DOMB Dombas 62.73 6 *eP* **P** **08 23 49.3 -0.4**
DOMB IAmb IAmb 08 23 50.3
comp=Z,285nm,1.2s
DOMB IAMs_20 IAMs_20 09 02 18.9
comp=Z,32μm,19.1s
TEIG Tepich 62.86 93 P **P** **08 23 51.7 +0.6**
TEIG IAmb IAmb 08 24 02.3
comp=Z,126nm,1.3s
FOO Floro 62.88 8 *eP* **P** **08 23 50.2 -0.4**
FOO IAmb IAmb 08 23 51.4
comp=Z,203nm,1.0s
FOO *eS* **S** **08 32 19.1 +2.2**
FOO IAMs_20 IAMs_20 09 03 06.4
comp=Z,39μm,19.2s
YOJ Yonaguni jima 63.30 275 P **P** **08 23 52.7 -1.3**
YOJ Yonaguni jima 63.30 275 P **P** **08 23 52.4 -1.6**
YOJ pmax pmax
comp=Z,797nm,0.9s
YOJ Yonaguni jima 63.30 275 P **P** **08 23 52.2 -1.7**
KLMR Klimovskoe 63.31 350 *eP* **P** **08 23 50.2 -3.3**
KLMR pmax pmax
comp=Z,754nm,1.2s
SUE Sulen 63.39 9 *eP* **P** **08 23 53.9 -0.1**
SUE IAmb IAmb 08 23 54.9
comp=Z,165nm,1.1s
SUE IAMs_20 IAMs_20 09 02 50.3
comp=Z,26μm,19.0s

HYA Hoyanger 63.40 8 *eP* **P** **08 23 54.0 -0.1**
HYA IAmb IAmb 08 23 55.1
comp=Z,845nm,2.1s
HYA IAMs_20 IAMs_20 09 06 40.9
comp=Z,24μm,18.5s
WHN Wuhan 63.49 286⇑P **P** **08 23 54.8 -0.3**
WHN sP **pP** **08 24 09.9 +3.0**
WHN pmax pmax
comp=Z,1μm,1.4s
FINES FINESS Array B 63.60 357 P **P** **08 23 54.7 -0.7**
comp=Z,170nm,1.0s,baz=15,slow=7.9,SNR=210
FINES PKPPKP P'P'df 08 52 47.8 -9.0
comp=Z,7.7nm,0.9s,baz=229,slow=1.5,SNR=7.6
comp=Z,170nm,1.0s
FINES FINESS Array B 63.60 357 P **P** **08 23 55.0 -0.5**
FINES FINESS Array B 63.60 357 P **P** **08 23 55.0 -0.5**
LRW Lerwick 63.69 12⇑*eP* **P** **08 23 56.6 +0.5**
LRW IAmb IAmb 08 23 58.1
comp=Z,330nm,1.0s
SVE Sverdlovsk 63.69 337*d iP* **P** **08 23 56.3 +0.2**
SVE pmax pmax
comp=Z,1μm,1.1s
XAN Xi'an 63.74 292 ⇑P **P** **08 23 56.5 -0.4**
XAN pP pP 08 24 06.9 -1.7
XAN pmax pmax
comp=Z,800nm,1.1s
XAN pmax pmax
comp=Z,15μm,10.6s
XAN Xi'an 63.74 292 P **P** **08 23 56.8 -0.1**
XAN PcP **PcP** **08 24 32.1 -0.6**
TATO Taipei 63.77 276 P **P** **08 23 57.4 +0.3**
TATO Taipei 63.77 276 P **P** **08 23 56.2 -0.8**
TATO IAmb IAmb 08 24 00.5
comp=Z,68nm,0.8s
NB2 NORSAR Subarra 63.85 5 P **P** **08 23 56.9 -0.2**
comp=Z,394nm,1.1s,baz=354,slow=6.9
NB2 NORSAR Subarra 63.85 5 P **P** **08 23 56.9 -0.2**
NOA NORSAR Array B 63.85 5 P **P** **08 23 56.9 -0.2**
comp=Z,165nm,0.9s,baz=354,slow=6.6,SNR=161
NOA PcP **PcP** **08 24 32.8 +0.2**
comp=Z,33nm,0.9s,baz=356,slow=4.8,SNR=7.1
NOA PKP2bc **P'P'bc** **08 52 56.1 -6.8**
comp=Z,1.1nm,0.7s,baz=312,slow=26,SNR=3.8
comp=Z,165nm,0.9s
SOR Soroa 63.87 87 IAmb IAmb 08 24 08.6
comp=Z,92nm,1.1s
KURK Kurchatov 63.93 323*c iP* **P** **08 23 57.5 -0.3**
KURK pmax pmax
comp=Z,502nm,0.9s
KURK Kurchatov 63.93 323 P **P** **08 23 57.8 +0.1**
KURK Kurchatov 63.93 323 P **P** **08 23 57.7 -0.1**
KURK Kurchatov 63.93 323 P **P** **08 23 57.7 -0.1**
KURK Kurchatov 63.93 323 P **P** **08 23 57.9 +0.1**
KURK PcP **PcP** **08 24 33.0 0.0**
ASK Askoy 63.99 8 *eP* **P** **08 23 58.1 +0.1**
ASK IAmb IAmb 08 23 59.2
comp=Z,298nm,1.1s
ASK IAMs_20 IAMs_20 09 02 25.1
comp=Z,32μm,18.5s
NAO01 NORSAR Array S 64.03 5 P **P** **08 23 58.0 -0.2**
SKAR Skarslia 64.03 7 *eP* **P** **08 23 58.2 -0.2**
SKAR IAmb IAmb 08 23 59.4
comp=Z,422nm,1.2s
SKAR IAMs_20 IAMs_20 08 53 29.5
comp=Z,38μm,21.2s
KURBB Kurchatov Arra 64.04 323 P **P** **08 23 58.2 -0.3**
comp=Z,270nm,1.0s,baz=26,slow=6.6,SNR=666
KURBB PcP **PcP** **08 24 33.2 -0.3**
comp=Z,45nm,0.9s,baz=44,slow=4.1,SNR=6.5
KURBB PKP2bc P'P'bc 08 52 51.5 -10
comp=Z,2.1nm,0.2s,baz=231,slow=2.4,SNR=4.3
comp=Z,270nm,1.0s
YHNB Yeheng 64.07 276 P **P** **08 23 58.1 -1.1**
YHNB Yeheng 64.07 276 IAmb IAmb 08 24 04.5
comp=Z,62nm,0.7s
YHNB Yeheng 64.07 276 P **P** **08 23 57.2 -2.0**
BER Bergen 64.11 8 *eP* **P** **08 23 58.9 +0.1**
BER IAmb IAmb 08 23 59.8
comp=Z,268nm,1.1s
NC602 NORSAR Array S 64.17 5 *eP* **P** **08 23 58.9 -0.3**
NC602 IAmb IAmb 08 23 59.9
comp=Z,205nm,1.2s
NORES NORESS Array B 64.17 5 P **P** **08 23 58.9 -0.3**
NORES pmax pmax
comp=Z,7.0nm,0.5s
GTA2 Gaotai 64.19 302 P **P** **08 23 59.3 -0.6**
GTA2 PP **PP** **08 26 20.3 -0.6**
GTA2 S **S** **08 32 33.3 -0.9**
GTA2 pmax pmax
comp=Z,710nm,1.1s
GTA2 L L
comp=Z,11μm,20.9s
GTA2 L L
comp=Z,14μm,20.0s
GTA2 L L
comp=Z,18μm,20.0s
KIRV Kirov 64.21 344 P **P** **08 23 58.9 -0.6**
comp=Z,473nm,0.9s,baz=14,slow=2.2,SNR=247
comp=Z,473nm,0.9s
KIRV Kirov 64.21 344*c iP* **P** **08 23 58.7 -0.8**
NACB Ninganchiao 64.33 276 P **P** **08 23 59.8 -1.0**
NACB Ninganchiao 64.33 276 P **P** **08 23 59.0 -1.8**
ZSN Zaisan 64.36 317*c iP* **P** **08 24 00.7 +0.1**
ZSN pmax pmax
comp=Z,293nm,0.8s
ZSN Zaisan 64.36 317⇑*iP* **P** **08 24 00.8 +0.1**
comp=Z,293nm,0.8s
BVAR Borovoye Array 64.57 329 P **P** **08 24 01.9 0.0**
comp=Z,422nm,0.9s,baz=43,slow=6.7,SNR=689
BVAR PcP **PcP** **08 24 36.3 +0.6**
comp=Z,148nm,0.8s,baz=34,slow=2.6,SNR=7.4
BVAR PKPPKP P'P'df 08 52 43.6 -11
comp=Z,1.5nm,0.7s,baz=200,slow=3.8,SNR=4.2
comp=Z,422nm,0.9s
BORK Borovoye 64.57 329*c iP* **P** **08 24 01.9 0.0**
BORK pmax pmax
comp=Z,609nm,1.3s
BORK Borovoye 64.57 329 P **P** **08 24 02.1 +0.2**
ARTI Arti 64.59 338 P **P** **08 24 01.7 -0.3**
comp=Z,930nm,0.9s,baz=26,slow=5.2,SNR=316
comp=Z,930nm,0.9s
ARTI Arti 64.59 338*c iP* **P** **08 24 01.7 -0.3**
ARTI 08 24 33.4
ARTI S **S** **08 32 40.0 +1.7**
ARTI SS **SS** **08 36 49.1 +0.9**
ARTI pmax pmax
comp=Z,920nm,0.8s
ARTI Arti 64.59 338 IAmb IAmb 08 24 02.7
comp=Z,1μm,0.7s
CAMR Camarioca 64.60 86 *eP* **P** **08 24 01.6 -0.9**
ODD1 Odda 64.68 8 *eP* **P** **08 24 02.6 0.0**
ODD1 IAmb IAmb 08 24 03.7
comp=Z,234nm,1.1s
ODD1 IAMs_20 IAMs_20 08 47 59.0
comp=Z,30μm,23.7s
LZH Lanzhou 64.81 297 *eP* **P** **08 24 04.0 0.0**
LZH sP pP 08 24 19.3 +3.6
LZH PcP **PcP** **08 24 34.6 -2.6**
LZH pmax pmax
comp=Z,810nm,1.3s
LZH L L
comp=Z,10μm,14.4s
LZH L L
comp=Z,9μm,14.4s
LZH L L
comp=Z,19μm,13.7s
HFS Hagfors 64.86 4 P **P** **08 24 03.3 -0.4**
comp=Z,208nm,0.8s,baz=20,slow=4.9,SNR=214
comp=Z,208nm,0.8s
OSL Oslo 64.92 5 *eP* **P** **08 24 04.1 0.0**
OSL IAmb IAmb 08 24 20.8
comp=Z,140nm,1.1s
OSL IAMs_20 IAMs_20 08 49 39.5
comp=Z,52μm,22.5s
HUEH Huehuetenango 64.94 99 P **P** **08 24 04.0 -1.1**
HUEH IAmb IAmb 08 26 11.0
comp=Z,60nm,0.5s
LZDM Lanzhou Array 64.98 297 P **P** **08 24 05.1 -0.2**
comp=Z,211nm,0.8s,baz=27,slow=1.7,SNR=100
comp=Z,211nm,0.8s
SSLB Suanglung 65.00 276 P **P** **08 24 04.7 -0.5**
SSLB Suanglung 65.00 276 P **P** **08 24 04.4 -0.8**
LINV Loch Inver, As 65.08 15⇑*eP* **P** **08 24 05.8 +0.6**
LINV IAmb IAmb 08 24 06.8
comp=Z,120nm,0.7s
PUL Pulkovo 65.10 355⇑*eP* **P** **08 24 05.1 -0.1**
PUL pmax pmax
comp=Z,521nm,1.0s
YULB Yu-li 65.11 276 P **P** **08 24 05.6 -0.3**
YULB Yu-li 65.11 276 IAmb IAmb 08 24 15.5
comp=Z,150nm,1.0s
YULB Yu-li 65.11 276 P **P** **08 24 04.2 -1.7**
KONO Kongsberg 65.14 6 P **P** **08 24 06.1 +0.6**
KONO Kongsberg 65.14 6 *eP* **P** **08 24 05.8 +0.3**
KONO Kongsberg 65.14 6 P **P** **08 24 05.9 +0.4**
KONO Kongsberg 65.14 6 P **P** **08 24 06.2 +0.6**
BLS5 Blasjo 65.15 8 *eP* **P** **08 24 05.8 +0.2**
BLS5 IAmb IAmb 08 24 06.8
comp=Z,282nm,1.1s
BLS5 IAMs_20 IAMs_20 08 51 28.0
comp=Z,39μm,21.7s
KMY Karmoy 65.26 9 *eP* **P** **08 24 06.3 +0.1**
KMY IAmb IAmb 08 24 06.7
comp=Z,98nm,1.1s
QZH2 Quanzhou 65.43 279⇑*iP* **P** **08 24 07.6 -0.3**
QZH2 pmax pmax
comp=Z,260nm,1.1s
TPUB Ta-pu 65.56 276 P **P** **08 24 08.9 +0.1**
TPUB Ta-pu 65.56 276 IAmb IAmb 08 24 26.1
comp=Z,175nm,1.1s
TPUB Ta-pu 65.56 276 P **P** **08 24 07.8 -1.1**
ARBE Arbavere 65.62 357 P **P** **08 24 08.7 +0.1**
TWGBT Beinan 65.68 275 P **P** **08 24 10.2 +0.6**
TWG Pinlang 65.68 275 IAmb IAmb 08 24 27.1
comp=Z,98nm,1.1s
TWG Pinlang 65.68 275 P **P** **08 24 08.8 -0.8**
APG El Apazote 65.78 99 P **P** **08 24 12.4 +1.9**
comp=Z,0.5nm,0.8s,baz=232,slow=18,SNR=4.3
KPL Plockton 65.80 15⇑*eP* **P** **08 24 10.1 +0.4**
KPL IAmb IAmb 08 24 11.7
comp=Z,150nm,0.8s
STRU Stroemstad 65.85 5 *iP* **P** **08 24 10.0 -0.1**
MK31 Makanchi Array 65.89 319*c iP* **P** **08 24 09.8 -0.8**
MKAR Makanchi Array 65.89 319 P **P** **08 24 10.1 -0.5**
comp=Z,114nm,0.8s,baz=46,slow=7.0,SNR=467
MKAR PKPPKP P'P'df 08 52 44.4 -7.8
comp=Z,1.7nm,1.0s,baz=232,slow=5.4,SNR=5.2
comp=Z,114nm,0.8s
MKAR Makanchi Array 65.89 319*ceP* **P** **08 24 09.8 -0.8**
MKAR pmax pmax
comp=Z,115nm,0.8s
MKAR Makanchi Array 65.89 319 P **P** **08 24 09.9 -0.7**
MCD Coleburn Disti 65.91 14⇑*eP* **P** **08 24 11.1 +0.6**
MCD IAmb IAmb 08 24 12.7
comp=Z,510nm,0.9s
KNMB Chin-men Tao 65.93 279 IAmb IAmb 08 24 11.9
comp=Z,129nm,1.0s
MAKZ Makanchi 66.00 319 P **P** **08 24 11.1 -0.2**
MAKZ Makanchi 66.00 319 P **P** **08 24 10.7 -0.6**
MAKZ Makanchi 66.00 319 P **P** **08 24 10.8 -0.6**
CNSH ChangSha 66.09 285 P **P** **08 24 12.0 -0.2**
CNSH pmax pmax
comp=Z,240nm,1.4s
WMQ Urumqi 66.19 313 *eP* **P** **08 24 12.8 +0.2**
WMQ PcP **PcP** **08 24 43.8 +1.2**
WMQ S **S** **08 32 59.4 +1.0**
WMQ pmax pmax
comp=Z,410nm,1.1s
ENH Enshi 66.35 289 P **P** **08 24 13.8 -0.1**
ENH Enshi 66.35 289 P **P** **08 24 13.7 -0.2**
MTSE Matsula 66.39 358 P **P** **08 24 13.6 0.0**
HOMB Homborsund 66.44 7 *eP* **P** **08 24 14.2 +0.3**
HOMB IAmb IAmb 08 24 15.3
comp=Z,352nm,1.0s
HOMB IAMs_20 IAMs_20 09 04 53.4
comp=Z,28μm,18.9s
HOMB Homborsund 66.44 7 *iP* **P** **08 24 14.2 +0.3**
VSU Vasula 66.57 357*c iP* **P** **08 24 13.3 -1.4**
VSU pmax pmax
comp=Z,616nm,0.9s
VSU Vasula 66.57 357 P **P** **08 24 13.6 -1.1**
BBSR BB Station 66.59 67 P **P** **08 24 14.0 -1.3**
BBSR IAmb IAmb 08 24 25.7
comp=Z,142nm,1.2s
BBSR BB Station 66.59 67 P **P** **08 24 14.4 -0.9**
DRUM Mains of Drumt 66.66 14 P **P** **08 24 15.9 +0.6**
DRUM Mains of Drumt 66.66 14⇑*eP* **P** **08 24 15.7 +0.3**
DRUM IAMs_20 IAMs_20 08 48 50.7
comp=Z,55μm,22.7s
TJOU Tjoern 66.87 5 *iP* **P** **08 24 16.5 -0.2**
LAWE Loch Awe, Argy 66.88 15⇑*eP* **P** **08 24 16.9 +0.2**
LAWE IAmb IAmb 08 24 18.6
comp=Z,241nm,0.9s
LAWE IAMs_20 IAMs_20 08 56 28.1
comp=Z,51μm,18.9s
INVG Invergeldie, C 66.91 15⇑*eP* **P** **08 24 17.3 +0.3**
INVG IAmb IAmb 08 24 18.8
comp=Z,202nm,0.9s
INVG IAMs_20 IAMs_20 08 55 58.6
comp=Z,60μm,18.9s
EAB Aberfoyle 67.10 15⇑*eP* **P** **08 24 18.6 +0.5**
EAB IAmb IAmb 08 24 20.2
comp=Z,346nm,0.8s
EAB IAMs_20 IAMs_20 08 54 23.6
comp=Z,62μm,19.9s
PGBU Glenifferbraes 67.45 15⇑*eP* **P** **08 24 20.6 +0.3**
PGBU IAmb IAmb 08 24 22.2
comp=Z,546nm,0.9s
PGBU IAMs_20 IAMs_20 08 53 42.3
comp=Z,146μm,19.9s
SLIT Slitere, Latvi 67.50 359 P **P** **08 24 20.3 -0.3**
ONAU Onsala 67.52 5 *iP* **P** **08 24 20.5 -0.3**
IDGL Inch Island, C 67.68 17 P **P** **08 24 22.3 +0.5**
IDGL Inch Island, C 67.68 17 P **P** **08 24 22.6 +0.9**
IDGL Inch Island, C 67.68 17⇑*eP* **P** **08 24 22.3 +0.5**
IDGL IAmb IAmb 08 24 24.0
comp=Z,154nm,0.8s
GOET G??ttrup 67.72 7 *iP* **P** **08 24 22.2 +0.2**
GOET IAmb IAmb 08 24 24.0
comp=Z,371nm,1.0s
CLGH Cloghs, Cushen 67.90 16 P **P** **08 24 23.8 +0.6**
CLGH Cloghs, Cushen 67.90 16⇑*eP* **P** **08 24 23.4 +0.2**
CLGH IAmb IAmb 08 24 24.7
comp=Z,73nm,0.8s
FABU Falkenberg 67.95 5 *iP* **P** **08 24 23.1 -0.4**
EKA Eskdalemuir Ar 68.10 14 P **P** **08 24 24.9 +0.5**
comp=Z,291nm,0.8s,baz=339,slow=4.8,SNR=459
EKA PKP2bc 08 52 40.7
comp=Z,5.8nm,0.9s,baz=145,slow=3.1,SNR=8.1
comp=Z,291nm,0.8s
EKA Eskdalemuir Ar 68.10 14 P **P** **08 24 25.0 +0.5**
ESK Eskdalemuir 68.11 14 P **P** **08 24 24.5 0.0**
ESK pmax pmax
comp=Z,361nm,0.9s
ESK Eskdalemuir 68.11 14 P **P** **08 24 24.5 0.0**
ESK Eskdalemuir 68.11 14 P **P** **08 24 25.2 +0.7**
ESK Eskdalemuir 68.11 14⇑*eP* **P** **08 24 24.8 +0.3**
ESK IAmb IAmb 08 24 26.6
comp=Z,225nm,0.9s
ESK IAMs_20 IAMs_20 08 53 29.0
comp=Z,49μm,19.5s
CCCC Cccc 68.11 84 *eP* **P** **08 24 26.8 +1.7**
NEWG New Galloway 68.16 15⇑*eP* **P** **08 24 24.8 0.0**
NEWG IAmb IAmb 08 24 26.6
comp=Z,129nm,0.8s
MUD Monsted U'grnd 68.30 7 *iP* **P** **08 24 26.2 +0.6**
MUD IAmb IAmb 08 24 27.3
comp=Z,376nm,1.1s
GAL1 Galloway 68.33 15⇑*eP* **P** **08 24 26.2 +0.4**
GAL1 IAmb IAmb 08 24 27.7
comp=Z,307nm,0.8s
GAL1 IAMs_20 IAMs_20 08 52 45.4
comp=Z,52μm,20.1s
DEL Delary 68.53 4 *iP* **P** **08 24 27.0 -0.2**
MOS Moscow 68.54 350 *eP* **P** **08 24 26.9 -0.3**
MOS *e* 08 24 43.1
MOS *e* 08 24 52.0
MOS *e* 08 26 57.5
MOS *e*PPP PPP 08 28 33.4
MOS *e*S **S** **08 33 24.6 -1.4**
MOS *e* 08 34 22.6
MOS *e*SS **SS** **08 37 50.3 +1.1**
MOS pmax pmax
comp=Z,1μm,1.6s
MOS pmax pmax
comp=N,300nm,1.1s
MOS pmax pmax
comp=Z,436nm,1.2s
MOS pmax pmax
comp=N,299nm,1.4s

MOS MLR MLR
comp=Z,18µm,21.0s
EDMD Edmundbyers 68.76 14 ⇑ *e*P **P 08 24 29.2 +0.7**
EDMD Edmundbyers 68.76 14 ⇑ *e*P **P 08 24 29.1 +0.5**
EDMD IAmb IAmb 08 24 30.6
comp=Z,207nm,1.0s
BLEU Blekinge 68.77 3 *i* P **P 08 24 28.0 -0.6**
KESW Keswick, Cumbr 68.83 15 P **P 08 24 29.3 +0.2**
KESW Keswick, Cumbr 68.83 15 ⇑ *e*P **P 08 24 29.1 +0.1**
KESW IAmb IAmb 08 24 31.0
comp=Z,207nm,0.9s
KESW IAMs_20 IAMs_20 08 53 39.3
comp=Z,56µm,19.5s
TDK Taldyqorghan 68.86 320 *c i*P **P 08 24 29.6 +0.2**
TDK pmax pmax
comp=Z,359nm,1.0s
TDK Taldyqorghan 68.86 320 ⇑ *i*P **P 08 24 29.6 +0.2**
comp=Z,359nm,1.0s
ILTH Belurgan, Co L 68.88 17 P **P 08 24 29.6 +0.3**
ILTH Belurgan, Co L 68.88 17 P **P 08 24 29.7 +0.4**
ILTH Belurgan, Co L 68.88 17 ⇑ *e*P **P 08 24 29.6 +0.3**
ILTH IAmb IAmb 08 24 31.2
comp=Z,260nm,0.9s
BJUU Bjuv 68.89 5 *i* P **P 08 24 29.3 -0.1**
CD2 Chengdu 68.91 294 P **P 08 24 30.0 0.0**
CD2 pP pP 08 24 38.3 -3.5
CD2 sP sP 08 24 44.0 -2.4
CD2 pmax pmax
comp=Z,900nm,0.8s
IGLA Glengowla, Co 68.93 19 P **P 08 24 30.1 +0.5**
IGLA Glengowla, Co 68.93 19 P **P 08 24 30.2 +0.6**
IGLA Glengowla, Co 68.93 19 ⇑ *e*P **P 08 24 30.1 +0.5**
IGLA IAmb IAmb 08 24 31.7
comp=Z,282nm,0.9s
IOMK Kirk Michael 68.93 16 P **P 08 24 30.1 +0.4**
IOMK Kirk Michael 68.93 16 *e*P **P 08 24 29.4 -0.3**
IOMK IAmb IAmb 08 24 31.4
comp=Z,53nm,0.8s
IOMK IAMs_20 IAMs_20 08 53 17.2
comp=Z,28µm,19.6s
GOMU GeErMu 69.18 304 P **P 08 24 31.4 -0.6**
GOMU pP pP 08 24 35.3 -8.5
GOMU pmax pmax
comp=Z,180nm,0.9s
GZH2 Guangzhou 69.23 282 P **P 08 24 32.3 +0.3**
GZH2 S **S 08 33 39.3 +4.1**
GZH2 pmax pmax
comp=Z,460nm,0.9s
GZH2 L L
comp=Z,7µm,20.1s
GZH2 L L
comp=Z,7µm,18.2s
GZH2 L L
comp=Z,16µm,19.0s
COP Copenhagen 69.25 5 P **P 08 24 32.2 +0.6**
COP Copenhagen 69.25 5 *i* P **P 08 24 31.6 0.0**
COP IAmb IAmb 08 24 32.8
comp=Z,706nm,1.0s
OBN Obninsk 69.26 350 P **P 08 24 30.9 -0.7**
comp=Z,116nm,0.6s,baz=28,slow=1.2,SNR=74
comp=Z,116nm,0.6s
OBN Obninsk 69.26 350 ⇑ P **P 08 24 31.1 -0.5**
OBN Obninsk 69.26 350 *c i*P **P 08 24 30.9 -0.7**
OBN *e**PP **pP 08 24 40.0 -3.4**
OBN *e**SP **sP 08 24 46.2 -1.8**
OBN *e* 08 24 55.1
OBN *e* 08 27 02.4
OBN *e*PPP PPP 08 28 42.6
OBN *e*S **S 08 33 34.6 +0.1**
OBN *e*SS **SS 08 38 02.0 +1.7**
OBN pmax pmax
comp=Z,435nm,1.2s
OBN MLR MLR
comp=Z,22µm,21.0s
OBN Obninsk 69.26 350 P **P 08 24 31.0 -0.7**
OBN Obninsk 69.26 350 P **P 08 24 30.7 -0.9**
comp=Z,338nm,1.3s
OBN Obninsk 69.26 350 P **P 08 24 31.1 -0.5**
SSRD Sdr. Stenderup 69.30 7 *i* P **P 08 24 32.6 +0.7**
SSRD IAmb IAmb 08 24 33.5
comp=Z,510nm,1.0s
GDLE Glaisdale, N Y 69.31 13 ⇑ *e*P **P 08 24 32.5 +0.5**
GDLE IAmb IAmb 08 24 34.0
comp=Z,169nm,0.9s
LUNU Lund 69.36 4 *i* P **P 08 24 32.2 -0.1**
YAR Yar 69.57 84 *e*P **P 08 24 32.5 -1.7**
LLD Lille Linde 69.59 5 *i* P **P 08 24 34.1 +0.3**
LLD IAmb IAmb 08 24 35.0
comp=Z,355nm,1.0s
PABE Paberze 69.61 358 IAmb IAmb 08 24 34.9
comp=Z,151nm,0.8s
PABE Paberze 69.61 358 P **P 08 24 33.9 +0.2**
DSB Dublin 69.62 17 P **P 08 24 34.3 +0.4**
DSB Dublin 69.62 17 P **P 08 24 34.4 +0.4**
DSB Dublin 69.62 17 IAmb IAmb 08 24 35.7
comp=Z,198nm,1.1s
DSB Dublin 69.62 17 P **P 08 24 34.3 +0.4**
HPK Haverah Park 69.65 14 ⇑ *e*P **P 08 24 34.8 +0.6**
HPK IAmb IAmb 08 24 35.9
comp=Z,89nm,0.6s
CHIV Chivirico 69.85 84 IAmb IAmb 08 24 47.3
comp=Z,186nm,1.0s
CHIV Chivirico 69.85 84 *e*P **P 08 24 36.0 +0.1**
SIPP Brgy, Tapao 69.90 273 *e*P **P 08 24 35.6 -0.6**
WLF1 Llynfaes 69.90 16 *e*P **P 08 24 35.6 -0.1**
WLF1 IAmb IAmb 08 24 37.3
comp=Z,88nm,0.8s
WLF1 IAMs_20 IAMs_20 08 54 46.5
comp=Z,103µm,19.6s
BSD Bornholm Skovb 69.93 3 P **P 08 24 35.0 -0.8**
BSD Bornholm Skovb 69.93 3 P **P 08 24 36.0 +0.2**
BSD Bornholm Skovb 69.93 3 *i* P **P 08 24 35.8 0.0**
BSD IAmb IAmb 08 24 36.7
comp=Z,272nm,1.0s
SHLS Shalkode 70.03 318 *c i*P **P 08 24 36.0 -0.8**
SHLS pmax pmax
comp=Z,421nm,0.9s
SHLS Shalkode 70.03 318 ⇑ *i*P **P 08 24 36.0 -0.8**
comp=Z,421nm,0.9s
HKPS Hong Kong Po S 70.04 280 P **P 08 24 37.4 +0.4**
HKPS Hong Kong Po S 70.04 280 IAmb IAmb 08 24 39.6
comp=Z,154nm,0.9s
HKPS Hong Kong Po S 70.04 280 P **P 08 24 37.5 +0.5**
SKMB Sankelmark Bun 70.04 7 P **P 08 24 37.6 +1.2**
KPKS Kokpek 70.07 319 *e*P **P 08 24 37.2 +0.2**
KPKS Kokpek 70.07 319 *e*P **P 08 24 37.2 +0.2**
NACGM Naroch 70.13 356 ⇑ *i*P **P 08 24 36.6 -0.4**
comp=Z,222nm,0.9s,baz=3.5
MOAC Moa 70.14 82 *e*P **P 08 24 36.9 -0.7**
VAL Valentia 70.18 20 P **P 08 24 37.9 +0.6**
VAL Valentia 70.18 20 P **P 08 24 38.1 +0.8**
VAL Valentia 70.18 20 P **P 08 24 38.1 +0.8**
LBWR Ladybower, Pea 70.18 14 P **P 08 24 37.8 +0.3**
LBWR Ladybower, Pea 70.18 14 ⇑ *e*P **P 08 24 37.7 +0.3**
LBWR IAmb IAmb 08 24 40.0
comp=Z,200nm,0.9s
LBWR IAMs_20 IAMs_20 08 48 42.5
comp=Z,51µm,20.5s
SZP Santa 70.19 272 P **P 08 24 38.6 +0.6**
AKTO Aktyubinsk 70.19 336 P **P 08 24 37.6 0.0**
comp=Z,583nm,0.9s,baz=17,slow=5.9
comp=Z,583nm,0.9s
NMDO Nuevo Mundo 70.20 82 IAmb IAmb 08 24 49.5
comp=Z,80nm,0.9s
UZB Uzynbulak 70.21 319 *c i*P **P 08 24 38.1 +0.2**
UZB Uzynbulak 70.21 319 ⇑ *i*P **P 08 24 38.2 +0.2**
LMK Market Rasen 70.32 13 P **P 08 24 39.1 +0.9**
LMK Market Rasen 70.32 13 ⇑ *e*P **P 08 24 38.8 +0.6**
LMK IAmb IAmb 08 24 40.3
comp=Z,637nm,1.0s
BTLS Baital 70.38 323 *e*P **P 08 24 38.9 +0.2**
BTLS pmax pmax
comp=Z,41nm,1.2s
BTLS Baital 70.38 323 *e*P **P 08 24 39.0 +0.2**
comp=Z,41nm,1.2s
IWEX Carrickbyrne, 70.39 17 P **P 08 24 39.1 +0.4**
IWEX Carrickbyrne, 70.39 17 P **P 08 24 39.4 +0.7**
IWEX Carrickbyrne, 70.39 17 *e*P **P 08 24 39.1 +0.4**
IWEX IAmb IAmb 08 24 40.8
comp=Z,122nm,0.9s
STNC Stoke 70.42 14 P **P 08 24 39.5 +0.6**
STNC Stoke 70.42 14 ⇑ *e*P **P 08 24 39.6 +0.8**
STNC IAmb IAmb 08 24 41.2
comp=Z,273nm,0.9s

RGN Rugen 70.43 5 *e*P **P 08 24 39.8 +0.9**
comp=Z,899nm,0.9s,baz=355,slow=5.8
RGN Rugen 70.43 5 P **P 08 24 40.2 +1.3**
BELG Belogornoye 70.45 343 P **P 08 24 38.8 -0.2**
comp=Z,876nm,1.0s,baz=0.0,slow=5.1,SNR=89
comp=Z,876nm,1.0s
BELG Belogornoye 70.45 343 *c i*P **P 08 24 38.1 -0.9**
BELG pmax pmax
comp=Z,270nm,1.3s
HLG Helgoland 70.46 8 *e*P **P 08 24 40.0 +0.9**
comp=Z,745nm,1.0s,baz=355,slow=5.8
HLG Helgoland 70.46 8 P **P 08 24 40.3 +1.3**
FOEL Foel Wylfa 70.47 15 P **P 08 24 39.9 +0.7**
FOEL Foel Wylfa 70.47 15 ⇑ *e*P **P 08 24 39.7 +0.5**
FOEL IAmb IAmb 08 24 41.4
comp=Z,395nm,0.8s
FOEL IAMs_20 IAMs_20 08 52 19.4
comp=Z,41µm,20.2s
MNK Minsk 70.48 356 *i* P **P 08 24 39.0 -0.2**
comp=E,225nm,1.2s
MNK *i* P **P 08 24 39.0 -0.2**
comp=N,50nm,0.9s
MNK *i* P **P 08 24 39.0 -0.2**
comp=Z,168nm,0.7s,baz=4.2
MNK *i* PcP **sP 08 24 55.5 -0.1**
MNK *i* PP **PP 08 27 14.1 -0.7**
MNK *i* PPP PPP 08 28 58.7
MNK *i* S **S 08 33 50.4 +1.4**
MNK *i* SS **SS 08 38 22.9 +3.8**
MNK *i* SSS SSS 08 41 41.6
MNK *i* LQ LQ 08 49 22.1
MNK *i* LR LR 08 56 08.6
MNK *i* LRM MLR 08 58 40.3
comp=E,17µm,19.5s
MNK *i* LRM MLR 08 58 46.1
comp=N,11µm,18.7s
MNK *i* LRM MLR 08 58 59.6
comp=Z,28µm,19.6s
MNK Minsk 70.48 356 *d i*P **P 08 24 39.0 -0.2**
SATY Saty 70.52 319 *c i*P **P 08 24 39.8 0.0**
SATY Saty 70.52 319 ⇑ *i*P **P 08 24 39.8 0.0**
KLNR Kaliningrad 70.54 0 *i* P **P 08 24 39.6 +0.1**
KUU Kurty 70.56 321 *e*P **P 08 24 40.1 +0.1**
KUU Kurty 70.56 321 *e*P **P 08 24 40.1 +0.1**
BOAB BOACO BROADBAN 70.57 96 IAmb IAmb 08 24 52.2
comp=Z,128nm,1.1s
BOAB BOACO BROADBAN 70.57 96 P **P 08 24 39.8 -0.4**
MTDJ Mount Denham 70.60 86 IAmb IAmb 08 24 52.1
comp=Z,196nm,1.1s
MTDJ Mount Denham 70.60 86 P **P 08 24 40.8 +0.2**
AB31 Akbulak array 70.82 334 *e*P **P 08 24 41.3 0.0**
AB31 pmax pmax
comp=Z,429nm,0.8s
ABKAR Akbulak array 70.82 334 P **P 08 24 41.4 +0.1**
HLM1 Long Mynd 70.88 15 ⇑ *e*P **P 08 24 42.2 +0.6**
HLM1 IAmb IAmb 08 24 43.3
comp=Z,79nm,0.9s
GYA Guiyang 70.88 289 ⇑ P **P 08 24 42.3 +0.1**
GYA pmax pmax
comp=Z,470nm,0.9s
GYA pmax pmax
comp=Z,8µm,12.4s
GYA L L
comp=Z,10µm,20.0s
GYA L L
comp=Z,7µm,16.5s
GYA L L
comp=Z,21µm,20.3s
BSEG Bad Segeberg 70.88 6 *e*P **P 08 24 42.4 +0.8**
comp=Z,195nm,1.0s,baz=355,slow=5.8
BSEG Bad Segeberg 70.88 6 P **P 08 24 42.4 +0.8**
CWF Charnwood Fore 70.89 14 P **P 08 24 42.3 +0.6**
CWF Charnwood Fore 70.89 14 *e*P **P 08 24 41.8 +0.1**
CWF IAmb IAmb 08 24 43.8
comp=Z,130nm,1.0s
MDOK Medeo 70.94 320 *c i*P **P 08 24 42.3 -0.1**
MDOK Medeo 70.94 320 ⇑ *i*P **P 08 24 42.4 -0.1**
AAA Alma-Ata 70.95 320 *e*P **P 08 24 42.4 +0.1**
AAA pmax pmax
comp=Z,415nm,1.2s
AAA Alma-Ata 70.95 320 *e*P **P 08 24 42.4 +0.1**
comp=Z,415nm,1.2s
PRZ Przheval'sk 71.02 319 P **P 08 24 44.2 +1.3**
TNSS Tian-Shan 71.08 320 *e*P **P 08 24 43.2 -0.4**
TNSS Tian-Shan 71.08 320 *e*P **P 08 24 43.3 -0.4**
SUW Suwalki 71.11 358 P **P 08 24 42.1 -0.9**
RSBS Rosebush, Pemb 71.14 16 *e*P **P 08 24 43.7 +0.4**
RSBS IAmb IAmb 08 24 45.3
comp=Z,224nm,0.8s
WACR West Acre 71.16 13 P **P 08 24 43.8 +0.5**
WACR West Acre 71.16 13 *e*P **P 08 24 43.7 +0.5**
WACR IAmb IAmb 08 24 45.6
comp=Z,1µm,0.9s
MCH1 Michaelchurch 71.36 15 ⇑ *e*P **P 08 24 44.8 +0.2**
MCH1 IAmb IAmb 08 24 46.7
comp=Z,167nm,0.9s
MCH1 IAMs_20 IAMs_20 08 47 34.0
comp=Z,47µm,20.1s
LPSR Galich'ya Gora 71.48 348 *c i*P **P 08 24 44.3 -1.0**
LPSR pmax pmax
comp=Z,471nm,1.5s
LNIZ Loecknitz 71.53 4 P **P 08 24 46.4 +0.8**
MONM Monmouth 71.55 15 ⇑ *e*P **P 08 24 46.1 +0.4**
MONM IAmb IAmb 08 24 47.8
comp=Z,116nm,0.8s
MONM IAMs_20 IAMs_20 08 47 20.4
comp=Z,41µm,19.7s
SGDS Sogindy 71.56 322 ⇑ *i*P **P 08 24 46.2 +0.2**
TKM2 Tokmak 2 71.68 321 P **P 08 24 47.3 +0.4**
SNR=139
STRD Stroud 71.70 15 *e*P **P 08 24 47.3 +0.6**
STRD IAmb IAmb 08 24 48.5
comp=Z,234nm,0.7s
MANU Manus Island 71.73 238 P **P 08 24 46.4 -0.9**
MANU IAmb IAmb 08 24 48.3
comp=Z,99nm,0.8s
OLDB Oldbury-Upon-S 71.76 15 *e*P **P 08 24 46.9 0.0**
OLDB IAmb IAmb 08 24 48.9
comp=Z,131nm,0.9s
USP Ospenovka 71.77 322 P **P 08 24 47.8 +0.5**
SNR=113
KDJ Kajisay 71.78 319 P **P 08 24 48.1 +0.6**
WUS Wushi 71.80 317 P **P 08 24 48.1 +0.5**
WUS Wushi 71.80 317 P **P 08 24 48.1 +0.5**
ELMS Elmsett, Ipswi 71.82 13 *e*P **P 08 24 47.6 +0.3**
ELMS IAmb IAmb 08 24 49.0
comp=Z,281nm,1.0s
ELMS IAMs_20 IAMs_20 08 55 38.8
comp=Z,38µm,19.4s
GKP Gorka Klasztor 71.84 2 P **P 08 24 47.2 -0.2**
GORT1 Trebel 71.88 6 *e*P **P 08 24 48.6 +1.0**
comp=Z,233nm,1.1s,baz=355,slow=5.8
TARG Taragay, Kyrgy 71.89 319 IAmb IAmb 08 25 01.4
comp=Z,160nm,1.0s
TARG Taragay, Kyrgy 71.89 319 P **P 08 24 49.3 +0.8**
CHMS Chumysh 71.92 321 P **P 08 24 48.7 +0.6**
SNR=122
TATA Tatamba Isabel 71.92 223 P **P 08 24 49.5 +1.1**
BOOM Boomskoye usch 71.93 320 P **P 08 24 49.2 +0.8**
BLUN Bluefields 72.00 95 P **P 08 24 48.8 -0.1**
RETH Rethem/Aller, 72.01 7 *e*P **P 08 24 49.2 +0.8**
comp=Z,243nm,1.1s,baz=355,slow=5.8
RETH Rethem/Aller, 72.01 7 P **P 08 24 49.2 +0.8**
SWN1 Swindon 72.01 15 ⇑ *e*P **P 08 24 49.2 +0.7**
SWN1 IAmb IAmb 08 24 50.8
comp=Z,256nm,0.8s
ULHL Ulahol 72.03 320 P **P 08 24 49.5 +0.5**
SNR=34
HTL Hartland 72.11 16 P **P 08 24 49.9 +0.8**
HTL Hartland 72.11 16 *e*P **P 08 24 49.0 -0.1**
HTL IAmb IAmb 08 24 51.2
comp=Z,172nm,0.9s
HTL IAMs_20 IAMs_20 08 44 09.8
comp=Z,45µm,22.5s
KBK Taragaybulak 72.14 321 P **P 08 24 50.4 +0.7**
SNR=84
WOL Wolverton 72.29 14 ⇑ *e*P **P 08 24 50.7 +0.5**
WOL IAmb IAmb 08 24 52.4
comp=Z,310nm,1.0s
IBBN Ibbenburen 72.31 8 *e*P **P 08 24 51.1 +0.8**
comp=Z,556nm,1.2s,baz=355,slow=5.8
IBBN Ibbenburen 72.31 8 P **P 08 24 51.1 +0.8**
LQP Lukban 72.32 269 *e*P **P 08 24 51.3 +0.2**
AAK Ala-Archa 72.32 321 P **P 08 24 51.3 +0.6**
SNR=101

AAK Ala-Archa 72.32 321 *i* P **P 08 24 51.3 +0.6**
SNR=104
AAK Ala-Archa 72.32 321 *c i*P **P 08 24 51.3 +0.6**
AAK pmax pmax
comp=Z,416nm,1.4s
AAK Ala-Archa 72.32 321 P **P 08 24 51.0 +0.3**
AAK Ala-Archa 72.32 321 P **P 08 24 51.3 +0.6**
AAK Ala-Archa 72.32 321 P **P 08 24 51.4 +0.6**
VORR Voronezh 72.37 348 *e*P **P 08 24 49.6 -1.0**
VORR pmax pmax
comp=Z,429nm,1.4s
SBD Saint Breward 72.49 17 ⇑ *e*P **P 08 24 51.6 +0.2**
SBD IAmb IAmb 08 24 53.2
comp=Z,110nm,0.9s
VRH Novokhopyorsk 72.50 346 *c i*P **P 08 24 50.1 -1.3**
VRH pmax pmax
comp=Z,403nm,1.7s
RUE Ruedersdorf 72.52 4 *e*P **P 08 24 52.1 +0.6**
comp=Z,675nm,1.0s,baz=355,slow=5.8
RUE Ruedersdorf 72.52 4 P **P 08 24 51.9 +0.5**
FLTG Flechtingen 72.54 6 *e*P **P 08 24 51.6 0.0**
comp=Z,293nm,1.0s,baz=355,slow=5.8
EKS2 Erkin-Say 72.56 322 P **P 08 24 52.7 +0.6**
SNR=84
WTSB Winterswijk 72.57 9 P **P 08 24 52.3 +0.6**
SAVO Savo Central 72.62 223 P **P 08 24 52.6 +0.1**
UCH Uchtor 72.67 321 P **P 08 24 54.4 +1.2**
SNR=7.3
ASSE Asse, Remlinge 72.70 6 *e*P **P 08 24 53.1 +0.6**
comp=Z,260nm,1.1s,baz=355,slow=5.8
ASSE Asse, Remlinge 72.70 6 P **P 08 24 53.1 +0.6**
PLP Palo 72.72 265 *e*P **P 08 24 52.3 -1.0**
DYA Yadsworthy 72.74 16 ⇑ *e*P **P 08 24 53.2 +0.3**
DYA IAmb IAmb 08 24 55.2
comp=Z,213nm,0.9s
CCA1 Carnmenellis 72.77 17 P **P 08 24 53.7 +0.7**
CCA1 Carnmenellis 72.77 17 ⇑ *e*P **P 08 24 53.4 +0.4**
CCA1 IAmb IAmb 08 24 55.1
comp=Z,159nm,0.8s
ELSH Elham, Standar 72.77 13 P **P 08 24 53.5 +0.6**
ELSH Elham, Standar 72.77 13 *e*P **P 08 24 53.6 +0.6**
ELSH IAmb IAmb 08 24 55.0
comp=Z,228nm,0.8s
ELSH IAMs_20 IAMs_20 08 50 42.8
comp=Z,54µm,20.0s
VSR Storozhevoye 72.82 348 *c i*P **P 08 24 52.4 -0.9**
VSR pmax pmax
comp=Z,396nm,1.2s
OPLO Oploo 72.85 10 P **P 08 24 54.6 +1.2**
R9F13 Warsaw-Wawer 72.93 360 *e*P **P 08 24 54.2 +0.3**
R9F13 *e*pP **PcP 08 25 10.2 -0.6**
HMNX Herstmonceux 72.94 13 P **P 08 24 54.7 +0.7**
HMNX Herstmonceux 72.94 13 *e*P **P 08 24 54.7 +0.7**
HMNX IAmb IAmb 08 24 56.6
comp=Z,190nm,0.9s
HMNX IAMs_20 IAMs_20 08 55 06.2
comp=Z,43µm,19.1s
CLZ Clausthal 72.97 7 *e*P **P 08 24 55.2 +0.9**
comp=Z,426nm,1.1s,baz=355,slow=5.8
CLZ Clausthal 72.97 7 P **P 08 24 55.1 +0.9**
HURO Huro Makira 73.03 220 P **P 08 24 55.4 +0.4**
VORD Divnogorie 73.05 348 *e*P **P 08 24 53.2 -1.5**
VORD pmax pmax
comp=Z,340nm,1.2s
ASAI AK-SAY(Kyrgyzs 73.08 319 P **P 08 24 56.2 +0.8**
BUG Bochum--Univer 73.13 9 *e*P **P 08 24 55.5 +0.4**
comp=Z,360nm,0.9s,baz=355,slow=5.8
BUG Bochum--Univer 73.13 9 P **P 08 24 55.5 +0.4**
DZA Taraz 73.20 324 *e*P **P 08 24 55.9 +0.1**
DZA Taraz 73.20 324 *e*P **P 08 24 56.0 +0.1**
GTTG Gottingen 73.24 7 *e*P **P 08 24 56.6 +0.8**
comp=Z,530nm,1.1s,baz=355,slow=5.8
GTTG Gottingen 73.24 7 P **P 08 24 56.6 +0.8**
KKAR Karatay Array 73.29 324 P **P 08 24 56.3 0.0**
KKAR Karatay Array 73.29 324 P **P 08 24 56.3 0.0**
BEL Belsk 73.32 360 P **P 08 24 56.5 +0.3**
BEL Belsk 73.32 360 P **P 08 24 56.8 +0.6**
WIMM Wimmelburg 73.36 6 P **P 08 24 56.9 +0.4**
DGTI Dogotuki 73.41 201 P **P 08 24 58.9 +1.8**
HDC Heredia 73.43 96 *e*P **P 08 24 58.1 +0.5**
KASTN Kahler Asten 73.46 8 *e*P **P 08 24 57.7 +0.5**
comp=Z,220nm,1.1s,baz=355,slow=5.8
UCC Uccle 73.48 11 IAmb IAmb 08 24 58.7
comp=Z,249nm,1.2s
UCC Uccle 73.48 11 *d*P **P 08 24 57.5 +0.3**
comp=Z,112nm,1.1s
UCC Uccle 73.48 11 P **P 08 24 57.6 +0.3**
SC01 Santiago de lo 73.51 80 IAmb IAmb 08 24 60.0
comp=Z,162nm,1.1s
SDDR Presa de Saban 73.55 80 IAmb IAmb 08 25 10.8
comp=Z,78nm,0.8s
SDDR Presa de Saban 73.55 80 *e*P **P 08 24 57.7 -0.5**
SDDR Presa de Saban 73.55 80 P **P 08 24 58.2 0.0**
SCPH Surigao 73.56 263 *e*P **P 08 24 57.7 -0.5**
BRLS Borolday 73.58 325 *e*P **P 08 24 59.5 +1.5**
BRLS Borolday 73.58 325 *e*P **P 08 24 59.6 +1.5**
BEBN Eben Emael 73.62 10 *d*P **P 08 24 58.2 +0.1**
comp=Z,116nm,1.0s
BEBN *d*pP **pP 08 25 08.9 -1.0**
RNPP9 Sopachiv 73.65 357 P **P 08 24 57.9 -0.3**
CLL Collm 73.65 5 ⇑ *i*P **P 08 24 58.3 +0.1**
CLL *e* 08 25 15.0
CLL *e*S **S 08 34 25.0 -0.4**
CLL pmax pmax
comp=Z,322nm,1.1s
CLL Collm 73.65 5 *e*P **P 08 24 58.3 +0.1**
comp=Z,293nm,1.0s,baz=355,slow=5.8
CLL Collm 73.65 5 P **P 08 24 57.9 -0.3**
comp=Z,304nm,1.1s
CLL Collm 73.65 5 ⇑ *i*P **P 08 24 58.3 +0.1**
comp=Z,322nm,1.1s
CLL *e*PcP **PcP 08 25 15.0 +1.1**
CLL *e*S **S 08 34 25.0 -0.4**
CLL *e*sS **pS 08 34 44.0 +3.9**
HGN Heimansgroeve 73.68 10 P **P 08 24 58.6 +0.3**
NEUB Neuenburg 73.69 6 *e*P **P 08 24 58.9 +0.5**
comp=Z,461nm,1.0s,baz=355,slow=5.8
NEUB Neuenburg 73.69 6 P **P 08 24 59.0 +0.5**
RNPP8 Varash 73.73 357 P **P 08 24 58.2 -0.5**
RNPP2 Kostyukhnivka 73.73 357 P **P 08 24 58.4 -0.3**
BSTI Sart Tilman 73.82 10 *d*P **P 08 24 59.8 +0.6**
comp=Z,47nm,0.8s
RNPP5 Staryi Chortor 73.83 357 P **P 08 24 59.0 -0.3**
MEM Membach 73.84 10 *d*P **P 08 24 59.6 +0.3**
comp=Z,150nm,1.1s
MEM Membach 73.84 10 P **P 08 24 59.8 +0.5**
BTNL Ternell 73.87 10 *d*P **P 08 24 59.9 +0.3**
comp=Z,93nm,1.0s
BCLA Clavier 73.96 10 *d*P **P 08 25 00.3 +0.2**
comp=Z,74nm,0.9s
BCLA *d*PP **PP 08 27 43.6 -0.9**
UBBA Unterbreizbach 73.96 7 *e*P **P 08 25 00.6 +0.7**
comp=Z,90nm,1.2s,baz=355,slow=5.8
UBBA Unterbreizbach 73.96 7 P **P 08 25 00.4 +0.4**
BGES Gesves 73.97 10 *d*P **P 08 25 00.2 +0.1**
comp=Z,76nm,1.1s
LLP Lapu-Lapu 73.99 265 *i* P **P 08 24 59.2 -1.5**
LLP *i* S **S 08 34 28.5 -1.7**
BMRD Maredsous 74.02 11 *d*P **P 08 25 00.9 +0.5**
comp=Z,196nm,1.1s
KMI2 Kunming 74.03 291 ⇑ P **P 08 25 00.9 -0.3**
KMI2 sP PcP 08 25 17.0 +0.7
KMI2 pmax pmax
comp=Z,94nm,1.6s
MI28 Mi28,Pidlybu 74.06 355 P **P 08 24 59.4 -1.2**
BHOU Houvegnez 74.09 10 *d*P **P 08 25 01.4 +0.5**
comp=Z,61nm,1.0s
BRG Berggiesshubel 74.13 4 *e*P **P 08 25 01.4 +0.3**
comp=Z,315nm,1.0s,baz=355,slow=5.8
BRG Berggiesshubel 74.13 4 P **P 08 25 01.3 +0.2**
BRG Berggiesshubel 74.13 4 ⇑ *i*P **P 08 25 01.3 +0.3**
BRG Amp 08 25 03.3
comp=Z,314nm,1.0s
BRG Berggiesshubel 74.13 4 P P 08 25 08.6 +7.6
BRG Amp 08 25 09.6
comp=Z,92nm,1.0s
AK21 Malin Array Si 74.14 354 P **P 08 25 00.4 -0.7**
AK23 Malin Array Si 74.15 354 P **P 08 25 00.4 -0.8**
AK22 Malin Array Si 74.16 354 P **P 08 25 00.5 -0.7**
AK20 Malin Array Si 74.18 354 P **P 08 25 00.6 -0.7**
AK03 Malin Array Si 74.18 354 P **P 08 25 00.4 -0.9**
AK18 Malin Array Si 74.20 354 P **P 08 25 00.5 -0.9**
BAIF Baives 74.20 11 *e*P **P 08 25 01.2 -0.2**
BAIF pmax pmax

comp=Z,388nm,1.2s
DOU Dourbes 74.20 11 P P 08 25 01.7 +0.2
DOU Dourbes 74.20 11 *d*P P 08 25 01.8 +0.3
comp=Z,119nm,1.1s
AKASG Malin Array Be 74.21 354 P P 08 25 00.7 -0.8
comp=Z,296nm,0.8s,baz=8.2,slow=5.7,SNR=238
comp=Z,296nm,0.8s
AKASG Malin Array Be 74.21 354 P P 08 25 00.5 -1.0
AKBB Malin Array Si 74.21 354*c i*P P 08 25 00.5 -1.0
AKBB pmax pmax
comp=Z,606nm,1.0s
RCHB Rochefort 74.21 10 *d*P P 08 25 01.6 +0.1
comp=Z,115nm,1.1s
RCHB Rochefort 74.21 10 P P 08 25 01.8 +0.3
KIEV Kiev 74.22 354 ⇑P P 08 25 01.0 -0.6
KIEV Kiev 74.22 354 *i* P P 08 25 00.8 -0.7
SNR=293
KIEV Kiev 74.22 354 P P 08 25 00.9 -0.6
KIEV Kiev 74.22 354 P P 08 25 00.9 -0.7
KIEV Kiev 74.22 354 P P 08 25 00.6 -0.9
comp=Z,2µm,0.9s
KIEV Kiev 74.22 354 P P 08 25 00.9 -0.6
AK01 Malin Array Si 74.22 354 P P 08 25 00.3 -1.2
JSA Saint Aubin 74.22 15⇑*e*P P 08 25 01.9 +0.3
JSA IAmb IAmb 08 25 03.5
comp=Z,217nm,0.8s
JSA IAMs_20 IAMs_20 08 52 01.9
comp=Z,49µm,19.1s
MOX Moxa 74.24 6 *e*P P 08 25 02.2 +0.5
comp=Z,498nm,1.1s,baz=355,slow=5.8
MOX *e*L L 08 54 07.9
comp=Z,37µm,20.2s
MOX Moxa 74.24 6 P P 08 25 02.2 +0.5
KSP Ksiaz 74.25 3 P P 08 25 01.7 0.0
AK02 Malin Array Si 74.25 354 P P 08 25 00.8 -0.9
AK12 Malin Array Si 74.27 354 P P 08 25 01.1 -0.7
AK08 Malin Array Si 74.27 354 P P 08 25 01.1 -0.8
AK14 Malin Array Si 74.29 354 P P 08 25 01.1 -0.8
CHM Chimkent 74.30 324 *e*P P 08 25 02.4 +0.2
CHM pmax pmax
comp=Z,426nm,1.6s
CHM Chimkent 74.30 324 *e*P P 08 25 02.4 +0.2
comp=Z,426nm,1.6s
IUG Iuzhnay 74.31 324*c i*P P 08 25 02.5 +0.1
IUG pmax pmax
comp=Z,293nm,1.1s
IUG Iuzhnay 74.31 324⇑*i*P P 08 25 02.5 +0.1
comp=Z,293nm,1.1s
PLN Plauen 74.43 6 *e*P P 08 25 03.2 +0.4
comp=Z,75nm,1.0s,baz=355,slow=5.8
TNS Taunus Mts 74.44 8 *e*P P 08 25 03.5 +0.5
comp=Z,326nm,1.1s,baz=355,slow=5.8
TNS Taunus Mts 74.44 8 P P 08 25 03.5 +0.5
RICC Richard 74.47 4 *e*P P 08 25 04.2 +1.2
RICC AMS AMS 08 48 50.0
comp=Z,42µm,19.9s
CHVC Chvalec 74.50 3 *e*P P 08 25 03.8 +0.6
CHVC MLR MLR
comp=Z,24µm,19.1s
CHVC Chvalec 74.50 3 *e*P P 08 25 03.8 +0.6
CHVC AMS AMS 08 56 30.0
comp=Z,24µm,19.1s
TANN Tannenbergstha 74.52 5 *e*P P 08 25 04.0 +0.5
comp=Z,174nm,1.2s,baz=355,slow=5.8
TANN Tannenbergstha 74.52 5 P P 08 25 03.9 +0.5
OSTC Ostas 74.53 3 *e*P P 08 25 04.1 +0.7
OSTC MLR MLR
comp=Z,28µm,19.2s
OSTC Ostas 74.53 3 *e*P P 08 25 04.1 +0.7
OSTC AMS AMS 08 53 20.0
comp=Z,28µm,19.2s
TBP Tagbilaran 74.56 265 *e*P P 08 25 02.9 -1.2
UPC Upice 74.58 3 *e*P P 08 25 04.2 +0.5
UPC *e**PP PcP 08 25 19.6 +1.7
UPC MLR MLR
comp=Z,27µm,19.2s
UPC Upice 74.58 3 *e*P P 08 25 04.2 +0.5
UPC *ep*P PcP 08 25 19.6 +1.7
UPC AMS AMS 08 53 10.0
comp=Z,27µm,19.2s
UPC Upice 74.58 3 P P 08 25 04.1 +0.5
NKC Novy Kostel 74.70 5 *e*P P 08 25 05.3 +0.9
NKC pmax pmax
comp=Z,85nm,0.7s
NKC MLR MLR
comp=Z,36µm,18.7s
NKC Novy Kostel 74.70 5 *e*P P 08 25 05.3 +0.9
comp=Z,85nm,0.7s
NKC AMS AMS 08 56 50.0
comp=Z,36µm,18.7s
NKC Novy Kostel 74.70 5 P P 08 25 05.1 +0.7
DPC Dobruska-Polom 74.74 3 *e*P P 08 25 05.4 +0.7
DPC pmax pmax
comp=Z,121nm,0.8s
DPC MLR MLR
comp=Z,20µm,19.4s
DPC Dobruska-Polom 74.74 3 *e*P P 08 25 05.4 +0.7
comp=Z,121nm,0.8s
DPC AMS AMS 08 53 00.0
comp=Z,20µm,19.4s
DPC Dobruska-Polom 74.74 3 P P 08 25 04.6 -0.1
comp=Z,418nm,1.6s
DPC Dobruska-Polom 74.74 3 P P 08 25 05.4 +0.7
WLF Walferdange 74.79 10 P P 08 25 05.7 +0.9
WLF Walferdange 74.79 10 *d*P P 08 25 05.4 +0.5
comp=Z,180nm,1.1s
WLF *dp*P pP 08 25 15.4 -1.4
WLF Walferdange 74.79 10 *e*P P 08 25 05.8 +0.9
comp=Z,350nm,1.1s,baz=355,slow=5.8
WLF Walferdange 74.79 10 P P 08 25 05.8 +0.9
OHH Osh 74.79 321 P P 08 25 04.2 -0.9
FLN La Foliniere 74.89 14 *e*P P 08 25 04.8 -0.7
FLN pmax pmax
comp=Z,344nm,1.1s
OJC Ojcow 74.93 1 P P 08 25 06.0 +0.2
OJC Ojcow 74.93 1 P P 08 25 05.9 +0.2
KSH2 Kashi 74.98 319 P P 08 25 07.3 +0.9
KSH2 sP pP 08 25 19.4 +1.1
KSH2 S S 08 34 44.3 +3.3
KRLC Kraliky 75.03 3 *e*P P 08 25 07.1 +0.8
KRLC MLR MLR
comp=Z,42µm,21.5s
KRLC Kraliky 75.03 3 *e*P P 08 25 07.1 +0.8
KRLC AMS AMS 08 49 10.0
comp=Z,42µm,21.5s
KRLC Kraliky 75.03 3 P P 08 25 06.9 +0.6
PRU Pruhonice 75.04 4 *e*P P 08 25 06.9 +0.6
PRU *e**PP PcP 08 25 20.4 +0.5
PRU MLR MLR
comp=Z,41µm,19.7s
PRU Pruhonice 75.04 4 *e*P P 08 25 06.9 +0.6
PRU *ep*P PcP 08 25 20.4 +0.5
PRU AMS AMS 08 48 40.0
comp=Z,41µm,19.7s
PRU Pruhonice 75.04 4 P P 08 25 06.8 +0.5
QIZ Qiongzhong 75.04 282 P P 08 25 07.0 +0.2
QIZ Qiongzhong 75.04 282 P P 08 25 07.3 +0.5
QIZ S S 08 34 43.6 +1.7
QIZ pmax pmax
comp=Z,290nm,1.0s
RAC Raciborz 75.05 2 *e*P P 08 25 07.2 +0.8
RAC AMS AMS 08 54 00.0
comp=Z,39nm,20.1s
RAC Raciborz 75.05 2 *e*P P 08 25 07.2 +0.8
LUBAR Lubar, Ukraine 75.06 355 P P 08 25 05.3 -1.2
SGMF Saint Gilles 75.07 16 *e*P P 08 25 06.2 -0.3
SGMF pmax pmax
comp=Z,425nm,1.2s
GRA3 Grafenberg Arr 75.10 6 P P 08 25 07.5 +0.8
ROTZ Rotzenmuhle 75.15 6 *e*P P 08 25 07.7 +0.7
comp=Z,64nm,1.1s,baz=355,slow=5.8
MSVF Nonsavu 75.16 202 P P 08 25 09.1 +1.7
MSVF Nonsavu 75.16 202⇓*i*P P 08 25 08.9 +1.6
MSVF pmax pmax
comp=Z,50nm,1.2s
MSVF Nonsavu 75.16 202 P P 08 25 08.3 +0.9
MSVF Nonsavu 75.16 202 P P 08 25 09.1 +1.7
GRA1 Grafenberg Arr 75.17 6 P P 08 25 08.0 +0.9
GRF Grafenberg Arr 75.17 6 *e*P P 08 25 07.9 +0.8
comp=Z,314nm,1.0s,baz=355,slow=5.8
GRF *e*L L 08 55 08.0
comp=Z,21µm,20.3s
GRFO Grafenberg 75.17 6 P P 08 25 07.9 +0.8
GRFO Grafenberg 75.17 6 P P 08 25 07.9 +0.8
GRFO Grafenberg 75.17 6 P P 08 25 08.0 +0.8

STEB Steborice 75.19 2 *e*P P 08 25 07.5 +0.3
STEB *ep*P sP 08 25 23.3 -0.4
SNPH Sibulan 75.19 265 *e*P P 08 25 07.3 -0.5
GRR Gorron 75.20 15 *e*P P 08 25 06.7 -0.6
GRR pmax pmax
comp=Z,231nm,1.0s
BRU2 Volcan 75.22 96 IAmb IAmb 08 25 20.3
comp=Z,170nm,1.5s
BRU2 Volcan 75.22 96 P P 08 25 08.1 0.0
OKC Ostrava-Krasne 75.30 2 *e*P P 08 25 08.4 +0.6
OKC Ostrava-Krasne 75.30 2 *e*P P 08 25 08.4 +0.6
OKC Ostrava-Krasne 75.30 2 P P 08 25 08.4 +0.6
BUKP Musuan 75.34 263 *i* P P 08 25 08.7 +0.1
MORC Moravsky Berou 75.34 2 ⇓P P 08 25 08.0 -0.1
MORC Moravsky Berou 75.34 2 P P 08 25 08.4 +0.3
MORC Moravsky Berou 75.34 2 IAmb IAmb 08 25 09.7
comp=Z,221nm,1.0s
MORC Moravsky Berou 75.34 2 *e*P P 08 25 08.3 +0.1
MORC Moravsky Berou 75.34 2 P P 08 25 08.5 +0.3
GRB4 Grafenberg Arr 75.41 6 P P 08 25 09.2 +0.8
GRB1 Grafenberg Arr 75.49 6 P P 08 25 09.9 +0.9
KWP Kalwaria Pacla 75.51 359 P P 08 25 09.4 +0.3
KWP Kalwaria Pacla 75.51 359 P P 08 25 08.9 -0.2
comp=Z,854nm,1.0s
GRB3 Grafenberg Arr 75.55 6 P P 08 25 10.0 +0.7
ZVC Zvikov 75.58 4 *e*P P 08 25 10.0 +0.6
ZVC *ep*P sP 08 25 25.5 -0.4
ZVC AMS AMS 08 48 10.0
comp=Z,54µm,20.2s
GRB2 Grafenberg Arr 75.61 6 P P 08 25 10.3 +0.7
NIE Niedzica 75.74 0 P P 08 25 10.4 0.0
comp=Z,97nm,1.2s
STHS Stebnicka Huta 75.74 360 *e*P P 08 25 10.9 +0.5
STHS pmax pmax
comp=Z,347nm,0.8s
STHS Stebnicka Huta 75.74 360 *e*P P 08 25 10.9 +0.5
MAUC Maruska 75.76 2 *e*P P 08 25 11.5 +1.0
TREC Trest 75.77 3 *e*P P 08 25 11.1 +0.5
TREC Trest 75.77 3 *e*P P 08 25 11.1 +0.5
TREC Trest 75.77 3 P P 08 25 10.9 +0.3
GRB5 Grafenberg Arr 75.77 6 P P 08 25 11.1 +0.5
GRC4 Grafenberg Arr 75.79 6 P P 08 25 11.2 +0.6
VRAC Vranov 75.79 3 P P 08 25 11.0 +0.3
comp=Z,250nm,1.0s,baz=359,slow=5.6,SNR=245
comp=Z,250nm,1.0s
VRAC Vranov 75.79 3 ⇓P P 08 25 11.2 +0.5
VRAC Vranov 75.79 3 P P 08 25 11.2 +0.5
VRAC Vranov 75.79 3 *e*P P 08 25 11.0 +0.3
VRAC Vranov 75.79 3 P P 08 25 11.3 +0.5
GENI Genyem 75.80 244 P P 08 25 11.9 +0.8
GENI Genyem 75.80 244 P P 08 25 12.1 +1.0
WET Wettzell 75.81 5 *e*P P 08 25 11.6 +0.8
comp=Z,224nm,1.1s,baz=355,slow=5.8
WET Wettzell 75.81 5 P P 08 25 11.5 +0.7
KHC Kasperske Hory 75.86 5⇑*i*P P 08 25 12.0 +0.9
KHC pmax pmax
comp=Z,459nm,1.1s
KHC Kasperske Hory 75.86 5 *e*P P 08 25 11.9 +0.9
comp=Z,99nm,0.8s
KHC *ep*P sP 08 25 28.4 +0.9
KHC AMS AMS 08 51 40.0
comp=Z,40µm,18.9s
KHC Kasperske Hory 75.86 5 P P 08 25 11.1 0.0
comp=Z,7µmcomp=Z,391nm,1.1s
KHC Kasperske Hory 75.86 5 P P 08 25 12.0 +0.9
GRC1 Grafenberg Arr 75.88 6 P P 08 25 11.7 +0.5
BTK Batken 75.90 323 P P 08 25 11.7 +0.2
STU Stuttgart 75.94 8 P P 08 25 11.8 +0.3
STU pmax pmax
comp=Z,632nm,1.1s
STU Stuttgart 75.94 8 *e*P P 08 25 11.9 +0.4
comp=Z,618nm,1.1s,baz=355,slow=5.8
STU Stuttgart 75.94 8 P P 08 25 12.1 +0.6
CLF Chambon-Foret 75.97 13 P P 08 25 12.8 +1.1
GRC3 Grafenberg Arr 75.99 6 P P 08 25 12.3 +0.5
GRC2 Grafenberg Arr 76.00 6 P P 08 25 12.3 +0.4
LANS Liptovska Anna 76.00 1 *e*P P 08 25 13.4 +1.5
LANS pmax pmax
comp=Z,78nm,0.9s
LANS Liptovska Anna 76.00 1 *e*P P 08 25 13.4 +1.5
KRUC Moravsky 76.03 3 P P 08 25 11.8 -0.2
KRUC Moravsky 76.03 3 *e*P P 08 25 12.0 0.0
KRUC Moravsky 76.03 3 P P 08 25 12.4 +0.4
KCP Kidapawan 76.04 262 *i* P P 08 25 13.2 +0.6
DRK Karamyk 76.06 322 P P 08 25 10.4 -2.3
GEC2 GERESS Array S 76.15 5 IAmb IAmb 08 25 14.4
comp=Z,195nm,1.0s
GEC2 GERESS Array S 76.15 5 *e*P P 08 25 13.2 +0.4
comp=Z,206nm,1.0s,baz=355,slow=5.8
GERES GERESS Array B 76.15 5 P P 08 25 13.1 +0.3
comp=Z,134nm,0.9s,baz=343,slow=4.2,SNR=494
GERES PKPPKP P'P'df 08 52 20.4 -15
comp=Z,0.2nm,0.4s,baz=190,slow=5.0,SNR=5.6
comp=Z,134nm,0.9s
CKRC Cesky Krumlov 76.20 4 *e*P P 08 25 13.4 +0.4
CKRC pmax pmax
comp=Z,55nm,0.8s
CKRC MLR MLR
comp=Z,43µm,20.0s
CKRC Cesky Krumlov 76.20 4 *e*P P 08 25 13.4 +0.4
comp=Z,55nm,0.8s
CKRC AMS AMS 08 43 50.0
comp=Z,43µm,20.0s
KOLS Kolonicke sedl 76.21 359 *e*P P 08 25 14.0 +0.9
KOLS pmax pmax
comp=Z,254nm,1.0s
KOLS Kolonicke sedl 76.21 359 P P 08 25 13.9 +0.9
KOLS Kolonicke sedl 76.21 359 *e*P P 08 25 14.0 +0.9
LSA Lhasa 76.25 302 P P 08 25 14.9 +0.7
LSA Lhasa 76.25 302 P P 08 25 15.1 +0.9
JAVC Velka Javorina 76.27 2 *e*P P 08 25 14.7 +1.3
JAVC Velka Javorina 76.27 2 P P 08 25 15.1 +1.6
BFO Black Forest 76.31 8 P P 08 25 14.0 +0.4
BFO pmax pmax
comp=Z,204nm,1.2s
BFO Black Forest 76.31 8 P P 08 25 14.0 +0.4
BFO IAmb IAmb 08 25 15.1
comp=Z,204nm,1.2s
BFO Black Forest 76.31 8 *e*P P 08 25 14.1 +0.4
comp=Z,187nm,1.2s,baz=355,slow=5.8
ECH Echery 76.32 9 P P 08 25 14.2 +0.5
ECH Echery 76.32 9 P P 08 25 14.2 +0.5
TNCH TengChong 76.37 294⇑*i*P P 08 25 15.0 +0.4
TNCH pmax pmax
comp=Z,550nm,0.9s
HAU Haudompre 76.45 10 *e*P P 08 25 13.9 -0.6
HAU pmax pmax
comp=Z,220nm,1.0s
SLVN Son La 76.48 288 P P 08 25 15.4 +0.3
PRSN Puerto Rico Se 76.49 78 IAmb IAmb 08 25 16.4
comp=Z,117nm,1.2s
UZHM Uzhgorod 76.52 359 P P 08 25 14.8 0.0
BCIP Isla Barro Col 76.55 93 pP pP 08 25 23.6 -3.7
SMOL Smolenice 76.61 2 *e*P P 08 25 16.6 +1.3
SMOL pmax pmax
comp=Z,91nm,0.9s
AOPR Arecibo Observ 76.61 77 IAmb IAmb 08 25 16.7
comp=Z,164nm,1.1s
KECS Kecovo 76.67 0 *e*P P 08 25 16.3 +0.6
KECS pmax pmax
comp=Z,316nm,0.9s
KECS Kecovo 76.67 0 P P 08 25 16.6 +0.9
KECS Kecovo 76.67 0 *e*P P 08 25 16.3 +0.6
CRPR Cabo Rojo, PR 76.68 78 IAmb IAmb 08 25 17.4
comp=Z,167nm,1.4s
FUR Furstenfeldbru 76.69 6 *e*P P 08 25 16.4 +0.6
comp=Z,252nm,0.9s,baz=355,slow=5.8
FUR Furstenfeldbru 76.69 6 P P 08 25 16.5 +0.6
UUPR Utuado, UPR, P 76.70 77 IAmb IAmb 08 25 17.1
comp=Z,113nm,1.0s
MODS Modra-Piesok 76.74 2 *e*P P 08 25 17.0 +0.9
MODS pmax pmax
comp=Z,1µm,1.1s
MODS Modra-Piesok 76.74 2 P P 08 25 17.3 +1.2
MODS Modra-Piesok 76.74 2 *e*P P 08 25 17.0 +0.9
MLPR Magueyes Islan 76.75 78 IAmb IAmb 08 25 18.6
comp=Z,166nm,1.5s
SORM Soroca 76.82 355 ⇓P P 08 25 15.8 -0.6
SORM Soroca 76.82 355 P P 08 25 15.9 -0.6
SORM Soroca 76.82 355 P P 08 25 15.7 -0.8
comp=Z,516nm,0.9s
DRBR Darabani 76.83 356 ⇑P P 08 25 15.9 -0.6
ECPR Experimental S 76.85 77 IAmb IAmb 08 25 17.9
comp=Z,146nm,1.0s

ABAH Abaujker 76.86 360 P P 08 25 17.6 +0.8
SLE Schleitheim 76.88 8 P P 08 25 16.8 -0.1
SLE Schleitheim 76.88 8 P P 08 25 17.1 +0.1
LOR Lormes 76.91 12 *e*P P 08 25 16.5 -0.6
LOR pmax pmax
comp=Z,342nm,1.2s
CELP Cerrillos 76.92 77 IAmb IAmb 08 25 18.7
comp=Z,183nm,1.1s
OBIP Obispado Ponce 76.93 77 IAmb IAmb 08 25 18.8
comp=Z,107nm,1.1s
BAL3X Bal3x, Balta 76.94 354 P P 08 25 16.3 -0.9
WINA Alland / Wiene 76.98 3 *i* P P 08 25 18.0 +0.6
comp=Z,247nm,1.0s,SNR=111
TRPA Tarpa 77.01 359 P P 08 25 18.2 +0.7
GAR Garm 77.02 322 P P 08 25 18.1 +0.1
MFF Saint Martin d 77.05 15 *e*P P 08 25 17.6 -0.2
MFF pmax pmax
comp=Z,2µm,1.0s
SJG San Juan 77.13 77 P P 08 25 17.5 -1.2
SJG pmax pmax
comp=Z,110nm,1.0s
SJG San Juan 77.13 77 P P 08 25 17.5 -1.2
SJG IAmb IAmb 08 25 20.5
comp=Z,110nm,1.0s
SJG San Juan 77.13 77 P P 08 25 17.3 -1.4
SJG pP PcP 08 25 28.3 -1.1
BOURR Bourrignon 77.14 9 P P 08 25 19.1 +0.6
CONA Conrad Observa 77.15 3 *i* P P 08 25 19.2 +0.8
comp=Z,399nm,1.2s,SNR=227
MOA Molln 77.17 4 *i* P P 08 25 18.7 +0.3
comp=Z,116nm,1.2s,SNR=102
MOA Molln 77.17 4 P P 08 25 18.8 +0.3
RJOB Jochberg 77.21 5 *e*P P 08 25 19.3 +0.5
comp=Z,223nm,0.8s,baz=355,slow=5.8
RJOB Jochberg 77.21 5 P P 08 25 19.4 +0.6
PSZ Piszkesteto 77.23 1 ⇑P P 08 25 20.0 +1.0
PSZ Piszkesteto 77.23 1 P P 08 25 19.9 +1.0
PSZ Piszkesteto 77.23 1 P P 08 25 20.0 +1.0
HUMP Col San Antoni 77.28 77 IAmb IAmb 08 25 21.4
comp=Z,103nm,1.0s
PDPR Patillas Dam, 77.28 77 IAmb IAmb 08 25 20.6
comp=Z,107nm,1.2s
BIOA Bad Ischl, Aus 77.30 5 *i* P P 08 25 19.6 +0.4
comp=Z,153nm,1.1s,SNR=61
AVF Avril sur Loir 77.32 12 *e*P P 08 25 18.7 -0.6
AVF pmax pmax
comp=Z,263nm,1.0s
SRO Srobarova 77.32 2 *e*P P 08 25 20.3 +1.0
SRO pmax pmax
comp=Z,185nm,1.1s
SRO Srobarova 77.32 2 P P 08 25 20.7 +1.4
SRO Srobarova 77.32 2 *e*P P 08 25 20.3 +1.0
RETA Reutte 77.33 7 *i* P P 08 25 19.9 +0.4
comp=Z,230nm,1.4s,SNR=78
PGRA Graciosa 77.36 37 *e*P P 08 25 20.7 +1.0
PGRA *i* IAmb IAmb 08 25 23.9
comp=Z,845nm,1.4s
RONA Rosalia, Austr 77.39 3 *i* P P 08 25 20.7 +0.9
comp=Z,174nm,1.0s,SNR=85
SOP Sopron 77.42 3 P P 08 25 20.9 +1.0
PPR Puerto Princes 77.42 269 *e*P P 08 25 20.7 +0.4
BMR Baia Mare 77.45 358 ⇓P P 08 25 20.5 +0.5
BMR Baia Mare 77.45 358 P P 08 25 20.6 +0.5
BMR Baia Mare 77.45 358 P P 08 25 20.7 +0.6
PCED Cedros 77.47 37 *e*P P 08 25 21.1 +0.8
PCED *i* IAmb IAmb 08 25 22.8
comp=Z,646nm,1.0s
DAVA Damuels 77.47 7 *i* P P 08 25 20.7 +0.4
comp=Z,88nm,0.9s,SNR=34
DAVA Damuels 77.47 7 P P 08 25 20.8 +0.4
DAVA pP PcP 08 25 31.2 +0.6
BURAR Bucovina Array 77.47 357 ⇑P P 08 25 20.5 +0.1
BURAR Bucovina Array 77.47 357 P P 08 25 20.4 +0.1
BURAR Bucovina Array 77.47 357 P P 08 25 20.6 +0.3
MOTA Moosalm 77.50 7 *i* P P 08 25 20.9 +0.4
comp=Z,312nm,1.0s,SNR=173
CALA Caldeira 77.51 38 *e*P P 08 25 21.6 +0.9
CALA *i* IAmb IAmb 08 25 24.4
comp=Z,828nm,1.3s
LESA Schwarzeotal 77.51 6 *i* P P 08 25 21.0 +0.5
comp=Z,315nm,1.5s,SNR=124
SMF Signal de Mont 77.52 12 *e*P P 08 25 19.8 -0.7
SMF pmax pmax
comp=Z,345nm,1.1s
WATA Walderalm 77.53 6 *i* P P 08 25 21.1 +0.4
comp=Z,361nm,1.0s,SNR=122
ROSA Rosais 77.54 37 *e*P P 08 25 21.5 +0.7
ROSA *i* IAmb IAmb 08 25 23.4
comp=Z,521nm,1.2s
ROSA Rosais 77.54 37 P P 08 25 22.0 +1.3
HOR Horta 77.58 37 *e*P P 08 25 22.0 +1.1
HOR *i* IAmb IAmb 08 25 23.4
comp=Z,686nm,0.8s
WTTA Wattenberg 77.61 6 *i* P P 08 25 21.9 +0.8
comp=Z,558nm,1.2s,SNR=144
WTTA Wattenberg 77.61 6 P P 08 25 22.0 +0.8
SQTA Sankt Quirin 77.63 7 *i* P P 08 25 21.9 +0.7
comp=Z,628nm,1.1s,SNR=199
BUD Budapest 77.66 1 P P 08 25 21.9 +0.6
PMAN Manadas 77.67 37 *e*P P 08 25 22.4 +1.0
PMAN *i* IAmb IAmb 08 25 25.2
comp=Z,416nm,1.2s
PICO Pico 77.67 37 *e*P P 08 25 22.6 +1.1
PICO *i* IAmb IAmb 08 25 25.6
comp=Z,386nm,1.6s
PRAR RASCA 77.69 356 ⇓P P 08 25 20.9 -0.5
PCAN Candelaria 77.69 37 *e*P P 08 25 21.8 +0.2
PCAN *i* IAmb IAmb 08 25 23.9
comp=Z,341nm,1.1s
CHGR Chuyangaron 77.72 323*c i*P P 08 25 21.6 -0.3
CHGR pmax pmax
comp=Z,2µm,0.9s
CHGR Chuyangaron 77.72 323 P P 08 25 21.9 +0.1
PPNO Prainha do Nor 77.76 37 *e*P P 08 25 22.9 +0.9
PPNO *i* IAmb IAmb 08 25 24.6
comp=Z,636nm,1.1s
BNALP Bannalp 77.76 9 P P 08 25 22.8 +0.8
LTVH Ltavrtes, Hu 77.77 359 ⇓P P 08 25 22.9 +1.2
LTVH Ltavrtes, Hu 77.77 359 P P 08 25 23.3 +1.5
FETA Feichten 77.79 7 *i* P P 08 25 23.0 +0.8
comp=Z,397nm,1.0s,SNR=223
IASR Iasi 77.81 355 ⇑P P 08 25 21.6 -0.5
ARSA Arzberg 77.81 4 *i* P P 08 25 23.0 +0.8
comp=Z,268nm,1.1s,SNR=130
ARSA Arzberg 77.81 4 P P 08 25 23.1 +0.9
PSBA Serra de Santa 77.81 36 *e*P P 08 25 23.5 +1.2
PSBA *i* IAmb IAmb 08 25 25.0
comp=Z,512nm,0.9s
MANEM Manem 77.83 321 IAmb IAmb 08 25 24.8
comp=Z,743nm,1.2s
BSZH Besenyszg 77.86 0 ⇑P P 08 25 23.3 +1.0
BSZH Besenyszg 77.86 0 P P 08 25 23.8 +1.6
PAGU Agualva, Azore 77.86 36 *e*P P 08 25 23.6 +1.1
PAGU *i* IAmb IAmb 08 25 25.1
comp=Z,304nm,1.0s
KBA Koelnbreinsper 77.89 5 *i* P P 08 25 23.8 +1.1
comp=Z,728nm,1.3s,SNR=87
KBA Koelnbreinsper 77.89 5 P P 08 25 23.9 +1.1
GIMEL St. Georges / 77.90 10 P P 08 25 23.5 +0.8
SESA Seetaler Alpe, 77.91 4 *i* P P 08 25 23.8 +0.9
comp=Z,487nm,1.0s,SNR=272
KIS Kishinev 77.92 354 ⇓P P 08 25 22.1 -0.6
KIS Kishinev 77.92 354 P P 08 25 22.0 -0.6
PSCM Serra do Cume 77.94 36 *e*P P 08 25 23.6 +0.7
PSCM *i* IAmb IAmb 08 25 25.5
comp=Z,214nm,1.4s
ADH Angra Heroismo 77.95 36 *e*P P 08 25 24.4 +1.5
ADH *i* IAmb IAmb 08 25 27.3
comp=Z,593nm,1.3s
MPLH Magyarpolny 77.95 2 P P 08 25 23.2 +0.3
comp=Z,1µm,1.2s
MPLH Magyarpolny 77.95 2 P P 08 25 24.0 +1.1
MESR Meseseni 77.99 358 ⇑P P 08 25 24.1 +1.1
ARCR ARCALIA 78.02 357 ⇑P P 08 25 24.2 +1.0
ERBR Yeremizino-Bor 78.05 346 *e*P P 08 25 22.2 -1.2
ERBR pmax pmax
comp=Z,880nm,1.0s
KOHI KOHIMA 78.08 298 *e*P P 08 25 23.6 -0.5
GIRR Girov 78.08 356 ⇑P P 08 25 23.2 -0.3
BIZ Bicaz 78.11 356 ⇑P P 08 25 24.4 +0.6
FUORN Ofenpass-Fuorn 78.16 7 P P 08 25 25.4 +1.1
SENIN Lac Senin/Sane 78.17 9 IAmb IAmb 08 25 43.9
comp=Z,71nm,0.9s
ABTA Abfaltersbach 78.18 6 *i* P P 08 25 24.5 +0.3

comp=Z,287nm,1.1s,SNR=157
TUE Stuetta 78.24 8 IAmb IAmb 08 25 26.9
comp=Z,154nm,1.0s
TUE Stuetta 78.24 8 P **P** **08 25 25.7 +0.9**
PMG Port Moresby 78.26 234 P **P** **08 25 25.8 +0.9**
PMG Port Moresby 78.26 234 P **P** **08 25 25.7 +0.9**
PMG Port Moresby 78.26 234*c iP* **P** **08 25 24.5 -0.4**
PMG *pmax pmax*
comp=Z,240nm,1.2s
PMG Port Moresby 78.26 234 P **P** **08 25 24.7 -0.2**
PMG IAmb IAmb 08 25 26.0
comp=Z,209nm,1.1s
PMG Port Moresby 78.26 234 P **P** **08 25 24.9 0.0**
GOF Gofitskoye 78.31 344*c iP* **P** **08 25 25.2 +0.3**
GOF *eS* **SKSac** **08 35 34.7 -1.3**
PURM Purcari 78.33 354 ⇑P **P** **08 25 25.6 +0.7**
PURM Purcari 78.33 354 P **P** **08 25 24.6 -0.3**
comp=Z,505nm,1.1s
VASR Vaslui 78.33 355 ⇓P **P** **08 25 25.2 +0.3**
DRGR 78.35 359 ⇑P **P** **08 25 25.1 -0.1**
DRGR 78.35 359 P **P** **08 25 25.4 +0.2**
DRGR 78.35 359 P **P** **08 25 25.5 +0.3**
MYKA Terra Mystica 78.35 5*i P* **P** **08 25 25.3 +0.1**
comp=Z,134nm,0.9s,SNR=83
SOKA Soboth 78.37 4*i P* **P** **08 25 25.8 +0.5**
comp=Z,317nm,1.0s,SNR=400
CJR Cluj-Napoca 78.41 358 ⇑P **P** **08 25 25.8 +0.3**
CJR Cluj-Napoca 78.41 358 P **P** **08 25 25.8 +0.3**
MARR Marisel-Cluj 78.46 358 ⇑P **P** **08 25 26.0 +0.2**
LEOM Leova 78.48 355 P **P** **08 25 25.7 0.0**
OBKA Obir 78.52 4*i P* **P** **08 25 26.6 +0.5**
comp=Z,759nm,0.8s,SNR=336
OBKA Obir 78.52 4 P **P** **08 25 26.7 +0.5**
TESR Tescani 78.52 356 ⇑P **P** **08 25 26.1 +0.1**
TESR Tescani 78.52 356 P **P** **08 25 25.9 -0.1**
PRED Cave del Predi 78.54 5 IAmb IAmb 08 25 27.9
comp=Z,206nm,1.1s
TGMR Targu Mures 78.58 357 ⇑P **P** **08 25 27.4 +1.1**
BEHE Becsehely 78.63 3 IAmb IAmb 08 25 28.9
comp=Z,172nm,1.1s
BEHE Becsehely 78.63 3*i P* **P** **08 25 27.6 +1.0**
BEHE Becsehely 78.63 3 P **P** **08 25 27.8 +1.1**
ONER Baraj Valea Uz 78.70 356 ⇑P **P** **08 25 27.9 +0.9**
BIR Birlad 78.72 355 ⇑P **P** **08 25 27.9 +0.8**
BIR Birlad 78.72 355 P **P** **08 25 27.9 +0.8**
AMBH Ambrzfalva 78.81 360 ⇑P **P** **08 25 28.8 +1.3**
AMBH Ambrzfalva 78.81 360 P **P** **08 25 28.9 +1.3**
CTI Castel Tesino 78.82 6 IAmb IAmb 08 25 30.1
comp=Z,180nm,1.1s
SIRR Siria 78.89 359 ⇓P **P** **08 25 28.5 +0.4**
IMP Imphal 78.89 298*eP* **P** **08 25 28.3 -0.1**
SMRT St. Maarten 78.89 75 IAmb IAmb 08 25 29.1
comp=Z,146nm,1.1s
SMRT St. Maarten 78.89 75 P **P** **08 25 27.6 -0.9**
GUWA GUWAHATI 78.89 300*eP* **P** **08 25 27.5 -0.8**
MORH Mrgy, Hungar 78.93 1 ⇑P **P** **08 25 28.6 +0.4**
MORH Mrgy, Hungar 78.93 1*i P* **P** **08 25 28.3 +0.1**
MORH Mrgy, Hungar 78.93 1 P **P** **08 25 27.9 -0.3**
comp=Z,164nm,1.2s
MORH Mrgy, Hungar 78.93 1 P **P** **08 25 28.5 +0.3**
GHRR 78.93 355 ⇑P **P** **08 25 29.1 +0.8**
GHRR 78.93 355 P **P** **08 25 29.0 +0.7**
SSB Saint Sauveur 78.95 12 P **P** **08 25 29.0 +0.5**
SSB Saint Sauveur 78.95 12 IAmb IAmb 08 25 30.4
comp=Z,124nm,1.1s
SSB Saint Sauveur 78.95 12 P **P** **08 25 28.9 +0.5**
MDB Medias 78.97 357 ⇑P **P** **08 25 29.3 +0.8**
MDB Medias 78.97 357 P **P** **08 25 29.5 +1.0**
OZUR 78.97 356 ⇑P **P** **08 25 29.2 +0.7**
BOSR Bodos 78.99 356 ⇑P **P** **08 25 29.8 +1.1**
TURR Turia 79.00 356 ⇑P **P** **08 25 29.6 +0.8**
SHAA Shahritus 79.06 323 IAmb IAmb 08 25 31.0
comp=Z,933nm,1.1s
LABN Labinsk 79.07 346*eP* **P** **08 25 28.2 -0.8**
LABN *pmax pmax*
comp=Z,216nm,1.2s
DOPR Dopca 79.11 357 ⇑P **P** **08 25 30.0 +0.7**
VLDR Vladesti 79.11 355 ⇓P **P** **08 25 29.5 +0.3**
COSR Cosmesti PH 79.14 355 ⇑P **P** **08 25 30.3 +0.9**
HNLY HANLEY 79.16 313*eP* **P** **08 25 31.2 +0.8**
VRI Vrincioaia 79.16 356 ⇓P **P** **08 25 29.7 +0.1**
VRI Vrincioaia 79.16 356 P **P** **08 25 29.6 +0.1**
VRI Vrincioaia 79.16 356 P **P** **08 25 29.8 +0.3**
STS Santiago 79.16 21 P **P** **08 25 30.1 +0.5**
PLOR Plostina 79.18 356 ⇓P **P** **08 25 30.4 +0.7**
PLOR Plostina 79.18 356 P **P** **08 25 30.3 +0.7**
MORE Moreh 79.20 297 IAmb IAmb 08 25 41.3
comp=Z,131nm,0.9s
COVR Voineasa-Covas 79.20 356 ⇑P **P** **08 25 30.1 +0.3**
ODBI Odobesti 79.25 355 ⇑P **P** **08 25 29.8 -0.1**
DEV Deva 79.25 358 ⇓P **P** **08 25 31.1 +1.0**
DEV Deva 79.25 358 P **P** **08 25 31.0 +1.0**
DEV Deva 79.25 358 P **P** **08 25 30.5 +0.5**
PYA1 Pyatigorsk 79.27 344*c iP* **P** **08 25 30.4 +0.2**
TRI Trieste 79.28 5 IAmb IAmb 08 25 30.9
comp=Z,109nm,0.8s
SCTR Scanteiesti 79.29 355 ⇑P **P** **08 25 30.5 +0.2**
PDA Ponta Delgada 79.30 36*eP* **P** **08 25 31.9 +1.5**
PDA *i* IAmb IAmb 08 25 34.7
comp=Z,1μm,1.3s
SHL Shillong 79.32 300 P **P** **08 25 29.3 -1.7**
SHL *pmax pmax*
comp=Z,237nm,1.5s
SHL Shillong 79.32 300 P **P** **08 25 29.8 -1.1**
SNR=30
SHL Shillong 79.32 300 IAmb IAmb 08 25 30.3
comp=Z,136nm,0.8s
SHL Shillong 79.32 300*eP* **P** **08 25 29.6 -1.4**
SHL IAmb IAmb 08 25 31.2
comp=Z,90nm,0.9s
CMLA Cha da Macela 79.33 36*eP* **P** **08 25 31.6 +1.0**
CMLA Cha da Macela 79.33 36 P **P** **08 25 30.7 +0.1**
CMLA *pmax pmax*
comp=Z,169nm,0.9s
CMLA Cha da Macela 79.33 36 P **P** **08 25 30.7 +0.1**
CMLA IAmb IAmb 08 25 46.5
comp=Z,169nm,0.8s
CMLA Cha da Macela 79.33 36 P **P** **08 25 32.2 +1.6**
ANN Anapa 79.34 348*i P* **P** **08 25 29.9 -0.6**
TATR Tatarca 79.36 355 ⇓P **P** **08 25 31.5 +0.9**
PGRON Lagoa das Cont 79.37 35*eP* **P** **08 25 31.5 +0.6**
PGRON *i* IAmb IAmb 08 25 35.1
comp=Z,416nm,2.0s
VIVF Saint-Julien-l 79.39 11*eP* **P** **08 25 30.5 -0.3**
VIVF *pmax pmax*
comp=Z,170nm,1.2s
IZVR Izvoarele 79.43 355 ⇑P **P** **08 25 30.8 -0.2**
NEGRR Negrea 79.43 355 ⇑P **P** **08 25 31.4 +0.4**
BART Pico Bartolome 79.43 35*eP* **P** **08 25 31.4 +0.1**
BART *i* IAmb IAmb 08 25 34.9
comp=Z,1μm,1.0s
KVAR Kislovodsk Arr 79.44 344 P **P** **08 25 32.0 +0.8**
comp=Z,119nm,1.0s,baz=269,slow=0.5
comp=Z,119nm,1.0s
KIV Kislovodsk 79.44 344 ⇑P **P** **08 25 31.9 +0.7**
KIV Kislovodsk 79.44 344*i P* **P** **08 25 31.8 +0.6**
SNR=47
KIV Kislovodsk 79.44 344*eP* **P** **08 25 31.7 +0.5**
KIV *pmax pmax*
comp=Z,494nm,1.1s
KIV Kislovodsk 79.44 344 P **P** **08 25 31.5 +0.3**
KIV Kislovodsk 79.44 344 P **P** **08 25 31.3 +0.1**
KIV Kislovodsk 79.44 344 P **P** **08 25 31.8 +0.6**
TNR Turnu Rosu 79.46 357 ⇓P **P** **08 25 32.0 +0.8**
TNR Turnu Rosu 79.46 357 P **P** **08 25 32.0 +0.8**
SCHL Schela 79.47 355 ⇓P **P** **08 25 31.8 +0.6**
SCHLR Schela 79.50 355 ⇑P **P** **08 25 31.0 -0.3**
BZS Buzias 79.54 359 ⇑P **P** **08 25 31.9 +0.3**
BZS Buzias 79.54 359 P **P** **08 25 31.8 +0.3**
BZS Buzias 79.54 359 P **P** **08 25 31.9 +0.3**
SIM Simferopol' 79.56 350*eP* **P** **08 25 32.0 +0.3**
SIM *eS* S 08 35 52.0 +22
SIM *pmax pmax*
comp=Z,281μm,0.7s
MAK Makhachkala 79.56 340*eP* **P** **08 25 31.8 +0.1**
MAK *e* 08 28 31.4
MAK *eS* **S** **08 35 29.5 -0.7**
MAK *pmax pmax*
comp=Z,993nm,0.9s
MLR Muntele Rosu 79.56 356 P **P** **08 25 31.9 -0.1**
comp=Z,89nm,1.0s,baz=11,slow=4.0,SNR=90
comp=Z,89nm,1.0s
MLR Muntele Rosu 79.56 356 ⇑P **P** **08 25 32.3 +0.3**
MLR Muntele Rosu 79.56 356 P **P** **08 25 32.2 +0.3**
MLR Muntele Rosu 79.56 356 IAmb IAmb 08 25 34.2
comp=Z,285nm,1.3s
MLR Muntele Rosu 79.56 356 P **P** **08 25 32.3 +0.3**
NEHR Nehoiu 79.61 356 ⇑P **P** **08 25 31.9 -0.1**
KBZ Khabaz 79.63 344 P **P** **08 25 32.7 +0.6**
comp=Z,412nm,0.9s,baz=23,slow=1.6,SNR=257
KBZ PKKPbc **PKKPbc** **08 44 17.9 +1.1**
comp=Z,1.1nm,0.6s,baz=162,slow=3.2,SNR=3.6
comp=Z,412nm,0.9s
KBZ Khabaz 79.63 344*c iP* **P** **08 25 32.5 +0.4**
KBZ *pmax pmax*
comp=Z,421nm,0.9s
GRER 79.63 355 ⇑P **P** **08 25 31.5 -0.6**
VOIR 79.65 357 ⇓P **P** **08 25 32.4 0.0**
VOIR 79.65 357 ⇑P **P** **08 25 32.3 0.0**
VOIR 79.65 357 P **P** **08 25 32.2 -0.1**
comp=Z,8μmcomp=Z,166nm,1.0s
VOIR 79.65 357 P **P** **08 25 32.8 +0.4**
SHA1 Shidzhatmaz 79.66 344*c iP* **P** **08 25 32.8 +0.2**
LOT Lotru 79.67 358 ⇑P **P** **08 25 33.1 +0.6**
TLCR 79.73 354 ⇓P **P** **08 25 32.7 +0.1**
TLCR 79.73 354 P **P** **08 25 32.7 +0.1**
NCK Nalchik 79.74 343*c iP* **P** **08 25 33.9 +1.1**
NCK *pmax pmax*
comp=Z,1μm,1.1s
GZR Gura Zlata 79.75 358 ⇑P **P** **08 25 33.3 +0.5**
GZR Gura Zlata 79.75 358 P **P** **08 25 33.3 +0.5**
BANR Banloc 79.77 360 ⇓P **P** **08 25 33.9 +1.1**
CFR Carcaliu 79.78 355 ⇑P **P** **08 25 33.1 +0.2**
CFR Carcaliu 79.78 355 P **P** **08 25 33.0 +0.2**
EVN Everest 79.78 305 P **P** **08 25 34.2 +0.3**
MTUR Matau 79.86 357 ⇑P **P** **08 25 33.8 +0.3**
MTUR Matau 79.86 357 P **P** **08 25 33.7 +0.3**
TNTI Ternate 79.87 257 P **P** **08 25 34.0 +0.2**
TNTI Ternate 79.87 257 P **P** **08 25 33.4 -0.4**
ISR Istrita 79.91 356 ⇑P **P** **08 25 33.7 -0.1**
ISR Istrita 79.91 356 P **P** **08 25 33.6 -0.1**
FRGS Fruska Gora 80.00 1⇑*iP* **P** **08 25 34.3 +0.2**
TPGR Topolog 80.08 354 ⇑P **P** **08 25 34.9 +0.4**
PGOR Pogoanele 80.10 355 ⇓P **P** **08 25 35.7 +1.0**
PGAV Gavieira, Arco 80.11 21⇑*iP* **P** **08 25 35.9 +1.0**
PGAV *i* IAmb IAmb 08 25 37.4
comp=Z,232nm,1.5s
JURR Jurilovca 80.14 354 ⇑P **P** **08 25 34.8 -0.1**
SOC Sochi 80.25 346*eP* **P** **08 25 34.2 -1.2**
SOC *eS* **S** **08 35 35.4 -2.1**
SOC *eSS* **SS** **08 40 50.6 +3.2**
SOC *eSSS* SSS 08 44 05.2
SOC *pmax pmax*
comp=Z,312nm,0.8s
SOC MLR MLR
comp=Z,7μm,18.0s
FAKI Fak Fak 80.25 250 P **P** **08 25 36.7 +0.9**
FAKI Fak Fak 80.25 250 IAmb IAmb 08 25 37.0
comp=Z,188nm,0.9s
FAKI Fak Fak 80.25 250 P **P** **08 25 36.0 +0.1**
HERR Herculane 80.26 359 ⇑P **P** **08 25 35.8 +0.2**
TSSA Tissa 80.27 315*eP* **P** **08 25 36.6 +0.6**
ISO Isola 80.30 10 P **P** **08 25 37.1 +1.2**
VSLR Vesoyloye 80.32 346*c iP* **P** **08 25 36.0 +0.1**
VSLR *pmax pmax*
comp=Z,444nm,1.0s
SULR 80.36 356 ⇓P **P** **08 25 35.7 -0.3**
SULR 80.36 356 P **P** **08 25 36.0 -0.1**
BLY Banja Luka 80.36 2 ⇑P **P** **08 25 36.3 +0.2**
BLY Banja Luka 80.36 2 IAmb IAmb 08 25 51.6
comp=Z,131nm,1.0s
BLY Banja Luka 80.36 2⇑*iP* **P** **08 25 36.3 +0.2**
BLY Banja Luka 80.36 2 P **P** **08 25 36.5 +0.4**
MDVR Moldovita 80.37 359 ⇑P **P** **08 25 36.5 +0.4**
RUSF Rustrel 80.38 11 P **P** **08 25 37.7 +1.5**
AMRR Amara 80.38 355 ⇑P **P** **08 25 36.3 +0.2**
AMRR Amara 80.38 355 P **P** **08 25 36.3 +0.2**
PCAB Cabril 80.40 21⇑*iP* **P** **08 25 37.3 +0.9**
PCAB *i* IAmb IAmb 08 25 58.9
comp=Z,236nm,1.6s
ATE Arette 80.40 16 P **P** **08 25 36.5 +0.2**
TLBR Topalu 80.41 355 ⇓P **P** **08 25 36.7 +0.4**
ECAL Calabor 80.44 20 P **P** **08 25 37.7 +1.1**
ECAL Calabor 80.44 20 P **P** **08 25 38.0 +1.3**
SRE Strehaia 80.47 358 ⇑P **P** **08 25 37.2 +0.5**
SRE Strehaia 80.47 358 P **P** **08 25 37.1 +0.5**
HUMR Humele 80.56 357 ⇑P **P** **08 25 36.8 -0.3**
HUMR Humele 80.56 357 P **P** **08 25 36.8 -0.3**
PBRG Braganca 80.57 20⇑*iP* **P** **08 25 37.9 +0.6**
PBRG *i* IAmb IAmb 08 25 58.9
comp=Z,165nm,1.4s
TEKS Tekeris 80.60 1⇑*iP* **P** **08 25 37.5 +0.1**
CVDA Cernavoda 80.62 355 ⇓P **P** **08 25 37.8 +0.4**
SBF Sospel 80.66 10*eP* **P** **08 25 37.3 -0.5**
SBF *pmax pmax*
comp=Z,292nm,0.9s
ESCA l'Escarene 80.68 10 P **P** **08 25 38.4 +0.6**
NIL Nilore 80.69 318 P **P** **08 25 38.7 +0.6**
NIL *pmax pmax*
comp=Z,1μm,1.0s
NIL Nilore 80.69 318 P **P** **08 25 38.5 +0.4**
NIL Nilore 80.69 318 P **P** **08 25 38.7 +0.6**
NIL Nilore 80.69 318 P **P** **08 25 38.7 +0.6**
CALF Calern 80.72 10 P **P** **08 25 38.6 +0.5**
DHRM DHARAMSHALA 80.72 315*eP* **P** **08 25 38.4 0.0**
DHRM IAmb IAmb 08 25 39.7
comp=Z,855nm,1.3s
THN Thein Dam 80.77 315*eP* **P** **08 25 39.1 +0.6**
THN IAmb IAmb 08 25 41.7
comp=Z,142nm,0.9s
POLO Lamas de Olo 80.77 21⇑*iP* **P** **08 25 39.4 +0.9**
POLO *i* IAmb IAmb 08 25 40.9
comp=Z,146nm,1.2s
MON Monaco 80.79 10 P **P** **08 25 39.8 +1.5**
CRAR CRAIOVA 80.80 358 ⇑P **P** **08 25 38.6 +0.2**
CRAR CRAIOVA 80.80 358 P **P** **08 25 38.5 +0.2**
ARBF Arbois 80.81 11 P **P** **08 25 39.9 +1.4**
PTO Porto 80.83 22⇑*iP* **P** **08 25 39.6 +1.0**
PTO *i* IAmb IAmb 08 25 41.0
comp=Z,335nm,1.2s
SGRR Singureni 80.83 356 ⇑P **P** **08 25 38.0 -0.6**
JOSI Joshimath 80.83 312*eP* **P** **08 25 39.0 0.0**
EFOR EFORIE 80.84 354 ⇑P **P** **08 25 37.5 -1.1**
ICOR Ion Corvin 80.85 355 ⇓P **P** **08 25 39.2 +0.5**
PUNG Punghina 80.86 358 ⇑P **P** **08 25 38.9 +0.2**
PVRL Vila Real 80.88 21⇑*iP* **P** **08 25 40.1 +1.1**
PVRL *i* IAmb IAmb 08 25 41.4
comp=Z,289nm,1.2s
COPA Copaceanca 80.95 357 ⇑P **P** **08 25 38.6 -0.6**
MANR Mangalia 81.11 354 ⇑P **P** **08 25 40.5 +0.5**
UTK UTTARKASHI 81.15 312*eP* **P** **08 25 40.5 -0.2**
CEST Esterri de Car 81.17 14 IAmb IAmb 08 25 42.8
comp=Z,251nm,1.2s
CHTO Chiang Mai 81.22 290 P **P** **08 25 40.7 -0.3**
CHTO Chiang Mai 81.22 290 P **P** **08 25 40.5 -0.5**
CHTO *pmax pmax*
comp=Z,267nm,1.3s
CHTO Chiang Mai 81.22 290 P **P** **08 25 40.2 -0.9**
CHTO Chiang Mai 81.22 290 P **P** **08 25 40.5 -0.5**
CHTO IAmb IAmb 08 25 41.8
comp=Z,267nm,1.3s
CHTO Chiang Mai 81.22 290 P **P** **08 25 40.5 -0.5**
TBLG Delisi 81.26 342 P **P** **08 25 41.4 +0.4**
MYLDM Lahad Datu 81.28 267 P **P** **08 25 42.2 +0.8**
MYLDM Lahad Datu 81.28 267 IAmb IAmb 08 25 43.9
comp=Z,192nm,1.1s
MYLDM Lahad Datu 81.28 267 P **P** **08 25 42.7 +1.3**
BBLS Lazi&#263i 81.28 1⇑*iP* **P** **08 25 42.0 +0.9**
CBE Ff, Capester 81.31 75 P **P** **08 25 42.0 +0.4**
PSN Preselentsi 81.31 355*i P* **P** **08 25 41.4 +0.3**
SMLA Simla 81.34 314*eP* **P** **08 25 41.8 +0.3**
SMLA IAmb IAmb 08 25 42.9
comp=Z,830nm,0.9s
PVIS Viseu 81.38 22⇑*iP* **P** **08 25 42.7 +1.1**
PTH Pithoragarh 81.39 311*eP* **P** **08 25 41.8 -0.2**
PTH IAmb IAmb 08 25 44.0
comp=Z,384nm,1.1s
BHK Bhakra 81.43 314*eP* **P** **08 25 42.4 +0.4**
VALD Valchedram 81.44 358*i P* **P** **08 25 41.6 -0.2**
KBL Kabul 81.46 321 P **P** **08 25 40.8 -1.6**
KBL *pmax pmax*
comp=Z,347nm,1.0s
KBL Kabul 81.46 321 P **P** **08 25 41.4 -1.1**
SNR=142
KBL Kabul 81.46 321 P **P** **08 25 40.8 -1.6**
KBL Kabul 81.46 321 P **P** **08 25 41.3 -1.1**
TDBA Terre de Bas, 81.47 75 P **P** **08 25 42.2 -0.2**
SJAF Saint Jean de 81.50 13 P **P** **08 25 42.8 +0.6**
CM31 Chiang Mai Arr 81.51 290 P **P** **08 25 42.8 +0.2**
SNR=230
CMAR Chiang Mai Arr 81.51 290 P **P** **08 25 42.5 -0.1**
comp=Z,568nm,1.0s,baz=14,slow=5.5,SNR=766
CMAR PKKPbc **PKKPbc** **08 44 13.6 +1.0**
comp=Z,1.6nm,0.6s,baz=234,slow=3.4,SNR=8.5
comp=Z,568nm,1.0s
DLV Lat 81.52 279 P **P** **08 25 43.4 +0.5**
EJON La Jonquera 81.54 13 P **P** **08 25 43.0 +0.6**
EJON La Jonquera 81.54 13 P **P** **08 25 43.2 +0.8**
KOUNC Koumac, New Ca 81.57 214 P **P** **08 25 44.2 +1.6**
KOUNC Koumac, New Ca 81.57 214 IAmb IAmb 08 25 44.5
comp=Z,99nm,1.2s
SHBG Sahibganj 81.69 303*i P* **P** **08 25 43.6 +0.2**
PLVB Pleven 81.71 357 ⇓P **P** **08 25 43.2 -0.1**
NEF NEVSHA 81.73 355 P **P** **08 25 44.0 +0.6**
MTE Manteigas 81.76 21⇑*iP* **P** **08 25 44.5 +0.8**
MTE *i* IAmb IAmb 08 25 46.2
comp=Z,341nm,1.4s
MTE Manteigas 81.76 21 P **P** **08 25 44.9 +1.2**
MPEP Malo Peshtene 81.77 358 P **P** **08 25 43.6 0.0**
PLE Pljevlja 81.82 1⇑*iP* **P** **08 25 45.0 +1.0**
EPOS Posof 81.83 343 P **P** **08 25 45.1 +1.0**
PRD Provadia 81.83 355*i P* **P** **08 25 44.8 +0.9**
KKM Kota Kinabalu 81.89 269 P **P** **08 25 44.9 +0.2**
KKM Kota Kinabalu 81.89 269 IAmb IAmb 08 25 48.0
comp=Z,205nm,1.1s
KKM Kota Kinabalu 81.89 269 P **P** **08 25 45.1 +0.4**
PCAS Casmilo, Conde 81.89 22⇑*iP* **P** **08 25 45.3 +1.0**
PCAS *i* IAmb IAmb 08 25 47.6
comp=Z,416nm,1.7s
SJES Sjenica 81.89 0⇑*iP* **P** **08 25 45.3 +0.9**
BATM Batumi 81.89 344 ⇑P **P** **08 25 44.3 +0.1**
BATM Batumi 81.89 344 P **P** **08 25 44.3 +0.1**
CORI Orista 81.89 14 IAmb IAmb 08 25 46.5
comp=Z,82nm,1.1s
NPW Naypyitaw 81.92 293 P **P** **08 25 44.4 -0.3**
UPM Unac-Piva 81.94 1⇑*iP* **P** **08 25 41.6 -3.1**
PVL Pavlikeni 81.96 357*i P* **P** **08 25 44.8 +0.2**
KLINJ Klinje 81.97 2*eP* **P** **08 25 44.7 -0.1**
SDV Santo Domingo 82.05 86 P **P** **08 25 44.2 -1.5**
SDV Santo Domingo 82.05 86*eP* **P** **08 25 44.4 -1.3**
SDV *epP* **PcP** **08 25 54.9 +3.8**
SDV *eS* **S** **08 35 58.5 +1.1**
PGF Pioggiola 82.10 9*eP* **P** **08 25 45.1 -0.4**
PGF *pmax pmax*
comp=Z,332nm,1.0s
BRY Bratogost 82.24 2⇑*iP* **P** **08 25 46.1 -0.1**
BRY Bratogost 82.24 2⇑*iP* **P** **08 25 46.2 0.0**
IVA Berane 82.28 1⇑*iP* **P** **08 25 46.7 +0.3**
KOME Kolasin 82.30 1⇑*iP* **P** **08 25 46.7 +0.2**
PCBR Castelo Branco 82.31 21⇑*iP* **P** **08 25 47.2 +0.8**
PCBR *i* IAmb IAmb 08 25 48.8
comp=Z,322nm,1.1s
PSBE So Bento 82.34 23*i P* **P** **08 25 47.6 +0.9**
PSBE *i* IAmb IAmb 08 25 50.0
comp=Z,450nm,1.4s
NKME Niksic 82.38 1⇑*iP* **P** **08 25 46.7 -0.1**
PSARD Sardoal 82.40 22⇑*iP* **P** **08 25 47.5 +0.6**
PSARD *i* IAmb IAmb 08 25 49.9
comp=Z,542nm,1.6s
NOUC Port Laguerre 82.40 212 P **P** **08 25 48.0 +1.1**
TREB Trebinje 82.42 2⇑*iP* **P** **08 25 46.5 -0.5**
BZK Bozkurt 82.53 350 ⇑P **P** **08 25 47.9 +0.4**
BZK Bozkurt 82.53 350 IAmb IAmb 08 26 07.6
comp=Z,119nm,1.0s
BZK Bozkurt 82.53 350 P **P** **08 25 47.5 0.0**
comp=Z,140nm,1.3s
PVY Plav 82.56 1⇑*iP* **P** **08 25 47.8 -0.1**
CEME Cevo 82.60 1⇑*iP* **P** **08 25 47.9 -0.1**
AQU L'Aquila 82.61 5 P **P** **08 25 48.8 +0.8**
AQU L'Aquila 82.61 5 P **P** **08 25 48.7 +0.6**
AQU *pmax pmax*
comp=Z,157nm,1.0s
AQU L'Aquila 82.61 5⇑*iP* **P** **08 25 48.7 +0.6**
AQU L'Aquila 82.61 5 P **P** **08 25 48.1 0.0**
comp=Z,157nm,1.0s
AQU L'Aquila 82.61 5 P **P** **08 25 48.9 +0.8**
FDFM Morne la Roset 82.64 75 IAmb IAmb 08 26 33.0
comp=Z,168nm,1.2s
UCM Universidad Co 82.68 18 P **P** **08 25 49.5 +1.0**
UCM Universidad Co 82.68 18 P **P** **08 25 49.7 +1.2**
HCY Herceg Novi 82.69 2⇑*iP* **P** **08 25 48.0 -0.4**
HCY Herceg Novi 82.69 2⇑*iP* **P** **08 25 48.1 -0.4**
CIDE Kastamonu/Cide 82.70 351 ⇑P **P** **08 25 48.7 +0.2**
PDG Podgorica 82.72 1 ⇑P **P** **08 25 48.7 +0.1**
PDG Podgorica 82.72 1⇑*iP* **P** **08 25 48.6 +0.1**
PDG Podgorica 82.72 1 P **P** **08 25 48.7 +0.1**
PDG Podgorica 82.72 1⇑*iP* **P** **08 25 48.6 +0.1**
PMRV Marv??o 82.73 22⇑*iP* **P** **08 25 49.2 +0.5**
PMRV *i* IAmb IAmb 08 25 51.7
comp=Z,406nm,1.3s
DIGO Kars 82.78 343 P **P** **08 25 50.5 +1.2**
KTUT Trabzon 82.79 346 ⇑P **P** **08 25 49.1 +0.2**
GNI Garni 82.80 342 P **P** **08 25 50.3 +1.1**
comp=Z,182nm,0.9s,baz=348,slow=5.2,SNR=32
comp=Z,182nm,0.9s
GNI Garni 82.80 342 P **P** **08 25 49.8 +0.6**
GNI Garni 82.80 342*c iP* **P** **08 25 50.5 +1.3**
GNI *pmax pmax*
comp=Z,413nm,1.2s
GNI Garni 82.80 342 P **P** **08 25 49.8 +0.6**
GNI Garni 82.80 342 IAmb IAmb 08 25 52.0
comp=Z,430nm,1.2s
GNI Garni 82.80 342 P **P** **08 25 49.1 -0.1**
comp=Z,300nm,1.0s
GNI Garni 82.80 342 P **P** **08 25 50.8 +1.6**
BUM Brajici-Budva 82.84 1⇑*iP* **P** **08 25 49.1 -0.2**
BIM Bigot 82.87 75 P **P** **08 25 48.3 -1.5**
PMTG Montargil 82.89 22⇑*iP* **P** **08 25 49.9 +0.4**
PMTG *i* IAmb IAmb 08 25 51.5
comp=Z,338nm,1.2s
PLD Plovdiv 82.94 357*i P* **P** **08 25 47.4 -2.3**
DRME Dracevica, Mon 82.96 1⇑*iP* **P** **08 25 50.0 +0.2**
DRME Dracevica, Mon 82.96 1⇑*iP* **P** **08 25 50.1 +0.2**
SANI Sanana 82.96 256 P **P** **08 25 50.7 +0.5**
SANI Sanana 82.96 256 P **P** **08 25 49.3 -0.8**
SANI Sanana 82.96 256 P **P** **08 25 49.3 -0.8**
INTR Introdacqua 82.97 5 IAmb IAmb 08 25 51.9
comp=Z,113nm,0.8s
LIS Lisbon 83.03 23*eP* **P** **08 25 50.8 +0.6**
LIS IAmb IAmb 08 25 52.2
comp=Z,848nm,1.4s
LIS Lisbon 83.03 23⇑*iP* **P** **08 25 51.2 +1.0**
LIS *i* IAmb IAmb 08 26 10.6
comp=Z,507nm,1.3s
LIS Lisbon 83.03 23*eP* **P** **08 25 50.8 +0.6**
ESDC Sonseca Array 83.17 19 P **P** **08 25 51.8 +0.7**
comp=Z,269nm,1.0s,baz=341,slow=4.7,SNR=631
ESDC PKKPbc **PKKPbc** **08 44 08.9 -0.1**
comp=Z,3.1nm,1.0s,baz=186,slow=1.2,SNR=10
ESDC PKPPKP **P'P'df** **08 52 14.7 -7.2**
comp=Z,1.7nm,0.9s,baz=101,slow=1.3,SNR=6.0
comp=Z,269nm,1.0s
ESDC Sonseca Array 83.17 19 P **P** **08 25 51.5 +0.5**
PARRA Arraiolos 83.18 22⇑*iP* **P** **08 25 51.6 +0.6**
PARRA *i* IAmb IAmb 08 25 53.1
comp=Z,444nm,1.1s
SKO Skopje 83.18 359*i P* **P** **08 25 51.8 +0.8**
ULC Ulcinj 83.18 1⇑*iP* **P** **08 25 50.9 -0.1**
PAB San Pablo 83.22 19 P **P** **08 25 51.7 +0.4**
PAB *pmax pmax*
comp=Z,212nm,1.1s
PAB San Pablo 83.22 19 P **P** **08 25 51.7 +0.4**
PAB San Pablo 83.22 19 P **P** **08 25 52.3 +0.9**
ROSC El Rosal 83.22 91 P **P** **08 25 52.2 +0.2**
comp=Z,4.0nm,0.4s,baz=339,slow=7.1,SNR=7.3
ROSC El Rosal 83.22 91 P **P** **08 25 49.6 -2.4**
ROSC IAmb IAmb 08 26 45.0
comp=Z,119nm,1.8s
PESTR Estremoz 83.22 22 P **P** **08 25 51.9 +0.7**
PESTR Estremoz 83.22 22⇑*iP* **P** **08 25 51.8 +0.5**
PESTR *i* IAmb IAmb 08 25 53.5
comp=Z,385nm,1.2s
PESTR Estremoz 83.22 22 P **P** **08 25 52.1 +0.9**
TOLI2 Tolitoli 83.30 262 P **P** **08 25 51.4 -0.5**
TOLI2 Tolitoli 83.30 262 IAmb IAmb 08 25 56.0
comp=Z,62nm,0.9s
TOLI2 Tolitoli 83.30 262 P **P** **08 25 50.7 -1.2**
SGRT San Giovanni R 83.31 4 IAmb IAmb 08 25 53.2

comp=Z,181nm,1.1s
PEHC Pehcevo 83.36 358 *i* P P 08 25 52.2 +0.2
MOE Montemor 83.39 22⇑ *i*P P 08 25 52.7 +0.6
MOE *i* IAmb IAmb 08 25 54.4
comp=Z,632nm,1.3s
EBAD Badajoz 83.45 21 P P 08 25 53.2 +0.8
EVO Evora 83.45 22 P P 08 25 53.2 +0.9
EVO Evora 83.45 22⇑ *i*P P 08 25 53.3 +0.9
EVO *i* IAmb IAmb 08 25 54.8
comp=Z,463nm,1.1s
NDI New Delhi 83.45 312 *i* x x 08 25 52.3
NDI *i* P P 08 25 52.3 -0.3
CTYL Yalikoy Yolu 83.46 354 P P 08 25 52.7 +0.3
comp=Z,405nm,1.0s
PHP Peshkopia 83.47 0 P P 08 25 52.8 +0.2
NPLP NPLP New Delhi 83.52 312 *e*P P 08 25 52.6 -0.3
MMB Musomishta 83.57 358 *i* P P 08 25 53.5 +0.5
KLYT Kilyos 83.63 354 P P 08 25 53.6 +0.3
comp=Z,8µmcomp=Z,782nm,1.1s
AYAN Aya Nagar 83.67 312 *e*P P 08 25 53.4 -0.3
KELT Kelkit 83.68 346 P P 08 25 55.0 +1.1
SILT Sile 83.69 353 ⇓P P 08 25 53.9 +0.4
BOK Bokaro 83.74 303 *e*P P 08 25 54.3 +0.1
ECHE Chera 83.77 17 P P 08 25 55.1 +1.0
VAY Valandovo 83.82 359 *i* P P 08 25 54.9 +0.7
PLOUS Minas do Lousa 83.84 23⇑ *i*P P 08 25 55.2 +0.8
PLOUS *i* IAmb IAmb 08 25 56.6
comp=Z,554nm,1.2s
RDO Rodhopi 83.92 356 P P 08 25 55.6 +0.9
LUWI Luwuk 83.94 259 P P 08 25 55.8 +0.6
LUWI Luwuk 83.94 259 P P 08 25 53.6 -1.5
LUWI Luwuk 83.94 259 P P 08 25 53.9 -1.2
PBEJ Beja 83.97 22⇑ *i*P P 08 25 55.7 +0.6
PBEJ *i* IAmb IAmb 08 25 57.3
comp=Z,297nm,1.3s
KNT Kendrikon 83.97 358 P P 08 25 56.9 +1.8
SRS Serrai 84.00 358 P P 08 25 55.8 +0.6
PBAR Barrancos 84.00 22 P P 08 25 56.2 +0.9
PBAR Barrancos 84.00 22⇑ *i*P P 08 25 56.1 +0.9
PBAR *i* IAmb IAmb 08 25 57.7
comp=Z,996nm,1.1s
OHR Ohrid 84.04 360 *i* P P 08 25 56.4 +0.9
MESJ Messejana 84.07 23 *e*P P 08 25 56.1 +0.5
MESJ IAmb IAmb 08 25 58.0
comp=Z,294nm,1.3s
MESJ Messejana 84.07 23⇑ *i*P P 08 25 56.1 +0.5
MESJ *i* IAmb IAmb 08 25 57.9
comp=Z,270nm,1.2s
MESJ Messejana 84.07 23 *e*P P 08 25 56.1 +0.5
COEN Coen 84.10 235 P P 08 25 55.7 -0.1
comp=Z,41nm,1.6s
COEN Coen 84.10 235 P P 08 25 56.6 +0.7
COEN Coen 84.10 235 P P 08 25 55.0 -0.9
ALN Alexandroupoli 84.15 356 P P 08 25 56.2 +0.3
ALN Alexandroupoli 84.15 356 P P 08 25 56.4 +0.5
ETOS Mallorca 84.17 14 P P 08 25 56.7 +0.6
GRG Griva 84.19 359 P P 08 25 57.1 +0.9
MAHO Mahon 84.23 13 P P 08 25 57.0 +0.7
MAHO Mahon 84.23 13 P P 08 25 57.1 +0.8
KUDL Kundal 84.23 313 *e*P P 08 25 56.5 -0.1
PTEO Sao Teotonio 84.24 23⇑ *i*P P 08 25 57.1 +0.7
PTEO *i* IAmb IAmb 08 25 58.7
comp=Z,648nm,1.1s
YLV Yalova 84.30 353 P P 08 25 56.5 -0.3
comp=Z,7µmcomp=Z,392nm,1.2s
SOH Sokhos 84.31 358 P P 08 25 57.3 +0.5
PCVE Castro Verde 84.31 23 P P 08 25 57.7 +0.9
PCVE Castro Verde 84.31 23⇑ *i*P P 08 25 57.6 +0.9
PCVE *i* IAmb IAmb 08 25 59.9
comp=Z,304nm,1.8s
ALBI Allahabad 84.36 307 *e*P P 08 25 56.5 -0.8
AGRA Agra 84.41 311 *e*P P 08 25 57.7 +0.2
ECAB El Cabril 84.43 20 P P 08 25 58.2 +0.7
MATE Matera 84.45 3 ⇑P P 08 25 58.1 +0.7
MATE Matera 84.45 3 P P 08 25 58.1 +0.7
EMIN Mina Concepcio 84.47 21 P P 08 25 58.5 +0.9
MORF Marmelete 84.49 23 *e*P P 08 25 58.4 +0.6
MORF *i* IAmb IAmb 08 25 59.7
comp=Z,447nm,1.0s
MORF Marmelete 84.49 23 *e*P P 08 25 58.4 +0.6
THE Thessaloniki 84.50 358 P P 08 25 57.8 +0.1
EADA Adamuz 84.51 20 P P 08 25 59.0 +1.1
EGRO El Granado 84.53 22 P P 08 25 59.0 +1.1
BAND Balkesir-Ban 84.58 354 ⇑P P 08 25 58.7 +0.5
ETOB Tobarra 84.60 17 P P 08 25 59.4 +1.0
PVAQ Vaqueiros 84.60 22⇑ *i*P P 08 25 59.2 +0.9
PVAQ *i* IAmb IAmb 08 26 00.8
comp=Z,587nm,1.3s
PVAQ Vaqueiros 84.60 22 P P 08 25 59.4 +1.1
OTAV Otavalo 84.61 97 P P 08 25 59.2 0.0
OTAV pmax pmax
comp=Z,32nm,1.2s
OTAV Otavalo 84.61 97 P P 08 25 59.2 0.0
OTAV Otavalo 84.61 97 *e*P P 08 25 58.6 -0.5
OTAV *e*pP pP 08 26 08.7 -2.6
OTAV *e*S SKSac 08 36 23.7 +3.3
OTAV Otavalo 84.61 97 P P 08 25 59.4 +0.2
PFVI Vila Bisbo 84.61 23 P P 08 25 59.2 +0.9
PFVI Vila Bisbo 84.61 23⇑ *i*P P 08 25 59.1 +0.7
PFVI *i* IAmb IAmb 08 26 00.7
comp=Z,662nm,1.1s
PFVI Vila Bisbo 84.61 23 P P 08 25 59.4 +1.0
VLO Vlora 84.68 1 P P 08 26 00.0 +1.4
EIBI Ibiza 84.68 15 P P 08 25 59.6 +0.9
PBDV Barranco-do-Ve 84.71 23 P P 08 26 00.1 +1.2
PBDV Barranco-do-Ve 84.71 23⇑ *i*P P 08 26 00.1 +1.2
PBDV *i* IAmb IAmb 08 26 02.4
comp=Z,602nm,1.7s
MARCO Tramutola 84.77 4 P P 08 25 59.8 +0.6
BR131 Keskin Array S 84.78 350 *c i*P P 08 25 59.7 +0.4
BR131 Keskin Array S 84.78 350 P P 08 26 00.0 +0.7
SNR=83
BRTR Keskin Array B 84.78 350 P P 08 25 59.8 +0.4
comp=Z,153nm,1.0s,baz=29,slow=2.8,SNR=217
BRTR PP PP 08 29 16.2 +1.4
comp=Z,23nm,1.2s,baz=35,slow=4.5,SNR=3.5
BRTR PKKPbc PKKPbc 08 44 05.7 +0.2
comp=Z,0.8nm,0.6s,baz=156,slow=6.7,SNR=3.9
BRTR PKPPKP P'P'df 08 52 10.7 -8.5
comp=Z,1.8nm,0.8s,baz=183,slow=8.0,SNR=5.2
comp=Z,153nm,1.0s
BRTR Keskin Array B 84.78 350 *c e*P P 08 25 59.7 +0.4
BRTR pmax pmax
comp=Z,157nm,1.0s
BR104 Keskin Array S 84.79 350 P P 08 25 59.1 -0.3
comp=Z,2µmcomp=Z,192nm,1.1s
ARPR Arapgir-MALATY 84.85 346 P P 08 26 01.3 +1.6
LIT Litokhoron 85.04 359 P P 08 26 00.5 0.0
LIT Litokhoron 85.04 359 P P 08 26 00.7 +0.2
ARNO Arenosillo 85.11 22 P P 08 26 02.2 +1.4
VSL Villasalto 85.17 9 P P 08 26 01.7 +0.6
PAIG Paliouri 85.19 358 P P 08 26 01.0 -0.2
EZN Ezine 85.20 356 P P 08 26 01.1 -0.1
comp=Z,340nm,1.3s
BALY Balya 85.22 355 P P 08 26 01.8 +0.4
SRN Sarande 85.27 0 P P 08 26 02.1 +0.6
KIRS Kirsehir-Merke 85.33 350 ⇑P P 08 26 03.0 +0.9
KKUL Konya-Kulu 85.40 350 P P 08 26 03.5 +1.1
KEK Kerkira 85.44 1 P P 08 26 02.1 -0.4
HAKT HAKKARI 85.50 342 P P 08 26 03.9 +0.8
ESPR Espera 85.51 21 P P 08 26 03.8 +1.0
TLOR Lorca, Murcia 85.54 18 P P 08 26 03.7 +0.7
EGOR Sierra Gorda, 85.62 20 P P 08 26 04.5 +0.9
EQTA Presa de Quent 85.66 19 P P 08 26 04.3 +0.6
JHNI Jhansi 85.67 310 *e*P P 08 26 02.7 -1.1
CART Cartagena 85.72 17 P P 08 26 02.8 -1.1
XOR Xorichti 85.76 358 P P 08 26 04.0 -0.1
SFS San Fernando 85.83 21 P P 08 26 05.2 +0.9
SFS San Fernando 85.83 21 P P 08 26 06.4 +2.0
EMAL Malaga-Limoner 85.90 20 P P 08 26 05.8 +1.0
EMAL Malaga-Limoner 85.90 20 P P 08 26 05.8 +1.0
TIP Timpagrande 85.92 3 ⇑P P 08 26 05.3 +0.4
TIP Timpagrande 85.92 3 P P 08 26 04.7 -0.2
comp=Z,351nm,1.0s
TIP Timpagrande 85.92 3 P P 08 26 05.5 +0.5
CNIL Conil 85.95 21 P P 08 26 06.3 +1.3
ELGU Los Guajares, 85.95 19 P P 08 26 05.6 +0.4
EMIJ Mijas 86.02 20 P P 08 26 05.9 +0.5
EBER Berja 86.06 19 P P 08 26 05.6 -0.2
ENIJ Nijar 86.11 18 P P 08 26 05.5 -0.4
AGG Agios Georgios 86.12 359 P P 08 26 05.2 -0.7
AGG Agios Georgios 86.12 359 P P 08 26 05.5 -0.4

LKD2 Lefkada island 86.36 360 P P 08 26 07.4 +0.3
PMOZ Porto Moniz, M 86.50 31 P P 08 26 08.3 +0.3
PMOZ Porto Moniz, M 86.50 31⇑ *i*P P 08 26 08.4 +0.5
PMOZ *i* IAmb IAmb 08 26 10.6
comp=Z,469nm,1.2s
PMOZ Porto Moniz, M 86.50 31 P P 08 26 09.2 +1.3
PMPST Porto Santo, M 86.52 30⇑ *i*P P 08 26 08.1 +0.2
PMPST *i* IAmb IAmb 08 26 09.7
comp=Z,821nm,1.0s
AJM Ajmer 86.52 313 *e*P P 08 26 07.3 -0.8
PMPS Porto Santo 86.54 30⇓ *i*P P 08 26 09.0 +1.0
PMPS *i* IAmb IAmb 08 26 09.8
comp=Z,482nm,0.9s
ANDN Andirin 86.59 348 P P 08 26 09.5 +1.2
CHOS Chios island 86.65 356 P P 08 26 08.7 +0.1
PMAR Madeira 86.68 31⇑ *e*P P 08 26 09.4 +0.5
PMAR *i* IAmb IAmb 08 26 11.7
comp=Z,617nm,1.2s
BWNR Bhubaneshwar 86.78 301 *e*P P 08 26 09.7 +0.3
CEL Celeste 86.80 4 P P 08 26 07.9 -1.4
GUNA GUNA 86.93 310 *e*P P 08 26 09.0 -1.0
AUAYR Ayr State High 87.11 229 P P 08 26 11.6 +0.9
MTSU Mount Surprise 87.21 232 P P 08 26 12.0 +0.7
comp=Z,87nm,0.9s
MTSU Mount Surprise 87.21 232 P P 08 26 12.0 +0.7
MTSU Mount Surprise 87.21 232 P P 08 26 11.5 +0.2
AYDN Tasoluk 87.28 354 P P 08 26 12.1 +0.5
CLTB Caltabellotta 87.35 6 P P 08 26 11.7 -0.3
BKB Balikpapan 87.45 264 P P 08 26 12.7 +0.1
BKB Balikpapan 87.45 264 P P 08 26 13.4 +0.8
RAFF Raffo Rosso 87.77 5 IAmb IAmb 08 26 36.3
comp=Z,107nm,1.0s
ITM Ithomi 87.96 359 P P 08 26 14.8 0.0
ELL Elmali 88.06 353 P P 08 26 15.4 0.0
CTAO Charters Tower 88.06 230 P P 08 26 15.8 +0.5
CTAO Charters Tower 88.06 230 P P 08 26 15.2 -0.1
CTAO pmax pmax
comp=Z,114nm,1.0s
CTAO Charters Tower 88.06 230 P P 08 26 15.2 -0.1
CTAO Charters Tower 88.06 230 P P 08 26 15.6 +0.3
BHPL Bhopal 88.12 310 *e*P P 08 26 15.0 -0.8
BHPL IAmb IAmb 08 26 16.5
BHPL *i* x x 08 29 17.1
KDU Kakadu 88.33 245 P P 08 26 16.2 -0.5
comp=Z,41nm,1.1s
AKAS Kas 88.59 353 P P 08 26 17.9 0.0
AVE Averroes 88.61 23 P P 08 26 18.2 +0.3
AVE Averroes 88.61 23 P P 08 26 18.4 +0.5
ARG Arkhangelos 88.70 354 P P 08 26 17.6 -0.7
ARG Arkhangelos 88.70 354 P P 08 26 17.9 -0.4
RAGD RAYAGADA 88.78 303 *i* P P 08 26 19.2 +0.2
RAGD IAmb IAmb 08 26 21.5
comp=Z,139nm,0.8s
KTHA Kythira Island 88.87 358 P P 08 26 18.9 -0.2
KAPI Kappang 88.90 260 P P 08 26 19.9 +0.5
KAPI Kappang 88.90 260⇑ *i*P P 08 26 19.1 -0.3
KAPI pmax pmax
comp=Z,193nm,1.1s
KAPI Kappang 88.90 260 P P 08 26 19.1 -0.3
KAPI Kappang 88.90 260 P P 08 26 19.3 -0.1
KAPI Kappang 88.90 260 P P 08 26 19.4 0.0
IFR Ifrane 88.90 21 P P 08 26 19.7 +0.2
IFR Ifrane 88.90 21 P P 08 26 19.7 +0.2
KEST Kesra 88.90 9 P P 08 26 19.6 +0.2
comp=Z,99nm,0.9s,baz=292,slow=1.5,SNR=56
KEST SKKP SKKPdf 08 47 10.9 -8.3
comp=Z,2.2nm,0.4s,baz=40,slow=5.8,SNR=4.6
comp=Z,99nm,0.9s
KEST Kesra 88.90 9 P P 08 26 20.1 +0.7
SNR=27
DRS Darwin Rock St 88.94 246 P P 08 26 20.5 +1.0
DGPR DIGLIPUR 89.09 292 IAmb IAmb 08 24 48.1
comp=Z,333nm,0.6s
AUNRC North Rockhamp 89.15 225 P P 08 26 22.0 +1.7
MTN Manton Dam 89.16 246 P P 08 26 20.8 +0.2
comp=Z,34nm,1.1s
MTN Manton Dam 89.16 246 IAmb IAmb 08 26 21.3
comp=Z,39nm,1.1s
NGP Nagpur 89.19 307 *i* P P 08 26 20.3 -0.6
NGP IAmb IAmb 08 26 22.6
comp=Z,111nm,0.8s
GD1S Gladstone Soft 89.33 224 P P 08 26 22.3 +1.1
KARP Karpathos 89.42 355 P P 08 26 21.5 -0.3
CSS Mathiatis 89.52 350 P P 08 26 22.4 +0.2
MD01 Midelt array s 89.60 21 P P 08 26 23.0 +0.2
IMMV Iera Moni Meta 89.64 357 P P 08 26 23.2 +0.5
IDI Anoyia 89.78 357 P P 08 26 22.0 -1.5
ZKR Zakros 89.90 355 P P 08 26 23.7 -0.2
CY604 RAF Akrotiri, 90.01 349 P P 08 26 24.6 +0.5
VIS Vishakhapatnam 90.15 302 *e*P P 08 26 25.4 0.0
VIS IAmb IAmb 08 26 27.4
comp=Z,106nm,0.9s
GVD Gavdhos 90.26 357 P P 08 26 25.4 -0.2
SOEI Soe 90.28 253 P P 08 26 27.0 +1.0
SOEI Soe 90.28 253 P P 08 26 25.6 -0.4
SOEI Soe 90.28 253 P P 08 26 25.3 -0.7
PBA Port Blair 90.46 291 P P 08 26 26.7 -0.1
SNR=6.8
PBA Port Blair 90.46 291 P P 08 26 26.4 -0.4
PBA Port Blair 90.46 291 *e*P P 08 26 26.4 -0.4
PBA IAmb IAmb 08 26 30.9
comp=Z,165nm,0.9s
AKL Akola 90.52 309 *e*P P 08 26 26.6 -0.5
EIDS Eidsvold 90.74 224 P P 08 26 28.8 +1.1
comp=Z,26nm,1.1s
EIDS Eidsvold 90.74 224 P P 08 26 29.0 +1.3
EIDS Eidsvold 90.74 224 P P 08 26 27.9 +0.2
TIO Tiouine 90.92 24 P P 08 26 29.5 +0.6
TIO Tiouine 90.92 24 P P 08 26 29.7 +0.7
MMAI Mount Meron Ar 91.21 348 P P 08 26 30.5 +0.3
comp=Z,45nm,0.9s,baz=6.3,slow=8.4,SNR=15
comp=Z,45nm,0.9s
QIS Mount Isa 91.49 235 P P 08 26 30.8 -0.6
comp=Z,89nm,1.2s
QIS Mount Isa 91.49 235 P P 08 26 30.8 -0.6
QIS Mount Isa 91.49 235 P P 08 26 30.7 -0.6
MMLI Mount Malkishu 91.78 348 P P 08 26 32.9 +0.1
MYKOM Kota Tinggi 92.42 277 P P 08 26 36.3 +0.4
MYKOM Kota Tinggi 92.42 277 IAmb IAmb 08 26 37.5
comp=Z,75nm,1.1s
MYKOM Kota Tinggi 92.42 277 P P 08 26 36.0 +0.1
HYB Hyderabad 92.68 306 *e*P P 08 26 36.3 -0.8
HYB IAmb IAmb 08 26 37.8
comp=Z,90nm,0.6s
HYB Hyderabad 92.68 306 *e*P P 08 26 36.7 -0.4
HYB *e*SKSac SKSac 08 37 06.8 -1.0
HYB *e*S S 08 37 39.0 0.0
LATR Latur 92.74 308 *i* P P 08 26 36.8 -0.6
KNRA Kununurra 92.77 246 P P 08 26 37.1 -0.2
comp=Z,57nm,1.2s
KNRA Kununurra 92.77 246 IAmb IAmb 08 26 37.7
comp=Z,43nm,0.9s
KBD Kabd 92.80 337 P P 08 26 37.8 +0.3
BTDF Bukit Timah Da 92.82 276 P P 08 26 38.2 +0.5
GHAJ Ghor Haditha 92.88 347 P P 08 26 38.3 +0.5
MSBI Mazada 92.90 347 P P 08 26 37.9 +0.1
BOAV Boa Vista 93.09 81 *e*P P 08 26 38.7 -0.3
WB0 Warramunga Arr 93.33 240 IAmb IAmb 08 26 40.1
comp=Z,66nm,1.1s
KZIT Kziot 93.42 348 P P 08 26 39.3 -1.0
WR8 Warramunga Arr 93.44 240 IAmb IAmb 08 26 40.5
comp=Z,49nm,0.9s
WRAB Tennant Creek 93.49 240 P P 08 26 40.0 -0.6
WRAB pmax pmax
comp=Z,58nm,1.0s
WRAB Tennant Creek 93.49 240 P P 08 26 40.0 -0.6
WRAB IAmb IAmb 08 26 40.9
comp=Z,58nm,1.0s
WRA Warramunga Arr 93.51 240 P P 08 26 39.7 -1.0
comp=Z,38nm,0.9s,baz=40,slow=5.2,SNR=87
WRA PKiKP PKiKP 08 31 26.4 0.0
comp=Z,6.9nm,0.9s,baz=192,slow=3.6,SNR=5.6
WRA PKKPbc PKKPbc 08 43 45.0 +0.4
comp=Z,0.2nm,0.3s,baz=209,slow=1.0,SNR=5.4
comp=Z,38nm,0.9s
WRA Warramunga Arr 93.51 240 P P 08 26 39.6 -1.0
SHME Shamm 93.54 328 *i* P P 08 26 40.6 -0.3
SNR=6.2
SHME Shamm 93.54 328 P P 08 26 40.1 -0.8
BANOM Banah 93.61 328 P P 08 26 40.7 -0.6
POO Poona 93.83 310 *e*P P 08 26 41.4 -1.0
MASF Masafi 94.17 328 P P 08 26 42.9 -1.0
MSFE Esma-Masafi 94.18 328 P P 08 26 43.3 -0.7

HRFI Mount Harif 94.20 348 P P 08 26 44.0 0.0
MDH Madha 94.20 328 P P 08 26 42.9 -1.1
CZSB Cruzeiro do Su 94.38 97 IAmb IAmb 08 26 56.5
comp=Z,40nm,0.9s
CZSB Cruzeiro do Su 94.38 97 *e*P P 08 26 44.4 -0.5
PSI Prapat 94.38 281 P P 08 26 45.6 +0.5
UOSS Minazif 94.56 328 P P 08 26 44.6 -1.0
UOSS Minazif 94.56 328 P P 08 26 44.3 -1.3
UOSS Minazif 94.56 328 P P 08 26 44.6 -1.0
EIL Elat 94.57 348 P P 08 26 45.3 -0.3
QLP Quilpie 94.63 228 P P 08 26 47.0 +1.3
comp=Z,111nm,1.3s
QLP Quilpie 94.63 228 P P 08 26 46.7 +1.0
QLP Quilpie 94.63 228 P P 08 26 46.4 +0.7
NAZ Nazwa, Dubai 94.68 328 *i* P P 08 26 45.8 -0.4
SNR=8.9
NAZ Nazwa, Dubai 94.68 328 P P 08 26 44.9 -1.3
HATD Hatta, Dubai 94.69 328 P P 08 26 44.7 -1.5
HATD Hatta, Dubai 94.69 328 P P 08 26 44.9 -1.3
ASHO Ashiyiah 94.85 328 *i* P P 08 26 46.3 -0.7
SNR=7.4
ASHO Ashiyiah 94.85 328 P P 08 26 45.9 -1.1
FAQ Al Faqa, Dubai 94.93 328 P P 08 26 46.7 -0.6
FAQ Al Faqa, Dubai 94.93 328 P P 08 26 46.5 -0.9
ARMA Armidale 95.06 221 P P 08 26 49.5 +1.9
comp=Z,64nm,1.3s
ARMA Armidale 95.06 221 P P 08 26 48.7 +1.0
ARMA Armidale 95.06 221 IAmb IAmb 08 26 50.3
comp=Z,65nm,1.1s
ARMA Armidale 95.06 221 P P 08 26 48.9 +1.2
ASUD Al Ashush, Dub 95.12 329 *i* P P 08 26 48.2 0.0
SNR=10
ASUD Al Ashush, Dub 95.12 329 P P 08 26 47.7 -0.5
SOHO SOHO 95.22 327 P P 08 26 47.7 -1.0
SOHO SOHO 95.22 327 P P 08 26 47.2 -1.4
WSAR Wadi Sarin 95.39 325 P P 08 26 49.5 0.0
SNR=7.9
HOQ Hoqain 95.49 327 P P 08 26 48.9 -1.1
ALNE Al Ain 95.53 328 *i* P P 08 26 49.7 -0.5
SNR=9.2
ALNE Al Ain 95.53 328 P P 08 26 49.4 -0.7
JRN Qarnain Island 95.54 331 P P 08 26 49.4 -0.7
AULRC Lightning Ridg 95.59 224 P P 08 26 51.2 +1.2
SMDO Samad 95.74 326 P P 08 26 50.5 -0.7
SNR=6.8
WBK Wadi Bani Khal 95.86 325 P P 08 26 51.6 -0.1
SNR=5.7
AUPHS Peel High Scho 95.95 221 P P 08 26 53.2 +1.6
ARQ Araqi 95.97 327 P P 08 26 51.4 -0.7
SNR=12
JLN Jalan Bani Buh 96.14 324 P P 08 26 52.8 -0.1
SNR=7.6
BSY Bisya 96.31 326 P P 08 26 53.0 -0.7
SNR=9.7
JMDO Jabal Madar 96.37 325 P P 08 26 53.2 -0.7
SNR=5.2
GSI Gunungsitoli 96.37 282 P P 08 26 54.1 +0.1
GSI Gunungsitoli 96.37 282 P P 08 26 53.8 -0.3
FITZ Fitzroy Crossi 96.43 248 P P 08 26 53.9 -0.1
comp=Z,11nm,1.1s
FITZ Fitzroy Crossi 96.43 248 P P 08 26 54.4 +0.4
FITZ Fitzroy Crossi 96.43 248 P P 08 26 53.8 -0.2
GHWR Ruwais 96.46 331 P P 08 26 53.6 -0.7
SLWR Sila 96.68 332 P P 08 26 54.7 -0.6
AS17 Alice Springs 96.82 238 P P 08 26 55.6 -0.1
comp=Z,26nm,0.9s
AS15 Alice Springs 96.84 238 P P 08 26 55.8 -0.1
comp=Z,20nm,1.0s
AS01 Alice Springs 96.84 238 P P 08 26 56.3 +0.4
AS31 Alice Springs 96.86 238 P P 08 26 55.9 -0.1
comp=Z,5.8nm,1.0s
ASAR Alice Springs 96.87 238 P P 08 26 55.4 -0.6
comp=Z,16nm,0.9s,baz=34,slow=4.6,SNR=108
ASAR PKiKP PKiKP 08 31 31.7 -0.5
comp=Z,1.6nm,0.8s,baz=15,slow=2.1,SNR=4.6
ASAR PKKPbc PKKPbc 08 43 36.0 +0.3
comp=Z,3.3nm,0.9s,baz=208,slow=2.5,SNR=11
comp=Z,16nm,0.9s
ASAR Alice Springs 96.87 238 P P 08 26 55.5 -0.5
ASAR Alice Springs 96.87 238 P P 08 26 55.5 -0.5
AS09 Alice Springs 96.88 238 P P 08 26 56.0 -0.1
comp=Z,26nm,0.9s
AUALC St Philip's Co 96.90 238 P P 08 26 56.8 +0.7
MZR Muzera 97.19 330 *i* P P 08 26 57.7 0.0
SNR=25
MZR Muzera 97.19 330 P P 08 26 57.5 -0.2
SNR=6.7
MHTO MHTO 97.70 325 P P 08 26 59.6 -0.4
SNR=5.5
AUDCS Dubbo College 97.82 222 P Pdif 08 27 01.7 +1.6
CMSA Cobar Meteorol 98.37 225 P Pdif 08 27 03.7 +1.2
RAYN Ar Rayn 98.74 337 *i* P P 08 27 04.9 +0.2
SNR=71
RAYN Ar Rayn 98.74 337 P P 08 27 04.8 +0.2
RAYN pmax pmax
comp=Z,95nm,0.9s
RAYN Ar Rayn 98.74 337 P P 08 27 04.8 +0.2
RAYN Ar Rayn 98.74 337 P P 08 27 04.9 +0.2
MALK Mahakanadarawa 99.52 300 P Pdif 08 27 06.9 -1.3
STKA Stephens Creek 100.36 228 P Pdif 08 27 11.2 -0.1
comp=Z,4.5nm,0.9s,baz=1.7,slow=7.3,SNR=8.0
STKA PKKPbc PKKPbc 08 43 26.9 +0.8
comp=Z,0.7nm,0.6s,baz=225,slow=1.4,SNR=3.6
STKA Stephens Creek 100.36 228 P Pdif 08 27 13.0 +1.6
STKA Stephens Creek 100.36 228 P Pdif 08 27 12.1 +0.7
TAM Tamanrasset 101.24 14 P Pdif 08 27 16.6 +0.7
TAM pmax pmax
comp=Z,9.0nm,2.5s
TAM Tamanrasset 101.24 14 P Pdif 08 27 16.0 +0.1
LPAZ La Paz 103.90 98 Pdiff Pdif 08 27 29.7 +1.5
comp=Z,1.8nm,0.9s,baz=322,slow=6.7,SNR=6.6
LPAZ PKKPbc PKKPbc 08 43 18.0 +2.0
comp=Z,2.6nm,0.8s,baz=81,slow=5.2,SNR=7.3
SIV San Ignacio 107.69 93 PKKPbc PKKPbc 08 43 05.8 +2.1
comp=Z,3.5nm,0.8s,baz=107,slow=3.8,SNR=15
TORD Torodi Ar. Bea 110.05 20 Pdiff Pdif 08 27 54.6 -0.4
comp=Z,1.1nm,0.9s,baz=334,slow=4.3,SNR=4.5
TORD PKiKP PKiKP 08 31 55.8 -0.8
comp=Z,4.0nm,1.0s,baz=339,slow=3.9,SNR=4.8
TORD PKKPbc PKKPbc 08 42 56.2 +0.1
comp=Z,1.5nm,0.7s,baz=164,slow=2.6,SNR=5.5
H03N2 Juan Fernandez 111.70 117 T T 10 33 01.5
baz=323,slow=77,SNR=37
H03N1 Juan Fernandez 111.72 117 T T 10 33 03.4
baz=323,slow=77,SNR=27
H03N3 Juan Fernandez 111.72 117 T T 10 33 03.0
baz=323,slow=77,SNR=34
DBIC Dimbokro 114.79 28 PKKPbc PKKPbc 08 42 40.0 -0.4
comp=Z,4.2nm,0.9s,baz=293,slow=1.8,SNR=3.1
BDFB Brasilia 114.87 82 PKKPbc PKKPbc 08 42 43.1 +2.9
comp=Z,3.8nm,0.7s,baz=187,slow=4.8,SNR=6.6
CPUP Villa Florida 117.95 96 PKP PKPdf 08 32 10.3 -0.9
comp=Z,2.4nm,0.8s,baz=284,slow=9.6,SNR=7.3
CPUP PKKPbc PKKPbc 08 42 31.6 +2.2
comp=Z,13nm,0.9s,baz=116,slow=4.8,SNR=24
LDASE Londrina, Braz 119.23 89 *e*P PKPdf 08 32 13.0 -0.9
CPSB Cacapava Do Su 123.27 96 PKPdf 08 32 21.0 -0.3
KMBO Kilima Mbogo 124.41 340 PKP PKiKP 08 32 25.2 +0.5
baz=349,slow=2.0
MBAR Mbarara 124.94 348 P PKiKP 08 32 26.0 +0.3
KIBK Kibwezi 125.42 338 PKP PKiKP 08 32 27.4 +0.9
MG05 Puerto Natales 128.44 127 PKPdf 08 32 30.3 -0.2
VNDA Vanda 134.65 191 PKhKP PKPpre 08 32 39.1
comp=Z,4.1nm,0.9s,baz=296,slow=3.3,SNR=8.3
VNDA SKPbc SKPbc 08 36 07.1 -1.0
comp=Z,18nm,1.0s,baz=354,slow=5.2,SNR=20
ABPO Ambohimpanom 138.61 320 PKiKP PKPdf 08 32 51.3 +0.4
ABPO Ambohimpanom 138.61 320 PKPdf 08 32 51.3 +0.4
ABPO Ambohimpanom 138.61 320 P PKPdf 08 32 51.4 +0.4
LSZ Lusaka 139.72 349 P PKPpre 08 32 45.4
VOI Vohitsoka 141.41 319 P PKPpre 08 32 49.0
KSANE Kasane 142.49 353 P PKPpre 08 32 53.3
TSUM Tsumeb 143.97 5 PKPab 08 32 58.0 +0.2
TSUM Tsumeb 143.97 5 P PKPbc 08 32 58.3 0.0
FOMA Nahampoana Res 144.12 317 PKPbc 08 32 58.9 +0.4
QSPA South Pole Qui 145.00 180 PKPbc PKPbc 08 32 59.6 -0.6
comp=Z,84nm,1.0s,baz=7.5,slow=0.5,SNR=78
QSPA SKPbc SKPbc 08 36 35.5 -1.0
comp=Z,35nm,1.1s,baz=30,slow=3.7,SNR=5.4
QSPA South Pole Qui 145.00 180 PKPbc 08 32 59.1 -1.0
SOOWA Sowa 145.15 351 P PKPdf 08 33 03.0 +0.6
CKGRV CKGRV 146.16 355 P PKPbc 08 33 05.5 +0.3
GRTLG Ghanzi 146.19 359 P PKPbc 08 33 05.7 +0.4
KHWEE KHWEE 146.58 352 P PKPbc 08 33 06.8 +0.4
WIN Windhoek 147.29 6 PKP2 PKPdf 08 33 06.5 +0.4

WIN	Windhoek	147.29	6			PKPdf	08 33 06.5	+0.4
WIN	Windhoek	147.29	6	P		PKPbc	08 33 09.2	+0.7
KOOLE	Kule	147.82	1	P		PKPbc	08 33 10.6	+0.7
LESE	Lesego, Limpop	148.50	344	P		PKPab	08 33 14.5	-0.4
SKOMA	Sekoma	149.24	354	P		PKPdf	08 33 09.5	+0.3
LBTB	Lobatse	149.61	351	P		PKPdf	08 33 10.1	+0.4
PAF	Port-aux-Franc	149.66	260	PKP2		PKiKP	08 33 14.3	-0.2
PAF	Port-aux-Franc	149.66	260			PKiKP	08 33 14.3	-0.2
BELA	Belgrano 2	150.46	159			PKPbc	08 33 13.9	-0.8
POGA	Pongola	151.01	339	P		PKPbc	08 33 17.7	+0.2
BOSA	Boshof	153.21	351	PKP		PKPdf	08 33 15.2	+0.1
	comp=Z,20nm,1.0s,baz=21,slow=2.0,SNR=19							
BOSA				PKPbc		PKiKP	08 33 22.9	+0.1
	comp=Z,72nm,0.8s,baz=17,slow=2.4,SNR=46							
BOSA				PKPab		sPKPdf	08 33 34.0	+2.0
	comp=Z,73nm,0.8s,baz=0.6,slow=4.4,SNR=12							
BOSA	Boshof	153.21	351			PKPdf	08 33 15.6	+0.5
BOSA	Boshof	153.21	351	P		PKPdf	08 33 15.2	+0.1
MAW	Mawson	156.86	221	PKP		PKPdf	08 33 18.8	+0.1
	comp=Z,9.6nm,0.9s,baz=58,slow=2.9,SNR=12							
MAW				PKPab		PKPab	08 33 49.0	+0.2
	comp=Z,84nm,1.0s,baz=97,slow=3.8,SNR=23							
SUR	Sutherland	157.17	360	PKPdf		PKPdf	08 33 21.4	+1.0
VNA1	Neumayer--Stat	160.03	152	PKPdf		PKPdf	08 33 19.1	-3.3
	comp=Z,26nm,1.2s							
VNA2	Neumayer--Watz	160.09	153	PKPdf		PKPdf	08 33 19.4	-3.1
	comp=Z,16nm,0.7s,baz=278,slow=2.1							
SNAA	Sanae	160.69	158	⇑PKPdf		PKPdf	08 33 19.4	-3.8
	comp=Z,211nm,0.8s							
SNAA	Sanae	160.69	158	PKP		PKPdf	08 33 21.0	-2.2
	comp=Z,9.8nm,1.1s,baz=327,slow=2.4,SNR=10							
SNAA				PKPab		PKPab	08 34 07.0	+1.6
	comp=Z,15nm,1.1s,baz=214,slow=2.9,SNR=3.2							
SNAA	Sanae	160.69	158	PKIKP		PKPdf	08 33 21.0	-2.2
TROLL	Troll, Antarti	161.48	162	PKPdf		PKPdf	08 33 21.0	-3.2
	comp=Z,878nm,0.7s							
ELIB	Princess Elisa	163.16	183	*d*PKPdf		PKPdf	08 33 23.6	-2.2
SYO	Syowa Base	163.69	205⇑	*eP*		PKPab	08 34 16.1	-2.4

*IDC **22** 08:20:05.7±3.6,53.°60N×88.°02E,h0km,mbtmp2.8/2, ML2.5/2,Error ellipse: s-maj=37.1km s-min=23.3km az=82.0*

ASRS 22 08:20:04.0±0.9,**53.°59N×88.°04E,h0**km,**M2.7**(MOS),**The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.95	282	I	I	08 32 00.0	
	0.1nm,1.0s,baz=97,slow=317,SNR=3.5						
ZALV	Zalesovo Beam	1.95	282	Pn	Pn	08 20 39.1	+0.8
	1.2nm,0.3s,baz=101,slow=14,SNR=14						
ZALV				Sn	Sb	08 21 05.8	+0.6
	2.0nm,0.3s,baz=100,slow=27,SNR=9.7						
KURBB	Kurchatov Arra	6.57	247	Pn	Pn	08 21 44.2	+2.4
	baz=62,slow=14,SNR=4.9						
KURBB				Lg	Lg	08 23 33.1	
	baz=63,slow=33,SNR=5.6						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.74	211	Pn	Pn	08 22 00.6	+2.7
	0.2nm,0.3s,baz=28,slow=14,SNR=1.5						
	0.3nm,0.5s						

*IDC **22** 08:26:47.8±1.2,54.°93N×159.°20W,h0km,mb3.8/10, mbtmp3.8/12,ML3.6/2,Error ellipse: s-maj=40.2km s-min=17.6km az=179.0*
*NEIC **22** 08:26:50.5±1.4,54.°73N±0.°09×159.°03W±0.°09,h19km±5km, ML3.7/28,Error ellipse: s-maj=13.0km s-min=7.5km az=166.0*

ISC 22 08:26:49.0±0.8,**54.°8N**±0.°1×**159.°01W**±0.°06,**h10**km,**n58,** σ1ŝ**10**/51,**mb3.9**/10,**South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.34	280		Pg	08 26 57.5	+1.8
CNBA				IAML		08 27 02.5	
	comp=E,11μm,0.3s						
SDPT	Sand Point	1.03	305		Pg	08 27 08.4	-0.4
SDPT				IAML		08 27 22.6	
	comp=N,2μm,0.5s						
SDPT				IAML		08 27 22.8	
	comp=E,2μm,0.8s						
VNFG	Fog Glacier, M	1.56	349		Pn	08 27 18.1	+1.3
CHGN	Chignik	1.58	12		Pn	08 27 17.3	+0.3
CHGN				IAML		08 27 39.6	
	comp=E,870nm,0.5s						
CHGN				IAML		08 27 43.0	
	comp=N,913nm,0.6s						
SII	Sitkinak Islan	3.27	55	Pn	Pn	08 27 41.5	+1.1
SII				IAML		08 28 49.4	
	comp=E,223nm,3.7s						
AKUT	Akutan	4.00	264	Pn	Pn	08 27 50.9	+0.7
AKUT				IAML		08 28 54.6	
	comp=E,100nm,1.7s						
AKUT				IAML		08 28 55.2	
	comp=N,112nm,4.3s						
ACHA	Angle Creek He	4.01	29	Pn	Pn	08 27 51.9	+1.3
OHAK	Old Harbor	4.05	50	Pn	Pn	08 27 51.1	+0.1
LVA	Lava Point	4.14	265	Pn	Pn	08 27 52.6	+0.3
LVA				IAML		08 28 54.4	
	comp=E,106nm,3.0s						
P16K	Nushagak River	4.32	7	Pn	Pn	08 27 54.2	-0.4
UNV	Unalaska Valle	4.49	261	Pn	Pn	08 27 56.6	-0.3
O14K	Tigyukauivet M	4.67	346	Pn	Pn	08 28 00.2	+0.8
O14K				IAML		08 29 25.9	
	comp=N,63nm,2.4s						
O14K				IAML		08 29 46.8	
	comp=E,53nm,4.8s						
KDAK	Kodiak Island	4.69	47	Pn	Pn	08 27 59.2	-0.6
	comp=E,1.2nm,0.3s,baz=231,slow=9.9,SNR=1.2						
	comp=E,4.0nm,0.4s						
KDAK	Kodiak Island	4.69	47	IAML		08 29 29.0	
	comp=E,50nm,4.8s						
O16K	Kokwok River B	4.87	6	Pn	Pn	08 28 04.1	+1.9
O16K				IAML		08 28 56.9	
	comp=N,46nm,4.2s						
O16K				IAML		08 29 46.9	
	comp=E,43nm,3.7s						
N14K	Kuskokwak Cree	5.37	345	Pn	Pn	08 28 10.0	+0.9
N15K	Kwethluk River	5.45	354	Pn	Pn	08 28 11.5	+1.3
N17K	Nushagak Hills	5.86	9	Pn	Pn	08 28 18.5	+2.7
M13K	Dall Lake	6.13	339		Pn	08 28 20.6	+1.2
M14K	Bethel	6.21	346		Pn	08 28 20.9	+0.3
M16K	Timber Creek	6.28	0	Pn	Pn	08 28 22.5	+0.9
M17K	Holitna River	6.71	6	Pn	Pn	08 28 29.4	+1.9
SPIA	Saint Paul Isl	6.76	296	Pn	Pn	08 28 28.1	0.0
M11K	Mekoryuk	6.83	328	Pn	Pn	08 28 29.3	+0.2
L14K	Kuka Creek	6.88	345		Pn	08 28 30.6	+0.8
L16K	Owhat River	6.97	358	Pn	Pn	08 28 31.1	+0.1
L18K	Granite Mounta	7.58	8	Pn	Pn	08 28 40.7	+1.3
K13K	Kusilvak Mount	7.78	340		Pn	08 28 42.9	+0.8
PWL	Port Wells	8.35	39	Pn	Pn	08 28 49.8	-0.1
J16K	Anvik River	8.59	355		Pn	08 28 54.1	+0.9
HIN	Hinchinbrook I	8.77	45	Pn	Pn	08 28 55.9	+0.2
J18K	Innoko River	8.81	7	Pn	Pn	08 28 56.7	+0.4
PPLA	Purkeypile	8.89	21	Pn	Pn	08 28 59.3	+1.9
FID	Port Fidalgo	8.98	43	Pn	Pn	08 28 57.8	-0.9
I17K	Unalakleet	9.19	355	Pn	Pn	08 29 02.1	+0.6
SCM	Sheep Creek Mo	9.37	36	Pn	Pn	08 29 05.2	+1.1
CAST	Castle Rocks	9.38	19	Pn	Pn	08 29 05.3	+1.2
RAGM	Ragged Mountai	9.53	48	Pn	Pn	08 29 06.6	+0.4
H19K	Roundabout Mou	10.88	6	Pn	Pn	08 29 25.2	+0.7
RIDG	Independent Ri	11.53	33	Pn	Pn	08 29 34.4	+0.9
ILAR	Eielson Array	11.72	26	Pn	Pn	08 29 33.5	-2.6
	comp=E,0.1nm,0.3s,baz=218,slow=14,SNR=8.4						
INK	Inuvik	18.01	31	P	Pn	08 30 59.2	+0.2
	comp=E,0.2nm,0.3s,baz=228,slow=8.0,SNR=4.0						
	comp=E,3.5nm,0.7s						
YKA	Yellowknife Ar	23.93	53	P	P	08 32 02.4	-0.4
	comp=E,0.8nm,0.8s,baz=273,slow=9.2,SNR=4.4						
	comp=E,0.8nm,0.8s						
PETK	Petropavlovsk-	25.24	284	P	P	08 32 14.3	-0.5
	comp=E,1.1nm,0.4s,baz=68,slow=9.1,SNR=9.2						
	comp=E,1.1nm,0.4s						
PDAR	Pinedale Array	34.02	90	P	P	08 33 33.9	+0.8
	comp=E,0.2nm,0.7s,baz=311,slow=8.5,SNR=1.4						
	comp=E,0.2nm,0.7s						
H11N2	WAKE ISLAND Hy	43.48	230	T	T	09 21 09.2	
	baz=28,slow=76,SNR=9.1						
H11N3	WAKE ISLAND Hy	43.49	230	T	T	09 21 02.4	
	baz=28,slow=76,SNR=9.0						
H11N1	WAKE ISLAND Hy	43.50	230	T	T	09 21 06.2	
	baz=28,slow=76,SNR=9.6						
H11S1	WAKE ISLAND Hy	44.64	230	T	T	09 22 30.2	
	baz=28,slow=76,SNR=7.1						
H11S2	WAKE ISLAND Hy	44.66	230	T	T	09 22 31.8	
	baz=28,slow=76,SNR=7.7						
H11S3	WAKE ISLAND Hy	44.66	230	T	T	09 22 36.9	
	baz=28,slow=76,SNR=5.6						
TXAR	Lajitas Array	46.77	100	P	P	08 35 20.2	+1.8
	comp=E,0.3nm,0.5s,baz=295,slow=4.8,SNR=7.6						
	comp=E,0.3nm,0.5s						
KSRS	Korea Array	51.11	282	P	P	08 35 51.3	-0.2
	comp=E,0.6nm,0.4s,baz=49,slow=6.9,SNR=4.2						
	comp=E,0.6nm,0.4s						
SONM	Songino Array	55.19	305	P	P	08 36 20.6	-1.1
	comp=E,0.8nm,0.5s,baz=54,slow=7.3,SNR=2.3						
	comp=E,0.8nm,0.5s						
MKAR	Makanchi Array	66.36	319	P	P	08 37 37.1	-0.6
	comp=E,0.6nm,0.7s,baz=42,slow=6.6,SNR=2.0						
	comp=E,0.6nm,0.7s						
AKASG	Malin Array Be	74.68	355	P	P	08 38 26.9	-1.3
	comp=E,1.1nm,0.5s,baz=7.6,slow=5.6,SNR=4.9						
	comp=E,1.1nm,0.5s						
CMAR	Chiang Mai Arr	81.86	290	P	P	08 39 07.5	-1.0
	comp=E,1.1nm,0.3s,baz=3.9,slow=8.5,SNR=4.0						
	comp=E,1.1nm,0.3s						
ESDC	Sonseca Array	83.53	19	P	P	08 39 16.9	-0.1
	comp=E,0.8nm,0.7s,baz=336,slow=3.6,SNR=4.2						
	comp=E,0.8nm,0.7s						

*FCIAR **22** 08:30:21.0,76.°75N×19.°04E,h10km, station OMEGA has station magnitude of 4.10*
*KOLA **22** 08:30:24.9,77.°00N×18.°96E,h0km,ML3.5,Error ellipse: s-maj=15.1km s-min=7.9km az=130.0,Storfjorden zone*
*NAO **22** 08:30:26.4±0.4,76.°99N×18.°98E,h12km,ML3.9*
*BER **22** 08:30:28.0±3.4,77.°01N×19.°11E,h15km±10km,ML3.1, ML3.9(NAO),Confirmed Earthquake*

ISC 22 08:30:24.4±1.4,**77.°02N**±0.°03×**19.°35E**±0.°04,**h11**km±10km, **n53,** σ2ŝ**20**/88,**1C-1D,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	0.86	271	Pb	Pg	08 30 40.5	-0.5
HSPB				Sb	Sg	08 30 50.6	-1.7
HSPB	Hornsund (broa	0.86	271	*i*	Pg	08 30 40.7	-0.3
HSPB				*eP*	Pb	08 30 42.5	+1.2
HSPB				*eS*	Sg	08 30 50.5	-1.7
HSPB				*eSg*	Sb	08 30 53.9	+1.0
HSPB				IAML		08 30 54.2	
	comp=Z,837nm,0.4s						
HSPB	Hornsund (broa	0.86	271	*eP*	Pg	08 30 38.6	-2.5
HSPB				*eS*	Sg	08 30 50.5	-1.8
HSPB	Hornsund (broa	0.86	271	P	Pg	08 30 40.4	-0.7
HSPB				S	Sg	08 30 51.3	-1.0
SPA0	Spitsbergen Ar	1.33	332	Pn	Pn	08 30 49.9	+1.0
	baz=145,slow=22						
SPA0				Sb	Sb	08 31 07.0	+0.6
	baz=146,slow=37						
SPA0	Spitsbergen Ar	1.33	332	Pn	Pn	08 30 49.9	+1.0
SPA0				Sb	Sb	08 31 07.0	+0.6
SPA0	Spitsbergen Ar	1.33	332	*eP*	Pn	08 30 48.6	-0.3
SPA0				*eS*	Sb	08 31 08.6	+2.2
SPITS	Spitsbergen Ar	1.33	332	P	Pn	08 30 49.6	+0.7
SPITS				S	Sb	08 31 07.6	+1.2
HOPEN	Hopen	1.40	109	Pb	Pn	08 30 52.6	+2.8
HOPEN				Sb	Sn	08 31 10.9	+2.7
HOPEN	Hopen	1.40	109	*eP*	Pn	08 30 52.4	+2.5
HOPEN				*eS*	Sn	08 31 11.0	+2.7
HOPEN				IAML		08 31 15.8	
	comp=Z,1μm,0.4s						
HOPEN	Hopen	1.40	109	*eP*	Pn	08 30 51.9	+2.1
HOPEN				*eS*	Sn	08 31 10.5	+2.2
BRBA	Barentsburg A	1.53	316	Pb	Pn	08 30 52.4	+0.8
BRBA				Pg	Pb	08 30 53.8	+1.2
BRBA				Sg	Sn	08 31 13.2	+1.9
BRBA	Barentsburg A	1.53	316	*eP*	Pn	08 30 52.3	+0.7
BRBA				*i*		08 30 53.7	
BRBB	Barentsburg B	1.55	317	Pb	Pn	08 30 52.6	+0.7
BRBB				Pg	Pb	08 30 54.1	+1.0
BRBB				Sg	Sn	08 31 12.9	+1.0
BRBB	Barentsburg B	1.55	317	*eP*	Pn	08 30 52.6	+0.7
BRBB				*i*		08 30 54.1	
BRBB				*eS*	Sn	08 31 11.3	-0.7
BRBB	Barentsburg B	1.55	317	P	Pn	08 30 52.5	+0.7
BRBB				S	Sn	08 31 11.9	0.0
KBS	Kingsbay	2.46	325	Pn	Pn	08 31 04.8	+0.4
KBS				Pg	Pb	08 31 10.7	+2.1
KBS				Sg	Sb	08 31 41.6	+2.7
KBS	Kingsbay	2.46	325⇑	*i*	Pn	08 31 04.5	+0.1
KBS				*eP*	Pb	08 31 10.7	+2.1
KBS				*eSg*	Sb	08 31 41.1	+2.2
KBS				IAML		08 31 47.5	
	comp=Z,568nm,0.5s						
KBS	Kingsbay	2.46	325	P	Pn	08 31 04.3	-0.1
KBS				S	Sb	08 31 39.2	+0.3
BJO1	Bjornoya	2.54	182	Pn	Pn	08 31 07.7	+2.3
BJO1				Pg	Pb	08 31 11.6	+1.7
BJO1				Sg	Sb	08 31 44.4	+3.4
BJO1	Bjornoya	2.54	182	*eP*	Pb	08 31 11.2	+1.3
BJO1				*eSg*	Sb	08 31 44.2	+3.2
BJO1				IAML		08 31 49.0	
	comp=Z,396nm,0.5s						
BJO1	Bjornoya	2.54	182	*eP*	Pb	08 31 11.0	+1.1
BJO1				*eS*	Sn	08 31 40.5	+4.2
BEAR	Bear Island, N	2.54	182	Pn	Pn	08 31 06.7	+1.2
	baz=358,slow=14						
BEAR				Pg	Pb	08 31 12.0	+2.0
	baz=359,slow=14						
BEAR				Sg	Sb	08 31 43.7	+2.5
	baz=9.8,slow=28						
OMEGA	Omega	6.57	42	*eP*	Pn	08 32 01.9	+1.2
OMEGA				*eS*	Sn	08 33 17.6	+2.2
	comp=Z,54nm,1.3s						
TRO	Tromso	7.43	181	*eP*	Pn	08 32 11.4	-1.1
TRO				*eS*	Sn	08 33 31.0	-5.7
TRO				IAML		08 33 43.5	
	comp=Z,3.6nm,0.4s						
VADS	Vadso	7.48	153	Pn	Pn	08 32 13.9	+0.7
VADS				Sn	Sn	08 33 30.9	-6.9
VADS	Vadso	7.48	153	*eP*	Pn	08 32 13.9	+0.7
VADS				*eS*	Sn	08 33 31.9	-5.9
VADS				IAML		08 33 36.5	
	comp=Z,19nm,0.2s						
VADS	Vadso	7.48	153	P	Pn	08 32 14.0	+0.7
VADS				S	Sn	08 33 33.0	-4.9
JETT	Jettan, Norway	7.51	177	Pn	Pn	08 32 15.7	+1.9
JETT				Sn	Sn	08 33 32.2	-6.6
JETT	Jettan, Norway	7.51	177	Pn	Pn	08 32 15.7	+1.9
JETT				Sn	Sn	08 33 32.2	-6.6
KEV	Kevo	7.62	160	Pn	Pn	08 32 14.8	-0.3
KEV				Sn	Sn	08 33 34.7	-6.5
KEV	Kevo	7.62	160	*eP*	Pn	08 32 14.7	-0.4
KEV				*eS*	Sn	08 33 35.5	-5.8
ARA0	ARCESS Array S	7.73	164	Pn	Pn	08 32 16.9	+0.3
	baz=345,slow=14						
ARA0				Sn	Sn	08 33 36.4	-7.6
	baz=358,slow=22						
ARA0	ARCESS Array S	7.73	164	*eP*	Pn	08 32 16.9	+0.3
ARA0				*eS*	Sn	08 33 36.9	-7.1
ARA0				IAML		08 33 47.8	
	comp=Z,9.5nm,0.4s						
ARCES	ARCESS Array B	7.73	164	P	Pn	08 32 17.6	+1.0
ARCES				S	Sn	08 33 37.0	-7.1
KTK1	Kautokeino	8.13	170	Pn	Pn	08 32 24.5	+2.3
KTK1				Sn	Sn	08 33 46.3	-7.6
HEF	Hetta	8.75	169	Pn	Pn	08 32 31.9	+1.2
HEF				Sn	Sn	08 34 01.8	-7.3
HEF	Hetta	8.75	169	Pn	Pn	08 32 31.9	+1.2
HEF				Sn	Sn	08 34 01.8	-7.3
TERR	Teriberka	9.05	142	P	Pn	08 32 34.2	-0.5
TERR				S	Sn	08 34 08.4	-7.9
LOF	Lofoten	9.10	194	*eP*	Pn	08 32 37.0	+1.6
LOF				*eS*	Sn	08 34 09.1	-8.5
STEI	Steigen	9.22	190	*eP*	Pn	08 32 39.9	+2.8
STEI				*eS*	Sn	08 34 15.9	-4.7
JNW	Jan Mayen West	9.61	246	*eP*	Pn	08 32 43.0	+0.6
JNE	Jan Mayen East	9.62	246	*eP*	Pn	08 32 42.9	+0.4
SALU	Saltoluokta	9.70	182	*eP*	Pn	08 32 44.0	+0.4
SALU				*eS*	Sn	08 34 28.4	-4.0
FAUS	Fauske	9.77	189	S	Sn	08 34 36.2	+2.2
LVZ	Lovozero	10.21	146	S	Sn	08 34 37.3	-7.6
APA0	Apatity Array	10.28	150	Pn	Pn	08 32 50.6	-1.0
	baz=341,slow=14						
APA0				Sn	Sn	08 34 39.4	-7.3
	baz=339,slow=22						
APA0	Apatity Array	10.28	150	Pn	Pn	08 32 50.6	-1.0
APA0				Sn	Sn	08 34 39.4	-7.3
APA0	Apatity Array	10.28	150	P	Pn	08 32 50.5	-1.2
APA0				S	Sn	08 34 38.4	-8.3
APA	Apatity	10.37	149	S	Sn	08 34 43.2	-5.5
VAGH	Vaagaholmen	10.51	193	*eP*	Pn	08 32 55.0	+0.4
VAGH				*eg*		08 34 48.9	
FIA0	FINESS Array S	15.81	168	P	Pn	08 34 03.9	-2.7
	baz=2.0,slow=12						
FIA0	FINESS Array S	15.81	168	P	Pn	08 34 03.9	-2.7

*IDC **22** 08:32:30.2±48.0,4.°07N×127.°39E,h0km,mb4.1/3, mbtmp4.1/3,MS5.1/2,Error ellipse: s-maj=803.6km s-min=203.1km az=158.0*
*DJA **22** 08:33:08.0±0.7,3.°N±5.°×12.°8E±.°,h209km±4km,M4.2/12, mb4.5/6,MLv4.0/12*

ISC 22 08:33:06.3±1.7,**2.°6N**±0.°1×**128.°5E**±0.°1,**h200**km,**n11,** σ1ŝ**21**/11,**mb4.0**/3,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.13	212	P	Pn	08 33 48.9	+2.7
SGSI	Sangihe	3.15	290	P	Pn	08 33 58.6	+0.8
SGSI				S	Sn	08 34 37.7	-0.3
MNI	Manado	3.83	253	P	Pn	08 34 05.6	-0.4
MNI				S	Sn	08 34 52.4	-0.4
SANI	Sanana	5.25	209	P	Pn	08 34 23.6	-0.3
GTOI	Gorontalo	5.82	251	P	Pn	08 34 32.6	+1.4
LUWI	Luwuk	6.77	238	P	Pn	08 34 44.1	+0.6
	63nm,0.6s						
WRA	Warramunga Arr	23.12	166	P	P	08 37 54.1	-0.7
	1.6nm,0.3s,baz=344,slow=9.0,SNR=34						
	1.6nm,0.3s						
ASAR	Alice Springs	26.63	169	P	P	08 38 25.9	-0.6
	1.4nm,0.6s,baz=347,slow=9.2,SNR=18						
	1.4nm,0.6s						
JNU	Nakatsue	30.45	4	LR	LR	08 50 53.2	
	comp=Z,6μm,21.4s,baz=258,slow=38						
HNR	Honiara	33.54	111	LR	LR	08 51 49.6	
	comp=Z,2μm,20.8s,baz=312,slow=33						
STKA	Stephens Creek	36.47	161	P	P	08 39 51.8	-0.4
	1.8nm,0.5s,baz=336,slow=8.0,SNR=8.7						
	1.8nm,0.5s						

*IDC **22** 08:33:12.0±7.9,54.°98N×158.°32W,h0km,mb3.4/3, mbtmp3.5/6,ML3.5/3,Error ellipse: s-maj=137.4km s-min=29.4km az=82.0*
*NEIC **22** 08:33:15.8±1.3,55.°14N±0.°06×158.°49W±0.°07,h35km±2km, ML3.5/26,Error ellipse: s-maj=11.5km s-min=3.8km az=327.0*

ISC 22 08:33:15.1±1.1,**55.°17N**±0.°09×**158.°42W**±0.°05,**h30**km,**n53,** σ1ŝ**18**/56,**mb3.3**/3,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.76	243	Pn	Pn	08 33 27.3	-2.4
CNBA				IAML		08 33 38.9	
	comp=N,1μm,0.3s						
CHGN	Chignik	1.14	0		Pn	08 33 34.5	-0.4
CHGN				Sn	Sn	08 33 48.9	-0.5
CHGN				IAML		08 33 51.9	
	comp=N,2μm,0.5s						
SDPT	Sand Point	1.19	280	Pn	Pn	08 33 34.4	-1.3
SDPT				Sn	Sn	08 33 48.9	-1.9
VNFG	Fog Glacier, M	1.29	331	Pn	Pn	08 33 37.4	+0.3
SII	Sitkinak Islan	2.76	58		Pn	08 33 58.6	+1.4
ACHA	Angle Creek He	3.49	28		Pn	08 34 08.1	+0.8
OHAK	Old Harbor	3.53	52	Pn	Pn	08 34 07.4	-0.4
OHAK				IAML		08 35 19.5	
	comp=N,60nm,0.8s						
P16K	Nushagak River	3.88	3	Pn	Pn	08 34 13.4	+0.9
P16K				IAML		08 35 20.1	
	comp=N,127nm,0.7s						
O15K	Ungalikthiuk R	4.09	350		Pn	08 34 15.7	+0.2
O15K				IAML		08 35 03.2	
	comp=N,29nm,1.2s						
O15K				IAML		08 35 07.1	
	comp=E,40nm,0.6s						
KDAK	Kodiak Island	4.16	49	Pn	Pn	08 34 15.9	-0.6
	comp=E,0.9nm,0.3s,baz=224,slow=7.8,SNR=4.4						
KDAK				Sn	Sn	08 34 59.4	-4.6
	comp=E,1.3nm,0.3s,baz=271,slow=12,SNR=1.3						
	comp=E,2.9nm,0.4s						
P17K	Kvichak River	4.18	14	Pn	Pn	08 34 18.1	+1.4
P17K				IAML		08 35 36.9	
	comp=E,88nm,1.2s						
P17K				IAML		08 35 41.4	
	comp=N,119nm,1.2s						
O14K	Tigyukauivet M	4.38	340		Pn	08 34 19.9	+0.5
O14K				IAML		08 35 49.3	
	comp=N,39nm,1.0s						
O16K	Kokwok River B	4.44	2		Pn	08 34 20.6	+0.3
O16K				IAML		08 35 47.9	
	comp=N,25nm,1.1s						
N14K	Kuskokwak Cree	5.08	341	Pn	Pn	08 34 29.4	+0.3
N14K				IAML		08 36 28.2	
	comp=E,36nm,1.5s						
N14K				IAML		08 36 35.8	
	comp=N,68nm,1.5s						
N15K	Kwethluk River	5.09	351		Pn	08 34 29.0	-0.3
N15K				IAML		08 36 14.2	
	comp=N,28nm,0.8s						
N15K				IAML		08 36 26.6	
	comp=E,30nm,0.9s						
N17K	Nushagak Hills	5.41	6		Pn	08 34 34.0	+0.4
N18K	Kilae Creek	5.69	13	Pn	Pn	08 34 38.7	+1.2
CNPM	China Poot	5.84	39	Pn	Pn	08 34 41.0	+1.4
M16K	Timber Creek	5.88	357		Pn	08 34 40.8	+0.8
M13K	Dall Lake	5.88	335		Pn	08 34 40.5	+

earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**283**	I	I	08 46 20.0	
	0.2nm,0.8s,baz=101,slow=317,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.73**	**283**	Pn	Pg	08 35 49.6	+2.5
	1.9nm,0.3s,baz=100,slow=14,SNR=17						
ZALV				Sn	Sg	08 36 14.1	+4.7
	3.8nm,0.3s,baz=100,slow=28,SNR=8.7						
KURBB	**Kurchatov Arra**	**6.36**	**246**	Pn	Pn	08 36 53.2	+4.3
	0.1nm,0.3s,baz=62,slow=13,SNR=1.9						
KURBB				Lg	Lg	08 38 40.2	
	baz=63,slow=32,SNR=4.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	08 37 10.6	+4.3
	0.2nm,0.3s,baz=30,slow=12,SNR=4.9						
MKAR				Lg	Lg	08 39 17.0	
	0.1nm,0.3s,baz=22,slow=36,SNR=3.1						
	0.9nm,0.8s						

IDC 22 08:35:15.2±999.0, **52.05N**×**43.88E**, **h0km**, **Error ellipse: s-maj=521.5km s-min=124.9km az=140.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**6.09**	**323**	I	I	09 09 40.0	
	0.3nm,0.7s,baz=137,slow=314,SNR=2.4						
I26DE	**FREYUNG INFRAS**	**19.41**	**273**	I	I	10 36 50.0	
	baz=72,slow=323,SNR=0.6						
I37NO	**I37NO**	**20.83**	**334**	I	I	10 38 40.0	
	baz=136,slow=323,SNR=1.5						

IDC 22 08:36:10.2±35.0, **5.18N**×**126.96E**, **h0km**, **mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=581.4km s-min=162.3km az=161.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.99**	**164**	P	P	08 41 45.0	0.0
	1.0nm,0.4s,baz=344,slow=10,SNR=9.0						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**29.46**	**167**	P	P	08 42 15.9	0.0
	0.5nm,0.4s,baz=356,slow=8.2,SNR=8.0						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**39.40**	**160**	P	P	08 43 41.6	-0.2
	1.1nm,0.6s,baz=335,slow=6.5,SNR=3.5						
	1.1nm,0.6s						

*IDC **22** 08:36:50.6±3.8, 54.67N×160.04W, h0km, mb3.9/3, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=123.0km s-min=24.3km az=160.0*
*NEIC **22** 08:36:58.4±1.6, 54.98N±0.10×160.0W±0.1, h30km±8km, mb3.5/3, ML3.5/30, Error ellipse: s-maj=15.2km s-min=8.3km az=149.0*

ISC 22 08:36:55.2±1.0, **54.84N**±0.09×**160.16W**±0.06, **h33km**, **n59**, σ1§**85**/59, **mb4.1/3, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.33**	**92**	Pg	**Pn**	**08 37 05.3**	**+1.7**
CNBA				IAML		08 37 11.2	
	comp=E,3μm,0.5s						
CNBA				IAML		08 37 11.4	
	comp=N,3μm,0.4s						
SDPT	**Sand Point**	**0.55**	**341**		**Pn**	**08 37 07.8**	**+1.2**
SDPT				IAML		08 37 15.4	
	comp=N,5μm,0.8s						
VNFG	**Fog Glacier, M**	**1.49**	**13**		**Pb**	**08 37 21.3**	**-1.1**
CHGN	**Chignik**	**1.77**	**33**		**Pn**	**08 37 24.8**	**+1.4**
CHGN				IAML		08 37 50.3	
	comp=N,531nm,0.3s						
AKUT	**Akutan**	**3.35**	**260**	Pn	**Pb**	**08 37 50.9**	**-2.9**
LVA	**Lava Point**	**3.49**	**261**	Pn	**Pb**	**08 37 53.3**	**-2.9**
LVA				IAML		08 38 53.4	
	comp=N,116nm,0.6s						
LVA				IAML		08 39 06.0	
	comp=E,71nm,4.4s						
SII	**Sitkinak Islan**	**3.80**	**60**	Pn	**Pn**	**08 37 51.8**	**+0.5**
SII				IAML		08 39 09.3	
	comp=N,141nm,0.8s						
UNV	**Unalaska Valle**	**3.84**	**258**	Pn	**Pn**	**08 37 56.7**	**+4.8**
UNV				IAML		08 38 57.0	
	comp=N,44nm,5.0s						
ACHA	**Angle Creek He**	**4.31**	**36**		**Pn**	**08 38 00.2**	**+1.8**
O15K	**Ungalikthiuk R**	**4.36**	**2**	Pn	**Pn**	**08 37 59.7**	**+0.7**
O14K	**Tigyukauivet M**	**4.47**	**353**	Pn	**Pn**	**08 38 01.8**	**+1.3**
O14K				IAML		08 40 22.9	
	comp=N,52nm,0.3s						
OHAK	**Old Harbor**	**4.54**	**55**	Pn	**Pn**	**08 38 01.9**	**+0.5**
OHAK				IAML		08 39 16.6	
	comp=E,39nm,1.9s						
OHAK				IAML		08 39 18.7	
	comp=N,48nm,1.0s						
P17K	**Kvichak River**	**4.82**	**23**	Pn	**Pn**	**08 38 07.9**	**+2.6**
KDAK	**Kodiak Island**	**5.15**	**52**	Pn	**Pn**	**08 38 09.9**	**+0.1**
	comp=N,1.3nm,0.3s,baz=238,slow=7.4,SNR=8.1						
KDAK				Sn	**Sn**	**08 39 02.7**	**-5.2**
	comp=N,0.9nm,0.3s,baz=284,slow=15,SNR=1.6						
	comp=N,3.5nm,0.3s						
KDAK	**Kodiak Island**	**5.15**	**52**	Pn	**Pn**	**08 38 11.1**	**+1.3**
KDAK				IAML		08 39 30.3	
	comp=N,38nm,4.8s						
KDAK				IAML		08 39 53.2	
	comp=N,38nm,3.9s						
N14K	**Kuskokwak Cree**	**5.17**	**351**		**Pn**	**08 38 11.7**	**+1.6**
N14K				IAML		08 41 31.3	
	comp=N,49nm,0.7s						
N15K	**Kwethluk River**	**5.35**	**0**		**Pn**	**08 38 13.7**	**+1.2**
O18K	**Koktuh Hills**	**5.70**	**26**	Pn	**Pn**	**08 38 19.6**	**+2.2**
M13K	**Dall Lake**	**5.85**	**344**		**Pn**	**08 38 21.2**	**+1.8**
N17K	**Nushagak Hills**	**5.93**	**14**	Pn	**Pn**	**08 38 22.4**	**+2.0**
M14K	**Bethel**	**6.01**	**352**		**Pn**	**08 38 22.6**	**+1.0**
SPIA	**Saint Paul Isl**	**6.13**	**297**	Pn	**Pn**	**08 38 26.4**	**+3.2**
O19K	**Port Alsworth**	**6.22**	**28**		**Pn**	**08 38 26.6**	**+2.1**
M16K	**Timber Creek**	**6.24**	**5**		**Pn**	**08 38 26.1**	**+1.4**
N18K	**Kilae Creek**	**6.29**	**20**	Pn	**Pn**	**08 38 27.3**	**+1.8**
ILSW	**Iliamna Southw**	**6.40**	**33**	Pn	**Pn**	**08 38 28.8**	**+1.6**
M11K	**Mekoryuk**	**6.44**	**332**	Pn	**Pn**	**08 38 29.5**	**+2.0**
L14K	**Kuka Creek**	**6.66**	**349**		**Pn**	**08 38 31.5**	**+1.0**
M17K	**Holitna River**	**6.74**	**11**	Pn	**Pn**	**08 38 33.2**	**+1.6**
CNPM	**China Poot**	**6.75**	**42**	Pn	**Pn**	**08 38 34.1**	**+2.3**
L16K	**Owhat River**	**6.91**	**3**	Pn	**Pn**	**08 38 34.7**	**+0.8**
K13K	**Kusilvak Mount**	**7.50**	**343**		**Pn**	**08 38 43.8**	**+1.7**
K15K	**Wolf Creek Mou**	**7.52**	**355**	Pn	**Pn**	**08 38 43.4**	**+1.1**
L18K	**Granite Mounta**	**7.62**	**12**	Pn	**Pn**	**08 38 45.1**	**+1.3**
SLKM	**Skilak Lake**	**7.79**	**39**	Pn	**Pn**	**08 38 47.8**	**+1.8**
SEW	**Seward**	**7.82**	**43**	Pn	**Pn**	**08 38 47.8**	**+1.4**
K17K	**Iditarod**	**7.96**	**6**	Pn	**Pn**	**08 38 49.1**	**+0.7**
J14K	**Nanvaranak Lak**	**8.13**	**349**	Pn	**Pn**	**08 38 51.2**	**+0.6**
PWL	**Port Wells**	**8.72**	**41**	Pn	**Pn**	**08 39 00.3**	**+1.5**
I17K	**Unalakleet**	**9.09**	**358**	Pn	**Pn**	**08 39 04.0**	**+0.2**
HIN	**Hinchinbrook I**	**9.20**	**47**	Pn	**Pn**	**08 39 06.6**	**+1.3**
J19K	**Poorman**	**9.47**	**12**	Pn	**Pn**	**08 39 10.2**	**+1.1**
CAST	**Castle Rocks**	**9.55**	**22**	Pn	**Pn**	**08 39 12.4**	**+2.2**
SCM	**Sheep Creek Mo**	**9.72**	**39**	Pn	**Pn**	**08 39 13.4**	**+0.9**
ANM	**Nome**	**10.11**	**347**	Pn	**Pn**	**08 39 19.2**	**+1.5**
H17K	**Granite Mounta**	**10.14**	**1**	Pn	**Pn**	**08 39 19.5**	**+1.4**
IMAR	**Indian Mountai**	**11.62**	**13**	Pn	**Pn**	**08 39 40.6**	**+2.2**
ILAR	**Eielson Array**	**11.96**	**28**	Pn	**Pn**	**08 39 41.2**	**-1.9**
	comp=N,0.1nm,0.3s,baz=220,slow=12,SNR=5.8						
F20K	**Avaraart Lake**	**12.44**	**8**	Pn	**Pn**	**08 39 51.5**	**+1.9**
BCAR	**Beaver Creek A**	**12.52**	**41**	Pn	**Pn**	**08 39 51.7**	**+0.8**
M29M	**Somme Creek**	**13.57**	**47**	Pn	**Pn**	**08 40 05.7**	**+0.6**
D23K	**Nanushuk River**	**14.84**	**13**	Pn	**P**	**08 40 26.2**	**-1.5**
H29M	**Whitestone**	**15.54**	**34**	Pn	**P**	**08 40 34.6**	**-0.9**
H29M				IAmb	IAmb	08 40 47.8	
	comp=Z,1.5nm,0.7s						
I30M	**Mount Dempster**	**15.68**	**39**	P	**P**	**08 40 38.8**	**+1.7**
I30M				IAmb	IAmb	08 40 54.5	
	comp=Z,11nm,0.8s						
INK	**Inuvik**	**18.29**	**32**	P	**P**	**08 41 04.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=234,slow=8.7,SNR=5.5						
	comp=Z,0.6nm,0.4s						
INK	**Inuvik**	**18.29**	**32**	IAmb	IAmb	08 41 19.2	
	comp=Z,3.0nm,1.1s						
YKA	**Yellowknife Ar**	**24.42**	**53**	P	**P**	**08 42 11.0**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=271,slow=8.0,SNR=3.1						
	comp=Z,0.4nm,0.7s						
PETK	**Petropavlovsk-**	**24.58**	**283**	P	**P**	**08 42 13.4**	**+1.6**
	comp=Z,2.7nm,0.5s,baz=66,slow=8.7,SNR=16						
	comp=Z,2.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**81.21**	**289**	P	**P**	**08 49 08.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=8.5,slow=6.2,SNR=5.5						
	comp=Z,0.7nm,0.3s						

*IDC **22** 08:39:12.8±3.0, 55.36N×160.84W, h0km, mb4.0/7, mbtmp3.9/9, ML3.5/2, MS4.8/1, Error ellipse: s-maj=78.7km s-min=22.7km az=161.0*
*NEIC **22** 08:39:17.3±1.4, 54.84N±0.07×160.26W±0.09, h33km±7km, mb3.6/4, ML3.7/30, Error ellipse: s-maj=11.9km s-min=6.5km az=153.0*

ISC 22 08:39:15.9±0.8, **54.86N**±0.06×**160.14W**±0.05, **h35km**, **n56**, σ2§**06**/64, **mb4.0/9, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.32**	**97**		**Pn**	**08 39 25.5**	**+1.3**
CNBA					**Sn**	**08 39 31.7**	**+1.9**
CNBA				IAML		08 39 32.3	
	comp=E,4μm,0.4s						
SDPT	**Sand Point**	**0.53**	**339**		**Pn**	**08 39 26.7**	**-0.2**
SDPT				Sn	**Sn**	**08 39 34.4**	**-0.3**
SDPT				IAML		08 39 34.6	
	comp=E,3μm,0.4s						
SDPT				IAML		08 39 35.7	
	comp=N,3μm,0.4s						
VNFG	**Fog Glacier, M**	**1.47**	**13**		**Pn**	**08 39 42.6**	**+2.6**
VNFG				Sn	**Sn**	**08 40 01.1**	**+3.2**
CHGN	**Chignik**	**1.75**	**33**		**Pn**	**08 39 46.2**	**+2.5**
CHGN				Sn	**Sn**	**08 40 07.7**	**+3.0**
CHGN				IAML		08 40 13.7	
	comp=N,783nm,0.2s						
AKUT	**Akutan**	**3.36**	**260**		**Pn**	**08 40 07.5**	**+1.6**
AKUT				Sn	**Sn**	**08 40 46.5**	**+2.0**
AKUT				IAML		08 41 00.0	
	comp=E,116nm,0.9s						
AKUT				IAML		08 41 01.1	
	comp=N,153nm,0.5s						
LVA	**Lava Point**	**3.50**	**261**		**Pn**	**08 40 08.9**	**+1.1**
LVA				IAML		08 41 03.0	
	comp=E,113nm,0.5s						
LVA				IAML		08 41 06.2	
	comp=N,185nm,0.8s						
SII	**Sitkinak Islan**	**3.78**	**61**	Pn	**Pn**	**08 40 13.9**	**+2.3**
UNV	**Unalaska Valle**	**3.86**	**257**		**Pn**	**08 40 14.0**	**+1.3**
UNV				Sn	**Sn**	**08 40 59.9**	**+3.1**
ACHA	**Angle Creek He**	**4.29**	**36**	Pn	**Pn**	**08 40 21.8**	**+3.1**
O15K	**Ungalikthiuk R**	**4.33**	**2**	Pn	**Pn**	**08 40 20.9**	**+1.6**
O15K				Sn	**Sn**	**08 41 08.6**	**+0.1**
O15K				IAML		08 41 40.1	
	comp=E,47nm,1.1s						
P16K	**Nushagak River**	**4.34**	**15**	Pn	**Pn**	**08 40 21.7**	**+2.4**
OHAK	**Old Harbor**	**4.51**	**56**	Pn	**Pn**	**08 40 23.9**	**+2.1**
OHAK				IAML		08 41 40.3	
	comp=N,50nm,0.9s						
KDAK	**Kodiak Island**	**5.13**	**52**	Pn	**Pn**	**08 40 31.2**	**+1.1**
	comp=N,1.0nm,0.3s,baz=262,slow=15,SNR=0.9						
KDAK				Sn	**Sn**	**08 41 24.2**	**-3.8**
	comp=N,2.1nm,0.3s,baz=218,slow=12,SNR=1.6						
	comp=N,3.9nm,0.6s						
KDAK	**Kodiak Island**	**5.13**	**52**	Pn	**Pn**	**08 40 33.0**	**+2.9**
KDAK				IAML		08 41 53.7	
	comp=N,54nm,1.4s						
KDAK				IAML		08 41 54.2	
	comp=N,48nm,1.5s						
N14K	**Kuskokwak Cree**	**5.15**	**351**		**Pn**	**08 40 32.1**	**+1.8**
N14K				IAML		08 41 30.7	
	comp=E,60nm,1.2s						
N14K				IAML		08 42 27.6	
	comp=N,50nm,1.5s						
N15K	**Kwethluk River**	**5.32**	**0**	Pn	**Pn**	**08 40 35.0**	**+2.2**
N15K				IAML		08 41 37.2	
	comp=N,38nm,0.5s						
N15K				IAML		08 41 37.6	
	comp=E,40nm,0.5s						
M14K	**Bethel**	**5.99**	**351**		**Pn**	**08 40 43.2**	**+1.3**
SPIA	**Saint Paul Isl**	**6.12**	**296**	Pn	**Pn**	**08 40 44.3**	**+0.5**
M16K	**Timber Creek**	**6.21**	**5**	Pn	**Pn**	**08 40 47.0**	**+2.0**
L14K	**Kuka Creek**	**6.64**	**349**		**Pn**	**08 40 52.1**	**+1.3**
L16K	**Owhat River**	**6.88**	**3**	Pn	**Pn**	**08 40 56.0**	**+1.8**
K13K	**Kusilvak Mount**	**7.48**	**343**		**Pn**	**08 41 03.5**	**+1.1**
L19K	**White Mountain**	**7.84**	**18**		**Pn**	**08 41 10.1**	**+2.6**
J14K	**Nanvaranak Lak**	**8.11**	**349**		**Pn**	**08 41 12.3**	**+1.4**
J16K	**Anvik River**	**8.45**	**359**	Pn	**Pn**	**08 41 16.5**	**+0.8**
PWL	**Port Wells**	**8.70**	**41**	Pn	**Pn**	**08 41 21.2**	**+2.1**
J18K	**Innoko River**	**8.81**	**10**	Pn	**Pn**	**08 41 22.3**	**+1.7**
HIN	**Hinchinbrook I**	**9.17**	**47**	Pn	**Pn**	**08 41 27.5**	**+1.9**
J20K	**Nowinta River**	**9.82**	**16**		**Pn**	**08 41 36.8**	**+2.3**
KLU	**Klutina**	**10.01**	**43**	Pn	**Pn**	**08 41 39.9**	**+2.8**
ANM	**Nome**	**10.08**	**347**	Pn	**Pn**	**08 41 39.4**	**+1.4**
H17K	**Granite Mounta**	**10.11**	**1**	Pn	**Pn**	**08 41 40.0**	**+1.6**
H19K	**Roundabout Mou**	**10.86**	**8**	Pn	**Pn**	**08 41 50.0**	**+1.4**
F15K	**North Star Dit**	**11.11**	**350**	Pn	**Pn**	**08 41 53.6**	**+1.6**
TNA	**Tin City**	**11.40**	**343**	Pn	**Pn**	**08 41 57.3**	**+1.3**
H21K	**Melozitna River**	**11.42**	**16**	Pn	**Pn**	**08 41 58.0**	**+1.8**
IMAR	**Indian Mountai**	**11.59**	**13**	Pn	**Pn**	**08 42 01.2**	**+2.6**
H22K	**Ishtalitna Cre**	**11.87**	**18**	Pn	**Pn**	**08 42 04.5**	**+2.0**
ILAR	**Eielson Array**	**11.94**	**29**	Pn	**Pn**	**08 42 00.6**	**-2.8**
	comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=2.8						
ILAR				LR	LR	08 47 13.8	
	comp=E,4μm,18.6s,baz=155,slow=41						
F19K	**Shaleruckik Mo**	**12.07**	**4**	Pn	**Pn**	**08 42 07.0**	**+1.9**
F20K	**Avaraart Lake**	**12.41**	**8**	Pn	**Pn**	**08 42 11.8**	**+2.0**
O29M	**Mount Kennedy**	**12.76**	**56**	Pn	**Pn**	**08 42 17.3**	**+2.6**
E24K	**Your Creek**	**14.34**	**18**	Pn	**Pn**	**08 42 39.0**	**+2.9**
C23K	**Itkillik River**	**15.63**	**12**		**Pn**	**08 42 54.1**	**+0.9**
C23K				IAmb	IAmb	08 43 14.0	
	comp=Z,4.0nm,0.9s						
I30M	**Mount Dempster**	**15.65**	**39**	P	**P**	**08 42 59.9**	**+2.5**
G30M	**tAoh Zrail Nji**	**16.66**	**34**		**Pn**	**08 43 09.3**	**+2.9**
G30M				IAmb	IAmb	08 43 11.7	
	comp=Z,9.2nm,1.5s						
INK	**Inuvik**	**18.27**	**32**	P	**P**	**08 43 25.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=242,slow=12,SNR=4.7						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**24.40**	**53**	P	**P**	**08 44 32.9**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=275,slow=9.4,SNR=1.3						
PETK	**Petropavlovsk-**	**24.58**	**283**	P	**P**	**08 44 30.5**	**-1.8**
	comp=Z,1.7nm,0.5s,baz=78,slow=14,SNR=22						
	comp=Z,2.3nm,0.5s						
ARCES	**ARCESS Array B**	**55.84**	**358**	P	**P**	**08 48 47.5**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=13,slow=7.5,SNR=4.2						
	comp=Z,0.9nm,0.6s						
FINES	**FINESS Array B**	**63.94**	**357**	P	**P**	**08 49 43.4**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=16,slow=8.2,SNR=14						
	comp=Z,0.8nm,0.4s						
BVAR	**Borovoye Array**	**64.64**	**329**	P	**P**	**08 49 48.0**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=46,slow=8.5,SNR=4.4						
	comp=Z,1.7nm,0.6s						
HFS	**Hagfors**	**65.25**	**3**	P	**P**	**08 49 52.5**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=9.1,slow=3.6,SNR=1.4						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**65.86**	**318**	P	**P**	**08 49 55.2**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=7.1,slow=3.5,SNR=3.1						
	comp=Z,0.3nm,0.5s						
AKASG	**Malin Array Be**	**74.52**	**354**	P	**P**	**08 50 49.1**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=9.0,slow=6.4,SNR=4.4						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**81.21**	**289**	P	**P**	**08 51 27.1**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=6.0,slow=5.5,SNR=7.0						

*IDC **22** 08:55:06.9±3.8, 36.39N×71.02E, h167km±33km, mb3.4/13, mbtmp3.9/18, Error ellipse: s-maj=28.5km s-min=13.7km az=37.0*
*NNC **22** 08:55:09.3±6.5, 37.02N×70.44E, h0km, mb4.2, mpv3.7, Error ellipse: s-maj=56.7km s-min=41.4km az=153.0*

ISC 22 08:55:11.1±0.8, **36.70N**±0.08×**70.99E**±0.09, **h200km**, **n22**, σ1§**62**/27, **mb3.5**/11, **1C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.40**	**357**	⇓P	**Pn**	**08 56 42.9**	**-0.6**
	5.1nm,0.4s,baz=187,slow=12,SNR=42						
KK31				⇓S	**Sn**	**08 57 52.5**	**-4.3**
	18nm,0.5s,baz=182,slow=16,SNR=19						
AAK	**Ala-Archa**	**6.51**	**23**	P	**Pn**	**08 56 45.3**	**+0.2**
	5.8nm,0.5s,baz=208,slow=5.1,SNR=10						
AAK				S	**Sn**	**08 57 58.8**	**-0.7**
	14nm,0.9s,baz=120,slow=20,SNR=10.0						
AAK	**Ala-Archa**	**6.51**	**23**	⇑P	**Pn**	**08 56 45.1**	**+0.1**
	1.8nm,0.5s						
AAK				⇓S	**Sn**	**08 57 59.2**	**-0.3**
	6.1nm,0.7s						
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**08 58 10.9**	**+0.8**
	0.7nm,0.6s,baz=206,slow=8.1,SNR=6.3						
AB31	**Akbulak array**	**14.90**	**331**	P	**P**	**08 58 34.0**	**+1.3**
	3.1nm,0.6s,baz=142,slow=12,SNR=27						
AB31				S	**S**	**09 01 14.6**	**-2.7**
	1.7nm,0.5s,baz=147,slow=24,SNR=4.3						
KURBB	**Kurchatov Arra**	**14.93**	**19**	P	**P**	**08 58 33.8**	**+0.8**
	0.6nm,0.6s,baz=212,slow=10,SNR=1.1						
BVAR	**Borovoye Array**	**16.33**	**359**	P	**Pn**	**08 58 50.1**	**+1.0**
	3.4nm,0.7s,baz=165,slow=12,SNR=11						
AKTO	**Aktyubinsk**	**16.60**	**330**	P	**Pn**	**08 58 52.7**	**+0.3**
	12nm,0.6s,baz=144,slow=8.9,SNR=21						
AKTO				S	**S**	**09 01 51.7**	**-2.9**
	1.3nm,0.8s,baz=228,slow=15,SNR=1.7						
AKTO	**Aktyubinsk**	**16.60**	**330**	⇓P	**P**	**08 58 51.5**	**+0.1**
	7.1nm,0.7s						
ZALV	**Zalesovo Beam**	**19.73**	**25**	P	**P**	**08 59 27.1**	**+1.8**
	2.8nm,0.6s,baz=222,slow=11,SNR=10						
	2.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.56**	**119**	P	**P**	**09 01 03.6**	**-2.5**
	1.5nm,0.3s,baz=305,slow=9.5,SNR=4.8						
	1.5nm,0.3s						
AKASG	**Malin Array Be**	**32.81**	**309**	P	**P**	**09 01 26.0**	**+0.6**
	0.7nm,0.5s,baz=102,slow=8.6,SNR=2.1						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**37.31**	**326**	P	**P**	**09 02 04.6**	**+1.0**
	1.8nm,0.8s,baz=101,slow=8.0,SNR=4.2						
	1.8nm,0.8s						
ARCES	**ARCESS Array B**	**40.95**	**338**	P	**P**	**09 02 35.5**	**+1.8**
	0.9nm,0.6s,baz=116,slow=8.2,SNR=5.8						
	0.9nm,0.6s						
HFS	**Hagfors**	**42.90**	**322**	P	**P**	**09 02 50.6**	**+1.0**
	1.2nm,0.3s,baz=94,slow=15,SNR=7.0						
	1.2nm,0.3s						
NOA	**NORSAR Array B**	**44.21**	**323**	P	**P**	**09 03 00.8**	**+0.7**
	0.8nm,0.6s,baz=101,slow=7.5,SNR=2.7						
	0.8nm,0.6s						
EKA	**Eskdalemuir Ar**	**52.13**	**316**	P	**P**	**09 04 01.2**	**+0.6**
	0.4nm,0.4s,baz=70,slow=5.8,SNR=2.2						
	0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P	**P**	**09 05 34.0**	**-0.6**
	0.3nm,0.8s,baz=44,slow=4.5,SNR=1.9						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**74.58**	**16**	P	**P**	**09 06 28.7**	**+1.0**
	0.4nm,0.9s,baz=327,slow=5.8,SNR=3.5						
	0.4nm,0.9s						
YKA	**Yellowknife Ar**	**81.04**	**3**	P	**P**	**09 07 04.5**	**+1.3**
	0.4nm,0.5s,baz=354,slow=5.3,SNR=14						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**82.11**	**122**	P	**P**	**09 07 07.8**	**-1.6**
	1.4nm,0.7s,baz=324,slow=4.9,SNR=12						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**84.38**	**125**	P	**P**	**09 07 19.4**	**-1.6**
	1.5nm,0.6s,baz=312,slow=5.0,SNR=23						
	1.5nm,0.6s						

*IDC **22** 09:17:09.8±2.2, 43.86N×99.98E, h0km, mb3.4/2, mbtmp3.5/7, ML3.0/4, Error ellipse: s-maj=37.1km s-min=16.1km az=1.0*

ISC 22 09:17:10.2±1.8, **43.7N**±0.2×**99.93E**±0.08, **h10km**, **n8**, σ1§**01**/8, **Mongolia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**6.14**	**45**	Pn	**Pn**	**09 18 39.5**	**-1.6**
	0.7nm,0.3s,baz=229,slow=15,SNR=10.0						
SONM				Pg	Pb	09 18 59.4	+2.1
	2.3nm,0.3s,baz=228,slow=18,SNR=16						
SONM				Lg	Lg	09 20 19.0	
	6.2nm,0.3s,baz=227,slow=32,SNR=9.6						
	3.2nm,0.6s						
TLY	**Talaya**	**8.39**	**16**	Lg	Lg	09 21 31.1	
	2.8nm,0.3s,baz=81,slow=19,SNR=9.8						
MKAR	**Makanchi Array**	**12.82**	**290**	Pn	**Pn**	**09 20 12.1**	**-0.3**
	baz=94,slow=16,SNR=3.2						
MKAR				Sn	**Sn**	**09 22 35.1**	**-0.1**
	0.1nm,0.3s,baz=102,slow=25,SNR=2.2						
MKAR				Lg	Lg	09 23 55.0	
	0.2nm,0.3s,baz=92,slow=32,SNR=6.2						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**14.28**	**321**	Pn	**Pn**	**09 20 33.3**	**+1.1**
	0.3nm,0.3s,baz=132,slow=13,SNR=3.7						
ZALV				Lg	Lg	09 24 35.1	
	0.1nm,0.3s,baz=115,slow=27,SNR=1.7						
	0.5nm,0.3s						
HILR	**Hailar Array B**	**14.82**	**60**	Pn	**Pn**	**09 20 40.3**	**+0.7**
	0.7nm,0.2s,baz=238,slow=14,SNR=

SII	**Sitkinak Islan**	**2.56**	**59**	Pn	**Pn**	**09 22 57.4**	**+0.2**
SII				IAML		09 23 54.1	
	comp=E,453nm,0.7s						
SII				IAML		09 24 09.3	
	comp=N,348nm,0.7s						
ACHA	**Angle Creek He**	**3.31**	**27**	Pn	**Pn**	**09 23 08.1**	**+0.6**
OHAK	**Old Harbor**	**3.32**	**52**	Pn	**Pn**	**09 23 06.7**	**-0.8**
OHAK				IAML		09 24 17.4	
	comp=N,73nm,0.9s						
P16K	**Nushagak River**	**3.75**	**1**	Pn	**Pn**	**09 23 14.7**	**+1.2**
KDAK	**Kodiak Island**	**3.96**	**49**	Pn	**Pn**	**09 23 15.8**	**-0.5**
	comp=N,1.3nm,0.3s,baz=185,slow=3.9,SNR=5.1						
KDAK				Sn	**Sn**	**09 23 58.2**	**-3.2**
	comp=N,2.2nm,0.3s,baz=30,slow=15,SNR=6.0						
	comp=N,2.3nm,0.3s						
KDAK	**Kodiak Island**	**3.96**	**49**	Pn	**Pn**	**09 23 16.5**	**+0.1**
KDAK				IAML		09 24 38.2	
	comp=N,51nm,2.1s						
KDAK				IAML		09 24 49.7	
	comp=N,49nm,2.0s						
O15K	**Ungalikthiuk R**	**4.00**	**347**	Pn	**Pn**	**09 23 17.4**	**+0.4**
O15K				IAML		09 24 06.2	
	comp=N,42nm,0.8s						
O15K				IAML		09 24 34.9	
	comp=E,46nm,0.7s						
O14K	**Tigyukauivet M**	**4.32**	**338**		**Pn**	**09 23 21.7**	**+0.3**
O14K				IAML		09 24 46.5	
	comp=N,58nm,0.9s						
O14K				IAML		09 24 60.0	
	comp=E,43nm,2.4s						
N15K	**Kwethluk River**	**5.00**	**349**	Pn	**Pn**	**09 23 31.9**	**+1.2**
N15K				IAML		09 25 07.8	
	comp=E,48nm,1.1s						
N15K				IAML		09 25 12.5	
	comp=N,38nm,1.0s						
N14K	**Kuskokwak Cree**	**5.03**	**339**	Pn	**Pn**	**09 23 31.4**	**+0.4**
CNPM	**China Poot**	**5.64**	**38**	Pn	**Pn**	**09 23 41.3**	**+1.7**
M16K	**Timber Creek**	**5.77**	**356**		**Pn**	**09 23 42.4**	**+1.2**
M14K	**Bethel**	**5.84**	**341**		**Pn**	**09 23 43.2**	**+1.0**
M13K	**Dall Lake**	**5.84**	**334**		**Pn**	**09 23 43.2**	**+1.0**
L16K	**Owhat River**	**6.48**	**354**	Pn	**Pn**	**09 23 51.9**	**+0.9**
SEW	**Seward**	**6.70**	**40**		**Pn**	**09 23 53.6**	**-0.3**
K17K	**Iditarod**	**7.45**	**359**		**Pn**	**09 24 04.8**	**+0.6**
K13K	**Kusilvak Mount**	**7.48**	**336**		**Pn**	**09 24 05.5**	**+0.8**
KAIM	**Kayak Island**	**8.69**	**52**	Pn	**Pn**	**09 24 22.0**	**+0.7**
I17K	**Unalakleet**	**8.72**	**352**	Pn	**Pn**	**09 24 22.5**	**+0.8**
WRH	**Wood River Hil**	**10.48**	**25**	Pn	**Pn**	**09 24 46.2**	**+0.5**
G18K	**Tagagawik**	**10.64**	**359**	Pn	**Pn**	**09 24 48.9**	**+0.9**
CCB	**Clear Creek Bu**	**10.70**	**25**	Pn	**Pn**	**09 24 48.1**	**-0.5**
H21K	**Melozitna Rive**	**10.72**	**12**	Pn	**Pn**	**09 24 49.6**	**+0.5**
ILAR	**Eielson Array**	**11.02**	**26**	Pn	**Pn**	**09 24 50.0**	**-3.1**
	comp=N,0.1nm,0.3s,baz=215,slow=13,SNR=12						
ILAR				Sn	**Sn**	**09 26 49.6**	**-5.4**
	baz=216,slow=22,SNR=4.5						
	comp=N,0.6nm,0.7s						
J25K	**Salcha River,**	**11.30**	**29**	Pn	**Pn**	**09 24 57.8**	**+0.8**
O29M	**Mount Kennedy**	**11.55**	**56**	Pn	**Pn**	**09 25 02.1**	**+1.6**
F19K	**Shaleruckik Mo**	**11.59**	**1**	Pn	**Pn**	**09 25 01.0**	**+0.2**
H24K	**Noodor Dome**	**11.70**	**21**	Pn	**Pn**	**09 25 03.3**	**+0.9**
M29M	**Somme Creek**	**12.40**	**47**	Pn	**Pn**	**09 25 12.5**	**+0.4**
O30N	**Mendenhall**	**12.86**	**56**	Pn	**Pn**	**09 25 19.1**	**+0.8**
P32M	**Atlin**	**13.79**	**62**	Pn	**Pn**	**09 25 33.0**	**+1.9**
H29M	**Whitestone**	**14.51**	**33**	Pn	**Pn**	**09 25 41.4**	**+0.7**
I30M	**Mount Dempster**	**14.59**	**38**	Pn	**Pn**	**09 25 42.6**	**+0.7**
INK	**Inuvik**	**17.29**	**31**	P	**Pn**	**09 26 16.8**	**+0.4**
	comp=N,0.2nm,0.3s,baz=231,slow=14,SNR=5.4						
	comp=N,0.9nm,0.5s						
YKA	**Yellowknife A**	**23.21**	**54**	P	**P**	**09 27 22.5**	**+0.9**
	comp=N,0.2nm,0.8s,baz=274,slow=9.6,SNR=4.0						
	comp=N,0.2nm,0.8s						
NVAR	**Mina Array Bea**	**31.48**	**106**	P	**P**	**09 28 38.1**	**+1.4**
	comp=N,0.4nm,0.7s,baz=316,slow=6.2,SNR=3.9						
	comp=N,0.4nm,0.7s						
PDAR	**Pinedale Array**	**33.52**	**91**	P	**P**	**09 28 55.0**	**+0.5**
	comp=N,0.2nm,0.5s,baz=316,slow=4.1,SNR=3.6						
	comp=N,0.2nm,0.5s						
TXAR	**Lajitas Array**	**46.36**	**101**	P	**P**	**09 30 41.5**	**+0.6**
	comp=N,0.4nm,0.8s,baz=317,slow=6.7,SNR=5.7						
	comp=N,0.4nm,0.8s						

*IDC **22** 09:28:42.9±1.7, 17.°96S×178.°62W, h613km±19km, mb3.1/11, mbtmp4.0/12, Error ellipse: s-maj=27.2km s-min=15.6km az=138.0*

ISC 22 09:28:41.8±0.8, 18.°0S±0.°2×178.°6W±0.°2, h600km, n13, σ0s72/15, mb3.6/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.25**	**274**	P	**P**	**09 30 04.1**	**+1.6**
	36nm,0.6s,baz=161,slow=5.3,SNR=34						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**09 35 14.4**	**+0.2**
	4.8nm,0.7s,baz=82,slow=8.9,SNR=9.7						
	4.8nm,0.7s						
WRA	**Warramunga Arr**	**44.49**	**260**	P	**P**	**09 36 01.2**	**-0.4**
	1.0nm,0.3s,baz=96,slow=8.2,SNR=61						
WRA				PcP	**PcP**	**09 37 31.1**	**-0.5**
	0.2nm,0.3s,baz=89,slow=3.8,SNR=4.9						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**09 36 02.9**	**+0.1**
	5.6nm,0.5s,baz=88,slow=8.6,SNR=131						
ASAR				PcP	**PcP**	**09 37 31.4**	**-0.8**
	0.5nm,0.4s,baz=104,slow=3.8,SNR=5.2						
	5.6nm,0.5s						
MJAR	**Matsushiro Arr**	**67.88**	**323**	P	**P**	**09 38 41.1**	**-0.6**
	1.1nm,0.6s,baz=103,slow=11,SNR=4.6						
	1.1nm,0.6s						
QSPA	**South Pole Qui**	**72.08**	**180**	P	**P**	**09 39 05.8**	**-0.4**
	2.1nm,1.1s,baz=301,slow=5.9,SNR=3.2						
	2.1nm,1.1s						
PETK	**Petropavlovsk-**	**73.71**	**345**	P	**P**	**09 39 15.3**	**-0.2**
	1.2nm,0.6s,baz=128,slow=4.7,SNR=4.5						
	1.2nm,0.6s						
NVAR	**Mina Array Bea**	**79.57**	**44**	P	**P**	**09 39 48.5**	**+0.4**
	0.3nm,0.6s,baz=223,slow=10,SNR=4.8						
	0.3nm,0.6s						
MAW	**Mawson**	**83.75**	**200**	P	**P**	**09 40 08.2**	**-0.3**
	0.5nm,0.4s,baz=153,slow=6.8,SNR=1.5						
	0.5nm,0.4s						
ILAR	**Eielson Array**	**85.98**	**13**	P	**P**	**09 40 18.4**	**-0.8**
	0.1nm,0.4s,baz=219,slow=5.1,SNR=5.8						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**09 40 22.0**	**+1.1**
	0.8nm,0.9s,baz=220,slow=6.1,SNR=9.9						
	0.8nm,0.9s						
PDAR	**Pinedale Array**	**87.49**	**43**	P	**P**	**09 40 27.2**	**+0.1**
	0.2nm,0.5s,baz=264,slow=3.2,SNR=2.7						
	0.2nm,0.5s						
GERES	**GERESS Array B**	**147.64**	**345**	PKPbc	**PKPbc**	**09 47 19.6**	**-0.3**
	0.3nm,0.4s,baz=20,slow=3.3,SNR=1.9						

IDC 22 09:41:48.0±4.9, 3.°50N×127.°72E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=181.5km s-min=76.4km az=75.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.18**	**165**	P	P	09 47 06.3	0.0
	0.4nm,0.4s,baz=344,slow=9.9,SNR=9.2						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**27.66**	**168**	P	P	09 47 37.8	0.0
	0.2nm,0.4s,baz=355,slow=7.6,SNR=12						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**37.57**	**160**	P	P	09 49 04.1	-0.2
	0.4nm,0.4s,baz=315,slow=11,SNR=1.7						
	0.4nm,0.4s						

*IDC **22** 09:45:21.6±7.4, 6.°22S×147.°85E, h0km, mb3.9/2, mbtmp4.1/5, ML3.6/3, Error ellipse: s-maj=99.9km s-min=69.7km az=31.0*

ISC 22 09:45:33.9±2.6, 6.°8S±0.°2×147.°6E±0.°3, h50km, n18, σ0s75/19, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.66**	**190**	Pn	**Pn**	**09 46 14.1**	**-0.3**
	72nm,0.3s,baz=5.1,slow=11,SNR=40						
PMG				Sn	**Sn**	**09 46 46.6**	**+1.2**
	100nm,0.3s,baz=347,slow=22,SNR=11						
	215nm,0.4s						
PMG	**Port Moresby**	**2.66**	**190**	P	**Pn**	**09 46 14.3**	**-0.1**
PMG	**Port Moresby**	**2.66**	**190**	P	**Pn**	**09 46 14.6**	**+0.2**
COEN	**Coen**	**8.38**	**211**	P	**Pn**	**09 47 32.9**	**0.0**
MTSU	**Mount Surprise**	**11.75**	**196**	P	**Pn**	**09 48 19.0**	**0.0**
TATA	**Tatamba Isabel**	**12.17**	**98**	P	P	09 48 31.8	-2.9
CTA	**Charters Tower**	**13.31**	**186**	Pn	**Pn**	**09 48 40.1**	**-0.1**
	0.4nm,0.3s,baz=353,slow=15,SNR=2.3						
	10nm,1.2s						
QIS	**Mount Isa**	**15.76**	**209**	P	**Pn**	**09 49 13.6**	**+0.8**
WRA	**Warramunga Arr**	**18.39**	**223**	P	**P**	**09 49 44.4**	**-0.5**
	0.5nm,0.3s,baz=48,slow=11,SNR=14						
	1.2nm,0.4s						
QLP	**Quilpie**	**19.97**	**189**	P	**P**	**09 50 02.0**	**-0.2**
AS01	**Alice Springs**	**21.34**	**217**	P	**P**	**09 50 16.8**	**-0.2**
ASAR	**Alice Springs**	**21.36**	**217**	P	**P**	**09 50 16.9**	**-0.4**
	1.8nm,0.5s,baz=41,slow=10,SNR=57						
ASAR				S	**S**	**09 54 10.2**	**-1.7**
	0.9nm,0.9s,baz=33,slow=23,SNR=5.0						
	1.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.22**	**240**	P	**P**	**09 50 46.9**	**+0.7**
CMSA	**Cobar Meteorol**	**24.71**	**184**	P	**P**	**09 50 49.7**	**-0.8**
STKA	**Stephens Creek**	**25.61**	**192**	P	**P**	**09 50 57.9**	**-0.8**
	1.5nm,0.5s,baz=21,slow=9.1,SNR=7.5						
	1.5nm,0.5s						
HTT	**Hallett**	**27.73**	**196**	P	**P**	**09 51 19.1**	**+1.2**
BBOO	**Buckleboo**	**28.06**	**201**	P	**P**	**09 51 20.8**	**0.0**
MEEK	**Meekatharra**	**33.95**	**231**	P	**P**	**09 52 12.9**	**+0.1**

*IDC **22** 09:54:13.5±2.8, 21.°64S×175.°89W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=75.2km s-min=38.5km az=27.0*

*NEIC **22** 09:54:25.5±1.5, 22.°1S±0.°1×176.°1W±0.°2, h74km±10km, mb4.2/11, Error ellipse: s-maj=24.6km s-min=14.3km az=56.0*

ISC 22 09:54:30.2±0.8, 21.°7S±0.°1×175.°9W±0.°1, h150km, n21, σ0s97/21, mb3.9/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.14**	**66**	Pn	**Pn**	**09 55 57.6**	**-1.2**
FUTU	**Fugatoga**	**7.62**	**343**	Pn	**Pn**	**09 56 18.9**	**+0.3**
AFI	**Afiamalu**	**8.63**	**27**	Pn	**Pn**	**09 56 33.7**	**+1.5**
STKA	**Stephens Creek**	**39.10**	**246**	P	**P**	**10 01 42.5**	**-0.6**
	0.6nm,0.5s,baz=90,slow=8.1,SNR=3.7						
	0.6nm,0.5s						
INKA	**Innaminka**	**39.72**	**252**	P	**P**	**10 01 47.9**	**-0.3**
INKA				IAmb	IAmb	10 01 50.3	
	comp=Z,1.4nm,0.7s						
BBOO	**Buckleboo**	**43.83**	**245**	P	**P**	**10 02 19.6**	**-1.9**
BBOO				IAmb	IAmb	10 02 20.3	
	comp=Z,4.8nm,1.1s						
AS31	**Alice Springs**	**46.20**	**258**	P	**P**	**10 02 41.0**	**+0.6**
AS31				IAmb	IAmb	10 02 41.7	
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**46.20**	**258**	P	**P**	**10 02 40.5**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=98,slow=7.0,SNR=45						
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**46.20**	**258**	P	**P**	**10 02 40.6**	**+0.2**
WR8	**Warramunga Arr**	**46.27**	**263**	P	**P**	**10 02 40.8**	**-0.2**
WR8				IAmb	IAmb	10 02 42.0	
	comp=Z,3.4nm,1.1s						
WB0	**Warramunga Arr**	**46.40**	**263**	P	**P**	**10 02 41.6**	**-0.4**
WB0				IAmb	IAmb	10 02 47.9	
	comp=Z,6.0nm,1.1s						
WRA	**Warramunga Arr**	**46.42**	**263**	P	**P**	**10 02 41.8**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=96,slow=7.8,SNR=42						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**46.42**	**263**	P	**P**	**10 02 41.6**	**-0.5**
FORT	**Forrest**	**50.67**	**247**	P	**P**	**10 03 13.0**	**-1.5**
KNRA	**Kununurra**	**52.57**	**266**	P	**P**	**10 03 29.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**54.85**	**263**	P	**P**	**10 03 46.2**	**+0.9**
FITZ				IAmb	IAmb	10 04 08.8	
	comp=Z,1.4nm,1.1s						
SBA	**Scott Base**	**56.86**	**184**	P	**P**	**10 03 60.0**	**+1.3**
CASY	**Casey**	**63.78**	**206**	P	**P**	**10 04 45.3**	**-0.5**
CASY				IAmb	IAmb	10 04 52.7	
	comp=Z,6.1nm,1.2s						
QSPA	**South Pole Qui**	**68.42**	**180**	P	**P**	**10 05 16.9**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=329,slow=2.8,SNR=8.3						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**68.42**	**180**	P	**P**	**10 05 16.6**	**+1.0**
AKASG	**Malin Array Be**	**144.97**	**332**	PKP	**PKiKP**	**10 13 52.6**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=44,slow=4.0,SNR=4.1						

*IDC **22** 09:55:06.2±0.9, 55.°11N×158.°80W, h0km, mb3.7/12, mbtmp3.7/15, ML3.9/3, Error ellipse: s-maj=28.4km s-min=15.1km az=5.0*

*ANF **22** 09:55:09.1±0.5, 54.°83N×158.°51W, h27km±5km, ML4.1/19, Error ellipse: s-maj=6.3km s-min=2.6km az=168.0*

*NEIC **22** 09:55:09.6±1.4, 54.°95N±0.°06×158.°55W±0.°07, h18km±5km, mb3.8/13, ML3.8/40, ML3.7(AEIC), Error ellipse: s-maj=9.1km s-min=4.9km az=157.0*

*AEIC **22** 09:55:09.0±1.4, 54.°85N±0.°06×158.°50W±0.°08, h26km±5km, Error ellipse: s-maj=10.1km s-min=5.2km az=149.0*

ISC 22 09:55:09.6±1.4, 54.°96N±0.°05×158.°49W±0.°04, h23km±10km, n233, σ0s96/236, mb3.7/13, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.65**	**259**	P	**Pb**	**09 55 21.1**	**-1.0**
CHNA	**Chernabura Isl**	**0.65**	**259**	S	**Sb**	**09 55 31.4**	**+0.7**
CHNA	**Chernabura Isl**	**0.65**	**259**	P	**Pb**	**09 55 21.2**	**-0.9**
	baz=77						
CHNA				S	**Sb**	**09 55 31.0**	**+0.3**
	baz=77						
CNBA	**Chernabura Isl**	**0.65**	**258**		**Pb**	**09 55 21.3**	**-0.9**
CNBA				Sg	**Sb**	**09 55 31.2**	**+0.4**
CNBA				IAML		09 55 33.2	
	comp=N,7μm,0.5s						
VNKR	**Veniaminof 5**	**1.19**	**336**		**Pn**	**09 55 31.1**	**+0.3**
VNKR					**Sn**	**09 55 46.6**	**+0.3**
SDPT	**Sand Point**	**1.21**	**290**	P	**Pn**	**09 55 30.2**	**-0.8**
SDPT	**Sand Point**	**1.21**	**290**	S	**Sb**	**09 55 46.3**	**-0.5**
SDPT	**Sand Point**	**1.21**	**290**		**Pn**	**09 55 29.8**	**-1.2**
SDPT				Sg	**Sb**	**09 55 44.8**	**-2.0**
SDPT				IAML		09 55 46.8	
	comp=E,3μm,0.9s						
SDPT				IAML		09 55 46.8	
	comp=N,2μm,1.0s						
SDPT	**Sand Point**	**1.21**	**290**	P	**Pn**	**09 55 29.9**	**-1.1**
	baz=108						
SDPT				S	**Sb**	**09 55 46.2**	**-0.6**
	baz=108						
CHGN	**Chignik**	**1.35**	**2**		**Pn**	**09 55 32.9**	**-0.1**
CHGN					**Sn**	**09 55 49.3**	**-0.9**
CHGN				IAML		09 55 51.8	
	comp=N,2μm,0.6s						
CHGN				IAML		09 55 53.5	
	comp=E,3μm,0.3s						
CHGN	**Chignik**	**1.35**	**2**	P	**Pn**	**09 55 33.2**	**+0.2**
	baz=182						
VNSS	**Veniaminof 8**	**1.39**	**337**		**Pb**	**09 55 34.7**	**-0.2**
S14K	**Fog Glacier**	**1.46**	**336**	P	**Pn**	**09 55 35.6**	**+1.0**
	baz=155						
VNFG	**Fog Glacier, M**	**1.46**	**336**		**Pn**	**09 55 35.5**	**+0.9**
VNFG	**Fog Glacier, M**	**1.46**	**336**		**Sb**	**09 55 56.1**	**+1.8**
VNFG	**Fog Glacier, M**	**1.46**	**336**		**Pn**	**09 55 35.7**	**+1.1**
CHIR	**Chirikof Islan**	**1.85**	**61**	P	**Pn**	**09 55 40.0**	**0.0**
CHIR	**Chirikof Islan**	**1.85**	**61**		**Pn**	**09 55 39.8**	**-0.1**
CHIR	**Chirikof Islan**	**1.85**	**61**	IAML		09 56 17.5	
	comp=N,687nm,0.6s						
CHIR				IAML		09 56 21.9	
	comp=E,814nm,0.7s						
CHIR	**Chirikof Islan**	**1.85**	**61**	P	**Pn**	**09 55 39.9**	**0.0**
	baz=244						
ANPB	**Aniakchak Plen**	**1.85**	**4**		**Pn**	**09 55 41.5**	**+1.5**
PS1A	**Pavlof South-1**	**1.92**	**285**		**Pn**	**09 55 40.6**	**-0.2**
PS1A					**Sn**	**09 56 04.9**	**+0.6**
DOL	**Dolgoi Island**	**1.95**	**277**		**Pn**	**09 55 40.6**	**-0.6**
DOL					**Sn**	**09 56 05.8**	**+0.8**
PS4A	**Pavlof South-4**	**1.97**	**283**		**Pn**	**09 55 41.5**	**0.0**
PS4A					**Sn**	**09 56 06.3**	**+0.8**
ANNE	**Aniakchak Nort**	**1.98**	**7**		**Pn**	**09 55 42.8**	**+1.2**
PN7A	**Pavlof North-7**	**2.06**	**285**		**Pn**	**09 55 43.0**	**+0.1**
PN7A					**Sn**	**09 56 09.9**	**+1.9**
DTNA	**Dutton South F**	**2.17**	**277**		**Pn**	**09 55 44.1**	**-0.2**
DTNA					**Sn**	**09 56 11.3**	**+0.9**
DT1	**Dutton Round H**	**2.19**	**276**		**Pn**	**09 55 44.0**	**-0.5**
DT1					**Sn**	**09 56 11.5**	**+0.7**
PLBL	**Peulik Blue Cr**	**2.91**	**18**		**Pn**	**09 55 56.2**	**+1.8**
SII	**Sitkinak Islan**	**2.92**	**55**	P	**Pn**	**09 55 55.0**	**+0.4**
SII	**Sitkinak Islan**	**2.92**	**55**		**Pn**	**09 55 54.9**	**+0.4**
SII				IAML		09 56 58.9	
	comp=N,459nm,0.7s						
R17L	**Mt. Peulik Vol**	**2.93**	**23**	P	**Pn**	**09 55 56.5**	**+1.8**
	baz=205						
PLK1	**Peulik 1**	**3.04**	**19**		**Pn**	**09 55 57.6**	**+1.5**
ISNN	**Isanotski Nort**	**3.06**	**270**		**Pn**	**09 55 57.2**	**+0.8**
PLK5	**Peulik 5**	**3.18**	**16**		**Pn**	**09 56 00.3**	**+2.2**
SSLN	**Shishaldin Nor**	**3.18**	**270**		**Pn**	**09 55 58.5**	**+0.3**
SSLS	**Shishaldin Sou**	**3.19**	**268**		**Pn**	**09 55 58.7**	**+0.3**
SSBA	**Shishaldin**	**3.26**	**269**		**Pn**	**09 56 00.1**	**+0.8**
Q17K	**Contact Creek**	**3.62**	**22**	P	**Pn**	**09 56 04.9**	**+0.7**
	baz=205						
ANCK	**Angle Creek**	**3.65**	**26**		**Pn**	**09 56 06.1**	**+1.5**
OHAK	**Old Harbor**	**3.70**	**50**	P	**Pn**	**09 56 05.5**	**+0.3**
OHAK	**Old Harbor**	**3.70**	**50**		**Pn**	**09 56 04.8**	**-0.4**
OHAK	**Old Harbor**	**3.70**	**50**	P	**Pn**	**09 56 05.0**	**-0.2**
	baz=234						
ACHA	**Angle Creek He**	**3.70**	**27**		**Pn**	**09 56 07.2**	**+1.8**
KABU	**Katmai Buttres**	**3.77**	**27**		**Pn**	**09 56 07.9**	**+1.6**
KAKN	**Katmai Knife C**	**3.85**	**28**		**Pn**	**09 56 09.1**	**+1.7**
Q16K	**King Salmon**	**3.87**	**14**		**Pn**	**09 56 09.5**	**+2.0**
Q16K	**King Salmon**	**3.87**	**14**	P	**Pn**	**09 56 09.8**	**+2.3**
	baz=196						
P16K	**Nushagak River**	**4.10**	**4**	Pn	**Pn**	**09 56 11.8**	**+1.2**
P16K				IAML		09 57 21.3	
	comp=N,176nm,1.2s						
P16K	**Nushagak River**	**4.10**	**4**	P	**Pn**	**09 56 11.7**	**+1.0**
	baz=184						
Q18K	**Katmai Hardscr**	**4.17**	**26**		**Pn**	**09 56 12.8**	**+1.0**
Q18K	**Katmai Hardscr**	**4.17**	**26**	P	**Pn**	**09 56 12.5**	**+0.7**
	baz=209						
AKSA	**Akutan Strait**	**4.28**	**262**		**Pn**	**09 56 12.3**	**-0.8**
O15K	**Ungalikthiuk R**	**4.29**	**351**		**Pn**	**09 56 13.7**	**+0.2**
O15K				IAML		09 57 07.7	
	comp=E,107nm,0.6s						
O15K	**Ungalikthiuk R**	**4.29**	**351**	P	**Pn**	**09 56 13.8**	**+0.4**
	baz=170						
AKUT	**Akutan**	**4.32**	**262**	P	**Pn**	**09 56 14.5**	**+0.7**
AKUT	**Akutan**	**4.32**	**262**		**Pn**	**09 56 14.4**	**+0.7**
AKUT				IAML		09 57 25.0	
	comp=E,100nm,0.7s						
AKUT				IAML		09 57 27.6	
	comp=N,102nm,1.1s						
KDAK	**Kodiak Island**	**4.34**	**47**	Pn	**Pn**	**09 56 13.4**	**-0.6**
	comp=N,3.3nm,0.3s,baz=201,slow=8.0,SNR=20						
KDAK				Sn	**Sn**	**09 57 01.1**	**-2.7**
	comp=N,2.3nm,0.3s,baz=50,slow=20,SNR=1.6						
	comp=N,9.4nm,0.4s						
KDAK	**Kodiak Island**	**4.34**	**47**		**Pn**	**09 56 13.7**	**-0.4**
KDAK	**Kodiak Island**	**4.34**	**47**	IAML		09 57 33.8	
	comp=N,72nm,0.9s						
KDAK				IAML		09 57 38.0	
	comp=N,65nm,1.0s						
KDAK	**Kodiak Island**	**4.34**	**47**	P	**Pn**	**09 56 13.7**	**-0.4**
	baz=232						
AHB	**Akutan Harbor**	**4.35**	**262**		**Pn**	**09 56 14.0**	**-0.2**
P17K	**Kvichak River**	**4.40**	**14**		**Pn**	**09 56 16.2**	**+1.4**
P17K	**Kvichak River**	**4.40**	**14**	P	**Pn**	**09 56 15.8**	**+1.0**
	baz=196						
AKLV	**Akutan Long Va**	**4.42**	**263**		**Pn**	**09 56 14.8**	**-0.3**
AKBBA	**Akutan Broad B**	**4.42**	**262**		**Pn**	**09 56 15.7**	**+0.5**
AKGG	**Akutan Green G**	**4.43**	**263**		**Pn**	**09 56 15.8**	**+0.5**
LVA	**Lava Point**	**4.46**	**263**		**Pn**	**09 56 16.7**	**+1.0**
LVA				IAML		09 57 32.2	
	comp=E,87nm,0.9s						
O14K	**Tigyukauivet M**	**4.57**	**342**		**Pn**	**09 56 17.8**	**+0.6**
O14K				IAML		09 57 15.3	
	comp=E,116nm,0.7s						
O14K				IAML		09 57 16.1	
	comp=N,91nm,0.7s						
O14K	**Tigyukauivet M**	**4.57**	**342**	P	**Pn**	**09 56 17.6**	**+0.4**
	baz=159						
O16K	**Kokwok River B**	**4.66**	**3**		**Pn**	**09 56 19.2**	**+0.8**
O16K	**Kokwok River B**	**4.66**	**3**	P	**Pn**	**09 56 18.9**	**+0.5**
	baz=183						
P18K	**Big Mountain,**	**4.79**	**20**		**Pn**	**09 56 22.1**	**+1.9**
UNV	**Unalaska Valle**	**4.81**	**260**	P	**Pn**	**09 56 20.3**	**-0.2**
UNV	**Unalaska Valle**	**4.81**	**260**		**Pn**	**09 56 20.4**	**-0.2**
UNV				IAML		09 57 48.5	
	comp=N,47nm,0.7s						
UNV	**Unalaska Valle**	**4.81**	**260**	P	**Pn**	**09 56 20.0**	**-0.5**
	baz=73						
O17K	**Koliganek Bris**	**4.89**	**8**		**Pn**	**09 56 22.7**	**+1.1**
O17K	**Koliganek Bris**	**4.89**	**8**	P	**Pn**	**09 56 22.3**	**+0.7**
	baz=190						
MNAT	**Makushin Natee**	**4.90**	**261**		**Pn**	**09 56 21.4**	**-0.4**
MGOD	**Makushin Gods**	**5.04**	**260**		**Pn**	**09 56 23.9**	**+0.3**
O18K	**Koktuh Hills**	**5.22**	**19**		**Pn**	**09 56 26.2**	**0.0**
N14K	**Kuskokwak Cree**	**5.27**	**342**		**Pn**	**09 56 27.6**	**+0.8**
N14K				IAML		09 58 20.0	

J18K	**Innoko River**	**8.58**	**5**	P		**Pn**	**09 57 13.2**	**+1.0**
	baz=187								
FID	**Port Fidalgo**	**8.64**	**43**	Pn		**Pn**	**09 57 12.6**	**-0.5**
SML	**Sawmill**	**8.69**	**34**	Pn		**Pn**	**09 57 14.4**	**+0.6**
K20K	**Telida**	**8.72**	**13**			**Pn**	**09 57 16.3**	**+2.1**
EYAK	**Cordova Ski Ar**	**8.81**	**45**	P		**Pn**	**09 57 17.5**	**+2.1**
EYAK	**Cordova Ski Ar**	**8.81**	**45**	Pn		**Pn**	**09 57 15.6**	**+0.2**
I17K	**Unalakleet**	**9.03**	**354**			**Pn**	**09 57 19.0**	**+0.7**
I17K	**Unalakleet**	**9.03**	**354**	P		**Pn**	**09 57 18.8**	**+0.5**
	baz=172								
SCM	**Sheep Creek Mo**	**9.04**	**36**			**Pn**	**09 57 19.4**	**+0.8**
SCM	**Sheep Creek Mo**	**9.04**	**36**	P		**Pn**	**09 57 19.4**	**+0.8**
	baz=225								
KAIM	**Kayak Island**	**9.07**	**51**			**Pn**	**09 57 19.9**	**+1.0**
CAST	**Castle Rocks**	**9.10**	**19**			**Pn**	**09 57 20.9**	**+1.6**
RAGM	**Ragged Mountai**	**9.18**	**48**			**Pn**	**09 57 20.8**	**+0.3**
J19K	**Poorman**	**9.18**	**8**			**Pn**	**09 57 20.9**	**+0.5**
KLU	**Klutina**	**9.31**	**40**			**Pn**	**09 57 22.8**	**+0.5**
KTH	**Kantishna Hill**	**9.45**	**21**	Pn		**Pn**	**09 57 24.3**	**+0.2**
TRF	**Thorofare Moun**	**9.49**	**23**	Pn		**Pn**	**09 57 25.8**	**+0.9**
BMRM	**Bremner River**	**9.52**	**45**	Pn		**Pn**	**09 57 25.1**	**0.0**
BERG	**Berg Lake**	**9.60**	**49**	Pn		**Pn**	**09 57 26.5**	**+0.3**
ATKA	**Atka Island**	**9.74**	**260**	P		**Pn**	**09 57 28.5**	**+0.4**
ATKA	**Atka Island**	**9.74**	**260**	Pn		**Pn**	**09 57 28.2**	**+0.1**
DHY	**Denali Highway**	**9.94**	**31**			**Pn**	**09 57 31.2**	**+0.2**
H17K	**Granite Mounta**	**10.04**	**357**			**Pn**	**09 57 32.9**	**+0.8**
GLB	**Gilahina Butte**	**10.10**	**44**	Pn		**Pn**	**09 57 33.4**	**+0.4**
VRDI	**Verde Repeater**	**10.13**	**46**	Pn		**Pn**	**09 57 34.2**	**+0.6**
H18K	**Honhosa River**	**10.23**	**0**			**Pn**	**09 57 35.2**	**+0.4**
ANM	**Nome**	**10.24**	**343**	Pn		**Pn**	**09 57 35.5**	**+0.6**
PAX	**Paxson**	**10.46**	**35**			**Pn**	**09 57 38.6**	**+0.6**
GRNC	**Granite Creek**	**10.62**	**50**			**Pn**	**09 57 40.3**	**0.0**
H19K	**Roundabout Mou**	**10.65**	**5**			**Pn**	**09 57 41.2**	**+0.7**
K24K	**Donnelly Dome**	**10.96**	**31**			**Pn**	**09 57 45.4**	**+0.5**
CCB	**Clear Creek Bu**	**11.09**	**25**	Pn		**Pn**	**09 57 45.9**	**-0.6**
RIDG	**Independent Ri**	**11.20**	**33**	Pn		**Pn**	**09 57 48.1**	**0.0**
G19K	**Purcell Mounta**	**11.25**	**3**	Pn		**Pn**	**09 57 49.0**	**+0.3**
ADK	**Adak**	**11.28**	**262**	P		**Pn**	**09 57 49.9**	**+0.8**
IMAR	**Indian Mountai**	**11.30**	**10**	Pn		**Pn**	**09 57 50.3**	**+0.8**
IL31		**11.42**	**26**	Pn		**Pn**	**09 57 51.4**	**+0.4**
ILAR	**Eielson Array**	**11.42**	**26**	Pn		**Pn**	**09 57 49.2**	**-1.9**
	comp=N,0.3nm,0.3s,baz=215,slow=14,SNR=16								
ILAR					Sn	Sn	09 59 46.9	-11	
	baz=216,slow=20								
ILAR	**Eielson Array**	**11.42**	**26**			**Pn**	**09 57 51.4**	**+0.3**
J25K	**Salcha River,**	**11.70**	**29**			**Pn**	**09 57 54.8**	**0.0**
L27K	**Beaver Creek,**	**11.79**	**40**			**Pn**	**09 57 56.3**	**+0.2**
BCAR	**Beaver Creek A**	**11.81**	**40**	Pn		**Pn**	**09 57 57.4**	**+1.0**
O29M	**Mount Kennedy**	**11.92**	**55**			**Pn**	**09 57 57.0**	**-1.0**
P29M	**Windy Craggy**	**12.14**	**59**	Pn		**Pn**	**09 58 01.9**	**+0.9**
PRP	**Porcupine Dome**	**12.36**	**26**			**Pn**	**09 58 04.4**	**+0.3**
S31K	**Pelican**	**12.66**	**67**	Pn		**Pn**	**09 58 07.5**	**-0.4**
M29M	**Somme Creek**	**12.79**	**46**			**Pn**	**09 58 10.5**	**+0.7**
I26K	**Coal Creek Min**	**12.84**	**30**			**Pn**	**09 58 10.4**	**-0.1**
N30M	**Aishikik Lake**	**12.99**	**51**	Pn		**Pn**	**09 58 12.2**	**-0.4**
SIT	**Sitka**	**13.12**	**71**	P		**Pn**	**09 58 17.8**	**+3.6**
E21K	**Killik River**	**13.70**	**7**	Pn		**Pn**	**09 58 20.9**	**-1.2**
K29M	**Barlow Dome**	**13.84**	**42**	Pn		**Pn**	**09 58 24.7**	**+0.5**
I28M	**Miner Creek**	**13.92**	**34**	Pn		**Pn**	**09 58 26.0**	**+0.7**
G26K	**Porcupine Rive**	**13.93**	**25**	Pn		**Pn**	**09 58 26.5**	**+1.1**
G27K	**Doyon Strip**	**14.37**	**28**	Pn		**Pn**	**09 58 31.9**	**+0.6**
D23K	**Nanushuk River**	**14.51**	**11**	Pn		**Pn**	**09 58 33.6**	**+0.4**
P33M	**Teslin, Yukon**	**14.69**	**59**	Pn		**Pn**	**09 58 35.6**	**-0.1**
B20K	**Meade River**	**15.12**	**2**			**Pn**	**09 58 42.8**	**+1.4**
B20K					IAmb	IAmb	09 58 46.9		
	comp=Z,4.5nm,0.8s								
F28M	**Old Crow**	**15.43**	**27**	Pn		**Pn**	**09 58 45.7**	**+0.2**
D25K	**Kavik River**	**15.44**	**16**	Pn		**Pn**	**09 58 44.8**	**-0.8**
DLBC	**Dease Lake**	**15.96**	**66**	Pn		**Pn**	**09 58 54.0**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=219,slow=21,SNR=4.4								
	comp=Z,0.8nm,0.4s								
MMPY	**Sheldon Lake,**	**15.96**	**50**			**Pn**	**09 58 52.6**	**+0.2**
MMPY					IAmb	IAmb	09 59 07.2		
	comp=Z,4.2nm,0.7s								
H31M	**Peel River**	**16.01**	**38**			**Pn**	**09 58 54.1**	**+1.1**
H31M					IAmb	IAmb	09 59 07.5		
	comp=Z,15nm,1.4s								
G30M	**tAoh Zraii Nji**	**16.06**	**33**			**Pn**	**09 58 54.1**	**+0.5**
G30M					IAmb	IAmb	09 59 07.1		
	comp=Z,9.7nm,0.8s								
E29M	**Blow River**	**16.51**	**27**	Pn		**Pn**	**09 59 00.3**	**+1.0**
G31M	**Satah River**	**16.64**	**34**	Pn		**Pn**	**09 59 01.5**	**+0.5**
G31M					IAmb	IAmb	09 59 13.3		
	comp=Z,5.2nm,0.8s								
INK	**Inuvik**	**17.69**	**31**	P		**Pn**	**09 59 13.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=253,slow=12,SNR=9.6								
	comp=Z,1.1nm,0.4s								
INK	**Inuvik**	**17.69**	**31**	P		**Pn**	**09 59 13.1**	**-0.9**
INK					IAmb	IAmb	09 59 33.5		
	comp=Z,5.7nm,1.1s								
C36M	**Paulatuk**	**21.16**	**34**	P		**P**	**09 59 53.4**	**+0.7**
YKAW3	**Yellowknife Wh**	**23.57**	**53**	P		**P**	**10 00 19.1**	**+1.0**
YKAW3					IAmb	IAmb	10 00 22.0		
	comp=Z,2.6nm,1.3s								
YKA	**Yellowknife Ar**	**23.58**	**54**	P		**P**	**10 00 18.0**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=263,slow=7.2,SNR=10								
	comp=Z,0.4nm,0.7s								
YKA	**Yellowknife Ar**	**23.58**	**54**	P		**P**	**10 00 18.6**	**+0.5**
YKAW1	**Yellowknife Wh**	**23.64**	**54**	P		**P**	**10 00 19.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**25.49**	**284**	P		**P**	**10 00 35.1**	**-0.6**
PETK	**Petropavlovsk-**	**25.49**	**284**	P		**P**	**10 00 33.0**	**-2.8**
	comp=Z,0.8nm,0.6s,baz=81,slow=14,SNR=5.0								
	comp=Z,0.8nm,0.6s								
PETK	**Petropavlovsk-**	**25.49**	**284**	P		**P**	**10 00 36.0**	**+0.2**
LYMT	**Lyon Mountain**	**29.70**	**86**	P		**P**	**10 01 14.5**	**+0.7**
NVAR	**Mina Array Bea**	**31.60**	**105**	P		**P**	**10 01 32.8**	**+2.1**
	comp=Z,0.9nm,0.6s,baz=305,slow=8.6,SNR=6.9								
	comp=Z,0.9nm,0.6s								
YHH	**Holmes Hill**	**31.76**	**89**	P		**P**	**10 01 32.9**	**+0.8**
PDAR	**Pinedale Array**	**33.73**	**91**	P		**P**	**10 01 50.9**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=294,slow=4.4,SNR=12								
	comp=Z,0.6nm,0.6s								
PDAR	**Pinedale Array**	**33.73**	**91**	P		**P**	**10 01 51.0**	**+1.7**
H11N2	**WAKE ISLAND Hy**	**43.84**	**231**	T		T	10 50 08.7		
	baz=28,slow=76,SNR=6.5								
H11N3	**WAKE ISLAND Hy**	**43.84**	**231**	T		T	10 50 09.2		
	baz=28,slow=76,SNR=7.3								
H11N1	**WAKE ISLAND Hy**	**43.85**	**231**	T		T	10 50 09.3		
	baz=28,slow=76,SNR=7.4								
H11S1	**WAKE ISLAND Hy**	**45.00**	**230**	T		T	10 51 35.4		
	baz=28,slow=76,SNR=20								
H11S2	**WAKE ISLAND Hy**	**45.01**	**230**	T		T	10 51 36.5		
	baz=28,slow=76,SNR=13								
H11S3	**WAKE ISLAND Hy**	**45.01**	**230**	T		T	10 51 36.8		
	baz=28,slow=76,SNR=8.0								
TXAR	**Lajitas Array**	**46.51**	**100**	P		**P**	**10 03 36.6**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=308,slow=5.7,SNR=19								
TXAR					PcP	**PcP**	**10 05 09.4**	**+0.2**	
	comp=Z,0.2nm,0.4s,baz=223,slow=0.2,SNR=4.5								
	comp=Z,0.9nm,0.5s								
KSRS	**Korea Array**	**51.36**	**282**	P		**P**	**10 04 11.3**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=44,slow=5.6,SNR=2.3								
	comp=Z,0.7nm,0.8s								
SONM	**Songino Array**	**55.32**	**305**	P		**P**	**10 04 40.4**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=46,slow=10,SNR=2.2								
	comp=Z,0.4nm,0.5s								
HFS	**Hagfors**	**65.09**	**4**	P		**P**	**10 05 47.2**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=60,slow=3.6,SNR=3.7								
	comp=Z,0.6nm,0.4s								
MKAR	**Makanchi Array**	**66.42**	**319**	P		**P**	**10 05 55.5**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=44,slow=5.7,SNR=2.3								
	comp=Z,0.3nm,0.5s								
MKAR	**Makanchi Array**	**66.42**	**319**	P		**P**	**10 05 55.9**	**-0.6**
EKA	**Eskdalemuir Ar**	**68.23**	**15**	P		**P**	**10 06 08.2**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=345,slow=6.4,SNR=3.4								
	comp=Z,1.0nm,0.7s								
AKASG	**Malin Array Be**	**74.52**	**355**	P		**P**	**10 06 43.8**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=10,slow=6.2,SNR=2.4								
	comp=Z,0.3nm,0.3s								
CMAR	**Chiang Mai Arr**	**82.07**	**291**	P		**P**	**10 07 27.5**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=37,slow=4.4,SNR=1.1								
	comp=Z,0.8nm,0.3s								
H03N2	**Juan Fernandez**	**111.14**	**118**	T		T	12 14 30.4		
	baz=324,slow=78,SNR=4.8								
H03N1	**Juan Fernandez**	**111.15**	**118**	T		T	12 14 31.7		
	baz=324,slow=78,SNR=7.5								
H03N3	**Juan Fernandez**	**111.16**	**118**	T		T	12 14 30.6		
	baz=324,slow=78,SNR=7.2								

*IDC **22** 09:56:16.5±0.8,26˚18S×70˚57W,h0km,mb4.1/4, mbtmp4.0/6,ML3.7/2,Error ellipse: s-maj=45.2km s-min=23.5km az=98.0*
*GUC **22** 09:56:20.7±0.7,26˚20S×70˚64W,h44km±1km,ML4.3*

*NEIC **22** 09:56:21.7±1.7,26˚18S±0˚03×70˚74W±0˚06,h31km±5km, mb4.1/8,ML4.1(GUC),Error ellipse: s-maj=8.1km s-min=4.0km az=102.0*

ISC 22 09:56:21.3±1.0,26˚14S±0˚04×70˚76W±0˚05,h34km±3km, n63,σ1ş45/70,mb4.2/5,3C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AC01	**Pan de Azucar**	**0.14**	**94**	⇓*i*	P	**Pn**	**09 56 28.2**	**+3.3**
AC01					eS	**Sb**	**09 56 32.6**	**+0.7**
AC01	**Pan de Azucar**	**0.14**	**94**			**Pn**	**09 56 28.2**	**+3.3**
GO03	**Copiapo**	**1.52**	**162**	⇑*i*	P	**Pn**	**09 56 46.8**	**+0.6**
GO03					eS	**Sn**	**09 57 04.9**	**0.0**
GO03					IAML		09 57 07.0	
	comp=E,3μm,0.2s							
GO03	**Copiapo**	**1.52**	**162**			**Pn**	**09 56 46.9**	**+0.7**
GO03					Sn	**Sn**	**09 57 04.6**	**-0.3**
PB14	**IPOC Station P**	**1.54**	**12**	*eP*		**Pn**	**09 56 48.2**	**+1.5**
PB14					eS	**Sb**	**09 57 08.6**	**-0.2**
PB14	**IPOC Station P**	**1.54**	**12**			**Pn**	**09 56 48.0**	**+1.4**
AC02	**Maricunga**	**1.62**	**116**	*i*	P	**Pn**	**09 56 48.2**	**+0.4**
AC02					eS	**Sn**	**09 57 07.1**	**-0.7**
AC02					IAML		09 57 07.7	
	comp=N,9μm,0.1s							
AC02	**Maricunga**	**1.62**	**116**			**Pn**	**09 56 48.3**	**+0.4**
AC02					Sn	**Sn**	**09 57 07.0**	**-0.9**
AC04	**Llanos de Chal**	**2.08**	**188**	⇓*eP*		**Pn**	**09 56 53.5**	**-0.4**
AC04					eS	**Sn**	**09 57 18.8**	**+0.3**
AC04	**Llanos de Chal**	**2.08**	**188**			**Pn**	**09 56 53.3**	**-0.6**
AC05	**El Transito**	**2.72**	**171**	*eP*		**Pn**	**09 57 04.5**	**+1.6**
AC05	**El Transito**	**2.72**	**171**			**Pn**	**09 57 04.4**	**+1.6**
LCO	**Las Campanas**	**2.86**	**179**	*eP*		**Pn**	**09 57 05.1**	**+0.3**
LCO					eS	**Sn**	**09 57 39.2**	**+0.9**
LCO	**Las Campanas**	**2.86**	**179**			**Pn**	**09 57 04.6**	**-0.2**
PB05	**IPOC Station P**	**3.31**	**9**	⇑*eP*		**Pn**	**09 57 11.3**	**+0.4**
PB05					eS	**Sn**	**09 57 51.0**	**+1.9**
PB05	**IPOC Station P**	**3.31**	**9**			**Pn**	**09 57 11.3**	**+0.4**
VCA	**Vinchina**	**3.44**	**139**	*eP*		**Pn**	**09 57 16.5**	**+3.8**
PB06	**IPOC Station P**	**3.58**	**18**	⇑*eP*		**Pn**	**09 57 15.5**	**+0.9**
PB06					eS	**Sb**	**09 58 07.2**	**-0.1**
PB06					IAML		09 58 16.3	
PB06	**IPOC Station P**	**3.58**	**18**			**Pn**	**09 57 15.6**	**+0.9**
CO01	**Juntas del Tor**	**3.87**	**171**	*eP*		**Pn**	**09 57 18.9**	**+0.2**
CO01					eS	**Sn**	**09 58 06.2**	**+3.2**
CO01	**Juntas del Tor**	**3.87**	**171**			**Pn**	**09 57 18.8**	**+0.1**
AF01	**San Pedro de A**	**3.95**	**37**	*eP*		**Pn**	**09 57 23.7**	**+3.9**
AF01					eS	**Sb**	**09 58 15.3**	**-2.5**
AF01	**San Pedro de A**	**3.95**	**37**			**Pn**	**09 57 23.3**	**+3.5**
GO04	**Tololo Observa**	**4.02**	**181**	⇓*eP*		**Pn**	**09 57 21.3**	**+0.6**
GO04					eS	**Sn**	**09 58 07.2**	**+0.4**
GO04	**Tololo Observa**	**4.02**	**181**			**Pn**	**09 57 21.2**	**+0.4**
PB03	**IPOC Station P**	**4.17**	**13**			**Pn**	**09 57 22.9**	**+0.2**
PB07	**IPOC Station P**	**4.46**	**10**			**Pn**	**09 57 27.1**	**+0.3**
PB09	**IPOC Station P**	**4.54**	**18**			**Pn**	**09 57 29.4**	**+1.6**
CO06	**Fray Jorge**	**4.58**	**190**	Pn		**Pn**	**09 57 27.2**	**-1.1**
CO03	**El Pedregal**	**4.68**	**179**			**Pn**	**09 57 30.2**	**+0.5**
SLA	**San Lorenzo**	**4.95**	**75**	*eP*		**Pn**	**09 57 37.4**	**+3.9**
CFA	**Coronel Fontan**	**5.88**	**159**	Pn		**Pn**	**09 57 47.9**	**+1.8**
CFA	comp=N,2.2nm,0.3s,baz=335,slow=12,SNR=9.3				Sn	**Sn**	**09 58 51.2**	**-1.1**
	comp=N,1.2nm,0.3s,baz=289,slow=7.4,SNR=3.9							
LPAZ	**La Paz**	**10.10**	**15**	Pn		**Pn**	**09 58 44.2**	**-0.4**
	comp=N,0.3nm,0.3s,baz=216,slow=6.8,SNR=5.2							
	comp=N,1.3nm,0.5s							
LPAZ	**La Paz**	**10.10**	**15**			**Pn**	**09 58 45.7**	**+1.1**
H03N1	**Juan Fernandez**	**10.15**	**222**	Pn		**Pn**	**09 58 43.7**	**-0.7**
H03N1				T		T	10 09 00.5	
	baz=49,slow=72,SNR=166							
H03N2	**Juan Fernandez**	**10.16**	**222**	Pn		**Pn**	**09 58 43.1**	**-1.5**
H03N2				T		T	10 09 04.3	
	baz=49,slow=72,SNR=218							
H03N3	**Juan Fernandez**	**10.17**	**222**	Pn		**Pn**	**09 58 44.0**	**-0.7**
H03N3				T		T	10 08 58.6	
	baz=49,slow=72,SNR=148							
H03S3	**Juan Fernandez**	**10.42**	**221**	T		T	10 09 14.7	
	baz=39,slow=74,SNR=4.1							
H03S1	**Juan Fernandez**	**10.43**	**221**	T		T	10 09 18.1	
	baz=39,slow=74,SNR=9.3							
H03S2	**Juan Fernandez**	**10.44**	**221**	T		T	10 09 19.5	
	baz=39,slow=74,SNR=8.5							
SIV	**San Ignacio**	**13.54**	**44**	Pn		**Pn**	**09 59 29.2**	**-2.0**
	baz=242,slow=6.5,SNR=3.6							
	comp=N,1.6nm,0.5s							
VILB	**Vilhena**	**16.45**	**39**	Pn		**Pn**	**10 00 09.9**	**+0.2**
VILB					IAmb	IAmb	10 00 26.5	
	comp=Z,7.2nm,0.6s							
ITAB	**Concordia**	**16.68**	**98**	Pn		**Pn**	**10 00 11.4**	**-1.2**
ITAB					IAmb	IAmb	10 00 36.5	
	comp=Z,15nm,1.3s							
CZSB	**Cruzeiro do Su**	**18.40**	**354**	P		**P**	**10 00 32.2**	**-1.4**
VAO	**Valinhos**	**21.86**	**87**			**P**	**10 01 08.5**	**-2.7**
GO08	**Villa O'Higgin**	**22.33**	**183**	P		**P**	**10 01 15.5**	**-0.5**
GO08					IAmb	IAmb	10 01 19.2	
	comp=Z,13nm,1.5s							
BDFB	**Brasilia**	**23.64**	**68**	P		**P**	**10 01 27.7**	**-2.0**
BDFB					IAmb	IAmb	10 01 43.4	
	comp=Z,8.6nm,1.2s							
TXAR	**Lajitas Array**	**63.55**	**328**	P		**P**	**10 06 50.0**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=128,slow=8.1,SNR=4.1							
	comp=Z,0.3nm,0.8s							
TXAR	**Lajitas Array**	**63.55**	**328**	P		**P**	**10 06 49.2**	**+0.5**
QSPA	**South Pole Qui**	**64.07**	**180**	P		**P**	**10 06 52.4**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=329,slow=1.8,SNR=16							
	comp=Z,1.0nm,0.4s							
QSPA	**South Pole Qui**	**64.07**	**180**	P		**P**	**10 06 52.5**	**+0.8**
MAW	**Mawson**	**80.38**	**164**	P		**P**	**10 08 29.0**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=223,slow=12,SNR=2.4							
	comp=Z,0.9nm,0.4s							
MAW	**Mawson**	**80.38**	**164**	P		**P**	**10 08 29.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**80.50**	**70**	P		**P**	**10 08 29.8**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=268,slow=4.8,SNR=5.1							
	comp=Z,2.7nm,0.6s							
ASAR	**Alice Springs**	**125.04**	**208**	PKP		**PKPdf**	**10 15 18.4**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=120,slow=1.3,SNR=4.9							
H11S2	**WAKE ISLAND Hy**	**26.65**	**274**	T		T	12 34 58.3	
	baz=115,slow=76,SNR=23							
H11S1	**WAKE ISLAND Hy**	**26.66**	**274**	T		T	12 34 49.4	
	baz=115,slow=76,SNR=22							
H11S3	**WAKE ISLAND Hy**	**26.67**	**274**	T		T	12 34 59.2	
	baz=115,slow=76,SNR=24							
WRA	**Warramunga Arr**	**128.12**	**210**	PKP		**PKPdf**	**10 15 24.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=154,slow=1.4,SNR=1.2							
KURBB	**Kurchatov Arra**	**146.10**	**36**	PKPbc		**PKPdf**	**10 15 57.5**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=254,slow=3.5,SNR=1.4							
ZALV	**Zalesovo Beam**	**146.85**	**27**	PKPbc		**PKPbc**	**10 15 59.3**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=306,slow=3.5,SNR=8.3							
MKAR	**Makanchi Array**	**150.33**	**39**	PKPbc		**PKPbc**	**10 16 09.3**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=290,slow=2.7,SNR=15							
MKAR	**Makanchi Array**	**150.33**	**39**			**PKPbc**	**10 16 09.6**	**+0.6**

*BJI **22** 10:00:09.7,24˚19N×143˚21E,h25km,mb4.9/63,Ms4.9/3, Ms7 4.9/2*
*IDC **22** 10:00:10.9±0.5,24˚22N×142˚62E,h0km,mb4.6/27, mbtmp4.6/31,ML3.8/5,Error ellipse: s-maj=18.8km s-min=12.1km az=80.0*
*GFZ **22** 10:00:11.8±0.4,24˚N±4˚×14˚3E±˚,h10km,M5.2/24, mb4.9/24*
*MOS **22** 10:00:11.1±1.0,24˚33N×142˚69E,h9km,mb5.2/45,Error ellipse: s-maj=10.6km s-min=4.8km az=119.8*
*NEIC **22** 10:00:12.7±1.5,24˚28N±0˚07×142˚9E±0˚1,h10km±1km, mb4.8/173,Error ellipse: s-maj=17.3km s-min=11.4km az=99.0*
*JMA **22** 10:00:15.2±0.3,24˚3N±0˚9×14˚3E±˚,h111km,MV4.5/23, IOTO ISLANDS REGION*

ISC 22 10:00:13.6±0.7,24˚29N±0˚04×142˚80E±0˚06,h15km±3km, n528,σ1ş34/498,mb4.8/195,MS5.0/4,15C-11D,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JHH2	**Haha-jima-NKT2**	**2.40**	**347**	*eP*		**Pn**	**10 00 54.4**	**+2.0**
JHH2					A	A	10 00 54.4	
	comp=N,8.0nm,2.4s,comp=E,11nm,1.1s							
JHH2					eS	**Sb**	**10 01 25.0**	**-0.9**
CBIJ	**Chichi jima**	**2.85**	**349**	*eP*		**Pn**	**10 01 00.6**	**+2.1**
CBIJ					eS	**Sn**	**10 01 34.6**	**+2.0**
JCJ	**Chichijima**	**2.85**	**349**	Pn		**Pn**	**10 00 59.1**	**+0.5**
	comp=E,21nm,0.3s,baz=195,slow=12,SNR=16							
JCJ					Sn	**Sn**	**10 01 31.7**	**-0.9**
	comp=E,96nm,0.3s,baz=301,slow=23,SNR=5.7							
JCJ	**Chichijima**	**2.85**	**349**			**Pn**	**10 01 00.8**	**+2.2**
JHJ	**Hachijo jima 2**	**9.19**	**344**	Pn		**Pn**	**10 02 25.1**	**-0.6**
	comp=E,4.0nm,0.3s,baz=174,slow=9.6,SNR=3.8							
JHJ					Sn	**Sn**	**10 04 06.3**	**-2.4**
	comp=E,7.7nm,0.3s,baz=68,slow=19,SNR=2.4							
	comp=E,88nm,0.9s							
JMZ	**Minamidaito 2**	**10.61**	**281**			Pn	10 02 50.9	+5.8
JMZ	**Minamidaito 2**	**10.61**	**281**	P		**Pn**	**10 02 44.5**	**-0.6**
BSO3	**Boso 3**	**10.66**	**350**	*eP*		**Pn**	**10 02 45.1**	**-0.5**
BSO3					eS	**Sn**	**10 04 43.4**	**-1.2**
BSO4	**Boso 4**	**10.87**	**349**	*eP*		**Pn**	**10 02 48.7**	**+0.1**
JAO	**Obara**	**11.95**	**338**	*eP*		**Pn**	**10 03 04.6**	**+1.1**
INU	**Inuyama**	**12.11**	**337**			**Pn**	**10 03 05.5**	**-0.1**
INU	**Inuyama**	**12.11**	**337**	P		**Pn**	**10 03 07.3**	**+1.7**
JMN	**Monobe**	**12.21**	**322**			**Pn**	**10 03 10.5**	**+3.4**
JMN	**Monobe**	**12.21**	**322**	P		Pn	10 03 12.1	+4.9
JGF	**Kuroka**	**12.21**	**339**			**Pn**	**10 03 07.5**	**+0.3**
JGF	**Kuroka**	**12.21**	**339**	P		**Pn**	**10 03 07.5**	**+0.3**
JAG	**Ashikaga**	**12.43**	**347**	*eP*		**Pn**	**10 03 08.3**	**-1.8**
MJAR	**Matsushiro Arr**	**12.83**	**343**	Pn		**Pn**	**10 03 14.4**	**-1.2**
	comp=E,0.2nm,0.3s,baz=164,slow=11,SNR=9.5							
MJAR					Sn	**Sn**	**10 05 33.3**	**-4.9**
	baz=165,slow=24,SNR=4.0							
	comp=E,2.3nm,0.8s							
MJAR	**Matsushiro Arr**	**12.83**	**343**			**Pn**	**10 03 14.6**	**-0.9**
MAJO	**Matsushiro**	**12.84**	**343**	⇓*i*	P	**Pn**	**10 03 14.1**	**-1.5**
MAJO					pmax	pmax		
	comp=Z,6.0nm,1.1s							
MAJO	**Matsushiro**	**12.84**	**343**			**Pn**	**10 03 14.2**	**-1.3**
MAJO	**Matsushiro**	**12.84**	**343**	P		**Pn**	**10 03 14.3**	**-1.3**
MJB9	**Matsu-Tunnel**	**12.84**	**343**			**Pn**	**10 03 15.3**	**-0.4**
JSU	**Suzuyama**	**13.06**	**306**			**Pn**	**10 03 21.9**	**+3.1**
JOW	**Kunigami**	**13.35**	**284**			**Pn**	**10 03 22.9**	**+0.2**
JOW	**Kunigami**	**13.35**	**284**	P		P	10 03 27.4	-4.9
JTM	**Tenmabayashi**	**16.51**	**355**			**Pn**	**10 04 02.5**	**-2.2**
JTM	**Tenmabayashi**	**16.51**	**355**	P		**Pn**	**10 04 05.0**	**+0.3**
ERM	**Erimo**	**17.68**	**1**			**Pn**	**10 04 13.6**	**-5.7**
TJN	**Taejon**

SLVN Son La 35.90 273 P 10 07 12.9 -0.6
SLVN IAmb IAmb 10 07 15.7
comp=Z,17nm,1.1s
SPSI Sidrap Palu 35.93 222 P P 10 07 13.9 +0.2
comp=Z,55nm,0.9s
KMI2 Kunming 36.30 280 ⇑P P 10 07 18.3 +1.2
KMI2 pmax pmax
comp=Z,37nm,1.1s
ULN Ulaanbaatar 36.76 319 ⇑*i*P P 10 07 19.9 -0.8
ULN pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 36.76 319 P P 10 07 19.8 -0.8
ULN Ulaanbaatar 36.76 319 P P 10 07 20.8 +0.1
comp=Z,8μmcomp=Z,24nm,1.4s
ULN Ulaanbaatar 36.76 319 P P 10 07 20.6 -0.2
PZH PanZhiHua 37.05 282 P P 10 07 25.3 +2.0
SONM Songino Array 37.15 319 P P 10 07 22.8 -1.2
comp=Z,1.8nm,0.8s,baz=131,slow=10,SNR=6.8
SONM PcP PcP 10 09 44.3 +0.3
comp=Z,0.6nm,0.5s,baz=116,slow=3.4,SNR=4.2
comp=Z,1.8nm,0.8s
SONM Songino Array 37.15 319 P P 10 07 23.3 -0.6
COEN Coen 38.02 179 P P 10 07 31.4 0.0
MTN Manton Dam 38.63 198 P P 10 07 35.5 -1.0
YAK Yakutsk 38.76 350 *e*P P 10 07 36.7 -0.5
YAK *e**PP **pP 10 07 39.8 -1.1**
YAK *e* 10 09 03.8
YAK *e* 10 09 47.9
YAK *e*S **S 10 13 34.7 +1.0**
YAK *e**SS **sS 10 13 43.3 +3.5**
YAK *e*SS **SnSn 10 16 21.5 -1.4**
YAK *e*SSS SSS 10 16 41.4
YAK *e* 10 17 46.4
YAK pmax pmax
comp=Z,46nm,1.4s
YAK pmax pmax
comp=N,39nm,1.9s
YAK pmax pmax
comp=E,9.0nm,1.6s
YAK pmax pmax
comp=N,681nm,15.7s
YAK pmax pmax
comp=Z,998nm,15.4s
YAK smax smax
comp=E,168nm,5.7s
YAK smax smax
comp=N,86nm,3.3s
YAK MLR MLR
comp=Z,1μm,21.0s
YAK MLR MLR
comp=N,1μm,19.0s
YAK MLR MLR
comp=E,279nm,18.0s
YAK Yakutsk 38.76 350 P P 10 07 36.6 -0.6
YAK IAmb IAmb 10 07 48.1
comp=Z,25nm,0.7s
SEY Seymchan 39.16 7⇑*i*P P 10 07 41.4 +0.9
SEY pmax pmax
comp=Z,5.0nm,1.3s
GTA2 Gaotai 39.18 303 *e*P P 10 07 39.9 -1.3
GTA2 pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 40.10 321 *e*P P 10 07 47.8 -0.9
ZAK pmax pmax
comp=Z,7.0nm,1.4s
TLY Talaya 40.48 323 *e*P P 10 07 52.6 +0.9
TLY pmax pmax
comp=Z,7.0nm,1.1s
TLY Talaya 40.48 323 P P 10 07 51.8 +0.1
CHTO Chiang Mai 41.03 271 P P 10 07 57.1 +0.5
CHTO pmax pmax
comp=Z,20nm,1.0s
CHTO Chiang Mai 41.03 271 P 10 07 57.1 +0.5
CHTO IAmb IAmb 10 07 58.0
comp=Z,21nm,0.9s
CHTO Chiang Mai 41.03 271 P P 10 07 57.4 +0.8
comp=Z,23nm,1.1s
CHTO Chiang Mai 41.03 271 P P 10 07 57.2 +0.6
CM31 Chiang Mai Arr 41.12 271 P P 10 07 57.8 +0.4
CM31 IAmb IAmb 10 07 59.2
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 41.12 271 P P 10 07 58.4 +0.9
comp=Z,9.8nm,0.7s,baz=63,slow=7.8,SNR=48
CMAR PcP PcP 10 09 57.4 +0.5
comp=Z,0.8nm,0.3s,baz=126,slow=0.9,SNR=5.8
CMAR Chiang Mai Arr 41.12 271 *i*P P 10 07 58.7 +1.3
CMAR pmax pmax
comp=Z,10.0nm,0.7s
CMAR Chiang Mai Arr 41.12 271 P P 10 07 57.5 0.0
GOMU GeErMu 42.73 298 P P 10 08 11.0 +0.2
GOMU pmax pmax
comp=Z,11nm,0.6s
MORE Moreh 44.03 280 P P 10 08 20.4 -0.6
WB0 Warramunga Arr 44.55 191 P P 10 08 23.7 -1.4
WB0 IAmb IAmb 10 08 25.2
comp=Z,22nm,1.1s
QIS Mount Isa 44.69 184 P P 10 08 24.6 -1.5
WR8 Warramunga Arr 44.72 191 P P 10 08 24.9 -1.5
WR8 IAmb IAmb 10 08 26.2
comp=Z,16nm,0.9s
WRAB Tennant Creek 44.72 191 P P 10 08 25.1 -1.3
WRA Warramunga Arr 44.73 191 P P 10 08 25.4 -1.1
comp=Z,16nm,0.8s,baz=6.3,slow=8.0,SNR=159
WRA PcP PcP 10 10 08.5 -0.3
comp=Z,4.4nm,0.9s,baz=15,slow=3.6,SNR=4.1
comp=Z,16nm,0.8s
WRA Warramunga Arr 44.73 191 *i*P P 10 08 25.1 -1.5
WRA pmax pmax
comp=Z,6.0nm,0.3s
WRA Warramunga Arr 44.73 191 P P 10 08 25.0 -1.5
FITZ Fitzroy Crossi 45.33 203 P P 10 08 30.7 -0.6
SHL Shillong 45.96 283 P P 10 08 36.9 +0.4
SHL pmax pmax
comp=Z,37nm,0.7s
SHL Shillong 45.96 283 P P 10 08 36.3 -0.2
LSA Lhasa 46.03 289 P P 10 08 36.5 -0.9
LSA IAmb IAmb 10 08 39.5
comp=Z,8.0nm,0.7s
BILL Bilibino 46.06 12⇓*i*P P 10 08 37.4 +0.9
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 46.06 12 P P 10 08 37.5 +0.9
BILL IAmb IAmb 10 08 49.6
comp=Z,15nm,1.2s
PSI Prapat 47.40 250 P P 10 08 49.3 +1.4
PSI Prapat 47.40 250 P P 10 08 49.3 +1.4
comp=Z,42nm,0.9s
RPSI Rantau Prapat 47.46 250 P P 10 08 48.2 0.0
TIXI Tiksi 48.05 354⇑*i*P P 10 08 51.9 0.0
TIXI pmax pmax
comp=Z,12nm,0.9s
TIXI Tiksi 48.05 354 P P 10 08 51.8 -0.1
AS31 Alice Springs 48.45 191 P 10 08 54.1 -1.5
ASAR Alice Springs 48.45 191 P P 10 08 54.1 -1.5
comp=Z,1.8nm,0.4s,baz=13,slow=7.9,SNR=70
ASAR PcP PcP 10 10 20.8 -1.0
comp=Z,0.7nm,0.9s,baz=46,slow=5.3,SNR=1.8
comp=Z,1.8nm,0.4s
ASAR Alice Springs 48.45 191 P P 10 08 54.0 -1.7
WMQ Urumqi 48.69 308 *e*P P 10 08 57.5 0.0
WMQ pP sP 10 09 04.1 +1.4
WMQ PcP PcP 10 10 23.4 +0.8
WMQ pmax pmax
comp=Z,20nm,1.5s
GSI Gunungsitoli 49.32 249 P P 10 09 03.1 +0.6
DGZ Jazzator, Alta 49.62 315⇑*i*P P 10 09 03.6 -1.0
DGZ pmax pmax
comp=Z,19nm,1.2s
EIDS Eidsvold 50.02 170 P P 10 09 07.2 -0.4
EIDS IAmb IAmb 10 09 10.9
comp=Z,30nm,1.5s
EVN Everest 50.03 287 P P 10 09 09.1 +0.4
ZSN Zaisan 51.01 312 *e*P P 10 09 14.3 -0.6
ZSN pmax pmax
comp=Z,8.0nm,1.1s
ZSN Zaisan 51.01 312 *e*P P 10 09 14.3 -0.6
comp=Z,8.1nm,1.1s
INKA Innaminka 51.77 182 P 10 09 19.6 -1.0
ZAA0 Zalesovo Array 51.98 320 P 10 09 20.9 -1.2
ZAA0 IAmb IAmb 10 09 21.5
comp=Z,7.3nm,0.7s
ZALV Zalesovo Beam 51.98 320 P P 10 09 21.1 -1.0
comp=Z,6.6nm,0.6s,baz=102,slow=6.9,SNR=28
ZALV PcP PcP 10 10 33.7 -0.7
comp=Z,2.5nm,0.8s,baz=122,slow=1.9,SNR=4.5
comp=Z,6.6nm,0.6s
ZALV Zalesovo Beam 51.98 320 *i*P P 10 09 20.6 -1.5
ZALV pmax pmax
comp=Z,7.0nm,0.6s
ZALV Zalesovo Beam 51.98 320 P P 10 09 20.9 -1.2
MK31 Makanchi Array 52.71 311 *c i*P P 10 09 26.4 -1.3
MKAR Makanchi Array 52.71 311 P P 10 09 26.9 -0.8
comp=Z,5.0nm,0.7s,baz=90,slow=8.4,SNR=29
MKAR PcP PcP 10 10 36.7 -0.6
comp=Z,2.5nm,0.8s,baz=76,slow=5.1,SNR=4.8
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 52.71 311 *i*P P 10 09 26.7 -1.0
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 52.71 311 P P 10 09 27.3 -0.4
MAKZ Makanchi 52.92 311 P P 10 09 28.8 -0.5
MAKZ IAmb IAmb 10 09 29.5
comp=Z,26nm,1.3s
MAKZ Makanchi 52.92 311 P P 10 09 28.7 -0.6
PDGK Podgornoye 54.63 307 P P 10 09 41.5 -0.5
SHLS Shalkode 54.66 307 *e*P P 10 09 39.1 -3.0
SHLS Shalkode 54.66 307 *e*P P 10 09 39.1 -3.0
WUS Wushi 54.91 304 P P 10 09 43.7 -0.4
WUS IAmb IAmb 10 09 45.3
comp=Z,10nm,1.1s
UZB Uzynbulak 54.98 307 *e*P P 10 09 43.7 -0.8
UZB pmax pmax
comp=Z,7.0nm,1.2s
UZB Uzynbulak 54.98 307 *e*P P 10 09 43.8 -0.8
comp=Z,7.0nm,1.2s
KPKS Kokpek 55.22 307 *e*P P 10 09 45.4 -0.7
KPKS Kokpek 55.22 307 *e*P P 10 09 45.5 -0.7
KURK Kurchatov 55.36 316 *c i*P P 10 09 45.5 -1.4
KURK pmax pmax
comp=Z,33nm,1.1s
KURK Kurchatov 55.36 316 P P 10 09 46.3 -0.6
KURK Kurchatov 55.36 316 P P 10 09 45.7 -1.2
TDK Taldyqorghan 55.38 309 *e*P P 10 09 46.6 -0.6
TDK pmax pmax
comp=Z,25nm,1.5s
TDK Taldyqorghan 55.38 309 *e*P P 10 09 46.6 -0.6
comp=Z,25nm,1.5s
KURBB Kurchatov Arra 55.41 316 P P 10 09 46.3 -1.0
comp=Z,6.5nm,0.3s,baz=93,slow=7.7,SNR=60
comp=Z,6.5nm,0.3s
SATY Saty 55.44 307 *e*P P 10 09 47.0 -0.8
SATY pmax pmax
comp=Z,7.0nm,1.2s
SATY Saty 55.44 307 *e*P P 10 09 47.0 -0.8
comp=Z,7.3nm,1.2s
NRIK Noril'sk 55.45 339 P P 10 09 46.8 -0.5
comp=Z,21nm,0.8s,baz=114,slow=9.2,SNR=21
comp=Z,21nm,0.8s
NRIK Noril'sk 55.45 339 *c i*P P 10 09 47.0 -0.3
NRIK pmax pmax
comp=Z,32nm,0.9s
NRIK Noril'sk 55.45 339 P 10 09 47.2 -0.1
STKA Stephens Creek 55.86 181 P P 10 09 49.5 -1.2
comp=Z,6.2nm,0.4s,baz=17,slow=6.7,SNR=30
comp=Z,6.2nm,0.4s
STKA Stephens Creek 55.86 181⇓*i*P P 10 09 49.6 -1.0
STKA Stephens Creek 55.86 181 P P 10 09 50.0 -0.7
TARG Taragay, Kyrgy 55.95 305 P P 10 09 52.1 +0.3
TARG Taragay, Kyrgy 55.95 305 IAmb IAmb 10 09 53.8
comp=Z,19nm,1.3s
TARG Taragay, Kyrgy 55.95 305 P P 10 09 52.1 +0.3
L19K White Mountain 55.95 30 P P 10 09 52.2 +1.2
baz=257
G19K Purcell Mounta 56.04 25 P P 10 09 53.3 +1.8
baz=252
J19K Poorman 56.04 28 P 10 09 54.2 +2.6
J19K Poorman 56.04 28 P P 10 09 52.9 +1.3
baz=255
H19K Roundabout Mou 56.11 26 P P 10 09 54.7 +2.7
baz=253
C19K Lookout Ridge 56.14 21 IAmb IAmb 10 10 01.1
comp=Z,9.3nm,1.0s
C19K Lookout Ridge 56.14 21 P P 10 09 54.8 +2.5
baz=248,SNR=5.3
D19K Kuna River 56.42 22 P P 10 09 55.5 +1.3
baz=250
MDOK Medeo 56.42 307 *e*P P 10 09 54.5 -0.4
MDOK Medeo 56.42 307 *e*P P 10 09 54.5 -0.4
TNSS Tian-Shan 56.50 307 *e*P P 10 09 54.6 -1.2
TNSS Tian-Shan 56.50 307 *e*P P 10 09 54.6 -1.2
AAA Alma-Ata 56.52 307 *e*P P 10 09 54.7 -0.7
AAA Alma-Ata 56.52 307 *e*P P 10 09 54.7 -0.7
K20K Telida 56.56 29 P P 10 09 57.1 +1.8
K20K IAmb IAmb 10 10 05.4
comp=Z,9.9nm,1.2s
K20K Telida 56.56 29 P P 10 09 57.4 +2.1
baz=257
J20K Nowinta River 56.71 28 P P 10 09 58.4 +2.0
baz=256
H20K Anotteneega Mo 56.73 26 P P 10 09 58.2 +1.7
baz=255
F20K Avaraart Lake 56.83 24 P P 10 09 58.9 +1.8
baz=253
KUU Kurty 56.90 308 *e*P P 10 09 57.4 -0.7
KUU Kurty 56.90 308 *e*P P 10 09 57.5 -0.7
ASAI AK-SAY(Kyrgyzs 56.97 304 P P 10 09 59.6 +0.6
SPCR Spurr Chakacha 56.99 32 P P 10 10 00.3 +1.8
baz=260
D20K Etivluk River 57.01 22 IAmb IAmb 10 10 07.4
comp=Z,8.3nm,0.8s
D20K Etivluk River 57.01 22 P P 10 10 00.2 +1.7
baz=251,SNR=10
E20K Nigu River 57.02 23 P P 10 09 59.8 +1.2
baz=252
B20K Meade River 57.26 21 IAmb IAmb 10 10 09.0
comp=Z,8.6nm,0.7s
B20K Meade River 57.26 21 P P 10 10 01.2 +1.1
baz=250
PPLA Purkeypile 57.30 30 P P 10 10 01.5 +0.7
baz=255
CHUM Lake Minchumin 57.44 28 P P 10 10 02.8 +1.3
baz=258
SKT Skwentna 57.44 31 P P 10 10 02.5 +0.8
baz=260
CAST Castle Rocks 57.45 29 IAmb IAmb 10 10 11.9
comp=Z,4.4nm,0.7s
CAST Castle Rocks 57.45 29 P P 10 10 03.2 +1.6
baz=259
H21K Melozitna Rive 57.61 26 P P 10 10 03.1 +0.4
baz=257
C21K Knifeblade Rid 57.78 22 P P 10 10 05.0 +1.2
baz=253
E21K Killik River 57.86 23 IAmb IAmb 10 10 12.3
comp=Z,8.0nm,1.1s
E21K Killik River 57.86 23 P P 10 10 05.6 +1.1
baz=254
KSH2 Kashi 57.87 302 P P 10 10 06.0 +0.8
KSH2 pmax pmax
comp=Z,10.0nm,0.6s
L22K Petersville 57.88 30 P P 10 10 06.1 +1.4
baz=261
B21K Ikpikpuk River 57.97 22 P P 10 10 06.9 +1.7
baz=253,SNR=10.0
SGDS Sogindy 58.17 307 *e*P P 10 10 06.4 -0.7
TRF Thorofare Moun 58.25 29 IAmb IAmb 10 10 17.9
comp=Z,11nm,1.2s
TRF Thorofare Moun 58.25 29 P P 10 10 07.8 +0.4
baz=261
F22K John River 58.27 24 P P 10 10 08.4 +1.1
baz=256
A22K Sinclair Lake 58.28 20 P P 10 10 09.2 +1.9
baz=251,SNR=8.7
MLY Manley 58.33 27 P P 10 10 08.7 +0.9
baz=259
AAK Ala-Archa 58.33 306⇓*i*P P 10 10 08.4 0.0
AAK pmax pmax
comp=Z,5.0nm,1.1s
BTLS Baital 58.47 309 *e*P P 10 10 08.6 -0.5
BTLS pmax pmax
comp=Z,8.0nm,0.9s
BTLS Baital 58.47 309 *e*P P 10 10 08.6 -0.5
comp=Z,7.8nm,0.9s
PMR Palmer 58.52 31 IAmb IAmb 10 10 23.9
comp=Z,11nm,1.2s
PMR Palmer 58.52 31 P P 10 10 10.1 +1.0
baz=263
B22K Teshekpuk Lake 58.58 21 P P 10 10 11.0 +1.7
B22K IAmb IAmb 10 10 17.7
comp=Z,10nm,0.9s
B22K Teshekpuk Lake 58.58 21 P P 10 10 10.1 +0.7
baz=253
MCK McKinley 58.89 29 P P 10 10 12.9 +1.2
baz=262
SML Sawmill 58.92 31 P P 10 10 13.3 +1.3
baz=263
I23K Minto, Yukon-K 58.92 27 P P 10 10 13.1 +1.3
baz=260
G23K Bananza Creek 58.93 25 IAmb IAmb 10 10 26.4
comp=Z,15nm,1.4s
G23K Bananza Creek 58.93 25 P P 10 10 13.8 +1.8
baz=259
WAT1 Susitna Watana 58.94 30 P P 10 10 12.8 +0.7
baz=263
H23K Yukon River 58.96 26 IAmb IAmb 10 10 20.5
comp=Z,9.3nm,1.4s
H23K Yukon River 58.96 26 P P 10 10 13.6 +1.4
baz=260
COLD Coldfoot 58.96 25 IAmb IAmb 10 10 28.3
comp=Z,4.7nm,0.9s
COLD Coldfoot 58.96 25 P P 10 10 14.1 +2.0
baz=258
D23K Nanushuk River 59.15 23 P 10 10 15.7 +2.3
D23K IAmb IAmb 10 10 22.1
comp=Z,14nm,1.1s
D23K Nanushuk River 59.15 23 P P 10 10 15.4 +1.9
baz=257,SNR=13
P23K Montague Islan 59.20 33 P P 10 10 15.2 +1.4
baz=265
M23K Glacier View 59.20 31 P P 10 10 15.0 +1.0
baz=264
WAT6 Susitna Watana 59.28 30 P P 10 10 15.8 +1.1
baz=264
E23K Chandalar 59.34 24 IAmb IAmb 10 10 25.9
comp=Z,13nm,1.1s
E23K Chandalar 59.34 24 P P 10 10 16.5 +1.6
baz=258,SNR=8.8
C23K Itkillik River 59.37 22 P P 10 10 16.5 +1.6
C23K Itkillik River 59.37 22 P P 10 10 16.7 +1.8
baz=256,SNR=25
SCM Sheep Creek Mo 59.40 31 P P 10 10 16.0 +0.6
baz=264
GLI Glacier Island 59.42 32 P P 10 10 16.2 +0.8
baz=265
TOLK Toolik Lake Re 59.48 23 P P 10 10 16.6 +0.8
baz=258
H24K Noodor Dome 59.64 27 P P 10 10 18.3 +1.4
baz=261
E24K Your Creek 59.77 24 IAmb IAmb 10 10 34.1
comp=Z,7.6nm,1.2s
E24K Your Creek 59.77 24 P P 10 10 19.7 +1.9
baz=260,SNR=7.9
HDA Harding Lake 59.84 28 P P 10 10 19.5 +1.3
baz=263
D24K Happy Valley 59.84 23 IAmb IAmb 10 10 27.2
comp=Z,13nm,1.1s
D24K Happy Valley 59.84 23 P P 10 10 19.8 +1.6
baz=259
F24K Squaw Lake 59.90 25 P P 10 10 19.9 +1.2
baz=260
ILAR Eielson Array 59.91 28 P P 10 10 18.4 -0.3
comp=Z,2.3nm,0.9s,baz=255,slow=6.0,SNR=14
comp=Z,2.3nm,0.9s
G24K Hadweenzic Riv 59.93 26 P P 10 10 20.9 +2.0
baz=261
M24K Tolsona, Glenn 59.96 31 P P 10 10 20.9 +1.7
baz=265
KLU Klutina 60.04 32 P P 10 10 21.3 +1.5
baz=266
EYAK Cordova Ski Ar 60.06 33 P P 10 10 21.1 +1.3
baz=266
K24K Donnelly Dome 60.29 29 P P 10 10 22.5 +1.1
baz=265
PAX Paxson 60.36 30 IAmb IAmb 10 10 31.9
comp=Z,16nm,1.4s
PAX Paxson 60.36 30 P P 10 10 23.0 +1.1
baz=265
HARP HAARP 60.46 31 P P 10 10 23.8 +1.3
baz=266
G25K Bearman Lake 60.48 26 P P 10 10 24.1 +1.5
baz=263
BVAR Borovoye Array 60.49 319 P P 10 10 22.1 -0.8
comp=Z,27nm,0.5s,baz=91,slow=7.9,SNR=68
comp=Z,27nm,0.5s
BORK Borovoye 60.53 319⇑*i*P P 10 10 22.5 -0.7
BORK pmax pmax
comp=Z,43nm,1.1s
BORK Borovoye 60.53 319 P 10 10 22.8 -0.4
J25K Salcha River, 60.54 28 P P 10 10 24.7 +1.5
baz=264
NIL Nilore 60.55 296 P P 10 10 23.0 -0.7
NIL Nilore 60.55 296 P P 10 10 24.0 +0.2
PRP Porcupine Dome 60.57 27 P P 10 10 24.7 +1.4
baz=264
DZA Taraz 60.62 307 *e*P P 10 10 23.4 -0.6
DZA pmax pmax
comp=Z,8.0nm,1.0s
DZA Taraz 60.62 307 *e*P P 10 10 23.5 -0.6
comp=Z,7.6nm,1.0s
BMRM Bremner River 60.64 32 P P 10 10 25.0 +1.2
baz=267
N25K Chitina, Valde 60.68 32 P P 10 10 25.3 +1.2
baz=267
KAIM Kayak Island 60.70 33 P P 10 10 25.8 +1.7
baz=268
RIDG Independent Ri 60.70 29 IAmb IAmb 10 10 34.8
comp=Z,10nm,1.2s
RIDG Independent Ri 60.70 29 P P 10 10 26.0 +1.8
baz=266
D25K Kavik River 60.73 23 IAmb IAmb 10 10 38.5
comp=Z,11nm,0.9s
D25K Kavik River 60.73 23 P P 10 10 25.9 +1.6
baz=261,SNR=14
F25K Christian Rive 60.76 25 IAmb IAmb 10 10 29.2
comp=Z,7.8nm,1.1s
F25K Christian Rive 60.76 25 P P 10 10 27.0 +2.4
baz=263,SNR=9.1
E25K Arctic Village 60.85 24 IAmb IAmb 10 10 41.6
comp=Z,10nm,1.1s
E25K Arctic Village 60.85 24 P P 10 10 27.5 +2.4
baz=262,SNR=9.5
SCRK Sand Creek 61.09 29 IAmb IAmb 10 10 36.4
comp=Z,7.5nm,0.7s
SCRK Sand Creek 61.09 29 P P 10 10 28.2 +1.2
baz=266
KK31 Karatay Array 61.19 307 P 10 10 27.4 -0.5
KKAR Karatay Array 61.19 307 P 10 10 27.3 -0.6
L26K Log Cabin Wild 61.33 30 IAmb IAmb 10 10 38.1
comp=Z,7.3nm,1.4s
L26K Log Cabin Wild 61.33 30 P P 10 10 30.0 +1.5
baz=267
F26K Sheenjek River 61.34 25 IAmb IAmb 10 10 32.0
comp=Z,4.7nm,0.8s
F26K Sheenjek River 61.34 25 P P 10 10 30.6 +2.1
baz=264,SNR=13
CRQE Cirque 61.38 33 P P 10 10 30.9 +2.0
baz=269
G26K Porcupine Rive 61.41 25 IAmb IAmb 10 10 39.3
comp=Z,14nm,1.4s
G26K Porcupine Rive 61.41 25 P P 10 10 31.1 +2.2
baz=265
MCARA McCarthy VSAT 61.42 32 P P 10 10 31.0 +1.9
baz=268
I26K Coal Creek Min 61.54 27 P P 10 10 31.8 +2.0
baz=266
IUG Iuzhnay 61.67 306 *e*P P 10 10 30.6 -0.7
IUG pmax pmax
comp=Z,9.0nm,0.9s
IUG Iuzhnay 61.67 306 *e*P P 10 10 30.6 -0.7
comp=Z,9.2nm,0.9s
BRLS Boroldav 61.69 307 *e*P P 10 10 31.6 +0.3
BRLS Boroldav 61.69 307 *e*P P 10 10 31.7 +0.3
C27K Jago River 61.71 22 IAmb IAmb 10 10 34.5
comp=Z,11nm,1.1s
C27K Jago River 61.71 22 P P 10 10 32.2 +1.4
baz=263
GAR Garm 61.94 303 P P 10 10 32.8 -0.3
CHM Chimkent 61.96 306 *e*P P 10 10 32.4 -0.7
CHM Chimkent 61.96 306 *e*P P 10 10 32.5 -0.7
M27K Edge Creek, AK 61.98 31 P P 10 10 34.5 +1.4
baz=269
L27K Beaver Creek, 62.02 30 P P 10 10 34.6 +1.5
baz=269
BCAR Beaver Creek A 62.04 30 P 10 10 34.1 +0.8
I27K Kandik River 62.19 27 P P 10 10 36.1 +1.8
baz=267
G27K Doyon Strip 62.23 26 P P 10 10 35.9 +1.4
baz=267
H27K Steamboat Moun 62.26 26 P P 10 10 36.6 +1.9
baz=267,SNR=13

E27K	**Coleen River**	**62.34**	**24**	IAmb	IAmb	10 10 37.8	
	comp=Z,6.4nm,1.1s						
E27K	**Coleen River**	**62.34**	**24**	P	**P**	**10 10 37.3**	**+2.1**
	baz=266,SNR=7.8						
D27M	**Malcolm River**	**62.64**	**23**	IAmb	IAmb	10 10 45.7	
	comp=Z,8.8nm,0.9s						
D27M	**Malcolm River**	**62.64**	**23**	P	**P**	**10 10 39.4**	**+2.2**
	baz=266,SNR=7.6						
YUK3	**Moose Creek**	**62.65**	**31**	P	**P**	**10 10 38.7**	**+1.1**
	baz=270						
O28M	**Mount Upton**	**62.80**	**33**	P	**P**	**10 10 39.8**	**+1.1**
	baz=271						
CHGR	**Chuyangaron**	**62.89**	**302**	*i*P	**P**	**10 10 39.3**	**-0.2**
CHGR				pmax	pmax		
	comp=Z,43nm,1.4s						
CHGR	**Chuyangaron**	**62.89**	**302**	P	**P**	**10 10 39.5**	**0.0**
I28M	**Miner Creek**	**62.89**	**27**	IAmb	IAmb	10 10 49.0	
	comp=Z,5.8nm,0.8s						
I28M	**Miner Creek**	**62.89**	**27**	P	**P**	**10 10 40.6**	**+1.6**
	baz=269						
F28M	**Old Crow**	**62.96**	**25**	IAmb	IAmb	10 10 47.7	
	comp=Z,7.2nm,0.9s						
F28M	**Old Crow**	**62.96**	**25**	P	**P**	**10 10 41.4**	**+2.1**
	baz=268,SNR=12						
YUK8	**Steele Glacier**	**62.99**	**32**	P	**P**	**10 10 40.9**	**+0.9**
	baz=271						
DAWY	**Dawson**	**63.12**	**29**	IAmb	IAmb	10 10 49.0	
	comp=Z,13nm,1.5s						
DAWY	**Dawson**	**63.12**	**29**	P	**P**	**10 10 41.5**	**+1.0**
	baz=270						
E28M	**Babbage River**	**63.12**	**24**	P	**P**	**10 10 42.3**	**+1.9**
	baz=268,SNR=24						
YUK4	**Talbot Arm**	**63.53**	**32**	P	**P**	**10 10 44.8**	**+1.4**
	baz=272						
H29M	**Whitestone**	**63.54**	**26**	IAmb	IAmb	10 11 01.4	
	comp=Z,7.8nm,1.1s						
H29M	**Whitestone**	**63.54**	**26**	P	**P**	**10 10 44.9**	**+1.8**
	baz=270						
M29M	**Somme Creek**	**63.58**	**31**	IAmb	IAmb	10 10 52.8	
	comp=Z,4.6nm,1.0s						
M29M	**Somme Creek**	**63.58**	**31**	P	**P**	**10 10 44.7**	**+1.1**
	baz=272						
O29M	**Mount Kennedy**	**63.62**	**33**	P	**P**	**10 10 45.0**	**+1.0**
	baz=273						
G29M	**Pine Creek**	**63.67**	**26**	IAmb	IAmb	10 11 00.9	
	comp=Z,13nm,1.2s						
G29M	**Pine Creek**	**63.67**	**26**	P	**P**	**10 10 46.1**	**+2.1**
	baz=270,SNR=7.4						
YUK6	**Outpost Mounta**	**63.69**	**32**	P	**P**	**10 10 45.9**	**+1.4**
	baz=273						
L29M	**L29M**	**63.70**	**30**	IAmb	IAmb	10 11 00.5	
	comp=Z,4.4nm,0.9s						
L29M	**L29M**	**63.70**	**30**	P	**P**	**10 10 45.6**	**+1.2**
	baz=272						
E29M	**Blow River**	**63.72**	**24**	IAmb	IAmb	10 10 54.3	
	comp=Z,9.2nm,0.9s						
E29M	**Blow River**	**63.72**	**24**	P	**P**	**10 10 46.2**	**+1.9**
	baz=269,SNR=10						
KBL	**Kabul**	**63.79**	**298**	P	**P**	**10 10 45.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,23nm,1.4s						
KBL	**Kabul**	**63.79**	**298**	P	**P**	**10 10 45.2**	**-0.4**
KBL	**Kabul**	**63.79**	**298**	P	**P**	**10 10 45.3**	**-0.4**
SHAA	**Shahritus**	**63.90**	**301**		**P**	**10 10 46.1**	**-0.1**
SHAA				IAmb	IAmb	10 10 49.1	
	comp=Z,35nm,1.3s						
K29M	**Barlow Dome**	**63.95**	**29**	IAmb	IAmb	10 11 00.9	
	comp=Z,7.7nm,1.2s						
K29M	**Barlow Dome**	**63.95**	**29**	P	**P**	**10 10 48.2**	**+2.2**
	baz=272,SNR=6.6						
P29M	**Windy Craggy**	**64.08**	**34**	IAmb	IAmb	10 11 07.6	
	comp=Z,7.4nm,1.0s						
P29M	**Windy Craggy**	**64.08**	**34**	P	**P**	**10 10 48.2**	**+1.4**
	baz=274						
HYT	**Haines Junctio**	**64.11**	**32**	IAmb	IAmb	10 10 55.4	
	comp=Z,9.2nm,1.1s						
HYT	**Haines Junctio**	**64.11**	**32**	P	**P**	**10 10 48.1**	**+0.9**
	baz=274						
EPYK	**Eagle Plains**	**64.20**	**26**	P	**P**	**10 10 49.1**	**+1.5**
	baz=272,SNR=8.4						
N30M	**Aishikik Lake**	**64.27**	**32**	P	**P**	**10 10 49.6**	**+1.5**
	baz=274						
M30M	**Minto, Yukon**	**64.34**	**30**	IAmb	IAmb	10 11 00.9	
	comp=Z,6.6nm,1.5s						
M30M	**Minto, Yukon**	**64.34**	**30**	P	**P**	**10 10 50.0**	**+1.4**
	baz=273						
G30M	**tAoh Zraii Nji**	**64.38**	**26**	P	**P**	**10 10 50.1**	**+1.4**
	baz=272,SNR=12						
I30M	**Mount Dempster**	**64.39**	**27**	IAmb	IAmb	10 11 03.5	
	comp=Z,12nm,1.4s						
I30M	**Mount Dempster**	**64.39**	**27**	P	**P**	**10 10 50.1**	**+1.2**
	baz=272						
P30M	**Million Dollar**	**64.43**	**33**	P	**P**	**10 10 50.4**	**+1.2**
	baz=274						
J30M	**Hart River**	**64.44**	**28**	P	**P**	**10 10 50.6**	**+1.3**
	baz=273						
F30M	**Barrier River**	**64.53**	**25**	P	**P**	**10 10 51.5**	**+1.9**
	baz=272,SNR=7.8						
PLBC	**Pleasant Camp**	**64.79**	**34**	P	**P**	**10 10 53.3**	**+1.9**
	baz=275						
O30N	**Mendenhall**	**64.81**	**32**	P	**P**	**10 10 53.2**	**+1.6**
	baz=275						
N31M	**Braeburn, Yuko**	**64.90**	**32**	P	**P**	**10 10 53.8**	**+1.6**
	baz=275						
G31M	**Satah River**	**65.15**	**26**	P	**P**	**10 10 54.9**	**+1.3**
	baz=274,SNR=6.5						
H31M	**Peel River**	**65.20**	**27**	IAmb	IAmb	10 11 00.2	
	comp=Z,11nm,1.1s						
H31M	**Peel River**	**65.20**	**27**	P	**P**	**10 10 55.9**	**+1.8**
	baz=274,SNR=7.7						
R31K	**City Hall, Gus**	**65.22**	**35**	P	**P**	**10 10 55.5**	**+1.3**
	baz=276						
SKAG	**Skagway**	**65.32**	**34**	P	**P**	**10 10 55.8**	**+1.0**
	baz=276						
INK	**Inuvik**	**65.35**	**24**	P	**P**	**10 10 55.6**	**+0.7**
	comp=Z,8.6nm,1.1s,baz=288,slow=5.3,SNR=9.6						
	comp=Z,8.6nm,1.1s						
INK	**Inuvik**	**65.35**	**24**		**P**	**10 10 55.3**	**+0.4**
INK				IAmb	IAmb	10 11 02.2	
	comp=Z,7.6nm,0.9s						
INK	**Inuvik**	**65.35**	**24**	P	**P**	**10 10 55.9**	**+1.0**
	baz=274,SNR=7.6						
INK	**Inuvik**	**65.35**	**24**	P	**P**	**10 10 55.9**	**+1.0**
WHY	**Whitehorse**	**65.41**	**32**	P	**P**	**10 10 56.7**	**+1.1**
	baz=276						
M31M	**Drury Creek, Y**	**65.49**	**31**	P	**P**	**10 10 57.3**	**+1.3**
	baz=276						
SIT	**Sitka**	**65.60**	**36**	P	**P**	**10 10 58.0**	**+1.3**
	baz=277						
R32K	**Eaglecrest**	**65.88**	**35**	P	**P**	**10 10 59.9**	**+1.3**
	baz=277						
S32K	**Killisnoo**	**65.95**	**36**	P	**P**	**10 11 00.0**	**+1.0**
	baz=278						
P32M	**Atlin**	**66.12**	**34**	P	**P**	**10 11 01.3**	**+1.2**
	baz=277						
N32M	**Quiet Lake**	**66.23**	**32**	P	**P**	**10 11 02.2**	**+1.4**
	baz=277						
P33M	**Teslin, Yukon**	**66.48**	**33**	IAmb	IAmb	10 11 14.6	
	comp=Z,4.7nm,1.0s						
P33M	**Teslin, Yukon**	**66.48**	**33**	P	**P**	**10 11 03.9**	**+1.4**
	baz=278						
MMPY	**Sheldon Lake,**	**66.88**	**30**	P	**P**	**10 11 06.2**	**+1.2**
	baz=278						
U33K	**Whale Pass**	**66.94**	**37**	P	**P**	**10 11 06.0**	**+0.6**
	baz=279						
ARTI	**Arti**	**67.08**	**323**	*c* *i*P	**P**	**10 11 05.3**	**-1.0**
ARTI						10 11 32.1	
ARTI				S	**S**	**10 20 00.2**	**+0.6**
ARTI				pmax	pmax		
	comp=Z,15nm,0.7s						
ARTI	**Arti**	**67.08**	**323**		**P**	**10 11 05.2**	**-1.0**
WRAK	**Wrangell Islan**	**67.32**	**37**	P	**P**	**10 11 08.6**	**+0.9**
	baz=260						
AB31	**Akbulak array**	**67.46**	**315**		**P**	**10 11 08.0**	**-0.8**
ABKAR	**Akbulak array**	**67.46**	**315**		**P**	**10 11 08.0**	**-0.8**
DLBC	**Dease Lake**	**68.19**	**34**	P	**P**	**10 11 14.7**	**+1.4**
	comp=Z,3.7nm,1.1s,baz=230,slow=3.2,SNR=4.6						
	comp=Z,3.7nm,1.1s						
DLBC	**Dease Lake**	**68.19**	**34**	P	**P**	**10 11 14.7**	**+1.4**
	baz=281						
C36M	**Paulatuk**	**68.61**	**22**	P	**P**	**10 11 15.7**	**+0.1**
	baz=282						
KIRV	**Kirov**	**71.32**	**326**	*e*P	**P**	**10 11 32.1**	**-0.4**
SPITS	**Spitsbergen Ar**	**73.23**	**350**	P	**P**	**10 11 44.2**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=93,slow=8.4,SNR=5.7						
	comp=Z,3.7nm,0.8s						
KBS	**Kingsbay**	**73.38**	**351**	*i* P	**P**	**10 11 45.2**	**+0.7**
NOR	**Nord**	**73.80**	**357**	*i* P	**P**	**10 11 48.7**	**+1.8**
NOR				IAmb	IAmb	10 11 49.5	
	comp=Z,2.0nm,0.7s						
BELG	**Belogornoye**	**74.17**	**321**	*ce*P	**P**	**10 11 49.1**	**-0.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LVZ	**Lovozero**	**74.27**	**338**	*d* *i*P	**P**	**10 11 50.0**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,11nm,1.1s						
LVZ	**Lovozero**	**74.27**	**338**	P	**P**	**10 11 50.3**	**+0.4**
	comp=Z,12nm,1.2s						
YKAW3	**Yellowknife Wh**	**74.31**	**28**		**P**	**10 11 50.3**	**+0.1**
YKA	**Yellowknife Ar**	**74.34**	**28**	P	**P**	**10 11 50.8**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=291,slow=5.4,SNR=18						
	comp=Z,2.9nm,0.7s						
YKA	**Yellowknife Ar**	**74.34**	**28**	*i* P	**P**	**10 11 50.7**	**+0.4**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**74.34**	**28**	P	**P**	**10 11 50.3**	**-0.1**
VADS	**Vadso**	**74.92**	**341**	*e*P	**P**	**10 11 54.3**	**+0.8**
KLMR	**Klimovskoe**	**75.28**	**330**	*e*P	**P**	**10 11 52.6**	**-3.2**
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
ARA0	**ARCESS Array S**	**76.36**	**341**	*e*P	**P**	**10 12 02.9**	**+1.0**
ARCES	**ARCESS Array B**	**76.36**	**341**	P	**P**	**10 12 02.5**	**+0.6**
	comp=Z,9.2nm,0.7s,baz=77,slow=8.5,SNR=29						
	comp=Z,9.2nm,0.7s						
ARCES	**ARCESS Array B**	**76.36**	**341**		**P**	**10 12 02.5**	**+0.6**
TULEG	**Thule**	**77.55**	**7**	*i* P	**P**	**10 12 09.0**	**+0.6**
TULEG				IAmb	IAmb	10 12 09.4	
	comp=Z,30nm,1.5s						
JETT	**Jettan, Norway**	**77.80**	**342**	*e*P	**P**	**10 12 10.7**	**+0.7**
JETT				IAmb	IAmb	10 12 11.4	
	comp=Z,13nm,0.7s						
PINE	**Pine Mountain**	**77.87**	**47**		**P**	**10 12 13.1**	**+1.9**
PINE				IAmb	IAmb	10 12 20.3	
	comp=Z,11nm,0.8s						
VRH	**Novokhopyorsk**	**78.01**	**321**	*e*P	**P**	**10 12 10.4**	**-1.0**
VRH				pmax	pmax		
	comp=Z,19nm,0.7s						
NEEM	**North Greenlan**	**78.15**	**3**	*i* P	**P**	**10 12 12.4**	**+0.3**
NEEM				IAmb	IAmb	10 12 13.4	
	comp=Z,22nm,1.2s						
K05A	**Summer Lake**	**78.31**	**48**		**P**	**10 12 16.0**	**+2.4**
MOS	**Moscow**	**78.33**	**326**	*e*P	**P**	**10 12 12.2**	**-0.9**
MOS				*e*		10 12 21.1	
MOS				pmax	pmax		
	comp=Z,22nm,0.6s						
OUL	**Oulu**	**78.72**	**337**	P	**P**	**10 12 15.6**	**+0.5**
OUL				pmax	pmax		
	comp=Z,21nm,1.2s						
LPSR	**Galich'ya Gora**	**79.00**	**323**	*e*P	**P**	**10 12 16.2**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,21nm,1.1s						
OBN	**Obninsk**	**79.15**	**326**	*d* *i*P	**P**	**10 12 17.4**	**-0.2**
OBN				*e**PP	**pP**	**10 12 21.4**	**-0.1**
OBN				*e*		10 12 24.5	
OBN				*e*		10 15 15.0	
OBN				*e*PPP	PPP	10 17 05.7	
OBN				*e*S	**S**	**10 22 17.6**	**+1.0**
OBN				*e*SS	**SS**	**10 27 24.9**	**+3.0**
OBN				pmax	pmax		
	comp=Z,35nm,1.4s						
OBN				MLR	MLR		
	comp=Z,900nm,19.0s						
VORR	**Voronezh**	**79.25**	**322**	*e*P	**P**	**10 12 17.2**	**-1.0**
VORR				pmax	pmax		
	comp=Z,51nm,0.4s						
VSR	**Storozhevoye**	**79.47**	**322**	*e*P	**P**	**10 12 19.1**	**-0.4**
VSR				pmax	pmax		
	comp=Z,19nm,0.8s						
STEI	**Steigen**	**80.30**	**342**	*e*P	**P**	**10 12 24.0**	**+0.4**
STEI				IAmb	IAmb	10 12 24.4	
	comp=Z,28nm,0.9s						
KBZ	**Khabaz**	**80.33**	**314**	P	**P**	**10 12 24.4**	**+0.2**
	comp=Z,5.5nm,0.8s,baz=116,slow=3.8,SNR=10.0						
	comp=Z,5.5nm,0.8s						
KIV	**Kislovodsk**	**80.37**	**314**	*e*P	**P**	**10 12 25.0**	**+0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**80.37**	**314**	P	**P**	**10 12 25.0**	**+0.3**
	comp=Z,9.4nm,0.5s						
KULLO	**Kullorsuaq**	**80.52**	**5**	*i* P	**P**	**10 12 25.8**	**+1.1**
KULLO				IAmb	IAmb	10 12 26.4	
	comp=Z,7.9nm,0.8s						
GNI	**Garni**	**80.52**	**310**	P	**P**	**10 12 25.7**	**+0.1**
	comp=Z,12nm,1.1s						
PNTR	**Pine Nut**	**80.62**	**51**	IAmb	IAmb	10 12 34.8	
	comp=Z,5.4nm,0.8s						
FAUS	**Fauske**	**80.66**	**342**	*e*P	**P**	**10 12 26.0**	**+0.4**
FAUS				IAmb	IAmb	10 12 26.2	
	comp=Z,18nm,0.9s						
FINES	**FINESS Array B**	**80.70**	**334**	P	**P**	**10 12 25.6**	**-0.3**
	comp=Z,4.1nm,0.4s,baz=75,slow=4.9,SNR=77						
	comp=Z,4.1nm,0.4s						
WAKR	**Walker**	**80.97**	**52**	P	**P**	**10 12 30.7**	**+2.5**
DBG	**Daneborg**	**81.02**	**355**	*i* P	**P**	**10 12 27.4**	**0.0**
DBG				IAmb	IAmb	10 12 28.1	
	comp=Z,3.7nm,0.9s						
MFID	**Camas Ranch**	**81.43**	**46**	IAmb	IAmb	10 12 39.0	
	comp=Z,10.0nm,1.1s						
RAUS	**Rausandaksla**	**81.67**	**342**	*e*P	**P**	**10 12 30.9**	**-0.1**
RAUS				IAmb	IAmb	10 12 31.3	
	comp=Z,20nm,0.9s						
MOR8	**Moi Rana**	**81.74**	**341**	*e*P	**P**	**10 12 30.2**	**-1.2**
MOR8				IAmb	IAmb	10 12 30.7	
	comp=Z,24nm,1.0s						
NVAR	**Mina Array Bea**	**81.81**	**52**	P	**P**	**10 12 33.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=260,slow=6.7,SNR=4.1						
	comp=Z,0.8nm,0.6s						
LEIR	**Leirfjorden**	**82.16**	**342**	*e*P	**P**	**10 12 34.0**	**+0.4**
LEIR				IAmb	IAmb	10 12 34.0	
	comp=Z,19nm,1.1s						
SUMG	**Summit**	**83.38**	**0**	P	**P**	**10 12 40.5**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SUMG	**Summit**	**83.38**	**0**	P	**P**	**10 12 40.1**	**-0.2**
SUMG				IAmb	IAmb	10 12 41.7	
	comp=Z,5.7nm,0.7s						
SUMG	**Summit**	**83.38**	**0**	*i* P	**P**	**10 12 41.0**	**+0.7**
SUMG				IAmb	IAmb	10 12 41.9	
	comp=Z,5.7nm,0.7s						
NSS	**Namsos**	**83.63**	**341**	*e*P	**P**	**10 12 40.8**	**-0.4**
MNK	**Minsk**	**83.80**	**328**	*i* P	**P**	**10 12 42.6**	**+0.3**
	comp=E,16nm,0.7s						
MNK				*i* P	**P**	**10 12 42.6**	**+0.3**
	comp=N,16nm,0.8s						
MNK				*i* P	**P**	**10 12 42.6**	**+0.3**
	comp=Z,23nm,0.8s,baz=56						
MNK				*i* PcP	**pP**	**10 12 46.5**	**+0.3**
MNK				*i* PP	**PP**	**10 15 55.7**	**+0.9**
MNK				*i* PPP	PPP	10 17 47.2	
MNK				*i* S	**SKSac**	**10 23 04.7**	**+0.1**
MNK				*i* SS	**SS**	**10 28 35.4**	**+4.2**
MNK				*i* SSS	SSS	10 32 04.9	
MNK				*i* LQ	LQ	10 44 15.4	
MNK				*i* LRM	MLR	10 50 05.0	
	comp=E,571nm,19.8s						
MNK	**Minsk**	**83.80**	**328**	*i* P	**P**	**10 12 42.6**	**+0.3**
MNK				*i*		10 12 46.5	
MNK				*i*		10 15 55.7	
MNK				*i* PPP	PPP	10 17 47.2	
MNK				*i* S	**SKSac**	**10 23 04.7**	**+0.1**
MNK				*i* SS	**SS**	**10 28 35.3**	**+4.2**
MNK				*i* SSS	SSS	10 32 04.8	
MNK				pmax	pmax		
	comp=Z,23nm,0.8s						
MNK				pmax	pmax		
	comp=E,16nm,0.7s						
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				MLR	MLR		
	comp=Z,1µm,19.0s						
MNK				MLR	MLR		
	comp=N,866nm,20.0s						
MNK				MLR	MLR		
	comp=E,571nm,20.0s						
FFC	**Flin Flon**	**83.82**	**32**	P	**P**	**10 12 43.3**	**+0.9**
FFC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FFC	**Flin Flon**	**83.82**	**32**		**P**	**10 12 43.3**	**+0.9**
FFC				IAmb	IAmb	10 12 54.9	
	comp=Z,9.2nm,1.1s						
GWY	**Greenwater Val**	**83.94**	**53**	IAmb	IAmb	10 12 51.8	
	comp=Z,5.0nm,0.9s						
NACGM	**Naroch**	**84.10**	**329**	*e*P	**P**	**10 12 44.2**	**+0.4**
	comp=Z,33nm,1.0s,baz=54						
RLMT	**Red Lodge**	**84.84**	**43**	IAmb	IAmb	10 12 57.2	
	comp=Z,4.3nm,0.8s						
DUG	**Dugway, Tooele**	**84.88**	**48**	P	**P**	**10 12 50.2**	**+2.0**
DUG				IAmb	IAmb	10 13 00.2	
	comp=Z,4.3nm,1.0s						
HWUT	**Hardware Ranch**	**85.06**	**46**	IAmb	IAmb	10 12 57.7	
	comp=Z,6.0nm,1.1s						
AK03	**Malin Array Si**	**85.19**	**324**	P	**P**	**10 12 48.2**	**-1.2**
AKASG	**Malin Array Be**	**85.20**	**324**	P	**P**	**10 12 48.7**	**-0.8**
	comp=Z,6.4nm,0.6s,baz=47,slow=5.2,SNR=31						
	comp=Z,6.4nm,0.6s						
AKASG	**Malin Array Be**	**85.20**	**324**	P	**P**	**10 12 48.8**	**-0.6**
AKASG				IAmb	IAmb	10 12 49.6	
	comp=Z,13nm,1.1s						
AKBB	**Malin Array Si**	**85.20**	**324**	⇑*i*P	**P**	**10 12 48.2**	**-1.2**
AKBB				pmax	pmax		
	comp=Z,22nm,0.9s						
AKBB	**Malin Array Si**	**85.20**	**324**		**P**	**10 12 48.3**	**-1.2**
AKBB	**Malin Array Si**	**85.20**	**324**	P	**P**	**10 12 48.2**	**-1.2**
AK01	**Malin Array Si**	**85.21**	**324**	P	**P**	**10 12 48.3**	**-1.2**
KIEV	**Kiev**	**85.22**	**324**	P	**P**	**10 12 48.3**	**-1.3**
KIEV				pmax	pmax		
	comp=Z,78nm,0.9s						
KIEV	**Kiev**	**85.22**	**324**	P	**P**	**10 12 48.4**	**-1.1**
KIEV	**Kiev**	**85.22**	**324**	P	**P**	**10 12 48.2**	**-1.3**
	comp=Z,79nm,0.9s						
AK09	**Malin Array Si**	**85.22**	**324**	P	**P**	**10 12 48.3**	**-1.2**
AK04	**Malin Array Si**	**85.22**	**324**	P	**P**	**10 12 48.3**	**-1.3**
AK10	**Malin Array Si**	**85.24**	**324**	P	**P**	**10 12 48.4**	**-1.3**
AK05	**Malin Array Si**	**85.26**	**324**	P	**P**	**10 12 48.5**	**-1.2**
AK06	**Malin Array Si**	**85.28**	**324**	P	**P**	**10 12 48.6**	**-1.2**
AK13	**Malin Array Si**	**85.34**	**324**	P	**P**	**10 12 48.9**	**-1.2**
PDAR	**Pinedale Array**	**85.81**	**45**	P	**P**	**10 12 52.7**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=259,slow=2.4,SNR=5.5						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**85.81**	**45**	P	**P**	**10 12 52.4**	**-0.6**
LAO	**LASA Array**	**85.88**	**40**	IAmb	IAmb	10 13 05.3	
	comp=Z,12nm,1.1s						
LCMT	**Little Creek M**	**86.04**	**51**	IAmb	IAmb	10 13 02.7	
	comp=Z,5.0nm,1.0s						
HFS	**Hagfors**	**86.21**	**337**	P	**P**	**10 12 53.2**	**-1.1**
	comp=Z,2.9nm,0.5s,baz=80,slow=3.5,SNR=14						
	comp=Z,2.9nm,0.5s						
KNB	**Kanab**	**86.34**	**51**	P	**P**	**10 12 57.3**	**+1.6**
KNB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DOMB	**Dombas**	**86.36**	**340**	*e*P	**P**	**10 12 55.0**	**-0.1**
DOMB				IAmb	IAmb	10 12 55.1	
	comp=Z,20nm,1.0s						
NB2	**NORSAR Subarra**	**86.41**	**339**	P	**P**	**10 12 54.5**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=45,slow=5.1						
NB2	**NORSAR Subarra**	**86.41**	**339**	P	**P**	**10 12 53.2**	**-2.1**
NB2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NB2	**NORSAR Subarra**	**86.41**	**339**	P	**P**	**10 12 54.5**	**-0.8**
NOA	**NORSAR Array B**	**86.41**	**339**	P	**P**	**10 12 54.2**	**-1.1**
	comp=Z,5.4nm,0.7s,baz=46,slow=4.7,SNR=6.7						
	comp=Z,5.4nm,0.7s						
LUBAR	**Lubar, Ukraine**	**86.42**	**324**	P	**P**	**10 12 53.9**	**-1.6**
MOL	**Molde**	**86.42**	**341**	*e*P	**P**	**10 12 57.2**	**+2.0**
NORES	**NORESS Array B**	**86.52**	**338**	P	**P**	**10 12 55.2**	**-0.6**
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RNPP9	**Sopachiv**	**86.54**	**326**	P	**P**	**10 12 54.6**	**-1.5**
RNPP8	**Varash**	**86.61**	**326**	P	**P**	**10 12 54.6**	**-1.8**
P17A	**Butcher Ranch,**	**86.62**	**48**	IAmb	IAmb	10 13 05.3	
	comp=Z,4.7nm,1.0s						
RAYN	**Ar Rayn**	**86.79**	**294**	P	**P**	**10 12 58.2**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAYN	**Ar Rayn**	**86.79**	**294**		**P**	**10 12 57.2**	**-0.8**
RAYN				IAmb	IAmb	10 13 06.3	
	comp=Z,5.1nm,0.7s						
OSL	**Oslo**	**87.39**	**338**	*e*P	**P**	**10 13 00.1**	**+0.1**
BR131	**Keskin Array S**	**88.31**	**313**	⇓*i*P	**P**	**10 13 04.1**	**-1.0**
BRTR	**Keskin Array B**	**88.31**	**313**	P	**P**	**10 13 03.8**	**-1.2**
	comp=Z,4.8nm,0.8s,baz=98,slow=3.7,SNR=10						
	comp=Z,4.8nm,0.8s						
BRTR	**Keskin Array B**	**88.31**	**313**	*i* P	**P**	**10 13 04.0**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**88.31**	**313**		**P**	**10 13 03.3**	**-1.8**
BR104	**Keskin Array S**	**88.32**	**313**	P	**P**	**10 13 03.9**	**-1.2**
	comp=Z,5.5nm,0.9s						
PV16	**Nyswonger Mesa**	**88.43**	**48**	IAmb	IAmb	10 13 14.1	
	comp=Z,9.8nm,1.3s						
PV03	**Paradox Valley**	**88.51**	**48**	IAmb	IAmb	10 13 14.2	
	comp=Z,11nm,1.4s						
TESR	**Tescani**	**88.96**	**322**	P	**P**	**10 13 06.1**	**-1.7**
	comp=Z,5.9nm,1.0s						
BUR08	**Bucovina Ar. S**	**89.11**	**323**	IAmb	IAmb	10 13 08.9	
	comp=Z,7.8nm,0.9s						
BURAR	**Bucovina Array**	**89.12**	**323**	P	**P**	**10 13 07.9**	**-0.8**
BURAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BURAR	**Bucovina Array**	**89.12**	**323**		**P**	**10 13 08.3**	**-0.3**
BURAR				IAmb	IAmb	10 13 09.2	
	comp=Z,6.7nm,0.9s						
KWP	**Kalwaria Pacla**	**89.24**	**326**	P	**P**	**10 13 08.2**	**-0.9**
	comp=Z,30nm,1.1s						
OJC	**Ojcow**	**90.33**	**327**	P	**P**	**10 13 13.1**	**-1.0**
	comp=Z,10nm,1.0s						
NIE	**Niedzica**	**90.59**	**327**	P	**P**	**10 13 14.8**	**-0.6**
	comp=Z,5.0nm,1.0s						
KSP	**Ksiaz**	**91.59**	**329**	P	**P**	**10 13 19.2**	**-0.8**
	comp=Z,15nm,0.9s						
MORC	**Moravsky Berou**	**91.72**

	comp=N,802nm,1.2s								
SIRN				IAML			10 03 26.0		
	comp=E,1µm,0.9s								
CUKT	**Cukurca**	**1.02**	**60**	Pg	**Pb**		**10 03 04.1**	**-1.1**	
CUKT				Sg	**Sb**		**10 03 18.2**	**-0.4**	
HAKT	**HAKKARI**	**1.27**	**50**	P	**Pn**		**10 03 08.9**	**-0.2**	
HAKT				S	**Sg**		**10 03 27.3**	**+0.8**	
HAKT				IAML			10 03 28.0		
	comp=N,475nm,0.8s								
HAKT				IAML			10 03 29.0		
	comp=E,392nm,1.2s								
SRTM	**Siirt_Merkez**	**1.33**	**340**	P	**Pn**		**10 03 09.8**	**0.0**	
SRTM				S	**Sg**		**10 03 29.4**	**+0.9**	
SRTM				IAML			10 03 30.0		
	comp=E,572nm,0.5s								
SRTM				IAML			10 03 32.0		
	comp=N,965nm,0.7s								
BTMN	**Batman**	**1.50**	**320**	P	**Pn**		**10 03 12.6**	**+0.3**	
BTMN				S	**Sb**		**10 03 32.2**	**-0.2**	
BTMN				IAML			10 03 38.0		
	comp=E,562nm,0.6s								
BTMN				IAML			10 03 39.0		
	comp=N,691nm,0.6s								
GEVA	**Gevas**	**1.63**	**16**	P	**Pb**		**10 03 15.2**	**-0.3**	
GEVA				S	**Sg**		**10 03 38.7**	**+0.6**	
GEVA				IAML			10 03 41.0		
	comp=E,199nm,0.9s								
GEVA				IAML			10 03 45.0		
	comp=N,156nm,0.9s								
BLIS	**Bitlis-Merkez**	**1.70**	**350**	P	**Pb**		**10 03 15.7**	**-0.9**	
BLIS				S	**Sg**		**10 03 40.4**	**+0.2**	
BLIS				IAML			10 03 42.0		
	comp=N,254nm,0.5s								
BLIS				IAML			10 03 45.0		
	comp=E,195nm,0.8s								
SVAN	**Silvan-Diyarba**	**1.74**	**324**	Pn	**Pb**		**10 03 16.4**	**-1.0**	
SVAN				Sn	**Sb**		**10 03 39.9**	**+0.7**	
SVAN	**Silvan-Diyarba**	**1.74**	**324**	P	**Pb**		**10 03 16.3**	**-1.0**	
SVAN				S	**Sb**		**10 03 39.3**	**+0.1**	
SVAN				IAML			10 03 41.0		
	comp=N,253nm,0.8s								
SVAN				IAML			10 03 43.0		
	comp=E,245nm,1.0s								
GURO	**Guroymak-BITLI**	**1.84**	**349**	Pn	**Pn**		**10 03 17.3**	**+0.4**	
GURO				Sn	**Sb**		**10 03 41.7**	**-0.4**	
TVAN	**Van**	**1.92**	**22**	P	**Pn**		**10 03 16.6**	**-1.5**	
TVAN				S	**Sg**		**10 03 48.3**	**+0.8**	
TVAN				IAML			10 03 59.0		
	comp=E,124nm,0.9s								
ADCV	**BITLIS_Adilcev**	**2.07**	**5**	P	**Pb**		**10 03 21.5**	**-1.5**	
ADCV				S	**Sg**		**10 03 51.0**	**-1.2**	
ADCV				IAML			10 03 55.0		
	comp=E,127nm,0.6s								
MUSM	**Mu-Merkez**	**2.12**	**339**	P	**Pn**		**10 03 20.0**	**-0.9**	
MUSM				S	**Sb**		**10 03 49.7**	**-0.5**	
MUSM				IAML			10 04 02.0		
	comp=E,101nm,0.9s								
DYBB	**Diyarbakir**	**2.23**	**303**	Pn	**Pn**		**10 03 23.9**	**+1.7**	
DYBB				Sn	**Sb**		**10 03 52.6**	**-0.6**	
OZAP	**Van, Ozalp-Mer**	**2.25**	**31**	P	**Pg**		**10 03 28.2**	**-0.7**	
OZAP				S	**Sg**		**10 04 05.1**	**+7.0**	
MLAZ	**Malazgirt-MUS**	**2.40**	**1**	Pn	**Pn**		**10 03 25.6**	**+1.1**	
SLHN	**Bingol, Solhan**	**2.50**	**333**	P	**Pg**		**10 03 33.4**	**-0.1**	
SLHN				S	**Sg**		**10 04 06.2**	**+0.4**	
SLHN				IAML			10 04 13.0		
	comp=E,146nm,1.0s								
SLHN				IAML			10 04 16.0		
	comp=N,137nm,0.6s								
DORK	**Agr/Tutak/Do**	**2.65**	**5**	P	**Pn**		**10 03 29.8**	**+1.7**	
DORK				S	**Sg**		**10 04 11.2**	**+0.4**	
DORK				IAML			10 04 16.0		
	comp=N,66nm,0.7s								
BNGB	**Bingl**	**2.67**	**328**	Pn	**Pn**		**10 03 29.8**	**+1.6**	
AGRB	**Hanur-Agry**	**2.85**	**8**	Pn	**Pn**		**10 03 31.9**	**+1.0**	
YEDI	**Yedisu-Bingol**	**3.10**	**331**	Pn	**Pn**		**10 03 35.9**	**+1.7**	
KOPR	**Koprukoy-ERZUR**	**3.28**	**351**	Pn	**Pn**		**10 03 38.2**	**+1.4**	

*IDC **22** 10:08:34.6±0.5,55˚.23N×158˚.94W, h0km, mb4.7/38, mbtmp4.7/42, ML4.5/4, MS4.7/1, Error ellipse: s-maj=15.3km s-min=9.6km az=176.0*
*GFZ **22** 10:08:37.1±0.3,55˚N±5˚×15˚9W±˚, h10km, M5.0/30, mb5.0/30*
*BJI **22** 10:08:37.1,55˚.27N×159˚.41W, h22km, mB5.3/2, mb5.2/55, Ms7 5.2/1*
*MOS **22** 10:08:37.6±0.9,55˚.22N×158˚.90W, h30km, mb5.2/59, Error ellipse: s-maj=9.1km s-min=4.5km az=98.3*
*AEIC **22** 10:08:38.8±1.2,55˚.07N±0˚.04×158˚.69W±0˚.05, h35km±4km, Error ellipse: s-maj=5.7km s-min=4.2km az=169.0*
*NEIC **22** 10:08:39.9,55˚.08N×158˚.77W, h41km*
*NEIC **22** 10:08:39.2±1.4, 55˚.08N±0˚.04×158˚.78W±0˚.05, h32km±4km, mb4.9/205, ML4.8/40, Mwr4.5/16, ML4.7(AEIC), Error ellipse: s-maj=5.7km s-min=4.1km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr4.33; Mθθ-3.83; Mϕϕ-0.50; Mrθ5.66; Mrϕ-1.79; Mθϕ3.52; Fault plane solution: M0 8.03000×10^15^ NP1:ϕ±59.46000°, δ73.18000°, λ85.65000°. NP2:ϕ±254.20000°, δ17.36000°, λ104.09000°. Principal axes: T 7.9224, Plg62.0000°, Azm323.0000°; N 0.2136, Plg4.0000°, Azm61.0000°; P -8.1360, Plg28.0000°, Azm153.0000°;*
*BGR **22** 10:08:40.0,55˚.03N×157˚.62W, h33km, mb4.8, Ms5.2*
*ANF **22** 10:08:40.2±0.2,55˚.12N×158˚.77W, h53km±3km, ML5.0/24, Error ellipse: s-maj=2.9km s-min=1.5km az=20.0*
ISC 22 10:08:38.4±0.6,**55˚.14N**±0˚.04×**158˚.79W**±0˚.03,**h28**km±3km, **h28**km:**pP-P,n1005,**σ**1**9**03**/964,**mb5.0**/266,**MS4.6**/3, **52C-22D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
CHNA	**Chernabura Isl**	**0.55**	**236**	P		**Pn**	**10 08 49.9**		**-0.4**
	baz=56,SNR=360								
CHNA				S		**Sn**	**10 09 00.8**		**+2.2**
	baz=56								
CNBA	**Chernabura Isl**	**0.56**	**236**			**Pn**	**10 08 50.2**		**-0.2**
CNBA				Sn		**Sn**	**10 08 59.0**		**+0.2**
CNBA				IAML			10 09 01.1		
	comp=E,69µm,0.6s								
CNBA				IAML			10 09 01.4		
	comp=N,63µm,0.6s								
VNKR	**Veniaminof 5**	**0.95**	**340**			**Pb**	**10 08 57.4**		**+1.0**
SDPT	**Sand Point**	**0.99**	**283**	P		**Pb**	**10 08 56.6**		**-0.3**
SDPT	**Sand Point**	**0.99**	**283**	S		**Sn**	**10 09 07.3**		**-2.0**
SDPT	**Sand Point**	**0.99**	**283**			**Pb**	**10 08 56.9**		**+0.1**
SDPT				Sn		**Sn**	**10 09 07.8**		**-1.6**
SDPT				IAML			10 09 14.6		
	comp=N,18µm,0.5s								
SDPT				IAML			10 09 18.2		
	comp=E,19µm,0.6s								
SDPT	**Sand Point**	**0.99**	**283**	P		**Pb**	**10 08 57.0**		**+0.1**
	baz=102,SNR=463								
SDPT				S		**Sb**	**10 09 10.4**		**+0.9**
	baz=102								
VNSS	**Veniaminof 8**	**1.15**	**341**			**Pb**	**10 09 00.8**		**+1.0**
CHGN	**Chignik**	**1.19**	**10**			**Sb**	**10 09 16.1**		**+0.9**
CHGN	**Chignik**	**1.19**	**10**			**Pb**	**10 08 59.9**		**-0.3**
CHGN	**Chignik**	**1.19**	**10**	IAML			10 09 21.3		
	comp=N,18µm,0.6s								
CHGN				IAML			10 09 21.3		
	comp=E,20µm,0.7s								
CHGN	**Chignik**	**1.19**	**10**	P		**Pb**	**10 08 59.9**		**-0.3**
	baz=191,SNR=681								
CHGN				S		**Sb**	**10 09 16.2**		**+1.1**
	baz=191								
S14K	**Fog Glacier**	**1.23**	**340**	P		**Pb**	**10 09 02.2**		**+1.2**
	baz=159,SNR=835								
VNFG	**Fog Glacier, M**	**1.23**	**340**			**Pb**	**10 09 02.2**		**+1.1**
VNFG	**Fog Glacier, M**	**1.23**	**340**			**Sb**	**10 09 19.6**		**+3.1**
VNFG	**Fog Glacier, M**	**1.23**	**340**			**Pb**	**10 09 02.1**		**+1.1**
VNFG	**Fog Glacier, M**	**1.23**	**340**	IAML			10 09 20.7		
	comp=E,41µm,0.6s								
VNFG				IAML			10 09 25.2		
	comp=N,54µm,0.7s								
BPBCA	**Veniaminof**	**1.47**	**7**			**Pb**	**10 09 04.7**		**-0.3**
BPBCA						**Sb**	**10 09 24.3**		**+1.0**
ANPB	**Aniakchak Plen**	**1.69**	**10**			**Pb**	**10 09 07.8**		**-1.0**
PS1A	**Pavlof South-1**	**1.71**	**281**			**Pn**	**10 09 07.6**		**+1.3**
PS1A						**Sb**	**10 09 30.5**		**+0.3**
ANPK	**Aniakchak Peak**	**1.75**	**12**			**Pb**	**10 09 08.7**		**-1.1**
DOL	**Dolgoi Island**	**1.76**	**272**			**Pn**	**10 09 08.2**		**+1.2**
DOL						**Sb**	**10 09 32.5**		**+0.8**
PS4A	**Pavlof South-4**	**1.77**	**278**			**Pn**	**10 09 08.5**		**+1.4**
PS4A						**Sb**	**10 09 32.1**		**+0.3**
AZAC	**Aniakchak**	**1.79**	**10**			**Pb**	**10 09 09.6**		**-1.0**
ANNW	**Aniakchak Nort**	**1.86**	**10**			**Pn**	**10 09 10.0**		**+1.5**
CHIR	**Chirikof Islan**	**1.93**	**68**	P		**Pb**	**10 09 12.0**		**-0.9**
CHIR	**Chirikof Islan**	**1.93**	**68**	S		**Sb**	**10 09 36.3**		**-0.2**
CHIR	**Chirikof Islan**	**1.93**	**68**			**Pn**	**10 09 09.3**		**0.0**
CHIR				IAML			10 09 47.7		
	comp=E,8µm,0.7s								
CHIR				IAML			10 09 49.4		
	comp=N,9µm,1.0s								
CHIR	**Chirikof Islan**	**1.93**	**68**	P		**Pn**	**10 09 09.7**		**+0.4**
	baz=250								
DTNA	**Dutton South F**	**1.98**	**272**			**Pn**	**10 09 11.5**		**+1.4**
DTNA						**Sb**	**10 09 37.2**		**-0.9**
DT1	**Dutton Round H**	**2.00**	**271**			**Pn**	**10 09 11.6**		**+1.3**
DT1						**Sb**	**10 09 37.5**		**-1.1**
PLBL	**Peulik Blue Cr**	**2.79**	**22**			**Pn**	**10 09 23.0**		**+1.8**
R17L	**Mt. Peulik Vol**	**2.84**	**27**	P		**Pn**	**10 09 24.1**		**+2.2**
	baz=209								
SII	**Sitkinak Islan**	**2.96**	**59**	P		**Pn**	**10 09 25.0**		**+1.5**
SII	**Sitkinak Islan**	**2.96**	**59**			**Pn**	**10 09 23.9**		**+0.3**
SII				IAML			10 10 19.0		
	comp=N,5µm,1.1s								
SII	**Sitkinak Islan**	**2.96**	**59**	P		**Pn**	**10 09 23.9**		**+0.3**
	baz=243,SNR=9.6								
PLK5	**Peulik 5**	**3.06**	**20**			**Pn**	**10 09 26.9**		**+2.1**
Q17K	**Contact Creek**	**3.52**	**26**	P		**Pn**	**10 09 32.5**		**+1.3**
	baz=208								
ANCK	**Angle Creek**	**3.57**	**29**			**Pn**	**10 09 33.5**		**+1.6**
MGLS	**Mageik Landsli**	**3.61**	**32**			**Pn**	**10 09 33.4**		**+1.0**
ACHA	**Angle Creek He**	**3.63**	**30**			**Pn**	**10 09 34.1**		**+1.4**
KABU	**Katmai Buttres**	**3.69**	**30**			**Pn**	**10 09 35.1**		**+1.6**
OHAK	**Old Harbor**	**3.72**	**54**	P		**Pn**	**10 09 34.3**		**+0.4**
OHAK	**Old Harbor**	**3.72**	**54**	S		**Sn**	**10 10 19.2**		**+2.5**
OHAK	**Old Harbor**	**3.72**	**54**			**Pn**	**10 09 33.9**		**0.0**
OHAK				IAML			10 10 44.9		
	comp=E,1µm,1.1s								
OHAK	**Old Harbor**	**3.72**	**54**	P		**Pn**	**10 09 33.9**		**0.0**
	baz=238,SNR=20								
Q16K	**King Salmon**	**3.74**	**17**			**Pn**	**10 09 35.8**		**+1.7**
Q16K	**King Salmon**	**3.74**	**17**	P		**Pn**	**10 09 35.9**		**+1.7**
	baz=199,SNR=117								
KAKN	**Katmai Knife C**	**3.78**	**31**			**Pn**	**10 09 36.5**		**+1.8**
KAWH	**Katmai**	**3.93**	**32**			**Pn**	**10 09 37.5**		**+0.7**
P16K	**Nushagak River**	**3.93**	**6**			**Pn**	**10 09 38.8**		**+2.1**
P16K	**Nushagak River**	**3.93**	**6**	P		**Pn**	**10 09 38.8**		**+2.1**
	baz=187,SNR=14								
KARR	**Katmai Rainbow**	**4.05**	**32**			**Pn**	**10 09 39.5**		**+1.0**
Q18K	**Katmai Hardscr**	**4.09**	**29**			**Pn**	**10 09 40.2**		**+1.2**
Q18K	**Katmai Hardscr**	**4.09**	**29**	P		**Pn**	**10 09 40.3**		**+1.2**
	baz=212,SNR=58								
O15K	**Ungalikthiuk R**	**4.09**	**353**			**Pn**	**10 09 40.6**		**+1.7**
O15K				IAML			10 10 31.1		
	comp=E,803nm,0.6s								
O15K	**Ungalikthiuk R**	**4.09**	**353**	P		**Pn**	**10 09 40.5**		**+1.6**
	baz=172,SNR=57								
O15K				S		**Sn**	**10 10 26.8**		**+1.0**
	baz=172								
KAHG	**Katmai Hook Gl**	**4.09**	**33**			**Pn**	**10 09 40.4**		**+1.3**
AKUT	**Akutan**	**4.18**	**259**	P		**Pn**	**10 09 42.2**		**+2.0**
AKUT	**Akutan**	**4.18**	**259**	S		**Sn**	**10 10 28.3**		**+0.3**
AKUT	**Akutan**	**4.18**	**259**			**Pn**	**10 09 42.0**		**+1.9**
AKUT				IAML			10 10 50.0		
	comp=N,1µm,0.9s								
AKUT				IAML			10 10 59.8		
	comp=E,883nm,0.7s								
P17K	**Kvichak River**	**4.26**	**17**			**Pn**	**10 09 43.3**		**+1.9**
P17K	**Kvichak River**	**4.26**	**17**	P		**Pn**	**10 09 42.9**		**+1.6**
	baz=198,SNR=59								
LVA	**Lava Point**	**4.32**	**260**			**Pn**	**10 09 43.8**		**+1.7**
LVA				IAML			10 11 02.0		
	comp=E,1µm,0.8s								
O14K	**Tigyukauivet M**	**4.34**	**343**			**Pn**	**10 09 44.3**		**+1.9**
O14K				IAML			10 11 06.8		
	comp=N,942nm,0.8s								
O14K	**Tigyukauivet M**	**4.34**	**343**	P		**Pn**	**10 09 44.1**		**+1.7**
	baz=161,SNR=183								
KDAK	**Kodiak Island**	**4.35**	**50**	Pn		**Pn**	**10 09 42.3**		**-0.1**
	comp=N,11nm,0.3s,baz=214,slow=5.4,SNR=133								
KDAK				Sn		**Sn**	**10 10 29.4**		**-2.8**
	comp=N,15nm,0.3s,baz=222,slow=19,SNR=1.7								
	comp=N,49nm,0.5s								
KDAK	**Kodiak Island**	**4.35**	**50**			**Pn**	**10 09 42.5**		**0.0**
KDAK	**Kodiak Island**	**4.35**	**50**	P		**Pn**	**10 09 42.4**		**-0.1**
	baz=235								
KDAK	**Kodiak Island**	**4.35**	**50**	P		**Pn**	**10 09 42.8**		**+0.3**
O16K	**Kokwok River B**	**4.48**	**5**			**Pn**	**10 09 45.9**		**+1.5**
O16K				IAML			10 11 17.1		
	comp=N,769nm,0.8s								
O16K				IAML			10 11 17.1		
	comp=E,668nm,0.9s								
O16K	**Kokwok River B**	**4.48**	**5**	P		**Pn**	**10 09 45.9**		**+1.5**
	baz=185,SNR=56								
UNV	**Unalaska Valle**	**4.68**	**257**	P		**Pn**	**10 09 47.8**		**+0.8**
UNV	**Unalaska Valle**	**4.68**	**257**	S		**Sn**	**10 10 41.3**		**+1.0**
UNV	**Unalaska Valle**	**4.68**	**257**			**Pn**	**10 09 48.3**		**+1.2**
UNV				IAML			10 11 11.0		
	comp=E,559nm,1.1s								
UNV	**Unalaska Valle**	**4.68**	**257**	P		**Pn**	**10 09 48.1**		**+1.1**
	baz=71,SNR=55								
P18K	**Big Mountain,**	**4.68**	**23**			**Pn**	**10 09 48.6**		**+1.5**
P18K	**Big Mountain,**	**4.68**	**23**	P		**Pn**	**10 09 48.7**		**+1.5**
	baz=206,SNR=37								
O17K	**Koliganek Bris**	**4.74**	**10**			**Pn**	**10 09 49.4**		**+1.6**
O17K	**Koliganek Bris**	**4.74**	**10**	P		**Pn**	**10 09 49.5**		**+1.6**
	baz=192,SNR=51								
MAPS	**Pakushin South**	**4.94**	**258**			**Pn**	**10 09 51.8**		**+1.2**
N14K	**Kuskokwak Cree**	**5.04**	**343**			**Pn**	**10 09 54.3**		**+2.3**
N14K	**Kuskokwak Cree**	**5.04**	**343**	P		**Pn**	**10 09 53.9**		**+1.9**
	baz=161,SNR=91								
N15K	**Kwethluk River**	**5.09**	**353**			**Pn**	**10 09 55.4**		**+2.7**
N15K				IAML			10 11 27.6		
	comp=N,669nm,1.0s								
N15K				IAML			10 11 42.7		
	comp=E,784nm,1.1s								
N15K	**Kwethluk River**	**5.09**	**353**	P		**Pn**	**10 09 54.7**		**+1.9**
	baz=172,SNR=138								
O18K	**Koktuh Hills**	**5.11**	**21**			**Pn**	**10 09 54.2**		**+1.2**
O18K	**Koktuh Hills**	**5.11**	**21**	P		**Pn**	**10 09 54.8**		**+1.9**
	baz=204,SNR=49								
N16K	**Nishlik Lake**	**5.35**	**0**			**Pn**	**10 09 58.3**		**+2.0**
N16K	**Nishlik Lake**	**5.35**	**0**	P		**Pn**	**10 09 58.3**		**+2.0**
	baz=180,SNR=164								
P19K	**Oil Pt**	**5.43**	**31**	P		**Pn**	**10 09 59.5**		**+2.1**
	baz=216								
N17K	**Nushagak Hills**	**5.47**	**8**			**Pn**	**10 09 59.6**		**+1.7**
N17K	**Nushagak Hills**	**5.47**	**8**	P		**Pn**	**10 09 59.4**		**+1.4**
	baz=190,SNR=45								
O19K	**Port Alsworth**	**5.61**	**23**			**Pn**	**10 10 01.1**		**+1.3**
O19K	**Port Alsworth**	**5.61**	**23**	P		**Pn**	**10 10 01.3**		**+1.5**
	baz=207,SNR=41								
M15K	**Kasigluk River**	**5.66**	**351**			**Pn**	**10 10 02.1**		**+1.6**
M15K	**Kasigluk River**	**5.66**	**351**	P		**Pn**	**10 10 02.2**		**+1.6**
	baz=189,SNR=172								
ILS	**Iliamna Low So**	**5.73**	**30**			**Pn**	**10 10 03.4**		**+1.8**
ILSW	**Iliamna Southw**	**5.73**	**30**			**Pn**	**10 10 02.7**		**+1.1**
N18K	**Kilae Creek**	**5.77**	**14**			**Pn**	**10 10 03.1**		**+1.1**
N18K	**Kilae Creek**	**5.77**	**14**	P		**Pn**	**10 10 03.8**		**+1.7**
	baz=197,SNR=32								
IVE	**Iliamna Volcan**	**5.79**	**30**			**Pn**	**10 10 04.0**		**+1.6**
M13K	**Dall Lake**	**5.82**	**337**			**Pn**	**10 10 05.1**		**+2.3**
M13K	**Dall Lake**	**5.82**	**337**	P		**Pn**	**10 10 05.0**		**+2.3**
	baz=153,SNR=147								
M14K	**Bethel**	**5.88**	**345**			**Pn**	**10 10 05.2**		**+1.7**
M14K	**Bethel**	**5.88**	**345**	P		**Pn**	**10 10 05.2**		**+1.7**
	baz=162,SNR=233								
M16K	**Timber Creek**	**5.90**	**359**			**Pn**	**10 10 05.7**		**+1.8**
M16K	**Timber Creek**	**5.90**	**359**	P		**Pn**	**10 10 05.8**		**+1.9**
	baz=179,SNR=163								
O20K	**Slope Mountain**	**5.96**	**31**	P		**Pn**	**10 10 07.3**		**+2.6**
	baz=216,SNR=15								
N19K	**Bonanza Creek**	**6.13**	**20**			**Pn**	**10 10 08.8**		**+1.6**
N19K	**Bonanza Creek**	**6.13**	**20**	P		**Pn**	**10 10 09.2**		**+2.1**
	baz=204,SNR=64								
RED	**Redoubt Volcan**	**6.20**	**29**			**Pn**	**10 10 09.4**		**+1.5**
NCT	**North Crescent**	**6.27**	**28**			**Pn**	**10 10 10.9**		**+1.9**
BRLK	**Bradley Lake**	**6.30**	**39**			**Pn**	**10 10 10.0**		**+0.7**
M17K	**Holitna River**	**6.32**	**6**			**Pn**	**10 10 11.3**		**+1.7**
M17K	**Holitna River**	**6.32**	**6**	P		**Pn**	**10 10 11.1**		**+1.5**
	baz=187,SNR=52								
BRSE	**Bradley Lake S**	**6.34**	**40**	P		**Pn**	**10 10 11.1**		**+1.2**
	baz=227								
L14K	**Kuka Creek**	**6.55**	**343**			**Pn**	**10 10 13.8**		**+1.1**
L14K	**Kuka Creek**	**6.55**	**343**	P		**Pn**	**10 10 13.9**		**+1.2**
	baz=160,SNR=141								
M18K	**Stony River**	**6.56**	**13**	P		**Pn**	**10 10 14.9**		**+2.1**
	baz=195,SNR=115								
M11K	**Mekoryuk**	**6.58**	**326**	P		**Pn**	**10 10 14.9**		**+1.8**
	baz=140,SNR=33								
L16K	**Owhat River**	**6.60**	**357**			**Pn**	**10 10 14.7**		**+1.3**
L16K	**Owhat River**	**6.60**	**357**	P		**Pn**	**10 10 14.6**		**+1.1**
	baz=177,SNR=116								
L15K	**Ungalak Mounta**	**6.71**	**349**	P		**Pn**	**10 10 15.6**		**+0.7**
	baz=167,SNR=126								
SPIA	**Saint Paul Isl**	**6.72**	**292**	P		**Pn**	**10 10 16.7**		**+1.7**
SPIA	**Saint Paul Isl**	**6.72**	**292**			**Pn**	**10 10 17.1**		**+2.1**
SPIA	**Saint Paul Isl**	**6.72**	**292**	P		**Pn**	**10 10 16.8**		**+1.8**
	baz=103,SNR=26								
SPCR	**Spurr Chakacha**	**7.00**	**27**	P		**Pn**	**10 10 19.7**		**+0.7**
	baz=213,SNR=11								
L17K	**Donlin**	**7.02**	**2**	P		**Pn**	**10 10 20.4**		**+1.2**
	baz=182,SNR=130								
SPU	**Mount Spurr**	**7.03**	**28**			**Pn**	**10 10 20.4**		**+1.0**
SLKM	**Skilak Lake**	**7.06**	**37**			**Pn**	**10 10 20.7**		**+0.9**
SEW	**Seward**	**7.06**	**41**			**Pn**	**10 10 20.3**		**+0.6**
SEW	**Seward**	**7.06**	**41**	P		**Pn**	**10 10 20.5**		**+0.8**
	baz=229								
L18K	**Granite Mounta**	**7.19**	**8**			**Pn**	**10 10 22.9**		**+1.5**
L18K	**Granite Mounta**	**7.19**	**8**	P		**Pn**	**10 10 23.0**		**+1.5**
	baz=190,SNR=64								
O22K	**Cooper Landing**	**7.22**	**38**	P		**Pn**	**10 10 23.0**		**+1.1**
	baz=226								
K15K	**Wolf Creek Mou**	**7.32**	**350**			**Pn**	**10 10 24.9**		**+1.7**
K15K	**Wolf Creek Mou**	**7.32**	**350**	P		**Pn**	**10 10 24.9**		**+1.7**
	baz=168,SNR=55								
L19K	**White Mountain**	**7.36**	**15**			**Pn**	**10 10 25.4**		**+1.6**
L19K	**White Mountain**	**7.36**	**15**	P		**Pn**	**10 10 24.8**		**+1.0**
	baz=198,SNR=70								
M20K	**Styx River**	**7.38**	**21**			**Pn**	**10 10 26.7**		**+2.5**
M20K	**Styx River**	**7.38**	**21**	P		**Pn**	**10 10 26.1**		**+1.8**
	baz=206,SNR=92								
K13K	**Kusilvak Mount**	**7.47**	**338**			**Pn**	**10 10 27.5**		**+2.2**
K13K	**Kusilvak Mount**	**7.47**	**338**	P		**Pn**	**10 10 26.9**		**+1.6**
	baz=153,SNR=116								
K17K	**Iditarod**	**7.61**	**2**			**Pn**	**10 10 28.7**		**+1.5**
K17K	**Iditarod**	**7.61**	**2**	P		**Pn**	**10 10 28.5**		**+1.3**
	baz=182,SNR=116								
RC01	**Rabbit Creek A**	**7.65**	**35**			**Pn**	**10 10 29.7**		**+1.9**
P23K	**Montague Islan**	**7.82**	**47**			**Pn**	**10 10 30.8**		**+0.7**
P23K	**Montague Islan**	**7.82**	**47**	P		**Pn**	**10 10 30.8**		**+0.7**
	baz=236								
SKT	**Skwentna**	**7.84**	**26**			**Pn**	**10 10 31.7**		**+1.3**
SKT	**Skwentna**	**7.84**	**26**	P		**Pn**	**10 10 31.5**		**+1.1**
	baz=212,SNR=12								
PWL	**Port Wells**	**7.98**	**40**			**Pn**	**10 10 32.0**		**-0.3**
PWL	**Port Wells**	**7.98**	**40**	P		**Pn**	**10 10 33.0**		**+0.7**
	baz=229,SNR=17								
Q23K	**Middleton Isla**	**7.99**	**52**	P		**Pn**	**10 10 32.8**		**+0.3**
	baz=243								
J14K	**Nanvaranak Lak**	**8.02**	**344**			**Pn**	**10 10 34.2**		**+1.4**
J14K	**Nanvaranak Lak**	**8.02**	**344**	P		**Pn**	**10 10 34.2**		**+1.4**
	baz=160,SNR=26								
M22K	**Willow**	**8.04**	**31**			**Pn**	**10 10 33.6**		**+0.5**
M22K	**Willow**	**8.04**	**31**	P		**Pn**	**10 10 33.6**		**+0.5**
	baz=218,SNR=13								
PMR	**Palmer**	**8.22**	**34**	P		**Pn**	**10 10 36.7**		**+1.1**
	baz=222								
J16K	**Anvik River**	**8.22**	**354**			**Pn**	**10 10 37.6**		**+1.9**
J16K	**Anvik River**	**8.22**	**354**	P		**Pn**	**10 10 37.0**		**+1.4**
	baz=173,SNR=199								
J17K	**VABM Dome**	**8.29**	**359**			**Pn**	**10 10 37.4**		**+0.8**
J17K	**VABM Dome**	**8.29**	**359**	P		**Pn**	**10 10 37.5**		**+1.0**
	baz=179,S

baz=227,SNR=26
G17K Kiwalik Mounta 10.44 356 P Pn 10 11 07.5 +1.5
baz=174,SNR=44
H19K Roundabout Mou 10.49 5 P Pn 10 11 08.1 +1.4
baz=187,SNR=48
H20K Anotleneega Mo 10.56 9 P Pn 10 11 09.2 +1.5
baz=192,SNR=34
I21K Tanana 10.62 16 Pn 10 11 09.7 +1.2
I21K Tanana 10.62 16 P Pn 10 11 09.7 +1.2
baz=202,SNR=11
GRNC Granite Creek 10.63 51 Pn 10 11 09.7 +0.8
NEA2 Nenana 10.65 23 Pn 10 11 08.8 -0.1
NEA2 Nenana 10.65 23 P Pn 10 11 08.9 -0.1
baz=212
MLY Manley 10.70 19 Pn 10 11 10.3 +0.8
MLY Manley 10.70 19 P Pn 10 11 10.0 +0.5
baz=206
G18K Tagagawik 10.79 0 P Pn 10 11 11.9 +1.1
baz=180,SNR=52
BARN Barnard Glacie 10.81 50 Pn 10 11 11.7 +0.4
GAMB Gambell 10.85 328 P Pn 10 11 12.5 +1.0
baz=137
K24K Donnelly Dome 10.90 32 Pn 10 11 13.8 +1.5
K24K Donnelly Dome 10.90 32 P Pn 10 11 13.3 +0.9
baz=223,SNR=20
H21K Melozitna Rive 10.95 13 Pn 10 11 14.1 +1.0
H21K Melozitna Rive 10.95 13 P Pn 10 11 14.0 +1.0
baz=198,SNR=27
F15K North Star Dit 10.98 347 P Pn 10 11 14.2 +0.8
baz=162,SNR=11
MENT Mentasta 10.99 39 P Pn 10 11 15.7 +2.1
F14K Arctic Creek 11.01 343 P Pn 10 11 15.1 +1.3
baz=157
HDA Harding Lake 11.03 28 P Pn 10 11 12.4 -1.6
baz=218,SNR=24
I23K Minto, Yukon-K 11.07 21 P Pn 10 11 14.5 0.0
baz=209
G19K Purcell Mounta 11.07 4 Pn 10 11 15.4 +0.8
G19K Purcell Mounta 11.07 4 P Pn 10 11 16.0 +1.3
baz=185,SNR=17
PINM Pinnacle 11.10 56 P Pn 10 11 15.7 +0.6
baz=252
ADK Adak 11.14 260 P Pn 10 11 16.3 +0.8
ADK Adak 11.14 260 Pn 10 11 16.3 +0.8
RIDG Independent Ri 11.14 34 Pn 10 11 17.0 +1.3
RIDG Independent Ri 11.14 34 P Pn 10 11 16.4 +0.7
baz=226,SNR=15
IMAR Indian Mountai 11.16 11 Pn 10 11 17.4 +1.6
COLA College 11.17 25 P Pn 10 11 16.4 +0.4
COLA College 11.17 25 P Pn 10 11 16.3 +0.3
COLA College 11.17 25 Pn Pn 10 11 16.3 +0.3
COLA College 11.17 25 P Pn 10 11 14.3 -1.7
L26K Log Cabin Wild 11.18 39 P Pn 10 11 17.3 +1.1
baz=232,SNR=16
ILAR Eielson Array 11.33 27 Pn Pn 10 11 15.6 -2.6
comp=E,1.4nm,0.3s,baz=220,slow=13,SNR=34
ILAR Eielson Array 11.33 27 Pn 10 11 16.0 -2.2
M27K Edge Creek, AK 11.35 44 P Pn 10 11 19.3 +0.6
baz=238
O28M Mount Upton 11.36 53 Pn 10 11 19.6 +0.8
O28M Mount Upton 11.36 53 P Pn 10 11 19.0 +0.2
baz=248,SNR=14
TNA Tin City 11.37 340 P Pn 10 11 19.6 +0.8
baz=152
H22K Ishtalitna Cre 11.38 16 Pn 10 11 19.7 +0.8
H22K Ishtalitna Cre 11.38 16 P Pn 10 11 19.4 +0.5
baz=202,SNR=14
F17K Baldwin Pennin 11.40 355 Pn 10 11 21.2 +2.1
F17K Baldwin Pennin 11.40 355 P Pn 10 11 20.3 +1.2
baz=173,SNR=8.7
KIWB Kanaga Island 11.41 261 Pn 10 11 20.5 +1.1
POKR Poker Plat Res 11.48 25 P Pn 10 11 20.3 +0.2
baz=215
F18K Selawik 11.51 358 P Pn 10 11 21.2 +0.6
baz=178,SNR=24
SCRK Sand Creek 11.58 34 Pn 10 11 21.2 -0.5
SCRK Sand Creek 11.58 34 P Pn 10 11 21.5 -0.2
baz=227
J25K Salcha River, 11.62 30 Pn 10 11 21.0 -1.2
J25K Salcha River, 11.62 30 P Pn 10 11 21.4 -0.8
baz=221,SNR=7.8
H23K Yukon River 11.63 19 Pn 10 11 23.0 +0.6
H23K Yukon River 11.63 19 P Pn 10 11 23.2 +0.8
baz=207,SNR=14
YUK3 Moose Creek 11.65 48 P Pn 10 11 23.6 +0.8
baz=243,SNR=24
G21K Allakaket 11.70 10 P Pn 10 11 24.5 +1.3
baz=195,SNR=13
YUK8 Steele Glacier 11.74 51 P Pn 10 11 25.2 +1.1
baz=247,SNR=25
F19K Shaleruckik Mo 11.75 2 P Pn 10 11 25.5 +1.7
baz=183,SNR=73
L27K Beaver Creek, 11.76 41 Pn 10 11 24.6 +0.5
L27K Beaver Creek, 11.76 41 P Pn 10 11 24.7 +0.7
baz=235,SNR=9.5
BCAR Beaver Creek A 11.78 41 Pn 10 11 22.8 -1.5
O29M Mount Kennedy 11.96 56 Pn 10 11 27.7 +0.8
O29M Mount Kennedy 11.96 56 P Pn 10 11 27.3 +0.4
baz=253,SNR=14
H24K Noodor Dome 11.98 22 P Pn 10 11 28.0 +0.9
baz=212
F20K Avaraart Lake 12.04 6 P Pn 10 11 29.1 +1.2
baz=188,SNR=32
E17K Hotham Inlet 12.07 354 P Pn 10 11 29.7 +1.4
baz=172,SNR=12
BRWY Burwash Landin 12.10 51 P Pn 10 11 30.1 +1.3
baz=248
P29M Windy Craggy 12.20 60 Pn 10 11 30.5 +0.4
P29M Windy Craggy 12.20 60 P Pn 10 11 30.5 +0.4
baz=258,SNR=8.1
K27K Chicken 12.25 37 Pn 10 11 31.6 +0.8
YUK6 Outpost Mounta 12.26 53 P Pn 10 11 31.6 +0.5
baz=251
YUK4 Talbot Arm 12.27 51 P Pn 10 11 32.4 +1.2
baz=248
PRP Porcupine Dome 12.28 27 P Pn 10 11 30.7 -0.5
baz=218,SNR=11
G23K Bananza Creek 12.35 16 P Pn 10 11 32.5 +0.4
baz=204,SNR=7.5
E18K Tukpahlearik C 12.36 357 Pn 10 11 34.4 +2.2
E18K Tukpahlearik C 12.36 357 P Pn 10 11 34.1 +1.9
baz=175,SNR=22
E19K Redstone River 12.38 3 P Pn 10 11 34.0 +1.5
baz=184,SNR=72
F21K Alatna River 12.39 10 Pn 10 11 33.9 +1.3
F21K Alatna River 12.39 10 P Pn 10 11 33.6 +1.0
baz=194
HYT Haines Junctio 12.62 55 P Pn 10 11 36.7 +0.9
baz=253
P30M Million Dollar 12.69 58 P Pn 10 11 37.9 +1.1
baz=256
S31K Pelican 12.75 68 Pn 10 11 38.2 +0.7
S31K Pelican 12.75 68 P Pn 10 11 37.9 +0.4
baz=267
D17K Noatak River 12.77 353 P Pn 10 11 39.3 +1.5
baz=169,SNR=9.4
I26K Coal Creek Min 12.77 31 P Pn 10 11 37.8 0.0
baz=224
M29M Somme Creek 12.79 47 Pn 10 11 38.9 +0.7
M29M Somme Creek 12.79 47 P Pn 10 11 38.2 0.0
baz=244,SNR=15
COLD Coldfoot 12.80 15 P Pn 10 11 38.5 +0.3
baz=203
F22K John River 12.80 12 P Pn 10 11 38.6 +0.4
baz=197
G24K Hadweenzic Riv 12.81 21 Pn Pn 10 11 38.0 -0.3
G24K Hadweenzic Riv 12.81 21 P Pn 10 11 39.4 +1.1
baz=210,SNR=14
PLBC Pleasant Camp 12.85 61 P Pn 10 11 39.9 +1.0
baz=260,SNR=5.2
N30M Aishikik Lake 13.01 52 P Pn 10 11 42.2 +1.0
baz=251
R31K City Hall, Gus 13.04 66 P Pn 10 11 42.6 +1.2
baz=265
RDOG Red Dog Mine 13.10 353 P Pn 10 11 43.5 +1.1
baz=170,SNR=19
G25K Bearman Lake 13.15 23 P Pn 10 11 44.1 +1.1
baz=214
E20K Nigu River 13.22 4 P Pn 10 11 45.1 +1.0
baz=187,SNR=28
SIT Sitka 13.22 72 P Pn 10 11 42.6 -1.4
SIT Sitka 13.22 72 Pn Pn 10 11 42.6 -1.4
SIT Sitka 13.22 72 P Pn 10 11 44.3 +0.3
baz=272
L29M L29M 13.22 45 Pn Pn 10 11 45.0 +0.9
L29M L29M 13.22 45 P Pn 10 11 44.5 +0.4
baz=242
DAWY Dawson 13.23 40 Pn Pn 10 11 45.2 +1.1
DAWY Dawson 13.23 40 P Pn 10 11 44.4 +0.3
baz=236
O30N Mendenhall 13.27 56 Pn 10 11 46.0 +1.3
O30N Mendenhall 13.27 56 P Pn 10 11 44.9 +0.2
baz=255
SKAG Skagway 13.37 62 P Pn 10 11 49.0 +3.0
SKAG Skagway 13.37 62 Pn 10 11 46.7 +0.7
SKAG Skagway 13.37 62 P Pn 10 11 46.4 +0.3
baz=261,SNR=13
D19K Kuna River 13.41 1 P Pn 10 11 47.5 +0.9
baz=182
I27K Kandik River 13.44 32 P Pn 10 11 47.3 +0.3
baz=227
F24K Squaw Lake 13.45 18 P Pn 10 11 47.3 +0.2
baz=208
C16K Lisburne Hills 13.53 350 P Pn 10 11 48.6 +0.5
baz=164
E21K Killik River 13.54 8 P Pn 10 11 49.3 +1.0
baz=192
C17K DeLong Mountai 13.54 353 P Pn 10 11 49.0 +0.7
baz=169,SNR=20
M30M Minto, Yukon 13.55 48 P Pn 10 11 49.5 +1.0
baz=247
C18K Utukok River 13.61 356 P Pn 10 11 50.2 +0.9
baz=174,SNR=12
N31M Braeburn, Yuko 13.61 53 P Pn 10 11 50.3 +1.0
baz=252
S32K Killisnoo 13.62 70 P Pn 10 11 50.3 +0.9
baz=270
AMKA Amchitka 13.62 263 Pn 10 11 49.0 -0.5
E23K Chandalar 13.65 15 P Pn 10 11 51.0 +1.0
baz=203,SNR=6.0
D20K Etivluk River 13.66 3 P Pn 10 11 51.0 +1.0
baz=185,SNR=21
R32K Eaglecrest 13.67 67 P Pn 10 11 51.2 +1.0
baz=267
K29M Barlow Dome 13.82 42 P Pn 10 11 52.5 +0.3
baz=241,SNR=8.2
WHY Whitehorse 13.82 57 Pn 10 11 53.9 +1.6
WHY Whitehorse 13.82 57 P Pn 10 11 53.2 +0.9
baz=257
G26K Porcupine Rive 13.84 25 P Pn 10 11 53.2 +0.8
baz=218
E24K Your Creek 13.84 16 P Pn 10 11 53.0 +0.5
baz=205,SNR=13
I28M Miner Creek 13.86 34 P Pn 10 11 53.2 +0.4
baz=231
H27K Steamboat Moun 13.90 30 P Pn 10 11 54.0 +0.7
baz=225
F25K Christian Rive 13.95 21 P Pn 10 11 53.5 -0.4
baz=213,SNR=5.1
C19K Lookout Ridge 14.02 359 P Pn 10 11 55.1 +0.2
baz=178,SNR=6.2
C21K Knifebiade Rid 14.19 6 P Pn 10 11 58.0 +0.8
baz=185,SNR=29
TOLK Toolik Lake Re 14.20 14 P Pn 10 11 58.0 +0.6
baz=202
P32M Atlin 14.20 61 P Pn 10 11 57.5 +0.1
baz=263
G27K Doyon Strip 14.29 28 P Pn 10 11 58.9 +0.4
baz=223,SNR=7.7
F26K Sheenjek River 14.35 23 P Pn 10 11 60.0 +0.5
baz=216
D23K Nasbuk River 14.37 12 P Pn 10 12 00.6 +1.0
baz=199,SNR=11
E25K Arctic Village 14.41 20 P Pn 10 12 00.9 +0.7
baz=212
M31M Drury Creek, Y 14.46 51 P Pn 10 12 01.5 +0.5
baz=252,SNR=15
U33K Whale Pass 14.51 76 Pn Pn 10 12 01.7 +0.1
U33K Whale Pass 14.51 76 P Pn 10 12 02.0 +0.5
baz=277
CRAG Craig 14.60 78 P Pn 10 12 03.4 +0.7
baz=279
J30M Hart River 14.63 41 Pn 10 12 03.5 +0.1
J30M Hart River 14.63 41 P Pn 10 12 03.9 +0.6
baz=240,SNR=10
B21K Ikpikpuk River 14.66 6 Pn 10 12 04.0 +0.5
B21K Ikpikpuk River 14.66 6 P Pn 10 12 04.3 +0.8
baz=190,SNR=9.9
P33M Teslin, Yukon 14.74 59 P Pn 10 12 05.5 +0.7
baz=261,SNR=17
D24K Happy Valley 14.78 14 P Pn 10 12 05.9 +0.7
baz=203
N32M Quiet Lake 14.79 56 P Pn 10 12 05.3 0.0
baz=257,SNR=14
H29M Whitestone 14.85 34 P Pn 10 12 06.7 +0.5
baz=231,SNR=44
Q32M Nakina River 14.88 64 P Pn 10 12 06.5 -0.3
baz=267
WRAK Wrangell Islan 14.90 74 P Pn 10 12 07.2 +0.3
baz=276
B20K Meade River 14.95 2 P Pn 10 12 07.2 -0.1
baz=184
I30M Mount Dempster 14.95 39 Pn 10 12 08.3 +0.7
I30M Mount Dempster 14.95 39 P Pn 10 12 07.9 +0.3
baz=238,SNR=23
A19K Wainwright 15.16 357 P Pn 10 12 09.6 -0.5
baz=175
C23K Itkillik River 15.20 11 IAmb IAmb 10 12 16.9
comp=Z,95nm,1.2s
C23K Itkillik River 15.20 11 P Pn 10 12 10.3 -0.5
baz=198,SNR=18
D25K Kavik River 15.31 17 P Pn 10 12 11.8 -0.4
baz=208,SNR=17
E27K Coleen River 15.34 25 P Pn 10 12 11.5 -1.0
baz=220
F28M Old Crow 15.35 28 P Pn 10 12 12.4 -0.3
baz=225
G29M Pine Creek 15.40 32 P Pn 10 12 12.8 -0.6
baz=230,SNR=38
B22K Teshekpuk Lake 15.45 7 IAmb IAmb 10 12 22.3
comp=Z,57nm,0.9s
B22K Teshekpuk Lake 15.45 7 P Pn 10 12 13.4 -0.5
baz=192
S34M Telegraph Cree 15.47 68 P Pn 10 12 14.0 -0.3
baz=272,SNR=8.7
V35K Ketchikan 15.47 78 P Pn 10 12 13.9 -0.4
baz=280
EPYK Eagle Plains 15.47 35 P Pn 10 12 14.3 -0.1
baz=234,SNR=110
R33M Jennings River 15.58 63 P Pn 10 12 15.9 0.0
baz=266,SNR=9.6
H31M Peel River 15.98 38 Pn 10 12 21.3 +0.4
H31M IAmb IAmb 10 12 26.8
comp=Z,56nm,0.8s
H31M Peel River 15.98 38 P Pn 10 12 20.7 -0.2
baz=240,SNR=18
MMPY Sheldon Lake, 15.98 51 P Pn 10 12 21.4 +0.5
baz=255,SNR=19
G30M tAoh Zraii Nji 16.00 33 P Pn 10 12 21.4 +0.2
baz=233,SNR=64
T35M Bob Quinn 16.00 72 P Pn 10 12 20.9 -0.3
baz=275
A22K Sinclair Lake 16.01 5 P Pn 10 12 20.7 -0.5
baz=188,SNR=19
DLBC Dease Lake 16.04 66 Pn P 10 12 23.9 -1.1
comp=Z,0.5nm,0.3s,baz=256,slow=13,SNR=7.8
comp=Z,3.2nm,0.7s
DLBC Dease Lake 16.04 66 P Pn 10 12 21.3 -0.5
baz=270
C27K Jago River 16.05 19 P Pn 10 12 21.5 -0.2
baz=213
SHEM Shemya Is, Ala 16.11 273 Pn Pn 10 12 22.3 -0.2
comp=Z,4.7nm,0.3s,baz=54,slow=1.4,SNR=10
comp=Z,23nm,0.5s
SHEM Shemya Is, Ala 16.11 273 IAmb IAmb 10 12 40.1
comp=Z,114nm,1.4s
E28M Babbage River 16.16 26 Pn Pn 10 12 22.5 -0.7
E28M Babbage River 16.16 26 P Pn 10 12 22.2 -0.9
baz=223
A21K Barrow 16.27 3 P Pn 10 12 23.9 -0.6
baz=184,SNR=24
D27M Malcolm River 16.30 23 P Pn 10 12 23.9 -1.1
baz=219
E29M Blow River 16.43 28 P Pn 10 12 25.6 -0.9
baz=226,SNR=6.2
F30M Barrier River 16.52 32 IAmb IAmb 10 12 32.7
comp=Z,50nm,0.8s
F30M Barrier River 16.52 32 P Pn 10 12 27.1 -0.6
baz=232,SNR=30
G31M Satah River 16.59 35 IAmb IAmb 10 12 32.3
comp=Z,71nm,0.9s
G31M Satah River 16.59 35 P Pn 10 12 28.3 -0.4
baz=236,SNR=21
D28M Stokes Point 16.89 25 P Pn 10 12 31.7 -0.6
baz=223
F31M Tsiigehtchic 17.05 34 P Pn 10 12 33.8 -0.6
baz=236
INK Inuvik 17.62 32 P Pn 10 12 40.4 -1.0
comp=Z,2.8nm,0.3s,baz=212,slow=9.7,SNR=27
comp=Z,13nm,0.5s
INK Inuvik 17.62 32 P Pn 10 12 40.9 -0.5
INK Inuvik 17.62 32 P Pn 10 12 40.5 -0.9
baz=234,SNR=19
INK Inuvik 17.62 32 P Pn 10 12 41.1 -0.3
BILL Bilibino 20.67 322 ⇑*i*P P 10 13 15.5 -0.1
BILL pmax pmax
comp=Z,49nm,1.3s
BILL Bilibino 20.67 322 P P 10 13 15.1 -0.5
BILL IAmb IAmb 10 13 20.4
comp=Z,67nm,1.4s
C36M Paulatuk 21.11 34 P P 10 13 20.4 +0.1
C36M Paulatuk 21.11 34 P P 10 13 20.1 -0.2
baz=245,SNR=17
A36M Sachs Harbour 22.03 27 P P 10 13 29.2 -1.0
A36M IAmb IAmb 10 13 30.7
comp=Z,39nm,0.8s
A36M Sachs Harbour 22.03 27 P P 10 13 29.0 -1.2
baz=238
YKAW3 Yellowknife Wh 23.61 54 P P 10 13 46.9 +0.4
YKA Yellowknife Ar 23.61 54 P P 10 13 46.2 -0.3
comp=Z,2.8nm,0.6s,baz=263,slow=7.0,SNR=28
comp=Z,2.8nm,0.6s
YKA Yellowknife Ar 23.61 54 P P 10 13 46.7 +0.1
LON Longmire 24.52 95 P P 10 13 54.7 -0.5
LON pmax pmax
comp=Z,13nm,0.9s
LON Longmire 24.52 95 P P 10 13 54.7 -0.5
PET Petropavlovsk 24.77 283 *e*P P 10 13 56.8 -0.6
PET pmax pmax
comp=Z,35nm,0.7s
PET Petropavlovsk 24.77 283 P P 10 13 57.2 -0.2
PET IAmb IAmb 10 13 57.7
comp=Z,23nm,0.7s
B08A Colville Reser 25.08 89 P P 10 13 59.4 -0.9
PEA0B Petropavlovsk- 25.27 284 P P 10 14 01.4 -0.6
PETK Petropavlovsk- 25.27 284 P P 10 14 01.3 -0.6
comp=Z,52nm,0.8s,baz=70,slow=12,SNR=71
comp=Z,52nm,0.8s
SEY Seymchan 25.71 307 P P 10 14 04.4 -1.4
comp=Z,21nm,0.8s,baz=96,slow=9.3,SNR=58
comp=Z,21nm,0.8s
SEY Seymchan 25.71 307 ⇑*i*P P 10 14 04.3 -1.5
SEY pmax pmax
comp=Z,22nm,0.9s
D08A Wollman Farm, 26.00 91 P P 10 14 08.6 0.0
E08A Dider Farm, El 26.24 93 P P 10 14 11.0 +0.3
EDM Edmonton 26.31 75 P P 10 14 12.0 +0.7
EDM IAmb IAmb 10 14 22.7
comp=Z,23nm,1.0s
NEW Newport 26.40 88 P P 10 14 15.0 +2.8
NEW Newport 26.40 88 P P 10 14 15.0 +2.8
MA2 Magadan 27.02 300 P P 10 14 16.5 -1.1
comp=Z,7.2nm,0.7s,baz=90,slow=13,SNR=5.9
comp=Z,7.2nm,0.7s
MA2 Magadan 27.02 300 P P 10 14 17.3 -0.3
MA2 Magadan 27.02 300 *ce*P P 10 14 17.1 -0.5
MA2 pmax pmax
comp=Z,12nm,1.1s
MA2 Magadan 27.02 300 P P 10 14 17.1 -0.5
MA2 Magadan 27.02 300 P P 10 14 17.6 -0.1
YBH Yreka Blue Hor 27.09 105 LR LR 10 23 11.6
comp=Z,2µm,20.1s,baz=301,slow=32
I07A Izee 27.39 97 P P 10 14 21.0 -0.3
HLID Hailey 30.62 93 P P 10 14 52.7 +2.6
BOZ Bozeman (W) 31.01 88 P P 10 14 56.2 +2.8
RES Resolute Bay 31.08 28 P P 10 14 53.7 +0.2
BLKN Baker Lake 31.65 48 P P 10 14 58.9 +0.3
BLKN IAmb IAmb 10 14 59.8
comp=Z,18nm,0.8s
NVAR Mina Array Bea 31.82 105 P P 10 15 02.9 +2.2
comp=Z,5.1nm,0.8s,baz=298,slow=8.4,SNR=15
comp=Z,5.1nm,0.8s
HWUT Hardware Ranch 33.49 94 P P 10 15 18.1 +2.9
TIXI Tiksi 33.72 327 P P 10 15 15.8 -0.8
comp=Z,5.8nm,0.4s,baz=87,slow=12,SNR=12
TIXI PcP PcP 10 17 55.6 +0.1
comp=Z,5.1nm,0.7s,baz=38,slow=3.8,SNR=6.7
comp=Z,5.8nm,0.4s
TIXI Tiksi 33.72 327 ⇓*i*P P 10 15 15.9 -0.8
TIXI pmax pmax
comp=Z,14nm,0.9s
TIXI Tiksi 33.72 327 P P 10 15 15.3 -1.3
TIXI IAmb IAmb 10 15 17.7
comp=Z,12nm,0.9s
PDAR Pinedale Array 33.90 91 P P 10 15 20.2 +1.4
comp=Z,1.7nm,0.5s,baz=326,slow=3.7,SNR=20
comp=Z,1.7nm,0.5s
TPNV Topopah Spring 34.01 104 IAmb IAmb 10 15 32.5
comp=Z,17nm,0.9s
FCC Fort Churchill 34.25 57 IAmb IAmb 10 15 22.8
comp=Z,14nm,1.0s
PRN Pahroc Range 34.35 103 IAmb IAmb 10 15 35.9
comp=Z,15nm,1.1s
QSM Queen of Sheba 34.38 106 IAmb IAmb 10 15 35.4
comp=Z,8.8nm,0.7s
TYV Tymovskoe 34.59 288 *e*P P 10 15 24.5 0.0
TYV *e*S S 10 20 51.7 +0.1
TYV pmax pmax
comp=Z,28nm,1.0s
TYV pmax pmax
comp=Z,500nm,5.8s
TYV smax smax
comp=N,600nm,8.1s
TYV smax smax
comp=E,400nm,8.1s
BSUT Blindstream Ca 34.65 95 IAmb IAmb 10 15 37.9
comp=Z,13nm,1.1s
BFSC Mount Baldy Ra 35.23 109 IAmb IAmb 10 15 42.8
comp=Z,14nm,1.4s
RDMU Red Mountain 35.31 94 IAmb IAmb 10 15 43.4
comp=Z,16nm,1.1s
P18A Preston Nutter 35.55 95 IAmb IAmb 10 15 45.6
comp=Z,12nm,1.1s
K22A Casper 35.72 88 IAmb IAmb 10 15 46.6
comp=Z,29nm,1.1s
SRU San Rafael Swe 35.73 96 IAmb IAmb 10 15 47.3
comp=Z,23nm,0.9s
ILON Igloolik, Nuna 35.76 36 P P 10 15 35.1 +0.8
ILON IAmb IAmb 10 15 35.7
comp=Z,19nm,0.7s
UGL Uglegorsk 35.85 285 *e*P P 10 15 36.1 +0.8
UGL *e*S S 10 21 05.9 -5.1
UGL pmax pmax
comp=Z,120nm,0.8s
UGL smax smax
comp=E,2µm,16.0s
UGL smax smax
comp=N,900nm,11.0s
UGL MLR MLR
comp=E,600nm,16.0s
YAK Yakutsk 36.12 311 *e*P P 10 15 36.7 -0.7
YAK pmax pmax
comp=Z,19nm,0.8s
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK pmax pmax
comp=E,3.0nm,0.7s
RSSD Black Hills 36.23 84 P P 10 15 40.4 +1.5
RSSD pmax pmax
comp=Z,35nm,1.4s
RSSD Black Hills 36.23 84 P P 10 15 39.2 +0.3
RSSD IAmb IAmb 10 15 50.6
comp=Z,35nm,1.4s
RSSD Black Hills 36.23 84 P P 10 15 40.6 +1.7
PFO Pinyon Flats O 36.36 109 ⇑*i*P P 10 15 41.8 +1.8
PFO pmax pmax
comp=Z,7.0nm,0.8s
ALE Alert 36.57 13 P P 10 15 40.7 -0.4
YSS Yuzhno-Sakhali 36.65 282 *e*P P 10 15 44.1 +1.9
YSS pmax pmax
comp=Z,20nm,1.3s
TULEG Thule 37.25 23 *i*P P 10 15 46.4 -0.5
TULEG IAmb IAmb 10 15 47.4
comp=Z,33nm,1.4s
ULM Lac du Bonnet 37.29 71 P P 10 15 47.9 +0.3
comp=Z,2.8nm,0.8s,baz=288,slow=8.3,SNR=4.7
comp=Z,2.8nm,0.8s
ULM Lac du Bonnet 37.29 71 *e*P P 10 15 48.7 +1.1
MVCO Mesa Verde 38.20 97 P P 10 15 55.5 -0.2
MVCO Mesa Verde 38.20 97 P P 10 15 57.8 +2.1

AGMN Agassiz Nation 38.38 73 P P 10 15 57.0 +0.2
AGMN IAmb IAmb 10 16 07.5
comp=Z,13nm,0.9s
AGMN Agassiz Nation 38.38 73 P P 10 15 57.5 +0.7
ASAJ Asahikawa 38.43 278 P P 10 15 57.4 +0.1
comp=Z,22nm,0.7s,baz=216,slow=2.9,SNR=24
comp=Z,22nm,0.7s
SUSD Miller 38.93 80 P P 10 16 00.8 -0.6
SUSD IAmb IAmb 10 16 12.5
comp=Z,25nm,0.9s
JEM Erimo 39.43 275 P P 10 16 06.2 +0.6
ERM Erimo 39.43 275 P P 10 16 06.0 +0.3
ERM Erimo 39.43 275⇓ *i*P P 10 16 05.9 +0.3
ERM pmax pmax
comp=Z,49nm,1.1s
ERM Erimo 39.43 275 P P 10 16 05.4 -0.2
SDCO Great Sand Dun 39.54 93 P P 10 16 06.4 -0.6
K30B Basset 39.66 83 P P 10 16 07.5 -0.1
TUC Tucson 40.47 104 P P 10 16 16.4 +2.0
NEEM North Greenlan 40.48 19 *i* P P 10 16 14.0 -0.3
NEEM IAmb IAmb 10 16 15.8
comp=Z,10nm,0.7s
KULLO Kullorsuaq 40.71 24 *i* P P 10 16 15.9 0.0
KULLO IAmb IAmb 10 16 16.8
comp=Z,28nm,0.8s
ANMO Albuquerque 40.97 97 P P 10 16 17.9 -0.8
UPNV Upernavik 41.92 26 *i* P P 10 16 25.8 0.0
UPNV IAmb IAmb 10 16 26.6
comp=Z,15nm,0.9s
NOR Nord 42.00 8 P P 10 16 26.6 +0.3
NOR Nord 42.00 8 *i* P P 10 16 26.3 -0.1
NOR IAmb IAmb 10 16 27.1
comp=Z,18nm,1.2s
CBKS Cedar Bluff 42.12 87 IAmb IAmb 10 16 39.9
comp=Z,32nm,1.0s
I37A Lemond, Waseca 42.32 77 IAmb IAmb 10 16 40.4
comp=Z,19nm,1.0s
HEH HeiHe 43.06 295 *e*P P 10 16 34.0 -1.3
NUUG Nuugaatsiaq 43.37 27 *i* P P 10 16 37.5 -0.1
NUUG IAmb IAmb 10 16 43.5
comp=Z,22nm,0.8s
H11N2 WAKE ISLAND Hy 43.82 230 T T 11 03 02.6
baz=28,slow=75,SNR=7.7
H11N3 WAKE ISLAND Hy 43.82 230 T T 11 03 03.1
baz=28,slow=75,SNR=9.6
H11N1 WAKE ISLAND Hy 43.84 230 T T 11 03 00.4
baz=28,slow=75,SNR=8.2
I40A Norwalk 43.95 75 IAmb IAmb 10 16 58.8
comp=Z,9.8nm,0.5s
MNTX Cornudas Mount 43.96 100 IAmb IAmb 10 16 55.3
comp=Z,15nm,1.1s
SAATT Saattut 44.22 27 *i* P P 10 16 44.8 +0.4
SAATT IAmb IAmb 10 16 45.9
comp=Z,24nm,1.2s
USRK Ussuriysk Ar. 44.33 286 P P 10 16 44.2 -1.4
comp=Z,1.8nm,0.6s,baz=58,slow=9.1,SNR=2.3
comp=Z,1.8nm,0.6s
TPB28 44.48 99 IAmb IAmb 10 16 59.8
comp=Z,13nm,1.2s
N38A Joes South For 44.50 80 IAmb IAmb 10 16 58.3
comp=Z,21nm,1.0s
VHRN Van Horn 44.87 100 IAmb IAmb 10 17 02.8
comp=Z,20nm,1.1s
128A Castleberry Fa 44.92 96 IAmb IAmb 10 17 02.2
comp=Z,16nm,1.1s
H11S1 WAKE ISLAND Hy 44.98 230 T T 11 04 33.4
baz=28,slow=75,SNR=5.7
H11S2 WAKE ISLAND Hy 44.99 229 T T 11 04 34.5
baz=28,slow=75,SNR=3.9
H11S3 WAKE ISLAND Hy 45.00 230 T T 11 04 54.8
baz=28,slow=75,SNR=6.0
P38A Dawn 45.12 82 IAmb IAmb 10 17 02.4
comp=Z,17nm,0.8s
MDJ Mudanjiang 45.38 288 P P 10 16 53.2 -0.8
WMOK Wichita Mounta 45.51 91 P P 10 16 54.4 -0.8
WMOK Wichita Mounta 45.51 91 IAmb IAmb 10 17 06.5
comp=Z,11nm,0.9s
WMOK Wichita Mounta 45.51 91 P P 10 16 56.2 +1.0
BNX BinXian 45.84 290 ⇑P P 10 16 56.9 -0.7
BNX pmax pmax
comp=Z,14nm,0.7s
MJA0 Matsu Arr-Jizo 45.92 273 *e*P P 10 16 58.9 +0.5
MAJO Matsushiro 45.95 273 P P 10 16 58.7 +0.1
MAJO Matsushiro 45.95 273 *c i*P P 10 16 58.6 0.0
MAJO pmax pmax
comp=Z,17nm,0.9s
MAJO Matsushiro 45.95 273 P P 10 16 59.0 +0.5
MAJO IAmb IAmb 10 16 59.4
comp=Z,16nm,0.8s
MAJO Matsushiro 45.95 273 P P 10 16 58.7 +0.1
MJAR Matsushiro Arr 45.95 273 P P 10 16 58.4 -0.2
comp=Z,6.1nm,0.6s,baz=33,slow=6.6,SNR=28
comp=Z,6.1nm,0.6s
MJAR Matsushiro Arr 45.95 273 P P 10 16 58.9 +0.3
MJB9 Matsu-Tunnel 45.95 273 IAmb IAmb 10 17 00.4
comp=Z,16nm,0.9s
DAG Danmarks Havn 45.96 12 P P 10 16 57.6 -0.5
DAG pmax pmax
comp=Z,33nm,0.9s
DAG Danmarks Havn 45.96 12 P P 10 16 57.9 -0.2
DAG Danmarks Havn 45.96 12 *i* P P 10 16 57.8 -0.3
DAG IAmb IAmb 10 16 58.6
comp=Z,20nm,0.6s
PSTR Posyet 45.99 285⇓ *i*P P 10 16 58.6 -0.2
P40A Paris 46.02 81 IAmb IAmb 10 17 09.5
comp=Z,17nm,1.0s
KBS Kingsbay 46.08 2 *c e*P P 10 17 00.4 +1.4
KBS pmax pmax
comp=Z,22nm,1.1s
KBS Kingsbay 46.08 2 *e*P P 10 16 59.8 +0.7
KBS IAmb IAmb 10 17 00.7
comp=Z,26nm,1.2s
KBS Kingsbay 46.08 2 *i* P P 10 16 59.9 +0.8
SUMG Summit 46.11 21 P P 10 17 00.1 +0.3
SUMG pmax pmax
comp=Z,35nm,1.1s
SUMG Summit 46.11 21 P P 10 17 00.1 +0.3
SUMG Summit 46.11 21 P P 10 17 00.4 +0.5
SUMG Summit 46.11 21 *i* P P 10 17 00.0 +0.2
SUMG IAmb IAmb 10 17 01.1
comp=Z,46nm,1.2s
ABTX Abilene, Hawle 46.55 94 IAmb IAmb 10 17 14.6
comp=Z,9.2nm,0.8s
RLO Rose Lookout 46.66 86 IAmb IAmb 10 17 14.6
comp=Z,16nm,1.1s
TX31 Lajitas Ar. Si 46.71 100 IAmb IAmb 10 17 16.9
comp=Z,17nm,1.1s
TXAR Lajitas Array 46.71 100 P P 10 17 06.0 +1.3
comp=Z,0.8nm,0.5s,baz=305,slow=5.8,SNR=28
TXAR PcP PcP 10 18 38.8 +0.8
comp=Z,0.5nm,0.6s,baz=334,slow=2.2,SNR=1.4
comp=Z,0.8nm,0.5s
TXAR Lajitas Array 46.71 100 P P 10 17 04.9 +0.1
U38A Gravette 46.83 86 IAmb IAmb 10 17 15.7
comp=Z,12nm,0.9s
NRIK Noril'sk 46.87 334 P P 10 17 05.3 -0.1
comp=Z,25nm,0.7s,baz=57,slow=7.3,SNR=27
NRIK PcP PcP 10 18 38.7 +1.0
comp=Z,4.0nm,0.6s,baz=76,slow=4.1,SNR=2.9
comp=Z,25nm,0.7s
NRIK Noril'sk 46.87 334 *c i*P P 10 17 05.2 -0.1
NRIK pmax pmax
comp=Z,38nm,1.0s
NRIK Noril'sk 46.87 334 P P 10 17 05.3 -0.1
SPA0 Spitsbergen Ar 46.91 1 *e*P P 10 17 06.0 +0.4
SPITS Spitsbergen Ar 46.91 1 P P 10 17 05.2 -0.4
comp=Z,2.1nm,0.4s,baz=46,slow=3.6,SNR=7.6
SPITS PcP PcP 10 18 38.1 +0.3
comp=Z,2.8nm,0.5s,baz=75,slow=4.5,SNR=6.0
comp=Z,2.1nm,0.4s
SFJD Kangerlussuaq 46.96 31 *i* P P 10 17 06.7 +0.6
SFJD IAmb IAmb 10 17 07.6
comp=Z,16nm,0.7s
JGF Kuroka 47.10 273 P P 10 17 09.0 +1.3
JGF Kuroka 47.10 273 P P 10 17 08.1 +0.4
HHAR Hobbs 47.19 86 P P 10 17 07.6 -0.7
HHAR IAmb IAmb 10 17 18.3
comp=Z,9.8nm,1.1s
HPIG 47.43 104 P P 10 17 13.1 +2.6
HIA Hailar 47.59 299 *e*P P 10 17 10.9 -0.4
HIA pmax pmax
comp=Z,5.0nm,0.7s
DBG Daneborg 47.88 14 *i* P P 10 17 12.7 -0.5
DBG IAmb IAmb 10 17 13.3
comp=Z,9.6nm,0.8s
FVM French Village 48.01 81 IAmb IAmb 10 17 24.9
comp=Z,14nm,1.2s
JCT Junction City 48.04 96 IAmb IAmb 10 17 26.1
comp=Z,14nm,0.9s
CN2 Changchun 48.16 290 P P 10 17 14.9 -0.9
CN2 pmax pmax
comp=Z,40nm,0.8s
FCAR Ozark Folk Cen 48.51 84 IAmb IAmb 10 17 27.9
comp=Z,14nm,1.2s
NUUK Nuuk 48.53 34 *i* P P 10 17 17.6 -0.6
NUUK IAmb IAmb 10 17 20.2
comp=Z,17nm,0.8s
MIAR Mount Ida 48.64 87 P P 10 17 20.5 +1.0
MIAR Mount Ida 48.64 87 IAmb IAmb 10 17 30.3
comp=Z,8.5nm,0.9s
MIAR Mount Ida 48.64 87 P P 10 17 20.5 +1.0
N47A Urbana 48.67 75 IAmb IAmb 10 17 29.5
comp=Z,20nm,1.0s
S44A Carbondale 48.87 81 IAmb IAmb 10 17 22.4
comp=Z,11nm,0.6s
SCHQ Schefferville 48.97 50 P P 10 17 21.4 -0.4
comp=Z,3.0nm,0.6s,baz=338,slow=7.9,SNR=6.5
comp=Z,3.0nm,0.6s
BUKO Buck Lake 49.02 66 IAmb IAmb 10 17 22.8
comp=Z,13nm,1.2s
O48B Farmland 49.40 75 IAmb IAmb 10 17 34.8
comp=Z,15nm,1.1s
T47A Sharon Grove 50.59 80 IAmb IAmb 10 17 44.9
comp=Z,19nm,1.1s
WVT Waverly 50.78 81 P P 10 17 35.8 0.0
WVT pmax pmax
comp=Z,20nm,1.0s
WVT Waverly 50.78 81 P P 10 17 36.0 +0.2
WVT IAmb IAmb 10 17 46.5
comp=Z,20nm,0.9s
WVT Waverly 50.78 81 P P 10 17 36.0 +0.2
SCO Scoresbysund 50.93 17 P P 10 17 36.6 +0.2
SCO pmax pmax
comp=Z,30nm,1.4s
SCO Scoresbysund 50.93 17 P P 10 17 36.8 +0.4
SCO IAmb IAmb 10 17 37.8
comp=Z,30nm,1.4s
SCO Scoresbysund 50.93 17 *i* P P 10 17 36.9 +0.5
SCO IAmb IAmb 10 17 37.6
comp=Z,7.4nm,0.5s
TRQ Mont Tremblant 51.01 63 P P 10 17 36.9 -0.5
TRQ IAmb IAmb 10 17 38.8
comp=Z,10nm,1.0s
SOEG Soedalen 51.01 22 *i* P P 10 17 36.6 -0.5
SOEG IAmb IAmb 10 17 38.0
comp=Z,27nm,1.0s
KS19 Wonju Array Si 51.15 282 P P 10 17 38.6 0.0
KS19 IAmb IAmb 10 17 40.0
comp=Z,19nm,0.9s
KSRS Korea Array 51.16 282 P P 10 17 39.0 +0.4
comp=Z,16nm,0.7s,baz=46,slow=7.0,SNR=116
KSRS PcP PcP 10 18 54.7 +0.9
comp=Z,2.0nm,0.8s,baz=56,slow=4.2,SNR=4.0
comp=Z,16nm,0.7s
KSAR Wonju Array Be 51.19 282 P P 10 17 38.4 -0.4
KSAR Wonju Array Be 51.19 282 P P 10 17 38.4 -0.4
Q51A Peebles 51.26 75 IAmb IAmb 10 17 49.8
comp=Z,18nm,0.9s
CLTN Cedars of Leba 51.66 80 IAmb IAmb 10 17 53.4
comp=Z,14nm,1.0s
O54A Avella 52.08 72 IAmb IAmb 10 18 01.9
comp=Z,9.7nm,0.9s
CFNY Clifton-Fine, 52.16 65 IAmb IAmb 10 17 46.4
comp=Z,13nm,1.1s
TJN Taejon 52.23 281 P P 10 17 46.8 +0.1
TJN Taejon 52.23 281 *c i*P P 10 17 46.7 +0.1
L56A Greenwood 52.24 68 IAmb IAmb 10 18 03.5
comp=Z,10nm,0.8s
JNU Nakatsue 52.59 276 P P 10 17 49.6 +0.2
comp=Z,8.9nm,0.8s,baz=53,slow=0.8,SNR=9.9
comp=Z,8.9nm,0.8s
Z47A Carrollton 52.76 84 IAmb IAmb 10 18 00.8
comp=Z,18nm,0.9s
W50A Signal Mountai 52.88 80 IAmb IAmb 10 18 01.3
comp=Z,11nm,1.0s
XLT XiLinHaoTe 53.06 296 *e*P P 10 17 52.8 0.0
XLT pmax pmax
comp=Z,26nm,0.7s
FPAL Fort Paine 53.19 81 IAmb IAmb 10 18 03.8
comp=Z,13nm,1.2s
Y49A Blount Mountai 53.23 82 P P 10 17 53.4 -0.7
Y49A IAmb IAmb 10 18 03.3
comp=Z,8.3nm,0.7s
TLY Talaya 53.59 310 P P 10 17 56.2 -0.3
comp=Z,10nm,0.9s,baz=56,slow=9.4,SNR=7.1
comp=Z,10nm,0.9s
TLY Talaya 53.59 310⇑ *i*P P 10 17 56.4 -0.1
TLY pmax pmax
comp=Z,13nm,1.0s
TLY Talaya 53.59 310 P P 10 17 57.0 +0.5
TLY IAmb IAmb 10 17 57.3
comp=Z,12nm,0.9s
TLY Talaya 53.59 310 P P 10 17 56.6 +0.1
DL2 Dalian 53.62 288 P P 10 17 56.4 -0.4
DL2 pmax pmax
comp=Z,40nm,0.8s
G62A West of Eustis 53.74 61 P P 10 17 57.4 -0.2
G62A IAmb IAmb 10 17 57.9
comp=Z,8.8nm,0.9s
V53A Saluda 53.95 78 IAmb IAmb 10 18 09.9
comp=Z,12nm,1.0s
JSU Suzuyama 54.02 275 P P 10 18 00.3 +0.3
JSU Suzuyama 54.02 275 P P 10 18 00.3 +0.3
JSU IAmb IAmb 10 18 00.7
comp=Z,13nm,0.7s
ULN Ulaanbaatar 54.74 305 *c i*P P 10 18 04.6 -0.5
ULN pmax pmax
comp=Z,11nm,1.2s
ULN Ulaanbaatar 54.74 305 P P 10 18 04.8 -0.3
VADS Vadso 54.91 357 *e*P P 10 18 05.4 -0.4
VADS IAmb IAmb 10 18 05.8
comp=Z,25nm,0.9s
SONM Songino Array 55.07 305 P P 10 18 07.5 0.0
comp=Z,10.0nm,0.7s,baz=48,slow=7.3,SNR=45
SONM PcP PcP 10 19 09.4 +0.8
comp=Z,4.3nm,0.7s,baz=44,slow=3.0,SNR=8.1
comp=Z,10.0nm,0.7s
SONM Songino Array 55.07 305 P P 10 18 07.4 -0.1
SONM IAmb IAmb 10 18 08.3
comp=Z,8.5nm,0.8s
KEV Kevo 55.34 358 P P 10 18 08.3 -0.6
TRO Tromso 55.52 1 P P 10 18 10.4 +0.2
TRO Tromso 55.52 1 *e*P P 10 18 10.3 +0.2
TRO IAmb IAmb 10 18 10.8
comp=Z,43nm,1.2s
ARA0 ARCESS Array S 55.59 358 *e*P P 10 18 10.2 -0.5
ARCES ARCESS Array B 55.59 358 P P 10 18 10.2 -0.6
comp=Z,6.9nm,0.7s,baz=20,slow=7.2,SNR=26
ARCES PcP PcP 10 19 10.4 +0.3
comp=Z,7.3nm,0.7s,baz=15,slow=5.0,SNR=9.1
comp=Z,6.9nm,0.7s
ARCES ARCESS Array B 55.59 358 P P 10 18 10.3 -0.5
ARCES IAmb IAmb 10 18 11.5
comp=Z,15nm,1.1s
JETT Jettan, Norway 55.61 0 *e*P P 10 18 11.9 +1.0
JETT IAmb IAmb 10 18 12.2
comp=Z,16nm,0.7s
GGN Saint George 55.64 59 P P 10 18 10.9 -0.5
BJI2 Beijing 55.77 292 P P 10 18 12.0 -0.4
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BORG Borgarnes 56.08 20 P P 10 18 13.0 -1.2
KTK1 Kautokeino 56.15 359 *e*P P 10 18 14.3 -0.5
HEF Hetta 56.75 359 *e*P P 10 18 18.9 -0.1
LVZ Lovozero 56.87 354 *c i*P P 10 18 19.4 -0.5
LVZ pmax pmax
comp=Z,29nm,0.9s
LVZ Lovozero 56.87 354 P P 10 18 19.8 -0.1
comp=Z,41nm,1.0s
LVZ Lovozero 56.87 354 P P 10 18 19.7 -0.3
KNGR Kungurtug, Tuv 57.02 312⇓ *e*P P 10 18 21.0 -0.3
KNGR pmax pmax
comp=Z,20nm,1.1s
LANU Lannavaara 57.13 360 *e*P P 10 18 21.7 0.0
STEI Steigen 57.17 3 *e*P P 10 18 21.8 -0.1
HHC Hu-ho-hao-te 57.58 296 *e*P P 10 18 25.9 +0.5
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,160nm,5.1s
SGF Sodankyl 57.67 358 P P 10 18 25.7 +0.2
SGF Sodankyl 57.67 358 P P 10 18 25.6 +0.1
FAUS Fauske 57.72 3 *e*P P 10 18 25.2 -0.7
FAUS IAmb IAmb 10 18 26.7
comp=Z,15nm,1.0s
HNS HongShan 58.46 291 ⇑P P 10 18 31.9 +0.4
HNS pmax pmax
comp=Z,90nm,0.9s
RAUS Rausandaksla 58.63 3 *e*P P 10 18 32.1 -0.1
RAUS IAmb IAmb 10 18 32.8
comp=Z,22nm,0.9s
MOR8 Moi Rana 58.91 3 *e*P P 10 18 33.0 -1.2
LEIR Leirfjorden 58.92 4 *e*P P 10 18 34.6 +0.4
ZAA0 Zalesovo Array 59.37 322 P P 10 18 37.9 +0.4
ZAA0 IAmb IAmb 10 18 39.1
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 59.37 322 P P 10 18 37.5 0.0
comp=Z,8.7nm,0.7s,baz=26,slow=5.6,SNR=33
comp=Z,8.7nm,0.7s
NJ2 Nanjing 60.18 284 *e*P P 10 18 43.0 -0.4
NJ2 pmax pmax
comp=Z,52nm,0.6s
NSS Namsos 60.45 5 *e*P P 10 18 45.5 +0.8
LYN LuoYang 61.79 291 P P 10 18 54.6 +0.2
LYN pmax pmax
comp=Z,57nm,0.9s
DGZ Jazzator, Alta 61.81 318 *c i*P P 10 18 54.8 +0.3
DGZ pmax pmax
comp=Z,10.0nm,0.9s
MOL Molde 62.14 7 *e*P P 10 18 57.0 +0.7
MOL IAmb IAmb 10 18 58.4
comp=Z,31nm,1.3s
AKN Aaknes 62.49 7 *e*P P 10 18 59.4 +0.7
AKN IAmb IAmb 10 18 59.5
comp=Z,22nm,0.8s
DOMB Dombas 62.77 6 IAmb IAmb 10 19 00.5
comp=Z,16nm,0.9s
DOMB *e*P P 10 19 00.8 +0.2
SUE Sulen 63.42 9 *e*P P 10 19 06.4 +1.7
KLMR Klimovskoe 63.45 350 *e*P P 10 19 02.7 -2.2
KLMR pmax pmax
comp=Z,30nm,1.0s
FIA1 FINESS Array S 63.70 357 P P 10 19 06.7 +0.1
FINES FINESS Array B 63.70 357 P P 10 19 06.3 -0.3
comp=Z,7.0nm,0.6s,baz=9.1,slow=8.3,SNR=20
comp=Z,7.0nm,0.6s
FINES FINESS Array B 63.70 357 *i* P P 10 19 06.1 -0.5
FINES pmax pmax
comp=Z,7.0nm,0.6s
SVE Sverdlovsk 63.89 337 *e*P P 10 19 08.6 +0.6
SVE pmax pmax
comp=Z,29nm,0.8s
NB2 NORSAR Subarra 63.90 5 P P 10 19 07.8 -0.2
comp=Z,9.4nm,0.7s,baz=355,slow=6.9
NB2 NORSAR Subarra 63.90 5 P P 10 19 07.8 -0.2
NOA NORSAR Array B 63.90 5 P P 10 19 08.0 0.0
comp=Z,7.3nm,0.7s,baz=354,slow=6.6,SNR=13
comp=Z,7.3nm,0.7s
NOA NORSAR Array B 63.90 5 P P 10 19 08.0 0.0
ASK Askoy 64.02 9 *e*P P 10 19 09.3 +0.6
SKAR Skarslia 64.07 7 *e*P P 10 19 09.6 +0.4
SKAR IAmb IAmb 10 19 09.7
comp=Z,11nm,0.8s
XAN Xi'an 64.08 293 ⇑P P 10 19 09.5 -0.1
XAN pP pP 10 19 19.1 +0.7
XAN pmax pmax
comp=Z,32nm,1.2s
BER Bergen 64.13 9 *e*P P 10 19 10.2 +0.7
BER IAmb IAmb 10 19 10.9
comp=Z,16nm,0.9s
KURK Kurchatov 64.19 323 *c i*P P 10 19 09.9 -0.1
KURK pmax pmax
comp=Z,19nm,0.9s
KURK Kurchatov 64.19 323 P P 10 19 10.7 +0.7
KURK IAmb IAmb 10 19 11.0
comp=Z,13nm,0.8s
KURK Kurchatov 64.19 323 P P 10 19 10.1 +0.1
NC602 NORSAR Array S 64.22 5 *e*P P 10 19 10.1 0.0
KURBB Kurchatov Arra 64.30 323 P P 10 19 10.4 -0.3
comp=Z,4.0nm,0.2s,baz=26,slow=6.4,SNR=34
comp=Z,4.0nm,0.2s
KIRV Kirov 64.38 344 ⇑ *i*P P 10 19 10.6 -0.5
GTA2 Gaotai 64.51 303 *e*P P 10 19 12.1 -0.4
GTA2 pmax pmax
comp=Z,56nm,1.0s
ZSN Zaisan 64.64 318 *c i*P P 10 19 13.2 +0.2
ZSN pmax pmax
comp=Z,8.0nm,0.7s
ZSN Zaisan 64.64 318 ⇑ *i*P P 10 19 13.3 +0.2
comp=Z,8.4nm,0.7s
ODD1 Odda 64.71 8 *e*P P 10 19 13.8 +0.5
ARTI Arti 64.79 338 *c i*P P 10 19 13.5 -0.3
ARTI 10 19 47.9
ARTI S S 10 27 54.0 +1.7
ARTI SS SS 10 31 59.4 -3.2
ARTI pmax pmax
comp=Z,35nm,1.2s
ARTI Arti 64.79 338 P P 10 19 13.8 0.0
BVAR Borovoye Array 64.80 330 P P 10 19 14.1 +0.1
comp=Z,7.1nm,0.8s,baz=43,slow=6.7,SNR=41
comp=Z,7.1nm,0.8s
BORK Borovoye 64.80 330 *c i*P P 10 19 14.0 0.0
BORK pmax pmax
comp=Z,18nm,0.9s
BORK Borovoye 64.80 330 P P 10 19 14.3 +0.4
HFS Hagfors 64.92 4 P P 10 19 14.4 -0.3
comp=Z,14nm,0.6s,baz=20,slow=4.7,SNR=42
comp=Z,14nm,0.6s
LZH Lanzhou 65.13 298 *e*P P 10 19 16.8 +0.2
LZH sP sP 10 19 32.1 +3.4
LZH pmax pmax
comp=Z,66nm,1.3s
BLS5 Blasjo 65.18 8 *e*P P 10 19 16.8 +0.4
BLS5 IAmb IAmb 10 19 17.8
comp=Z,16nm,0.8s
KONO Kongsberg 65.19 6 *e*P P 10 19 16.2 -0.2
KONO Kongsberg 65.19 6 P P 10 19 17.4 +1.0
KONO IAmb IAmb 10 19 28.8
comp=Z,13nm,1.1s
LZDM Lanzhou Array 65.31 298 P P 10 19 18.0 0.0
comp=Z,7.1nm,0.8s,baz=48,slow=2.2,SNR=8.4
comp=Z,11nm,0.6s
SSLB Suanglung 65.33 277 P P 10 19 18.0 +0.1
SSLB Suanglung 65.33 277 P P 10 19 17.6 -0.3
YULB Yu-li 65.44 276 P P 10 19 19.2 +0.7
YULB IAmb IAmb 10 19 30.0
comp=Z,6.8nm,0.8s
MK31 Makanchi Array 66.16 319 ⇑ *i*P P 10 19 22.2 -0.7
MKAR Makanchi Array 66.16 319 P P 10 19 22.4 -0.6
comp=Z,5.5nm,0.5s,baz=42,slow=6.1,SNR=39
comp=Z,5.5nm,0.5s
MKAR Makanchi Array 66.16 319 *i* P P 10 19 22.3 -0.6
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 66.16 319 P P 10 19 22.8 -0.2
MAKZ Makanchi 66.27 319 P P 10 19 23.3 -0.3
MAKZ Makanchi 66.27 319 P P 10 19 23.3 -0.3
WMQ Urumqi 66.48 314 *e*P P 10 19 25.8 +0.7
WMQ pmax pmax
comp=Z,19nm,0.9s
DRUM Mains of Drumt 66.66 14 P P 10 19 26.8 +0.9
VSU Vasula 66.67 357 *c i*P P 10 19 24.8 -1.1
VSU pmax pmax
comp=Z,25nm,0.7s
EKA Eskdalemuir Ar 68.10 15 P P 10 19 35.5 +0.5
comp=Z,8.6nm,0.7s,baz=336,slow=4.9,SNR=21
comp=Z,8.6nm,0.7s
TDK Taldyqorghan 69.12 320 *e*P P 10 19 41.8 +0.2
TDK pmax pmax
comp=Z,10.0nm,0.8s
TDK Taldyqorghan 69.12 320 *e*P P 10 19 41.9 +0.2
comp=Z,9.7nm,0.8s
CD2 Chengdu 69.24 294 P P 10 19 41.6 -1.0
CD2 pmax pmax
comp=Z,50nm,0.6s
OBN Obninsk 69.39 351 *e*P P 10 19 42.4 -0.6
OBN *e**PP pP 10 19 48.0 -3.8
OBN *e* 10 20 04.4
OBN *e* 10 22 16.7
OBN *e*PPP PPP 10 23 55.3
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,925nm,19.0s
GOMU GeErMu 69.49 304 P P 10 19 42.4 -2.1
GOMU pmax pmax
comp=Z,11nm,0.8s

PDGK	**Podgornoye**	**70.15**	**319**	P		**P**	**10 19 49.1**	**+1.0**
NACGM	**Naroch**	**70.22**	**357**	*e*P		**P**	**10 19 48.6**	**+0.4**
	comp=Z,35nm,0.8s,baz=3.3							
SHLS	**Shalkode**	**70.31**	**319**	*e*P		**P**	**10 19 48.3**	**-0.8**
SHLS				pmax	pmax			
	comp=Z,6.0nm,0.5s							
SHLS	**Shalkode**	**70.31**	**319**	*e*P		**P**	**10 19 48.4**	**-0.8**
	comp=Z,5.8nm,0.5s							
KPKS	**Kokpek**	**70.34**	**319**	*e*P		**P**	**10 19 49.6**	**+0.4**
KPKS	**Kokpek**	**70.34**	**319**	*e*P		**P**	**10 19 49.6**	**+0.4**
UZB	**Uzynbulak**	**70.48**	**319***c*	*i*P		**P**	**10 19 50.3**	**+0.1**
UZB				pmax	pmax			
	comp=Z,8.0nm,1.3s							
UZB	**Uzynbulak**	**70.48**	**319**	⇑*i*P		**P**	**10 19 50.3**	**+0.1**
	comp=Z,7.7nm,1.3s							
MNK	**Minsk**	**70.58**	**356**	*i* LR		LR	10 52 21.9	
MNK	**Minsk**	**70.58**	**356**	*i* P		**P**	**10 19 49.3**	**-1.1**
MNK				*i*			10 20 12.2	
MNK				*i*			10 22 23.8	
MNK				*i* PPP		PPP	10 24 04.8	
MNK				*i* S		**S**	**10 28 59.7**	**-2.0**
MNK				*i* SS		**SS**	**10 33 27.7**	**-4.4**
MNK				*i* SSS		SSS	10 36 46.5	
MNK				pmax	pmax			
	comp=E,26nm,0.9s							
MNK				pmax	pmax			
	comp=N,24nm,0.6s							
MNK				pmax	pmax			
	comp=Z,45nm,0.7s							
MNK	**Minsk**	**70.58**	**356**	*i* P		**P**	**10 19 49.3**	**-1.1**
	comp=E,26nm,0.9s							
MNK	**Minsk**	**70.58**	**356**	*i* P		**P**	**10 19 49.3**	**-1.1**
	comp=N,24nm,0.6s							
MNK	**Minsk**	**70.58**	**356**	*i* P		**P**	**10 19 49.3**	**-1.1**
	comp=Z,45nm,0.7s,baz=4.0							
MNK	**Minsk**	**70.58**	**356**	*i* PcP		**PcP**	**10 20 12.2**	**+0.8**
MNK	**Minsk**	**70.58**	**356**	*i* PP		PP	10 22 23.9	-2.2
MNK	**Minsk**	**70.58**	**356**	*i* PPP		PPP	10 24 04.8	
MNK	**Minsk**	**70.58**	**356**	*i* S		**S**	**10 28 59.7**	**-2.0**
MNK	**Minsk**	**70.58**	**356**	*i* SS		SS	10 33 27.8	-4.4
MNK	**Minsk**	**70.58**	**356**	*i* SSS		SSS	10 36 46.5	
MNK	**Minsk**	**70.58**	**356**	*i* LQ		LQ	10 44 47.5	
BELG	**Belogornoye**	**70.62**	**343***d*	*i*P		**P**	**10 19 50.6**	**0.0**
BELG				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BTLS	**Baital**	**70.64**	**323**	*e*P		**P**	**10 19 51.1**	**+0.2**
BTLS	**Baital**	**70.64**	**323**	*e*P		**P**	**10 19 51.2**	**+0.2**
SATY	**Saty**	**70.79**	**319**	*e*P		**P**	**10 19 52.2**	**+0.2**
SATY				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SATY	**Saty**	**70.79**	**319**	*e*P		**P**	**10 19 52.3**	**+0.2**
	comp=Z,8.5nm,1.0s							
KUU	**Kurty**	**70.83**	**321**	*e*P		**P**	**10 19 52.4**	**+0.3**
KUU	**Kurty**	**70.83**	**321**	*e*P		**P**	**10 19 52.5**	**+0.3**
BSEG	**Bad Segeberg**	**70.92**	**7**	*e*P		**P**	**10 19 53.3**	**+0.9**
	comp=Z,8.1nm,1.0s,baz=353,slow=5.8							
AB31	**Akbulak array**	**71.03**	**334**	*i* P		**P**	**10 19 53.3**	**+0.1**
AB31				pmax	pmax			
	comp=Z,22nm,0.9s							
AB31	**Akbulak array**	**71.03**	**334**	P		**P**	**10 19 53.6**	**+0.4**
ABKAR	**Akbulak array**	**71.03**	**334**	P		**P**	**10 19 53.6**	**+0.4**
MDOK	**Medeo**	**71.21**	**320**	*e*P		**P**	**10 19 54.7**	**+0.1**
MDOK	**Medeo**	**71.21**	**320**	*e*P		**P**	**10 19 54.7**	**+0.1**
GYA	**Guiyang**	**71.21**	**289**	⇓P		**P**	**10 19 55.4**	**+0.6**
GYA				pmax	pmax			
	comp=Z,41nm,0.6s							
AAA	**Alma-Ata**	**71.22**	**320**	*e*P		**P**	**10 19 54.7**	**+0.2**
AAA	**Alma-Ata**	**71.22**	**320**	*e*P		**P**	**10 19 54.8**	**+0.2**
TNSS	**Tian-Shan**	**71.35**	**320**	*e*P		**P**	**10 19 55.6**	**-0.2**
TNSS	**Tian-Shan**	**71.35**	**320**	*e*P		**P**	**10 19 55.6**	**-0.2**
LPSR	**Galich'ya Gora**	**71.63**	**349**	*e*P		**P**	**10 19 56.2**	**-0.5**
LPSR				pmax	pmax			
	comp=Z,22nm,0.8s							
SGDS	**Sogindy**	**71.83**	**322**	⇑*i*P		**P**	**10 19 58.5**	**+0.3**
TKM2	**Tokmak 2**	**71.94**	**321**	P		**P**	**10 19 59.9**	**+0.8**
	SNR=5.4							
USP	**Ospenovka**	**72.03**	**322**	P		**P**	**10 20 00.2**	**+0.8**
	SNR=6.6							
KDJ	**Kajisay**	**72.05**	**320**	P		**P**	**10 20 00.6**	**+0.9**
WUS	**Wushi**	**72.08**	**318**	IAmb		IAmb	10 20 01.3	
	comp=Z,18nm,0.8s							
TARG	**Taragay, Kyrgy**	**72.16**	**319**	P		**P**	**10 20 02.4**	**+1.7**
TARG	**Taragay, Kyrgy**	**72.16**	**319**	IAmb		IAmb	10 20 05.1	
	comp=Z,7.6nm,0.7s							
TARG	**Taragay, Kyrgy**	**72.16**	**319**	P		**P**	**10 20 02.4**	**+1.7**
BOOM	**Boomskoye usch**	**72.19**	**321**	P		**P**	**10 20 01.4**	**+0.8**
KBK	**Karagaybulak**	**72.41**	**321**	P		**P**	**10 20 02.8**	**+1.0**
	SNR=6.0							
VORR	**Voronezh**	**72.51**	**348**	*e*P		**P**	**10 20 01.4**	**-0.6**
VORR				pmax	pmax			
	comp=Z,40nm,0.4s							
FLTG	**Flechtingen**	**72.58**	**6**	*e*P		**P**	**10 20 02.6**	**+0.2**
	comp=Z,8.7nm,0.9s,baz=353,slow=5.8							
AAK	**Ala-Archa**	**72.59**	**322**	P		**P**	**10 20 03.8**	**+0.9**
	SNR=7.9							
AAK	**Ala-Archa**	**72.59**	**322***c*	*i*P		**P**	**10 20 03.7**	**+0.9**
AAK				pmax	pmax			
	comp=Z,19nm,1.0s							
AAK	**Ala-Archa**	**72.59**	**322**	P		**P**	**10 20 03.3**	**+0.4**
AAK				IAmb		IAmb	10 20 04.5	
	comp=Z,23nm,1.1s							
VRH	**Novokhopyorsk**	**72.66**	**347**	*e*P		**P**	**10 20 01.4**	**-1.5**
VRH				pmax	pmax			
	comp=Z,22nm,1.0s							
EKS2	**Erkin-Say**	**72.82**	**322**	P		**P**	**10 20 05.2**	**+1.0**
	SNR=7.3							
VSR	**Storozhevoye**	**72.96**	**348**	*e*P		**P**	**10 20 04.1**	**-0.6**
VSR				pmax	pmax			
	comp=Z,18nm,0.5s							
CLZ	**Clausthal**	**73.01**	**7**	*e*P		**P**	**10 20 06.0**	**+0.9**
	comp=Z,9.3nm,0.8s,baz=353,slow=5.8							
NRN	**Naryn**	**73.09**	**320**	IAmb		IAmb	10 20 08.1	
	comp=Z,26nm,1.2s							
VORD	**Divnogorie**	**73.19**	**348**	*e*P		**P**	**10 20 03.2**	**-2.9**
VORD				pmax	pmax			
	comp=Z,20nm,0.9s							
GTTG	**Gottingen**	**73.27**	**7**	*e*P		**P**	**10 20 07.6**	**+1.0**
	comp=Z,18nm,1.0s,baz=353,slow=5.8							
WIMM	**Wimmelburg**	**73.40**	**6**	P		**P**	**10 20 08.3**	**+1.0**
DZA	**Taraz**	**73.46**	**324**	*e*P		**P**	**10 20 08.1**	**+0.2**
DZA				pmax	pmax			
	comp=Z,5.0nm,0.5s							
DZA	**Taraz**	**73.46**	**324**	*e*P		**P**	**10 20 08.2**	**+0.2**
	comp=Z,5.5nm,0.5s							
KASTN	**Kahler Asten**	**73.49**	**8**	*e*P		**P**	**10 20 07.9**	**-0.1**
	comp=Z,9.0nm,1.2s,baz=353,slow=5.8							
KKAR	**Karatay Array**	**73.55**	**325**	P		**P**	**10 20 08.8**	**+0.4**
CLL	**Collm**	**73.70**	**5**	*i* P		**P**	**10 20 09.4**	**+0.3**
CLL				pmax	pmax			
	comp=Z,14nm,1.2s							
CLL	**Collm**	**73.70**	**5**	*e*P		**P**	**10 20 09.0**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=353,slow=5.8							
CLL	**Collm**	**73.70**	**5**	P		**P**	**10 20 08.9**	**-0.2**
CLL	**Collm**	**73.70**	**5**	*i* P		**P**	**10 20 09.4**	**+0.3**
	comp=Z,14nm,1.2s							
NEUB	**Neuenburg**	**73.73**	**6**	*e*P		**P**	**10 20 09.6**	**+0.3**
	comp=Z,20nm,1.2s,baz=353,slow=5.8							
RNPP9	**Sopachiv**	**73.75**	**357**	P		**P**	**10 20 09.4**	**+0.1**
PZH	**PanZhiHua**	**73.81**	**293**	P		**P**	**10 20 10.1**	**-0.2**
RNPP8	**Varash**	**73.82**	**357**	P		**P**	**10 20 09.8**	**0.0**
BRLS	**Boroldoy**	**73.83**	**325***c*	*i*P		**P**	**10 20 11.7**	**+1.6**
BRLS	**Boroldoy**	**73.83**	**325**	⇑*i*P		**P**	**10 20 11.7**	**+1.6**
MEM	**Membach**	**73.86**	**10**	*d*P		**P**	**10 20 09.9**	**-0.1**
RNPP5	**Staryi Chortor**	**73.93**	**357**	P		**P**	**10 20 10.4**	**0.0**
BMRD	**Maredsous**	**74.03**	**11**	*d*P		**P**	**10 20 11.8**	**+0.8**
	comp=Z,8.0nm,1.0s							
MI28	**MI28_Pidlybu**	**74.16**	**356**	P		**P**	**10 20 10.7**	**-1.1**
BRG	**Berggiesshubel**	**74.18**	**5**	P		**P**	**10 20 12.4**	**+0.5**
BRG	**Berggiesshubel**	**74.18**	**5**	*e*P		**P**	**10 20 12.2**	**+0.2**
	comp=Z,13nm,1.1s,baz=353,slow=5.8							
BRG	**Berggiesshubel**	**74.18**	**5**	P		**P**	**10 20 12.4**	**+0.5**
BRG	**Berggiesshubel**	**74.18**	**5**	*e*P		**P**	**10 20 12.2**	**+0.3**
BRG				Amp			10 20 14.1	
	comp=Z,11nm,1.1s							
DOU	**Dourbes**	**74.22**	**11**	*d*P		**P**	**10 20 12.3**	**+0.2**
	comp=Z,3.7nm,1.1s							
AK21	**Malin Array Si**	**74.25**	**355**	P		**P**	**10 20 11.5**	**-0.8**
AK23	**Malin Array Si**	**74.26**	**355**	P		**P**	**10 20 11.6**	**-0.8**
AK22	**Malin Array Si**	**74.27**	**355**	P		**P**	**10 20 11.6**	**-0.8**
MOX	**Moxa**	**74.28**	**6**	P		**P**	**10 20 13.1**	**+0.6**
MOX	**Moxa**	**74.28**	**6**	*e*P		**P**	**10 20 13.0**	**+0.5**
	comp=Z,18nm,1.1s,baz=353,slow=5.8							
MOX				*e*L		L	10 54 10.8	
	comp=Z,1µm,18.2s							
MOX	**Moxa**	**74.28**	**6**	P		**P**	**10 20 13.1**	**+0.6**
AK20	**Malin Array Si**	**74.29**	**355**	P		**P**	**10 20 11.9**	**-0.6**
AK03	**Malin Array Si**	**74.29**	**355**	P		**P**	**10 20 11.8**	**-0.7**
AK04	**Malin Array Si**	**74.30**	**355**	P		**P**	**10 20 11.8**	**-0.8**
AK18	**Malin Array Si**	**74.31**	**355**	P		**P**	**10 20 11.8**	**-0.8**
AK19	**Malin Array Si**	**74.31**	**355**	P		**P**	**10 20 11.8**	**-0.8**
KSP	**Ksiaz**	**74.31**	**3**	P		**P**	**10 20 12.7**	**0.0**
	comp=Z,11nm,1.1s							
AKASG	**Malin Array Be**	**74.32**	**355**	P		**P**	**10 20 12.2**	**-0.5**
	comp=Z,8.9nm,0.4s,baz=6.7,slow=5.7,SNR=59							
	comp=Z,8.9nm,0.4s							
AKASG	**Malin Array Be**	**74.32**	**355**	*i* P		**P**	**10 20 12.1**	**-0.6**
AKASG				pmax	pmax			
	comp=Z,9.0nm,0.4s							
AKASG	**Malin Array Be**	**74.32**	**355**	P		**P**	**10 20 12.2**	**-0.5**
AKBB	**Malin Array Si**	**74.32**	**355***c*	*i*P		**P**	**10 20 12.2**	**-0.5**
AKBB				pmax	pmax			
	comp=Z,40nm,1.0s							
AKBB	**Malin Array Si**	**74.32**	**355**	P		**P**	**10 20 12.4**	**-0.2**
AKBB	**Malin Array Si**	**74.32**	**355**	P		**P**	**10 20 11.8**	**-0.9**
KIEV	**Kiev**	**74.33**	**355**	P		**P**	**10 20 12.0**	**-0.7**
KIEV	**Kiev**	**74.33**	**355**	P		**P**	**10 20 12.3**	**-0.4**
KIEV	**Kiev**	**74.33**	**355**	P		**P**	**10 20 11.8**	**-0.9**
	comp=Z,166nm,0.9s							
AK01	**Malin Array Si**	**74.33**	**355**	P		**P**	**10 20 11.9**	**-0.8**
AK15	**Malin Array Si**	**74.33**	**355**	P		**P**	**10 20 11.9**	**-0.9**
AK17	**Malin Array Si**	**74.34**	**355**	P		**P**	**10 20 12.0**	**-0.8**
AK11	**Malin Array Si**	**74.34**	**355**	P		**P**	**10 20 12.0**	**-0.8**
AK16	**Malin Array Si**	**74.36**	**355**	P		**P**	**10 20 12.0**	**-0.9**
AK02	**Malin Array Si**	**74.36**	**355**	P		**P**	**10 20 12.1**	**-0.8**
AK12	**Malin Array Si**	**74.38**	**355**	P		**P**	**10 20 12.2**	**-0.8**
AK08	**Malin Array Si**	**74.38**	**355**	P		**P**	**10 20 12.2**	**-0.9**
AK14	**Malin Array Si**	**74.39**	**355**	P		**P**	**10 20 12.3**	**-0.8**
AK13	**Malin Array Si**	**74.42**	**355**	P		**P**	**10 20 12.4**	**-0.9**
AK06	**Malin Array Si**	**74.43**	**355**	P		**P**	**10 20 12.5**	**-0.9**
PLN	**Plauen**	**74.47**	**6**	*e*P		**P**	**10 20 14.1**	**+0.4**
	comp=Z,2.3nm,1.0s,baz=353,slow=5.8							
CHM	**Chimkent**	**74.55**	**325**	*e*P		**P**	**10 20 14.5**	**+0.3**
CHM				pmax	pmax			
	comp=Z,14nm,0.6s							
CHM	**Chimkent**	**74.55**	**325**	*e*P		**P**	**10 20 14.6**	**+0.3**
	comp=Z,14nm,0.6s							
IUG	**Iuzhnay**	**74.56**	**324**	*e*P		**P**	**10 20 14.6**	**+0.2**
IUG				pmax	pmax			
	comp=Z,18nm,0.9s							
IUG	**Iuzhnay**	**74.56**	**324**	*e*P		**P**	**10 20 14.6**	**+0.2**
	comp=Z,18nm,0.9s							
TANN	**Tannenbergstha**	**74.56**	**6**	*e*P		**P**	**10 20 14.5**	**+0.3**
	comp=Z,5.8nm,1.1s,baz=353,slow=5.8							
OSTC	**Ostas**	**74.59**	**3**	*e*P		**P**	**10 20 15.6**	**+1.2**
OSTC	**Ostas**	**74.59**	**3**	*e*P		**P**	**10 20 15.6**	**+1.2**
UPC	**Upice**	**74.64**	**3**	P		**P**	**10 20 15.1**	**+0.5**
DPC	**Dobruska-Polom**	**74.80**	**3**	*e*P		**P**	**10 20 16.5**	**+0.9**
DPC	**Dobruska-Polom**	**74.80**	**3**	*e*P		**P**	**10 20 16.5**	**+0.9**
DPC	**Dobruska-Polom**	**74.80**	**3**	P		**P**	**10 20 16.0**	**+0.4**
	comp=Z,975nmcomp=Z,16nm,1.1s							
DPC	**Dobruska-Polom**	**74.80**	**3**	P		**P**	**10 20 16.5**	**+0.9**
WLF	**Walferdange**	**74.81**	**10**	*d*P		**P**	**10 20 15.8**	**+0.2**
OJC	**Ojcow**	**75.01**	**1**	P		**P**	**10 20 16.8**	**+0.1**
	comp=Z,8.9nm,1.4s							
KRLC	**Kraliky**	**75.09**	**3**	*e*P		**P**	**10 20 17.8**	**+0.5**
KRLC	**Kraliky**	**75.09**	**3**	*e*P		**P**	**10 20 17.8**	**+0.5**
LUBAR	**Lubar, Ukraine**	**75.17**	**356**	P		**P**	**10 20 16.5**	**-1.1**
ROTZ	**Rotzenmuhle**	**75.19**	**6**	*e*P		**P**	**10 20 18.5**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=353,slow=5.8							
GRF	**Grafenberg Arr**	**75.21**	**7**	*e*L		L	10 58 42.8	
	comp=Z,1µm,21.5s							
KSH2	**Kashi**	**75.25**	**319**	P		**P**	**10 20 19.4**	**+0.9**
KSH2				pP		pP	10 20 24.3	-3.1
KSH2				sP		PcP	10 20 32.3	+0.5
KSH2				pmax	pmax			
	comp=Z,40nm,0.9s							
STEB	**Steborice**	**75.26**	**2**	*e*P		**P**	**10 20 18.7**	**+0.5**
MORC	**Moravsky Berou**	**75.41**	**2**	⇓P		P	10 20 14.3	-4.8
MORC	**Moravsky Berou**	**75.41**	**2**	⇓P		P	10 20 14.3	-4.8
MORC	**Moravsky Berou**	**75.41**	**2**	*e*P		**P**	**10 20 19.0**	**-0.1**
NIE	**Niedzica**	**75.81**	**1**	P		**P**	**10 20 22.2**	**+0.8**
	comp=Z,3.6nm,0.8s							
STHS	**Stebnicka Huta**	**75.82**	**360**	*e*P		**P**	**10 20 22.0**	**+0.6**
STHS				pmax	pmax			
	comp=Z,19nm,0.7s							
STHS	**Stebnicka Huta**	**75.82**	**360**	*e*P		**P**	**10 20 22.0**	**+0.6**
VRAC	**Vranov**	**75.85**	**3**	⇓P		**P**	**10 20 22.3**	**+0.7**
VRAC	**Vranov**	**75.85**	**3**	⇓P		**P**	**10 20 22.3**	**+0.7**
VRAC	**Vranov**	**75.85**	**3**	*e*P		**P**	**10 20 21.9**	**+0.3**
VRAC	**Vranov**	**75.85**	**3**	P		**P**	**10 20 22.3**	**+0.7**
WET	**Wettzell**	**75.85**	**6**	*e*P		**P**	**10 20 22.3**	**+0.6**
	comp=Z,7.4nm,1.2s,baz=353,slow=5.8							
KHC	**Kasperske Hory**	**75.91**	**5**	⇑*i*P		**P**	**10 20 22.8**	**+0.9**
KHC				pmax	pmax			
	comp=Z,16nm,1.4s							
KHC	**Kasperske Hory**	**75.91**	**5**	*e*P		**P**	**10 20 22.9**	**+0.9**
KHC	**Kasperske Hory**	**75.91**	**5**	P		**P**	**10 20 22.8**	**+0.9**
KHC				IAmb		IAmb	10 20 24.0	
	comp=Z,15nm,1.2s							
KHC	**Kasperske Hory**	**75.91**	**5**	P		**P**	**10 20 22.6**	**+0.7**
	comp=Z,11nm,1.2s							
LANS	**Liptovska Anna**	**76.07**	**1**	*e*P		**P**	**10 20 24.6**	**+1.7**
LANS				pmax	pmax			
	comp=Z,5.0nm,0.8s							
LANS	**Liptovska Anna**	**76.07**	**1**	*e*P		**P**	**10 20 24.6**	**+1.7**
KRUC	**Moravsky**	**76.09**	**3**	P		**P**	**10 20 23.4**	**+0.5**
KRUC	**Moravsky**	**76.09**	**3**	*e*P		**P**	**10 20 23.1**	**+0.1**
KRUC	**Moravsky**	**76.09**	**3**	P		**P**	**10 20 23.4**	**+0.5**
GEC2	**GERESS Array S**	**76.20**	**5**	*e*P		**P**	**10 20 23.8**	**+0.1**
	comp=Z,11nm,1.3s,baz=353,slow=5.8							
GERES	**GERESS Array B**	**76.20**	**5**	P		**P**	**10 20 24.1**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=343,slow=4.2,SNR=16							
	comp=Z,1.6nm,0.5s							
GERES	**GERESS Array B**	**76.20**	**5**	P		**P**	**10 20 23.7**	**0.0**
KOLS	**Kolonicke sedl**	**76.30**	**359**	P		**P**	**10 20 25.3**	**+1.2**
KOLS	**Kolonicke sedl**	**76.30**	**359**	P		**P**	**10 20 25.3**	**+1.2**
DRK	**Karamyk**	**76.33**	**322**	P		**P**	**10 20 25.5**	**+0.7**
JAVC	**Velka Javorina**	**76.33**	**2**	*e*P		**P**	**10 20 25.2**	**+0.8**
JAVC	**Velka Javorina**	**76.33**	**2**	P		**P**	**10 20 25.9**	**+1.5**
BFO	**Black Forest**	**76.34**	**9**	*e*P		**P**	**10 20 24.1**	**-0.3**
	comp=Z,12nm,1.5s,baz=353,slow=5.8							
ECH	**Echery**	**76.34**	**10**	P		**P**	**10 20 25.2**	**+0.8**
MODS	**Modra-Piesok**	**76.81**	**3**	*e*P		**P**	**10 20 28.2**	**+1.2**
MODS				pmax	pmax			
	comp=Z,23nm,1.1s							
MODS	**Modra-Piesok**	**76.81**	**3**	P		**P**	**10 20 28.2**	**+1.2**
MODS	**Modra-Piesok**	**76.81**	**3**	*e*P		**P**	**10 20 28.2**	**+1.2**
SLVN	**Son La**	**76.81**	**288**	P		**P**	**10 20 28.5**	**+1.0**
SLVN	**Son La**	**76.81**	**288**	P		**P**	**10 20 28.1**	**+0.5**
WINA	**Alland / Wiene**	**77.04**	**4**	*e*P		**P**	**10 20 29.5**	**+1.1**
	comp=Z,8.4nm,0.9s							
CONA	**Conrad Observa**	**77.21**	**4**	*i* P		**P**	**10 20 30.3**	**+0.9**
	comp=Z,11nm,1.2s,SNR=6.7							
MOA	**Molln**	**77.22**	**5**	*e*P		**P**	**10 20 30.7**	**+1.4**
	comp=Z,1.4nm,0.4s							
RJOB	**Jochberg**	**77.25**	**6**	*e*P		**P**	**10 20 30.0**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=353,slow=5.8							
GAR	**Garm**	**77.28**	**323**	P		**P**	**10 20 30.0**	**0.0**
PSZ	**Piszkesteto**	**77.31**	**1**	P		**P**	**10 20 31.4**	**+1.5**
PSZ				pmax	pmax			
	comp=Z,13nm,1.0s							
PSZ	**Piszkesteto**	**77.31**	**1**	P		**P**	**10 20 30.8**	**+0.8**
PSZ				IAmb		IAmb	10 20 32.1	
	comp=Z,13nm,1.0s							
BIOA	**Bad Ischl, Aus**	**77.34**	**5**	*e*P		**P**	**10 20 31.4**	**+1.3**
	comp=Z,5.5nm,1.1s							
RETA	**Reutte**	**77.37**	**7**	*e*P		**P**	**10 20 31.6**	**+1.3**
	comp=Z,4.4nm,1.1s							
RONA	**Rosalia, Austr**	**77.45**	**3**	*e*P		**P**	**10 20 32.2**	**+1.5**
	comp=Z,7.8nm,1.3s							
BUR08	**Bucovina Ar. S**	**77.53**	**357**	IAmb		IAmb	10 20 32.6	
	comp=Z,13nm,1.2s							
MOTA	**Moosalm**	**77.53**	**7**	*i* P		**P**	**10 20 31.9**	**+0.6**
	comp=Z,9.5nm,1.0s,SNR=5.4							
LESA	**Schwarzleotal**	**77.56**	**6**	*e*P		**P**	**10 20 32.0**	**+0.6**
	comp=Z,3.3nm,0.6s							
BURAR	**Bucovina Array**	**77.56**	**357**	P		**P**	**10 20 31.8**	**+0.4**
BURAR				pmax	pmax			
	comp=Z,8.0nm,0.7s							
BURAR	**Bucovina Array**	**77.56**	**357**	P		**P**	**10 20 31.9**	**+0.5**
BURAR				IAmb		IAmb	10 20 32.6	
	comp=Z,8.3nm,0.7s							
WATA	**Walderalm**	**77.58**	**7**	*e*P		**P**	**10 20 33.0**	**+1.4**
	comp=Z,18nm,1.1s							
WTTA	**Wattenberg**	**77.65**	**7**	*e*P		**P**	**10 20 32.8**	**+0.8**
	comp=Z,11nm,0.7s							
SQTA	**Sankt Quirin**	**77.67**	**7**	*i* P		**P**	**10 20 32.9**	**+0.9**
	comp=Z,15nm,1.2s,SNR=5.6							
FETA	**Feichten**	**77.83**	**7**	*e*P		**P**	**10 20 33.4**	**+0.4**
	comp=Z,6.8nm,1.0s							
ARSA	**Arzberg**	**77.87**	**4**	P		**P**	**10 20 33.3**	**+0.3**
ARSA	**Arzberg**	**77.87**	**4**	*e*P		**P**	**10 20 34.0**	**+0.9**
	comp=Z,9.4nm,1.3s							
KBA	**Koelnbreinsper**	**77.94**	**5**	*i* P		**P**	**10 20 34.8**	**+1.2**
	comp=Z,14nm,0.7s,SNR=5.5							
SESA	**Seetaler Alpe,**	**77.97**	**5**	*i* P		**P**	**10 20 34.6**	**+0.8**
	comp=Z,21nm,1.4s,SNR=3.7							
CHGR	**Chuyangaron**	**77.98**	**324**	⇑*i*P		**P**	**10 20 34.1**	**+0.2**
CHGR				pmax	pmax			
	comp=Z,100nm,0.9s							
CHGR	**Chuyangaron**	**77.98**	**324**	P		**P**	**10 20 34.1**	**+0.2**
MANEM	**Manem**	**78.09**	**321**	IAmb		IAmb	10 20 37.2	
	comp=Z,54nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**78.19**	**8**	IAmb		IAmb	10 20 38.0	
	comp=Z,14nm,1.4s							
BIZ	**Bicaz**	**78.21**	**357**	⇑P		**P**	**10 20 33.9**	**-1.0**
ABTA	**Abfaltersbach**	**78.22**	**6**	*e*P		**P**	**10 20 36.3**	**+1.3**
	comp=Z,11nm,1.4s							
NE56	**Odesa**	**78.23**	**353**	P		**P**	**10 20 34.2**	**-0.7**
MYKA	**Terra Mystica**	**78.40**	**5**	*e*P		**P**	**10 20 37.0**	**+0.9**
	comp=Z,2.4nm,0.7s							
SOKA	**Soboth**	**78.42**	**4**	*i* P		**P**	**10 20 37.3**	**+1.2**
	comp=Z,9.5nm,0.8s,SNR=13							
PURM	**Purcari**	**78.44**	**354**	P		**P**	**10 20 35.8**	**-0.3**
GOF	**Gofitskoye**	**78.47**	**344***c*	*e*P		**P**	**10 20 36.5**	**+0.1**
MARR	**Marisel-Cluj**	**78.55**	**359**	⇑P		**P**	**10 20 36.9**	**0.0**
OBKA	**Obir**	**78.57**	**5**	*i* P		**P**	**10 20 37.6**	**+0.6**
	comp=Z,13nm,0.6s,SNR=11							
ONER	**Baraj Valea Uz**	**78.81**	**356**	⇑P		**P**	**10 20 38.7**	**+0.5**
SIRR	**Siria**	**78.97**	**360**	⇑P		**P**	**10 20 39.6**	**+0.6**
GHRR		**79.04**	**356**	P		**P**	**10 20 39.9**	**+0.5**
DOPR	**Dopca**	**79.20**	**357**	⇓P		**P**	**10 20 40.1**	**-0.3**
VLDR	**Vladesti**	**79.22**	**355**	⇑P		**P**	**10 20 40.5**	**0.0**
VRI	**Vrincioaia**	**79.26**	**356**	⇑P		**P**	**10 20 41.1**	**+0.4**
VRI	**Vrincioaia**	**79.26**	**356**	⇑P		**P**	**10 20 41.1**	**+0.4**
PLOR	**Plostina**	**79.28**	**356**	⇓P		**P**	**10 20 40.1**	**-0.7**
PLOR	**Plostina**	**79.28**	**356**	⇓P		**P**	**10 20 40.1**	**-0.7**
COVR	**Voineasa-Covas**	**79.30**	**356**	⇓P		**P**	**10 20 39.7**	**-1.3**
SHAA	**Shahritus**	**79.32**	**324**	P		**P**	**10 20 41.7**	**+0.5**
SHAA				IAmb		IAmb	10 20 44.0	
	comp=Z,45nm,1.0s							
SAHR	**Sahastru**	**79.40**	**356**	⇑P		**P**	**10 20 40.5**

PTEO	**Sao Teotonio**	**84.19**	**23**	*e*P	**P**	**10 21 06.7**	**-0.1**
PTEO				*i* IAmb	IAmb	10 21 08.8	
	comp=Z,56nm,1.6s						
PCVE	**Castro Verde**	**84.26**	**23**	*e*P	**P**	**10 21 08.2**	**+1.1**
PCVE				*e*pP	**sP**	**10 21 18.2**	**-1.2**
PVAQ	**Vaqueiros**	**84.55**	**23**	*e*P	**P**	**10 21 09.9**	**+1.3**
PVAQ				*i* IAmb	IAmb	10 21 11.5	
	comp=Z,28nm,1.5s						
PVAQ				*e*pP	**pP**	**10 21 18.8**	**+1.2**
PBDV	**Barranco-do-Ve**	**84.66**	**23**	*e*P	**P**	**10 21 10.2**	**+1.0**
PBDV				*i* IAmb	IAmb	10 21 53.4	
	comp=Z,30nm,1.7s						
BR106	**Keskin Array S**	**84.90**	**350**	P	**P**	**10 21 11.1**	**+0.5**
	comp=Z,71nmcomp=Z,8.3nm,1.0s						
BRTR	**Keskin Array B**	**84.91**	**350**	P	**P**	**10 21 11.2**	**+0.7**
	comp=Z,6.3nm,0.9s,baz=20,slow=3.9,SNR=14						
	comp=Z,6.3nm,0.9s						
BR104	**Keskin Array S**	**84.93**	**350**	P	**P**	**10 21 11.2**	**+0.5**
	comp=Z,72nmcomp=Z,10nm,1.0s						
VSL	**Villasalto**	**85.19**	**9**	P	**P**	**10 21 12.4**	**+0.6**
VSL				IAmb	IAmb	10 21 13.4	
	comp=Z,8.2nm,0.7s						
TIP	**Timpagrande**	**85.97**	**3**	P	**P**	**10 21 16.2**	**+0.4**
PMPS	**Porto Santo**	**86.44**	**31**	*e*P	**P**	**10 21 20.8**	**+2.8**
PMPS				*i* IAmb	IAmb	10 21 45.1	
	comp=Z,125nm,1.4s						
CTA	**Charters Tower**	**88.26**	**230**	P	**P**	**10 21 27.1**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=59,slow=3.6,SNR=4.4						
	comp=Z,6.6nm,0.7s						
BHPL	**Bhopal**	**88.42**	**310**	*e*P	**P**	**10 21 27.4**	**-0.4**
KEST	**Kesra**	**88.92**	**10**	P	**P**	**10 21 29.8**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=334,slow=4.4,SNR=3.7						
	comp=Z,6.0nm,0.8s						
MD01	**Midelt array s**	**89.56**	**22**	P	**P**	**10 21 33.6**	**+0.5**
MD31	**MD31**	**89.56**	**22**	P	**P**	**10 21 33.7**	**+0.6**
MD31				IAmb	IAmb	10 21 34.5	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**93.75**	**240**	P	**P**	**10 21 51.3**	**-1.1**
	comp=Z,2.2nm,1.0s,baz=36,slow=5.2,SNR=7.3						
	comp=Z,2.2nm,1.0s						
WRA	**Warramunga Arr**	**93.75**	**240**	*i* P	**P**	**10 21 50.5**	**-1.9**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**144.92**	**180**	PKPbc	**PKPab**	**10 28 09.8**	**-0.7**
	comp=Z,4.6nm,0.6s,baz=23,slow=0.6,SNR=36						
QSPA	**South Pole Qui**	**144.92**	**180**		**PKPab**	**10 28 10.3**	**-0.2**
BOSA	**Boshof**	**153.33**	**352**	PKPbc	**PKPbc**	**10 28 33.4**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=111,slow=3.5,SNR=3.0						
BOSA	**Boshof**	**153.33**	**352**		**PKiKP**	**10 28 33.7**	**0.0**
MAW	**Mawson**	**157.01**	**221**	PKPab	**PKPab**	**10 29 00.5**	**+0.4**
	comp=Z,3.7nm,1.0s,baz=116,slow=5.9,SNR=4.6						
MAW	**Mawson**	**157.01**	**221**		**PKPab**	**10 29 00.8**	**+0.7**

*KOLA **22** 10:17:12.5, 64°.73N×30°.85E, h0km, ML2.4, Error ellipse: s-maj=14.6km s-min=9.8km az=170.0, Kostomuksha, Karelia*
*HEL **22** 10:17:12.6±0.3, 64°.79N×30°.63E, h0km, ML2.0, Explosion*
*IDC **22** 10:17:14.1±2.7, 64°.77N×30°.53E, h0km, mbtmp3.4/3, ML2.2/3, Error ellipse: s-maj=44.4km s-min=8.9km az=101.0*

ISC 22 10:17:12.0±0.8, **64°.85N**±0°.02×**30°.61E**±0°.04, **h0**km, **n44, s56/62, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KU1	**Kurvinen**	**0.84**	**329**	PG	**Pg**	**10 17 28.7**	**+0.6**
KU6	**Riekki**	**1.22**	**346**	PG	**Pg**	**10 17 35.2**	**0.0**
	baz=162						
KU6				smax	smax	10 17 51.2	
	comp=Z,13nm,0.2s						
KU6				SB	**Sb**	**10 17 52.3**	**+0.2**
MSF	**Maaselka**	**1.25**	**329**	PG	**Pb**	**10 17 36.3**	**-0.1**
	baz=147						
MSF				SG	**Sb**	**10 17 53.2**	**+0.1**
KU2	**Taivalkoski**	**1.32**	**312**	PG	**Pg**	**10 17 37.2**	**-0.1**
	baz=133						
OLKF	**Oulanka, Finla**	**1.56**	**342**	PG	**Pn**	**10 17 41.4**	**+0.5**
OLKF				smax	smax	10 18 01.1	
	comp=Z,12nm,0.2s						
OLKF				SN	**Sg**	**10 18 03.0**	**+1.0**
JOF	**Joensuu**	**1.97**	**171**	*e*P	**Pn**	**10 17 46.2**	**-0.3**
JOF	**Joensuu**	**1.97**	**171**	SG	**Sn**	**10 18 12.3**	**+0.5**
RANF	**Ranua**	**1.98**	**308**	PG	**Pb**	**10 17 48.4**	**-0.5**
	baz=123						
RANF				SG	**Sb**	**10 18 14.7**	**+0.7**
OUL	**Oulu**	**2.02**	**279**	PG	**Pb**	**10 17 48.8**	**-0.7**
OUL				SG	**Sb**	**10 18 15.4**	**+0.3**
KVDA	**Kovda**	**2.07**	**26**	P	**Pb**	**10 17 49.4**	**-1.0**
KVDA				S	**Sb**	**10 18 17.0**	**+0.4**
OBF4	**Vikkela, Lumij**	**2.36**	**272**	PB	**Pb**	**10 17 53.8**	**-1.4**
	baz=92						
OBF4				smax	smax	10 18 22.6	
	comp=Z,10nm,0.2s						
OBF4				SG	**Sb**	**10 18 25.8**	**+1.0**
RNF	**Rovaniemi**	**2.59**	**315**	PN	**Pn**	**10 17 56.8**	**+1.7**
	baz=129						
RNF				SG	**Sb**	**10 18 32.8**	**+1.2**
OBF0	**Syolatti, Pyha**	**2.76**	**266**	PN	**Pn**	**10 17 59.0**	**+1.6**
	baz=76						
OBF0				smax	smax	10 18 34.0	
	comp=Z,7.1nm,0.2s						
OBF0				SG	**Sb**	**10 18 37.8**	**+1.3**
SUF	**Sumiainen**	**2.92**	**225**	*e*P	**Pn**	**10 18 01.0**	**+1.5**
SUF	**Sumiainen**	**2.92**	**225**	PB	**Pn**	**10 18 01.0**	**+1.5**
SUF				smax	smax	10 18 37.3	
	comp=Z,4.1nm,0.2s						
APA0	**Apatity Array**	**2.93**	**18**	P	**Pn**	**10 18 00.8**	**+1.1**
APA0				S	**Sn**	**10 18 37.4**	**+1.9**
APA	**Apatity**	**2.96**	**21**	P	**Pn**	**10 18 01.4**	**+1.4**
APA				S	**Sn**	**10 18 35.4**	**-0.8**
OBF8	**Ulkokalla**	**3.13**	**264**	PN	**Pn**	**10 18 03.6**	**+1.1**
OBF8				smax	smax	10 18 44.6	
	comp=Z,3.6nm,0.2s						
KAF	**Kangasniemi**	**3.36**	**217**	SG	**Sb**	**10 18 55.0**	**+1.4**
LVZ	**Lovozero**	**3.46**	**26**	S	**Sn**	**10 18 47.0**	**-1.8**
LVZ	**Lovozero**	**3.46**	**26**	PN	**Pn**	**10 18 08.2**	**+1.1**
KLF	**Kolari**	**3.62**	**314**	PN	**Pn**	**10 18 10.2**	**+1.0**
KEF	**Keuruu**	**3.73**	**226**	*e*P	**Pn**	**10 18 12.8**	**+2.1**
KEF	**Keuruu**	**3.73**	**226**	SN	**Sn**	**10 18 56.0**	**+0.8**
RAJF	**Raja-Jooseppi**	**3.75**	**347**	PN	**Pn**	**10 18 12.3**	**+1.3**
ERTU	**Ertsjaerv**	**3.88**	**300**	PN	**Pn**	**10 18 14.6**	**+1.8**
ERTU				SG	**Sg**	**10 19 15.2**	**-1.2**
VAF	**Ylistaro**	**3.95**	**246**	*e*P	**Pn**	**10 18 15.5**	**+1.8**
VAF	**Ylistaro**	**3.95**	**246**	PN	**Pn**	**10 18 16.0**	**+2.3**
	baz=59						
VAF				SG	**Sg**	**10 19 15.8**	**-2.8**
FIA0	**FINESS Array S**	**3.99**	**213**	PN	**Pn**	**10 18 14.3**	**0.0**
FIA0				SG	**Sg**	**10 19 16.5**	**-3.5**
FINES	**FINESS Array B**	**3.99**	**213**	Pn	**Pn**	**10 18 14.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=34,slow=13,SNR=4.0						
FINES				Pg	**Pb**	**10 18 22.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=31,slow=17,SNR=9.9						
FINES				Lg	Lg	10 19 14.9	
	comp=Z,1.6nm,0.3s,baz=40,slow=27,SNR=12						
FINES				Rg	Rg	10 19 31.8	
	comp=Z,5.1nm,0.8s,baz=35,slow=24,SNR=6.4						
	comp=Z,0.5nm,0.2s						
UMAU	**Umeaa**	**4.42**	**262**	PN	**Pn**	**10 18 20.3**	**+0.1**
UMAU				SG	**Sg**	**10 19 30.6**	**-3.3**
HEF	**Hetta**	**4.52**	**325**	PN	**Pn**	**10 18 24.0**	**+2.4**
HEF				SG	**Sg**	**10 19 34.1**	**-2.8**
VJF	**Virojoki**	**4.55**	**199**	SG	**Sb**	**10 19 32.2**	**+4.2**
TERR	**Teriberka**	**4.71**	**20**	P	**Pn**	**10 18 25.1**	**+0.9**
LANU	**Lannavaara**	**4.71**	**317**	SG	**Sg**	**10 19 40.4**	**-2.8**
ARCES	**ARCESS Array B**	**5.11**	**339**	Pn	**Pn**	**10 18 30.4**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=152,slow=12,SNR=34						
ARCES				Sn	**Sn**	**10 19 27.4**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=159,slow=26,SNR=2.1						
ARCES				Lg	Lg	10 19 49.4	
	comp=Z,0.6nm,0.3s,baz=154,slow=30,SNR=4.5						
	comp=Z,1.1nm,0.3s						
ARCES	**ARCESS Array B**	**5.11**	**339**	P	**Pn**	**10 18 30.3**	**+0.7**
ARCES				S	**Sn**	**10 19 29.4**	**+0.2**
VADS	**Vadso**	**5.32**	**355**	S	**Sn**	**10 19 36.1**	**+1.8**
MEF	**Metsahovi**	**5.47**	**215**	*e*P	**Pn**	**10 18 36.1**	**+1.6**
RAF	**Rauma**	**5.57**	**230**	*e*P	**Pn**	**10 18 37.6**	**+1.6**
I37NO	**I37NO**	**6.33**	**317**	I	I	10 53 20.0	
	baz=127,slow=318,SNR=2.1						
FAUS	**Fauske**	**6.72**	**299**	S	**Sn**	**10 20 09.8**	**+1.1**
AAL	**Aland**	**6.79**	**231**	*e*P	**Pn**	**10 18 53.8**	**+1.1**
HFS	**Hagfors**	**9.13**	**247**	Pn	**Pn**	**10 19 24.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=61,slow=12,SNR=3.3						
	comp=Z,6.3nm,0.7s						

IDC 22 10:17:25.0±2.4, **6°.45S×130°.18E, h0**km, **mb3.6/1, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=89.6km s-min=29.8km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.40**	**201**	Pn	Pn	10 20 23.8	+0.9
	0.3nm,0.3s,baz=28,slow=10,SNR=8.9						
FITZ				Sn	Sn	10 22 37.1	-4.8
	0.2nm,0.3s,baz=328,slow=19,SNR=1.4						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**14.01**	**164**	Pn	Pn	10 20 43.9	-1.1
	0.2nm,0.3s,baz=346,slow=13,SNR=10						
WRA				Sn	Sn	10 23 12.2	-9.2
	0.1nm,0.3s,baz=332,slow=25,SNR=2.1						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**17.49**	**169**	P	Pn	10 21 30.6	+0.1
	0.1nm,0.3s,baz=344,slow=9.1,SNR=10.0						
ASAR				S	Sn	10 24 36.5	-9.5
	0.3nm,0.7s,baz=356,slow=26,SNR=4.3						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	10 28 25.3	0.0
	0.4nm,0.6s,baz=115,slow=5.9,SNR=3.6						
	0.4nm,0.6s						

*IDC **22** 10:18:20.4±0.6, 55°.00N×158°.61W, h0km, mb4.5/32, mbtmp4.5/37, ML4.1/5, Error ellipse: s-maj=18.4km s-min=10.6km az=1.0*
*AEIC **22** 10:18:22.5±1.2, 54°.81N±0°.05×158°.28W±0°.06, h18km±4km, Error ellipse: s-maj=8.0km s-min=5.0km az=169.0*
*GFZ **22** 10:18:22.3±0.2, 55°.N±5°×15°.9W±°, h10km, M4.9/26, mb4.7/26*
*NEIC **22** 10:18:23.9±1.0, 54°.88N±0°.04×158°.33W±0°.05, h25km±4km, mb4.7/189, ML4.7/40, Mwr4.7/20, ML4.5(AEIC), Error ellipse: s-maj=5.7km s-min=4.1km az=175.0, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.51; Mθθ-0.51; Mφφ-0.01; Mrθ0.71; Mrφ-0.06; Mθφ0.83; Fault plane solution: M0 1.21000×10^16^ NP1: φs 46.64000°, δ 79.18000°, λ 77.28000°. NP2: φs 276.89000°, δ 16.64000°, λ 139.05000°. Principal axes: T 1.2919, Plg 54.0000°, Azm 301.0000°; N -0.1946, Plg 12.0000°, Azm 49.0000°; P -1.0973, Plg 33.0000°, Azm 147.0000°;*
*BJI **22** 10:18:23.5, 55°.39N×159°.29W, h8km, mb5.0/48, Ms5.0/2, Ms7 4.7/2*
*NEIC **22** 10:18:24.5±4.1, 54°.85N×158°.34W, h26km*
*ANF **22** 10:18:24.4±1.0, 54°.88N×158°.40W, h27km±10km, ML4.9/23, Error ellipse: s-maj=4.0km s-min=1.9km az=16.0*

ISC 22 10:18:22.6±1.2, **54°.90N**±0°.04×**158°.31W**±0°.03, **h17**km±7km, **n628, σ1 12/570, mb4.7**/148, **2C-8D, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.75**	**265**	P	**Pg**	**10 18 37.3**	**+0.1**
CHNA	**Chernabura Isl**	**0.75**	**265**	S	**Sn**	**10 18 48.0**	**-1.2**
CHNA	**Chernabura Isl**	**0.75**	**265**	P	**Pg**	**10 18 37.5**	**+0.3**
	baz=81,SNR=1000						
CHNA				S	**Sg**	**10 18 47.8**	**+0.8**
	baz=81						
CNBA	**Chernabura Isl**	**0.75**	**264**		**Pg**	**10 18 37.5**	**+0.3**
CNBA					**Sn**	**10 18 48.2**	**-1.0**
CNBA				IAML		10 18 55.3	
	comp=E,29μm,0.8s						
VNKR	**Veniaminof 5**	**1.29**	**332**		**Pb**	**10 18 46.2**	**-0.2**
VNSG	**Veniaminof 6**	**1.31**	**340**		**Pb**	**10 18 46.8**	**+0.1**
VNSG					**Sg**	**10 19 04.3**	**-0.6**
SDPT	**Sand Point**	**1.33**	**291**	P	**Pn**	**10 18 46.0**	**-0.2**
SDPT	**Sand Point**	**1.33**	**291**		**Pn**	**10 18 46.0**	**-0.2**
SDPT					**Sn**	**10 19 03.4**	**-0.1**
SDPT				IAML		10 19 11.2	
	comp=E,12μm,1.1s						
SDPT				IAML		10 19 13.8	
	comp=N,18μm,1.2s						
SDPT	**Sand Point**	**1.33**	**291**	P	**Pn**	**10 18 46.1**	**-0.2**
	baz=109,SNR=467						
CHGN	**Chignik**	**1.41**	**358**		**Pn**	**10 18 47.7**	**+0.3**
CHGN				Sn	**Sb**	**10 19 06.3**	**+0.3**
CHGN				IAML		10 19 07.0	
	comp=N,15μm,0.5s						
CHGN	**Chignik**	**1.41**	**358**	P	**Pn**	**10 18 47.9**	**+0.5**
	baz=181,SNR=620						
CHGN				S	**Sb**	**10 19 06.1**	**+0.1**
	baz=181						
VNSS	**Veniaminof 8**	**1.48**	**334**		**Pb**	**10 18 49.7**	**-0.1**
S14K	**Fog Glacier**	**1.56**	**334**	P	**Pb**	**10 18 50.8**	**-0.3**
	baz=155,SNR=254						
VNFG	**Fog Glacier, M**	**1.56**	**334**		**Pb**	**10 18 50.7**	**-0.3**
VNFG					**Sg**	**10 19 12.9**	**0.0**
VNFG	**Fog Glacier, M**	**1.56**	**334**		**Pb**	**10 18 50.6**	**-0.5**
VNFG				IAML		10 19 19.5	
	comp=E,23μm,1.2s						
VNFG				IAML		10 19 24.4	
	comp=N,22μm,0.9s						
CHIR	**Chirikof Isln**	**1.79**	**58**	P	**Pn**	**10 18 52.8**	**+0.2**
CHIR	**Chirikof Isln**	**1.79**	**58**	S	**Sn**	**10 19 14.9**	**0.0**
CHIR	**Chirikof Isln**	**1.79**	**58**		**Pn**	**10 18 53.2**	**+0.6**
CHIR				IAML		10 19 30.7	
	comp=E,6μm,0.9s						
CHIR				IAML		10 19 34.0	
	comp=N,5μm,1.0s						
CHIR	**Chirikof Isln**	**1.79**	**58**	P	**Pn**	**10 18 53.1**	**+0.4**
	baz=242						
ANPB	**Aniakchak Plen**	**1.91**	**0**		**Pn**	**10 18 55.4**	**+1.1**
ANPB					**Sb**	**10 19 21.8**	**+1.3**
ANPK	**Aniakchak Peak**	**1.95**	**3**		**Pn**	**10 18 55.9**	**+0.9**
ANPK					**Sb**	**10 19 22.8**	**+1.1**
PS1A	**Pavlof South-1**	**2.04**	**286**		**Pn**	**10 18 56.3**	**+0.2**
PS1A					**Sb**	**10 19 23.2**	**-1.0**
DOL	**Dolgoi Island**	**2.06**	**278**		**Pn**	**10 18 56.4**	**0.0**
DOL					**Sb**	**10 19 23.8**	**-1.2**
ANNW	**Aniakchak Nort**	**2.07**	**1**		**Pn**	**10 18 58.0**	**+1.4**
PS4A	**Pavlof South-4**	**2.09**	**284**		**Pn**	**10 18 56.9**	**+0.1**
PS4A					**Sb**	**10 19 25.2**	**-0.3**
PN7A	**Pavlof North-7**	**2.19**	**286**		**Pn**	**10 18 58.6**	**+0.4**
PN7A					**Sb**	**10 19 28.1**	**-0.3**
DTNA	**Dutton South F**	**2.29**	**278**		**Pn**	**10 18 59.8**	**+0.3**
DTNA					**Sb**	**10 19 29.8**	**-1.5**
DT1	**Dutton Round H**	**2.30**	**277**		**Pn**	**10 18 59.7**	**+0.1**
DT1					**Sn**	**10 19 28.8**	**+1.2**
SII	**Sitkinak Islan**	**2.86**	**53**	P	**Pn**	**10 19 08.0**	**+0.6**
SII	**Sitkinak Islan**	**2.86**	**53**		**Pn**	**10 19 08.0**	**+0.6**
SII				Sn	**Sn**	**10 19 40.9**	**-0.6**
SII				IAML		10 20 23.6	
	comp=N,3μm,1.1s						
SII	**Sitkinak Islan**	**2.86**	**53**	P	**Pn**	**10 19 08.1**	**+0.7**
	baz=238,SNR=24						
PLBL	**Peulik Blue Cr**	**2.93**	**16**		**Pn**	**10 19 09.6**	**+1.2**
R17L	**Mt. Peulik Vol**	**2.95**	**21**	P	**Pn**	**10 19 09.8**	**+1.2**
	baz=204						
PLK1	**Peulik 1**	**3.06**	**17**		**Pn**	**10 19 11.8**	**+1.7**
ISNN	**Isanotski Nort**	**3.16**	**271**		**Pn**	**10 19 12.5**	**+1.0**
ISNN					**Sn**	**10 19 51.1**	**+2.3**
PLK5	**Peulik 5**	**3.21**	**14**		**Pn**	**10 19 14.0**	**+1.9**
SSLN	**Shishaldin Nor**	**3.29**	**271**		**Pn**	**10 19 14.4**	**+1.1**
SSLN					**Sn**	**10 19 55.0**	**+2.9**
SSBA	**Shishaldin**	**3.37**	**270**		**Pn**	**10 19 15.3**	**+0.9**
Q17K	**Contact Creek**	**3.63**	**21**	P	**Pn**	**10 19 19.2**	**+1.1**
	baz=204						
OHAK	**Old Harbor**	**3.65**	**48**	P	**Pn**	**10 19 18.1**	**-0.1**
OHAK	**Old Harbor**	**3.65**	**48**		**Pn**	**10 19 18.6**	**+0.4**
OHAK	**Old Harbor**	**3.65**	**48**	P	**Pn**	**10 19 18.5**	**+0.4**
	baz=234,SNR=28						
ANCK	**Angle Creek**	**3.66**	**24**		**Pn**	**10 19 19.5**	**+1.1**
MGLS	**Mageik Landsli**	**3.68**	**27**		**Pn**	**10 19 19.6**	**+1.0**
ACHA	**Angle Creek He**	**3.71**	**25**		**Pn**	**10 19 20.0**	**+1.0**
KABU	**Katmai Buttres**	**3.77**	**25**		**Pn**	**10 19 21.2**	**+1.2**
Q16K	**King Salmon**	**3.90**	**13**		**Pn**	**10 19 22.8**	**+1.3**
Q16K	**King Salmon**	**3.90**	**13**	P	**Pn**	**10 19 22.0**	**+0.4**
	baz=195,SNR=19						
KAWH	**Katmai**	**3.99**	**28**		**Pn**	**10 19 24.7**	**+1.7**
KARR	**Katmai Rainbow**	**4.12**	**27**		**Pn**	**10 19 25.7**	**+1.0**
P16K	**Nushagak River**	**4.15**	**2**		**Pn**	**10 19 26.0**	**+1.0**
P16K	**Nushagak River**	**4.15**	**2**	P	**Pn**	**10 19 25.9**	**+0.9**
	baz=184,SNR=5.8						
Q18K	**Katmai Hardscr**	**4.17**	**24**		**Pn**	**10 19 28.1**	**+2.6**
Q18K	**Katmai Hardscr**	**4.17**	**24**	P	**Pn**	**10 19 26.6**	**+1.1**
	baz=208,SNR=14						
KDAK	**Kodiak Island**	**4.30**	**45**	Pn	**Pn**	**10 19 27.2**	**+0.1**
	comp=N,5.6nm,0.3s,baz=198,slow=4.4,SNR=36						
KDAK				Sn	**Sn**	**10 20 12.2**	**-4.6**
	comp=N,19nm,0.3s,baz=36,slow=19,SNR=7.1						
	comp=N,18nm,0.3s						
KDAK	**Kodiak Island**	**4.30**	**45**		**Pn**	**10 19 27.2**	**+0.1**
KDAK	**Kodiak Island**	**4.30**	**45**	P	**Pn**	**10 19 27.0**	**-0.1**
	baz=231						
KDAK	**Kodiak Island**	**4.30**	**45**	P	**Pb**	**10 19 34.0**	**-3.6**
O15K	**Ungalikthiuk R**	**4.37**	**350**		**Pn**	**10 19 28.7**	**+0.6**
O15K				IAML		10 21 02.8	
	comp=E,501nm,1.1s						
O15K	**Ungalikthiuk R**	**4.37**	**350**	P	**Pn**	**10 19 28.5**	**+0.4**
	baz=169,SNR=19						
AKSA	**Akutan Strait**	**4.38**	**263**		**Pn**	**10 19 28.9**	**+0.7**
AKUT	**Akutan**	**4.42**	**263**	P	**Pn**	**10 19 29.3**	**+0.6**
AKUT	**Akutan**	**4.42**	**263**	S	**Sn**	**10 20 19.3**	**-0.4**
AKUT	**Akutan**	**4.42**	**263**		**Pn**	**10 19 29.4**	**+0.7**
AKUT				IAML		10 20 34.9	
	comp=E,529nm,1.2s						
AKUT				IAML		10 20 51.5	
	comp=N,851nm,1.1s						
P17K	**Kvichak River**	**4.43**	**13**		**Pn**	**10 19 29.4**	**+0.6**
P17K	**Kvichak River**	**4.43**	**13**	P	**Pn**	**10 19 29.6**	**+0.7**
	baz=195,SNR=13						
AHB	**Akutan Harbor**	**4.45**	**263**		**Pn**	**10 19 29.9**	**+0.7**
AKLV	**Akutan Long Va**	**4.52**	**264**		**Pn**	**10 19 30.5**	**+0.3**
AKBBA	**Akutan Broad B**	**4.52**	**263**		**Pn**	**10 19 30.9**	**+0.8**
AKV	**Akutan Volcano**	**4.53**	**263**		**Pn**	**10 19 31.2**	**+0.8**
AKGG	**Akutan Green G**	**4.53**	**264**		**Pn**	**10 19 30.7**	**+0.4**
ZRO	**Akutan Zero**	**4.55**	**263**		**Pn**	**10 19 31.1**	**+0.5**
LVA	**Lava Point**	**4.56**	**264**		**Pn**	**10 19 31.4**	**+0.7**
LVA				IAML		10 20 59.4	
	comp=E,883nm,0.9s						
AKMO	**Akutan Morgan**	**4.56**	**263**		**Pn**	**10 19 31.3**	**+0.6**
AKRB	**Akutan Reef Bi**	**4.59**	**264**		**Pn**	**10 19 31.8**	**+0.7**
O14K	**Tigyukauivet M**	**4.66**	**341**		**Pn**	**10 19 32.7**	**+0.7**
O14K				IAML		10 21 08.8	
	comp=N,521nm,1.0s						
O14K				IAML		10 21 13.8	
	comp=E,426nm,1.1s						
O14K	**Tigyukauivet M**	**4.66**	**341**	P	**Pn**	**10 19 32.4**	**+0.5**
	baz=159,SNR=42						
O16K	**Kokwok River B**	**4.71**	**1**		**Pn**	**10 19 33.8**	**+1.0**
O16K				IAML		10 21 03.8	
	comp=N,334nm,1.1s						
O16K	**Kokwok River B**	**4.71**	**1**	P	**Pn**	**10 19 33.4**	**+0.6**
	baz=182,SNR=20						
P18K	**Big Mountain,**	**4.81**	**19**		**Pn**	**10 19 35.5**	**+1.3**
P18K	**Big Mountain,**	**4.81**	**19**	P	**Pn**	**10 19 35.2**	**+1.0**
	baz=203						
UNV	**Unalaska Valle**	**4.91**	**261**	P	**Pn**	**10 19 34.9**	**-0.6**
UNV	**Unalaska Valle**	**4.91**	**261**	S	**Sn**	**10 20 30.0**	**-1.8**
UNV	**Unalaska Valle**	**4.91**	**261**		**Pn**	**10 19 35.5**	**0.0**
UNV				IAML		10 21 00.7	
	comp=N,319nm,0.9s						
UNV				IAML		10 21 08.3	
	comp=E,331nm,0.9s						
UNV	**Unalaska Valle**	**4.91**	**261**	P	**Pn**	**10 19 35.6**	**+0.1**
	baz=74,SNR=46						
O17K	**Koliganek Bris**	**4.93**	**7**	P	**Pn**	**10 19 36.5**	**+0.7**
	baz=189,SNR=33						
MNAT	**Makushin Natee**	**5.00**	**262**		**Pn**	**10 19 36.9**	**+0.1**
MGOD	**Makushin Gods**	**5.13**	**261**		**Pn**	**10 19 38.8**	**+0.1**
MAPS	**Pakushin South**	**5.17**	**261**		**Pn**	**10 19 39.4**	**+0.4**
O18K	**Koktuh Hills**	**5.24**	**17**		**Pn**	**10 19 41.4**	**+1.3**
O18K	**Koktuh Hills**	**5.24**	**17**	P	**Pn**	**10 19 41.2**	**+1.1**
	baz=201						
N14K	**Kuskokwak Cree**	**5.36**	**341**		**Pn**	**10 19 42.0**	**+0.4**
N14K				IAML		10 20 54.9	
	comp=N,403nm,1.0s						
N14K				IAML		10 21 26.3	
	comp=E,468nm,1.0s						
N14K	**Kuskokwak Cree**	**5.36**	**341**	P	**Pn**	**10 19 42.3**	**+0.6**
	baz=159,SNR=32						
N15K	**Kwethluk River**	**5.37**	**350**		**Pn**	**10 19 43.0**	**+1.2**
N15K				IAML		10 21 26.3	
	comp=N,372nm,1.1s						
N15K				IAML		10 21 31.3	
	comp=E,447nm,1.1s						
N15K	**Kwethluk River**	**5.37**	**350**	P	**Pn**	**10 19 42.9**	**+1.0**
	baz=170,SNR=47						
P19K	**Oil Pt**	**5.50**	**28**	P	**Pn**	**10 19 45.3**	**+1.6**
	baz=213						
N16K	**Nishlik Lake**	**5.60**	**358**		**Pn**	**10 19 45.9**	**+0.9**
N16K	**Nishlik Lake**	**5.60**	**358**	P	**Pn**	**10 19 46.0**	**+1.0**
	baz=178,SNR=91						
N17K	**Nushag

P23K	**Montague Islan** baz=234	7.79	45	P		Pn	10 20 15.9 +0.9
K13K	**Kusilvak Mount** baz=152,SNR=48	7.80	337	P		Pn	10 20 15.5 +0.4
K17K	**Iditarod** baz=181,SNR=50	7.84	0	P		Pn	10 20 16.3 +0.6
SKT	**Skwentna** baz=210,SNR=9.7	7.94	24	P		Pn	10 20 19.2 +2.2
PWL	**Port Wells** baz=227,SNR=22	7.99	38	P		Pn	10 20 18.9 +1.1
M22K	**Willow** baz=216	8.11	29	P		Pn	10 20 21.1 +1.8
PMR	**Palmer**	8.27	32	P		Pn	10 20 23.0 +1.5
PMR	**Palmer**	8.27	32			Pn	10 20 21.8 +0.3
PMR	**Palmer** baz=220	8.27	32	P		Pn	10 20 23.3 +1.8
J14K	**Nanvaranak Lak**	8.33	343			Pn	10 20 22.9 +0.6
J14K	**Nanvaranak Lak** baz=159,SNR=7.7	8.33	343	P		Pn	10 20 23.2 +0.8
KNK	**Knik Glacier** baz=223	8.35	35	P		Pn	10 20 23.5 +0.8
HIN	**Hinchinbrook I**	8.39	44			Pn	10 20 23.0 -0.2
GLI	**Glacier Island** baz=230	8.45	40	P		Pn	10 20 24.4 +0.3
GHO	**Glory Hole Cre**	8.47	32			Pn	10 20 25.4 +1.1
J16K	**Anvik River** baz=172,SNR=78	8.49	353	P		Pn	10 20 25.0 +0.3
J17K	**VABM Dome** baz=178,SNR=15	8.53	358	P		Pn	10 20 25.3 +0.1
L22K	**Petersville** baz=211,SNR=16	8.59	24	P		Pn	10 20 27.3 +1.3
PPLA	**Purkeypile** baz=205	8.62	19	P		Pn	10 20 27.9 +1.4
J18K	**Innoko River** baz=187,SNR=12	8.63	5	P		Pn	10 20 27.5 +1.0
SML	**Sawmill** baz=222	8.68	33	P		Pn	10 20 27.9 +0.7
K20K	**Telida** baz=197	8.76	13	P		Pn	10 20 29.2 +0.9
EYAK	**Cordova Ski Ar**	8.78	45	P		Pn	10 20 29.3 +0.8
EYAK	**Cordova Ski Ar** baz=236,SNR=9.7	8.78	45	P		Pn	10 20 29.5 +1.0
M23K	**Glacier View** baz=224	8.86	34	P		Pn	10 20 31.3 +1.6
KAIM	**Kayak Island** baz=243,SNR=10	9.02	50	P		Pn	10 20 33.3 +1.4
SCM	**Sheep Creek Mo** baz=225,SNR=17	9.02	35	P		Pn	10 20 33.2 +1.2
I17K	**Unalakleet** baz=172,SNR=15	9.10	353	P		Pn	10 20 33.3 +0.4
CAST	**Castle Rocks** baz=204	9.12	18	P		Pn	10 20 34.5 +1.3
J19K	**Poorman** baz=190,SNR=41	9.22	7	P		Pn	10 20 36.0 +1.4
KLU	**Klutina** baz=231,SNR=23	9.29	40	P		Pn	10 20 36.7 +1.2
WAT1	**Susitna Watana** baz=217	9.41	28	P		Pn	10 20 37.9 +0.7
WAT6	**Susitna Watana** baz=221	9.45	31	P		Pn	10 20 38.3 +0.4
BMRM	**Bremner River** baz=237	9.48	45	P		Pn	10 20 37.8 -0.4
TRF	**Thorofare Moun**	9.50	22			Pn	10 20 38.6 0.0
TRF	**Thorofare Moun** baz=210	9.50	22	P		Pn	10 20 38.6 0.0
CHUM	**Lake Minchumin** baz=202	9.51	16	P		Pn	10 20 38.9 +0.4
J20K	**Nowinta River** baz=195,SNR=16	9.54	11	P		Pn	10 20 40.8 +1.8
M24K	**Tolsona, Glenn** baz=227,SNR=6.6	9.60	36	P		Pn	10 20 41.3 +1.4
ATKA	**Atka Island**	9.84	261	P		Pn	10 20 42.7 -0.3
N25K	**Chitina, Valde** baz=234	9.85	41	P		Pn	10 20 45.0 +1.6
GCSA	**Galena City Sc** baz=185	9.91	4	P		Pn	10 20 45.1 +1.2
DHY	**Denali Highway** baz=220	9.94	30	P		Pn	10 20 46.0 +1.5
H16K	**Elim** baz=167	9.97	350	P		Pn	10 20 45.6 +0.8
CRQE	**Cirque** baz=241,SNR=12	10.00	48	P		Pn	10 20 46.5 +1.1
MCK	**McKinley** baz=213	10.06	25	P		Pn	10 20 47.7 +1.6
H17K	**Granite Mounta**	10.10	356			Pn	10 20 47.8 +1.1
H17K	**Granite Mounta** baz=175,SNR=17	10.10	356	P		Pn	10 20 48.1 +1.4
I20K	**Naaghedeneel** baz=193	10.11	9	P		Pn	10 20 48.6 +1.9
HARP	**HAARP**	10.15	37	Pn		Pn	10 20 48.3 +0.9
HARP	**HAARP** baz=229	10.15	37	P		Pn	10 20 49.3 +1.9
H18K	**Honhosa River**	10.29	360			Pn	10 20 50.5 +1.2
H18K	**Honhosa River** baz=180,SNR=37	10.29	360	P		Pn	10 20 51.4 +2.2
ANM	**Nome** baz=157	10.32	343	P		Pn	10 20 50.6 +1.0
MCARA	**McCarthy VSAT** baz=238	10.35	45	P		Pn	10 20 52.0 +2.0
PAX	**Paxson**	10.44	34			Pn	10 20 52.4 +1.0
PAX	**Paxson** baz=226,SNR=15	10.44	34	P		Pn	10 20 52.7 +1.2
G15K	**Niukluk** baz=162	10.52	347	P		Pn	10 20 53.2 +0.8
GRNC	**Granite Creek**	10.57	50	Pn		Pn	10 20 53.1 -0.2
G17K	**Kiwalik Mounta** baz=173,SNR=5.8	10.70	355	P		Pn	10 20 56.0 +1.2
H19K	**Roundabout Mou** baz=186,SNR=40	10.70	4	P		Pn	10 20 56.5 +1.6
BARN	**Barnard Glacie**	10.76	48			Pn	10 20 55.9 0.0
H20K	**Anotleneega Mo** baz=191,SNR=31	10.76	8	P		Pn	10 20 57.4 +1.7
NEA2	**Nenana** baz=210,SNR=9.8	10.77	22	P		Pn	10 20 56.9 +1.1
I21K	**Tanana** baz=200,SNR=8.2	10.78	14	P		Pn	10 20 56.8 +0.9
MLY	**Manley**	10.84	17			Pn	10 20 57.4 +0.7
MLY	**Manley** baz=204	10.84	17	P		Pn	10 20 57.3 +0.5
K24K	**Donnelly Dome** baz=222,SNR=12	10.96	30	P		Pn	10 21 00.4 +2.0
PCA	**Pinnacle**	11.00	54			Pn	10 21 00.1 +1.1
PINM	**Pinnacle** baz=250,SNR=19	11.00	54	P		Pn	10 21 00.6 +1.5
G18K	**Tagagawik** baz=179,SNR=7.9	11.04	359	P		Pn	10 21 00.9 +1.5
HDA	**Harding Lake** baz=217	11.11	26	P		Pn	10 21 01.8 +1.3
H21K	**Melozitna Rive** baz=197,SNR=25	11.13	12	P		Pn	10 21 01.9 +1.2
RIDG	**Independent Ri** baz=224	11.19	32	P		Pn	10 21 03.2 +1.6
L26K	**Log Cabin Wild** baz=231	11.20	37	P		Pn	10 21 03.8 +2.1
I23K	**Minto, Yukon-K** baz=208	11.20	20	P		Pn	10 21 02.8 +1.2
COLA	**College**	11.28	23	P		Pn	10 21 04.2 +1.5
COLA	**College**	11.28	23			Pn	10 21 03.3 +0.6
COLA	**College** baz=213	11.28	23	P		Pn	10 21 04.1 +1.4
COLA	**College**	11.28	23	P		Pn	10 21 03.8 +1.1
F15K	**North Star Dit**	11.28	346			Pn	10 21 04.0 +1.1
F15K	**North Star Dit** baz=161,SNR=5.5	11.28	346	P		Pn	10 21 03.9 +1.1
O28M	**Mount Upton**	11.28	51			Pn	10 21 04.2 +1.1
O28M	**Mount Upton** baz=247,SNR=12	11.28	51	P		Pn	10 21 04.7 +1.6
G19K	**Purcell Mounta**	11.30	3			Pn	10 21 04.2 +1.2
G19K	**Purcell Mounta** baz=184,SNR=12	11.30	3	P		Pn	10 21 04.2 +1.2
F14K	**Arctic Creek** baz=156	11.32	343	P		Pn	10 21 04.1 +0.8
M27K	**Edge Creek, AK** baz=237	11.34	42	P		Pn	10 21 05.0 +1.3
IMAR	**Indian Mountai**	11.34	10			Pn	10 21 04.0 +0.4
ADK	**Adak**	11.38	262	P		Pn	10 21 04.0 -0.1
ADK	**Adak**	11.38	262			Pn	10 21 04.2 +0.1
ILAR	**Eielson Array** comp=E,0.4nm,0.3s,baz=218,slow=14,SNR=32	11.42	25	Pn		Pn	10 21 03.3 -1.4
ILAR	baz=209,slow=16			Sn		Sn	10 22 59.4 -12
ILAR	**Eielson Array**	11.42	25			Pn	10 21 04.8 +0.1
H22K	**Ishtalitna Cre** baz=201,SNR=12	11.54	14	P		Pn	10 21 07.4 +1.0
POKR	**Poker Plat Res** baz=213	11.58	23	P		Pn	10 21 08.5 +1.7
YUK3	**Moose Creek** baz=242	11.61	46	P		Pn	10 21 08.2 +0.7
SCRK	**Sand Creek** baz=226	11.63	33	P		Pn	10 21 08.4 +0.8
KIWB	**Kanaga Island**	11.66	263			Pn	10 21 07.9 -0.1
F17K	**Baldwin Pennin** baz=172	11.67	354	P		Pn	10 21 08.9 +0.8
YUK8	**Steele Glacier** baz=205,SNR=16	11.68	49	P		Pn	10 21 10.4 +1.8
J25K	**Salcha River,** baz=220,SNR=9.6	11.69	28	P		Pn	10 21 09.7 +1.2
F18K	**Selawik** baz=177,SNR=9.1	11.76	357	P		Pn	10 21 10.8 +1.6
L27K	**Beaver Creek,**	11.76	39			Pn	10 21 10.2 +0.8
L27K	**Beaver Creek,** baz=234	11.76	39	P		Pn	10 21 11.1 +1.7
H23K	**Yukon River** baz=206,SNR=8.5	11.77	18	P		Pn	10 21 10.0 +0.5
BCAR	**Beaver Creek A**	11.78	39			Pn	10 21 10.6 +0.9
O29M	**Mount Kennedy** baz=252,SNR=40	11.86	55	P		Pn	10 21 12.8 +1.9
G21K	**Allakaket** baz=194,SNR=11	11.89	9	P		Pn	10 21 11.5 +0.5
F19K	**Shaleruckik Mo** baz=182,SNR=18	11.98	1	P		Pn	10 21 13.0 +0.7
P29M	**Windy Craggy** baz=256,SNR=26	12.08	59	P		Pn	10 21 14.7 +1.0
H24K	**Noodoo Dome** baz=210	12.10	21	P		Pn	10 21 14.0 0.0
YUK6	**Outpost Mounta** baz=249	12.18	52	P		Pn	10 21 16.9 +1.6
YUK4	**Talbot Arm** baz=247	12.20	50	P		Pn	10 21 17.7 +2.2
F20K	**Avaraart Lake** baz=187,SNR=17	12.26	5	P		Pn	10 21 16.9 +0.9
E17K	**Hotham Inlet** baz=171	12.34	354	P		Pn	10 21 17.8 +0.5
PRP	**Porcupine Dome** baz=217	12.37	25	P		Pn	10 21 17.9 +0.2
G23K	**Bananza Creek** baz=203,SNR=12	12.50	15	P		Pn	10 21 20.1 +0.5
HYT	**Haines Junctio** baz=251	12.53	53	P		Pn	10 21 20.7 +0.7
F21K	**Alatna River** baz=193	12.58	9	P		Pn	10 21 20.8 +0.3
S31K	**Pelican** baz=266,SNR=6.8	12.58	67	P		Pn	10 21 20.4 -0.1
P30M	**Million Dollar** baz=255	12.58	57	P		Pn	10 21 22.9 +2.3
E19K	**Redstone River** baz=183,SNR=21	12.61	2	P		Pn	10 21 21.7 +0.8
E18K	**Tukpahlearik C** baz=174,SNR=5.1	12.62	356	P		Pn	10 21 21.9 +0.9
PLBC	**Pleasant Camp** baz=259,SNR=14	12.72	60	P		Pn	10 21 24.1 +1.6
M29M	**Somme Creek** baz=234,SNR=14	12.75	46	P		Pn	10 21 23.5 +0.5
I26K	**Coal Creek Min** baz=223	12.84	30	P		Pn	10 21 24.9 +0.8
G24K	**Hadweenzic Riv** baz=209	12.94	20	P		Pn	10 21 26.1 +0.7
N30M	**Aishikik Lake**	12.94	51			Pn	10 21 26.4 +0.9
N30M	**Aishikik Lake** baz=249	12.94	51	P		Pn	10 21 27.0 +1.5
F22K	**John River** baz=196	12.98	11	P		Pn	10 21 26.8 +0.8
SIT	**Sitka**	13.03	71	P		Pn	10 21 26.3 -0.4
SIT	**Sitka**	13.03	71	Pn		Pn	10 21 26.2 -0.5
SIT	**Sitka** baz=270	13.03	71	P		Pn	10 21 26.5 -0.2
D17K	**Noatak River** baz=168	13.04	352	P		Pn	10 21 27.5 +0.7
O30N	**Mendenhall** baz=254,SNR=7.5	13.18	55	P		Pn	10 21 30.3 +1.6
L29M	**L29M**	13.20	43			Pn	10 21 30.2 +1.1
L29M	**L29M** baz=241	13.20	43	P		Pn	10 21 30.1 +1.1
DAWY	**Dawson** baz=235	13.24	38	P		Pn	10 21 30.7 +1.2
SKAG	**Skagway**	13.24	60	P		Pn	10 21 32.0 +2.5
SKAG	**Skagway**	13.24	60			Pn	10 21 30.2 +0.7
SKAG	**Skagway** baz=260,SNR=8.5	13.24	60	P		Pn	10 21 31.6 +2.1
G25K	**Bearman Lake** baz=212	13.27	21	P		Pn	10 21 31.0 +1.1
RDOG	**Red Dog Mine** baz=169,SNR=10.0	13.38	353	P		Pn	10 21 32.6 +1.2
S32K	**Killisnoo** baz=269	13.44	69	P		Pn	10 21 33.4 +1.2
E20K	**Nigu River** baz=186,SNR=7.9	13.44	3	P		Pn	10 21 33.6 +1.3
I27K	**Kandik River** baz=226,SNR=11	13.50	31	P		Pn	10 21 34.9 +1.8
M30M	**Minto, Yukon** baz=245	13.51	47	P		Pn	10 21 34.2 +1.0
N31M	**Braebuun, Yuko** baz=251,SNR=9.0	13.54	52	P		Pn	10 21 35.7 +2.1
F24K	**Squaw Lake** baz=207	13.59	17	P		Pn	10 21 36.3 +2.0
D19K	**Kuna River** baz=181	13.65	0	P		Pn	10 21 36.2 +1.1
WHY	**Whitehorse** baz=256,SNR=7.7	13.72	56	P		Pn	10 21 38.0 +1.8
E21K	**Killik River** baz=191	13.74	7	P		Pn	10 21 38.2 +1.8
K29M	**Barlow Dome** baz=240,SNR=10.0	13.81	41	P		Pn	10 21 41.2 +3.8
C17K	**DeLong Mountai** baz=168,SNR=5.4	13.81	352	P		Pn	10 21 38.9 +1.6
C16K	**Lisburne Hills** baz=163	13.82	349	P		Pn	10 21 39.6 +2.2
E23K	**Chandalar** baz=202,SNR=5.7	13.82	14	P		Pn	10 21 40.2 +2.7
C18K	**Utuk River** baz=173	13.87	356	P		Pn	10 21 39.9 +1.8
AMKA	**Amchitka**	13.88	265			Pn	10 21 37.1 -1.2
D20K	**Etivluk River** baz=184,SNR=11	13.89	3	P		Pn	10 21 40.5 +2.2
I28M	**Miner Creek** baz=230,SNR=22	13.91	33	P		Pn	10 21 40.6 +1.9
G26K	**Porcupine Rive** baz=217	13.94	24	P		Pn	10 21 40.2 +1.2
H27K	**Steamboat Moun** baz=224	13.97	29	P		Pn	10 21 39.7 +0.1
E24K	**Your Creek** baz=204,SNR=9.3	14.00	15	P		Pn	10 21 39.9 0.0
F25K	**Christian Rive** baz=212	14.07	20	P		Pn	10 21 40.9 0.0
P32M	**Atlin** baz=262	14.07	61	P		Pn	10 21 41.8 +0.8
C19K	**Lookout Ridge** baz=177	14.27	358	P		Pn	10 21 42.9 -0.7
U33K	**Whale Pass**	14.30	75			Pn	10 21 43.3 -0.7
U33K	**Whale Pass** baz=276	14.30	75	P		Pn	10 21 44.1 +0.1
G27K	**Doyon Strip** baz=222	14.37	27	P		Pn	10 21 45.8 +0.9
TOLK	**Toolik Lake Re** baz=201,SNR=13	14.37	13	P		Pn	10 21 45.5 +0.5
CRAG	**Craig**	14.38	77	P		Pn	10 21 45.7 +0.7
C21K	**Knifeblade Rid** baz=188,SNR=27	14.40	5	P		Pn	10 21 46.5 +1.2
F26K	**Sheenjek River** baz=215	14.47	22	P		Pn	10 21 47.1 +0.8
E25K	**Arctic Village** baz=211	14.54	19	P		Pn	10 21 47.8 +0.5
D23K	**Nanushuk River** baz=198,SNR=9.8	14.55	11	P		Pn	10 21 47.7 +0.4
P33M	**Teslin, Yukon** baz=260,SNR=11	14.62	58	P		Pn	10 21 49.6 +1.1
J30M	**Hart River** baz=239,SNR=18	14.63	40	P		Pn	10 21 50.1 +1.4
N32M	**Quiet Lake** baz=256,SNR=8.6	14.69	55	P		Pn	10 21 50.3 +0.9
WRAK	**Wrangell Islan** baz=275	14.70	73	P		Pn	10 21 50.3 +0.9
Q32M	**Nakina River** baz=266	14.74	63	P		Pn	10 21 51.0 +0.9
B21K	**Ikpikpuk River** baz=189,SNR=12	14.87	5	P		Pn	10 21 52.2 +0.5
H29M	**Whitestone** baz=230,SNR=34	14.90	33	P		Pn	10 21 53.6 +1.4
D24K	**Happy Valley** baz=202	14.95	13	P		Pn	10 21 54.5 +1.7
I30M	**Mount Dempster** baz=237,SNR=24	14.96	38	P		Pn	10 21 54.4 +1.3
B20K	**Meade River** comp=Z,42nm,0.9s	15.18	2	IAmb		IAmb	10 22 01.3
B20K	**Meade River**	15.18	2	P		Pn	10 21 56.1 +0.3
H02S1	**DAWSON INLET T** SNR=6.7	15.24	86	T		T	10 37 20.6
H02S2	**DAWSON INLET T** SNR=7.2	15.24	86	T		T	10 37 18.4
V35K	**Ketchikan** baz=280,SNR=8.1	15.25	77	P		Pn	10 21 58.0 +1.2
S34M	**Telegraph Cree** baz=270,SNR=12	15.29	68	P		Pn	10 21 58.5 +1.1
C23K	**Itkillik River** comp=Z,23nm,0.8s	15.39	10	IAmb		IAmb	10 22 15.7
C23K	**Itkillik River** baz=197,SNR=15	15.39	10	P		Pn	10 21 59.1 +0.6
F28M	**Old Crow** baz=224	15.43	27	P		Pn	10 22 00.8 +1.6
R33M	**Jennings River** baz=265,SNR=13	15.44	62	P		Pn	10 22 01.1 +1.6
G29M	**Pine Creek** baz=229,SNR=22	15.46	31	P		Pn	10 22 01.0 +1.4
D25K	**Kavik River** baz=207,SNR=12	15.46	16	P		Pn	10 22 00.2 +0.6
EPYK	**Eagle Plains** baz=233,SNR=22	15.52	34	P		Pn	10 22 01.1 +0.8
B22K	**Teshekpuk Lake** baz=191	15.65	6	P		Pn	10 22 02.4 +0.4
DLBC	**Dease Lake** comp=Z,0.5nm,0.3s,baz=253,slow=12,SNR=16 comp=Z,3.1nm,0.6s	15.88	66	Pn		Pn	10 22 06.8 +1.6
DLBC	**Dease Lake** baz=270,SNR=8.5	15.88	66	P		P	10 22 07.0 -1.7
MMPY	**Sheldon Lake,** baz=254,SNR=17	15.91	50	P		Pn	10 22 07.2 +1.8
H31M	**Peel River** baz=239,SNR=16	15.99	37	P		Pn	10 22 08.0 +1.5
G30M	**tAoh Zrail Nji** comp=Z,96nm,1.4s	16.05	32	IAmb		IAmb	10 22 23.0
G30M	**tAoh Zrail Nji** baz=232,SNR=27	16.05	32	P		Pn	10 22 08.3 +1.1
A22K	**Sinclair Lake** baz=187,SNR=8.4	16.23	4	P		Pn	10 22 09.4 0.0
E28M	**Babbage River** baz=222	16.25	25	P		Pn	10 22 10.0 +0.3
SHEM	**Shemya Is, Ala** comp=Z,1.4nm,0.3s,baz=58,slow=9.5,SNR=2.8 comp=Z,70nm,1.1s	16.40	274	Pn		Pn	10 22 09.4 -2.3
SHEM	**Shemya Is, Ala** comp=Z,183nm,1.4s	16.40	274	IAmb		IAmb	10 22 11.3
D27M	**Malcolm River** baz=218	16.42	22	P		Pn	10 22 12.0 +0.1
A21K	**Barrow** baz=184,SNR=6.3	16.50	2	P		Pn	10 22 12.2 -0.7
E29M	**Blow River** baz=225	16.51	27	P		Pn	10 22 12.5 -0.5
F30M	**Barrier River** baz=231,SNR=8.1	16.58	31	P		Pn	10 22 14.5 +0.6
G31M	**Satah River** baz=236,SNR=14	16.63	34	P		Pn	10 22 15.7 +1.2
INK	**Inuvik** comp=Z,0.7nm,0.3s,baz=219,slow=10,SNR=14 comp=Z,4.4nm,0.5s	17.68	31	P		Pn	10 22 26.5 -1.1
INK	**Inuvik** baz=233,SNR=12	17.68	31	P		P	10 22 28.3 -0.1
INK	**Inuvik**	17.68	31	P		P	10 22 28.8 +0.4
LIRD	**Liard River Hi** baz=270,SNR=7.0	17.93	62	P		P	10 22 31.9 +0.6
BBB	**Bella Bella** comp=Z,0.2nm,0.3s,baz=302,slow=9.5,SNR=2.5 comp=Z,14nm,1.0s	18.08	86	P		P	10 22 34.4 +1.4
BILL	**Bilibino**	21.03	323	P		P	10 23 04.3 -0.7
BILL	comp=Z,47nm,1.2s			IAmb		IAmb	10 23 08.4
C36M	**Paulatuk**	21.15	34			P	10 23 06.8 +0.5
C36M	**Paulatuk** baz=244,SNR=9.6	21.15	34	P		P	10 23 06.3 0.0
LLLB	**Lillooet**	22.29	86	P		P	10 23 18.1 -0.6
YKAW3	**Yellowknife Wh**	23.52	53			P	10 23 31.9 +0.5
YKA	**Yellowknife Ar** comp=Z,1.4nm,0.7s,baz=268,slow=8.2,SNR=20 comp=Z,1.4nm,0.7s	23.53	53	P		P	10 23 31.6 +0.2
PET	**Petropavlovsk**	25.10	284	P		P	10 23 45.5 -0.5
PET	comp=Z,23nm,0.9s			IAmb		IAmb	10 23 45.8
PEA0B	**Petropavlovsk-**	25.61	284	P		P	10 23 49.3 -1.3
PETK	**Petropavlovsk-** comp=Z,36nm,0.8s,baz=76,slow=13,SNR=45 comp=Z,36nm,0.8s	25.61	284	P		P	10 23 49.1 -1.5
PETK	**Petropavlovsk-**	25.61	284			P	10 23 49.6 -1.1
E08A	**Dider Farm, El**	25.95	93	P		P	10 23 54.4 +0.7
SEY	**Seymchan** comp=Z,22nm,0.8s,baz=92,slow=8.5,SNR=76 comp=Z,22nm,0.8s	26.08	308	P		P	10 23 53.3 -1.6
NEW	**Newport**	26.13	87	P		P	10 23 58.1 +2.6
PINE	**Pine Mountain**	26.44	99	P		P	10 23 57.8 -0.7
E09A	**Wood Farm, Sta**	26.46	92	P		P	10 23 57.5 -1.0
E09A	comp=Z,14nm,1.2s			IAmb		IAmb	10 24 02.1
G08A	**Pilot Rock**	26.68	95			P	10 24 00.2 -0.3
LNOR	**Lincton Mounta**	26.74	93			P	10 24 01.1 +0.1
MA2	**Magadan**	27.38	301	P		P	10 24 06.1 -0.5
WVOR	**Wild Horse Val**	28.61	99	P		P	10 24 21.0 +3.2
HLID	**Hailey**	30.33	94	P		P	10 24 35.2 +2.1
NVAR	**Mina Array Bea** comp=Z,4.5nm,0.7s,baz=303,slow=8.6,SNR=5.6	31.48	105	P		P	10 24 46.1 +2.7
NVAR	comp=Z,0.2nm,0.5s,baz=314,slow=4.1,SNR=1.6 comp=Z,4.5nm,0.7s			PcP		PcP	10 27 37.3 +1.2
YMR	**Madison River**	31.66	89	P		P	10 24 44.9 0.0
YMR	comp=Z,13nm,0.9s			IAmb		IAmb	10 24 48.6
GCMT	**Greycliff**	31.76	86	P		P	10 24 45.7 0.0
CWC	**Cottonwood Cre**	33.03	107	P		P	10 24 57.1 +0.2
CWC	comp=Z,7.7nm,1.3s			IAmb		IAmb	10 25 09.3
HWUT	**Hardware Ranch**	33.19	94	P		P	10 24 55.5 -2.8
LAO	**LASA Array** comp=Z,7.7nm,1.0s	33.23	82	IAmb		IAmb	10 25 09.0
DUG	**Dugway, Tooele** comp=Z,7.5nm,1.0s	33.39	97	IAmb		IAmb	10 25 04.0
DUG	**Dugway, Tooele**	33.39	97	P		P	10 25 02.9 +2.9
PDAR	**Pinedale Array** comp=Z,2.7nm,0.7s,baz=310,slow=5.1,SNR=34 comp=Z,2.7nm,0.7s	33.62	91	P		P	10 25 04.5 +2.4
PDAR	**Pinedale Array**	33.62	91			P	10 25 02.8 +0.7
MPMC	**Manual Prospec** comp=Z,8.2nm,1.1s	33.63	107	IAmb		IAmb	10 25 06.4
TPNV	**Topopah Spring** comp=Z,14nm,1.1s	33.68	105	IAmb		IAmb	10 25 06.7
GWY	**Greenwater Val** comp=Z,8.3nm,0.9s	33.99	106	IAmb		IAmb	10 25 20.9
PRN	**Pahroc Range** comp=Z,14nm,1.1s	34.03	103	IAmb		IAmb	10 25 17.7
QSM	**Queen of Sheba** comp=Z,10.0nm,1.0s	34.05	106	IAmb		IAmb	10 25 09.6
TIXI	**Tiksi**	34.08	327			P	10 25 04.1 -1.3
Q16A	**Castle Valley** comp=Z,14nm,1.3s	35.19	97	IAmb		IAmb	10 25 19.9
P18A	**Preston Nutter** comp=Z,6.8nm,1.0s	35.24	95	IAmb		IAmb	10 25 26.3
K22A	**Casper** comp=Z,10nm,0.9s	35.44	88	IAmb		IAmb	10 25 20.7
PKCU	**Pink Cliffs** comp=Z,7.3nm,0.8s	35.55	100	IAmb		IAmb	10 25 22.6
BELC	**Belle Mtn. Jos** comp=Z,4.2nm,0.8s	35.98	108	IAmb		IAmb	10 25 25.3
RSSD	**Black Hills**	35.98	84			P	10 25 22.6 +0.2
RSSD	comp=Z,9.7nm,0.8s			IAmb		IAmb	10 25 25.4
IRM	**Iron Mountain** comp=Z,11nm,1.0s	36.33	107	IAmb		IAmb	10 25 29.3
W13A	**Hualapai Mount** comp=Z,6.2nm,0.9s	36.34	104	IAmb		IAmb	10 25 29.5
HAYD	**Hayden** comp=Z,6.5nm,0.8s	36.38	92	IAmb		IAmb	10 25 29.2
PV10	**Paradox Valley** comp=Z,18nm,1.2s	36.78	96	IAmb		IAmb	10 25 41.0
PV20	**West Nyswonger** comp=Z,9.9nm,1.0s	36.84	96	IAmb		IAmb	10 25 33.9
PV19	**Morning Glory** comp=Z,9.9nm,1.0s	36.86	96	IAmb		IAmb	10 25 33.9
PV11	**David Mesa, Pa** comp=Z,12nm,1.1s	36.93	96	IAmb		IAmb	10 25 42.1
PV18	**Skein Mesa, Pa** comp=Z,9.7nm,1.0s	36.94	96	IAmb		IAmb	10 25 33.3
PV12	**Saucer Basin,** comp=Z,14nm,1.3s	36.96	96	IAmb		IAmb	10 25 33.5
PV13	**Radium Mtn., P** comp=Z,14nm,0.9s	37.05	96	IAmb		IAmb	10 25 34.8
PV02	**Paradox Valley**	37.07	96	IAmb		IAmb	10 25 35.0

comp=Z,14nm,0.9s
ULM Lac du Bonnet 37.11 71 P P 10 25 32.3 +0.6
comp=Z,2.4nm,0.8s,baz=261,slow=10.0,SNR=3.3
comp=Z,2.4nm,0.8s
ULM Lac du Bonnet 37.11 71 IAmb IAmb 10 25 34.8
comp=Z,12nm,1.5s
PV15 Paradox Valley 37.12 95 IAmb IAmb 10 25 43.4
comp=Z,13nm,1.2s
PV01 Paradox Valley 37.21 96 IAmb IAmb 10 25 37.9
comp=Z,8.7nm,1.0s
WUAZ Wupatki 37.45 101 IAmb IAmb 10 25 38.9
comp=Z,9.1nm,0.9s
MVCO Mesa Verde 37.89 97 IAmb IAmb 10 25 41.7
comp=Z,7.1nm,1.0s
MVCO Mesa Verde 37.89 97 P P **10 25 41.2 +2.4**
AGMN Agassiz Nation 38.18 73 IAmb IAmb 10 25 42.6
comp=Z,7.1nm,0.9s
SUSD Miller 38.69 80 IAmb IAmb 10 25 47.5
comp=Z,21nm,0.9s
OGNE Ogallala 39.12 87 IAmb IAmb 10 25 52.0
comp=Z,14nm,0.9s
TUC Tucson 40.13 104 P **10 25 57.6 +0.2**
TUC Tucson 40.13 104 P P **10 26 00.4 +3.0**
T25A Trinidad 40.29 93 IAmb IAmb 10 26 11.3
comp=Z,16nm,1.3s
NEEM North Greenlan 40.62 19 *i* P P **10 26 00.6 -0.5**
NEEM IAmb IAmb 10 26 02.1
comp=Z,19nm,1.2s
TASM ASL Pad, Albuq 40.66 97 IAmb IAmb 10 26 05.2
comp=Z,5.6nm,1.3s
ANMO Albuquerque 40.66 97 P 10 26 02.1 +0.2
ANMO Albuquerque 40.66 97 P P **10 26 04.2 +2.3**
DUN6 Lazy B Ranch 40.91 102 IAmb IAmb 10 26 07.1
comp=Z,13nm,0.8s
CBKS Cedar Bluff 41.85 88 IAmb IAmb 10 26 22.0
comp=Z,19nm,1.2s
HEH HeiHe 43.42 296 *e*P P **10 26 21.9 -2.1**
HEH pmax pmax
comp=Z,9.0nm,0.6s
MNTX Cornudas Mount 43.64 100 IAmb IAmb 10 26 29.7
comp=Z,9.5nm,1.0s
MNTX Cornudas Mount 43.64 100 P P **10 26 28.6 +2.6**
H11N2 WAKE ISLAND Hy 43.88 231 T T 11 13 08.6
baz=28,slow=76,SNR=18
H11N3 WAKE ISLAND Hy 43.89 231 T T 11 13 09.1
baz=28,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 43.90 231 T T 11 13 10.0
baz=28,slow=76,SNR=17
TPB28 44.16 99 IAmb IAmb 10 26 43.0
comp=Z,7.8nm,1.1s
TPB11 China Draw 44.23 98 IAmb IAmb 10 26 34.3
comp=Z,14nm,1.1s
N38A Joes South For 44.27 81 IAmb IAmb 10 26 32.6
comp=Z,16nm,0.9s
VHRN Van Horn 44.55 100 IAmb IAmb 10 26 37.3
comp=Z,16nm,1.2s
128A Castleberry Fa 44.62 96 IAmb IAmb 10 26 36.7
comp=Z,10nm,1.0s
USRK Ussuriysk Ar. 44.66 286 P P **10 26 31.9 -2.1**
comp=Z,2.6nm,0.9s,baz=61,slow=6.7,SNR=9.7
comp=Z,2.6nm,0.9s
PECS Pecos 44.75 99 IAmb IAmb 10 26 47.1
comp=Z,7.8nm,1.2s
POST Post 44.86 95 IAmb IAmb 10 26 38.2
comp=Z,6.8nm,0.9s
129A Stewart Farms, 44.97 96 IAmb IAmb 10 26 47.2
comp=Z,6.5nm,1.2s
H11S1 WAKE ISLAND Hy 45.04 230 T T 11 14 47.4
baz=28,slow=76,SNR=43
H11S2 WAKE ISLAND Hy 45.06 230 T T 11 14 54.5
baz=28,slow=76,SNR=68
H11S3 WAKE ISLAND Hy 45.06 230 T T 11 14 48.7
baz=28,slow=76,SNR=36
WMOK Wichita Mounta 45.23 91 IAmb IAmb 10 26 40.6
comp=Z,4.5nm,0.8s
WMOK Wichita Mounta 45.23 91 P P **10 26 40.4 +1.7**
TPB05 Hovey Rd 45.39 99 IAmb IAmb 10 26 43.1
comp=Z,6.7nm,1.3s
OK052 Battle Ridge R 45.48 88 IAmb IAmb 10 26 42.0
comp=Z,7.8nm,0.9s
TMB01 Midkiff 45.55 97 IAmb IAmb 10 26 43.4
comp=Z,4.3nm,0.6s
MDJ Mudanjiang 45.72 288 IAmb IAmb 10 26 41.7
comp=Z,10.0nm,0.9s
SGCY Sterling City 45.92 96 IAmb IAmb 10 26 46.0
comp=Z,7.8nm,0.6s
DAG Danmarks Havn 46.13 12 P P **10 26 45.3 0.0**
DAG Danmarks Havn 46.13 12 IAmb IAmb 10 26 46.3
comp=Z,11nm,0.8s
DAG Danmarks Havn 46.13 12 *i* P P **10 26 45.0 -0.2**
BNX BinXian 46.19 291 ⇓P P **10 26 45.4 -0.7**
BNX pmax pmax
comp=Z,22nm,0.9s
SUMG Summit 46.23 21 *i* P P 10 26 53.7 +7.2
SUMG IAmb IAmb 10 26 58.5
comp=Z,21nm,1.1s
MAJO Matsushiro 46.24 274 P P **10 26 46.1 -0.5**
MAJO Matsushiro 46.24 274 P P **10 26 46.2 -0.5**
MJAR Matsushiro Arr 46.24 274 P P **10 26 45.7 -0.9**
comp=Z,9.6nm,1.0s,baz=34,slow=6.4,SNR=24
comp=Z,9.6nm,1.0s
MJAR Matsushiro Arr 46.24 274 P **10 26 46.2 -0.5**
MJAR IAmb IAmb 10 26 47.4
comp=Z,11nm,1.2s
MJB9 Matsu-Tunnel 46.24 274 P P **10 26 46.7 0.0**
ABTX Abilene, Hawle 46.25 94 IAmb IAmb 10 26 48.6
comp=Z,5.5nm,0.7s
KBS Kingsbay 46.30 3 *i* P P **10 26 47.2 +0.7**
TX31 Lajitas Ar. Si 46.39 100 IAmb IAmb 10 26 51.3
comp=Z,12nm,1.1s
TXAR Lajitas Array 46.39 100 P P **10 26 50.1 +2.1**
comp=Z,6.0nm,0.8s,baz=305,slow=5.6,SNR=77
TXAR ScP **ScP 10 32 15.1 +0.1**
comp=Z,0.9nm,1.0s,baz=301,slow=3.8,SNR=5.8
comp=Z,6.0nm,0.8s
TXAR Lajitas Array 46.39 100 P **10 26 50.0 +2.1**
R40A Maddies Statio 46.50 82 IAmb IAmb 10 26 48.5
comp=Z,5.0nm,0.5s
U38A Gravette 46.56 86 IAmb IAmb 10 26 49.9
comp=Z,4.5nm,0.6s
OZNA Ozona 46.65 97 IAmb IAmb 10 26 51.8
comp=Z,4.6nm,0.6s
SAND Sanderson 46.80 98 IAmb IAmb 10 27 00.8
comp=Z,5.7nm,1.2s
HPIG 47.10 104 P P **10 26 56.0 +2.3**
SPITS Spitsbergen Ar 47.14 1 P P **10 26 52.9 -0.3**
comp=Z,1.6nm,0.6s,baz=16,slow=6.4,SNR=1.8
comp=Z,1.6nm,0.6s
NRIK Noril'sk 47.21 334 P P **10 26 52.9 -0.8**
comp=Z,22nm,0.9s,baz=58,slow=7.2,SNR=18
comp=Z,22nm,0.9s
NRIK Noril'sk 47.21 334 P **10 26 53.1 -0.7**
JGF Kuroka 47.40 274 P P **10 26 55.8 0.0**
SFIN Lafayette 48.02 77 P P **10 27 01.0 +0.6**
SFIN IAmb IAmb 10 27 01.5
comp=Z,7.5nm,0.6s
DBG Daneborg 48.05 14 *i* P P **10 27 00.7 +0.5**
DBG IAmb IAmb 10 27 00.8
comp=Z,4.9nm,0.6s
FCAR Ozark Folk Cen 48.25 85 P P **10 27 01.7 -0.6**
FCAR IAmb IAmb 10 27 24.8
comp=Z,7.3nm,1.1s
CN2 Changchun 48.51 290 P P **10 27 02.8 -1.4**
CN2 pmax pmax
comp=Z,50nm,0.9s
SCHQ Schefferville 48.91 50 P P **10 27 09.8 +2.6**
comp=Z,2.6nm,0.7s,baz=292,slow=5.4,SNR=3.5
comp=Z,2.6nm,0.7s
SCHQ Schefferville 48.91 50 IAmb IAmb 10 27 27.5
comp=Z,19nm,1.5s
P48A Milroy 49.58 76 P P **10 27 12.2 -0.2**
P48A IAmb IAmb 10 27 13.1
comp=Z,10nm,1.0s
T47A Sharon Grove 50.35 80 IAmb IAmb 10 27 27.9
comp=Z,13nm,1.0s
WVT Waverly 50.54 81 P **10 27 19.6 -0.1**
WVT Waverly 50.54 81 P P **10 27 20.4 +0.6**
SCO Scoresbysund 51.07 17 P **10 27 24.1 +0.9**
SCO IAmb IAmb 10 27 36.1
comp=Z,18nm,1.5s
V48A Smith Brothers 51.40 81 IAmb IAmb 10 27 29.2
comp=Z,4.2nm,0.7s
CLTN Cedars of Leba 51.42 80 IAmb IAmb 10 27 28.2
comp=Z,7.6nm,0.8s
KS19 Wonju Array Si 51.48 282 P P **10 27 26.9 +0.1**
KS19 IAmb IAmb 10 27 27.9
comp=Z,12nm,0.9s
KSRS Korea Array 51.48 282 P P **10 27 26.8 0.0**
comp=Z,12nm,0.9s,baz=50,slow=6.7,SNR=70
comp=Z,12nm,0.9s
KSAR Wonju Array Be 51.51 282 P **10 27 26.7 -0.3**
ZAIG Zacatecas 52.10 105 P P **10 27 33.1 +1.2**
TJN Taejon 52.56 282 P **10 27 34.3 -0.5**
W50A Signal Mountai 52.64 80 IAmb IAmb 10 27 36.5
comp=Z,7.6nm,0.8s
FPAL Fort Paine 52.95 81 IAmb IAmb 10 27 38.5
comp=Z,2.2nm,1.1s
XLT XiLinHaoTe 53.42 296 *e*P P **10 27 41.0 -0.2**
XLT pP sP 10 27 51.3 +2.6
XLT PcP **PcP 10 28 49.5 +1.3**
XLT pmax pmax
comp=Z,76nm,0.8s
V53A Saluda 53.72 78 P P **10 27 43.4 -0.1**
V53A IAmb IAmb 10 27 52.9
comp=Z,11nm,1.1s
TLY Talaya 53.95 310 P **10 27 44.7 -0.3**
TLY Talaya 53.95 310 P P **10 27 44.7 -0.3**
HODGE Hodges 55.08 79 IAmb IAmb 10 27 53.6
comp=Z,6.2nm,0.9s
ULN Ulaanbaatar 55.11 305 P P **10 27 53.2 -0.4**
SONM Songino Array 55.44 305 P P **10 27 55.7 -0.2**
comp=Z,14nm,0.8s,baz=47,slow=7.5,SNR=68
SONM PcP **PcP 10 28 56.5 +0.5**
comp=Z,3.1nm,0.9s,baz=63,slow=2.4,SNR=4.6
comp=Z,14nm,0.8s
SONM Songino Array 55.44 305 P **10 27 55.6 -0.3**
TRO Tromso 55.76 1 *e*P P **10 28 01.5 +3.8**
ARCES ARCESS Array B 55.84 358 P P **10 27 57.9 -0.4**
comp=Z,5.3nm,1.0s,baz=31,slow=7.3,SNR=8.1
comp=Z,5.3nm,1.0s
JETT Jettan, Norway 55.85 1 *e*P P **10 28 00.4 +2.0**
BJI2 Beijing 56.12 293 P P **10 28 00.3 -0.4**
BJI2 pmax pmax
comp=Z,4.0nm,0.7s
BJT Baijiatuau 56.12 293 P P **10 28 00.6 -0.2**
BJT IAmb IAmb 10 28 27.3
comp=Z,5.1nm,0.6s
KTK1 Kautokeino 56.40 359 *e*P P **10 28 05.9 +3.6**
LANU Lannavaara 57.37 360 *e*P P **10 28 08.7 -0.5**
STEI Steigen 57.39 3 *e*P P **10 28 09.0 -0.3**
STEI IAmb IAmb 10 28 10.4
comp=Z,25nm,1.4s
HHC Hu-ho-hao-te 57.94 296 *e*P P **10 28 13.9 +0.2**
HHC pmax pmax
comp=Z,16nm,0.8s
HNS HongShan 58.81 292 ⇑P P **10 28 19.8 +0.1**
HNS pmax pmax
comp=Z,45nm,0.9s
JOW Kunigami 59.09 273 IAmb IAmb 10 28 22.1
comp=Z,8.5nm,0.9s
LEIR Leirfjorden 59.14 4 *e*P P **10 28 23.0 +1.5**
ZAA0 Zalesovo Array 59.73 322 P **10 28 25.6 -0.2**
ZAA0 IAmb IAmb 10 28 34.8
comp=Z,12nm,1.2s
ZALV Zalesovo Beam 59.73 322 P P **10 28 25.3 -0.5**
comp=Z,2.2nm,0.6s,baz=27,slow=6.8,SNR=10
comp=Z,2.2nm,0.6s
NJ2 Nanjing 60.51 285 *e*P P **10 28 32.3 +0.8**
NJ2 pmax pmax
comp=Z,21nm,0.5s
FINES FINESS Array B 63.95 358 P P **10 28 53.5 -0.6**
comp=Z,10.0nm,1.0s,baz=1.9,slow=7.6,SNR=16
comp=Z,10.0nm,1.0s
FINES FINESS Array B 63.95 358 P P **10 28 54.0 -0.1**
NB2 NORSAR Subarra 64.11 6 P P **10 28 55.2 0.0**
comp=Z,9.5nm,1.1s,baz=354,slow=6.9
NB2 NORSAR Subarra 64.11 6 P P **10 28 55.2 0.0**
NOA NORSAR Array B 64.11 6 P P **10 28 55.2 0.0**
comp=Z,0.9nm,0.5s,baz=354,slow=6.6,SNR=5.2
comp=Z,0.9nm,0.5s
XAN Xi'an 64.43 293 ⇑P P **10 28 57.0 -0.7**
XAN pmax pmax
comp=Z,20nm,1.0s
KURK Kurchatov 64.55 324 P **10 28 58.4 +0.2**
KURK IAmb IAmb 10 29 09.8
comp=Z,7.5nm,0.8s
KURK Kurchatov 64.55 324 P P **10 28 58.0 -0.2**
KURBB Kurchatov Arra 64.66 324 P P **10 28 58.4 -0.5**
comp=Z,5.9nm,1.0s,baz=24,slow=6.5,SNR=25
comp=Z,5.9nm,1.0s
GTA2 Gaotai 64.88 303 *e*P P **10 29 00.1 -0.6**
GTA2 pmax pmax
comp=Z,22nm,1.2s
ZSN Zaisan 65.00 318 *e*P P **10 29 01.1 -0.1**
comp=Z,8.7nm,0.9s
ARTI Arti 65.11 339 P **10 29 01.3 -0.4**
HFS Hagfors 65.14 4 P P **10 29 01.8 0.0**
comp=Z,2.3nm,0.6s,baz=19,slow=4.3,SNR=9.3
comp=Z,2.3nm,0.6s
BVAR Borovoye Array 65.15 330 P P **10 29 01.6 -0.5**
comp=Z,4.2nm,0.6s,baz=32,slow=6.8,SNR=14
comp=Z,4.2nm,0.6s
BORK Borovoye 65.15 330 P **10 29 02.0 -0.1**
LZH Lanzhou 65.49 298 *e*P P **10 29 04.0 -0.8**
LZH pP sP 10 29 12.1 -0.2
LZH pmax pmax
comp=Z,25nm,1.3s
SSLB Suanglung 65.64 277 P P **10 29 05.1 -0.6**
MKAR Makanchi Array 66.53 319 P P **10 29 10.3 -0.8**
comp=Z,5.0nm,0.8s,baz=48,slow=5.9,SNR=25
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 66.53 319 P **10 29 10.5 -0.6**
MAKZ Makanchi 66.64 319 P P **10 29 11.2 -0.6**
MAKZ IAmb IAmb 10 29 11.5
comp=Z,8.5nm,0.9s
MAKZ Makanchi 66.64 319 P P **10 29 11.1 -0.6**
WMQ Urumqi 66.85 314 *e*P P **10 29 13.4 +0.2**
WMQ pP sP 10 29 20.6 -0.2
WMQ pmax pmax
comp=Z,16nm,1.1s
EKA Eskdalemuir Ar 68.26 15 P P **10 29 22.2 +0.4**
comp=Z,9.3nm,1.1s,baz=341,slow=5.0,SNR=5.5
comp=Z,9.3nm,1.1s
TDK Taldyqorghan 69.49 321 *e*P P **10 29 29.7 0.0**
comp=Z,5.0nm,0.6s
GOMU GeErMu 69.86 304 P P **10 29 31.1 -1.5**
GOMU pmax pmax
comp=Z,4.0nm,0.5s
SHLS Shalkode 70.68 319 *e*P P **10 29 36.1 -1.0**
comp=Z,11nm,0.9s
KPKS Kokpek 70.70 320 *e*P P **10 29 37.4 +0.1**
UZB Uzynbulak 70.85 319 *e*P P **10 29 38.2 -0.1**
BTLS Baital 71.00 324 *e*P P **10 29 39.1 +0.2**
SATY Saty 71.16 320 *e*P P **10 29 40.0 0.0**
comp=Z,5.4nm,1.0s
KUU Kurty 71.20 321 *e*P P **10 29 40.2 0.0**
AB31 Akbulak array 71.37 335 P **10 29 41.2 +0.1**
ABKAR Akbulak array 71.37 335 P **10 29 41.1 0.0**
MDOK Medeo 71.57 321 *e*P P **10 29 42.5 -0.2**
AAA Alma-Ata 71.58 321 *e*P P **10 29 42.6 0.0**
TNSS Tian-Shan 71.72 321 *e*P P **10 29 43.4 -0.4**
SGDS Sogindy 72.19 322 *e*P P **10 29 46.1 -0.1**
TARG Taragay, Kyrgy 72.53 319 P **10 29 48.1 -0.6**
TARG IAmb IAmb 10 30 09.7
comp=Z,8.9nm,1.0s
TARG Taragay, Kyrgy 72.53 319 P P **10 29 50.2 +1.5**
BOOM Boomskoye usch 72.56 321 P P **10 29 49.0 +0.4**
AAK Ala-Archa 72.95 322 P **10 29 50.9 0.0**
AAK Ala-Archa 72.95 322 P P **10 29 51.3 +0.4**
NRN Naryn 73.46 320 IAmb IAmb 10 29 55.9
comp=Z,11nm,1.0s
ASAI AK-SAY(Kyrgyzs 73.71 320 P P **10 29 56.5 +0.9**
DZA Taraz 73.82 324 *e*P P **10 29 55.9 0.0**
comp=Z,4.7nm,0.5s
KK31 Karatay Array 73.91 325 P **10 29 56.5 +0.2**
KKAR Karatay Array 73.91 325 P P **10 29 56.6 +0.3**
MEM Membach 74.05 10 *d*P P **10 29 55.5 -1.5**
MEM *d*PcP **PcP 10 30 10.8 -1.3**
PZH PanZhiHua 74.17 293 P P **10 29 58.3 +0.1**
BRLS Borolday 74.19 325 *e*P P **10 29 59.2 +1.2**
BMRD Maredsous 74.22 11 *d*P P **10 29 59.5 +1.5**
DOU Dourbes 74.40 11 *d*P P **10 30 00.0 +1.0**
comp=Z,3.4nm,1.0s
DOU *d*PcP **PcP 10 30 12.3 -1.3**
DOU *d*PP **PP 10 32 43.6 -0.9**
MOX Moxa 74.49 7 P P **10 30 00.6 +1.0**
AKASG Malin Array Be 74.58 355 P P **10 29 59.7 -0.3**
comp=Z,3.4nm,0.5s,baz=6.9,slow=5.8,SNR=18
comp=Z,3.4nm,0.5s
AKASG Malin Array Be 74.58 355 P P **10 30 00.1 0.0**
AKASG IAmb IAmb 10 30 16.6
comp=Z,7.6nm,1.5s
AKBB Malin Array Si 74.58 355 P P **10 29 59.7 -0.4**
KIEV Kiev 74.59 355 P P **10 29 59.8 -0.3**
KIEV Kiev 74.59 355 P P **10 29 59.8 -0.3**
CHM Chimkent 74.91 325 *e*P P **10 30 02.2 0.0**
comp=Z,6.2nm,0.4s
IUG Iuzhnay 74.92 325 *e*P P **10 30 02.4 0.0**
comp=Z,12nm,0.8s
WLF Walferdange 75.00 10 *d*P P **10 30 02.9 +0.4**
DPC Dobruska-Polom 75.03 4 P P **10 30 04.1 +1.3**
KSH2 Kashi 75.62 320 P P **10 30 07.0 +0.5**
KSH2 sP sP 10 30 15.4 +1.3
KSH2 pmax pmax
comp=Z,18nm,0.9s
KHC Kasperske Hory 76.12 5 P P **10 30 09.4 +0.4**
KHC IAmb IAmb 10 30 18.8
comp=Z,8.1nm,1.3s
GERES GERESS Array B 76.41 5 P P **10 30 10.7 0.0**
comp=Z,0.6nm,0.6s,baz=20,slow=4.3,SNR=4.9
comp=Z,0.6nm,0.6s
GERES GERESS Array B 76.41 5 P P **10 30 10.8 +0.1**
SLVN Son La 77.16 289 P P **10 30 15.3 0.0**
SLVN IAmb IAmb 10 30 16.6
comp=Z,8.0nm,0.8s
CONA Conrad Observa 77.43 4 *e*P P **10 30 17.1 +0.6**
comp=Z,2.2nm,0.7s
MOTA Moosalm 77.74 7 *e*P P **10 30 18.6 +0.3**
comp=Z,6.8nm,1.4s
WATA Walderalm 77.78 7 *e*P P **10 30 19.1 +0.6**
comp=Z,2.4nm,0.6s
BURAR Bucovina Array 77.82 358 P **10 30 18.7 +0.1**
WTTA Wattenberg 77.86 7 *e*P P **10 30 19.7 +0.7**
comp=Z,1.1nm,0.8s
SQTA Sankt Quirin 77.87 7 *e*P P **10 30 19.2 +0.2**
comp=Z,4.5nm,0.8s
FETA Feichten 78.03 8 *e*P P **10 30 20.6 +0.7**
comp=Z,3.3nm,1.1s
SESA Seetaler Alpe, 78.18 5 *e*P P **10 30 22.1 +1.3**
comp=Z,8.6nm,1.3s
DAVOX Davos/Dischmat 78.20 8 P P **10 30 21.7 +0.8**
comp=Z,1.0nm,0.2s,baz=356,slow=18,SNR=3.6
comp=Z,1.0nm,0.2s
CHGR Chuyangaron 78.34 324 P P **10 30 21.8 +0.1**
MANEM Manem 78.46 322 IAmb IAmb 10 30 32.4
comp=Z,30nm,1.2s
SOKA Soboth 78.64 5 *e*P P **10 30 24.3 +1.1**
comp=Z,5.4nm,1.1s
OBKA Obir 78.78 5 *e*P P **10 30 24.6 +0.6**
comp=Z,4.4nm,0.5s
OBKA Obir 78.78 5 P P **10 30 24.8 +0.8**
SHAA Shahritus 79.68 324 IAmb IAmb 10 30 38.6
comp=Z,27nm,1.0s
KBZ Khabaz 80.10 345 P P **10 30 31.8 +0.7**
comp=Z,5.3nm,0.9s,baz=332,slow=3.0,SNR=9.9
comp=Z,5.3nm,0.9s
NIL Nilore 81.33 319 P **10 30 38.0 0.0**
CMAR Chiang Mai Arr 82.19 291 P P **10 30 42.5 -0.1**
comp=Z,13nm,0.8s,baz=14,slow=5.3,SNR=68
comp=Z,13nm,0.8s
ESDC Sonseca Array 83.27 20 P P **10 30 48.6 +0.6**
comp=Z,2.4nm,0.9s,baz=345,slow=4.5,SNR=9.6
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 85.19 351 P P **10 30 58.0 +0.1**
comp=Z,5.3nm,1.0s,baz=45,slow=3.7,SNR=9.1
comp=Z,5.3nm,1.0s
WRA Warramunga Arr 93.87 240 P P **10 31 37.9 -1.0**
comp=Z,1.4nm,0.9s,baz=43,slow=5.2,SNR=7.3
comp=Z,1.4nm,0.9s
ASAR Alice Springs 97.22 239 P P **10 31 54.0 0.0**
comp=Z,0.4nm,0.8s,baz=43,slow=3.3,SNR=4.5
comp=Z,0.4nm,0.8s
H03N2 Juan Fernandez 111.02 118 T T 12 37 45.3
baz=324,slow=77,SNR=30
H03N1 Juan Fernandez 111.03 118 T T 12 37 27.9
baz=324,slow=77,SNR=39
H03N3 Juan Fernandez 111.03 118 T T 12 37 46.3
baz=324,slow=77,SNR=29
QSPA South Pole Qui 144.68 180 PKP **PKPab 10 37 54.9 -0.6**
comp=Z,1.6nm,0.8s,baz=90,slow=0.5,SNR=7.8

BER 22 10:25:06.2±0.4, 78°.36N×11°.81E, h18km±8km, ML0.7, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**0.57**	**3**	*e*P		Pg 10 25 16.2	-1.3
KBS				*e*S		Sg 10 25 24.0	-1.2
KBS				IAML		10 25 29.3	
	comp=Z,4.2nm,0.3s						
SPA0	**Spitsbergen Ar**	**0.95**	**99**	*e*P		Pb 10 25 23.1	-1.1
SPA0				*e*S		Sb 10 25 35.1	-1.2
SPA0				IAML		10 25 38.4	
	comp=Z,2.7nm,0.3s						
HSPB	**Hornsund (broa**	**1.58**	**148**	*e*P		Pb 10 25 34.2	-0.7
HSPB				*e*S		Sn 10 25 50.6	-2.6

*BER **22** 11:00:37.5±0.8, 67°.62N×34°.85E, h0km, Suspected explosion*
*KOLA **22** 11:00:38.0±0.5, 67°.68N±0°.02×34°.21E±0°.07, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **22** 11:00:42.8±2.7, 67°.51N×33°.19E, h0km, mbtmp2.8/2, ML2.1/2, Error ellipse: s-maj=31.5km s-min=11.9km az=75.0*
ISC 22 11:00:37.8±1.1, 67°.65N±0°.05×34°.24E±0°.05, h0km, n17, σ1s 04°/25, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.29**	**33**	P	**Pg**	**11 00 43.6**	**+0.3**
LVZ				S	**Sg**	**11 00 47.5**	**+0.4**
APA	**Apatity**	**0.33**	**255**	P	**Pg**	**11 00 44.5**	**+0.5**
APA				S	**Sg**	**11 00 49.1**	**+0.8**
APA0	**Apatity Array**	**0.48**	**265**	P	**Pg**	**11 00 46.8**	**-0.1**
APA0				S	**Sg**	**11 00 54.0**	**+0.8**
KVDA	**Kovda**	**1.10**	**209**	P	**Pg**	**11 00 59.3**	**+0.4**
KVDA				S	**Sg**	**11 01 13.5**	**+0.3**
TERR	**Teriberka**	**1.59**	**11**	P	**Pn**	**11 01 07.4**	**+0.3**
TERR				S	**Sn**	**11 01 27.2**	**-1.1**
VADS	**Vadso**	**3.04**	**327**	*e*S	**Sn**	**11 02 04.1**	**0.0**
VADS	**Vadso**	**3.04**	**327**	P	**Pn**	**11 01 26.1**	**-0.9**
VADS				S	**Sn**	**11 02 02.8**	**-1.3**
ARA0	**ARCESS Array S**	**3.72**	**305**	*e*P	**Pn**	**11 01 37.0**	**+0.6**
ARCES	**ARCESS Array B**	**3.72**	**305**	Pn	**Pn**	**11 01 36.7**	**+0.3**
	0.2nm,0.3s,baz=184,slow=14,SNR=44						
ARCES				Pg	**Pb**	**11 01 45.1**	**+0.9**
	0.3nm,0.3s,baz=120,slow=14,SNR=18						
ARCES				Sn	**Sn**	**11 02 18.6**	**-2.1**
	0.4nm,0.3s,baz=127,slow=26,SNR=8.9						
ARCES				Lg	Lg	11 02 31.6	
	1.0nm,0.3s,baz=120,slow=27,SNR=3.7						
	0.5nm,0.2s						
ARCES	**ARCESS Array B**	**3.72**	**305**	P	**Pn**	**11 01 36.7**	**+0.3**
ARCES				S	**Sn**	**11 02 19.4**	**-1.4**
HEF	**Hetta**	**4.05**	**286**	*e*S	**Sn**	**11 02 29.7**	**+0.8**
KTK1	**Kautokeino**	**4.30**	**294**	*e*S	**Sn**	**11 02 34.9**	**-0.3**
JETT	**Jettan, Norway**	**5.41**	**297**	*e*S	**Sn**	**11 03 00.6**	**-1.8**
I37NO	**I37NO**	**5.95**	**291**	I	I	11 35 55.0	
	baz=95,slow=320,SNR=12						
SALU	**Saltoluokta**	**6.04**	**275**	*e*S	**Sn**	**11 03 16.6**	**-1.4**
FINES	**FINESS Array B**	**7.15**	**213**	Pn	**Pn**	**11 02 22.7**	**-0.8**
	0.1nm,0.3s,baz=44,slow=12,SNR=1.3						
FINES				Lg	Lg	11 04 15.1	
	0.1nm,0.3s,baz=26,slow=32,SNR=1.2						
	1.3nm,0.9s						
FAUS	**Fauske**	**7.26**	**277**	S	**Sn**	**11 03 46.3**	**-1.8**

*IDC **22** 11:01:45.7±2.0, 54°.76N×159°.45W, h0km, mb3.3/4, mbtmp3.4/6, ML3.8/3, Error ellipse: s-maj=36.2km s-min=30.5km az=90.0*
*NEIC **22** 11:01:53.2±1.3, 54°.9N±0°.1×158°.29W±0°.08, h19km±8km, ML3.6/8, Error ellipse: s-maj=20.5km s-min=6.8km az=175.0*
ISC 22 11:01:52.1±0.9, 54°.96N±0°.08×158°.31W±0°.06, h10km, n63, σ1s 23°/62, mb3.3/4, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.75**	**261**	P	**Pg**	**11 02 06.7**	**+0.2**
CNBA	**Chernabura Isl**	**0.75**	**260**	Pg	**Pg**	**11 02 07.8**	**+1.2**
CHGN	**Chignik**	**1.35**	**358**	Pn	**Pn**	**11 02 15.6**	**-1.4**
CHGN				Sn	**Sb**	**11 02 32.1**	**-2.6**

VNFG	**Fog Glacier, M**	**1.51**	**333**	Pn		**Pn**	**11 02 19.2**	**0.0**	
CHIR	**Chirikof Islan**	**1.76**	**59**			**Pn**	**11 02 23.0**	**+0.3**	
CHIR				IAML			11 03 29.0		
	comp=E,611nm,1.1s								
CHIR				IAML			11 03 29.6		
	comp=N,466nm,1.1s								
SII	**Sitkinak Islan**	**2.83**	**54**	P		**Pn**	**11 02 36.9**	**-0.5**	
SII	**Sitkinak Islan**	**2.83**	**54**	S		**Sn**	**11 03 12.9**	**+1.3**	
SII	**Sitkinak Islan**	**2.83**	**54**			**Pn**	**11 02 37.4**	**0.0**	
OHAK	**Old Harbor**	**3.62**	**49**	P		**Pn**	**11 02 47.8**	**-0.3**	
OHAK	**Old Harbor**	**3.62**	**49**	Pn		**Pn**	**11 02 48.0**	**-0.1**	
ACHA	**Angle Creek He**	**3.66**	**26**	Pn		**Pn**	**11 02 50.6**	**+1.8**	
P16K	**Nushagak River**	**4.09**	**2**	Pn		**Pn**	**11 02 55.9**	**+1.3**	
KDAK	**Kodiak Island**	**4.26**	**46**	Pn		**Pn**	**11 02 56.2**	**-0.7**	
	comp=N,1.7nm,0.3s,baz=208,slow=4.1,SNR=34								
KDAK	**Kodiak Island**	**4.26**	**46**	Pn		**Pn**	**11 02 58.8**	**+1.9**	
O14K	**Tigyukauivet M**	**4.60**	**341**			**Pn**	**11 03 03.1**	**+1.5**	
O18K	**Koktuh Hills**	**5.19**	**18**	Pn		**Pn**	**11 03 12.1**	**+2.3**	
N15K	**Kwethluk River**	**5.32**	**350**			**Pn**	**11 03 12.9**	**+1.5**	
N17K	**Nushagak Hills**	**5.62**	**6**			**Pn**	**11 03 16.9**	**+1.3**	
N18K	**Kilae Creek**	**5.88**	**12**	Pn		**Pn**	**11 03 21.6**	**+2.3**	
CNPM	**China Poot**	**5.98**	**37**	Pn		**Pn**	**11 03 21.6**	**+1.1**	
M16K	**Timber Creek**	**6.09**	**357**			**Pn**	**11 03 22.8**	**+0.7**	
M13K	**Dall Lake**	**6.10**	**336**			**Pn**	**11 03 23.1**	**+0.9**	
M14K	**Bethel**	**6.13**	**343**			**Pn**	**11 03 24.0**	**+1.4**	
N19K	**Bonanza Creek**	**6.22**	**18**	Pn		**Pn**	**11 03 26.2**	**+2.3**	
BRLK	**Bradley Lake**	**6.27**	**37**	Pn		**Pn**	**11 03 24.9**	**+0.3**	
SEW	**Seward**	**7.03**	**39**	Pn		**Pn**	**11 03 35.0**	**+0.2**	
SLKM	**Skilak Lake**	**7.05**	**35**	Pn		**Pn**	**11 03 36.4**	**+1.1**	
L18K	**Granite Mounta**	**7.34**	**6**			**Pn**	**11 03 40.4**	**+1.3**	
M20K	**Styx River**	**7.46**	**19**	Pn		**Pn**	**11 03 43.5**	**+2.6**	
L19K	**White Mountain**	**7.47**	**13**			**Pn**	**11 03 42.9**	**+1.9**	
K15K	**Wolf Creek Mou**	**7.55**	**348**			**Pn**	**11 03 42.8**	**+0.7**	
RC01	**Rabbit Creek A**	**7.65**	**33**	Pn		**Pn**	**11 03 44.9**	**+1.5**	
K13K	**Kusilvak Mount**	**7.75**	**337**			**Pn**	**11 03 45.6**	**+0.9**	
K17K	**Iditarod**	**7.79**	**0**			**Pn**	**11 03 45.5**	**+0.2**	
MID	**Middleton Isla**	**7.89**	**51**	Pn		**Pn**	**11 03 46.7**	**0.0**	
PWL	**Port Wells**	**7.95**	**38**			**Pn**	**11 03 47.7**	**+0.2**	
HIN	**Hinchinbrook I**	**8.35**	**44**	Pn		**Pn**	**11 03 53.1**	**0.0**	
J16K	**Anvik River**	**8.44**	**353**			**Pn**	**11 03 54.1**	**-0.1**	
J17K	**VABM Dome**	**8.48**	**358**	Pn		**Pn**	**11 03 55.9**	**+1.2**	
FID	**Port Fidalgo**	**8.57**	**43**	Pn		**Pn**	**11 03 55.1**	**-1.0**	
SML	**Sawmill**	**8.63**	**33**	Pn		**Pn**	**11 03 57.0**	**0.0**	
EYAK	**Cordova Ski Ar**	**8.74**	**45**	P		**Pn**	**11 03 58.9**	**+0.5**	
EYAK	**Cordova Ski Ar**	**8.74**	**45**	Pn		**Pn**	**11 03 58.7**	**-0.3**	
SCM	**Sheep Creek Mo**	**8.98**	**35**			**Pn**	**11 04 01.9**	**+0.1**	
RAGM	**Ragged Mountai**	**9.10**	**48**	Pn		**Pn**	**11 04 03.6**	**+0.2**	
J19K	**Poorman**	**9.17**	**7**			**Pn**	**11 04 05.5**	**+1.2**	
BMRM	**Bremner River**	**9.44**	**45**	Pn		**Pn**	**11 04 08.5**	**+0.5**	
BERG	**Berg Lake**	**9.53**	**49**	Pn		**Pn**	**11 04 09.5**	**+0.3**	
DHY	**Denali Highway**	**9.89**	**30**	Pn		**Pn**	**11 04 15.5**	**+1.2**	
GLB	**Gilahina Butte**	**10.03**	**44**	Pn		**Pn**	**11 04 16.4**	**+0.4**	
G19K	**Purcell Mounta**	**11.24**	**3**	Pn		**Pn**	**11 04 33.7**	**+1.1**	
ILAR	**Eielson Array**	**11.37**	**26**	Pn		Pn	11 04 30.9	-3.5	
	comp=N,0.2nm,0.3s,baz=218,slow=14,SNR=8.5								
	comp=N,0.4nm,0.3s								
F20K	**Avaraart Lake**	**12.20**	**5**	Pn		**Pn**	**11 04 47.6**	**+2.0**	
S31K	**Pelican**	**12.56**	**67**	Pn		**Pn**	**11 04 50.6**	**0.0**	
M29M	**Somme Creek**	**12.71**	**46**	Pn		**Pn**	**11 04 53.7**	**+0.9**	
BESE	**Bessie Mountai**	**13.34**	**65**	Pn		**Pn**	**11 05 01.3**	**0.0**	
SHEM	**Shemya Is, Ala**	**16.39**	**274**	Pn		Pn	11 05 27.2	-15	
	comp=N,1.1nm,0.3s,baz=76,slow=17,SNR=1.9								
INK	**Inuvik**	**17.63**	**31**	P		**Pn**	**11 05 58.1**	**+0.7**	
	comp=N,0.3nm,0.3s,baz=224,slow=18,SNR=7.8								
	comp=N,1.3nm,0.6s								
YKA	**Yellowknife Ar**	**23.50**	**54**	P		**P**	**11 07 01.1**	**-0.5**	
	comp=N,0.2nm,0.5s,baz=268,slow=9.2,SNR=5.5								
	comp=N,0.2nm,0.5s								
NVAR	**Mina Array Bea**	**31.50**	**105**	P		**P**	**11 08 14.2**	**+0.1**	
	comp=N,0.2nm,0.5s,baz=315,slow=10,SNR=2.2								
	comp=N,0.2nm,0.5s								
PDAR	**Pinedale Array**	**33.62**	**91**	P		**P**	**11 08 33.5**	**+0.8**	
	comp=N,0.3nm,0.6s,baz=297,slow=4.6,SNR=4.5								
	comp=N,0.3nm,0.6s								
TXAR	**Lajitas Array**	**46.40**	**100**	P		**P**	**11 10 19.3**	**+0.6**	
	comp=N,0.4nm,0.7s,baz=306,slow=4.8,SNR=6.5								
	comp=N,0.4nm,0.7s								
QSPA	**South Pole Qui**	**144.73**	**180**	PKP		**PKPab**	**11 21 23.2**	**-3.3**	
	comp=N,1.3nm,1.1s,baz=69,slow=3.4,SNR=3.5								

*NNC **22** 11:02:05.3±0.5, 42.˚88N×78.˚18E, h0km, mb2.1, mpv3.1, Error ellipse: s-maj=4.0km s-min=1.9km az=173.0*
*KRNET **22** 11:02:06.5±0.1, 42.˚87N×78.˚11E, h28km, mb2.7*
*SOME **22** 11:02:06.6, 42.˚88N×78.˚08E, h10km*
ISC 22 11:02:04.7±1.2, **42.˚85N**±0.˚02×**78.˚07E**±0.˚02, **h0**km±10km, **n38**, σ**1**ᵗ**36**/69, **14C-8D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ANVS	**Anan'yevo**	**0.31**	**258**	⇓*eP*		**Pb**	**11 02 13.9**	**+0.7**
ANVS				⇓*eS*		**Sb**	**11 02 19.7**	**+0.9**
SATY	**Saty**	**0.32**	**49**	P		**Pg**	**11 02 11.2**	**+0.2**
	16nm,0.1s							
SATY				S		**Sg**	**11 02 14.5**	**-0.6**
	465nm,0.2s							
SATY	**Saty**	**0.32**	**49**	*eP*		**Pg**	**11 02 11.2**	**+0.2**
	16nm,0.1s							
SATY				*eS*		**Sg**	**11 02 14.5**	**-0.6**
	465nm,0.2s							
PRZ	**Przheval'sk**	**0.44**	**146**	⇑*eP*		**Pb**	**11 02 15.6**	**+0.2**
PRZ				⇑*eS*		**Sb**	**11 02 21.9**	**-0.7**
KURS	**Kuram**	**0.64**	**6**	P		**Pg**	**11 02 17.9**	**+0.8**
	26nm,0.1s							
KURS				S		**Sg**	**11 02 26.1**	**+0.6**
	30nm,0.3s							
KURS	**Kuram**	**0.64**	**6**	*eP*		**Pg**	**11 02 17.9**	**+0.8**
	26nm,0.1s							
KURS				*eS*		**Sg**	**11 02 26.1**	**+0.6**
	30nm,0.3s							
UZB	**Uzynbulak**	**0.76**	**66**	P		**Pg**	**11 02 18.7**	**-0.6**
	8.1nm,0.1s							
UZB				S		**Sg**	**11 02 27.4**	**-1.7**
	27nm,0.2s							
UZB	**Uzynbulak**	**0.76**	**66**	*eP*		**Pg**	**11 02 18.7**	**-0.6**
UZB				*eS*		**Sg**	**11 02 27.4**	**-1.7**
KPKS	**Kokpek**	**0.76**	**36**	P		**Pg**	**11 02 18.7**	**-0.6**
	0.2nm,0.2s							
KPKS				S		**Sg**	**11 02 27.5**	**-1.7**
	41nm,0.2s							
KPKS	**Kokpek**	**0.76**	**36**	*eP*		**Pg**	**11 02 18.7**	**-0.6**
	0.2nm,0.2s							
KPKS				*eS*		**Sg**	**11 02 27.5**	**-1.7**
	41nm,0.2s							
MDOK	**Medeo**	**0.81**	**293**	Pg		**Pn**	**11 02 22.6**	**-1.0**
	3.2nm,0.1s							
MDOK				Lg		Lg	11 02 34.0	
	9.3nm,0.2s							
MDOK	**Medeo**	**0.81**	**293**	*eP*		**Pn**	**11 02 22.6**	**-1.0**
	3.2nm,0.1s							
MDOK				*eS*		**Sb**	**11 02 34.0**	**+0.6**
	9.3nm,0.2s							
TNSS	**Tian-Shan**	**0.85**	**283**	P		**Pn**	**11 02 23.5**	**-0.8**
	1.9nm,0.1s							
TNSS				S		**Sn**	**11 02 35.5**	**-2.2**
	2.5nm,0.2s							
TNSS	**Tian-Shan**	**0.85**	**283**	*eP*		**Pn**	**11 02 23.5**	**-0.8**
	1.9nm,0.1s							
TNSS				*eS*		**Sn**	**11 02 35.5**	**-2.2**
	2.5nm,0.2s							
KDJ	**Kajisay**	**0.98**	**223**	⇑*eP*		**Pn**	**11 02 25.5**	**-0.4**
KDJ				⇑*eS*		**Sn**	**11 02 39.2**	**-1.3**
SHLS	**Shalkode**	**1.06**	**73**	P		**Pn**	**11 02 30.0**	**+2.9**
	5.1nm,0.1s							
SHLS				S		**Sn**	**11 02 46.7**	**+4.1**
	20nm,0.2s							
SHLS	**Shalkode**	**1.06**	**73**	*eP*		**Pn**	**11 02 30.0**	**+2.9**
	5.1nm,0.1s							
SHLS				*eS*		**Sn**	**11 02 46.7**	**+4.1**
	20nm,0.2s							
TARG	**Taragay, Kyrgy**	**1.14**	**190**	⇑*eP*		**Pn**	**11 02 28.1**	**-0.2**
TARG				⇑*eS*		**Sn**	**11 02 43.5**	**-1.2**
PDGK	**Podgornoye**	**1.14**	**65**	⇑Pg		**Pb**	**11 02 25.5**	**-2.0**
	1.0nm,0.4s							
PDGK				⇓Lg		Lg	11 02 39.2	
	12nm,0.8s							
BLB	**Baldybastay**	**1.28**	**13**	P		**Pn**	**11 02 29.3**	**-0.7**
	20nm,0.1s							
BLB				S		**Sb**	**11 02 45.4**	**-1.5**
	15nm,0.1s							
KTBS	**Karatobe**	**1.33**	**311**	P		**Pg**	**11 02 31.2**	**+0.9**
	5.3nm,0.1s							
KTBS				S		**Sg**	**11 02 48.7**	**+1.1**
	16nm,0.2s							
KTBS	**Karatobe**	**1.33**	**311**	*eP*		**Pg**	**11 02 31.2**	**+0.9**
	5.3nm,0.1s							
KTBS				*eS*		**Sg**	**11 02 48.7**	**+1.1**
	16nm,0.2s							
ARXS	**Arharly**	**1.38**	**353**	P		**Pb**	**11 02 31.4**	**0.0**
	3.7nm,0.1s							
ARXS				S		**Sn**	**11 02 49.2**	**-1.1**
	17nm,0.2s							
ARXS	**Arharly**	**1.38**	**353**	*eP*		**Pb**	**11 02 31.4**	**0.0**
	3.7nm,0.1s							
ARXS				*eS*		**Sn**	**11 02 49.2**	**-1.1**
	17nm,0.2s							
ULHL	**Ulahol**	**1.48**	**247**	⇑*eP*		**Pg**	**11 02 34.0**	**+0.9**
ULHL				⇑*eS*		**Sg**	**11 02 53.8**	**+1.5**
BOOM	**Boomskoye usch**	**1.61**	**258**	⇓*eP*		**Pb**	**11 02 35.8**	**+0.3**
BOOM				⇓*eS*		**Sg**	**11 02 57.0**	**+0.4**
KNOS	**Konyrlen**	**1.71**	**28**	P		**Pb**	**11 02 36.6**	**-0.6**
	4.7nm,0.1s							
KNOS				S		**Sn**	**11 02 57.9**	**-0.7**
	11nm,0.2s							
TKM2	**Tokmak 2**	**1.82**	**273**	⇑*eP*		**Pb**	**11 02 38.8**	**-0.3**
TKM2				⇑*eS*		**Sb**	**11 03 02.2**	**-0.3**
KRBS	**Karabastau**	**1.95**	**297**	Pg		**Pg**	**11 02 43.0**	**+0.9**
	3.2nm,0.3s							
KRBS				Lg		Lg	11 03 08.5	
	20nm,0.2s							
KRBS	**Karabastau**	**1.95**	**297**	*eP*		**Pg**	**11 02 43.0**	**+0.9**
	3.2nm,0.3s							
KRBS				*eS*		**Sg**	**11 03 08.5**	**+1.2**
	20nm,0.2s							
NRN	**Naryn**	**2.09**	**228**	⇓*eP*		**Pb**	**11 02 42.7**	**-1.0**
NRN				⇓*eS*		**Sb**	**11 03 08.9**	**-1.5**
SGDS	**Sogindy**	**2.59**	**285**	Pg		**Pg**	**11 02 54.5**	**+0.1**
	2.0nm,0.2s							
SGDS				Lg		Lg	11 03 28.6	
	2.7nm,0.2s							
KAPS	**Kapalarasan**	**2.61**	**20**	Pg		**Pb**	**11 02 53.2**	**+0.9**
	3.5nm,0.1s							
KAPS				Lg		Lg	11 03 26.2	
	14nm,0.1s							
KAPS	**Kapalarasan**	**2.61**	**20**	*eP*		**Pb**	**11 02 53.2**	**+0.9**
	3.5nm,0.1s							
KAPS				*eS*		**Sb**	**11 03 26.2**	**+1.3**
	14nm,0.1s							
AAK	**Ala-Archa**	**2.65**	**267**	⇓Pg		**Pb**	**11 02 54.2**	**+1.2**
	0.3nm,0.3s							
AAK				⇑Lg		Lg	11 03 31.6	
	3.3nm,0.8s							
AAK	**Ala-Archa**	**2.65**	**267**	⇑*eP*		**Pn**	**11 02 50.1**	**+1.3**
AAK				⇑*eS*		**Sn**	**11 03 21.8**	**+0.2**
BTLS	**Baital**	**3.64**	**308**	Pg		**Pg**	**11 03 13.3**	**-1.2**
	1.1nm,0.2s							
BTLS				Lg		Lg	11 04 00.1	
	2.7nm,0.3s							
BTLS	**Baital**	**3.64**	**308**	*eP*		**Pg**	**11 03 13.3**	**-1.2**
	1.1nm,0.2s							
BTLS				*eS*		**Sg**	**11 04 00.1**	**-1.6**
	2.7nm,0.3s							

*BJI **22** 11:02:07.5, 55.˚06N×161.˚10W, h10km, mB5.2/9, mb5.5/70, Ms4.7/9, Ms7 4.7/9*
*MOS **22** 11:02:08.3±0.8, 54.˚86N×160.˚78W, h24km, mb5.5/93, Error ellipse: s-maj=7.6km s-min=3.4km az=92.6*
*AEIC **22** 11:02:10.8±4.0, 54.˚74N±0.˚04×160.˚64W±0.˚06, h10km±3km, Error ellipse: s-maj=6.8km s-min=3.5km az=221.0*
*IDC **22** 11:02:12.1±1.6, 54.˚83N×160.˚72W, h42km±12km, mb4.9/32, mbtmp5.0/37, ML4.4/5, MS4.4/12, Error ellipse: s-maj=13.7km s-min=9.2km az=178.0*
*NEIC **22** 11:02:12.7, 54.˚73N×160.˚46W, h36km*
*NEIC **22** 11:02:12.7±2.0, 54.˚84N±0.˚06×160.˚68W±0.˚07, h43km±4km, mb5.1/400, ML5.1/30, Mwr4.9/37, Error ellipse: s-maj=8.2km s-min=6.0km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.17; $M_{\theta\theta}$-1.70; $M_{\phi\phi}$-0.46; $M_{r\theta}$1.46; $M_{\theta\phi}$-0.87; $M_{r\phi}$1.39; Fault plane solution: M_o2.95000×10^{16} NP1:ϕ_s52.00000°, δ66.71000°, λ81.46000°, NP2:ϕ_s252.79000°, δ24.72000°, λ109.03000°. Principal axes: T 2.9998, Plg67.0000°, Azm306.0000°; N -0.0961, Plg8.0000°, Azm55.0000°; P -2.9037, Plg21.0000°, Azm148.0000°;*
*GFZ **22** 11:02:13.3±0.1, 55.˚1N±3.˚6×16.˚1W±.˚1, h47km, M5.3/153, mb5.2/153, mB5.8/43, Mw(mB)5.3/43*
*BGR **22** 11:02:18.8, 55.˚94N×161.˚55W, h38km, mb5.1, Ms4.8*
ISC 22 11:02:11.7±0.3, **54.˚85N**±0.˚04×**160.˚61W**±0.˚03, **h40**km±2km, **h40**km:**pP-P, n1451**, σ**1ᵗ28**/1392, **mb5.1**/452, **MS4.6**/16, **59C-35D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.51**	**9**	P		Pn	11 02 14.8	-7.8
SDPT	**Sand Point**	**0.51**	**9**	S		**Sn**	**11 02 32.6**	**+2.4**
SDPT	**Sand Point**	**0.51**	**9**			**Pn**	**11 02 23.6**	**+1.0**
SDPT						**Sn**	**11 02 32.3**	**+2.1**
SDPT	**Sand Point**	**0.51**	**9**	P		**Pn**	**11 02 23.6**	**+1.0**
	baz=181,SNR=15							
CHNA	**Chernabura Isl**	**0.59**	**91**	P		**Pn**	**11 02 22.7**	**-0.9**
	baz=258,SNR=27							
CNBA	**Chernabura Isl**	**0.59**	**92**	Pn		**Pn**	**11 02 22.6**	**-1.1**
CNBA				Sn		**Sn**	**11 02 30.2**	**-2.0**
DOL	**Dolgoi Island**	**0.78**	**293**			**Pn**	**11 02 25.9**	**-0.4**
PS1A	**Pavlof South-1**	**0.87**	**312**			**Pn**	**11 02 28.5**	**+1.0**
PS4A	**Pavlof South-4**	**0.87**	**306**			**Pn**	**11 02 28.4**	**+0.9**
PN7A	**Pavlof North-7**	**0.99**	**307**			**Pn**	**11 02 30.5**	**+1.3**
DTNA	**Dutton South F**	**0.99**	**289**			**Pn**	**11 02 29.6**	**+0.5**
DT1	**Dutton Round H**	**1.00**	**286**			**Pn**	**11 02 29.5**	**+0.3**
DT1						**Sn**	**11 02 42.7**	**+0.7**
VNKR	**Veniaminof 5**	**1.39**	**30**			**Pn**	**11 02 36.6**	**+2.0**
S14K	**Fog Glacier**	**1.56**	**22**	P		**Pn**	**11 02 40.7**	**+3.6**
	baz=199,SNR=50							
VNFG	**Fog Glacier, M**	**1.56**	**22**	Pn		**Pn**	**11 02 40.2**	**+3.2**
ISNN	**Isanotski Nort**	**1.83**	**271**			**Pn**	**11 02 41.9**	**+1.3**
ISNN						**Sn**	**11 03 06.9**	**+4.3**
CHGN	**Chignik**	**1.92**	**40**	Pn		**Pn**	**11 02 44.9**	**+3.1**
CHGN				IAML			11 03 11.7	
	comp=N,12µm,0.9s							
CHGN				IAML			11 03 15.0	
	comp=E,14µm,0.6s							
CHGN	**Chignik**	**1.92**	**40**	P		**Pn**	**11 02 44.3**	**+2.4**
	baz=218,SNR=21							
SSLN	**Shishaldin Nor**	**1.96**	**270**			**Pn**	**11 02 43.9**	**+1.5**
SSBA	**Shishaldin**	**2.03**	**269**			**Pn**	**11 02 45.2**	**+1.8**
CHIR	**Chirikof Islan**	**3.01**	**69**	P		**Pn**	**11 02 58.2**	**+1.3**
	baz=250							
AKSA	**Akutan Strait**	**3.05**	**259**			**Pn**	**11 02 59.0**	**+1.6**
AKUT	**Akutan**	**3.09**	**259**	P		**Pn**	**11 02 59.2**	**+1.3**
AKUT	**Akutan**	**3.09**	**259**			**Pn**	**11 02 59.7**	**+1.8**
AKUT				Sn		**Sn**	**11 03 35.5**	**+1.9**
AKUT				IAML			11 03 47.0	
	comp=N,4µm,0.7s							
AKUT				IAML			11 03 47.3	
	comp=E,3µm,1.1s							
AKLV	**Akutan Long Va**	**3.19**	**260**			**Pn**	**11 03 00.6**	**+1.3**
AKBBA	**Akutan Broad B**	**3.19**	**259**			**Pn**	**11 03 00.8**	**+1.5**
AKGG	**Akutan Green G**	**3.20**	**261**			**Pn**	**11 03 01.0**	**+1.5**
AKV	**Akutan Volcano**	**3.20**	**259**			**Pn**	**11 03 01.2**	**+1.7**
ZRO	**Akutan Zero**	**3.22**	**259**			**Pn**	**11 03 01.2**	**+1.5**
LVA	**Lava Point**	**3.23**	**260**			**Pn**	**11 03 01.4**	**+1.5**
LVA				IAML			11 03 53.6	
	comp=N,7µm,0.8s							
LVA				IAML			11 03 57.3	
	comp=E,4µm,0.6s							
AKRB	**Akutan Reef Bi**	**3.26**	**260**			**Pn**	**11 03 02.0**	**+1.7**
UNV	**Unalaska Valle**	**3.59**	**256**	P		**Pn**	**11 03 05.6**	**+0.8**
UNV	**Unalaska Valle**	**3.59**	**256**			**Pn**	**11 03 05.4**	**+0.6**
UNV	**Unalaska Valle**	**3.59**	**256**	P		**Pn**	**11 03 05.5**	**+0.8**
	baz=74,SNR=174							
R17L	**Mt. Peulik Vol**	**3.67**	**39**	P		**Pn**	**11 03 08.2**	**+2.3**
	baz=220							
MGOD	**Makushin Gods**	**3.81**	**257**			**Pn**	**11 03 09.0**	**+1.1**
MAPS	**Pakushin South**	**3.85**	**257**			**Pn**	**11 03 09.6**	**+1.3**
SII	**Sitkinak Islan**	**4.02**	**62**	Pn		**Pn**	**11 03 11.0**	**+0.3**
SII				IAML			11 04 24.3	
	comp=N,5µm,1.0s							
SII				IAML			11 04 27.0	
	comp=E,4µm,0.8s							
SII	**Sitkinak Islan**	**4.02**	**62**	P		**Pn**	**11 03 12.3**	**+1.6**
	baz=245							
Q17K	**Contact Creek**	**4.31**	**35**	P		**Pn**	**11 03 16.7**	**+2.0**
	baz=218							
O15K	**Ungalikthiuk R**	**4.37**	**5**	Pn		**Pn**	**11 03 17.7**	**+2.3**
O15K				IAML			11 04 11.3	
	comp=E,2µm,0.6s							
O15K	**Ungalikthiuk R**	**4.37**	**5**	P		**Pn**	**11 03 17.6**	**+2.2**
	baz=185,SNR=147							
ANCK	**Angle Creek**	**4.40**	**38**			**Pn**	**11 03 18.6**	**+2.7**
Q16K	**King Salmon**	**4.42**	**28**	P		**Pn**	**11 03 19.3**	**+3.3**
	baz=210,SNR=17							
O14K	**Tigyukauivet M**	**4.43**	**356**	Pn		**Pn**	**11 03 19.2**	**+2.9**
O14K				IAML			11 04 41.9	
	comp=N,1µm,0.8s							
O14K				IAML			11 04 43.0	
	comp=E,1µm,1.1s							
O14K	**Tigyukauivet M**	**4.43**	**356**	P		**Pn**	**11 03 19.1**	**+2.7**
	baz=174,SNR=128							
P16K	**Nushagak River**	**4.44**	**18**			**Pn**	**11 03 19.2**	**+2.9**
P16K				IAML			11 04 50.2	
	comp=E,4µm,1.1s							
P16K	**Nushagak River**	**4.44**	**18**	P		**Pn**	**11 03 19.3**	**+3.0**
	baz=199,SNR=14							
ACHA	**Angle Creek He**	**4.47**	**39**	Pn		**Pn**	**11 03 19.6**	**+2.8**
MGLS	**Mageik Landsli**	**4.47**	**40**			**Pn**	**11 03 19.3**	**+2.4**
OKFG	**Magazine Ridge**	**4.53**	**254**			**Pn**	**11 03 19.0**	**+1.4**
OKTU	**Okmok Mt. Tuli**	**4.61**	**255**			**Pn**	**11 03 20.1**	**+1.3**
OKNC	**Okmok New Cone**	**4.63**	**256**			**Pn**	**11 03 20.2**	**+1.1**
OKCE	**Okmok Cone E**	**4.66**	**255**			**Pn**	**11 03 20.9**	**+1.3**
OHAK	**Old Harbor**	**4.75**	**57**	P		**Pn**	**11 03 21.1**	**+0.4**
	baz=241							
Q18K	**Katmai Hardscr**	**4.90**	**37**	P		**Pn**	**11 03 25.6**	**+2.7**
	baz=220,SNR=36							
P17K	**Kvichak River**	**4.92**	**26**	Pn		**Pn**	**11 03 26.8**	**+3.8**
P17K	**Kvichak River**	**4.92**	**26**	P		**Pn**	**11 03 26.1**	**+3.1**
	baz=208,SNR=34							
O16K	**Kokwok River B**	**4.95**	**15**			**Pn**	**11 03 26.1**	**+2.6**
O16K	**Kokwok River B**	**4.95**	**15**	IAML			11 04 55.9	
	comp=E,1µm,0.9s							
O16K				IAML			11 04 59.6	
	comp=N,852nm,0.9s							
O16K	**Kokwok River B**	**4.95**	**15**	P		**Pn**	**11 03 25.6**	**+2.1**
	baz=196,SNR=72							
N14K	**Kuskokwak Cree**	**5.13**	**354**	P		**Pn**	**11 03 28.4**	**+2.6**
	baz=172,SNR=184							
O17K	**Koliganek Bris**	**5.30**	**20**	P		**Pn**	**11 03 30.9**	**+2.8**
	baz=202,SNR=35							
N15K	**Kwethluk River**	**5.35**	**3**	P		**Pn**	**11 03 31.7**	**+2.8**
	baz=182,SNR=85							
KDAK	**Kodiak Island**	**5.35**	**53**	P		**Pn**	**11 03 29.4**	**+0.5**
	comp=N,3.2nm,0.3s,baz=252,slow=18,SNR=4.2							
KDAK				S		**Sn**	**11 04 27.4**	**-1.8**
	comp=N,159nm,0.5s,baz=26,slow=22,SNR=8.7							
	comp=N,30nm,0.4s							
KDAK	**Kodiak Island**	**5.35**	**53**	*i* P		**Pn**	**11 03 30.0**	**+1.1**
KDAK	**Kodiak Island**	**5.35**	**53**	IAML			11 04 54.0	
	comp=N,894nm,0.9s							
KDAK				IAML			11 04 54.5	
	comp=N,885nm,0.6s							
KDAK	**Kodiak Island**	**5.35**	**53**	P		**Pn**	**11 03 30.4**	**+1.4**
	baz=238							
KDAK	**Kodiak Island**	**5.35**	**53**	P		**Pn**	**11 03 32.1**	**+3.1**
P18K	**Big Mountain,**	**5.42**	**31**	P		**Pn**	**11 03 32.8**	**+2.9**
	baz=214,SNR=36							
N16K	**Nishlik Lake**	**5.73**	**9**	P		**Pn**	**11 03 37.2**	**+3.0**
	baz=190,SNR=154							
M13K	**Dall Lake**	**5.77**	**346**	Pn		**Pn**	**11 03 36.8**	**+2.1**
M13K	**Dall Lake**	**5.77**	**346**	P		**Pn**	**11 03 37.4**	**+2.7**
	baz=164,SNR=43							
CLCO	**Concord Point,**	**5.78**	**253**			**Pn**	**11 03 36.2**	**+1.4**
O18K	**Koktuh Hills**	**5.81**	**28**			**Pn**	**11 03 37.4**	**+2.1**
O18K	**Koktuh Hills**

baz=239,SNR=9.1
M22K Willow 8.85 34 Pn 11 04 18.6 +1.8
M22K Willow 8.85 34 P Pn 11 04 18.7 +1.8
baz=222,SNR=36
J18K Innoko River 8.87 11 Pn Pn 11 04 19.1 +1.9
J18K Innoko River 8.87 11 P Pn 11 04 19.4 +2.2
baz=194,SNR=53
PWL Port Wells 8.89 42 P Pn 11 04 18.5 +1.1
baz=232,SNR=26
Q23K Middleton Isla 9.01 54 P Pn 11 04 19.6 +0.6
baz=245
PMR Palmer 9.07 37 P Pn 11 04 21.5 +1.6
PMR Palmer 9.07 37 Pn 11 04 21.5 +1.6
PMR Palmer 9.07 37 P Pn 11 04 21.9 +2.0
baz=226,SNR=12
I17K Unalakleet 9.07 360 Pn 11 04 21.6 +1.8
I17K Unalakleet 9.07 360 P Pn 11 04 22.1 +2.3
baz=179,SNR=20
PPLA Purkeypile 9.17 25 P Pn 11 04 24.2 +2.8
baz=211,SNR=42
K20K Telida 9.17 19 Pn Pn 11 04 23.2 +2.0
K20K Telida 9.17 19 P Pn 11 04 23.3 +2.0
baz=204,SNR=74
KNK Knik Glacier 9.19 39 Pn 11 04 22.5 +1.0
KNK Knik Glacier 9.19 39 P Pn 11 04 23.2 +1.6
baz=229
L22K Petersville 9.24 30 Pn 11 04 24.4 +2.1
L22K Petersville 9.24 30 P Pn 11 04 25.0 +2.7
baz=217,SNR=24
GHO Glory Hole Cre 9.27 37 Pn 11 04 24.4 +1.7
HIN Hinchinbrook I 9.38 48 Pn 11 04 25.2 +1.0
GLI Glacier Island 9.39 44 Pn Pn 11 04 24.7 +0.3
GLI Glacier Island 9.39 44 P Pn 11 04 25.1 +0.8
baz=235
SML Sawmill 9.50 38 P Pn 11 04 26.3 +0.5
SML Sawmill 9.50 38 Pn 11 04 26.3 +0.5
SML Sawmill 9.50 38 P Pn 11 04 26.1 +0.3
baz=227
J19K Poorman 9.52 13 Pn Pn 11 04 28.5 +2.5
J19K Poorman 9.52 13 P Pn 11 04 28.3 +2.2
baz=197,SNR=58
FID Port Fidalgo 9.58 46 Pn 11 04 27.1 +0.3
CAST Castle Rocks 9.64 23 P Pn 11 04 30.1 +2.4
baz=219
M23K Glacier View 9.70 39 P Pn 11 04 29.9 +1.3
baz=229,SNR=20
EYAK Cordova Ski Ar 9.78 48 Pn 11 04 30.3 +0.6
EYAK Cordova Ski Ar 9.78 48 P Pn 11 04 30.0 +0.4
baz=240,SNR=18
H16K Elim 9.86 356 P Pn 11 04 32.6 +2.0
baz=174,SNR=17
SCM Sheep Creek Mo 9.88 39 P Pn 11 04 32.2 +1.2
baz=230,SNR=20
J20K Nowinta River 9.91 17 P Pn 11 04 33.8 +2.4
baz=202,SNR=114
CHUM Lake Minchumin 9.99 22 P Pn 11 04 35.5 +3.0
baz=208,SNR=37
ANM Nome 10.04 348 P Pn 11 04 35.5 +2.4
ANM Nome 10.04 348 Pn 11 04 35.5 +2.4
ANM Nome 10.04 348 P Pn 11 04 35.2 +2.1
baz=164,SNR=17
ADK Adak 10.05 259 P Pn 11 04 33.7 +0.4
ADK Adak 10.05 259 P Pn 11 04 33.8 +0.4
ADK Adak 10.05 259 Pn 11 04 33.8 +0.5
ADK Adak 10.05 259 P Pn 11 04 33.4 +0.1
KAIM Kayak Island 10.10 53 P Pn 11 04 35.2 +1.1
baz=246,SNR=18
GCSA Galena City Sc 10.11 9 P Pn 11 04 36.1 +2.1
baz=192,SNR=21
TRF Thorofare Moun 10.11 27 P Pn 11 04 36.4 +2.1
baz=216
H17K Granite Mounta 10.13 2 Pn 11 04 36.5 +2.2
H17K Granite Mounta 10.13 2 P Pn 11 04 36.6 +2.2
baz=182,SNR=64
WAT1 Susitna Watana 10.14 33 P Pn 11 04 35.3 +0.8
baz=223
KLU Klutina 10.21 43 Pn Pn 11 04 36.3 +0.7
KLU Klutina 10.21 43 P Pn 11 04 36.5 +0.9
baz=235,SNR=44
WAT6 Susitna Watana 10.23 36 P Pn 11 04 36.0 +0.1
baz=226,SNR=20
G15K Niukluk 10.32 352 P Pn 11 04 39.1 +2.1
baz=169
KIWB Kanaga Island 10.33 260 Pn 11 04 38.0 +0.8
H18K Honhosa River 10.40 5 Pn Pn 11 04 40.2 +2.1
H18K Honhosa River 10.40 5 P Pn 11 04 40.3 +2.1
baz=187,SNR=17
I20K Naaghedeneel 10.44 15 P Pn 11 04 41.2 +2.6
baz=199,SNR=54
M24K Tolsona, Glenn 10.47 40 Pn 11 04 40.2 +1.1
M24K Tolsona, Glenn 10.47 40 P Pn 11 04 40.3 +1.2
baz=232,SNR=24
BMRM Bremner River 10.48 48 Pn 11 04 40.2 +1.0
BMRM Bremner River 10.48 48 P Pn 11 04 40.5 +1.3
baz=240,SNR=19
GAMB Gambell 10.58 332 P Pn 11 04 43.0 +2.5
baz=143,SNR=6.7
BERG Berg Lake 10.62 52 Pn 11 04 42.0 +0.9
DHY Denali Highway 10.69 34 P Pn 11 04 43.8 +1.6
baz=225,SNR=22
G17K Kiwalik Mounta 10.69 360 P Pn 11 04 44.3 +2.2
baz=180,SNR=38
MCK McKinley 10.71 29 P Pn 11 04 44.7 +2.4
baz=218,SNR=31
N25K Chitina, Valde 10.80 45 P Pn 11 04 45.4 +1.7
baz=238,SNR=24
H19K Roundabout Mou 10.91 9 Pn Pn 11 04 47.1 +2.1
H19K Roundabout Mou 10.91 9 P Pn 11 04 47.3 +2.2
baz=192,SNR=63
F14K Arctic Creek 11.03 347 P Pn 11 04 49.6 +2.9
baz=162,SNR=6.3
HARP HAARP 11.03 40 Pn 11 04 47.7 +1.0
HARP HAARP 11.03 40 P Pn 11 04 48.2 +1.5
baz=233,SNR=12
CRQE Cirque 11.04 51 P Pn 11 04 47.6 +0.6
baz=245,SNR=9.9
GLB Gilahina Butte 11.05 46 Pn 11 04 47.8 +0.8
H20K Anotleneega Mo 11.05 13 P Pn 11 04 49.2 +2.2
baz=197,SNR=70
F15K North Star Dit 11.08 351 Pn 11 04 50.0 +2.7
F15K North Star Dit 11.08 351 P Pn 11 04 50.1 +2.7
baz=168,SNR=56
G18K Tagagawik 11.13 4 Pn Pn 11 04 50.4 +2.3
G18K Tagagawik 11.13 4 P Pn 11 04 50.1 +2.1
baz=186,SNR=84
TGL Tana Glacier 11.16 51 Pn 11 04 49.2 +0.6
I21K Tanana 11.21 19 P Pn 11 04 51.3 +2.1
baz=206,SNR=37
PAX Paxson 11.27 38 P Pn 11 04 51.6 +1.6
PAX Paxson 11.27 38 Pn 11 04 51.6 +1.6
PAX Paxson 11.27 38 P Pn 11 04 50.6 +0.5
baz=230,SNR=31
MLY Manley 11.33 22 P Pn 11 04 53.1 +2.2
baz=210,SNR=35
TNA Tin City 11.34 344 Pn 11 04 54.2 +3.4
TNA Tin City 11.34 344 P Pn 11 04 53.5 +2.7
baz=156,SNR=9.9
MCARA McCarthy VSAT 11.35 48 P Pn 11 04 52.0 +0.9
baz=242,SNR=12
NEA2 Nenana 11.36 26 P Pn 11 04 52.6 +1.4
baz=215,SNR=37
G19K Purcell Mounta 11.47 7 Pn 11 04 54.6 +2.0
G19K Purcell Mounta 11.47 7 P Pn 11 04 54.6 +2.0
baz=190,SNR=26
H21K Melozitna Rive 11.51 16 P Pn 11 04 55.4 +2.2
baz=203,SNR=65
GRNC Granite Creek 11.64 52 Pn 11 04 56.4 +1.1
F17K Baldwin Pennin 11.64 359 Pn 11 04 57.6 +2.6
F17K Baldwin Pennin 11.64 359 P Pn 11 04 57.1 +2.1
baz=178
IMAR Indian Mountai 11.67 14 Pn 11 04 56.7 +1.4
K24K Donnelly Dome 11.72 34 P Pn 11 04 57.9 +1.8
baz=226,SNR=17
I23K Minto, Yukon-K 11.74 24 P Pn 11 04 57.9 +1.5
baz=213,SNR=33
HDA Harding Lake 11.79 30 P Pn 11 04 57.5 +0.4
baz=221,SNR=18
F18K Selawik 11.80 2 P Pn 11 04 59.9 +2.7
baz=182,SNR=20
M26K Nabesna, AK 11.87 43 Pn 11 04 58.7 +0.6
M26K Nabesna, AK 11.87 43 P Pn 11 04 59.5 +1.3
baz=238,SNR=63
MENT Mentasta 11.88 40 Pn 11 04 59.5 +1.1
COLA College 11.90 27 ⇑*i*P Pn 11 04 59.7 +1.2
COLA College 11.90 27 Pn 11 05 00.7 +2.3
COLA College 11.90 27 P Pn 11 04 59.4 +0.9
baz=218
COLA College 11.90 27 P Pn 11 04 58.4 -0.1
H22K Ishtalitna Cre 11.97 19 P Pn 11 05 02.2 +2.7
baz=206,SNR=98
RIDG Independent Ri 11.98 36 P Pn 11 05 01.2 +1.5
baz=229,SNR=27
LOGN Logan Glacier 12.02 52 Pn 11 05 03.5 +3.2
L26K Log Cabin Wild 12.07 40 Pn 11 05 02.6 +1.7
L26K Log Cabin Wild 12.07 40 P Pn 11 05 02.3 +1.4
baz=234,SNR=19
ILAR Eielson Array 12.08 29 P Pn 11 05 00.2 -0.8
comp=N,1.4nm,0.3s,baz=221,slow=14,SNR=25
ILAR S Sn 11 07 11.2 -3.0
comp=N,11nm,0.9s,baz=214,slow=23,SNR=4.3
ILAR LR LR 11 10 30.8
comp=N,2µm,18.6s,baz=214,slow=41
comp=N,3.2nm,0.3s
ILAR Eielson Array 12.08 29 P Pn 11 05 02.4 +1.4
ILAR Eielson Array 12.08 29 Pn 11 05 02.4 +1.4
F19K Shaleruckik Mo 12.11 5 P Pn 11 05 03.9 +2.5
baz=188,SNR=77
PINM Pinnacle 12.13 56 P Pn 11 05 01.9 +0.2
baz=252
POKR Poker Plat Res 12.20 27 P Pn 11 05 04.4 +1.7
baz=218
G21K Allakaket 12.20 14 P Pn 11 05 04.2 +1.5
baz=199
H23K Yukon River 12.28 22 P Pn 11 05 04.9 +1.2
baz=211
M27K Edge Creek, AK 12.29 45 Pn 11 05 06.4 +2.3
M27K Edge Creek, AK 12.29 45 P Pn 11 05 04.7 +0.6
baz=240,SNR=26
E17K Hotham Inlet 12.29 358 P Pn 11 05 06.0 +2.1
baz=176,SNR=6.3
O28M Mount Upton 12.37 53 P Pn 11 05 05.2 -0.1
baz=250,SNR=22
J25K Salcha River, 12.41 32 P Pn 11 05 05.7 +0.1
baz=224,SNR=22
SCRK Sand Creek 12.43 36 P Pn 11 05 05.5 -0.3
baz=230,SNR=22
F20K Avaraart Lake 12.47 9 Pn 11 05 09.0 +2.7
F20K Avaraart Lake 12.47 9 P Pn 11 05 08.9 +2.7
baz=193,SNR=54
AMKA Amchitka 12.55 262 Pn 11 05 07.4 0.0
E18K Tukpahlearik C 12.62 0 Pn 11 05 11.3 +2.9
E18K Tukpahlearik C 12.62 0 P Pn 11 05 10.6 +2.3
baz=180,SNR=16
YUK3 Moose Creek 12.63 49 P Pn 11 05 09.8 +1.1
baz=245,SNR=28
H24K Noodor Dome 12.66 24 Pn 11 05 09.7 +0.7
H24K Noodor Dome 12.66 24 P Pn 11 05 09.9 +0.8
baz=215,SNR=37
L27K Beaver Creek, 12.67 42 Pn 11 05 09.4 +0.3
L27K Beaver Creek, 12.67 42 P Pn 11 05 09.8 +0.7
baz=237,SNR=28
BCAR Beaver Creek A 12.69 42 Pn 11 05 09.0 -0.4
YUK8 Steele Glacier 12.74 51 P Pn 11 05 11.3 +0.9
baz=248,SNR=28
E19K Redstone River 12.76 6 P Pn 11 05 12.8 +2.6
baz=188
F21K Alatna River 12.88 13 P Pn 11 05 14.7 +2.8
baz=198,SNR=69
G23K Bananza Creek 12.95 19 P Pn 11 05 14.7 +1.8
baz=208,SNR=45
D17K Noatak River 12.95 356 P Pn 11 05 15.4 +2.5
baz=173,SNR=10
O29M Mount Kennedy 12.99 56 P Pn 11 05 15.0 +1.4
baz=254,SNR=25
PRP Porcupine Dome 13.02 29 Pn 11 05 13.9 0.0
PRP Porcupine Dome 13.02 29 P Pn 11 05 14.0 0.0
baz=221
P29M Windy Craggy 13.25 60 P Pn 11 05 18.3 +1.3
baz=258,SNR=16
YUK4 Talbot Arm 13.27 52 P Pn 11 05 19.7 +2.2
baz=250,SNR=9.5
YUK6 Outpost Mounta 13.27 54 P Pn 11 05 18.8 +1.3
baz=252,SNR=11
RDOG Red Dog Mine 13.30 356 Pn 11 05 21.3 +3.6
RDOG Red Dog Mine 13.30 356 P Pn 11 05 20.6 +2.9
baz=174,SNR=15
F22K John River 13.32 14 P Pn 11 05 20.2 +2.3
baz=201
COLD Coldfoot 13.38 18 P Pn 11 05 20.3 +1.6
baz=206,SNR=92
G24K Hadweenzic Riv 13.47 23 P Pn 11 05 20.7 +0.8
baz=214,SNR=24
I26K Coal Creek Min 13.57 32 P Pn 11 05 21.8 +0.5
baz=227
E20K Nigu River 13.62 7 P Pn 11 05 24.7 +2.7
baz=191
HYT Haines Junctio 13.64 55 P Pn 11 05 23.6 +1.1
baz=254
C16K Lisburne Hills 13.66 353 P Pn 11 05 25.5 +3.0
baz=168
C17K DeLong Mountai 13.73 356 P Pn 11 05 26.9 +3.4
baz=174,SNR=16
P30M Million Dollar 13.73 58 P Pn 11 05 24.6 +0.9
baz=257
D19K Kuna River 13.75 4 P Pn 11 05 26.7 +2.9
baz=186
M29M Somme Creek 13.76 48 P Pn 11 05 24.8 +0.8
baz=246,SNR=60
S31K Pelican 13.83 67 Pn 11 05 25.9 +1.0
S31K Pelican 13.83 67 P Pn 11 05 26.1 +1.2
baz=267,SNR=8.6
G25K Bearman Lake 13.84 25 P Pn 11 05 27.0 +2.0
baz=217
C18K Utukok River 13.86 359 Pn 11 05 28.9 +3.6
C18K Utukok River 13.86 359 P Pn 11 05 28.3 +3.1
baz=178,SNR=42
PLBC Pleasant Camp 13.91 61 P Pn 11 05 27.4 +1.4
baz=261,SNR=20
E21K Killik River 13.99 10 P Pn 11 05 29.8 +2.8
baz=196
N30M Aishikik Lake 14.02 52 P Pn 11 05 28.5 +1.0
baz=252
D20K Etivluk River 14.04 6 P Pn 11 05 30.6 +2.9
baz=189
F24K Squaw Lake 14.07 20 P Pn 11 05 29.5 +1.4
baz=211
R31K City Hall, Gus 14.11 65 P Pn 11 05 30.0 +1.3
baz=265
DAWY Dawson 14.13 41 P Pn 11 05 29.3 +0.3
baz=238,SNR=15
L29M L2ill 14.17 45 P Pn 11 05 30.5 +1.0
baz=244,SNR=15
E23K Chandalar 14.22 17 P Pn 11 05 31.5 +1.2
baz=206,SNR=57
I27K Kandik River 14.25 33 P Pn 11 05 30.7 0.0
baz=229,SNR=12
O30N Mendenhall 14.30 56 Pn 11 05 33.1 +1.8
O30N Mendenhall 14.30 56 P Pn 11 05 30.6 -0.7
baz=256,SNR=12
C19K Lookout Ridge 14.32 1 P Pn 11 05 32.8 +1.2
baz=192
SKAG Skagway 14.43 61 Pn 11 05 35.7 +2.7
SKAG Skagway 14.43 61 P Pn 11 05 32.9 -0.1
baz=262,SNR=9.9
E24K Your Creek 14.44 18 P Pn 11 05 34.1 +1.0
baz=209,SNR=44
M30M Minto, Yukon 14.52 48 Pn 11 05 34.8 +0.4
M30M Minto, Yukon 14.52 48 P Pn 11 05 33.6 -0.7
baz=248,SNR=18
G26K Porcupine Rive 14.57 27 P Pn 11 05 34.5 -0.3
baz=221,SNR=11
BESE Bessie Mountai 14.59 65 P 11 05 38.0 -3.0
C21K Knifeblade Rid 14.61 8 P Pn 11 05 36.4 +1.1
baz=193,SNR=132
F25K Christian Rive 14.61 23 P Pn 11 05 36.0 +0.5
baz=216,SNR=17
N31M Braeburn, Yuko 14.63 53 P 11 05 38.8 -2.6
H27K Steamboat Moun 14.69 32 P Pn 11 05 36.6 0.0
baz=228,SNR=9.4
I28M Miner Creek 14.71 36 P Pn 11 05 36.5 -0.2
baz=233,SNR=8.6
S32K Killisnoo 14.71 69 P Pn 11 05 36.0 -0.7
baz=270,SNR=7.5
K29M Barlow Dome 14.74 43 P Pn 11 05 37.5 +0.1
baz=242,SNR=52
R32K Eaglecrest 14.75 66 Pn 11 05 39.5 +2.2
R32K Eaglecrest 14.75 66 P Pn 11 05 36.6 -0.7
baz=267,SNR=8.8
TOLK Toolik Lake Re 14.76 16 P Pn 11 05 39.4 +2.0
baz=205,SNR=65
J29N Klondike Camp 14.77 40 Pn 11 05 38.9 +1.3
J29N Klondike Camp 14.77 40 P Pn 11 05 38.9 +1.3
baz=239
WHY Whitehorse 14.86 57 P Pn 11 05 39.1 +0.3
baz=258,SNR=12
D23K Nanushuk River 14.89 14 P Pn 11 05 40.7 +1.6
baz=202,SNR=33
F26K Sheenjek River 15.04 25 P Pn 11 05 41.9 +0.7
baz=219,SNR=18
G27K Doyon Strip 15.05 30 P Pn 11 05 41.0 -0.2
baz=226,SNR=13
E25K Arctic Village 15.06 22 IAmb IAmb 11 06 03.4
comp=Z,80nm,1.1s
E25K Arctic Village 15.06 22 P Pn 11 05 42.8 +1.4
baz=215,SNR=41
SHEM Shemya Is, Ala 15.07 272 P Pn 11 05 40.7 -0.8
comp=Z,4.9nm,0.3s,baz=64,slow=2.8,SNR=9.7
SHEM LR LR 11 10 50.2
comp=Z,823nm,20.5s,baz=80,slow=34
comp=Z,24nm,0.6s
B21K Ikpikpuk River 15.08 8 Pn 11 05 42.9 +1.3
B21K IAmb IAmb 11 05 48.7
comp=Z,50nm,0.7s
B21K Ikpikpuk River 15.08 8 P Pn 11 05 43.4 +1.9
baz=193,SNR=52
P32M Atlin 15.26 61 P Pn 11 05 44.0 -0.1
baz=263
B20K Meade River 15.30 5 IAmb IAmb 11 06 00.0
comp=Z,91nm,0.9s
B20K Meade River 15.30 5 P Pn 11 05 45.8 +1.4
baz=187
D24K Happy Valley 15.34 16 IAmb IAmb 11 06 11.2
comp=Z,122nm,1.1s
D24K Happy Valley 15.34 16 P Pn 11 05 46.4 +1.4
baz=206
A19K Wainwright 15.42 359 P P 11 05 48.2 -1.8
baz=179,SNR=24
M31M Drury Creek, Y 15.46 51 IAmb IAmb 11 06 09.1
comp=Z,76nm,0.8s
M31M Drury Creek, Y 15.46 51 P Pn 11 05 47.2 +0.6
baz=253,SNR=31
J30M Hart River 15.54 41 P Pn 11 05 48.9 +1.0
baz=242,SNR=117
U33K Whale Pass 15.60 74 P Pn 11 05 49.0 +0.6
baz=276,SNR=5.8
H29M Whitestone 15.68 35 P Pn 11 05 50.3 +0.8
baz=234,SNR=19
C23K Itkillik River 15.71 13 IAmb IAmb 11 06 10.0
comp=Z,200nm,1.2s
C23K Itkillik River 15.71 13 P Pn 11 05 50.5 +0.8
baz=201,SNR=61
P33M Teslin, Yukon 15.79 59 P Pn 11 05 50.8 -0.1
baz=262
N32M Quiet Lake 15.81 55 P Pn 11 05 51.6 +0.4
baz=258
I30M Mount Dempster 15.84 39 P Pn 11 05 51.9 +0.3
baz=240,SNR=109
B22K Teshekpuk Lake 15.88 9 IAmb IAmb 11 05 59.1
comp=Z,64nm,0.8s
B22K Teshekpuk Lake 15.88 9 P Pn 11 05 53.0 +1.0
baz=195,SNR=55
D25K Kavik River 15.91 19 P Pn 11 05 53.0 +0.6
baz=211,SNR=35
Q32M Nakina River 15.96 64 P Pn 11 05 53.0 -0.2
baz=267,SNR=11
WRAK Wrangell Islan 15.99 73 P Pn 11 05 53.1 -0.4
baz=276
E27K Coleen River 16.05 26 P Pn 11 05 54.8 +0.6
baz=222,SNR=12
F28M Old Crow 16.11 29 P Pn 11 05 55.0 +0.1
baz=227,SNR=31
G29M Pine Creek 16.21 33 P Pn 11 05 56.6 +0.4
baz=232,SNR=43
EPYK Eagle Plains 16.32 36 P Pn 11 05 58.5 +0.9
baz=236,SNR=33
A22K Sinclair Lake 16.41 7 P P 11 06 00.0 -0.9
baz=191,SNR=23
S34M Telegraph Cree 16.55 67 P Pn 11 06 01.2 +0.7
baz=271,SNR=7.6
V35K Ketchikan 16.56 76 P Pn 11 05 59.9 -0.7
baz=280,SNR=7.8
H02S1 DAWSON INLET T 16.57 84 T T 11 22 17.5
H02S2 DAWSON INLET T 16.57 84 T T 11 22 18.0
A21K Barrow 16.63 4 P P 11 06 02.9 -0.6
baz=188,SNR=18
R33M Jennings River 16.65 62 P Pn 11 06 02.5 +0.7
baz=267,SNR=16
C27K Jago River 16.68 21 P P 11 06 04.0 0.0
baz=216,SNR=9.9
C26K Camden Bay 16.69 19 P P 11 06 03.8 -0.3
baz=213
G30M tAoh Zraii Nji 16.82 34 P P 11 06 05.2 -0.5
baz=235,SNR=30
H31M Peel River 16.86 39 IAmb IAmb 11 06 27.5
comp=Z,171nm,0.8s
H31M Peel River 16.86 39 P Pn 11 06 04.6 +0.2
baz=242,SNR=44
E28M Babbage River 16.88 27 P P 11 06 06.1 -0.2
baz=225
MMPY Sheldon Lake, 16.98 51 P P 11 06 07.7 +0.3
baz=256,SNR=30
D27M Malcolm River 16.99 24 P P 11 06 07.6 0.0
baz=221,SNR=16
T35M Bob Quinn 17.09 70 P Pn 11 06 06.7 -0.6
baz=275,SNR=5.8
DLBC Dease Lake 17.12 65 P Pn 11 06 07.9 +0.2
comp=Z,0.7nm,0.3s,baz=247,slow=14,SNR=15
DLBC S Sn 11 09 12.1 -4.8
comp=Z,2.3nm,0.8s,baz=98,slow=18,SNR=1.3
comp=Z,7.1nm,1.1s
DLBC Dease Lake 17.12 65 P Pn 11 06 08.1 +0.3
baz=271,SNR=12
E29M Blow River 17.18 29 P Pn 11 06 08.0 -0.4
E29M Blow River 17.18 29 P Pn 11 06 08.6 +0.2
baz=229,SNR=17
F30M Barrier River 17.32 33 P P 11 06 11.0 -0.2
F30M Barrier River 17.32 33 P Pn 11 06 10.5 +0.3
baz=234,SNR=22
G31M Satah River 17.44 36 P P 11 06 11.8 -0.6
G31M IAmb IAmb 11 06 28.9
comp=Z,64nm,0.8s
G31M Satah River 17.44 36 P P 11 06 12.1 -0.3
baz=238,SNR=26
D28M Stokes Point 17.60 26 P P 11 06 14.0 -0.1
baz=225
WTLY Watson Lake, Y 17.78 60 P P 11 06 17.2 +0.9
WTLY Watson Lake, Y 17.78 60 P Pn 11 06 15.5 -0.3
baz=266,SNR=18
F31M Tsiigehtchic 17.89 35 P Pn 11 06 16.3 -0.7
F31M Tsiigehtchic 17.89 35 P P 11 06 17.2 -0.1
baz=238
INK Inuvik 18.42 32 P P 11 06 22.8 -0.5
comp=Z,2.3nm,0.3s,baz=232,slow=14,SNR=27
comp=Z,8.4nm,0.4s
INK Inuvik 18.42 32 P P 11 06 22.4 -0.8
INK Inuvik 18.42 32 P P 11 06 22.7 -0.5
baz=236,SNR=21
LIRD Liard River Hi 19.14 62 P P 11 06 30.7 -0.5
baz=271,SNR=8.1
BBB Bella Bella 19.41 84 LR LR 11 12 20.6
comp=Z,399nm,19.8s,baz=326,slow=31
KOTAN Kotaneelee Air 20.16 60 P Pn 11 06 43.2 -1.1
baz=271
BILL Bilibino 20.27 324 ⇓*i*P P 11 06 43.9 +0.5
BILL pmax pmax
comp=Z,17nm,1.8s
BILL Bilibino 20.27 324 P 11 06 43.7 +0.3
WRGLY Wrigley 20.60 51 P Pn 11 06 48.4 -1.0
WRGLY IAmb IAmb 11 06 53.8
comp=Z,76nm,0.7s
WRGLY Wrigley 20.60 51 P P 11 06 47.4 +0.4
baz=263,SNR=6.3
C36M Paulatuk 21.94 34 P P 11 07 01.1 -0.2
C36M IAmb IAmb 11 07 10.8
comp=Z,42nm,0.8s
C36M Paulatuk 21.94 34 P P 11 07 01.3 0.0
baz=247
A36M Sachs Harbour 22.78 28 P P 11 07 09.8 -0.4
A36M IAmb IAmb 11 07 12.7
comp=Z,61nm,0.8s
A36M Sachs Harbour 22.78 28 P P 11 07 11.0 +0.8
baz=240
CLRS Cowichan Lake 23.14 90 P P 11 07 21.4 +7.3
LLLB Lillooet 23.62 84 P P 11 07 23.3 +4.4
PET Petropavlovsk 23.82 283 *i* P P 11 07 20.3 -0.3
PET pmax pmax
comp=Z,131nm,0.6s
PET Petropavlovsk 23.82 283 P P 11 07 20.1 -0.5
PET Petropavlovsk 23.82 283 P P 11 07 20.0 -0.6
comp=Z,2µmcomp=Z,255nm,0.8s
PET Petropavlovsk 23.82 283 P P 11 07 20.5 -0.1

NLWA **Neilton Lookou** 24.01 93 P **P** **11 07 23.6 +1.0**
PEA0B **Petropavlovsk-** 24.32 283⇑ *i*P **P** **11 07 24.6 -0.7**
PETK **Petropavlovsk-** 24.32 283 P **P** **11 07 24.9 -0.4**
comp=Z,113nm,0.5s,baz=76,slow=13,SNR=234
comp=Z,113nm,0.5s
PETK **Petropavlovsk-** 24.32 283 P **P** **11 07 25.1 -0.2**
PETK **Petropavlovsk-** 24.32 283 P **P** **11 07 25.1 -0.2**
YKAW3 **Yellowknife Wh** 24.62 53 P **P** **11 07 28.9 +1.0**
YKA **Yellowknife Ar** 24.63 53 P **P** **11 07 29.4 +1.4**
comp=Z,6.5nm,0.6s,baz=271,slow=8.7,SNR=50
YKA PcP **PcP** **11 11 04.6 +0.3**
comp=Z,4.7nm,0.6s,baz=281,slow=1.9,SNR=14
YKA ScP **ScP** **11 14 38.7 -0.9**
comp=Z,1.5nm,0.8s,baz=287,slow=3.6,SNR=7.0
comp=Z,6.5nm,0.6s
YKA **Yellowknife Ar** 24.63 53 *c e*P **P** **11 07 29.1 +1.1**
YKA pmax pmax
comp=Z,8.0nm,0.6s
YKA **Yellowknife Ar** 24.63 53 P **P** **11 07 28.8 +0.8**
YKAW1 **Yellowknife Wh** 24.68 53 P **P** **11 07 29.7 +1.2**
SEY **Seymchan** 25.06 308 *i* P **P** **11 07 30.6 -1.3**
SEY pmax pmax
comp=Z,8.0nm,0.9s
SKR **Severo-Kuril's** 26.19 279 *e*P **P** **11 07 41.2 -1.0**
SKR pmax pmax
comp=Z,115nm,0.6s
MA2 **Magadan** 26.26 300 *c i*P **P** **11 07 43.3 +0.5**
MA2 pmax pmax
comp=Z,19nm,0.9s
MA2 **Magadan** 26.26 300 P **P** **11 07 42.5 -0.2**
MA2 IAmb IAmb 11 07 59.3
comp=Z,35nm,1.0s
MA2 **Magadan** 26.26 300 P **P** **11 07 41.7 -1.1**
NEW **Newport** 27.46 86 P **P** **11 07 55.3 +1.5**
NEW **Newport** 27.46 86 P **P** **11 07 55.3 +1.5**
YBH **Yreka Blue Hor** 28.05 102 LR LR 11 16 43.4
comp=Z,782nm,18.3s,baz=314,slow=31
WVOR **Wild Horse Val** 29.92 97 P **P** **11 08 18.5 +2.8**
WVOR **Wild Horse Val** 29.92 97 P **P** **11 08 18.5 +2.8**
PNTR **Pine Nut** 31.58 103 IAmb IAmb 11 08 50.1
comp=Z,22nm,1.2s
HLID **Hailey** 31.66 91 P **P** **11 08 32.0 +0.9**
HLID **Hailey** 31.66 91 P **P** **11 08 33.1 +2.0**
RES **Resolute Bay** 31.83 27 P **P** **11 08 32.3 +0.3**
RES pmax pmax
comp=Z,11nm,1.0s
RES **Resolute Bay** 31.83 27 P **P** **11 08 32.3 +0.3**
BLKN **Baker Lake** 32.62 47 IAmb IAmb 11 08 40.9
comp=Z,27nm,0.8s
NVAR **Mina Array Bea** 32.77 102 P **P** **11 08 40.0 -0.9**
comp=Z,0.7nm,0.3s,baz=48,slow=26,SNR=15
NVAR PcP **PcP** **11 11 25.7 +0.3**
comp=Z,3.8nm,0.6s,baz=305,slow=2.4,SNR=13
NVAR ScP **ScP** **11 15 05.1 -0.8**
comp=Z,2.0nm,0.9s,baz=291,slow=2.8,SNR=10
NVAR **Mina Array Bea** 32.77 102 P **P** **11 08 39.7 -1.2**
TIXI **Tiksi** 33.40 327⇓ *i*P **P** **11 08 45.1 -0.7**
TIXI pmax pmax
comp=Z,13nm,0.9s
TIXI **Tiksi** 33.40 327 P **P** **11 08 45.1 -0.7**
TIXI IAmb IAmb 11 08 46.6
comp=Z,16nm,1.0s
FLWY **Flagg Ranch** 33.49 88 IAmb IAmb 11 09 11.6
comp=Z,24nm,1.4s
TYV **Tymovskoe** 33.68 287 *e*P **P** **11 08 48.9 +0.4**
TYV *e*S **S** **11 14 05.6 -3.0**
TYV pmax pmax
comp=Z,58nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.7s
TYV smax smax
comp=N,300nm,6.8s
TYV smax smax
comp=E,300nm,6.8s
RLMT **Red Lodge** 33.71 85 IAmb IAmb 11 09 02.1
comp=Z,18nm,1.2s
HVU **Hansel Valley** 33.71 93 IAmb IAmb 11 09 02.1
comp=Z,14nm,0.9s
AHID **Auburn Hatcher** 34.06 90 P **P** **11 08 53.9 +1.7**
HWUT **Hardware Ranch** 34.52 92 P **P** **11 08 58.0 +1.9**
DUG **Dugway, Tooele** 34.71 95 P **P** **11 08 59.3 +1.5**
DUG **Dugway, Tooele** 34.71 95 IAmb IAmb 11 09 10.8
comp=Z,27nm,1.1s
DUG **Dugway, Tooele** 34.71 95 P **P** **11 08 59.3 +1.5**
UGL **Uglegorsk** 34.92 285⇓ *i*P **P** **11 09 00.0 +0.8**
UGL *e*S **S** **11 14 24.8 -2.8**
UGL pmax pmax
comp=Z,200nm,1.0s
PDAR **Pinedale Array** 34.95 89 P **P** **11 09 01.0 +1.1**
comp=Z,0.5nm,0.6s,baz=308,slow=5.1,SNR=4.3
PDAR PcP **PcP** **11 11 31.3 -0.3**
comp=Z,0.5nm,0.7s,baz=282,slow=2.7,SNR=2.0
PDAR ScP **ScP** **11 15 11.4 -2.1**
comp=Z,0.6nm,0.9s,baz=277,slow=2.5,SNR=3.7
PDAR **Pinedale Array** 34.95 89 P **P** **11 09 00.5 +0.7**
FCC **Fort Churchill** 35.28 56 IAmb IAmb 11 09 14.2
comp=Z,23nm,1.0s
PRN **Pahroc Range** 35.32 100 IAmb IAmb 11 09 16.3
comp=Z,25nm,1.2s
YAK **Yakutsk** 35.51 310 LR LR 11 24 34.0
comp=Z,1μm,20.9s,baz=100,slow=38
YAK **Yakutsk** 35.51 310 *e*P **P** **11 09 02.6 -1.5**
YAK *e**PP **pP** **11 09 12.2 -3.0**
YAK *e* 11 10 21.5
YAK *e* 11 11 31.6
YAK *e*S **S** **11 14 35.9 -0.6**
YAK *e**SS **sS** **11 14 52.2 -2.6**
YAK *e*SS **SnSn** **11 16 57.8 -0.5**
YAK *e* 11 19 19.3
YAK pmax pmax
comp=Z,65nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,19nm,1.6s
YAK pmax pmax
comp=Z,167nm,4.7s
YAK pmax pmax
comp=N,50nm,4.2s
YAK pmax pmax
comp=E,112nm,6.6s
YAK smax smax
comp=N,50nm,4.3s
YAK smax smax
comp=E,40nm,2.7s
YAK MLR MLR
comp=N,122nm,18.0s
YAK MLR MLR
comp=E,531nm,17.0s
YAK **Yakutsk** 35.51 310 P **P** **11 09 02.8 -1.3**
YAK **Yakutsk** 35.51 310 P **P** **11 09 02.9 -1.3**
BSUT **Blindstream Ca** 35.67 93 IAmb IAmb 11 09 19.1
comp=Z,16nm,1.2s
YSS **Yuzhno-Sakhali** 35.69 281 *e*P **P** **11 09 06.5 +0.7**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=Z,500nm,15.0s
SRU **San Rafael Swe** 36.75 94 IAmb IAmb 11 09 28.3
comp=Z,32nm,1.0s
ALE **Alert** 37.08 12 P **P** **11 09 17.5 +0.1**
ALE **Alert** 37.08 12 P **P** **11 09 17.7 +0.4**
ALE pP **pP** **11 09 29.3 +0.9**
PFO **Pinyon Flats O** 37.27 106 *e*P **P** **11 09 19.5 -0.2**
PFO pmax pmax
comp=Z,7.0nm,1.0s
RSSD **Black Hills** 37.31 83 P **P** **11 09 20.6 +0.6**
RSSD pmax pmax
comp=Z,9.0nm,0.7s
RSSD **Black Hills** 37.31 83 P **P** **11 09 20.6 +0.6**
RSSD IAmb IAmb 11 09 40.3
comp=Z,9.4nm,0.7s
RSSD **Black Hills** 37.31 83 P **P** **11 09 20.1 +0.1**
O20A **White River Ci** 37.39 91 P **P** **11 09 21.4 +0.7**
O20A IAmb IAmb 11 09 33.0
comp=Z,26nm,1.1s
JKA **Kamikawa-asahi** 37.43 278 P **P** **11 09 19.9 -0.9**
JKA IAmb IAmb 11 09 23.9
comp=Z,20nm,0.8s
ASAJ **Asahikawa** 37.43 278 P **P** **11 09 19.9 -0.8**
ASAJ pmax pmax
comp=Z,20nm,0.8s
E28A **Huff** 37.76 77 IAmb IAmb 11 09 36.1
comp=Z,50nm,1.2s
TULEG **Thule** 37.92 22 *i* P **P** **11 09 24.2 -0.3**
TULEG IAmb IAmb 11 09 24.7
comp=Z,9.9nm,0.8s
PV10 **Paradox Valley** 38.10 94 IAmb IAmb 11 09 27.0
comp=Z,22nm,1.1s
PV20 **West Nyswonger** 38.17 94 IAmb IAmb 11 09 40.4
comp=Z,17nm,0.9s
PV19 **Morning Glory** 38.18 94 IAmb IAmb 11 09 40.4
comp=Z,30nm,1.3s
PV18 **Skein Mesa, Pa** 38.27 94 IAmb IAmb 11 09 39.8
comp=Z,17nm,1.0s
PV13 **Radium Mtn., P** 38.38 94 IAmb IAmb 11 09 41.3
comp=Z,21nm,1.0s
ULM **Lac du Bonnet** 38.38 69 P **P** **11 09 29.6 +0.9**
comp=Z,18nm,0.7s,baz=300,slow=8.4,SNR=34
ULM PcP **PcP** **11 11 41.2 -0.2**
comp=Z,2.7nm,0.6s,baz=315,slow=5.8,SNR=2.4
comp=Z,18nm,0.7s
ULM **Lac du Bonnet** 38.38 69 *c i*P **P** **11 09 29.9 +1.2**
ULM **Lac du Bonnet** 38.38 69 P **P** **11 09 29.7 +1.1**
ULM IAmb IAmb 11 09 30.7
comp=Z,22nm,0.8s
PV02 **Paradox Valley** 38.39 94 IAmb IAmb 11 09 41.5
comp=Z,29nm,1.0s
ERM **Erimo** 38.41 274 P **P** **11 09 28.8 -0.2**
MVCO **Mesa Verde** 39.21 95 P **P** **11 09 36.9 +0.8**
AGMN **Agassiz Nation** 39.47 72 IAmb IAmb 11 09 39.8
comp=Z,31nm,0.8s
AGMN **Agassiz Nation** 39.47 72 P **P** **11 09 38.9 +1.1**
EPLO **Experimental L** 39.85 69 IAmb IAmb 11 09 43.0
comp=Z,19nm,0.9s
SUSD **Miller** 40.01 79 IAmb IAmb 11 09 52.6
comp=Z,36nm,1.0s
ZEA **Zeya** 40.39 299 *e*P **P** **11 09 44.6 -0.8**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.8s
K30B **Basset** 40.73 81 IAmb IAmb 11 09 59.2
comp=Z,46nm,1.1s
NEEM **North Greenlan** 41.09 18 *i* P **P** **11 09 51.4 +0.1**
NEEM IAmb IAmb 11 09 52.1
comp=Z,42nm,0.9s
KULLO **Kullorsuaq** 41.39 23 P **P** **11 09 53.3 0.0**
KULLO **Kullorsuaq** 41.39 23 *i* P **P** **11 09 53.6 +0.2**
KULLO IAmb IAmb 11 09 54.5
comp=Z,21nm,0.7s
TUC **Tucson** 41.42 102 P **P** **11 09 54.3 +0.1**
TUC pmax pmax
comp=Z,8.0nm,1.2s
TUC **Tucson** 41.42 102 P **P** **11 09 54.3 +0.1**
TUC **Tucson** 41.42 102 P **P** **11 09 56.1 +1.9**
ECSD **EROS Data Cent** 41.77 78 P **P** **11 09 57.7 +0.8**
ANMO **Albuquerque** 41.98 95 P **P** **11 09 59.4 +0.5**
ANMO **Albuquerque** 41.98 95 P **P** **11 09 59.4 +0.5**
EYMN **Ely** 42.05 70 IAmb IAmb 11 10 01.1
comp=Z,46nm,0.8s
EYMN **Ely** 42.05 70 P **P** **11 10 00.6 +1.5**
HEH **HeiHe** 42.23 295 *e*P **P** **11 09 59.0 -1.5**
HEH PcP **PcP** **11 11 53.4 -0.4**
HEH pmax pmax
comp=Z,45nm,0.8s
NOR **Nord** 42.42 7 P **P** **11 10 02.2 +0.5**
NOR **Nord** 42.42 7 P **P** **11 10 02.2 +0.5**
NOR **Nord** 42.42 7 *i* P **P** **11 10 01.9 +0.2**
NOR IAmb IAmb 11 10 03.1
comp=Z,32nm,1.0s
UPNV **Upernavik** 42.63 25 P **P** **11 10 04.3 +0.9**
UPNV **Upernavik** 42.63 25 *i* P **P** **11 10 03.9 +0.4**
UPNV IAmb IAmb 11 10 04.5
comp=Z,19nm,0.7s
E38A **The Farm, Brul** 42.83 71 IAmb IAmb 11 10 07.0
comp=Z,34nm,0.7s
H11N2 **WAKE ISLAND Hy** 42.83 228 T T 11 55 12.9
baz=28,slow=76,SNR=107
H11N3 **WAKE ISLAND Hy** 42.84 228 T T 11 55 11.2
baz=28,slow=76,SNR=102
H11N1 **WAKE ISLAND Hy** 42.85 228 T T 11 55 12.9
baz=28,slow=76,SNR=89
USA0B **Ussuriysk Arra** 43.40 285 *i* P **P** **11 10 08.4 -1.6**
USA0B **Ussuriysk Arra** 43.40 285 P **P** **11 10 08.7 -1.3**
USRK **Ussuriysk Ar.** 43.40 285 P **P** **11 10 08.3 -1.7**
comp=Z,8.7nm,0.7s,baz=59,slow=9.7,SNR=17
USRK PcP **PcP** **11 11 58.2 +0.4**
comp=Z,1.6nm,0.6s,baz=27,slow=3.6,SNR=4.3
comp=Z,8.7nm,0.7s
I37A **Lemond, Waseca** 43.41 75 P **P** **11 10 11.0 +0.8**
I37A IAmb IAmb 11 10 23.3
comp=Z,73nm,1.3s
HSIG 43.81 105 P **P** **11 10 13.6 +0.1**
FRB **Frobisher Bay** 43.83 40 P **P** **11 10 14.4 +1.2**
FRB **Frobisher Bay** 43.83 40 P **P** **11 10 13.9 +0.7**
H11S1 **WAKE ISLAND Hy** 44.00 228 T T 11 56 36.7
baz=26,slow=76,SNR=64
H11S2 **WAKE ISLAND Hy** 44.02 228 T T 11 56 39.5
baz=26,slow=76,SNR=50
H11S3 **WAKE ISLAND Hy** 44.02 228 T T 11 56 39.1
baz=26,slow=76,SNR=18
NUUG **Nuugaatsiaq** 44.10 26 *i* P **P** **11 10 16.0 +0.7**
NUUG IAmb IAmb 11 10 16.2
comp=Z,16nm,0.7s
N35A **Tabor** 44.17 80 IAmb IAmb 11 10 18.8
comp=Z,28nm,0.6s
G40A **Rib Lake** 44.40 72 IAmb IAmb 11 10 19.7
comp=Z,18nm,0.7s
MDJ **Mudanjiang** 44.47 287 P **P** **11 10 17.4 -1.2**
MDJ IAmb IAmb 11 10 18.2
comp=Z,21nm,0.9s
MDJ **Mudanjiang** 44.47 287 P **P** **11 10 17.0 -1.6**
MDJ pmax pmax
comp=Z,30nm,1.2s
MDJ **Mudanjiang** 44.47 287 P **P** **11 10 17.5 -1.1**
MDJ **Mudanjiang** 44.47 287 P **P** **11 10 17.5 -1.1**
SCIA **State Center** 44.87 78 P **P** **11 10 22.8 +0.9**
SCIA IAmb IAmb 11 10 34.2
comp=Z,35nm,1.1s
MAJO **Matsushiro** 44.91 272 P **P** **11 10 22.3 0.0**
MAJO **Matsushiro** 44.91 272 P **P** **11 10 22.3 0.0**
MAJO **Matsushiro** 44.91 272 P **P** **11 10 22.4 +0.1**
MAJO **Matsushiro** 44.91 272 P **P** **11 10 22.2 0.0**
MJAR **Matsushiro Arr** 44.91 272 P **P** **11 10 22.1 -0.2**
comp=Z,14nm,0.6s,baz=35,slow=7.1,SNR=62
MJAR LR LR 11 27 57.4
comp=Z,216nm,20.6s,baz=346,slow=34
comp=Z,14nm,0.6s
MJAR **Matsushiro Arr** 44.91 272 P **P** **11 10 22.3 0.0**
MJAR pmax pmax
comp=Z,83nm,1.5s
MJAR **Matsushiro Arr** 44.91 272 P **P** **11 10 22.2 0.0**
MJB9 **Matsu-Tunnel** 44.91 272 P **P** **11 10 23.2 +0.9**
MNTX **Cornudas Mount** 44.95 98 P **P** **11 10 25.1 +2.5**
SAATT **Saattut** 44.95 26 *i* P **P** **11 10 22.9 +0.8**
SAATT IAmb IAmb 11 10 23.0
comp=Z,11nm,0.7s
BNX **BinXian** 44.96 290 ⇑P **P** **11 10 21.9 -0.6**
BNX pmax pmax
comp=Z,56nm,0.8s
I40A **Norwalk** 45.04 74 IAmb IAmb 11 10 24.9
comp=Z,27nm,0.8s
SAQQ **Saqqaq** 45.38 27 *i* P **P** **11 10 26.3 +0.8**
SAQQ IAmb IAmb 11 10 27.5
comp=Z,29nm,1.0s
GDH **Godhavn** 45.44 29 *i* P **P** **11 10 26.8 +0.8**
GDH IAmb IAmb 11 10 27.0
comp=Z,21nm,1.1s
N38A **Joes South For** 45.59 79 IAmb IAmb 11 10 47.1
comp=Z,20nm,0.8s
JFWS **Jewell Farm** 45.87 75 IAmb IAmb 11 10 52.5
comp=Z,13nm,0.8s
L40A **Anamosa** 45.89 76 IAmb IAmb 11 10 48.4
comp=Z,19nm,1.0s
JGF **Kuroka** 46.06 272 P **P** **11 10 31.4 0.0**
P38A **Dawn** 46.20 80 IAmb IAmb 11 10 51.8
comp=Z,18nm,0.9s
KBS **Kingsbay** 46.41 2 *e*P **P** **11 10 34.6 +1.1**
KBS pmax pmax
comp=Z,41nm,0.7s
KBS **Kingsbay** 46.41 2 *e*P **P** **11 10 34.7 +1.1**
KBS IAmb IAmb 11 10 35.4
comp=Z,45nm,0.8s
KBS **Kingsbay** 46.41 2 P **P** **11 10 34.6 +1.1**
KBS **Kingsbay** 46.41 2 P **P** **11 10 34.7 +1.2**
KBS **Kingsbay** 46.41 2 P **P** **11 10 34.7 +1.2**
KBS PcP **PcP** **11 12 09.3 +1.7**
KBS **Kingsbay** 46.41 2 *i* P **P** **11 10 34.4 +0.8**
INU **Inuyama** 46.44 272 IAmb IAmb 11 10 34.7
comp=Z,24nm,0.9s
INU **Inuyama** 46.44 272 P **P** **11 10 33.4 -0.9**
INU **Inuyama** 46.44 272 P **P** **11 10 33.8 -0.5**
INU PcP **PcP** **11 12 08.5 0.0**
OK048 **Pawnee Station** 46.44 86 P **P** **11 10 35.3 +1.0**
OK048 IAmb IAmb 11 10 45.7
comp=Z,20nm,1.3s
DAG **Danmarks Havn** 46.45 11 P **P** **11 10 33.7 -0.2**
DAG pmax pmax
comp=Z,61nm,1.0s
DAG **Danmarks Havn** 46.45 11 P **P** **11 10 34.1 +0.2**
DAG **Danmarks Havn** 46.45 11 *i* P **P** **11 10 33.9 0.0**
DAG IAmb IAmb 11 10 34.8
comp=Z,68nm,1.1s
WMOK **Wichita Mounta** 46.56 89 P **P** **11 10 36.5 +1.2**
WMOK **Wichita Mounta** 46.56 89 P **P** **11 10 36.7 +1.4**
HILR **Hailar Array B** 46.62 298 P **P** **11 10 34.9 -0.8**
comp=Z,8.9nm,0.4s,baz=53,slow=9.1,SNR=12
comp=Z,8.9nm,0.4s
NRIK **Noril'sk** 46.66 333 P **P** **11 10 35.3 -0.3**
comp=Z,14nm,0.6s,baz=64,slow=6.0,SNR=16
NRIK LR LR 11 31 57.9
comp=Z,691nm,20.9s,baz=26,slow=38
comp=Z,14nm,0.6s
NRIK **Noril'sk** 46.66 333 *c i*P **P** **11 10 35.2 -0.4**
NRIK pmax pmax
comp=Z,15nm,0.6s
NRIK **Noril'sk** 46.66 333 P **P** **11 10 35.4 -0.3**
NRIK IAmb IAmb 11 10 37.3
comp=Z,16nm,0.6s
SUMG **Summit** 46.76 20 P **P** **11 10 37.4 +0.6**
SUMG pmax pmax
comp=Z,25nm,1.0s
SUMG **Summit** 46.76 20 P **P** **11 10 37.6 +0.8**
SUMG **Summit** 46.76 20 *i* P **P** **11 10 37.5 +0.7**
SUMG IAmb IAmb 11 10 38.3
comp=Z,52nm,1.4s
HIA **Hailar** 46.80 298 P **P** **11 10 36.2 -0.9**
HIA pmax pmax
comp=Z,11nm,0.7s
HIA **Hailar** 46.80 298 P **P** **11 10 36.2 -0.9**
HIA IAmb IAmb 11 10 36.9
comp=Z,11nm,0.7s
OK052 **Battle Ridge R** 46.82 86 IAmb IAmb 11 10 48.6
comp=Z,14nm,0.8s
P40A **Paris** 47.11 79 IAmb IAmb 11 10 40.5
comp=Z,14nm,0.8s
SPA0 **Spitsbergen Ar** 47.22 1 *e*P **P** **11 10 39.6 -0.4**
SPA0 IAmb IAmb 11 10 44.0
comp=Z,35nm,1.1s
SPITS **Spitsbergen Ar** 47.22 1 P **P** **11 10 39.4 -0.6**
comp=Z,13nm,0.8s,baz=34,slow=6.1,SNR=12
SPITS PcP **PcP** **11 12 10.6 0.0**
comp=Z,5.8nm,0.6s,baz=45,slow=1.6,SNR=2.8
comp=Z,13nm,0.8s
SPB2 **Spitsbergen Ar** 47.23 1 IAmb IAmb 11 10 54.4
comp=Z,29nm,1.1s
CN2 **Changchun** 47.27 289 P **P** **11 10 39.9 -0.8**
CN2 pmax pmax
comp=Z,70nm,0.9s
TXAR **Lajitas Array** 47.70 98 P **P** **11 10 46.0 +1.7**
comp=Z,1.8nm,0.7s,baz=301,slow=5.6,SNR=23
TXAR PcP **PcP** **11 12 14.0 +0.9**
comp=Z,2.9nm,0.7s,baz=303,slow=1.8,SNR=6.9
TXAR ScP **ScP** **11 16 02.9 -1.0**
comp=Z,0.9nm,0.9s,baz=305,slow=4.4,SNR=4.8
TXAR **Lajitas Array** 47.70 98 P **P** **11 10 45.3 +1.0**
SFJD **Kangerlussuaq** 47.75 30 P **P** **11 10 45.4 +1.3**
SFJD pmax pmax
comp=Z,44nm,0.8s
SFJD **Kangerlussuaq** 47.75 30 P **P** **11 10 45.4 +1.3**
SFJD **Kangerlussuaq** 47.75 30 P **P** **11 10 45.4 +1.3**
SFJD **Kangerlussuaq** 47.75 30 P **P** **11 10 45.4 +1.3**
SFJD **Kangerlussuaq** 47.75 30 *i* P **P** **11 10 45.1 +1.1**
SFJD IAmb IAmb 11 10 45.9
comp=Z,44nm,0.8s
U38A **Gravette** 47.90 84 IAmb IAmb 11 10 46.5
comp=Z,9.0nm,0.8s
DBG **Daneborg** 48.42 13 P **P** **11 10 49.4 +0.2**
DBG **Daneborg** 48.42 13 *i* P **P** **11 10 49.2 0.0**
DBG IAmb IAmb 11 10 50.0
comp=Z,17nm,0.9s
CCM **Cathedral Cave** 48.57 80 P **P** **11 10 50.6 -0.3**
CCM pmax pmax
comp=Z,12nm,1.4s
CCM **Cathedral Cave** 48.57 80 P **P** **11 10 50.5 -0.3**
J47A **Sunmer** 48.66 71 P **P** **11 10 52.2 +0.7**
J47A IAmb IAmb 11 10 52.9
comp=Z,30nm,1.0s
SLM **Saint Louis** 48.75 79 P **P** **11 10 52.9 +0.7**
SLM pmax pmax
comp=Z,52nm,1.3s
SLM **Saint Louis** 48.75 79 P **P** **11 10 52.9 +0.7**
JCT **Junction City** 49.06 94 IAmb IAmb 11 11 10.2
comp=Z,10nm,0.8s
Q44A **Meyer Farm, Va** 49.25 78 P **P** **11 10 56.5 +0.5**
Q44A IAmb IAmb 11 11 14.7
comp=Z,22nm,0.9s
SFIN **Lafayette** 49.32 75 IAmb IAmb 11 11 09.5
comp=Z,33nm,1.2s
VLDQ **Val d'Or** 49.33 61 P **P** **11 10 55.4 -1.1**
VLDQ IAmb IAmb 11 10 56.3
comp=Z,19nm,0.8s
NUUK **Nuuk** 49.35 33 P **P** **11 10 58.1 +1.7**
NUUK **Nuuk** 49.35 33 *i* P **P** **11 10 57.9 +1.5**
NUUK IAmb IAmb 11 10 59.9
comp=Z,22nm,1.2s
JMN **Monobe** 49.41 273 P **P** **11 10 58.0 +0.7**
FCAR **Ozark Folk Cen** 49.58 83 IAmb IAmb 11 10 59.3
comp=Z,15nm,1.0s
MIAR **Mount Ida** 49.70 85 P **P** **11 10 59.8 +0.3**
MIAR pmax pmax
comp=Z,16nm,1.3s
MIAR **Mount Ida** 49.70 85 P **P** **11 10 59.8 +0.3**
MIAR IAmb IAmb 11 11 18.8
comp=Z,16nm,1.2s
MIAR **Mount Ida** 49.70 85 P **P** **11 11 00.5 +0.9**
N47A **Urbana** 49.76 74 P **P** **11 10 59.7 -0.2**
S44A **Carbondale** 49.96 79 IAmb IAmb 11 11 02.3
comp=Z,17nm,0.7s
SCHQ **Schefferville** 49.96 49 P **P** **11 11 01.4 +0.2**
comp=Z,6.4nm,0.7s,baz=300,slow=8.3,SNR=8.9
comp=Z,6.4nm,0.7s
SCHQ **Schefferville** 49.96 49 IAmb IAmb 11 11 09.8
comp=Z,25nm,1.3s
BUKO **Buck Lake** 50.09 65 P **P** **11 11 03.1 +0.7**
KS19 **Wonju Array Si** 50.18 281 P **P** **11 11 03.0 -0.1**
KSRS **Korea Array** 50.19 281 P **P** **11 11 03.6 +0.5**
comp=Z,32nm,0.8s,baz=48,slow=6.9,SNR=214
KSRS PcP **PcP** **11 12 21.7 -0.2**
comp=Z,3.2nm,0.7s,baz=52,slow=4.1,SNR=2.7
comp=Z,32nm,0.8s
KSAR **Wonju Array Be** 50.22 281 P **P** **11 11 03.1 -0.3**
KSAR **Wonju Array Be** 50.22 281 P **P** **11 11 03.1 -0.3**
N49A **Columbus Grove** 50.57 72 IAmb IAmb 11 11 18.9
comp=Z,29nm,1.1s
SADO **Sadowa** 50.68 66 IAmb IAmb 11 11 07.9
comp=Z,18nm,0.7s
T45A **Paducah** 50.78 79 P **P** **11 11 08.2 +0.6**
P48A **Milroy** 50.89 75 P **P** **11 11 08.2 -0.2**
P48A IAmb IAmb 11 11 09.0
comp=Z,20nm,0.9s
INCN **Inchon** 50.90 282 P **P** **11 11 08.7 +0.2**
INCN pmax pmax
comp=Z,54nm,1.1s
INCN **Inchon** 50.90 282 P **P** **11 11 08.7 +0.2**
INCN **Inchon** 50.90 282 P **P** **11 11 08.8 +0.2**
CCAR **Cane Creek** 51.19 84 P **P** **11 11 11.9 +1.2**
CCAR IAmb IAmb 11 11 22.7
comp=Z,27nm,0.9s
TJN **Taejon** 51.26 280 *c i*P **P** **11 11 11.1 -0.1**
TJN pmax pmax
comp=Z,3.0nm,1.0s
TJN **Taejon** 51.26 280 P **P** **11 11 11.6 +0.3**
SCO **Scoresbysund** 51.51 16 P **P** **11 11 13.2 +0.6**
SCO pmax pmax
comp=Z,19nm,1.1s
SCO **Scoresbysund** 51.51 16 P **P** **11 11 13.2 +0.6**
SCO IAmb IAmb 11 11 29.8
comp=Z,19nm,1.1s
SCO **Scoresbysund** 51.51 16 P **P** **11 11 13.2 +0.6**
SCO pP **sP** **11 11 27.3 -1.4**
SCO **Scoresbysund** 51.51 16 *i* P **P** **11 11 13.3 +0.7**

SCO IAmb IAmb 11 11 14.9
comp=Z,7.5nm,0.8s
DELO Deloro Mine 51.65 65 P **P** **11 11 15.1 +1.0**
DELO IAmb IAmb 11 11 15.7
comp=Z,15nm,0.9s
T47A Sharon Grove 51.67 78 P **P** **11 11 14.8 +0.5**
T47A IAmb IAmb 11 11 27.1
comp=Z,23nm,1.1s
SOEG Soedalen 51.67 22 *i* P **P** **11 11 14.2 +0.3**
SOEG IAmb IAmb 11 11 15.3
comp=Z,40nm,0.8s
WVT Waverly 51.87 79 P **P** **11 11 16.2 +0.4**
WVT pmax pmax
comp=Z,27nm,0.8s
WVT Waverly 51.87 79 P **P** **11 11 16.2 +0.4**
WVT Waverly 51.87 79 P **P** **11 11 16.2 +0.4**
WVT Waverly 51.87 79 P **P** **11 11 16.5 +0.7**
WVT PcP **PcP** **11 12 28.9 +0.7**
H06N1 SOCORRO T-PHAS 51.91 114 T T 12 06 40.6
SNR=3.9
TRQ Mont Tremblant 52.07 61 P **P** **11 11 17.4 +0.1**
TRQ IAmb IAmb 11 11 18.2
comp=Z,33nm,1.2s
OXF Oxford 52.12 82 P **P** **11 11 18.1 +0.4**
OXF pmax pmax
comp=Z,34nm,0.8s
OXF Oxford 52.12 82 P **P** **11 11 18.1 +0.4**
MEDO Medina 52.13 67 P **P** **11 11 18.6 +0.9**
XLT XiLinHaoTe 52.24 295 *eP* **P** **11 11 18.9 +0.3**
XLT sP sP 11 11 33.4 -1.3
XLT pmax pmax
comp=Z,77nm,0.8s
ALLY Alegheny Colle 52.27 69 P **P** **11 11 19.1 +0.4**
ANGG Ammassalik, Gr 52.30 26 *i* P **P** **11 11 18.1 -0.5**
ANGG IAmb IAmb 11 11 19.1
comp=Z,16nm,0.7s
R50A Paris 52.32 75 IAmb IAmb 11 11 37.6
comp=Z,19nm,0.9s
PECO Prince Edward 52.38 65 IAmb IAmb 11 11 21.0
comp=Z,19nm,1.1s
O52A Adamsville 52.42 72 IAmb IAmb 11 11 20.6
comp=Z,16nm,0.9s
N53A Lisbon 52.48 70 IAmb IAmb 11 11 21.2
comp=Z,20nm,0.8s
WBO Williamsburg 52.54 63 IAmb IAmb 11 11 21.7
comp=Z,23nm,0.7s
PAOC Oil Creek Stat 52.62 69 IAmb IAmb 11 11 22.3
comp=Z,16nm,0.9s
IVI Ivigtut 52.63 34 *i* P **P** **11 11 22.5 +1.4**
IVI IAmb IAmb 11 11 24.2
comp=Z,22nm,0.8s
O53A New Philadelph 52.67 71 IAmb IAmb 11 11 22.3
comp=Z,13nm,0.8s
DL2 Dalian 52.70 287 P **P** **11 11 21.6 -0.4**
DL2 pmax pmax
comp=Z,59nm,0.9s
CLTN Cedars of Leba 52.75 78 IAmb IAmb 11 11 36.1
comp=Z,19nm,1.2s
U49A Red Boiling Sp 52.76 78 IAmb IAmb 11 11 34.5
comp=Z,20nm,1.4s
PAMR Moraine State 52.79 70 IAmb IAmb 11 11 23.5
comp=Z,18nm,0.9s
T50A Nancy 52.93 76 IAmb IAmb 11 11 42.2
comp=Z,11nm,0.8s
TLY Talaya 52.96 309 *c i* P **P** **11 11 23.2 -0.6**
TLY pmax pmax
comp=Z,20nm,0.9s
TLY Talaya 52.96 309 P **P** **11 11 23.9 +0.2**
JSU Suzuyama 53.00 274 IAmb IAmb 11 11 25.1
comp=Z,24nm,0.8s
JSU Suzuyama 53.00 274 P **P** **11 11 24.3 0.0**
MNTQ Montreal, Queb 53.04 62 IAmb IAmb 11 11 24.7
comp=Z,15nm,0.7s
P53A Whipple 53.10 72 IAmb IAmb 11 11 42.7
comp=Z,9.9nm,0.7s
LONY Lake Ozonia 53.16 63 IAmb IAmb 11 11 26.1
comp=Z,12nm,1.1s
O54A Avella 53.17 71 IAmb IAmb 11 11 26.1
comp=Z,26nm,0.8s
S51A Beattyville 53.19 75 IAmb IAmb 11 11 44.2
comp=Z,16nm,0.9s
LMQ La Malbaie 53.27 58 IAmb IAmb 11 11 32.6
comp=Z,12nm,0.9s
ICQ Pointe Anglais 53.36 54 IAmb IAmb 11 11 27.9
comp=Z,28nm,0.9s
K57A Scipio Center 53.46 66 IAmb IAmb 11 11 28.9
comp=Z,26nm,1.2s
FRNY Flat Rock 53.52 62 IAmb IAmb 11 11 28.3
comp=Z,11nm,0.8s
Q54A Coxs Mills 53.77 72 IAmb IAmb 11 11 30.5
comp=Z,13nm,1.0s
NCB Newcomb 53.79 63 IAmb IAmb 11 11 32.0
comp=Z,9.1nm,0.7s
MCWV Mont Chateau 53.83 71 IAmb IAmb 11 11 31.2
comp=Z,21nm,0.7s
Z47A Carrollton 53.84 82 IAmb IAmb 11 11 41.3
comp=Z,29nm,1.2s
W50A Signal Mountai 53.96 78 IAmb IAmb 11 11 32.2
comp=Z,13nm,0.8s
TZTN Tazewell 53.99 76 IAmb IAmb 11 11 44.4
comp=Z,21nm,1.1s
TZTN Tazewell 53.99 76 P **P** **11 11 32.1 +0.6**
J59A Piesco 54.00 64 IAmb IAmb 11 11 32.6
comp=Z,18nm,0.7s
ZAK Zakamensk 54.03 308 *eP* **P** **11 11 30.6 -1.1**
ZAK pmax pmax
comp=Z,8.0nm,1.4s
ULN Ulaanbaatar 54.04 304 P **P** **11 11 31.8 -0.1**
ULN Ulaanbaatar 54.04 304 P **P** **11 11 31.6 -0.3**
comp=Z,95nm,1.1s
ULN Ulaanbaatar 54.04 304 P **P** **11 11 32.0 +0.1**
ULN Ulaanbaatar 54.04 304 P **P** **11 11 31.9 +0.1**
ULN PcP **PcP** **11 12 36.9 +0.4**
BINY Binghamton 54.11 66 IAmb IAmb 11 11 33.9
comp=Z,23nm,0.9s
BINY Binghamton 54.11 66 P **P** **11 11 33.1 +0.8**
M57A Sunshine Farm, 54.11 67 IAmb IAmb 11 11 33.6
comp=Z,17nm,0.8s
D62A Allapoint, All 54.21 57 IAmb IAmb 11 11 34.1
comp=Z,18nm,0.9s
CPCT Cooper Cave 54.23 78 IAmb IAmb 11 11 45.5
comp=Z,13nm,1.1s
SONM Songino Array 54.38 304 P **P** **11 11 34.4 +0.2**
comp=Z,19nm,0.7s,baz=48,slow=7.4,SNR=42
SONM PcP **PcP** **11 12 38.2 +0.6**
comp=Z,9.2nm,0.6s,baz=58,slow=1.9,SNR=10
SONM LR LR 11 37 20.4
comp=Z,361nm,20.1s,baz=30,slow=39
comp=Z,19nm,0.7s
SONM Songino Array 54.38 304 P **P** **11 11 34.6 +0.3**
SONM pmax pmax
comp=Z,17nm,0.8s
SONM Songino Array 54.38 304 P **P** **11 11 34.6 +0.3**
SONM IAmb IAmb 11 11 35.3
comp=Z,17nm,0.8s
TKL Tuckaleechee C 54.50 77 IAmb IAmb 11 11 47.7
comp=Z,16nm,1.0s
L59A Walton 54.62 65 IAmb IAmb 11 11 38.1
comp=Z,22nm,0.8s
Q56A Snyder Ridge, 54.63 71 IAmb IAmb 11 11 55.3
comp=Z,12nm,1.0s
R55A Marlinton 54.66 72 IAmb IAmb 11 11 48.5
comp=Z,31nm,1.4s
KSPA Keystone Colle 54.68 66 IAmb IAmb 11 11 37.8
comp=Z,13nm,0.8s
N58A Sunbury 54.69 68 IAmb IAmb 11 11 48.6
comp=Z,17nm,1.0s
LBNH Lisbon 54.78 62 IAmb IAmb 11 11 38.3
comp=Z,17nm,0.9s
G62A West of Eustis 54.79 60 IAmb IAmb 11 11 38.4
comp=Z,19nm,0.8s
BJI2 Beijing 54.90 291 P **P** **11 11 38.0 0.0**
H62A Milan 54.94 61 IAmb IAmb 11 11 39.3
comp=Z,18nm,0.8s
P57A Homestead Farm 54.95 70 IAmb IAmb 11 11 39.5
comp=Z,24nm,0.9s
TRY Troy 54.95 64 IAmb IAmb 11 11 39.9
comp=Z,16nm,0.8s
HNH Hanover 54.98 62 IAmb IAmb 11 11 40.0
comp=Z,12nm,0.8s
V53A Saluda 55.03 76 IAmb IAmb 11 11 51.3
comp=Z,16nm,1.1s
J61A Chester 55.09 63 IAmb IAmb 11 11 40.9
comp=Z,17nm,0.7s
PAGS Pennsylvania G 55.12 68 IAmb IAmb 11 11 40.5
comp=Z,20nm,0.8s
VADS Vadso 55.13 356 *eP* **P** **11 11 38.6 -0.6**
VADS IAmb IAmb 11 11 39.5
comp=Z,28nm,0.8s
BLA Blacksburg 55.26 73 IAmb IAmb 11 11 41.8
comp=Z,14nm,0.8s
PKME Peaks-Kenny Pk 55.38 59 IAmb IAmb 11 11 42.4
comp=Z,18nm,1.1s
BG3 Lake Jocassee 55.46 77 IAmb IAmb 11 11 54.0
comp=Z,23nm,1.3s
KEV Kevo 55.58 357 P **P** **11 11 42.2 -0.3**
KEV P **sP** **11 11 56.9 -1.8**
KEV pmax pmax
comp=Z,59nm,0.8s
KEV Kevo 55.58 357 P **P** **11 11 41.8 -0.7**
KEV pP **sP** **11 11 56.9 -1.8**
KEV Kevo 55.58 357 P **P** **11 11 42.2 -0.3**
I63A Otisfield 55.60 61 IAmb IAmb 11 11 44.3
comp=Z,16nm,1.0s
S57A Dark Hollow, R 55.67 72 IAmb IAmb 11 11 56.4
comp=Z,11nm,1.0s
WVL Waterville 55.70 60 IAmb IAmb 11 11 44.4
comp=Z,12nm,0.9s
V55A Taylorsville 55.80 75 P **P** **11 11 44.9 +0.4**
V55A IAmb IAmb 11 11 45.6
comp=Z,10nm,0.9s
TRO Tromso 55.83 0 P **P** **11 11 44.0 -0.2**
TRO Tromso 55.83 0 *eP* **P** **11 11 44.3 +0.1**
TRO IAmb IAmb 11 11 45.0
comp=Z,31nm,0.7s
ARA0 ARCESS Array S 55.85 357 *eP* **P** **11 11 42.7 -1.7**
ARCES ARCESS Array B 55.85 357 P **P** **11 11 42.9 -1.6**
comp=Z,14nm,0.7s,baz=11,slow=7.4,SNR=29
ARCES PcP **PcP** **11 12 43.0 +0.2**
comp=Z,9.1nm,0.7s,baz=356,slow=4.9,SNR=7.3
comp=Z,14nm,0.7s
ARCES ARCESS Array B 55.85 357 P **P** **11 11 44.2 -0.2**
ARCES IAmb IAmb 11 11 44.8
comp=Z,18nm,0.8s
ARCES **PcP** **11 12 43.1 +0.3**
JETT Jettan, Norway 55.91 360 *eP* **P** **11 11 44.8 0.0**
JETT IAmb IAmb 11 11 45.9
comp=Z,34nm,0.7s
R58B Mineral 56.11 71 IAmb IAmb 11 11 59.1
comp=Z,21nm,1.1s
WSPT Westport, CT 56.24 65 IAmb IAmb 11 11 48.9
comp=Z,22nm,0.7s
KMSC Kings Mountain 56.25 76 IAmb IAmb 11 11 59.5
comp=Z,27nm,1.3s
G65A Princeton 56.28 58 IAmb IAmb 11 11 48.7
comp=Z,14nm,0.8s
HODGE Hodges 56.39 77 IAmb IAmb 11 11 49.2
comp=Z,13nm,0.8s
WES Weston 56.41 63 IAmb IAmb 11 11 50.2
comp=Z,19nm,0.9s
KTK1 Kautokeino 56.42 358 *eP* **P** **11 11 47.8 -0.8**
KTK1 IAmb IAmb 11 11 48.7
comp=Z,14nm,0.8s
EMMW East Machias 56.69 58 P **P** **11 11 50.8 +0.1**
GGN Saint George 56.69 58 IAmb IAmb 11 11 51.4
comp=Z,18nm,0.6s
BORG Borgarnes 56.71 20 P **P** **11 11 52.3 +1.7**
BORG pmax pmax
comp=Z,18nm,1.0s
BORG Borgarnes 56.71 20 P **P** **11 11 52.3 +1.7**
BORG IAmb IAmb 11 12 08.7
comp=Z,18nm,1.0s
BORG Borgarnes 56.71 20 P **P** **11 11 49.4 -1.2**
BORG Borgarnes 56.71 20 P **P** **11 11 52.5 +1.9**
HHC Hu-ho-hao-te 56.76 295 *eP* **P** **11 11 51.9 +0.5**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,87nm,4.5s
V58A Windy Hill, Pi 57.01 73 P **P** **11 11 53.8 +0.7**
V58A IAmb IAmb 11 11 54.2
comp=Z,17nm,0.9s
T59A Double "B" Far 57.01 71 IAmb IAmb 11 11 54.3
comp=Z,20nm,0.8s
LVZ Lovozero 57.05 353 *c i* P **P** **11 11 52.5 -0.5**
LVZ pmax pmax
comp=Z,42nm,0.9s
LVZ Lovozero 57.05 353 P **P** **11 11 52.4 -0.5**
LVZ Lovozero 57.05 353 P **P** **11 11 52.3 -0.7**
comp=Z,52nm,1.0s
LVZ Lovozero 57.05 353 P **P** **11 11 52.5 -0.5**
LVZ pP **pP** **11 12 07.0 +2.4**
LVZ Lovozero 57.05 353 P **P** **11 11 52.8 -0.2**
LOF Lofoten 57.26 3 *eP* **P** **11 11 53.7 -0.7**
LOF IAmb IAmb 11 11 56.4
comp=Z,14nm,0.6s
APA Apatity 57.45 354 *eP* **P** **11 11 54.5 -1.3**
APA pmax pmax
comp=Z,8.0nm,0.9s
STEI Steigen 57.50 2 *eP* **P** **11 11 55.8 -0.3**
STEI IAmb IAmb 11 11 56.3
comp=Z,19nm,0.6s
HNS HongShan 57.58 290 ⇑P **P** **11 11 57.5 +0.4**
HNS pmax pmax
comp=Z,64nm,1.0s
BTO2 Baotou 57.71 296 *eP* **P** **11 12 00.3 +2.1**
BTO2 PP **PP** **11 14 03.5 -2.6**
BTO2 S **S** **11 19 58.4 +4.4**
BTO2 pmax pmax
comp=Z,37nm,0.5s
BTO2 pmax pmax
comp=Z,1μm,10.7s
BTO2 L L
comp=Z,510nm,11.4s
BTO2 L L
comp=Z,650nm,15.7s
BTO2 L L
comp=Z,2μm,20.4s
JOW Kunigami 57.76 272 P **P** **11 11 58.9 +0.3**
JOW pP **sP** **11 12 12.9 -1.8**
SGF Sodankyl 57.91 357 P **P** **11 11 58.9 -0.1**
SGF P **pP** **11 12 13.1 +2.4**
SGF pmax pmax
comp=Z,68nm,0.9s
SGF Sodankyl 57.91 357 P **P** **11 11 59.3 +0.2**
SGF pP **pP** **11 12 13.1 +2.4**
FAUS Fauske 58.05 2 *eP* **P** **11 11 59.9 -0.1**
FAUS IAmb IAmb 11 12 00.5
comp=Z,23nm,0.9s
VAGH Vaagaholmen 58.66 3 *eP* **P** **11 12 04.4 +0.2**
VAGH IAmb IAmb 11 12 04.8
comp=Z,16nm,0.9s
KONS Konsvik 58.89 3 *eP* **P** **11 12 05.8 0.0**
KONS IAmb IAmb 11 12 06.1
comp=Z,21nm,0.8s
ZALV Zalesovo Beam 58.95 321 P **P** **11 12 06.1 -0.4**
comp=Z,3.4nm,0.4s,baz=30,slow=5.9,SNR=20
ZALV PcP **PcP** **11 12 55.5 +0.3**
comp=Z,4.8nm,0.6s,baz=28,slow=4.2,SNR=8.5
ZALV LR LR 11 39 49.7
comp=Z,703nm,18.9s,baz=54,slow=38
comp=Z,3.4nm,0.4s
ZALV Zalesovo Beam 58.95 321 *i* P **P** **11 12 06.5 +0.1**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 58.95 321 P **P** **11 12 06.6 +0.1**
ZALV **PcP** **11 12 55.8 +0.6**
RAUS Rausandaksla 58.97 3 *eP* **P** **11 12 06.3 -0.2**
RAUS IAmb IAmb 11 12 07.0
comp=Z,28nm,0.8s
GBN Guysborough 59.03 54 P **P** **11 12 08.2 +1.1**
STOK Stokkvaagen 59.05 3 *eP* **P** **11 12 07.3 +0.4**
NJ2 Nanjing 59.23 283 *eP* **P** **11 12 10.3 +1.6**
NJ2 pmax pmax
comp=Z,30nm,0.5s
MOR8 Moi Rana 59.25 2 *eP* **P** **11 12 07.4 -1.0**
MOR8 IAmb IAmb 11 12 07.5
comp=Z,14nm,0.7s
LEIR Leirfjorden 59.27 3 *eP* **P** **11 12 08.7 +0.2**
LEIR IAmb IAmb 11 12 09.3
comp=Z,47nm,1.3s
MSF Maaselka 59.34 355 P **P** **11 12 08.8 -0.2**
MSF Maaselka 59.34 355 P **P** **11 12 08.8 -0.2**
OUL Oulu 60.29 357 P **P** **11 12 15.1 -0.4**
OUL pmax pmax
comp=Z,66nm,0.8s
OUL Oulu 60.29 357 P **P** **11 12 15.4 -0.1**
NSS Namsos 60.82 4 *eP* **P** **11 12 19.1 0.0**
NSS IAmb IAmb 11 12 19.7
comp=Z,29nm,1.1s
LYN LuoYang 60.91 289 P **P** **11 12 20.8 +0.6**
LYN pmax pmax
comp=Z,130nm,0.6s
DGZ Jazzator, Alta 61.31 317 *c i* P **P** **11 12 22.5 -0.4**
DGZ pmax pmax
comp=Z,10.0nm,0.7s
MOL Molde 62.56 6 *eP* **P** **11 12 30.4 -0.4**
MOL IAmb IAmb 11 12 31.2
comp=Z,77nm,1.3s
YOJ Yonaguni jima 62.61 274 P **P** **11 12 30.4 -1.3**
WHN Wuhan 62.89 285 ⇑P **P** **11 12 33.3 -0.2**
WHN sP **sP** **11 12 47.8 -2.0**
WHN pmax pmax
comp=Z,80nm,0.9s
AKN Aaknes 62.91 6 *eP* **P** **11 12 32.6 -0.6**
AKN IAmb IAmb 11 12 34.7
comp=Z,50nm,0.7s
DOMB Dombas 63.17 5 *eP* **P** **11 12 35.0 0.0**
DOMB IAmb IAmb 11 12 35.7
comp=Z,32nm,0.6s
XAN Xi'an 63.22 292 ⇑P **P** **11 12 35.4 -0.3**
XAN pmax pmax
comp=Z,55nm,0.9s
XAN Xi'an 63.22 292 P **P** **11 12 35.5 -0.3**
YHNB Yeheng 63.39 276 P **P** **11 12 36.1 -0.9**
SEM Semipalatinsk 63.47 321 *eP* **P** **11 12 36.7 -0.6**
SEM Semipalatinsk 63.47 321 *eP* **P** **11 12 36.8 -0.6**
KLMR Klimovskoe 63.55 349 *eP* **P** **11 12 35.8 -1.6**
KLMR *e*PP **pP** **11 12 46.1 -3.0**
KLMR pmax pmax
comp=Z,67nm,1.2s
NACB Ninganchiao 63.65 275 P **P** **11 12 37.8 -0.8**
SVE Sverdlovsk 63.74 336 *deP* **P** **11 12 39.0 +0.2**
SVE pmax pmax
comp=Z,70nm,0.9s
GTA2 Gaotai 63.78 302 P **P** **11 12 38.8 -0.7**
GTA2 pmax pmax
comp=Z,56nm,0.9s
GTA2 L L
comp=Z,350nm,22.9s
GTA2 L L
comp=Z,240nm,22.2s
GTA2 L L
comp=Z,640nm,22.9s
KURK Kurchatov 63.79 322 ⇑ *i* P **P** **11 12 38.9 -0.3**
KURK pmax pmax
comp=Z,17nm,0.7s
KURK Kurchatov 63.79 322 P **P** **11 12 39.4 +0.1**
KURK IAmb IAmb 11 12 40.0
comp=Z,13nm,0.6s
KURK **PcP** **11 13 14.7 -0.2**
KURK Kurchatov 63.79 322 P **P** **11 12 38.8 -0.3**
KURK Kurchatov 63.79 322 P **P** **11 12 39.4 +0.1**
KURBB Kurchatov Arra 63.90 322 P **P** **11 12 39.8 -0.2**
comp=Z,11nm,0.9s,baz=21,slow=6.6,SNR=46
KURBB PcP **PcP** **11 13 14.9 -0.4**
comp=Z,3.0nm,0.5s,baz=39,slow=3.7,SNR=11
KURBB LR LR 11 42 46.3
comp=Z,524nm,18.4s,baz=82,slow=38
comp=Z,11nm,0.9s
FIA1 FINESS Array S 63.93 356 P **P** **11 12 40.0 +0.1**
FINES FINESS Array B 63.93 356 P **P** **11 12 39.6 -0.3**
comp=Z,22nm,0.6s,baz=18,slow=7.7,SNR=126
comp=Z,22nm,0.6s
FINES FINESS Array B 63.93 356 *i* P **P** **11 12 39.5 -0.5**
FINES pmax pmax
comp=Z,22nm,0.6s
FINES FINESS Array B 63.93 356 P **P** **11 12 39.8 -0.2**
NC204 NORSAR Array S 64.02 5 P **P** **11 12 41.1 +0.5**
ZSN Zaisan 64.14 317 *eP* **P** **11 12 41.2 -0.4**
ZSN Zaisan 64.14 317 *eP* **P** **11 12 41.3 -0.4**
LRW Lerwick 64.20 11 *eP* **P** **11 12 42.4 +0.6**
LRW IAmb IAmb 11 12 44.2
comp=Z,38nm,0.8s
NBO00 NORSAR Array S 64.27 5 IAmb IAmb 11 12 58.0
comp=Z,29nm,1.0s
NB2 NORSAR Subarra 64.28 4 P **P** **11 12 42.5 +0.2**
comp=Z,14nm,0.7s,baz=355,slow=6.5
NB2 NORSAR Subarra 64.28 4 P **P** **11 12 42.5 +0.2**
NOA NORSAR Array B 64.28 4 P **P** **11 12 42.5 +0.2**
comp=Z,21nm,0.8s,baz=356,slow=6.6,SNR=45
comp=Z,21nm,0.8s
SSLB Suanglung 64.31 275 P **P** **11 12 42.5 -0.6**
LZH Lanzhou 64.33 297 *eP* **P** **11 12 43.0 -0.2**
LZH pP pP 11 12 51.9 -3.1
LZH pmax pmax
comp=Z,120nm,1.3s
LZH L L
comp=Z,490nm,13.4s
LZH L L
comp=Z,320nm,14.1s
LZH L L
comp=Z,680nm,14.8s
KIRV Kirov 64.36 343 *c i* P **P** **11 12 42.4 -0.4**
YULB Yu-li 64.42 275 IAmb IAmb 11 12 57.2
comp=Z,16nm,0.9s
YULB Yu-li 64.42 275 P **P** **11 12 43.8 0.0**
ASK Askoy 64.47 8 *eP* **P** **11 12 44.6 +1.1**
ASK IAmb IAmb 11 12 47.8
comp=Z,45nm,1.4s
SKAR Skarslia 64.48 6 *eP* **P** **11 12 44.2 +0.5**
SKAR IAmb IAmb 11 12 44.8
comp=Z,38nm,0.7s
LZDM Lanzhou Array 64.51 297 P **P** **11 12 44.6 +0.1**
comp=Z,26nm,0.5s,baz=333,slow=1.7,SNR=23
comp=Z,26nm,0.5s
LZDM LR LR 11 42 05.8
comp=Z,311nm,21.2s,baz=50,slow=37
comp=Z,26nm,0.5s
BVAR Borovoye Array 64.52 329 P **P** **11 12 44.4 +0.4**
comp=Z,47nm,0.7s,baz=42,slow=6.8,SNR=81
BVAR PcP **PcP** **11 13 17.9 +0.1**
comp=Z,9.0nm,0.6s,baz=56,slow=3.9,SNR=4.9
comp=Z,47nm,0.7s
BORK Borovoye 64.52 329 *c i* P **P** **11 12 44.0 0.0**
BORK pmax pmax
comp=Z,45nm,1.1s
BORK Borovoye 64.52 329 P **P** **11 12 44.4 +0.4**
BER Bergen 64.57 8 *eP* **P** **11 12 44.5 +0.3**
NC602 NORSAR Array S 64.60 4 *eP* **P** **11 12 44.3 0.0**
NC602 IAmb IAmb 11 12 45.0
comp=Z,12nm,0.7s
NC602 NORSAR Array S 64.60 4 IAmb IAmb 11 13 00.7
comp=Z,39nm,1.4s
NORES NORESS Array B 64.60 4 P **P** **11 12 44.3 0.0**
NORES pmax pmax
comp=Z,4.0nm,0.5s
ARTI Arti 64.66 337 *c i* P **P** **11 12 44.5 -0.3**
ARTI **11 13 17.8**
ARTI **11 15 06.2**
ARTI S **S** **11 21 21.2 -0.3**
ARTI SS **SS** **11 25 30.4 -1.2**
ARTI pmax pmax
comp=Z,95nm,0.7s
ARTI Arti 64.66 337 P **P** **11 12 44.9 0.0**
ARTI Arti 64.66 337 P **P** **11 12 44.7 -0.1**
QZH2 Quanzhou 64.77 278 ⇑ *i* P P 11 12 38.8 -7.2
QZH2 pmax pmax
comp=Z,46nm,0.7s
TPUB Ta-pu 64.88 275 IAmb IAmb 11 12 49.7
comp=Z,16nm,0.8s
TWG Pinlang 65.00 274 IAmb IAmb 11 12 49.1
comp=Z,13nm,0.5s
ODD1 Odda 65.14 7 *eP* **P** **11 12 48.5 +0.6**
ODD1 IAmb IAmb 11 12 49.1
comp=Z,22nm,0.8s
HFS Hagfors 65.28 3 P **P** **11 12 48.7 -0.1**
comp=Z,39nm,0.6s,baz=7.8,slow=3.3,SNR=93
comp=Z,39nm,0.6s
OSL Oslo 65.36 5 *eP* **P** **11 12 49.5 +0.2**
OSL IAmb IAmb 11 12 50.0
comp=Z,15nm,0.7s
KONO Kongsberg 65.59 5 P **P** **11 12 51.9 +1.1**
KONO pmax pmax
comp=Z,38nm,1.0s
KONO Kongsberg 65.59 5 *eP* **P** **11 12 51.6 +0.8**
KONO Kongsberg 65.59 5 P **P** **11 12 51.9 +1.1**
KONO Kongsberg 65.59 5 P **P** **11 12 51.7 +1.0**
KONO pP **sP** **11 13 05.9 -1.2**
BLS5 Blasjo 65.61 7 *eP* **P** **11 12 52.0 +1.0**
BLS5 IAmb IAmb 11 12 52.2
comp=Z,24nm,0.7s
LINV Loch Inver, As 65.62 14 *eP* **P** **11 12 51.9 +0.9**
LINV IAmb IAmb 11 12 53.3
comp=Z,11nm,0.8s
MK31 Makanchi Array 65.69 318 ⇑ *i* P **P** **11 12 50.9 -0.8**
MK31 Makanchi Array 65.69 318 P **P** **11 12 51.4 -0.3**
MKAR Makanchi Array 65.69 318 P **P** **11 12 50.9 -0.8**

comp=Z,7.7nm,0.5s,baz=43,slow=5.5,SNR=80
MKAR LR LR 11 43 55.0
comp=Z,479nm,19.7s,baz=348,slow=38
comp=Z,7.7nm,0.5s
MKAR Makanchi Array 65.69 318 P **P 11 12 51.3 -0.4**
MKAR Makanchi Array 65.69 318 P **P 11 12 51.3 -0.4**
ENH Enshi 65.79 288 P **P 11 12 52.2 -0.4**
ENH Enshi 65.79 288 P **P 11 12 52.5 -0.1**
MAKZ Makanchi 65.80 318 P **P 11 12 52.0 -0.4**
MAKZ pmax pmax
comp=Z,13nm,0.9s
MAKZ Makanchi 65.80 318 P **P 11 12 52.0 -0.4**
MAKZ IAmb IAmb 11 12 52.5
comp=Z,13nm,0.8s
MAKZ Makanchi 65.80 318 P **P 11 12 52.1 -0.2**
WMQ Urumqi 65.91 313 *e*P **P 11 12 53.9 +0.7**
WMQ pmax pmax
comp=Z,31nm,0.7s
STRU Stroemstad 66.28 5 *i* P **P 11 12 56.1 +0.9**
KPL Plockton 66.34 15 *e*P **P 11 12 56.2 +0.6**
KPL IAmb IAmb 11 12 58.6
comp=Z,11nm,0.7s
MCD Coleburn Disti 66.44 13 *e*P **P 11 12 57.1 +0.9**
MCD IAmb IAmb 11 12 58.9
comp=Z,38nm,0.9s
VSU Vasula 66.89 356*c i*P **P 11 12 58.2 -0.9**
VSU pmax pmax
comp=Z,46nm,0.9s
VSU Vasula 66.89 356 P **P 11 12 58.6 -0.5**
VSU pP **pP 11 13 12.8 +1.9**
HOMB Homborsund 66.90 6 *e*P **P 11 13 00.1 +0.9**
HOMB IAmb IAmb 11 13 00.6
comp=Z,28nm,0.8s
DRUM Mains of Drumt 67.19 13 P **P 11 13 01.9 +0.9**
DRUM Mains of Drumt 67.19 13 *e*P **P 11 13 01.6 +0.6**
DRUM IAmb IAmb 11 13 03.9
comp=Z,66nm,0.7s
TJOU Tjoern 67.30 4 *i* P **P 11 13 02.4 +0.7**
LAWE Loch Awe, Argy 67.42 15 *e*P **P 11 13 02.8 +0.3**
LAWE IAmb IAmb 11 13 05.6
comp=Z,17nm,0.7s
INVG Invergeldie, C 67.45 14 *e*P **P 11 13 02.4 -0.4**
INVG IAmb IAmb 11 13 05.6
comp=Z,12nm,0.9s
EAB Aberfoyle 67.64 14 *e*P **P 11 13 04.7 +0.7**
EAB IAmb IAmb 11 13 07.1
comp=Z,19nm,0.7s
ONAU Onsala 67.95 4 *i* P **P 11 13 05.9 +0.1**
IDGL Inch Island, C 68.24 16 P **P 11 13 09.1 +1.4**
FABU Falkenberg 68.38 4 *i* P **P 11 13 08.6 +0.1**
CD2 Chengdu 68.39 293 P **P 11 13 09.3 +0.2**
CD2 pmax pmax
comp=Z,170nm,0.7s
EKA Eskdalemuir Ar 68.64 14 P **P 11 13 10.7 +0.5**
comp=Z,24nm,0.9s,baz=339,slow=5.0,SNR=25
comp=Z,24nm,0.9s
ESK Eskdalemuir 68.65 14 P **P 11 13 10.9 +0.7**
ESK pmax pmax
comp=Z,24nm,0.9s
ESK Eskdalemuir 68.65 14 P **P 11 13 10.9 +0.7**
ESK IAmb IAmb 11 13 13.5
comp=Z,24nm,0.9s
ESK Eskdalemuir 68.65 14 P **P 11 13 11.2 +0.9**
ESK Eskdalemuir 68.65 14 *e*P **P 11 13 11.0 +0.7**
ESK IAmb IAmb 11 13 13.8
comp=Z,18nm,0.9s
TDK Taldyqorghan 68.67 319 *e*P **P 11 13 10.2 -0.4**
TDK pmax pmax
comp=Z,14nm,0.6s
TDK Taldyqorghan 68.67 319 *e*P **P 11 13 10.3 -0.4**
comp=Z,14nm,0.6s
MUD Monsted U'grnd 68.75 6 *i* P **P 11 13 12.0 +1.2**
MUD IAmb IAmb 11 13 13.0
comp=Z,38nm,1.1s
MOS Moscow 68.77 349 *e*P **P 11 13 10.9 -0.1**
MOS pmax pmax
comp=Z,50nm,0.6s
GOMU GeErMu 68.78 303 P **P 11 13 10.4 -1.5**
GOMU pP pP 11 13 14.3 -9.4
GOMU pmax pmax
comp=Z,9.0nm,0.6s
DEL Delary 68.95 3 *i* P **P 11 13 12.4 +0.3**
BLEU Blekinge 69.17 2 *i* P **P 11 13 13.3 -0.1**
BJUU Bjuv 69.32 4 *i* P **P 11 13 14.8 +0.5**
ILTH Belurgan, Co L 69.44 16 P **P 11 13 15.7 +0.6**
ILTH Belurgan, Co L 69.44 16 P **P 11 13 14.6 -0.5**
ILTH Belurgan, Co L 69.44 16 *e*P **P 11 13 15.3 +0.1**
ILTH IAmb IAmb 11 13 16.5
comp=Z,13nm,0.8s
OBN Obninsk 69.50 350*c i*P **P 11 13 14.9 -0.6**
OBN *e**PP **pP 11 13 26.1 -1.2**
OBN *e* 11 13 40.0
OBN *e* 11 15 46.7
OBN *e*PPP PPP 11 17 26.1
OBN pmax pmax
comp=Z,51nm,1.0s
OBN MLR MLR
comp=Z,384nm,22.0s
OBN Obninsk 69.50 350 P **P 11 13 14.9 -0.6**
comp=Z,995nmcomp=Z,64nm,0.8s
IGLA Glengowla, Co 69.51 18 P **P 11 13 16.4 +0.8**
SHLS Shalkode 69.83 317 *e*P **P 11 13 16.5 -1.4**
SHLS pmax pmax
comp=Z,25nm,0.8s
SHLS Shalkode 69.83 317 *e*P **P 11 13 16.5 -1.4**
comp=Z,25nm,0.8s
KPKS Kokpek 69.87 318 *e*P **P 11 13 17.6 -0.5**
KPKS Kokpek 69.87 318 *e*P **P 11 13 17.7 -0.4**
UZB Uzynbulak 70.01 318 *e*P **P 11 13 18.5 -0.6**
UZB Uzynbulak 70.01 318 *e*P **P 11 13 18.5 -0.6**
UZB *i* S **S 11 22 26.9 +0.4**
BTLS Baital 70.24 322 *e*P **P 11 13 19.8 -0.4**
BTLS Baital 70.24 322 *e*P **P 11 13 19.9 -0.4**
GYA Guiyang 70.31 288 ⇓P **P 11 13 21.6 +0.5**
GYA pmax pmax
comp=Z,60nm,0.8s
SATY Saty 70.32 318 *e*P **P 11 13 20.3 -0.7**
SATY Saty 70.32 318 *e*P **P 11 13 20.3 -0.7**
BSD Bornholm Skovb 70.34 3 *i* P **P 11 13 20.7 0.0**
BSD IAmb IAmb 11 13 24.1
comp=Z,26nm,1.0s
KUU Kurty 70.39 320 *e*P **P 11 13 20.9 -0.3**
KUU Kurty 70.39 320 *e*P **P 11 13 20.9 -0.3**
BELG Belogornoye 70.59 342*c i*P **P 11 13 21.8 -0.4**
BELG pmax pmax
comp=Z,16nm,0.8s
MDOK Medeo 70.75 319 *e*P **P 11 13 23.0 -0.6**
MDOK Medeo 70.75 319 *e*P **P 11 13 23.1 -0.6**
AAA Alma-Ata 70.76 319 *e*P **P 11 13 23.1 -0.4**
AAA pmax pmax
comp=Z,21nm,0.5s
AAA Alma-Ata 70.76 319 *e*P **P 11 13 23.2 -0.4**
comp=Z,22nm,0.5s
MNK Minsk 70.79 355 *i* P **P 11 13 23.8 +0.3**
comp=E,60nm,0.9s
MNK *i* P **P 11 13 23.8 +0.3**
comp=N,23nm,0.9s
MNK *i* P **P 11 13 23.8 +0.3**
comp=Z,70nm,0.9s,baz=5.7
MNK *i* PcP **PcP 11 13 46.0 +2.0**
MNK *i* PP **PP 11 16 00.3 +0.5**
MNK *i* PPP PPP 11 17 40.1
MNK *i* S **S 11 22 32.9 -2.1**
MNK *i* SS **SS 11 27 00.4 -5.9**
MNK *i* SSS SSS 11 30 25.1
MNK *i* LQ LQ 11 39 01.7
MNK *i* LR LR 11 43 40.1
MNK *i* LRM MLR 11 47 17.1
comp=N,539nm,21.3s
MNK *i* LRM MLR 11 47 24.8
comp=E,765nm,23.9s
MNK *i* LRM MLR 11 47 50.4
comp=Z,308nm,23.9s
MNK Minsk 70.79 355 *i* P **P 11 13 23.7 +0.3**
MNK *i* 11 13 46.0
MNK *i* 11 16 00.2
MNK *i* PPP PPP 11 17 40.1
MNK *i* S **S 11 22 32.8 -2.1**
MNK pmax pmax
comp=Z,70nm,0.9s
MNK pmax pmax
comp=E,60nm,0.9s
MNK pmax pmax
comp=N,23nm,0.9s

MNK MLR MLR
comp=N,539nm,21.0s
MNK MLR MLR
comp=E,765nm,24.0s
MNK MLR MLR
comp=Z,308nm,24.0s
AB31 Akbulak array 70.83 333 *e*P **P 11 13 23.8 0.0**
AB31 pmax pmax
comp=Z,25nm,0.4s
ABKAR Akbulak array 70.83 333 P **P 11 13 24.1 +0.3**
TNSS Tian-Shan 70.90 319 *e*P **P 11 13 24.1 -0.7**
TNSS Tian-Shan 70.90 319 *e*P **P 11 13 24.1 -0.7**
IWEX Carrickbyrne, 70.96 17 P **P 11 13 25.5 +1.0**
FOEL Foel Wylfa 71.01 14 P **P 11 13 26.3 +1.5**
BSEG Bad Segeberg 71.33 6 P **P 11 13 27.1 +0.4**
BSEG Bad Segeberg 71.33 6 *e*P **P 11 13 27.7 +1.1**
comp=Z,18nm,1.1s,baz=356,slow=5.8
BSEG Bad Segeberg 71.33 6 P **P 11 13 27.1 +0.4**
SGDS Sogindy 71.40 321 *e*P **P 11 13 27.2 -0.3**
CWF Charnwood Fore 71.42 13 P **P 11 13 28.2 +1.0**
CWF Charnwood Fore 71.42 13 *e*P **P 11 13 27.2 -0.1**
CWF IAmb IAmb 11 13 30.9
comp=Z,8.5nm,0.9s
HLM1 Long Mynd 71.42 14 *e*P **P 11 13 27.9 +0.6**
HLM1 IAmb IAmb 11 13 31.2
comp=Z,5.3nm,0.9s
TKM2 Tokmak 2 71.50 320 P **P 11 13 28.9 +0.6**
SNR=7.8
WUS Wushi 71.58 317 IAmb IAmb 11 13 29.9
comp=Z,20nm,0.7s
WUS Wushi 71.58 317 P **P 11 13 29.1 +0.4**
USP Ospenovka 71.61 321 P **P 11 13 29.3 +0.7**
SNR=7.7
TARG Taragay, Kyrgy 71.69 318 P **P 11 13 29.7 +0.1**
TARG Taragay, Kyrgy 71.69 318 IAmb IAmb 11 13 31.5
comp=Z,13nm,0.5s
TARG Taragay, Kyrgy 71.69 318 P **P 11 13 29.7 +0.1**
RSBS Rosebush, Pemb 71.69 15 *e*P **P 11 13 29.1 +0.1**
RSBS IAmb IAmb 11 13 30.6
comp=Z,13nm,0.8s
LPSR Galich'ya Gora 71.70 348 *e*P **P 11 13 28.2 -0.7**
LPSR pmax pmax
comp=Z,56nm,0.8s
BOOM Boomskoye usch 71.75 319 P **P 11 13 30.3 +0.6**
BOOM Boomskoye usch 71.75 319 P **P 11 13 30.3 +0.6**
CHMS Chumysh 71.75 321 P **P 11 13 30.6 +1.1**
SNR=5.2
AAK Ala-Archa 72.16 321 P **P 11 13 32.8 +0.7**
SNR=10
AAK Ala-Archa 72.16 321*c i*P **P 11 13 32.7 +0.6**
AAK pmax pmax
comp=Z,17nm,0.7s
AAK Ala-Archa 72.16 321 P **P 11 13 32.9 +0.7**
AAK IAmb IAmb 11 13 33.1
comp=Z,16nm,0.7s
AAK Ala-Archa 72.16 321 P **P 11 13 32.9 +0.7**
AAK Ala-Archa 72.16 321 P **P 11 13 32.8 +0.7**
GORT1 Trebel 72.32 5 *e*P **P 11 13 33.8 +1.2**
comp=Z,21nm,1.1s,baz=356,slow=5.8
EKS2 Erkin-Say 72.40 321 P **P 11 13 34.3 +0.8**
SNR=9.9
RETH Rethem/Aller, 72.46 6 *e*P **P 11 13 34.5 +1.1**
comp=Z,15nm,1.0s,baz=356,slow=5.8
RETH Rethem/Aller, 72.46 6 P **P 11 13 34.6 +1.1**
VORR Voronezh 72.58 347 *e*P **P 11 13 33.5 -0.7**
VORR pmax pmax
comp=Z,67nm,0.4s
NRN Naryn 72.63 319 IAmb IAmb 11 13 37.0
comp=Z,48nm,1.3s
VRH Novokhopyorsk 72.69 345 *e*P **P 11 13 33.9 -1.0**
VRH pmax pmax
comp=Z,45nm,0.6s
IBBN Ibbenburen 72.78 7 *e*P **P 11 13 36.3 +1.0**
comp=Z,45nm,1.2s,baz=356,slow=5.8
IBBN Ibbenburen 72.78 7 P **P 11 13 36.4 +1.0**
IBBN pP **sP 11 13 51.2 -0.6**
ASAI AK-SAY(Kyrgyzs 72.88 318 P **P 11 13 37.5 +0.9**
RUE Ruedersdorf 72.94 4 *e*P **P 11 13 37.2 +0.9**
comp=Z,72nm,1.3s,baz=356,slow=5.8
PZH PanZhiHua 72.95 292 P **P 11 13 39.3 +2.3**
FLTG Flechtingen 72.98 5 *e*P **P 11 13 36.7 +0.2**
comp=Z,24nm,1.0s,baz=356,slow=5.8
VSR Storozhevoye 73.03 347 *e*P **P 11 13 36.3 -0.6**
VSR pmax pmax
comp=Z,62nm,0.5s
DZA Taraz 73.07 323 *e*P **P 11 13 37.0 -0.3**
DZA Taraz 73.07 323 *e*P **P 11 13 37.1 -0.3**
ASSE Asse, Remlinge 73.15 6 *e*P **P 11 13 38.4 +0.9**
comp=Z,21nm,1.1s,baz=356,slow=5.8
ASSE Asse, Remlinge 73.15 6 P **P 11 13 38.7 +1.2**
ASSE pP **PcP 11 13 52.9 -1.1**
JUD3 Juan Diaz 3 73.16 96 P **P 11 13 38.5 +0.3**
KK31 Karatay Array 73.17 323 P **P 11 13 38.1 +0.2**
KK31 pmax pmax
comp=Z,23nm,0.9s
KK31 Karatay Array 73.17 323 P **P 11 13 38.1 +0.2**
KK31 IAmb IAmb 11 13 38.9
comp=Z,23nm,0.8s
KKAR Karatay Array 73.17 323 P **P 11 13 38.1 +0.2**
KKAR Karatay Array 73.17 323 P **P 11 13 38.1 +0.2**
VORD Divnogorie 73.26 347 *e*P **P 11 13 35.8 -2.4**
VORD pmax pmax
comp=Z,30nm,0.8s
DYA Yadsworthy 73.29 15 *e*P **P 11 13 38.4 -0.1**
DYA IAmb IAmb 11 13 40.4
comp=Z,10nm,0.9s
CCA1 Carnmenellis 73.33 16 *e*P **P 11 13 39.1 +0.4**
CCA1 IAmb IAmb 11 13 40.4
comp=Z,10nm,0.7s
CLZ Clausthal 73.42 6 *e*P **P 11 13 40.2 +1.0**
comp=Z,28nm,1.0s,baz=356,slow=5.8
CLZ *es*P **PcP 11 13 55.5 +0.2**
CLZ Clausthal 73.42 6 P **P 11 13 40.3 +1.0**
CLZ pP **PcP 11 13 55.1 -0.2**
BRLS Borolday 73.47 324 *e*P **P 11 13 40.8 +1.1**
BRLS Borolday 73.47 324 *e*P **P 11 13 40.8 +1.1**
KMI2 Kunming 73.49 290 ⇑P **P 11 13 40.3 0.0**
KMI2 sP PcP 11 13 54.6 -1.7
KMI2 pmax pmax
comp=Z,16nm,1.3s
BUG Bochum--Univer 73.60 8 *e*P **P 11 13 40.9 +0.6**
comp=Z,29nm,1.1s,baz=356,slow=5.8
BUG Bochum--Univer 73.60 8 P **P 11 13 41.2 +1.0**
GTTG Gottingen 73.69 6 *e*P **P 11 13 41.9 +1.1**
comp=Z,32nm,1.0s,baz=356,slow=5.8
GTTG Gottingen 73.69 6 P **P 11 13 41.9 +1.1**
WIMM Wimmelburg 73.80 5 P **P 11 13 42.2 +0.8**
KASTN Kahler Asten 73.93 7 *e*P **P 11 13 43.1 +0.8**
comp=Z,15nm,1.0s,baz=356,slow=5.8
RNPP9 Sopachiv 73.97 356 P **P 11 13 41.9 -0.5**
UCC Uccle 73.98 10 *d*P **P 11 13 43.1 +0.6**
RNPP8 Varash 74.05 356 P **P 11 13 42.7 -0.2**
CLL Collm 74.08 4 ⇑*i*P **P 11 13 43.2 +0.1**
CLL *i* *PP **pP 11 13 54.1 -0.9**
CLL *i* *SP **PcP 11 13 58.2 +0.1**
CLL pmax pmax
comp=Z,23nm,1.0s
CLL Collm 74.08 4 *e*P **P 11 13 43.3 +0.2**
comp=Z,20nm,1.0s,baz=356,slow=5.8
CLL *e*L L 11 49 18.0
comp=Z,495nm,20.0s
CLL Collm 74.08 4 P **P 11 13 43.0 -0.1**
comp=Z,745nmcomp=Z,23nm,1.0s
CLL Collm 74.08 4 ⇑*i*P **P 11 13 43.2 +0.1**
comp=Z,23nm,1.0s
CLL *i* pP **PcP 11 13 58.2 +0.1**
comp=Z,18nm,1.0s
NEUB Neuenburg 74.12 5 *e*P **P 11 13 44.2 +0.9**
comp=Z,37nm,0.8s,baz=356,slow=5.8
NEUB Neuenburg 74.12 5 P **P 11 13 44.3 +1.0**
RNPP5 Staryi Chortor 74.16 356 P **P 11 13 43.5 0.0**
HGN Heimansgroeve 74.16 9 P **P 11 13 44.1 +0.6**
CHM Chimkent 74.17 324 *e*P **P 11 13 43.5 -0.3**
CHM pmax pmax
comp=Z,15nm,0.5s
CHM Chimkent 74.17 324 *e*P **P 11 13 43.5 -0.3**
comp=Z,15nm,0.5s
IUG luzhnay 74.18 323 *e*P **P 11 13 43.4 -0.6**
IUG pmax pmax
comp=Z,16nm,0.5s
IUG luzhnay 74.18 323 *e*P **P 11 13 43.4 -0.6**
comp=Z,16nm,0.5s
BSTI Sart Tilman 74.31 9 *d*P **P 11 13 45.2 +0.8**
MEM Membach 74.32 9 P **P 11 13 45.4 +0.9**
MEM Membach 74.32 9 *d*P **P 11 13 45.1 +0.6**

MEM *d*pP **pP 11 13 56.1 -0.3**
MEM Membach 74.32 9 P **P 11 13 45.4 +0.9**
SDDR Presa de Saban 74.32 79 P **P 11 13 45.7 +0.7**
SDDR IAmb IAmb 11 13 57.1
comp=Z,21nm,0.8s
TRKS Terek-Say 74.34 322 P **P 11 13 45.5 +0.5**
MI28 Mi28,Pidlybu 74.37 355 P **P 11 13 43.5 -1.3**
UBBA Unterbreizbach 74.41 6 P **P 11 13 46.0 +1.1**
AK21 Malin Array Si 74.44 354 P **P 11 13 44.6 -0.6**
BCLA Clavier 74.45 9 *d*P **P 11 13 45.7 +0.5**
comp=Z,7.0nm,1.0s
AK23 Malin Array Si 74.45 354 P **P 11 13 44.7 -0.5**
AK22 Malin Array Si 74.45 354 P **P 11 13 44.8 -0.5**
BGES Gesves 74.46 9 *d*P **P 11 13 45.9 +0.6**
comp=Z,7.8nm,1.0s
AK20 Malin Array Si 74.47 354 P **P 11 13 44.9 -0.5**
AK03 Malin Array Si 74.48 354 P **P 11 13 44.7 -0.7**
AK04 Malin Array Si 74.48 354 P **P 11 13 44.9 -0.5**
AK18 Malin Array Si 74.49 354 P **P 11 13 44.9 -0.6**
AK19 Malin Array Si 74.50 354 P **P 11 13 44.9 -0.6**
AKASG Malin Array Be 74.50 354 P **P 11 13 45.1 -0.4**
comp=Z,37nm,0.5s,baz=10,slow=6.0,SNR=35
comp=Z,37nm,0.5s
AKASG Malin Array Be 74.50 354 P **P 11 13 45.3 -0.2**
AKASG pmax pmax
comp=Z,63nm,0.7s
AKASG Malin Array Be 74.50 354 P **P 11 13 45.3 -0.2**
AKBB Malin Array Si 74.50 354*c i*P **P 11 13 45.2 -0.3**
AKBB pmax pmax
comp=Z,54nm,0.9s
AKBB Malin Array Si 74.50 354 P **P 11 13 45.3 -0.2**
AKBB Malin Array Si 74.50 354 P **P 11 13 45.0 -0.5**
BMRD Maredsous 74.51 10 *d*P **P 11 13 46.3 +0.7**
comp=Z,12nm,1.1s
BMRD *d*pP **pP 11 13 57.6 0.0**
KIEV Kiev 74.51 354 ⇑P **P 11 13 45.1 -0.5**
KIEV Kiev 74.51 354 P **P 11 13 45.4 -0.2**
KIEV pmax pmax
comp=Z,66nm,0.7s
KIEV Kiev 74.51 354 P **P 11 13 45.4 -0.2**
KIEV Kiev 74.51 354 P **P 11 13 45.0 -0.5**
comp=Z,5μmcomp=Z,412nm,0.8s
KIEV Kiev 74.51 354 P **P 11 13 45.4 -0.2**
KIEV Kiev 74.51 354 P **P 11 13 45.2 -0.5**
KIEV PcP **PcP 11 14 00.6 +0.6**
KIEV sP **sP 11 14 04.5 +2.4**
BRG Berggiesshubel 74.55 4 P **P 11 13 46.5 +0.6**
BRG Berggiesshubel 74.55 4 *e*P **P 11 13 46.4 +0.6**
comp=Z,19nm,1.0s,baz=356,slow=5.8
BRG Berggiesshubel 74.55 4 P **P 11 13 46.5 +0.6**
BRG Berggiesshubel 74.55 4 *i* P **P 11 13 46.5 +0.6**
BRG Amp 11 13 47.6
comp=Z,19nm,1.0s
BRG ⇑PP **sP 11 14 01.7 -0.7**
BRG Amp 11 14 02.6
comp=Z,22nm,1.1s
AK08 Malin Array Si 74.57 353 P **P 11 13 45.4 -0.5**
KSP Ksiaz 74.65 2 P **P 11 13 46.6 +0.2**
comp=Z,21nm,1.0s
MOX Moxa 74.68 5 P **P 11 13 47.5 +0.9**
MOX Moxa 74.68 5 *e*P **P 11 13 47.4 +0.8**
comp=Z,32nm,1.1s,baz=356,slow=5.8
MOX *es*P **sP 11 14 02.6 -0.5**
MOX *e*L L 11 49 06.3
comp=Z,326nm,19.1s
MOX Moxa 74.68 5 P **P 11 13 47.5 +0.9**
BAIF Baives 74.70 10 *e*P **P 11 13 47.1 +0.4**
BAIF pmax pmax
comp=Z,15nm,0.9s
DOU Dourbes 74.70 10 *d*P **P 11 13 47.2 +0.5**
comp=Z,7.2nm,1.1s
RCHB Rochefort 74.70 9 *d*P **P 11 13 47.1 +0.4**
RCHB *d*pP **pP 11 13 58.4 -0.3**
RCHB Rochefort 74.70 9 P **P 11 13 47.3 +0.6**
GIVF Givet 74.71 10 *e*P **P 11 13 47.1 +0.3**
GIVF pmax pmax
comp=Z,37nm,1.4s
JSA Saint Aubin 74.77 14 *e*P **P 11 13 47.9 +0.8**
JSA IAmb IAmb 11 13 48.6
comp=Z,17nm,0.7s
KSH2 Kashi 74.78 318 P **P 11 13 48.4 +0.8**
KSH2 sP PcP 11 14 02.1 +0.6
KSH2 pmax pmax
comp=Z,65nm,0.9s
PLN Plauen 74.87 5 *e*P **P 11 13 48.2 +0.6**
comp=Z,4.8nm,1.0s,baz=356,slow=5.8
CHVC Chvalec 74.90 2 *e*P **P 11 13 49.2 +1.3**
CHVC Chvalec 74.90 2 *e*P **P 11 13 49.2 +1.3**
TNS Taunus Mts 74.90 7 P **P 11 13 48.8 +0.9**
TNS Taunus Mts 74.90 7 *e*P **P 11 13 48.6 +0.7**
comp=Z,18nm,1.1s,baz=356,slow=5.8
TNS Taunus Mts 74.90 7 P **P 11 13 48.9 +0.9**
OSTC Ostas 74.94 2 *e*P **P 11 13 48.4 +0.3**
OSTC Ostas 74.94 2 *e*P **P 11 13 48.4 +0.3**
TANN Tannenbergstha 74.95 5 *e*P **P 11 13 48.9 +0.7**
comp=Z,11nm,1.2s,baz=356,slow=5.8
TANN Tannenbergstha 74.95 5 P **P 11 13 49.0 +0.8**
UPC Upice 74.98 2 *e*P **P 11 13 49.2 +0.9**
UPC Upice 74.98 2 *e*P **P 11 13 49.2 +0.9**
UPC Upice 74.98 2 P **P 11 13 49.2 +0.9**
NKC Novy Kostel 75.13 5 P **P 11 13 50.3 +1.1**
DPC Dobruska-Polom 75.14 2 *e*P **P 11 13 50.6 +1.3**
DPC Dobruska-Polom 75.14 2 *e*P **P 11 13 50.6 +1.3**
DPC Dobruska-Polom 75.14 2 P **P 11 13 50.1 +0.8**
comp=Z,33nm,1.3s
DPC Dobruska-Polom 75.14 2 P **P 11 13 50.4 +1.0**
WLF Walferdange 75.27 9 P **P 11 13 50.4 +0.4**
WLF pmax pmax
comp=Z,25nm,1.1s
WLF Walferdange 75.27 9 P **P 11 13 50.4 +0.4**
WLF IAmb IAmb 11 13 52.9
comp=Z,25nm,1.1s
WLF Walferdange 75.27 9 *d*P **P 11 13 51.1 +1.1**
comp=Z,15nm,1.0s
WLF Walferdange 75.27 9 *e*P **P 11 13 51.2 +1.2**
comp=Z,20nm,1.0s,baz=356,slow=5.8
WLF Walferdange 75.27 9 P **P 11 13 51.4 +1.4**
OJC Ojcow 75.31 360 P **P 11 13 50.7 +0.5**
OJC Ojcow 75.31 360 P **P 11 13 50.7 +0.5**
OJC Ojcow 75.31 360 P **P 11 13 51.1 +0.9**
LUBAR Lubar, Ukraine 75.37 354 P **P 11 13 49.8 -0.8**
FLN La Foliniere 75.42 13 *e*P **P 11 13 50.1 -0.8**
FLN pmax pmax
comp=Z,24nm,1.3s
KRLC Kraliky 75.43 2 *e*P **P 11 13 51.9 +0.9**
KRLC Kraliky 75.43 2 *e*P **P 11 13 51.9 +0.9**
KRLC Kraliky 75.43 2 P **P 11 13 51.8 +0.9**
ROSF Rostrenen 75.43 15 *e*P **P 11 13 51.4 +0.4**
ROSF pmax pmax
comp=Z,12nm,0.9s
PRU Pruhonice 75.46 3 *e*P **P 11 13 52.2 +1.1**
PRU Pruhonice 75.46 3 *e*P **P 11 13 52.2 +1.1**
PRU Pruhonice 75.46 3 P **P 11 13 51.9 +0.8**
GRA3 Grafenberg Arr 75.54 5 P **P 11 13 52.9 +1.3**
DR12 Loma Pena Alta 75.56 78 P **P 11 13 53.1 +0.9**
STEB Steborice 75.58 1 *e*P **P 11 13 52.6 +0.8**
ROTZ Rotzenmuhle 75.59 5 *e*P **P 11 13 52.7 +0.8**
comp=Z,4.0nm,1.1s,baz=356,slow=5.8
GRF Grafenberg Arr 75.61 5 *e*L L 11 48 41.7
comp=Z,900nm,19.9s
SGMF Saint Gilles 75.62 15 *e*P **P 11 13 51.8 -0.2**
SGMF pmax pmax
comp=Z,18nm,1.1s
LDF La Druitiere 75.63 13 *e*P **P 11 13 51.4 -0.7**
LDF pmax pmax
comp=Z,27nm,1.2s
OKC Ostrava-Krasne 75.68 1 *e*P **P 11 13 53.5 +1.1**
OKC Ostrava-Krasne 75.68 1 *e*P **P 11 13 53.5 +1.1**
OKC Ostrava-Krasne 75.68 1 P **P 11 13 53.4 +1.0**
GRR Gorron 75.73 14 *e*P **P 11 13 52.9 +0.2**
GRR pmax pmax
comp=Z,9.0nm,0.6s
MORC Moravsky Berou 75.74 1 ⇑P **P 11 13 53.1 +0.3**
MORC Moravsky Berou 75.74 1 P **P 11 13 53.4 +0.7**
MORC Moravsky Berou 75.74 1 P **P 11 13 53.3 +0.5**
MORC IAmb IAmb 11 13 54.4
comp=Z,18nm,0.9s
MORC Moravsky Berou 75.74 1 *e*P **P 11 13 53.1 +0.3**
MORC Moravsky Berou 75.74 1 P **P 11 13 53.5 +0.7**
BTK Batken 75.75 322 P **P 11 13 53.5 +0.4**
BTK pmax pmax
comp=Z,48nm,1.4s
BTK Batken 75.75 322 P **P 11 13 53.5 +0.4**

BTK IAmb IAmb 11 13 54.2
comp=Z,48nm,1.4s
BTK Batken 75.75 322 P **P** **11 13 53.4 +0.3**
LSA Lhasa 75.84 302 P P 11 13 47.5 -6.7
GRB4 Grafenberg Arr 75.85 5 P **P** **11 13 54.5 +1.1**
KWP Kalwaria Pacla 75.86 358 P **P** **11 13 54.0 +0.6**
KWP Kalwaria Pacla 75.86 358 P **P** **11 13 53.8 +0.4**
comp=Z,69nm,1.3s
TNCH TengChong 75.86 293 P **P** **11 13 54.4 +0.4**
TNCH pmax pmax
comp=Z,86nm,0.8s
SLVN Son La 75.91 287 P **P** **11 13 53.8 -0.3**
GRB1 Grafenberg Arr 75.93 5 P **P** **11 13 54.0 +0.2**
GRB1 Grafenberg Arr 75.93 5 P **P** **11 13 55.0 +1.1**
GRB3 Grafenberg Arr 75.99 5 P **P** **11 13 55.6 +1.5**
STHS Stebnicka Huta 76.10 359 *e*P **P** **11 13 55.1 +0.3**
STHS pmax pmax
comp=Z,49nm,0.8s
STHS Stebnicka Huta 76.10 359 *e*P **P** **11 13 55.1 +0.3**
NIE Niedzica 76.11 359 P **P** **11 13 55.5 +0.7**
comp=Z,8.6nm,1.2s
VRAC Vranov 76.19 2 ⇓P **P** **11 13 56.5 +1.2**
VRAC Vranov 76.19 2 P **P** **11 13 56.5 +1.2**
VRAC Vranov 76.19 2 *e*P **P** **11 13 56.1 +0.8**
VRAC Vranov 76.19 2 P **P** **11 13 56.3 +0.9**
GRB5 Grafenberg Arr 76.21 5 P **P** **11 13 56.2 +0.8**
WET Wettzell 76.24 4 P **P** **11 13 56.5 +0.9**
WET Wettzell 76.24 4 *e*P **P** **11 13 56.6 +0.9**
comp=Z,20nm,1.3s,baz=356,slow=5.8
WET Wettzell 76.24 4 P **P** **11 13 56.5 +0.9**
KHC Kasperske Hory 76.28 4*c i*P **P** **11 13 56.8 +0.9**
KHC pmax pmax
comp=Z,35nm,1.2s
KHC Kasperske Hory 76.28 4 *e*P **P** **11 13 57.0 +1.2**
KHC Kasperske Hory 76.28 4 IAmb IAmb 11 13 58.1
comp=Z,31nm,1.1s
KHC Kasperske Hory 76.28 4 P **P** **11 13 56.5 +0.6**
comp=Z,28nm,1.1s
KHC Kasperske Hory 76.28 4 P **P** **11 13 57.0 +1.2**
GRC3 Grafenberg Arr 76.43 5 P **P** **11 13 57.9 +1.2**
KRUC Moravsky 76.44 2 P **P** **11 13 57.4 +0.7**
KRUC Moravsky 76.44 2 *e*P **P** **11 13 57.0 +0.3**
KRUC Moravsky 76.44 2 P **P** **11 13 57.4 +0.7**
CLF Chambon-Foret 76.49 12 P **P** **11 13 58.2 +1.2**
KOLS Kolonicke sedl 76.56 358 *e*P **P** **11 13 56.8 -0.6**
KOLS pmax pmax
comp=Z,20nm,0.9s
KOLS Kolonicke sedl 76.56 358 P **P** **11 13 58.8 +1.4**
KOLS Kolonicke sedl 76.56 358 *e*P **P** **11 13 56.8 -0.6**
GEC2 GERESS Array S 76.57 4 P **P** **11 13 58.3 +0.7**
GEC2 GERESS Array S 76.57 4 *e*P **P** **11 13 58.3 +0.7**
comp=Z,14nm,1.0s,baz=356,slow=5.8
GERES GERESS Array B 76.57 4 P **P** **11 13 58.2 +0.6**
comp=Z,8.9nm,0.9s,baz=343,slow=4.2,SNR=38
GERES PKKPbc **PKKPbc 11 33 03.4 -2.7**
comp=Z,1.6nm,0.7s,baz=64,slow=3.1,SNR=9.1
comp=Z,8.9nm,0.9s
GERES GERESS Array B 76.57 4 P **P** **11 13 57.9 +0.3**
CDF Champ du Feu 76.61 8 *e*P **P** **11 13 58.0 +0.2**
CDF pmax pmax
comp=Z,9.0nm,0.9s
JAVC Velka Javorina 76.66 1 *e*P **P** **11 13 59.6 +1.6**
JAVC Velka Javorina 76.66 1 P **P** **11 13 60.0 +2.0**
BFO Black Forest 76.78 8 *e*P **P** **11 13 59.2 +0.5**
comp=Z,7.3nm,0.8s,baz=356,slow=5.8
ECH Echery 76.80 8 P **P** **11 13 59.3 +0.5**
ECH Echery 76.80 8 IAmb IAmb 11 14 00.4
comp=Z,22nm,1.1s
ECH Echery 76.80 8 P **P** **11 13 59.5 +0.8**
ECH Echery 76.80 8 P **P** **11 13 59.4 +0.6**
GAR Garm 76.86 322 P **P** **11 13 59.7 +0.3**
HAU Haudompre 76.93 9 *e*P **P** **11 13 59.8 +0.3**
HAU pmax pmax
comp=Z,11nm,0.8s
SORM Soroca 77.11 354 ⇑P **P** **11 14 00.5 -0.1**
SORM Soroca 77.11 354 P **P** **11 14 00.4 -0.1**
SORM Soroca 77.11 354 P **P** **11 14 00.0 -0.5**
comp=Z,84nm,0.9s
MODS Modra-Piesok 77.14 1 *e*P **P** **11 14 02.2 +1.5**
MODS pmax pmax
comp=Z,74nm,1.1s
MODS Modra-Piesok 77.14 1 P **P** **11 14 02.2 +1.5**
MODS Modra-Piesok 77.14 1 *e*P **P** **11 14 02.2 +1.5**
HINF Hinteralfeld 77.17 9 *e*P **P** **11 14 00.2 -0.7**
HINF pmax pmax
comp=Z,10.0nm,1.0s
ABAH Abaujker 77.22 359 P **P** **11 14 00.6 -0.4**
SLE Schleitheim 77.35 8 P **P** **11 14 02.2 +0.3**
SLE Schleitheim 77.35 8 P **P** **11 14 02.2 +0.3**
TRPA Tarpa 77.36 358 P **P** **11 14 02.9 +1.0**
WINA Alland / Wiene 77.38 2 *i*P **P** **11 14 03.1 +1.1**
SNR=8.9
LOR Lormes 77.42 11 *e*P **P** **11 14 02.4 +0.1**
LOR pmax pmax
comp=Z,9.0nm,0.8s
PMG Port Moresby 77.46 233 *e*P **P** **11 14 02.1 -0.7**
PMG pmax pmax
comp=Z,29nm,1.1s
CONA Conrad Observa 77.56 2 *i*P **P** **11 14 04.2 +1.1**
comp=Z,22nm,0.9s,SNR=18
CHGR Chuyangaron 77.58 322*c i*P **P** **11 14 03.5 +0.1**
CHGR pmax pmax
comp=Z,140nm,0.7s
CHGR Chuyangaron 77.58 322 P **P** **11 14 03.4 0.0**
CHGR Chuyangaron 77.58 322 P **P** **11 14 03.6 +0.2**
MFF Saint Martin d 77.58 14 *e*P **P** **11 14 03.7 +0.5**
MFF pmax pmax
comp=Z,85nm,0.8s
MOA Molln 77.59 4 *e*P **P** **11 14 03.8 +0.7**
comp=Z,7.8nm,1.1s
MOA Molln 77.59 4 P **P** **11 14 03.9 +0.7**
PSZ Piszkesteto 77.61 360 ⇑P **P** **11 14 04.1 +0.7**
PSZ Piszkesteto 77.61 360 P **P** **11 14 05.0 +1.6**
PSZ Piszkesteto 77.61 360 P **P** **11 14 04.3 +0.9**
PSZ IAmb IAmb 11 14 05.7
comp=Z,28nm,1.0s
PSZ Piszkesteto 77.61 360 P **P** **11 14 04.7 +1.4**
BOURR Bourrignon 77.62 8 P **P** **11 14 04.3 +0.9**
RJOB Jochberg 77.64 5 *e*P **P** **11 14 04.5 +0.9**
comp=Z,12nm,0.8s,baz=356,slow=5.8
RJOB Jochberg 77.64 5 P **P** **11 14 04.4 +0.9**
MANEM Manem 77.66 320 IAmb IAmb 11 14 06.0
comp=Z,73nm,1.0s
BIOA Bad Ischl, Aus 77.72 4 *e*P **P** **11 14 04.6 +0.7**
comp=Z,4.3nm,0.6s
BUR08 Bucovina Ar. S 77.77 356 IAmb IAmb 11 14 05.8
comp=Z,15nm,0.7s
RETA Reutte 77.78 6 *i*P **P** **11 14 05.1 +0.7**
comp=Z,10nm,1.0s,SNR=5.5
BURAR Bucovina Array 77.80 356 ⇓P **P** **11 14 04.5 +0.1**
BURAR Bucovina Array 77.80 356 P **P** **11 14 04.9 +0.4**
BURAR Bucovina Array 77.80 356 P **P** **11 14 04.9 +0.4**
BURAR IAmb IAmb 11 14 06.3
comp=Z,21nm,0.7s
RONA Rosalia, Austr 77.80 2 *i*P **P** **11 14 05.5 +1.1**
comp=Z,12nm,0.9s,SNR=8.3
AVF Avril sur Loir 77.83 11 *e*P **P** **11 14 04.5 0.0**
AVF pmax pmax
comp=Z,8.0nm,0.6s
DAVA Damuels 77.92 7 P **P** **11 14 06.5 +1.2**
MOTA Moosalm 77.94 6 *i*P **P** **11 14 06.2 +0.9**
comp=Z,28nm,1.2s,SNR=9.4
LESA Schwarzleotal 77.95 5 *i*P **P** **11 14 06.0 +0.8**
comp=Z,14nm,1.1s,SNR=7.3
WATA Walderalm 77.98 5 *i*P **P** **11 14 06.2 +0.7**
comp=Z,22nm,1.1s,SNR=6.6
BGF Bois d'Agland 78.00 12 *e*P **P** **11 14 05.7 +0.2**
BGF pmax pmax
comp=Z,17nm,1.0s
SMF Signal de Mont 78.03 11 *e*P **P** **11 14 05.0 -0.7**
SMF pmax pmax
comp=Z,13nm,0.9s
WTTA Wattenberg 78.05 5 P **P** **11 14 07.0 +1.0**
WTTA Wattenberg 78.05 5 *i*P **P** **11 14 07.0 +1.0**
comp=Z,19nm,0.7s,SNR=8.6
WTTA Wattenberg 78.05 5 P **P** **11 14 07.0 +1.0**
SQTA Sankt Quirin 78.07 6 *i*P **P** **11 14 07.0 +1.0**
comp=Z,25nm,0.9s,SNR=13
LTVH Ltavrtes, Hu 78.12 358 P **P** **11 14 05.8 -0.3**
ARSA Arzberg 78.22 3 IAmb IAmb 11 14 09.0
comp=Z,18nm,1.0s
ARSA Arzberg 78.22 3 *i*P **P** **11 14 07.9 +1.1**
comp=Z,19nm,1.0s,SNR=7.7
ARSA Arzberg 78.22 3 P **P** **11 14 08.1 +1.3**

BNALP Bannalp 78.23 8 P **P** **11 14 06.4 -0.6**
FETA Feichten 78.24 6 *i*P **P** **11 14 07.9 +0.9**
comp=Z,21nm,1.2s,SNR=8.0
CABF La Chapelle 78.29 9 *e*P **P** **11 14 07.7 +0.5**
CABF pmax pmax
comp=Z,23nm,1.1s
KBA Koelnbreinsper 78.32 4 P **P** **11 14 09.1 +1.6**
KBA Koelnbreinsper 78.32 4 *e*P **P** **11 14 08.8 +1.3**
comp=Z,32nm,1.0s
KBA Koelnbreinsper 78.32 4 P **P** **11 14 09.1 +1.6**
SESA Seetaler Alpe, 78.33 3 *i*P **P** **11 14 08.5 +0.9**
SNR=15
MPLH Magyarpolny 78.35 1 P **P** **11 14 08.6 +1.2**
comp=Z,70nm,1.2s
MPLH Magyarpolny 78.35 1 P **P** **11 14 08.9 +1.6**
ARCR ARCALIA 78.36 357 ⇓P **P** **11 14 08.7 +1.2**
GIMEL St. Georges / 78.39 9 P **P** **11 14 09.2 +1.4**
IMP Imphal 78.42 297 *e*P **P** **11 14 08.1 -0.1**
IMP IAmb IAmb 11 14 09.4
comp=Z,52nm,0.4s
BIZ Bicaz 78.43 355 ⇑P **P** **11 14 08.3 +0.5**
GOF Gofitskoye 78.46 343*c i*P **P** **11 14 08.6 +0.5**
ABTA Abfaltersbach 78.61 5 *e*P **P** **11 14 09.8 +0.8**
comp=Z,14nm,1.0s
FUORN Ofenpass-Fuorn 78.61 6 IAmb IAmb 11 14 26.6
comp=Z,23nm,1.1s
FUORN Ofenpass-Fuorn 78.61 6 P **P** **11 14 10.5 +1.3**
TUE Stuetta 78.70 7 P **P** **11 14 10.3 +0.7**
TUE Stuetta 78.70 7 P **P** **11 14 10.8 +1.2**
CJR Cluj-Napoca 78.75 357 P **P** **11 14 11.7 +2.0**
MYKA Terra Mystica 78.78 4 *e*P **P** **11 14 11.0 +1.1**
comp=Z,5.3nm,0.6s
SOKA Soboth 78.78 3 *i*P **P** **11 14 10.8 +0.9**
comp=Z,20nm,0.9s,SNR=23
MARR Marisel-Cluj 78.80 357 ⇓P **P** **11 14 10.7 +0.7**
TESR Tescani 78.83 355 ⇓P **P** **11 14 10.2 +0.1**
TESR Tescani 78.83 355 P **P** **11 14 10.1 0.0**
comp=Z,863nmcomp=Z,20nm,0.9s
TESR Tescani 78.83 355 P **P** **11 14 10.2 +0.1**
SHL Shillong 78.87 299 P **P** **11 14 09.6 -1.2**
SHL pmax pmax
comp=Z,19nm,0.7s
SHL Shillong 78.87 299 P **P** **11 14 09.6 -1.2**
SHL IAmb IAmb 11 14 10.1
comp=Z,19nm,0.7s
HNLY HANLEY 78.88 312 *e*P **P** **11 14 11.6 +0.4**
HNLY IAmb IAmb 11 14 15.7
comp=Z,17nm,1.2s
SHAA Shahritus 78.93 323 P **P** **11 14 11.1 +0.2**
SHAA IAmb IAmb 11 14 12.3
comp=Z,66nm,0.9s
OBKA Obir 78.94 3 *i*P **P** **11 14 11.5 +0.8**
comp=Z,41nm,0.7s,SNR=27
OBKA Obir 78.94 3 P **P** **11 14 11.6 +0.8**
PRED Cave del Predi 78.97 4 P **P** **11 14 11.4 +0.5**
ONER Baraj Valea Uz 79.02 355 ⇓P **P** **11 14 12.4 +1.3**
RJF Les Rejaudoux 79.08 13 *e*P **P** **11 14 11.8 +0.3**
RJF pmax pmax
comp=Z,30nm,0.9s
GHRR 79.24 354 ⇑P **P** **11 14 13.5 +1.2**
GHRR 79.24 354 P **P** **11 14 13.3 +1.0**
GHRR 79.24 354 P **P** **11 14 13.5 +1.2**
CTI Castel Tesino 79.27 5 IAmb IAmb 11 14 28.1
comp=Z,18nm,1.2s
OZUR 79.29 355 ⇑P **P** **11 14 13.6 +1.0**
MORH Mrgy, Hungar 79.31 1 ⇓P **P** **11 14 13.4 +0.7**
MORH Mrgy, Hungar 79.31 1 P **P** **11 14 13.3 +0.6**
LFF La Frestale 79.33 13 *e*P **P** **11 14 13.4 +0.6**
LFF pmax pmax
comp=Z,162nm,1.2s
EVN Everest 79.39 304 P **P** **11 14 14.7 +0.5**
VLDR Vladesti 79.41 354 ⇑P **P** **11 14 13.7 +0.4**
SABO M.te Sabotino 79.43 4 IAmb IAmb 11 14 29.5
comp=Z,20nm,0.9s
DOPR Dopca 79.43 356 ⇓P **P** **11 14 14.6 +1.2**
LPL La Plagne 79.44 9 *e*P **P** **11 14 14.8 +1.1**
LPL pmax pmax
comp=Z,4.0nm,0.7s
SSB Saint Sauveur 79.46 11 P **P** **11 14 14.1 +0.5**
SSB Saint Sauveur 79.46 11 P **P** **11 14 14.1 +0.5**
VRI Vrincioaia 79.47 355 ⇑P **P** **11 14 13.8 +0.1**
VRI Vrincioaia 79.47 355 P **P** **11 14 13.7 +0.1**
VRI Vrincioaia 79.47 355 P **P** **11 14 13.9 +0.3**
VRI Vrincioaia 79.47 355 P **P** **11 14 14.3 +0.7**
PLOR Plostina 79.49 355 ⇑P **P** **11 14 14.3 +0.6**
PLOR Plostina 79.49 355 P **P** **11 14 14.3 +0.6**
COVR Voineasa-Covas 79.52 355 ⇓P **P** **11 14 14.8 +1.0**
CAF Calviac 79.52 12 *e*P **P** **11 14 14.2 +0.3**
CAF pmax pmax
comp=Z,11nm,1.2s
ODBI Odobesti 79.56 355 ⇑P **P** **11 14 15.5 +1.5**
PTJ Puntijarka 79.58 2 P **P** **11 14 15.2 +0.9**
KIV Kislovodsk 79.59 343 ⇓P **P** **11 14 14.6 +0.2**
KIV Kislovodsk 79.59 343 *e*P **P** **11 14 15.1 +0.7**
KIV pmax pmax
comp=Z,52nm,1.0s
KIV Kislovodsk 79.59 343 P **P** **11 14 15.4 +0.9**
SAHR Sahastru 79.61 355 ⇓P **P** **11 14 15.5 +1.1**
MAK Makhachkala 79.66 339 *e*P **P** **11 14 14.0 -0.6**
MAK *e*PPP PPP 11 19 02.6
MAK *e*S **S** **11 24 13.7 +0.1**
MAK *e*SS **SS** **11 29 24.0 +3.0**
MAK *e*SSS SSS 11 32 52.4
MAK pmax pmax
comp=Z,141nm,1.0s
NEGRR Negrea 79.73 354 ⇑P **P** **11 14 16.4 +1.4**
KBZ Khabaz 79.78 343 P **P** **11 14 16.1 +0.8**
comp=Z,37nm,0.9s,baz=326,slow=3.2,SNR=52
comp=Z,37nm,0.9s
KBZ Khabaz 79.78 343*c i*P **P** **11 14 16.0 +0.8**
KBZ pmax pmax
comp=Z,40nm,0.9s
TNR Turnu Rosu 79.79 357 ⇓P **P** **11 14 16.7 +1.3**
TNR Turnu Rosu 79.79 357 P **P** **11 14 16.7 +1.3**
SHA1 Shidzhatmaz 79.81 343*c i*P **P** **11 14 16.4 +0.6**
MLR Muntele Rosu 79.88 355 ⇓P **P** **11 14 16.8 +0.8**
MLR Muntele Rosu 79.88 355 P **P** **11 14 16.8 +0.8**
MLR Muntele Rosu 79.88 355 IAmb IAmb 11 14 33.1
comp=Z,24nm,1.3s
MLR Muntele Rosu 79.88 355 P **P** **11 14 16.9 +0.8**
VIVF Saint-Julien-l 79.89 11 P **P** **11 14 15.6 -0.3**
VIVF pmax pmax
comp=Z,9.0nm,1.0s
BZS Buzias 79.89 358 ⇑P **P** **11 14 16.5 +0.6**
BZS Buzias 79.89 358 P **P** **11 14 16.5 +0.6**
BZS Buzias 79.89 358 P **P** **11 14 16.5 +0.6**
ORIF Oris-en-Rattie 79.95 10 *e*P **P** **11 14 16.8 +0.5**
VOIR 79.98 356 ⇑P **P** **11 14 16.8 +0.4**
VOIR 79.98 356 P **P** **11 14 17.4 +1.0**
VOIR 79.98 356 P **P** **11 14 17.1 +0.6**
LOT Lotru 80.01 357 P **P** **11 14 16.7 0.0**
TLCR 80.02 353 ⇑P **P** **11 14 17.1 +0.6**
TLCR 80.02 353 P **P** **11 14 17.1 +0.6**
CFR Carcaliu 80.07 354 ⇑P **P** **11 14 17.1 +0.2**
CFR Carcaliu 80.07 354 P **P** **11 14 17.0 +0.2**
MBDF Montbardon 80.22 9 *e*P **P** **11 14 19.2 +1.3**
MBDF pmax pmax
comp=Z,10.0nm,0.6s
ISR Istrita 80.22 355 ⇓P **P** **11 14 17.6 -0.1**
ISR Istrita 80.22 355 P **P** **11 14 17.6 -0.1**
KLP Kalpa 80.26 312 *e*P **P** **11 14 18.6 +0.1**
KLP IAmb IAmb 11 14 22.2
comp=Z,70nm,0.9s
TPGR Topolog 80.38 353 ⇑P **P** **11 14 19.1 +0.6**
SOC Sochi 80.43 345 *e*P **P** **11 14 18.6 -0.2**
SOC *e*S **S** **11 24 21.5 -0.2**
SOC *e*SS **SS** **11 29 33.0 +0.6**
SOC pmax pmax
comp=Z,28nm,0.7s
SOC MLR MLR
comp=Z,282nm,19.0s
DHRM DHARAMSHALA 80.46 314 *e*P **P** **11 14 19.5 0.0**
DHRM IAmb IAmb 11 14 26.1
comp=Z,28nm,0.9s
NIL Nilore 80.48 317 P **P** **11 14 19.5 +0.2**
NIL pmax pmax
comp=Z,101nm,1.0s
NIL Nilore 80.48 317 P **P** **11 14 19.4 +0.2**
NIL Nilore 80.48 317 P **P** **11 14 20.1 +0.8**
THN Thein Dam 80.52 314 *e*P **P** **11 14 20.4 +0.9**
THN *ex* x 11 14 21.5
THN IAmb IAmb 11 14 21.6
comp=Z,29nm,0.9s

MYLDM Lahad Datu 80.54 266 IAmb IAmb 11 14 22.1
comp=Z,19nm,0.9s
MYLDM Lahad Datu 80.54 266 P **P** **11 14 20.9 +1.2**
comp=Z,26nm,1.2s
MYLDM Lahad Datu 80.54 266 P **P** **11 14 21.0 +1.3**
HERR Herculane 80.61 358 ⇑P **P** **11 14 19.8 +0.1**
CHTO Chiang Mai 80.67 289 P **P** **11 14 19.7 -0.7**
CHTO pmax pmax
comp=Z,15nm,0.7s
CHTO Chiang Mai 80.67 289 P **P** **11 14 19.7 -0.7**
CHTO IAmb IAmb 11 14 21.4
comp=Z,15nm,0.7s
CHTO Chiang Mai 80.67 289 P **P** **11 14 19.8 -0.7**
comp=Z,21nm,0.8s
CHTO Chiang Mai 80.67 289 P **P** **11 14 20.1 -0.3**
CHTO Chiang Mai 80.67 289 P **P** **11 14 20.1 -0.3**
PGAV Gavieira, Arco 80.71 21 *e*P **P** **11 14 22.5 +2.0**
PGAV *i* IAmb IAmb 11 14 25.1
comp=Z,38nm,1.7s
MDVR Moldovita 80.73 358 ⇑P **P** **11 14 20.7 +0.3**
TIRR Tirgusor 80.77 353 P **P** **11 14 20.9 +0.3**
TIRR pmax pmax
comp=Z,37nm,0.8s
TIRR Tirgusor 80.77 353 P **P** **11 14 20.9 +0.3**
ISO Isola 80.79 9 P **P** **11 14 22.4 +1.6**
ISO Isola 80.79 9 P **P** **11 14 22.4 +1.6**
DLV Lat 80.86 278 IAmb IAmb 11 14 25.1
comp=Z,26nm,1.1s
ATE Arette 80.95 15 P **P** **11 14 22.2 +0.6**
CMAR Chiang Mai Arr 80.96 289 P **P** **11 14 22.1 +0.1**
comp=Z,51nm,0.8s,baz=17,slow=5.6,SNR=193
comp=Z,51nm,0.8s
PCAB Cabril 81.01 20 *e*P **P** **11 14 23.6 +1.7**
AKT Akhty 81.04 339 *e*P **P** **11 14 22.5 +0.3**
AKT *e* 11 14 28.7
AKT pmax pmax
comp=Z,81nm,0.8s
SMLA Simla 81.07 313 *e*P **P** **11 14 22.6 +0.2**
SMLA IAmb IAmb 11 14 25.8
comp=Z,93nm,1.1s
PTH Pithoragarh 81.08 310 *e*P **P** **11 14 22.6 -0.2**
PTH IAmb IAmb 11 14 24.4
comp=Z,19nm,0.6s
MTLF Montolieu 81.10 13 *e*P **P** **11 14 22.8 +0.4**
MTLF pmax pmax
comp=Z,13nm,1.0s
SBF Sospel 81.14 9 *e*P **P** **11 14 23.0 +0.3**
SBF pmax pmax
comp=Z,17nm,0.8s
ICOR Ion Corvin 81.15 354 ⇑P **P** **11 14 23.9 +1.3**
EPF Esparros 81.15 14 *e*P **P** **11 14 22.5 -0.3**
EPF pmax pmax
comp=Z,6.0nm,1.0s
ESCA l'Escarene 81.17 9 P **P** **11 14 23.6 +0.9**
PBRG Braganca 81.17 19 *e*P **P** **11 14 23.5 +1.7**
PUNG Punghina 81.20 357 ⇓P **P** **11 14 23.4 +0.5**
KBL Kabul 81.30 320 P **P** **11 14 22.7 -1.1**
KBL pmax pmax
comp=Z,42nm,0.8s
KBL Kabul 81.30 320 P **P** **11 14 22.6 -1.1**
KBL Kabul 81.30 320 P **P** **11 14 22.8 -1.1**
POLO Lamas de Olo 81.38 20 *e*P **P** **11 14 25.6 +1.6**
POLO *i* IAmb IAmb 11 14 28.5
comp=Z,13nm,2.4s
POLO *e*pP **pP** **11 14 36.7 +0.6**
NPW Naypyitaw 81.40 292 P **P** **11 14 24.1 -0.2**
SEKA Sheki 81.41 339 P **P** **11 14 24.6 +0.5**
PTO Porto 81.44 21 *e*P **P** **11 14 26.1 +1.9**
PTO *i* IAmb IAmb 11 15 05.8
comp=Z,37nm,1.8s
PVRL Vila Real 81.49 20 *e*P **P** **11 14 26.3 +1.8**
PVRL *i* IAmb IAmb 11 14 39.6
comp=Z,39nm,1.9s
EPOS Posof 81.97 343 P **P** **11 14 28.4 +1.2**
PVIS Viseu 81.99 21 *e*P **P** **11 14 28.8 +1.5**
PVIS *e*pP **pP** **11 14 40.1 +0.9**
PVIS *e*sP **sP** **11 14 44.9 +1.1**
GANJ Ganja 82.13 340 P **P** **11 14 28.4 +0.5**
FDMO Fiordimonte 82.34 5 IAmb IAmb 11 14 47.8
comp=Z,19nm,0.9s
MTE Manteigas 82.36 20 *e*P **P** **11 14 30.9 +1.7**
MTE *e*pP **pP** **11 14 41.1 -0.1**
MTE *e*sP **sP** **11 14 46.9 +1.1**
MTE *i* IAmb IAmb 11 14 50.5
comp=Z,34nm,1.5s
MTE Manteigas 82.36 20 P **P** **11 14 30.7 +1.5**
PCAS Casmilo, Conde 82.50 21 *e*P **P** **11 14 31.5 +1.6**
PCAS *i* IAmb IAmb 11 14 44.8
comp=Z,59nm,1.6s
TOLI2 Tolitoli 82.53 261 P **P** **11 14 29.1 -1.2**
NRCA Norcia 82.55 5 IAmb IAmb 11 14 47.4
comp=Z,18nm,0.9s
PGF Pioggiola 82.58 8 *e*P **P** **11 14 30.7 +0.4**
PGF pmax pmax
comp=Z,20nm,0.8s
SDV Santo Domingo 82.80 85 *e*P **P** **11 14 32.0 +0.1**
GNI Garni 82.92 341*c i*P **P** **11 14 33.5 +1.3**
GNI pmax pmax
comp=Z,26nm,0.8s
GNI Garni 82.92 341 P **P** **11 14 34.4 +2.2**
PCBR Castelo Branco 82.92 21 *e*P **P** **11 14 33.0 +1.0**
PCBR *i* IAmb IAmb 11 14 34.2
comp=Z,40nm,1.0s
PCBR *e*sP **sP** **11 14 49.5 +0.9**
PSBE So Bento 82.96 22 *e*P **P** **11 14 34.0 +1.8**
PSBE *i* IAmb IAmb 11 14 35.0
comp=Z,44nm,0.9s
PSBE *e*pP **pP** **11 14 45.4 +1.1**
PSARD Sardoal 83.01 21 *e*P **P** **11 14 33.9 +1.4**
PSARD *i* IAmb IAmb 11 14 34.9
comp=Z,66nm,1.2s
PSARD *e*pP **pP** **11 14 45.0 +0.4**
PSARD *e*sP **sP** **11 14 50.2 +1.1**
PDG Podgorica 83.10 0 ⇑P **P** **11 14 33.0 +0.2**
PDG Podgorica 83.10 0 P **P** **11 14 33.3 +0.5**
PMRV Marv??o 83.33 21 *e*P **P** **11 14 35.3 +1.1**
PMRV *i* IAmb IAmb 11 14 36.5
comp=Z,27nm,1.2s
PMRV *e*pP **pP** **11 14 47.2 +1.0**
INTR Introdacqua 83.40 4 IAmb IAmb 11 14 52.2
comp=Z,14nm,0.7s
PMTG Montargil 83.51 21 *e*P **P** **11 14 36.2 +1.1**
PMTG *i* IAmb IAmb 11 14 36.5
comp=Z,27nm,1.0s
ESBB Sonseca Array 83.75 18 IAmb IAmb 11 14 38.4
comp=Z,22nm,0.8s
ESDC Sonseca Array 83.75 18 P **P** **11 14 37.4 +1.1**
comp=Z,22nm,0.8s,baz=342,slow=4.8,SNR=106
comp=Z,22nm,0.8s
ESDC Sonseca Array 83.75 18 P **P** **11 14 37.4 +1.1**
PARRA Arraiolos 83.79 21 *e*P **P** **11 14 37.4 +1.0**
PARRA *i* IAmb IAmb 11 14 38.5
comp=Z,35nm,1.2s
KOPT Kop Dagi 83.79 344 IAmb IAmb 11 14 39.8
comp=Z,24nm,1.1s
PESTR Estremoz 83.83 21 *e*P **P** **11 14 38.4 +1.7**
PESTR *i* IAmb IAmb 11 14 50.6
comp=Z,30nm,1.4s
PESTR Estremoz 83.83 21 P **P** **11 14 37.9 +1.2**
PHP Peshkopia 83.84 359 P **P** **11 14 37.3 +0.5**
PHP Peshkopia 83.84 359 P **P** **11 14 37.3 +0.5**
KELT Kelkit 83.86 345 P **P** **11 14 38.5 +1.4**
KUDL Kundal 83.95 312 *e*P **P** **11 14 37.5 +0.1**
KUDL IAmb IAmb 11 14 38.4
comp=Z,36nm,0.4s
MOE Montemor 84.00 22 *e*P **P** **11 14 39.0 +1.4**
MOE *e*pP **pP** **11 14 49.8 +0.1**
MOE *i* IAmb IAmb 11 14 51.7
comp=Z,41nm,1.6s
EVO Evora 84.07 21 *e*P **P** **11 14 38.9 +1.0**
EVO *i* IAmb IAmb 11 14 39.7
comp=Z,26nm,1.0s
EVO *e*pP **pP** **11 14 50.5 +0.5**
EVO *e*sP **sP** **11 14 55.4 +0.9**
RDO Rodhopi 84.24 355 P **P** **11 14 39.8 +1.1**
KNT Kendrikon 84.32 357 P **P** **11 14 41.3 +2.1**
KNT Kendrikon 84.32 357 P **P** **11 14 41.3 +2.1**
SRS Serrai 84.34 357 P **P** **11 14 40.0 +0.7**
SRS Serrai 84.34 357 P **P** **11 14 40.0 +0.7**
ALN Alexandroupoli 84.46 355 P **P** **11 14 40.2 +0.4**
ALN Alexandroupoli 84.46 355 P **P** **11 14 40.2 +0.4**
PLOUS Minas do Lousa 84.46 22 *e*P **P** **11 14 40.5 +0.6**
PLOUS *i* IAmb IAmb 11 14 42.3
comp=Z,30nm,1.2s

PLOUS					*ep*P		**pP**	11 14 52.8	+0.8
PLOUS					*es*P		**sP**	11 14 57.1	+0.6
GRG	**Griva**	**84.53**	**358**		P		**P**	11 14 41.6	+1.3
GRG	**Griva**	**84.53**	**358**		P		**P**	11 14 41.6	+1.3
PBEJ	**Beja**	**84.58**	**21**	*ep*	P		**P**	11 14 42.2	+1.7
PBEJ				*i*	IAmb	IAmb		11 14 42.8	
	comp=Z,19nm,1.3s								
PBAR	**Barrancos**	**84.61**	**21**	*ep*	P		**P**	11 14 42.4	+1.7
PBAR				*i*	IAmb	IAmb		11 14 43.6	
	comp=Z,46nm,1.3s								
PBAR				*ep*	P		**pP**	11 14 53.7	+0.9
PBAR				*es*	P		**sP**	11 14 58.7	+1.4
SOH	**Sokhos**	**84.64**	**357**		P		**P**	11 14 41.5	+0.6
SOH	**Sokhos**	**84.64**	**357**		P		**P**	11 14 41.5	+0.6
MESJ	**Messejana**	**84.69**	**22**	*ep*	P		**P**	11 14 42.7	+1.7
MESJ				*i*	IAmb	IAmb		11 15 23.0	
	comp=Z,29nm,1.8s								
PTEO	**Sao Teotonio**	**84.86**	**22**	*ep*	P		**P**	11 14 43.9	+2.0
PCVE	**Castro Verde**	**84.93**	**22**	*ep*	P		**P**	11 14 44.1	+1.8
PCVE				*ep*	P		**pP**	11 14 54.7	+0.3
PCVE				*es*	P		**sP**	11 15 00.2	+1.3
PCVE				*i*	IAmb	IAmb		11 15 09.4	
	comp=Z,26nm,1.6s								
BR131	**Keskin Array S**	**85.01**	**349**	*c*	*i* P		**P**	11 14 43.4	+0.5
BR131	**Keskin Array S**	**85.01**	**349**		P		**P**	11 14 43.3	+0.4
BRTR	**Keskin Array B**	**85.01**	**349**		P		**P**	11 14 43.6	+0.7
	comp=Z,17nm,0.8s,baz=45,slow=3.7,SNR=38								
	comp=Z,17nm,0.8s								
BRTR	**Keskin Array B**	**85.01**	**349**	*ce*	P		**P**	11 14 43.5	+0.7
BRTR					pmax	pmax			
	comp=Z,18nm,0.9s								
MARCO	**Tramutola**	**85.18**	**3**		P		**P**	11 14 44.9	+1.3
PVAQ	**Vaqueiros**	**85.22**	**21**	*ep*	P		**P**	11 14 45.1	+1.4
PVAQ				*ep*	P		**pP**	11 14 56.8	+0.9
PVAQ				*i*	IAmb	IAmb		11 15 03.1	
	comp=Z,26nm,1.6s								
PFVI	**Vila Bisbo**	**85.24**	**22**	*ep*	P		**P**	11 14 45.5	+1.7
PFVI				*i*	IAmb	IAmb		11 14 46.1	
	comp=Z,86nm,1.3s								
OTAV	**Otavalo**	**85.28**	**96**	*ep*	P		**P**	11 14 44.5	-0.3
OTAV				*ep*	P		**pP**	11 14 56.2	-0.9
LIT	**Litokhoron**	**85.39**	**358**		P		**P**	11 14 44.0	-0.6
LIT	**Litokhoron**	**85.39**	**358**		P		**P**	11 14 45.0	+0.4
BALY	**Balya**	**85.52**	**354**		P		**P**	11 14 44.3	-1.0
KIRS	**Kirsehir-Merke**	**85.57**	**349**	⇓	P		**P**	11 14 46.2	+0.6
HAKT	**HAKKARI**	**85.62**	**341**		P		**P**	11 14 47.0	+1.0
VSL	**Villasalto**	**85.64**	**8**		IAmb	IAmb		11 15 03.0	
	comp=Z,17nm,0.8s								
VSL	**Villasalto**	**85.64**	**8**		P		**P**	11 14 46.8	+1.0
SRN	**Sarande**	**85.64**	**360**		P		**P**	11 14 46.2	+0.5
TIP	**Timpagrande**	**86.32**	**2**	⇓	P		**P**	11 14 49.9	+0.6
TIP	**Timpagrande**	**86.32**	**2**		P		**P**	11 14 49.8	+0.6
BWNR	**Bhubaneshwar**	**86.35**	**300**	*ep*	P		**P**	11 14 50.4	+0.9
BWNR				*i*	x		x	11 15 05.7	
MTSU	**Mount Surprise**	**86.41**	**231**		P		**P**	11 14 50.2	+0.5
	comp=Z,9.2nm,0.9s								
GUNA	**GUNA**	**86.62**	**309**	*ep*	P		**P**	11 14 49.8	-1.1
GUNA					IAmb	IAmb		11 14 51.1	
	comp=Z,51nm,0.7s								
LKD2	**Lefkada island**	**86.73**	**359**		P		**P**	11 14 52.0	+0.8
ANDN	**Andirin**	**86.80**	**347**		P		**P**	11 14 52.2	+0.6
CEL	**Celeste**	**87.22**	**3**		P		**P**	11 14 52.6	-1.1
CTA	**Charters Tower**	**87.27**	**229**		P		**P**	11 14 53.2	-0.7
	comp=Z,10nm,0.8s,baz=28,slow=7.0,SNR=8.4								
	comp=Z,10nm,0.8s								
PMAR	**Madeira**	**87.36**	**30**	*ep*	P		**P**	11 14 57.1	+2.5
AYDN	**Tasoluk**	**87.57**	**353**		P		**P**	11 14 56.2	+0.9
BHPL	**Bhopal**	**87.80**	**309**	*ep*	P		**P**	11 14 55.8	-0.9
BHPL					IAmb	IAmb		11 14 57.5	
	comp=Z,24nm,0.7s								
BHPL				*i*	pP		**pP**	11 15 10.9	+2.1
ITM	**Ithomi**	**88.32**	**358**		P		**P**	11 14 59.4	+0.5
RAGD	**RAYAGADA**	**88.38**	**302**	*ep*	P		**P**	11 14 59.5	+0.2
RAGD				*i*	x		x	11 15 15.2	
KEST	**Kesra**	**89.37**	**8**		P		**P**	11 15 04.5	+0.5
	comp=Z,4.4nm,0.6s,baz=24,slow=2.9,SNR=5.2								
	comp=Z,4.4nm,0.6s								
KEST	**Kesra**	**89.37**	**8**		IAmb	IAmb		11 15 22.1	
	comp=Z,8.7nm,1.0s								
MD01	**Midelt array s**	**90.20**	**20**		P		**P**	11 15 08.2	+0.3
MD31	**MD31**	**90.20**	**20**		IAmb	IAmb		11 15 09.3	
	comp=Z,4.8nm,0.7s								
QIS	**Mount Isa**	**90.69**	**234**		P		**P**	11 15 09.4	-0.6
	comp=Z,11nm,1.5s								
WB0	**Warramunga Arr**	**92.52**	**239**		P		**P**	11 15 17.6	-0.8
WRA	**Warramunga Arr**	**92.70**	**239**		P		**P**	11 15 18.4	-1.0
	comp=Z,4.2nm,0.7s,baz=37,slow=5.5,SNR=18								
	comp=Z,4.2nm,0.7s								
WRA	**Warramunga Arr**	**92.70**	**239**	*i*	P		**P**	11 15 18.3	-1.0
WRA					pmax	pmax			
	comp=Z,5.0nm,0.7s								
WRA	**Warramunga Arr**	**92.70**	**239**		P		**P**	11 15 18.3	-1.0
QLP	**Quilpie**	**93.85**	**227**		P		**P**	11 15 25.4	+1.0
	comp=Z,24nm,1.3s								
FITZ	**Fitzroy Crossi**	**95.62**	**247**		P		**P**	11 15 31.9	-0.8
	comp=Z,7.6nm,0.8s,baz=360,slow=3.9,SNR=11								
	comp=Z,7.6nm,0.8s								
FITZ	**Fitzroy Crossi**	**95.62**	**247**		P		**P**	11 15 32.5	-0.2
AS17	**Alice Springs**	**96.02**	**237**		P		**P**	11 15 34.2	-0.2
	comp=Z,4.3nm,0.8s								
ASAR	**Alice Springs**	**96.06**	**237**		P		**P**	11 15 34.0	-0.6
	comp=Z,2.2nm,0.8s,baz=34,slow=4.9,SNR=23								
	comp=Z,2.2nm,0.8s								
ASAR	**Alice Springs**	**96.06**	**237**		P		**P**	11 15 34.3	-0.4
ASAR	**Alice Springs**	**96.06**	**237**		P		**P**	11 15 34.2	-0.4
CMSA	**Cobar Meteorol**	**97.60**	**224**		P		Pdif	11 15 46.8	+5.4
RAYN	**Ar Rayn**	**98.80**	**336**		P		Pdif	11 15 47.8	+0.5
RAYN					pmax	pmax			
	comp=Z,12nm,0.7s								
RAYN	**Ar Rayn**	**98.80**	**336**		P		Pdif	11 15 47.8	+0.5
H03N2	**Juan Fernandez**	**112.18**	**117**		T		T	13 22 03.0	
	baz=324,slow=77,SNR=9.2								
H03N1	**Juan Fernandez**	**112.19**	**117**		T		T	13 22 01.7	
	baz=324,slow=77,SNR=11								
H03N3	**Juan Fernandez**	**112.19**	**117**		T		T	13 22 02.7	
	baz=324,slow=77,SNR=9.7								
TSUM	**Tsumeb**	**144.39**	**3**		P		PKPbc	11 21 42.1	+0.1
QSPA	**South Pole Qui**	**144.62**	**180**		PKP		**PKPab**	11 21 41.0	-0.2
	comp=Z,23nm,0.8s,baz=16,slow=0.6,SNR=92								
QSPA					SKPbc		**SKPbc**	11 25 16.8	-1.2
	comp=Z,5.2nm,1.0s,baz=152,slow=0.6,SNR=4.8								
QSPA	**South Pole Qui**	**144.62**	**180**				PKPbc	11 21 41.5	+0.2
SOOWA	**Sowa**	**145.38**	**349**		P		**PKPab**	11 21 46.0	+0.7
CKGRV	**CKGRV**	**146.45**	**353**		P		**PKPab**	11 21 48.6	-0.7
GRTLG	**Ghanzi**	**146.54**	**357**		P		**PKPab**	11 21 49.1	-0.6
KHWEE	**KHWEE**	**146.83**	**350**		P		**PKPab**	11 21 50.0	-0.8
WIN	**Windhoek**	**147.72**	**4**		PKP2		**PKPdf**	11 21 50.3	+1.1
WIN	**Windhoek**	**147.72**	**4**		P		**PKPbc**	11 21 52.6	+0.6
KOOLE	**Kule**	**148.19**	**359**		P		**PKiKP**	11 21 54.0	-0.9
SKOMA	**Sekoma**	**149.52**	**352**		P		**PKiKP**	11 21 56.9	-0.6
LBTB	**Lobatse**	**149.85**	**349**		P		**PKiKP**	11 21 58.0	-0.2
MAKGR	**Makgori**	**150.72**	**350**		P		**PKiKP**	11 21 59.8	-0.2
POGA	**Pongola**	**151.09**	**337**		P		**PKiKP**	11 22 00.6	0.0
MAW	**Mawson**	**156.11**	**221**		PKPab		**PKPab**	11 22 26.1	-1.8
	comp=Z,6.6nm,0.7s,baz=82,slow=5.0,SNR=10								
MAW	**Mawson**	**156.11**	**221**		PKP2		**PKPab**	11 22 28.8	+0.9
MAW	**Mawson**	**156.11**	**221**				**PKPab**	11 22 28.8	+0.9
VNA2	**Neumayer--Watz**	**160.08**	**154**	⇑	PKPdf		**PKPdf**	11 22 02.9	-1.9
	comp=Z,5.9nm,0.8s,baz=288,slow=2.1								
SNAA	**Sanae**	**160.61**	**159**		PKP		**PKPdf**	11 22 05.3	-0.1
	comp=Z,0.9nm,0.7s,baz=177,slow=7.8,SNR=4.0								
SNAA					PKPab		**PKPab**	11 22 46.1	-1.3
	comp=Z,1.4nm,0.8s,baz=208,slow=7.3,SNR=3.6								
TROLL	**Troll, Antarti**	**161.33**	**164**	⇓	PKPdf		**PKPdf**	11 22 05.9	-0.4
	comp=Z,106nm,1.0s								

*IDC **22** 11:03:07.5±3.2,32.°16S×68.°63W, h0km, mb4.0/1, mbtmp3.8/2, ML3.8/1, Error ellipse: s-maj=125.4km s-min=74.3km az=72.0*
*SJA **22** 11:03:24.3±0.7, 31.°25S×68.°99W, h109km±3km, ML3.6, MW3.7*

ISC 22 11:03:24.2±0.9, **31.°26S**±0.°04×**68.°92W**±0.°06, **h117**km±6km, **n21**, σ0**°95**/30, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZON	**Zonda**	**0.35**	**144**	*eP*		**Pn**	**11 03 41.1**	**-0.1**
ZON				*eS*		**Sn**	**11 03 53.3**	**-0.5**
ZON				IAML			11 03 54.3	
	comp=Z,2μm,0.2s							
RTLL	**Cerro Villicun**	**0.39**	**100**	*eP*		**Pn**	**11 03 41.2**	**-0.1**
RTLL				*eS*		**Sn**	**11 03 54.4**	**+0.3**
RTLL				IAML			11 03 54.7	
	comp=Z,3μm,0.3s							
SJA	**San Juan**	**0.41**	**131**	*eP*		**Pn**	**11 03 41.9**	**+0.5**
SJA				IAML			11 03 55.7	
	comp=Z,2μm,0.2s							
RTLS	**Leoncito**	**0.62**	**211**	*eP*		**Pn**	**11 03 43.0**	**-0.1**
RTLS				*eS*		**Sn**	**11 03 57.2**	**0.0**
RTLS				IAML			11 03 57.9	
	comp=Z,2μm,0.2s							
CFA	**Coronel Fontan**	**0.68**	**121**	*eP*		**Pn**	**11 03 43.3**	**+0.1**
CFA				IAML			11 03 58.0	
	comp=Z,2μm,0.5s							
ACCO	**Cerro Coronel**	**0.68**	**350**	*eP*		**Pn**	**11 03 43.7**	**+0.2**
ACCO				*eS*		**Sn**	**11 03 58.4**	**+0.3**
ACCO				IAML			11 04 00.3	
	comp=Z,959nm,0.5s							
ACDV	**Cuesta del Vie**	**1.10**	**351**	*eP*		**Pn**	**11 03 47.7**	**+0.5**
ACDV				*eS*		**Sn**	**11 04 05.4**	**+0.8**
ACDV				IAML			11 04 06.6	
	comp=Z,406nm,0.2s							
AROD	**Rodeo**	**1.19**	**336**	*eP*		**Pn**	**11 03 48.8**	**+0.5**
AVFE	**Valle Fertil**	**1.40**	**65**	*eP*		**Pn**	**11 03 51.2**	**+0.9**
AVFE				IAML			11 04 12.1	
	comp=Z,40nm,1.0s							
CO03	**El Pedregal**	**1.57**	**285**	*eP*		**Pn**	**11 03 52.7**	**+0.3**
CO03				IAML			11 04 17.0	
	comp=Z,617nm,0.4s							
ARCO	**CERRO ARCO**	**1.57**	**180**	*eP*		**Pn**	**11 03 53.8**	**+1.3**
ARCO				*eS*		**Sn**	**11 04 15.4**	**+1.4**
ARCO				IAML			11 04 16.4	
	comp=Z,582nm,0.5s							
CO01	**Juntas del Tor**	**1.63**	**321**	*eP*		**Pn**	**11 03 54.6**	**+1.3**
CO01				IAML			11 04 19.6	
	comp=Z,213nm,0.2s							
CO02	**Combarbal**	**1.78**	**271**	*eP*		**Pn**	**11 03 54.9**	**0.0**
CO02				IAML			11 04 20.5	
	comp=Z,986nm,0.3s							
AAGR	**Agrelo**	**1.82**	**178**	*eP*		**Pn**	**11 03 56.4**	**+0.9**
AAGR				*eS*		**Sn**	**11 04 20.2**	**+1.0**
AAGR				IAML			11 04 21.6	
	comp=Z,390nm,0.2s							
GO04	**Tololo Observa**	**1.95**	**303**	*eP*		**Pn**	**11 03 56.9**	**-0.2**
GO04				IAML			11 04 26.9	
	comp=Z,567nm,0.7s							
VA03	**San Esteban**	**2.04**	**222**	*eP*		**Pn**	**11 03 58.7**	**+0.6**
VA03				*eS*		**Sn**	**11 04 26.1**	**+2.1**
VA03				IAML			11 04 33.6	
	comp=Z,285nm,0.6s							
VCA	**Vinchina**	**2.59**	**14**	*eP*		**Pn**	**11 04 06.4**	**+1.1**
VCA				*eS*		**Sn**	**11 04 39.1**	**+2.3**
VCA				IAML			11 04 43.3	
	comp=Z,197nm,0.4s							
LPAZ	**La Paz**	**14.92**	**3**	Pn		**P**	**11 06 52.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=178,slow=13,SNR=5.4							
	comp=Z,1.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**80.78**	**69**	P		**P**	**11 15 23.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=234,slow=6.3,SNR=4.4							
	comp=Z,0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**149.08**	**42**	PKPbc		**PKPbc**	**11 22 58.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=298,slow=3.4,SNR=4.7							
ZALV	**Zalesovo Beam**	**150.51**	**32**	PKPbc		**PKiKP**	**11 23 01.9**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=331,slow=3.3,SNR=8.5							

*ISK **22** 11:06:42.3,38.°58N×39.°34E, h5km, ML2.6/5*
*AFAD **22** 11:06:44.0,38.°47N×39.°27E, h7km±1km, ML1.6*

ISC 22 11:06:41.6±1.1, **38.°49N**±0.°05×**39.°35E**±0.°05, **h23**km±6km, **n10**, σ0**°82**/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ESIJ	**Sivrice-Elazig**	**0.05**	**217**	Pg		**Pb**	**11 06 45.8**	**0.0**
ESIJ				Sg		**Sb**	**11 06 47.9**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.12**	**198**	Pg		**Pb**	**11 06 46.8**	**+0.5**
ELZ	**Elazig**	**0.23**	**330**	P		**Pn**	**11 06 49.0**	**-0.7**
ELZ				S		**Sb**	**11 06 52.7**	**+1.2**
ELZ				IAML			11 06 53.0	
	comp=N,186nm,0.3s							
ELZ				IAML			11 06 53.0	
	comp=E,149nm,0.2s							
ESGZ	**Sivrice-Elazig**	**0.24**	**255**	Pg		**Pb**	**11 06 47.9**	**+0.3**
MDNT	**Maden**	**0.28**	**111**	P		**Pn**	**11 06 50.1**	**-0.3**
MDNT				S		**Sn**	**11 06 55.6**	**-0.3**
MDNT				IAML			11 06 58.0	
	comp=E,48nm,0.8s							
MDNT				IAML			11 07 00.0	
	comp=N,92nm,0.3s							
CNGT	**ngs**	**0.28**	**189**	P		**Pn**	**11 06 49.6**	**-0.8**
CNGT				S		**Sb**	**11 06 54.0**	**+1.3**
CNGT				IAML			11 06 54.0	
	comp=N,110nm,0.3s							
CNGT				IAML			11 06 54.0	
	comp=E,151nm,0.5s							
ELZG	**Elazig**	**0.29**	**271**	P		**Pb**	**11 06 49.1**	**+0.7**
ELZG				S		**Sb**	**11 06 52.5**	**-0.6**
ELZG				IAML			11 06 53.0	
	comp=E,147nm,0.3s							
ELZG				IAML			11 06 54.0	
	comp=N,168nm,0.2s							
MDYL	**Doganyol-Malat**	**0.30**	**234**	Pg		**Pn**	**11 06 49.9**	**-0.8**
MAYA	**Malatya/Merkez**	**0.75**	**257**	P		**Pb**	**11 06 57.1**	**+1.1**
MAYA				S		**Sb**	**11 07 05.8**	**0.0**
MAYA				IAML			11 07 09.0	
	comp=E,20nm,0.4s							
MAYA				IAML			11 07 10.0	
	comp=N,21nm,0.2s							
ARPR	**Arapgir-MALATY**	**1.00**	**307**	Pg		**Pb**	**11 07 00.6**	**+0.4**

*IDC **22** 11:12:44.9±2.2,22.°17S×170.°56E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=129.1km s-min=25.6km az=155.0*
*NOU **22** 11:12:59.9,20.°98S×169.°44E, h0km, MLv4.7/16, Vanuatu Islands*

ISC 22 11:12:52.6±1.1, **21.°1S**±0.°2×**170.°1E**±0.°1, **h35**km, **n20**, σ2**°26**/20, **mb4.0/5, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.00**	**259**	P		**Pn**	**11 13 26.6**	**+2.7**
MARNC	**Mare, Loyalty**	**2.00**	**259**	S		**Sn**	**11 13 46.5**	**-1.3**
YATNC	**Mamie plateau,**	**3.17**	**252**	P		**Pn**	**11 13 42.0**	**+2.0**
YATNC	**Mamie plateau,**	**3.17**	**252**	S		**Sn**	**11 14 14.8**	**-1.9**
OUENC	**Ouen Island, N**	**3.33**	**246**	P		**Pn**	**11 13 46.1**	**+3.8**
OUENC	**Ouen Island, N**	**3.33**	**246**	S		**Sn**	**11 14 20.8**	**+0.1**
ONTNC	**Ouen Toro**	**3.63**	**250**	P		**Pn**	**11 13 49.8**	**+3.4**
ONTNC	**Ouen Toro**	**3.63**	**250**	S		**Sn**	**11 14 26.9**	**-1.1**
NOUC	**Port Laguerre**	**3.71**	**254**	P		**Pn**	**11 13 50.6**	**+3.2**
NOUC	**Port Laguerre**	**3.71**	**254**	S		**Sn**	**11 14 29.3**	**-0.6**
KOUNC	**Koumac, New Ca**	**5.50**	**275**	P		**Pn**	**11 14 14.9**	**+2.8**
KOUNC	**Koumac, New Ca**	**5.50**	**275**	S		**Sn**	**11 15 12.9**	**-1.2**
STKA	**Stephens Creek**	**27.63**	**241**	P		**P**	**11 18 32.3**	**-4.7**
	0.7nm,0.5s,baz=95,slow=12,SNR=1.9							
	0.7nm,0.5s							
WRA	**Warramunga Arr**	**33.51**	**265**	P		**P**	**11 19 28.6**	**-0.5**
	0.3nm,0.6s,baz=104,slow=7.9,SNR=1.7							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**33.55**	**259**	P		**P**	**11 19 29.0**	**-0.4**
	1.2nm,0.6s,baz=95,slow=9.5,SNR=24							
	1.2nm,0.6s							
FITZ	**Fitzroy Crossi**	**41.93**	**266**	P		**P**	**11 20 40.4**	**+0.2**
	2.8nm,1.0s,baz=124,slow=9.3,SNR=1.8							
	2.8nm,1.0s							
NVAR	**Mina Array Bea**	**89.40**	**48**	P		**P**	**11 25 46.2**	**+0.1**
	0.8nm,0.7s,baz=228,slow=8.1,SNR=7.5							
	0.8nm,0.7s							
ARCES	**ARCESS Array B**	**127.07**	**345**	PKP		**PKPdf**	**11 31 52.4**	**+0.1**
	1.8nm,0.7s,baz=33,slow=2.5,SNR=3.6							
EKA	**Eskdalemuir Ar**	**145.44**	**353**	PKPbc		**PKPbc**	**11 32 26.5**	**-0.1**
	1.4nm,0.4s,baz=359,slow=2.4,SNR=13							
GERES	**GERESS Array B**	**146.52**	**331**	PKPbc		**PKPbc**	**11 32 30.4**	**+0.2**
	1.4nm,0.6s,baz=29,slow=3.0,SNR=11							

IDC 22 11:16:13.7±10.0, **54.°20S**×**133.°60W**, **h0**km, **mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=748.7km s-min=42.6km az=144.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H03S2	**Juan Fernandez**	**43.01**	**85**	T		T	12 09 44.4	
	baz=222,slow=74,SNR=25							
H03S1	**Juan Fernandez**	**43.01**	**85**	T		T	12 09 46.7	
	baz=222,slow=74,SNR=21							
H03S3	**Juan Fernandez**	**43.02**	**85**	T		T	12 09 44.4	
	baz=222,slow=74,SNR=24							
H03N3	**Juan Fernandez**	**43.28**	**84**	T		T	12 10 00.8	
	baz=226,slow=72,SNR=19							
H03N2	**Juan Fernandez**	**43.28**	**84**	T		T	12 10 01.0	
	baz=226,slow=72,SNR=30							
H03N1	**Juan Fernandez**	**43.30**	**84**	T		T	12 09 58.4	
	baz=226,slow=72,SNR=22							
ASAR	**Alice Springs**	**72.57**	**254**	P		P	11 27 42.6	-0.1
	0.7nm,0.8s,baz=144,slow=6.5,SNR=4.6							
	0.7nm,0.8s							
WRA	**Warramunga Arr**	**75.26**	**256**	P		P	11 27 58.7	+0.2
	0.5nm,0.8s,baz=139,slow=6.6,SNR=2.4							
	0.5nm,0.8s							
TXAR	**Lajitas Array**	**87.12**	**26**	P		P	11 29 01.1	-0.1
	0.3nm,0.7s,baz=190,slow=5.1,SNR=4.6							
	0.3nm,0.7s							
ILAR	**Eielson Array**	**119.08**	**354**	PKP		PKPdf	11 35 02.8	-0.1
	0.2nm,0.6s,baz=156,slow=1.6,SNR=1.9							

*WEL **22** 11:23:16.5±0.7,32.°5S×17.°8W±1.°3, h12km, M5.0/10, mB5.3/7, ML5.0/18, MLv5.2/10, Mw(mB)4.7/7, Error ellipse: s-maj=18.1km s-min=4.5km az=106.5*
*IDC **22** 11:23:23.9±1.6,31.°55S×179.°03W, h86km±14km, mb4.4/11, mbtmp4.7/13, Error ellipse: s-maj=16.3km s-min=12.7km az=105.0*
*NEIC **22** 11:23:24.1±1.6,31.°59S±0.°09×179.°0W±0.°2, h78km±7km, mb4.6/22, Error ellipse: s-maj=23.4km s-min=12.0km az=106.0*

ISC 22 11:23:24.4±0.4, **31.°74S**±0.°05×**178.°75W**±0.°09, **h100**km, **n122**, σ2**°32**/109, **mb4.6**/21, **3D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**2.57**	**16**	P		**Pn**	**11 24 02.1**	**-2.4**
GLKZ				S		**Sn**	**11 24 31.9**	**-3.4**
RAO	**Raoul Island**	**2.58**	**16**	P		**Pn**	**11 24 03.4**	**-1.3**
	504nm,0.3s,baz=114,slow=23,SNR=2.9							
RAO				S		**Sn**	**11 24 33.0**	**-2.5**
	1μm,0.3s,baz=70,slow=21,SNR=3.5							
RAO	**Raoul Island**	**2.58**	**16**			**Pn**	**11 24 02.5**	**-2.2**
MXZ	**Matakaoa Point**	**6.29**	**202**	Pn		**Pn**	**11 24 55.3**	**+0.6**
MXZ	**Matakaoa Point**	**6.29**	**202**	P		**Pn**	**11 24 51.2**	**-3.5**
WMGZ	**Waiomatatini S**	**6.50**	**200**	P		**Pn**	**11 24 54.5**	**-2.9**
WMGZ				S		**Sn**	**11 26 07.0**	**-3.0**
PKGZ	**Pakihiroa**	**6.64**	**202**	P		**Pn**	**11 24 56.2**	**-3.2**
HAZ	**Te Kaha**	**6.64**	**204**	P		**Pn**	**11 24 56.7**	**-2.7**
PUZ	**Puketiti**	**6.78**	**200**	P		**Pn**	**11 24 57.2**	**-4.1**
RUGZ	**Raukumara Rang**	**6.87**	**204**	P		**Pn**	**11 24 59.3**	**-3.3**
TWGZ	**Tauwhareparae**	**6.96**	**202**	P		**Pn**	**11 24 59.7**	**-4.1**
WCZ	**Waipu Caves**	**7.11**	**232**	P		**Pn**	**11 25 08.6**	**+2.9**
CNGZ	**Carnagh Statio**	**7.17**	**199**	P		**Pn**	**11 25 02.9**	**-3.7**
TKGZ	**Te Karaka**	**7.24**	**202**	P		**Pn**	**11 25 03.2**	**-4.3**
MWZ	**Matawai**	**7.25**	**204**	P		**Pn**	**11 25 03.5**	**-4.3**
OUZ	**Omahuta**	**7.28**	**239**	P		**Pn**	**11 25 10.9**	**+3.0**
URZ	**Urewera**	**7.34**	**206**	P		**Pn**	**11 25 05.5**	**-3.3**
	9.3nm,0.3s,baz=259,slow=3.5,SNR=55							
URZ				S		**Sn**	**11 26 26.5**	**-3.9**
	44nm,0.3s,baz=175,slow=21,SNR=11							
URZ	**Urewera**	**7.34**	**206**	P		**Pn**	**11 25 05.0**	**-3.8**
MKAZ	**Moumakai**	**7.34**	**222**	P		**Pn**	**11 25 10.4**	**+1.5**
RAGZ	**Rawiri**	**7.43**	**204**	P		**Pn**	**11 25 07.6**	**-2.6**
RIGZ	**Rimuhau**	**7.51**	**201**	P		**Pn**	**11 25 08.7**	**-2.6**
TOZ	**Tahuroa Road**	**7.62**	**217**	Pn		**Pn**	**11 25 12.4**	**-0.3**
TOZ	**Tahuroa Road**	**7.62**	**217**	P		**Pn**	**11 25 15.6**	**+2.9**
MUGZ	**

SNAA	Sanae	76.84	179	⇓P		P		11 35 08.6	+3.7
	comp=Z,147nm,0.4s								
SNAA	Sanae	76.84	179	P		P		11 35 08.3	+3.4
	comp=Z,4.2nm,0.4s,baz=210,slow=9.4,SNR=25								
	comp=Z,4.2nm,0.4s								
SNAA	Sanae	76.84	179			P		11 35 08.9	+4.0
SNAA					IAmb	IAmb		11 35 09.4	
	comp=Z,8.6nm,0.8s								
VNA2	Neumayer--Watz	77.44	177	⇓P		P		11 35 10.5	+2.3
	comp=Z,22nm,0.6s,baz=180,slow=5.3								
VNA1	Neumayer--Stat	77.67	177	P		P		11 35 11.8	+2.3
	comp=Z,8.6nm,0.5s								
H03S2	Juan Fernandez	80.26	124	T		T		13 04 16.9	
	baz=236,slow=74,SNR=40								
H03S1	Juan Fernandez	80.27	124	T		T		13 04 19.9	
	baz=236,slow=74,SNR=47								
H03S3	Juan Fernandez	80.28	124	T		T		13 04 18.7	
	baz=236,slow=74,SNR=54								
H03N3	Juan Fernandez	80.46	123	T		T		13 04 30.4	
	baz=240,slow=72,SNR=38								
H03N2	Juan Fernandez	80.46	123	T		T		13 04 29.0	
	baz=240,slow=72,SNR=27								
H03N1	Juan Fernandez	80.48	123	T		T		13 04 29.5	
	baz=240,slow=72,SNR=77								
KSRS	Korea Array	84.95	320	P		P		11 35 48.0	-0.3
	comp=Z,1.5nm,0.7s,baz=143,slow=5.6,SNR=11								
	comp=Z,1.5nm,0.7s								
PETK	Petropavlovsk-	86.95	346	P		P		11 35 57.3	-0.5
	comp=Z,1.3nm,0.6s,baz=104,slow=6.4,SNR=4.6								
	comp=Z,1.3nm,0.6s								
PETK	Petropavlovsk-	86.95	346	P		P		11 35 58.2	+0.4
MKAR	Makanchi Array	118.14	310	PKP		PKPdf		11 41 57.6	-1.9
	comp=Z,0.7nm,0.7s,baz=89,slow=3.4,SNR=1.9								
MKAR	Makanchi Array	118.14	310			PKiKP		11 41 59.5	0.0
KURK	Kurchatov	121.50	313			PKiKP		11 42 06.0	+0.2
KURBB	Kurchatov Arra	121.54	313	PKP		PKPdf		11 42 05.3	-0.4
	comp=Z,1.6nm,0.6s,baz=109,slow=2.0,SNR=18								
GAR	Garm	124.42	298			PKiKP		11 42 12.7	+0.5
KK31	Karatay Array	125.27	303			PKiKP		11 42 13.6	0.0
KKAR	Karatay Array	125.27	303			PKiKP		11 42 13.8	+0.1
BVAR	Borovoye Array	126.91	315	PKP		PKPdf		11 42 15.7	-0.3
	comp=Z,1.8nm,0.4s,baz=105,slow=1.7,SNR=6.5								
AKTO	Aktyubinsk	134.51	311	PKP		PKiKP		11 42 32.0	+0.1
	comp=Z,0.9nm,0.3s,baz=103,slow=4.2,SNR=4.0								
H10S2	ASCENSION HYDR	136.77	157	T		T		14 15 31.3	
	baz=16,slow=74,SNR=9.6								
H10S3	ASCENSION HYDR	136.77	157	T		T		14 15 29.6	
	baz=204,slow=74,SNR=9.2								
H10N3	ASCENSION HYDR	137.86	156	T		T		14 16 53.3	
	baz=203,slow=74,SNR=12								
H10N1	ASCENSION HYDR	137.86	156	T		T		14 16 49.9	
	baz=203,slow=74,SNR=14								
H10N2	ASCENSION HYDR	137.88	156	T		T		14 16 51.0	
	baz=203,slow=74,SNR=15								
ARCES	ARCESS Array B	139.75	347	PKP		PKiKP		11 42 41.4	-0.7
	comp=Z,0.4nm,0.3s,baz=60,slow=2.8,SNR=7.6								
KBZ	Khabaz	145.30	302	PKPbc		PKPbc		11 42 49.5	-0.7
	comp=Z,5.6nm,1.0s,baz=143,slow=3.0,SNR=5.7								
FINES	FINESS Array B	146.17	339	PKPbc		PKPdf		11 42 50.8	-0.4
	comp=Z,7.6nm,0.6s,baz=36,slow=2.9,SNR=22								
FINES	FINESS Array B	146.17	339			PKPab		11 42 52.8	-0.3
NB2	NORSAR Subarra	149.97	350	PKP		PKiKP		11 43 04.2	+0.9
	comp=Z,0.7nm,0.4s,baz=26,slow=2.7								
NOA	NORSAR Array B	149.97	350	PKPbc		PKPbc		11 43 02.7	+0.2
	comp=Z,0.3nm,0.4s,baz=59,slow=1.5,SNR=4.7								
HFS	Hagfors	150.42	347	PKPbc		PKiKP		11 43 04.5	+0.3
	comp=Z,1.4nm,0.3s,baz=174,slow=3.0,SNR=14								
BNN	Bunyan	151.01	294			PKiKP		11 43 06.4	+0.1
MMAI	Mount Meron Ar	151.20	282	PKPbc		PKiKP		11 43 06.5	-0.4
	comp=Z,3.8nm,0.4s,baz=84,slow=8.6,SNR=9.4								
AKASG	Malin Array Be	151.95	321	PKPbc		PKPbc		11 43 07.1	-0.2
	comp=Z,1.5nm,0.5s,baz=64,slow=2.5,SNR=13								
AKASG	Malin Array Be	151.95	321			PKiKP		11 43 08.3	+0.6
AKBB	Malin Array Si	151.95	321			PKiKP		11 43 08.1	+0.4
CY604	RAF Akrotiri,	152.06	284	PKPbc		PKiKP		11 43 08.6	+0.5
BRTR	Keskin Array B	152.64	296	PKPbc		PKiKP		11 43 09.4	-0.2
	comp=Z,4.1nm,0.7s,baz=102,slow=4.0,SNR=9.2								
BRTR	Keskin Array B	152.64	296			PKiKP		11 43 09.7	0.0
DBIC	Dimbokro	154.41	166	PKPbc		PKiKP		11 43 17.5	+3.6
	comp=Z,2.5nm,0.5s,baz=134,slow=2.5,SNR=5.8								
CLL	Collm	158.61	339	*i* PKPab		PKPab		11 43 46.2	+0.8
	comp=Z,4.0nm,0.5s								
TORD	Torodi Ar. Bea	161.49	181	PKP		PKPdf		11 43 15.7	+1.6
	comp=Z,0.7nm,0.6s,baz=153,slow=1.3,SNR=3.9								
TORD				PKPab		PKPab		11 43 59.6	+0.9
	comp=Z,1.2nm,0.3s,baz=172,slow=4.6,SNR=12								
ESDC	Sonseca Array	171.02	27	PKP		PKPdf		11 43 21.6	+0.7
	comp=Z,0.8nm,0.8s,baz=356,slow=1.9,SNR=5.4								

NEIC ***22*** *11:33:21.1,48.84N×129.37W,h5km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.57; $M_{\theta\theta}$-4.46; $M_{\phi\phi}$4.88; $M_{r\theta}$2.30; $M_{r\phi}$-6.44; $M_{\theta\phi}$-2.77; Fault plane solution: $M_0$9.10000×10^{16} NP1:$\phi_0$202.00000°, δ67.00000°, λ18.00000°. NP2:$\phi_0$104.00000°, δ73.00000°, λ156.00000°. Principal axes: T 8.7370, Plg29.0000°, Azm62.0000°; N 0.3959, Plg61.0000°, Azm252.0000°; P -9.1329, Plg4.0000°, Azm154.0000°;*

PGC ***22*** *11:33:21.1±0.1,48.84N×129.37W,h10km,MLSn4.5/14, Mw5.2,221km southwest of Port Alice, Bc Vancouver Island, Canada Region*

BJI ***22*** *11:33:21.0,49.10N×129.00W,h10km,mB5.2/10, mb4.7/32,Ms5.2/22,Ms7 4.9/20*

IDC ***22*** *11:33:22.7±0.6,48.94N×129.20W,h0km,mb4.4/26, mbtmp4.5/38,ML4.1/12,MS4.7/65,Error ellipse: s-maj=15.1km s-min=8.1km az=51.0*

NEIC ***22*** *11:33:24.6,49.03N×129.11W,h10km*

NEIC ***22*** *11:33:24.7±1.4,49.10N±0.05×129.0W±0.1,h10km±1km, mb5.1/539,Ms_20 5.0/284,Mwr5.0/31,Mwr5.2(OTT),Error ellipse: s-maj=12.0km s-min=8.6km az=247.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40; $M_{\theta\theta}$-3.02; $M_{\phi\phi}$4.43; $M_{r\theta}$-0.24; $M_{\theta\phi}$-1.52; $M_{r\phi}$-0.40; Fault plane solution: $M_0$4.23000×10^{16} NP1: ϕ_s124.10000°, δ81.30000°, λ-175.83000°. NP2: ϕ_s33.47000°, δ85.87000°, λ-8.73000°. Principal axes: T 4.7426, Plg3.0000°, Azm79.0000°; N -1.3700, Plg80.0000°, Azm188.0000°; P -3.3726, Plg9.0000°, Azm349.0000°;*

GFZ ***22*** *11:33:26.4±0.5,49°N±4°×12°9W±°,h10km,M5.0/22, mb5.0/22*

MOS ***22*** *11:33:26.0±1.3,49.10N×128.83W,h23km,mb5.3/32, Error ellipse: s-maj=9.0km s-min=4.8km az=108.8*

BGR ***22*** *11:33:42.1,50.77N×125.95W,h10km,mb5.0,Ms5.0*

ISC 22 11:33:25.5±1.1,49.04N±0.04×129.05W±0.04,h16km±6km, n1027,σ1934/704,mb5.0/250,MS5.0/201,10C-10D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	Brooks Peninsu	1.40	36	Pn	Pn	11 33 48.6	-1.7
BPEB				Sn	Sn	11 34 08.0	-0.5
NC89	ODP889	1.50	103	Pn	Pn	11 33 49.0	-2.5
EDB	Eliza Dome	1.51	56	Pn	Pn	11 33 50.0	-1.9
EDB				Sn	Sb	11 34 11.7	-0.4
FHBB	Fair Harbour	1.63	50	Pn	Pn	11 33 51.8	-1.6
FHBB				Sn	Sn	11 34 13.9	-0.1
NTKA	Nootka	1.69	70	Pn	Pn	11 33 52.4	-1.9
NTKA				Sn	Sn	11 34 14.7	-0.9
HOLB	Holberg	1.71	20	Pn	Pn	11 33 53.0	-1.7
HOLB	Holberg	1.71	20	Pn	Pn	11 33 52.6	-2.1
HOLB				Sn	Sn	11 34 14.5	-1.8
PACB	Port Alice, BC	1.73	35	Pn	Pn	11 33 53.0	-1.9
PACB				Sn	Sn	11 34 15.2	-1.3
TAHB	Tahsis	1.77	60	Pn	Pn	11 33 53.7	-1.8
WOSB	Woss	1.97	54	Pn	Pn	11 33 57.0	-1.3
PHC	Port Hardy	1.97	31	Pn	Pn	11 33 56.7	-1.5
B012	Ucluelet	2.32	91	Pn	Pn	11 34 00.4	-2.5
B012				Sn	Sn	11 34 28.9	-2.1
OZB	Mount Ozzard	2.35	91	Pn	Pn	11 34 00.8	-2.6
CBB	Campbell River	2.60	66	Pn	Pn	11 34 06.2	-0.7
CBB	Campbell River	2.60	66		Pn	11 34 06.5	-0.4
C03A	Quillayute Air	3.18	108		Pn	11 34 13.4	-1.3
BBB	Bella Bella	3.21	10	Pn	Pn	11 34 13.9	-1.2
	76nm,0.3s,baz=221,slow=5.6,SNR=875						
BBB				Sn	Sn	11 34 51.9	-1.2
	85nm,0.3s,baz=112,slow=20,SNR=5.6						
BBB				LR	LR	11 35 30.7	
	comp=Z,6μm,20.9s,baz=334,slow=38						
	223nm,0.3s						
BBB	Bella Bella	3.21	10	Pn	Pn	11 34 14.6	-0.6
BBB	Bella Bella	3.21	10		Pn	11 34 14.2	-1.0
BBB	Bella Bella	3.21	10	P	Pn	11 34 14.7	-0.5
CLRS	Cowichan Lake	3.25	92		Pn	11 34 14.0	-1.8
NLLB	Nanaimo Lost L	3.33	85	Pn	Pn	11 34 16.1	-0.8
SHB	Sechelt	3.43	79	Pn	Pn	11 34 18.1	-0.4
HG4B	Hotspring	3.53	338	Pn	Pn	11 34 15.7	-4.0
PGC	Sidney	3.72	94	Pn	Pn	11 34 20.9	-1.3
PGC	Sidney	3.72	94		Pn	11 34 20.4	-1.8
B04A	Port Angeles	3.81	103		Pn	11 34 21.7	-1.8
NLWA	Neilton Lookou	3.84	113		Pn	11 34 22.3	-1.5
WPB	Watts Point	3.87	79	Pn	Pn	11 34 24.6	+0.3
SNB	Saturna Island	3.89	92	Pn	Pn	11 34 24.5	-0.1
WISH	Wishkah	4.03	116		Pn	11 34 25.9	-0.5
WSLR	Whistler	4.14	72	Pn	Pn	11 34 28.6	+0.6
A04D	Lummi Island	4.20	92		Pn	11 34 27.9	-0.9
RADR	Ruder Ridge	4.41	124		Pn	11 34 30.1	-1.6
GNW	Green Mountain	4.41	107		Pn	11 34 30.9	-0.8
MOBC	Moresby Island	4.50	337		Pn	11 34 30.6	-2.4
A05A	Maple Falls	4.59	88		Pn	11 34 33.4	-0.7
DIB	Dawson Inlet,	4.70	334		Pn	11 34 34.3	-1.2
H02S1	DAWSON INLET T	4.70	334	Pn	Pn	11 34 33.6	-2.0
H02S1				T	T	11 38 15.9	
H02S2	DAWSON INLET T	4.70	334	Pn	Pn	11 34 34.1	-1.5
H02S2				T	T	11 38 15.9	
F03A	Seaside	4.85	128		Pn	11 34 37.6	-0.2
LLLB	Lillooet	4.90	69	Pn	Pn	11 34 39.2	+0.7
LLLB	Lillooet	4.90	69		Pn	11 34 38.6	+0.1
F04D	Rainier, OR	5.05	124		Pn	11 34 40.7	+0.3
D05A	Enumclaw	5.08	109		Pn	11 34 41.5	+0.6
RUBB	Prince Rupert	5.35	352		Pn	11 34 44.1	-0.5
LON	Longmire	5.38	112	P	Pn	11 34 45.5	+0.4
LON	Longmire	5.38	112		Pn	11 34 45.5	+0.4
G03D	McMinnville, O	5.50	132		Pn	11 34 47.5	+0.8
LTY	Liberty	5.89	104		Pn	11 34 51.6	-0.4
G04A	Mulino	5.90	128		Pn	11 34 53.2	+1.0
COR	Corvallis	5.95	136	P	Pn	11 34 53.3	+0.5
COR	Corvallis	5.95	136		Pn	11 34 53.3	+0.5
COR	Corvallis	5.95	136	P	Pn	11 34 54.6	+1.7
I02E	Swisshome, OR	6.10	142		Pn	11 34 55.0	+0.1
PNT	Penticton	6.20	84	P	Pn	11 34 56.1	-0.1
H04D	Lebanon	6.26	134		Pn	11 34 58.0	+0.9
BUCK	Buck Mountain	6.39	137		Pn	11 34 59.9	+0.8
MXC	Moxie City	6.39	109		Pn	11 34 58.9	-0.1
V35K	Ketchikan	6.50	347	P	Pn	11 35 00.2	-0.1
	baz=164						
CRAG	Craig	6.91	340	P	Pn	11 35 05.1	-0.9
	baz=156						
U35K	Hyder	6.92	355	P	Pn	11 35 06.3	+0.2
	baz=174						
U33K	Whale Pass	7.51	342		Pn	11 35 14.7	+0.5
U33K	Whale Pass	7.51	342	P	Pn	11 35 13.6	-0.6
	baz=158						
WRAK	Wrangell Islan	7.66	346	P	Pn	11 35 16.0	-0.3
	baz=163						
NEW	Newport	7.94	91	Pn	Pn	11 35 20.1	-0.1
	4.3nm,0.3s,baz=284,slow=12,SNR=42						
NEW				LR	LR	11 38 29.5	
	comp=Z,18μm,18.9s,baz=271,slow=38						
	14nm,0.4s						
NEW	Newport	7.94	91	P	Pn	11 35 20.3	0.0
T35M	Bob Quinn	7.99	355	P	Pn	11 35 20.8	0.0
	baz=174,SNR=11						
YBH	Yreka Blue Hor	8.56	146	Pn	Pn	11 35 29.7	+1.0
	2.5nm,0.3s,baz=336,slow=14,SNR=121						
YBH				LR	LR	11 38 28.8	
	comp=Z,12μm,18.9s,baz=334,slow=36						
	184nm,0.9s						
SIT	Sitka	8.87	337	P	Pn	11 35 32.1	-0.8
SIT	Sitka	8.87	337	Pn	Pn	11 35 32.1	-0.8
SIT	Sitka	8.87	337	P	Pn	11 35 33.3	+0.4
	baz=152						
S34M	Telegraph Cree	8.98	353	P	Pn	11 35 34.9	+0.6
	baz=171,SNR=6.1						
BMO	Blue Mountains	9.06	113	P	Pn	11 35 37.3	+1.7
S32K	Killisnoo	9.07	341	P	Pn	11 35 35.7	+0.1
	baz=156						
KHBM	Hayfork Bally	9.34	152		Pn	11 35 40.4	+0.8
DLBC	Dease Lake	9.44	357	Pn	Pn	11 35 42.7	+2.0
	0.5nm,0.3s,baz=175,slow=14,SNR=18						
DLBC				LR	LR	11 39 13.7	
	comp=Z,10μm,19.6s,baz=159,slow=37						
	6.8nm,0.7s						
DLBC	Dease Lake	9.44	357	P	Pn	11 35 40.8	+0.1
	baz=176,SNR=13						
PLID	Pearl Lake	9.74	109		Pn	11 35 45.1	0.0
JIS	Juneau Island	9.78	343	P	Pn	11 35 49.0	+3.7
R32K	Eaglecrest	9.80	343	P	Pn	11 35 45.7	0.0
	baz=158,SNR=8.8						
WVOR	Wild Horse Val	9.82	128	P	Pn	11 35 49.1	+3.0
WVOR	Wild Horse Val	9.82	128	P	Pn	11 35 49.2	+3.1
S31K	Pelican	9.90	337	P	Pn	11 35 47.3	+0.3
	baz=151						
Q32M	Nakina River	10.12	350	P	Pn	11 35 50.0	-0.2
	baz=167,SNR=6.8						
MSO	Missoula	10.38	97		Pn	11 35 52.8	-0.9
R33M	Jennings River	10.44	355	P	Pn	11 35 54.7	+0.2
	baz=173,SNR=16						
LIRD	Laird River Hi	10.54	8	P	Pn	11 35 55.4	-0.3
	baz=190						
EDM	Edmonton	10.72	61	P	Pn	11 35 57.2	-1.0
EDM	Edmonton	10.72	61		Pn	11 35 57.2	-1.0
P32M	Atlin	10.92	347	P	Pn	11 36 00.9	0.0
	baz=163						
HOPS	Hopland Field	10.92	155		Pn	11 36 01.7	+0.7
SKAG	Skagway	11.06	343	P	Pn	11 36 06.8	+3.9
SKAG	Skagway	11.06	343	Pn	Pn	11 36 03.2	+0.3
SKAG	Skagway	11.06	343	P	Pn	11 36 03.2	+0.3
	baz=158,SNR=5.8						
SUTB	Sutter Butte	11.10	149		Pn	11 36 04.4	+0.9
WTLY	Watson Lake, Y	11.10	1	P	Pn	11 36 03.1	-0.4
	baz=180						
PLBC	Pleasant Camp	11.27	341	P	Pn	11 36 06.0	+0.2
	baz=154,SNR=13						
P33M	Teslin, Yukon	11.41	350		Pn	11 36 08.1	+0.4
P33M	Teslin, Yukon	11.41	350	P	Pn	11 36 07.6	0.0
	baz=167,SNR=16						
KOTAN	Kotaneelee Air	11.48	13	P	Pn	11 36 07.9	-0.8
	baz=196						
HLID	Hailey	11.51	113	P	Pn	11 36 11.5	+2.3
CVS	Carmenet Viney	11.70	154		Pn	11 36 11.4	-0.3
P29M	Windy Craggy	11.75	338	P	Pn	11 36 12.8	+0.5
	baz=150						
MCCM	Marconi Confer	11.77	155		Pn	11 36 12.1	-0.5
P30M	Million Dollar	12.01	341	P	Pn	11 36 16.3	+0.5
	baz=154						
WHY	Whitehorse	12.12	346		Pn	11 36 18.0	+0.6
WHY	Whitehorse	12.12	346	P	Pn	11 36 16.9	-0.4
	baz=161,SNR=25						
FARB	Farallon Islan	12.15	157		Pn	11 36 17.8	-0.1
BOZ	Bozeman (W)	12.31	100	P	Pn	11 36 19.7	-0.5
BOZ	Bozeman (W)	12.31	100		Pn	11 36 19.7	-0.5
N32M	Quiet Lake	12.36	351	P	Pn	11 36 20.5	-0.1
	baz=167						
O30N	Mendenhall	12.43	344	P	Pn	11 36 22.1	+0.6
	baz=158,SNR=44						
O29M	Mount Kennedy	12.54	338	P	Pn	11 36 23.6	+0.4
	baz=150,SNR=9.4						
HYT	Haines Junctio	12.76	341	P	Pn	11 36 26.6	+0.4
	baz=154,SNR=14						
ELK	Elko	12.82	125	Pn	Pn	11 36 29.5	+2.3
	0.1nm,0.3s,baz=304,slow=10,SNR=20						
	5.0nm,0.9s						
PINM	Pinnacle	12.82	334	P	Pn	11 36 27.5	+0.5
	baz=144,SNR=11						
N31M	Braeburn, Yuko	13.04	346	P	Pn	11 36 30.4	+0.5
	baz=160,SNR=23						
YUK6	Outpost Mounta	13.05	340	P	Pn	11 36 30.7	+0.4
	baz=152,SNR=11						
NVAR	Mina Array Bea	13.13	140	Pn	Pn	11 36 33.6	+2.2
	0.1nm,0.3s,baz=313,slow=8.7,SNR=86						
NVAR				LR	LR	11 41 26.8	
	comp=Z,7μm,18.7s,baz=319,slow=37						
	44nm,1.1s						
NVAR	Mina Array Bea	13.13	140		Pn	11 36 32.9	+1.5
N30M	Aishikik Lake	13.25	343	P	Pn	11 36 33.5	+0.7
	baz=156						
O28M	Mount Upton	13.36	336	P	Pn	11 36 35.2	+0.6
	baz=146,SNR=9.8						
SAO	San Andreas Ge	13.46	153	P	Pn	11 36 36.0	+0.2
YUK4	Talbot Arm	13.47	340	P	Pn	11 36 37.4	+1.4
	baz=152,SNR=18						
M31M	Drury Creek, Y	13.53	349	P	Pn	11 36 37.8	+1.3
	baz=164,SNR=20						
FXWY	Fox Creek	13.56	107		Pn	11 36 39.6	+2.3
BRWY	Burwash Landin	13.59	339	P	Pn	11 36 38.5	+1.2
	baz=151						
YNE	Yellowstone No	13.60	100		Pn	11 36 37.6	-0.2
MMPY	Sheldon Lake,	13.67	356	P	Pn	11 36 40.1	+1.6
	baz=174,SNR=41						
YUK8	Steele Glacier	13.69	338	P	Pn	11 36 40.3	+1.4
	baz=148,SNR=27						
AHID	Auburn Hatcher	13.97	110	P	Pn	11 36 45.5	+2.6
KAIM	Kayak Island	14.05	327	P	Pn	11 36 45.1	+1.4
	baz=134						
CRQE	Cirque	14.21	331	P	Pn	11 36 45.6	-0.3
	baz=139,SNR=9.5						
M30M	Minto, Yukon	14.23	345	P	Pn	11 36 46.5	+0.3
	baz=159,SNR=25						
YUK3	Moose Creek	14.28	338	P	Pn	11 36 47.3	+0.3
	baz=148,SNR=32						
HWUT	Hardware Ranch	14.35	115	P	Pn	11 36 50.9	+2.8
M29M	Somme Creek	14.42	342	P	Pn	11 36 50.0	+1.2
	baz=154,SNR=82						
DUG	Dugway, Tooele	14.53	121	P	Pn	11 36 52.1	+1.6
WRGLY	Wrigley	14.55	10	P	Pn	11 36 51.7	+1.2
	baz=194						
MCARA	McCarthy VSAT	14.67	333	P	Pn	11 36 52.5	+0.3
	baz=141,SNR=6.0						
BMRM	Bremner River	14.86	329	P	Pn	11 36 55.1	+0.3
	baz=136,SNR=6.5						
S11A	Rachel	14.92	135		Pn	11 36 56.2	+0.4
BVCY	Beaver Creek	14.93	338	P	Pn	11 36 55.3	-0.3
	baz=148,SNR=14						
PDAR	Pinedale Array	14.93	107	Pn	Pn	11 36 58.6	+2.6
	0.2nm,0.3s,baz=308,slow=13,SNR=61						
PDAR				LR	LR	11 42 57.8	
	comp=Z,5μm,20.2s,baz=288,slow=38						
	8.8nm,0.8s						
PDAR	Pinedale Array	14.93	107		Pn	11 36 56.9	+0.9
L29M	L29M	14.96	344		Pn	11 36 55.4	-0.7
L29M	L29M	14.96	344	P	Pn	11 36 57.0	+0.9
	baz=156,SNR=44						
EYAK	Cordova Ski Ar	14.96	327	P	P	11 37 00.9	-0.6
EYAK	Cordova Ski Ar	14.96	327		Pn	11 36 56.7	+0.6
EYAK	Cordova Ski Ar	14.96	327	P	Pn	11 36 57.1	+1.0
	baz=133						
NLU	North Lily Min	15.11	121	IAmb	IAmb	11 37 06.1	
	comp=Z,79nm,1.3s						
M27K	Edge Creek, AK	15.14	337	IAmb	IAmb	11 37 02.3	
	comp=Z,232nm,1.8s						
M27K	Edge Creek, AK	15.14	337	P	Pn	11 36 58.9	+0.4
	baz=146,SNR=36						
HIN	Hinchinbrook I	15.14	325	IAmb	IAmb	11 37 03.6	
	comp=Z,192nm,1.8s						
WCT	Wildcat Mounta	15.23	139	IAmb	IAmb	11 37 07.6	
	comp=Z,154nm,1.2s						
P23K	Montague Islan	15.23	323	IAmb	IAmb	11 37 00.5	
	comp=Z,91nm,1.6s						
P23K	Montague Islan	15.23	323	P	Pn	11 36 58.6	-1.0
	baz=128						
N25K	Chitina, Valde	15.33	331	P	Pn	11 37 00.1	-0.9
	baz=138,SNR=8.9						
FURC	Furnace Creek,	15.40	140	IAmb	IAmb	11 37 05.3	
	comp=Z,289nm,1.7s						
ISA	Isabella, Lake	15.46	146	IAmb	IAmb	11 37 09.9	
	comp=Z,156nm,1.3s						
M26K	Nabesna, AK	15.47	335	P	Pn	11 37 01.9	-1.0
	baz=143						
LAO	LASA Array	15.49	90	IAmb	IAmb	11 37 08.1	
	comp=Z,72nm,0.9s						
K29M	Barlow Dome	15.54	346	P	Pn	11 37 03.7	-0.1
	baz=158,SNR=30						
GLI	Glacier Island	15.68	326	P	Pn	11 37 05.4	-0.1
	baz=131						
KLU	Klutina	15.68	329	P	Pn	11 37 05.1	-0.5
	baz=135,SNR=11						
YKA	Yellowknife Ar	15.69	25	Pn	Pn	11 37 04.2	-1.4
	comp=Z,0.9nm,0.3s,baz=217,slow=13,SNR=49						
YKA				LR	LR	11 42 14.9	
	comp=Z,1μm,21.4s,baz=211,slow=34						
	comp=Z,8.8nm,0.6s						
YKA	Yellowknife A	15.69	25		Pn	11 37 03.7	-1.9
BCAR	Beaver Creek A	15.71	338		Pn	11 37 05.5	-0.4
YKAW1	Yellowknife Wh	15.71	26		Pn	11 37 04.8	-1.1
L27K	Beaver Creek,	15.71	338	P	Pn	11 37 05.3	-0.6
	baz=147,SNR=42						
YKAW3	Yellowknife Wh	15.74	25		Pn	11 37 05.3	-0.9
QSM	Queen of Sheba	15.83	141	IAmb	IAmb	11 37 14.2	
	comp=Z,189nm,1.1s						
CCCA	Chr Cany lake	16.01	143	IAmb	IAmb	11 37 17.9	
	comp=Z,261nm,1.4s						
J30M	Hart River	16.06	349	P	Pn	11 37 10.0	-0.5
	baz=162,SNR=33		

K22A Casper 16.91 104 IAmb IAmb 11 37 30.4
comp=Z,196nm,1.1s
SCRK Sand Creek 17.02 337 P **Pn** **11 37 23.0 +0.4**
baz=144,SNR=46
BFSC Mount Baldy Ra 17.03 146 IAmb IAmb 11 37 27.3
comp=Z,198nm,1.5s
H31M Peel River 17.04 353 P **P** **11 37 23.7 -0.9**
baz=168,SNR=20
RIDG Independent Ri 17.05 336 P **Pn** **11 37 23.1 +0.1**
baz=142,SNR=8.4
WAT6 Susitna Watana 17.06 330 P **Pn** **11 37 23.0 -0.3**
baz=134,SNR=8.4
CAPN Captain Cook N 17.20 321 P **Pn** **11 37 25.4 +0.6**
baz=123
O20A White River Ci 17.25 113 IAmb IAmb 11 37 32.8
comp=Z,271nm,1.5s
HMU Henry Mountain 17.26 123 IAmb IAmb 11 37 32.5
comp=Z,154nm,1.3s
DHY Denali Highway 17.29 331 P **Pn** **11 37 26.2 +0.1**
baz=136,SNR=12
K24K Donnelly Dome 17.36 335 P **Pn** **11 37 26.6 -0.2**
baz=140
M22K Willow 17.36 325 P **Pn** **11 37 27.2 +0.4**
baz=127
I28M Miner Creek 17.43 345 P **Pn** **11 37 28.0 +0.3**
baz=155,SNR=30
O20K Slope Mountain 17.47 318 P **Pn** **11 37 28.8 +0.5**
baz=118
CHIR Chirikof Islan 17.49 303 P **Pn** **11 37 28.8 +0.4**
baz=101
WAT1 Susitna Watana 17.50 329 P **Pn** **11 37 29.0 +0.4**
baz=133
P19K Oil Pt 17.54 316 P **Pn** **11 37 28.7 -0.4**
baz=116
U15A North Rim 17.57 130 IAmb IAmb 11 37 35.5
comp=Z,255nm,1.6s
FFC Flin Flon 17.59 61 P **Pn** **11 37 27.6 -2.2**
FFC pmax pmax
comp=Z,527nm,1.1s
FFC Flin Flon 17.59 61 P **Pn** **11 37 27.6 -2.2**
FFC Flin Flon 17.59 61 P **Pn** **11 37 27.9 -1.8**
HAYD Hayden 17.61 111 IAmb IAmb 11 37 36.9
comp=Z,125nm,1.3s
ILSW Iliamna Southw 17.65 317 P **Pn** **11 37 30.1 -0.5**
CUT Chulitna 17.82 327 P **P** **11 37 33.2 0.0**
baz=129
EPYK Eagle Plains 17.83 350 IAmb IAmb 11 37 37.8
comp=Z,182nm,1.4s
EPYK Eagle Plains 17.83 350 P **P** **11 37 33.2 -0.1**
baz=163,SNR=37
RSSD Black Hills 17.85 97 P **Pn** **11 37 32.6 -0.6**
RSSD pmax pmax
comp=Z,112nm,1.1s
RSSD Black Hills 17.85 97 P **Pn** **11 37 32.6 -0.6**
RSSD IAmb IAmb 11 37 39.9
comp=Z,112nm,1.1s
RSSD Black Hills 17.85 97 P **P** **11 37 33.5 -0.4**
W13A Hualapai Mount 17.86 136 P **P** **11 37 33.9 -0.2**
SPCR Spurr Chakacha 17.87 322 P **Pn** **11 37 33.1 -0.1**
baz=122
I27K Kandik River 17.88 343 P **Pn** **11 37 33.2 0.0**
baz=152,SNR=17
BELC Belle Mtn. Jos 17.88 142 IAmb IAmb 11 37 38.4
comp=Z,175nm,1.6s
J25K Salcha River, 17.89 337 P **Pn** **11 37 33.7 +0.3**
baz=143,SNR=26
H29M Whitestone 17.90 348 IAmb IAmb 11 37 37.3
comp=Z,190nm,1.6s
H29M Whitestone 17.90 348 P **P** **11 37 33.7 -0.3**
baz=160,SNR=36
I26K Coal Creek Min 17.93 341 P **P** **11 37 34.4 0.0**
baz=148
PV22 Blue Mesa, Par 17.95 118 IAmb IAmb 11 37 41.5
comp=Z,164nm,1.0s
Q18K Katmai Hardscr 17.97 312 P **Pn** **11 37 34.2 -0.4**
baz=111
DNR Dunn Ranch,Anz 18.02 144 IAmb IAmb 11 37 39.3
comp=Z,175nm,1.3s
SKT Skwentna 18.04 324 P **Pn** **11 37 34.9 -0.3**
baz=125
PFO Pinyon Flats O 18.04 144 P **Pn** **11 37 35.1 -0.4**
comp=Z,0.3nm,0.3s,baz=328,slow=10.0,SNR=25
PFO LR LR 11 44 34.0
comp=Z,3µm,18.1s,baz=323,slow=37
comp=Z,28nm,0.9s
PFO Pinyon Flats O 18.04 144*d i* P **Pn** **11 37 35.7 +0.1**
PFO pmax pmax
comp=Z,74nm,1.0s
PFO Pinyon Flats O 18.04 144 P **Pn** **11 37 35.6 0.0**
L22K Petersville 18.08 326 P **Pn** **11 37 35.8 +0.1**
baz=128,SNR=15
PV07 Paradox Valley 18.10 118 IAmb IAmb 11 37 43.0
comp=Z,146nm,1.0s
G31M Satah River 18.14 353 P **Pn** **11 37 36.3 0.0**
baz=169,SNR=18
HDA Harding Lake 18.16 335 P **P** **11 37 36.8 -0.1**
baz=139,SNR=12
MCK McKinley 18.26 331 P **P** **11 37 38.4 +0.4**
baz=134,SNR=10
PV15 Paradox Valley 18.26 118 IAmb IAmb 11 37 46.8
comp=Z,206nm,1.0s
O19K Port Alsworth 18.27 317 P **Pn** **11 37 37.8 -0.3**
baz=116
Q17K Contact Creek 18.28 310 P **P** **11 37 38.3 0.0**
baz=108
R17L Mt. Peulik Vol 18.33 308 P **P** **11 37 38.9 +0.1**
baz=106
P18K Big Mountain, 18.36 314 P **Pn** **11 37 39.2 0.0**
baz=113
G30M tAoh Zraii Nji 18.37 351 P **Pn** **11 37 39.2 0.0**
baz=165,SNR=14
BC3 Big Chuckawall 18.40 142 P **Pn** **11 37 40.1 +0.2**
BC3 IAmb IAmb 11 37 44.1
comp=Z,127nm,1.4s
DPP Dos Picos Cty 18.41 146 IAmb IAmb 11 37 47.6
comp=Z,232nm,1.7s
ILAR Eielson Array 18.42 335 P **Pn** **11 37 40.2 +0.4**
comp=Z,0.2nm,0.3s,baz=150,slow=10,SNR=31
ILAR PcP **PcP** **11 42 09.2 -0.4**
comp=Z,1.2nm,0.9s,baz=120,slow=1.8,SNR=4.5
ILAR LR LR 11 44 07.9
comp=Z,3µm,18.2s,baz=136,slow=35
comp=Z,4.5nm,0.9s
ILAR Eielson Array 18.42 335 P **P** **11 37 38.9 -0.8**
H27K Steamboat Moun 18.42 344 IAmb IAmb 11 37 44.5
comp=Z,194nm,1.9s
H27K Steamboat Moun 18.42 344 P **Pn** **11 37 40.6 +0.7**
baz=153,SNR=28
TRF Thorofare Moun 18.51 329 P **Pn** **11 37 41.1 0.0**
baz=131,SNR=19
G29M Pine Creek 18.51 349 P **Pn** **11 37 41.4 +0.5**
baz=161,SNR=55
O18K Koktuh Hills 18.53 316 P **P** **11 37 41.1 0.0**
baz=114
CCB Clear Creek Bu 18.58 334 IAmb IAmb 11 37 50.1
comp=Z,316nm,1.8s
M20K Styx River 18.61 323 P **Pn** **11 37 42.3 +0.1**
baz=122,SNR=9.4
F31M Tsiigehtchic 18.61 354 P **Pn** **11 37 42.4 +0.3**
baz=170,SNR=5.5
N19K Bonanza Creek 18.63 319 P **P** **11 37 41.9 -0.3**
baz=118,SNR=8.4
PRP Porcupine Dome 18.66 338 IAmb IAmb 11 37 51.2
comp=Z,239nm,1.9s
PRP Porcupine Dome 18.66 338 P **Pn** **11 37 43.1 +0.2**
baz=144,SNR=39
BLYC Blythe 18.71 139 IAmb IAmb 11 37 51.9
comp=Z,95nm,1.1s
BWN Browne 18.73 332 IAmb IAmb 11 37 51.1
comp=Z,148nm,1.3s
WUAZ Wupatki 18.74 130 IAmb IAmb 11 37 54.5
comp=Z,250nm,1.6s
COLA College 18.76 335 P **Pn** **11 37 45.8 +1.8**
COLA College 18.76 335*d i* P **P** **11 37 43.6 +0.1**
COLA College 18.76 335 P **Pn** **11 37 44.0 +0.1**
COLA IAmb IAmb 11 37 52.4
comp=Z,237nm,1.5s
COLA College 18.76 335 P **Pn** **11 37 44.2 +0.3**
baz=138
COLA College 18.76 335 P **Pn** **11 37 44.5 +0.5**
Q16K King Salmon 18.79 311 P **P** **11 37 43.7 -0.1**
baz=109
PPLA Purkeypile 18.83 326 P **Pn** **11 37 44.8 -0.2**
PPLA Purkeypile 18.83 326 P **P** **11 37 44.6 +0.2**
baz=126,SNR=7.2
POKR Poker Plat Res 18.83 336 P **Pn** **11 37 45.0 +0.1**
baz=140
P17K Kvichak River 18.86 313 IAmb IAmb 11 37 51.6
comp=Z,235nm,1.8s
P17K Kvichak River 18.86 313 P **P** **11 37 44.4 -0.2**
baz=110
NEA2 Nenana 18.91 333 P **Pn** **11 37 45.6 -0.2**
baz=136,SNR=22
F30M Barrier River 18.94 352 P **Pn** **11 37 45.9 -0.2**
baz=166,SNR=28
G27K Doyon Strip 18.96 345 IAmb IAmb 11 37 53.4
comp=Z,173nm,1.8s
G27K Doyon Strip 18.96 345 P **Pn** **11 37 46.6 +0.2**
baz=154,SNR=53
MVCO Mesa Verde 19.03 121 IAmb IAmb 11 37 55.2
comp=Z,142nm,1.0s
MVCO Mesa Verde 19.03 121 P **Pn** **11 37 48.5 +0.8**
ISCO Idaho Springs 19.06 110 P **Pn** **11 37 49.4 +1.3**
ISCO Idaho Springs 19.06 110 P **Pn** **11 37 49.5 +1.5**
YUH Yuha Desert 19.10 144 IAmb IAmb 11 37 53.1
comp=Z,211nm,1.9s
CAST Castle Rocks 19.11 327 P **P** **11 37 47.3 0.0**
baz=128
CHGN Chignik 19.12 303 P **Pn** **11 37 48.1 -0.2**
baz=100
CBX Cerro Bola 19.12 146 IAmb IAmb 11 37 54.7
comp=Z,93nm,1.0s
N18K Kilae Creek 19.19 317 P **P** **11 37 48.7 +0.5**
baz=115,SNR=8.4
O17K Koliganek Bris 19.38 314 P **P** **11 37 50.8 +0.6**
baz=111
I23K Minto, Yukon-K 19.40 334 P **Pn** **11 37 51.5 -0.1**
baz=136,SNR=24
F28M Old Crow 19.42 348 P **Pn** **11 37 51.7 -0.2**
baz=158,SNR=17
INK Inuvik 19.46 355 P **Pn** **11 37 52.1 -0.2**
comp=Z,0.2nm,0.3s,baz=176,slow=14,SNR=29
INK LR LR 11 45 27.8
comp=Z,6µm,19.6s,baz=173,slow=37
comp=Z,6.8nm,1.0s
INK Inuvik 19.46 355 Pn **P** **11 37 49.4 -1.7**
INK Inuvik 19.46 355 IAmb IAmb 11 37 57.6
comp=Z,153nm,1.8s
INK Inuvik 19.46 355 P **Pn** **11 37 52.2 0.0**
baz=171,SNR=19
INK Inuvik 19.46 355 P **Pn** **11 37 55.1 +2.8**
L19K White Mountain 19.46 322 P **Pn** **11 37 52.6 +0.3**
baz=120,SNR=17
FYU Fort Yukon 19.46 340 IAmb IAmb 11 38 03.1
comp=Z,236nm,1.4s
CHUM Lake Minchumin 19.48 328 P **Pn** **11 37 53.6 +1.0**
baz=129,SNR=31
G26K Porcupine Rive 19.48 343 IAmb IAmb 11 37 57.6
comp=Z,123nm,1.6s
G26K Porcupine Rive 19.48 343 P **Pn** **11 37 53.3 +0.6**
baz=150,SNR=26
H24K Noodor Dome 19.51 337 IAmb IAmb 11 38 01.9
comp=Z,346nm,1.9s
H24K Noodor Dome 19.51 337 P **Pn** **11 37 53.3 +0.3**
baz=140,SNR=49
M18K Stony River 19.52 320 P **P** **11 37 52.3 +0.5**
baz=117,SNR=7.4
CCX Cicese 19.52 147 IAmb IAmb 11 38 03.5
comp=Z,209nm,1.3s
P16K Nushagak River 19.56 312 P **P** **11 37 52.5 +0.2**
baz=108
X16A Lo Mia Camp, P 19.58 132 IAmb IAmb 11 37 58.4
comp=Z,118nm,1.3s
CHNA Chernabura Isl 19.60 299 P **P** **11 37 52.3 -0.4**
baz=94
S22A 4UR Ranch, Cre 19.63 117 IAmb IAmb 11 38 07.8
comp=Z,189nm,1.3s
ESJX Sierra Juarez 19.67 145 IAmb IAmb 11 38 03.0
comp=Z,244nm,1.9s
N17K Nushagak Hills 19.71 316 P **P** **11 37 54.5 +0.6**
N17K Nushagak Hills 19.71 316 P **P** **11 37 53.8 -0.1**
baz=113,SNR=7.3
MLY Manley 19.73 332 IAmb IAmb 11 37 59.9
comp=Z,314nm,1.9s
MLY Manley 19.73 332 P **P** **11 37 54.8 +0.7**
baz=134,SNR=36
S14K Fog Glacier 19.75 303 P **P** **11 37 54.9 +0.5**
baz=98
K20K Telida 19.79 326 P **Pn** **11 37 56.3 0.0**
baz=124,SNR=17
O16K Kokwok River B 19.79 313 P **P** **11 37 55.5 +0.7**
O16K IAmb IAmb 11 37 58.1
comp=Z,162nm,1.9s
O16K Kokwok River B 19.79 313 P **P** **11 37 54.6 -0.2**
baz=109
G25K Bearman Lake 19.82 340 P **Pn** **11 37 56.1 -0.5**
baz=145,SNR=16
E29M Blow River 19.90 350 IAmb IAmb 11 38 03.4
comp=Z,181nm,1.6s
E29M Blow River 19.90 350 P **Pn** **11 37 57.4 -0.3**
baz=162,SNR=50
H23K Yukon River 19.95 335 P **Pn** **11 37 57.8 -0.4**
baz=137
G24K Hadweenzic Riv 20.09 339 IAmb IAmb 11 38 05.3
comp=Z,192nm,1.9s
G24K IAMs_20 IAMs_20 11 44 52.2
comp=Z,5µm,19.0s
G24K Hadweenzic Riv 20.09 339 P Pn 11 37 58.9 -0.9
baz=142,SNR=22
SDPT Sand Point 20.15 300 P **P** **11 37 58.7 0.0**
baz=95
M17K Holitna River 20.18 318 P **P** **11 37 57.8 -1.2**
M17K IAmb IAmb 11 38 09.5
comp=Z,159nm,1.7s
M17K Holitna River 20.18 318 P **P** **11 37 58.3 -0.6**
baz=115,SNR=10.0
F26K Sheenjek River 20.20 343 IAmb IAmb 11 38 05.3
comp=Z,159nm,1.8s
F26K IAMs_20 IAMs_20 11 45 22.4
comp=Z,5µm,19.0s
F26K Sheenjek River 20.20 343 P Pn 11 38 00.5 -0.7
baz=150,SNR=33
E27K Coleen River 20.20 346 IAmb IAmb 11 38 06.9
comp=Z,181nm,1.9s
E27K IAMs_20 IAMs_20 11 45 23.5
comp=Z,6µm,20.0s
E27K Coleen River 20.20 346 P **P** **11 38 00.1 +0.8**
baz=155,SNR=32
I21K Tanana 20.21 332 IAmb IAmb 11 38 10.3
comp=Z,230nm,1.8s
I21K Tanana 20.21 332 P **P** **11 37 59.3 0.0**
baz=132,SNR=14
L18K Granite Mounta 20.22 321 IAmb IAmb 11 38 09.4
comp=Z,178nm,1.8s
L18K Granite Mounta 20.22 321 P **P** **11 37 59.2 -0.3**
baz=118,SNR=12
VTX Valle De La Tr 20.28 146 P **P** **11 37 59.0 -1.4**
VTX IAmb IAmb 11 38 08.9
comp=Z,92nm,1.4s
J20K Nowinta River 20.30 328 P Pn 11 38 01.3 -0.9
baz=126,SNR=18
E28M Babbage River 20.30 349 IAMs_20 IAMs_20 11 45 56.1
comp=Z,6µm,18.0s
E28M Babbage River 20.30 349 P **P** **11 37 59.7 -0.6**
baz=160,SNR=47
F25K Christian Rive 20.41 342 P **P** **11 38 01.7 +0.1**
baz=147,SNR=27
N16K Nishlik Lake 20.41 315 P **P** **11 38 02.1 +0.4**
baz=110
O15K Ungalikthiuk R 20.51 311 P **P** **11 38 02.8 +0.2**
baz=106
C36M Paulatuk 20.52 5 P **P** **11 38 02.3 -0.3**
C36M IAmb IAmb 11 38 08.6
comp=Z,185nm,1.8s
C36M IAMs_20 IAMs_20 11 46 12.8
comp=Z,7µm,19.0s
C36M Paulatuk 20.52 5 P **P** **11 38 01.8 -0.8**
baz=189
H22K Ishtalitna Cre 20.52 334 IAmb IAmb 11 38 10.6
comp=Z,106nm,1.6s
H22K Ishtalitna Cre 20.52 334 P **P** **11 38 02.6 -0.1**
baz=134,SNR=24
M16K Timber Creek 20.70 317 IAmb IAmb 11 38 15.3
comp=Z,152nm,1.3s
M16K Timber Creek 20.70 317 P **P** **11 38 04.8 +0.1**
baz=112
J19K Poorman 20.72 326 P **P** **11 38 06.0 +1.1**
baz=124,SNR=17
G23K Bananza Creek 20.74 336 P **P** **11 38 05.2 +0.1**
G23K IAmb IAmb 11 38 21.4
comp=Z,84nm,1.4s
G23K Bananza Creek 20.74 336 P Pn 11 38 06.4 -1.1
baz=138,SNR=23
I20K Naaghedeneel 20.79 329 P **P** **11 38 05.1 -0.4**
I20K IAmb IAmb 11 38 20.5
comp=Z,69nm,1.1s
I20K Naaghedeneel 20.79 329 P **P** **11 38 06.6 +1.1**
baz=127
H21K Melozitna Rive 20.79 332 IAmb IAmb 11 38 13.0
comp=Z,251nm,2.0s
H21K Melozitna Rive 20.79 332 P **P** **11 38 06.3 +0.7**
baz=132,SNR=32
F24K Squaw Lake 20.84 340 IAmb IAmb 11 38 22.7
comp=Z,130nm,1.9s
F24K IAMs_20 IAMs_20 11 45 27.1
comp=Z,6µm,19.0s
F24K Squaw Lake 20.84 340 P **P** **11 38 06.7 +0.5**
baz=143,SNR=19
E25K Arctic Village 20.85 343 IAmb IAmb 11 38 17.2
comp=Z,162nm,1.9s
E25K IAMs_20 IAMs_20 11 45 42.3
comp=Z,6µm,21.0s
E25K Arctic Village 20.85 343 P **P** **11 38 06.8 +0.5**
baz=148,SNR=30
J18K Innoko River 20.85 324 P **P** **11 38 06.2 -0.1**
baz=121,SNR=26
L17K Donlin 20.86 320 P **P** **11 38 07.2 +0.8**
baz=115,SNR=13
D28M Stokes Point 20.90 350 P **P** **11 38 07.2 +0.5**
baz=162
N15K Kwethluk River 20.93 314 P Pn 11 38 08.8 -1.0
baz=108
PIX Pinacate 21.05 140 P **P** **11 38 08.8 +0.2**
PIX IAmb IAmb 11 38 13.5
comp=Z,132nm,1.1s
SUSD Miller 21.06 91 P **P** **11 38 09.2 +0.5**
SUSD IAMs_20 IAMs_20 11 46 23.5
comp=Z,7µm,18.0s
D27M Malcolm River 21.09 348 IAmb IAmb 11 38 17.9
comp=Z,198nm,1.6s
D27M IAMs_20 IAMs_20 11 46 19.9
comp=Z,5µm,20.0s
D27M Malcolm River 21.09 348 P **P** **11 38 10.0 +1.1**
baz=158,SNR=22
K17K Iditarod 21.12 321 IAmb IAmb 11 38 15.5
comp=Z,171nm,1.6s
K17K Iditarod 21.12 321 P **P** **11 38 09.3 +0.1**
baz=117,SNR=20
COLD Coldfoot 21.18 337 IAmb IAmb 11 38 19.6
comp=Z,183nm,2.0s
COLD Coldfoot 21.18 337 P **P** **11 38 10.0 +0.2**
baz=139,SNR=21
L16K Owhat River 21.19 318 P **P** **11 38 10.5 +0.5**
L16K Owhat River 21.19 318 P **P** **11 38 11.1 +1.2**
baz=113,SNR=9.6
O14K Tigyukauivet M 21.24 311 P **P** **11 38 12.1 +1.6**
baz=104
G22K Bettles 21.29 336 P **P** **11 38 12.0 +1.0**
baz=136
H20K Anotleneega Mo 21.35 330 P **P** **11 38 11.8 +0.1**
baz=128,SNR=14
M15K Kasigluk River 21.38 315 P **P** **11 38 12.3 +0.3**
baz=109,SNR=15
K30B Basset 21.38 96 IAMs_20 IAMs_20 11 46 36.3
comp=Z,6µm,18.0s
KSCO Kaye Shedlock' 21.38 108 IAMs_20 IAMs_20 11 46 58.7
comp=Z,4µm,19.0s
E24K Your Creek 21.43 340 IAMs_20 IAMs_20 11 45 45.6
comp=Z,5µm,19.0s
E24K Your Creek 21.43 340 P **P** **11 38 13.1 +0.7**
baz=143,SNR=28
ULM Lac du Bonnet 21.43 74 P **P** **11 38 12.8 +0.3**
comp=Z,52nm,0.9s,baz=287,slow=9.4,SNR=50
ULM LR LR 11 46 45.3
comp=Z,9µm,19.6s,baz=272,slow=37
comp=Z,52nm,0.9s
ULM Lac du Bonnet 21.43 74*c i* P **P** **11 38 12.4 -0.1**
ULM Lac du Bonnet 21.43 74 P **P** **11 38 12.3 -0.3**
T25A Trinidad 21.46 114 IAMs_20 IAMs_20 11 47 06.9
comp=Z,5µm,18.0s
G21K Allakaket 21.58 333 P **P** **11 38 14.6 +0.6**
baz=132
GCSA Galena City Sc 21.59 327 P **P** **11 38 14.4 +0.2**
baz=123
TUC Tucson 21.61 134 P **P** **11 38 15.3 +0.5**
TUC pmax pmax
comp=Z,61nm,1.2s
TUC MLR MLR
comp=Z,4µm,20.0s
TUC Tucson 21.61 134 P **P** **11 38 15.3 +0.5**
TUC IAmb IAmb 11 38 31.8
comp=Z,61nm,1.2s
TUC Tucson 21.61 134 P **P** **11 38 15.8 +1.0**
N14K Kuskokwak Cree 21.63 313 IAmb IAmb 11 38 32.6
comp=Z,54nm,1.1s
N14K Kuskokwak Cree 21.63 313 P **P** **11 38 14.5 -0.1**
baz=105
E23K Chandalar 21.67 339 IAmb IAmb 11 38 33.3
comp=Z,87nm,1.3s
E23K IAMs_20 IAMs_20 11 45 54.1
comp=Z,5µm,20.0s
E23K Chandalar 21.67 339 P **P** **11 38 14.9 -0.3**
baz=141,SNR=22
J17K VABM Dome 21.75 323 P **P** **11 38 16.2 +0.3**
J17K VABM Dome 21.75 323 P **P** **11 38 16.6 +0.7**
baz=117
TASM ASL Pad, Albuq 21.80 122 IAmb IAmb 11 38 36.4
comp=Z,120nm,1.2s
TASM ASL Pad, Albuq 21.80 122 IAmb IAmb 11 38 36.4
comp=Z,119nm,1.2s
ANMO Albuquerque 21.80 122 P **P** **11 38 17.4 +0.5**
comp=Z,22nm,1.0s,baz=308,slow=9.9,SNR=32
comp=Z,22nm,1.0s
ANMO Albuquerque 21.80 122*d i* P **P** **11 38 17.5 +0.5**
ANMO pmax pmax
comp=Z,33nm,1.1s
ANMO Albuquerque 21.80 122 P **P** **11 38 17.7 +0.7**
ANMO IAmb IAmb 11 38 36.3
comp=Z,102nm,1.2s
ANMO Albuquerque 21.80 122 P **P** **11 38 18.0 +1.0**
C27K Jago River 21.84 346 IAmb IAmb 11 38 26.9
comp=Z,250nm,2.0s
C27K IAMs_20 IAMs_20 11 46 35.7
comp=Z,7µm,18.0s
C27K Jago River 21.84 346 P **P** **11 38 16.6 -0.3**
baz=153,SNR=14
AGMN Agassiz Nation 21.84 79 P **P** **11 38 16.8 -0.2**
AGMN IAMs_20 IAMs_20 11 46 47.9
comp=Z,7µm,19.0s
AGMN Agassiz Nation 21.84 79 P **P** **11 38 18.1 +1.1**
H19K Roundabout Mou 21.89 329 P **P** **11 38 16.4 -0.9**
H19K Roundabout Mou 21.89 329 P **P** **11 38 17.2 -0.2**
baz=126,SNR=21
F22K John River 21.90 336 P **P** **11 38 18.1 +0.6**
baz=136
M14K Bethel 21.99 315 IAmb IAmb 11 38 38.3
comp=Z,70nm,1.3s
M14K Bethel 21.99 315 P **P** **11 38 18.3 -0.2**
baz=107
D25K Kavik River 22.03 344 IAmb IAmb 11 38 28.8
comp=Z,129nm,1.9s
D25K IAMs_20 IAMs_20 11 46 40.6
comp=Z,6µm,19.0s
D25K Kavik River 22.03 344 P **P** **11 38 19.4 +0.4**
baz=148,SNR=26
F21K Alatna River 22.05 335 P **P** **11 38 19.4 +0.2**
baz=133,SNR=9.6
L15K Ungalak Mounta 22.07 317 P **P** **11 38 19.0 -0.4**
baz=110
TOLK Toolik Lake Re 22.12 340 P **P** **11 38 20.1 +0.2**
baz=142,SNR=31
F33A 5 Mile Ranch, 22.29 86 IAMs_20 IAMs_20 11 47 03.1
comp=Z,5µm,19.0s
C26K Camden Bay 22.29 346 P **P** **11 38 21.5 -0.2**
baz=152
J16K Anvik River 22.31 321 P **P** **11 38 21.9 0.0**
baz=115
K15K Wolf Creek Mou 22.31 319 P **P** **11 38 21.6 -0.4**
baz=111
H18K Honhosa River 22.35 327 P **P** **11 38 22.6 +0.3**
baz=122
D24K Happy Valley 22.37 341 IAMs_20 IAMs_20 11 46 29.8
comp=Z,6µm,20.0s
D24K Happy Valley 22.37 341 P **P** **11 38 22.0 -0.6**
baz=144
G19K Purcell Mounta 22.47 330 IAmb IAmb 11 38 32.3
comp=Z,205nm,1.9s
G19K Purcell Mounta 22.47 330 P **P** **11 38 23.8 +0.2**
baz=126,SNR=18
L14K Kuka Creek 22.51 316 P **P** **11 38 24.2 +0.2**
L14K IAmb IAmb 11 38 36.3
comp=Z,73nm,1.6s
L14K Kuka Creek 22.51 316 P **P** **11 38 23.7 -0.3**
baz=108

FCC	**Fort Churchill**	**22.53**	**51**	P	**P**	**11 38 24.5**	**+0.2**			
FCC	comp=Z,216nm,0.9s			pmax	pmax					
FCC	**Fort Churchill**	**22.53**	**51**	P	**P**	**11 38 24.5**	**+0.2**			
M13K	**Dall Lake**	**22.56**	**313**	IAmb	IAmb	11 38 38.8				
	comp=Z,63nm,1.1s									
M13K	**Dall Lake**	**22.56**	**313**	P	**P**	**11 38 24.7**	**+0.1**			
	baz=105									
F20K	**Avaraaart Lake**	**22.59**	**333**	P	**P**	**11 38 25.1**	**+0.2**			
	baz=130,SNR=18									
I17K	**Unalakleet**	**22.61**	**323**	P	**P**	**11 38 25.8**	**+0.7**			
	baz=116									
D23K	**Nanushuk River**	**22.63**	**340**	IAMs_20	IAMs_20	11 46 37.4				
	comp=Z,6µm,21.0s									
D23K	**Nanushuk River**	**22.63**	**340**	P	**P**	**11 38 26.2**	**+0.9**			
	baz=141,SNR=23									
H17K	**Granite Mounta**	**22.80**	**326**	P	**P**	**11 38 27.5**	**+0.3**			
	baz=119									
G18K	**Tagagawik**	**22.85**	**329**	P	**P**	**11 38 27.8**	**+0.1**			
	baz=123,SNR=8.6									
ECSD	**EROS Data Cent**	**22.89**	**91**	IAMs_20	IAMs_20	11 47 30.0				
	comp=Z,7µm,18.0s									
ECSD	**EROS Data Cent**	**22.89**	**91**	P	**P**	**11 38 29.1**	**+0.9**			
EPLO	**Experimental L**	**22.90**	**75**	IAmb	IAmb	11 38 44.9				
	comp=Z,80nm,1.0s									
RTBA	**Rita Blanca**	**22.93**	**113**	P	**P**	**11 38 27.9**	**-1.0**			
RTBA				IAmb	IAmb	11 38 43.7				
	comp=Z,140nm,1.3s									
BGNE	**Belgrade**	**22.95**	**98**	P	**P**	**11 38 27.9**	**-1.0**			
BGNE				IAMs_20	IAMs_20	11 48 05.8				
	comp=Z,6µm,21.0s									
E21K	**Killik River**	**23.04**	**337**	P	**P**	**11 38 29.2**	**-0.5**			
E21K				IAmb	IAmb	11 38 49.0				
	comp=Z,83nm,1.9s									
E21K	**Killik River**	**23.04**	**337**	P	**P**	**11 38 30.2**	**+0.5**			
	baz=135									
A36M	**Sachs Harbour**	**23.09**	**3**	IAMs_20	IAMs_20	11 47 42.9				
	comp=Z,5µm,18.0s									
A36M	**Sachs Harbour**	**23.09**	**3**	P	**P**	**11 38 30.4**	**+0.3**			
	baz=186									
F19K	**Shaleruckik Mo**	**23.10**	**331**	IAmb	IAmb	11 38 37.9				
	comp=Z,77nm,1.9s									
F19K	**Shaleruckik Mo**	**23.10**	**331**	P	**P**	**11 38 30.6**	**+0.5**			
	baz=126									
319A	**Douglas**	**23.11**	**132**	IAmb	IAmb	11 38 56.1				
	comp=Z,109nm,1.2s									
C23K	**Itkillik River**	**23.30**	**341**	IAmb	IAmb	11 38 37.6				
	comp=Z,91nm,1.6s									
C23K				IAMs_20	IAMs_20	11 47 11.1				
	comp=Z,5µm,20.0s									
C23K	**Itkillik River**	**23.30**	**341**	P	**P**	**11 38 32.5**	**+0.3**			
	baz=142,SNR=20									
E19K	**Redstone River**	**23.31**	**333**	P	**P**	**11 38 32.7**	**+0.3**			
	baz=128									
G17K	**Kiwalik Mounta**	**23.35**	**327**	P	**P**	**11 38 32.8**	**+0.1**			
	baz=119									
J14K	**Nanvaranak Lak**	**23.35**	**319**	IAmb	IAmb	11 38 43.0				
	comp=Z,93nm,1.8s									
J14K	**Nanvaranak Lak**	**23.35**	**319**	P	**P**	**11 38 33.3**	**+0.5**			
	baz=110									
E20K	**Nigu River**	**23.52**	**335**	P	**P**	**11 38 34.3**	**-0.1**			
	baz=131									
H16K	**Elim**	**23.55**	**324**	P	**P**	**11 38 34.9**	**+0.2**			
	baz=115									
F18K	**Selawik**	**23.58**	**329**	P	**P**	**11 38 35.1**	**+0.2**			
	baz=123,SNR=7.1									
K13K	**Kusilvak Mount**	**23.58**	**317**	P	**P**	**11 38 34.6**	**-0.5**			
	baz=106									
UNV	**Unalaska Valle**	**23.64**	**296**	P	**P**	**11 38 34.7**	**-0.9**			
	baz=86									
C21K	**Knifeblade Rid**	**23.76**	**337**	P	**P**	**11 38 36.1**	**-0.7**			
	baz=135,SNR=30									
L34A	**Svendsen Farm,**	**23.83**	**95**	IAMs_20	IAMs_20	11 48 02.2				
	comp=Z,6µm,19.0s									
M11K	**Mekoryuk**	**23.93**	**312**	P	**P**	**11 38 38.3**	**-0.1**			
	baz=101									
D20K	**Etivluk River**	**23.94**	**335**	IAMs_20	IAMs_20	11 47 03.9				
	comp=Z,4µm,22.0s									
D20K	**Etivluk River**	**23.94**	**335**	P	**P**	**11 38 38.8**	**+0.4**			
	baz=131									
F17K	**Baldwin Pennin**	**24.04**	**328**	P	**P**	**11 38 39.6**	**+0.3**			
	baz=120									
B21K	**Ikpikpuk River**	**24.05**	**338**	IAmb	IAmb	11 38 44.3				
	comp=Z,132nm,1.9s									
B21K	**Ikpikpuk River**	**24.05**	**338**	P	**P**	**11 38 39.4**	**0.0**			
	baz=136,SNR=16									
PH02	**Texas Public H**	**24.11**	**114**	IAmb	IAmb	11 38 51.5				
	comp=Z,149nm,1.6s									
EPT	**El Paso**	**24.19**	**127**	P	**P**	**11 38 40.8**	**-0.5**			
EPT				IAmb	IAmb	11 38 43.4				
	comp=Z,67nm,1.2s									
D19K	**Kuna River**	**24.22**	**334**	P	**P**	**11 38 41.1**	**0.0**			
	baz=129									
B22K	**Teshekpuk Lake**	**24.30**	**340**	IAmb	IAmb	11 38 45.7				
	comp=Z,112nm,1.6s									
B22K				IAMs_20	IAMs_20	11 47 51.6				
	comp=Z,5µm,20.0s									
B22K	**Teshekpuk Lake**	**24.30**	**340**	P	**P**	**11 38 41.7**	**0.0**			
	baz=138,SNR=22									
HSIG		**24.33**	**139**	P	**P**	**11 38 41.3**	**-1.0**			
E18K	**Tukpahlearik C**	**24.34**	**331**	P	**P**	**11 38 42.7**	**+0.6**			
	baz=123,SNR=7.7									
G15K	**Niukluk**	**24.39**	**324**	P	**P**	**11 38 43.8**	**+1.2**			
	baz=114									
E17K	**Hotham Inlet**	**24.56**	**329**	P	**P**	**11 38 44.2**	**0.0**			
	baz=121									
AMTX	**Amarillo**	**24.62**	**115**	IAMs_20	IAMs_20	11 49 07.3				
	comp=Z,5µm,18.0s									
EYMN	**Ely**	**24.75**	**78**	P	**P**	**11 38 48.6**	**+2.5**			
ANM	**Nome**	**24.76**	**322**	P	**P**	**11 38 46.0**	**+0.1**			
	baz=111									
SPMN	**Marine on St.**	**24.80**	**85**	IAMs_20	IAMs_20	11 48 31.4				
	comp=Z,5µm,21.0s									
MNTX	**Cornudas Mount**	**24.84**	**125**	IAmb	IAmb	11 39 08.7				
	comp=Z,76nm,1.4s									
MNTX	**Cornudas Mount**	**24.84**	**125**	P	**P**	**11 38 48.0**	**+0.9**			
N35A	**Tabor**	**24.86**	**97**	IAMs_20	IAMs_20	11 48 45.3				
	comp=Z,6µm,20.0s									
I37A	**Lemond, Waseca**	**24.88**	**88**	IAmb	IAmb	11 39 07.1				
	comp=Z,77nm,1.1s									
I37A				IAMs_20	IAMs_20	11 48 40.7				
	comp=Z,6µm,18.0s									
F15K	**North Star Dit**	**24.92**	**325**	P	**P**	**11 38 47.5**	**0.0**			
	baz=114									
B20K	**Meade River**	**24.95**	**337**	IAMs_20	IAMs_20	11 48 09.9				
	comp=Z,4µm,20.0s									
B20K	**Meade River**	**24.95**	**337**	P	**P**	**11 38 47.7**	**+0.1**			
	baz=132									
C19K	**Lookout Ridge**	**25.02**	**334**	P	**P**	**11 38 48.5**	**+0.1**			
	baz=128									
A22K	**Sinclair Lake**	**25.14**	**340**	P	**P**	**11 38 48.5**	**-0.8**			
	baz=137,SNR=9.6									
C18K	**Utukok River**	**25.22**	**333**	P	**P**	**11 38 49.5**	**-0.7**			
	baz=124,SNR=7.6									
SRIG	**Santa Rosalia**	**25.28**	**143**	P	**P**	**11 38 50.6**	**-0.3**			
SRIG	**Santa Rosalia**	**25.28**	**143**	P	**P**	**11 38 51.8**	**+0.8**			
D17K	**Noatak River**	**25.30**	**330**	P	**P**	**11 38 51.2**	**+0.4**			
	baz=120									
TPB28		**25.34**	**124**	IAmb	IAmb	11 39 12.6				
	comp=Z,21nm,1.3s									
OK038	**West end E0370**	**25.37**	**108**	IAMs_20	IAMs_20	11 49 24.2				
	comp=Z,4µm,20.0s									
TPB11	**China Draw**	**25.39**	**123**	IAmb	IAmb	11 39 14.6				
	comp=Z,42nm,1.1s									
RDOG	**Red Dog Mine**	**25.42**	**331**	P	**P**	**11 38 52.3**	**+0.3**			
	baz=121									
F14K	**Arctic Creek**	**25.47**	**324**	P	**P**	**11 38 52.6**	**+0.2**			
	baz=112									
C17K	**DeLong Mountai**	**25.73**	**332**	P	**P**	**11 38 54.6**	**-0.2**			
	baz=122									
A21K	**Barrow**	**25.74**	**340**	P	**P**	**11 38 54.8**	**0.0**			
	baz=135,SNR=10									
128A	**Castleberry Fa**	**25.75**	**120**	IAmb	IAmb	11 39 17.5				
	comp=Z,39nm,1.0s									
VHRN	**Van Horn**	**25.77**	**126**	IAmb	IAmb	11 39 16.4				
	comp=Z,40nm,1.1s									
TPB13	**Reeves - Culbe**	**25.79**	**123**	IAmb	IAmb	11 39 18.2				
	comp=Z,47nm,1.1s									
DKNS	**Dickens**	**25.91**	**116**	P	**P**	**11 38 56.6**	**-0.2**			
DKNS				IAmb	IAmb	11 39 20.0				
	comp=Z,60nm,1.4s									
SCIA	**State Center**	**25.94**	**92**	IAMs_20	IAMs_20	11 49 15.8				
	comp=Z,4µm,18.0s									
POST	**Post**	**26.00**	**118**	P	**P**	**11 38 57.4**	**-0.1**			
POST				IAmb	IAmb	11 39 19.8				
	comp=Z,73nm,1.2s									
TPB06	**Permian Basin**	**26.07**	**122**	IAmb	IAmb	11 39 23.1				
	comp=Z,39nm,1.2s									
129A	**Stewart Farms,**	**26.10**	**119**	IAmb	IAmb	11 39 20.6				
	comp=Z,51nm,1.2s									
A19K	**Wainwright**	**26.10**	**336**	P	**P**	**11 38 57.8**	**-0.3**			
	baz=127									
TNA	**Tin City**	**26.12**	**324**	P	**P**	**11 38 58.4**	**+0.1**			
	baz=110									
C16K	**Lisburne Hills**	**26.32**	**330**	P	**P**	**11 38 59.3**	**-0.8**			
	baz=118									
N38A	**Joes South For**	**26.47**	**95**	IAMs_20	IAMs_20	11 49 35.9				
	comp=Z,5µm,19.0s									
WMOK	**Wichita Mounta**	**26.47**	**111**	P	**P**	**11 39 02.1**	**+0.3**			
WMOK	**Wichita Mounta**	**26.47**	**111**	IAmb	IAmb	11 39 11.1				
	comp=Z,53nm,1.1s									
WMOK	**Wichita Mounta**	**26.47**	**111**	IAMs_20	IAMs_20	11 50 04.4				
	comp=Z,4µm,19.0s									
WMOK	**Wichita Mounta**	**26.47**	**111**	P	**P**	**11 39 03.3**	**+1.5**			
G40A	**Rib Lake**	**26.49**	**83**	IAMs_20	IAMs_20	11 49 41.0				
	comp=Z,6µm,18.0s									
OK048	**Pawnee Station**	**26.54**	**106**	IAMs_20	IAMs_20	11 49 58.1				
	comp=Z,4µm,21.0s									
OK051	**E0350 and S346**	**26.55**	**106**	IAmb	IAmb	11 39 20.4				
	comp=Z,68nm,1.2s									
OK051				IAMs_20	IAMs_20	11 49 58.4				
	comp=Z,3µm,20.0s									
TPB05	**Hovey Rd**	**26.56**	**123**	IAmb	IAmb	11 39 14.1				
	comp=Z,36nm,1.4s									
OK029	**Liberty Lake**	**26.60**	**108**	IAMs_20	IAMs_20	11 50 03.9				
	comp=Z,4µm,21.0s									
229A	**Bryant Ranch,**	**26.62**	**120**	IAmb	IAmb	11 39 25.1				
	comp=Z,64nm,1.2s									
ALPN	**Alpine**	**26.81**	**125**	IAmb	IAmb	11 39 27.3				
	comp=Z,33nm,1.1s									
P38A	**Dawn**	**26.88**	**97**	IAMs_20	IAMs_20	11 49 58.9				
	comp=Z,4µm,18.0s									
OK052	**Battle Ridge R**	**26.89**	**107**	IAMs_20	IAMs_20	11 50 18.4				
	comp=Z,4µm,19.0s									
X34A	**Smith Ranch, M**	**27.14**	**110**	IAmb	IAmb	11 39 36.0				
	comp=Z,40nm,1.2s									
DEOK	**Depew**	**27.17**	**107**	IAmb	IAmb	11 39 24.4				
	comp=Z,72nm,1.0s									
GAMB	**Gambell**	**27.18**	**319**	P	**P**	**11 39 07.2**	**-0.6**			
	baz=102									
WTFS	**Witchita Falls**	**27.32**	**113**	IAmb	IAmb	11 39 30.2				
	comp=Z,69nm,1.2s									
ABTX	**Abilene, Hawle**	**27.41**	**116**	IAMs_20	IAMs_20	11 50 40.2				
	comp=Z,4µm,19.0s									
JFWS	**Jewell Farm**	**27.43**	**88**	IAMs_20	IAMs_20	11 50 11.1				
	comp=Z,5µm,19.0s									
TUL3	**Leonard**	**27.58**	**106**	IAmb	IAmb	11 39 21.0				
	comp=Z,41nm,1.1s									
TUL3				IAMs_20	IAMs_20	11 50 38.7				
	comp=Z,3µm,18.0s									
TX31	**Lajitas Ar. Si**	**27.61**	**126**	IAmb	IAmb	11 39 47.0				
	comp=Z,32nm,1.2s									
TXAR	**Lajitas Array**	**27.61**	**126**	P	**P**	**11 39 13.1**	**+1.0**			
	comp=Z,5.7nm,1.0s,baz=316,slow=7.1,SNR=32									
TXAR				PcP	**PcP**	**11 42 28.7**	**-0.7**			
	comp=Z,0.3nm,0.7s,baz=312,slow=3.6,SNR=1.3									
	comp=Z,5.7nm,1.0s									
TXAR	**Lajitas Array**	**27.61**	**126**	P	**P**	**11 39 11.8**	**-0.3**			
OZNA	**Ozona**	**27.79**	**120**	P	**P**	**11 39 12.9**	**-0.8**			
OZNA				IAmb	IAmb	11 39 34.7				
	comp=Z,90nm,1.7s									
P40A	**Paris**	**27.90**	**96**	IAMs_20	IAMs_20	11 50 30.9				
	comp=Z,5µm,20.0s									
RLO	**Rose Lookout**	**27.91**	**105**	P	**P**	**11 39 13.8**	**-0.8**			
RLO				IAmb	IAmb	11 39 39.0				
	comp=Z,38nm,1.1s									
LOOK	**Love County**	**27.95**	**111**	IAmb	IAmb	11 39 24.3				
	comp=Z,67nm,1.2s									
PLPT	**Palo Pinto**	**28.07**	**114**	IAmb	IAmb	11 39 23.7				
	comp=Z,73nm,1.6s									
N41A	**Harden Midland**	**28.07**	**93**	IAMs_20	IAMs_20	11 50 34.3				
	comp=Z,5µm,19.0s									
U38A	**Gravette**	**28.15**	**104**	IAmb	IAmb	11 39 31.4				
	comp=Z,56nm,1.1s									
U38A				IAMs_20	IAMs_20	11 51 12.7				
	comp=Z,3µm,18.0s									
L42A	**Oliver, Polo**	**28.23**	**89**	IAMs_20	IAMs_20	11 50 45.3				
	comp=Z,5µm,18.0s									
Z35A	**Perchaven, San**	**28.35**	**112**	IAMs_20	IAMs_20	11 51 34.3				
	comp=Z,4µm,18.0s									
H43A	**Windswept, Lux**	**28.39**	**83**	IAMs_20	IAMs_20	11 50 42.4				
	comp=Z,5µm,19.0s									
R40A	**Maddies Statio**	**28.43**	**98**	IAMs_20	IAMs_20	11 50 59.1				
	comp=Z,3µm,18.0s									
HHAR	**Hobbs**	**28.53**	**103**	IAmb	IAmb	11 39 34.8				
	comp=Z,34nm,1.1s									
HPIG		**28.54**	**132**	P	**P**	**11 39 20.5**	**-0.1**			
HPIG				IAmb	IAmb	11 39 46.6				
	comp=Z,39nm,1.4s									
HPIG		**28.54**	**132**	P	**P**	**11 39 21.3**	**+0.7**			
BRDY	**Brady**	**28.75**	**117**	P	**P**	**11 39 21.9**	**-0.3**			
K43A	**Burlington**	**28.78**	**87**	IAMs_20	IAMs_20	11 51 02.9				
	comp=Z,5µm,18.0s									
JCT	**Junction City**	**28.87**	**119**	P	**P**	**11 39 23.1**	**-0.3**			
JCT				pmax	pmax					
	comp=Z,52nm,1.1s									
JCT	**Junction City**	**28.87**	**119**	P	**P**	**11 39 23.1**	**-0.3**			
JCT				IAmb	IAmb	11 39 34.0				
	comp=Z,52nm,1.1s									
LPIG	**La Paz**	**28.93**	**143**	LR	LR	11 50 11.8				
	comp=Z,1µm,18.5s,baz=330,slow=35									
WHTX	**Lake Whitney,**	**29.16**	**114**	IAmb	IAmb	11 39 35.9				
	comp=Z,44nm,1.2s									
WHTX				IAMs_20	IAMs_20	11 51 51.6				
	comp=Z,4µm,18.0s									
HDIL	**Hopedale**	**29.18**	**92**	IAMs_20	IAMs_20	11 51 16.5				
	comp=Z,4µm,18.0s									
L44A	**Lake County Fo**	**29.30**	**88**	IAMs_20	IAMs_20	11 51 18.6				
	comp=Z,4µm,18.0s									
RES	**Resolute Bay**	**29.47**	**18**	P	**P**	**11 39 29.5**	**+1.4**			
P43A	**Skaggs, Pawnee**	**29.50**	**94**	IAMs_20	IAMs_20	11 51 29.1				
	comp=Z,5µm,19.0s									
M44A	**Midewin, Midew**	**29.59**	**89**	IAMs_20	IAMs_20	11 51 28.3				
	comp=Z,4µm,21.0s									
FVM	**French Village**	**29.81**	**97**	IAmb	IAmb	11 39 56.0				
	comp=Z,53nm,1.3s									
MIAR	**Mount Ida**	**29.84**	**106**	P	**P**	**11 39 31.7**	**-0.1**			
MIAR				pmax	pmax					
	comp=Z,28nm,1.1s									
MIAR				MLR	MLR					
	comp=Z,3µm,21.0s									
MIAR	**Mount Ida**	**29.84**	**106**	P	**P**	**11 39 31.7**	**-0.1**			
MIAR				IAmb	IAmb	11 39 43.7				
	comp=Z,28nm,1.1s									
MIAR				IAMs_20	IAMs_20	11 51 27.7				
	comp=Z,3µm,21.0s									
MIAR	**Mount Ida**	**29.84**	**106**	P	**P**	**11 39 33.8**	**+1.9**			
HNDO	**Hondo**	**29.88**	**120**	IAmb	IAmb	11 39 42.0				
	comp=Z,63nm,1.9s									
E46A	**Sault Ste Mari**	**29.90**	**78**	IAmb	IAmb	11 39 45.1				
	comp=Z,45nm,1.1s									
T42A	**Van Buren**	**29.92**	**99**	P	**P**	**11 39 31.8**	**-0.7**			
T42A				IAMs_20	IAMs_20	11 51 55.4				
	comp=Z,3µm,18.0s									
Q44A	**Meyer Farm, Va**	**30.22**	**94**	IAMs_20	IAMs_20	11 51 51.3				
	comp=Z,4µm,19.0s									
SFIN	**Lafayette**	**30.71**	**90**	IAmb	IAmb	11 39 58.0				
	comp=Z,41nm,1.1s									
SFIN				IAMs_20	IAMs_20	11 52 29.1				
	comp=Z,5µm,20.0s									
833A	**Chaparral WMA,**	**30.74**	**121**	IAmb	IAmb	11 39 51.2				
	comp=Z,58nm,1.1s									
S44A	**Carbondale**	**30.74**	**97**	IAMs_20	IAMs_20	11 52 09.9				
	comp=Z,3µm,21.0s									
NATX	**Nacogdoches**	**31.02**	**111**	IAMs_20	IAMs_20	11 53 07.9				
	comp=Z,4µm,21.0s									
P46A	**Rosedale**	**31.03**	**92**	IAmb	IAmb	11 40 00.6				
	comp=Z,62nm,1.3s									
P46A				IAMs_20	IAMs_20	11 52 23.6				
	comp=Z,5µm,18.0s									
735A	**Kenedy**	**31.24**	**119**	IAMs_20	IAMs_20	11 53 09.6				
	comp=Z,2µm,19.0s									
N47A	**Urbana**	**31.39**	**88**	IAmb	IAmb	11 39 53.0				
	comp=Z,33nm,0.9s									
T45A	**Paducah**	**31.52**	**97**	IAMs_20	IAMs_20	11 52 42.7				
	comp=Z,4µm,20.0s									
HKT	**Hockley**	**31.59**	**115**	P	**P**	**11 39 49.6**	**+2.4**			
HKT				pmax	pmax					
	comp=Z,58nm,1.3s									
HKT				MLR	MLR					
	comp=Z,5µm,18.0s									
HKT	**Hockley**	**31.59**	**115**	P	**P**	**11 39 49.6**	**+2.4**			
HKT				IAmb	IAmb	11 39 59.4				
	comp=Z,58nm,1.2s									
HKT	**Hockley**	**31.59**	**115**	P	**P**	**11 39 49.3**	**+2.1**			
USIN	**University of**	**31.62**	**95**	IAmb	IAmb	11 40 01.7				
	comp=Z,34nm,0.8s									
I49A	**Point Hope**	**31.84**	**81**	IAMs_20	IAMs_20	11 52 46.6				
	comp=Z,5µm,20.0s									
AAM	**Ann Arbor**	**32.04**	**85**	IAMs_20	IAMs_20	11 52 29.9				
	comp=Z,3µm,21.0s									
O48B	**Farmland**	**32.05**	**89**	IAMs_20	IAMs_20	11 53 20.5				
	comp=Z,5µm,21.0s									
P48A	**Milroy**	**32.29**	**91**	IAMs_20	IAMs_20	11 53 34.8				
	comp=Z,3µm,19.0s									
N49A	**Columbus Grove**	**32.36**	**87**	IAmb	IAmb	11 40 01.4				
	comp=Z,27nm,0.9s									
WCI	**Wyandotte Cave**	**32.38**	**93**	P	**P**	**11 39 54.6**	**+0.4**			
WCI	**Wyandotte Cave**	**32.38**	**93**	P	**P**	**11 39 55.0**	**+0.8**			
143A	**Socs Landing,**	**32.42**	**106**	IAMs_20	IAMs_20	11 54 36.8				
	comp=Z,2µm,18.0s									
OXF	**Oxford**	**32.53**	**102**	IAMs_20	IAMs_20	11 53 37.6				
	comp=Z,2µm,19.0s									
T47A	**Sharon Grove**	**32.55**	**96**	IAmb	IAmb	11 40 13.3				
	comp=Z,39nm,1.2s									
T47A				IAMs_20	IAMs_20	11 53 14.8				
	comp=Z,4µm,20.0s									
WVT	**Waverly**	**32.57**	**98**	P	**P**	**11 39 55.7**	**-0.2**			
WVT				pmax	pmax					
	comp=Z,92nm,1.7s									
WVT				MLR	MLR					
	comp=Z,2µm,19.0s									
WVT	**Waverly**	**32.57**	**98**	P	**P**	**11 39 55.7**	**-0.2**			
WVT	**Waverly**	**32.57**	**98**	IAMs_20	IAMs_20	11 54 14.6				
	comp=Z,2µm,19.0s									
WVT	**Waverly**	**32.57**	**98**	P	**P**	**11 39 57.2**	**+1.4**			
441A	**DeRidder**	**32.63**	**111**	IAMs_20	IAMs_20	11 54 16.4				
	comp=Z,3µm,20.0s									
O49A	**Covington**	**32.63**	**89**	P	**P**	**11 39 55.8**	**-0.5**			
O49A				IAmb	IAmb	11 40 15.8				
	comp=Z,30nm,0.9s									
O49A				IAMs_20	IAMs_20	11 53 21.7				
	comp=Z,4µm,19.0s									
R49A	**Shelbyville**	**33.08**	**92**	IAmb	IAmb	11 41 09.7				
	comp=Z,39nm,1.2s									
BUKO	**Buck Lake**	**33.42**	**77**	IAmb	IAmb	11 40 05.4				
	comp=Z,31nm,0.8s									
ACSO	**Alum Creek Sta**	**33.49**	**88**	IAmb	IAmb	11 40 11.5				
	comp=Z,28nm,0.9s									
ACSO				IAMs_20	IAMs_20	11 53 48.6				
	comp=Z,4µm,21.0s									
ZAIG	**Zacatecas**	**33.55**	**132**	IAmb	IAmb	11 40 07.4				
	comp=Z,42nm,1.4s									
VLDQ	**Val d'Or**	**33.61**	**72**	IAmb	IAmb	11 40 05.6				
	comp=Z,50nm,1.3s									
R50A	**Paris**	**33.64**	**92**	IAMs_20	IAMs_20	11 54 18.7				
	comp=Z,4µm,21.0s									
U49A	**Red Boiling Sp**	**33.69**	**95**	IAmb	IAmb	11 40 19.3				
	comp=Z,70nm,1.6s									
P51A	**Williamsport**	**33.83**	**89**	IAmb	IAmb	11 40 14.1				
	comp=Z,37nm,0.8s									
SADO	**Sadowa**	**33.87**	**78**	LR	LR	11 54 17.3				
	comp=Z,9µm,18.2s,baz=327,slow=37									
SADO	**Sadowa**	**33.87**	**78**	IAmb	IAmb	11 40 14.5				
	comp=Z,28nm,0.9s									
Q51A	**Peebles**	**33.89**	**90**	IAmb	IAmb	11 40 25.1				
	comp=Z,44nm,1.0s									
Q51A				IAMs_20	IAMs_20	11 54 27.1				
	comp=Z,4µm,20.0s									
X48A	**Hartselle**	**34.10**	**99**	IAmb	IAmb	11 40 27.8				
	comp=Z,29nm,1.3s									
Z47A	**Carrollton**	**34.22**	**102**	IAMs_20	IAMs_20	11 54 40.4				
	comp=Z,2µm,20.0s									
O52A	**Adamsville**	**34.31**	**87**	IAmb	IAmb	11 40 14.2				
	comp=Z,54nm,1.6s									
O52A				IAMs_20	IAMs_20	11 54 15.1				
	comp=Z,4µm,22.0s									
S51A	**Beatty

V55A Taylorsville 37.07 93 lAmb lAmb 11 40 49.8
comp=z,47nm,1.3s
GOGA Godfrey 37.07 98 P **P** **11 40 35.8 +1.1**
GOGA Godfrey 37.07 98 lAmb lAmb 11 40 41.8
comp=z,51nm,1.2s
GOGA Godfrey 37.07 98 lAMs_20 lAMs_20 11 56 24.7
comp=z,3µm,19.0s
BINY Binghamton 37.09 80 lAmb lAmb 11 40 40.1
comp=z,30nm,1.1s
P57A Homestead Farm 37.15 85 lAmb lAmb 11 40 43.1
comp=z,41nm,0.9s
N58A Sunbury 37.29 82 lAmb lAmb 11 40 41.7
comp=z,28nm,0.9s
U56A King 37.33 91 lAmb lAmb 11 40 55.0
comp=z,27nm,1.1s
U56A lAMs_20 lAMs_20 11 56 29.2
comp=z,3µm,18.0s
HODGE Hodges 37.35 96 lAmb lAmb 11 40 55.2
comp=z,41nm,1.2s
352A Blakely 37.36 101 lAmb lAmb 11 40 48.6
comp=z,55nm,1.1s
451A Vernon 37.40 103 lAMs_20 lAMs_20 11 57 00.7
comp=z,2µm,19.0s
KMSC Kings Mountain 37.41 94 lAmb lAmb 11 40 55.5
comp=z,68nm,1.2s
S57A Dark Hollow, R 37.47 88 lAMs_20 lAMs_20 11 56 13.8
comp=z,4µm,20.0s
PAGS Pennsylvania G 37.60 83 lAmb lAmb 11 40 44.1
comp=z,48nm,1.0s
SCHQ Schefferville 37.67 57 P **P** **11 40 40.6 +1.0**
comp=z,21nm,1.0s,baz=285,slow=7.7,SNR=8.2
SCHQ LR LR 11 56 29.5
comp=z,11µm,18.6s,baz=286,slow=37
comp=z,21nm,1.0s
SCHQ Schefferville 37.67 57 lAmb lAmb 11 40 51.7
comp=z,67nm,1.1s
MVL Millersville 37.97 83 lAmb lAmb 11 40 49.4
comp=z,22nm,0.9s
R58B Mineral 38.06 87 lAmb lAmb 11 40 51.5
comp=z,46nm,1.1s
UNM Universidad Na 38.13 130 lAMs_20 lAMs_20 11 58 17.2
comp=z,3µm,19.0s
LMQ La Malbaie 38.25 69 lAmb lAmb 11 40 52.5
comp=z,25nm,1.0s
CBN Corbin Frederi 38.26 87 lAMs_20 lAMs_20 11 55 59.7
comp=z,2µm,19.0s
BIRD Birdtown, Kers 38.28 94 lAmb lAmb 11 41 02.9
comp=z,58nm,1.1s
TRY Troy 38.33 78 lAmb lAmb 11 40 47.6
comp=z,61nm,1.5s
V58A Windy Hill, Pi 38.48 91 lAMs_20 lAMs_20 11 56 47.8
comp=z,3µm,21.0s
553A Crawfordville 38.53 102 lAMs_20 lAMs_20 11 57 47.5
comp=z,2µm,21.0s
KULLO Kullorsuaq 38.70 24 P **P** **11 40 50.0 +2.0**
LBNH Lisbon 38.72 75 lAmb lAmb 11 41 03.4
comp=z,53nm,1.8s
HNH Hanover 38.74 76 lAMs_20 lAMs_20 11 56 46.0
comp=z,4µm,21.0s
T59A Double "B" Far 38.83 88 lAmb lAmb 11 41 08.6
comp=z,113nm,1.7s
PAL Palisades 39.03 80 lAMs_20 lAMs_20 11 56 34.9
comp=z,2µm,22.0s
H62A Milan 39.05 74 lAmb lAmb 11 41 34.7
comp=z,63nm,1.8s
X58A Rowland 39.08 93 lAmb lAmb 11 41 12.9
comp=z,53nm,1.1s
ICQ Pointe Anglais 39.30 65 lAmb lAmb 11 40 55.9
comp=z,36nm,1.0s
I63A Otisfield 39.66 74 lAMs_20 lAMs_20 11 57 12.2
comp=z,3µm,20.0s
S61A Accomac 39.67 86 lAMs_20 lAMs_20 11 57 08.9
comp=z,2µm,21.0s
TLIG Tlapa 39.93 131 lAmb lAmb 11 41 00.5
comp=z,41nm,1.4s
NEEM North Greenlan 40.12 19 *i* P **P** **11 41 01.1 +0.9**
NEEM lAmb lAmb 11 41 05.4
comp=z,20nm,1.0s
V61A Roper 40.16 89 lAMs_20 lAMs_20 11 57 56.0
comp=z,3µm,19.0s
BATG Bathurst New B 40.98 68 P **P** **11 41 07.5 +0.2**
BATG lAmb lAmb 11 41 09.9
comp=z,35nm,1.1s
G65A Princeton 41.01 71 P **P** **11 41 08.4 +0.8**
ILULI Ilulissat 41.20 32 lAMs_20 lAMs_20 11 57 39.5
comp=z,2µm,21.0s
EMMW East Machias 41.31 72 P **P** **11 41 09.7 -0.3**
EMMW lAmb lAmb 11 41 17.3
comp=z,48nm,1.5s
SFJD Kangerlussuaq 41.91 35 LR LR 11 58 39.8
comp=z,2µm,18.9s,baz=281,slow=36
SFJD Kangerlussuaq 41.91 35 lAMs_20 lAMs_20 11 58 28.3
comp=z,2µm,20.0s
SEY Seymchan 43.18 319⇓ *i* P **P** **11 41 24.6 -0.4**
SEY pmax pmax
comp=z,8.0nm,0.9s
HAL Halifax 43.75 70 lAmb lAmb 11 41 49.7
comp=z,47nm,1.5s
SUMG Summit 44.28 26 P **P** **11 41 33.5 -0.8**
SUMG pmax pmax
comp=z,25nm,0.9s
SUMG Summit 44.28 26 P **P** **11 41 33.5 -0.8**
SUMG lAmb lAmb 11 41 50.3
comp=z,25nm,0.9s
SUMG Summit 44.28 26 *i* P **P** **11 41 35.9 +1.6**
SUMG lAmb lAmb 11 41 50.5
comp=z,31nm,1.0s
PETK Petropavlovsk- 44.35 304 P **P** **11 41 33.0 -1.6**
comp=z,4.3nm,0.8s,baz=68,slow=12,SNR=8.2
PETK LR LR 11 57 00.3
comp=z,493nm,21.4s,baz=71,slow=32
comp=z,4.3nm,0.8s
PETK Petropavlovsk- 44.35 304 P **P** **11 41 32.9 -1.6**
IVI Ivigtut 44.82 43 lAMs_20 lAMs_20 11 57 37.5
comp=z,2µm,20.0s
PETF Flores 45.09 121 P **P** **11 41 41.0 +0.1**
PETF lAmb lAmb 11 41 48.2
comp=z,19nm,1.0s
MA2 Magadan 45.15 315 *i* P **P** **11 41 40.4 -0.5**
MA2 pmax pmax
comp=z,21nm,1.7s
MA2 Magadan 45.15 315 P **P** **11 41 41.2 +0.4**
MA2 lAmb lAmb 11 42 14.5
comp=z,37nm,1.7s
HUEH Huehuetenango 45.48 124 P **P** **11 41 44.9 +0.6**
NRS Narsarsuaq 46.06 42 lAMs_20 lAMs_20 11 58 35.0
comp=z,2µm,18.0s
DAG Danmarks Havn 47.17 17 P **P** **11 41 58.3 +1.8**
DAG pmax pmax
comp=z,10.0nm,1.6s
DAG Danmarks Havn 47.17 17 *i* P **P** **11 41 57.0 +0.5**
DAG lAmb lAmb 11 42 00.2
comp=z,4.9nm,0.7s
MTO3 Montecristo 47.41 123 P **P** **11 41 59.7 +0.3**
MTO3 lAmb lAmb 11 42 26.9
comp=z,38nm,1.5s
TIXI Tiksi 47.89 335 LR LR 12 03 56.8
comp=z,996nm,20.4s,baz=56,slow=38
TIXI Tiksi 47.89 335*d* *i* P **P** **11 42 03.2 +1.0**
TIXI pmax pmax
comp=z,5.0nm,1.0s
TIXI Tiksi 47.89 335 P **P** **11 42 02.2 0.0**
TIXI lAmb lAmb 11 42 31.8
comp=z,12nm,1.1s
DBG Daneborg 48.19 20 *i* P **P** **11 42 04.7 +0.2**
DBG lAmb lAmb 11 42 10.2
comp=z,17nm,1.1s
SOEG Soedalen 48.27 30 *i* P P 11 42 14.0 +8.9
SOEG lAmb lAmb 11 42 16.9
comp=z,12nm,1.1s
SCO Scoresbysund 49.90 25 *i* P **P** **11 42 20.3 +2.7**
SCO lAmb lAmb 11 42 24.2
comp=z,6.5nm,1.3s
BBSR BB Station 50.04 84 P **P** **11 42 18.3 -0.9**
BBSR lAmb lAmb 11 42 24.0
comp=z,28nm,0.8s
BBSR BB Station 50.04 84 lAMs_20 lAMs_20 12 04 13.6
comp=z,2µm,18.0s
BOAB BOACO BROADBAN 51.07 120 P **P** **11 42 26.7 -0.4**
SPITS Spitsbergen Ar 51.31 9 P **P** **11 42 28.2 0.0**
SPITS pmax pmax
comp=z,86nm,1.8s
GTBY Guantanamo Bay 51.72 104 lAMs_20 lAMs_20 12 05 38.9
comp=z,1µm,21.0s
XMAS Kiritimati 52.75 217 lAMs_20 lAMs_20 12 05 35.1
comp=z,1µm,21.0s
JTS Las Juntas de 53.22 121 LR LR 12 07 10.2
comp=z,642nm,21.3s,baz=340,slow=38
BORG Borgarnes 53.54 31 LR LR 12 03 57.7
comp=z,810nm,19.6s,baz=315,slow=34
ASAJ Asahikawa 57.59 301 LR LR 12 07 20.3
comp=z,326nm,19.2s,baz=66,slow=35
H11N2 WAKE ISLAND Hy 58.40 264 T T 12 46 30.2
baz=44,slow=75,SNR=83
H11N3 WAKE ISLAND Hy 58.40 264 T T 12 46 28.5
baz=44,slow=75,SNR=101
H11N1 WAKE ISLAND Hy 58.42 264 T T 12 46 28.5
baz=44,slow=75,SNR=89
SJG San Juan 58.82 98 LR LR 12 08 57.1
comp=z,426nm,21.1s,baz=303,slow=36
NRIK Noril'sk 58.91 346 P **P** **11 43 23.4 +0.4**
comp=z,2.5nm,0.6s,baz=7.1,slow=3.7,SNR=4.4
NRIK LR LR 12 10 08.0
comp=z,820nm,20.4s,baz=31,slow=37
comp=z,2.5nm,0.6s
NRIK Noril'sk 58.91 346 *i* P **P** **11 43 23.5 +0.4**
NRIK pmax pmax
comp=z,10.0nm,1.0s
NRIK Noril'sk 58.91 346 P **P** **11 43 22.9 -0.2**
NRIK lAmb lAmb 11 43 39.6
comp=z,20nm,1.4s
ZEA Zeya 59.13 318 *eP* **P** **11 43 23.5 -1.3**
H11S1 WAKE ISLAND Hy 59.41 263 T T 12 47 48.8
baz=47,slow=75,SNR=12
H11S2 WAKE ISLAND Hy 59.42 263 T T 12 47 48.6
baz=47,slow=75,SNR=21
H11S3 WAKE ISLAND Hy 59.43 263 T T 12 47 51.9
baz=47,slow=75,SNR=8.1
ARCES ARCESS Array B 60.27 10 LR LR 12 11 05.9
comp=z,908nm,19.7s,baz=310,slow=38
SMRT St. Maarten 60.87 96 lAMs_20 lAMs_20 12 09 39.0
comp=z,2µm,22.0s
SABA Saba 61.07 96 lAMs_20 lAMs_20 12 10 08.4
comp=z,838nm,20.0s
HEH HeiHe 61.41 315 *eP* **P** **11 43 37.3 -3.2**
HEH pmax pmax
comp=z,8.0nm,1.2s
ANWB Willy Bob 61.99 95 lAMs_20 lAMs_20 12 11 38.7
comp=z,870nm,20.0s
LVZ Lovozero 62.75 7 *i* P **P** **11 43 51.1 +1.8**
LVZ pmax pmax
comp=z,36nm,1.8s
GDHS Morne Mazeau, 63.02 96 lAMs_20 lAMs_20 12 10 42.6
comp=z,1µm,21.0s
ABD La Joyeuse, An 63.05 96 lAMs_20 lAMs_20 12 15 58.8
comp=z,975nm,20.0s
CBE Ff, Capester 63.27 96 lAMs_20 lAMs_20 12 11 32.5
comp=z,1µm,21.0s
USA0B Ussuriysk Arra 63.29 307 *i* P **P** **11 43 56.5 +3.3**
USRK Ussuriysk Ar. 63.29 307 P **P** **11 43 52.6 -0.6**
comp=z,1.8nm,0.7s,baz=69,slow=9.4,SNR=2.2
comp=z,1.8nm,0.7s
USRK Ussuriysk Ar. 63.29 307 P **P** **11 43 51.7 -1.6**
MAGL Barre de l'ile 63.57 96 lAMs_20 lAMs_20 12 10 38.5
comp=z,1µm,20.0s
ROSC El Rosal 63.78 115 LR LR 12 15 01.2
comp=z,341nm,18.7s,baz=357,slow=39
ROSC El Rosal 63.78 115 P **P** **11 43 56.1 -1.2**
ROSC pmax pmax
comp=z,29nm,1.0s
ROSC El Rosal 63.78 115 P **P** **11 43 56.1 -1.2**
BNX BinXian 64.56 311⇑ P **P** **11 44 00.3 -1.2**
BNX S **S** **11 52 40.0 -0.1**
BNX pmax pmax
comp=z,5.0nm,0.7s
BNX L L
comp=z,330nm,21.4s
BNX L L
comp=z,580nm,22.3s
BNX L L
comp=z,650nm,26.0s
OTAV Otavalo 65.12 122 P **P** **11 44 06.4 +0.4**
OTAV pmax pmax
comp=z,19nm,1.1s
OTAV Otavalo 65.12 122 P **P** **11 44 06.4 +0.4**
OTAV lAmb lAmb 11 44 31.5
comp=z,19nm,1.1s
HILR Hailar Array B 65.39 318 LR LR 12 11 45.4
comp=z,530nm,20.1s,baz=45,slow=35
NOA NORSAR Array B 65.70 20 P **P** **11 44 10.0 +1.2**
comp=z,1.8nm,0.9s,baz=333,slow=6.8,SNR=2.5
NOA LR LR 12 12 07.8
comp=z,437nm,18.3s,baz=315,slow=35
comp=z,1.8nm,0.9s
CN2 Changchun 66.92 311 P **P** **11 44 15.3 -1.5**
CN2 pmax pmax
comp=z,10.0nm,0.6s
HFS Hagfors 67.06 19 P **P** **11 44 18.3 +0.9**
comp=z,6.1nm,0.9s,baz=58,slow=5.6,SNR=4.2
comp=z,6.1nm,0.9s
FINES FINESS Array B 68.07 13 P **P** **11 44 23.4 -0.3**
comp=z,3.0nm,0.9s,baz=354,slow=5.6,SNR=1.5
FINES LR LR 12 16 05.0
comp=z,537nm,18.6s,baz=310,slow=38
comp=z,3.0nm,0.9s
FINES FINESS Array B 68.07 13 P **P** **11 44 23.1 -0.7**
JCJ Chichijima 69.28 288 LR LR 12 11 16.1
comp=z,194nm,18.8s,baz=112,slow=33
TLY Talaya 70.07 328 *i* P **P** **11 44 36.3 -0.1**
TLY pmax pmax
comp=z,3.0nm,0.9s
KLMR Klimovskoe 70.08 6 *eP* **P** **11 44 35.1 -1.1**
KLMR *e* 11 44 57.0
KLMR pmax pmax
comp=z,38nm,1.4s
KLMR MLR MLR
comp=z,762nm,17.0s
KSRS Korea Array 70.25 305 P **P** **11 44 35.3 -2.3**
comp=z,0.7nm,0.6s,baz=47,slow=7.4,SNR=4.3
KSAR Wonju Array Be 70.28 305 P **P** **11 44 36.3 -1.5**
KSAR Wonju Array Be 70.28 305 P **P** **11 44 36.3 -1.5**
HLG Helgoland 70.94 25 *eP* **P** **11 44 41.1 -0.4**
comp=z,159nm,1.1s,baz=333,slow=5.9,SNR=1.2
ULN Ulaanbaatar 71.97 324⇑ *i* P **P** **11 44 49.6 +1.5**
SONM Songino Array 72.25 324 P **P** **11 44 49.8 0.0**
comp=z,0.9nm,0.4s,baz=60,slow=12,SNR=4.2
SONM LR LR 12 15 52.4
comp=z,969nm,20.8s,baz=20,slow=35
comp=z,0.9nm,0.4s
SONM Songino Array 72.25 324 P **P** **11 44 50.1 +0.3**
SONM pmax pmax
comp=z,6.0nm,1.2s
SONM Songino Array 72.25 324 P **P** **11 44 50.1 +0.3**
DL2 Dalian 72.48 309 P **P** **11 44 49.1 -2.0**
DL2 S **S** **11 54 07.9 -6.5**
DL2 pmax pmax
comp=z,16nm,1.3s
DL2 pmax pmax
comp=z,180nm,4.8s
DL2 L L
comp=z,400nm,19.4s
DL2 L L
comp=z,540nm,17.8s
DL2 L L
comp=z,400nm,16.7s
RETH Rethem/Aller, 72.63 25 *eP* **P** **11 44 53.0 +1.3**
comp=z,33nm,1.5s,baz=333,slow=5.9,SNR=3.2
KIRV Kirov 72.73 1 P **P** **11 44 53.0 +0.8**
comp=z,6.4nm,0.6s,baz=335,slow=7.2,SNR=4.7
KIRV LR LR 12 19 36.4
comp=z,276nm,20.8s,baz=356,slow=38
comp=z,6.4nm,0.6s
KIRV Kirov 72.73 1 *eP* **P** **11 44 54.1 +1.9**
AFI Afiamalu 73.17 223 LR LR 12 10 56.6
comp=z,410nm,21.5s,baz=240,slow=31
BMRD Maredsous 73.41 29 *dP* **P** **11 44 57.1 +0.7**
BCLA Clavier 73.48 28 *dP* **P** **11 44 58.3 +1.5**
ZALV Zalesovo Beam 73.48 340 P **P** **11 44 55.6 -1.1**
comp=z,0.9nm,0.6s,baz=19,slow=5.3,SNR=6.3
ZALV LR LR 12 19 11.6
comp=z,733nm,20.2s,baz=33,slow=37
comp=z,0.9nm,0.6s
PATS Pohnpei 73.50 261 lAMs_20 lAMs_20 12 14 50.6
comp=z,967nm,21.0s
CLZ Clausthal 73.72 25 *eP* **P** **11 44 59.8 +1.5**
comp=z,13nm,1.2s,baz=333,slow=5.9,SNR=3.0
BOAV Boa Vista 74.22 105 P **P** **11 45 01.8 +0.1**
BJI2 Beijing 74.31 314 P **P** **11 45 00.0 -1.9**
BJI2 pmax pmax
comp=z,2.0nm,0.7s
BJI2 L L
comp=z,350nm,19.2s
BJI2 L L
comp=z,240nm,20.2s
UBBA Unterbreizbach 74.53 26 *eP* **P** **11 45 04.2 +1.4**
comp=z,77nm,2.4s,baz=333,slow=5.9,SNR=2.5
TNS Taunus Mts 74.61 27 *eP* **P** **11 45 04.5 +1.0**
comp=z,8.9nm,1.3s,baz=333,slow=5.9,SNR=1.6
ARTI Arti 74.76 356 LR LR 12 20 19.4
comp=z,353nm,19.6s,baz=10.0,slow=38
ARTI Arti 74.76 356*c* *i* P **P** **11 45 04.2 0.0**
ARTI 11 45 21.1
ARTI S **S** **11 54 41.0 +1.3**
ARTI SS **SS** **11 59 22.6 -3.3**
ARTI pmax pmax
comp=z,16nm,1.6s
ARTI Arti 74.76 356 P **P** **11 45 03.8 -0.5**
ARTI lAmb lAmb 11 45 09.7
comp=z,10nm,0.7s
CZSB Cruzeiro do Su 74.88 121 P **P** **11 45 05.5 +0.1**
CZSB lAmb lAmb 11 45 19.7
comp=z,35nm,1.2s
CLL Collm 74.91 24 *eP* **P** **11 45 07.0 +1.9**
CLL pmax pmax
comp=z,26nm,1.9s
CLL Collm 74.91 24 P **P** **11 45 03.5 -1.6**
CLL Collm 74.91 24 *eP* **P** **11 45 07.2 +2.1**
comp=z,18nm,1.6s,baz=333,slow=5.9,SNR=2.0
CLL Collm 74.91 24 *eP* **P** **11 45 07.0 +1.9**
comp=z,26nm,1.9s
CLL *ex* x 11 45 14.0
comp=z,20nm,1.7s
CLL AMS AMS 12 16 00.0
comp=z,600nm,21.1s
MOS Moscow 75.00 8 *eP* P 11 45 12.3 +6.7
RAR Rarotonga 75.11 210 LR LR 12 11 30.0
comp=z,401nm,18.8s,baz=205,slow=30
MOX Moxa 75.14 25 *eP* **P** **11 45 07.8 +1.3**
comp=z,8.3nm,1.2s,baz=333,slow=5.9,SNR=2.6
MOX *eL* L 12 16 13.2
comp=z,778nm,21.6s
PLN Plauen 75.43 24 *eP* **P** **11 45 09.9 +1.8**
comp=z,1.4nm,0.9s,baz=333,slow=5.9,SNR=1.4
OBN Obninsk 75.52 9 LR LR 12 20 34.6
comp=z,569nm,18.9s,baz=352,slow=37
OBN Obninsk 75.52 8*d* *eP* **P** **11 45 10.0 +1.4**
OBN *e* 11 45 21.4
OBN *e* 11 47 55.2
OBN *eP* PPP 11 49 44.8
OBN pmax pmax
comp=z,8.0nm,0.8s
OBN MLR MLR
comp=z,672nm,19.0s
BRG Berggiesshubel 75.55 23 *eP* **P** **11 45 10.7 +1.8**
comp=z,37nm,2.0s,baz=333,slow=5.9,SNR=2.7
BRG Berggiesshubel 75.55 23 *eP* **P** **11 45 11.0 +2.1**
BRG Amp 11 45 14.3
comp=z,4.6nm,0.8s
BRG Berggiesshubel 75.55 23 P P 11 45 18.0 +9.1
BRG Amp 11 45 19.6
comp=z,6.1nm,0.9s
HHC Hu-ho-hao-te 75.78 317 *eP* **P** **11 45 10.4 -0.1**
HHC pmax pmax
comp=z,6.0nm,0.7s
HHC pmax pmax
comp=z,62nm,4.2s
GRF Grafenberg Arr 75.89 25 *eP* **P** **11 45 12.9 +2.0**
comp=z,28nm,1.5s,baz=333,slow=5.9,SNR=1.4
GRF *eL* L 12 17 43.7
comp=z,946nm,20.7s
GRFO Grafenberg 75.89 25 lAMs_20 lAMs_20 12 17 44.3
comp=z,1µm,20.0s
ECH Echery 75.99 28 P **P** **11 45 13.3 +1.8**
ROTZ Rotzenmuhle 76.09 25 *eP* **P** **11 45 12.7 +0.7**
baz=333,slow=5.9,SNR=1.8
STU Stuttgart 76.12 27 lAMs_20 lAMs_20 12 17 40.6
comp=z,675nm,19.0s
KSP Ksiaz 76.17 22 P **P** **11 45 13.5 +1.1**
comp=z,609nmcomp=z,11nm,1.5s
BFO Black Forest 76.25 28 *eP* **P** **11 45 14.1 +1.2**
comp=z,10nm,1.2s,baz=333,slow=5.9,SNR=3.2
BTO2 Baotou 76.61 318 *eP* **P** **11 45 16.1 +0.8**
BTO2 sP **pwP** **11 45 23.6 +0.7**
BTO2 PP **PP** **11 48 07.9 +1.0**
BTO2 S **S** **11 55 03.0 +2.0**
BTO2 pmax pmax
comp=z,14nm,0.6s
BTO2 pmax pmax
comp=z,490nm,7.4s
BTO2 L L
comp=z,2µm,16.3s
BTO2 L L
comp=z,3µm,16.3s
BTO2 L L
comp=z,1µm,16.2s
DPC Dobruska-Polom 76.63 22 P **P** **11 45 16.2 +1.1**
comp=z,2µmcomp=z,9.1nm,1.5s
PVIS Viseu 76.68 42 *eP* **P** **11 45 16.5 +1.0**
DGZ Jazzator, Alta 76.76 337 *i* P **P** **11 45 16.1 +0.1**
DGZ pmax pmax
comp=z,13nm,1.9s
WET Wettzell 76.84 25 *eP* **P** **11 45 16.4 +0.2**
comp=z,27nm,2.1s,baz=333,slow=5.9,SNR=1.6
PCAS Casmilo, Conde 76.95 43 *eP* **P** **11 45 18.2 +1.2**
PCAS *i* lAmb lAmb 11 45 47.5
comp=z,44nm,1.5s
BORK Borovoye 76.97 348 *i* P **P** **11 45 17.9 +1.0**
BORK pmax pmax
comp=z,11nm,1.1s
BORK Borovoye 76.97 348 lAMs_20 lAMs_20 12 23 56.6
comp=z,664nm,19.0s
BVAR Borovoye Array 76.98 348 P **P** **11 45 18.2 +1.3**
comp=z,1.2nm,0.6s,baz=48,slow=2.1,SNR=1.7
comp=z,1.2nm,0.6s
KHC Kasperske Hory 77.04 24⇑ *i* P **P** **11 45 19.3 +1.9**
KHC pmax pmax
comp=z,5.0nm,1.3s
KHC Kasperske Hory 77.04 24 P **P** **11 45 17.7 +0.3**
KHC Kasperske Hory 77.04 24 P **P** **11 45 18.5 +1.1**
comp=z,7.8nm,1.5s
HNS HongShan 77.08 313⇑ P P 11 45 23.0 +5.3
HNS pmax pmax
comp=z,8.0nm,1.1s
MTE Manteigas 77.09 42 *eP* **P** **11 45 17.4 -0.5**
MTE *i* lAmb lAmb 11 45 37.1
comp=z,23nm,1.6s
MDP Montagnes des 77.26 97 LR LR 12 24 44.5
comp=z,331nm,18.2s,baz=336,slow=40
GUMO Guam 77.32 276 LR LR 12 14 48.7
comp=z,211nm,20.0s,baz=94,slow=32
GEC2 GERESS Array S 77.34 24 *eP* **P** **11 45 20.0 +0.8**
comp=z,26nm,2.0s,baz=333,slow=5.9,SNR=2.9
GERES GERESS Array B 77.34 24 P **P** **11 45 19.0 -0.2**
comp=z,1.4nm,0.9s,baz=332,slow=5.3,SNR=5.7
comp=z,1.4nm,0.9s
GERES GERESS Array B 77.34 24 P **P** **11 45 18.9 -0.3**
MORC Moravsky Berou 77.46 21 *eP* **P** **11 45 20.9 +1.1**
PCBR Castelo Branco 77.58 42 *eP* **P** **11 45 23.9 +3.4**
PCBR *i* lAmb lAmb 11 45 39.6
comp=z,26nm,1.9s
DAVA Damuels 77.66 27 *ep* P **P** **11 45 24.6 +3.6**
comp=z,15nm,1.7s
VRAC Vranov 77.66 22 P **P** **11 45 21.2 +0.3**
comp=z,1.9nm,0.5s,baz=328,slow=6.3,SNR=6.2
comp=z,1.9nm,0.5s
VRAC Vranov 77.66 22 *eP* **P** **11 45 22.1 +1.2**
RNPP9 Sopachiv 77.66 16 P **P** **11 45 22.0 +1.2**
RNPP8 Varash 77.73 16 P **P** **11 45 22.4 +1.2**
RETA Reutte 77.74 27 *ep* P **P** **11 45 25.6 +4.2**
comp=z,5.6nm,1.1s
KURK Kurchatov 77.84 342 *i* P **P** **11 45 22.3 +0.5**
KURK pmax pmax
comp=z,13nm,1.9s
KURK Kurchatov 77.84 342 P **P** **11 45 21.2 -0.5**
RNPP5 Staryi Chortor 77.84 16 P **P** **11 45 23.0 +1.2**
KRUC Moravsky 77.84 22 *eP* **P** **11 45 23.7 +1.9**
RPN Rapa Nui 77.84 162 LR LR 12 11 54.4
comp=z,176nm,20.9s,baz=24,slow=30
KURBB Kurchatov Arra 77.94 342 P **P** **11 45 21.4 -0.9**
comp=z,1.5nm,0.7s,baz=16,slow=5.6,SNR=9.1
comp=z,1.5nm,0.7s
MOTA Moosalm 77.97 26 *ep* P P 11 45 27.9 +5.1
comp=z,6.2nm,1.0s
RJOB Jochberg 78.10 25 *eP* **P** **11 45 24.5 +1.1**
baz=333,slow=5.9,SNR=2.4
DAVOX Davos/Dischmat 78.11 27 P **P** **11 45 25.3 +1.6**
comp=z,1.8nm,0.5s,baz=336,slow=3.1,SNR=7.0
DAVOX LR LR 12 19 28.8
comp=z,683nm,19.7s,baz=324,slow=35
comp=z,1.8nm,0.5s

SQTA	**Sankt Quirin**	**78.11**	**26**	*ep*P	**P**	**11 45 27.8**	**+4.2**
	comp=Z,7.3nm,1.0s						
WATA	**Walderalm**	**78.12**	**26**	*ep*P	**P**	**11 45 27.9**	**+4.3**
	comp=Z,20nm,1.4s						
FETA	**Feichten**	**78.15**	**27**	*ep*P	P	11 45 28.6	+4.8
	comp=Z,11nm,1.2s						
PARRA	**Arraiolos**	**78.16**	**43**	*e*P	**P**	**11 45 24.6**	**+0.8**
PARRA				*i* IAmb	IAmb	11 45 34.6	
	comp=Z,26nm,1.5s						
WTTA	**Wattenberg**	**78.20**	**26**	*ep*P	**P**	**11 45 28.2**	**+4.2**
	comp=Z,16nm,1.5s						
TUE	**Stuetta**	**78.23**	**28**	P	**P**	**11 45 23.5**	**-0.8**
TUE				IAmb	IAmb	11 45 35.3	
	comp=Z,34nm,1.9s						
TUE	**Stuetta**	**78.23**	**28**	P	**P**	**11 45 25.3**	**+1.0**
	comp=Z,26nm,1.2s						
LESA	**Schwarzleotal**	**78.35**	**25**	*ep*P	**P**	**11 45 27.9**	**+3.1**
	comp=Z,8.6nm,1.7s						
NIE	**Niedzica**	**78.44**	**20**	P	**P**	**11 45 26.6**	**+1.4**
WINA	**Alland / Wiene**	**78.64**	**23**	*ep*P	**P**	**11 45 30.7**	**+4.4**
	comp=Z,5.1nm,0.9s						
CONA	**Conrad Observa**	**78.75**	**23**	*ep*P	**P**	**11 45 28.9**	**+1.9**
	comp=Z,3.4nm,1.1s						
AK21	**Malin Array Si**	**78.81**	**14**	P	**P**	**11 45 28.8**	**+1.7**
AK22	**Malin Array Si**	**78.83**	**14**	P	**P**	**11 45 28.7**	**+1.5**
AK20	**Malin Array Si**	**78.84**	**14**	P	**P**	**11 45 28.9**	**+1.6**
CEST	**Esterri de Car**	**78.85**	**35**	P	**P**	**11 45 27.1**	**-0.5**
KBA	**Koelnbreinsper**	**78.85**	**25**	*ep*P	**P**	**11 45 31.5**	**+3.8**
	comp=Z,9.7nm,1.0s						
AK19	**Malin Array Si**	**78.86**	**14**	P	**P**	**11 45 28.8**	**+1.4**
AK18	**Malin Array Si**	**78.87**	**14**	P	**P**	**11 45 28.9**	**+1.5**
AK04	**Malin Array Si**	**78.88**	**14**	P	**P**	**11 45 29.0**	**+1.5**
AK03	**Malin Array Si**	**78.89**	**14**	P	**P**	**11 45 29.0**	**+1.4**
AK17	**Malin Array Si**	**78.90**	**14**	P	**P**	**11 45 29.1**	**+1.5**
BELG	**Belogornoye**	**78.91**	**2**	P	**P**	**11 45 30.1**	**+2.5**
	comp=Z,10nm,0.5s,baz=154,slow=7.6,SNR=5.6						
BELG				LR	LR	12 27 02.5	
	comp=Z,277nm,18.8s,baz=316,slow=41						
	comp=Z,10nm,0.5s						
BELG	**Belogornoye**	**78.91**	**2**	*i* P	**P**	**11 45 28.9**	**+1.3**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKASG	**Malin Array Be**	**78.91**	**14**	P	**P**	**11 45 29.5**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=352,slow=5.8,SNR=7.6						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**78.91**	**14**	P	**P**	**11 45 26.8**	**-0.9**
AKBB	**Malin Array Si**	**78.91**	**14**	*i* P	**P**	**11 45 27.4**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,13nm,2.0s						
AKBB	**Malin Array Si**	**78.91**	**14**	P	**P**	**11 45 26.3**	**-1.4**
AKBB				IAmb	IAmb	11 45 55.7	
	comp=Z,17nm,1.4s						
AKBB	**Malin Array Si**	**78.91**	**14**	P	**P**	**11 45 29.1**	**+1.4**
KIEV	**Kiev**	**78.92**	**14**	IAMs_20	IAMs_20	12 17 17.9	
	comp=Z,730nm,21.0s						
KIEV	**Kiev**	**78.92**	**14**	P	**P**	**11 45 29.1**	**+1.4**
	comp=Z,6µmcomp=Z,29nm,1.0s						
ABTA	**Abfaltersbach**	**78.92**	**26**	*ep*P	**P**	**11 45 32.0**	**+4.0**
	comp=Z,0.2nm,0.2s						
AK01	**Malin Array Si**	**78.92**	**14**	P	**P**	**11 45 29.2**	**+1.5**
AK16	**Malin Array Si**	**78.92**	**14**	P	**P**	**11 45 29.2**	**+1.4**
AK11	**Malin Array Si**	**78.92**	**14**	P	**P**	**11 45 29.2**	**+1.4**
AK02	**Malin Array Si**	**78.95**	**14**	P	**P**	**11 45 29.4**	**+1.5**
AK12	**Malin Array Si**	**78.96**	**14**	P	**P**	**11 45 29.4**	**+1.5**
AK14	**Malin Array Si**	**78.96**	**14**	P	**P**	**11 45 29.4**	**+1.4**
AK08	**Malin Array Si**	**78.98**	**14**	P	**P**	**11 45 29.5**	**+1.4**
AK05	**Malin Array Si**	**78.99**	**14**	P	**P**	**11 45 29.6**	**+1.5**
AK10	**Malin Array Si**	**79.02**	**14**	P	**P**	**11 45 29.7**	**+1.4**
RONA	**Rosalia, Austr**	**79.08**	**23**	*ep*P	**P**	**11 45 30.8**	**+2.0**
	comp=Z,2.8nm,0.9s						
PBAR	**Barrancos**	**79.14**	**43**	*e*P	**P**	**11 45 33.0**	**+3.8**
PBAR				*i* IAmb	IAmb	11 45 58.9	
	comp=Z,19nm,1.9s						
SESA	**Seetaler Alpe,**	**79.16**	**24**	*ep*P	**P**	**11 45 31.3**	**+1.8**
	comp=Z,24nm,1.2s						
NJ2	**Nanjing**	**79.19**	**307**	*e*P	**P**	**11 45 31.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,28nm,0.5s						
ESDC	**Sonseca Array**	**79.23**	**40**	P	**P**	**11 45 30.3**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=317,slow=5.2,SNR=16						
	comp=Z,3.8nm,0.9s						
ESDC	**Sonseca Array**	**79.23**	**40**	P	**P**	**11 45 29.5**	**-0.2**
ARSA	**Arzberg**	**79.29**	**24**	P	**P**	**11 45 29.6**	**-0.2**
ARSA				IAmb	IAmb	11 45 53.7	
	comp=Z,37nm,1.9s						
ARSA	**Arzberg**	**79.29**	**24**	*ep*P	**P**	**11 45 33.3**	**+3.4**
	comp=Z,7.5nm,1.1s						
MYKA	**Terra Mystica**	**79.35**	**25**	*ep*P	**P**	**11 45 33.7**	**+3.4**
	comp=Z,1.5nm,0.5s						
ZSN	**Zaisan**	**79.49**	**337**	*e*P	**P**	**11 45 33.5**	**+2.5**
ZSN	**Zaisan**	**79.49**	**337**	*e*P	**P**	**11 45 33.5**	**+2.5**
SOKA	**Soboth**	**79.69**	**24**	*ep*P	**P**	**11 45 33.6**	**+1.4**
	comp=Z,11nm,1.8s						
OBKA	**Obir**	**79.71**	**25**	*ep*P	**P**	**11 45 35.2**	**+3.0**
	comp=Z,4.3nm,0.9s						
MPLH	**Magyarpolny**	**79.88**	**22**	P	**P**	**11 45 34.5**	**+1.4**
	comp=Z,3µmcomp=Z,25nm,1.1s						
AKTO	**Aktyubinsk**	**80.72**	**355**	P	**P**	**11 45 38.4**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=311,slow=3.6,SNR=7.8						
AKTO				LR	LR	12 24 17.6	
	comp=Z,363nm,19.9s,baz=358,slow=38						
	comp=Z,3.9nm,0.8s						
MKAR	**Makanchi Array**	**80.74**	**339**	P	**P**	**11 45 38.5**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=18,slow=5.8,SNR=4.7						
MKAR				LR	LR	12 23 12.5	
	comp=Z,729nm,21.6s,baz=3.5,slow=37						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**80.74**	**339**	P	**P**	**11 45 37.7**	**-0.1**
MORH	**Mrgy, Hungar**	**81.05**	**22**	P	**P**	**11 45 40.6**	**+1.3**
	comp=Z,11nm,1.5s						
MSVF	**Nonsavu**	**81.35**	**230**	LR	LR	12 13 55.5	
	comp=Z,736nm,20.3s,baz=18,slow=30						
AB31	**Akbulak array**	**81.78**	**354**	P	**P**	**11 45 42.8**	**-0.4**
AB31				IAmb	IAmb	11 45 50.0	
	comp=Z,15nm,1.2s						
ABKAR	**Akbulak array**	**81.78**	**354**	P	**P**	**11 45 42.8**	**-0.4**
BLY	**Banja Luka**	**82.04**	**24**	IAMs_20	IAMs_20	12 28 36.9	
	comp=Z,709nm,22.0s						
WMQ	**Urumqi**	**82.08**	**334**	*e*P	**P**	**11 45 48.9**	**+4.0**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				L	L		
	comp=Z,500nm,18.5s						
WMQ				L	L		
	comp=Z,520nm,20.9s						
WMQ				L	L		
	comp=Z,770nm,24.5s						
MURB	**Monte Urbino**	**82.09**	**27**	P	**P**	**11 45 45.4**	**+0.3**
MURB				IAmb	IAmb	11 46 16.5	
	comp=Z,15nm,0.9s						
FDMO	**Fiordimonte**	**82.47**	**27**	P	**P**	**11 45 46.5**	**-0.4**
FDMO				IAmb	IAmb	11 46 11.5	
	comp=Z,16nm,1.1s						
XAN	**Xi'an**	**82.55**	**315**	P	**P**	**11 45 46.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TDK	**Taldyqorghan**	**83.32**	**341**	*e*P	**P**	**11 45 53.7**	**+2.4**
TDK	**Taldyqorghan**	**83.32**	**341**	*e*P	**P**	**11 45 53.8**	**+2.4**
MLR	**Muntele Rosu**	**83.36**	**17**	LR	LR	12 21 56.8	
	comp=Z,793nm,18.2s,baz=338,slow=35						
BTLS	**Baital**	**84.15**	**344**	*e*P	**P**	**11 45 58.1**	**+2.6**
BTLS	**Baital**	**84.15**	**344**	*e*P	**P**	**11 45 58.2**	**+2.6**
LPAZ	**La Paz**	**84.42**	**123**	P	**P**	**11 45 57.0**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=359,slow=3.5,SNR=13						
LPAZ				LR	LR	12 25 55.5	
	comp=Z,329nm,19.8s,baz=338,slow=37						
	comp=Z,3.8nm,0.7s						
LPAZ	**La Paz**	**84.42**	**123**	P	**P**	**11 45 56.7**	**-1.2**
LPAZ				IAmb	IAmb	11 46 10.5	
	comp=Z,10nm,0.9s						
MD01	**Midelt array s**	**84.57**	**44**	P	**P**	**11 45 58.0**	**-0.1**
KPKS	**Kokpek**	**84.72**	**340**	*e*P	**P**	**11 46 01.1**	**+2.6**
KPKS	**Kokpek**	**84.72**	**340**	*e*P	**P**	**11 46 01.2**	**+2.6**
PDG	**Podgorica**	**84.75**	**23**	IAMs_20	IAMs_20	12 28 19.6	
	comp=Z,700nm,19.0s						
SHLS	**Shalkode**	**84.83**	**339**	*e*P	**P**	**11 46 01.1**	**+1.9**
SHLS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHLS	**Shalkode**	**84.83**	**339**	*e*P	**P**	**11 46 01.2**	**+1.9**
	comp=Z,4.8nm,1.1s						
HNR	**Honiara**	**84.91**	**249**	LR	LR	12 17 28.2	
	comp=Z,48nm,20.1s,baz=146,slow=31						
HNR	**Honiara**	**84.91**	**249**	IAMs_20	IAMs_20	12 17 37.8	
	comp=Z,971nm,20.0s						
UZB	**Uzynbulak**	**84.94**	**340**	*e*P	**P**	**11 46 02.1**	**+2.3**
UZB	**Uzynbulak**	**84.94**	**340**	*e*P	**P**	**11 46 02.1**	**+2.3**
SATY	**Saty**	**85.17**	**340**	*e*P	**P**	**11 46 03.0**	**+2.1**
SATY				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SATY	**Saty**	**85.17**	**340**	*e*P	**P**	**11 46 03.0**	**+2.1**
	comp=Z,5.0nm,1.7s						
AAA	**Alma-Ata**	**85.35**	**341**	*e*P	**P**	**11 46 04.4**	**+2.7**
AAA	**Alma-Ata**	**85.35**	**341**	*e*P	**P**	**11 46 04.4**	**+2.7**
MDOK	**Medeo**	**85.36**	**341**	*e*P	**P**	**11 46 04.2**	**+2.3**
MDOK	**Medeo**	**85.36**	**341**	*e*P	**P**	**11 46 04.2**	**+2.3**
TNSS	**Tian-Shan**	**85.51**	**341**	*e*P	**P**	**11 46 05.1**	**+2.2**
TNSS	**Tian-Shan**	**85.51**	**341**	*e*P	**P**	**11 46 05.1**	**+2.2**
SGDS	**Sogindy**	**85.58**	**343**	*e*P	**P**	**11 46 05.4**	**+2.5**
KRVT	**Keravat (AS076**	**85.99**	**259**	LR	LR	12 18 37.7	
	comp=Z,125nm,20.2s,baz=344,slow=32						
GOF	**Gofitskoye**	**86.03**	**6**	*c*eP	**P**	**11 46 06.9**	**+1.9**
AAK	**Ala-Archa**	**86.39**	**343**	LR	LR	12 28 06.2	
	comp=Z,338nm,20.2s,baz=356,slow=38						
AAK	**Ala-Archa**	**86.39**	**343**	⇑*i*P	**P**	**11 46 07.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GO01	**Chusmiza**	**86.59**	**125**	IAMs_20	IAMs_20	12 16 29.2	
	comp=Z,633nm,18.0s						
GOMU	**GeErMu**	**86.62**	**326**	P	**P**	**11 46 06.5**	**-2.0**
GOMU				pP	PcP	11 46 09.8	-1.1
GOMU				S	**SKSac**	**11 56 41.1**	**+6.2**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GOMU				L	L		
	comp=Z,420nm,20.8s						
GOMU				L	L		
	comp=Z,780nm,21.8s						
KKAR	**Karatay Array**	**86.65**	**346**	P	**P**	**11 46 07.9**	**-0.2**
KKAR	**Karatay Array**	**86.65**	**346**	P	**P**	**11 46 07.9**	**-0.2**
DZA	**Taraz**	**86.72**	**345**	*e*P	**P**	**11 46 10.9**	**+2.5**
DZA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DZA	**Taraz**	**86.72**	**345**	*e*P	**P**	**11 46 10.9**	**+2.5**
	comp=Z,5.0nm,0.5s						
WUS	**Wushi**	**86.75**	**339**	IAMs_20	IAMs_20	12 26 37.9	
	comp=Z,536nm,20.0s						
BRLS	**Borolday**	**86.83**	**346**	*e*P	**P**	**11 46 12.8**	**+3.8**
BRLS	**Borolday**	**86.83**	**346**	*e*P	**P**	**11 46 12.8**	**+3.8**
TIP	**Timpagrande**	**87.10**	**26**	IAMs_20	IAMs_20	12 29 11.8	
	comp=Z,935nm,22.0s						
KIV	**Kislovodsk**	**87.11**	**6**	*e*P	**P**	**11 46 13.3**	**+2.9**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,368nm,20.0s						
KBZ	**Khabaz**	**87.35**	**6**	P	**P**	**11 46 11.2**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=337,slow=4.4,SNR=7.6						
KBZ				LR	LR	12 28 40.8	
	comp=Z,625nm,19.5s,baz=328,slow=38						
	comp=Z,3.8nm,0.9s						
KBZ	**Khabaz**	**87.35**	**6**	*i* P	**P**	**11 46 12.9**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CD2	**Chengdu**	**87.54**	**317**	P	**P**	**11 46 11.8**	**-0.8**
CHM	**Chimkent**	**87.56**	**346**	*e*P	**P**	**11 46 14.8**	**+2.3**
CHM	**Chimkent**	**87.56**	**346**	*e*P	**P**	**11 46 14.9**	**+2.3**
IUG	**Iuzhnay**	**87.66**	**346**	*e*P	**P**	**11 46 15.5**	**+2.4**
IUG				pmax	pmax		
	comp=Z,11nm,1.3s						
IUG	**Iuzhnay**	**87.66**	**346**	*e*P	**P**	**11 46 15.6**	**+2.4**
	comp=Z,11nm,1.3s						
KEST	**Kesra**	**87.86**	**33**	P	**P**	**11 46 13.4**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=206,slow=6.2,SNR=2.0						
	comp=Z,1.3nm,0.5s						
VAE	**Valguarnera**	**87.96**	**28**	LR	LR	12 23 31.9	
	comp=Z,485nm,21.6s,baz=26,slow=34						
SIV	**San Ignacio**	**88.22**	**117**	LR	LR	12 29 43.0	
	comp=Z,318nm,20.3s,baz=300,slow=38						
MAK	**Makhachkala**	**88.33**	**3**	*e*P	**P**	**11 46 13.0**	**-3.1**
MAK				*e*		11 49 53.3	
MAK				*e*		11 56 38.1	
MAK				*e*SS	SS	12 02 45.9	-2.2
MAK				*e*SSS	SSS	12 06 24.6	
MAK				pmax	pmax		
	comp=Z,126nm,1.0s						
PTLB	**Pontes e Lacer**	**88.93**	**115**	P	**P**	**11 46 18.6**	**-0.6**
PTLB				IAmb	IAmb	11 46 36.0	
	comp=Z,21nm,1.4s						
BRTR	**Keskin Array B**	**90.30**	**13**	LR	LR	12 28 50.2	
	comp=Z,266nm,19.7s,baz=20,slow=37						
GNI	**Garni**	**91.02**	**5**	LR	LR	12 29 29.7	
	comp=Z,404nm,21.8s,baz=21,slow=37						
CHGR	**Chuyangaron**	**91.20**	**346**	⇓*i*P	**P**	**11 46 30.8**	**+1.0**
CHGR				pmax	pmax		
	comp=Z,13nm,0.9s						
JAY	**Jayapura**	**92.04**	**269**	LR	LR	12 20 56.5	
	comp=Z,897nm,20.5s,baz=38,slow=31						
TGY	**Tagaytay City**	**92.07**	**294**	LR	LR	12 20 24.4	
	comp=Z,392nm,21.7s,baz=90,slow=31						
PZH	**PanZhiHua**	**92.21**	**316**	P	**P**	**11 46 35.1**	**+0.4**
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PMG	**Port Moresby**	**92.98**	**259**	LR	LR	12 21 34.1	
	comp=Z,502nm,21.8s,baz=70,slow=31						
CO01	**Juntas del Tor**	**94.58**	**132**	IAMs_20	IAMs_20	12 26 05.1	
	comp=Z,427nm,21.0s						
DAV	**Davao City (W)**	**94.65**	**286**	LR	LR	12 20 53.2	
	comp=Z,546nm,21.7s,baz=67,slow=30						
DAV	**Davao City (W)**	**94.65**	**286**	IAMs_20	IAMs_20	12 19 24.4	
	comp=Z,772nm,22.0s						
BDFB	**Brasilia**	**95.91**	**107**	LR	LR	12 34 46.6	
	comp=Z,232nm,18.1s,baz=331,slow=38						
RCBR	**Riachuelo**	**96.43**	**91**	LR	LR	12 31 00.5	
	comp=Z,115nm,18.0s,baz=315,slow=36						
SIJI	**Sorong**	**97.01**	**277**	LR	LR	12 22 10.3	
	comp=Z,520nm,21.3s,baz=28,slow=30						
MT05	**Renca**	**97.08**	**134**	IAMs_20	IAMs_20	12 21 06.2	
	comp=Z,332nm,18.0s						
MORE	**Moreh**	**97.44**	**321**	IAMs_20	IAMs_20	12 28 24.1	
	comp=Z,474nm,21.0s						
CPUP	**Villa Florida**	**98.45**	**121**	LR	LR	12 37 22.8	
	comp=Z,148nm,19.5s,baz=336,slow=39						
URZ	**Urewera**	**99.12**	**220**	LR	LR	12 25 32.5	
	comp=Z,258nm,19.6s,baz=48,slow=32						
CMAR	**Chiang Mai Arr**	**100.43**	**314**	P	**Pdif**	**11 47 11.7**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=29,slow=5.1,SNR=2.1						
CMAR	**Chiang Mai Arr**	**100.43**	**314**	*i* P	**Pdif**	**11 47 11.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**100.43**	**314**	Pdif	**Pdif**	**11 47 11.4**	**-0.5**
WR1	**Warramunga Arr**	**109.06**	**261**	P	**Pdif**	**11 47 54.0**	**+3.9**
HYB	**Hyderabad**	**109.44**	**332**	*e*Pdif	**Pdif**	**11 47 51.2**	**-0.8**
HYB				*e*SKSac	**SKSac**	**11 58 31.2**	**-0.1**
ASAR	**Alice Springs**	**112.00**	**259**	PKiKP	**PKiKP**	**11 51 59.5**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=63,slow=1.2,SNR=5.8						
ASAR	**Alice Springs**	**112.00**	**259**		**PKiKP**	**11 51 58.4**	**-1.5**
VNDA	**Vanda**	**133.14**	**196**	PKP	**PKPdf**	**11 52 38.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=256,slow=12,SNR=1.7						
QSPA	**South Pole Qui**	**138.84**	**180**	PKP	**PKPdf**	**11 52 49.1**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=354,slow=3.6,SNR=5.9						
QSPA	**South Pole Qui**	**138.84**	**180**		**PKPdf**	**11 52 49.8**	**+0.2**
VNA1	**Neumayer--Stat**	**145.30**	**150**	PKPdf	**PKPbc**	**11 52 58.7**	**-2.0**
	comp=Z,35nm,1.0s						
VNA2	**Neumayer--Watz**	**145.55**	**150**	⇓PKPdf	**PKPdf**	**11 52 57.3**	**-4.1**
	comp=Z,17nm,0.8s,baz=301,slow=4.5						
SNAA	**Sanae**	**146.85**	**152**	PKPdf	**PKPdf**	**11 53 04.5**	**+0.9**
	comp=Z,403nm,1.0s						
SNAA	**Sanae**	**146.85**	**152**	PKPbc	**PKPdf**	**11 53 03.9**	**+0.3**
	comp=Z,11nm,1.2s,baz=206,slow=0.4,SNR=3.7						
SNAA	**Sanae**	**146.85**	**152**	PKIKP	**PKPdf**	**11 53 04.1**	**+0.5**
SNAA	**Sanae**	**146.85**	**152**		**PKPdf**	**11 53 04.1**	**+0.5**
NVL	**N'lazarevskaya**	**151.59**	**154**	*e*PKIKP	**PKPdf**	**11 53 09.4**	**-1.7**
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOSA	**Boshof**	**151.66**	**53**	PKPbc	**PKiKP**	**11 53 19.8**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=54,slow=1.3,SNR=4.2						

NEIC ***22*** *11:41:22.4±1.4, 55°.29N±0°.04×158°.49W±0°.07, h10km±2km, ML3.0/34, Error ellipse: s-maj=8.6km s-min=4.7km az=313.0*

IDC ***22*** *11:41:27.9±4.9, 55°.81N×158°.32W, h0km, mb2.8/2, mbtmp3.2/5, ML2.9/3, Error ellipse: s-maj=77.8km s-min=38.9km az=93.0*

ISC 22 11:41:22.3±1.0, 55°.32N±0°.07×158°.47W±0°.05, h10km, n55, σ0s86/57, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.81**	**233**			**Pb**	**11 41 38.5**	**0.0**
CNBA				IAML			11 41 55.3	
	comp=E,482nm,0.6s							
CNBA				IAML			11 41 55.4	
	comp=N,626nm,0.3s							
CHGN	**Chignik**	**0.99**	**2**			**Pg**	**11 41 41.2**	**-0.1**
CHGN				Sg		**Sg**	**11 41 54.0**	**-0.1**
SDPT	**Sand Point**	**1.15**	**273**			**Pn**	**11 41 44.4**	**0.0**
SDPT				Sg		**Sb**	**11 41 57.1**	**-2.0**
SDPT				IAML			11 42 07.3	
	comp=E,335nm,0.5s							
SDPT				IAML			11 42 09.2	
	comp=N,264nm,0.7s							
VNFG	**Fog Glacier, M**	**1.15**	**328**			**Pn**	**11 41 45.6**	**+1.1**
CHIR	**Chirikof Islan**	**1.69**	**71**			**Pn**	**11 41 52.1**	**+0.3**
CHIR				Sn		**Sn**	**11 42 13.1**	**-0.6**
CHIR				IAML			11 42 23.9	
	comp=E,154nm,0.6s							
CHIR				IAML			11 42 27.2	
	comp=N,239nm,1.1s							
SII	**Sitkinak Islan**	**2.71**	**61**	Pn		**Pn**	**11 42 06.4**	**+0.5**
SII				IAML			11 42 56.8	
	comp=N,100nm,1.2s							
SII				IAML			11 43 23.8	
	comp=E,105nm,1.0s							
ACHA	**Angle Creek He**	**3.38**	**29**	Pn		**Pn**	**11 42 15.8**	**+0.7**
OHAK	**Old Harbor**	**3.46**	**54**	Pn		**Pn**	**11 42 16.4**	**+0.2**
O15K	**Ungalikthiuk R**	**3.94**	**350**	Pn		**Pn**	**11 42 23.6**	**+0.8**
O15K				IAML			11 42 51.0	
	comp=N,15nm,1.1s							
O15K				IAML			11 43 52.3	
	comp=E,17nm,1.1s							
P17K	**Kvichak River**	**4.04**	**15**	Pn		**Pn**	**11 42 23.8**	**-0.3**
KDAK	**Kodiak Island**	**4.09**	**50**	Pn		**Pn**	**11 42 24.8**	**0.0**
	comp=E,2.2nm,0.3s,baz=207,slow=5.8,SNR=22							
KDAK				Sn		**Sn**	**11 43 09.6**	**-3.1**
	comp=E,1.0nm,0.3s,baz=335,slow=23,SNR=1.5							
	comp=E,6.0nm,0.4s							
KDAK	**Kodiak Island**	**4.09**	**50**			**Pn**	**11 42 24.8**	**0.0**
O14K	**Tigyukauivet M**	**4.23**	**340**	Pn		**Pn**	**11 42 28.0**	**+1.3**
O14K				IAML			11 43 45.7	
	comp=E,12nm,1.1s							
O14K				IAML			11 43 49.0	
	comp=N,17nm,0.8s							
O18K	**Koktuh Hills**	**4.88**	**20**	Pn		**Pn**	**11 42 36.8**	**+1.2**
O18K				IAML			11 44 20.9	
	comp=N,6.2nm,1.1s							
UNV	**Unalaska Valle**	**4.90**	**256**	Pn		**Pn**	**11 42 36.9**	**+0.9**
UNV				IAML			11 43 54.5	
	comp=E,4.7nm,1.2s							
UNV				IAML			11 44 01.2	
	comp=N,5.2nm,0.6s							
N14K	**Kuskokwak Cree**	**4.93**	**341**	Pn		**Pn**	**11 42 36.4**	**0.0**
N15K	**Kwethluk River**	**4.94**	**351**	Pn		**Pn**	**11 42 37.1**	**+0.5**
N15K				IAML			11 44 07.0	
	comp=E,13nm,1.2s							
N15K				IAML			11 44 07.7	
	comp=N,13nm,1.1s							
N17K	**Nushagak Hills**	**5.27**	**7**			**Pn**	**11 42 40.6**	**-0.4**
N17K				IAML			11 44 27.5	
	comp=E,5.9nm,1.1s							
M16K	**Timber Creek**	**5.73**	**358**	Pn		**Pn**	**11 42 47.1**	**-0.2**
M13K	**Dall Lake**	**5.74**	**335**			**Pn**	**11 42 48.3**	**+0.9**
CNPM	**China Poot**	**5.75**	**40**	Pn		**Pn**	**11 42 47.7**	**+0.1**
M14K	**Bethel**	**5.76**	**343**	Pn		**Pn**	**11 42 48.1**	**+0.5**
RED	**Redoubt Volcan**	**5.95**	**28**	Pn		**Pn**	**11 42 50.1**	**-0.3**
M17K	**Holitna River**	**6.13**	**5**	Pn		**Pn**	**11 42 52.2**	**-0.6**
L14K	**Kuka Creek**	**6.44**	**342**			**Pn**	**11 42 57.3**	**+0.3**
SEW	**Seward**	**6.81**	**41**	Pn		**Pn**	**11 43 01.5**	**-0.5**
SLKM	**Skilak Lake**	**6.81**	**37**	Pn		**Pn**	**11 43 02.7**	**+0.6**
SPIA	**Saint Paul Isl**	**6.83**	**291**	Pn		**Pn**	**11 43 02.8**	**+0.5**
L18K	**Granite Mounta**	**6.99**	**7**	Pn		**Pn**	**11 43 05.5**	**+0.9**
M20K	**Styx River**	**7.15**	**21**	Pn		**Pn**	**11 43 07.1**	**+0.3**
K15K	**Wolf Creek Mou**	**7.18**	**348**	Pn		**Pn**	**11 43 07.8**	**+0.6**
K13K	**Kusilvak Mount**	**7.38**	**337**	Pn		**Pn**	**11 43 10.3**	**+0.4**
RC01	**Rabbit Creek A**	**7.40**	**35**	Pn		**Pn**	**11 43 10.2**	**0.0**
K17K	**Iditarod**	**7.42**

comp=E,760nm,1.0s
SATY Saty 2.59 11 *e*PN **Pb 11 50 30.0 -1.1**
SATY *e*S **Sb 11 51 02.9 -0.1**
SATY Saty 2.59 11 *e*P **Pb 11 50 30.1 -1.1**
SATY *e*S **Sb 11 51 03.0 -0.1**
SATY Saty 2.59 11 *e*P **Pg 11 50 32.1 -2.0**
comp=E,131nm,0.8s
SATY *e*S **Sg 11 51 08.4 +0.6**
comp=E,760nm,1.0s
TNSS Tian-Shan 2.59 347 Pg **Pb 11 50 31.3 +0.1**
comp=E,75nm,0.5s
TNSS Lg Lg 11 51 07.4
comp=E,168nm,0.8s
TNSS Tian-Shan 2.59 347 *e*PN **Pb 11 50 30.2 -1.0**
TNSS *e*S **Sb 11 51 02.9 -0.4**
TNSS Tian-Shan 2.59 347 *e*P **Pb 11 50 30.3 -1.0**
TNSS *e*S **Sb 11 51 02.9 -0.4**
TNSS Tian-Shan 2.59 347 *e*P **Pb 11 50 31.3 +0.1**
comp=E,75nm,0.5s
TNSS *e*S **Sg 11 51 07.4 -0.4**
comp=E,168nm,0.8s
IZV Izvestkoviy 2.66 342 Pg **Pb 11 50 30.1 -2.2**
comp=E,162nm,0.5s
IZV Lg Lg 11 51 05.0
comp=E,273nm,0.6s
IZV Izvestkoviy 2.66 342 *e*P **Pb 11 50 30.1 -2.2**
comp=E,162nm,0.5s
IZV *e*S **Sb 11 51 05.0 0.0**
comp=E,273nm,0.6s
MDOK Medeo 2.70 349 Pg **Pb 11 50 33.0 0.0**
comp=E,375nm,0.5s
MDOK Lg Lg 11 51 09.6
comp=E,920nm,0.5s
MDOK Medeo 2.70 349 *e*PN **Pb 11 50 31.1 -1.8**
MDOK *e*S **Sb 11 51 05.1 -1.1**
MDOK Medeo 2.70 349 *e*P **Pb 11 50 31.2 -1.8**
MDOK *e*S **Sb 11 51 05.1 -1.1**
KNDC Almaty 2.77 348 ⇑Pg **Pb 11 50 33.7 -0.3**
comp=E,466nm,0.6s
KNDC ⇑Lg Lg 11 51 12.1
comp=E,515nm,0.5s
KNDC Almaty 2.77 348 PN **Pb 11 50 33.7 -0.3**
AAA Alma-Ata 2.77 347 Pg **Pg 11 50 35.3 -2.2**
comp=E,323nm,0.5s
AAA Lg Lg 11 51 13.3
comp=E,20nm,0.1s
AAA Alma-Ata 2.77 347 *e*P **Pg 11 50 35.3 -2.2**
comp=E,323nm,0.5s
AAA *e*S **Sg 11 51 13.3 0.0**
comp=E,20nm,0.1s
UZB Uzynbulak 2.80 19 Pg **Pb 11 50 35.4 +0.7**
comp=E,71nm,0.7s
UZB Lg Lg 11 51 14.0
comp=E,470nm,0.8s
UZB Uzynbulak 2.80 19 *e*PN **Pb 11 50 33.0 -1.6**
UZB *e*S **Sb 11 51 08.2 -0.8**
UZB Uzynbulak 2.80 19 *e*P **Pb 11 50 33.1 -1.6**
UZB *e*S **Sb 11 51 08.3 -0.8**
UZB Uzynbulak 2.80 19 *e*P **Pb 11 50 35.4 +0.7**
comp=E,71nm,0.7s
UZB *e*S **Sg 11 51 14.0 -0.4**
comp=E,470nm,0.8s
KST Kastek 2.86 333 Pg **Pb 11 50 36.2 +0.6**
comp=E,177nm,0.8s
KST Lg Lg 11 51 15.2
comp=E,427nm,0.7s
KST Kastek 2.86 333 *e*P **Pb 11 50 36.2 +0.6**
comp=E,177nm,0.8s
KST *e*S **Sg 11 51 15.2 -1.1**
comp=E,427nm,0.7s
TKM2 Tokmak 2 2.90 327 P **Pb 11 50 34.1 -2.2**
SNR=20
SHLS Shalkode 2.94 25 Pg **Pg 11 50 40.8 +0.1**
comp=E,136nm,0.6s
SHLS Lg Lg 11 51 23.2
comp=E,266nm,0.8s
SHLS Shalkode 2.94 25 *e*PN **Pb 11 50 36.7 -0.2**
SHLS Shalkode 2.94 25 *e*P **Pb 11 50 36.8 -0.2**
SHLS Shalkode 2.94 25 *e*P **Pg 11 50 40.9 +0.1**
comp=E,136nm,0.6s
SHLS *e*S **Sg 11 51 23.2 +4.4**
comp=E,266nm,0.8s
UCH Uchtor 2.98 306 P **Pb 11 50 38.0 +0.2**
SNR=34
KURS Kuram 2.99 6 Pg **Pb 11 50 38.1 +0.2**
comp=E,92nm,0.7s
KURS Lg Lg 11 51 18.1
comp=E,270nm,0.6s
KURS Kuram 2.99 6 *e*P **Pb 11 50 38.1 +0.2**
comp=E,92nm,0.7s
KURS *e*S **Sg 11 51 18.1 -2.4**
comp=E,270nm,0.6s
KBK Karagaybulak 3.00 317 P **Pb 11 50 38.5 +0.5**
SNR=46
KBK Karagaybulak 3.00 317 *e*PN **Pn 11 50 32.8 +0.6**
KBK Karagaybulak 3.00 317 ⇑*i*P **Pn 11 50 32.8 +0.6**
KBK ⇑*i*S **Sn 11 51 10.3 +2.0**
SALK Salom-Alik 3.01 278 ⇓*i*PN **Pn 11 50 32.9 +0.6**
SALK *i* S **Sn 11 51 10.6 +2.2**
SALK Salom-Alik 3.01 279 ⇓*i*P **Pn 11 50 32.9 +0.6**
SALK ⇓*i*S **Sn 11 51 10.6 +2.2**
KPKS Kokpek 3.04 13 Pg **Pb 11 50 38.8 +0.2**
comp=E,0.3nm,0.2s
KPKS Lg Lg 11 51 19.9
comp=E,500nm,0.4s
KPKS Kokpek 3.04 13 *e*PN **Pb 11 50 35.6 -3.0**
KPKS Kokpek 3.04 13 *e*P **Pb 11 50 35.6 -3.0**
KPKS Kokpek 3.04 13 *e*P **Pb 11 50 38.8 +0.2**
comp=E,0.3nm,0.2s
KPKS *e*S **Sg 11 51 19.9 -2.0**
comp=E,500nm,0.4s
PDGK Podgornoye 3.10 24 ⇑Pg **Pb 11 50 39.9 +0.2**
comp=E,68nm,0.6s
PDGK ⇓Lg Lg 11 51 20.4
comp=E,663nm,0.8s
PDGK Podgornoye 3.10 24 PN **Pn 11 50 34.3 +0.7**
PDGK Podgornoye 3.10 24 **Pn 11 50 34.3 +0.7**
AAK Ala-Archa 3.23 312 Pn **Pb 11 50 42.1 +0.1**
comp=E,21nm,0.3s,baz=144,slow=13,SNR=71
AAK Sn **Sb 11 51 24.5 +3.0**
comp=E,27nm,0.3s,baz=305,slow=14,SNR=18
comp=E,186nm,0.7s
AAK Ala-Archa 3.23 312 P **Pg 11 50 44.0 -2.4**
SNR=9.3
AAK Ala-Archa 3.23 312 ⇓Pg **Pb 11 50 41.9 -0.2**
comp=E,165nm,0.8s
AAK ⇑Lg Lg 11 51 24.0
comp=E,244nm,0.8s
AAK Ala-Archa 3.23 312 *i* PN **Pn 11 50 37.4 +2.0**
AAK Ala-Archa 3.23 312 ⇑*i*P **Pn 11 50 35.9 +0.5**
AAK ⇑*i*S **Sn 11 51 16.1 +2.0**
AAK Ala-Archa 3.23 312 **Pn 11 50 37.1 +1.7**
FRU1 Bishkek 3.27 316 PN **Pb 11 50 38.8 -3.9**
FRU1 Bishkek 3.27 316 ⇓*i*P **Pn 11 50 36.9 +1.0**
FRU1 ⇓*i*S **Sn 11 51 17.4 +2.5**
FRU1 Bishkek 3.27 316 **Pb 11 50 38.8 -3.9**
SFK Sufi-Kurgan 3.28 263 *i* PN **Pn 11 50 36.6 +0.5**
SFK *i* S **Sn 11 51 17.0 +1.6**
SFK Sufi-Kurgan 3.28 263 ⇑*i*P **Pn 11 50 36.6 +0.5**
SFK ⇑*i*S **Sn 11 51 17.0 +1.6**
KTBS Karatobe 3.29 346 Pg **Pb 11 50 42.6 -0.4**
comp=E,1.1nm,0.1s
KTBS Lg Lg 11 51 26.4
comp=E,223nm,0.4s
KTBS Karatobe 3.29 346 *e*P **Pb 11 50 42.5 -0.4**
comp=E,1.1nm,0.1s
KTBS *e*S **Sb 11 51 26.4 +3.2**
comp=E,223nm,0.4s
CHMS Chumysh 3.35 319 P **Pb 11 50 44.5 +0.6**
SNR=36
CHMS Chumysh 3.35 319 *e*PN **Pn 11 50 37.4 +0.6**
CHMS Chumysh 3.35 319 ⇓*i*P **Pn 11 50 37.4 +0.6**
CHMS ⇓*i*S **Sn 11 51 18.4 +1.8**
KTMS Ketmen 3.52 33 Pg **Pb 11 50 45.7 -1.2**
comp=E,13nm,0.5s
KTMS Lg Lg 11 51 31.2
comp=E,67nm,0.5s
KTMS Ketmen 3.52 33 *e*P **Pb 11 50 45.7 -1.2**
comp=E,13nm,0.5s
KTMS *e*S **Sb 11 51 31.2 +1.5**
comp=E,67nm,0.5s
KRBS Karabastau 3.54 335 Pg **Pb 11 50 46.9 -0.3**
comp=E,152nm,0.4s
KRBS Lg Lg 11 51 33.7
comp=E,231nm,0.7s
KRBS Karabastau 3.54 335 *e*P **Pb 11 50 46.9 -0.3**
comp=E,152nm,0.4s
KRBS *e*S **Sb 11 51 33.7 +3.6**
comp=E,231nm,0.7s
KUU Kurty 3.54 343 Pg **Pb 11 50 46.9 -0.2**
comp=E,17nm,0.6s
KUU Lg Lg 11 51 33.3
comp=E,147nm,0.5s
KUU Kurty 3.54 343 *e*PN **Pb 11 50 46.2 -0.9**
KUU *e* 11 50 50.3
KUU Kurty 3.54 343 *e*PN **Pb 11 50 46.3 -0.9**
KUU *e*Pg **Pg 11 50 50.3 -1.9**
KUU Kurty 3.54 343 *e*P **Pb 11 50 46.9 -0.2**
comp=E,17nm,0.6s
KUU *e*S **Sb 11 51 33.3 +3.2**
comp=E,147nm,0.5s
BLB Baldybastay 3.62 8 Pg **Pb 11 50 49.9 +1.2**
comp=E,40nm,0.3s
BLB Lg Lg 11 51 38.4
comp=E,208nm,1.1s
USP Ospenovka 3.67 320 P **Pb 11 50 50.0 +0.7**
SNR=38
USP Ospenovka 3.67 320 *e*PN **Pn 11 50 42.0 +0.8**
USP Ospenovka 3.67 320 ⇓*i*P **Pn 11 50 42.0 +0.8**
USP ⇓*i*S **Sn 11 51 26.0 +1.4**
EKS2 Erkin-Say 3.67 307 P **Pg 11 50 52.3 -2.4**
SNR=26
EKS2 Erkin-Say 3.67 307 ⇓*i*PN **Pn 11 50 42.1 +0.7**
EKS2 *i* S **Sn 11 51 26.3 +1.5**
EKS2 Erkin-Say 3.67 307 ⇓*i*P **Pn 11 50 42.1 +0.7**
EKS2 ⇓*i*S **Sn 11 51 26.3 +1.5**
ARXS Arharly 3.70 1 Pg **Pb 11 50 51.0 +1.0**
comp=E,48nm,0.6s
ARXS Lg Lg 11 51 40.4
comp=E,276nm,0.5s
ARXS Arharly 3.70 1 *e*P **Pb 11 50 51.0 +1.0**
comp=E,48nm,0.6s
ARXS *e*S **Sg 11 51 40.4 -2.9**
comp=E,276nm,0.5s
SGDS Sogindy 3.75 323 Pg **Pb 11 50 50.8 +0.2**
comp=E,96nm,0.7s
SGDS Lg Lg 11 51 40.0
comp=E,98nm,0.7s
SGDS Sogindy 3.75 323 *e*PN **Pb 11 50 48.8 -1.9**
SGDS *e*Pg **Pg 11 50 54.1 -2.1**
OHH Osh 3.78 272 *e*PN **Pn 11 50 43.3 +0.5**
OHH Osh 3.78 272 ⇓*i*P **Pn 11 50 43.3 +0.5**
OHH ⇓*i*S **Sn 11 51 28.8 +1.4**
KNOS Konyrlen 3.99 15 Pg **Pb 11 50 56.4 +1.5**
comp=E,36nm,0.8s
KNOS Lg Lg 11 51 50.2
comp=E,48nm,0.5s
MRKS Merke 4.06 305 Pg **Pb 11 50 57.2 +1.2**
comp=E,43nm,0.6s
MRKS Lg Lg 11 51 50.9
comp=E,63nm,0.8s
MRKS Merke 4.06 305 *e*P **Pb 11 50 57.2 +1.2**
comp=E,43nm,0.6s
MRKS *e*S **Sg 11 51 50.9 -3.8**
comp=E,63nm,0.8s
MNAS Manas 4.40 298 *e*PN **Pn 11 50 52.2 +0.8**
MNAS Manas 4.40 298 ⇑*e*P **Pn 11 50 52.2 +0.8**
MNAS ⇑*i*S **Sn 11 51 43.9 +1.0**
TDK Taldyqorghan 4.51 6 Pg **Pb 11 50 06.2 +2.4**
comp=E,91nm,0.5s
TDK Lg Lg 11 52 06.2
comp=E,251nm,0.5s
TDK Taldyqorghan 4.51 6 *e*PN **Pb 11 50 59.4 -4.4**
TDK *e* 11 51 09.1
TDK Taldyqorghan 4.51 6 *e*Pn **Pb 11 50 59.4 -4.4**
TDK *e*Pg **Pg 11 51 09.1 -1.8**
TDK Taldyqorghan 4.51 6 *e*P **Pb 11 51 06.2 +2.4**
comp=E,91nm,0.5s
TDK *e*S **Sg 11 52 06.2 -3.1**
comp=E,251nm,0.5s
ARK Arkit 4.55 288 ⇑*e*P **Pn 11 50 54.6 +1.2**
ARK ⇑*e*S **Sn 11 51 47.3 +0.9**
DRK Karamyk 4.68 259 PN **Pn 11 50 56.2 +0.8**
DRK Karamyk 4.68 259 Pn **Pn 11 50 56.2 +0.8**
KAPS Kapalarasan 4.92 13 Pg **Pg 11 51 14.2 -4.3**
comp=E,19nm,0.3s
KAPS Lg Lg 11 52 20.8
comp=E,88nm,0.7s
KAPS Kapalarasan 4.92 13 *e*P **Pg 11 51 14.2 -4.3**
comp=E,19nm,0.3s
KAPS *e*S **Sg 11 52 20.8 -1.5**
comp=E,88nm,0.7s
BTLS Baital 5.28 330 Pg **Pb 11 51 18.2 +1.4**
comp=E,19nm,0.8s
BTLS Lg Lg 11 52 27.6
comp=E,63nm,0.6s
BTLS Baital 5.28 330 *e*PN Pb 11 51 09.8 -7.0
BTLS *e* 11 51 22.2
BTLS Baital 5.28 330 *e*Pn Pb 11 51 09.8 -7.0
BTLS *e*Pg **Pg 11 51 22.3 -3.3**
BTLS Baital 5.28 330 *e*P **Pb 11 51 18.2 +1.4**
comp=E,19nm,0.8s
BTLS *e*S **Sg 11 52 27.6 -6.3**
comp=E,63nm,0.6s
BTK Batken 5.32 267 PN **Pn 11 51 05.3 +1.4**
BTK Batken 5.32 267 Pn **Pn 11 51 05.3 +1.4**
MANEM Manem 5.58 240 **Pn 11 51 07.3 -0.4**
GAR Garm 5.92 258 **Pn 11 51 13.4 +1.1**
KK31 Karatay Array 5.99 298 ⇑Pg **Pb 11 51 32.0 +3.1**
comp=E,12nm,0.7s,baz=116,slow=14,SNR=48
KK31 ⇑Lg Lg 11 52 50.0
comp=E,14nm,0.6s,baz=117,slow=27,SNR=4.0
KK31 Karatay Array 5.99 298 PN **Pn 11 51 15.1 +1.9**
KK31 Karatay Array 5.99 298 Pn **Pn 11 51 15.1 +1.9**
IUG Iuzhnay 6.03 288 Pg **Pb 11 51 33.4 +3.7**
comp=E,26nm,0.7s
IUG Lg Lg 11 52 53.0
comp=E,62nm,0.9s
IUG Iuzhnay 6.03 288 *e*P **Pb 11 51 33.4 +3.7**
comp=E,26nm,0.7s
IUG *e*S **Sg 11 52 53.0 -5.0**
comp=E,62nm,0.9s
BRLS Borolday 6.43 296 Pg **Pb 11 51 41.2 +4.9**
comp=E,3.7nm,0.7s
BRLS Lg Lg 11 53 06.3
comp=E,9.9nm,1.0s
BRLS Borolday 6.43 296 *e*P **Pb 11 51 41.2 +4.9**
comp=E,3.7nm,0.7s
BRLS *e*S **Sg 11 53 06.3 -4.3**
comp=E,9.9nm,1.0s
CHGR Chuyangaron 6.89 257 *i* PN **Pn 11 51 25.5 0.0**
CHGR Chuyangaron 6.89 257 **Pn 11 51 24.1 -1.4**
MAKZ Makanchi 7.00 25 PN **Pn 11 51 26.9 -0.1**
MAKZ Makanchi 7.00 25 Pn **Pn 11 51 26.9 -0.1**
MK31 Makanchi Array 7.09 26 ⇑Pn **Pn 11 51 28.2 -0.1**
comp=E,0.5nm,0.3s
MK31 ⇓Sn **Sn 11 52 48.2 -0.7**
comp=E,5.0nm,0.8s
MK31 ⇑Lg Lg 11 53 28.2
comp=E,6.1nm,0.7s,baz=208,slow=28,SNR=7.0
MK31 Makanchi Array 7.09 26 *i* P **Pn 11 51 29.8 +1.6**
MKAR Makanchi Array 7.09 26 Pn **Pn 11 51 30.6 +2.4**
comp=E,0.7nm,0.3s,baz=212,slow=15,SNR=14
MKAR Sn **Sn 11 52 51.0 +2.2**
comp=E,0.6nm,0.3s,baz=206,slow=23,SNR=4.1
MKAR Lg Lg 11 53 25.5
comp=E,0.9nm,0.3s,baz=210,slow=29,SNR=7.2
comp=E,0.8nm,0.3s
MKAR Makanchi Array 7.09 26 **Pn 11 51 28.4 +0.1**
NIL Nilore 7.73 209 P **Pn 11 51 35.8 -1.3**
NIL Nilore 7.73 209 **Pn 11 51 35.8 -1.3**
SHAA Shahritus 8.04 252 **Pn 11 51 40.5 -0.9**
WMQ Urumqi 8.10 63 Pn **Pn 11 51 42.9 +0.8**
WMQ Sn **Sn 11 53 14.9 +1.2**
WMQ smax smax
comp=N,15nm,1.3s
WMQ smax smax
comp=E,15nm,1.5s
KURBB Kurchatov Arra 10.13 3 Lg Lg 11 55 03.8
comp=E,0.1nm,0.3s,baz=192,slow=32,SNR=9.5
BVAR Borovoye Array 13.48 341 Pn **Pn 11 52 57.1 +1.4**
comp=E,0.1nm,0.3s,baz=160,slow=14,SNR=1.4
BVAR Lg Lg 11 56 51.6
baz=150,slow=27,SNR=3.8
comp=E,0.4nm,0.3s
BORK Borovoye 13.52 341 *i* P **Pn 11 52 58.4 +2.2**
ZALV Zalesovo Beam 14.27 17 Pn **Pn 11 53 07.4 +1.1**
comp=E,0.2nm,0.3s,baz=230,slow=12,SNR=3.5
comp=E,0.7nm,0.5s
ZALV Zalesovo Beam 14.27 17 *i* P **P 11 53 09.3 -4.4**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 14.27 17 **Pn 11 53 06.1 -0.2**
AKTO Aktyubinsk 16.98 312 P **P 11 53 44.5 +0.7**
comp=Z,0.1nm,0.3s,baz=107,slow=17,SNR=1.6
comp=Z,1.2nm,0.5s
ARTI Arti 20.31 328 P Pn 11 54 22.5 +0.2
comp=Z,2.2nm,0.3s,baz=126,slow=4.3,SNR=4.6
comp=Z,2.2nm,0.3s
ARTI Arti 20.31 328 P Pn 11 54 21.2 -1.1
ARTI S Sn 11 58 12.2 +1.3
ARTI SS **SnSn 11 58 32.0 +6.6**
SONM Songino Array 21.73 61 P **P 11 54 35.8 -0.1**
comp=Z,1.0nm,0.6s,baz=256,slow=12,SNR=3.9
comp=Z,1.0nm,0.6s
ULN Ulaanbaatar 22.17 61 *e*P **P 11 54 41.3 +0.7**
GNI Garni 25.09 280 *e*P **P 11 55 09.9 +0.6**
GNI pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 30.76 312 *e*P **P 11 56 01.0 +1.4**
OBN *e* 11 56 59.8
OBN *e* 11 58 57.4
OBN pmax pmax
comp=Z,3.0nm,0.7s
OBN MLR MLR
comp=Z,280nm,20.0s
FINES FINESS Array B 37.37 322 P **P 11 56 58.0 +1.1**
comp=Z,1.4nm,0.6s,baz=108,slow=6.2,SNR=6.8
comp=Z,1.4nm,0.6s
FINES FINESS Array B 37.37 322 P **P 11 56 58.0 +1.1**
FINES FINESS Array B 37.37 322 P **P 11 56 56.6 -0.3**
ARCES ARCESS Array B 39.65 334 P **P 11 57 16.7 +0.7**
comp=Z,2.0nm,0.8s,baz=109,slow=6.7,SNR=4.3
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 39.65 334 P **P 11 57 16.9 +0.9**
ARCES pmax pmax
comp=Z,15nm,1.5s
ARCES ARCESS Array B 39.65 334 P **P 11 57 16.9 +0.9**
ARCES IAmb IAmb 11 57 20.0
comp=Z,15nm,1.4s
NOA NORSAR Array B 44.52 320 P **P 11 57 56.8 +0.9**
comp=Z,0.4nm,0.5s,baz=89,slow=7.3,SNR=2.0
comp=Z,0.4nm,0.5s
KAPI Kappang 59.45 129 LR LR 12 30 58.7
comp=Z,163nm,19.9s,baz=100,slow=42
TORD Torodi Ar. Bea 71.02 271 P **P 12 01 02.0 -0.7**
comp=Z,2.3nm,0.6s,baz=45,slow=5.6,SNR=11
comp=Z,2.3nm,0.6s
CHNA Chernabura Isl 73.16 31 P **P 12 01 17.9 +3.0**
KDAK Kodiak Island 73.40 25 LR LR 12 37 04.0
comp=Z,641nm,21.3s,baz=130,slow=39
YKA Yellowknife Ar 76.86 6 P **P 12 01 35.2 -0.9**
comp=Z,0.4nm,0.5s,baz=346,slow=5.6,SNR=7.7
comp=Z,0.4nm,0.5s
YKA Yellowknife Ar 76.86 6 *i* P **P 12 01 39.5 +3.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 79.89 127 P **P 12 01 51.5 -2.0**
comp=Z,0.4nm,0.9s,baz=317,slow=5.6,SNR=1.9
comp=Z,0.4nm,0.9s
ASAR Alice Springs 82.47 130 P **P 12 02 06.5 -0.7**
comp=Z,0.5nm,0.8s,baz=314,slow=5.1,SNR=8.4
comp=Z,0.5nm,0.8s
ASAR Alice Springs 82.47 130 P **P 12 02 05.4 -1.8**

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*IDC **22** 11:51:26.6±2.4, 54.44N×160.48W, h0km, mb3.7/3, mbtmp3.5/6, ML3.4/3, Error ellipse: s-maj=65.1km s-min=23.4km az=141.0*
*NEIC **22** 11:51:37.6±0.8, 54.88N±0.06×160.21W±0.09, h29km±12km, ML3.5/34, Error ellipse: s-maj=9.2km s-min=7.3km az=188.0*
ISC 22 11:51:36.5±0.8, 54.97N±0.05×160.15W±0.04, h33km, n63, σ2s31/67, mb3.8/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.35**	**113**	P	**Pb**	**11 51 46.0**	**+1.1**
CHNA	**Chernabura Isl**	**0.35**	**113**	S	**Sn**	**11 51 52.1**	**+1.0**
CNBA	**Chernabura Isl**	**0.36**	**115**		**Pb**	**11 51 45.9**	**+0.9**
CNBA				Sg	**Sn**	**11 51 52.2**	**+1.0**
CNBA				IAML		11 51 53.3	
	comp=N,2μm,0.1s						
SDPT	**Sand Point**	**0.42**	**334**	P	**Pn**	**11 51 47.6**	**+1.3**
SDPT	**Sand Point**	**0.42**	**334**	S	**Sn**	**11 51 55.0**	**+2.1**
SDPT	**Sand Point**	**0.42**	**334**		**Pn**	**11 51 47.8**	**+1.5**
SDPT				Sg	**Sn**	**11 51 55.0**	**+2.1**
SDPT				IAML		11 51 55.6	
	comp=N,4μm,0.3s						
SDPT				IAML		11 51 55.6	
	comp=E,4μm,0.3s						
VNFG	**Fog Glacier, M**	**1.36**	**14**		**Pb**	**11 52 02.4**	**+0.9**
VNFG				IAML		11 52 32.0	
	comp=E,881nm,0.5s						
CHGN	**Chignik**	**1.66**	**36**		**Pb**	**11 52 06.6**	**+0.2**
CHGN				IAML		11 52 31.2	
	comp=N,429nm,0.2s						
AKUT	**Akutan**	**3.38**	**258**	P	**Pn**	**11 52 29.6**	**+2.8**
AKUT	**Akutan**	**3.38**	**258**	Pn	**Pn**	**11 52 28.3**	**+1.5**
AKUT				IAML		11 53 20.8	
	comp=E,71nm,0.5s						
LVA	**Lava Point**	**3.52**	**259**		**Pn**	**11 52 29.0**	**+0.2**
LVA				IAML		11 53 33.5	
	comp=N,112nm,0.7s						
SII	**Sitkinak Islan**	**3.73**	**62**	P	**Pn**	**11 52 34.1**	**+2.4**
SII	**Sitkinak Islan**	**3.73**	**62**	S	**Sn**	**11 53 18.0**	**+3.6**
UNV	**Unalaska Valle**	**3.88**	**256**	P	**Pn**	**11 52 35.3**	**+1.6**
UNV	**Unalaska Valle**	**3.88**	**256**	S	**Sn**	**11 53 21.3**	**+3.2**
UNV	**Unalaska Valle**	**3.88**	**256**		**Pn**	**11 52 34.1**	**+0.3**
ACHA	**Angle Creek He**	**4.20**	**37**	Pn	**Pn**	**11 52 41.6**	**+3.4**
O15K	**Ungalikthiuk R**	**4.22**	**2**		**Pn**	**11 52 40.9**	**+2.5**
P16K	**Nushagak River**	**4.24**	**15**	Pn	**Pn**	**11 52 41.3**	**+2.7**
O14K	**Tigyukauivet M**	**4.34**	**352**		**Pn**	**11 52 42.5**	**+2.5**
OHAK	**Old Harbor**	**4.46**	**57**	P	**Pn**	**11 52 43.8**	**+2.1**
OHAK	**Old Harbor**	**4.46**	**57**	Pn	**Pn**	**11 52 43.4**	**+1.8**
P17K	**Kvichak River**	**4.69**	**24**	Pn	**Pn**	**11 52 49.2**	**+4.3**
O16K	**Kokwok River B**	**4.77**	**13**		**Pn**	**11 52 48.6**	**+2.7**
O16K				IAML		11 55 32.0	
	comp=E,23nm,1.1s						
N14K	**Kuskokwak Cree**	**5.03**	**351**		**Pn**	**11 52 51.9**	**+2.3**
KDAK	**Kodiak Island**	**5.06**	**53**	Pn	**Pn**	**11 52 50.4**	**+0.5**
	comp=E,1.1nm,0.3s,baz=16,slow=1.6,SNR=21						
KDAK				Sn	**Sn**	**11 53 46.9**	**-0.3**
	comp=E,0.9nm,0.3s,baz=198,slow=20,SNR=1.8						
	comp=E,2.4nm,0.4s						
KDAK	**Kodiak Island**	**5.06**	**53**	Pn	**Pn**	**11 52 51.5**	**+1.5**
KDAK				IAML		11 54 12.6	
	comp=E,31nm,0.4s						
KDAK				IAML		11 55 32.5	
	comp=E,25nm,1.0s						
N15K	**Kwethluk River**	**5.21**	**0**		**Pn**	**11 52 54.8**	**+2.8**
M13K	**Dall Lake**	**5.72**	**344**	Pn	**Pn**	**11 53 01.6**	**+2.6**
N17K	**Nushagak Hills**	**5.79**	**15**	Pn	**Pn**	**11 53 03.1**	**+3.1**
M14K	**Bethel**	**5.88**	**351**		**Pn**	**11 53 03.1**	**+2.0**
SPIA	**Saint Paul Isl**	**6.07**	**295**	P	**Pn**	**11 53 05.6**	**+1.8**
SPIA	**Saint Paul Isl**	**6.07**	**295**		**Pn**	**11 53 05.4**	**+1.6**
M16K	**Timber Creek**	**6.10**	**5**		**Pn**	**11 53 07.0**	**+2.7**
M11K	**Mekoryuk**	**6.32**	**332**	Pn	**Pn**	**11 53 09.3**	**+2.1**
L14K	**Kuka Creek**	**6.53**	**349**		**Pn**	**11 53 12.2**	**+2.1**
M17K	**Holitna River**	**6.61**	**11**		**Pn**	**11 53 14.3**	**+3.2**
L16K	**Owhat River**	**6.77**	**3**	Pn	**Pn**	**11 53 16.0**	**+2.6**
K13K	**Kusilvak Mount**	**7.37**	**343**		**Pn**	**11 53 24.0**	**+2.4**
K15K	**Wolf Creek Mou**	**7.38**	**355**	Pn	**Pn**	**11 53 24.2**	**+2.4**
L18K	**Granite Mounta**	**7.49**	**13**		**Pn**	**11 53 25.9**	**+2.6**
SEW	**Seward**	**7.72**	**44**	Pn	**Pn**	**11 53 29.4**	**+3.0**
L19K	**White Mountain**	**7.74**	**19**	Pn	**Pn**	**11 53 29.9**	**+3.2**
J14K	**Nanvaranak Lak**	**8.00**	**349**	Pn	**Pn**	**11 53 32.3**	**+2.2**
J16K	**Anvik River**	**8.34**	**359**	Pn	**Pn**	**11 53 36.7**	**+1.8**
J17K	**VABM Dome**	**8.47**	**3**		**Pn**	**11 53 38.4**	**+1.8**
PWL	**Port Wells**	**8.62**	**42**	Pn	**Pn**	**11 53 41.1**	**+2.4**
J18K	**Innoko River**	**8.70**	**10**	Pn	**Pn**	**11 53 42.1**	**+2.2**
HIN	**Hinchinbrook I**	**9.10**	**48**	Pn	**Pn**	**11 53 48.0**	**+2.6**
FID	**Port Fidalgo**	**9.30**	**46**	Pn	**Pn**	**11 53 49.5**	**+1.4**
EYAK	**Cordova Ski Ar**	**9.50**	**48**	Pn	**Pn**	**11 53 52.9**	**+2.1**
J20K	**Nowinta River**	**9.72**	**16**	Pn	**Pn**	**11 53 56.0**	**+2.2**
RAGM	**Ragged Mountai**	**9.89**	**50**	Pn	**Pn**	**11 53 58.0**	**+1.7**
ADK	**Adak**	**10.34**	**259**	P	**Pn**	**11 54 04.0**	**+1.7**
KIWB	**Kanaga Island**	**10.61**	**260**	Pn	**Pn**	**11 54 06.4**	**+0.4**
F15K	**North Star Dit**	**10.99**	**350**	Pn	**Pn**	**11 54 14.2**	**+2.9**
I21K	**Tanana**	**11.01**	**18**	Pn	**Pn**	**11 54 14.2**	**+2.8**
ILAR	**Eielson Array**	**11.84**	**29**	Pn	**Pn**	**11 54 20.1**	**-2.7**
	comp=E,0.1nm,0.3s,baz=214,slow=14,SNR=4.1						
ILAR				Sn	**Sn**	**11 56 32.1**	**-1.5**
	baz=212,slow=14						
	comp=E,0.2nm,0.6s						
F19K	**Shaleruckik Mo**	**11.96**	**5**	Pn	**Pn**	**11 54 27.0**	**+2.6**

INK	**Inuvik**	**18.18**	**32**	P		**Pn**	**11 55 44.5**	**-1.3**
	comp=E,0.2nm,0.3s,baz=245,slow=13,SNR=6.9							
	comp=E,0.6nm,0.5s							
YKA	**Yellowknife Ar**	**24.34**	**54**	P		**P**	**11 56 50.0**	**-0.8**
	comp=E,0.2nm,0.6s,baz=268,slow=8.8,SNR=2.2							
	comp=E,0.2nm,0.6s							
FINES	**FINESS Array B**	**63.82**	**357**	P		**P**	**12 02 01.8**	**-3.1**
	comp=E,2.8nm,0.8s,baz=14,slow=8.5,SNR=5.3							
	comp=E,2.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**81.16**	**289**	P		**P**	**12 03 45.2**	**-3.5**
	comp=E,0.4nm,0.4s,baz=6.5,slow=5.2,SNR=6.1							
	comp=E,0.4nm,0.4s							

*IDC **22** 11:52:57.2±1.6,54.°84N×158.°50W, h0km, mb3.4/6, mbtmp3.4/9, ML3.4/3, Error ellipse: s-maj=38.8km s-min=23.9km az=163.0*

*NEIC **22** 11:53:05.9±0.8,55.°131N±0.°008×158.°31W±0.°07, h35km±2km, ML3.4/22, Error ellipse: s-maj=6.5km s-min=3.1km az=90.0*

ISC 22 11:53:03.7±0.8,55.°06N±0.°07×158.°23W±0.°05, h35km, n36, σ1°34/40, mb3.6/6, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.82**	**254**		**Pn**	**11 53 19.6**	**+0.9**
CNBA				Sn	**Sn**	**11 53 31.1**	**+1.6**
CHGN	**Chignik**	**1.25**	**355**	Pn	**Pn**	**11 53 25.6**	**+1.0**
CHGN				Sn	**Sn**	**11 53 39.9**	**-0.3**
SDPT	**Sand Point**	**1.32**	**284**	Pn	**Pn**	**11 53 26.1**	**+0.6**
SDPT				Sn	**Sn**	**11 53 42.5**	**+0.6**
SDPT				IAML		11 53 42.6	
	comp=E,585nm,0.8s						
SDPT				IAML		11 53 48.8	
	comp=N,797nm,0.6s						
VNFG	**Fog Glacier, M**	**1.44**	**329**	Pn	**Pn**	**11 53 28.7**	**+1.4**
CHIR	**Chirikof Islan**	**1.67**	**62**		**Pn**	**11 53 32.8**	**+2.4**
CHIR				IAML		11 54 04.7	
	comp=E,431nm,0.7s						
CHIR				IAML		11 54 09.4	
	comp=N,438nm,1.2s						
OHAK	**Old Harbor**	**3.52**	**50**	Pn	**Pn**	**11 53 56.7**	**+1.0**
OHAK				IAML		11 54 59.5	
	comp=N,51nm,1.0s						
KDAK	**Kodiak Island**	**4.16**	**47**	Pn	**Pn**	**11 54 04.1**	**-0.4**
	comp=N,1.9nm,0.3s,baz=251,slow=22,SNR=9.6						
KDAK				Sn	**Sn**	**11 54 51.3**	**-0.5**
	baz=289,slow=18						
	comp=N,4.3nm,0.3s						
KDAK	**Kodiak Island**	**4.16**	**47**		**Pn**	**11 54 05.6**	**+1.0**
O15K	**Ungalikthiuk R**	**4.22**	**349**	Pn	**Pn**	**11 54 06.0**	**+0.7**
O15K				IAML		11 54 57.1	
	comp=N,35nm,0.5s						
O15K				IAML		11 54 58.6	
	comp=E,37nm,0.6s						
O14K	**Tigyukauivet M**	**4.52**	**340**	Pn	**Pn**	**11 54 10.2**	**+0.7**
O14K				IAML		11 55 04.4	
	comp=E,33nm,0.7s						
O14K				IAML		11 55 05.2	
	comp=N,34nm,0.7s						
N14K	**Kuskokwak Cree**	**5.22**	**341**	Pn	**Pn**	**11 54 20.3**	**+1.2**
N14K				IAML		11 56 12.5	
	comp=N,42nm,1.1s						
N15K	**Kwethluk River**	**5.22**	**350**	Pn	**Pn**	**11 54 20.5**	**+1.4**
N15K				IAML		11 55 51.7	
	comp=E,40nm,1.1s						
N15K				IAML		11 55 55.8	
	comp=N,31nm,0.8s						
N17K	**Nushagak Hills**	**5.51**	**5**	Pn	**Pn**	**11 54 24.1**	**+1.0**
ILSW	**Iliamna Southw**	**5.65**	**27**	Pn	**Pn**	**11 54 26.6**	**+1.5**
CNPM	**China Poot**	**5.87**	**37**	Pn	**Pn**	**11 54 29.2**	**+1.2**
M16K	**Timber Creek**	**6.00**	**357**		**Pn**	**11 54 31.4**	**+1.6**
M13K	**Dall Lake**	**6.03**	**335**	Pn	**Pn**	**11 54 31.8**	**+1.6**
M14K	**Bethel**	**6.04**	**342**	Pn	**Pn**	**11 54 31.6**	**+1.2**
L16K	**Owhat River**	**6.70**	**355**	Pn	**Pn**	**11 54 40.8**	**+1.3**
L14K	**Kuka Creek**	**6.72**	**341**	Pn	**Pn**	**11 54 40.7**	**+1.0**
M11K	**Mekoryuk**	**6.83**	**325**	Pn	**Pn**	**11 54 42.4**	**+1.2**
L18K	**Granite Mounta**	**7.23**	**6**	Pn	**Pn**	**11 54 48.1**	**+1.5**
K17K	**Iditarod**	**7.68**	**360**		**Pn**	**11 54 54.2**	**+1.3**
PWL	**Port Wells**	**7.84**	**38**	Pn	**Pn**	**11 54 56.1**	**+1.1**
J14K	**Nanvaranak Lak**	**8.19**	**343**	Pn	**Pn**	**11 55 00.5**	**+0.7**
HIN	**Hinchinbrook I**	**8.24**	**45**	Pn	**Pn**	**11 55 02.4**	**+1.8**
J16K	**Anvik River**	**8.34**	**353**		**Pn**	**11 55 03.4**	**+1.5**
ILAR	**Eielson Array**	**11.26**	**26**	Pn	**Pn**	**11 55 38.0**	**-3.8**
	comp=N,0.2nm,0.3s,baz=217,slow=13,SNR=8.0						
	comp=N,0.3nm,0.6s						
ILAR	**Eielson Array**	**11.26**	**26**	Pn	**Pn**	**11 55 42.5**	**+0.6**
INK	**Inuvik**	**17.52**	**31**	P	**Pn**	**11 57 04.5**	**-0.2**
	comp=N,0.1nm,0.3s,baz=226,slow=10,SNR=1.8						
	comp=N,0.6nm,0.4s						
YKA	**Yellowknife Ar**	**23.40**	**54**	P	**P**	**11 58 09.7**	**+0.8**
	comp=N,0.2nm,0.8s,baz=281,slow=11,SNR=2.1						
	comp=N,0.2nm,0.8s						
TXAR	**Lajitas Array**	**46.38**	**101**	P	**P**	**12 01 26.0**	**-0.5**
	comp=N,0.1nm,0.4s,baz=318,slow=7.7,SNR=2.2						
	comp=N,0.1nm,0.4s						
KSRS	**Korea Array**	**51.49**	**282**	P	**P**	**12 02 04.2**	**-1.1**
	comp=N,0.5nm,0.6s,baz=46,slow=7.7,SNR=4.8						
	comp=N,0.5nm,0.6s						
FINES	**FINESS Array B**	**63.79**	**358**	P	**P**	**12 03 30.9**	**-0.6**
	comp=N,1.0nm,0.7s,baz=357,slow=7.5,SNR=1.3						
	comp=N,1.0nm,0.7s						
MKAR	**Makanchi Array**	**66.44**	**319**	P	**P**	**12 03 47.5**	**-1.5**
	comp=N,0.2nm,0.4s,baz=40,slow=7.7,SNR=1.0						
	comp=N,0.2nm,0.4s						
AKASG	**Malin Array Be**	**74.43**	**355**	P	**P**	**12 04 38.4**	**+0.8**
	comp=N,0.3nm,0.3s,baz=10.0,slow=6.0,SNR=2.3						
	comp=N,0.3nm,0.3s						

*IDC **22** 12:04:43.2±7.3,18.°77S×169.°46E, h252km±46km, mb3.5/4, mbtmp4.1/5, Error ellipse: s-maj=79.7km s-min=26.0km az=29.0*

*NOU **22** 12:04:46.2, 18.°90S×169.°33E, h220km, MLv4.0/12, Vanuatu Islands*

ISC 22 12:04:42.7±1.7,18.°81S±0.°07×169.°5E±0.°2, h246km, n14, σ1°02/15, mb3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.44**	**314**	P	**Pn**	**12 05 21.0**	**+0.7**
DVP	**Devils Point**	**1.66**	**310**	P	**Pn**	**12 05 22.8**	**+0.9**
DVP	**Devils Point**	**1.66**	**310**	S	**S**	**12 05 51.5**	**-1.2**
MARNC	**Mare, Loyalty**	**3.00**	**207**	P	**Pn**	**12 05 34.6**	**-0.4**
MARNC	**Mare, Loyalty**	**3.00**	**207**	P	**S**	**12 06 14.4**	**-1.9**
YATNC	**Mamie plateau,**	**4.06**	**217**	P	**Pn**	**12 05 47.3**	**+0.2**
DZM	**Mont Dzumac**	**4.34**	**221**	P	**Pn**	**12 05 50.8**	**+0.4**
	8.0nm,0.7s,baz=330,slow=22,SNR=11						
DZM				S	**S**	**12 06 45.8**	**+1.5**
	6.6nm,0.6s,baz=98,slow=18,SNR=1.7						
OUENC	**Ouen Island, N**	**4.38**	**214**	P	**Pn**	**12 05 51.7**	**+0.9**
NOUC	**Port Laguerre**	**4.45**	**222**	P	**Pn**	**12 05 52.5**	**+0.8**
ONTNC	**Ouen Toro**	**4.51**	**219**	P	**Pn**	**12 05 53.1**	**+0.7**
URZ	**Urewera**	**20.48**	**163**	P	**P**	**12 09 02.9**	**+0.8**
	9.6nm,1.0s,baz=315,slow=6.1,SNR=1.6						
	9.6nm,1.0s						
STKA	**Stephens Creek**	**28.29**	**237**	P	**P**	**12 10 13.3**	**-0.4**
	1.5nm,0.7s,baz=56,slow=9.2,SNR=3.6						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**33.17**	**262**	P	**P**	**12 10 55.8**	**-0.8**
	0.6nm,0.6s,baz=98,slow=7.8,SNR=21						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**33.48**	**255**	P	**P**	**12 10 59.3**	**0.0**
	5.8nm,0.5s,baz=81,slow=8.8,SNR=181						
	5.8nm,0.5s						

*IDC **22** 12:08:52.8±7.6,55.°26N×159.°08W, h0km, mb3.0/2, mbtmp3.1/5, ML3.4/3, Error ellipse: s-maj=129.0km s-min=38.8km az=84.0*

*NEIC **22** 12:08:56.0±1.1,55.°01N±0.°08×158.°40W±0.°07, h8km±11km, ML3.2/34, Error ellipse: s-maj=11.7km s-min=5.8km az=173.0*

ISC 22 12:08:55.8±0.9,55.°05N±0.°08×158.°35W±0.°06, h10km, n66, σ1°11/68, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.75**	**253**		**Pg**	**12 09 09.4**	**-0.9**
CHGN	**Chignik**	**1.26**	**358**		**Pn**	**12 09 19.3**	**-0.2**
CHGN				Sg	**Sb**	**12 09 35.5**	**-0.4**
CHGN				IAML		12 09 37.9	
	comp=N,550nm,0.4s						
CHGN				IAML		12 09 40.5	
	comp=E,623nm,0.4s						
SDPT	**Sand Point**	**1.26**	**285**		**Pn**	**12 09 18.6**	**-0.9**
SDPT				IAML		12 09 45.4	
	comp=E,500nm,0.7s						
SDPT				IAML		12 09 46.5	
	comp=N,527nm,0.8s						
VNFG	**Fog Glacier, M**	**1.42**	**332**		**Pn**	**12 09 22.3**	**+0.6**
CHIR	**Chirikof Islan**	**1.74**	**62**	Pn	**Pn**	**12 09 26.6**	**+0.6**
CHIR				Sn	**Sn**	**12 09 48.0**	**-0.2**
CHIR				IAML		12 10 00.3	
	comp=E,289nm,0.7s						
CHIR				IAML		12 10 05.7	
	comp=N,204nm,0.8s						
SII	**Sitkinak Islan**	**2.80**	**55**	Pn	**Pn**	**12 09 41.2**	**+0.6**
OHAK	**Old Harbor**	**3.57**	**50**	Pn	**Pn**	**12 09 51.5**	**+0.3**
KDAK	**Kodiak Island**	**4.21**	**47**	Pn	**Pn**	**12 09 59.6**	**-0.4**
	comp=N,0.9nm,0.3s,baz=201,slow=4.4,SNR=20						
KDAK				Sn	**Sn**	**12 10 45.5**	**-3.8**
	comp=N,0.6nm,0.3s,baz=29,slow=18,SNR=7.1						
	comp=N,7.8nm,0.9s						
KDAK	**Kodiak Island**	**4.21**	**47**	Pn	**Pn**	**12 10 00.1**	**0.0**
KDAK				IAML		12 11 34.3	
	comp=N,16nm,1.1s						
O15K	**Ungalikthiuk R**	**4.22**	**350**	Pn	**Pn**	**12 10 00.4**	**+0.3**
O15K				IAML		12 11 10.2	
	comp=N,18nm,1.0s						
O15K				IAML		12 11 28.6	
	comp=E,17nm,1.2s						
P17K	**Kvichak River**	**4.29**	**13**	Pn	**Pn**	**12 10 02.0**	**+1.0**
AKUT	**Akutan**	**4.42**	**261**	Pn	**Pn**	**12 10 02.8**	**0.0**
AKUT				IAML		12 11 07.9	
	comp=E,19nm,0.9s						
AKUT				IAML		12 11 17.7	
	comp=N,22nm,1.1s						
O14K	**Tigyukauivet M**	**4.51**	**341**		**Pn**	**12 10 05.0**	**+0.9**
O14K				IAML		12 11 40.8	
	comp=N,18nm,1.1s						
O14K				IAML		12 11 41.2	
	comp=E,18nm,1.1s						
LVA	**Lava Point**	**4.56**	**262**	Pn	**Pn**	**12 10 04.3**	**-0.5**
LVA				IAML		12 11 32.6	
	comp=N,35nm,0.8s						
LVA				IAML		12 12 12.9	
	comp=E,19nm,1.1s						
O16K	**Kokwok River B**	**4.56**	**2**	Pn	**Pn**	**12 10 06.0**	**+1.2**
UNV	**Unalaska Valle**	**4.91**	**259**	Pn	**Pn**	**12 10 09.0**	**-0.6**
UNV				IAML		12 11 27.9	
	comp=N,12nm,0.6s						
N14K	**Kuskokwak Cree**	**5.21**	**341**	Pn	**Pn**	**12 10 14.8**	**+1.1**
N15K	**Kwethluk River**	**5.22**	**350**	Pn	**Pn**	**12 10 15.2**	**+1.3**
N15K				IAML		12 11 58.5	
	comp=E,17nm,0.7s						
N15K				IAML		12 11 59.1	
	comp=N,15nm,0.9s						
N17K	**Nushagak Hills**	**5.53**	**6**	Pn	**Pn**	**12 10 19.6**	**+1.5**
N18K	**Kilae Creek**	**5.80**	**12**	Pn	**Pn**	**12 10 23.3**	**+1.5**
M16K	**Timber Creek**	**6.00**	**357**		**Pn**	**12 10 25.7**	**+1.1**
M13K	**Dall Lake**	**6.01**	**336**	Pn	**Pn**	**12 10 25.7**	**+1.1**
M14K	**Bethel**	**6.04**	**343**		**Pn**	**12 10 25.6**	**+0.6**
N19K	**Bonanza Creek**	**6.14**	**18**	Pn	**Pn**	**12 10 28.0**	**+1.5**
M17K	**Holitna River**	**6.39**	**4**	Pn	**Pn**	**12 10 31.3**	**+1.4**
L16K	**Owhat River**	**6.71**	**355**		**Pn**	**12 10 34.8**	**+0.5**
L14K	**Kuka Creek**	**6.71**	**342**		**Pn**	**12 10 34.6**	**+0.3**
M11K	**Mekoryuk**	**6.80**	**325**	Pn	**Pn**	**12 10 35.5**	**0.0**
SEW	**Seward**	**6.97**	**40**	Pn	**Pn**	**12 10 38.7**	**+0.9**
SLKM	**Skilak Lake**	**6.99**	**35**	Pn	**Pn**	**12 10 38.8**	**+0.6**
SPIA	**Saint Paul Isl**	**6.99**	**293**	Pn	**Pn**	**12 10 38.1**	**0.0**
L18K	**Granite Mounta**	**7.25**	**6**	Pn	**Pn**	**12 10 42.7**	**+1.1**
M20K	**Styx River**	**7.38**	**20**	Pn	**Pn**	**12 10 44.9**	**+1.3**
L19K	**White Mountain**	**7.38**	**13**		**Pn**	**12 10 44.2**	**+0.6**
K15K	**Wolf Creek Mou**	**7.46**	**348**	Pn	**Pn**	**12 10 45.2**	**+0.7**
RC01	**Rabbit Creek A**	**7.58**	**33**	Pn	**Pn**	**12 10 47.3**	**+1.1**
K13K	**Kusilvak Mount**	**7.65**	**337**	Pn	**Pn**	**12 10 48.0**	**+0.8**
K17K	**Iditarod**	**7.69**	**0**		**Pn**	**12 10 48.5**	**+0.7**
P23K	**Montague Islan**	**7.70**	**45**	Pn	**Pn**	**12 10 48.7**	**+0.9**
PWL	**Port Wells**	**7.89**	**38**	Pn	**Pn**	**12 10 50.5**	**0.0**
PMR	**Palmer**	**8.15**	**33**	Pn	**Pn**	**12 10 53.7**	**-0.3**
J14K	**Nanvaranak Lak**	**8.18**	**343**	Pn	**Pn**	**12 10 55.0**	**+0.6**
J16K	**Anvik River**	**8.34**	**353**	Pn	**Pn**	**12 10 57.1**	**+0.4**
GHO	**Glory Hole Cre**	**8.36**	**32**	Pn	**Pn**	**12 10 56.9**	**-0.1**
J17K	**VABM Dome**	**8.38**	**358**	Pn	**Pn**	**12 10 57.0**	**-0.3**
EYAK	**Cordova Ski Ar**	**8.69**	**46**	Pn	**Pn**	**12 11 01.8**	**+0.3**
SCM	**Sheep Creek Mo**	**8.91**	**36**	Pn	**Pn**	**12 11 05.7**	**+1.1**
KAIM	**Kayak Island**	**8.95**	**51**	Pn	**Pn**	**12 11 06.3**	**+1.3**
J19K	**Poorman**	**9.08**	**8**	Pn	**Pn**	**12 11 08.3**	**+1.5**
KLU	**Klutina**	**9.19**	**40**	Pn	**Pn**	**12 11 09.7**	**+1.4**
PAX	**Paxson**	**10.33**	**35**	Pn	**Pn**	**12 11 25.0**	**+1.0**
H19K	**Roundabout Mou**	**10.56**	**4**	Pn	**Pn**	**12 11 29.2**	**+2.2**
G18K	**Tagagawik**	**10.89**	**359**	Pn	**Pn**	**12 11 32.2**	**+0.7**
CCB	**Clear Creek Bu**	**10.97**	**24**	Pn	**Pn**	**12 11 32.3**	**-0.3**
HDA	**Harding Lake**	**10.99**	**27**	Pn	**Pn**	**12 11 34.1**	**+1.2**
I23K	**Minto, Yukon-K**	**11.06**	**20**	Pn	**Pn**	**12 11 34.7**	**+0.8**
G19K	**Purcell Mounta**	**11.15**	**3**		**Pn**	**12 11 35.9**	**+0.8**
IMAR	**Indian Mountai**	**11.20**	**10**	Pn	**Pn**	**12 11 38.5**	**+2.8**
O28M	**Mount Upton**	**11.21**	**52**	Pn	**Pn**	**12 11 35.7**	**-0.5**
IL31		**11.30**	**26**		**Pn**	**12 11 38.9**	**+1.8**
ILAR	**Eielson Array**	**11.30**	**26**	Pn	Pn	12 11 29.1	-8.1
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=8.2						
	comp=N,0.2nm,0.8s						
ADK	**Adak**	**11.38**	**261**	Pn	**Pn**	**12 11 38.9**	**+0.7**
KIWB	**Kanaga Island**	**11.65**	**262**	Pn	**Pn**	**12 11 41.5**	**-0.5**
INK	**Inuvik**	**17.56**	**31**	P	**Pn**	**12 12 59.0**	**-1.4**
	comp=N,0.2nm,0.3s,baz=232,slow=13,SNR=5.7						
	comp=N,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**23.46**	**54**	P	**P**	**12 14 06.5**	**+1.5**
	comp=N,0.3nm,0.7s,baz=264,slow=11,SNR=1.6						
	comp=N,0.3nm,0.7s						
TXAR	**Lajitas Array**	**46.44**	**101**	P	**P**	**12 17 24.3**	**+1.6**
	comp=N,0.1nm,0.4s,baz=317,slow=7.7,SNR=2.4						
	comp=N,0.1nm,0.4s						

*IDC **22** 12:10:39.1±0.9,54.°81N×57.°45E, h0km, mb3.4/4, mbtmp3.6/10, ML3.1/6, Error ellipse: s-maj=12.9km s-min=10.3km az=23.0*

*MIRAS **22** 12:10:40.0,54.°75N×57.°63E, h0km, ML3.5/10*

ISC 22 12:10:37.9±1.4,54.°71N±0.°03×57.°57E±0.°03, h3km±11km, n21, σ1°89/73, mb3.5/3, 1C-3D, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BA1R	**Ufa**	**1.09**	**264**	*e*P	**Pb**	**12 11 00.7**	**+1.3**
	134nm,0.2s						
BA1R				*e*P	**Pb**	**12 11 00.7**	**+1.3**
BA1R				*e*P	**Pb**	**12 11 00.7**	**+1.3**
BA1R				*e*S	**Sb**	**12 11 15.9**	**+1.9**
	376nm,0.5s						
BA1R				*e*S	**Sb**	**12 11 15.9**	**+1.9**
BA1R				*e*S	**Sb**	**12 11 15.9**	**+1.9**
BA1R				*i* AML	AML	12 11 18.8	
	804nm,0.6s						
ARTI	**Arti**	**1.74**	**15**	Pn	**Pn**	**12 11 09.9**	**+0.8**
	9.9nm,0.3s,baz=192,slow=10,SNR=24						
ARTI				Lg	Lg	12 11 33.0	
	13nm,0.3s,baz=96,slow=22,SNR=25						
ARTI	**Arti**	**1.74**	**15**	*e*P	**Pn**	**12 11 09.9**	**+0.8**
ARTI				*e*P	**Pn**	**12 11 09.9**	**+0.8**
ARTI				*e*P	**Pn**	**12 11 09.9**	**+0.8**
	21nm,0.4s						
ARTI				*e*S	**Sg**	**12 11 33.2**	**-0.5**
ARTI				*e*S	**Sg**	**12 11 33.2**	**-0.5**
ARTI				*e*S	**Sg**	**12 11 33.2**	**-0.5**
ARTI				*i* AML	AML	12 11 37.1	
	192nm,0.9s						
SVE	**Sverdlovsk**	**2.73**	**38**	*e*P	**Pn**	**12 11 25.2**	**+2.6**
SVE				*e*P	**Pn**	**12 11 25.2**	**+2.6**
SVE				*e*P	**Pn**	**12 11 25.2**	**+2.6**
SVE				*e*S	**Sb**	**12 12 00.3**	**-1.1**
SVE				*e*S	**Sb**	**12 12 00.3**	**-1.1**
SVE				*e*S	**Sb**	**12 12 00.3**	**-1.1**
SVE				*i* AML	AML	12 12 04.4	
	166nm,0.5s						
PR3R	**Kungur**	**2.76**	**354**	*e*Pn	**Pn**	**12 11 24.6**	**+1.6**
PR3R				*e*Pn	**Pn**	**12 11 24.6**	**+1.6**
PR3R				*e*Pn	**Pn**	**12 11 24.6**	**+1.6**
PR3R				*e*Pg	**Pg**	**12 11 30.1**	**-0.6**
PR3R				*e*Pg	**Pg**	**12 11 30.1**	**-0.6**
PR3R				*e*Pg	**Pg**	**12 11 30.1**	**-0.6**
PR3R				*e*Sn	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*Sn	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*Sn	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*S	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*S	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*S	**Sb**	**12 12 01.6**	**-0.3**
PR3R				*e*Sg	**Sg**	**12 12 08.4**	**+2.0**
PR3R				*e*Sg	**Sg**	**12 12 08.4**	**+2.0**
PR3R				*e*Sg	**Sg**	**12 12 08.4**	**+2.0**
PR3R				*i* AML	AML	12 12 08.6	
	202nm,0.6s						
KAUR	**Kamensk Uralsk**	**2.82**	**51**	*e*P	**Pn**	**12 11 25.3**	**+1.5**
KAUR				*e*P	**Pn**	**12 11 25.3**	**+1.5**
KAUR				*e*P	**Pn**	**12 11 25.3**	**+1.5**
KAUR				*e*S	**Sn**	**12 12 01.4**	**+3.2**
KAUR				*e*S	**Sn**	**12 12 01.4**	**+3.2**
KAUR				*e*S	**Sn**	**12 12 01.4**	**+3.2**
	18nm,0.8s						
KAUR				*i* AML	AML	12 12 06.4	
	65nm,0.7s						
PR4R	**Vlasy**	**3.38**	**343**	*e*P	**Pb**	**12 11 38.9**	**+0.5**
PR4R				*e*P	**Pb**	**12 11 38.9**	**+0.5**
PR4R				*e*P	**Pb**	**12 11 38.9**	**+0.5**
	86nm,0.6s						
PR4R				*e*S	**Sb**	**12 12 21.9**	**+2.1**
	140nm,0.3s						
PR4R				*e*S	**Sb**	**12 12 21.9**	**+2.1**
PR4R				*e*S	**Sb**	**12 12 21.9**	**+2.1**
PR4R				*i* AML	AML	12 12 26.0	
	167nm,0.4s						
PR7R	**Sarany**	**3.90**	**9**	*e*P	**Pb**	**12 11 48.9**	**+1.6**
PR7R				*e*P	**Pb**	**12 11 48.9**	**+1.6**
	86nm,0.4s						
PR7R				*e*P	**Pb**	**12 11 48.9**	**+1.6**
PR7R				*e*S	**Sg**	**12 12 42.0**	**-1.1**
PR7R				*e*S	**Sg**	**12 12 42.0**	**-1.1**
PR7R				*e*S	**Sg**	**12 12 42.0**	**-1.1**
	123nm,0.6s						
PR7R				*i* AML	AML	12 12 46.3	
	156nm,0.6s						
AKTO	**Aktyubinsk**	**4.29**	**176**	⇑Pn	**Pb**	**12 11 52.7**	**-1.3**
	2.6nm,0.5s						
AKTO				⇓Sn	**Sb**	**12 12 47.7**	**+1.5**
	22nm,0.6s						
SVUR	**Severouralsk**	**5.65**	**12**	*e*P	**Pb**	**12 12 19.9**	**+2.9**
	4.0nm,0.6s						
SVUR				*e*P	**Pb**	**12 12 19.9**	**+2.9**
SVUR				*e*P	**Pb**	**12 12 19.9**	**+2.9**
SVUR				*e*S	**Sg**	**12 13 36.1**	**-3.1**
SVUR				*e*S	**Sg**	**12 13 36.1**	**-3.1**
SVUR				*e*S	**Sg**	**12 13 36.1**	**-3.1**
	13nm,0.5s						
SVUR				*i* AML	AML	12 13 43.2	
	21nm,2.5s						
AB31	**Akbulak array**	**5.66**	**164**	Pn	**Pn**	**12 12 04.0**	**+1.2**
	0.5nm,0.3s,baz=355,slow=12,SNR=40						
AB31				⇓Sn	**Sn**	**12 13 09.3**	**+1.0**
	2.2nm,0.4s,baz=338,slow=24,SNR=4.2						
AB31				⇓Lg	Lg	12 13 33.4	
	6.6nm,0.5s,baz=348,slow=30,SNR=3.7						
KIRV	**Kirov**	**5.94**	**314**	Pn	**Pn**	**12 12 05.7**	**-1.0**
	1.5nm,0.3s,baz=206,slow=3.9,SNR=2.0						
KIRV				Sn	**Sn**	**12 13 10.4**	**-4.7**
	1.5nm,0.3s,baz=249,slow=8.9,SNR=1.4						
KIRV				Lg	Lg	12 13 43.6	
	2.9nm,0.3s,baz=219,slow=21,SNR=4.0						
	5.1nm,0.5s						
BVAR	**Borovoye Array**	**7.76**	**97**	Pn	**Pn**	**12 12 33.7**	**+1.9**
	0.1nm,0.3s,baz=278,slow=12,SNR=4.1						
BVAR				Sn	**Sn**	**12 13 56.6**	**-3.5**
	0.3nm,0.3s,baz=288,slow=25,SNR=6.5						
BVAR				Lg	Lg	12 14 43.0	
	0.2nm,0.3s,baz=285,slow=29,SNR=3.9						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**13.35**	**99**	Pn	**Pn**	**12 13 47.5**	**-0.6**
	0.1nm,0.3s,baz=297,slow=14,SNR=9.3						
KURBB				Lg	Lg	12 17 36.4	
	baz=298,slow=29,SNR=5.5						
	0.8nm,0.5s						
KBZ	**Khabaz**	**14.55**	**227**	Pn	Pn	12 14 02.1	-2.5
	0.4nm,0.3s,baz=31,slow=2.7,SNR=4.7						
	0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**15.88**	**82**	Pn	**Pn**	**12 14 23.7**	**+1.6**
	0.2nm,0.3s,baz=293,slow=15,SNR=1.6						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**17.83**	**305**	Pn	**Pn**	**12 14 42.9**	**-3.8**
	0.2nm,0.3s,baz=114,slow=15,SNR=5.8						
	4.1nm,1.1s						
ARCES	**ARCESS Array B**	**20.72**	**328**	P	**P**	**12 15 20.2**	**+1.2**
	0.6nm,0.5s,baz=110,slow=10,SNR=3.5						
	0.6nm,0.5s						
BRTR	**Keskin Array B**	**21.96**	**237**	P	**P**	**12 15 34.4**	**+1.6**
	1.4nm,0.8s,baz=46,slow=7.1,SNR=3.9						
	1.4nm,0.8s						
HFS	**Hagfors**	**23.88**	**301**	P	**P**	**12 15 51.9**	**-0.4**
	1.5nm,0.5s,baz=84,slow=15,SNR=12						
	1.5nm,0.5s						
NOA	**NORSAR Array B**	**

CHIR	**Chirikof Islan**	**1.80**	**64**			**Pn**		**12 16 42.9**	**+0.4**
CHIR					Sn	**Sn**		**12 17 04.2**	**0.0**
CHIR					IAML			12 17 16.9	
	comp=E,573nm,0.6s								
CHIR					IAML			12 17 26.1	
	comp=N,250nm,0.8s								
SII	**Sitkinak Islan**	**2.86**	**57**			**Pn**		**12 16 57.4**	**+0.4**
SII					IAML			12 18 03.6	
	comp=N,236nm,0.8s								
OHAK	**Old Harbor**	**3.63**	**51**			**Pn**		**12 17 07.4**	**-0.1**
P16K	**Nushagak River**	**3.98**	**4**	Pn		**Pn**		**12 17 13.8**	**+1.4**
P16K					IAML			12 18 18.3	
	comp=N,84nm,0.8s								
O15K	**Ungalikthiuk R**	**4.18**	**351**			**Pn**		**12 17 15.7**	**+0.6**
O15K					IAML			12 18 36.6	
	comp=E,33nm,1.2s								
KDAK	**Kodiak Island**	**4.26**	**48**	Pn		**Pn**		**12 17 16.4**	**+0.2**
	comp=E,1.7nm,0.3s,baz=173,slow=1.3,SNR=56								
KDAK					Sn	**Sn**		**12 18 01.8**	**-3.1**
	comp=E,1.8nm,0.3s,baz=302,slow=8.5,SNR=4.1								
	comp=E,3.4nm,0.3s								
KDAK	**Kodiak Island**	**4.26**	**48**	Pn		**Pn**		**12 17 16.2**	**0.0**
KDAK					IAML			12 18 31.9	
	comp=E,28nm,0.9s								
KDAK					IAML			12 18 47.3	
	comp=E,33nm,1.0s								
P17K	**Kvichak River**	**4.29**	**14**			**Pn**		**12 17 17.8**	**+1.3**
O14K	**Tigyukauivet M**	**4.46**	**341**			**Pn**		**12 17 20.0**	**+1.1**
O14K					IAML			12 18 41.9	
	comp=N,33nm,0.9s								
O14K					IAML			12 18 53.7	
	comp=E,27nm,0.8s								
O16K	**Kokwok River B**	**4.54**	**3**			**Pn**		**12 17 20.8**	**+0.7**
O18K	**Koktuh Hills**	**5.12**	**19**	Pn		**Pn**		**12 17 29.4**	**+1.4**
N14K	**Kuskokwak Cree**	**5.16**	**342**			**Pn**		**12 17 29.3**	**+0.8**
N14K					IAML			12 19 02.6	
	comp=E,36nm,1.1s								
N14K					IAML			12 19 08.8	
	comp=N,38nm,1.0s								
N15K	**Kwethluk River**	**5.19**	**351**			**Pn**		**12 17 29.8**	**+0.9**
N15K					IAML			12 19 12.3	
	comp=N,27nm,0.8s								
N15K					IAML			12 19 15.0	
	comp=E,26nm,0.8s								
N17K	**Nushagak Hills**	**5.52**	**7**			**Pn**		**12 17 33.9**	**+0.5**
ILSW	**Iliamna Southw**	**5.71**	**28**	Pn		**Pn**		**12 17 37.1**	**+0.9**
N18K	**Kilae Creek**	**5.80**	**13**	Pn		**Pn**		**12 17 38.6**	**+1.3**
M13K	**Dall Lake**	**5.96**	**336**			**Pn**		**12 17 40.7**	**+1.3**
M16K	**Timber Creek**	**5.98**	**358**			**Pn**		**12 17 40.9**	**+1.2**
M14K	**Bethel**	**5.99**	**343**			**Pn**		**12 17 40.7**	**+0.8**
N19K	**Bonanza Creek**	**6.14**	**19**	Pn		**Pn**		**12 17 43.6**	**+1.5**
M17K	**Holitna River**	**6.38**	**5**			**Pn**		**12 17 46.0**	**+0.8**
L14K	**Kuka Creek**	**6.67**	**342**			**Pn**		**12 17 49.5**	**+0.3**
L16K	**Owhat River**	**6.68**	**356**			**Pn**		**12 17 50.1**	**+0.7**
M11K	**Mekoryuk**	**6.74**	**325**	Pn		**Pn**		**12 17 50.9**	**+0.7**
SPIA	**Saint Paul Isl**	**6.90**	**293**	Pn		**Pn**		**12 17 52.5**	**+0.1**
SEW	**Seward**	**7.01**	**40**	Pn		**Pn**		**12 17 54.0**	**+0.2**
L18K	**Granite Mounta**	**7.24**	**7**			**Pn**		**12 17 57.3**	**+0.4**
L19K	**White Mountain**	**7.38**	**13**			**Pn**		**12 18 00.7**	**+1.7**
K15K	**Wolf Creek Mou**	**7.42**	**349**			**Pn**		**12 18 00.7**	**+1.2**
K13K	**Kusilvak Mount**	**7.60**	**337**			**Pn**		**12 18 02.8**	**+0.8**
RC01	**Rabbit Creek A**	**7.61**	**34**	Pn		**Pn**		**12 18 02.4**	**+0.2**
K17K	**Iditarod**	**7.67**	**1**			**Pn**		**12 18 03.8**	**+0.8**
SKT	**Skwentna**	**7.83**	**25**	Pn		**Pn**		**12 18 06.0**	**+0.9**
PWL	**Port Wells**	**7.92**	**39**			**Pn**		**12 18 06.4**	**-0.1**
J14K	**Nanvaranak Lak**	**8.13**	**343**	Pn		**Pn**		**12 18 09.9**	**+0.7**
J16K	**Anvik River**	**8.31**	**353**			**Pn**		**12 18 12.3**	**+0.6**
HIN	**Hinchinbrook I**	**8.34**	**45**	Pn		**Pn**		**12 18 12.8**	**+0.6**
J17K	**VABM Dome**	**8.36**	**358**			**Pn**		**12 18 12.6**	**+0.2**
J18K	**Innoko River**	**8.47**	**5**			**Pn**		**12 18 14.8**	**+0.8**
FID	**Port Fidalgo**	**8.56**	**43**	Pn		**Pn**		**12 18 14.5**	**-0.7**
K20K	**Telida**	**8.62**	**13**			**Pn**		**12 18 16.8**	**+0.9**
EYAK	**Cordova Ski Ar**	**8.74**	**46**	Pn		**Pn**		**12 18 18.1**	**+0.5**
I17K	**Unalakleet**	**8.92**	**354**	Pn		**Pn**		**12 18 21.0**	**+1.0**
J19K	**Poorman**	**9.07**	**8**	Pn		**Pn**		**12 18 23.1**	**+1.0**
RAGM	**Ragged Mountai**	**9.11**	**49**	Pn		**Pn**		**12 18 23.2**	**+0.5**
KLU	**Klutina**	**9.23**	**41**	Pn		**Pn**		**12 18 25.0**	**+0.6**
H17K	**Granite Mounta**	**9.93**	**357**	Pn		**Pn**		**12 18 34.9**	**+1.1**
H18K	**Honhosa River**	**10.12**	**0**	Pn		**Pn**		**12 18 37.6**	**+1.1**
ANM	**Nome**	**10.13**	**343**	Pn		**Pn**		**12 18 37.0**	**+0.4**
G19K	**Purcell Mounta**	**11.13**	**3**	Pn		**Pn**		**12 18 51.0**	**+0.7**
IMAR	**Indian Mountai**	**11.19**	**10**	Pn		**Pn**		**12 18 51.8**	**+0.6**
ILAR	**Eielson Airpor**	**11.32**	**26**	Pn		Pn		12 18 48.1	-4.7
	comp=E,0.2nm,0.3s,baz=217,slow=13,SNR=17								
ILAR						Sn		12 20 46.9	-11
	baz=214,slow=26,SNR=1.5								
	comp=E,0.6nm,0.6s								
PRP	**Porcupine Dome**	**12.26**	**26**	Pn		**Pn**		**12 19 05.2**	**-0.7**
G23K	**Bananza Creek**	**12.37**	**16**	Pn		**Pn**		**12 19 06.7**	**-0.6**
E19K	**Redstone River**	**12.45**	**2**	Pn		**Pn**		**12 19 08.5**	**+0.2**
S31K	**Pelican**	**12.62**	**68**	Pn		**Pn**		**12 19 09.7**	**-0.9**
M29M	**Somme Creek**	**12.71**	**46**			**Pn**		**12 19 11.7**	**-0.4**
BESE	**Bessie Mountai**	**13.39**	**65**	Pn		**Pn**		**12 19 20.7**	**-0.6**
C18K	**Utukok River**	**13.69**	**356**	Pn		**Pn**		**12 19 24.6**	**-0.6**
C19K	**Lookout Ridge**	**14.10**	**358**	Pn		**Pn**		**12 19 30.8**	**0.0**
J30M	**Hart River**	**14.57**	**40**	Pn		**Pn**		**12 19 38.9**	**+1.5**
B20K	**Meade River**	**15.01**	**2**	Pn		**Pn**		**12 19 43.0**	**-0.1**
B20K					IAmb	IAmb		12 19 48.8	
	comp=E,2.0nm,0.8s								
C23K	**Itkillik River**	**15.24**	**10**	Pn		**Pn**		**12 19 46.4**	**+0.3**
C23K					IAmb	IAmb		12 19 54.7	
	comp=E,2.1nm,1.1s								
EPYK	**Eagle Plains**	**15.44**	**34**	Pn		**Pn**		**12 19 49.2**	**+0.4**
H31M	**Peel River**	**15.93**	**38**	Pn		**Pn**		**12 19 55.4**	**+0.3**
H31M					IAmb	IAmb		12 20 11.2	
	comp=E,2.4nm,0.9s								
G30M	**tAoh Zraii Nji**	**15.96**	**33**	Pn		**Pn**		**12 19 55.9**	**+0.3**
G30M					IAmb	IAmb		12 20 02.1	
	comp=E,3.8nm,0.9s								
INK	**Inuvik**	**17.59**	**31**	P		**Pn**		**12 20 16.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=234,slow=13,SNR=6.4								
	comp=Z,0.9nm,0.4s								
INK	**Inuvik**	**17.59**	**31**	P		**Pn**		**12 20 16.6**	**+0.7**
NVAR	**Mina Array Bea**	**31.63**	**105**	P		**P**		**12 22 35.9**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=304,slow=8.7,SNR=5.4								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**33.73**	**91**	P		**P**		**12 22 53.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=294,slow=8.0,SNR=4.4								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**33.73**	**91**	P		**P**		**12 22 51.6**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**43.90**	**230**	T		T		13 11 13.3	
	baz=28,slow=75,SNR=3.1								
H11N3	**WAKE ISLAND Hy**	**43.91**	**230**	T		T		13 11 13.7	
	baz=28,slow=75,SNR=2.8								
H11N1	**WAKE ISLAND Hy**	**43.92**	**230**	T		T		13 11 13.5	
	baz=28,slow=75,SNR=2.8								
H11S1	**WAKE ISLAND Hy**	**45.07**	**230**	T		T		13 12 40.0	
	baz=29,slow=74,SNR=3.6								
H11S2	**WAKE ISLAND Hy**	**45.08**	**230**	T		T		13 12 40.8	
	baz=29,slow=74,SNR=3.4								
H11S3	**WAKE ISLAND Hy**	**45.08**	**230**	T		T		13 12 40.6	
	baz=29								
TXAR	**Lajitas Array**	**46.53**	**100**	P		**P**		**12 24 40.0**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=312,slow=5.7,SNR=2.9								
	comp=Z,0.1nm,0.5s								
TXAR	**Lajitas Array**	**46.53**	**100**	P		**P**		**12 24 37.9**	**-0.2**
SONM	**Songino Array**	**55.25**	**305**	P		**P**		**12 25 42.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=32,slow=8.5,SNR=1.5								
	comp=Z,0.3nm,0.4s								
SONM	**Songino Array**	**55.25**	**305**	P		**P**		**12 25 43.6**	**0.0**
ZALV	**Zalesovo Beam**	**59.53**	**322**	P		**P**		**12 26 12.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=32,slow=4.7,SNR=2.0								
	comp=Z,0.3nm,0.3s								
QSPA	**South Pole Qui**	**144.85**	**180**	PKP		**PKPab**		**12 35 44.4**	**-0.6**
	comp=Z,2.4nm,1.2s,baz=71,slow=2.1,SNR=2.6								
QSPA	**South Pole Qui**	**144.85**	**180**			PKPbc		12 35 44.9	-0.2

*ATH **22** 12:18:23.5,34˚.26N×23˚.55E,h13km±2km, ML3.5/6, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*THE **22** 12:18:29.2,35˚N±3˚×2˚4E±˚,h18km±3km, M3.2/7, MLh3.2/7*

ISC 22 12:18:25.9±2.8**,34˚4N**±0.1×**23˚62E**±0.07**,h17**km±9km**,n16,** σ0**58**/30**, Crete**

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

GVD	**Gavdhos**	**0.60**	**40**	P		**Pg**		**12 18 37.9**	**+0.1**
GVD				S		**Sg**		**12 18 45.2**	**-0.7**
GVD	**Gavdhos**	**0.60**	**40**	P		**Pg**		**12 18 37.7**	**-0.2**
GVD				S		**Sb**		**12 18 47.7**	**+1.5**
KNDR	**Palaiochora Ch**	**0.86**	**0**	P		**Pg**		**12 18 42.7**	**0.0**
KNDR				S		**Sb**		**12 18 53.1**	**-0.5**
KNDR	**Palaiochora Ch**	**0.86**	**0**	P		**Pb**		**12 18 42.2**	**-0.2**
KNDR				S		**Sn**		**12 18 55.5**	**+0.1**
IMMV	**Iera Moni Meta**	**1.12**	**15**	P		**Pb**		**12 18 46.5**	**-0.4**
IMMV				S		**Sb**		**12 19 00.7**	**-0.5**
IMMV	**Iera Moni Meta**	**1.12**	**15**	P		**Pb**		**12 18 46.4**	**-0.5**
IMMV				S		**Sn**		**12 19 02.7**	**+0.7**
VAM	**Vamos**	**1.13**	**25**	P		**Pn**		**12 18 47.4**	**+0.4**
VAM				S		**Sb**		**12 19 00.6**	**-0.9**
VAM	**Vamos**	**1.13**	**25**	P		**Pb**		**12 18 47.1**	**0.0**
VAM				S		**Sg**		**12 19 03.6**	**+0.9**
CHNB	**Souda**	**1.17**	**18**	P		**Pn**		**12 18 47.8**	**+0.3**
CHNB				S		**Sg**		**12 19 04.5**	**+0.7**
SIVA	**Sivas**	**1.17**	**56**	P		**Pb**		**12 18 48.0**	**+0.3**
SIVA				S		**Sb**		**12 19 02.8**	**+0.1**
SIVA	**Sivas**	**1.17**	**56**	P		**Pn**		**12 18 47.8**	**+0.2**
SIVA				S		**Sg**		**12 19 03.7**	**-0.2**
CHAN	**Chania**	**1.19**	**17**	P		**Pn**		**12 18 47.7**	**-0.1**
CHAN				S		**Sg**		**12 19 05.0**	**+0.4**
IDI	**Anoyia**	**1.39**	**49**	P		**Pn**		**12 18 50.9**	**+0.3**
IDI				S		**Sn**		**12 19 07.5**	**-1.1**
IDI	**Anoyia**	**1.39**	**49**	P		**Pn**		**12 18 50.5**	**-0.1**
IDI				S		**Sg**		**12 19 10.4**	**-0.4**
ANKY	**Antikythira Is**	**1.51**	**350**	P		**Pn**		**12 18 52.9**	**+0.6**
ANKY	**Antikythira Is**	**1.51**	**350**	P		**Pn**		**12 18 52.1**	**-0.2**

*IDC **22** 12:24:14.3±8.3,54˚.97N×158˚.14W, h0km, mb3.2/2, mbtmp3.2/5, ML3.0/3, Error ellipse: s-maj=147.2km s-min=31.6km az=83.0*
*NEIC **22** 12:24:15.8±0.8, 55˚.02N±0˚.07×158˚.45W±0˚.08, h35km±2km, ML3.5/36, Error ellipse: s-maj=13.2km s-min=5.9km az=151.0*

ISC 22 12:24:15.6±0.9**,55˚02N**±0˚.07×**158˚52W**±0˚.05**,h30**km**,n44,** σ0**94**/47**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.65**	**252**		**Pb**	**12 24 26.6**	**-1.8**
CNBA					**Sn**	**12 24 37.9**	**0.0**
SDPT	**Sand Point**	**1.17**	**287**		**Pn**	**12 24 34.8**	**-1.1**
SDPT					**Sn**	**12 24 50.7**	**0.0**
CHGN	**Chignik**	**1.28**	**3**		**Pn**	**12 24 36.8**	**-0.6**
CHGN					**Sn**	**12 24 52.8**	**-0.8**
CHGN				IAML		12 24 55.4	
	comp=E,664nm,0.1s						
VNFG	**Fog Glacier, M**	**1.40**	**336**		**Pn**	**12 24 39.6**	**+0.5**
VNFG				IAML		12 25 01.1	
	comp=N,1μm,0.8s						
VNFG				IAML		12 25 01.7	
	comp=E,977nm,0.7s						
CHIR	**Chirikof Islan**	**1.84**	**63**	Pn	**Pn**	**12 24 44.8**	**-0.2**
CHIR				IAML		12 25 54.8	
	comp=E,313nm,0.4s						
SII	**Sitkinak Islan**	**2.89**	**56**	Pn	**Pn**	**12 24 58.6**	**-1.0**
ACHA	**Angle Creek He**	**3.65**	**28**	Pn	**Pn**	**12 25 09.1**	**-1.0**
OHAK	**Old Harbor**	**3.67**	**51**	Pn	**Pn**	**12 25 09.5**	**-0.5**
OHAK				IAML		12 27 10.8	
	comp=E,59nm,1.0s						
OHAK				IAML		12 27 11.4	
	comp=N,60nm,0.8s						
O15K	**Ungalikthiuk R**	**4.23**	**351**	Pn	**Pn**	**12 25 17.8**	**-0.1**
O15K				IAML		12 27 41.2	
	comp=E,32nm,1.0s						
O15K				IAML		12 27 45.8	
	comp=N,31nm,0.9s						
KDAK	**Kodiak Island**	**4.31**	**48**	Pn	**Pn**	**12 25 17.9**	**-1.0**
	comp=N,1.1nm,0.3s,baz=238,slow=8.2,SNR=8.4						
	comp=N,2.1nm,0.3s						
KDAK	**Kodiak Island**	**4.31**	**48**		**Pn**	**12 25 18.4**	**-0.5**
KDAK				IAML		12 27 38.5	
	comp=N,41nm,1.2s						
AKUT	**Akutan**	**4.31**	**261**	Pn	**Pn**	**12 25 20.5**	**+1.5**
P17K	**Kvichak River**	**4.34**	**14**	Pn	**Pn**	**12 25 20.3**	**+1.0**
LVA	**Lava Point**	**4.46**	**262**	Pn	**Pn**	**12 25 21.3**	**+0.3**
O14K	**Tigyukauivet M**	**4.50**	**342**	Pn	**Pn**	**12 25 21.5**	**-0.1**
O14K				IAML		12 27 52.7	
	comp=E,29nm,1.2s						
O14K				IAML		12 28 05.5	
	comp=N,36nm,0.8s						
O16K	**Kokwok River B**	**4.59**	**3**	Pn	**Pn**	**12 25 22.6**	**-0.2**
O16K				IAML		12 27 44.5	
	comp=E,27nm,0.7s						
UNV	**Unalaska Valle**	**4.81**	**259**	Pn	**Pn**	**12 25 26.7**	**+0.9**
N14K	**Kuskokwak Cree**	**5.20**	**342**	Pn	**Pn**	**12 25 31.5**	**+0.2**
N15K	**Kwethluk River**	**5.23**	**351**		**Pn**	**12 25 32.2**	**+0.5**
N15K				IAML		12 28 10.2	
	comp=E,37nm,0.6s						
N15K				IAML		12 28 25.1	
	comp=N,30nm,0.7s						
N17K	**Nushagak Hills**	**5.57**	**7**	Pn	**Pn**	**12 25 35.9**	**-0.4**
M13K	**Dall Lake**	**5.99**	**336**	Pn	**Pn**	**12 25 42.3**	**+0.2**
CNPM	**China Poot**	**6.00**	**38**	Pn	**Pn**	**12 25 41.6**	**-0.6**
M16K	**Timber Creek**	**6.02**	**358**	Pn	**Pn**	**12 25 42.9**	**+0.4**
M14K	**Bethel**	**6.03**	**344**		**Pn**	**12 25 42.6**	**0.0**
N19K	**Bonanza Creek**	**6.19**	**19**	Pn	**Pn**	**12 25 44.7**	**-0.2**
M17K	**Holitna River**	**6.42**	**5**	Pn	**Pn**	**12 25 48.5**	**+0.5**
L14K	**Kuka Creek**	**6.71**	**343**	Pn	**Pn**	**12 25 51.9**	**0.0**
M11K	**Mekoryuk**	**6.77**	**326**	Pn	**Pn**	**12 25 53.5**	**+0.8**
SPIA	**Saint Paul Isl**	**6.91**	**293**	Pn	**Pn**	**12 25 55.1**	**+0.5**
SLKM	**Skilak Lake**	**7.07**	**36**	Pn	**Pn**	**12 25 56.2**	**-0.6**
L18K	**Granite Mounta**	**7.28**	**7**	Pn	**Pn**	**12 25 59.3**	**-0.5**
K15K	**Wolf Creek Mou**	**7.46**	**349**	Pn	**Pn**	**12 26 01.9**	**-0.3**
K13K	**Kusilvak Mount**	**7.64**	**338**	Pn	**Pn**	**12 26 04.9**	**+0.3**
K17K	**Iditarod**	**7.72**	**1**	Pn	**Pn**	**12 26 05.9**	**+0.2**
P23K	**Montague Islan**	**7.79**	**46**	Pn	**Pn**	**12 26 05.3**	**-1.4**
J16K	**Anvik River**	**8.36**	**354**		**Pn**	**12 26 14.4**	**-0.1**
J17K	**VABM Dome**	**8.41**	**358**	Pn	**Pn**	**12 26 16.0**	**+0.8**
I17K	**Unalakleet**	**8.96**	**354**	Pn	**Pn**	**12 26 22.8**	**+0.1**
ILAR	**Eielson Airpor**	**11.37**	**26**	Pn	**Pn**	**12 26 51.6**	**-4.0**
	comp=N,0.1nm,0.3s,baz=215,slow=13,SNR=9.3						
	comp=N,0.2nm,0.5s						
ILAR	**Eielson Airpor**	**11.37**	**26**	Pn	**Pn**	**12 26 54.9**	**-0.7**
H22K	**Ishtalitna Cre**	**11.45**	**15**	Pn	**Pn**	**12 26 56.5**	**-0.4**
INK	**Inuvik**	**17.64**	**31**	P	**Pn**	**12 28 18.6**	**0.0**
	baz=185,slow=9.6,SNR=2.4						
	comp=N,1.6nm,1.0s						
NVAR	**Mina Array Bea**	**31.63**	**105**	P	**P**	**12 30 37.3**	**+1.4**
	comp=N,0.3nm,0.6s,baz=317,slow=8.2,SNR=2.1						
	comp=N,0.3nm,0.6s						
TXAR	**Lajitas Array**	**46.53**	**100**	P	**P**	**12 32 41.4**	**+1.1**
	comp=N,0.2nm,0.7s,baz=319,slow=7.5,SNR=2.3						
	comp=N,0.2nm,0.7s						

*NEIC **22** 12:25:02.0±1.5, 54˚.87N±0˚.07×158˚.28W±0˚.07, h16km±6km, mb3.6/11, ML3.7/36, ML3.8(AEIC), Error ellipse: s-maj=10.2km s-min=5.2km az=160.0*
*AEIC **22** 12:25:02.5±1.6, 54˚.87N±0˚.07×158˚.33W±0˚.09, h26km±6km, Error ellipse: s-maj=11.2km s-min=5.6km az=149.0*
*IDC **22** 12:25:03.8±1.4, 54˚.87N×157˚.31W, h0km, mb3.5/5, mbtmp3.5/8, ML3.6/3, Error ellipse: s-maj=28.7km s-min=26.5km az=170.0*

ISC 22 12:25:01.6±0.8**,54˚90N**±0˚.08×**158˚23W**±0˚.05**,h10**km**,n80,** σ1**07**/73**, mb3.7**/5**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.79**	**265**	Pg	**Pg**	**12 25 16.2**	**-0.7**
CNBA				Sg	**Sb**	**12 25 27.5**	**-0.7**
CNBA				IAML		12 25 27.9	
	comp=N,4μm,0.4s						
CNBA				IAML		12 25 28.6	
	comp=E,4μm,0.4s						
VNSG	**Veniaminof 6**	**1.33**	**339**		**Pn**	**12 25 25.3**	**-0.9**
SDPT	**Sand Point**	**1.37**	**290**	Pn	**Pn**	**12 25 25.3**	**-1.5**
SDPT					**Sb**	**12 25 42.5**	**-2.3**
SDPT				IAML		12 25 48.5	
	comp=N,1μm,0.9s						
SDPT				IAML		12 25 49.7	
	comp=E,1μm,1.1s						
CHGN	**Chignik**	**1.41**	**356**		**Pn**	**12 25 26.7**	**-0.6**
CHGN				Sn	**Sn**	**12 25 45.0**	**-1.0**
CHGN				IAML		12 25 45.4	
	comp=N,851nm,0.4s						
CHGN				IAML		12 25 45.5	
	comp=E,1μm,0.5s						

VNNF	**Veniaminof 3**	**1.52**	**336**			**Pn**		**12 25 28.9**	**-0.1**
VNFG	**Fog Glacier, M**	**1.58**	**332**	Pn		**Pn**		**12 25 29.4**	**-0.4**
CHIR	**Chirikof Islan**	**1.75**	**57**			**Pn**		**12 25 31.7**	**-0.3**
CHIR	**Chirikof Islan**	**1.75**	**57**	IAML				12 26 11.8	
	comp=E,663nm,0.6s								
CHIR				IAML				12 26 13.2	
	comp=N,453nm,1.0s								
PS1A	**Pavlof South-1**	**2.09**	**286**			**Pn**		**12 25 35.8**	**-0.8**
PVV	**Pavlof Volcano**	**2.10**	**285**			**Pn**		**12 25 35.8**	**-1.0**
PS4A	**Pavlof South-4**	**2.13**	**284**			**Pn**		**12 25 36.3**	**-1.0**
SII	**Sitkinak Islan**	**2.83**	**52**	P		**Pn**		**12 25 46.9**	**+0.1**
SII	**Sitkinak Islan**	**2.83**	**52**			**Pn**		**12 25 46.8**	**-0.1**
SII				IAML				12 26 50.1	
	comp=N,389nm,0.8s								
OHAK	**Old Harbor**	**3.62**	**48**	P		**Pn**		**12 25 57.0**	**-0.6**
OHAK	**Old Harbor**	**3.62**	**48**	Pn		**Pn**		**12 25 57.2**	**-0.4**
ACHA	**Angle Creek He**	**3.69**	**25**	Pn		**Pn**		**12 25 59.3**	**+0.6**
P16K	**Nushagak River**	**4.15**	**2**	Pn		**Pn**		**12 26 05.6**	**+0.7**
KDAK	**Kodiak Island**	**4.27**	**45**	Pn		**Pn**		**12 26 04.4**	**-2.2**
	comp=N,2.3nm,0.3s,baz=64,slow=2.9,SNR=9.0								
KDAK					Sn	Sn		12 26 48.0	-8.4
	comp=N,2.4nm,0.3s,baz=37,slow=18,SNR=7.4								
	comp=N,6.9nm,0.5s								
KDAK	**Kodiak Island**	**4.27**	**45**			**Pn**		**12 26 05.8**	**-0.8**
KDAK				IAML				12 27 32.7	
	comp=N,49nm,0.7s								
P17K	**Kvichak River**	**4.42**	**12**	Pn		**Pn**		**12 26 08.9**	**+0.3**
P17K				IAML				12 27 34.9	
	comp=N,114nm,1.0s								
P17K				IAML				12 28 04.2	
	comp=E,83nm,1.1s								
AKUT	**Akutan**	**4.46**	**263**	P		**Pn**		**12 26 09.8**	**+0.6**
AKUT	**Akutan**	**4.46**	**263**	Pn		**Pn**		**12 26 08.8**	**-0.5**
LVA	**Lava Point**	**4.61**	**264**			**Pn**		**12 26 10.6**	**-0.7**
O14K	**Tigyukauivet M**	**4.67**	**340**	Pn		**Pn**		**12 26 12.7**	**+0.6**
O14K				IAML				12 29 02.6	
	comp=N,46nm,0.9s								
O14K				IAML				12 29 11.9	
	comp=E,41nm,0.9s								
O16K	**Kokwok River B**	**4.71**	**1**	Pn		**Pn**		**12 26 13.6**	**+1.0**
UNV	**Unalaska Valle**	**4.96**	**261**	P		**Pn**		**12 26 16.3**	**+0.3**
	comp=E,16nm,1.0s								
UNV	**Unalaska Valle**	**4.96**	**261**	Pn		**Pn**		**12 26 15.8**	**-0.1**
UNV				IAML				12 28 15.2	
	comp=E,69nm,0.7s								
UNV				IAML				12 28 23.2	
	comp=N,72nm,1.1s								
O18K	**Koktuh Hills**	**5.23**	**17**	Pn		**Pn**		**12 26 21.9**	**+2.1**
N14K	**Kuskokwak Cree**	**5.38**	**341**	Pn		**Pn**		**12 26 21.6**	**-0.2**
N14K				IAML				12 28 50.1	
	comp=E,48nm,0.7s								
N14K				IAML				12 29 33.1	
	comp=N,52nm,1.1s								
N15K	**Kwethluk River**	**5.38**	**350**	Pn		**Pn**		**12 26 22.2**	**+0.3**
CNPM	**China Poot**	**6.00**	**36**	Pn		**Pn**		**12 26 29.7**	**-0.6**
M16K	**Timber Creek**	**6.16**	**357**			**Pn**		**12 26 33.3**	**+0.8**
M13K	**Dall Lake**	**6.18**	**336**			**Pn**		**12 26 33.0**	**+0.3**
M14K	**Bethel**	**6.20**	**343**			**Pn**		**12 26 32.8**	**-0.3**
RED	**Redoubt Volcan**	**6.26**	**26**	Pn		**Pn**		**12 26 34.3**	**+0.2**
L16K	**Owhat River**	**6.87**	**355**			**Pn**		**12 26 43.2**	**+1.0**
L14K	**Kuka Creek**	**6.88**	**342**			**Pn**		**12 26 43.2**	**+0.9**
SEW	**Seward**	**7.04**	**39**	Pn		**Pn**		**12 26 43.7**	**-0.9**
SLKM	**Skilak Lake**	**7.07**	**34**	Pn		**Pn**		**12 26 44.6**	**-0.5**
SPIA	**Saint Paul Isl**	**7.11**	**

CHIR					IAML		12 28 16.3	
	comp=E,198nm,0.9s							
CHIR					IAML		12 28 39.5	
	comp=N,165nm,1.0s							
SII	**Sitkinak Islan**	**4.31**	**59**	Pn		**Pn**	**12 27 31.8**	**+1.8**
SII					IAML		12 28 53.5	
	comp=E,147nm,0.7s							
O15K	**Ungalikthiuk R**	**4.69**	**7**	Pn		**Pn**	**12 27 38.1**	**+2.8**
O15K					IAML		12 28 54.4	
	comp=E,34nm,0.8s							
O15K					IAML		12 29 13.5	
	comp=N,36nm,0.8s							
ACHA	**Angle Creek He**	**4.80**	**38**	Pn		**Pn**	**12 27 40.3**	**+3.3**
N14K	**Kuskokwak Cree**	**5.43**	**356**	Pn		**Pn**	**12 27 46.7**	**+1.3**
KDAK	**Kodiak Island**	**5.66**	**51**	Pn		**Pn**	**12 27 47.4**	**-1.1**
	comp=N,24nm,0.7s,baz=27,slow=1.1,SNR=1.5							
KDAK	**Kodiak Island**	**5.66**	**51**	Pn		**Pn**	**12 27 48.7**	**+0.1**
N15K	**Kwethluk River**	**5.67**	**4**	Pn		**Pn**	**12 27 49.7**	**+1.0**
M13K	**Dall Lake**	**6.05**	**348**	Pn		**Pn**	**12 27 56.7**	**+2.8**
O18K	**Koktuh Hills**	**6.16**	**28**	Pn		**Pn**	**12 27 59.1**	**+3.6**
M14K	**Bethel**	**6.26**	**355**	Pn		**Pn**	**12 27 58.4**	**+1.6**
M11K	**Mekoryuk**	**6.54**	**336**	Pn		**Pn**	**12 28 02.8**	**+2.3**
M16K	**Timber Creek**	**6.59**	**8**	Pn		**Pn**	**12 28 03.5**	**+2.1**
M17K	**Holitna River**	**7.13**	**13**	Pn		**Pn**	**12 28 11.0**	**+2.3**
N19K	**Bonanza Creek**	**7.17**	**26**	Pn		**Pn**	**12 28 11.6**	**+2.2**
L18K	**Granite Mounta**	**8.02**	**14**	Pn		**Pn**	**12 28 23.1**	**+2.2**
K17K	**Iditarod**	**8.32**	**8**	Pn		**Pn**	**12 28 26.7**	**+1.7**
SEW	**Seward**	**8.32**	**43**	Pn		**Pn**	**12 28 26.5**	**+1.4**
J14K	**Nanvaranak Lak**	**8.36**	**351**			**Pn**	**12 28 26.8**	**+1.3**
J16K	**Anvik River**	**8.78**	**1**	Pn		**Pn**	**12 28 33.6**	**+2.2**
J17K	**VABM Dome**	**8.94**	**5**	Pn		**Pn**	**12 28 34.7**	**+1.2**
J18K	**Innoko River**	**9.21**	**12**	Pn		**Pn**	**12 28 38.9**	**+1.6**
HIN	**Hinchinbrook I**	**9.71**	**47**			**Pn**	**12 28 45.0**	**+0.9**
J19K	**Poorman**	**9.86**	**14**			**Pn**	**12 28 48.1**	**+1.9**
CAST	**Castle Rocks**	**9.99**	**23**	Pn		**Pn**	**12 28 49.2**	**+1.3**
KLU	**Klutina**	**10.54**	**43**			**Pn**	**12 28 56.0**	**+0.4**
ILAR	**Eielson Array**	**12.43**	**29**	Pn		Pn	12 29 14.2	-7.0
	comp=N,0.2nm,0.6s,baz=218,slow=12,SNR=1.2							
H23K	**Yukon River**	**12.62**	**22**	Pn		**Pn**	**12 29 25.9**	**+2.0**
F20K	**Avaraart Lake**	**12.80**	**9**	Pn		**Pn**	**12 29 28.2**	**+1.9**
L27K	**Beaver Creek,**	**13.01**	**41**	Pn		**Pn**	**12 29 30.0**	**+0.8**
H24K	**Noodor Dome**	**13.01**	**24**	Pn		**Pn**	**12 29 29.9**	**+0.6**
BCAR	**Beaver Creek A**	**13.03**	**41**	Pn		**Pn**	**12 29 30.5**	**+1.1**
O29M	**Mount Kennedy**	**13.29**	**55**	Pn		**Pn**	**12 29 35.0**	**+1.8**
G23K	**Bananza Creek**	**13.29**	**19**	Pn		**Pn**	**12 29 33.9**	**+0.8**
PRP	**Porcupine Dome**	**13.37**	**28**	Pn		**Pn**	**12 29 35.7**	**+1.5**
K27K	**Chicken**	**13.46**	**38**	Pn		**Pn**	**12 29 36.4**	**+1.0**
I26K	**Coal Creek Min**	**13.92**	**32**	Pn		**Pn**	**12 29 41.5**	**-0.1**
M29M	**Somme Creek**	**14.08**	**47**			**Pn**	**12 29 45.1**	**+1.3**
S31K	**Pelican**	**14.09**	**66**	Pn		**Pn**	**12 29 44.7**	**+0.8**
N30M	**Aishikik Lake**	**14.33**	**51**	Pn		**Pn**	**12 29 48.9**	**+1.7**
D20K	**Etivluk River**	**14.37**	**6**	Pn		**Pn**	**12 29 49.8**	**+2.1**
S32K	**Killisnoo**	**14.96**	**68**	Pn		**Pn**	**12 29 57.3**	**+1.6**
D23K	**Nanushuk River**	**15.23**	**14**	Pn		**Pn**	**12 29 59.6**	**+0.4**
D23K					IAmb	IAmb	12 30 13.6	
	comp=Z,4.0nm,1.1s							
G27K	**Doyon Strip**	**15.40**	**29**	Pn		**Pn**	**12 30 02.8**	**+1.3**
C23K	**Itkillik River**	**16.05**	**13**	Pn		**Pn**	**12 30 10.3**	**+0.5**
C23K					IAmb	IAmb	12 30 23.1	
	comp=Z,3.5nm,0.8s							
B22K	**Teshekpuk Lake**	**16.21**	**9**	Pn		**Pn**	**12 30 12.9**	**+1.0**
B22K					IAmb	IAmb	12 30 29.5	
	comp=Z,4.8nm,1.1s							
G29M	**Pine Creek**	**16.55**	**33**	Pn		**P**	**12 30 17.9**	**-0.9**
G29M					IAmb	IAmb	12 30 26.9	
	comp=Z,4.5nm,0.7s							
G30M	**tAoh Zraii Nji**	**17.17**	**34**	P		**P**	**12 30 25.2**	**-0.4**
G30M					IAmb	IAmb	12 30 30.6	
	comp=Z,3.0nm,0.6s							
H31M	**Peel River**	**17.20**	**38**	P		**P**	**12 30 25.4**	**-0.5**
MMPY	**Sheldon Lake,**	**17.29**	**50**	P		**Pn**	**12 30 25.7**	**0.0**
F30M	**Barrier River**	**17.67**	**32**	P		**Pn**	**12 30 30.4**	**+0.1**
G31M	**Satah River**	**17.78**	**35**	P		**P**	**12 30 31.9**	**-0.3**
G31M					IAmb	IAmb	12 30 36.1	
	comp=Z,8.7nm,1.4s							
INK	**Inuvik**	**18.77**	**32**	P		**P**	**12 30 39.9**	**-3.2**
	comp=Z,0.7nm,0.5s,baz=329,slow=9.2,SNR=1.3							
INK	**Inuvik**	**18.77**	**32**	P		**Pn**	**12 30 43.3**	**-0.4**
INK					IAmb	IAmb	12 30 55.1	
	comp=Z,4.5nm,1.2s							
PETK	**Petropavlovsk-**	**24.25**	**284**	P		**P**	**12 31 40.5**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=79,slow=13,SNR=6.2							
	comp=Z,1.2nm,0.5s							
PETK	**Petropavlovsk-**	**24.25**	**284**	P		**P**	**12 31 40.3**	**-0.7**
NVAR	**Mina Array Bea**	**32.85**	**102**	P		**P**	**12 33 00.5**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=296,slow=8.9,SNR=4.8							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**47.80**	**98**	P		**P**	**12 35 02.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=310,slow=5.2,SNR=4.8							
	comp=Z,0.2nm,0.5s							
TXAR	**Lajitas Array**	**47.80**	**98**	P		**P**	**12 35 00.5**	**-1.1**
FINES	**FINESS Array B**	**64.24**	**356**	P		**P**	**12 36 57.3**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=8.9,slow=9.8,SNR=4.0							
	comp=Z,0.9nm,0.5s							
HFS	**Hagfors**	**65.60**	**3**	P		**P**	**12 37 05.3**	**-2.1**
	comp=Z,1.0nm,0.5s,baz=5.7,slow=4.5,SNR=5.6							
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**74.80**	**353**	P		**P**	**12 38 03.0**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=8.9,slow=6.0,SNR=2.6							
	comp=Z,0.6nm,0.4s							

HEL 22 12:32:58.7±0.1, 63.78N×25.65E, h0km, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
OUF	**Merijarvi**	**0.71**	**326**	PG	Pg		12 33 11.5	-0.9
OUF				SG	Sg		12 33 20.9	-0.7
OUF				smax	smax		12 33 21.0	
	comp=Z,2.6nm,0.2s							
NIF	**Nilsia**	**1.04**	**111**	PN	Pn		12 33 20.2	-0.3
	baz=284							
NIF				smax	smax		12 33 30.6	
	comp=Z,1.1nm,0.2s							
NIF				SN	Sn		12 33 35.9	+0.1
SUF	**Sumiainen**	**1.09**	**168**	*eP*	Pb		12 33 20.0	-0.4
SUF	**Sumiainen**	**1.09**	**168**	PN	Pg		12 33 19.9	+0.4
SUF				smax	smax		12 33 31.9	
	comp=Z,0.6nm,0.2s							
OUL	**Oulu**	**1.31**	**5**	PN	Pg		12 33 24.0	+0.1
	baz=188							
OUL				SN	Sb		12 33 41.9	+0.4
VAF	**Ylistaro**	**1.53**	**242**	*eP*	Pn		12 33 26.0	-1.2
VAF	**Ylistaro**	**1.53**	**242**	PG	Pn		12 33 26.0	-1.3
	baz=61							
VAF				smax	smax		12 33 44.6	
	comp=Z,1.0nm,0.2s							
VAF				SB	Sn		12 33 45.3	-2.5
KEF	**Keuruu**	**1.66**	**193**	*eP*	Pn		12 33 28.4	-0.6
KEF	**Keuruu**	**1.66**	**193**	PN	Pn		12 33 28.9	-0.1
	baz=1.0							
KEF				smax	smax		12 33 48.2	
	comp=Z,1.2nm,0.2s							
KEF				SN	Sn		12 33 49.6	-1.3
KAF	**Kangasniemi**	**1.70**	**170**	PG	Pb		12 33 30.4	-0.4
	baz=336							
KAF				smax	smax		12 33 49.5	
	comp=Z,1.5nm,0.2s							
KAF				SN	Sg		12 33 53.2	-0.1
RANF	**Ranua**	**2.29**	**12**	PG	Pb		12 33 39.8	-1.1
FIA0	**FINESS Array S**	**2.35**	**175**	PG	Pb		12 33 40.5	-1.4
	baz=354							
FIA0				smax	smax		12 34 08.4	
	comp=Z,0.9nm,0.2s							
FIA0				SG	Sb		12 34 11.8	+0.3
TOF	**Tornio**	**2.38**	**347**	PG	Pb		12 33 41.1	-1.2
KPF	**Kankaanpaa**	**2.55**	**222**	PG	Pn		12 33 43.1	+1.8
KPF				smax	smax		12 34 14.1	
	comp=Z,1.0nm,0.2s							
KPF				SG	Sb		12 34 15.6	-1.6
JOF	**Joensuu**	**2.69**	**106**	*eP*	Pn		12 33 44.0	+0.8
JOF	**Joensuu**	**2.69**	**106**	PG	Pb		12 33 48.2	+0.4

*UPP **22** 12:33:28.8±0.3, 67.42N×23.37E, h0km, ML2.0, Suspected explosion*
*HEL **22** 12:33:29.1±0.2, 67.48N×23.38E, h0km, ML1.6, Explosion*
*IDC **22** 12:33:30.5±1.0, 67.41N×24.06E, h0km, mbtmp3.1/3, ML2.0/3, Error ellipse: s-maj=21.6km s-min=6.5km az=98.0*
*BER **22** 12:33:32.2±0.3, 67.56N×23.20E, h0km, Suspected explosion*

ISC 22 12:33:28.5±0.8, 67.44N±0.02×23.36E±0.03, h0km, n29, σ0=92/41, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KLF	**Kolari**	**0.31**	**130**	PG	**Pg**		**12 33 34.9**	**+0.5**
KLF				SG	**Sg**		**12 33 39.8**	**+1.4**
KLF				smax	smax		12 33 40.5	
	comp=Z,16nm,0.2s							
MASU	**Masugnsbyn**	**0.53**	**273**	P	**Pg**		**12 33 38.9**	**+0.4**
MASU				S	**Sg**		**12 33 46.2**	**+0.9**
LANU	**Lannavaara**	**0.80**	**320**	*eP*	**Pg**		**12 33 44.3**	**+0.4**
LANU	**Lannavaara**	**0.80**	**320**	P	**Pg**		**12 33 44.3**	**+0.4**
LANU				S	**Sb**		**12 33 55.8**	**-1.0**
HEF	**Hetta**	**0.98**	**7**	*eP*	**Pb**		**12 33 47.9**	**-0.6**
ERTU	**Ertsjaerv**	**1.00**	**208**	P	**Pg**		**12 33 47.2**	**-0.4**
ERTU				S	**Sg**		**12 34 00.2**	**-0.3**
DUNU	**Dundret**	**1.13**	**255**	P	**Pg**		**12 33 49.9**	**-0.2**
KUA	**Kurravaara**	**1.27**	**296**	P	**Pg**		**12 33 52.5**	**-0.3**
RNF	**Rovaniemi**	**1.33**	**127**	PG	**Pg**		**12 33 53.5**	**-0.5**
RNF				SB	**Sb**		**12 34 11.7**	**-0.2**
TOF	**Tornio**	**1.42**	**164**	PG	**Pn**		**12 33 55.2**	**-0.2**
TOF				smax	smax		12 34 12.9	
	comp=Z,3.8nm,0.2s							
TOF				SN	**Sn**		**12 34 15.7**	**+1.0**
RATU	**Laukkuluspa**	**1.49**	**287**	P	**Pn**		**12 33 56.5**	**-0.1**
KTK1	**Kautokeino**	**1.58**	**358**	*eP*	**Pn**		**12 33 57.7**	**-0.1**
KTK1	**Kautokeino**	**1.58**	**358**	PN	**Pn**		**12 33 57.9**	**+0.1**
KTK1				SN	**Sg**		**12 34 21.1**	**+1.7**
HARU	**Harads**	**1.59**	**218**	P	**Pn**		**12 33 57.7**	**-0.1**
NIKU	**Nikkaluokta**	**1.71**	**287**	P	**Pb**		**12 34 00.2**	**-0.5**
SALU	**Saltoluokta**	**1.88**	**271**	*eP*	**Pb**		**12 34 02.8**	**-0.8**
RANF	**Ranua**	**1.97**	**135**	PG	**Pb**		**12 34 04.7**	**-0.5**
	baz=316							
RANF				SG	**Sb**		**12 34 30.8**	**+0.4**
RANF	**Ranua**	**1.97**	**135**	SN	**Pb**		**12 34 04.7**	**-0.5**
RAJF	**Raja-Jooseppi**	**2.14**	**59**	PG	**Pb**		**12 34 06.7**	**-1.4**
ARA0	**ARCESS Array S**	**2.25**	**20**	PG	**Pb**		**12 34 08.7**	**-1.3**
ARA0				SG	**Sb**		**12 34 38.4**	**0.0**
ARCES	**ARCESS Array B**	**2.25**	**20**	Pn	**Pn**		**12 34 08.2**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=198,slow=15,SNR=14							
ARCES				Sn	**Sb**		**12 34 37.4**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=197,slow=28,SNR=13							
ARCES				Lg	Lg		12 34 39.7	
	comp=Z,1.2nm,0.3s,baz=199,slow=28,SNR=9.4							
	comp=Z,1.5nm,0.4s							
I37NO	**I37NO**	**2.42**	**315**	I	I		12 48 05.2	
	baz=132,slow=319,SNR=4.2							
VRF	**Varrio**	**2.42**	**80**	PB	**Pb**		**12 34 11.9**	**-0.9**
VRF	**Varrio**	**2.42**	**80**	PG	**Pb**		**12 34 11.9**	**-0.9**
	baz=266							
VRF				smax	smax		12 34 40.1	
	comp=Z,3.1nm,0.2s							
VRF				SG	**Sb**		**12 34 43.4**	**+0.3**
OUL	**Oulu**	**2.57**	**155**	PG	**Pg**		**12 34 17.1**	**-0.7**
	baz=342							
OUL				SG	**Sg**		**12 34 49.8**	**-1.2**
OLKF	**Oulanka, Finla**	**2.63**	**112**	PG	**Pb**		**12 34 15.8**	**-0.7**
OLKF				smax	smax		12 34 47.1	
	comp=Z,1.9nm,0.2s							
MSF	**Maaselka**	**2.73**	**121**	SG	**Sb**		**12 34 53.2**	**+1.1**
FINES	**FINESS Array B**	**6.13**	**168**	Pn	**Pn**		**12 35 01.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=357,slow=13,SNR=4.7							
FINES				Sn	**Sn**		**12 36 09.7**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=357,slow=24,SNR=6.5							
FINES				Lg	Lg		12 36 39.5	
	comp=Z,0.2nm,0.3s,baz=0.6,slow=27,SNR=2.0							
	comp=Z,2.0nm,0.9s							
HFS	**Hagfors**	**8.47**	**215**	Pn	**Pn**		**12 35 34.8**	**+2.5**
	baz=27,slow=9.7,SNR=1.6							
	comp=Z,3.8nm,1.1s							

*IDC **22** 12:33:33.9±0.7, 54.90N×158.60W, h0km, mb4.1/26, mbtmp4.1/29, ML4.1/3, MS3.6/1, Error ellipse: s-maj=18.2km s-min=12.7km az=2.0*
*AEIC **22** 12:33:37.6±1.5, 54.85N±0.07×158.39W±0.08, h21km±4km, Error ellipse: s-maj=10.1km s-min=6.5km az=174.0*
*NEIC **22** 12:33:37.2±1.3, 54.86N±0.07×158.28W±0.06, h24km±5km, mb4.5/94, ML4.3/36, ML4.4(AEIC), Error ellipse: s-maj=10.3km s-min=5.1km az=173.0*

ISC 22 12:33:37.9±0.5, 54.88N±0.08×158.26W±0.04, h30km, n285, σ0=97/236, mb4.4/73, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CHNA	**Chernabura Isl**	**0.77**	**267**	P	**Pn**		**12 33 51.3**	**-1.4**
CHNA	**Chernabura Isl**	**0.77**	**267**	S	**Sb**		**12 34 01.7**	**-1.2**
CNBA	**Chernabura Isl**	**0.77**	**266**		**Pn**		**12 33 51.1**	**-1.6**
CNBA				Sg	**Sb**		**12 34 01.5**	**-1.4**
CNBA				IAML			12 34 02.5	
	comp=N,18μm,0.5s							
CNBA				IAML			12 34 02.6	
	comp=E,16μm,0.4s							
VNKR	**Veniaminof 5**	**1.32**	**332**		**Pn**		**12 34 00.2**	**-0.1**
VNSG	**Veniaminof 6**	**1.34**	**340**		**Pn**		**12 34 00.6**	**0.0**
SDPT	**Sand Point**	**1.36**	**291**	P	**Pn**		**12 33 59.7**	**-1.1**
SDPT	**Sand Point**	**1.36**	**291**	S	**Sn**		**12 34 18.2**	**+0.4**
SDPT	**Sand Point**	**1.36**	**291**		**Pn**		**12 33 59.6**	**-1.1**
SDPT					**Sn**		**12 34 16.4**	**-1.3**
SDPT				IAML			12 34 23.1	
	comp=E,6μm,0.8s							
SDPT				IAML			12 34 28.5	
	comp=N,6μm,0.7s							
CHGN	**Chignik**	**1.43**	**357**	Pn	**Pn**		**12 34 01.9**	**+0.1**
VNWF	**Veniaminof 8**	**1.48**	**330**		**Pn**		**12 34 02.9**	**+0.4**
VNSS	**Veniaminof 8**	**1.51**	**334**		**Pn**		**12 34 03.9**	**+0.8**
VNHG	**Fog Glacier, M**	**1.59**	**333**	Pn	**Pn**		**12 34 04.3**	**+0.2**
CHIR	**Chirikof Islan**	**1.78**	**57**		**Pn**		**12 34 06.8**	**+0.2**
CHIR				IAML			12 34 42.6	
	comp=N,3μm,1.0s							
CHIR				IAML			12 34 43.9	
	comp=E,3μm,0.9s							
PS1A	**Pavlof South-1**	**2.07**	**287**		**Pn**		**12 34 10.5**	**-0.1**
DOL	**Dolgoi Island**	**2.09**	**279**		**Pn**		**12 34 09.0**	**-1.9**
HAG	**Hague Volcano**	**2.14**	**283**		**Pn**		**12 34 12.0**	**+0.4**
PN7A	**Pavlof North-7**	**2.22**	**286**		**Pn**		**12 34 12.7**	**0.0**
SII	**Sitkinak Islan**	**2.86**	**52**	P	**Pn**		**12 34 21.6**	**+0.2**
SII	**Sitkinak Islan**	**2.86**	**52**		**Pn**		**12 34 21.9**	**+0.4**
SII				IAML			12 35 19.7	
	comp=N,2μm,0.7s							
OHAK	**Old Harbor**	**3.65**	**48**	P	**Pn**		**12 34 32.1**	**-0.1**
OHAK	**Old Harbor**	**3.65**	**48**		**Pn**		**12 34 32.4**	**+0.2**
OHAK				IAML			12 35 48.4	
	comp=E,357nm,1.0s							
OHAK				IAML			12 35 54.5	
	comp=N,346nm,1.1s							
ACHA	**Angle Creek He**	**3.71**	**25**		**Pn**		**12 34 33.5**	**+0.3**
P16K	**Nushagak River**	**4.17**	**2**		**Pn**		**12 34 39.0**	**-0.3**
KDAK	**Kodiak Island**	**4.30**	**45**	Pn	**Pn**		**12 34 40.8**	**-0.3**
	comp=N,8.1nm,0.3s,baz=198,slow=1.4,SNR=87							
KDAK				Sn	**Sn**		**12 35 25.9**	**-4.2**
	comp=N,16nm,0.3s,baz=209,slow=12,SNR=1.8							
KDAK				Lg	Lg		12 35 47.5	
	comp=N,8.4nm,0.3s,baz=318,slow=7.1,SNR=1.2							
	comp=N,31nm,0.5s							
KDAK	**Kodiak Island**	**4.30**	**45**		**Pn**		**12 34 41.1**	**-0.1**
O15K	**Ungalikthiuk R**	**4.39**	**349**		**Pn**		**12 34 42.4**	**-0.1**
O15K				IAML			12 36 05.7	
	comp=E,300nm,0.8s							
AKUT	**Akutan**	**4.44**	**263**	P	**Pn**		**12 34 42.9**	**-0.2**
AKUT	**Akutan**	**4.44**	**263**		**Pn**		**12 34 42.9**	**-0.2**
AKUT				IAML			12 35 57.8	
	comp=N,291nm,1.1s							
P17K	**Kvichak River**	**4.44**	**12**		**Pn**		**12 34 44.4**	**+1.2**
LVA	**Lava Point**	**4.59**	**264**		**Pn**		**12 34 45.3**	**+0.1**
LVA				IAML			12 35 58.2	
	comp=E,286nm,0.7s							
LVA				IAML			12 35 58.9	
	comp=N,452nm,0.8s							
O14K	**Tigyukauivet M**	**4.68**	**341**		**Pn**		**12 34 46.7**	**+0.3**
O14K				IAML			12 36 16.0	
	comp=E,220nm,1.1s							
O14K				IAML			12 36 21.6	
	comp=N,370nm,0.9s							
O16K	**Kokwok River B**	**4.73**	**1**		**Pn**		**12 34 48.1**	**+1.0**
O16K				IAML			12 36 19.5	
	comp=N,160nm,0.9s							
O16K				IAML			12 36 22.2	
	comp=E,156nm,0.9s							
UNV	**Unalaska Valle**	**4.93**	**261**	P	**Pn**		**12 34 48.8**	**-1.1**
UNV	**Unalaska Valle**	**4.93**	**261**		**Pn**		**12 34 49.2**	**-0.7**
UNV				IAML			12 36 09.0	
	comp=N,150nm,0.6s							

O18K	**Koktuh Hills**	**5.26**	**17**			**Pn**	**12 34 54.9**	**+0.6**
N14K	**Kuskokwak Cree**	**5.39**	**341**			**Pn**	**12 34 56.2**	**+0.1**
N15K	**Kwethluk River**	**5.40**	**350**			**Pn**	**12 34 56.9**	**+0.6**
N17K	**Nushagak Hills**	**5.70**	**5**			**Pn**	**12 35 01.1**	**+0.7**
ILSW	**Iliamna Southw**	**5.82**	**26**			**Pn**	**12 35 02.3**	**+0.2**
N18K	**Kilae Creek**	**5.96**	**11**			**Pn**	**12 35 04.7**	**+0.7**
HOM	**Homer**	**5.99**	**34**	Pn		**Pn**	**12 35 04.9**	**+0.6**
CNPM	**China Poot**	**6.02**	**36**			**Pn**	**12 35 04.9**	**0.0**
M13K	**Dall Lake**	**6.18**	**336**			**Pn**	**12 35 06.8**	**-0.3**
M14K	**Bethel**	**6.21**	**343**			**Pn**	**12 35 07.5**	**+0.1**
N19K	**Bonanza Creek**	**6.28**	**17**			**Pn**	**12 35 09.2**	**+0.6**
RED	**Redoubt Volcan**	**6.29**	**26**			**Pn**	**12 35 08.4**	**-0.2**
BRLK	**Bradley Lake**	**6.32**	**36**			**Pn**	**12 35 08.2**	**-0.7**
M11K	**Mekoryuk**	**6.97**	**326**			**Pn**	**12 35 17.3**	**-0.5**
SEW	**Seward**	**7.07**	**39**			**Pn**	**12 35 18.0**	**-1.2**
SLKM	**Skilak Lake**	**7.10**	**34**			**Pn**	**12 35 20.0**	**+0.3**
SPIA	**Saint Paul Isl**	**7.10**	**294**	P		**Pn**	**12 35 19.4**	**-0.3**
SPIA	**Saint Paul Isl**	**7.10**	**294**			**Pn**	**12 35 19.4**	**-0.3**
SPU	**Mount Spurr**	**7.13**	**25**			**Pn**	**12 35 20.7**	**+0.7**
CLES	**Cleveland East**	**7.18**	**258**	Pn		**Pn**	**12 35 19.1**	**-1.7**
O22K	**Cooper Landing**	**7.24**	**36**			**Pn**	**12 35 19.5**	**-2.0**
L18K	**Granite Mounta**	**7.41**	**6**			**Pn**	**12 35 23.2**	**-0.6**
STLK	**Strandline Lak**	**7.45**	**24**			**Pn**	**12 35 24.2**	**-0.3**
M20K	**Styx River**	**7.52**	**19**			**Pn**	**12 35 24.7**	**-0.8**
L19K	**White Mountain**	**7.54**	**12**			**Pn**	**12 35 25.9**	**+0.2**
K15K	**Wolf Creek Mou**	**7.63**	**348**			**Pn**	**12 35 27.7**	**+0.8**
RC01	**Rabbit Creek A**	**7.70**	**33**			**Pn**	**12 35 27.0**	**-0.8**
P23K	**Montague Islan**	**7.78**	**44**			**Pn**	**12 35 28.5**	**-0.5**
K13K	**Kusilvak Mount**	**7.83**	**337**			**Pn**	**12 35 29.8**	**+0.2**
K17K	**Iditarod**	**7.86**	**360**	Pn		**Pn**	**12 35 31.8**	**+1.7**
MID	**Middleton Isla**	**7.92**	**50**	Pn		**Pn**	**12 35 31.6**	**+0.7**
PWL	**Port Wells**	**7.99**	**37**			**Pn**	**12 35 30.8**	**-1.1**
PMR	**Palmer**	**8.27**	**32**	P		**Pn**	**12 35 36.2**	**+0.6**
KNK	**Knik Glacier**	**8.35**	**34**	Pn		**Pn**	**12 35 37.1**	**+0.3**
J14K	**Nanvaranak Lak**	**8.36**	**343**			**Pn**	**12 35 36.9**	**+0.1**
HIN	**Hinchinbrook I**	**8.38**	**44**			**Pn**	**12 35 36.6**	**-0.7**
GHO	**Glory Hole Cre**	**8.47**	**32**			**Pn**	**12 35 39.0**	**+0.5**
J16K	**Anvik River**	**8.52**	**353**			**Pn**	**12 35 38.9**	**-0.1**
J17K	**VABM Dome**	**8.56**	**358**			**Pn**	**12 35 39.4**	**-0.2**
L22K	**Petersville**	**8.60**	**24**			**Pn**	**12 35 40.8**	**+0.6**
FID	**Port Fidalgo**	**8.61**	**42**			**Pn**	**12 35 38.7**	**-1.6**
SML	**Sawmill**	**8.68**	**33**			**Pn**	**12 35 41.5**	**+0.2**
EYAK	**Cordova Ski Ar**	**8.77**	**45**	P		**Pn**	**12 35 41.7**	**-0.8**
EYAK	**Cordova Ski Ar**	**8.77**	**45**			**Pn**	**12 35 42.3**	**-0.3**
I17K	**Unalakleet**	**9.12**	**353**			**Pn**	**12 35 47.5**	**+0.3**
RAGM	**Ragged Mountai**	**9.13**	**47**			**Pn**	**12 35 47.7**	**+0.2**
KLU	**Klutina**	**9.28**	**39**			**Pn**	**12 35 49.1**	**-0.6**
KTH	**Kantishna Hill**	**9.47**	**20**			**Pn**	**12 35 52.3**	**+0.1**
BMRM	**Bremner River**	**9.48**	**44**			**Pn**	**12 35 50.9**	**-1.4**
TRF	**Thorofare Moun**	**9.51**	**22**			**Pn**	**12 35 52.0**	**-0.8**
BERG	**Berg Lake**	**9.55**	**49**			**Pn**	**12 35 52.5**	**-0.8**
M24K	**Tolsona, Glenn**	**9.61**	**36**			**Pn**	**12 35 54.2**	**+0.2**
RND	**Reindeer**	**9.81**	**26**			**Pn**	**12 35 56.0**	**-0.8**
ATKA	**Atka Island**	**9.86**	**261**	P		**Pn**	**12 35 56.6**	**-0.8**
CRQM	**Cirque**	**9.97**	**48**	Pn		**Pn**	**12 35 59.5**	**+0.3**
GLB	**Gilahina Butte**	**10.06

comp=Z,4.4nm,0.7s,baz=68,slow=14,SNR=11
comp=Z,4.4nm,0.7s

PETK	**Petropavlovsk-**	**25.64**	**284**	P		**P**	**12 39 03.5**	**-1.0**
EDM	**Edmonton**	**26.08**	**75**			**P**	**12 39 08.5**	**-0.1**
EDM				IAmb		IAmb	12 39 11.4	

comp=Z,8.6nm,0.7s

F10A	**Beach Ranch, E**	**27.26**	**92**			**P**	**12 39 19.0**	**-0.3**
LYMT	**Lyon Mountain**	**29.57**	**86**	P		**P**	**12 39 38.8**	**-1.2**
MFID	**Camas Ranch**	**29.57**	**95**	P		**P**	**12 39 39.4**	**-0.6**
PNTR	**Pine Nut**	**30.27**	**105**	P		**P**	**12 39 45.9**	**-0.4**
PNTR				IAmb		IAmb	12 39 50.7	

comp=Z,8.3nm,0.8s

BCYI	**Bear Canyon**	**30.43**	**91**	P		**P**	**12 39 47.4**	**-0.3**
MCMT	**McKenzie Canyo**	**30.45**	**90**	P		**P**	**12 39 47.0**	**-0.9**
RES	**Resolute Bay**	**31.17**	**27**	P		**P**	**12 39 53.7**	**+0.1**
RES				IAmb		IAmb	12 40 26.1	

comp=Z,7.3nm,1.1s

YHL	**Hebgen Lake**	**31.40**	**89**	P		**P**	**12 39 55.7**	**-0.6**
YHL				IAmb		IAmb	12 40 00.1	

comp=Z,4.0nm,0.8s

NVAR	**Mina Array Bea**	**31.45**	**105**	P		**P**	**12 39 59.7**	**+3.0**

comp=Z,3.0nm,0.7s,baz=306,slow=8.6,SNR=27
comp=Z,3.0nm,0.7s

NVAR	**Mina Array Bea**	**31.45**	**105**	P		**P**	**12 39 56.1**	**-0.7**
YHH	**Holmes Hill**	**31.63**	**89**	P		**P**	**12 39 57.4**	**-0.9**
PDAR	**Pinedale Array**	**33.59**	**91**	P		**P**	**12 40 18.1**	**+2.6**

comp=Z,2.3nm,0.6s,baz=306,slow=5.2,SNR=29
comp=Z,2.3nm,0.6s

P18A	**Preston Nutter**	**35.22**	**95**	IAmb		IAmb	12 40 35.0	

comp=Z,3.8nm,1.0s

SRU	**San Rafael Swe**	**35.40**	**96**	IAmb		IAmb	12 40 35.1	

comp=Z,12nm,1.2s

RSSD	**Black Hills**	**35.95**	**84**	P		**P**	**12 40 36.2**	**+0.4**
O20A	**White River Ci**	**36.03**	**93**	P		**P**	**12 40 36.6**	**+0.1**
IRM	**Iron Mountain**	**36.30**	**107**	IAmb		IAmb	12 40 42.7	

comp=Z,6.9nm,1.1s

W13A	**Hualapai Mount**	**36.31**	**104**	IAmb		IAmb	12 40 42.9	

comp=Z,3.5nm,0.9s

HAYD	**Hayden**	**36.35**	**92**	IAmb		IAmb	12 40 42.7	

comp=Z,4.9nm,0.7s

PV04	**Paradox Valley**	**36.82**	**96**	IAmb		IAmb	12 40 47.4	

comp=Z,4.5nm,1.0s

PV18	**Skein Mesa, Pa**	**36.91**	**96**	IAmb		IAmb	12 40 50.4	

comp=Z,5.1nm,0.8s

PV12	**Saucer Basin,**	**36.93**	**96**	IAmb		IAmb	12 40 47.6	

comp=Z,13nm,1.4s

PV13	**Radium Mtn., P**	**37.03**	**96**	IAmb		IAmb	12 40 48.3	

comp=Z,13nm,1.1s

PV02	**Paradox Valley**	**37.04**	**96**	IAmb		IAmb	12 40 48.5	

comp=Z,10.0nm,0.8s

PV15	**Paradox Valley**	**37.10**	**95**	IAmb		IAmb	12 40 50.9	

comp=Z,5.8nm,0.9s

PV01	**Paradox Valley**	**37.19**	**96**	IAmb		IAmb	12 40 51.4	

comp=Z,4.8nm,0.7s

Y14A	**Wickenburg**	**37.65**	**105**	IAmb		IAmb	12 40 53.9	

comp=Z,4.2nm,0.8s

T25A	**Trinidad**	**40.27**	**93**	IAmb		IAmb	12 41 15.8	

comp=Z,4.8nm,0.7s

NEEM	**North Greenlan**	**40.63**	**19**	*i* P		**P**	**12 41 14.9**	**+0.1**
NEEM				IAmb		IAmb	12 41 15.5	

comp=Z,3.8nm,0.6s

MNTX	**Cornudas Mount**	**43.61**	**100**	IAmb		IAmb	12 41 43.6	

comp=Z,4.0nm,0.8s

H11N2	**WAKE ISLAND Hy**	**43.89**	**231**	T		T	13 28 30.5	

baz=28,slow=76,SNR=5.6

H11N3	**WAKE ISLAND Hy**	**43.90**	**231**	T		T	13 28 33.3	

baz=28,slow=76,SNR=9.0

H11N1	**WAKE ISLAND Hy**	**43.91**	**231**	T		T	13 28 29.9	

baz=28,slow=76,SNR=4.5

TPB28		**44.14**	**99**	IAmb		IAmb	12 41 47.7	

comp=Z,4.8nm,1.0s

TPB11	**China Draw**	**44.21**	**98**	IAmb		IAmb	12 41 47.7	

comp=Z,6.2nm,1.0s

VHRN	**Van Horn**	**44.52**	**100**	IAmb		IAmb	12 41 50.7	

comp=Z,10.0nm,1.3s

128A	**Castleberry Fa**	**44.59**	**96**	IAmb		IAmb	12 41 50.1	

comp=Z,5.9nm,0.8s

H11S1	**WAKE ISLAND Hy**	**45.05**	**230**	T		T	13 30 01.3	

baz=28,slow=76,SNR=12

H11S2	**WAKE ISLAND Hy**	**45.06**	**230**	T		T	13 30 02.5	

baz=28,slow=76,SNR=12

H11S3	**WAKE ISLAND Hy**	**45.07**	**230**	T		T	13 30 03.6	

baz=28,slow=76,SNR=8.5

WMOK	**Wichita Mounta**	**45.20**	**91**	P		**P**	**12 41 52.5**	**+0.6**
WMOK				IAmb		IAmb	12 41 54.6	

comp=Z,4.2nm,0.6s

DAG	**Danmarks Havn**	**46.15**	**12**	*i* P		**P**	**12 41 59.3**	**+0.4**
DAG				IAmb		IAmb	12 41 59.9	

comp=Z,3.4nm,0.7s

MJAR	**Matsushiro Arr**	**46.27**	**274**	P		**P**	**12 42 00.1**	**-0.3**

comp=Z,1.3nm,0.7s,baz=40,slow=8.4,SNR=4.5
comp=Z,1.3nm,0.7s

TX31	**Lajitas Ar. Si**	**46.36**	**100**	IAmb		IAmb	12 42 04.7	

comp=Z,6.5nm,0.9s

TXAR	**Lajitas Array**	**46.36**	**100**	P		**P**	**12 42 03.8**	**+2.5**

comp=Z,4.1nm,0.7s,baz=307,slow=5.6,SNR=65

TXAR				PcP		**PcP**	**12 43 37.2**	**+1.2**

comp=Z,1.3nm,0.7s,baz=188,slow=1.1,SNR=12
comp=Z,4.1nm,0.7s

TXAR	**Lajitas Array**	**46.36**	**100**			**P**	**12 42 01.3**	**+0.1**
R40A	**Maddies Statio**	**46.48**	**82**	P		**P**	**12 42 01.8**	**-0.2**
OZNA	**Ozona**	**46.62**	**97**	IAmb		IAmb	12 42 05.3	

comp=Z,4.2nm,0.5s

SAND	**Sanderson**	**46.77**	**98**	IAmb		IAmb	12 42 07.3	

comp=Z,3.0nm,0.8s

SPITS	**Spitsbergen Ar**	**47.16**	**2**	P		**P**	**12 42 06.6**	**-0.3**

comp=Z,5.9nm,0.9s,baz=0.0,slow=7.7,SNR=1.6
comp=Z,5.9nm,0.9s

NRIK	**Noril'sk**	**47.24**	**334**	P		**P**	**12 42 08.4**	**+0.9**

comp=Z,2.9nm,0.6s,baz=53,slow=7.8,SNR=4.6
comp=Z,2.9nm,0.6s

NRIK	**Noril'sk**	**47.24**	**334**	P		**P**	**12 42 06.6**	**-0.9**
BRDY	**Brady**	**47.58**	**95**	IAmb		IAmb	12 42 12.4	

comp=Z,2.4nm,0.6s

DBG	**Daneborg**	**48.06**	**14**	*i* P		**P**	**12 42 13.7**	**-0.1**
DBG				IAmb		IAmb	12 42 14.4	

comp=Z,1.9nm,0.7s

WVT	**Waverly**	**50.52**	**81**			**P**	**12 42 33.1**	**0.0**
H06N1	**SOCORRO T-PHAS**	**50.69**	**116**	T		T	13 37 15.2	

SNR=4.8

JCJ	**Chichijima**	**50.89**	**262**	LR		LR	13 01 12.8	

comp=Z,69nm,21.0s,baz=326,slow=33

Q51A	**Peebles**	**51.03**	**75**			**P**	**12 42 37.0**	**+0.1**
CLTN	**Cedars of Leba**	**51.40**	**80**			**P**	**12 42 39.4**	**-0.4**
CLTN				IAmb		IAmb	12 42 41.7	

comp=Z,8.1nm,0.8s

KSRS	**Korea Array**	**51.51**	**282**	P		**P**	**12 42 39.9**	**-0.6**

comp=Z,1.4nm,0.8s,baz=44,slow=7.7,SNR=12
comp=Z,1.4nm,0.8s

V53A	**Saluda**	**53.70**	**78**	P		**P**	**12 42 56.9**	**0.0**
V53A				IAmb		IAmb	12 42 58.3	

comp=Z,6.1nm,0.8s

HODGE	**Hodges**	**55.05**	**79**	IAmb		IAmb	12 43 07.2	

comp=Z,5.5nm,0.7s

SONM	**Songino Array**	**55.47**	**305**	P		**P**	**12 43 09.3**	**-0.3**

comp=Z,1.9nm,0.7s,baz=51,slow=7.6,SNR=7.4
comp=Z,1.9nm,0.7s

SONM	**Songino Array**	**55.47**	**305**	P		**P**	**12 43 09.2**	**-0.4**
ARCES	**ARCESS Array B**	**55.87**	**358**	P		**P**	**12 43 13.3**	**+1.3**

comp=Z,4.1nm,1.1s,baz=22,slow=6.8,SNR=6.7
comp=Z,4.1nm,1.1s

ARCES	**ARCESS Array B**	**55.87**	**358**	P		**P**	**12 43 12.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**57.97**	**297**	*eP*		**P**	**12 43 29.5**	**+2.1**
HHC				pmax		pmax		

comp=Z,5.0nm,0.6s

HHC				pmax		pmax		

comp=Z,63nm,4.2s

ZALV	**Zalesovo Beam**	**59.76**	**322**	P		**P**	**12 43 39.5**	**0.0**

comp=Z,0.4nm,0.3s,baz=25,slow=7.4,SNR=8.4
comp=Z,0.4nm,0.3s

ZALV	**Zalesovo Beam**	**59.76**	**322**	P		**P**	**12 43 39.1**	**-0.4**
PETF	**Flores**	**63.91**	**98**	P		**P**	**12 44 07.4**	**-0.5**
FINES	**FINESS Array B**	**63.97**	**358**	P		**P**	**12 44 07.7**	**+0.1**

comp=Z,2.2nm,0.9s,baz=21,slow=13,SNR=6.0
comp=Z,2.2nm,0.9s

FINES	**FINESS Array B**	**63.97**	**358**	P		**P**	**12 44 08.4**	**+0.7**
NB2	**NORSAR Subarra**	**64.13**	**6**	P		**P**	**12 44 10.2**	**+1.4**

comp=Z,1.7nm,0.6s,baz=355,slow=6.9

NOA	**NORSAR Array B**	**64.13**	**6**	P		**P**	**12 44 08.9**	**+0.2**

comp=Z,0.8nm,0.7s,baz=352,slow=6.6,SNR=4.9
comp=Z,0.8nm,0.7s

KURK	**Kurchatov**	**64.58**	**324**	P		**P**	**12 44 11.7**	**-0.2**
KURK				IAmb		IAmb	12 44 20.7	

comp=Z,4.0nm,0.9s

KURBB	**Kurchatov Arra**	**64.69**	**324**	P		**P**	**12 44 12.0**	**-0.5**

comp=Z,0.4nm,0.6s,baz=1.9,slow=4.6,SNR=6.4
comp=Z,0.4nm,0.6s

GTA2	**Gaotai**	**64.91**	**303**	*eP*		**P**	**12 44 16.4**	**+2.0**
GTA2				pmax		pmax		

comp=Z,3.0nm,0.9s

ARTI	**Arti**	**65.14**	**339**	P		**P**	**12 44 16.2**	**+0.8**
HFS	**Hagfors**	**65.16**	**4**	P		**P**	**12 44 15.2**	**-0.3**

comp=Z,1.4nm,0.6s,baz=29,slow=3.4,SNR=4.7
comp=Z,1.4nm,0.6s

BVAR	**Borovoye Array**	**65.18**	**330**	P		**P**	**12 44 15.5**	**-0.2**

comp=Z,1.3nm,0.7s,baz=42,slow=6.8,SNR=12
comp=Z,1.3nm,0.7s

MKAR	**Makanchi Array**	**66.56**	**319**	P		**P**	**12 44 24.3**	**-0.4**

comp=Z,0.5nm,0.5s,baz=37,slow=8.2,SNR=7.2
comp=Z,0.5nm,0.5s

MKAR	**Makanchi Array**	**66.56**	**319**	P		**P**	**12 44 24.4**	**-0.3**
MAKZ	**Makanchi**	**66.67**	**320**	P		**P**	**12 44 25.3**	**-0.1**
EKA	**Eskdalemuir Ar**	**68.27**	**15**	P		**P**	**12 44 36.3**	**+0.9**

comp=Z,1.1nm,0.6s,baz=330,slow=4.8,SNR=3.5
comp=Z,1.1nm,0.6s

RNPP8	**Varash**	**74.10**	**357**	P		P	12 45 17.0	+6.3
PZH	**PanZhiHua**	**74.20**	**293**	P		**P**	**12 45 12.5**	**+0.7**
RNPP5	**Staryi Chortor**	**74.21**	**357**	P		P	12 45 17.6	+6.3
AK21	**Malin Array Si**	**74.54**	**355**	P		P	12 45 21.0	+7.8
AK23	**Malin Array Si**	**74.55**	**355**	P		P	12 45 20.8	+7.5
AK22	**Malin Array Si**	**74.55**	**355**	P		P	12 45 20.8	+7.5
AK20	**Malin Array Si**	**74.57**	**355**	P		P	12 45 21.0	+7.6
AK03	**Malin Array Si**	**74.58**	**355**	P		P	12 45 20.9	+7.4
AKASG	**Malin Array Be**	**74.61**	**355**	P		**P**	**12 45 13.4**	**-0.2**

comp=Z,2.1nm,0.6s,baz=9.0,slow=5.9,SNR=6.1
comp=Z,2.1nm,0.6s

AKBB	**Malin Array Si**	**74.61**	**355**	P		**P**	**12 45 13.7**	**+0.1**
KIEV	**Kiev**	**74.61**	**355**	P		**P**	**12 45 13.6**	**0.0**
AK07	**Malin Array Si**	**74.76**	**355**	P		P	12 45 20.8	+6.3
DPC	**Dobruska-Polom**	**75.05**	**4**	P		P	12 45 21.9	+5.6

comp=Z,5.3nm,1.1s

LUBAR	**Lubar, Ukraine**	**75.45**	**356**	P		P	12 45 24.8	+6.3
KSH2	**Kashi**	**75.65**	**320**	P		**P**	**12 45 23.8**	**+3.7**
KSH2				pP		pP	12 45 29.8	+0.3
KSH2				pmax		pmax		

comp=Z,3.0nm,0.7s

KHC	**Kasperske Hory**	**76.14**	**6**	P		P	12 45 28.1	+5.6

comp=Z,4.0nm,1.3s

SORM	**Soroca**	**77.21**	**355**	P		P	12 45 34.8	+6.3

comp=Z,14nm,0.7s

NE56	**Odesa**	**78.52**	**354**	P		P	12 45 42.3	+6.5
KIV	**Kislovodsk**	**79.94**	**345**	P		P	12 45 50.6	+6.8

comp=Z,13nm,0.7s

KBZ	**Khabaz**	**80.13**	**345**	P		**P**	**12 45 45.5**	**+0.9**

comp=Z,0.6nm,0.5s,baz=329,slow=6.3,SNR=5.4
comp=Z,0.6nm,0.5s

CMAR	**Chiang Mai Arr**	**82.22**	**291**	P		**P**	**12 45 55.9**	**-0.3**

comp=Z,0.9nm,0.5s,baz=14,slow=4.9,SNR=6.1
comp=Z,0.9nm,0.5s

CMAR	**Chiang Mai Arr**	**82.22**	**291**	P		**P**	**12 45 55.7**	**-0.4**
ESDC	**Sonseca Array**	**83.28**	**20**	P		**P**	**12 46 01.6**	**+0.1**

comp=Z,1.2nm,0.8s,baz=345,slow=5.5,SNR=9.2
comp=Z,1.2nm,0.8s

BRTR	**Keskin Array B**	**85.22**	**351**	P		**P**	**12 46 11.0**	**-0.4**

comp=Z,0.7nm,0.6s,baz=46,slow=3.6,SNR=5.8
comp=Z,0.7nm,0.6s

BRTR	**Keskin Array B**	**85.22**	**351**	P		**P**	**12 46 10.9**	**-0.5**
BR105	**Keskin Array S**	**85.23**	**351**	P		P	12 46 17.8	+6.4
WRA	**Warramunga Arr**	**93.89**	**241**	P		**P**	**12 46 50.9**	**-1.4**

comp=Z,0.9nm,1.0s,baz=29,slow=4.8,SNR=3.8
comp=Z,0.9nm,1.0s

ASAR	**Alice Springs**	**97.23**	**239**	P		**P**	**12 47 07.2**	**-0.3**

comp=Z,0.2nm,0.7s,baz=27,slow=5.4,SNR=1.8
comp=Z,0.2nm,0.7s

ASAR	**Alice Springs**	**97.23**	**239**	P		**P**	**12 47 07.5**	**-0.1**
H03N2	**Juan Fernandez**	**110.98**	**118**	T		T	14 52 38.8	

baz=325,slow=78,SNR=8.0

H03N1	**Juan Fernandez**	**111.00**	**118**	T		T	14 52 39.6	

baz=325,slow=78,SNR=22

H03N3	**Juan Fernandez**	**111.00**	**118**	T		T	14 52 39.6	

baz=325,slow=78,SNR=15

QSPA	**South Pole Qui**	**144.66**	**180**	PKP		**PKPab**	**12 53 08.8**	**0.0**

comp=Z,4.4nm,0.9s,baz=214,slow=0.4,SNR=18

QSPA	**South Pole Qui**	**144.66**	**180**	PKPdf		PKPbc	12 53 09.3	+0.3

*ISU **22** 12:49:19, 41.°88N×70.°45E, h15km*
*KRNET **22** 12:49:20.4±0.1, 42.°03N×70.°38E, h12km, mb3.1*
*SOME **22** 12:49:20.3, 42.°07N×70.°27E, h15km*
*NNC **22** 12:49:20.6±0.7, 42.°10N×70.°34E, h6km±6km, mb3.5, mpv3.3, Error ellipse: s-maj=4.5km s-min=2.9km az=37.0*

ISC 22 12:49:18.8±0.9, **42.°09N**±0.°02×**70.°36E**±0.°02, **h13**km±8km, **n26**, σ1°**35**/46, **9C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PSK	**Pskem**	**0.16**	**175**	S		**Sg**	**12 49 24.3**	**-1.2**
PSK				S			12 49 26.8	
IUG	**Iuzhnay**	**0.25**	**283**	P		**Pb**	**12 49 25.8**	**+0.6**

997nm,0.2s

IUG				S		**Sg**	**12 49 30.2**	**+2.5**

1μm,0.2s

IUG	**Iuzhnay**	**0.25**	**283**	*eP*		**Pb**	**12 49 25.8**	**+0.6**

997nm,0.2s

IUG				*eS*		**Sg**	**12 49 30.2**	**+2.5**

1μm,0.2s

CHRV	**Charvak**	**0.54**	**214**	P		**Pb**	**12 49 30.0**	**-0.2**
CHRV				S		**Sg**	**12 49 37.1**	**+0.5**
CHMG	**Chimgan**	**0.60**	**206**	P		**Pb**	**12 49 31.6**	**+0.4**
CHMG				S		**Sg**	**12 49 38.7**	**+0.3**
TVKS	**Tavaksay**	**0.73**	**226**	P		**Pb**	**12 49 33.5**	**0.0**
TVKS				S		**Sg**	**12 49 43.0**	**+0.3**
TRKS	**Terek-Say**	**0.81**	**133**	⇓*eP*		**Pn**	**12 49 36.2**	**+0.1**
TRKS				⇓*eS*		**Sb**	**12 49 47.3**	**+1.5**
BRLS	**Boroldav**	**1.01**	**338**	P		**Pg**	**12 49 37.1**	**-1.3**

4.8nm,0.1s

BRLS				S		**Sg**	**12 49 49.4**	**-2.2**

95nm,0.1s

BRLS	**Boroldav**	**1.01**	**338**	*eP*		**Pg**	**12 49 37.1**	**-1.3**
BRLS				*eS*		**Sg**	**12 49 49.4**	**-2.2**
BRLS	**Boroldav**	**1.01**	**338**	*eP*		**Pg**	**12 49 37.1**	**-1.3**

4.8nm,0.1s

BRLS				*eS*		**Sg**	**12 49 49.4**	**-2.2**

95nm,0.1s

KK31	**Karatay Array**	**1.02**	**6**	⇓P		**Pn**	**12 49 39.9**	**+1.1**

1.7nm,0.2s,baz=188,slow=18,SNR=69

KK31				⇑S		**Sn**	**12 49 54.0**	**+1.0**

11nm,0.3s,baz=184,slow=31,SNR=15

ARK	**Arkit**	**1.23**	**103**	⇑*eP*		**Pg**	**12 49 43.2**	**+0.7**
ARK				⇑*eS*		**Sn**	**12 49 59.6**	**+1.1**
MNAS	**Manas**	**1.64**	**75**	⇑*eP*		**Pg**	**12 49 51.1**	**+0.8**
MNAS				⇑*eS*		**Sg**	**12 50 13.1**	**+1.4**
BTK	**Batken**	**2.06**	**170**	⇑*eP*		**Pb**	**12 49 57.0**	**+0.9**
BTK				⇑*eS*		**Sg**	**12 50 23.4**	**-1.6**
MRKS	**Merke**	**2.22**	**72**	Pg		**Pg**	**12 50 01.7**	**+0.2**

4.7nm,0.3s

MRKS				Lg		Lg	12 50 31.8	

30nm,0.4s

MRKS	**Merke**	**2.22**	**72**	*eP*		**Pg**	**12 50 01.7**	**+0.2**

4.7nm,0.3s

MRKS				*eS*		**Sg**	**12 50 31.8**	**+1.6**

30nm,0.4s

EKS2	**Erkin-Say**	**2.60**	**76**	⇑*eP*		**Pb**	**12 50 05.4**	**+0.1**
EKS2				⇑*eS*		**Sb**	**12 50 37.9**	**+0.7**
DRK	**Karamyk**	**2.83**	**157**	⇓*eP*		**Pb**	**12 50 07.9**	**-1.4**
DRK				⇓*eS*		**Sb**	**12 50 42.2**	**-1.8**
SALK	**Salom-Alik**	**2.87**	**114**	⇓*eP*		**Pb**	**12 50 08.6**	**-1.3**
SALK				⇓*eS*		**Sb**	**12 50 43.6**	**-1.4**
SGDS	**Sogindy**	**3.43**	**65**	Pg		**Pg**	**12 50 23.5**	**-0.9**

1.1nm,0.2s

SGDS				Lg		Lg	12 51 08.8	

7.0nm,0.5s

BTLS	**Baital**	**3.99**	**41**	Pg		**Pg**	**12 50 34.5**	**-0.6**

1.1nm,0.2s

BTLS				Lg		Lg	12 51 27.8	

3.7nm,0.4s

BTLS	**Baital**	**3.99**	**41**	*eP*		**Pg**	**12 50 34.5**	**-0.6**

1.1nm,0.2s

BTLS				*eS*		**Sg**	**12 51 27.8**	**+1.0**

3.7nm,0.4s

KST	**Kastek**	**4.25**	**75**	Pg		**Pg**	**12 50 38.0**	**-2.1**

2.0nm,0.2s

KST				Lg		Lg	12 51 33.7	

5.4nm,0.2s

KST	**Kastek**	**4.25**	**75**	*eP*		**Pg**	**12 50 38.0**	**-2.1**

2.0nm,0.2s

KST				*eS*		**Sg**	**12 51 33.7**	**-1.5**

5.4nm,0.2s

KTBS	**Karatobe**	**4.92**	**69**	Pg		**Pg**	**12 50 52.3**	**-0.7**

0.2nm,0.1s

KTBS				Lg		Lg	12 51 58.3	

7.2nm,0.6s

KTBS	**Karatobe**	**4.92**	**69**	*eP*		**Pg**	**12 50 52.3**	**-0.7**
KTBS				*eS*		**Sg**	**12 51 58.3**	**+1.5**

7.2nm,0.6s

*IDC **22** 12:52:43.5±2.8, 55.°04N×161.°00W, h0km, mb3.5/3, mbtmp3.4/6, ML2.9/3, Error ellipse: s-maj=76.7km s-min=21.6km az=156.0*
*NEIC **22** 12:52:47.6±1.0, 54.°73N±0.°04×160.°52W±0.°07, h21km±7km, ML3.2/32, Error ellipse: s-maj=6.5km s-min=5.4km az=55.0*

ISC 22 12:52:44.8±1.0, **54.°66N**±0.°06×**160.°46W**±0.°05, **h10**km, **n52**, σ1°**33**/54, **mb3.7/3, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.53**	**72**			**Pg**	**12 52 56.0**	**+0.9**
CNBA				Sg		**Sb**	**12 53 06.6**	**+2.7**
SDPT	**Sand Point**	**0.69**	**359**	P		**Pg**	**12 52 59.2**	**+1.1**
SDPT	**Sand Point**	**0.69**	**359**	S		**Sg**

SII	**Sitkinak Islan**	**2.83**	**53**			**Pn**	**12 57 32.9**	**-0.6**
SII				IAML			12 58 34.1	
	comp=N,566nm,0.7s							
SII				IAML			12 58 38.8	
	comp=E,567nm,0.8s							
OHAK	**Old Harbor**	**3.62**	**48**	P		**Pn**	**12 57 43.4**	**-0.8**
OHAK	**Old Harbor**	**3.62**	**48**			**Pn**	**12 57 43.6**	**-0.6**
ACHA	**Angle Creek He**	**3.68**	**25**			**Pn**	**12 57 48.4**	**+3.2**
P16K	**Nushagak River**	**4.13**	**2**	Pn		**Pn**	**12 57 52.6**	**+1.4**
KDAK	**Kodiak Island**	**4.27**	**45**	Pn		**Pn**	**12 57 52.3**	**-0.8**
	comp=E,2.0nm,0.3s,baz=207,slow=2.1,SNR=25							
KDAK				Sn		**Sn**	**12 58 37.3**	**-4.3**
	comp=E,6.8nm,0.3s,baz=33,slow=22,SNR=7.1							
	comp=E,10.0nm,0.4s							
KDAK	**Kodiak Island**	**4.27**	**45**			**Pn**	**12 57 52.3**	**-0.8**
KDAK				IAML			12 59 27.6	
	comp=E,74nm,0.9s							
O15K	**Ungalikthiuk R**	**4.36**	**349**			**Pn**	**12 57 54.3**	**-0.1**
O15K				IAML			12 59 20.2	
	comp=N,76nm,0.8s							
O15K				IAML			12 59 25.5	
	comp=E,69nm,0.8s							
P17K	**Kvichak River**	**4.41**	**12**			**Pn**	**12 57 57.4**	**+2.4**
AKUT	**Akutan**	**4.45**	**263**	P		**Pn**	**12 57 56.2**	**+0.6**
AKUT	**Akutan**	**4.45**	**263**	Pn		**Pn**	**12 57 55.3**	**-0.2**
AKUT				IAML			12 59 08.7	
	comp=N,73nm,1.0s							
AKUT				IAML			12 59 11.7	
	comp=E,76nm,0.8s							
LVA	**Lava Point**	**4.59**	**264**			**Pn**	**12 57 57.9**	**+0.3**
LVA				IAML			12 59 18.8	
	comp=N,116nm,0.7s							
LVA				IAML			12 59 22.6	
	comp=E,70nm,0.8s							
O14K	**Tigyukauivet M**	**4.65**	**341**			**Pn**	**12 57 58.3**	**0.0**
O14K				IAML			12 59 26.7	
	comp=E,75nm,1.0s							
O16K	**Kokwok River B**	**4.69**	**1**			**Pn**	**12 58 00.1**	**+1.2**
O16K				IAML			12 59 19.8	
	comp=N,48nm,0.7s							
UNV	**Unalaska Valle**	**4.94**	**261**	P		**Pn**	**12 58 02.1**	**-0.2**
UNV	**Unalaska Valle**	**4.94**	**261**	S		**Sn**	**12 58 58.7**	**+0.6**
UNV	**Unalaska Valle**	**4.94**	**261**			**Pn**	**12 58 00.8**	**-1.6**
O18K	**Koktuh Hills**	**5.22**	**17**			**Pn**	**12 58 06.8**	**+0.6**
O18K				IAML			12 59 36.8	
	comp=E,32nm,1.0s							
O18K				IAML			12 59 46.8	
	comp=N,33nm,0.6s							
N14K	**Kuskokwak Cree**	**5.35**	**341**			**Pn**	**12 58 08.2**	**+0.3**
N15K	**Kwethluk River**	**5.36**	**350**			**Pn**	**12 58 09.2**	**+1.0**
N17K	**Nushagak Hills**	**5.66**	**5**			**Pn**	**12 58 13.8**	**+1.6**
ILSW	**Iliamna Southw**	**5.78**	**26**			**Pn**	**12 58 15.1**	**+1.1**
N18K	**Kilae Creek**	**5.92**	**11**			**Pn**	**12 58 16.5**	**+0.7**
CNPM	**China Poot**	**5.99**	**37**	Pn		**Pn**	**12 58 16.3**	**-0.5**
M13K	**Dall Lake**	**6.15**	**336**			**Pn**	**12 58 19.5**	**+0.6**
M14K	**Bethel**	**6.18**	**343**			**Pn**	**12 58 19.1**	**-0.2**
N19K	**Bonanza Creek**	**6.25**	**17**			**Pn**	**12 58 21.0**	**+0.6**
BRLK	**Bradley Lake**	**6.29**	**36**	Pn		**Pn**	**12 58 19.8**	**-1.0**
M17K	**Holitna River**	**6.52**	**3**			**Pn**	**12 58 24.6**	**+0.6**
L16K	**Owhat River**	**6.85**	**355**			**Pn**	**12 58 28.8**	**+0.3**
L14K	**Kuka Creek**	**6.86**	**342**			**Pn**	**12 58 28.2**	**-0.4**
M11K	**Mekoryuk**	**6.94**	**325**	Pn		**Pn**	**12 58 30.7**	**+1.0**
SEW	**Seward**	**7.04**	**39**	Pn		**Pn**	**12 58 29.4**	**-1.7**
SLKM	**Skilak Lake**	**7.07**	**34**	Pn		**Pn**	**12 58 32.2**	**+0.6**
SPIA	**Saint Paul Isl**	**7.09**	**294**	P		**Pn**	**12 58 31.5**	**-0.3**
SPIA	**Saint Paul Isl**	**7.09**	**294**	Pn		**Pn**	**12 58 32.0**	**+0.2**
L18K	**Granite Mounta**	**7.37**	**6**			**Pn**	**12 58 37.3**	**+1.6**
L19K	**White Mountain**	**7.50**	**12**			**Pn**	**12 58 39.4**	**+1.9**
K15K	**Wolf Creek Mou**	**7.60**	**348**			**Pn**	**12 58 39.5**	**+0.7**
RC01	**Rabbit Creek A**	**7.66**	**33**			**Pn**	**12 58 39.5**	**-0.2**
P23K	**Montague Islan**	**7.76**	**45**	Pn		**Pn**	**12 58 41.1**	**+0.1**
K13K	**Kusilvak Mount**	**7.79**	**337**			**Pn**	**12 58 41.8**	**+0.4**
PWL	**Port Wells**	**7.96**	**38**			**Pn**	**12 58 42.5**	**-1.3**
PMR	**Palmer**	**8.24**	**32**	Pn		**Pn**	**12 58 46.7**	**-0.9**
EYAK	**Cordova Ski Ar**	**8.75**	**45**	P		**Pn**	**12 58 54.5**	**0.0**
H17K	**Granite Mounta**	**10.09**	**356**			**Pn**	**12 59 12.7**	**-0.3**
H18K	**Honhosa River**	**10.27**	**360**			**Pn**	**12 59 14.6**	**-0.8**
ANM	**Nome**	**10.32**	**343**	Pn		**Pn**	**12 59 16.3**	**+0.3**
PAX	**Paxson**	**10.41**	**34**			**Pn**	**12 59 17.4**	**0.0**
WRH	**Wood River Hil**	**10.86**	**24**	Pn		**Pn**	**12 59 24.0**	**+0.6**
K24K	**Donnelly Dome**	**10.93**	**30**			**Pn**	**12 59 24.6**	**+0.1**
CCB	**Clear Creek Bu**	**11.07**	**24**			**Pn**	**12 59 25.2**	**-1.1**
HDA	**Harding Lake**	**11.09**	**26**			**Pn**	**12 59 26.0**	**-0.5**
H21K	**Melozitna Rive**	**11.11**	**12**			**Pn**	**12 59 27.0**	**+0.2**
RIDG	**Independent Ri**	**11.16**	**32**			**Pn**	**12 59 27.3**	**-0.3**
I23K	**Minto, Yukon-K**	**11.17**	**20**			**Pn**	**12 59 27.5**	**-0.2**
F15K	**North Star Dit**	**11.27**	**346**	Pn		**Pn**	**12 59 28.4**	**-0.7**
G19K	**Purcell Mounta**	**11.28**	**2**			**Pn**	**12 59 29.8**	**+0.6**
IMAR	**Indian Mountai**	**11.32**	**9**	Pn		**Pn**	**12 59 30.3**	**+0.6**
IL31		**11.40**	**25**			**Pn**	**12 59 30.0**	**-0.7**
ILAR	**Eielson Array**	**11.40**	**25**	Pn		**Pn**	**12 59 27.4**	**-3.3**
	comp=N,0.4nm,0.3s,baz=212,slow=13,SNR=28							
ILAR				Sn		Sn	13 01 27.1	-10
	comp=N,0.1nm,0.3s,baz=217,slow=23,SNR=1.2							
	comp=N,0.3nm,0.5s							
ILAR	**Eielson Array**	**11.40**	**25**			**Pn**	**12 59 30.3**	**-0.5**
ADK	**Adak**	**11.41**	**262**	P		**Pn**	**12 59 31.0**	**+0.1**
ADK	**Adak**	**11.41**	**262**	Pn		**Pn**	**12 59 30.2**	**-0.8**
J25K	**Salcha River,**	**11.67**	**28**			**Pn**	**12 59 34.3**	**-0.2**
L27K	**Beaver Creek,**	**11.73**	**39**			**Pn**	**12 59 35.0**	**-0.4**
P29M	**Windy Craggy**	**12.05**	**59**			**Pn**	**12 59 40.1**	**+0.4**
PRP	**Porcupine Dome**	**12.34**	**25**	Pn		**Pn**	**12 59 43.8**	**0.0**
S31K	**Pelican**	**12.55**	**67**	Pn		**Pn**	**12 59 45.8**	**-0.7**
N31M	**Braeburn, Yuko**	**13.51**	**52**	Pn		**Pn**	**12 59 60.0**	**+0.3**
U33K	**Whale Pass**	**14.27**	**75**	Pn		**Pn**	**13 00 09.3**	**-0.7**
N32M	**Quiet Lake**	**14.66**	**55**	Pn		**Pn**	**13 00 16.0**	**+0.6**
Q32M	**Nakina River**	**14.71**	**63**	Pn		**Pn**	**13 00 16.8**	**+0.7**
C23K	**Itkillik River**	**15.37**	**10**	Pn		**Pn**	**13 00 24.8**	**+0.2**
C23K				IAmb		IAmb	13 00 43.2	
	comp=Z,3.7nm,0.9s							
D25K	**Kavik River**	**15.44**	**16**	Pn		**Pn**	**13 00 26.0**	**+0.4**
B22K	**Teshekpuk Lake**	**15.63**	**6**			**Pn**	**13 00 27.3**	**-0.7**
B22K				IAmb		IAmb	13 00 35.8	
	comp=Z,4.8nm,0.8s							
DLBC	**Dease Lake**	**15.85**	**66**	Pn		**Pn**	**13 00 29.4**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=262,slow=11,SNR=6.9							
MMPY	**Sheldon Lake,**	**15.88**	**50**			**Pn**	**13 00 31.4**	**+0.1**
H31M	**Peel River**	**15.96**	**37**			**Pn**	**13 00 32.2**	**-0.1**
H31M				IAmb		IAmb	13 00 53.3	
	comp=Z,7.9nm,1.0s							
G30M	**tAoh Zraii Nji**	**16.02**	**32**			**Pn**	**13 00 33.9**	**+0.8**
G30M				IAmb		IAmb	13 00 46.1	
	comp=Z,8.2nm,0.7s							
INK	**Inuvik**	**17.65**	**31**	P		**Pn**	**13 00 52.9**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=241,slow=14,SNR=14							
	comp=Z,0.5nm,0.3s							
C36M	**Paulatuk**	**21.12**	**34**	P		**P**	**13 01 32.5**	**+0.5**
YKAW3	**Yellowknife Wh**	**23.49**	**53**	P		**P**	**13 01 56.6**	**-0.3**
YKAW3				IAmb		IAmb	13 02 27.5	
	comp=Z,3.5nm,1.4s							
YKA	**Yellowknife Ar**	**23.50**	**54**	P		**P**	**13 01 56.9**	**0.0**
	comp=Z,0.5nm,0.5s,baz=270,slow=8.9,SNR=8.1							
	comp=Z,0.5nm,0.5s							
YKA	**Yellowknife Ar**	**23.50**	**54**	P		**P**	**13 01 56.7**	**-0.2**
YKAW1	**Yellowknife Wh**	**23.55**	**54**	P		**P**	**13 01 56.2**	**-1.2**
YKAW1				IAmb		IAmb	13 01 59.5	
	comp=Z,10nm,1.4s							
PETK	**Petropavlovsk-**	**25.63**	**284**	P		**P**	**13 02 13.2**	**-3.4**
	comp=Z,1.7nm,0.6s,baz=67,slow=13,SNR=2.7							
	comp=Z,1.7nm,0.6s							
PETK	**Petropavlovsk-**	**25.63**	**284**	P		**P**	**13 02 13.9**	**-2.7**
NVAR	**Mina Array Bea**	**31.46**	**105**	P		**P**	**13 03 11.8**	**+2.9**
	comp=Z,0.7nm,0.6s,baz=303,slow=8.8,SNR=7.1							
	comp=Z,0.7nm,0.6s							
PDAR	**Pinedale Array**	**33.59**	**91**	P		**P**	**13 03 28.7**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=304,slow=4.3,SNR=8.1							
	comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**33.59**	**91**	P		**P**	**13 03 27.7**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**43.91**	**231**	T		T	13 51 48.6	
	baz=28,slow=76,SNR=7.6							
H11N3	**WAKE ISLAND Hy**	**43.92**	**231**	T		T	13 51 48.9	
	baz=28,slow=76,SNR=5.6							
H11N1	**WAKE ISLAND Hy**	**43.93**	**231**	T		T	13 51 50.1	
	baz=28,slow=76,SNR=3.7							
H11S1	**WAKE ISLAND Hy**	**45.07**	**230**	T		T	13 53 14.2	
	baz=28,slow=76,SNR=7.4							
H11S2	**WAKE ISLAND Hy**	**45.09**	**230**	T		T	13 53 21.3	
	baz=28,slow=76,SNR=9.9							
H11S3	**WAKE ISLAND Hy**	**45.09**	**230**	T		T	13 53 20.4	
	baz=28,slow=76,SNR=6.3							
ZALV	**Zalesovo Beam**	**59.73**	**322**	P		**P**	**13 06 52.4**	**+1.0**
	comp=Z,0.5nm,0.2s,baz=19,slow=6.1,SNR=1.9							
	comp=Z,0.5nm,0.2s							
ZALV	**Zalesovo Beam**	**59.73**	**322**	P		**P**	**13 06 51.9**	**+0.5**

FINES	**FINESS Array B**	**63.94**	**358**	P		**P**	**13 07 19.4**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=357,slow=6.5,SNR=1.8							
	comp=Z,2.8nm,0.9s							
FINES	**FINESS Array B**	**63.94**	**358**	P		**P**	**13 07 19.5**	**0.0**
KURK	**Kurchatov**	**64.55**	**324**	P		**P**	**13 07 23.4**	**-0.3**
KURK				IAmb		IAmb	13 07 39.1	
	comp=Z,1.7nm,0.8s							
KURBB	**Kurchatov Arra**	**64.66**	**324**	P		**P**	**13 07 25.7**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=25,slow=7.2,SNR=2.7							
	comp=Z,0.1nm,0.3s							
HFS	**Hagfors**	**65.12**	**4**	P		**P**	**13 07 28.8**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=352,slow=5.8,SNR=1.7							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**66.54**	**319**	P		**P**	**13 07 35.3**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=39,slow=5.8,SNR=5.0							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**66.54**	**319**	P		**P**	**13 07 36.3**	**-0.4**
MAKZ	**Makanchi**	**66.64**	**319**	P		**P**	**13 07 37.1**	**-0.2**
AKASG	**Malin Array Be**	**74.57**	**355**	P		**P**	**13 08 27.0**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=9.6,slow=5.8,SNR=5.3							
	comp=Z,0.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**82.21**	**291**	P		**P**	**13 09 08.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=32,slow=5.3,SNR=1.7							
	comp=Z,0.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**82.21**	**291**	P		**P**	**13 09 07.7**	**-0.5**
H03N2	**Juan Fernandez**	**111.00**	**118**	T		T	15 15 56.8	
	baz=325,slow=78,SNR=4.1							
H03N1	**Juan Fernandez**	**111.01**	**118**	T		T	15 15 58.4	
	baz=325,slow=78,SNR=5.3							
H03N3	**Juan Fernandez**	**111.02**	**118**	T		T	15 15 56.8	
	baz=325,slow=78,SNR=4.7							
QSPA	**South Pole Qui**	**144.69**	**180**	PKP		PKPbc	13 16 21.0	-0.1
	comp=Z,1.5nm,1.0s,baz=51,slow=5.7,SNR=2.3							
QSPA	**South Pole Qui**	**144.69**	**180**			PKPbc	13 16 21.4	+0.3

*JMA **22** 13:22:04.9±0.2,25°N±2°×124°4E±0°7,h105km±2km, MV3.6/14,NW OFF ISHIGAKIJIMA IS*
*IDC **22** 13:22:07.5±4.8,25°29N×124°30E,h141km±46km,mb3.6/9, mbtmp3.0/11,Error ellipse: s-maj=26.3km s-min=13.7km az=68.0*
ISC 22 13:22:03.5±0.8,25°24N±0°08×124°38E±0°05,h109km±8km, n34,σ1§11/46,mb3.9/9,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.65**	**185**	*i* P		**Pn**	**13 22 21.7**	**+0.4**
JISG				S		**Sn**	**13 22 34.4**	**-0.3**
JTJ	**Tarama**	**0.66**	**153**	P		**Pn**	**13 22 22.0**	**+0.6**
JTJ				*e*S		**Sn**	**13 22 34.8**	**-0.1**
JIRJ	**Irabujima**	**0.84**	**118**	*i* P		**Pn**	**13 22 23.6**	**+0.5**
JIRJ				*e*S		**Sn**	**13 22 37.5**	**-0.3**
JIKM	**Ikemajima**	**0.85**	**111**	*e*S		**Sn**	**13 22 38.6**	**+0.8**
JIJ	**Ishigaki jima**	**0.90**	**194**	P		**Pn**	**13 22 23.6**	**0.0**
JIJ				S		**Sn**	**13 22 37.7**	**-0.9**
JMJ	**Miyako jima 2**	**0.93**	**117**	P		**Pn**	**13 22 25.2**	**+1.3**
JMJ2	**Miyako jima3**	**0.99**	**120**	*i* P		**Pn**	**13 22 25.4**	**+0.9**
JMJ2				S		**Sn**	**13 22 41.1**	**+0.8**
JOGS	**Gusukube**	**1.05**	**117**	P		**Pn**	**13 22 26.1**	**+1.0**
JOGS				*e*S		**Sn**	**13 22 41.7**	**+0.3**
JKRS	**Kuro-shima**	**1.05**	**199**	P		**Pn**	**13 22 25.5**	**+0.4**
JKRS				S		**Sn**	**13 22 41.1**	**-0.3**
IRIF	**Iriomote-Funau**	**1.07**	**213**	P		**Pn**	**13 22 25.5**	**+0.2**
IRIF				S		**Sn**	**13 22 41.6**	**-0.2**
HATJ	**Hateruma jima**	**1.28**	**204**	P		**Pn**	**13 22 28.1**	**+0.4**
HATJ				*e*S		**Sn**	**13 22 45.9**	**-0.1**
YOJ	**Yonaguni jima**	**1.46**	**238**	P		**Pn**	**13 22 30.7**	**+1.0**
YOJ	**Yonaguni jima**	**1.46**	**238**	P		**Pn**	**13 22 31.0**	**+1.3**
YOJ				*e*S		**Sn**	**13 22 50.1**	**+0.4**
JYNG		**1.52**	**239**	P		**Pn**	**13 22 31.7**	**+1.3**
JYNG	**Yonagunijimaku**			*e*S		**Sn**	**13 22 51.2**	**+0.4**
NACB	**Ninganchiao**	**2.74**	**248**	P		**Pn**	**13 22 46.5**	**+0.5**
YHNB	**Yeheng**	**2.78**	**259**	P		**Pn**	**13 22 49.3**	**+2.7**
YULB	**Yu-li**	**3.36**	**237**	P		**Pn**	**13 22 53.4**	**-0.8**
SSLB	**Suanglung**	**3.44**	**246**	P		**Pn**	**13 22 55.9**	**+0.6**
JOW	**Kunigami**	**3.85**	**65**	P		**Pn**	**13 23 00.5**	**-0.3**
TWGBT	**Beinan**	**3.86**	**232**	P		**Pn**	**13 23 00.1**	**-0.8**
TPUB	**Ta-pu**	**3.92**	**241**	P		**Pn**	**13 23 03.4**	**+1.6**
JMZ	**Minamidaito 2**	**6.21**	**83**	P		**Pn**	**13 23 30.6**	**-2.1**
PACPP	**Pamplona Cagay**	**7.31**	**203**	*i* P		**Pn**	**13 23 47.2**	**-0.3**
PACPP				*i* S		**Sn**	**13 25 06.9**	**-2.1**
KSRS	**Korea Array**	**12.55**	**13**	P		**P**	**13 25 01.3**	**-4.0**
	1.8nm,0.5s,baz=199,slow=11,SNR=9.6							
MJAR	**Matsushiro Arr**	**16.35**	**43**	P		**P**	**13 25 48.2**	**+0.7**
	0.9nm,0.6s,baz=232,slow=10,SNR=2.6							
MKAR	**Makanchi Array**	**39.66**	**314**	P		**P**	**13 29 24.9**	**+0.2**
	0.6nm,0.3s,baz=97,slow=7.9,SNR=16							
	0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**41.00**	**325**	P		**P**	**13 29 35.6**	**0.0**
	3.4nm,0.4s,baz=114,slow=9.3,SNR=18							
	3.4nm,0.4s							
KURBB	**Kurchatov Arra**	**43.22**	**318**	P		**P**	**13 29 53.7**	**0.0**
	0.9nm,0.5s,baz=108,slow=8.4,SNR=9.5							
	0.9nm,0.5s							
WRA	**Warramunga Arr**	**45.94**	**167**	P		**P**	**13 30 16.5**	**+0.9**
	2.2nm,0.6s,baz=349,slow=8.6,SNR=25							
	2.2nm,0.6s							
BVAR	**Borovoye Array**	**48.73**	**319**	P		**P**	**13 30 36.6**	**-0.3**
	0.7nm,0.4s,baz=105,slow=9.1,SNR=2.4							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**49.48**	**168**	P		**P**	**13 30 44.4**	**+1.4**
	1.5nm,0.6s,baz=354,slow=13,SNR=30							
	1.5nm,0.6s							
ILAR	**Eielson Array**	**66.94**	**28**	P		**P**	**13 32 44.0**	**0.0**
	0.2nm,0.5s,baz=278,slow=3.9,SNR=4.6							
	0.2nm,0.5s							
NOA	**NORSAR Array B**	**78.64**	**333**	P		**P**	**13 33 53.0**	**-0.2**
	0.4nm,0.6s,baz=56,slow=5.9,SNR=1.8							
	0.4nm,0.6s							
YKA	**Yellowknife Ar**	**80.86**	**24**	P		**P**	**13 34 05.9**	**+0.8**
	0.9nm,0.5s,baz=305,slow=5.3,SNR=12							
	0.9nm,0.5s							

*IDC **22** 13:22:19.4±0.8,54°73N×160°43W,h0km,mb4.1/24, mbtmp4.1/28,ML3.8/4,Error ellipse: s-maj=19.5km s-min=12.2km az=165.0*
*AEIC **22** 13:22:19.0±3.2,54°34N±0°04×160°32W±0°08,h5km±4km, Error ellipse: s-maj=7.4km s-min=5.3km az=121.0*
*NEIC **22** 13:22:24.0±1.9,54°68N±0°05×160°23W±0°07,h22km±6km, mb4.2/52,ML4.2/36,ML4.3(AEIC),Error ellipse: s-maj=7.2km s-min=5.3km az=187.0*
ISC 22 13:22:23.1±0.5,54°64N±0°05×160°22W±0°04,h24km, n141,σ1§12/127,mb4.4/45,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.41**	**64**			**Pb**	**13 22 32.1**	**+0.4**
CNBA				Sg		**Sb**	**13 22 37.5**	**-0.1**
CNBA				IAML			13 22 38.1	
	comp=N,20μm,0.8s							
CNBA				IAML			13 22 38.7	
	comp=E,14μm,0.3s							
CHNA	**Chernabura Isl**	**0.41**	**62**	P		**Pb**	**13 22 31.0**	**-0.8**
CHNA	**Chernabura Isl**	**0.41**	**62**	S		**Sb**	**13 22 37.7**	**0.0**
SDPT	**Sand Point**	**0.72**	**348**	P		**Pn**	**13 22 37.8**	**0.0**
SDPT	**Sand Point**	**0.72**	**348**	S		**Sb**	**13 22 46.7**	**+0.2**
SDPT	**Sand Point**	**0.72**	**348**			**Pn**	**13 22 38.2**	**+0.4**
SDPT				Sg		**Sb**	**13 22 46.7**	**+0.2**
SDPT				IAML			13 22 47.1	
	comp=E,16μm,0.5s							
SDPT				IAML			13 22 47.2	
	comp=N,15μm,0.3s							
DOL	**Dolgoi Island**	**1.08**	**299**			**Pn**	**13 22 41.2**	**-1.5**
PS1A	**Pavlof South-1**	**1.17**	**312**			**Pn**	**13 22 43.2**	**-0.8**
HAG	**Hague Volcano**	**1.18**	**305**			**Pn**	**13 22 43.5**	**-0.7**
DT1	**Dutton Round H**	**1.28**	**292**			**Pn**	**13 22 44.0**	**-1.4**
VNKR	**Veniaminof 5**	**1.47**	**19**			**Pb**	**13 22 49.7**	**-0.2**
VNSS	**Veniaminof 8**	**1.65**	**15**			**Pb**	**13 22 52.5**	**-0.3**
VNFG	**Fog Glacier, M**	**1.69**	**13**			**Pb**	**13 22 53.1**	**-0.4**
VNFG				Sn		**Sn**	**13 22 12.5**	**+0.5**
CHGN	**Chignik**	**1.95**	**31**	Pn		**Pn**	**13 22 55.7**	**+1.0**
CHGN				IAML			13 23 24.0	
	comp=N,3μm,0.5s							
CHIR	**Chirikof Islan**	**2.88**	**64**	P		**Pn**	**13 23 07.4**	**-0.1**
CHIR	**Chirikof Islan**	**2.88**	**64**	Pn		**Pn**	**13 23 07.7**	**+0.2**
CHIR				IAML			13 24 01.3	
	comp=N,756nm,1.1s							
CHIR				IAML			13 24 03.7	
	comp=E,971nm,1.1s							
AKUT	**Akutan**	**3.29**	**263**	P		**Pn**	**13 23 14.4**	**+1.4**
AKUT	**Akutan**	**3.29**	**263**	Pn		**Pn**	**13 23 14.4**	**+1.4**
LVA	**Lava Point**	**3.43**	**264**			**Pn**	**13 23 16.4**	**+1.3**
LVA				IAML			13 24 26.6	

	comp=N,562nm,0.7s							
UNV	**Unalaska Valle**	**3.77**	**260**	P		**Pn**	**13 23 20.2**	**+0.5**
UNV	**Unalaska Valle**	**3.77**	**260**			**Pn**	**13 23 20.5**	**+0.8**
SII	**Sitkinak Islan**	**3.92**	**58**	P		**Pn**	**13 23 22.6**	**+0.8**
SII	**Sitkinak Islan**	**3.92**	**58**	S		**Sn**	**13 24 08.3**	**+1.2**
SII	**Sitkinak Islan**	**3.92**	**58**			**Pn**	**13 23 22.3**	**+0.5**
SII				IAML			13 24 34.2	
	comp=E,515nm,0.6s							
SII				IAML			13 24 40.0	
	comp=N,583nm,1.0s							
ACHA	**Angle Creek He**	**4.49**	**35**			**Pn**	**13 23 31.2**	**+1.6**
O15K	**Ungalikthiuk R**	**4.55**	**3**			**Pn**	**13 23 31.7**	**+1.3**
O15K				IAML			13 25 10.2	
	comp=E,187nm,0.9s							
P16K	**Nushagak River**	**4.57**	**15**			**Pn**	**13 23 32.7**	**+2.1**
O14K	**Tigyukauivet M**	**4.66**	**353**			**Pn**	**13 23 33.5**	**+1.6**
O14K				IAML			13 24 52.0	
	comp=E,144nm,0.8s							
O14K				IAML			13 25 09.1	
	comp=N,218nm,0.8s							
OHAK	**Old Harbor**	**4.67**	**54**	P		**Pn**	**13 23 31.5**	**-0.6**
OHAK	**Old Harbor**	**4.67**	**54**			**Pn**	**13 23 31.9**	**-0.2**
OHAK				IAML			13 24 53.5	
	comp=E,143nm,0.9s							
OHAK				IAML			13 24 59.7	
	comp=N,151nm,1.0s							
P17K	**Kvichak River**	**5.01**	**23**			**Pn**	**13 23 38.1**	**+1.4**
O16K	**Kokwok River B**	**5.10**	**12**			**Pn**	**13 23 39.8**	**+1.9**
O16K				IAML			13 25 13.8	
	comp=E,102nm,1.0s							
KDAK	**Kodiak Island**	**5.29**	**50**	Pn		**Pn**	**13 23 40.0**	**-0.6**
	comp=E,4.0nm,0.3s,baz=209,slow=4.2,SNR=106							
KDAK				Sn		**Sn**	**13 24 35.7**	**-5.1**
	comp=E,3.8nm,0.3s,baz=252,slow=14,SNR=1.2							
KDAK				Lg		Lg	13 24 59.9	
	comp=E,5.2nm,0.3s,baz=233,slow=20,SNR=1.9							
	comp=E,9.2nm,0.3s							
KDAK	**Kodiak Island**	**5.29**	**50**	IAML			13 25 17.1	
	comp=E,126nm,1.0s							
KDAK				IAML			13 25 19.0	
	comp=E,118nm,1.2s							
SPIA	**Saint Paul Isl**	**6.18**	**298**	P		**Pn**	**13 23 53.1**	**+0.3**
ATKA	**Atka Island**	**8.70**	**259**	P		**Pn**	**13 24 28.7**	**+1.4**
EYAK	**Cordova Ski Ar**	**9.75**	**47**	P		**Pn**	**13 24 41.9**	**+0.2**
ADK	**Adak**	**10.24**	**261**	P		**Pn**	**13 24 49.5**	**+1.0**
ILAR	**Eielson Array**	**12.15**	**28**	Pn		Pn	13 25 08.7	-5.8
	comp=E,0.3nm,0.3s,baz=216,slow=13,SNR=24							
ILAR				Sn		Sn	13 27 17.0	-12

NOR	**Nord**	**42.60**	**7**	*i* P		**P**	**13 30 16.7**	**+0.2**
NOR				IAmb		IAmb	13 30 17.4	
	comp=Z,4.7nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**42.87**	**229**	T		T	14 16 14.4	
	baz=28,slow=76,SNR=22							
H11N3	**WAKE ISLAND Hy**	**42.88**	**229**	T		T	14 16 14.7	
	baz=28,slow=76,SNR=21							
H11N1	**WAKE ISLAND Hy**	**42.89**	**229**	T		T	14 16 17.0	
	baz=28,slow=76,SNR=7.8							
H11S1	**WAKE ISLAND Hy**	**44.04**	**228**	T		T	14 17 42.8	
	baz=28,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**44.05**	**228**	T		T	14 17 44.7	
	baz=28,slow=76,SNR=8.2							
H11S3	**WAKE ISLAND Hy**	**44.05**	**228**	T		T	14 17 42.8	
	baz=28,slow=76,SNR=6.2							
SAATT	**Saattut**	**45.03**	**26**	*i* P		**P**	**13 30 38.8**	**+2.7**
SAATT				IAmb		IAmb	13 30 41.6	
	comp=Z,8.0nm,0.7s							
MJAR	**Matsushiro Arr**	**45.15**	**273**	P		**P**	**13 30 36.6**	**-1.0**
	comp=Z,2.7nm,0.9s,baz=32,slow=6.4,SNR=5.2							
	comp=Z,2.7nm,0.9s							
MJB9	**Matsu-Tunnel**	**45.15**	**273**	P		**P**	**13 30 39.0**	**+1.4**
MJB9				IAmb		IAmb	13 30 40.1	
	comp=Z,5.2nm,0.8s							
MAJO	**Matsushiro**	**45.15**	**273**	P		**P**	**13 30 38.2**	**+0.6**
MAJO				IAmb		IAmb	13 30 39.2	
	comp=Z,5.5nm,0.8s							
DAG	**Danmarks Havn**	**46.61**	**11**	*i* P		**P**	**13 30 48.0**	**-0.5**
DAG				IAmb		IAmb	13 30 49.7	
	comp=Z,6.5nm,0.7s							
SUMG	**Summit**	**46.86**	**21**			**P**	**13 30 52.1**	**+1.1**
SUMG	**Summit**	**46.86**	**21**	*i* P		**P**	**13 30 51.8**	**+0.8**
SUMG				IAmb		IAmb	13 30 52.6	
	comp=Z,3.5nm,0.7s							
NRIK	**Noril'sk**	**46.94**	**333**	P		**P**	**13 30 50.7**	**-0.5**
	comp=Z,5.1nm,0.6s,baz=56,slow=7.7,SNR=4.8							
	comp=Z,5.1nm,0.6s							
NRIK	**Noril'sk**	**46.94**	**333**	P		**P**	**13 30 52.4**	**+1.2**
SPITS	**Spitsbergen Ar**	**47.42**	**1**	P		**P**	**13 30 55.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=10,slow=8.1,SNR=1.1							
	comp=Z,0.7nm,0.4s							
TXAR	**Lajitas Array**	**47.44**	**98**	P		**P**	**13 30 57.1**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=301,slow=5.7,SNR=6.9							
	comp=Z,0.5nm,0.7s							
KS19	**Wonju Array Si**	**50.45**	**281**	P		**P**	**13 31 20.1**	**+1.5**
KS19				IAmb		IAmb	13 31 21.3	
	comp=Z,3.2nm,0.8s							
KSRS	**Korea Array**	**50.45**	**281**	P		**P**	**13 31 18.2**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=47,slow=7.0,SNR=20							
	comp=Z,2.8nm,0.8s							
KSAR	**Wonju Array Be**	**50.48**	**281**	P		**P**	**13 31 18.9**	**+0.1**
H06N1	**SOCORRO T-PHAS**	**51.62**	**114**	T		T	14 26 45.5	
	SNR=6.0							
SONM	**Songino Array**	**54.68**	**304**	P		**P**	**13 31 48.3**	**-1.7**
	comp=Z,2.1nm,0.8s,baz=44,slow=9.2,SNR=7.3							
SONM				PcP		**PcP**	**13 32 52.2**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=18,slow=2.5,SNR=4.2							
	comp=Z,2.1nm,0.8s							
G62A	**West of Eustis**	**54.70**	**60**	P		**P**	**13 31 50.1**	**+0.2**
F64A	**Sherman**	**55.33**	**58**	P		**P**	**13 31 54.1**	**-0.4**
ARCES	**ARCESS Array B**	**56.06**	**358**	P		**P**	**13 31 58.0**	**-1.4**
	comp=Z,2.8nm,0.9s,baz=38,slow=6.1,SNR=4.4							
	comp=Z,2.8nm,0.9s							
HHC	**Hu-ho-hao-te**	**57.05**	**295**	*e*P		**P**	**13 32 06.4**	**-0.6**
HHC				pmax		pmax		
	comp=Z,12nm,0.7s							
HHC				pmax		pmax		
	comp=Z,36nm,4.9s							
ZALV	**Zalesovo Beam**	**59.25**	**321**	P		**P**	**13 32 21.3**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=64,slow=5.0,SNR=1.8							
	comp=Z,0.3nm,0.3s							
GTA2	**Gaotai**	**64.08**	**302**	*e*P		**P**	**13 32 54.1**	**-0.9**
GTA2				pmax		pmax		
	comp=Z,8.0nm,0.9s							
FINES	**FINESS Array B**	**64.15**	**357**	P		**P**	**13 32 54.1**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=15,slow=8.5,SNR=11							
	comp=Z,1.3nm,0.5s							
KURBB	**Kurchatov Arra**	**64.20**	**323**	P		**P**	**13 32 54.3**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=19,slow=6.5,SNR=6.5							
	comp=Z,0.6nm,0.5s							
NB2	**NORSAR Subarra**	**64.46**	**5**	P		**P**	**13 32 57.6**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=355,slow=6.9							
BVAR	**Borovoye Array**	**64.81**	**329**	P		**P**	**13 32 59.0**	**-0.4**
	comp=Z,5.6nm,0.6s,baz=37,slow=7.5,SNR=16							
	comp=Z,5.6nm,0.6s							
HFS	**Hagfors**	**65.47**	**3**	P		**P**	**13 33 03.3**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=20,slow=4.7,SNR=8.7							
	comp=Z,2.3nm,0.6s							
MKAR	**Makanchi Array**	**65.99**	**318**	P		**P**	**13 33 05.4**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=42,slow=6.3,SNR=12							
	comp=Z,0.7nm,0.4s							
WMQ	**Urumqi**	**66.22**	**313**	*e*P		**P**	**13 33 10.3**	**+1.6**
WMQ				pmax		pmax		
	comp=Z,11nm,0.9s							
EKA	**Eskdalemuir Ar**	**68.78**	**14**	P		**P**	**13 33 24.1**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=334,slow=4.7,SNR=6.5							
	comp=Z,2.2nm,0.7s							
PZH	**PanZhiHua**	**73.24**	**292**	P		P	13 33 57.3	+5.0
AKASG	**Malin Array Be**	**74.73**	**354**	P		**P**	**13 33 59.0**	**-1.4**
	comp=Z,2.8nm,0.5s,baz=8.7,slow=5.7,SNR=14							
	comp=Z,2.8nm,0.5s							
KSH2	**Kashi**	**75.08**	**318**	P		**P**	**13 34 02.4**	**-0.5**
KSH2				pmax		pmax		
	comp=Z,9.0nm,0.8s							
GERES	**GERESS Array B**	**76.76**	**4**	P		**P**	**13 34 12.0**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=343,slow=4.2,SNR=7.2							
	comp=Z,0.8nm,0.7s							
KBZ	**Khabaz**	**80.04**	**343**	P		**P**	**13 34 30.8**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=316,slow=4.3,SNR=7.1							
	comp=Z,3.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**81.24**	**289**	P		**P**	**13 34 36.8**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=18,slow=5.5,SNR=13							
	comp=Z,2.3nm,0.8s							
ESDC	**Sonseca Array**	**83.87**	**18**	P		**P**	**13 34 51.0**	**+0.5**
	comp=Z,4.9nm,0.7s,baz=344,slow=4.8,SNR=35							
	comp=Z,4.9nm,0.7s							
H03N2	**Juan Fernandez**	**111.88**	**117**	T		T	15 42 19.4	
	baz=315							
H03N1	**Juan Fernandez**	**111.89**	**117**	T		T	15 42 16.0	
	baz=315							
H03N3	**Juan Fernandez**	**111.90**	**117**	T		T	15 42 17.7	
	baz=315							
QSPA	**South Pole Qui**	**144.42**	**180**	PKP		PKPbc	13 41 54.2	-0.1
	comp=Z,2.6nm,0.7s,baz=297,slow=0.5,SNR=16							
BOSA	**Boshof**	**153.69**	**349**	PKPbc		**PKPbc**	**13 42 19.1**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=348,slow=3.3,SNR=1.8							

IDC ***22*** *13:33:35.4±0.6,54˚.90N×158˚.52W, h0km, mb4.2/28, mbtmp4.2/32, ML4.0/4, MS3.6/8, Error ellipse: s-maj=17.3km s-min=12.0km az=179.0*

AEIC ***22*** *13:33:38.5±1.6,54˚.93N±0˚.06×158˚.34W±0˚.07, h13km±3km, Error ellipse: s-maj=8.9km s-min=5.4km az=168.0*

NEIC ***22*** *13:33:39.2±1.6,54˚.91N±0˚.06×158˚.30W±0˚.08, h24km±4km, mb4.5/212, ML4.5/40, Mwr4.3/16, ML4.5(AEIC), Error ellipse: s-maj=9.2km s-min=6.1km az=168.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.28; Mθθ0.27; Mϕϕ 1.01; Mrθ2.13; Mθϕ0.88; Mϕr1.88; Fault plane solution: M₀3.20000×10¹⁵ NP1: ϕs227.47000°, δ77.05000°, λ-81.92000°. NP2:ϕs15.12000°, δ15.23000°, λ-121.43000°. Principal axes: T 3.3017, Plg32.0000°, Azm311.0000°; N -0.2125, Plg8.0000°, Azm46.0000°; P -3.0892, Plg57.0000°, Azm148.0000°;*

NEIC ***22*** *13:33:39.1,54˚.91N×158˚.30W, h22km*

GFZ ***22*** *13:33:41.1±0.3,55˚N±6˚×15˚8W±˚, h30km, M5.0/25, mb4.7/25*

ISC 22 13:33:38.8±2.7,**54˚.94N**±0˚.05×**158˚.27W**±0˚.04, **h21**km±13km,**n316,**σ1s**11**/268,**mb4.5**/120,**MS3.8**/6,**1C, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.77**	**263**	P	**Pb**	**13 33 52.2**	**-1.3**
CHNA	**Chernabura Isl**	**0.77**	**263**	S	**Sb**	**13 34 02.3**	**-1.2**
CNBA	**Chernabura Isl**	**0.77**	**262**		**Pb**	**13 33 52.6**	**-0.9**
CNBA					**Sb**	**13 34 03.3**	**-0.2**
CNBA				IAML		13 34 04.2	
	comp=E,25μm,0.6s						
CNBA				IAML		13 34 05.9	
	comp=N,17μm,0.7s						
VNSG	**Veniaminof 6**	**1.28**	**339**		**Pn**	**13 34 01.4**	**-0.1**
SDPT	**Sand Point**	**1.33**	**289**		**Pn**	**13 34 01.0**	**-1.1**
SDPT				IAML		13 34 24.0	
	comp=E,10μm,0.9s						
SDPT				IAML		13 34 24.0	
	comp=N,10μm,0.6s						
VNSW	**Veniaminof 7**	**1.35**	**328**		**Pn**	**13 34 02.7**	**+0.2**
CHGN	**Chignik**	**1.37**	**357**		**Pn**	**13 34 02.8**	**+0.2**
CHGN					**Sb**	**13 34 20.6**	**-0.1**
CHGN				IAML		13 34 26.0	
	comp=E,11μm,0.6s						
VNSS	**Veniaminof 8**	**1.46**	**333**		**Pb**	**13 34 04.8**	**-0.5**
VNFG	**Fog Glacier, M**	**1.54**	**332**		**Pb**	**13 34 06.0**	**-0.7**
CHIR	**Chirikof Islan**	**1.75**	**58**	P	**Pn**	**13 34 07.8**	**-0.1**
CHIR	**Chirikof Islan**	**1.75**	**58**		**Pn**	**13 34 08.2**	**+0.3**
CHIR				IAML		13 34 55.4	
	comp=E,3μm,0.8s						
PVV	**Pavlof Volcano**	**2.07**	**284**		**Pn**	**13 34 12.2**	**0.0**
DOL	**Dolgoi Island**	**2.08**	**277**		**Pn**	**13 34 12.4**	**0.0**
PS4A	**Pavlof South-4**	**2.10**	**283**		**Pn**	**13 34 12.4**	**-0.3**
PN7A	**Pavlof North-7**	**2.19**	**285**		**Pn**	**13 34 14.9**	**+0.8**
SII	**Sitkinak Islan**	**2.83**	**53**	P	**Pn**	**13 34 22.7**	**0.0**
SII	**Sitkinak Islan**	**2.83**	**53**		**Pn**	**13 34 22.9**	**+0.3**
SII				IAML		13 35 15.5	
	comp=E,2μm,1.2s						
OHAK	**Old Harbor**	**3.61**	**49**	P	**Pn**	**13 34 33.2**	**-0.2**
OHAK	**Old Harbor**	**3.61**	**49**		**Pn**	**13 34 33.5**	**+0.1**
ACHA	**Angle Creek He**	**3.67**	**25**		**Pn**	**13 34 34.5**	**+0.2**
P16K	**Nushagak River**	**4.11**	**2**		**Pn**	**13 34 39.1**	**-1.2**
KDAK	**Kodiak Island**	**4.26**	**46**	Pn	**Pn**	**13 34 42.1**	**-0.3**
	comp=E,9.9nm,0.3s,baz=178,slow=1.2,SNR=97						
KDAK				Sn	**Sn**	**13 35 26.9**	**-4.4**
	comp=E,14nm,0.3s,baz=256,slow=7.9,SNR=6.2						
KDAK				Lg	Lg	13 35 52.9	
	baz=246,slow=7.6						
	comp=E,34nm,0.4s						
KDAK	**Kodiak Island**	**4.26**	**46**		**Pn**	**13 34 42.2**	**-0.1**
KDAK	**Kodiak Island**	**4.26**	**46**	P	**Pn**	**13 34 40.7**	**-1.7**
O15K	**Ungalikthiuk R**	**4.34**	**349**		**Pn**	**13 34 43.7**	**+0.3**
O15K				IAML		13 36 07.8	
	comp=N,281nm,0.8s						
O15K				IAML		13 36 10.6	
	comp=E,460nm,0.9s						
P17K	**Kvichak River**	**4.39**	**12**	Pn	**Pn**	**13 34 44.9**	**+0.8**
AKUT	**Akutan**	**4.44**	**263**	P	**Pn**	**13 34 45.3**	**+0.5**
AKUT	**Akutan**	**4.44**	**263**	S	**Sn**	**13 35 36.9**	**+1.1**
AKUT	**Akutan**	**4.44**	**263**		**Pn**	**13 34 44.7**	**-0.1**
AKUT				IAML		13 35 58.0	
	comp=N,424nm,1.5s						
AKUT				IAML		13 36 08.1	
	comp=E,364nm,1.0s						
LVA	**Lava Point**	**4.59**	**263**		**Pn**	**13 34 46.4**	**-0.5**
LVA				IAML		13 36 05.3	
	comp=N,665nm,0.8s						
LVA				IAML		13 36 14.4	
	comp=E,408nm,0.7s						
O14K	**Tigyukauivet M**	**4.63**	**341**		**Pn**	**13 34 47.7**	**+0.3**
O14K				IAML		13 36 16.7	
	comp=N,459nm,0.9s						
O14K				IAML		13 36 31.5	
	comp=E,297nm,1.1s						
O16K	**Kokwok River B**	**4.67**	**1**		**Pn**	**13 34 49.1**	**+1.1**
O16K				IAML		13 36 27.2	
	comp=E,229nm,0.8s						
O16K				IAML		13 36 27.6	
	comp=N,247nm,0.8s						
UNV	**Unalaska Valle**	**4.94**	**261**	P	**Pn**	**13 34 50.5**	**-1.1**
UNV	**Unalaska Valle**	**4.94**	**261**		**Pn**	**13 34 50.8**	**-0.8**
O18K	**Koktuh Hills**	**5.20**	**17**		**Pn**	**13 34 55.9**	**+0.6**
O18K				IAML		13 36 28.9	
	comp=E,192nm,0.9s						
N14K	**Kuskokwak Cree**	**5.33**	**341**		**Pn**	**13 34 57.1**	**+0.1**
N15K	**Kwethluk River**	**5.34**	**350**		**Pn**	**13 34 57.8**	**+0.6**
N15K				IAML		13 36 31.7	
	comp=E,352nm,0.7s						
N15K				IAML		13 36 40.4	
	comp=N,390nm,0.8s						
N17K	**Nushagak Hills**	**5.64**	**5**		**Pn**	**13 35 02.8**	**+1.5**
O19K	**Port Alsworth**	**5.69**	**20**	Pn	**Pn**	**13 35 02.6**	**+0.7**
ILSW	**Iliamna Southw**	**5.77**	**27**	Pn	**Pn**	**13 35 03.4**	**+0.2**
SPIA	**Saint Paul Isl**	**7.07**	**293**	P	**Pn**	**13 35 21.0**	**+0.1**
EYAK	**Cordova Ski Ar**	**8.74**	**45**	P	**Pn**	**13 35 43.6**	**-0.1**
ATKA	**Atka Island**	**9.86**	**260**	P	**Pn**	**13 35 58.6**	**-0.5**
COLA	**College**	**11.24**	**23**	P	**Pn**	**13 36 18.0**	**+0.1**
COLA	**College**	**11.24**	**23**	P	**Pn**	**13 36 16.8**	**-1.1**
ILAR	**Eielson Array**	**11.38**	**25**	Pn	**Pn**	**13 36 15.8**	**-4.0**
	comp=N,0.7nm,0.3s,baz=215,slow=13,SNR=33						
ILAR				Sn	Sn	13 38 13.3	-13
	baz=206,slow=27						
	comp=N,3.9nm,0.8s						
ADK	**Adak**	**11.40**	**262**	P	**Pn**	**13 36 20.0**	**-0.2**
SIT	**Sitka**	**13.00**	**71**	P	**Pn**	**13 36 41.3**	**-0.7**
SKAG	**Skagway**	**13.21**	**61**	P	**Pn**	**13 36 47.2**	**+2.4**
CRAG	**Craig**	**14.35**	**78**	P	**Pn**	**13 37 01.1**	**+0.7**
B20K	**Meade River**	**15.14**	**1**		**Pn**	**13 37 12.0**	**+1.0**
B20K				IAmb	IAmb	13 37 15.8	
	comp=Z,20nm,0.6s						
H02S1	**DAWSON INLET T**	**15.21**	**86**	T	T	13 52 53.9	
	SNR=9.8						
H02S2	**DAWSON INLET T**	**15.21**	**86**	T	T	13 52 54.0	
	SNR=10.0						
V35K	**Ketchikan**	**15.22**	**78**	IAmb	IAmb	13 37 21.1	
	comp=Z,17nm,0.8s						
S34M	**Telegraph Cree**	**15.26**	**68**	IAmb	IAmb	13 37 21.7	
	comp=Z,28nm,0.8s						
C23K	**Itkillik River**	**15.35**	**10**	Pn	**Pn**	**13 37 14.9**	**+1.2**
F28M	**Old Crow**	**15.39**	**27**	Pn	**Pn**	**13 37 15.1**	**+0.7**
R33M	**Jennings River**	**15.41**	**62**	Pn	**Pn**	**13 37 13.7**	**-1.1**
G29M	**Pine Creek**	**15.42**	**31**		**Pn**	**13 37 14.4**	**-0.4**
G29M				IAmb	IAmb	13 37 29.1	
	comp=Z,42nm,0.8s						
EPYK	**Eagle Plains**	**15.47**	**34**	Pn	**Pn**	**13 37 15.2**	**-0.3**
EPYK				IAmb	IAmb	13 37 26.0	
	comp=Z,50nm,0.9s						
DLBC	**Dease Lake**	**15.85**	**66**	Pn	**Pn**	**13 37 19.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=251,slow=12,SNR=16						
DLBC				LR	LR	13 43 16.1	
	comp=Z,128nm,18.3s,baz=310,slow=36						
	comp=Z,0.4nm,0.4s						
H31M	**Peel River**	**15.95**	**37**	IAmb	IAmb	13 37 38.9	
	comp=Z,37nm,0.8s						
G30M	**tAoh Zraii Nji**	**16.01**	**32**		**Pn**	**13 37 21.6**	**-0.8**
G30M				IAmb	IAmb	13 37 34.9	
	comp=Z,55nm,0.8s						
SHEM	**Shemya Is, Ala**	**16.42**	**274**	LR	LR	13 44 09.6	
	comp=Z,184nm,18.8s,baz=87,slow=39						
SMY	**Shemya**	**16.42**	**274**	Pn	**Pn**	**13 37 26.3**	**-1.3**
F30M	**Barrier River**	**16.53**	**31**	Pn	**Pn**	**13 37 29.5**	**+0.5**
F30M				IAmb	IAmb	13 37 42.7	
	comp=Z,24nm,0.7s						
G31M	**Satah River**	**16.59**	**34**	Pn	**Pn**	**13 37 29.2**	**-0.5**
G31M				IAmb	IAmb	13 37 41.7	
	comp=Z,19nm,0.7s						
F31M	**Tsiigehtchic**	**17.06**	**33**	Pn	**Pn**	**13 37 34.7**	**-0.8**
INK	**Inuvik**	**17.64**	**31**	P	**Pn**	**13 37 42.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=208,slow=10,SNR=14						
	comp=Z,5.9nm,0.5s						
INK	**Inuvik**	**17.64**	**31**		**Pn**	**13 37 42.4**	**-0.4**
INK				IAmb	IAmb	13 37 54.2	
	comp=Z,26nm,0.9s						
INK	**Inuvik**	**17.64**	**31**	P	**Pn**	**13 37 41.9**	**-0.8**
C36M	**Paulatuk**	**21.11**	**34**		**P**	**13 38 21.5**	**0.0**
A36M	**Sachs Harbour**	**22.07**	**27**	P	**P**	**13 38 32.2**	**+0.3**
LLLB	**Lillooet**	**22.27**	**86**	P	**P**	**13 38 33.7**	**-0.5**
NLWA	**Neilton Lookou**	**22.67**	**95**	P	**P**	**13 38 38.3**	**-0.2**
NLWA				IAmb	IAmb	13 38 42.5	
	comp=Z,16nm,0.9s						
WISH	**Wishkah**	**22.87**	**96**	P	**P**	**13 38 40.9**	**+0.4**
GNW	**Green Mountain**	**23.18**	**94**	P	**P**	**13 38 45.1**	**+1.4**
YKAW3	**Yellowknife Wh**	**23.48**	**53**	P	**P**	**13 38 46.9**	**+0.3**
YKA	**Yellowknife Ar**	**23.49**	**54**	P	**P**	**13 38 46.6**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=268,slow=8.3,SNR=36						
YKA				PcP	**PcP**	**13 42 31.2**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=301,slow=2.4,SNR=2.1						
	comp=Z,1.8nm,0.5s						
YKA	**Yellowknife Ar**	**23.49**	**54**		**P**	**13 38 46.8**	**+0.2**
YKA					**PcP**	**13 42 30.9**	**-0.7**
YKAW1	**Yellowknife Wh**	**23.54**	**54**	P	**P**	**13 38 47.6**	**+0.4**
LTY	**Liberty**	**24.58**	**93**	P	**P**	**13 38 56.1**	**-1.1**
B08A	**Colville Reser**	**24.79**	**89**	P	**P**	**13 38 58.1**	**-0.8**
EPH	**Ephrata**	**25.15**	**91**	P	**P**	**13 39 01.5**	**-0.7**
H04A	**Detroit Lake**	**25.17**	**99**	P	**P**	**13 39 01.5**	**-0.9**
H04A				IAmb	IAmb	13 39 07.5	
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**25.61**	**284**	P	**P**	**13 39 04.7**	**-1.6**
	comp=Z,7.0nm,0.8s,baz=76,slow=14,SNR=21						
	comp=Z,7.0nm,0.8s						
PETK	**Petropavlovsk-**	**25.61**	**284**	P	**P**	**13 39 05.0**	**-1.3**
HAWA	**Hanford**	**25.71**	**93**		**P**	**13 39 06.3**	**-1.0**
HAWA				IAmb	IAmb	13 39 10.8	
	comp=Z,9.9nm,0.8s						
WIFE	**Three Sisters-**	**25.76**	**100**	P	**P**	**13 39 07.8**	**-0.2**
WIFE				IAmb	IAmb	13 39 13.9	
	comp=Z,11nm,1.1s						
EDM	**Edmonton**	**26.07**	**75**		**P**	**13 39 11.0**	**+0.5**
EDM				IAmb	IAmb	13 39 12.7	
	comp=Z,11nm,0.7s						
NEW	**Newport**	**26.11**	**88**	P	**P**	**13 39 09.2**	**-1.7**
J04A	**Umpqua Nationa**	**26.11**	**102**	P	**P**	**13 39 11.6**	**+0.4**
J04A				IAmb	IAmb	13 39 17.6	
	comp=Z,14nm,1.0s						
G08A	**Pilot Rock**	**26.66**	**95**		**P**	**13 39 16.9**	**+0.8**
YBH	**Yreka Blue Hor**	**26.75**	**105**	LR	LR	13 47 40.4	
	comp=Z,303nm,21.3s,baz=268,slow=31						
JTMT	**Jette**	**28.01**	**86**	P	**P**	**13 39 28.9**	**+0.8**
MSO	**Missoula**	**28.70**	**88**	P	**P**	**13 39 33.1**	**-1.1**
ORV	**Oroville**	**28.91**	**107**	P	**P**	**13 39 36.8**	**+0.7**
LYMT	**Lyon Mountain**	**29.57**	**86**	P	**P**	**13 39 43.5**	**+1.4**
MFID	**Camas Ranch**	**29.59**	**95**	IAmb	IAmb	13 39 45.1	
	comp=Z,5.5nm,0.8s						
MPK	**Martis Peak**	**29.91**	**106**	IAmb	IAmb	13 39 48.6	
	comp=Z,11nm,1.1s						
PNTR	**Pine Nut**	**30.29**	**105**	IAmb	IAmb	13 39 52.3	
	comp=Z,10nm,0.8s						
HLID	**Hailey**	**30.31**	**94**	P	**P**	**13 39 47.6**	**-1.0**
EGMT	**Eagleton**	**30.47**	**83**	IAmb	IAmb	13 39 52.0	
	comp=Z,13nm,1.1s						
WAKR	**Walker**	**30.79**	**106**	IAmb	IAmb	13 39 56.8	
	comp=Z,4.8nm,0.9s						
YHL	**Hebgen Lake**	**31.40**	**89**	IAmb	IAmb	13 40 01.5	
	comp=Z,5.5nm,0.8s						
YHB	**Horse Butte**	**31.45**	**89**	IAmb	IAmb	13 40 01.8	
	comp=Z,7.5nm,0.8s						
NVAR	**Mina Array Bea**	**31.47**	**105**	P	**P**	**13 40 01.8**	**+2.8**
	comp=Z,3.6nm,0.6s,baz=318,slow=11,SNR=1.2						
NVAR				PcP	**PcP**	**13 42 51.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=336,slow=4.6,SNR=4.1						
	comp=Z,3.6nm,0.6s						
NVAR	**Mina Array Bea**	**31.47**	**105**	P	**P**	**13 40 01.5**	**+2.5**
NV11	**Mina Array Sit**	**31.55**	**105**	P	**P**	**13 40 02.3**	**+2.7**
BLKN	**Baker Lake**	**31.56**	**47**		**P**	**13 39 59.6**	**+0.5**
BLKN				IAmb	IAmb	13 40 00.3	
	comp=Z,6.8nm,0.7s						
ELK	**Elko**	**31.63**	**99**	P	**P**	**13 40 00.7**	**+0.4**
YMR	**Madison River**	**31.64**	**89**	P	**P**	**13 40 00.2**	**-0.1**
YNE	**Yellowstone No**	**31.99**	**88**	IAmb	IAmb	13 40 06.4	
	comp=Z,8.4nm,0.8s						
H17A	**Grant Village**	**32.02**	**89**	IAmb	IAmb	13 40 08.3	
	comp=Z,10nm,1.0s						
PKD	**Bear Valley Ra**	**32.04**	**111**	P	**P**	**13 40 04.0**	**+0.2**
PKD				IAmb	IAmb	13 40 05.0	
	comp=Z,5.0nm,0.8s						
YMP	**Mirror Lake Pl**	**32.06**	**88**	P	**P**	**13 40 03.7**	**-0.4**
YMP				IAmb	IAmb	13 40 07.5	
	comp=Z,6.5nm,1.0s						
FLWY	**Flagg Ranch**	**32.14**	**90**	P	**P**	**13 40 05.1**	**+0.4**
FLWY				IAmb	IAmb	13 40 08.5	
	comp=Z,7.5nm,0.9s						
TPH	**Tonopah**	**32.33**	**104**	IAmb	IAmb	13 40 09.8	
	comp=Z,6.0nm,1.0s						
RLMT	**Red Lodge**	**32.35**	**87**	IAmb	IAmb	13 40 10.0	
	comp=Z,8.4nm,0.8s						
HVU	**Hansel Valley**	**32.37**	**95**	IAmb	IAmb	13 40 10.1	
	comp=Z,7.2nm,1.0s						
DSP	**Deep Springs**	**32.41**	**106**	IAmb	IAmb	13 40 10.6	
	comp=Z,4.0nm,0.8s						
BGU	**Big Grassy Mou**	**32.77**	**96**	P	**P**	**13 40 10.0**	**-0.3**
CWC	**Cottonwood Cre**	**33.02**	**107**	P	**P**	**13 40 12.7**	**+0.2**
DUG	**Dugway, Tooele**	**33.38**	**97**	P	**P**	**13 40 15.5**	**-0.1**
DUG				IAmb	IAmb	13 40 18.8	
	comp=Z,8.0nm,1.1s						
DUG	**Dugway, Tooele**	**33.38**	**97**	P	**P**	**13 40 14.8**	**-0.8**
S11A	**Rachel**	**33.46**	**103**	IAmb	IAmb	13 40 44.7	
	comp=Z,7.8nm,1.2s						
TCUT	**Toone Canyon**	**33.58**	**95**	P	**P**

NEEM IAmb IAmb 13 41 24.9
comp=Z,8.4nm,0.7s
ANMO Albuquerque 40.64 98 P **P** 13 41 16.6 -0.8
ANMO Albuquerque 40.64 98 P **P** 13 41 16.0 -1.4
KULLO Kullorsuaq 40.77 24 P **P** 13 41 16.1 -1.6
KULLO Kullorsuaq 40.77 24 *i* P **P** 13 41 16.6 -1.1
KULLO IAmb IAmb 13 41 22.9
comp=Z,10.0nm,0.8s
Y22A Socorro 41.08 99 P **P** 13 41 19.4 -1.6
Y22A IAmb IAmb 13 41 24.4
comp=Z,7.2nm,1.1s
L34A Svendsen Farm, 41.68 82 P **P** 13 41 24.8 -0.8
RTBA Rita Blanca 41.73 93 P **P** 13 41 25.2 -1.0
RTBA IAmb IAmb 13 41 28.4
comp=Z,5.7nm,0.7s
CBKS Cedar Bluff 41.83 88 P **P** 13 41 26.6 -0.3
CBKS IAmb IAmb 13 41 29.4
comp=Z,12nm,0.7s
I37A Lemond, Waseca 42.07 77 **P** 13 41 28.0 -0.7
I37A IAmb IAmb 13 41 31.1
comp=Z,12nm,0.9s
N35A Tabor 42.82 82 P **P** 13 41 35.9 +1.0
MSTX Muleshoe 43.46 95 P **P** 13 41 40.5 +0.3
MSTX IAmb IAmb 13 41 43.6
comp=Z,6.7nm,1.0s
MNTX Cornudas Mount 43.63 100 IAmb IAmb 13 41 44.6
comp=Z,7.8nm,0.9s
MNTX Cornudas Mount 43.63 100 P **P** 13 41 42.3 +0.8
GDL2 Guadalupe Moun 43.84 98 P **P** 13 41 44.1 +0.8
H11N2 WAKE ISLAND Hy 43.92 231 T T 14 28 38.4
baz=28,slow=75,SNR=25
H11N3 WAKE ISLAND Hy 43.93 231 T T 14 28 38.8
baz=28,slow=75,SNR=52
H11N1 WAKE ISLAND Hy 43.94 231 T T 14 28 39.7
baz=28,slow=75,SNR=18
TPB28 44.15 99 P **P** 13 41 46.4 +0.6
TPB28 IAmb IAmb 13 41 49.2
comp=Z,4.5nm,0.9s
TPB11 China Draw 44.22 98 IAmb IAmb 13 41 49.2
comp=Z,20nm,1.4s
VHRN Van Horn 44.53 100 IAmb IAmb 13 41 52.1
comp=Z,17nm,1.3s
128A Castleberry Fa 44.60 96 IAmb IAmb 13 41 51.6
comp=Z,8.8nm,0.9s
H11S1 WAKE ISLAND Hy 45.08 230 T T 14 30 07.1
baz=28,slow=76,SNR=45
H11S2 WAKE ISLAND Hy 45.09 230 T T 14 30 06.7
baz=28,slow=76,SNR=57
H11S3 WAKE ISLAND Hy 45.10 230 T T 14 30 08.4
baz=28,slow=76,SNR=34
WMOK Wichita Mounta 45.21 91 IAmb IAmb 13 41 56.0
comp=Z,5.2nm,0.7s
WMOK Wichita Mounta 45.21 91 P **P** 13 41 53.7 -0.4
DAG Danmarks Havn 46.09 12 P **P** 13 41 59.4 -1.1
DAG Danmarks Havn 46.09 12 *i* P **P** 13 41 59.0 -1.5
DAG IAmb IAmb 13 42 02.0
comp=Z,4.7nm,0.9s
TUL3 Leonard 46.10 88 **P** 13 42 00.4 -0.7
SUMG Summit 46.19 21 P **P** 13 42 01.5 -0.3
SUMG IAmb IAmb 13 42 10.8
comp=Z,10nm,1.0s
SUMG Summit 46.19 21 P **P** 13 42 02.3 +0.5
SUMG Summit 46.19 21 *i* P P 13 42 06.9 +5.1
SUMG IAmb IAmb 13 42 11.2
comp=Z,9.2nm,0.9s
ABTX Abilene, Hawle 46.23 94 P **P** 13 42 02.5 +0.3
ABTX IAmb IAmb 13 42 03.9
comp=Z,5.9nm,0.7s
MJAR Matsushiro Arr 46.26 274 P **P** 13 42 01.9 -0.5
comp=Z,1.8nm,0.7s,baz=34,slow=6.9,SNR=6.3
comp=Z,1.8nm,0.7s
MJAR Matsushiro Arr 46.26 274 P **P** 13 42 02.1 -0.3
MJB9 Matsu-Tunnel 46.26 274 P **P** 13 42 02.1 -0.3
MJB9 IAmb IAmb 13 42 06.2
comp=Z,5.5nm,0.8s
MAJO Matsushiro 46.26 274 P **P** 13 42 02.6 +0.2
MAJO IAmb IAmb 13 42 05.2
comp=Z,5.8nm,0.8s
S39A Bolivar 46.28 84 P **P** 13 42 01.7 -0.8
S39A IAmb IAmb 13 42 02.1
comp=Z,4.6nm,1.0s
TX31 Lajitas Ar. Si 46.38 100 **P** 13 42 04.8 +1.3
TX31 IAmb IAmb 13 42 06.2
comp=Z,8.2nm,0.9s
TX31 PcP **PcP** 13 43 38.7 +0.5
TXAR Lajitas Array 46.38 100 P **P** 13 42 05.1 +1.6
comp=Z,6.5nm,0.8s,baz=308,slow=5.6,SNR=81
TXAR PcP **PcP** 13 43 38.3 +0.1
comp=Z,1.2nm,0.6s,baz=213,slow=1.5,SNR=8.3
TXAR LR LR 14 00 47.5
comp=Z,163nm,18.5s,baz=289,slow=35
comp=Z,6.5nm,0.8s
TXAR Lajitas Array 46.38 100 **P** 13 42 04.6 +1.1
TXAR PcP **PcP** 13 43 38.7 +0.5
R40A Maddies Statio 46.48 82 P **P** 13 42 03.1 -0.9
OZNA Ozona 46.63 97 IAmb IAmb 13 42 06.7
comp=Z,4.7nm,0.6s
SPITS Spitsbergen Ar 47.10 2 P **P** 13 42 08.7 +0.2
comp=Z,3.9nm,0.7s,baz=27,slow=9.9,SNR=2.1
comp=Z,3.9nm,0.7s
NRIK Noril'sk 47.18 334 P **P** 13 42 08.7 -0.5
comp=Z,4.8nm,0.7s,baz=62,slow=7.2,SNR=6.8
comp=Z,4.8nm,0.7s
JCT Junction City 47.72 96 P **P** 13 42 14.4 +0.5
Q44A Meyer Farm, Va 47.91 80 P **P** 13 42 15.4 +0.2
DBG Daneborg 48.01 14 *i* P **P** 13 42 15.6 +0.1
DBG IAmb IAmb 13 42 17.4
comp=Z,4.9nm,0.9s
FCAR Ozark Folk Cen 48.23 85 P **P** 13 42 16.7 -1.0
P46A Rosedale 48.45 78 P **P** 13 42 19.7 +0.4
CN2 Changchun 48.52 290 P **P** 13 42 19.1 -0.7
CN2 pmax pmax
comp=Z,10.0nm,0.7s
SCHQ Schefferville 48.87 50 P **P** 13 42 21.9 -0.5
comp=Z,3.2nm,0.7s,baz=350,slow=3.4,SNR=3.5
comp=Z,3.2nm,0.7s
WVT Waverly 50.52 81 **P** 13 42 35.4 +0.2
WVT Waverly 50.52 81 P **P** 13 42 34.0 -1.1
H06N1 SOCORRO T-PHAS 50.72 116 T T 14 37 24.0
SNR=7.2
SCO Scoresbysund 51.03 17 P **P** 13 42 40.0 +1.4
CLTN Cedars of Leba 51.40 80 **P** 13 42 42.3 +0.5
U49A Red Boiling Sp 51.41 79 P **P** 13 42 41.9 0.0
U49A IAmb IAmb 13 42 42.2
comp=Z,3.5nm,0.6s
U49A PcP **PcP** 13 43 55.8 -0.4
KS19 Wonju Array Si 51.49 282 P **P** 13 42 42.2 -0.3
KS19 IAmb IAmb 13 42 52.1
comp=Z,4.3nm,0.9s
KSRS Korea Array 51.49 282 P **P** 13 42 42.0 -0.4
comp=Z,1.4nm,0.6s,baz=44,slow=6.9,SNR=14
KSRS LR LR 14 05 01.1
comp=Z,16nm,19.5s,baz=15,slow=37
comp=Z,1.4nm,0.6s
W52A Murphy 53.48 79 IAmb IAmb 13 42 58.3
comp=Z,5.0nm,0.8s
V53A Saluda 53.70 78 **P** 13 42 59.0 +0.2
V53A IAmb IAmb 13 42 59.6
comp=Z,5.1nm,0.8s
VADS Vadso 55.13 357 *e*P P 13 43 15.9 +7.2
VADS IAmb IAmb 13 43 18.4
comp=Z,158nm,1.8s
SONM Songino Array 55.43 305 P **P** 13 43 10.9 -0.5
comp=Z,3.5nm,0.7s,baz=48,slow=6.8,SNR=15
SONM PcP **PcP** 13 44 09.7 -1.7
comp=Z,0.7nm,0.6s,baz=55,slow=5.9,SNR=1.3
comp=Z,3.5nm,0.7s
SONM Songino Array 55.43 305 P **P** 13 43 10.9 -0.5
SONM IAmb IAmb 13 43 11.9
comp=Z,2.8nm,0.7s
SONM **PcP** 13 44 10.3 -1.2
TRO Tromso 55.72 1 *e*P **P** 13 43 16.4 +3.4
ARCES ARCESS Array B 55.81 358 P **P** 13 43 12.5 -1.1
comp=Z,0.5nm,0.4s,baz=10,slow=7.5,SNR=6.3
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 55.81 358 P **P** 13 43 12.8 -0.8
ARCES IAmb IAmb 13 43 43.0
comp=Z,12nm,1.4s
JETT Jettan, Norway 55.81 1 *e*P **P** 13 43 18.1 +4.4
JETT IAmb IAmb 13 43 24.4
comp=Z,22nm,1.1s
STEI Steigen 57.35 3 *e*P **P** 13 43 24.0 -0.6
STEI IAmb IAmb 13 43 37.3
comp=Z,174nm,2.8s
HHC Hu-ho-hao-te 57.94 296 *e*P **P** 13 43 29.3 0.0
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,90nm,4.9s
HNS HongShan 58.81 292 ⇑P P 13 43 42.5 +7.2
HNS pmax pmax
comp=Z,18nm,0.7s
LEIR Leirfjorden 59.10 4 *e*P **P** 13 43 40.3 +3.4
ZALV Zalesovo Beam 59.71 322 P **P** 13 43 41.9 +0.7
comp=Z,1.0nm,0.6s,baz=46,slow=6.4,SNR=9.8
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 59.71 322 **P** 13 43 41.8 +0.6
NJ2 Nanjing 60.52 285 *e*P **P** 13 43 46.9 -0.2
NJ2 pmax pmax
comp=Z,23nm,0.5s
NSS Namsos 60.63 5 *e*P **P** 13 43 51.0 +3.7
NSS IAmb IAmb 13 43 56.0
comp=Z,12nm,0.9s
MOL Molde 62.31 7 *e*P **P** 13 44 02.7 +4.0
AKN Aaknes 62.65 8 *e*P **P** 13 44 04.7 +3.6
DOMB Dombas 62.94 7 *e*P **P** 13 44 06.8 +3.7
NC204 NORSAR Array S 63.81 6 P **P** 13 44 08.3 -0.5
FIA1 FINESS Array S 63.91 358 P **P** 13 44 09.6 +0.2
FINES FINESS Array B 63.91 358 P **P** 13 44 08.8 -0.6
comp=Z,1.4nm,0.5s,baz=352,slow=5.8,SNR=7.9
comp=Z,1.4nm,0.5s
FINES FINESS Array B 63.91 358 P **P** 13 44 09.1 -0.3
NC405 NORSAR Array S 64.02 5 P **P** 13 44 10.6 +0.4
NB2 NORSAR Subarra 64.07 6 P **P** 13 44 12.2 +1.7
comp=Z,1.5nm,0.6s,baz=354,slow=6.9
NB2 NORSAR Subarra 64.07 6 P **P** 13 44 12.2 +1.7
NOA NORSAR Array B 64.07 6 P **P** 13 44 12.3 +1.7
comp=Z,1.7nm,0.7s,baz=353,slow=6.7,SNR=5.2
NOA LR LR 14 14 41.2
comp=Z,18nm,18.1s,baz=225,slow=38
comp=Z,1.7nm,0.7s
SKAR Skarslia 64.24 7 *e*P **P** 13 44 12.1 +0.5
KURK Kurchatov 64.53 324 P **P** 13 44 13.8 +0.2
KURK Kurchatov 64.53 324 P **P** 13 44 14.6 +1.0
KURBB Kurchatov Arra 64.64 324 P **P** 13 44 13.9 -0.4
comp=Z,2.3nm,0.2s,baz=26,slow=6.4,SNR=15
comp=Z,2.3nm,0.2s
GTA2 Gaotai 64.87 303 *e*P **P** 13 44 15.3 -0.9
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
ARTI Arti 65.08 339 **P** 13 44 16.9 -0.3
HFS Hagfors 65.10 4 P **P** 13 44 17.3 +0.1
comp=Z,3.6nm,0.6s,baz=25,slow=3.9,SNR=12
comp=Z,3.6nm,0.6s
BVAR Borovoye Array 65.13 330 P **P** 13 44 17.2 -0.3
comp=Z,2.0nm,0.5s,baz=39,slow=7.8,SNR=6.6
comp=Z,2.0nm,0.5s
BORK Borovoye 65.13 330 **P** 13 44 17.4 -0.1
BORK IAmb IAmb 13 44 26.2
comp=Z,7.2nm,1.1s
BLS5 Blasjo 65.34 9 *e*P P 13 44 27.4 +8.6
MKAR Makanchi Array 66.51 319 P **P** 13 44 25.7 -0.9
comp=Z,0.9nm,0.5s,baz=43,slow=6.9,SNR=9.5
comp=Z,0.9nm,0.5s
MAKZ Makanchi 66.62 319 P **P** 13 44 26.7 -0.5
EKA Eskdalemuir Ar 68.22 15 P **P** 13 44 37.5 +0.4
comp=Z,0.9nm,0.5s,baz=334,slow=5.6,SNR=3.5
comp=Z,0.9nm,0.5s
PDGK Podgornoye 70.50 319 P **P** 13 44 51.3 -0.4
RGN Rugen 70.66 5 P **P** 13 44 51.6 -0.6
AB31 Akbulak array 71.34 335 **P** 13 44 56.3 -0.1
ABKAR Akbulak array 71.34 335 **P** 13 44 56.3 -0.2
WUS Wushi 72.43 318 P **P** 13 45 03.6 +0.3
WUS Wushi 72.43 318 P **P** 13 45 04.0 +0.7
TARG Taragay, Kyrgy 72.51 319 P **P** 13 45 04.4 +0.2
TARG IAmb IAmb 13 45 13.3
comp=Z,5.5nm,0.9s
BOOM Boomskoye usch 72.54 321 P **P** 13 45 04.2 +0.1
AAK Ala-Archa 72.93 322 P **P** 13 45 05.8 -0.6
NRN Naryn 73.44 320 P **P** 13 45 09.2 -0.4
KK31 Karatay Array 73.89 325 **P** 13 45 11.4 -0.3
KKAR Karatay Array 73.89 325 **P** 13 45 11.6 -0.2
PZH PanZhiHua 74.17 293 P **P** 13 45 14.8 +1.0
AKASG Malin Array Be 74.55 355 P **P** 13 45 14.7 -0.7
comp=Z,1.1nm,0.4s,baz=10,slow=5.9,SNR=7.8
comp=Z,1.1nm,0.4s
AKASG Malin Array Be 74.55 355 P **P** 13 45 14.6 -0.8
AKASG IAmb IAmb 13 45 24.5
comp=Z,7.7nm,1.4s
AKBB Malin Array Si 74.55 355 **P** 13 45 15.2 -0.3
KIEV Kiev 74.55 355 P **P** 13 45 14.3 -1.2
DPC Dobruska-Polom 74.99 4 P **P** 13 45 18.8 +0.7
KHC Kasperske Hory 76.08 6 P **P** 13 45 25.2 +0.9
GERES GERESS Array B 76.37 5 P **P** 13 45 26.5 +0.4
comp=Z,0.3nm,0.4s,baz=356,slow=7.1,SNR=2.6
comp=Z,0.3nm,0.4s
BTK Batken 76.50 323 P **P** 13 45 27.3 +0.4
KOLS Kolonicke sedl 76.50 360 P **P** 13 45 27.7 +1.0
TRPA Tarpa 77.30 359 P **P** 13 45 32.3 +1.1
GAR Garm 77.62 323 P **P** 13 45 34.5 +1.2
CHGR Chuyangaron 78.32 324 P **P** 13 45 37.8 +0.6
OBKA Obir 78.75 5 P **P** 13 45 40.1 +0.7
KBZ Khabaz 80.07 345 P **P** 13 45 47.6 +1.1
comp=Z,0.6nm,0.5s,baz=334,slow=5.1,SNR=9.3
comp=Z,0.6nm,0.5s
NIL Nilore 81.32 319 P **P** 13 45 55.3 +1.8
CMAR Chiang Mai Arr 82.20 291 P **P** 13 45 57.7 -0.5
comp=Z,1.3nm,0.5s,baz=18,slow=4.9,SNR=6.8
comp=Z,1.3nm,0.5s
CMAR Chiang Mai Arr 82.20 291 P **P** 13 45 57.3 -0.9
ESDC Sonseca Array 83.22 20 P **P** 13 46 03.8 +0.4
comp=Z,2.0nm,1.0s,baz=344,slow=4.6,SNR=9.2
comp=Z,2.0nm,1.0s
ESDC Sonseca Array 83.22 20 P **P** 13 46 02.4 -1.0
ESDC IAmb IAmb 13 46 12.8
comp=Z,7.3nm,1.1s
BRTR Keskin Array B 85.16 351 P **P** 13 46 14.3 +1.1
comp=Z,0.9nm,0.7s,baz=34,slow=3.0,SNR=8.6
comp=Z,0.9nm,0.7s
BRTR Keskin Array B 85.16 351 P **P** 13 46 12.6 -0.7
KKUL Konya-Kulu 85.77 351 P **P** 13 46 16.4 +0.1
WRA Warramunga Arr 93.91 241 P **P** 13 46 52.9 -1.7
comp=Z,0.7nm,0.7s,baz=127,slow=2.9,SNR=6.1
comp=Z,0.7nm,0.7s
WRA Warramunga Arr 93.91 241 P **P** 13 46 52.7 -1.9
MDP Montagnes des 94.75 74 LR LR 14 27 45.2
comp=Z,46nm,21.7s,baz=97,slow=34
ASAR Alice Springs 97.25 239 P **P** 13 47 08.4 -1.4
comp=Z,0.4nm,0.8s,baz=27,slow=4.7,SNR=2.8
comp=Z,0.4nm,0.8s
ASAR Alice Springs 97.25 239 P **P** 13 47 08.1 -1.7
H03N2 Juan Fernandez 111.02 118 T T 15 52 42.5
baz=324,slow=78,SNR=20
H03N1 Juan Fernandez 111.03 118 T T 15 52 41.3
baz=324,slow=78,SNR=18
H03N3 Juan Fernandez 111.03 118 T T 15 52 42.9
baz=324,slow=78,SNR=19
QSPA South Pole Qui 144.72 180 PKP **PKPab** 13 53 10.1 -1.1
comp=Z,6.1nm,1.0s,baz=35,slow=0.4,SNR=17
QSPA South Pole Qui 144.72 180 **PKPab** 13 53 10.7 -0.5
GRTLG Ghanzi 146.47 1 PKPbc **PKPdf** 13 53 16.8 0.0
BOSA Boshof 153.57 353 PKPbc **PKiKP** 13 53 36.4 +0.8
comp=Z,1.1nm,0.7s,baz=39,slow=2.7,SNR=1.9

*IDC **22** 13:41:14.4±0.6,54.˚16S×133.˚04W,h0km,mb4.3/12, mbtmp4.2/12,MS4.0/5,Error ellipse: s-maj=22.0km s-min=17.9km az=135.0*
*NEIC **22** 13:41:16.3±0.8,54.˚1S±0.˚1×133.˚0W±0.˚2,h10km±1km, mb4.9/67,Error ellipse: s-maj=18.6km s-min=17.7km az=313.0*
*GFZ **22** 13:41:17.2±0.2,54.˚S±5.˚×13.˚3W±.˚, h10km,M4.9/20, mb4.7/20,confirmed*
ISC 22 13:41:16.0±0.4,**54.˚10S**±0.˚08×**133.˚01W**±0.˚09,**h10**km, **n131,**σ0**85/93,mb4.9/39,MS3.8/5,2D,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PTCN	**Pitcairn Islan**	**29.07**	**5**	P	**P**	**P**	**13 47 16.0**	**-0.4**
SBA	**Scott Base**	**31.60**	**201**	P	**P**	**P**	**13 47 38.0**	**-0.3**
SBA				IAmb	IAmb	IAmb	13 47 48.6	
	comp=Z,22nm,1.6s							
VA02	**Isla de Pascua**	**32.01**	**42**	P	**P**	**P**	**13 47 42.0**	**-0.4**
VA02	**Isla de Pascua**	**32.01**	**42**	P	**P**	**P**	**13 47 43.4**	**+1.0**
VNDA	**Vanda**	**32.58**	**202**	P	**P**	**P**	**13 47 47.9**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=83,slow=8.1,SNR=14							
VNDA				PcP	**PcP**	**PcP**	**13 50 31.0**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=60,slow=1.4,SNR=3.8							
VNDA				LR	LR	LR	13 57 53.9	
	comp=Z,199nm,21.1s,baz=316,slow=31							
	comp=Z,2.0nm,0.8s							
VNDA	**Vanda**	**32.58**	**202**	P	**P**	**P**	**13 47 46.8**	**-0.1**
VNDA						**PcP**	**13 50 32.7**	**-0.1**
SMAI	**San Martin Ant**	**32.92**	**141**	P	**P**	**P**	**13 47 49.6**	**-0.4**
MG03	**Isla Dawson**	**35.72**	**116**	P	**P**	**P**	**13 48 14.3**	**0.0**
QSPA	**South Pole Qui**	**36.08**	**180**	P	**P**	**P**	**13 48 18.4**	**+0.9**
	comp=Z,13nm,0.9s,baz=87,slow=1.9,SNR=36							
	comp=Z,13nm,0.9s							
QSPA	**South Pole Qui**	**36.08**	**180**	P	**P**	**P**	**13 48 18.8**	**+1.3**
QSPA				IAmb	IAmb	IAmb	13 48 19.9	
	comp=Z,19nm,1.0s							
BELA	**Belgrano 2**	**39.49**	**161**	P	**P**	**P**	**13 48 46.2**	**+0.2**
RAO	**Raoul Island**	**40.77**	**289**	LR	LR	LR	14 03 42.8	
	comp=Z,469nm,18.0s,baz=333,slow=33							
H03S2	**Juan Fernandez**	**42.65**	**84**	T	T	T	14 34 35.9	
	baz=222,slow=74,SNR=110							
H03S1	**Juan Fernandez**	**42.66**	**84**	T	T	T	14 34 35.2	
	baz=222,slow=74,SNR=104							
H03S3	**Juan Fernandez**	**42.67**	**84**	T	T	T	14 34 36.2	
	baz=222,slow=74,SNR=78							
H03N3	**Juan Fernandez**	**42.92**	**84**	T	T	T	14 34 55.3	
	baz=226,slow=72,SNR=84							
H03N2	**Juan Fernandez**	**42.93**	**84**	T	T	T	14 34 54.1	
	baz=226,slow=72,SNR=96							
H03N1	**Juan Fernandez**	**42.94**	**84**	T	T	T	14 34 52.4	
	baz=226,slow=72,SNR=74							
ORCD	**Orcadas**	**44.55**	**136**	P	**P**	**P**	**13 49 27.5**	**0.0**
BO02	**Sierra Bellavi**	**46.77**	**92**	P	**P**	**P**	**13 49 45.5**	**+0.1**
BO02	**Sierra Bellavi**	**46.77**	**92**	P	**P**	**P**	**13 49 45.3**	**-0.2**
MT13	**San Alfonso**	**47.80**	**91**	P	**P**	**P**	**13 49 53.4**	**-0.1**
VA03	**San Esteban**	**48.34**	**90**	P	**P**	**P**	**13 49 57.5**	**-0.2**
VA03	**San Esteban**	**48.34**	**90**	P	**P**	**P**	**13 49 57.4**	**-0.3**
CO04	**Los Peladeros**	**48.60**	**89**	P	**P**	**P**	**13 50 00.1**	**+0.2**
CO02	**Combarbal**	**49.19**	**88**	P	**P**	**P**	**13 50 04.9**	**+0.6**
CO02				IAmb	IAmb	IAmb	13 50 15.7	
	comp=Z,17nm,1.0s							
CO02	**Combarbal**	**49.19**	**88**	P	**P**	**P**	**13 50 04.0**	**-0.3**
CO06	**Fray Jorge**	**49.20**	**87**	P	**P**	**P**	**13 50 04.7**	**+0.5**
CO06				IAmb	IAmb	IAmb	13 50 07.5	
	comp=Z,19nm,1.1s							
VNA2	**Neumayer--Watz**	**49.42**	**159**	⇓P		**P**	**13 50 04.5**	**-0.9**
	comp=Z,7.0nm,0.6s,baz=214,slow=8.6							
VNA2	**Neumayer--Watz**	**49.42**	**159**	P	**P**		**13 50 05.1**	**-0.3**
VNA1	**Neumayer--Stat**	**49.45**	**159**	P	**P**		**13 50 05.1**	**-0.5**
	comp=Z,8.9nm,0.8s							
TRQA	**Tornquist**	**49.66**	**102**	P	**P**	**P**	**13 50 10.1**	**+2.4**
SNAA	**Sanae**	**49.73**	**162**	⇓P		**P**	**13 50 06.8**	**-1.0**
	comp=Z,52nm,0.6s							
SNAA	**Sanae**	**49.73**	**162**	P	**P**	**P**	**13 50 05.7**	**-2.1**
	comp=Z,2.3nm,0.6s,baz=210,slow=7.0,SNR=6.6							
	comp=Z,2.3nm,0.6s							
SNAA	**Sanae**	**49.73**	**162**	P	**P**	**P**	**13 50 07.4**	**-0.4**
SNAA				IAmb	IAmb	IAmb	13 51 48.3	
	comp=Z,22nm,2.0s							
SNAA	**Sanae**	**49.73**	**162**	P	**P**	**P**	**13 50 06.7**	**-1.0**
GO04	**Tololo Observa**	**50.06**	**88**	P	**P**	**P**	**13 50 10.9**	**-0.2**
GO04				IAmb	IAmb	IAmb	13 50 34.9	
	comp=Z,29nm,1.4s							
GO04	**Tololo Observa**	**50.06**	**88**	P	**P**	**P**	**13 50 10.2**	**-0.9**
AFI	**Afiamalu**	**50.29**	**308**	P	**P**	**P**	**13 50 12.3**	**-0.3**
ZON	**Zonda**	**50.31**	**91**	P	**P**	**P**	**13 50 12.8**	**+0.1**
ZON				IAmb	IAmb	IAmb	13 50 13.9	
	comp=Z,41nm,1.7s							
TROLL	**Troll, Antarti**	**50.39**	**164**	P	**P**	**P**	**13 50 12.6**	**-0.4**
	comp=Z,185nm,0.9s							
CFA	**Coronel Fontan**	**50.53**	**91**	LR	LR		14 08 10.4	
	comp=Z,96nm,21.1s,baz=176,slow=32							
CASY	**Casey**	**50.73**	**208**	P	**P**	**P**	**13 50 16.2**	**+0.9**
CASY				IAmb	IAmb	IAmb	13 50 17.5	
	comp=Z,13nm,0.9s							
CASY	**Casey**	**50.73**	**208**	P	**P**	**P**	**13 50 17.0**	**+1.6**
MSVF	**Nonsavu**	**52.17**	**295**	P	**P**	**P**	**13 50 27.1**	**+0.3**
SALTA		**57.13**	**86**	P	**P**	**P**	**13 51 03.2**	**-0.1**
MAW	**Mawson**	**58.04**	**187**	P	**P**	**P**	**13 51 07.8**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=170,slow=10,SNR=6.2							
	comp=Z,3.4nm,0.8s							
MAW	**Mawson**	**58.04**	**187**	P	**P**	**P**	**13 51 08.8**	**+0.4**
MAW	**Mawson**	**58.04**	**187**	P	**P**	**P**	**13 51 08.0**	**-0.4**
PSGCX	**Pisagua**	**58.50**	**80**	P	**P**	**P**	**13 51 12.8**	**+0.3**
PB11	**IPOC Station P**	**58.64**	**80**	P	**P**	**P**	**13 51 13.5**	**0.0**
PB11				IAmb	IAmb	IAmb	13 51 14.5	
	comp=Z,12nm,0.9s							
PB11	**IPOC Station P**	**58.64**	**80**	P	**P**	**P**	**13 51 13.1**	**-0.4**
AP01	**Chacalluta**	**59.34**	**79**	P	**P**	**P**	**13 51 17.7**	**-0.4**
PB16	**IPOC Station P**	**59.85**	**79**	P	**P**	**P**	**13 51 21.8**	**-0.6**
PB16				IAmb	IAmb	IAmb	13 51 24.1	
	comp=Z,11nm,1.3s							
PB16	**IPOC Station P**	**59.85**	**79**	P	**P**	**P**	**13 51 22.8**	**+0.5**
NNA	**Nana**	**60.81**	**69**	LR	LR	LR	14 11 33.7	
	comp=Z,161nm,19.2s,baz=196,slow=30							
CPUP	**Villa Florida**	**60.84**	**95**	P	**P**	**P**	**13 51 27.6**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=243,slow=7.2,SNR=3.6							
	comp=Z,1.9nm,0.9s							
CPUP	**Villa Florida**	**60.84**	**95**	P	**P**	**P**	**13 51 27.9**	**-0.5**
CPUP				IAmb	IAmb	IAmb	13 53 38.8	
	comp=Z,20nm,1.8s							
LPAZ	**La Paz**	**62.26**	**79**	P	**P**	**P**	**13 51 39.5**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=208,slow=2.4,SNR=12							
	comp=Z,3.3nm,0.7s							
LPAZ	**La Paz**	**62.26**	**79**			**P**	**13 51 39.5**	**+0.7**
LPAZ	**La Paz**	**62.26**	**79**	P	**P**	**P**	**13 51 39.8**	**+0.9**
STKA	**Stephens Creek**	**62.30**	**253**	P	**P**	**P**	**13 51 38.0**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=117,slow=4.5,SNR=5.1							
STKA				LR	LR	LR	14 15 03.2	
	comp=Z,72nm,20.2s,baz=205,slow=33							
	comp=Z,2.3nm,0.8s							
STKA	**Stephens Creek**	**62.30**	**253**	P	**P**	**P**	**13 51 38.8**	**+0.6**
QLP	**Quilpie**	**64.78**	**259**	P	**P**	**P**	**13 51 55.1**	**+0.5**
INKA	**Innaminka**	**65.90**	**256**	P	**P**	**P**	**13 52 02.3**	**+0.4**
ASAR	**Alice Springs**	**72.93**	**253**	P	**P**	**P**	**13 52 45.3**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=139,slow=5.9,SNR=21							
	comp=Z,2.6nm,0.9s							
ASAR	**Alice Springs**	**72.93**	**253**	P	**P**	**P**	**13 52 45.0**	**-0.5**
H01W1	**Cape Leeuwin H**	**74.20**	**232**	T	T	T	15 14 54.9	
	baz=145,slow=76,SNR=13							
H01W2	**Cape Leeuwin H**	**74.20**	**232**	T	T	T	15 14 55.6	
	baz=145,slow=76,SNR=11							
H01W3	**Cape Leeuwin H**	**74.22**	**232**	T	T	T	15 14 54.0	
	baz=145,slow=76,SNR=12							
PAF	**Port-aux-Franc**	**75.08**	**195**	P	**P**	**P**	**13 52 57.6**	**0.0**
WR8	**Warramunga Arr**	**75.52**	**256**	P	**P**	**P**	**13 53 00.3**	**-0.3**
WR8				IAmb	IAmb	IAmb	13 54 49.0	
	comp=Z,24nm,1.7s							
WRA	**Warramunga Arr**	**75.62**	**256**	P	**P**	**P**	**13 53 00.7**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=146,slow=5.0,SNR=8.7							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**75.62**	**256**	P	**P**	**P**	**13 53 01.0**	**-0.2**
TEIG	**Tepich**	**83.39**	**42**	P	**P**	**P**	**13 53 44.1**	**+0.9**
HPIG		**84.09**	**24**	P	**P**	**P**	**13 53 48.6**	**+1.7**
TX31	**Lajitas Ar. Si**	**86.88**	**25**	P	**P**	**P**	**13 54 00.4**	**-0.2**
TXAR	**Lajitas Array**	**86.88**	**25**	P	**P**	**P**	**13 54 02.1**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=188,slow=8.6,SNR=15							
	comp=Z,1.9nm,0.8s							
TXAR	**Lajitas Array**	**86.88**	**25**	P	**P**	**P**	**13 54 01.2**	**+0.6**
SAND	**Sanderson**	**87.87**	**26**	P	**P**	**P**	**13 54 06.7**	**+1.4**
SAND				IAmb	IAmb	IAmb	13 54 08.0	
	comp=Z,11nm,1.1s							
VHRN	**Van Horn**	**87.94**	**24**	P	**P**	**P**	**13 54 07.0**	**+1.2**
113A	**Mohawk Valley,**	**88.10**	**16**	P	**P**	**P**	**13 54 06.8**	**+0.5**
TUC	**Tucson**	**88.18**	**19**	P	**P**	**P**	**13 54 07.2**	**+0.4**
TUC				IAmb	IAmb	IAmb	13 54 10.1	
	comp=Z,12nm,1.4s							
TUC	**Tucson**	**88.18**	**19**	P	**P**	**P**	**13 54 09.0**	**+2.3**
BORC	**Borrego Spring**	**88.19**	**14**	IAmb	IAmb	IAmb	13 54 09.9	
	comp=Z,7.2n

OZNA	Ozona	89.05	27	IAmb	IAmb	13 54 13.5		
	comp=Z,5.3nm,1.0s							
IRM	Iron Mountain	89.24	15	IAmb	IAmb	13 54 15.2		
	comp=Z,14nm,1.2s							
TMB01	Midkiff	89.51	26	IAmb	IAmb	13 55 16.4		
	comp=Z,8.4nm,0.4s							
H11N3	WAKE ISLAND Hy	89.67	305	T	T	15 33 42.5		
	baz=147,slow=76,SNR=26							
H11N1	WAKE ISLAND Hy	89.68	305	T	T	15 33 42.5		
	baz=147,slow=76,SNR=25							
H11N2	WAKE ISLAND Hy	89.69	305	T	T	15 33 43.5		
	baz=147,slow=76,SNR=21							
PKD	Bear Valley Ra	90.32	10	IAmb	IAmb	13 54 20.0		
	comp=Z,14nm,1.1s							
MPMC	Manual Prospec	90.79	13	IAmb	IAmb	13 54 22.2		
	comp=Z,5.8nm,0.9s							
ANMO	Albuquerque	91.60	22	P	P	13 54 24.4	+1.5	
TPNV	Topopah Spring	91.83	13	IAmb	IAmb	13 54 27.3		
	comp=Z,3.4nm,0.9s							
KNB	Kanab	92.41	16	IAmb	IAmb	13 54 29.6		
	comp=Z,7.2nm,1.2s							
PRN	Pahroc Range	92.45	14	IAmb	IAmb	13 54 29.8		
	comp=Z,4.0nm,1.0s							
WAKR	Walker	92.97	11	IAmb	IAmb	13 54 32.7		
	comp=Z,12nm,1.5s							
NVAR	Mina Array Bea	93.03	12	P	P	13 54 31.1	+1.7	
	comp=Z,0.6nm,0.6s,baz=183,slow=6.3,SNR=4.6							
	comp=Z,0.6nm,0.6s							
NVAR	Mina Array Bea	93.03	12	P	P	13 54 29.4	-0.1	
HMU	Henry Mountain	93.66	17	IAmb	IAmb	13 54 34.8		
	comp=Z,6.1nm,1.2s							
PSUT	Pine Spring	93.73	15	IAmb	IAmb	13 54 35.6		
	comp=Z,3.8nm,1.0s							
PDAR	Pinedale Array	98.56	17	P	Pdif	13 54 55.5	+0.9	
	comp=Z,0.3nm,0.5s,baz=205,slow=5.0,SNR=2.2							
	comp=Z,0.3nm,0.5s							
PDAR	Pinedale Array	98.56	17	P	Pdif	13 54 54.6	+0.1	
H10S3	ASCENSION HYDR	98.70	118	T	T	15 45 28.8		
	baz=13,slow=74,SNR=5.4							
H10S2	ASCENSION HYDR	98.71	118	T	T	15 45 27.1		
	baz=207,slow=74,SNR=4.7							
H10N3	ASCENSION HYDR	99.73	118	T	T	15 46 44.9		
	baz=206,slow=75,SNR=7.1							
H10N1	ASCENSION HYDR	99.73	118	T	T	15 46 44.6		
	baz=206,slow=75							
H10N2	ASCENSION HYDR	99.75	118	T	T	15 46 46.4		
	baz=206,slow=75,SNR=9.1							
H02S2	DAWSON INLET T	106.93	0	T	T	15 55 04.8		
H02S1	DAWSON INLET T	106.93	0	T	T	15 55 04.8		
ILAR	Eielson Array	119.02	353	PKP	PKiKP	14 00 03.5	+0.1	
	comp=Z,1.6nm,0.7s,baz=218,slow=2.2,SNR=12							
PETK	Petropavlovsk-	121.28	319	PKP	PKPdf	14 00 06.9	-1.2	
	comp=Z,2.8nm,0.8s,baz=100,slow=5.3,SNR=4.8							
KSRS	Korea Array	124.28	288	PKP	PKPdf	14 00 13.1	-1.3	
	comp=Z,0.9nm,0.8s,baz=115,slow=2.1,SNR=4.9							
TORD	Torodi Ar. Bea	125.89	121	PKP	PKPdf	14 00 16.6	-1.5	
	comp=Z,0.4nm,0.6s,baz=214,slow=1.0,SNR=2.5							
BORG	Borgarnes	145.42	45	PKPbc	PKPbc	14 00 52.7	0.0	
NOR	Nord	146.91	14	*i* P	PKPab	14 00 57.6	-0.6	
DAG	Danmarks Havn	147.39	23	*i* P	PKPbc	14 00 58.2	+0.1	
EKA	Eskdalemuir Ar	151.51	67	PKPbc	PKPbc	14 01 08.2	-0.8	
	comp=Z,0.4nm,0.4s,baz=251,slow=2.6,SNR=3.5							
MKAR	Makanchi Array	156.56	266	PKPab	PKPab	14 01 38.5	-0.8	
	comp=Z,1.2nm,0.9s,baz=142,slow=4.1,SNR=6.5							
ZALV	Zalesovo Beam	157.95	285	PKPab	PKPab	14 01 45.2	+0.1	
	comp=Z,0.6nm,0.3s,baz=119,slow=5.2,SNR=4.6							

*IDC **22** 13:49:02.2±2.2,54˚.60N×158˚.34W, h0km, mb3.7/5, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=58.0km s-min=21.1km az=151.0*

*NEIC **22** 13:49:06.5±1.4,54˚.77N±0˚.05×158˚.22W±0˚.07, h20km±4km, mb3.9/25, ML3.6/36, ML3.7(AEIC), Error ellipse: s-maj=7.6km s-min=5.9km az=190.0*

*AEIC **22** 13:49:06.8±1.4,54˚.73N±0˚.07×158˚.24W±0˚.04, h26km±4km, Error ellipse: s-maj=10.5km s-min=2.2km az=193.0*

ISC 22 13:49:08.2±0.6,54˚81N±0˚.08×158˚18W±0˚.04,h35km, n153,σ0§98/150,mb3.9/10,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.82	272	Pg	Pn	13 49 22.1	-1.1
CNBA					Sn	13 49 33.3	-0.7
CNBA				IAML		13 49 33.9	
	comp=E,3μm,0.3s						
CNBA				IAML		13 49 36.5	
	comp=N,3μm,0.6s						
CHNA	Chernabura Isl	0.82	272	P	Pn	13 49 21.9	-1.3
CHNA	Chernabura Isl	0.82	272	S	Sn	13 49 33.5	-0.6
VNKR	Veniaminof 5	1.40	332		Pn	13 49 30.9	-0.4
VNSG	Veniaminof 6	1.42	339		Pn	13 49 31.4	-0.2
SDPT	Sand Point	1.43	293	P	Pn	13 49 30.7	-0.9
SDPT	Sand Point	1.43	293	S	Sn	13 49 50.5	+1.4
SDPT	Sand Point	1.43	293		Pn	13 49 30.8	-0.9
SDPT					Sn	13 49 48.9	-0.2
SDPT				IAML		13 49 56.0	
	comp=N,834nm,1.2s						
SDPT				IAML		13 50 00.5	
	comp=E,1μm,0.8s						
CHGN	Chignik	1.50	355		Pn	13 49 32.9	+0.3
VNSS	Veniaminof 8	1.60	333		Pn	13 49 34.7	+0.6
VNFG	Fog Glacier, M	1.68	333		Pn	13 49 35.4	+0.3
VNFG	Fog Glacier, M	1.68	333		Pn	13 49 35.7	+0.6
CHIR	Chirikof Isln	1.78	54	P	Pn	13 49 37.0	+0.6
CHIR	Chirikof Isln	1.78	54	S	Sn	13 49 57.7	-0.1
CHIR	Chirikof Isln	1.78	54		Pn	13 49 36.8	+0.4
CHIR				IAML		13 50 15.4	
	comp=N,462nm,0.7s						
CHIR				IAML		13 50 17.9	
	comp=E,529nm,0.9s						
PS1A	Pavlof South-1	2.14	288		Pn	13 49 41.0	-0.4
DOL	Dolgoi Island	2.15	281		Pn	13 49 41.1	-0.5
PS4A	Pavlof South-4	2.18	286		Pn	13 49 41.6	-0.4
PN7A	Pavlof North-7	2.28	288		Pn	13 49 43.5	+0.1
DTNA	Dutton South F	2.37	280		Pn	13 49 44.4	-0.2
DT1	Dutton Round H	2.39	279		Pn	13 49 44.4	-0.4
SII	Sitkinak Islan	2.86	51	P	Pn	13 49 52.5	+1.2
SII	Sitkinak Islan	2.86	51	S	Sn	13 50 24.1	-0.5
SII	Sitkinak Islan	2.86	51	Pn	Pn	13 49 52.4	+1.0
SII				IAML		13 50 55.6	
	comp=N,384nm,0.8s						
OHAK	Old Harbor	3.66	47	P	Pn	13 50 02.5	+0.3
OHAK	Old Harbor	3.66	47		Pn	13 50 03.3	+1.1
ACHA	Angle Creek He	3.76	24	Pn	Pn	13 50 04.3	+0.5
P16K	Nushagak River	4.24	1	Pn	Pn	13 50 10.4	+0.2
KDAK	Kodiak Island	4.31	44	Pn	Pn	13 50 11.5	+0.3
	comp=N,1.3nm,0.3s,baz=217,slow=4.8,SNR=26						
KDAK				Sn	Sn	13 50 56.6	-3.7
	comp=N,2.2nm,0.3s,baz=167,slow=19,SNR=5.0						
KDAK				Lg	Lg	13 51 21.2	
	comp=N,0.7nm,0.3s,baz=81,slow=8.6,SNR=2.0						
	comp=N,4.2nm,0.4s						
KDAK	Kodiak Island	4.31	44		Pn	13 50 11.8	+0.6
KDAK				IAML		13 51 42.9	
	comp=N,58nm,1.7s						
KDAK				IAML		13 51 43.5	
	comp=N,58nm,2.2s						
O15K	Ungalikthiuk R	4.47	349		Pn	13 50 13.4	0.0
O15K				IAML		13 51 40.9	
	comp=E,56nm,0.8s						
O15K				IAML		13 51 48.1	
	comp=N,44nm,1.1s						
AKUT	Akutan	4.48	264	P	Pn	13 50 14.1	+0.6
AKUT	Akutan	4.48	264		Pn	13 50 13.1	-0.4
AKUT				IAML		13 51 34.0	
	comp=E,55nm,0.9s						
AKUT				IAML		13 51 37.5	
	comp=N,43nm,1.1s						
P17K	Kvichak River	4.50	11	Pn	Pn	13 50 14.3	+0.5
LVA	Lava Point	4.63	265	Pn	Pn	13 50 15.8	+0.3
LVA				IAML		13 51 36.6	
	comp=N,89nm,0.7s						
LVA				IAML		13 51 46.8	
	comp=E,50nm,1.0s						
O14K	Tigyukauivet M	4.77	341		Pn	13 50 17.7	+0.3
O14K				IAML		13 51 41.7	
	comp=N,55nm,0.7s						
O14K				IAML		13 52 14.4	
	comp=E,36nm,1.1s						
O16K	Kokwok River B	4.80	1	Pn	Pn	13 50 20.0	+2.1
UNV	Unalaska Valle	4.97	262	P	Pn	13 50 20.0	-0.2
UNV	Unalaska Valle	4.97	262		Pn	13 50 20.0	-0.2
O18K	Koktuh Hills	5.31	16	Pn	Pn	13 50 29.1	+4.2
O18K				IAML		13 52 12.5	
	comp=N,25nm,1.1s						

N14K	Kuskokwak Cree	5.47	341		Pn	13 50 27.5	+0.4	
N15K	Kwethluk River	5.48	350	Pn	Pn	13 50 28.0	+0.8	
N17K	Nushagak Hills	5.76	5		Pn	13 50 33.1	+2.0	
ILSW	Iliamna Southw	5.86	26	Pn	Pn	13 50 34.1	+1.5	
N18K	Kilae Creek	6.02	11	Pn	Pn	13 50 35.3	+0.7	
CNPM	China Poot	6.05	36	Pn	Pn	13 50 35.6	+0.5	
M16K	Timber Creek	6.25	356		Pn	13 50 38.4	+0.6	
M13K	Dall Lake	6.27	336		Pn	13 50 38.3	+0.3	
M14K	Bethel	6.29	343		Pn	13 50 38.2	-0.2	
N19K	Bonanza Creek	6.34	17	Pn	Pn	13 50 39.9	+0.8	
M17K	Holitna River	6.63	3	Pn	Pn	13 50 42.5	-0.5	
L16K	Owhat River	6.96	355		Pn	13 50 48.0	+0.5	
L14K	Kuka Creek	6.97	342		Pn	13 50 47.1	-0.6	
SEW	Seward	7.09	38	Pn	Pn	13 50 50.9	+1.6	
SLKM	Skilak Lake	7.13	33	Pn	Pn	13 50 51.3	+1.4	
SPIA	Saint Paul Isl	7.17	294	P	Pn	13 50 50.3	-0.2	
SPIA	Saint Paul Isl	7.17	294	Pn	Pn	13 50 50.8	+0.4	
L18K	Granite Mounta	7.48	5		Pn	13 50 56.4	+1.8	
M20K	Styx River	7.58	18	Pn	Pn	13 50 56.8	+0.7	
L19K	White Mountain	7.60	12	Pn	Pn	13 50 57.1	+0.8	
K15K	Wolf Creek Mou	7.71	348		Pn	13 50 58.6	+0.8	
RC01	Rabbit Creek A	7.73	32	Pn	Pn	13 50 58.0	-0.1	
K13K	Kusilvak Mount	7.91	337		Pn	13 51 00.8	+0.3	
K17K	Iditarod	7.94	360	Pn	Pn	13 51 01.9	+1.0	
PWL	Port Wells	8.02	37		Pn	13 51 01.3	-0.7	
HIN	Hinchinbrook I	8.40	43		Pn	13 51 07.7	+0.4	
J14K	Nanvaranak Lak	8.44	343	Pn	Pn	13 51 07.6	-0.2	
J16K	Anvik River	8.60	353		Pn	13 51 10.0	+0.1	
J17K	VABM Dome	8.63	357	Pn	Pn	13 51 11.5	+1.1	
CAST	Castle Rocks	9.18	17		Pn	13 51 18.6	+0.6	
J19K	Poorman	9.31	7	Pn	Pn	13 51 19.7	0.0	
KLU	Klutina	9.31	39	Pn	Pn	13 51 21.0	+1.2	
BMRM	Bremner River	9.49	44	Pn	Pn	13 51 23.9	+1.6	
KTH	Kantishna Hill	9.52	20	Pn	Pn	13 51 23.2	+0.5	
M24K	Tolsona, Glenn	9.64	36	Pn	Pn	13 51 24.5	+0.2	
GLB	Gilahina Butte	10.08	43	Pn	Pn	13 51 31.5	+1.1	
H17K	Granite Mounta	10.20	356	Pn	Pn	13 51 32.8	+0.9	
PAX	Paxson	10.48	34	Pn	Pn	13 51 36.7	+0.9	
I21K	Tanana	10.85	14	Pn	Pn	13 51 42.2	+1.4	
WRH	Wood River Hil	10.94	24	Pn	Pn	13 51 43.2	+1.2	
K24K	Donnelly Dome	11.00	30	Pn	Pn	13 51 44.2	+1.3	
G18K	Tagagawik	11.13	359	Pn	Pn	13 51 44.8	+0.1	
H21K	Melozitna Rive	11.20	12	Pn	Pn	13 51 46.1	+0.5	
RIDG	Independent Ri	11.23	32	Pn	Pn	13 51 47.0	+1.0	
I23K	Minto, Yukon-K	11.26	19	Pn	Pn	13 51 45.2	-1.1	
F15K	North Star Dit	11.39	346	Pn	Pn	13 51 48.9	+0.7	
IMAR	Indian Mountai	11.42	9	Pn	Pn	13 51 49.6	+1.1	
ADK	Adak	11.44	263	P	Pn	13 51 50.1	+1.2	
IL31		11.47	25	Pn	Pn	13 51 48.8	-0.5	
ILAR	Eielson Array	11.47	25	Pn	Pn	13 51 45.8	-3.6	
	comp=N,0.3nm,0.3s,baz=216,slow=13,SNR=14							
ILAR				Sn	Sn	13 53 46.1	-10	
	baz=213,slow=23,SNR=1.7							
	comp=N,0.2nm,0.4s							
ILAR	Eielson Array	11.47	25		Pn	13 51 48.1	-1.2	
KIWB	Kanaga Island	11.72	263	Pn	Pn	13 51 51.4	-1.4	
J25K	Salcha River,	11.74	28	Pn	Pn	13 51 54.0	+1.0	
L27K	Beaver Creek,	11.79	39	Pn	Pn	13 51 54.9	+1.2	
BCAR	Beaver Creek A	11.81	39	Pn	Pn	13 51 54.9	+1.0	
H23K	Yukon River	11.84	18	Pn	Pn	13 51 53.9	-0.4	
F20K	Avaraart Lake	12.34	5	Pn	Pn	13 52 01.9	+0.8	
G23K	Bananza Creek	12.57	15	Pn	Pn	13 52 05.1	+0.8	
M29M	Somme Creek	12.76	45	Pn	Pn	13 52 07.7	+0.7	
I27K	Kandik River	13.54	30	Pn	Pn	13 52 18.5	+0.9	
D19K	Kuna River	13.74	0	Pn	Pn	13 52 20.1	-0.1	
E21K	Killik River	13.82	7	Pn	Pn	13 52 20.3	-1.1	
C18K	Utukok River	13.96	355	Pn	Pn	13 52 22.9	-0.4	
H27K	Steamboat Moun	14.02	29	Pn	Pn	13 52 25.3	+1.2	
P32M	Atlin	14.06	60	Pn	Pn	13 52 23.2	-1.4	
H29M	Whitestone	14.94	32	Pn	Pn	13 52 37.1	+0.6	
I30M	Mount Dempster	14.99	37	Pn	Pn	13 52 38.1	+0.9	
I30M				IAmb	IAmb	13 52 59.9		
	comp=Z,3.8nm,0.8s							
B20K	Meade River	15.27	1	Pn	Pn	13 52 41.0	+0.3	
B20K				IAmb	IAmb	13 52 45.6		
	comp=Z,4.4nm,0.5s							
G29M	Pine Creek	15.50	31	Pn	Pn	13 52 44.0	+0.1	
G29M				IAmb	IAmb	13 52 50.8		
	comp=Z,4.5nm,0.8s							
EPYK	Eagle Plains	15.55	33	Pn	Pn	13 52 44.4	-0.2	
EPYK				IAmb	IAmb	13 53 07.4		
	comp=Z,5.8nm,0.7s							
B22K	Teshekpuk Lake	15.74	6	Pn	Pn	13 52 45.6	-1.2	
MMPY	Sheldon Lake,	15.92	50	Pn	Pn	13 52 50.0	+0.7	
H31M	Peel River	16.02	37	Pn	Pn	13 52 50.7	+0.1	
G30M	tAoh Zraii Nji	16.09	32	Pn	Pn	13 52 51.3	-0.1	
G30M				IAmb	IAmb	13 53 07.4		
	comp=Z,6.2nm,1.1s							
RUBB	Prince Rupert	16.16	80	Pn	Pn	13 52 51.3	-1.0	
RUBB				IAmb	IAmb	13 53 14.8		
	comp=Z,14nm,1.3s							
E29M	Blow River	16.56	27	Pn	Pn	13 52 58.1	+0.8	
F30M	Barrier River	16.62	31	Pn	Pn	13 52 57.4	-0.7	
F30M				IAmb	IAmb	13 53 13.1		
	comp=Z,9.3nm,1.2s							
G31M	Satah River	16.67	34	Pn	Pn	13 52 58.1	-0.6	
G31M				IAmb	IAmb	13 53 03.6		
	comp=Z,7.8nm,1.2s							
INK	Inuvik	17.72	31	P	Pn	13 53 12.2	+0.4	
	comp=Z,0.3nm,0.3s,baz=218,slow=9.9,SNR=5.5							
	comp=Z,1.0nm,0.5s							
INK	Inuvik	17.72	31		Pn	13 53 10.4	-1.4	
C36M	Paulatuk	21.19	33	P	P	13 53 50.6	+0.4	
C36M				IAmb	IAmb	13 54 17.6		
	comp=Z,14nm,1.1s							
PGC	Sidney	22.21	92	P	P	13 54 01.2	0.0	
YKAW3	Yellowknife Wh	23.52	53	P	P	13 54 14.2	-0.5	
YKA	Yellowknife Ar	23.52	53	P	P	13 54 14.6	-0.1	
	comp=Z,0.3nm,0.7s,baz=270,slow=8.1,SNR=1.9							
	comp=Z,0.3nm,0.7s							
YKA	Yellowknife Ar	23.52	53	P	P	13 54 14.8	+0.1	
PEA0B	Petropavlovsk-	25.70	285	P	P	13 54 33.5	-1.2	
PETK	Petropavlovsk-	25.70	285	P	P	13 54 33.8	-1.0	
	comp=Z,2.2nm,0.8s,baz=76,slow=14,SNR=11							
	comp=Z,2.2nm,0.8s							
PETK	Petropavlovsk-	25.70	285	P	P	13 54 34.0	-0.7	
E09A	Wood Farm, Sta	26.38	92	P	P	13 54 39.9	-1.0	
NV11	Mina Array Sit	31.47	105	P	P	13 55 25.9	-0.5	
NV11				IAmb	IAmb	13 55 26.9		
	comp=Z,1.0nm,0.5s							
YPP	Pitchstone Pla	31.91	89	P	P	13 55 30.8	+0.3	
YPP				IAmb	IAmb	13 55 51.8		
	comp=Z,1.8nm,1.0s							
YMP	Mirror Lake PI	32.01	88	P	P	13 55 31.9	+0.6	
YMP				IAmb	IAmb	13 55 40.2		
	comp=Z,4.0nm,1.1s							
PDAR	Pinedale Array	33.54	91	P	P	13 55 43.9	-0.8	
H11N2	WAKE ISLAND Hy	43.88	231	T	T	14 44 05.7		
	baz=28,slow=76,SNR=5.3							
H11N3	WAKE ISLAND Hy	43.89	231	T	T	14 44 06.1		
	baz=28,slow=76,SNR=5.2							
H11N1	WAKE ISLAND Hy	43.90	231	T	T	14 44 07.1		
	baz=28,slow=76,SNR=4.5							
H11S1	WAKE ISLAND Hy	45.04	230	T	T	14 45 35.9		
	baz=28,slow=76,SNR=18							
H11S2	WAKE ISLAND Hy	45.05	230	T	T	14 45 34.3		
	baz=28,slow=76,SNR=15							
H11S3	WAKE ISLAND Hy	45.06	230	T	T	14 45 33.9		
	baz=28,slow=76,SNR=6.3							
ARCES	ARCESS Array B	55.94	358	P	P	13 58 42.3	+0.2	
FINES	FINESS Array B	64.05	358	P	P	13 59 36.9	-0.9	
	comp=Z,1.2nm,0.6s,baz=347,slow=4.1,SNR=4.3							
	comp=Z,1.2nm,0.6s							
FINES	FINESS Array B	64.05	358	P	P	13 59 38.4	+0.7	
NC405	NORSAR Array S	64.15	5	P	P	13 59 39.4	+1.0	
MKAR	Makanchi Array	66.65	319	P	P	13 59 54.2	-0.7	
	comp=Z,0.3nm,0.5s,baz=48,slow=7.2,SNR=4.5							
	comp=Z,0.3nm,0.5s							
MAKZ	Makanchi	66.75	320	P	P	13 59 56.0	+0.5	
AB31	Akbulak array	71.48	335	P	P	14 00 26.1	+1.3	
AB31				IAmb	IAmb	14 00 26.4		
	comp=Z,2.0nm,0.8s							
ABKAR	Akbulak array	71.48	335	P	P	14 00 26.0	+1.3	
KKAR	Karatay Array	74.02	325	P	P	14 00 41.1	+1.2	
CMAR	Chiang Mai Arr	82.29	291	P	P	14 01 26.1	0.0	
	comp=Z,0.9nm,0.7s,baz=6.3,slow=6.1,SNR=7.6							
	comp=Z,0.9nm,0.7s							
CMAR	Chiang Mai Arr	82.29	291	P	P	14 01 26.3	+0.2	
QSPA	South Pole Qui	144.58	180	PKP	PKPdf	14 08 39.2	-0.2	
	comp=Z,1.5nm,1.1s,baz=24,slow=0.7,SNR=3.8							
QSPA	South Pole Qui	144.58	180		PKPdf	14 08 39.9	+0.5	
ORCD	Orcadas	145.42	127	PKPbc	PKPab	14 08 41.8	+0.7	

*NEIC **22** 14:12:46.5±1.8,55˚.13N±0˚.07×159˚.45W±0˚.08, h35km±1km, mb3.6/12, ML3.3/40, ML3.1(AEIC), Error ellipse: s-maj=12.1km s-min=6.8km az=160.0*

*AEIC **22** 14:12:46.1±2.1,55˚.14N±0˚.07×159˚.50W±0˚.08, h34km±6km, Error ellipse: s-maj=10.1km s-min=6.0km az=158.0*

ISC 22 14:12:46.4±0.9,55˚18N±0˚.09×159˚50W±0˚.05,h37km, n103,σ1§15/106,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	Chernabura Isl	0.35	189	P	Pn	14 12 55.0	+0.2
CHNA	Chernabura Isl	0.35	189	S	Sn	14 13 01.9	+0.3
CNBA	Chernabura Isl	0.36	188		Pn	14 12 55.2	+0.3
CNBA					Sn	14 13 01.7	+0.1
CNBA				IAML		14 13 02.2	
	comp=E,2μm,0.2s						
CNBA				IAML		14 13 02.3	
	comp=N,2μm,0.2s						
SDPT	Sand Point	0.58	287	P	Pn	14 12 58.1	-0.2
SDPT	Sand Point	0.58	287	S	Sn	14 13 06.9	+0.4
SDPT	Sand Point	0.58	287		Pn	14 12 58.3	0.0
SDPT				IAML		14 13 07.3	
	comp=N,1μm,0.8s						
SDPT					Sn	14 13 07.0	+0.4
VNKR	Veniaminof 5	0.86	5		Pn	14 13 02.2	+0.2
VNSS	Veniaminof 8	1.05	1		Pn	14 13 05.7	+1.0
VNFG	Fog Glacier, M	1.11	358		Pn	14 13 06.7	+1.3
VNFG	Fog Glacier, M	1.11	358		Pn	14 13 06.8	+1.3
VNFG				IAML		14 13 25.0	
	comp=E,943nm,0.6s						
VNFG				IAML		14 13 28.5	
	comp=N,931nm,0.5s						
CHGN	Chignik	1.28	28		Pn	14 13 08.2	+0.5
CHGN				IAML		14 13 29.9	
	comp=N,516nm,0.4s						
PS1A	Pavlof South-1	1.31	282		Pn	14 13 08.5	+0.5
DOL	Dolgoi Island	1.36	270		Pn	14 13 09.0	+0.3
DOL					Sn	14 13 26.8	+1.3
PS4A	Pavlof South-4	1.36	278		Pn	14 13 09.1	+0.3
PN7A	Pavlof North-7	1.45	281		Pn	14 13 10.7	+0.6
DTNA	Dutton South F	1.58	270		Pn	14 13 12.3	+0.5
DT1	Dutton Round H	1.60	269		Pn	14 13 12.2	+0.2
CHIR	Chirikof Isln	2.30	72	P	Pn	14 13 24.2	+2.6
CHIR	Chirikof Isln	2.30	72		Pn	14 13 21.5	-0.1
CHIR				IAML		14 13 50.8	
	comp=N,156nm,1.8s						
CHIR				IAML		14 13 50.8	
	comp=E,169nm,2.0s						
ISNN	Isanotski Nort	2.49	264		Pn	14 13 26.0	+1.7
SII	Sitkinak Islan	3.30	63	P	Pn	14 13 38.2	+2.8
SII	Sitkinak Islan	3.30	63	Pn	Pn	14 13 36.2	+0.7
SII				IAML		14 14 41.4	
	comp=N,105nm,1.3s						
Q17K	Contact Creek	3.68	31		Pn	14 13 42.5	+1.8
ANCK	Angle Creek	3.75	34		Pn	14 13 43.5	+1.9
AKUT	Akutan	3.79	257	P	Pn	14 13 44.5	+2.4
AKUT	Akutan	3.79	257	Pn	Pn	14 13 43.6	+1.5
AKUT				IAML		14 14 45.6	
	comp=N,41nm,0.9s						
AKUT				IAML		14 14 46.7	
	comp=E,35nm,0.7s						
MGLS	Mageik Landsli	3.81	37		Pn	14 13 44.0	+1.5
ACHA	Angle Creek He	3.81	35		Pn	14 13 44.3	+1.8
Q16K	King Salmon	3.84	23		Pn	14 13 44.5	+1.7
LVA	Lava Point	3.93	258	Pn	Pn	14 13 45.1	+1.0
LVA				IAML		14 14 51.0	
	comp=N,64nm,0.7s						
LVA				IAML		14 14 56.7	
	comp=E,32nm,1.1s						
P16K	Nushagak River	3.95	11		Pn	14 13 45.9	+1.6
O15K	Ungaliktiuk R	4.01	358		Pn	14 13 45.8	+0.6
OHAK	Old Harbor	4.03	57	P	Pn	14 13 47.2	+1.8
OHAK	Old Harbor	4.03	57	Pn	Pn	14 13 45.2	-0.2
OHAK				IAML		14 15 03.0	
	comp=E,34nm,2.6s						
OHAK				IAML		14 15 47.4	
	comp=N,27nm,2.5s						
O14K	Tigyukauivet M	4.20	348		Pn	14 13 48.6	+0.9
UN

G31M					IAmb	IAmb	14 16 47.5	
	comp=Z,5.7nm,1.1s							
INK	**Inuvik**	**17.80**	**32**	Pn	**Pn**	**Pn**	**14 16 49.4**	**-1.3**
C36M	**Paulatuk**	**21.30**	**34**	P	**P**	**P**	**14 17 28.3**	**-1.1**
NC303	**NORSAR Array S**	**63.71**	**5**	P	**P**	**P**	**14 23 13.5**	**0.0**
BORK	**Borovoye**	**64.56**	**329**	P	**P**	**P**	**14 23 20.1**	**+0.9**
AB31	**Akbulak array**	**70.82**	**334**	P	**P**	**P**	**14 23 57.8**	**-0.9**
AB31					IAmb	IAmb	14 23 59.3	
	comp=Z,0.6nm,0.8s							
ABKAR	**Akbulak array**	**70.82**	**334**	P	**P**	**P**	**14 23 57.8**	**-0.9**
KKAR	**Karatay Array**	**73.28**	**324**	P	**P**	**P**	**14 24 13.1**	**-0.4**

*SOME **22** 14:25:02.5,41.°32N×83.°75E,h10km*
*NNC **22** 14:25:05.2±2.1,41.°32N×83.°48E,h16km±11km,mb3.6, mpv3.2,Error ellipse: s-maj=15.6km s-min=12.5km az=178.0*

ISC 22 14:25:07.8±2.6,**41.°5N**±0.°1×**83.°41E**±0.°08,**h10**km,**n22,** σ2**9**s**25**/30,**4C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**3.02**	**312**	Pg		**Pb**	**14 26 03.2**	**+1.4**
	3.8nm,0.2s							
KTMS				Lg		Lg	14 26 46.4	
	13nm,0.4s							
KTMS	**Ketmen**	**3.02**	**312**	*e*P		**Pb**	**14 26 03.2**	**+1.4**
	3.8nm,0.2s							
KTMS				*e*S		**Sg**	**14 26 46.4**	**+1.6**
	13nm,0.4s							
SHLS	**Shalkode**	**3.39**	**302**	Pg		**Pn**	**14 26 03.2**	**+2.3**
	6.4nm,0.3s							
SHLS				Lg		Lg	14 26 47.1	
	36nm,0.4s							
SHLS	**Shalkode**	**3.39**	**302**	*e*P		**Pn**	**14 26 03.2**	**+2.3**
	6.4nm,0.3s							
SHLS				*e*S		**Sb**	**14 26 47.1**	**-2.4**
	36nm,0.4s							
PDGK	**Podgornoye**	**3.46**	**304**	⇑Pg		**Pb**	**14 26 11.1**	**+1.8**
	4.8nm,0.5s							
PDGK				⇑Lg		Lg	14 26 59.2	
	12nm,0.6s							
UZB	**Uzynbulak**	**3.67**	**299**	Pg		**Pb**	**14 26 13.0**	**+0.1**
	4.6nm,0.4s							
UZB				Lg		Lg	14 27 03.5	
	14nm,0.5s							
UZB	**Uzynbulak**	**3.67**	**299**	*e*P		**Pb**	**14 26 13.0**	**+0.1**
	4.6nm,0.4s							
UZB				*e*S		**Sg**	**14 27 03.5**	**-2.2**
	14nm,0.5s							
DJR	**Jarkent**	**3.92**	**319**	Pg		**Pg**	**14 26 20.9**	**-2.1**
	2.6nm,0.3s							
DJR				Lg		Lg	14 27 17.3	
	4.9nm,0.5s							
DJR	**Jarkent**	**3.92**	**319**	*e*P		**Pg**	**14 26 20.9**	**-2.1**
	2.6nm,0.3s							
DJR				*e*S		**Sg**	**14 27 17.3**	**+3.5**
	4.9nm,0.5s							
KPKS	**Kokpek**	**4.04**	**302**	Pg		**Pb**	**14 26 19.3**	**+0.2**
	0.3nm,0.1s							
KPKS				Lg		Lg	14 27 14.7	
	18nm,0.5s							
KPKS	**Kokpek**	**4.04**	**302**	*e*P		**Pb**	**14 26 19.3**	**+0.2**
	0.3nm,0.1s							
KPKS				*e*S		**Sg**	**14 27 14.7**	**-2.8**
	18nm,0.5s							
SATY	**Saty**	**4.05**	**295**	Pg		**Pb**	**14 26 20.7**	**+1.4**
	2.3nm,0.3s							
SATY				Lg		Lg	14 27 17.4	
	12nm,0.3s							
SATY	**Saty**	**4.05**	**295**	*e*P		**Pb**	**14 26 20.8**	**+1.4**
	2.3nm,0.3s							
SATY				*e*S		**Sg**	**14 27 17.4**	**-0.4**
	12nm,0.3s							
KNOS	**Konyrlen**	**4.26**	**315**	Pg		**Pb**	**14 26 25.0**	**+2.1**
	3.4nm,0.4s							
KNOS				Lg		Lg	14 27 24.1	
	9.3nm,0.5s							
ARXS	**Arharly**	**4.95**	**306**	Pg		**Pg**	**14 26 39.3**	**-3.4**
	1.7nm,0.3s							
ARXS				Lg		Lg	14 27 48.8	
	4.8nm,0.5s							
ARXS	**Arharly**	**4.95**	**306**	*e*P		**Pg**	**14 26 39.2**	**-3.4**
	1.7nm,0.3s							
ARXS				*e*S		**Sg**	**14 27 48.8**	**+2.1**
	4.8nm,0.5s							
TNSS	**Tian-Shan**	**5.05**	**290**	Pg		**Pg**	**14 26 42.9**	**-1.8**
	0.6nm,0.3s							
TNSS				Lg		Lg	14 27 54.6	
	2.2nm,0.5s							
TNSS	**Tian-Shan**	**5.05**	**290**	*e*P		**Pg**	**14 26 42.9**	**-1.8**
	0.6nm,0.3s							
TNSS				*e*S		**Sg**	**14 27 54.6**	**+4.5**
	2.2nm,0.5s							
MK31	**Makanchi Array**	**5.41**	**352**	Pn		**Pn**	**14 26 26.7**	**-1.9**
	0.1nm,0.2s,baz=170,slow=13,SNR=6.2							
MK31				⇑Pg		**Pb**	**14 26 45.5**	**+3.2**
	0.1nm,0.2s,baz=168,slow=16,SNR=3.3							
MK31				⇓Lg		Lg	14 28 01.6	
	1.0nm,0.3s,baz=164,slow=29,SNR=9.4							
MAKZ	**Makanchi**	**5.46**	**350**	⇑Sn		**Sn**	**14 27 33.0**	**+0.9**
	1.7nm,0.7s							
MAKZ				⇓Lg		Lg	14 28 00.2	
	8.5nm,0.9s							
ZSN	**Zaisan**	**6.09**	**9**	Pg		Pg	14 26 59.3	-5.2
	1.8nm,0.1s							
ZSN				Lg		Lg	14 28 22.6	
	7.3nm,0.3s							
ZSN	**Zaisan**	**6.09**	**9**	*e*P		Pg	14 26 59.2	-5.2
	1.8nm,0.1s							
ZSN				*e*S		**Sg**	**14 28 22.6**	**-0.7**
	7.3nm,0.3s							

*IDC **22** 14:32:46.7±1.7,34.°28N×91.°31E,h0km,mb3.9/4, mbtmp3.9/7,ML3.4/2,MS3.4/3,Error ellipse: s-maj=78.6km s-min=22.2km az=62.0*
*NEIC **22** 14:32:46.4±1.5,34.°20N±0.°06×90.°78E±0.°05,h10km±1km, mb4.4/40,Error ellipse: s-maj=11.8km s-min=3.2km az=148.0*

ISC 22 14:32:46.2±0.5,**34.°19N**±0.°06×**90.°77E**±0.°06,**h10**km,**n67,** σ0**98**/64,**mb4.5**/18,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GOMU	**GeErMu**	**3.87**	**58**	Pn		**Pb**	**14 33 56.6**	**+1.9**
GOMU				Sn		**Sg**	**14 34 48.3**	**-2.0**
GOMU				smax		smax		
	comp=N,5.0nm,0.3s							
GOMU				smax		smax		
	comp=E,8.0nm,0.3s							
GOMU				LR		LR		
	comp=N,520nm,5.7s							
GOMU				LR		LR		
	comp=E,340nm,4.7s							
GOMU				LR		LR		
	comp=Z,15μm,4.8s							
LSA	**Lhasa**	**4.49**	**176**			**Pn**	**14 33 56.3**	**+1.5**
EVN	**Everest**	**7.08**	**210**	Pn		**Pn**	**14 34 29.5**	**-0.9**
SHL	**Shillong**	**8.65**	**173**	Pn		**Pn**	**14 34 50.5**	**-1.1**
MORE	**Moreh**	**10.39**	**162**	Pn		**Pn**	**14 35 14.8**	**-0.5**
PDGK	**Podgornoye**	**12.67**	**319**	Pn		**Pn**	**14 35 45.3**	**-1.2**
TARG	**Taragay, Kyrgy**	**12.69**	**310**	Pn		**Pn**	**14 35 46.4**	**-0.6**
NRN	**Naryn**	**13.72**	**306**	Pn		**Pn**	**14 36 01.2**	**+0.1**
MKAR	**Makanchi Array**	**14.13**	**335**	Pn		**Pn**	**14 36 06.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=10							
	comp=Z,0.8nm,0.9s							
MAKZ	**Makanchi**	**14.25**	**335**			**Pn**	**14 36 07.1**	**-0.9**
AAK	**Ala-Archa**	**15.28**	**308**	LR		LR	14 43 20.0	
	comp=Z,97nm,20.0s,baz=134,slow=41							
MANEM	**Manem**	**15.84**	**288**	Pn		**Pn**	**14 36 29.9**	**+0.5**
MANEM				IAmb		IAmb	14 36 37.0	
	comp=Z,9.4nm,0.5s							
ENH	**Enshi**	**16.31**	**99**	Pn		**Pn**	**14 36 34.3**	**-1.0**
ENH				IAmb		IAmb	14 37 05.5	
	comp=Z,16nm,1.1s							
BTK	**Batken**	**16.95**	**296**	Pn		**Pn**	**14 36 42.8**	**-0.6**
CHTO	**Chiang Mai**	**16.96**	**153**			**Pn**	**14 36 44.2**	**+0.6**
GAR	**Garm**	**17.11**	**292**	Pn		**Pn**	**14 36 45.6**	**+0.2**
SLVN	**Son La**	**17.27**	**134**			**Pn**	**14 36 47.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**17.29**	**153**	P		**Pn**	**14 36 47.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=344,slow=13,SNR=4.8							
CMAR	**Chiang Mai Arr**	**17.29**	**153**			**Pn**	**14 36 46.8**	**-0.9**
KBL	**Kabul**	**17.95**	**277**			**Pn**	**14 36 55.7**	**-0.3**
CHGR	**Chuyangaron**	**17.95**	**291**			**Pn**	**14 36 55.4**	**-0.5**
CHGR				IAmb		IAmb	14 36 56.5	
	comp=Z,18nm,1.1s							
KK31	**Karatay Array**	**18.12**	**305**			**Pn**	**14 36 58.3**	**+0.4**
KKAR	**Karatay Array**	**18.12**	**305**			**Pn**	**14 36 57.2**	**-0.7**
SHAA	**Shahritus**	**18.65**	**287**			**P**	**14 37 02.8**	**-1.4**
SHAA					IAmb	IAmb	14 37 05.6	
	comp=Z,22nm,1.0s							
KURBB	**Kurchatov Arra**	**18.70**	**335**	P		**Pn**	**14 37 07.3**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=11							
	comp=Z,3.2nm,0.2s							
KURK	**Kurchatov**	**18.75**	**335**	P		**P**	**14 37 03.5**	**-1.5**
TLY	**Talaya**	**19.80**	**24**	P		**P**	**14 37 14.5**	**-2.1**
ZAA0	**Zalesovo Array**	**20.19**	**350**	P		**P**	**14 37 20.2**	**-0.6**
ZAA0					IAmb	IAmb	14 37 26.3	
	comp=Z,6.8nm,0.9s							
ZALV	**Zalesovo Beam**	**20.19**	**350**	P		Pn	14 37 23.2	+0.5
	comp=Z,5.8nm,0.7s,baz=167,slow=10,SNR=27							
	comp=Z,5.8nm,0.7s							
ZALV	**Zalesovo Beam**	**20.19**	**350**			**P**	**14 37 20.6**	**-0.3**
HKPS	**Hong Kong Po S**	**23.70**	**114**	P		**P**	**14 37 57.5**	**-0.8**
HKPS					IAmb	IAmb	14 38 36.2	
	comp=Z,24nm,1.0s							
BVAR	**Borovoye Array**	**23.77**	**329**	P		**P**	**14 38 02.1**	**+3.5**
	comp=Z,3.5nm,0.7s,baz=129,slow=10,SNR=9.4							
	comp=Z,3.5nm,0.7s							
BORK	**Borovoye**	**23.82**	**328**			**P**	**14 37 59.6**	**+0.5**
BORK					IAmb	IAmb	14 38 04.7	
	comp=Z,5.8nm,0.7s							
AB31	**Akbulak array**	**27.26**	**313**			**P**	**14 38 30.2**	**-0.2**
ABKAR	**Akbulak array**	**27.26**	**313**	P		**P**	**14 38 30.2**	**-0.2**
MAJO	**Matsushiro**	**38.45**	**73**	P		**P**	**14 40 07.9**	**-0.3**
MAJO					IAmb	IAmb	14 40 30.7	
	comp=Z,5.7nm,1.2s							
FINES	**FINESS Array B**	**48.64**	**325**	LR		LR	15 03 54.7	
	comp=Z,49nm,18.5s,baz=82,slow=38							
BURAR	**Bucovina Array**	**49.91**	**306**	P		**P**	**14 41 40.6**	**+0.6**
PETK	**Petropavlovsk-**	**50.05**	**46**	P		**P**	**14 41 42.0**	**+1.3**
GUMO	**Guam**	**52.90**	**99**	P		**P**	**14 42 02.2**	**-0.4**
SOEI	**Soe**	**54.04**	**138**	P		**P**	**14 42 10.4**	**-0.6**
NC303	**NORSAR Array S**	**55.72**	**325**	P		**P**	**14 42 23.4**	**+0.8**
NB201	**NORSAR Array S**	**55.78**	**325**	P		**P**	**14 42 22.8**	**-0.2**
NOA	**NORSAR Array B**	**55.82**	**325**	LR		LR	15 08 34.9	
	comp=Z,26nm,18.5s,baz=240,slow=38							
TIP	**Timpagrande**	**58.04**	**298**	P		**P**	**14 42 39.4**	**-0.1**
TIP					IAmb	IAmb	14 42 41.1	
	comp=Z,9.2nm,1.3s							
C19K	**Lookout Ridge**	**65.02**	**22**	P		**P**	**14 43 26.4**	**+0.2**
C19K					IAmb	IAmb	14 43 46.0	
	comp=Z,9.4nm,1.4s							
F17K	**Baldwin Pennin**	**65.83**	**25**	P		**P**	**14 43 31.8**	**+0.5**
E19K	**Redstone River**	**66.64**	**23**	P		**P**	**14 43 36.0**	**-0.5**
E19K					IAmb	IAmb	14 44 17.7	
	comp=Z,4.0nm,1.2s							
F19K	**Shaleruckik Mo**	**66.81**	**24**	P		**P**	**14 43 37.9**	**+0.3**
F19K					IAmb	IAmb	14 44 04.5	
	comp=Z,4.9nm,1.3s							
C23K	**Itkillik River**	**67.23**	**19**	P		**P**	**14 43 41.5**	**+1.3**
C23K					IAmb	IAmb	14 44 07.1	
	comp=Z,4.2nm,1.4s							
SUMG	**Summit**	**67.94**	**345**	P		**P**	**14 43 45.5**	**+0.3**
H19K	**Roundabout Mou**	**67.98**	**24**	P		**P**	**14 43 45.1**	**+0.2**
H19K					IAmb	IAmb	14 43 53.9	
	comp=Z,4.3nm,1.1s							
WR8	**Warramunga Arr**	**68.06**	**135**	P		**P**	**14 43 46.4**	**+0.3**
WR0	**Warramunga Arr**	**68.08**	**135**	P		**P**	**14 43 46.5**	**+0.3**
WR0					IAmb	IAmb	14 44 26.3	
	comp=Z,8.6nm,1.4s							
IMAR	**Indian Mountai**	**68.62**	**23**	P		**P**	**14 43 48.6**	**-0.5**
COLD	**Coldfoot**	**68.98**	**21**	P		**P**	**14 43 51.3**	**+0.1**
COLD					IAmb	IAmb	14 43 55.0	
	comp=Z,1.9nm,1.1s							
C27K	**Jago River**	**69.18**	**18**	P		**P**	**14 43 52.3**	**-0.2**
C27K					IAmb	IAmb	14 44 31.8	
	comp=Z,6.9nm,1.4s							
J20K	**Nowinta River**	**69.57**	**25**	P		**P**	**14 43 55.5**	**+0.5**
J20K					IAmb	IAmb	14 44 40.2	
	comp=Z,6.8nm,1.5s							
ASAR	**Alice Springs**	**70.65**	**138**	P		**P**	**14 44 03.2**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=326,slow=6.4,SNR=2.7							
	comp=Z,1.9nm,0.9s							
ASAR	**Alice Springs**	**70.65**	**138**	P		**P**	**14 44 02.0**	**-0.1**
KTH	**Kantishna Hill**	**71.08**	**25**	P		**P**	**14 44 04.9**	**+0.7**
KTH					IAmb	IAmb	14 44 22.7	
	comp=Z,9.2nm,1.5s							
ILAR	**Eielson Array**	**71.61**	**22**	P		**P**	**14 44 08.1**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=300,slow=4.5,SNR=5.4							
	comp=Z,0.3nm,0.6s							
POIN	**Pond Inlet**	**73.11**	**356**	P		**P**	**14 44 17.3**	**+1.1**
SCM	**Sheep Creek Mo**	**73.47**	**25**	P		**P**	**14 44 19.3**	**+0.7**
SCM					IAmb	IAmb	14 44 30.4	
	comp=Z,8.8nm,1.2s							
SII	**Sitkinak Islan**	**74.24**	**31**	P		**P**	**14 44 23.6**	**+0.5**
BCAR	**Beaver Creek A**	**74.42**	**22**	P		**P**	**14 44 25.1**	**+1.0**
P23K	**Montague Islan**	**74.69**	**26**	P		**P**	**14 44 25.5**	**-0.1**

*NEIC **22** 14:36:26.8±1.1,4.°39N±0.°05×127.°31E±0.°08,h10km±1km, mb4.6/74,Error ellipse: s-maj=13.5km s-min=7.7km az=69.0*
*DJA **22** 14:36:27.8±1.1,4.°N±10.°×12.°7E±.°,h10km,M4.6/19, mB5.0/6,mb4.9/17,MLv4.7/19,Mw(mB)4.3/6*
*MAN **22** 14:36:27.0,3.°83N×127.°29E,h68km,MS4.5*
*IDC **22** 14:36:33.4±1.7,4.°19N×127.°21E,h65km±16km,mb3.9/15, mbtmp4.3/19,MS3.2/4,Error ellipse: s-maj=25.2km s-min=9.2km az=68.0*

ISC 22 14:36:32.8±0.3,**4.°27N**±0.°04×**127.°33E**±0.°06,**h65**km,**n160,** σ1**84**/157,**mb4.4**/50,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**1.89**	**252**	P		**Pn**	**14 37 01.8**	**-1.1**
GSPH	**General Santos**	**2.98**	**307**	*i* P		**Pn**	**14 37 15.2**	**-2.7**
GSPH				*i* S		**Sn**	**14 37 51.1**	**-1.4**
DAV	**Davao City (W)**	**3.28**	**328**	P		**Pn**	**14 37 20.8**	**-1.1**
	95nm,0.3s,baz=98,slow=7.1,SNR=1.3							
DAV				S		**Sn**	**14 38 01.9**	**+2.1**
	414nm,0.5s,baz=66,slow=21,SNR=7.5							
DAV	**Davao City (W)**	**3.28**	**328**	Pn		Pn	14 37 15.7	-6.2
DAV				Sn		**Sn**	**14 37 54.4**	**-5.4**
DMPH	**Davao City--Mi**	**3.33**	**327**	*e*P		**Pn**	**14 37 26.2**	**+3.7**
DMPH				*i* S		**Sn**	**14 38 06.4**	**+5.4**
TNTI	**Ternate**	**3.48**	**179**	P		**Pn**	**14 37 24.8**	**+0.3**
TNTI	**Ternate**	**3.48**	**179**	S		Sn	14 38 14.8	+10
TNTI	**Ternate**	**3.48**	**179**			**Pn**	**14 37 24.1**	**-0.5**
TNTI					Sn	**Sn**	**14 38 04.5**	**+0.1**
TNTI	**Ternate**	**3.48**	**179**	P		**Pn**	**14 37 24.9**	**+0.4**
KCP	**Kidapawan**	**3.52**	**321**	*e*P		**Pn**	**14 37 27.7**	**+2.5**
KCP				*e*S		**Sn**	**14 38 10.7**	**+5.0**
CDOP	**Cateel, Davao**	**3.60**	**346**	*i* P		**Pn**	**14 37 23.6**	**-2.7**
CDOP				*i* S		**Sn**	**14 38 08.8**	**+1.2**
MNI	**Manado**	**3.75**	**222**	P		**Pn**	**14 37 28.5**	**+0.2**
BIPH	**Bislig**	**4.01**	**346**	*e*P		**Pn**	**14 37 32.9**	**+1.1**
BIPH				*e*S		**Sn**	**14 38 13.0**	**-4.5**
BUKP	**Musuan**	**4.24**	**328**	*i* P		**Pn**	**14 37 36.3**	**+1.3**
BUKP				*i* S		**Sn**	**14 38 25.6**	**+2.4**
CTBH	**Cotabato--PC H**	**4.24**	**314**	*e*P		**Pn**	**14 37 34.5**	**-0.5**
TSSP	**Tandag City**	**4.87**	**347**	*e*P		**Pn**	**14 37 42.0**	**-1.7**
TSSP				*e*S		Sn	14 38 22.2	-17
CGP	**Cagayan de Oro**	**4.91**	**328**	*e*P		**Pn**	**14 37 46.3**	**+2.1**
CGP				*i* S		**Sn**	**14 38 45.7**	**+5.9**
GTOI	**Gorontalo**	**5.62**	**230**	P		**Pn**	**14 37 54.2**	**+0.2**
	0.3nm813nm71nm,0.6s							
SCPH	**Surigao**	**5.77**	**342**	*e*P		Pn	14 37 49.2	-6.7
DCPH	**Dipolog City**	**5.83**	**318**	*e*P		Pn	14 38 02.5	+5.8
TBP	**Tagbilaran**	**6.39**	**328**	*e*P		**Pn**	**14 38 04.5**	**0.0**
TBP				*e*S		**Sn**	**14 39 18.8**	**+2.8**
SANI	**Sanana**	**6.42**	**192**	P		**Pn**	**14 38 02.7**	**-2.1**
SWI	**Sorong**	**6.44**	**142**	P		**Pn**	**14 38 04.2**	**-0.9**
	0.2nm1μm63nm,0.7s							
SIJI	**Sorong**	**6.45**	**142**	P		**Pn**	**14 38 04.0**	**-1.3**
	26nm,0.5s,baz=328,slow=17,SNR=29							
SIJI				S		**Sn**	**14 39 13.2**	**-4.2**
	14nm,0.6s,baz=177,slow=22,SNR=1.3							
SIJI				LR		LR	14 40 49.8	
	comp=Z,205nm,20.4s,baz=284,slow=40							
SIJI	**Sorong**	**6.45**	**142**	P		**Pn**	**14 38 03.9**	**-1.3**
SNPH	**Sibulan**	**6.47**	**321**	*e*P		**Pn**	**14 38 07.8**	**+2.2**
LLP	**Lapu-Lapu**	**6.87**	**331**	*e*P		Pn	14 38 17.1	+6.1
LLP				*e*S		**Sn**	**14 39 32.4**	**+4.6**
LUWI	**Luwuk**	**6.97**	**221**	P		**Pn**	**14 38 10.2**	**-2.2**
LUWI	**Luwuk**	**6.97**	**221**	Pn		**Pn**	**14 38 08.9**	**-3.5**
PLP	**Palo**	**7.24**	**341**	*e*P		**Pn**	**14 38 17.9**	**+1.9**
TOLI2	**Tolitoli**	**7.25**	**245**	P		Pn	14 38 09.3	-7.0
TOLI2	**Tolitoli**	**7.25**	**245**	Pn		**Pn**	**14 38 12.7**	**-3.6**
NLAI	**Namlea**	**7.46**	**182**	P		**Pn**	**14 38 19.1**	**0.0**
	0.2nm46nm,0.5s							
APSI	**Ampana**	**7.66**	**228**	P		**Pn**	**14 38 24.8**	**+3.0**
MPSI	**Mapaga**	**8.39**	**242**	P		Pn	14 38 37.4	+5.6
FAKI	**Fak Fak**	**8.67**	**145**	P		**Pn**	**14 38 35.5**	**-0.2**
FAKI	**Fak Fak**	**8.67**	**145**	Pn		**Pn**	**14 38 32.5**	**-3.2**
FAKI	**Fak Fak**	**8.67**	**145**	P		**Pn**	**14 38 35.9**	**+0.2**
	50nm,1.3s							
KDI	**Kendari**	**9.43**	**210**	P		**Pn**	**14 38 46.4**	**+0.4**
	24nm,0.7s							
BAKI	**Biak**	**10.31**	**122**	P		**Pn**	**14 39 02.9**	**+4.8**
KKM	**Kota Kinabalu**	**11.21**	**280**	Pn		**Pn**	**14 39 06.2**	**-4.2**
LQP	**Lukban**	**11.32**	**330**	*e*P		Pn	14 38 55.4	-17
TGY	**Tagaytay City**	**11.63**	**328**	LR		LR	14 45 07.8	
	comp=Z,102nm,18.9s,baz=202,slow=44							
SOEI	**Soe**	**14.26**	**192**	Pn		**Pn**	**14 39 49.4**	**-2.4**
BATI	**Baumata**	**14.84**	**194**	P		**Pn**	**14 39 58.0**	**-1.1**
	18nm,0.4s,baz=313,slow=4.3,SNR=4.8							
JAY	**Jayapura**	**14.97**	**117**	P		**Pn**	**14 40 03.1**	**+2.2**
	11nm,1.0s,baz=282,slow=15,SNR=1.9							
DRS	**Darwin Rock St**	**16.97**	**168**	P		**P**	**14 40 28.1**	**+1.1**
MTN	**Manton Dam**	**17.42**	**168**	Pn		**Pn**	**14 40 29.6**	**-2.0**
JAGI	**Jajag, Banyuwa**	**18.25**	**226**	P		**P**	**14 40 40.3**	**-0.9**
TWG	**Pinlang**	**19.41**	**342**	P		**P**	**14 40 50.7**	**-3.2**
KNRA	**Kununurra**	**19.87**	**176**			**P**	**14 40 58.6**	**-0.2**
KNRA					IAmb	IAmb	14 41 02.7	
	comp=Z,23nm,1.1s							
YULB	**Yu-li**	**19.88**	**344**	P		**P**	**14 40 56.5**	**-2.5**
TPUB	**Ta-pu**	**20.00**	**342**			**P**	**14 40 57.6**	**-2.6**
TPUB					IAmb	IAmb	14 41 00.9	
	comp=Z,17nm,0.7s							
DLV	**Lat**	**20.14**	**293**	P		**P**	**14 41 00.1**	**-2.0**
SMRI	**Semarang**	**20.26**	**236**	P		**P**	**14 41 02.0**	**-1.2**
SSLB	**Suanglung**	**20.36**	**343**	P		**P**	**14 41 02.0**	**-2.2**
SSLB					IAmb	IAmb	14 41 16.7	
	comp=Z,12nm,0.7s							
MANU	**Manus Island**	**20.98**	**107**	P		**P**	**14 41 10.4**	**-0.6**
YHNB	**Yeheng**	**21.08**	**345**	P		**P**	**14 41 10.2**	**-1.8**
YHNB					IAmb	IAmb	14 41 25.6	
	comp=Z,16nm,0.9s							
JMZ	**Minamidaito 2**	**21.75**	**10**	P		**P**	**14 41 17.0**	**-2.0**
FITZ	**Fitzroy Crossi**	**22.29**	**184**	P		**P**	**14 41 25.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**22.29**	**184**	P		**P**	**14 41 24.1**	**-0.8**
JOW	**Kunigami**	**22.45**	**2**	P		**P**	**14 41 24.1**	**-2.6**
JOW					IAmb	IAmb	14 41 52.8	
	comp=Z,9.2nm,0.5s							
MYKOM	**Kota Tinggi**	**23.57**	**265**	P		**P**	**14 41 37.1**	**-0.8**
COEN	**Coen**	**23.98**	**139**	P		**P**	**14 41 41.4**	**-0.2**
WB0	**Warramunga Arr**	**24.88**	**164**			**P**	**14 41 49.8**	**+0.1**
WB0					IAmb	IAmb	14 42 02.3	
	comp=Z,16nm,0.8s							
WRA	**Warramunga Arr**	**25.03**	**164**	P		**P**	**14 41 50.9**	**-0.2**
	comp=Z,7.0nm,0.6s,baz=345,slow=9.9,SNR=65							
	comp=Z,7.0nm,0.6s							
WRA	**Warramunga Arr**	**25.03**	**164**	P		**P**	**14 41 49.4**	**-1.7**
WB2	**Warramunga Arr**	**25.03**	**164**	P		**P**	**14 41 51.6**	**+0.6**
WB2					IAmb	IAmb	14 42 03.8	
	comp=Z,11nm,0.7s							
WR8	**Warramunga Arr**	**25.09**	**164**			**P**	**14 41 51.8**	**+0.3**
WR8					IAmb	IAmb	14 42 03.9	
	comp=Z,11nm,0.8s							
MBWA	**Marble Bar**	**26.35**	**196**	P		**P**	**14 42 03.8**	**+0.9**
MBWA					IAmb	IAmb	14 42 21.3	
	comp=Z,12nm,1.0s							
BKNI	**Bangkinang**	**26.55**	**262**	P		**P**	**14 42 04.4**	**-0.6**
JCJ	**Chichijima**	**26.77**	**30**	P		**P**	**14 42 05.0**	**-1.7**
QIS	**Mount Isa**	**27.46**	**154**	P		**P**	**14 42 14.5**	**+1.5**
AS31	**Alice Springs**	**28.50**	**167**	P		**P**	**14 42 22.8**	**+0.5**
ASAR	**Alice Springs**	**28.50**	**167**	P		**P**	**14 42 22.7**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=354,slow=7.6,SNR=50							
	comp=Z,1.3nm,0.5s							
AS01	**Alice Springs**	**28.51**	**167**	P		**P**	**14 42 22.9**	**+0.6**
JMN	**Monobe**	**29.94**	**11**	P		**P**	**14 42 33.8**	**-1.1**
JMN					IAmb	IAmb	14 42 56.0	
	comp=Z,24nm,1

	comp=Z,2.4nm,0.7s							
BOOM	**Boomskoye usch**	**59.33**	**318**	P	**P**	**14 46 27.7**	**-0.8**
BOOM				IAmb	IAmb	14 46 47.8	
	comp=Z,11nm,1.1s							
AAK	**Ala-Archa**	**60.37**	**317**	P	**P**	**14 46 35.5**	**-0.1**
AAK				IAmb	IAmb	14 46 48.3	
	comp=Z,3.1nm,1.0s							
ZAA0	**Zalesovo Array**	**60.38**	**333**	P	**P**	**14 46 34.2**	**-1.0**
ZAA0				IAmb	IAmb	14 46 48.7	
	comp=Z,1.9nm,0.7s							
ZALV	**Zalesovo Beam**	**60.38**	**333**	P	**P**	**14 46 34.6**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=117,slow=6.2,SNR=5.9							
	comp=Z,1.4nm,0.4s							
MANEM	**Manem**	**60.52**	**311**	P	**P**	**14 46 36.6**	**-0.2**
MANEM				IAmb	IAmb	14 46 49.8	
	comp=Z,10nm,0.4s							
KURBB	**Kurchatov Arra**	**61.61**	**327**	P	**P**	**14 46 44.3**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=124,slow=5.8,SNR=22							
	comp=Z,2.6nm,0.7s							
KURK	**Kurchatov**	**61.61**	**327**		**P**	**14 46 43.9**	**+0.3**
SHEM	**Shemya Is, Ala**	**61.70**	**30**	P	**P**	**14 46 43.5**	**-0.6**
SMY	**Shemya**	**61.70**	**30**	P	**P**	**14 46 43.4**	**-0.7**
GAR	**Garm**	**62.00**	**312**		**P**	**14 46 45.7**	**-1.0**
KK31	**Karatay Array**	**63.25**	**317**		**P**	**14 46 55.0**	**+0.3**
KK31				IAmb	IAmb	14 46 58.4	
	comp=Z,5.3nm,1.1s							
KKAR	**Karatay Array**	**63.25**	**317**	P	**P**	**14 46 55.0**	**+0.3**
MCQ	**Macquarie Isla**	**64.20**	**160**	P	**P**	**14 47 02.5**	**+1.8**
GSTR	**Great Sitkin T**	**66.62**	**34**	P	**P**	**14 47 16.9**	**+0.4**
BVAR	**Borovoye Array**	**67.20**	**327**	P	**P**	**14 47 19.9**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=124,slow=9.2,SNR=12							
	comp=Z,3.9nm,0.7s							
BORK	**Borovoye**	**67.25**	**327**		**P**	**14 47 20.0**	**-0.3**
TIXI	**Tiksi**	**67.30**	**1**	P	**P**	**14 47 19.6**	**-0.7**
TIXI				IAmb	IAmb	14 47 36.2	
	comp=Z,8.9nm,1.4s							
NRIK	**Noril'sk**	**70.05**	**346**	P	**P**	**14 47 37.0**	**-0.5**
NRIK				IAmb	IAmb	14 47 38.8	
	comp=Z,3.1nm,0.7s							
CASY	**Casey**	**71.42**	**187**	P	**P**	**14 47 47.4**	**+1.6**
CASY				IAmb	IAmb	14 47 50.1	
	comp=Z,2.6nm,0.8s							
AB31	**Akbulak array**	**72.11**	**321**		**P**	**14 47 50.9**	**+0.5**
AB31				IAmb	IAmb	14 47 52.0	
	comp=Z,3.2nm,0.7s							
ABKAR	**Akbulak array**	**72.11**	**321**		**P**	**14 47 50.5**	**+0.1**
GAMB	**Gambell**	**73.66**	**24**	P	**P**	**14 47 59.1**	**-0.1**
XMAS	**Kiritimati**	**75.12**	**89**	P	**P**	**14 48 08.8**	**0.0**
B21K	**Ikpikpuk River**	**81.86**	**20**	P	**P**	**14 48 45.3**	**+0.5**
B21K				IAmb	IAmb	14 49 05.3	
	comp=Z,3.0nm,0.8s							
E21K	**Killik River**	**81.90**	**21**	P	**P**	**14 48 45.4**	**+0.3**
B22K	**Teshekpuk Lake**	**82.38**	**20**	P	**P**	**14 48 47.0**	**-0.4**
B22K				IAmb	IAmb	14 49 07.7	
	comp=Z,9.0nm,1.4s							
L22K	**Petersville**	**82.49**	**28**	P	**P**	**14 48 48.5**	**+0.3**
L22K				IAmb	IAmb	14 49 14.3	
	comp=Z,5.5nm,1.1s							
E23K	**Chandalar**	**83.46**	**22**	P	**P**	**14 48 54.4**	**+1.1**
E23K				IAmb	IAmb	14 49 08.2	
	comp=Z,3.1nm,0.8s							
VNDA	**Vanda**	**83.88**	**173**	P	**P**	**14 48 55.1**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=289,slow=6.2,SNR=5.0							
	comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**83.88**	**173**	P	**P**	**14 48 57.8**	**+2.8**
G24K	**Hadweenzic Riv**	**84.20**	**23**	P	**P**	**14 48 57.8**	**+0.9**
G24K				IAmb	IAmb	14 49 13.4	
	comp=Z,2.4nm,0.8s							
ILAR	**Eielson Array**	**84.36**	**25**	P	**P**	**14 48 59.3**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=280,slow=5.8,SNR=4.2							
	comp=Z,0.3nm,0.7s							
ILAR	**Eielson Array**	**84.36**	**25**	P	**P**	**14 48 58.0**	**+0.2**
D25K	**Kavik River**	**84.72**	**21**	P	**P**	**14 49 00.6**	**+1.0**
D25K				IAmb	IAmb	14 49 10.6	
	comp=Z,3.0nm,1.2s							
SBA	**Scott Base**	**84.78**	**172**	P	**P**	**14 49 01.5**	**+1.9**
RIDG	**Independent Ri**	**85.23**	**26**	P	**P**	**14 49 02.5**	**+0.2**
RIDG				IAmb	IAmb	14 49 28.6	
	comp=Z,6.9nm,1.3s							
H27K	**Steamboat Moun**	**86.59**	**24**	P	**P**	**14 49 09.3**	**+0.4**
BRTR	**Keskin Array B**	**90.14**	**310**	LR	LR	15 35 30.1	
	comp=Z,12nm,19.8s,baz=68,slow=39							
QSPA	**South Pole Qui**	**94.17**	**180**	P	**P**	**14 49 44.2**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=270,slow=2.0,SNR=2.2							
	comp=Z,1.1nm,1.0s							
QSPA	**South Pole Qui**	**94.17**	**180**	P	**P**	**14 49 45.3**	**+0.9**
QSPA				IAmb	IAmb	14 50 01.6	
	comp=Z,4.2nm,1.4s							

*NOU **22** 14:41:22.9, 29.°69S × 177.°13W, h371km, mb4.3/6, Kermadec Islands, New Zealand*
*IDC **22** 14:41:56.3±3.8, 31.°73S × 179.°71E, h368km±33km, mb3.5/4, mbtmp4.3/5, Error ellipse: s-maj=38.3km s-min=21.3km az=48.0*
*WEL **22** 14:42:04.8±1.6, 32.°S±19.°× 18.°0E±2.°3, h359km±46km, M4.5/12, mB4.9/9, ML4.5/6, MLv4.8/12, Mw(mB)4.2/9, Error ellipse: s-maj=34.4km s-min=17.7km az=54.8*

ISC 22 14:41:54.2±1.2, 31.°73S±0.°09 × 179.°7W±0.°1, h350km, n56, σ2^{s}72/56, mb3.8/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZ	**Great Barrier**	**6.04**	**220**	P	P*n*	14 43 30.6	+5.2
WMGZ	**Waiomatatini S**	**6.27**	**194**	P	P*n*	**14 43 32.4**	**+4.3**
HAZ	**Te Kaha**	**6.36**	**198**	P	P*n*	**14 43 33.2**	**+4.1**
HAZ				S	**S**	**14 44 46.0**	**0.0**
PKGZ	**Pakihiroa**	**6.39**	**196**	P	P*n*	14 43 35.7	+6.3
PKGZ				S	**S**	**14 44 45.0**	**-1.8**
WCZ	**Waipu Caves**	**6.49**	**228**	P	P*n*	**14 43 35.3**	**+4.7**
PUZ	**Puketiti**	**6.55**	**194**	P	P*n*	**14 43 34.6**	**+3.3**
PUZ				S	**S**	**14 44 49.6**	**-0.4**
RUGZ	**Raukumara Rang**	**6.59**	**198**	P	P*n*	**14 43 35.4**	**+3.6**
OUZ	**Omahuta**	**6.59**	**236**	P	P*n*	**14 43 35.6**	**+3.8**
OUZ	**Omahuta**	**6.59**	**236**	P	P*n*	**14 43 35.8**	**+4.0**
TWGZ	**Tauwhareparae**	**6.71**	**196**	P	P*n*	14 43 38.1	+4.9
CNGZ	**Carnagh Statio**	**6.96**	**194**	P	P*n*	**14 43 40.0**	**+4.0**
MWZ	**Matawai**	**6.97**	**198**	P	P*n*	**14 43 38.5**	**+2.3**
MWZ				S	**S**	**14 44 57.3**	**-1.8**
TKGZ	**Te Karaka**	**6.99**	**196**	P	P*n*	**14 43 39.3**	**+2.9**
URZ	**Urewera**	**7.02**	**201**	P	P*n*	**14 43 38.1**	**+1.4**
	49nm,0.3s,baz=270,slow=3.8,SNR=114						
URZ				S	**S**	**14 44 58.5**	**-1.6**
	37nm,0.5s,baz=78,slow=22,SNR=10						
URZ	**Urewera**	**7.02**	**201**	P	P*n*	**14 43 38.1**	**+1.4**
URZ	**Urewera**	**7.02**	**201**	P	P*n*	**14 43 38.1**	**+1.4**
URZ				S	**S**	**14 44 57.9**	**-2.2**
RAGZ	**Rawiri**	**7.16**	**198**	P	P*n*	**14 43 42.3**	**+4.0**
TOZ	**Tahuroa Road**	**7.17**	**212**	P	P*n*	14 43 44.1	+5.6
RIGZ	**Rimuhau**	**7.27**	**196**	P	P*n*	**14 43 43.5**	**+3.9**
MUGZ	**Murupara**	**7.33**	**202**	P	P*n*	**14 43 43.6**	**+3.2**
HSRZ	**Hossack Road**	**7.36**	**206**	P	P*n*	14 43 46.0	+5.2
RTZ	**Ruatahuna**	**7.39**	**201**	P	P*n*	**14 43 45.0**	**+3.9**
PRGZ	**Paritu Road**	**7.45**	**195**	P	P*n*	14 43 47.1	+5.4
PRRZ	**Plateau Road**	**7.47**	**204**	P	P*n*	**14 43 45.9**	**+3.9**
ALRZ	**Allen Road**	**7.55**	**204**	P	P*n*	**14 43 46.7**	**+3.7**
WPRZ	**Whakapapatarin**	**7.58**	**205**	P	P*n*	**14 43 47.3**	**+4.0**
KNZ	**Kokohu**	**7.59**	**196**	P	P*n*	**14 43 46.8**	**+3.4**
MTHZ	**Maungataniwha**	**7.65**	**201**	P	P*n*	**14 43 47.1**	**+2.9**
MHGZ	**Mahia Peninsul**	**7.66**	**194**	P	P*n*	**14 43 48.9**	**+4.7**
WHHZ	**Waihua**	**7.75**	**198**	P	P*n*	**14 43 49.4**	**+4.1**
MRHZ	**Matea Rd**	**7.77**	**203**	P	P*n*	**14 43 48.7**	**+3.2**
NMHZ	**Naumai**	**7.89**	**200**	P	P*n*	**14 43 49.9**	**+2.9**
ARHZ	**Aropaoanui**	**7.99**	**199**	P	P*n*	**14 43 51.2**	**+3.2**
BKZ	**Black Stump Fm**	**8.04**	**202**	P	P*n*	**14 43 49.3**	**+0.5**
HIZ	**Hauiti**	**8.11**	**212**	P	**P**	**14 43 52.6**	**+0.1**
HIZ	**Hauiti**	**8.11**	**212**	P	**P**	**14 43 54.3**	**+1.8**
FWVZ	**Far West T-bar**	**8.45**	**206**	P	**P**	**14 43 56.2**	**-0.3**
WHVZ	**Whangaehu Hut**	**8.46**	**206**	P	P*n*	**14 43 55.2**	**+1.3**
MOVZ	**Moawhango**	**8.51**	**204**	P	P*n*	**14 43 55.9**	**+1.5**
KAHZ	**Kahuranaki**	**8.52**	**198**	P	**P**	**14 43 57.3**	**+0.2**
VRZ	**Vera Road**	**8.65**	**210**	P	**P**	**14 43 59.4**	**+0.8**
PXZ	**Pawanui**	**8.74**	**198**	P	**P**	**14 43 58.9**	**-0.6**
PNHZ	**Pukenui**	**8.82**	**201**	P	P*n*	**14 43 58.7**	**+0.6**
PRHZ	**Porangahau**	**9.02**	**198**	P	**P**	**14 44 02.1**	**-0.6**
TSZ	**Takapari Road**	**9.03**	**202**	P	P*n*	**14 44 01.2**	**+0.7**
POWZ	**Post Office Ro**	**9.39**	**202**	P	P*n*	**14 44 05.6**	**+0.9**
PRWZ	**Pori Road**	**9.48**	**200**	P	P*n*	14 44 00.7	-5.2
BFZ	**Birch Farm**	**9.52**	**199**	P	P*n*	**14 44 07.1**	**+0.9**
OGWZ	**Otaki Gorge**	**9.97**	**203**	P	P*n*	**14 44 10.7**	**-1.0**
QRZ	**Quartz Range**	**11.03**	**212**	P	P*n*	**14 44 24.6**	**+0.3**
KHZ	**Kahutara**	**11.95**	**205**	P	**P**	**14 44 34.2**	**-0.9**
ASAR	**Alice Springs**	**41.60**	**269**	P	**P**	**14 49 06.0**	**-3.5**
	1.3nm,0.5s,baz=107,slow=7.2,SNR=32						
ASAR				PcP	**PP**	**14 50 55.9**	**+1.7**
	0.2nm,0.8s,baz=107,slow=3.2,SNR=1.4						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**42.71**	**275**	P	**P**	**14 49 14.9**	**-3.4**
	3.1nm,0.5s,baz=112,slow=7.9,SNR=45						
	3.1nm,0.5s						
QSPA	**South Pole Qui**	**58.39**	**180**	P	**P**	**14 51 14.2**	**+0.5**
	1.7nm,0.5s,baz=52,slow=7.0,SNR=12						
	1.7nm,0.5s						
PETK	**Petropavlovsk-**	**86.74**	**347**	P	**P**	**14 53 58.8**	**-0.1**
	1.1nm,0.7s,baz=118,slow=4.7,SNR=4.9						
	1.1nm,0.7s						
FINES	**FINESS Array B**	**145.86**	**338**	PKPbc	**PKPdf**	**15 00 50.7**	**-0.1**
	2.1nm,0.5s,baz=56,slow=3.9,SNR=15						

*CATAC **22** 14:44:34.2, 13.°N±3.°× 9.°0W±.°, h4km±4km, M3.3/19, MLv3.3/19, confirmed*
*GCG **22** 14:44:34.5±0.8, 12.°95N × 90.°34W, h14km±12km, MD4.0, MW2.7, Presumed earthquake*
*SNET **22** 14:44:35.1±1.4, 12.°95N × 90.°23W, h14km, ML3.2, Presumed earthquake*

ISC 22 14:44:34.3±2.0, 12.°94N±0.°07 × 90.°30W±0.°06, h17km±10km, n40, σ0^{s}87/61, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.94**	**17**	P	**Pb**	**14 44 52.3**	**+0.2**
FAME				S	**Sg**	**14 45 05.0**	**+0.1**
NUBE	**Las Nubes**	**1.08**	**28**	P	**Pb**	**14 44 54.5**	**-0.2**
NUBE				S	**Sn**	**14 45 10.4**	**+0.9**
NUBE	**Las Nubes**	**1.08**	**28**	*i* P	**Pb**	**14 44 54.4**	**-0.2**
NUBE	**Las Nubes**	**1.08**	**28**	*i* P	**Pb**	**14 44 54.5**	**-0.2**
NUBE				*e* S	**Sb**	**14 45 07.5**	**-1.0**
JAYA	**Jayaque - finc**	**1.09**	**49**	P	**Pb**	**14 44 54.4**	**-0.4**
JAYA				S	**Sg**	**14 45 09.2**	**-0.6**
JAYA	**Jayaque - finc**	**1.09**	**49**	*i* P	**Pb**	**14 44 54.2**	**-0.6**
JAYA	**Jayaque - finc**	**1.09**	**49**	*i* P	**Pb**	**14 44 54.2**	**-0.6**
LALI	**Alcalda de L**	**1.10**	**60**	P	**Pb**	**14 44 54.7**	**-0.1**
LALI				S	**Sb**	**14 45 08.9**	**0.0**
CEVE	**Cerro Verde**	**1.10**	**37**	P	**Pb**	**14 44 55.2**	**+0.2**
CEVE	**Cerro Verde**	**1.10**	**37**	*i* P	**Pg**	**14 44 55.3**	**-0.4**
CEVE				*e* S	**Sn**	**14 45 10.0**	**0.0**
SBLS	**San Blas**	**1.11**	**36**	*i* P	**Pb**	**14 44 54.9**	**-0.3**
LOAL	**Lomas de Alarc**	**1.17**	**26**	P	**Pb**	**14 44 56.1**	**+0.1**
LOAL				S	**Sn**	**14 45 13.4**	**+2.0**
SLOZ	**Alcaldia de Sa**	**1.19**	**25**	P	**Pn**	**14 44 56.5**	**+0.3**
SLOZ				S	**Sg**	**14 45 13.9**	**+1.0**
CEDA	**San Andres**	**1.23**	**46**	P	**Pn**	**14 44 56.8**	**+0.1**
CEDA				S	**Sg**	**14 45 14.4**	**+0.2**
PMON	**Piamonte**	**1.23**	**51**	P	**Pb**	**14 44 57.1**	**0.0**
PMON				S	**Sg**	**14 45 14.3**	**+0.1**
PMON	**Piamonte**	**1.23**	**51**	*i* P	**Pn**	**14 44 56.5**	**-0.2**
UNIC	**Universidad Ca**	**1.27**	**35**	P	**Pn**	**14 44 56.4**	**-0.9**
UNIC				S	**Sg**	**14 45 15.2**	**-0.2**
BOQS	**Boqueron**	**1.27**	**51**	*i* P	**Pn**	**14 44 57.2**	**-0.3**
UEES	**Universidad Ev**	**1.29**	**53**	P	**Pb**	**14 44 58.2**	**+0.1**
UEES				S	**Sb**	**14 45 14.4**	**-0.1**
LOMA	**Loma Larga**	**1.30**	**57**	P	**Pn**	**14 44 57.1**	**-0.7**
LOMA	**Loma Larga**	**1.30**	**57**	*i* P	**Pn**	**14 44 57.2**	**-0.7**
LOMA				*e* S	**Sn**	**14 45 15.1**	**+0.2**
RBDL	**Robledal**	**1.31**	**27**	*i* P	**Pn**	**14 44 58.4**	**+0.5**
RBDL				*e* S	**Sg**	**14 45 17.2**	**+0.4**
LFRS	**El Faro**	**1.38**	**61**	*i* P	**Pn**	**14 44 58.0**	**-0.9**
LFU	**La Fuente**	**1.41**	**55**	*i* P	**Pn**	**14 44 59.1**	**-0.1**
SJTE	**Alcalda de S**	**1.43**	**62**	*i* P	**Pn**	**14 44 58.0**	**-1.5**
PAVA	**Las Pavas**	**1.53**	**60**	P	**Pn**	**14 45 01.0**	**0.0**
COEG	**Centro de Oper**	**1.54**	**64**	P	**Pn**	**14 45 00.3**	**-0.7**
COEG				S	**Sn**	**14 45 20.5**	**-0.2**
COEG	**Centro de Oper**	**1.54**	**64**	*i* P	**Pn**	**14 44 59.9**	**-1.1**
TECO	**Alcaldia de Te**	**1.59**	**68**	P	**Pn**	**14 45 01.4**	**-0.3**
TECO				S	**Sb**	**14 45 23.8**	**+0.6**
MTO3	**Montecristo**	**1.71**	**32**	P	**Pn**	**14 45 04.1**	**+0.5**
MTO3				S	**Sg**	**14 45 28.0**	**-1.6**
MTO3	**Montecristo**	**1.71**	**32**	*i* P	**Pn**	**14 45 04.0**	**+0.5**
STG8	**El Palmar, Qui**	**1.81**	**326**	*i* P	**Pg**	**14 45 10.6**	**+1.4**
P5NO	**Presa 5 de nov**	**1.82**	**55**	P	**Pn**	**14 45 05.7**	**+0.8**
P5NO				S	**Sb**	**14 45 30.9**	**+1.1**
ESQI	**Esquipulas**	**1.86**	**30**	P	**Pn**	**14 45 06.7**	**+1.2**
ESQI				S	**Sg**	**14 45 33.7**	**-0.6**
PACA	**Pacayal**	**2.00**	**75**	P	**Pn**	**14 45 07.6**	**+0.2**
PACA				S	**Sb**	**14 45 33.8**	**-1.0**
APG	**El Apazote**	**2.06**	**356**	*i* P	**Pn**	**14 45 04.2**	**-4.1**
SARH	**Santa Rosa de**	**2.36**	**39**	P	**Pn**	**14 45 16.1**	**-0.3**
LCND	**La Caada**	**2.38**	**81**	P	**Pn**	**14 45 12.5**	**0.0**
CNCH	**Conchagua**	**2.43**	**82**	P	**Pn**	**14 45 12.7**	**-0.6**
CNCH				S	**Sn**	**14 45 43.1**	**+0.5**
ROCN	**Rota Cerro Neg**	**3.50**	**97**	P	**Pn**	**14 45 28.1**	**+0.2**

*NEIC **22** 14:53:44.0±1.3, 61.°45N±0.°03 × 149.°97W±0.°02, h35km±2km, mb4.1/17, ML3.6/192, ML3.4(AEIC), Error ellipse: s-maj=4.9km s-min=3.0km az=342.0*
*IDC **22** 14:53:45.0±1.9, 61.°20N × 149.°54W, h42km±20km, mb3.3/5, mbtmp3.4/9, ML3.1/4, Error ellipse: s-maj=21.3km s-min=14.1km az=120.0*
*AEIC **22** 14:53:44.7±1.3, 61.°45N±0.°03 × 149.°96W±0.°05, h37km±6km, Error ellipse: s-maj=4.6km s-min=3.4km az=164.0*

ISC 22 14:53:43.7±0.8, 61.°44N±0.°03 × 149.°96W±0.°03, h40km±7km, n130, σ1^{s}36/116, mb3.8/12, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M22K	**Willow**	**0.33**	**346**		P*n*	**14 53 52.0**	**-0.3**
M22K					**Sn**	**14 53 58.9**	**+0.6**
M22K				IAML		14 53 59.5	
	comp=N,7μm,0.6s						
M22K				IAML		14 54 03.6	
	comp=E,5μm,0.5s						
RC01	**Rabbit Creek A**	**0.36**	**163**		P*n*	**14 53 53.0**	**+0.3**
RC01					**Sn**	**14 54 00.3**	**+1.3**
RC01				IAML		14 54 00.6	
	comp=E,5μm,0.5s						
RC01				IAML		14 54 01.6	
	comp=N,5μm,0.2s						
PMR	**Palmer**	**0.43**	**68**	P	P*n*	**14 53 53.0**	**-0.5**
PMR	**Palmer**	**0.43**	**68**	S	**Sn**	**14 54 00.3**	**0.0**
PMR	**Palmer**	**0.43**	**68**		**Sn**	**14 53 53.2**	**-0.3**
PMR					**Sn**	**14 54 00.6**	**+0.3**
PMR				IAML		14 54 00.9	
	comp=N,4μm,0.7s						
PMR				IAML		14 54 01.2	
	comp=E,3μm,0.6s						
GHO	**Glory Hole Cre**	**0.60**	**55**		P*n*	**14 53 55.5**	**-0.3**
GHO					**Sn**	**14 54 04.7**	**+0.3**
GHO				IAML		14 54 06.0	
	comp=N,2μm,0.4s						
GHO				IAML		14 54 06.0	
	comp=E,4μm,0.4s						
KNK	**Knik Glacier**	**0.72**	**91**		P*n*	**14 53 57.7**	**+0.2**
KNK				Sn	**Sn**	**14 54 09.2**	**+1.9**
KNK				IAML		14 54 11.6	
	comp=E,2μm,0.3s						
SML	**Sawmill**	**0.86**	**64**		P*n*	**14 53 59.2**	**-0.2**
SML					**Sn**	**14 54 11.0**	**+0.2**
SML				IAML		14 54 12.4	
	comp=N,1μm,0.6s						
STLK	**Strandline Lak**	**0.90**	**275**		P*n*	**14 54 00.3**	**+0.3**
STLK					**Sn**	**14 54 12.7**	**+0.8**
STLK				IAML		14 54 13.1	
	comp=E,3μm,0.3s						
STLK				IAML		14 54 13.1	
	comp=N,3μm,0.7s						
SKT	**Skwentna**	**0.93**	**307**		P*n*	**14 54 00.0**	**-0.2**
SLKM	**Skilak Lake**	**0.94**	**188**		P*n*	**14 54 00.6**	**+0.2**
SLKM				IAML		14 54 16.0	
	comp=N,2μm,0.2s						
O22K	**Cooper Landing**	**0.96**	**173**		P*n*	**14 54 01.0**	**+0.3**
PWL	**Port Wells**	**0.98**	**126**		P*n*	**14 54 01.3**	**+0.4**
CUT	**Chulitna**	**0.98**	**352**		P*n*	**14 54 01.0**	**0.0**
SPU	**Mount Spurr**	**1.04**	**257**		P*n*	**14 54 02.1**	**+0.2**
L22K	**Petersville**	**1.16**	**341**		P*n*	**14 54 03.3**	**-0.2**
SPWE	**Spurr West**	**1.26**	**264**		P*n*	**14 54 05.5**	**+0.5**
SCM	**Sheep Creek Mo**	**1.32**	**71**		P*n*	**14 54 06.1**	**+0.4**
SEW	**Seward**	**1.36**	**169**		P*n*	**14 54 06.5**	**+0.4**
SEW				IAML		14 54 29.0	
	comp=N,1μm,0.3s						
SEW				IAML		14 54 30.9	
	comp=E,981nm,0.4s						
GLI	**Glacier Island**	**1.50**	**111**		P*n*	**14 54 08.3**	**+0.3**
GLI				IAML		14 54 32.3	
	comp=N,792nm,0.5s						
GLI				IAML		14 54 40.2	
	comp=E,1μm,0.5s						
M20K	**Styx River**	**1.58**	**288**		P*n*	**14 54 09.8**	**+0.5**
M20K				IAML		14 54 32.9	
	comp=N,462nm,0.8s						
M20K				IAML		14 54 33.0	
	comp=E,540nm,0.7s						
RDSO	**Redoubt South**	**1.68**	**235**		P*n*	**14 54 11.4**	**+0.7**
RED	**Redoubt Volcan**	**1.71**	**235**		P*n*	**14 54 11.1**	**0.0**
RED				IAML		14 54 35.9	
	comp=E,554nm,0.6s						
RED				IAML		14 54 36.6	
	comp=N,620nm,0.5s						
BRLK	**Bradley Lake**	**1.74**	**196**		P*n*	**14 54 11.5**	**+0.1**
BRLK				IAML		14 54 37.7	
	comp=E,811nm,0.5s						
BRLK				IAML		14 54 39.0	
	comp=N,647nm,0.5s						
PPLA	**Purkeypile**	**1.80**	**325**		P*n*	**14 54 12.8**	**+0.4**
PPLA				IAML		14 54 50.6	
	comp=E,407nm,0.8s						
PPLA				IAML		14 54 53.4	
	comp=N,386nm,0.8s						
FID	**Port Fidalgo**	**1.82**	**111**		P*n*	**14 54 12.4**	**-0.1**
FID				IAML		14 54 37.6	
	comp=E,714nm,0.6s						
FID				IAML		14 54 44.2	
	comp=N,798nm,0.6s						
P23K	**Montague Islan**	**1.91**	**138**		P*n*	**14 54 13.6**	**-0.1**
M24K	**Tolsona, Glenn**	**1.92**	**68**		P*n*	**14 54 14.9**	**+1.0**
M24K				IAML		14 54 42.4	
	comp=N,762nm,0.8s						
KLU	**Klutina**	**1.94**	**87**		P*n*	**14 54 14.6**	**+0.4**
KLU				IAML		14 54 43.1	
	comp=N,633nm,0.4s						
KLU				IAML		14 54 48.3	
	comp=E,330nm,0.6s						
HOM	**Homer**	**1.97**	**206**		P*n*	**14 54 14.2**	**-0.3**
HIN	**Hinchinbrook I**	**1.98**	**120**		P*n*	**14 54 15.2**	**+0.5**
HIN				IAML		14 54 55.4	
	comp=N,471nm,0.8s						
CNPM	**China Poot**	**2.02**	**199**		P*n*	**14 54 15.8**	**+0.6**
CNPM				IAML		14 54 46.7	
	comp=N,609nm,0.4s						
TRF	**Thorofare Moun**	**2.03**	**356**		P*n*	**14 54 16.1**	**+0.6**
TRF				IAML		14 54 43.6	
	comp=E,353nm,0.5s						
TRF				IAML		14 54 44.4	
	comp=N,505nm,0.8s						
DHY	**Denali Highway**	**2.04**	**35**		P*n*	**14 54 15.6**	**-0.1**
DHY				IAML		14 54 47.0	
	comp=E,267nm,0.7s						
RND	**Reindeer**	**2.04**	**14**		P*n*	**14 54 16.3**	**+0.7**
RND				IAML		14 54 52.5	
	comp=N,281nm,0.7s						
RND				IAML		14 54 53.2	
	comp=E,267nm,1.1s						
DIV	**Divide**	**2.04**	**97**		P*n*	**14 54 15.9**	**+0.3**
DIV				IAML		14 54 45.2	
	comp=E,307nm,0.5s						
IVE	**Iliamna Volcan**	**2.07**	**228**		P*n*	**14 54 16.9**	**+0.9**
ILS	**Iliamna Low So**	**2.13**	**227**		P*n*	**14 54 18.1**	**+1.2**
ILSW	**Iliamna Southw**	**2.14**	**228**		P*n*	**14 54 17.4**	**+0.4**
ILSW				IAML		14 54 48.7	
	comp=E,239nm,0.7s						
M19K	**Big River Lodg**	**2.17**	**284**	Pn	P*n*	**14 54 17.6**	**+0.4**
KTH	**Kantishna Hill**	**2.17**	**349**		P*n*	**14 54 18.1**	**+0.7**
KTH				IAML		14 54 47.9	
	comp=N,492nm,0.6s						
CAST	**Castle Rocks**	**2.22**	**335**		P*n*	**14 54 18.2**	**+0.2**
CAST				IAML		14 55 00.6	
	comp=E,265nm,1.1s						
PS11	**TAPS Pump St11**	**2.23**	**71**		P*n*	**14 54 19.7**	**+1.6**
EYAK	**Cordova Ski Ar**	**2.24**	**112**	P	P*n*	**14 54 20.0**	**+1.8**
EYAK	**Cordova Ski Ar**	**2.24**	**112**	S	**Sn**	**14 54 50.4**	**+5.9**
EYAK	**Cordova Ski Ar**	**2.24**	**112**		P*n*	**14 54 18.5**	**+0.4**
EYAK				IAML		14 54 56.4	
	comp=N,266nm,0.5s						
N19K	**Bonanza Creek**	**2.28**	**256**		P*n*	**14 54 19.8**	**+0.9**
MCK	**McKinley**	**2.35**	**11**	Pn	P*n*	**14 54 20.2**	**+0.4**
MCK				IAML		14 55 01.2	
	comp=N,358nm,0.9s						
MCK				IAML

	comp=E,87nm,0.9s								
J19K				IAML			14 55 52.9		
	comp=N,96nm,1.1s								
I23K	**Minto, Yukon-K**	**3.74**	**4**	IAML			14 55 39.2		
	comp=E,74nm,1.2s								
I23K				IAML			14 55 48.5		
	comp=N,71nm,0.8s								
J18K	**Innoko River**	**3.74**	**306**	IAML			14 55 23.6		
	comp=N,60nm,0.8s								
SCRK	**Sand Creek**	**3.75**	**45**	IAML			14 55 40.9		
	comp=E,62nm,0.7s								
J25K	**Salcha River,**	**3.81**	**31**	IAML			14 55 33.8		
	comp=E,74nm,0.6s								
I21K	**Tanana**	**3.87**	**347**	IAML			14 55 26.6		
	comp=N,61nm,0.8s								
KDAK	**Kodiak Island**	**3.90**	**201**	P		**Pn**	**14 54 40.1**	**-0.9**	
	comp=N,1.2nm,0.3s,baz=44,slow=3.5,SNR=27								
KDAK				S		**Sn**	**14 55 23.7**	**-1.8**	
	comp=N,13nm,0.5s,baz=63,slow=8.1,SNR=2.1								
	comp=N,4.1nm,0.3s								
GRNC	**Granite Creek**	**4.05**	**96**	IAML			14 55 50.5		
	comp=N,113nm,0.6s								
GRNC				IAML			14 55 51.5		
	comp=E,55nm,0.7s								
M16K	**Timber Creek**	**4.37**	**269**	IAML			14 56 07.0		
	comp=N,37nm,0.9s								
LOGN	**Logan Glacier**	**4.39**	**94**	IAML			14 56 01.6		
	comp=N,69nm,0.9s								
LOGN				IAML			14 56 04.5		
	comp=E,54nm,0.9s								
O16K	**Kokwok River B**	**4.42**	**249**	IAML			14 56 26.0		
	comp=N,36nm,1.3s								
H24K	**Noodor Dome**	**4.51**	**11**	IAML			14 55 46.4		
	comp=E,34nm,0.8s								
H22K	**Ishtalitna Cre**	**4.52**	**353**	IAML			14 55 42.1		
	comp=N,38nm,1.0s								
PRP	**Porcupine Dome**	**4.55**	**24**	IAML			14 55 54.5		
	comp=E,41nm,0.6s								
PRP				IAML			14 55 58.3		
	comp=N,32nm,0.9s								
OHAK	**Old Harbor**	**4.56**	**203**	P		**Pn**	**14 54 49.9**	**-0.1**	
J17K	**VABM Dome**	**4.67**	**299**	IAML			14 56 26.8		
	comp=E,31nm,1.1s								
O28M	**Mount Upton**	**4.79**	**94**	IAML			14 56 13.0		
	comp=E,27nm,1.0s								
O28M				IAML			14 56 13.4		
	comp=N,34nm,0.8s								
H19K	**Roundabout Mou**	**5.03**	**328**	IAML			14 56 30.9		
	comp=E,45nm,1.4s								
H19K				IAML			14 56 32.6		
	comp=N,34nm,1.4s								
N15K	**Kwethluk River**	**5.12**	**260**	IAML			14 56 28.8		
	comp=N,43nm,1.2s								
N15K				IAML			14 56 47.5		
	comp=E,36nm,0.8s								
J16K	**Anvik River**	**5.29**	**295**	IAML			14 56 32.3		
	comp=N,22nm,1.3s								
J16K				IAML			14 56 47.2		
	comp=E,24nm,1.0s								
G24K	**Hadweenzic Riv**	**5.40**	**11**	IAML			14 56 19.0		
	comp=N,18nm,0.7s								
INK	**Inuvik**	**9.78**	**38**	P		**Pn**	**14 56 03.8**	**+2.2**	
	comp=N,0.1nm,0.3s,baz=225,slow=16,SNR=3.6								
INK				S		**Sn**	**14 57 48.5**	**-1.4**	
	comp=N,0.8nm,0.5s,baz=274,slow=20,SNR=1.4								
	comp=N,0.9nm,0.7s								
ATKA	**Atka Island**	**16.07**	**246**	Pn		**Pn**	**14 57 26.3**	**-0.1**	
HOLB	**Holberg**	**16.20**	**122**	Pn		**Pn**	**14 57 27.1**	**-1.1**	
HOLB				IAmb		IAmb	14 57 39.2		
	comp=E,31nm,1.1s								
YKAW3	**Yellowknife Wh**	**16.51**	**71**	Pn		**Pn**	**14 57 30.6**	**-1.3**	
YKA	**Yellowknife Ar**	**16.53**	**71**	P		**Pn**	**14 57 33.2**	**+1.0**	
	comp=Z,0.1nm,0.3s,baz=282,slow=11,SNR=2.8								
	comp=Z,0.4nm,0.7s								
YKA	**Yellowknife Ar**	**16.53**	**71**	Pn		**Pn**	**14 57 31.6**	**-0.6**	
ADK	**Adak**	**17.40**	**249**	Pn		**Pn**	**14 57 42.8**	**-0.3**	
LLLB	**Lillooet**	**18.90**	**112**	P		**P**	**14 57 58.7**	**-1.9**	
AMKA	**Amchitka**	**19.57**	**253**	P		**P**	**14 58 06.9**	**-0.9**	
AMKA				IAmb		IAmb	14 58 11.6		
	comp=Z,21nm,0.9s								
EDM	**Edmonton**	**21.14**	**96**	P		**P**	**14 58 24.4**	**-0.5**	
EDM				IAmb		IAmb	14 58 29.0		
	comp=Z,4.9nm,0.9s								
B08A	**Colville Reser**	**21.68**	**113**	P		**P**	**14 58 27.8**	**-2.9**	
B08A				IAmb		IAmb	14 58 28.4		
	comp=Z,4.4nm,0.7s								
LYMT	**Lyon Mountain**	**25.90**	**107**	P		**P**	**14 59 11.6**	**-0.2**	
EGMT	**Eagleton**	**26.31**	**102**	P		**P**	**14 59 13.2**	**-2.2**	
EGMT				IAmb		IAmb	14 59 25.8		
	comp=Z,3.2nm,0.9s								
KMRM	**Mail Ridge**	**26.61**	**131**	P		**P**	**14 59 19.0**	**+1.0**	
RLMT	**Red Lodge**	**28.68**	**106**	P		**P**	**14 59 35.2**	**-1.5**	
PEA0B	**Petropavlovsk-**	**28.76**	**277**	P		**P**	**14 59 36.9**	**-0.2**	
PEA0B				IAmb		IAmb	14 59 55.0		
	comp=Z,9.5nm,1.1s								
PETK	**Petropavlovsk-**	**28.76**	**277**	P		**P**	**14 59 41.2**	**+4.2**	
	comp=Z,0.8nm,0.7s,baz=80,slow=17,SNR=11								
	comp=Z,0.8nm,0.7s								
PETK	**Petropavlovsk-**	**28.76**	**277**	P		**P**	**14 59 36.6**	**-0.5**	
BMN	**Battle Mountai**	**28.94**	**121**	P		**P**	**14 59 37.4**	**-1.6**	
PDAR	**Pinedale Array**	**30.37**	**109**	P		**P**	**14 59 52.2**	**+0.6**	
	comp=Z,0.3nm,0.6s,baz=330,slow=4.4,SNR=5.6								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**30.37**	**109**	P		**P**	**14 59 52.6**	**+0.9**	
MPU	**Maple Canyon**	**31.66**	**115**	P		**P**	**15 00 01.4**	**-1.7**	
TPNV	**Topopah Spring**	**32.31**	**124**	P		**P**	**15 00 09.4**	**+0.6**	
TPNV				IAmb		IAmb	15 00 18.2		
	comp=Z,1.1nm,0.9s								
TXAR	**Lajitas Array**	**44.16**	**115**	P		**P**	**15 01 46.4**	**-1.9**	
	comp=Z,0.3nm,0.9s,baz=339,slow=7.8,SNR=2.1								
	comp=Z,0.3nm,0.9s								
MKAR	**Makanchi Array**	**64.21**	**323**	P		**P**	**15 04 17.9**	**+3.9**	
	comp=Z,0.4nm,0.8s,baz=18,slow=6.6,SNR=2.2								
	comp=Z,0.4nm,0.8s								
MAKZ	**Makanchi**	**64.29**	**323**	P		**P**	**15 04 14.8**	**+0.3**	
MAKZ				IAmb		IAmb	15 04 18.9		
	comp=Z,1.2nm,1.0s								
AB31	**Akbulak array**	**67.08**	**339**	P		**P**	**15 04 32.0**	**-0.3**	
AB31				IAmb		IAmb	15 04 32.8		
	comp=Z,0.8nm,1.0s								
ABKAR	**Akbulak array**	**67.08**	**339**	P		**P**	**15 04 30.9**	**-1.4**	
AKASG	**Malin Array Be**	**68.21**	**1**	P		**P**	**15 04 41.2**	**+1.8**	
	comp=Z,0.3nm,0.4s,baz=2.0,slow=6.5,SNR=2.2								
	comp=Z,0.3nm,0.4s								
KKAR	**Karatay Array**	**70.77**	**330**	P		**P**	**15 04 54.6**	**-0.8**	
QSPA	**South Pole Qui**	**151.24**	**180**	PKPbc		**PKPbc**	**15 13 29.6**	**-1.3**	
	comp=Z,1.1nm,0.6s,baz=125,slow=7.2,SNR=8.8								

IDC 22 15:02:30.2±9.0, 18°.96S×175°.76W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=391.3km s-min=43.2km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.93**	**260**	P	P	15 11 03.1	+0.1
	0.4nm,1.0s,baz=96,slow=8.0,SNR=4.9						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**46.95**	**255**	P	P	15 11 02.8	-0.4
	0.1nm,0.5s,baz=88,slow=7.6,SNR=5.0						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**86.36**	**12**	P	P	15 15 13.9	0.0
	0.1nm,0.5s,baz=188,slow=5.4,SNR=1.9						
	0.1nm,0.5s						

*UPA **22** 15:12:47.2±2.1, 7°.73N×82°.37W, h10km±16km, ML3.8, MW3.7, Presumed earthquake*

*CATAC **22** 15:12:49.8±0.6, 8°.N±4°×8°.3W±°, h5km, M3.8/13, MLv3.8/13, Error ellipse: s-maj=9.3km s-min=3.4km az=17.5, confirmed*

*UCR **22** 15:12:49.0±0.6, 7°.80N×82°.44W, h4km±9km, MW4.0, Presumed earthquake*

ISC 22 15:12:47.3±1.5, 7.78N±0°.06×82°.33W±0°.04, h15km±10km, n44, σ1°29/54, 1C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPA	**Petro Terminal**	**0.67**	**308**	*i* P	**Pb**	**15 13 00.9**	**+0.1**
BGUAL	**Bijagual, Pana**	**0.72**	**0**	*i* P	**Pn**	**15 13 03.4**	**+0.4**
BGUAL				*eS*	**Sb**	**15 13 12.8**	**+1.5**
CDITO	**Canoas**	**0.95**	**326**	P	**Pg**	**15 13 05.5**	**-0.2**
CDITO				S	**Sg**	**15 13 18.6**	**+0.3**
BQTLY	**Boquete Panama**	**0.98**	**353**	*eP*	**Pn**	**15 13 06.8**	**+0.2**
BQTLY	**Boquete Panama**	**0.98**	**353**	*i* P	**Pg**	**15 13 06.3**	**0.0**
CLLRA	**Cordillera,**	**0.99**	**344**	*i* P	**Pn**	**15 13 07.0**	**+0.1**
NELY	**Ciudad Neily**	**1.05**	**325**	*eP*	**Pb**	**15 13 07.3**	**0.0**
NELY	**Ciudad Neily**	**1.05**	**325**	*i* P	**Pb**	**15 13 05.9**	**-1.3**
NELY				*eS*	**Sb**	**15 13 20.6**	**-0.3**
BRU2	**Volcan**	**1.06**	**341**	P	**Pn**	**15 13 08.3**	**+0.4**
BRU2	**Volcan**	**1.06**	**341**	*eP*	**Pn**	**15 13 08.1**	**+0.3**
BRU2				*eS*	**Sg**	**15 13 22.1**	**+0.2**
BRU2	**Volcan**	**1.06**	**341**	*i* P	**Pn**	**15 13 08.0**	**+0.2**
BRU2				*eS*	**Sg**	**15 13 22.3**	**+0.4**
BRU2				IAML		15 13 22.6	
	comp=E,2μm,0.4s						
GMAL	**Guarumal, Vera**	**1.09**	**91**	*eP*	**Pg**	**15 13 10.5**	**+2.0**
SCLRA	**Santa Clara, W**	**1.13**	**337**	*eP*	**Pb**	**15 13 08.7**	**0.0**
SCLRA	**Santa Clara, W**	**1.13**	**337**	*i* P	**Pb**	**15 13 08.3**	**-0.5**
PIRO	**Carate, Puerto**	**1.17**	**302**	P	**Pn**	**15 13 08.7**	**-0.4**
PIRO				S	**Sg**	**15 13 25.7**	**+0.5**
PIRO	**Carate, Puerto**	**1.17**	**302**	*eP*	**Pn**	**15 13 08.8**	**-0.3**
PIRO	**Carate, Puerto**	**1.17**	**302**	*i* P	**Pn**	**15 13 08.4**	**-0.7**
PIRO				*eS*	**Sn**	**15 13 24.7**	**-0.1**
KKNTU	**Kakint²**	**1.17**	**26**	*eP*	**Pg**	**15 13 10.5**	**+0.4**
KKNTU	**Kakint²**	**1.17**	**26**	*i* P	**Pg**	**15 13 10.4**	**+0.4**
KKNTU				*eS*	**Sg**	**15 13 25.8**	**+0.5**
VITO	**San Vito**	**1.21**	**329**	*eS*	**Sg**	**15 13 27.3**	**+0.9**
ALCO	**Alturas Coton,**	**1.26**	**337**	*eP*	**Pb**	**15 13 10.8**	**-0.1**
EDP2	**Potrero Grande**	**1.48**	**326**	*eP*	**Pb**	**15 13 14.7**	**+0.1**
PANP	**Palmar Norte**	**1.61**	**316**	*eP*	**Pn**	**15 13 15.4**	**+0.1**
DRK0	**Durika**	**1.73**	**329**	*eP*	Pn	15 13 06.9	-10
DRK0				*eS*	Sn	15 13 29.7	-9.1
RGM0	**Gandoca**	**1.82**	**351**	P	**Pg**	**15 13 21.6**	**-0.6**
RGM0				S	**Sg**	**15 13 46.6**	**+0.7**
EDPE	**Pejibaye, P**	**1.83**	**318**	*eP*	**Pn**	**15 13 19.2**	**+0.8**
OCHAL	**Ojochal**	**1.84**	**315**	P	**Pn**	**15 13 19.2**	**+0.8**
OCHAL				S	**Sn**	**15 13 42.1**	**+0.6**
SAJE	**San Jernim**	**1.94**	**323**	*eP*	**Pn**	**15 13 21.0**	**+1.1**
AZU	**Azuero**	**2.04**	**90**	*eP*	**Pg**	**15 13 25.8**	**-0.7**
QUEP	**Quepos**	**2.44**	**312**	P	**Pn**	**15 13 28.0**	**+1.4**
LCR2	**La Lucha 2**	**2.55**	**320**	P	**Pn**	**15 13 30.6**	**+2.2**
RESJ	**San Isidro (Tu**	**2.58**	**330**	*eP*	**Pb**	**15 13 31.8**	**-1.6**
VTCV	**VTCV, Calle Va**	**2.58**	**328**	*eP*	**Pb**	**15 13 31.2**	**-2.3**
LCOCO	**El Coco**	**2.59**	**332**	*eP*	**Pb**	**15 13 31.9**	**-1.5**
ABRB	**Las Abras (San**	**2.60**	**328**	*eP*	**Pb**	**15 13 31.6**	**-2.2**
RVLA	**Villa Bonita**	**2.62**	**332**	*eP*	**Pb**	**15 13 31.9**	**-2.1**
CVTQ	**Turrialba Volc**	**2.62**	**327**	*eP*	**Pn**	**15 13 31.8**	**+2.3**
BCIP	**Isla Barro Col**	**2.83**	**61**	P	**Pg**	**15 13 39.3**	**-2.2**
BCIP				S	**Sg**	**15 14 17.1**	**-1.2**
TCS1	**Tacares**	**2.97**	**319**	P	**Pn**	**15 13 36.8**	**+2.8**
TRB2	**Turrubares**	**2.98**	**316**	P	**Pb**	**15 13 39.2**	**-0.8**
TRB2				S	**Sn**	**15 14 11.1**	**+1.6**
TRT2	**Tortugero**	**3.08**	**333**	P	**Pn**	**15 13 37.7**	**+2.2**
TRT2				S	**Sb**	**15 14 16.8**	**-2.6**
JTS	**Las Juntas de**	**3.59**	**314**	P	**Pb**	**15 13 47.9**	**-2.7**
BOAB	**BOACO BROADBAN**	**5.68**	**325**	P	Pn	15 14 18.1	+6.9
WILN	**Americas 2**	**5.77**	**319**	P	Pn	15 14 20.0	+7.5

*IDC **22** 15:21:17.6±2.0, 54°.61N×160°.78W, h0km, mb3.8/9, mbtmp3.7/12, ML3.3/3, Error ellipse: s-maj=54.3km s-min=18.2km az=154.0*

*NEIC **22** 15:21:23.2±1.9, 54°.69N±0°.05×160°.57W±0°.05, h30km±4km, mb3.7/23, ML3.5/30, ML3.4(AEIC), Error ellipse: s-maj=7.8km s-min=4.5km az=179.0*

*AEIC **22** 15:21:24.1±2.5, 54°.76N±0°.03×160°.66W±0°.03, h15km±4km, Error ellipse: s-maj=4.0km s-min=1.6km az=156.0*

ISC 22 15:21:24.0±0.7, 54°.77N±0°.07×160°.53W±0°.03, h35km, n169, σ1°58/168, mb3.9/9, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.55**	**84**	P	**Pn**	**15 21 35.1**	**-0.2**
CHNA	**Chernabura Isl**	**0.55**	**84**	S	**Sn**	**15 21 42.9**	**-0.3**
CNBA	**Chernabura Isl**	**0.55**	**85**		**Pn**	**15 21 35.0**	**-0.3**
CNBA				Sg	**Sn**	**15 21 42.7**	**-0.5**
SDPT	**Sand Point**	**0.58**	**3**	P	**Pn**	**15 21 36.1**	**+0.4**
SDPT	**Sand Point**	**0.58**	**3**	S	**Sn**	**15 21 45.0**	**+1.0**
SDPT	**Sand Point**	**0.58**	**3**		**Pn**	**15 21 36.1**	**+0.4**
SDPT				Sg	**Sn**	**15 21 44.6**	**+0.6**
DOL	**Dolgoi Island**	**0.85**	**297**		**Pn**	**15 21 39.3**	**-0.2**
DOL					**Sn**	**15 21 50.4**	**-0.4**
PS1A	**Pavlof South-1**	**0.95**	**314**		**Pn**	**15 21 41.4**	**+0.5**
PS4A	**Pavlof South-4**	**0.95**	**308**		**Pn**	**15 21 41.2**	**+0.3**
DTNA	**Dutton South F**	**1.06**	**291**		**Pn**	**15 21 42.4**	**+0.1**
DTNA					**Sn**	**15 21 56.0**	**+0.2**
DT1	**Dutton Round H**	**1.06**	**289**		**Pn**	**15 21 42.0**	**-0.4**
DT1					**Sn**	**15 21 55.3**	**-0.6**
PN7A	**Pavlof North-7**	**1.07**	**309**		**Pn**	**15 21 43.3**	**+0.7**
VNKR	**Veniaminof 5**	**1.42**	**27**		**Pn**	**15 21 49.2**	**+1.8**
VNSS	**Veniaminof 8**	**1.58**	**22**		**Pn**	**15 21 51.7**	**+2.1**
VNSG	**Veniaminof 6**	**1.59**	**31**		**Pn**	**15 21 51.7**	**+2.1**
VNFG	**Fog Glacier, M**	**1.61**	**20**		**Pn**	**15 21 53.3**	**+3.3**
VNFG	**Fog Glacier, M**	**1.61**	**20**		**Pn**	**15 21 52.3**	**+2.2**
VNFG				IAML		15 22 18.9	
	comp=N,1μm,0.9s						
VNFG				IAML		15 22 22.1	
	comp=E,1μm,0.6s						
ISNN	**Isanotski Nort**	**1.88**	**273**		**Pn**	**15 21 54.6**	**+1.0**
CHGN	**Chignik**	**1.95**	**37**	Pn	**Pn**	**15 21 56.5**	**+2.0**
CHGN				IAML		15 22 25.2	
	comp=E,835nm,0.4s						
CHGN				IAML		15 22 26.5	
	comp=N,508nm,0.2s						
CHIR	**Chirikof Islan**	**3.00**	**67**	P	**Pn**	**15 22 10.4**	**+1.5**
CHIR	**Chirikof Islan**	**3.00**	**67**	S	**Sn**	**15 22 45.3**	**+1.7**
CHIR	**Chirikof Islan**	**3.00**	**67**	Pn	**Pn**	**15 22 10.3**	**+1.3**
CHIR				IAML		15 23 03.2	
	comp=N,151nm,1.0s						
CHIR				IAML		15 23 06.8	
	comp=E,160nm,1.2s						
AKUT	**Akutan**	**3.12**	**260**	P	**Pn**	**15 22 12.5**	**+1.8**
AKUT	**Akutan**	**3.12**	**260**	S	**Sn**	**15 22 49.7**	**+3.0**
AKUT	**Akutan**	**3.12**	**260**	Pn	**Pn**	**15 22 12.0**	**+1.4**
AKUT				IAML		15 23 00.3	
	comp=N,99nm,0.7s						
LVA	**Lava Point**	**3.27**	**261**	Pn	**Pn**	**15 22 14.2**	**+1.5**
LVA				IAML		15 23 03.1	
	comp=E,90nm,0.7s						
LVA				IAML		15 23 23.8	
	comp=N,146nm,0.7s						
UNV	**Unalaska Valle**	**3.62**	**258**	P	**Pn**	**15 22 18.2**	**+0.7**
UNV	**Unalaska Valle**	**3.62**	**258**	Pn	**Pn**	**15 22 17.9**	**+0.4**
SII	**Sitkinak Islan**	**4.02**	**61**	P	**Pn**	**15 22 24.6**	**+1.6**
SII	**Sitkinak Islan**	**4.02**	**61**	Pn	**Pn**	**15 22 24.5**	**+1.6**
SII				IAML		15 23 48.9	
	comp=E,125nm,0.9s						
O15K	**Ungalikthiuk R**	**4.43**	**5**	Pn	**Pn**	**15 22 30.3**	**+1.6**
O15K				IAML		15 23 57.8	
	comp=E,41nm,0.7s						
O15K				IAML		15 24 04.9	
	comp=N,30nm,0.8s						
P16K	**Nushagak River**	**4.49**	**17**	Pn	**Pn**	**15 22 31.3**	**+1.9**
P16K				IAML		15 23 50.0	
	comp=N,86nm,1.4s						
ACHA	**Angle Creek He**	**4.49**	**38**	Pn	**Pn**	**15 22 31.6**	**+2.0**
O14K	**Tigyukauivet M**	**4.51**	**355**	Pn	**Pn**	**15 22 31.6**	**+1.9**
O14K				IAML		15 23 52.8	
	comp=N,31nm,1.0s						
O14K				IAML		15 23 56.5	
	comp=E,34nm,1.0s						
OHAK	**Old Harbor**	**4.75**	**56**	P	**Pn**	**15 22 33.1**	**+0.1**
OHAK	**Old Harbor**	**4.75**	**56**	S	**Sn**	**15 23 27.6**	**+0.9**
OHAK	**Old Harbor**	**4.75**	**56**	Pn	**Pn**	**15 22 33.9**	**+0.9**
P17K	**Kvichak River**	**4.96**	**25**	Pn	**Pn**	**15 22 38.3**	**+2.4**
O16K	**Kokwok River B**	**5.01**	**14**	Pn	**Pn**	**15 22 38.5**	**+1.9**
O16K				IAML		15 24 12.0	
	comp=E,21nm,0.8s						
O16K				IAML		15 24 19.3	
	comp=N,20nm,0.9s						
KDAK	**Kodiak Island**	**5.36**	**53**	Pn	**Pn**	**15 22 42.1**	**+0.8**
	comp=N,0.6nm,0.3s,baz=150,slow=1.3,SNR=43						
KDAK				Sn	**Sn**	**15 23 39.0**	**-2.7**
	comp=N,1.6nm,0.3s,baz=52,slow=16,SNR=5.7						
KDAK				Lg	Lg	15 24 02.3	
	comp=N,1.9nm,0.3s,baz=2.9,slow=18,SNR=7.7						
	comp=N,2.0nm,0.3s						
N15K	**Kwethluk River**	**5.42**	**2**	Pn	**Pn**	**15 22 44.1**	**+2.0**
O18K	**Koktuh Hills**	**5.85**	**27**	Pn	**Pn**	**15 22 50.0**	**+1.8**
M13K	**Dall Lake**	**5.85**	**346**	Pn	**Pn**	**15 22 50.1**	**+2.0**
SPIA	**Saint Paul Isl**	**5.96**	**298**	P	**Pn**	**15 22 51.0**	**+1.3**
SPIA	**Saint Paul Isl**	**5.96**	**298**	Pn	**Pn**	**15 22 50.9**	**+1.3**
N17K	**Nushagak Hills**	**6.04**	**16**	Pn	**Pn**	**15 22 52.8**	**+2.1**
M14K	**Bethel**	**6.04**	**353**	Pn	**Pn**	**15 22 52.4**	**+1.7**
M16K	**Timber Creek**	**6.32**	**7**	Pn	**Pn**	**15 22 56.2**	**+1.6**
M11K	**Mekoryuk**	**6.40**	**334**	Pn	**Pn**	**15 22 56.8**	**+1.3**
N18K	**Kilae Creek**	**6.42**	**21**	Pn	**Pn**	**15 22 58.8**	**+2.8**
ILSW	**Iliamna Southw**	**6.57**	**34**	Pn	**Pn**	**15 23 00.7**	**+2.5**
L14K	**Kuka Creek**	**6.68**	**351**	Pn	**Pn**	**15 23 00.9**	**+1.4**
M17K	**Holitna River**	**6.84**	**13**	Pn	**Pn**	**15 23 04.2**	**+2.4**
N19K	**Bonanza Creek**	**6.86**	**26**	Pn	**Pn**	**15 23 04.9**	**+2.8**
CNPM	**China Poot**	**6.94**	**43**	Pn	**Pn**	**15 23 04.7**	**+1.6**
L16K	**Owhat River**	**6.98**	**4**	Pn	**Pn**	**15 23 05.4**	**+1.9**
K13K	**Kusilvak Mount**	**7.50**	**345**	Pn	**Pn**	**15 23 12.4**	**+1.7**
K15K	**Wolf Creek Mou**	**7.56**	**356**	Pn	**Pn**	**15 23 13.5**	**+1.9**
L18K	**Granite Mounta**	**7.73**	**14**	Pn	**Pn**	**15 23 15.6**	**+1.7**
M19K	**Big River Lodg**	**7.84**	**22**	Pn	**Pn**	**15 23 18.4**	**+2.9**
SLKM	**Skilak Lake**	**7.97**	**40**	Pn	**Pn**	**15 23 19.7**	**+2.5**
L19K	**White Mountain**	**8.00**	**19**	Pn	**Pn**	**15 23 20.0**	**+2.4**
SEW	**Seward**	**8.01**	**44**	Pn	**Pn**	**15 23 19.3**	**+1.6**
K17K	**Iditarod**	**8.05**	**7**	Pn	**Pn**	**15 23 19.9**	**+1.6**
M20K	**Styx River**	**8.12**	**26**	Pn	**Pn**	**15 23 23.0**	**+3.7**
J14K	**Nanvaranak Lak**	**8.15**	**350**	Pn	**Pn**	**15 23 21.2**	**+1.6**
J16K	**Anvik River**	**8.54**	**360**	Pn	**Pn**	**15 23 26.5**	**+1.5**
ATKA	**Atka Island**	**8.54**	**258**	P	**Pn**	**15 23 26.7**	**+1.6**
ATKA	**Atka Island**	**8.54**	**258**	Pn	**Pn**	**15 23 26.0**	**+0.9**
J17K	**VABM Dome**	**8.68**	**4**	Pn	**Pn**	**15 23 27.7**	**+0.8**
P23K	**Montague Islan**	**8.81**	**48**	Pn	**Pn**	**15 23 29.6**	**+1.0**
PWL	**Port Wells**	**8.91**	**42**	Pn	**Pn**	**15 23 31.2**	**+1.1**
J18K	**Innoko River**	**8.93**	**11**	Pn	**Pn**	**15 23 32.0**	**+1.6**
I17K	**Unalakleet**	**9.14**	**360**	Pn	**Pn**	**15 23 35.0**	**+1.8**
K20K	**Telida**	**9.22**	**18**	Pn	**Pn**	**15 23 36.5**	**+2.2**
L22K	**Petersville**	**9.28**	**29**	Pn	**Pn**	**15 23 36.6**	**+1.5**
GHO	**Glory Hole Cre**	**9.29**	**36**	Pn	**Pn**	**15 23 36.7**	**+1.3**
HIN	**Hinchinbrook I**	**9.40**	**47**	Pn	**Pn**	**15 23 37.8**	**+1.1**
J19K	**Poorman**	**9.58**	**13**	Pn	**Pn**	**15 23 40.6**	**+1.4**
FID	**Port Fidalgo**	**9.59**	**46**	Pn	**Pn**	**15 23 39.6**	**+0.2**
SCM	**Sheep Creek Mo**	**9.90**	**39**	Pn	**Pn**	**15 23 44.3**	**+0.6**
J20K	**Nowinta River**	**9.97**	**16**	Pn	**Pn**	**15 23 46.5**	**+2.0**
KTH	**Kantishna Hill**	**10.08**	**25**	Pn	**Pn**	**15 23 48.1**	**+2.0**
ADK	**Adak**	**10.09**	**260**	Pn	**Pn**	**15 23 47.1**	**+1.0**
KAIM	**Kayak Island**	**10.11**	**53**	Pn	**Pn**	**15 23 48.4**	**+1.9**
ANM	**Nome**	**10.12**	**348**	Pn	**Pn**	**15 23 48.1**	**+1.6**
TRF	**Thorofare Moun**	**10.15**	**27**	Pn	**Pn**	**15 23 49.5**	**+2.2**
RAGM	**Ragged Mountai**	**10.19**	**50**	Pn	**Pn**	**15 23 48.1**	**+0.5**
H17K	**Granite Mounta**	**10.20**	**1**	Pn	**Pn**	**15 23 49.6**	**+1.9**
KLU	**Klutina**	**10.23**	**43**	Pn	**Pn**	**15 23 49.0**	**+0.8**
KIWB	**Kanaga Island**	**10.36**	**260**	Pn	**Pn**	**15 23 51.1**	**+1.1**
H18K	**Honhosa River**	**10.47**	**5**	Pn	**Pn**	**15 23 52.5**	**+1.1**
BMRM	**Bremner River**	**10.49**	**47**	Pn	**Pn**	**15 23 52.4**	**+0.6**
M24K	**Tolsona, Glenn**	**10.50**	**40**	Pn	**Pn**	**15 23 52.8**	**+1.0**
DHY	**Denali Highway**	**10.72**	**34**	Pn	**Pn**	**15 23 55.7**	**+0.7**
H19K	**Roundabout Mou**	**10.97**	**9**	Pn	**Pn**	**15 24 00.1**	**+1.9**
GLB	**Gilahina Butte**	**11.06**	**46**	Pn	**Pn**	**15 24 00.1**	**+0.6**
VRDI	**Verde Repeater**	**11.11**	**48**	Pn	**Pn**	**15 24 00.2**	**-0.1**
F15K	**North Star Dit**	**11.15**	**351**	Pn	**Pn**	**15 24 02.9**	**+2.2**
TGL	**Tana Glacier**	**11.17**	**50**	Pn	**Pn**	**15 24 01.6**	**+0.5**
PAX	**Paxson**	**11.30**	**37**	Pn	**Pn**	**15 24 05.3**	**+2.5**
WRH	**Wood River

comp=Z,1.1nm,0.6s
MKAR Makanchi Array 65.77 318 P **P** 15 32 03.7 -1.4
comp=Z,0.2nm,0.4s,baz=30,slow=8.0,SNR=4.2
comp=Z,0.2nm,0.4s
CMAR Chiang Mai Arr 81.02 289 P **P** 15 33 34.5 -0.8
comp=Z,0.5nm,0.3s,baz=18,slow=5.0,SNR=5.5
comp=Z,0.5nm,0.3s
ESDC Sonseca Array 83.80 18 P **P** 15 33 49.5 +0.1
comp=Z,0.6nm,0.7s,baz=345,slow=4.5,SNR=5.0
comp=Z,0.6nm,0.7s
QSPA South Pole Qui 144.55 180 PKP PKPbc 15 40 53.0 -0.9
comp=Z,1.8nm,1.1s,baz=329,slow=1.5,SNR=2.2

NEIC ***22*** *15:23:14.7±1.4,5.78N±0.08×127.0E±0.1,h107km±6km, mb4.1/11, Error ellipse: s-maj=22.2km s-min=9.0km az=68.0*
MAN ***22*** *15:23:14.0,5.79N×127.00E,h103km,MS3.8*
DJA ***22*** *15:23:15.0±0.8,6°N±7°×12°7E±°,h139km±17km, M4.2/14, mB4.7/4, mb4.0/9, MLv4.3/14, Mw(mB)3.9/4*
IDC ***22*** *15:23:15.1±2.6,5.81N×127.13E,h118km±21km, mb3.6/5, mbtmp4.0/6, Error ellipse: s-maj=76.4km s-min=12.2km az=59.0*
ISC 22 15:23:13.5±0.9,5.74N±0.05×127.02E±0.07,h103km±10km, n40,σ1§84/50,mb4.0/12,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
DAV	**Davao City (W)**	**1.95**	**313**	P		**P**	**Pn**	**15 23 47.2**	**+1.6**
	186nm,0.4s,baz=273,slow=1.8,SNR=2.5								
DAV				S		**Sn**	**Sn**	**15 24 14.2**	**+4.2**
	270nm,0.3s,baz=284,slow=23,SNR=7.3								
DAV	**Davao City (W)**	**1.95**	**313**			**Pn**	**Pn**	**15 23 45.9**	**+0.4**
DAV	**Davao City (W)**	**1.95**	**313**	P		**Pn**	**Pn**	**15 23 47.9**	**+2.4**
DMPH	**Davao City--Mi**	**2.01**	**312**	*i* P		**Pn**	**Pn**	**15 23 48.1**	**+1.8**
DMPH				*i* S		**Sn**	**Sn**	**15 24 05.4**	**-6.0**
GSPH	**General Santos**	**2.09**	**280**	*i* P		**Pn**	**Pn**	**15 23 46.4**	**-1.0**
GSPH				*i* S		**Sn**	**Sn**	**15 24 19.9**	**-2.4**
CDDP	**Cateel, Davao**	**2.11**	**344**	*i* P		**Pn**	**Pn**	**15 23 47.7**	**+0.1**
CDDP				*i* S		**Sn**	**Sn**	**15 24 12.0**	**-1.7**
KCP	**Kidapawan**	**2.29**	**303**	*i* P		**Pn**	**Pn**	**15 23 51.2**	**+1.1**
KCP				*i* S		**Sn**	**Sn**	**15 24 19.4**	**+1.3**
BIPH	**Bislig**	**2.51**	**345**	*eP*		**Pn**	**Pn**	**15 23 54.2**	**+1.3**
BIPH				*eS*		**Sn**	**Sn**	**15 24 21.1**	**-2.1**
SGSI	**Sangihe**	**2.52**	**216**	P		**Pn**	**Pn**	**15 23 54.6**	**+1.5**
BUKP	**Musuan**	**2.88**	**318**	*i* P		**Pn**	**Pn**	**15 23 59.1**	**+1.3**
BUKP				*i* S		**Sn**	**Sn**	**15 24 33.1**	**+1.2**
CTBH	**Cotabato--PC H**	**3.12**	**298**	*eP*		**Pn**	**Pn**	**15 24 02.1**	**+1.1**
CTBH				*i* S		**Sn**	**Sn**	**15 24 38.9**	**+1.3**
TSSP	**Tandag City**	**3.38**	**346**	*eP*		**Pn**	**Pn**	**15 24 04.9**	**+0.5**
TSSP				*eS*		Sn	Sn	15 24 32.2	-12
SCPH	**Surigao**	**4.29**	**339**	*eP*		**Pn**	**Pn**	**15 24 15.7**	**-1.0**
SCPH				*eS*		**Sn**	**Sn**	**15 25 07.5**	**+1.8**
MNI	**Manado**	**4.79**	**207**	P		**Pn**	**Pn**	**15 24 25.3**	**+1.8**
TNTI	**Ternate**	**4.95**	**176**	Pn		**Pn**	**Pn**	**15 24 26.9**	**+1.3**
TNTI	**Ternate**	**4.95**	**176**	P		**Pn**	**Pn**	**15 24 27.5**	**+1.9**
PLP	**Palo**	**5.75**	**340**	*eP*		**Pn**	**Pn**	15 24 44.3	+7.8
PLP				*eS*		**Sn**	**Sn**	**15 25 38.4**	**-2.9**
GTOI	**Gorontalo**	**6.46**	**218**	P		**Pn**	**Pn**	**15 24 46.6**	**+0.5**
	0.1nm472nm17nm,1.0s								
TOLI2	**Tolitoli**	**7.74**	**234**	Pn		**Pn**	**Pn**	**15 25 03.4**	**-0.1**
SWI	**Sorong**	**7.81**	**147**	P		**Pn**	**Pn**	**15 25 06.8**	**+2.4**
	0.1nm18nm,1.6s								
SIJI	**Sorong**	**7.82**	**147**	P		**Pn**	**Pn**	**15 25 07.2**	**+2.6**
	4.5nm,0.3s,baz=278,slow=23,SNR=8.6								
SIJI				S		**Sn**	**Sn**	**15 26 27.3**	**-4.2**
	3.2nm,0.3s,baz=325,slow=22,SNR=5.8								
SIJI	**Sorong**	**7.82**	**147**	P		**Pn**	**Pn**	**15 25 06.8**	**+2.2**
	0.1nm584nm11nm,1.8s								
NLAI	**Namlea**	**8.92**	**179**	P		**Pn**	**Pn**	**15 25 19.5**	**-0.1**
KNRA	**Kununurra**	**21.35**	**175**	P		**P**	**P**	**15 27 53.5**	**+0.9**
KNRA				IAmb		IAmb	IAmb	15 27 55.0	
	comp=Z,7.8nm,0.6s								
FITZ	**Fitzroy Crossi**	**23.73**	**183**	P		**P**	**P**	**15 28 17.1**	**+0.8**
WB0	**Warramunga Arr**	**26.37**	**164**	P		**P**	**P**	**15 28 40.7**	**+0.4**
WB0				IAmb		IAmb	IAmb	15 28 45.9	
	comp=Z,4.3nm,1.1s								
WRA	**Warramunga Arr**	**26.52**	**164**	P		**P**	**P**	**15 28 42.0**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=346,slow=10,SNR=13								
	comp=Z,0.6nm,0.5s								
WRA	**Warramunga Arr**	**26.52**	**164**			**P**	**P**	**15 28 42.7**	**+1.0**
WR8	**Warramunga Arr**	**26.57**	**164**	P		**P**	**P**	**15 28 42.4**	**+0.2**
WR8				IAmb		IAmb	IAmb	15 28 45.3	
	comp=Z,3.2nm,1.1s								
ASAR	**Alice Springs**	**29.99**	**167**	P		**P**	**P**	**15 29 12.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=345,slow=7.2,SNR=7.2								
	comp=Z,0.3nm,0.4s								
BBOO	**Buckleboo**	**39.29**	**168**	P		**P**	**P**	**15 30 33.0**	**+0.6**
BBOO				IAmb		IAmb	IAmb	15 30 59.8	
	comp=Z,2.3nm,0.8s								
NWAO	**Narrogin (SRO)**	**39.56**	**193**	P		**P**	**P**	**15 30 35.2**	**+0.5**
MKAR	**Makanchi Array**	**56.09**	**324**	P		**P**	**P**	**15 32 42.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=131,slow=8.0,SNR=21								
	comp=Z,1.6nm,0.6s								
MAKZ	**Makanchi**	**56.28**	**324**	P		**P**	**P**	**15 32 42.5**	**-0.9**
MAKZ				IAmb		IAmb	IAmb	15 32 44.1	
	comp=Z,1.4nm,0.8s								
KURK	**Kurchatov**	**60.22**	**327**	P		**P**	**P**	**15 33 10.1**	**-0.6**
KURK				IAmb		IAmb	IAmb	15 33 11.4	
	comp=Z,4.5nm,0.7s								
KURBB	**Kurchatov Arra**	**60.22**	**327**	P		**P**	**P**	**15 33 10.6**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=125,slow=6.4,SNR=28								
	comp=Z,2.1nm,0.6s								
BVAR	**Borovoye Array**	**65.81**	**326**	P		**P**	**P**	**15 33 47.6**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=105,slow=6.5,SNR=6.8								
	comp=Z,1.9nm,0.8s								
AB31	**Akbulak array**	**70.79**	**320**	P		**P**	**P**	**15 34 18.0**	**-0.8**
AB31				IAmb		IAmb	IAmb	15 34 19.3	
	comp=Z,1.8nm,0.8s								
ABKAR	**Akbulak array**	**70.79**	**320**	P		**P**	**P**	**15 34 18.1**	**-0.7**
GRNC	**Granite Creek**	**85.64**	**30**	P		**P**	**P**	**15 35 40.2**	**-0.5**

IDC ***22*** *15:31:03.3±0.9,55.19N×159.35W,h0km, mb4.1/22, mbtmp4.1/25, ML4.1/3, MS3.5/4, Error ellipse: s-maj=24.6km s-min=13.9km az=166.0*
NEIC ***22*** *15:31:08.7±1.7,55.15N±0.04×159.14W±0.08,h38km±6km, mb4.4/53, ML4.0/40, Mwr4.1/19, ML3.9(AEIC), Error ellipse: s-maj=6.9km s-min=5.2km az=128.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr1.15; Mθθ-0.75; Mϕϕ-0.40; Mrθ1.39; Mrϕ-0.46; Mθϕ0.59; Fault plane solution: M₀1.87000×10¹⁵ NP1:φ64.42000°, δ71.95000°, λ95.15000°. NP2:φ228.22000°, δ18.75000°, λ74.61000°. Principal axes: T 1.9269, Plg63.0000°, Azm342.0000°; N -0.1111, Plg5.0000°, Azm243.0000°; P -1.8158, Plg27.0000°, Azm150.0000°;*
AEIC ***22*** *15:31:08.5±2.1,55.15N±0.05×159.15W±0.06,h30km±4km Error ellipse: s-maj=6.9km s-min=4.6km az=188.0*
NEIC ***22*** *15:31:08.8,55.15N×159.14W,h39km*
ISC 22 15:31:09.1±0.8,55.17N±0.07×159.13W±0.04,h42km±8km, n303,σ1§01/297,mb4.3/40,MS3.4/4,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
CHNA	**Chernabura Isl**	**0.43**	**218**	P		**Pn**	**Pn**	**15 31 17.4**	**-1.5**
CNBA	**Chernabura Isl**	**0.44**	**217**			**Pn**	**Pn**	**15 31 17.7**	**-1.4**
CNBA						**Sn**	**Sn**	**15 31 24.1**	**-1.9**
CNBA				IAML				15 31 28.5	
	comp=N,9μm,0.4s								
SDPT	**Sand Point**	**0.79**	**284**	P		**Pn**	**Pn**	**15 31 23.0**	**-0.7**
SDPT	**Sand Point**	**0.79**	**284**	S		**Sn**	**Sn**	**15 31 33.2**	**-1.2**
SDPT	**Sand Point**	**0.79**	**284**			**Pn**	**Pn**	**15 31 23.1**	**-0.6**
SDPT						**Sn**	**Sn**	**15 31 32.3**	**-2.1**
SDPT				IAML				15 31 34.1	
	comp=N,6μm,0.8s								
SDPT				IAML				15 31 35.6	
	comp=E,4μm,0.5s								
VNKR	**Veniaminof 5**	**0.88**	**351**			**Pn**	**Pn**	**15 31 25.0**	**0.0**
VNSS	**Veniaminof 8**	**1.08**	**350**			**Pn**	**Pn**	**15 31 28.6**	**+0.7**
VNFG	**Fog Glacier, M**	**1.14**	**348**			**Pn**	**Pn**	**15 31 29.7**	**+1.0**
VNFG	**Fog Glacier, M**	**1.14**	**348**			**Pn**	**Pn**	**15 31 29.8**	**+1.1**
CHGN	**Chignik**	**1.21**	**19**	Pn		**Pn**	**Pn**	**15 31 29.1**	**-0.3**
PS1A	**Pavlof South-1**	**1.51**	**281**			**Pn**	**Pn**	**15 31 33.7**	**0.0**
PS1A						**Sn**	**Sn**	**15 31 53.5**	**+1.3**
DOL	**Dolgoi Island**	**1.57**	**270**			**Pn**	**Pn**	**15 31 34.3**	**-0.1**
DOL						**Sn**	**Sn**	**15 31 53.9**	**+0.4**
PS4A	**Pavlof South-4**	**1.57**	**278**			**Pn**	**Pn**	**15 31 34.5**	**+0.1**
PS4A						**Sn**	**Sn**	**15 31 54.5**	**+1.0**
ANPB	**Aniakchak Plen**	**1.71**	**16**			**Pn**	**Pn**	**15 31 36.9**	**+0.5**
DT1	**Dutton Round H**	**1.81**	**269**			**Pn**	**Pn**	**15 31 37.7**	**0.0**
CHIR	**Chirikof Islan**	**2.10**	**70**	P		**Pn**	**Pn**	**15 31 42.0**	**+0.3**
CHIR	**Chirikof Islan**	**2.10**	**70**	S		**Sn**	**Sn**	**15 32 08.0**	**+1.4**
CHIR	**Chirikof Islan**	**2.10**	**70**	Pn		**Pn**	**Pn**	**15 31 41.8**	**+0.1**
CHIR				IAML				15 32 17.8	
	comp=E,2μm,1.1s								
CHIR				IAML				15 32 19.6	
	comp=N,1μm,1.0s								
ISNN	**Isanotski Nort**	**2.70**	**265**				**Pn**	**15 31 51.2**	**+1.3**
SII	**Sitkinak Islan**	**3.12**	**61**	P			**Pn**	**15 31 56.1**	**+0.4**
SII	**Sitkinak Islan**	**3.12**	**61**	Pn			**Pn**	**15 31 55.6**	**0.0**
ACHA	**Angle Creek He**	**3.70**	**33**	Pn			**Pn**	**15 32 04.7**	**+0.9**
OHAK	**Old Harbor**	**3.86**	**55**	P			**Pn**	**15 32 05.6**	**-0.2**
OHAK	**Old Harbor**	**3.86**	**55**	Pn			**Pn**	**15 32 05.5**	**-0.3**
OHAK				IAML				15 33 28.5	
	comp=N,206nm,1.0s								
P16K	**Nushagak River**	**3.92**	**9**	Pn			**Pn**	**15 32 07.2**	**+0.5**
P16K				IAML				15 33 27.1	
	comp=N,340nm,0.9s								
AKUT	**Akutan**	**3.99**	**258**	P			**Pn**	**15 32 09.1**	**+1.4**
AKUT	**Akutan**	**3.99**	**258**	Pn			**Pn**	**15 32 08.8**	**+1.2**
AKUT				IAML				15 33 17.8	
	comp=E,249nm,0.9s								
AKUT				IAML				15 33 17.8	
	comp=N,275nm,0.9s								
O15K	**Ungalikthiuk R**	**4.04**	**355**	Pn			**Pn**	**15 32 08.3**	**0.0**
LVA	**Lava Point**	**4.13**	**259**	Pn			**Pn**	**15 32 10.7**	**+1.0**
LVA				IAML				15 33 18.1	
	comp=E,255nm,0.6s								
O14K	**Tigyukauivet M**	**4.26**	**345**	Pn			**Pn**	**15 32 11.9**	**+0.7**
P17K	**Kvichak River**	**4.29**	**19**	Pn			**Pn**	**15 32 12.6**	**+0.8**
O16K	**Kokwok River B**	**4.47**	**7**	Pn			**Pn**	**15 32 14.8**	**+0.6**
KDAK	**Kodiak Island**	**4.48**	**52**	Pn			**Pn**	**15 32 13.9**	**-0.4**
	comp=E,3.3nm,0.3s,baz=211,slow=5.4,SNR=106								
KDAK					Sn		**Sn**	**15 33 01.2**	**-3.8**
	comp=E,6.5nm,0.3s,baz=34,slow=20,SNR=5.9								
KDAK					Lg		Lg	15 33 23.1	
	comp=E,10nm,0.3s,baz=154,slow=22,SNR=5.6								
	comp=E,13nm,0.3s								
KDAK	**Kodiak Island**	**4.48**	**52**	Pn			**Pn**	**15 32 13.8**	**-0.4**
KDAK				IAML				15 33 30.4	
	comp=E,158nm,0.8s								
KDAK				IAML				15 33 35.9	
	comp=E,120nm,1.1s								
UNV	**Unalaska Valle**	**4.50**	**256**	P			**Pn**	**15 32 15.0**	**+0.4**
UNV	**Unalaska Valle**	**4.50**	**256**	S			**Sn**	**15 33 07.5**	**+1.9**
UNV	**Unalaska Valle**	**4.50**	**256**	Pn			**Pn**	**15 32 14.4**	**-0.1**
UNV				IAML				15 33 19.1	
	comp=E,145nm,0.6s								
UNV				IAML				15 33 30.0	
	comp=N,137nm,0.6s								
N14K	**Kuskokwak Cree**	**4.96**	**345**	Pn			**Pn**	**15 32 21.8**	**+0.9**
N14K				IAML				15 33 33.0	
	comp=N,147nm,1.3s								
N14K				IAML				15 34 08.5	
	comp=E,160nm,1.4s								
N15K	**Kwethluk River**	**5.04**	**355**	Pn			**Pn**	**15 32 23.4**	**+1.3**
N15K				IAML				15 34 07.5	
	comp=E,145nm,0.7s								
N15K				IAML				15 34 07.7	
	comp=N,85nm,0.8s								
O18K	**Koktuh Hills**	**5.15**	**23**	Pn			**Pn**	**15 32 24.8**	**+1.2**
O18K				IAML				15 33 33.4	
	comp=E,56nm,1.2s								
O18K				IAML				15 33 41.5	
	comp=N,65nm,0.7s								
N17K	**Nushagak Hills**	**5.47**	**10**	Pn			**Pn**	**15 32 28.2**	**+0.3**
O19K	**Port Alsworth**	**5.66**	**25**	Pn			**Pn**	**15 32 31.5**	**+1.0**
M13K	**Dall Lake**	**5.72**	**339**	Pn			**Pn**	**15 32 32.5**	**+1.1**
N18K	**Kilae Creek**	**5.79**	**16**	Pn			**Pn**	**15 32 33.3**	**+0.9**
M14K	**Bethel**	**5.80**	**346**	Pn			**Pn**	**15 32 33.0**	**+0.7**
ILSW	**Iliamna Southw**	**5.80**	**31**	Pn			**Pn**	**15 32 33.6**	**+1.0**
M16K	**Timber Creek**	**5.87**	**1**	Pn			**Pn**	**15 32 34.4**	**+1.0**
CNPM	**China Poot**	**6.11**	**41**	Pn			**Pn**	**15 32 37.4**	**+0.6**
N19K	**Bonanza Creek**	**6.17**	**22**	Pn			**Pn**	**15 32 39.3**	**+1.6**
RED	**Redoubt Volcan**	**6.26**	**30**	Pn			**Pn**	**15 32 40.4**	**+1.4**
M17K	**Holitna River**	**6.31**	**7**	Pn			**Pn**	**15 32 40.2**	**+0.7**
BRLK	**Bradley Lake**	**6.40**	**41**	Pn			**Pn**	**15 32 39.6**	**-1.1**
M11K	**Mekoryuk**	**6.45**	**327**	Pn			**Pn**	**15 32 42.0**	**+0.7**
L14K	**Kuka Creek**	**6.47**	**345**	Pn			**Pn**	**15 32 42.0**	**+0.4**
SPIA	**Saint Paul Isl**	**6.53**	**292**	P			**Pn**	**15 32 42.8**	**+0.4**
SPIA	**Saint Paul Isl**	**6.53**	**292**	S			**Sn**	**15 33 57.4**	**+2.0**
SPIA	**Saint Paul Isl**	**6.53**	**292**	Pn			**Pn**	**15 32 42.8**	**+0.4**
SPU	**Mount Spurr**	**7.09**	**29**	Pn			**Pn**	**15 32 51.5**	**+1.3**
SLKM	**Skilak Lake**	**7.16**	**38**	Pn			**Pn**	**15 32 53.4**	**+2.3**
SEW	**Seward**	**7.17**	**42**	Pn			**Pn**	**15 32 51.9**	**+0.7**
L18K	**Granite Mounta**	**7.18**	**9**	Pn			**Pn**	**15 32 51.7**	**+0.3**
K15K	**Wolf Creek Mou**	**7.25**	**351**	Pn			**Pn**	**15 32 53.6**	**+1.3**
K13K	**Kusilvak Mount**	**7.37**	**339**	Pn			**Pn**	**15 32 54.8**	**+0.9**
L19K	**White Mountain**	**7.38**	**16**	Pn			**Pn**	**15 32 54.5**	**+0.4**
STLK	**Strandline Lak**	**7.42**	**28**	Pn			**Pn**	**15 32 56.1**	**+1.5**
M20K	**Styx River**	**7.43**	**23**	Pn			**Pn**	**15 32 56.8**	**+2.0**
K17K	**Iditarod**	**7.58**	**3**	Pn			**Pn**	**15 32 57.4**	**+0.5**
RC01	**Rabbit Creek A**	**7.74**	**36**	Pn			**Pn**	**15 32 59.1**	**+0.1**
SKT	**Skwentna**	**7.90**	**27**	Pn			**Pn**	**15 33 01.7**	**+0.5**
J14K	**Nanvaranak Lak**	**7.94**	**345**	Pn			**Pn**	**15 33 02.4**	**+0.7**
P23K	**Montague Islan**	**7.94**	**48**	Pn			**Pn**	**15 33 02.0**	**+0.2**
PWL	**Port Wells**	**8.08**	**41**	Pn			**Pn**	**15 33 04.0**	**+0.2**
J16K	**Anvik River**	**8.18**	**355**	Pn			**Pn**	**15 33 05.1**	**+0.1**
J17K	**VABM Dome**	**8.25**	**0**	Pn			**Pn**	**15 33 05.9**	**-0.2**
PMR	**Palmer**	**8.30**	**30**	Pn			**Pn**	**15 33 07.3**	**+1.1**
KNK	**Knik Glacier**	**8.41**	**38**	Pn			**Pn**	**15 33 09.0**	**+0.8**
J18K	**Innoko River**	**8.41**	**7**	Pn			**Pn**	**15 33 08.8**	**+0.6**
GHO	**Glory Hole Cre**	**8.50**	**35**	Pn			**Pn**	**15 33 10.1**	**+0.5**
PPLA	**Purkeypile**	**8.53**	**22**	Pn			**Pn**	**15 33 12.3**	**+2.3**
HIN	**Hinchinbrook I**	**8.54**	**47**	Pn			**Pn**	**15 33 10.2**	**+0.3**
L22K	**Petersville**	**8.55**	**27**	Pn			**Pn**	**15 33 10.5**	**+0.4**
CUT	**Chulitna**	**8.58**	**29**	Pn			**Pn**	**15 33 11.4**	**+0.9**
K20K	**Telida**	**8.61**	**15**	Pn			**Pn**	**15 33 11.9**	**+1.0**
SML	**Sawmill**	**8.72**	**36**	Pn			**Pn**	**15 33 13.1**	**+0.5**
FID	**Port Fidalgo**	**8.74**	**45**	Pn			**Pn**	**15 33 11.9**	**-0.9**
I17K	**Unalakleet**	**8.78**	**355**	Pn			**Pn**	**15 33 13.9**	**+0.7**
EYAK	**Cordova Ski Ar**	**8.93**	**47**	P			**Pn**	**15 33 15.8**	**+0.5**
EYAK	**Cordova Ski Ar**	**8.93**	**47**	Pn			**Pn**	**15 33 15.1**	**-0.3**
CAST	**Castle Rocks**	**9.02**	**21**	Pn			**Pn**	**15 33 18.0**	**+1.4**
J19K	**Poorman**	**9.03**	**10**	Pn			**Pn**	**15 33 17.1**	**+0.4**
KAIM	**Kayak Island**	**9.23**	**53**	Pn			**Pn**	**15 33 20.3**	**+0.9**
DIV	**Divide**	**9.24**	**44**	Pn			**Pn**	**15 33 20.9**	**+1.3**
RAGM	**Ragged Mountai**	**9.32**	**50**	Pn			**Pn**	**15 33 20.8**	**+0.1**
J20K	**Nowinta River**	**9.38**	**14**	Pn			**Pn**	**15 33 22.0**	**+0.6**
KTH	**Kantishna Hill**	**9.39**	**23**	Pn			**Pn**	**15 33 22.5**	**+0.9**
KLU	**Klutina**	**9.39**	**42**	Pn			**Pn**	**15 33 22.4**	**+0.7**
ATKA	**Atka Island**	**9.42**	**258**	P			**Pn**	**15 33 22.9**	**+0.9**
ATKA	**Atka Island**	**9.42**	**258**	Pn			**Pn**	**15 33 22.4**	**+0.3**
TRF	**Thorofare Moun**	**9.45**	**25**	Pn			**Pn**	**15 33 22.4**	**-0.1**
BMRM	**Bremner River**	**9.63**	**47**	Pn			**Pn**	**15 33 25.6**	**+0.7**
M24K	**Tolsona, Glenn**	**9.68**	**39**	Pn			**Pn**	**15 33 26.4**	**+0.7**
BERG	**Berg Lake**	**9.75**	**51**	Pn			**Pn**	**15 33 26.7**	**+0.1**
H17K	**Granite Mounta**	**9.81**	**358**	Pn			**Pn**	**15 33 27.9**	**+0.6**
ANM	**Nome**	**9.93**	**344**	Pn			**Pn**	**15 33 29.1**	**+0.2**
I20K	**Naaghedeneel**	**9.93**	**12**	Pn			**Pn**	**15 33 29.5**	**+0.6**
MCK	**McKinley**	**10.02**	**27**	Pn			**Pn**	**15 33 30.4**	**+0.2**
H18K	**Honhosa River**	**10.03**	**2**	Pn			**Pn**	**15 33 31.2**	**+0.9**
GLB	**Gilahina Butte**	**10.21**	**46**	Pn			**Pn**	**15 33 33.5**	**+0.5**
HARP	**HAARP**	**10.23**	**39**	Pn			**Pn**	**15 33 34.5**	**+1.3**
VRDI	**Verde Repeater**	**10.25**	**47**	Pn			**Pn**	**15 33 33.5**	**0.0**
TGL	**Tana Glacier**	**10.30**	**50**	Pn			**Pn**	**15 33 35.0**	**+0.8**
G16K	**Koyuk River**	**10.38**	**352**	Pn			**Pn**	**15 33 36.6**	**+1.5**
H19K	**Roundabout Mou**	**10.48**	**6**	Pn			**Pn**	**15 33 36.9**	**+0.4**
MCARA	**McCarthy VSAT**	**10.50**	**47**	Pn			**Pn**	**15 33 38.0**	**+1.1**
I21K	**Tanana**	**10.65**	**17**	Pn			**Pn**	**15 33 40.0**	**+1.2**
MLY	**Manley**	**10.73**	**19**	Pn			**Pn**	**15 33 40.9**	**+0.9**
G18K	**Tagagawik**	**10.77**	**1**	Pn			**Pn**	**15 33 41.4**	**+1.0**
GRNC	**Granite Creek**	**10.77**	**52**	Pn			**Pn**	**15 33 40.7**	**0.0**
WRH	**Wood River Hil**	**10.84**	**26**	Pn			**Pn**	**15 33 39.8**	**-1.7**
F15K	**North Star Dit**	**10.91**	**348**	Pn			**Pn**	**15 33 43.1**	**+0.7**
BARN	**Barnard Glacie**	**10.94**	**50**	Pn			**Pn**	**15 33 43.5**	**+0.5**
ADK	**Adak**	**10.95**	**260**	P			**Pn**	**15 33 43.6**	**+0.6**
ADK	**Adak**	**10.95**	**260**	S			**Sn**	**15 35 46.0**	**+2.0**
ADK	**Adak**	**10.95**	**260**	Pn			**Pn**	**15 33 43.5**	**+0.5**
H21K	**Melozitna Rive**	**10.97**	**14**	Pn			**Pn**	**15 33 43.6**	**+0.4**
K24K	**Donnelly Dome**	**10.98**	**33**	Pn			**Pn**	**15 33 44.3**	**+1.0**
M26K	**Nabesna, AK**	**11.05**	**42**	Pn			**Pn**	**15 33 45.8**	**+1.4**
CCB	**Clear Creek Bu**	**11.05**	**26**	Pn			**Pn**	**15 33 42.7**	**-1.7**
G19K	**Purcell Mounta**	**11.06**	**4**	Pn			**Pn**	**15 33 44.9**	**+0.5**
HDA	**Harding Lake**	**11.09**	**28**	Pn			**Pn**	**15 33 43.0**	**-1.8**
MENT	**Mentasta**	**11.09**	**39**	Pn			**Pn**	**15 33 45.1**	**+0.2**
I23K	**Minto, Yukon-K**	**11.11**	**22**	Pn			**Pn**	**15 33 43.9**	**-1.2**
LOGN	**Logan Glacier**	**11.14**	**52**	Pn			**Pn**	**15 33 47.0**	**+1.2**
RIDG	**Independent Ri**	**11.23**	**34**	Pn			**Pn**	**15 33 46.8**	**0.0**
KIWB	**Kanaga Island**	**11.23**	**260**	Pn			**Pn**	**15 33 46.8**	**0.0**
PCA	**Pinnacle**	**11.24**	**56**	Pn			**Pn**	**15 33 47.6**	**+0.6**
L26K	**Log Cabin Wild**	**11.28**	**39**	Pn			**Pn**	**15 33 48.5**	**+1.1**
TNA	**Tin City**	**11.28**	**341**	Pn			**Pn**	**15 33 49.3**	**+1.9**
F17K	**Baldwin Pennin**	**11.36**	**356**	Pn			**Pn**	**15 33 50.7**	**+2.2**
IL31		**11.39**	**27**	Pn			**Pn**	**15 33 46.8**	**-2.1**
ILAR	**Eielson Array**	**11.39**	**27**	Pn			**Pn**	15 33 42.7	-6.3
	comp=N,0.5nm,0.3s,baz=216,slow=13,SNR=23								
ILAR							Sn	Sn	15 35 42.0	-13
	baz=216,slow=23								
	comp=N,0.9nm,0.5s								
ILAR	**Eielson Array**	**11.39**	**27**	Pn			**Pn**	**15 33 46.8**	**-2.2**
H22K	**Ishtalitna Cre**	**11.40**	**16**	Pn			**Pn**	**15 33 49.2**	**+0.1**
M27K	**Edge Creek, AK**	**11.46**	**44**	Pn			**Pn**	**15 33 50.3**	**+0.2**
O28M	**Mount Upton**	**11.49**	**53**	Pn			**Pn**	**15 33 51.3**	**+0.7**
SCRK	**Sand Creek**	**11.67**	**35**	Pn			**Pn**	**15 33 51.8**	**-1.0**
G21K	**Allakaket**	**11.70**	**11**	Pn			**Pn**	**15 33 53.0**	**-0.2**
F19K	**Shaleruckik Mo**	**11.72**	**3**	Pn			**Pn**	**15 33 54.2**	**+0.7**
L27K	**Beaver Creek,**	**11.86**	**41**	Pn			**Pn**	**15 33 55.7**	**+0.2**
BCAR	**Beaver Creek A**	**11.88**	**41**	Pn			**Pn**	**15 33 55.3**	**-0.4**
H24K	**Noodor Dome**	**12.03**	**23**	Pn			**Pn**	**15 33 59.1**	**+1.4**
F20K	**Avaraart Lake**	**12.03**	**6**	Pn			**Pn**	**15 33 58.7**	**+1.0**
O29M	**Mount Kennedy**	**12.10**	**57**	Pn			**Pn**	**15 33 60.0**	**+1.2**
E18K	**Tukpahlearik C**	**12.32**	**357**	Pn			**Pn**	**15 34 03.5**	**+1.9**
PRP	**Porcupine Dome**	**12.34**	**27**	Pn			**Pn**

comp=Z,5.1nm,0.4s,baz=64,slow=7.0,SNR=7.8
comp=Z,5.1nm,0.4s
NRIK Noril'sk 46.75 333 P P 15 39 33.7 +0.2
JGF Kuroka 46.91 273 P P 15 39 34.6 -0.6
JGF IAmb IAmb 15 39 59.7
comp=Z,8.1nm,1.2s
TXAR Lajitas Array 46.91 100 P P 15 39 36.8 +1.5
comp=Z,0.1nm,0.3s,baz=328,slow=11,SNR=1.7
comp=Z,0.1nm,0.3s
N47A Urbana 48.85 75 P P 15 39 49.1 -1.1
SCO Scoresbysund 50.95 17 P P 15 40 05.5 -0.2
SCO IAmb IAmb 15 40 08.3
comp=Z,2.9nm,1.1s
KSRS Korea Array 50.96 282 P P 15 40 06.3 +0.1
comp=Z,2.2nm,0.9s,baz=55,slow=6.5,SNR=10
comp=Z,2.2nm,0.9s
JTU Tsushima 52.22 278 P P 15 40 16.1 +0.5
SONM Songino Array 54.90 305 P P 15 40 34.7 -0.5
comp=Z,1.2nm,0.5s,baz=43,slow=5.8,SNR=4.9
comp=Z,1.2nm,0.5s
SONM Songino Array 54.90 305 P P 15 40 34.2 -1.1
KEV Kevo 55.30 357 P P 15 40 37.0 -0.6
ARCES ARCESS Array B 55.56 358 P P 15 40 39.4 -0.1
comp=Z,1.3nm,0.5s,baz=19,slow=7.7,SNR=7.9
comp=Z,1.3nm,0.5s
ARCES ARCESS Array B 55.56 358 P P 15 40 39.6 0.0
ZAA0 Zalesovo Array 59.22 322 P P 15 41 05.0 -0.5
ZAA0 IAmb IAmb 15 41 06.7
comp=Z,1.8nm,0.8s
ZALV Zalesovo Beam 59.22 322 P P 15 41 05.0 -0.6
comp=Z,0.9nm,0.3s,baz=38,slow=7.5,SNR=5.9
ZALV LR LR 16 08 42.8
comp=Z,42nm,19.3s,baz=356,slow=38
comp=Z,0.9nm,0.3s
ZALV Zalesovo Beam 59.22 322 P P 15 41 05.5 0.0
NC204 NORSAR Array S 63.62 5 P P 15 41 35.3 +0.1
FINES FINESS Array B 63.66 357 P P 15 41 34.5 -0.8
comp=Z,1.0nm,0.3s,baz=2.1,slow=8.2,SNR=16
comp=Z,1.0nm,0.3s
NB2 NORSAR Subarra 63.88 5 P P 15 41 36.9 0.0
comp=Z,0.5nm,0.5s,baz=354,slow=6.9
NOA NORSAR Array B 63.88 5 P P 15 41 36.8 -0.1
comp=Z,1.6nm,0.8s,baz=356,slow=5.8,SNR=4.1
comp=Z,1.6nm,0.8s
KURK Kurchatov 64.05 323 P P 15 41 37.5 -0.6
KURK IAmb IAmb 15 41 38.6
comp=Z,1.9nm,0.8s
KURBB Kurchatov Arra 64.16 323 P P 15 41 38.8 0.0
comp=Z,0.7nm,0.6s,baz=24,slow=6.3,SNR=7.6
comp=Z,0.7nm,0.6s
GTA2 Gaotai 64.33 303 *eP* **P 15 41 40.5 +0.2**
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
BVAR Borovoye Array 64.68 329 P P 15 41 42.2 0.0
comp=Z,4.1nm,0.5s,baz=31,slow=6.2,SNR=14
comp=Z,4.1nm,0.5s
BORK Borovoye 64.68 330 P P 15 41 41.5 -0.7
BORK IAmb IAmb 15 41 43.4
comp=Z,3.1nm,0.4s
ARTI Arti 64.69 338 P P 15 41 41.1 -1.0
HFS Hagfors 64.90 4 P P 15 41 43.1 -0.4
comp=Z,2.4nm,0.6s,baz=22,slow=3.4,SNR=8.5
comp=Z,2.4nm,0.6s
MKAR Makanchi Array 66.01 319 P P 15 41 50.2 -0.8
comp=Z,0.3nm,0.3s,baz=46,slow=5.9,SNR=12
comp=Z,0.3nm,0.3s
MAKZ Makanchi 66.12 319 P P 15 41 50.7 -0.9
MAKZ IAmb IAmb 15 41 51.2
comp=Z,1.6nm,0.9s
EKA Eskdalemuir Ar 68.11 15 P P 15 42 04.6 +0.5
comp=Z,1.8nm,0.5s,baz=337,slow=4.8,SNR=12
comp=Z,1.8nm,0.5s
AB31 Akbulak array 70.92 334 P P 15 42 21.0 -0.5
AB31 IAmb IAmb 15 42 21.8
comp=Z,4.0nm,0.6s
ABKAR Akbulak array 70.92 334 P P 15 42 21.2 -0.3
BOOM Boomskoye usch 72.05 320 P P 15 42 28.6 0.0
KKAR Karatay Array 73.41 324 P P 15 42 36.8 +0.2
PZH PanZhiHua 73.62 293 P P 15 42 28.3 -10
ARSB Arslanbob 74.13 322 P P 15 42 42.2 +1.2
AKASG Malin Array Be 74.27 354 P P 15 42 40.4 -0.9
comp=Z,1.1nm,0.3s,baz=6.7,slow=5.7,SNR=9.3
AKASG LR LR 16 18 10.4
comp=Z,13nm,18.5s,baz=282,slow=38
comp=Z,1.1nm,0.3s
AKBB Malin Array Si 74.27 354 P P 15 42 40.5 -0.8
AKBB IAmb IAmb 15 42 41.5
comp=Z,7.3nm,0.9s
GERES GERESS Array B 76.18 5 P P 15 42 52.8 +0.2
comp=Z,1.0nm,0.7s,baz=345,slow=4.1,SNR=8.6
comp=Z,1.0nm,0.7s
BUR08 Bucovina Ar. S 77.49 357 P P 15 43 00.3 +0.4
BUR08 IAmb IAmb 15 43 00.8
comp=Z,2.5nm,0.8s
BURAR Bucovina Array 77.52 357 P P 15 43 00.1 0.0
BURAR IAmb IAmb 15 43 01.1
comp=Z,1.5nm,0.8s
CHGR Chuyangaron 77.84 323 P P 15 43 00.8 -1.3
FUORN Ofenpass-Fuorn 78.19 7 P P 15 43 04.7 +0.7
FUORN IAmb IAmb 15 43 11.1
comp=Z,2.4nm,0.8s
KBZ Khabaz 79.71 344 P P 15 43 13.1 +1.0
comp=Z,3.5nm,1.0s,baz=274,slow=4.8,SNR=5.2
comp=Z,3.5nm,1.0s
CMAR Chiang Mai Arr 81.65 290 P P 15 43 22.8 -0.1
comp=Z,2.0nm,0.6s,baz=15,slow=5.1,SNR=15
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 81.65 290 P P 15 43 22.4 -0.4
ESDC Sonseca Array 83.17 19 P P 15 43 31.3 +0.8
comp=Z,1.4nm,0.6s,baz=340,slow=4.8,SNR=11
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 84.85 350 P P 15 43 39.6 +0.4
VSL Villasalto 85.19 9 P P 15 43 41.6 +0.8
VSL IAmb IAmb 15 43 56.3
comp=Z,7.7nm,1.1s
RPN Rapa Nui 92.37 137 LR LR 16 15 11.5
comp=Z,85nm,20.2s,baz=352,slow=29
QSPA South Pole Qui 144.95 180 PKP PKPbc 15 50 39.3 -0.2
comp=Z,0.9nm,0.5s,baz=12,slow=0.4,SNR=14
QSPA South Pole Qui 144.95 180 PKPbc PKPbc 15 50 39.4 -0.1
BOSA Boshof 153.28 351 PKPbc PKPbc 15 51 02.0 -0.2
comp=Z,1.0nm,0.6s,baz=219,slow=3.0,SNR=3.6

*IDC **22** 15:37:50.4±2.0,55.˚19N×158.˚56W, h0km, mb3.4/2, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=41.0km s-min=26.6km az=157.0*
*AEIC **22** 15:37:56.7±1.5,55.˚20N±0.˚04×158.˚49W±0.˚08, h26km±7km, Error ellipse: s-maj=8.2km s-min=4.0km az=132.0*
*NEIC **22** 15:37:57.8±1.9,55.˚20N±0.˚04×158.˚55W±0.˚08, h35km±2km, ML3.2/40, ML3.2(AEIC), Error ellipse: s-maj=9.4km s-min=3.1km az=308.0*
ISC 22 15:37:55.8±0.9, 55.˚15N±0.˚08×158.˚44W±0.˚05, h30km, n66, σ1♀25/69, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.74**	**244**			**Pb**	**15 38 09.3**	**-0.9**
CNBA						**Sb**	**15 38 20.2**	**+0.2**
CNBA				IAML			15 38 22.7	
	comp=E,714nm,0.7s							
CNBA				IAML			15 38 23.0	
	comp=N,653nm,0.4s							
VNKR	**Veniaminof 5**	**1.02**	**329**			**Pn**	**15 38 14.4**	**+0.2**
VNHG	**Veniaminof 1**	**1.15**	**339**			**Pn**	**15 38 16.5**	**+0.6**
CHGN	**Chignik**	**1.15**	**1**	Pn		**Pn**	**15 38 15.8**	**-0.1**
CHGN				Sn		**Sn**	**15 38 30.0**	**-0.5**
SDPT	**Sand Point**	**1.18**	**280**	Pn		**Pn**	**15 38 15.9**	**-0.3**
SDPT				Sn		**Sn**	**15 38 30.8**	**-0.5**
SDPT				IAML			15 38 32.8	
	comp=N,473nm,1.0s							
SDPT				IAML			15 38 33.6	
	comp=E,354nm,0.8s							
VNSS	**Veniaminof 8**	**1.22**	**332**			**Pn**	**15 38 16.9**	**-0.1**
VNFG	**Fog Glacier, M**	**1.30**	**331**			**Pn**	**15 38 18.5**	**+0.5**
VNFG	**Fog Glacier, M**	**1.30**	**331**	Pn		**Pn**	**15 38 18.7**	**+0.7**
VNFG				IAML			15 38 38.7	
	comp=N,2μm,0.7s							
VNFG				IAML			15 38 44.1	
	comp=E,1μm,0.6s							
CHIR	**Chirikof Islan**	**1.74**	**66**	Pn		**Pb**	**15 38 27.6**	**+0.6**
CHIR				IAML			15 38 56.0	
	comp=E,261nm,1.1s							
CHIR				IAML			15 39 02.6	
	comp=N,223nm,1.0s							
PS1A	**Pavlof South-1**	**1.91**	**279**			**Pn**	**15 38 27.5**	**+1.2**
DOL	**Dolgoi Island**	**1.96**	**271**			**Pn**	**15 38 28.2**	**+1.1**
PS4A	**Pavlof South-4**	**1.96**	**277**			**Pn**	**15 38 28.5**	**+1.4**
PN7A	**Pavlof North-7**	**2.05**	**279**			**Pn**	**15 38 30.5**	**+2.1**
DTNA	**Dutton South F**	**2.19**	**271**			**Pn**	**15 38 30.8**	**+0.7**
DT1	**Dutton Round H**	**2.21**	**270**			**Pn**	**15 38 30.8**	**+0.4**
SII	**Sitkinak Islan**	**2.78**	**58**	Pn		**Pn**	**15 38 38.8**	**+0.5**
SII				IAML			15 39 35.3	
	comp=N,132nm,0.7s							
ISNN	**Isanotski Nort**	**3.09**	**266**			**Pn**	**15 38 44.4**	**+1.8**
ANCK	**Angle Creek**	**3.46**	**27**			**Pn**	**15 38 50.2**	**+2.6**
ACHA	**Angle Creek He**	**3.51**	**28**	Pn		**Pn**	**15 38 49.7**	**+1.3**
OHAK	**Old Harbor**	**3.55**	**52**	Pn		**Pn**	**15 38 48.7**	**-0.1**
OHAK				IAML			15 39 57.0	
	comp=N,30nm,1.2s							
P16K	**Nushagak River**	**3.90**	**3**	Pn		**Pn**	**15 38 53.8**	**+0.2**
O15K	**Ungalikthiuk R**	**4.10**	**350**	Pn		**Pn**	**15 38 56.4**	**-0.1**
KDAK	**Kodiak Island**	**4.18**	**49**	Pn		**Pn**	**15 38 56.3**	**-1.1**
	comp=N,0.5nm,0.3s,baz=162,slow=2.5,SNR=8.9							
KDAK					Sn	**Sn**	**15 39 41.2**	**-4.1**
	comp=N,0.8nm,0.3s,baz=327,slow=7.7,SNR=1.8							
	comp=N,4.2nm,0.7s							
KDAK	**Kodiak Island**	**4.18**	**49**	Pn		**Pn**	**15 38 57.1**	**-0.4**
KDAK				IAML			15 40 08.3	
	comp=N,19nm,1.4s							
KDAK				IAML			15 40 12.8	
	comp=N,19nm,0.8s							
AKUT	**Akutan**	**4.38**	**260**	Pn		**Pn**	**15 39 00.2**	**0.0**
AKUT				IAML			15 40 14.6	
	comp=E,20nm,1.1s							
AKUT				IAML			15 40 21.0	
	comp=N,22nm,1.5s							
O14K	**Tigyukauivet M**	**4.39**	**341**	Pn		**Pn**	**15 39 01.1**	**+0.8**
O14K				IAML			15 40 22.8	
	comp=N,21nm,1.1s							
O14K				IAML			15 41 38.6	
	comp=E,20nm,1.5s							
O16K	**Kokwok River B**	**4.46**	**2**	Pn		**Pn**	**15 39 00.8**	**-0.4**
O16K				IAML			15 40 26.9	
	comp=E,20nm,0.8s							
LVA	**Lava Point**	**4.52**	**260**	Pn		**Pn**	**15 39 02.2**	**0.0**
LVA				IAML			15 40 48.8	
	comp=E,26nm,1.2s							
UNV	**Unalaska Valle**	**4.88**	**258**	Pn		**Pn**	**15 39 07.1**	**0.0**
O18K	**Koktuh Hills**	**5.02**	**19**	Pn		**Pn**	**15 39 08.9**	**-0.2**
O18K				IAML			15 41 53.9	
	comp=N,13nm,1.4s							
N14K	**Kuskokwak Cree**	**5.09**	**341**	Pn		**Pn**	**15 39 10.9**	**+0.9**
N15K	**Kwethluk River**	**5.11**	**351**	Pn		**Pn**	**15 39 11.9**	**+1.7**
N15K				IAML			15 40 53.0	
	comp=E,22nm,0.9s							
N15K				IAML			15 40 54.6	
	comp=N,21nm,0.8s							
N17K	**Nushagak Hills**	**5.43**	**7**	Pn		**Pn**	**15 39 14.8**	**+0.2**
N17K				IAML			15 41 07.5	
	comp=E,12nm,1.4s							
ILSW	**Iliamna Southw**	**5.62**	**28**	Pn		**Pn**	**15 39 20.3**	**+3.0**
N18K	**Kilae Creek**	**5.71**	**13**	Pn		**Pn**	**15 39 20.2**	**+1.7**
M13K	**Dall Lake**	**5.89**	**336**	Pn		**Pn**	**15 39 22.0**	**+1.1**
M16K	**Timber Creek**	**5.89**	**358**	Pn		**Pn**	**15 39 21.9**	**+1.0**
M14K	**Bethel**	**5.92**	**343**	Pn		**Pn**	**15 39 21.4**	**+0.2**
N19K	**Bonanza Creek**	**6.05**	**19**	Pn		**Pn**	**15 39 24.2**	**+0.9**
L14K	**Kuka Creek**	**6.60**	**342**	Pn		**Pn**	**15 39 30.6**	**0.0**
L16K	**Owhat River**	**6.60**	**356**	Pn		**Pn**	**15 39 30.7**	**0.0**
SPIA	**Saint Paul Isl**	**6.90**	**292**	Pn		**Pn**	**15 39 35.7**	**+0.9**
M19K	**Big River Lodg**	**7.09**	**16**	Pn		**Pn**	**15 39 38.4**	**+0.9**
L18K	**Granite Mounta**	**7.14**	**7**	Pn		**Pn**	**15 39 40.0**	**+1.8**
L19K	**White Mountain**	**7.29**	**13**	Pn		**Pn**	**15 39 41.3**	**+1.1**
K15K	**Wolf Creek Mou**	**7.34**	**349**	Pn		**Pn**	**15 39 41.7**	**+0.9**
K13K	**Kusilvak Mount**	**7.53**	**337**	Pn		**Pn**	**15 39 44.7**	**+1.2**
K17K	**Iditarod**	**7.59**	**0**	Pn		**Pn**	**15 39 43.9**	**-0.3**
J14K	**Nanvaranak Lak**	**8.06**	**343**	Pn		**Pn**	**15 39 49.6**	**-1.1**
J16K	**Anvik River**	**8.23**	**353**	Pn		**Pn**	**15 39 53.7**	**+0.7**
HIN	**Hinchinbrook I**	**8.26**	**46**	Pn		**Pn**	**15 39 56.3**	**+2.8**
J17K	**VABM Dome**	**8.28**	**358**	Pn		**Pn**	**15 39 53.8**	**+0.2**
J18K	**Innoko River**	**8.38**	**5**	Pn		**Pn**	**15 39 56.2**	**+1.1**
K20K	**Telida**	**8.53**	**13**	Pn		**Pn**	**15 39 58.9**	**+1.8**
I17K	**Unalakleet**	**8.83**	**353**	Pn		**Pn**	**15 40 02.0**	**+0.7**
CAST	**Castle Rocks**	**8.90**	**19**	Pn		**Pn**	**15 40 04.3**	**+2.1**
J19K	**Poorman**	**8.98**	**8**	Pn		**Pn**	**15 40 04.7**	**+1.4**
RAGM	**Ragged Mountai**	**9.02**	**49**	Pn		**Pn**	**15 40 05.5**	**+1.5**
WRH	**Wood River Hil**	**10.68**	**25**	Pn		**Pn**	**15 40 26.7**	**+0.1**
H21K	**Melozitna Rive**	**10.89**	**12**	Pn		**Pn**	**15 40 30.0**	**+0.5**
ILAR	**Eielson Array**	**11.23**	**26**	Pn		Pn	15 40 25.6	-8.4
	comp=E,0.1nm,0.3s,baz=214,slow=14,SNR=5.8							
	comp=E,0.1nm,0.7s							
KIWB	**Kanaga Island**	**11.62**	**261**	Pn		**Pn**	**15 40 41.2**	**+1.8**
F19K	**Shaleruckik Mo**	**11.72**	**1**	Pn		**Pn**	**15 40 41.9**	**+1.1**
H24K	**Noodor Dome**	**11.89**	**21**	Pn		**Pn**	**15 40 43.3**	**+0.2**
PETK	**Petropavlovsk-**	**25.47**	**284**	P		**P**	**15 43 19.1**	**-1.8**
	comp=E,1.6nm,1.0s,baz=87,slow=10,SNR=2.1							
	comp=E,1.6nm,1.0s							
TXAR	**Lajitas Array**	**46.51**	**101**	P		**P**	**15 46 19.7**	**-0.7**
	comp=E,0.1nm,0.5s,baz=320,slow=7.0,SNR=3.6							
	comp=E,0.1nm,0.5s							

KOLA 22 15:52:55.0, 67.˚63N×34.˚07E, h0km, ML1.4, Error ellipse: s-maj=2.9km s-min=1.2km az=130.0, Khibiny, mines Koashva, Nyurkpakh, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
APA	**Apatity**	**0.26**	**257**	P		Pg	15 52 59.8	-0.3
APA				S		Sg	15 53 03.4	0.0
LVZ	**Lovozero**	**0.35**	**39**	P		Pg	15 53 00.6	-1.1
LVZ				S		Sg	15 53 06.0	-0.2
APA0	**Apatity Array**	**0.41**	**267**	P		Pg	15 53 02.3	-0.6
APA0				S		Sg	15 53 07.7	-0.5
KVDA	**Kovda**	**1.05**	**207**	P		Pg	15 53 14.0	-1.1
KVDA				S		Sg	15 53 27.6	-1.1
TERR	**Teriberka**	**1.63**	**13**	P		Pn	15 53 23.7	-1.1
TERR				S		Sn	15 53 45.2	-1.3
VADS	**Vadso**	**3.03**	**328**	S		Sn	15 54 20.1	-0.9

*BER **22** 15:53:45.6±0.9, 67.˚54N×34.˚64E, h0km, Suspected explosion*
KOLA 22 15:53:46.0±0.6, 67.˚62N±0.˚02×34.˚15E±0.˚06, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
APA	**Apatity**	**0.29**	**261**	P		Pg	15 53 50.7	-0.8
APA				S		Sg	15 53 55.1	-0.1
LVZ	**Lovozero**	**0.34**	**34**	P		Pg	15 53 52.4	-0.1
LVZ				S		Sg	15 53 57.4	+0.5
APA0	**Apatity Array**	**0.44**	**269**	P		Pg	15 53 53.7	-0.8
APA0				S		Sg	15 54 00.1	0.0
KVDA	**Kovda**	**1.05**	**209**	P		Pg	15 54 05.7	-0.5
KVDA				S		Sg	15 54 18.2	-1.7
TERR	**Teriberka**	**1.63**	**12**	P		Pn	15 54 15.0	-0.9
TERR				S		Sn	15 54 35.3	-2.3
VADS	**Vadso**	**3.05**	**328**	*eP*		Pn	15 54 36.0	+0.6
VADS				*eS*		Sn	15 55 12.1	-0.5
KEV	**Kevo**	**3.38**	**313**	*eS*		Sn	15 55 20.3	-0.3
ARA0	**ARCESS Array S**	**3.71**	**305**	*eP*		Pn	15 54 44.8	+0.4
ARCES	**ARCESS Array B**	**3.71**	**305**	P		Pn	15 54 44.6	+0.2
ARCES				S		Sn	15 55 27.1	-1.7
HEF	**Hetta**	**4.02**	**286**	*eS*		Sn	15 55 36.7	+0.2
LANU	**Lannavaara**	**4.62**	**281**	*eP*		Pn	15 54 56.7	-0.3
FAUS	**Fauske**	**7.23**	**277**	S		Sn	15 56 53.6	-1.9

*GCG **22** 16:03:49.7±1.2, 13.˚31N×90.˚61W, h19km±6km, MD5.0, Presumed earthquake*
*CATAC **22** 16:03:50.7±0.5, 13.˚N±2.˚×9.˚1W±.˚, h25km±4km, M4.4/27, MLv4.4/27, Error ellipse: s-maj=5.3km s-min=3.7km az=30.8, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-0.31; Mθθ-0.47; Mφφ0.77; Mrθ0.55; Mrφ 1.35; Mθφ-0.92; Fault plane solution: M0 1.85705×10^15 NP1: φs350.74248°, δ79.11964°, λ-145.71829°. NP2: φs253.41028°, δ56.41752°, λ-13.09560°. Principal axes: T 1.7717, Plg14.9309°, Azm117.9485°; N 0.1603, Plg54.2353°, Azm6.2199°; P -1.9320, Plg31.6413°, Azm217.4059°; confirmed*
*SNET **22** 16:03:51.8±1.7, 13.˚49N×90.˚57W, h45km, ML4.2, Presumed earthquake*

ISC 22 16:03:49.2±1.6, 13.˚35N±0.˚05×90.˚48W±0.˚04, h4km±11km, n66, σ1♀06/89, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.66**	**43**	P		**Pn**	**16 04 04.5**	**-0.9**
PCG5	**San Vicente Pa**	**0.86**	**6**	*i* P		**Pn**	**16 04 08.7**	**+0.3**
NUBE	**Las Nubes**	**0.87**	**51**	P		**Pn**	**16 04 07.7**	**-0.7**
NUBE	**Las Nubes**	**0.87**	**51**	*i* P		**Pn**	**16 04 07.7**	**-0.7**
NUBE	**Las Nubes**	**0.87**	**51**	*i* P		**Pn**	**16 04 07.7**	**-0.7**
FG8	**Yepocapa, Chim**	**0.90**	**355**	*i* P		**Pn**	**16 04 10.8**	**+1.9**
FG16	**Alotenango, Sa**	**0.91**	**358**	*i* P		**Pn**	**16 04 10.8**	**+1.7**
LOAL	**Lomas de Alarc**	**0.93**	**46**	P		**Pn**	**16 04 09.1**	**0.0**
LOAL				S		**Sn**	**16 04 22.5**	**-0.5**
SLOZ	**Alcaldia de Sa**	**0.95**	**45**	P		**Pn**	**16 04 09.2**	**-0.2**
SLOZ				S		**Sn**	**16 04 23.1**	**-0.3**
CEVE	**Cerro Verde**	**0.95**	**60**	P		**Pn**	**16 04 09.4**	**-0.3**
SBLS	**San Blas**	**0.96**	**60**	*i* P		**Pn**	**16 04 09.3**	**-0.4**
JAYA	**Jayaque - finc**	**1.04**	**73**	*i* P		**Pb**	**16 04 10.1**	**+0.2**
JAYA				S		**Sn**	**16 04 24.7**	**-1.2**
JAYA	**Jayaque - finc**	**1.04**	**73**	*i* P		**Pb**	**16 04 10.1**	**+0.2**
JAYA	**Jayaque - finc**	**1.04**	**73**	*i* P		**Pb**	**16 04 10.0**	**0.0**
RBDL	**Robledal**	**1.07**	**45**	*i* P		**Pn**	**16 04 11.4**	**+0.2**
ESSG	**Sabana Grande**	**1.08**	**341**	*i* P		**Pg**	**16 04 09.3**	**-0.7**
UNIC	**Universidad Ca**	**1.09**	**55**	P		**Pn**	**16 04 11.2**	**-0.2**
UNIC				S		**Sn**	**16 04 26.6**	**-0.5**
LALI	**Alcalda de L**	**1.13**	**83**	P		**Pb**	**16 04 11.7**	**+0.4**
LALI				S		**Sn**	**16 04 27.1**	**-0.8**
CEDA	**San Andres**	**1.14**	**67**	P		**Pn**	**16 04 12.2**	**+0.1**
CEDA				S		**Sn**	**16 04 28.3**	**+0.1**
CEDA	**San Andres**	**1.14**	**67**	*i* P		**Pn**	**16 04 12.7**	**+0.7**
CEDA				*eS*		**Sn**	**16 04 27.6**	**-0.5**
PMON	**Piamonte**	**1.18**	**72**	P		**Pb**	**16 04 12.5**	**+0.2**
PMON				S		**Sn**	**16 04 29.1**	**-0.2**
PIC2	**El Picacho**	**1.25**	**72**	*i* P		**Pb**	**16 04 13.3**	**-0.1**
UEES	**Universidad Ev**	**1.25**	**73**	P		**Pb**	**16 04 13.5**	**-0.1**
UEES				S		**Sn**	**16 04 31.5**	**+0.4**
PANCS	**Alcalda de**	**1.29**	**78**	P		**Pn**	**16 04 14.3**	**+0.2**
PANCS				S		**Sb**	**16 04 30.5**	**-0.4**
LOMA	**Loma Larga**	**1.30**	**77**	P		**Pg**	**16 04 14.1**	**-0.1**
LOMA				S		**Sn**	**16 04 32.1**	**-0.1**
LOMA	**Loma Larga**	**1.30**	**77**	*i* P		**Pn**	**16 04 14.4**	**+0.1**
LOMA				*eS*		**Sn**	**16 04 34.8**	**+2.6**
STG5	**El Palmar, Qui**	**1.34**	**321**	*i* P		**Pb**	**16 04 17.4**	**+2.4**
LFU	**La Fuente**	**1.38**	**73**	*i* P		**Pb**	**16 04 15.9**	**+0.2**
STG8	**El Palmar, Qui**	**1.38**	**322**	*i* P		**Pb**	**16 04 18.5**	**+2.7**
MTO3	**Montecristo**	**1.50**	**46**	P		**Pb**	**16 04 17.7**	**-0.1**
MTO3				S		**Sn**	**16 04 38.5**	**+1.2**
MTO3	**Montecristo**	**1.50**	**46**	*i* P		**Pb**	**16 04 17.6**	**-0.1**
PAVA	**Las Pavas**	**1.54**	**76**	P		**Pg**	**16 04 18.4**	**-0.3**
PAVA	**Las Pavas**	**1.54**	**76**	*i* P		**Pg**	**16 04 18.4**	**-0.3**
COEG	**Centro de Oper**	**1.57**	**80**	P		**Pn**	**16 04 18.3**	**+0.3**
COEG				S		**Sg**	**16 04 39.4**	**-0.4**
ESQI	**Esquipulas**	**1.63**	**42**	P		**Pb**	**16 04 19.5**	**-0.4**
ESQI	**Esquipulas**	**1.63**	**42**	*i* P		**Pb**	**16 04 19.2**	**-0.7**
ZAFR2	**Estanzuela, Za**	**1.64**	**42**	*i* P		**Pg**	**16 04 22.3**	**+1.7**
APG	**El Apazote**	**1.64**	**0**	*i* P		**Pb**	**16 04 19.8**	**-0.4**
APG				*i* S		**Sn**	**16 04 40.6**	**-0.2**
TECO	**Alcaldia de Te**	**1.66**	**83**	P		**Pb**	**16 04 20.0**	**-0.4**
TECO				S		**Sg**	**16 04 41.5**	**-1.1**
RTAL	**Retalhuleu**	**1.66**	**315**	P		**Pn**	**16 04 17.1**	**-2.1**
RTAL				S		**Sn**	**16 04 36.7**	**-4.3**
PACA	**Pacayal**	**2.10**	**87**	P		**Pn**	**16 04 25.8**	**+0.5**
RANC	**El Ranchito**	**2.13**	**88**	P		**Pn**	**16 04 26.1**	**+0.4**
SARH	**Santa Rosa de**	**2.18**	**49**	P		**Pn**	**16 04 27.5**	**+1.1**
SARH	**Santa Rosa de**	**2.18**	**49**	*i* P		**Pn**	**16 04 27.5**	**+1.1**
INTP	**Intipuca**	**2.36**	**93**	*i* P		**Pn**	**16 04 29.3**	**+0.5**
LCND	**La Caada**	**2.52**	**91**	*i* P		**Pn**	**16 04 31.6**	**+0.7**
CNCH	**Conchagua**	**2.57**	**91**	P		**Pn**	**16 04 31.9**	**+0.1**
CNCH				S		**Sn**	**16 05 04.3**	**+0.6**
CNCH	**Conchagua**	**2.57**	**91**	*i* P		**Pn**	**16 04 32.1**	**+0.3**
CSJN	**Cosiguina Volc**	**2.87**	**97**	P		**Pn**	**16 04 36.1**	**+0.7**
CSGN				S		**Sn**	**16 05 12.1**	**+1.3**
CRIN	**San Cristobal**	**3.40**	**101**	P		**Pn**	**16 04 44.2**	**+1.0**
HOYN	**Al Sur del Vol**	**3.63**	**102**	S		**Sn**	**16 05 30.3**	**+0.5**
CNGA	**Al SSO del Vol**	**3.78**	**103**	P		**Pn**	**16 04 50.7**	**+2.4**
CNGN	**Cerro Negro**	**3.78**	**103**	P		**Pn**	**16 04 50.8**	**+2.4**
MACN	**El Madrono**	**3.81**	**103**	P		**Pn**	**16 04 49.4**	**+0.7**
LEVN	**Ruinas Leon Vi**	**3.88**	**104**	P		**Pn**	**16 04 50.2**	**+0.5**
OCON	**Estacion meteo**	**3.90**	**85**	S		**Sn**	**16 05 37.3**	**+1.0**
MOM3	**MOM3**	**3.95**	**102**	P		**Pn**	**16 04 50.8**	**+0.2**
MOMN	**Momotombo**	**3.95**	**103**	S		**Sn**	**16 05 35.7**	**-1.9**
COPN	**Copaltepe**	**3.96**	**107**	P		**Pn**	**16 04 51.2**	**+0.4**
MOM2	**El Cardon**	**4.00**	**103**	P		**Pn**	**16 04 51.7**	**+0.4**
MOM2				S		**Sn**	**16 05 39.3**	**+0.7**
LIMN	**Finca el Limon**	**4.01**	**94**	P		**Pn**	**16 04 51.8**	**+0.2**
LIMN				S		**Sn**	**16 05 39.0**	**-0.2**
RCON	**San Juan de Ri**	**4.20**	**88**	P		**Pn**	**16 04 54.5**	**+0.2**
RCON				S		**Sn**	**16 05 44.7**	**+0.7**
MGAN	**Managua**	**4.29**	**106**	S		**Sn**	**16 05 48.4**	**-1.7**
MAS3	**Al N del Volca**	**4.40**	**107**	S		**Sn**	**16 05 48.5**	**-0.1**
MATN	**Matagalpa**	**4.45**	**95**	P		**Pn**	**16 04 57

KURBB	**Kurchatov Arra**	**13.08**	**21**	Pn	**Pn**	**16 09 39.8**	**-0.5**
	baz=212,slow=12,SNR=1.5								
KURBB				Lg	Lg	16 13 29.0	
	baz=215,slow=29								
AKTO	**Aktyubinsk**	**14.98**	**326**	Pn	Pn	16 09 58.5	-7.8
	0.3nm,0.3s,baz=144,slow=14,SNR=4.1								
	0.9nm,0.5s								
ZALV	**Zalesovo Beam**	**17.95**	**27**	P	**P**	**16 10 42.2**	**-2.4**
	0.2nm,0.3s,baz=222,slow=13,SNR=6.0								
	0.2nm,0.3s								
HFS	**Hagfors**	**41.43**	**320**	P	P	16 14 15.7	-5.2
	1.9nm,0.7s,baz=108,slow=8.0,SNR=4.4								
	1.9nm,0.7s								
NOA	**NORSAR Array B**	**42.71**	**322**	P	P	16 14 26.0	-5.4
	0.3nm,0.5s,baz=111,slow=6.1,SNR=1.8								
	0.3nm,0.5s								
WRA	**Warramunga Arr**	**83.08**	**122**	P	**P**	**16 19 01.2**	**+0.6**
	0.5nm,0.6s,baz=324,slow=4.9,SNR=5.1								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**85.44**	**125**	P	**P**	**16 19 12.7**	**+0.2**
	0.4nm,0.7s,baz=311,slow=5.2,SNR=4.8								
	0.4nm,0.7s								

IDC 22 16:09:19.4±2.9, 6°27S×130°06E, h96km±40km, mb3.1/1, mbtmp3.5/5, Error ellipse: s-maj=75.0km s-min=21.9km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.50**	**13**	P	Pn	16 10 38.9	0.0
	7.0nm,0.2s,baz=8.6,slow=3.5,SNR=50						
SIJI				S	Sn	16 11 32.1	-8.8
	16nm,0.2s,baz=196,slow=19,SNR=8.4						
FITZ	**Fitzroy Crossi**	**12.53**	**200**	P	Pn	16 12 14.9	+0.7
	1.4nm,0.8s,baz=28,slow=11,SNR=14						
FITZ				S	Sn	16 14 22.6	-9.4
	2.0nm,0.6s,baz=93,slow=21,SNR=2.0						
WRA	**Warramunga Arr**	**14.21**	**163**	P	Pn	16 12 34.6	-1.8
	0.3nm,0.4s,baz=344,slow=13,SNR=8.2						
WRA				S	Sn	16 15 01.2	-12
	0.4nm,0.4s,baz=334,slow=22,SNR=7.3						
ASAR	**Alice Springs**	**17.69**	**168**	P	Pn	16 13 19.9	+0.1
	0.3nm,0.3s,baz=350,slow=9.9,SNR=35						
ASAR				S	Sn	16 16 28.9	-8.0
	0.2nm,0.3s,baz=336,slow=15,SNR=5.3						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	16 20 06.2	0.0
	0.2nm,0.3s,baz=121,slow=7.2,SNR=5.3						
	0.2nm,0.3s						

IDC 22 16:20:39.9±0.7, 5°86N×125°72E, h125km±6km, mb3.4/11, mbtmp3.8/12, MS3.5/1, Error ellipse: s-maj=29.8km s-min=9.3km az=78.0
MAN 22 16:20:40.0, 5°78N×125°71E, h121km, MS4.2
NEIC 22 16:20:40.9±2.5, 5°83N±0°07×125°89E±0°08, h119km±6km, mb4.0/24, Error ellipse: s-maj=13.3km s-min=6.8km az=54.0
DJA 22 16:20:41.8±0.9, 6°N±6°×12°6E±°, h109km±22km, M4.4/13, mB4.8/7, mb4.7/7, MLv4.7/13, Mw(mB)4.0/7
ISC 22 16:20:40.1±0.7, 5°80N±0°04×125°81E±0°05, h120km±7km, n75, σ1°92/91, mb3.9/21, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.90**	**288**	*i* P	**Pn**	**16 21 01.4**	**+0.2**
GSPH				*i* S	**Sn**	**16 21 16.0**	**-1.2**
DAV	**Davao City (W)**	**1.28**	**350**	P	**Pn**	**16 21 05.7**	**+0.7**
	238nm,0.5s,baz=350,slow=9.7,SNR=1.6						
DAV				S	**Sn**	**16 21 23.3**	**-0.7**
	680nm,0.3s,baz=141,slow=23,SNR=19						
DAV	**Davao City (W)**	**1.28**	**350**		**Pn**	**16 21 05.3**	**+0.3**
DAV	**Davao City (W)**	**1.28**	**350**	P	**Pn**	**16 21 06.5**	**+1.5**
DMPH	**Davao City--Mi**	**1.31**	**347**	*eP*	**Pn**	**16 21 06.5**	**+1.2**
DMPH				*i* S	**Sn**	**16 21 19.3**	**-5.2**
KCP	**Kidapawan**	**1.39**	**329**	*i* P	**Pn**	**16 21 07.5**	**+1.1**
KCP				*i* S	**Sn**	**16 21 27.4**	**+1.1**
CDOP	**Cateel, Davao**	**2.07**	**18**	*i* P	**Pn**	**16 21 15.5**	**+1.1**
CDOP				*i* S	**Sn**	**16 21 42.0**	**+1.4**
CTBH	**Cotabato--PC H**	**2.10**	**312**	*eP*	**Pn**	**16 21 14.8**	**+0.1**
CTBH				*i* S	**Sn**	**16 21 40.5**	**-0.7**
SGSI	**Sangihe**	**2.12**	**187**	P	**Pn**	**16 21 17.0**	**+1.9**
SGSI				S	**Sn**	**16 21 44.9**	**+3.0**
BUKP	**Musuan**	**2.19**	**340**	*i* P	**Pn**	**16 21 16.6**	**+0.6**
BUKP				*i* S	**Sn**	**16 21 45.3**	**+1.8**
BIPH	**Bislig**	**2.43**	**13**	*eP*	**Pn**	**16 21 21.4**	**+2.4**
BIPH				*eS*	**Sn**	**16 21 54.8**	**+5.9**
CGP	**Cagayan de Oro**	**2.86**	**337**	*eP*	**Pn**	**16 21 24.9**	**+0.3**
CGP				*i* S	**Sn**	**16 22 02.1**	**+3.4**
PAGZ	**Pagadian**	**3.15**	**310**	*eP*	**Pn**	**16 21 29.6**	**+1.2**
TSSP	**Tandag City**	**3.24**	**7**	*eP*	**Pn**	**16 21 30.6**	**+0.9**
TSSP				*eS*	**Sn**	**16 22 06.2**	**-1.6**
DCPH	**Dipolog City**	**3.68**	**319**	*eP*	Pn	16 21 30.0	-5.4
IPIL	**Ipil**	**3.77**	**302**	*i* P	**Pn**	**16 21 38.9**	**+2.4**
IPIL				*eS*	**Sn**	**16 22 20.9**	**+0.6**
LSIP	**Lazi, Siquijor**	**3.95**	**327**	*i* P	**Pn**	**16 21 40.5**	**+1.6**
SCPH	**Surigao**	**3.97**	**355**	*eP*	**Pn**	**16 21 41.7**	**+2.5**
SCPH				*eS*	**Sn**	**16 22 30.3**	**+5.3**
TBP	**Tagbilaran**	**4.32**	**334**	*eP*	**Pn**	**16 21 44.1**	**+0.2**
SNPH	**Sibulan**	**4.34**	**324**	*eP*	**Pn**	**16 21 47.1**	**+2.8**
MNI	**Manado**	**4.43**	**193**	P	**Pn**	**16 21 47.7**	**+2.2**
LLP	**Lapu-Lapu**	**4.84**	**338**	*eP*	**Pn**	**16 21 51.6**	**+0.7**
LLP				*eS*	**Sn**	**16 22 46.8**	**+0.8**
TNTI	**Ternate**	**5.23**	**163**	Pn	**Pn**	**16 21 56.5**	**+0.3**
TNTI	**Ternate**	**5.23**	**163**	P	**Pn**	**16 21 57.1**	**+0.9**
	0.4nm1μm47nm,0.7s						
PLP	**Palo**	**5.39**	**351**	*eP*	**Pn**	**16 21 59.1**	**+0.7**
PLP				*eS*	**Sn**	**16 22 55.5**	**-3.8**
GTOI	**Gorontalo**	**5.84**	**209**	P	**Pn**	**16 22 05.7**	**+1.3**
	0.5nm56nm,0.5s						
GTOI				S	**Sn**	**16 23 08.8**	**-1.4**
	0.5nm56nm,0.5s						
TOLI2	**Tolitoli**	**6.84**	**227**	Pn	**Pn**	**16 22 18.4**	**+0.4**
MYLDM	**Lahad Datu**	**7.30**	**265**	Pn	**Pn**	**16 22 27.5**	**+3.4**
MYLDM	**Lahad Datu**	**7.30**	**265**	P	**Pn**	**16 22 27.5**	**+3.4**
SIJI	**Sorong**	**8.58**	**140**	P	**Pn**	**16 22 42.0**	**+0.4**
	4.3nm,0.4s,baz=334,slow=19,SNR=9.4						
SIJI				S	**Sn**	**16 24 14.0**	**-2.7**
	4.3nm,0.6s,baz=190,slow=24,SNR=1.5						
GQP	**Guinayangan**	**8.71**	**338**	*eP*	**Pn**	**16 22 46.1**	**+3.0**
LQP	**Lukban**	**9.26**	**333**	*eP*	**Pn**	**16 22 54.6**	**+3.8**
FAKI	**Fak Fak**	**10.79**	**143**	Pn	**Pn**	**16 23 11.0**	**-0.4**
BATI	**Baumata**	**16.05**	**188**	P	**Pn**	**16 24 17.7**	**-1.4**
	24nm,0.4s,baz=46,slow=3.9,SNR=5.2						
YULB	**Yu-li**	**18.02**	**347**	P	**P**	**16 24 40.5**	**-1.3**
YULB				IAmb	IAmb	16 24 47.2	
	comp=Z,8.1nm,1.1s						
TPUB	**Ta-pu**	**18.10**	**345**	P	**P**	**16 24 41.2**	**-1.5**
TPUB				IAmb	IAmb	16 24 54.0	
	comp=Z,8.5nm,0.9s						
SSLB	**Suanglung**	**18.48**	**346**	P	**P**	**16 24 45.9**	**-1.0**
MTN	**Manton Dam**	**19.27**	**164**	P	**P**	**16 24 52.1**	**-3.4**
JOW	**Kunigami**	**21.05**	**6**	P	**P**	**16 25 15.2**	**+0.6**
JOW				IAmb	IAmb	16 25 16.5	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**21.54**	**172**	P	**P**	**16 25 21.3**	**+1.4**
KNRA				IAmb	IAmb	16 25 24.2	
	comp=Z,14nm,1.1s						
LEM	**Lembang**	**22.06**	**236**	LR	LR	16 35 15.0	
	comp=Z,106nm,18.6s,baz=193,slow=40						
FITZ	**Fitzroy Crossi**	**23.75**	**180**	P	**P**	**16 25 41.7**	**+0.2**
	comp=Z,2.8nm,0.3s,baz=7.6,slow=8.3,SNR=20						
	comp=Z,2.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**23.75**	**180**	P	**P**	**16 25 41.9**	**+0.3**
WB0	**Warramunga Arr**	**26.78**	**162**	P	**P**	**16 26 09.0**	**0.0**
WB0				IAmb	IAmb	16 26 36.1	
	comp=Z,5.1nm,0.9s						
WRA	**Warramunga Arr**	**26.93**	**162**	P	**P**	**16 26 09.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=346,slow=10,SNR=9.4						
	comp=Z,0.2nm,0.3s						
WR8	**Warramunga Arr**	**26.99**	**162**	P	**P**	**16 26 11.2**	**+0.3**
WR8				IAmb	IAmb	16 26 27.4	
	comp=Z,3.6nm,0.9s						
JMN	**Monobe**	**28.78**	**14**	P	**P**	**16 26 26.8**	**+0.1**
JMN				IAmb	IAmb	16 26 35.1	
	comp=Z,4.5nm,0.9s						
AS31	**Alice Springs**	**30.34**	**165**	P	**P**	**16 26 41.5**	**+0.9**
ASAR	**Alice Springs**	**30.34**	**165**	P	**P**	**16 26 41.1**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=342,slow=7.3,SNR=17						
ASAR				PcP	**PcP**	**16 29 39.2**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=345,slow=2.6,SNR=4.9						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**30.34**	**165**	P	**P**	**16 26 40.6**	**0.0**
KSRS	**Korea Array**	**31.56**	**3**	P	**P**	**16 26 50.2**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=183,slow=9.6,SNR=8.1						
	comp=Z,0.7nm,0.4s						
MJAR	**Matsushiro Arr**	**32.64**	**19**	P	**P**	**16 26 59.2**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=191,slow=9.0,SNR=5.3						
	comp=Z,1.1nm,0.8s						
MORW	**Morawa**	**35.92**	**195**	P	**P**	**16 27 28.4**	**-0.6**
INKA	**Innaminka**	**36.34**	**157**	P	**P**	**16 27 32.2**	**-0.3**
FORT	**Forrest**	**36.44**	**177**	P	**P**	**16 27 34.8**	**+1.5**
USA0B	**Ussuriysk Arra**	**38.63**	**7**	P	**P**	**16 27 52.5**	**+0.9**
USA0B				IAmb	IAmb	16 27 53.0	
	comp=Z,3.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**38.63**	**7**	P	**P**	**16 27 51.5**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=190,slow=6.9,SNR=16						
	comp=Z,2.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**38.63**	**7**	P	**P**	**16 27 52.1**	**+0.4**
NWAO	**Narrogin (SRO)**	**39.37**	**191**	P	**P**	**16 27 57.6**	**-0.3**
BBOO	**Buckleboo**	**39.62**	**166**	P	**P**	**16 28 01.0**	**+1.0**
STKA	**Stephens Creek**	**40.38**	**159**	P	**P**	**16 28 07.4**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=342,slow=7.5,SNR=6.4						
	comp=Z,1.0nm,0.4s						
EVN	**Everest**	**43.04**	**305**	P	**P**	**16 28 30.9**	**+2.0**
PETK	**Petropavlovsk-**	**53.88**	**23**	P	**P**	**16 29 49.9**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=230,slow=0.9,SNR=6.4						
	comp=Z,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**53.88**	**23**	P	**P**	**16 29 52.0**	**+1.1**
MKAR	**Makanchi Array**	**55.34**	**325**	P	**P**	**16 29 59.0**	**-2.6**
	comp=Z,0.5nm,0.4s,baz=118,slow=8.0,SNR=12						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**55.34**	**325**	P	**P**	**16 29 59.8**	**-1.7**
ZALV	**Zalesovo Beam**	**58.34**	**333**	P	**P**	**16 30 19.3**	**-3.1**
	comp=Z,0.3nm,0.4s,baz=112,slow=8.0,SNR=2.0						
	comp=Z,0.3nm,0.4s						
TIXI	**Tiksi**	**65.80**	**1**	P	**P**	**16 31 10.9**	**-1.1**
CASY	**Casey**	**72.75**	**186**	P	**P**	**16 31 56.8**	**+1.9**
CASY				IAmb	IAmb	16 32 18.0	
	comp=Z,2.0nm,0.9s						
C19K	**Lookout Ridge**	**79.14**	**21**	P	**P**	**16 32 32.3**	**+1.1**
C19K				IAmb	IAmb	16 32 43.8	
	comp=Z,2.2nm,0.9s						
D19K	**Kuna River**	**79.54**	**21**	P	**P**	**16 32 33.9**	**+0.5**
D19K				IAmb	IAmb	16 32 35.8	
	comp=Z,2.4nm,0.8s						
B21K	**Ikpikpuk River**	**80.96**	**20**	P	**P**	**16 32 41.9**	**+0.9**
C23K	**Itkillik River**	**82.37**	**20**	P	**P**	**16 32 48.8**	**+0.5**
C23K				IAmb	IAmb	16 32 49.7	
	comp=Z,1.4nm,0.7s						
ILAR	**Eielson Array**	**83.64**	**26**	P	**P**	**16 32 53.5**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=223,slow=5.1,SNR=4.6						
	comp=Z,0.2nm,0.6s						
TRQ	**Mont Tremblant**	**125.12**	**17**	PKPdf	**PKPdf**	**16 39 23.5**	**-3.2**

IDC 22 16:26:22.7±2.1, 1°28N×125°75E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=220.9km s-min=25.2km az=65.0
DJA 22 16:26:32.3±0.3, 2°S±3°×12°0E±°, h10km, M2.6/11, MLv2.6/11
ISC 22 16:26:31.0±1.5, 1°6S±0°1×120°59E±0°09, h10km, n6, σ2°31/4, mb3.2/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**1.00**	**311**	P	**Pn**	**16 26 51.4**	**+0.2**
APSI	**Ampana**	**1.25**	**58**	P	**Pn**	**16 26 55.5**	**+1.0**
MMSI	**Mamuju**	**2.01**	**236**	P	**Pn**	**16 27 06.2**	**+1.1**
WRA	**Warramunga Arr**	**22.67**	**145**	P	P	16 31 26.3	-6.5
	0.4nm,0.4s,baz=335,slow=11,SNR=4.7						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.47**	**151**	P	**P**	**16 31 57.8**	**-1.7**
	0.2nm,0.6s,baz=352,slow=7.7,SNR=5.3						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.72**	**330**	P	P	16 36 24.4	-4.6
	0.5nm,0.5s,baz=118,slow=7.8,SNR=8.7						
	0.5nm,0.5s						

ATH 22 16:28:50.8, 39°84N×19°62E, h9km±1km, ML2.9/12, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
NEIC 22 16:28:51.5±1.7, 39°67N±0°07×19°76E±0°07, h10km±2km, ML2.7/14, Error ellipse: s-maj=11.7km s-min=8.6km az=345.0
TIR 22 16:28:56.6, 39°62N×19°82E, h16km±4km, Ml2.8/4
THE 22 16:28:57.6, 40°N±2°×2°0E±°, h11km±3km, M2.6/12, MLh2.6/12
ISC 22 16:28:53.8±0.9, 39°69N±0°02×19°80E±0°03, h4km±7km, n47, σ1°65/75, 1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.02**	**7**	Pg	Pg	16 28 53.6	-1.0
KEK				Sg	**Sg**	**16 28 54.1**	**-1.1**
SRN	**Sarande**	**0.25**	**40**	⇓Pg	**Pg**	**16 28 58.3**	**-0.2**
SRN				Sg	**Sg**	**16 29 02.1**	**+0.3**
SRN				AML	AML	16 29 03.8	
	4.9nm,0.3s						
LFKM	**Lefkimmi**	**0.32**	**140**	P	**Pg**	**16 29 01.0**	**+1.1**
LFKM				S	**Sg**	**16 29 04.9**	**+0.8**
IGT	**Igoumenitsa**	**0.44**	**111**	Pg	**Pg**	**16 29 02.9**	**+0.6**
IGT				Sg	**Sb**	**16 29 11.1**	**0.0**
IGT	**Igoumenitsa**	**0.44**	**111**	P	**Pg**	**16 29 02.5**	**+0.2**
IGT				S	**Sg**	**16 29 07.2**	**-0.9**
IGT	**Igoumenitsa**	**0.44**	**111**	P	**Pg**	**16 29 03.0**	**+0.7**
IGT				S	**Sb**	**16 29 11.3**	**+0.1**
VLO	**Vlora**	**0.81**	**344**	Pg	**Pn**	**16 29 13.9**	**+1.9**
VLO				Sg	**Sn**	**16 29 25.5**	**+1.1**
VLO				AML	AML	16 29 33.8	
	1.7nm,0.4s						
JAN	**Janina**	**0.82**	**92**	P	**Pb**	**16 29 10.0**	**-0.5**
JAN				S	**Sb**	**16 29 20.2**	**-1.7**
JAN	**Janina**	**0.82**	**92**	P	**Pb**	**16 29 09.6**	**-0.9**
JAN				S	**Sn**	**16 29 22.6**	**-2.0**
PRMD	**Pramanda**	**1.02**	**99**	P	**Pb**	**16 29 13.8**	**-0.2**
PRMD				S	**Sb**	**16 29 25.7**	**-2.0**
PRMD	**Pramanda**	**1.02**	**99**	P	**Pb**	**16 29 12.9**	**-1.1**
PRMD				S	**Sn**	**16 29 29.1**	**-0.5**
TSLK	**Tsoukalades, L**	**1.09**	**142**	P	**Pb**	**16 29 15.3**	**+0.1**
TSLK				S	**Sb**	**16 29 28.7**	**-1.1**
TSLK	**Tsoukalades, L**	**1.09**	**142**	P	**Pb**	**16 29 15.1**	**-0.1**
TSLK				S	**Sg**	**16 29 31.6**	**+2.8**
LKD2	**Lefkada island**	**1.12**	**143**	Pg	**Pb**	**16 29 15.7**	**0.0**
LKD2				Sg	**Sg**	**16 29 32.7**	**+2.9**
LKD2	**Lefkada island**	**1.12**	**143**	P	**Pb**	**16 29 15.9**	**+0.2**
LKD2				S	**Sb**	**16 29 30.2**	**-0.5**
LKD2	**Lefkada island**	**1.12**	**143**	P	**Pb**	**16 29 14.9**	**-0.8**
LKD2				S	**Sg**	**16 29 33.4**	**+3.6**
DRAG	**Dragano-Lefkad**	**1.17**	**149**	P	**Pn**	**16 29 16.9**	**-0.1**
DRAG	**Dragano-Lefkad**	**1.17**	**149**	P	**Pn**	**16 29 16.3**	**-0.6**
DRAG				S	**Sg**	**16 29 34.8**	**+3.3**
TETR	**Tetrakomo, Epi**	**1.20**	**106**	P	**Pn**	**16 29 16.3**	**-1.1**
TETR				S	**Sb**	**16 29 31.0**	**-1.8**
TETR	**Tetrakomo, Epi**	**1.20**	**106**	P	**Pn**	**16 29 16.1**	**-1.3**
TETR				S	**Sg**	**16 29 34.4**	**+2.3**
NYDR	**Nydri-Lefkada**	**1.20**	**144**	P	**Pn**	**16 29 17.2**	**-0.1**
KBN	**Korca**	**1.20**	**39**	Pg	**Pg**	**16 29 19.3**	**+2.4**
KBN				Sg	**Sg**	**16 29 37.7**	**+5.2**
KPRO	**Kipourio**	**1.24**	**77**	P	**Pn**	**16 29 17.6**	**-0.3**
KPRO				S	**Sb**	**16 29 33.5**	**-0.6**
KPRO	**Kipourio**	**1.24**	**77**	P	**Pn**	**16 29 16.1**	**-1.8**
KPRO				S	**Sn**	**16 29 33.9**	**-1.2**
EVGI	**Lefkada island**	**1.26**	**148**	P	**Pn**	**16 29 18.2**	**0.0**
EVGI				S	**Sb**	**16 29 34.5**	**-0.1**
EVGI	**Lefkada island**	**1.26**	**148**	P	**Pn**	**16 29 17.4**	**-0.8**
EVGI				S	**Sg**	**16 29 36.7**	**+2.5**
AMPL	**Ampelaki**	**1.34**	**124**	P	**Pb**	**16 29 19.9**	**+0.5**
AMPL	**Ampelaki**	**1.34**	**124**	P	**Pn**	**16 29 18.8**	**-0.4**
AMPL				S	**Sg**	**16 29 39.0**	**+2.2**
FSK	**Fiskardo**	**1.37**	**154**	P	**Pb**	**16 29 20.6**	**+0.7**
FSK				S	**Sb**	**16 29 37.8**	**+0.2**
FSK	**Fiskardo**	**1.37**	**154**	P	**Pn**	**16 29 18.9**	**-0.7**
FSK				S	**Sg**	**16 29 39.6**	**+1.9**
OHR	**Ohrid**	**1.61**	**28**	*i* Pn	**Pg**	**16 29 26.8**	**+2.1**
VLS	**Valsamata**	**1.63**	**157**	P	**Pn**	**16 29 24.1**	**+0.8**
VLS	**Valsamata**	**1.63**	**157**	P	**Pn**	**16 29 22.6**	**-0.7**
VLS				S	**Sb**	**16 29 46.3**	**+1.0**
MESG	**Mesagne**	**1.74**	**302**	P	Pn	16 29 18.9	-5.9
RTZL	**Ratzakli, Kefa**	**1.78**	**154**	P	**Pn**	**16 29 24.2**	**-1.1**
PLEV	**Plevrona-Mesol**	**1.79**	**135**	P	**Pn**	**16 29 24.9**	**-0.6**
PHP	**Peshkopia**	**2.05**	**14**	Pn	**Pg**	**16 29 33.4**	**+0.3**
PHP				Sn	**Sg**	**16 30 02.1**	**+2.4**
PHP				AML	AML	16 30 09.7	
	0.1nm,0.5s						
LIT	**Litokhoron**	**2.11**	**78**		**Pb**	**16 29 32.0**	**-0.7**
LIT				IAML		16 30 12.8	
	comp=N,39nm,0.7s						
NOCI	**Noci**	**2.36**	**299**	Pn	**Pg**	**16 29 39.6**	**+0.6**
NOCI				Sn	**Sg**	**16 30 10.1**	**+0.5**
NOCI				AML	AML	16 30 17.8	
	comp=N,0.5nm,0.3s						
TIP	**Timpagrande**	**2.41**	**259**	Pn	**Pn**	**16 29 34.0**	**0.0**
ITM	**Ithomi**	**3.01**	**146**	Pn	**Pn**	**16 29 38.6**	**-3.7**
ITM				IAML		16 30 48.4	
	comp=N,17nm,2.6s						
ITM				IAML		16 30 50.6	
	comp=E,19nm,2.7s						
CEL	**Celeste**	**3.36**	**246**	Pn	**Pn**	**16 29 43.5**	**-3.6**
CEL				IAML		16 30 27.9	
	comp=E,20nm,0.5s						
SGRT	**San Giovanni R**	**3.71**	**305**	Pn	**Pn**	**16 29 49.5**	**-2.4**
SGRT				IAML		16 30 59.8	
	comp=E,14nm,0.5s						
SGRT				IAML		16 31 04.8	
	comp=N,15nm,0.9s						
RDO	**Rodhopi**	**4.62**	**70**	Pn	**Pn**	**16 30 01.7**	**-2.6**
RDO				IAML		16 30 42.3	
	comp=N,5.5nm,2.1s						
RDO				IAML		16 31 35.7	
	comp=E,4.7nm,2.3s						
RAFF	**Raffo Rosso**	**4.92**	**242**	Pn	**Pn**	**16 30 05.9**	**-2.7**
NRCA	**Norcia**	**5.93**	**304**	Pn	**Pn**	**16 30 22.7**	**+0.3**
FDMO	**Fiordimonte**	**6.05**	**306**	Pn	**Pn**	**16 30 24.2**	**+0.2**

IDC 22 16:48:22.8±1.0, 37°10N×135°31E, h370km±12km, mb2.7/4, mbtmp3.6/10, Error ellipse: s-maj=20.4km s-min=15.7km az=83.0
JMA 22 16:48:24.9±0.4, 37°N±1°×13°5E±°, h361km±3km, MV2.9/19, NW OFF HOKURIKU DISTRICT
ISC 22 16:48:23.1±0.8, 37°14N±0°09×135°17E±0°08, h350km, n19, σ2°42/21, mb2.9/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**1.27**	**132**	*eS*	**S**	**16 49 50.3**	**+2.7**
JHG	**Hegura jima**	**1.56**	**63**	*eP*	**Pn**	**16 49 14.8**	**+3.3**
JHG				*eS*	**S**	**16 49 53.1**	**+2.8**
JOI	**OKI**	**1.76**	**242**	*eP*	**Pn**	**16 49 16.1**	**+3.3**
JSZ	**Suzu**	**1.77**	**79**	*eP*	**Pn**	**16 49 15.6**	**+2.8**
JWT	**Wachi**	**1.87**	**174**	*eP*	**Pn**	**16 49 16.4**	**+2.9**
JYTA	**Yamagatataniai**	**2.00**	**140**	*eP*	**Pn**	**16 49 16.6**	**+2.3**
MJAR	**Matsushiro Arr**	**2.51**	**103**	P	**Pn**	**16 49 18.4**	**+0.1**
	38nm,0.7s,baz=281,slow=9.2,SNR=161						
JIE	**Ise**	**3.02**	**155**	*eP*	**Pn**	**16 49 25.1**	**+2.5**
JYN	**Shimob**	**3.18**	**120**	P	**Pn**	**16 49 26.1**	**+1.9**
JYN				*eS*	**S**	**16 50 14.3**	**+0.9**
JMK	**Ichinoseki**	**5.11**	**67**	*eP*	**Pn**	**16 49 45.1**	**+1.3**
JNU	**Nakatsue**	**5.33**	**222**	P	**Pn**	**16 49 47.7**	**+1.2**
	4.9nm,0.9s,baz=58,slow=9.5,SNR=2.8						
KSRS	**Korea Array**	**5.79**	**275**	P	**Pn**	**16 49 53.9**	**+2.5**
	2.6nm,0.6s,baz=94,slow=11,SNR=14						
USRK	**Ussuriysk Ar.**	**7.45**	**342**	P	**Pn**	**16 50 11.9**	**+1.4**
	2.9nm,0.5s,baz=167,slow=11,SNR=17						
ASAJ	**Asahikawa**	**8.96**	**37**	P		**16 50 28.2**	**-0.2**
	9.1nm,0.4s,baz=237,slow=11,SNR=24						
HILR	**Hailar Array B**	**16.68**	**323**	P	**P**	**16 51 57.5**	**+1.8**
	1.3nm,0.4s,baz=121,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**39.81**	**301**	P	**P**	**16 55 21.2**	**-2.2**
	0.4nm,0.6s,baz=91,slow=11,SNR=4.7						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**52.07**	**32**	P	**P**	**16 56 55.5**	**-2.2**
	0.2nm,0.8s,baz=276,slow=7.5,SNR=2.1						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**56.78**	**181**	P	**P**	**16 57 29.6**	**-2.3**
	0.8nm,0.5s,baz=356,slow=7.5,SNR=16						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**60.49**	**181**	P	**P**	**16 57 54.7**	**-2.5**
	0.3nm,0.8s,baz=1.6,slow=6.4,SNR=6.1						
	0.3nm,0.8s						

**IDC 22 16:54:48.6±5.4, 16°29S×176°13W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=176.1km s-min=106.1km az=155.0, Fiji Islands region

TPB08					Sb	17 01 48.9	-1.1
TPB08	**Permian Basin**	**0.42**	**132**	P	Pb	17 01 42.3	-0.8
TPB08				S	Sb	17 01 48.9	-1.1
TPB10	**Southeast of T**	**0.43**	**285**		Pg	17 01 42.1	+0.9
TPB10					Sb	17 01 51.2	+0.9
TPB10	**Southeast of T**	**0.43**	**285**	P	Pg	17 01 42.1	+0.9
TPB10				S	Sb	17 01 51.2	+0.9
MNHN	**Monahans**	**0.47**	**69**		Pg	17 01 42.1	+0.2
MNHN					Sg	17 01 49.3	+1.3
MNHN	**Monahans**	**0.47**	**69**	⇑P	Pg	17 01 42.3	+0.4
MNHN				S	Sg	17 01 49.3	+1.3
TPB06	**Permian Basin**	**0.48**	**5**		Pg	17 01 42.7	+0.6
TPB06					Sb	17 01 50.3	-1.4
TPB06				IAML		17 01 54.6	
	3µm,0.7s						
TPB06	**Permian Basin**	**0.48**	**5**	P	Pg	17 01 43.1	+1.0
TPB06				S	Sb	17 01 50.3	-1.4
TPB01	**Permian Basin**	**0.49**	**243**	Pg	Pg	17 01 42.6	+0.2
TPB01					Sg	17 01 50.1	+1.3
TPB01				IAML		17 01 56.1	
	2µm,0.6s						
TPB01				IAML		17 01 57.8	
	2µm,0.5s						
TPB01	**Permian Basin**	**0.49**	**243**	⇓P	Pg	17 01 42.9	+0.5
TPB01				S	Sg	17 01 50.1	+1.3
TPB07	**Mentone**	**0.53**	**320**		Pg	17 01 44.0	+0.9
TPB07	**Mentone**	**0.53**	**320**	P	Pg	17 01 44.0	+0.9
PECS	**Pecos**	**0.55**	**291**		Pg	17 01 44.0	+0.5
PECS					Sg	17 01 52.1	+1.6
PECS	**Pecos**	**0.55**	**291**	⇓P	Pg	17 01 44.0	+0.5
PECS				S	Sg	17 01 52.1	+1.6
TPB12	**Southwest of T**	**0.59**	**274**		Pg	17 01 44.8	+0.5
TPB12					Sb	17 01 53.8	-1.1
TPB12	**Southwest of T**	**0.59**	**274**	⇓P	Pg	17 01 44.8	+0.5
TPB12				S	Sb	17 01 53.8	-1.1
TPB13	**Reeves - Culbe**	**0.62**	**308**		Pg	17 01 45.8	+0.9
ALPN	**Alpine**	**0.85**	**202**		Pg	17 01 49.3	0.0
ALPN	**Alpine**	**0.85**	**202**	⇓P	Pg	17 01 49.3	0.0
ALPN				S	Sg	17 02 00.8	+0.4
TPB11	**China Draw**	**1.00**	**320**		Pb	17 01 52.7	-0.4
TMB02	**Rankin**	**1.06**	**88**		Pb	17 01 53.5	-0.5
TMB02					Sb	17 02 08.1	-0.3
TMB02	**Rankin**	**1.06**	**88**	P	Pb	17 01 53.5	-0.5
TMB02				S	Sb	17 02 08.1	-0.3
TPB09	**Culberson Coun**	**1.07**	**305**		Pg	17 01 53.4	0.0
TPB09	**Culberson Coun**	**1.07**	**305**	P	Pg	17 01 53.4	0.0
ODSA	**Odessa**	**1.13**	**33**		Pg	17 01 54.0	-0.6
ODSA				IAmb_Lg		17 02 07.9	
	comp=Z,109nm,0.9s						
ODSA					Sb	17 02 10.1	-0.3
ODSA				IAML		17 02 16.0	
	comp=Z,628nm,0.6s						
ODSA				IAML		17 02 24.9	
	comp=Z,1µm,0.8s						
ODSA	**Odessa**	**1.13**	**33**	P	Pg	17 01 54.3	-0.3
ODSA				S	Sb	17 02 10.1	-0.3
TMB01	**Midkiff**	**1.13**	**64**	P	Pg	17 01 54.4	-0.2
TMB01				S	Sb	17 02 10.2	-0.3
TPB28		**1.16**	**296**		Pg	17 01 55.0	-0.2
TPB28				IAmb_Lg		17 02 12.8	
	comp=Z,14nm,0.8s						
TPB28				IAML		17 02 25.8	
	comp=Z,123nm,0.6s						
TPB28				IAML		17 02 29.0	
	comp=Z,132nm,0.7s						
TPB28		**1.16**	**296**	P	Pg	17 01 55.1	-0.1
TMB07		**1.20**	**46**	P	Pg	17 01 55.5	-0.4
TMB07				S	Sn	17 02 12.9	-0.9
CLNB	**Carlsbad**	**1.21**	**335**		Pg	17 01 56.4	+0.3
TPB29		**1.21**	**299**		Pg	17 01 56.0	-0.1
TPB29		**1.21**	**299**	P	Pg	17 01 56.0	-0.1
GDL2	**Guadalupe Moun**	**1.39**	**318**		Pn	17 01 59.2	-0.2
GDL2	**Guadalupe Moun**	**1.39**	**318**	P	Pn	17 01 59.2	-0.2
229A	**Bryant Ranch,**	**1.48**	**57**		Pb	17 02 00.7	-0.5
229A					Sg	17 02 21.2	+0.8
229A				IAML		17 02 32.3	
	comp=Z,357nm,0.7s						
TMB06	**Greenwood**	**1.49**	**57**	P	Pn	17 02 00.8	0.0
TMB06				S	Sg	17 02 21.2	+0.3
VHRN	**Van Horn**	**1.52**	**256**		Pn	17 02 01.2	-0.1
VHRN				IAML		17 02 26.8	
	comp=Z,308nm,0.8s						
VHRN	**Van Horn**	**1.52**	**256**	⇓P	Pn	17 02 01.2	-0.1
SAND	**Sanderson**	**1.57**	**140**		Pn	17 02 01.6	-0.3
SAND				IAML		17 02 27.6	
	comp=Z,387nm,0.9s						
SAND				IAML		17 02 28.6	
	comp=Z,443nm,0.7s						
SAND	**Sanderson**	**1.57**	**140**	P	Pb	17 02 02.1	-0.6
128A	**Castleberry Fa**	**1.59**	**25**		Pn	17 02 02.2	-0.1
128A				IAML		17 02 27.7	
	comp=Z,364nm,0.6s						
128A				IAML		17 02 27.9	
	comp=Z,339nm,0.8s						
TMB04	**Seminole**	**1.59**	**24**	P	Pn	17 02 02.3	-0.1
OZNA	**Ozona**	**1.86**	**97**		Pb	17 02 06.5	-1.2
OZNA				IAmb_Lg		17 02 33.1	
	comp=Z,77nm,0.8s						
OZNA				IAML		17 02 37.5	
	comp=Z,404nm,0.6s						
OZNA				IAML		17 02 38.3	
	comp=Z,516nm,0.7s						
OZNA	**Ozona**	**1.86**	**97**	P	Pb	17 02 07.0	-0.7
TX31	**Lajitas Ar. Si**	**1.86**	**191**		Pb	17 02 06.8	-1.0
TX31	**Lajitas Ar. Si**	**1.86**	**191**	P	Pb	17 02 06.9	-0.9
TXAR	**Lajitas Array**	**1.86**	**191**		Pb	17 02 06.8	-1.0
MNTX	**Cornudas Mount**	**1.88**	**287**		Pn	17 02 06.6	+0.5
MNTX	**Cornudas Mount**	**1.88**	**287**	P	Pb	17 02 07.0	-1.0
129A	**Stewart Farms,**	**1.88**	**39**		Pb	17 02 07.0	-1.1
129A				IAML		17 02 34.4	
	comp=Z,522nm,0.6s						
129A				IAmb_Lg		17 02 35.5	
	comp=Z,84nm,0.9s						
129A				IAML		17 02 35.9	
	comp=Z,378nm,0.6s						
TMB05	**Klondike**	**1.88**	**39**	P	Pb	17 02 07.1	-1.0
CPRX	**Cap Rock**	**1.92**	**345**		Pb	17 02 08.0	-0.8
SGCY	**Sterling City**	**1.98**	**67**		Pn	17 02 08.2	+0.7
SGCY				IAML		17 02 37.5	
	comp=Z,632nm,0.8s						
SGCY				IAML		17 02 39.3	
	comp=Z,558nm,1.1s						
SGCY	**Sterling City**	**1.98**	**67**	P	Pb	17 02 08.5	-1.2
POST	**Post**	**2.41**	**38**		Pn	17 02 14.4	+0.8
POST				IAML		17 02 54.3	
	comp=Z,410nm,1.1s						
SN07	**Snyder 07**	**2.78**	**46**		Pn	17 02 19.2	+0.6
MSTX	**Muleshoe**	**2.82**	**8**		Pn	17 02 20.3	+1.1
MSTX				IAmb_Lg		17 03 08.2	
	comp=Z,73nm,0.7s						
JCT	**Junction City**	**3.06**	**102**	IAML		17 03 18.5	
	comp=Z,176nm,0.5s						
JCT				IAML		17 03 23.4	
	comp=Z,206nm,0.6s						
ABTX	**Abilene, Hawle**	**3.41**	**64**	IAML		17 03 26.4	
	comp=Z,239nm,0.4s						
APMT	**Aspermont**	**3.42**	**50**	IAML		17 03 25.9	
	comp=Z,227nm,0.7s						
BRDY	**Brady**	**3.66**	**87**	IAML		17 03 34.6	
	comp=Z,147nm,0.6s						
BRDY				IAML		17 03 38.9	
	comp=Z,82nm,0.6s						
HNDO	**Hondo**	**3.82**	**114**	IAML		17 03 41.6	
	comp=Z,137nm,0.8s						
HNDO				IAML		17 03 42.3	
	comp=Z,134nm,0.9s						
121A	**Cookes Peak, D**	**4.07**	**291**	IAmb_Lg		17 03 46.3	
	comp=Z,29nm,0.7s						
121A				IAML		17 03 50.2	
	comp=E,63nm,0.6s						
121A				IAML		17 03 56.0	
	comp=N,44nm,0.7s						
Y22A	**Socorro**	**4.16**	**312**	IAML		17 03 48.6	
	comp=E,70nm,1.0s						
Y22A				IAML		17 03 50.4	
	comp=N,50nm,0.7s						
Y22A				IAmb_Lg		17 03 51.0	
	comp=Z,56nm,0.8s						
833A	**Chaparral WMA,**	**4.41**	**129**	IAmb_Lg		17 04 04.1	
	comp=Z,42nm,0.8s						
PLPT	**Palo Pinto**	**4.52**	**67**	IAmb_Lg		17 04 01.8	
	comp=Z,67nm,0.9s						
ALQ	**Albuquerque**	**4.62**	**325**	IAmb_Lg		17 04 10.7	
	comp=Z,23nm,0.8s						
ALQ	**Albuquerque**	**4.62**	**325**	IAmb_Lg		17 04 10.6	
	comp=Z,23nm,0.8s						
ALQ				IAmb_Lg		17 04 10.6	
	comp=Z,23nm,0.8s						
ANMO	**Albuquerque**	**4.62**	**325**	IAML		17 04 01.5	
	comp=Z,29nm,0.7s						
ANMO				IAML		17 04 02.2	
	comp=Z,25nm,0.8s						
TASM	**ASL Pad, Albuq**	**4.62**	**325**	IAML		17 04 01.6	
	comp=Z,59nm,0.8s						
TASM				IAML		17 04 02.3	
	comp=Z,24nm,0.8s						
TASM	**ASL Pad, Albuq**	**4.62**	**325**	IAML		17 04 01.6	
	comp=Z,34nm,0.8s						
TASM				IAML		17 04 02.0	
	comp=Z,51nm,0.8s						
TASM				IAmb_Lg		17 04 06.9	
	comp=Z,22nm,0.8s						
HPIG		**4.71**	**207**	IAmb_Lg		17 04 08.4	
	comp=Z,22nm,0.8s						
HPIG				IAML		17 04 10.6	
	comp=E,52nm,0.7s						
HPIG				IAML		17 04 11.4	
	comp=N,27nm,0.6s						
WTFS	**Witchita Falls**	**4.82**	**56**	IAmb_Lg		17 04 19.8	
	comp=Z,32nm,0.8s						
DUN6	**Lazy B Ranch**	**5.14**	**287**	IAmb_Lg		17 04 25.9	
	comp=Z,44nm,0.7s						
WMOK	**Wichita Mounta**	**5.18**	**46**	IAML		17 04 22.2	
	comp=Z,49nm,0.6s						
WMOK				IAmb_Lg		17 04 24.3	
	comp=Z,48nm,0.8s						
WMOK				IAML		17 04 27.6	
	comp=Z,55nm,0.8s						
RTBA	**Rita Blanca**	**5.27**	**5**	IAmb_Lg		17 04 27.9	
	comp=Z,34nm,0.7s						
ELIS	**Ellis County**	**5.84**	**32**	IAmb_Lg		17 04 48.1	
	comp=Z,38nm,0.8s						
OK038	**West end E0370**	**6.50**	**34**	IAmb_Lg		17 05 11.1	
	comp=Z,33nm,0.8s						
NOKA	**Waynoka**	**6.53**	**32**	IAmb_Lg		17 05 11.3	
	comp=Z,26nm,1.0s						
W35A	**Tecumseh**	**6.67**	**52**	IAmb_Lg		17 05 14.1	
	comp=Z,37nm,0.8s						
OK029	**Liberty Lake**	**6.70**	**45**	IAmb_Lg		17 05 13.6	
	comp=Z,33nm,0.8s						
CROK	**Carrier**	**6.90**	**38**	IAmb_Lg		17 05 21.9	
	comp=Z,29nm,0.9s						
OK052	**Battle Ridge R**	**7.23**	**47**	IAmb_Lg		17 05 40.6	
	comp=Z,19nm,0.7s						
DEOK	**Depew**	**7.33**	**49**	IAmb_Lg		17 05 34.9	
	comp=Z,20nm,0.9s						
NATX	**Nacogdoches**	**7.38**	**83**	IAmb_Lg		17 05 39.6	
	comp=Z,26nm,0.7s						
OK048	**Pawnee Station**	**7.42**	**43**	IAmb_Lg		17 05 40.2	
	comp=Z,14nm,0.7s						
TUL3	**Leonard**	**7.83**	**51**	IAmb_Lg		17 06 03.0	
	comp=Z,28nm,0.9s						
KSCO	**Kaye Shedlock'**	**7.84**	**4**	IAmb_Lg		17 05 55.1	
	comp=Z,26nm,0.8s						
T35A	**Sooner Cattle**	**8.02**	**43**	IAmb_Lg		17 05 54.2	
	comp=Z,15nm,0.9s						
WUAZ	**Wupatki**	**8.04**	**305**	IAmb_Lg		17 06 09.7	
	comp=Z,13nm,1.1s						
R32A	**Long Quarter,**	**8.15**	**26**	IAmb_Lg		17 06 09.0	
	comp=Z,25nm,1.0s						
PV13	**Radium Mtn., P**	**8.33**	**328**	IAmb_Lg		17 06 01.4	
	comp=Z,11nm,1.2s						
PV02	**Paradox Valley**	**8.34**	**329**	IAmb_Lg		17 06 07.3	
	comp=Z,12nm,1.1s						
PV05	**Paradox Valley**	**8.40**	**327**	IAmb_Lg		17 06 11.8	
	comp=Z,12nm,1.1s						
PV18	**Skein Mesa, Pa**	**8.45**	**328**	IAmb_Lg		17 06 21.6	
	comp=Z,11nm,0.9s						
PV12	**Saucer Basin,**	**8.46**	**329**	IAmb_Lg		17 06 17.5	
	comp=Z,20nm,1.2s						
RLO	**Rose Lookout**	**8.49**	**52**	IAmb_Lg		17 06 17.5	
	comp=Z,24nm,1.0s						
PV16	**Nyswonger Mesa**	**8.50**	**328**	IAmb_Lg		17 06 18.2	
	comp=Z,11nm,1.1s						
PV19	**Morning Glory**	**8.53**	**328**	IAmb_Lg		17 06 21.5	
	comp=Z,11nm,0.8s						
PV20	**West Nyswonger**	**8.55**	**328**	IAmb_Lg		17 06 24.7	
	comp=Z,21nm,1.1s						
PV10	**Paradox Valley**	**8.61**	**328**	IAmb_Lg		17 06 10.4	
	comp=Z,13nm,0.8s						
PV23	**Carpenter Ridg**	**8.66**	**329**	IAmb_Lg		17 06 15.4	
	comp=Z,14nm,0.8s						
MIAR	**Mount Ida**	**8.82**	**65**	IAmb_Lg		17 06 27.8	
	comp=Z,28nm,1.0s						
U38A	**ovette**	**9.07**	**52**	IAmb_Lg		17 06 40.2	
	comp=Z,19nm,0.8s						
HMU	**Henry Mountain**	**9.14**	**320**	IAmb_Lg		17 06 43.9	
	comp=Z,22nm,1.3s						
HHAR	**Hobbs**	**9.29**	**54**	IAmb_Lg		17 06 38.9	
	comp=Z,20nm,1.0s						
KNB	**Kanab**	**9.83**	**309**	IAmb_Lg		17 07 12.5	
	comp=Z,9.8nm,1.3s						

TAP ***22*** *17:08:30.4,23°.20N×120°.79E,h4km,ML3.6,B*
JMA ***22*** *17:08:31.1±0.1,23°.2N±0°.2×120°.8E±0°.7,h2km±2km,*
TAIWAN REGION

ISC 22 17:08:31.0±1.0,23°.21N±0°.01×120°.80E±0°.01,h2km±8km,
n116,ₙ0ᵍ92/196,13C-13D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.04**	**214**	⇑iP	Pg	17 08 31.7	-0.3
STYH				*i* S	Sg	17 08 32.3	-0.2
STYT	**Tauyuan**	**0.06**	**223**	⇑iP	Pg	17 08 32.1	-0.2
STYT				*i* S	Sg	17 08 33.1	0.0
WTP	**Ta-pu**	**0.18**	**282**	⇓iP	Pg	17 08 34.6	+0.1
WTP				S	Sg	17 08 37.6	+0.8
TPUB	**Ta-pu**	**0.18**	**300**	P	Pg	17 08 34.7	+0.1
TPUB	**Ta-pu**	**0.18**	**300**	S	Sg	17 08 38.0	+1.0
TPUB	**Ta-pu**	**0.18**	**300**	⇓iP	Pg	17 08 34.9	+0.3
TPUB				S	Sg	17 08 37.9	+0.9
ELDTW	**Lidau**	**0.20**	**96**	⇓iP	Pg	17 08 35.5	+0.6
ELDTW				*i* S	Sg	17 08 38.7	+1.3
SGST	**Jiashian**	**0.24**	**238**	⇑iP	Pg	17 08 35.0	-0.6
SGST				S	Sg	17 08 38.9	+0.2
CHN4	**Tsaushan**	**0.24**	**306**	⇓iP	Pg	17 08 36.2	+0.6
CHN4				*i* S	Sg	17 08 40.2	+1.5
CHN1	**Nanshi**	**0.25**	**265**	⇓iP	Pg	17 08 36.5	+0.6
CHN1				*e*S	Sg	17 08 40.7	+1.5
WCKO	**Fanlu**	**0.29**	**322**	⇓P	Pg	17 08 37.2	+0.6
WCKO				S	Sb	17 08 42.4	-1.9
TWK	**Hsinying**	**0.30**	**281**	⇓iP	Pg	17 08 37.4	+0.7
TWK				*i* S	Sg	17 08 42.4	+1.8
ALS	**Alishan**	**0.30**	**0**	⇑iP	Pg	17 08 37.3	+0.4
ALS				S	Sg	17 08 42.0	+1.2
EHD	**Haiduan**	**0.38**	**99**	⇓iP	Pg	17 08 38.8	+0.5
EHD				*e*S	Sg	17 08 44.1	+1.0
ECS	**Chishang**	**0.40**	**106**	⇓iP	Pb	17 08 39.5	-1.3
ECS				S	Sb	17 08 45.7	-1.7
CHN5	**Tsauling**	**0.40**	**343**	⇑iP	Pg	17 08 39.3	+0.5
CHN5				S	Sb	17 08 45.8	-1.8
CHN3	**Shinhua**	**0.42**	**252**	*e*P	Pb	17 08 41.5	+0.2
CHN3				*e*S	Sb	17 08 49.4	+1.4
CHY	**Chiayi**	**0.45**	**310**	P	Pb	17 08 40.9	-0.8
CHY				S	Sb	17 08 48.5	-0.4
FULB	**Fuli**	**0.45**	**91**	⇓iP	Pb	17 08 40.9	-0.9
FULB				*i* S	Sb	17 08 47.8	-1.1
TWG	**Pinlang**	**0.46**	**147**	⇓P	Pg	17 08 40.3	+0.5
TWG				*e*S	Sg	17 08 46.7	+1.0
TWGBT	**Beinan**	**0.47**	**147**	P	Pg	17 08 40.2	+0.3
TWGBT	**Beinan**	**0.47**	**147**	⇓iP	Pg	17 08 40.3	+0.3
TWGBT				S	Sg	17 08 46.9	+0.9
SSHA	**Shanhua**	**0.48**	**261**	*e*P	Pb	17 08 42.1	0.0
SSHA				*e*S	Sb	17 08 51.2	+1.6
SSD	**Sandimen**	**0.49**	**199**	⇑iP	Pg	17 08 40.3	0.0
SSD				*e*S	Sg	17 08 46.6	-0.1
WHYT	**Xinyi Township**	**0.49**	**5**	⇑iP	Pg	17 08 40.8	+0.4
WHYT				S	Sg	17 08 48.0	+1.3
YULB	**Yu-li**	**0.49**	**68**	⇑iP	Pg	17 08 40.7	+0.3
YULB				*e*S	Sg	17 08 46.7	0.0
TWM1	**Shoushan**	**0.52**	**223**	P	Pb	17 08 42.9	0.0
CHKT	**Chengkung**	**0.53**	**102**	P	Pb	17 08 42.4	-0.6
CHKT				*e*S	Sb	17 08 51.5	+0.4
WDLH	**Douliu**	**0.54**	**333**	P	Pb	17 08 42.8	-0.4
WDLH				*e*S	Sb	17 08 52.2	+0.9
CHKH	**Chenggong**	**0.55**	**92**	P	Pb	17 08 42.3	-1.0
TTN	**Taitung**	**0.55**	**145**	*e*P	Pb	17 08 42.9	-0.5
TTN				*e*S	Sb	17 08 51.6	-0.2

SGLT	**Jiouru**	**0.56**	**211**	*e*P	Pb	17 08 43.0	-0.5
WDL	**Douliou City**	**0.56**	**334**	*e*P	Pb	17 08 43.2	-0.3
WDL				*e*S	Sb	17 08 52.6	+0.6
CHN8	**Yiju**	**0.56**	**284**	*e*P	Pb	17 08 42.7	-0.9
CHN8				*e*S	Sb	17 08 52.5	+0.4
EHY	**Hungye**	**0.56**	**58**	P	Pb	17 08 42.3	-1.3
EHY				*e*S	Sg	17 08 49.7	+0.6
EHYH	**Wanrong**	**0.57**	**60**	*e*P	Pg	17 08 42.4	+0.3
EHYH				*e*S	Sg	17 08 50.0	+0.6
SSLB	**Suanglung**	**0.59**	**13**	P	Pg	17 08 42.2	-0.2
SSLB	**Suanglung**	**0.59**	**13**	⇑iP	Pg	17 08 42.4	0.0
SSLB				*e*S	Sb	17 08 51.3	-1.8
ECBN	**Changbin**	**0.61**	**80**	*e*P	Pb	17 08 44.5	+0.2
ECBN				*e*S	Sb	17 08 53.6	+0.2
MASBT	**Mashibuluo**	**0.61**	**195**	⇑iP	Pg	17 08 42.4	-0.3
MASBT				*e*S	Sg	17 08 50.4	-0.3
WSL	**Shuilin Townsh**	**0.61**	**301**	*e*P	Pb	17 08 44.0	-0.5
WSL				*e*S	Sb	17 08 54.3	+0.7
WJS	**Zhushan**	**0.61**	**354**	*e*P	Pb	17 08 44.0	-0.5
WJS				*e*S	Sb	17 08 54.6	+1.0
ECL	**Taimali**	**0.62**	**167**	⇓P	Pg	17 08 43.0	0.0
ECL				*e*S	Sg	17 08 51.6	+0.6
VWDT	**VWDT**	**0.62**	**30**	⇑iP	Pg	17 08 43.2	+0.1
VWDT				*e*S	Sb	17 08 54.9	+1.0
HGSD	**Ruisui**	**0.64**	**64**	*e*P	Pb	17 08 44.1	-0.8
HGSD				*e*S	Sb	17 08 55.3	+1.1
TSCK	**Chigu Township**	**0.66**	**265**	*e*P	Pb	17 08 45.0	-0.3
TSCK				*e*S	Sb	17 08 56.0	+1.1
WNT	**Mingjian**	**0.68**	**351**	P	Pb	17 08 45.3	-0.2
WNT				*e*S	Sb	17 08 55.7	+0.4
WSF	**Szhu**	**0.68**	**309**	*i* P	Pb	17 08 45.0	-0.7
WSF				*i* S	Sb	17 08 56.0	+0.4
TYC	**Yuchr**	**0.69**	**4**	*i* P	Pb	17 08 45.0	-0.8
TYC				S	Sn	17 08 57.3	-1.9
WARBT	**Fenglin Townsh**	**0.74**	**46**	*e*P	Pg	17 08 45.1	-0.1
WARBT				*e*S	Sb	17 08 56.3	-0.9
SSPT	**Xinbi**	**0.75**	**197**	*e*P	Pg	17 08 45.9	+0.4
WSSB	**Gushan**	**0.75**	**222**	*e*P	Pn	17 08 47.9	-0.8
WSSB				*e*S	Sn	17 09 01.7	+1.0
RLNB	**Erlin**	**0.79**	**329**	*e*P	Pb	17 08 47.2	-0.3
RLNB				*e*S	Sb	17 08 59.3	+0.6
WRL	**Guolierlin Hig**	**0.79**	**331**	*e*P	Pb	17 08 47.0	-0.6
WRL				S	Sb	17 08 58.7	-0.1
WTCT	**Ta-ch'eng**	**0.81**	**324**	*e*S	Sb	17 08 59.5	+0.3
OWD	**Renai**	**0.82**	**25**	P	Pg	17 08 46.5	-0.2
OWD				*e*S	Sn	17 09 01.1	-1.4
EAST	**Anshuo**	**0.82**	**177**	*e*P	Pg	17 08 46.8	0.0
WUSB	**Renai**	**0.83**	**20**	⇑iP	Pg	17 08 46.4	-0.6
WUSB				*e*S	Sn	17 09 01.4	-1.4
ESL	**Shilin**	**0.83**	**44**	*e*P	Pg	17 08 47.0	0.0
ESL				*e*S	Sb	17 08 59.4	-0.6
TEGC	**Jichi Village**	**0.84**	**53**	*e*P	Pn	17 08 48.7	-1.2
SCZT	**Fangliau**	**0.85**	**192**	⇑P	Pg	17 08 47.0	-0.3
TAW	**Tawu**	**0.85**	**174**	*e*P	Pb	17 08 47.6	-0.9
WCS	**Beigang Elemen**	**0.85**	**7**	*e*P	Pg	17 08 47.6	+0.3
WCS				*e*S	Sb	17 09 01.1	+0.7
WCH1	**Changhua City**	**0.89**	**345**	*e*S	Sn	17 09 02.5	-1.5
WCHH	**Zhanghua**	**0.90**	**346**	*e*P	Pb	17 08 48.5	-0.7
WCHH				*e*S	Sb	17 09 02.2	+0.5
SHUL	**Shoufeng**	**0.91**	**50**	*e*P	Pb	17 08 49.4	0.0
WLCH	**Liuqiu**	**0.94**	**205**	*e*P	Pn	17 08 52.0	+0.8
TCU	**Taichung**	**0.94**	**353**	*e*P	Pb	17 08 49.8	-0.3
TCU				*e*S	Sn	17 09 04.0	-1.4
TWP	**Hsiaoliuchiu**	**0.95**	**205**	*e*P	Pn	17 08 52.2	+0.9
ETM	**Tongmen**	**0.98**	**40**	*e*P	Pg	17 08 49.8	-0.1
LXIB	**Xiulin Townshi**	**0.98**	**35**	P	Pg	17 08 49.5	-0.4
LXIB				*e*S	Sn	17 09 04.0	-0.6
WHF	**Hehuan Shan**	**1.02**	**24**	*e*P	Pg	17 08 50.2	-0.5
WDGT	**Dungji**	**1.05**	**273**	*i* P	Pg	17 08 50.5	-0.7
WDGT				*i* S	Sg	17 09 05.3	+0.5
WHP	**Taichung City**	**1.07**	**7**	*e*P	Pb	17 08 51.9	-0.5
WHP				*e*S	Sn	17 09 08.6	-0.2
TDCB	**Techi**	**1.09**	**17**	*e*P	Pg	17 08 51.8	-0.1
TWT	**Tachien**	**1.09**	**18**	*e*P	Pb	17 08 52.2	-0.5
TWT				*e*S	Sn	17 09 09.0	-0.4
TWQ1	**Liyutan**	**1.14**	**359**	*i* P	Pn	17 08 53.5	-0.5
TWQ1				*e*S	Sn	17 09 11.0	+0.9
WDJ	**Dajia District**	**1.14**	**353**	*e*P	Pn	17 08 54.4	+0.4
WDJ				*e*S	Sn	17 09 10.6	+0.2
PHUB	**P'eng-hu**	**1.17**	**285**	P	Pg	17 08 52.2	-1.3
PHUB				*e*S	Sg	17 09 08.3	-0.3
ETLH	**Xiulin Townshi**	**1.17**	**32**	*e*P	Pg	17 08 52.5	-1.0
ETLH				*e*S	Sn	17 09 10.8	-0.4
SMST	**Manzhou Townsh**	**1.18**	**178**	*e*P	Pn	17 08 54.4	-0.2
SMST				*e*S	Sn	17 09 12.2	+1.4
HEN	**Hengchun**	**1.20**	**183**	*e*P	Pn	17 08 54.5	-0.3
PNG	**Penghu**	**1.20**	**288**	*i* P	Pg	17 08 53.0	-1.1
PNG				S	Sg	17 09 09.2	-0.5
NACB	**Ninganchiao**	**1.20**	**37**

1.2nm,1.0s
H04S1 CROZET ISLANDS 53.77 238 T T 18 29 56.9
baz=131,slow=75,SNR=7.9
H04S2 CROZET ISLANDS 53.77 238 T T 18 29 56.6
baz=131,slow=75,SNR=9.9
H04S3 CROZET ISLANDS 53.79 238 T T 18 29 55.5
baz=131,slow=75,SNR=7.5

*NEIC **22** 17:31:31.4±2.0, 41.˚11N±0.˚02×112.˚94W±0.˚05, h0km±1km, ML1.8/38, Error ellipse: s-maj=6.3km s-min=2.4km az=256.0*
*IDC **22** 17:31:34.2±1.6, 41.˚26N×112.˚82W, h0km, mbtmp1.7/1, ML2.7/1, Error ellipse: s-maj=81.1km s-min=11.1km az=147.0*
ISC 22 17:31:31.9±1.0, **41.˚10N**±0.˚03×**112.˚94W**±0.˚03, **h0km, n27,** σ0**$72/28, Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BGU	**Big Grassy Mou**	**0.19**	**202**	Pg		**Pg**	**17 31 37.4**	**+1.8**
SPUT	**South Promonto**	**0.42**	**61**			**Pg**	**17 31 40.2**	**+0.2**
SPUT						**Sg**	**17 31 45.2**	**-0.2**
SPUT					IAML		17 31 52.6	
	comp=N,69nm,0.4s							
HVU	**Hansel Valley**	**0.69**	**10**			**Pg**	**17 31 45.3**	**+0.3**
HVU					IAML		17 32 05.2	
	comp=E,46nm,0.3s							
NOQ	**North Oquirrh**	**0.77**	**126**	Pg		**Pg**	**17 31 46.7**	**+0.2**
NOQ					IAML		17 32 02.3	
	comp=E,27nm,0.4s							
DUG	**Dugway, Tooele**	**0.91**	**174**			**Pb**	**17 31 50.3**	**-0.4**
DUG					IAML		17 32 12.1	
	comp=E,30nm,0.5s							
CTU	**Camp Tracy**	**0.99**	**114**			**Pg**	**17 31 51.2**	**+0.3**
HWUT	**Hardware Ranch**	**1.15**	**64**			**Pg**	**17 31 53.6**	**-0.3**
HWUT					IAML		17 32 18.1	
	comp=E,20nm,0.4s							
HWUT					IAML		17 32 22.7	
	comp=E,15nm,0.5s							
TCUT	**Toone Canyon**	**1.16**	**89**			**Pg**	**17 31 54.3**	**+0.3**
NLU	**North Lily Min**	**1.32**	**150**			**Pg**	**17 31 57.2**	**0.0**
NLU					IAML		17 32 24.1	
	comp=N,13nm,0.6s							
NLU					IAML		17 32 32.3	
	comp=E,9.2nm,0.5s							
MPU	**Maple Canyon**	**1.47**	**137**			**Pn**	**17 31 59.4**	**-0.5**
BSUT	**Blindstream Ca**	**1.75**	**108**			**Pn**	**17 32 03.3**	**-0.5**
BSUT					IAML		17 32 32.3	
	comp=N,5.6nm,2.3s							
ELK	**Elko**	**1.78**	**259**			**Pb**	**17 32 05.6**	**0.0**
ELK					IAML		17 32 36.2	
	comp=N,7.6nm,0.4s							
AHID	**Auburn Hatcher**	**2.15**	**39**			**Pn**	**17 32 09.6**	**+0.4**
ECR	**Eagle Creek**	**2.27**	**30**	Pn		**Pb**	**17 32 13.4**	**-0.5**
P18A	**Preston Nutter**	**2.53**	**125**	Pn		**Pn**	**17 32 15.7**	**+1.2**
PSUT	**Pine Spring**	**2.66**	**196**			**Pn**	**17 32 16.4**	**+0.2**
PSUT					IAML		17 33 04.8	
	comp=N,3.7nm,0.6s							
PSUT					IAML		17 33 12.9	
	comp=E,4.2nm,0.5s							
HLID	**Hailey**	**2.69**	**336**			**Pn**	**17 32 18.0**	**+1.4**
HLID					IAML		17 33 00.9	
	comp=E,3.5nm,0.8s							
HLID					IAML		17 33 04.2	
	comp=E,3.1nm,0.7s							
SRU	**San Rafael Swe**	**2.72**	**136**	Pn		**Pn**	**17 32 16.4**	**-0.6**
FXWY	**Fox Creek**	**2.90**	**29**	Pn		**Pn**	**17 32 20.3**	**+0.7**
FXWY					IAML		17 33 39.4	
	comp=E,2.5nm,4.6s							
FXWY					IAML		17 33 40.6	
	comp=E,2.7nm,4.5s							
BW06	**Boulder Array**	**3.02**	**55**	Pn		**Pn**	**17 32 21.4**	**+0.2**
BW06					IAML		17 33 13.7	
	comp=E,3.1nm,1.1s							
PD31	**Pinedale Array**	**3.02**	**55**			**Pn**	**17 32 21.2**	**0.0**
PDAR	**Pinedale Array**	**3.02**	**55**	Pn		**Pn**	**17 32 21.4**	**+0.2**
	comp=E,0.1nm,0.3s,baz=237,slow=11,SNR=2.3							
PDAR				Pg		**Pb**	**17 32 27.2**	**+0.6**
	comp=E,0.9nm,0.3s,baz=227,slow=16,SNR=12							
PDAR				Lg		Lg	17 33 05.4	
	comp=E,1.1nm,0.3s,baz=233,slow=26,SNR=7.6							
	comp=E,0.3nm,0.5s							
LOHW	**Long Hollow**	**3.05**	**34**	Pn		**Pn**	**17 32 21.6**	**+0.1**
LOHW					IAML		17 33 19.7	
	comp=E,4.4nm,4.2s							
LOHW					IAML		17 34 07.5	
	comp=E,3.4nm,4.6s							
BCYI	**Bear Canyon**	**3.23**	**354**			**Pn**	**17 32 23.8**	**-0.2**
MCMT	**McKenzie Canyo**	**3.72**	**1**	Pn		**Pn**	**17 32 30.5**	**-0.4**
NVAR	**Mina Array Bea**	**4.92**	**239**	Pg		**Pg**	**17 33 04.5**	**-1.7**
	comp=E,0.2nm,0.3s,baz=53,slow=16,SNR=2.3							
I56US	**NEWPORT INFRAS 7.76**		**339**	I		I	18 15 20.0	
	baz=160,slow=315,SNR=4.8							

*SJA **22** 17:32:06.8±1.8, 21.˚49S×68.˚49W, h141km, ML3.5, MW3.8*
*GUC **22** 17:32:09.3±0.8, 21.˚52S×68.˚46W, h125km±6km, ML3.5*
ISC 22 17:32:07.0±1.5, **21.˚49S**±0.˚03×**68.˚60W**±0.˚06, **h156km**±11**km, n31,** σ1$**47/47, 3C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB09	**IPOC Station P**	**0.67**	**243**	*eP*		**Pn**	**17 32 29.9**	**-0.2**
PB09					IAML		17 32 49.1	
	comp=Z,305nm,0.2s							
PB09	**IPOC Station P**	**0.67**	**243**	↑*iP*		**Pn**	**17 32 29.7**	**-0.4**
PB09				*eS*		**Sn**	**17 32 45.8**	**-2.0**
PB09					IAML		17 32 48.5	
	comp=E,750nm,0.4s							
PB03	**IPOC Station P**	**1.21**	**242**	*eP*		**Pn**	**17 32 34.6**	**+0.3**
PB03					IAML		17 32 58.4	
	comp=Z,682nm,0.1s							
PB03	**IPOC Station P**	**1.21**	**242**	↑*eP*		**Pn**	**17 32 34.4**	**+0.1**
PB03				*eS*		**Sn**	**17 32 54.2**	**-1.1**
PB03					IAML		17 32 55.9	
	comp=E,1μm,0.1s							
PB02	**IPOC Station P**	**1.22**	**278**	*eP*		**Pn**	**17 32 34.9**	**+0.5**
PB02				*eS*		**Sn**	**17 32 56.7**	**+1.3**
PB02					IAML		17 32 57.3	
	comp=Z,1μm,0.1s							
PB02	**IPOC Station P**	**1.22**	**278**	*eP*		**Pn**	**17 32 34.9**	**+0.5**
PB02				*eS*		**Sn**	**17 32 54.7**	**-0.7**
PB02					IAML		17 32 56.3	
	comp=N,2μm,0.3s							
PB07	**IPOC Station P**	**1.22**	**259**	*eP*		**Pn**	**17 32 34.9**	**+0.4**
PB07				*eS*		**Sn**	**17 32 56.2**	**+0.7**
PB07					IAML		17 32 56.5	
	comp=Z,1μm,0.4s							
PB08	**IPOC Station P**	**1.44**	**339**	*eP*		**Pn**	**17 32 37.5**	**+0.7**
PB08					IAML		17 33 03.5	
	comp=Z,327nm,0.9s							
PB08	**IPOC Station P**	**1.44**	**339**	⇓*iP*		**Pn**	**17 32 37.4**	**+0.6**
PB08				*eS*		**Sn**	**17 32 58.7**	**-1.0**
PB08					IAML		17 33 01.1	
	comp=E,565nm,0.5s							
AF01	**San Pedro de A**	**1.51**	**165**	*eP*		**Pn**	**17 32 38.0**	**+0.6**
AF01				*eS*		**Sn**	**17 33 03.8**	**+3.0**
AF01					IAML		17 33 16.4	
	comp=Z,424nm,1.3s							
PB06	**IPOC Station P**	**1.51**	**217**	*eP*		**Pn**	**17 32 37.5**	**+0.3**
PB06					IAML		17 33 03.0	
	comp=Z,361nm,0.4s							
PB06	**IPOC Station P**	**1.51**	**217**	⇓*iP*		**Pn**	**17 32 37.4**	**+0.1**
PB06				*eS*		**Sn**	**17 32 59.4**	**-1.2**
PB06					IAML		17 33 01.1	
	comp=E,978nm,0.2s							
TA01	**Diego Aracena**	**1.74**	**302**	*eP*		**Pn**	**17 32 40.1**	**+0.6**
TA01					IAML		17 33 07.2	
	comp=Z,225nm,0.6s							
TA01	**Diego Aracena**	**1.74**	**302**	↑*eP*		**Pn**	**17 32 40.1**	**+0.6**
TA01				*eS*		**Sn**	**17 33 04.7**	**+0.1**
TA01					IAML		17 33 06.2	
	comp=E,883nm,0.2s							
TA02	**Huaiquique**	**1.88**	**310**	*eP*		**Pn**	**17 32 41.9**	**+0.8**
TA02				*eS*		**Sn**	**17 33 08.9**	**+1.6**
TA02					IAML		17 33 09.0	
	comp=Z,360nm,0.2s							
TA02	**Huaiquique**	**1.88**	**310**	*eP*		**Pn**	**17 32 41.5**	**+0.4**
GO01	**Chusmiza**	**1.90**	**343**	*eP*		**Pn**	**17 32 42.5**	**+0.7**
GO01	**Chusmiza**	**1.90**	**343**	⇓*eP*		**Pn**	**17 32 42.3**	**+0.5**
GO01				*eS*		**Sn**	**17 33 08.6**	**0.0**
PB11	**IPOC Station P**	**1.98**	**330**	*eP*		**Pn**	**17 32 42.6**	**+0.1**
PB11					IAML		17 33 11.9	
	comp=Z,277nm,0.2s							
PB11	**IPOC Station P**	**1.98**	**330**	⇓*eP*		**Pn**	**17 32 42.7**	**+0.2**
PB11				*eS*		**Sn**	**17 33 09.1**	**-0.7**
PB05	**IPOC Station P**	**2.01**	**227**	*eP*		**Pn**	**17 32 43.1**	**+0.4**
PB05				*eS*		**Sn**	**17 33 10.5**	**+0.2**
PB05					IAML		17 33 15.5	
	comp=Z,172nm,0.6s							
PB05	**IPOC Station P**	**2.01**	**227**	*eP*		**Pn**	**17 32 43.4**	**+0.7**
PB05					IAML		17 33 11.2	
	comp=N,267nm,0.5s							
PSGCX	**Pisagua**	**2.36**	**323**	*eP*		**Pn**	**17 32 47.0**	**+0.1**
PSGCX					IAML		17 33 19.5	
	comp=Z,128nm,0.4s							
PB16	**IPOC Station P**	**3.25**	**345**	*eP*		**Pn**	**17 32 59.9**	**+1.5**
PB16				*eS*		**Sn**	**17 33 31.8**	**-6.4**
PB16					IAML		17 33 43.5	
	comp=Z,45nm,0.5s							
PB12	**IPOC Station P**	**3.29**	**330**	*eP*		**Pn**	**17 32 58.2**	**-0.2**
PB12					IAML		17 33 39.7	
	comp=Z,100nm,0.1s							
HJA	**Humahuaca**	**3.41**	**121**	*eP*		**Pn**	**17 33 00.1**	**-0.1**
SALTA		**3.43**	**143**	*eP*		**Pn**	**17 33 00.6**	**+0.1**
AP01	**Chacalluta**	**3.51**	**332**	*eP*		**Pn**	**17 33 04.5**	**+3.4**
AP01				*eS*		**Sn**	**17 33 41.8**	**-1.3**
AP01					IAML		17 33 46.0	
	comp=Z,151nm,0.1s							
PB14	**IPOC Station P**	**3.54**	**208**	*eP*		**Pn**	**17 33 01.6**	**-0.1**
PB14				*eS*		**Sn**	**17 33 42.7**	**-1.5**
PB14					IAML		17 33 52.6	
	comp=Z,62nm,0.6s							
LPAZ	**La Paz**	**5.19**	**5**	*eP*		**Pn**	**17 33 26.3**	**+2.6**
AC02	**Maricunga**	**5.34**	**185**	*eP*		**Pn**	**17 33 25.2**	**-0.3**
AC02					IAML		17 35 00.7	
	comp=Z,14nm,2.5s							

DJA 22 17:40:56.1±0.3, **3˚S**±3˚×**13˚9E**±˚, **h62km**±10km, **M4.0**/9, **mb4.4**/5, **MLv3.8**/9, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WAMI	**Wamena**	**0.48**	**208**	P		Pn	17 41 10.4	+2.4
WAMI				S		Sn	17 41 21.8	+5.1
GENI	**Genyem**	**1.50**	**55**	P		Pn	17 41 20.8	0.0
GENI				S		Sn	17 41 41.2	+1.8
JAY	**Jayapura**	**2.00**	**62**	P		Pn	17 41 27.1	-0.5
JAY				S		Sn	17 41 50.6	-1.0
SRPI	**Serui, Papua**	**3.12**	**300**	P		Pn	17 41 44.4	+1.4
BAKI	**Biak**	**3.62**	**308**	P		Pn	17 41 51.2	+1.5
FAKI	**Fak Fak**	**6.70**	**274**	P		Pn	17 42 31.3	-0.7
SIJI	**Sorong**	**8.09**	**288**	P		Pn	17 42 51.5	+0.5

*IDC **22** 17:50:41.7±0.7, 15.˚24S×173.˚18W, h0km, mb4.1/11, mbtmp4.1/11, MS3.5/10, Error ellipse: s-maj=28.0km s-min=18.8km az=125.0*
*NEIC **22** 17:50:43.1±1.9, 15.˚2S±0.˚1×173.˚1W±0.˚1, h10km±1km, mb4.6/90, Error ellipse: s-maj=28.2km s-min=15.6km az=126.0*
ISC 22 17:50:46.0±0.5, **15.˚2S**±0.˚1×**173.˚0W**±0.˚1, **h29km, n301,** σ0**$74/254, mb4.6/57, MS3.6/9, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**1.78**	**44**			**Pn**	**17 51 12.5**	**-2.4**
MSVF	**Nonsavu**	**8.91**	**252**	LR		LR	17 56 01.0	
	comp=Z,278nm,18.7s,baz=82,slow=36							
DZM	**Mont Dzumac**	**20.59**	**248**	LR		LR	18 01 52.0	
	comp=Z,134nm,20.1s,baz=21,slow=33							
URZ	**Urewera**	**24.55**	**199**	P		**P**	**17 56 03.7**	**+0.4**
	5.3nm,0.3s,baz=84,slow=2.6,SNR=8.8							
	5.3nm,0.3s							
BFZ	**Birch Farm**	**27.04**	**198**	P		**P**	**17 56 25.3**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**38.98**	**329**	T		T	18 38 41.2	
	baz=146,slow=76,SNR=16							
H11S3	**WAKE ISLAND Hy**	**38.99**	**328**	T		T	18 38 52.7	
	baz=146,slow=76,SNR=10							
H11S1	**WAKE ISLAND Hy**	**39.00**	**329**	T		T	18 38 31.6	
	baz=146,slow=76,SNR=9.4							
H11N3	**WAKE ISLAND Hy**	**39.92**	**330**	T		T	18 40 53.9	
	baz=150,slow=76,SNR=16							
H11N1	**WAKE ISLAND Hy**	**39.93**	**330**	T		T	18 41 12.8	
	baz=150,slow=76,SNR=8.8							
H11N2	**WAKE ISLAND Hy**	**39.94**	**330**	T		T	18 40 55.3	
	baz=150,slow=76,SNR=15							
WR8	**Warramunga Arr**	**50.07**	**257**	P		**P**	**17 59 37.1**	**-1.6**
WB0	**Warramunga Arr**	**50.19**	**257**	P		**P**	**17 59 37.0**	**-2.6**
WB0					IAmb	IAmb	18 00 17.0	
	comp=Z,8.2nm,1.2s							
WRA	**Warramunga Arr**	**50.23**	**257**	P		**P**	**17 59 37.7**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=91,slow=6.9,SNR=11							
	comp=Z,0.3nm,0.5s							
WRA	**Warramunga Arr**	**50.23**	**257**	P		**P**	**17 59 38.9**	**-1.0**
AS31	**Alice Springs**	**50.50**	**252**	P		**P**	**17 59 39.3**	**-2.6**
ASAR	**Alice Springs**	**50.50**	**252**	P		**P**	**17 59 39.5**	**-2.5**
	comp=Z,1.4nm,0.5s,baz=87,slow=7.9,SNR=47							
ASAR					LR	LR	18 19 41.1	
	comp=Z,73nm,19.5s,baz=95,slow=34							
	comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**50.50**	**252**	P		**P**	**17 59 38.6**	**-3.3**
SBA	**Scott Base**	**63.47**	**185**	P		**P**	**18 01 13.5**	**+0.7**
SHEM	**Shemya Is, Ala**	**68.57**	**352**	LR		LR	18 26 42.0	
	comp=Z,32nm,19.5s,baz=184,slow=32							
MJAR	**Matsushiro Arr**	**69.02**	**320**	P		**P**	**18 01 49.0**	**0.0**
	comp=Z,2.1nm,1.0s,baz=157,slow=6.2,SNR=5.8							
	comp=Z,2.1nm,1.0s							
MJAR	**Matsushiro Arr**	**69.02**	**320**	P		**P**	**18 01 47.6**	**-1.4**
PETK	**Petropavlovsk-**	**72.56**	**342**	P		**P**	**18 02 10.5**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=126,slow=6.2,SNR=7.5							
	comp=Z,3.8nm,0.8s							
PETK	**Petropavlovsk-**	**72.56**	**342**	P		**P**	**18 02 10.2**	**0.0**
NVAR	**Mina Array Bea**	**73.96**	**42**	LR		LR	18 28 00.7	
	comp=Z,50nm,21.4s,baz=116,slow=30							
QSPA	**South Pole Qui**	**74.83**	**180**	P		**P**	**18 02 24.0**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=14,slow=2.4,SNR=5.9							
	comp=Z,1.8nm,0.9s							
QSPA	**South Pole Qui**	**74.83**	**180**	P		**P**	**18 02 23.4**	**-0.2**
QSPA					IAmb	IAmb	18 02 54.5	
	comp=Z,10nm,1.4s							
P17K	**Kvichak River**	**75.37**	**9**	P		**P**	**18 02 26.2**	**-0.3**
	baz=197							
N14K	**Kuskokwak Cree**	**75.43**	**6**	P		**P**	**18 02 26.5**	**-0.3**
	baz=192							
O16K	**Kokwok River B**	**75.52**	**8**	P		**P**	**18 02 27.5**	**+0.2**
	baz=195							
M11K	**Mekoryuk**	**75.53**	**4**	P		**P**	**18 02 26.7**	**-0.6**
	baz=187							
P18K	**Big Mountain,**	**75.74**	**9**	P		**P**	**18 02 28.1**	**-0.6**
	baz=198							
M13K	**Dall Lake**	**75.77**	**5**	P		**P**	**18 02 28.4**	**-0.3**
	baz=190							
O17K	**Koliganek Bris**	**75.83**	**8**	P		**P**	**18 02 28.6**	**-0.5**
	baz=196							
N15K	**Kwethluk River**	**75.84**	**7**	P		**P**	**18 02 28.7**	**-0.5**
	baz=193							
O18K	**Koktuh Hills**	**76.19**	**9**	P		**P**	**18 02 31.7**	**+0.5**
	baz=198							
M14K	**Bethel**	**76.22**	**6**			**P**	**18 02 31.5**	**+0.3**
M14K	**Bethel**	**76.22**	**6**	P		**P**	**18 02 31.2**	**-0.1**
	baz=191,SNR=5.9							
KSRS	**Korea Array**	**76.27**	**315**	P		**P**	**18 02 34.0**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=134,slow=6.1,SNR=7.2							
	comp=Z,1.3nm,0.9s							
KSAR	**Wonju Array Be**	**76.29**	**315**	P		**P**	**18 02 31.2**	**-1.0**
M15K	**Kasigluk River**	**76.29**	**6**	P		**P**	**18 02 31.6**	**-0.1**
	baz=192							
N16K	**Nishlik Lake**	**76.29**	**7**	P		**P**	**18 02 31.6**	**-0.1**
	baz=194							
P19K	**Oil Pt**	**76.31**	**10**	P		**P**	**18 02 32.1**	**+0.2**
	baz=200							
N17K	**Nushagak Hills**	**76.55**	**8**	P		**P**	**18 02 33.7**	**+0.6**
	baz=196							
L14K	**Kuka Creek**	**76.74**	**5**	P		**P**	**18 02 35.2**	**+1.0**
	baz=190							
M16K	**Timber Creek**	**76.81**	**7**	P		**P**	**18 02 35.1**	**+0.4**
	baz=194							
O20K	**Slope Mountain**	**76.82**	**10**	P		**P**	**18 02 35.0**	**+0.2**
	baz=200							
BRSE	**Bradley Lake S**	**76.85**	**11**	P		**P**	**18 02 35.3**	**+0.4**
	baz=202							
K13K	**Kusilvak Mount**	**77.17**	**4**	P		**P**	**18 02 38.0**	**+1.3**
	baz=188							
L15K	**Ungalak Mounta**	**77.18**	**6**	P		**P**	**18 02 37.2**	**+0.5**
	baz=192							
ELK	**Elko**	**77.21**	**41**	LR		LR	18 28 22.4	
	comp=Z,33nm,20.9s,baz=212,slow=29							
N19K	**Bonanza Creek**	**77.21**	**9**	P		**P**	**18 02 37.2**	**+0.2**
	baz=198							
M17K	**Holitna River**	**77.36**	**8**	P		**P**	**18 02 38.6**	**+0.9**
	baz=196							
L16K	**Owhat River**	**77.42**	**7**	P		**P**	**18 02 38.7**	**+0.7**
	baz=194							
SEW	**Seward**	**77.44**	**12**	P		**P**	**18 02 38.4**	**+0.3**
	baz=203							
BBB	**Bella Bella**	**77.56**	**26**	LR		LR	18 33 21.9	
	comp=Z,21nm,18.2s,baz=162,slow=33							
G08A	**Pilot Rock**	**77.58**	**36**			**P**	**18 02 40.2**	**+0.7**
G08A					IAmb	IAmb	18 02 41.9	
	comp=Z,4.8nm,1.1s							
SLKM	**Skilak Lake**	**77.66**	**11**	P		**P**	**18 02 39.4**	**-0.1**
M18K	**Stony River**	**77.66**	**8**	P		**P**	**18 02 40.0**	**+0.6**
	baz=197							
P23K	**Montague Islan**	**77.76**	**13**	P		**P**	**18 02 40.0**	**+0.1**
	baz=205							
K15K	**Wolf Creek Mou**	**77.78**	**5**	P		**P**	**18 02 41.1**	**+1.1**
	baz=192							
L17K	**Donlin**	**77.97**	**7**	P		**P**	**18 02 42.2**	**+1.1**
	baz=195							
CRAG	**Craig**	**78.03**	**22**	P		**P**	**18 02 41.5**	**-0.1**
	baz=219							
L18K	**Granite Mounta**	**78.25**	**8**	P		**P**	**18 02 44.1**	**+1.4**
L18K	**Granite Mounta**	**78.25**	**8**	P		**P**	**18 02 43.4**	**+0.7**
	baz=196							
RC01	**Rabbit Creek A**	**78.29**	**11**	P		**P**	**18 02 43.6**	**+0.7**
	baz=203							
STLK	**Strandline Lak**	**78.29**	**10**	P		**P**	**18 02 42.4**	**-0.7**
STLK					IAmb	IAmb	18 02 43.2	
	comp=Z,5.5nm,0.9s							
PWL	**Port Wells**	**78.35**	**12**	P		**P**	**18 02 43.3**	**0.0**
	baz=204							
KAIM	**Kayak Island**	**78.37**	**14**	P		**P**	**18 02 44.0**	**+0.6**
	baz=208							
M20K	**Styx River**	**78.44**	**9**	P		**P**	**18 02 44.1**	**+0.3**
	baz=200							
L19K	**White Mountain**	**78.46**	**9**	P		**P**	**18 02 44.3**	**+0.4**
	baz=198							
V35K	**Ketchikan**	**78.48**	**23**	P		**P**	**18 02 43.3**	**-0.8**
	baz=221							
K17K	**Iditarod**	**78.53**	**7**	P		**P**	**18 02 45.1**	**+0.9**
	baz=195							
U33K	**Whale Pass**	**78.54**	**22**	P		**P**	**18 02 43.6**	**-0.7**
	baz=219							
EYAK	**Cordova Ski Ar**	**78.62**	**13**	P		**P**	**18 02 44.7**	**0.0**
	baz=207							
GLI	**Glacier Island**	**78.62**	**13**	P		**P**	**18 02 44.9**	**+0.1**
	baz=206							
GAMB	**Gambell**	**78.74**	**1**	P		**P**	**18 02 44.8**	**-0.5**
	baz=182							
SKT	**Skwentna**	**78.79**	**10**	P		**P**	**18 02 45.3**	**-0.4**
	baz=201							
KNK	**Knik Glacier**	**78.83**	**12**	P		**P**	**18 02 46.4**	**+0.4**
	baz=204							
J16K	**Anvik River**	**78.84**	**6**			**P**	**18 02 47.3**	**+1.4**
J16K	**Anvik River**	**78.84**	**6**	P		**P**	**18 02 47.1**	**+1.2**
	baz=192							
PMR	**Palmer**	**78.87**	**11**	P		**P**	**18 02 46.7**	**+0.7**
	baz=204							
WRAK	**Wrangell Islan**	**79.05**	**22**	P		**P**	**18 02 47.3**	**+0.2**
	baz=220							
J17K	**VABM Nome**	**79.11**	**6**	P		**P**	**18 02 48.3**	**+0.9**
	baz=194							
DIV	**Divide**	**79.13**	**13**	P		**P**	**18 02 47.9**	**+0.3**
SML	**Sawmill**	**79.22**	**12**	P		**P**	**18 02 48.4**	**+0.3**
	baz=204							
BMRM	**Bremner River**	**79.25**	**14**			**P**	**18 02 48.8**	**+0.6**
BMRM	**Bremner River**	**79.25**	**14**	P		**P**	**18 02 48.3**	**+0.1**
	baz=208,SNR=5.3							
HLID	**Hailey**	**79.26**	**39**			**P**	**18 02 50.0**	**+1.1**
KLU	**Klutina**	**79.43**	**13**	P		**P**	**18 02 49.2**	**0.0**
	baz=207							
L22K	**Petersville**	**79.43**	**10**	P		**P**	**18 02 48.1**	**-1.1**
L22K					IAmb	IAmb	18 02 49.6	
	comp=Z,10nm,1.0s							
L22K	**Petersville**	**79.43**	**10**	P		**P**	**18 02 48.7**	**-0.5**
	baz=202,SNR=7.4							
SCM	**Sheep Creek Mo**	**79.44**	**12**	P		**P**	**18 02 49.3**	**0.0**
	baz=205							
J18K	**Innoko River**	**79.44**	**7**			**P**	**18 02 49.7**	**+0.5**
J18K					IAmb	IAmb	18 02 51.1	
	comp=Z,8.4nm,0.9s							
J18K	**Innoko River**	**79.44**	**7**	P		**P**	**18 02 50.0**	**+0.7**
	baz=196,SNR=7.0							
PPLA	**Purkeypile**	**79.55**	**10**	P		**P**	**18 02 49.6**	**-0.3**
	baz=201							
PINM	**Pinnacle**	**79.57**	**16**	P		**P**	**18 02 50.0**	**0.0**
	baz=212							
K20K	**Telida**	**79.69**	**9**	P		**P**	**18 02 49.4**	**-1.2**
K20K					IAmb	IAmb	18 02 52.6	
	comp=Z,9.2nm,1.1s							
K20K	**Telida**	**79.69**	**9**	P		**P**	**18 02 50.9**	**+0.3**
	baz=199,SNR=5.4							
ANM	**Nome**	**79.75**	**3**	P		**P**	**18 02 52.2**	**+1.4**
	baz=188							
R32K	**Eaglecrest**	**79.76**	**20**	P		**P**	**18 02 51.2**	**+0.1**
	baz=218							
N25K	**Chitina, Valde**	**79.82**	**13**	P		**P**	**18 02 51.6**	**+0.2**
	baz=208,SNR=5.3							
GLB	**Gilahina Butte**	**79.85**	**14**			**P**	**18 02 51.7**	**+0.2**
P29M	**Windy Craggy**	**79.88**	**17**	P		**P**	**18 02 51.8**	**+0.2**
	baz=215							
M24K	**Tolsona, Glenn**	**79.93**	**12**	P		**P**	**18 02 52.2**	**+0.3**
	baz=206							
MCARA	**McCarthy VSAT**	**79.98**	**14**	P		**P**	**18 02 52

MCK	McKinley	80.87	11		P	18 02 56.9	0.0
MCK	McKinley	80.87	11	P	P	18 02 57.2	+0.3
	baz=204						
M26K	Nabesna, AK	80.88	14	P	P	18 02 57.4	+0.3
	baz=209						
H18K	Honhosa River	80.89	6	P	P	18 02 57.5	+0.5
	baz=194						
HYT	Haines Junctio	80.93	17		P	18 02 57.3	-0.1
HYT				IAmb	IAmb	18 02 59.2	
	comp=Z,5.3nm,1.0s						
HYT	Haines Junctio	80.93	17	P	P	18 02 57.5	+0.1
	baz=215						
YUK3	Moose Creek	80.95	15	P	P	18 02 57.7	+0.1
	baz=212						
I20K	Naaghedeneel	81.01	8	P	P	18 02 58.2	+0.7
	baz=198						
G17K	Kiwalik Mounta	81.01	5	P	P	18 02 58.4	+0.8
	baz=192						
Q32M	Nakina River	81.03	20	P	P	18 02 58.3	+0.2
	baz=220						
P32M	Atlin	81.06	19	P	P	18 02 58.0	-0.1
	baz=218						
M27K	Edge Creek, AK	81.10	14	IAmb	IAmb	18 03 00.1	
	comp=Z,6.3nm,1.0s						
M27K	Edge Creek, AK	81.10	14	P	P	18 02 58.8	+0.4
	baz=210,SNR=7.7						
O30N	Mendenhall	81.29	17	IAmb	IAmb	18 03 00.9	
	comp=Z,4.3nm,0.8s						
O30N	Mendenhall	81.29	17	P	P	18 02 59.6	+0.3
	baz=216,SNR=7.4						
BVCY	Beaver Creek	81.39	15	P	P	18 03 00.2	+0.4
	baz=212						
FXWY	Fox Creek	81.39	40	IAmb	IAmb	18 03 02.6	
	comp=Z,6.0nm,1.2s						
DLBC	Dease Lake	81.40	21	LR	LR	18 31 59.0	
	comp=Z,25nm,19.8s,baz=110,slow=30						
DLBC	Dease Lake	81.40	21	P	P	18 02 59.9	0.0
	baz=222						
H19K	Roundabout Mou	81.47	7	P	P	18 03 00.6	+0.6
	baz=196						
K24K	Donnelly Dome	81.53	12	P	P	18 03 00.8	+0.3
	baz=207						
WHY	Whitehorse	81.55	18	P	P	18 03 00.7	0.0
	baz=217						
N30M	Aishikik Lake	81.57	17	P	P	18 03 00.7	0.0
	baz=215						
G18K	Tagagawik	81.58	6	P	P	18 03 01.2	+0.5
	baz=194						
H20K	Anotleneega Mo	81.62	8	P	P	18 03 01.3	+0.4
	baz=198						
NEA2	Nenana	81.64	10	IAmb	IAmb	18 03 02.7	
	comp=Z,4.8nm,0.8s						
NEA2	Nenana	81.64	10	P	P	18 03 01.3	+0.3
	baz=204						
RIDG	Independent Ri	81.66	12	IAmb	IAmb	18 03 02.2	
	comp=Z,6.1nm,1.0s						
RIDG	Independent Ri	81.66	12	P	P	18 03 01.1	-0.1
	baz=208						
L27K	Beaver Creek,	81.72	14	P	P	18 03 01.5	0.0
	baz=210						
MLY	Manley	81.78	9		P	18 03 01.4	-0.4
MLY				IAmb	IAmb	18 03 02.2	
	comp=Z,5.7nm,0.9s						
MLY	Manley	81.78	9	P	P	18 03 01.4	-0.4
	baz=202,SNR=7.5						
R33M	Jennings River	81.80	20	P	P	18 03 01.4	-0.7
	baz=221						
P33M	Teslin, Yukon	81.83	19	P	P	18 03 02.1	0.0
	baz=219						
HDA	Harding Lake	81.85	11	IAmb	IAmb	18 03 03.0	
	comp=Z,6.8nm,0.9s						
HDA	Harding Lake	81.85	11	P	P	18 03 02.0	-0.1
	baz=206,SNR=6.1						
F17K	Baldwin Pennin	81.89	5	P	P	18 03 03.1	+0.9
	baz=192						
PDAR	Pinedale Array	81.89	42	P	P	18 03 03.1	0.0
	comp=Z,1.1nm,0.9s,baz=227,slow=3.7,SNR=8.0						
PDAR				LR	LR	18 35 45.4	
	comp=Z,15nm,19.5s,baz=226,slow=33						
	comp=Z,1.1nm,0.9s						
PDAR	Pinedale Array	81.89	42	P	P	18 03 02.1	-1.0
N31M	Braeburn, Yuko	81.95	17	IAmb	IAmb	18 03 04.4	
	comp=Z,5.0nm,1.0s						
N31M	Braeburn, Yuko	81.95	17	P	P	18 03 02.8	+0.1
	baz=216						
G19K	Purcell Mounta	81.99	6	IAmb	IAmb	18 03 04.5	
	comp=Z,5.1nm,0.8s						
G19K	Purcell Mounta	81.99	6	P	P	18 03 03.4	+0.6
	baz=196						
M29M	Somme Creek	82.02	15	P	P	18 03 03.1	0.0
	baz=214,SNR=5.2						
BOZ	Bozeman (W)	82.03	38	IAmb	IAmb	18 03 05.5	
	comp=Z,6.6nm,1.4s						
SCRK	Sand Creek	82.05	12		P	18 03 02.9	-0.4
SCRK				IAmb	IAmb	18 03 04.5	
	comp=Z,4.2nm,0.9s						
SCRK	Sand Creek	82.05	12	P	P	18 03 03.3	0.0
	baz=208,SNR=7.0						
H21K	Melozitna Rive	82.06	8	IAmb	IAmb	18 03 04.9	
	comp=Z,5.0nm,1.1s						
H21K	Melozitna Rive	82.06	8	P	P	18 03 03.8	+0.6
	baz=200						
I23K	Minto, Yukon-K	82.11	10	IAmb	IAmb	18 03 04.2	
	comp=Z,4.2nm,0.9s						
I23K	Minto, Yukon-K	82.11	10	P	P	18 03 03.4	0.0
	baz=203						
IL31		82.19	11	IAmb	IAmb	18 03 11.9	
	comp=Z,6.3nm,1.4s						
ILAR	Eielson Array	82.19	11	P	P	18 03 03.6	-0.2
	comp=Z,1.9nm,0.8s,baz=224,slow=6.3,SNR=23						
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	82.19	11		P	18 03 03.5	-0.4
J25K	Salcha River,	82.34	12	IAmb	IAmb	18 03 05.8	
	comp=Z,5.2nm,0.9s						
J25K	Salcha River,	82.34	12	P	P	18 03 04.7	0.0
	baz=207,SNR=8.4						
POKR	Poker Plat Res	82.41	11	P	P	18 03 05.0	0.0
	baz=205						
H22K	Ishtalitna Cre	82.48	9		P	18 03 05.8	+0.3
H22K				IAmb	IAmb	18 03 06.7	
	comp=Z,4.5nm,0.8s						
H22K	Ishtalitna Cre	82.48	9	P	P	18 03 05.7	+0.3
	baz=201,SNR=6.4						
M30M	Minto, Yukon	82.56	16	P	P	18 03 06.0	+0.1
	baz=215						
F19K	Shaleruckik Mo	82.59	6	P	P	18 03 06.5	+0.6
	baz=195,SNR=6.8						
L29M	L29M	82.66	15	P	P	18 03 07.1	+0.7
	baz=214,SNR=14						
H23K	Yukon River	82.70	10	P	P	18 03 06.4	-0.1
	baz=203						
G21K	Allakaket	82.78	8	IAmb	IAmb	18 03 08.2	
	comp=Z,3.3nm,0.7s						
G21K	Allakaket	82.78	8	P	P	18 03 07.5	+0.6
	baz=199						
E18K	Tukpahlearik C	82.90	5	P	P	18 03 08.1	+0.6
	baz=192						
H24K	Noodor Dome	82.99	10	P	P	18 03 08.0	-0.1
	baz=205						
D17K	Noatak River	83.00	4	P	P	18 03 07.9	-0.1
	baz=190						
F20K	Avaraart Lake	83.02	7	P	P	18 03 08.6	+0.5
	baz=197						
PRP	Porcupine Dome	83.12	11		P	18 03 08.4	-0.4
PRP	Porcupine Dome	83.12	11	P	P	18 03 09.1	+0.3
	baz=207,SNR=9.6						
DAWY	Dawson	83.15	14	IAmb	IAmb	18 03 10.5	
	comp=Z,5.0nm,1.0s						
DAWY	Dawson	83.15	14	P	P	18 03 09.5	+0.6
	baz=213						
RLMT	Red Lodge	83.23	40		P	18 03 10.3	+0.3
RLMT				IAmb	IAmb	18 03 12.1	
	comp=Z,3.3nm,0.9s						
E19K	Redstone River	83.25	6	P	P	18 03 10.3	+1.0
	baz=196						
I26K	Coal Creek Min	83.39	12	IAmb	IAmb	18 03 11.7	
	comp=Z,3.4nm,1.0s						
I26K	Coal Creek Min	83.39	12	P	P	18 03 10.1	0.0
	baz=209						
K29M	Barlow Dome	83.42	15	P	P	18 03 10.6	+0.1
	baz=214						
C16K	Lisburne Hills	83.44	3	P	P	18 03 11.7	+1.5
	baz=188						
F21K	Alatna River	83.45	8	IAmb	IAmb	18 03 11.4	
	comp=Z,2.6nm,0.6s						
F21K	Alatna River	83.45	8	P	P	18 03 10.7	+0.3
	baz=199						
G23K	Bananza Creek	83.45	9	IAmb	IAmb	18 03 11.9	
	comp=Z,4.8nm,1.1s						
G23K	Bananza Creek	83.45	9	P	P	18 03 10.3	-0.1
	baz=202						
C17K	DeLong Mountai	83.76	4	P	P	18 03 12.4	+0.5
	baz=190						
RTBA	Rita Blanca	83.79	50	IAmb	IAmb	18 03 13.8	
	comp=Z,4.2nm,0.7s						
G24K	Hadweenzic Riv	83.84	10	P	P	18 03 13.0	+0.6
	baz=205						
F22K	John River	83.89	8	P	P	18 03 13.5	+0.9
	baz=200						
COLD	Coldfoot	83.90	9	IAmb	IAmb	18 03 14.8	
	comp=Z,4.4nm,1.0s						
COLD	Coldfoot	83.90	9	P	P	18 03 13.7	+1.0
	baz=202,SNR=5.8						
I27K	Kandik River	83.97	13	P	P	18 03 13.9	+0.8
	baz=211						
C18K	Utukok River	84.06	4	P	P	18 03 14.0	+0.4
	baz=192						
E20K	Nigu River	84.13	6	P	P	18 03 14.8	+0.9
	baz=196						
G25K	Bearman Lake	84.14	10	P	P	18 03 14.3	+0.5
	baz=206						
MMPY	Sheldon Lake,	84.16	18	IAmb	IAmb	18 03 15.3	
	comp=Z,3.4nm,0.6s						
MMPY	Sheldon Lake,	84.16	18	P	P	18 03 14.6	+0.4
	baz=220,SNR=6.1						
D19K	Kuna River	84.17	5	P	P	18 03 14.3	+0.2
	baz=195						
I28M	Miner Creek	84.20	13	P	P	18 03 14.5	+0.2
	baz=212						
J30M	Hart River	84.32	15	P	P	18 03 15.3	+0.3
	baz=216						
D20K	Etivluk River	84.53	6	P	P	18 03 16.6	+0.8
	baz=196						
F24K	Squaw Lake	84.53	9	P	P	18 03 16.4	+0.5
	baz=204						
E22K	Anaktuvuk Pass	84.53	8	P	P	18 03 16.4	+0.5
	baz=201						
H27K	Steamboat Moun	84.53	12	IAmb	IAmb	18 03 17.8	
	comp=Z,5.8nm,1.2s						
H27K	Steamboat Moun	84.53	12	P	P	18 03 16.4	+0.4
	baz=211						
E21K	Killik River	84.55	7	IAmb	IAmb	18 03 17.4	
	comp=Z,4.9nm,0.9s						
E21K	Killik River	84.55	7	P	P	18 03 16.4	+0.4
	baz=199,SNR=6.7						
C19K	Lookout Ridge	84.64	5	P	P	18 03 17.3	+0.9
	baz=193,SNR=6.0						
ABTX	Abilene, Hawle	84.67	54		P	18 03 17.8	+0.4
G26K	Porcupine Rive	84.72	11	P	P	18 03 17.7	+0.9
	baz=208,SNR=11						
E23K	Chandalar	84.76	9	IAmb	IAmb	18 03 18.9	
	comp=Z,4.7nm,1.1s						
E23K	Chandalar	84.76	9	P	P	18 03 17.8	+0.7
	baz=203						
I30M	Mount Dempster	84.84	15	IAmb	IAmb	18 03 18.4	
	comp=Z,3.4nm,0.8s						
I30M	Mount Dempster	84.84	15	P	P	18 03 17.8	+0.2
	baz=216,SNR=7.8						
E24K	Your Creek	84.94	9	P	P	18 03 18.7	+0.7
	baz=204,SNR=5.8						
F25K	Christian Rive	84.96	10	P	P	18 03 18.9	+0.8
	baz=215,SNR=5.5						
G27K	Doyon Strip	85.01	12	P	P	18 03 18.9	+0.6
	baz=210						
C21K	Knifeblade Rid	85.14	6	P	P	18 03 20.0	+1.1
	baz=198						
H29M	Whitestone	85.20	13	IAmb	IAmb	18 03 20.6	
	comp=Z,5.1nm,0.8s						
H29M	Whitestone	85.20	13	P	P	18 03 19.9	+0.6
	baz=214,SNR=5.2						
TOLK	Toolik Lake Re	85.31	8	P	P	18 03 20.6	+0.8
	baz=203						
F26K	Sheenjek River	85.32	11	P	P	18 03 20.7	+0.8
	baz=208						
E25K	Arctic Village	85.45	10	IAmb	IAmb	18 03 22.5	
	comp=Z,3.2nm,0.8s						
E25K	Arctic Village	85.45	10	P	P	18 03 21.6	+1.1
	baz=207						
D23K	Nanushuk River	85.46	8	IAmb	IAmb	18 03 22.5	
	comp=Z,6.8nm,1.0s						
D23K	Nanushuk River	85.46	8	P	P	18 03 21.5	+1.0
	baz=202,SNR=6.7						
A19K	Wainwright	85.61	4	P	P	18 03 21.0	-0.2
	baz=192						
B21K	Ikpikpuk River	85.61	6	P	P	18 03 21.9	+0.8
	baz=198						
EPYK	Eagle Plains	85.70	14	P	P	18 03 21.9	+0.1
	baz=215						
B20K	Meade River	85.72	5	P	P	18 03 22.6	+0.8
	baz=196						
PLPT	Palo Pinto	85.78	55	P	P	18 03 22.7	-0.3
H31M	Peel River	85.81	15	P	P	18 03 22.7	+0.4
	baz=217						
G29M	Pine Creek	85.86	13	P	P	18 03 22.6	+0.1
	baz=214						
F28M	Old Crow	86.06	12	P	P	18 03 23.9	+0.4
	baz=212						
E27K	Coleen River	86.22	11	P	P	18 03 24.7	+0.4
	baz=210						
C23K	Itkillik River	86.28	8	P	P	18 03 25.4	+0.9
	baz=202						
G30M	tAoh Zraii Nji	86.32	14	P	P	18 03 25.1	+0.2
	baz=216						
G31M	Satah River	86.73	14	P	P	18 03 26.7	0.0
	baz=217						
HHC	Hu-ho-hao-te	89.15	313	*e*P	P	18 03 39.3	+0.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,55nm,4.3s						
YKA	Yellowknife Ar	89.79	23	P	P	18 03 41.4	0.0
	comp=Z,1.8nm,0.9s,baz=241,slow=4.3,SNR=6.8						
	comp=Z,1.8nm,0.9s						
YKA	Yellowknife Ar	89.79	23	P	P	18 03 40.6	-0.8
PZH	PanZhiHua	92.50	297	P	P	18 03 55.4	+0.4
ULM	Lac du Bonnet	93.57	39	LR	LR	18 42 33.2	
	comp=Z,36nm,18.6s,baz=270,slow=33						
CLL	Collm	143.67	354	*i* PKiKP	PKiKP	18 10 22.4	+0.9
	comp=Z,3.0nm,0.9s						
MOX	Moxa	144.46	355	*e*L	L	19 19 12.5	
	comp=Z,70nm,18.6s						
MORC	Moravsky Berou	144.46	348	*e*PKP	PKPab	18 10 18.3	+0.4
VRAC	Vranov	145.09	349	*e*PKP	PKPbc	18 10 20.1	0.0
ROTZ	Rotzenmuhle	145.27	354	*e*PKPbc	PKPab	18 10 21.3	+0.5
	baz=7.5,slow=3.1						
JAVC	Velka Javorina	145.31	348	*e*PKP	PKPab	18 10 21.4	+0.4
KRUC	Moravsky	145.37	349	*e*PKP	PKPbc	18 10 21.3	+0.3
GRF	Grafenberg Arr	145.44	355	*e*PKPbc	PKPdf	18 10 21.7	+0.5
	baz=7.5,slow=3.1						
GRF				*e*L	L	19 14 35.9	
	comp=Z,23nm,20.2s						
WLF	Walferdange	145.63	1	*e*PKPbc	PKPab	18 10 22.6	+0.4
	baz=7.5,slow=3.1						
KHC	Kasperske Hory	145.74	352	*e*PKP	PKPbc	18 10 22.5	+0.3
WET	Wettzell	145.81	353	*e*PKPbc	PKPab	18 10 23.1	+0.3
	baz=7.5,slow=3.1						
GEC2	GERESS Array S	146.00	352	*e*PKPbc	PKPbc	18 10 23.4	+0.3
	baz=7.5,slow=3.1						
GERES	GERESS Array B	146.00	352	PKPbc	PKPdf	18 10 22.9	+0.6
	comp=Z,1.5nm,0.8s,baz=338,slow=1.4,SNR=14						
GERES	GERESS Array B	146.00	352		PKPdf	18 10 20.0	-2.3
BRTR	Keskin Array B	146.23	321	PKPbc	PKPbc	18 10 24.3	+0.1
	comp=Z,5.7nm,0.9s,baz=101,slow=1.3,SNR=11						
BRTR	Keskin Array B	146.23	321		PKPdf	18 10 22.6	-0.5
CONA	Conrad Observa	146.55	349	*i* pPKP	PKPbc	18 10 25.5	+0.7
	comp=Z,3.6nm,1.1s						
MOA	Molln	146.90	351	*e*PKP	PKPbc	18 10 26.1	+0.4
	comp=Z,2.0nm,0.7s						
SESA	Seetal Alpe,	147.57	350	*i* pPKP	PKPbc	18 10 27.7	-0.1
	comp=Z,6.9nm,0.8s						
RETA	Reutte	147.66	355	*e*PKP	PKPbc	18 10 28.4	+0.5
	comp=Z,5.8nm,1.5s						
MOTA	Moosalm	147.78	355	*i* PKP	PKPbc	18 10 28.6	+0.3
	comp=Z,2.1nm,0.8s						
SQTA	Sankt Quirin	147.89	355	*e*pPKP	PKPbc	18 10 28.8	+0.2
	comp=Z,2.0nm,0.6s						
SOKA	Soboth	147.91	350	*e*pPKP	PKPbc	18 10 28.4	-0.2
	comp=Z,3.0nm,1.0s						
ABTA	Abfaltersbach	148.22	353	*e*pPKP	PKPbc	18 10 29.1	-0.3
	comp=Z,3.4nm,1.1s						
ESDC	Sonseca Array	153.82	19	PKPab	PKPab	18 10 56.2	+0.5
	comp=Z,0.8nm,0.8s,baz=313,slow=3.6,SNR=5.1						

*TEH **22** 18:32:42.1, 26°.75N×54°.20E, h8km±58km, ML3.2,*

Presumed earthquake
*OMAN **22** 18:32:49.0±1.7, 26°.65N×54°.15E, h10km, ml2.8/13, Error ellipse: s-maj=20.1km s-min=10.6km az=178.0*
*DSN **22** 18:32:49.7±1.7, 26°.76N×54°.17E, h20km, ML2.6/7, Error ellipse: s-maj=18.7km s-min=8.3km az=172.0*
ISC 22 18:32:42.6±1.0, **26.71N**±0°.04×**54.16E**±0°.05, **h10**km, **n32,**
σ1§**62**/35, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	Lamerd	1.08	306	Pg	Pn	18 33 03.8	-0.1
KHL1	Khalili_Fars	1.20	321	Pg	Pn	18 33 04.9	-0.5
JHRM	Jahrom	1.86	344	Pn	Pb	18 33 16.2	-0.5
SHME	Shamm	1.90	110	P	Pg	18 33 19.7	+0.7
SHME				S	Sg	18 33 45.2	+1.6
SHME	Shamm	1.90	110	P	Pg	18 33 19.8	+0.8
SHME				S	Sg	18 33 45.8	+2.2
GENO	Geno	1.93	69	Pn	Pg	18 33 18.2	-1.3
QIR1	Qir	2.02	331	Pn	Pb	18 33 19.5	+0.1
BANOM	Banah	2.08	112	P	Pg	18 33 22.6	+0.2
BANOM				S	Sg	18 33 50.8	+1.5
NAZ	Nazwa, Dubai	2.19	141	P	Pg	18 33 26.6	+2.1
NAZ	Nazwa, Dubai	2.19	141	P	Pg	18 33 27.0	+2.5
MASF	Masafi	2.24	126	P	Pg	18 33 27.1	+1.6
MASF				S	Sg	18 33 53.8	-0.9
IBND	Bandar-abas	2.25	70	Pn	Pg	18 33 23.2	-2.6
AJN	Ajban	2.27	160	P	Pb	18 33 22.5	-1.0
FAQ	Al Faqa, Dubai	2.35	146	P	Pb	18 33 24.7	-0.3
MDH	Madha	2.38	126	P	Pg	18 33 28.4	+0.1
MDH				S	Sg	18 33 57.5	-1.8
UOSS	Minazif	2.55	133	P	Pg	18 33 31.2	-0.2
UOSS				S	Sb	18 34 01.4	+1.6
HATD	Hatta, Dubai	2.59	136	P	Pg	18 33 31.7	-0.5
HATD	Hatta, Dubai	2.59	136	P	Pg	18 33 31.7	-0.5
ASHO	Ashiyiah	2.65	139	P	Pg	18 33 32.6	-0.8
ASHO				S	Sb	18 34 03.7	+1.0
ASHO	Ashiyiah	2.65	139	P	Pg	18 33 33.0	-0.3
	SNR=14						
SOHO	SOHO	3.35	139	P	Pb	18 33 41.7	-0.3
NGRK	Negar Kerman	3.70	37	Pn	Pn	18 33 42.0	+1.8
ARQ	Araqi	3.98	147	P	Pb	18 33 50.0	-3.0
UMZA	Um Al Zommool	4.08	167	P	Pb	18 33 52.2	-2.4
KHGB	Koh Gabri	4.18	29	Pn	Pn	18 33 47.9	+1.2
HOQ	Hoqain	4.23	137	P	Pb	18 33 52.4	-4.6
	SNR=9.6						
IMEH	Mehriz	4.68	5	Pn	Pn	18 33 54.2	+0.6
TAFT	Taft - Yazd	5.00	0	Pn	Pn	18 33 58.9	+1.0
SMDO	Samad	5.07	135	P	Pb	18 34 05.0	-6.5
	SNR=6.8						
WSAR	Wadi Sarin	5.33	129	P	Pn	18 34 08.0	+5.7
WBK	Wadi Bani Khal	5.99	132	P	Pn	18 34 17.0	+5.7
MHTO	MHTO	6.68	148	P	Pn	18 34 27.5	+6.7

*IDC **22** 18:37:52.7±1.2, 54°.63N×160°.96W, h0km, mb3.8/11, mbtmp3.7/14, ML3.4/3, MS3.0/2, Error ellipse: s-maj=31.7km s-min=18.0km az=165.0*
*NEIC **22** 18:37:57.9±2.0, 54°.58N±0°.06×160°.60W±0°.10, h25km±6km, mb3.8/13, ML3.8/34, Error ellipse: s-maj=9.6km s-min=6.7km az=133.0*
ISC 22 18:37:54.8±0.7, **54°.54N**±0°.06×**160°.64W**±0°.05, **h10**km, **n85,**
σ1§**45**/70, **mb3.8**/12, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	Chernabura Isl	0.67	65		Pg	18 38 09.7	+2.0
CHNA	Chernabura Isl	0.67	64	P	Pg	18 38 09.7	+1.9
CHNA	Chernabura Isl	0.67	64	S	Sg	18 38 18.1	+1.5
SDPT	Sand Point	0.81	6	P	Pg	18 38 11.3	+0.9
SDPT	Sand Point	0.81	6	S	Sg	18 38 22.2	+1.1
SDPT	Sand Point	0.81	6		Pg	18 38 11.4	+0.9
SDPT				Sg	Sg	18 38 21.7	+0.7
SDPT				IAML		18 38 27.7	
	comp=E,5μm,0.6s						
SDPT				IAML		18 38 28.0	
	comp=N,3μm,0.8s						
VNFG	Fog Glacier, M	1.85	19		Pn	18 38 28.5	+1.8
CHGN	Chignik	2.17	35		Pn	18 38 32.1	+1.1
CHGN				Sn	Sn	18 38 58.2	+0.4
CHGN				IAML		18 39 01.8	
	comp=N,697nm,0.3s						
CHGN				IAML		18 39 03.1	
	comp=E,901nm,0.5s						
AKUT	Akutan	3.03	264	P	Pn	18 38 44.7	+1.9
AKUT	Akutan	3.03	264		Pn	18 38 44.3	+1.5
AKUT				IAML		18 39 29.2	
	comp=N,238nm,1.0s						
AKUT				IAML		18 39 31.2	
	comp=E,241nm,0.9s						
CHIR	Chirikof Islan	3.15	64	P	Pn	18 38 45.5	+1.1
CHIR	Chirikof Islan	3.15	64	Pn	Pn	18 38 45.2	+0.9
CHIR				Sn	Sn	18 39 18.8	-3.2
CHIR				IAML		18 39 42.1	
	comp=E,239nm,0.6s						
CHIR				IAML		18 39 43.7	
	comp=N,230nm,1.1s						
LVA	Lava Point	3.18	265		Pn	18 38 46.9	+2.0
LVA				IAML		18 39 44.2	
	comp=E,196nm,0.7s						
UNV	Unalaska Valle	3.52	261		Pn	18 38 51.2	+1.7
UNV				IAML		18 39 41.1	
	comp=E,118nm,0.7s						
UNV				IAML		18 39 46.2	
	comp=N,120nm,0.8s						
SII	Sitkinak Islan	4.18	59	P	Pn	18 38 59.6	+0.9
SII	Sitkinak Islan	4.18	59	Pn	Pn	18 38 59.6	+0.9
SII				IAML		18 40 16.2	
	comp=E,183nm,0.9s						
SII				IAML		18 40 22.6	
	comp=N,178nm,0.6s						
O15K	Ungalikthiuk R	4.67	5		Pn	18 39 06.1	+0.9
ACHA	Angle Creek He	4.71	37		Pn	18 39 07.4	+1.4
P16K	Nushagak River	4.73	17	Pn	Pn	18 39 07.7	+1.6
O14K	Tigyukauivet M	4.73	356	Pn	Pn	18 39 07.7	+1.6
O14K				IAML		18 40 33.5	
	comp=N,57nm,0.8s						
O14K				IAML		18 40 42.1	
	comp=E,67nm,0.9s						
OHAK	Old Harbor	4.93	54	P	Pn	18 39 09.2	+0.3
OHAK	Old Harbor	4.93	54	Pn	Pn	18 39 09.3	+0.4
OHAK				IAML		18 40 32.2	
	comp=N,56nm,1.0s						
OHAK				IAML		18 40 33.7	
	comp=E,47nm,0.8s						
P17K	Kvichak River	5.20	25		Pn	18 39 14.5	+1.9
O16K	Kokwok River B	5.25	14		Pn	18 39 14.8	+1.6
N14K	Kuskokwak Cree	5.42	354		Pn	18 39 16.1	+0.5
N14K				IAML		18 40 58.6	
	comp=E,51nm,1.0s						
KDAK	Kodiak Island	5.55	51	Pn	Pn	18 39 17.9	+0.6
	comp=E,0.8nm,0.3s,baz=246,slow=1.3,SNR=29						
KDAK				Sn	Sn	18 40 19.1	-2.0
	comp=E,2.2nm,0.3s,baz=329,slow=22,SNR=7.3						
	comp=E,3.6nm,0.4s						
KDAK	Kodiak Island

I27K	**Kandik River**	**14.51**	**33**	Pn	**Pn**	18 41 19.7	**-0.4**	
J30M	**Hart River**	**15.78**	**41**	IAmb	IAmb	18 41 48.2		
	comp=Z,12nm,1.0s							
H29M	**Whitestone**	**15.94**	**34**	IAmb	IAmb	18 41 52.3		
	comp=Z,4.6nm,0.8s							
I30M	**Mount Dempster**	**16.08**	**39**	IAmb	IAmb	18 41 55.6		
	comp=Z,9.0nm,0.8s							
G29M	**Pine Creek**	**16.47**	**32**	IAmb	IAmb	18 41 48.2		
	comp=Z,6.8nm,1.1s							
EPYK	**Eagle Plains**	**16.57**	**35**	IAmb	IAmb	18 41 56.8		
	comp=Z,6.0nm,0.9s							
H31M	**Peel River**	**17.10**	**38**	IAmb	IAmb	18 41 58.7		
	comp=Z,6.4nm,1.0s							
INK	**Inuvik**	**18.69**	**32**	P	**P**	**18 42 11.9**	**-0.8**	
	comp=Z,0.3nm,0.3s,baz=238,slow=11,SNR=4.7							
	comp=Z,1.7nm,0.8s							
PETK	**Petropavlovsk-**	**24.38**	**284**	P	**P**	**18 43 10.8**	**-2.1**	
	comp=Z,1.0nm,0.4s,baz=77,slow=13,SNR=9.2							
	comp=Z,1.0nm,0.4s							
MA2	**Magadan**	**26.40**	**301**	LR	LR	18 55 41.6		
	comp=Z,28nm,18.7s,baz=74,slow=41							
NEW	**Newport**	**27.50**	**85**	LR	LR	18 52 34.5		
	comp=Z,36nm,19.1s,baz=142,slow=32							
H11N2	**WAKE ISLAND Hy**	**42.62**	**228**	T	T	19 30 59.4		
	baz=27,slow=76,SNR=8.6							
H11N3	**WAKE ISLAND Hy**	**42.63**	**228**	T	T	19 30 54.6		
	baz=27,slow=76,SNR=7.7							
H11N1	**WAKE ISLAND Hy**	**42.64**	**228**	T	T	19 30 50.4		
	baz=27,slow=76,SNR=6.1							
H11S1	**WAKE ISLAND Hy**	**43.79**	**228**	T	T	19 32 26.8		
	baz=26,slow=75,SNR=13							
H11S2	**WAKE ISLAND Hy**	**43.80**	**228**	T	T	19 32 23.4		
	baz=26,slow=75,SNR=5.4							
H11S3	**WAKE ISLAND Hy**	**43.81**	**228**	T	T	19 32 17.4		
	baz=26,slow=75,SNR=4.2							
TXAR	**Lajitas Array**	**47.67**	**98**	P	**P**	**18 46 32.7**	**+1.4**	
	comp=Z,0.7nm,0.8s,baz=309,slow=7.1,SNR=7.6							
	comp=Z,0.7nm,0.8s							
TXAR	**Lajitas Array**	**47.67**	**98**	P	**P**	**18 46 32.2**	**+0.9**	
SONM	**Songino Array**	**54.53**	**304**	P	**P**	**18 47 21.9**	**-0.9**	
	comp=Z,0.5nm,0.3s,baz=52,slow=7.8,SNR=5.2							
	comp=Z,0.5nm,0.3s							
SONM	**Songino Array**	**54.53**	**304**	P	**P**	**18 47 22.6**	**-0.1**	
KURK	**Kurchatov**	**64.02**	**323**	P	**P**	**18 48 29.1**	**+0.9**	
KURK				IAmb	IAmb	18 48 30.3		
	comp=Z,0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**64.13**	**323**	P	P	18 48 26.9	-1.9	
	comp=Z,0.2nm,0.4s,baz=47,slow=9.0,SNR=2.6							
	comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**64.23**	**356**	P	P	18 48 26.9	-2.4	
	comp=Z,1.1nm,0.5s,baz=1.8,slow=6.1,SNR=7.4							
	comp=Z,1.1nm,0.5s							
BVAR	**Borovoye Array**	**64.77**	**329**	P	**P**	**18 48 31.5**	**-1.5**	
	comp=Z,1.5nm,0.9s,baz=54,slow=7.5,SNR=3.7							
	comp=Z,1.5nm,0.9s							
HFS	**Hagfors**	**65.58**	**3**	P	**P**	**18 48 36.6**	**-1.5**	
	comp=Z,1.7nm,0.7s,baz=40,slow=2.5,SNR=5.3							
	comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**65.90**	**318**	P	P	18 48 38.3	-2.2	
	comp=Z,0.2nm,0.3s,baz=41,slow=6.5,SNR=7.8							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**65.90**	**318**	P	P	18 48 38.0	-2.5	
AKASG	**Malin Array Be**	**74.80**	**354**	P	P	18 49 32.2	-2.6	
	comp=Z,0.3nm,0.4s,baz=11,slow=6.4,SNR=2.7							
	comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**81.04**	**289**	P	**P**	**18 50 10.2**	**+0.2**	
	comp=Z,0.3nm,0.4s,baz=25,slow=3.5,SNR=4.7							
	comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**81.04**	**289**	P	**P**	**18 50 09.9**	**-0.1**	
ESDC	**Sonseca Array**	**84.04**	**18**	P	**P**	**18 50 24.9**	**-0.5**	
	comp=Z,0.4nm,0.6s,baz=343,slow=5.7,SNR=4.3							
	comp=Z,0.4nm,0.6s							
ESDC	**Sonseca Array**	**84.04**	**18**	P	**P**	**18 50 23.9**	**-1.5**	
QSPA	**South Pole Qui**	**144.32**	**180**	PKP	**PKPab**	**18 57 26.6**	**-1.1**	
	comp=Z,1.7nm,0.8s,baz=324,slow=1.1,SNR=10							
QSPA	**South Pole Qui**	**144.32**	**180**		**PKPab**	**18 57 26.0**	**-1.7**	

IDC ***22*** *18:39:24.5±2.0, 6°26S×142°59E, h0km, mb3.4/2, mbtmp3.7/6, ML3.5/3, MS3.1/3, Error ellipse: s-maj=39.5km s-min=26.1km az=68.0*

ISC 22 18:39:26.6±1.0, 6°34S±0°07×142°43E±0°09, h35km, n8, σ2s67/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAY	**Jayapura**	**4.17**	**336**	Pn		**Pn**	**18 40 27.5**	**-0.3**
	3.9nm,0.3s,baz=157,slow=13,SNR=51							
JAY				Sn		**Sn**	**18 41 15.5**	**+0.2**
	6.8nm,0.3s,baz=252,slow=21,SNR=8.0							
JAY				LR		LR	18 42 12.9	
	comp=Z,87nm,21.0s,baz=39,slow=40							
	11nm,0.4s							
PMG	**Port Moresby**	**5.59**	**123**	Pn		**Pn**	**18 40 46.9**	**-0.4**
	15nm,0.5s,baz=360,slow=5.5,SNR=16							
PMG				Sn		**Sn**	**18 41 49.6**	**-0.7**
	5.7nm,0.3s,baz=206,slow=21,SNR=13							
CTA	**Charters Tower**	**14.16**	**165**	LR		LR	18 48 52.1	
	comp=Z,90nm,19.5s,baz=16,slow=40							
WRA	**Warramunga Arr**	**15.64**	**209**	Pn		**P**	**18 43 06.8**	**-1.4**
	0.2nm,0.3s,baz=24,slow=12,SNR=7.0							
WRA				Sn		**Sn**	**18 45 58.5**	**+1.7**
	0.2nm,0.3s,baz=40,slow=23,SNR=5.0							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**19.08**	**205**	P		**Pn**	**18 43 51.5**	**+4.2**
	0.1nm,0.3s,baz=33,slow=9.9,SNR=24							
ASAR				S		**S**	**18 47 19.5**	**-1.5**
	0.4nm,0.8s,baz=20,slow=27,SNR=2.1							
	3.1nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.12**	**233**	P		**Pn**	**18 44 00.9**	**+1.3**
	1.8nm,1.0s,baz=58,slow=9.5,SNR=1.1							
FITZ				S		**S**	**18 47 37.1**	**-4.8**
	1.0nm,0.6s,baz=325,slow=1.7,SNR=0.9							
	1.8nm,1.0s							
CMAR	**Chiang Mai Arr**	**49.46**	**301**	P		P	18 48 18.9	+5.1
	0.3nm,0.4s,baz=104,slow=7.5,SNR=4.2							
	0.3nm,0.4s							
VNDA	**Vanda**	**71.88**	**176**	LR		LR	19 19 12.9	
	comp=Z,45nm,21.8s,baz=282,slow=33							

IDC ***22*** *19:21:57.2±0.6, 6°74N×72°92W, h160km±6km, mb3.9/17, mbtmp4.5/21, Error ellipse: s-maj=10.3km s-min=7.1km az=140.0*

CATAC ***22*** *19:21:57.2±0.4, 7°N±2°×7°3W±°, h158km±4km, M4.7/9, mb4.9/7, mB5.0/7, MLv5.0/9, Mw(mB)4.3/7, Error ellipse: s-maj=5.9km s-min=3.5km az=89.2, confirmed*

NEIC ***22*** *19:21:57.3±1.6, 6°78N±0°07×73°02W±0°08, h152km±6km, mb4.6/362, Error ellipse: s-maj=12.1km s-min=8.6km az=128.0*

GFZ ***22*** *19:21:57.4±0.3, 7°N±3°×7°3W±°, h155km, M4.7/30, mb4.7/30, confirmed*

RSNC ***22*** *19:21:58.3±0.0, 7°N±1°×7°3W±°, h150km±1km, M4.8, mb5.1, mB5.4, ML4.4, MLv5.1, Mw(mB)4.8, MwMwp4.9, Mwp5.2*

FUNV ***22*** *19:21:59.8, 6°97N×73°12W, h118km, MW4.6, Presumed earthquake*

VAO ***22*** *19:22:04.9±2.2, 8°03N×73°21W, h10km, mb4.7, Presumed earthquake*

ISC 22 19:21:56.7±0.5, 6°83N±0°03×73°02W±0°03, h155km±4km, h155km:pP-P, n614, σ1s41/497, mb4.6/182, 2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.28**	**215**	P		**Pn**	**19 22 18.7**	**+0.7**
BARC				S		**Sn**	**19 22 34.0**	**-0.3**
PAMC	**Pamplona, Colo**	**0.60**	**32**	P		**Pn**	**19 22 21.5**	**+1.9**
PAMC				S		**Sn**	**19 22 38.7**	**+1.5**
BRJC	**Barrancabermej**	**0.74**	**281**	P		**Pn**	**19 22 20.3**	**+0.4**
BRJC				S		**Sn**	**19 22 37.3**	**-0.3**
RUSC	**La Rusia**	**0.93**	**184**	P		**Pn**	**19 22 22.7**	**+0.8**
RUSC				S		**Sn**	**19 22 42.0**	**+0.8**
RUSC	**La Rusia**	**0.93**	**184**	P		**Pn**	**19 22 22.5**	**+0.6**
RUSC				S		**Sn**	**19 22 41.4**	**+0.2**
RUSC	**La Rusia**	**0.93**	**184**	eP		**Pn**	**19 22 22.5**	**+0.6**
RUSC				eS		**Sn**	**19 22 38.5**	**-2.7**
OCAC	**Ocana**	**1.44**	**348**	P		**Pn**	**19 22 26.7**	**+0.6**
OCAC				S		**Sn**	**19 22 48.8**	**+0.1**
PTBC	**PUERTO BERRIO,**	**1.46**	**259**	P		**Pn**	**19 22 25.0**	**-1.1**
PTBC				S		**Sn**	**19 22 45.8**	**-2.9**
SPBC	**San Pablo de B**	**1.57**	**222**	P		**Pn**	**19 22 27.4**	**0.0**
SPBC				S		**Sn**	**19 22 49.4**	**-1.6**
NORC	**Norcasia**	**2.23**	**236**	P		**Pn**	**19 22 34.3**	**-0.5**
NORC				S		**Sn**	**19 23 01.8**	**-2.4**
CHIC	**Chingaza**	**2.29**	**198**	P		**Pn**	**19 22 36.5**	**+0.5**
CHIC				S		**Sn**	**19 23 06.2**	**-0.1**
ROSC	**El Rosal**	**2.36**	**213**	P		**Pn**	**19 22 38.4**	**+1.7**
	2μm,0.3s,baz=20,slow=4.6,SNR=557							
ROSC				S		**Sn**	**19 23 08.0**	**+0.4**
	7μm,0.4s,baz=99,slow=14,SNR=8.2							
ROSC	**El Rosal**	**2.36**	**213**			**Pn**	**19 22 38.3**	**+1.5**
ROSC						**Sn**	**19 23 05.2**	**-2.4**
ROSC	**El Rosal**	**2.36**	**213**	P		**Pn**	**19 22 38.2**	**+1.5**
ROSC				S		**Sn**	**19 23 06.0**	**-1.6**
CVER	**Cruz Verde, Cu**	**2.52**	**205**	P		**Pn**	**19 22 40.1**	**+1.4**
CVER				S		**Sn**	**19 23 08.5**	**-2.7**
HELC	**Santa Helena**	**2.57**	**256**	P		**Pn**	**19 22 38.2**	**-1.0**
HELC				S		**Sn**	**19 23 10.2**	**-1.9**
HELC	**Santa Helena**	**2.57**	**256**	P		**Pn**	**19 22 38.2**	**-1.0**
HELC				S		**Sn**	**19 23 09.8**	**-2.3**
HELC	**Santa Helena**	**2.57**	**256**	eP		**Pn**	**19 22 38.8**	**-0.5**
HELC				eS		**Sn**	**19 23 07.7**	**-4.4**
MEDEC	**Medelln, Ant**	**2.61**	**258**	P		**Pn**	**19 22 39.0**	**-0.6**
UREC	**San Jos de Ur**	**2.66**	**290**	P		**Pn**	**19 22 38.1**	**-1.9**
UREC				S		**Sn**	**19 23 09.1**	**-4.3**
PTGC	**Puerto Gaitan,**	**2.75**	**161**	P		**Pn**	**19 22 41.8**	**+0.6**
PTGC				S		**Sn**	**19 23 14.7**	**-0.9**
VILC	**Villavicencio,**	**2.78**	**194**	P		**Pn**	**19 22 41.9**	**+0.3**
VILC				S		**Sn**	**19 23 15.9**	**-0.5**
GUY2C	**Guyana, Caldas**	**2.83**	**236**	P		**Pn**	**19 22 42.3**	**-0.2**
GUY2C				S		**Sn**	**19 23 19.0**	**+1.1**
SDV	**Santo Domingo**	**3.12**	**49**	P		**Pn**	**19 22 48.2**	**+2.3**
	1μm,0.4s,baz=235,slow=8.9,SNR=603							
SDV				S		**Sn**	**19 23 25.2**	**+1.1**
	997nm,0.4s,baz=90,slow=20,SNR=11							
SDV	**Santo Domingo**	**3.12**	**49**			**Pn**	**19 22 47.9**	**+1.9**
SDV	**Santo Domingo**	**3.12**	**49**	eP		**Pn**	**19 22 48.1**	**+2.1**
SDV				eS		**Sn**	**19 23 20.4**	**-3.8**
SDV	**Santo Domingo**	**3.12**	**49**	eP		**Pn**	**19 22 48.2**	**+2.3**
SDV				eS		**Sn**	**19 23 21.6**	**-2.6**
SDV	**Santo Domingo**	**3.12**	**49**	eP		**Pn**	**19 22 48.3**	**+2.3**
SDV				eS		**Sn**	**19 23 25.6**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.13**	**252**	P		**Pn**	**19 22 45.8**	**-0.2**
CBOC				S		**Sn**	**19 23 22.1**	**-2.0**
DBBC	**Dabeiba**	**3.17**	**274**	P		**Pn**	**19 22 46.1**	**-0.4**
DBBC				S		**Sn**	**19 23 20.9**	**-4.2**
ARGC	**Ariguani, Magd**	**3.25**	**338**	P		**Pn**	**19 22 48.7**	**+1.3**
ARGC				S		**Sn**	**19 23 26.8**	**+0.1**
PRAC	**Prado**	**3.61**	**211**	P		**Pn**	**19 22 52.0**	**0.0**
PRAC				S		**Sn**	**19 23 35.3**	**+0.3**
PRAC	**Prado**	**3.61**	**211**	P		**Pn**	**19 22 51.8**	**-0.3**
PRAC				S		**Sn**	**19 23 32.5**	**-2.6**
APAC	**Apartado, Choc**	**3.69**	**287**	P		**Pn**	**19 22 52.5**	**-0.5**
SJCC	**San Jacinto, C**	**3.73**	**325**	P		**Pn**	**19 22 52.4**	**-1.2**
SJCC				S		**Sn**	**19 23 35.4**	**-2.4**
SJCC	**San Jacinto, C**	**3.73**	**325**	P		**Pn**	**19 22 52.2**	**-1.4**
SJCC	**San Jacinto, C**	**3.73**	**325**	eP		**Pn**	**19 22 52.2**	**-1.4**
SJCC				eS		**Sn**	**19 23 32.4**	**-5.4**
LCBC	**Los crdobas,**	**3.88**	**302**	P		**Pn**	**19 22 54.4**	**-1.1**
SOLC	**Bahia Solano**	**4.40**	**262**	P		**Pn**	**19 23 02.3**	**0.0**
SMRC	**Santa Marta, M**	**4.47**	**345**	P		**Pn**	**19 23 03.1**	**-0.1**
PIZC	**Pizarro, Choco**	**4.70**	**247**	P		**Pn**	**19 23 07.0**	**+0.8**
MACC	**Macarena, Meta**	**4.72**	**190**	P		**Pn**	**19 23 05.8**	**-0.8**
PTAC	**Punta Ardita,**	**4.77**	**274**	P		**Pn**	**19 23 06.3**	**-1.8**
BETC	**Betania**	**4.77**	**211**	P		**Pn**	**19 23 06.9**	**-0.4**
URI	**Uribia**	**4.95**	**12**	P		**Pn**	**19 23 09.0**	**-0.4**
URI				S		**Sn**	**19 24 07.6**	**+1.2**
URIC	**Uribia, Colomb**	**4.95**	**12**	P		**Pn**	**19 23 09.0**	**-0.5**
	2.0nm8μm341nm,0.9s							
URIC	**Uribia, Colomb**	**4.95**	**12**	eP		**Pn**	**19 23 09.1**	**-0.5**
URIC				eS		**Sn**	**19 23 58.3**	**-8.1**
JAMC	**Jamundi, Valle**	**5.11**	**226**	P		**Pn**	**19 23 10.8**	**-1.1**
	0.6nm6μm229nm,0.4s							
GARC	**Garzon, Huila**	**5.23**	**208**	P		**Pn**	**19 23 12.4**	**-1.1**
POPC	**Popayan, Colom**	**5.61**	**221**	P		**Pn**	**19 23 18.0**	**-0.4**
	2μm176nm,0.6s							
FLOC	**Florencia**	**5.83**	**207**	P		**Pn**	**19 23 21.0**	**-0.3**
FLOC				S		**Sn**	**19 24 27.9**	**+0.4**
FLOC	**Florencia**	**5.83**	**207**	P		**Pn**	**19 23 20.7**	**-0.6**
	4μm277nm,0.8s							
BBAC	**Balboa, Cauca**	**6.37**	**222**	P		**Pn**	**19 23 27.3**	**-1.3**
	4μm295nm,0.6s							
GR1C	**Gorgona, Isla**	**6.38**	**234**	P		**Pn**	**19 23 26.5**	**-2.0**
	354nm,2.2s							
CRUC	**La Cruz**	**6.53**	**217**	P		**Pn**	**19 23 32.7**	**+1.8**
TACV	**Tcata**	**6.78**	**61**	eP		**Pn**	**19 23 33.8**	**-0.1**
TACV				eS		**Sn**	**19 24 44.8**	**-5.3**
PTLC	**Puerto Leguiza**	**6.84**	**195**	P		**Pn**	**19 23 36.8**	**+2.1**
FUNV	**FUNVISIS**	**7.12**	**59**	eP		**Pn**	**19 23 38.8**	**+0.3**
FUNV				eS		**Sn**	**19 24 52.5**	**-6.0**
BCIP	**Isla Barro Col**	**7.14**	**289**	P		**Pn**	**19 23 36.7**	**-2.0**
BCIP				S		**Sn**	**19 24 55.8**	**-2.9**
BCIP	**Isla Barro Col**	**7.14**	**289**	P		**Pn**	**19 23 35.7**	**-3.0**
	53nm,1.0s							
BCIP	**Isla Barro Col**	**7.14**	**289**	P		**Pn**	**19 23 35.9**	**-2.8**
AZU	**Azuero**	**7.26**	**278**	P		**Pn**	**19 23 38.7**	**-1.5**
	32nm,0.7s							
CMBC	**Cumbal**	**7.56**	**220**	P		**Pn**	**19 23 45.3**	**+0.6**
	408nm,0.7s							
TULM	**Tulcn-Chalpat**	**7.71**	**218**	P		**Pn**	**19 23 47.6**	**+0.9**
	280nm,0.8s							
CASC	**Dorado de Casc**	**7.92**	**213**	P		**Pn**	**19 23 48.3**	**-0.9**
	1μm138nm,0.8s							
IMBA	**Imbabura, San**	**8.31**	**219**	P		**Pn**	**19 23 54.5**	**-0.1**
CUSE	**Cuicocha Este**	**8.41**	**220**	P		**Pn**	**19 23 56.7**	**+0.7**
	3μm76nm,0.9s							
OTAV	**Otavalo**	**8.50**	**220**			**Pn**	**19 23 55.9**	**-1.2**
OTAV	**Otavalo**	**8.50**	**220**	P		**Pn**	**19 23 55.2**	**-2.0**
	362nm48nm,1.0s							
OTAV	**Otavalo**	**8.50**	**220**	eP		**Pn**	**19 23 56.2**	**-1.0**
OTAV				eS		**Sn**	**19 25 31.1**	**-1.0**
OTAV	**Otavalo**	**8.50**	**220**	P		**Pn**	**19 23 56.1**	**-1.0**
PAC1	**Pacto, Paraso**	**8.70**	**222**	P		**Pn**	**19 23 58.6**	**-0.9**
PULU	**Pululahua**	**8.70**	**219**	P		**Pn**	**19 23 59.4**	**-0.4**
ANTS	**Antisana-Sarah**	**8.91**	**215**	P		**Pn**	**19 24 02.7**	**0.0**
ANTS				S		**Sn**	**19 25 41.0**	**-1.1**
VCES	**Cotopaxi**	**9.28**	**216**	P		**Pn**	**19 24 06.5**	**-1.1**
VCES				S		**Sn**	**19 25 50.0**	**-1.1**
SLOR	**San Lorenzo -**	**9.29**	**216**	P		**Pn**	**19 24 07.0**	**-0.7**
SLOR	**San Lorenzo -**	**9.29**	**216**	Pn		**Pn**	**19 24 07.7**	**+0.1**
BRU2	**Volcan**	**9.78**	**282**	P		**Pn**	**19 24 11.5**	**-2.4**
BRU2				S		**Sn**	**19 25 59.1**	**-3.4**
BRU2	**Volcan**	**9.78**	**282**			**Pn**	**19 24 14.0**	**+0.1**
PRVC	**Isla de Provid**	**10.48**	**309**	P		**Pn**	**19 24 19.6**	**-3.4**
	46nm,1.3s							
PCJ	**Portland Cotta**	**11.58**	**340**	*i* P		**Pn**	**19 24 39.2**	**+1.9**
GWJ	**Greenwich**	**11.75**	**342**	*i* P		**Pn**	**19 24 41.5**	**+1.8**
GWJ				*i* P		P	19 24 41.6	-5.0
STH	**Stony Hill**	**11.78**	**342**	*i* P		**Pn**	**19 24 42.5**	**+2.5**
MCJ	**Malvern**	**11.94**	**338**	*i* P		**Pn**	**19 24 45.0**	**+2.9**
BNJ	**Bonny Gate**	**12.05**	**342**	*i* P		**Pn**	**19 24 45.2**	**+1.6**
TRN	**Trinidad (W)**	**12.09**	**71**	eP		**Pn**	**19 24 44.9**	**+0.9**
CVJ	**Coleyville**	**12.16**	**339**	*i* P		**Pn**	**19 24 47.0**	**+2.0**
MTDJ	**Mount Denham**	**12.16**	**339**			**Pn**	**19 24 46.0**	**+1.0**
MTDJ	**Mount Denham**	**12.16**	**339**	P		**Pn**	**19 24 47.1**	**+2.1**
	4μm216nm,0.6s							
MTDJ	**Mount Denham**	**12.16**	**339**	eP		**P**	**19 24 48.1**	**-3.0**
MTDJ	**Mount Denham**	**12.16**	**339**	P		**P**	**19 24 48.4**	**-2.8**
SDDR	**Presa de Saban**	**12.20**	**8**			**Pn**	**19 24 45.8**	**+0.3**
SDDR	**Presa de Saban**	**12.20**	**8**	P		**Pn**	**19 24 47.1**	**+1.6**
	59nm,0.9s							
SDDR	**Presa de Saban**	**12.20**	**8**	eP		**P**	**19 24 50.0**	**-1.6**
SDDR	**Presa de Saban**	**12.20**	**8**	P		**Pn**	**19 24 48.4**	**+2.9**
JTS	**Las Juntas de**	**12.29**	**287**	P		**Pn**	**19 24 49.3**	**+2.6**
	12nm,0.8s,baz=83,slow=12,SNR=4.8							
JTS	**Las Juntas de**	**12.29**	**287**			**Pn**	**19 24 47.1**	**+0.4**
JTS	**Las Juntas de**	**12.29**	**287**	P		**Pn**	**19 24 49.4**	**+2.6**
DR12	**Loma Pena Alta**	**12.40**	**16**	Pn		**Pn**	**19 24 48.0**	**-0.2**
PRSN	**Puerto Rico Se**	**12.69**	**26**	Pn		**Pn**	**19 24 51.9**	**+0.2**
JUD3	**Juan Diaz 3**	**12.82**	**286**			**P**	**19 24 58.4**	**-0.1**
CELP	**Cerrillos**	**12.82**	**29**			**Pn**	**19 24 53.3**	**-0.2**
AOPR	**Arecibo Observ**	**12.98**	**27**	Pn		**Pn**	**19 24 54.1**	**-1.4**
PDPR	**Patillas Dam,**	**13.05**	**31**			**Pn**	**19 24 55.6**	**-0.8**
SJG	**San Juan**	**13.06**	**30**	P		**Pn**	**19 24 56.5**	**0.0**
	26nm,0.4s,baz=200,slow=13,SNR=12							
SJG	**San Juan**	**13.06**	**30**	Pn		**Pn**	**19 24 55.5**	**-1.1**
SJG	**San Juan**	**13.06**	**30**	P		**Pn**	**19 24 56.3**	**-0.2**
ECPR	**Experimental S**	**13.13**	**29**			**Pn**	**19 24 56.9**	**-0.6**
GTBY	**Guantanamo Bay**	**13.18**	**351**	P		**Pn**	**19 25 00.2**	**+2.2**
GTBY	**Guantanamo Bay**	**13.18**	**351**	*i* P		**P**	**19 25 01.5**	**-0.9**
GTBY	**Guantanamo Bay**	**13.18**	**351**	eP		**P**	**19 25 01.7**	**-0.7**
GTBY	**Guantanamo Bay**	**13.18**	**351**	P		**P**	**19 25 02.1**	**-0.3**
BOAV	**Boa Vista**	**13.21**	**109**			**Pn**	**19 24 58.4**	**-0.1**
BOAV	**Boa Vista**	**13.21**	**109**	eP		**Pn**	**19 24 59.6**	**+1.1**
BOAV				eS		**Sn**	**19 27 19.1**	**-5.7**
HUMP	**Col San Antoni**	**13.24**	**31**	Pn		**Pn**	**19 24 58.9**	**+0.1**
RCC	**Rio Carpintero**	**13.35**	**349**	eP		**P**	**19 25 04.3**	**+0.1**
MARVS	**Santiago de Cu**	**13.39**	**348**	eP		**P**	**19 25 04.6**	**-0.1**
QMBU	**Quimbuelo**	**13.41**	**353**	eP		**P**	**19 25 04.0**	**-0.9**
CHIV	**Chivirico**	**13.48**	**346**	Pn		**Pn**	**19 25 00.5**	**-1.3**
BOAB	**BOACO BROADBAN**	**13.66**	**295**			**Pn**	**19 25 03.1**	**-1.1**
BOAB	**BOACO BROADBAN**	**13.66**	**295**	P		**Pn**	**19 25 03.9**	**-0.3**
LMGC	**Las Mercedes**	**13.72**	**344**	eP		**P**	**19 25 08.9**	**+0.6**
NMDO	**Nuevo Mundo**	**13.79**	**352**	eP		**P**	**19 25 10.4**	**+1.3**
YAR	**Yar**	**13.85**	**347**	eP		**P**	**19 25 10.7**	**+0.9**
MOAC	**Moa**	**13.88**	**352**	eP		**P**	**19 25 13.7**	**+3.5**
HLGC	**Holguin**	**14.29**	**348**	eP		**P**	**19 25 18.9**	**+4.2**
CBCY	**The Bluff, Cay**	**14.41**	**334**	eP		**P**	**19 25 16.8**	**+0.8**
CZSB	**Cruzeiro do Su**	**14.46**	**179**			**Pn**	**19 25 14.2**	**-0.2**
CZSB	**Cruzeiro do Su**	**14.46**	**179**	eP		**Pn**	**19 25 12.8**	**-1.5**
CZSB				eS		**Sn**	**19 27 49.2**	**-5.8**
LCCY	**Blossom Villag**	**14.49**	**332**	eP		**P**	**19 25 18.5**	**+1.5**
FSCY	**Frank Sound, G**	**14.73**	**328**	eP		Pn	19 25 07.7	-10
ATAH	**Athaulapa**	**14.87**	**201**	P		**P**	**19 25 21.1**	**-0.6**
	12nm,0.7s,baz=14,slow=6.5,SNR=7.3							
CCCC	**Cccc**	**15.01**	**343**	eP		**P**	**19 25 27.9**	**+5.2**
MGV	**Manicaragua**	**16.61**	**337**	eP		Pn	19 25 49.2	+8.5
CAIB	**Caibarien**	**16.77**	**339**	P		**Pn**	**19 25 43.0**	**+0.4**
CAIB				IAmb		IAmb	19 25 55.0	
	comp=Z,33nm,0.7s							
MTO3	**Montecristo**	**17.73**	**296**	IAmb		IAmb	19 25 57.1	
	comp=Z,21nm,0.7s							
ESQI	**Esquipulas**	**17.78**	**297**	IAmb		IAmb	19 25 57.9	
	comp=Z,46nm,0.8s							
APG	**El Apazote**	**18.95**	**297**	P		**P**	**19 26 06.0**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=174,slow=10.0,SNR=14							
PETF	**Flores**	**19.28**	**303**	IAmb		IAmb	19 26 16.3	
	comp=Z,55nm,1.3s							
TEIG	**Tepich**	**19.91**	**313**			**P**	**19 26 17.4**	**+1.0**
TEIG	**Tepich**	**19.91**	**313**	P		**P**	**19 26 18.0**	**+1.6**
MDP	**Montagnes des**	**20.34**	**94**	P		**P**	**19 26 20.8**	**-0.2**
	comp=Z,10.0nm,0.9s,baz=263,slow=9.8,SNR=6.2							
MDP				S		**S**		
	comp=Z,11nm,1.2s,baz=64,slow=18,SNR=2.5							
	comp=Z,10.0nm,0.9s							
ITTB	**Itaituba**	**20.52**	**122**	eP		**P**	**19 26 23.6**	**+0.5**
ITTB				epP		**pP**	**19 26 50.9**	**+0.6**
ITTB				eS		**S**	**19 30 04.0**	**-0.5**
NPGB	**Novo Progresso**	**22.37**	**128**	eP		pP	19 27 12.8	+2.4
NPGB	**Novo Progresso**	**22.37**	**128**	eP		**P**	**19 26 42.8**	**+0.5

TXAR PcP **PcP** **19 31 09.7 +1.7**
comp=Z,1.6nm,0.8s,baz=134,slow=5.9,SNR=5.9
comp=Z,6.6nm,0.7s
TXAR Lajitas Array 36.53 312 P 19 28 48.1 +0.5
TX31 Lajitas Ar. Si 36.54 312 IAmb IAmb 19 28 49.2
comp=Z,7.2nm,0.8s
WMOK Wichita Mounta 36.54 323 IAmb IAmb 19 28 48.2
comp=Z,9.2nm,0.7s
WMOK Wichita Mounta 36.54 323 P **P** **19 28 47.4 -0.1**
OK048 Pawnee Station 36.68 327 P 19 28 48.9 +0.2
TMB01 Midkiff 36.70 316 IAmb IAmb 19 28 50.2
comp=Z,8.8nm,0.8s
SN07 Snyder 07 36.77 319 IAmb IAmb 19 28 50.8
comp=Z,14nm,0.6s
T35A Sooner Cattle 36.82 328 IAmb IAmb 19 28 50.8
comp=Z,21nm,1.0s
LDASE Londrina, Braz 36.88 145 *e*P pP 19 29 22.5 -2.1
HPIG 36.91 307 P **P** **19 28 51.5 +0.6**
MNHN Monahans 36.98 315 IAmb IAmb 19 28 52.5
comp=Z,9.0nm,0.9s
NCB Newcomb 37.01 359 IAmb IAmb 19 28 56.4
comp=Z,8.2nm,0.9s
129A Stewart Farms, 37.13 318 IAmb IAmb 19 28 54.2
comp=Z,20nm,1.1s
DKNS Dickens 37.16 320 IAmb IAmb 19 28 54.4
comp=Z,10nm,0.7s
CROK Carrier 37.32 326 IAmb IAmb 19 28 54.9
comp=Z,16nm,0.8s
TPB01 Permian Basin 37.48 314 IAmb IAmb 19 28 56.9
comp=Z,13nm,0.7s
P38A Dawn 37.51 334 P 19 28 55.9 +0.4
FRNY Flat Rock 37.87 359 IAmb IAmb 19 29 01.3
comp=Z,6.8nm,0.8s
EMMW East Machias 38.05 6 P **P** **19 29 01.5 +1.5**
EMMW IAmb IAmb 19 29 02.7
comp=Z,12nm,0.5s
WBO Williamsburg 38.08 357 IAmb IAmb 19 29 02.9
comp=Z,26nm,1.2s
VHRN Van Horn 38.27 313 IAmb IAmb 19 29 03.8
comp=Z,14nm,1.1s
G62A West of Eustis 38.31 3 IAmb IAmb 19 29 05.4
comp=Z,10nm,0.7s
TPB28 38.39 314 IAmb IAmb 19 29 05.9
comp=Z,4.3nm,0.9s
G65A Princeton 38.52 6 P **P** **19 29 05.8 +1.9**
G65A IAmb IAmb 19 29 06.8
comp=Z,8.0nm,0.6s
GGN Saint George 38.52 7 P **P** **19 29 05.9 +1.9**
GGN IAmb IAmb 19 29 06.8
comp=Z,7.8nm,0.6s
MNTQ Montreal, Queb 38.53 359 IAmb IAmb 19 29 07.4
comp=Z,17nm,1.0s
MSTX Muleshoe 38.55 319 P 19 29 04.6 +0.1
MSTX IAmb IAmb 19 29 06.3
comp=Z,14nm,0.9s
L40A Anamosa 38.63 338 IAmb IAmb 19 29 05.7
comp=Z,16nm,0.7s
MNTX Cornudas Mount 39.04 314 IAmb IAmb 19 29 11.0
comp=Z,14nm,0.8s
MNTX Cornudas Mount 39.04 314 P **P** **19 29 09.5 +0.9**
TRQ Mont Tremblant 39.27 358 IAmb IAmb 19 29 12.8
comp=Z,14nm,1.3s
I40A Norwalk 40.01 340 IAmb IAmb 19 29 17.7
comp=Z,17nm,0.9s
RTBA Rita Blanca 40.07 322 IAmb IAmb 19 29 18.8
comp=Z,36nm,1.5s
D62A Allapoint, All 40.25 4 P 19 29 19.7 +1.4
D62A IAmb IAmb 19 29 21.1
comp=Z,13nm,0.5s
BATG Bathurst New B 40.74 7 P 19 29 23.9 +1.6
LDAQ Lac Daran 41.02 2 P **P** **19 29 26.1 +1.5**
LDAQ IAmb IAmb 19 29 27.5
comp=Z,7.8nm,0.5s
G40A Rib Lake 41.10 341 IAmb IAmb 19 29 26.7
comp=Z,11nm,0.7s
121A Cookes Peak, D 41.21 313 P 19 29 27.9 +1.2
121A IAmb IAmb 19 29 29.5
comp=Z,12nm,1.1s
ANMO Albuquerque 41.58 317 P 19 29 30.0 +0.4
ANMO Albuquerque 41.58 317 P **P** **19 29 31.0 +1.4**
TASM ASL Pad, Albuq 41.58 317 IAmb IAmb 19 29 34.6
comp=Z,2.9nm,0.6s
CNLB Canela 41.79 150 *e*P pP 19 30 04.1 -2.1
ECSD EROS Data Cent 42.19 334 IAmb IAmb 19 29 34.9
comp=Z,15nm,1.0s
ECSD EROS Data Cent 42.19 334 P **P** **19 29 33.7 -0.5**
SDCO Great Sand Dun 42.61 321 IAmb IAmb 19 29 40.5
comp=Z,8.2nm,0.8s
TUC Tucson 43.32 311 P 19 29 43.8 +0.2
TUC Tucson 43.32 311 P **P** **19 29 44.4 +0.8**
S22A 4UR Ranch, Cre 43.45 320 IAmb IAmb 19 29 47.5
comp=Z,17nm,1.3s
EYMN Ely 43.90 342 P **P** **19 29 48.6 +0.8**
TBO Thunder Bay 43.93 344 P 19 29 48.2 +0.1
TBO IAmb IAmb 19 29 49.6
comp=Z,12nm,0.8s
W18A Petrified Fore 43.93 315 IAmb IAmb 19 29 51.2
comp=Z,20nm,0.9s
ISCO Idaho Springs 43.96 323 P 19 29 49.5 +0.7
ISCO IAmb IAmb 19 29 51.4
comp=Z,10nm,0.9s
ISCO Idaho Springs 43.96 323 P **P** **19 29 50.5 +1.7**
MVCO Mesa Verde 44.22 318 IAmb IAmb 19 29 53.0
comp=Z,16nm,1.4s
MVCO Mesa Verde 44.22 318 P **P** **19 29 52.2 +1.4**
PV01 Paradox Valley 44.79 319 IAmb IAmb 19 29 58.1
comp=Z,11nm,0.8s
PV13 Radium Mtn., P 44.97 319 IAmb IAmb 19 29 59.1
comp=Z,18nm,0.8s
PV07 Paradox Valley 45.01 320 IAmb IAmb 19 29 59.6
comp=Z,17nm,1.2s
PV12 Saucer Basin, 45.05 319 IAmb IAmb 19 29 59.9
comp=Z,19nm,0.7s
PV18 Skein Mesa, Pa 45.07 319 IAmb IAmb 19 30 01.8
comp=Z,22nm,0.8s
PV05 Paradox Valley 45.10 319 IAmb IAmb 19 29 59.6
comp=Z,12nm,0.6s
PV19 Morning Glory 45.16 319 IAmb IAmb 19 30 02.4
comp=Z,16nm,1.1s
PV22 Blue Mesa, Par 45.16 320 IAmb IAmb 19 30 00.5
comp=Z,8.2nm,0.7s
PV20 West Nyswonger 45.16 319 IAmb IAmb 19 30 01.9
comp=Z,20nm,1.2s
PV23 Carpenter Ridg 45.26 319 IAmb IAmb 19 30 02.4
comp=Z,9.3nm,0.6s
WUAZ Wupatki 45.29 315 IAmb IAmb 19 30 02.3
comp=Z,23nm,0.8s
AGMN Agassiz Nation 45.66 339 IAmb IAmb 19 30 03.0
comp=Z,15nm,0.7s
AGMN Agassiz Nation 45.66 339 P **P** **19 30 02.4 +0.7**
Y14A Wickenburg 45.72 312 IAmb IAmb 19 30 04.6
comp=Z,13nm,0.7s
RSSD Black Hills 45.99 329 P **P** **19 30 05.8 +1.2**
RSSD Black Hills 45.99 329 P **P** **19 30 05.8 +1.2**
HMU Henry Mountain 46.11 318 IAmb IAmb 19 30 08.8
comp=Z,29nm,1.0s
EPLO Experimental L 46.12 341 IAmb IAmb 19 30 06.6
comp=Z,18nm,0.6s
U15A North Rim 46.39 315 IAmb IAmb 19 30 10.7
comp=Z,14nm,1.0s
SRU San Rafael Swe 46.60 319 IAmb IAmb 19 30 11.7
comp=Z,11nm,0.8s
P17A Butcher Ranch, 46.94 320 IAmb IAmb 19 30 14.3
comp=Z,13nm,0.9s
KNB Kanab 47.05 316 IAmb IAmb 19 30 15.7
comp=Z,16nm,0.9s
ULM Lac du Bonnet 47.31 340 P **P** **19 30 14.7 +0.1**
comp=Z,20nm,0.5s,baz=141,slow=7.8,SNR=37
comp=Z,20nm,0.5s
LCMT Little Creek M 47.34 315 IAmb IAmb 19 30 18.3
comp=Z,14nm,0.9s
BSUT Blindstream Ca 47.55 321 IAmb IAmb 19 30 19.3
comp=Z,12nm,0.8s
MPU Maple Canyon 47.82 320 IAmb IAmb 19 30 21.0
comp=Z,12nm,0.9s
SCHQ Schefferville 48.13 5 P **P** **19 30 21.6 +0.8**
comp=Z,16nm,0.6s,baz=190,slow=6.6,SNR=27
comp=Z,16nm,0.6s
SCHQ Schefferville 48.13 5 IAmb IAmb 19 30 23.2
comp=Z,15nm,0.6s
BW06 Boulder Array 48.13 324 IAmb IAmb 19 30 22.9
comp=Z,14nm,1.3s
PD31 Pinedale Array 48.13 324 IAmb IAmb 19 30 22.9
comp=Z,12nm,1.2s
PDAR Pinedale Array 48.13 324 P **P** **19 30 21.9 +0.5**
comp=Z,4.5nm,0.6s,baz=126,slow=9.0,SNR=39
comp=Z,4.5nm,0.6s

PDAR Pinedale Array 48.13 324 P **P** **19 30 21.5 +0.2**
HWUT Hardware Ranch 48.66 322 IAmb IAmb 19 30 27.2
comp=Z,7.8nm,0.7s
HWUT Hardware Ranch 48.66 322 P **P** **19 30 26.0 +0.6**
DUG Dugway, Tooele 48.68 319 IAmb IAmb 19 30 27.7
comp=Z,7.2nm,0.8s
DUG Dugway, Tooele 48.68 319 P **P** **19 30 26.9 +1.5**
LAO LASA Array 48.88 330 IAmb IAmb 19 30 28.2
comp=Z,13nm,1.1s
AHID Auburn Hatcher 49.05 323 IAmb IAmb 19 30 29.7
comp=Z,9.9nm,0.9s
AHID Auburn Hatcher 49.05 323 P **P** **19 30 29.0 +0.7**
GSC Goldstone, Bar 49.13 312 IAmb IAmb 19 30 31.1
comp=Z,7.5nm,0.7s
BGU Big Grassy Mou 49.21 320 IAmb IAmb 19 30 31.2
comp=Z,15nm,0.7s
LOHW Long Hollow 49.25 324 IAmb IAmb 19 30 31.7
comp=Z,8.9nm,0.6s
TPNV Topopah Spring 49.44 314 IAmb IAmb 19 30 33.9
comp=Z,11nm,1.1s
CCCA Chr Cany lake 49.64 312 IAmb IAmb 19 30 34.5
comp=Z,10.0nm,0.7s
DSP Deep Springs 50.86 313 IAmb IAmb 19 30 44.3
comp=Z,10nm,1.0s
BOZ Bozeman (W) 51.03 326 IAmb IAmb 19 30 45.1
comp=Z,6.8nm,0.7s
DLMT Dillon 51.44 325 IAmb IAmb 19 30 48.4
comp=Z,11nm,1.1s
HLID Hailey 51.49 322 P **P** **19 30 45.6 -1.1**
NVAR Mina Array Bea 51.55 315 P **P** **19 30 47.7 +0.5**
comp=Z,2.8nm,0.6s,baz=115,slow=10.0,SNR=13
comp=Z,2.8nm,0.6s
NVAR Mina Array Bea 51.55 315 P **P** **19 30 46.8 -0.4**
EGMT Eagleton 51.56 329 IAmb IAmb 19 30 49.0
comp=Z,23nm,1.4s
MFID Camas Ranch 52.29 321 IAmb IAmb 19 30 54.2
comp=Z,11nm,0.8s
PNTR Pine Nut 52.75 315 IAmb IAmb 19 31 01.8
comp=Z,7.8nm,0.7s
FFC Flin Flon 53.12 339 P **P** **19 30 58.6 +0.4**
FFC IAmb IAmb 19 30 58.8
comp=Z,5.5nm,0.5s
FFC Flin Flon 53.12 339 P **P** **19 30 58.4 +0.2**
PLID Pearl Lake 53.28 323 IAmb IAmb 19 31 01.0
comp=Z,7.5nm,0.8s
FCC Fort Churchill 54.29 347 IAmb IAmb 19 31 07.3
comp=Z,6.5nm,0.7s
F10A Beach Ranch, E 54.48 323 IAmb IAmb 19 31 09.4
comp=Z,9.8nm,0.6s
LDM Libby Dam 54.76 327 IAmb IAmb 19 31 12.1
comp=Z,7.5nm,0.7s
O03E Paynes Creek 54.80 315 IAmb IAmb 19 31 11.2
comp=Z,5.9nm,0.6s
I07A Izee 54.93 320 IAmb IAmb 19 31 13.5
comp=Z,7.0nm,0.8s
LNOR Lincton Mounta 55.06 323 IAmb IAmb 19 31 13.8
comp=Z,7.7nm,0.6s
NEW Newport 55.65 326 IAmb IAmb 19 31 17.3
comp=Z,4.0nm,0.7s
YBH Yreka Blue Hor 56.01 316 IAmb IAmb 19 31 19.3
comp=Z,4.0nm,0.6s
D08A Wollman Farm, 56.04 324 IAmb IAmb 19 31 20.6
comp=Z,4.9nm,0.8s
G06A Carlson Farm, 56.19 321 IAmb IAmb 19 31 23.2
comp=Z,9.7nm,1.0s
EPH Ephrata 56.59 324 IAmb IAmb 19 31 25.4
comp=Z,13nm,0.9s
I04A Tendick Farm, 56.67 319 IAmb IAmb 19 31 25.1
comp=Z,11nm,1.2s
H04A Detroit Lake 56.91 320 IAmb IAmb 19 31 30.2
comp=Z,14nm,0.9s
B08A Colville Reser 56.95 325 IAmb IAmb 19 31 27.2
comp=Z,7.8nm,0.8s
LTY Liberty 57.17 323 IAmb IAmb 19 31 29.4
comp=Z,9.3nm,0.7s
BUCK Buck Mountain 57.22 319 IAmb IAmb 19 31 30.7
comp=Z,7.5nm,1.0s
GNW Green Mountain 58.61 323 IAmb IAmb 19 31 37.9
comp=Z,6.2nm,0.6s
NLWA Neilton Lookou 59.16 322 IAmb IAmb 19 31 43.6
comp=Z,13nm,1.1s
LLLB Lillooet 59.52 326 IAmb IAmb 19 31 45.2
comp=Z,17nm,1.2s
YKAW1 Yellowknife Wh 63.24 340 IAmb IAmb 19 32 09.6
comp=Z,10.0nm,0.8s
YKA Yellowknife Ar 63.29 340 P **P** **19 32 09.2 +0.5**
comp=Z,12nm,0.5s,baz=136,slow=6.8,SNR=72
comp=Z,12nm,0.5s
YKA Yellowknife Ar 63.29 340 P **P** **19 32 08.6 -0.1**
YKAW3 Yellowknife Wh 63.34 340 IAmb IAmb 19 32 10.3
comp=Z,6.8nm,0.7s
T35M Bob Quinn 66.86 330 IAmb IAmb 19 32 34.6
comp=Z,8.2nm,1.0s
T35M Bob Quinn 66.86 330 P **P** **19 32 33.8 +1.9**
baz=115
V35K Ketchikan 66.89 328 P **P** **19 32 33.3 +1.4**
baz=113
DLBC Dease Lake 67.37 331 P **P** **19 32 36.5 +1.3**
baz=116
WTLY Watson Lake, Y 67.55 333 IAmb IAmb 19 32 38.1
comp=Z,13nm,0.8s
WTLY Watson Lake, Y 67.55 333 P **P** **19 32 37.2 +1.1**
baz=112
DBIC Dimbokro 67.63 86 P **P** **19 32 37.4 -0.1**
comp=Z,3.1nm,0.6s,baz=268,slow=7.2,SNR=4.9
comp=Z,3.1nm,0.6s
DBIC Dimbokro 67.63 86 P **P** **19 32 37.1 -0.4**
DBIC IAmb IAmb 19 32 49.0
comp=Z,24nm,1.4s
S34M Telegraph Cree 67.68 331 IAmb IAmb 19 32 39.4
comp=Z,10nm,0.8s
S34M Telegraph Cree 67.68 331 P **P** **19 32 38.7 +1.7**
baz=114,SNR=5.9
U33K Whale Pass 67.97 328 P **P** **19 32 40.7 +1.9**
baz=112
R33M Jennings River 68.22 332 IAmb IAmb 19 32 43.0
comp=Z,7.8nm,0.9s
R33M Jennings River 68.22 332 P **P** **19 32 42.1 +1.7**
baz=115,SNR=7.0
Q32M Nakina River 68.65 331 P **P** **19 32 44.9 +1.7**
baz=114,SNR=5.5
SUMG Summit 68.96 11 P **P** **19 32 45.5 +0.3**
SUMG Summit 68.96 11 P **P** **19 32 45.5 +0.3**
SUMG Summit 68.96 11 *i*P **P** **19 32 46.1 +0.9**
SUMG IAmb IAmb 19 32 46.8
comp=Z,16nm,0.6s
S32K Killisnoo 69.21 329 P **P** **19 32 47.9 +1.4**
baz=111
P33M Teslin, Yukon 69.41 333 IAmb IAmb 19 32 50.8
comp=Z,10nm,1.2s
P33M Teslin, Yukon 69.41 333 P **P** **19 32 49.5 +1.7**
baz=114
SIT Sitka 69.45 329 P **P** **19 32 49.9 +2.0**
baz=110
R32K Eaglecrest 69.47 330 P **P** **19 32 49.9 +1.8**
baz=111
P32M Atlin 69.58 332 IAmb IAmb 19 32 51.2
comp=Z,6.9nm,0.9s
P32M Atlin 69.58 332 P **P** **19 32 50.0 +1.2**
baz=112
MMPY Sheldon Lake, 69.74 335 P **P** **19 32 51.3 +1.6**
baz=116
S31K Pelican 70.22 330 P **P** **19 32 54.5 +1.9**
baz=110
WHY Whitehorse 70.53 333 P **P** **19 32 56.2 +1.6**
baz=112
PLBC Pleasant Camp 70.79 331 P **P** **19 32 57.7 +1.6**
baz=110
O30N Mendenhall 71.12 332 IAmb IAmb 19 33 00.7
comp=Z,10nm,0.8s
O30N Mendenhall 71.12 332 P **P** **19 32 59.9 +1.8**
baz=111,SNR=14
N31M Braeburn, Yuko 71.23 333 IAmb IAmb 19 33 01.4
comp=Z,20nm,1.2s
N31M Braeburn, Yuko 71.23 333 P **P** **19 33 00.5 +1.7**
baz=111,SNR=11
P29M Windy Craggy 71.51 331 P **P** **19 33 02.2 +1.7**
baz=109
NEEM North Greenlan 71.54 5 *i*P **P** **19 33 01.6 +0.9**
NEEM IAmb IAmb 19 33 02.2
comp=Z,17nm,0.8s
HYT Haines Junctio 71.79 332 P **P** **19 33 04.0 +1.8**
baz=109
N30M Aishikik Lake 71.81 333 IAmb IAmb 19 33 05.2
comp=Z,12nm,1.1s
N30M Aishikik Lake 71.81 333 P **P** **19 33 04.1 +1.8**
baz=110,SNR=10
M30M Minto, Yukon 72.07 334 IAmb IAmb 19 33 05.9
comp=Z,11nm,0.8s
M30M Minto, Yukon 72.07 334 P **P** **19 33 05.1 +1.3**
baz=111,SNR=20
O29M Mount Kennedy 72.12 332 P **P** **19 33 05.7 +1.4**
baz=108
YUK6 Outpost Mounta 72.23 332 P **P** **19 33 06.9 +1.9**
baz=109
H31M Peel River 72.30 338 P **P** **19 33 05.6 +0.5**
baz=114
A36M Sachs Harbour 72.46 345 P **P** **19 33 06.4 +0.6**
baz=125
YUK4 Talbot Arm 72.48 333 P **P** **19 33 07.1 +0.6**
baz=109
J30M Hart River 72.60 336 P **P** **19 33 07.9 +0.9**
baz=112
BRWY Burwash Landin 72.67 333 P **P** **19 33 08.6 +1.2**
baz=108
G31M Satah River 72.74 339 IAmb IAmb 19 33 09.3
comp=Z,9.9nm,0.9s
G31M Satah River 72.74 339 P **P** **19 33 08.1 +0.6**
baz=114
M29M Somme Creek 72.76 334 P **P** **19 33 09.0 +1.1**
baz=109
F31M Tsiigehtchic 72.77 339 P **P** **19 33 08.7 +1.0**
baz=115
K29M Barlow Dome 72.82 335 P **P** **19 33 09.5 +1.2**
baz=110,SNR=9.1
L29M L29M 72.83 334 P **P** **19 33 09.1 +0.8**
baz=110,SNR=5.6
I30M Mount Dempster 72.86 337 P **P** **19 33 09.4 +0.9**
baz=112,SNR=8.2
PINM Pinnacle 72.86 331 P **P** **19 33 09.5 +1.0**
baz=107
YUK8 Steele Glacier 72.98 332 P **P** **19 33 10.2 +0.7**
baz=108
INK Inuvik 73.06 340 P **P** **19 33 10.4 +1.0**
INK Inuvik 73.06 340 P **P** **19 33 10.2 +0.8**
baz=115
INK Inuvik 73.06 340 P **P** **19 33 09.8 +0.4**
EPYK Eagle Plains 73.42 338 IAmb IAmb 19 33 13.6
comp=Z,15nm,1.3s
EPYK Eagle Plains 73.42 338 P **P** **19 33 12.0 +0.4**
baz=112,SNR=5.1
YUK3 Moose Creek 73.44 333 P **P** **19 33 13.0 +0.9**
baz=107,SNR=15
F30M Barrier River 73.55 339 IAmb IAmb 19 33 14.3
comp=Z,19nm,1.2s
F30M Barrier River 73.55 339 P **P** **19 33 12.9 +0.6**
baz=113,SNR=6.0
TORD Torodi Ar. Bea 73.64 78 P **P** **19 33 13.0 -0.8**
comp=Z,0.5nm,0.3s,baz=285,slow=6.3,SNR=12
comp=Z,0.5nm,0.3s
TORD Torodi Ar. Bea 73.64 78 P **P** **19 33 12.4 -1.4**
DAWY Dawson 73.68 335 P **P** **19 33 14.0 +0.8**
baz=109
BVCY Beaver Creek 73.81 333 P **P** **19 33 14.9 +0.9**
baz=107,SNR=7.0
H29M Whitestone 73.99 337 P **P** **19 33 15.2 +0.3**
baz=110,SNR=5.6
G29M Pine Creek 74.10 338 P **P** **19 33 16.0 +0.4**
baz=111,SNR=6.2
M27K Edge Creek, AK 74.25 333 IAmb IAmb 19 33 19.4
comp=Z,14nm,1.2s
M27K Edge Creek, AK 74.25 333 P **P** **19 33 17.7 +1.0**
baz=106,SNR=14
I28M Miner Creek 74.34 336 P **P** **19 33 17.7 +0.6**
baz=108,SNR=8.3
CRQE Cirque 74.39 331 P **P** **19 33 18.3 +0.8**
baz=104
BCAR Beaver Creek A 74.40 334 P **P** **19 33 18.4 +1.0**
L27K Beaver Creek, 74.42 334 P **P** **19 33 18.5 +1.0**
baz=106,SNR=12
MCARA McCarthy VSAT 74.52 332 P **P** **19 33 19.3 +1.2**
baz=104
E29M Blow River 74.58 340 IAmb IAmb 19 33 20.1
comp=Z,9.9nm,0.8s
E29M Blow River 74.58 340 P **P** **19 33 18.6 +0.3**
baz=111,SNR=14
KAIM Kayak Island 74.84 330 P **P** **19 33 20.4 +0.4**
baz=103
F28M Old Crow 75.01 339 P **P** **19 33 20.9 0.0**
baz=109,SNR=6.0
I27K Kandik River 75.05 336 P **P** **19 33 21.7 +0.6**
baz=107,SNR=9.2
L26K Log Cabin Wild 75.08 334 IAmb IAmb 19 33 23.9
comp=Z,7.0nm,0.8s
L26K Log Cabin Wild 75.08 334 P **P** **19 33 21.7 +0.4**
baz=105,SNR=9.3
BMRM Bremner River 75.16 331 IAmb IAmb 19 33 24.9
comp=Z,8.4nm,0.8s
BMRM Bremner River 75.16 331 P **P** **19 33 23.4 +1.5**
baz=103,SNR=6.1
H27K Steamboat Moun 75.20 337 P **P** **19 33 22.6 +0.6**
baz=107
D28M Stokes Point 75.20 340 P **P** **19 33 22.4 +0.6**
baz=111
E28M Babbage River 75.22 340 P **P** **19 33 22.4 +0.4**
E28M Babbage River 75.22 340 P **P** **19 33 22.4 +0.4**
baz=110,SNR=8.1
N25K Chitina, Valde 75.30 332 P **P** **19 33 24.3 +1.6**
baz=103
G27K Doyon Strip 75.42 338 P **P** **19 33 23.7 +0.4**
baz=107
SCRK Sand Creek 75.59 334 P **P** **19 33 25.2 +0.9**
baz=104,SNR=12
EYAK Cordova Ski Ar 75.62 331 P **P** **19 33 25.4 +1.1**
baz=102
DAG Danmarks Havn 75.63 11 P **P** **19 33 24.1 0.0**
DAG Danmarks Havn 75.63 11 *i*P **P** **19 33 24.5 +0.3**
DAG IAmb IAmb 19 33 24.9
comp=Z,3.5nm,0.8s
HARP HAARP 75.74 333 P **P** **19 33 25.7 +0.6**
baz=103
E27K Coleen River 75.81 339 P **P** **19 33 25.8 +0.4**
baz=108,SNR=5.8
KLU Klutina 75.90 332 P **P** **19 33 26.6 +0.5**
baz=102
RIDG Independent Ri 75.91 334 IAmb IAmb 19 33 28.4
comp=Z,10nm,1.0s
RIDG Independent Ri 75.91 334 P **P** **19 33 26.9 +0.8**
baz=104
D27M Malcolm River 75.92 340 P **P** **19 33 26.2 +0.2**
baz=108
PAX Paxson 76.01 333 P **P** **19 33 27.1 +0.4**
baz=103
M24K Tolsona, Glenn 76.14 332 P **P** **19 33 27.9 +0.5**
baz=102
G26K Porcupine Rive 76.27 337 P **P** **19 33 28.5 +0.6**
baz=105
K24K Donnelly Dome 76.32 334 IAmb IAmb 19 33 30.6
comp=Z,7.8nm,0.8s
K24K Donnelly Dome 76.32 334 P **P** **19 33 28.9 +0.5**
baz=103
P23K Montague Islan 76.33 330 P **P** **19 33 28.4 0.0**
baz=100
J25K Salcha River, 76.33 335 P **P** **19 33 28.7 +0.3**
baz=103
GLI Glacier Island 76.34 331 P **P** **19 33 28.5 0.0**
baz=101
F26K Sheenjek River 76.60 338 P **P** **19 33 30.4 +0.6**
baz=105
PRP Porcupine Dome 76.60 336 P **P** **19 33 30.2 +0.2**
baz=103
SCM Sheep Creek Mo 76.62 332 IAmb IAmb 19 33 32.8
comp=Z,17nm,1.0s
SCM Sheep Creek Mo 76.62 332 P **P** **19 33 30.6 +0.5**
baz=101
M23K Glacier View 76.80 332 P **P** **19 33 31.5 +0.4**
baz=100
DHY Denali Highway 76.88 333 P **P** **19 33 32.0 +0.3**
baz=101
PWL Port Wells 76.93 331 P **P** **19 33 32.0 +0.2**
baz=100
WAT6 Susitna Watana 76.95 333 P **P** **19 33 32.4 +0.3**
baz=100
HDA Harding Lake 76.95 335 P **P** **19 33 32.1 +0.2**
baz=102,SNR=6.9
C27K Jago River 76.96 340 P **P** **19 33 32.2 +0.4**
baz=106
ILAR Eielson Array 77.00 335 P **P** **19 33 32.5 +0.4**
comp=Z,1.9nm,0.8s,baz=108,slow=4.4,SNR=21
ILAR PP **PP** **19 36 25.1 -2.3**
comp=Z,0.5nm,0.8s,baz=98,slow=8.9,SNR=4.7
comp=Z,1.9nm,0.8s
ILAR Eielson Array 77.00 335 P **P** **19 33 32.3 +0.2**
KNK Knik Glacier 77.08 331 P **P** **19 33 33.1 +0.5**
baz=100
SML Sawmill 77.09 332 IAmb IAmb 19 33 34.7

comp=Z,21nm,1.5s
SML **Sawmill** 77.09 332 P P 19 33 32.8 +0.1
baz=100
G25K **Bearman Lake** 77.11 337 P P 19 33 33.5 +0.9
baz=103
F25K **Christian Rive** 77.13 338 P P 19 33 33.0 +0.1
baz=104,SNR=5.5
E25K **Arctic Village** 77.23 338 P P 19 33 33.8 +0.4
baz=104
POKR **Poker Flat Res** 77.30 335 P P 19 33 34.1 +0.3
baz=101
SEW **Seward** 77.36 330 P P 19 33 34.3 +0.1
baz=98
GHO **Glory Hole Cre** 77.36 332 IAmb IAmb 19 33 36.6
comp=Z,12nm,0.8s
WAT1 **Susitna Watana** 77.36 333 P P 19 33 34.6 +0.4
baz=100
H24K **Noodor Dome** 77.62 336 P P 19 33 35.9 +0.3
baz=101,SNR=8.7
G24K **Hadweenzic Riv** 77.63 337 P P 19 33 36.2 +0.5
baz=102
RC01 **Rabbit Creek A** 77.64 331 P P 19 33 36.2 +0.5
baz=98
MCK **McKinley** 77.69 334 P P 19 33 36.5 +0.5
baz=100
D25K **Kazik River** 77.80 340 P P 19 33 36.6 +0.1
baz=103,SNR=8.8
NEA2 **Nenana** 77.89 335 P P 19 33 37.4 +0.4
baz=100,SNR=7.6
BRSE **Bradley Lake S** 77.95 330 P P 19 33 38.1 +0.6
baz=97
F24K **Squaw Lake** 77.95 338 P P 19 33 37.4 0.0
baz=102,SNR=7.6
CUT **Chulitna** 78.08 332 P P 19 33 38.2 +0.1
baz=98
I23K **Minto, Yukon-K** 78.11 335 P P 19 33 38.6 +0.4
baz=100
TRF **Thorofare Moun** 78.24 333 P P 19 33 39.7 +0.5
baz=98
E24K **Your Creek** 78.29 338 P P 19 33 39.4 +0.2
baz=101
H23K **Yukon River** 78.29 336 P P 19 33 39.5 +0.2
baz=100
L22K **Petersville** 78.33 332 P P 19 33 39.6 0.0
baz=98
SKT **Skwentna** 78.61 332 IAmb IAmb 19 33 42.9
comp=Z,6.9nm,0.7s
SKT **Skwentna** 78.61 332 P P 19 33 41.0 -0.1
baz=97
G23K **Bananza Creek** 78.63 337 P P 19 33 41.6 +0.4
baz=99,SNR=9.3
MLY **Manley** 78.67 335 P P 19 33 41.6 +0.2
baz=98
E23K **Chandalar** 78.70 338 P P 19 33 41.8 +0.2
baz=100
COLD **Coldfoot** 78.78 337 P P 19 33 42.3 +0.3
baz=99
TOLK **Toolik Lake Re** 78.79 339 P P 19 33 42.0 0.0
baz=100
O20K **Slope Mountain** 78.93 330 P P 19 33 42.8 -0.1
baz=96
PPLA **Purkeypile** 79.02 333 IAmb IAmb 19 33 45.0
comp=Z,11nm,0.5s
PPLA **Purkeypile** 79.02 333 P P 19 33 44.0 +0.5
baz=97,SNR=6.4
CAST **Castle Rocks** 79.04 333 P P 19 33 43.5 +0.1
baz=97
RED **Redoubt Volcan** 79.04 330 IAmb IAmb 19 33 45.2
comp=Z,18nm,1.0s
H22K **Ishtalitna Cre** 79.05 336 P P 19 33 43.5 +0.1
baz=98
CHUM **Lake Minchumin** 79.19 334 P P 19 33 45.0 +0.8
baz=97,SNR=14
D23K **Nanushuk River** 79.24 339 P P 19 33 45.0 +0.6
baz=99,SNR=5.5
M20K **Styx River** 79.35 332 P P 19 33 45.3 +0.1
baz=96
C23K **Itkillik River** 79.36 340 P P 19 33 45.1 +0.1
baz=99
E22K **Anaktuvuk Pass** 79.53 338 P P 19 33 46.5 +0.5
baz=98
F22K **John River** 79.58 337 P P 19 33 47.1 +0.8
baz=98
H21K **Melozitna Rive** 79.61 335 P P 19 33 47.0 +0.5
baz=96
N19K **Bonanza Creek** 79.91 331 P P 19 33 48.2 0.0
baz=94
K20K **Telida** 79.92 333 P P 19 33 48.8 +0.7
baz=95
G21K **Allakaket** 79.98 336 P P 19 33 49.1 +0.7
baz=96,SNR=6.3
J20K **Nowinta River** 80.03 334 IAmb IAmb 19 33 50.1
comp=Z,6.1nm,0.6s
J20K **Nowinta River** 80.03 334 P P 19 33 48.9 +0.2
baz=95
F21K **Alatna River** 80.05 337 P P 19 33 49.6 +0.8
baz=96,SNR=8.0
L19K **White Mountain** 80.19 332 P P 19 33 49.9 +0.2
baz=94
CHIR **Chirikof Islan** 80.23 325 P P 19 33 50.3 +0.3
baz=92
E21K **Killik River** 80.36 338 P P 19 33 50.4 -0.1
baz=96
H20K **Anotleneega Mo** 80.45 335 P P 19 33 51.2 +0.2
baz=95
N18K **Kilae Creek** 80.59 330 P P 19 33 52.3 +0.4
baz=93
M18K **Stony River** 80.60 331 P P 19 33 52.2 +0.4
baz=93
J19K **Poorman** 80.66 334 P P 19 33 52.5 +0.5
baz=94
B21K **Ikpikpuk River** 80.71 339 IAmb IAmb 19 33 54.1
comp=Z,6.8nm,0.7s
B21K **Ikpikpuk River** 80.71 339 P P 19 33 53.2 +1.0
baz=96,SNR=7.7
C21K **Knifeblade Rid** 80.73 339 P P 19 33 53.3 +1.0
baz=95
F20K **Avaraart Lake** 80.91 337 P P 19 33 53.9 +0.6
baz=94
L18K **Granite Mounta** 81.05 332 P P 19 33 53.8 -0.4
baz=92
H19K **Roundabout Mou** 81.10 335 P P 19 33 55.1 +0.7
baz=93
J18K **Innoko River** 81.11 333 P P 19 33 55.1 +0.6
baz=93
O17K **Koliganek Bris** 81.16 329 P P 19 33 54.8 0.0
baz=92
E20K **Nigu River** 81.17 338 P P 19 33 55.0 +0.3
baz=94,SNR=17
NOA **NORSAR Array B** 81.27 29 P P 19 33 57.3 +1.8
comp=Z,0.4nm,0.4s,baz=267,slow=5.3,SNR=3.7
comp=Z,0.4nm,0.4s
D20K **Etivluk River** 81.35 338 P P 19 33 56.3 +0.6
baz=94
M17K **Holitna River** 81.38 331 P P 19 33 56.2 +0.3
baz=92
G19K **Purcell Mounta** 81.40 336 P P 19 33 56.7 +0.7
baz=93
E19K **Redstone River** 81.52 337 P P 19 33 57.5 +0.9
baz=93,SNR=5.0
B20K **Meade River** 81.62 340 IAmb IAmb 19 33 59.5
comp=Z,13nm,1.2s
B20K **Meade River** 81.62 340 P P 19 33 58.0 +1.0
baz=93
O16K **Kokwok River B** 81.66 329 P P 19 33 57.8 +0.3
baz=91
F19K **Shaleruckim Mo** 81.70 337 P P 19 33 58.4 +0.9
baz=92
L17K **Donlin** 81.80 332 P P 19 33 58.8 +0.7
baz=91
K17K **Iditarod** 81.81 332 P P 19 33 58.9 +0.7
baz=91
H18K **Honhosa River** 81.89 335 P P 19 33 59.3 +0.7
baz=91
D19K **Kuna River** 81.89 338 IAmb IAmb 19 34 01.0
comp=Z,11nm,1.1s
D19K **Kuna River** 81.89 338 P P 19 33 59.2 +0.7
baz=92,SNR=6.6
G18K **Tagagawik** 82.03 336 P P 19 33 59.7 +0.4
baz=91
M16K **Timber Creek** 82.11 331 P P 19 33 59.4 -0.3
baz=90
J17K **VABM Dome** 82.17 333 P P 19 34 01.4 +1.4
baz=90
C19K **Lookout Ridge** 82.44 339 IAmb IAmb 19 34 04.2
comp=Z,14nm,1.1s
C19K **Lookout Ridge** 82.44 339 P P 19 34 02.7 +1.3
baz=91,SNR=8.1
HFS **Hagfors** 82.49 30 P P 19 34 01.6 -0.2
comp=Z,1.3nm,0.8s,baz=258,slow=7.2,SNR=1.6
comp=Z,1.3nm,0.8s
H17K **Granite Mounta** 82.55 335 P P 19 34 02.5 +0.6
baz=90
O15K **Ungalikthiuk R** 82.55 329 P P 19 34 02.9 +0.8
baz=89
N15K **Kwethluk River** 82.67 330 P P 19 34 03.0 +0.3
baz=89
GERES **GERESS Array B** 82.75 42 P P 19 34 03.6 +0.1
comp=Z,0.2nm,0.5s,baz=270,slow=2.7,SNR=4.0
comp=Z,0.2nm,0.5s
GERES **GERESS Array B** 82.75 42 P P 19 34 03.4 -0.1
E18K **Tukpahlearik C** 82.81 337 P P 19 34 03.3 0.0
baz=90
G17K **Kiwalik Mounta** 82.85 335 P P 19 34 03.8 +0.3
baz=89
J16K **Anvik River** 82.86 333 P P 19 34 04.4 +0.8
baz=89
I17K **Unalakleet** 82.89 334 P P 19 34 05.1 +1.4
baz=89
M15K **Kasigluk River** 82.95 330 P P 19 34 04.8 +0.6
baz=89
A19K **Wainwright** 82.96 340 P P 19 34 05.0 +1.0
baz=90
SDPT **Sand Point** 82.99 325 P P 19 34 05.2 +0.8
baz=88
C18K **Utukok River** 83.02 338 P P 19 34 05.0 +0.6
baz=89
F17K **Baldwin Pennin** 83.08 336 P P 19 34 04.8 +0.2
baz=89
MOA **Molln** 83.17 43 P P 19 34 05.1 -0.5
SPITS **Spitsbergen Ar** 83.24 12 P P 19 34 06.2 +0.9
comp=Z,5.3nm,0.9s,baz=256,slow=2.4,SNR=4.5
comp=Z,5.3nm,0.9s
O14K **Tigyukauivet M** 83.29 329 P P 19 34 05.7 -0.1
baz=88
E17K **Hotham Inlet** 83.30 337 P P 19 34 06.0 +0.2
baz=88
K15K **Wolf Creek Mou** 83.31 332 P P 19 34 06.3 +0.3
baz=88
L15K **Ungalak Mounta** 83.31 331 P P 19 34 06.5 +0.6
baz=88
N14K **Kuskokwak Cree** 83.47 330 P P 19 34 07.0 +0.2
baz=88
H16K **Elim** 83.55 334 P P 19 34 07.2 +0.1
baz=88
G16K **Koyuk River** 83.57 335 P P 19 34 07.5 +0.4
baz=88
C17K **DeLong Mountai** 83.76 338 P P 19 34 08.6 +0.4
baz=87
D17K **Noatak River** 83.76 337 P P 19 34 08.4 +0.3
baz=87
L14K **Kuk Creek** 83.90 331 P P 19 34 08.9 0.0
baz=87
J14K **Nanvaranak Lak** 84.23 332 P P 19 34 10.1 -0.4
baz=86
M13K **Dall Lake** 84.28 330 P P 19 34 11.4 +0.6
baz=86
F15K **North Star Dit** 84.50 335 P P 19 34 12.7 +0.7
baz=86
C16K **Lisburne Hills** 84.57 338 P P 19 34 13.0 +0.8
baz=85
K13K **Kusilvak Mount** 84.80 332 P P 19 34 14.3 +0.8
baz=85
ANM **Nome** 84.90 334 P P 19 34 14.3 +0.4
baz=85
M11K **Mekoryuk** 85.69 330 P P 19 34 18.0 +0.1
baz=84
TNA **Tin City** 85.87 335 P P 19 34 18.7 +0.1
baz=83
UNV **Unalaska Valle** 86.60 324 P P 19 34 22.4 -0.1
baz=83
ARCES **ARCESS Array B** 86.63 20 P P 19 34 21.9 -0.5
comp=Z,0.9nm,0.6s,baz=298,slow=2.6,SNR=5.6
comp=Z,0.9nm,0.6s
ARCES **ARCESS Array B** 86.63 20 P P 19 34 21.8 -0.6
ARCES IAmb IAmb 19 34 30.1
comp=Z,10nm,1.4s
FINES **FINESS Array B** 88.39 28 P P 19 34 30.4 -0.4
comp=Z,3.3nm,1.0s,baz=251,slow=4.3,SNR=3.5
comp=Z,3.3nm,1.0s
FINES **FINESS Array B** 88.39 28 P P 19 34 30.8 -0.1
VNA2 **Neumayer--Watz** 88.67 163 ⇑P P 19 34 30.6 -1.3
comp=Z,1.2nm,0.6s,baz=311,slow=4.9
ZALV **Zalesovo Beam** 116.64 14 PKP PKiKP 19 40 22.6 +0.2
comp=Z,0.7nm,0.5s,baz=210,slow=3.6,SNR=4.1
ZALV **Zalesovo Beam** 116.64 14 PKiKP 19 40 22.4 0.0
KURK **Kurchatov** 117.67 20 PKiKP 19 40 24.6 +0.1
KURBB **Kurchatov Arra** 117.72 20 PKP PKiKP 19 40 24.6 0.0
comp=Z,0.3nm,0.5s,baz=304,slow=1.4,SNR=2.4
MKAR **Makanchi Array** 122.28 20 PKP PKPdf 19 40 33.5 -0.1
comp=Z,0.5nm,0.4s,baz=300,slow=2.5,SNR=15
MKAR **Makanchi Array** 122.28 20 PKPdf 19 40 33.2 -0.3
SONM **Songino Array** 125.57 0 PKP PKiKP 19 40 40.5 +0.1
comp=Z,0.5nm,0.5s,baz=298,slow=0.8,SNR=2.9
SONM **Songino Array** 125.57 0 PKPdf 19 40 39.9 -0.1
HHC **Hu-ho-hao-te** 132.37 355 eP PKPdf 19 40 52.3 -0.8
NJ2 **Nanjing** 139.71 344 eP PKPdf 19 41 06.1 -0.7
NJ2 pmax pmax
comp=Z,17nm,0.5s
PZH **PanZhiHua** 146.48 9 PKPbc PKPdf 19 41 17.8 -1.2
ASAR **Alice Springs** 149.20 234 PKPbc PKPbc 19 41 27.3 -0.5
comp=Z,1.9nm,0.5s,baz=114,slow=3.9,SNR=32
ASAR **Alice Springs** 149.20 234 PKPdf 19 41 23.0 -0.4
WRA **Warramunga Arr** 150.43 241 PKPbc PKPbc 19 41 30.5 -0.4
comp=Z,2.9nm,0.4s,baz=109,slow=2.6,SNR=70
WRA **Warramunga Arr** 150.43 241 PKPbc 19 41 30.0 -0.8
CMAR **Chiang Mai Arr** 153.65 17 PKPbc PKiKP 19 41 38.9 +0.6
comp=Z,1.3nm,0.5s,baz=328,slow=3.3,SNR=10
CMAR **Chiang Mai Arr** 153.65 17 PKiKP 19 41 38.4 +0.2

*IDC **22** 19:31:51.6±1.9, 35°.74N×70°.85E, h0km, mb4.0/8, mbtmp3.9/13, ML3.8/4, MS2.8/1, Error ellipse: s-maj=39.3km s-min=20.9km az=145.0*
*NEIC **22** 19:32:05.2±2.2, 36°.32N±0°.06×70°.79E±0°.04, h96km±10km, mb4.0/6, Error ellipse: s-maj=9.3km s-min=4.4km az=175.0*
*NNC **22** 19:32:08.2±6.4, 36°.99N×70°.42E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=53.0km s-min=40.6km az=156.0*
ISC 22 19:32:04.1±0.6, 36°.22N±0°.05×70°.93E±0°.06, h100km, n63, σ1§82/68, mb4.0/6, 1C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANEM	**Manem**	1.45	24		Pn	19 32 31.0	+1.0
MANEM				Sn	Sn	19 32 49.8	+0.1
KBL	**Kabul**	2.28	223		Pn	19 32 43.1	+2.6
SHAA	**Shahritus**	2.62	302		Pn	19 32 44.0	-0.9
CHGR	**Chuyangaron**	2.81	330		Pn	19 32 46.5	-0.9
GAR	**Garm**	2.82	350		Pn	19 32 47.1	-0.4
NIL	**Nilore**	3.20	143		Pn	19 32 55.2	+2.7
DRK	**Karamyk**	3.33	12		Pn	19 32 55.7	+1.2
BTK	**Batken**	3.83	359		Pn	19 33 02.3	+1.2
JMU	**Jammu**	4.71	136	eP	Pn	19 33 15.2	+2.3
JMU				eS	Sn	19 34 07.5	+1.2
JMU				IAML		19 34 11.6	
	comp=E,129nm,0.2s						
JMU				IAML		19 34 12.4	
	comp=N,180nm,0.4s						
TSSA	**Tissa**	5.47	127	eP	Pn	19 33 24.6	+1.2
TSSA				eS	Sn	19 34 25.2	0.0
TSSA				IAML		19 34 26.8	
	comp=E,178nm,0.1s						
TSSA				IAML		19 34 27.9	
	comp=N,211nm,0.2s						
THN	**Thein Dam**	5.49	132	eP	Pn	19 33 24.8	+1.3
THN				eS	Sn	19 34 26.9	+1.5
THN				IAML		19 34 29.2	
	comp=N,95nm,0.4s						
THN				IAML		19 34 30.7	
	comp=Z,37nm,0.2s						
NRN	**Naryn**	6.54	36		Pn	19 33 38.3	+0.3
EKS2	**Erkin-Say**	6.80	18	P	Pn	19 33 42.0	+0.7
	SNR=13						
KK31	**Karatay Array**	6.88	357	⇑P	Pn	19 33 41.6	-0.7
	comp=Z,5.2nm,0.2s,baz=180,slow=11,SNR=146						
KK31				⇓S	Sn	19 34 53.0	-6.0
	comp=Z,7.1nm,0.3s,baz=190,slow=24,SNR=4.4						
KK31	**Karatay Array**	6.88	357		Pn	19 33 41.6	-0.7
KKAR	**Karatay Array**	6.88	357		Pn	19 33 41.1	-1.2
AAK	**Ala-Archa**	6.98	22	Pn	Pn	19 33 44.2	+0.5
	comp=Z,4.4nm,0.3s,baz=204,slow=7.5,SNR=20						
AAK				Sn	Sn	19 34 58.6	-3.0
	comp=Z,2.0nm,0.3s,baz=333,slow=20,SNR=9.6						
	comp=Z,13nm,0.4s						
AAK **Ala-Archa** 6.98 22 P Pn 19 33 44.8 +1.1
SNR=13
AAK **Ala-Archa** 6.98 22 ⇓P Pn 19 33 44.3 +0.5
comp=Z,4.5nm,0.5s
AAK ⇓S Sn 19 34 58.6 -3.0
comp=Z,3.3nm,0.5s
AAK **Ala-Archa** 6.98 22 Pn 19 33 44.1 +0.3
FRU1 **Bishkek** 7.17 22 Pn Pn 19 33 45.7 -0.6
SMLA **Simla** 7.27 133 eP Pn 19 33 47.3 -0.3
SMLA IAML 19 35 11.1
comp=N,73nm,0.3s
SMLA IAML 19 35 11.6
comp=E,52nm,0.2s
BOOM **Boomskoye usch** 7.37 30 Pn Pn 19 33 48.8 -0.3
CHMS **Chumysh** 7.38 22 P Pn 19 33 50.1 +0.9
SNR=14
USP **Ospenovka** 7.55 20 P Pn 19 33 51.9 +0.4
SNR=9.9
TKM2 **Tokmak 2** 7.60 27 P Pn 19 33 53.0 +0.8
SNR=5.3
KLP **Kalpa** 7.67 125 eP Pn 19 33 53.2 -0.2
KLP eS Sn 19 35 15.5 -3.5
TARG **Taragay, Kyrgy** 7.67 42 Pn Pn 19 33 53.8 +0.3
WUS **Wushi** 8.16 50 Pn Pn 19 34 00.4 +0.5
UTK **UTTARKASHI** 8.33 129 eP Pn 19 34 03.0 +0.8
UTK eS Sn 19 35 30.3 -4.3
PDGK **Podgornoye** 9.68 40 Pn 19 34 21.7 +1.2
PTH **Pithoragarh** 10.22 128 eS Sn 19 36 15.8 -4.9
AJM **Ajmer** 10.26 161 eP Pn 19 34 27.0 -1.4
LGTI **Lohaghat** 10.27 129 eP Pn 19 34 26.9 -1.8
LGTI eS Sn 19 36 15.5 -6.5
LGTI IAML 19 36 17.7
comp=E,11nm,0.2s
UDPR **Udaipur** 11.85 168 ex Pn 19 34 41.8 -8.0
UDPR ex Sn 19 36 56.9 -3.2
MAKZ **Makanchi** 13.42 35 Pn 19 35 10.2 -0.2
MKAR **Makanchi Array** 13.55 35 Pn Pn 19 35 11.9 -0.2
comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=4.9
comp=E,0.6nm,0.8s
MKAR **Makanchi Array** 13.55 35 Pn Pn 19 35 12.4 +0.3
AB31 **Akbulak array** 15.30 332 P Pn 19 35 32.3 -2.2
comp=E,4.5nm,0.5s,baz=147,slow=11,SNR=140
AB31 S Sn 19 38 09.9 -13
comp=E,1.0nm,0.5s,baz=158,slow=22,SNR=8.1
AB31 **Akbulak array** 15.30 332 Pn 19 35 31.6 -2.9
ABKAR **Akbulak array** 15.30 332 Pn 19 35 31.7 -2.7
KURBB **Kurchatov Arra** 15.40 18 Pn Pn 19 35 35.4 -0.3
comp=E,0.1nm,0.3s,baz=210,slow=10,SNR=13
comp=E,0.2nm,0.5s
KURK **Kurchatov** 15.51 19 Pn 19 35 35.1 -2.0
EVN **Everest** 15.77 117 Pn Pn 19 35 38.6 -2.5
EVN IAmb IAmb 19 35 42.0
comp=Z,8.2nm,0.5s
AKL **Akola** 16.35 159 eP Pn 19 35 47.8 0.0
BVAR **Borovoye Array** 16.81 359 P P 19 35 53.4 -0.3
comp=Z,1.2nm,0.6s,baz=178,slow=13,SNR=3.7
AKTO **Aktyubinsk** 17.00 331 P Pn 19 35 54.2 -1.3
comp=Z,0.9nm,0.3s,baz=149,slow=12,SNR=22
comp=Z,12nm,0.9s
AKTO **Aktyubinsk** 17.00 331 ⇓P P 19 35 55.1 -0.6
comp=Z,7.1nm,0.8s
ZAA0 **Zalesovo Array** 20.19 24 P 19 36 30.9 +0.4
ZAA0 IAmb IAmb 19 36 34.3
comp=Z,4.2nm,0.6s
ZALV **Zalesovo Beam** 20.19 24 P P 19 36 31.4 +0.9
comp=Z,4.4nm,0.5s,baz=214,slow=12,SNR=28
comp=Z,4.4nm,0.5s
ZALV **Zalesovo Beam** 20.19 24 P 19 36 30.7 +0.1
ARTI **Arti** 21.89 341 P P 19 36 50.5 +1.8
comp=Z,1.8nm,0.3s,baz=145,slow=5.6,SNR=6.6
comp=Z,1.8nm,0.3s
KBZ **Khabaz** 22.68 298 LR LR 19 48 36.0
comp=Z,24nm,18.9s,baz=42,slow=44
SONM **Songino Array** 28.54 55 P P 19 37 52.7 +2.3
comp=Z,0.4nm,0.8s,baz=257,slow=3.8,SNR=1.8
comp=Z,0.4nm,0.8s
SONM **Songino Array** 28.54 55 IAmb IAmb 19 38 03.8
comp=Z,2.3nm,1.4s
FINES **FINESS Array B** 37.68 326 P P 19 39 12.0 +2.7
comp=Z,1.8nm,0.8s,baz=94,slow=5.6,SNR=1.2
comp=Z,1.8nm,0.8s
FINES **FINESS Array B** 37.68 326 P P 19 39 08.0 -1.4
ARCES **ARCESS Array B** 41.38 338 P P 19 39 42.9 +2.9
comp=Z,0.9nm,0.4s,baz=105,slow=8.3,SNR=9.6
comp=Z,0.9nm,0.4s
ARCES **ARCESS Array B** 41.38 338 P P 19 39 40.9 +1.0
HFS **Hagfors** 43.25 322 P P 19 39 57.5 +2.3
comp=Z,1.6nm,0.6s,baz=97,slow=7.4,SNR=5.9
comp=Z,1.6nm,0.6s
TORD **Torodi Ar. Bea** 65.66 269 P P 19 42 37.4 -0.6
comp=Z,0.7nm,0.5s,baz=51,slow=5.7,SNR=12
comp=Z,0.7nm,0.5s
INK **Inuvik** 74.19 9 P P 19 43 31.5 +2.1
comp=Z,1.4nm,0.5s,baz=359,slow=6.9,SNR=2.2
comp=Z,1.4nm,0.5s
INK **Inuvik** 74.19 9 P P 19 43 31.4 +2.0
INK IAmb IAmb 19 43 39.7
comp=Z,2.7nm,1.0s

*IDC **22** 19:37:15.3±0.9, 54°.96N×159°.05W, h0km, mb3.8/18, mbtmp3.8/22, ML3.6/4, MS2.7/1, Error ellipse: s-maj=21.3km s-min=14.2km az=177.0*
*NEIC **22** 19:37:20.7±2.1, 55°.09N±0°.10×158°.77W±0°.09, h29km±6km, mb4.0/17, ML3.8/40, Error ellipse: s-maj=14.6km s-min=7.2km az=171.0*
ISC 22 19:37:21.0±0.5, 55°.11N±0°.06×158°.67W±0°.04, h35km, n94, σ1§33/83, mb3.8/18, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	0.60	242	P	Pn	19 37 31.4	-1.6
CHNA	**Chernabura Isl**	0.60	242	S	Sn	19 37 39.8	-1.7
CNBA	**Chernabura Isl**	0.60	242		Pn	19 37 31.4	-1.7
SDPT	**Sand Point**	1.06	284	P	Pn	19 37 36.8	-2.5
SDPT	**Sand Point**	1.06	284		Pn	19 37 36.8	-2.5
SDPT				IAML		19 37 47.8	
	comp=N,2μm,0.9s						
SDPT				IAML		19 37 59.4	
	comp=E,2μm,0.6s						
CHGN	**Chignik**	1.20	7		Pn	19 37 41.5	+0.2
CHGN				IAML		19 38 00.7	
	comp=N,2μm,0.1s						
VNFG	**Fog Glacier, M**	1.28	337		Pn	19 37 43.1	+0.6
CHIR	**Chirikof Islan**	1.88	66	P	Pn	19 37 50.0	-0.6
CHIR	**Chirikof Islan**	1.88	66		Pn	19 37 50.0	-0.6
CHIR				IAML		19 38 27.1	
	comp=N,679nm,0.8s						
CHIR				IAML		19 38 31.5	
	comp=E,1μm,0.9s						
SII	**Sitkinak Islan**	2.92	58	P	Pn	19 38 04.7	-0.2
SII	**Sitkinak Islan**	2.92	58		Pn	19 38 04.6	-0.3
SII				IAML		19 39 08.8	
	comp=N,526nm,0.7s						
ACHA	**Angle Creek He**	3.62	29		Pn	19 38 15.1	+0.6
OHAK	**Old Harbor**	3.68	53	P	Pn	19 38 14.8	-0.5
OHAK	**Old Harbor**	3.68	53		Pn	19 38 14.8	-0.5
OHAK				IAML		19 39 24.8	
	comp=N,139nm,0.9s						
OHAK				IAML		19 39 25.2	
	comp=E,109nm,1.0s						
P16K	**Nushagak River**	3.95	5		Pn	19 38 20.5	+1.5
O15K	**Ungalikthiuk R**	4.12	352		Pn	19 38 22.5	+1.0
O15K				IAML		19 39 45.9	
	comp=E,88nm,0.8s						
AKUT	**Akutan**	4.24	260	P	Pn	19 38 23.4	+0.4
AKUT	**Akutan**	4.24	260	S	Sn	19 39 14.4	+3.2
AKUT	**Akutan**	4.24	260	Pn	Pn	19 38 24.1	+1.1
AKUT				IAML		19 39 27.4	
	comp=E,84nm,0.8s						
AKUT				IAML		19 39 37.7	
	comp=N,87nm,1.0s						
P17K	**Kvichak River**	4.27	16		Pn	19 38 24.6	+1.1
KDAK	**Kodiak Island**	4.31	49	Pn	Pn	19 38 23.8	-0.2
	comp=N,3.2nm,0.3s,baz=171,slow=0.8,SNR=71						
KDAK				Sn	Sn	19 39 10.4	-2.6
	comp=N,5.0nm,0.3s,baz=31,slow=18,SNR=6.5						
	comp=N,10nm,0.4s						
KDAK	**Kodiak Island**	4.31	49		Pn	19 38 24.0	0.0
KDAK				IAML		19 39 53.4	
	comp=N,71nm,1.1s						
LVA	**Lava Point**	4.38	260		Pn	19 38 25.1	+0.1
LVA				IAML		19 39 39.4	
	comp=E,124nm,0.9s						
O14K	**Tigyukauivet M**	4.39	342		Pn	19 38 25.8	+0.8

O14K IAML 19 39 22.4
comp=E,98nm,0.8s
O14K IAML 19 39 52.2
comp=N,75nm,0.8s
O16K Kokwok River B 4.51 4 Pn 19 38 27.7 +1.0
O16K IAML 19 39 50.3
comp=N,57nm,0.8s
UNV Unalaska Valle 4.74 258 P Pn 19 38 30.2 +0.3
UNV Unalaska Valle 4.74 258 S Sn 19 39 27.2 +3.6
UNV Unalaska Valle 4.74 258 Pn 19 38 29.5 -0.4
UNV IAML 19 39 46.7
comp=N,57nm,0.9s
N14K Kuskokwak Cree 5.09 343 Pn 19 38 35.6 +0.9
N14K IAML 19 40 18.5
comp=N,84nm,1.2s
N14K IAML 19 40 30.5
comp=E,86nm,1.1s
O18K Koktuh Hills 5.11 20 Pn 19 38 36.0 +1.0
N15K Kwethluk River 5.13 352 IAML 19 40 22.6
comp=N,78nm,1.1s
N17K Nushagak Hills 5.49 8 Pn 19 38 41.3 +1.1
ILSW Iliamna Southw 5.72 29 Pn 19 38 43.3 -0.2
SPIA Saint Paul Isl 6.79 292 P Pn 19 38 56.1 -1.9
G18K Tagagawik 10.82 0 Pn 19 39 54.4 +1.2
K24K Donnelly Dome 10.88 32 Pn Pn 19 39 53.9 -0.2
ADK Adak 11.20 261 P Pn 19 39 59.4 +1.0
ILAR Eielson Array 11.32 26 Pn Pn 19 39 56.9 -3.2
comp=N,0.7nm,0.3s,baz=217,slow=13,SNR=25
ILAR Sn **Sn 19 42 00.4 -4.8**
comp=N,0.1nm,0.3s,baz=216,slow=22,SNR=5.7
comp=N,1.4nm,0.5s
ILAR Eielson Array 11.32 26 Pn 19 39 59.3 -0.7
L27K Beaver Creek, 11.73 40 Pn 19 40 05.5 -0.3
P29M Windy Craggy 12.15 60 Pn 19 40 10.8 -0.6
RDOG Red Dog Mine 13.14 353 Pn 19 40 24.9 +0.1
D23K Nanushuk River 14.38 12 Pn 19 40 41.1 -0.6
P33M Teslin, Yukon 14.69 59 P 19 40 53.0 +1.2
C23K Itkillik River 15.22 11 IAmb IAmb 19 41 00.1
comp=Z,7.2nm,0.9s
G29M Pine Creek 15.39 32 IAmb IAmb 19 41 05.6
comp=Z,12nm,0.9s
S34M Telegraph Cree 15.41 68 IAmb IAmb 19 41 03.3
comp=Z,6.5nm,0.9s
EPYK Eagle Plains 15.46 34 IAmb IAmb 19 41 10.1
comp=Z,10nm,0.7s
H31M Peel River 15.95 38 P 19 41 06.6 +0.9
H31M IAmb IAmb 19 41 12.1
comp=Z,5.9nm,0.8s
G30M tAoh Zraii Nji 15.98 33 IAmb IAmb 19 41 11.4
comp=Z,14nm,1.1s
DLBC Dease Lake 15.99 66 Pn **P 19 41 05.5 -0.7**
baz=232,slow=14,SNR=4.9
comp=Z,1.9nm,0.8s
G31M Satah River 16.58 35 IAmb IAmb 19 41 20.1
comp=Z,7.2nm,1.0s
INK Inuvik 17.61 31 P P 19 41 24.2 +0.3
comp=Z,0.5nm,0.3s,baz=254,slow=16,SNR=8.6
comp=Z,2.6nm,0.4s
INK Inuvik 17.61 31 Pn 19 41 23.0 -0.2
YKA Yellowknife Ar 23.57 54 P P 19 42 28.2 +0.3
comp=Z,0.6nm,0.7s,baz=267,slow=7.8,SNR=4.4
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 23.57 54 P P 19 42 29.6 +1.7
PETK Petropavlovsk- 25.35 284 P P 19 42 42.2 -2.1
comp=Z,1.3nm,0.6s,baz=67,slow=15,SNR=5.6
comp=Z,1.3nm,0.6s
PETK Petropavlovsk- 25.35 284 P P 19 42 42.7 -1.6
LYMT Lyon Mountain 29.79 86 P P 19 43 25.6 +1.1
NVAR Mina Array Bea 31.74 105 P P 19 43 42.9 +1.2
comp=Z,1.2nm,0.6s,baz=311,slow=9.3,SNR=5.5
NVAR LR LR 19 53 25.1
comp=Z,15nm,21.6s,baz=294,slow=30
comp=Z,1.2nm,0.6s
YHH Holmes Hill 31.86 89 P P 19 43 43.6 +0.8
PDAR Pinedale Array 33.83 91 P P 19 44 00.9 +0.9
comp=Z,0.5nm,0.6s,baz=319,slow=4.2,SNR=7.7
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 33.83 91 P P 19 44 00.8 +0.8
SRU San Rafael Swe 35.66 96 P P 19 44 17.1 +1.4
H11N2 WAKE ISLAND Hy 43.85 230 T T 20 32 21.5
baz=29,slow=75,SNR=4.8
H11N3 WAKE ISLAND Hy 43.86 230 T T 20 32 21.1
baz=29,slow=75,SNR=6.3
H11N1 WAKE ISLAND Hy 43.87 230 T T 20 32 13.7
baz=29,slow=75,SNR=5.1
H11S1 WAKE ISLAND Hy 45.02 230 T T 20 33 46.1
baz=28,slow=75,SNR=23
H11S2 WAKE ISLAND Hy 45.03 230 T T 20 33 50.8
baz=28,slow=75,SNR=21
H11S3 WAKE ISLAND Hy 45.03 230 T T 20 33 49.0
baz=28,slow=75,SNR=13
TXAR Lajitas Array 46.63 100 P P 19 45 46.9 +1.0
comp=Z,0.5nm,0.6s,baz=303,slow=5.7,SNR=8.5
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 46.63 100 P P 19 45 46.3 +0.4
KSRS Korea Array 51.23 282 P P 19 46 19.9 -0.9
comp=Z,0.4nm,0.6s,baz=50,slow=8.1,SNR=2.1
comp=Z,0.4nm,0.6s
SONM Songino Array 55.14 305 P P 19 46 49.0 -0.7
comp=Z,0.6nm,0.6s,baz=79,slow=6.4,SNR=3.1
comp=Z,0.6nm,0.6s
SONM Songino Array 55.14 305 P P 19 46 49.5 -0.2
SONM IAmb IAmb 19 46 55.6
comp=Z,1.4nm,1.2s
FINES FINESS Array B 63.73 357 P P 19 47 49.5 +1.0
comp=Z,2.1nm,0.8s,baz=347,slow=8.1,SNR=6.5
comp=Z,2.1nm,0.8s
FINES FINESS Array B 63.73 357 P P 19 47 49.7 +1.2
KURK Kurchatov 64.25 324 P P 19 47 52.9 +0.9
KURBB Kurchatov Arra 64.36 324 P P 19 47 53.0 +0.2
comp=Z,0.3nm,0.3s,baz=28,slow=7.4,SNR=5.0
comp=Z,0.3nm,0.3s
ARTI Arti 64.84 338 P P 19 47 54.7 -1.1
comp=Z,1.1nm,0.4s,baz=58,slow=7.2,SNR=4.2
comp=Z,1.1nm,0.4s
ARTI Arti 64.84 338 P P 19 47 55.3 -0.5
BVAR Borovoye Array 64.86 330 P P 19 47 54.3 -1.7
comp=Z,0.9nm,0.5s,baz=8.3,slow=3.2,SNR=2.9
comp=Z,0.9nm,0.5s
HFS Hagfors 64.94 4 P P 19 47 56.6 +0.1
comp=Z,3.0nm,1.0s,baz=35,slow=3.3,SNR=7.0
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 66.23 319 P P 19 48 03.8 -1.2
comp=Z,0.2nm,0.4s,baz=30,slow=4.8,SNR=6.8
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 66.23 319 P P 19 48 04.1 -1.0
EKA Eskdalemuir Ar 68.11 15 P P 19 48 18.7 +2.0
comp=Z,0.8nm,0.6s,baz=346,slow=6.8,SNR=4.3
comp=Z,0.8nm,0.6s
AKASG Malin Array Be 74.35 355 P P 19 48 54.5 -0.1
comp=Z,0.9nm,0.4s,baz=10,slow=6.0,SNR=8.2
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 74.35 355 P P 19 48 53.8 -0.7
AKASG IAmb IAmb 19 49 37.4
comp=Z,2.2nm,1.1s
AKBB Malin Array Si 74.35 355 P P 19 48 54.4 -0.1
GERES GERESS Array B 76.22 5 P P 19 49 05.5 +0.1
comp=Z,0.3nm,0.6s,baz=337,slow=2.2,SNR=3.8
comp=Z,0.3nm,0.6s
GERES GERESS Array B 76.22 5 P P 19 49 05.4 -0.1
CMAR Chiang Mai Arr 81.92 291 P P 19 49 37.0 0.0
comp=Z,0.8nm,0.7s,baz=14,slow=6.1,SNR=5.3
comp=Z,0.8nm,0.7s
CMAR Chiang Mai Arr 81.92 291 P P 19 49 37.0 0.0
ESDC Sonseca Array 83.14 19 P P 19 49 44.0 +1.0
comp=Z,0.5nm,0.6s,baz=351,slow=4.6,SNR=4.9
comp=Z,0.5nm,0.6s

SJA ***22*** *19:44:58.0, 16°.45S×73°.57W, h10km, MW5.2(GFZ)*
IDC ***22*** *19:45:02.5±0.4, 16°.26S×73°.93W, h0km, mb4.9/15, mbtmp4.9/19, ML4.7/4, MS4.4/12, Error ellipse: s-maj=18.7km s-min=12.6km az=55.0*
VAO ***22*** *19:45:06.4±0.3, 16°.47S×73°.92W, h35km±1km, mb5.3, Presumed earthquake*
BJI ***22*** *19:45:06.5, 16°.24S×74°.57W, h30km, mB5.4/3*
GFZ ***22*** *19:45:09.0±0.3, 16°.3S×74°.4W±°, h10km, M5.1/31, mb5.1/31*
NEIC ***22*** *19:45:08.1±1.9, 16°.40S±0°.06×73°.90W±0°.08, h35km±1km, mb4.9/194, Error ellipse: s-maj=16.2km s-min=4.3km az=235.0*
ISC 22 19:45:06.9±0.6, 16°.38S±0°.04×73°.87W±0°.05, h30km±3km, h30km:pP-P, n411, σ1°.68/346, mb5.0/119, MS4.3/8, 3C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AP01	**Chacalluta**	**3.90**	**121**			**Pn**	**19 46 05.4**	**+0.5**
AP01	**Chacalluta**	**3.90**	**121**	P		**Pn**	**19 46 08.0**	**+3.1**
PB12	**IPOC Station P**	**4.04**	**124**	*i* P		**Pn**	**19 46 10.6**	**+3.7**
PB12				*eS*		**Sb**	**19 47 14.0**	**+8.0**
PB12	**IPOC Station P**	**4.04**	**124**			**Pn**	**19 46 07.9**	**+0.9**
PB12	**IPOC Station P**	**4.04**	**124**	P		**Pn**	**19 46 07.8**	**+0.9**
PB18	**Visviri**	**4.37**	**107**			**Pn**	**19 46 16.4**	**+4.6**
PB16	**IPOC Station P**	**4.59**	**116**			**Pn**	**19 46 14.8**	**-0.1**
PSGCX	**Pisagua**	**4.79**	**132**			**Pn**	**19 46 17.6**	**+0.4**
PSGCX	**Pisagua**	**4.79**	**132**	P		**Pn**	**19 46 18.3**	**+1.1**
PB11	**IPOC Station P**	**5.23**	**131**	*i* P		**Pn**	**19 46 25.6**	**+2.3**
PB11	**IPOC Station P**	**5.23**	**131**			**Pn**	**19 46 24.1**	**+0.8**
PB11	**IPOC Station P**	**5.23**	**131**	P		**Pn**	**19 46 24.5**	**+1.2**
NNA	**Nana**	**5.23**	**326**	Pn		**Pn**	**19 46 22.5**	**-0.8**
	29nm,0.3s,baz=140,slow=7.6,SNR=15							
NNA				Sn		**Sn**	**19 47 18.9**	**-3.8**
	30nm,0.3s,baz=93,slow=7.7,SNR=4.0							
	20nm,0.3s							
NNA	**Nana**	**5.23**	**326**			**Pn**	**19 46 22.8**	**-0.5**
NNA	**Nana**	**5.23**	**326**	P		**Pn**	**19 46 27.9**	**+4.6**
TA02	**Huaiquique**	**5.25**	**138**	*i* P		**Pn**	**19 46 25.9**	**+2.5**
TA02	**Huaiquique**	**5.25**	**138**	P		**Pn**	**19 46 24.5**	**+1.1**
TA01	**Diego Aracena**	**5.44**	**141**	*i* P		**Pn**	**19 46 26.9**	**+0.9**
TA01				*eS*		**Sn**	**19 47 25.0**	**-2.6**
TA01	**Diego Aracena**	**5.44**	**141**			**Pn**	**19 46 26.5**	**+0.5**
TA01	**Diego Aracena**	**5.44**	**141**	P		**Pn**	**19 46 26.9**	**+0.9**
LPAZ	**La Paz**	**5.51**	**90**	Pn		Pn	19 46 33.5	+6.0
	30nm,0.3s,baz=274,slow=8.3,SNR=333							
LPAZ				Sn		**Sb**	**19 47 43.6**	**-5.0**
	baz=264,slow=15							
LPAZ				LR		LR	19 48 33.6	
	comp=Z,858nm,21.4s,baz=265,slow=38							
LPAZ	**La Paz**	**5.51**	**90**			Pn	19 46 33.0	+5.5
GO01	**Chusmiza**	**5.52**	**127**			**Pn**	**19 46 28.9**	**+1.4**
GO01	**Chusmiza**	**5.52**	**127**	P		**Pn**	**19 46 29.5**	**+1.9**
PB08	**IPOC Station P**	**5.83**	**131**			**Pn**	**19 46 33.0**	**+1.1**
PB02	**IPOC Station P**	**6.19**	**143**	*i* P		**Pn**	**19 46 36.6**	**+0.2**
PB02				*eS*		**Sn**	**19 47 41.5**	**-4.7**
PB02	**IPOC Station P**	**6.19**	**143**			**Pn**	**19 46 36.6**	**+0.2**
PB02	**IPOC Station P**	**6.19**	**143**	P		**Pn**	**19 46 37.2**	**+0.8**
PB07	**IPOC Station P**	**6.51**	**145**	*i* P		**Pn**	**19 46 41.0**	**0.0**
PB07				*eS*		**Sn**	**19 47 51.0**	**-3.4**
PB07	**IPOC Station P**	**6.51**	**145**			**Pn**	**19 46 40.7**	**-0.3**
PB07	**IPOC Station P**	**6.51**	**145**	P		**Pn**	**19 46 41.4**	**+0.4**
PB03	**IPOC Station P**	**6.85**	**146**	*i* P		**Pn**	**19 46 45.8**	**+0.2**
PB03				*eS*		**Sn**	**19 47 57.0**	**-5.6**
PB03	**IPOC Station P**	**6.85**	**146**			**Pn**	**19 46 45.1**	**-0.5**
PB03	**IPOC Station P**	**6.85**	**146**	P		**Pn**	**19 46 45.7**	**+0.2**
PB09	**IPOC Station P**	**6.94**	**142**	*i* P		**Pn**	**19 46 48.4**	**+1.6**
PB09				*eS*		**Sn**	**19 48 01.9**	**-2.9**
PB09	**IPOC Station P**	**6.94**	**142**			**Pn**	**19 46 48.1**	**+1.3**
PB09	**IPOC Station P**	**6.94**	**142**	P		**Pn**	**19 46 48.5**	**+1.7**
PB05	**IPOC Station P**	**7.31**	**152**	*i* P		**Pn**	**19 46 50.2**	**-1.6**
PB05				*eS*		**Sn**	**19 48 06.0**	**-7.8**
PB05	**IPOC Station P**	**7.31**	**152**			**Pn**	**19 46 50.9**	**-0.9**
PB05	**IPOC Station P**	**7.31**	**152**	P		**Pn**	**19 46 51.3**	**-0.5**
PB06	**IPOC Station P**	**7.48**	**148**			**Pn**	**19 46 54.0**	**-0.2**
PB06	**IPOC Station P**	**7.48**	**148**	P		**Pn**	**19 46 54.6**	**+0.3**
AF01	**San Pedro de A**	**8.45**	**142**			**Pn**	**19 47 09.9**	**+2.2**
CZSB	**Cruzeiro do Su**	**8.67**	**8**			**Pn**	**19 47 11.1**	**+0.7**
CZSB	**Cruzeiro do Su**	**8.67**	**8**	P		**Pn**	**19 47 12.2**	**+1.7**
	4µm312nm,0.7s							
CZSB	**Cruzeiro do Su**	**8.67**	**8**	*eP*		**Pn**	**19 47 11.2**	**+0.7**
CZSB				*eS*		**Sn**	**19 48 49.9**	**+2.6**
PB14	**IPOC Station P**	**8.82**	**159**			**Pn**	**19 47 11.0**	**-1.8**
PB14	**IPOC Station P**	**8.82**	**159**	P		**Pn**	**19 47 09.6**	**-3.1**
AC01	**Pan de Azucar**	**10.19**	**163**	Pn		**Pn**	**19 47 30.0**	**-1.2**
ATAH	**Atahualpa**	**10.20**	**334**	Pn		Pn	19 47 36.6	+4.8
	1.8nm,0.3s,baz=135,slow=10,SNR=28							
ATAH				Sn		Sn	19 49 37.9	+12
	0.5nm,0.3s,baz=5.1,slow=19,SNR=4.1							
ATAH				LR		LR	19 51 53.1	
	comp=Z,1µm,19.3s,baz=174,slow=41							
SALTA		**10.52**	**139**	P		**Pn**	**19 47 39.7**	**+3.4**
AC02	**Maricunga**	**11.30**	**158**			**Pn**	**19 47 46.9**	**0.0**
AC02	**Maricunga**	**11.30**	**158**	P		**Pn**	**19 47 49.2**	**+2.3**
SLA	**San Lorenzo**	**11.41**	**138**	*eP*		**Pn**	**19 47 51.4**	**+3.4**
FSA	**Cafayete**	**12.15**	**144**	*eP*		**Pn**	**19 48 03.0**	**+4.7**
SIV	**San Ignacio**	**12.30**	**90**	Pn		**Pn**	**19 48 01.3**	**+1.1**
	2.0nm,0.3s,baz=262,slow=11,SNR=71							
SIV				Sn		**Sn**	**19 50 17.1**	**+0.7**
	baz=173,slow=11,SNR=4.4							
SIV				LR		LR	19 53 18.6	
	comp=Z,3µm,19.1s,baz=283,slow=40							
	88nm,0.6s							
BBSD	**Serra de San D**	**12.72**	**96**	*eP*		**Pn**	**19 48 05.9**	**0.0**
AC05	**El Transito**	**12.83**	**166**			**Pn**	**19 48 07.8**	**+0.2**
AC05	**El Transito**	**12.83**	**166**	P		**Pn**	**19 48 11.6**	**+4.0**
LCO	**Las Campanas**	**12.90**	**167**			**Pn**	**19 48 06.9**	**-1.7**
TINO	**Tinogasta**	**13.00**	**154**	*eP*		**Pn**	**19 48 12.0**	**+2.2**
MCRA	**Macar, Loja**	**13.35**	**333**	P		**Pn**	**19 48 14.4**	**-0.2**
	31nm,0.8s							
VCA	**Vinchina**	**13.36**	**158**	*eP*		**Pn**	**19 48 16.4**	**+1.6**
VILB	**Vilhena**	**13.65**	**77**			**Pn**	**19 48 18.3**	**-0.4**
VILB	**Vilhena**	**13.65**	**77**	*eP*		**Pn**	**19 48 18.9**	**+0.2**
VILB				*eS*		**Sn**	**19 50 50.9**	**+1.4**
CO01	**Juntas del Tor**	**13.97**	**166**	P		**Pn**	**19 48 26.6**	**+3.4**
GO04	**Tololo Observa**	**14.01**	**169**			**Pn**	**19 48 22.7**	**-1.0**
GO04	**Tololo Observa**	**14.01**	**169**	P		**Pn**	**19 48 26.6**	**+2.9**
PTLB	**Pontes e Lacer**	**14.20**	**88**			**Pn**	**19 48 25.9**	**-0.2**
PTLB	**Pontes e Lacer**	**14.20**	**88**	*eP*		**Pn**	**19 48 26.1**	**0.0**
PTLB				*eS*		**Sn**	**19 51 03.8**	**+1.0**
AROD	**Rodeo**	**14.30**	**164**	*eP*		**P**	**19 48 31.6**	**-3.1**
ACLC	**CERRO LA CRUZ**	**14.46**	**155**	*eP*		**Pn**	**19 48 31.6**	**+1.8**
CO03	**El Pedregal**	**14.68**	**169**	P		**Pn**	**19 48 34.9**	**+2.1**
ACCO	**Cerro Coronel**	**14.81**	**164**	*eP*		**P**	**19 48 38.2**	**-2.0**
CO02	**Combarbal**	**14.99**	**170**	P		**Pn**	**19 48 38.6**	**+1.8**
AVFE	**Valle Fertil**	**15.38**	**159**	*eP*		**Pn**	**19 48 43.6**	**+1.7**
COIM	**Forte Coimbra**	**15.68**	**105**	*eP*		**Pn**	**19 48 42.8**	**-3.0**
COIM				*epP*		**pP**	**19 48 53.5**	**-3.7**
CO04	**Los Peladeros**	**15.81**	**171**	IAmb		IAmb	19 48 55.1	
	comp=Z,92nm,1.1s							
CO04	**Los Peladeros**	**15.81**	**171**	P		**Pn**	**19 48 49.4**	**+1.6**
ZON	**Zonda**	**15.82**	**164**	Pn		**Pn**	**19 48 47.9**	**+0.3**
ZON				IAmb		IAmb	19 48 55.3	
	comp=Z,72nm,1.0s							
PIAT	**Ana Tenorio**	**15.89**	**344**	P		**Pn**	**19 48 49.7**	**+0.8**
	comp=Z,39nm,1.3s							
CFA	**Coronel Fontan**	**16.00**	**162**	Pn		**P**	**19 48 51.9**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=337,slow=12,SNR=25							
	comp=Z,42nm,1.0s							
SLOR	**San Lorenzo -**	**16.21**	**343**	P		**P**	**19 48 56.8**	**+0.7**
MURT	**Porto Murtinho**	**16.24**	**111**	*eP*		**Pn**	**19 48 51.3**	**-1.7**
MURT				*eS*		**Sn**	**19 51 52.5**	**+0.1**
AUSP	**Uspallata**	**16.29**	**166**	*eP*		**P**	**19 48 55.7**	**-0.9**
VA03	**San Esteban**	**16.59**	**170**	P		**P**	**19 49 02.2**	**+2.5**
VA01	**Torpederas**	**16.69**	**173**	P		**P**	**19 49 03.6**	**+2.9**
PEL	**Peldehue**	**16.94**	**171**	P		**P**	**19 49 04.1**	**+0.5**
OTAV	**Otavalo**	**17.12**	**344**			**Pn**	**19 49 04.2**	**-0.4**
OTAV	**Otavalo**	**17.12**	**344**	*eP*		**Pn**	**19 49 04.7**	**+0.1**
OTAV				*eS*		**Sn**	**19 52 15.5**	**+1.0**
OTAV	**Otavalo**	**17.12**	**344**	P		P	19 49 14.8	+8.7
VA05	**Santo Domingo**	**17.32**	**174**	P		**P**	**19 49 08.1**	**+0.3**
SALV	**Santo Antonio**	**17.47**	**91**	*eP*		**Pn**	**19 49 07.9**	**-0.6**
SALV				*epP*		**pP**	**19 49 15.4**	**-1.8**
SGC2	**Sao Gabriel da**	**17.50**	**24**	P		**Pn**	**19 49 06.9**	**-2.0**
	comp=Z,1µmcomp=Z,110nm,1.2s							
SGC2	**Sao Gabriel da**	**17.50**	**24**	*eP*		**Pn**	**19 49 08.0**	**-0.9**
H03N1	**Juan Fernandez**	**17.59**	**194**	T		T	20 07 41.2	
	baz=18,slow=74,SNR=1604							
MT13	**San Alfonso**	**17.59**	**170**			**Pn**	**19 49 09.2**	**-0.8**
H03N2	**Juan Fernandez**	**17.59**	**194**	T		T	20 07 44.9	
	baz=18,slow=74,SNR=2765							
MRA	**San Martin**	**17.59**	**157**	*eP*		**Pn**	**19 49 07.3**	**-2.8**
H03N3	**Juan Fernandez**	**17.60**	**194**	T		T	20 07 40.0	
	baz=18,slow=74,SNR=2434							
AQDB	**Aquidauana**	**17.71**	**106**			**Pn**	**19 49 10.0**	**-1.4**
AQDB	**Aquidauana**	**17.71**	**106**	*eP*		**Pn**	**19 49 11.0**	**-0.5**
AQDB	**Aquidauana**	**17.71**	**106**	P		**Pn**	**19 49 11.0**	**-0.5**
CPUP	**Villa Florida**	**18.29**	**126**	P		**P**	**19 49 18.2**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=314,slow=13,SNR=14							
CPUP				LR		LR	19 57 44.4	
	comp=Z,1µm,18.3s,baz=296,slow=41							
	comp=Z,18nm,0.8s							
CPUP	**Villa Florida**	**18.29**	**126**	P		**P**	**19 49 18.1**	**-0.4**
CLDB	**Colider**	**18.39**	**75**	*eP*		**P**	**19 49 19.5**	**-0.2**
CLDB				*epP*		**pP**	**19 49 27.9**	**+0.3**
CLDB	**Colider**	**18.39**	**75**	P		**Pn**	**19 49 19.8**	**-0.1**
MACC	**Macarena, Meta**	**18.41**	**0**	P		**P**	**19 49 19.7**	**-0.2**
	comp=Z,1µmcomp=Z,84nm,0.9s							

MACA	**Manacapuru-AM**	**18.45**	**46**			**P**	**19 49 19.6**	**-0.8**
MACA				IAmb		IAmb	19 49 24.3	
	comp=Z,115nm,0.8s							
MACA	**Manacapuru-AM**	**18.45**	**46**	*eP*		**P**	**19 49 19.7**	**-0.7**
MACA				*eS*		**S**	**19 52 48.2**	**-1.4**
BO02	**Sierra Bellavi**	**18.54**	**172**	P		**Pn**	**19 49 25.3**	**+3.6**
BBAC	**Balboa, Cauca**	**18.59**	**349**	P		**Pn**	**19 49 23.0**	**+0.6**
	comp=Z,1µmcomp=Z,115nm,1.3s							
GO05	**Hualane**	**18.63**	**175**	P		**Pn**	**19 49 27.3**	**+4.6**
SJPY	**San Joaquin**	**18.68**	**120**	*eP*		**P**	**19 49 22.2**	**-0.7**
AMBA	**Amambai (Brazi**	**19.92**	**113**	*eP*		**P**	**19 49 24.8**	**-0.7**
POPC	**Popayan, Colom**	**19.00**	**351**	P		**Pn**	**19 49 28.0**	**+0.5**
	comp=Z,869nmcomp=Z,61nm,1.2s							
ML02	**Panimavida**	**19.43**	**174**	IAmb		IAmb	19 49 39.5	
	comp=Z,87nm,0.9s							
ML02	**Panimavida**	**19.43**	**174**	P		**Pn**	**19 49 34.6**	**+2.4**
PRAC	**Prado**	**19.99**	**357**	P		**Pn**	**19 49 38.6**	**-0.5**
	comp=Z,2µmcomp=Z,114nm,1.5s							
BI02	**San Fabin de**	**20.33**	**174**	P		Pn	19 49 43.6	+0.5
NPGB	**Novo Progresso**	**20.34**	**65**	*eP*		**P**	**19 49 40.7**	**-0.4**
NPGB				*epP*		**pP**	**19 49 49.9**	**+0.9**
PSAL	**Palomas, Salto**	**20.83**	**138**	*eP*		**P**	**19 49 45.7**	**-0.5**
CHIC	**Chinigaza**	**20.88**	**0**	P		Pn	19 49 48.8	-1.0
	comp=Z,1µmcomp=Z,108nm,1.2s							
TRCB	**Terra Rica**	**20.98**	**111**	P		**P**	**19 49 48.4**	**+0.3**
TRCB	**Terra Rica**	**20.98**	**111**	*eP*		**P**	**19 49 47.6**	**-0.4**
TRCB	**Terra Rica**	**20.98**	**111**	P		Pn	19 49 49.6	-1.1
ROSC	**El Rosal**	**21.09**	**359**	P		**P**	**19 49 51.0**	**+1.4**
	comp=Z,17nm,0.7s,baz=168,slow=5.2,SNR=7.5							
ROSC	**El Rosal**	**21.09**	**359**			**P**		
ROSC				IAmb		IAmb	19 50 02.0	
	comp=Z,61nm,0.9s							
ROSC	**El Rosal**	**21.09**	**359**	P		**P**	**19 49 52.1**	**+2.6**
	comp=Z,1µmcomp=Z,74nm,0.9s							
ARAG	**Araguaiana, MT**	**21.21**	**91**	*eP*		**P**	**19 49 50.0**	**-0.4**
ITTB	**Itaituba**	**21.43**	**58**	*eP*		**P**	**19 49 52.4**	**-0.4**
GUY2C	**Guyana, Caldas**	**21.52**	**356**	P		**P**	**19 49 55.6**	**+1.4**
	comp=Z,2µmcomp=Z,156nm,0.9s							
SPBC	**San Pablo de B**	**21.89**	**359**	P		**P**	**19 49 58.8**	**+1.0**
	comp=Z,1µmcomp=Z,79nm,1.5s							
PTGB	**Pitanga**	**22.01**	**116**	*eP*		**P**	**19 49 58.8**	**-0.3**
CBOC	**Ciudad Bolivar**	**22.20**	**354**	P		**P**	**19 50 01.4**	**+0.1**
	comp=Z,1µmcomp=Z,103nm,1.0s							
SNDB	**Serra Nova Dou**	**22.31**	**82**	*eP*		**P**	**19 50 01.4**	**-0.9**
LDASE	**Londrina, Braz**	**22.48**	**112**	*eP*		**P**	**19 50 03.2**	**-1.0**
ANCO	**Parque Anchore**	**22.84**	**144**	*eP*		**P**	**19 50 06.0**	**-1.6**
BOAV	**Boa Vista**	**22.84**	**36**				**19 50 06.8**	**-1.1**
BOAV				IAmb		IAmb	19 50 16.4	
	comp=Z,68nm,1.0s							
BOAV	**Boa Vista**	**22.84**	**36**	P		**P**	**19 50 07.2**	**-0.7**
	comp=Z,1µmcomp=Z,87nm,1.0s							
BOAV	**Boa Vista**	**22.84**	**36**	*eP*		**P**	**19 50 08.0**	**+0.1**
BOAV				*epP*		**pP**	**19 50 15.9**	**0.0**
ITAB	**Concordia**	**22.85**	**122**			**P**	**19 50 07.9**	**0.0**
ITAB	**Concordia**	**22.85**	**122**	*eP*		**P**	**19 50 07.5**	**-0.5**
ITAB	**Concordia**	**22.85**	**122**	P		**P**	**19 50 08.3**	**+0.4**
GO06	**Curarrehue**	**23.21**	**175**			**P**	**19 50 10.5**	**-1.1**
GO06	**Curarrehue**	**23.21**	**175**	P		**P**	**19 50 13.7**	**+2.1**
CPSB	**Cacapava Do Su**	**23.32**	**130**			**P**	**19 50 12.2**	**-0.5**
CPSB				IAmb		IAmb	19 50 37.3	
	comp=Z,44nm,0.9s							
CPSB	**Cacapava Do Su**	**23.32**	**130**	*eP*		**P**	**19 50 11.6**	**-1.1**
CPSB				*epP*		**pP**	**19 50 20.6**	**+0.1**
CPSB	**Cacapava Do Su**	**23.32**	**130**	P		**P**	**19 50 13.7**	**+1.1**
DBBC	**Dabeiba**	**23.36**	**354**	P		**P**	**19 50 14.4**	**+1.2**
	comp=Z,8µmcomp=Z,105nm,1.1s							
PAMC	**Pamplona, Colo**	**23.60**	**3**	P		**P**	**19 50 17.8**	**+1.9**
LR05	**Currie**	**23.82**	**176**			**P**	**19 50 16.9**	**-0.4**
UREC	**San Jos de Ur**	**24.03**	**356**	P		**P**	**19 50 21.4**	**+1.8**
	comp=Z,502nmcomp=Z,90nm,0.9s							
APAC	**Apartado, Choc**	**24.27**	**353**	P		**P**	**19 50 25.3**	**+3.5**
	comp=Z,100nm,1.3s							
BB19B	**Bebedouro**	**24.43**	**105**	*eP*		**P**	**19 50 22.7**	**-0.6**
IPMB	**Ipameri, GO**	**24.56**	**97**	*eP*		**P**	**19 50 23.5**	**-0.9**
CNLB	**Canela**	**24.75**	**125**	*eP*		**P**	**19 50 25.0**	**-1.1**
CNLB	**Canela**	**24.75**	**125**	P		**P**	**19 50 27.0**	**+0.9**
BDFB	**Brasilia**	**24.86**	**92**	P		**P**	**19 50 27.6**	**+0.4**
	comp=Z,40nm,0.9s,baz=

HHAR	**Hobbs**	**55.71**	**340**	IAmb	IAmb	19 55 40.5		
	comp=Z,13nm,1.0s							
POST	**Post**	**55.81**	**332**	IAmb	IAmb	19 54 51.0		
	comp=Z,15nm,1.1s							
S39A	**Bolivar**	**56.81**	**342**	IAmb	IAmb	19 55 26.1		
	comp=Z,12nm,1.0s							
R40A	**Maddies Statio**	**57.06**	**343**	IAmb	IAmb	19 54 59.2		
	comp=Z,14nm,1.2s							
BINY	**Binghamton**	**58.32**	**358**	IAmb	IAmb	19 55 57.5		
	comp=Z,15nm,1.0s							
121A	**Cookes Peak, D**	**58.48**	**326**	IAmb	IAmb	19 55 02.2		
	comp=Z,12nm,0.9s							
ANMO	**Albuquerque**	**59.70**	**329**	P	**P**	**19 55 08.6**	**-0.4**	
ANMO	**Albuquerque**	**59.70**	**329**	P	**P**	**19 55 09.4**	**+0.3**	
TUC	**Tucson**	**59.95**	**324**	P	**P**	**19 55 09.8**	**-0.9**	
T25A	**Trinidad**	**60.52**	**332**	P	**P**	**19 55 14.5**	**-0.2**	
T25A				IAmb	IAmb	19 55 23.1		
	comp=Z,10.0nm,1.1s							
X18A	**Snowflake**	**61.16**	**326**	IAmb	IAmb	19 55 20.7		
	comp=Z,11nm,1.3s							
G62A	**West of Eustis**	**61.38**	**3**	P	**P**	**19 55 21.2**	**+1.1**	
G62A				IAmb	IAmb	19 56 09.6		
	comp=Z,11nm,0.9s							
SDCO	**Great Sand Dun**	**61.51**	**332**	P	**P**	**19 55 21.0**	**-0.5**	
SDCO				IAmb	IAmb	19 55 29.9		
	comp=Z,15nm,1.2s							
G65A	**Princeton**	**61.55**	**5**	P	**P**	**19 55 21.6**	**+0.4**	
G65A				IAmb	IAmb	19 55 43.1		
	comp=Z,11nm,0.9s							
X16A	**Lo Mia Camp, P**	**61.88**	**325**	IAmb	IAmb	19 55 25.7		
	comp=Z,13nm,1.1s							
Y14A	**Wickenburg**	**62.40**	**324**	IAmb	IAmb	19 55 28.9		
	comp=Z,8.6nm,0.9s							
WUAZ	**Wupatki**	**62.67**	**326**	IAmb	IAmb	19 56 09.0		
	comp=Z,11nm,0.9s							
ECSD	**EROS Data Cent**	**63.34**	**342**	IAmb	IAmb	19 56 10.8		
	comp=Z,11nm,0.9s							
PV15	**Paradox Valley**	**63.38**	**330**	IAmb	IAmb	19 56 22.2		
	comp=Z,13nm,1.0s							
PV02	**Paradox Valley**	**63.40**	**330**	IAmb	IAmb	19 55 42.7		
	comp=Z,25nm,1.5s							
PV13	**Radium Mtn., P**	**63.40**	**330**	IAmb	IAmb	19 56 26.8		
	comp=Z,10nm,1.3s							
PV18	**Skein Mesa, Pa**	**63.51**	**330**	IAmb	IAmb	19 55 50.6		
	comp=Z,26nm,1.6s							
PV12	**Saucer Basin,**	**63.52**	**330**	IAmb	IAmb	19 56 17.4		
	comp=Z,27nm,1.5s							
BATG	**Bathurst New B**	**63.75**	**6**	P	**P**	**19 55 36.1**	**+0.3**	
BATG				IAmb	IAmb	19 55 39.0		
	comp=Z,13nm,1.1s							
IRM	**Iron Mountain**	**63.80**	**322**	IAmb	IAmb	19 55 38.4		
	comp=Z,8.2nm,1.0s							
U15A	**North Rim**	**63.84**	**326**	IAmb	IAmb	19 55 48.3		
	comp=Z,11nm,1.4s							
BORC	**Borrego Spring**	**63.93**	**321**	IAmb	IAmb	19 55 39.4		
	comp=Z,13nm,1.1s							
PMD	**Palm Desert**	**64.17**	**321**	IAmb	IAmb	19 55 48.1		
	comp=Z,18nm,1.3s							
HMU	**Henry Mountain**	**64.18**	**328**	IAmb	IAmb	19 56 18.4		
	comp=Z,11nm,1.2s							
BELC	**Belle Mtn. Jos**	**64.19**	**322**	IAmb	IAmb	19 55 41.3		
	comp=Z,16nm,1.5s							
PFO	**Pinyon Flats O**	**64.19**	**321**	P	**P**	**19 55 39.4**	**+0.2**	
PFO				IAmb	IAmb	19 55 41.3		
	comp=Z,10nm,0.9s							
BELA	**Belgrano 2**	**64.46**	**171**	P	**P**	**19 55 41.0**	**+0.8**	
BELA				IAmb	IAmb	19 55 43.2		
	comp=Z,20nm,1.1s							
KNB	**Kanab**	**64.57**	**326**	IAmb	IAmb	19 55 43.8		
	comp=Z,12nm,0.9s							
SRU	**San Rafael Swe**	**64.97**	**329**	IAmb	IAmb	19 55 45.5		
	comp=Z,11nm,1.3s							
MTPU	**Mount Pierson**	**65.00**	**327**	IAmb	IAmb	19 57 34.3		
	comp=Z,17nm,1.8s							
F33A	**5 Mile Ranch,**	**65.17**	**343**	IAmb	IAmb	19 55 44.8		
	comp=Z,10nm,0.9s							
P18A	**Preston Nutter**	**65.24**	**330**	IAmb	IAmb	19 55 55.0		
	comp=Z,13nm,1.4s							
P17A	**Butcher Ranch,**	**65.36**	**329**	IAmb	IAmb	19 55 48.0		
	comp=Z,8.3nm,0.9s							
BSUT	**Blindstream Ca**	**66.19**	**330**	IAmb	IAmb	19 56 01.4		
	comp=Z,10.0nm,1.2s							
TPNV	**Topopah Spring**	**66.41**	**324**	IAmb	IAmb	19 56 06.7		
	comp=Z,9.0nm,1.0s							
WCT	**Wildcat Mounta**	**66.51**	**324**	IAmb	IAmb	19 55 56.4		
	comp=Z,8.2nm,0.8s							
VNA1	**Neumayer--Stat**	**66.65**	**161**	⇑P	**P**	**19 55 56.4**	**+2.0**	
	comp=Z,27nm,0.9s							
DUG	**Dugway, Tooele**	**66.94**	**328**	IAmb	IAmb	19 55 58.7		
	comp=Z,9.8nm,0.9s							
VNA2	**Neumayer--Watz**	**67.00**	**161**	⇑P	**P**	**19 55 58.1**	**+1.4**	
	comp=Z,16nm,0.6s,baz=289,slow=6.9							
AGMN	**Agassiz Nation**	**67.31**	**344**	IAmb	IAmb	19 56 36.6		
	comp=Z,19nm,1.1s							
PDAR	**Pinedale Array**	**67.39**	**332**	P	**P**	**19 55 59.0**	**-0.8**	
	comp=Z,0.7nm,0.7s,baz=141,slow=7.3,SNR=6.4							
PDAR	**Pinedale Array**	**67.39**	**332**	P	**P**	**19 55 58.9**	**-0.9**	
HWUT	**Hardware Ranch**	**67.41**	**330**	IAmb	IAmb	19 56 08.2		
	comp=Z,8.1nm,1.1s							
DSP	**Deep Springs**	**67.68**	**323**	IAmb	IAmb	19 56 11.0		
	comp=Z,13nm,1.4s							
EPLO	**Experimental L**	**68.07**	**346**	IAmb	IAmb	19 56 03.7		
	comp=Z,17nm,1.1s							
NVAR	**Mina Array Bea**	**68.60**	**324**	P	**P**	**19 56 05.8**	**-1.6**	
	comp=Z,2.5nm,0.9s,baz=146,slow=7.4,SNR=9.9							
	comp=Z,2.5nm,0.9s							
NVAR	**Mina Array Bea**	**68.60**	**324**	P	**P**	**19 56 07.9**	**+0.4**	
SNAA	**Sanae**	**68.62**	**161**	⇑P	**P**	**19 56 08.4**	**+1.5**	
	comp=Z,539nm,0.6s							
SNAA	**Sanae**	**68.62**	**161**	P	**P**	**19 56 07.7**	**+0.7**	
	comp=Z,24nm,0.6s,baz=278,slow=6.0,SNR=76							
	comp=Z,24nm,0.6s							
FLWY	**Flagg Ranch**	**68.94**	**332**	IAmb	IAmb	19 58 41.8		
	comp=Z,15nm,1.0s							
ULM	**Lac du Bonnet**	**69.12**	**345**	P	**P**	**19 56 08.6**	**-1.5**	
	comp=Z,5.4nm,0.8s,baz=133,slow=6.5,SNR=9.0							
	comp=Z,5.4nm,0.8s							
ULM	**Lac du Bonnet**	**69.12**	**345**	IAmb	IAmb	19 56 46.6		
	comp=Z,8.3nm,0.8s							
PNTR	**Pine Nut**	**69.79**	**324**	IAmb	IAmb	19 56 17.1		
	comp=Z,10.0nm,0.8s							
PAHR	**Pah Rah Range**	**70.09**	**324**	IAmb	IAmb	19 56 18.8		
	comp=Z,14nm,0.9s							
AFDM	**Forest Hills D**	**70.49**	**323**	IAmb	IAmb	19 56 27.9		
	comp=Z,15nm,1.6s							
MFID	**Camas Ranch**	**70.84**	**329**	IAmb	IAmb	19 56 30.4		
	comp=Z,20nm,1.3s							
SCHQ	**Schefferville**	**71.18**	**4**	P	**P**	**19 56 21.9**	**-0.8**	
	comp=Z,7.9nm,0.9s,baz=201,slow=7.2,SNR=7.5							
	comp=Z,7.9nm,0.9s							
ORV	**Oroville**	**71.20**	**323**	IAmb	IAmb	19 56 25.4		
	comp=Z,17nm,0.9s							
DBIC	**Dimbokro**	**71.99**	**77**	P	**P**	**19 56 28.7**	**+0.2**	
	comp=Z,42nm,0.7s,baz=253,slow=6.3,SNR=43							
	comp=Z,42nm,0.7s							
DBIC	**Dimbokro**	**71.99**	**77**	P	**P**	**19 56 28.9**	**+0.4**	
KHBM	**Hayfork Bally**	**72.92**	**323**	IAmb	IAmb	19 56 35.6		
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**73.78**	**180**	P	**P**	**19 56 39.4**	**+1.1**	
	comp=Z,20nm,0.8s,baz=149,slow=1.7,SNR=98							
	comp=Z,20nm,0.8s							
QSPA	**South Pole Qui**	**73.78**	**180**	P	**P**	**19 56 39.8**	**+1.4**	
QSPA	**South Pole Qui**	**73.78**	**180**	P	**P**	**19 56 40.4**	**+2.0**	
WIFE	**Three Sisters-**	**74.38**	**326**	IAmb	IAmb	19 56 53.4		
	comp=Z,16nm,1.3s							
ACRG	**Accra**	**76.03**	**80**	P	**P**	**19 56 51.3**	**-0.8**	
SBA	**Scott Base**	**79.97**	**191**	P	**P**	**19 57 15.0**	**+2.1**	
SBA	**Scott Base**	**79.97**	**191**	P	**P**	**19 57 15.4**	**+2.6**	
TORD	**Torodi Ar. Bea**	**80.22**	**73**	P	**P**	**19 57 15.4**	**+0.1**	
	comp=Z,47nm,0.7s,baz=256,slow=5.0,SNR=204							
	comp=Z,47nm,0.7s							
TORD	**Torodi Ar. Bea**	**80.22**	**73**	P	**P**	**19 57 14.7**	**-0.6**	
VNDA	**Vanda**	**81.03**	**190**	P	**P**	**19 57 20.2**	**+1.7**	
	comp=Z,4.1nm,0.7s,baz=60,slow=1.5,SNR=38							
	comp=Z,4.1nm,0.7s							
VNDA	**Vanda**	**81.03**	**190**	P	**P**	**19 57 20.9**	**+2.4**	
MORF	**Marmelete**	**81.27**	**47**	*e*P	**P**	**19 57 22.1**	**+1.6**	
MORF				IAmb	IAmb	19 57 23.4		
	comp=Z,24nm,1.1s							
PTEO	**Sao Teotonio**	**81.33**	**47**	*e*P	**P**	**19 57 20.6**	**-0.2**	
PBDV	**Barranco-do-Ve**	**81.75**	**47**	*e*P	**P**	**19 57 25.4**	**+2.4**	
PLOUS	**Minas do Lousa**	**81.78**	**47**	*e*P	**P**	**19 57 25.1**	**+2.1**	
MESJ	**Messejana**	**81.83**	**47**	*e*P	**P**	**19 57 25.1**	**+1.7**	
MESJ	**Messejana**	**81.83**	**47**	*e*P	**P**	**19 57 25.4**	**+2.1**	
PCVE	**Castro Verde**	**81.86**	**47**	*e*P	**P**	**19 57 25.7**	**+2.2**	
PCVE				*e*pP	**pP**	**19 57 34.5**	**+1.6**	
PVAQ	**Vaqueiros**	**81.98**	**47**	*e*P	**P**	**19 57 26.3**	**+2.2**	

MD01	**Midelt array s**	**82.14**	**53**	P	**P**	**19 57 25.8**	**+0.5**	
MD31	**MD31**	**82.14**	**53**	P	**P**	**19 57 26.2**	**+0.9**	
MD31				IAmb	IAmb	19 57 28.2		
	comp=Z,12nm,1.4s							
PBEJ	**Beja**	**82.16**	**47**	*e*P	**P**	**19 57 27.3**	**+2.1**	
EVO	**Evora**	**82.29**	**46**	*e*P	**P**	**19 57 27.7**	**+1.9**	
PMTG	**Montargil**	**82.40**	**46**	*e*P	**P**	**19 57 27.9**	**+1.6**	
PARRA	**Arraiolos**	**82.41**	**46**	*e*P	**P**	**19 57 27.6**	**+1.2**	
PSARD	**Sardoal**	**82.69**	**45**	*e*P	**P**	**19 57 29.2**	**+1.3**	
PESTR	**Estremoz**	**82.74**	**46**	*e*P	**P**	**19 57 30.6**	**+2.4**	
PBAR	**Barrancos**	**82.81**	**47**	*e*P	**P**	**19 57 30.2**	**+1.8**	
PBAR				*e*pP	**sP**	**19 57 40.6**	**-0.6**	
PTO	**Porto**	**83.12**	**44**	*e*P	**P**	**19 57 31.9**	**+1.9**	
PTO				*i* IAmb	IAmb	19 57 33.2		
	comp=Z,53nm,1.5s							
PMRV	**Marv??o**	**83.14**	**46**	*e*P	**P**	**19 57 30.6**	**+0.3**	
PMRV				*i* IAmb	IAmb	19 57 32.3		
	comp=Z,25nm,1.5s							
PCBR	**Castelo Branco**	**83.27**	**45**	*e*P	**P**	**19 57 32.1**	**+1.3**	
PVIS	**Viseu**	**83.40**	**44**	*e*P	**P**	**19 57 32.9**	**+1.3**	
MTE	**Manteigas**	**83.48**	**45**	*e*P	**P**	**19 57 32.8**	**+0.8**	
POLO	**Lamas de Olo**	**83.77**	**44**	*e*P	**P**	**19 57 34.9**	**+1.3**	
PCAB	**Cabril**	**83.78**	**43**	*e*P	**P**	**19 57 34.8**	**+1.4**	
PVRL	**Vila Real**	**83.78**	**44**	*e*P	**P**	**19 57 35.0**	**+1.5**	
PVRL				*i* IAmb	IAmb	19 57 35.3		
	comp=Z,26nm,1.0s							
PBRG	**Braganca**	**84.67**	**44**	*e*P	**P**	**19 57 39.5**	**+1.4**	
PBRG				*i* IAmb	IAmb	19 57 40.4		
	comp=Z,27nm,1.6s							
WIN	**Windhoek**	**84.72**	**112**	P	**P**	**19 57 40.4**	**+1.4**	
WIN				IAmb	IAmb	19 57 41.7		
	comp=Z,17nm,1.1s							
YKA	**Yellowknife Ar**	**84.87**	**342**	P	**P**	**19 57 38.0**	**-0.4**	
	comp=Z,13nm,0.8s,baz=140,slow=5.4,SNR=57							
	comp=Z,13nm,0.8s							
YKA	**Yellowknife Ar**	**84.87**	**342**	P	**P**	**19 57 37.3**	**-1.1**	
YKAW3	**Yellowknife Wh**	**84.92**	**342**	IAmb	IAmb	19 57 39.4		
	comp=Z,10nm,0.8s							
PAB	**San Pablo**	**85.30**	**47**	P	**P**	**19 57 42.3**	**+1.0**	
ESDC	**Sonseca Array**	**85.62**	**47**	P	**P**	**19 57 44.0**	**+1.1**	
	comp=Z,6.4nm,1.0s,baz=252,slow=5.5,SNR=32							
	comp=Z,6.4nm,1.0s							
ESDC	**Sonseca Array**	**85.62**	**47**	P	**P**	**19 57 43.4**	**+0.5**	
TSUM	**Tsumeb**	**86.06**	**109**	P	**P**	**19 57 45.9**	**+0.2**	
TSUM				IAmb	IAmb	19 57 48.7		
	comp=Z,8.1nm,0.8s							
TSUM	**Tsumeb**	**86.06**	**109**	P	**P**	**19 57 47.1**	**+1.4**	
ILULI	**Ilulissat**	**86.89**	**8**	*i* P	**P**	**19 57 48.7**	**+0.4**	
ILULI				IAmb	IAmb	19 57 48.8		
	comp=Z,22nm,0.9s							
KOOLE	**Kule**	**87.35**	**113**	P	**P**	**19 57 52.5**	**+0.6**	
SAQQ	**Saqqaq**	**87.53**	**7**	*i* P	**P**	**19 57 51.8**	**+0.4**	
SAQQ				IAmb	IAmb	19 57 52.0		
	comp=Z,22nm,0.9s							
CCD	**Concordia, Ant**	**88.08**	**184**	P	**P**	**19 57 56.6**	**+1.9**	
SAATT	**Saattut**	**88.32**	**7**	*i* P	**P**	**19 57 55.5**	**+0.4**	
SOEG	**Soedalen**	**89.75**	**15**	*e*P	**P**	**19 58 06.5**	**+4.7**	
SOEG				IAmb	IAmb	19 58 10.7		
	comp=Z,10nm,0.6s							
BOSA	**Boshof**	**90.02**	**120**	P	**P**	**19 58 04.7**	**+0.3**	
	comp=Z,5.3nm,0.9s,baz=259,slow=4.9,SNR=6.7							
	comp=Z,5.3nm,0.9s							
MAW	**Mawson**	**90.52**	**165**	P	**P**	**19 58 07.6**	**+1.9**	
	comp=Z,3.3nm,2.2s							
MAW	**Mawson**	**90.52**	**165**	P	**P**	**19 58 06.8**	**+1.1**	
	comp=Z,6.1nm,0.8s,baz=193,slow=5.7,SNR=15							
	comp=Z,6.1nm,0.8s							
MAW	**Mawson**	**90.52**	**165**	IAmb	IAmb	19 58 08.4		
	comp=Z,9.0nm,1.8s							
MMPY	**Sheldon Lake,**	**90.54**	**337**	IAmb	IAmb	19 58 07.5		
	comp=Z,4.9nm,0.8s							
SUMG	**Summit**	**91.81**	**10**	*i* P	**P**	**19 58 12.8**	**+0.9**	
SUMG				IAmb	IAmb	19 58 13.7		
	comp=Z,38nm,0.8s							
M29M	**Somme Creek**	**93.25**	**335**	IAmb	IAmb	19 58 19.8		
	comp=Z,6.5nm,0.9s							
J30M	**Hart River**	**93.51**	**337**	IAmb	IAmb	19 58 20.9		
	comp=Z,3.9nm,0.8s							
K29M	**Barlow Dome**	**93.58**	**337**	IAmb	IAmb	19 58 20.8		
	comp=Z,5.1nm,0.9s							
I30M	**Mount Dempster**	**93.87**	**338**	IAmb	IAmb	19 58 22.4		
	comp=Z,5.3nm,0.8s							
NEEM	**North Greenlan**	**94.58**	**5**	*i* P	**P**	**19 58 24.6**	**+0.1**	
NEEM				IAmb	IAmb	19 58 27.9		
	comp=Z,6.8nm,0.9s							
INK	**Inuvik**	**94.58**	**341**	IAmb	IAmb	19 58 24.9		
	comp=Z,6.7nm,1.0s							
BCAR	**Beaver Creek A**	**94.89**	**335**	P	**P**	**19 58 24.8**	**-1.1**	
H29M	**Whitestone**	**95.08**	**338**	IAmb	IAmb	19 58 27.2		
	comp=Z,4.7nm,0.8s							
I28M	**Miner Creek**	**95.28**	**337**	IAmb	IAmb	19 59 20.4		
	comp=Z,11nm,1.6s							
G29M	**Pine Creek**	**95.31**	**339**	IAmb	IAmb	19 58 28.0		
	comp=Z,4.7nm,0.8s							
E29M	**Blow River**	**96.00**	**340**	IAmb	IAmb	19 58 31.1		
	comp=Z,6.2nm,0.8s							
J25K	**Salcha River,**	**96.98**	**336**	IAmb	IAmb	20 02 13.5		
	comp=Z,8.6nm,1.6s							
ILAR	**Eielson Array**	**97.65**	**336**	P	**P**	**19 58 37.0**	**-1.4**	
	comp=Z,0.5nm,0.8s,baz=112,slow=5.9,SNR=5.2							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**97.65**	**336**	P	**P**	**19 58 36.9**	**-1.5**	
G24K	**Hadweenzic Riv**	**98.59**	**337**	IAmb	IAmb	19 58 44.0		
	comp=Z,3.1nm,1.1s							
SKT	**Skwentna**	**98.64**	**332**	IAmb	IAmb	19 58 45.5		
	comp=Z,3.7nm,0.8s							
CAST	**Castle Rocks**	**99.33**	**333**	IAmb	IAmb	19 58 46.6		
	comp=Z,2.8nm,0.8s							
GERES	**GERESS Array B**	**100.57**	**42**	P	**Pdif**	**19 58 52.2**	**+0.3**	
	comp=Z,0.6nm,0.7s,baz=240,slow=4.5,SNR=6.3							
GERES	**GERESS Array B**	**100.57**	**42**		**Pdif**	**19 58 51.6**	**-0.3**	
CLL	**Collm**	**100.68**	**40**	*e*Pdif	**Pdif**	**19 58 53.0**	**+0.9**	
CLL				*e*PP	**PP**	**20 03 00.0**	**+0.1**	
KBZ	**Khabaz**	**120.43**	**49**	PKP	**PKPdf**	**20 03 55.2**	**-0.3**	
	comp=Z,3.5nm,0.8s,baz=331,slow=1.8,SNR=7.9							
STKA	**Stephens Creek**	**121.19**	**215**	PKP	**PKPdf**	**20 03 57.0**	**-0.6**	
	comp=Z,1.9nm,0.7s,baz=108,slow=3.2,SNR=4.2							
H11N3	**WAKE ISLAND Hyd**	**122.38**	**283**	T	T	22 18 06.8		
	baz=98,slow=74,SNR=35							
H11N2	**WAKE ISLAND Hyd**	**122.39**	**283**	T	T	22 18 07.9		
	baz=98,slow=74,SNR=29							
H11N1	**WAKE ISLAND Hyd**	**122.40**	**283**	T	T	22 17 53.5		
	baz=98,slow=74,SNR=24							
H11S2	**WAKE ISLAND Hyd**	**122.41**	**282**	T	T	22 18 08.2		
	baz=98,slow=75,SNR=165							
H11S1	**WAKE ISLAND Hyd**	**122.42**	**282**	T	T	22 17 57.1		
	baz=98,slow=75,SNR=40							
H11S3	**WAKE ISLAND Hyd**	**122.43**	**282**	T	T	22 17 57.9		
	baz=98,slow=75,SNR=53							
TIXI	**Tiksi**	**123.11**	**352**		**PKPdf**	**20 03 59.9**	**0.0**	
PETK	**Petropavlovsk-**	**125.69**	**324**	PKP	**PKiKP**	**20 04 06.2**	**+0.4**	
	comp=Z,1.8nm,0.7s,baz=24,slow=3.1,SNR=7.4							
PETK	**Petropavlovsk-**	**125.69**	**324**		**PKiKP**	**20 04 06.0**	**+0.1**	
ARTI	**Arti**	**126.29**	**31**		**PKiKP**	**20 04 06.9**	**0.0**	
ABKAR	**Akbulak array**	**130.32**	**38**		**PKiKP**	**20 04 15.2**	**0.0**	
QIS	**Mount Isa**	**130.73**	**223**	P	**PKiKP**	**20 04 17.2**	**+0.2**	
AS09	**Alice Springs**	**131.78**	**215**	P	**PKiKP**	**20 04 18.9**	**-0.2**	
ASAR	**Alice Springs**	**131.83**	**215**	PKP	**PKPdf**	**20 04 17.8**	**-0.4**	
	comp=Z,2.6nm,0.8s,baz=145,slow=2.4,SNR=21							
ASAR				SKPbc	**SKPab**	**20 07 42.6**	**-0.1**	
	comp=Z,1.1nm,1.0s,baz=141,slow=3.1,SNR=5.0							
ASAR	**Alice Springs**	**131.83**	**215**		**PKPdf**	**20 04 17.5**	**-0.6**	
AS15	**Alice Springs**	**131.85**	**215**	P	**PKiKP**	**20 04 19.0**	**-0.2**	
BORK	**Borovoye**	**133.90**	**29**		**PKiKP**	**20 04 22.1**	**-0.3**	
BVAR	**Borovoye Array**	**133.94**	**29**	PKhKP	PKPpre	20 04 13.6		
	comp=Z,0.5nm,0.7s,baz=5.2,slow=1.6,SNR=3.7							
BVAR				PKP	**PKiKP**	**20 04 22.2**	**-0.2**	
	comp=Z,1.6nm,0.7s,baz=256,slow=2.4,SNR=8.7							
WRA	**Warramunga Arr**	**134.49**	**219**	PKP	**PKiKP**	**20 04 23.9**	**-0.7**	
	comp=Z,5.2nm,0.7s,baz=136,slow=1.9,SNR=34							
WRA	**Warramunga Arr**	**134.49**	**219**		**PKPdf**	**20 04 23.7**	**+0.5**	
WB0	**Warramunga Arr**	**134.59**	**219**		**PKPdf**	**20 04 23.0**	**-0.4**	
ZALV	**Zalesovo Beam**	**139.00**	**19**	PKP	**PKiKP**	**20 04 31.8**	**-0.9**	
	comp=Z,12nm,0.9s,baz=304,slow=2.7,SNR=34							
ZALV	**Zalesovo Beam**	**139.00**	**19**		**PKPdf**	**20 04 30.0**	**-0.4**	
KURK	**Kurchatov**	**139.25**	**27**		**PKPdf**	**20 04 29.6**	**-1.4**	
KURBB	**Kurchatov Arra**	**139.28**	**27**	PKhKP	PKPpre	20 04 22.9		
	comp=Z,0.8nm,0.8s,baz=307,slow=2.4,SNR=10							
KURBB				PKP	**PKPdf**	**20 04 31.7**	**+0.7**	
	comp=Z,1.9nm,1.0s,baz=318,slow=2.2,SNR=4.4							
HEH	**HeiHe**	**142.10**	**338**	*e*PKP	**PKPdf**	**20 04 30.8**	**-5.4**	
MKAR	**Makanchi Array**	**143.79**	**28**	PKP	PKPbc	20 04 37.4	+0.4	
	comp=Z,4.9nm,0.7s,baz=329,slow=3.5,SNR=53							
MKAR	**Makanchi Array**	**143.79**	**28**		PKPbc	20 04 36.7	-0.2	
USRK	**Ussuriysk Ar.**	**144.69**	**327**	PKP	PKPbc	20 04 40.2	+0.5	
	comp=Z,12nm,0.8s,baz=58,slow=1.4,SNR=20							
USRK	**Ussuriysk Ar.**	**144.69**	**327**		**PKPab**	**20 04 39.5**	**-0.1**	
KSH2	**Kashi**	**144.98**	**44**	PKPbc	**PKPdf**	**20 04 43.0**	**+1.2**	
HILR	**Hailar Array B**	**145.11**	**344**	PKP	**PKPab**	**20 04 41.2**	**+0.1**	
	comp=Z,30nm,0.7s,baz=49,slow=2.9,SNR=33							
MJAR	**Matsushiro Arr**	**145.21**	**311**	PKPbc	**PKPbc**	**20 04 41.5**	**-0.2**	
	comp=Z,11nm,0.7s,baz=112,slow=2.8,SNR=55							
MJAR	**Matsushiro Arr**	**145.21**	**311**		**PKPbc**	**20 04 40.6**	**-1.1**	
MDJ	**Mudanjiang**	**145.60**	**330**	PKPbc	**PKPdf**	**20 04 42.4**	**-0.1**	
BNX	**BinXian**	**145.74**	**333**	PKPbc	**PKPbc**	**20 04 43.0**	**-0.1**	
WMQ	**Urumqi**	**148.49**	**26**	*e*PKPbc	**PKPbc**	**20 04 49.3**	**-1.7**	
WMQ				PKPab	**PKPab**	**20 04 54.8**	**+0.4**	
WMQ				sPKP	sPKPbc	20 05 02.0	-1.4	
SONM	**Songino Array**	**148.63**	**360**	PKPbc	**PKiKP**	**20 04 52.2**	**-0.6**	
	comp=Z,25nm,0.7s,baz=332,slow=1.5,SNR=75							
XLT	**XiLinHaoTe**	**151.30**	**345**	*e*PKPbc	**PKiKP**	**20 04 58.3**	**-0.1**	
XLT				pPKP	sPKPbc	20 05 08.9	-1.5	
KSRS	**Korea Array**	**151.53**	**322**	PKP	**PKPdf**	**20 04 53.8**	**+1.4**	
	comp=Z,2.5nm,0.9s,baz=47,slow=0.7,SNR=14							
KSRS				PKPbc	**PKiKP**	**20 04 59.6**	**+0.7**	
	comp=Z,16nm,0.8s,baz=352,slow=1.8,SNR=58							
JNU	**Nakatsue**	**152.13**	**311**	PKPbc	**PKiKP**	**20 05 00.2**	**-0.2**	
	comp=Z,18nm,0.9s,baz=70,slow=6.1,SNR=15							
BJI2	**Beijing**	**154.88**	**342**	PKPbc	**PKPdf**	**20 04 56.0**	**-1.1**	
HHC	**Hu-ho-hao-te**	**155.17**	**350**	*e*PKPbc	**PKPdf**	**20 04 56.8**	**-0.8**	
GTA2	**Gaotai**	**156.31**	**12**	*e*PKP	**PKPdf**	**20 04 59.9**	**+0.7**	
GTA2				pPKP	pPKPdf	20 05 09.6	+1.0	
GTA2				PKPab	**PKPab**	**20 05 27.1**	**-0.2**	
GTA2				PKS	**PKSdf**	**20 08 29.0**	**-4.3**	
NJ2	**Nanjing**	**160.59**	**326**	*e*PKP	**PKPdf**	**20 05 04.8**	**+0.4**	
XAN	**Xi'an**	**162.24**	**352**	PKP	**PKPdf**	**20 05 06.9**	**+0.7**	
PZH	**PanZhiHua**	**169.13**	**21**	PKP	**PKPdf**	**20 05 10.3**	**-1.8**	
KMI2	**Kunming**	**170.72**	**19**	PKP	**PKPdf**	**20 05 11.3**	**-1.9**	
CMAR	**Chiang Mai Arr**	**172.83**	**72**	PKP	**PKPdf**	**20 05 14.9**	**+0.9**	
	comp=Z,0.8nm,0.5s,baz=322,slow=1.4,SNR=9.9							
CMAR				PKPab	**PKPab**	**20 06 41.4**	**+0.9**	
	comp=Z,3.1n

H19K	**Roundabout Mou**	**58.33**	**28**	P	**P**	**20 08 10.2**	**+0.4**
H19K				IAmb	IAmb	20 08 29.4	
	comp=Z,4.2nm,1.3s						
D20K	**Etivluk River**	**58.38**	**24**	P	**P**	**20 08 10.5**	**+0.4**
D20K				IAmb	IAmb	20 08 40.1	
	comp=Z,2.7nm,1.2s						
J19K	**Poorman**	**58.69**	**30**	P	**P**	**20 08 12.9**	**+0.7**
J19K				IAmb	IAmb	20 08 14.0	
	comp=Z,1.6nm,0.6s						
J20K	**Nowinta River**	**59.33**	**30**	P	**P**	**20 08 18.1**	**+1.4**
J20K				IAmb	IAmb	20 08 50.1	
	comp=Z,4.2nm,1.4s						
K20K	**Telida**	**59.39**	**31**	P	**P**	**20 08 18.6**	**+1.4**
K20K				IAmb	IAmb	20 08 51.4	
	comp=Z,4.4nm,1.3s						
G21K	**Allakaket**	**59.54**	**27**	P	**P**	**20 08 19.2**	**+1.2**
G21K				IAmb	IAmb	20 08 19.9	
	comp=Z,2.2nm,1.0s						
PPLA	**Purkeypile**	**60.27**	**31**	P	**P**	**20 08 23.9**	**+0.6**
H22K	**Ishtalitna Cre**	**60.42**	**28**	P	**P**	**20 08 25.6**	**+1.4**
H22K				IAmb	IAmb	20 08 26.6	
	comp=Z,1.7nm,0.8s						
MLY	**Manley**	**60.75**	**29**	P	**P**	**20 08 27.0**	**+0.5**
MLY				IAmb	IAmb	20 08 28.4	
	comp=Z,1.5nm,0.7s						
L22K	**Petersville**	**60.96**	**32**	P	**P**	**20 08 29.0**	**+1.0**
E24K	**Your Creek**	**61.40**	**25**	P	**P**	**20 08 32.0**	**+1.2**
E24K				IAmb	IAmb	20 08 32.7	
	comp=Z,1.4nm,0.6s						
RND	**Reindeer**	**61.73**	**30**	P	**P**	**20 08 33.7**	**+0.6**
CCB	**Clear Creek Bu**	**62.03**	**29**	P	**P**	**20 08 35.5**	**+0.5**
ILAR	**Eielson Array**	**62.41**	**29**	P	**P**	**20 08 38.1**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=291,slow=9.0,SNR=8.4						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**62.41**	**29**	P	**P**	**20 08 37.8**	**+0.3**
DHY	**Denali Highway**	**62.44**	**31**	P	**P**	**20 08 38.1**	**+0.1**
DHY				IAmb	IAmb	20 09 05.2	
	comp=Z,3.1nm,1.4s						
F26K	**Sheenjek River**	**63.08**	**25**	IAmb	IAmb	20 08 44.5	
	comp=Z,2.5nm,0.8s						
SCRK	**Sand Creek**	**63.78**	**29**	P	**P**	**20 08 47.3**	**+0.5**
I27K	**Kandik River**	**64.45**	**27**	IAmb	IAmb	20 08 53.5	
	comp=Z,3.1nm,1.0s						
BERG	**Berg Lake**	**64.65**	**33**	P	**P**	**20 08 53.8**	**+1.4**
EPYK	**Eagle Plains**	**66.21**	**26**	P	**P**	**20 09 03.0**	**+0.7**
EPYK				IAmb	IAmb	20 09 42.3	
	comp=Z,6.7nm,1.4s						
FINES	**FINESS Array B**	**71.36**	**330**	P	**P**	**20 09 33.9**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=73,slow=6.4,SNR=4.2						
	comp=Z,2.5nm,0.9s						
YKA	**Yellowknife Ar**	**76.47**	**25**	P	**P**	**20 10 04.3**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=304,slow=6.3,SNR=5.3						
	comp=Z,0.6nm,0.5s						

BGR ***22*** *20:07:14.8,31˙89N×87˙73E,h33km,mb5.9,mB_BB6.7, Ms6.2*

BJI ***22*** *20:07:18.6,33˙19N×86˙81E,h10km,mB6.6/73,mb5.8/73, Ms6.6/86,Ms7 6.6/88*

NEIC ***22*** *20:07:19.2±1.8,33˙14N±0˙05×86˙86E±0˙07,h10km±1km, mb6.2/568,Ms_20 6.3/642,Mwb6.1/309,Mww6.3/19,Error ellipse: s-maj=12.8km s-min=2.8km az=230.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.64; Mθθ-0.46; Mϕϕ2.10; Mrθ-0.27; Mθϕ0.76; Mϕr-0.04; Fault plane solution: M₀2.08000×10¹⁸ NP1: ϕs181.87000°,δ44.98000°,λ-109.38000°. NP2: ϕs28.31000°,δ48.18000°,λ-71.65000°. Principal axes: T 2.3149, Plg2.0000°, Azm105.0000°; N -0.6116, Plg14.0000°, Azm196.0000°; P -1.7033, Plg76.0000°, Azm9.0000°;*

GFZ ***22*** *20:07:19.7,33˙10N×86˙79E,h13km,Mw6.4/38,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-3.81; Mθθ-0.47; Mϕϕ4.29; Mrθ0.88; Mθϕ0.78; Mϕr-0.97; Fault plane solution: M₀4.34598×10¹⁸ NP1: ϕs204.81554°,δ41.58398°,λ-65.92395°. NP2: ϕs353.96288°,δ52.70083°,λ-109.89975°. Principal axes: T 4.4937, Plg5.7630°, Azm97.9618°; N -0.3122, Plg15.7097°, Azm6.3352°; P -4.1815, Plg73.2149°, Azm207.5096°;*

IPGP ***22*** *20:07:19.0,33˙13N×86˙84E,h11km,Mw6.3, Fault plane solution: NP1:ϕs174.00000°,δ45.00000°,λ-106.00000°. NP2:ϕs17.00000°,δ47.00000°,λ-74.00000°.*

MOS ***22*** *20:07:19.8±1.1,33˙14N×86˙87E,h18km,mb6.4/84, MS6.2/85,Error ellipse: s-maj=5.1km s-min=2.5km az=125.7*

NEIC ***22*** *20:07:19.5,33˙13N×86˙84E,h10km*

NEIC ***22*** *20:07:19.8,33˙13N×86˙81E,h10km*

ISC-PP ***22*** *20:07:19,33˙14N×86˙86E,h1km,Mwppsm6.6,Moment Tensor Solution. s51 Moment tensor: Scale 10¹⁹Nm; Mrr-0.65±.14; Mθθ-0.03±.14; Mϕϕ0.73±.15; Mrθ0.06±.14; Mθϕ0.04±.32; Mϕr-0.12±.09; Fault plane solution: M₀1.14000×10¹⁹ NP1:ϕs345.90000°,δ44.00000°, λ261.90000°. NP2:ϕs177.10000°,δ46.50000°, λ-82.30000°.*

GFZ ***22*** *20:07:19.9±0.1,33˙7N±2˙×8˙7E±˙,h10km,M6.3/42, mb5.9/42*

IDC ***22*** *20:07:21.6±1.3,33˙05N×86˙86E,h33km±9km,mb5.5/47, mbtmp5.7/52,ML4.4/5,MS6.0/80,Error ellipse: s-maj=8.4km s-min=6.0km az=33.0*

PTWC ***22*** *20:07:21,33˙10N×86˙70E,Mwp6.6/15*

NDI ***22*** *20:07:24.5±3.8,32˙80N×86˙71E,h10km,mb6.0,MW6.0, Presumed earthquake*

GCMT ***22*** *20:07:24.2±0.1,33˙10N×86˙87E,h17km,MW6.4/171, Moment Tensor Solution. s165,c385; s171,c601; Duration: 3ₜ9 Moment tensor: Scale 10¹⁸Nm; Mrr-4.41±.03; Mθθ-1.08±.03; Mϕϕ5.48±.03; Mrθ-0.15±.07; Mθϕ1.00±.02; Mϕr-0.45±.07; Best double couple: M₀5.04200×10¹⁸ NP1:ϕs187.00000°,δ42.00000°, λ-92.00000°. NP2:ϕs10.00000°,δ48.00000°,λ-88.00000°. Principal axes: T 5.6500, Plg3.0000°, Azm99.0000°; N -1.2270, Plg1.0000°, Azm189.0000°; P -4.4330, Plg87.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *20:07:37.5,33˙13N×86˙84E,h12km,Moment Tensor Solution. Duration: 6ₜ9 Moment tensor: Scale 10¹⁸Nm; Mrr-2.90; Mθθ0.66; Mϕϕ2.24; Mrθ-0.54; Mθϕ0.76; Mϕr-1.57; Fault plane solution: M₀3.20000×10¹⁸ NP1: ϕs203.01000°,δ29.37000°,λ-87.74000°. NP2:ϕs20.42000°, δ60.66000°,λ-91.27000°. Principal axes: T 3.0121, Plg16.0000°, Azm111.0000°; N 0.3543, Plg1.0000°, Azm21.0000°; P -3.3663, Plg74.0000°, Azm287.0000°;*

ISC 22 20:07:18.7±0.1,33°08N±0°02×86°84E±0°02,h10km,n2564, σ1§67/2580,**mb6.2**/559,**MS6.3**/507,**131C-255D,Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.00**	**131**	P		Pb	20 08 40.8		-5.8
LSA	**Lhasa**	**5.00**	**131**	P		Pn	20 08 39.9		+5.7
LSA	**Lhasa**	**5.00**	**131**			Pn	20 08 39.9		+5.7
EVN	**Everest**	**5.11**	**180**			**Pn**	**20 08 38.6**		**+2.7**
EVN	**Everest**	**5.11**	**180**		⇓P	**Pn**	**20 08 39.3**		**+3.4**
EVN	**Everest**	**5.11**	**180**		P	**Pn**	**20 08 39.5**		**+3.6**
VLK	**Valmikinagar**	**6.16**	**205**		*ex*	x	20 08 58.1		
PTH	**Pithoragarh**	**6.66**	**240**		*eP*	**Pn**	**20 09 00.6**		**+3.8**
PTH					*i* x	x	20 11 06.3		
JOSI	**Joshimath**	**6.69**	**250**		*eP*	**Pn**	**20 09 00.0**		**+2.8**
JPG	**JALPAIGURI**	**6.71**	**165**		*eP*	**Pn**	**20 09 01.2**		**+3.8**
LGTI	**Lohaghat**	**6.85**	**239**		*eP*	**Pn**	**20 09 03.4**		**+4.0**
LGTI					*eS*	**Sn**	**20 10 11.4**		**-6.1**
GKPR	**Gorakhpur**	**6.98**	**206**		*eP*	**Pn**	**20 09 02.0**		**+1.0**
TAWA	**Tawang**	**6.99**	**140**		*ex*	x	20 09 07.1		
BRCI	**Bahraich**	**7.12**	**221**		*eP*	**Pn**	**20 09 07.1**		**+4.2**
COBR	**COOCHBEHAR**	**7.14**	**161**		*eP*	Pn	20 09 08.4		+5.2
COBR						IAmb	IAmb	20 09 11.3	
	comp=Z,2μm,1.1s								
GOMU	**GeErMu**	**7.27**	**62**		Pn	**Pn**	**20 09 08.1**		**+2.7**
GOMU					Sn	**Sn**	**20 10 30.1**		**+1.9**
GOMU					Sg	**Sg**	**20 11 06.9**		**-5.3**
GOMU					L	L			
	comp=Z,236μm,10.9s								
GOMU					L	L			
	comp=Z,413μm,10.3s								
KLP	**Kalpa**	**7.43**	**260**		*eP*	**Pn**	**20 09 10.6**		**+3.0**
UTK	**UTTARKASHI**	**7.51**	**254**		*eP*	**Pn**	**20 09 11.3**		**+2.8**
DHUB	**DHUBRI**	**7.55**	**158**		*eP*	**Pn**	**20 09 12.2**		**+3.3**
SHBG	**Sahibganj**	**7.85**	**175**		*eP*	**Pn**	**20 09 15.0**		**+2.0**
SHBG					IAmb	IAmb	20 09 18.8		
	comp=Z,710nm,1.1s								
TKRD	**Thakurdwara**	**7.89**	**242**		*eP*	**Pn**	**20 09 17.5**		**+4.0**
GUWA	**GUWAHATI**	**8.06**	**147**		*eP*	**Pn**	**20 09 19.9**		**+4.0**
ALCI	**Alchi Leh**	**8.13**	**281**		*eP*	**Pn**	**20 09 20.4**		**+3.3**
ALCI					*i* x	x	20 11 46.2		
LKN	**LUCKNOW**	**8.14**	**221**		*eP*	**Pn**	**20 09 19.4**		**+2.4**
LKN					IAmb	IAmb	20 09 25.5		
	comp=Z,2μm,1.0s								
JMUI	**Jamui**	**8.14**	**184**		*eP*	**Pn**	**20 09 20.4**		**+3.3**
GAYA	**Gaya**	**8.37**	**190**		*eP*	**Pn**	**20 09 21.8**		**+1.6**
GAYA					*i* x	x	20 12 47.1		
SMLA	**Simla**	**8.43**	**259**		*eP*	**Pn**	**20 09 22.1**		**+1.1**
VAR	**Varanasi**	**8.48**	**204**		*eP*	**Pn**	**20 09 24.3**		**+2.7**
VAR					*i* x	x	20 12 46.1		
SHL	**Shillong**	**8.69**	**148**		P	**Pn**	**20 09 25.2**		**+0.6**
SHL	**Shillong**	**8.69**	**148**		P	**Pn**	**20 09 21.9**		**-2.7**
	SNR=126								
SHL					S	**Sn**	**20 11 01.1**		**-1.6**
SHL	**Shillong**	**8.69**	**148**			**Pn**	**20 09 25.2**		**+0.6**
SHL	**Shillong**	**8.69**	**148**		P	**Pn**	**20 09 25.8**		**+1.1**
SHL	**Shillong**	**8.69**	**148**		*eP*	**Pn**	**20 09 26.2**		**+1.5**
SHL					IAmb	IAmb	20 09 30.6		
	comp=Z,242nm,0.8s								
CGRH	**CHANDIGARH**	**8.87**	**257**		*eP*	**Pn**	**20 09 30.1**		**+3.1**
CGRH					IAmb	IAmb	20 09 38.1		
	comp=Z,682nm,1.0s								
ASOR	**Ausora**	**8.90**	**243**		*eP*	**Pn**	**20 09 30.4**		**+3.0**
ALBI	**Allahabad**	**8.90**	**211**		*eP*	**Pn**	**20 09 28.1**		**+0.6**
ALBI					*i* x	x	20 12 16.0		
TSSA	**Tissa**	**8.98**	**271**		*eP*	**Pn**	**20 09 31.6**		**+2.9**
TSSA					*eS*	**Sn**	**20 11 07.5**		**-2.6**
KKR	**Kurukshetra**	**9.10**	**253**		*eP*	**Pn**	**20 09 34.0**		**+3.9**
KKR					IAmb	IAmb	20 09 41.5		
	comp=Z,1μm,0.6s								
BISR	**Bishrakh**	**9.25**	**243**		*eP*	**Pn**	**20 09 35.1**		**+2.9**
TLWR	**Talawar**	**9.26**	**266**		*eP*	**Pn**	**20 09 35.5**		**+3.2**
BOK	**Bokaro**	**9.29**	**185**		*eP*	**Pn**	**20 09 34.8**		**+2.0**
BOK					*i* x	x	20 12 23.8		
BOK					*i* x	x	20 12 26.6		
BOK					*ex*	x	20 13 11.9		
BOK					*ex*	x	20 13 15.7		
THN	**Thein Dam**	**9.35**	**269**		*eP*	**Pn**	**20 09 35.8**		**+2.2**
THN					*i* x	x	20 13 01.1		
NDI	**New Delhi**	**9.36**	**245**		*eP*	**Pn**	**20 09 36.0**		**+2.3**
NDI					IAmb	IAmb	20 09 40.0		
	comp=Z,184nm,0.5s								
JMIU	**JAMIA UNIVERSI**	**9.36**	**244**		*eP*	**Pn**	**20 09 36.8**		**+3.1**
LDR	**Lodi Road**	**9.41**	**244**		*eP*	**Pn**	**20 09 37.3**		**+2.9**
LDR					IAmb	IAmb	20 09 45.1		
	comp=Z,543nm,0.9s								
NPLP	**NPLP New Delhi**	**9.42**	**244**		*eP*	**Pn**	**20 09 36.0**		**+1.5**
NPLP					IAmb	IAmb	20 09 41.2		
	comp=Z,241nm,0.9s								
BHGR	**Bahadurgarh**	**9.57**	**245**		*eP*	**Pn**	**20 09 39.6**		**+3.0**
AGRA	**Agra**	**9.66**	**235**		*eP*	**Pn**	**20 09 41.1**		**+3.4**
KOHI	**KOHIMA**	**9.69**	**137**		*eP*	**Pn**	**20 09 41.5**		**+3.1**
JHJR	**Jhajjar**	**9.83**	**246**		*eP*	**Pn**	**20 09 42.9**		**+2.8**
SRNI	**Srinagar**	**10.09**	**279**		*eP*	Pn	20 09 49.0		+5.2
JMU	**Jammu**	**10.10**	**272**		*eP*	**Pn**	**20 09 46.0**		**+2.2**
WUS	**Wushi**	**10.13**	**325**			**Pn**	**20 09 43.6**		**-0.7**
IMP	**Imphal**	**10.31**	**141**		*eP*	**Pn**	**20 09 49.0**		**+2.1**
JHNI	**Jhansi**	**10.45**	**225**		*eP*	**Pn**	**20 09 48.5**		**-0.2**
WMQ	**Urumqi**	**10.74**	**3**		*eP*	**Pn**	**20 09 53.5**		**+0.8**
WMQ					S	**Sn**	**20 11 52.9**		**-0.1**
WMQ					pmax	pmax			
	comp=Z,300nm,1.3s								
WMQ					pmax	pmax			
	comp=Z,14μm,6.9s								
WMQ					L	L			
	comp=Z,154μm,15.1s								
WMQ					L	L			
	comp=Z,76μm,15.7s								
WMQ					L	L			
	comp=Z,51μm,14.5s								
KSH2	**Kashi**	**10.94**	**307**		P	**Pn**	**20 09 56.6**		**+1.2**
KSH2					sP		20 10 03.3		
KSH2					S	**Sn**	**20 12 03.5**		**+5.6**
KSH2					pmax	pmax			
	comp=Z,190nm,1.2s								
KSH2					pmax	pmax			
	comp=Z,18μm,7.2s								
KSH2					L	L			
	comp=Z,298μm,13.7s								
KSH2					L	L			
	comp=Z,196μm,11.7s								
MORE	**Moreh**	**10.98**	**141**			**Pn**	**20 09 56.6**		**+0.7**
BRDH	**Bariadhala**	**11.20**	**157**		Pn	**Pn**	**20 09 59.4**		**+0.4**
	comp=Z,164nm,0.3s,baz=22,slow=7.4,SNR=8.7								
BRDH					Lg	Lg	20 13 08.2		
	comp=Z,47nm,0.3s,baz=267,slow=19,SNR=1.3								
TARG	**Taragay, Kyrgy**	**11.22**	**323**		P	**Pn**	**20 10 00.9**		**+1.3**
TARG	**Taragay, Kyrgy**	**11.22**	**323**			**Pn**	**20 10 00.9**		**+1.3**
TARG	**Taragay, Kyrgy**	**11.22**	**323**		P	**Pn**	**20 10 00.5**		**+0.9**
NIL	**Nilore**	**11.38**	**277**		P	**Pn**	**20 10 00.5**		**-0.9**
NIL	**Nilore**	**11.38**	**277**		P	**Pn**	**20 10 01.2**		**-0.2**
NIL					S	**Sn**	**20 12 07.8**		**-0.7**
NIL	**Nilore**	**11.38**	**277**		P	**Pn**	**20 10 00.5**		**-0.9**
NIL	**Nilore**	**11.38**	**277**		P	**Pn**	**20 10 00.3**		**-1.0**
NIL	**Nilore**	**11.38**	**277**		⇑P	**Pn**	**20 10 00.2**		**-1.2**
NIL	**Nilore**	**11.38**	**277**		P	**Pn**	**20 10 00.3**		**-1.0**
SRGN	**SRI GANGA NAGA**	**11.49**	**258**		*eP*	**Pn**	**20 10 02.8**		**-0.1**
SRGN					IAmb	IAmb	20 10 06.2		
	comp=Z,655nm,0.9s								
PRZ	**Przheval'sk**	**11.51**	**327**		P	**Pn**	**20 10 03.3**		**0.0**
PRZ	**Przheval'sk**	**11.51**	**327**			**Pn**	**20 10 03.3**		**0.0**
PRZ	**Przheval'sk**	**11.51**	**327**		P	**Pn**	**20 10 05.0**		**+1.7**
SHLS	**Shalkode**	**11.61**	**332**		*d* iP	**Pn**	**20 10 02.3**		**-2.3**
SHLS					*eS*	**Sn**	**20 12 11.3**		**-3.0**
SHLS	**Shalkode**	**11.61**	**332**		⇓*i*P	**Pn**	**20 10 02.3**		**-2.3**
SHLS					*eS*	**Sn**	**20 12 11.3**		**-3.0**
BLSP	**Bilaspur**	**11.69**	**202**		*eP*	**Pn**	**20 10 05.1**		**-0.6**
BLSP					IAmb	IAmb	20 10 09.6		
	comp=Z,1μm,0.2s								
BLSP					*i* x	x	20 15 11.7		
PDGK	**Podgornoye**	**11.74**	**333**		P	**Pn**	**20 10 06.9**		**+0.5**
PDGK	**Podgornoye**	**11.74**	**333**			**Pn**	**20 10 06.9**		**+0.5**
PDGK	**Podgornoye**	**11.74**	**333**		P	**Pn**	**20 10 06.3**		**-0.1**
UZB	**Uzynbulak**	**11.78**	**331**		*d* iP	**Pn**	**20 10 06.8**		**-0.1**
UZB					*eS*	**Sn**	**20 12 19.3**		**+0.9**
UZB	**Uzynbulak**	**11.78**	**331**		⇓*i*P	**Pn**	**20 10 06.8**		**-0.1**
UZB					*eS*	**Sn**	**20 12 19.3**		**+0.9**
GUNA	**GUNA**	**11.83**	**227**		*eP*	**Pn**	**20 10 06.5**		**-1.1**
GUNA					*i* x	x	20 14 33.1		
KDJ	**Kajisay**	**11.83**	**323**		P	**Pn**	**20 10 07.9**		**+0.2**
KDJ	**Kajisay**	**11.83**	**323**			**Pn**	**20 10 07.9**		**+0.2**
SATY	**Saty**	**11.96**	**329**		*d* iP	**Pn**	**20 10 09.3**		**-0.1**
SATY					*eS*	**Sn**	**20 12 24.0**		**+1.0**
SATY	**Saty**	**11.96**	**329**		⇓*i*P	**Pn**	**20 10 09.4**		**-0.1**
SATY					*eS*	**Sn**	**20 12 24.0**		**+1.0**
NRN	**Naryn**	**11.99**	**317**		*eP*	**Pn**	**20 10 11.8**		**+1.8**
NRN	**Naryn**	**11.99**	**317**			**Pn**	**20 10 11.8**		**+1.8**
KPKS	**Kokpek**	**12.18**	**331**		*eP*	**Pn**	**20 10 11.9**		**-0.4**
KPKS					*eS*	**Sn**	**20 12 28.7**		**+0.5**
KPKS	**Kokpek**	**12.18**	**331**		*eP*	**Pn**	**20 10 12.0**		**-0.4**
KPKS					*eS*	**Sn**	**20 12 28.7**		**+0.5**
GTA2	**Gaotai**	**12.22**	**55**		P	**Pn**	**20 10 12.1**		**-0.9**
GTA2					S	**Sn**	**20 12 30.9**		**+1.5**
GTA2					pmax	pmax			
	comp=Z,11μm,7.6s								
GTA2					L	L			
	comp=Z,248μm,14.6s								
GTA2					L	L			
	comp=Z,213μm,15.9s								
ULHL	**Ulahol**	**12.41**	**321**		P	**Pn**	**20 10 16.4**		**+0.9**
	SNR=140								
AJM	**Ajmer**	**12.51**	**241**		*eP*	**Pn**	**20 10 16.3**		**-0.6**
TNSS	**Tian-Shan**	**12.62**	**325**		*eP*	**Pn**	**20 10 18.2**		**-0.4**
TNSS					*eS*	**Sn**	**20 12 40.0**		**+0.6**
TNSS	**Tian-Shan**	**12.62**	**325**		*eP*	**Pn**	**20 10 18.2**		**-0.4**
TNSS					*eS*	**Sn**	**20 12 40.0**		**+0.6**
MDOK	**Medeo**	**12.67**	**325**		*eP*	**Pn**	**20 10 19.0**		**-0.1**
MDOK					*eS*	**Sn**	**20 12 41.3**		**+1.1**
MDOK	**Medeo**	**12.67**	**325**		*eP*	**Pn**	**20 10 19.0**		**-0.1**
MDOK					*eS*	**Sn**	**20 12 41.3**		**+1.1**
MDOK					LR	LR	20 15 37.5		
	comp=Z,36μm,8.7s								
BKNR	**BIKANER**	**12.73**	**250**		*eP*	**Pn**	**20 10 20.6**		**+0.7**
BKNR					*i* x	x	20 14 22.3		
BOOM	**Boomskoye usch**	**12.74**	**321**		P	**Pn**	**20 10 20.3**		**+0.2**
BOOM	**Boomskoye usch**	**12.74**	**321**			**Pn**	**20 10 20.3**		**+0.2**
AAA	**Alma-Ata**	**12.76**	**325**		*eP*	**Pn**	**20 10 20.3**		**0.0**
AAA	**Alma-Ata**	**12.76**	**325**		*eP*	**Pn**	**20 10 20.4**		**0.0**
AAA					LR	LR	20 15 43.1		
	comp=Z,59μm,8.4s								
BWNR	**Bhubaneshwar**	**12.81**	**184**		*eP*	**Pn**	**20 10 19.3**		**-1.7**
BWNR					IAmb	IAmb	20 10 25.7		
	comp=Z,212nm,0.8s								
BHPL	**Bhopal**	**12.84**	**223**		*ex*	**Pn**	**20 10 19.0**		**-2.5**
BHPL					*ex*	x	20 12 35.3		
BHPL					*i* x	x	20 14 02.6		
TNCH	**TengChong**	**12.98**	**125**		P	**Pn**	**20 10 23.9**		**+0.4**
TNCH					S	**Sn**	**20 12 47.5**		**-0.7**
TNCH					pmax	pmax			
	comp=Z,570nm,1.2s								
TNCH					pmax	pmax			
	comp=Z,5μm,4.2s								
TNCH					L	L			
	comp=Z,216μm,16.6s								
TNCH					L	L			
	comp=Z,224μm,18.0s								
TNCH					L	L			
	comp=Z,382μm,13.5s								
MANEM	**Manem**	**13.15**	**294**			**Pn**	**20 10 25.6**		**-0.2**
TKM2	**Tokmak 2**	**13.22**	**321**		P	**Pn**	**20 10 27.0**		**+0.3**
	SNR=266								
UCH	**Uchtor**	**13.35**	**317**		P	**Pn**	**20 10 30.0**		**+1.2**
	SNR=23								
KBK	**Karagaybulak**	**13.39**	**319**		P	**Pn**	**20 10 30.4**		**+1.5**
	SNR=125								
OHH	**Osh**	**13.48**	**307**		P	**Pn**	**20 10 30.3**		**+0.2**
OHH	**Osh**	**13.48**	**307**		P	**Pn**	**20 10 30.4**		**+0.2**
KUU	**Kurty**	**13.55**	**326**		*eP*	**Pn**	**20 10 31.2**		**+0.2**
KUU					MLR	MLR			
	comp=Z,51μm,9.0s								
KUU	**Kurty**	**13.55**	**326**		*eP*	**Pn**	**20 10 31.3**		**+0.2**
KUU					LR	LR	20 16 15.4		
	comp=Z,51μm,9.5s								
TDK	**Taldyqorghan**	**13.58**	**334**		*d* iP	**Pn**	**20 10 31.0**		**-0.3**
TDK					MLR	MLR			
	comp=Z,93μm,11.0s								
TDK	**Taldyqorghan**	**13.58**	**334**		⇓*i*P	**Pn**	**20 10 31.0**		**-0.3**
TDK					LR	LR	20 16 17.7		
	comp=Z,93μm,11.0s								
AAK	**Ala-Archa**	**13.63**	**318**		Pn	**Pn**	**20 10 32.6**		**+0.4**
	comp=Z,1.4nm,0.3s,baz=139,slow=12,SNR=44								
AAK					LR	LR	20 16 15.6		
	comp=Z,97μm,21.4s,baz=130,slow=39								
	comp=Z,107nm,1.1s								
AAK	**Ala-Archa**	**13.63**	**318**		P	**Pn**	**20 10 33.1**		**+0.8**
	SNR=67								
AAK	**Ala-Archa**	**13.63**	**318**		*i* P	**Pn**	**20 10 32.5**		**+0.4**
	SNR=78								
AAK	**Ala-Archa**	**13.63**	**318**		*ce*P	**Pn**	**20 10 33.0**		**+0.8**
AAK					pmax	pmax			
	comp=Z,157nm,1.3s								
AAK					MLR	MLR			
	comp=Z,91μm,13.0s								
AAK	**Ala-Archa**	**13.63**	**318**		P	**Pn**	**20 10 32.9**		**+0.7**
AAK					S	**Sn**	**20 13 08.2**		**+4.5**
AAK	**Ala-Archa**	**13.63**	**318**			**Pn**	**20 10 32.4**		**+0.2**
AAK	**Ala-Archa**	**13.63**	**318**		P	**Pn**	**20 10 33.1**		**+0.8**
AAK	**Ala-Archa**	**13.63**	**318**		⇓P	**Pn**	**20 10 33.0**		**+0.8**
AAK	**Ala-Archa**	**13.63**	**318**		P	**Pn**	**20 10 32.6**		**+0.4**
AAK					S	**Sn**	**20 13 10.1**		**+6.4**
AAK	**Ala-Archa**	**13.63**	**318**		P	**Pn**	**20 10 33.2**		**+1.0**
FRU1	**Bishkek**	**13.66**	**319**		*eP*	**Pn**	**20 10 33.3**		**+0.7**
FRU1	**Bishkek**	**13.66**	**319**			**Pn**	**20 10 33.3**		**+0.7**
DRK	**Karamyk**	**13.70**	**302**		P	**Pn**	**20 10 34.7**		**+1.4**
DRK	**Karamyk**	**13.70**	**302**			**Pn**	**20 10 34.7**		**+1.4**
CHMS	**Chumysh**	**13.72**	**320**		P	**Pn**	**20 10 33.9**		**+0.5**
	SNR=68								
NGP	**Nagpur**	**13.73**	**212**		*eP*	**Pn**	**20 10 31.8**		**-1.8**
NGP					IAmb	IAmb	20 10 35.3		
	comp=Z,948nm,1.2s								
ARSB	**Arslanbob**	**13.76**	**311**		P	**Pn**	**20 10 33.5**		**-0.5**
ARSB	**Arslanbob**	**13.76**	**311**			**Pn**	**20 10 33.5**		**-0.5**
USP	**Ospenovka**	**14.04**	**320**		P	**Pn**	**20 10 37.7**		**0.0**
	SNR=50								
EKS2	**Erkin-Say**	**14.05**	**317**		P	**Pn**	**20 10 39.2**		**+1.2**
	SNR=104								
SGDS	**Sogindy**	**14.10**	**321**		*eP*	**Pn**	**20 10 38.5**		**0.0**
MK01

DZA Taraz 15.64 313 *e*P **Pn** **20 10 59.1 -0.1**
DZA Taraz 15.64 313 *e*P **Pn** **20 10 59.2 -0.1**
SHAA Shahritus 15.91 292 Pn **Pn** **20 10 59.0 -3.8**
SHAA IAmb IAmb 20 11 09.7
comp=Z,6μm,1.7s
KMI2 Kunming 15.98 116 ⇑P **Pn** **20 11 04.5 +0.6**
KMI2 S **Sn** **20 14 04.3 +3.0**
KMI2 L L
comp=Z,129μm,14.1s
KMI2 L L
comp=Z,161μm,26.3s
IUG luzhnay 16.08 309 *e*P **Pn** **20 11 04.9 0.0**
IUG luzhnay 16.08 309 *e*P **Pn** **20 11 05.0 0.0**
KK31 Karatay Array 16.26 313 P **Pn** **20 11 06.9 -0.3**
KK31 pmax pmax
comp=Z,909nm,1.5s
KK31 Karatay Array 16.26 313 Pn **Pn** **20 11 06.9 -0.3**
KKAR Karatay Array 16.26 313 P **Pn** **20 11 05.9 -1.3**
KKAR Karatay Array 16.26 313 Pn **Pn** **20 11 05.8 -1.3**
CHM Chimkent 16.44 309 *e*P **Pn** **20 11 09.6 +0.1**
CHM MLR MLR
comp=Z,27μm,13.0s
CHM Chimkent 16.44 309 *e*P **Pn** **20 11 09.7 +0.1**
CHM LR LR 20 18 14.9
comp=Z,27μm,12.5s
DGZ Jazzator, Alta 16.61 1*d i*P **Pn** **20 11 10.7 -1.0**
DGZ MLR MLR
comp=Z,148μm,12.0s
BRLS Boroldaу 16.64 312 *e*P **Pn** **20 11 11.4 -0.7**
BRLS Boroldaу 16.64 312 *e*P **Pn** **20 11 11.4 -0.7**
HYB Hyderabad 17.29 208 *ex* **Pn** **20 11 17.4 -3.1**
HYB Hyderabad 17.29 208 *i* P **Pn** **20 11 16.7 -3.7**
HYB *e*S **S** **20 14 44.0 +2.2**
VJD Vijayawada 17.42 200 *e*P **P** **20 11 25.0 +1.8**
VJD IAmb IAmb 20 11 31.3
comp=Z,351nm,1.1s
VJD *i* x x 20 18 04.8
CHTO Chiang Mai 17.88 140 P **P** **20 11 28.2 -0.1**
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 26.6 -1.0**
CHTO pmax pmax
comp=Z,294nm,1.2s
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 27.2 -0.5**
CHTO P **Pn** **20 11 27.2 -0.5**
CHTO S **Sn** **20 14 47.3 +0.3**
CHTO S **Sn** **20 14 47.3 +0.3**
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 26.6 -1.0**
CHTO Chiang Mai 17.88 140 ⇓P **Pn** **20 11 26.3 -1.3**
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 26.7 -0.9**
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 26.3 -1.3**
CHTO Chiang Mai 17.88 140 P **Pn** **20 11 27.2 -0.5**
BHUJ Bhuj 18.02 241 *e*P **P** **20 11 31.9 +2.2**
BHUJ *i* x x 20 15 03.1
CM31 Chiang Mai Arr 18.17 140 P **Pn** **20 11 31.2 0.0**
SNR=186
CM31 P **Pn** **20 11 31.2 0.0**
SNR=186
CM31 S **Sn** **20 14 50.8 -3.2**
CM31 S **Sn** **20 14 50.8 -3.2**
CM31 Chiang Mai Arr 18.17 140 P **Pn** **20 11 31.0 -0.2**
CMAR Chiang Mai Arr 18.17 140 P **Pn** **20 11 29.9 -1.3**
comp=Z,0.3nm,0.3s,baz=326,slow=13,SNR=4.1
CMAR S **Sn** **20 14 52.9 -1.1**
comp=Z,0.5nm,0.3s,baz=227,slow=24,SNR=1.1
CMAR PcP **PcP** **20 16 04.6 +0.1**
comp=Z,8.4nm,1.0s,baz=337,slow=0.8,SNR=5.3
comp=Z,61nm,1.0s
CMAR Chiang Mai Arr 18.17 140 P **Pn** **20 11 31.3 +0.1**
CMAR 20 14 52.9
CMAR Chiang Mai Arr 18.17 140 P **Pn** **20 11 31.2 +0.1**
GYA Guiyang 18.42 106 ⇑P **P** **20 11 33.8 -0.6**
GYA S **Sn** **20 14 58.9 -1.4**
GYA pmax pmax
comp=Z,140nm,0.9s
GYA pmax pmax
comp=Z,27μm,6.5s
GYA L L
comp=Z,96μm,10.0s
GYA L L
comp=Z,208μm,11.6s
XAN Xi'an 18.43 81 ⇓P **P** **20 11 32.5 -1.8**
XAN S **Sn** **20 14 56.5 -3.8**
XAN pmax pmax
comp=Z,370nm,1.4s
XAN pmax pmax
comp=Z,33μm,7.6s
XAN L L
comp=Z,356μm,16.8s
XAN L L
comp=Z,90μm,14.4s
XAN L L
comp=Z,206μm,8.3s
KURBB Kurchatov Arra 18.57 343 P **P** **20 11 34.2 -1.4**
comp=Z,1.5nm,0.3s,baz=162,slow=10,SNR=248
KURBB S **S** **20 15 05.8 -1.4**
comp=Z,13nm,1.1s,baz=145,slow=28,SNR=1.1
KURBB PcP **PcP** **20 16 05.5 +0.9**
comp=Z,8.4nm,1.0s,baz=183,slow=2.6,SNR=4.3
KURBB LR LR 20 19 45.7
comp=Z,32μm,19.9s,baz=160,slow=40
KURBB PKP2ab P'P'ab 20 50 05.2 -15
comp=Z,0.7nm,0.8s,baz=336,slow=4.8,SNR=5.7
comp=Z,513nm,1.2s
POO Poona 18.59 222 *e*P **Pn** **20 11 36.7 +0.2**
POO IAmb IAmb 20 11 41.9
comp=Z,1μm,1.4s
KURK Kurchatov 18.63 343*ce*P **P** **20 11 35.0 -1.3**
KURK pmax pmax
comp=Z,1μm,1.3s
KURK MLR MLR
comp=Z,74μm,16.0s
KURK Kurchatov 18.63 343 P **P** **20 11 35.0 -1.3**
KURK P **P** **20 11 35.0 -1.3**
KURK S **S** **20 15 07.2 -1.3**
KURK S **S** **20 15 07.2 -1.3**
KURK Kurchatov 18.63 343 **Sn** **20 15 05.8 +1.0**
KURK **PcP** **20 16 05.5 +0.8**
KURK Kurchatov 18.63 343 P **P** **20 11 34.5 -1.9**
KURK Kurchatov 18.63 343 P **P** **20 11 35.1 -1.3**
KURK Kurchatov 18.63 343 P **P** **20 11 35.1 -1.2**
SLVN Son La 19.14 123 P **Pn** **20 11 45.3 +2.3**
SLVN Son La 19.14 123 P **Pn** **20 11 43.4 +0.3**
KNGR Kungurtug, Tuv 19.20 21*de*P **Pn** **20 11 44.0 +0.4**
KNGR pmax pmax
comp=Z,596nm,1.0s
KNGR MLR MLR
comp=Z,51μm,12.0s
KAD Karad 19.41 219 ⇑*i*P **Pn** **20 11 48.6 +2.3**
KAD IAmb IAmb 20 11 49.7
comp=Z,315nm,0.8s
ENH Enshi 19.47 92 P **Pn** **20 11 48.5 +1.5**
ENH Enshi 19.47 92 P **Pn** **20 11 46.6 -0.4**
BTO2 Baotou 19.91 61 *e*P **P** **20 11 51.4 +0.8**
BTO2 pP **pP** **20 11 55.3 +0.5**
BTO2 PP **PnPn** **20 12 10.3 +4.1**
BTO2 S **Sn** **20 15 35.8 -0.3**
BTO2 pmax pmax
comp=Z,310nm,1.5s
BTO2 pmax pmax
comp=Z,69μm,7.4s
BTO2 L L
comp=Z,251μm,11.2s
BTO2 L L
comp=Z,330μm,12.9s
HRA Herat 20.49 280 P **P** **20 11 57.0 0.0**
SONA0 Songino Array 20.86 39 P **P** **20 12 02.0 +1.2**
SONM Songino Array 20.86 39 P **P** **20 12 01.4 +0.5**
comp=Z,200nm,1.0s,baz=228,slow=7.8,SNR=327
SONM PcP **PcP** **20 16 08.7 -0.4**
comp=Z,5.8nm,0.9s,baz=215,slow=3.0,SNR=4.9
comp=Z,200nm,1.0s
SONM Songino Array 20.86 39 P **P** **20 12 01.4 +0.5**
ZAA0 Zalesovo Array 20.91 357 P **P** **20 12 00.0 -1.1**
ZAA0 IAmb IAmb 20 12 03.6
comp=Z,2μm,1.2s
ZAA0 Zalesovo Array 20.91 357 P **P** **20 12 00.6 -0.6**
ZALV Zalesovo Beam 20.91 357 P **P** **20 12 00.9 -0.3**
comp=Z,656nm,0.9s,baz=179,slow=7.0,SNR=765
ZALV LR LR 20 20 46.1
comp=Z,47μm,18.8s,baz=184,slow=38
comp=Z,656nm,0.9s
ZALV Zalesovo Beam 20.91 357 *i* P **P** **20 12 00.4 -0.8**
ZALV pmax pmax
comp=Z,642nm,0.9s
ZALV Zalesovo Beam 20.91 357 P **P** **20 12 00.1 -1.0**

ZAK Zakamensk 21.12 30 *e*P **P** **20 12 04.3 +0.7**
ZAK pmax pmax
comp=Z,1μm,1.5s
HHC Hu-ho-hao-te 21.18 61 *e*P **P** **20 12 05.3 +1.0**
HHC sP sP 20 12 14.8 +4.3
HHC S Sn 20 16 03.5 -3.1
HHC sS sS 20 16 07.0 +0.5
HHC pmax pmax
comp=Z,370nm,1.6s
HHC pmax pmax
comp=Z,6μm,8.8s
HHC L L
comp=Z,96μm,13.4s
HHC L L
comp=Z,84μm,13.5s
HHC L L
comp=Z,100μm,12.3s
ULN Ulaanbaatar 21.23 40*d i*P **P** **20 12 05.7 +0.8**
ULN pmax pmax
comp=Z,1μm,1.7s
ULN MLR MLR
comp=Z,53μm,15.0s
ULN Ulaanbaatar 21.23 40 P **P** **20 12 04.3 -0.6**
ULN S **S** **20 15 60.0 -0.9**
ULN Ulaanbaatar 21.23 40 P **P** **20 12 05.0 +0.1**
ULN IAmb IAmb 20 12 11.8
comp=Z,3μm,1.7s
ULN Ulaanbaatar 21.23 40 ⇓P **P** **20 12 05.7 +0.8**
ULN Ulaanbaatar 21.23 40 P **P** **20 12 05.3 +0.4**
comp=Z,4μm,1.7s
ULN Ulaanbaatar 21.23 40 P **P** **20 12 05.9 +1.1**
MOY Mondy 21.24 25 *e*P **P** **20 12 06.2 +1.2**
MOY pmax pmax
comp=Z,1μm,1.8s
LYN LuoYang 21.33 79⇓*i*P **P** **20 12 06.3 +0.4**
LYN pP pP 20 12 09.8 -0.3
LYN S **S** **20 15 58.6 -4.2**
LYN sS sS 20 16 05.5 -3.9
LYN pmax pmax
comp=Z,520nm,1.0s
LYN pmax pmax
comp=Z,42μm,11.5s
LYN L L
comp=Z,80μm,9.6s
LYN L L
comp=Z,174μm,11.7s
TIY Taiyuan 21.34 70 *e*P **P** **20 12 06.6 +0.5**
TIY S **S** **20 16 05.3 +2.1**
TIY pmax pmax
comp=Z,290nm,0.9s
TIY pmax pmax
comp=Z,26μm,11.4s
TIY L L
comp=Z,109μm,8.2s
TIY L L
comp=Z,102μm,9.4s
TIY L L
comp=Z,76μm,10.0s
GULI GuiLin 21.93 105 ⇓P **P** **20 12 09.8 -2.6**
GULI S **S** **20 16 14.8 +0.2**
GULI pmax pmax
comp=Z,220nm,1.2s
GULI LR LR
comp=N,75μm,11.4s
GULI LR LR
comp=E,133μm,10.8s
GULI LR LR
comp=Z,175μm,11.4s
PBA Port Blair 22.00 164 P **P** **20 12 15.7 +2.5**
SNR=59
PBA S **S** **20 16 14.2 -1.9**
PBA Port Blair 22.00 164 P **P** **20 12 14.5 +1.3**
PBA IAmb IAmb 20 12 31.7
comp=Z,2μm,1.2s
PBA Port Blair 22.00 164 P **P** **20 12 14.4 +1.3**
PBA Port Blair 22.00 164 P **P** **20 12 15.5 +2.3**
TLY Talaya 22.25 28 P **P** **20 12 16.1 +0.4**
comp=Z,55nm,1.1s,baz=222,slow=9.4,SNR=58
TLY S **S** **20 16 25.3 +4.9**
comp=Z,2.7nm,0.4s,baz=221,slow=13,SNR=1.2
TLY LR LR 20 21 17.6
comp=Z,83μm,18.1s,baz=218,slow=38
comp=Z,55nm,1.1s
TLY Talaya 22.25 28*d i*P **P** **20 12 17.6 +1.9**
TLY pmax pmax
comp=Z,258nm,1.7s
TLY MLR MLR
comp=Z,78μm,15.0s
TLY Talaya 22.25 28 P **P** **20 12 14.0 -1.7**
TLY P **P** **20 12 14.0 -1.7**
TLY S **S** **20 16 19.6 -0.9**
TLY S **S** **20 16 19.6 -0.9**
TLY Talaya 22.25 28 P **P** **20 12 16.4 +0.7**
TLY Talaya 22.25 28 ⇓P **P** **20 12 17.0 +1.3**
TLY Talaya 22.25 28 P **P** **20 12 17.2 +1.5**
MNGI Mangalore 22.88 211 ⇑*i*P **P** **20 12 23.4 +0.8**
MNGI IAmb IAmb 20 12 25.9
comp=Z,788nm,1.5s
IRK Irkutsk 22.93 28 *e*P **P** **20 12 23.7 +0.8**
IRK pmax pmax
comp=Z,3μm,3.1s
CNSH ChangSha 22.95 95 ⇓P **P** **20 12 22.3 -1.0**
CNSH S **S** **20 16 32.8 -0.7**
CNSH pmax pmax
comp=Z,170nm,1.5s
CNSH L L
comp=Z,74μm,11.0s
CNSH L L
comp=Z,46μm,12.9s
CNSH L L
comp=Z,64μm,9.8s
HNS HongShan 23.13 71 ⇓P **P** **20 12 25.4 +0.4**
HNS S **S** **20 16 26.4 -10**
HNS PcS **PcS** **20 19 56.8 +4.1**
HNS pmax pmax
comp=Z,490nm,1.2s
HNS pmax pmax
comp=Z,25μm,7.8s
HNS L L
comp=Z,61μm,9.9s
HNS L L
comp=Z,93μm,10.6s
BVAR Borovoye Array 23.17 334 P **P** **20 12 24.8 -0.5**
comp=Z,148nm,0.9s,baz=150,slow=8.5,SNR=161
BVAR S **S** **20 16 44.2 +7.4**
comp=Z,27nm,1.1s,baz=141,slow=9.3,SNR=2.2
comp=Z,148nm,0.9s
BORK Borovoye 23.21 334*d i*P **P** **20 12 24.6 -1.1**
BORK pmax pmax
comp=Z,823nm,1.5s
BORK MLR MLR
comp=Z,67μm,15.0s
BORK Borovoye 23.21 334 P **P** **20 12 25.9 +0.2**
BORK IAmb IAmb 20 12 29.8
comp=Z,976nm,1.4s
WHN Wuhan 23.49 89 ⇓P **P** **20 12 28.8 +0.1**
WHN S **S** **20 16 40.9 -1.5**
WHN pmax pmax
comp=Z,5μm,1.5s
WHN pmax pmax
comp=Z,53μm,7.4s
KOD Kodaikanal 24.32 203 *e*P **P** **20 12 37.2 +0.2**
KOD IAmb IAmb 20 12 41.7
comp=Z,2μm,1.2s
KOD *i* x x 20 21 40.4
BJT Baijiatuau 24.49 65 P **P** **20 12 39.8 +1.8**
BJI2 Beijing 24.49 65 P **P** **20 12 39.3 +1.2**
BJI2 S **S** **20 16 53.5 -4.8**
BJI2 pmax pmax
comp=Z,120nm,1.6s
BJI2 pmax pmax
comp=Z,10μm,6.1s
BJI2 L L
comp=Z,67μm,16.3s
BJI2 L L
comp=Z,27μm,14.3s
BJI2 L L
comp=Z,45μm,16.8s
QIZ Qiongzhong 24.89 119 P **P** **20 12 44.0 +2.2**
QIZ Qiongzhong 24.89 119 P **P** **20 12 42.9 +1.1**
QIZ S **S** **20 17 06.6 +1.6**
QIZ pmax pmax
comp=Z,14μm,7.4s
QIZ L L
comp=Z,70μm,16.7s
QIZ L L
comp=Z,50μm,16.7s
QIZ L L
comp=Z,49μm,17.5s
TIA Tai'an 25.06 74 P **P** **20 12 44.1 +0.8**
TIA S **S** **20 16 58.8 -8.8**
TIA SS **SnSn** **20 18 06.3 +10**
TIA pmax pmax
comp=Z,600nm,1.1s
TIA pmax pmax
comp=Z,24μm,7.0s
TIA L L
comp=Z,216μm,17.8s
TIA L L
comp=Z,31μm,17.5s
TIA L L
comp=Z,105μm,10.7s
XLT XiLinHaoTe 25.18 56 *e*P **P** **20 12 45.8 +1.4**
XLT sP sP 20 12 52.8 +2.0
XLT S **S** **20 17 12.3 +2.7**
XLT pmax pmax
comp=Z,160nm,1.0s
XLT pmax pmax
comp=Z,23μm,6.6s
XLT L L
comp=Z,17μm,14.7s
XLT L L
comp=Z,68μm,15.7s
XLT L L
comp=Z,34μm,12.5s
MALK Mahakanadarawa 25.25 195 P **P** **20 12 45.9 +0.8**
MALK Mahakanadarawa 25.25 195 ⇓P **P** **20 12 45.6 +0.6**
MALK Mahakanadarawa 25.25 195 P **P** **20 12 46.3 +1.2**
GZH2 Guangzhou 25.34 105 P **P** **20 12 46.5 +0.6**
GZH2 S **S** **20 17 14.3 +2.1**
GZH2 pmax pmax
comp=Z,150nm,1.3s
GZH2 pmax pmax
comp=Z,17μm,8.8s
GZH2 L L
comp=Z,84μm,11.4s
GZH2 L L
comp=Z,146μm,10.3s
GZH2 L L
comp=Z,200μm,9.8s
AB31 Akbulak array 25.71 317 *i* P **P** **20 12 49.3 +0.3**
AB31 pmax pmax
comp=Z,462nm,0.8s
AB31 Akbulak array 25.71 317 P **P** **20 12 49.1 0.0**
AB31 IAmb IAmb 20 12 54.1
comp=Z,530nm,0.9s
ABKAR Akbulak array 25.71 317 P **P** **20 12 49.1 0.0**
PALK Pallekele 26.31 194 *i* P **P** **20 12 55.3 +0.5**
SNR=23
PALK Pallekele 26.31 194 P **P** **20 12 56.0 +1.3**
PALK Pallekele 26.31 194 P **P** **20 12 55.1 +0.4**
PALK P **P** **20 12 55.1 +0.4**
PALK P **P** **20 12 55.1 +0.4**
PALK S **S** **20 17 26.9 -0.7**
PALK S **S** **20 17 26.9 -0.7**
PALK S **S** **20 17 26.9 -0.7**
PALK Pallekele 26.31 194 P **P** **20 12 55.3 +0.5**
PALK Pallekele 26.31 194 P **P** **20 12 55.2 +0.5**
PALK Pallekele 26.31 194 P **P** **20 12 54.9 +0.2**
PALK Pallekele 26.31 194 P **P** **20 12 56.2 +1.5**
HKPS Hong Kong Po S 26.39 107 P **P** **20 12 57.1 +1.6**
HKPS Hong Kong Po S 26.39 107 P **P** **20 12 56.1 +0.7**
HKPS Hong Kong Po S 26.39 107 P **P** **20 12 57.4 +1.9**
HKC Hong Kong Obse 26.41 107 ⇑P **P** **20 12 56.0 +0.4**
JLN Jalan Bani Buh 26.56 253 P **P** **20 12 59.5 +2.5**
SNR=35
JLN P **P** **20 12 59.5 +2.5**
SNR=35
JLN P **P** **20 12 59.5 +2.5**
SNR=35
JLN S **S** **20 17 30.4 -1.0**
JLN S **S** **20 17 30.4 -1.0**
JLN S **S** **20 17 30.4 -1.0**
WSAR Wadi Sarin 26.66 256 LR LR 20 25 34.0
comp=Z,96nm,18.4s,baz=86,slow=41
WSAR Wadi Sarin 26.66 256 P **P** **20 13 01.1 +3.2**
SNR=14
WSAR S **S** **20 17 38.0 +4.8**
WBK Wadi Bani Khal 26.68 254 P **P** **20 13 00.6 +2.4**
SNR=26
WBK P **P** **20 13 00.6 +2.4**
SNR=26
WBK S **S** **20 17 35.9 +2.3**
WBK S **S** **20 17 35.9 +2.3**
BIDO Bidbid 26.94 257 P **P** **20 13 02.9 +2.5**
SNR=12
BIDO P **P** **20 13 02.9 +2.5**
SNR=12
BIDO P **P** **20 13 02.9 +2.5**
SNR=12
BIDO S **S** **20 17 40.5 +3.0**
BIDO S **S** **20 17 40.5 +3.0**
BIDO S **S** **20 17 40.5 +3.0**
NJ2 Nanjing 26.95 83 ⇓P **P** **20 13 00.8 +0.4**
NJ2 S **S** **20 17 40.8 +3.3**
NJ2 pmax pmax
comp=Z,340nm,2.1s
NJ2 pmax pmax
comp=Z,29μm,6.6s
NJ2 L L
comp=Z,152μm,10.4s
NJ2 L L
comp=Z,188μm,8.5s
NJ2 L L
comp=Z,184μm,7.6s
SMDO Samad 27.22 256 P **P** **20 13 05.7 +2.7**
SNR=18
SMDO P **P** **20 13 05.7 +2.7**
SNR=18
SMDO P **P** **20 13 05.7 +2.7**
SNR=18
SMDO S **S** **20 17 38.7 -3.4**
SMDO S **S** **20 17 38.7 -3.4**
SMDO S **S** **20 17 38.7 -3.4**
AKTO Aktyubinsk 27.37 318 P **P** **20 13 03.2 -0.8**
comp=Z,96nm,1.0s,baz=114,slow=7.1,SNR=155
AKTO S **S** **20 17 44.5 +0.6**
comp=Z,12nm,1.1s,baz=40,slow=19,SNR=1.3
comp=Z,96nm,1.0s
BANOM Banah 27.45 263 P **P** **20 13 08.5 +3.4**
BANOM S **S** **20 17 47.4 +1.7**
HALK Hakmana 27.46 193 ⇑P **P** **20 13 06.8 +1.8**
HALK Hakmana 27.46 193 P **P** **20 13 06.5 +1.5**
JMDO Jabal Madar 27.50 255 P **P** **20 13 08.0 +2.6**
SNR=15
JMDO P **P** **20 13 08.0 +2.6**
SNR=15
JMDO S **S** **20 17 49.4 +2.9**
JMDO S **S** **20 17 49.4 +2.9**
SHME Shamm 27.54 263 P **P** **20 13 07.4 +1.7**
SHME Shamm 27.54 263 P **P** **20 13 08.0 +2.3**
SHME P **P** **20 13 08.0 +2.3**
SHME P **P** **20 13 08.0 +2.3**
SHME S **S** **20 17 47.2 +0.3**
SHME S **S** **20 17 47.2 +0.3**
SHME S **S** **20 17 47.2 +0.3**
HOQ Hoqain 27.58 258 P **P** **20 13 08.0 +1.8**
SNR=7.6
HOQ P **P** **20 13 08.0 +1.8**
SNR=7.6
HOQ P **P** **20 13 08.0 +1.8**
SNR=7.6
HOQ S **S** **20 17 49.6 +1.9**
HOQ S **S** **20 17 49.6 +1.9**
HOQ S **S** **20 17 49.6 +1.9**
MDH Madha 27.70 262 P **P** **20 13 08.0 +0.9**
MDH P **P** **20 13 08.0 +0.9**
MDH P **P** **20 13 08.0 +0.9**
MASF Masafi 27.78 262 P **P** **20 13 10.0 +2.0**
MASF P **P** **20 13 10.0 +2.0**
MASF S **S** **20 17 50.8 -0.1**
MASF S **S** **20 17 50.8 -0.1**
MSFE Esma-Masafi 27.79 262 *i* P **P** **20 13 09.7 +1.6**
SNR=6.6
UOSS Minazif 27.92 261 P **P** **20 13 09.4 +0.3**
UOSS Minazif 27.92 261 P **P** **20 13 10.3 +1.2**
UOSS P **P** **20 13 10.3 +1.2**
UOSS S **S** **20 17 54.9 +1.9**
UOSS S **S** **20 17 54.9 +1.9**
UOSS Minazif 27.92 261 P **P** **20 13 08.9 -0.2**

UOSS	**Minazif**	**27.92**	**261**		P		**P**	**20 13 08.7 -0.4**
UOSS					S		**S**	**20 17 57.1 +4.1**
UOSS	**Minazif**	**27.92**	**261**		P		**P**	**20 13 12.3 +3.2**
SOHO	**SOHO**	**27.98**	**259**		P		**P**	**20 13 11.6 +1.9**
SOHO					P		**P**	**20 13 11.6 +1.9**
SOHO					S		**S**	**20 17 53.1 -0.8**
SOHO					S		**S**	**20 17 53.1 -0.8**
HATD	**Hatta, Dubai**	**28.02**	**261**	*i*	P		**P**	**20 13 11.5 +1.4**
	SNR=5.6							
HATD	**Hatta, Dubai**	**28.02**	**261**		P		**P**	**20 13 12.6 +2.5**
HATD					P		**P**	**20 13 12.6 +2.5**
HATD					P		**P**	**20 13 12.6 +2.5**
HATD					S		**S**	**20 17 58.2 +3.6**
HATD					S		**S**	**20 17 58.2 +3.6**
HATD					S		**S**	**20 17 58.2 +3.6**
BSY	**Bisya**	**28.06**	**256**		P		**P**	**20 13 13.5 +3.0**
	SNR=20							
BSY					P		**P**	**20 13 13.5 +3.0**
	SNR=20							
BSY					P		**P**	**20 13 13.5 +3.0**
	SNR=20							
BSY					S		**S**	**20 17 58.7 +3.5**
BSY					S		**S**	**20 17 58.7 +3.5**
BSY					S		**S**	**20 17 58.7 +3.5**
ASHO	**Ashiyiah**	**28.14**	**261**	*i*	P		**P**	**20 13 13.1 +1.9**
	SNR=28							
ASHO	**Ashiyiah**	**28.14**	**261**		P		**P**	**20 13 14.0 +2.8**
	SNR=18							
ASHO					P		**P**	**20 13 14.0 +2.8**
	SNR=18							
ASHO					P		**P**	**20 13 14.0 +2.8**
	SNR=18							
ASHO					S		**S**	**20 17 59.3 +2.7**
ASHO					S		**S**	**20 17 59.3 +2.7**
ASHO					S		**S**	**20 17 59.3 +2.7**
MHTO	**MHTO**	**28.30**	**252**		P		**P**	**20 13 13.4 +0.8**
	SNR=41							
MHTO					P		**P**	**20 13 13.4 +0.8**
	SNR=41							
MHTO					P		**P**	**20 13 13.4 +0.8**
	SNR=41							
MHTO					S		**S**	**20 18 01.9 +2.9**
MHTO					S		**S**	**20 18 01.9 +2.9**
MHTO					S		**S**	**20 18 01.9 +2.9**
ARQ	**Araqi**	**28.34**	**258**		P		**P**	**20 13 14.7 +1.8**
	SNR=15							
ARQ					P		**P**	**20 13 14.7 +1.8**
	SNR=15							
ARQ					P		**P**	**20 13 14.7 +1.8**
	SNR=15							
ARQ					S		**S**	**20 18 03.5 +3.8**
ARQ					S		**S**	**20 18 03.5 +3.8**
ARQ					S		**S**	**20 18 03.5 +3.8**
NAZ	**Nazwa, Dubai**	**28.35**	**262**	*i*	P		**P**	**20 13 14.7 +1.7**
	SNR=18							
NAZ	**Nazwa, Dubai**	**28.35**	**262**		P		**P**	**20 13 15.9 +2.9**
	SNR=8.7							
NAZ					P		**P**	**20 13 15.9 +2.9**
	SNR=8.7							
NAZ					P		**P**	**20 13 15.9 +2.9**
	SNR=8.7							
NAZ					S		**S**	**20 18 03.0 +3.3**
NAZ					S		**S**	**20 18 03.0 +3.3**
NAZ					S		**S**	**20 18 03.0 +3.3**
FAQ	**Al Faqa, Dubai**	**28.50**	**261**	*i*	P		**P**	**20 13 16.1 +1.7**
	SNR=6.7							
FAQ	**Al Faqa, Dubai**	**28.50**	**261**		P		**P**	**20 13 15.6 +1.2**
	SNR=13							
FAQ					P		**P**	**20 13 15.6 +1.2**
	SNR=13							
FAQ					P		**P**	**20 13 15.6 +1.2**
	SNR=13							
FAQ					S		**S**	**20 18 02.0 -0.2**
FAQ					S		**S**	**20 18 02.0 -0.2**
FAQ					S		**S**	**20 18 02.0 -0.2**
BSI	**Banda Aceh**	**28.56**	**162**		P		**P**	**20 13 12.1 -2.8**
	comp=Z,22μmcomp=Z,107nm,1.1s							
DL2	**Dalian**	**28.62**	**68**		P		**P**	**20 13 16.4 +1.1**
DL2					S		**S**	**20 18 04.4 +0.6**
DL2					pmax		pmax	
	comp=Z,310nm,0.8s							
DL2					pmax		pmax	
	comp=Z,9μm,7.8s							
DL2					L		L	
	comp=Z,37μm,14.2s							
DL2					L		L	
	comp=Z,68μm,13.3s							
DL2					L		L	
	comp=Z,76μm,13.7s							
ALNE	**Al Ain**	**28.66**	**260**	*i*	P		**P**	**20 13 17.2 +1.4**
	SNR=13							
ALNE	**Al Ain**	**28.66**	**260**		P		**P**	**20 13 17.7 +1.9**
	SNR=9.1							
ALNE					P		**P**	**20 13 17.7 +1.9**
	SNR=9.1							
ALNE					S		**S**	**20 18 08.1 +3.4**
ALNE					S		**S**	**20 18 08.1 +3.4**
ASUD	**Al Ashush, Dub**	**28.77**	**261**	*i*	P		**P**	**20 13 18.3 +1.6**
	SNR=7.8							
ASUD	**Al Ashush, Dub**	**28.77**	**261**		P		**P**	**20 13 20.6 +3.8**
	SNR=7.1							
ASUD					P		**P**	**20 13 20.6 +3.8**
	SNR=7.1							
ASUD					P		**P**	**20 13 20.6 +3.8**
	SNR=7.1							
ASUD					S		**S**	**20 18 09.4 +3.0**
ASUD					S		**S**	**20 18 09.4 +3.0**
ASUD					S		**S**	**20 18 09.4 +3.0**
QZH2	**Quanzhou**	**28.85**	**98**	⇓*i*	P		**P**	**20 13 18.8 +1.3**
QZH2					S		**S**	**20 18 09.4 +1.8**
QZH2					pmax		pmax	
	comp=Z,140nm,1.3s							
QZH2					pmax		pmax	
	comp=Z,9μm,10.1s							
QZH2					L		L	
	comp=Z,64μm,17.3s							
QZH2					L		L	
	comp=Z,40μm,16.1s							
QZH2					L		L	
	comp=Z,79μm,14.8s							
KNMB	**Chin-men Tao**	**28.87**	**99**		P		**P**	**20 13 16.8 -0.8**
DLV	**Lat**	**28.91**	**132**		P		**P**	**20 13 19.3 +1.0**
DLV	**Lat**	**28.91**	**132**	⇓	P		**P**	**20 13 19.2 +1.0**
DLV	**Lat**	**28.91**	**132**		P		**P**	**20 13 19.5 +1.2**
AJN	**Ajban**	**29.08**	**261**	*i*	P		**P**	**20 13 20.6 +1.1**
	SNR=9.0							
AJN	**Ajban**	**29.08**	**261**		P		**P**	**20 13 21.8 +2.3**
	SNR=9.3							
AJN					P		**P**	**20 13 21.8 +2.3**
	SNR=9.3							
AJN					P		**P**	**20 13 21.8 +2.3**
	SNR=9.3							
SSE	**Sheshan**	**29.09**	**84**		P		**P**	**20 13 20.8 +1.2**
SSE					S		**S**	**20 18 11.1 -0.2**
SSE					pmax		pmax	
	comp=Z,42nm,1.3s							
SSE					pmax		pmax	
	comp=Z,4μm,7.3s							
DQM	**DQM**	**29.20**	**251**		P		**P**	**20 13 22.1 +1.6**
	SNR=17							
DQM					P		**P**	**20 13 22.1 +1.6**
	SNR=17							
DQM					S		**S**	**20 18 14.1 +0.9**
DQM					S		**S**	**20 18 14.1 +0.9**
LHMI	**Lhok Sumawe**	**29.27**	**159**		P		**P**	**20 13 23.5 +2.3**
LHMI	**Lhok Sumawe**	**29.27**	**159**		P		**P**	**20 13 23.3 +2.1**
LHMI	**Lhok Sumawe**	**29.27**	**159**	⇓	P		**P**	**20 13 23.5 +2.3**
LHMI	**Lhok Sumawe**	**29.27**	**159**		P		**P**	**20 13 24.1 +2.9**
LHMI	**Lhok Sumawe**	**29.27**	**159**		P		**P**	**20 13 24.4 +3.2**
HIA	**Hailar**	**29.28**	**47**		P		**P**	**20 13 22.2 +1.1**
HIA	**Hailar**	**29.28**	**47**	*d*	iP		**P**	**20 13 22.1 +1.0**
HIA					pmax		pmax	
	comp=Z,294nm,1.3s							
HIA					MLR		MLR	
	comp=Z,36μm,14.0s							
HILR	**Hailar Array B**	**29.39**	**46**		P		**P**	**20 13 22.7 +0.6**
	comp=Z,122nm,0.9s,baz=241,slow=7.5,SNR=78							
HILR					LR		LR	20 26 28.6
	comp=Z,17μm,19.1s,baz=110,slow=39							
	comp=Z,122nm,0.9s							
UMZA	**Um Al Zommool**	**29.74**	**258**		P		**P**	**20 13 26.7 +1.3**
UMZA					P		**P**	**20 13 26.7 +1.3**
UMZA					P		**P**	**20 13 26.7 +1.3**
SVE	**Sverdlovsk**	**29.78**	**331**	*ce*	P		**P**	**20 13 25.7 +0.3**
SVE					*e*S		**S**	**20 18 25.5 +3.9**
SVE					pmax		pmax	
	comp=Z,525nm,1.2s							
SVE					pmax		pmax	
	comp=Z,4μm,12.3s							
SVE					MLR		MLR	
	comp=Z,90μm,12.0s							
MLSI	**Meulaboh, Aceh**	**30.03**	**161**		P		**P**	**20 13 28.0 +0.1**
	comp=Z,15μmcomp=Z,5μmcomp=Z,223nm,1.0s							
SNY	**Shenyang**	**30.26**	**63**	⇓	P		**P**	**20 13 29.9 +0.2**
SNY					S		**S**	**20 18 32.0 +2.6**
SNY					pmax		pmax	
	comp=Z,170nm,1.1s							
SNY					pmax		pmax	
	comp=Z,6μm,6.4s							
SNY					L		L	
	comp=Z,162μm,25.5s							
SNY					L		L	
	comp=Z,27μm,19.1s							
SNY					L		L	
	comp=Z,62μm,16.1s							
MZWR	**Madinat Zayed**	**30.33**	**261**		P		**P**	**20 13 31.8 +1.2**
MZWR					S		**S**	**20 18 31.1 +0.2**
ARTI	**Arti**	**30.46**	**328**		P		**P**	**20 13 30.7 -0.7**
	comp=Z,142nm,0.9s,baz=132,slow=6.2,SNR=179							
ARTI					LR		LR	20 26 55.8
	comp=Z,38μm,18.8s,baz=130,slow=38							
	comp=Z,142nm,0.9s							
ARTI	**Arti**	**30.46**	**328**	*d*	iP		**P**	**20 13 31.1 -0.3**
ARTI								20 16 26.3
ARTI					S		**S**	**20 18 34.1 +1.9**
ARTI					SS		**SnSn**	**20 20 06.2 -1.5**
ARTI					pmax		pmax	
	comp=Z,573nm,1.9s							
ARTI					MLR		MLR	
	comp=Z,36μm,13.0s							
ARTI	**Arti**	**30.46**	**328**		P		**P**	**20 13 29.9 -1.5**
ARTI	**Arti**	**30.46**	**328**	⇓	P		**P**	**20 13 31.0 -0.3**
JRN	**Qarnain Island**	**30.71**	**264**		P		**P**	**20 13 36.4 +2.5**
	SNR=6.5							
JRN					P		**P**	**20 13 36.4 +2.5**
	SNR=6.5							
JRN					S		**S**	**20 18 34.8 -2.0**
JRN					S		**S**	**20 18 34.8 -2.0**
BOD	**Bodaibo**	**30.83**	**28**	*e*	P		**P**	**20 13 35.6 +0.9**
BOD					pmax		pmax	
	comp=Z,416nm,1.6s							
SUJ	**Sinuiju**	**30.86**	**66**		P		**P**	**20 13 34.8 -0.3**
SUJ					AmB			
	comp=Z,3μm,4.0s							
MZR	**Muzera**	**30.99**	**260**	*i*	P		**P**	**20 13 37.1 +0.6**
	SNR=25							
MZR	**Muzera**	**30.99**	**260**		P		**P**	**20 13 37.8 +1.3**
	SNR=16							
MZR					P		**P**	**20 13 37.8 +1.3**
	SNR=16							
MZR					P		**P**	**20 13 37.8 +1.3**
	SNR=16							
MZR					S		**S**	**20 18 38.3 -3.0**
MZR					S		**S**	**20 18 38.3 -3.0**
MZR					S		**S**	**20 18 38.3 -3.0**
GHWR	**Ruwais**	**31.08**	**262**		P		**P**	**20 13 38.3 +1.1**
GHWR					P		**P**	**20 13 38.3 +1.1**
GHWR					P		**P**	**20 13 38.3 +1.1**
GHWR					S		**S**	**20 18 43.4 +0.7**
GHWR					S		**S**	**20 18 43.4 +0.7**
GHWR					S		**S**	**20 18 43.4 +0.7**
KCSI	**Kotacane, Aceh**	**31.14**	**159**		P		**P**	**20 13 36.6 -1.1**
	comp=Z,11μmcomp=Z,72nm,1.2s							
LKRN	**Lenkeran, Azer**	**31.18**	**291**		P		**P**	**20 13 40.0 +2.1**
TPTI		**31.21**	**160**		P		**P**	**20 13 36.8 -1.5**
	comp=Z,15μmcomp=Z,4μmcomp=Z,176nm,1.3s							
TPUB	**Ta-pu**	**31.22**	**99**		P		**P**	**20 13 40.8 +2.3**
TPUB	**Ta-pu**	**31.22**	**99**		IAmb		IAmb	20 13 45.7
	comp=Z,517nm,1.7s							
TPUB	**Ta-pu**	**31.22**	**99**		P		**P**	**20 13 40.8 +2.3**
TATO	**Taipei**	**31.25**	**96**		P		**P**	**20 13 41.6 +2.9**
TATO	**Taipei**	**31.25**	**96**		P		**P**	**20 13 41.2 +2.5**
YHNB	**Yeheng**	**31.27**	**96**		P		**P**	**20 13 41.0 +2.0**
YHNB	**Yeheng**	**31.27**	**96**		P		**P**	**20 13 41.2 +2.2**
SSLB	**Suanglung**	**31.28**	**98**		P		**P**	**20 13 41.1 +2.1**
SSLB	**Suanglung**	**31.28**	**98**		P		**P**	**20 13 41.5 +2.5**
TSI	**Tuntungan**	**31.41**	**157**		P		**P**	**20 13 41.9 +1.8**
NACB	**Ninganchiao**	**31.66**	**97**		P		**P**	**20 13 44.8 +2.5**
NACB	**Ninganchiao**	**31.66**	**97**		IAmb		IAmb	20 13 47.6
	comp=Z,842nm,1.9s							
NACB					IAMs_20		IAMs_20	20 27 17.2
	comp=Z,85μm,21.0s							
NACB	**Ninganchiao**	**31.66**	**97**		P		**P**	**20 13 45.2 +2.9**
YULB	**Yu-li**	**31.73**	**99**		P		**P**	**20 13 45.0 +2.0**
YULB	**Yu-li**	**31.73**	**99**		IAmb		IAmb	20 13 50.9
	comp=Z,522nm,1.5s							
YULB					IAMs_20		IAMs_20	20 27 28.4
	comp=Z,55μm,21.0s							
YULB	**Yu-li**	**31.73**	**99**		P		**P**	**20 13 45.4 +2.4**
SHAO	**Shalim**	**31.76**	**250**		P		**P**	**20 13 46.5 +3.3**
SNSI	**Sinabang, Aceh**	**31.79**	**162**		P		**P**	**20 13 44.4 +1.0**
TWG	**Pinlang**	**31.80**	**100**		P		**P**	**20 13 46.4 +2.8**
TWGBT	**Beinan**	**31.80**	**100**		P		**P**	**20 13 46.0 +2.4**
CN2	**Changchun**	**31.82**	**59**	⇓*i*	P		**P**	**20 13 43.6 +0.1**
CN2					PP		**PP**	**20 14 48.8 -6.5**
CN2					S		**S**	**20 18 51.3 -2.5**
CN2					pmax		pmax	
	comp=Z,180nm,0.9s							
CN2					pmax		pmax	
	comp=Z,6μm,7.0s							
CN2					L		L	
	comp=Z,73μm,10.0s							
CN2					L		L	
	comp=Z,118μm,10.0s							
CN2					L		L	
	comp=Z,150μm,10.0s							
PYAG	**Pyongyang**	**31.84**	**68**		P		**P**	**20 13 43.8 0.0**
PYAG					S		**S**	**20 18 52.5 -1.8**
PYAG					AmB			
	comp=Z,3μm,2.8s							
PYAG					AMS		AMS	
	comp=Z,39μm,10.0s							
HJU	**Haeju**	**31.86**	**70**		P		**P**	**20 13 43.6 -0.3**
HJU					S		**S**	**20 18 52.2 -2.3**
HJU					AmB			
	comp=Z,5μm,2.6s							
HJU					AMS		AMS	
	comp=Z,49μm,10.8s							
AKT	**Akhty**	**32.01**	**297**	*e*	P		**P**	**20 13 46.2 +0.8**
AKT				*e*				20 14 50.1
AKT				*e*				20 16 31.3
AKT				*e*	S		**S**	**20 18 55.0 -2.1**
AKT				*e*	SS		**SnSn**	**20 20 48.0 +2.0**
AKT				*e*				20 24 14.8
AKT					pmax		pmax	
	comp=Z,885nm,1.6s							
AKT					MLR		MLR	
	comp=Z,27μm,17.0s							
SLWR	**Sila**	**32.02**	**263**		P		**P**	**20 13 46.8 +1.3**
SLWR					P		**P**	**20 13 46.8 +1.3**
SLWR					P		**P**	**20 13 46.8 +1.3**
SLWR					S		**S**	**20 19 00.5 +3.2**
SLWR					S		**S**	**20 19 00.5 +3.2**
SLWR					S		**S**	**20 19 00.5 +3.2**
PSI	**Prapat**	**32.18**	**157**		P		**P**	**20 13 47.2 +0.1**
PSI	**Prapat**	**32.18**	**157**		P		**P**	**20 13 46.1 -1.0**
PSI					pmax		pmax	
	comp=Z,1μm,1.5s							
PSI					MLR		MLR	
	comp=Z,32μm,20.0s							
SAKB	**Bahrain**	**32.25**	**267**		P		**P**	**20 13 48.3 +0.8**
MAK	**Makhachkala**	**32.26**	**299**	*e*	P		**P**	**20 13 46.0 -1.4**
MAK				*e*				20 14 53.9
MAK				*e*	S		**S**	**20 18 59.0 -1.7**
MAK					pmax		pmax	
	comp=Z,393nm,1.6s							
MAK					MLR		MLR	
	comp=Z,61μm,20.0s							
RPSI	**Rantau Prapat**	**32.28**	**157**		P		**P**	**20 13 46.1 -1.7**
SEKA	**Sheki**	**32.40**	**296**		P		**P**	**20 13 50.0 +1.3**
DMTO	**DMTO**	**32.46**	**250**		P		**P**	**20 13 51.7 +2.3**
DMTO					S		**S**	**20 19 07.8 +3.5**
MNGR	**Mingechevir, A**	**32.48**	**295**		P		**P**	**20 13 51.6 +2.3**
INCN	**Inchon**	**32.61**	**71**		P		**P**	**20 13 50.8 +0.2**
INCN	**Inchon**	**32.61**	**71**		P		**P**	**20 13 50.4 -0.2**
INCN					pmax		pmax	
	comp=Z,1μm,1.3s							
INCN					MLR		MLR	
	comp=Z,43μm,20.0s							
INCN	**Inchon**	**32.61**	**71**		P		**P**	**20 13 51.5 +0.9**
INCN					S		**S**	**20 19 03.1 -3.3**
INCN	**Inchon**	**32.61**	**71**		P		**P**	**20 13 50.4 -0.2**
INCN	**Inchon**	**32.61**	**71**	⇑	P		**P**	**20 13 49.9 -0.7**
INCN	**Inchon**	**32.61**	**71**		P		**P**	**20 13 50.9 +0.3**
GANJ	**Ganja**	**33.05**	**295**		P		**P**	**20 13 55.8 +1.3**
RBK	**Rabkut**	**33.17**	**250**		P		**P**	**20 13 56.9 +1.3**
	SNR=7.7							
RBK					P		**P**	**20 13 56.9 +1.3**
	SNR=7.7							
RBK					S		**S**	**20 19 12.3 -3.0**
RBK					S		**S**	**20 19 12.3 -3.0**
GSI	**Gunungsitoli**	**33.18**	**160**		P		**P**	**20 13 57.1 +1.4**
GSI	**Gunungsitoli**	**33.18**	**160**		P		**P**	**20 13 56.8 +1.1**
GSI	**Gunungsitoli**	**33.18**	**160**		P		**P**	**20 13 58.0 +2.3**
	comp=Z,17μmcomp=Z,1μm,1.5s							
GSI	**Gunungsitoli**	**33.18**	**160**		P		**P**	**20 13 57.8 +2.1**
HHU	**Hamhung**	**33.19**	**66**		P		**P**	**20 13 55.5 0.0**
HHU					S		**S**	**20 19 13.1 -2.2**
HHU					AmB			
	comp=Z,4μm,3.0s							
HHU					AMS		AMS	
	comp=Z,46μm,17.0s							
WHFO	**Wadi Hawf**	**33.28**	**251**		P		**P**	**20 13 58.3 +1.7**
	SNR=10							
WHFO					P		**P**	**20 13 58.3 +1.7**
	SNR=10							
WHFO					S		**S**	**20 19 20.4 +3.3**
WHFO					S		**S**	**20 19 20.4 +3.3**
TJN	**Taejon**	**33.30**	**73**		P		**P**	**20 13 55.9 -0.7**
TJN	**Taejon**	**33.30**	**73**	*d*	iP		**P**	**20 13 55.9 -0.7**
BNX	**BinXian**	**33.44**	**56**	⇓	P		**P**	**20 13 58.1 +0.4**
BNX					S		**S**	**20 19 20.0 +1.0**
BNX					pmax		pmax	
	comp=Z,310nm,1.7s							
BNX					pmax		pmax	
	comp=Z,7μm,6.9s							
BNX					L		L	
	comp=Z,160μm,12.9s							
BNX					L		L	
	comp=Z,17μm,12.3s							
BNX					L		L	
	comp=Z,61μm,10.2s							
KS19	**Wonju Array Si**	**33.59**	**71**		IAmb		IAmb	20 14 05.6
	comp=Z,876nm,1.7s							
KSAR	**Wonju Array Be**	**33.61**	**71**		P		**P**	**20 13 58.5 -0.7**
KSAR	**Wonju Array Be**	**33.61**	**71**		P		**P**	**20 13 58.5 -0.7**
KSRS	**Korea Array**	**33.64**	**71**		P		**P**	**20 13 59.1 -0.4**
	comp=Z,107nm,0.7s,baz=272,slow=8.3,SNR=195							
KSRS					LR		LR	20 28 02.1
	comp=Z,35μm,20.2s,baz=275,slow=37							
	comp=Z,107nm,0.7s							
NAX	**Nakhchivan**	**33.72**	**292**		P		**P**	**20 14 02.8 +2.4**
SZP	**Santa**	**33.92**	**109**		P		**P**	**20 14 04.5 +2.4**
BELG	**Belogornoye**	**34.11**	**316**		P		**P**	**20 14 02.7 -0.7**
	comp=Z,333nm,0.9s,baz=90,slow=3.0,SNR=151							
BELG					PcP		**PcP**	**20 16 39.8 -0.8**
	comp=Z,230nm,1.1s,baz=125,slow=3.4,SNR=4.4							
BELG					LR		LR	20 28 53.2
	comp=Z,45μm,21.0s,baz=99,slow=38							
	comp=Z,333nm,0.9s							
BELG	**Belogornoye**	**34.11**	**316**	*d*	iP		**P**	**20 14 03.1 -0.3**
BELG					pmax		pmax	
	comp=Z,174nm,1.4s							
BELG					MLR		MLR	
	comp=Z,7μm,18.0s							
PACPP	**Pamplona Cagay**	**34.15**	**107**	*i*	P		**P**	**20 14 06.5 +2.4**
PACPP				*i*	S		**S**	**20 19 34.9 +4.5**
TBLG	**Delisi**	**34.26**	**297**		P		**P**	**20 14 06.0 +1.1**
GNI	**Garni**	**34.27**	**294**		P		**P**	**20 14 07.1 +1.9**
	comp=Z,226nm,0.9s,baz=159,slow=2.4,SNR=97							
GNI	**Garni**	**34.27**	**294**		P		**P**	**20 14 07.1 +1.9**
GNI	**Garni**	**34.27**	**294**	*ce*	P		**P**	**20 14 07.0 +1.9**
GNI					pmax		pmax	
	comp=Z,585nm,1.2s							
GNI					MLR		MLR	
	comp=Z,16μm,19.0s							
GNI	**Garni**	**34.27**	**294**		P		**P**	**20 14 07.7 +2.5**
GNI					P		**P**	**20 14 07.7 +2.5**
GNI					S		**S**	**20 19 32.0 -0.4**
GNI					S		**S**	**20 19 32.0 -0.4**
GNI	**Garni**	**34.27**	**294**		P		**P**	**20 14 06.8 +1.6**
GNI	**Garni**	**34.27**	**294**	⇓	P		**P**	**20 14 07.1 +1.9**
GNI	**Garni**	**34.27**	**294**		P		**P**	**20 14 08.1 +2.9**
MNSI	**Mandailing Nat**	**34.28**	**157**		P		**P**	**20 14 06.0 +0.8**
	comp=Z,730nm,0.9s							
HEH	**HeiHe**	**34.32**	**48**	*e*	P		**P**	**20 14 05.8 +0.5**
HEH					pP		**pP**	**20 14 10.3 +0.5**
HEH					S		**S**	**20 19 35.3 +2.8**
HEH					sS		**sS**	**20 19 43.1 +3.1**
HEH					ScS		**ScS**	**20 24 25.6 -3.0**
HEH					pmax		pmax	
	comp=Z,300nm,1.5s							
HEH					pmax		pmax	
	comp=Z,6μm,7.0s							
HEH					L		L	
	comp=Z,53μm,11.6s							
HEH					L		L	
	comp=Z,82μm,12.4s							
HEH					L		L	
	comp=Z,124μm,12.4s							
PBSI	**Pulau Batu**	**34.68**	**160**		P		**P**	**20 14 11.1 +2.4**
MDJ	**Mudanjiang**	**34.86**	**58**		P		**P**	**20 14 10.5 +0.5**
MDJ	**Mudanjiang**	**34.86**	**58**		IAmb		IAmb	20 14 14.8
	comp=Z,703nm,1.9s							
MDJ					IAMs_20		IAMs_20	20 28 55.6
	comp=Z,57μm,21.0s							
MDJ	**Mudanjiang**	**34.86**	**58**		P		**P**	**20 14 10.5 +0.5**
MDJ					S		**S**	**20 19 41.1 +0.1**
MDJ					pmax		pmax	
	comp=Z,130nm,2.3s							
MDJ					L		L	
	comp=Z,36μm,10.0s							
MDJ					L		L	
	comp=Z,64μm,16.5s							
MDJ					L		L	
	comp=Z,89μm,16.7s							
KAAM	**Kaadhehdhoo**	**34.94**	**205**		P		**P**	**20 14 13.7 +2.8**
MYKOM	**Kota Tinggi**	**34.99**	**149**		P		**P**	**20 14 12.1 +0.8**
MYKOM	**Kota Tinggi**	**34.99**	**149**		IAmb		IAmb	20 14 15.5
	comp=Z,610nm,1.6s							
MYKOM	**Kota Tinggi**	**34.99**	**149**	⇓	P		**P**	**20 14 11.8 +0.4**
JFU	**Fukue jima 2**	**35.03**	**79**		P		**P**	**20 14 12.2 +0.5**
NCK	**Nalchik**	**35.15**	**300**	*d*	iP		**P**	**20 14 12.5 -0.1**
NCK					pmax		pmax	
	comp=Z,833nm,1.8s							
NCK					MLR		MLR	
	comp=Z,42μm,18.0s							
JTU	**Tsushima**	**35.21**	**76**		P		**P**	**20 14 13.9 +0.8**
JTU	**Tsushima**	**35.21**	**76**	⇓	P		**P**	**20 14 13.0 -0.1**
JTU	**Tsushima**	**35.21**	**76**		P		**P**	**20 14 14.1 +1.0**
JTU	**Tsushima**	**35.21**	**76**		P		**P**	**20 14 13.8 +0.6**
BKNI	**Bangkinang**	**35.22**	**155**		P		**P**	**20 14 14.0 +0.7**
BKNI	**Bangkinang**	**35.22**	**155**		P		**P**	**20 14 13.8 +0.4**
BKNI	**Bangkinang**	**35.22**	**155**	⇓	P		**P**	**20 14 12.3 -1.1**
BKNI	**Bangkinang**	**35.22**	**155**		P		**P**	**20 14 14.1 +0.7**
BKNI	**Bangkinang**	**35.22**	**155**		P		**P**	**20 14 14.6 +1.3**
ZEA	**Zeya**	**35.24**	**42**	*e*	P		**P**	**20 14 14.3 +1.1**
ZEA				*e*				20 15 29.7
ZEA				*e*	S		**S**	**20

BTDF **Bukit Timah Da** 35.34 150 P **P** **20 14 15.6 +1.2**
GOF **Gofitskoye** 35.63 303*d* iP **P** **20 14 18.1 +1.4**
GOF eS **S** **20 19 58.3 +5.4**
PSTR **Posyet** 35.65 61 *e*P **P** **20 14 18.0 +1.1**
KBZ **Khabaz** 35.66 300 P **P** **20 14 17.3 +0.3**
comp=Z,40nm,1.1s,baz=80,slow=11,SNR=42
KBZ LR LR 20 30 20.7
comp=Z,37μm,21.1s,baz=94,slow=39
comp=Z,40nm,1.1s
KBZ **Khabaz** 35.66 300*c*eP **P** **20 14 16.5 -0.4**
KBZ pmax pmax
comp=Z,155nm,1.4s
KBZ MLR MLR
comp=Z,34μm,19.0s
GEVA **Gevas** 35.68 291 IAmb IAmb 20 14 22.1
comp=Z,524nm,1.7s
KIRV **Kirov** 35.71 327 P **P** **20 14 15.2 -1.9**
comp=Z,302nm,0.9s,baz=118,slow=4.2,SNR=145
KIRV LR LR 20 30 07.5
comp=Z,26μm,20.9s,baz=124,slow=38
comp=Z,302nm,0.9s
KIRV **Kirov** 35.71 327*d* iP **P** **20 14 16.9 -0.2**
PPI **Padang Panjang** 35.73 156 P **P** **20 14 17.8 +0.1**
comp=Z,14μmcomp=Z,7μmcomp=Z,308nm,1.3s
EPOS **Posof** 35.77 297 P **P** **20 14 20.2 +2.2**
KVAR **Kislovodsk Arr** 35.82 301 P **P** **20 14 19.1 +0.7**
comp=Z,9.3nm,0.8s,baz=63,slow=6.8,SNR=5.6
KVAR S **S** **20 19 54.6 -1.3**
comp=Z,5.5nm,0.8s,baz=138,slow=16,SNR=0.8
KVAR LR LR 20 30 18.6
comp=Z,59μm,19.7s,baz=215,slow=38
comp=Z,9.3nm,0.8s
KIV **Kislovodsk** 35.83 301 ⇑P **P** **20 14 20.3 +1.9**
KIV **Kislovodsk** 35.83 301 *i* P **P** **20 14 19.2 +0.7**
SNR=74
KIV **Kislovodsk** 35.83 301 *e*P **P** **20 14 18.0 -0.5**
KIV *e* 20 15 38.6
KIV *e* 20 16 46.9
KIV *e*S **S** **20 19 55.0 -1.0**
KIV *e*SSS SSS 20 22 36.2
KIV pmax pmax
comp=Z,1μm,4.3s
KIV pmax pmax
comp=Z,146nm,1.0s
KIV MLR MLR
comp=Z,30μm,16.0s
KIV **Kislovodsk** 35.83 301 P **P** **20 14 19.4 +0.9**
KIV P **P** **20 14 19.4 +0.9**
KIV P **P** **20 14 19.4 +0.9**
KIV S **S** **20 19 58.5 +2.5**
KIV S **S** **20 19 58.5 +2.5**
KIV S **S** **20 19 58.5 +2.5**
KIV **Kislovodsk** 35.83 301 P **P** **20 14 19.1 +0.7**
KIV IAmb IAmb 20 14 25.1
comp=Z,552nm,1.6s
KIV **Kislovodsk** 35.83 301 ⇓P **P** **20 14 18.9 +0.4**
KIV **Kislovodsk** 35.83 301 P **P** **20 14 18.9 +0.4**
KIV S **S** **20 20 01.4 +5.3**
KIV **Kislovodsk** 35.83 301 P **P** **20 14 19.2 +0.7**
comp=Z,5μmcomp=Z,174nm,1.6s
KIV **Kislovodsk** 35.83 301 P **P** **20 14 19.6 +1.1**
SHA1 **Shidzhatmaz** 35.84 300*d* iP **P** **20 14 19.6 +0.8**
TPRI **Tanjung Pinang** 36.06 149 P **P** **20 14 21.7 +1.1**
comp=Z,11μmcomp=Z,8μmcomp=Z,98nm,1.0s
PDSI **Padang** 36.17 156 P **P** **20 14 21.6 0.0**
comp=Z,11μmcomp=Z,12μmcomp=Z,744nm,1.6s
JOW **Kunigami** 36.26 89 LR LR 20 29 53.6
comp=Z,36μm,21.8s,baz=253,slow=37
JOW **Kunigami** 36.26 89 P **P** **20 14 22.8 +0.5**
JOW **Kunigami** 36.26 89 ⇓P **P** **20 14 21.1 -1.2**
TGY **Tagaytay City** 36.29 113 LR LR 20 29 00.7
comp=Z,50μm,20.0s,baz=315,slow=36
NRIK **Noril'sk** 36.31 0 P **P** **20 14 20.7 -1.5**
comp=Z,423nm,0.9s,baz=167,slow=8.5,SNR=250
NRIK PP **PnPn** **20 15 43.6 -0.3**
comp=Z,192nm,1.3s,baz=169,slow=8.4,SNR=5.2
NRIK S **S** **20 20 02.0 -0.6**
comp=Z,3.6nm,0.8s,baz=225,slow=15,SNR=1.1
NRIK LR LR 20 31 02.2
comp=Z,46μm,19.9s,baz=186,slow=39
comp=Z,423nm,0.9s
NRIK **Noril'sk** 36.31 0*d* iP **P** **20 14 22.0 -0.2**
NRIK pmax pmax
comp=Z,582nm,1.0s
NRIK MLR MLR
comp=Z,59μm,16.0s
NRIK **Noril'sk** 36.31 0 IAmb IAmb 20 14 24.4
comp=Z,571nm,0.9s
VLA **Vladivostok** 36.45 61*c* iP **P** **20 14 23.9 +0.2**
VLA pmax pmax
comp=Z,537nm,1.8s
VLA MLR MLR
comp=Z,50μm,16.0s
GURO **Guroymak-BITLI** 36.46 292 IAmb IAmb 20 14 29.1
comp=Z,797nm,1.8s
SDSI **Sungai Dareh** 36.52 155 P **P** **20 14 23.5 -1.0**
comp=Z,12μmcomp=Z,3μmcomp=Z,73nm,1.0s
BATM **Batumi** 36.54 297 ⇑P **P** **20 14 26.3 +1.8**
BATM **Batumi** 36.54 297 P **P** **20 14 27.6 +3.1**
USA0B **Ussuriysk Arra** 36.55 59*d* iP **P** **20 14 24.4 -0.2**
USRK **Ussuriysk Ar.** 36.55 59 P **P** **20 14 24.4 -0.1**
comp=Z,75nm,1.0s,baz=262,slow=8.5,SNR=120
USRK LR LR 20 30 18.3
comp=Z,55μm,18.4s,baz=267,slow=38
comp=Z,75nm,1.0s
JNU **Nakatsue** 36.69 78 P **P** **20 14 25.8 -0.1**
comp=Z,143nm,1.1s,baz=297,slow=4.3,SNR=40
JNU S **S** **20 20 05.9 -3.4**
comp=Z,2.2nm,0.7s,baz=236,slow=23,SNR=1.2
JNU LR LR 20 30 07.3
comp=Z,40μm,19.6s,baz=289,slow=37
comp=Z,143nm,1.1s
JNU **Nakatsue** 36.69 78 P **P** **20 14 26.8 +0.9**
JSU **Suzuyama** 36.71 80 P **P** **20 14 26.2 +0.1**
JSU **Suzuyama** 36.71 80 ⇓P **P** **20 14 25.9 -0.2**
LQP **Lukban** 36.75 113 *e*P **P** **20 14 25.6 -1.1**
LABN **Labinsk** 37.26 302 *e*P **P** **20 14 30.7 +0.1**
LABN *e* 20 16 01.9
LABN *e*S **S** **20 20 17.3 -0.4**
LABN pmax pmax
comp=Z,899nm,1.3s
LABN pmax pmax
comp=E,92nm,1.4s
LABN pmax pmax
comp=N,52nm,1.3s
LABN MLR MLR
comp=Z,41μm,17.0s
VRH **Novokhopyorsk** 37.34 313 *e*P **P** **20 14 31.2 0.0**
VRH *i* S **S** **20 20 21.0 +2.2**
VRH pmax pmax
comp=Z,2μm,1.8s
VRH pmax pmax
comp=Z,1μm,1.6s
VRH MLR MLR
comp=Z,65μm,19.0s
PPR **Puerto Princes** 37.41 121 *i* P **P** **20 14 33.1 +0.9**
RAYN **Ar Rayn** 37.42 266 *i* P **P** **20 14 32.3 0.0**
SNR=50
RAYN **Ar Rayn** 37.42 266 P **P** **20 14 31.1 -1.1**
RAYN pmax pmax
comp=Z,357nm,1.8s
RAYN MLR MLR
comp=Z,44μm,21.0s
RAYN **Ar Rayn** 37.42 266 P **P** **20 14 32.3 0.0**
RAYN S **S** **20 20 23.8 +3.1**
RAYN **Ar Rayn** 37.42 266 P **P** **20 14 31.1 -1.1**
RAYN **Ar Rayn** 37.42 266 IAMs_20 IAMs_20 20 32 27.6
comp=Z,44μm,21.0s
RAYN **Ar Rayn** 37.42 266 P **P** **20 14 32.5 +0.3**
ERBR **Yeremizino-Bor** 37.48 304 *e*P **P** **20 14 31.5 -0.9**
ERBR *e* 20 16 01.1
ERBR *e*S **S** **20 20 21.4 +0.4**
ERBR pmax pmax
comp=Z,284nm,1.1s
ERBR pmax pmax
comp=N,33nm,1.3s
ERBR pmax pmax
comp=E,46nm,1.3s
ERBR MLR MLR
comp=Z,42μm,22.0s
KOPT **Kop Dagi** 37.53 294 IAmb IAmb 20 14 38.3
comp=Z,544nm,1.4s
GQP **Guinayangan** 37.57 112 *i* P **P** **20 14 34.8 +1.3**
SOC **Sochi** 37.97 300 *e*P **P** **20 14 35.6 -1.0**
SOC *e*S **S** **20 20 28.0 -0.5**
SOC pmax pmax
comp=Z,407nm,1.2s
SOC MLR MLR
comp=Z,36μm,19.0s
KKM **Kota Kinabalu** 38.33 128 P **P** **20 14 41.6 +1.6**
KKM **Kota Kinabalu** 38.33 128 P **P** **20 14 40.6 +0.6**
KKM **Kota Kinabalu** 38.33 128 ⇓P **P** **20 14 41.2 +1.2**
KELT **Kelkit** 38.47 295 P **P** **20 14 43.0 +1.9**
VORD **Divnogorie** 38.81 312 *e*P **P** **20 14 41.5 -2.1**
VORD *e*S **S** **20 20 40.0 -1.0**
VORD *e*SS **SnSn** **20 23 26.7 -3.5**
VORD pmax pmax
comp=Z,820nm,1.2s
VORD pmax pmax
comp=Z,1μm,1.4s
VORD smax smax
comp=N,1μm,5.6s
VORD MLR MLR
comp=Z,10μm,11.0s
VSR **Storozhevoye** 38.93 312*d* iP **P** **20 14 44.2 -0.4**
VSR *e*S **S** **20 20 37.2 -5.6**
VSR *e*SS **SnSn** **20 23 25.1 -8.0**
VSR pmax pmax
comp=Z,2μm,1.9s
VSR pmax pmax
comp=Z,1μm,2.0s
VSR MLR MLR
comp=Z,58μm,23.0s
VORR **Voronezh** 38.98 313 *e*P **P** **20 14 43.2 -1.7**
VORR *e*S S 20 20 34.3 -9.2
VORR *e*SS **SnSn** **20 23 28.6 -5.6**
VORR pmax pmax
comp=Z,2μm,1.8s
VORR pmax pmax
comp=Z,1μm,1.7s
VORR smax smax
comp=N,750nm,4.8s
JAD **Aida** 38.99 74 P **P** **20 14 44.2 -1.1**
JMN **Monobe** 39.01 76 P **P** **20 14 45.7 +0.2**
JMN **Monobe** 39.01 76 IAmb IAmb 20 14 55.0
comp=Z,394nm,0.9s
JMN **Monobe** 39.01 76 ⇓P **P** **20 14 45.8 +0.2**
JMN **Monobe** 39.01 76 P **P** **20 14 46.1 +0.6**
JMN **Monobe** 39.01 76 P **P** **20 14 45.9 +0.3**
JMZ **Minamidaito 2** 39.09 89 P **P** **20 14 49.1 +2.9**
JMZ **Minamidaito 2** 39.09 89 ⇑P **P** **20 14 48.6 +2.4**
ARPR **Arapgir-MALATY** 39.28 293 IAmb IAmb 20 14 53.0
comp=Z,2μm,1.6s
LPSR **Galich'ya Gora** 39.31 314*d* iP **P** **20 14 47.7 0.0**
LPSR *i* 20 16 16.5
LPSR *e*S **S** **20 20 47.7 -0.8**
LPSR *e*SS **SS** **20 23 38.4 -3.3**
LPSR pmax pmax
comp=Z,747nm,1.0s
LPSR pmax pmax
comp=Z,2μm,1.4s
LPSR MLR MLR
comp=Z,31μm,19.0s
ANN **Anapa** 39.61 302 *e*P **P** **20 14 50.1 -0.2**
ANN *e* 20 16 22.4
ANN *e*S **S** **20 20 56.9 +3.8**
ANN *e*SS **SS** **20 23 43.0 -4.9**
ANN pmax pmax
comp=N,492nm,1.4s
ANN pmax pmax
comp=Z,2μm,1.4s
ANN pmax pmax
comp=E,557nm,1.6s
ANN pmax pmax
comp=Z,942nm,1.2s
ANN pmax pmax
comp=N,272nm,1.2s
ANN pmax pmax
comp=E,245nm,1.3s
ANN smax smax
comp=E,5μm,7.6s
ANN smax smax
comp=N,3μm,7.8s
ANN MLR MLR
comp=E,46μm,18.0s
ANN MLR MLR
comp=Z,33μm,16.0s
PMBI **Palembang** 39.63 151 P **P** **20 14 52.6 +1.9**
PMBI **Palembang** 39.63 151 IAmb IAmb 20 14 57.3
comp=Z,987nm,1.3s
PMBI **Palembang** 39.63 151 P **P** **20 14 52.6 +1.9**
YAK **Yakutsk** 39.71 30 P **P** **20 14 51.0 +0.1**
comp=Z,364nm,0.8s,baz=230,slow=8.6,SNR=140
YAK S **S** **20 20 52.4 -1.8**
comp=Z,2.9nm,0.4s,baz=49,slow=23,SNR=1.6
comp=Z,364nm,0.8s
YAK **Yakutsk** 39.71 30 *e*P **P** **20 14 51.2 +0.3**
YAK *e* 20 16 23.1
YAK *e*PPP PPP 20 16 44.2
YAK *e* 20 16 57.7
YAK *e*S **S** **20 20 55.2 +1.0**
YAK *e*SSS SSS 20 24 09.7
YAK *e* 20 24 59.4
YAK pmax pmax
comp=Z,477nm,1.5s
YAK pmax pmax
comp=N,98nm,1.5s
YAK pmax pmax
comp=E,193nm,1.5s
YAK pmax pmax
comp=E,7μm,13.4s
YAK pmax pmax
comp=Z,8μm,12.1s
YAK pmax pmax
comp=N,3μm,12.4s
YAK smax smax
comp=E,7μm,15.1s
YAK smax smax
comp=N,5μm,14.3s
YAK MLR MLR
comp=N,9μm,15.0s
YAK MLR MLR
comp=Z,35μm,18.0s
YAK MLR MLR
comp=E,23μm,18.0s
YAK **Yakutsk** 39.71 30 P **P** **20 14 50.3 -0.6**
YAK IAmb IAmb 20 14 55.0
comp=Z,430nm,0.9s
JWT **Wachi** 39.92 73 P **P** **20 14 53.9 +0.9**
GRNR **Gornyy** 40.06 49 ⇑*i*P **P** **20 14 55.4 +1.3**
GRNR pmax pmax
comp=E,210nm,1.0s
GRNR pmax pmax
comp=Z,380nm,1.1s
GRNR MLR MLR
comp=N,23μm,11.0s
GRNR MLR MLR
comp=E,33μm,11.0s
GRNR MLR MLR
comp=Z,62μm,11.0s
GAZ **Gaziantep** 40.43 290 IAmb IAmb 20 15 01.7
comp=Z,1μm,1.9s
GAZ **Gaziantep** 40.43 290 ⇓P **P** **20 14 58.4 +1.0**
MOS **Moscow** 40.69 319 *e*P **P** **20 14 59.4 +0.2**
MOS *e* 20 16 35.6
MOS *e*PPP PPP 20 17 02.9
MOS *e*S **S** **20 21 10.0 +0.9**
MOS *e*SSS SSS 20 24 45.6
MOS pmax pmax
comp=E,2μm,1.8s
MOS pmax pmax
comp=E,616nm,1.4s
MOS pmax pmax
comp=Z,4μm,1.8s
MOS pmax pmax
comp=Z,2μm,1.8s
MOS smax smax
comp=E,1μm,1.8s
MOS smax smax
comp=N,7μm,4.3s
MOS MLR MLR
comp=E,27μm,16.0s
MOS MLR MLR
comp=Z,22μm,16.0s
LLP **Lapu-Lapu** 40.94 115 *e*P **P** **20 15 02.7 +1.0**
LLP *e*S S 20 20 54.1 -20
SNPH **Sibulan** 41.01 117 *e*P **P** **20 15 03.6 +1.3**
OBN **Obninsk** 41.15 318 LR LR 20 32 59.8
comp=Z,27μm,21.0s,baz=96,slow=37
OBN **Obninsk** 41.15 318 ⇑P **P** **20 15 04.0 +1.1**
OBN **Obninsk** 41.15 318*de*P **P** **20 15 02.5 -0.4**
OBN *i* 20 16 35.8
OBN *i* 20 17 01.9
OBN *e*PPP PPP 20 17 06.3
OBN *i* S **S** **20 21 16.9 +1.0**
OBN pmax pmax
comp=Z,2μm,1.6s
OBN MLR MLR
comp=Z,25μm,19.0s
OBN **Obninsk** 41.15 318 P **P** **20 15 03.0 +0.1**
OBN **Obninsk** 41.15 318 ⇓P **P** **20 15 02.8 -0.2**
OBN **Obninsk** 41.15 318 P **P** **20 15 03.3 +0.4**
comp=Z,15μmcomp=Z,749nm,1.8s
JIE **Ise** 41.15 74 P **P** **20 15 03.3 0.0**
PLP **Palo** 41.19 113 *e*P **P** **20 15 03.0 -0.8**
INU **Inuyama** 41.20 72 P **P** **20 15 03.2 -0.4**
INU **Inuyama** 41.20 72 P **P** **20 15 03.3 -0.4**
KLMR **Klimovskoe** 41.21 327*c* iP **P** **20 15 01.2 -2.1**
KLMR *e* 20 16 37.7
KLMR S **S** **20 21 12.6 -4.0**
KLMR SS **SS** **20 24 20.3 +0.9**
KLMR pmax pmax
comp=Z,1μm,1.5s
KLMR MLR MLR
comp=Z,53μm,12.0s
BNN **Bunyan** 41.23 293 IAmb IAmb 20 15 08.2
comp=Z,1μm,1.8s
BNN **Bunyan** 41.23 293 ⇓p **P** **20 15 05.0 +1.0**
JGN **Niukaw** 41.27 71 P **P** **20 15 03.7 -0.5**
JGF **Kuroka** 41.42 72 P **P** **20 15 05.1 -0.4**
JGF **Kuroka** 41.42 72 ⇑P **P** **20 15 04.7 -0.9**
DCPH **Dipolog City** 41.59 118 *i* P **P** **20 15 06.8 -0.2**
DCPH *i* S S 20 24 55.6
ASF **Jabal al Asfar** 41.75 283 LR LR 20 36 11.0
comp=Z,18μm,20.3s,baz=64,slow=41
BEIL **Beino** 41.75 287 *e*P **P** **20 15 09.9 +1.6**
MAJO **Matsushiro** 41.91 70 P **P** **20 15 08.6 -0.9**
MAJO **Matsushiro** 41.91 70*d* iP **P** **20 15 08.1 -1.4**
MAJO pmax pmax
comp=Z,267nm,1.0s
MAJO MLR MLR
comp=Z,19μm,16.0s
MAJO **Matsushiro** 41.91 70 P **P** **20 15 07.6 -1.9**
MAJO **Matsushiro** 41.91 70 ⇓P **P** **20 15 08.7 -0.9**
MAJO **Matsushiro** 41.91 70 P **P** **20 15 08.8 -0.7**
MAT **Matsushiro** 41.91 70 P **P** **20 15 08.8 -0.7**
MJAR **Matsushiro Arr** 41.91 70 P **P** **20 15 08.8 -0.7**
comp=Z,180nm,1.0s,baz=286,slow=8.6,SNR=223
MJAR S S 20 21 10.0 -18
comp=Z,1.2nm,0.9s,baz=257,slow=22,SNR=4.3
MJAR LR LR 20 33 11.6
comp=Z,15μm,18.1s,baz=277,slow=37
comp=Z,180nm,1.0s
MJAR **Matsushiro Arr** 41.91 70 P **P** **20 15 08.3 -1.2**
SIM **Simferopol'** 41.96 302*ce*P **P** **20 15 10.6 +0.8**
SIM *e* 21 16 53.0
SIM pmax pmax
comp=Z,1μm,1.1s
SIM pmax pmax
comp=Z,2μm,9.6s
SIM pmax pmax
comp=Z,3μm,10.0s
HWQ **Hawqa** 42.00 286 *e*P **P** **20 15 11.3 +0.9**
ZAHL **Zahle** 42.15 286 *e*P **P** **20 15 13.5 +1.9**
BZK **Bozkurt** 42.25 298 ⇑P **P** **20 15 13.8 +1.6**
BZK **Bozkurt** 42.25 298 IAmb IAmb 20 15 17.2
comp=Z,1μm,1.5s
BZK **Bozkurt** 42.25 298 ⇓P **P** **20 15 13.0 +0.8**
BZK **Bozkurt** 42.25 298 P **P** **20 15 13.2 +1.0**
comp=Z,12μmcomp=Z,473nm,1.8s
RCY **Rachaya** 42.28 285 *e*P **P** **20 15 14.3 +1.7**
JSG **Sagara** 42.28 73 P **P** **20 15 14.3 +1.8**
JSG **Sagara** 42.28 73 IAmb IAmb 20 15 17.1
comp=Z,439nm,1.0s
JSG **Sagara** 42.28 73 ⇓P **P** **20 15 13.1 +0.6**
BHL **Bhannes** 42.33 286 *e*P **P** **20 15 13.9 +0.9**
SHBL **Chebaa** 42.39 285 *e*P **P** **20 15 15.5 +1.9**
QRWL **Qaraoun** 42.39 285 *e*P **P** **20 15 15.3 +1.8**
DQRL **Deir Qamar** 42.44 286 *e*P **P** **20 15 15.1 +1.1**
SCPH **Surigao** 42.44 114 *e*P **P** **20 15 15.0 +1.0**
GEM **Giv'at Ha'Em** 42.49 285 ⇑p **P** **20 15 15.1 +0.8**
KIRS **Kirsehir-Merke** 42.68 294 ⇑P **P** **20 15 17.4 +1.6**
CGP **Cagayan de Oro** 42.68 116 *e*P **P** **20 15 16.8 +0.8**
MMAI **Mount Meron Ar** 42.75 285 P **P** **20 15 17.2 +0.8**
comp=Z,71nm,1.0s,baz=97,slow=14,SNR=62
MMAI PcP **PcP** **20 17 08.2 +0.3**
comp=Z,96nm,1.1s,baz=60,slow=3.8,SNR=9.1
MMAI S S 20 21 29.3 -11
comp=Z,0.2nm,0.2s,baz=36,slow=20,SNR=1.2
MMAI LR LR 20 36 23.2
comp=Z,16μm,21.5s,baz=88,slow=41
comp=Z,71nm,1.0s
BR131 **Keskin Array S** 42.80 295*d* iP **P** **20 15 17.4 +0.5**
BR131 **Keskin Array S** 42.80 295 P **P** **20 15 18.1 +1.2**
SNR=102
BR131 P **P** **20 15 18.1 +1.2**
SNR=102
BR131 S **S** **20 21 42.6 +1.4**
BR131 S **S** **20 21 42.6 +1.4**
BR131 **Keskin Array S** 42.80 295 IAmb IAmb 20 15 20.6
comp=Z,1μm,2.0s
BRTR **Keskin Array B** 42.80 295 P **P** **20 15 17.4 +0.5**
comp=Z,69nm,1.0s,baz=97,slow=5.2,SNR=123
BRTR PcP **PcP** **20 17 07.0 -1.1**
comp=Z,23nm,1.1s,baz=139,slow=2.3,SNR=4.8
BRTR LR LR 20 37 13.4
comp=Z,12μm,20.0s,baz=93,slow=42
comp=Z,69nm,1.0s
BRTR **Keskin Array B** 42.80 295 *i* P **P** **20 15 18.1 +1.2**
BRTR pmax pmax
comp=Z,68nm,1.0s
BRTR **Keskin Array B** 42.80 295 P **P** **20 15 17.0 +0.1**
BR104 **Keskin Array S** 42.80 295 P **P** **20 15 17.7 +0.8**
comp=Z,1μmcomp=Z,99nm,1.6s
BR106 **Keskin Array S** 42.82 295 P **P** **20 15 17.6 +0.6**
comp=Z,1μmcomp=Z,105nm,1.6s
BR105 **Keskin Array S** 42.82 295 P **P** **20 15 17.4 +0.4**
comp=Z,1μmcomp=Z,119nm,1.7s
ADZR **Andozero** 42.87 331*d* iP **P** **20 15 16.6 -0.2**
ADZR *e* 20 16 57.4
ADZR S **S** **20 21 43.5 +2.4**
ADZR pmax pmax
comp=Z,2μm,1.8s
ADZR pmax pmax
comp=Z,1μm,1.6s
ADZR MLR MLR
comp=Z,33μm,16.0s
NKL **Nikolayevsk** 42.94 46 *e*P **P** **20 15 17.8 +0.2**
NKL *e*S **S** **20 21 42.4 0.0**
NKL pmax pmax
comp=N,453nm,1.1s
NKL pmax pmax
comp=E,367nm,1.2s
NKL pmax pmax
comp=Z,2μm,1.2s
NKL smax smax
comp=E,1μm,5.7s
NKL smax smax
comp=N,899nm,7.8s
NKL MLR MLR
comp=E,125μm,11.0s
NKL MLR MLR
comp=N,116μm,14.0s
NKL MLR MLR
comp=Z,163μm,12.0s
CIDE **Kastamonu/Cide** 43.05 298 ⇑P **P** **20 15 19.8 +1.2**
GHAJ **Ghor Haditha** 43.07 282 IAmb IAmb 20 15 23.3
comp=Z,870nm,1.4s
GHAJ IAMs_20 IAMs_20 20 36 39.7
comp=Z,33μm,20.0s
SALP **Salfit** 43.17 283 ⇓p **P** **20 15 21.1 +1.3**
MSBI **Mazada** 43.24 282 ⇓p **P** **20 15 21.7 +1.4**
JTM **Tenmabayashi** 43.44 64 P **P** **20 15 22.4 +0.6**
JTM **Tenmabayashi** 43.44 64 ⇓P **P** **20 15 20.4 -1.4**
JTM **Tenmabayashi** 43.44 64 P **P** **20 15 22.7 +0.9**
JEW **Eniwo** 43.48 61 P **P** **20 15 23.1 +1.0**
AMAZ **Amatzia** 43.54 283 ⇓p **P** **20 15 23.9 +1.1**
UGL **Uglegorsk** 43.60 52 ⇓*i*P **P** **20 15 23.3 +0.3**
UGL *e* 20 17 06.7
UGL *e*S **S** **20 21 48.8 -3.4**
UGL pmax pmax
comp=Z,8μm,5.5s
UGL pmax pmax
comp=Z,500nm,1.2s
UGL MLR MLR
comp=E,52μm,9.0s
UGL MLR MLR

UGL MLR MLR
comp=Z,52µm,10.0s
JMM Marumori 43.69 68 P **P** **20 15 23.0 -0.9**
JOM Ohasama 43.80 65 P **P** **20 15 24.6 -0.1**
CSS Mathiatis 43.95 288 ⇓P **P** **20 15 25.9 -0.2**
CSS Mathiatis 43.95 288 P **P** **20 15 26.6 +0.6**
comp=Z,5µmcomp=Z,104nm,1.5s
JHJ Hachijo jima 2 43.95 75 LR LR 20 33 29.3
comp=Z,18µm,21.8s,baz=290,slow=36
TYV Tymovskoe 44.01 49 *e*P **P** **20 15 27.8 +1.5**
TYV *e*S **S** **20 22 00.5 +2.3**
TYV pmax pmax
comp=Z,6µm,4.9s
TYV pmax pmax
comp=Z,321nm,1.4s
TYV smax smax
comp=N,2µm,7.8s
TYV smax smax
comp=E,4µm,7.8s
TYV smax smax
comp=E,16nm,1.7s
TYV MLR MLR
comp=Z,81µm,12.0s
EIL Elat 44.07 280 LR LR 20 36 42.4
comp=Z,38µm,21.4s,baz=84,slow=40
EIL Elat 44.07 280 ⇑p **P** **20 15 27.7 +0.7**
YSS Yuzhno-Sakhali 44.10 55 P **P** **20 15 28.0 +1.0**
YSS Yuzhno-Sakhali 44.10 55*d*P **P** **20 15 27.2 +0.2**
YSS *e* 20 17 11.2
YSS *e*S **S** **20 21 59.7 +0.1**
YSS *e*SS **ScS** **20 25 22.2 -3.6**
YSS pmax pmax
comp=Z,7µm,8.0s
YSS pmax pmax
comp=N,500nm,3.7s
YSS pmax pmax
comp=E,4µm,8.8s
YSS pmax pmax
comp=Z,170nm,1.1s
YSS pmax pmax
comp=Z,4µm,8.1s
YSS pmax pmax
comp=N,500nm,3.7s
YSS pmax pmax
comp=E,2µm,5.8s
YSS smax smax
comp=N,4µm,9.5s
YSS smax smax
comp=E,7µm,14.1s
YSS MLR MLR
comp=Z,36µm,12.0s
YSS MLR MLR
comp=N,11µm,11.0s
YSS MLR MLR
comp=E,55µm,12.0s
YSS Yuzhno-Sakhali 44.10 55 P **P** **20 15 26.5 -0.5**
YSS IAmb IAmb 20 15 34.4
comp=Z,514nm,1.5s
YSS IAMs_20 IAMs_20 20 34 32.0
comp=Z,42µm,18.0s
KZIT Kziot 44.15 282 ⇓p **P** **20 15 28.9 +1.2**
ASAJ Asahikawa 44.18 59 P **P** **20 15 28.6 +0.9**
comp=Z,103nm,1.0s,baz=285,slow=10.0,SNR=16
ASAJ PP **PP** **20 17 11.6 +1.0**
comp=Z,17nm,0.9s,baz=349,slow=10,SNR=1.0
ASAJ S **S** **20 21 57.6 -3.2**
comp=Z,3.8nm,0.7s,baz=70,slow=12,SNR=1.6
ASAJ LR LR 20 34 10.7
comp=Z,40µm,20.3s,baz=280,slow=36
comp=Z,103nm,1.0s
ASAJ Asahikawa 44.18 59 P **P** **20 15 28.9 +1.1**
JKA Kamikawa-asahi 44.19 59 **PcP** **20 17 11.6 -0.9**
JKA **S** **20 21 57.6 -3.3**
JKA Kamikawa-asahi 44.19 59 IAmb IAmb 20 15 35.8
comp=Z,713nm,1.4s
JKA Kamikawa-asahi 44.19 59 ⇓P **P** **20 15 27.6 -0.2**
DAV Davao City (W) 44.24 117 P **P** **20 15 29.2 +0.6**
comp=Z,224nm,0.5s,baz=30,slow=7.5,SNR=9.6
DAV LR LR 20 35 13.5
comp=Z,20µm,18.9s,baz=333,slow=38
comp=Z,224nm,0.5s
DAV Davao City (W) 44.24 117 P **P** **20 15 28.4 -0.2**
DAV Davao City (W) 44.24 117 P **P** **20 15 29.7 +1.1**
DAV Davao City (W) 44.24 117 P **P** **20 15 30.0 +1.4**
BKB Balikpapan 44.39 134 P **P** **20 15 30.8 +1.1**
BKB Balikpapan 44.39 134 P **P** **20 15 29.2 -0.4**
CDOP Cateel, Davao 44.43 116 *i* P **P** **20 15 29.9 -0.1**
TIXI Tiksi 44.53 18 LR LR 20 34 43.1
comp=Z,34µm,19.2s,baz=252,slow=37
TIXI Tiksi 44.53 18*ce*P **P** **20 15 29.6 -0.5**
TIXI pmax pmax
comp=Z,545nm,1.3s
TIXI MLR MLR
comp=Z,35µm,15.0s
TIXI Tiksi 44.53 18 P **P** **20 15 28.9 -1.2**
TIXI IAmb IAmb 20 15 37.1
comp=Z,395nm,1.3s
MDUB Mudurnu 44.54 296 ⇓P **P** **20 15 31.3 +0.5**
SAHE Sakarya_HENDEK 44.74 297 ⇓P **P** **20 15 33.0 +0.7**
ERM Erimo 44.83 62 P **P** **20 15 34.5 +1.6**
ERM Erimo 44.83 62*d*iP **P** **20 15 32.8 -0.1**
ERM pmax pmax
comp=Z,537nm,1.3s
ERM MLR MLR
comp=Z,30µm,17.0s
ERM Erimo 44.83 62 P **P** **20 15 32.6 -0.3**
ERM IAmb IAmb 20 15 40.8
comp=Z,549nm,1.3s
ERM Erimo 44.83 62 P **P** **20 15 33.2 +0.3**
JEM Erimo 44.83 62 P **P** **20 15 34.4 +1.5**
PURM Purcari 44.85 305 ⇑P **P** **20 15 33.5 +0.5**
PURM Purcari 44.85 305 P **P** **20 15 33.3 +0.3**
comp=Z,22µmcomp=Z,2µm,1.2s
BAL3X Bal3x, Balta 44.96 307 P **P** **20 15 34.4 +0.5**
TOLI2 Tolitoli 45.02 128 P **P** **20 15 35.7 +1.0**
TOLI2 Tolitoli 45.02 128 IAmb IAmb 20 15 41.1
comp=Z,408nm,1.2s
AK09 Malin Array Si 45.11 311 P **P** **20 15 35.7 +0.6**
AK08 Malin Array Si 45.13 311 P **P** **20 15 35.8 +0.6**
AK10 Malin Array Si 45.13 311 P **P** **20 15 35.9 +0.7**
AKASG Malin Array Be 45.15 311 P **P** **20 15 34.8 -0.6**
comp=Z,131nm,0.8s,baz=82,slow=7.4,SNR=230
AKASG PcP **PcP** **20 17 15.0 -0.7**
comp=Z,21nm,1.0s,baz=70,slow=4.4,SNR=4.7
AKASG S **S** **20 22 13.3 -1.4**
comp=Z,0.3nm,0.2s,baz=86,slow=12,SNR=4.1
AKASG LR LR 20 36 02.9
comp=Z,46µm,20.8s,baz=88,slow=38
AKASG PKP2ab P'P'ab 20 48 09.2 -12
comp=Z,0.3nm,0.5s,baz=282,slow=4.5,SNR=4.1
comp=Z,131nm,0.8s
AKASG Malin Array Be 45.15 311 *i* P **P** **20 15 34.7 -0.6**
AKASG pmax pmax
comp=Z,142nm,0.8s
AKASG Malin Array Be 45.15 311 P **P** **20 15 35.0 -0.3**
AKBB Malin Array Si 45.15 311*d*iP **P** **20 15 34.7 -0.7**
AKBB pmax pmax
comp=Z,724nm,1.6s
AKBB MLR MLR
comp=Z,48µm,21.0s
AKBB Malin Array Si 45.15 311 IAmb IAmb 20 15 38.1
comp=Z,313nm,0.9s
AKBB Malin Array Si 45.15 311 P **P** **20 15 35.8 +0.4**
AK03 Malin Array Si 45.15 311 P **P** **20 15 35.8 +0.4**
AK01 Malin Array Si 45.16 311 P **P** **20 15 35.8 +0.4**
KIEV Kiev 45.16 311 ⇑P **P** **20 15 37.1 +1.6**
KIEV Kiev 45.16 311 *i* P **P** **20 15 35.0 -0.4**
SNR=72
KIEV Kiev 45.16 311 P **P** **20 15 37.0 +1.6**
KIEV Kiev 45.16 311 P **P** **20 15 34.4 -1.0**
KIEV IAmb IAmb 20 15 38.0
comp=Z,294nm,0.9s
KIEV Kiev 45.16 311 ⇑P **P** **20 15 34.7 -0.8**
KIEV Kiev 45.16 311 P **P** **20 15 35.8 +0.4**
comp=Z,30µmcomp=Z,1µm,0.9s
AK02 Malin Array Si 45.16 311 P **P** **20 15 35.9 +0.4**
AK07 Malin Array Si 45.16 311 P **P** **20 15 35.9 +0.4**
AK05 Malin Array Si 45.16 311 P **P** **20 15 35.9 +0.4**
AK06 Malin Array Si 45.17 311 P **P** **20 15 35.9 +0.4**
AK11 Malin Array Si 45.19 311 P **P** **20 15 36.1 +0.4**
AK04 Malin Array Si 45.19 311 P **P** **20 15 36.1 +0.4**
AK12 Malin Array Si 45.20 311 P **P** **20 15 36.1 +0.4**
AK15 Malin Array Si 45.22 311 P **P** **20 15 36.3 +0.4**
AK23 Malin Array Si 45.22 311 P **P** **20 15 36.3 +0.4**

AK14 Malin Array Si 45.23 311 P **P** **20 15 36.4 +0.4**
AK16 Malin Array Si 45.23 311 P **P** **20 15 36.4 +0.4**
AK22 Malin Array Si 45.25 311 P **P** **20 15 36.6 +0.5**
AK18 Malin Array Si 45.25 311 P **P** **20 15 36.6 +0.4**
AK13 Malin Array Si 45.26 311 P **P** **20 15 36.6 +0.4**
AK17 Malin Array Si 45.26 311 P **P** **20 15 36.6 +0.4**
AK21 Malin Array Si 45.27 311 P **P** **20 15 36.6 +0.3**
AK19 Malin Array Si 45.29 311 P **P** **20 15 36.8 +0.4**
PUL Pulkovo 45.34 324*i*iP **P** **20 15 38.1 +1.4**
PUL pmax pmax
comp=Z,882nm,1.9s
PUL MLR MLR
comp=Z,31µm,17.0s
KIS Kishinev 45.54 306 ⇑P **P** **20 15 40.1 +1.6**
KIS Kishinev 45.54 306 P **P** **20 15 40.1 +1.6**
KIS Kishinev 45.54 306 P **P** **20 15 38.7 +0.2**
comp=Z,6µmcomp=Z,500nm,0.9s
ATD Arta Tunnel 45.58 252 P **P** **20 15 40.6 +1.3**
SNR=69
ATD S **S** **20 22 19.0 -2.9**
ATD Arta Tunnel 45.58 252 P **P** **20 15 39.8 +0.5**
ATD Arta Tunnel 45.58 252 ⇓P **P** **20 15 40.1 +0.8**
SILT Sile 45.60 297 ⇓P **P** **20 15 40.5 +1.4**
JURR Jurilovca 45.69 302 ⇑P **P** **20 15 41.0 +1.3**
TLCR 45.69 303 P **P** **20 15 40.4 +0.7**
LVZ Lovozero 45.76 335*e*P **P** **20 15 39.5 -0.5**
LVZ pmax pmax
comp=Z,509nm,1.2s
LVZ MLR MLR
comp=Z,32µm,16.0s
LVZ Lovozero 45.76 335 P **P** **20 15 39.6 -0.5**
LVZ IAmb IAmb 20 15 42.1
comp=Z,394nm,1.1s
LVZ Lovozero 45.76 335 ⇓P **P** **20 15 39.5 -0.5**
LVZ Lovozero 45.76 335 P **P** **20 15 40.2 +0.2**
comp=Z,7µmcomp=Z,449nm,1.2s
SMRI Semarang 45.78 146 P **P** **20 15 42.7 +2.0**
SORM Soroca 45.79 307 P **P** **20 15 40.2 -0.2**
SORM Soroca 45.79 307 P **P** **20 15 40.5 +0.1**
comp=Z,8µmcomp=Z,417nm,1.1s
YLV Yalova 45.90 297 P **P** **20 15 42.2 +0.6**
comp=Z,8µmcomp=Z,383nm,1.5s
EFOR EFORIE 45.94 302 ⇑P **P** **20 15 43.6 +1.9**
LEOM Leova 45.97 305 P **P** **20 15 43.1 +1.2**
MANR Mangalia 46.00 301 ⇑P **P** **20 15 43.8 +1.6**
TPGR Topolog 46.00 303 ⇓P **P** **20 15 43.5 +1.3**
COCO West Island 46.02 166 P **P** **20 15 44.2 +1.7**
COCO West Island 46.02 166 P **P** **20 15 42.6 +0.1**
COCO pmax pmax
comp=Z,2µm,1.8s
COCO West Island 46.02 166 P **P** **20 15 44.7 +2.2**
COCO West Island 46.02 166 P **P** **20 15 42.6 +0.1**
KLYT Kilyos 46.03 298 P **P** **20 15 43.2 +0.7**
comp=Z,13µmcomp=Z,536nm,1.8s
ISK Istanbul-Kandi 46.05 297 P **P** **20 15 43.2 +0.6**
TIRR Tirgusor 46.05 302 P **P** **20 15 42.9 +0.3**
TIRR Tirgusor 46.05 302 IAmb IAmb 20 15 46.2
comp=Z,758nm,1.7s
MNK Minsk 46.07 316 *i* P **P** **20 15 43.0 +0.5**
comp=E,67nm,0.8s
MNK *i* P **P** **20 15 43.0 +0.5**
comp=N,387nm,1.1s
MNK *i* P **P** **20 15 43.0 +0.5**
comp=Z,407nm,0.9s,baz=93
MNK *i* PP **PP** **20 17 30.2 -0.2**
MNK *i* PPP PPP 20 18 13.9
MNK *i* S **S** **20 22 29.0 +1.2**
MNK *i* SS **SS** **20 25 55.6 +3.0**
MNK *i* SSS SSS 20 26 48.8
MNK *i* LQ LQ 20 31 13.7
MNK *i* LR LR 20 35 11.9
MNK *i* LRM MLR 20 37 00.1
comp=E,62µm,16.9s
MNK *i* LRM MLR 20 37 12.2
comp=Z,34µm,18.3s
MNK *i* LRM MLR 20 37 32.8
comp=N,23µm,16.1s
MNK Minsk 46.07 316*d*iP **P** **20 15 43.0 +0.5**
APA Apatity 46.08 335⇓*e*P **P** **20 15 41.3 -1.2**
APA *e* 20 17 18.7
APA *e* 20 17 30.4
APA *e*S **S** **20 22 24.9 -2.8**
APA *e*SS **SS** **20 25 47.7 -4.7**
GIUM Giurgiulesti 46.09 304 ⇑P **P** **20 15 44.9 +2.0**
LUBAR Lubar, Ukraine 46.10 310 P **P** **20 15 43.6 +1.3**
MI28 Mi28,Pidlybu 46.14 311 P **P** **20 15 42.4 -0.8**
VLDR Vladesti 46.14 304 ⇓P **P** **20 15 44.0 +0.7**
CFR Carcaliu 46.17 303 ⇑P **P** **20 15 44.1 +0.6**
CFR Carcaliu 46.17 303 P **P** **20 15 43.7 +0.2**
TATR Tatarca 46.19 304 ⇓P **P** **20 15 44.3 +0.7**
SCTR Scanteiesti 46.22 304 ⇓P **P** **20 15 44.7 +0.8**
ELL Elmali 46.24 291 ⇑P **P** **20 15 44.3 -0.1**
ELL Elmali 46.24 291 ⇑P **P** **20 15 44.3 -0.1**
VASR Vaslui 46.27 305 ⇓P **P** **20 15 44.8 +0.5**
TLBR Topalu 46.30 302 ⇑P **P** **20 15 45.0 +0.4**
NEGRR Negrea 46.31 304 ⇓P **P** **20 15 45.6 +1.0**
PSN Preselentsi 46.35 301 *i* P **P** **20 15 46.2 +1.2**
SCHL Schela 46.35 304 ⇑P **P** **20 15 45.9 +0.9**
SCHLR Schela 46.35 304 ⇑P **P** **20 15 46.3 +1.3**
IASR Iasi 46.37 306 ⇑P **P** **20 15 46.1 +1.0**
IZVR Izvoarele 46.39 304 ⇑P **P** **20 15 47.2 +2.0**
BIR Birlad 46.42 305 ⇑P **P** **20 15 47.3 +1.9**
BIR Birlad 46.42 305 P **P** **20 15 47.3 +1.9**
TUDR 46.45 304 ⇓P **P** **20 15 46.8 +1.1**
ICOR Ion Corvin 46.53 302 ⇑P **P** **20 15 48.3 +2.0**
YUK Yuzh-Kuril'sk 46.53 58*d*iP **P** **20 15 47.7 +1.4**
YUK *i* 20 17 19.4
YUK *i* 20 17 38.0
YUK *e*PPP PPP 20 18 15.6
YUK *i*S **S** **20 22 39.0 +4.3**
YUK *e*SSS SSS 20 26 51.7
YUK pmax pmax
comp=Z,1µm,2.0s
YUK pmax pmax
comp=Z,1µm,1.1s
YUK pmax pmax
comp=E,508nm,0.9s
YUK pmax pmax
comp=N,527nm,1.2s
CTYL Yalikoy Yolu 46.56 298 P **P** **20 15 46.9 +0.3**
comp=N,7µmcomp=N,244nm,1.7s
GHRR 46.59 304 ⇑P **P** **20 15 48.7 +1.9**
GHRR 46.59 304 P **P** **20 15 47.8 +1.0**
COSR Cosmesti PH 46.67 304 ⇑P **P** **20 15 49.7 +2.3**
NACGM Naroch 46.72 317⇓*e*P **P** **20 15 50.1 +2.4**
PANC Panciu 46.79 304 ⇑P **P** **20 15 49.8 +1.5**
AMRR Amara 46.80 302 ⇑P **P** **20 15 50.7 +2.3**
AMRR Amara 46.80 302 P **P** **20 15 50.7 +2.3**
ODBI Odobesti 46.86 304 ⇓P **P** **20 15 50.9 +1.9**
XMI Christmas Isla 46.87 154 P **P** **20 15 50.6 +1.3**
BAND Balkesir-Ban 46.90 297 P **P** **20 15 50.5 +1.2**
MANT Manisa 46.91 294 IAmb IAmb 20 15 52.8
comp=Z,538nm,1.5s
PRD Provadia 46.94 300 *i* P **P** **20 15 51.0 +1.4**
DRBR Darabani 46.95 307 ⇑P **P** **20 15 50.2 +0.6**
VSU Vasula 46.99 321*c i*P **P** **20 15 48.3 -1.4**
VSU pmax pmax
comp=Z,273nm,1.2s
VSU MLR MLR
comp=Z,32µm,14.0s
VSU Vasula 46.99 321 ⇓P **P** **20 15 48.1 -1.6**
PGOR Pogoanele 47.01 303 ⇓P **P** **20 15 52.2 +2.1**
KMPD K-Podol'skiy 47.02 308 P **P** **20 15 49.7 -0.4**
TESR Tescani 47.07 305 ⇑P **P** **20 15 51.2 +0.7**
TESR Tescani 47.07 305 P **P** **20 15 51.0 +0.4**
comp=Z,10µmcomp=Z,572nm,1.3s
CICN Ciocanesti 47.07 302 ⇑P **P** **20 15 52.6 +2.0**
VRI Vrincioaia 47.08 304 ⇓P **P** **20 15 51.7 +1.0**
VRI Vrincioaia 47.08 304 P **P** **20 15 51.6 +1.0**
VRI Vrincioaia 47.08 304 P **P** **20 15 52.2 +1.5**
comp=Z,14µmcomp=Z,786nm,0.9s
GIRR Girov 47.12 306 ⇑P **P** **20 15 53.2 +2.2**
SAHR Sahastru 47.12 304 ⇑P **P** **20 15 52.7 +1.6**
PLOR Plostina 47.14 304 ⇓P **P** **20 15 52.3 +1.2**
PLOR Plostina 47.14 304 P **P** **20 15 52.3 +1.2**
LEHL Lehliu 47.18 302 ⇑P **P** **20 15 53.9 +2.4**
BALB Balikesir 47.20 296 ⇓P **P** **20 15 51.8 +0.2**
MSF Maaselka 47.23 332 P **P** **20 15 51.0 -0.5**
RNPP9 Sopachiv 47.24 312 P **P** **20 15 52.7 +0.9**
RNPP2 Kostyukhnivka 47.25 312 P **P** **20 15 52.7 +0.8**
RNPP5 Staryi Chortor 47.25 312 P **P** **20 15 52.8 +0.9**
ONER Baraj Valea Uz 47.26 305 ⇑P **P** **20 15 53.4 +1.3**

RNPP8 Varash 47.27 312 P **P** **20 15 52.9 +0.9**
PRAR RASCA 47.27 306 ⇑P **P** **20 15 53.6 +1.4**
ISR Istrita 47.30 303 ⇑P **P** **20 15 54.6 +2.2**
ISR Istrita 47.30 303 P **P** **20 15 54.6 +2.2**
BIZ Bicaz 47.40 306 ⇑P **P** **20 15 54.7 +1.6**
YER Yerkesik 47.42 292 P **P** **20 15 53.1 -0.4**
NEHR Nehoiu 47.43 304 ⇓P **P** **20 15 55.6 +2.1**
COVR Voineasa-Covas 47.45 304 ⇑P **P** **20 15 55.1 +1.5**
RAZG Razgrad 47.53 301 ⇓P **P** **20 15 55.1 +0.8**
TURR Turia 47.55 305 ⇓P **P** **20 15 55.3 +0.9**
SULR 47.56 303 ⇓P **P** **20 15 55.7 +1.3**
FINES FINESS Array B 47.66 325 P **P** **20 15 54.5 -0.5**
comp=Z,44nm,0.7s,baz=102,slow=8.0,SNR=69
FINES PcP **PcP** **20 17 24.2 -0.1**
comp=Z,48nm,1.0s,baz=142,slow=4.8,SNR=6.1
FINES PP **PP** **20 17 44.6 -1.7**
comp=Z,58nm,1.1s,baz=132,slow=7.3,SNR=5.0
FINES S **S** **20 22 47.3 -3.2**
comp=Z,2.5nm,0.8s,baz=126,slow=16,SNR=1.4
FINES LR LR 20 37 06.0
comp=Z,26µm,18.1s,baz=96,slow=37
comp=Z,44nm,0.7s
FINES FINESS Array B 47.66 325 *i* P **P** **20 15 55.0 +0.1**
FINES pmax pmax
comp=Z,44nm,0.7s
MLR Muntele Rosu 47.67 304 S **S** **20 22 54.7 +3.4**
comp=Z,6.2nm,1.2s,baz=330,slow=22,SNR=7.6
MLR LR LR 20 38 55.5
comp=Z,44µm,19.3s,baz=67,slow=40
MLR Muntele Rosu 47.67 304 ⇓P **P** **20 15 56.8 +1.3**
MLR Muntele Rosu 47.67 304 P **P** **20 15 56.7 +1.3**
MLR Muntele Rosu 47.67 304 IAMs_20 IAMs_20 20 38 35.2
comp=Z,43µm,21.0s
MLR Muntele Rosu 47.67 304 P **P** **20 15 56.7 +1.3**
comp=Z,19µmcomp=Z,2µm,0.8s
JMB Yambol 47.69 300 *i* P **P** **20 15 56.0 +0.6**
OZUR 47.71 305 ⇓P **P** **20 15 56.2 +0.6**
BOSR Bodos 47.80 305 ⇑P **P** **20 15 57.7 +1.4**
KUR Kuril'sk 47.80 57*d i*P **P** **20 15 55.2 -1.0**
KUR *e* 20 17 23.9
KUR *e* 20 17 47.3
KUR *e*PPP PPP 20 18 32.9
KUR *e*S **S** **20 22 52.5 -0.3**
KUR *e* 20 25 49.6
KUR *e*SSS SSS 20 27 22.5
KUR pmax pmax
comp=Z,451nm,1.3s
KUR pmax pmax
comp=Z,3µm,8.2s
KUR MLR MLR
comp=N,19µm,12.0s
KUR MLR MLR
comp=Z,21µm,12.0s
KUR MLR MLR
comp=E,9µm,11.0s
JCJ Chichijima 47.80 82 LR LR 20 37 47.7
comp=E,11µm,18.1s,baz=280,slow=38
SGRR Singureni 47.82 302 ⇑P **P** **20 15 57.4 +1.0**
MSEY Mahe Island 47.89 224 *i* P **P** **20 15 56.8 -0.4**
SNR=6.0
MSEY Mahe Island 47.89 224 P **P** **20 15 56.7 -0.6**
MSEY pmax pmax
comp=Z,840nm,1.8s
MSEY MLR MLR
comp=Z,24µm,22.0s
MSEY Mahe Island 47.89 224 P **P** **20 15 58.4 +1.1**
MSEY P **P** **20 15 58.4 +1.1**
MSEY S **S** **20 22 54.0 -0.8**
MSEY S **S** **20 22 54.0 -0.8**
MSEY Mahe Island 47.89 224 P **P** **20 15 56.7 -0.6**
BURAR Bucovina Array 47.93 307 ⇑P **P** **20 15 58.6 +1.2**
BURAR Bucovina Array 47.93 307 P **P** **20 15 58.5 +1.2**
BURAR Bucovina Array 47.93 307 P **P** **20 15 56.7 -0.6**
LUWI Luwuk 47.94 128 P **P** **20 15 59.2 +1.5**
LUWI Luwuk 47.94 128 P **P** **20 15 57.1 -0.6**
LUWI Luwuk 47.94 128 P **P** **20 15 57.1 -0.6**
SZH Strazhitsa 47.96 301 *i* P **P** **20 15 58.2 +0.6**
CAVK Edirne/Enez-Ca 48.28 297 ⇑P **P** **20 16 01.5 +1.5**
VOIR 48.30 304 ⇑P **P** **20 16 00.9 +0.6**
VOIR 48.30 304 P **P** **20 16 00.8 +0.6**
VOIR 48.30 304 P **P** **20 16 00.7 +0.5**
comp=Z,6µmcomp=Z,331nm,1.0s
MTUR Matau 48.32 304 ⇑P **P** **20 16 01.9 +1.4**
MTUR Matau 48.32 304 P **P** **20 16 01.8 +1.4**
VADS Vadso 48.33 337 *e*P **P** **20 15 59.9 -0.1**
VADS IVmB_BB 20 16 01.9
comp=Z,5µm,5.2s
VADS *e*PP **PP** **20 17 53.5 +1.3**
VADS *e*S **S** **20 23 01.2 +1.6**
VADS *e*SS **SS** **20 26 32.5 +3.8**
VADS IVMs_BB IVMs_BB 20 37 53.4
comp=Z,13µm,10.5s
ALN Alexandroupoli 48.33 298 P **P** **20 16 00.8 +0.4**
ALN Alexandroupoli 48.33 298 ⇓P **P** **20 16 00.4 0.0**
OUL 48.33 330 P **P** **20 15 59.8 -0.2**
EZN Ezine 48.33 296 P **P** **20 16 00.8 +0.4**
PABE Paberze 48.35 317 IAmb IAmb 20 16 06.4
comp=Z,254nm,0.9s
COPA Copaceanca 48.37 302 ⇑P **P** **20 16 02.3 +1.7**
DIM Dimitrovgrad 48.46 299 *i* P **P** **20 16 02.0 +0.6**
HUMR Humele 48.48 303 ⇑P **P** **20 16 03.1 +1.6**
TGMR Targu Mures 48.52 305 ⇓P **P** **20 16 03.7 +1.9**
PVL Pavlikeni 48.56 301 *i* P **P** **20 16 04.0 +1.8**
SGF Sodankyl 48.58 333 P **P** **20 16 01.6 -0.3**
MDB Medias 48.67 305 ⇑P **P** **20 16 05.2 +2.2**
MDB Medias 48.67 305 P **P** **20 16 05.2 +2.2**
KARP Karpathos 48.69 290 ⇓P **P** **20 16 03.1 -0.2**
KARP Karpathos 48.69 290 P **P** **20 16 03.9 +0.6**
comp=Z,13µmcomp=Z,887nm,1.6s
TNR Turnu Rosu 48.81 304 ⇓P **P** **20 16 05.3 +1.2**
TNR Turnu Rosu 48.81 304 P **P** **20 16 05.1 +1.0**
JAGI Jajag, Banyuwa 48.82 143 P **P** **20 16 06.1 +1.7**
JAGI Jajag, Banyuwa 48.82 143 ⇓P **P** **20 16 02.9 -1.5**
SUW Suwalki 48.82 315 ⇓P **P** **20 16 03.3 -0.7**
SUW Suwalki 48.82 315 ⇓P **P** **20 16 03.3 -0.7**
PLVB Pleven 48.92 301 ⇓P **P** **20 16 06.1 +1.2**
VLAD Vladila 48.97 302 ⇑P **P** **20 16 05.9 +0.6**
KEV Kevo 48.99 336 P **P** **20 16 04.8 -0.2**
KEV pmax pmax
comp=Z,312nm,1.2s
KEV MLR MLR
comp=Z,26µm,20.0s
KEV Kevo 48.99 336 P **P** **20 16 04.8 -0.2**
KEV IAmb IAmb 20 16 07.8
comp=Z,312nm,1.2s
KEV IAMs_20 IAMs_20 20 36 19.8
comp=Z,26µm,20.0s
KEV Kevo 48.99 336 ⇑P **P** **20 16 05.0 -0.1**
KEV Kevo 48.99 336 P **P** **20 16 05.0 -0.1**
KEV S **S** **20 23 11.9 +2.9**
MA2 Magadan 49.05 37 LR LR 20 38 43.3
comp=Z,19µm,18.7s,baz=266,slow=38
MA2 Magadan 49.05 37 P **P** **20 16 06.1 +0.4**
MA2 Magadan 49.05 37*ce*P **P** **20 16 05.9 +0.2**
MA2 pmax pmax
comp=Z,412nm,1.0s
MA2 MLR MLR
comp=Z,27µm,17.0s
MA2 Magadan 49.05 37 P **P** **20 16 05.5 -0.2**
MA2 Magadan 49.05 37 ⇓P **P** **20 16 06.0 +0.4**
MA2 Magadan 49.05 37 P **P** **20 16 06.7 +1.0**
comp=Z,12µmcomp=Z,681nm,1.3s
BMR Baia Mare 49.08 307 ⇑P **P** **20 16 08.3 +2.1**
BMR Baia Mare 49.08 307 P **P** **20 16 08.2 +2.1**
KAPI Kappang 49.08 134 LR LR 20 40 07.3
comp=Z,15µm,19.0s,baz=305,slow=40
KAPI Kappang 49.08 134 P **P** **20 16 07.3 +0.9**
KAPI Kappang 49.08 134 P **P** **20 16 06.1 -0.3**
KAPI pmax pmax
comp=Z,149nm,1.3s
KAPI Kappang 49.08 134 P **P** **20 16 06.1 -0.3**
KAPI Kappang 49.08 134 ⇓P **P** **20 16 05.4 -1.0**
KAPI Kappang 49.08 134 P **P** **20 16 05.7 -0.7**
KAPI S **S** **20 23 13.7 +2.2**
CJR Cluj-Napoca 49.13 306 ⇑P **P** **20 16 08.7 +2.1**
CJR Cluj-Napoca 49.13 306 P **P** **20 16 08.7 +2.1**
LOT Lotru 49.19 304 ⇑P **P** **20 16 08.8 +1.7**
CRAR CRAIOVA 49.35 303 ⇑P **P** **20 16 10.1 +1.9**
CRAR CRAIOVA 49.35 303 P **P** **20 16 10.0 +1.9**
KWP Kalwaria Pacla 49.39 310 P **P** **20 16 09.2 +0.8**
KWP Kalwaria Pacla 49.39 310 ⇑P **P** **20 16 08.6 +0.1**
KWP Kalwaria Pacla 49.39 310 P **P** **20 16 09.3 +0.8**
comp=Z,14µmcomp=Z,758nm,1.7s

ARA0 ARCESS Array S 49.44 336 *e*P P **20 16 08.4 -0.2**
ARA0 IVmB_BB 20 16 10.5
comp=Z,5µm,5.2s
ARA0 *e*PP **PP** **20 18 03.4 +1.0**
ARA0 *e*ScP **ScP** **20 21 26.6 +0.6**
ARA0 *e*S **S** **20 23 16.8 +1.4**
ARA0 *e*SS **SS** **20 26 49.1 +2.4**
ARA0 IVmS_BB IVmS_BB 20 38 15.8
comp=Z,27µm,10.8s
ARCES ARCESS Array B 49.44 336 P P **20 16 08.6 0.0**
comp=Z,166nm,1.1s,baz=95,slow=5.1,SNR=99
ARCES PcP **PcP** **20 17 30.4 -0.1**
comp=Z,52nm,1.0s,baz=94,slow=3.6,SNR=6.6
ARCES LR LR 20 38 44.6
comp=Z,13µm,21.7s,baz=104,slow=38
comp=Z,166nm,1.1s
ARCES ARCESS Array B 49.44 336 P P **20 16 08.2 -0.3**
ARCES IAmb IAmb 20 16 11.4
comp=Z,402nm,1.3s
MARR Marisel-Cluj 49.46 306 ⇑P P **20 16 11.1 +1.9**
MESR Meseseni 49.52 306 ⇑P P **20 16 11.6 +2.1**
MPEP Malo Peshtene 49.55 301 *i*P P **20 16 11.7 +1.9**
SRE Strehaia 49.71 303 ⇑P P **20 16 12.3 +1.3**
SRE Strehaia 49.71 303 P P **20 16 12.2 +1.3**
VALD Valchedram 49.71 302 *i*P P **20 16 11.9 +0.9**
BAIL Bailesti 49.72 302 ⇑P P **20 16 13.0 +2.0**
DRGR 49.73 306 ⇑P P **20 16 13.1 +1.9**
DRGR 49.73 306 P P **20 16 13.0 +1.9**
DEV Deva 49.73 305 ⇑P P **20 16 13.1 +2.1**
DEV Deva 49.73 305 P P **20 16 13.1 +2.1**
KOLS Kolonicke sedl 49.75 309 *e*P P **20 16 12.8 +1.6**
KOLS pmax pmax
comp=Z,48nm,1.0s
KOLS Kolonicke sedl 49.75 309 *e*P P **20 16 12.8 +1.6**
UZHM Uzhgorod 49.77 308 P P **20 16 11.7 +0.4**
CEI Carei 49.77 307 ⇓P P **20 16 13.5 +2.1**
CEI Carei 49.77 307 P P **20 16 13.4 +2.1**
TNTI Ternate 49.81 122 P P **20 16 11.9 -0.1**
TNTI Ternate 49.81 122 ⇓P P **20 16 11.6 -0.4**
GZR Gura Zlata 49.89 304 ⇑P P **20 16 13.8 +1.3**
GZR Gura Zlata 49.89 304 P P **20 16 13.7 +1.3**
PUNG Punghina 49.97 303 ⇓P P **20 16 13.3 +0.4**
OUR Ouranopolis 49.98 297 P P **20 16 13.3 +0.3**
SEY Seymchan 50.05 33 LR LR 20 38 36.0
comp=Z,29µm,19.7s,baz=276,slow=37
SEY Seymchan 50.05 33 *d*/P P **20 16 13.9 +0.6**
SEY pmax pmax
comp=Z,599nm,1.6s
SEY MLR MLR
comp=Z,21µm,14.0s
RMGR Halanga-Turnu 50.07 303 ⇑P P **20 16 15.3 +1.6**
KTK1 Kautokeino 50.11 335 *e*P P **20 16 13.5 -0.1**
KTK1 IVmB_BB 20 16 15.4
comp=Z,4µm,5.2s
KTK1 *e*PP **PP** **20 18 09.3 +0.8**
KTK1 *e*S **S** **20 23 25.0 +0.2**
KTK1 *e*SS **SS** **20 27 00.5 +3.0**
KTK1 IVmS_BB IVmS_BB 20 39 42.2
comp=Z,26µm,9.8s
R9F13 Warsaw-Wawer 50.14 313 *e*P P **20 16 14.5 +0.4**
comp=Z,12nm,0.9s
R9F13 *e* 20 21 33.1
R9F13 *e*S **S** **20 23 30.9 +5.3**
LTVH Ltavrtes, Hu 50.19 307 ⇑P P **20 16 16.7 +2.1**
LTVH Ltavrtes, Hu 50.19 307 ⇓P P **20 16 15.9 +1.4**
HERR Herculane 50.23 303 ⇑P P **20 16 15.9 +1.0**
STHS Stebnicka Huta 50.36 309 *e*P P **20 16 17.5 +1.7**
STHS pmax pmax
comp=Z,195nm,1.8s
STHS Stebnicka Huta 50.36 309 *e*P P **20 16 17.5 +1.7**
PEHC Pehcevo 50.47 299 *i*P P 20 16 26.2 +9.3
SIRR Siria 50.52 305 ⇓P P **20 16 17.8 +0.7**
IDI Anoyia 50.55 291 P P **20 16 16.7 -0.9**
comp=Z,51nm,0.8s,baz=51,slow=9.0,SNR=18
comp=Z,51nm,0.8s
BZS Buzias 50.66 305 ⇑P P **20 16 19.9 +1.7**
BZS Buzias 50.66 305 P P **20 16 19.8 +1.7**
BZS Buzias 50.66 305 ⇓P P **20 16 18.6 +0.5**
MDVR Moldovita 50.74 303 ⇑P P **20 16 20.5 +1.7**
SANI Sanana 50.85 126 P P **20 16 19.4 -0.4**
TIM Timisoara 50.91 305 ⇓P P **20 16 21.8 +1.7**
TIM Timisoara 50.91 305 P P **20 16 21.7 +1.7**
NIE Niedzica 50.97 310 P P **20 16 21.6 +1.1**
comp=Z,4µmcomp=Z,130nm,1.6s
KECS Kecovo 50.98 308 *e*P P **20 16 22.7 +2.2**
KECS pmax pmax
comp=Z,64nm,1.0s
KECS Kecovo 50.98 308 *e*P P **20 16 22.7 +2.2**
BANR Banloc 51.03 304 ⇑P P **20 16 23.1 +2.2**
PLAI Plampang 51.03 139 P P **20 16 19.7 -1.5**
LIT Litokhoron 51.15 297 P P **20 16 21.1 -0.8**
LIT Litokhoron 51.15 297 ⇑P P **20 16 21.1 -0.8**
AMBH Ambrzfalva 51.15 306 ⇓P P **20 16 23.9 +2.2**
OJC Ojcow 51.19 311 P P **20 16 21.3 -0.8**
OJC Ojcow 51.19 311 ⇓P P **20 16 22.2 +0.1**
OJC Ojcow 51.19 311 P P **20 16 22.4 +0.3**
comp=Z,7µmcomp=Z,249nm,1.8s
JETT Jettan, Norway 51.20 336 *e*P P **20 16 21.3 -0.6**
JETT IVmB_BB 20 16 25.5
comp=Z,5µm,7.1s
JETT *e*PP **PP** **20 18 19.0 +0.5**
JETT *e*S **S** **20 23 40.1 +0.1**
JETT *e*SS **SS** **20 27 18.4 +3.6**
JETT IVmS_BB IVmS_BB 20 40 14.2
comp=Z,21µm,10.0s
PSZ Piszkesteto 51.45 308 ⇓P P **20 16 25.0 +0.8**
PSZ Piszkesteto 51.45 308 P P **20 16 24.9 +0.8**
PSZ Piszkesteto 51.45 308 ⇓P P **20 16 24.1 -0.1**
SKO Skopje 51.49 300 *i*P P **20 16 25.3 +0.9**
AGG Agios Georgios 51.53 296 ⇑P P **20 16 23.8 -1.0**
AGG Agios Georgios 51.53 296 ⇑P P **20 16 23.8 -1.0**
LANS Liptovska Anna 51.55 309 *e*P P **20 16 27.3 +2.5**
LANS Liptovska Anna 51.55 309 *e*P P **20 16 27.3 +2.5**
HOPEN Hopen 51.60 345 *e*P P **20 16 24.8 +0.1**
HOPEN IVmB_BB 20 16 28.6
comp=Z,5µm,8.3s
HOPEN *e*PP **PP** **20 18 23.2 +1.4**
HOPEN *e*S **S** **20 23 46.2 +1.0**
HOPEN *e*SS **SS** **20 27 24.2 +3.4**
HOPEN IVmS_BB IVmS_BB 20 43 39.6
comp=Z,24µm,13.3s
TRO Tromso 51.73 336 *e*P P **20 16 25.6 -0.2**
TRO IVmB_BB 20 16 27.5
comp=Z,5µm,2.0s
TRO *e*PP **PP** **20 18 24.0 +0.9**
TRO *e*ScP **ScP** **20 21 35.2 -0.6**
TRO *e*S **S** **20 23 49.6 +2.5**
TRO *e*SS **SS** **20 27 26.1 +3.2**
TRO IVmS_BB IVmS_BB 20 40 36.6
comp=Z,18µm,10.3s
FRGS Fruska Gora 51.99 304 ⇓*i*P P **20 16 28.3 +0.1**
BUD Budapest 52.10 307 P P **20 16 29.0 +0.1**
OHR Ohrid 52.16 299 *i*P P **20 16 29.2 -0.3**
RAC Raciborz 52.23 311 *e*P P **20 16 30.5 +0.7**
RAC *e*S **S** **20 23 54.4 -0.1**
RAC AMS AMS 20 40 02.0
comp=Z,37nm,19.0s
RAC Raciborz 52.23 311 *e*P P **20 16 30.5 +0.7**
RAC *e*S **S** **20 23 54.4 -0.1**
RAC MLR MLR
comp=Z,37µm,19.0s
SJES Sjenica 52.27 302 ⇓*i*P P **20 16 30.8 +0.4**
OKC Ostrava-Krasne 52.30 310 *e*P P **20 16 32.5 +2.2**
OKC *e*S **S** **20 23 59.1 +3.6**
OKC MLR MLR
comp=Z,22µm,16.7s
OKC Ostrava-Krasne 52.30 310 *e*P P **20 16 32.5 +2.2**
OKC *e*S **S** **20 23 59.1 +3.6**
OKC AMS AMS 20 42 00.0
comp=Z,22µm,16.7s
TEKS Tekeris 52.31 304 ⇓*i*P P **20 16 30.5 -0.1**
IVA Berane 52.41 301 ⇓*i*P P **20 16 31.9 +0.5**
PVY Plav 52.43 301 ⇓*i*P P **20 16 31.6 0.0**
SRO Srobarova 52.52 308 *e*P P **20 16 34.0 +2.0**
SRO pmax pmax
comp=Z,511nm,2.0s
SRO Srobarova 52.52 308 *e*P P **20 16 34.0 +2.0**
STEB Steborice 52.52 310 *e*P P **20 16 32.8 +0.8**
BJO1 Bjornoya 52.52 342 *e*P P **20 16 30.4 -1.2**
BJO1 IVmB_BB 20 16 33.3
comp=Z,5µm,2.4s
BJO1 *e*PP **PP** **20 18 31.9 +1.6**
BJO1 *e*ScP **ScP** **20 21 40.1 +0.9**
BJO1 *e*S **S** **20 23 59.1 +1.2**
BJO1 *e*SS **SS** **20 27 38.1 +2.7**
BJO1 IVmS_BB IVmS_BB 20 41 04.8
comp=Z,13µm,13.0s
BBLS Lazi&#263i 52.54 303 ⇓*i*P P **20 16 32.8 +0.5**
MAUC Maruska 52.58 310 *e*P P **20 16 36.3 +3.8**
MORH Mrgy, Hungar 52.59 306 ⇓*i*P P **20 16 32.6 0.0**
MORH Mrgy, Hungar 52.59 306 P P **20 16 33.2 +0.6**
comp=Z,6µmcomp=Z,275nm,1.6s
PLE Pljevlja 52.67 302 ⇓*i*P P **20 16 33.8 +0.4**
KOME Kolasin 52.69 301 ⇓*i*P P **20 16 33.6 +0.1**
MORC Moravsky Berou 52.69 310 ⇓P P **20 16 34.3 +0.9**
MORC Moravsky Berou 52.69 310 P P **20 16 34.2 +0.9**
MORC Moravsky Berou 52.69 310 IAmb IAmb 20 16 39.0
comp=Z,255nm,1.0s
MORC Moravsky Berou 52.69 310 *e*P P **20 16 33.5 +0.1**
MORC *e*PP **PP** **20 18 32.0 -0.3**
MORC *e*S **S** **20 24 00.9 -0.1**
MORC Moravsky Berou 52.69 310 ⇓P P **20 16 33.4 +0.1**
JAVC Velka Javorina 52.76 309 *e*P P **20 16 35.1 +1.2**
JAVC *e*PP **PP** **20 18 34.2 +1.2**
JAVC *e*S **S** **20 24 02.8 +0.8**
FAUS Fauske 52.86 333 *e*P P **20 16 34.3 +0.1**
FAUS IVmB_BB 20 16 39.8
comp=Z,4µm,5.0s
FAUS *e*PP **PP** **20 18 34.9 +1.5**
FAUS *e*ScP **ScP** **20 21 40.9 +0.2**
FAUS *e*S **S** **20 24 03.0 +0.4**
FAUS *e*SS **SS** **20 27 44.7 +3.7**
FAUS IVmS_BB IVmS_BB 20 41 31.5
comp=Z,17µm,10.2s
STEI Steigen 52.90 333 *e*P P **20 16 34.6 +0.1**
STEI IVmB_BB 20 16 36.1
comp=Z,5µm,2.2s
STEI *e*PP **PP** **20 18 32.8 -0.9**
STEI *e*ScP **ScP** **20 21 41.8 +0.9**
STEI *e*S **S** **20 24 04.8 +1.5**
STEI *e*SS **SS** **20 27 43.3 +1.7**
STEI IVmS_BB IVmS_BB 20 41 01.8
comp=Z,20µm,9.8s
PDG Podgorica 52.97 301 ⇑P P **20 16 35.9 +0.5**
PDG Podgorica 52.97 301 IAmb IAmb 20 16 37.4
comp=Z,292nm,1.1s
PDG Podgorica 52.97 301 ⇓P P **20 16 34.9 -0.5**
PDG Podgorica 52.97 301 *i*P P **20 16 34.9 -0.5**
PDG Podgorica 52.97 301 *i*P P **20 16 35.7 +0.3**
KOVH Kovagotottos 52.99 306 ⇓P P **20 16 35.0 -0.5**
UPM Unac-Piva 53.04 302 *e*P P **20 16 37.1 +0.9**
UPM Unac-Piva 53.04 302 *i*P P **20 16 36.3 +0.1**
DRME Dracevica, Mon 53.08 301 *i*P P **20 16 35.8 -0.4**
DRME Dracevica, Mon 53.08 301 *i*P P **20 16 35.9 -0.3**
ULC Ulcinj 53.09 300 *i*P P **20 16 35.7 -0.7**
MODS Modra-Piesok 53.10 309 *e*P P **20 16 37.9 +1.5**
MODS pmax pmax
comp=Z,114nm,1.8s
MODS Modra-Piesok 53.10 309 *e*P P **20 16 37.9 +1.5**
NKME Niksic 53.11 301 *i*P P **20 16 36.2 -0.3**
KRLC Kraliky 53.13 311 *e*P P **20 16 36.8 +0.2**
KRLC *e*S **S** **20 24 07.4 +0.4**
KRLC MLR MLR
comp=Z,32µm,16.5s
KRLC Kraliky 53.13 311 *e*P P **20 16 36.8 +0.2**
KRLC *e*S **S** **20 24 07.4 +0.4**
KRLC AMS AMS 20 40 10.0
comp=Z,32µm,16.5s
MPLH Magyarpolny 53.15 307 P P **20 16 37.7 +1.0**
comp=Z,18µmcomp=Z,998nm,1.6s
MOR8 Moi Rana 53.16 331 *e*P P **20 16 35.2 -1.2**
MOR8 IVmB_BB 20 16 37.2
comp=Z,5µm,2.1s
MOR8 *e*PP **PP** **20 18 35.5 -0.7**
MOR8 *e*ScP **ScP** **20 21 40.7 -1.5**
MOR8 *e*S **S** **20 24 06.6 -0.2**
MOR8 *e*ScS **ScS** **20 26 25.8 -0.1**
MOR8 *e*SS **SS** **20 27 47.0 +1.2**
MOR8 IVmS_BB IVmS_BB 20 41 08.6
comp=Z,23µm,11.3s
PEA0B Petropavlovsk- 53.17 45 *d*/P P **20 16 36.0 -0.8**
PEA0B Petropavlovsk- 53.17 45 IAmb IAmb 20 16 39.5
comp=Z,767nm,1.7s
PETK Petropavlovsk- 53.17 45 P P **20 16 35.6 -1.1**
comp=Z,60nm,0.8s,baz=299,slow=2.6,SNR=77
PETK LR LR 20 39 10.3
comp=Z,13µm,20.4s,baz=276,slow=36
PETK PKPPKP P'P'df 20 46 55.8 -12
comp=Z,2.4nm,0.9s,baz=157,slow=5.9,SNR=4.3
comp=Z,60nm,0.8s
PETK Petropavlovsk- 53.17 45 P P **20 16 36.0 -0.8**
PETK Petropavlovsk- 53.17 45 P P **20 16 36.0 -0.8**
CEME Cevo 53.19 301 *i*P P **20 16 36.7 -0.4**
BUM Brajici-Budva 53.26 301 *i*P P **20 16 37.3 -0.4**
KSP Ksiaz 53.31 312 ⇓P P **20 16 37.8 0.0**
KSP Ksiaz 53.31 312 ⇓P P **20 16 37.8 0.0**
KSP Ksiaz 53.31 312 P P **20 16 38.8 +1.0**
comp=Z,7µmcomp=Z,253nm,1.6s
RAUS Rausandaksla 53.33 331 *e*P P **20 16 37.3 -0.4**
RAUS IVmB_BB 20 16 40.8
comp=Z,5µm,7.7s
RAUS *e*PP **PP** **20 18 37.9 +0.3**
RAUS *e*S **S** **20 24 09.2 +0.1**
RAUS *e*SS **SS** **20 27 51.4 +3.0**
RAUS IVmS_BB IVmS_BB 20 41 59.0
comp=Z,17µm,11.1s
BRY Bratogost 53.37 302 ⇓*i*P P **20 16 38.2 -0.4**
BRY Bratogost 53.37 302 ⇓*i*P P **20 16 38.6 0.0**
DPC Dobruska-Polom 53.38 311 *e*P P **20 16 38.9 +0.5**
DPC *e* 20 18 37.4
DPC *e*S **S** **20 24 11.2 +0.9**
DPC pmax pmax
comp=Z,125nm,0.6s
DPC MLR MLR
comp=Z,32µm,17.9s
DPC Dobruska-Polom 53.38 311 *e*P P **20 16 38.9 +0.5**
comp=Z,125nm,0.6s
DPC *e*PP **PP** **20 18 37.4 -1.1**
DPC *e*S **S** **20 24 11.2 +0.9**
DPC AMS AMS 20 40 20.0
comp=Z,32µm,17.9s
DPC Dobruska-Polom 53.38 311 P P **20 16 39.3 +0.9**
comp=Z,7µmcomp=Z,341nm,0.8s
VRAC Vranov 53.38 310 P P **20 16 38.5 +0.1**
comp=Z,55nm,0.7s,baz=83,slow=7.5,SNR=99
VRAC S **S** **20 24 06.4 -3.9**
comp=Z,5.2nm,0.9s,baz=69,slow=6.1,SNR=3.7
VRAC LR LR 20 43 20.8
comp=Z,28µm,18.8s,baz=81,slow=40
comp=Z,55nm,0.7s
VRAC Vranov 53.38 310 ⇓P P **20 16 38.9 +0.4**
VRAC Vranov 53.38 310 P P **20 16 38.8 +0.4**
VRAC Vranov 53.38 310 *e*P P **20 16 39.0 +0.6**
VRAC *e*PP **PP** **20 18 39.4 +0.9**
VRAC *e*S **S** **20 24 09.7 -0.6**
OSTC Ostas 53.41 311 AMS AMS 20 40 10.0
comp=Z,29µm,16.2s
MMRI Maumere 53.44 135 P P **20 16 38.0 -1.1**
MMRI Maumere 53.44 135 ⇓P P **20 16 36.8 -2.3**
CHVC Chvalec 53.51 312 *e*P P **20 16 40.1 +0.8**
CHVC *e*S **S** **20 24 13.8 +1.8**
CHVC MLR MLR
comp=Z,26µm,17.0s
CHVC Chvalec 53.51 312 *e*P P **20 16 40.1 +0.8**
CHVC *e*S **S** **20 24 13.8 +1.8**
CHVC AMS AMS 20 40 30.0
comp=Z,26µm,17.0s
HCY Herceg Novi 53.51 301 *e*P P **20 16 39.5 0.0**
HCY Herceg Novi 53.51 301 ⇓*i*P P **20 16 39.4 0.0**
BSD Bornholm Skovb 53.54 317 *i*P P **20 16 38.6 -0.7**
BSD IAmb IAmb 20 16 43.8
comp=Z,84nm,1.0s
BSD IVmS_BB IVmS_BB 20 42 35.2
comp=Z,16µm,12.1s
BSD IAmS_20 IAmS_20 20 42 38.2
comp=Z,34µm,13.9s
UPC Upice 53.55 311 *e*P P **20 16 40.7 +1.1**
UPC *e*S **S** **20 24 13.6 +1.1**
UPC MLR MLR
comp=Z,30µm,15.9s
UPC Upice 53.55 311 *e*P P **20 16 40.7 +1.1**
UPC *e*S **S** **20 24 13.6 +1.1**
UPC AMS AMS 20 40 30.0
comp=Z,30µm,15.9s
LOF Lofoten 53.55 334 *e*P P **20 16 38.0 -1.3**
LOF IVmB_BB 20 16 44.3
comp=Z,3µm,2.4s
LOF *e*PP **PP** **20 18 39.0 -0.6**
LOF *e*S **S** **20 24 12.1 +0.1**
LOF *e*SS **SKiKP** **20 27 55.1 +0.5**
LOF IVmS_BB IVmS_BB 20 41 23.2
comp=Z,26µm,11.7s
TREB Trebinje 53.55 302 *e*P P **20 16 39.7 0.0**
KRUC Moravsky 53.55 310 P P **20 16 38.8 -0.8**
KRUC Moravsky 53.55 310 *e*P P **20 16 40.1 +0.5**
KRUC *e*PP **PP** **20 18 39.4 -0.6**
KRUC *e*S **S** **20 24 12.6 -0.1**
VAGH Vaagaholmen 53.64 332 *e*P P **20 16 39.0 -0.9**
VAGH IVmB_BB 20 16 41.5
comp=Z,4µm,2.1s
VAGH *e*PP **PP** **20 18 41.3 +0.9**
VAGH *e*ScP **ScP** **20 21 45.1 +0.9**
VAGH *e*S **S** **20 24 13.2 +0.1**
VAGH *e*SS **SKiKP** **20 27 56.4 +1.6**
VAGH IVmS_BB IVmS_BB 20 40 25.7
comp=Z,16µm,12.8s
HFS Hagfors 53.69 324 P P **20 16 39.5 -0.9**
comp=Z,104nm,0.7s,baz=88,slow=7.6,SNR=92
HFS LR LR 20 41 52.0
comp=Z,41µm,19.6s,baz=88,slow=38
comp=Z,104nm,0.7s
KONS Konsvik 53.70 331 *e*P P **20 16 39.7 -0.7**
KONS IVmB_BB 20 16 41.8
comp=Z,5µm,5.3s
KONS *e*PP **PP** **20 18 41.7 +0.8**
KONS *e*S **S** **20 24 15.9 +1.9**
KONS *e*SS **SKiKP** **20 27 58.8 +4.0**
KONS IVmS_BB IVmS_BB 20 40 33.7
comp=Z,18µm,13.7s
LEIR Leirfjorden 53.70 331 *e*P P **20 16 40.0 -0.4**
LEIR IVmB_BB 20 16 41.9
comp=Z,6µm,5.2s
LEIR *e*PP **PP** **20 18 40.9 -0.1**
LEIR *e*ScP **ScP** **20 21 44.1 -0.3**
LEIR *e*S **S** **20 24 15.3 +1.2**
LEIR *e*SS **SKiKP** **20 27 57.5 +2.7**
LEIR IVmS_BB IVmS_BB 20 42 09.7
comp=Z,27µm,9.9s
SOP Sopron 53.71 308 P P **20 16 41.3 +0.5**
STOK Stokkvaagen 53.74 331 *e*P P **20 16 39.7 -1.0**
STOK IVmB_BB 20 16 44.5
comp=Z,5µm,7.7s
STOK *e*PP **PP** **20 18 42.2 +0.9**
STOK *e*S **S** **20 24 16.6 +2.0**
STOK *e*SS **SKiKP** **20 27 57.6 +2.8**
STOK IVmS_BB IVmS_BB 20 41 30.7
comp=Z,20µm,12.9s
SIJI Sorong 53.75 120 LR LR 20 42 45.0
comp=Z,5µm,19.4s,baz=330,slow=40
PET Petropavlovsk 53.76 45 P P **20 16 40.6 -0.5**
PET Petropavlovsk 53.76 45 *e*P P **20 16 40.5 -0.5**
PET *e* 20 17 43.2
PET *e* 20 18 44.9
PET *e*S **S** **20 24 11.5 -3.7**
PET *e*SS **SKiKP** **20 27 50.9 -4.4**
PET pmax pmax
comp=Z,287nm,1.1s
PET pmax pmax
comp=Z,3µm,9.6s
PET pmax pmax
comp=Z,4µm,12.5s
PET pmax pmax
comp=Z,2µm,11.5s
PET smax smax
comp=N,2µm,13.1s
PET smax smax
comp=N,2µm,13.8s
PET MLR MLR
comp=Z,28µm,13.0s
PET MLR MLR
comp=Z,32µm,13.0s
PET Petropavlovsk 53.76 45 P P **20 16 40.0 -1.0**
PET IAmb IAmb 20 16 42.7
comp=Z,376nm,1.2s
PET IAmS_20 IAmS_20 20 39 05.7
comp=Z,29µm,18.0s
PET Petropavlovsk 53.76 45 ⇑P P **20 16 39.7 -1.3**
PET Petropavlovsk 53.76 45 P P **20 16 40.5 -0.5**
comp=Z,6µmcomp=Z,304nm,1.4s
BEHE Becsehely 53.81 306 IAmb IAmb 20 16 47.2
comp=Z,294nm,1.1s
BEHE Becsehely 53.81 306 ⇓*i*P P **20 16 42.1 +0.6**
SPB2 Spitsbergen Ar 53.88 346 IAmb IAmb 20 16 47.4
comp=Z,492nm,1.6s
RONA Rosalia, Austr 53.88 308 *e*P P **20 16 42.1 0.0**
comp=Z,2µm,2.3s,SNR=237
RONA *e*S **S** **20 24 21.5 +4.3**
comp=Z,2µm,6.8s
SPA0 Spitsbergen Ar 53.88 346 *e*P P **20 16 41.0 -0.7**
SPA0 IVmB_BB 20 16 43.9
comp=Z,5µm,2.4s
SPA0 *e*PP **PP** **20 18 43.2 +0.7**
SPA0 *e*S **S** **20 24 18.0 +1.7**
SPA0 *e*SS **SS** **20 27 58.0 +1.1**
SPA0 IVmS_BB IVmS_BB 20 44 41.4
comp=Z,16µm,14.3s
SPITS Spitsbergen Ar 53.88 346 P P **20 16 41.8 +0.2**
comp=Z,84nm,1.0s,baz=120,slow=5.2,SNR=27
SPITS PcP **PcP** **20 17 47.4 +0.4**
comp=Z,60nm,1.0s,baz=100,slow=7.5,SNR=9.6
SPITS LR LR 20 45 01.3
comp=Z,27µm,18.1s,baz=115,slow=42
comp=Z,84nm,1.0s
SPITS Spitsbergen Ar 53.88 346 P P **20 16 42.2 +0.6**
SPITS 20 17 47.4
SPITS pmax pmax
comp=Z,443nm,1.5s
BLY Banja Luka 53.90 304 ⇑P P **20 16 43.6 +1.3**
BLY Banja Luka 53.90 304 ⇓P P **20 16 42.2 0.0**
BLY Banja Luka 53.90 304 ⇓*i*P P **20 16 42.5 +0.3**
WINA Alland / Wiene 53.95 308 *i*P P **20 16 43.1 +0.6**
comp=Z,2µm,2.5s,SNR=156
WINA *e*S **S** **20 24 21.4 +3.4**
DEL Delary 53.96 319 *i*P P **20 16 42.8 +0.4**
TREC Trest 54.10 310 *e*P P **20 16 45.4 +1.8**
TREC *e*S **S** **20 24 21.4 +1.3**
TREC MLR MLR
comp=Z,34µm,21.2s
TREC Trest 54.10 310 *e*P P **20 16 45.4 +1.8**
TREC *e*S **S** **20 24 21.4 +1.3**
TREC AMS AMS 20 40 30.0
comp=Z,34µm,21.2s
CONA Conrad Observa 54.12 308 *i*P P **20 16 43.9 0.0**
comp=Z,2µm,2.3s,SNR=506
CONA *e*sPKiKP **PKiKP** **20 24 24.5 +1.0**
comp=Z,1µm,5.5s
NSS Namsos 54.23 329 *e*P P **20 16 44.2 -0.1**
NSS IVmB_BB 20 16 45.4
comp=Z,4µm,5.1s
NSS *e*PP **PP** **20 18 46.9 +1.1**
NSS *e*S **S** **20 24 22.9 +1.6**
NSS IVmS_BB IVmS_BB 20 41 32.0
comp=Z,22µm,9.3s
LUNU Lund 54.30 318 *i*P P **20 16 44.0 -0.9**
BJUU Bjuv 54.48 319 *i*P P **20 16 46.1 -0.1**
ARSA Arzberg 54.48 308 IAmb IAmb 20 16 49.8
comp=Z,725nm,1.9s
ARSA Arzberg 54.48 308 ⇓P P **20 16 46.2 -0.3**
ARSA Arzberg 54.48 308 *i*P P **20 16 46.4 -0.1**
comp=Z,2µm,2.4s,SNR=127
ARSA *e*sPKiKP **PKiKP** **20 24 29.1 +5.3**
comp=Z,1µm,6.4s
FABU Falkenberg 54.52 320 *i*P P **20 16 46.7 +0.2**
RGN Rugen 54.53 317 IAmb IAmb 20 16 50.6
comp=Z,289nm,1.0s
RGN Rugen 54.53 317 ⇓P P **20 16 47.5 +0.9**
PRU Pruhonice 54.57 311 *e*P P **20 16 47.9 +0.9**
PRU *e* 20 18 52.2
PRU *e*S **S** **20 24 26.2 -0.1**
PRU pmax pmax
comp=Z,46nm,0.7s
PRU MLR MLR
comp=Z,32µm,18.5s
PRU Pruhonice 54.57 311 *e*P P **20 16 47.9 +0.9**
comp=Z,46nm,0.7s
PRU *e*PP **PP** **20 18 52.2 +3.1**
PRU *e*S **S** **20 24 26.2 -0.1**
PRU AMS AMS 20 41 00.0
comp=Z,32µm,18.5s
NC405 NORSAR Array S 54.58 325 IAmb IAmb 20 16 48.8
comp=Z,370nm,1.1s
RUE Ruedersdorf 54.59 314 ⇑P P **20 16 46.3 -0.8**

RUE Ruedersdorf 54.59 314 *e*P **P 20 16 48.7 +1.7**
comp=Z,172nm,0.9s,baz=77,slow=7.0
NC602 NORSAR Array S 54.70 324 *e*P **P 20 16 46.9 -0.9**
NC602 IVmB_BB 20 16 50.9
comp=Z,5µm,9.6s
NC602 *e*PP **PP 20 18 50.1 +0.1**
NC602 *e*ScP **ScP 20 21 48.8 -0.1**
NC602 *e*S **S 20 24 29.4 +1.7**
NC602 *e*SS **SS 20 28 12.3 +2.2**
NC602 IVmS_BB IVmS_BB 20 41 54.2
comp=Z,29µm,12.6s
NC602 NORSAR Array S 54.70 324 IAmb IAmb 20 16 49.3
comp=Z,305nm,1.1s
NORES NORESS Array B 54.70 324 P **P 20 16 47.8 0.0**
NORES pmax pmax
comp=Z,213nm,1.0s
NC303 NORSAR Array S 54.73 325 IAmb IAmb 20 16 49.9
comp=Z,310nm,1.1s
RICC Richard 54.74 312 *e*P **P 20 16 50.7 +2.4**
RICC *e*S **S 20 24 29.0 +0.4**
RICC AMS AMS 20 40 20.0
comp=Z,27µm,18.3s
BRG Berggiesshubel 54.78 312 *e*P **P 20 16 49.7 +1.2**
comp=Z,145nm,0.9s,baz=77,slow=7.0
BRG Berggiesshubel 54.78 312 *e*P **P 20 16 49.1 +0.6**
BRG Amp 20 16 50.6
comp=Z,31nm,1.1s
BRG Berggiesshubel 54.78 312 P **P 20 16 51.3 +2.8**
BRG Amp 20 16 54.7
comp=Z,160nm,0.9s
BRG ⇑PP **PcP 20 17 52.2 +1.3**
BRG Amp 20 17 54.1
comp=Z,51nm,1.1s
BRG PP PP 20 18 43.2 -7.8
BRG Amp 20 18 44.7
comp=Z,15nm,1.0s
BRG Berggiesshubel 54.78 312 S **S 20 24 36.0 +6.9**
BRG Berggiesshubel 54.78 312 SS **SS 20 28 19.0 +7.2**
NB2 NORSAR Subarra 54.83 325 P **P 20 16 47.7 -1.1**
comp=Z,333nm,1.1s,baz=84,slow=7.4
NB2 NORSAR Subarra 54.83 325 P **P 20 16 47.7 -1.1**
NOA NORSAR Array B 54.83 325 P **P 20 16 47.9 -0.9**
comp=Z,112nm,0.9s,baz=85,slow=7.2,SNR=108
NOA LR LR 20 40 21.8
comp=Z,36µm,18.4s,baz=85,slow=36
comp=Z,112nm,0.9s
COP Copenhagen 54.86 318 *i* P **P 20 16 50.0 +1.0**
COP IAmb IAmb 20 16 55.5
comp=Z,350nm,0.9s
KBS Kingsbay 54.88 347*d* *i*P **P 20 16 48.3 -0.5**
KBS pmax pmax
comp=Z,140nm,1.5s
KBS MLR MLR
comp=Z,27µm,18.0s
KBS Kingsbay 54.88 347 *e*P **P 20 16 47.7 -1.1**
KBS IVmB_BB 20 16 52.3
comp=Z,3µm,8.9s
KBS *e*PP **PP 20 18 53.1 +1.7**
KBS *e*S **S 20 24 31.6 +1.9**
KBS IVMs_BB IVMs_BB 20 42 58.8
comp=Z,11µm,18.4s
KBS Kingsbay 54.88 347 P **P 20 16 48.7 -0.1**
KBS IAMs_20 IAMs_20 20 41 53.1
comp=Z,28µm,19.0s
KBS Kingsbay 54.88 347 ⇓P **P 20 16 48.8 -0.1**
KBS Kingsbay 54.88 347 *i* P **P 20 16 49.5 +0.6**
ONAU Onsala 54.90 320 *i* P **P 20 16 47.0 -2.2**
ZVC Zvikov 54.90 310 *e*P **P 20 16 50.2 +0.8**
ZVC *e*PP **PP 20 18 55.3 +3.2**
ZVC *e*S **S 20 24 34.8 +4.0**
ZVC AMS AMS 20 42 20.0
comp=Z,24µm,18.4s
SOKA Soboth 54.94 307 *i* P **P 20 16 49.8 0.0**
comp=Z,3µm,2.2s
SOKA S **S 20 24 31.2 -0.4**
comp=Z,4µm,7.2s
CKRC Cesky Krumlov 54.95 310 *e*P **P 20 16 50.8 +1.0**
CKRC *e*S **S 20 24 33.7 +2.1**
CKRC MLR MLR
comp=Z,35µm,23.4s
CKRC Cesky Krumlov 54.95 310 *e*P **P 20 16 50.8 +1.0**
CKRC *e*S **S 20 24 33.7 +2.1**
CKRC AMS AMS 20 40 40.0
comp=Z,35µm,23.4s
TJOU Tjoern 54.97 321 *i* P **P 20 16 48.5 -1.3**
NAO01 NORSAR Array S 55.01 325 IAmb IAmb 20 16 51.3
comp=Z,242nm,1.1s
NC204 NORSAR Array S 55.02 325 IAmb IAmb 20 16 51.8
comp=Z,302nm,1.1s
LLD Lille Linde 55.04 318 *i* P **P 20 16 50.0 -0.2**
LLD IAmb IAmb 20 16 56.7
comp=Z,160nm,0.9s
STRU Stroemstad 55.07 322 *i* P **P 20 16 50.2 -0.3**
SESA Seetaler Alpe, 55.15 308 *i* P **P 20 16 51.4 -0.1**
comp=Z,4µm,2.4s,SNR=242
SESA *e*S **S 20 24 33.2 -1.4**
comp=Z,6µm,7.1s
MOA Molln 55.19 308 *i* P **P 20 16 51.4 -0.2**
comp=Z,2µm,2.4s,SNR=234
MOA *e*S **S 20 24 33.4 -1.4**
comp=Z,4µm,9.6s
OSL Oslo 55.19 323 *e*P **P 20 16 51.0 -0.4**
OSL IVmB_BB 20 16 54.6
comp=Z,6µm,7.9s
OSL *e*S **S 20 24 36.0 +1.6**
OSL *e*SS **SS 20 28 20.5 +2.6**
OSL IVMs_BB IVMs_BB 20 42 43.5
comp=Z,24µm,12.1s
CLL Collm 55.28 313 *i* P **P 20 16 51.8 -0.3**
CLL *e*S **S 20 24 39.0 +3.2**
CLL pmax pmax
comp=Z,625nm,2.0s
CLL Collm 55.28 313 *e*P **P 20 16 52.7 +0.6**
comp=Z,42nm,0.8s,baz=77,slow=7.0
CLL *e*L L 20 40 25.4
comp=Z,26µm,21.9s
CLL Collm 55.28 313 P **P 20 16 52.6 +0.5**
comp=Z,6µmcomp=Z,131nm,1.6s
CLL Collm 55.28 313 *i* P **P 20 16 51.8 -0.3**
comp=Z,625nm,2.0s
CLL *e*Pmax 20 17 02.0
CLL *e*PP **PP 20 18 54.0 -1.4**
CLL *e*PPP PPP 20 20 02.0
CLL *e*S **S 20 24 39.0 +3.2**
CLL *e*SS **SS 20 28 24.0 +4.4**
CLL AMS AMS 20 44 00.0
MATE Matera 55.28 299 ⇑P **P 20 16 52.9 +0.7**
MATE Matera 55.28 299 ⇓P **P 20 16 51.5 -0.8**
OBKA Obir 55.30 307 *e*P **P 20 16 52.5 0.0**
comp=Z,3µm,2.5s,SNR=100
OBKA *e*S **S 20 24 34.8 -1.7**
comp=Z,6µm,10.7s
GEC2 GERESS Array S 55.34 310 IAmb IAmb 20 16 59.0
comp=Z,274nm,0.9s
GEC2 GERESS Array S 55.34 310 *e*P **P 20 16 53.8 +1.1**
comp=Z,218nm,0.9s,baz=77,slow=7.0
GEC2 *e*L L 20 42 42.5
comp=Z,17µm,21.6s
GERES GERESS Array B 55.34 310 P **P 20 16 52.7 -0.1**
comp=Z,90nm,0.7s,baz=76,slow=5.6,SNR=184
GERES LR LR 20 43 04.2
comp=Z,16µm,20.8s,baz=82,slow=39
GERES PKPPKP 20 46 51.6
comp=Z,0.1nm,0.3s,baz=227,slow=3.9,SNR=4.5
comp=Z,90nm,0.7s
GERES GERESS Array B 55.34 310 P **P 20 16 53.0 +0.3**
GERES GERESS Array B 55.34 310 P **P 20 16 53.0 +0.3**
KHC Kasperske Hory 55.36 310*d* *i*P **P 20 16 52.3 -0.5**
KHC pmax pmax
comp=Z,412nm,1.8s
KHC MLR MLR
comp=Z,16µm,18.0s
KHC Kasperske Hory 55.36 310 *e*P **P 20 16 53.1 +0.3**
comp=Z,20nm,0.6s
KHC *e*PP **PP 20 18 59.7 +3.4**
KHC *e*S **S 20 24 37.2 +0.2**
KHC AMS AMS 20 41 10.0
comp=Z,42µm,24.1s
KHC Kasperske Hory 55.36 310 ⇓P **P 20 16 52.9 +0.1**
KHC Kasperske Hory 55.36 310 P **P 20 16 53.3 +0.5**
comp=Z,7µmcomp=Z,208nm,1.7s
SOEI Soe 55.55 133 P **P 20 16 53.8 -0.8**
SOEI Soe 55.55 133 P **P 20 16 54.1 -0.5**
SOEI Soe 55.55 133 ⇓P **P 20 16 52.6 -2.0**
BIOA Bad Ischl, Aus 55.63 308 *i* P **P 20 16 54.6 -0.2**
comp=Z,1µm,2.3s,SNR=182
BIOA S **S 20 24 39.9 -0.9**
comp=Z,4µm,10.3s
TIP Timpagrande 55.66 298 ⇑P **P 20 16 55.5 +0.3**
TIP Timpagrande 55.66 298 ⇓P **P 20 16 54.5 -0.6**
TIP Timpagrande 55.66 298 P **P 20 16 55.3 +0.2**
comp=Z,5µmcomp=Z,204nm,1.8s
DOMB Dombas 55.74 326 *e*P **P 20 16 54.8 -0.5**
DOMB IVmB_BB 20 16 56.8
comp=Z,5µm,5.2s
DOMB *e*PP **PP 20 19 00.2 +0.8**
DOMB *e*ScP **ScP 20 21 54.2 +0.6**
DOMB *e*S **S 20 24 41.9 +0.1**
DOMB *e*SS **SS 20 28 29.3 +2.7**
DOMB IVMs_BB IVMs_BB 20 42 44.9
comp=Z,28µm,10.2s
TANN Tannenbergstha 55.79 312 *e*P **P 20 16 56.9 +0.9**
comp=Z,84nm,0.9s,baz=77,slow=7.0
KONO Kongsberg 55.79 323 P **P 20 16 56.3 +0.6**
KONO Kongsberg 55.79 323 *e*P **P 20 16 54.5 -1.2**
KONO IVmB_BB 20 16 58.6
comp=Z,5µm,8.4s
KONO *e*PP **PP 20 19 00.8 +0.9**
KONO *e*S **S 20 24 43.5 +1.1**
KONO *e*SS **SS 20 28 29.9 +2.5**
KONO IVMs_BB IVMs_BB 20 43 56.7
comp=Z,22µm,9.9s
KONO Kongsberg 55.79 323 P **P 20 16 55.5 -0.2**
KONO IAmb IAmb 20 16 57.5
comp=Z,222nm,1.2s
KONO Kongsberg 55.79 323 IAMs_20 IAMs_20 20 42 53.1
comp=Z,29µm,20.0s
KONO Kongsberg 55.79 323 ⇓P **P 20 16 55.5 -0.2**
WET Wettzell 55.80 310 *e*P **P 20 16 57.1 +1.1**
comp=Z,93nm,0.9s,baz=77,slow=7.0
WET *e*L L 20 42 14.6
comp=Z,22µm,21.8s
NKC Novy Kostel 55.84 312 *e*P **P 20 16 57.7 +1.5**
NKC *e*S **S 20 24 41.6 -1.8**
NKC MLR MLR
comp=Z,32µm,16.6s
NKC Novy Kostel 55.84 312 *e*P **P 20 16 57.7 +1.5**
NKC *e*S **S 20 24 41.6 -1.8**
NKC AMS AMS 20 43 50.0
comp=Z,32µm,16.6s
BILL Bilibino 55.85 27*d* *i*P **P 20 16 56.5 +0.5**
BILL pmax pmax
comp=Z,360nm,1.0s
BILL MLR MLR
comp=Z,35µm,16.0s
BILL Bilibino 55.85 27 P **P 20 16 57.3 +1.3**
BILL IAmb IAmb 20 16 59.9
comp=Z,282nm,1.0s
BILL IAMs_20 IAMs_20 20 42 25.1
comp=Z,22µm,22.0s
FAKI Fak Fak 55.87 121 P **P 20 16 57.3 +0.5**
FAKI Fak Fak 55.87 121 IAmb IAmb 20 17 02.2
comp=Z,414nm,1.5s
FAKI Fak Fak 55.87 121 ⇓P **P 20 16 56.2 -0.6**
MYKA Terra Mystica 55.88 307 *e*P **P 20 16 56.1 -0.5**
comp=Z,2µm,3.6s,SNR=31
MYKA S **S 20 24 41.7 -2.5**
comp=Z,2µm,6.7s
DPSS Saipan 55.95 94 P **P 20 16 57.6 +0.2**
PLN Plauen 55.97 312 *e*P **P 20 16 58.1 +1.0**
comp=Z,296nm,2.0s,baz=77,slow=7.0
KBA Koelnbreinsper 55.97 308 ⇓P **P 20 16 56.5 -0.9**
KBA Koelnbreinsper 55.97 308 ⇓P **P 20 16 56.5 -0.9**
KBA Koelnbreinsper 55.97 308 *e*P **P 20 16 56.7 -0.7**
comp=Z,2µm,2.7s,SNR=155
KBA S **S 20 24 46.3 +0.7**
comp=Z,2µm,6.6s
GORT1 Trebel 55.97 315 *e*P **P 20 16 58.3 +1.3**
comp=Z,473nm,1.5s,baz=77,slow=7.0
GUMO Guam 56.01 96 LR LR 20 40 57.7
comp=Z,9µm,21.3s,baz=304,slow=36
GUMO Guam 56.01 96 P **P 20 16 59.7 +1.9**
GUMO Guam 56.01 96 P **P 20 16 58.0 +0.2**
GUMO pmax pmax
comp=Z,805nm,1.6s
GUMO Guam 56.01 96 P **P 20 16 58.0 +0.2**
NEUB Neuenburg 56.05 313 *e*P **P 20 16 58.6 +1.0**
comp=Z,140nm,0.8s,baz=77,slow=7.0
ROTZ Rotzenmuhle 56.09 311 *e*P **P 20 16 59.4 +1.4**
comp=Z,34nm,1.0s,baz=77,slow=7.0
FLTG Flechtingen 56.15 314 ⇓P **P 20 16 57.4 -0.9**
FLTG Flechtingen 56.15 314 *e*P **P 20 16 58.9 +0.6**
comp=Z,119nm,0.8s,baz=77,slow=7.0
RJOB Jochberg 56.18 309 *e*P **P 20 16 59.5 +0.8**
comp=Z,59nm,0.8s,baz=77,slow=7.0
MOX Moxa 56.27 312 *e*P **P 20 17 00.3 +1.0**
comp=Z,108nm,1.1s,baz=77,slow=7.0
MOX *e*L L 20 42 58.1
comp=Z,28µm,21.2s
SKAR Skarslia 56.29 325 *e*P **P 20 16 59.2 -0.1**
SKAR IVmB_BB 20 17 01.7
comp=Z,5µm,5.2s
SKAR *e*PP **PP 20 19 04.7 +0.4**
SKAR *e*S **S 20 24 49.9 +0.8**
SKAR *e*SS **SS 20 28 38.2 +2.9**
SKAR IVMs_BB IVMs_BB 20 42 46.2
comp=Z,23µm,10.4s
LESA Schwarzleotal 56.33 308 *i* P **P 20 16 59.4 -0.4**
comp=Z,2µm,2.3s,SNR=384
LODK Lodwar 56.34 250 P **P 20 17 00.8 +0.4**
SNR=131
LODK Lodwar 56.34 250 P **P 20 17 01.1 +0.8**
LODK IAmb IAmb 20 17 04.0
comp=Z,607nm,1.6s
BSEG Bad Segeberg 56.37 316 *e*P **P 20 17 01.3 +1.4**
comp=Z,48nm,0.8s,baz=77,slow=7.0
BSEG *e*L L 20 43 48.1
comp=Z,24µm,21.2s
MOL Molde 56.38 327 *e*P **P 20 16 59.5 -0.3**
MOL IVmB_BB 20 17 01.9
comp=Z,5µm,1.9s
MOL *e*PP **PP 20 19 05.3 +0.4**
MOL *e*S **S 20 24 50.7 +0.7**
MOL *e*SS **SS 20 28 38.2 +1.7**
MOL IVMs_BB IVMs_BB 20 43 04.9
comp=Z,28µm,12.6s
GOET G??ttrup 56.40 320 *i* P **P 20 17 01.1 +1.1**
GOET IAmb IAmb 20 17 03.0
comp=Z,155nm,0.5s
MUD Monsted U'grnd 56.53 319 *i* P **P 20 17 01.7 +0.7**
MUD IAmb IAmb 20 17 03.9
comp=Z,107nm,0.9s
MUD IAMs_20 IAMs_20 20 43 39.2
comp=Z,35µm,14.9s
HOMB Homborsund 56.57 322 *e*P **P 20 17 00.3 -0.9**
HOMB IVmB_BB 20 17 04.5
comp=Z,5µm,9.3s
HOMB *e*PP **PP 20 19 07.3 +0.6**
HOMB *e*S **S 20 24 53.0 +0.3**
HOMB *e*SS **SS 20 28 42.4 +2.8**
HOMB IVMs_BB IVMs_BB 20 44 22.5
comp=Z,23µm,9.3s
HOMB Homborsund 56.57 322 *i* P **P 20 17 00.2 -0.9**
CEL Celeste 56.58 297 ⇓P **P 20 17 01.3 -0.4**
CEL Celeste 56.58 297 P **P 20 17 01.8 +0.1**
comp=Z,9µmcomp=Z,657nm,1.4s
STAL STALIGIAL 56.59 307 IAmb IAmb 20 17 06.5
comp=Z,202nm,0.9s
ABTA Abfaltersbach 56.60 308 *i* P **P 20 17 00.6 -1.2**
comp=Z,1µm,2.5s,SNR=90
ABTA S **S 20 24 54.5 +0.7**
comp=Z,2µm,9.2s
AKN Aaknes 56.69 326 *e*P **P 20 17 01.5 -0.5**
AKN IVmB_BB 20 17 08.1
comp=Z,3µm,2.7s
AKN *e*PP **PP 20 19 08.1 +0.3**
AKN *e*S **S 20 24 54.9 +0.6**
AKN *e*SS **SS 20 28 44.1 +2.7**
AKN IVMs_BB IVMs_BB 20 43 10.3
comp=Z,27µm,11.0s
GRA1 Grafenberg Arr 56.73 311 IAmb IAmb 20 17 09.3
comp=Z,260nm,1.0s
GRA1 IAMs_20 IAMs_20 20 43 47.1
comp=Z,28µm,18.0s
GRF Grafenberg Arr 56.73 311 *e*P **P 20 17 04.1 +1.5**
comp=Z,155nm,0.9s,baz=77,slow=7.0
GRF *e*L L 20 43 48.1
comp=Z,27µm,19.6s
GRFO Grafenberg 56.73 311 P **P 20 17 02.9 +0.3**
GRFO pmax pmax
comp=Z,210nm,1.0s
GRFO MLR MLR
comp=Z,28µm,18.0s
GRFO Grafenberg 56.73 311 P **P 20 17 02.9 +0.3**
GRFO IAmb IAmb 20 17 09.2
comp=Z,210nm,1.0s
GRFO IAMs_20 IAMs_20 20 43 47.6
comp=Z,28µm,18.0s
CLZ Clausthal 56.77 314 *e*P **P 20 17 03.9 +1.0**
comp=Z,168nm,0.8s,baz=77,slow=7.0
WTTA Wattenberg 57.05 308 *i* P **P 20 17 04.3 -0.8**
comp=Z,2µm,2.5s,SNR=204
FUR Furstenfeldbru 57.06 309 *e*P **P 20 17 06.3 +1.3**
comp=Z,392nm,0.9s,baz=77,slow=7.0
FUR *e*L L 20 44 32.9
comp=Z,15µm,21.3s
WATA Walderalm 57.08 308 *e*P **P 20 17 04.1 -1.2**
comp=Z,2µm,2.5s,SNR=171
WATA *e*S **S 20 25 00.7 +0.6**
comp=Z,1µm,4.8s
ROCAM Rodrigues Isla 57.13 207 P **P 20 17 06.2 +0.6**
AQU L'Aquila 57.17 302 P **P 20 17 06.1 +0.2**
AQU L'Aquila 57.17 302 P **P 20 17 06.2 +0.2**
AQU L'Aquila 57.17 302 ⇓P **P 20 17 05.8 0.0**
AQU L'Aquila 57.17 302 ⇓*i*P **P 20 17 06.1 +0.2**
AQU L'Aquila 57.17 302 P **P 20 17 05.9 0.0**
comp=Z,10µmcomp=Z,455nm,1.6s
RETH Rethem/Aller, 57.18 315 *e*P **P 20 17 06.5 +0.9**
comp=Z,929nm,2.2s,baz=77,slow=7.0
HYA Hoyanger 57.23 325 *e*P **P 20 17 05.3 -0.5**
HYA IVmB_BB 20 17 09.1
comp=Z,4µm,7.8s
HYA *e*PP **PP 20 19 13.0 +0.4**
HYA *e*S **S 20 25 03.5 +2.1**
HYA *e*SS **SS 20 28 52.8 +2.9**
HYA IVMs_BB IVMs_BB 20 43 21.9
comp=Z,26µm,12.5s
UBBA Unterbreizbach 57.23 313 *e*P **P 20 17 06.8 +0.9**
comp=Z,34nm,0.8s,baz=77,slow=7.0
ODD1 Odda 57.23 324 *e*P **P 20 17 05.6 -0.4**
ODD1 IVmB_BB 20 17 10.6
comp=Z,4µm,6.3s
ODD1 *e*PP **PP 20 19 13.9 +1.1**
ODD1 *e*S **S 20 25 02.0 +0.4**
ODD1 *e*SS **SS 20 28 53.3 +3.2**
ODD1 IVMs_BB IVMs_BB 20 45 14.1
comp=Z,21µm,8.4s
NRCA Norcia 57.24 303 IAmb IAmb 20 17 18.5
comp=Z,372nm,1.2s
SQTA Sankt Quirin 57.35 308 *e*P **P 20 17 06.4 -0.7**
comp=Z,2µm,2.5s,SNR=175
CTI Castel Tesino 57.36 307 P **P 20 17 05.9 -1.3**
CTI Castel Tesino 57.36 307 IAmb IAmb 20 17 11.7
comp=Z,245nm,0.9s
MOTA Moosalm 57.38 309 *e*P **P 20 17 06.6 -0.9**
comp=Z,2µm,2.7s,SNR=223
MOTA *e*S **S 20 25 06.8 +2.6**
comp=Z,1µm,4.8s
BLS5 Blasjo 57.41 323 *e*P **P 20 17 06.8 -0.4**
BLS5 IVmB_BB 20 17 11.7
comp=Z,5µm,8.0s
BLS5 *e*PP **PP 20 19 14.3 0.0**
BLS5 *e*S **S 20 25 05.4 +1.5**
BLS5 *e*SS **SS 20 28 56.4 +3.5**
BLS5 IVMs_BB IVMs_BB 20 45 00.1
comp=Z,23µm,9.6s
RETA Reutte 57.57 309 *i* P **P 20 17 07.9 -0.7**
comp=Z,388nm,1.4s,SNR=311
RETA *e*S **S 20 25 07.4 +0.9**
comp=Z,2µm,6.5s
FOO Floro 57.69 326 *e*P **P 20 17 08.0 -1.1**
FOO IVmB_BB 20 17 13.3
comp=Z,5µm,7.5s
FOO *e*PP **PP 20 19 16.3 -0.4**
FOO *e*S **S 20 25 08.2 +0.7**
FOO *e*SS **SS 20 28 59.3 +2.2**
FOO IVMs_BB IVMs_BB 20 43 55.8
comp=Z,20µm,11.0s
FETA Feichten 57.72 308 *i* P **P 20 17 08.9 -0.9**
comp=Z,227nm,1.0s,SNR=91
FETA *e*S **S 20 25 08.0 -0.6**
comp=Z,1µm,4.8s
KMBO Kilima Mbogo 57.75 244*d* *i*P **P 20 17 10.1 -0.4**
BER Bergen 57.78 325 *e*P **P 20 17 09.2 -0.6**
BER IVmB_BB 20 17 14.2
comp=Z,4µm,7.5s
BER *e*PP **PP 20 19 17.9 +0.3**
BER *e*ScP **ScP 20 21 59.8 -2.7**
BER *e*S **S 20 25 10.6 +2.0**
BER *e*SS **SS 20 29 02.6 +3.9**
BER IVMs_BB IVMs_BB 20 43 35.4
comp=Z,30µm,12.7s
ASK Askoy 57.83 325 *e*P **P 20 17 10.9 +0.8**
ASK IVmB_BB 20 17 13.3
comp=Z,5µm,8.6s
ASK *e*PP **PP 20 19 19.3 +1.4**
ASK *e*S **S 20 25 10.6 +1.3**
ASK *e*SS **SS 20 29 02.2 +2.8**
ASK IVMs_BB IVMs_BB 20 43 37.0
comp=Z,28µm,11.3s
MGAB Montegabbione 57.92 303 ⇓P **P 20 17 10.2 -0.9**
SUE Sulen 57.93 325 *e*P **P 20 17 10.7 -0.1**
SUE IVmB_BB 20 17 14.0
comp=Z,4µm,7.9s
SUE *e*PP **PP 20 19 18.9 +0.1**
SUE *e*S **S 20 25 12.5 +1.9**
SUE *e*SS **SS 20 29 05.0 +4.1**
SUE IVMs_BB IVMs_BB 20 44 09.9
comp=Z,25µm,12.5s
VAE Valguarnera 57.94 297 P **P 20 17 11.8 +0.5**
comp=Z,68nm,0.9s,baz=9.0,slow=6.7,SNR=26
VAE LR LR 20 47 30.0
comp=Z,11µm,19.5s,baz=100,slow=42
comp=Z,68nm,0.9s
KIBK Kibwezi 57.95 242 P **P 20 17 11.5 -0.2**
KIBK Kibwezi 57.95 242 P **P 20 17 12.4 +0.6**
SNR=29
KIBK Kibwezi 57.95 242 P **P 20 17 10.9 -0.8**
KIBK IAmb IAmb 20 17 14.6
comp=Z,652nm,1.8s
KMY Karmoy 58.06 323 *e*P **P 20 17 10.6 -1.1**
KMY IVmB_BB 20 17 15.2
comp=Z,4µm,9.3s
KMY *e*PP **PP 20 19 20.8 +0.8**
KMY *e*ScP **ScP 20 22 04.1 +0.4**
KMY *e*S **S 20 25 12.3 0.0**
KMY *e*SS **SS 20 29 06.7 +3.7**
KMY IVMs_BB IVMs_BB 20 45 21.8
comp=Z,18µm,10.5s
KASTN Kahler Asten 58.11 313 *e*P **P 20 17 13.0 +0.7**
comp=Z,13nm,0.7s,baz=77,slow=7.0
FUORN Ofenpass-Fuorn 58.13 308 IAMs_20 IAMs_20 20 44 40.4
comp=Z,28µm,22.0s
DAVA Damuels 58.20 309 ⇓P **P 20 17 12.0 -1.2**
DAVA Damuels 58.20 309 *i* P **P 20 17 12.1 -1.1**
comp=Z,278nm,1.0s,SNR=106
DAVA *e*S **S 20 25 10.9 -4.1**
comp=Z,3µm,7.0s
IBBN Ibbenburen 58.23 315 ⇓P **P 20 17 13.2 +0.2**
IBBN Ibbenburen 58.23 315 *e*P **P 20 17 14.1 +1.0**
comp=Z,52nm,0.7s,baz=77,slow=7.0
SALO Salr 58.24 307 IAmb IAmb 20 17 18.5
comp=Z,402nm,1.0s
SALO Salr 58.24 307 ⇑P **P 20 17 13.5 +0.2**
STU Stuttgart 58.25 311 P **P 20 17 13.5 +0.2**
STU Stuttgart 58.25 311 IAmb IAmb 20 17 19.5
comp=Z,235nm,1.0s
STU Stuttgart 58.25 311 ⇓P **P 20 17 13.3 +0.1**
STU Stuttgart 58.25 311 *e*P **P 20 17 14.4 +1.1**
comp=Z,281nm,0.8s,baz=77,slow=7.0
TNS Taunus Mts 58.34 312 *e*P **P 20 17 14.8 +0.8**
comp=Z,66nm,0.7s,baz=77,slow=7.0
TNS *e*L L 20 44 11.0
comp=Z,25µm,20.2s
DAVOX Davos/Dischmat 58.34 308 P **P 20 17 13.2 -1.0**
comp=Z,86nm,0.7s,baz=78,slow=5.7,SNR=75
DAVOX LR LR 20 44 31.9
comp=Z,31µm,21.8s,baz=62,slow=38
comp=Z,86nm,0.7s
BUG Bochum–Univer 58.75 314 *e*P **P 20 17 17.7 +1.0**
comp=Z,77nm,1.0s,baz=77,slow=7.0
TUE Stuetta 58.78 308 IAmb IAmb 20 17 21.8
comp=Z,149nm,0.8s
TUE Stuetta 58.78 308 ⇓P **P 20 17 15.0 -2.3**
TUE Stuetta 58.78 308 P **P 20 17 17.2 -0.1**
comp=Z,21µmcomp=Z,834nm,0.8s
CLTB Caltabellotta 58.80 297 ⇓P **P 20 17 15.9 -1.5**

CASP Castiglione de 58.84 303 IAmb IAmb 20 17 20.6
comp=Z,453nm,1.9s
BFO Black Forest 58.92 310 P **P** **20 17 17.0 -1.0**
BFO pmax pmax
comp=Z,505nm,1.9s
BFO MLR MLR
comp=Z,28µm,22.0s
BFO Black Forest 58.92 310 P **P** **20 17 17.0 -1.0**
BFO IAmb IAmb 20 17 25.4
comp=Z,505nm,1.9s
BFO IAMs_20 IAMs_20 20 43 44.1
comp=Z,28µm,22.0s
BFO Black Forest 58.92 310 ⇓P **P** **20 17 17.3 -0.7**
BFO Black Forest 58.92 310 *e*P **P** **20 17 18.4 +0.4**
comp=Z,52nm,0.8s,baz=77,slow=7.0
BOB Bobbio (Coli) 59.21 306 ⇓P **P** **20 17 20.3 +0.1**
NOR Nord 59.44 350 ⇑P **P** **20 17 20.5 -0.5**
NOR Nord 59.44 350 ⇑P **P** **20 17 20.4 -0.5**
NOR Nord 59.44 350 *i* P **P** **20 17 20.6 -0.5**
NOR IAmb IAmb 20 17 23.4
comp=Z,1µm,2.1s
NOR IAMs_20 IAMs_20 20 50 28.5
comp=Z,21µm,13.6s
BTNL Ternell 59.67 313 *d*P **P** **20 17 23.1 -0.1**
BTNL
comp=Z,33nm,1.1s
*d*PP **PP** **20 19 33.0 -1.5**
ECH Echery 59.70 310 P **P** **20 17 23.2 -0.2**
ECH Echery 59.70 310 IAMs_20 IAMs_20 20 44 05.8
comp=Z,28µm,22.0s
ECH Echery 59.70 310 ⇓P **P** **20 17 22.6 -0.8**
MEM Membach 59.74 313 *d*P **P** **20 17 23.2 -0.4**
comp=Z,54nm,1.3s
BHOU Houvegnez 59.81 313 *d*P **P** **20 17 25.1 +1.0**
BHOU *d*PcP **PcP** **20 18 10.8 +0.1**
BEBN Eben Emael 59.89 314 *d*P **P** **20 17 24.6 0.0**
comp=Z,50nm,1.0s
WLF Walferdange 59.92 312 P **P** **20 17 25.2 +0.4**
WLF Walferdange 59.92 312 P **P** **20 17 25.2 +0.4**
WLF Walferdange 59.92 312 IAmb IAmb 20 17 28.8
comp=Z,256nm,1.1s
WLF IAMs_20 IAMs_20 20 45 11.4
comp=Z,25µm,19.0s
WLF Walferdange 59.92 312 *d*P **P** **20 17 25.1 +0.2**
comp=Z,104nm,1.0s
WLF Walferdange 59.92 312 ⇑P **P** **20 17 25.6 +0.7**
WLF Walferdange 59.92 312 *e*P **P** **20 17 26.2 +1.3**
comp=Z,101nm,0.9s,baz=77,slow=7.0
BSTI Sart Tilman 60.01 313 *d*P **P** **20 17 25.4 -0.1**
comp=Z,8.4nm,1.1s
MONC Moncucco Torin 60.15 307 ⇓P **P** **20 17 26.0 -0.5**
SENIN Lac Senin/Sane 60.17 308 IAmb IAmb 20 17 31.8
comp=Z,242nm,1.1s
SENIN IAMs_20 IAMs_20 20 46 07.1
comp=Z,21µm,18.0s
PGF Pioggiola 60.22 304 ⇓P **P** **20 17 26.6 -0.5**
PGF Pioggiola 60.22 304 ⇓P **P** **20 17 26.6 -0.5**
BCLA Clavier 60.22 313 *d*P **P** **20 17 27.4 +0.5**
comp=Z,40nm,1.3s
BCLA *d*PcP **PcP** **20 18 12.7 +0.4**
BCLA *d*PP **PP** **20 19 37.9 -1.5**
RCHB Rochefort 60.35 313 *d*P **P** **20 17 27.5 -0.2**
comp=Z,58nm,1.0s
RCHB *d*PcP **PcP** **20 18 13.8 +1.0**
BGES Gesves 60.37 313 *d*P **P** **20 17 28.5 +0.6**
comp=Z,39nm,1.3s
BGES *d*PcP **PcP** **20 18 10.6 -2.3**
BGES *d*PP **PP** **20 19 38.9 -1.8**
BMRD Maredsous 60.59 313 *d*P **P** **20 17 28.6 -0.8**
comp=Z,50nm,1.3s
UCC Uccle 60.69 314 *d*P **P** **20 17 29.7 -0.3**
JNE Jan Mayen East 60.75 338 *e*P **P** **20 17 30.6 +0.4**
JNE IVmB_BB 20 17 34.3
comp=Z,5µm,8.1s
JNE *e*PP **PP** **20 19 45.5 +1.9**
JNE *e*S **S** **20 25 48.0 +1.3**
JNE IVMs_BB IVMs_BB 20 49 17.6
comp=Z,6µm,15.8s
DOU Dourbes 60.75 313 *d*P **P** **20 17 30.4 -0.1**
comp=Z,34nm,1.1s
DOU *d*PcP **PcP** **20 18 15.4 +1.0**
DOU *d*PP **PP** **20 19 46.0 +2.0**
JNW Jan Mayen West 60.78 338 *e*P **P** **20 17 30.9 +0.5**
JNW IVmB_BB 20 17 34.4
comp=Z,5µm,10.1s
JNW *e*PP **PP** **20 19 45.9 +2.1**
JNW *e* 20 21 11.5
JNW *e*S **S** **20 25 42.8 -4.3**
JNW *e*ScS **ScS** **20 27 22.8 +1.8**
JNW IVMs_BB IVMs_BB 20 49 19.2
comp=Z,6µm,14.8s
JMIC Jan Mayen 60.81 338 LR LR 20 45 47.0
comp=Z,7µm,19.9s,baz=84,slow=38
JMIC Jan Mayen 60.81 338 *e*P **P** **20 17 31.2 +0.6**
JMIC IVmB_BB 20 17 34.7
comp=Z,5µm,8.4s
JMIC *e*PP **PP** **20 19 44.8 +0.7**
JMIC *e* 20 21 18.6
JMIC *e*S **S** **20 25 48.4 +0.8**
JMIC *e*ScS **ScS** **20 27 21.4 +0.2**
JMIC IVMs_BB IVMs_BB 20 49 19.6
comp=Z,6µm,16.3s
JMI Jan Mayen 60.90 338 *e*P **P** **20 17 30.6 -0.6**
JMI IVmB_BB 20 17 35.4
comp=Z,6µm,8.1s
JMI *e*PP **PP** **20 19 45.7 +0.8**
JMI *e* 20 21 12.6
JMI IVMs_BB IVMs_BB 20 47 16.1
comp=Z,6µm,14.4s
VSL Villasalto 60.98 300 ⇓P **P** **20 17 31.3 -1.0**
LRW Lerwick 60.99 325 ⇓P **P** **20 17 31.8 -0.2**
LRW Lerwick 60.99 325 *e*P **P** **20 17 31.3 -0.7**
LRW IAMs_20 IAMs_20 20 46 34.5
comp=Z,36µm,12.2s
GIRL Giralia 61.27 151 P **P** **20 17 34.9 +0.7**
comp=Z,149nm,1.9s,comp=Z,0.0nm
GIRL Giralia 61.27 151 P **P** **20 17 35.3 +1.1**
GIRL IAmb IAmb 20 17 40.0
comp=Z,165nm,1.1s
DAG Danmarks Havn 61.51 345 P **P** **20 17 33.5 -1.7**
DAG Danmarks Havn 61.51 345 ⇓P **P** **20 17 34.2 -1.0**
DAG Danmarks Havn 61.51 345 *i* P **P** **20 17 33.4 -1.9**
DAG IAmb IAmb 20 17 37.3
comp=Z,859nm,2.0s
GENI Genyem 61.54 114 P **P** **20 17 37.7 +1.3**
RER Riviere de l'E 61.57 213 P **P** **20 17 36.3 -0.1**
RER IAmb IAmb 20 17 43.0
comp=Z,189nm,0.9s
RER Riviere de l'E 61.57 213 ⇓P **P** **20 17 38.7 +2.3**
DRS Darwin Rock St 61.76 130 P **P** **20 17 38.8 +1.1**
JAY Jayapura 61.91 114 LR LR 20 43 18.4
comp=Z,9µm,21.9s,baz=304,slow=35
LOR Lormes 62.12 310 ⇓P **P** **20 17 38.6 -1.2**
MTN Manton Dam 62.22 130 P **P** **20 17 39.9 -0.9**
comp=Z,50nm,1.7s,comp=Z,0.0nm
ELMS Elmsett, Ipswi 62.29 316 *e*P **P** **20 17 40.2 -0.6**
ELMS IAMs_20 IAMs_20 20 47 52.6
comp=Z,42µm,17.2s
WACR West Acre 62.29 317 *e*P **P** **20 17 40.3 -0.6**
WACR IAMs_20 IAMs_20 20 48 44.6
comp=Z,33µm,13.5s
SSB Saint Sauveur 62.34 308 P **P** **20 17 41.1 -0.3**
SSB pmax pmax
comp=Z,110nm,0.9s
SSB MLR MLR
comp=Z,13µm,22.0s
SSB Saint Sauveur 62.34 308 P **P** **20 17 41.1 -0.3**
SSB IAmb IAmb 20 17 46.4
comp=Z,110nm,0.9s
SSB Saint Sauveur 62.34 308 ⇓P **P** **20 17 40.5 -0.9**
KEST Kesra 62.37 296 P **P** **20 17 41.5 -0.3**
comp=Z,108nm,1.1s,baz=60,slow=2.0,SNR=84
KEST PKP2bc P'P'bc 20 46 48.5 -12
comp=Z,5.7nm,1.1s,baz=277,slow=9.8,SNR=4.7
KEST LR LR 20 48 27.9
comp=Z,10µm,20.9s,baz=57,slow=40
comp=Z,108nm,1.1s
KEST Kesra 62.37 296 P **P** **20 17 42.1 +0.3**
MBWA Marble Bar 62.41 145 P **P** **20 17 41.5 -0.5**
comp=Z,236nm,1.7s
MBWA Marble Bar 62.41 145 P **P** **20 17 42.1 +0.1**
MBWA Marble Bar 62.41 145 P **P** **20 17 41.9 -0.1**
MBWA Marble Bar 62.41 145 P **P** **20 17 41.8 -0.2**
MBWA IAmb IAmb 20 17 45.0
comp=Z,290nm,1.2s
MBWA Marble Bar 62.41 145 P **P** **20 17 41.5 -0.5**
MBWA S **S** **20 26 09.6 +0.6**
MBAR Mbarara 62.45 249 LR LR 20 44 51.7
comp=Z,10µm,21.4s,baz=52,slow=36
MBAR Mbarara 62.45 249*d* *i*P **P** **20 17 42.1 -0.6**
MBAR pmax pmax
comp=Z,414nm,1.4s
MBAR MLR MLR
comp=Z,8µm,18.0s
MBAR Mbarara 62.45 249 P **P** **20 17 41.8 -0.9**
MBAR Mbarara 62.45 249 P **P** **20 17 42.4 -0.3**
ELSH Elham, Standar 62.51 315 *e*P **P** **20 17 41.5 -0.8**
ELSH IAMs_20 IAMs_20 20 44 22.6
comp=Z,40µm,24.7s
GDLE Glaisdale, N Y 62.55 319 *e*P **P** **20 17 41.8 -0.8**
GDLE IAMs_20 IAMs_20 20 49 52.3
comp=Z,33µm,11.1s
LMK Market Rasen 62.60 318 *e*P **P** **20 17 42.8 -0.1**
LMK IAMs_20 IAMs_20 20 48 15.5
comp=Z,31µm,16.1s
DRUM Mains of Drumt 62.63 322 *e*P **P** **20 17 42.2 -0.9**
DRUM IAMs_20 IAMs_20 20 47 07.5
comp=Z,32µm,16.8s
CLF Chambon-Foret 62.88 311 P **P** **20 17 44.5 -0.3**
CLF IAmb IAmb 20 17 59.3
comp=Z,242nm,1.4s
CLF Chambon-Foret 62.88 311 ⇓P **P** **20 17 44.5 -0.3**
KNRA Kununurra 62.88 134 P **P** **20 17 45.5 +0.3**
comp=Z,205nm,1.5s,comp=Z,0.0nm
KNRA Kununurra 62.88 134 P **P** **20 17 45.2 0.0**
KNRA IAmb IAmb 20 17 51.0
comp=Z,308nm,1.4s
DBG Daneborg 62.89 343 ⇓P **P** **20 17 44.2 -0.3**
DBG Daneborg 62.89 343 *i* P **P** **20 17 45.0 +0.5**
DBG IAmb IAmb 20 17 46.4
comp=Z,177nm,1.2s
SHEM Shemya Is, Ala 62.89 43 LR LR 20 47 32.0
comp=Z,15µm,18.4s,baz=278,slow=38
SMY Shemya 62.89 43 P **P** **20 17 45.4 +0.5**
SMY Shemya 62.89 43 P **P** **20 17 44.6 -0.2**
SMY pmax pmax
comp=Z,742nm,1.2s
SMY Shemya 62.89 43 P **P** **20 17 44.6 -0.2**
SMY Shemya 62.89 43 ⇑P **P** **20 17 44.7 -0.1**
FITZ Fitzroy Crossi 62.96 138 LR LR 20 48 45.0
comp=Z,8µm,19.2s,baz=329,slow=40
FITZ Fitzroy Crossi 62.96 138 ⇑P **P** **20 17 46.4 +0.7**
KDU Kakadu 62.98 128 P **P** **20 17 45.1 -0.8**
comp=Z,85nm,1.7s
EDMD Edmundbyers 63.05 320 *e*P **P** **20 17 44.8 -1.1**
EDMD IAMs_20 IAMs_20 20 48 02.1
comp=Z,23µm,16.2s
HMNX Herstmonceux 63.08 315 *e*P **P** **20 17 46.0 -0.1**
HMNX IAMs_20 IAMs_20 20 44 54.0
comp=Z,37µm,19.5s
HPK Haverah Park 63.16 319 *e*P **P** **20 17 46.0 -0.6**
HPK IAMs_20 IAMs_20 20 48 22.2
comp=Z,25µm,16.2s
EDI Edinburgh 63.33 321 *e*P **P** **20 17 47.4 -0.3**
EDI IAMs_20 IAMs_20 20 45 56.8
comp=Z,26µm,16.4s
CWF Charnwood Fore 63.40 317 *e*P **P** **20 17 47.1 -1.1**
CWF IAMs_20 IAMs_20 20 47 53.2
comp=Z,27µm,18.4s
LBWR Ladybower, Pea 63.40 318 *e*P **P** **20 17 47.8 -0.5**
LBWR IAMs_20 IAMs_20 20 48 40.3
comp=Z,29µm,17.6s
EKA Eskdalemuir Ar 63.52 320 P **P** **20 17 48.2 -0.8**
comp=Z,37nm,0.8s,baz=78,slow=6.6,SNR=64
EKA PP **PP** **20 20 01.0 -7.3**
comp=Z,35nm,1.1s,baz=69,slow=7.8,SNR=5.4
EKA LR LR 20 48 04.6
comp=Z,22µm,18.7s,baz=79,slow=38
comp=Z,37nm,0.8s
ESK Eskdalemuir 63.55 320 P **P** **20 17 49.1 -0.1**
ESK pmax pmax
comp=Z,548nm,1.9s
ESK MLR MLR
comp=Z,27µm,20.0s
ESK Eskdalemuir 63.55 320 P **P** **20 17 49.1 -0.1**
ESK IAmb IAmb 20 17 51.8
comp=Z,548nm,1.9s
ESK Eskdalemuir 63.55 320 ⇓P **P** **20 17 48.8 -0.4**
ESK Eskdalemuir 63.55 320 *e*P **P** **20 17 47.8 -1.4**
ESK IAMs_20 IAMs_20 20 49 59.4
comp=Z,26µm,13.2s
INVG Invergeldie, C 63.61 322 *e*P **P** **20 17 49.0 -0.6**
INVG IAMs_20 IAMs_20 20 45 47.0
comp=Z,30µm,16.2s
ALE Alert 63.65 356 P **P** **20 17 49.5 0.0**
KESW Keswick, Cumbr 63.75 320 *e*P **P** **20 17 50.1 -0.5**
KESW IAMs_20 IAMs_20 20 50 31.2
comp=Z,27µm,11.5s
STNC Stoke 63.78 318 *e*P **P** **20 17 50.3 -0.5**
STNC IAMs_20 IAMs_20 20 50 42.9
comp=Z,36µm,12.8s
EAB Aberfoyle 63.85 321 *e*P **P** **20 17 50.5 -0.7**
EAB IAMs_20 IAMs_20 20 45 54.8
comp=Z,30µm,16.6s
WOL Wolverton 63.85 316 *e*P **P** **20 17 50.8 -0.4**
WOL IAMs_20 IAMs_20 20 49 10.1
comp=Z,31µm,17.9s
PGBU Glenifferbraes 64.06 321 *e*P **P** **20 17 51.9 -0.7**
PGBU IAMs_20 IAMs_20 20 47 43.3
comp=Z,52µm,18.6s
KPL Plockton 64.11 323 *e*P **P** **20 17 52.2 -0.6**
KPL IAMs_20 IAMs_20 20 48 22.6
comp=Z,52µm,15.7s
SWN1 Swindon 64.11 316 *e*P **P** **20 17 52.5 -0.5**
SWN1 IAMs_20 IAMs_20 20 48 59.0
comp=Z,28µm,15.9s
ABPO Ambohimpanom 64.15 222 P **P** **20 17 53.2 -0.6**
ABPO pmax pmax
comp=Z,471nm,1.9s
ABPO Ambohimpanom 64.15 222 P **P** **20 17 53.2 -0.6**
ABPO IAmb IAmb 20 17 55.5
comp=Z,471nm,1.9s
ABPO Ambohimpanom 64.15 222 ⇑P **P** **20 17 53.3 -0.6**
ABPO Ambohimpanom 64.15 222 P **P** **20 17 53.5 -0.3**
NEWG New Galloway 64.17 320 *e*P **P** **20 17 52.8 -0.5**
NEWG IAMs_20 IAMs_20 20 48 24.4
comp=Z,35µm,14.3s
HLM1 Long Mynd 64.37 317 *e*P **P** **20 17 53.8 -0.9**
HLM1 IAMs_20 IAMs_20 20 48 20.1
comp=Z,21µm,22.1s
LAWE Loch Awe, Argy 64.37 322 *e*P **P** **20 17 54.3 -0.3**
LAWE IAMs_20 IAMs_20 20 46 53.7
comp=Z,34µm,16.1s
FOEL Foel Wylfa 64.42 318 *e*P **P** **20 17 53.9 -1.1**
FOEL IAMs_20 IAMs_20 20 50 56.6
comp=Z,29µm,12.6s
EJON La Jonquera 64.48 305 P **P** **20 17 55.8 +0.2**
MAHO Mahon 64.50 302 P **P** **20 17 55.4 -0.2**
MAHO Mahon 64.50 302 IAmb IAmb 20 18 02.9
comp=Z,241nm,1.4s
OLDB Oldbury-Upon-S 64.50 316 *e*P **P** **20 17 54.3 -1.2**
OLDB IAMs_20 IAMs_20 20 49 11.8
comp=Z,30µm,17.6s
GAL1 Galloway 64.52 320 *e*P **P** **20 17 55.2 -0.3**
GAL1 IAMs_20 IAMs_20 20 50 55.3
comp=Z,30µm,12.7s
MONM Monmouth 64.58 317 *e*P **P** **20 17 55.3 -0.7**
MONM IAMs_20 IAMs_20 20 48 51.1
comp=Z,32µm,21.1s
MTLF Montolieu 64.60 306 ⇑P **P** **20 17 55.8 -0.5**
MCH1 Michaelchurch 64.63 317 ⇓P **P** **20 17 56.0 -0.4**
MCH1 Michaelchurch 64.63 317 *e*P **P** **20 17 55.3 -1.0**
MCH1 IAMs_20 IAMs_20 20 48 53.6
comp=Z,29µm,16.6s
IOMK Kirk Michael 64.67 320 *e*P **P** **20 17 56.4 -0.1**
IOMK IAMs_20 IAMs_20 20 51 06.3
comp=Z,14µm,11.6s
MFF Saint Martin d 64.92 311 ⇑P **P** **20 17 57.4 -0.9**
MFF Saint Martin d 64.92 311 ⇑P **P** **20 17 57.4 -0.9**
WLF1 Llynfaes 64.94 319 *e*P **P** **20 17 57.5 -0.8**
WLF1 IAMs_20 IAMs_20 20 49 23.8
comp=Z,48µm,23.6s
SCO Scoresbysund 65.11 339 IAmb IAmb 20 18 02.9
comp=Z,375nm,1.6s
SCO Scoresbysund 65.11 339 ⇓P **P** **20 18 00.5 +1.3**
SCO Scoresbysund 65.11 339 *i* P **P** **20 18 00.6 +1.4**
SCO IAmb IAmb 20 18 02.6
comp=Z,297nm,1.5s
CLGH Cloghs, Cushen 65.19 321 *e*P **P** **20 17 58.6 -1.3**
CLGH IAMs_20 IAMs_20 20 47 09.4
comp=Z,32µm,22.8s
JSA Saint Aubin 65.20 314 ⇑P **P** **20 17 59.4 -0.7**
JSA Saint Aubin 65.20 314 *e*P **P** **20 17 59.1 -0.9**
JSA IAMs_20 IAMs_20 20 50 44.3
comp=Z,22µm,13.8s
CEST Esterri de Car 65.54 306 IAmb IAmb 20 18 10.3
comp=Z,276nm,1.5s
ETOS Mallorca 65.58 303 P **P** **20 18 03.5 +0.8**
GAMB Gambell 65.63 29 IAmb IAmb 20 18 05.2
comp=Z,276nm,1.6s
GAMB IAMs_20 IAMs_20 20 44 14.0
comp=Z,16µm,21.0s
GAMB Gambell 65.63 29 P **P** **20 18 03.0 +0.4**
baz=296,SNR=6.8
RSBS Rosebush, Pemb 65.65 317 *e*P **P** **20 18 01.7 -1.2**
RSBS IAMs_20 IAMs_20 20 50 10.0
comp=Z,31µm,15.5s
ILTH Belurgan, Co L 65.72 320 P **P** **20 18 04.1 +0.8**
ILTH Belurgan, Co L 65.72 320 *e*P **P** **20 18 02.4 -1.0**
DYA Yadsworthy 65.77 315 *e*P **P** **20 18 02.3 -1.4**
DYA IAMs_20 IAMs_20 20 46 28.2
comp=Z,27µm,18.4s
HTL Hartland 65.87 316 *e*P **P** **20 18 03.5 -0.9**
HTL IAMs_20 IAMs_20 20 48 23.6
comp=Z,26µm,17.3s
C16K Lisburne Hills 65.89 23 P **P** **20 18 04.7 +0.5**
baz=299,SNR=55
IDGL Inch Island, C 65.93 321 P **P** **20 18 05.8 +1.1**
IDGL Inch Island, C 65.93 321 *e*P **P** **20 18 03.4 -1.3**
DSB Dublin 66.05 319 P **P** **20 18 05.3 -0.2**
DSB Dublin 66.05 319 P **P** **20 18 05.7 +0.2**
DSB Dublin 66.05 319 IAMs_20 IAMs_20 20 47 45.3
comp=Z,20µm,19.0s
SBD Saint Breward 66.16 316 *e*P **P** **20 18 05.2 -1.1**
SBD IAMs_20 IAMs_20 20 46 51.4
comp=Z,27µm,22.6s
ROSF Rostrenen 66.20 313 ⇓P **P** **20 18 06.3 -0.3**
ROSF Rostrenen 66.20 313 ⇓P **P** **20 18 06.3 -0.3**
A19K Wainwright 66.22 20 P **P** **20 18 07.5 +1.2**
baz=302
TNA Tin City 66.28 26 IAMs_20 IAMs_20 20 49 07.6
comp=Z,21µm,18.0s
TNA Tin City 66.28 26 P **P** **20 18 07.7 +0.9**
baz=296,SNR=6.1
AMKA Amchitka 66.38 43 P **P** **20 18 08.3 +0.6**
AMKA IAmb IAmb 20 18 10.1
comp=Z,246nm,1.0s
C17K DeLong Mountai 66.48 22 P **P** **20 18 08.5 +0.4**
baz=301,SNR=60
IWEX Carrickbyrne, 66.62 318 P **P** **20 18 10.1 +0.9**
IWEX Carrickbyrne, 66.62 318 *e*P **P** **20 18 08.3 -0.9**
CCA1 Carnmenellis 66.63 316 *e*P **P** **20 18 07.8 -1.5**
CCA1 IAMs_20 IAMs_20 20 46 51.3
comp=Z,31µm,25.8s
MEEK Meekatharra 66.64 149 P **P** **20 18 09.0 -0.6**
comp=Z,216nm,1.2s
MEEK Meekatharra 66.64 149 P **P** **20 18 09.4 -0.2**
VOI Vohitsoka 66.71 221 P **P** **20 18 10.4 +0.2**
SNR=19
VOI Vohitsoka 66.71 221 P **P** **20 18 09.4 -0.9**
RDOG Red Dog Mine 66.78 23 IAmb IAmb 20 18 17.0
comp=Z,225nm,1.2s
RDOG IAMs_20 IAMs_20 20 49 19.7
comp=Z,17µm,20.0s
RDOG Red Dog Mine 66.78 23 P **P** **20 18 10.6 +0.5**
baz=301,SNR=39
NEEM North Greenlan 66.81 351 *i* P **P** **20 18 10.7 +0.3**
NEEM IAmb IAmb 20 18 11.9
comp=Z,569nm,1.0s
MANU Manus Island 66.82 109 P **P** **20 18 11.6 +0.6**
MANU IAmb IAmb 20 18 17.3
comp=Z,210nm,1.2s
A21K Barrow 66.83 18 P **P** **20 18 10.5 +0.3**
baz=305
F14K Arctic Creek 66.91 26 P **P** **20 18 11.3 +0.4**
baz=299,SNR=17
D17K Noatak River 66.91 23 P **P** **20 18 11.6 +0.8**
baz=301,SNR=100
EIBI Ibiza 66.92 302 P **P** **20 18 12.2 +0.8**
C18K Utukok River 67.01 22 IAmb IAmb 20 18 18.7
comp=Z,343nm,1.2s
C18K Utukok River 67.01 22 P **P** **20 18 12.4 +0.9**
baz=302,SNR=84
C19K Lookout Ridge 67.25 21 P **P** **20 18 13.7 +0.7**
C19K Lookout Ridge 67.25 21 P **P** **20 18 14.2 +1.1**
baz=304,SNR=132
F15K North Star Dit 67.40 25 IAmb IAmb 20 18 17.1
comp=Z,154nm,1.2s
F15K IAMs_20 IAMs_20 20 50 00.1
comp=Z,16µm,20.0s
F15K North Star Dit 67.40 25 P **P** **20 18 15.0 +1.1**
baz=300,SNR=18
B20K Meade River 67.45 20 IAmb IAmb 20 18 17.0
comp=Z,247nm,1.1s
B20K Meade River 67.45 20 P **P** **20 18 14.7 +0.6**
baz=305,SNR=115
A22K Sinclair Lake 67.45 18 P **P** **20 18 15.0 +0.8**
baz=307,SNR=17
IGLA Glengowla, Co 67.61 320 P **P** **20 18 16.6 +1.1**
IGLA Glengowla, Co 67.61 320 *e*P **P** **20 18 14.7 -0.8**
E17K Hotham Inlet 67.65 23 P **P** **20 18 16.3 +0.8**
baz=302,SNR=37
ANM Nome 67.71 26 IAmb IAmb 20 18 19.2
comp=Z,174nm,1.2s
ANM Nome 67.71 26 P **P** **20 18 16.6 +0.6**
baz=300,SNR=13
MORW Morawa 67.73 153 P **P** **20 18 16.0 -0.4**
comp=Z,224nm,1.8s
MORW Morawa 67.73 153 P **P** **20 18 16.6 +0.2**
MORW Morawa 67.73 153 ⇑P **P** **20 18 16.4 -0.1**
BORG Borgarnes 67.76 334 P **P** **20 18 17.3 +1.1**
BORG pmax pmax
comp=Z,460nm,1.9s
BORG MLR MLR
comp=Z,12µm,19.0s
BORG Borgarnes 67.76 334 P **P** **20 18 17.3 +1.1**
BORG IAmb IAmb 20 18 21.0
comp=Z,460nm,1.9s
BORG Borgarnes 67.76 334 ⇓P **P** **20 18 18.1 +1.9**
E18K Tukpahlearik C 67.87 23 P **P** **20 18 17.9 +1.0**
baz=303,SNR=126
G15K Niukluk 67.98 26 P **P** **20 18 18.4 +0.8**
baz=301,SNR=20
D19K Kuna River 68.04 21 IAmb IAmb 20 18 20.9
comp=Z,288nm,1.1s
D19K Kuna River 68.04 21 P **P** **20 18 18.6 +0.6**
baz=305,SNR=118
SUMG Summit 68.17 345 P **P** **20 18 19.1 -0.1**
SUMG Summit 68.17 345 P **P** **20 18 18.9 -0.3**
SUMG Summit 68.17 345 IAMs_20 IAMs_20 20 53 47.4
comp=Z,13µm,18.0s
SUMG Summit 68.17 345 ⇓P **P** **20 18 18.9 -0.3**
SUMG Summit 68.17 345 *i* P **P** **20 18 19.1 -0.1**
SUMG IAmb IAmb 20 18 21.9
comp=Z,962nm,1.4s
SUMG IAMs_20 IAMs_20 20 53 49.3
comp=Z,16µm,18.2s
F17K Baldwin Pennin 68.19 24 P **P** **20 18 20.0 +1.2**
baz=303,SNR=55
B22K Teshekpuk Lake 68.27 18 IAmb IAmb 20 18 23.6
comp=Z,254nm,1.1s
B22K IAMs_20 IAMs_20 20 52 30.7
comp=Z,14µm,18.0s
B22K Teshekpuk Lake 68.27 18 P **P** **20 18 19.6 +0.3**
baz=308,SNR=43
ECHE Chera 68.30 304 P **P** **20 18 20.4 +0.2**
D20K Etivluk River 68.36 21 P **P** **20 18 20.5 +0.5**
baz=306,SNR=175
G16K Koyuk River 68.38 25 IAmb IAmb 20 18 23.4
comp=Z,153nm,1.1s
G16K IAMs_20 IAMs_20 20 50 31.9
comp=Z,14µm,19.0s
G16K Koyuk River 68.38 25 P **P** **20 18 21.0 +0.9**
baz=302,SNR=28
B21K Ikpikpuk River 68.39 19 IAMs_20 IAMs_20 20 53 44.9
comp=Z,19µm,18.0s
B21K Ikpikpuk River 68.39 19 P **P** **20 18 20.8 +0.7**
baz=308,SNR=110
ADK Adak 68.43 41 P **P** **20 18 22.1 +1.5**
ADK Adak 68.43 41 IAMs_20 IAMs_20 20 50 13.8
comp=Z,15µm,19.0s
C21K Knifeblade Rid 68.62 20 P **P** **20 18 22.4 +0.8**
baz=308
F18K Selawik 68.64 23 P **P** **20 18 22.6 +0.9**
baz=304,SNR=70
VAL Valentia 68.74 319 P **P** **20 18 23.3 +0.7**
VAL Valentia 68.74 319 P **P** **20 18 23.1 +0.5**

VAL Valentia 68.74 319 ⇓P P 20 18 21.8 -0.8
E20K Nigu River 68.76 21 P P 20 18 23.0 +0.5
baz=307,SNR=153
H16K Elim 68.83 26 P P 20 18 23.8 +0.9
baz=303,SNR=19
G17K Kiwalik Mounta 68.92 24 P P 20 18 23.8 +0.3
baz=304,SNR=56
E19K Redstone River 68.92 22 IAMs_20 IAMs_20 20 50 41.0
comp=Z,20µm,21.0s
E19K Redstone River 68.92 22 P P 20 18 24.0 +0.5
baz=306,SNR=105
FOMA Nahampoana Res 69.10 219 IAmb IAmb 20 18 28.9
comp=Z,151nm,0.9s
FOMA Nahampoana Res 69.10 219 P P 20 18 23.5 -1.5
F19K Shaleruckik Mo 69.11 22 IAmb IAmb 20 18 27.1
comp=Z,214nm,1.1s
F19K Shaleruckik Mo 69.11 22 P P 20 18 24.8 +0.2
baz=306,SNR=158
SOEG Soedalen 69.16 339 ⇓P P 20 18 25.2 +0.3
SOEG Soedalen 69.16 339 *i* P P 20 18 26.2 +1.3
SOEG IAmb IAmb 20 18 27.4
comp=Z,276nm,1.3s
CART Cartagena 69.20 302 P P 20 18 25.5 -0.2
E21K Killik River 69.30 20 IAmb IAmb 20 18 28.3
comp=Z,281nm,1.1s
E21K Killik River 69.30 20 P P 20 18 26.1 +0.2
baz=308,SNR=212
SPIA Saint Paul Isl 69.30 35 P P 20 18 27.9 +1.9
SPIA Saint Paul Isl 69.30 35 IAMs_20 IAMs_20 20 48 33.4
comp=Z,13µm,18.0s
SPIA Saint Paul Isl 69.30 35 P P 20 18 26.5 +0.5
baz=299,SNR=8.7
C23K Itkillik River 69.33 18 IAMs_20 IAMs_20 20 51 59.8
comp=Z,16µm,20.0s
C23K Itkillik River 69.33 18 P P 20 18 26.4 +0.4
baz=311,SNR=247
K13K Kusilvak Mount 69.35 29 IAmb IAmb 20 18 29.1
comp=Z,134nm,1.1s
K13K Kusilvak Mount 69.35 29 P P 20 18 27.1 +0.9
baz=302,SNR=38
J14K Nanvaranak Lak 69.35 28 IAmb IAmb 20 18 29.1
comp=Z,150nm,1.0s
J14K Nanvaranak Lak 69.35 28 P P 20 18 27.0 +0.8
baz=302,SNR=45
BLDU Ballidu 69.37 153 P P 20 18 25.5 -1.1
comp=Z,205nm,1.7s
BLDU Ballidu 69.37 153 P P 20 18 25.8 -0.8
G18K Tagagawik 69.37 24 IAMs_20 IAMs_20 20 50 14.1
comp=Z,17µm,19.0s
G18K Tagagawik 69.37 24 P P 20 18 26.6 +0.3
baz=305,SNR=68
WB0 Warramunga Arr 69.45 132 IAmb IAmb 20 18 30.2
comp=Z,496nm,1.6s
H17K Granite Mounta 69.49 25 IAmb IAmb 20 18 30.4
comp=Z,342nm,1.1s
H17K IAMs_20 IAMs_20 20 51 25.3
comp=Z,14µm,20.0s
H17K Granite Mounta 69.49 25 P P 20 18 28.3 +1.3
baz=305,SNR=147
M11K Mekoryuk 69.52 30 P P 20 18 28.5 +1.2
baz=301,SNR=9.2
WRA Warramunga Arr 69.55 132 P P 20 18 26.8 -1.2
comp=Z,46nm,1.0s,baz=327,slow=6.4,SNR=108
WRA PKPPKP **P'P'df** 20 46 31.0 -0.7
comp=Z,14nm,1.2s,baz=141,slow=2.0,SNR=18
WRA LR LR 20 53 07.1
comp=Z,7µm,21.5s,baz=324,slow=40
comp=Z,46nm,1.0s
WRA Warramunga Arr 69.55 132 P P 20 18 27.3 -0.7
WRA Warramunga Arr 69.55 132 P P 20 18 27.3 -0.7
WRAB Tennant Creek 69.55 132 P P 20 18 27.6 -0.4
WRAB pmax pmax
comp=Z,503nm,1.6s
WRAB Tennant Creek 69.55 132 P P 20 18 27.6 -0.4
WRAB IAmb IAmb 20 18 30.9
comp=Z,503nm,1.6s
UCM Universidad Co 69.56 305 P P 20 18 27.7 -0.3
TULEG Thule 69.58 354 IAmb IAmb 20 18 28.3
comp=Z,216nm,1.0s
TULEG Thule 69.58 354 ⇓P P 20 18 26.1 -1.3
TULEG Thule 69.58 354 *i* P P 20 18 26.6 -0.8
TULEG IAmb IAmb 20 18 28.5
comp=Z,219nm,1.0s
F20K Avaraart Lake 69.63 22 IAMs_20 IAMs_20 20 51 13.9
comp=Z,19µm,20.0s
F20K Avaraart Lake 69.63 22 P P 20 18 28.5 +0.7
baz=307,SNR=104
TLOR Lorca, Murcia 69.66 302 P P 20 18 29.0 +0.4
WR8 Warramunga Arr 69.66 132 IAmb IAmb 20 18 31.5
comp=Z,509nm,1.6s
G19K Purcell Mounta 69.74 23 IAmb IAmb 20 18 31.5
comp=Z,233nm,1.1s
G19K IAMs_20 IAMs_20 20 50 19.9
comp=Z,20µm,18.0s
G19K Purcell Mounta 69.74 23 P P 20 18 29.2 +0.6
baz=307,SNR=130
I17K Unalakleet 69.81 26 IAmb IAmb 20 18 32.4
comp=Z,159nm,1.1s
I17K IAMs_20 IAMs_20 20 47 00.7
comp=Z,15µm,20.0s
I17K Unalakleet 69.81 26 P P 20 18 30.0 +1.0
baz=304,SNR=15
D23K Nanushuk River 69.89 19 IAMs_20 IAMs_20 20 53 57.5
comp=Z,15µm,18.0s
D23K Nanushuk River 69.89 19 P P 20 18 29.8 +0.4
baz=311,SNR=84
H18K Honhosa River 69.90 24 IAmb IAmb 20 18 32.6
comp=Z,241nm,1.1s
H18K IAMs_20 IAMs_20 20 49 03.2
comp=Z,14µm,19.0s
H18K Honhosa River 69.90 24 P P 20 18 30.1 +0.5
baz=306,SNR=95
KULLO Kullorsuaq 70.03 350 ⇓P P 20 18 29.4 -0.7
KULLO Kullorsuaq 70.03 350 *i* P P 20 18 29.7 -0.5
KULLO IAmb IAmb 20 18 31.4
comp=Z,541nm,1.1s
E22K Anaktuvuk Pass 70.12 20 IAmb IAmb 20 18 34.2
comp=Z,576nm,1.8s
E22K Anaktuvuk Pass 70.12 20 P P 20 18 31.2 +0.3
baz=310
J16K Anvik River 70.18 26 IAmb IAmb 20 18 34.7
comp=Z,178nm,1.0s
J16K IAMs_20 IAMs_20 20 52 00.2
comp=Z,14µm,18.0s
J16K Anvik River 70.18 26 P P 20 18 32.4 +1.1
baz=305,SNR=57
F21K Alatna River 70.21 21 IAMs_20 IAMs_20 20 51 47.2
comp=Z,18µm,20.0s
F21K Alatna River 70.21 21 P P 20 18 31.9 +0.4
baz=309,SNR=266
D24K Happy Valley 70.26 18 P P 20 18 32.1 +0.4
baz=313
H19K Roundabout Mou 70.33 23 IAmb IAmb 20 18 35.4
comp=Z,280nm,1.2s
H19K IAMs_20 IAMs_20 20 51 39.3
comp=Z,14µm,18.0s
H19K Roundabout Mou 70.33 23 P P 20 18 33.2 +1.1
baz=307,SNR=114
ENIJ Nijar 70.33 302 P P 20 18 32.4 -0.4
ESDC Sonseca Array 70.34 305 P P 20 18 31.4 -1.4
comp=Z,35nm,1.0s,baz=53,slow=6.2,SNR=129
ESDC PP PP 20 21 01.9 -6.3
comp=Z,6.3nm,0.8s,baz=51,slow=8.7,SNR=7.4
ESDC PKP2bc P'P'bc 20 46 27.6 -10
comp=Z,12nm,1.4s,baz=279,slow=1.9,SNR=20
ESDC LR LR 20 53 12.9
comp=Z,9µm,18.1s,baz=50,slow=39
comp=Z,35nm,1.0s
ESDC Sonseca Array 70.34 305 P P 20 18 31.6 -1.2
K15K Wolf Creek Mou 70.39 27 P P 20 18 33.5 +1.0
baz=304,SNR=37
MUN Mundaring 70.40 154 P P 20 18 31.7 -1.3
comp=Z,217nm,1.7s
MUN Mundaring 70.40 154 P P 20 18 32.8 -0.1
MUN Mundaring 70.40 154 P P 20 18 31.6 -1.3
TOLK Toolik Lake Re 70.41 19 P P 20 18 33.2 +0.5
baz=312,SNR=277
F22K John River 70.42 20 P P 20 18 33.2 +0.5
baz=310,SNR=168
L14K Kuka Creek 70.47 29 IAmb IAmb 20 18 36.2
comp=Z,178nm,1.1s
L14K IAMs_20 IAMs_20 20 52 03.9
comp=Z,20µm,20.0s
L14K Kuka Creek 70.47 29 P P 20 18 34.0 +1.0
baz=304
KLBR Kellerberrin 70.64 152 P P 20 18 33.3 -1.1
comp=Z,215nm,0.9s
KLBR Kellerberrin 70.64 152 P P 20 18 34.2 -0.2
GCSA Galena City Sc 70.65 24 P P 20 18 35.1 +1.0
baz=307,SNR=21
G21K Allakaket 70.66 22 IAMs_20 IAMs_20 20 51 47.9
comp=Z,16µm,19.0s
G21K Allakaket 70.66 22 P P 20 18 34.7 +0.5
baz=309,SNR=134
PAB San Pablo 70.67 305 P P 20 18 34.0 -0.8
PAB pmax pmax
comp=Z,124nm,1.3s
PAB MLR MLR
comp=Z,13µm,18.0s
PAB San Pablo 70.67 305 P P 20 18 34.0 -0.8
PAB San Pablo 70.67 305 IAMs_20 IAMs_20 20 54 34.3
comp=Z,13µm,18.0s
J17K VABM Dome 70.68 26 IAmb IAmb 20 18 37.6
comp=Z,207nm,1.2s
J17K IAMs_20 IAMs_20 20 47 46.8
comp=Z,14µm,21.0s
J17K VABM Dome 70.68 26 P P 20 18 35.3 +1.0
baz=306,SNR=70
M13K Dall Lake 70.70 30 IAmb IAmb 20 18 38.2
comp=Z,334nm,1.1s
M13K Dall Lake 70.70 30 P P 20 18 35.8 +1.3
baz=303,SNR=24
C26K Camden Bay 70.71 17 P P 20 18 35.7 +1.2
baz=316,SNR=9.8
L15K Ungalak Mounta 70.75 28 P P 20 18 35.5 +0.7
baz=304,SNR=39
D25K Kavik River 70.78 18 IAmb IAmb 20 18 37.4
comp=Z,186nm,1.1s
D25K IAMs_20 IAMs_20 20 52 24.9
comp=Z,19µm,20.0s
D25K Kavik River 70.78 18 P P 20 18 35.5 +0.6
baz=315,SNR=157
PATS Pohnpei 70.78 94 P P 20 18 38.3 +2.5
E23K Chandalar 70.79 19 IAmb IAmb 20 18 38.6
comp=Z,637nm,1.9s
E23K IAMs_20 IAMs_20 20 53 13.3
comp=Z,14µm,20.0s
E23K Chandalar 70.79 19 P P 20 18 35.6 +0.5
baz=312,SNR=109
EBER Berja 70.86 302 P P 20 18 35.7 -0.5
H20K Anotleneega Mo 70.86 23 P P 20 18 35.8 +0.4
baz=309,SNR=140
IMAR Indian Mountai 70.92 22 P P 20 18 35.5 -0.3
TAM Tamanrasset 70.96 285 ⇓P P 20 18 36.4 -0.5
TAM Tamanrasset 70.96 285 IAMs_20 IAMs_20 20 54 25.2
comp=Z,15µm,18.0s
TAM Tamanrasset 70.96 285 ⇓P P 20 18 36.4 -0.5
G22K Bettles 71.00 21 P P 20 18 36.2 0.0
baz=311
M14K Bethel 71.09 29 IAmb IAmb 20 18 41.7
comp=Z,220nm,0.9s
M14K IAMs_20 IAMs_20 20 53 49.3
comp=Z,13µm,19.0s
M14K Bethel 71.09 29 P P 20 18 37.4 +0.5
baz=304,SNR=58
E24K Your Creek 71.09 19 P P 20 18 37.4 +0.5
baz=313,SNR=207
EQTA Presa de Quent 71.11 302 P P 20 18 36.5 -1.0
ECAL Calabor 71.17 308 P P 20 18 38.2 +0.4
COLD Coldfoot 71.18 20 IAmb IAmb 20 18 40.0
comp=Z,158nm,1.1s
COLD IAMs_20 IAMs_20 20 52 30.7
comp=Z,15µm,20.0s
COLD Coldfoot 71.18 20 P P 20 18 37.7 +0.4
baz=312,SNR=133
C27K Jago River 71.21 17 IAmb IAmb 20 18 40.4
comp=Z,204nm,1.0s
C27K IAMs_20 IAMs_20 20 53 11.4
comp=Z,18µm,20.0s
C27K Jago River 71.21 17 P P 20 18 38.1 +0.6
baz=317,SNR=186
PMG Port Moresby 71.22 115 LR LR 20 53 00.5
comp=Z,3µm,19.8s,baz=285,slow=38
PMG Port Moresby 71.22 115 P P 20 18 39.0 +0.7
PMG Port Moresby 71.22 115 *d i* P P 20 18 38.3 0.0
PMG pmax pmax
comp=Z,205nm,1.4s
PMG MLR MLR
comp=Z,5µm,23.0s
PMG Port Moresby 71.22 115 P P 20 18 37.8 -0.5
PMG IAmb IAmb 20 18 40.7
comp=Z,213nm,1.4s
PMG Port Moresby 71.22 115 ⇓P P 20 18 38.3 0.0
COEN Coen 71.24 121 P P 20 18 38.6 +0.2
COEN Coen 71.24 121 ⇓P P 20 18 38.0 -0.4
PBRG Braganca 71.24 308 *eP* P 20 18 38.2 -0.1
PBRG *i* IAmb IAmb 20 18 44.0
comp=Z,167nm,2.1s
K17K Iditarod 71.37 26 IAmb IAmb 20 18 42.0
comp=Z,305nm,1.2s
K17K IAMs_20 IAMs_20 20 52 26.6
comp=Z,14µm,19.0s
K17K Iditarod 71.37 26 P P 20 18 39.6 +1.1
baz=307,SNR=45
ELGU Los Guajares, 71.39 302 P P 20 18 39.1 -0.2
UPNV Upernavik 71.40 349 *i* P P 20 18 38.3 -0.2
UPNV IAmb IAmb 20 18 39.8
comp=Z,240nm,1.0s
EALB Alboran 71.40 301 P P 20 18 38.4 -0.8
WAKE Wake Island 71.42 79 P P 20 18 41.3 +1.7
WAKE Wake Island 71.42 79 P P 20 18 39.5 -0.1
H21K Melozitna Rive 71.43 22 IAmb IAmb 20 18 41.7
comp=Z,218nm,1.1s
H21K IAMs_20 IAMs_20 20 50 17.3
comp=Z,15µm,20.0s
H21K Melozitna Rive 71.43 22 P P 20 18 39.5 +0.6
baz=310,SNR=200
I20K Naaghedeneel 71.43 23 IAmb IAmb 20 18 42.3
comp=Z,374nm,1.2s
I20K IAMs_20 IAMs_20 20 51 29.6
comp=Z,15µm,18.0s
I20K Naaghedeneel 71.43 23 P P 20 18 39.7 +0.9
baz=309
EADA Adamuz 71.46 304 P P 20 18 39.1 -0.5
J18K Innoko River 71.49 25 IAmb IAmb 20 18 42.4
comp=Z,221nm,1.1s
J18K IAMs_20 IAMs_20 20 52 46.2
comp=Z,18µm,18.0s
J18K Innoko River 71.49 25 P P 20 18 40.1 +0.8
baz=308,SNR=125
L16K Owhat River 71.52 27 IAmb IAmb 20 18 43.9
comp=Z,303nm,1.5s
L16K Owhat River 71.52 27 P P 20 18 40.5 +1.1
baz=306,SNR=37
J19K Poorman 71.55 24 IAmb IAmb 20 18 43.1
comp=Z,318nm,1.1s
J19K IAMs_20 IAMs_20 20 51 53.7
comp=Z,13µm,19.0s
J19K Poorman 71.55 24 P P 20 18 40.8 +1.2
baz=308,SNR=276
G23K Bananza Creek 71.58 21 IAmb IAmb 20 18 43.5
comp=Z,492nm,1.8s
G23K IAMs_20 IAMs_20 20 52 43.3
comp=Z,17µm,18.0s
G23K Bananza Creek 71.58 21 P P 20 18 40.5 +0.7
baz=312,SNR=110
WMELI Melilla 71.63 300 P P 20 18 40.2 -0.4
NWAO Narrogin (SRO) 71.63 153 P P 20 18 39.3 -1.2
comp=Z,383nm,1.7s
NWAO Narrogin (SRO) 71.63 153 LR LR 20 53 50.0
comp=Z,6µm,19.6s,baz=330,slow=39
NWAO Narrogin (SRO) 71.63 153 P P 20 18 39.8 -0.6
NWAO Narrogin (SRO) 71.63 153 P P 20 18 40.0 -0.4
NWAO Narrogin (SRO) 71.63 153 P P 20 18 39.2 -1.2
NWAO pmax pmax
NWAO comp=Z,291nm,1.3s MLR MLR
comp=Z,7µm,20.0s
NWAO Narrogin (SRO) 71.63 153 P P 20 18 39.4 -1.0
NWAO Narrogin (SRO) 71.63 153 P P 20 18 39.2 -1.2
NWAO IAmb IAmb 20 18 42.4
comp=Z,291nm,1.2s
M15K Kasigluk River 71.63 29 P P 20 18 40.9 +0.7
baz=305,SNR=64
F24K Squaw Lake 71.64 19 IAmb IAmb 20 18 43.8
comp=Z,424nm,1.9s
F24K Squaw Lake 71.64 19 P P 20 18 40.5 +0.3
baz=314,SNR=92
N14K Kuskokwak Cree 71.67 30 P P 20 18 41.3 +1.0
baz=305,SNR=21
H22K Ishtalitna Cre 71.72 22 IAmb IAmb 20 18 44.5
comp=Z,488nm,1.8s
H22K IAMs_20 IAMs_20 20 53 01.0
comp=Z,19µm,18.0s
H22K Ishtalitna Cre 71.72 22 P P 20 18 41.2 +0.6
baz=311,SNR=110
L17K Donlin 71.72 27 P P 20 18 41.6 +0.9
baz=307,SNR=68
E25K Arctic Village 71.84 18 IAMs_20 IAMs_20 20 53 14.0
comp=Z,17µm,19.0s
E25K Arctic Village 71.84 18 P P 20 18 41.5 +0.2
baz=316,SNR=112
KRVT Keravat (AS076 71.89 108 LR LR 20 48 24.1
comp=Z,4µm,21.2s,baz=245,slow=34
J20K Nowinta River 71.94 24 IAmb IAmb 20 18 45.3
comp=Z,191nm,1.0s
J20K Nowinta River 71.94 24 P P 20 18 43.0 +1.1
baz=310,SNR=160
NUUG Nuugaatsiaq 71.94 348 *i* P P 20 18 41.8 -0.1
NUUG IAmb IAmb 20 18 43.1
comp=Z,299nm,1.3s
I21K Tanana 72.00 22 IAMs_20 IAMs_20 20 53 05.5
comp=Z,14µm,19.0s
I21K Tanana 72.00 22 P P 20 18 43.0 +0.7
baz=311,SNR=15
EMAL Malaga-Limoner 72.01 302 P P 20 18 41.4 -1.5
AS15 Alice Springs 72.07 135 P P 20 18 43.3 0.0
comp=Z,102nm,1.1s
ECAB El Cabril 72.09 304 P P 20 18 42.9 -0.5
ASAR Alice Springs 72.09 135 P P 20 18 42.5 -0.9
comp=Z,28nm,0.9s,baz=321,slow=5.5,SNR=142
ASAR PKPPKP **P'P'df** 20 46 26.6 -0.3
comp=Z,2.4nm,1.2s,baz=90,slow=2.5,SNR=5.0
comp=Z,28nm,0.9s
ASAR Alice Springs 72.09 135 P P 20 18 43.0 -0.4
ASAR Alice Springs 72.09 135 P P 20 18 43.0 -0.4
AUALC St Philip's Co 72.10 135 P P 20 18 43.9 +0.4
AS01 Alice Springs 72.12 135 P P 20 18 43.9 +0.3
M16K Timber Creek 72.13 28 IAmb IAmb 20 18 46.6
comp=Z,211nm,1.2s
M16K Timber Creek 72.13 28 P P 20 18 44.4 +1.3
baz=306,SNR=48
PCAB Cabril 72.13 308 ⇓*eP* P 20 18 43.4 -0.2
PCAB *i* IAmb IAmb 20 18 48.4
comp=Z,264nm,2.1s
PVRL Vila Real 72.14 308 *eP* P 20 18 44.9 +1.3
PVRL *i* IAmb IAmb 20 18 49.2
comp=Z,105nm,1.9s
POLO Lamas de Olo 72.14 308 *eP* P 20 18 44.4 +0.7
POLO *i* IAmb IAmb 20 18 48.6
comp=Z,40nm,1.9s
KMBL Kambalda 72.15 149 P P 20 18 43.5 -0.1
comp=Z,64nm,1.7s,comp=Z,0.0nm
D27M Malcolm River 72.15 16 IAMs_20 IAMs_20 20 52 10.1
comp=Z,13µm,20.0s
D27M Malcolm River 72.15 16 P P 20 18 43.6 +0.4
baz=319,SNR=35
PGAV Gavieira, Arco 72.17 309 *eP* P 20 18 44.7 +0.8
PGAV *i* IAmb IAmb 20 18 48.7
comp=Z,223nm,2.0s
PGAV *e*PP PP 20 21 14.5 -9.4
PGAV *e*S S 20 28 08.5 +2.0
PGAV *e*SS SS 20 32 47.2 +4.0
PGAV *i* IAMs_20 IAMs_20 20 37 48.9
comp=Z,8µm,20.0s
N15K Kwethluk River 72.18 29 IAmb IAmb 20 18 46.9
comp=Z,261nm,1.4s
N15K IAMs_20 IAMs_20 20 53 28.2
comp=Z,21µm,22.0s
N15K Kwethluk River 72.18 29 P P 20 18 44.6 +1.1
baz=306,SNR=30
F25K Christian Rive 72.20 19 IAMs_20 IAMs_20 20 54 13.5
comp=Z,18µm,19.0s
F25K Christian Rive 72.20 19 P P 20 18 44.3 +0.8
baz=316,SNR=180
O14K Tigyukauivet M 72.23 30 IAMs_20 IAMs_20 20 52 49.6
comp=Z,19µm,20.0s
O14K Tigyukauivet M 72.23 30 P P 20 18 44.6 +0.8
baz=305,SNR=14
SAATT Saattut 72.25 347 *i* P P 20 18 43.1 -0.5
SAATT IAmb IAmb 20 18 44.3
comp=Z,152nm,1.0s
L18K Granite Mounta 72.27 26 P P 20 18 44.9 +0.9
baz=308,SNR=47
H23K Yukon River 72.32 21 IAmb IAmb 20 18 48.4
comp=Z,719nm,2.0s
H23K IAMs_20 IAMs_20 20 53 22.7
comp=Z,17µm,18.0s
H23K Yukon River 72.32 21 P P 20 18 45.2 +0.9
baz=313
G24K Hadweenzic Riv 72.33 20 P P 20 18 44.9 +0.7
baz=314,SNR=144
MTE Manteigas 72.44 307 *eP* P 20 18 46.5 +1.0
MTE *i* IAmb IAmb 20 18 51.7
comp=Z,335nm,1.9s
MTE *e*PP PP 20 21 29.6 +3.4
MTE *e*S S 20 28 13.3 +3.8
MTE *e*SS SS 20 33 16.2 +29
MTE *e*LR LR 20 39 03.2
MTE *i* IAMs_20 IAMs_20 20 54 52.7
comp=Z,7µm,18.0s
MTE Manteigas 72.44 307 IAmb IAmb 20 18 51.8
comp=Z,532nm,2.0s
MTE Manteigas 72.44 307 ⇓P P 20 18 45.6 +0.1
M17K Holitna River 72.49 27 IAmb IAmb 20 18 50.3
comp=Z,205nm,1.0s
M17K IAMs_20 IAMs_20 20 49 22.2
comp=Z,16µm,21.0s
M17K Holitna River 72.49 27 P P 20 18 46.8 +1.5
baz=308,SNR=59
K20K Telida 72.49 24 IAmb IAmb 20 18 48.8
comp=Z,222nm,1.0s
K20K IAMs_20 IAMs_20 20 52 23.6
comp=Z,13µm,19.0s
K20K Telida 72.49 24 P P 20 18 46.6 +1.4
baz=310,SNR=113
MLY Manley 72.49 22 IAMs_20 IAMs_20 20 53 20.5
comp=Z,14µm,19.0s
MLY Manley 72.49 22 P P 20 18 45.7 +0.4
baz=312,SNR=147
RES Resolute Bay 72.50 0 LR LR 20 54 42.8
comp=Z,10µm,18.7s,baz=9.5,slow=39
RES Resolute Bay 72.50 0 ⇑P P 20 18 45.5 +0.4
RES Resolute Bay 72.50 0 ⇑P P 20 18 44.6 -0.5
F26K Sheenjek River 72.52 18 IAMs_20 IAMs_20 20 52 40.8
comp=Z,15µm,20.0s
F26K Sheenjek River 72.52 18 P P 20 18 46.6 +1.1
baz=317,SNR=100
PVIS Viseu 72.52 307 *eP* P 20 18 46.7 +0.7
N16K Nishlik Lake 72.53 28 P P 20 18 47.0 +1.5
baz=307,SNR=60
D28M Stokes Point 72.59 15 P P 20 18 46.7 +1.0
baz=321,SNR=12
NIAQ Niaqornat 72.65 347 *i* P P 20 18 46.6 +0.5
NIAQ IAmb IAmb 20 19 01.5
comp=Z,187nm,1.6s
PCBR Castelo Branco 72.66 306 *eP* P 20 18 47.0 +0.3
PCBR *i* IAmb IAmb 20 18 52.5
comp=Z,139nm,2.1s
G25K Bearman Lake 72.67 19 P P 20 18 47.3 +1.1
baz=316,SNR=76
ANGG Ammassalik, Gr 72.73 339 IAMs_20 IAMs_20 20 52 03.9
comp=Z,13µm,18.0s
ANGG Ammassalik, Gr 72.73 339 ⇑P P 20 18 46.2 -0.4
ANGG Ammassalik, Gr 72.73 339 *i* P P 20 18 47.0 +0.4
ANGG IAmb IAmb 20 18 48.3
comp=Z,472nm,1.2s
CHUM Lake Minchumin 72.74 23 P P 20 18 47.6 +0.8
baz=311,SNR=40
PTO Porto 72.79 308 *eP* P 20 18 48.4 +1.0
PTO *i* IAmb IAmb 20 18 51.2
comp=Z,132nm,2.0s
E27K Coleen River 72.80 17 IAmb IAmb 20 18 49.7
comp=Z,197nm,1.1s
E27K IAMs_20 IAMs_20 20 54 02.4
comp=Z,13µm,18.0s
E27K Coleen River 72.80 17 P P 20 18 47.6 +0.6
baz=319,SNR=161
PMRV Marv??o 72.80 306 *eP* P 20 18 48.0 +0.4
PMRV *i* IAmb IAmb 20 18 54.3
comp=Z,145nm,1.6s
PMRV *e*PP PP 20 21 33.6 +4.4
PMRV *e*S S 20 28 15.2 +1.6
PMRV *e*SS SS 20 33 19.3 +27
PMRV *i* IAMs_20 IAMs_20 20 53 07.9
comp=Z,9µm,18.0s
H24K Noodor Dome 72.81 21 IAMs_20 IAMs_20 20 53 20.9
comp=Z,19µm,20.0s
H24K Noodor Dome 72.81 21 P P 20 18 47.9 +0.6
baz=314,SNR=138
UNV Unalaska Valle 72.84 36 P P 20 18 46.9 -0.6

UNV **Unalaska Valle** 72.84 36 P P 20 18 46.4 -1.1
baz=303,SNR=14
A36M **Sachs Harbour** 72.84 10 IAmb IAmb 20 18 49.6
comp=Z,298nm,1.1s
A36M **Sachs Harbour** 72.84 10 P P 20 18 47.5 +0.3
baz=332,SNR=12
I23K **Minto, Yukon-K** 72.84 22 IAmb IAmb 20 18 50.2
comp=Z,212nm,1.2s
I23K **Minto, Yukon-K** 72.84 22 P P 20 18 48.2 +0.9
baz=313,SNR=130
EBAD **Badajoz** 72.87 305 P P 20 18 47.7 -0.2
O15K **Ungalikthiuk R** 72.88 30 P P 20 18 48.4 +0.8
baz=306,SNR=24
L19K **White Mountain** 72.96 26 IAmb IAmb 20 18 51.8
comp=Z,320nm,1.1s
L19K IAMs_20 IAMs_20 20 53 27.1
comp=Z,14µm,19.0s
L19K **White Mountain** 72.96 26 P P 20 18 49.6 +1.4
baz=309,SNR=153
SAQQ **Saqqaq** 72.97 346 *i* P P 20 18 47.3 -0.6
SAQQ IAmb IAmb 20 18 49.1
comp=Z,273nm,1.2s
ESPR **Espera** 72.97 303 P P 20 18 48.0 -0.6
E28M **Babbage River** 72.97 16 P P 20 18 48.5 +0.4
baz=321,SNR=107
RKGY **Rocky Gully** 73.04 154 P P 20 18 49.0 +0.2
M18K **Stony River** 73.04 26 P P 20 18 49.8 +1.3
baz=309,SNR=40
AKUT **Akutan** 73.05 36 P P 20 18 48.6 -0.1
AKUT **Akutan** 73.05 36 P P 20 18 47.9 -0.8
AKUT IAmb IAmb 20 18 49.6
comp=Z,336nm,1.0s
FYU **Fort Yukon** 73.05 19 IAMs_20 IAMs_20 20 53 55.1
comp=Z,16µm,18.0s
EMIN **Mina Concepcio** 73.11 304 P P 20 18 49.2 -0.2
N17K **Nushagak Hills** 73.12 28 IAmb IAmb 20 18 52.8
comp=Z,214nm,1.3s
N17K IAMs_20 IAMs_20 20 52 46.0
comp=Z,18µm,20.0s
N17K **Nushagak Hills** 73.12 28 P P 20 18 50.3 +1.3
baz=306,SNR=36
CAST **Castle Rocks** 73.13 24 IAmb IAmb 20 18 52.2
comp=Z,191nm,1.0s
CAST **Castle Rocks** 73.13 24 P P 20 18 49.9 +0.8
baz=311,SNR=174
G26K **Porcupine Rive** 73.16 19 IAMs_20 IAMs_20 20 52 42.8
comp=Z,14µm,20.0s
G26K **Porcupine Rive** 73.16 19 P P 20 18 49.9 +0.8
baz=317,SNR=180
PBAR **Barrancos** 73.16 305 P P 20 18 49.3 -0.4
PBAR **Barrancos** 73.16 305 *e*P P 20 18 50.3 +0.6
PBAR *i* IAmb IAmb 20 18 55.5
comp=Z,271nm,2.1s
PESTR **Estremoz** 73.21 306 P P 20 18 49.5 -0.5
PESTR **Estremoz** 73.21 306 ⇓*e*P P 20 18 49.5 -0.5
PESTR *i* IAmb IAmb 20 18 55.7
comp=Z,134nm,2.0s
PSARD **Sardoal** 73.24 307 *e*P P 20 18 49.6 -0.6
PSARD *i* IAmb IAmb 20 18 56.2
comp=Z,411nm,2.0s
PCAS **Casmilo, Conde** 73.25 307 *e*P P 20 18 50.9 +0.7
PCAS *i* IAmb IAmb 20 18 56.2
comp=Z,161nm,2.1s
M19K **Big River Lodg** 73.31 26 IAmb IAmb 20 18 55.2
comp=Z,345nm,1.4s
M19K IAMs_20 IAMs_20 20 54 06.9
comp=Z,14µm,20.0s
M19K **Big River Lodg** 73.31 26 P P 20 18 51.7 +1.6
baz=310
NEA2 **Nenana** 73.31 22 IAmb IAmb 20 18 52.6
comp=Z,277nm,1.0s
NEA2 IAMs_20 IAMs_20 20 51 36.3
comp=Z,15µm,20.0s
NEA2 **Nenana** 73.31 22 P P 20 18 50.7 +0.6
baz=314,SNR=282
O16K **Kokwok River B** 73.33 29 P P 20 18 51.6 +1.3
baz=308,SNR=80
CNIL **Conil** 73.35 303 P P 20 18 51.5 +0.7
QIS **Mount Isa** 73.36 129 P P 20 18 50.8 -0.2
comp=Z,63nm,1.2s,comp=Z,0.0nm
QIS **Mount Isa** 73.36 129 P P 20 18 51.1 +0.1
SFS **San Fernando** 73.41 303 P P 20 18 52.1 +0.9
KTH **Kantishna Hill** 73.43 23 IAmb IAmb 20 18 53.5
comp=Z,192nm,1.1s
KTH IAMs_20 IAMs_20 20 55 43.3
comp=Z,13µm,19.0s
PPLA **Purkeypile** 73.44 24 IAMs_20 IAMs_20 20 53 14.7
comp=Z,15µm,19.0s
PPLA **Purkeypile** 73.44 24 P P 20 18 51.5 +0.4
baz=311,SNR=93
ILULI **Ilulissat** 73.44 346 IAmb IAmb 20 18 52.3
comp=Z,346nm,1.1s
ILULI **Ilulissat** 73.44 346 ⇓P P 20 18 50.2 -0.5
ILULI **Ilulissat** 73.44 346 *i* P P 20 18 50.4 -0.4
ILULI IAmb IAmb 20 18 52.0
comp=Z,359nm,1.1s
POKR **Poker Plat Res** 73.45 21 P P 20 18 51.3 +0.3
baz=315
ARNO **Arenosillo** 73.47 304 P P 20 18 52.7 +1.1
BWN **Browne** 73.48 22 IAmb IAmb 20 18 54.5
comp=Z,405nm,1.2s
BWN IAMs_20 IAMs_20 20 55 01.0
comp=Z,13µm,18.0s
COLA **College** 73.50 21 P P 20 18 51.6 +0.4
COLA **College** 73.50 21 *d* *i*P P 20 18 50.8 -0.4
COLA pmax pmax
comp=Z,316nm,1.1s
COLA MLR MLR
comp=Z,15µm,18.0s
COLA **College** 73.50 21 P P 20 18 51.8 +0.6
COLA IAmb IAmb 20 18 53.5
comp=Z,242nm,1.0s
COLA **College** 73.50 21 IAMs_20 IAMs_20 20 54 05.9
comp=Z,16µm,19.0s
COLA **College** 73.50 21 P P 20 18 51.4 +0.3
COLA **College** 73.50 21 P P 20 18 51.5 +0.4
baz=314
E29M **Blow River** 73.52 16 IAmb IAmb 20 18 54.0
comp=Z,236nm,1.1s
E29M **Blow River** 73.52 16 P P 20 18 51.8 +0.5
baz=322,SNR=224
N18K **Kilae Creek** 73.53 27 P P 20 18 52.9 +1.4
baz=309,SNR=31
PARRA **Arraiolos** 73.54 306 *e*P P 20 18 52.2 +0.3
PARRA *i* IAmb IAmb 20 18 56.7
comp=Z,127nm,2.1s
PMTG **Montargil** 73.54 306 *e*P P 20 18 51.4 -0.5
PMTG *i* IAmb IAmb 20 18 58.5
comp=Z,168nm,1.8s
O17K **Koliganek Bris** 73.62 28 P P 20 18 52.4 +0.4
baz=308,SNR=31
EVO **Evora** 73.66 305 P P 20 18 52.8 +0.1
EVO **Evora** 73.66 305 *e*P P 20 18 53.1 +0.5
EVO *i* IAmb IAmb 20 18 58.4
comp=Z,220nm,2.1s
F28M **Old Crow** 73.66 17 IAmb IAmb 20 18 54.8
comp=Z,209nm,1.1s
F28M IAMs_20 IAMs_20 20 54 56.1
comp=Z,14µm,19.0s
F28M **Old Crow** 73.66 17 P P 20 18 52.3 +0.1
baz=320,SNR=174
CCB **Clear Creek Bu** 73.67 21 IAMs_20 IAMs_20 20 54 19.6
comp=Z,17µm,19.0s
WRH **Wood River Hil** 73.70 22 IAMs_20 IAMs_20 20 54 11.5
comp=Z,16µm,18.0s
TRF **Thorofare Moun** 73.71 23 P P 20 18 52.5 -0.2
baz=313,SNR=38
PSBE **So Bento** 73.71 307 *e*P P 20 18 53.3 +0.3
PSBE *i* IAmb IAmb 20 18 59.2
comp=Z,460nm,1.9s
P16K **Nushagak River** 73.72 29 IAmb IAmb 20 18 55.7
comp=Z,321nm,1.2s
P16K IAMs_20 IAMs_20 20 52 02.9
comp=Z,19µm,20.0s
P16K **Nushagak River** 73.72 29 P P 20 18 53.2 +0.6
baz=308,SNR=6.8
PRP **Porcupine Dome** 73.73 20 IAmb IAmb 20 18 56.6
comp=Z,497nm,1.6s
PRP IAMs_20 IAMs_20 20 55 12.0
comp=Z,15µm,18.0s
PRP **Porcupine Dome** 73.73 20 P P 20 18 53.4 +0.6
baz=316,SNR=155
M20K **Styx River** 73.78 25 IAMs_20 IAMs_20 20 52 19.6
comp=Z,13µm,20.0s
M20K **Styx River** 73.78 25 P P 20 18 53.9 +0.9
baz=311
EGRO **El Granado** 73.78 304 P P 20 18 52.9 -0.4

LSZ **Lusaka** 73.78 239 LR LR 20 52 43.0
comp=Z,6µm,18.5s,baz=40,slow=37
LSZ **Lusaka** 73.78 239 P P 20 18 52.7 -1.0
LSZ pmax pmax
comp=Z,536nm,2.0s
LSZ MLR MLR
comp=Z,12µm,20.0s
LSZ **Lusaka** 73.78 239 P P 20 18 53.5 -0.2
LSZ **Lusaka** 73.78 239 P P 20 18 52.7 -1.0
LSZ IAmb IAmb 20 18 56.2
comp=Z,536nm,1.9s
LSZ **Lusaka** 73.78 239 P P 20 18 52.9 -0.8
PBEJ **Beja** 73.81 305 *e*P P 20 18 54.4 +0.9
PBEJ *i* IAmb IAmb 20 18 59.3
comp=Z,149nm,2.1s
G27K **Doyon Strip** 73.83 18 IAMs_20 IAMs_20 20 53 50.4
comp=Z,12µm,19.0s
G27K **Doyon Strip** 73.83 18 P P 20 18 53.5 +0.4
baz=319,SNR=96
ILAR **Eielson Array** 73.86 21 P P 20 18 52.4 -1.0
comp=Z,66nm,1.0s,baz=304,slow=3.1,SNR=287
ILAR PP PP 20 21 34.4 -3.1
comp=Z,11nm,0.8s,baz=314,slow=8.1,SNR=8.9
ILAR PKPPKP 20 46 21.7
comp=Z,0.7nm,0.8s,baz=202,slow=1.9,SNR=6.4
ILAR LR LR 20 54 31.5
comp=Z,12µm,19.2s,baz=318,slow=38
comp=Z,66nm,1.0s
ILAR **Eielson Array** 73.86 21 P P 20 18 52.3 -1.1
MOE **Montemor** 73.89 306 P P 20 18 54.8 +0.8
GDH **Godhavn** 73.91 346 *i* P P 20 18 53.2 -0.3
GDH IAmb IAmb 20 18 54.5
comp=Z,276nm,1.1s
MCK **McKinley** 73.95 23 P P 20 18 53.9 0.0
baz=314,SNR=33
N19K **Bonanza Creek** 73.97 27 IAmb IAmb 20 19 00.2
comp=Z,221nm,1.2s
N19K IAMs_20 IAMs_20 20 50 28.5
comp=Z,17µm,18.0s
N19K **Bonanza Creek** 73.97 27 P P 20 18 55.4 +1.2
baz=310,SNR=54
POIN **Pond Inlet** 73.98 355 IAmb IAmb 20 18 55.5
comp=Z,260nm,1.1s
PVAQ **Vaqueiros** 74.01 304 *e*P P 20 18 54.9 +0.2
PVAQ *i* IAmb IAmb 20 19 01.6
comp=Z,217nm,1.9s
PVAQ *e*S S 20 28 28.6 +1.4
PVAQ *e*SS SS 20 33 35.5 +24
PVAQ *i* IAMs_20 IAMs_20 20 58 06.4
comp=Z,11µm,18.0s
PVAQ **Vaqueiros** 74.01 304 ⇓P P 20 18 54.6 -0.1
MDT **Midelt** 74.03 299 P P 20 18 54.7 -0.3
comp=Z,23nm,1.1s,baz=74,slow=6.9,SNR=21
MDT LR LR 20 56 37.8
comp=Z,5µm,19.9s,baz=56,slow=40
comp=Z,23nm,1.1s
IFR **Ifrane** 74.07 300 P P 20 18 55.5 +0.2
HDA **Harding Lake** 74.10 21 IAMs_20 IAMs_20 20 54 33.0
comp=Z,14µm,19.0s
HDA **Harding Lake** 74.10 21 P P 20 18 54.4 -0.4
baz=315,SNR=41
MD01 **Midelt array s** 74.11 299 P P 20 18 55.2 -0.4
PCVE **Castro Verde** 74.12 305 P P 20 18 55.3 0.0
PCVE **Castro Verde** 74.12 305 *e*P P 20 18 55.8 +0.5
PCVE *i* IAmb IAmb 20 19 01.5
comp=Z,92nm,1.6s
MESJ **Messejana** 74.14 305 *e*P P 20 18 55.3 -0.2
MESJ *e*S S 20 28 29.4 +0.7
MESJ IAMs_20 IAMs_20 20 48 40.2
comp=N,21µm,28.6s
MESJ **Messejana** 74.14 305 *e*P P 20 18 55.8 +0.3
MESJ *i* IAmb IAmb 20 19 01.4
comp=N,188nm,2.1s
MESJ **Messejana** 74.14 305 *e*P P 20 18 55.3 -0.2
MESJ *e*S S 20 28 29.4 +0.7
MESJ **Messejana** 74.14 305 ⇑P P 20 18 55.6 +0.1
L22K **Petersville** 74.17 24 P P 20 18 55.3 0.0
baz=313,SNR=88
PLOUS **Minas do Lousa** 74.19 305 *e*P P 20 18 56.5 +0.8
PLOUS *i* IAmb IAmb 20 19 01.8
comp=N,247nm,2.0s
RND **Reindeer** 74.21 23 IAmb IAmb 20 18 58.0
comp=Z,446nm,2.0s
RND IAMs_20 IAMs_20 20 55 51.8
comp=Z,15µm,19.0s
PBDV **Barranco-do-Ve** 74.24 304 P P 20 18 57.2 +1.1
PBDV **Barranco-do-Ve** 74.24 304 *e*P P 20 18 56.4 +0.3
PBDV *i* IAmb IAmb 20 19 03.3
comp=Z,294nm,2.0s
P17K **Kvichak River** 74.25 29 P P 20 18 56.6 +0.9
baz=309,SNR=30
SKT **Skwentna** 74.28 25 IAmb IAmb 20 18 58.3
comp=Z,386nm,1.1s
SKT IAMs_20 IAMs_20 20 53 32.9
comp=Z,13µm,18.0s
SKT **Skwentna** 74.28 25 P P 20 18 56.1 +0.2
baz=312,SNR=215
H27K **Steamboat Moun** 74.30 18 IAMs_20 IAMs_20 20 54 58.9
comp=Z,18µm,18.0s
H27K **Steamboat Moun** 74.30 18 P P 20 18 56.3 +0.3
baz=319,SNR=130
O18K **Koktuh Hills** 74.31 28 IAmb IAmb 20 18 59.6
comp=Z,353nm,1.2s
O18K **Koktuh Hills** 74.31 28 P P 20 18 57.2 +1.1
baz=310,SNR=37
LIS **Lisbon** 74.34 306 *e*P P 20 18 56.5 -0.1
LIS *e*S S 20 28 31.7 +0.8
LIS IAMs_20 IAMs_20 20 50 07.6
comp=N,27µm,22.1s
LIS **Lisbon** 74.34 306 *e*P P 20 18 58.2 +1.6
LIS **Lisbon** 74.34 306 *e*P P 20 18 56.5 -0.1
LIS **Lisbon** 74.34 306 P P 20 18 58.4 +1.8
LIS *e*S S 20 28 31.7 +0.8
CUT **Chulitna** 74.43 24 P P 20 18 56.9 +0.3
baz=313,SNR=7.7
J25K **Salcha River,** 74.43 21 P P 20 18 56.2 -0.5
baz=316,SNR=68
O19K **Port Alsworth** 74.44 27 IAmb IAmb 20 18 60.0
comp=Z,202nm,1.0s
O19K IAMs_20 IAMs_20 20 54 19.7
comp=Z,12µm,20.0s
O19K **Port Alsworth** 74.44 27 P P 20 18 57.9 +1.2
baz=310,SNR=24
Q16K **King Salmon** 74.48 29 P P 20 18 57.8 +0.7
baz=309,SNR=21
STLK **Strandline Lak** 74.50 25 IAmb IAmb 20 18 59.8
comp=Z,202nm,1.0s
FORT **Forrest** 74.52 144 P P 20 18 58.4 +0.9
comp=Z,130nm,1.2s,comp=Z,0.0nm
FORT **Forrest** 74.52 144 IAmb IAmb 20 19 00.6
comp=Z,339nm,1.6s
INK **Inuvik** 74.54 14 LR LR 20 54 38.8
comp=Z,6µm,21.5s,baz=342,slow=38
INK **Inuvik** 74.54 14 P P 20 18 57.3 0.0
INK **Inuvik** 74.54 14 IAmb IAmb 20 19 00.5
comp=Z,572nm,1.8s
INK **Inuvik** 74.54 14 P P 20 18 57.2 0.0
baz=326,SNR=97
SPCR **Spurr Chakacha** 74.56 26 P P 20 18 58.4 +0.8
baz=312,SNR=17
P18K **Big Mountain,** 74.60 28 P P 20 18 58.7 +0.8
baz=310,SNR=28
F30M **Barrier River** 74.62 16 IAmb IAmb 20 19 00.4
comp=Z,239nm,1.0s
F30M **Barrier River** 74.62 16 P P 20 18 58.2 +0.5
baz=324,SNR=105
PTEO **Sao Teotonio** 74.63 305 *e*P P 20 18 58.2 -0.1
PTEO *i* IAmb IAmb 20 19 04.3
comp=Z,310nm,2.1s
G29M **Pine Creek** 74.66 17 P P 20 18 58.4 +0.4
baz=322,SNR=118
MORF **Marmelete** 74.70 305 *e*P P 20 18 58.7 -0.1
MORF *e*S S 20 28 35.9 +0.7
MORF IAMs_20 IAMs_20 20 50 32.3
comp=N,30µm,22.7s
MORF **Marmelete** 74.70 305 *e*P P 20 18 58.7 -0.1
MORF *e*S S 20 28 35.9 +0.7
WAT1 **Susitna Watana** 74.71 23 P P 20 18 57.4 -1.0
baz=314
S14K **Fog Glacier** 74.72 32 P P 20 18 58.2 -0.5
baz=307,SNR=16
VNFG **Fog Glacier, M** 74.72 32 IAMs_20 IAMs_20 20 52 36.7
comp=Z,15µm,18.0s
I27K **Kandik River** 74.76 19 IAMs_20 IAMs_20 20 53 52.2
comp=Z,14µm,19.0s
I27K **Kandik River** 74.76 19 P P 20 18 59.5 +0.8
baz=319,SNR=158
MTSU **Mount Surprise** 74.86 124 P P 20 19 01.1 +1.3
comp=Z,31nm,1.2s
MTSU **Mount Surprise** 74.86 124 P P 20 19 01.1 +1.3
SDPT **Sand Point** 74.87 33 P P 20 18 59.9 +0.6
SDPT **Sand Point** 74.87 33 IAmb IAmb 20 19 06.3
comp=Z,323nm,1.3s
SDPT **Sand Point** 74.87 33 P P 20 18 58.0 -1.3
baz=307,SNR=12
RED **Redoubt Volcan** 74.87 26 IAmb IAmb 20 19 04.1
comp=Z,565nm,1.6s
K24K **Donnelly Dome** 74.89 21 IAmb IAmb 20 19 01.0
comp=Z,365nm,1.0s
K24K IAMs_20 IAMs_20 20 55 06.0
comp=Z,13µm,18.0s
K24K **Donnelly Dome** 74.89 21 P P 20 18 58.8 -0.6
baz=316,SNR=33
PFVI **Vila Bisbo** 74.91 305 P P 20 19 01.0 +1.0
PFVI **Vila Bisbo** 74.91 305 *e*P P 20 19 00.6 +0.6
PFVI *i* IAmb IAmb 20 19 06.0
comp=Z,224nm,2.1s
DHY **Denali Highway** 74.92 22 IAMs_20 IAMs_20 20 52 26.6
comp=Z,12µm,18.0s
DHY **Denali Highway** 74.92 22 P P 20 18 59.4 -0.4
baz=315,SNR=88
M22K **Willow** 74.92 24 IAmb IAmb 20 19 04.6
comp=Z,436nm,1.4s
M22K IAMs_20 IAMs_20 20 57 09.6
comp=Z,12µm,19.0s
M22K **Willow** 74.92 24 P P 20 18 59.5 -0.1
baz=313,SNR=10
G30M **tAoh Zraii Nji** 75.03 16 IAmb IAmb 20 19 03.0
comp=Z,547nm,1.4s
G30M IAMs_20 IAMs_20 20 54 33.1
comp=Z,13µm,20.0s
G30M **tAoh Zraii Nji** 75.03 16 P P 20 19 00.1 -0.1
baz=324,SNR=129
H29M **Whitestone** 75.12 17 IAMs_20 IAMs_20 20 55 43.6
comp=Z,13µm,20.0s
H29M **Whitestone** 75.12 17 P P 20 19 00.8 +0.1
baz=322,SNR=110
SFJD **Kangerlussuaq** 75.14 344 LR LR 20 56 45.9
comp=Z,13µm,19.6s,baz=40,slow=39
SFJD **Kangerlussuaq** 75.14 344 P P 20 18 59.4 -1.3
SFJD pmax pmax
comp=Z,348nm,1.0s
SFJD MLR MLR
comp=Z,14µm,19.0s
SFJD **Kangerlussuaq** 75.14 344 P P 20 18 59.4 -1.3
SFJD IAmb IAmb 20 19 02.1
comp=Z,348nm,1.0s
SFJD **Kangerlussuaq** 75.14 344 IAMs_20 IAMs_20 20 56 23.6
comp=Z,14µm,19.0s
SFJD **Kangerlussuaq** 75.14 344 P P 20 18 60.0 -0.7
SFJD **Kangerlussuaq** 75.14 344 *i* P P 20 18 59.7 -1.0
SFJD IAmb IAmb 20 19 01.9
comp=Z,399nm,1.1s
WAT6 **Susitna Watana** 75.15 23 P P 20 19 01.0 -0.1
baz=315,SNR=77
O20K **Slope Mountain** 75.15 27 P P 20 19 01.5 +0.5
baz=312,SNR=13
Q18K **Katmai Hardscr** 75.17 28 P P 20 19 00.5 -0.7
baz=310,SNR=18
P19K **Oil Pt** 75.21 27 P P 20 19 00.7 -0.6
baz=311
F31M **Tsiigehtchic** 75.22 15 IAmb IAmb 20 19 04.2
comp=Z,730nm,1.8s
F31M **Tsiigehtchic** 75.22 15 P P 20 19 01.0 -0.2
baz=326,SNR=22
CHGN **Chignik** 75.22 32 IAmb IAmb 20 19 03.2
comp=Z,451nm,1.6s
CHGN **Chignik** 75.22 32 P P 20 19 00.4 -0.9
baz=308,SNR=16
RIDG **Independent Ri** 75.23 21 IAmb IAmb 20 19 03.0
comp=Z,237nm,1.0s
RIDG IAMs_20 IAMs_20 20 53 57.7
comp=Z,12µm,20.0s
RIDG **Independent Ri** 75.23 21 P P 20 19 00.8 -0.6
baz=317,SNR=130
CAPN **Captain Cook N** 75.23 25 P P 20 19 01.8 +0.5
baz=313
SCRK **Sand Creek** 75.31 21 IAmb IAmb 20 19 04.1
comp=Z,251nm,1.1s
SCRK **Sand Creek** 75.31 21 P P 20 19 01.8 -0.1
baz=318,SNR=201
GHO **Glory Hole Cre** 75.32 24 IAMs_20 IAMs_20 20 56 43.5
comp=Z,13µm,19.0s
I28M **Miner Creek** 75.33 18 P P 20 19 01.6 -0.4
baz=321,SNR=166
PMR **Palmer** 75.38 24 P P 20 19 02.6 +0.4
PMR **Palmer** 75.38 24 P P 20 19 02.3 +0.1
baz=314,SNR=25
C36M **Paulatuk** 75.38 11 P P 20 19 01.4 -0.6
baz=334,SNR=23
EPYK **Eagle Plains** 75.41 17 IAmb IAmb 20 19 04.2
comp=Z,226nm,1.1s
EPYK **Eagle Plains** 75.41 17 P P 20 19 02.0 -0.4
baz=323,SNR=113
SML **Sawmill** 75.50 24 IAmb IAmb 20 19 05.5
comp=Z,346nm,1.0s
SML IAMs_20 IAMs_20 20 55 36.1
comp=Z,14µm,18.0s
SML **Sawmill** 75.50 24 P P 20 19 03.2 +0.3
baz=315,SNR=145
RC01 **Rabbit Creek A** 75.52 25 IAmb IAmb 20 19 05.5
comp=Z,390nm,1.2s
RC01 IAMs_20 IAMs_20 20 56 28.6
comp=Z,15µm,18.0s
RC01 **Rabbit Creek A** 75.52 25 P P 20 19 02.9 -0.1
baz=314,SNR=60
G31M **Satah River** 75.53 16 IAmb IAmb 20 19 04.9
comp=Z,244nm,0.9s
G31M **Satah River** 75.53 16 P P 20 19 02.8 -0.2
baz=325,SNR=97
CHNA **Chernabura Isl** 75.59 33 P P 20 19 03.6 +0.1
CHNA **Chernabura Isl** 75.59 33 P P 20 19 02.8 -0.7
baz=308,SNR=55
CNBA **Chernabura Isl** 75.60 33 IAMs_20 IAMs_20 20 50 26.6
comp=Z,14µm,20.0s
PAX **Paxson** 75.60 22 IAMs_20 IAMs_20 20 54 51.6
comp=Z,14µm,18.0s
PAX **Paxson** 75.60 22 P P 20 19 03.4 -0.1
baz=317,SNR=53
M23K **Glacier View** 75.71 24 P P 20 19 04.1 0.0
baz=315,SNR=70
KNK **Knik Glacier** 75.73 24 IAmb IAmb 20 19 07.0
comp=Z,312nm,1.3s
KNK IAMs_20 IAMs_20 20 53 36.3
comp=Z,17µm,22.0s
KNK **Knik Glacier** 75.73 24 P P 20 19 04.7 +0.4
baz=315,SNR=38
SLKM **Skilak Lake** 75.75 25 IAmb IAmb 20 19 06.3
comp=Z,230nm,1.2s
HOM **Homer** 75.81 27 P P 20 19 04.8 +0.1
baz=312,SNR=6.6
SCM **Sheep Creek Mo** 75.82 23 IAmb IAmb 20 19 07.3
comp=Z,221nm,0.9s
SCM IAMs_20 IAMs_20 20 55 39.5
comp=Z,13µm,19.0s
SCM **Sheep Creek Mo** 75.82 23 P P 20 19 05.2 +0.3
baz=316,SNR=69
K27K **Chicken** 75.83 20 IAMs_20 IAMs_20 20 54 55.2
comp=Z,20µm,20.0s
AVE **Averroes** 75.83 301 P P 20 19 06.0 +0.6
AVE **Averroes** 75.83 301 IAMs_20 IAMs_20 20 55 28.4
comp=Z,12µm,21.0s
O22K **Cooper Landing** 75.94 25 IAmb IAmb 20 19 07.7
comp=Z,366nm,1.1s
O22K IAMs_20 IAMs_20 20 54 28.5
comp=Z,18µm,19.0s
O22K **Cooper Landing** 75.94 25 P P 20 19 05.7 +0.2
baz=314,SNR=9.5
M24K **Tolsona, Glenn** 76.00 23 IAmb IAmb 20 19 08.8
comp=Z,343nm,1.1s
M24K IAMs_20 IAMs_20 20 55 49.9
comp=Z,11µm,18.0s
M24K **Tolsona, Glenn** 76.00 23 P P 20 19 06.3 +0.5
baz=316,SNR=49
BRLK **Bradley Lake** 76.02 26 IAmb IAmb 20 19 07.8
comp=Z,249nm,1.0s
BRLK IAMs_20 IAMs_20 20 53 18.4
comp=Z,14µm,18.0s
CNPM **China Poot** 76.05 26 IAmb IAmb 20 19 10.4
comp=Z,176nm,0.9s
BRSE **Bradley Lake S** 76.08 26 P P 20 19 06.8 +0.5
baz=313,SNR=23
HARP **HAARP** 76.11 22 IAMs_20 IAMs_20 20 54 31.3
comp=Z,12µm,20.0s

HARP HAARP 76.11 22 P P 20 19 07.4 +1.0
baz=317,SNR=46
MENT Mentasta 76.16 21 P P 20 19 08.1 +1.4
PWL Port Wells 76.17 24 IAmb IAmb 20 19 09.2
comp=Z,330nm,1.5s
PWL IAMs_20 IAMs_20 20 57 56.9
comp=Z,12µm,20.0s
PWL Port Wells 76.17 24 P P 20 19 07.2 +0.4
baz=315,SNR=32
L26K Log Cabin Wild 76.21 21 IAMs_20 IAMs_20 20 55 51.7
comp=Z,14µm,18.0s
L26K Log Cabin Wild 76.21 21 P P 20 19 07.1 +0.2
baz=318,SNR=31
SEW Seward 76.30 25 IAmb IAmb 20 19 09.8
comp=Z,331nm,1.2s
SEW IAMs_20 IAMs_20 20 55 42.5
comp=Z,16µm,18.0s
SEW Seward 76.30 25 P P 20 19 07.5 0.0
baz=314,SNR=61
I30M Mount Dempster 76.42 17 IAmb IAmb 20 19 10.2
comp=Z,194nm,0.9s
I30M Mount Dempster 76.42 17 P P 20 19 07.9 -0.3
baz=324,SNR=242
H31M Peel River 76.43 16 IAmb IAmb 20 19 11.0
comp=Z,430nm,1.4s
H31M Peel River 76.43 16 P P 20 19 07.8 -0.4
baz=325,SNR=134
KLU Klutina 76.53 23 IAmb IAmb 20 19 11.7
comp=Z,196nm,1.2s
KLU IAMs_20 IAMs_20 20 56 35.3
comp=Z,17µm,18.0s
KLU Klutina 76.53 23 P P 20 19 09.7 +0.8
baz=317,SNR=59
DAWY Dawson 76.55 19 P P 20 19 09.0 +0.1
baz=322,SNR=112
J29N Klondike Camp 76.56 18 IAMs_20 IAMs_20 20 56 08.9
comp=Z,14µm,19.0s
J29N Klondike Camp 76.56 18 P P 20 19 09.4 +0.3
baz=322,SNR=7.9
GLI Glacier Island 76.58 24 IAMs_20 IAMs_20 20 54 12.3
comp=Z,13µm,21.0s
GLI Glacier Island 76.58 24 P P 20 19 09.0 0.0
baz=316,SNR=33
L27K Beaver Creek, 76.64 21 IAmb IAmb 20 19 12.6
comp=Z,289nm,1.2s
L27K Beaver Creek, 76.64 21 P P 20 19 10.2 +0.8
baz=320,SNR=260
BCAR Beaver Creek A 76.65 21 P P 20 19 09.7 +0.2
KDAK Kodiak Island 76.71 28 LR LR 20 56 39.0
comp=Z,19µm,18.9s,baz=293,slow=38
KDAK Kodiak Island 76.71 28 *d i* P P 20 19 10.3 +0.5
KDAK pmax pmax
comp=Z,388nm,1.1s
KDAK MLR MLR
comp=Z,27µm,16.0s
KDAK Kodiak Island 76.71 28 P P 20 19 10.1 +0.2
KDAK IAmb IAmb 20 19 12.3
comp=Z,408nm,1.1s
KDAK Kodiak Island 76.71 28 ⇑P P 20 19 10.0 +0.2
KDAK Kodiak Island 76.71 28 P P 20 19 10.3 +0.5
baz=312
CHIR Chirikof Islan 76.74 31 P P 20 19 11.7 +1.7
CHIR Chirikof Islan 76.74 31 P P 20 19 10.2 +0.2
baz=310,SNR=7.5
M26K Nabesna, AK 76.79 21 IAMs_20 IAMs_20 20 54 57.0
comp=Z,14µm,20.0s
M26K Nabesna, AK 76.79 21 P P 20 19 11.4 +1.1
baz=319,SNR=38
EDA Edea 76.79 266 IAmb IAmb 20 19 13.2
comp=Z,608nm,2.0s
EDA IAMs_20 IAMs_20 20 55 05.3
comp=Z,14µm,20.0s
OHAK Old Harbor 76.80 29 P P 20 19 11.3 +1.0
OHAK Old Harbor 76.80 29 IAmb IAmb 20 19 13.0
comp=Z,478nm,1.3s
OHAK Old Harbor 76.80 29 P P 20 19 10.7 +0.4
baz=312,SNR=32
DIV Divide 76.84 23 IAmb IAmb 20 19 13.3
comp=Z,210nm,1.4s
SII Sitkinak Islan 76.87 30 P P 20 19 12.3 +1.5
SII Sitkinak Islan 76.87 30 IAMs_20 IAMs_20 20 55 31.2
comp=Z,21µm,22.0s
SII Sitkinak Islan 76.87 30 P P 20 19 11.2 +0.4
baz=311,SNR=8.8
N25K Chitina, Valde 76.88 23 P P 20 19 11.6 +0.8
baz=318,SNR=123
FID Port Fidalgo 76.88 24 IAMs_20 IAMs_20 20 54 22.1
comp=Z,13µm,18.0s
TIO Tiouine 76.92 298 P P 20 19 12.3 +0.6
J30M Hart River 76.95 18 P P 20 19 11.6 +0.3
baz=324,SNR=155
MATP Matopo 77.01 235 LR LR 20 52 20.2
comp=Z,8µm,19.0s,baz=54,slow=35
P23K Montague Islan 77.11 25 IAmb IAmb 20 19 15.0
comp=Z,360nm,1.1s
P23K Montague Islan 77.11 25 P P 20 19 12.6 +0.6
baz=316,SNR=56
HIN Hinchinbrook I 77.13 24 IAmb IAmb 20 19 15.2
comp=Z,301nm,1.2s
HIN IAMs_20 IAMs_20 20 55 34.3
comp=Z,13µm,18.0s
M27K Edge Creek, AK 77.16 21 IAmb IAmb 20 19 15.7
comp=Z,211nm,1.2s
M27K Edge Creek, AK 77.16 21 P P 20 19 13.2 +0.7
baz=320,SNR=38
K29M Barlow Dome 77.23 19 IAmb IAmb 20 19 15.4
comp=Z,201nm,1.1s
K29M IAMs_20 IAMs_20 20 55 59.4
comp=Z,15µm,20.0s
K29M Barlow Dome 77.23 19 P P 20 19 13.5 +0.7
baz=323,SNR=228
EYAK Cordova Ski Ar 77.28 24 P P 20 19 14.3 +1.3
EYAK Cordova Ski Ar 77.28 24 IAmb IAmb 20 19 16.1
comp=Z,222nm,1.2s
EYAK Cordova Ski Ar 77.28 24 P P 20 19 13.8 +0.8
baz=317,SNR=44
BMRM Bremner River 77.35 23 IAmb IAmb 20 19 16.2
comp=Z,216nm,1.1s
BMRM IAMs_20 IAMs_20 20 56 40.0
comp=Z,12µm,18.0s
BMRM Bremner River 77.35 23 P P 20 19 14.2 +0.7
baz=318,SNR=59
BVCY Beaver Creek 77.42 21 P P 20 19 14.7 +0.8
baz=321,SNR=32
ILON Igloolik, Nuna 77.51 356 IAmb IAmb 20 19 15.1
comp=Z,217nm,1.1s
CTA Charters Tower 77.53 124 P P 20 19 15.9 +1.0
comp=Z,47nm,1.1s
CTA Charters Tower 77.53 124 LR LR 20 55 19.1
comp=Z,2µm,22.0s,baz=296,slow=37
CTA Charters Tower 77.53 124 P P 20 19 15.5 +0.6
CTA Charters Tower 77.53 124 P P 20 19 15.9 +1.0
CTAO Charters Tower 77.53 124 P P 20 19 15.6 +0.6
CTAO Charters Tower 77.53 124 P P 20 19 13.8 -1.1
CTAO pmax pmax
comp=Z,416nm,1.8s
CTAO MLR MLR
comp=Z,6µm,21.0s
CTAO Charters Tower 77.53 124 P P 20 19 13.8 -1.1
CTAO IAmb IAmb 20 19 17.2
comp=Z,416nm,1.8s
CTAO Charters Tower 77.53 124 ⇓P P 20 19 15.3 +0.4
VRDI Verde Repeater 77.53 22 IAmb IAmb 20 19 17.5
comp=Z,176nm,1.1s
VRDI IAMs_20 IAMs_20 20 57 08.7
comp=Z,11µm,18.0s
MCARA McCarthy VSAT 77.55 22 IAMs_20 IAMs_20 20 57 23.1
comp=Z,15µm,18.0s
MCARA McCarthy VSAT 77.55 22 P P 20 19 15.2 +0.6
baz=319,SNR=67
KSANE Kasane 77.62 239 IAmb IAmb 20 19 18.5
comp=Z,619nm,1.8s
KSANE Kasane 77.62 239 P P 20 19 15.4 -0.2
L29M L29M 77.66 19 IAMs_20 IAMs_20 20 56 23.6
comp=Z,14µm,19.0s
L29M L29M 77.66 19 P P 20 19 15.7 +0.5
baz=323,SNR=169
NUUK Nuuk 77.72 343 *i* P P 20 19 15.3 -0.1
NUUK IAmb IAmb 20 19 16.5
comp=Z,372nm,1.2s
MID Middleton Isla 77.89 25 IAMs_20 IAMs_20 20 55 58.0
comp=Z,12µm,20.0s
CRQM Cirque 77.98 23 IAmb IAmb 20 19 20.1
comp=Z,269nm,1.1s
CRQM IAMs_20 IAMs_20 20 55 40.2
comp=Z,13µm,20.0s
CRQE Cirque 78.00 23 P P 20 19 17.7 +0.5
baz=319,SNR=28
YUK3 Moose Creek 78.04 21 P P 20 19 17.9 +0.4
baz=321,SNR=20
TGL Tana Glacier 78.08 22 IAmb IAmb 20 19 20.6
comp=Z,285nm,1.0s
TGL IAMs_20 IAMs_20 20 55 42.4
comp=Z,12µm,18.0s
M29M Sonmne Creek 78.09 20 P P 20 19 18.4 +0.7
baz=322,SNR=125
KAIM Kayak Island 78.19 24 IAmb IAmb 20 19 21.5
comp=Z,296nm,1.1s
KAIM IAMs_20 IAMs_20 20 57 19.1
comp=Z,12µm,21.0s
KAIM Kayak Island 78.19 24 P P 20 19 19.1 +1.0
baz=318,SNR=44
BARN Barnard Glacie 78.22 22 IAMs_20 IAMs_20 20 55 43.0
comp=Z,17µm,19.0s
NRS Narsarsuaq 78.38 339 IAmb IAmb 20 19 29.6
comp=Z,317nm,1.4s
NRS IAMs_20 IAMs_20 20 58 36.4
comp=Z,14µm,18.0s
NRS Narsarsuaq 78.38 339 *i* P P 20 19 17.7 -1.4
NRS IAmb IAmb 20 19 20.4
comp=Z,181nm,1.1s
NRS IVMs_BB IVMs_BB 20 58 27.8
comp=Z,5µm,12.0s
NRS IAMs_20 IAMs_20 20 58 30.3
comp=Z,14µm,16.0s
GRNC Granite Creek 78.45 22 IAmb IAmb 20 19 23.6
comp=Z,478nm,1.5s
GRNC IAMs_20 IAMs_20 20 57 58.9
comp=Z,12µm,20.0s
M30M Minto, Yukon 78.45 19 IAMs_20 IAMs_20 20 58 57.6
comp=Z,11µm,18.0s
M30M Minto, Yukon 78.45 19 P P 20 19 20.4 +0.9
baz=324,SNR=55
LOGN Logan Glacier 78.61 22 IAMs_20 IAMs_20 20 55 56.2
comp=Z,20µm,22.0s
YUK8 Steele Glacier 78.63 21 P P 20 19 21.1 +0.3
baz=322,SNR=35
SOOWA Sowa 78.68 236 P P 20 19 21.3 -0.1
BRWY Burwash Landin 78.78 21 P P 20 19 21.9 +0.5
baz=322,SNR=8.5
O28M Mount Upton 78.90 21 IAMs_20 IAMs_20 20 58 11.6
comp=Z,17µm,18.0s
O28M Mount Upton 78.90 21 P P 20 19 23.2 +0.8
baz=321,SNR=23
YUK4 Talbot Arm 78.92 21 P P 20 19 22.5 +0.1
baz=322,SNR=29
TORD Torodi Ar. Bea 78.93 278 P P 20 19 21.6 -1.3
comp=Z,52nm,0.8s,baz=56,slow=4.2,SNR=117
TORD S S 20 29 19.6 -2.2
comp=Z,1.2nm,0.9s,baz=69,slow=7.9,SNR=4.8
TORD PKPPKP P'P'df 20 46 21.2 -0.7
comp=Z,0.6nm,0.8s,baz=240,slow=3.4,SNR=4.0
TORD LR LR 20 58 59.8
comp=Z,13µm,19.0s,baz=60,slow=39
comp=Z,52nm,0.8s
IVI Ivigtut 79.17 340 IAmb IAmb 20 19 24.9
comp=Z,402nm,1.2s
IVI IAMs_20 IAMs_20 21 01 17.3
comp=Z,12µm,19.0s
IVI Ivigtut 79.17 340 *i* P P 20 19 23.6 +0.2
IVI IAmb IAmb 20 19 24.7
comp=Z,428nm,1.2s
N30M Aishikik Lake 79.27 20 P P 20 19 24.9 +0.8
baz=324,SNR=84
YUK6 Outpost Mounta 79.32 21 P P 20 19 25.0 +0.4
baz=323,SNR=25
M31M Drury Creek, Y 79.41 18 IAMs_20 IAMs_20 20 57 24.8
comp=Z,16µm,20.0s
M31M Drury Creek, Y 79.41 18 P P 20 19 25.1 +0.3
baz=326,SNR=103
PCA Pinnacle 79.41 22 IAmb IAmb 20 19 28.1
comp=Z,284nm,1.3s
PCA IAMs_20 IAMs_20 20 56 30.4
comp=Z,15µm,20.0s
PINM Pinnacle 79.41 22 P P 20 19 25.8 +0.9
baz=321,SNR=32
N31M Braeburn, Yuko 79.62 19 IAmb IAmb 20 19 28.9
comp=Z,418nm,1.1s
N31M IAMs_20 IAMs_20 20 57 42.5
comp=Z,13µm,18.0s
N31M Braeburn, Yuko 79.62 19 P P 20 19 26.6 +0.6
baz=325,SNR=268
HYT Haines Junctio 79.67 20 IAmb IAmb 20 19 29.3
comp=Z,235nm,1.0s
HYT Haines Junctio 79.67 20 P P 20 19 27.1 +0.8
baz=323,SNR=153
POGA Pongola 79.71 228 IAmb IAmb 20 19 29.2
comp=Z,59nm,1.9s
POGA Pongola 79.71 228 P P 20 19 25.8 -1.0
O29M Mount Kennedy 79.77 21 IAMs_20 IAMs_20 20 58 23.4
comp=Z,15µm,20.0s
O29M Mount Kennedy 79.77 21 P P 20 19 27.4 +0.4
baz=323,SNR=18
MMPY Sheldon Lake, 79.85 17 IAmb IAmb 20 19 31.4
comp=Z,752nm,1.7s
MMPY Sheldon Lake, 79.85 17 P P 20 19 28.1 +0.9
baz=328,SNR=150
O30N Mendenhall 80.12 20 IAmb IAmb 20 19 31.7
comp=Z,297nm,1.3s
O30N Mendenhall 80.12 20 P P 20 19 29.4 +0.7
baz=325,SNR=134
KHWEE KHWEE 80.13 236 P P 20 19 28.3 -1.1
BBOO Buckleboo 80.28 140 P P 20 19 29.9 +0.1
comp=Z,153nm,2.0s
BBOO Buckleboo 80.28 140 P P 20 19 29.7 -0.1
BBOO Buckleboo 80.28 140 IAmb IAmb 20 19 32.2
comp=Z,609nm,1.7s
P30M Million Dollar 80.39 21 P P 20 19 30.9 +0.6
baz=324,SNR=47
TATA Tatamba Isabel 80.52 106 P P 20 19 33.3 +1.8
WHY Whitehorse 80.55 19 P P 20 19 31.5 +0.4
baz=326,SNR=57
P29M Windy Craggy 80.56 21 IAMs_20 IAMs_20 20 58 21.3
comp=Z,12µm,19.0s
P29M Windy Craggy 80.56 21 P P 20 19 31.6 +0.6
baz=323,SNR=40
QLP Quilpie 80.60 130 P P 20 19 33.0 +1.4
comp=Z,392nm,1.7s
QLP Quilpie 80.60 130 P P 20 19 32.7 +1.1
N32M Quiet Lake 80.63 18 IAMs_20 IAMs_20 20 58 33.1
comp=Z,14µm,21.0s
N32M Quiet Lake 80.63 18 P P 20 19 31.8 +0.3
baz=327
CKGRV CKGRV 80.95 237 P P 20 19 32.7 -1.1
WRGLY Wrigley 81.02 13 P P 20 19 33.7 +0.3
baz=335
PLBC Pleasant Camp 81.11 21 P P 20 19 34.7 +0.7
baz=321,SNR=86
AUCAS Cummins Area S 81.21 141 P P 20 19 35.1 +0.4
HNR Honiara 81.24 107 LR LR 20 53 32.7
comp=Z,380nm,21.9s,baz=28,slow=34
HNR Honiara 81.24 107 P P 20 19 37.6 +2.2
HNR Honiara 81.24 107 P P 20 19 35.5 +0.2
HNR pmax pmax
comp=Z,1µm,1.7s
HNR MLR MLR
comp=Z,8µm,22.0s
HNR Honiara 81.24 107 P P 20 19 35.5 +0.2
SKAG Skagway 81.41 20 P P 20 19 37.7 +2.2
SKAG Skagway 81.41 20 IAmb IAmb 20 19 39.1
comp=Z,284nm,1.1s
SKAG Skagway 81.41 20 P P 20 19 36.6 +1.1
baz=325,SNR=44
P33M Teslin, Yukon 81.49 19 P P 20 19 36.5 +0.4
baz=327,SNR=108
TGTN Hyland Airport 81.51 16 P P 20 19 37.3 +1.2
baz=331,SNR=34
FRB Frobisher Bay 81.54 349 LR LR 21 00 16.4
comp=Z,8µm,19.0s,baz=25,slow=39
FRB Frobisher Bay 81.54 349 P P 20 19 35.8 -0.3
PTPS Port Pirie 81.62 139 P P 20 19 38.6 +1.7
P32M Atlin 81.77 20 IAMs_20 IAMs_20 20 59 20.2
comp=Z,16µm,18.0s
P32M Atlin 81.77 20 P P 20 19 38.6 +1.1
baz=327,SNR=88
AUJCS Jamestown Cent 81.98 138 P P 20 19 38.6 -0.3
LBTB Lobatse 82.07 233 LR LR 20 52 28.2
comp=Z,5µm,22.0s,baz=46,slow=33
LBTB Lobatse 82.07 233 IAmb IAmb 20 19 41.1
comp=Z,209nm,1.4s
LBTB Lobatse 82.07 233 ⇓P P 20 19 38.5 -1.1
LBTB Lobatse 82.07 233 P P 20 19 38.8 -0.8
R31K City Hall, Gus 82.15 21 P P 20 19 40.4 +1.0
baz=325
PMPST Porto Santo, M 82.27 304 *e* P P 20 19 39.4 -1.3
BESE Bessie Mountai 82.28 21 IAMs_20 IAMs_20 20 59 07.8
comp=Z,14µm,19.0s
HTT Hallett 82.33 138 P P 20 19 41.1 +0.4
comp=Z,35nm,0.9s
HTT Hallett 82.33 138 P P 20 19 40.4 -0.3
HTT Hallett 82.33 138 P P 20 19 41.1 +0.4
S31K Pelican 82.37 22 IAmb IAmb 20 19 47.2
comp=Z,281nm,1.2s
S31K Pelican 82.37 22 P P 20 19 41.9 +1.3
baz=325,SNR=69
WTLY Watson Lake, Y 82.62 17 IAmb IAmb 20 19 44.2
comp=Z,170nm,1.2s
WTLY Watson Lake, Y 82.62 17 P P 20 19 42.0 +0.1
baz=330,SNR=38
R32K Eaglecrest 82.63 21 IAmb IAmb 20 19 45.7
comp=Z,259nm,1.1s
R32K IAMs_20 IAMs_20 20 59 29.2
comp=Z,15µm,19.0s
R32K Eaglecrest 82.63 21 P P 20 19 43.6 +1.6
baz=326,SNR=80
AUNRC North Rockhamp 82.65 124 P P 20 19 44.0 +1.5
JIS Juneau Island 82.67 21 P P 20 19 43.9 +1.7
R33M Jennings River 82.68 18 IAmb IAmb 20 19 45.4
comp=Z,256nm,1.1s
R33M IAMs_20 IAMs_20 20 59 32.4
comp=Z,16µm,21.0s
R33M Jennings River 82.68 18 P P 20 19 43.1 +0.7
baz=329,SNR=182
Q32M Nakina River 82.70 19 IAmb IAmb 20 19 45.8
comp=Z,215nm,1.2s
Q32M IAMs_20 IAMs_20 21 00 08.9
comp=Z,15µm,19.0s
Q32M Nakina River 82.70 19 P P 20 19 43.5 +0.9
baz=328,SNR=70
STKA Stephens Creek 82.72 136 P P 20 19 41.6 -1.1
comp=Z,62nm,1.0s,baz=318,slow=5.7,SNR=48
STKA PKPPKP P'P'df 20 46 10.2 +2.1
comp=Z,1.4nm,0.8s,baz=192,slow=2.6,SNR=5.2
STKA LR LR 21 00 51.2
comp=Z,7µm,20.7s,baz=310,slow=39
comp=Z,62nm,1.0s
GRTLG Ghanzi 82.75 239 P P 20 19 42.9 -0.3
SKOMA Sekoma 82.87 235 P P 20 19 42.6 -1.1
PMAR Madeira 82.87 304 *e* P P 20 19 44.2 +0.2
PMAR *i* IAmb IAmb 20 19 52.4
comp=Z,875nm,1.7s
PMOZ Porto Moniz, M 83.01 305 P P 20 19 46.2 +1.6
PMOZ Porto Moniz, M 83.01 305 *e* P P 20 19 44.2 -0.4
PMOZ *e* PP PP 20 22 57.9 +3.0
PMOZ *e* SS sS 20 30 16.5 +4.1
MAKGR Makgori 83.13 233 P P 20 19 44.2 -1.0
YKA Yellowknife Ar 83.20 10 P P 20 19 44.2 -0.7
comp=Z,80nm,1.1s,baz=343,slow=4.9,SNR=128
YKA PP PP 20 22 49.5 -5.9
comp=Z,8.8nm,1.0s,baz=349,slow=7.3,SNR=5.6
YKA PKPPKP P'P'df 20 46 05.7 -11
comp=Z,1.4nm,0.9s,baz=65,slow=2.9,SNR=3.6
YKA LR LR 20 58 53.3
comp=Z,11µm,21.4s,baz=340,slow=37
comp=Z,80nm,1.1s
YKA Yellowknife Ar 83.20 10 *i* P P 20 19 44.7 -0.2
YKA pmax pmax
comp=Z,79nm,1.0s
YKA Yellowknife Ar 83.20 10 P P 20 19 43.9 -1.0
YKAW1 Yellowknife Wh 83.23 10 IAmb IAmb 20 19 46.7
comp=Z,292nm,1.2s
AUMAR Marden Senior 83.26 139 P P 20 19 45.8 +0.4
S32K Killisnoo 83.28 21 IAmb IAmb 20 19 48.8
comp=Z,213nm,1.3s
S32K Killisnoo 83.28 21 P P 20 19 46.4 +1.1
baz=326,SNR=51
SIT Sitka 83.40 22 P P 20 19 47.9 +2.0
SIT Sitka 83.40 22 IAmb IAmb 20 19 49.6
comp=Z,273nm,1.1s
SIT Sitka 83.40 22 P P 20 19 47.4 +1.4
baz=326,SNR=41
RMQ Roma 83.50 127 P P 20 19 49.3 +2.5
comp=Z,122nm,1.9s
RMQ Roma 83.50 127 P P 20 19 49.4 +2.5
KOTAN Kotaneelee Air 83.70 15 P P 20 19 48.0 +0.4
baz=334
DLBC Dease Lake 83.76 19 LR LR 21 01 07.3
comp=Z,17µm,18.0s,baz=311,slow=38
DLBC Dease Lake 83.76 19 P P 20 19 48.9 +1.0
baz=330,SNR=167
AUMBR Murray Bridge 83.79 139 P P 20 19 48.5 +0.4
LIRD Liard River Hi 83.89 16 P P 20 19 48.9 +0.4
baz=333,SNR=18
S34M Telegraph Cree 83.91 19 IAMs_20 IAMs_20 21 01 12.8
comp=Z,11µm,18.0s
S34M Telegraph Cree 83.91 19 P P 20 19 50.1 +1.5
baz=329,SNR=97
TSUM Tsumeb 84.06 243 LR LR 20 55 17.8
comp=Z,8µm,22.0s,baz=42,slow=34
TSUM Tsumeb 84.06 243 P P 20 19 49.9 -0.2
TSUM IAmb IAmb 20 19 53.1
comp=Z,355nm,1.9s
TSUM Tsumeb 84.06 243 ⇑P P 20 19 49.4 -0.7
TSUM Tsumeb 84.06 243 P P 20 19 50.1 0.0
T33K Petersburg 84.32 21 P P 20 19 51.8 +1.2
baz=327
EIDS Eidsvold 84.34 125 P P 20 19 52.2 +1.0
comp=Z,151nm,2.0s,comp=Z,0.0nm
EIDS Eidsvold 84.34 125 P P 20 19 52.1 +0.9
ACRG Accra 84.48 273 IAmb IAmb 20 19 54.8
comp=Z,283nm,1.8s
KOOLE Kule 84.51 238 IAmb IAmb 20 19 56.0
comp=Z,138nm,0.8s
KOOLE Kule 84.51 238 P P 20 19 52.0 -0.3
EOSO Osorio 84.54 300 P P 20 19 53.9 +1.4
BOSA Boshof 84.69 231 P P 20 19 52.0 -1.1
comp=Z,27nm,0.9s,baz=40,slow=2.9,SNR=32
BOSA LR LR 20 56 37.6
comp=Z,6µm,19.1s,baz=52,slow=35
comp=Z,27nm,0.9s
BOSA Boshof 84.69 231 ⇑P P 20 19 51.9 -1.2
BOSA Boshof 84.69 231 P P 20 19 52.0 -1.1
BOSA S SKSac 20 30 17.8 +0.3
BOSA Boshof 84.69 231 P P 20 19 52.4 -0.7
WRAK Wrangell Islan 84.83 21 IAMs_20 IAMs_20 21 02 39.4
comp=Z,10µm,18.0s
WRAK Wrangell Islan 84.83 21 ⇓P P 20 19 54.3 +1.0
WRAK Wrangell Islan 84.83 21 P P 20 19 54.4 +1.2
baz=328,SNR=86
U33K Whale Pass 84.86 21 IAMs_20 IAMs_20 21 00 34.1
comp=Z,14µm,19.0s
U33K Whale Pass 84.86 21 P P 20 19 54.2 +0.8
baz=327,SNR=47
CMSA Cobar Meteorol 84.95 133 P P 20 19 54.6 +0.5
comp=Z,78nm,1.4s
CMSA Cobar Meteorol 84.95 133 P P 20 19 54.3 +0.2
T35M Bob Quinn 84.95 19 IAmb IAmb 20 19 57.6
comp=Z,265nm,1.2s
T35M IAMs_20 IAMs_20 21 02 12.5
comp=Z,10µm,19.0s
T35M Bob Quinn 84.95 19 P P 20 19 55.0 +1.1
baz=330,SNR=83
AULRC Lightning Ridg 84.96 130 P P 20 19 54.6 +0.4
BART Pico Bartolome 85.29 313 *e* P P 20 19 58.1 +2.1
BART *i* IAmb IAmb 20 20 03.0
comp=Z,443nm,1.8s
CRAG Craig 85.40 22 P P 20 19 57.9 +1.8
CRAG Craig 85.40 22 IAmb IAmb 20 19 59.5
comp=Z,288nm,1.3s
CRAG Craig 85.40 22 ⇑P P 20 19 57.2 +1.1
CRAG Craig 85.40 22 P P 20 19 56.8 +0.7
baz=327,SNR=20
PGRON Lagoa das Cont 85.42 313 *e* P P 20 19 58.5 +1.8
PGRON *i* IAmb IAmb 20 20 01.9
comp=Z,390nm,1.7s
CMLA Cha da Macela 85.52 313 *e* P P 20 19 59.6 +2.5
CMLA *i* IAmb IAmb 20 20 04.4
comp=Z,510nm,1.9s
CMLA Cha da Macela 85.52 313 P P 20 19 57.7 +0.5
CMLA pmax pmax
comp=Z,644nm,1.8s
CMLA MLR MLR
comp=Z,10µm,21.0s
CMLA Cha da Macela 85.52 313 P P 20 19 57.7 +0.5
CMLA IAMs_20 IAMs_20 21 00 21.1
comp=Z,10µm,21.0s
PSET Sete Cidades 85.60 313 *e* P P 20 19 59.4 +1.8
PSET *i* IAmb IAmb 20 20 01.2
comp=Z,216nm,1.5s
PSMN Pico do Norte, 85.71 312 *e* P P 20 19 59.7 +1.6

PSMN *i* lAmb lAmb 20 20 04.0
comp=Z,647nm,2.0s
PAGU Agualva, Azore 85.89 314 *e*P P 20 20 01.6 +2.6
PAGU *i* lAmb lAmb 20 20 04.4
comp=Z,272nm,1.9s
U35K Hyder 85.94 20 lAmb lAmb 20 20 02.5
comp=Z,183nm,0.9s
U35K IAMs_20 IAMs_20 21 02 08.6
comp=Z,12µm,20.0s
U35K Hyder 85.94 20 P P **20 19 59.6 +0.8**
baz=330
PSBA Serra de Santa 85.98 314 *e*P P 20 20 01.9 +2.4
PSBA *i* lAmb lAmb 20 20 06.7
comp=Z,286nm,1.7s
V35K Ketchikan 85.98 21 lAmb lAmb 20 20 02.5
comp=Z,337nm,1.5s
V35K IAMs_20 IAMs_20 21 01 17.7
comp=Z,10µm,19.0s
V35K Ketchikan 85.98 21 P P **20 19 59.5 +0.5**
baz=328,SNR=35
ADH Angra Heroismo 86.00 314 *e*P P 20 20 01.7 +2.3
ADH *i* lAmb lAmb 20 20 05.0
comp=Z,296nm,1.8s
PGRA Graciosa 86.20 315 *e*P P 20 20 02.3 +1.8
PGRA *i* lAmb lAmb 20 20 07.0
comp=Z,414nm,2.0s
TW1H Toowoomba 1 Ha 86.36 126 P P **20 20 03.1 +1.8**
AUTOO Toowoomba Stat 86.36 126 P P **20 20 02.9 +1.6**
WIN Windhoek 86.48 240 P P **20 20 02.5 +0.3**
WIN Windhoek 86.48 240 IAMs_20 IAMs_20 20 55 54.2
comp=Z,11µm,21.0s
WIN Windhoek 86.48 240 P P **20 20 01.7 -0.5**
PMAN Manadas 86.52 315 *e*P P 20 20 04.4 +2.4
PMAN *i* lAmb lAmb 20 20 09.6
comp=Z,296nm,1.4s
ROSA Rosais 86.56 315 *e*P P 20 20 04.4 +2.1
ROSA *i* lAmb lAmb 20 20 08.0
comp=Z,343nm,2.0s
PPNO Prainha do Nor 86.73 315 *e*P P 20 20 05.6 +2.4
PPNO *i* lAmb lAmb 20 20 11.4
comp=Z,349nm,1.8s
PICO Pico 86.81 315 *e*P P 20 20 05.9 +2.3
PICO *i* lAmb lAmb 20 20 11.2
comp=Z,493nm,1.6s
PCAN Candelaria 86.87 315 *e*P P 20 20 05.0 +1.2
PCAN *i* lAmb lAmb 20 20 18.3
comp=Z,370nm,1.6s
PCED Cedros 86.89 315 *e*P P 20 20 06.0 +2.1
PCED *i* lAmb lAmb 20 20 08.5
comp=Z,339nm,1.8s
HOR Horta 86.91 315 *e*P P 20 20 06.7 +2.7
HOR *i* lAmb lAmb 20 20 11.4
comp=Z,452nm,1.8s
CALA Caldeira 86.92 315 *e*P P 20 20 06.3 +2.2
CALA *i* lAmb lAmb 20 20 09.7
comp=Z,582nm,1.5s
RUBB Prince Rupert 87.25 21 lAmb lAmb 20 20 08.2
comp=Z,214nm,1.1s
AUDCS Dubbo College 87.25 132 P P **20 20 06.1 +0.6**
DIB Dawson Inlet, 87.52 22 lAmb lAmb 20 20 09.8
comp=Z,189nm,1.1s
AUMAG Moama Anglican 87.56 137 P P **20 20 09.4 +2.5**
MOBC Moresby Island 87.73 22 lAmb lAmb 20 20 10.3
comp=Z,191nm,1.2s
DBIC Dimbokro 87.82 276 P P **20 20 07.4 -1.4**
comp=Z,62nm,0.9s,baz=60,slow=5.9,SNR=20
DBIC S **SKSac 20 30 33.9 -3.6**
comp=Z,4.8nm,0.9s,baz=297,slow=2.3,SNR=3.2
DBIC LR LR 21 03 11.0
comp=Z,10µm,19.3s,baz=64,slow=38
comp=Z,62nm,0.9s
DBIC Dimbokro 87.82 276 P P **20 20 07.8 -0.9**
AUPHS Peel High Scho 87.94 129 P P **20 20 10.0 +1.1**
ARMA Armidale 87.98 129 P P **20 20 10.7 +1.5**
comp=Z,99nm,2.1s
ARMA Armidale 87.98 129 P P **20 20 10.2 +1.0**
ARMA Armidale 87.98 129 lAmb lAmb 20 20 17.6
comp=Z,91nm,1.0s
BRAT Ballarat 88.12 138 P P **20 20 10.7 +1.2**
HG4B Hotspring 88.71 22 lAmb lAmb 20 20 14.9
comp=Z,177nm,1.2s
TOO Toolangi 89.02 137 P P **20 20 14.5 +0.7**
comp=Z,42nm,1.9s,comp=Z,0.0nm
TOO Toolangi 89.02 137 P P **20 20 14.5 +0.7**
AUMTS Mt Stromlo 89.55 134 P P **20 20 17.3 +0.9**
CAN Canberra 89.55 134 P P **20 20 16.9 +0.6**
comp=Z,149nm,1.8s
CAN Canberra 89.55 134 P P **20 20 17.2 +0.8**
CAN Canberra 89.55 134 P P **20 20 16.9 +0.6**
CAN Canberra 89.55 134 ⇓P P **20 20 15.8 -0.6**
SCHQ Schefferville 89.56 345 P P **20 20 14.8 -1.5**
comp=Z,60nm,1.0s,baz=31,slow=5.4,SNR=33
comp=Z,60nm,1.0s
SCHQ Schefferville 89.56 345 lAmb lAmb 20 20 17.4
comp=Z,125nm,1.1s
AUDAR Daramalan Coll 89.58 134 P P **20 20 17.6 +1.1**
SYDH Sydney Hard Ro 89.59 132 P P **20 20 18.9 +2.4**
AUMHS Melrose High S 89.63 134 P P **20 20 17.9 +1.2**
BBB Bella Bella 89.75 21 LR LR 21 02 20.5
comp=Z,6µm,18.9s,baz=334,slow=37
BBB Bella Bella 89.75 21 lAmb lAmb 20 20 19.7
comp=Z,145nm,1.2s
CNB Canberra Magne 89.76 133 P P **20 20 18.2 +0.8**
comp=Z,2.2nm,1.9s,comp=Z,0.0nm
AUKHS Kincumber High 89.80 131 P P **20 20 19.1 +1.6**
AUSMG Snowy Mountain 90.05 135 P P **20 20 19.9 +1.2**
SUR Sutherland 90.05 231 LR LR 20 57 52.4
comp=Z,6µm,21.5s,baz=47,slow=34
SUR Sutherland 90.05 231 P P **20 20 18.5 -0.5**
SUR Sutherland 90.05 231 IAMs_20 IAMs_20 20 56 48.7
comp=Z,12µm,21.0s
MILA Mila 90.80 135 P P **20 20 24.1 +1.9**
comp=Z,26nm,1.8s
KOUNC Koumac, New Ca 91.06 114 P P **20 20 25.9 +2.2**
HOLB Holberg 91.10 21 lAmb lAmb 20 20 26.4
comp=Z,255nm,1.2s
DRLN Deer Lake 92.09 338 lAmb lAmb 20 20 29.9
comp=Z,193nm,1.2s
FFC Flin Flon 92.22 5 P P **20 20 28.4 -0.2**
FFC pmax pmax
comp=Z,888nm,1.9s
FFC MLR MLR
comp=Z,12µm,19.0s
FFC Flin Flon 92.22 5 P P **20 20 28.4 -0.2**
FFC Flin Flon 92.22 5 IAMs_20 IAMs_20 21 05 47.6
comp=Z,12µm,19.0s
CORO Coronation Par 92.62 139 P P **20 20 32.9 +2.5**
NOUC Port Laguerre 93.49 114 P P **20 20 36.2 +1.3**
DZM Mont Dzumac 93.58 114 LR LR 21 02 09.9
comp=Z,4µm,21.9s,baz=300,slow=35
TAU Tasmania Unive 93.71 140 P P **20 20 37.4 +2.0**
CLRS Cowichan Lake 93.90 20 lAmb lAmb 20 20 40.4
comp=Z,204nm,1.6s
YATNC Mamie plateau, 93.92 114 P P **20 20 38.6 +1.7**
OUENC Ouen Island, N 94.08 114 P P **20 20 39.7 +2.1**
OUENC Ouen Island, N 94.08 114 lAmb lAmb 20 20 41.3
comp=Z,144nm,1.3s
ICQ Pointe Anglais 94.60 343 lAmb lAmb 20 20 41.6
comp=Z,202nm,1.2s
B04A Port Angeles 94.77 20 lAmb lAmb 20 20 43.8
comp=Z,130nm,1.2s
NLWA Neilton Lookou 95.27 20 lAmb lAmb 20 20 46.2
comp=Z,86nm,1.1s
NLWA IAMs_20 IAMs_20 21 04 30.4
comp=Z,11µm,20.0s
GNW Green Mountain 95.41 20 lAmb lAmb 20 20 46.8
comp=Z,95nm,1.2s
B08A Colville Reser 95.61 17 lAmb lAmb 20 20 47.6
comp=Z,194nm,1.4s
RADR Rader Ridge 96.17 21 lAmb lAmb 20 20 50.2
comp=Z,103nm,1.3s
NEW Newport 96.23 16 LR LR 21 09 36.9
comp=Z,9µm,19.0s,baz=354,slow=39
NEW Newport 96.23 16 ⇓P P **20 20 46.9 -0.3**
NEW Newport 96.23 16 IAMs_20 IAMs_20 21 09 15.5
comp=Z,11µm,19.0s
LTY Liberty 96.28 18 lAmb lAmb 20 20 49.6
comp=Z,84nm,1.3s
BATG Bathurst New B 96.38 342 lAmb lAmb 20 20 50.0
comp=Z,157nm,1.2s
LDM Libby Dam 96.44 15 lAmb lAmb 20 20 51.1
comp=Z,171nm,1.6s
EPH Ephrata 96.48 18 lAmb lAmb 20 20 51.2
comp=Z,124nm,1.4s
D08A Wollman Farm, 96.92 17 lAmb lAmb 20 20 53.6
comp=Z,220nm,1.9s

ULM Lac du Bonnet 97.00 2 P P **20 20 49.2 -1.3**
comp=Z,24nm,1.1s,baz=358,slow=5.0,SNR=25
ULM PP PP **20 24 38.2 -6.8**
comp=Z,16nm,1.2s,baz=17,slow=6.7,SNR=3.4
ULM PKKPbc **PKKPdf 20 37 28.4 -2.9**
comp=Z,0.6nm,0.4s,baz=121,slow=5.9,SNR=3.1
ULM LR LR 21 07 29.1
comp=Z,6µm,18.9s,baz=6.0,slow=37
comp=Z,24nm,1.1s
WAH2 Wahluke Slope 97.04 18 lAmb lAmb 20 20 54.1
comp=Z,108nm,1.4s
E07A Sunnyside 97.14 18 lAmb lAmb 20 20 54.8
comp=Z,181nm,1.6s
LMQ La Malbaie 97.16 345 lAmb lAmb 20 20 54.2
comp=Z,192nm,1.8s
D62A Allapoint, All 97.30 344 IAMs_20 IAMs_20 21 08 09.0
comp=Z,12µm,20.0s
HAWA Hanford 97.38 18 lAmb lAmb 20 20 55.9
comp=Z,88nm,1.4s
HAWA IAMs_20 IAMs_20 21 09 15.2
comp=Z,10µm,18.0s
E08A Dider Farm, El 97.41 18 lAmb lAmb 20 20 56.0
comp=Z,134nm,1.4s
E09A Wood Farm, Sta 97.62 17 lAmb lAmb 20 20 56.6
comp=Z,93nm,1.3s
G04A Mulino 97.66 20 lAmb lAmb 20 20 56.4
comp=Z,103nm,1.2s
F07A Phinny Hill Vi 97.74 19 lAmb lAmb 20 20 57.9
comp=Z,116nm,1.8s
HOOD Mount Hood Mea 97.79 20 lAmb lAmb 20 20 58.0
comp=Z,194nm,2.0s
YPT Yellepit 97.85 18 lAmb lAmb 20 20 58.2
comp=Z,160nm,1.6s
EGMT Eagleton 97.90 11 lAmb lAmb 20 20 56.3
comp=Z,68nm,1.2s
EGMT IAMs_20 IAMs_20 21 09 47.1
comp=Z,10µm,19.0s
COR Corvallis 97.97 21 IAMs_20 IAMs_20 21 06 22.0
comp=Z,11µm,22.0s
HAL Halifax 98.10 339 lAmb lAmb 20 20 57.6
comp=Z,69nm,1.1s
G06A Carlson Farm, 98.16 19 lAmb lAmb 20 21 00.9
comp=Z,96nm,1.8s
H04D Lebanon 98.20 21 lAmb lAmb 20 21 00.0
comp=Z,150nm,1.9s
F64A Sherman 98.27 343 lAmb lAmb 20 20 58.2
comp=Z,56nm,1.3s
F10A Beach Ranch, E 98.35 17 lAmb lAmb 20 20 59.4
comp=Z,86nm,1.4s
G65A Princeton 98.69 342 lAmb lAmb 20 21 00.2
comp=Z,58nm,1.2s
AGMN Agassiz Nation 98.95 2 lAmb lAmb 20 21 01.4
comp=Z,135nm,1.7s
AGMN IAMs_20 IAMs_20 21 09 09.5
comp=Z,8µm,18.0s
PKME Peaks-Kenny Pk 99.07 343 lAmb lAmb 20 21 02.1
comp=Z,55nm,1.1s
PKME IAMs_20 IAMs_20 21 06 05.7
comp=Z,9µm,20.0s
MDND Maddock 99.23 4 IAMs_20 IAMs_20 21 09 13.0
comp=Z,8µm,20.0s
TRQ Mont Tremblant 99.29 347 lAmb lAmb 20 21 02.8
comp=Z,57nm,1.2s
EYMN Ely 99.33 359 lAmb lAmb 20 21 03.3
comp=Z,164nm,2.0s
EYMN Ely 99.33 359 IAMs_20 IAMs_20 21 08 49.4
comp=Z,13µm,22.0s
BMO Blue Mountains 99.39 17 P **Pdif 20 21 01.6 +0.1**
BMO Blue Mountains 99.39 17 IAMs_20 IAMs_20 21 11 32.1
comp=Z,11µm,20.0s
G62A West of Eustis 99.40 344 IAMs_20 IAMs_20 21 10 12.6
comp=Z,9µm,19.0s
PLID Pearl Lake 99.48 16 lAmb lAmb 20 21 04.6
comp=Z,211nm,1.9s
PLID IAMs_20 IAMs_20 21 10 48.5
comp=Z,12µm,21.0s
J04A Umpqua Nationa 99.56 21 lAmb lAmb 20 21 09.3
comp=Z,67nm,1.2s
WVL Waterville 99.81 343 IAMs_20 IAMs_20 21 06 27.5
comp=Z,10µm,20.0s
BOZ Bozeman (W) 99.92 13 P **Pdif 20 21 04.6 +0.6**
DLMT Dillon 99.95 14 IAMs_20 IAMs_20 21 12 59.1
comp=Z,9µm,18.0s
LBNH Lisbon 100.65 345 IAMs_20 IAMs_20 21 06 49.5
comp=Z,9µm,22.0s
E38A The Farm, Brul 100.67 359 IAMs_20 IAMs_20 21 09 37.9
comp=Z,10µm,21.0s
RLMT Red Lodge 100.80 12 IAMs_20 IAMs_20 21 12 48.8
comp=Z,11µm,19.0s
LONY Lake Ozonia 100.84 347 IAMs_20 IAMs_20 21 09 00.5
comp=Z,11µm,21.0s
I62A Tamworth 100.86 344 IAMs_20 IAMs_20 21 07 25.2
comp=Z,9µm,22.0s
MFID Camas Ranch 101.10 17 IAMs_20 IAMs_20 21 11 06.4
comp=Z,9µm,20.0s
HNH Hanover 101.23 345 IAMs_20 IAMs_20 21 07 07.1
comp=Z,9µm,21.0s
HLID Hailey 101.29 16 IAMs_20 IAMs_20 21 11 07.4
comp=Z,8µm,18.0s
F33A 5 Mile Ranch, 101.39 2 IAMs_20 IAMs_20 21 16 40.2
comp=Z,10µm,18.0s
FLWY Flagg Ranch 101.55 13 IAMs_20 IAMs_20 21 12 26.3
comp=Z,11µm,20.0s
J61A Chester 101.64 345 IAMs_20 IAMs_20 21 09 42.7
comp=Z,10µm,20.0s
FXWY Fox Creek 101.92 13 IAMs_20 IAMs_20 21 16 03.0
comp=Z,10µm,19.0s
J59A Piesco 101.93 346 IAMs_20 IAMs_20 21 11 00.5
comp=Z,10µm,20.0s
G40A Rib Lake 101.97 358 IAMs_20 IAMs_20 21 14 03.4
comp=Z,9µm,19.0s
MAW Mawson 102.00 189 P **Pdif 20 21 13.2 +1.1**
comp=Z,2.6nm,1.5s
MAW Mawson 102.00 189 P **Pdif 20 21 12.3 +0.2**
comp=Z,5.8nm,0.8s,baz=14,slow=6.8,SNR=9.3
MAW PP **PP 20 25 21.4 -2.6**
comp=Z,12nm,1.3s,baz=46,slow=6.7,SNR=3.7
LOHW Long Hollow 102.03 13 IAMs_20 IAMs_20 21 12 40.8
comp=Z,11µm,19.0s
SNOW Snow King Moun 102.14 13 IAMs_20 IAMs_20 21 13 53.0
comp=Z,10µm,18.0s
HRV Adam Dziewonsk 102.21 344 IAMs_20 IAMs_20 21 12 04.9
comp=Z,8µm,20.0s
K62A Royalston 102.21 344 IAMs_20 IAMs_20 21 08 15.0
comp=Z,10µm,21.0s
WES Weston 102.27 344 IAMs_20 IAMs_20 21 12 29.5
comp=Z,8µm,19.0s
J57A Williamstown 102.27 347 IAMs_20 IAMs_20 21 15 15.5
comp=Z,9µm,19.0s
BCX Boston College 102.28 343 IAMs_20 IAMs_20 21 12 28.1
comp=Z,12µm,20.0s
L61B Northampton 102.52 345 IAMs_20 IAMs_20 21 08 26.1
comp=Z,11µm,20.0s
RSSD Black Hills 102.53 8 P **Pdif 20 21 17.1 +1.4**
RSSD Black Hills 102.53 8 IAMs_20 IAMs_20 21 11 30.3
comp=Z,10µm,19.0s
L64A Middleborough 102.58 343 IAMs_20 IAMs_20 21 11 20.6
comp=Z,10µm,22.0s
SUSD Miller 102.66 4 IAMs_20 IAMs_20 21 17 13.8
comp=Z,11µm,18.0s
AHID Auburn Hatcher 102.75 13 IAMs_20 IAMs_20 21 10 07.0
comp=Z,9µm,22.0s
I49A Point Hope 102.77 352 IAMs_20 IAMs_20 21 10 19.5
comp=Z,11µm,20.0s
M65A Busby, Falmout 102.88 343 P **Pdif 20 21 16.7 -0.3**
baz=19
K57A Scipio Center 103.03 347 IAMs_20 IAMs_20 21 12 32.4
comp=Z,10µm,19.0s
PDAR Pinedale Array 103.03 12 Pdiff **Pdif 20 21 17.6 -0.4**
comp=Z,0.5nm,0.7s,baz=0.0,slow=1.5,SNR=7.7
PDAR PKiKP **PP 20 25 25.9 -5.4**
comp=Z,5.1nm,1.1s,baz=345,slow=2.0,SNR=6.0
PDAR PKKPbc **PKKPbc 20 37 10.8 -3.8**
comp=Z,0.4nm,0.5s,baz=190,slow=3.0,SNR=5.0
L59A Walton 103.27 346 IAMs_20 IAMs_20 21 13 54.8
comp=Z,9µm,19.0s
I40A Norwalk 103.36 358 IAMs_20 IAMs_20 21 14 00.1
comp=Z,11µm,20.0s
M63A Gales Ferry 103.37 344 IAMs_20 IAMs_20 21 12 59.6
comp=Z,11µm,19.0s
BINY Binghamton 103.44 347 IAMs_20 IAMs_20 21 08 33.4
comp=Z,9µm,21.0s
K22A Casper 103.64 10 IAMs_20 IAMs_20 21 12 02.0
comp=Z,9µm,19.0s
ELK Elko 103.76 17 IAMs_20 IAMs_20 21 12 49.0
comp=Z,11µm,21.0s
HWUT Hardware Ranch 103.77 14 IAMs_20 IAMs_20 21 16 56.0
comp=Z,10µm,18.0s

WSPT Westport, CT 103.88 345 IAMs_20 IAMs_20 21 09 14.1
comp=Z,11µm,21.0s
K50A Casco 103.89 352 IAMs_20 IAMs_20 21 10 19.3
comp=Z,10µm,21.0s
N62A Caumsett State 104.14 345 IAMs_20 IAMs_20 21 14 21.0
comp=Z,9µm,18.0s
PAL Palisades 104.17 345 IAMs_20 IAMs_20 21 12 56.7
comp=Z,11µm,19.0s
JFWS Jewell Farm 104.32 358 IAMs_20 IAMs_20 21 13 26.7
comp=Z,12µm,20.0s
N58A Sunbury 104.89 347 IAMs_20 IAMs_20 21 13 12.9
comp=Z,10µm,20.0s
M52A Chesterland 104.95 351 IAMs_20 IAMs_20 21 11 58.4
comp=Z,12µm,21.0s
NVAR Mina Array Bea 105.11 20 Pdiff **Pdif 20 21 28.2 +0.9**
comp=Z,0.4nm,0.4s,baz=299,slow=4.7,SNR=7.5
NVAR PKiKP **PKiKP 20 25 36.1 -5.7**
comp=Z,0.7nm,0.6s,baz=313,slow=4.0,SNR=3.6
NVAR PKKPbc **PKKPbc 20 37 06.3 -1.9**
comp=Z,0.7nm,0.6s,baz=29,slow=4.2,SNR=4.6
L40A Anamosa 105.20 359 IAMs_20 IAMs_20 21 11 54.9
comp=Z,11µm,21.0s
L34A Svendsen Farm, 105.26 2 IAMs_20 IAMs_20 21 16 52.6
comp=Z,8µm,20.0s
M50A Fremont 105.30 352 IAMs_20 IAMs_20 21 10 50.5
comp=Z,11µm,21.0s
N51A Ashland 105.69 352 IAMs_20 IAMs_20 21 12 48.0
comp=Z,8µm,20.0s
BGNE Belgrade 105.73 4 IAMs_20 IAMs_20 21 18 02.1
comp=Z,9µm,18.0s
O20A White River Ci 105.82 12 IAMs_20 IAMs_20 21 17 22.3
comp=Z,10µm,18.0s
O54A Avella 106.15 350 IAMs_20 IAMs_20 21 14 25.0
comp=Z,10µm,19.0s
N35A Tabor 106.39 2 IAMs_20 IAMs_20 21 15 02.4
comp=Z,11µm,20.0s
TIN Tinemaha, Big 106.41 21 IAMs_20 IAMs_20 21 14 20.1
comp=Z,8µm,20.0s
O52A Adamsville 106.42 351 IAMs_20 IAMs_20 21 12 42.1
comp=Z,12µm,22.0s
P57A Homestead Farm 106.44 348 IAMs_20 IAMs_20 21 12 56.9
comp=Z,8µm,21.0s
ACSO Alum Creek Sta 106.45 352 IAMs_20 IAMs_20 21 13 31.9
comp=Z,8µm,20.0s
N41A Harden Midland 106.55 358 IAMs_20 IAMs_20 21 13 27.5
comp=Z,10µm,19.0s
ISCO Idaho Springs 106.57 10 IAMs_20 IAMs_20 21 14 51.1
comp=Z,10µm,20.0s
MCWV Mont Chateau 106.58 349 IAMs_20 IAMs_20 21 14 46.5
comp=Z,9µm,18.0s
CWC Cottonwood Cre 107.02 21 IAMs_20 IAMs_20 21 17 44.4
comp=Z,7µm,18.0s
R61A Willards 107.04 345 IAMs_20 IAMs_20 21 17 21.8
comp=Z,10µm,18.0s
Q56A Snyder Ridge, 107.08 349 IAMs_20 IAMs_20 21 18 08.7
comp=Z,7µm,18.0s
FURC Furnace Creek, 107.35 20 IAMs_20 IAMs_20 21 18 45.0
comp=Z,7µm,20.0s
WKZ Wanaka 107.48 132 IAMs_20 IAMs_20 21 10 40.3
comp=Z,10µm,19.0s
SYO Syowa Base 107.54 196⇑ *e*P **Pdif 20 21 26.2 -11**
SYO Syowa Base 107.54 196⇓ *e*P **Pdif 20 21 41.8 +5.0**
SYO Syowa Base 107.54 196⇑ *e*P **PKiKP 20 25 39.4 -5.4**
MPMC Manual Prospec 107.55 20 IAMs_20 IAMs_20 21 20 45.4
comp=Z,7µm,18.0s
ISA Isabella, Lake 107.62 21 IAMs_20 IAMs_20 21 16 40.3
comp=Z,6µm,18.0s
S61A Accomac 107.74 346 IAMs_20 IAMs_20 21 16 34.2
comp=Z,8µm,19.0s
P40A Paris 107.75 359 IAMs_20 IAMs_20 21 15 22.3
comp=Z,10µm,18.0s
R55A Marlinton 107.97 349 IAMs_20 IAMs_20 21 18 36.2
comp=Z,8µm,19.0s
INZ Inchbonnie 108.00 130 IAMs_20 IAMs_20 21 12 41.2
comp=Z,8µm,21.0s
KSU1 Kansas State U 108.11 3 IAMs_20 IAMs_20 21 19 10.0
comp=Z,8µm,19.0s
CBKS Cedar Bluff 108.21 5 IAMs_20 IAMs_20 21 17 41.6
comp=Z,8µm,21.0s
S57A Dark Hollow, R 108.29 348 IAMs_20 IAMs_20 21 11 42.7
comp=Z,8µm,20.0s
MVCO Mesa Verde 108.62 13 IAMs_20 IAMs_20 21 14 15.6
comp=Z,9µm,20.0s
S54A Dingess, Beckl 108.62 350 IAMs_20 IAMs_20 21 14 20.5
comp=Z,9µm,20.0s
R32A Long Quarter, 108.67 5 IAMs_20 IAMs_20 21 17 07.9
comp=Z,9µm,19.0s
T59A Double "B" Far 108.80 347 IAMs_20 IAMs_20 21 16 00.3
comp=Z,10µm,19.0s
R40A Maddies Statio 108.98 359 IAMs_20 IAMs_20 21 15 59.1
comp=Z,8µm,18.0s
BLA Blacksburg 109.06 349 IAMs_20 IAMs_20 21 11 11.2
comp=Z,11µm,21.0s
MWC Mount Wilson 109.08 22 IAMs_20 IAMs_20 21 16 22.9
comp=Z,7µm,20.0s
BFSC Mount Baldy Ra 109.19 21 IAMs_20 IAMs_20 21 17 03.8
comp=Z,8µm,19.0s
WUAZ Wupatki 109.66 16 IAMs_20 IAMs_20 21 14 41.9
comp=Z,10µm,21.0s
BELC Belle Mtn. Jos 109.90 20 IAMs_20 IAMs_20 21 18 11.6
comp=Z,7µm,20.0s
U56A King 109.90 349 IAMs_20 IAMs_20 21 18 04.4
comp=Z,7µm,20.0s
IRM Iron Mountain 110.00 19 IAMs_20 IAMs_20 21 17 38.1
comp=Z,7µm,18.0s
T42A Van Buren 110.22 358 IAMs_20 IAMs_20 21 15 37.8
comp=Z,11µm,21.0s
V58A Windy Hill, Pi 110.23 348 IAMs_20 IAMs_20 21 15 56.1
comp=Z,9µm,21.0s
T35A Sooner Cattle 110.29 3 IAMs_20 IAMs_20 21 15 24.8
comp=Z,9µm,20.0s
V55A Taylorsville 110.52 350 IAMs_20 IAMs_20 21 14 36.7
comp=Z,8µm,21.0s
OK038 West end E0370 110.60 5 IAMs_20 IAMs_20 21 22 49.0
comp=Z,9µm,20.0s
OK051 E0350 and S346 110.69 3 IAMs_20 IAMs_20 21 18 13.2
comp=Z,9µm,19.0s
OK048 Pawnee Station 110.77 3 IAMs_20 IAMs_20 21 21 15.4
comp=Z,8µm,18.0s
V53A Saluda 110.92 351 IAMs_20 IAMs_20 21 13 34.4
comp=Z,10µm,20.0s
GLA Glamis 111.12 19 IAMs_20 IAMs_20 21 16 50.0
comp=Z,6µm,18.0s
ANMO Albuquerque 111.19 12 IAMs_20 IAMs_20 21 18 12.3
comp=Z,10µm,21.0s
ALQ Albuquerque 111.19 12 IAMs_20 IAMs_20 21 18 23.4
comp=Z,9µm,20.0s
ALQ Albuquerque 111.19 12 IAMs_20 IAMs_20 21 18 23.4
comp=Z,9µm,20.0s
KMSC Kings Mountain 111.23 350 IAMs_20 IAMs_20 21 12 17.5
comp=Z,7µm,20.0s
V48A Smith Brothers 111.28 354 IAMs_20 IAMs_20 21 16 27.8
comp=Z,10µm,20.0s
TUL3 Leonard 111.32 2 IAMs_20 IAMs_20 21 16 55.0
comp=Z,10µm,20.0s
Y60A Bolivia 111.80 347 IAMs_20 IAMs_20 21 15 33.8
comp=Z,10µm,20.0s
TUC Tucson 112.87 16 IAMs_20 IAMs_20 21 16 33.9
comp=Z,10µm,22.0s
NHSC New Hope 113.04 348 IAMs_20 IAMs_20 21 18 06.4
comp=Z,10µm,20.0s
154A Montrose 113.97 351 IAMs_20 IAMs_20 21 19 54.1
comp=Z,9µm,20.0s
Z38A Mt. Pleasant 113.99 2 IAMs_20 IAMs_20 21 21 08.6
comp=Z,9µm,19.0s
257A Skidaway Islan 114.28 349 IAMs_20 IAMs_20 21 19 57.5
comp=Z,7µm,18.0s
WHTX Lake Whitney, 115.15 4 IAMs_20 IAMs_20 21 20 27.4
comp=Z,9µm,18.0s
TIGA Tifton 115.19 351 IAMs_20 IAMs_20 21 19 44.4
comp=Z,8µm,21.0s
456A Hilliard 115.67 349 IAMs_20 IAMs_20 21 20 52.1
comp=Z,8µm,18.0s
NVL N'lazarevskaya 116.14 201 *e*PKIKP **PKiKP 20 26 01.6 +0.5**
NVL *e* 20 27 10.3
NVL *e*SP SP 20 36 42.0 -3.9
NVL *e*PS **PS 20 36 44.2 -3.8**
NVL *e*SS **SS 20 43 13.2 +3.8**
NVL pmax pmax
comp=Z,9.0nm,0.8s
JCT Junction City 116.47 6 IAMs_20 IAMs_20 21 22 39.5
comp=Z,9µm,20.0s
656A Willston 117.08 350 IAMs_20 IAMs_20 21 20 16.4
comp=Z,7µm,18.0s
TXAR Lajitas Array 117.13 10 PKP **PKPdf 20 26 03.5 -1.0**
comp=Z,4.9nm,1.1s,baz=348,slow=4.2,SNR=3.9
TXAR PKKPbc **PKKPbc 20 36 28.0 -0.8**
comp=Z,4.5nm,1.0s,baz=172,slow=4.2,SNR=14

TXAR				SKKP	**SKKPdf**	**20 40 27.1**	**-2.4**		
	comp=Z,1.5nm,1.1s,baz=189,slow=4.9,SNR=5.6								
TXAR	**Lajitas Array**	**117.13**	**10**		**PKPdf**	**20 26 03.6**	**-1.0**		
TXAR					**PKKPbc**	**20 36 27.7**	**-1.1**		
DWPF	**Disney Wildern**	**118.13**	**348**	IAMs_20	IAMs_20	21 23 02.4			
	comp=Z,7µm,18.0s								
735A	**Kenedy**	**118.24**	**5**	IAMs_20	IAMs_20	21 22 53.3			
	comp=Z,9µm,19.0s								
VNDA	**Vanda**	**118.88**	**166**	PKP	**PKPdf**	**20 26 04.8**	**-1.4**		
	comp=Z,2.5nm,0.9s,baz=273,slow=5.6,SNR=9.5								
VNDA				PP	**PP**	**20 27 22.6**	**-3.2**		
	comp=Z,4.2nm,1.1s,baz=288,slow=8.9,SNR=3.6								
VNDA				PKKPbc	**PKKPbc**	**20 36 22.4**	**-0.6**		
	comp=Z,4.4nm,0.9s,baz=110,slow=2.0,SNR=16								
060A	**Indiantown**	**118.99**	**347**	IAMs_20	IAMs_20	21 20 29.0			
	comp=Z,7µm,20.0s								
SBA	**Scott Base**	**119.99**	**166**	PKIKP	**PKPdf**	**20 26 08.2**	**-0.2**		
SBA				MLR	MLR				
	comp=Z,4µm,19.0s								
SBA	**Scott Base**	**119.99**	**166**		**PKPdf**	**20 26 08.2**	**-0.2**		
SNAA	**Sanae**	**120.92**	**202**	⇓PKPdf	**PKPdf**	**20 26 09.3**	**-1.1**		
	comp=Z,349nm,0.9s								
SNAA				⇑PP	**PP**	**20 27 37.3**	**-2.6**		
	comp=Z,20µm,6.0s								
SNAA				⇑PKKPbc	**PKKPbc**	**20 36 14.6**	**-0.9**		
	comp=Z,225nm,1.1s								
SNAA	**Sanae**	**120.92**	**202**	PKP	**PKPdf**	**20 26 09.4**	**-1.0**		
	comp=Z,14nm,0.9s,baz=105,slow=1.7,SNR=17								
SNAA				PP	**PP**	**20 27 38.7**	**-1.2**		
	comp=Z,4.3nm,0.9s,baz=80,slow=6.1,SNR=3.6								
SNAA				PKKPbc	**PKKPab**	**20 36 13.3**	**+0.6**		
	comp=Z,13nm,1.1s,baz=264,slow=2.8,SNR=14								
SNAA	**Sanae**	**120.92**	**202**		**PKPdf**	**20 26 09.0**	**-1.3**		
SNAA				IAMs_20	IAMs_20	21 08 27.7			
	comp=Z,7µm,22.0s								
SLBS	**Sierra La Lagu**	**121.32**	**18**	IAMs_20	IAMs_20	21 24 26.0			
	comp=Z,8µm,20.0s								
NBPA	**Parau_RN**	**121.37**	**285**	PKP	**PKiKP**	**20 26 13.9**	**+0.8**		
GRTK	**Grand Turk**	**121.78**	**336**	IAMs_20	IAMs_20	21 19 22.5			
	comp=Z,6µm,20.0s								
VNA2	**Neumayer--Watz**	**122.24**	**203**	PKPdf	**PKPdf**	**20 26 11.9**	**-0.9**		
	comp=Z,36nm,0.8s,baz=51,slow=3.2								
VNA2				⇑PP	**PP**	**20 27 48.4**	**-0.4**		
	comp=Z,145nm,1.2s,baz=96,slow=4.4								
VNA2				⇑PKKPbc	**PKKPbc**	**20 36 09.8**	**-0.5**		
	comp=Z,3.2nm,0.6s,baz=270,slow=4.7								
VNA1	**Neumayer--Stat**	**122.48**	**203**	PKPdf	**PKPdf**	**20 26 13.0**	**-0.2**		
	comp=Z,37nm,1.0s								
VNA1				PKKPbc	**PKKPbc**	**20 36 09.1**	**-0.2**		
	comp=Z,7.8nm,1.1s								
SBBR	**Sobral**	**122.73**	**289**	PKP	**PKPdf**	**20 26 15.6**	**+0.1**		
QSPA	**South Pole Qui**	**122.87**	**180**	PKP	**PKPdf**	**20 26 12.7**	**-1.5**		
	comp=Z,24nm,1.1s,baz=295,slow=0.4,SNR=22								
QSPA				PP	**PP**	**20 27 50.6**	**-2.6**		
	comp=Z,21nm,1.3s,baz=305,slow=2.1,SNR=4.2								
QSPA				PKKPbc	**PKKPab**	**20 36 05.4**	**+1.0**		
	comp=Z,13nm,1.1s,baz=200,slow=1.5,SNR=13								
QSPA	**South Pole Qui**	**122.87**	**180**		**PKPdf**	**20 26 13.1**	**-1.2**		
NBPB	**Pedra_Branca-C**	**123.25**	**287**	PKP	**PKPdf**	**20 26 15.8**	**-0.8**		
NBMA	**Muriti-CE**	**123.64**	**284**	PKP	**PKPdf**	**20 26 16.9**	**-0.4**		
NBMA	**Muriti-CE**	**123.64**	**284**	*eP*	**PKPdf**	**20 26 15.2**	**-2.1**		
NBPS	**Pedro II - PI**	**124.06**	**289**	PKP	**PKPdf**	**20 26 17.7**	**-0.5**		
NBPS	**Pedro II - PI**	**124.06**	**289**	*eP*	**PKPdf**	**20 26 15.4**	**-2.7**		
SDDR	**Presa de Saban**	**124.17**	**335**	IAMs_20	IAMs_20	21 19 13.9			
	comp=Z,9µm,22.0s								
NBLA	**Lagarto - SE**	**124.84**	**280**	PKP	**PKPdf**	**20 26 19.0**	**-0.5**		
NBPN	**Ponto Novo - B**	**126.75**	**282**	PKP	**PKPdf**	**20 26 22.8**	**-0.4**		
NBPN	**Ponto Novo - B**	**126.75**	**282**	*eP*	**PKPdf**	**20 26 20.1**	**-3.1**		
TEIG	**Tepich**	**126.79**	**354**		**PKPdf**	**20 26 22.0**	**-1.2**		
PPT2	**Papeete2**	**127.31**	**88**	*e*PP	**PP**	**20 28 23.0**	**-1.1**		
	comp=Z,1µm,27.5s								
PPT2				*e*SS	SS	20 45 37.7	+3.5		
	comp=Z,8µm,30.8s								
PPT2				*e*LQ	LQ	21 00 58.9			
	comp=Z,5µm,28.5s								
PPT2				*e*LR	LR	21 06 17.1			
	comp=Z,33µm,38.0s								
PPT2				*e*LR	LR	21 06 19.7			
	comp=Z,16µm,39.2s								
UNM	**Universidad Na**	**127.57**	**7**	IAMs_20	IAMs_20	21 29 45.4			
	comp=Z,7µm,21.0s								
NBIT	**Itapeh - BA**	**128.26**	**277**	PKP	**PKiKP**	**20 26 26.6**	**0.0**		
NBIT	**Itapeh - BA**	**128.26**	**277**	*eP*	**PKPdf**	**20 26 24.3**	**-1.7**		
CMC01	**Camacan, BA**	**128.55**	**277**	PKP	**PKPdf**	**20 26 25.7**	**-0.8**		
CMC01	**Camacan, BA**	**128.55**	**277**	*eP*	**PKPdf**	**20 26 25.0**	**-1.5**		
GUA01	**Guaratinga, BA**	**129.39**	**275**	PKP	**PKPdf**	**20 26 28.0**	**-0.1**		
GUA01	**Guaratinga, BA**	**129.39**	**275**	*eP*	**PKPdf**	**20 26 25.8**	**-2.3**		
TAOE	**Nuku Hiva Isla**	**130.47**	**72**	*e*PP	PP	20 28 33.9	-11		
	comp=Z,818nm,27.3s								
TAOE				*e*S	**SKSdf**	**20 33 44.5**	**+2.1**		
	comp=Z,2µm,25.3s								
TAOE				*e*SS	**SS**	**20 46 11.5**	**-1.4**		
	comp=Z,6µm,28.7s								
TAOE				*e*LQ	LQ	21 02 22.6			
	comp=Z,6µm,30.2s								
TAOE				*e*LR	LR	21 07 46.4			
	comp=Z,11µm,25.6s								
URIC	**Uribia, Colomb**	**131.10**	**332**	P	**PKPdf**	**20 26 26.6**	**-4.9**		
	comp=Z,2µmcomp=Z,68nm,1.6s								
URIC				PKP	**PKiKP**	**20 26 33.6**	**+1.2**		
	comp=Z,2µmcomp=Z,68nm,1.6s								
RIB01	**Linhares ES**	**131.17**	**273**	PKP	**PKPdf**	**20 26 30.1**	**-1.3**		
RIB01	**Linhares ES**	**131.17**	**273**	*eP*	**PKPdf**	**20 26 29.1**	**-2.3**		
BSFB	**Barra de Sao F**	**131.33**	**273**	PKP	**PKPdf**	**20 26 30.3**	**-1.4**		
BSFB	**Barra de Sao F**	**131.33**	**273**	*eP*	**PKPdf**	**20 26 29.2**	**-2.5**		
SERC	**Banco Serrana,**	**131.34**	**343**	P	**PKiKP**	**20 26 33.0**	**+0.1**		
	comp=Z,5µmcomp=Z,211nm,1.9s								
SDBA	**SAO DESIDERIO**	**131.46**	**283**	PKP	**PKPdf**	**20 26 31.0**	**-1.2**		
SDBA	**SAO DESIDERIO**	**131.46**	**283**	*eP*	**PKPdf**	**20 26 29.4**	**-2.8**		
SJMB	**Sao Joao De Ma**	**131.56**	**274**	PKP	**PKPdf**	**20 26 31.8**	**-0.4**		
SJMB	**Sao Joao De Ma**	**131.56**	**274**	*eP*	**PKPdf**	**20 26 29.7**	**-2.5**		
SMTB	**Santa Maria do**	**131.60**	**289**	PKP	**PKPdf**	**20 26 32.7**	**+0.2**		
SMTB	**Santa Maria do**	**131.60**	**289**	*eP*	**PKPdf**	**20 26 29.7**	**-2.7**		
PRPB	**Parauapebas**	**131.69**	**294**	PKP	**PKPdf**	**20 26 32.4**	**-0.3**		
PRPB	**Parauapebas**	**131.69**	**294**	*eP*	**PKPdf**	**20 26 31.5**	**-1.2**		
ALF01	**Guarapari-ES**	**132.04**	**271**	PKP	**PKPdf**	**20 26 32.8**	**-0.3**		
ALF01	**Guarapari-ES**	**132.04**	**271**	*eP*	**PKPdf**	**20 26 30.0**	**-3.0**		
JANB	**Januaria**	**132.38**	**280**	PKP	**PKPdf**	**20 26 33.3**	**-0.6**		
JANB	**Januaria**	**132.38**	**280**	*eP*	**PKPdf**	**20 26 31.4**	**-2.5**		
SMRC	**Santa Marta, M**	**132.44**	**334**	P	**PKPdf**	**20 26 31.4**	**-2.6**		
	comp=Z,57nm,1.7s								
PRVC	**Isla de Provid**	**132.45**	**344**	P	**PKPdf**	**20 26 33.8**	**-0.2**		
	comp=Z,4µmcomp=Z,142nm,1.6s								
SDV	**Santo Domingo**	**133.07**	**329**		**PKPdf**	**20 26 35.5**	**0.0**		
SDV	**Santo Domingo**	**133.07**	**329**	PKP	**PKPdf**	**20 26 34.6**	**-0.9**		
SDV	**Santo Domingo**	**133.07**	**329**	*eP*	**PKPdf**	**20 26 33.8**	**-1.7**		
BOAV	**Boa Vista**	**133.14**	**312**		**PKPdf**	**20 26 35.4**	**0.0**		
BOAV	**Boa Vista**	**133.14**	**312**	P	**PKPdf**	**20 26 33.0**	**-2.4**		
BOAV				PKP	**PKiKP**	**20 26 36.2**	**-0.4**		
BOAV	**Boa Vista**	**133.14**	**312**	PKP	**PKPdf**	**20 26 34.6**	**-0.8**		
BOAV	**Boa Vista**	**133.14**	**312**	*eP*	**PKPdf**	**20 26 33.4**	**-2.0**		
NTVB	**Natividade**	**133.32**	**286**	PKP	**PKPdf**	**20 26 35.3**	**-0.3**		
CAM01	**Campos-RJ**	**133.34**	**270**	PKP	**PKPdf**	**20 26 34.4**	**-1.1**		
CAM01	**Campos-RJ**	**133.34**	**270**	*eP*	**PKPdf**	**20 26 33.6**	**-1.8**		
DIAM	**Diamantina, MG**	**133.44**	**276**	PKP	**PKPdf**	**20 26 35.8**	**-0.2**		
DIAM	**Diamantina, MG**	**133.44**	**276**	*eP*	**PKPdf**	**20 26 33.0**	**-3.0**		
ARGC	**Ariguani, Magd**	**133.65**	**334**	P	**PKPdf**	**20 26 32.2**	**-4.2**		
	comp=Z,2µmcomp=Z,55nm,1.7s								
SJCC	**San Jacinto, C**	**133.95**	**335**	P	**PKPdf**	**20 26 36.1**	**-0.9**		
	comp=Z,3µmcomp=Z,84nm,2.0s								
SJCC				PKP	**PKiKP**	**20 26 38.7**	**+0.4**		
	comp=Z,3µmcomp=Z,84nm,2.0s								
DUB01	**Friburgo-RJ**	**134.06**	**270**	PKP	**PKPdf**	**20 26 36.0**	**-0.8**		
DUB01	**Friburgo-RJ**	**134.06**	**270**	*eP*	**PKPdf**	**20 26 33.8**	**-3.1**		
OCAC	**Ocana**	**134.78**	**332**	P	**PKPdf**	**20 26 35.3**	**-3.4**		
	comp=Z,3µmcomp=Z,147nm,1.9s								
OCAC				PKP	**PKiKP**	**20 26 38.5**	**-1.6**		
	comp=Z,3µmcomp=Z,147nm,1.9s								
ITTB	**Itaituba**	**134.90**	**301**	PKP	**PKPdf**	**20 26 38.0**	**-0.7**		
ITTB	**Itaituba**	**134.90**	**301**	*eP*	**PKPdf**	**20 26 38.1**	**-0.6**		
LCBC	**Los crdobas,**	**135.33**	**336**	P	**PKPdf**	**20 26 33.0**	**-6.5**		
	comp=Z,6µmcomp=Z,4µmcomp=Z,77nm,0.9s								
PAMC	**Pamplona, Colo**	**135.34**	**330**	P	**PKPdf**	**20 26 33.0**	**-7.1**		
BSCB	**Bom Sucesso**	**135.60**	**273**	PKP	**PKPdf**	**20 26 40.4**	**+0.6**		
BDFB	**Brasilia**	**135.73**	**282**	PKP	**PKPdf**	**20 26 39.3**	**-0.9**		
	comp=Z,8.8nm,0.9s,baz=19,slow=2.6,SNR=8.1								
BDFB				PP	PP	20 29 09.6	-8.8		
	comp=Z,4.3nm,0.8s,baz=74,slow=6.6,SNR=3.4								
PMNB	**Patos De Minas**	**135.87**	**277**	PKP	**PKPdf**	**20 26 40.6**	**+0.2**		
PMNB	**Patos De Minas**	**135.87**	**277**	*eP*	**PKPdf**	**20 26 40.0**	**-0.5**		
UREC	**San Jos de Ur**	**136.06**	**334**	P	**PKPdf**	**20 26 35.3**	**-5.6**		
	comp=Z,2µmcomp=Z,44nm,2.0s								
BRJC	**Barrancabermej**	**136.10**	**332**	P	PKPdf	20 26 32.2	-8.7		
	comp=Z,10µmcomp=Z,277nm,2.2s								
BCIP	**Isla Barro Col**	**136.11**	**341**	P	**PKPdf**	**20 26 38.5**	**-2.4**		
JTS	**Las Juntas de**	**136.16**	**348**	IAMs_20	IAMs_20	21 29 54.1			
	comp=Z,7µm,22.0s								
BARC	**Barichara**	**136.21**	**331**	P	**PKPdf**	**20 26 41.7**	**+0.2**		
	comp=Z,2µmcomp=Z,50nm,1.8s								
APAC	**Apartado, Choc**	**136.30**	**336**	P	**PKPdf**	**20 26 38.5**	**-2.8**		
	comp=Z,4µmcomp=Z,112nm,2.0s								
APAC				PKP	**PKiKP**	**20 26 44.3**	**+1.3**		
	comp=Z,4µmcomp=Z,112nm,2.0s								
HDC	**Heredia**	**136.30**	**347**	IAMs_20	IAMs_20	21 34 53.6			
	comp=Z,5µm,19.0s								
SNDB	**Serra Nova Dou**	**136.37**	**289**	PKP	**PKPdf**	**20 26 40.0**	**-1.3**		
SNDB	**Serra Nova Dou**	**136.37**	**289**	*eP*	**PKPdf**	**20 26 39.8**	**-1.6**		
NPGB	**Novo Progresso**	**136.44**	**298**	PKP	**PKPdf**	**20 26 41.3**	**-0.2**		
CANS	**Sao Roque de M**	**136.44**	**275**	PKP	**PKPdf**	**20 26 41.8**	**0.0**		
PTBC	**PUERTO BERRIO**	**136.77**	**332**	P	**PKPdf**	**20 26 37.7**	**-4.5**		
	comp=Z,2µmcomp=Z,66nm,1.2s								
PTBC				PKP	**PKiKP**	**20 26 43.2**	**-0.8**		
	comp=Z,2µmcomp=Z,66nm,1.2s								
RUSC	**La Rusia**	**136.80**	**330**	P	PKPdf	20 26 21.9	-21		
	comp=Z,2µmcomp=Z,115nm,1.6s								
DBBC	**Dabeiba**	**136.99**	**335**	P	PKPdf	20 26 28.2	-14		
IPMB	**Ipameri, GO**	**137.07**	**279**	PKP	**PKPdf**	**20 26 42.5**	**-0.1**		
SPBC	**San Pablo de B**	**137.43**	**331**	P	PKPdf	20 26 33.0	-11		
	comp=Z,4µmcomp=Z,104nm,2.1s								
SPBC				PKP	**PKiKP**	**20 26 46.0**	**+0.6**		
	comp=Z,4µmcomp=Z,104nm,2.1s								
HELC	**Santa Helena**	**137.50**	**334**	P	PKPdf	20 26 32.2	-12		
AZU	**Azuero**	**137.54**	**341**	P	PKPdf	20 26 35.3	-8.3		
AZU				PKP	**PKiKP**	**20 26 43.0**	**-2.5**		
GMAL	**Guarumal, Vera**	**137.82**	**342**	PKP	**PKPdf**	**20 26 44.7**	**+0.6**		
NORC	**Norcasia**	**137.83**	**332**	P	**PKPdf**	**20 26 39.3**	**-4.9**		
	comp=Z,3µmcomp=Z,82nm,2.1s								
PTGC	**Puerto Gaitan,**	**137.91**	**328**	P	PKPdf	20 26 34.5	-10		
	comp=Z,4µmcomp=Z,226nm,1.4s								
PTGC				PKP	**PKiKP**	**20 26 44.8**	**-1.5**		
	comp=Z,4µmcomp=Z,226nm,1.4s								
CBOC	**Ciudad Bolivar**	**137.98**	**334**	P	PKPpre	20 26 40.9			
	comp=Z,1µmcomp=Z,30nm,1.8s								
CHIC	**Chingaza**	**138.21**	**330**	P	PKPdf	20 26 36.9	-8.5		
	comp=Z,3µmcomp=Z,69nm,1.5s								
ROSC	**El Rosal**	**138.27**	**331**	PP	**PP**	**20 29 29.9**	**-3.3**		
	comp=Z,6.4nm,0.4s,baz=98,slow=8.1,SNR=5.2								
ROSC	**El Rosal**	**138.27**	**331**	P	PKPdf	20 26 31.4	-14		
	comp=Z,3µmcomp=Z,169nm,1.4s								
GUY2C	**Guyana, Caldas**	**138.33**	**333**	P	PKPdf	20 26 36.1	-10		
	comp=Z,2µmcomp=Z,40nm,1.3s								
CVER	**Cruz Verde, Cu**	**138.45**	**331**	P	PKPdf	20 26 35.3	-11		
	comp=Z,4µmcomp=Z,63nm,2.2s								
RCLB	**Rio Claro- Sao**	**138.53**	**273**	*eP*	PKPpre	20 26 40.9			
VILC	**Villavicencio,**	**138.66**	**330**	P	PKPdf	**20 26 39.3**	**-6.6**		
BB19B	**Bebedouro**	**138.78**	**275**	PKP	**PKPdf**	**20 26 46.4**	**+0.7**		
BB19B	**Bebedouro**	**138.78**	**275**	*eP*	**PKPdf**	**20 26 42.8**	**-2.8**		
SPB	**Sao Paulo**	**138.93**	**271**		**PKPdf**	**20 26 46.2**	**+0.4**		
SPB	**Sao Paulo**	**138.93**	**271**	*eP*	**PKPdf**	**20 26 45.0**	**-0.8**		
SGC2	**Sao Gabriel da**	**139.01**	**318**	P	PKPdf	20 26 36.1	-10		
	comp=Z,2µmcomp=Z,77nm,1.5s								
SGC2				PKP	PKiKP	20 26 37.9	-11		
	comp=Z,2µmcomp=Z,77nm,1.5s								
PET01	**Itanhaem-SP**	**139.07**	**270**	PKP	**PKPdf**	**20 26 44.6**	**-1.4**		
PET01	**Itanhaem-SP**	**139.07**	**270**	*eP*	**PKPdf**	**20 26 45.6**	**-0.5**		
PRAC	**Prado**	**139.52**	**331**	P	PKPdf	20 26 35.3	-12		
	comp=Z,3µmcomp=Z,155nm,1.6s								
PRAC				PKP	PKiKP	20 26 40.1	-10		
	comp=Z,3µmcomp=Z,155nm,1.6s								
FRTB	**Fartura**	**140.61**	**273**	PKP	PKPpre	20 26 45.1			
FRTB	**Fartura**	**140.61**	**273**	*eP*	PKPpre	20 26 45.5			
JAMC	**Jamundi, Valle**	**140.67**	**333**	P	PKPdf	20 26 40.1	-10		
	comp=Z,3µmcomp=Z,109nm,1.6s								
JAMC				PKP	**PKiKP**	**20 26 44.9**	**-7.3**		
	comp=Z,3µmcomp=Z,109nm,1.6s								
GARC	**Garzon, Huila**	**141.15**	**331**	P	PKPdf	20 26 38.5	-12		
	comp=Z,2µmcomp=Z,68nm,1.7s								
POPC	**Popayan, Colom**	**141.20**	**333**	P	PKPdf	20 26 40.1	-11		
	comp=Z,2µmcomp=Z,55nm,1.7s								
POPC				PKP	PKiKP	20 26 44.4	-9.1		
	comp=Z,2µmcomp=Z,55nm,1.7s								
FLOC	**Florencia**	**141.76**	**331**	P	PKPdf	20 26 41.7	-10		
	comp=Z,3µmcomp=Z,134nm,1.7s								
SMAI	**San Martin Ant**	**141.84**	**195**		PKPpre	20 26 46.0			
LDASE	**Londrina, Braz**	**141.94**	**274**	*eP*	**PKPdf**	**20 26 49.9**	**-1.4**		
BBAC	**Balboa, Cauca**	**141.99**	**334**	P	PKPpre	20 26 39.3			
	comp=Z,2µmcomp=Z,55nm,1.9s								
SALV	**Santo Antonio**	**142.10**	**288**	*eP*	**PKPdf**	**20 26 48.4**	**-3.3**		
PP1B	**Ponte de Pedra**	**142.36**	**285**	*eP*	**PKPdf**	**20 26 47.9**	**-4.3**		
PTLC	**Puerto Leguiza**	**142.67**	**329**	P	**PKPdf**	**20 26 45.6**	**-7.3**		
	comp=Z,5µmcomp=Z,180nm,1.7s								
TRCB	**Terra Rica**	**142.96**	**275**	*eP*	**PKPdf**	**20 26 50.1**	**-3.1**		
CMBC	**Cumbal**	**143.20**	**334**	P	PKPbc	20 26 51.2	-0.1		
PTGB	**Pitanga**	**143.25**	**272**	*eP*	PKPbc	20 26 51.4	+0.7		
TULM	**Tulcn-Chalpat**	**143.39**	**334**	P	PKPbc	20 26 52.8	+1.0		
	comp=Z,184nm,1.3s								
PMSA	**Palmer Station**	**143.63**	**201**	PKP	**PKPdf**	**20 26 53.0**	**+0.1**		
	comp=Z,28nm,0.8s,baz=59,slow=5.9,SNR=5.1								
PMSA	**Palmer Station**	**143.63**	**201**		PKPpre	20 26 49.6			
PMSA	**Palmer Station**	**143.63**	**201**	*eP*	PKPbc	20 26 51.0	+0.6		
CASC	**Dorado de Casc**	**143.75**	**333**	P	PKPab	20 26 48.8	-2.9		
	comp=Z,5µmcomp=Z,195nm,1.7s								
CNLB	**Canela**	**143.79**	**264**	PKP	PKPab	20 26 51.0	-0.4		
CNLB	**Canela**	**143.79**	**264**	*eP*	PKPbc	20 26 52.4	+0.2		
VILB	**Vilhena**	**143.87**	**296**		PKPab	20 26 51.5	-0.6		
VILB	**Vilhena**	**143.87**	**296**	PKP	PKPab	20 26 52.0	0.0		
VILB	**Vilhena**	**143.87**	**296**	*eP*	PKPab	20 26 51.9	-0.2		
CUSE	**Cuicocha Este**	**143.99**	**334**	P	PKPab	20 26 50.4	-2.7		
	comp=Z,10µmcomp=Z,141nm,1.1s								
OTAV	**Otavalo**	**144.08**	**334**	PKIKP	PKPbc	20 26 53.9	+0.1		
OTAV				MLR	MLR				
	comp=Z,3µm,22.0s								
OTAV	**Otavalo**	**144.08**	**334**		PKPbc	20 26 53.9	+0.1		
OTAV	**Otavalo**	**144.08**	**334**	P	**PKPab**	**20 26 50.4**	**-3.0**		
	comp=Z,11µmcomp=Z,3µmcomp=Z,134nm,1.6s								
OTAV	**Otavalo**	**144.08**	**334**	PKP	**PKPab**	**20 26 53.3**	**-0.1**		
OTAV	**Otavalo**	**144.08**	**334**	*eP*	**PKPab**	**20 26 52.5**	**-0.9**		
PAC1	**Pacto, Paraso**	**144.17**	**335**	P	**PKPab**	**20 26 51.2**	**-2.2**		
	comp=Z,5µmcomp=Z,83nm,1.3s								
ITAB	**Concordia**	**144.21**	**268**		**PKPab**	**20 26 52.3**	**-0.7**		
ITAB	**Concordia**	**144.21**	**268**	PKP	**PKPab**	**20 26 52.7**	**-0.3**		
ITAB	**Concordia**	**144.21**	**268**	*eP*	**PKPab**	**20 26 52.7**	**-0.3**		
AQDB	**Aquidauana**	**144.46**	**281**	PKP	**PKPab**	**20 26 53.4**	**-0.6**		
AQDB	**Aquidauana**	**144.46**	**281**	*eP*	**PKPab**	**20 26 53.3**	**-0.8**		
PTLB	**Pontes e Lacer**	**144.57**	**291**	PKP	**PKPab**	**20 26 53.6**	**-0.9**		
PTLB	**Pontes e Lacer**	**144.57**	**291**	*eP*	**PKPab**	**20 26 53.1**	**-1.4**		
PIAT	**Ana Tenorio**	**145.15**	**333**	P	**PKPdf**	**20 26 58.3**	**+0.6**		
	comp=Z,17µmcomp=Z,10µmcomp=Z,161nm,0.9s								
COIM	**Forte Coimbra**	**145.90**	**284**	*eP*	**PKPdf**	**20 26 55.6**	**-2.6**		
CPSB	**Cacapava Do Su**	**146.25**	**264**	PKP	**PKPdf**	**20 26 58.9**	**+0.3**		
CPSB	**Cacapava Do Su**	**146.25**	**264**	*eP*	**PKPdf**	**20 26 56.4**	**-2.2**		
PPLP	**Puerto Lpez**	**146.54**	**337**	P	**PKPdf**	**20 26 59.9**	**+0.2**		
MURT	**Porto Murtinho**	**146.59**	**281**	*eP*	**PKPdf**	**20 26 56.4**	**-3.0**		
BBSD	**Serra de San D**	**146.72**	**290**	*eP*	**PKPdf**	**20 26 56.4**	**-3.4**		
SJPY	**San Joaquin**	**146.75**	**274**	*eP*	**PKPdf**	**20 26 57.4**	**-2.3**		
PAYG	**Puerto Ayora**	**147.65**	**355**	IAMs_20	IAMs_20	21 34 22.4			
	comp=Z,4µm,21.0s								
CPUP	**Villa Florida**	**148.27**	**273**	PKPbc	**PKPdf**	**20 27 00.0**	**-2.0**		
	comp=Z,105nm,1.1s,baz=56,slow=2.7,SNR=31								
CPUP	**Villa Florida**	**148.27**	**273**	PKP	**PKPdf**	**20 27 01.5**	**-0.5**		
CZSB	**Cruzeiro do Su**	**148.45**	**319**	P	**PKPdf**	**20 27 01.5**	**-1.3**		
	comp=Z,15µmcomp=Z,5µmcomp=Z,143nm,1.5s								
CZSB	**Cruzeiro do Su**	**148.45**	**319**	PKP	**PKPdf**	**20 27 01.7**	**-1.1**		
CZSB	**Cruzeiro do Su**	**148.45**	**319**	*eP*	**PKPdf**	**20 27 00.3**	**-2.5**		
EFI	**East Falkland**	**148.52**	**223**	IAMs_20	IAMs_20	21 32 07.3			
	comp=Z,4µm,20.0s								
PSAL	**Palomas, Salto**	**149.90**	**264**	*eP*	**PKPdf**	**20 27 02.1**	**-2.4**		
ANCO	**Parque Anchore**	**150.77**	**258**	*eP*	**PKPdf**	**20 27 03.7**	**-2.1**		
LPAZ	**La Paz**	**151.88**	**300**	PKP	**PKPdf**	**20 27 07.2**	**-1.7**		
	comp=Z,28nm,1.0s,baz=33,slow=3.9,SNR=71								
LPAZ	**La Paz**	**151.88**	**300**	P	**PKPdf**	**20 27 03.8**	**-5.0**		
LPAZ	**La Paz**	**151.88**	**300**	PKP	**PKPdf**	**20 27 08.3**	**-0.5**		
LPAZ	**La Paz**	**151.88**	**300**	*eP*	**PKPdf**	**20 27 05.5**	**-3.3**		
USHA	**Ushuaia**	**152.17**	**211**	PKPbc	**PKPbc**	**20 27 13.6**	**-0.4**		
	comp=Z,29nm,0.7s,baz=104,slow=2.1,SNR=4.9								
PB18	**Visviri**	**153.71**	**300**	IAMs_20	IAMs_20	21 41 37.0			
	comp=Z,5µm,22.0s								
PB16	**IPOC Station P**	**154.20**	**299**	IAMs_20	IAMs_20	21 44 29.3			
	comp=Z,6µm,20.0s								
TRQA	**Tornquist**	**154.22**	**250**	PKIKP	**PKPdf**	**20 27 10.7**	**-0.2**		
TRQA				MLR	MLR				
	comp=Z,6µm,22.0s								
TRQA	**Tornquist**	**154.22**	**250**		**PKPdf**	**20 27 10.7**	**-0.2**		
TRQA				IAMs_20	IAMs_20	21 30 50.8			
	comp=Z,6µm,22.0s								
TRQA	**Tornquist**	**154.22**	**250**	PKP	**PKPdf**	**20 27 10.5**	**-0.4**		
SLA	**San Lorenzo**	**154.45**	**282**	*eP*	**PKPdf**	**20 27 11.7**	**-0.1**		
AP01	**Chacalluta**	**154.83**	**300**	IAMs_20	IAMs_20	21 36 29.0			
	com

5.5nm,1.0s,baz=161,slow=9.2,SNR=2.4
LZDM Lanzhou Array 14.20 74 Pn Pn 20 18 07.1 +1.6
baz=234,slow=6.9
2.6nm,0.4s
KBL Kabul 14.80 280 Pn Pn 20 18 12.1 -1.5
CHGR Chuyangaron 15.27 296 P P 20 18 25.6 +1.0
SHAA Shahritus 15.82 291 Pn Pn 20 18 25.3 -1.6
HYB Hyderabad 17.38 207 *eP* P 20 18 48.5 +0.4
HYB *eS* Sn 20 22 02.0 +1.6
CHTO Chiang Mai 18.01 140 P Pn 20 18 55.3 +0.8
CMAR Chiang Mai Arr 18.30 140 P Pn 20 18 57.0 -1.0
0.2nm,0.3s,baz=321,slow=12,SNR=9.2
5.9nm,0.8s
CMAR Chiang Mai Arr 18.30 140 P Pn 20 18 56.2 -1.9
KURBB Kurchatov Arra 18.43 343 P Pn 20 19 01.0 +1.5
0.1nm,0.3s,baz=154,slow=10,SNR=4.0
KURBB PcP PcP 20 23 29.5 -0.2
1.1nm,1.1s,baz=123,slow=3.4,SNR=1.8
2.4nm,0.7s
KURK Kurchatov 18.49 343 P P 20 19 00.6 +0.5
KURK Kurchatov 18.49 343 PcP 20 23 29.5 -0.3
SLVN Son La 19.25 124 P P 20 19 08.4 -0.2
HRA Herat 20.42 280 P P 20 19 22.5 +0.9
ZAA0 Zalesovo Array 20.78 357 P P 20 19 25.2 +0.2
ZALV Zalesovo Beam 20.78 357 P P 20 19 25.8 +0.8
7.6nm,0.9s,baz=179,slow=9.3,SNR=3.6
7.6nm,0.9s
SONM Songino Array 20.79 40 P P 20 19 26.9 +1.5
7.1nm,0.9s,baz=225,slow=7.7,SNR=4.6
7.1nm,0.9s
BVAR Borovoye Array 23.04 334 P P 20 19 49.9 +0.7
1.9nm,0.7s,baz=124,slow=8.9,SNR=1.4
1.9nm,0.7s
AB31 Akbulak array 25.58 317 P P 20 20 14.5 +1.4
AB31 IAmb IAmb 20 20 36.5
comp=Z,123nm,2.0s
ABKAR Akbulak array 25.58 317 P P 20 20 14.6 +1.4
INCN Inchon 32.62 71 P P 20 21 16.2 +0.3
INCN IAmb IAmb 20 21 17.8
comp=Z,28nm,1.0s
KS19 Wonju Array Si 33.59 71 P P 20 21 23.3 -1.1
KS19 IAmb IAmb 20 21 38.0
comp=Z,31nm,1.6s
KSAR Wonju Array Be 33.61 71 P P 20 21 24.5 -0.1
KSRS Korea Array 33.64 71 P P 20 21 25.4 +0.6
comp=Z,5.8nm,0.7s,baz=273,slow=8.3,SNR=17
comp=Z,5.8nm,0.7s
NRIK Noril'sk 36.18 0 P P 20 21 46.9 +0.5
comp=Z,5.9nm,0.8s,baz=157,slow=7.7,SNR=2.5
comp=Z,5.9nm,0.8s
MJB9 Matsu-Tunnel 41.91 70 P 20 22 35.5 +0.7
MAJO Matsushiro 41.91 70 P P P 20 22 34.3 -0.5
MJAR Matsushiro Arr 41.92 70 P P 20 22 34.7 -0.1
comp=Z,11nm,1.0s,baz=286,slow=8.8,SNR=17
comp=Z,11nm,1.0s
MJAR Matsushiro Arr 41.92 70 P 20 22 35.3 +0.5
MMAI Mount Meron Ar 42.67 284 P P P 20 22 40.9 -0.1
comp=Z,1.3nm,0.7s,baz=76,slow=6.1,SNR=1.6
comp=Z,1.3nm,0.7s
BRTR Keskin Array B 42.71 295 P P 20 22 41.6 +0.2
comp=Z,1.7nm,0.6s,baz=94,slow=7.7,SNR=3.3
comp=Z,1.7nm,0.6s
AKASG Malin Array Be 45.03 311 P P 20 23 00.6 +0.9
comp=Z,3.9nm,0.7s,baz=85,slow=7.1,SNR=11
comp=Z,3.9nm,0.7s
AKASG Malin Array Be 45.03 311 IAmb IAmb 20 23 04.4
comp=Z,15nm,1.4s
FINES FINESS Array B 47.53 325 P P 20 23 19.0 -0.2
comp=Z,2.9nm,0.8s,baz=97,slow=9.8,SNR=3.6
comp=Z,2.9nm,0.8s
FINES FINESS Array B 47.53 325 P P 20 23 18.6 -0.5
MLR Muntele Rosu 47.56 304 P P 20 23 21.4 +1.6
comp=Z,44nm,0.9s,baz=114,slow=7.7,SNR=17
BURAR Bucovina Array 47.81 307 P P 20 23 22.7 +0.9
ARCES ARCESS Array B 49.30 336 P P 20 23 32.8 0.0
comp=Z,3.3nm,0.9s,baz=76,slow=5.1,SNR=1.9
comp=Z,3.3nm,0.9s
ARCES ARCESS Array B 49.30 336 P P 20 23 32.6 -0.2
ARCES IAmb IAmb 20 24 12.5
comp=Z,34nm,1.6s
OJC Ojcow 51.07 311 P P 20 23 47.6 +1.2
ITM Ithomi 52.23 294 P P 20 23 55.2 -0.1
MAUC Maruska 52.46 310 *eP* P 20 23 59.8 +2.9
MORC Moravsky Berou 52.57 310 P 20 23 57.8 +0.1
MORC IAmb IAmb 20 24 38.7
comp=Z,44nm,1.9s
KRLC Kraliky 53.01 311 *eP* P 20 24 02.5 +1.5
PETK Petropavlovsk- 53.12 45 P P 20 24 00.4 -1.2
comp=Z,2.0nm,0.8s,baz=0.0,slow=1.9,SNR=4.2
comp=Z,2.0nm,0.8s
PETK Petropavlovsk- 53.12 45 P P 20 24 02.0 +0.4
DPC Dobruska-Polom 53.26 311 *eP* P 20 24 04.9 +2.1
OSTC Ostas 53.29 311 *eP* P 20 24 04.6 +1.6
CHVC Chvalec 53.38 311 *eP* P 20 24 05.7 +2.0
UPC Upice 53.42 311 *eP* P 20 24 05.9 +2.0
HFS Hagfors 53.56 323 P P 20 24 04.4 -0.3
comp=Z,4.3nm,0.7s,baz=76,slow=6.1,SNR=5.5
comp=Z,4.3nm,0.7s
SPITS Spitsbergen Ar 53.74 346 P P 20 24 04.7 -1.2
comp=Z,14nm,1.2s,baz=165,slow=6.0,SNR=2.1
comp=Z,14nm,1.2s
BLY Banja Luka 53.79 304 P P 20 24 06.4 -0.3
BLY IAmb IAmb 20 24 10.5
comp=Z,8.9nm,1.0s
NC405 NORSAR Array S 54.45 325 P P 20 24 11.7 +0.4
PRU Pruhonice 54.45 311 *eP* P 20 24 13.3 +1.9
NB2 NORSAR Subarra 54.70 325 P P 20 24 13.4 +0.3
comp=Z,1.6nm,0.6s,baz=84,slow=7.4
NOA NORSAR Array B 54.70 325 P P 20 24 12.2 -0.9
comp=Z,4.2nm,0.8s,baz=83,slow=7.2,SNR=7.9
comp=Z,4.2nm,0.8s
ZVC Zvikov 54.78 310 *eP* P 20 24 15.9 +2.1
CKRC Cesky Krumlov 54.83 310 *eP* P 20 24 13.7 -0.6
GEC2 GERESS Array S 55.22 310 P P 20 24 17.1 0.0
GEC2 IAmb IAmb 20 24 20.7
comp=Z,7.8nm,0.9s
GERES GERESS Array B 55.22 310 P P 20 24 17.6 +0.5
comp=Z,4.1nm,0.8s,baz=69,slow=5.9,SNR=13
comp=Z,4.1nm,0.8s
GERES GERESS Array B 55.22 310 P P 20 24 17.0 -0.1
KHC Kasperske Hory 55.24 310 *eP* P 20 24 13.7 -3.5
TRI Trieste 55.91 306 P P 20 24 22.2 +0.2
CEL Celeste 56.48 297 IAmb IAmb 20 25 37.8
comp=Z,47nm,1.7s
INTR Introdacqua 56.81 302 IAmb IAmb 20 25 30.9
comp=Z,54nm,2.0s
FDMO Fiordimonte 57.09 303 IAmb IAmb 20 24 33.7
comp=Z,13nm,1.2s
TEOL Teolo 57.42 306 IAmb IAmb 20 24 35.9
comp=Z,17nm,0.8s
KMBO Kilima Mbogo 57.77 244 P P 20 24 34.9 -1.0
baz=102,slow=14
KEST Kesra 62.27 296 P P 20 25 07.6 +1.2
comp=Z,3.8nm,0.8s,baz=43,slow=9.6,SNR=3.7
comp=Z,3.8nm,0.8s
KEST Kesra 62.27 296 P P 20 25 05.7 -0.7
KEST IAmb IAmb 20 26 47.9
comp=Z,31nm,1.6s
KNRA Kununurra 63.01 134 P P 20 25 11.7 +0.4
KNRA IAmb IAmb 20 25 11.8
comp=Z,22nm,1.1s
CEST Esterri de Car 65.42 306 P P 20 25 28.0 +0.9
WRA Warramunga Arr 69.67 132 P P 20 25 53.1 -0.9
comp=Z,2.3nm,0.9s,baz=326,slow=6.7,SNR=6.3
comp=Z,2.3nm,0.9s
WRA Warramunga Arr 69.67 132 P P 20 25 52.7 -1.3
WB2 Warramunga Arr 69.68 132 P P 20 25 53.4 -0.7
ESDC Sonseca Array 70.23 305 P P 20 25 57.8 +0.4
comp=Z,1.6nm,0.8s,baz=60,slow=6.2,SNR=7.9
comp=Z,1.6nm,0.8s
ESDC Sonseca Array 70.23 305 P P 20 25 56.5 -0.9
ESDC IAmb IAmb 20 27 28.4
comp=Z,46nm,2.0s
E24K Your Creek 70.98 19 P P 20 26 02.0 +0.5
E24K IAmb IAmb 20 26 22.5
comp=Z,8.0nm,1.4s
C27K Jago River 71.10 17 P P 20 26 02.0 -0.1
C27K IAmb IAmb 20 26 05.8
comp=Z,7.3nm,1.1s
ASAR Alice Springs 72.22 135 P P 20 26 08.6 -0.9
comp=Z,2.7nm,0.9s,baz=323,slow=6.1,SNR=9.0
comp=Z,2.7nm,0.9s
ASAR Alice Springs 72.22 135 P P 20 26 09.0 -0.4
ILAR Eielson Array 73.76 21 P P 20 26 18.6 +0.5
comp=Z,1.6nm,0.9s,baz=303,slow=4.6,SNR=5.3
ILAR PP PP 20 29 01.0 -0.9
comp=Z,0.7nm,0.9s,baz=283,slow=6.6,SNR=4.1
comp=Z,1.6nm,0.9s
ILAR Eielson Array 73.76 21 P P 20 26 18.1 +0.1
STLK Strandline Lak 74.40 25 P P 20 26 20.5 -1.4
TORD Torodi Ar. Bea 78.86 278 P P 20 26 47.4 -0.4
comp=Z,4.3nm,0.8s,baz=50,slow=3.3,SNR=5.8
comp=Z,4.3nm,0.8s
KOOLE Kule 84.53 238 P P 20 27 16.7 -1.0
KOOLE IAmb IAmb 20 27 20.2
comp=Z,7.8nm,0.8s
PMSA Palmer Station 143.73 201 PKP **PKPdf** 20 34 19.5 +1.1
comp=Z,13nm,0.7s,baz=63,slow=4.5,SNR=1.9
CPUP Villa Florida 148.21 273 PKPbc **PKPdf** 20 34 26.9 -0.3
comp=Z,4.2nm,0.9s,baz=124,slow=3.6,SNR=6.6
LPAZ La Paz 151.78 301 PKPbc **PKPbc** 20 34 39.6 -0.7
comp=Z,3.3nm,0.8s,baz=11,slow=3.4,SNR=5.2

*IDC **22** 20:16:27.3±1.0,32.98N×86.78E,h0km,mb3.7/12, mbtmp3.8/14,ML2.7/2,Error ellipse: s-maj=26.4km s-min=19.1km az=35.0*
ISC 22 20:16:29.0±1.0,33.1N±0.2×86.9E±0.1,h10km,n15,
σ0s90/14,mb3.9/10,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.16**	**347**	Pn		**Pn**	**20 19 49.5**	**0.0**
	baz=171,slow=9.5,SNR=0.9							
	5.6nm,1.2s							
KURBB	**Kurchatov Arra**	**18.59**	**343**	P		**Pn**	**20 20 47.2**	**+0.8**
	baz=157,slow=13,SNR=2.0							
	1.8nm,0.9s							
SONM	**Songino Array**	**20.87**	**39**	P		Pn	20 21 13.0	-0.7
	1.0nm,0.8s,baz=213,slow=13,SNR=1.5							
	1.0nm,0.8s							
ZALV	**Zalesovo Beam**	**20.93**	**357**	P		**P**	**20 21 11.2**	**-0.5**
	1.2nm,0.4s,baz=180,slow=10,SNR=2.0							
	1.2nm,0.4s							
BVAR	**Borovoye Array**	**23.20**	**334**	P		**P**	**20 21 36.6**	**+0.8**
	0.8nm,0.6s,baz=133,slow=7.6,SNR=1.0							
	0.8nm,0.6s							
KSRS	**Korea Array**	**33.64**	**71**	P		**P**	**20 23 10.1**	**+0.4**
	1.1nm,0.6s,baz=276,slow=8.8,SNR=4.1							
	1.1nm,0.6s							
MLR	**Muntele Rosu**	**47.69**	**304**	P		**P**	**20 25 07.0**	**+1.1**
	7.2nm,0.9s,baz=128,slow=8.6,SNR=3.5							
PETK	**Petropavlovsk-**	**53.19**	**45**	P		**P**	**20 25 46.2**	**-0.9**
	1.4nm,0.8s,baz=268,slow=16,SNR=2.5							
	1.4nm,0.8s							
HFS	**Hagfors**	**53.72**	**324**	P		**P**	**20 25 50.7**	**-0.2**
	6.5nm,1.0s,baz=100,slow=7.5,SNR=3.2							
	6.5nm,1.0s							
NOA	**NORSAR Array B**	**54.85**	**325**	P		**P**	**20 25 58.0**	**-1.2**
	0.4nm,0.4s,baz=84,slow=7.4,SNR=1.7							
	0.4nm,0.4s							
GERES	**GERESS Array B**	**55.36**	**310**	P		**P**	**20 26 04.1**	**+0.9**
	0.9nm,0.7s,baz=65,slow=4.9,SNR=3.6							
	0.9nm,0.7s							
WRA	**Warramunga Arr**	**69.53**	**132**	P		**P**	**20 27 39.0**	**+0.9**
	1.1nm,1.0s,baz=321,slow=6.2,SNR=2.3							
	1.1nm,1.0s							
ASAR	**Alice Springs**	**72.07**	**135**	P		**P**	**20 27 53.5**	**0.0**
	0.6nm,0.9s,baz=314,slow=7.3,SNR=2.5							
	0.6nm,0.9s							
ILAR	**Eielson Array**	**73.88**	**21**	P		**P**	**20 28 04.0**	**+0.3**
	0.2nm,0.6s,baz=281,slow=5.4,SNR=1.5							
	0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.94**	**279**	P		**P**	**20 28 31.9**	**-1.4**
	1.0nm,0.8s,baz=36,slow=4.3,SNR=7.9							
	1.0nm,0.8s							

*IDC **22** 20:17:52.8±0.8,33.05N×86.73E,h0km,mb4.0/18, mbtmp4.0/22,ML3.6/4,MS5.0/1,Error ellipse: s-maj=21.4km s-min=14.1km az=33.0*
*NEIC **22** 20:17:55.3±1.2,33.12N±0.05×86.8E±0.1,h10km±1km, mb4.3/13,Error ellipse: s-maj=15.2km s-min=7.0km az=248.0*
ISC 22 20:17:54.9±0.5,33.13N±0.08×86.80E±0.07,h10km,n64,
σ1s27/60,mb4.2/19,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.05**	**131**	Pn		**Pn**	**20 19 12.5**	**+1.4**
EVN	**Everest**	**5.15**	**180**	Pn		**Pn**	**20 19 12.4**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.16**	**323**	Pn		**Pn**	**20 20 32.0**	**-3.0**
NIL	**Nilore**	**11.34**	**276**	Pn		**Pn**	**20 20 37.6**	**+0.6**
PDGK	**Podgornoye**	**11.69**	**333**	Pn		**Pn**	**20 20 41.4**	**-0.5**
AAK	**Ala-Archa**	**13.57**	**318**	LR		LR	20 26 16.2	
	comp=Z,6μm,21.6s,baz=193,slow=37							
MKAR	**Makanchi Array**	**14.08**	**347**	Pn		**Pn**	**20 21 13.2**	**-1.2**
	0.1nm,0.3s,baz=153,slow=13,SNR=2.9							
	1.9nm,0.9s							
LZDM	**Lanzhou Array**	**14.21**	**74**	Pn		**Pn**	**20 21 17.8**	**+1.2**
	baz=282,slow=14							
	1.4nm,0.3s							
BTK	**Batken**	**14.57**	**303**	P		P	**20 21 30.7**	**+2.9**
KBL	**Kabul**	**14.82**	**280**	Pn		**Pn**	**20 21 26.1**	**+1.2**
CHGR	**Chuyangaron**	**15.32**	**296**	Pn		**Pn**	**20 21 31.6**	**+0.3**
SHAA	**Shahritus**	**15.86**	**291**	Pn		**Pn**	**20 21 36.2**	**-2.2**
SHAA				IAmb	IAmb		20 21 50.3	
	comp=Z,5.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**18.23**	**140**	P		**Pn**	**20 22 08.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=331,slow=11,SNR=4.4							
	comp=Z,1.7nm,0.9s							
KURBB	**Kurchatov Arra**	**18.51**	**343**	P		**P**	**20 22 11.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=156,slow=11,SNR=4.4							
	comp=Z,1.9nm,0.9s							
KURK	**Kurchatov**	**18.58**	**344**	P		**P**	**20 22 11.3**	**-0.7**
SONM	**Songino Array**	**20.84**	**39**	P		**P**	**20 22 37.7**	**+0.8**
	comp=Z,3.8nm,0.8s,baz=226,slow=12,SNR=7.1							
	comp=Z,3.8nm,0.8s							
ZAA0	**Zalesovo Array**	**20.86**	**357**	P		**P**	**20 22 37.2**	**+0.4**
ZALV	**Zalesovo Beam**	**20.86**	**357**	P		**P**	**20 22 36.6**	**-0.2**
	comp=Z,2.9nm,0.4s,baz=182,slow=8.9,SNR=10							
	comp=Z,2.9nm,0.4s							
ZALV	**Zalesovo Beam**	**20.86**	**357**	P		**P**	**20 22 37.0**	**+0.2**
BVAR	**Borovoye Array**	**23.12**	**334**	P		**P**	**20 23 00.2**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=144,slow=10.0,SNR=2.1							
	comp=Z,2.3nm,0.9s							
AB31	**Akbulak array**	**25.65**	**317**	P		**P**	**20 23 24.9**	**+0.2**
AB31				IAmb	IAmb		20 23 44.1	
	comp=Z,4.5nm,1.1s							
ABKAR	**Akbulak array**	**25.65**	**317**	P		**P**	**20 23 25.0**	**+0.3**
KSRS	**Korea Array**	**33.66**	**71**	P		**P**	**20 24 35.5**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=275,slow=9.0,SNR=18							
	comp=Z,3.6nm,0.6s							
NRIK	**Noril'sk**	**36.26**	**0**	P		**P**	**20 24 58.4**	**+0.4**
	comp=Z,4.8nm,0.6s,baz=154,slow=6.6,SNR=4.5							
	comp=Z,4.8nm,0.6s							
NRIK	**Noril'sk**	**36.26**	**0**	IAmb	IAmb		20 25 04.4	
	comp=Z,21nm,1.5s							
USRK	**Ussuriysk Ar.**	**36.56**	**59**	P		**P**	**20 25 00.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**41.93**	**70**	P		**P**	**20 25 46.0**	**+0.2**
MAJO	**Matsushiro**	**41.93**	**70**	P		**P**	**20 25 45.3**	**-0.6**
MAJO				IAmb	IAmb		20 25 46.5	
	comp=Z,4.4nm,0.9s							
MJAR	**Matsushiro Arr**	**41.93**	**70**	P		**P**	**20 25 45.6**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=285,slow=8.9,SNR=7.5							
	comp=Z,2.8nm,0.9s							
MJAR	**Matsushiro Arr**	**41.93**	**70**	P		**P**	**20 25 45.8**	**-0.1**
AKASG	**Malin Array Be**	**45.10**	**311**	P		**P**	**20 26 11.2**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=81,slow=7.4,SNR=6.3							
	comp=Z,2.0nm,0.7s							
AKASG	**Malin Array Be**	**45.10**	**311**	IAmb	IAmb		20 26 16.3	
	comp=Z,1.8nm,1.1s							
ELL	**Elmali**	**46.19**	**291**	P		**P**	**20 26 20.2**	**0.0**
FINES	**FINESS Array B**	**47.61**	**325**	P		**P**	**20 26 29.6**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=111,slow=8.3,SNR=1.8							
	comp=Z,2.6nm,0.9s							
FINES	**FINESS Array B**	**47.61**	**325**	P		**P**	**20 26 29.1**	**-1.6**
MLR	**Muntele Rosu**	**47.62**	**304**	P		**P**	**20 26 33.1**	**+1.9**
	comp=Z,10nm,0.7s,baz=149,slow=5.9,SNR=12							
MLR	**Muntele Rosu**	**47.62**	**304**	P		**P**	**20 26 33.7**	**+2.5**
KRLC	**Kraliky**	**53.08**	**311**	*eP*		**P**	**20 27 13.8**	**+1.4**
PETK	**Petropavlovsk-**	**53.17**	**45**	P		**P**	**20 27 13.2**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=289,slow=4.4,SNR=3.5							
	comp=Z,1.5nm,0.7s							
PETK	**Petropavlovsk-**	**53.17**	**45**	P		**P**	**20 27 13.1**	**+0.1**
DPC	**Dobruska-Polom**	**53.32**	**311**	*eP*		**P**	**20 27 16.4**	**+2.2**
OSTC	**Ostas**	**53.35**	**311**	*eP*		**P**	**20 27 16.2**	**+1.8**
UPC	**Upice**	**53.49**	**311**	*eP*		**P**	**20 27 17.0**	**+1.7**
HFS	**Hagfors**	**53.63**	**324**	P		**P**	**20 27 15.9**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=96,slow=9.1,SNR=8.1							
	comp=Z,2.7nm,0.6s							
NB2	**NORSAR Subarra**	**54.77**	**325**	P		**P**	**20 27 24.5**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=84,slow=7.4							
NOA	**NORSAR Array B**	**54.77**	**325**	P		**P**	**20 27 24.3**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=83,slow=7.3,SNR=4.9							
	comp=Z,1.9nm,0.7s							
ZVC	**Zvikov**	**54.84**	**310**	*eP*		**P**	**20 27 27.1**	**+1.9**
CKRC	**Cesky Krumlov**	**54.90**	**310**	*eP*		**P**	**20 27 27.3**	**+1.7**
GERES	**GERESS Array B**	**55.28**	**310**	P		**P**	**20 27 29.1**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=76,slow=5.6,SNR=8.6							
	comp=Z,1.5nm,0.6s							
GERES	**GERESS Array B**	**55.28**	**310**	P		**P**	**20 27 28.6**	**0.0**
EKA	**Eskdalemuir Ar**	**63.46**	**320**	P		**P**	**20 28 23.9**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=70,slow=6.9,SNR=3.5							
	comp=Z,1.6nm,0.8s							
WRA	**Warramunga Arr**	**69.61**	**132**	P		**P**	**20 29 04.1**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=326,slow=6.6,SNR=10							
	comp=Z,0.7nm,0.5s							
WRA	**Warramunga Arr**	**69.61**	**132**	P		**P**	**20 29 03.6**	**-0.9**
D23K	**Nanushuk River**	**69.86**	**19**	P		**P**	**20 29 05.7**	**+0.3**
D23K				IAmb	IAmb		20 29 14.1	
	comp=Z,5.5nm,1.2s							
ESDC	**Sonseca Array**	**70.29**	**305**	P		**P**	**20 29 08.3**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=63,slow=7.5,SNR=3.5							
	comp=Z,0.9nm,1.0s							
ESDC	**Sonseca Array**	**70.29**	**305**	IAmb	IAmb		20 29 17.6	
	comp=Z,6.8nm,1.3s							
K15K	**Wolf Creek Mou**	**70.37**	**27**	P		**P**	**20 29 09.1**	**+0.4**
ASAR	**Alice Springs**	**72.15**	**135**	P		**P**	**20 29 19.3**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=316,slow=6.1,SNR=2.0							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**72.15**	**135**	P		**P**	**20 29 18.7**	**-1.3**
ILAR	**Eielson Array**	**73.83**	**21**	P		**P**	**20 29 29.1**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=315,slow=4.6,SNR=5.0							
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**73.83**	**21**	P		**P**	**20 29 27.5**	**-1.8**
TORD	**Torodi Ar. Bea**	**78.89**	**278**	P		**P**	**20 29 58.3**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=43,slow=3.8,SNR=4.0							
	comp=Z,1.3nm,0.7s							
CPUP	**Villa Florida**	**148.23**	**273**	PKPbc		**PKPdf**	**20 37 37.9**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=64,slow=12,SNR=3.1							
CZSB	**Cruzeiro do Su**	**148.39**	**319**			**PKPdf**	**20 37 34.6**	**-4.2**

*IDC **22** 20:20:03.5±0.8,33.12N×86.84E,h0km,mb4.0/16, mbtmp4.0/19,ML3.5/3,Error ellipse: s-maj=24.8km s-min=15.2km az=47.0*
*NEIC **22** 20:20:05.4±1.7,33.2N±0.1×86.9E±0.1,h10km±1km, mb4.4/12,Error ellipse: s-maj=22.9km s-min=10.1km az=226.0*
ISC 22 20:20:05.1±0.5,33.22N±0.08×86.95E±0.07,h10km,n54,
σ1s25/54,mb4.1/18,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.03**	**133**			**Pn**	**20 21 21.2**	**+0.2**
EVN	**Everest**	**5.25**	**181**			**Pn**	**20 21 27.4**	**+3.2**
MORE	**Moreh**	**11.04**	**142**	Pn		**Pn**	**20 22 43.5**	**+0.5**
TARG	**Taragay, Kyrgy**	**11.16**	**322**	Pn		**Pn**	**20 22 46.1**	**+1.0**
NIL	**Nilore**	**11.45**	**276**	Pn		**Pn**	**20 22 47.4**	**-1.4**
PDGK	**Podgornoye**	**11.66**	**332**	Pn		**Pn**	**20 22 52.0**	**+0.4**
MKAR	**Makanchi Array**	**14.01**	**347**	Pn		**Pn**	**20 23 23.7**	**+0.1**
	0.1nm,0.3s,baz=158,slow=14,SNR=4.2							
	1.7nm,0.7s							
MAKZ	**Makanchi**	**14.09**	**346**	Pn		**Pn**	**20 23 24.9**	**+0.2**
GAR	**Garm**	**14.62**	**298**	P		P	**20 23 38.5**	**0.0**
BTK	**Batken**	**14.62**	**302**	P		P	**20 23 40.9**	**+2.3**
KBL	**Kabul**	**14.93**	**280**	Pn		**Pn**	**20 23 36.0**	**-0.5**
CHGR	**Chuyangaron**	**15.39**	**296**	P		P	**20 23 47.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**18.22**	**141**	P		**Pn**	**20 24 17.4**	**-0.8**
	0.2nm,0.3s,baz=324,slow=11,SNR=6.6							
	1.7nm,0.8s							
KURBB	**Kurchatov Arra**	**18.46**	**343**	P		**P**	**20 24 21.0**	**+0.2**
	0.1nm,0.3s,baz=159,slow=10,SNR=7.2							
	1.5nm,0.7s							
KURK	**Kurchatov**	**18.52**	**343**	P		**P**	**20 24 20.5**	**-1.0**
SONM	**Songino Array**	**20.69**	**39**	P		**P**	**20 24 46.5**	**+1.1**
	1.9nm,1.0s,baz=227,slow=11,SNR=4.1							
	1.9nm,1.0s							
ZAA0	**Zalesovo Array**	**20.77**	**356**	P		**P**	**20 24 46.3**	**+0.2**
ZALV	**Zalesovo Beam**	**20.77**	**356**	P		**P**	**20 24 46.9**	**+0.8**
	4.6nm,0.4s,baz=181,slow=9.5,SNR=12							
	4.6nm,0.4s							
ZALV	**Zalesovo Beam**	**20.77**	**356**	P		**P**	**20 24 47.2**	**+1.2**
BVAR	**Borovoye Array**	**23.08**	**334**	P		**P**	**20 25 11.1**	**+0.3**
	2.1nm,0.8s,baz=157,slow=8.0,SNR=3.9							
	2.1nm,0.8s							
AB31	**Akbulak array**	**25.67**	**317**	P		**P**	**20 25 34.5**	**-0.5**
ABKAR	**Akbulak array**	**25.67**	**317**	P		**P**	**20 25 35.3**	**+0.3**
ARTI	**Arti**	**30.38**	**328**			**P**	**20 26 17.8**	**+0.7**
ARTI				IAmb	IAmb		20 26 44.8	
	comp=Z,14nm,1.5s							
KSRS	**Korea Array**	**33.51**	**71**	P		**P**	**20 26 45.3**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=277,slow=10.0,SNR=6.9							
	comp=Z,1.4nm,0.7s							
NRIK	**Noril'sk**	**36.17**	**0**	P		**P**	**20 27 08.8**	**+1.5**
	comp=Z,5.5nm,0.6s,baz=168,slow=6.4,SNR=3.8							
	comp=Z,5.5nm,0.6s							
NRIK	**Noril'sk**	**36.17**	**0**	P		**P**	**20 27 06.4**	**-0.9**
NRIK				IAmb	IAmb		20 27 09.2	
	comp=Z,3.7nm,0.6s							
MJAR	**Matsushiro Arr**	**41.78**	**71**	P		**P**	**20 27 53.2**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=291,slow=8.5,SNR=4.0							
MJAR	**Matsushiro Arr**	**41.78**	**71**	P		**P**	**20 27 55.2**	**+0.4**
TIXI	**Tiksi**	**44.37**	**18**	P		**P**	**20 28 15.8**	**+0.6**
TIXI				IAmb	IAmb		20 28 18.8	
	comp=Z,4.8nm,1.1s							
AKASG	**Malin Array Be**	**45.13**	**311**	P		**P**	**20 28 21.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=81,slow=7.3,SNR=9.5							
	comp=Z,1.4nm,0.6s							
AKASG	**Malin Array Be**	**45.13**	**311**	P		**P**	**20 28 20.4**	**-1.2**
AKASG				IAmb	IAmb		20 28 42.5	
	comp=Z,4.5nm,1.4s							
AKBB	**Malin Array Si**	**45.13**	**311**	P		**P**	**20 28 22.5**	**+0.9**
AKBB				IAmb	IAmb		20 28 45.7	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.03**	**347**	Pn	**Pn**	**20 26 52.2**	**-0.5**
	0.1nm,0.3s,baz=163,slow=15,SNR=2.3 0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.21**	**141**	P	**Pn**	**20 27 46.9**	**0.0**
	0.4nm,0.3s,baz=313,slow=11,SNR=4.6 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**18.47**	**343**	P	**P**	**20 27 50.5**	**+0.7**
	baz=161,slow=10.0,SNR=6.2 0.9nm,0.8s						
SONM	**Songino Array**	**20.71**	**39**	P	**P**	**20 28 15.3**	**+0.9**
	1.0nm,0.7s,baz=221,slow=13,SNR=6.6 1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**20.79**	**356**	P	**P**	**20 28 13.7**	**-1.4**
	2.0nm,0.9s,baz=190,slow=7.3,SNR=4.2 2.0nm,0.9s						
BVAR	**Borovoye Array**	**23.10**	**334**	P	**P**	**20 28 39.9**	**+0.1**
	0.5nm,0.6s,baz=138,slow=15,SNR=8.3 0.5nm,0.6s						
KSRS	**Korea Array**	**33.52**	**71**	P	**P**	**20 30 14.1**	**+0.4**
	1.2nm,0.6s,baz=272,slow=9.6,SNR=7.2 1.2nm,0.6s						
MJAR	**Matsushiro Arr**	**41.80**	**71**	P	**P**	**20 31 24.1**	**+0.3**
	1.0nm,0.7s,baz=282,slow=8.4,SNR=5.2 1.0nm,0.7s						
AKASG	**Malin Array Be**	**45.13**	**311**	P	**P**	**20 31 51.2**	**+0.9**
	0.2nm,0.3s,baz=96,slow=5.7,SNR=1.8 0.2nm,0.3s						
FINES	**FINESS Array B**	**47.61**	**325**	P	**P**	**20 32 09.7**	**+0.1**
	3.6nm,1.0s,baz=159,slow=8.3,SNR=2.1 3.6nm,1.0s						
ARCES	**ARCESS Array B**	**49.37**	**336**	P	**P**	**20 32 23.5**	**+0.4**
	2.1nm,0.9s,baz=58,slow=5.6,SNR=1.9 2.1nm,0.9s						
HFS	**Hagfors**	**53.64**	**323**	P	**P**	**20 32 55.3**	**+0.1**
	2.0nm,0.8s,baz=104,slow=4.9,SNR=1.7 2.0nm,0.8s						
NOA	**NORSAR Array B**	**54.77**	**325**	P	**P**	**20 33 03.5**	**0.0**
	1.0nm,0.8s,baz=83,slow=7.4,SNR=3.8 1.0nm,0.8s						
GERES	**GERESS Array B**	**55.32**	**310**	P	**P**	**20 33 07.7**	**-0.1**
	0.2nm,0.5s,baz=90,slow=2.7,SNR=4.0 0.2nm,0.5s						
WRA	**Warramunga Arr**	**69.57**	**132**	P	**P**	**20 34 42.9**	**-0.4**
	0.5nm,0.6s,baz=325,slow=6.6,SNR=8.4 0.5nm,0.6s						
ASAR	**Alice Springs**	**72.12**	**135**	P	**P**	**20 34 58.6**	**-0.2**
	0.4nm,0.6s,baz=315,slow=5.8,SNR=4.2 0.4nm,0.6s						
ILAR	**Eielson Array**	**73.72**	**21**	P	**P**	**20 35 06.9**	**-0.8**
	0.4nm,0.8s,baz=310,slow=3.4,SNR=4.2 0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.99**	**279**	P	**P**	**20 35 38.1**	**-0.3**
	0.6nm,0.7s,baz=46,slow=4.4,SNR=1.9 0.6nm,0.7s						

*IDC **22** 20:31:24.7±1.4,33.05N×86.86E, h0km, mb3.5/5, mbtmp3.4/8, ML3.2/3, Error ellipse: s-maj=45.5km s-min=23.2km az=58.0*

ISC 22 20:31:26.2±1.1,33.2N±0.2×87.1E±0.3, h10km, n8, σ0.9 64/7, mb3.6/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.10**	**346**	Pn	**Pn**	**20 34 46.1**	**+0.2**
	0.1nm,0.3s,baz=181,slow=11,SNR=2.2 0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.11**	**141**	P	**P**	**20 35 37.8**	**-0.4**
	0.2nm,0.3s,baz=234,slow=11,SNR=1.5 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**18.55**	**343**	P	**Pn**	**20 35 43.0**	**0.0**
	baz=160,slow=11,SNR=4.4 0.4nm,0.7s						
SONM	**Songino Array**	**20.68**	**39**	P	Pn	20 36 09.2	+0.6
	0.3nm,0.4s,baz=231,slow=8.2,SNR=1.7 0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**20.84**	**356**	P	**P**	**20 36 07.8**	**-0.1**
	0.5nm,0.4s,baz=170,slow=9.0,SNR=3.7 0.5nm,0.4s						
HFS	**Hagfors**	**53.74**	**324**	P	**P**	**20 40 47.3**	**-0.9**
	2.5nm,0.9s,baz=80,slow=16,SNR=1.9 2.5nm,0.9s						
GERES	**GERESS Array B**	**55.44**	**310**	P	**P**	**20 41 01.5**	**+0.6**
	0.4nm,0.6s,baz=55,slow=12,SNR=3.5 0.4nm,0.6s						
WRA	**Warramunga Arr**	**69.46**	**132**	P	**P**	**20 42 35.3**	**+0.5**
	0.4nm,0.8s,baz=322,slow=6.3,SNR=2.1 0.4nm,0.8s						

*SJA **22** 20:39:06.1±0.6,22.87S×70.79W, h36km±3km, ML3.7, MW3.9*
*GUC **22** 20:39:10.2±0.7,22.82S×70.56W, h39km±2km, ML3.7*
*IDC **22** 20:39:11.8±3.1,22.96S×70.20W, h52km±27km, mb3.7/4, mbtmp3.8/7, ML3.3/3, Error ellipse: s-maj=40.2km s-min=20.3km az=95.0*

ISC 22 20:39:07.0±1.6,22.88S±0.04×70.76W±0.07, h23km±11km, n48, σ1.9 55/53, mb4.4/3, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB05	**IPOC Station P**	**0.52**	**87**	*eP*	**Pb**	**20 39 18.1**	**+0.5**
PB05				IAML		20 39 27.9	
	comp=Z,4μm,0.2s						
PB05	**IPOC Station P**	**0.52**	**87**	*eP*	**Pb**	**20 39 18.1**	**+0.5**
PB05				*eS*	**Sb**	**20 39 24.3**	**-0.4**
PB05				IAML		20 39 26.8	
	comp=E,10μm,0.4s						
PB06	**IPOC Station P**	**1.11**	**81**	*eP*	**Pn**	**20 39 26.6**	**-0.7**
PB06				IAML		20 39 43.8	
	comp=Z,2μm,0.6s						
PB06	**IPOC Station P**	**1.11**	**81**	*eP*	**Pn**	**20 39 26.5**	**-0.8**
PB06				*eS*	**Sn**	**20 39 39.2**	**-2.9**
PB06				IAML		20 39 40.0	
	comp=N,4μm,0.2s						
PB03	**IPOC Station P**	**1.25**	**49**	*eP*	**Pn**	**20 39 29.1**	**-0.1**
PB03				IAML		20 39 50.3	
	comp=Z,1μm,0.4s						
PB03	**IPOC Station P**	**1.25**	**49**	*eP*	**Pn**	**20 39 28.9**	**-0.4**
PB03				*eS*	**Sn**	**20 39 43.1**	**-2.3**
PB03				IAML		20 39 44.2	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**1.41**	**35**	*eP*	**Pn**	**20 39 31.3**	**-0.1**
PB07				*eS*	**Sn**	**20 39 49.9**	**+0.6**
PB07				IAML		20 39 59.5	
	comp=Z,794nm,0.4s						
PB07	**IPOC Station P**	**1.41**	**35**	*eP*	**Pn**	**20 39 31.3**	**-0.1**
PB07				*eS*	**Sn**	**20 39 47.7**	**-1.6**
PB07				IAML		20 39 52.2	
	comp=E,1μm,0.3s						
PB02	**IPOC Station P**	**1.75**	**28**	*eP*	**Pn**	**20 39 36.9**	**+0.8**
PB02				IAML		20 40 11.4	
	comp=Z,1μm,0.3s						
PB02	**IPOC Station P**	**1.75**	**28**	*eP*	**Pn**	**20 39 36.0**	**0.0**
PB02				*eS*	**Sn**	**20 39 56.3**	**-1.4**
PB02				IAML		20 40 07.8	
	comp=E,1μm,0.3s						
PB14	**IPOC Station P**	**1.77**	**169**	*eP*	**Pn**	**20 39 36.9**	**+0.4**
PB14				IAML		20 40 07.5	
	comp=Z,398nm,0.2s						
PB14	**IPOC Station P**	**1.77**	**169**	*iP*	**Pn**	**20 39 36.6**	**+0.2**
PB14				IAML		20 39 58.1	
	comp=E,484nm,0.3s						
PB09	**IPOC Station P**	**1.78**	**53**	*eP*	**Pn**	**20 39 37.6**	**+1.2**
PB09				IAML		20 40 06.6	
	comp=Z,761nm,0.4s						
PB09	**IPOC Station P**	**1.78**	**53**	*eP*	**Pn**	**20 39 36.9**	**+0.4**
PB09				*eS*	**Sn**	**20 39 56.6**	**-1.8**
PB09				IAML		20 40 02.7	
	comp=E,1μm,0.8s						
AF01	**San Pedro de A**	**2.38**	**92**	*eP*	**Pn**	**20 39 46.3**	**+1.4**
AF01				IAML		20 40 38.2	
	comp=Z,1μm,0.6s						
AF01	**San Pedro de A**	**2.38**	**92**	*eP*	**Pn**	**20 39 47.6**	**+2.6**
AF01				IAML		20 40 34.3	
	comp=N,3μm,0.5s						
PB08	**IPOC Station P**	**3.11**	**29**	*eP*	**Pn**	**20 39 58.6**	**+3.6**
PB08				IAML		20 40 51.0	
	comp=Z,94nm,0.3s						
PB08	**IPOC Station P**	**3.11**	**29**	*eP*	**Pn**	**20 39 56.3**	**+1.2**
PB08				IAML		20 40 49.1	
	comp=E,167nm,0.6s						
AC01	**Pan de Azucar**	**3.25**	**177**	*eP*	**Pn**	**20 39 56.1**	**-0.5**
AC01				IAML		20 40 53.1	
	comp=Z,123nm,0.6s						
AC01	**Pan de Azucar**	**3.25**	**177**	*eP*	**Pn**	**20 39 55.8**	**-0.9**
AC01				*eS*	**Sn**	**20 40 31.9**	**-2.8**
AC01				IAML		20 40 39.9	
	comp=N,204nm,0.1s						
PB11	**IPOC Station P**	**3.27**	**19**	*eP*	**Pn**	**20 39 57.3**	**+0.2**
PB11				IAML		20 40 55.7	
	comp=N,206nm,0.4s						
PSGCX	**Pisagua**	**3.32**	**10**	*eP*	**Pn**	**20 39 57.5**	**-0.2**
PSGCX				*eS*	Sn	20 40 18.4	-18
PSGCX	**Pisagua**	**3.32**	**10**	*eP*	**Pn**	**20 39 57.3**	**-0.4**
GO01	**Chusmiza**	**3.52**	**25**	*eP*	Pn	20 39 46.4	-14
GO01				*eS*	**Sb**	**20 40 51.0**	**-0.4**
GO01				IAML		20 40 56.8	
	comp=Z,118nm,0.6s						
GO01	**Chusmiza**	**3.52**	**25**	*eP*	**Pn**	**20 40 02.1**	**+1.4**
GO01				IAML		20 41 09.3	
	comp=N,167nm,0.3s						
AC02	**Maricunga**	**4.21**	**160**	*eP*	**Pn**	**20 40 12.0**	**+1.8**
AC02				*eS*	**Sn**	**20 41 00.1**	**+1.3**
AC02				IAML		20 41 19.1	
	comp=Z,195nm,0.4s						
AC02	**Maricunga**	**4.21**	**160**	*eP*	**Pn**	**20 40 12.0**	**+1.8**
AC02				*eS*	**Sn**	**20 40 59.9**	**+1.0**
PB12	**IPOC Station P**	**4.27**	**6**	*eP*	**Pn**	**20 40 11.2**	**+0.5**
PB12				IAML		20 41 31.0	
	comp=Z,38nm,0.7s						
GO03	**Copiapo**	**4.71**	**174**	*eP*	**Pn**	**20 40 17.2**	**+0.4**
GO03				*eS*	**Sn**	**20 41 09.9**	**-0.9**
GO03				IAML		20 41 50.7	
	comp=Z,89nm,0.6s						
LPAZ	**La Paz**	**7.01**	**21**	P	**Pn**	**20 40 51.9**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=182,slow=13,SNR=6.8 comp=Z,0.7nm,0.3s						
CFA	**Coronel Fontan**	**8.97**	**166**	P	**Pn**	**20 41 15.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=338,slow=16,SNR=2.1 comp=Z,0.6nm,0.3s						
SIV	**San Ignacio**	**11.42**	**55**	P	**Pn**	**20 41 46.3**	**-2.6**
	baz=246,slow=9.1,SNR=5.3 comp=Z,0.9nm,0.3s						
H03N1	**Juan Fernandez**	**12.73**	**213**	P	**Pn**	**20 42 04.5**	**-1.9**
H03N1	baz=106,slow=14,SNR=9.4			T	T	20 55 15.7	
	baz=38,slow=72,SNR=160						
H03N2	**Juan Fernandez**	**12.74**	**213**	P	**Pn**	**20 42 05.0**	**-1.6**
H03N2	baz=106,slow=14,SNR=5.0			T	T	20 55 16.5	
	baz=38,slow=72,SNR=174						
H03N3	**Juan Fernandez**	**12.75**	**213**	P	**Pn**	**20 42 05.1**	**-1.6**
H03N3	baz=106,slow=14,SNR=6.1			T	T	20 55 09.3	
	baz=38,slow=72,SNR=161						
TXAR	**Lajitas Array**	**60.81**	**327**	P	**P**	**20 49 21.5**	**+4.0**
	comp=Z,0.2nm,0.8s,baz=136,slow=5.8,SNR=2.4 comp=Z,0.2nm,0.8s						
SNAA	**Sanae**	**61.55**	**161**	P	**P**	**20 49 21.9**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=269,slow=8.6,SNR=6.5 comp=Z,1.8nm,0.6s						
QSPA	**South Pole Qui**	**67.31**	**180**	P	**P**	**20 50 01.2**	**+1.3**
	comp=Z,1.4nm,0.5s,baz=113,slow=2.3,SNR=16 comp=Z,1.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**79.43**	**71**	P	**Pn**	**20 51 10.6**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=248,slow=4.8,SNR=11 comp=Z,1.1nm,0.5s						
H11S2	**WAKE ISLAND Hyd**	**26.34**	**277**	T	T	23 17 28.2	
	baz=106,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hyd**	**26.35**	**277**	T	T	23 17 28.5	
	baz=106,slow=75,SNR=42						
H11S3	**WAKE ISLAND Hyd**	**26.36**	**277**	T	T	23 17 31.6	
	baz=106,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hyd**	**26.46**	**278**	T	T	23 17 37.1	
	baz=105,slow=75,SNR=44						
H11N1	**WAKE ISLAND Hyd**	**26.48**	**278**	T	T	23 17 41.4	
	baz=105,slow=75,SNR=28						
H11N2	**WAKE ISLAND Hyd**	**26.48**	**278**	T	T	23 17 43.9	
	baz=105,slow=75,SNR=36						
ASAR	**Alice Springs**	**127.89**	**209**	PKP	**PKPdf**	**20 58 10.1**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=149,slow=2.0,SNR=2.4						
WRA	**Warramunga Arr**	**130.89**	**212**	PKP	**PKiKP**	**20 58 17.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=154,slow=1.8,SNR=5.6						
MKAR	**Makanchi Array**	**147.75**	**36**	PKPbc	**PKPbc**	**20 58 49.9**	**0.0**
	comp=Z,0.7nm,0.7s,baz=318,slow=3.8,SNR=6.9						

*IDC **22** 20:43:59.6±0.9,33.14N×86.74E, h0km, mb3.6/11, mbtmp3.6/14, ML2.9/1, Error ellipse: s-maj=28.9km s-min=16.9km az=52.0*

ISC 22 20:44:01.1±0.9,33.2N±0.1×86.8E±0.2, h10km, n14, σ0.6 56/13, mb3.7/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.03**	**347**	Pn	**Pn**	**20 47 19.6**	**-0.4**
	0.1nm,0.3s,baz=159,slow=16,SNR=6.8 1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.27**	**140**	P	**P**	**20 48 14.7**	**-0.3**
	1.8nm,0.9s,baz=322,slow=12,SNR=9.7						
KURBB	**Kurchatov Arra**	**18.47**	**343**	P	**Pn**	**20 48 16.5**	**-0.5**
	0.6nm,0.6s,baz=160,slow=12,SNR=1.0						
ZALV	**Zalesovo Beam**	**20.82**	**357**	P	Pn	20 48 43.0	-2.0
	2.2nm,0.5s,baz=185,slow=9.4,SNR=11 2.2nm,0.5s						
SONM	**Songino Array**	**20.84**	**40**	P	**P**	**20 48 42.5**	**-0.5**
	1.3nm,0.9s,baz=226,slow=12,SNR=5.8 1.3nm,0.9s						
BVAR	**Borovoye Array**	**23.07**	**334**	P	**P**	**20 49 07.9**	**+1.2**
	0.5nm,0.6s,baz=142,slow=12,SNR=2.6 0.5nm,0.6s						
KSRS	**Korea Array**	**33.67**	**71**	P	**P**	**20 50 42.7**	**+0.6**
	0.6nm,0.6s,baz=281,slow=8.1,SNR=2.6 0.6nm,0.6s						
HFS	**Hagfors**	**53.58**	**323**	P	**P**	**20 53 22.4**	**+0.4**
	1.8nm,0.8s,baz=70,slow=8.3,SNR=1.8 1.8nm,0.8s						
NOA	**NORSAR Array B**	**54.72**	**325**	P	**P**	**20 53 30.5**	**+0.1**
	1.0nm,0.7s,baz=119,slow=14,SNR=1.7 1.0nm,0.7s						
GERES	**GERESS Array B**	**55.23**	**310**	P	**P**	**20 53 34.3**	**-0.1**
	0.6nm,0.6s,baz=75,slow=6.2,SNR=5.4 0.6nm,0.6s						
WRA	**Warramunga Arr**	**69.66**	**132**	P	**P**	**20 55 11.3**	**+0.3**
	0.3nm,0.5s,baz=316,slow=6.3,SNR=6.8 0.3nm,0.5s						
ASAR	**Alice Springs**	**72.20**	**135**	P	**P**	**20 55 26.6**	**+0.2**
	0.3nm,0.7s,baz=316,slow=6.1,SNR=4.1 0.3nm,0.7s						
ILAR	**Eielson Array**	**73.81**	**21**	P	**P**	**20 55 35.0**	**-0.5**
	0.5nm,0.9s,baz=319,slow=5.2,SNR=4.5 0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.85**	**278**	P	**P**	**20 56 04.5**	**-0.4**
	0.6nm,0.9s,baz=80,slow=3.7,SNR=3.6 0.6nm,0.9s						

*IDC **22** 20:48:09.9±0.8,33.08N×86.74E, h0km, mb3.7/15, mbtmp3.6/18, ML3.3/3, Error ellipse: s-maj=25.4km s-min=15.3km az=42.0*

ISC 22 20:48:11.6±0.8,33.1N±0.1×86.7E±0.1, h10km, n19, σ0.9 91/19, mb3.8/13, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.09**	**347**	Pn	**Pn**	**20 51 30.5**	**-0.7**
	baz=158,slow=14,SNR=6.4 0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**18.25**	**140**	P	**P**	**20 52 24.4**	**-0.8**
	0.2nm,0.3s,baz=317,slow=12,SNR=7.1 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**18.52**	**343**	P	**Pn**	**20 52 27.5**	**-0.6**
	baz=157,slow=10,SNR=5.5 0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**20.88**	**357**	P	**P**	**20 52 52.9**	**-0.8**
	0.8nm,0.4s,baz=178,slow=12,SNR=6.9 0.8nm,0.4s						
SONM	**Songino Array**	**20.91**	**39**	P	**P**	**20 52 52.9**	**-1.3**
	0.4nm,0.5s,baz=222,slow=11,SNR=4.7 0.4nm,0.5s						
BVAR	**Borovoye Array**	**23.11**	**334**	P	**P**	**20 53 18.0**	**+0.5**
	0.3nm,0.6s,baz=156,slow=11,SNR=4.2 0.3nm,0.6s						
KSRS	**Korea Array**	**33.73**	**71**	P	**P**	**20 54 53.4**	**+0.3**
	1.6nm,0.6s,baz=275,slow=9.3,SNR=9.0 1.6nm,0.6s						
MJAR	**Matsushiro Arr**	**42.00**	**70**	P	**P**	**20 56 04.1**	**+1.0**
	1.4nm,0.8s,baz=291,slow=9.7,SNR=5.9 1.4nm,0.8s						
AKASG	**Malin Array Be**	**45.06**	**311**	P	**P**	**20 56 27.0**	**-0.4**
	0.5nm,0.6s,baz=80,slow=7.5,SNR=2.4 0.5nm,0.6s						
ARCES	**ARCESS Array B**	**49.38**	**336**	P	**P**	**20 57 01.2**	**+0.3**
	1.7nm,0.8s,baz=92,slow=15,SNR=1.5 1.7nm,0.8s						
PETK	**Petropavlovsk-**	**53.23**	**45**	P	**P**	**20 57 32.3**	**+2.3**
	1.1nm,0.7s,baz=279,slow=12,SNR=1.7						
HFS	**Hagfors**	**53.61**	**324**	P	**P**	**20 57 32.9**	**+0.2**
	1.5nm,0.6s,baz=98,slow=11,SNR=4.6 1.5nm,0.6s						
SPITS	**Spitsbergen Ar**	**53.84**	**346**	P	**P**	**20 57 33.9**	**-0.2**
	3.5nm,0.8s,baz=28,slow=6.5,SNR=1.7 3.5nm,0.8s						
NOA	**NORSAR Array B**	**54.75**	**325**	P	**P**	**20 57 41.0**	**-0.1**
	1.0nm,0.7s,baz=89,slow=6.4,SNR=3.0 1.0nm,0.7s						
GERES	**GERESS Array B**	**55.25**	**310**	P	**P**	**20 57 46.0**	**+1.0**
	0.5nm,0.7s,baz=78,slow=5.7,SNR=5.6 0.5nm,0.7s						
WRA	**Warramunga Arr**	**69.64**	**132**	P	**P**	**20 59 20.9**	**-0.4**
	0.4nm,0.6s,baz=319,slow=6.3,SNR=7.3 0.4nm,0.6s						
ASAR	**Alice Springs**	**72.18**	**135**	P	**P**	**20 59 36.2**	**-0.6**
	0.4nm,0.9s,baz=318,slow=6.5,SNR=2.2 0.4nm,0.9s						
ILAR	**Eielson Array**	**73.88**	**21**	P	**P**	**20 59 45.4**	**-0.9**
	0.3nm,0.7s,baz=321,slow=5.4,SNR=4.2 0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.83**	**278**	P	**P**	**21 00 15.2**	**+0.1**
	0.4nm,0.6s,baz=73,slow=4.7,SNR=4.0 0.4nm,0.6s						

IDC 22 20:48:42.3±12.0,7.76S×127.39E, h183km±145km, mb2.7/1, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=100.9km s-min=54.3km az=32.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.42**	**189**	P	Pn	20 51 08.6	+1.3
	0.1nm,0.3s,baz=35,slow=12,SNR=1.9						
FITZ				S	Sn	20 53 02.1	-1.2
	1.6nm,0.8s,baz=117,slow=7.6,SNR=1.1 3.2nm,1.0s						
WRA	**Warramunga Arr**	**13.86**	**152**	P	Pn	20 51 50.0	-1.2
	0.1nm,0.3s,baz=326,slow=13,SNR=7.8						
WRA				S	Sn	20 54 14.4	-11
	0.3nm,0.6s,baz=335,slow=21,SNR=6.3 0.5nm,0.8s						
ASAR	**Alice Springs**	**17.01**	**159**	P	Pn	20 52 29.4	-0.3
	0.1nm,0.3s,baz=336,slow=10,SNR=5.1 0.3nm,0.7s						
MKAR	**Makanchi Array**	**67.47**	**328**	P	P	20 59 18.2	-0.1
	0.1nm,0.5s,baz=124,slow=4.3,SNR=1.5 0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**71.82**	**330**	P	P	20 59 33.2	-12
	1.0nm,0.7s,baz=106,slow=6.4,SNR=9.0						

*NDI **22** 20:50:43.1±2.3,34.61N×70.76E, h90km±196km, ML3.3, MW3.7, Presumed earthquake*
*IDC **22** 20:50:54.7±7.5,34.85N×71.55E, h99km±67km, mb3.4/5, mbtmp3.6/9, ML3.1/4, Error ellipse: s-maj=49.8km s-min=29.7km az=26.0*

ISC 22 20:50:54.0±1.0,34.7N±0.1×71.7E±0.1, h100km, n15, σ1.9 36/16, mb3.6/4, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**3.27**	**126**	*eP*	Pn	20 51 40.7	-2.7
JMU				*eS*	**Sn**	**20 52 22.5**	**+0.9**
JMU				IAML		20 52 35.7	
	comp=E,81nm,0.3s						
JMU				IAML		20 52 36.2	
	comp=N,76nm,0.5s						
THN	**Thein Dam**	**4.11**	**123**	*eP*	Pn	20 51 50.8	-3.8
THN				*eS*	**Sn**	**20 52 41.9**	**+0.3**
THN				IAML		20 52 47.5	
	comp=E,47nm,0.6s						
TSSA	**Tissa**	**4.18**	**116**	*eP*	**Pn**	**20 51 54.8**	**-1.0**
TSSA				*eS*	**Sn**	**20 52 43.8**	**+0.1**
TSSA				IAML		20 52 48.6	
	comp=N,56nm,0.1s						
TSSA				IAML		20 52 48.6	
	comp=E,78nm,0.3s						
TSSA				IAML		20 52 48.6	
	comp=Z,46nm,0.2s						
SMLA	**Simla**	**5.85**	**126**	*eP*	Pn	20 52 14.1	-4.1
SMLA				*eS*	**Sn**	**20 53 21.4**	**-2.6**
KLP	**Kalpa**	**6.37**	**118**	*eS*	**Sn**	**20 53 36.2**	**-1.0**
KLP				IAML		20 53 40.1	
	comp=E,49nm,0.4s						
KLP				IAML		20 53 40.8	
	comp=N,23nm,0.4s						
AAK	**Ala-Archa**	**8.18**	**15**	P	**Pn**	**20 52 49.1**	**-1.0**
	comp=N,1.1nm,0.3s,baz=207,slow=6.5,SNR=4.6 comp=N,2.5nm,0.4s						
MKAR	**Makanchi Array**	**14.46**	**30**	P	**Pn**	**20 54 15.8**	**+2.1**
	comp=N,0.1nm,0.3s,baz=212,slow=8.0,SNR=5.2 comp=N,0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**16.64**	**15**	P	**P**	**20 54 41.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=203,slow=10,SNR=9.2 comp=N,1.3nm,0.7s						
BVAR	**Borovoye Array**	**18.30**	**358**	P	**P**	**20 54 57.9**	**-2.1**
	baz=158,slow=9.9,SNR=1.8 comp=N,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**21.31**	**22**	P	**P**	**20 55 32.7**	**+0.2**
	comp=N,1.7nm,0.4s,baz=213,slow=10,SNR=9.9 comp=N,1.7nm,0.4s						
FINES	**FINESS Array B**	**39.25**	**327**	P	**P**	**20 58 12.0**	**-0.4**
	comp=N,4.0nm,1.1s,baz=111,slow=8.5,SNR=1.6 comp=N,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**66.25**	**270**	P	**P**	**21 01 32.1**	**+0.3**
	comp=N,0.3nm,0.5s,baz=52,slow=5.7,SNR=1.8 comp=N,0.3nm,0.5s						
WRA	**Warramunga Arr**	**80.59**	**122**	P	**P**	**21 02 57.1**	**+1.4**
	comp=N,0.3nm,0.7s,baz=318,slow=5.6,SNR=1.5 comp=N,0.3nm,0.7s						
SII	**Sitkinak Islan**	**81.09**	**24**	P	**P**	**21 02 57.5**	**-0.4**
ASAR	**Alice Springs**	**82.79**	**125**	P	**P**	**21 03 08.9**	**+1.6**
	comp=N,0.4nm,0.8s,baz=305,slow=5.5,SNR=2.7 comp=N,0.4nm,0.8s						

*IDC **22** 20:53:03.6±0.9,33.17N×87.02E, h0km, mb3.5/10, mbtmp3.4/13, ML3.0/3, Error ellipse: s-maj=29.1km s-min=17.9km az=49.0*

ISC 22 20:53:05.1±0.8,33.2N±0.1×87.1E±0.1, h10km, n14, σ0.6 68/13, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.06**	**346**	Pn	**Pn**	**20 56 25.0**	**+0.7**
	baz=156,slow=14,SNR=3.4 0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.14**	**141**	P	**P**	**20 57 17.6**	**+0.1**
	0.1nm,0.3s,baz=339,slow=14,SNR=1.5 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**18.51**	**343**	P	**Pn**	**20 57 21.2**	**-0.3**
	baz=144,slow=13,SNR=2.7 0.3nm,0.6s						
SONM	**Songino Array**	**20.66**	**39**	P	**P**	**20 57 44.2**	**-0.8**
	0.5nm,0.6s,baz=264,slow=12,SNR=1

0.4nm,0.7s,baz=58,slow=4.4,SNR=2.6
0.4nm,0.7s

*IDC **22** 20:56:57.2±1.2,32.99N×86.96E,h0km,mb3.4/5, mbtmp3.3/8,ML3.2/2,Error ellipse: s-maj=36.1km s-min=25.0km az=55.0*
ISC 22 20:56:58.8±1.0,**33.1N**±0.1×**87.0E**±0.2,**h10**km,**n8,** σ1°**49**/8, **mb3.5**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.18**	**347**	P	n		**Pn**	**21 00 18.1**	**-1.5**
	baz=152,slow=13,SNR=1.8								
	0.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**18.09**	**141**	P			**Pn**	**21 01 10.3**	**0.0**
	0.1nm,0.3s,baz=320,slow=8.7,SNR=1.6								
	0.2nm,0.3s								
KURBB	**Kurchatov Arra**	**18.62**	**343**	P			**P**	**21 01 18.2**	**+1.9**
	0.4nm,0.6s,baz=154,slow=12,SNR=4.0								
SONM	**Songino Array**	**20.82**	**39**	P			**P**	**21 01 41.9**	**+1.4**
	1.1nm,0.8s,baz=216,slow=12,SNR=4.6								
	1.1nm,0.8s								
GERES	**GERESS Array B**	**55.43**	**310**	P			**P**	**21 06 34.6**	**+1.1**
	0.2nm,0.4s,baz=64,slow=5.9,SNR=4.9								
	0.2nm,0.4s								
WRA	**Warramunga Arr**	**69.46**	**132**	P			**P**	**21 08 07.5**	**-0.1**
	0.2nm,0.6s,baz=318,slow=6.2,SNR=1.7								
	0.2nm,0.6s								
ILAR	**Eielson Array**	**73.85**	**21**	P			**P**	**21 08 32.1**	**-1.3**
	0.3nm,0.6s,baz=314,slow=5.5,SNR=2.9								
	0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**79.03**	**279**	P			**P**	**21 09 03.1**	**-0.5**
	0.4nm,0.7s,baz=40,slow=5.9,SNR=2.5								
	0.4nm,0.7s								

*SNET **22** 20:58:33.1±0.8,13°.15N×89°.20W,h52km,ML3.6, Presumed earthquake*
*CATAC **22** 20:58:33.1±0.3,13°.N±2°×8°.9W±°,h29km±1km,M3.7/14, MLv3.7/14,Error ellipse: s-maj=5.4km s-min=2.3km az=30.4,confirmed*
*GCG **22** 20:58:34.8±0.5,13°.27N×89°.28W,h54km±10km,MD4.1, ML4.1,Presumed earthquake*
ISC 22 20:58:33.2±1.4,**13.12N**±0.05×**89.23W**±0.03,**h30**km±12km, **n53,** σ0°**62**/86,**El Salvador**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.38**	**347**	P			**Pn**	**20 58 43.5**	**+0.8**
LALI				S			**Sn**	**20 58 51.2**	**+2.1**
LALI	**Alcalda de L**	**0.38**	**347**	*eP*			**Pn**	**20 58 43.3**	**+0.6**
PANCS	**Alcalda de**	**0.50**	**6**	P			**Pn**	**20 58 44.4**	**0.0**
PANCS				S			**Sn**	**20 58 51.6**	**+0.4**
LOMA	**Loma Larga**	**0.53**	**6**	P			**Pn**	**20 58 45.1**	**+0.2**
LOMA				S			**Sn**	**20 58 54.4**	**+1.4**
SJTE	**Alcalda de S**	**0.54**	**24**	*i* P			**Pn**	**20 58 44.9**	**-0.2**
SJTE				*eS*			**Sn**	**20 58 53.0**	**-0.1**
JAYA	**Jayaque - finc**	**0.58**	**338**	P			**Pn**	**20 58 45.4**	**-0.2**
JAYA	**Jayaque - finc**	**0.58**	**338**	*i* P			**Pn**	**20 58 45.5**	**-0.2**
JAYA				*eS*			**Sn**	**20 58 53.8**	**-0.3**
JAYA				IAML				20 58 56.4	
	comp=E,10μm,0.2s								
JAYA	**Jayaque - finc**	**0.58**	**338**	*i* P			**Pn**	**20 58 45.7**	**+0.1**
JAYA				*eS*			**Sn**	**20 58 54.0**	**-0.1**
SEMO	**Seminario San**	**0.58**	**1**	P			**Pn**	**20 58 45.6**	**0.0**
SEMO				S			**Sn**	**20 58 54.8**	**+0.6**
UEES	**Universidad Ev**	**0.60**	**359**	P			**Pn**	**20 58 45.7**	**-0.1**
UEES				S			**Sn**	**20 58 55.3**	**+0.8**
IGN	**Direccin Gen**	**0.60**	**6**	P			**Pn**	**20 58 45.6**	**-0.2**
IGN	**Direccin Gen**	**0.60**	**6**	*i* P			**Pn**	**20 58 45.5**	**-0.3**
IGN				*eS*			**Sn**	**20 58 55.2**	**+0.7**
PMON	**Piamonte**	**0.60**	**352**	P			**Pn**	**20 58 45.8**	**0.0**
PMON				S			**Sn**	**20 58 56.0**	**+1.4**
COEG	**Centro de Oper**	**0.61**	**34**	P			**Pn**	**20 58 45.8**	**-0.1**
COEG				S			**Sn**	**20 58 55.1**	**+0.3**
COEG	**Centro de Oper**	**0.61**	**34**	*i* P			**Pb**	**20 58 45.5**	**0.0**
COEG				*eS*			**Sn**	**20 58 54.4**	**-0.3**
TECO	**Alcaldia de Te**	**0.61**	**46**	P			**Pb**	**20 58 45.5**	**+0.1**
TECO				S			**Sn**	**20 58 54.1**	**-0.5**
LBRS	**Las Brisas**	**0.65**	**16**	*i* P			**Pn**	**20 58 46.5**	**0.0**
PAVA	**Las Pavas**	**0.66**	**26**	P			**Pb**	**20 58 46.3**	**0.0**
PAVA	**Las Pavas**	**0.66**	**26**	*i* P			**Pb**	**20 58 46.1**	**-0.3**
PAVA				*eS*			**Sn**	**20 58 56.4**	**+0.3**
CEDA	**San Andres**	**0.70**	**347**	S			**Sn**	**20 58 57.7**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.76**	**40**	S			**Sn**	**20 58 59.0**	**+0.5**
CEVE	**Cerro Verde**	**0.81**	**332**	P			**Pb**	**20 58 49.2**	**+0.3**
CEVE				S			**Sn**	**20 59 01.2**	**+1.3**
PQSS	**Presa 15 de Se**	**0.82**	**52**	P			**Pn**	**20 58 48.3**	**-0.5**
PQSS				S			**Sb**	**20 59 00.4**	**+0.6**
SNJE	**San Jose**	**0.83**	**334**	*i* P			**Pn**	**20 58 49.2**	**+0.1**
UNIC	**Universidad Ca**	**0.92**	**340**	P			**Pn**	**20 58 50.2**	**+0.1**
UNIC				S			**Sb**	**20 59 02.9**	**+0.4**
NUBE	**Las Nubes**	**0.95**	**326**	P			**Pn**	**20 58 50.6**	**-0.1**
NUBE	**Las Nubes**	**0.95**	**326**	*i* P			**Pn**	**20 58 50.4**	**-0.2**
NUBE				*eS*			**Sn**	**20 59 02.8**	**-0.5**
NUBE	**Las Nubes**	**0.95**	**326**	*i* P			**Pn**	**20 58 50.4**	**-0.2**
NUBE				*eS*			**Sn**	**20 59 03.0**	**-0.3**
PACA	**Pacayal**	**0.95**	**68**	P			**Pn**	**20 58 50.6**	**-0.1**
PACA				S			**Sb**	**20 59 04.4**	**+0.9**
RANC	**El Ranchito**	**0.97**	**71**	P			**Pn**	**20 58 50.9**	**0.0**
RANC				S			**Sb**	**20 59 04.7**	**+0.6**
RANC	**El Ranchito**	**0.97**	**71**	*i* P			**Pn**	**20 58 50.2**	**-0.7**
RANC				*eS*			**Sn**	**20 59 03.8**	**0.0**
P5NO	**Presa 5 de nov**	**0.98**	**28**	P			**Pn**	**20 58 50.1**	**-0.9**
P5NO				S			**Sb**	**20 59 03.6**	**-0.6**
LOAL	**Lomas de Alarc**	**1.03**	**329**	P			**Pn**	**20 58 50.6**	**-1.1**
LOAL				S			**Sb**	**20 59 06.3**	**+0.7**
FAME	**Alcaldia de Sa**	**1.05**	**314**	P			**Pn**	**20 58 51.5**	**-0.4**
FAME				S			**Sn**	**20 59 04.8**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.05**	**329**	P			**Pb**	**20 58 52.6**	**-0.3**
SLOZ				S			**Sb**	**20 59 06.3**	**0.0**
INTP	**Intipuca**	**1.15**	**86**	*i* P			**Pn**	**20 58 52.8**	**-0.5**
INTP				*eS*			**Sn**	**20 59 07.4**	**-0.6**
MTO3	**Montecristo**	**1.28**	**354**	P			**Pn**	**20 58 54.8**	**-0.5**
MTO3				S			**Sb**	**20 59 11.8**	**-1.3**
MTO3	**Montecristo**	**1.28**	**354**	*i* P			**Pn**	**20 58 54.8**	**-0.5**
LCND	**La Caada**	**1.32**	**81**	P			**Pn**	**20 58 55.2**	**-0.4**
LCND	**La Caada**	**1.32**	**81**	*i* P			**Pn**	**20 58 55.0**	**-0.6**
CNCH	**Conchagua**	**1.37**	**83**	P			**Pn**	**20 58 55.8**	**-0.6**
CNCH	**Conchagua**	**1.37**	**83**	*i* P			**Pn**	**20 58 55.8**	**-0.6**
ESQI	**Esquipulas**	**1.44**	**356**	P			**Pn**	**20 58 57.3**	**-0.1**
ESQI				S			**Sb**	**20 59 16.0**	**-1.4**
ESQI	**Esquipulas**	**1.44**	**356**	*i* P			**Pn**	**20 58 57.2**	**-0.2**
ESQI				*eS*			**Sn**	**20 59 15.4**	**0.0**
CSGN	**Cosiguina Volc**	**1.64**	**95**	P			**Pn**	**20 58 59.8**	**-0.2**
CSGN				S			**Sn**	**20 59 20.2**	**0.0**
SARH	**Santa Rosa de**	**1.71**	**15**	P			**Pn**	**20 59 01.0**	**-0.1**
SARH				S			**Sn**	**20 59 22.3**	**+0.2**
SARH	**Santa Rosa de**	**1.71**	**15**	*i* P			**Pn**	**20 59 01.0**	**-0.1**
CRIN	**San Cristobal**	**2.17**	**101**	S			**Sn**	**20 59 34.3**	**+1.0**
HOYN	**Al Sur del Vol**	**2.40**	**102**	P			**Pn**	**20 59 10.8**	**+0.3**
CNGN	**Cerro Negro**	**2.54**	**104**	S			**Sn**	**20 59 43.0**	**+0.5**
LEVN	**Ruinas Leon Vi**	**2.65**	**105**	P			**Pn**	**20 59 13.9**	**0.0**
LEVN				S			**Sn**	**20 59 46.2**	**+1.2**
MOM3	**MOM3**	**2.71**	**102**	S			**Sn**	**20 59 47.2**	**+0.5**
MOMN	**Momotombo**	**2.72**	**105**	S			**Sn**	**20 59 46.1**	**-0.7**

*IDC **22** 21:01:03.2±1.3,33°.11N×87°.00E,h0km,mb3.5/3, mbtmp3.3/6,ML3.3/3,Error ellipse: s-maj=64.3km s-min=25.0km az=52.0*
ISC 22 21:01:04.6±1.1,**33.2N**±0.2×**87.1E**±0.3,**h10**km,**n6,** σ0°**66**/6, **Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.10**	**346**	Pn			**Pn**	**21 04 24.7**	**+0.4**
	baz=165,slow=11,SNR=2.3								
	0.2nm,0.5s								
CMAR	**Chiang Mai Arr**	**18.11**	**141**	P			**P**	**21 05 16.5**	**-0.2**
	0.3nm,0.3s,baz=325,slow=15,SNR=4.3								
	0.4nm,0.2s								
KURBB	**Kurchatov Arra**	**18.55**	**343**	P			**Pn**	**21 05 20.8**	**-0.7**
	baz=170,slow=11,SNR=3.0								
	0.2nm,0.7s								
GERES	**GERESS Array B**	**55.44**	**310**	P			**P**	**21 10 38.7**	**-0.6**
	0.2nm,0.5s,baz=63,slow=9.0,SNR=4.0								
	0.2nm,0.5s								
WRA	**Warramunga Arr**	**69.46**	**132**	P			**P**	**21 12 13.4**	**+0.1**
	0.4nm,0.9s,baz=320,slow=5.8,SNR=1.9								
	0.4nm,0.9s								
TORD	**Torodi Ar. Bea**	**79.11**	**279**	P			**P**	**21 13 10.3**	**+0.6**
	0.7nm,0.9s,baz=69,slow=5.6,SNR=3.7								
	0.7nm,0.9s								

*IDC **22** 21:01:53.4±3.5,1°.80S×136°.02E,h0km,mb3.4/2, mbtmp3.3/3,ML2.9/1,Error ellipse: s-maj=155.8km s-min=29.1km az=80.0*
*DJA **22** 21:02:00.7±0.3,2°.S±4°×13°.4E±°,h10km,M3.3/7,MLv3.3/7*
ISC 22 21:02:03.7±1.1,**2.28S**±0.09×**134.22E**±0.08,**h35**km,**n8,** σ0°**39**/8,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MWPI	**Manokwari, Pap**	**1.35**	**352**	P			**Pn**	**21 02 26.1**	**0.0**
FAKI	**Fak Fak**	**2.07**	**252**	P			**Pn**	**21 02 36.3**	**+0.3**
BAKI	**Biak**	**2.18**	**60**	P			**Pn**	**21 02 37.9**	**+0.4**
SIJI	**Sorong**	**3.27**	**295**	P			**Pn**	**21 02 52.8**	**+0.3**
SWI	**Sorong**	**3.27**	**295**	P			**Pn**	**21 02 52.9**	**+0.3**
WRA	**Warramunga Arr**	**17.56**	**180**	P			**Pn**	**21 06 05.3**	**-0.5**
	baz=2.8,slow=11,SNR=1.8								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**21.27**	**181**	P			**P**	**21 06 47.3**	**+0.1**
	1.3nm,0.9s,baz=8.1,slow=12,SNR=9.8								
	1.3nm,0.9s								
MKAR	**Makanchi Array**	**66.75**	**324**	P			**P**	**21 12 51.5**	**-0.1**
	0.2nm,0.5s,baz=109,slow=7.8,SNR=4.6								
	0.2nm,0.5s								

*IDC **22** 21:05:54.1±0.8,84°.72N×101°.87E,h0km,mb3.6/11, mbtmp3.7/15,ML3.5/4,MS4.5/1,Error ellipse: s-maj=20.7km s-min=18.8km az=119.0*
*NEIC **22** 21:05:55.9±1.6,84°.72N±0°.09×10°1E±°,h10km±1km, mb4.1/15,Error ellipse: s-maj=17.0km s-min=14.3km az=112.0*
*FCIAR **22** 21:06:07.0,83°.64N×92°.68E,h5km,station SVZ has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*
ISC 22 21:05:56.0±0.6,**84.74N**±0°.07×**100.47E**±0°.07,**h10**km,**n39,** σ1°**43**/41,**mb3.9**/17,**North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.50**	**178**	*eP*			**Pn**	**21 07 22.3**	**+4.6**
SVZ				*eS*			**Sn**	**21 08 18.5**	**-2.3**
	37nm,0.8s								
OMEGA	**Omega**	**7.38**	**267**	*eP*			**Pn**	**21 07 43.8**	**+0.2**
OMEGA				*eS*			**Sn**	**21 09 03.3**	**-3.8**
	18nm,1.2s								
KBS	**Kingsbay**	**12.21**	**294**	Pn			**Pn**	**21 08 49.5**	**0.0**
SPITS	**Spitsbergen Ar**	**12.50**	**289**	Pn			**Pn**	**21 08 52.8**	**-0.7**
	baz=45,slow=19								
	4.6nm,0.9s								
TIXI	**Tiksi**	**14.03**	**142**	Pn			**Pn**	**21 09 12.5**	**-1.8**
	0.1nm,0.3s,baz=7.5,slow=7.7,SNR=3.9								
	0.6nm,0.5s								
TIXI	**Tiksi**	**14.03**	**142**				**Pn**	**21 09 12.2**	**-2.1**
NRIK	**Noril'sk**	**15.67**	**197**	Pn			**Pn**	**21 09 36.2**	**-0.1**
	0.7nm,0.3s,baz=29,slow=13,SNR=11								
	1.4nm,0.4s								
NRIK	**Noril'sk**	**15.67**	**197**				**Pn**	**21 09 36.2**	**-0.1**
NRIK					IAmb		IAmb	21 09 42.4	
	comp=Z,11nm,0.7s								
ARCES	**ARCESS Array B**	**19.86**	**269**	P			**P**	**21 10 26.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=20,slow=11,SNR=1.9								
	comp=Z,2.9nm,1.0s								
BILL	**Bilibino**	**20.47**	**101**	P			**P**	**21 10 33.2**	**-0.1**
BILL					IAmb		IAmb	21 10 47.0	
	comp=Z,10nm,1.2s								
JMIC	**Jan Mayen**	**21.43**	**302**	LR			LR	21 17 23.6	
	comp=Z,1μm,19.8s,baz=77,slow=32								
B20K	**Meade River**	**21.85**	**65**	P			**P**	**21 10 47.8**	**-0.3**
C19K	**Lookout Ridge**	**22.52**	**67**				**P**	**21 10 55.1**	**-0.2**
C19K					IAmb		IAmb	21 11 05.9	
	comp=Z,7.8nm,1.1s								
C23K	**Itkillik River**	**22.55**	**59**				**P**	**21 10 54.6**	**-0.9**
C23K					IAmb		IAmb	21 11 06.1	
	comp=Z,13nm,1.5s								
SCO	**Scoresbysund**	**22.90**	**313**				**P**	**21 10 59.5**	**+0.2**
SCO					IAmb		IAmb	21 11 03.7	
	comp=Z,3.5nm,0.6s								
E23K	**Chandalar**	**24.37**	**59**				**P**	**21 11 14.1**	**+0.4**
E23K					IAmb		IAmb	21 11 24.4	
	comp=Z,6.3nm,1.3s								
E29M	**Blow River**	**24.91**	**48**	P			**P**	**21 11 19.1**	**+0.6**
E29M					IAmb		IAmb	21 11 35.9	
	comp=Z,3.4nm,1.0s								
G21K	**Allakaket**	**25.57**	**63**				**P**	**21 11 24.2**	**-0.3**
G21K					IAmb		IAmb	21 11 33.2	
	comp=Z,5.0nm,1.1s								
IMAR	**Indian Mountai**	**26.07**	**64**	P			**P**	**21 11 30.6**	**+1.5**
FYU	**Fort Yukon**	**26.18**	**56**	P			**P**	**21 11 32.1**	**+2.2**
FINES	**FINESS Array B**	**27.73**	**264**	P			**P**	**21 11 44.4**	**+0.4**
	comp=Z,3.5nm,0.9s,baz=27,slow=12,SNR=4.8								
	comp=Z,3.5nm,0.9s								
ILAR	**Eielson Array**	**27.82**	**58**	P			**P**	**21 11 45.0**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=355,slow=8.1,SNR=2.5								
	comp=Z,0.2nm,0.8s								
BVAR	**Borovoye Array**	**32.67**	**214**	P			**P**	**21 12 29.3**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=30,slow=8.9,SNR=4.2								
	comp=Z,0.4nm,0.6s								
KURK	**Kurchatov**	**34.60**	**205**	P			**P**	**21 12 43.5**	**-1.0**
KURBB	**Kurchatov Arra**	**34.70**	**205**	P			**P**	**21 12 45.7**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=19,slow=7.2,SNR=5.6								
KURBB					PcP		**PcP**	**21 15 18.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=352,slow=3.0,SNR=6.2								
	comp=Z,0.2nm,0.3s								
ABKAR	**Akbulak array**	**37.04**	**225**	P			**P**	**21 13 05.0**	**-0.5**
SONM	**Songino Array**	**37.09**	**173**	P			**P**	**21 13 05.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=1.1,slow=7.6,SNR=3.6								
	comp=Z,0.7nm,0.8s								
AKASG	**Malin Array Be**	**38.06**	**258**	P			**P**	**21 13 14.9**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=3.6,slow=8.0,SNR=2.8								
	comp=Z,0.7nm,0.6s								
KIEV	**Kiev**	**38.07**	**258**	P			**P**	**21 13 14.9**	**+0.8**
KIEV					IAmb		IAmb	21 13 39.8	
	comp=Z,1.9nm,0.6s								
MAKZ	**Makanchi**	**38.39**	**201**	P			**P**	**21 13 16.8**	**-0.1**
MKAR	**Makanchi Array**	**38.39**	**200**	P			**P**	**21 13 17.1**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=2.4,slow=7.2,SNR=15								
	comp=Z,1.2nm,0.7s								
GERES	**GERESS Array B**	**41.33**	**273**	P			**P**	**21 13 42.9**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=0.0,slow=8.2,SNR=1.8								
	comp=Z,0.1nm,0.5s								
KKAR	**Karatay Array**	**42.56**	**213**	P			**P**	**21 13 52.9**	**+1.5**
PDAR	**Pinedale Array**	**52.06**	**28**	P			**P**	**21 15 05.4**	**-0.3**
TX31	**Lajitas Ar. Si**	**65.69**	**23**	P			**P**	**21 16 40.0**	**-0.2**
TXAR	**Lajitas Array**	**65.69**	**23**	P			**P**	**21 16 39.3**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=352,slow=4.3,SNR=7.8								
	comp=Z,0.4nm,0.5s								
CMAR	**Chiang Mai Arr**	**66.36**	**182**	P			**P**	**21 16 42.4**	**-2.2**
	comp=Z,0.5nm,0.6s,baz=7.1,slow=5.3,SNR=6.3								
	comp=Z,0.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**66.36**	**182**	P			**P**	**21 16 43.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**77.80**	**280**	P			**P**	**21 17 54.0**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=0.3,slow=6.1,SNR=5.6								
	comp=Z,0.8nm,0.7s								

NEIC 22 21:12:17.5±1.4,**54.64N**±0°.08×**160.1W**±0°.1,**h25**km±4km, **mb3.7**/10,**ML3.4**/30,**Error ellipse: s-maj=13.4km s-min=7.2km az=148.0,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.36**	**61**	P	g		Pb	21 12 25.6	+0.2
CNBA				S	g		Sb	21 12 31.1	+0.1
CNBA				IAML				21 12 31.9	
	comp=E,2μm,0.4s								
CNBA				IAML				21 12 33.0	
	comp=N,2μm,0.4s								
SDPT	**Sand Point**	**0.73**	**345**				Pb	21 12 31.0	-0.6
SDPT						Sn	Sb	21 12 40.2	-1.0
VNFG	**Fog Glacier, M**	**1.68**	**11**				Pn	21 12 45.6	+0.4
VNFG						Sn	Sb	21 13 07.6	-0.8
CHGN	**Chignik**	**1.93**	**30**				Pn	21 12 48.9	+0.3
CHGN						Sn	Sn	21 13 12.1	+0.1
CHIR	**Chirikof Islan**	**2.84**	**64**	P	n		Pn	21 13 00.8	-0.3
CHIR				IAML				21 13 55.4	
	comp=N,142nm,1.0s								
CHIR				IAML				21 14 04.8	
	comp=E,123nm,2.2s								
AKUT	**Akutan**	**3.33**	**263**	Pn			Pn	21 13 08.0	+0.1
AKUT				IAML				21 14 16.0	
	comp=E,64nm,1.4s								
AKUT				IAML				21 14 51.9	
	comp=N,59nm,0.1s								
UNV	**Unalaska Valle**	**3.82**	**261**	Pn			Pn	21 13 15.1	+0.5
SII	**Sitkinak Islan**	**3.88**	**58**	Pn			Pn	21 13 15.8	+0.3
SII				IAML				21 15 35.1	
	comp=N,110nm,1.7s								
O15K	**Ungalikthiuk R**	**4.55**	**2**	Pn			Pn	21 13 23.4	-1.2
P16K	**Nushagak River**	**4.55**	**14**	Pn			Pn	21 13 24.7	+0.1
P16K				IAML				21 15 04.0	
	comp=E,78nm,1.4s								
OHAK	**Old Harbor**	**4.64**	**53**	Pn			Pn	21 13 24.9	-0.9
OHAK				IAML				21 14 48.0	
	comp=N,22nm,1.9s								
OHAK				IAML				21 16 28.4	
	comp=E,24nm,2.5s								
O14K	**Tigyukauivet M**	**4.66**	**353**	Pn			Pn	21 13 26.8	+0.7
O14K				IAML				21 15 05.9	
	comp=E,21nm,1.1s								
O14K				IAML				21 15 08.3	
	comp=N,22nm,1.5s								
P17K	**Kvichak River**	**4.99**	**22**	Pn			Pn	21 13 30.4	-0.3
P17K				IAML				21 15 03.3	
	comp=E,55nm,1.2s								
O16K	**Kokwok River B**	**5.09**	**12**	Pn			Pn	21 13 31.4	-0.6
O16K				IAML				21 15 05.4	
	comp=N,13nm,0.7s								
KDAK	**Kodiak Island**	**5.26**	**50**	Pn			Pn	21 13 33.7	-0.6
KDAK				IAML				21 14 39.0	
	comp=N,27nm,2.4s								
KDAK				IAML				21 15 41.7	
	comp=N,26nm,2.2s								
N14K	**Kuskokwak Cree**	**5.36**	**352**	Pn			Pn	21 13 35.6	-0.1
N15K	**Kwethluk River**	**5.54**	**0**				Pn	21 13 37.9	-0.3
M13K	**Dall Lake**	**6.04**	**345**	Pn			Pn	21 13 44.6	-0.3
M14K	**Bethel**	**6.20**	**352**				Pn	21 13 46.9	-0.3
SPIA	**Saint Paul Isl**	**6.23**	**298**	Pn			Pn	21 13 47.0	-0.6
M16K	**Timber Creek**	**6.43**	**5**	Pn			Pn	21 13 50.8	+0.5
M11K	**Mekoryuk**	**6.62**	**333**	Pn			Pn	21 13 52.6	-0.3
L14K	**Kuka Creek**	**6.85**	**350**				Pn	21 13 56.0	-0.1
L16K	**Owhat River**	**7.10**	**3**	Pn			Pn	21 13 59.5	0.0
K13K	**Kusilvak Mount**	**7.69**	**344**	Pn			Pn	21 14 08.1	+0.6
L18K	**Granite Mounta**	**7.81**	**12**	Pn			Pn	21 14 09.5	+0.2
K17K	**Iditarod**	**8.15**	**6**	Pn			Pn	21 14 14.0	0.0
J14K	**Nanvaranak Lak**	**8.32**	**349**	Pn			Pn	21 14 16.3	0.0
J16K	**Anvik River**	**8.67**	**359**	Pn			Pn	21 14 20.1	-1.0
PWL	**Port Wells**	**8.86**	**41**	Pn			Pn	21 14 22.5	-1.2
J18K	**Innoko River**	**9.02**	**10**	Pn			Pn	21 14 26.1	+0.2
KLU	**Klutina**	**10.17**	**42**				Pn	21 14 41.6	-0.1
DHY	**Denali Highway**	**10.71**	**33**	Pn			Pn	21 14 49.7	+0.6
RIDG	**Independent Ri**	**11.99**	**34**	Pn			Pn	21 15 05.7	-0.8
F20K	**Avaraart Lake**	**12.63**	**8**	Pn			Pn	21 15 14.9	-0.2
M29M	**Somme Creek**	**13.69**	**47**				Pn	21 15 29.5	-0.3
D20K	**Etivluk River**	**14.21**	**5**	Pn			Pn	21 15 35.9	-0.9
I27K	**Kandik River**	**14.27**	**32**	Pn			Pn	21 15 39.8	+2.1
E24K	**Your Creek**	**14.54**	**18**	Pn			Pn	21 15 39.5	-1.8
G26K	**Porcupine Rive**	**14.62**	**26**	Pn			Pn	21 15 40.2	-2.2
I28M	**Miner Creek**	**14.71**	**35**	Pn			Pn	21 15 41.9	-1.8
H27K	**Steamboat Moun**	**14.72**	**31**	Pn			Pn	21 15 41.5	-2.3
J30M	**Hart River**	**15.51**	**41**				Pn	21 15 55.8	+1.5
J30M				IAmb			IAmb	21 16 04.9	
	comp=Z,2.2nm,0.5s								
H29M	**Whitestone**	**15.70**	**34**	Pn			Pn	21 15 57.5	+1.0
H29M				IAmb			IAmb	21 16 04.0	
	comp=Z,5.8nm,1.4s								
I30M	**Mount Dempster**	**15.82**	**39**				Pn	21 15 58.8	+0.5
I30M				IAmb			IAmb	21 16 07.3	
	comp=Z,3.8nm,0.8s								
G29M	**Pine Creek**	**16.23**	**32**	Pn			Pn	21 16 03.2	-0.2
EPYK	**Eagle Plains**	**16.32**	**35**	Pn			Pn	21 16 05.4	+0.8
EPYK

YNR				IAML		21 23 30.3	
	comp=E,81nm,0.5s						
YNR				IAML		21 23 30.9	
	comp=N,63nm,0.9s						
OVMT	**Ovando**	**3.14**	**26**		Pn	21 22 38.1	+0.7
E09A	**Wood Farm, Sta**	**3.15**	**317**		Pn	21 22 38.4	+1.0
E09A				IAML		21 23 20.7	
	comp=N,56nm,0.5s						
E09A				IAML		21 23 21.6	
	comp=E,66nm,0.6s						
FBMT	**Ferry Basin**	**3.18**	**7**		Pn	21 22 39.2	+1.4
WVOR	**Wild Horse Val**	**3.21**	**237**		Pn	21 22 39.5	+1.2
WVOR				IAML		21 23 32.0	
	comp=E,33nm,1.4s						
AHID	**Auburn Hatcher**	**3.21**	**116**		Pn	21 22 40.1	+1.6
AHID				IAML		21 23 37.1	
	comp=E,38nm,0.7s						
AHID				IAML		21 23 41.1	
	comp=E,33nm,0.9s						
I07A	**Izee**	**3.24**	**268**		Pn	21 22 40.5	+1.8
I07A				IAML		21 23 38.8	
	comp=E,42nm,1.0s						
I07A				IAML		21 23 40.0	
	comp=N,30nm,1.1s						
LOHW	**Long Hollow**	**3.25**	**100**		Pn	21 22 41.8	+2.8
LYMT	**Lyon Mountain**	**3.32**	**34**		Pn	21 22 40.8	+1.0
YPT	**Yellepit**	**3.32**	**304**	Pn	Pn	21 22 40.8	+1.2
BHMT	**Big Hole Peak**	**3.33**	**360**		Pn	21 22 41.4	+1.5
SWMT	**Swartz Lake**	**3.33**	**12**		Pn	21 22 41.2	+1.3
SPUT	**South Promonto**	**3.50**	**146**	Pn	Pn	21 22 43.2	+0.9
SPUT				IAML		21 23 42.2	
	comp=N,30nm,0.7s						
SPUT				IAML		21 23 42.6	
	comp=E,34nm,1.3s						
ELK	**Elko**	**3.52**	**183**	Pn	Pn	21 22 42.7	+0.1
JTMT	**Jette**	**3.53**	**8**		Pn	21 22 44.0	+1.4
BGU	**Big Grassy Mou**	**3.64**	**156**		Pn	21 22 45.4	+1.2
BGU				IAML		21 23 47.7	
	comp=E,26nm,0.9s						
HWUT	**Hardware Ranch**	**3.67**	**135**		Pn	21 22 45.9	+1.3
HAWA	**Hanford**	**3.83**	**305**	Pn	Pn	21 22 48.0	+1.2
D08A	**Wollman Farm,**	**3.92**	**317**		Pn	21 22 49.5	+1.6
D08A				IAML		21 23 59.3	
	comp=N,22nm,0.7s						
D08A				IAML		21 24 02.9	
	comp=E,26nm,0.9s						
WAH2	**Wahluke Slope**	**4.06**	**310**		Pn	21 22 50.5	+0.7
GCMT	**Greycliff**	**4.09**	**66**		Pn	21 22 52.2	+1.8
E07A	**Sunnyside**	**4.11**	**306**	Pn	Pn	21 22 52.2	+1.7
E07A				IAML		21 23 43.6	
	comp=E,41nm,0.4s						
G06A	**Carlson Farm,**	**4.12**	**286**		Pn	21 22 52.0	+1.2
G06A				IAML		21 23 57.6	
	comp=N,21nm,0.9s						
RLMT	**Red Lodge**	**4.19**	**76**		Pn	21 22 52.8	+0.9
RLMT				IAML		21 24 07.5	
	comp=N,38nm,0.3s						
LDM	**Libby Dam**	**4.20**	**357**		Pn	21 22 53.3	+1.4
BW06	**Boulder Array**	**4.24**	**109**		Pn	21 22 53.8	+1.2
PD31	**Pinedale Array**	**4.24**	**109**		Pn	21 22 53.3	+0.8
PDAR	**Pinedale Array**	**4.24**	**109**		Pn	21 22 54.2	+1.7
NEW	**Newport**	**4.26**	**341**		Pn	21 22 53.7	+1.0
PINE	**Pine Mountain**	**4.30**	**266**		Pn	21 22 52.3	-1.0
PINE				IAML		21 24 23.0	
	comp=E,15nm,2.2s						
DUG	**Dugway, Tooele**	**4.38**	**157**		Pn	21 22 56.5	+2.2
DUG				IAML		21 24 13.9	
	comp=E,23nm,1.6s						
DUG				IAML		21 24 24.6	
	comp=E,17nm,1.1s						
EPH	**Ephrata**	**4.45**	**316**	Pn	Pn	21 22 56.2	+0.9
EPH				IAML		21 24 14.2	
	comp=E,20nm,1.2s						
EPH				IAML		21 24 15.5	
	comp=N,20nm,0.6s						
K05A	**Summer Lake**	**4.54**	**252**		Pn	21 22 57.9	+1.2
K05A				IAML		21 23 34.9	
	comp=N,13nm,2.9s						
K05A				IAML		21 25 37.7	
	comp=E,15nm,4.2s						
J05D	**Fort Rock, OR**	**4.61**	**260**	Pn	Pn	21 22 58.7	+1.2
J05D				IAML		21 23 54.9	
	comp=E,15nm,3.8s						
J05D				IAML		21 24 28.2	
	comp=N,14nm,2.7s						
NLU	**North Lily Min**	**4.82**	**152**	Pn	Pn	21 23 02.0	+1.5
NLU				IAML		21 24 24.8	
	comp=E,10nm,3.5s						
BSUT	**Blindstream Ca**	**4.87**	**138**		Pn	21 23 02.5	+1.1
BSUT				IAML		21 24 28.6	
	comp=E,9.5nm,2.1s						
BSUT				IAML		21 24 36.5	
	comp=N,8.9nm,4.6s						
LTY	**Liberty**	**4.97**	**309**		Pn	21 23 02.8	+0.5
LTY				IAML		21 24 03.8	
	comp=E,18nm,0.3s						
LTY				IAML		21 24 05.0	
	comp=N,14nm,0.5s						
B08A	**Colville Reser**	**5.08**	**325**		Pn	21 23 04.7	+0.9
B08A				IAML		21 24 35.1	
	comp=E,23nm,0.5s						
EGMT	**Eagleton**	**5.25**	**42**		Pn	21 23 07.6	+1.4
KVN	**Kaiserville**	**5.69**	**205**		Pn	21 23 13.7	+1.2

IDC ***22*** *21:21:55.2±3.7, 24.66N×95.26E, h70km±39km, mb3.5/4, mbtmp3.7/5, ML4.2/2, Error ellipse: s-maj=28.8km s-min=17.8km az=51.0*

NDI ***22*** *21:21:57.7±1.3, 24.82N×95.28E, h115km±11km, ML3.5, MW3.6, Presumed earthquake*

ISC 22 21:21:58.0±1.1,**24.60N**±0.08×**95.08E**±0.08,**h100**km,**n14,** σ1§**97**/19,**mb3.8**/4,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.06**	**283**	*eP*	**Pn**	**21 22 22.3**	**+3.2**
IMP				*eS*	**Sn**	**21 22 38.1**	**+3.0**
IMP				IAML		21 22 42.7	
	comp=E,431nm,0.2s						
KOHI	**KOHIMA**	**1.42**	**322**	*eP*	**Pn**	**21 22 25.4**	**+1.9**
KOHI				*eS*	**Sn**	**21 22 44.5**	**+1.8**
KOHI				IAML		21 22 46.0	
	comp=E,356nm,0.4s						
KOHI				IAML		21 22 46.1	
	comp=N,240nm,0.6s						
LKP	**Lekhapani**	**2.81**	**14**	*eP*	Pn	21 22 28.1	-13
LKP				*eS*	Sn	21 22 57.7	-17
LKP				IAML		21 23 01.9	
	comp=E,318nm,0.2s						
LKP				IAML		21 23 03.5	
	comp=N,341nm,0.0s						
SHL	**Shillong**	**3.06**	**289**	*eP*	**Pn**	**21 22 45.4**	**+0.8**
SHL				*eS*	**Sn**	**21 23 19.2**	**-1.4**
GUWA	**GUWAHATI**	**3.45**	**298**	*eP*	**Pn**	**21 22 50.2**	**+0.4**
GUWA				*eS*	**Sn**	**21 23 28.9**	**-0.9**
GUWA				IAML		21 23 29.2	
	comp=E,151nm,0.1s						
BRDH	**Bariadhala**	**3.69**	**239**	P	Pn	21 22 50.9	-2.1
	comp=E,66nm,0.3s,baz=95,slow=19,SNR=2.1						
BRDH				S	**Sn**	**21 23 37.0**	**+1.5**
	comp=E,140nm,0.3s,baz=239,slow=22,SNR=11						
TAWA	**Tawang**	**4.16**	**317**	*eP*	**Pn**	**21 23 01.1**	**+1.5**
TAWA				*eS*	**Sn**	**21 23 45.7**	**-1.6**
TAWA				IAML		21 23 48.6	
	comp=E,478nm,0.2s						
TAWA				IAML		21 23 48.7	
	comp=N,504nm,0.2s						
DHUB	**DHUBRI**	**4.82**	**288**	*eP*	**Pn**	**21 23 08.5**	**+0.4**
DHUB				*eS*	**Sn**	**21 24 01.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**7.09**	**149**	P	**Pn**	**21 23 36.4**	**-2.8**
	comp=N,0.5nm,0.3s,baz=326,slow=13,SNR=7.8 comp=N,0.6nm,0.3s						
BOK	**Bokaro**	**8.43**	**266**	*eS*	**Sn**	**21 25 27.8**	**-3.2**
MKAR	**Makanchi Array**	**24.40**	**338**	P	**P**	**21 27 08.2**	**+1.3**
	comp=N,2.6nm,0.6s,baz=149,slow=10,SNR=33 comp=N,2.6nm,0.6s						
KURBB	**Kurchatov Arra**	**28.97**	**338**	P	**P**	**21 27 45.9**	**-1.9**
	comp=N,0.2nm,0.3s,baz=165,slow=7.5,SNR=1.6 comp=N,0.2nm,0.3s						
WRA	**Warramunga Arr**	**58.48**	**136**	P	**P**	**21 31 43.8**	**-0.1**
	comp=N,0.5nm,0.4s,baz=322,slow=7.4,SNR=18 comp=N,0.5nm,0.4s						
ASAR	**Alice Springs**	**60.98**	**139**	P	**P**	**21 32 00.9**	**0.0**
	comp=N,0.5nm,0.6s,baz=319,slow=6.5,SNR=9.2 comp=N,0.5nm,0.6s						

UPP ***22*** *21:28:19.3±0.3, 67.85N×20.22E, h1km±2km, ML1.8, Confirmed Induced event*

HEL ***22*** *21:28:19.4±0.3, 67.84N×20.20E, h0km, ML1.6, Suspected explosion*

IDC ***22*** *21:28:20.3±1.1, 67.78N×20.85E, h0km, mbtmp3.1/4, ML1.9/4, Error ellipse: s-maj=22.0km s-min=7.4km az=122.0*

ISC 22 21:28:19.5±0.8,**67.83N**±0.03×**20.25E**±0.02,**h0**km,**n26,** σ1§**09**/42,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**15**	P	**Pg**	**21 28 21.7**	**-0.2**
KUA				S	**Sg**	**21 28 23.5**	**-0.1**
RATU	**Laukkuluspa**	**0.25**	**269**	P	**Pg**	**21 28 24.0**	**-0.3**
RATU				S	**Sg**	**21 28 27.4**	**-0.1**
NIKU	**Nikkaluokta**	**0.46**	**275**	P	**Pg**	**21 28 27.8**	**-0.5**
NIKU				S	**Sg**	**21 28 34.1**	**-0.2**
LANU	**Lannavaara**	**0.69**	**71**	*eP*	**Pg**	**21 28 32.6**	**-0.2**
LANU	**Lannavaara**	**0.69**	**71**	P	**Pg**	**21 28 32.5**	**-0.2**
LANU				S	**Sg**	**21 28 42.1**	**+0.4**
LANU	**Lannavaara**	**0.69**	**71**	PB	**Pg**	**21 28 32.5**	**-0.2**
LANU				SG	**Sg**	**21 28 41.8**	**+0.1**
DUNU	**Dundret**	**0.72**	**170**	P	**Pg**	**21 28 33.0**	**-0.2**
DUNU				S	**Sg**	**21 28 43.3**	**+0.7**
MASU	**Masugnsbyn**	**0.77**	**118**	P	**Pg**	**21 28 34.1**	**0.0**
MASU				S	**Sg**	**21 28 44.9**	**+0.9**
SALU	**Saltoluokta**	**0.81**	**237**	*eP*	**Pg**	**21 28 34.4**	**-0.5**
SALU	**Saltoluokta**	**0.81**	**237**	P	**Pg**	**21 28 34.4**	**-0.5**
HEF	**Hetta**	**1.40**	**64**	smax	smax	21 29 01.9	
	comp=Z,4.8nm,0.2s						
HEF				SG	**Sg**	**21 29 03.0**	**-1.5**
ERTU	**Ertsjaerv**	**1.49**	**149**	P	**Pn**	**21 28 46.7**	**-0.7**
ERTU	**Ertsjaerv**	**1.49**	**149**	PG	**Pn**	**21 28 46.5**	**-0.9**
ERTU				SN	**Sb**	**21 29 07.5**	**+0.1**
KLF	**Kolari**	**1.55**	**111**	PG	**Pn**	**21 28 47.7**	**-0.5**
KLF				smax	smax	21 29 06.3	
	comp=Z,5.3nm,0.2s						
KLF				SN	**Sg**	**21 29 09.6**	**+0.5**
KTK1	**Kautokeino**	**1.62**	**42**	PN	**Pn**	**21 28 48.7**	**-0.5**
KTK1				SN	**Sg**	**21 29 12.4**	**+0.9**
HARU	**Harads**	**1.70**	**170**	P	**Pn**	**21 28 50.2**	**-0.1**
TRO	**Tromso**	**1.88**	**346**	PG	**Pn**	**21 28 53.0**	**+0.3**
TRO				SN	**Sn**	**21 29 16.8**	**-0.2**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pn**	**21 29 03.3**	**+0.9**
	baz=227						
ARA0				SG	**Sn**	**21 29 36.5**	**+2.3**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn	**Pn**	**21 29 02.6**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=225,slow=16,SNR=27						
ARCES				Lg	Lg	21 29 36.5	
	comp=Z,2.0nm,0.3s,baz=229,slow=25,SNR=20 comp=Z,1.5nm,0.3s						
KEV	**Kevo**	**3.13**	**49**	PB	**Pn**	**21 29 10.8**	**+0.9**
KEV				SN	**Sn**	**21 29 48.5**	**+0.6**
BURU	**Burvik**	**3.29**	**172**	PN	**Pn**	**21 29 14.2**	**+2.0**
BURU				SB	**Sb**	**21 29 56.6**	**-2.6**
UMAU	**Umeaa**	**3.97**	**177**	PN	**Pn**	**21 29 23.7**	**+2.3**
	baz=357						
UMAU				SN	**Sn**	**21 30 09.9**	**+1.3**
KU6	**Riekki**	**4.20**	**111**	PN	**Pn**	**21 29 25.6**	**+0.9**
	baz=302						
KU6				SG	**Sg**	**21 30 31.2**	**-3.2**
FINES	**FINESS Array B**	**6.88**	**156**	Pn	**Pn**	**21 30 00.8**	**-0.7**
	baz=350,slow=13,SNR=1.6						
FINES				Lg	Lg	21 31 52.1	
	comp=Z,0.2nm,0.3s,baz=348,slow=26,SNR=5.8 comp=Z,3.6nm,1.1s						
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**21 30 15.9**	**+1.1**
	baz=14,slow=13,SNR=1.6						
NOA				Lg	Lg	21 32 25.8	
	baz=315,slow=4.4,SNR=3.5 comp=Z,0.7nm,0.7s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**21 30 19.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=22,slow=12,SNR=1.4 comp=Z,1.9nm,0.9s						

GFZ ***22*** *21:39:55.8, 55.34N×159.53W, h52km, Mw5.5/32, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.46; Mθθ-1.73; Mφφ0.27; Mrθ1.03; Mθφ-0.27; Mφr0.60; Fault plane solution: M₀2.02506×10¹⁷ NP1:φs67.92930°, δ63.73856°, λ74.97465°. NP2:φs279.17243°, δ29.98865°, λ117.71901°. Principal axes: T 1.9197, Plg67.7158°, Azm309.0200°; N 0.1963, Plg13.4436°, Azm74.7025°; P -2.1161, Plg17.4318°, Azm169.0069°;*

BJI ***22*** *21:39:57.5, 55.46N×160.08W, h28km, mB5.8/38, mb5.7/89, Ms5.3/63, Ms7 5.2/62*

MOS ***22*** *21:39:57.1±0.8, 55.35N×159.37W, h40km, mb6.0/132, MS5.0/52, Error ellipse: s-maj=7.2km s-min=5.2km az=95.7*

NEIC ***22*** *21:39:58.6, 55.25N×159.32W, h36km*

NEIC ***22*** *21:39:58.5±1.6, 55.25N±0.05×159.34W±0.08, h36km±4km, mb5.7/254, ML5.6/34, Ms_20 5.1/214, Mwr5.5/79, Mww5.5/50, ML5.5(AEIC), Error ellipse: s-maj=7.9km s-min=4.6km az=138.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.68; Mθθ-0.52; Mφφ-0.16; Mrθ1.89; Mθφ-0.42; Mφr0.89; Fault plane solution: M₀2.22000×10¹⁷ NP1:φs226.09000°, δ10.16000°, λ71.89000°. NP2:φs64.46000°, δ80.35000°, λ93.19000°. Principal axes: T 2.1634, Plg55.0000°, Azm338.0000°; N 0.1020, Plg3.0000°, Azm244.0000°; P -2.2654, Plg35.0000°, Azm152.0000°;*

AEIC ***22*** *21:39:58.8±1.8, 55.20N±0.05×159.26W±0.07, h37km±4km Error ellipse: s-maj=8.2km s-min=4.8km az=144.0*

PTWC ***22*** *21:39:58, 55.20N×159.20W, h18km, Mwp5.6/6*

ANF ***22*** *21:39:59.2±0.5, 55.26N×159.21W, h25km±8km, ML5.9/24, Error ellipse: s-maj=5.1km s-min=2.4km az=27.0*

GFZ ***22*** *21:39:59.7±0.2, 55°N±2°×15°9W±°, h38km±2km, M5.8/272, mb5.7/272, mB6.1/227, Mw(mB)5.8/227, Error ellipse: s-maj=5.0km s-min=3.2km az=169.1, confirmed*

NEIC ***22*** *21:39:59.1, 55.22N×159.31W, h39km*

IDC ***22*** *21:39:59.5±1.1, 55.41N×159.47W, h40km±8km, mb5.2/44, mbtmp5.4/49, ML4.4/6, MS4.9/77, Error ellipse: s-maj=10.1km s-min=6.5km az=1.0*

GCMT ***22*** *21:40:01.5±0.3, 55.09N±0.02×159.18W±0.03, h52km±1km, MW5.6/111, Moment Tensor Solution. s69,c86; s111,c166; Duration: 1s6 Moment tensor: Scale 10¹⁷ Nm; Mrr3.09±.17; Mθθ-1.83±.12; Mφφ-1.26±.12; Mrθ1.67±.09; Mθφ-1.54±.06; Mφr0.89±.07; Best double couple: M₀3.63300×10¹⁷ NP1:φs224.00000°, δ30.00000°, λ80.00000°. NP2:φs56.00000°, δ61.00000°, λ96.00000°. Principal axes: T 3.6400, Plg74.0000°, Azm341.0000°; N -0.0130, Plg5.0000°, Azm233.0000°; P -3.6270, Plg16.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *21:40:05, 55.25N×159.32W, h36km, Moment Tensor Solution. Duration: 3s0 Moment tensor: Scale 10¹⁷Nm; Mrr1.36; Mθθ-0.85; Mφφ-0.51; Mrθ1.81; Mθφ-0.63; Mφr0.88; Fault plane solution: M₀4.42000×10¹⁷ NP1: φs224.15000°, δ17.52000°, λ72.81000°. NP2:φs62.12000°, δ73.29000°, λ95.33000°. Principal axes: T 2.4483, Plg61.0000°, Azm340.0000°; N -0.0613, Plg5.0000°, Azm241.0000°; P -2.3870, Plg28.0000°, Azm148.0000°;*

BGR ***22*** *21:40:05.9, 56.23N×159.77W, h33km, mb5.9, mB_BB6.1, Ms4.8*

ISC 22 21:39:58.4±0.2,**55.22N**±0.03×**159.28W**±0.02,**h36**km±1km, **h37**km:**pP-P,n2069,**σ1§**18**/2156,**mb5.8**/538,**MS5.1**/227, **235C-31D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.43**	**205**	P	**Pn**	**21 40 08.7**	**+0.9**
CHNA	**Chernabura Isl**	**0.43**	**205**	S	**Sn**	**21 40 15.4**	**+0.8**
CHNA	**Chernabura Isl**	**0.43**	**205**	P	**Pn**	**21 40 08.7**	**+0.9**
CHNA	**Chernabura Isl**	**0.43**	**205**	P	**Pn**	**21 40 08.7**	**+0.9**
	baz=22,SNR=1000						
CHNA				S	**Sn**	**21 40 15.8**	**+1.2**
	baz=22						
CNBA	**Chernabura Isl**	**0.44**	**204**		**Pn**	**21 40 08.4**	**+0.5**
CNBA					**Sn**	**21 40 15.3**	**+0.5**
SDPT	**Sand Point**	**0.70**	**281**	P	**Pn**	**21 40 12.7**	**+1.0**
SDPT	**Sand Point**	**0.70**	**281**	S	**Sn**	**21 40 22.6**	**+1.4**
SDPT	**Sand Point**	**0.70**	**281**		**Pn**	**21 40 12.6**	**+0.9**
SDPT					**Sn**	**21 40 20.1**	**-1.1**
SDPT				IAML		21 40 23.4	
	comp=N,223μm,1.9s						
SDPT	**Sand Point**	**0.70**	**281**	P	**Pn**	**21 40 12.6**	**+0.9**
SDPT	**Sand Point**	**0.70**	**281**	P	**Pn**	**21 40 12.8**	**+1.1**
	baz=100,SNR=1000						
SDPT				S	**Sn**	**21 40 22.0**	**+0.7**
	baz=100						
S14K	**Fog Glacier**	**1.08**	**352**	P	**Pn**	**21 40 19.5**	**+2.5**
	baz=172,SNR=1000						
VNFG	**Fog Glacier, M**	**1.08**	**352**		**Pn**	**21 40 19.3**	**+2.3**
VNFG					Sn	**21 40 30.7**	**0.0**
CHGN	**Chignik**	**1.19**	**24**		**Pn**	**21 40 19.7**	**+1.3**
CHGN					Sn	**21 40 33.8**	**+0.6**
CHGN				IAML		21 40 37.3	
	comp=E,221μm,1.1s						
CHGN				IAML		21 40 38.2	
	comp=N,136μm,1.0s						
CHGN	**Chignik**	**1.19**	**24**	P	**Pn**	**21 40 19.9**	**+1.5**
CHGN				S	**Sn**	**21 40 35.2**	**+1.9**
CHGN	**Chignik**	**1.19**	**24**	P	**Pn**	**21 40 19.7**	**+1.3**
	baz=205,SNR=1000						
CHGN				S	**Sn**	**21 40 35.0**	**+1.7**
	baz=205						
CHIR	**Chirikof Islan**	**2.16**	**72**	P	**Pn**	**21 40 33.5**	**+1.6**
CHIR	**Chirikof Islan**	**2.16**	**72**	S	**Sn**	**21 41 00.4**	**+3.1**
CHIR	**Chirikof Islan**	**2.16**	**72**		**Pn**	**21 40 33.2**	**+1.5**
CHIR				IAML		21 41 10.5	
	comp=E,55μm,0.7s						
CHIR				IAML		21 41 12.5	
	comp=N,50μm,1.6s						
CHIR	**Chirikof Islan**	**2.16**	**72**	P	**Pn**	**21 40 33.4**	**+1.6**
CHIR	**Chirikof Islan**	**2.16**	**72**	P	**Pn**	**21 40 33.3**	**+1.5**
	baz=256,SNR=49						
CHIR				S	**Sn**	**21 40 58.4**	**+1.1**
	baz=256						
R17L	**Mt. Peulik Vol**	**2.91**	**33**	P	**Pn**	**21 40 44.6**	**+2.5**
	baz=215						
R17L				S	**Sn**	**21 41 16.9**	**+1.1**
	baz=215						
SII	**Sitkinak Islan**	**3.17**	**63**	P	**Pn**	**21 40 47.4**	**+1.8**
SII	**Sitkinak Islan**	**3.17**	**63**	S	**Sn**	**21 41 25.2**	**+3.1**
SII	**Sitkinak Islan**	**3.17**	**63**		**Pn**	**21 40 46.7**	**+1.1**
SII	**Sitkinak Islan**	**3.17**	**63**	P	**Pn**	**21 40 47.0**	**+1.4**
	baz=247,SNR=33						
Q17K	**Contact Creek**	**3.58**	**30**	P	**Pn**	**21 40 53.1**	**+1.8**
	baz=213						
Q17K				S	**Sn**	**21 41 33.7**	**+1.4**
	baz=213						
Q16K	**King Salmon**	**3.75**	**21**	P	**Pn**	**21 40 55.7**	**+2.2**
	baz=204,SNR=365						
Q16K				S	**Sn**	**21 41 38.0**	**+1.6**
	baz=204						
P16K	**Nushagak River**	**3.88**	**10**		**Pn**	**21 40 57.5**	**+2.1**
P16K	**Nushagak River**	**3.88**	**10**	P	**Pn**	**21 40 57.5**	**+2.1**
	baz=191						
OHAK	**Old Harbor**	**3.90**	**57**	P	**Pn**	**21 40 56.5**	**+0.9**
OHAK	**Old Harbor**	**3.90**	**57**	S	**Sn**	**21 41 43.6**	**+3.5**
OHAK	**Old Harbor**	**3.90**	**57**		**Pn**	**21 40 56.3**	**+0.6**
OHAK				IAML		21 42 08.1	
	comp=E,9μm,1.2s						
OHAK				IAML		21 42 11.4	
	comp=N,8μm,1.9s						
OHAK	**Old Harbor**	**3.90**	**57**	P	**Pn**	**21 40 56.1**	**+0.5**
OHAK	**Old Harbor**	**3.90**	**57**	P	**Pn**	**21 40 56.5**	**+0.9**
	baz=242,SNR=32						
AKUT	**Akutan**	**3.92**	**257**	P	**Pn**	**21 40 58.1**	**+2.1**
AKUT	**Akutan**	**3.92**	**257**	S	**Sn**	**21 41 41.4**	**+0.7**
AKUT	**Akutan**	**3.92**	**257**		**Pn**	**21 40 58.1**	**+2.1**
AKUT				IAML		21 42 06.0	
	comp=N,9μm,1.7s						
AKUT				IAML		21 42 08.0	
	comp=E,7μm,1.2s						
AKUT	**Akutan**	**3.92**	**257**	P	**Pn**	**21 40 58.8**	**+2.9**
O15K	**Ungalikthiuk R**	**3.98**	**356**		**Pn**	**21 40 58.2**	**+1.5**
O15K	**Ungalikthiuk R**	**3.98**	**356**	P	**Pn**	**21 40 58.5**	**+1.8**
	baz=176,SNR=471						
O15K				S	**Sn**	**21 41 43.4**	**+1.4**
	baz=176						
LVA	**Lava Point**	**4.06**	**258**		**Pn**	**21 41 00.2**	**+2.3**
LVA				IAML		21 42 06.9	
	comp=E,6μm,0.7s						
LVA				IAML		21 42 08.5	
	comp=N,12μm,1.3s						
O14K	**Tigyukauivet M**	**4.18**	**346**		**Pn**	**21 41 00.9**	**+1.4**
O14K				IAML		21 42 20.3	
	comp=E,5μm,1.4s						
O14K				IAML		21 42 27.7	
	comp=N,6μm,0.9s						
O14K	**Tigyukauivet M**	**4.18**	**346**	P	**Pn**	**21 41 01.4**	**+1.9**
	baz=164,SNR=1000						
P17K	**Kvichak River**	**4.27**	**20**		**Pn**	**21 41 02.9**	**+2.1**
P17K	**Kvichak River**	**4.27**	**20**	P	**Pn**	**21 41 02.6**	**+1.9**
	baz=203						
UNV	**Unalaska Valle**	**4.43**	**255**	P	**Pn**	**21 41 05.1**	**+2.2**
UNV	**Unalaska Valle**	**4.43**	**255**	S	**Sn**	**21 41 53.8**	**+0.7**
UNV	**Unalaska Valle**	**4.43**	**255**		**Pn**	**21 41 04.8**	**+2.0**
UNV	**Unalaska Valle**	**4.43**	**255**	P	**Pn**	**21 41 04.9**	**+2.0**
UNV	**Unalaska Valle**	**4.43**	**255**	P	**Pn**	**21 41 04.7**	**+1.8**
	baz=69						
O16K	**Kokwok River B**	**4.43**	**8**		**Pn**	**21 41 04.6**	**+1.7**
O16K				IAML		21 42 29.9	
	comp=E,5μm,1.2s						
O16K	**Kokwok River B**	**4.43**	**8**	P	**Pn**	**21 41 04.7**	**+1.8**
	baz=189,SNR=563						
KDAK	**Kodiak Island**	**4.51**	**53**	P	**Pn**	**21 41 04.7**	**+0.7**
	comp=E,21nm,0.3s,baz=207,slow=2.6,SNR=153						
KDAK				S	**Sn**	**21 41 53.6**	**-1.5**
	comp=E,739nm,0.5s,baz=19,slow=18,SNR=6.7						
KDAK				LR	LR	21 43 11.1	
	comp=E,26μm,19.7s,baz=226,slow=43 comp=E,153nm,0.3s						
KDAK	**Kodiak Island**	**4.51**	**53**		**Pn**	**21 41 04.4**	**+0.4**
KDAK				IAML		21 42 23.0	
	comp=E,8μm,0.8s						
KDAK				IAML		21 42 26.5	
	comp=E,8μm,1.1s						
KDAK	**Kodiak Island**	**4.51**	**53**	P	**Pn**	**21 41 04.8**	**+0.7**
	baz=238						
KDAK	**Kodiak Island**	**4.51**	**53**	P	**Pn**	**21 41 04.9**	**+0.9**
O17K	**Koliganek Bris**	**4.71**	**14**	P	**Pn**	**21 41 08.7**	**+1.9**
	baz=196						
P18K	**Big Mountain,**	**4.72**	**26**	P	**Pn**	**21 41 09.0**	**+2.0**
	baz=210						
P18K				S	**Sn**	**21 42 01.2**	**+0.7**
	baz=210						
N14K	**Kuskokwak Cree**	**4.89**	**346**	P	**Pn**	**21 41 11.3**	**+2.1**
	baz=164,SNR=900						
N15K	**Kwethluk River**	**4.98**	**355**	P	**Pn**	**21 41 12.6**	**+2.1**
	baz=175,SNR=1000						
N15K				S	**Sn**	**21 42 09.6**	**+2.9**
	baz=175						
O18K	**Koktu

baz=200,SNR=291
M16K Timber Creek 5.82 2 Pn 21 41 24.5 +2.5
M16K Timber Creek 5.82 2 P Pn 21 41 24.3 +2.3
baz=182,SNR=1000
O20K Slope Mountain 6.04 34 P Pn 21 41 27.5 +2.4
baz=219
HOM Homer 6.06 40 Pn 21 41 28.0 +2.6
HOM Homer 6.06 40 P Pn 21 41 27.6 +2.3
baz=226,SNR=40
N19K Bonanza Creek 6.16 22 P Pn 21 41 29.4 +2.7
baz=207,SNR=615
M17K Holitna River 6.27 8 Pn 21 41 30.5 +2.3
M17K Holitna River 6.27 8 P Pn 21 41 29.9 +1.7
baz=190,SNR=554
M11K Mekoryuk 6.36 327 P Pn 21 41 31.2 +1.9
baz=142,SNR=168
L14K Kuka Creek 6.39 345 P Pn 21 41 31.5 +1.6
baz=162
SPIA Saint Paul Isl 6.43 292 P Pn 21 41 32.1 +1.8
SPIA Saint Paul Isl 6.43 292 S Sn 21 42 44.0 +1.7
SPIA Saint Paul Isl 6.43 292 Pn 21 41 31.7 +1.4
SPIA Saint Paul Isl 6.43 292 P Pn 21 41 32.3 +2.0
SPIA Saint Paul Isl 6.43 292 P Pn 21 41 32.1 +1.8
baz=103,SNR=52
BRSE Bradley Lake S 6.46 42 P Pn 21 41 31.3 +0.5
baz=229,SNR=56
BRSE S Sn 21 42 43.5 +0.4
baz=229
L16K Owhat River 6.51 359 P Pn 21 41 33.1 +1.7
baz=179,SNR=1000
L16K S Sn 21 42 46.0 +1.7
baz=179
M18K Stony River 6.54 15 P Pn 21 41 33.6 +1.7
baz=198,SNR=1000
M18K S Sn 21 42 45.5 +0.3
baz=198
L15K Ungalak Mounta 6.58 351 P Pn 21 41 33.4 +1.0
baz=169,SNR=529
L17K Donlin 6.95 4 P Pn 21 41 39.0 +1.5
baz=185
L17K S Sn 21 42 55.9 +0.6
baz=185
CAPN Captain Cook N 7.04 34 P Pn 21 41 41.4 +2.7
baz=221
L18K Granite Mounta 7.15 10 P Pn 21 41 41.8 +1.6
baz=192,SNR=312
L18K S Sn 21 43 00.1 +0.1
baz=192
SLKM Skilak Lake 7.17 39 P Pn 21 41 39.7 -0.8
M19K Big River Lodg 7.17 19 P Pn 21 41 42.9 +2.4
baz=203
M19K S Sn 21 43 02.2 +1.6
baz=203
SEW Seward 7.19 43 P Pn 21 41 41.4 +0.6
baz=231,SNR=49
K15K Wolf Creek Mou 7.19 352 P Pn 21 41 42.5 +1.8
baz=170,SNR=1000
K15K S Sn 21 43 01.9 +0.8
baz=170
K13K Kusilvak Mount 7.29 340 P Pn 21 41 43.9 +1.7
baz=155,SNR=1000
K13K S Sn 21 43 03.7 +0.2
baz=155
O22K Cooper Landing 7.33 40 S Sn 21 43 06.7 +2.2
baz=228
L19K White Mountain 7.35 16 P Pn 21 41 45.1 +2.1
baz=200,SNR=778
L19K S Sn 21 43 05.7 +0.7
baz=200
M20K Styx River 7.41 23 P Pn 21 41 46.9 +3.0
baz=208,SNR=469
K17K Iditarod 7.54 3 P Pn 21 41 47.3 +1.8
baz=184,SNR=996
K17K S Sn 21 43 11.1 +1.5
baz=184
RC01 Rabbit Creek A 7.75 37 P Pn 21 41 50.2 +1.8
baz=225,SNR=56
RC01 S Sn 21 43 15.2 +0.5
baz=225
J14K Nanvaranak Lak 7.87 345 Pn 21 41 51.3 +1.3
J14K Nanvaranak Lak 7.87 345 P Pn 21 41 51.3 +1.3
baz=162,SNR=308
J14K S Sn 21 43 18.5 +0.9
baz=162
SKT Skwentna 7.89 28 P Pn 21 41 52.1 +1.7
baz=214,SNR=268
P23K Montague Islan 7.97 48 Pn 21 41 52.6 +1.1
P23K Montague Islan 7.97 48 P Pn 21 41 52.3 +0.8
baz=238,SNR=40
P23K S Sn 21 43 20.0 -0.2
baz=238
PWL Port Wells 8.10 41 P Pn 21 41 54.0 +0.8
baz=231,SNR=139
PWL S Sn 21 43 23.4 0.0
baz=231
M22K Willow 8.11 32 P Pn 21 41 54.1 +0.7
baz=220,SNR=28
M22K S Sn 21 43 24.8 +1.2
baz=220
J16K Anvik River 8.12 356 P Pn 21 41 55.4 +1.9
baz=175,SNR=1000
J16K S Sn 21 43 24.8 +1.0
baz=175
Q23K Middleton Isla 8.16 54 P Pn 21 41 54.6 +0.5
baz=245
MID Middleton Isla 8.17 54 Pn 21 41 55.0 +0.8
J17K VABM Dome 8.20 1 P Pn 21 41 55.6 +1.0
baz=181,SNR=346
PMR Palmer 8.31 36 P Pn 21 41 58.6 +2.5
PMR Palmer 8.31 36 P Pn 21 41 56.0 -0.1
baz=224,SNR=28
PMR S Sn 21 43 27.4 -1.2
baz=224
J18K Innoko River 8.37 8 P Pn 21 41 58.4 +1.4
baz=190,SNR=602
KNK Knik Glacier 8.42 38 P Pn 21 41 58.2 +0.6
baz=227,SNR=67
KNK S Sn 21 43 29.9 -1.4
baz=227
PPLA Purkeypile 8.52 22 P Pn 21 42 02.1 +3.0
PPLA Purkeypile 8.52 22 P Pn 21 42 01.9 +2.8
baz=209,SNR=492
L22K Petersville 8.54 28 P Pn 21 42 00.3 +0.9
baz=215,SNR=211
CUT Chulitna 8.58 29 P Pn 21 41 60.0 +0.2
baz=217,SNR=24
K20K Telida 8.58 16 P Pn 21 42 01.4 +1.5
baz=200
GLI Glacier Island 8.59 44 P Pn 21 42 00.1 +0.2
baz=234,SNR=80
I17K Unalakleet 8.72 356 Pn 21 42 03.5 +1.8
I17K Unalakleet 8.72 356 P Pn 21 42 03.8 +2.1
baz=175,SNR=1000
I17K S Sn 21 43 39.1 +0.5
baz=175
SML Sawmill 8.73 36 P Pn 21 42 01.4 -0.6
baz=226,SNR=61
SML S Sn 21 43 40.7 +1.7
baz=226
M23K Glacier View 8.93 38 P Pn 21 42 04.6 -0.1
baz=228,SNR=117
EYAK Cordova Ski Ar 8.96 48 P Pn 21 42 06.0 +1.0
EYAK Cordova Ski Ar 8.96 48 P Pn 21 42 05.0 0.0
baz=239,SNR=37
EYAK S Sn 21 43 43.8 -0.7
baz=239
J19K Poorman 8.99 10 P Pn 21 42 07.4 +1.9
baz=194,SNR=543
CAST Castle Rocks 9.00 21 P Pn 21 42 07.7 +2.1
baz=207,SNR=393
SCM Sheep Creek Mo 9.10 38 P Pn 21 42 07.5 +0.5
baz=229,SNR=226
SCM S Sn 21 43 48.4 +0.3
baz=229
KAIM Kayak Island 9.26 53 Pn 21 42 10.6 +1.4
KAIM Kayak Island 9.26 53 P Pn 21 42 10.2 +1.1
baz=246,SNR=84
KAIM S Sn 21 43 51.7 -0.3
baz=246
ATKA Atka Island 9.35 257 P Pn 21 42 11.6 +1.3
ATKA Atka Island 9.35 257 Pn 21 42 11.3 +1.0
J20K Nowinta River 9.35 14 P Pn 21 42 12.0 +1.7
baz=198,SNR=100
CHUM Lake Minchumin 9.37 19 P Pn 21 42 12.7 +2.1
baz=205,SNR=150
KLU Klutina 9.41 43 P Pn 21 42 11.3 0.0
baz=234,SNR=650
KLU S Sn 21 43 55.6 -0.1
baz=234
WAT1 Susitna Watana 9.41 32 P Pn 21 42 10.0 -1.2
baz=221
WAT1 S Sn 21 43 55.5 -0.2
baz=221
TRF Thorofare Moun 9.43 25 P Pn 21 42 12.3 +0.6
TRF Thorofare Moun 9.43 25 P Pn 21 42 10.7 -1.0
baz=213,SNR=259
WAT6 Susitna Watana 9.48 34 P Pn 21 42 10.8 -1.5
baz=224,SNR=169
H16K Elim 9.56 352 P Pn 21 42 14.6 +1.4
baz=170,SNR=194
GCSA Galena City Sc 9.63 6 P Pn 21 42 16.1 +1.9
baz=188,SNR=112
BMRM Bremner River 9.66 47 P Pn 21 42 15.1 +0.5
BMRM Bremner River 9.66 47 P Pn 21 42 14.8 +0.2
baz=240,SNR=41
M24K Tolsona, Glenn 9.69 39 P Pn 21 42 15.8 +0.7
baz=230,SNR=123
H17K Granite Mounta 9.75 358 P Pn 21 42 17.8 +1.9
baz=178,SNR=577
H17K S Sn 21 44 05.9 +1.9
baz=178
ANM Nome 9.85 344 P Pn 21 42 19.1 +1.8
ANM Nome 9.85 344 P Pn 21 42 18.6 +1.4
baz=159,SNR=51
I20K Naaghedeneel 9.90 12 Pn 21 42 19.9 +2.1
I20K Naaghedeneel 9.90 12 P Pn 21 42 19.9 +2.1
baz=196,SNR=82
DHY Denali Highway 9.95 33 P Pn 21 42 17.4 -1.4
baz=223,SNR=70
H18K Honhosa River 9.97 2 P Pn 21 42 20.6 +1.7
baz=183,SNR=163
MCK McKinley 10.01 27 P Pn 21 42 18.0 -1.4
baz=216,SNR=42
G15K Niukluk 10.09 348 P Pn 21 42 21.9 +1.5
baz=164
CRQM Cirque 10.19 50 Pn 21 42 22.8 +0.7
CRQE Cirque 10.21 51 P Pn 21 42 22.5 +0.2
baz=244,SNR=26
BWN Browne 10.24 25 Pn 21 42 23.5 +1.0
HARP HAARP 10.25 40 Pn 21 42 23.3 +0.6
HARP HAARP 10.25 40 P Pn 21 42 23.2 +0.6
baz=232,SNR=48
G16K Koyuk River 10.32 353 P Pn 21 42 25.5 +1.9
baz=170,SNR=187
G17K Kiwalik Mounta 10.34 357 P Pn 21 42 25.7 +1.9
baz=176,SNR=296
H19K Roundabout Mou 10.43 7 Pn 21 42 26.8 +1.6
H19K Roundabout Mou 10.43 7 P Pn 21 42 27.0 +1.8
baz=189,SNR=665
PAX Paxson 10.50 37 P Pn 21 42 26.5 +0.2
baz=229,SNR=279
H20K Anotleneega Mo 10.53 10 P Pn 21 42 28.0 +1.5
baz=194,SNR=1000
MCARA McCarthy VSAT 10.53 48 P Pn 21 42 27.0 +0.5
baz=241,SNR=34
I21K Tanana 10.62 17 P Pn 21 42 29.3 +1.6
baz=203,SNR=139
GAMB Gambell 10.63 329 Pn 21 42 28.7 +0.9
GAMB Gambell 10.63 329 P Pn 21 42 28.8 +1.0
baz=138,SNR=27
NEA2 Nenana 10.69 24 P Pn 21 42 27.4 -1.2
baz=213,SNR=59
MLY Manley 10.71 20 P Pn 21 42 29.8 +0.8
baz=207,SNR=560
G18K Tagagawik 10.71 1 P Pn 21 42 30.9 +1.9
baz=182,SNR=162
F15K North Star Dit 10.84 348 Pn 21 42 32.2 +1.4
F15K North Star Dit 10.84 348 P Pn 21 42 32.6 +1.8
baz=164,SNR=110
F14K Arctic Creek 10.85 344 P Pn 21 42 32.9 +2.0
baz=158,SNR=46
ADK Adak 10.88 259 P Pn 21 42 32.0 +0.7
ADK Adak 10.88 259 S Sn 21 44 32.8 +1.2
ADK Adak 10.88 259 P Pn 21 42 32.6 +1.3
ADK Adak 10.88 259 Pn 21 42 32.6 +1.3
ADK Adak 10.88 259 P Pn 21 42 32.2 +0.9
H21K Meiozitna Rive 10.94 14 P Pn 21 42 34.0 +1.9
baz=200,SNR=566
K24K Donnelly Dome 10.98 33 P Pn 21 42 32.5 -0.2
baz=225,SNR=18
G19K Purcell Mounta 11.01 5 P Pn 21 42 34.7 +1.7
baz=187,SNR=489
M26K Nabesna, AK 11.07 43 P Pn 21 42 34.3 +0.4
baz=237,SNR=92
HDA Harding Lake 11.09 29 P Pn 21 42 32.1 -2.0
baz=220,SNR=115
I23K Minto, Yukon-K 11.10 22 P Pn 21 42 33.2 -1.0
baz=211,SNR=117
IMAR Indian Mountai 11.13 12 Pn 21 42 36.2 +1.5
TNA Tin City 11.20 341 P Pn 21 42 37.4 +1.8
baz=154,SNR=89
COLA College 11.22 26 P Pn 21 42 38.8 +2.9
COLA College 11.22 26 S Sn 21 44 43.6 +3.9
COLA College 11.22 26 c P Pn 21 42 38.0 +2.1
COLA College 11.22 26 Pn 21 42 35.9 +0.1
COLA College 11.22 26 P Pn 21 42 35.4 -0.5
baz=216
COLA College 11.22 26 P Pn 21 42 38.2 +2.4
RIDG Independent Ri 11.23 35 P Pn 21 42 36.0 -0.1
baz=227,SNR=90
PCA Pinnacle 11.28 57 Pn 21 42 37.8 +0.9
PINM Pinnacle 11.28 57 P Pn 21 42 37.7 +0.8
baz=253,SNR=40
L26K Log Cabin Wild 11.29 40 P Pn 21 42 37.1 +0.2
baz=234,SNR=75
F17K Baldwin Pennin 11.30 356 P Pn 21 42 39.1 +2.1
baz=174,SNR=80
H22K Ishtalitna Cre 11.38 17 P Pn 21 42 39.8 +1.7
baz=204,SNR=148
ILAR Eielson Array 11.38 28 P Pn 21 42 36.6 -1.5
comp=E,1.6nm,0.3s,baz=219,slow=13,SNR=122
ILAR S Sn 21 44 39.8 -4.1
comp=E,74nm,0.8s,baz=216,slow=20,SNR=6.0
ILAR LR LR 21 47 17.1
comp=E,9µm,19.9s,baz=224,slow=39
ILAR ScP ScP 21 51 57.9 -1.2
comp=E,3.6nm,1.1s,baz=296,slow=2.7,SNR=5.6
comp=E,25nm,0.8s
YKU2 Yakutat 11.41 60 Pn Pn 21 42 38.5 0.0
F18K Selawik 11.42 359 P Pn 21 42 41.1 +2.5
baz=179,SNR=124
M27K Edge Creek, AK 11.49 44 P Pn 21 42 40.4 +0.7
baz=239,SNR=79
POKR Poker Plat Res 11.52 26 P Pn 21 42 38.4 -1.6
baz=216
O28M Mount Upton 11.53 53 P Pn 21 42 40.9 +0.4
baz=250,SNR=58
H23K Yukon River 11.65 20 P Pn 21 42 41.5 -0.3
baz=209
G21K Allakaket 11.67 11 P Pn 21 42 43.9 +1.9
baz=197,SNR=361
SCRK Sand Creek 11.67 35 P Pn 21 42 42.3 0.0
baz=228,SNR=89
F19K Shaleruckik Mo 11.68 3 Pn 21 42 44.0 +1.9
F19K Shaleruckik Mo 11.68 3 P Pn 21 42 44.3 +2.2
baz=184,SNR=476
J25K Salcha River, 11.69 31 P Pn 21 42 40.4 -2.0
baz=223,SNR=114
YUK3 Moose Creek 11.80 49 P Pn 21 42 44.8 +0.7
baz=245,SNR=280
L27K Beaver Creek, 11.88 42 P Pn 21 42 45.4 +0.4
baz=237
BCAR Beaver Creek A 11.90 42 Pn 21 42 45.8 +0.5
YUK8 Steele Glacier 11.91 51 P Pn 21 42 47.3 +1.7
baz=248,SNR=90
BVCY Beaver Creek 11.93 45 P Pn 21 42 46.6 +0.9
baz=241,SNR=94
E17K Hotham Inlet 11.96 355 P Pn 21 42 48.4 +2.3
baz=173,SNR=96
F20K Avaraart Lake 11.99 7 P Pn 21 42 48.7 +2.3
baz=190,SNR=621
H24K Noodor Dome 12.01 23 P Pn 21 42 45.2 -1.5
baz=213,SNR=54
O29M Mount Kennedy 12.14 57 P Pn 21 42 50.0 +1.3
baz=254,SNR=105
E18K Tukpahlearik C 12.26 358 Pn 21 42 52.1 +2.0
E18K Tukpahlearik C 12.26 358 P Pn 21 42 52.7 +2.5
baz=176,SNR=268
BRWY Burwash Landin 12.27 52 P Pn 21 42 51.0 +0.7
baz=249
G22K Bettles 12.31 14 P Pn 21 42 52.3 +1.5
baz=201,SNR=130
E19K Redstone River 12.32 4 P Pn 21 42 53.7 +2.7
baz=186,SNR=710
PRP Porcupine Dome 12.33 28 P Pn 21 42 49.1 -2.1
baz=220,SNR=124
G23K Bananza Creek 12.35 17 P Pn 21 42 50.7 -0.7
baz=206,SNR=209
F21K Alatna River 12.35 11 P Pn 21 42 53.8 +2.3
baz=196,SNR=256
P29M Windy Craggy 12.39 60 Pn 21 42 52.0 0.0
P29M Windy Craggy 12.39 60 P Pn 21 42 52.8 +0.8
baz=259,SNR=129
YUK6 Outpost Mounta 12.43 54 P Pn 21 42 52.6 -0.1
baz=252,SNR=37
YUK4 Talbot Arm 12.43 52 P Pn 21 42 53.5 +0.8
baz=250,SNR=62
D17K Noatak River 12.65 353 P Pn 21 42 57.9 +2.5
baz=170,SNR=111
F22K John River 12.78 12 P Pn 21 42 59.4 +2.2
baz=199,SNR=163
COLD Coldfoot 12.79 16 P Pn 21 42 57.3 -0.1
baz=204,SNR=62
HYT Haines Junctio 12.80 55 Pn 21 42 58.1 +0.5
HYT Haines Junctio 12.80 55 P Pn 21 42 56.6 -1.0
baz=254,SNR=30
G24K Hadweenzic Riv 12.83 21 P Pn 21 42 57.6 -0.3
baz=212,SNR=233
P30M Million Dollar 12.88 59 P Pn 21 42 59.2 +0.5
baz=258
M29M Somme Creek 12.94 48 P Pn 21 43 00.2 +0.7
baz=246,SNR=529
S31K Pelican 12.97 68 P Pn 21 43 00.2 +0.3
baz=268,SNR=25
RDOG Red Dog Mine 12.99 354 P Pn 21 43 03.5 +3.4
baz=171,SNR=358
PLBC Pleasant Camp 13.05 62 P Pn 21 43 02.5 +1.5
baz=261,SNR=108
E20K Nigu River 13.16 5 P Pn 21 43 05.3 +2.8
baz=188,SNR=727
N30M Aishikik Lake 13.18 53 P Pn 21 43 02.6 -0.2
baz=252,SNR=96
G25K Bearman Lake 13.18 23 P Pn 21 43 02.5 -0.2
baz=215,SNR=32
FYU Fort Yukon 13.23 25 Pn 21 43 03.1 -0.2
D19K Kuna River 13.33 2 P Pn 21 43 06.6 +1.8
baz=183,SNR=95
DAWY Dawson 13.34 40 P Pn 21 43 04.4 -0.5
baz=238,SNR=71
L29M L29M 13.36 45 P Pn 21 43 05.8 +0.6
baz=244,SNR=86
C16K Lisburne Hills 13.40 350 P Pn 21 43 08.4 +2.7
baz=165
E22K Anaktuvuk Pass 13.42 12 P Pn 21 43 07.5 +1.6
baz=199
C17K DeLong Mountai 13.42 354 P Pn 21 43 09.3 +3.3
baz=170,SNR=364
O30N Mendenhall 13.45 56 Pn 21 43 07.1 +0.7
O30N Mendenhall 13.45 56 P Pn 21 43 06.5 0.0
baz=256,SNR=47
F24K Squaw Lake 13.46 19 P Pn 21 43 06.6 +0.1
baz=209,SNR=66
SIT Sitka 13.46 72 P Pn 21 43 09.1 +2.5
SIT Sitka 13.46 72 P Pn 21 43 06.2 -0.4
SIT Sitka 13.46 72 Pn 21 43 06.2 -0.4
SIT Sitka 13.46 72 P Pn 21 43 06.7 +0.1
baz=272
E21K Killik River 13.49 8 P Pn 21 43 09.1 +2.2
baz=193
C18K Utukok River 13.51 357 P Pn 21 43 08.5 +1.3
baz=175,SNR=247
I27K Kandik River 13.52 33 P Pn 21 43 06.4 -0.9
baz=228,SNR=24
SKAG Skagway 13.58 62 P Pn 21 43 11.4 +3.3
SKAG Skagway 13.58 62 Pn 21 43 07.7 -0.4
SKAG Skagway 13.58 62 P Pn 21 43 09.5 +1.4
baz=262,SNR=24
D20K Etivluk River 13.60 4 P Pn 21 43 10.2 +1.8
baz=187,SNR=559
E23K Chandalar 13.65 16 P Pn 21 43 09.9 +0.8
baz=204,SNR=114
M30M Minto, Yukon 13.70 48 P Pn 21 43 10.2 +0.4
baz=248,SNR=143
N31M Braeburn, Yuko 13.79 53 P Pn 21 43 12.2 +1.1
baz=254,SNR=61
E24K Your Creek 13.84 17 Pn 21 43 10.0 -1.8
E24K Your Creek 13.84 17 P Pn 21 43 09.8 -2.0
baz=207,SNR=74
S32K Killisnoo 13.86 71 P Pn 21 43 12.8 +0.9
baz=271,SNR=25
G26K Porcupine Rive 13.89 26 P Pn 21 43 10.2 -2.1
baz=220,SNR=24
R32K Eaglecrest 13.89 67 P Pn 21 43 11.6 -0.9
baz=268
C19K Lookout Ridge 13.94 360 P Pn 21 43 12.1 -0.9
baz=179,SNR=93
K29M Barlow Dome 13.94 43 P Pn 21 43 12.6 -0.6
baz=242,SNR=73
I28M Miner Creek 13.95 35 P Pn 21 43 13.1 -0.2
baz=232,SNR=50
JIS Juneau Island 13.97 67 P Pn 21 43 15.6 +2.2
F25K Christian Rive 13.97 22 P Pn 21 43 12.6 -0.9
baz=214,SNR=68
H27K Steamboat Moun 13.97 31 P Pn 21 43 11.1 -2.5
baz=226,SNR=31
J29N Klondike Camp 13.98 40 P Pn 21 43 14.3 +0.6
baz=238,SNR=11
WHY Whitehorse 14.01 57 P Pn 21 43 14.6 +0.5
baz=258,SNR=35
C21K Knifeblade Rid 14.14 7 P Pn 21 43 16.7 +1.0
baz=191,SNR=102
TOLK Toolik Lake Re 14.19 15 P Pn 21 43 17.3 +0.8
baz=203,SNR=145
D23K Nanushuk River 14.34 13 P Pn 21 43 19.0 +0.4
baz=200,SNR=130
G27K Doyon Strip 14.34 29 P Pn 21 43 18.4 -0.2
baz=224,SNR=29
F26K Sheenjek River 14.39 24 P Pn 21 43 18.2 -0.9
baz=217,SNR=43
P32M Atlin 14.41 62 P Pn 21 43 20.2 +0.7
baz=264,SNR=11
E25K Arctic Village 14.43 21 P Pn 21 43 20.3 +0.6
baz=213,SNR=158
B21K Ikpikpuk River 14.61 6 Pn 21 43 22.1 +0.1
B21K Ikpikpuk River 14.61 6 P Pn 21 43 22.8 +0.8
baz=191,SNR=349
M31M Drury Creek, Y 14.63 51 P Pn 21 43 23.4 +1.0
baz=253,SNR=28
J30M Hart River 14.75 41 P Pn 21 43 24.9 +0.7
baz=241,SNR=273
U33K Whale Pass 14.76 76 P Pn 21 43 24.2 +0.1
baz=278
D24K Happy Valley 14.77 15 P Pn 21 43 24.5 +0.3
baz=204
T33K Petersburg 14.78 73 P Pn 21 43 24.6 +0.3
baz=275
CRAG Craig 14.86 78 P Pn 21 43 27.1 +1.7
CRAG Craig 14.86 78 Pn 21 43 25.7 +0.3
CRAG Craig 14.86 78 P Pn 21 43 26.8 +1.4
baz=280
B20K Meade River 14.87 3 P Pn 21 43 25.7 +0.1
baz=185,SNR=204
P33M Teslin, Yukon 14.94 60 P Pn 21 43 27.7 +1.0
baz=262,SNR=245
H29M Whitestone 14.94 34 P Pn 21 43 25.6 -1.0
baz=232,SNR=241
N32M Quiet Lake 14.97 56 P Pn 21 43 28.1 +1.1
baz=258
I30M Mount Dempster 15.06 39 P Pn 21 43 28.1 -0.1
baz=239,SNR=93
A19K Wainwright 15.06 358 P Pn 21 43 29.1 +1.0
baz=176,SNR=86
Q32M Nakina River 15.10 65 P Pn 21 43 30.8 +1.8
baz=267,SNR=49
WRAK Wrangell Islan 15.15 74 Pn 21 43 29.2 -0.1
WRAK Wrangell Islan 15.15 74 P Pn 21 43 31.6 +2.3
baz=277,SNR=13
C23K Itkillik River 15.18 12 P Pn 21 43 29.5 -0.1
baz=199,SNR=1000
D25K Kavik River 15.31 17 P P 21 43 34.8 -1.0
baz=209,SNR=197
E27K Coleen River 15.38 25 P P 21 43 34.5 -2.0
baz=221,SNR=45
B22K Teshekpuk Lake 15.40 7 P Pn 21 43 32.9 +0.4
baz=193
F28M Old Crow 15.41 29 P Pn 21 43 30.7 -2.0
baz=226,SNR=47
G29M Pine Creek 15.48 32 P Pn 21 43 33.2 -0.5
baz=231,SNR=148
EPYK Eagle Plains 15.57 35 P Pn 21 43 34.5 -0.3
baz=235,SNR=186
S34M Telegraph Cree 15.69 69 Pn 21 43 38.3 +1.8

S34M	**Telegraph Cree**	**15.69**	**69**	P		**P**	**21 43 38.5**	**-1.6**		
	baz=272,SNR=105									
V35K	**Ketchikan**	**15.73**	**78**	P		**P**	**21 43 38.9**	**-1.5**		
	baz=281,SNR=16									
DIB	**Dawson Inlet,**	**15.77**	**86**			**Pn**	**21 43 37.0**	**-0.4**		
H02S1	**DAWSON INLET T**	**15.77**	**86**	P		**P**	**21 43 40.8**	**-0.2**		
	SNR=14									
H02S1				S		**Sn**	**21 46 20.9**	**-10**		
H02S1				T		T	21 59 36.9			
	SNR=5.0									
H02S2	**DAWSON INLET T**	**15.77**	**86**	P		**Pn**	**21 43 38.7**	**+1.2**		
	SNR=14									
H02S2				S		**Sn**	**21 46 23.2**	**-7.7**		
H02S2				T		T	21 59 36.8			
	SNR=5.0									
R33M	**Jennings River**	**15.79**	**63**	P		**Pn**	**21 43 39.3**	**+1.4**		
	baz=267,SNR=165									
SHEM	**Shemya Is, Ala**	**15.82**	**272**	P		**Pn**	**21 43 37.5**	**-0.6**		
	comp=E,8.8nm,0.3s,baz=51,slow=4.9,SNR=8.9									
SHEM				LR		LR	21 49 33.0			
	comp=E,5µm,21.0s,baz=80,slow=36									
	comp=E,39nm,0.6s									
SHEM	**Shemya Is, Ala**	**15.82**	**272**			**Pn**	**21 43 38.0**	**-0.1**		
SMY	**Shemya**	**15.82**	**272**	P		**Pn**	**21 43 37.8**	**-0.3**		
SMY				pmax		pmax				
	comp=Z,295nm,1.3s									
SMY	**Shemya**	**15.82**	**272**			**Pn**	**21 43 37.8**	**-0.3**		
A22K	**Sinclair Lake**	**15.96**	**5**	P		**Pn**	**21 43 39.7**	**0.0**		
	baz=189									
C27K	**Jago River**	**16.06**	**20**	P		**Pn**	**21 43 41.2**	**+0.1**		
	baz=214,SNR=105									
MOBC	**Moresby Island**	**16.08**	**86**			**Pn**	**21 43 42.3**	**+0.8**		
G30M	**tAoh Zraii Nji**	**16.08**	**34**	P		**Pn**	**21 43 40.5**	**-0.9**		
	baz=234,SNR=176									
H31M	**Peel River**	**16.08**	**39**	P		**Pn**	**21 43 41.2**	**-0.3**		
	baz=241,SNR=490									
C26K	**Camden Bay**	**16.09**	**18**	P		**Pn**	**21 43 41.3**	**-0.1**		
	baz=211,SNR=54									
MMPY	**Sheldon Lake,**	**16.14**	**51**	P		**P**	**21 43 44.0**	**-1.1**		
	baz=256,SNR=353									
E28M	**Babbage River**	**16.20**	**26**	P		**Pn**	**21 43 43.2**	**+0.3**		
	baz=224,SNR=39									
A21K	**Barrow**	**16.20**	**3**	P		**Pn**	**21 43 43.1**	**+0.3**		
	baz=186,SNR=25									
T35M	**Bob Quinn**	**16.24**	**72**	P		**P**	**21 43 46.4**	**+0.2**		
	baz=276,SNR=40									
DLBC	**Dease Lake**	**16.26**	**67**	P		**P**	**21 43 46.0**	**-0.5**		
	comp=Z,0.3nm,0.3s,baz=260,slow=15,SNR=25									
DLBC				S		**Sn**	**21 46 41.4**	**-1.5**		
	comp=Z,8.0nm,0.7s,baz=77,slow=23,SNR=1.3									
DLBC				LR		LR	21 49 38.4			
	comp=Z,3µm,18.9s,baz=266,slow=36									
	comp=Z,42nm,1.0s									
DLBC	**Dease Lake**	**16.26**	**67**	P		**P**	**21 43 46.0**	**-0.5**		
	baz=271,SNR=54									
D27M	**Malcolm River**	**16.34**	**23**	P		**Pn**	**21 43 43.7**	**-0.9**		
	baz=220,SNR=42									
E29M	**Blow River**	**16.48**	**28**	P		**Pn**	**21 43 46.5**	**+0.1**		
	baz=227,SNR=40									
U35K	**Hyder**	**16.51**	**76**	P		**P**	**21 43 48.2**	**-0.8**		
	baz=280									
F30M	**Barrier River**	**16.59**	**32**	P		**Pn**	**21 43 46.4**	**-1.4**		
	baz=233,SNR=141									
G31M	**Satah River**	**16.69**	**35**	P		**Pn**	**21 43 47.1**	**-1.9**		
	baz=238,SNR=182									
HG4B	**Hotspring**	**16.81**	**88**	P		**Pn**	**21 43 51.6**	**+0.9**		
D28M	**Stokes Point**	**16.93**	**25**	P		**Pn**	**21 43 52.3**	**+0.3**		
	baz=224									
WTLY	**Watson Lake, Y**	**16.93**	**61**	P		**P**	**21 43 54.5**	**+0.7**		
	baz=267									
F31M	**Tsiigehtchic**	**17.14**	**34**	P		**Pn**	**21 43 54.2**	**-0.4**		
	baz=237									
TGTN	**Hyland Airport**	**17.32**	**56**	P		**P**	**21 43 59.4**	**+1.3**		
	baz=263,SNR=44									
INK	**Inuvik**	**17.70**	**32**	P		**Pn**	**21 44 00.3**	**-1.2**		
	comp=Z,3.7nm,0.3s,baz=223,slow=16,SNR=40									
INK				S		**Sn**	**21 47 17.4**	**+0.1**		
	comp=Z,47nm,0.9s,baz=55,slow=31,SNR=7.5									
INK				LR		LR	21 51 27.5			
	comp=Z,4µm,18.1s,baz=228,slow=39									
INK				ScP		**ScP**	**21 52 08.5**	**-1.5**		
	comp=Z,19nm,1.1s,baz=158,slow=0.9,SNR=3.7									
	comp=Z,194nm,0.9s									
INK	**Inuvik**	**17.70**	**32**	P		**Pn**	**21 43 59.8**	**-1.7**		
	baz=235,SNR=196									
INK	**Inuvik**	**17.70**	**32**	P		**Pn**	**21 44 00.4**	**-1.1**		
LIRD	**Liard River Hi**	**18.28**	**63**	P		**Pn**	**21 44 11.9**	**+3.1**		
	baz=271,SNR=31									
BBB	**Bella Bella**	**18.62**	**86**	P		**Pn**	**21 44 14.5**	**+1.7**		
	comp=Z,0.5nm,0.3s,baz=299,slow=7.9,SNR=4.8									
BBB				LR		LR	21 49 58.1			
	comp=Z,4µm,20.1s,baz=298,slow=32									
BBB	**Bella Bella**	**18.62**	**86**	P		**Pn**	**21 44 16.0**	**+3.1**		
HOLB	**Holberg**	**19.23**	**91**	P		**P**	**21 44 19.0**	**-0.2**		
KOTAN	**Kotaneelee Air**	**19.30**	**61**	P		**Pn**	**21 44 22.5**	**+1.4**		
	baz=271,SNR=37									
WRGLY	**Wrigley**	**19.76**	**52**	P		**Pn**	**21 44 26.4**	**-0.1**		
	baz=263,SNR=15									
BILL	**Bilibino**	**20.43**	**322**	*c*	*i*P	**P**	**21 44 32.1**	**0.0**		
BILL					pmax	pmax				
	comp=Z,214nm,1.3s									
BILL	**Bilibino**	**20.43**	**322**		P	**P**	**21 44 30.7**	**-1.4**		
BILL					IAmb	IAmb	21 44 48.8			
	comp=Z,347nm,1.4s									
CBB	**Campbell River**	**21.09**	**90**		P	**P**	**21 44 39.9**	**+0.6**		
C36M	**Paulatuk**	**21.20**	**34**		P	**P**	**21 44 39.3**	**-1.0**		
C36M					IAmb	IAmb	21 44 41.0			
	comp=Z,330nm,0.8s									
C36M	**Paulatuk**	**21.20**	**34**		P	**P**	**21 44 39.4**	**-0.8**		
	baz=246,SNR=54									
A36M	**Sachs Harbour**	**22.09**	**28**		P	**P**	**21 44 48.0**	**-1.7**		
A36M					IAmb	IAmb	21 44 50.1			
	comp=Z,327nm,1.1s									
A36M	**Sachs Harbour**	**22.09**	**28**		P	**P**	**21 44 48.1**	**-1.7**		
	baz=239,SNR=19									
PGC	**Sidney**	**22.85**	**92**		P	**P**	**21 44 58.5**	**+0.4**		
NLWA	**Neilton Lookou**	**23.27**	**95**		P	**P**	**21 45 03.6**	**+1.1**		
NLWA					IAmb	IAmb	21 45 18.2			
	comp=Z,259nm,1.2s									
A05A	**Maple Falls**	**23.46**	**90**		P	**P**	**21 45 05.2**	**+1.0**		
A05A					IAmb	IAmb	21 45 19.3			
	comp=Z,170nm,1.2s									
YKA	**Yellowknife Ar**	**23.79**	**54**		P	**P**	**21 45 07.7**	**+0.5**		
	comp=Z,86nm,1.0s,baz=274,slow=9.3,SNR=98									
YKA					PcP	**PcP**	**21 48 49.1**	**-0.5**		
	comp=Z,4.7nm,0.9s,baz=276,slow=1.5,SNR=2.7									
YKA					S	**S**	**21 49 15.3**	**-4.7**		
	comp=Z,7.1nm,0.8s,baz=273,slow=15,SNR=4.0									
YKA					ScP	**ScP**	**21 52 24.1**	**-0.7**		
	comp=Z,6.3nm,1.0s,baz=267,slow=2.1,SNR=9.6									
YKA					LR	LR	21 54 52.8			
	comp=Z,3µm,21.0s,baz=237,slow=38									
	comp=Z,86nm,1.0s									
YKA	**Yellowknife Ar**	**23.79**	**54**	*c*	*e*P	**P**	**21 45 07.6**	**+0.4**		
YKA					pmax	pmax				
	comp=Z,86nm,1.0s									
YKA	**Yellowknife Ar**	**23.79**	**54**		P	**P**	**21 45 07.4**	**+0.2**		
PET	**Petropavlovsk**	**24.48**	**282**		*e*P	**P**	**21 45 13.8**	**+0.1**		
PET					*e*S	**S**	**21 49 32.3**	**+1.0**		
PET					pmax	pmax				
	comp=Z,183nm,0.8s									
PET					MLR	MLR				
	comp=Z,2µm,16.0s									
PET					MLR	MLR				
	comp=Z,2µm,16.0s									
PET	**Petropavlovsk**	**24.48**	**282**		P	**P**	**21 45 12.8**	**-0.9**		
PET					IAmb	IAmb	21 45 15.2			
	comp=Z,124nm,0.8s									
PET	**Petropavlovsk**	**24.48**	**282**		P	**P**	**21 45 13.1**	**-0.6**		
	comp=Z,2µmcomp=Z,167nm,1.1s									
PET	**Petropavlovsk**	**24.48**	**282**		P	**P**	**21 45 14.0**	**+0.3**		
PEA0B	**Petropavlovsk-**	**24.98**	**283**	*c*	*i*P	**P**	**21 45 18.1**	**-0.2**		
PEA0B	**Petropavlovsk-**	**24.98**	**283**		P	**P**	**21 45 17.3**	**-1.0**		
PEA0B					IAmb	IAmb	21 45 20.4			
	comp=Z,434nm,1.3s									
PETK	**Petropavlovsk-**	**24.98**	**283**		P	**P**	**21 45 17.9**	**-0.4**		
	comp=Z,103nm,0.6s,baz=72,slow=12,SNR=141									
PETK					PcP	**PcP**	**21 48 52.0**	**-0.4**		
	comp=Z,8.3nm,0.9s,baz=76,slow=6.3,SNR=3.6									
PETK					ScP	**ScP**	**21 52 27.4**	**-0.9**		
	comp=Z,16nm,1.1s,baz=54,slow=5.9,SNR=8.1									
PETK					LR	LR	21 55 05.2			
	comp=Z,2µm,20.7s,baz=75,slow=36									
	comp=Z,103nm,0.6s									
PETK	**Petropavlovsk-**	**24.98**	**283**		P	**P**	**21 45 17.1**	**-1.2**		
PETK							21 48 52.9			
PETK	**Petropavlovsk-**	**24.98**	**283**		P	**P**	**21 45 17.1**	**-1.2**		
PETK						**PcP**	**21 48 52.9**	**+0.5**		
PETK						**ScP**	**21 52 28.4**	**+0.1**		
COR	**Corvallis**	**25.22**	**100**		P	**P**	**21 45 21.7**	**+1.3**		
COR	**Corvallis**	**25.22**	**100**		IAMs_20	IAMs_20	21 52 45.4			
	comp=Z,6µm,21.0s									
COR	**Corvallis**	**25.22**	**100**		P	**P**	**21 45 21.2**	**+0.8**		
B08A	**Colville Reser**	**25.36**	**89**		P	**P**	**21 45 22.3**	**+0.5**		
B08A					IAmb	IAmb	21 45 36.5			
	comp=Z,136nm,1.1s									
SEY	**Seymchan**	**25.44**	**307**		PcP	**PcP**	**21 48 53.6**	**+0.4**		
	comp=Z,40nm,1.0s,baz=58,slow=1.7,SNR=5.8									
SEY					ScP	**ScP**	**21 52 30.7**	**+1.3**		
	comp=Z,9.9nm,1.1s,baz=109,slow=3.8,SNR=5.9									
SEY					LR	LR	21 56 29.9			
	comp=Z,9µm,19.2s,baz=91,slow=39									
SEY	**Seymchan**	**25.44**	**307**	*c*	*i*P	**P**	**21 45 20.9**	**-1.4**		
SEY					pmax	pmax				
	comp=Z,125nm,0.9s									
E07A	**Sunnyside**	**26.03**	**93**		P	**P**	**21 45 27.6**	**-0.2**		
E07A					IAmb	IAmb	21 45 42.9			
	comp=Z,333nm,1.8s									
EDM	**Edmonton**	**26.56**	**75**		P	**P**	**21 45 33.4**	**+0.8**		
EDM					pmax	pmax				
	comp=Z,512nm,1.6s									
EDM	**Edmonton**	**26.56**	**75**		P	**P**	**21 45 33.4**	**+0.8**		
EDM					IAmb	IAmb	21 45 51.8			
	comp=Z,512nm,1.6s									
NEW	**Newport**	**26.67**	**87**		P	**P**	**21 45 35.6**	**+2.0**		
	comp=Z,14nm,0.9s,baz=303,slow=7.4,SNR=19									
NEW					LR	LR	21 54 38.2			
	comp=Z,3µm,20.6s,baz=308,slow=33									
	comp=Z,14nm,0.9s									
NEW	**Newport**	**26.67**	**87**		P	**P**	**21 45 36.3**	**+2.6**		
MA2	**Magadan**	**26.73**	**300**		ScP	**ScP**	**21 52 32.7**	**-0.6**		
	comp=Z,2.5nm,0.3s,baz=19,slow=8.2,SNR=4.3									
MA2					LR	LR	21 57 42.3			
	comp=Z,2µm,18.4s,baz=83,slow=40									
MA2	**Magadan**	**26.73**	**300**	*c*	*i*P	**P**	**21 45 33.1**	**-0.9**		
MA2					pmax	pmax				
	comp=Z,77nm,1.3s									
MA2	**Magadan**	**26.73**	**300**		P	**P**	**21 45 32.8**	**-1.2**		
MA2						**ScP**	**21 52 33.5**	**+0.2**		
MA2	**Magadan**	**26.73**	**300**		P	**P**	**21 45 33.5**	**-0.5**		
	comp=Z,1µmcomp=Z,78nm,1.2s									
MA2	**Magadan**	**26.73**	**300**		P	**P**	**21 45 33.4**	**-0.7**		
SKR	**Severo-Kuril's**	**26.89**	**279**	*e*	P	**P**	**21 45 34.5**	**-1.0**		
PINE	**Pine Mountain**	**27.04**	**99**		P	**P**	**21 45 37.7**	**+0.5**		
JCC	**Jacoby Creek,**	**27.28**	**107**		IAMs_20	IAMs_20	21 54 00.5			
	comp=Z,5µm,19.0s									
YBH	**Yreka Blue Hor**	**27.38**	**104**		P	**P**	**21 45 43.0**	**+2.9**		
	comp=Z,6.4nm,0.8s,baz=294,slow=6.0,SNR=6.6									
YBH					LR	LR	21 54 13.7			
	comp=Z,7µm,21.4s,baz=308,slow=31									
	comp=Z,6.4nm,0.8s									
M02C	**Callahan**	**27.53**	**105**		P	**P**	**21 45 42.6**	**+1.1**		
KHBM	**Hayfork Bally**	**27.83**	**106**		IAMs_20	IAMs_20	21 54 09.1			
	comp=Z,6µm,19.0s									
O02D	**Mt. Diablo Mer**	**28.40**	**107**		IAMs_20	IAMs_20	21 54 57.3			
	comp=Z,5µm,20.0s									
BMO	**Blue Mountains**	**28.47**	**94**		IAMs_20	IAMs_20	21 55 07.9			
	comp=Z,4µm,21.0s									
O03E	**Paynes Creek**	**28.86**	**105**		IAMs_20	IAMs_20	21 54 56.5			
	comp=Z,4µm,19.0s									
PLID	**Pearl Lake**	**29.08**	**92**		P	**P**	**21 45 56.0**	**+0.6**		
WVOR	**Wild Horse Val**	**29.21**	**99**		P	**P**	**21 45 58.1**	**+1.6**		
WVOR					pmax	pmax				
	comp=Z,88nm,1.4s									
WVOR					MLR	MLR				
	comp=Z,4µm,22.0s									
WVOR	**Wild Horse Val**	**29.21**	**99**		P	**P**	**21 45 58.1**	**+1.6**		
WVOR					IAMs_20	IAMs_20	21 55 05.5			
	comp=Z,4µm,22.0s									
WVOR	**Wild Horse Val**	**29.21**	**99**		P	**P**	**21 46 00.1**	**+3.6**		
MCCM	**Marconi Confer**	**29.80**	**110**		IAMs_20	IAMs_20	21 54 56.3			
	comp=Z,4µm,21.0s									
FARB	**Farallon Islan**	**30.06**	**110**		IAMs_20	IAMs_20	21 55 30.3			
	comp=Z,4µm,18.0s									
LYMT	**Lyon Mountain**	**30.13**	**86**		P	**P**	**21 46 05.8**	**+1.1**		
AFDM	**Forest Hills D**	**30.27**	**106**		P	**P**	**21 46 07.0**	**+1.3**		
PAHR	**Pah Rah Range**	**30.61**	**104**		P	**P**	**21 46 09.4**	**+0.5**		
PAHR					IAmb	IAmb	21 46 23.6			
	comp=Z,84nm,1.1s									
JRSC	**Jasper Ridge**	**30.69**	**110**		IAMs_20	IAMs_20	21 55 21.8			
	comp=Z,4µm,21.0s									
WELL	**Weller Preserv**	**30.76**	**107**		IAMs_20	IAMs_20	21 55 51.7			
	comp=Z,4µm,21.0s									
HLID	**Hailey**	**30.91**	**93**		P	**P**	**21 46 12.8**	**+1.3**		
HLID	**Hailey**	**30.91**	**93**		P	**P**	**21 46 14.7**	**+3.2**		
HLID					pP	**sP**	**21 46 24.5**	**-1.6**		
EGMT	**Eagleton**	**31.00**	**82**		IAMs_20	IAMs_20	21 57 40.9			
	comp=Z,3µm,19.0s									
MHC	**Mount Hamilton**	**31.06**	**109**		IAMs_20	IAMs_20	21 55 46.6			
	comp=Z,4µm,20.0s									
RES	**Resolute Bay**	**31.14**	**28**		LR	LR	22 01 16.8			
	comp=Z,2µm,20.7s,baz=266,slow=41									
RES	**Resolute Bay**	**31.14**	**28**		P	**P**	**21 46 13.2**	**+0.2**		
RES	**Resolute Bay**	**31.14**	**28**		P	**P**	**21 46 13.4**	**+0.5**		
CMB	**Columbia Colle**	**31.24**	**107**		IAMs_20	IAMs_20	21 56 05.3			
	comp=Z,4µm,21.0s									
BOZ	**Bozeman (W)**	**31.28**	**88**		P	**P**	**21 46 17.0**	**+2.2**		
FORD	**Fort Ord Natur**	**31.47**	**110**		IAMs_20	IAMs_20	21 56 20.4			
	comp=Z,3µm,18.0s									
SAO	**San Andreas Ge**	**31.59**	**110**		IAMs_20	IAMs_20	21 55 47.6			
	comp=Z,4µm,22.0s									
YHB	**Horse Butte**	**32.03**	**89**		P	**P**	**21 46 23.1**	**+1.7**		
YHB					IAmb	IAmb	21 46 35.9			
	comp=Z,121nm,1.1s									
FFC	**Flin Flon**	**32.10**	**67**		P	**P**	**21 46 21.8**	**+0.2**		
FFC					pmax	pmax				
	comp=Z,36nm,1.3s									
FFC					MLR	MLR				
	comp=Z,3µm,19.0s									
FFC	**Flin Flon**	**32.10**	**67**		P	**P**	**21 46 21.8**	**+0.2**		
FFC	**Flin Flon**	**32.10**	**67**		P	**P**	**21 46 22.7**	**+1.1**		
NVAR	**Mina Array Bea**	**32.11**	**104**		P	**P**	**21 46 24.7**	**+2.6**		
	comp=Z,3.5nm,0.8s,baz=306,slow=8.8,SNR=11									
NVAR					PcP	**PcP**	**21 49 11.1**	**+0.4**		
	comp=Z,3.7nm,0.6s,baz=318,slow=4.1,SNR=5.8									
NVAR					LR	LR	21 57 09.3			
	comp=Z,5µm,21.2s,baz=322,slow=32									
NVAR	**Mina Array Bea**	**32.11**	**104**		P	**P**	**21 46 23.2**	**+1.0**		
NVAR						**PcP**	**21 49 10.9**	**+0.3**		
ELK	**Elko**	**32.24**	**98**		P	**P**	**21 46 25.5**	**+2.1**		
	comp=Z,8.7nm,1.0s,baz=318,slow=3.7,SNR=13									
ELK					LR	LR	21 57 16.0			
	comp=Z,4µm,20.8s,baz=316,slow=32									
	comp=Z,8.7nm,1.0s									
ELK	**Elko**	**32.24**	**98**		IAMs_20	IAMs_20	21 57 04.9			
	comp=Z,4µm,20.0s									
HULI	**Fort Hunter Li**	**32.26**	**111**		IAMs_20	IAMs_20	21 55 54.6			
	comp=Z,4µm,22.0s									
PKD	**Bear Valley Ra**	**32.69**	**110**		IAMs_20	IAMs_20	21 56 19.9			
	comp=Z,4µm,22.0s									
TPH	**Tonopah**	**32.96**	**104**		P	**P**	**21 46 30.4**	**+0.8**		
TPH					pmax	pmax				
	comp=Z,76nm,1.1s									
TPH	**Tonopah**	**32.96**	**104**		P	**P**	**21 46 30.4**	**+0.8**		
TPH					IAmb	IAmb	21 46 44.3			
	comp=Z,76nm,1.1s									
DSP	**Deep Springs**	**33.05**	**105**		P	**P**	**21 46 31.9**	**+1.8**		
DSP					IAmb	IAmb	21 46 45.7			
	comp=Z,80nm,1.1s									
TIN	**Tinemaha, Big**	**33.13**	**106**		IAMs_20	IAMs_20	21 57 25.6			
	comp=Z,4µm,20.0s									
AHID	**Auburn Hatcher**	**33.30**	**92**		P	**P**	**21 46 34.5**	**+2.0**		
BGU	**Big Grassy Mou**	**33.38**	**96**		P	**P**	**21 46 34.9**	**+1.7**		
BGU					IAmb	IAmb	21 46 48.0			
	comp=Z,137nm,1.6s									
TIXI	**Tiksi**	**33.50**	**327**		LR	LR	22 02 03.9			
	comp=Z,5µm,18.7s,baz=91,slow=40									
TIXI	**Tiksi**	**33.50**	**327**	*c*	*i*P	**P**	**21 46 32.5**	**-1.2**		
TIXI					pmax	pmax				
	comp=Z,124nm,1.0s									
TIXI	**Tiksi**	**33.50**	**327**		P	**P**	**21 46 32.4**	**-1.2**		
TIXI					IAmb	IAmb	21 46 35.5			
	comp=Z,135nm,1.1s									
CWC	**Cottonwood Cre**	**33.66**	**107**		IAMs_20	IAMs_20	21 57 28.7			
	comp=Z,4µm,22.0s									
LAO	**LASA Array**	**33.74**	**82**		P	**P**	**21 46 37.2**	**+1.0**		
LAO					IAmb	IAmb	21 46 50.8			
	comp=Z,79nm,1.3s									
LAO					IAMs_20	IAMs_20	21 59 10.5			
	comp=Z,3µm,20.0s									
KIP	**Kipapa**	**33.76**	**178**		IAMs_20	IAMs_20	21 56 47.6			
	comp=Z,3µm,21.0s									
HWUT	**Hardware Ranch**	**33.77**	**94**		P	**P**	**21 46 39.9**	**+3.3**		
DUG	**Dugway, Tooele**	**33.99**	**97**		P	**P**	**21 46 42.3**	**+3.9**		
DUG	**Dugway, Tooele**	**33.99**	**97**		P	**P**	**21 46 42.3**	**+3.9**		
DUG					pP	**sP**	**21 46 51.7**	**-1.4**		
ISA	**Isabella, Lake**	**34.02**	**108**		IAMs_20	IAMs_20	21 57 47.1			
	comp=Z,3µm,20.0s									
PD31	**Pinedale Array**	**34.18**	**90**		P	**P**	**21 46 41.2**	**+1.0**		
PDAR	**Pinedale Array**	**34.18**	**90**		P	**P**	**21 46 42.2**	**+2.0**		
	comp=Z,2.0nm,0.6s,baz=316,slow=6.2,SNR=17									
PDAR					S	**S**	**21 52 08.4**	**+4.2**		
	comp=Z,0.3nm,0.3s,baz=64,slow=9.5,SNR=5.4									
PDAR					ScP	**ScP**	**21 52 57.0**	**-1.3**		
	comp=Z,2.2nm,1.1s,baz=312,slow=3.6,SNR=4.9									
PDAR					P3KPbc		22 17 39.8			
	comp=Z,0.5nm,0.5s,baz=133,slow=3.1,SNR=6.6									
PDAR	**Pinedale Array**	**34.18**	**90**		P	**P**	**21 46 41.2**	**+1.0**		
PDAR						**ScP**	**21 52 56.6**	**-1.6**		
TYV	**Tymovskoe**	**34.30**	**287**		*e*P	**P**	**21 46 41.3**	**+0.4**		
TYV					*e*S	**S**	**21 52 07.1**	**+1.7**		
TYV					pmax	pmax				
	comp=Z,500nm,4.5s									
TYV					pmax	pmax				
	comp=Z,109nm,0.9s									
TYV					smax	smax				
	comp=N,200nm,6.4s									
TYV					smax	smax				
	comp=E,300nm,6.4s									
OSI	**Osito Audit: C**	**34.66**	**109**		IAMs_20	IAMs_20	21 57 20.3			
	comp=Z,3µm,21.0s									
PASC	**Pasadena Art C**	**35.29**	**109**		IAMs_20	IAMs_20	21 57 39.9			
	comp=Z,3µm,22.0s									
BFSC	**Mount Baldy Ra**	**35.52**	**109**		IAMs_20	IAMs_20	21 58 32.1			
	comp=Z,3µm,20.0s									
UGL	**Uglegorsk**	**35.56**	**285**		*e*P	**P**	**21 46 52.5**	**+0.8**		
UGL					*e*S	**S**	**21 52 25.2**	**+0.4**		
UGL					pmax	pmax				
	comp=Z,800nm,1.3s									
UGL					pmax	pmax				
	comp=Z,500nm,0.9s									
UGL					smax	smax				
	comp=E,500nm,3.7s									
UGL					smax	smax				
	comp=N,200nm,2.8s									
UGL					MLR	MLR				
	comp=N,1µm,16.0s									
UGL					MLR	MLR				
	comp=Z,2µm,14.0s									
YAK	**Yakutsk**	**35.85**	**310**		ScP	**ScP**	**21 53 03.4**	**-0.2**		
	comp=Z,9.3nm,0.3s,baz=127,slow=5.1,SNR=7.2									
YAK					LR	LR	22 02 43.2			
	comp=Z,4µm,21.8s,baz=76,slow=38									
YAK	**Yakutsk**	**35.85**	**310**	*c*	*i*P	**P**	**21 46 52.3**	**-1.8**		
YAK					*e**PP	**sP**	**21 47 09.0**	**+0.1**		
YAK					*e*		21 48 13.7			
YAK					*e*		21 49 19.2			
YAK					*e*S	**S**	**21 52 28.1**	**-0.9**		
YAK					*e*SS	**SnSn**	**21 54 53.4**	**+0.1**		
YAK					*e*SSS	SSS	21 55 11.1			
YAK					*e*		21 57 02.9			
YAK					pmax	pmax				
	comp=Z,264nm,1.4s									
YAK					pmax	pmax				
	comp=N,79nm,1.5s									
YAK					pmax	pmax				
	comp=E,92nm,1.8s									
YAK					pmax	pmax				
	comp=Z,402nm,4.5s									
YAK					pmax	pmax				
	comp=N,261nm,7.2s									
YAK					pmax	pmax				

WUAZ IAmb IAmb 21 47 28.2
comp=Z,100nm,1.1s
WUAZ IAMs_20 IAMs_20 22 01 03.0
comp=Z,3µm,20.0s
JKA Kamikawa-asahi 38.14 278 P **P** **21 47 13.6 -0.2**
JKA IAmb IAmb 21 47 14.9
comp=Z,248nm,1.4s
JKA Kamikawa-asahi 38.14 278 P **P** **21 47 14.2 +0.5**
ASAJ Asahikawa 38.14 278 PcP **PcP** **21 49 28.4 +0.5**
comp=Z,19nm,0.8s,baz=346,slow=4.2,SNR=9.1
ASAJ Asahikawa 38.14 278 P **P** **21 47 13.6 -0.2**
ASAJ pmax pmax
comp=Z,248nm,1.4s
ISCO Idaho Springs 38.37 91 P **P** **21 47 16.6 +0.5**
ISCO pmax pmax
comp=Z,25nm,1.1s
ISCO Idaho Springs 38.37 91 P **P** **21 47 16.6 +0.5**
MVCO Mesa Verde 38.49 96 P **P** **21 47 19.6 +2.5**
AGMN Agassiz Nation 38.62 73 P **P** **21 47 17.8 +0.1**
AGMN IAmb IAmb 21 47 40.3
comp=Z,72nm,0.9s
AGMN Agassiz Nation 38.62 73 P **P** **21 47 18.6 +0.9**
EPLO Experimental L 39.00 70 P **P** **21 47 21.3 +0.4**
EPLO IAmb IAmb 21 47 42.0
comp=Z,110nm,1.3s
ERM Erimo 39.15 275 P **P** **21 47 22.4 +0.2**
ERM Erimo 39.15 275 *c iP* **P** **21 47 22.2 0.0**
ERM pmax pmax
comp=Z,263nm,1.3s
ERM Erimo 39.15 275 P **P** **21 47 21.7 -0.5**
ERM IAmb IAmb 21 47 24.0
comp=Z,155nm,0.9s
ERM Erimo 39.15 275 P **P** **21 47 22.8 +0.6**
ERM Erimo 39.15 275 P **P** **21 47 22.8 +0.6**
ERM PcP **PcP** **21 49 32.9 +1.9**
JEM Erimo 39.15 275 P **P** **21 47 22.4 +0.2**
SUSD Miller 39.19 80 IAMs_20 IAMs_20 22 02 44.4
comp=Z,2µm,20.0s
X18A Snowflake 39.58 101 P **P** **21 47 27.2 +1.1**
X18A IAmb IAmb 21 47 41.1
comp=Z,122nm,1.3s
OGNE Ogallala 39.66 87 P **P** **21 47 27.1 +0.5**
OGNE IAmb IAmb 21 47 40.7
comp=Z,99nm,0.9s
SDCO Great Sand Dun 39.83 93 P **P** **21 47 29.1 +0.8**
K30B Basset 39.92 83 IAMs_20 IAMs_20 22 02 31.0
comp=Z,3µm,21.0s
NEEM North Greenlan 40.49 19 *i* P **P** **21 47 33.3 0.0**
NEEM IAmb IAmb 21 47 34.1
comp=Z,119nm,1.2s
KULLO Kullorsuaq 40.74 24 P **P** **21 47 35.3 +0.3**
KULLO Kullorsuaq 40.74 24 *i* P **P** **21 47 35.4 +0.3**
KULLO IAmb IAmb 21 47 36.4
comp=Z,140nm,1.2s
TUC Tucson 40.76 104 P **P** **21 47 37.2 +1.4**
TUC pmax pmax
comp=Z,93nm,1.4s
TUC Tucson 40.76 104 P **P** **21 47 37.2 +1.4**
TUC Tucson 40.76 104 P **P** **21 47 38.6 +2.9**
TUC pP **sP** **21 47 48.9 -1.6**
T25A Trinidad 40.87 93 IAMs_20 IAMs_20 22 02 23.1
comp=Z,2µm,22.0s
ZEA Zeya 40.88 300 *e*P **P** **21 47 34.6 -1.8**
ZEA pmax pmax
comp=E,200nm,5.1s
ZEA pmax pmax
comp=Z,300nm,5.9s
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.3s
ZEA MLR MLR
comp=N,400nm,13.0s
ZEA MLR MLR
comp=E,200nm,13.0s
ECSD EROS Data Cent 40.95 79 P **P** **21 47 36.0 -1.1**
ECSD IAMs_20 IAMs_20 22 03 59.1
comp=Z,3µm,20.0s
ECSD EROS Data Cent 40.95 79 P **P** **21 47 37.4 +0.3**
JTM Tenmabayashi 41.14 275 P **P** **21 47 38.9 +0.2**
JTM Tenmabayashi 41.14 275 P **P** **21 47 38.1 -0.6**
JTM IAmb IAmb 21 47 39.9
comp=Z,214nm,1.2s
JTM Tenmabayashi 41.14 275 P **P** **21 47 38.5 -0.1**
EYMN Ely 41.20 71 P **P** **21 47 40.2 +1.0**
ANMO Albuquerque 41.26 97 P **P** **21 47 41.8 +1.8**
comp=Z,3.7nm,1.1s,baz=323,slow=9.0,SNR=8.5
ANMO PcP **PcP** **21 49 39.9 +1.7**
comp=Z,15nm,1.0s,baz=315,slow=4.5,SNR=6.7
ANMO LR LR 22 03 46.3
comp=Z,2µm,18.2s,baz=290,slow=34
ANMO Albuquerque 41.26 97 *ce*P **P** **21 47 42.3 +2.3**
ANMO pmax pmax
comp=Z,8.0nm,1.4s
ANMO Albuquerque 41.26 97 P **P** **21 47 39.6 -0.4**
ANMO Albuquerque 41.26 97 P **P** **21 47 42.6 +2.6**
BGNE Belgrade 41.57 83 IAMs_20 IAMs_20 22 03 54.6
comp=Z,2µm,20.0s
NOR Nord 41.95 8 P **P** **21 47 45.0 +0.1**
NOR Nord 41.95 8 *i* P **P** **21 47 43.3 -1.6**
NOR IAmb IAmb 21 47 47.8
comp=Z,29nm,1.0s
UPNV Upernavik 41.96 26 P **P** **21 47 45.5 +0.5**
UPNV Upernavik 41.96 26 *i* P **P** **21 47 45.2 +0.2**
UPNV IAmb IAmb 21 47 46.3
comp=Z,138nm,1.0s
L34A Svendsen Farm, 42.21 81 IAMs_20 IAMs_20 22 04 26.6
comp=Z,2µm,21.0s
I37A Lemond, Waseca 42.57 77 IAMs_20 IAMs_20 22 05 20.9
comp=Z,3µm,18.0s
HEH HeiHe 42.77 295 *e*P **P** **21 47 50.3 -1.6**
HEH pmax pmax
comp=Z,51nm,1.0s
HEH L L
comp=Z,700nm,21.2s
HEH L L
comp=Z,2µm,20.4s
HEH L L
comp=Z,2µm,18.8s
FRB Frobisher Bay 43.05 41 LR LR 22 06 14.7
comp=Z,3µm,21.5s,baz=306,slow=37
FRB Frobisher Bay 43.05 41 P **P** **21 47 54.6 +0.6**
FRB Frobisher Bay 43.05 41 P **P** **21 47 54.6 +0.6**
R32A Long Quarter, 43.25 87 P **P** **21 47 56.6 +0.6**
N35A Tabor 43.35 82 IAMs_20 IAMs_20 22 04 40.8
comp=Z,3µm,21.0s
NUUG Nuugaatsiaq 43.42 26 *i* P **P** **21 47 57.4 +0.5**
NUUG IAmb IAmb 21 48 02.0
comp=Z,296nm,1.1s
H11N2 WAKE ISLAND Hy 43.66 229 T T 22 34 29.8
baz=28,slow=76,SNR=119
H11N3 WAKE ISLAND Hy 43.67 229 T T 22 34 17.5
baz=28,slow=76,SNR=171
H11N1 WAKE ISLAND Hy 43.68 229 T T 22 34 18.4
baz=28,slow=76,SNR=124
NIAQ Niaqornat 43.76 27 *i* P **P** **21 48 00.2 +0.7**
NIAQ IAmb IAmb 21 48 01.6
comp=Z,94nm,1.1s
AMTX Amarillo 44.03 93 IAMs_20 IAMs_20 22 04 24.7
comp=Z,2µm,22.0s
USA0B Ussuriysk Arra 44.04 285 P **P** **21 48 00.7 -1.5**
USA0B pmax pmax
comp=Z,20nm,1.2s
USA0B Ussuriysk Arra 44.04 285 P **P** **21 48 00.7 -1.5**
USRK Ussuriysk Ar. 44.04 285 P **P** **21 48 00.0 -2.2**
comp=Z,17nm,1.0s,baz=58,slow=7.8,SNR=15
USRK PcP **PcP** **21 49 48.0 +0.9**
comp=Z,9.0nm,0.7s,baz=8.9,slow=1.6,SNR=14
USRK LR LR 22 07 54.3
comp=Z,1µm,20.0s,baz=47,slow=38
comp=Z,17nm,1.0s
USRK Ussuriysk Ar. 44.04 285 P **P** **21 48 00.6 -1.6**
USRK Ussuriysk Ar. 44.04 285 P **P** **21 48 00.6 -1.6**
USRK **PcP** **21 49 48.0 +0.9**
MNTX Cornudas Mount 44.25 99 P **P** **21 48 06.8 +2.7**
MNTX pP **pP** **21 48 16.6 +2.1**
SAATT Saattut 44.27 27 *i* P **P** **21 48 03.7 0.0**
SAATT IAmb IAmb 21 48 06.0
comp=Z,170nm,0.9s
SAQQ Saqqaq 44.69 28 *i* P **P** **21 48 07.2 +0.1**
SAQQ IAmb IAmb 21 48 08.6
comp=Z,188nm,1.0s
GDH Godhavn 44.74 29 *i* P **P** **21 48 07.8 +0.3**
GDH IAmb IAmb 21 48 09.4
comp=Z,41nm,1.0s
comp=Z,77nm,1.3s
INU Inuyama 47.19 273 P **P** **21 48 26.8 -0.4**
JHJ2 Mitsune 47.20 268 P **P** **21 48 27.7 +0.4**
JHJ2 Mitsune 47.20 268 P **P** **21 48 27.4 +0.1**
JHJ Hachijo jima 2 47.21 268 P **P** **21 48 27.2 -0.2**
comp=Z,77nm,0.6s,baz=214,slow=18,SNR=6.1
JHJ LR LR 22 06 38.1
comp=Z,925nm,21.6s,baz=96,slow=34
comp=Z,77nm,0.6s
OZNA Ozona 47.24 96 P **P** **21 48 27.9 +0.1**
M44A Midewin, Midew 47.27 76 IAMs_20 IAMs_20 22 08 34.3
comp=Z,2µm,18.0s
HIA Hailar 47.30 298 P **P** **21 48 26.8 -1.2**
HIA pmax pmax
comp=Z,31nm,1.1s
HIA MLR MLR
comp=Z,1µm,21.0s
HIA Hailar 47.30 298 **P** **21 48 26.8 -1.2**
HIA Hailar 47.30 298 P **P** **21 48 26.7 -1.2**
LPIG La Paz 47.43 111 P **P** **21 48 27.7 -1.4**
comp=Z,32nm,0.3s,baz=347,slow=2.7,SNR=4.2
LPIG LR LR 22 06 15.4
comp=Z,2µm,20.5s,baz=296,slow=33
HPIG 47.72 104 P **P** **21 48 31.5 -0.1**
CCM Cathedral Cave 47.76 81 P **P** **21 48 30.9 -0.7**
CCM pmax pmax
comp=Z,55nm,1.2s
CCM MLR MLR
comp=Z,2µm,19.0s
CCM Cathedral Cave 47.76 81 P **P** **21 48 30.9 -0.7**
CCM IAmb IAmb 21 48 43.5
comp=Z,55nm,1.2s
CCM Cathedral Cave 47.76 81 P **P** **21 48 31.3 -0.2**
DBG Daneborg 47.87 14 P **P** **21 48 31.8 -0.2**
DBG Daneborg 47.87 14 *i* P **P** **21 48 31.2 -0.8**
DBG IAmb IAmb 21 48 33.0
comp=Z,59nm,0.8s
CN2 Changchun 47.88 289 ⇑ *i* P **P** **21 48 31.3 -1.1**
CN2 sP sP 21 48 47.9 +0.6
CN2 S **S** **21 55 22.4 -4.5**
CN2 pmax pmax
comp=Z,180nm,1.0s
CN2 L L
comp=Z,900nm,17.0s
CN2 L L
comp=Z,1µm,17.0s
CN2 L L
comp=Z,2µm,19.0s
SLBS Sierra La Lagu 47.96 111 P **P** **21 48 36.5 +3.1**
HSPB Hornsund (broa 48.00 2 P **P** **21 48 32.9 -0.1**
JCT Junction City 48.33 95 P **P** **21 48 36.6 +0.4**
JCT pmax pmax
comp=Z,75nm,0.9s
JCT MLR MLR
comp=Z,1µm,22.0s
JCT Junction City 48.33 95 P **P** **21 48 36.6 +0.4**
JCT IAmb IAmb 21 48 49.4
comp=Z,75nm,0.9s
SFIN Lafayette 48.48 76 IAMs_20 IAMs_20 22 09 03.4
comp=Z,2µm,19.0s
HOPEN Hopen 48.51 359 *e*P **P** **21 48 37.5 +0.6**
HOPEN IAmb IAmb 21 48 37.7
comp=Z,268nm,1.1s
WHTX Lake Whitney, 48.55 92 IAMs_20 IAMs_20 22 07 21.3
comp=Z,2µm,22.0s
T42A Van Buren 48.56 82 IAMs_20 IAMs_20 22 08 02.6
comp=Z,2µm,21.0s
NUUK Nuuk 48.61 34 P **P** **21 48 39.4 +1.6**
NUUK Nuuk 48.61 34 *i* P **P** **21 48 38.6 +0.8**
NUUK IAmb IAmb 21 48 40.1
comp=Z,146nm,1.1s
MIAR Mount Ida 48.91 87 P **P** **21 48 40.6 +0.1**
MIAR pmax pmax
comp=Z,71nm,1.1s
MIAR Mount Ida 48.91 87 P **P** **21 48 40.6 +0.1**
MIAR IAmb IAmb 21 48 53.5
comp=Z,71nm,1.1s
MIAR Mount Ida 48.91 87 P **P** **21 48 41.4 +0.9**
PBMO Poplar Bluff 49.11 82 P **P** **21 48 41.3 -0.7**
PBMO IAmb IAmb 21 49 08.5
comp=Z,43nm,1.0s
SCHQ Schefferville 49.13 50 P **P** **21 48 41.1 -0.8**
comp=Z,47nm,1.2s,baz=322,slow=7.2,SNR=15
SCHQ LR LR 22 10 31.2
comp=Z,2µm,19.4s,baz=304,slow=37
comp=Z,47nm,1.2s
LCAR Lake Charles 49.20 83 P **P** **21 48 41.6 -1.1**
HHU Hamhung 49.36 284 P **P** **21 48 45.4 +1.6**
HHU S **S** **21 55 47.1 -0.6**
HHU AmB
comp=Z,411nm,1.4s
N49A Columbus Grove 49.73 74 IAMs_20 IAMs_20 22 09 43.1
comp=Z,2µm,18.0s
SADO Sadowa 49.82 67 LR LR 22 10 19.8
comp=Z,1µm,18.2s,baz=310,slow=36
SADO Sadowa 49.82 67 P **P** **21 48 47.0 -0.4**
JMN Monobe 50.15 274 P **P** **21 48 51.0 +1.0**
JMN Monobe 50.15 274 P **P** **21 48 49.8 -0.3**
JMN Monobe 50.15 274 P **P** **21 48 50.8 +0.7**
SNY Shenyang 50.22 289 ⇑ P **P** **21 48 50.4 0.0**
SNY S **S** **21 56 01.6 +1.8**
SNY pmax pmax
comp=Z,210nm,1.0s
SNY pmax pmax
comp=Z,690nm,4.4s
SNY L L
comp=Z,800nm,20.7s
SNY L L
comp=Z,840nm,22.5s
SNY L L
comp=Z,1µm,21.8s
JCJ Chichijima 50.36 261 P **P** **21 48 50.6 -1.1**
comp=Z,127nm,0.5s,baz=326,slow=4.5,SNR=10
JCJ LR LR 22 07 26.5
comp=Z,300nm,21.9s,baz=60,slow=33
comp=Z,127nm,0.5s
JCJ Chichijima 50.36 261 P **P** **21 48 52.5 +0.9**
JCJ Chichijima 50.36 261 P **P** **21 48 51.1 -0.5**
JCJ Chichijima 50.36 261 P **P** **21 48 52.0 +0.4**
WCI Wyandotte Cave 50.42 78 P **P** **21 48 51.2 -0.8**
WCI pmax pmax
comp=Z,43nm,1.3s
WCI MLR MLR
comp=Z,2µm,20.0s
WCI Wyandotte Cave 50.42 78 P **P** **21 48 51.2 -0.8**
WCI Wyandotte Cave 50.42 78 P **P** **21 48 52.1 +0.1**
BJO1 Bjornoya 50.55 1 *e*P **P** **21 48 53.4 +0.9**
BJO1 IAmb IAmb 21 48 53.5
comp=Z,142nm,1.1s
735A Kenedy 50.69 95 IAMs_20 IAMs_20 22 09 05.1
comp=Z,2µm,21.0s
N51A Ashland 50.72 72 IAMs_20 IAMs_20 22 10 26.7
comp=Z,2µm,20.0s
ACSO Alum Creek Sta 50.86 74 P **P** **21 48 54.7 -0.6**
KS19 Wonju Array Si 50.86 282 P **P** **21 48 55.4 0.0**
KS19 IAmb IAmb 21 48 57.2
comp=Z,138nm,1.1s
KS19 PcP **PcP** **21 50 11.6 +0.1**
KSRS Korea Array 50.87 281 P **P** **21 48 55.8 +0.5**
comp=Z,98nm,1.1s,baz=52,slow=6.9,SNR=175
KSRS PcP **PcP** **21 50 12.9 +1.4**
comp=Z,27nm,1.0s,baz=51,slow=4.3,SNR=7.8
KSRS LR LR 22 11 20.2
comp=Z,333nm,19.9s,baz=50,slow=37
comp=Z,98nm,1.1s
KSAR Wonju Array Be 50.90 281 P **P** **21 48 55.6 0.0**
KSAR 21 50 12.1
KSAR Wonju Array Be 50.90 281 P **P** **21 48 55.6 0.0**
KSAR PcP **PcP** **21 50 12.1 +0.5**
SUJ Sinuiju 50.91 286 P **P** **21 48 57.5 +1.9**
SCO Scoresbysund 50.93 17 P **P** **21 48 55.5 +0.2**
SCO Scoresbysund 50.93 17 P **P** **21 48 55.5 +0.2**
SCO IAmb IAmb 21 48 57.3
comp=Z,99nm,1.1s
SCO IAMs_20 IAMs_20 22 11 37.7
comp=Z,2µm,21.0s
SCO Scoresbysund 50.93 17 P **P** **21 48 55.8 +0.5**
SCO Scoresbysund 50.93 17 *i* P **P** **21 48 55.0 -0.3**
SCO IAmb IAmb 21 48 57.0
comp=Z,94nm,1.1s
PYAG Pyongyang 50.95 284 P **P** **21 48 58.1 +2.2**
PYAG S **S** **21 56 09.4 -0.6**
PYAG AmB
comp=Z,785nm,1.5s
HKT Hockley 50.99 92 *e*P **P** **21 48 58.0 +1.7**

H11S1 WAKE ISLAND Hy 44.83 229 P **P** **21 48 09.7 +1.2**
H11S1 T T 22 35 58.3
baz=28,slow=75,SNR=104
H11S2 WAKE ISLAND Hy 44.84 229 P **P** **21 48 09.8 +1.2**
H11S2 T T 22 35 59.4
baz=28,slow=75,SNR=59
H11S3 WAKE ISLAND Hy 44.84 229 P **P** **21 48 09.9 +1.2**
H11S3 T T 22 35 57.9
baz=28,slow=75,SNR=48
JFWS Jewell Farm 45.03 76 P **P** **21 48 09.7 -0.5**
JFWS pmax pmax
comp=Z,50nm,0.9s
JFWS Jewell Farm 45.03 76 P **P** **21 48 09.7 -0.5**
JFWS IAmb IAmb 21 48 22.2
comp=Z,50nm,0.8s
MDJ Mudanjiang 45.09 287 P **P** **21 48 09.1 -1.5**
MDJ IAMs_20 IAMs_20 22 07 21.0
comp=Z,2µm,20.0s
MDJ Mudanjiang 45.09 287 P **P** **21 48 09.3 -1.3**
MDJ pmax pmax
comp=Z,45nm,1.3s
MDJ Mudanjiang 45.09 287 P **P** **21 48 09.6 -1.0**
I42A Draeger Farm, 45.14 74 IAMs_20 IAMs_20 22 06 45.7
comp=Z,2µm,18.0s
ILULI Ilulissat 45.43 28 P **P** **21 48 12.6 -0.4**
ILULI pmax pmax
comp=Z,86nm,1.1s
ILULI Ilulissat 45.43 28 P **P** **21 48 12.6 -0.4**
ILULI IAmb IAmb 21 48 14.3
comp=Z,86nm,1.1s
ILULI Ilulissat 45.43 28 P **P** **21 48 13.2 +0.3**
ILULI Ilulissat 45.43 28 *i* P **P** **21 48 12.2 -0.8**
ILULI IAmb IAmb 21 48 14.0
comp=Z,79nm,1.1s
T35A Sooner Cattle 45.55 87 IAMs_20 IAMs_20 22 05 18.8
comp=Z,2µm,21.0s
BNX BinXian 45.55 290 ⇓ P **P** **21 48 14.0 -0.3**
BNX pmax pmax
comp=Z,89nm,1.3s
MAJO Matsushiro 45.67 273 P **P** **21 48 15.3 0.0**
MAJO Matsushiro 45.67 273 *c iP* **P** **21 48 15.4 +0.2**
MAJO pmax pmax
comp=Z,255nm,1.3s
MAJO Matsushiro 45.67 273 P **P** **21 48 14.8 -0.5**
MAJO Matsushiro 45.67 273 P **P** **21 48 15.5 +0.2**
MAJO Matsushiro 45.67 273 P **P** **21 48 15.4 +0.2**
MAJO sP **sP** **21 48 32.1 +1.9**
MJAR Matsushiro Arr 45.67 273 P **P** **21 48 15.3 0.0**
comp=Z,70nm,1.1s,baz=36,slow=6.4,SNR=131
MJAR PcP **PcP** **21 49 52.2 -0.7**
comp=Z,20nm,1.2s,baz=46,slow=2.5,SNR=5.6
MJAR ScP **ScP** **21 53 43.4 +0.7**
comp=Z,1.4nm,1.0s,baz=49,slow=4.2,SNR=2.8
MJAR LR LR 22 06 00.7
comp=Z,1µm,21.9s,baz=44,slow=34
comp=Z,70nm,1.1s
MJAR Matsushiro Arr 45.67 273 P **P** **21 48 15.0 -0.3**
MJAR IAmb IAmb 21 48 16.8
comp=Z,155nm,1.3s
MJAR **PcP** **21 49 53.1 +0.3**
MJAR **ScP** **21 53 41.3 -1.4**
PSTR Posyet 45.70 284 *c iP* **P** **21 48 15.1 -0.3**
WMOK Wichita Mounta 45.79 91 P **P** **21 48 17.0 +0.7**
WMOK pmax pmax
comp=Z,49nm,1.0s
WMOK Wichita Mounta 45.79 91 P **P** **21 48 16.9 +0.7**
WMOK Wichita Mounta 45.79 91 P **P** **21 48 17.7 +1.4**
DAG Danmarks Havn 45.93 12 P **P** **21 48 16.6 -0.2**
DAG Danmarks Havn 45.93 12 P **P** **21 48 16.7 -0.2**
DAG Danmarks Havn 45.93 12 *i* P **P** **21 48 16.2 -0.7**
DAG IAmb IAmb 21 48 17.6
comp=Z,147nm,1.0s
L42A Oliver, Polo 45.96 76 IAMs_20 IAMs_20 22 07 43.5
comp=Z,2µm,18.0s
KBS Kingsbay 46.00 2 *ce*P **P** **21 48 18.0 +0.6**
KBS pmax pmax
comp=Z,193nm,1.2s
KBS Kingsbay 46.00 2 *e*P **P** **21 48 18.0 +0.6**
KBS IAmb IAmb 21 48 19.3
comp=Z,178nm,1.1s
KBS Kingsbay 46.00 2 P **P** **21 48 17.7 +0.3**
KBS IAmb IAmb 21 48 19.6
comp=Z,197nm,1.2s
KBS IAMs_20 IAMs_20 22 07 04.3
comp=Z,2µm,20.0s
KBS Kingsbay 46.00 2 P **P** **21 48 18.4 +1.0**
KBS Kingsbay 46.00 2 P **P** **21 48 18.3 +1.0**
KBS sP **sP** **21 48 33.9 +1.6**
KBS PcP **PcP** **21 49 55.2 +1.9**
KBS ScP **ScP** **21 53 44.5 +1.2**
KBS Kingsbay 46.00 2 *i* P **P** **21 48 18.2 +0.8**
SUMG Summit 46.13 21 P **P** **21 48 18.8 -0.1**
SUMG pmax pmax
comp=Z,268nm,1.3s
SUMG MLR MLR
comp=Z,1µm,18.0s
SUMG Summit 46.13 21 P **P** **21 48 18.8 -0.1**
SUMG Summit 46.13 21 P **P** **21 48 19.5 +0.6**
SUMG Summit 46.13 21 *i* P **P** **21 48 19.1 +0.1**
SUMG IAmb IAmb 21 48 20.7
comp=Z,220nm,1.2s
ALPN Alpine 46.23 99 P **P** **21 48 20.5 +0.6**
NRIK Noril'sk 46.67 333 P **P** **21 48 22.0 -0.7**
comp=Z,162nm,0.9s,baz=55,slow=6.6,SNR=100
NRIK PcP **PcP** **21 49 55.9 +0.1**
comp=Z,45nm,1.0s,baz=37,slow=4.1,SNR=3.9
NRIK LR LR 22 11 18.1
comp=Z,3µm,19.0s,baz=50,slow=40
comp=Z,162nm,0.9s
NRIK Noril'sk 46.67 333 *c iP* **P** **21 48 22.3 -0.4**
NRIK pmax pmax
comp=Z,227nm,0.9s
NRIK Noril'sk 46.67 333 P **P** **21 48 22.3 -0.4**
NRIK **PcP** **21 49 57.1 +1.3**
JGF Kuroka 46.82 273 P **P** **21 48 25.1 +0.7**
JGF Kuroka 46.82 273 P **P** **21 48 24.0 -0.3**
JGF Kuroka 46.82 273 P **P** **21 48 24.6 +0.2**
ABTX Abilene, Hawle 46.83 93 IAMs_20 IAMs_20 22 06 36.9
comp=Z,3µm,21.0s
SPA0 Spitsbergen Ar 46.83 1 *e*P **P** **21 48 23.9 0.0**
SPA0 IAmb IAmb 21 48 25.1
comp=Z,193nm,1.2s
SPITS Spitsbergen Ar 46.83 1 P **P** **21 48 23.2 -0.8**
comp=Z,78nm,1.1s,baz=27,slow=9.4,SNR=24
SPITS PcP **PcP** **21 49 55.5 -0.8**
comp=Z,26nm,0.9s,baz=52,slow=2.4,SNR=5.0
SPITS LR LR 22 08 46.1
comp=Z,1µm,18.8s,baz=343,slow=37
comp=Z,78nm,1.1s
SPITS Spitsbergen Ar 46.83 1 P **P** **21 48 23.3 -0.6**
SPITS pmax pmax
comp=Z,180nm,1.2s
SPB2 Spitsbergen Ar 46.84 1 P **P** **21 48 23.4 -0.6**
SPB2 IAmb IAmb 21 48 25.5
comp=Z,155nm,1.2s
TXAR Lajitas Array 47.00 100 P **P** **21 48 27.6 +1.7**
comp=Z,2.9nm,0.8s,baz=311,slow=6.3,SNR=24
TXAR LR LR 22 06 54.2
comp=Z,4µm,20.2s,baz=295,slow=34
TXAR PKPPKP **P'P'df** **22 19 41.2 -4.5**
comp=Z,1.0nm,1.1s,baz=149,slow=2.7,SNR=3.7
TXAR Lajitas Array 47.00 100 P **P** **21 48 26.7 +0.8**
SFJD Kangerlussuaq 47.03 31 LR LR 22 07 39.1
comp=Z,1µm,21.8s,baz=316,slow=35
SFJD Kangerlussuaq 47.03 31 P **P** **21 48 25.1 -0.4**
SFJD pmax pmax
comp=Z,296nm,1.2s
SFJD Kangerlussuaq 47.03 31 P **P** **21 48 25.1 -0.4**
SFJD Kangerlussuaq 47.03 31 P **P** **21 48 26.7 +1.1**
SFJD Kangerlussuaq 47.03 31 P **P** **21 48 26.6 +1.1**
SFJD sP **sP** **21 48 42.8 +2.4**
SFJD Kangerlussuaq 47.03 31 *i* P **P** **21 48 26.9 +1.3**
SFJD IAmb IAmb 21 48 27.4
comp=Z,302nm,1.1s
HILR Hailar Array B 47.12 299 P **P** **21 48 25.4 -1.1**
comp=Z,9.2nm,0.5s,baz=55,slow=9.5,SNR=13
HILR PcP **PcP** **21 49 56.8 -1.0**
comp=Z,8.1nm,0.8s,baz=64,slow=5.0,SNR=5.3
HILR LR LR 22 09 28.3
comp=Z,868nm,20.1s,baz=80,slow=38
comp=Z,9.2nm,0.5s
HDIL Hopedale 47.14 78 P **P** **21 48 26.6 -0.1**
INU Inuyama 47.19 273 P **P** **21 48 28.3 +1.1**
INU Inuyama 47.19 273 P **P** **21 48 26.2 -1.0**
INU IAmb IAmb 21 48 28.1

HKT pmax pmax
comp=Z,34nm,1.5s
HKT Hockley 50.99 92 P P 21 48 58.6 +2.3
SOEG Soedalen 51.04 22 *i* P **P 21 48 56.1 -0.1**
SOEG IAmb IAmb 21 48 57.6
comp=Z,330nm,1.0s
WVT Waverly 51.05 81 P P 21 48 56.9 +0.2
WVT pmax pmax
comp=Z,107nm,0.9s
WVT Waverly 51.05 81 P P 21 48 56.9 +0.2
WVT IAmb IAmb 21 49 09.6
comp=Z,107nm,0.9s
WVT Waverly 51.05 81 P P 21 48 57.4 +0.7
WVT Waverly 51.05 81 P P 21 48 57.5 +0.7
WVT pP **pP 21 49 09.2 +1.8**
WVT ScP **ScP 21 54 05.9 +0.5**
ERPA Erie 51.18 70 P P 21 48 57.5 -0.1
TRQ Mont Tremblant 51.21 62 P P 21 48 57.3 -0.6
TRQ IAmb IAmb 21 48 58.9
comp=Z,106nm,1.2s
R50A Paris 51.48 76 IAMs_20 IAMs_20 22 10 46.8
comp=Z,2µm,18.0s
INCN Inchon 51.57 282 P P 21 49 00.2 -0.4
INCN pmax pmax
comp=Z,165nm,1.2s
INCN Inchon 51.57 282 P P 21 48 59.7 -0.9
INCN Inchon 51.57 282 P P 21 49 00.2 -0.4
INCN IAmb IAmb 21 49 02.0
comp=Z,165nm,1.1s
INCN Inchon 51.57 282 P P 21 49 00.9 +0.2
ANGG Ammassalik, Gr 51.62 27 P P 21 48 59.8 -0.7
ANGG IAMs_20 IAMs_20 22 14 14.3
comp=Z,1µm,19.0s
ANGG Ammassalik, Gr 51.62 27 P P 21 49 00.4 -0.2
ANGG Ammassalik, Gr 51.62 27 *i* P **P 21 49 00.4 -0.2**
ANGG IAmb IAmb 21 49 01.2
comp=Z,286nm,1.2s
LDAQ Lac Daran 51.68 59 P P 21 49 00.4 -1.0
LDAQ IAmb IAmb 21 49 02.6
comp=Z,62nm,1.3s
HJU Haeju 51.68 284 P P 21 49 03.2 +1.9
HJU pP **sP 21 49 19.4 +3.0**
HJU S **S 21 56 19.1 -0.9**
HJU AmB
comp=Z,1µm,1.3s
IVI Ivigtut 51.89 35 P P 21 49 02.2 -0.4
IVI IAmb IAmb 21 49 04.7
comp=Z,96nm,1.1s
IVI Ivigtut 51.89 35 *i* P **P 21 49 03.0 +0.4**
IVI IAmb IAmb 21 49 04.4
comp=Z,74nm,1.0s
U49A Red Boiling Sp 51.93 79 IAMs_20 IAMs_20 22 10 30.6
comp=Z,2µm,20.0s
TJN Taejon 51.95 281 *c i* P **P 21 49 03.4 0.0**
TJN Taejon 51.95 281 P **P 21 49 03.1 -0.3**
TJN PcP **PcP 21 50 15.8 +0.3**
T50A Nancy 52.09 78 IAMs_20 IAMs_20 22 10 28.0
comp=Z,2µm,20.0s
JTU Tsushima 52.13 278 P P 21 49 05.6 +0.8
JTU Tsushima 52.13 278 P P 21 49 05.7 +0.8
MNTQ Montreal, Queb 52.18 63 P P 21 49 04.1 -1.0
MNTQ IAmb IAmb 21 49 05.4
comp=Z,56nm,1.0s
LONY Lake Ozonia 52.30 64 P P 21 49 05.2 -0.8
LONY IAMs_20 IAMs_20 22 10 51.1
comp=Z,2µm,19.0s
JNU Nakatsue 52.31 275 LR LR 22 12 11.8
comp=Z,328nm,20.6s,baz=48,slow=37
JNW Jan Mayen West 52.35 12 *eP* **P 21 49 07.2 +1.2**
JNW IAmb IAmb 21 49 08.1
comp=Z,118nm,1.1s
JMIC Jan Mayen 52.38 12 LR LR 22 12 10.0
comp=Z,1µm,20.1s,baz=340,slow=37
J57A Williamstown 52.41 66 IAMs_20 IAMs_20 22 10 53.7
comp=Z,1µm,20.0s
JMI Jan Mayen 52.41 12 *eP* **P 21 49 07.1 +0.8**
JMI IAmb IAmb 21 49 09.2
comp=Z,162nm,1.2s
LMQ La Malbaie 52.41 59 P P 21 49 05.8 -0.9
L56A Greenwood 52.47 68 IAMs_20 IAMs_20 22 11 29.5
comp=Z,1µm,20.0s
K57A Scipio Center 52.61 67 P P 21 49 08.1 -0.1
K57A IAmb IAmb 21 49 37.2
comp=Z,86nm,1.4s
IRK Irkutsk 52.65 310 *eP* **P 21 49 04.6 -3.8**
IRK pmax pmax
comp=Z,105nm,1.7s
FRNY Flat Rock 52.66 63 P P 21 49 07.8 -0.8
X48A Hartselle 52.70 82 IAMs_20 IAMs_20 22 10 31.2
comp=Z,2µm,20.0s
ZAIG Zacatecas 52.72 104 P P 21 49 10.0 +0.3
XLT XiLinHaoTe 52.77 295 *eP* **P 21 49 09.6 0.0**
XLT sP sP 21 49 26.3 +1.7
XLT PcP **PcP 21 50 19.8 +1.1**
XLT pmax pmax
comp=Z,180nm,1.0s
XLT pmax pmax
comp=Z,710nm,8.0s
XLT L L
comp=Z,940nm,19.0s
XLT L L
comp=Z,1µm,24.0s
NRS Narsarsuaq 52.81 34 P P 21 49 09.8 +0.3
NRS pmax pmax
comp=Z,138nm,1.3s
NRS MLR MLR
comp=Z,1µm,19.0s
NRS Narsarsuaq 52.81 34 P P 21 49 09.8 +0.3
NRS IAmb IAmb 21 49 36.5
comp=Z,138nm,1.3s
NRS IAMs_20 IAMs_20 22 13 54.8
comp=Z,1µm,19.0s
MCWV Mont Chateau 52.98 72 P P 21 49 10.7 -0.4
MCWV IAMs_20 IAMs_20 22 12 06.2
comp=Z,1µm,18.0s
XMAS Kiritimati 53.03 178 IAMs_20 IAMs_20 22 07 22.9
comp=Z,2µm,22.0s
TZTN Tazewell 53.16 77 P P 21 49 12.8 +0.4
BINY Binghamton 53.26 67 P P 21 49 13.7 +0.6
M57A Sunshine Farm, 53.26 69 IAMs_20 IAMs_20 22 11 37.4
comp=Z,2µm,20.0s
TLY Talaya 53.32 310 LR LR 22 12 29.6
comp=Z,1µm,21.8s,baz=18,slow=37
TLY Talaya 53.32 310 *ce* P **P 21 49 13.1 -0.3**
TLY pmax pmax
comp=Z,89nm,1.3s
TLY Talaya 53.32 310 P **P 21 49 12.5 -0.9**
TLY Talaya 53.32 310 P **P 21 49 12.9 -0.5**
TLY IAmb IAmb 21 49 15.2
comp=Z,47nm,1.0s
TLY Talaya 53.32 310 P **P 21 49 13.5 +0.1**
DL2 Dalian 53.33 287 P **P 21 49 13.6 0.0**
DL2 S **S 21 56 45.5 +2.9**
DL2 pmax pmax
comp=Z,130nm,1.1s
DL2 pmax pmax
comp=Z,390nm,4.6s
DL2 L L
comp=Z,1µm,24.2s
DL2 L L
comp=Z,900nm,20.8s
DL2 L L
comp=Z,2µm,20.6s
TKL Tuckaleechee C 53.67 78 P **P 21 49 15.5 -0.7**
comp=Z,22nm,1.0s,baz=306,slow=5.3,SNR=15
TKL LR LR 22 12 07.5
comp=Z,2µm,18.5s,baz=299,slow=36
comp=Z,22nm,1.0s
TKL Tuckaleechee C 53.67 78 P **P 21 49 15.6 -0.6**
TKL pmax pmax
comp=Z,53nm,1.1s
TKL Tuckaleechee C 53.67 78 P **P 21 49 15.6 -0.6**
TKL IAmb IAmb 21 49 34.4
comp=Z,53nm,1.1s
JSU Suzuyama 53.74 274 P **P 21 49 17.5 +0.7**
JSU Suzuyama 53.74 274 P **P 21 49 16.1 -0.6**
JSU IAmb IAmb 21 49 18.1
comp=Z,54nm,0.7s
JSU Suzuyama 53.74 274 P **P 21 49 16.9 +0.1**
LRAL Lakeview Retre 53.76 83 P **P 21 49 16.0 -0.9**
N58A Sunbury 53.83 69 IAMs_20 IAMs_20 22 12 04.6
comp=Z,2µm,20.0s
LBNH Lisbon 53.93 63 P **P 21 49 17.3 -0.7**
LBNH pmax pmax
comp=Z,39nm,1.0s
LBNH MLR MLR
comp=Z,2µm,18.0s
LBNH Lisbon 53.93 63 P **P 21 49 17.3 -0.7**
LBNH IAMs_20 IAMs_20 22 12 02.1
comp=Z,2µm,18.0s
H62A Milan 54.08 62 IAMs_20 IAMs_20 22 12 09.2
comp=Z,1µm,19.0s
HNH Hanover 54.12 63 IAMs_20 IAMs_20 22 12 16.3
comp=Z,2µm,20.0s
U54A Nelsons Funny 54.14 76 IAMs_20 IAMs_20 22 12 47.0
comp=Z,2µm,18.0s
J61A Chester 54.24 64 IAMs_20 IAMs_20 22 12 00.4
comp=Z,2µm,20.0s
ZAK Zakamensk 54.40 309 *eP* **P 21 49 20.2 -1.2**
ZAK *e* 21 50 25.0
ZAK pmax pmax
comp=Z,38nm,1.4s
ZAK pmax pmax
comp=Z,37nm,1.5s
BLA Blacksburg 54.41 74 P **P 21 49 21.2 -0.4**
BLA pmax pmax
comp=Z,34nm,0.9s
BLA Blacksburg 54.41 74 P **P 21 49 21.2 -0.4**
ULN Ulaanbaatar 54.46 304 *c i* P **P 21 49 21.3 -0.7**
ULN pmax pmax
comp=Z,65nm,1.3s
ULN Ulaanbaatar 54.46 304 P **P 21 49 20.4 -1.5**
ULN Ulaanbaatar 54.46 304 P **P 21 49 21.2 -0.7**
ULN Ulaanbaatar 54.46 304 P **P 21 49 21.4 -0.6**
comp=Z,4µmcomp=Z,190nm,1.0s
ULN Ulaanbaatar 54.46 304 P **P 21 49 21.6 -0.4**
ULN Ulaanbaatar 54.46 304 P **P 21 49 21.6 -0.4**
ULN sP **sP 21 49 37.7 +0.6**
ULN PcP **PcP 21 50 25.5 +0.4**
I62A Tamworth 54.49 63 IAMs_20 IAMs_20 22 12 27.9
comp=Z,1µm,19.0s
MOY Mondy 54.49 311 *eP* **P 21 49 21.6 -0.4**
MOY pmax pmax
comp=Z,84nm,1.4s
PKME Peaks-Kenny Pk 54.53 60 P **P 21 49 21.8 -0.4**
PKME IAmb IAmb 21 49 23.3
comp=Z,51nm,1.1s
BATG Bathurst New B 54.67 56 P **P 21 49 22.8 -0.5**
BATG IAmb IAmb 21 49 24.5
comp=Z,83nm,1.0s
I63A Otisfield 54.74 62 IAMs_20 IAMs_20 22 12 37.7
comp=Z,2µm,19.0s
SONM Songino Array 54.80 305 P **P 21 49 23.2 -1.2**
comp=Z,56nm,0.9s,baz=48,slow=6.7,SNR=130
SONM PcP **PcP 21 50 26.5 +0.1**
comp=Z,31nm,1.0s,baz=54,slow=1.7,SNR=7.1
SONM LR LR 22 14 41.0
comp=Z,3µm,19.8s,baz=38,slow=38
comp=Z,56nm,0.9s
SONM Songino Array 54.80 305 P **P 21 49 24.3 -0.1**
SONM 21 50 27.3
SONM pmax pmax
comp=Z,113nm,1.2s
SONM Songino Array 54.80 305 P **P 21 49 24.3 -0.1**
SONM IAmb IAmb 21 49 25.7
comp=Z,113nm,1.2s
SONM **PcP 21 50 27.3 +0.9**
VADS Vadso 54.81 356 *eP* **P 21 49 23.3 -0.6**
VADS IAmb IAmb 21 49 24.3
comp=Z,180nm,1.0s
L61B Northampton 54.81 65 IAMs_20 IAMs_20 22 13 20.6
comp=Z,2µm,19.0s
K62A Royalston 54.89 64 IAMs_20 IAMs_20 22 14 52.6
comp=Z,2µm,19.0s
250A Grady 54.95 83 IAMs_20 IAMs_20 22 11 30.0
comp=Z,2µm,20.0s
BRAL Brewton 55.11 84 IAMs_20 IAMs_20 22 12 17.9
comp=Z,2µm,19.0s
KEV Kevo 55.25 357 P **P 21 49 26.5 -0.6**
KEV pmax pmax
comp=Z,201nm,1.0s
KEV MLR MLR
comp=Z,1µm,18.0s
KEV Kevo 55.25 357 P **P 21 49 26.5 -0.6**
KEV Kevo 55.25 357 P **P 21 49 26.7 -0.4**
KEV Kevo 55.25 357 P **P 21 49 26.6 -0.4**
KEV sP **sP 21 49 43.8 +1.6**
HRV Adam Dziewonsk 55.35 64 P **P 21 49 27.9 -0.3**
HRV pmax pmax
comp=Z,34nm,1.1s
HRV Adam Dziewonsk 55.35 64 P **P 21 49 27.9 -0.3**
HRV Adam Dziewonsk 55.35 64 P **P 21 49 28.7 +0.5**
TRO Tromso 55.45 1 *eP* **P 21 49 28.4 -0.1**
TRO IAmb IAmb 21 49 29.5
comp=Z,182nm,0.9s
BJI2 Beijing 55.48 292 P **P 21 49 28.8 -0.4**
BJI2 PcP **PcP 21 50 29.0 0.0**
BJI2 S **S 21 57 11.6 +0.1**
BJI2 pmax pmax
comp=Z,19nm,1.2s
BJI2 L L
comp=Z,590nm,18.7s
BJI2 L L
comp=Z,420nm,17.5s
BJI2 L L
comp=Z,760nm,19.3s
BJT Baijiatuau 55.48 292 P **P 21 49 28.5 -0.7**
BJT pmax pmax
comp=Z,54nm,1.2s
BJT MLR MLR
comp=Z,1µm,20.0s
BJT Baijiatuau 55.48 292 **P 21 49 28.5 -0.7**
BJT IAmb IAmb 21 49 30.3
comp=Z,54nm,1.2s
BJT Baijiatuau 55.48 292 IAMs_20 IAMs_20 22 15 26.0
comp=Z,1µm,20.0s
BJT Baijiatuau 55.48 292 P **P 21 49 28.9 -0.3**
BJT Baijiatuau 55.48 292 P **P 21 49 29.2 0.0**
GOGA Godfrey 55.48 80 P **P 21 49 28.5 -0.8**
ARA0 ARCESS Array S 55.50 358 *eP* **P 21 49 28.5 -0.5**
ARA0 IAmb IAmb 21 49 29.3
comp=Z,119nm,1.0s
ARCES ARCESS Array B 55.50 358 P **P 21 49 27.6 -1.3**
comp=Z,76nm,0.9s,baz=0.0,slow=7.3,SNR=72
ARCES PcP **PcP 21 50 29.3 +0.8**
comp=Z,40nm,0.9s,baz=28,slow=3.0,SNR=6.9
ARCES LR LR 22 15 03.6
comp=Z,889nm,18.9s,baz=1.0,slow=38
comp=Z,76nm,0.9s
ARCES ARCESS Array B 55.50 358 P **P 21 49 28.2 -0.8**
ARCES IAmb IAmb 21 49 29.5
comp=Z,113nm,1.0s
ARCES **PcP 21 50 29.4 +0.9**
JETT Jettan, Norway 55.53 0 *eP* **P 21 49 29.2 0.0**
JETT IAmb IAmb 21 49 30.2
comp=Z,228nm,1.1s
WES Weston 55.56 64 IAMs_20 IAMs_20 22 12 49.3
comp=Z,2µm,22.0s
EMMW East Machias 55.83 59 IAMs_20 IAMs_20 22 13 54.4
comp=Z,1µm,19.0s
GGN Saint George 55.84 59 P **P 21 49 30.8 -0.9**
MOIG Morelia 55.96 105 P **P 21 49 32.5 -0.7**
MOIG IAmb IAmb 21 49 47.1
comp=Z,77nm,1.0s
KTK1 Kautokeino 56.06 359 *eP* **P 21 49 32.1 -0.9**
KTK1 IAmb IAmb 21 49 33.3
comp=Z,131nm,1.0s
352A Blakely 56.09 82 IAMs_20 IAMs_20 22 12 14.9
comp=Z,2µm,20.0s
BORG Borgarnes 56.10 20 P **P 21 49 33.9 +0.7**
BORG pmax pmax
comp=Z,297nm,1.1s
BORG MLR MLR
comp=Z,900nm,21.0s
BORG Borgarnes 56.10 20 P **P 21 49 33.9 +0.7**
BORG Borgarnes 56.10 20 P **P 21 49 35.0 +1.8**
M65A Busby, Falmout 56.50 64 IAMs_20 IAMs_20 22 13 08.3
comp=Z,2µm,20.0s
LVZ Lovozero 56.76 354 *ce* P **P 21 49 37.4 -0.6**
LVZ pmax pmax
comp=Z,309nm,1.0s
LVZ Lovozero 56.76 354 P **P 21 49 37.4 -0.6**
LVZ IAMs_20 IAMs_20 22 18 25.2
comp=Z,1µm,20.0s
LVZ Lovozero 56.76 354 P **P 21 49 37.0 -1.0**
comp=Z,3µmcomp=Z,346nm,1.1s
LVZ Lovozero 56.76 354 P **P 21 49 37.7 -0.3**
LOF Lofoten 56.85 3 *eP* **P 21 49 37.2 -1.3**
LOF IAmb IAmb 21 49 41.0
comp=Z,45nm,0.9s
TIGA Tifton 56.88 81 IAMs_20 IAMs_20 22 12 38.8
comp=Z,2µm,22.0s
STEI Steigen 57.10 2 *eP* **P 21 49 39.9 -0.4**
STEI IAmb IAmb 21 49 41.0
comp=Z,94nm,0.9s
HHC Hu-ho-hao-te 57.29 296 *eP* **P 21 49 42.1 -0.2**
HHC sP sP 21 49 58.9 +1.5
HHC pmax pmax
comp=Z,71nm,1.2s
HHC pmax pmax
comp=Z,430nm,4.0s
HHC L L
comp=Z,700nm,21.0s
HHC L L
comp=Z,860nm,16.8s
HHC L L
comp=Z,1µm,20.2s
NHSC New Hope 57.56 78 P **P 21 49 44.2 +0.2**
NHSC IAmb IAmb 21 49 56.7
comp=Z,138nm,1.2s
SGF Sodankyl 57.58 357 P **P 21 49 43.7 0.0**
SGF Sodankyl 57.58 357 P **P 21 49 43.8 +0.1**
FAUS Fauske 57.65 2 *eP* **P 21 49 43.9 -0.3**
FAUS IAmb IAmb 21 49 44.9
comp=Z,134nm,1.0s
TIA Tai'an 57.74 288 P **P 21 49 45.1 -0.3**
TIA sP **sP 21 50 00.6 +0.1**
TIA pmax pmax
comp=Z,130nm,1.2s
TIA pmax pmax
comp=Z,600nm,3.5s
TIA L L
comp=Z,730nm,19.3s
TIA L L
comp=Z,1µm,24.3s
TIA L L
comp=Z,2µm,25.5s
HAL Halifax 57.77 57 P **P 21 49 44.6 -0.8**
HAL pmax pmax
comp=Z,44nm,1.2s
HAL Halifax 57.77 57 P **P 21 49 44.6 -0.8**
HNS HongShan 58.17 291 ⇓ P **P 21 49 48.4 +0.1**
HNS pmax pmax
comp=Z,270nm,1.1s
HNS L L
comp=Z,1µm,18.4s
HNS L L
comp=Z,2µm,19.4s
HNS L L
comp=Z,2µm,20.5s
BTO2 Baotou 58.23 297 *eP* **P 21 49 48.5 -0.4**
BTO2 pP **pP 21 50 01.1 +1.3**
BTO2 S **S 21 57 46.4 -1.8**
BTO2 pmax pmax
comp=Z,110nm,1.1s
BTO2 pmax pmax
comp=Z,850nm,3.6s
BTO2 L L
comp=Z,1µm,14.9s
BTO2 L L
comp=Z,2µm,19.4s
BTO2 L L
comp=Z,2µm,19.1s
VAGH Vaagaholmen 58.24 3 *eP* **P 21 49 47.6 -0.8**
VAGH IAmb IAmb 21 49 49.1
comp=Z,80nm,1.0s
TARA Tarawa 58.27 213 IAMs_20 IAMs_20 22 10 11.5
comp=Z,1µm,20.0s
KONS Konsvik 58.47 4 *eP* **P 21 49 49.6 -0.3**
KONS IAmb IAmb 21 49 50.8
comp=Z,85nm,1.0s
JOW Kunigami 58.51 272 LR LR 22 12 02.7
comp=Z,360nm,21.4s,baz=16,slow=33
JOW Kunigami 58.51 272 P **P 21 49 50.6 -0.2**
JOW IAmb IAmb 21 49 52.5
comp=Z,132nm,1.2s
JOW Kunigami 58.51 272 P **P 21 49 51.3 +0.5**
RAUS Rausandaksla 58.56 3 *eP* **P 21 49 50.3 -0.4**
RAUS IAmb IAmb 21 49 51.4
comp=Z,203nm,1.0s
STOK Stokkvaagen 58.63 4 *eP* **P 21 49 51.1 0.0**
STOK IAmb IAmb 21 49 52.1
comp=Z,154nm,1.1s
MOR8 Moi Rana 58.84 3 *eP* **P 21 49 51.0 -1.6**
MOR8 IAmb IAmb 21 49 52.2
comp=Z,92nm,1.0s
LEIR Leirfjorden 58.85 4 *eP* **P 21 49 52.6 0.0**
LEIR IAmb IAmb 21 49 53.7
comp=Z,158nm,1.1s
MSF Maaselka 59.03 356 P **P 21 49 53.8 0.0**
MSF Maaselka 59.03 356 P **P 21 49 53.9 0.0**
TLIG Tlapa 59.12 104 P **P 21 49 55.8 +0.4**
TLIG IAmb IAmb 21 50 09.1
comp=Z,60nm,1.2s
ZAA0 Zalesovo Array 59.13 322 P **P 21 49 54.3 -0.5**
ZALV Zalesovo Beam 59.13 322 P **P 21 49 54.4 -0.3**
comp=Z,91nm,1.0s,baz=39,slow=5.7,SNR=182
ZALV LR LR 22 17 31.6
comp=Z,5µm,19.6s,baz=32,slow=38
ZALV PKPPKP P'P'df 22 19 24.4 -8.7
comp=Z,0.3nm,0.4s,baz=223,slow=5.7,SNR=1.6
comp=Z,91nm,1.0s
ZALV Zalesovo Beam 59.13 322 P **P 21 49 54.2 -0.5**
TIY Taiyuan 59.15 293 *eP* **P 21 49 55.4 +0.2**
TIY pmax pmax
comp=Z,67nm,1.0s
SSE Sheshan 59.30 281 P **P 21 49 56.4 +0.1**
SSE pmax pmax
comp=Z,29nm,0.9s
GUMO Guam 59.73 249 LR LR 22 12 32.4
comp=Z,239nm,21.8s,baz=60,slow=33
NJ2 Nanjing 59.89 284 ⇑ *i* P **P 21 49 59.8 -0.5**
NJ2 sP **sP 21 50 15.8 +0.4**
NJ2 pmax pmax
comp=Z,230nm,1.3s
OUL Oulu 59.96 357 P **P 21 49 59.9 -0.3**
OUL Oulu 59.96 357 P **P 21 50 00.1 -0.2**
NSS Namsos 60.39 4 *eP* **P 21 50 02.9 -0.3**
NSS IAmb IAmb 21 50 04.1
comp=Z,156nm,1.1s
ADZR Andozero 60.41 351 *c i* P **P 21 50 02.8 -0.5**
ADZR pmax pmax
comp=Z,266nm,1.0s
SOFL Sornfelli, Far 61.05 14 ⇑ *eP* **P 21 50 08.6 +0.8**
LYN LuoYang 61.50 290 ⇑ *i* P **P 21 50 11.5 +0.2**
LYN sP sP 21 50 28.0 +1.6
LYN pmax pmax
comp=Z,460nm,1.0s
CMIG Matias Romero 61.56 101 LR LR 22 14 36.0
comp=Z,2µm,20.8s,baz=253,slow=34
DGZ Jazzator, Alta 61.56 317 *c i* P **P 21 50 11.7 0.0**
DGZ pmax pmax
comp=Z,120nm,1.2s
JMJ Miyako jima 2 61.77 273 P **P 21 50 14.4 +1.3**
060A Indiantown 62.04 82 IAMs_20 IAMs_20 22 16 12.7
comp=Z,2µm,22.0s
MOL Molde 62.09 7 *eP* **P 21 50 15.2 +0.5**
MOL IAmb IAmb 21 50 16.1
comp=Z,139nm,1.2s
AKN Aaknes 62.45 7 *eP* **P 21 50 17.8 +0.6**
AKN IAmb IAmb 21 50 18.8
comp=Z,248nm,1.1s
DOMB Dombas 62.72 6 *eP* **P 21 50 19.1 +0.1**
DOMB IAmb IAmb 21 50 19.9
comp=Z,97nm,1.1s
FOO Floro 62.87 8 *eP* **P 21 50 19.9 -0.1**
FOO IAmb IAmb 21 50 21.0
comp=Z,80nm,1.1s
KLMR Klimovskoe 63.31 350 *eP* **P 21 50 21.2 -1.7**
KLMR *e*PP **pP 21 50 35.8 +1.9**
KLMR S **S 21 58 49.4 -2.6**
KLMR pmax pmax
comp=Z,338nm,1.2s
KLMR MLR MLR
comp=Z,1µm,17.0s
YOJ Yonaguni jima 63.34 275 P **P 21 50 24.6 +0.9**
YOJ Yonaguni jima 63.34 275 P **P 21 50 22.2 -1.5**
YOJ pmax pmax
comp=Z,144nm,0.9s
YOJ Yonaguni jima 63.34 275 P **P 21 50 22.2 -1.5**
SUE Sulen 63.38 9 *eP* **P 21 50 23.6 +0.2**
SUE IAmb IAmb 21 50 24.5
comp=Z,68nm,1.1s
HYA Hoyanger 63.39 8 *eP* **P 21 50 23.6 +0.2**
HYA IAmb IAmb 21 50 24.7
comp=Z,90nm,1.2s

WHN **Wuhan** 63.53 286 ⇑P **P** 21 50 24.5 -0.3
WHN sP **sP** 21 50 40.9 +0.9
WHN pmax pmax
comp=Z,400nm,1.3s
WHN pmax pmax
comp=Z,1μm,3.7s
FIA1 **FINESS Array S** 63.60 357 P **P** 21 50 24.4 -0.4
FINES **FINESS Array B** 63.60 357 P **P** 21 50 24.3 -0.6
comp=Z,89nm,1.0s,baz=0.9,slow=8.9,SNR=78
FINES PKP2bc P'P'bc 22 19 16.7 -16
comp=Z,8.0nm,1.0s,baz=155,slow=4.0,SNR=5.7
FINES LR LR 22 21 05.0
comp=Z,536nm,18.1s,baz=12,slow=39
comp=Z,89nm,1.0s
FINES **FINESS Array B** 63.60 357*ce*P **P** 21 50 24.2 -0.6
FINES pmax pmax
comp=Z,90nm,1.0s
NC303 **NORSAR Array S** 63.66 5 P **P** 21 50 25.2 0.0
LRW **Lerwick** 63.67 12⇑*e*P **P** 21 50 26.1 +0.8
LRW IAmb IAmb 21 50 27.1
comp=Z,220nm,1.0s
SVE **Sverdlovsk** 63.70 337*d* iP **P** 21 50 25.7 +0.1
SVE pmax pmax
comp=Z,341nm,1.1s
SVE MLR MLR
comp=Z,2μm,21.0s
XAN **Xi'an** 63.79 292 ⇓P **P** 21 50 26.0 -0.6
XAN pP pP 21 50 35.5 -2.0
XAN pmax pmax
comp=Z,230nm,1.2s
XAN pmax pmax
comp=Z,1μm,8.7s
XAN L L
comp=Z,1μm,16.5s
XAN L L
comp=Z,850nm,17.9s
XAN L L
comp=Z,2μm,17.9s
SOR **Soroa** 63.82 87 P **P** 21 50 25.9 -0.9
SOR pmax pmax
comp=Z,34nm,0.9s
SOR **Soroa** 63.82 87 P **P** 21 50 25.9 -0.9
SOR IAmb IAmb 21 50 39.3
comp=Z,34nm,0.9s
NB2 **NORSAR Subarra** 63.84 5 P **P** 21 50 26.2 -0.3
comp=Z,184nm,1.2s,baz=354,slow=6.5
NB2 **NORSAR Subarra** 63.84 5 P **P** 21 50 26.2 -0.3
NOA **NORSAR Array B** 63.84 5 P **P** 21 50 26.0 -0.5
comp=Z,71nm,1.0s,baz=354,slow=6.6,SNR=57
NOA LR LR 22 16 21.4
comp=Z,424nm,21.5s,baz=0.0,slow=34
comp=Z,71nm,1.0s
KURK **Kurchatov** 63.96 323*ce*P **P** 21 50 27.1 -0.2
KURK pmax pmax
comp=Z,211nm,1.1s
KURK **Kurchatov** 63.96 323 P **P** 21 50 26.4 -0.9
KURK **Kurchatov** 63.96 323 P **P** 21 50 26.9 -0.4
KURK **Kurchatov** 63.96 323 P **P** 21 50 27.4 0.0
ASK **Askoy** 63.98 8 *e*P **P** 21 50 27.6 +0.3
ASK IAmb IAmb 21 50 28.8
comp=Z,133nm,1.1s
NAO01 **NORSAR Array S** 64.02 5 P **P** 21 50 27.2 -0.4
SKAR **Skarslia** 64.02 7 *e*P **P** 21 50 27.3 -0.4
SKAR IAmb IAmb 21 50 29.0
comp=Z,149nm,1.1s
KURBB **Kurchatov Arra** 64.06 323 P **P** 21 50 27.4 -0.6
comp=Z,111nm,1.0s,baz=26,slow=6.6,SNR=288
KURBB PKP2bc **P'P'df** 22 19 20.5 -4.5
comp=Z,0.5nm,0.9s,baz=214,slow=2.3,SNR=4.3
KURBB LR LR 22 20 47.5
comp=Z,4μm,18.2s,baz=10,slow=38
comp=Z,111nm,1.0s
BER **Bergen** 64.09 8 *e*P **P** 21 50 28.5 +0.4
BER IAmb IAmb 21 50 29.4
comp=Z,130nm,1.2s
NC602 **NORSAR Array S** 64.16 5 *e*P **P** 21 50 27.3 -1.2
NC602 IAmb IAmb 21 50 29.5
comp=Z,112nm,1.3s
NORES **NORESS Array B** 64.16 5 P **P** 21 50 28.3 -0.2
NORES pmax pmax
comp=Z,44nm,1.1s
KIRV **Kirov** 64.22 344 LR LR 22 21 50.4
comp=Z,1μm,20.5s,baz=25,slow=39
KIRV **Kirov** 64.22 344*c* iP **P** 21 50 28.2 -0.7
GTA2 **Gaotai** 64.23 302 P **P** 21 50 28.8 -0.7
GTA2 S **S** 21 59 01.8 -2.6
GTA2 sS sS 21 59 22.4 -0.1
GTA2 pmax pmax
comp=Z,200nm,1.2s
GTA2 L L
comp=Z,900nm,18.7s
GTA2 L L
comp=Z,1μm,20.3s
GTA2 L L
comp=Z,2μm,18.4s
NACB **Ninganchiao** 64.38 276 P **P** 21 50 30.0 -0.5
NACB **Ninganchiao** 64.38 276 P **P** 21 50 29.3 -1.2
NACB IAmb IAmb 21 50 33.9
comp=Z,103nm,1.2s
NACB **Ninganchiao** 64.38 276 P **P** 21 50 29.0 -1.5
ZSN **Zaisan** 64.39 317*c* iP **P** 21 50 30.4 +0.1
ZSN *e*S **S** 21 59 05.5 -0.3
ZSN pmax pmax
comp=Z,104nm,1.0s
ZSN **Zaisan** 64.39 317⇑*i*P **P** 21 50 30.4 +0.1
comp=Z,104nm,1.0s
ZSN *e*S **S** 21 59 05.5 -0.3
BVAR **Borovoye Array** 64.59 329 P **P** 21 50 30.9 -0.6
comp=Z,132nm,0.9s,baz=25,slow=4.9,SNR=266
BVAR PKPPKP P'P'df 22 19 15.8 -8.7
comp=Z,2.0nm,1.0s,baz=193,slow=5.9,SNR=4.9
comp=Z,132nm,0.9s
BORK **Borovoye** 64.59 329*c* iP **P** 21 50 31.5 0.0
BORK pmax pmax
comp=Z,183nm,1.0s
BORK **Borovoye** 64.59 329 P **P** 21 50 31.4 0.0
ARTI **Arti** 64.61 338 LR LR 22 21 30.0
comp=Z,2μm,21.4s,baz=13,slow=39
ARTI **Arti** 64.61 338*c* iP **P** 21 50 31.2 -0.3
ARTI *PP **pP** 21 50 43.8 +1.3
ARTI 21 51 05.1
ARTI 21 52 53.3
ARTI PPP PPP 21 54 28.9
ARTI S **S** 21 59 07.5 -0.7
ARTI 22 00 20.9
ARTI SS **SS** 22 03 15.3 -2.7
ARTI pmax pmax
comp=Z,378nm,1.0s
ARTI MLR MLR
comp=Z,3μm,21.0s
ARTI **Arti** 64.61 338 P **P** 21 50 30.9 -0.6
ODD1 **Odda** 64.67 8 *e*P **P** 21 50 32.1 +0.2
ODD1 IAmb IAmb 21 50 33.3
comp=Z,99nm,1.1s
LZH **Lanzhou** 64.85 297 *e*P **P** 21 50 33.8 +0.2
LZH pP pP 21 50 44.0 -0.6
LZH sP sP 21 50 50.0 +1.2
LZH pmax pmax
comp=Z,200nm,1.2s
LZH pmax pmax
comp=Z,1μm,4.2s
LZH L L
comp=Z,2μm,14.5s
LZH L L
comp=Z,1μm,14.2s
LZH L L
comp=Z,3μm,13.2s
HFS **Hagfors** 64.86 4 P **P** 21 50 32.5 -0.5
comp=Z,80nm,0.9s,baz=23,slow=3.0,SNR=90
HFS LR LR 22 16 56.3
comp=Z,390nm,21.1s,baz=346,slow=34
comp=Z,80nm,0.9s
OSL **Oslo** 64.91 6 *e*P **P** 21 50 34.0 +0.5
OSL IAmb IAmb 21 50 34.1
comp=Z,117nm,1.4s
LZDM **Lanzhou Array** 65.02 297 P **P** 21 50 34.3 -0.7
comp=Z,16nm,0.5s,baz=41,slow=2.7,SNR=38
LZDM LR LR 22 21 51.6
comp=Z,2μm,19.5s,baz=60,slow=39
comp=Z,16nm,0.5s
SSLB **Suanglung** 65.04 276 P **P** 21 50 35.4 +0.5
SSLB **Suanglung** 65.04 276 P **P** 21 50 34.4 -0.5
LINV **Loch Inver, As** 65.07 15⇑*e*P **P** 21 50 34.8 +0.4
LINV IAmb IAmb 21 50 36.4
comp=Z,242nm,1.2s
PUL **Pulkovo** 65.10 355*ce*P **P** 21 50 34.7 +0.1
PUL pmax pmax
comp=Z,267nm,1.3s
KONO **Kongsberg** 65.13 6*ce*P **P** 21 50 34.9 0.0
KONO pmax pmax
comp=Z,161nm,1.2s
KONO **Kongsberg** 65.13 6 *e*P **P** 21 50 35.1 +0.2
KONO IAmb IAmb 21 50 36.5
comp=Z,182nm,1.2s
KONO **Kongsberg** 65.13 6 P **P** 21 50 34.9 0.0
KONO **Kongsberg** 65.13 6 P **P** 21 50 35.7 +0.8
BLS5 **Blasjo** 65.14 8 *e*P **P** 21 50 35.3 +0.4
BLS5 IAmb IAmb 21 50 36.4
comp=Z,88nm,1.0s
YULB **Yu-li** 65.16 276 P **P** 21 50 37.5 +1.9
YULB **Yu-li** 65.16 276 P **P** 21 50 34.2 -1.4
YULB IAmb IAmb 21 50 58.1
comp=Z,58nm,1.0s
YULB **Yu-li** 65.16 276 P **P** 21 50 34.8 -0.8
KMY **Karmoy** 65.25 9 *e*P **P** 21 50 35.6 0.0
KMY IAmb IAmb 21 50 36.9
comp=Z,122nm,1.6s
QZH2 **Quanzhou** 65.48 279⇑*i*P **P** 21 50 37.5 -0.1
QZH2 S **S** 21 59 19.8 +0.1
QZH2 pmax pmax
comp=Z,70nm,1.3s
QZH2 pmax pmax
comp=Z,340nm,3.9s
QZH2 L L
comp=Z,360nm,16.5s
QZH2 L L
comp=Z,470nm,15.8s
QZH2 L L
comp=Z,520nm,15.0s
TPUB **Ta-pu** 65.61 276 P **P** 21 50 39.8 +1.3
ARBE **Arbavere** 65.61 357 P **P** 21 50 38.1 +0.2
TWG **Pinlang** 65.73 275 P **P** 21 50 38.8 -0.5
TWG IAmb IAmb 21 51 03.3
comp=Z,63nm,1.4s
TWG **Pinlang** 65.73 275 P **P** 21 50 38.8 -0.5
KPL **Plockton** 65.78 15⇑*e*P **P** 21 50 39.7 +0.7
KPL IAmb IAmb 21 50 40.8
comp=Z,96nm,0.9s
STRU **Stroemstad** 65.84 5 *i* P **P** 21 50 39.6 +0.2
MCD **Coleburn Disti** 65.89 14 *e*P **P** 21 50 40.6 +0.8
MCD IAmb IAmb 21 50 41.7
comp=Z,357nm,1.0s
MK31 **Makanchi Array** 65.92 319*c* iP **P** 21 50 39.4 -0.8
MK31 **Makanchi Array** 65.92 319 P **P** 21 50 39.6 -0.6
MK31 IAmb IAmb 21 50 40.9
comp=Z,69nm,1.1s
MKAR **Makanchi Array** 65.92 319 P **P** 21 50 39.5 -0.7
comp=Z,44nm,1.0s,baz=50,slow=6.5,SNR=205
MKAR S **S** 21 59 20.9 -3.8
comp=Z,1.5nm,1.1s,baz=40,slow=11,SNR=3.8
MKAR PKP2bc P'P'bc 22 19 11.8 -14
comp=Z,0.3nm,0.7s,baz=202,slow=0.8,SNR=3.5
MKAR LR LR 22 21 59.9
comp=Z,2μm,19.4s,baz=19,slow=38
comp=Z,44nm,1.0s
MKAR **Makanchi Array** 65.92 319*ce*P **P** 21 50 39.5 -0.7
MKAR pmax pmax
comp=Z,45nm,1.0s
MAKZ **Makanchi** 66.02 319 P **P** 21 50 40.5 -0.4
MAKZ **Makanchi** 66.02 319 P **P** 21 50 40.4 -0.4
MAKZ IAmb IAmb 21 50 41.7
comp=Z,93nm,1.1s
MAKZ **Makanchi** 66.02 319 P **P** 21 50 40.4 -0.5
CNSH **ChangSha** 66.14 285 P **P** 21 50 41.6 -0.2
CNSH pmax pmax
comp=Z,89nm,1.4s
WMQ **Urumqi** 66.22 313 ⇑P **P** 21 50 42.6 +0.3
WMQ sP sP 21 50 59.8 +2.3
WMQ PP **PP** 21 53 12.5 +4.8
WMQ S **S** 21 59 29.1 +0.6
WMQ pmax pmax
comp=Z,72nm,0.9s
WMQ pmax pmax
comp=Z,440nm,3.7s
WMQ L L
comp=Z,1μm,18.7s
WMQ L L
comp=Z,1μm,18.7s
WMQ L L
comp=Z,2μm,22.7s
MTSE **Matsula** 66.39 358 P **P** 21 50 43.1 +0.1
ENH **Enshi** 66.40 289 P **P** 21 50 44.6 +1.1
ENH **Enshi** 66.40 289 **P** 21 50 42.9 -0.7
ENH IAMs_20 IAMs_20 22 18 58.9
comp=Z,1μm,21.0s
ENH **Enshi** 66.40 289 P **P** 21 50 43.5 0.0
HOMB **Homborsund** 66.43 7 *e*P **P** 21 50 43.8 +0.6
HOMB IAmb IAmb 21 50 44.9
comp=Z,171nm,1.1s
HOMB **Homborsund** 66.43 7 *i* P **P** 21 50 43.6 +0.4
BBSR **BB Station** 66.55 67 P **P** 21 50 43.6 -0.8
BBSR IAmb IAmb 21 51 05.6
comp=Z,96nm,1.4s
BBSR **BB Station** 66.55 67 P **P** 21 50 44.8 +0.4
VSU **Vasula** 66.57 357*ce*P **P** 21 50 43.1 -1.0
VSU pmax pmax
comp=Z,248nm,1.0s
VSU **Vasula** 66.57 357 P **P** 21 50 43.4 -0.7
DRUM **Mains of Drumt** 66.64 14 P **P** 21 50 45.5 +0.9
DRUM **Mains of Drumt** 66.64 14⇑*e*P **P** 21 50 45.2 +0.6
DRUM IAmb IAmb 21 50 46.2
comp=Z,502nm,1.0s
MTO3 **Montecristo** 66.85 98 P **P** 21 50 45.6 -1.2
LAWE **Loch Awe, Argy** 66.86 15⇑*e*P **P** 21 50 46.7 +0.7
LAWE IAmb IAmb 21 50 47.7
comp=Z,158nm,0.9s
TJOU **Tjoern** 66.86 5 *i* P **P** 21 50 46.1 +0.1
EAB **Aberfoyle** 67.09 15⇑*e*P **P** 21 50 48.2 +0.7
EAB IAmb IAmb 21 50 49.3
comp=Z,249nm,1.0s
PGBU **Glenifferbraes** 67.43 15⇑*e*P **P** 21 50 50.1 +0.5
PGBU IAmb IAmb 21 50 51.3
comp=Z,399nm,1.0s
GGERF **Dalmarnock** 67.44 15 *e*P **P** 21 50 50.2 +0.5
SLIT **Slitere, Latvi** 67.50 359 P **P** 21 50 49.9 -0.1
EDI **Edinburgh** 67.51 14⇑*e*P **P** 21 50 50.6 +0.4
EDI IAmb IAmb 21 50 51.8
comp=Z,174nm,1.0s
ONAU **Onsala** 67.51 5 *i* P **P** 21 50 50.0 -0.1
IDGL **Inch Island, C** 67.66 17 P **P** 21 50 52.0 +0.9
IDGL **Inch Island, C** 67.66 17 P **P** 21 50 52.1 +1.1
IDGL **Inch Island, C** 67.66 17⇑*e*P **P** 21 50 51.9 +0.9
IDGL IAmb IAmb 21 50 53.0
comp=Z,197nm,1.1s
CLGH **Cloghs, Cushen** 67.88 16 P **P** 21 50 53.3 +0.8
CLGH **Cloghs, Cushen** 67.88 16⇑*e*P **P** 21 50 53.0 +0.5
CLGH IAmb IAmb 21 50 54.2
comp=Z,218nm,1.5s
FABU **Falkenberg** 67.95 5 *i* P **P** 21 50 52.3 -0.5
EKA **Eskdalemuir Ar** 68.09 14 P **P** 21 50 54.0 +0.2
comp=Z,147nm,1.0s,baz=340,slow=4.7,SNR=138
EKA LR LR 22 20 02.3
comp=Z,1μm,21.9s,baz=338,slow=35
comp=Z,147nm,1.0s
EKA **Eskdalemuir Ar** 68.09 14 P **P** 21 50 54.0 +0.2
ESK **Eskdalemuir** 68.09 14 P **P** 21 50 54.7 +0.9
ESK pmax pmax
comp=Z,156nm,1.0s
ESK **Eskdalemuir** 68.09 14 IAMs_20 IAMs_20 22 19 39.4
comp=Z,1μm,21.0s
ESK **Eskdalemuir** 68.09 14 P **P** 21 50 54.8 +1.0
ESK **Eskdalemuir** 68.09 14⇑*e*P **P** 21 50 54.3 +0.4
ESK IAmb IAmb 21 50 55.6
comp=Z,163nm,1.0s
NEWG **New Galloway** 68.14 15⇑*e*P **P** 21 50 54.5 +0.4
NEWG IAmb IAmb 21 50 55.7
comp=Z,118nm,1.0s
MUD **Monsted U'grnd** 68.28 7 *i* P **P** 21 50 55.7 +0.7
MUD IAmb IAmb 21 50 56.9
comp=Z,126nm,1.1s
GAL1 **Galloway** 68.31 15⇑*e*P **P** 21 50 55.7 +0.5
GAL1 IAmb IAmb 21 50 56.8
comp=Z,197nm,1.0s
DEL **Delary** 68.53 4 *i* P **P** 21 50 56.7 +0.2
MOS **Moscow** 68.54 350 *e*P **P** 21 50 56.5 -0.1
MOS *e*PP **pP** 21 51 06.7 -0.9
MOS *e* 21 51 22.2
MOS *e* 21 53 25.8
MOS *e*PPP PPP 21 55 04.7
MOS *e*S **S** 21 59 53.6 -2.2
MOS *e* 22 00 51.4
MOS *e*SSS SSS 22 07 26.5
MOS pmax pmax
comp=Z,187nm,1.3s
MOS pmax pmax
comp=N,122nm,1.2s
MOS pmax pmax
comp=Z,300nm,1.5s
MOS MLR MLR
comp=Z,12μm,19.0s
EDMD **Edmundbyers** 68.74 14 P **P** 21 50 58.8 +0.9
EDMD **Edmundbyers** 68.74 14⇑*e*P **P** 21 50 58.4 +0.5
EDMD IAmb IAmb 21 50 59.7
comp=Z,177nm,1.1s
KESW **Keswick, Cumbr** 68.82 15 P **P** 21 50 59.4 +1.0
KESW **Keswick, Cumbr** 68.82 15⇑*e*P **P** 21 50 59.0 +0.7
KESW IAmb IAmb 21 51 00.1
comp=Z,189nm,1.0s
ILTH **Belurgan, Co L** 68.86 17 P **P** 21 50 59.3 +0.7
ILTH **Belurgan, Co L** 68.86 17 P **P** 21 50 59.3 +0.7
ILTH **Belurgan, Co L** 68.86 17⇑*e*P **P** 21 50 59.1 +0.5
ILTH IAmb IAmb 21 51 00.2
comp=Z,214nm,1.0s
TDK **Taldyqorghan** 68.88 320*c* iP **P** 21 50 59.2 +0.2
TDK pmax pmax
comp=Z,148nm,1.1s
TDK MLR MLR
comp=Z,3μm,20.0s
TDK **Taldyqorghan** 68.88 320⇑*i*P **P** 21 50 59.3 +0.2
comp=Z,148nm,1.1s
TDK LR LR 22 21 42.5
comp=Z,3μm,20.0s
BJUU **Bjuv** 68.89 5 *i* P **P** 21 50 58.7 -0.1
IGLA **Glengowla, Co** 68.91 19 P **P** 21 50 59.8 +0.9
IGLA **Glengowla, Co** 68.91 19 P **P** 21 50 60.0 +1.1
IOMK **Kirk Michael** 68.92 16 P **P** 21 50 59.5 +0.5
IOMK **Kirk Michael** 68.92 16⇑*e*P **P** 21 50 59.2 +0.3
IOMK IAmb IAmb 21 51 00.5
comp=Z,42nm,1.0s
CD2 **Chengdu** 68.95 294 P **P** 21 50 59.8 +0.2
CD2 pP pP 21 51 07.9 -2.8
CD2 sP sP 21 51 13.4 -1.5
CD2 S **S** 21 59 59.8 -1.7
CD2 pmax pmax
comp=Z,440nm,1.1s
CD2 pmax pmax
comp=Z,840nm,4.0s
CD2 L L
comp=Z,1μm,19.0s
CD2 L L
comp=Z,1μm,20.3s
CD2 L L
comp=Z,1μm,18.4s
GOMU **GeErMu** 69.21 304 P **P** 21 50 59.8 -1.8
GOMU S **S** 22 00 01.9 -3.3
GOMU pmax pmax
comp=Z,56nm,1.0s
GOMU L L
comp=Z,1μm,17.1s
GOMU L L
comp=Z,830nm,18.6s
COP **Copenhagen** 69.25 5 P **P** 21 51 01.3 +0.3
COP **Copenhagen** 69.25 5 *i* P **P** 21 51 01.7 +0.7
COP IAmb IAmb 21 51 02.5
comp=Z,314nm,1.1s
OBN **Obninsk** 69.26 350 LR LR 22 24 50.2
comp=Z,1μm,21.9s,baz=1.5,slow=39
OBN **Obninsk** 69.26 350 ⇑P **P** 21 51 01.2 +0.1
OBN **Obninsk** 69.26 350*ce*P **P** 21 51 00.3 -0.7
OBN *i* *PP **pP** 21 51 12.2 +0.1
OBN *i* *SP **sP** 21 51 16.3 -0.1
OBN *e* 21 51 24.5
OBN *e* 21 53 32.9
OBN *e*PPP PPP 21 55 14.9
OBN *i* S **S** 22 00 04.3 0.0
OBN *e*SS **SS** 22 04 32.1 +2.1
OBN pmax pmax
comp=Z,205nm,1.2s
OBN MLR MLR
comp=Z,2μm,20.0s
OBN **Obninsk** 69.26 350 P **P** 21 51 00.4 -0.7
OBN **Obninsk** 69.26 350 P **P** 21 51 00.1 -1.0
comp=Z,3μmcomp=Z,204nm,1.5s
OBN **Obninsk** 69.26 350 P **P** 21 51 00.6 -0.5
GZH2 **Guangzhou** 69.28 282 P **P** 21 51 02.1 +0.4
GZH2 S **S** 22 00 06.0 +0.6
GZH2 pmax pmax
comp=Z,100nm,1.0s
GZH2 L L
comp=Z,750nm,19.1s
GZH2 L L
comp=Z,770nm,19.2s
GZH2 L L
comp=Z,640nm,21.3s
SSRD **Sdr. Stenderup** 69.29 7 *i* P **P** 21 51 02.7 +1.4
SSRD IAmb IAmb 21 51 03.1
comp=Z,208nm,1.1s
GDLE **Glaisdale, N Y** 69.30 13⇑*e*P **P** 21 51 02.0 +0.7
GDLE IAmb IAmb 21 51 03.1
comp=Z,166nm,1.1s
LUNU **Lund** 69.35 4 *i* P **P** 21 51 02.0 +0.4
LLD **Lille Linde** 69.59 5 *i* P **P** 21 51 04.0 +0.9
LLD IAmb IAmb 21 51 05.1
comp=Z,96nm,0.9s
PABE **Paberze** 69.60 358 P **P** 21 51 03.7 +0.6
PABE IAmb IAmb 21 51 21.1
comp=Z,97nm,0.9s
PABE **Paberze** 69.60 358 P **P** 21 51 03.5 +0.3
DSB **Dublin** 69.61 17 P **P** 21 51 04.1 +0.9
DSB **Dublin** 69.61 17 P **P** 21 51 02.8 -0.5
DSB IAmb IAmb 21 51 05.2
comp=Z,66nm,1.1s
DSB **Dublin** 69.61 17 P **P** 21 51 04.1 +0.9
PDGK **Podgornoye** 69.91 318 P **P** 21 51 05.4 -0.1
PDGK **Podgornoye** 69.91 318 P **P** 21 51 05.4 -0.1
BSD **Bornholm Skovb** 69.92 4 P **P** 21 51 06.0 +0.8
BSD **Bornholm Skovb** 69.92 4 *i* P **P** 21 51 04.7 -0.4
BSD IAmb IAmb 21 51 06.3
comp=Z,63nm,0.9s
SIUN **Universidad Ur** 70.01 95 P **P** 21 51 06.1 -0.2
SKMB **Sankelmark Bun** 70.03 7 P **P** 21 51 07.2 +1.4
SHLS **Shalkode** 70.06 318*c* iP **P** 21 51 05.5 -0.9
SHLS pmax pmax
comp=Z,132nm,1.2s
SHLS **Shalkode** 70.06 318⇑*i*P **P** 21 51 05.6 -0.9
comp=Z,132nm,1.2s
HKPS **Hong Kong Po S** 70.09 280 P **P** 21 51 06.9 +0.1
HKPS IAmb IAmb 21 51 09.4
comp=Z,48nm,0.9s
HKPS **Hong Kong Po S** 70.09 280 P **P** 21 51 07.4 +0.7
KPKS **Kokpek** 70.09 319 *e*P **P** 21 51 06.9 +0.3
KPKS **Kokpek** 70.09 319 *e*P **P** 21 51 06.9 +0.3
VAL **Valentia** 70.16 20 P **P** 21 51 08.2 +1.6
VAL **Valentia** 70.16 20 P **P** 21 51 08.2 +1.6
LBWR **Ladybower, Pea** 70.17 14 P **P** 21 51 07.7 +1.0
LBWR **Ladybower, Pea** 70.17 14⇑*e*P **P** 21 51 07.3 +0.6
LBWR IAmb IAmb 21 51 08.5
comp=Z,135nm,1.0s
AKTO **Aktyubinsk** 70.21 336 LR LR 22 28 02.2
comp=Z,1μm,18.0s,baz=22,slow=41
UZB **Uzynbulak** 70.24 319*c* iP **P** 21 51 07.6 +0.1
UZB **Uzynbulak** 70.24 319⇑*i*P **P** 21 51 07.6 +0.1
SZP **Santa** 70.24 272 P **P** 21 51 08.1 +0.4
LMK **Market Rasen** 70.30 13 P **P** 21 51 08.7 +1.1
LMK **Market Rasen** 70.30 13⇑*e*P **P** 21 51 08.0 +0.5
LMK IAmb IAmb 21 51 09.4
comp=Z,437nm,1.0s
IWEX **Carrickbyrne,** 70.38 17 P **P** 21 51 09.0 +1.0
IWEX **Carrickbyrne,** 70.38 17 P **P** 21 51 09.0 +1.0
IWEX **Carrickbyrne,** 70.38 17⇑*e*P **P** 21 51 08.7 +0.7
IWEX IAmb IAmb 21 51 09.9
comp=Z,140nm,1.1s
STNC **Stoke** 70.40 14 P **P** 21 51 09.6 +1.4
BTLS **Baital** 70.41 323 *e*P **P** 21 51 08.6 +0.3
BTLS **Baital** 70.41 323 *e*P **P** 21 51 08.7 +0.3
RGN **Rugen** 70.42 5 P **P** 21 51 08.5 +0.3
RGN **Rugen** 70.42 5 *e*P **P** 21 51 09.6 +1.4
baz=355,slow=5.9
RGN **Rugen** 70.42 5 P **P** 21 51 09.8 +1.6
HLG **Helgoland** 70.45 8 *e*P **P** 21 51 09.5 +1.1
comp=Z,328nm,1.1s,baz=355,slow=5.9
FOEL **Foel Wylfa** 70.45 15 P **P** 21 51 09.2 +0.7
FOEL **Foel Wylfa** 70.45 15⇑*e*P **P** 21 51 09.1 +0.6
FOEL IAmb IAmb 21 51 10.4

comp=Z,297nm,1.0s
BELG Belogornoye 70.46 343 *c iP* **P 21 51 08.0 -0.5**
BELG pmax pmax
comp=Z,95nm,1.3s
MNK Minsk 70.48 356 *i P* **P 21 51 09.0 +0.4**
comp=E,117nm,1.2s
MNK *i P* **P 21 51 09.0 +0.4**
comp=N,27nm,0.9s
MNK *i P* **P 21 51 09.0 +0.4**
comp=Z,123nm,1.0s,baz=4.5
MNK *i pP* **pP 21 51 21.0 +1.3**
MNK *i sP* **sP 21 51 24.7 +0.8**
MNK *i PP* **PP 21 53 45.0 +0.9**
MNK *i PPP* PPP 21 55 27.7
MNK *i S* **S 22 00 19.4 +0.7**
MNK *i sS* **sS 22 00 37.2 +0.2**
MNK *i SS* **SS 22 04 50.7 +1.9**
MNK *i SSS* SSS 22 08 10.4
MNK Minsk 70.48 356 *c iP* **P 21 51 09.0 +0.4**
BOAB BOACO BROADBAN 70.52 96 P **P 21 51 08.6 -0.8**
BOAB BOACO BROADBAN 70.52 96 P **P 21 51 09.1 -0.3**
SATY Saty 70.55 319 *c iP* **P 21 51 09.5 +0.1**
SATY pmax pmax
comp=Z,86nm,1.4s
SATY Saty 70.55 319⇑ *iP* **P 21 51 09.5 +0.1**
comp=Z,86nm,1.4s
KUU Kurty 70.59 321 *eP* **P 21 51 09.7 +0.2**
KUU MLR MLR
comp=Z,1μm,20.0s
KUU Kurty 70.59 321 *eP* **P 21 51 09.7 +0.2**
KUU LR LR 22 22 43.5
comp=Z,1μm,20.0s
STBN Sutton Boningt 70.78 14⇑ *eP* **P 21 51 10.9 +0.5**
AB31 Akbulak array 70.83 334 P **P 21 51 11.0 +0.1**
ABKAR Akbulak array 70.83 334 P **P 21 51 10.8 0.0**
HLM1 Long Mynd 70.86 15⇑ *eP* **P 21 51 11.4 +0.4**
BSEG Bad Segeberg 70.87 6 *eP* **P 21 51 12.0 +1.0**
comp=Z,71nm,1.1s,baz=355,slow=5.9
BSEG Bad Segeberg 70.87 6 P **P 21 51 11.7 +0.7**
CWF Charnwood Fore 70.87 14 P **P 21 51 12.0 +1.0**
CWF Charnwood Fore 70.87 14⇑ *eP* **P 21 51 11.7 +0.7**
CWF IAmb IAmb 21 51 12.9
comp=Z,136nm,1.1s
GYA Guiyang 70.92 289 ⇑P **P 21 51 12.1 +0.2**
GYA S **S 22 00 24.3 -0.6**
GYA SS **SS 22 04 56.6 -0.8**
GYA pmax pmax
comp=Z,110nm,1.2s
GYA L L
comp=Z,710nm,20.4s
GYA L L
comp=Z,820nm,19.0s
GYA L L
comp=Z,2μm,27.1s
MDOK Medeo 70.96 320 *eP* **P 21 51 12.0 +0.1**
MDOK Medeo 70.96 320 *eP* **P 21 51 12.1 +0.1**
MDOK LR LR 22 22 58.0
AAA Alma-Ata 70.97 320 *eP* **P 21 51 12.1 +0.2**
AAA pmax pmax
comp=Z,177nm,1.2s
AAA Alma-Ata 70.97 320 *eP* **P 21 51 12.1 +0.2**
comp=Z,177nm,1.2s
AAA LR LR 22 22 58.5
PRZ Przheval'sk 71.04 319 P **P 21 51 12.7 +0.2**
PRZ pmax pmax
comp=Z,176nm,1.2s
PRZ Przheval'sk 71.04 319 P **P 21 51 12.7 +0.2**
PRZ Przheval'sk 71.04 319 P **P 21 51 13.9 +1.4**
TNSS Tian-Shan 71.11 320 *eP* **P 21 51 12.8 -0.3**
TNSS Tian-Shan 71.11 320 *eP* **P 21 51 12.8 -0.3**
SUW Suwalki 71.11 358 P **P 21 51 11.3 -1.1**
SUW Suwalki 71.11 358 P **P 21 51 11.3 -1.1**
WACR West Acre 71.14 13 P **P 21 51 13.6 +1.0**
WACR West Acre 71.14 13⇑ *eP* **P 21 51 13.2 +0.6**
WACR IAmb IAmb 21 51 14.7
comp=Z,543nm,0.9s
MCH1 Michaelchurch 71.35 15⇑ *eP* **P 21 51 14.4 +0.5**
MCH1 IAmb IAmb 21 51 15.7
comp=Z,170nm,1.1s
RABL Rabaul 71.41 232 P **P 21 51 13.5 -1.3**
RABL IAmb IAmb 21 51 16.9
comp=Z,38nm,0.5s
LPSR Galich'ya Gora 71.49 348 *eP* **P 21 51 14.0 -0.7**
LPSR pmax pmax
comp=Z,197nm,1.5s
LNIZ Loecknitz 71.52 4 P **P 21 51 15.8 +0.9**
MONM Monmouth 71.53 15⇑ *eP* **P 21 51 15.4 +0.4**
MONM IAmb IAmb 21 51 16.9
comp=Z,133nm,1.1s
KRVT Keravat (AS076 71.58 232 LR LR 22 17 29.5
comp=Z,192nm,21.7s,baz=22,slow=31
SGDS Sogindy 71.59 322⇑ *iP* **P 21 51 15.8 +0.1**
SGDS *eS* **S 22 00 31.9 -0.2**
STRD Stroud 71.69 15⇑ *eP* **P 21 51 16.7 +0.8**
STRD IAmb IAmb 21 51 17.9
comp=Z,278nm,1.1s
TKM2 Tokmak 2 71.70 321 P **P 21 51 16.7 +0.2**
SNR=88
OLDB Oldbury-Upon-S 71.74 15⇑ *eP* **P 21 51 16.7 +0.4**
OLDB IAmb IAmb 21 51 18.0
comp=Z,140nm,1.1s
MANU Manus Island 71.78 238 P **P 21 51 16.4 -0.5**
MANU IAmb IAmb 21 51 30.0
comp=Z,130nm,1.8s
USP Ospenovka 71.80 322 P **P 21 51 17.4 +0.5**
SNR=74
ELMS Elmsett, Ipswi 71.81 13⇑ *eP* **P 21 51 16.6 0.0**
ELMS IAmb IAmb 21 51 18.1
comp=Z,146nm,1.0s
KDJ Kajisay 71.81 319 P **P 21 51 17.1 0.0**
KDJ pmax pmax
comp=Z,165nm,1.2s
KDJ Kajisay 71.81 319 P **P 21 51 17.1 0.0**
KDJ IAmb IAmb 21 51 19.1
comp=Z,165nm,1.2s
KDJ Kajisay 71.81 319 P **P 21 51 17.8 +0.7**
WUS Wushi 71.83 317 P **P 21 51 17.1 -0.1**
WUS Wushi 71.83 317 P **P 21 51 17.6 +0.4**
GORT1 Trebel 71.87 6 *eP* **P 21 51 18.1 +1.1**
comp=Z,109nm,1.2s,baz=355,slow=5.9
TARG Taragay, Kyrgy 71.92 319 P **P 21 51 19.1 +1.1**
CHMS Chumysh 71.94 321 P **P 21 51 18.4 +0.7**
SNR=111
BOOM Boomskoye usch 71.95 320 P **P 21 51 18.7 +0.7**
BLUN Bluefields 71.96 95 P **P 21 51 18.7 +0.6**
TATA Tatamba Isabel 71.96 223 P **P 21 51 19.2 +1.2**
RETH Rethem/Aller, 72.00 7 *eP* **P 21 51 18.8 +1.0**
comp=Z,93nm,1.2s,baz=355,slow=5.9
RETH Rethem/Aller, 72.00 7 P **P 21 51 18.7 +1.0**
SWN1 Swindon 72.00 15⇑ *eP* **P 21 51 18.9 +1.1**
SWN1 IAmb IAmb 21 51 19.9
comp=Z,180nm,1.0s
ULHL Ulahol 72.06 320 P **P 21 51 19.3 +0.7**
SNR=20
HTL Hartland 72.09 16 P **P 21 51 19.5 +1.1**
HTL Hartland 72.09 16⇑ *eP* **P 21 51 19.2 +0.9**
HTL IAmb IAmb 21 51 20.2
comp=Z,148nm,1.0s
FRU1 Bishkek 72.15 321 P **P 21 51 19.6 +0.6**
FRU1 pmax pmax
comp=Z,314nm,1.3s
FRU1 Bishkek 72.15 321 P **P 21 51 19.6 +0.6**
KBK Karagaybulak 72.17 321 P **P 21 51 20.1 +0.8**
SNR=64
BUW Bucklebury Wes 72.18 14⇑ *eP* **P 21 51 19.9 +1.0**
BUW IAmb IAmb 21 51 20.9
comp=Z,619nm,1.1s
WOL Wolverton 72.27 14⇑ *eP* **P 21 51 20.3 +0.8**
WOL IAmb IAmb 21 51 21.5
comp=Z,382nm,1.1s
IBBN Ibbenburen 72.30 8 *eP* **P 21 51 20.6 +1.0**
comp=Z,171nm,1.1s,baz=355,slow=5.9
IBBN Ibbenburen 72.30 8 P **P 21 51 20.6 +1.0**
AAK Ala-Archa 72.35 321 LR LR 22 25 45.6
comp=Z,5μm,19.2s,baz=24,slow=38
AAK Ala-Archa 72.35 321 P **P 21 51 21.0 +0.7**
SNR=45
AAK Ala-Archa 72.35 321 P **P 21 51 21.0 +0.7**
AAK Ala-Archa 72.35 321 *eP* **P 21 51 20.8 +0.5**
AAK pmax pmax
comp=Z,133nm,1.2s
AAK Ala-Archa 72.35 321 P **P 21 51 20.5 +0.2**
AAK Ala-Archa 72.35 321 P **P 21 51 20.3 0.0**
AAK IAmb IAmb 21 51 22.4

comp=Z,149nm,1.3s
AAK Ala-Archa 72.35 321 P **P 21 51 21.0 +0.7**
VORR Voronezh 72.37 348 *eP* **P 21 51 19.3 -0.7**
VORR pmax pmax
comp=Z,243nm,1.5s
SBD Saint Breward 72.47 17⇑ *eP* **P 21 51 21.0 +0.3**
SBD IAmb IAmb 21 51 22.3
comp=Z,114nm,1.1s
RUE Ruedersdorf 72.51 4 *eP* **P 21 51 21.7 +0.9**
comp=Z,221nm,1.0s,baz=355,slow=5.9
RUE Ruedersdorf 72.51 4 P **P 21 51 21.7 +0.9**
VRH Novokhopyorsk 72.51 346 *eP* **P 21 51 19.5 -1.4**
VRH pmax pmax
comp=Z,157nm,1.6s
FLTG Flechtingen 72.53 6 *eP* **P 21 51 21.2 +0.3**
comp=Z,104nm,1.1s,baz=355,slow=5.9
WTSB Winterswijk 72.56 9 P **P 21 51 21.9 +0.8**
EKS2 Erkin-Say 72.58 322 P **P 21 51 22.4 +0.7**
SNR=73
JTS Las Juntas de 72.67 97 LR LR 22 24 52.9
comp=Z,512nm,19.9s,baz=340,slow=37
ASSE Asse, Remlinge 72.69 6 *eP* **P 21 51 22.6 +0.7**
comp=Z,96nm,1.1s,baz=355,slow=5.9
ASSE Asse, Remlinge 72.69 6 P **P 21 51 22.6 +0.7**
DYA Yadsworthy 72.72 16⇑ *eP* **P 21 51 22.5 +0.4**
DYA IAmb IAmb 21 51 23.8
comp=Z,147nm,1.0s
TGY Tagaytay City 72.72 270 P **P 21 51 23.1 +0.3**
comp=Z,330nm,0.4s,baz=135,slow=1.4,SNR=11
TGY LR LR 22 20 23.0
comp=Z,471nm,20.5s,baz=18,slow=33
CCA1 Carnmenellis 72.75 17 P **P 21 51 23.3 +1.0**
CCA1 Carnmenellis 72.75 17⇑ *eP* **P 21 51 23.1 +0.7**
CCA1 IAmb IAmb 21 51 24.2
comp=Z,142nm,1.0s
ELSH Elham, Standar 72.75 13⇑ *eP* **P 21 51 22.8 +0.4**
ELSH IAmb IAmb 21 51 24.0
comp=Z,145nm,1.0s
VSR Storozhevoye 72.82 348 *eP* **P 21 51 21.9 -0.9**
VSR pmax pmax
comp=Z,188nm,1.4s
OPLO Oploo 72.84 10 P **P 21 51 24.0 +1.2**
HNR Honiara 72.86 222 LR LR 22 16 42.7
comp=Z,37nm,21.9s,baz=143,slow=30
HMNX Herstmonceux 72.92 13 P **P 21 51 24.4 +1.1**
HMNX Herstmonceux 72.92 13⇑ *eP* **P 21 51 24.1 +0.7**
R9F13 Warsaw-Wawer 72.92 360 *eP* **P 21 51 23.7 +0.4**
R9F13 *epP* **PcP 21 51 41.0 +0.8**
R9F13 *eS* **SKiKP 22 00 55.6 +2.8**
R9F13 *e* 22 05 06.9
CLZ Clausthal 72.96 7 *eP* **P 21 51 24.8 +1.1**
comp=Z,165nm,1.1s,baz=355,slow=5.9
CLZ Clausthal 72.96 7 P **P 21 51 24.6 +1.0**
PPT Papeete 72.97 170 LR LR 22 18 02.9
comp=Z,902nm,20.3s,baz=62,slow=31
VORD Divnogorie 73.06 348 *eP* **P 21 51 22.6 -1.5**
VORD *e*SP **sP 21 51 38.6 -0.8**
VORD pmax pmax
comp=Z,70nm,1.0s
ASAI AK-SAY(Kyrgyzs 73.10 319 P **P 21 51 25.8 +0.8**
BUG Bochum--Univer 73.12 9 *eP* **P 21 51 25.1 +0.6**
comp=Z,146nm,1.0s,baz=355,slow=5.9
BUG Bochum--Univer 73.12 9 P **P 21 51 25.0 +0.6**
GTTG Gottingen 73.23 7 *eP* **P 21 51 26.2 +1.1**
comp=Z,185nm,1.1s,baz=355,slow=5.9
GTTG Gottingen 73.23 7 P **P 21 51 26.1 +1.0**
DZA Taraz 73.23 324 *eP* **P 21 51 25.5 +0.2**
DZA Taraz 73.23 324 *eP* **P 21 51 25.6 +0.2**
BEL Belsk 73.31 360 P **P 21 51 26.5 +0.9**
KK31 Karatay Array 73.32 324 P **P 21 51 25.6 -0.3**
KK31 pmax pmax
comp=Z,200nm,1.2s
KK31 Karatay Array 73.32 324 P **P 21 51 25.6 -0.3**
KKAR Karatay Array 73.32 324 P **P 21 51 25.8 -0.1**
KKAR Karatay Array 73.32 324 P **P 21 51 25.8 -0.1**
WIMM Wimmelburg 73.35 6 P **P 21 51 26.5 +0.6**
KASTN Kahler Asten 73.45 8 *eP* **P 21 51 27.3 +0.8**
comp=Z,77nm,1.1s,baz=355,slow=5.9
UCC Uccle 73.47 11 P **P 21 51 26.2 -0.4**
UCC pmax pmax
comp=Z,87nm,1.1s
UCC Uccle 73.47 11 P **P 21 51 26.2 -0.4**
UCC IAmb IAmb 21 51 28.3
comp=Z,87nm,1.1s
UCC Uccle 73.47 11 *dP* **P 21 51 27.0 +0.4**
comp=Z,41nm,1.1s
UCC Uccle 73.47 11 P **P 21 51 27.0 +0.4**
SDDR Presa de Saban 73.50 81 P **P 21 51 27.3 0.0**
SDDR IAmb IAmb 21 51 29.1
comp=Z,55nm,1.1s
SDDR Presa de Saban 73.50 81 P **P 21 51 28.1 +0.8**
PZH PanZhiHua 73.52 293 P **P 21 51 27.8 +0.3**
PZH pmax pmax
comp=Z,11nm,1.2s
PZH pmax pmax
comp=Z,370nm,5.8s
BRLS Borolday 73.61 325 *c iP* **P 21 51 29.1 +1.5**
BRLS Borolday 73.61 325⇑ *iP* **P 21 51 29.1 +1.5**
BEBN Eben Emael 73.61 10 *dP* **P 21 51 27.7 +0.4**
comp=Z,39nm,1.1s
BEBN *dP*cP **PcP 21 51 43.5 +0.3**
CLL Collm 73.64 5⇑ *iP* **P 21 51 27.7 +0.1**
CLL *i* 21 51 43.1
CLL *eS* **S 22 00 55.0 -0.1**
CLL pmax pmax
comp=Z,111nm,1.1s
CLL MLR MLR
comp=Z,800nm,20.0s
CLL Collm 73.64 5 P **P 21 51 27.3 -0.3**
CLL IAmb IAmb 21 51 29.2
comp=Z,97nm,1.0s
CLL Collm 73.64 5 *eP* **P 21 51 27.9 +0.3**
comp=Z,96nm,1.0s,baz=355,slow=5.9
CLL Collm 73.64 5 P **P 21 51 27.5 -0.1**
comp=Z,2μmcomp=Z,104nm,1.1s
CLL Collm 73.64 5⇑ *iP* **P 21 51 27.7 +0.1**
comp=Z,111nm,1.1s
CLL *i* sP **sP 21 51 43.1 +0.2**
CLL *eS* **S 22 00 55.0 -0.1**
CLL *es*S **sS 22 01 15.0 +1.5**
CLL AMS AMS 22 26 00.0
comp=Z,800nm,20.0s
RNPP9 Sopachiv 73.65 357 P **P 21 51 27.4 -0.2**
HGN Heimansgroeve 73.67 10 P **P 21 51 28.4 +0.6**
NEUB Neuenburg 73.68 6 *eP* **P 21 51 28.6 +0.8**
comp=Z,155nm,1.0s,baz=355,slow=5.9
NEUB Neuenburg 73.68 6 P **P 21 51 28.6 +0.8**
RNPP8 Varash 73.72 357 P **P 21 51 27.6 -0.5**
BSTI Sart Tilman 73.81 10 *dP* **P 21 51 29.4 +0.8**
comp=Z,12nm,1.0s
MEM Membach 73.83 10 *dP* **P 21 51 29.2 +0.5**
comp=Z,57nm,1.1s
MEM Membach 73.83 10 P **P 21 51 29.4 +0.7**
RNPP5 Staryi Chortor 73.83 357 P **P 21 51 28.4 -0.3**
BTNL Ternell 73.86 10 *dP* **P 21 51 29.5 +0.6**
comp=Z,34nm,1.1s
BCLA Clavier 73.94 10 *dP* **P 21 51 29.8 +0.4**
comp=Z,34nm,1.2s
UBBA Unterbreizbach 73.95 7 *eP* **P 21 51 29.8 +0.6**
comp=Z,50nm,1.3s,baz=355,slow=5.9
UBBA Unterbreizbach 73.95 7 P **P 21 51 29.9 +0.6**
BGES Gesves 73.96 10 *dP* **P 21 51 29.8 +0.3**
comp=Z,30nm,1.2s
BMRD Maredsous 74.00 11 *dP* **P 21 51 30.3 +0.6**
comp=Z,75nm,1.1s
MI28 Mi28,Pidlybu 74.06 355 P **P 21 51 28.2 -1.8**
KMI2 Kunming 74.08 291⇑P **P 21 51 30.6 -0.2**
KMI2 sP sP 21 51 47.0 +0.8
KMI2 pmax pmax
comp=Z,43nm,1.5s
KMI2 pmax pmax
comp=Z,500nm,6.6s
KMI2 L L
comp=Z,510nm,18.0s
KMI2 L L
comp=Z,760nm,21.8s
KMI2 L L
comp=Z,1μm,21.1s
BHOU Houvegnez 74.08 10 *dP* **P 21 51 30.8 +0.6**
comp=Z,20nm,1.1s
BHOU *d*PcP **PcP 21 51 43.8 -1.5**
BRG Berggiesshubel 74.12 4 *eP* **P 21 51 31.0 +0.6**
comp=Z,110nm,1.0s,baz=355,slow=5.9
BRG Berggiesshubel 74.12 4 P **P 21 51 30.8 +0.4**
BRG Berggiesshubel 74.12 4⇑ *iP* **P 21 51 30.9 +0.5**

BRG Amp 21 51 32.9
comp=Z,110nm,1.0s
AK21 Malin Array Si 74.14 355 P **P 21 51 29.7 -0.8**
AK23 Malin Array Si 74.15 354 P **P 21 51 29.6 -1.0**
AK22 Malin Array Si 74.16 354 P **P 21 51 30.0 -0.6**
AK03 Malin Array Si 74.18 354 P **P 21 51 29.9 -0.8**
BAIF Baives 74.19 11 *eP* **P 21 51 30.7 -0.1**
BAIF pmax pmax
comp=Z,152nm,1.2s
DOU Dourbes 74.19 11 *dP* **P 21 51 31.3 +0.5**
comp=Z,45nm,1.1s
DOU *d*PcP **sP 21 51 46.8 +0.7**
RCHB Rochefort 74.20 10 *dP* **P 21 51 31.2 +0.3**
comp=Z,41nm,1.1s
RCHB Rochefort 74.20 10 P **P 21 51 31.4 +0.5**
JSA Saint Aubin 74.21 15⇑ *eP* **P 21 51 31.6 +0.7**
JSA IAmb IAmb 21 51 32.6
comp=Z,188nm,1.0s
GIVF Givet 74.21 11 *eP* **P 21 51 30.7 -0.2**
GIVF pmax pmax
comp=Z,128nm,1.2s
AKASG Malin Array Be 74.21 354 P **P 21 51 30.3 -0.6**
comp=Z,66nm,0.7s,baz=8.2,slow=5.7,SNR=241
AKASG LR LR 22 24 12.7
comp=Z,1μm,21.8s,baz=12,slow=36
comp=Z,66nm,0.7s
AKASG Malin Array Be 74.21 354 P **P 21 51 30.1 -0.8**
AKBB Malin Array Si 74.21 354 *ceP* **P 21 51 30.2 -0.7**
AKBB pmax pmax
comp=Z,136nm,0.9s
AKBB Malin Array Si 74.21 354 P **P 21 51 30.2 -0.7**
KIEV Kiev 74.22 354⇑P **P 21 51 30.7 -0.2**
KIEV Kiev 74.22 354 P **P 21 51 30.5 -0.5**
KIEV Kiev 74.22 354 P **P 21 51 30.7 -0.2**
KIEV Kiev 74.22 354 P **P 21 51 30.1 -0.8**
comp=Z,11μmcomp=Z,626nm,1.1s
KIEV Kiev 74.22 354 P **P 21 51 30.4 -0.5**
AK01 Malin Array Si 74.22 354 P **P 21 51 30.1 -0.9**
AK15 Malin Array Si 74.22 354 P **P 21 51 30.1 -0.9**
MOX Moxa 74.23 6 *eP* **P 21 51 31.9 +0.8**
comp=Z,159nm,1.0s,baz=355,slow=5.9
MOX *eL* L 22 32 15.0
comp=Z,494nm,21.6s
MOX Moxa 74.23 6 P **P 21 51 31.8 +0.7**
CHM Chimkent 74.32 325 *c iP* **P 21 51 31.9 +0.2**
CHM pmax pmax
comp=Z,115nm,1.2s
CHM MLR MLR
comp=Z,2μm,17.0s
CHM Chimkent 74.32 325⇑ *iP* **P 21 51 31.9 +0.2**
comp=Z,115nm,1.2s
CHM LR LR 22 24 58.4
comp=Z,2μm,17.2s
AK06 Malin Array Si 74.33 354 P **P 21 51 30.8 -0.8**
IUG luzhnay 74.33 324 *c iP* **P 21 51 32.1 +0.2**
IUG pmax pmax
comp=Z,130nm,1.2s
IUG luzhnay 74.33 324⇑ *iP* **P 21 51 32.1 +0.2**
comp=Z,130nm,1.2s
PLN Plauen 74.42 6 *eP* **P 21 51 32.9 +0.7**
comp=Z,25nm,1.0s,baz=355,slow=5.9
TNS Taunus Mts 74.43 8 *eP* **P 21 51 33.1 +0.8**
comp=Z,107nm,1.1s,baz=355,slow=5.9
TNS Taunus Mts 74.43 8 P **P 21 51 33.0 +0.8**
RICC Richard 74.46 4 *eP* **P 21 51 33.5 +1.1**
CHVC Chvalec 74.49 3 *eP* **P 21 51 33.0 +0.4**
CHVC Chvalec 74.49 3 *eP* **P 21 51 33.0 +0.4**
BANI BANI 74.50 80 P **P 21 51 33.3 +0.1**
TANN Tannenbergstha 74.51 5 *eP* **P 21 51 33.5 +0.8**
comp=Z,70nm,1.2s,baz=355,slow=5.9
TANN Tannenbergstha 74.51 5 P **P 21 51 33.4 +0.6**
OSTC Ostas 74.53 3 *eP* **P 21 51 33.5 +0.7**
OSTC MLR MLR
comp=Z,800nm,22.3s
OSTC Ostas 74.53 3 *eP* **P 21 51 33.5 +0.7**
OSTC AMS AMS 22 29 10.0
comp=Z,800nm,22.3s
UPC Upice 74.57 3 *eP* **P 21 51 33.8 +0.8**
UPC Upice 74.57 3 *eP* **P 21 51 33.8 +0.8**
UPC Upice 74.57 3 P **P 21 51 33.7 +0.6**
NKC Novy Kostel 74.69 5 *eP* **P 21 51 34.3 +0.5**
NKC MLR MLR
comp=Z,800nm,20.4s
NKC Novy Kostel 74.69 5 *eP* **P 21 51 34.3 +0.5**
NKC AMS AMS 22 31 10.0
comp=Z,800nm,20.4s
NKC Novy Kostel 74.69 5 P **P 21 51 34.6 +0.9**
DPC Dobruska-Polom 74.73 3 *eP* **P 21 51 34.9 +0.9**
DPC pmax pmax
comp=Z,68nm,0.9s
DPC MLR MLR
comp=Z,600nm,19.8s
DPC Dobruska-Polom 74.73 3 *eP* **P 21 51 34.9 +0.9**
comp=Z,68nm,0.9s
DPC AMS AMS 22 29 30.0
comp=Z,600nm,19.8s
DPC Dobruska-Polom 74.73 3 P **P 21 51 34.5 +0.5**
comp=Z,2μmcomp=Z,141nm,1.3s
DPC Dobruska-Polom 74.73 3 P **P 21 51 35.0 +0.9**
WLF Walferdange 74.78 10 P **P 21 51 34.8 +0.6**
WLF pmax pmax
comp=Z,139nm,1.1s
WLF Walferdange 74.78 10 P **P 21 51 34.8 +0.6**
WLF IAmb IAmb 21 51 36.7
comp=Z,139nm,1.1s
WLF Walferdange 74.78 10 *dP* **P 21 51 35.0 +0.8**
comp=Z,67nm,1.1s
WLF Walferdange 74.78 10 *eP* **P 21 51 35.5 +1.2**
comp=Z,129nm,1.1s,baz=355,slow=5.9
WLF Walferdange 74.78 10 P **P 21 51 35.5 +1.2**
OHH Osh 74.82 321 P **P 21 51 33.9 -0.8**
ROSF Rostrenen 74.86 16 *eP* **P 21 51 34.7 0.0**
ROSF pmax pmax
comp=Z,158nm,1.3s
FLN La Foliniere 74.87 14 *eP* **P 21 51 34.3 -0.5**
FLN pmax pmax
comp=Z,134nm,1.2s
OJC Ojcow 74.93 1 P **P 21 51 34.9 -0.2**
OJC Ojcow 74.93 1 P **P 21 51 34.9 -0.2**
OJC Ojcow 74.93 1 P **P 21 51 35.2 +0.1**
comp=Z,2μmcomp=Z,84nm,1.6s
OJC Ojcow 74.93 1 P **P 21 51 35.3 +0.2**
KSH2 Kashi 75.00 319 P **P 21 51 36.9 +1.0**
KSH2 pP pP 21 51 44.3 -2.8
KSH2 sP sP 21 51 53.8 +2.5
KSH2 pmax pmax
comp=Z,180nm,1.3s
KSH2 L L
comp=Z,1μm,22.3s
KSH2 L L
comp=Z,1μm,25.1s
KSH2 L L
comp=Z,1μm,25.8s
KRLC Kraliky 75.02 3 *eP* **P 21 51 36.4 +0.7**
KRLC MLR MLR
comp=Z,600nm,18.9s
KRLC Kraliky 75.02 3 *eP* **P 21 51 36.4 +0.7**
KRLC AMS AMS 22 29 40.0
comp=Z,600nm,18.9s
KRLC Kraliky 75.02 3 P **P 21 51 36.4 +0.7**
PRU Pruhonice 75.03 4 *eP* **P 21 51 36.5 +0.8**
PRU *e* 21 51 48.4
PRU pmax pmax
comp=Z,42nm,0.9s
PRU MLR MLR
comp=Z,700nm,21.4s
PRU Pruhonice 75.03 4 *eP* **P 21 51 36.5 +0.8**
comp=Z,42nm,0.9s
PRU *ex* x 21 51 48.4
PRU AMS AMS 22 30 40.0
comp=Z,700nm,21.4s
PRU Pruhonice 75.03 4 P **P 21 51 36.4 +0.6**
LUBAR Lubar, Ukraine 75.06 355 P **P 21 51 35.1 -0.8**
LDF La Druitiere 75.09 14 *eP* **P 21 51 35.6 -0.4**
LDF pmax pmax
comp=Z,162nm,1.2s
QIZ Qiongzhong 75.09 282 P **P 21 51 38.0 +1.5**
QIZ Qiongzhong 75.09 282 P **P 21 51 36.6 +0.1**
QIZ IAmb IAmb 21 51 40.1
comp=Z,131nm,1.1s
QIZ Qiongzhong 75.09 282 P **P 21 51 36.9 +0.4**
QIZ S **S 22 01 11.9 -0.2**
QIZ pmax pmax
comp=Z,34nm,0.8s
QIZ L L

QIZ L L
comp=Z,300nm,14.2s

QIZ L L
comp=Z,400nm,21.6s

GRA3 **Grafenberg Arr** 75.09 6 P P 21 51 37.1 +1.0
ROTZ **Rotzenmuhle** 75.14 6 *eP* P 21 51 37.3 +1.0
comp=Z,290nm,15.7s
comp=Z,24nm,1.1s,baz=355,slow=5.9

GRA1 **Grafenberg Arr** 75.16 6 P P 21 51 37.5 +1.0
GRF **Grafenberg Arr** 75.16 6 *eP* P 21 51 37.5 +1.0
comp=Z,119nm,1.1s,baz=355,slow=5.9

GRF *eL* L 22 23 38.1
comp=Z,664nm,20.5s

GRFO **Grafenberg** 75.16 6 P P 21 51 36.8 +0.3
GRFO pmax pmax
comp=Z,90nm,1.0s

GRFO **Grafenberg** 75.16 6 P P 21 51 36.8 +0.3
GRFO lAmb lAmb 21 51 38.5
comp=Z,90nm,1.0s

GRFO **Grafenberg** 75.16 6 P P 21 51 37.5 +1.0
MSVF **Nonsavu** 75.18 202 LR LR 22 17 18.8
comp=Z,1µm,21.8s,baz=50,slow=30

MSVF **Nonsavu** 75.18 202 P P 21 51 37.5 +0.6
MSVF pmax pmax
comp=Z,83nm,1.4s

MSVF **Nonsavu** 75.18 202 P P 21 51 37.5 +0.6
MSVF lAmb lAmb 21 51 40.5
comp=Z,83nm,1.4s

GRR **Gorron** 75.18 15 *eP* P 21 51 36.3 -0.3
GRR pmax pmax
comp=Z,106nm,1.2s

STEB **Steborice** 75.19 2 *eP* P 21 51 37.1 +0.5
GRA2 **Grafenberg Arr** 75.20 6 P P 21 51 37.7 +1.0
QUIF **Quistinic** 75.29 16 *eP* P 21 51 37.1 -0.1
QUIF pmax pmax
comp=Z,120nm,1.3s

OKC **Ostrava-Krasne** 75.29 2 *eP* P 21 51 38.0 +0.8
OKC MLR MLR
comp=Z,600nm,20.6s

OKC **Ostrava-Krasne** 75.29 2 *eP* P 21 51 38.0 +0.8
OKC AMS AMS 22 23 00.0
comp=Z,600nm,20.6s

OKC **Ostrava-Krasne** 75.29 2 P P 21 51 37.9 +0.7
MORC **Moravsky Berou** 75.34 2 ⇑P P 21 51 38.1 +0.6
MORC **Moravsky Berou** 75.34 2 P P 21 51 38.1 +0.6
MORC **Moravsky Berou** 75.34 2 P P 21 51 37.4 -0.1
MORC lAmb lAmb 21 51 39.3
comp=Z,71nm,1.0s

MORC **Moravsky Berou** 75.34 2 *eP* P 21 51 37.7 +0.2
MORC **Moravsky Berou** 75.34 2 P P 21 51 38.0 +0.4
GRB4 **Grafenberg Arr** 75.40 6 P P 21 51 38.8 +0.9
GRB1 **Grafenberg Arr** 75.48 6 P P 21 51 39.3 +0.9
JAY **Jayapura** 75.50 243 LR LR 22 24 16.6
comp=Z,306nm,18.5s,baz=58,slow=35

JAY **Jayapura** 75.50 243 P P 21 51 40.2 +1.3
KWP **Kalwaria Pacla** 75.50 359 P P 21 51 39.0 +0.6
comp=Z,3µmcomp=Z,254nm,1.0s

GRB3 **Grafenberg Arr** 75.54 6 P P 21 51 39.6 +0.9
ZVC **Zvikov** 75.57 4 *eP* P 21 51 39.7 +0.9
ZVC AMS AMS 22 34 10.0
comp=Z,800nm,20.5s

GRB2 **Grafenberg Arr** 75.60 6 P P 21 51 39.7 +0.7
NIE **Niedzica** 75.73 0 P P 21 51 40.4 +0.6
comp=Z,645nmcomp=Z,33nm,1.2s

STHS **Stebnicka Huta** 75.73 360 *eP* P 21 51 41.0 +1.2
STHS pmax pmax
comp=Z,108nm,1.0s

STHS **Stebnicka Huta** 75.73 360 *eP* P 21 51 41.0 +1.2
MAUC **Maruska** 75.76 2 *eP* P 21 51 40.8 +0.9
DAV **Davao City (W)** 75.76 262 P P 21 51 40.7 +0.4
comp=Z,55nm,0.4s,baz=64,slow=9.6,SNR=3.9

DAV LR LR 22 25 19.8
comp=Z,181nm,18.9s,baz=54,slow=36
comp=Z,55nm,0.4s

DAV **Davao City (W)** 75.76 262 P P 21 51 40.1 -0.2
GRB5 **Grafenberg Arr** 75.76 6 P P 21 51 40.5 +0.5
TREC **Trest** 75.76 4 *eP* P 21 51 40.5 +0.5
TREC **Trest** 75.76 4 *eP* P 21 51 40.5 +0.5
TREC **Trest** 75.76 4 P P 21 51 40.4 +0.5
GRC4 **Grafenberg Arr** 75.78 6 P P 21 51 40.7 +0.7
VRAC **Vranov** 75.78 3 P P 21 51 40.7 +0.7
comp=Z,82nm,1.0s,baz=360,slow=6.1,SNR=106
comp=Z,82nm,1.0s

VRAC **Vranov** 75.78 3 ⇑P P 21 51 40.8 +0.7
VRAC **Vranov** 75.78 3 *eP* P 21 51 40.5 +0.4
VRAC **Vranov** 75.78 3 P P 21 51 40.8 +0.7
WET **Wettzell** 75.80 5 *eP* P 21 51 41.2 +1.0
comp=Z,89nm,1.2s,baz=355,slow=5.9

WET **Wettzell** 75.80 5 P P 21 51 41.0 +0.9
GENI **Genyem** 75.84 244 P P 21 51 43.5 +2.7
comp=Z,32nm,0.7s

GENI **Genyem** 75.84 244 P P 21 51 42.0 +1.2
KHC **Kasperske Hory** 75.85 5 *eP* P 21 51 41.4 +0.9
KHC pmax pmax
comp=Z,77nm,0.9s

KHC MLR MLR
comp=Z,1µm,20.9s

KHC **Kasperske Hory** 75.85 5 *eP* P 21 51 41.4 +0.9
comp=Z,77nm,0.9s

KHC AMS AMS 22 22 00.0
comp=Z,1µm,20.9s

KHC **Kasperske Hory** 75.85 5 P P 21 51 41.0 +0.5
comp=Z,2µmcomp=Z,136nm,1.6s

KHC **Kasperske Hory** 75.85 5 P P 21 51 41.5 +1.1
GRC1 **Grafenberg Arr** 75.87 6 P P 21 51 41.1 +0.6
LKP **Lekhapani** 75.91 298 *ex* x 21 51 26.3
BTK **Batken** 75.92 323 P P 21 51 41.3 +0.2
STU **Stuttgart** 75.93 8 P P 21 51 41.4 +0.5
STU **Stuttgart** 75.93 8 *eP* P 21 51 41.5 +0.7
comp=Z,210nm,1.0s,baz=355,slow=5.9

STU **Stuttgart** 75.93 8 P P 21 51 41.6 +0.8
CLF **Chambon-Foret** 75.96 13 P P 21 51 41.9 +0.8
CLF **Chambon-Foret** 75.96 13 P P 21 51 42.4 +1.3
GRC3 **Grafenberg Arr** 75.98 6 P P 21 51 41.9 +0.7
GRC2 **Grafenberg Arr** 75.99 6 P P 21 51 41.8 +0.6
LANS **Liptovska Anna** 75.99 1 *eP* P 21 51 42.9 +1.6
LANS pmax pmax
comp=Z,57nm,1.0s

LANS **Liptovska Anna** 75.99 1 *eP* P 21 51 42.9 +1.6
KRUC **Moravsky** 76.03 3 P P 21 51 41.4 0.0
KRUC **Moravsky** 76.03 3 *eP* P 21 51 41.7 +0.3
KRUC **Moravsky** 76.03 3 P P 21 51 42.0 +0.6
DRK **Karamyk** 76.09 322 P P 21 51 43.0 +0.7
CDF **Champ du Feu** 76.12 9 *eP* P 21 51 41.8 -0.3
CDF pmax pmax
comp=Z,97nm,1.2s

RAR **Rarotonga** 76.12 180 LR LR 22 18 34.5
comp=Z,855nm,21.1s,baz=68,slow=30

GEC2 **GERESS Array S** 76.14 5 P P 21 51 42.1 -0.1
GEC2 lAmb lAmb 21 51 44.0
comp=Z,79nm,1.1s

GEC2 **GERESS Array S** 76.14 5 *eP* P 21 51 42.9 +0.7
comp=Z,77nm,1.0s,baz=355,slow=5.9

GERES **GERESS Array B** 76.14 5 P P 21 51 42.5 +0.3
comp=Z,43nm,1.0s,baz=340,slow=3.5,SNR=251

GERES PKPPKP **P'P'df** 22 18 57.8 -7.0
comp=Z,0.3nm,0.6s,baz=175,slow=3.4,SNR=5.6
comp=Z,43nm,1.0s

CKRC **Cesky Krumlov** 76.19 4 *eP* P 21 51 42.8 +0.4
CKRC pmax pmax
comp=Z,16nm,0.8s

CKRC MLR MLR
comp=Z,700nm,19.2s

CKRC **Cesky Krumlov** 76.19 4 *eP* P 21 51 42.8 +0.4
comp=Z,16nm,0.8s

CKRC AMS AMS 22 30 50.0
comp=Z,700nm,19.2s

KOLS **Kolonicke sedl** 76.21 359 *eP* P 21 51 43.3 +0.8
KOLS pmax pmax
comp=Z,64nm,1.0s

KOLS **Kolonicke sedl** 76.21 359 P P 21 51 43.5 +1.0
KOLS **Kolonicke sedl** 76.21 359 *eP* P 21 51 43.3 +0.8
JAVC **Velka Javorina** 76.26 2 *eP* P 21 51 44.4 +1.6
JAVC **Velka Javorina** 76.26 2 P P 21 51 44.4 +1.6
LSA **Lhasa** 76.29 302 P P 21 51 44.8 +1.0
LSA **Lhasa** 76.29 302 P P 21 51 44.1 +0.2
LSA pmax pmax
comp=Z,154nm,1.0s

LSA **Lhasa** 76.29 302 P P 21 51 44.0 +0.2
LSA **Lhasa** 76.29 302 P P 21 51 44.8 +1.0
BFO **Black Forest** 76.30 8 P P 21 51 43.0 0.0
BFO pmax pmax
comp=Z,54nm,1.0s

BFO **Black Forest** 76.30 8 P P 21 51 43.0 0.0
BFO lAmb lAmb 21 51 44.7
comp=Z,54nm,1.0s

BFO **Black Forest** 76.30 8 *eP* P 21 51 43.7 +0.7
comp=Z,68nm,1.1s,baz=355,slow=5.9

ECH **Echery** 76.31 9 P P 21 51 43.5 +0.4
ECH **Echery** 76.31 9 P P 21 51 43.7 +0.6
TNCH **TengChong** 76.41 294 P P 21 51 44.4 +0.2
TNCH S S 22 01 24.8 -2.2
TNCH pmax pmax
comp=Z,180nm,1.5s

TNCH pmax pmax
comp=Z,970nm,3.9s

TNCH L L
comp=Z,530nm,18.5s

TNCH L L
comp=Z,380nm,20.9s

TNCH L L
comp=Z,960nm,23.7s

HAU **Haudompre** 76.44 10 *eP* P 21 51 43.4 -0.4
HAU pmax pmax
comp=Z,92nm,1.0s

KMPD **K-Podol'skiy** 76.47 356 P P 21 51 43.3 -0.6
UZHM **Uzhgorod** 76.51 359 P P 21 51 44.3 +0.1
SLVN **Son La** 76.53 288 P P 21 51 45.2 +0.5
SLVN **Son La** 76.53 288 P P 21 51 44.9 +0.1
SLVN lAmb lAmb 21 51 46.6
comp=Z,80nm,1.0s

SMOL **Smolenice** 76.60 2 *eP* P 21 51 45.7 +1.0
SMOL pmax pmax
comp=Z,31nm,1.0s

KECS **Kecovo** 76.67 0 P P 21 51 46.5 +1.4
FUR **Furstenfeldbru** 76.68 6 *eP* P 21 51 46.1 +0.9
comp=Z,130nm,1.1s,baz=355,slow=5.9

FUR **Furstenfeldbru** 76.68 6 P P 21 51 46.1 +0.9
MODS **Modra-Piesok** 76.74 2 *eP* P 21 51 46.4 +0.9
MODS pmax pmax
comp=Z,270nm,1.2s

MODS **Modra-Piesok** 76.74 2 P P 21 51 46.8 +1.3
MODS **Modra-Piesok** 76.74 2 *eP* P 21 51 46.4 +0.9
SORM **Soroca** 76.82 355 ⇑P P 21 51 45.7 -0.2
SORM **Soroca** 76.82 355 P P 21 51 45.7 -0.2
SORM **Soroca** 76.82 355 P P 21 51 45.0 -0.9
comp=Z,3µmcomp=Z,164nm,1.1s

DRBR **Darabani** 76.83 356 ⇑P P 21 51 46.1 +0.2
ABAH **Abaujker** 76.85 360 P P 21 51 47.1 +1.0
SLE **Schleitheim** 76.87 8 P P 21 51 46.5 +0.2
SLE **Schleitheim** 76.87 8 P P 21 51 46.6 +0.4
OBIP **Obispado Ponce** 76.89 77 P P 21 51 46.6 -0.2
OBIP lAmb lAmb 21 51 48.6
comp=Z,73nm,1.1s

LOR **Lormes** 76.90 12 *eP* P 21 51 46.1 -0.3
LOR pmax pmax
comp=Z,136nm,1.2s

BAL3X **Bal3x, Balta** 76.94 354 P P 21 51 46.3 -0.3
WINA **Alland / Wiene** 76.97 3 *i* P P 21 51 47.6 +0.8
comp=Z,195nm,1.2s,SNR=64

WINA *ePcP* **sP** 21 52 04.4 +2.3
comp=Z,449nm,1.9s

TRPA **Tarpa** 77.01 359 P P 21 51 47.7 +0.8
MFF **Saint Martin d** 77.03 15 *eP* P 21 51 47.2 +0.1
MFF pmax pmax
comp=Z,1µm,1.2s

GAR **Garm** 77.04 322 P P 21 51 47.3 -0.2
GAR **Garm** 77.04 322 P P 21 51 47.8 +0.3
SJG **San Juan** 77.09 77 P P 21 51 48.9 +1.0
BOURR **Bourrignon** 77.13 9 P P 21 51 48.6 +0.9
CONA **Conrad Observa** 77.14 3 *i* P P 21 51 48.8 +0.9
comp=Z,216nm,1.2s,SNR=112

CONA *ePcP* **sP** 21 52 05.4 +2.2
comp=Z,598nm,2.6s

MOA **Molln** 77.16 4 *i* P P 21 51 48.3 +0.4
comp=Z,117nm,1.5s,SNR=46

MOA **Molln** 77.16 4 P P 21 51 48.4 +0.5
RJOB **Jochberg** 77.20 5 *eP* P 21 51 49.0 +0.8
comp=Z,76nm,0.9s,baz=355,slow=5.9

RJOB **Jochberg** 77.20 5 P P 21 51 48.9 +0.8
PSZ **Piszkesteto** 77.23 1 ⇑P P 21 51 49.6 +1.2
PSZ **Piszkesteto** 77.23 1 P P 21 51 49.6 +1.2
PSZ **Piszkesteto** 77.23 1 P P 21 51 49.0 +0.6
PSZ lAmb lAmb 21 51 50.8
comp=Z,123nm,1.0s

PSZ lAmIs_20 lAmIs_20 22 28 16.8
comp=Z,772nm,19.0s

PSZ **Piszkesteto** 77.23 1 P P 21 51 49.5 +1.2
BIOA **Bad Ischl, Aus** 77.29 5 *i* P P 21 51 49.0 +0.4
comp=Z,146nm,1.3s,SNR=43

BIOA *epP* **sP** 21 52 05.8 +1.9
comp=Z,372nm,2.4s

AVF **Avril sur Loir** 77.31 12 *eP* P 21 51 48.3 -0.4
AVF pmax pmax
comp=Z,122nm,1.2s

SRO **Srobarova** 77.32 2 *eP* P 21 51 50.4 +1.7
SRO pmax pmax
comp=Z,59nm,1.1s

SRO **Srobarova** 77.32 2 P P 21 51 50.5 +1.8
SRO **Srobarova** 77.32 2 *eP* P 21 51 50.4 +1.7
RETA **Reutte** 77.32 7 *eP* P 21 51 49.5 +0.7
comp=Z,85nm,1.3s,SNR=30

PGRA **Graciosa** 77.32 37 *eP* P 21 51 50.6 +1.7
PGRA *i* lAmb lAmb 21 51 52.9
comp=Z,372nm,1.3s

RONA **Rosalia, Austr** 77.38 3 *i* P P 21 51 50.2 +1.0
comp=Z,146nm,1.4s,SNR=60

RONA *epP* **sP** 21 52 06.9 +2.4
comp=Z,480nm,2.4s

SOP **Sopron** 77.41 3 P P 21 51 50.4 +1.2
SOP **Sopron** 77.41 3 P P 21 51 50.4 +1.2
PCED **Cedros** 77.43 38 *eP* P 21 51 50.7 +1.2
PCED *i* lAmb lAmb 21 51 52.9
comp=Z,227nm,0.9s

BUR08 **Bucovina Ar. S** 77.44 357 P P 21 51 49.5 0.0
BUR08 lAmb lAmb 21 51 51.3
comp=Z,56nm,0.9s

BMR **Baia Mare** 77.45 358 ⇑P P 21 51 50.4 +0.9
BMR **Baia Mare** 77.45 358 P P 21 51 50.4 +0.9
BMR **Baia Mare** 77.45 358 P P 21 51 50.3 +0.8
CEI **Carei** 77.46 359 ⇑P P 21 51 50.8 +1.3
CEI **Carei** 77.46 359 P P 21 51 50.8 +1.3
DAVA **Damuels** 77.46 8 *i* P P 21 51 50.2 +0.5
comp=Z,34nm,1.1s,SNR=18

DAVA *epP* **sP** 21 52 07.0 +1.9
comp=Z,39nm,1.0s

DAVA **Damuels** 77.46 8 P P 21 51 50.4 +0.7
BURAR **Bucovina Array** 77.47 357 ⇑P P 21 51 50.1 +0.4
BURAR **Bucovina Array** 77.47 357 P P 21 51 50.1 +0.4
BURAR **Bucovina Array** 77.47 357 P P 21 51 49.8 +0.1
CALA **Caldeira** 77.47 38 *eP* P 21 51 51.3 +1.4
CALA *i* lAmb lAmb 21 51 53.4
comp=Z,344nm,1.0s

BGF **Bois d'Agland** 77.48 13 *eP* P 21 51 49.3 -0.3
BGF pmax pmax
comp=Z,136nm,1.2s

MOTA **Moosalm** 77.48 7 *i* P P 21 51 50.4 +0.6
comp=Z,187nm,1.2s,SNR=101

LESA **Schwarzleotal** 77.50 6 *i* P P 21 51 50.6 +0.8
comp=Z,117nm,1.4s,SNR=73

SMF **Signal de Mont** 77.51 12 *eP* P 21 51 49.4 -0.5
SMF pmax pmax
comp=Z,140nm,1.1s

ROSA **Rosais** 77.51 37 *eP* P 21 51 51.6 +1.7
ROSA *i* lAmb lAmb 21 51 53.6
comp=Z,168nm,1.1s

ROSA **Rosais** 77.51 37 P P 21 51 51.7 +1.7
WATA **Walderalm** 77.53 6 *i* P P 21 51 50.8 +0.7
comp=Z,216nm,1.2s,SNR=127

WATA *i* pP **sP** 21 52 07.3 +1.9
comp=Z,276nm,1.7s

HOR **Horta** 77.55 38 *eP* P 21 51 52.2 +2.0
HOR *i* lAmb lAmb 21 51 53.5
comp=Z,195nm,0.9s

WTTA **Wattenberg** 77.60 6 *i* P P 21 51 51.5 +1.0
comp=Z,184nm,1.1s,SNR=119

WTTA *epP* **sP** 21 52 08.1 +2.2
comp=Z,138nm,1.6s

WTTA **Wattenberg** 77.60 6 P P 21 51 51.6 +1.0
SQTA **Sankt Quirin** 77.62 7 *i* P P 21 51 51.5 +0.9
comp=Z,248nm,1.1s,SNR=155

SQTA *epP* **sP** 21 52 07.9 +2.0
comp=Z,266nm,1.4s

PMAN **Manadas** 77.64 37 *eP* P 21 51 52.3 +1.6
PMAN *i* lAmb lAmb 21 51 54.3
comp=Z,204nm,1.0s

PICO **Pico** 77.64 37 *eP* P 21 51 52.2 +1.4
PICO *i* lAmb lAmb 21 51 54.5
comp=Z,175nm,1.3s

PCAN **Candelaria** 77.66 37 *eP* P 21 51 51.9 +1.1
PCAN *i* lAmb lAmb 21 51 54.2
comp=Z,149nm,1.2s

BUD **Budapest** 77.66 1 P P 21 51 51.7 +1.1
BUD **Budapest** 77.66 1 P P 21 51 51.7 +1.1
PRAR **RASCA** 77.68 356 ⇑P P 21 51 51.4 +0.6
CHGR **Chuyangaron** 77.75 323 *c* P P 21 51 51.3 -0.1
CHGR pmax pmax
comp=Z,378nm,1.0s

CHGR **Chuyangaron** 77.75 323 P P 21 51 51.6 +0.1
BNALP **Bannalp** 77.75 9 P P 21 51 52.4 +1.0
LTVH **Ltavrtes, Hu** 77.76 359 ⇑P P 21 51 52.7 +1.5
LTVH **Ltavrtes, Hu** 77.76 359 P P 21 51 52.6 +1.4
FETA **Feichten** 77.78 7 *i* P P 21 51 52.5 +0.9
comp=Z,147nm,1.0s,SNR=116

PSBA **Serra de Santa** 77.78 37 *eP* P 21 51 52.4 +0.9
PSBA *i* lAmb lAmb 21 51 55.1
comp=Z,162nm,1.0s

ARSA **Arzberg** 77.81 4 P P 21 51 52.0 +0.5
ARSA lAmb lAmb 21 51 53.9
comp=Z,95nm,1.1s

ARSA **Arzberg** 77.81 4 *i* P P 21 51 52.5 +1.0
comp=Z,143nm,1.2s,SNR=36

ARSA *epP* **sP** 21 52 09.2 +2.3
comp=Z,340nm,2.1s

ARSA **Arzberg** 77.81 4 P P 21 51 52.7 +1.1
IASR **Iasi** 77.81 355 ⇑P P 21 51 52.1 +0.6
BSZH **Besenyszg** 77.85 0 ⇑P P 21 51 52.9 +1.2
BSZH **Besenyszg** 77.85 0 P P 21 51 53.3 +1.6
KBA **Koelnbreinsper** 77.88 5 *i* P P 21 51 53.2 +1.1
comp=Z,268nm,1.2s,SNR=160

KBA **Koelnbreinsper** 77.88 5 P P 21 51 53.3 +1.1
GIMEL **St. Georges /** 77.88 10 P P 21 51 53.2 +1.1
SESA **Seetaler Alpe,** 77.91 4 *i* P P 21 51 53.2 +0.9
comp=Z,551nm,1.5s,SNR=121

SESA *epP* **sP** 21 52 10.2 +2.6
comp=Z,1µm,2.4s

ADH **Angra Heroismo** 77.91 36 *eP* P 21 51 53.9 +1.7
ADH *i* lAmb lAmb 21 51 56.4
comp=Z,211nm,1.1s

KIS **Kishinev** 77.92 354 ⇑P P 21 51 52.6 +0.4
KIS **Kishinev** 77.92 354 P P 21 51 52.5 +0.4
KIS **Kishinev** 77.92 354 P P 21 51 52.0 -0.1
comp=Z,1µmcomp=Z,95nm,1.1s

MPLH **Magyarpolny** 77.95 2 P P 21 51 53.3 +1.1
comp=Z,5µmcomp=Z,356nm,1.5s

MPLH **Magyarpolny** 77.95 2 P P 21 51 53.6 +1.3
DAVOX **Davos/Dischmat** 77.96 8 P P 21 51 53.2 +0.6
comp=Z,56nm,1.0s,baz=337,slow=4.4,SNR=68

DAVOX LR LR 22 26 11.6
comp=Z,445nm,21.8s,baz=330,slow=36
comp=Z,56nm,1.0s

MESR **Meseseni** 77.98 358 ⇑P P 21 51 53.6 +1.2
ARCR **ARCALIA** 78.02 357 ⇑P P 21 51 54.0 +1.3
ERBR **Yeremizino-Bor** 78.06 346 *eP* P 21 51 52.5 -0.4
ERBR *e*PP **sP** 21 52 08.6 +0.4
ERBR *eS* S 22 01 40.5 -3.4
ERBR pmax pmax
comp=Z,284nm,1.1s

ERBR MLR MLR
comp=Z,2µm,21.0s

BORR **Bors** 78.06 359 ⇑P P 21 51 54.5 +1.6
GIRR **Girov** 78.08 356 ⇑P P 21 51 53.4 +0.4
BIZ **Bicaz** 78.11 356 ⇑P P 21 51 54.1 +0.9
NE56 **Odesa** 78.11 353 P P 21 51 51.5 -1.6
KOHI **KOHIMA** 78.11 298 *eP* P 21 51 53.3 -0.4
FUORN **Ofenpass-Fuorn** 78.15 7 P P 21 51 54.2 +0.5
FUORN lAmb lAmb 21 51 56.2
comp=Z,130nm,1.1s

FUORN **Ofenpass-Fuorn** 78.15 7 P P 21 51 55.0 +1.3
SENIN **Lac Senin/Sane** 78.16 9 IAMs_20 IAMs_20 22 25 58.4
comp=Z,799nm,20.0s

ABTA **Abfaltersbach** 78.17 6 *i* P P 21 51 53.8 +0.2
comp=Z,127nm,1.1s,SNR=77

TUE **Stuetta** 78.22 8 P P 21 51 54.7 +0.6
TUE lAmb lAmb 21 51 56.5
comp=Z,61nm,1.1s

TUE **Stuetta** 78.22 8 P P 21 51 55.0 +0.9
comp=Z,5µmcomp=Z,276nm,1.3s

TUE **Stuetta** 78.22 8 P P 21 51 55.3 +1.2
PMG **Port Moresby** 78.30 234 *ce* P P 21 51 54.8 +0.3
PMG pmax pmax
comp=Z,84nm,1.3s

PMG **Port Moresby** 78.30 234 P P 21 51 54.5 0.0
PMG lAmb lAmb 21 51 56.1
comp=Z,78nm,1.2s

PMG **Port Moresby** 78.30 234 P P 21 51 55.5 +1.0
comp=Z,54nm,1.3s

PMG **Port Moresby** 78.30 234 P P 21 51 54.0 -0.5
GOF **Gofitskoye** 78.32 344 *c* P P 21 51 54.7 +0.4
GOF *eS* **SKSac** 22 02 01.6 -4.2
PURM **Purcari** 78.33 354 ⇑P P 21 51 54.9 +0.6
PURM **Purcari** 78.33 354 P P 21 51 53.9 -0.4
comp=Z,4µmcomp=Z,228nm,1.3s

VASR **Vaslui** 78.33 355 ⇓P P 21 51 54.7 +0.3
DRGR 78.35 359 ⇑P P 21 51 55.3 +0.7
DRGR 78.35 359 P P 21 51 55.3 +0.7
DRGR 78.35 359 P P 21 51 55.2 +0.6
MYKA **Terra Mystica** 78.35 5 *i* P P 21 51 54.9 +0.3
comp=Z,125nm,1.4s,SNR=32

MYKA *epP* **sP** 21 52 11.8 +1.9
comp=Z,352nm,2.4s

SOKA **Soboth** 78.36 4 *i* P P 21 51 55.3 +0.7
comp=Z,332nm,1.3s,SNR=208

SOKA *epP* **sP** 21 52 12.2 +2.2
comp=Z,637nm,2.4s

CJR **Cluj-Napoca** 78.41 358 ⇑P P 21 51 55.6 +0.7
CJR **Cluj-Napoca** 78.41 358 P P 21 51 55.6 +0.7
MARR **Marisel-Cluj** 78.45 358 ⇑P P 21 51 55.7 +0.5
OBKA **Obir** 78.51 4 *i* P P 21 51 56.3 +0.8
comp=Z,332nm,1.1s,SNR=103

OBKA **Obir** 78.51 4 P P 21 51 56.4 +0.8
TESR **Tescani** 78.52 356 ⇑P P 21 51 55.5 0.0
TESR **Tescani** 78.52 356 P P 21 51 55.3 -0.1
comp=Z,2µmcomp=Z,118nm,2.0s

TESR **Tescani** 78.52 356 P P 21 51 55.5 0.0
RJF **Les Rejaudoux** 78.53 14 *eP* P 21 51 55.1 -0.5
RJF pmax pmax
comp=Z,496nm,1.1s

TGMR **Targu Mures** 78.57 357 ⇓P P 21 51 57.1 +1.4
BEHE **Becsehely** 78.63 3 ⇑*i*P P 21 51 57.2 +1.2
BEHE **Becsehely** 78.63 3 P P 21 51 57.3 +1.2
ONER **Baraj Valea Uz** 78.70 356 ⇑P P 21 51 57.3 +0.9
BIR **Birlad** 78.72 355 ⇑P P 21 51 58.1 +1.6
BIR **Birlad** 78.72 355 P P 21 51 58.1 +1.6
LFF **La Frestale** 78.78 14 *eP* P 21 51 56.0 -0.9
LFF pmax pmax
comp=Z,1µm,1.2s

AMBH **Ambrzfalva** 78.80 360 ⇓P P 21 51 58.8 +1.8
AMBH **Ambrzfalva** 78.80 360 P P 21 51 58.3 +1.3
CTI **Castel Tesino** 78.81 6 P P 21 51 56.8 -0.4
CTI pmax pmax
comp=Z,76nm,1.1s

CTI **Castel Tesino** 78.81 6 P P 21 51 56.8 -0.4
CTI lAmb lAmb 21 51 59.6
comp=Z,76nm,1.1s

SIRR **Siria** 78.88 359 ⇑P P 21 51 58.2 +0.7
MORH **Mrgy, Hungar** 78.92 1 ⇑P P 21 51 58.2 +0.6
MORH **Mrgy, Hungar** 78.92 1 ⇑*i*P P 21 51 57.8 +0.2
MORH **Mrgy, Hungar** 78.92 1 P P 21 51 57.8 +0.2
MORH **Mrgy, Hungar** 78.92 1 P P 21 51 58.1 +0.5
IMP **Imphal** 78.93 298 *eP* P 21 51 58.1 0.0
GHRR 78.93 355 ⇑P P 21 51 59.4 +1.7
GHRR 78.93 355 P P 21 51 58.2 +0.5
GHRR 78.93 355 P P 21 51 58.7 +1.0
GUWA **GUWAHATI** 78.93 300 *eP* P 21 51 57.8 -0.3
LPL **La Plagne** 78.94 10 *eP* P 21 51 58.6 +0.6
LPL pmax pmax
comp=Z,36nm,1.0s

SSB **Saint Sauveur** 78.94 12 P P 21 51 58.0 +0.2
SSB pmax pmax
comp=Z,63nm,1.2s

SSB **Saint Sauveur** 78.94 12 P P 21 51 58.0 +0.2
SSB lAmb lAmb 21 51 60.0
comp=Z,63nm,1.2s

SSB **Saint Sauveur** 78.94 12 P P 21 51 58.6 +0.8
LPG **La Plagne** 78.96 10 *eP* P 21 51 58.9 +0.7
LPG pmax pmax
comp=Z,57nm,1.2s

MDB **Medias** 78.96 357 ⇑P P 21 51 58.9 +1.0
MDB **Medias** 78.96 357 P P 21 51 58.9 +1.0
OZUR 78.97 356 ⇑P P 21 51 58.9 +0.9
CAF **Calviac** 78.98 13 *eP* P 21 51 57.9 -0.1
CAF pmax pmax
comp=Z,97nm,1.1s

CGRP Cima Grappa 78.99 6 P P 21 51 58.3 0.0
BOSR Bodos 78.99 356 ⇑P P 21 51 59.5 +1.4
TURR Turia 79.00 356 ⇑P P 21 51 59.4 +1.3
LABN Labinsk 79.07 346 eP P 21 51 58.3 -0.2
LABN e*PP pP 21 52 09.8 +0.1
LABN eS S 22 01 54.1 -0.7
LABN pmax pmax
comp=Z,85nm,1.4s
LABN MLR MLR
comp=Z,2µm,21.0s
DOPR Dopca 79.11 357 ⇑P P 21 51 59.9 +1.2
VLDR Vladesti 79.11 355 ⇑P P 21 51 59.3 +0.6
SWI Sorong 79.12 252 P P 21 51 59.4 +0.3
comp=Z,2µmcomp=Z,92nm,1.1s
SIJI Sorong 79.12 252 LR LR 22 24 39.7
comp=Z,283nm,19.7s,baz=104,slow=34
SIJI Sorong 79.12 252 P P 21 51 59.3 +0.1
comp=Z,1µmcomp=Z,72nm,1.1s
COSR Cosmesti PH 79.14 355 ⇑P P 21 51 59.8 +1.0
VRI Vrincioaia 79.16 356 ⇑P P 21 51 59.7 +0.7
VRI Vrincioaia 79.16 356 P P 21 51 59.6 +0.7
VRI Vrincioaia 79.16 356 P P 21 51 59.4 +0.4
PLOR Plostina 79.18 356 ⇓P P 21 51 59.9 +0.8
PLOR Plostina 79.18 356 P P 21 51 59.9 +0.8
PSET Sete Cidades 79.18 36 eP P 21 52 00.8 +1.6
PSET i IAmb IAmb 21 52 03.0
comp=Z,285nm,1.0s
COVR Voineasa-Covas 79.20 356 ⇑P P 21 52 00.4 +1.2
ODBI Odobesti 79.25 355 ⇑P P 21 52 01.1 +1.7
DEV Deva 79.25 358 ⇑P P 21 52 01.0 +1.5
DEV Deva 79.25 358 P P 21 52 00.9 +1.5
DEV Deva 79.25 358 P P 21 52 00.1 +0.6
PDA Ponta Delgada 79.27 36 eP P 21 52 01.1 +1.5
PDA i IAmb IAmb 21 52 03.7
comp=Z,564nm,1.1s
SCTR Scanteiesti 79.29 355 ⇑P P 21 51 01.1 +1.5
CMLA Cha da Macela 79.30 36 eP P 21 52 01.9 +2.1
CMLA i IAmb IAmb 21 52 04.0
comp=Z,192nm,1.4s
CMLA Cha da Macela 79.30 36 P P 21 52 00.6 +0.8
CMLA pmax pmax
comp=Z,60nm,0.8s
CMLA Cha da Macela 79.30 36 P P 21 52 00.6 +0.8
CMLA IAmb IAmb 21 52 03.7
comp=Z,60nm,0.8s
CMLA Cha da Macela 79.30 36 P P 21 52 02.3 +2.5
SAHR Sahastru 79.30 356 ⇑P P 21 52 00.9 +1.1
PGRON Lagoa das Cont 79.34 36 eP P 21 52 01.9 +1.8
PGRON i IAmb IAmb 21 52 03.9
comp=Z,167nm,1.8s
ANN Anapa 79.35 348 eP P 21 51 59.4 -0.6
ANN e*PP sP 21 52 13.9 -1.4
ANN eS S 22 01 52.3 -5.3
ANN e*SS ScS 22 02 19.8 -0.2
ANN pmax pmax
comp=Z,66nm,1.0s
ANN MLR MLR
comp=Z,1µm,20.0s
SHL Shillong 79.36 300 P P 21 51 59.0 -1.6
SHL pmax pmax
comp=Z,50nm,0.9s
SHL Shillong 79.36 300 P P 21 51 59.6 -1.0
SNR=16
SHL Shillong 79.36 300 P P 21 51 59.0 -1.6
SHL IAmb IAmb 21 52 00.8
comp=Z,50nm,0.9s
SHL Shillong 79.36 300 eP P 21 51 59.6 -1.0
SHL IAmb IAmb 21 52 01.6
comp=Z,26nm,0.5s
TATR Tatarca 79.36 355 ⇑P P 21 52 00.8 +0.7
VIVF Saint-Julien-l 79.37 12 eP P 21 52 00.1 -0.1
VIVF pmax pmax
comp=Z,72nm,1.2s
TUDR 79.39 355 ⇑P P 21 52 01.5 +1.3
BART Pico Bartolome 79.40 35 eP P 21 52 01.9 +1.4
BART i IAmb IAmb 21 52 04.0
comp=Z,401nm,1.0s
TIM Timisoara 79.41 360 ⇑P P 21 52 02.6 +2.2
TIM Timisoara 79.41 360 P P 21 52 02.5 +2.2
IZVR Izvoarele 79.43 355 ⇑P P 21 52 01.2 +0.8
NEGRR Negrea 79.43 355 ⇑P P 21 52 02.0 +1.6
ORIF Oris-en-Rattie 79.44 11 eP P 21 52 00.7 +0.1
ORIF pmax pmax
comp=Z,26nm,0.9s
KVAR Kislovodsk Arr 79.45 344 LR LR 22 32 24.2
comp=Z,722nm,19.8s,baz=262,slow=40
KIV Kislovodsk 79.45 344 ⇑P P 21 52 02.1 +1.4
KIV Kislovodsk 79.45 344 P P 21 52 01.6 +0.9
KIV Kislovodsk 79.45 344 eP P 21 52 01.1 +0.4
KIV pmax pmax
comp=Z,137nm,1.1s
KIV MLR MLR
comp=Z,532nm,19.0s
KIV Kislovodsk 79.45 344 P P 21 51 60.0 -0.7
KIV Kislovodsk 79.45 344 P P 21 52 00.7 0.0
KIV IAMs_20 IAMs_20 22 31 23.7
comp=Z,927nm,21.0s
KIV Kislovodsk 79.45 344 P P 21 52 01.4 +0.7
TNR Turnu Rosu 79.45 357 ⇓P P 21 52 01.8 +1.2
TNR Turnu Rosu 79.45 357 P P 21 52 01.8 +1.2
GIUM Giurgiulesti 79.47 355 ⇑P P 21 52 02.1 +1.5
SCHLR Schela 79.50 355 ⇑P P 21 52 01.5 +0.7
BZS Buzias 79.53 359 ⇑P P 21 52 01.5 +0.5
BZS Buzias 79.53 359 P P 21 52 01.4 +0.5
BZS Buzias 79.53 359 P P 21 52 01.5 +0.5
SIM Simferopol' 79.56 350 eP P 21 52 01.3 +0.2
MLR Muntele Rosu 79.56 356 LR LR 22 27 46.6
comp=Z,874nm,21.9s,baz=0.5,slow=36
MLR Muntele Rosu 79.56 356 ⇑P P 21 52 02.5 +1.1
MLR Muntele Rosu 79.56 356 P P 21 52 02.4 +1.1
MLR Muntele Rosu 79.56 356 P P 21 52 01.3 0.0
MLR Muntele Rosu 79.56 356 P P 21 52 01.7 +0.4
MAK Makhachkala 79.57 340c iP P 21 51 01.3 +0.1
MAK ePPP PPP 21 56 52.8
MAK eS S 22 02 00.9 +0.8
MAK eSS SS 22 07 11.8 +4.8
MAK pmax pmax
comp=Z,348nm,1.0s
NEHR Nehoiu 79.61 356 ⇑P P 21 52 02.7 +1.3
KBZ Khabaz 79.64 344 P P 21 52 01.6 +0.1
comp=Z,109nm,0.9s,baz=11,slow=1.9,SNR=122
KBZ LR LR 22 32 46.6
comp=Z,870nm,19.2s,baz=3.5,slow=40
comp=Z,109nm,0.9s
KBZ Khabaz 79.64 344ceP P 21 52 02.2 +0.7
KBZ pmax pmax
comp=Z,117nm,0.9s
VOIR 79.65 357 ⇑P P 21 52 02.5 +0.7
VOIR 79.65 357 P P 21 52 02.4 +0.7
VOIR 79.65 357 P P 21 52 02.4 +0.6
SHA1 Shidzhatmaz 79.67 344ceP P 21 52 02.5 +0.4
LOT Lotru 79.67 358 ⇑P P 21 52 02.7 +0.8
LOT Lotru 79.67 358 P P 21 52 01.7 -0.2
TLCR 79.73 354 ⇑P P 21 52 02.8 +0.8
TLCR 79.73 354 P P 21 52 02.8 +0.8
GZR Gura Zlata 79.74 359 ⇑P P 21 52 02.7 +0.5
GZR Gura Zlata 79.74 359 P P 21 52 02.7 +0.5
NCK Nalchik 79.75 343c iP P 21 52 03.1 +0.8
NCK pmax pmax
comp=Z,338nm,1.0s
BANR Banloc 79.77 360 ⇓P P 21 52 03.6 +1.4
CFR Carcaliu 79.78 355 ⇑P P 21 52 02.3 0.0
CFR Carcaliu 79.78 355 P P 21 52 02.3 0.0
EVN Everest 79.82 305 P P 21 52 03.7 +0.1
EVN Everest 79.82 305 P P 21 52 04.0 +0.4
MTUR Matau 79.86 357 ⇑P P 21 52 02.2 -0.7
MTUR Matau 79.86 357 P P 21 52 02.2 -0.7
ISR Istrita 79.91 356 ⇑P P 21 52 04.1 +0.9
ISR Istrita 79.91 356 P P 21 52 04.0 +0.9
DHUB DHUBRI 79.91 301 eP P 21 52 02.8 -0.5
TNTI Ternate 79.92 257 P P 21 52 02.9 -0.5
FRGS Fruska Gora 79.99 1⇑iP P 21 52 03.9 +0.4
TPGR Topolog 80.08 354 ⇑P P 21 52 04.4 +0.4
PGAV Gavieira, Arco 80.08 22 eP P 21 52 05.5 +1.3
PGAV i IAmb IAmb 21 52 24.9
comp=Z,105nm,1.5s
PGAV eLR LR 22 20 33.8
PGAV i IAMs_20 IAMs_20 22 27 36.0
comp=Z,747nm,22.0s
PGOR Pogoanele 80.10 355 ⇑P P 21 52 04.9 +0.8
PSMN Pico do Norte, 80.14 36 eP P 21 52 04.8 +0.4
PSMN i IAmb IAmb 21 52 07.6
comp=Z,137nm,1.5s

JURR Jurilovca 80.15 354 ⇑P P 21 52 05.2 +0.9
SOC Sochi 80.25 346 eP P 21 52 04.6 -0.3
SOC e 21 55 09.1
SOC ePPP PPP 21 56 55.5
SOC eS S 22 02 06.3 -1.0
SOC eSS SS 22 07 19.6 +2.5
SOC eSSS SSS 22 10 39.1
SOC pmax pmax
comp=Z,98nm,0.9s
SOC MLR MLR
comp=Z,1µm,20.0s
HERR Herculane 80.26 359 ⇑P P 21 52 05.3 +0.4
ISO Isola 80.29 10 P P 21 52 06.6 +1.4
TSSA Tissa 80.30 315 eP P 21 52 05.9 +0.3
TSSA IAmb IAmb 21 52 08.1
comp=Z,107nm,0.7s
FAKI Fak Fak 80.30 250 P P 21 52 06.2 +0.7
FAKI Fak Fak 80.30 250 P P 21 52 05.0 -0.5
FAKI IAmb IAmb 21 52 27.8
comp=Z,99nm,1.1s
FAKI Fak Fak 80.30 250 P P 21 52 06.3 +0.7
comp=Z,83nm,1.2s
FAKI Fak Fak 80.30 250 P P 21 52 06.0 +0.5
BLY Banja Luka 80.36 3 ⇓P P 21 52 06.1 +0.6
BLY Banja Luka 80.36 3⇑iP P 21 52 05.8 +0.3
BLY Banja Luka 80.36 3 P P 21 52 06.0 +0.6
SULR 80.36 356 ⇑P P 21 52 07.2 +1.8
SULR 80.36 356 P P 21 52 05.6 +0.1
RUSF Rustrel 80.37 11 P P 21 52 07.4 +1.9
MDVR Moldovita 80.37 359 ⇑P P 21 52 06.3 +0.7
PCAB Cabril 80.38 21 eP P 21 52 06.9 +1.2
PCAB i IAmb IAmb 21 52 09.2
comp=Z,84nm,1.4s
AMRR Amara 80.38 355 ⇑P P 21 52 05.8 +0.3
AMRR Amara 80.38 355 P P 21 52 05.8 +0.3
ATE Arette 80.38 16 P P 21 52 06.3 +0.6
TLBR Topalu 80.41 355 ⇑P P 21 52 06.3 +0.6
ECAL Calabor 80.42 20 P P 21 52 07.6 +1.7
SRE Strehaia 80.47 358 ⇑P P 21 52 06.9 +0.9
SRE Strehaia 80.47 358 P P 21 52 06.9 +0.9
RMGR Halanga-Turnu 80.47 359 ⇑P P 21 52 07.4 +1.4
TIRR Tirgusor 80.48 354 ⇑P P 21 52 06.6 +0.5
TIRR Tirgusor 80.48 354 P P 21 52 06.6 +0.5
TIRR Tirgusor 80.48 354 P P 21 52 05.8 -0.3
TIRR IAmb IAmb 21 52 07.7
comp=Z,136nm,1.0s
TIRR Tirgusor 80.48 354 P P 21 52 06.5 +0.4
LEHL Lehliu 80.54 356 ⇑P P 21 52 07.0 +0.6
PBRG Braganca 80.55 20 eP P 21 52 07.8 +1.2
PBRG i IAmb IAmb 21 52 26.5
comp=Z,61nm,1.4s
HUMR Humele 80.56 357 ⇑P P 21 52 06.5 -0.1
HUMR Humele 80.56 357 P P 21 52 06.3 -0.2
KLP Kalpa 80.57 313 eP P 21 52 07.0 -0.2
KLP IAmb IAmb 21 52 09.4
comp=Z,391nm,1.1s
EPF Esparros 80.60 15 eP P 21 52 06.1 -0.8
EPF pmax pmax
comp=Z,40nm,1.2s
TEKS Tekeris 80.60 1⇑iP P 21 52 07.0 +0.2
SBF Sospel 80.64 10 eP P 21 52 06.8 -0.3
SBF pmax pmax
comp=Z,106nm,1.0s
ESCA l'Escarene 80.67 10 P P 21 52 08.1 +0.9
CALF Calern 80.70 10 P P 21 52 08.2 +0.7
NIL Nilore 80.72 318 P P 21 52 08.0 +0.4
NIL pmax pmax
comp=Z,402nm,1.1s
NIL MLR MLR
comp=Z,2µm,20.0s
NIL Nilore 80.72 318 P P 21 52 08.1 +0.4
NIL Nilore 80.72 318 P P 21 52 08.0 +0.4
NIL Nilore 80.72 318 P P 21 52 08.5 +0.9
POLO Lamas de Olo 80.75 21 eP P 21 52 09.0 +1.3
POLO i IAmb IAmb 21 52 10.6
comp=Z,56nm,1.2s
MON Monaco 80.78 10 P P 21 52 09.6 +1.9
ARBF Arbois 80.79 11 P P 21 52 09.6 +1.8
THN Thein Dam 80.80 315 eP P 21 52 08.7 +0.5
THN IAmb IAmb 21 52 10.3
comp=Z,54nm,0.7s
PTO Porto 80.81 22 eP P 21 52 09.1 +1.2
PTO i IAmb IAmb 21 52 10.6
comp=Z,131nm,1.2s
CICN Ciocanesti 80.81 355 ⇑P P 21 52 07.7 -0.1
SGRR Singureni 80.83 356 ⇑P P 21 52 08.4 +0.4
EFOR EFORIE 80.84 354 ⇑P P 21 52 09.3 +1.2
ICOR Ion Corvin 80.85 355 ⇓P P 21 52 09.3 +1.2
PUNG Punghina 80.86 358 ⇑P P 21 52 08.4 +0.3
PVRL Vila Real 80.86 21 eP P 21 52 09.7 +1.4
PVRL i IAmb IAmb 21 52 29.0
comp=Z,115nm,1.4s
JOSI Joshimath 80.86 312 eP P 21 52 09.1 +0.4
JOSI IAmb IAmb 21 52 11.7
comp=Z,152nm,0.9s
JMU Jammu 80.87 316 eP P 21 52 09.8 +1.3
JMU IAmb IAmb 21 52 12.5
comp=Z,202nm,1.3s
AKT Akhty 80.95 340⇑iP P 21 52 09.1 +0.2
AKT e*PP sP 21 52 23.0 -1.3
AKT e 21 55 13.5
AKT ePPP PPP 21 57 02.4
AKT eS S 22 02 12.8 -2.2
AKT eSS SS 22 07 26.6 -1.4
AKT pmax pmax
comp=Z,285nm,1.0s
AKT MLR MLR
comp=Z,3µm,22.0s
GDHS Morne Mazeau, 81.01 75 P P 21 52 09.0 -0.4
VLAD Vladila 81.10 357 ⇑P P 21 52 09.5 +0.1
BAIL Bailesti 81.11 358 ⇑P P 21 52 10.7 +1.2
MANR Mangalia 81.11 354 ⇑P P 21 52 10.3 +0.9
UTK UTTARKASHI 81.19 313 eP P 21 52 10.2 0.0
CHTO Chiang Mai 81.26 290 P P 21 52 11.6 +0.9
CHTO Chiang Mai 81.26 290 P P 21 52 09.6 -1.1
CHTO pmax pmax
comp=Z,27nm,0.8s
CHTO Chiang Mai 81.26 290 P P 21 52 09.9 -0.8
CHTO Chiang Mai 81.26 290 P P 21 52 09.6 -1.1
CHTO Chiang Mai 81.26 290 P P 21 52 09.9 -0.8
comp=Z,1µmcomp=Z,52nm,1.2s
CHTO Chiang Mai 81.26 290 P P 21 52 10.2 -0.5
TBLG Delisi 81.27 342 P P 21 52 11.3 +0.9
BBLS Lazi&#263i 81.28 1⇑iP P 21 52 11.6 +1.1
PSN Preselentsi 81.31 355 iP P 21 52 11.5 +0.9
SEKA Sheki 81.32 340 P P 21 52 09.2 -1.6
MYLDM Lahad Datu 81.33 267 P 21 52 11.8 +0.7
MYLDM IAmb IAmb 21 52 37.2
comp=Z,93nm,1.3s
MYLDM Lahad Datu 81.33 267 P P 21 52 12.5 +1.5
comp=Z,59nm,1.3s
MYLDM Lahad Datu 81.33 267 P P 21 52 12.7 +1.6
PVIS Viseu 81.36 22 eP P 21 52 12.2 +1.2
SMLA Simla 81.37 314 eP P 21 52 11.3 +0.2
SMLA IAmb IAmb 21 52 13.3
comp=Z,231nm,0.9s
PTH Pithoragarh 81.42 311 eP P 21 52 11.4 -0.2
PTH IAmb IAmb 21 52 14.9
comp=Z,98nm,1.0s
TDBA Terre de Bas, 81.43 75 P P 21 52 11.4 -0.1
VALD Valchedram 81.44 358 iP P 21 52 11.3 +0.1
RAZG Razgrad 81.46 356 ⇑P P 21 52 11.4 0.0
BHK Bhakra 81.46 314 eP P 21 52 11.7 0.0
BHK IAmb IAmb 21 52 15.5
comp=Z,104nm,1.1s
KBL Kabul 81.49 321 P P 21 52 10.5 -1.5
KBL pmax pmax
comp=Z,118nm,1.1s
KBL Kabul 81.49 321 P P 21 52 10.5 -1.5
SNR=46
KBL Kabul 81.49 321 P P 21 52 10.5 -1.5
KBL IAmb IAmb 21 52 12.1
comp=Z,118nm,1.1s
KBL Kabul 81.49 321 P P 21 52 10.4 -1.5
SJAF Saint Jean de 81.49 13 P P 21 52 12.4 +0.9
EJON La Jonquera 81.52 13 P P 21 52 12.7 +1.0
CM31 Chiang Mai Arr 81.55 290 P P 21 52 12.5 +0.3
SNR=81
CM31 Chiang Mai Arr 81.55 290 P P 21 52 11.9 -0.3
CMAR Chiang Mai Arr 81.55 290 P P 21 52 12.1 -0.2
comp=Z,161nm,1.1s,baz=14,slow=5.4,SNR=316
CMAR LR LR 22 32 03.3
comp=Z,443nm,18.9s,baz=55,slow=38
comp=Z,161nm,1.1s
DLV Lat 81.57 279 P P 21 52 13.2 +0.7
DLV Lat 81.57 279 P P 21 52 12.5 0.0
DLV IAmb IAmb 21 52 16.5
comp=Z,89nm,1.1s
DLV Lat 81.57 279 P P 21 52 13.3 +0.7
LGTI Lohaghat 81.64 311 eP P 21 52 12.4 -0.4
PLVB Pleven 81.71 357 ⇑P P 21 52 12.8 +0.2
MTE Manteigas 81.74 21 eP P 21 52 14.1 +1.1
MTE i IAmb IAmb 21 52 15.8
comp=Z,135nm,1.3s
MTE eLR LR 22 20 52.6
MTE i IAMs_20 IAMs_20 22 27 26.4
comp=Z,645nm,22.0s
MTE Manteigas 81.74 21 IAMs_20 IAMs_20 22 25 16.5
comp=Z,989nm,22.0s
MTE Manteigas 81.74 21 P P 21 52 14.4 +1.5
MPEP Malo Peshtene 81.76 358 iP P 21 52 12.1 -0.9
MNGR Mingechevir, A 81.76 340 P P 21 52 11.9 -1.1
SZH Strazhitsa 81.78 356 iP P 21 52 13.0 -0.1
PLE Pljevlja 81.81 1⇑iP P 21 52 14.2 +0.8
EPOS Posof 81.84 343 P P 21 52 14.7 +1.2
PCAS Casmilo, Conde 81.87 22 eP P 21 52 14.8 +1.2
PCAS i IAmb IAmb 21 52 17.2
comp=Z,152nm,1.6s
SJES Sjenica 81.89 1⇑iP P 21 52 14.8 +1.0
BATM Batumi 81.90 344 ⇑P P 21 52 14.5 +0.8
BATM Batumi 81.90 344 P P 21 52 14.5 +0.8
KKM Kota Kinabalu 81.94 269 P P 21 52 14.3 -0.1
KKM IAmb IAmb 21 52 19.0
comp=Z,69nm,1.1s
KKM Kota Kinabalu 81.94 269 P P 21 52 17.1 +2.7
comp=Z,60nm,1.1s
KKM Kota Kinabalu 81.94 269 P P 21 52 15.6 +1.2
UPM Unac-Piva 81.94 1⇑iP P 21 52 14.3 +0.2
UPM Unac-Piva 81.94 1⇑iP P 21 52 14.3 +0.2
PVL Pavlikeni 81.96 357 iP P 21 52 14.0 0.0
NPW Naypyitaw 81.96 293 P P 21 52 14.1 -0.2
SDV Santo Domingo 82.00 86 eP P 21 52 15.0 +0.2
GANJ Ganja 82.03 341 P P 21 52 13.3 -1.2
PGF Pioggiola 82.09 9 eP P 21 52 14.7 -0.2
PGF pmax pmax
comp=Z,169nm,1.2s
BRY Bratogost 82.23 2⇑iP P 21 52 15.6 0.0
BRY Bratogost 82.23 2⇓iP P 21 52 15.3 -0.3
IVA Berane 82.28 1⇓iP P 21 52 15.7 -0.1
PCBR Castelo Branco 82.29 22 eP P 21 52 16.8 +1.0
PCBR i IAmb IAmb 21 52 18.3
comp=Z,125nm,1.4s
KOME Kolasin 82.30 1⇑iP P 21 52 16.1 +0.2
PSBE So Bento 82.32 23 eP P 21 52 17.0 +1.0
PSBE i IAmb IAmb 21 52 19.6
comp=Z,169nm,1.5s
NKME Niksic 82.37 1⇓iP P 21 52 16.2 0.0
PSARD Sardoal 82.38 22 eP P 21 52 17.3 +1.0
PSARD i IAmb IAmb 21 52 19.5
comp=Z,200nm,1.6s
TREB Trebinje 82.41 2⇑iP P 21 52 15.8 -0.6
GTOI Gorontalo 82.47 260 P P 21 52 15.5 -1.5
comp=Z,33nm,1.0s
VTS Vitosha 82.51 358 iP P 21 52 21.3 +4.2
PVY Plav 82.56 1⇑iP P 21 52 16.9 -0.4
CEME Cevo 82.59 1⇑iP P 21 52 17.4 0.0
AQU L'Aquila 82.60 5 P P 21 52 18.4 +1.0
AQU L'Aquila 82.60 5⇑iP P 21 52 18.1 +0.7
AQU L'Aquila 82.60 5 P P 21 52 18.4 +1.0
UCM Universidad Co 82.66 18 P P 21 52 19.2 +1.4
HCY Herceg Novi 82.69 2⇑iP P 21 52 17.6 -0.2
HCY Herceg Novi 82.69 2⇑iP P 21 52 17.6 -0.2
PMRV Marv??o 82.70 22 eP P 21 52 18.8 +0.8
PMRV i IAmb IAmb 21 52 21.3
comp=Z,149nm,1.5s
PMRV eLR LR 22 21 20.7
PMRV i IAMs_20 IAMs_20 22 30 30.2
comp=Z,687nm,18.0s
PDG Podgorica 82.71 1 ⇑P P 21 52 18.2 +0.2
PDG Podgorica 82.71 1 P P 21 52 18.0 0.0
PDG IAMs_20 IAMs_20 22 35 19.9
comp=Z,877nm,22.0s
PDG Podgorica 82.71 1⇑iP P 21 52 18.1 +0.2
PDG Podgorica 82.71 1 P P 21 52 18.4 +0.4
PDG Podgorica 82.71 1⇑iP P 21 52 18.1 +0.2
DIGO Kars 82.79 343 P P 21 52 20.0 +1.3
GNI Garni 82.81 342 LR LR 22 36 12.9
comp=Z,594nm,18.5s,baz=11,slow=41
GNI Garni 82.81 342 P P 21 52 18.6 -0.1
GNI Garni 82.81 342ceP P 21 52 20.0 +1.3
GNI pmax pmax
comp=Z,144nm,1.2s
GNI Garni 82.81 342 P P 21 52 19.4 +0.7
GNI Garni 82.81 342 P P 21 52 18.7 0.0
GNI Garni 82.81 342 IAMs_20 IAMs_20 22 33 58.6
comp=Z,833nm,21.0s
GNI Garni 82.81 342 P P 21 52 20.4 +1.7
BUM Brajici-Budva 82.84 1⇑iP P 21 52 18.2 -0.5
PMTG Montargil 82.87 22 eP P 21 52 19.6 +0.8
PMTG i IAmb IAmb 21 52 21.2
comp=Z,111nm,1.3s
DRME Dracevica, Mon 82.95 1⇑iP P 21 52 19.6 +0.4
DRME Dracevica, Mon 82.95 1⇑iP P 21 52 19.1 -0.1
LIS Lisbon 83.00 23 eP P 21 52 20.2 +0.7
LIS IAmb IAmb 21 52 22.0
comp=Z,155nm,1.1s
LIS Lisbon 83.00 23 P P 21 52 21.4 +1.9
LIS Lisbon 83.00 23 eP P 21 52 20.2 +0.7
LIS Lisbon 83.00 23 P P 21 52 21.4 +1.9
DIM Dimitrovgrad 83.02 356 iP P 21 52 20.0 +0.5
ESDC Sonseca Array 83.15 19 P P 21 52 20.7 +0.4
comp=Z,76nm,1.0s,baz=341,slow=4.8,SNR=277
ESDC PKKPbc PKKPbc 22 10 37.7 -0.8
comp=Z,1.3nm,1.1s,baz=165,slow=1.2,SNR=5.5
ESDC PKPPKP P'P'df 22 18 44.4 -7.3
comp=Z,2.2nm,1.2s,baz=307,slow=0.8,SNR=6.9
ESDC LR LR 22 31 22.9
comp=Z,410nm,19.8s,baz=325,slow=37
comp=Z,76nm,1.0s
ESDC Sonseca Array 83.15 19 P P 21 52 21.0 +0.6
PARRA Arraiolos 83.15 22 eP P 21 52 21.1 +0.8
PARRA i IAmb IAmb 21 52 22.7
comp=Z,152nm,1.3s
ROSC El Rosal 83.17 91 P P 21 52 23.3 +2.1
comp=Z,6.3nm,0.4s,baz=307,slow=10,SNR=3.7
comp=Z,6.3nm,0.4s
ROSC El Rosal 83.17 91 P P 21 52 19.9 -1.3
SKO Skopje 83.18 359 iP P 21 52 21.8 +1.5
ULC Ulcinj 83.18 1⇑iP P 21 52 19.8 -0.6
PAB San Pablo 83.20 19 P P 21 52 20.4 -0.2
PAB pmax pmax
comp=Z,95nm,1.2s
PAB MLR MLR
comp=Z,1µm,22.0s
PAB San Pablo 83.20 19 P P 21 52 20.4 -0.2
PAB IAmb IAmb 21 52 23.2
comp=Z,95nm,1.2s
PAB San Pablo 83.20 19 P P 21 52 21.6 +0.9
PESTR Estremoz 83.20 22 eP P 21 52 21.4 +0.8
PESTR i IAmb IAmb 21 52 23.7
comp=Z,141nm,1.7s
PESTR Estremoz 83.20 22 P P 21 52 20.5 0.0
PESTR IAmb IAmb 21 52 23.0
comp=Z,105nm,1.1s
PESTR Estremoz 83.20 22 P P 21 52 21.7 +1.2
GAYA Gaya 83.23 304 eP P 21 52 20.4 -0.5
GAYA IAmb IAmb 21 52 22.6
comp=Z,49nm,1.0s
TOLI2 Tolitoli 83.35 262 P P 21 52 23.0 +1.4
TOLI2 Tolitoli 83.35 262 P P 21 52 20.4 -1.1
TOLI2 IAmb IAmb 21 52 25.2
comp=Z,45nm,1.2s
TOLI2 Tolitoli 83.35 262 P P 21 52 20.9 -0.7
PEHC Pehcevo 83.35 358 iP P 21 52 22.0 +0.6
MOE Montemor 83.37 23 eP P 21 52 22.5 +1.1
MOE i IAmb IAmb 21 52 24.8
comp=Z,230nm,1.6s
EVO Evora 83.43 22 eP P 21 52 22.7 +1.0
EVO i IAmb IAmb 21 52 24.3
comp=Z,169nm,1.4s
PHP Peshkopia 83.47 0 P P 21 52 22.4 +0.4
NDI New Delhi 83.49 312 eP P 21 52 22.1 0.0
NDI i x x 21 52 38.2
NAX Nakhchivan 83.61 341 P P 21 52 21.8 -1.0
KELT Kelkit 83.69 346 P P 21 52 24.5 +1.2
BOK Bokaro 83.78 303⇑iP P 21 52 23.7 -0.1

BOK IAmb IAmb 21 52 25.9
comp=Z,42nm,0.9s
PLOUS Minas do Lousa 83.82 23 *e*P **P** **21 52 24.8 +1.1**
PLOUS *i* IAmb IAmb 21 52 26.4
comp=Z,191nm,1.3s
SAHE Sakarya_HENDEK 83.91 352 ⇑P **P** **21 52 25.0 +0.9**
RDO Rodhopi 83.92 356 P **P** **21 52 25.2 +1.1**
HRA Herat 83.92 327 P **P** **21 52 24.2 -0.3**
HRA IAmb IAmb 21 52 26.4
comp=Z,118nm,1.1s
PBEJ Beja 83.95 22 *e*P **P** **21 52 25.4 +1.0**
PBEJ *i* IAmb IAmb 21 52 27.0
comp=Z,117nm,1.4s
KNT Kendrikon 83.97 358 P **P** **21 52 26.5 +2.0**
LUWI Luwuk 83.98 259 P **P** **21 52 23.7 -1.1**
LUWI Luwuk 83.98 259 P **P** **21 52 22.6 -2.2**
comp=Z,1µmcomp=Z,97nm,1.1s
LUWI Luwuk 83.98 259 P **P** **21 52 24.2 -0.6**
PBAR Barrancos 83.98 22 *e*P **P** **21 52 25.7 +1.1**
PBAR *i* IAmb IAmb 21 52 27.8
comp=Z,334nm,1.5s
SRS Serrai 84.00 358 P **P** **21 52 25.3 +0.7**
OHR Ohrid 84.04 360 *i* P **P** **21 52 25.8 +0.9**
MESJ Messejana 84.05 23 *e*P **P** **21 52 25.7 +0.8**
MESJ IAmb IAmb 21 52 27.7
comp=Z,108nm,1.4s
MESJ Messejana 84.05 23 *e*P **P** **21 52 25.8 +0.8**
MESJ *i* IAmb IAmb 21 52 27.4
comp=Z,89nm,1.3s
MESJ Messejana 84.05 23 *e*P **P** **21 52 25.7 +0.8**
COEN Coen 84.14 235 P **P** **21 52 24.6 -0.9**
COEN IAmb IAmb 21 52 38.4
comp=Z,63nm,1.9s
ALN Alexandroupoli 84.14 356 P **P** **21 52 26.0 +0.6**
GRG Griva 84.18 359 P **P** **21 52 26.8 +1.2**
PTEO Sao Teotonio 84.22 23 *e*P **P** **21 52 26.8 +1.1**
PTEO *i* IAmb IAmb 21 52 28.4
comp=Z,252nm,1.3s
PCVE Castro Verde 84.29 23 P **P** **21 52 27.2 +1.1**
SOH Sokhos 84.30 358 P **P** **21 52 26.9 +0.6**
CAVK Edirne/Enez-Ca 84.34 356 ⇑P **P** **21 52 26.9 +0.6**
ALBI Allahabad 84.39 307 *e*P **P** **21 52 25.9 -0.9**
ALBI IAmb IAmb 21 52 28.0
comp=Z,67nm,0.6s
MATE Matera 84.44 3 ⇑P **P** **21 52 27.9 +1.1**
MATE Matera 84.44 3 P **P** **21 52 27.7 +0.9**
MORF Marmelete 84.47 23 *e*P **P** **21 52 27.8 +0.7**
MORF IAmb IAmb 21 52 29.4
comp=Z,226nm,1.2s
MORF Marmelete 84.47 23 *e*P **P** **21 52 27.8 +0.7**
THE Thessaloniki 84.50 358 P **P** **21 52 27.3 +0.2**
APSI Ampana 84.51 260 P **P** **21 52 27.3 -0.2**
comp=Z,1µmcomp=Z,80nm,1.3s
KBN Korca 84.53 360 P **P** **21 52 28.1 +0.7**
OTAV Otavalo 84.56 97 P **P** **21 52 28.3 -0.1**
OTAV pmax pmax
comp=Z,10.0nm,1.0s
OTAV Otavalo 84.56 97 P **P** **21 52 28.3 -0.1**
OTAV Otavalo 84.56 97 *e*P **P** **21 52 28.6 +0.2**
OTAV Otavalo 84.56 97 P **P** **21 52 29.5 +1.1**
PVAQ Vaqueiros 84.58 22 *e*P **P** **21 52 28.7 +1.1**
PVAQ *i* IAmb IAmb 21 52 31.2
comp=Z,228nm,1.6s
PVAQ *e*LR LR 22 23 50.4
PVAQ *i* IAMs_20 IAMs_20 22 28 09.6
comp=Z,639nm,22.0s
PVAQ Vaqueiros 84.58 22 P **P** **21 52 28.2 +0.6**
PVAQ Vaqueiros 84.58 22 P **P** **21 52 29.2 +1.6**
BAND Balkesir-Ban 84.58 354 ⇑P **P** **21 52 28.4 +0.8**
PFVI Vila Bisbo 84.59 23 *e*P **P** **21 52 28.8 +1.1**
PFVI *i* IAmb IAmb 21 52 30.3
comp=Z,223nm,1.2s
PFVI Vila Bisbo 84.59 23 P **P** **21 52 27.8 +0.2**
PFVI Vila Bisbo 84.59 23 P **P** **21 52 29.1 +1.4**
VLO Vlora 84.67 1 P **P** **21 52 28.9 +0.9**
PBDV Barranco-do-Ve 84.69 23 *e*P **P** **21 52 29.6 +1.4**
PBDV *i* IAmb IAmb 21 52 32.1
comp=Z,220nm,1.6s
MARCO Tramutola 84.76 4 P **P** **21 52 29.4 +0.8**
BR131 Keskin Array S 84.78 350 *c i*P **P** **21 52 29.3 +0.5**
BR131 Keskin Array S 84.78 350 P **P** **21 52 30.0 +1.2**
SNR=32
BR131 Keskin Array S 84.78 350 P **P** **21 52 28.9 +0.2**
BRTR Keskin Array B 84.78 350 P **P** **21 52 29.1 +0.2**
comp=Z,63nm,1.1s,baz=29,slow=2.8,SNR=89
comp=Z,63nm,1.1s
BRTR Keskin Array B 84.78 350 P **P** **21 52 28.7 -0.1**
ARPR Arapgir-MALATY 84.85 346 P **P** **21 52 29.2 +0.1**
ARPR Arapgir-MALATY 84.85 346 P **P** **21 52 30.9 +1.8**
LIT Litokhoron 85.04 359 P **P** **21 52 30.3 +0.4**
VSL Villasalto 85.15 9 P **P** **21 52 31.4 +0.9**
PAIG Paliouri 85.19 358 P **P** **21 52 30.7 +0.1**
BALY Balya 85.22 355 P **P** **21 52 31.3 +0.5**
SRN Sarande 85.27 1 P **P** **21 52 31.8 +0.8**
SLOR San Lorenzo - 85.33 98 P **P** **21 52 32.5 +0.3**
KIRS Kirsehir-Merke 85.34 350 ⇑P **P** **21 52 32.7 +1.2**
KKUL Konya-Kulu 85.40 351 P **P** **21 52 33.0 +1.2**
KEK Kerkira 85.43 1 P **P** **21 52 31.8 -0.1**
HAKT HAKKARI 85.51 342 P **P** **21 52 33.5 +0.9**
PCI Palu 85.53 262 P **P** **21 52 32.1 -0.5**
comp=Z,2µmcomp=Z,113nm,1.3s
JHNI Jhansi 85.70 310 *e*P **P** **21 52 32.3 -1.1**
JHNI IAmb IAmb 21 52 36.6
comp=Z,27nm,0.5s
CART Cartagena 85.70 17 IAMs_20 IAMs_20 22 30 34.3
comp=Z,990nm,21.0s
XOR Xorichti 85.76 358 P **P** **21 52 33.7 +0.2**
EMAL Malaga-Limoner 85.88 20 P **P** **21 52 35.3 +1.3**
TIP Timpagrande 85.91 3 ⇑P **P** **21 52 35.1 +0.8**
TIP Timpagrande 85.91 3 IAMs_20 IAMs_20 22 38 04.5
comp=Z,670nm,22.0s
TIP Timpagrande 85.91 3 P **P** **21 52 35.1 +0.8**
AGG Agios Georgios 86.11 359 P **P** **21 52 35.2 -0.1**
LKD2 Lefkada island 86.36 0 P **P** **21 52 37.0 +0.5**
PMOZ Porto Moniz, M 86.47 31 *e*P **P** **21 52 38.2 +0.9**
PMOZ *e*LR LR 22 24 43.5
PMOZ *i* IAMs_20 IAMs_20 22 29 52.9
comp=Z,465nm,20.0s
PMPST Porto Santo, M 86.49 30 *e*P **P** **21 52 38.7 +1.5**
AJM Ajmer 86.56 313 *e*P **P** **21 52 36.8 -0.9**
AJM IAmb IAmb 21 52 40.2
comp=Z,17nm,0.9s
AJM *i* pP **sP** **21 52 53.7 +0.6**
ANDN Andirin 86.60 348 P **P** **21 52 39.1 +1.3**
CHOS Chios island 86.65 356 P **P** **21 52 38.2 +0.3**
PMAR Madeira 86.65 31 *e*P **P** **21 52 40.3 +2.1**
PMAR *i* IAmb IAmb 21 52 41.3
comp=Z,279nm,1.3s
CEL Celeste 86.80 4 P **P** **21 52 37.2 -1.5**
CEL Celeste 86.80 4 P **P** **21 52 37.5 -1.2**
BWNR Bhubaneshwar 86.82 301 *e*P **P** **21 52 39.2 +0.2**
BWNR IAmb IAmb 21 52 41.5
comp=Z,38nm,0.5s
GAZ Gaziantep 86.89 347 P **P** **21 52 39.4 +0.2**
GAZ IAmb IAmb 21 52 41.8
comp=Z,93nm,1.1s
GUNA GUNA 86.96 310 *e*P **P** **21 52 38.7 -1.0**
BLSP Bilaspur 86.98 305 *e*P **P** **21 52 37.5 -2.2**
BLSP IAmb IAmb 21 52 39.6
comp=Z,25nm,0.8s
KKSI Kolaka, Sulawe 87.18 259 P **P** **21 52 41.9 +1.2**
comp=Z,48nm,1.2s
MTSU Mount Surprise 87.25 232 P **P** **21 52 42.1 +1.2**
comp=Z,18nm,1.1s
MTSU Mount Surprise 87.25 232 P **P** **21 52 41.7 +0.8**
AYDN Tasoluk 87.28 354 P **P** **21 52 41.6 +0.6**
CLTB Caltabellotta 87.34 6 P **P** **21 52 41.5 +0.2**
ITM Ithomi 87.96 359 P **P** **21 52 44.6 +0.4**
SPSI Sidrap Palu 88.07 260 P P 21 52 49.8 +4.8
comp=Z,38nm,1.1s
CTAO Charters Tower 88.10 230 P **P** **21 52 46.1 +1.2**
CTAO Charters Tower 88.10 230 P **P** **21 52 44.6 -0.3**
CTAO pmax pmax
comp=Z,41nm,1.1s
CTAO Charters Tower 88.10 230 P **P** **21 52 44.6 -0.3**
CTAO IAmb IAmb 21 52 57.9
comp=Z,41nm,1.1s
CTAO Charters Tower 88.10 230 P **P** **21 52 46.1 +1.2**
BHPL Bhopal 88.15 310 ⇑*i*P **P** **21 52 44.5 -0.9**
BHPL IAmb IAmb 21 52 46.5
comp=Z,26nm,0.8s
AVE Averroes 88.59 23 P **P** **21 52 47.3 0.0**
AVE Averroes 88.59 23 P **P** **21 52 48.1 +0.9**

AKAS Kas 88.59 353 P **P** **21 52 46.8 -0.6**
AKAS Kas 88.59 353 P **P** **21 52 47.6 +0.2**
ARG Arkhangelos 88.70 354 P **P** **21 52 48.0 +0.2**
RAGD RAYAGADA 88.82 303 *e*P **P** **21 52 48.8 +0.2**
RAGD IAmb IAmb 21 52 51.2
comp=Z,45nm,0.9s
IFR Ifrane 88.88 21 P **P** **21 52 49.4 +0.5**
KEST Kesra 88.89 9 P **P** **21 52 48.8 +0.1**
comp=Z,29nm,0.9s,baz=327,slow=2.9,SNR=23
comp=Z,29nm,0.9s
KEST Kesra 88.89 9 P **P** **21 52 50.2 +1.5**
SNR=9.9
KEST Kesra 88.89 9 P **P** **21 52 48.4 -0.3**
KEST IAmb IAmb 21 53 10.9
comp=Z,46nm,1.1s
KAPI Kappang 88.94 260 P **P** **21 52 47.9 -1.2**
KAPI pmax pmax
comp=Z,97nm,1.4s
KAPI Kappang 88.94 260 P **P** **21 52 47.9 -1.2**
KAPI Kappang 88.94 260 P **P** **21 52 49.9 +0.8**
KAPI Kappang 88.94 260 P **P** **21 52 49.4 +0.4**
NGP Nagpur 89.23 307 *e*P **P** **21 52 49.8 -0.7**
KARP Karpathos 89.42 355 P **P** **21 52 50.0 -1.2**
KARP Karpathos 89.42 355 P **P** **21 52 51.6 +0.4**
CSS Mathiatis 89.53 350 P **P** **21 52 50.6 -1.0**
CSS Mathiatis 89.53 350 P **P** **21 52 52.1 +0.4**
MD01 Midelt array s 89.58 21 P **P** **21 52 51.9 -0.2**
MD31 MD31 89.58 21 P **P** **21 52 51.7 -0.3**
MD31 IAmb IAmb 21 52 54.0
comp=Z,42nm,1.0s
IMMV Iera Moni Meta 89.64 357 P **P** **21 52 53.1 +1.0**
MDT Midelt 89.66 21 P **P** **21 52 52.4 0.0**
comp=Z,37nm,1.0s,baz=1.7,slow=5.4,SNR=42
MDT LR LR 22 37 09.1
comp=Z,363nm,18.2s,baz=315,slow=38
comp=Z,37nm,1.0s
IDI Anoyia 89.78 357 P **P** **21 52 52.0 -0.9**
comp=Z,20nm,0.9s,baz=349,slow=10,SNR=6.6
comp=Z,20nm,0.9s
ZKR Zakros 89.90 355 P **P** **21 52 53.8 +0.4**
CY604 RAF Akrotiri, 90.02 349 P **P** **21 52 53.2 -0.4**
CY604 IAmb IAmb 21 52 58.3
comp=Z,48nm,1.0s
GVD Gavdhos 90.25 357 P **P** **21 52 55.2 +0.2**
PBA Port Blair 90.50 291 P **P** **21 52 56.1 -0.3**
EIDS Eidsvold 90.78 224 P **P** **21 52 57.4 +0.1**
EIDS IAmb IAmb 21 55 45.1
comp=Z,90nm,1.9s
TIO Tiouine 90.90 24 P **P** **21 52 59.3 +1.0**
MMAI Mount Meron Ar 91.22 348 P **P** **21 52 59.5 -0.2**
comp=Z,30nm,1.1s,baz=9.9,slow=3.4,SNR=13
comp=Z,30nm,1.1s
SGC2 Sao Gabriel da 91.44 88 *e*P **P** **21 53 00.3 -0.5**
QIS Mount Isa 91.53 235 P **P** **21 53 01.0 +0.1**
comp=Z,23nm,1.8s
QIS Mount Isa 91.53 235 P **P** **21 53 01.8 +0.8**
QIS Mount Isa 91.53 235 P **P** **21 53 00.8 -0.1**
MMLI Mount Malkishu 91.79 348 P **P** **21 53 02.8 +0.5**
ASF Jabal al Asfar 91.86 346 LR LR 22 37 43.5
comp=Z,481nm,21.9s,baz=26,slow=38
UJAP Al Uja 92.26 347 P **P** **21 53 05.1 +0.8**
RPN Rapa Nui 92.47 137 LR LR 22 24 33.5
comp=Z,651nm,21.0s,baz=348,slow=29
MYKOM Kota Tinggi 92.47 277 P **P** **21 53 04.6 -1.0**
MYKOM IAmb IAmb 21 53 07.4
comp=Z,38nm,1.3s
MYKOM Kota Tinggi 92.47 277 P **P** **21 53 06.8 +1.3**
comp=Z,25nm,1.4s
MYKOM Kota Tinggi 92.47 277 P **P** **21 53 06.2 +0.6**
HYB Hyderabad 92.72 306 *e*P **P** **21 53 06.4 -0.3**
HYB IAmb IAmb 21 53 08.0
comp=Z,24nm,1.0s
HYB Hyderabad 92.72 306 *e*P **P** **21 53 06.4 -0.3**
BTDF Bukit Timah Da 92.86 276 P **P** **21 53 09.0 +1.6**
comp=Z,13nm,1.1s
BOAV Boa Vista 93.05 81 P **P** **21 53 07.7 -0.5**
BOAV Boa Vista 93.05 81 *e*P **P** **21 53 07.4 -0.8**
WB0 Warramunga Arr 93.38 240 P **P** **21 53 08.6 -0.9**
WB0 IAmb IAmb 21 53 21.9
comp=Z,34nm,1.4s
KZIT Kziot 93.42 348 P **P** **21 53 09.8 0.0**
WR0 Warramunga Arr 93.47 240 P **P** **21 53 08.9 -1.0**
WR0 IAmb IAmb 21 53 10.6
comp=Z,36nm,1.4s
WRAB Tennant Creek 93.54 240 P **P** **21 53 11.1 +0.9**
WRAB Tennant Creek 93.54 240 P **P** **21 53 10.1 -0.2**
WRA Warramunga Arr 93.55 240 P **P** **21 53 09.6 -0.7**
comp=Z,9.6nm,1.0s,baz=39,slow=5.2,SNR=32
WRA PKIKP **PKiKP** **21 57 53.7 -2.3**
comp=Z,0.3nm,0.4s,baz=59,slow=1.2,SNR=6.3
comp=Z,9.6nm,1.0s
WRA Warramunga Arr 93.55 240 P **P** **21 53 08.9 -1.4**
SHME Shamm 93.56 329 P **P** **21 53 09.9 -0.6**
SHME Shamm 93.56 329 P **P** **21 53 09.6 -0.9**
HRFI Mount Harif 94.20 348 P **P** **21 53 13.7 +0.3**
CZSB Cruzeiro do Su 94.33 97 P **P** **21 53 13.1 -1.0**
CZSB IAmb IAmb 21 53 27.4
comp=Z,74nm,1.6s
PSI Prapat 94.43 281 P **P** **21 53 15.1 +0.4**
PSI Prapat 94.43 281 P **P** **21 53 13.8 -0.9**
PSI pmax pmax
comp=Z,54nm,1.1s
PSI Prapat 94.43 281 P **P** **21 53 14.4 -0.3**
comp=Z,50nm,1.2s
RPSI Rantau Prapat 94.52 281 P **P** **21 53 13.8 -1.2**
RPSI IAmb IAmb 21 53 31.9
comp=Z,54nm,1.1s
QLP Quilpie 94.67 229 P **P** **21 53 16.7 +1.4**
NAZ Nazwa, Dubai 94.70 329 P **P** **21 53 15.2 -0.5**
KAD Karad 94.79 310 *e*P **P** **21 53 15.4 -0.9**
ASHO Ashiyiah 94.87 328 P **P** **21 53 15.8 -0.8**
ASHO Ashiyiah 94.87 328 P **P** **21 53 13.8 -2.7**
ARMA Armidale 95.09 221 P **P** **21 53 19.0 +1.8**
comp=Z,18nm,1.6s
ARMA Armidale 95.09 221 P **P** **21 53 19.2 +1.9**
ASUD Al Ashush, Dub 95.14 329 P **P** **21 53 17.7 0.0**
WSAR Wadi Sarin 95.41 325 P **P** **21 53 18.3 -0.7**
NNA Nana 95.47 103 IAMs_20 IAMs_20 22 28 43.3
comp=Z,604nm,21.0s
HOQ Hoqain 95.51 327 P **P** **21 53 19.0 -0.4**
ALNE Al Ain 95.55 328 P **P** **21 53 19.0 -0.7**
SMDO Samad 95.77 326 P **P** **21 53 20.4 -0.3**
WBK Wadi Bani Khal 95.89 325 P **P** **21 53 21.6 +0.4**
ARQ Araqi 95.99 327 P **P** **21 53 22.0 +0.3**
SNR=5.7
SDSI Sungai Dareh 96.07 277 P **P** **21 53 24.7 +2.6**
comp=Z,23nm,1.2s
JLN Jalan Bani Buh 96.17 324 P **P** **21 53 22.5 0.0**
BSY Bisya 96.33 326 P **P** **21 53 22.8 -0.5**
JMDO Jabal Madar 96.39 326 P **P** **21 53 22.9 -0.6**
GSI Gunungsitoli 96.42 282 P **P** **21 53 25.1 +1.4**
GSI Gunungsitoli 96.42 282 P **P** **21 53 23.1 -0.5**
FITZ Fitzroy Crossi 96.47 248 P **P** **21 53 23.6 0.0**
comp=Z,4.5nm,1.7s
FITZ Fitzroy Crossi 96.47 248 P **P** **21 53 24.3 +0.6**
FITZ Fitzroy Crossi 96.47 248 P **P** **21 53 23.0 -0.7**
AS17 Alice Springs 96.86 238 P **P** **21 53 25.8 +0.4**
comp=Z,6.5nm,1.1s
AS15 Alice Springs 96.88 238 P **P** **21 53 25.8 +0.3**
comp=Z,6.2nm,1.2s
ASAR Alice Springs 96.91 238 P **P** **21 53 25.1 -0.5**
comp=Z,3.0nm,0.9s,baz=37,slow=4.0,SNR=15
ASAR PKKPbc **PKKPbc** **22 10 03.5 -1.5**
comp=Z,1.2nm,1.0s,baz=214,slow=8.2,SNR=5.4
ASAR LR LR 22 31 56.5
comp=Z,380nm,19.9s,baz=114,slow=32
comp=Z,3.0nm,0.9s
ASAR Alice Springs 96.91 238 P **P** **21 53 24.8 -0.9**
AS09 Alice Springs 96.92 238 P **P** **21 53 24.5 -1.2**
comp=Z,5.6nm,0.8s
UMZA Um Al Zommool 96.99 328 P **P** **21 53 25.6 -0.5**
MZR Muzera 97.21 330 P **P** **21 53 27.1 -0.1**
MZR Muzera 97.21 330 P Pdif 21 53 27.6 +0.3
MHTO MHTO 97.73 325 P **P** **21 53 29.1 -0.4**
RAYN Ar Rayn 98.76 337 P Pdif 21 53 34.3 +0.2
RAYN Ar Rayn 98.76 337 P **P** **21 53 33.5 -0.7**
RAYN pmax pmax
comp=Z,42nm,1.1s
RAYN MLR MLR
comp=Z,1µm,21.0s
RAYN Ar Rayn 98.76 337 P **P** **21 53 34.1 -0.1**
RAYN Ar Rayn 98.76 337 P **P** **21 53 33.5 -0.7**
RAYN IAmb IAmb 21 53 35.5
comp=Z,42nm,1.1s

RAYN Ar Rayn 98.76 337 P Pdif 21 53 34.5 +0.3
GO01 Chusmiza 105.96 101 IAMs_20 IAMs_20 22 33 39.3
comp=Z,448nm,18.0s
TORD Torodi Ar. Bea 110.03 20 PKiKP **PKiKP** **21 58 24.9 -1.1**
comp=Z,1.1nm,0.8s,baz=343,slow=2.5,SNR=7.3
TORD PKKPbc **PKKPbc** **22 09 25.5 -0.1**
comp=Z,0.5nm,0.4s,baz=136,slow=1.5,SNR=6.1
H03N2 Juan Fernandez 111.66 118 T T 23 59 33.9
baz=324,slow=78,SNR=45
AC02 Maricunga 111.67 106 IAMs_20 IAMs_20 22 33 06.7
comp=Z,430nm,22.0s
H03N1 Juan Fernandez 111.68 117 T T 23 59 23.5
baz=324,slow=78,SNR=44
H03N3 Juan Fernandez 111.68 118 T T 23 59 33.9
baz=324,slow=78,SNR=56
MT05 Renca 115.90 112 IAMs_20 IAMs_20 22 35 31.6
comp=Z,626nm,22.0s
CPUP Villa Florida 117.91 97 PKKPbc PKKPbc 22 09 01.5 +2.5
comp=Z,4.0nm,0.9s,baz=119,slow=6.3,SNR=6.7
SBA Scott Base 134.45 190 PKiKP **PKiKP** **21 59 11.9 -0.1**
SBA Scott Base 134.45 190 **PKiKP** **21 59 11.9 -0.1**
VNDA Vanda 134.66 191 PKP **PKPdf** **21 59 11.3 +0.3**
comp=Z,1.9nm,0.9s,baz=304,slow=5.6,SNR=5.3
VNDA SKPbc **SKPbc** **22 02 36.7 -1.2**
comp=Z,8.4nm,1.1s,baz=353,slow=4.7,SNR=10
VNDA Vanda 134.66 191 PKiKP **PKiKP** **21 59 12.2 -0.2**
VNDA Vanda 134.66 191 **PKiKP** **21 59 12.2 -0.2**
LSZ Lusaka 139.72 349 PKhKP **PKPpre** 21 59 13.8
comp=Z,7.2nm,0.7s,baz=42,slow=3.1,SNR=13
LSZ SKPbc **SKPbc** **22 02 55.4 +0.4**
comp=Z,5.6nm,0.9s,baz=27,slow=1.5,SNR=4.8
LSZ Lusaka 139.72 349 P PKPpre 21 59 14.6
VOI Vohitsoka 141.44 319 P PKPpre 21 59 20.2
KSANE Kasane 142.49 353 P PKPpre 21 59 22.9
TSUM Tsumeb 143.96 5 PKP PKPbc 21 59 27.5 -0.2
comp=Z,49nm,1.0s,baz=218,slow=1.1,SNR=41
TSUM Tsumeb 143.96 5 PKPbc 21 59 28.1 +0.3
TSUM Tsumeb 143.96 5 P PKPbc 21 59 28.2 +0.4
GMARE Gumare 144.21 358 PKPdf **PKPab** **21 59 28.0 -0.1**
MATP Matopo 144.77 347 PKP **PKPab** **21 59 29.4 -0.7**
comp=Z,191nm,1.1s,baz=354,slow=3.1,SNR=150
QSPA South Pole Qui 145.00 180 PKPbc **PKPbc** **21 59 29.4 -0.2**
comp=Z,25nm,0.7s,baz=46,slow=0.6,SNR=102
QSPA SKPbc **SKPbc** **22 03 05.2 -1.1**
comp=Z,16nm,1.2s,baz=331,slow=3.9,SNR=3.8
SOOWA Sowa 145.15 351 P **PKPdf** **21 59 32.6 +0.7**
CKGRV CKGRV 146.16 355 P **PKPab** **21 59 35.0 -0.2**
GRTLG Ghanzi 146.19 359 **PKPdf** **21 59 34.0 +0.3**
GRTLG Ghanzi 146.19 359 P **PKPab** **21 59 35.3 -0.1**
KHWEE KHWEE 146.58 352 **PKPdf** **21 59 34.9 +0.6**
KHWEE KHWEE 146.58 352 P **PKPab** **21 59 36.5 -0.4**
WIN Windhoek 147.28 6 PKP2 **PKPbc** **21 59 37.2 -0.7**
WIN Windhoek 147.28 6 **PKPbc** **21 59 37.2 -0.7**
WIN Windhoek 147.28 6 P **PKPab** **21 59 38.8 -0.9**
KOOLE Kule 147.81 1 P **PKPbc** **21 59 40.2 +1.0**
LEPH Lephalale, Lim 148.24 348 *e*P **PKPbc** **21 59 40.7 +0.4**
PILG Pilgrimsrest, 148.86 342 *e*P **PKPab** **21 59 47.4 +1.4**
SKOMA Sekoma 149.24 354 P **PKiKP** **21 59 43.6 -0.5**
LBTB Lobatse 149.61 351 PKP **PKPdf** **21 59 39.6 +0.5**
comp=Z,66nm,1.3s,baz=238,slow=1.3,SNR=11
LBTB PKPbc **PKiKP** **21 59 44.7 -0.2**
comp=Z,281nm,1.1s,baz=2.0,slow=2.1,SNR=95
LBTB Lobatse 149.61 351 PKPdf **PKPdf** **21 59 39.1 -0.1**
LBTB PKPbc **PKPbc** **21 59 43.9 +0.1**
LBTB Lobatse 149.61 351 *e*P **PKPbc** **21 59 44.1 +0.3**
LBTB Lobatse 149.61 351 P **PKPdf** **21 59 40.0 +0.8**
LBTB x x 21 59 44.9
HRAO HartRAO 150.26 347 *e*P **PKPbc** **21 59 45.4 0.0**
BELA Belgrano 2 150.45 159 **PKPbc** **21 59 43.4 -0.7**
MAKGR Makgori 150.47 353 **PKPdf** **21 59 40.2 -0.3**
MAKGR PKPbc **PKPbc** **21 59 45.8 -0.1**
MAKGR Makgori 150.47 353 P **PKPdf** **21 59 41.4 +0.9**
MAKGR x x 21 59 46.8
WDLM Western Deep L 150.81 348 *e*P **PKiKP** **21 59 47.5 +0.1**
POGA Pongola 151.02 340 PKPbc **PKPbc** **21 59 46.6 -0.4**
POGA Pongola 151.02 340 P **PKiKP** **21 59 47.8 +0.3**
SNKL Senekal, Frees 152.59 346 *e*P **PKiKP** **21 59 51.1 +0.1**
BOSA Boshof 153.21 351 PKP **PKPdf** **21 59 45.2 +0.7**
comp=Z,11nm,1.1s,baz=7.5,slow=2.8,SNR=8.7
BOSA PKPbc **PKiKP** **21 59 52.2 0.0**
comp=Z,17nm,0.6s,baz=16,slow=1.7,SNR=37
BOSA Boshof 153.21 351 **PKPdf** **21 59 43.9 -0.7**
BOSA **PKPbc** **21 59 51.2 -0.9**
BOSA Boshof 153.21 351 *e*P **PKPbc** **21 59 50.7 -1.3**
MAW Mawson 156.90 221 P **PKPdf** **21 59 48.6 +0.4**
MAW Mawson 156.90 221 PKP **PKPdf** **21 59 48.0 -0.1**
comp=Z,4.3nm,1.0s,baz=63,slow=2.3,SNR=6.8
MAW PKPbc **pPKPdf** **21 59 57.2 -2.7**
comp=Z,15nm,1.2s,baz=40,slow=3.7,SNR=4.9
MAW PKPab **PKPab** **22 00 18.5 +0.1**
comp=Z,14nm,0.8s,baz=102,slow=4.5,SNR=22
SUR Sutherland 157.17 360 PKPab **PKPab** **22 00 22.0 +1.3**
comp=Z,20nm,0.9s,baz=345,slow=2.6,SNR=6.0
SNAA Sanae 160.67 158 PKP **PKPdf** **21 59 51.9 -0.8**
comp=Z,5.5nm,1.1s,baz=180,slow=2.8,SNR=5.5
SNAA PKPab **PKPab** **22 00 36.1 +1.3**
comp=Z,3.8nm,0.9s,baz=212,slow=5.2,SNR=4.0

*IDC **22**21:43:03.6±0.9,25°.36N×127°.80E,h0km,mb3.9/9,*
mbtmp3.8/11,ML2.8/2,Error ellipse: s-maj=29.0km
s-min=19.9km az=80.0
*JMA **22**21:43:09.4±0.3,25°.N±2°×12°.8E±°,h63km±4km,MV3.5/23,*
NEAR OKINAWAJIMA ISLAND

ISC 22 21:43:07.7±0.7,25°.26N±0°.05×127°.68E±0°.04,h27km,n31,
σ1s15/37,mb3.7/9,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.89**	**6**	P	**Pb**	**21 43 25.0**	**+0.5**
JJT3				S	**Sn**	**21 43 37.0**	**+0.6**
JNTH	**Nagotoyohara**	**1.29**	**14**	P	**Pn**	**21 43 30.2**	**+0.2**
JKE	**Kume jima 2**	**1.33**	**323**	*i* P	**Pn**	**21 43 30.3**	**-0.3**
JKE				*e*S	**Sn**	**21 43 45.4**	**-2.0**
JAGN	**Aguni-jima**	**1.38**	**344**	*i* P	**Pn**	**21 43 31.3**	**+0.1**
JOW	**Kunigami**	**1.66**	**19**	P	**Pn**	**21 43 35.6**	**+0.6**
JIH	**Iheya**	**1.79**	**8**	P	**Pn**	**21 43 37.6**	**+0.8**
JIH				*e*S	**Sn**	**21 43 58.4**	**-0.2**
JYRO	**Yoronjima**	**1.89**	**21**	P	**Pn**	**21 43 38.6**	**+0.4**
JOGS	**Gusukube**	**2.12**	**257**	P	**Pn**	**21 43 42.6**	**+1.2**
JOKE	**Okinoerabujima**	**2.24**	**21**	*e*P	**Pn**	**21 43 43.8**	**+0.7**
JTK	**Tokunoshima**	**2.76**	**24**	P	**Pn**	**21 43 51.1**	**+0.9**
JTJ	**Tarama**	**2.77**	**258**	*e*P	**Pn**	**21 43 50.3**	**0.0**
JISG	**Ishigakijimahi**	**3.13**	**258**	P	**Pn**	**21 43 55.3**	**0.0**
JMZ	**Minamidaito 2**	**3.25**	**79**	*i* P	**Pn**	**21 43 57.4**	**+0.5**
JMZ				S	**Sn**	**21 44 31.8**	**-3.0**
JAMN	**Amaminishikomi**	**3.26**	**24**	P	**Pn**	**21 43 58.4**	**+1.4**
JKDJ	**Kitadaitoujima**	**3.34**	**77**	*i* P	**Pn**	**21 43 58.8**	**+0.7**
JKDJ				S	**Sn**	**21 44 35.5**	**-1.3**
JAM	**Amami Oshima**	**3.58**	**28**	P	**Pn**	**21 44 02.9**	**+1.5**
JZK	**Kikaishima**	**3.67**	**33**	P	**Pn**	**21 44 04.7**	**+2.0**
JTAJ	**Takarajima**	**4.11**	**19**	*e*P	**Pn**	**21 44 09.7**	**+0.9**
JMTN	**Minamitane**	**5.86**	**28**	*e*P	**Pn**	**21 44 33.3**	**+0.5**
JMTN				*e*S	**Sn**	**21 45 37.6**	**-1.5**
KSRS	**Korea Array**	**12.16**	**1**	Pn	**Pn**	**21 45 57.5**	**-1.6**
	0.1nm,0.3s,baz=170,slow=14,SNR=4.1						
	0.7nm,0.7s						
MJAR	**Matsushiro Arr**	**14.42**	**36**	Pn	**Pn**	**21 46 29.0**	**-1.0**
	baz=184,slow=9.3,SNR=1.3						
	0.2nm,0.4s						
LZDM	**Lanzhou Array**	**23.18**	**303**	P	**P**	**21 48 12.1**	**-0.5**
	5.3nm,0.5s,baz=130,slow=7.8,SNR=8.8						
	5.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.48**	**261**	P	**P**	**21 48 53.4**	**+1.5**
	0.2nm,0.3s,baz=67,slow=8.9,SNR=4.8						
	0.2nm,0.3s						
SONM	**Songino Array**	**28.11**	**329**	P	**P**	**21 48 57.7**	**+0.3**
	0.6nm,0.4s,baz=144,slow=11,SNR=4.4						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**45.39**	**171**	P	**P**	**21 51 24.2**	**+0.1**
	0.4nm,0.8s,baz=350,slow=8.0,SNR=2.4						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**49.01**	**172**	P	**P**	**21 51 53.1**	**+0.9**
	0.3nm,0.6s,baz=350,slow=9.8,SNR=8.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**65.53**	**28**	P	**P**	**21 53 47.3**	**-1.1**
	0.5nm,0.8s,baz=307,slow=5.6,SNR=6.7						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**73.46**	**331**	P	**P**	**21 54 36.3**	**-1.2**
	4.3nm,1.0s,baz=67,slow=7.1,SNR=1.7						
	4.3nm,1.0s						
AKASG	**Malin Array Be**	**75.95**	**320**	P	**P**	**21 54 52.8**	**+0.8**
	1.2nm,0.5s,baz=65,slow=5.4,SNR=3.1						
	1.2nm,0.5s						

NB2	**NORSAR Subarra**	**79.96**	**334**	P		**P**	**21 55 15.9**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=54,slow=5.3								
NOA	**NORSAR Array B**	**79.96**	**334**	P		**P**	**21 55 14.0**	**-0.2**
	comp=Z,2.6nm,1.0s,baz=55,slow=5.2,SNR=5.9								
	comp=Z,2.6nm,1.0s								

JMA 22 21:47:06.0±0.1,35°9N±0.2×137°7E±0.2,h10km,MV0.3/11, WESTERN NAGANO PREF,Eastern Honshu

NEIC 22 21:51:11.2±0.8,55°09N±0.07×158°38W±0.09,h35km±2km, ML3.5/34,Error ellipse: s-maj=12.3km s-min=8.0km az=164.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.74**	**249**		Pn	21 51 24.0	-1.2
CNBA					Sn	21 51 35.2	0.0
CHGN	**Chignik**	**1.22**	**359**	Pn	Pn	21 51 30.9	-0.8
CHGN				IAML		21 51 50.3	
	comp=N,2μm,0.4s						
SDPT	**Sand Point**	**1.23**	**283**		Pn	21 51 31.6	-0.3
SDPT				Sn	Sn	21 51 47.1	-0.1
SDPT				IAML		21 51 54.5	
	comp=N,608nm,1.0s						
SDPT				IAML		21 51 55.8	
	comp=E,504nm,0.6s						
VNFG	**Fog Glacier, M**	**1.37**	**332**	Pn	Pn	21 51 34.2	+0.3
CHIR	**Chirikof Islan**	**1.74**	**64**	Pn	Pn	21 51 38.3	-0.6
CHIR				IAML		21 52 10.4	
	comp=E,326nm,0.7s						
CHIR				IAML		21 52 14.8	
	comp=N,315nm,0.8s						
SII	**Sitkinak Islan**	**2.79**	**56**	Pn	Pn	21 51 52.4	-1.0
SII				IAML		21 52 45.9	
	comp=E,176nm,2.1s						
SII				IAML		21 53 00.6	
	comp=N,175nm,0.8s						
OHAK	**Old Harbor**	**3.56**	**51**	Pn	Pn	21 52 02.9	-1.0
P16K	**Nushagak River**	**3.96**	**3**	Pn	Pn	21 52 09.2	-0.2
O15K	**Ungalikthiuk R**	**4.17**	**350**	Pn	Pn	21 52 12.1	-0.2
KDAK	**Kodiak Island**	**4.20**	**48**	Pn	Pn	21 52 12.7	0.0
KDAK				IAML		21 52 46.5	
	comp=N,34nm,2.8s						
KDAK				IAML		21 53 04.9	
	comp=N,37nm,4.3s						
P17K	**Kvichak River**	**4.25**	**14**	Pn	Pn	21 52 13.3	0.0
P17K				IAML		21 53 12.8	
	comp=N,81nm,2.3s						
P17K				IAML		21 53 13.2	
	comp=E,75nm,3.5s						
AKUT	**Akutan**	**4.40**	**260**	Pn	Pn	21 52 15.2	-0.2
AKUT				IAML		21 52 51.5	
	comp=E,46nm,4.3s						
AKUT				IAML		21 54 58.3	
	comp=N,50nm,4.1s						
O14K	**Tigyukauivet M**	**4.46**	**341**		Pn	21 52 16.2	-0.1
O14K				IAML		21 52 58.6	
	comp=N,49nm,3.8s						
O16K	**Kokwok River B**	**4.52**	**2**	Pn	Pn	21 52 17.0	-0.1
O16K				IAML		21 53 38.1	
	comp=E,28nm,3.6s						
LVA	**Lava Point**	**4.54**	**261**	Pn	Pn	21 52 18.4	+1.0
LVA				IAML		21 52 54.8	
	comp=E,49nm,2.3s						
N14K	**Kuskokwak Cree**	**5.16**	**341**		Pn	21 52 26.1	+0.2
N15K	**Kwethluk River**	**5.18**	**350**	Pn	Pn	21 52 26.6	+0.4
N15K				IAML		21 53 44.5	
	comp=E,35nm,4.7s						
N15K				IAML		21 54 07.5	
	comp=N,30nm,2.5s						
ILSW	**Iliamna Southw**	**5.66**	**28**	Pn	Pn	21 52 34.0	+1.1
M16K	**Timber Creek**	**5.96**	**357**	Pn	Pn	21 52 37.3	+0.5
M13K	**Dall Lake**	**5.96**	**336**	Pn	Pn	21 52 36.9	+0.1
M14K	**Bethel**	**5.99**	**343**		Pn	21 52 36.8	-0.4
N19K	**Bonanza Creek**	**6.10**	**18**	Pn	Pn	21 52 38.6	-0.3
M17K	**Holitna River**	**6.35**	**4**	Pn	Pn	21 52 41.9	-0.3
L16K	**Owhat River**	**6.67**	**356**	Pn	Pn	21 52 46.4	-0.1
L14K	**Kuka Creek**	**6.67**	**342**		Pn	21 52 45.9	-0.6
J14K	**Nanvaranak Lak**	**8.13**	**343**	Pn	Pn	21 53 06.4	-0.2
J16K	**Anvik River**	**8.30**	**353**		Pn	21 53 08.6	-0.3
J17K	**VABM Dome**	**8.34**	**358**	Pn	Pn	21 53 09.8	+0.3
J18K	**Innoko River**	**8.45**	**5**	Pn	Pn	21 53 11.5	+0.6
I17K	**Unalakleet**	**8.90**	**353**	Pn	Pn	21 53 16.6	-0.6
CAST	**Castle Rocks**	**8.95**	**18**	Pn	Pn	21 53 18.3	+0.4
J19K	**Poorman**	**9.04**	**8**	Pn	Pn	21 53 19.6	+0.5
H17K	**Granite Mounta**	**9.91**	**356**	Pn	Pn	21 53 31.0	0.0
H18K	**Honhosa River**	**10.10**	**0**	Pn	Pn	21 53 33.9	+0.4
G16K	**Koyuk River**	**10.52**	**351**	Pn	Pn	21 53 39.0	-0.3
I23K	**Minto, Yukon-K**	**11.03**	**20**	Pn	Pn	21 53 46.4	+0.1
F15K	**North Star Dit**	**11.09**	**346**	Pn	Pn	21 53 46.8	-0.3
F19K	**Shaleruckik Mo**	**11.79**	**1**	Pn	Pn	21 53 57.3	+0.7

*VAO **22** 22:25:00.2±0.7,27°.42S×70°.22W,h10km,mb4.6, Presumed earthquake*
*GFZ **22** 22:25:08.8±0.2,27°S±2°×7°0W±°,h126km±4km,M4.8/18, mb5.0/18*
*SJA **22** 22:25:10.0±2.3,27°.27S×70°.15W,h96km±14km,ML4.5, MW4.3*
*NEIC **22** 22:25:11.4±1.4,27°.29S±0°.04×70°.06W±0°.04,h95km±4km, mb4.6/56,Mww5.0(GUC),Error ellipse: s-maj=6.2km s-min=5.3km az=135.0*
*GUC **22** 22:25:11.3±0.8,27°.30S×70°.08W,h99km±5km,ML4.9*
*IDC **22** 22:25:11.4±0.4,27°.26S×69°.85W,h96km±3km,mb4.0/12, mbtmp4.3/16,Error ellipse: s-maj=16.0km s-min=9.1km az=77.0*

ISC 22 22:25:10.7±0.3,27°30S±0°.03×70°.09W±0°.04,h96km±2km, h96km:pP-P,n282,σ1§57/308,mb4.5/33,14C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiapo**	**0.33**	**204**	*i* P	**Pn**	**22 25 25.7**	**+0.6**
GO03				IAML		22 25 38.2	
	comp=Z,16μm,0.1s						
GO03	**Copiapo**	**0.33**	**204**	*i* P	**Pn**	**22 25 25.2**	**+0.1**
GO03				*e*S	**Sn**	**22 25 36.3**	**+0.5**
GO03				IAML		22 25 37.6	
	comp=E,64μm,0.2s						
GO03	**Copiapo**	**0.33**	**204**		**Pn**	**22 25 25.6**	**+0.6**
GO03				Sn	**Sn**	**22 25 36.4**	**+0.6**
GO03	**Copiapo**	**0.33**	**204**	P	**Pn**	**22 25 25.7**	**+0.6**
AC02	**Maricunga**	**0.97**	**62**	*i* P	**Pn**	**22 25 31.9**	**+0.8**
AC02				*e*S	**Sn**	**22 25 46.7**	**+0.4**
AC02				*e*S	**Sn**	**22 25 46.7**	**+0.4**
AC02				IAML		22 25 47.8	
	comp=Z,11μm,0.1s						
AC02	**Maricunga**	**0.97**	**62**	*e*P	**Pn**	**22 25 31.7**	**+0.7**
AC02				*e*S	**Sn**	**22 25 46.5**	**+0.2**
AC02				IAML		22 25 47.9	
	comp=N,53μm,0.3s						
AC02	**Maricunga**	**0.97**	**62**		**Pn**	**22 25 31.8**	**+0.8**
AC02				Sn	**Sn**	**22 25 46.4**	**+0.2**
AC02	**Maricunga**	**0.97**	**62**	P	**Pn**	**22 25 31.9**	**+0.8**
AC01	**Pan de Azucar**	**1.23**	**338**	*i* P	**Pn**	**22 25 34.5**	**+1.0**
AC01				IAML		22 25 56.4	
	comp=Z,8μm,0.5s						
AC01	**Pan de Azucar**	**1.23**	**338**	⇑*i*P	**Pn**	**22 25 34.4**	**+0.8**
AC01				*e*S	**Sn**	**22 25 51.2**	**+0.5**
AC01				IAML		22 25 52.9	
	comp=E,21μm,0.4s						
AC01	**Pan de Azucar**	**1.23**	**338**		**Pn**	**22 25 34.4**	**+0.8**
AC01	**Pan de Azucar**	**1.23**	**338**	P	**Pn**	**22 25 34.7**	**+1.1**
AC04	**Llanos de Chal**	**1.26**	**224**	*i* P	**Pn**	**22 25 34.7**	**+0.8**
AC04				IAML		22 25 55.2	
	comp=Z,10μm,0.5s						
AC04	**Llanos de Chal**	**1.26**	**224**	⇑*i*P	**Pn**	**22 25 34.6**	**+0.8**
AC04				*e*S	**Sn**	**22 25 51.7**	**+0.4**
AC04				IAML		22 25 54.1	
	comp=E,18μm,0.2s						
AC04	**Llanos de Chal**	**1.26**	**224**		**Pn**	**22 25 34.4**	**+0.6**
AC04	**Llanos de Chal**	**1.26**	**224**	P	**Pn**	**22 25 34.7**	**+0.8**
AC05	**El Transito**	**1.54**	**186**	*i* P	**Pn**	**22 25 38.3**	**+0.8**
AC05				IAML		22 26 02.9	
	comp=Z,6μm,0.5s						
AC05	**El Transito**	**1.54**	**186**	⇑*i*P	**Pn**	**22 25 38.2**	**+0.7**
AC05				*e*S	**Sn**	**22 25 58.5**	**+0.8**
AC05				IAML		22 26 00.1	
	comp=E,12μm,0.5s						
AC05	**El Transito**	**1.54**	**186**		**Pn**	**22 25 38.0**	**+0.5**
AC05	**El Transito**	**1.54**	**186**	P	**Pn**	**22 25 38.3**	**+0.8**
LCO	**Las Campanas**	**1.79**	**197**	*i* P	**Pn**	**22 25 41.2**	**+0.4**
LCO				IAML		22 26 07.4	
	comp=Z,9μm,0.6s						
LCO	**Las Campanas**	**1.79**	**197**	*e*P	**Pn**	**22 25 40.4**	**-0.4**
LCO				IAML		22 26 05.7	
	comp=Z,41μm,0.4s						
LCO	**Las Campanas**	**1.79**	**197**		**Pn**	**22 25 41.1**	**+0.3**
VCA	**Vinchina**	**2.20**	**131**	*i* P	**Pn**	**22 25 48.5**	**+2.6**
VCA				⇓*e*S	**Sn**	**22 26 15.8**	**+3.0**
VCA				IAML		22 26 22.2	
	comp=Z,2μm,0.6s						
VCA	**Vinchina**	**2.20**	**131**	⇑*e*P	**Pn**	**22 25 48.2**	**+2.3**
TINO	**Tinogasta**	**2.36**	**109**	*i* P	**Pn**	**22 25 48.4**	**+0.4**
TINO				IAML		22 26 19.1	
	comp=Z,1μm,0.9s						
CO01	**Juntas del Tor**	**2.67**	**180**	*i* P	**Pn**	**22 25 53.4**	**+1.2**
CO01				IAML		22 26 51.7	
	comp=Z,984nm,0.7s						
CO01	**Juntas del Tor**	**2.67**	**180**	⇑*i*P	**Pn**	**22 25 53.0**	**+0.8**
CO01	**Juntas del Tor**	**2.67**	**180**		**Pn**	**22 25 52.6**	**+0.3**
CO01	**Juntas del Tor**	**2.67**	**180**	P	**Pn**	**22 25 53.2**	**+1.0**
PB14	**IPOC Station P**	**2.67**	**354**	*i* P	**Pn**	**22 25 52.3**	**-0.1**
PB14				IAML		22 26 26.7	
	comp=Z,2μm,0.3s						
PB14	**IPOC Station P**	**2.67**	**354**	⇑*i*P	**Pn**	**22 25 52.0**	**-0.4**
PB14				IAML		22 26 46.2	
	comp=E,2μm,0.3s						
PB14	**IPOC Station P**	**2.67**	**354**		**Pn**	**22 25 52.2**	**-0.1**
PB14	**IPOC Station P**	**2.67**	**354**	P	**Pn**	**22 25 52.2**	**-0.1**
AROD	**Rodeo**	**2.91**	**169**	*i* P	**Pn**	**22 25 57.7**	**+2.2**
GO04	**Tololo Observa**	**2.94**	**192**	*e*P	**Pn**	**22 25 55.1**	**-0.6**
GO04				*e*S	Sn	22 26 20.4	-10
GO04				IAML		22 26 22.1	
	comp=Z,5μm,0.8s						
GO04	**Tololo Observa**	**2.94**	**192**	⇑*i*P	**Pn**	**22 25 55.3**	**-0.5**
GO04	**Tololo Observa**	**2.94**	**192**		**Pn**	**22 25 55.2**	**-0.5**
GO04	**Tololo Observa**	**2.94**	**192**	P	**Pn**	**22 25 55.5**	**-0.3**
ACDV	**Cuesta del Vie**	**2.99**	**164**	*i* P	**Pn**	**22 25 59.4**	**+3.0**
ACDV				*e*S	**Sn**	**22 26 25.7**	**-5.8**
ACDV				IAML		22 26 26.6	
	comp=Z,2μm,1.5s						
ACCO	**Cerro Coronel**	**3.40**	**165**	*i* P	**Pn**	**22 26 04.2**	**+2.1**
ACCO				IAML		22 26 49.8	
	comp=Z,382nm,0.4s						
ACLC	**CERRO LA CRUZ**	**3.48**	**128**	*i* P	**Pn**	**22 26 04.2**	**+1.2**
ACLC				IAML		22 26 49.6	
	comp=Z,251nm,0.4s						
CO03	**El Pedregal**	**3.57**	**188**	*i* P	**Pn**	**22 26 03.9**	**-0.3**
CO03				IAML		22 27 09.3	
	comp=Z,2μm,0.5s						
CO03	**El Pedregal**	**3.57**	**188**	⇑*i*P	**Pn**	**22 26 03.8**	**-0.3**
CO03				IAML		22 27 10.4	
	comp=E,3μm,0.5s						
CO03	**El Pedregal**	**3.57**	**188**		**Pn**	**22 26 03.6**	**-0.5**
CO03	**El Pedregal**	**3.57**	**188**	P	**Pn**	**22 26 03.9**	**-0.3**
FSA	**Cafayete**	**3.86**	**73**	*i* P	**Pn**	**22 26 10.3**	**+2.2**
CO02	**Combarbal**	**3.98**	**191**	*i* P	**Pn**	**22 26 08.6**	**-1.0**
CO02				IAML		22 27 25.0	
	comp=Z,2μm,0.6s						
CO02	**Combarbal**	**3.98**	**191**	⇑*e*P	**Pn**	**22 26 08.4**	**-1.2**
CO02	**Combarbal**	**3.98**	**191**		**Pn**	**22 26 08.4**	**-1.2**
CO02	**Combarbal**	**3.98**	**191**	P	**Pn**	**22 26 08.6**	**-1.0**
RTLL	**Cerro Villicun**	**4.26**	**161**	*i* P	**Pn**	**22 26 14.6**	**+1.2**
RTLL				IAML		22 27 34.1	
	comp=Z,364nm,0.5s						
ZON	**Zonda**	**4.41**	**164**	*i* P	**Pn**	**22 26 16.3**	**+0.8**
ZON				IAML		22 27 47.5	
	comp=Z,270nm,0.8s						
ZON	**Zonda**	**4.41**	**164**		**Pn**	**22 26 15.8**	**+0.3**
ZON	**Zonda**	**4.41**	**164**	P	**Pn**	**22 26 16.3**	**+0.8**
SJA	**San Juan**	**4.42**	**163**	*i* P	**Pn**	**22 26 18.1**	**+2.5**
SJA				IAML		22 27 42.8	
	comp=Z,193nm,0.8s						
PB05	**IPOC Station P**	**4.42**	**359**	*i* P	**Pn**	**22 26 13.8**	**-2.0**
PB05				IAML		22 27 29.4	
	comp=Z,525nm,0.5s						
PB05	**IPOC Station P**	**4.42**	**359**	⇑*i*P	**Pn**	**22 26 13.6**	**-2.2**
PB05	**IPOC Station P**	**4.42**	**359**	P	**Pn**	**22 26 13.9**	**-1.9**
RTLS	**Leoncito**	**4.54**	**171**	*i* P	**Pn**	**22 26 18.6**	**+1.1**
RTLS				IAML		22 27 40.5	
	comp=Z,1μm,0.7s						
SALTA		**4.56**	**49**	*i* P	**Pn**	**22 26 19.7**	**+1.8**
SALTA				IAML		22 27 43.5	
	comp=Z,160nm,1.2s						
SALTA		**4.56**	**49**	P	**Pn**	**22 26 19.6**	**+1.7**
CFA	**Coronel Fontan**	**4.59**	**160**	P	**Pn**	**22 26 18.3**	**+0.5**
	comp=Z,84nm,0.3s,baz=344,slow=15,SNR=649						
CFA				S	**Sn**	**22 27 08.5**	**-1.5**
	comp=Z,67nm,0.3s,baz=113,slow=19,SNR=6.8						
CFA	**Coronel Fontan**	**4.59**	**160**	*i* P	**Pn**	**22 26 18.4**	**+0.5**
CFA				IAML		22 27 43.4	
	comp=Z,145nm,1.2s						
PB06	**IPOC Station P**	**4.59**	**6**	*i* P	**Pn**	**22 26 16.8**	**-1.3**
PB06				IAML		22 27 52.9	
	comp=Z,638nm,0.5s						
PB06	**IPOC Station P**	**4.59**	**6**	⇑*e*P	**Pn**	**22 26 16.6**	**-1.5**
PB06	**IPOC Station P**	**4.59**	**6**		**Pn**	**22 26 16.6**	**-1.5**
PB06	**IPOC Station P**	**4.59**	**6**	P	**Pn**	**22 26 16.8**	**-1.3**
AF01	**San Pedro de A**	**4.66**	**22**	*i* P	**Pn**	**22 26 20.3**	**+1.2**
AF01				IAML		22 27 59.6	
	comp=Z,2μm,0.7s						
AF01	**San Pedro de A**	**4.66**	**22**	⇑*e*P	**Pn**	**22 26 19.1**	**0.0**
AF01	**San Pedro de A**	**4.66**	**22**		**Pn**	**22 26 19.2**	**+0.1**
CO04	**Los Peladeros**	**4.79**	**189**	⇑*e*P	**Pn**	**22 26 19.3**	**-1.6**
CO04	**Los Peladeros**	**4.79**	**189**		**Pn**	**22 26 19.2**	**-1.6**
CO04	**Los Peladeros**	**4.79**	**189**	P	**Pn**	**22 26 19.5**	**-1.4**
SLA	**San Lorenzo**	**4.86**	**59**	*e*P	**Pn**	**22 26 23.7**	**+2.1**
SLA				IAML		22 27 22.7	
	comp=Z,22nm,0.8s						
SLA	**San Lorenzo**	**4.86**	**59**	*e*P	**Pn**	**22 26 23.5**	**+1.9**
PB03	**IPOC Station P**	**5.23**	**3**	*i* P	**Pn**	**22 26 24.5**	**-2.3**
PB03				IAML		22 27 52.1	
	comp=Z,517nm,0.8s						
PB03	**IPOC Station P**	**5.23**	**3**		**Pn**	**22 26 24.4**	**-2.3**
PB03	**IPOC Station P**	**5.23**	**3**	P	**Pn**	**22 26 24.6**	**-2.3**
VA03	**San Esteban**	**5.46**	**184**	*e*P	**Pn**	**22 26 29.1**	**-0.8**
VA03	**San Esteban**	**5.46**	**184**		**Pn**	**22 26 29.0**	**-0.8**
VA03	**San Esteban**	**5.46**	**184**	P	**Pn**	**22 26 29.1**	**-0.8**
PB09	**IPOC Station P**	**5.53**	**8**		**Pn**	**22 26 29.7**	**-1.0**
PB09	**IPOC Station P**	**5.53**	**8**	P	**Pn**	**22 26 29.8**	**-1.0**
PB07	**IPOC Station P**	**5.55**	**2**		**Pn**	**22 26 28.6**	**-2.5**
PB07	**IPOC Station P**	**5.55**	**2**	P	**Pn**	**22 26 28.6**	**-2.5**
PEL	**Peldehue**	**5.85**	**185**		**Pn**	**22 26 32.9**	**-2.1**
PEL	**Peldehue**	**5.85**	**185**	P	**Pn**	**22 26 33.7**	**-1.3**
VA01	**Torpederas**	**5.87**	**193**	P	**Pn**	**22 26 31.9**	**-3.3**
PB02	**IPOC Station P**	**5.95**	**2**		**Pn**	**22 26 33.6**	**-2.8**
PB02	**IPOC Station P**	**5.95**	**2**	P	**Pn**	**22 26 33.8**	**-2.7**
MT02	**Curacav**	**6.01**	**188**		**Pn**	**22 26 34.6**	**-2.5**
MT05	**Renca**	**6.10**	**185**		**Pn**	**22 26 36.6**	**-1.9**
MT16	**CCHEN**	**6.12**	**183**		**Pn**	**22 26 37.7**	**-1.1**
MT08	**Bocatoma Ro**	**6.13**	**179**		**Pn**	**22 26 39.5**	**+0.5**
TCA	**Tanti**	**6.26**	**131**	⇑*e*P	**Pn**	**22 26 39.6**	**-1.1**
VA05	**Santo Domingo**	**6.48**	**191**	P	**Pn**	**22 26 40.1**	**-3.4**
BO04	**La Punta**	**6.69**	**184**		**Pn**	**22 26 43.7**	**-2.6**
PB08	**IPOC Station P**	**7.17**	**7**	Pn	**Pn**	**22 26 50.5**	**-2.8**
PB08	**IPOC Station P**	**7.17**	**7**	P	**Pn**	**22 26 50.8**	**-2.6**
BO03	**Pichilemu**	**7.36**	**192**	P	**Pn**	**22 26 51.5**	**-4.0**
BO02	**Sierra Bellavi**	**7.50**	**184**	P	**Pn**	**22 26 54.7**	**-2.8**
PB11	**IPOC Station P**	**7.51**	**3**	P	**Pn**	**22 26 54.0**	**-3.8**
GO01	**Chusmiza**	**7.64**	**6**		**Pn**	**22 26 56.5**	**-3.3**
GO01	**Chusmiza**	**7.64**	**6**	P	**Pn**	**22 26 56.7**	**-3.0**
PSGCX	**Pisagua**	**7.66**	**360**	P	**Pn**	**22 26 55.8**	**-4.0**
GO05	**Hualane**	**7.85**	**191**	P	**Pn**	**22 26 57.8**	**-4.4**
ML02	**Panimavida**	**8.52**	**187**	P	**Pn**	**22 27 07.2**	**-4.0**
PB12	**IPOC Station P**	**8.64**	**358**	P	**Pn**	**22 27 09.2**	**-4.0**
PB16	**IPOC Station P**	**8.93**	**4**	P	**Pn**	**22 27 15.9**	**-1.6**
BI02	**San Fabin de**	**9.39**	**186**	P	**Pn**	**22 27 19.8**	**-3.5**
PB18	**Visviri**	**9.68**	**3**		**Pn**	**22 27 25.9**	**-1.7**
PB18	**Visviri**	**9.68**	**3**	P	**Pn**	**22 27 27.1**	**-0.4**
H03N1	**Juan Fernandez**	**9.78**	**229**	P	**Pn**	**22 27 26.5**	**-1.6**
	baz=112,slow=18,SNR=82						
H03N1				T	T	22 37 16.3	
	baz=52,slow=72,SNR=863						
H03N2	**Juan Fernandez**	**9.79**	**229**	P	**Pn**	**22 27 26.7**	**-1.5**
	baz=112,slow=18,SNR=57						
H03N2				T	T	22 37 13.7	
	baz=52,slow=72,SNR=506						
H03N3	**Juan Fernandez**	**9.79**	**229**	P	**Pn**	**22 27 26.8**	**-1.5**
	baz=112,slow=18,SNR=97						
H03N3				T	T	22 37 17.1	
	baz=52,slow=72,SNR=636						
H03S3	**Juan Fernandez**	**10.01**	**227**	P	**Pn**	**22 27 29.2**	**-2.1**
	baz=25,slow=19,SNR=30						
H03S1	**Juan Fernandez**	**10.02**	**227**	P	**Pn**	**22 27 28.8**	**-2.5**
	baz=25,slow=19,SNR=19						
H03S2	**Juan Fernandez**	**10.03**	**227**	P	**Pn**	**22 27 29.5**	**-1.9**
	baz=25,slow=19,SNR=19						
LPAZ	**La Paz**	**11.10**	**10**	P	**Pn**	**22 27 45.3**	**-1.8**
	comp=Z,7.1nm,0.4s,baz=198,slow=6.2,SNR=35						
LPAZ	**La Paz**	**11.10**	**10**	Pn	**Pn**	**22 27 44.7**	**-2.4**
LPAZ	**La Paz**	**11.10**	**10**	*e*P	Pn	22 27 42.1	-5.0
LPAZ	**La Paz**	**11.10**	**10**	P	**Pn**	**22 27 45.4**	**-1.7**
CPUP	**Villa Florida**	**11.44**	**88**	P	**Pn**	**22 27 48.9**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=256,slow=12,SNR=5.9						
CPUP	**Villa Florida**	**11.44**	**88**	Pn	**Pn**	**22 27 48.6**	**-2.3**
CPUP	**Villa Florida**	**11.44**	**88**	*e*P	**Pn**	**22 27 46.3**	**-4.7**
PSAL	**Palomas, Salto**	**11.54**	**112**	*e*P	Pn	22 27 45.9	-6.4
ANCO	**Parque Anchore**	**12.52**	**127**	*e*P	Pn	22 27 58.1	-7.3
MURT	**Porto Murtinho**	**12.67**	**66**	*e*P	**Pn**	**22 28 03.2**	**-4.2**
TRQA	**Tornquist**	**12.71**	**150**		**Pn**	**22 28 05.2**	**-2.7**
SJPY	**San Joaquin**	**12.77**	**83**	*e*P	**Pn**	**22 28 04.2**	**-4.6**
BBSD	**Serra de San D**	**13.34**	**43**	*e*P	**Pn**	**22 28 12.4**	**-3.9**
BBSD				*e*pP	P	22 28 14.8	-7.6
SIV	**San Ignacio**	**14.02**	**38**	P	Pn	22 28 19.9	-5.3
	comp=Z,5.5nm,0.3s,baz=236,slow=9.8,SNR=24						
CPSB	**Cacapava Do Su**	**14.91**	**106**	Pn	**Pn**	**22 28 35.1**	**-1.5**
PTLB	**Pontes e Lacer**	**15.57**	**43**		**Pn**	**22 28 42.9**	**-2.1**
PTLB	**Pontes e Lacer**	**15.57**	**43**	*e*P	**Pn**	**22 28 40.7**	**-4.2**
ITAB	**Concordia**	**15.97**	**94**	Pn	**Pn**	**22 28 49.7**	**-0.1**
ITAB				IAmb	IAmb	22 29 31.2	
	comp=Z,34nm,1.4s						
PTGB	**Pitanga**	**16.41**	**85**	*e*P	**Pn**	**22 28 53.3**	**-2.1**
TRCB	**Terra Rica**	**16.44**	**78**		**Pn**	**22 28 56.2**	**+0.4**
NNA	**Nana**	**16.50**	**336**	P	**P**	**22 28 59.4**	**+1.9**
	comp=Z,9.9nm,0.6s,baz=166,slow=12,SNR=3.5						
NNA				S	**Sn**	**22 32 00.5**	**+1.0**
	comp=Z,5.7nm,0.4s,baz=137,slow=23,SNR=1.9						
NNA	**Nana**	**16.50**	**336**	P	**Pn**	**22 28 56.8**	**+0.3**
VILB	**Vilhena**	**17.01**	**35**	Pn	**Pn**	**22 29 00.4**	**-2.4**
VILB				IAmb	IAmb	22 29 04.2	
	comp=Z,30nm,0.8s						
VILB	**Vilhena**	**17.01**	**35**	*e*P	**Pn**	**22 28 59.9**	**-2.9**
SALV	**Santo Antonio**	**17.52**	**53**	*e*P	**P**	**22 29 06.5**	**-2.3**
LDASE	**Londrina, Braz**	**17.58**	**81**	*e*P	**P**	**22 29 08.6**	**-0.8**
FRTB	**Fartura**	**18.96**	**83**	*e*P	**P**	**22 29 23.1**	**-1.4**
CZSB	**Cruzeiro do Su**	**19.62**	**352**		**P**	**22 29 31.1**	**-0.6**
CZSB	**Cruzeiro do Su**	**19.62**	**352**	*e*P	**P**	**22 29 30.0**	**-1.7**
AY03	**Cochrane**	**20.02**	**185**	P	**P**	**22 29 35.9**	**+0.1**
AY03				IAmb	IAmb	22 29 41.1	
	comp=Z,19nm,0.8s						
ARAG	**Araguaiana, MT**	**20.52**	**60**	*e*P	**P**	**22 29 41.0**	**-0.3**
BB19B	**Bebedouro**	**20.61**	**77**	*e*P	**P**	**22 29 42.0**	**-0.4**
PET01	**Itanhaem-SP**	**20.75**	**87**	*e*P	**P**	**22 29 42.9**	**-0.9**
SPB	**Sao Paulo**	**20.78**	**85**	P	**P**	**22 29 42.5**	**-1.7**
SPB	**Sao Paulo**	**20.78**	**85**	*e*P	**P**	**22 29 41.9**	**-2.3**
SPB	**Sao Paulo**	**20.78**	**85**	P	**P**	**22 29 43.5**	**-0.7**
RCLB	**Rio Claro- Sao**	**21.02**	**82**	*e*P	**P**	**22 29 46.1**	**-0.8**
CLDB	**Colider**	**21.16**	**42**	*e*P	**P**	**22 29 47.6**	**-0.7**
CLDB	**Colider**	**21.16**	**42**	P	**P**	**22 29 47.6**	**-0.7**
GO08	**Villa O'Higgin**	**21.22**	**185**	P	**P**	**22 29 49.0**	**+0.3**
GO08				IAmb	IAmb	22 30 29.2	
	comp=Z,23nm,0.9s						
VAO	**Valinhos**	**21.35**	**84**		**P**	**22 29 48.8**	**-1.7**
VAO				IAmb	IAmb	22 29 50.6	
	comp=Z,43nm,0.9s						
VAO	**Valinhos**	**21.35**	**84**	*e*P	**P**	**22 29 47.8**	**-2.6**
IPMB	**Ipameri, GO**	**22.19**	**70**	*e*P	**P**	**22 29 57.4**	**-1.9**
CANS	**Sao Roque de M**	**22.75**	**77**	*e*P	**P**	**22 30 03.5**	**-1.7**
SNDB	**Serra Nova Dou**	**23.31**	**53**	*e*P	**P**	**22 30 08.1**	**-2.3**
PMNB	**Patos De Minas**	**23.43**	**73

P17A Butcher Ranch, 76.48 329 P **P** 22 36 50.3 0.0
P17A IAmb IAmb 22 36 53.2
comp=Z,8.4nm,1.2s
SUR Sutherland 76.63 120 P **P** 22 36 51.4 -0.1
SUR IAmb IAmb 22 37 14.3
comp=Z,14nm,1.3s
CCD Concordia, Ant 77.48 184 P **P** 22 36 57.2 +1.5
HWUT Hardware Ranch 78.57 330 **P** 22 37 03.3 +1.5
HWUT IAmb IAmb 22 37 04.3
comp=Z,6.5nm,0.8s
PD31 Pinedale Array 78.62 331 **P** 22 37 02.9 +0.7
PDAR Pinedale Array 78.62 331 P **P** 22 37 03.2 +1.1
comp=Z,1.6nm,0.9s,baz=124,slow=4.6,SNR=11
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 78.62 331 **P** 22 37 03.0 +0.9
MAW Mawson 79.11 163 P **P** 22 37 05.0 +0.8
comp=Z,3.0nm,0.5s,baz=207,slow=6.4,SNR=16
MAW pP **pP** 22 37 30.3 +0.5
comp=Z,2.7nm,0.6s,baz=199,slow=6.7,SNR=3.2
comp=Z,3.0nm,0.5s
MAW Mawson 79.11 163 P **P** 22 37 04.8 +0.6
AHID Auburn Hatcher 79.29 331 P **P** 22 37 06.7 +1.0
AHID IAmb IAmb 22 37 08.2
comp=Z,6.3nm,0.9s
NVAR Mina Array Bea 79.43 323 P **P** 22 37 08.0 +1.4
comp=Z,0.9nm,0.9s,baz=58,slow=5.5,SNR=2.6
comp=Z,0.9nm,0.9s
TSUM Tsumeb 79.44 106 P **P** 22 37 07.2 +0.1
TSUM IAmb IAmb 22 37 08.6
comp=Z,8.7nm,0.8s
TSUM Tsumeb 79.44 106 P **P** 22 37 07.7 +0.6
TSUM pP **pP** 22 37 35.3 +2.3
EPLO Experimental L 79.46 345 P **P** 22 37 07.4 +1.1
EPLO IAmb IAmb 22 37 08.1
comp=Z,4.5nm,0.8s
ELK Elko 79.61 327 **P** 22 37 08.8 +1.1
KOOLE Kule 80.03 111 P **P** 22 37 10.4 +0.1
KOOLE IAmb IAmb 22 37 11.0
comp=Z,4.0nm,0.6s
TORD Torodi Ar. Bea 80.33 70 P **P** 22 37 11.8 0.0
comp=Z,24nm,0.6s,baz=269,slow=5.4,SNR=182
TORD pP **pP** 22 37 37.1 -0.6
comp=Z,4.1nm,0.6s,baz=276,slow=6.4,SNR=4.0
TORD Torodi Ar. Bea 80.33 70 P **P** 22 37 11.4 -0.3
GRHM Grahamstown, E 80.49 122 P **P** 22 37 11.6 -0.9
ULM Lac du Bonnet 80.52 344 P **P** 22 37 12.3 +0.3
comp=Z,2.8nm,0.5s,baz=153,slow=9.2,SNR=6.0
ULM pP **pP** 22 37 37.0 -0.5
comp=Z,2.7nm,0.4s,baz=157,slow=6.5,SNR=2.5
comp=Z,2.8nm,0.5s
ULM Lac du Bonnet 80.52 344 **P** 22 37 12.1 +0.1
ULM IAmb IAmb 22 37 13.2
comp=Z,14nm,1.2s
GCMT Greycliff 81.14 333 P **P** 22 37 16.2 +0.7
HLID Hailey 81.40 329 P **P** 22 37 17.8 +0.8
GRTLG Ghanzi 81.59 110 P **P** 22 37 18.1 -0.4
GRTLG IAmb IAmb 22 37 19.6
comp=Z,5.0nm,0.7s
BOSA Boshof 81.69 118 P **P** 22 37 18.1 -0.9
comp=Z,2.3nm,0.8s,baz=204,slow=3.4,SNR=5.2
BOSA pP **pP** 22 37 44.4 -0.3
comp=Z,2.1nm,0.7s,baz=266,slow=2.1,SNR=2.5
comp=Z,2.3nm,0.8s
BOSA Boshof 81.69 118 P **P** 22 37 18.0 -1.1
PLID Pearl Lake 83.30 329 P **P** 22 37 27.8 +0.8
LBTB Lobatse 83.58 115 P **P** 22 37 28.6 -0.2
LBTB IAmb IAmb 22 37 29.5
comp=Z,7.0nm,0.9s
LBTB Lobatse 83.58 115 P **P** 22 37 28.9 0.0
LBTB pP **pP** 22 37 55.2 +0.5
MD01 Midelt array s 86.20 50 P **P** 22 37 41.8 +0.1
CASY Casey 86.72 180 P **P** 22 37 44.4 +0.8
CASY Casey 86.72 180 P **P** 22 37 45.2 +1.6
CASY pP **pP** 22 38 10.3 +1.0
ESDC Sonseca Array 90.69 45 P **P** 22 38 02.7 0.0
comp=Z,0.4nm,0.8s,baz=262,slow=3.9,SNR=4.3
comp=Z,0.4nm,0.8s
MMAI Mount Meron Ar 116.55 65 PKP **PKPdf** 22 43 43.5 -0.3
comp=Z,0.5nm,0.4s,baz=101,slow=7.5,SNR=4.0
ASAR Alice Springs 124.29 207 PKP **PKPdf** 22 43 58.7 -0.3
comp=Z,1.4nm,0.5s,baz=166,slow=2.5,SNR=14
ASAR pPKP **pPKPdf** 22 44 25.3 -0.6
comp=Z,2.4nm,0.8s,baz=148,slow=2.5,SNR=8.1
KBZ Khabaz 124.48 54 PKP **PKiKP** 22 43 59.1 +0.3
comp=Z,2.0nm,0.7s,baz=146,slow=3.6,SNR=3.9
H11S2 WAKE ISLAND Hyl 27.32 273 T T 01 04 16.7
baz=116,slow=76,SNR=14
H11S1 WAKE ISLAND Hyl 27.33 273 T T 01 04 06.5
baz=116,slow=76,SNR=12
WR8 Warramunga Arr 127.33 209 PKPdf **PKPdf** 22 44 04.6 -0.3
H11S3 WAKE ISLAND Hyl 27.34 273 T T 01 04 05.9
baz=116,slow=76,SNR=10.0
WRA Warramunga Arr 127.42 209 PKP **PKPdf** 22 44 05.2 +0.1
comp=Z,2.8nm,0.7s,baz=158,slow=1.7,SNR=19
WRA pPKP **pPKPdf** 22 44 31.9 0.0
comp=Z,3.3nm,0.7s,baz=166,slow=1.6,SNR=12
WRA Warramunga Arr 127.42 209 **PKPdf** 22 44 04.9 -0.1
H11N3 WAKE ISLAND Hyl 27.56 275 T T 01 04 26.2
baz=109
H11N1 WAKE ISLAND Hyl 27.58 275 T T 01 04 22.8
baz=109
H11N2 WAKE ISLAND Hyl 27.58 275 T T 01 04 19.8
baz=109
ARTI Arti 133.39 37 PKPdf **PKiKP** 22 44 16.6 +0.2
ABKAR Akbulak array 136.02 46 PKPdf **PKPdf** 22 44 21.0 +0.7
PETK Petropavlovsk- 136.42 320 PKP **PKPdf** 22 44 21.5 +0.6
comp=Z,1.1nm,0.5s,baz=98,slow=3.0,SNR=4.7
BVAR Borovoye Array 141.09 38 PKP **PKPdf** 22 44 29.5 0.0
comp=Z,1.9nm,0.7s,baz=289,slow=4.5,SNR=5.1
KKAR Karatay Array 144.51 53 PKPdf PKPbc 22 44 35.0 +0.2
BTK Batken 145.34 58 PKPbc **PKPab** 22 44 37.7 -0.1
KURK Kurchatov 146.67 37 **PKPbc** 22 44 40.7 -0.4
KURBB Kurchatov Arra 146.67 37 PKPbc **PKPbc** 22 44 40.3 -0.7
comp=Z,6.1nm,0.6s,baz=304,slow=3.1,SNR=60
KURBB pPKPbc **pPKPdf** 22 45 07.0 +0.8
comp=Z,5.4nm,1.1s,baz=302,slow=3.5,SNR=6.2
ARSB Arslanbob 146.70 56 PKPbc **PKPbc** 22 44 41.3 -0.4
ZAA0 Zalesovo Array 147.60 28 PKPdf **PKPdf** 22 44 41.4 +0.7
ZALV Zalesovo Beam 147.60 28 PKPbc **PKPdf** 22 44 42.0 +1.2
comp=Z,14nm,0.6s,baz=300,slow=3.5,SNR=44
ZALV pPKPbc **pPKPdf** 22 45 08.2 +0.5
comp=Z,11nm,0.8s,baz=303,slow=2.8,SNR=6.5
ZALV Zalesovo Beam 147.60 28 **PKPdf** 22 44 41.0 +0.3
NRN Naryn 148.87 54 PKPbc **PKPbc** 22 44 47.2 -0.6
KSH2 Kashi 149.11 59 PKPbc **PKiKP** 22 44 49.4 0.0
KSH2 pPKP pPKPbc 22 45 15.0 0.0
MAKZ Makanchi 150.64 41 PKPbc **PKiKP** 22 44 51.9 -0.2
PDGK Podgornoye 150.68 49 PKPbc **PKiKP** 22 44 52.6 +0.2
MKAR Makanchi Array 150.83 41 PKPbc **PKPbc** 22 44 52.2 +0.3
comp=Z,0.3nm,0.7s,baz=311,slow=2.1,SNR=3.9
MKAR pPKPbc **pPKPbc** 22 45 18.6 -0.2
comp=Z,8.1nm,0.9s,baz=291,slow=2.2,SNR=9.0
MKAR Makanchi Array 150.83 41 **PKPbc** 22 44 51.7 -0.2
GSI Gunungsitoli 151.57 153 PKPbc **PKPbc** 22 44 54.6 0.0
TOLI2 Tolitoli 151.95 204 PKPbc **PKPbc** 22 44 54.2 -1.2
MJAR Matsushiro Arr 154.35 298 PKPab **PKPab** 22 45 16.1 +1.6
comp=Z,1.6nm,0.7s,baz=76,slow=5.4,SNR=5.0
WMQ Urumqi 155.65 42 ePKP **PKPdf** 22 44 50.8 -2.5
WMQ PKPab **pPKPdf** 22 45 22.1 +1.7
SONM Songino Array 159.31 7 PKP **PKPdf** 22 44 58.7 +0.9
comp=Z,0.6nm,0.6s,baz=241,slow=1.5,SNR=4.2
SONM pPKP **pPKPdf** 22 45 25.2 +0.2
comp=Z,0.4nm,0.4s,baz=188,slow=4.2,SNR=3.3
SONM PKPab **sPKPdf** 22 45 35.0 -0.1
comp=Z,0.9nm,0.8s,baz=8.5,slow=2.9,SNR=3.8
SONM pPKPab **pPKPab** 22 46 01.1 -0.7
comp=Z,1.0nm,0.7s,baz=346,slow=5.4,SNR=2.7
HHC Hu-ho-hao-te 166.41 355 *eP* **PKPdf** 22 45 07.5 +2.6
CMAR Chiang Mai Arr 166.61 129 pPKP pPKPdf 22 45 31.9 -0.7
comp=Z,0.7nm,0.3s,baz=205,slow=0.4,SNR=2.1
NJ2 Nanjing 170.89 303 *eP* **PKPdf** 22 45 07.8 -0.1

*NDI **22** 22:28:30.3±2.6, 33°.14N×87°.49E, h15km±18km, ML3.6, MW4.0, Presumed earthquake*
*MOS **22** 22:28:32.3±1.2, 33°.19N×86°.80E, h10km, mb4.7/19, Error ellipse: s-maj=8.6km s-min=4.1km az=122.4*
*IDC **22** 22:28:32.0±0.6, 33°.08N×86°.78E, h0km, mb4.2/23, mbtmp4.1/28, ML3.9/5, MS4.2/6, Error ellipse: s-maj=17.4km s-min=11.5km az=34.0*
*BJI **22** 22:28:33.8, 33°.23N×86°.91E, h7km, mB4.8/5, mb4.4/38, Ms4.3/28, Ms7 4.0/25*
*NEIC **22** 22:28:33.3±1.2, 33°.19N±0°.04×86°.75E±0°.08, h10km±1km, mb4.5/59, Error ellipse: s-maj=11.6km s-min=5.6km*

az=283.0
*GFZ **22** 22:28:35.8±0.2, 33°N±4°×8°7E±°, h10km, M4.5/23, mb4.5/23*
ISC 22 22:28:33.8±0.3, 33°.19N±0°.05×86°.69E±0°.04, h10km, n328, σ1s92/333, mb4.5/92, MS4.2/9, 44C-6D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.16**	**131**	P	**Pn**	**22 29 50.6**	**-0.9**
LSA	**Lhasa**	**5.16**	**131**		**Pn**	**22 29 50.6**	**-0.9**
EVN	**Everest**	**5.22**	**179**		**Pn**	**22 29 52.6**	**+0.2**
EVN	**Everest**	**5.22**	**179**	P	**Pn**	**22 29 56.3**	**+3.9**
KLP	**Kalpa**	**7.33**	**259**	*e*P	**Pn**	**22 30 25.8**	**+4.7**
KLP				*i* x	x	22 32 43.0	
GOMU	**GeErMu**	**7.33**	**64**	Pn	**Pn**	**22 30 22.3**	**+1.0**
GOMU				Sn	**Sn**	**22 31 46.9**	**+2.1**
GOMU				L	L		
	comp=N,920nm,5.7s						
GOMU				L	L		
	comp=E,470nm,4.8s						
SMLA	**Simla**	**8.33**	**258**	*e*P	**Pn**	**22 30 37.1**	**+2.6**
SMLA				IAML		22 32 27.0	
	comp=E,28nm,1.8s						
SMLA				IAML		22 32 27.4	
	comp=N,19nm,1.7s						
SMLA				*i* Lg	Lg	22 33 08.5	
SHL	**Shillong**	**8.84**	**148**	P	**Pn**	**22 30 40.4**	**-1.4**
SHL	**Shillong**	**8.84**	**148**	Pn	**Pn**	**22 30 40.4**	**-1.4**
TSSA	**Tissa**	**8.86**	**271**	*e*P	**Pn**	**22 30 46.1**	**+4.1**
TSSA				IAML		22 31 21.9	
	comp=N,19nm,0.5s						
TSSA				IAML		22 31 22.1	
	comp=E,24nm,0.9s						
TSSA				*i* Lg	Lg	22 33 23.2	
TSSA				*i* x	x	22 34 01.8	
THN	**Thein Dam**	**9.23**	**268**	*e*P	Pn	22 30 52.1	+5.1
THN				*e*S	**Sn**	**22 32 33.1**	**+2.2**
THN				IAML		22 32 42.9	
	comp=E,29nm,0.7s						
THN				*i* x	x	22 33 42.6	
THN				*e*x	x	22 34 15.7	
WUS	**Wushi**	**9.97**	**325**		**Pn**	**22 30 57.2**	**+0.1**
JHNI	**Jhansi**	**10.44**	**225**	*e*P	**Pn**	**22 31 04.9**	**+1.4**
WMQ	**Urumqi**	**10.64**	**4**	*e*P	**Pn**	**22 31 07.8**	**+1.4**
WMQ				S	**Sn**	**22 33 01.6**	**-4.0**
WMQ				pmax	pmax		
	comp=E,7.0nm,0.9s						
KSH2	**Kashi**	**10.77**	**307**	P	**Pn**	**22 31 10.9**	**+2.7**
KSH2				pmax	pmax		
	comp=E,2.0nm,0.8s						
KSH2				L	L		
	comp=E,1μm,17.2s						
KSH2				L	L		
	comp=E,1μm,17.9s						
KSH2				L	L		
	comp=E,2μm,25.4s						
TARG	**Taragay, Kyrgy**	**11.06**	**323**	P	**Pn**	**22 31 12.1**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.06**	**323**		**Pn**	**22 31 12.1**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.06**	**323**	P	**Pn**	**22 31 15.6**	**+3.3**
MORE	**Moreh**	**11.14**	**141**		**Pn**	**22 31 12.7**	**-0.4**
NIL	**Nilore**	**11.24**	**276**	P	**Pn**	**22 31 14.0**	**-0.5**
NIL	**Nilore**	**11.24**	**276**		**Pn**	**22 31 14.0**	**-0.5**
NIL	**Nilore**	**11.24**	**276**	P	**Pn**	**22 31 16.5**	**+2.0**
PDGK	**Podgornoye**	**11.59**	**333**	P	**Pn**	**22 31 19.6**	**+0.2**
PDGK	**Podgornoye**	**11.59**	**333**		**Pn**	**22 31 19.6**	**+0.2**
NRN	**Naryn**	**11.83**	**317**	P	**Pn**	**22 31 22.7**	**-0.1**
NRN	**Naryn**	**11.83**	**317**	Pn	**Pn**	**22 31 22.7**	**-0.1**
GTA2	**Gaotai**	**12.27**	**55**	*e*P	**Pn**	**22 31 30.9**	**+2.3**
GTA2				pmax	pmax		
	comp=E,3.0nm,0.9s						
GTA2				L	L		
	comp=E,950nm,13.7s						
GTA2				L	L		
	comp=E,500nm,14.0s						
GTA2				L	L		
	comp=E,570nm,13.0s						
AJM	**Ajmer**	**12.45**	**240**	*e*P	**Pn**	**22 31 32.0**	**+1.0**
BOOM	**Boomskoye usch**	**12.57**	**321**	P	**Pn**	**22 31 32.6**	**-0.2**
BOOM	**Boomskoye usch**	**12.57**	**321**		**Pn**	**22 31 32.6**	**-0.2**
BOOM	**Boomskoye usch**	**12.57**	**321**	P	**Pn**	**22 31 35.5**	**+2.7**
MANEM	**Manem**	**12.99**	**294**	Pn	**Pn**	**22 31 37.4**	**-1.3**
AAK	**Ala-Archa**	**13.46**	**318**	Pn	**Pn**	**22 31 47.8**	**+2.8**
	comp=E,0.3nm,0.3s,baz=138,slow=16,SNR=4.0						
	comp=E,1.2nm,0.5s						
AAK	**Ala-Archa**	**13.46**	**318**	*e*P	**Pn**	**22 31 48.9**	**+3.9**
AAK	**Ala-Archa**	**13.46**	**318**	Pn	**Pn**	**22 31 44.3**	**-0.7**
AAK	**Ala-Archa**	**13.46**	**318**	P	**Pn**	**22 31 49.5**	**+4.5**
FRU1	**Bishkek**	**13.50**	**319**	P	**Pn**	**22 31 44.6**	**-0.8**
FRU1	**Bishkek**	**13.50**	**319**	Pn	**Pn**	**22 31 44.6**	**-0.8**
MK31	**Makanchi Array**	**14.00**	**347**	*c* *i*P	**Pn**	**22 31 53.4**	**+1.3**
MKAR	**Makanchi Array**	**14.00**	**347**	Pn	**Pn**	**22 31 52.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=154,slow=15,SNR=15						
	comp=E,2.3nm,0.8s						
MKAR	**Makanchi Array**	**14.00**	**347**		**Pn**	**22 31 50.9**	**-1.3**
MAKZ	**Makanchi**	**14.07**	**347**	P	**Pn**	**22 31 52.3**	**-0.8**
MAKZ	**Makanchi**	**14.07**	**347**		**Pn**	**22 31 52.3**	**-0.8**
MAKZ	**Makanchi**	**14.07**	**347**	P	**Pn**	**22 31 54.1**	**+1.0**
LZDM	**Lanzhou Array**	**14.28**	**74**	Pn	**Pn**	**22 31 55.8**	**-0.6**
	baz=278,slow=9.8						
	comp=E,0.7nm,0.3s						
LZH	**Lanzhou**	**14.42**	**74**	*e*P	**P**	**22 32 00.9**	**-4.1**
LZH				pP	Pn	22 32 06.8	+8.7
LZH				pmax	pmax		
	comp=E,18nm,1.6s						
LZH				L	L		
	comp=E,1μm,15.6s						
LZH				L	L		
	comp=E,720nm,13.4s						
LZH				L	L		
	comp=E,700nm,16.8s						
GAR	**Garm**	**14.45**	**298**		**Pn**	**22 31 57.5**	**-0.9**
CD2	**Chengdu**	**14.66**	**94**	P	**Pn**	**22 31 59.5**	**-1.7**
PZH	**PanZhiHua**	**14.66**	**113**	P	**Pn**	**22 32 01.8**	**+0.5**
KBL	**Kabul**	**14.72**	**280**	P	**Pn**	**22 32 01.4**	**-0.9**
KBL	**Kabul**	**14.72**	**280**		**Pn**	**22 32 01.4**	**-0.9**
KBL	**Kabul**	**14.72**	**280**	P	**Pn**	**22 32 02.3**	**0.0**
CHGR	**Chuyangaron**	**15.21**	**296**	P	**Pn**	**22 32 09.5**	**+0.8**
CHGR				pmax	pmax		
	comp=Z,36nm,0.7s						
CHGR	**Chuyangaron**	**15.21**	**296**		**Pn**	**22 32 09.5**	**+0.8**
SHAA	**Shahritus**	**15.76**	**291**		**Pn**	**22 32 13.7**	**-2.1**
SHAA				IAmb	IAmb	22 32 26.8	
	comp=Z,22nm,0.7s						
NPW	**Naypyitaw**	**15.80**	**145**	P	**Pn**	**22 32 16.5**	**+0.2**
KK31	**Karatay Array**	**16.10**	**313**	P	**Pn**	**22 32 20.6**	**+0.5**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KK31	**Karatay Array**	**16.10**	**313**	Pn	**Pn**	**22 32 20.6**	**+0.5**
KKAR	**Karatay Array**	**16.10**	**313**	P	**Pn**	**22 32 20.2**	**+0.1**
KKAR	**Karatay Array**	**16.10**	**313**		**Pn**	**22 32 20.1**	**+0.1**
KMI2	**Kunming**	**16.14**	**116**	P	**Pn**	**22 32 20.5**	**-0.5**
KMI2				pmax	pmax		
	comp=Z,16nm,0.8s						
KMI2				L	L		
	comp=Z,610nm,15.7s						
KMI2				L	L		
	comp=Z,720nm,10.6s						
KMI2				L	L		
	comp=Z,1μm,14.8s						
DGZ	**Jazzator, Alta**	**16.51**	**2**	*e*P	**Pn**	**22 32 26.0**	**+0.5**
CHTO	**Chiang Mai**	**18.04**	**140**	P	**Pn**	**22 32 42.4**	**-2.2**
CHTO				pmax	pmax		
	comp=Z,13nm,1.3s						
CHTO	**Chiang Mai**	**18.04**	**140**	P	**Pn**	**22 32 42.4**	**-2.2**
CHTO	**Chiang Mai**	**18.04**	**140**	P	**P**	**22 32 46.6**	**+1.5**
CMAR	**Chiang Mai Arr**	**18.33**	**140**	P	**Pn**	**22 32 45.4**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=325,slow=11,SNR=27						
CMAR				LR	LR	22 40 51.3	
	comp=Z,448nm,18.3s,baz=305,slow=41						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**18.33**	**140**	*c*e P	**P**	**22 32 48.7**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.33**	**140**		**Pn**	**22 32 46.0**	**-2.2**
KURBB	**Kurchatov Arra**	**18.43**	**343**	P	**Pn**	**22 32 49.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=155,slow=11,SNR=28						
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	**18.49**	**344**	*e*P	**P**	**22 32 49.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	**Kurchatov**	**18.49**	**344**	P	**P**	**22 32 47.4**	**-2.4**
KURK	**Kurchatov**	**18.49**	**344**	P	**Pn**	**22 32 50.4**	**+0.4**
XAN	**Xi'an**	**18.54**	**81**	P	**P**	**22 32 49.0**	**-1.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GYA	**Guiyang**	**18.57**	**106**	P	**Pn**	**22 32 51.3**	**+0.1**
GYA				PP	**PnPn**	**22 33 08.9**	**+5.9**
GYA				S	**Sn**	**22 36 18.0**	**-1.0**
GYA				SS	**SnSn**	**22 36 41.0**	**+8.3**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,170nm,3.5s						
GYA				L	L		
	comp=Z,410nm,11.1s						
GYA				L	L		
	comp=Z,540nm,11.6s						
GYA				L	L		
	comp=Z,870nm,13.2s						
SLVN	**Son La**	**19.30**	**123**	P	**P**	**22 32 58.4**	**-0.6**
BTO2	**Baotou**	**19.97**	**61**	*e*P	**Pn**	**22 33 06.4**	**-1.6**
BTO2				S	**Sn**	**22 36 52.6**	**0.0**
BTO2				pmax	pmax		
	comp=Z,18nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,380nm,4.3s						
BTO2				L	L		
	comp=Z,870nm,11.0s						
BTO2				L	L		
	comp=Z,660nm,12.6s						
BTO2				L	L		
	comp=Z,1μm,17.5s						
HRA	**Herat**	**20.34**	**280**	P	**P**	**22 33 09.2**	**-1.3**
ZAA0	**Zalesovo Array**	**20.80**	**357**	P	**P**	**22 33 13.4**	**-1.5**
ZALV	**Zalesovo Beam**	**20.80**	**357**	P	Pn	22 33 15.8	-1.6
	comp=Z,6.0nm,0.6s,baz=178,slow=11,SNR=25						
ZALV				LR	LR	22 42 48.4	
	comp=Z,396nm,18.6s,baz=191,slow=41						
	comp=Z,6.0nm,0.6s						
ZALV	**Zalesovo Beam**	**20.80**	**357**	P	**P**	**22 33 13.9**	**-1.1**
SONM	**Songino Array**	**20.86**	**40**	P	**P**	**22 33 16.0**	**+0.2**
	comp=Z,4.9nm,0.8s,baz=229,slow=12,SNR=15						
	comp=Z,4.9nm,0.8s						
SONM	**Songino Array**	**20.86**	**40**		**P**	**22 33 14.2**	**-1.6**
ZAK	**Zakamensk**	**21.09**	**31**	*e*P	**P**	**22 33 18.9**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,15nm,1.6s						
MOY	**Mondy**	**21.20**	**25**	*e*P	**P**	**22 33 21.6**	**+2.1**
MOY				pmax	pmax		
	comp=Z,37nm,2.4s						
ULN	**Ulaanbaatar**	**21.23**	**40**	*d* *i*P	**P**	**22 33 20.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ULN	**Ulaanbaatar**	**21.23**	**40**	P	**P**	**22 33 18.7**	**-1.2**
ULN	**Ulaanbaatar**	**21.23**	**40**	P	**P**	**22 33 20.9**	**+1.0**
HHC	**Hu-ho-hao-te**	**21.24**	**62**	*e*P	**P**	**22 33 21.5**	**+1.5**
BVAR	**Borovoye Array**	**23.02**	**334**	P	**P**	**22 33 39.2**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=145,slow=9.0,SNR=4.9						
	comp=Z,1.4nm,0.7s						
BORK	**Borovoye**	**23.06**	**334**	P	**P**	**22 33 37.8**	**-1.4**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BORK	**Borovoye**	**23.06**	**334**	P	**P**	**22 33 37.8**	**-1.4**
CNSH	**ChangSha**	**23.09**	**95**	P	**P**	**22 33 44.0**	**+4.3**
CNSH				pmax	pmax		
	comp=Z,15nm,0.9s						
HNS	**HongShan**	**23.21**	**72**	⇓P	**P**	**22 33 41.9**	**+1.0**
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
HNS				L	L		
	comp=Z,430nm,15.8s						
HNS				L	L		
	comp=Z,400nm,15.1s						
BJI2	**Beijing**	**24.56**	**65**	P	**P**	**22 33 54.1**	**+0.4**
BJI2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BJI2				L	L		
	comp=Z,100nm,14.3s						
BJI2				L	L		
	comp=Z,140nm,11.8s						
BJI2				L	L		
	comp=Z,180nm,11.8s						
QIZ	**Qiongzhong**	**25.05**	**119**	P	**P**	**22 33 56.8**	**-1.5**
QIZ				S	**S**	**22 38 23.1**	**+0.5**
QIZ				L	L		
	comp=Z,160nm,9.0s						
QIZ				L	L		
	comp=Z,300nm,9.4s						
QIZ				L	L		
	comp=Z,400nm,16.7s						
AB31	**Akbulak array**	**25.55**	**317**		**P**	**22 34 03.0**	**+0.4**
AB31				IAmb	IAmb	22 34 08.0	
	comp=Z,9.7nm,0.8s						
ABKAR	**Akbulak array**	**25.55**	**317**		**P**	**22 34 02.7**	**+0.2**
NJ2	**Nanjing**	**27.06**	**84**	pmax	pmax		
	comp=Z,21nm,0.5s						
NJ2	**Nanjing**	**27.06**	**84**	*e*P	**P**	**22 34 17.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
DLV	**Lat**	**29.08**	**132**	P	**P**	**22 34 33.4**	**-1.3**
ARTI	**Arti**	**30.30**	**328**	*d* *i*P	**P**	**22 34 46.2**	**+1.2**
ARTI						22 35 42.2	
ARTI						22 37 46.6	
ARTI				S	**S**	**22 39 47.0**	**+2.2**
ARTI				SS	**SnSn**	**22 41 18.0**	**-0.9**
ARTI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARTI	**Arti**	**30.30**	**328**		**P**	**22 34 44.6**	**-0.4**
ARTI				IAmb	IAmb	22 34 47.7	
	comp=Z,4.5nm,0.6s						
MAK	**Makhachkala**	**32.10**	**299**	*e*P	**P**	**22 34 56.8**	**-4.2**
MAK				*e*		22 36 05.4	
MAK				*e*S	**S**	**22 40 06.7**	**-6.5**
MAK				*e*SS	**SnSn**	**22 42 05.9**	**+2.9**
MAK				pmax	pmax		
	comp=Z,51nm,0.9s						
MAK				MLR	MLR		
	comp=Z,328nm,12.0s						
KS19	**Wonju Array Si**	**33.67**	**71**	P	**P**	**22 35 13.3**	**-1.6**
KSAR	**Wonju Array Be**	**33.69**	**71**	P	**P**	**22 35 13.5**	**-1.5**
KSAR	**Wonju Array Be**	**33.69**	**71**	P	**P**	**22 35 13.4**	**-1.5**
KSRS	**Korea Array**	**33.72**	**71**	P	**P**	**22 35 14.5**	**-0.7**
	comp=Z,5.9nm,0.7s,baz=273,slow=9.3,SNR=32						
	comp=Z,5.9nm,0.7s						
KIRV	**Kirov**	**35.55**	**327**	*d* *i*P	**P**	**22 35 32.0**	**+1.2**
NRIK	**Noril'sk**	**36.20**	**1**	P	**P**	**22 35 37.1**	**+0.9**
	comp=Z,8.5nm,0.8s,baz=162,slow=6.0,SNR=5.0						
	comp=Z,8.5nm,0.8s						
NRIK	**Noril'sk**	**36.20**	**1**	*i* P	**P**	**22 35 37.4**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NRIK	**Noril'sk**	**36.20**	**1**	P	**P**	**22 35 35.6**	**-0.7**
NRIK				IAmb	IAmb	22 35 38.1	
	comp=Z,8.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**36.61**	**59**	P	**P**	**22 35 39.4**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=241,slow=8.1,SNR=4.1						
	comp=Z,1.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**36.61**	**59**	P	**P**	**22 35 38.1**	**-2.0**
VRH	**Novokhopyorsk**	**37.18**	**313**	*e*P	**P**	**22 35 46.4**	**+1.6**
VRH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VSR	**Stor

comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 42.00 70 P **P** **22 36 23.9 -1.3**
BRTR Keskin Array B 42.64 295 P **P** **22 36 32.5 +1.9**
comp=Z,1.2nm,0.6s,baz=103,slow=6.5,SNR=2.3
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 42.64 295 P **P** **22 36 29.8 -0.8**
BR104 Keskin Array S 42.65 294 P **P** **22 36 32.4 +1.8**
comp=Z,2.9nm,0.9s
BR104 pP **sP** **22 36 38.1 +0.9**
comp=Z,2.9nm,0.9s
DAV Davao City (W) 44.41 117 P **P** **22 36 43.9 -0.9**
comp=Z,140nm,0.5s,baz=18,slow=1.8,SNR=2.8
TIXI Tiksi 44.47 18⇑*eP* **P** **22 36 45.2 +0.5**
TIXI pmax pmax
comp=Z,12nm,1.8s
TIXI Tiksi 44.47 18 **P** **22 36 44.3 -0.3**
PURM Purcari 44.68 305⇑P **P** **22 36 48.5 +1.8**
PURM Purcari 44.68 305 P **P** **22 36 49.0 +2.3**
comp=Z,38nm,0.9s
AK09 Malin Array Si 44.95 311 P **P** **22 36 50.9 +2.1**
AK08 Malin Array Si 44.97 311 P **P** **22 36 50.8 +1.9**
AK08 pP **sP** **22 36 54.6 -1.0**
AK10 Malin Array Si 44.97 311 P **P** **22 36 50.9 +2.0**
AKASG Malin Array Be 44.99 311 P **P** **22 36 49.5 +0.5**
comp=Z,4.3nm,0.9s,baz=87,slow=7.0,SNR=12
comp=Z,4.3nm,0.9s
AKASG Malin Array Be 44.99 311*ceP* **P** **22 36 50.5 +1.4**
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 44.99 311 P **P** **22 36 48.4 -0.6**
AKBB Malin Array Si 44.99 311 P **P** **22 36 48.3 -0.8**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
AKBB Malin Array Si 44.99 311 **P** **22 36 48.2 -0.8**
AKBB lAmb lAmb 22 36 52.7
comp=Z,7.4nm,0.9s
AKBB Malin Array Si 44.99 311 P **P** **22 36 51.1 +2.0**
AK01 Malin Array Si 44.99 311 P **P** **22 36 50.3 +1.2**
KIEV Kiev 45.00 311⇑P **P** **22 36 50.7 +1.5**
KIEV Kiev 45.00 311 P **P** **22 36 50.6 +1.5**
KIEV Kiev 45.00 311 P **P** **22 36 51.1 +2.0**
comp=Z,34nm,0.9s
KIEV Kiev 45.00 311 P **P** **22 36 50.7 +1.5**
AK02 Malin Array Si 45.00 311 P **P** **22 36 51.0 +1.8**
AK16 Malin Array Si 45.06 311 P **P** **22 36 51.4 +1.7**
AK22 Malin Array Si 45.08 311 P **P** **22 36 51.6 +1.8**
JURR Jurilovca 45.53 302⇑P **P** **22 36 56.2 +2.8**
TLCR 45.53 303⇓P **P** **22 36 55.6 +2.1**
TLCR 45.53 303 P **P** **22 36 55.5 +2.1**
SORM Soroca 45.62 307⇑P **P** **22 36 55.5 +1.4**
SORM Soroca 45.62 307 P **P** **22 36 55.5 +1.4**
SORM Soroca 45.62 307 P **P** **22 36 55.1 +1.0**
comp=Z,9.1nm,1.0s
TPGR Topolog 45.84 303⇑P **P** **22 36 58.2 +2.3**
LUBAR Lubar, Ukraine 45.94 310 P **P** **22 36 58.1 +1.5**
MI28 MI28,Pidlybu 45.97 311 P **P** **22 36 58.0 +1.1**
VLDR Vladesti 45.98 304⇑P **P** **22 36 59.6 +2.6**
CFR Carcaliu 46.01 303⇑P **P** **22 36 59.4 +2.1**
CFR Carcaliu 46.01 303 P **P** **22 36 59.3 +2.1**
ELL Elmali 46.09 291 P **P** **22 36 58.3 +0.1**
ELL pmax pmax
comp=Z,13nm,0.8s
ELL Elmali 46.09 291 **P** **22 36 58.3 +0.1**
VASR Vaslui 46.11 305⇑P **P** **22 37 00.8 +2.8**
ICOR Ion Corvin 46.37 302⇑P **P** **22 37 03.1 +3.0**
GHRR 46.42 304⇑P **P** **22 37 03.6 +3.1**
GHRR 46.42 304 P **P** **22 37 03.2 +2.7**
GHRR 46.42 304 P **P** **22 37 03.7 +3.1**
KMPD K-Podol'skiy 46.85 308 P **P** **22 37 05.3 +1.5**
TESR Tescani 46.90 305⇑P **P** **22 37 06.4 +2.1**
TESR Tescani 46.90 305 P **P** **22 37 05.9 +1.6**
comp=Z,12nm,1.2s
TESR Tescani 46.90 305 P **P** **22 37 06.5 +2.2**
VRI Vrincioaia 46.92 304⇑P **P** **22 37 07.2 +2.8**
VRI Vrincioaia 46.92 304 P **P** **22 37 07.2 +2.8**
VRI Vrincioaia 46.92 304 P **P** **22 37 06.4 +2.0**
comp=Z,12nm,0.8s
VRI Vrincioaia 46.92 304 P **P** **22 37 07.2 +2.8**
GIRR Girov 46.96 306⇑P **P** **22 37 07.1 +2.4**
SAHR Sahastru 46.96 304⇑P **P** **22 37 08.3 +3.5**
PLOR Plostina 46.97 304⇑P **P** **22 37 08.0 +3.1**
PLOR Plostina 46.97 304 P **P** **22 37 07.9 +3.1**
RNPP9 Sopachiv 47.08 312 P **P** **22 37 07.5 +1.9**
RNPP5 Staryi Chortor 47.09 311 P **P** **22 37 07.7 +2.1**
ONER Baraj Valea Uz 47.10 305⇑P **P** **22 37 08.7 +2.9**
BIZ Bicaz 47.23 306⇑P **P** **22 37 09.2 +2.3**
NEHR Nehoiu 47.27 304⇑P **P** **22 37 08.8 +3.6**
COVR Voineasa-Covas 47.28 304⇑P **P** **22 37 10.3 +3.0**
TURR Turia 47.39 304⇑P **P** **22 37 11.2 +3.1**
FINES FINESS Array B 47.50 325 P **P** **22 37 09.8 +1.1**
comp=Z,3.3nm,0.8s,baz=93,slow=12,SNR=5.1
comp=Z,3.3nm,0.8s
FINES FINESS Array B 47.50 325 P **P** **22 37 08.7 0.0**
MLR Muntele Rosu 47.51 304⇑P **P** **22 37 12.6 +3.4**
MLR Muntele Rosu 47.51 304 P **P** **22 37 10.2 +1.1**
MLR pmax pmax
comp=Z,32nm,0.8s
MLR Muntele Rosu 47.51 304 **P** **22 37 10.2 +1.1**
MLR Muntele Rosu 47.51 304 P **P** **22 37 12.1 +2.9**
comp=Z,42nm,0.8s
MLR Muntele Rosu 47.51 304 P **P** **22 37 12.7 +3.5**
BOSR Bodos 47.63 304⇓P **P** **22 37 12.9 +2.9**
BURAR Bucovina Array 47.77 307⇑P **P** **22 37 13.2 +2.1**
BURAR Bucovina Array 47.77 307 P **P** **22 37 13.2 +2.1**
BURAR Bucovina Array 47.77 307 **P** **22 37 11.6 +0.5**
BURAR lAmb lAmb 22 37 14.9
comp=Z,2.4nm,0.8s
BUR08 Bucovina Ar. S 47.77 307 **P** **22 37 10.3 -0.8**
BUR08 lAmb lAmb 22 37 15.2
comp=Z,2.9nm,0.9s
DOPR Dopca 47.83 304⇑P **P** **22 37 14.4 +2.9**
VOIR 48.14 304⇑P **P** **22 37 16.2 +2.1**
VOIR 48.14 304 P **P** **22 37 16.1 +2.1**
VOIR 48.14 304 P **P** **22 37 15.7 +1.7**
comp=Z,6.5nm,0.8s
VOIR 48.14 304 P **P** **22 37 15.9 +1.9**
ARCR ARCALIA 48.41 306⇑P **P** **22 37 19.3 +3.3**
TNR Turnu Rosu 48.65 304⇑P **P** **22 37 21.5 +3.6**
TNR Turnu Rosu 48.65 304 P **P** **22 37 21.4 +3.6**
BMR Baia Mare 48.92 307 P **P** **22 37 20.1 +0.3**
BMR Baia Mare 48.92 307 P **P** **22 37 20.1 +0.3**
CJR Cluj-Napoca 48.97 306⇑P **P** **22 37 23.8 +3.5**
CJR Cluj-Napoca 48.97 306 P **P** **22 37 23.8 +3.5**
LOT Lotru 49.03 304⇑P **P** **22 37 24.1 +3.2**
LOT Lotru 49.03 304 P **P** **22 37 23.4 +2.5**
KWP Kalwaria Pacla 49.22 310 P P 22 37 27.2 +5.0
MARR Mariseli-Cluj 49.30 306⇑P **P** **22 37 25.8 +2.8**
GZR Gura Zlata 49.73 304⇑P **P** **22 37 28.3 +2.1**
GZR Gura Zlata 49.73 304 P **P** **22 37 28.2 +2.1**
SEY Seymchan 50.03 33⇑*iP* **P** **22 37 29.4 +1.3**
SEY pmax pmax
comp=Z,13nm,2.0s
HERR Herculane 50.06 303⇑P **P** **22 37 30.8 +2.2**
SIRR Siria 50.36 305⇑P **P** **22 37 34.0 +3.1**
KNT Kendrikon 50.44 299 P **P** **22 37 34.3 +2.7**
BZS Buzias 50.49 304 P **P** **22 37 34.2 +2.3**
MDVR Moldovita 50.57 303⇑P **P** **22 37 35.0 +2.4**
GRG Griva 50.85 298 P **P** **22 37 36.3 +1.6**
STEB Steborice 52.36 310*eP* **P** **22 37 48.9 +3.1**
MAUC Maruska 52.41 310*eP* **P** **22 37 48.7 +2.4**
MORH Mrgy, Hungar 52.43 306⇑P **P** **22 37 48.2 +1.9**
MORH Mrgy, Hungar 52.43 306 P **P** **22 37 47.9 +1.6**
comp=Z,5.4nm,1.3s
MORH Mrgy, Hungar 52.43 306 P **P** **22 37 48.3 +2.0**
MORC Moravsky Berou 52.53 310 P **P** **22 37 47.8 +0.6**
MORC pmax pmax
comp=Z,6.0nm,1.2s
MORC Moravsky Berou 52.53 310 P **P** **22 37 47.8 +0.6**
MORC lAmb lAmb 22 37 51.5
comp=Z,5.6nm,1.2s
MORC Moravsky Berou 52.53 310*eP* **P** **22 37 49.1 +2.0**
KRLC Kraliky 52.97 311*eP* **P** **22 37 53.0 +2.6**
KRLC Kraliky 52.97 311*eP* **P** **22 37 53.0 +2.6**
MPLH Magyarpolny 52.99 307 P **P** **22 37 52.4 +1.9**
MPLH pP **sP** **22 37 57.6 +0.3**
MPLH Magyarpolny 52.99 307 P **P** **22 37 52.7 +2.2**
PETK Petropavlovsk- 53.19 45 P **P** **22 37 52.3 +0.4**
comp=Z,2.0nm,0.7s,baz=261,slow=2.2,SNR=5.9
comp=Z,2.0nm,0.7s
PETK Petropavlovsk- 53.19 45 P **P** **22 37 50.9 -1.0**
DPC Dobruska-Polom 53.21 311*eP* **P** **22 37 52.9 +0.7**
DPC Dobruska-Polom 53.21 311*eP* **P** **22 37 52.9 +0.7**
DPC Dobruska-Polom 53.21 311 P **P** **22 37 52.0 -0.2**

VRAC Vranov 53.22 310*eP* **P** **22 37 54.1 +1.9**
VRAC Vranov 53.22 310 P **P** **22 37 54.7 +2.5**
CHVC Chvalec 53.34 311*eP* **P** **22 37 53.2 +0.1**
CHVC Chvalec 53.34 311*eP* **P** **22 37 53.2 +0.1**
UPC Upice 53.38 311*eP* **P** **22 37 55.7 +2.3**
UPC smax smax
comp=N,5.0nm,0.4s
UPC Upice 53.38 311*eP* **P** **22 37 55.7 +2.3**
KRUC Moravsky 53.39 310 P **P** **22 37 56.5 +3.0**
KRUC Moravsky 53.39 310*eP* **P** **22 37 55.4 +2.0**
KRUC Moravsky 53.39 310 P **P** **22 37 56.5 +3.0**
HFS Hagfors 53.53 323 P **P** **22 37 55.2 +1.0**
comp=N,4.7nm,0.7s,baz=80,slow=8.1,SNR=9.9
comp=N,4.7nm,0.7s
RONA Rosalia, Austr 53.71 308*epP* **P** **22 37 57.7 +1.8**
comp=N,4.3nm,1.3s
BLY Banja Luka 53.74 304 P **P** **22 37 55.2 -0.8**
BLY lAmb lAmb 22 37 58.8
comp=Z,6.8nm,1.2s
CONA Conrad Observa 53.95 308*epP* pP 22 38 00.4 -2.2
comp=Z,4.4nm,0.8s,SNR=7.5
NORES NORESS Array B 54.54 324 P **P** **22 38 02.5 +0.9**
NORES pmax pmax
comp=Z,6.0nm,0.9s
NC303 NORSAR Array S 54.58 325 P **P** **22 38 02.4 +0.5**
BRG Berggiesshubel 54.61 312*eP* **P** **22 38 04.2 +1.9**
BRG Amp 22 38 06.7
comp=Z,2.4nm,0.6s
NB2 NORSAR Subarra 54.67 325 P **P** **22 38 03.1 +0.5**
comp=Z,1.7nm,0.6s,baz=84,slow=7.4
NB2 NORSAR Subarra 54.67 325 P **P** **22 38 04.1 +1.5**
NOA NORSAR Array B 54.67 325 P **P** **22 38 03.5 +0.8**
comp=Z,3.4nm,0.8s,baz=100,slow=7.2,SNR=10
NOA LR LR 23 03 03.5
comp=Z,192nm,20.2s,baz=255,slow=38
comp=Z,3.4nm,0.8s
SOKA Soboth 54.77 307*epP* pP 22 38 06.0 -2.5
comp=Z,7.1nm,1.0s,SNR=9.0
SESA Seetaler Alpe, 54.99 307*epP* **P** **22 38 07.6 +2.2**
comp=Z,4.5nm,1.0s
MOA Molln 55.02 308*epP* **P** **22 38 07.6 +2.2**
comp=Z,3.5nm,0.9s
CLL Collm 55.11 313*eP* **P** **22 38 07.0 +1.1**
CLL Collm 55.11 313*eP* **P** **22 38 07.0 +1.1**
GEC2 GERESS Array S 55.17 310 P **P** **22 38 06.0 -0.5**
GEC2 lAmb lAmb 22 38 10.9
comp=Z,5.8nm,1.1s
GERES GERESS Array B 55.17 310 P **P** **22 38 08.2 +1.6**
comp=Z,3.1nm,0.8s,baz=76,slow=5.6,SNR=28
comp=Z,3.1nm,0.8s
GERES GERESS Array B 55.17 310 P **P** **22 38 05.9 -0.6**
KHC Kasperske Hory 55.19 310⇑*iP* **P** **22 38 09.2 +2.6**
KHC pmax pmax
comp=Z,9.0nm,2.5s
KHC Kasperske Hory 55.19 310*eP* **P** **22 38 08.6 +2.0**
KONO Kongsberg 55.63 323 P **P** **22 38 09.8 +0.2**
KONO pmax pmax
comp=Z,23nm,1.5s
KONO Kongsberg 55.63 323 P **P** **22 38 09.8 +0.2**
KBA Koelnbreinsper 55.81 308*epP* pP 22 38 13.7 -2.4
comp=Z,3.2nm,1.1s
BILL Bilibino 55.82 27⇑*iP* **P** **22 38 12.5 +1.7**
BILL pmax pmax
comp=Z,4.0nm,0.7s
LESA Schwarzleotal 56.16 308*epP* **P** **22 38 14.9 +1.2**
comp=Z,3.2nm,0.8s
INTR Introdacqua 56.75 302 P **P** **22 38 17.5 -0.4**
INTR lAmb lAmb 22 38 20.6
comp=Z,6.2nm,0.9s
WTTA Wattenberg 56.89 308*i pP* **P** **22 38 20.7 +1.7**
comp=Z,4.0nm,0.7s,SNR=6.1
WATA Walderalm 56.91 308*epP* **P** **22 38 20.5 +1.5**
comp=Z,3.2nm,0.9s
AQU L'Aquila 57.01 302 P **P** **22 38 18.3 -1.5**
AQU pmax pmax
comp=Z,7.0nm,1.1s
AQU L'Aquila 57.01 302 P **P** **22 38 18.3 -1.5**
AQU lAmb lAmb 22 38 24.6
comp=Z,7.2nm,1.1s
FDMO Fiordimonte 57.04 303 **P** **22 38 18.7 -1.2**
FDMO lAmb lAmb 22 38 23.8
comp=Z,8.2nm,1.2s
SQTA Sankt Quirin 57.18 308*epP* **P** **22 38 22.4 +1.5**
comp=Z,2.8nm,0.7s
MOTA Mosalm 57.22 308*epP* **P** **22 38 23.5 +2.2**
comp=Z,6.7nm,0.9s
RETA Reutte 57.41 309*epP* **P** **22 38 24.2 +1.7**
comp=Z,2.0nm,0.6s
FETA Feichten 57.55 308*epP* **P** **22 38 25.1 +1.4**
comp=Z,3.3nm,0.9s
DAVA Damuels 58.04 309*epP* **P** **22 38 29.7 +2.7**
comp=Z,3.7nm,0.8s
TUE Stuetta 58.62 308 **P** **22 38 30.3 -0.8**
TUE lAmb lAmb 22 38 35.3
comp=Z,3.6nm,0.9s
SENIN Lac Senin/Sane 60.00 308 P **P** **22 38 40.4 -0.4**
SENIN lAmb lAmb 22 38 48.5
comp=Z,5.2nm,1.1s
EKA Eskdalemuir Ar 63.36 320 P **P** **22 39 03.7 +0.7**
comp=Z,2.4nm,0.8s,baz=77,slow=8.1,SNR=4.0
comp=Z,2.4nm,0.8s
D20K Etivluk River 68.31 21 **P** **22 39 34.3 -0.3**
D20K lAmb lAmb 22 40 04.2
comp=Z,3.2nm,1.0s
WB0 Warramunga Arr 69.62 132 P **P** **22 39 42.4 -1.1**
WRA Warramunga Arr 69.72 132 P **P** **22 39 43.6 -0.4**
comp=Z,1.8nm,0.7s,baz=326,slow=6.5,SNR=11
comp=Z,1.8nm,0.7s
WRA Warramunga Arr 69.72 132*ceP* **P** **22 39 43.7 -0.3**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 69.72 132 P **P** **22 39 42.6 -1.4**
ESDC Sonseca Array 70.18 305 P **P** **22 39 47.2 +0.4**
comp=Z,0.8nm,0.8s,baz=35,slow=6.1,SNR=6.2
comp=Z,0.8nm,0.8s
ESDC Sonseca Array 70.18 305 P **P** **22 39 45.8 -1.0**
TAM Tamanrasset 70.81 285 P **P** **22 39 50.3 -0.7**
TAM Tamanrasset 70.81 285 **P** **22 39 50.3 -0.7**
J19K Poorman 71.50 24 **P** **22 39 53.6 -0.7**
J19K lAmb lAmb 22 39 57.0
comp=Z,4.0nm,0.9s
ASAR Alice Springs 72.26 135 P **P** **22 39 59.1 -0.3**
comp=Z,1.8nm,0.8s,baz=316,slow=5.7,SNR=9.4
ASAR LR LR 23 16 27.8
comp=Z,285nm,18.6s,baz=170,slow=40
comp=Z,1.8nm,0.8s
ASAR Alice Springs 72.26 135 P **P** **22 39 58.2 -1.2**
E27K Coleen River 72.73 17 **P** **22 40 00.6 -1.1**
E27K lAmb lAmb 22 40 03.1
comp=Z,2.4nm,1.0s
E28M Babbage River 72.91 16 **P** **22 40 01.4 -1.3**
E28M lAmb lAmb 22 40 04.1
comp=Z,2.8nm,1.1s
L19K White Mountain 72.92 26 **P** **22 40 01.9 -1.0**
CAST Castle Rocks 73.08 24 P **P** **22 40 03.4 -0.4**
CAST lAmb lAmb 22 40 06.0
comp=Z,3.0nm,0.8s
E29M Blow River 73.45 16 **P** **22 40 05.0 -0.9**
E29M lAmb lAmb 22 40 08.0
comp=Z,4.3nm,0.9s
ILAR Eielson Array 73.81 21 P **P** **22 40 08.0 -0.1**
comp=Z,1.3nm,0.8s,baz=311,slow=5.0,SNR=14
comp=Z,1.3nm,0.8s
ILAR Eielson Array 73.81 21 P **P** **22 40 08.0 -0.1**
ILAR Eielson Array 73.81 21 P **P** **22 40 07.2 -0.9**
SKT Skwentna 74.23 25 **P** **22 40 09.6 -1.0**
G29M Pine Creek 74.59 17 P **P** **22 40 11.9 -0.7**
G29M lAmb lAmb 22 40 15.1
comp=Z,3.0nm,0.9s
I27K Kandik River 74.70 19 P **P** **22 40 13.1 -0.2**
I27K lAmb lAmb 22 40 15.5
comp=Z,2.9nm,0.9s
RIDG Independent Ri 75.17 21 P **P** **22 40 14.3 -1.7**
RIDG lAmb lAmb 22 40 16.9
comp=Z,5.0nm,1.0s
SCRK Sand Creek 75.25 21 P **P** **22 40 16.1 -0.5**
SCRK lAmb lAmb 22 40 18.1
comp=Z,3.0nm,0.9s
I28M Miner Creek 75.26 18 **P** **22 40 16.2 -0.4**
I28M lAmb lAmb 22 40 19.0
comp=Z,2.5nm,0.8s
J30M Hart River 76.89 18 **P** **22 40 25.6 -0.4**
J30M lAmb lAmb 22 40 28.2
comp=Z,2.5nm,0.8s
MCARA McCarthy VSAT 77.50 22 P **P** **22 40 29.0 -0.2**
CTA Charters Tower 77.69 124 LR LR 23 17 22.7

comp=Z,171nm,19.8s,baz=231,slow=38
TORD Torodi Ar. Bea 78.79 278 P **P** **22 40 37.0 -0.1**
comp=Z,2.6nm,0.8s,baz=52,slow=5.2,SNR=9.7
comp=Z,2.6nm,0.8s
STKA Stephens Creek 82.89 135 P **P** **22 40 57.2 -1.4**
comp=Z,2.2nm,0.9s,baz=333,slow=9.0,SNR=3.7
comp=Z,2.2nm,0.9s
YKA Yellowknife Ar 83.12 10 P **P** **22 40 59.2 -0.2**
comp=Z,1.2nm,0.8s,baz=344,slow=5.4,SNR=4.4
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 83.12 10*ceP* **P** **22 41 02.2 +2.7**
YKA pmax pmax
comp=Z,1.0nm,0.8s
BOSA Boshof 84.66 231 P **P** **22 41 07.5 -0.5**
comp=Z,1.5nm,0.8s,baz=34,slow=3.6,SNR=2.2
comp=Z,1.5nm,0.8s
BOSA Boshof 84.66 231 P **P** **22 41 06.6 -1.3**
BOSA lAmb lAmb 22 41 32.9
comp=Z,4.8nm,1.2s
CPUP Villa Florida 148.14 273 PKhKP PKPpre 22 48 16.6
comp=Z,2.8nm,0.8s,baz=60,slow=3.1,SNR=8.1
LPAZ La Paz 151.72 300 PKP **PKPdf** **22 48 23.1 -0.5**
comp=Z,2.2nm,0.8s,baz=188,slow=4.7,SNR=4.7

*IDC **22** 22:31:23.2±1.4,8°.87S×110°.57E,h0km,mb3.9/8, mbtmp3.9/10,ML3.6/2,Error ellipse: s-maj=46.4km s-min=17.3km az=39.0*
*DJA **22** 22:31:29.0±0.3,9°S±4°×11°0E±°,h10km,M4.4/41,mb4.6/6, MLv4.3/41*
ISC 22 22:31:29.3±1.2,9°.2S±0°.1×110°.31E±0°.09,h51km,n36, σ1§34/29,mb4.0/8,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.27**	**10**	P	**Pn**	**22 31 50.1**	**-0.6**
YOGI	**Yogyakarta**	**1.35**	**359**	P	**Pn**	**22 31 51.4**	**-0.4**
WOJI	**Wonogiri, Jawa**	**1.46**	**25**	P	**Pn**	**22 31 52.6**	**-0.7**
SNJI	**Sawahan-Nganju**	**1.99**	**46**	P	**Pn**	**22 32 00.9**	**+0.2**
SJI	**Sawahan**	**2.03**	**45**	P	**Pn**	**22 32 00.9**	**-0.2**
SMRI	**Semarang**	**2.11**	**4**	P	**Pn**	**22 32 04.4**	**+2.2**
NGJI	**Ngawi**	**2.12**	**33**	P	**Pn**	**22 32 06.1**	**+3.7**
KPJI	**Karang Pucung**	**2.28**	**323**	P	**Pn**	**22 32 05.9**	**+1.4**
CTJI	**Waduk Cacaban**	**2.42**	**333**	P	**Pn**	**22 32 08.4**	**+1.9**
BBJI	**Bungbulang**	**3.13**	**303**	P	**Pn**	**22 32 17.2**	**+0.9**
LEM	**Lembang**	**3.54**	**311**	Pn	**Pn**	**22 32 21.1**	**-0.8**
	6.5nm,0.3s,baz=109,slow=16,SNR=7.5						
LEM				Sn	**Sn**	**22 33 04.0**	**+1.4**
	7.2nm,0.3s,baz=53,slow=6.1,SNR=3.7						
	14nm,0.4s						
BLJI	**Banyuglugur**	**3.55**	**67**	P	**Pn**	**22 32 22.8**	**+0.9**
JAGI	**Jajag, Banyuwa**	**3.86**	**80**	P	**Pn**	**22 32 26.3**	**+0.1**
ABJI	**Asem Bagus**	**4.12**	**71**	P	**Pn**	**22 32 31.7**	**+2.0**
RTBI	**Rangdo, Negare**	**4.63**	**82**	P	**Pn**	**22 32 38.0**	**+1.2**
IGBI	**Denpasar**	**4.79**	**86**	P	**Pn**	**22 32 40.7**	**+1.8**
CGJI	**Cibinong**	**5.23**	**299**	P	**Pn**	**22 32 46.3**	**+1.3**
TWSI	**Taliwang, Sumb**	**6.51**	**87**	P	**Pn**	**22 33 02.6**	**+0.1**
	0.2nm28nm,0.6s						
PLAI	**Plampang**	**7.38**	**88**	P	**Pn**	**22 33 15.8**	**+1.3**
	0.2nm46nm,0.9s						
DBNI	**Kabupaten Domp**	**7.94**	**86**	P	**Pn**	**22 33 23.3**	**+1.2**
KAPI	**Kappang**	**10.24**	**67**	Pn	Pn	22 33 45.6	-8.0
	0.4nm,0.3s,baz=224,slow=8.5,SNR=1.9						
	4.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.33**	**122**	P	Pn	22 35 20.1	-7.6
	3.1nm,0.8s,baz=280,slow=11,SNR=1.9						
FITZ				S	Sn	22 38 23.4	-16
	2.4nm,0.9s,baz=131,slow=23,SNR=1.5						
WRA	**Warramunga Arr**	**25.57**	**117**	P	**P**	**22 36 52.9**	**-0.8**
	0.7nm,0.9s,baz=291,slow=11,SNR=15						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**26.77**	**125**	P	**P**	**22 37 05.3**	**+0.8**
	0.6nm,0.6s,baz=300,slow=9.8,SNR=7.9						
	0.6nm,0.6s						
H08S2	**Diego Garcia H**	**37.43**	**269**	T	T	23 18 41.0	
	baz=94						
H08S3	**Diego Garcia H**	**37.44**	**269**	T	T	23 18 45.6	
	baz=94,slow=74						
H08S1	**Diego Carcia H**	**37.45**	**269**	T	T	23 18 48.9	
	baz=94,slow=74						
USRK	**Ussuriysk Ar.**	**56.64**	**19**	P	**P**	**22 41 06.4**	**-0.8**
	2.0nm,0.7s,baz=209,slow=3.4,SNR=5.2						
	2.0nm,0.7s						
MKAR	**Makanchi Array**	**61.06**	**338**	P	**P**	**22 41 37.6**	**-0.3**
	1.3nm,0.5s,baz=150,slow=7.5,SNR=26						
	1.3nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.81**	**222**	T	T	23 49 36.7	
	baz=75						
H04N1	**CROZET ISLANDS**	**61.83**	**222**	T	T	23 49 36.7	
	baz=75						
H04N3	**CROZET ISLANDS**	**61.83**	**222**	T	T	23 49 23.3	
	baz=75						
KURBB	**Kurchatov Arra**	**65.63**	**338**	P	**P**	**22 42 07.3**	**-0.6**
	0.3nm,0.4s,baz=162,slow=5.1,SNR=4.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**66.48**	**344**	P	**P**	**22 42 12.6**	**-0.8**
	0.7nm,0.4s,baz=142,slow=6.3,SNR=3.1						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**70.66**	**336**	P	**P**	**22 42 38.8**	**-0.7**
	1.3nm,0.6s,baz=143,slow=9.9,SNR=4.3						
	1.3nm,0.6s						
PETK	**Petropavlovsk-**	**73.94**	**27**	P	**P**	**22 42 58.3**	**-0.7**
	0.9nm,0.5s,baz=234,slow=8.4,SNR=5.9						
	0.9nm,0.5s						

PRU 22 22:45:25.7,51°.52N×16°.07E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.93**	**181**	*e*PG	Pg	22 45 42.8	-0.8
CHVC				*e*SG	Sg	22 45 56.4	+0.8
CHVC	**Chvalec**	**0.93**	**181**	*e*	Pg	22 45 42.8	-0.8
OSTC	**Ostas**	**0.97**	**175**	*e*PG	Pg	22 45 43.7	-0.5
OSTC				*e*SG	Sg	22 45 57.3	+0.5
	comp=Z,3.1nm,0.3s						
UPC	**Upice**	**1.01**	**182**	*e*PG	Pg	22 45 44.2	-0.9
UPC				*e*SG	Sg	22 45 58.3	+0.1
	comp=Z,4.7nm,0.4s						
UPC	**Upice**	**1.01**	**182**	*e*	Pg	22 45 44.2	-0.9
DPC	**Dobruska-Polom**	**1.18**	**172**	*e*PG	Pg	22 45 46.9	-1.4
DPC				*e*SG	Sg	22 46 03.4	-0.2
	comp=Z,3.2nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**245**	Pg	Pn	22 45 52.0	-1.6
BRG				Sg	Sg	22 46 12.1	-1.3
BRG				Amp		22 46 14.4	
	comp=Z,2.8nm,0.4s						
KRLC	**Kraliky**	**1.52**	**162**	*e*PG	Pn	22 45 53.1	-1.0
KRLC				*e*SG	Sg	22 46 13.3	-1.0
	comp=Z,2.2nm,0.6s						
STEB	**Steborice**	**1.92**	**145**	*e*SG	Sb	22 46 26.1	0.0
CLL	**Collm**	**1.93**	**265**	*e*Pg	Pn	22 45 56.0	-3.8
CLL				*e*Sg	Sn	22 46 22.0	-2.8
MORC	**Moravsky Berou**	**1.98**	**151**	*e*PN	Pn	22 45 58.2	-2.3
MORC				*e*SG	Sb	22 46 27.7	-0.2
VRAC	**Vranov**	**2.24**	**171**	*e*PN	Pn	22 46 02.9	-1.1
VRAC				*e*SG	Sb	22 46 35.5	+0.2
TREC	**Trest**	**2.26**	**190**	*e*SG	Sg	22 46 38.0	-0.2
KHC	**Kasperske Hory**	**2.88**	**215**	*e*SG	Sg	22 46 56.0	-2.0

IDC 22 22:50:13.8±2.5,22°.81S×12°.52W,h0km,mb4.0/3, mbtmp4.0/3,MS4.1/4,Error ellipse: s-maj=90.9km s-min=29.0km az=148.0,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**13.92**	**351**	T	T	23 07 10.3	
	baz=172,slow=74,SNR=44						
H10S3	**ASCENSION HYDR**	**13.93**	**351**	T	T	23 07 11.0	
	baz=48,slow=74,SNR=50						
BDFB	**Brasilia**	**34.20**	**276**	P	P	22 57 01.1	-0.3
	1.3nm,0.4s,baz=120,slow=8.1,SNR=4.2						
BDFB				LR	LR	23 07 42.3	
	comp=Z,134nm,20.9s,baz=233,slow=31						
	1.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**38.35**	**23**	P	P	22 57 36.7	0.0
	1.8nm,0.6s,baz=201,slow=8.8,SNR=12						
	1.8nm,0.6s						
CPUP	**Villa Florida**	**40.75**	**256**	P	P	22 57 56.9	+0.2
	1.3nm,0.8s,baz=101,slow=16,SNR=2.9						
	1.3nm,0.8s						
MDT	**Midelt**	**55.83**	**8**	LR	LR	23 22 56.9	
	comp=Z,162nm,19.8s,baz=158,slow=35						
ATAH	**Atahualpa**	**65.05**	**273**	LR	LR	23 27 48.5	
	comp=Z,152nm,19.6s,baz=88,slow=35						
FRB	**Frobisher Bay**	**96.66**	**338**	LR	LR	23 43 11.6	

comp=Z,223nm,18.0s,baz=302,slow=33
MJAR Matsushiro Arr 151.25 55 PKPbc PKPbc 23 10 09.2 -0.3
0.3nm,0.4s,baz=307,slow=2.6,SNR=2.1

*IDC **22** 22:59:50.0±1.7,2.84N×132.69E,h0km,mb3.7/5, mbtmp3.7/6,ML3.6/1,Error ellipse: s-maj=81.4km s-min=20.0km az=75.0*
ISC 22 22:59:55.8±1.4,2.7N±0.1×132.5E±0.3,h35km,n12, σ0≤72/7,mb3.7/5,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.76**	**198**	Pn	**Pn**	**23 00 51.9**	**+0.5**
	3.7nm,0.3s,baz=17,slow=19,SNR=16						
SIJI				Sn	**Sn**	**23 01 34.1**	**-0.4**
	1.9nm,0.3s,baz=201,slow=23,SNR=7.1 12nm,0.4s						
WRA	**Warramunga Arr**	**22.61**	**175**	P	**P**	**23 04 52.5**	**-1.1**
	0.8nm,0.6s,baz=357,slow=11,SNR=8.2 0.8nm,0.6s						
ASAR	**Alice Springs**	**26.27**	**177**	P	**P**	**23 05 28.4**	**+0.4**
	0.9nm,0.8s,baz=357,slow=9.2,SNR=6.2 0.9nm,0.8s						
STKA	**Stephens Creek**	**35.50**	**167**	P	**P**	**23 06 49.5**	**+0.3**
	3.1nm,0.9s,baz=352,slow=12,SNR=4.0 3.1nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**37.01**	**63**	T	T	23 45 55.0	
	baz=248						
H11S2	**WAKE ISLAND Hy**	**37.02**	**63**	T	T	23 45 57.8	
	baz=248						
H11S1	**WAKE ISLAND Hy**	**37.02**	**62**	T	T	23 45 47.6	
	baz=248						
H11N1	**WAKE ISLAND Hy**	**37.63**	**61**	T	T	23 46 37.8	
	baz=247						
H11N2	**WAKE ISLAND Hy**	**37.65**	**61**	T	T	23 46 41.1	
	baz=247,SNR=4.4						
H11N3	**WAKE ISLAND Hy**	**37.65**	**61**	T	T	23 46 41.1	
	baz=247						
MKAR	**Makanchi Array**	**61.70**	**323**	P	**P**	**23 10 10.7**	**+0.1**
	0.4nm,0.6s,baz=115,slow=5.7,SNR=4.3 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**65.72**	**326**	P	**P**	**23 10 36.5**	**-0.4**
	0.6nm,0.8s,baz=124,slow=6.7,SNR=5.8 0.6nm,0.8s						

*IDC **22** 23:01:22.8±1.5,37.68N×20.97E,h0km,mb3.7/6, mbtmp3.7/6,MS3.3/1,Error ellipse: s-maj=43.8km s-min=27.4km az=129.0*
*THE **22** 23:01:27.1,38°N±1°×2°1E±°,h16km±1km,M3.0/11, MLh3.0/11*
*ATH **22** 23:01:27.7,37.74N×20.89E,h6km±1km,ML3.0/13, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
ISC 22 23:01:26.5±0.9,37.73N±0.04×20.87E±0.03,h19km±3km, n42,σ0≤80/53,mb3.6/5,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.04**	**229**	P	**Pg**	**23 01 30.0**	**+0.1**
LTHK				S	**Sg**	**23 01 32.4**	**+0.2**
ORTH	**Orthonies,Zaky**	**0.18**	**310**	P	**Pg**	**23 01 31.7**	**+0.3**
ORTH				S	**Sg**	**23 01 35.3**	**+0.6**
ORTH	**Orthonies,Zaky**	**0.18**	**310**	P	**Pg**	**23 01 31.6**	**+0.3**
ORTH				S	**Sg**	**23 01 34.3**	**-0.4**
RTZL	**Ratzakli, Kefa**	**0.35**	**347**	P	**Pb**	**23 01 34.4**	**+0.2**
RTZL				S	**Sb**	**23 01 40.0**	**+0.6**
LCHA	**Lechaina**	**0.37**	**57**	P	**Pb**	**23 01 34.8**	**+0.2**
LCHA				S	**Sg**	**23 01 39.3**	**-0.4**
VLS	**Valsamata**	**0.50**	**333**	P	**Pb**	**23 01 36.5**	**-0.1**
VLS				S	**Sb**	**23 01 43.9**	**+0.3**
RLS	**Riolos of Patr**	**0.57**	**55**	P	**Pb**	**23 01 38.0**	**+0.2**
RLS				S	**Sb**	**23 01 45.8**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.58**	**324**	P	**Pg**	**23 01 38.6**	**+0.4**
AXS	**Araxos**	**0.61**	**41**	P	**Pg**	**23 01 38.8**	**+0.1**
ZARO	**Zacharo**	**0.67**	**112**	P	**Pg**	**23 01 40.3**	**+0.6**
AMT	**Artemida-Makis**	**0.69**	**107**	P	**Pb**	**23 01 39.7**	**-0.3**
DRO	**Drossia**	**0.70**	**72**	P	**Pb**	**23 01 40.2**	**+0.1**
DRO				S	**Sg**	**23 01 50.1**	**+0.4**
PLEV	**Plevrona-Mesol**	**0.80**	**32**	P	**Pb**	**23 01 42.1**	**+0.3**
AST1	**Astakos**	**0.82**	**12**	P	**Pg**	**23 01 42.7**	**0.0**
EVGI	**Lefkada island**	**0.90**	**349**	P	**Pb**	**23 01 43.8**	**+0.2**
EVGI				S	**Sn**	**23 01 57.1**	**+0.4**
DRAG	**Dragano-Lefkad**	**0.98**	**346**	P	**Pg**	**23 01 45.6**	**0.0**
NYDR	**Nydri-Lefkada**	**0.99**	**352**	P	**Pg**	**23 01 45.6**	**-0.2**
VVK	**Vomvokou**	**1.01**	**47**	P	**Pn**	**23 01 46.0**	**+0.2**
VVK				S	**Sg**	**23 02 00.4**	**+0.8**
PVO	**Paravola**	**1.02**	**30**	P	**Pg**	**23 01 46.5**	**0.0**
PVO				S	**Sg**	**23 02 00.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.06**	**73**	P	**Pb**	**23 01 45.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.06**	**73**	P	**Pg**	**23 01 47.1**	**0.0**
KLV				S	**Sg**	**23 02 01.7**	**+0.7**
EFP	**Efpalio**	**1.07**	**49**	P	**Pn**	**23 01 46.5**	**0.0**
ANX	**Ano Chora**	**1.19**	**44**	P	**Pg**	**23 01 49.7**	**+0.1**
EVR	**Evrytania**	**1.39**	**32**	P	**Pg**	**23 01 53.5**	**+0.1**
TETR	**Tetrakomo, Epi**	**1.64**	**11**	P	**Pb**	**23 01 57.3**	**+1.1**
LKR	**Lokris**	**1.91**	**61**	P	**Pb**	**23 02 00.7**	**0.0**
VLI	**Veliai**	**1.94**	**121**	P	**Pb**	**23 02 01.9**	**+0.8**
THL	**Klokotos Trika**	**2.04**	**26**	P	**Pb**	**23 02 02.9**	**0.0**
KEK	**Kerkira**	**2.15**	**337**	P	**Pb**	**23 02 04.0**	**-0.8**
VLY	**Voula,Athens**	**2.32**	**86**	P	**Pb**	**23 02 05.9**	**-1.8**
NEO	**Neokhori**	**2.42**	**49**	P	**Pb**	**23 02 07.7**	**-1.8**
DION	**Dionisos Attik**	**2.45**	**81**	P	**Pn**	**23 02 07.5**	**+2.0**
KZN	**Kozani**	**2.66**	**15**	P	**Pb**	**23 02 12.0**	**-1.6**
KYMI	**Kymi, Euboea I**	**2.70**	**70**	P	**Pn**	**23 02 11.2**	**+2.3**
OHR	**Ohrid**	**3.37**	**359**	*i* Pn	**Pb**	**23 02 27.2**	**+1.4**
ASF	**Jabal al Asfar**	**14.26**	**108**	LR	LR	23 11 57.6	
	comp=Z,124nm,18.2s,baz=206,slow=45						
HFS	**Hagfors**	**22.88**	**351**	P	**P**	**23 06 28.0**	**-0.7**
	1.3nm,0.6s,baz=166,slow=13,SNR=1.7 1.3nm,0.6s						
FINES	**FINESS Array B**	**23.96**	**6**	P	**P**	**23 06 39.4**	**+0.2**
	4.3nm,1.0s,baz=186,slow=13,SNR=3.5 4.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**29.86**	**220**	P	**P**	**23 07 32.2**	**-0.6**
	0.3nm,0.7s,baz=28,slow=9.6,SNR=1.7 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**42.27**	**53**	P	**P**	**23 09 17.4**	**-1.1**
	0.5nm,0.5s,baz=281,slow=8.6,SNR=5.6 0.5nm,0.5s						
MKAR	**Makanchi Array**	**45.30**	**58**	P	**P**	**23 09 41.8**	**-1.2**
	0.3nm,0.3s,baz=273,slow=7.8,SNR=10 0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**23 09 45.5**	**-1.1**
	0.6nm,0.4s,baz=272,slow=9.8,SNR=4.2 0.6nm,0.4s						

IDC 22 23:02:45.9±1.3,1.59N×128.85E,h0km,mb3.5/4, mbtmp3.5/5,ML3.1/1,Error ellipse: s-maj=75.2km s-min=19.7km az=60.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.44**	**135**	Pn	Pn	23 03 40.1	-0.7
	2.0nm,0.3s,baz=327,slow=23,SNR=5.8						
SIJI				Sn	Sn	23 04 24.1	+1.8
	1.2nm,0.3s,baz=188,slow=22,SNR=1.5 9.0nm,0.4s						
WRA	**Warramunga Arr**	**22.06**	**166**	P	P	23 07 41.3	-1.3
	1.0nm,0.8s,baz=345,slow=12,SNR=5.5 1.0nm,0.8s						
ASAR	**Alice Springs**	**25.58**	**169**	P	P	23 08 18.1	+1.1
	1.1nm,0.8s,baz=355,slow=10,SNR=7.1 1.1nm,0.8s						
MKAR	**Makanchi Array**	**60.51**	**325**	P	P	23 12 58.3	+0.4
	0.4nm,0.8s,baz=122,slow=5.4,SNR=3.6 0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**64.67**	**327**	P	P	23 13 25.2	-0.4
	0.4nm,0.8s,baz=120,slow=5.7,SNR=4.4 0.4nm,0.8s						

*BJI **22** 23:06:34.9,51.44N×179.24W,h36km,mB5.2/9,mb5.0/55, Ms4.7/6,Ms7 4.6/7*
*MOS **22** 23:06:35.1±1.0,51.31N×178.88W,h45km,mb5.0/69, MS4.2/8,Error ellipse: s-maj=7.1km s-min=4.6km az=106.3*
*NEIC **22** 23:06:36.9±1.6,51.4N±0.1×178.94W±0.09,h45km±5km, mb4.9/230,ML4.9/8,Error ellipse: s-maj=15.1km s-min=7.9km az=169.0*
*IDC **22** 23:06:37.0±1.6,51.40N×178.90W,h46km±13km,mb4.3/38, mbtmp4.6/43,ML4.7/5,MS3.9/42,Error ellipse: s-maj=13.7km s-min=8.7km az=167.0*
*GFZ **22** 23:06:38.0±0.2,51°N±5°×17°9W±°,h49km,M4.9/92, mb4.9/92*
*BGR **22** 23:06:43.4,52.18N×177.29E,h33km,mb4.7,Ms4.1*
ISC 22 23:06:36.5±0.6,51.23N±0.06×178.86W±0.03,h46km±4km, n1053,σ0≤97/1062,mb4.8/245,MS4.0/54,69C-18D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.51**	**63**	P	**Pn**	**23 07 01.1**	**+0.1**
ADK						23 07 20.4	
ADK	**Adak**	**1.51**	**63**		**Pn**	**23 07 01.1**	**+0.1**
ADK				Sn	**Sn**	**23 07 20.4**	**+0.9**
ADK	**Adak**	**1.51**	**63**	P	**Pn**	**23 07 01.2**	**+0.2**
ATKA	**Atka Island**	**3.06**	**70**		**Pn**	**23 07 23.2**	**+0.9**
ATKA				Sn	**Sn**	**23 07 59.1**	**+1.5**
ATKA				IAML		23 08 06.2	
	comp=N,4μm,1.2s						
ATKA				IAML		23 08 12.2	
	comp=E,3μm,1.0s						
SHEM	**Shemya Is, Ala**	**4.61**	**292**	P	**Pn**	**23 07 43.7**	**+0.2**
	comp=E,50nm,0.3s,baz=127,slow=1.8,SNR=28						
SHEM				S	**Sn**	**23 08 37.5**	**+1.9**
	comp=E,248nm,0.6s,baz=308,slow=22,SNR=5.7 comp=E,128nm,0.4s						
SHEM	**Shemya Is, Ala**	**4.61**	**292**		**Pn**	**23 07 43.1**	**-0.4**
SMY	**Shemya**	**4.61**	**292**	P	**Pn**	**23 07 43.4**	**-0.1**
SMY	**Shemya**	**4.61**	**292**		**Pn**	**23 07 43.4**	**-0.1**
SMY				IAML		23 08 56.5	
	comp=N,812nm,1.4s						
SMY				IAML		23 08 57.5	
	comp=E,1μm,1.0s						
CLES	**Cleveland East**	**5.76**	**70**	Pn	**Pn**	**23 08 01.4**	**+2.1**
SPIA	**Saint Paul Isl**	**7.81**	**37**		**Pn**	**23 08 28.1**	**+0.7**
SPIA	**Saint Paul Isl**	**7.81**	**37**	P	**Pn**	**23 08 30.5**	**+3.1**
	baz=224,SNR=8.8						
UNV	**Unalaska Valle**	**7.98**	**66**		**Pn**	**23 08 31.1**	**+1.4**
UNV	**Unalaska Valle**	**7.98**	**66**	P	**Pn**	**23 08 33.0**	**+3.3**
	baz=256						
LVA	**Lava Point**	**8.33**	**64**		**Pn**	**23 08 37.2**	**+2.7**
AKUT	**Akutan**	**8.47**	**65**		**Pn**	**23 08 38.3**	**+1.9**
M11K	**Mekoryuk**	**11.59**	**33**		**Pn**	**23 09 20.1**	**+1.0**
M11K	**Mekoryuk**	**11.59**	**33**	P	**Pn**	**23 09 22.8**	**+3.7**
	baz=224,SNR=6.5						
M13K	**Dall Lake**	**12.64**	**37**		**Pn**	**23 09 34.6**	**+1.2**
M13K	**Dall Lake**	**12.64**	**37**	P	**Pn**	**23 09 38.2**	**+4.8**
	baz=230						
O14K	**Tigyukauivet M**	**12.83**	**44**		**Pn**	**23 09 37.8**	**+1.8**
O14K	**Tigyukauivet M**	**12.83**	**44**	P	**Pn**	**23 09 39.7**	**+3.8**
	baz=239						
N14K	**Kuskokwak Cree**	**13.01**	**41**		**Pn**	**23 09 39.6**	**+1.1**
N14K	**Kuskokwak Cree**	**13.01**	**41**	P	**P**	**23 09 43.4**	**-4.4**
	baz=236						
GAMB	**Gambell**	**13.15**	**14**	P	**Pn**	**23 09 42.6**	**+2.3**
	baz=200						
K13K	**Kusilvak Mount**	**13.24**	**30**		**Pn**	**23 09 42.6**	**+1.0**
K13K	**Kusilvak Mount**	**13.24**	**30**	P	**Pn**	**23 09 42.6**	**+1.0**
	baz=223						
M14K	**Bethel**	**13.39**	**38**		**Pn**	**23 09 45.6**	**+2.0**
M14K	**Bethel**	**13.39**	**38**	P	**Pn**	**23 09 47.2**	**+3.6**
	baz=232						
O15K	**Ungalikthiuk R**	**13.43**	**46**		**Pn**	**23 09 45.1**	**+0.9**
O15K	**Ungalikthiuk R**	**13.43**	**46**	P	**P**	**23 09 48.5**	**-4.0**
	baz=242						
L14K	**Kuka Creek**	**13.50**	**35**		**Pn**	**23 09 45.9**	**+0.8**
L14K	**Kuka Creek**	**13.50**	**35**	P	**Pn**	**23 09 48.3**	**+3.2**
	baz=229,SNR=27						
N15K	**Kwethluk River**	**13.81**	**42**	P	**P**	**23 09 53.9**	**-2.9**
	baz=238,SNR=48						
M15K	**Kasigluk River**	**13.86**	**40**	P	**P**	**23 09 54.3**	**-2.9**
	baz=235,SNR=20						
PET	**Petropavlovsk**	**13.92**	**286**	*e*P	**Pn**	**23 09 49.3**	**-1.6**
PET				pmax	pmax		
	comp=Z,29nm,1.3s						
L15K	**Ungalak Mounta**	**14.15**	**36**	P	**Pn**	**23 09 57.1**	**+3.2**
	baz=230,SNR=17						
J14K	**Nanvaranak Lak**	**14.20**	**30**		**Pn**	**23 09 54.0**	**-0.5**
J14K	**Nanvaranak Lak**	**14.20**	**30**	P	**P**	**23 09 58.2**	**-2.7**
	baz=223						
P16K	**Nushagak River**	**14.22**	**49**	Pn	**Pn**	**23 09 55.9**	**+1.0**
P16K	**Nushagak River**	**14.22**	**49**	P	**P**	**23 09 59.4**	**-1.8**
	baz=246						
O16K	**Kokwok River B**	**14.41**	**46**	P	**P**	**23 10 02.1**	**-1.2**
	baz=244						
PEA0B	**Petropavlovsk-**	**14.50**	**287**	*i* P	**Pn**	**23 09 59.8**	**+1.2**
PEA0B	**Petropavlovsk-**	**14.50**	**287**		**Pn**	**23 09 59.0**	**+0.4**
PETK	**Petropavlovsk-**	**14.50**	**287**	P	**Pn**	**23 09 58.6**	**0.0**
	comp=Z,2.0nm,0.3s,baz=90,slow=15,SNR=16						
PETK				S	**Sn**	**23 12 35.2**	**-2.6**
	comp=Z,1.0nm,0.7s,baz=94,slow=16,SNR=1.7						
PETK				LR	LR	23 16 01.8	
	comp=Z,283nm,18.7s,baz=101,slow=39 comp=Z,5.0nm,0.6s						
PETK	**Petropavlovsk-**	**14.50**	**287**	P	**Pn**	**23 09 59.3**	**+0.7**
PETK	**Petropavlovsk-**	**14.50**	**287**		**Pn**	**23 09 59.3**	**+0.7**
N16K	**Nishlik Lake**	**14.54**	**43**	P	**P**	**23 10 03.1**	**-1.7**
	baz=SNR=30						
R17L	**Mt. Peulik Vol**	**14.54**	**55**	P	**Pn**	**23 10 01.3**	**+2.2**
	baz=254						
K15K	**Wolf Creek Mou**	**14.54**	**34**	Pn	**Pn**	**23 10 01.5**	**+2.3**
K15K	**Wolf Creek Mou**	**14.54**	**34**	P	**P**	**23 10 03.8**	**-1.0**
	baz=228,SNR=30						
Q16K	**King Salmon**	**14.72**	**51**	P	**P**	**23 10 05.3**	**-1.5**
	baz=249						
M16K	**Timber Creek**	**14.75**	**41**		**Pn**	**23 10 03.8**	**+1.9**
M16K	**Timber Creek**	**14.75**	**41**	P	**P**	**23 10 05.7**	**-1.4**
	baz=237,SNR=19						
L16K	**Owhat River**	**14.93**	**38**		**Pn**	**23 10 05.5**	**+1.2**
L16K	**Owhat River**	**14.93**	**38**	P	**P**	**23 10 07.6**	**-1.5**
	baz=234,SNR=8.5						
O17K	**Koliganek Bris**	**14.95**	**47**	P	**P**	**23 10 08.6**	**-0.7**
	baz=245						
Q17K	**Contact Creek**	**14.97**	**53**	P	**Pn**	**23 10 05.1**	**+0.2**
	baz=252						
P17K	**Kvichak River**	**15.02**	**49**	P	**P**	**23 10 09.4**	**-0.7**
	baz=248						
ANM	**Nome**	**15.12**	**23**	P	**P**	**23 10 10.6**	**-0.6**
	baz=214						
N17K	**Nushagak Hills**	**15.25**	**44**		**P**	**23 10 10.7**	**-1.9**
N17K	**Nushagak Hills**	**15.25**	**44**	P	**P**	**23 10 12.1**	**-0.5**
	baz=242,SNR=29						
J16K	**Anvik River**	**15.53**	**32**		**P**	**23 10 14.1**	**-1.6**
J16K	**Anvik River**	**15.53**	**32**	P	**P**	**23 10 15.3**	**-0.4**
	baz=228,SNR=28						
Q18K	**Katmai Hardscr**	**15.53**	**52**	P	**P**	**23 10 14.3**	**-1.5**
	baz=252						
M17K	**Holitna River**	**15.57**	**41**	P	**P**	**23 10 15.8**	**-0.4**
	baz=239,SNR=25						
L17K	**Donlin**	**15.63**	**38**	P	**P**	**23 10 15.7**	**-1.2**
	baz=235						
P18K	**Big Mountain,**	**15.67**	**49**	P	**Pn**	**23 10 15.1**	**+1.1**
	baz=249						
G15K	**Niukluk**	**15.80**	**24**	P	**P**	**23 10 18.8**	**+0.1**
	baz=216,SNR=11						
N18K	**Kilae Creek**	**15.89**	**45**		**P**	**23 10 18.8**	**-0.9**
N18K				IAmb	IAmb	23 10 25.0	
	comp=Z,53nm,1.0s						
N18K	**Kilae Creek**	**15.89**	**45**	P	**P**	**23 10 19.4**	**-0.3**
	baz=244,SNR=12						
I17K	**Unalakleet**	**15.91**	**30**	P	**P**	**23 10 19.9**	**0.0**
	baz=226						
K17K	**Iditarod**	**15.97**	**36**	P	**P**	**23 10 20.0**	**-0.7**
K17K	**Iditarod**	**15.97**	**36**	P	**P**	**23 10 20.9**	**+0.3**
	baz=234,SNR=22						
H16K	**Elim**	**16.00**	**27**	P	**Pn**	**23 10 18.6**	**+0.5**
	baz=221						
J17K	**VABM Dome**	**16.12**	**33**	P	**P**	**23 10 20.9**	**-1.3**
J17K	**VABM Dome**	**16.12**	**33**	P	**P**	**23 10 21.9**	**-0.3**
	baz=230,SNR=43						
F15K	**North Star Dit**	**16.25**	**21**	P	**P**	**23 10 23.6**	**-0.1**
F15K	**North Star Dit**	**16.25**	**21**	P	**Pn**	**23 10 21.2**	**0.0**
	baz=214						
M18K	**Stony River**	**16.29**	**42**	P	**Pn**	**23 10 22.5**	**+0.7**
	baz=242,SNR=5.5						
L18K	**Granite Mounta**	**16.31**	**39**		**P**	**23 10 24.0**	**-0.4**
L18K	**Granite Mounta**	**16.31**	**39**	P	**Pn**	**23 10 22.9**	**+0.9**
	baz=238,SNR=17						
KDAK	**Kodiak Island**	**16.54**	**56**	P	**Pn**	**23 10 22.9**	**-2.0**
	comp=Z,5.4nm,0.3s,baz=230,slow=3.9,SNR=47 comp=Z,12nm,0.4s						
G16K	**Koyuk River**	**16.55**	**25**	P	**Pn**	**23 10 25.7**	**+0.7**
	baz=219,SNR=13						
N19K	**Bonanza Creek**	**16.57**	**45**	P	**P**	**23 10 26.5**	**-0.9**
	baz=246,SNR=17						
H17K	**Granite Mounta**	**16.90**	**28**		**Pn**	**23 10 30.1**	**+0.7**
	baz=225,SNR=12						
J18K	**Innoko River**	**17.00**	**35**		**P**	**23 10 31.8**	**-0.2**
J18K	**Innoko River**	**17.00**	**35**	P	**P**	**23 10 31.8**	**-0.2**
	baz=234,SNR=36						
L19K	**White Mountain**	**17.03**	**41**	P	**P**	**23 10 32.4**	**0.0**
	baz=241,SNR=42						
M19K	**Big River Lodg**	**17.09**	**42**	P	**P**	**23 10 33.6**	**+0.6**
M19K	**Big River Lodg**	**17.09**	**42**	P	**P**	**23 10 33.1**	**+0.1**
	baz=243						
G17K	**Kiwalik Mounta**	**17.10**	**26**	P	**P**	**23 10 33.1**	**0.0**
	baz=222,SNR=8.2						
H18K	**Honhosa River**	**17.52**	**29**	P	**P**	**23 10 38.9**	**+1.1**
	baz=227,SNR=20						
M20K	**Styx River**	**17.61**	**43**		**Pn**	**23 10 37.7**	**-0.7**
M20K	**Styx River**	**17.61**	**43**	P	**P**	**23 10 40.0**	**+1.1**
	baz=245,SNR=19						
CNPM	**China Poot**	**17.65**	**51**	P	**Pn**	**23 10 38.5**	**-0.2**
J19K	**Poorman**	**17.70**	**35**		**P**	**23 10 40.5**	**+0.7**
J19K				IAmb	IAmb	23 10 46.0	
	comp=Z,61nm,1.2s						
J19K	**Poorman**	**17.70**	**35**	P	**P**	**23 10 41.1**	**+1.3**
	baz=235,SNR=45						
GCSA	**Galena City Sc**	**17.73**	**32**	P	**P**	**23 10 40.8**	**+0.8**
	baz=231						
K20K	**Telida**	**17.93**	**38**	P	**P**	**23 10 43.3**	**+0.9**
	baz=239						
BRSE	**Bradley Lake S**	**17.95**	**51**	P	**P**	**23 10 43.2**	**+0.7**
	baz=254						
G18K	**Tagagawik**	**17.95**	**27**	P	**P**	**23 10 43.6**	**+1.1**
	baz=225,SNR=7.0						
E17K	**Hotham Inlet**	**18.03**	**22**	P	**P**	**23 10 44.5**	**+1.2**
	baz=217,SNR=6.7						
F18K	**Selawik**	**18.19**	**25**	P	**Pn**	**23 10 47.0**	**+1.7**
	baz=222,SNR=11						
D17K	**Noatak River**	**18.26**	**19**	P	**Pn**	**23 10 46.9**	**+0.9**
	baz=213,SNR=25						
C16K	**Lisburne Hills**	**18.33**	**16**	P	**Pn**	**23 10 48.0**	**+1.1**
	baz=208						
SKT	**Skwentna**	**18.34**	**44**		**Pn**	**23 10 47.5**	**+0.4**
SKT				IAmb	IAmb	23 10 53.5	
	comp=Z,163nm,1.2s						
SKT	**Skwentna**	**18.34**	**44**	P	**Pn**	**23 10 48.0**	**+0.9**
	baz=247,SNR=102						
J20K	**Nowinta River**	**18.34**	**36**	P	**Pn**	**23 10 48.1**	**+0.9**
	baz=237,SNR=33						
BILL	**Bilibino**	**18.37**	**342**	*e*P	**Pn**	**23 10 47.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,90nm,1.7s						
BILL	**Bilibino**	**18.37**	**342**	P	**P**	**23 10 46.1**	**-0.9**
H19K	**Roundabout Mou**	**18.37**	**30**		**Pn**	**23 10 47.7**	**+0.3**
H19K	**Roundabout Mou**	**18.37**	**30**	P	**P**	**23 10 48.3**	**+0.9**
	baz=230,SNR=16						
SLKM	**Skilak Lake**	**18.42**	**49**	P	**Pn**	**23 10 48.2**	**+0.1**
PPLA	**Purkeypile**	**18.45**	**40**	P	**P**	**23 10 48.3**	**+0.1**
	baz=243,SNR=13						
I20K	**Naaghedeneel**	**18.57**	**34**	P	**Pn**	**23 10 50.3**	**+0.4**
	baz=235,SNR=10						
G19K	**Purcell Mounta**	**18.59**	**28**		**P**	**23 10 49.7**	**+0.3**
G19K				IAmb	IAmb	23 10 55.4	
	comp=Z,70nm,1.3s						
G19K	**Purcell Mounta**	**18.59**	**28**	P	**Pn**	**23 10 51.0**	**+0.9**
	baz=227,SNR=32						
E18K	**Tukpahlearik C**	**18.59**	**22**	P	**Pn**	**23 10 50.1**	**+0.1**
	baz=218,SNR=8.8						
RDOG	**Red Dog Mine**	**18.59**	**19**	P	**Pn**	**23 10 50.8**	**+0.6**
	baz=213,SNR=6.6						
O22K	**Cooper Landing**	**18.64**	**49**	P	**Pn**	**23 10 51.1**	**+0.3**
	baz=253						
SEW	**Seward**	**18.67**	**50**	P	**P**	**23 10 49.7**	**-0.7**
SEW	**Seward**	**18.67**	**50**	P	**P**	**23 10 50.5**	**+0.1**
	baz=255,SNR=11						
CAST	**Castle Rocks**	**18.74**	**39**	P	**Pn**	**23 10 52.2**	**+0.3**
	baz=242,SNR=40						
H20K	**Anotleneega Mo**	**18.86**	**32**	P	**Pn**	**23 10 53.3**	**0.0**
	baz=232,SNR=29						
F19K	**Shaleruckik Mo**	**18.87**	**26**		**P**	**23 10 53.0**	**+0.5**
F19K				IAmb	IAmb	23 10 59.6	
	comp=Z,98nm,1.6s						
F19K	**Shaleruckik Mo**	**18.87**	**26**	P	**Pn**	**23 10 53.5**	**0.0**
	baz=224,SNR=24						
CHUM	**Lake Minchumin**	**18.88**	**38**	P	**Pn**	**23 10 54.0**	**+0.5**
	baz=240,SNR=18						
L22K	**Petersville**	**18.89**	**42**	P	**P**	**23 10 52.5**	**-0.3**
L22K				IAmb	IAmb	23 10 57.8	
	comp=Z,104nm,0.9s						
L22K	**Petersville**	**18.89**	**42**	P	**Pn**	**23 10 53.5**	**-0.3**
	baz=246,SNR=106						
C17K	**DeLong Mountai**	**18.90**	**18**	P	**Pn**	**23 10 54.0**	**+0.2**
	baz=212,SNR=34						
MA2	**Magadan**	**19.02**	**308**	P	**P**	**23 10 53.1**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=85,slow=18,SNR=4.3						
MA2				LR	LR	23 17 34.9	
	comp=Z,381nm,19.7s,baz=97,slow=35 comp=Z,5.2nm,0.6s						
MA2	**Magadan**	**19.02**	**308**	*e*P	**P**	**23 10 53.5**	**-0.7**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MA2	**Magadan**	**19.02**	**308**	P	**P**	**23 10 53.1**	**-1.1**
CUT	**Chulitna**	**19.05**	**43**	P	**P**	**23 10 55.0**	**+0.4**
CUT				IAmb	IAmb	23 11 01.8	
	comp=Z,96nm,0.8s						
CUT	**Chulitna**	**19.05**	**43**	P	**Pn**	**23 10 55.4**	**-0.3**
	baz=247						
KTH	**Kantishna Hill**	**19.27**	**39**	P	**P**	**23 10 57.0**	**0.0**
KTH				IAmb	IAmb	23 11 02.4	
	comp=Z,86nm,0.8s						
SEY	**Seymchan**	**19.34**	**318**	P	**P**	**23 10

SCM Sheep Creek Mo 20.15 46 P P 23 11 05.1 -1.6
SCM IAmb IAmb 23 11 10.6
comp=Z,39nm,0.8s
SCM Sheep Creek Mo 20.15 46 P P 23 11 06.5 -0.1
baz=253,SNR=21
C19K Lookout Ridge 20.16 20 P 23 11 07.1 +0.5
C19K IAmb IAmb 23 11 15.2
comp=Z,53nm,1.1s
C19K Lookout Ridge 20.16 20 P P 23 11 07.7 +1.1
baz=217,SNR=30
HIN Hinchinbrook I 20.17 50 P P 23 11 07.4 +0.6
WAT6 Susitna Watana 20.21 44 P P 23 11 07.5 +0.1
baz=250,SNR=37
H22K Ishtalitna Cre 20.27 33 P Pn 23 11 09.0 -1.1
baz=237,SNR=29
E20K Nigu River 20.32 24 P Pn 23 11 09.8 -1.0
baz=224,SNR=21
F21K Alatna River 20.38 29 P Pn 23 11 10.3 -1.1
baz=231,SNR=47
NEA2 Nenana 20.46 38 P P 23 11 09.5 -0.4
NEA2 IAmb IAmb 23 11 15.1
comp=Z,123nm,1.2s
NEA2 Nenana 20.46 38 P Pn 23 11 11.3 -1.1
baz=244,SNR=50
DHY Denali Highway 20.54 43 P P 23 11 10.2 -0.8
DHY Denali Highway 20.54 43 P P 23 11 11.0 0.0
baz=250,SNR=61
D20K Etivluk River 20.55 23 P P 23 11 11.9 +1.1
baz=223,SNR=78
EYAK Cordova Ski Ar 20.57 50 P P 23 11 12.2 +1.1
baz=258
I23K Minto, Yukon-K 20.61 36 P P 23 11 10.6 -0.8
I23K IAmb IAmb 23 11 20.1
comp=Z,40nm,1.0s
I23K Minto, Yukon-K 20.61 36 P P 23 11 12.3 +0.8
baz=242,SNR=46
KLU Klutina 20.70 48 P P 23 11 13.4 +0.8
baz=255,SNR=12
M24K Tolsona, Glenn 20.75 46 P P 23 11 13.6 +0.5
baz=254,SNR=9.7
A19K Wainwright 20.77 17 P P 23 11 14.1 +1.0
baz=213,SNR=6.1
G22K Bettles 20.81 31 P P 23 11 14.6 +1.0
baz=235
H23K Yukon River 20.88 34 P P 23 11 14.5 +0.1
H23K Yukon River 20.88 34 P P 23 11 15.4 +1.0
baz=240
F22K John River 20.95 29 P P 23 11 15.9 +0.7
baz=232
E21K Killik River 21.04 26 P P 23 11 16.0 -0.1
E21K Killik River 21.04 26 P P 23 11 16.3 +0.2
baz=228
COLA College 21.06 38 *c i* **P P 23 11 16.9 +0.6**
COLA pmax pmax
comp=Z,35nm,0.9s
COLA College 21.06 38 P P 23 11 15.8 -0.4
COLA IAmb IAmb 23 11 29.8
comp=Z,30nm,0.8s
COLA College 21.06 38 P P 23 11 17.2 +0.9
baz=244
COLA College 21.06 38 P P 23 11 17.2 +0.9
G23K Bananza Creek 21.18 32 P P 23 11 18.8 +1.1
baz=237,SNR=32
BMRM Bremner River 21.20 49 P P 23 11 19.4 +1.4
baz=258,SNR=8.0
HDA Harding Lake 21.22 39 P P 23 11 18.1 +0.1
baz=247,SNR=19
HARP HAARP 21.30 45 P P 23 11 19.8 +0.9
baz=254
POKR Poker Plat Res 21.32 37 P P 23 11 19.8 +0.7
baz=244
PAX Paxson 21.32 44 P P 23 11 20.2 +0.9
baz=252,SNR=47
C21K Knifeblade Rid 21.33 24 P P 23 11 19.9 +0.7
baz=225,SNR=28
ILAR Eielson Array 21.39 38 P P 23 11 18.4 -1.5
comp=Z,2.3nm,0.4s,baz=241,slow=8.6,SNR=43
ILAR PcP **PcP 23 15 21.6 -0.1**
comp=Z,1.7nm,0.4s,baz=273,slow=3.0,SNR=11
ILAR ScP **ScP 23 18 54.5 -0.2**
comp=Z,0.8nm,0.7s,baz=273,slow=3.9,SNR=5.2
comp=Z,2.3nm,0.4s
ILAR Eielson Array 21.39 38 P P 23 11 18.7 -1.2
ILAR Eielson Array 21.39 38 P 23 11 18.7 -1.2
B20K Meade River 21.40 20 P P 23 11 20.4 +0.6
baz=220,SNR=25
COLD Coldfoot 21.41 31 P P 23 11 19.8 -0.2
COLD Coldfoot 21.41 31 P P 23 11 21.3 +1.3
baz=236,SNR=12
K24K Donnelly Dome 21.47 41 P P 23 11 21.5 +0.7
baz=250,SNR=13
H24K Noodor Dome 21.48 35 P P 23 11 20.7 -0.2
baz=242,SNR=37
BERG Berg Lake 21.53 51 P P 23 11 21.5 +0.1
GLB Gilahina Butte 21.68 48 P 23 11 22.6 -0.5
GLB IAmb IAmb 23 11 29.6
comp=Z,22nm,0.6s
B21K Ikpikpuk River 21.70 23 P P 23 11 23.3 +0.2
baz=224,SNR=48
RIDG Independent Ri 21.84 42 P P 23 11 23.9 -0.9
RIDG IAmb IAmb 23 11 28.2
comp=Z,21nm,0.8s
RIDG Independent Ri 21.84 42 P P 23 11 24.0 -0.7
baz=251,SNR=28
CRQM Cirque 21.87 50 P P 23 11 25.6 +0.4
CRQE Cirque 21.89 50 P P 23 11 25.3 -0.1
baz=260
J25K Salcha River, 21.93 40 P P 23 11 24.2 -1.5
J25K Salcha River, 21.93 40 P P 23 11 25.0 -0.7
baz=248,SNR=28
MCARA McCarthy VSAT 22.04 49 P P 23 11 27.0 +0.1
MCARA IAmb IAmb 23 11 42.8
comp=Z,21nm,0.8s
G24K Hadweenzic Riv 22.04 34 P P 23 11 27.8 +0.9
baz=241,SNR=94
E23K Chandalar 22.07 29 P P 23 11 27.6 +0.4
baz=235,SNR=27
PRP Porcupine Dome 22.22 37 P P 23 11 28.4 -0.5
PRP Porcupine Dome 22.22 37 P P 23 11 28.9 0.0
baz=246,SNR=8.8
L26K Log Cabin Wild 22.27 44 P P 23 11 28.9 -0.5
baz=255
M26K Nabesna, AK 22.27 46 P P 23 11 29.7 +0.3
baz=257,SNR=6.8
SCRK Sand Creek 22.27 42 P 23 11 28.4 -1.1
SCRK IAmb IAmb 23 11 31.6
comp=Z,17nm,0.6s
SCRK Sand Creek 22.27 42 P P 23 11 28.3 -1.1
baz=252,SNR=42
D23K Nanushuk River 22.30 27 P P 23 11 30.1 +0.6
baz=232,SNR=37
F24K Squaw Lake 22.32 31 P P 23 11 30.6 +0.7
baz=239,SNR=73
TOLK Toolik Lake Re 22.42 28 P P 23 11 31.2 +0.3
baz=234,SNR=44
E24K Your Creek 22.42 30 P P 23 11 31.7 +0.7
baz=237,SNR=34
GRNC Granite Creek 22.54 51 P P 23 11 31.8 -0.6
G25K Bearman Lake 22.55 34 P P 23 11 32.6 +0.3
baz=243,SNR=14
A22K Sinclair Lake 22.64 20 P P 23 11 33.3 +0.1
baz=222
M27K Edge Creek, AK 22.77 46 P P 23 11 35.1 +0.3
baz=258,SNR=50
FYU Fort Yukon 22.77 35 P P 23 11 34.0 -0.6
FYU IAmb IAmb 23 11 38.7
comp=Z,24nm,0.8s
C23K Itkillik River 22.87 25 P P 23 11 35.7 +0.1
baz=230,SNR=31
LOGN Logan Glacier 22.91 51 P P 23 11 35.7 -0.6
D24K Happy Valley 22.94 27 P P 23 11 36.4 +0.1
baz=234
L27K Beaver Creek, 22.95 45 P P 23 11 36.6 +0.1
baz=256
BCAR Beaver Creek A 22.97 45 P 23 11 35.8 -1.0
F25K Christian Rive 23.10 32 P P 23 11 38.3 +0.3
baz=242,SNR=37
PINM Pinnacle 23.20 53 P P 23 11 39.4 +0.2
baz=265
BVCY Beaver Creek 23.24 47 P P 23 11 39.6 +0.2
baz=259,SNR=28
O28M Mount Upton 23.30 51 P P 23 11 39.2 -1.2
O28M Mount Upton 23.30 51 P P 23 11 40.2 -0.1
baz=264
YUK3 Moose Creek 23.31 48 P P 23 11 40.1 -0.2
baz=261,SNR=51
E25K Arctic Village 23.38 31 P P 23 11 41.0 +0.3
baz=241,SNR=36
G26K Porcupine Rive 23.45 35 P P 23 11 41.5 +0.1
baz=245,SNR=53
YUK8 Steele Glacier 23.57 50 P P 23 11 42.3 -0.6
baz=263,SNR=15
F26K Sheenjek River 23.65 33 P P 23 11 43.7 +0.3
baz=243,SNR=18
D25K Kavik River 23.76 28 P P 23 11 44.6 +0.3
baz=237,SNR=30
I27K Kandik River 23.76 39 P P 23 11 44.2 -0.2
baz=251,SNR=9.3
BRWY Burwash Landin 23.93 49 P P 23 11 45.4 -0.6
baz=263
H27K Steamboat Moun 24.01 37 P P 23 11 45.3 -1.3
baz=250
TYV Tymovskoe 24.02 284 *e* **P P 23 11 48.2 +1.4**
TYV *e* **S S 23 16 04.4 +3.9**
TYV pmax pmax
comp=Z,300nm,3.7s
TYV pmax pmax
comp=Z,28nm,0.8s
TYV smax smax
comp=N,200nm,7.8s
TYV smax smax
comp=E,200nm,7.8s
YUK4 Talbot Arm 24.11 50 P P 23 11 48.0 +0.1
baz=264,SNR=11
G27K Doyon Strip 24.17 36 P P 23 11 47.7 -0.4
baz=248
YUK6 Outpost Mounta 24.21 51 P P 23 11 48.3 -0.5
baz=265
DAWY Dawson 24.24 43 P P 23 11 48.3 -0.6
DAWY Dawson 24.24 43 P P 23 11 48.8 0.0
baz=257,SNR=10
M29M Somme Creek 24.35 47 P P 23 11 49.5 -0.4
baz=261,SNR=43
I28M Mier Creek 24.38 39 P P 23 11 49.5 -0.6
baz=253,SNR=49
C26K Camden Bay 24.51 28 P P 23 11 51.3 +0.2
baz=238,SNR=14
L29M L29M 24.61 45 P P 23 11 52.0 -0.1
baz=260,SNR=26
HYT Haines Junctio 24.62 51 P 23 11 51.4 -1.0
HYT Haines Junctio 24.62 51 P P 23 11 52.1 -0.3
baz=266
C27K Jago River 24.72 29 P P 23 11 53.1 +0.1
baz=240,SNR=16
E27K Coleen River 24.74 33 P P 23 11 53.9 +0.6
baz=246,SNR=25
P30M Million Dollar 24.85 53 P P 23 11 54.8 +0.4
baz=268
N30M Aishikik Lake 24.87 50 P P 23 11 54.2 -0.4
baz=265
UGL Uglegorsk 24.93 281 *e* **P P 23 11 57.0 +1.9**
UGL *e* **S S 23 16 15.4 +0.2**
UGL pmax pmax
comp=Z,70nm,0.4s
K29M Barlow Dome 25.01 44 P P 23 11 55.5 -0.3
baz=259,SNR=28
F28M Old Crow 25.11 35 P P 23 11 57.1 +0.5
baz=249,SNR=30
M30M Minto, Yukon 25.13 47 P P 23 11 56.7 -0.2
baz=263
H29M Whitestone 25.22 38 P P 23 11 57.4 -0.3
baz=254,SNR=7.5
S31K Pesan 25.24 58 P P 23 11 57.9 +0.1
baz=273
YSS Yuzhno-Sakhali 25.30 275 *e* **P P 23 11 59.7 +1.3**
YSS pmax pmax
comp=Z,200nm,2.6s
YSS pmax pmax
comp=Z,50nm,0.9s
YSS Yuzhno-Sakhali 25.30 275 P 23 11 58.3 -0.1
YSS IAmb IAmb 23 12 00.6
comp=Z,39nm,0.7s
YSS Yuzhno-Sakhali 25.30 275 P P 23 11 60.0 +1.5
O30N Mendenhall 25.31 51 P P 23 11 58.7 +0.2
baz=267
D27M Malcolm River 25.39 31 P P 23 12 00.1 +0.9
baz=244,SNR=14
N31M Braeburn, Yuko 25.50 50 P P 23 12 00.1 -0.1
baz=266
G29M Pine Creek 25.56 37 P 23 12 00.2 -0.5
G29M Pine Creek 25.56 37 P P 23 12 00.4 -0.2
baz=252
E28M Babbage River 25.60 33 P P 23 12 01.6 +0.6
baz=247,SNR=22
J30M Hart River 25.66 42 P P 23 12 01.6 -0.1
baz=259,SNR=9.1
I30M Mount Dempster 25.77 41 P P 23 12 02.1 -0.6
baz=258,SNR=32
WHY Whitehorse 25.90 52 P P 23 12 04.4 +0.4
baz=269
EPYK Eagle Plains 25.90 38 P P 23 12 03.2 -0.7
baz=255,SNR=9.9
E29M Blow River 26.09 34 P P 23 12 06.1 +0.7
baz=250,SNR=17
S32K Killisnoo 26.17 59 P P 23 12 07.5 +1.3
baz=276
G30M tAoh Zraii Nji 26.26 37 P P 23 12 06.5 -0.5
baz=254
F30M Barrier River 26.59 36 P P 23 12 10.4 +0.4
baz=254
JKA Kamikawa-asahi 26.67 270 P P 23 12 10.1 -0.8
JKA IAmb IAmb 23 12 13.4
comp=Z,30nm,0.9s
ASAJ Asahikawa 26.67 270 LR LR 23 21 15.8
comp=Z,208nm,19.7s,baz=38,slow=33
ASAJ Asahikawa 26.67 270 P P 23 12 10.1 -0.8
ASAJ pmax pmax
comp=Z,30nm,0.9s
H31M Peel River 26.72 40 P 23 12 10.3 -0.8
H31M Peel River 26.72 40 P P 23 12 11.5 +0.4
baz=259,SNR=8.3
P33M Teslin, Yukon 26.92 53 P P 23 12 13.5 +0.3
baz=271
G31M Satah River 26.98 38 P P 23 12 12.6 -0.9
G31M Satah River 26.98 38 P P 23 12 13.0 -0.5
baz=257
Q32M Nakina River 27.26 55 P P 23 12 16.6 +0.3
baz=274
F31M Tsiigehtchic 27.31 37 P P 23 12 16.2 -0.2
baz=256
INK Inuvik 27.61 35 P P 23 12 17.3 -1.7
comp=Z,2.1nm,0.4s,baz=256,slow=6.5,SNR=7.8
INK PcP **PcP 23 15 35.1 -0.1**
comp=Z,2.6nm,0.4s,baz=337,slow=2.0,SNR=5.7
comp=Z,2.1nm,0.4s
INK Inuvik 27.61 35 P P 23 12 17.7 -1.3
INK pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 27.61 35 P 23 12 17.7 -1.3
INK Inuvik 27.61 35 P P 23 12 19.1 +0.1
baz=255
INK Inuvik 27.61 35 P P 23 12 18.9 -0.1
MMPY Sheldon Lake, 27.68 47 P P 23 12 20.1 +0.2
baz=268,SNR=8.0
MOBC Moresby Island 28.42 68 P P 23 12 27.5 +1.0
MOBC IAmb IAmb 23 12 35.6
comp=Z,32nm,1.4s
DLBC Dease Lake 28.48 56 LR LR 23 23 47.4
comp=Z,202nm,18.8s,baz=264,slow=36
HG4B Hotspring 29.11 69 P P 23 12 34.2 +1.6
HG4B IAmb IAmb 23 13 02.7
comp=Z,36nm,1.4s
YAK Yakutsk 29.49 311 LR LR 23 23 42.8
comp=Z,380nm,20.6s,baz=94,slow=35
YAK Yakutsk 29.49 311 *e* **P P 23 12 37.0 +1.2**
YAK pmax pmax
comp=Z,6.0nm,0.9s
TIXI Tiksi 30.75 331 LR LR 23 25 34.7
comp=Z,402nm,19.4s,baz=102,slow=37
TIXI Tiksi 30.75 331 *e* **P P 23 12 47.5 +0.6**
TIXI pmax pmax
comp=Z,2.0nm,1.1s
BBB Bella Bella 30.94 68 LR LR 23 25 04.5
comp=Z,182nm,19.4s,baz=324,slow=36
HOLB Holberg 31.46 71 P P 23 12 54.6 +1.2
ZEA Zeya 32.26 296 *e* **P P 23 12 59.5 -0.9**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra 33.28 277 P P 23 13 08.4 -0.9
USA0B pmax pmax
comp=Z,11nm,1.1s
USA0B Ussuriysk Arra 33.28 277 P P 23 13 08.4 -0.9
USA0B IAmb IAmb 23 13 12.2
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 33.28 277 P P 23 13 08.9 -0.4
comp=Z,4.8nm,0.6s,baz=59,slow=9.5,SNR=9.6
USRK PcP **PcP 23 15 50.9 +0.3**
comp=Z,3.5nm,0.8s,baz=76,slow=5.0,SNR=5.0
USRK LR LR 23 27 05.1
comp=Z,102nm,21.5s,baz=9.3,slow=37
comp=Z,4.8nm,0.6s
USRK Ussuriysk Ar. 33.28 277 P P 23 13 08.6 -0.8
USRK **PcP 23 15 51.2 +0.6**
H11N2 WAKE ISLAND Hy 33.38 205 T T 23 50 17.7
baz=18,slow=76,SNR=630
HEH HeiHe 33.38 290 *e* **P P 23 13 08.9 -1.3**
HEH pmax pmax
comp=Z,15nm,1.1s
H11N3 WAKE ISLAND Hy 33.38 205 T T 23 50 14.0
baz=18,slow=76,SNR=592
H11N1 WAKE ISLAND Hy 33.39 205 T T 23 50 14.7
baz=18,slow=76,SNR=651
MJAR Matsushiro Arr 33.72 261 P P 23 13 13.7 +0.3
comp=Z,4.5nm,0.8s,baz=54,slow=7.6,SNR=18
MJAR PcP **PcP 23 15 52.6 +0.6**
comp=Z,1.5nm,0.5s,baz=70,slow=2.9,SNR=7.6
MJAR ScP **ScP 23 19 34.2 +1.6**
comp=Z,0.7nm,0.6s,baz=9.2,slow=1.4,SNR=4.5
MJAR LR LR 23 25 14.7
comp=Z,198nm,19.8s,baz=57,slow=33
comp=Z,4.5nm,0.8s
MJAR Matsushiro Arr 33.72 261 P P 23 13 12.7 -0.6
MJAR IAmb IAmb 23 13 15.1
comp=Z,10nm,1.2s
MJAR **PcP 23 15 52.6 +0.6**
MJAR **ScP 23 19 34.3 +1.6**
MAJO Matsushiro 33.73 261 *d i* **P P 23 13 13.7 +0.4**
MAJO pmax pmax
comp=Z,16nm,1.0s
MAJO Matsushiro 33.73 261 P P 23 13 13.4 0.0
MAJO IAmb IAmb 23 13 15.2
comp=Z,30nm,1.2s
MAJO Matsushiro 33.73 261 P P 23 13 14.6 +1.3
MAJO pP **pwP 23 13 27.9 +0.4**
MDJ Mudanjiang 34.56 280 P P 23 13 19.7 -0.8
MDJ IAmb IAmb 23 13 21.6
comp=Z,11nm,0.9s
H11S1 WAKE ISLAND Hy 34.59 205 T T 23 50 50.6
baz=17,slow=76,SNR=887
H11S2 WAKE ISLAND Hy 34.61 205 T T 23 51 12.6
baz=17,slow=76,SNR=288
H11S3 WAKE ISLAND Hy 34.61 205 T T 23 51 12.7
baz=17,slow=76,SNR=252
JGF Kuroka 34.86 261 P P 23 13 22.9 -0.3
JGF IAmb IAmb 23 13 25.2
comp=Z,16nm,0.9s
JGF Kuroka 34.86 261 P P 23 13 23.9 +0.7
LLLB Lillooet 35.15 68 P P 23 13 25.9 +0.4
LLLB IAmb IAmb 23 13 28.5
comp=Z,12nm,1.0s
INU Inuyama 35.23 261 P P 23 13 26.0 -0.3
INU IAmb IAmb 23 13 27.5
comp=Z,20nm,1.3s
BNX BinXian 35.36 283 ⇓ **P P 23 13 26.3 -1.1**
BNX pmax pmax
comp=Z,41nm,0.7s
YKA Yellowknife Ar 35.36 46 P P 23 13 26.9 -0.3
comp=Z,4.9nm,0.8s,baz=278,slow=9.4,SNR=21
YKA PcP **PcP 23 15 56.8 +0.5**
comp=Z,1.0nm,0.4s,baz=282,slow=2.9,SNR=6.5
YKA ScP **ScP 23 19 38.2 +0.2**
comp=Z,0.6nm,0.5s,baz=284,slow=3.4,SNR=4.8
YKA LR LR 23 30 16.4
comp=Z,224nm,19.2s,baz=255,slow=40
comp=Z,4.9nm,0.8s
A05A Maple Falls 35.70 71 P P 23 13 30.9 +0.6
A05A IAmb IAmb 23 13 33.0
comp=Z,19nm,0.9s
CN2 Changchun 37.54 281 P P 23 13 45.3 -0.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JCJ Chichijima 37.98 246 LR LR 23 26 36.2
comp=Z,124nm,20.3s,baz=22,slow=32
I04A Tendick Farm, 38.01 79 P P 23 13 51.4 +1.4
I04A IAmb IAmb 23 14 03.1
comp=Z,17nm,0.7s
HILR Hailar Array B 38.17 292 P P 23 13 49.7 -1.6
comp=Z,1.9nm,0.4s,baz=50,slow=9.9,SNR=3.9
comp=Z,1.9nm,0.4s
WIFE Three Sisters- 38.23 78 P P 23 13 53.2 +1.1
WIFE IAmb IAmb 23 14 09.9
comp=Z,32nm,1.2s
HIA Hailar 38.31 292 P P 23 13 50.9 -1.5
HIA pmax pmax
comp=Z,10.0nm,0.9s
HIA Hailar 38.31 292 P P 23 13 50.9 -1.5
HIA IAmb IAmb 23 13 52.8
comp=Z,10nm,0.9s
EDM Edmonton 38.92 61 P P 23 13 57.6 +0.1
EDM pmax pmax
comp=Z,19nm,0.9s
EDM Edmonton 38.92 61 P P 23 13 57.6 +0.1
EDM IAmb IAmb 23 13 59.5
comp=Z,19nm,0.9s
YBH Yreka Blue Hor 38.94 82 LR LR 23 27 54.4
comp=Z,157nm,19.8s,baz=321,slow=33
NEW Newport 38.97 69 LR LR 23 27 51.7
comp=Z,93nm,20.8s,baz=337,slow=33
NEW Newport 38.97 69 P P 23 13 58.6 +0.6
NEW pmax pmax
comp=Z,17nm,0.7s
NEW Newport 38.97 69 P P 23 13 58.6 +0.6
NEW IAmb IAmb 23 14 00.1
comp=Z,17nm,0.7s
NEW Newport 38.97 69 P P 23 13 59.2 +1.2
KSRS Korea Array 39.60 271 P P 23 14 03.7 +0.4
comp=Z,6.8nm,0.8s,baz=59,slow=8.3,SNR=27
KSRS PcP **PcP 23 16 10.4 +0.8**
comp=Z,1.7nm,0.8s,baz=55,slow=3.0,SNR=5.2
KSRS LR LR 23 27 50.8
comp=Z,54nm,20.6s,baz=340,slow=32
comp=Z,6.8nm,0.8s
KSAR Wonju Array Be 39.63 271 P P 23 14 03.7 +0.1
KSAR 23 16 10.5
KSAR Wonju Array Be 39.63 271 P P 23 14 03.7 +0.1
KSAR PcP **PcP 23 16 10.5 +0.8**
RES Resolute Bay 39.90 24 LR LR 23 32 44.8
comp=Z,238nm,20.6s,baz=246,slow=39
HATC Hat Creek Radi 40.23 82 P P 23 14 10.0 +1.4
HATC IAmb IAmb 23 14 31.1
comp=Z,17nm,0.7s
O03E Paynes Creek 40.32 83 P P 23 14 10.3 +1.0
O03E IAmb IAmb 23 14 26.4
comp=Z,43nm,1.7s
JNU Nakatsue 40.52 263 LR LR 23 33 55.5
comp=Z,104nm,19.2s,baz=342,slow=40
BMO Blue Mountains 40.57 74 P P 23 14 11.8 +0.4
BMO pmax pmax
comp=Z,4.0nm,0.7s
BMO Blue Mountains 40.57 74 P P 23 14 11.8 +0.4
TJN Taejon 40.62 270 P P 23 14 11.3 -0.4
TJN pmax pmax
comp=Z,76nm,0.8s
TJN Taejon 40.62 270 P P 23 14 11.3 -0.4
WVOR Wild Horse Val 41.07 78 P P 23 14 16.3 +0.8
WVOR pmax pmax
comp=Z,11nm,0.9s
WVOR Wild Horse Val 41.07 78 P P 23 14 16.3 +0.8
WVOR IAmb IAmb 23 14 25.7
comp=Z,11nm,0.8s
WVOR Wild Horse Val 41.07 78 P P 23 14 16.1 +0.5
MSO Missoula 41.55 70 P P 23 14 19.4 0.0
MSO IAmb IAmb 23 14 21.3
comp=Z,17nm,0.9s
JSU Suzuyama 41.87 262 P P 23 14 21.8 -0.3
JSU IAmb IAmb 23 14 24.0
comp=Z,41nm,1.2s
JSU Suzuyama 41.87 262 P P 23 14 22.7 +0.6
MFID Camas Ranch 42.24 75 P P 23 14 25.6 +0.5
LYMT Lyon Mountain 42.45 69 P P 23 14 27.1 +0.2
HLID Hailey 43.02 74 P P 23 14 31.9 +0.4
HLID Hailey 43.02 74 P P 23 14 33.0 +1.5
BMN Battle Mountai 43.09 80 P P 23 14 32.6 +0.6
BMN pmax pmax
comp=Z,6.0nm,1.0s
BMN Battle Mountai 43.09 80 P P 23 14 32.6 +0.6
DLMT Dillon 43.12 71 P P 23 14 32.9 +0.6
XLT XiLinHaoTe 43.20 287 *e* **P P 23 14 33.9 +1.0**
XLT pmax pmax
comp=Z,15nm,0.5s

XLT L L
comp=Z,220nm,19.2s
XLT L L
comp=Z,400nm,18.4s
BCYI Bear Canyon 43.21 73 P **P** **23 14 33.6 +0.5**
BCYI IAmb IAmb 23 14 36.0
comp=Z,30nm,1.2s
MCMT McKenzie Canyo 43.26 72 P **P** **23 14 34.4 +0.9**
EGMT Eagleton 43.38 66 P **P** **23 14 34.3 +0.1**
EGMT IAmb IAmb 23 14 36.8
comp=Z,12nm,0.8s
NVAR Mina Array Bea 43.61 83 P **P** **23 14 37.8 +1.5**
comp=Z,1.7nm,0.6s,baz=295,slow=7.1,SNR=6.6
NVAR LR LR 23 29 12.5
comp=Z,194nm,20.2s,baz=274,slow=31
comp=Z,1.7nm,0.6s
ELK Elko 44.12 78 LR LR 23 31 09.2
comp=Z,180nm,18.1s,baz=317,slow=33
ELK Elko 44.12 78 P **P** **23 14 41.5 +1.0**
ELK pmax pmax
comp=Z,9.0nm,1.1s
ELK Elko 44.12 78 P **P** **23 14 41.5 +1.0**
YHB Horse Butte 44.29 71 P **P** **23 14 42.2 +0.4**
YHB IAmb IAmb 23 14 44.4
comp=Z,26nm,0.9s
NRIK Noril'sk 44.52 330 PcP **PcP** **23 16 25.8 +0.4**
comp=Z,2.1nm,0.4s,baz=99,slow=4.6,SNR=1.7
ECR Eagle Creek 45.14 73 P **P** **23 14 49.4 +0.9**
ECR IAmb IAmb 23 14 59.8
comp=Z,26nm,1.5s
RLMT Red Lodge 45.22 69 P **P** **23 14 49.9 +0.7**
BJI2 Beijing 45.39 282 P **P** **23 14 50.8 +0.6**
BJI2 pmax pmax
comp=Z,7.0nm,0.6s
BJT Baijiatuan 45.39 282 P **P** **23 14 50.3 +0.1**
BJT pmax pmax
comp=Z,12nm,0.6s
BJT Baijiatuan 45.39 282 P **P** **23 14 50.3 +0.1**
BJT IAmb IAmb 23 14 51.9
comp=Z,12nm,0.6s
BJT Baijiatuan 45.39 282 P **P** **23 14 51.5 +1.2**
AHID Auburn Hatcher 45.47 73 P **P** **23 14 53.0 +1.9**
HWUT Hardware Ranch 45.86 75 P **P** **23 14 54.9 +0.7**
HWUT Hardware Ranch 45.86 75 P **P** **23 14 56.0 +1.7**
DUG Dugway, Tooele 45.94 77 P **P** **23 14 55.4 +0.6**
DUG pmax pmax
comp=Z,27nm,1.1s
DUG Dugway, Tooele 45.94 77 P **P** **23 14 55.4 +0.6**
DUG IAmb IAmb 23 15 11.4
comp=Z,27nm,1.1s
DUG Dugway, Tooele 45.94 77 P **P** **23 14 55.6 +0.8**
TLY Talaya 46.12 303 PcP **PcP** **23 16 31.5 +0.2**
comp=Z,3.2nm,0.6s,baz=58,slow=6.9,SNR=2.7
TLY LR LR 23 37 37.5
comp=Z,101nm,18.0s,baz=54,slow=40
TLY Talaya 46.12 303*ce*P **P** **23 14 56.5 +0.6**
TLY pmax pmax
comp=Z,2.0nm,0.9s
TLY Talaya 46.12 303 P **P** **23 14 55.4 -0.4**
LAO LASA Array 46.12 66 P **P** **23 14 56.4 +0.4**
ULN Ulaanbaatar 46.30 296*c i*P **P** **23 14 57.6 +0.1**
ULN pmax pmax
comp=Z,17nm,1.2s
ULN Ulaanbaatar 46.30 296 P **P** **23 14 57.1 -0.4**
ULN IAmb IAmb 23 14 58.8
comp=Z,9.9nm,0.8s
ULN Ulaanbaatar 46.30 296 P **P** **23 14 57.9 +0.4**
comp=Z,58nm,1.0s
ULN Ulaanbaatar 46.30 296 P **P** **23 14 57.7 +0.1**
ULN Ulaanbaatar 46.30 296 P **P** **23 14 58.1 +0.5**
PDAR Pinedale Array 46.39 72 P **P** **23 14 59.3 +0.9**
comp=Z,12nm,0.5s,baz=312,slow=3.4,SNR=143
PDAR LR LR 23 33 23.3
comp=Z,80nm,19.3s,baz=298,slow=35
comp=Z,12nm,0.5s
PDAR Pinedale Array 46.39 72 P **P** **23 14 58.8 +0.3**
JOW Kunigami 46.51 259 P **P** **23 14 58.6 -0.6**
JOW IAmb IAmb 23 15 01.1
comp=Z,34nm,1.3s
JOW Kunigami 46.51 259 P **P** **23 15 00.5 +1.3**
NLU North Lily Min 46.54 77 P **P** **23 15 00.0 +0.4**
NLU IAmb IAmb 23 15 08.4
comp=Z,8.0nm,0.9s
SONM Songino Array 46.68 297 P **P** **23 15 00.5 0.0**
comp=Z,5.7nm,0.6s,baz=53,slow=10,SNR=29
SONM PcP **PcP** **23 16 33.0 -0.5**
comp=Z,1.6nm,0.6s,baz=54,slow=1.9,SNR=3.0
SONM ScP **ScP** **23 20 23.7 +0.6**
comp=Z,0.3nm,0.3s,baz=29,slow=3.3,SNR=1.6
SONM LR LR 23 35 20.9
comp=Z,468nm,20.2s,baz=32,slow=37
comp=Z,5.7nm,0.6s
SONM Songino Array 46.68 297 P **P** **23 15 00.2 -0.3**
SONM IAmb IAmb 23 15 02.1
comp=Z,25nm,1.4s
SONM PcP **PcP** **23 16 33.4 -0.1**
ZAK Zakamensk 47.00 301*e*P **P** **23 15 02.6 -0.3**
ZAK *e* 23 16 34.6
ZAK pmax pmax
comp=Z,15nm,1.6s
NEEM North Greenlan 47.59 14*i*P **P** **23 15 06.5 -0.9**
NEEM IAmb IAmb 23 15 08.3
comp=Z,15nm,0.5s
HHC Hu-ho-hao-te 47.70 286*e*P **P** **23 15 08.4 -0.1**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,38nm,5.7s
PFO Pinyon Flats O 47.81 86 LR LR 23 33 23.5
comp=Z,118nm,19.2s,baz=217,slow=34
HNS HongShan 47.90 280⇓P **P** **23 15 11.0 +1.1**
HNS pmax pmax
comp=Z,21nm,0.9s
U15A North Rim 48.59 81 P **P** **23 15 16.5 +0.8**
U15A IAmb IAmb 23 15 25.8
comp=Z,11nm,0.8s
O20A White River Ci 48.76 74 P **P** **23 15 17.0 +0.2**
BTO2 Baotou 48.78 287*e*P **P** **23 15 17.5 +0.7**
BTO2 S **S** **23 22 16.6 +0.1**
BTO2 pmax pmax
comp=Z,68nm,0.7s
BTO2 pmax pmax
comp=Z,310nm,5.1s
BTO2 L L
comp=Z,260nm,5.0s
BTO2 L L
comp=Z,320nm,10.9s
BTO2 L L
comp=Z,650nm,17.7s
NJ2 Nanjing 48.78 272*e*P **P** **23 15 16.8 0.0**
NJ2 pmax pmax
comp=Z,34nm,0.6s
RSSD Black Hills 48.85 67 P **P** **23 15 17.7 +0.2**
RSSD Black Hills 48.85 67 P **P** **23 15 17.7 +0.2**
RSSD Black Hills 48.85 67 P **P** **23 15 18.3 +0.8**
ULM Lac du Bonnet 49.80 57 P **P** **23 15 24.1 -0.3**
comp=Z,1.5nm,0.4s,baz=297,slow=7.0,SNR=7.3
ULM LR LR 23 35 52.4
comp=Z,134nm,21.3s,baz=286,slow=35
comp=Z,1.5nm,0.4s
KBS Kingsbay 49.95 357⇑*e*P **P** **23 15 27.5 +2.4**
KBS pmax pmax
comp=Z,27nm,1.2s
KBS Kingsbay 49.95 357*e*P **P** **23 15 25.5 +0.4**
KBS IAmb IAmb 23 15 28.9
comp=Z,30nm,1.2s
KBS Kingsbay 49.95 357 P **P** **23 15 24.8 -0.3**
KBS Kingsbay 49.95 357*i*P **P** **23 15 24.8 -0.3**
MVCO Mesa Verde 50.44 77 P **P** **23 15 30.0 +0.4**
MVCO IAmb IAmb 23 15 46.7
comp=Z,8.1nm,0.6s
MVCO Mesa Verde 50.44 77 P **P** **23 15 30.4 +0.7**
SPA0 Spitsbergen Ar 50.53 356*e*P **P** **23 15 28.9 -0.6**
SPA0 IAmb IAmb 23 15 32.4
comp=Z,50nm,1.2s
SPITS Spitsbergen Ar 50.53 356 P **P** **23 15 28.8 -0.7**
comp=Z,9.9nm,0.4s,baz=36,slow=7.2,SNR=38
SPITS PP **PP** **23 17 25.3 +0.3**
comp=Z,2.7nm,0.5s,baz=339,slow=7.7,SNR=5.1
SPITS LR LR 23 37 57.6
comp=Z,118nm,18.9s,baz=52,slow=37
comp=Z,9.9nm,0.4s
SPB2 Spitsbergen Ar 50.53 356 P **P** **23 15 28.5 -1.0**
ISCO Idaho Springs 50.55 73 P **P** **23 15 31.2 +0.7**
ISCO pmax pmax
comp=Z,7.0nm,0.9s
ISCO Idaho Springs 50.55 73 P **P** **23 15 31.2 +0.7**
ISCO IAmb IAmb 23 15 34.2
comp=Z,6.5nm,0.8s
ISCO Idaho Springs 50.55 73 P **P** **23 15 31.9 +1.3**
AGMN Agassiz Nation 50.95 59 P **P** **23 15 33.0 -0.1**
S22A 4UR Ranch, Cre 51.11 76 P **P** **23 15 34.8 0.0**
S22A IAmb IAmb 23 15 38.8
comp=Z,10nm,1.1s
LYN LuoYang 51.12 279 P **P** **23 15 35.4 +0.9**
LYN pmax pmax
comp=Z,32nm,0.6s
SUSD Miller 51.57 64 P **P** **23 15 37.5 -0.3**
DAG Danmarks Havn 51.66 6*i*P **P** **23 15 36.0 -1.9**
DAG IAmb IAmb 23 15 40.0
comp=Z,2.4nm,0.7s
TUC Tucson 52.23 84 P **P** **23 15 44.9 +1.9**
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 52.23 84 P **P** **23 15 44.9 +1.9**
TUC Tucson 52.23 84 P **P** **23 15 44.8 +1.9**
NACB Ninganchiao 52.58 262 P **P** **23 15 44.5 -0.9**
NACB IAmb IAmb 23 15 45.8
comp=Z,9.2nm,0.8s
WHN Wuhan 52.63 274 P **P** **23 15 45.5 -0.3**
ANMO Albuquerque 53.16 78 LR LR 23 37 13.7
comp=Z,149nm,20.0s,baz=335,slow=35
ANMO Albuquerque 53.16 78*d i*P **P** **23 15 51.1 +1.2**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 53.16 78 P **P** **23 15 50.4 +0.5**
ANMO Albuquerque 53.16 78 P **P** **23 15 50.0 +0.1**
SSLB Suanglung 53.26 263 P **P** **23 15 49.8 -0.7**
SSLB Suanglung 53.26 263 P **P** **23 15 50.4 -0.1**
ECSD EROS Data Cent 53.33 64 P **P** **23 15 50.1 -0.7**
ECSD IAmb IAmb 23 15 51.1
comp=Z,7.7nm,1.0s
ECSD EROS Data Cent 53.33 64 P **P** **23 15 50.6 -0.2**
SUMG Summit 53.45 14 P **P** **23 15 50.6 -1.2**
SUMG pmax pmax
comp=Z,17nm,1.2s
SUMG Summit 53.45 14 P **P** **23 15 50.6 -1.2**
SUMG IAmb IAmb 23 15 53.5
comp=Z,16nm,1.2s
SUMG Summit 53.45 14 P **P** **23 15 50.4 -1.4**
SUMG Summit 53.45 14*i*P **P** **23 15 51.0 -0.8**
SUMG IAmb IAmb 23 15 54.4
comp=Z,7.9nm,1.0s
Y22A Socorro 53.52 79 P **P** **23 15 53.1 +0.6**
Y22A IAmb IAmb 23 15 57.9
comp=Z,13nm,1.1s
XAN Xi'an 53.65 281⇓P **P** **23 15 53.4 +0.1**
XAN pmax pmax
comp=Z,21nm,0.9s
DBG Daneborg 53.93 7*i*P **P** **23 15 53.7 -1.0**
DBG IAmb IAmb 23 15 54.6
comp=Z,3.6nm,0.6s
ZALV Zalesovo Beam 54.11 314 P **P** **23 15 56.1 -0.2**
comp=Z,1.0nm,0.4s,baz=32,slow=5.9,SNR=4.1
ZALV PcP **PcP** **23 17 01.3 +0.7**
comp=Z,5.2nm,0.6s,baz=35,slow=3.4,SNR=18
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 54.11 314 P **P** **23 15 55.9 -0.5**
RTBA Rita Blanca 54.45 74 P **P** **23 15 59.7 +0.5**
RTBA IAmb IAmb 23 16 02.6
comp=Z,17nm,1.0s
LZH Lanzhou 55.39 286*e*P **P** **23 16 07.4 +1.3**
LZH sP sP 23 16 26.8 +2.8
LZH pmax pmax
comp=Z,34nm,1.2s
LZH L L
comp=Z,280nm,13.5s
LZH L L
comp=Z,270nm,13.5s
LZH L L
comp=Z,480nm,13.8s
LZDM Lanzhou Array 55.57 286 P **P** **23 16 07.2 -0.3**
comp=Z,3.4nm,0.4s,baz=64,slow=3.4,SNR=5.9
LZDM LR LR 23 40 50.2
comp=Z,245nm,21.2s,baz=15,slow=37
comp=Z,3.4nm,0.4s
GTA2 Gaotai 55.57 292*e*P **P** **23 16 07.3 0.0**
GTA2 pmax pmax
comp=Z,50nm,0.7s
DGZ Jazzator, Alta 55.60 308*i*P **P** **23 16 08.1 +0.7**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
SFJD Kangerlussuaq 55.80 22 LR LR 23 42 52.8
comp=Z,90nm,19.1s,baz=320,slow=39
MNTX Cornudas Mount 56.01 80 P **P** **23 16 09.7 -0.7**
MNTX Cornudas Mount 56.01 80 P **P** **23 16 11.3 +0.9**
VADS Vadso 57.24 349*e*P **P** **23 16 19.2 +0.7**
SCO Scoresbysund 57.46 9 P **P** **23 16 19.4 -0.7**
SCO pmax pmax
comp=Z,3.0nm,0.7s
SCO Scoresbysund 57.46 9 P **P** **23 16 19.4 -0.7**
SCO Scoresbysund 57.46 9*i*P **P** **23 16 19.7 -0.3**
SCO IAmb IAmb 23 16 20.5
comp=Z,3.7nm,1.0s
BLOK Blackwell 57.54 70 P **P** **23 16 21.2 0.0**
WMOK Wichita Mounta 57.98 73 P **P** **23 16 24.2 -0.1**
WMOK pmax pmax
comp=Z,9.0nm,0.9s
WMOK Wichita Mounta 57.98 73 P **P** **23 16 24.2 -0.1**
WMOK IAmb IAmb 23 16 27.1
comp=Z,9.3nm,0.9s
WMOK Wichita Mounta 57.98 73 P **P** **23 16 25.0 +0.8**
ARA0 ARCESS Array S 58.24 350*e*P **P** **23 16 25.1 -0.4**
ARCES ARCESS Array B 58.24 350 P **P** **23 16 24.7 -0.9**
comp=Z,5.0nm,0.7s,baz=26,slow=8.7,SNR=18
ARCES PcP **PcP** **23 17 15.9 -0.4**
comp=Z,2.1nm,0.8s,baz=6.5,slow=5.4,SNR=3.7
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 58.24 350 P **P** **23 16 24.7 -0.9**
ARCES PcP **PcP** **23 17 15.9 -0.4**
LPIG La Paz 58.27 90 LR LR 23 35 38.5
comp=Z,61nm,21.5s,baz=332,slow=30
LVZ Lovozero 58.58 346 P **P** **23 16 28.0 0.0**
LVZ Lovozero 58.58 346 P **P** **23 16 26.9 -1.1**
TXAR Lajitas Array 58.71 81 P **P** **23 16 30.4 +0.8**
comp=Z,1.1nm,0.4s,baz=300,slow=5.4,SNR=15
comp=Z,1.1nm,0.4s
TXAR Lajitas Array 58.71 81 P **P** **23 16 29.6 0.0**
TRO Tromso 58.75 353*e*P **P** **23 16 28.5 -0.6**
TRO IAmb IAmb 23 16 36.1
comp=Z,32nm,1.5s
CD2 Chengdu 58.97 282 P **P** **23 16 31.8 +0.5**
KTK1 Kautokeino 58.97 351*e*P **P** **23 16 31.3 +0.6**
KTK1 IAmb IAmb 23 16 31.4
comp=Z,19nm,1.1s
KURK Kurchatov 59.10 314*ce*P **P** **23 16 30.4 -1.4**
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 59.10 314 P **P** **23 16 30.2 -1.6**
KURK IAmb IAmb 23 16 33.8
comp=Z,4.0nm,0.6s
KURK PcP **PcP** **23 17 19.8 -0.2**
KURK Kurchatov 59.10 314 P **P** **23 16 30.9 -0.9**
KURK Kurchatov 59.10 314 P **P** **23 16 30.4 -1.4**
KURK PcP **PcP** **23 17 19.9 -0.2**
HPIG 59.16 84 P **P** **23 16 33.3 +0.5**
HPIG IAmb IAmb 23 17 26.4
comp=Z,6.2nm,0.7s
KURBB Kurchatov Arra 59.21 314 P **P** **23 16 31.1 -1.4**
comp=Z,2.6nm,0.5s,baz=43,slow=6.5,SNR=40
KURBB PcP **PcP** **23 17 20.6 +0.1**
comp=Z,1.4nm,0.4s,baz=42,slow=3.1,SNR=12
comp=Z,2.6nm,0.5s
WMQ Urumqi 59.39 303*e*P **P** **23 16 35.4 +1.4**
WMQ PcP **PcP** **23 17 22.6 +1.1**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ L L
comp=Z,280nm,21.9s
HDIL Hopedale 59.52 62 P **P** **23 16 34.6 -0.2**
HHAR Hobbs 59.79 69 P **P** **23 16 36.3 -0.5**
HHAR IAmb IAmb 23 16 37.5
comp=Z,21nm,1.4s
MK31 Makanchi Array 60.10 308*c i*P **P** **23 16 37.1 -1.7**
MK31 Makanchi Array 60.10 308 P **P** **23 16 38.2 -0.6**
MKAR Makanchi Array 60.10 308 P **P** **23 16 37.4 -1.4**
comp=Z,2.1nm,0.3s,baz=50,slow=6.2,SNR=50
MKAR PcP **PcP** **23 17 24.4 +0.2**
comp=Z,2.1nm,0.5s,baz=44,slow=4.6,SNR=4.6
MKAR LR LR 23 43 45.4
comp=Z,183nm,19.7s,baz=23,slow=37
comp=Z,2.1nm,0.3s
MKAR Makanchi Array 60.10 308 P **P** **23 16 37.5 -1.4**
MKAR 23 17 24.1
MKAR Makanchi Array 60.10 308 P **P** **23 16 37.5 -1.4**
MKAR **PcP** **23 17 24.1 -0.1**
CCM Cathedral Cave 60.13 65 P **P** **23 16 39.0 -0.2**
SCHQ Schefferville 60.15 38 P **P** **23 16 38.5 -0.5**
comp=Z,9.8nm,0.9s,baz=319,slow=6.5,SNR=8.7
SCHQ LR LR 23 44 15.7
comp=Z,182nm,18.4s,baz=279,slow=38
comp=Z,9.8nm,0.9s
SCHQ Schefferville 60.15 38 P **P** **23 16 38.1 -0.9**
MAKZ Makanchi 60.24 309 P **P** **23 16 39.9 +0.1**
MAKZ Makanchi 60.24 309 P **P** **23 16 38.4 -1.4**
MAKZ IAmb IAmb 23 16 40.4
comp=Z,4.3nm,0.5s
MAKZ Makanchi 60.24 309 P **P** **23 16 38.5 -1.3**
GYA Guiyang 60.30 276⇓P **P** **23 16 40.8 +0.2**
GYA pmax pmax
comp=Z,15nm,0.7s
FVM French Village 60.65 65 P **P** **23 16 42.2 -0.5**
FVM pmax pmax
comp=Z,17nm,0.7s
FVM French Village 60.65 65 P **P** **23 16 42.2 -0.5**
GOMU GeErMu 60.67 292 P **P** **23 16 42.5 -0.8**
GOMU PcP **PcP** **23 17 27.8 +0.7**
GOMU pmax pmax
comp=Z,17nm,0.9s
STEI Steigen 60.70 354*e*P **P** **23 16 39.8 -2.6**
STEI IAmb IAmb 23 16 43.4
comp=Z,27nm,1.3s
BVAR Borovoye Array 60.98 320 P **P** **23 16 43.9 -0.8**
comp=Z,6.3nm,0.4s,baz=48,slow=7.6,SNR=22
BVAR PcP **PcP** **23 17 27.9 +0.3**
comp=Z,5.6nm,0.5s,baz=50,slow=3.3,SNR=7.1
comp=Z,6.3nm,0.4s
BORK Borovoye 60.99 320 P **P** **23 16 43.8 -0.9**
BORK pmax pmax
comp=Z,5.0nm,0.6s
BORK Borovoye 60.99 320 P **P** **23 16 43.8 -0.9**
BORK IAmb IAmb 23 16 47.9
comp=Z,4.9nm,0.6s
MIAR Mount Ida 61.21 70 P **P** **23 16 47.6 +1.1**
FAUS Fauske 61.24 354*e*P **P** **23 16 42.1 -4.0**
FAUS IAmb IAmb 23 16 50.4
comp=Z,386nm,3.4s
USIN University of 62.23 63 P **P** **23 16 53.5 +0.2**
LEIR Leirfjorden 62.63 355*e*P **P** **23 16 54.9 -0.6**
LEIR IAmb IAmb 23 16 59.1
comp=Z,43nm,1.5s
WCI Wyandotte Cave 62.81 62 P **P** **23 16 57.0 -0.1**
WCI pmax pmax
comp=Z,30nm,0.7s
WCI Wyandotte Cave 62.81 62 P **P** **23 16 57.0 -0.1**
WCI Wyandotte Cave 62.81 62 P **P** **23 16 57.5 +0.3**
WCI Wyandotte Cave 62.81 62 P **P** **23 16 57.9 +0.8**
ARTI Arti 62.81 328 P **P** **23 16 55.6 -1.2**
comp=Z,3.8nm,0.4s,baz=355,slow=3.6,SNR=4.3
ARTI PcP **PcP** **23 17 34.8 -0.1**
comp=Z,4.7nm,0.5s,baz=27,slow=2.7,SNR=6.7
comp=Z,3.8nm,0.4s
ARTI Arti 62.81 328*c i*P **P** **23 16 55.6 -1.2**
ARTI 23 17 34.1
ARTI S **S** **23 25 25.8 +3.5**
ARTI SS **SS** **23 29 21.7 -5.1**
ARTI pmax pmax
comp=Z,2.0nm,0.5s
ARTI Arti 62.81 328 P **P** **23 16 55.8 -1.1**
ARTI **PcP** **23 17 34.7 -0.2**
BORG Borgarnes 63.06 11 LR LR 23 45 58.2
comp=Z,61nm,20.1s,baz=13,slow=38
HKT Hockley 63.09 75⇑*i*P **P** **23 17 00.0 +0.9**
HKT pmax pmax
comp=Z,17nm,1.4s
HKT Hockley 63.09 75 P **P** **23 17 00.2 +1.2**
HNR Honiara 63.14 204 LR LR 23 40 41.9
comp=Z,6.6nm,19.0s,baz=56,slow=32
PZH PanZhiHua 63.33 280 P **P** **23 17 02.3 +1.3**
WVT Waverly 63.43 65 P **P** **23 17 01.0 -0.3**
WVT pmax pmax
comp=Z,23nm,0.9s
WVT Waverly 63.43 65 P **P** **23 17 01.0 -0.3**
WVT Waverly 63.43 65 P **P** **23 17 01.7 +0.4**
WVT Waverly 63.43 65 P **P** **23 17 02.0 +0.7**
OXF Oxford 63.67 67 P **P** **23 17 03.0 +0.1**
OXF pmax pmax
comp=Z,117nm,1.3s
OXF Oxford 63.67 67 P **P** **23 17 03.0 +0.1**
KMI2 Kunming 63.69 278⇑P **P** **23 17 03.4 0.0**
KMI2 pmax pmax
comp=Z,11nm,0.9s
PDGK Podgornoye 63.96 307 P **P** **23 17 04.4 -0.5**
PDGK Podgornoye 63.96 307 P **P** **23 17 04.3 -0.5**
MMNY Mt. Morris Dam 64.04 54 P **P** **23 17 05.3 +0.1**
KLMR Klimovskoe 64.11 340*e*P **P** **23 17 04.9 -0.4**
KLMR pmax pmax
comp=Z,13nm,1.3s
NSS Namsos 64.28 355*e*P **P** **23 17 07.8 +1.4**
BINY Binghamton 65.40 53 P **P** **23 17 13.7 -0.4**
BINY IAmb IAmb 23 17 15.8
comp=Z,16nm,0.9s
BINY Binghamton 65.40 53 P **P** **23 17 14.3 +0.2**
TZTN Tazewell 65.54 62 P **P** **23 17 15.9 +0.8**
WUS Wushi 65.66 306 P **P** **23 17 15.9 -0.1**
WUS IAmb IAmb 23 17 17.6
comp=Z,6.4nm,0.7s
WUS Wushi 65.66 306 P **P** **23 17 17.1 +1.2**
SLVN Son La 65.75 274 P **P** **23 17 16.1 -0.6**
SLVN IAmb IAmb 23 17 19.1
comp=Z,10.0nm,1.1s
FIA1 FINESS Array S 65.92 347 P **P** **23 17 16.3 -0.8**
FINES FINESS Array B 65.92 347 P **P** **23 17 16.4 -0.7**
comp=Z,5.5nm,0.3s,baz=11,slow=7.5,SNR=86
FINES PKIKP **PKiKP** **23 23 45.0 -4.5**
comp=Z,3.3nm,0.9s,baz=12,slow=7.3,SNR=5.1
comp=Z,5.5nm,0.3s
FINES FINESS Array B 65.92 347 P **P** **23 17 16.3 -0.8**
TARG Taragay, Kyrgy 65.98 307 P **P** **23 17 18.8 +0.4**
TARG pmax pmax
comp=Z,4.0nm,0.6s
TARG Taragay, Kyrgy 65.98 307 P **P** **23 17 18.8 +0.4**
TARG IAmb IAmb 23 17 50.9
comp=Z,4.3nm,0.6s
KDJ Kajisay 66.00 308 P **P** **23 17 18.4 +0.2**
KDJ pmax pmax
comp=Z,14nm,1.1s
KDJ Kajisay 66.00 308 P **P** **23 17 18.4 +0.2**
KDJ IAmb IAmb 23 18 55.4
comp=Z,14nm,1.1s
TKL Tuckaleechee C 66.05 63 LR LR 23 47 06.4
comp=Z,123nm,20.5s,baz=332,slow=37
BOOM Boomskoye usch 66.34 309 P **P** **23 17 19.9 -0.4**
BOOM pmax pmax
comp=Z,7.0nm,0.8s
BOOM Boomskoye usch 66.34 309 P **P** **23 17 19.9 -0.4**
BOOM IAmb IAmb 23 17 23.0
comp=Z,7.0nm,0.8s
BOOM Boomskoye usch 66.34 309 P **P** **23 17 20.5 +0.1**
MOL Molde 66.44 357*e*P **P** **23 17 22.2 +1.8**
FRU1 Bishkek 66.74 310 P **P** **23 17 23.1 +0.3**
FRU1 pmax pmax
comp=Z,27nm,1.2s
FRU1 Bishkek 66.74 310 P **P** **23 17 23.1 +0.3**
BLA Blacksburg 66.76 59 P **P** **23 17 22.7 -0.3**
BLA pmax pmax
comp=Z,12nm,0.7s
BLA Blacksburg 66.76 59 P **P** **23 17 22.7 -0.3**
BLA IAmb IAmb 23 17 24.4
comp=Z,12nm,0.7s
SWI Sorong 66.83 236 P **P** **23 17 24.1 +0.6**
SIJI Sorong 66.83 236 P **P** **23 17 24.0 +0.4**
comp=Z,46nm,0.9s
AKN Aaknes 66.85 357*e*P **P** **23 17 23.4 +0.4**
DOMB Dombas 66.90 356*e*P **P** **23 17 22.6 -0.9**
DOMB IAmb IAmb 23 17 28.5
comp=Z,80nm,2.1s
AAK Ala-Archa 66.93 310 P **P** **23 17 23.8 -0.3**
comp=Z,9.4nm,0.6s,baz=101,slow=3.6,SNR=12
comp=Z,9.4nm,0.6s
AAK Ala-Archa 66.93 310*ce*P **P** **23 17 25.6 +1.5**
AAK pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 66.93 310 P **P** **23 17 24.1 0.0**
AAK IAmb IAmb 23 17 26.6
comp=Z,9.3nm,0.7s

AAK Ala-Archa 66.93 310 P **P** **23 17 25.3 +1.1**
NRN Naryn 67.10 308 P **P** **23 17 25.5 +0.1**
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 67.10 308 P **P** **23 17 25.5 +0.1**
ASAI AK-SAY(Kyrgyzs 67.23 307 P **P** **23 17 26.9 +0.7**
LSA Lhasa 67.46 290 P **P** **23 17 27.9 -0.1**
LSA pmax pmax
comp=Z,21nm,0.5s
LSA Lhasa 67.46 290 P **P** **23 17 27.9 -0.1**
LSA Lhasa 67.46 290 P **P** **23 17 28.4 +0.3**
EMMW East Machias 67.57 46 P **P** **23 17 27.0 -0.9**
EMMW IAmb IAmb 23 17 28.0
comp=Z,11nm,0.7s
NC204 NORSAR Array S 67.58 355 P **P** **23 17 27.1 -0.7**
NC204 IAmb IAmb 23 18 09.4
comp=Z,24nm,1.4s
AKTO Aktyubinsk 67.79 325 P **P** **23 17 28.1 -1.1**
comp=Z,3.8nm,0.5s,baz=60,slow=6.9,SNR=12
AKTO PcP **PcP** **23 17 55.9 +0.2**
comp=Z,2.1nm,0.6s,baz=32,slow=5.2,SNR=2.8
comp=Z,3.8nm,0.5s
NB2 NORSAR Subarra 67.80 355 P **P** **23 17 28.4 -0.7**
comp=Z,1.1nm,0.4s,baz=7.7,slow=6.9
NB2 NORSAR Subarra 67.80 355 P **P** **23 17 28.4 -0.7**
NOA NORSAR Array B 67.80 355 P **P** **23 17 27.9 -1.2**
comp=Z,2.6nm,0.6s,baz=12,slow=6.9,SNR=25
comp=Z,2.6nm,0.6s
GOGA Godfrey 67.87 64 P **P** **23 17 29.6 -0.4**
GOGA pmax pmax
comp=Z,19nm,1.0s
GOGA Godfrey 67.87 64 P **P** **23 17 29.6 -0.4**
GOGA IAmb IAmb 23 17 31.0
comp=Z,19nm,0.9s
GOGA Godfrey 67.87 64 P **P** **23 17 30.0 +0.1**
AB31 Akbulak array 68.04 323 P **P** **23 17 29.7 -1.1**
ABKAR Akbulak array 68.04 323 P **P** **23 17 29.6 -1.2**
NC602 NORSAR Array S 68.08 355 *eP* **P** **23 17 30.1 -0.8**
NORES NORESS Array B 68.08 355 P **P** **23 17 32.2 +1.4**
SKAR Skarslia 68.30 356 *eP* **P** **23 17 32.2 -0.1**
KK31 Karatay Array 68.46 313 P **P** **23 17 33.3 -0.3**
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KK31 Karatay Array 68.46 313 P **P** **23 17 33.3 -0.3**
KK31 IAmb IAmb 23 17 35.4
comp=Z,6.8nm,0.6s
KKAR Karatay Array 68.46 313 P **P** **23 17 32.5 -1.1**
KKAR Karatay Array 68.46 313 P **P** **23 17 32.5 -1.1**
HFS Hagfors 68.53 353 P **P** **23 17 32.5 -1.1**
comp=Z,3.0nm,0.5s,baz=33,slow=5.4,SNR=34
comp=Z,3.0nm,0.5s
ARSB Arslanbob 68.66 310 P **P** **23 17 35.2 +0.2**
ARSB pmax pmax
comp=Z,12nm,0.6s
ARSB Arslanbob 68.66 310 P **P** **23 17 35.2 +0.2**
ARSB IAmb IAmb 23 17 37.2
comp=Z,12nm,0.6s
OSL Oslo 68.92 355 *eP* **P** **23 17 37.5 +1.4**
KSH2 Kashi 69.05 307 P **P** **23 17 39.3 +1.8**
KSH2 pmax pmax
comp=Z,20nm,0.6s
MYLDM Lahad Datu 69.05 251 P **P** **23 17 39.4 +1.9**
comp=Z,16nm,1.4s
MOS Moscow 69.19 339 *eP* **P** **23 17 38.0 +0.2**
MOS *e* 23 18 03.6
MOS pmax pmax
comp=Z,22nm,0.7s
KONO Kongsberg 69.27 355 P **P** **23 17 37.9 -0.4**
KONO pmax pmax
comp=Z,22nm,1.2s
KONO Kongsberg 69.27 355 *eP* **P** **23 17 38.9 +0.7**
KONO IAmb IAmb 23 17 43.4
comp=Z,60nm,2.0s
KONO Kongsberg 69.27 355 P **P** **23 17 37.9 -0.4**
KONO IAmb IAmb 23 19 16.0
comp=Z,22nm,1.2s
MORE Moreh 69.57 283 P **P** **23 17 39.6 -1.1**
MORE IAmb IAmb 23 17 42.4
comp=Z,5.2nm,0.5s
OBN Obninsk 70.00 339 LR LR 23 52 33.5
comp=Z,161nm,18.1s,baz=349,slow=40
OBN Obninsk 70.00 339 *d iP* **P** **23 17 42.6 -0.2**
OBN *e* 23 18 03.3
OBN *e* 23 20 18.2
OBN pmax pmax
comp=Z,18nm,0.9s
OBN MLR MLR
comp=Z,282nm,22.0s
OBN Obninsk 70.00 339 P **P** **23 17 42.0 -0.8**
OBN Obninsk 70.00 339 P **P** **23 17 43.1 +0.3**
comp=Z,26nm,0.8s
OBN Obninsk 70.00 339 P **P** **23 17 42.6 -0.2**
SHL Shillong 70.06 286 P **P** **23 17 42.8 -1.1**
SHL pmax pmax
comp=Z,25nm,0.8s
SHL Shillong 70.06 286 P **P** **23 17 42.8 -1.1**
DRK Karamyk 70.66 309 P **P** **23 17 47.1 -0.4**
DRK Karamyk 70.66 309 P **P** **23 17 47.1 -0.4**
BTK Batken 70.68 310 P **P** **23 17 47.0 -0.4**
BTK pmax pmax
comp=Z,14nm,0.9s
BTK Batken 70.68 310 P **P** **23 17 47.0 -0.4**
BTK IAmb IAmb 23 17 49.4
comp=Z,14nm,0.9s
BTK Batken 70.68 310 P **P** **23 17 48.4 +1.0**
CHTO Chiang Mai 70.72 276 P **P** **23 17 46.8 -1.0**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CHTO Chiang Mai 70.72 276 P **P** **23 17 46.8 -1.0**
CHTO Chiang Mai 70.72 276 P **P** **23 17 47.9 +0.1**
CHTO Chiang Mai 70.72 276 P **P** **23 17 48.0 +0.2**
CM31 Chiang Mai Arr 70.99 276 P **P** **23 17 49.0 -0.5**
CM31 IAmb IAmb 23 17 50.7
comp=Z,14nm,1.3s
CMAR Chiang Mai Arr 70.99 276 P **P** **23 17 49.0 -0.4**
comp=Z,2.3nm,0.5s,baz=27,slow=7.0,SNR=33
comp=Z,2.3nm,0.5s
EVN Everest 71.30 291 P **P** **23 17 51.4 -0.5**
EVN Everest 71.30 291 P **P** **23 17 52.9 +0.9**
NPW Naypyitaw 71.75 279 P **P** **23 17 54.5 +0.5**
LPSR Galich'ya Gora 71.76 337 *eP* **P** **23 17 52.7 -0.8**
LPSR pmax pmax
comp=Z,8.0nm,0.9s
PABE Paberze 71.96 347 P **P** **23 17 54.6 -0.1**
MNK Minsk 72.30 344 *i* P **P** **23 17 57.3 +0.5**
MNK comp=E,9.0nm,0.8s
i P **P** **23 17 57.3 +0.5**
comp=N,10.0nm,1.1s
MNK *i* P **P** **23 17 57.3 +0.5**
comp=Z,11nm,0.9s,baz=17
MNK *i* PcP **sP** **23 18 15.0 -0.1**
MNK *i* PP **PP** **23 20 37.6 +0.5**
MNK *i* PPP PPP 23 22 21.1
MNK *i* S **S** **23 27 14.5 -1.6**
MNK *i* SS **SS** **23 31 57.8 +4.5**
MNK *i* SSS SSS 23 35 19.9
MNK *i* LRM MLR 23 51 60.0
comp=N,122nm,18.4s
MNK *i* LRM MLR 23 52 28.6
comp=Z,122nm,18.5s
MNK *i* LRM MLR 23 53 49.2
comp=E,89nm,23.6s
MNK Minsk 72.30 344 *i* P **P** **23 17 57.2 +0.5**
MNK *i* 23 18 14.9
MNK *i* 23 20 37.5
MNK *i* PPP PPP 23 22 21.0
MNK *i* S **S** **23 27 14.4 -1.6**
MNK *i* SS **SS** **23 31 57.7 +4.5**
MNK pmax pmax
comp=Z,11nm,0.9s
MNK pmax pmax
comp=N,10.0nm,1.1s
MNK pmax pmax
comp=E,9.0nm,0.8s
MNK MLR MLR
comp=N,122nm,18.0s
MNK MLR MLR
comp=Z,122nm,18.0s
MNK MLR MLR
comp=E,89nm,24.0s
VRH Novokhopyorsk 72.31 335 *eP* **P** **23 17 54.8 -2.0**
VRH pmax pmax
comp=Z,9.0nm,0.7s
VORR Voronezh 72.54 336 *eP* **P** **23 17 57.4 -0.8**
VORR pmax pmax
comp=Z,12nm,0.4s
VSR Storozhevoye 72.96 336 *eP* **P** **23 17 59.8 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.7s
CMIG Matias Romero 73.13 84 LR LR 23 50 12.3
comp=Z,48nm,18.4s,baz=330,slow=36
PPT Papeete 73.15 151 LR LR 23 41 30.8
comp=Z,116nm,21.9s,baz=348,slow=29
EKB Eskdalemuir 73.75 3 P **P** **23 18 05.0 -0.3**
EKA Eskdalemuir Ar 73.75 3 P **P** **23 18 05.2 -0.1**
comp=Z,2.2nm,0.5s,baz=353,slow=5.4,SNR=18
comp=Z,2.2nm,0.5s
RAR Rarotonga 74.05 162 LR LR 23 44 46.5
comp=Z,122nm,19.9s,baz=310,slow=31
NIL Nilore 74.47 305 P **P** **23 18 10.5 +0.5**
NIL pmax pmax
comp=Z,37nm,0.6s
NIL Nilore 74.47 305 P **P** **23 18 10.5 +0.5**
NIL Nilore 74.47 305 P **P** **23 18 11.3 +1.4**
BSEG Bad Segeberg 74.93 354 *eP* **P** **23 18 12.2 0.0**
comp=Z,10nm,1.2s,baz=8.7,slow=5.6
BSEG *eL* L 23 56 32.9
comp=Z,64nm,21.2s
BSEG Bad Segeberg 74.93 354 P **P** **23 18 11.8 -0.3**
RNPP9 Sopachiv 75.61 344 P **P** **23 18 16.2 +0.1**
AK23 Malin Array Si 75.64 342 P **P** **23 18 16.1 -0.2**
AK21 Malin Array Si 75.65 342 P **P** **23 18 15.5 -0.8**
AK22 Malin Array Si 75.66 342 P **P** **23 18 15.7 -0.7**
AK03 Malin Array Si 75.66 342 P **P** **23 18 15.6 -0.8**
AK04 Malin Array Si 75.67 342 P **P** **23 18 15.6 -0.9**
AKASG Malin Array Be 75.68 342 P **P** **23 18 15.8 -0.7**
comp=Z,3.0nm,0.4s,baz=21,slow=5.8,SNR=49
AKASG LR LR 23 55 13.3
comp=Z,148nm,18.4s,baz=62,slow=39
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 75.68 342 P **P** **23 18 15.5 -1.0**
AKASG IAmb IAmb 23 18 17.0
comp=Z,13nm,1.4s
AKBB Malin Array Si 75.68 342 *ceP* **P** **23 18 15.6 -1.0**
AKBB pmax pmax
comp=Z,25nm,1.0s
AKBB Malin Array Si 75.68 342 P **P** **23 18 15.4 -1.2**
AKBB Malin Array Si 75.68 342 P **P** **23 18 16.0 -0.6**
RNPP8 Varash 75.69 344 P **P** **23 18 16.3 -0.3**
KIEV Kiev 75.69 342 *⇑P* **P** **23 18 16.1 -0.6**
KIEV Kiev 75.69 342 P **P** **23 18 16.0 -0.6**
KIEV Kiev 75.69 342 P **P** **23 18 16.0 -0.6**
comp=Z,106nm,1.1s
KIEV Kiev 75.69 342 P **P** **23 18 15.7 -0.9**
KIEV Kiev 75.69 342 P **P** **23 18 16.0 -0.6**
AK01 Malin Array Si 75.69 342 P **P** **23 18 15.8 -0.8**
AK19 Malin Array Si 75.70 342 P **P** **23 18 15.8 -0.9**
AK11 Malin Array Si 75.72 342 P **P** **23 18 15.8 -0.9**
MI28 Mi28,Pidlybu 75.76 343 P **P** **23 18 16.0 -1.0**
AK05 Malin Array Si 75.76 342 P **P** **23 18 16.2 -0.8**
AK14 Malin Array Si 75.77 342 P **P** **23 18 16.4 -0.7**
RNPP5 Staryi Chortor 75.79 344 P **P** **23 18 16.4 -0.7**
GORT1 Trebel 75.81 354 *eP* **P** **23 18 17.7 +0.5**
comp=Z,19nm,1.2s,baz=8.7,slow=5.6
KBL Kabul 75.90 308 P **P** **23 18 17.5 -0.9**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 75.90 308 P **P** **23 18 17.4 -0.9**
KBL IAmb IAmb 23 18 19.6
comp=Z,13nm,0.8s
KBL Kabul 75.90 308 P **P** **23 18 18.2 -0.2**
RETH Rethem/Aller, 76.18 355 *eP* **P** **23 18 20.0 +0.7**
comp=Z,9.3nm,1.1s,baz=8.7,slow=5.6
FLTG Flechtingen 76.47 354 *eP* **P** **23 18 20.4 -0.5**
comp=Z,5.9nm,0.7s,baz=8.7,slow=5.6
IBBN Ibbenburen 76.69 356 *eP* **P** **23 18 22.6 +0.4**
comp=Z,23nm,1.1s,baz=8.7,slow=5.6
IBBN Ibbenburen 76.69 356 P **P** **23 18 22.9 +0.6**
LUBAR Lubar, Ukraine 76.71 343 P **P** **23 18 21.0 -1.4**
CLZ Clausthal 77.01 354 *eP* **P** **23 18 24.1 0.0**
comp=Z,16nm,1.2s,baz=8.7,slow=5.6
CLZ Clausthal 77.01 354 P **P** **23 18 24.2 +0.1**
WTSB Winterswijk 77.07 356 P **P** **23 18 24.6 +0.3**
MTN Manton Dam 77.15 230 P **P** **23 18 25.0 -0.3**
MTN IAmb IAmb 23 18 39.1
comp=Z,23nm,1.4s
GTTG Gottingen 77.33 354 *eP* **P** **23 18 25.8 0.0**
comp=Z,8.4nm,1.0s,baz=8.7,slow=5.6
GTTG Gottingen 77.33 354 P **P** **23 18 26.4 +0.5**
CLL Collm 77.35 352 *i* P **P** **23 18 25.0 -1.0**
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 77.35 352 *eP* **P** **23 18 25.3 -0.7**
comp=Z,4.1nm,0.7s,baz=8.7,slow=5.6
CLL Collm 77.35 352 P **P** **23 18 25.0 -1.0**
comp=Z,6.8nm,1.2s
CLL Collm 77.35 352 *i* P **P** **23 18 25.0 -1.0**
comp=Z,5.0nm,0.7s
CLL *ePP* **PP** **23 21 20.0 +0.2**
GOF Gofitskoye 77.48 331 *d iP* **P** **23 18 27.2 +0.4**
OJC Ojcow 77.69 348 P **P** **23 18 27.2 -0.7**
OJC Ojcow 77.69 348 P **P** **23 18 27.2 -0.7**
OJC Ojcow 77.69 348 P **P** **23 18 28.1 +0.2**
comp=Z,6.8nm,1.2s
OJC Ojcow 77.69 348 P **P** **23 18 27.6 -0.3**
BRG Bergjesshubel 77.70 352 *eP* **P** **23 18 27.3 -0.6**
comp=Z,4.6nm,0.8s,baz=8.7,slow=5.6
KASTN Kahler Asten 77.76 355 *eP* **P** **23 18 28.2 -0.1**
comp=Z,8.5nm,1.3s,baz=8.7,slow=5.6
OSTC Ostas 77.79 350 *eP* **P** **23 18 29.2 +0.7**
OSTC MLR MLR
comp=Z,200nm,21.9s
OSTC Ostas 77.79 350 *eP* **P** **23 18 29.2 +0.7**
OSTC AMS AMS 23 54 30.0
comp=Z,200nm,21.9s
KWP Kalwaria Pacla 77.85 346 P **P** **23 18 28.9 +0.1**
comp=Z,524nmcomp=Z,51nm,1.0s
UPC Upice 77.86 350 AMS AMS 23 54 40.0
comp=Z,200nm,24.0s
DPC Dobruska-Polom 77.98 350 *eP* **P** **23 18 29.8 +0.2**
DPC MLR MLR
comp=Z,200nm,20.2s
DPC Dobruska-Polom 77.98 350 *eP* **P** **23 18 29.8 +0.2**
DPC AMS AMS 23 55 00.0
comp=Z,200nm,20.2s
DPC Dobruska-Polom 77.98 350 P **P** **23 18 29.3 -0.3**
comp=Z,6.4nm,1.2s
DPC Dobruska-Polom 77.98 350 P **P** **23 18 30.0 +0.4**
RICC Richard 78.01 352 *eP* **P** **23 18 30.6 +0.9**
MOX Moxa 78.12 353 *eP* **P** **23 18 29.9 -0.4**
comp=Z,4.1nm,0.8s,baz=8.7,slow=5.6
MOX *eL* L 00 01 47.8
comp=Z,106nm,21.8s
MOX Moxa 78.12 353 P **P** **23 18 30.4 +0.1**
STEB Steborice 78.22 349 *eP* **P** **23 18 30.8 -0.1**
PLN Plauen 78.23 353 *eP* **P** **23 18 30.7 -0.2**
comp=Z,1.3nm,0.8s,baz=8.7,slow=5.6
BAL3X Bal3x, Balta 78.24 341 P **P** **23 18 31.1 +0.1**
KMPD K-Podol'skiy 78.25 343 P **P** **23 18 30.7 -0.3**
OKC Ostrava-Krasne 78.28 349 AMS AMS 23 50 40.0
comp=Z,200nm,23.7s
TANN Tannenbergstha 78.28 353 *eP* **P** **23 18 30.9 -0.3**
comp=Z,9.1nm,1.4s,baz=8.7,slow=5.6
TANN *eL* L 23 57 49.5
comp=Z,143nm,20.7s
TANN Tannenbergstha 78.28 353 P **P** **23 18 30.9 -0.3**
SORM Soroca 78.30 342 *⇑P* **P** **23 18 31.1 -0.2**
SORM Soroca 78.30 342 P **P** **23 18 31.1 -0.2**
SORM Soroca 78.30 342 P **P** **23 18 31.0 -0.3**
comp=Z,666nmcomp=Z,56nm,0.9s
HGN Heimansgroeve 78.31 357 P **P** **23 18 31.7 +0.4**
UCC Uccle 78.32 358 *dP* **P** **23 18 31.5 +0.1**
comp=Z,5.9nm,0.7s
MORC Moravsky Berou 78.41 349 *⇑P* **P** **23 18 32.2 +0.3**
MORC Moravsky Berou 78.41 349 P **P** **23 18 32.2 +0.3**
MORC Moravsky Berou 78.41 349 P **P** **23 18 30.9 -1.1**
MORC Moravsky Berou 78.41 349 *eP* **P** **23 18 31.7 -0.3**
MEM Membach 78.46 357 *dP* **P** **23 18 32.6 +0.5**
MEM Membach 78.46 357 P **P** **23 18 32.6 +0.5**
NKC Novy Kostel 78.46 353 *eP* **P** **23 18 32.0 -0.2**
NKC Novy Kostel 78.46 353 *eP* **P** **23 18 32.0 -0.2**
NKC Novy Kostel 78.46 353 P **P** **23 18 32.2 0.0**
BSTI Sart Tilman 78.50 357 *dP* **P** **23 18 32.6 +0.2**
comp=Z,3.7nm,0.6s
PRU Pruhonice 78.52 351 *eP* **P** **23 18 32.0 -0.5**
PRU MLR MLR
comp=Z,100nm,17.7s
PRU Pruhonice 78.52 351 *eP* **P** **23 18 32.0 -0.5**
PRU AMS AMS 23 52 10.0
comp=Z,100nm,17.7s
KIV Kislovodsk 78.58 331 *⇑P* **P** **23 18 33.6 +0.4**
KIV Kislovodsk 78.58 331 *eP* **P** **23 18 33.3 +0.2**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV Kislovodsk 78.58 331 P **P** **23 18 32.2 -0.9**
KIV IAmb IAmb 23 18 34.5
comp=Z,9.6nm,0.9s
KIV Kislovodsk 78.58 331 P **P** **23 18 32.7 -0.4**
KIV Kislovodsk 78.58 331 P **P** **23 18 33.5 +0.4**
KOLS Kolonicke sedl 78.59 346 *eP* **P** **23 18 33.6 +0.6**
KOLS pmax pmax
comp=Z,9.0nm,0.6s
KOLS Kolonicke sedl 78.59 346 P **P** **23 18 34.0 +1.0**
KOLS Kolonicke sedl 78.59 346 *eP* **P** **23 18 33.6 +0.6**
BCLA Clavier 78.67 357 *dP* **P** **23 18 33.2 -0.1**
comp=Z,6.2nm,0.8s
KBZ Khabaz 78.72 331 P **P** **23 18 33.0 -0.7**
comp=Z,4.8nm,0.9s,baz=297,slow=2.3,SNR=7.7
comp=Z,4.8nm,0.9s
KBZ Khabaz 78.72 331 *ceP* **P** **23 18 34.1 +0.4**
KBZ pmax pmax
comp=Z,8.0nm,1.0s
TNS Taunus Mts 78.74 355 *eP* **P** **23 18 34.4 +0.6**
comp=Z,5.4nm,0.7s,baz=8.7,slow=5.6
MAUC Maruska 78.78 349 *eP* **P** **23 18 33.8 -0.2**
LANS Liptovska Anna 78.78 348 *eP* **P** **23 18 35.0 +1.0**
LANS pmax pmax
comp=Z,4.0nm,0.6s
LANS Liptovska Anna 78.78 348 *eP* **P** **23 18 35.0 +1.0**
SHA1 Shidzhatmaz 78.79 331 *c iP* **P** **23 18 34.2 -0.2**
BMRD Maredsous 78.80 358 *dP* **P** **23 18 34.2 +0.2**
RCHB Rochefort 78.94 357 *dP* **P** **23 18 35.3 +0.6**
ROTZ Rotzenmuhle 78.94 353 *eP* **P** **23 18 35.0 +0.1**
comp=Z,1.1nm,0.9s,baz=8.7,slow=5.6
VRAC Vranov 78.98 350 *⇑P* **P** **23 18 36.0 +0.9**
VRAC Vranov 78.98 350 P **P** **23 18 36.0 +0.9**
VRAC Vranov 78.98 350 *eP* **P** **23 18 34.7 -0.4**
VRAC Vranov 78.98 350 P **P** **23 18 35.4 +0.3**
DOU Dourbes 79.01 358 *dP* **P** **23 18 34.9 -0.3**
GRA1 Grafenberg Arr 79.09 353 P **P** **23 18 35.4 -0.3**
GRA1 IAmb IAmb 23 18 36.9
comp=Z,10nm,0.8s
GRA1 Grafenberg Arr 79.09 353 P **P** **23 18 36.3 +0.6**
GRF Grafenberg Arr 79.09 353 P **P** **23 18 35.4 -0.3**
GRF pmax pmax
comp=Z,10.0nm,0.8s
GRF Grafenberg Arr 79.09 353 *eP* **P** **23 18 35.8 +0.1**
comp=Z,11nm,0.8s,baz=8.7,slow=5.6
GRF *eL* L 23 56 26.8
comp=Z,130nm,20.2s
GRFO Grafenberg 79.09 353 P **P** **23 18 36.3 +0.6**
ZVC Zvikov 79.10 351 *eP* **P** **23 18 35.6 -0.1**
TREC Trest 79.11 350 P **P** **23 18 36.3 +0.5**
TREC Trest 79.11 350 P **P** **23 18 35.8 0.0**
GRA2 Grafenberg Arr 79.12 353 P **P** **23 18 36.4 +0.5**
AKT Akhty 79.14 326 *eP* **P** **23 18 36.3 +0.1**
AKT pmax pmax
comp=Z,12nm,1.1s
KRUC Moravsky 79.24 350 P **P** **23 18 36.7 +0.2**
KRUC Moravsky 79.24 350 *eP* **P** **23 18 36.4 -0.1**
KRUC Moravsky 79.24 350 P **P** **23 18 36.6 +0.1**
GRB4 Grafenberg Arr 79.29 353 P **P** **23 18 37.2 +0.4**
HRA Herat 79.29 313 P **P** **23 18 36.8 -0.5**
JAVC Velka Javorina 79.30 349 *eP* **P** **23 18 38.1 +1.2**
TRPA Tarpa 79.33 346 P **P** **23 18 37.4 +0.4**
BUR08 Bucovina Ar. S 79.36 344 P **P** **23 18 37.2 -0.2**
BUR08 IAmb IAmb 23 18 39.1
comp=Z,22nm,1.1s
ABAH Abaujker 79.37 346 P **P** **23 18 37.3 +0.1**
BURAR Bucovina Array 79.39 344 *⇑P* **P** **23 18 38.1 +0.7**
BURAR Bucovina Array 79.39 344 P **P** **23 18 38.1 +0.7**
BURAR Bucovina Array 79.39 344 P **P** **23 18 37.0 -0.4**
WLF Walferdange 79.40 357 *dP* **P** **23 18 38.2 +0.9**
WLF Walferdange 79.40 357 *eP* **P** **23 18 38.2 +0.9**
comp=Z,5.7nm,0.8s,baz=8.7,slow=5.6
KHC Kasperske Hory 79.46 352 *⇑iP* **P** **23 18 37.6 -0.1**
KHC pmax pmax
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 79.46 352 *eP* **P** **23 18 38.0 +0.3**
KHC AMS AMS 00 02 00.0
comp=Z,200nm,17.7s
KHC Kasperske Hory 79.46 352 P **P** **23 18 37.1 -0.7**
KHC Kasperske Hory 79.46 352 P **P** **23 18 37.8 0.0**
WET Wettzell 79.51 352 *eP* **P** **23 18 37.7 -0.3**
comp=Z,2.8nm,0.9s,baz=8.7,slow=5.6
WET Wettzell 79.51 352 P **P** **23 18 37.9 -0.1**
BMR Baia Mare 79.63 345 P **P** **23 18 41.2 +2.6**
BMR Baia Mare 79.63 345 P **P** **23 18 39.1 +0.5**
SMOL Smolenice 79.66 349 *eP* **P** **23 18 39.0 +0.2**
SMOL pmax pmax
comp=Z,2.0nm,0.5s
CKRC Cesky Krumlov 79.70 351 *eP* **P** **23 18 38.9 -0.1**
CKRC MLR MLR
comp=Z,100nm,19.4s
CKRC Cesky Krumlov 79.70 351 *eP* **P** **23 18 38.9 -0.1**
CKRC AMS AMS 23 56 10.0
comp=Z,100nm,19.4s
GEC2 GERESS Array S 79.73 352 *eP* **P** **23 18 38.8 -0.5**
comp=Z,3.4nm,0.6s,baz=8.7,slow=5.6
GERES GERESS Array B 79.73 352 P **P** **23 18 39.1 -0.2**
comp=Z,1.7nm,0.5s,baz=19,slow=5.3,SNR=28
comp=Z,1.7nm,0.5s
GERES GERESS Array B 79.73 352 P **P** **23 18 38.3 -1.0**
GIRR Girov 79.79 343 *⇑P* **P** **23 18 39.9 +0.4**
SOC Sochi 79.81 333 *i* P **P** **23 18 40.4 +0.7**
SOC *e* 23 21 40.4
SOC *ePPP* PPP 23 22 32.3
SOC *eS* **S** **23 28 43.7 +4.7**
SOC *eSS* **SS** **23 33 47.2 0.0**
SOC *eSSS* SSS 23 37 13.4
SOC MLR MLR
comp=Z,200nm,18.0s
MODS Modra-Piesok 79.82 349 *eP* **P** **23 18 40.8 +1.1**
MODS pmax pmax
comp=Z,28nm,1.4s
MODS Modra-Piesok 79.82 349 P **P** **23 18 40.4 +0.7**
MODS Modra-Piesok 79.82 349 *eP* **P** **23 18 40.8 +1.1**
VASR Vaslui 79.84 342 *⇑P* **P** **23 18 40.4 +0.6**
BIZ Bicaz 79.88 343 *⇑P* **P** **23 18 41.1 +1.1**
PSZ Piszkesteto 79.93 347 *⇑P* **P** **23 18 41.6 +1.2**
PSZ Piszkesteto 79.93 347 P **P** **23 18 41.5 +1.2**
PSZ Piszkesteto 79.93 347 P **P** **23 18 40.0 -0.3**
PSZ IAmb IAmb 23 18 42.5
comp=Z,8.7nm,1.0s
PSZ Piszkesteto 79.93 347 P **P** **23 18 40.9 +0.5**
ARCR ARCALIA 80.05 344 *⇑P* **P** **23 18 42.7 +1.7**
RAO Raoul Island 80.13 179 LR LR 23 50 05.8
comp=Z,112nm,21.1s,baz=324,slow=32
TESR Tescani 80.19 342 *⇑P* **P** **23 18 42.0 +0.3**
TESR Tescani 80.19 342 P **P** **23 18 41.1 -0.6**
WINA Alland / Wiene 80.22 350 *i* P **P** **23 18 42.4 +0.6**
comp=Z,2.8nm,0.6s
BIR Birlad 80.24 342 *⇑P* **P** **23 18 43.0 +1.1**
BIR Birlad 80.24 342 P **P** **23 18 43.0 +1.1**
ONER Baraj Valea Uz 80.41 343 *⇑P* **P** **23 18 44.1 +1.2**
CONA Conrad Observa 80.42 350 *eP* **P** **23 18 43.2 +0.2**
comp=Z,8.3nm,1.0s,SNR=7.8
BUD Budapest 80.48 348 P **P** **23 18 44.6 +1.4**
BUD Budapest 80.48 348 P **P** **23 18 42.0 -1.1**
GHRR 80.48 342 *⇑P* **P** **23 18 44.4 +1.2**
GHRR 80.48 342 P **P** **23 18 44.4 +1.2**
BSZH Besenyszg 80.48 347 P **P** **23 18 43.6 +0.4**
CJR Cluj-Napoca 80.54 345 *⇑P* **P** **23 18 44.7 +1.0**
CJR Cluj-Napoca 80.54 345 P **P** **23 18 44.6 +1.0**
RONA Rosalia, Austr 80.60 350 *eP* **P** **23 18 44.3 +0.4**
comp=Z,2.5nm,0.5s
FUR Furstenfeldbru 80.61 353 *eP* **P** **23 18 43.9 0.0**
comp=Z,10nm,0.8s,baz=8.7,slow=5.6
DRGR 80.61 345 *⇑P* **P** **23 18 44.8 +0.7**
DRGR 80.61 345 P **P** **23 18 44.7 +0.7**
DRGR 80.61 345 P **P** **23 18 44.4 +0.3**
BFO Black Forest 80.63 355 P **P** **23 18 43.1 -1.0**
BFO pmax pmax
comp=Z,5.0nm,0.8s
BFO Black Forest 80.63 355 P **P** **23 18 43.1 -1.0**
BFO Black Forest 80.63 355 *eP* **P** **23 18 43.7 -0.4**
comp=Z,5.0nm,0.9s,baz=8.7,slow=5.6
MARR Marisel-Cluj 80.66 345 *⇑P* **P** **23 18 45.1 +0.8**
COSR Cosmesti PH 80.69 342 *⇑P* **P** **23 18 44.8 +0.5**
TURR Turia 80.75 343 *⇑P* **P** **23 18 45.8 +1.1**
OZUR 80.75 343 *⇑P* **P** **23 18 45.6 +0.8**
BOSR Bodos 80.80 343 *⇑P* **P** **23 18 46.1 +1.1**
VRI Vrincioaia 80.80 342 *⇑P* **P** **23 18 46.0 +1.0**

VRI	**Vrincioaia**	**80.80 342**	P	**P**	**23 18 46.0 +1.0**			
ECH	**Echery**	**80.80 356**	P	**P**	**23 18 44.3 -0.7**			
ECH			pmax	pmax				
	comp=Z,5.0nm,0.9s							
ECH	**Echery**	**80.80 356**	P	**P**	**23 18 44.3 -0.7**			
ECH	**Echery**	**80.80 356**	P	**P**	**23 18 45.0 +0.1**			
PLOR	**Plostina**	**80.83 342**	⇑P	**P**	**23 18 46.2 +1.0**			
PLOR	**Plostina**	**80.83 342**	P	**P**	**23 18 46.1 +1.0**			
ODBI	**Odobesti**	**80.83 342**	⇑P	**P**	**23 18 46.6 +1.5**			
BIOA	**Bad Ischl, Aus**	**80.88 351**	*e*P	**P**	**23 18 45.7 +0.3**			
	comp=Z,6.2nm,0.8s,SNR=6.1							
RJOB	**Jochberg**	**80.91 352**	*e*P	**P**	**23 18 45.5 -0.1**			
	comp=Z,2.0nm,0.7s,baz=8.7,slow=5.6							
COVR	**Voineasa-Covas**	**80.92 343**	⇑P	**P**	**23 18 45.9 +0.3**			
SAHR	**Sahastru**	**80.94 342**	⇓P	**P**	**23 18 46.9 +1.2**			
DOPR	**Dopca**	**80.95 343**	⇑P	**P**	**23 18 46.8 +1.0**			
MPLH	**Magyarpolny**	**80.97 349**	P	**P**	**23 18 46.8 +1.0**			
TLCR		**81.03 341**	⇑P	**P**	**23 18 46.2 0.0**			
TLCR		**81.03 341**	P	**P**	**23 18 46.2 0.0**			
CLF	**Chambon-Foret**	**81.12 359**	P	**P**	**23 18 46.1 -0.5**			
CLF	**Chambon-Foret**	**81.12 359**	P	**P**	**23 18 47.0 +0.3**			
ARSA	**Arzberg**	**81.13 350**	P	**P**	**23 18 46.2 -0.5**			
ARSA			IAmb	IAmb	23 18 48.1			
	comp=Z,9.4nm,1.2s							
CFR	**Carcaliu**	**81.18 341**	⇑P	**P**	**23 18 47.7 +0.7**			
CFR	**Carcaliu**	**81.18 341**	P	**P**	**23 18 47.6 +0.7**			
SIRR	**Siria**	**81.29 346**	⇑P	**P**	**23 18 48.5 +0.9**			
NEHR	**Nehoiu**	**81.30 342**	⇑P	**P**	**23 18 48.8 +1.1**			
MLR	**Muntele Rosu**	**81.31 343**	⇑P	**P**	**23 18 49.3 +1.4**			
MLR	**Muntele Rosu**	**81.31 343**	P	**P**	**23 18 49.2 +1.4**			
MLR	**Muntele Rosu**	**81.31 343**	P	**P**	**23 18 47.7 -0.2**			
MLR			IAmb	IAmb	23 18 50.0			
	comp=Z,16nm,0.8s							
MLR	**Muntele Rosu**	**81.31 343**	P	**P**	**23 18 49.0 +1.2**			
RETA	**Reutte**	**81.32 353**	*i* P	**P**	**23 18 48.4 +0.6**			
	comp=Z,1.7nm,0.4s							
SESA	**Seetaler Alpe,**	**81.36 351**	*e*P	**P**	**23 18 49.0 +0.8**			
	comp=Z,12nm,0.9s,SNR=9.1							
WATA	**Walderalm**	**81.41 353**	*i* P	**P**	**23 18 48.3 0.0**			
	comp=Z,11nm,1.0s,SNR=7.1							
JURR	**Jurilovca**	**81.42 340**	⇑P	**P**	**23 18 48.7 +0.5**			
TPGR	**Topolog**	**81.43 341**	⇑P	**P**	**23 18 49.1 +0.8**			
MOTA	**Moosalm**	**81.44 353**	*i* P	**P**	**23 18 49.1 +0.6**			
	comp=Z,13nm,1.1s							
WTTA	**Wattenberg**	**81.48 353**	*i* P	**P**	**23 18 48.9 +0.1**			
	comp=Z,9.2nm,0.6s,SNR=8.5							
WTTA	**Wattenberg**	**81.48 353**	P	**P**	**23 18 49.0 +0.2**			
KBA	**Koelnbreinsper**	**81.51 352**	*e*P	**P**	**23 18 49.6 +0.6**			
	comp=Z,33nm,0.9s,SNR=16							
KBA	**Koelnbreinsper**	**81.51 352**	P	**P**	**23 18 49.8 +0.8**			
VOIR		**81.52 343**	⇑P	**P**	**23 18 50.4 +1.4**			
VOIR		**81.52 343**	P	**P**	**23 18 50.3 +1.4**			
VOIR		**81.52 343**	P	**P**	**23 18 49.6 +0.7**			
ISR	**Istrita**	**81.55 342**	⇑P	**P**	**23 18 49.5 +0.4**			
ISR	**Istrita**	**81.55 342**	P	**P**	**23 18 49.4 +0.4**			
SQTA	**Sankt Quirin**	**81.55 353**	*i* P	**P**	**23 18 49.9 +0.8**			
	comp=Z,6.2nm,0.8s							
DAVA	**Damuels**	**81.58 354**	*e*P	**P**	**23 18 49.8 +0.5**			
	comp=Z,3.2nm,0.7s							
WB0	**Warramunga Arr**	**81.70 224**	P	**P**	**23 18 49.3 -0.6**			
MTUR	**Matau**	**81.72 343**	⇑P	**P**	**23 18 50.8 +0.8**			
MTUR	**Matau**	**81.72 343**	P	**P**	**23 18 50.8 +0.8**			
LOT	**Lotru**	**81.74 344**	⇑P	**P**	**23 18 50.3 +0.2**			
SOKA	**Soboth**	**81.75 350**	*e*P	**P**	**23 18 49.8 -0.3**			
	comp=Z,15nm,0.8s,SNR=15							
MORH	**Mrgy, Hungar**	**81.77 348**	⇑P	**P**	**23 18 50.3 +0.2**			
MORH	**Mrgy, Hungar**	**81.77 348**	*e*P	**P**	**23 18 48.9 -1.2**			
MORH	**Mrgy, Hungar**	**81.77 348**	P	**P**	**23 18 50.1 0.0**			
FETA	**Feichten**	**81.79 353**	*e*P	**P**	**23 18 51.2 +0.8**			
	comp=Z,12nm,1.2s,SNR=7.0							
TLBR	**Topalu**	**81.80 341**	⇑P	**P**	**23 18 51.1 +0.8**			
TIRR	**Tirgusor**	**81.81 341**	⇑P	**P**	**23 18 51.1 +0.8**			
TIRR	**Tirgusor**	**81.81 341**	P	**P**	**23 18 51.0 +0.8**			
TIRR	**Tirgusor**	**81.81 341**	P	**P**	**23 18 49.3 -1.0**			
TIRR			IAmb	IAmb	23 18 51.3			
	comp=Z,12nm,0.8s							
TIRR	**Tirgusor**	**81.81 341**	P	**P**	**23 18 50.0 -0.3**			
WR8	**Warramunga Arr**	**81.82 224**	P	**P**	**23 18 49.5 -1.0**			
WR8			IAmb	IAmb	23 19 24.0			
	comp=Z,21nm,1.5s							
WRA	**Warramunga Arr**	**81.88 224**	P	**P**	**23 18 50.5 -0.4**			
	comp=Z,3.3nm,1.0s,baz=38,slow=6.2,SNR=12							
	comp=Z,3.3nm,1.0s							
ABTA	**Abfaltersbach**	**81.92 352**	*i* P	**P**	**23 18 50.8 -0.2**			
	comp=Z,12nm,1.0s,SNR=6.9							
BZS	**Buzias**	**81.93 346**	⇑P	**P**	**23 18 51.3 +0.3**			
BZS	**Buzias**	**81.93 346**	P	**P**	**23 18 51.2 +0.3**			
BZS	**Buzias**	**81.93 346**	P	**P**	**23 18 51.3 +0.3**			
GZR	**Gura Zlata**	**81.96 345**	⇑P	**P**	**23 18 52.1 +0.9**			
GZR	**Gura Zlata**	**81.96 345**	P	**P**	**23 18 52.1 +0.9**			
OBKA	**Obir**	**81.96 351**	*e*P	**P**	**23 18 51.3 +0.1**			
	comp=Z,6.7nm,0.6s,SNR=5.7							
OBKA	**Obir**	**81.96 351**	P	**P**	**23 18 51.7 +0.4**			
ACOM	**Acomizza, Ital**	**82.02 351**	P	**P**	**23 18 51.4 -0.2**			
BNALP	**Bannalp**	**82.08 355**	P	**P**	**23 18 52.2 +0.3**			
PRED	**Cave del Predi**	**82.12 351**	P	**P**	**23 18 51.1 -1.0**			
PRED			IAmb	IAmb	23 18 52.8			
	comp=Z,6.2nm,0.7s							
FUORN	**Ofenpass-Fuorn**	**82.22 354**	P	**P**	**23 18 52.5 -0.2**			
FUORN			IAmb	IAmb	23 18 54.0			
	comp=Z,6.4nm,0.7s							
FUORN	**Ofenpass-Fuorn**	**82.22 354**	P	**P**	**23 18 53.7 +0.9**			
ICOR	**Ion Corvin**	**82.26 341**	⇑P	**P**	**23 18 53.7 +1.0**			
PTJ	**Puntijarka**	**82.40 350**	P	**P**	**23 18 53.7 +0.2**			
HUMR	**Humele**	**82.41 343**	⇑P	**P**	**23 18 53.4 -0.1**			
HUMR	**Humele**	**82.41 343**	P	**P**	**23 18 53.1 -0.4**			
TUE	**Stuetta**	**82.43 354**	P	**P**	**23 18 53.7 -0.1**			
TUE			IAmb	IAmb	23 18 55.0			
	comp=Z,7.0nm,0.8s							
TUE	**Stuetta**	**82.43 354**	P	**P**	**23 18 54.0 +0.2**			
HERR	**Herculane**	**82.52 345**	⇑P	**P**	**23 18 54.2 +0.2**			
SABO	**M.te Sabotino**	**82.58 351**	P	**P**	**23 18 53.6 -0.8**			
SABO			IAmb	IAmb	23 21 04.9			
	comp=Z,8.3nm,1.1s							
FRGS	**Fruska Gora**	**82.65 347**	*e*P	**P**	**23 18 54.5 -0.2**			
SENIN	**Lac Senin/Sane**	**82.65 356**	P	**P**	**23 18 54.7 -0.3**			
CTI	**Castel Tesino**	**82.68 353**	P	**P**	**23 18 54.0 -1.0**			
CTI			pmax	pmax				
	comp=Z,11nm,1.3s							
CTI	**Castel Tesino**	**82.68 353**	P	**P**	**23 18 54.0 -1.0**			
CTI			IAmb	IAmb	23 18 57.1			
	comp=Z,11nm,1.3s							
MDVR	**Moldovita**	**82.73 345**	⇑P	**P**	**23 18 55.7 +0.5**			
CGRP	**Cima Grappa**	**82.84 353**	P	**P**	**23 18 55.5 -0.4**			
PSI	**Prapat**	**82.95 266**	P	**P**	**23 18 56.1 -0.7**			
PSI			pmax	pmax				
	comp=Z,13nm,0.6s							
PSI	**Prapat**	**82.95 266**	P	**P**	**23 18 57.0 +0.2**			
	comp=Z,19nm,1.0s							
PUNG	**Punghina**	**83.02 344**	⇓P	**P**	**23 18 57.1 +0.4**			
RPSI	**Rantau Prapat**	**83.03 266**	P	**P**	**23 18 56.1 -1.0**			
VLAD	**Vladila**	**83.03 343**	⇑P	**P**	**23 18 57.3 +0.6**			
RAZG	**Razgrad**	**83.05 342**	⇑P	**P**	**23 18 57.3 +0.4**			
TEKS	**Tekeris**	**83.28 347**	*e*P	**P**	**23 18 57.2 -0.8**			
TEOL	**Teolo**	**83.36 353**	P	**P**	**23 18 58.1 -0.3**			
BLY	**Banja Luka**	**83.40 349**	⇑P	**P**	**23 18 59.0 +0.4**			
BLY	**Banja Luka**	**83.40 349**	P	**P**	**23 18 57.8 -0.8**			
BLY			IAmb	IAmb	23 19 00.6			
	comp=Z,5.0nm,0.5s							
BLY	**Banja Luka**	**83.40 349**	*e*P	**P**	**23 18 58.0 -0.6**			
PLVB	**Pleven**	**83.58 343**	⇑P	**P**	**23 19 00.4 +0.8**			
GURO	**Guroymak-BITLI**	**83.69 329**	P	**P**	**23 18 59.6 -0.8**			
GURO			IAmb	IAmb	23 19 03.4			
	comp=Z,10.0nm,1.2s							
TOKA	**Tokat**	**83.74 334**	P	**P**	**23 19 00.1 -0.4**			
TOKA			IAmb	IAmb	23 19 02.5			
	comp=Z,8.1nm,0.9s							
BBLS	**Lazi&#263i**	**83.97 347**	*e*P	**P**	**23 19 01.9 +0.3**			
HAKT	**HAKKARI**	**84.03 327**	P	**P**	**23 19 02.7 +0.4**			
FITZ	**Fitzroy Crossi**	**84.34 232**	P	**P**	**23 19 03.8 +0.2**			
	comp=Z,13nm,0.8s,baz=18,slow=6.1,SNR=14							
	comp=Z,13nm,0.8s							
FITZ	**Fitzroy Crossi**	**84.34 232**	P	**P**	**23 19 03.6 +0.1**			
SJES	**Sjenica**	**84.48 346**	*e*P	**P**	**23 19 04.4 +0.1**			
UPM	**Unac-Piva**	**84.69 347**	*e*P	**P**	**23 19 04.2 -1.2**			
SAHE	**Sakarya_HENDEK**	**84.70 338**	⇑P	**P**	**23 19 05.9 +0.6**			
ISO	**Isola**	**84.83 356**	P	**P**	**23 19 06.8 +0.8**			
GSI	**Gunungsitoli**	**84.95 266**	P	**P**	**23 19 06.2 -0.7**			
BRY	**Bratogost**	**85.04 347**	*e*P	**P**	**23 19 06.5 -0.6**			
BR131	**Keskin Array S**	**85.07 335**	P	**P**	**23 19 06.7 -0.6**			
BR131			pmax	pmax				
	comp=Z,9.0nm,0.7s							
BR131	**Keskin Array S**	**85.07 335**	P	**P**	**23 19 06.7 -0.6**			
BR131			IAmb	IAmb	23 19 08.4			
	comp=Z,9.3nm,0.7s							
BRTR	**Keskin Array B**	**85.07 335**	P	**P**	**23 19 07.2 -0.2**			
	comp=Z,9.7nm,0.8s,baz=40,slow=2.6,SNR=22							
	comp=Z,9.7nm,0.8s							
BRTR	**Keskin Array B**	**85.07 335**	P	**P**	**23 19 07.0 -0.4**			
RUSF	**Rustrel**	**85.14 357**	P	**P**	**23 19 08.3 +0.8**			
ESCA	**l'Escarene**	**85.17 355**	P	**P**	**23 19 08.0 +0.3**			
TREB	**Trebinje**	**85.25 347**	*e*P	**P**	**23 19 07.1 -0.9**			
BNN	**Bunyan**	**85.29 334**	P	**P**	**23 19 08.1 -0.3**			
BNN			IAmb	IAmb	23 19 09.4			
	comp=Z,12nm,0.8s							
ASAR	**Alice Springs**	**85.35 222**	P	**P**	**23 19 08.8 +0.2**			
	comp=Z,3.0nm,0.8s,baz=24,slow=6.0,SNR=18							
	comp=Z,3.0nm,0.8s							
ASAR	**Alice Springs**	**85.35 222**	P	**P**	**23 19 08.4 -0.2**			
MURB	**Monte Urbino**	**85.37 352**	P	**P**	**23 19 08.4 -0.3**			
PDG	**Podgorica**	**85.40 347**	⇑P	**P**	**23 19 08.9 +0.1**			
PDG	**Podgorica**	**85.40 347**	P	**P**	**23 19 07.5 -1.3**			
PDG	**Podgorica**	**85.40 347**	*e*P	**P**	**23 19 08.2 -0.5**			
PDG	**Podgorica**	**85.40 347**	P	**P**	**23 19 08.6 -0.1**			
HCY	**Herceg Novi**	**85.49 347**	*e*P	**P**	**23 19 07.5 -1.7**			
GUMA	**Gualdo di Mace**	**85.50 351**	P	**P**	**23 19 08.1 -1.2**			
KIRS	**Kirsehir-Merke**	**85.55 335**	⇑P	**P**	**23 19 10.4 +0.7**			
RDO	**Rodhopi**	**85.57 342**	P	**P**	**23 19 08.9 -0.7**			
RDO			IAmb	IAmb	23 19 11.4			
	comp=Z,13nm,1.0s							
RDO	**Rodhopi**	**85.57 342**	P	**P**	**23 19 10.3 +0.7**			
DRME	**Dracevica, Mon**	**85.65 347**	*e*P	**P**	**23 19 08.8 -1.2**			
NRCA	**Norcia**	**85.74 351**	P	**P**	**23 19 10.1 -0.4**			
KKUL	**Konya-Kulu**	**85.78 336**	P	**P**	**23 19 11.4 +0.5**			
PHP	**Peshkopia**	**85.95 346**	P	**P**	**23 19 11.3 -0.3**			
CASP	**Castiglione de**	**85.98 353**	P	**P**	**23 19 10.7 -1.0**			
CESX	**Cesi**	**86.02 352**	P	**P**	**23 19 11.0 -0.8**			
KNT	**Kendrikon**	**86.05 344**	P	**P**	**23 19 13.3 +1.2**			
AQU	**L'Aquila**	**86.19 351**	P	**P**	**23 19 12.3 -0.5**			
AQU			pmax	pmax				
	comp=Z,15nm,0.8s							
AQU	**L'Aquila**	**86.19 351**	P	**P**	**23 19 12.2 -0.5**			
AQU	**L'Aquila**	**86.19 351**	*e*P	**P**	**23 19 12.5 -0.3**			
AQU	**L'Aquila**	**86.19 351**	P	**P**	**23 19 13.4 +0.7**			
ANDN	**Andirin**	**86.33 333**	P	**P**	**23 19 14.2 +0.6**			
GAZ	**Gaziantep**	**86.46 332**	P	**P**	**23 19 13.0 -1.1**			
INTR	**Introdacqua**	**86.48 351**	P	**P**	**23 19 13.1 -1.1**			
SGRT	**San Giovanni R**	**86.53 349**	P	**P**	**23 19 13.7 -0.8**			
CEST	**Esterri de Car**	**86.56 360**	P	**P**	**23 19 14.2 -0.4**			
CEST			IAmb	IAmb	23 19 16.6			
	comp=Z,13nm,1.2s							
PBRG	**Braganca**	**87.09 6**	*e*P	**P**	**23 19 16.7 -0.5**			
PVRL	**Vila Real**	**87.55 7**	*e*P	**P**	**23 19 19.3 -0.1**			
PVIS	**Viseu**	**88.10 7**	*e*P	**P**	**23 19 21.8 -0.2**			
MTE	**Manteigas**	**88.44 7**	*e*P	**P**	**23 19 23.5 -0.1**			
PCAS	**Casmilo, Conde**	**88.71 7**	*e*P	**P**	**23 19 24.5 -0.4**			
TIP	**Timpagrande**	**88.94 348**	⇑P	**P**	**23 19 25.6 -0.4**			
PCBR	**Castelo Branco**	**89.00 7**	*e*P	**P**	**23 19 25.7 -0.4**			
ESBB	**Sonseca Array**	**89.37 4**	P	**P**	**23 19 26.8 -1.2**			
ESBB			IAmb	IAmb	23 19 28.6			
	comp=Z,14nm,1.4s							
ESDC	**Sonseca Array**	**89.37 4**	P	**P**	**23 19 26.9 -1.1**			
	comp=Z,4.7nm,0.9s,baz=352,slow=4.3,SNR=26							
	comp=Z,4.7nm,0.9s							
ESDC	**Sonseca Array**	**89.37 4**	P	**P**	**23 19 26.6 -1.4**			
VSL	**Villasalto**	**89.37 354**	P	**P**	**23 19 27.3 -0.7**			
VSL			IAmb	IAmb	23 19 28.8			
	comp=Z,7.0nm,1.1s							
PMRV	**Marv??o**	**89.41 7**	*e*P	**P**	**23 19 27.5 -0.7**			
SJG	**San Juan**	**89.46 61**	LR	LR	00 03 02.9			
	comp=Z,45nm,18.9s,baz=9.5,slow=38							
PAB	**San Pablo**	**89.48 4**	P	**P**	**23 19 26.8 -1.8**			
PAB			pmax	pmax				
	comp=Z,23nm,2.0s							
PAB	**San Pablo**	**89.48 4**	P	**P**	**23 19 26.8 -1.8**			
CSS	**Mathiatis**	**89.63 334**	P	**P**	**23 19 27.6 -1.7**			
STKA	**Stephens Creek**	**89.78 213**	P	**P**	**23 19 31.0 +1.3**			
	comp=Z,8.9nm,0.9s,baz=352,slow=6.2,SNR=14							
STKA			LR	LR	23 57 14.4			
	comp=Z,117nm,21.9s,baz=224,slow=34							
	comp=Z,8.9nm,0.9s							
STKA	**Stephens Creek**	**89.78 213**	P	**P**	**23 19 31.0 +1.3**			
STKA	**Stephens Creek**	**89.78 213**	P	**P**	**23 19 31.2 +1.5**			
CY604	**RAF Akrotiri,**	**89.88 333**	P	**P**	**23 19 29.6 -0.5**			
CEL	**Celeste**	**89.96 348**	P	**P**	**23 19 28.8 -2.0**			
CEL			IAmb	IAmb	23 19 30.2			
	comp=Z,6.7nm,0.7s							
PARRA	**Arraiolos**	**89.97 7**	*e*P	**P**	**23 19 30.0 -0.8**			
ITM	**Ithomi**	**90.09 344**	P	**P**	**23 19 30.1 -1.3**			
PBAR	**Barrancos**	**90.69 6**	*e*P	**P**	**23 19 33.8 -0.3**			
PVAQ	**Vaqueiros**	**91.40 7**	*e*P	**P**	**23 19 37.2 -0.2**			
KEST	**Kesra**	**93.11 353**	P	**P**	**23 19 44.2 -1.3**			
	comp=Z,2.6nm,0.7s,baz=332,slow=8.1,SNR=6.5							
	comp=Z,2.6nm,0.7s							
KEST	**Kesra**	**93.11 353**	P	**P**	**23 19 43.6 -1.9**			
SDV	**Santo Domingo**	**94.30 70**	LR	LR	00 04 27.9			
	comp=Z,52nm,20.2s,baz=90,slow=37							
RPZ	**Rata Peaks**	**94.97 187**	LR	LR	00 00 03.0			
	comp=Z,28nm,18.6s,baz=148,slow=34							
RAYN	**Ar Rayn**	**95.97 320**	P	**P**	**23 19 58.5 -0.2**			
MD01	**Midelt array s**	**96.11 5**	P	**P**	**23 19 58.0 -1.3**			
MD31	**MD31**	**96.11 5**	P	**P**	**23 19 58.1 -1.2**			
TORD	**Torodi Ar. Bea**	**115.90 359**	PKP	**PKiKP**	**23 25 13.6 -0.7**			
	comp=Z,0.8nm,0.4s,baz=356,slow=2.5,SNR=16							
H03N2	**Juan Fernandez**	**121.14 106**	T	T	01 38 26.2			
	baz=317,slow=77,SNR=143							
H03N1	**Juan Fernandez**	**121.15 106**	T	T	01 38 27.5			
	baz=317,slow=77,SNR=133							
H03N3	**Juan Fernandez**	**121.16 106**	T	T	01 38 30.7			
	baz=317,slow=77,SNR=127							
DBIC	**Dimbokro**	**122.11 7**	PKP	**PKPdf**	**23 25 25.9 -0.4**			
	comp=Z,3.3nm,0.3s,baz=32,slow=1.5,SNR=15							
DBIC	**Dimbokro**	**122.11 7**	PKIKP	**PKPdf**	**23 25 26.0 -0.3**			
DBIC	**Dimbokro**	**122.11 7**		**PKPdf**	**23 25 26.0 -0.3**			
VNDA	**Vanda**	**129.04 185**	PKP	**PKiKP**	**23 25 39.0 +0.8**			
	comp=Z,0.2nm,0.5s,baz=29,slow=4.0,SNR=7.1							
QSPA	**South Pole Qui**	**140.98 180**	PKhKP	PKPpre	23 25 55.2			
	comp=Z,1.6nm,0.9s,baz=158,slow=0.7,SNR=7.3							
GMARE	**Gumare**	**144.16 325**	PKPdf	PKPbc	23 26 05.8 +0.4			
PILG	**Pilgrimsrest,**	**145.34 308**	*e*P	**PKPab**	**23 26 10.2 +0.7**			
TSUM	**Tsumeb**	**145.58 332**	PKPbc	**PKPdf**	**23 26 09.6 0.0**			
TSUM	**Tsumeb**	**145.58 332**	*e*P	**PKPdf**	**23 26 09.2 -0.4**			
LEPH	**Lephalale, Lim**	**145.82 313**	*e*P	**PKPdf**	**23 26 10.3 +0.2**			
MAW	**Mawson**	**146.34 218**	PKPbc	**PKPab**	**23 26 11.3 -0.3**			
	comp=Z,6.2nm,0.9s,baz=96,slow=3.0,SNR=13							
POGA	**Pongola**	**146.81 304**	PKPbc	**PKPbc**	**23 26 13.0 -0.4**			
HRAO	**HartRAO**	**147.61 311**	*e*P	**PKPbc**	**23 26 15.9 +0.1**			
LBTB	**Lobatse**	**147.81 315**	PKP2	**PKPbc**	**23 26 16.7 +0.4**			
LBTB	**Lobatse**	**147.81 315**	PKPbc	**PKPbc**	**23 26 16.6 +0.4**			
LBTB	**Lobatse**	**147.81 315**	*e*P	**PKPbc**	**23 26 17.1 +0.8**			
MAKGR	**Makgori**	**148.86 316**	PKPbc	**PKPbc**	**23 26 18.8 -0.2**			
SNKL	**Senekal, Frees**	**149.56 309**	*e*P	**PKPbc**	**23 26 20.9 +0.1**			
BELA	**Belgrano 2**	**150.21 166**		**PKPbc**	**23 26 20.3 -0.4**			
BOSA	**Boshof**	**151.05 312**	PKPbc	**PKiKP**	**23 26 24.7 -0.2**			
	comp=Z,6.1nm,0.5s,baz=51,slow=1.8,SNR=33							
BOSA	**Boshof**	**151.05 312**	PKIKP	**PKPbc**	**23 26 23.0 -1.3**			
BOSA	**Boshof**	**151.05 312**		**PKPbc**	**23 26 23.0 -1.3**			
BOSA	**Boshof**	**151.05 312**	*e*P	**PKPbc**	**23 26 23.8 -0.5**			
GRAF	**Camdeboo Natio**	**154.46 309**	*e*P	**PKPbc**	**23 26 29.9 -1.8**			
BRAK	**Brakfontein**	**154.81 312**	*e*P	**PKPbc**	**23 26 30.8 -1.6**			

NEIC ***22*** *23:09:18.0±1.8,54.69N±0.08×160.3W±0.1,h46km±11km, mb3.9/12, ML3.9/26, Error ellipse: s-maj=13.4km s-min=8.6km az=139.0*

ANF ***22*** *23:09:20.6±1.1,54.87N×160.51W,h33km±4km, ML4.2/11, Error ellipse: s-maj=10.6km s-min=5.9km az=58.0*

ISC 22 23:09:16.7±1.2,54.67N±0.07×160.52W±0.05,h35km,n71, σ1.59/84, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.56**	**74**			**Pn**		**23 09 30.0**	**+1.8**
CNBA							**Sn**	**23 09 36.5**	**+0.3**
CHNA	**Chernabura Isl**	**0.56**	**73**	P		**Pn**		**23 09 30.2**	**+1.9**
	baz=259								
SDPT	**Sand Point**	**0.69**	**2**			**Pn**		**23 09 30.4**	**+0.5**
SDPT					Sn	**Sn**		**23 09 38.7**	**-0.6**
SDPT	**Sand Point**	**0.69**	**2**	P		**Pn**		**23 09 30.3**	**+0.5**
	baz=180								
SDPT				S		**Sn**		**23 09 38.7**	**-0.6**
	baz=180								
S14K	**Fog Glacier**	**1.71**	**18**	P		**Pn**		**23 09 47.2**	**+3.1**
	baz=199								
VNFG	**Fog Glacier, M**	**1.71**	**18**	Pn		**Pn**		**23 09 45.3**	**+1.2**
CHGN	**Chignik**	**2.03**	**35**				**Pn**	**23 09 49.6**	**+1.3**
CHGN						IAML		23 10 18.6	
	comp=N,830nm,0.4s								
CHGN						IAML		23 10 19.3	
	comp=E,1μm,0.7s								
CHGN	**Chignik**	**2.03**	**35**	P		**Pn**		**23 09 51.4**	**+3.0**
	baz=218								
CHIR	**Chirikof Islan**	**3.03**	**66**			**Pn**		**23 10 01.4**	**-0.7**
CHIR						IAML		23 11 01.3	
	comp=E,429nm,1.1s								
CHIR						IAML		23 11 04.6	
	comp=N,421nm,1.0s								
AKUT	**Akutan**	**3.12**	**262**	Pn		**Pn**		**23 10 06.6**	**+3.4**
AKUT						IAML		23 10 57.9	
	comp=E,271nm,0.8s								
AKUT						IAML		23 11 00.4	
	comp=N,279nm,0.6s								
LVA	**Lava Point**	**3.26**	**263**			**Pn**		**23 10 08.3**	**+3.0**
LVA						IAML		23 10 58.2	
	comp=E,312nm,0.9s								
UNV	**Unalaska Valle**	**3.60**	**259**	Pn		**Pn**		**23 10 13.2**	**+3.3**
UNV						IAML		23 10 44.6	
	comp=E,130nm,1.2s								
R17L	**Mt. Peulik Vol**	**3.77**	**36**	P		**Pn**		**23 10 16.1**	**+3.7**
	baz=220								
SII	**Sitkinak Islan**	**4.06**	**60**	Pn		**Pn**		**23 10 14.3**	**-2.0**
SII						IAML		23 11 38.9	
	comp=E,327nm,1.2s								
SII	**Sitkinak Islan**	**4.06**	**60**	P		**Pn**		**23 10 14.7**	**-1.6**
	baz=260								
O15K	**Ungalikthiuk R**	**4.54**	**5**	Pn		**Pn**		**23 10 24.1**	**+1.3**
O15K						IAML		23 11 16.5	
	comp=N,69nm,0.5s								
O15K						IAML		23 11 54.8	
	comp=E,75nm,0.7s								
O15K	**Ungalikthiuk R**	**4.54**	**5**	P		**Pn**		**23 10 24.4**	**+1.6**
	baz=185								
O15K				S		**Sn**		**23 11 14.0**	**-0.3**
	baz=185								
Q16K	**King Salmon**	**4.55**	**26**	S		**Sn**		**23 11 16.1**	**+1.6**
	baz=210								
O14K	**Tigyukauivet M**	**4.62**	**355**	Pn		**Pn**		**23 10 25.1**	**+1.2**
O14K						IAML		23 11 51.2	
	comp=N,76nm,0.8s								
O14K	**Tigyukauivet M**	**4.62**	**355**	P		**Pn**		**23 10 25.4**	**+1.5**
	baz=174								
O14K				S		**Sn**		**23 11 16.9**

baz=270
CNBA **Chernabura Isl** 0.43 90 Pb 23 13 27.2 0.0
CNBA Sb 23 13 33.2 -0.3
CNBA IAML 23 13 33.9
comp=E,1µm,0.4s
SDPT **Sand Point** 0.53 351 Pb 23 13 28.7 -0.1
SDPT Sb 23 13 36.1 -0.1
SDPT IAML 23 13 36.6
comp=E,1µm,0.4s
SDPT **Sand Point** 0.53 351 P Pb 23 13 28.7 -0.1
baz=171
SDPT S Sb 23 13 36.3 +0.1
baz=171
DOL **Dolgoi Island** 0.94 291 Pn 23 13 34.9 0.0
DOL Sn 23 13 47.4 +0.1
PS4A **Pavlof South-4** 1.02 301 Pn 23 13 36.2 +0.2
PS4A Sb 23 13 50.0 0.0
DTNA **Dutton South F** 1.15 287 Pn 23 13 38.2 +0.4
DT1 **Dutton Round H** 1.16 285 Pn 23 13 38.0 +0.1
S14K **Fog Glacier** 1.53 16 P Pn 23 13 44.0 +1.0
baz=197
S14K S Sb 23 14 05.3 +0.7
baz=197
VNFG **Fog Glacier, M** 1.53 16 Pn 23 13 44.0 +1.0
VNFG Sb 23 14 04.5 0.0
CHGN **Chignik** 1.84 36 Pn 23 13 47.9 +0.7
CHGN Sn Sn 23 14 10.9 +1.6
CHGN IAML 23 14 15.1
comp=N,365nm,0.2s
CHGN **Chignik** 1.84 36 P Pn 23 13 47.8 +0.7
baz=217
CHGN S Sn 23 14 10.7 +1.4
baz=217
CHIR **Chirikof Islan** 2.87 68 Pn Pn 23 14 01.3 -0.1
CHIR Sn Sn 23 14 33.4 -1.4
CHIR IAML 23 14 49.9
comp=N,57nm,1.2s
CHIR IAML 23 14 58.5
comp=E,95nm,1.0s
CHIR **Chirikof Islan** 2.87 68 P Pn 23 14 01.6 +0.2
baz=252
CHIR S Sn 23 14 34.2 -0.6
baz=252
AKUT **Akutan** 3.25 260 Pn Pn 23 14 06.6 0.0
AKUT Sn Sn 23 14 45.3 +1.1
AKUT IAML 23 16 04.9
comp=E,52nm,0.1s
AKUT IAML 23 16 05.7
comp=N,42nm,0.1s
LVA **Lava Point** 3.39 261 Pn Pn 23 14 08.4 -0.2
LVA IAML 23 14 56.1
comp=E,44nm,1.1s
LVA IAML 23 15 17.7
comp=N,86nm,1.1s
R17L **Mt. Peulik Vol** 3.58 37 P Pn 23 14 12.7 +1.6
baz=220
UNV **Unalaska Valle** 3.75 257 Pn Pn 23 14 14.0 +0.6
SII **Sitkinak Islan** 3.89 61 Pn Pn 23 14 15.7 +0.3
Q17K **Contact Creek** 4.23 34 P Pn 23 14 21.2 +1.0
baz=217
O15K **Ungalikthiuk R** 4.37 3 Pn Pn 23 14 21.7 -0.3
O15K **Ungalikthiuk R** 4.37 3 P Pn 23 14 22.1 +0.1
baz=184
P16K **Nushagak River** 4.41 16 Pn Pn 23 14 23.4 +1.0
P16K IAML 23 15 38.7
comp=E,37nm,1.2s
P16K IAML 23 15 46.9
comp=N,37nm,1.0s
O14K **Tigyukauivet M** 4.47 354 Pn Pn 23 14 23.6 +0.3
O14K **Tigyukauivet M** 4.47 354 P Pn 23 14 23.8 +0.5
baz=173
OHAK **Old Harbor** 4.62 56 Pn Pn 23 14 24.7 -0.7
OHAK IAML 23 15 39.9
comp=N,23nm,0.9s
OHAK IAML 23 15 46.0
comp=E,14nm,1.0s
OHAK **Old Harbor** 4.62 56 P Pn 23 14 24.9 -0.6
baz=242
Q18K **Katmai Hardscr** 4.82 35 P Pn 23 14 29.3 +1.0
baz=220
P17K **Kvichak River** 4.87 24 Pn Pn 23 14 30.2 +1.4
P17K **Kvichak River** 4.87 24 P Pn 23 14 31.0 +2.2
baz=208
O16K **Kokwok River B** 4.93 13 Pn Pn 23 14 30.5 +0.8
O16K **Kokwok River B** 4.93 13 P Pn 23 14 30.8 +1.1
baz=195
N14K **Kuskokwak Cree** 5.17 352 Pn Pn 23 14 32.6 -0.2
N14K IAML 23 16 11.4
comp=N,15nm,1.1s
N14K IAML 23 16 23.3
comp=E,12nm,1.1s
N14K **Kuskokwak Cree** 5.17 352 P Pn 23 14 33.2 +0.3
baz=171
KDAK **Kodiak Island** 5.23 52 Pn Pn 23 14 33.2 -0.6
KDAK IAML 23 15 57.7
comp=E,22nm,0.7s
KDAK **Kodiak Island** 5.23 52 P Pn 23 14 33.2 -0.6
baz=239
O17K **Koliganek Bris** 5.26 18 P Pn 23 14 35.2 +1.0
baz=201
N15K **Kwethluk River** 5.36 1 Pn Pn 23 14 35.4 -0.2
N15K IAML 23 15 39.4
comp=E,14nm,0.9s
N15K IAML 23 16 15.8
comp=N,11nm,1.1s
N15K **Kwethluk River** 5.36 1 P Pn 23 14 36.1 +0.5
baz=182
N16K **Nishlik Lake** 5.73 8 P Pn 23 14 41.1 +0.5
baz=189
O18K **Koktuh Hills** 5.75 27 Pn Pn 23 14 41.8 +0.8
M13K **Dall Lake** 5.83 345 Pn Pn 23 14 42.5 +0.5
M13K **Dall Lake** 5.83 345 P Pn 23 14 42.9 +0.8
baz=163
M13K S Sn 23 15 46.9 -0.9
baz=163
M15K **Kasigluk River** 5.89 358 P Pn 23 14 42.7 -0.1
baz=178
M15K S Sn 23 15 47.1 -2.0
baz=178
N17K **Nushagak Hills** 5.96 15 Pn Pn 23 14 43.5 -0.3
M14K **Bethel** 6.01 352 Pn Pn 23 14 43.9 -0.5
M14K **Bethel** 6.01 352 P Pn 23 14 44.6 +0.2
baz=171
M14K S Sn 23 15 50.4 -1.6
baz=171
M16K **Timber Creek** 6.26 6 Pn Pn 23 14 48.0 +0.1
M16K **Timber Creek** 6.26 6 P Pn 23 14 48.2 +0.3
baz=187
N18K **Kilae Creek** 6.33 20 Pn Pn 23 14 49.1 +0.2
N18K **Kilae Creek** 6.33 20 P Pn 23 14 49.6 +0.7
baz=204
M11K **Mekoryuk** 6.40 333 Pn Pn 23 14 49.1 -0.7
ILSW **Iliamna Southw** 6.46 34 Pn Pn 23 14 52.1 +1.3
L14K **Kuka Creek** 6.65 350 Pn Pn 23 14 52.9 -0.4
L14K **Kuka Creek** 6.65 350 P Pn 23 14 53.4 +0.1
baz=168
N19K **Bonanza Creek** 6.76 25 Pn Pn 23 14 56.0 +1.0
N19K **Bonanza Creek** 6.76 25 P Pn 23 14 56.4 +1.5
baz=210
M17K **Holitna River** 6.77 12 Pn Pn 23 14 55.1 +0.2
M17K **Holitna River** 6.77 12 P Pn 23 14 55.3 +0.4
baz=194
L15K **Ungalak Mounta** 6.90 355 P Pn 23 14 56.0 -0.7
baz=174
L16K **Owhat River** 6.92 3 Pn Pn 23 14 56.9 0.0
L16K **Owhat River** 6.92 3 P Pn 23 14 57.3 +0.4
baz=184
M18K **Stony River** 7.09 18 P Pn 23 15 00.2 +0.9
baz=202
L17K **Donlin** 7.41 7 P Pn 23 15 03.2 -0.4
baz=189
K13K **Kusilvak Mount** 7.48 344 Pn Pn 23 15 04.4 -0.2
K13K **Kusilvak Mount** 7.48 344 P Pn 23 15 04.8 +0.2
baz=160
K15K **Wolf Creek Mou** 7.52 356 Pn Pn 23 15 05.3 +0.1
K15K **Wolf Creek Mou** 7.52 356 P Pn 23 15 05.5 +0.4
baz=175
L18K **Granite Mounta** 7.66 13 Pn Pn 23 15 06.8 -0.2
L18K **Granite Mounta** 7.66 13 P Pn 23 15 07.5 +0.4
baz=196
L19K **White Mountain** 7.91 19 P Pn 23 15 11.8 +1.2
baz=204
M20K **Styx River** 8.02 25 Pn Pn 23 15 13.2 +1.1
J14K **Nanvaranak Lak** 8.12 349 P Pn 23 15 13.5 +0.1
baz=167
J16K **Anvik River** 8.49 359 Pn Pn 23 15 18.0 -0.4
baz=179
J16K **Anvik River** 8.49 359 P Pn 23 15 18.6 +0.1
baz=179
J17K **VABM Dome** 8.62 4 P Pn 23 15 19.6 -0.7
baz=185
P23K **Montague Islan** 8.68 48 Pn Pn 23 15 20.9 -0.2
P23K **Montague Islan** 8.68 48 P Pn 23 15 21.2 +0.1
baz=239
PWL **Port Wells** 8.79 42 Pn Pn 23 15 22.7 +0.1
HIN **Hinchinbrook I** 9.28 47 Pn Pn 23 15 28.6 -0.6
RAGM **Ragged Mountai** 10.07 50 Pn Pn 23 15 39.9 -0.3

*IDC **22** 23:39:19.9±1.2, 32.97N×87.00E, h0km, mb3.5/4, mbtmp3.5/7, ML2.9/2, MS3.1/1, Error ellipse: s-maj=51.6km s-min=23.1km az=58.0*
ISC 22 23:39:21.3±1.0, 33.1N±0.2×87.0E±0.3, h10km, n7, σ1s09/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	14.20	347	Pn	Pn	23 42 41.7	-0.7
	baz=166,slow=11,SNR=2.3						
	0.3nm,0.9s						
CMAR	**Chiang Mai Arr**	18.03	141	P	P	23 43 33.1	+0.6
	0.8nm,0.3s,baz=335,slow=11,SNR=7.6						
CMAR				LR	LR	23 50 37.4	
	comp=Z,58nm,19.2s,baz=175,slow=38						
KURBB	**Kurchatov Arra**	18.65	343	P	Pn	23 43 39.3	-0.2
	0.1nm,0.3s,baz=153,slow=12,SNR=5.0						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	20.95	356	P	P	23 44 04.8	+0.6
	0.6nm,0.5s,baz=177,slow=9.9,SNR=3.9						
	0.6nm,0.5s						
GERES	**GERESS Array B**	55.49	310	P	P	23 48 57.9	+1.4
	0.6nm,0.6s,baz=78,slow=6.0,SNR=9.4						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	69.40	132	P	P	23 50 29.1	-0.5
	0.3nm,0.8s,baz=318,slow=6.8,SNR=1.7						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	79.11	279	P	P	23 51 25.4	-1.1
	0.5nm,0.8s,baz=42,slow=3.9,SNR=2.3						
	0.5nm,0.8s						

*IDC **22** 23:47:35.0±1.2, 33.06N×86.88E, h0km, mb3.4/6, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=38.0km s-min=23.3km az=59.0*
ISC 22 23:47:36.6±1.0, 33.1N±0.1×86.9E±0.2, h10km, n8, σ0s76/8, mb3.4/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	14.12	347	Pn	Pn	23 50 56.5	-0.1
	baz=167,slow=13,SNR=3.0						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	18.15	141	P	P	23 51 50.2	+0.9
	0.2nm,0.3s,baz=337,slow=9.9,SNR=4.3						
	0.3nm,0.3s						
SONM	**Songino Array**	20.80	39	P	P	23 52 18.0	-0.2
	0.4nm,0.4s,baz=200,slow=12,SNR=1.5						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	20.89	357	P	P	23 52 18.9	+0.1
	1.2nm,0.5s,baz=180,slow=9.6,SNR=6.7						
	1.2nm,0.5s						
BVAR	**Borovoye Array**	23.17	334	P	P	23 52 43.8	+0.6
	0.9nm,0.8s,baz=159,slow=8.6,SNR=3.1						
	0.9nm,0.8s						
GERES	**GERESS Array B**	55.36	310	P	P	23 57 11.6	+0.7
	0.3nm,0.8s,baz=81,slow=7.7,SNR=2.7						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	69.53	132	P	P	23 58 45.1	-0.6
	0.3nm,0.7s,baz=314,slow=6.2,SNR=1.9						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	78.98	279	P	P	23 59 40.3	-0.8
	0.3nm,0.7s,baz=56,slow=6.1,SNR=1.7						
	0.3nm,0.7s						

*IDC **22** 23:50:26.0±0.9, 33.11N×86.66E, h0km, mb3.7/12, mbtmp3.7/15, ML4.7/1, Error ellipse: s-maj=28.3km s-min=16.8km az=52.0*
ISC 22 23:50:27.5±0.9, 33.1N±0.1×86.7E±0.2, h10km, n15, σ0s59/14, mb3.9/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	14.04	347	Pn	Pn	23 53 46.4	-0.1
	0.5nm,0.7s,baz=158,slow=14,SNR=4.5						
CMAR	**Chiang Mai Arr**	18.29	140	P	P	23 54 41.0	-0.5
	0.9nm,0.3s,baz=330,slow=11,SNR=4.7						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	18.48	343	P	Pn	23 54 43.2	-0.3
	1.5nm,0.2s,baz=161,slow=11,SNR=1.2						
ZALV	**Zalesovo Beam**	20.84	357	P	P	23 55 09.0	-0.2
	1.6nm,0.5s,baz=188,slow=9.0,SNR=7.2						
	1.6nm,0.5s						
SONM	**Songino Array**	20.88	40	P	Pn	23 55 10.7	-1.6
	1.3nm,0.7s,baz=224,slow=12,SNR=4.0						
	1.3nm,0.7s						
BVAR	**Borovoye Array**	23.07	334	P	P	23 55 33.7	+0.7
	0.4nm,0.6s,baz=139,slow=11,SNR=2.2						
	0.4nm,0.6s						
KSRS	**Korea Array**	33.72	71	P	P	23 57 09.3	+0.3
	1.2nm,0.6s,baz=275,slow=9.0,SNR=4.7						
	1.2nm,0.6s						
NRIK	**Noril'sk**	36.25	1	P	P	23 57 29.8	-0.6
	3.1nm,0.6s,baz=135,slow=6.7,SNR=2.4						
	3.1nm,0.6s						
HFS	**Hagfors**	53.57	323	P	P	23 59 47.8	-0.5
	1.0nm,0.6s,baz=95,slow=3.3,SNR=4.7						
	1.0nm,0.6s						
NOA	**NORSAR Array B**	54.71	325	P	P	23 59 56.6	-0.1
	0.9nm,0.7s,baz=84,slow=7.0,SNR=3.3						
	0.9nm,0.7s						
GERES	**GERESS Array B**	55.21	310	P	P	00 00 01.7	+1.1
	0.6nm,0.6s,baz=72,slow=6.2,SNR=7.0						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	69.67	132	P	P	00 01 37.8	+0.3
	0.4nm,0.5s,baz=326,slow=6.7,SNR=7.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	72.21	135	P	P	00 01 53.3	+0.4
	0.2nm,0.3s,baz=311,slow=6.1,SNR=2.0						
	0.2nm,0.3s						
ILAR	**Eielson Array**	73.85	21	P	P	00 02 02.1	+0.1
	0.4nm,0.8s,baz=305,slow=3.2,SNR=3.4						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	78.81	278	P	P	00 02 30.2	-0.8
	0.6nm,0.8s,baz=47,slow=4.3,SNR=1.8						
	0.6nm,0.8s						

*IDC **22** 23:51:29.3±1.6, 33.12N×86.64E, h0km, mb3.6/7, mbtmp3.7/10, ML3.5/3, Error ellipse: s-maj=34.9km s-min=28.4km az=65.0*
ISC 22 23:51:30.4±1.2, 33.3N±0.2×86.9E±0.3, h10km, n10, σ0s81/8, mb3.8/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	13.97	347	Pn	Pn	23 54 47.6	-0.7
	baz=171,slow=10,SNR=4.1						
	0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	18.27	141	P	P	23 55 44.3	0.0
	0.3nm,0.3s,baz=341,slow=11,SNR=4.2						
	1.1nm,0.3s						
KURBB	**Kurchatov Arra**	18.41	343	P	Pn	23 55 45.8	+0.2
	0.1nm,0.3s,baz=162,slow=12,SNR=5.7						
	1.4nm,0.3s						
SONM	**Songino Array**	20.69	40	P	Pn	23 56 14.1	+1.0
	0.7nm,0.6s,baz=243,slow=9.5,SNR=2.3						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	20.74	357	P	Pn	23 56 12.8	-0.5
	3.2nm,0.8s,baz=177,slow=11,SNR=10						
	3.2nm,0.8s						
BVAR	**Borovoye Array**	23.03	334	P	P	23 56 35.8	+0.3
	1.4nm,0.9s,baz=151,slow=9.2,SNR=3.3						
	1.4nm,0.9s						
AKASG	**Malin Array Be**	45.07	311	P	P	23 59 45.9	-0.5
	1.0nm,0.7s,baz=84,slow=7.1,SNR=5.6						
	1.0nm,0.7s						
NOA	**NORSAR Array B**	54.71	325	P	P	00 01 00.2	+0.6
	0.7nm,0.6s,baz=83,slow=7.2,SNR=2.4						
	0.7nm,0.6s						
GERES	**GERESS Array B**	55.26	310	P	P	00 01 04.9	+1.1
	0.7nm,0.7s,baz=79,slow=5.8,SNR=7.1						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	78.95	278	P	P	00 03 33.7	-0.9
	0.6nm,0.9s,baz=30,slow=6.4,SNR=2.9						
	0.6nm,0.9s						

*CATAC **22** 23:51:31.6±0.2, 12.2°N×88.8°W±°, h29km, M3.7/30, MLv3.7/30, Error ellipse: s-maj=4.3km s-min=1.7km az=27.2, confirmed*
*SNET **22** 23:51:31.8±1.9, 12.21N×87.50W, h34km, ML3.6, Presumed earthquake*
ISC 22 23:51:30.9±1.3, 12.13N±0.05×87.54W±0.03, h27km±12km, n51, σ0s59/81, 1C-10D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	0.74	40	⇓P	Pn	23 51 46.3	+0.6
CRIN				S	Sn	23 51 57.7	+1.5
HOYN	**Al Sur del Vol**	0.84	56	⇓P	Pb	23 51 47.0	+0.1
HOYN				S	Sn	23 51 58.5	0.0
TELN	**Telica**	0.84	56	P	Pn	23 51 46.5	-0.6
CSGN	**Cosiguina Volc**	0.84	359	P	Pb	23 51 47.4	+0.4
CSGN				S	Sn	23 51 58.9	+0.3
HERN	**Volcan Telica**	0.84	56	P	Pb	23 51 47.2	+0.2
HERN				S	Sn	23 51 58.3	-0.3
CNGA	**Al SSO del Vol**	0.90	66	⇓P	Pb	23 51 47.8	-0.1
CNGN	**Cerro Negro**	0.90	66	⇓P	Pb	23 51 47.8	-0.2
CNGN				S	Sb	23 52 00.1	+0.5
MACN	**El Madrono**	0.91	68	⇓P	Pb	23 51 48.0	-0.1
MACN				S	Sb	23 52 00.1	+0.2
COPN	**Copaltepe**	0.93	87	⇓P	Pn	23 51 47.8	-0.5
LEVN	**Ruinas Leon Vi**	0.94	73	⇓P	Pb	23 51 49.2	+0.6
LEVN				S	Sb	23 52 01.9	+1.1
MOMN	**Momotombo**	1.02	74	P	Pb	23 51 49.7	-0.2
MOMN				S	Sb	23 52 02.7	-0.3
MOM3	**MOM3**	1.07	69	P	Pb	23 51 50.5	-0.3
MOM3				S	Sb	23 52 04.4	0.0
MOM2	**El Cardon**	1.08	73	⇓P	Pn	23 51 50.4	+0.2
MOM2				S	Sb	23 52 04.5	-0.1
SAPS	**Ciudad Sandino**	1.11	88	P	Pn	23 51 51.0	+0.3
SAPS				S	Sb	23 52 05.2	-0.5
CNCH	**Conchagua**	1.17	346	P	Pn	23 51 52.0	+0.3
CNCH				S	Sb	23 52 06.9	-0.6
CNCH	**Conchagua**	1.17	346	*i* P	Pb	23 51 52.3	-0.3
CNCH				*e*S	Sb	23 52 07.3	-0.2
APQ2	**Apoyeque**	1.19	87	S	Sb	23 52 07.2	-0.7
ABCN	**Banco Central**	1.20	90	S	Sn	23 52 07.2	-0.3
LCND	**La Caada**	1.22	344	P	Pn	23 51 52.4	+0.1
LCND	**La Caada**	1.22	344	*i* P	Pb	23 51 52.9	-0.4
LCND				*e*S	Sn	23 52 06.7	-1.2
AESN	**El Sauce Leon**	1.23	52	S	Sn	23 52 07.6	-0.6
TISN	**Laguna Tiscapa**	1.24	89	P	Pn	23 51 52.2	-0.4
MGAN	**Managua**	1.27	89	S	Sn	23 52 09.1	+0.1
WILN	**Americas 2**	1.32	89	P	Pn	23 51 53.8	+0.2
WILN				S	Sn	23 52 10.4	0.0
MAS3	**Al N del Volca**	1.34	94	P	Pn	23 51 54.7	+0.8
MAS3				S	Sn	23 52 10.1	-0.8
SABN	**Sabanita**	1.36	97	P	Pn	23 51 54.7	+0.5
MASN	**Masaya**	1.37	96	P	Pn	23 51 55.1	+0.8
MASN				S	Sn	23 52 11.5	-0.1
NANN	**Nandasmo**	1.40	98	P	Pb	23 51 56.1	-0.4
NANN				S	Sb	23 52 13.3	-0.7
LIMN	**Finca el Limon**	1.47	51	⇑P	Pn	23 51 55.8	0.0
LIMN				S	Sn	23 52 13.9	-0.3
RANC	**El Ranchito**	1.49	331	P	Pn	23 51 56.3	+0.3
RANC				S	Sn	23 52 14.7	0.0
PACA	**Pacayal**	1.53	330	P	Pn	23 51 57.1	+0.5
PACA				S	Sb	23 52 16.7	-1.2
PACA	**Pacayal**	1.53	330	*i* P	Pn	23 51 56.8	+0.1
PACA				*e*S	Sn	23 52 15.9	+0.2
TECA	**Tecapa**	1.65	325	*i* P	Pn	23 51 58.9	+0.6
MATN	**Matagalpa**	1.77	63	P	Pn	23 51 59.9	0.0
MATN				S	Sn	23 52 21.2	-0.3
TECO	**Alcaldia de Te**	1.85	319	S	Sn	23 52 22.7	-0.7
BOAB	**BOACO BROADBAN**	1.86	80	P	Pn	23 52 01.0	-0.1
BOAB				S	Sn	23 52 23.4	-0.3
RCON	**San Juan de Ri**	1.91	45	P	Pn	23 52 02.6	+0.8
RCON				S	Sn	23 52 25.4	+0.3
MORN	**Al O del Volca**	1.94	107	S	Sn	23 52 26.0	+0.3
SCLA	**Alcaldia de Sa**	1.94	324	P	Pn	23 52 03.7	+1.5
SCLA				S	Sn	23 52 26.9	+1.0
RCVN	**Varillal2**	1.95	42	⇓P	Pn	23 52 03.1	+0.6
RCVN				S	Sn	23 52 25.5	-0.7
CONN	**Concepcion**	1.96	107	P	Pn	23 52 03.3	+0.9
CONN				S	Sn	23 52 24.9	-1.2
OMEN	**Al SSO del Vol**	1.97	108	⇓P	Pn	23 52 03.6	+1.0
OMEN				S	Sn	23 52 26.8	+0.3
COEG	**Centro de Oper**	1.97	319	S	Sn	23 52 25.5	-0.1
COEG	**Centro de Oper**	1.97	319	*e*S	Sn	23 52 25.5	-1.1
RCPN	**Sur Rio San Ju**	1.98	45	P	Pn	23 52 03.3	+0.5
SJTE	**Alcalda de S**	2.05	316	*i* P	Pn	23 52 04.0	+0.2
SJTE				*e*S	Sn	23 52 27.6	-1.0
LOMA	**Loma Larga**	2.19	314	S	Sn	23 52 32.0	+0.1
PMON	**Piamonte**	2.34	312	S	Sn	23 52 36.4	+0.7
JAYA	**Jayaque - finc**	2.40	309	S	Sn	23 52 37.4	+0.2
JAYA	**Jayaque - finc**	2.40	309	*e*S	Sn	23 52 37.2	0.0
NUBE	**Las Nubes**	2.80	309	S	Sn	23 52 47.1	-0.1

*IDC **22** 23:52:18.7±1.9, 33.06N×86.92E, h0km, mb3.3/3, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=58.4km s-min=31.2km az=70.0*
ISC 22 23:52:20.0±1.3, 33.1N±0.2×87.0E±0.3, h10km, n6, σ0s33/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	14.14	347	Pn	Pn	23 55 40.4	+0.1
	0.1nm,0.3s,baz=168,slow=10,SNR=2.0						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	18.09	141	P	P	23 56 31.9	0.0
	0.6nm,0.3s,baz=341,slow=11,SNR=1.4						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	18.59	343	P	Pn	23 56 37.8	+0.5
	baz=155,slow=11,SNR=1.0						
	3.4nm,0.2s						
ZALV	**Zalesovo Beam**	20.89	356	P	P	23 57 02.0	-0.3
	0.8nm,0.4s,baz=179,slow=11,SNR=2.8						
	0.8nm,0.4s						
GERES	**GERESS Array B**	55.44	310	P	P	00 01 54.5	-0.2
	0.3nm,0.6s,baz=61,slow=6.0,SNR=2.6						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	79.08	279	P	P	00 04 25.0	0.0
	0.2nm,0.8s,baz=45,slow=5.0,SNR=1.1						
	0.2nm,0.8s						

*IDC **23** 00:04:47.2±1.5, 23.52S×69.54E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=56.7km s-min=29.2km az=84.0*
ISC 23 00:04:49.2±1.5, 23.5S±0.2×69.5E±0.4, h12km, n15, σ1s09/6, mb4.0/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	16.04	11	T	T	00 25 02.1	
	baz=190,slow=76,SNR=62						
H08S2	**Diego Garcia H**	16.04	11	T	T	00 25 02.4	
	baz=190,slow=76,SNR=44						
H08S3	**Diego Garcia H**	16.05	11	T	T	00 25 03.6	
	baz=190,slow=76,SNR=58						
H04N2	**CROZET ISLANDS**	26.75	208	T	T	00 38 31.3	
	baz=40,slow=74,SNR=94						
H04N1	**CROZET ISLANDS**	26.76	208	T	T	00 38 37.6	
	baz=40,slow=74,SNR=103						
H04N3	**CROZET ISLANDS**	26.77	208	T	T	00 38 35.1	
	baz=40,slow=74,SNR=118						
H01W2	**Cape Leeuwin H**	40.25	117	T	T	00 55 04.9	
	baz=274,slow=75,SNR=8.5						
H01W3	**Cape Leeuwin H**	40.25	117	T	T	00 54 58.7	
	baz=274,slow=75,SNR=7.6						
H01W1	**Cape Leeuwin H**	40.27	117	T	T	00 55 04.4	
	baz=274,slow=75,SNR=6.8						
CMAR	**Chiang Mai Arr**	50.64	37	P	P	00 13 48.9	+0.4
	0.5nm,0.3s,baz=213,slow=5.9,SNR=1.4						
	0.5nm,0.3s						
ASAR	**Alice Springs**	58.50	104	P	P	00 14 45.4	-0.4
	0.5nm,0.7s,baz=254,slow=7.0,SNR=6.3						
	0.5nm,0.7s						
QSPA	**South Pole Qui**	66.60	180	P	P	00 15 39.5	+0.2
	1.2nm,1.0s,baz=274,slow=2.9,SNR=3.6						
	1.2nm,1.0s						
MKAR	**Makanchi Array**	70.93	9	P	P	00 16 06.6	+0.4
	0.9nm,0.7s,baz=190,slow=7.3,SNR=5.7						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	74.24	6	P	P	00 16 24.2	-1.6
	0.6nm,0.2s,baz=206,slow=6.2,SNR=1.1						
	0.6nm,0.2s						

ZALV	**Zalesovo Beam**	**78.27**	**9**	P		**P**		**00 16 49.2**	**+0.7**
	0.4nm,0.5s,baz=197,slow=4.5,SNR=1.5								
	0.4nm,0.5s								

IDC ***23*** *00:10:20.8±0.8, 32°.85N×86°.74E, h0km, mb3.8/15, mbtmp3.8/18, ML3.6/3, MS3.6/18, Error ellipse: s-maj=23.2km s-min=15.6km az=42.0*

BJI ***23*** *00:10:27.3, 32°.93N×87°.08E, h8km, mB4.5/2, mb4.4/5, Ms4.0/6, Ms7 3.9/5*

ISC 23 00:10:23.6±0.8, 32°.8N±0°.1×86°.5E±0°.1, h10km, n36, σ2s73/22, mb3.9/14, MS3.7/16, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**11.02**	**5**	*eP*	**Pn**	**00 13 06.0**	**+4.6**
WMQ				PP	**PnPn**	**00 13 15.5**	**+6.3**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	**Ala-Archa**	**13.62**	**319**	LR	LR	00 19 24.7	
	comp=Z,211nm,18.1s,baz=134,slow=40						
MKAR	**Makanchi Array**	**14.32**	**348**	Pn	**Pn**	**00 13 43.7**	**-2.6**
	0.1nm,0.3s,baz=158,slow=12,SNR=4.1						
MKAR				LR	LR	00 20 19.3	
	comp=Z,206nm,18.8s,baz=156,slow=42						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**18.17**	**139**	P	**Pn**	**00 14 34.5**	**-1.6**
	0.5nm,0.3s,baz=331,slow=13,SNR=8.9						
CMAR				LR	LR	00 22 56.9	
	comp=Z,87nm,18.3s,baz=315,slow=42						
	0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**18.73**	**344**	P	**P**	**00 14 40.4**	**-1.9**
	0.1nm,0.3s,baz=158,slow=12,SNR=14						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**21.15**	**357**	P	**P**	**00 15 06.6**	**-2.1**
	5.5nm,0.8s,baz=175,slow=10,SNR=24						
	5.5nm,0.8s						
SONM	**Songino Array**	**21.25**	**39**	P	**P**	**00 15 06.4**	**-3.5**
	2.3nm,0.9s,baz=234,slow=12,SNR=5.8						
	2.3nm,0.9s						
BVAR	**Borovoye Array**	**23.27**	**335**	P	**P**	**00 15 30.2**	**-1.0**
	0.9nm,0.7s,baz=139,slow=11,SNR=3.7						
	0.9nm,0.7s						
QIZ	**Qiongzhong**	**25.04**	**118**	P	**P**	**00 15 49.6**	**+1.6**
QIZ				S	**S**	**00 20 15.4**	**+3.1**
QIZ				L	L		
	comp=N,150nm,16.9s						
QIZ				L	L		
	comp=E,190nm,22.7s						
QIZ				L	L		
	comp=Z,210nm,16.0s						
AKTO	**Aktyubinsk**	**27.36**	**318**	LR	LR	00 27 55.7	
	comp=Z,66nm,20.6s,baz=165,slow=38						
HILR	**Hailar Array B**	**29.80**	**46**	P	**P**	**00 16 28.7**	**-1.8**
	1.3nm,0.4s,baz=248,slow=7.6,SNR=1.9						
	1.3nm,0.4s						
ARTI	**Arti**	**30.52**	**329**	LR	LR	00 30 15.4	
	comp=Z,112nm,19.3s,baz=129,slow=39						
KSRS	**Korea Array**	**34.01**	**70**	P	**P**	**00 17 05.7**	**-1.9**
	1.4nm,0.5s,baz=272,slow=8.4,SNR=6.9						
	1.4nm,0.5s						
KBZ	**Khabaz**	**35.53**	**301**	LR	LR	00 35 23.9	
	comp=Z,66nm,18.4s,baz=86,slow=42						
NRIK	**Noril'sk**	**36.57**	**1**	LR	LR	00 33 36.4	
	comp=Z,137nm,20.2s,baz=205,slow=38						
USRK	**Ussuriysk Ar.**	**36.95**	**59**	LR	LR	00 34 50.0	
	comp=Z,70nm,18.2s,baz=190,slow=40						
MJAR	**Matsushiro Arr**	**42.29**	**70**	LR	LR	00 37 32.5	
	comp=Z,51nm,20.2s,baz=188,slow=39						
BRTR	**Keskin Array B**	**42.63**	**295**	LR	LR	00 39 38.7	
	comp=Z,29nm,21.7s,baz=102,slow=41						
AKASG	**Malin Array Be**	**45.09**	**311**	P	**P**	**00 18 40.6**	**+0.9**
	0.7nm,0.5s,baz=86,slow=6.7,SNR=6.4						
AKASG				LR	LR	00 41 26.8	
	comp=Z,79nm,18.5s,baz=71,slow=41						
	0.7nm,0.5s						
MLR	**Muntele Rosu**	**47.56**	**304**	LR	LR	00 43 12.7	
	comp=Z,93nm,18.7s,baz=66,slow=41						
FINES	**FINESS Array B**	**47.70**	**326**	P	**P**	**00 19 00.3**	**+0.2**
	2.3nm,0.8s,baz=103,slow=4.4,SNR=3.7						
	2.3nm,0.8s						
VRAC	**Vranov**	**53.31**	**310**	LR	LR	00 46 32.7	
	comp=Z,83nm,20.1s,baz=78,slow=41						
HFS	**Hagfors**	**53.71**	**324**	P	**P**	**00 19 44.4**	**-1.1**
	2.6nm,0.7s,baz=88,slow=10,SNR=4.2						
HFS				LR	LR	00 44 20.1	
	comp=Z,70nm,20.7s,baz=97,slow=38						
	2.6nm,0.7s						
NB2	**NORSAR Subarra**	**54.86**	**325**	P	**P**	**00 19 53.4**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=83,slow=7.4						
NOA	**NORSAR Array B**	**54.86**	**325**	P	**P**	**00 19 53.0**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=83,slow=7.2,SNR=4.0						
NOA				LR	LR	00 45 04.5	
	comp=Z,71nm,18.4s,baz=95,slow=38						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	**55.27**	**310**	P	**P**	**00 19 58.0**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=78,slow=5.8,SNR=8.2						
	comp=Z,1.1nm,0.9s						
DAVOX	**Davos/Dischmat**	**58.26**	**308**	LR	LR	00 48 11.9	
	comp=Z,96nm,20.2s,baz=76,slow=39						
EKA	**Eskdalemuir Ar**	**63.52**	**320**	LR	LR	00 51 54.8	
	comp=Z,42nm,19.2s,baz=50,slow=39						
BORG	**Borgarnes**	**67.86**	**334**	LR	LR	00 51 37.2	
	comp=Z,50nm,18.7s,baz=38,slow=36						
WRA	**Warramunga Arr**	**69.61**	**132**	P	P	00 21 30.0	-3.2
	comp=Z,0.7nm,0.8s,baz=318,slow=5.9,SNR=3.8						
	comp=Z,0.7nm,0.8s						
ESDC	**Sonseca Array**	**70.24**	**305**	P	**P**	**00 21 37.5**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=61,slow=6.5,SNR=2.4						
	comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**72.13**	**135**	P	P	00 21 46.4	-2.1
	comp=Z,1.1nm,0.8s,baz=318,slow=5.3,SNR=6.1						
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**74.22**	**21**	P	P	00 21 56.9	-3.4
	comp=Z,0.6nm,0.8s,baz=326,slow=5.9,SNR=6.2						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.66**	**278**	P	**P**	**00 22 25.1**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=62,slow=6.1,SNR=3.3						
	comp=Z,0.7nm,0.9s						
SIV	**San Ignacio**	**146.21**	**292**	PKPbc	**PKPdf**	**00 30 04.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=90,slow=1.0,SNR=6.4						
LPAZ	**La Paz**	**151.75**	**300**	PKPbc	**PKPdf**	**00 30 18.4**	**+5.0**
	comp=Z,0.7nm,0.5s,baz=90,slow=1.0,SNR=3.6						

IDC ***23*** *00:29:25.4±2.0, 36°.44N×117°.82W, h0km, mbtmp2.8/3, ML3.5/3, Error ellipse: s-maj=24.9km s-min=11.2km az=59.0*

NEIC ***23*** *00:29:25.7±1.0, 36°.447N±0°.010×117°.98W±0°.01, h6km±2km, ML3.6/146, Mwr3.7/4(PAS), Error ellipse: s-maj=1.6km s-min=1.4km az=66.0*

PAS ***23*** *00:29:26.2±0.9, 36°.448N±0°.010×117°.99W±0°.01, h4km±2km, Error ellipse: s-maj=1.6km s-min=1.3km az=57.0*

ISC 23 00:29:26.1±0.9, 36°.45N±0°.02×117°.98W±0°.02, h6km±7km, n94, σ0s67/119, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CWC	**Cottonwood Cre**	**0.08**	**264**		**Pg**	**00 29 28.0**	**-0.2**
CWC				Sg	**Sg**	**00 29 29.4**	**-0.2**
CWC				IAML		00 29 29.9	
	comp=E,45μm,0.2s						
CGO	**Cerro Gordo**	**0.18**	**54**		**Pg**	**00 29 30.1**	**+0.2**
CGO					**Sg**	**00 29 32.8**	**+0.5**
MFS	**McCloud Flat S**	**0.34**	**163**		**Pg**	**00 29 32.8**	**-0.1**
MFS					**Sg**	**00 29 38.1**	**+0.6**
DAC	**Darwin (Calif)**	**0.36**	**118**		**Pg**	**00 29 32.9**	**-0.2**
DAC					**Sg**	**00 29 38.4**	**+0.5**
WLHM	**Little Horse**	**0.40**	**222**		**Pg**	**00 29 33.7**	**-0.2**
WRVM	**Rose V. Centra**	**0.45**	**170**		**Pg**	**00 29 34.6**	**-0.1**
WRVM					**Sg**	**00 29 41.1**	**+0.5**
WCSM	**Coso Springs S**	**0.46**	**158**		**Pg**	**00 29 35.0**	**0.0**
WCSM					**Sg**	**00 29 41.5**	**+0.6**
JRC2	**Joshua Ridge**	**0.48**	**163**		**Pg**	**00 29 35.4**	**-0.1**
JRC2					**Sg**	**00 29 42.5**	**+0.7**
WVPM	**Volcano Peak E**	**0.52**	**165**		**Pg**	**00 29 36.0**	**-0.1**
WVPM					**Sg**	**00 29 43.6**	**+0.8**
MPMC	**Manual Prospec**	**0.56**	**134**		**Pg**	**00 29 36.6**	**-0.3**
MPMC				Sg	**Sg**	**00 29 44.3**	**+0.2**
MPMC				IAML		00 29 45.0	
	comp=N,3μm,0.3s						
MPMC				IAML		00 29 45.1	
	comp=E,5μm,0.4s						
RCWM	**Renegade Canyo**	**0.56**	**151**		**Pg**	**00 29 36.9**	**-0.1**
RCWM					**Sg**	**00 29 44.7**	**+0.3**
WNMM	**Nine Mile Cany**	**0.61**	**174**		**Sg**	**00 29 45.9**	**+0.2**
TIN	**Tinemaha, Big**	**0.64**	**342**		**Pg**	**00 29 38.3**	**-0.1**
TIN				Sg	**Sg**	**00 29 47.4**	**+0.6**
TOW	**Tower One**	**0.66**	**164**		**Pb**	**00 29 39.1**	**-1.0**
TOW					**Sb**	**00 29 49.0**	**-0.5**
SRTC	**Snort**	**0.78**	**166**		**Pg**	**00 29 41.1**	**+0.1**
SRTC					**Sb**	**00 29 52.9**	**+0.1**
WORM	**Onyx Ranch**	**0.78**	**196**		**Pg**	**00 29 40.5**	**-0.6**
WORM					**Sg**	**00 29 51.0**	**-0.2**
WHFM	**Hanning Flat**	**0.81**	**202**		**Pg**	**00 29 41.1**	**-0.5**
WHFM					**Sg**	**00 29 51.6**	**-0.5**
LCH	**Last Change Ra**	**0.83**	**19**		**Pg**	**00 29 41.5**	**-0.6**
LCH					**Sg**	**00 29 52.6**	**-0.2**
WASM	**Alta Sierra Ca**	**0.85**	**214**		**Pg**	**00 29 42.0**	**-0.5**
ISA	**Isabella, Lake**	**0.88**	**207**		**Pg**	**00 29 42.5**	**-0.5**
ISA				Sg	**Sg**	**00 29 54.0**	**-0.4**
FURC	**Furnace Creek,**	**0.90**	**88**		**Pg**	**00 29 43.1**	**-0.3**
FURC					**Sg**	**00 29 55.3**	**+0.1**
WBSM	**Bird Springs**	**0.92**	**188**		**Pg**	**00 29 43.2**	**-0.6**
WBSM					**Sg**	**00 29 55.7**	**0.0**
DSP	**Deep Springs**	**0.92**	**1**		**Pg**	**00 29 43.0**	**-0.8**
DSP					**Sg**	**00 29 55.3**	**-0.5**
DSP				IAML		00 29 56.2	
	comp=N,2μm,0.4s						
DSP				IAML		00 29 56.5	
	comp=E,2μm,0.4s						
LRMC	**Laurel Mtn Rad**	**1.00**	**166**		**Pg**	**00 29 44.8**	**-0.5**
LRMC					**Sg**	**00 29 57.7**	**-0.5**
LRMC				IAML		00 29 58.9	
	comp=E,2μm,0.6s						
LRMC				IAML		00 30 00.9	
	comp=N,1μm,0.4s						
QSM	**Queen of Sheba**	**1.02**	**118**		**Pg**	**00 29 45.2**	**-0.5**
QSM				IAML		00 30 02.7	
	comp=N,2μm,0.7s						
QSM				IAML		00 30 02.8	
	comp=E,2μm,0.6s						
GMN	**Gold Mountain**	**1.03**	**34**		**Pg**	**00 29 45.0**	**-0.9**
GMN					**Sg**	**00 29 59.1**	**-0.2**
CCCA	**Chr Cany lake**	**1.05**	**151**		**Pg**	**00 29 46.0**	**-0.2**
VES	**Vestal, Richgr**	**1.08**	**236**		**Pg**	**00 29 46.3**	**-0.5**
VES					**Sg**	**00 30 00.4**	**-0.4**
VES				IAML		00 30 05.4	
	comp=E,1μm,0.5s						
GWY	**Greenwater Val**	**1.09**	**103**		**Pg**	**00 29 46.6**	**-0.4**
GWY				IAML		00 30 04.3	
	comp=N,2μm,0.5s						
GWY				IAML		00 30 06.3	
	comp=E,2μm,0.4s						
WCT	**Wildcat Mounta**	**1.14**	**72**		**Pg**	**00 29 47.3**	**-0.7**
WCT				IAML		00 30 04.2	
	comp=E,964nm,0.5s						
WCT				IAML		00 30 05.8	
	comp=N,949nm,0.6s						
KCC	**Kaiser Creek**	**1.38**	**310**		**Pn**	**00 29 51.3**	**-0.7**
MDPB	**Devils Postpil**	**1.47**	**324**		**Pn**	**00 29 53.1**	**-0.3**
MDPB					**Sb**	**00 30 12.6**	**-0.5**
MDPB				IAML		00 30 13.5	
	comp=N,815nm,0.4s						
MDPB				IAML		00 30 16.8	
	comp=E,698nm,0.4s						
TPNV	**Topopah Spring**	**1.48**	**70**		**Pn**	**00 29 53.1**	**-0.3**
TPNV				IAML		00 30 16.0	
	comp=E,682nm,1.1s						
TPNV				IAML		00 30 19.6	
	comp=E,851nm,0.5s						
FRI	**Friant**	**1.49**	**292**		**Pn**	**00 29 52.9**	**-0.5**
GSC	**Goldstone, Bar**	**1.49**	**140**		**Pn**	**00 29 52.8**	**-0.6**
GSC				IAML		00 30 17.4	
	comp=N,974nm,0.6s						
GSC				IAML		00 30 18.5	
	comp=E,963nm,0.5s						
TPO	**Tropico Hills**	**1.58**	**187**		**Pn**	**00 29 54.5**	**-0.1**
TPO				IAML		00 30 19.8	
	comp=N,865nm,0.6s						
TPO				IAML		00 30 20.6	
	comp=E,726nm,0.9s						
TPH	**Tonopah**	**1.73**	**20**		**Pb**	**00 29 57.8**	**-0.7**
TPH				IAML		00 30 24.9	
	comp=E,407nm,0.6s						
TPH				IAML		00 30 25.6	
	comp=N,539nm,0.5s						
LHV	**Little Huntoon**	**1.85**	**347**		**Pb**	**00 29 59.2**	**-1.0**
LHV				IAML		00 31 0.0	
	comp=E,526nm,0.9s						
LHV				IAML		00 30 34.3	
	comp=N,368nm,0.9s						
OSI	**Osito Audit: C**	**1.93**	**199**		**Pn**	**00 30 00.3**	**+0.9**
OSI				IAML		00 30 31.9	
	comp=N,426nm,0.6s						
OSI				IAML		00 30 33.3	
	comp=E,535nm,0.8s						
NV11	**Mina Array Sit**	**1.99**	**356**		**Pn**	**00 30 01.1**	**+0.8**
NVAR	**Mina Array Bea**	**2.00**	**353**	Pn	**Pn**	**00 30 00.5**	**0.0**
	comp=E,23nm,0.3s,baz=172,slow=13,SNR=281						
NVAR				Pg	**Pg**	**00 30 03.5**	**-0.9**
	comp=E,23nm,0.3s,baz=166,slow=15,SNR=236						
NVAR				Lg	Lg	00 30 29.2	
	comp=E,27nm,0.3s,baz=166,slow=32,SNR=8.2						
	comp=E,46nm,0.5s						
NVAR	**Mina Array Bea**	**2.00**	**353**		**Pn**	**00 30 01.4**	**+0.9**
PKD	**Bear Valley Ra**	**2.13**	**257**		**Pn**	**00 30 02.6**	**+0.4**
PKD				IAML		00 30 40.6	
	comp=N,462nm,0.9s						
PKD				IAML		00 30 49.2	
	comp=E,353nm,0.9s						
S11A	**Rachel**	**2.15**	**56**		**Pn**	**00 30 02.8**	**+0.2**
MTPC	**Mountain Pass**	**2.19**	**115**		**Pn**	**00 30 02.5**	**-0.7**
MTPC				IAML		00 30 37.9	
	comp=E,243nm,0.3s						
MTPC				IAML		00 30 43.2	
	comp=N,196nm,0.6s						
BFSC	**Mount Baldy Ra**	**2.22**	**173**		**Pn**	**00 30 03.6**	**0.0**
BFSC				IAML		00 30 36.7	
	comp=E,239nm,0.8s						
MWC	**Mount Wilson**	**2.22**	**182**		**Pn**	**00 30 03.7**	**+0.1**
MWC				IAML		00 30 38.3	
	comp=N,348nm,0.5s						
MWC				IAML		00 30 42.3	
	comp=E,240nm,0.6s						
PASC	**Pasadena Art C**	**2.28**	**184**		**Pn**	**00 30 04.4**	**+0.2**
PASC				IAML		00 30 43.1	
	comp=E,191nm,0.6s						
PMPB	**Monarch Peak**	**2.29**	**265**		**Pn**	**00 30 05.1**	**+0.7**
LVN	**Las Vegas**	**2.32**	**98**	Pn	**Pn**	**00 30 03.7**	**-1.2**
LVN				IAML		00 30 41.9	
	comp=E,475nm,0.7s						
LVN				IAML		00 30 44.2	
	comp=N,512nm,1.2s						
WAKR	**Walker**	**2.36**	**331**		**Pn**	**00 30 05.3**	**-0.2**
Q09A	**Carvers**	**2.46**	**15**		**Pn**	**00 30 07.3**	**+0.3**
BBGB	**Big Mountain B**	**2.47**	**274**		**Pn**	**00 30 07.5**	**+0.6**
CMB	**Columbia Colle**	**2.49**	**310**		**Pn**	**00 30 08.4**	**+1.3**
CMB				IAML		00 30 49.1	
	comp=E,237nm,0.5s						
CMB				IAML		00 30 56.9	
	comp=N,278nm,0.7s						
PRN	**Pahroc Range**	**2.54**	**67**		**Pn**	**00 30 08.0**	**+0.1**
PRN				IAML		00 30 57.8	
	comp=E,417nm,0.9s						
KVN	**Kaiserville**	**2.60**	**358**		**Pn**	**00 30 09.4**	**+0.5**
HULI	**Fort Hunter Li**	**2.67**	**262**		**Pn**	**00 30 10.4**	**+0.9**
HULI				IAML		00 30 58.4	
	comp=N,271nm,0.7s						
HULI				IAML		00 31 04.3	
	comp=E,289nm,0.9s						
SAO	**San Andreas Ge**	**2.81**	**277**		**Pn**	**00 30 12.2**	**+0.7**
ELS	**Elsinore Mount**	**2.83**	**171**		**Pn**	**00 30 12.1**	**+0.2**
ELS				IAML		00 30 57.0	
	comp=E,131nm,0.7s						
BELC	**Belle Mtn. Jos**	**2.93**	**146**		**Pn**	**00 30 12.7**	**-0.6**
BELC				IAML		00 31 03.3	
	comp=N,99nm,0.4s						
BELC				IAML		00 31 04.2	
	comp=E,104nm,0.5s						
PNTR	**Pine Nut**	**2.93**	**335**		**Pn**	**00 30 14.4**	**+1.0**
PNTR				IAML		00 31 27.0	
	comp=N,172nm,0.7s						
PNTR				IAML		00 31 28.6	
	comp=E,128nm,0.8s						
MHC	**Mount Hamilton**	**3.07**	**288**		**Pn**	**00 30 15.4**	**+0.2**
MHC				IAML		00 31 06.6	
	comp=E,196nm,0.8s						
DNR	**Dunn Ranch,Anz**	**3.08**	**159**		**Pn**	**00 30 13.9**	**-1.5**
PMD	**Palm Desert**	**3.09**	**154**		**Pn**	**00 30 14.2**	**-1.1**
PFO	**Pinyon Flats O**	**3.09**	**156**		**Pn**	**00 30 14.9**	**-0.6**
IRM	**Iron Mountain**	**3.26**	**134**		**Pn**	**00 30 16.6**	**-1.1**
AFDM	**Forest Hills D**	**3.44**	**317**		**Pn**	**00 30 21.4**	**+1.1**
AFDM				IAML		00 31 17.9	
	comp=E,140nm,0.7s						
AFDM				IAML		00 31 20.3	
	comp=N,177nm,0.5s						
BC3	**Big Chuckawall**	**3.47**	**143**		**Pn**	**00 30 19.7**	**-1.0**
DPP	**Dos Picos Cty**	**3.55**	**166**		**Pn**	**00 30 20.0**	**-1.7**
DPP				IAML		00 31 21.7	
	comp=E,65nm,1.0s						
W13A	**Hualapai Mount**	**3.59**	**111**		**Pn**	**00 30 22.6**	**+0.1**
LCMT	**Little Creek M**	**3.85**	**80**		**Pn**	**00 30 26.6**	**+0.6**
CCUT	**Cedar City**	**3.86**	**72**		**Pn**	**00 30 27.2**	**+1.0**
PSUT	**Pine Spring**	**3.89**	**56**		**Pn**	**00 30 26.6**	**0.0**
BLYC	**Blythe**	**3.91**	**133**		**Pn**	**00 30 25.9**	**-0.8**
BLYC				IAML		00 31 39.1	
	comp=N,55nm,0.5s						
BAR	**Barrett**	**3.91**	**164**		**Pn**	**00 30 26.8**	**+0.1**
BAR				IAML		00 31 29.6	
	comp=E,69nm,0.6s						
BMN	**Battle Mountai**	**4.02**	**8**	Pn	**Pn**	**00 30 28.8**	**+0.5**
CVS	**Carmenet Viney**	**4.04**	**299**	Pn	**Pn**	**00 30 28.5**	**+0.1**
CVS				IAML		00 31 30.2	
	comp=N,52nm,1.1s						
CVS				IAML		00 31 44.8	
	comp=E,80nm,1.1s						
SZCU	**Shurtz Canyon**	**4.08**	**72**		**Pn**	**00 30 29.0**	**-0.2**
SUTB	**Sutter Butte**	**4.10**	**314**		**Pn**	**00 30 30.1**	**+0.9**
ORV	**Oroville**	**4.16**	**319**		**Pn**	**00 30 30.0**	**-0.2**
ORV				IAML		00 31 47.1	
	comp=N,42nm,0.6s						
ORV				IAML		00 31 47.3	
	comp=E,81nm,0.7s						
KNB	**Kanab**	**4.18**	**81**		**Pn**	**00 30 31.5**	**+0.9**
CBX	**Cerro Bola**	**4.27**	**165**		**Pn**	**00 30 32.3**	**+0.6**
GLA	**Glamis**	**4.27**	**142**		**Pn**	**00 30 30.2**	**-1.4**
GLA				IAML		00 31 58.0	
	comp=N,56nm,0.8s						
GLA				IAML		00 31 58.4	
	comp=E,78nm,0.9s						
U15A	**North Rim**	**4.59**	**89**		**Pn**	**00 30 37.4**	**+1.1**
PKCU	**Pink Cliffs**	**4.65**	**76**		**Pn**	**00 30 37.5**	**+0.4**
ESJX	**Sierra Juarez**	**4.74**	**159**	Pn	**Pn**	**00 30 37.2**	**-1.1**
Y14A	**Wickenburg**	**4.78**	**120**		**Pn**	**00 30 38.1**	**-0.6**
ELK	**Elko**	**4.80**	**26**		**Pn**	**00 30 39.6**	**+0.6**
Q03E	**Paynes Creek**	**4.87**	**323**		**Pn**	**00 30 40.7**	**+0.7**
TCRU	**Three Creeks R**	**4.90**	**62**	Pn	**Pn**	**00 30 39.9**	**-0.6**
WUAZ	**Wupatki**	**5.44**	**98**		**Pn**	**00 30 47.8**	**0.0**
X16A	**Lo Mia Camp, P**	**5.71**	**109**	Pn	**Pn**	**00 30 52.0**	**+0.4**
PDAR	**Pinedale Array**	**9.06**	**43**	Pn	**Pn**	**00 31 38.1**	**+0.6**
	comp=E,0.1nm,0.3s,baz=226,slow=10,SNR=2.0						
PDAR				Lg	Lg	00 34 10.0	
	comp=E,0.1nm,0.3s,baz=230,slow=31,SNR=2.0						
	comp=E,0.1nm,0.4s						
TXAR	**Lajitas Array**	**13.96**	**116**	Pn	**Pn**	**00 32 46.7**	**+2.3**
	baz=300,slow=17,SNR=2.5						
	comp=E,0.1nm,0.7s						

IDC ***23*** *00:35:02.9±0.9, 54°.84N×159°.49W, h0km, mb4.1/21, mbtmp4.1/24, ML4.1/3, MS3.4/7, Error ellipse: s-maj=23.8km s-min=14.7km az=177.0*

NEIC ***23*** *00:35:11.1±1.5, 55°.11N±0°.06×159°.22W±0°.08, h38km±5km, mb4.3/30, ML4.0/38, Mwr4.0/45, ML3.8(AEIC), Error ellipse: s-maj=9.9km s-min=4.9km az=145.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-0.20; $M_{r\theta}$0.90; $M_{\theta\phi}$-0.32; $M_{\phi r}$0.62; Fault plane solution: M_o1.49000×10^{15} NP1:ϕ_s59.05000°, δ68.60000°, λ84.08000°. NP2:ϕ_s254.91000°, δ22.16000°, λ104.74000°. Principal axes: T 1.5361, Plg66.0000°, Azm319.0000°; N -0.0959, Plg6.0000°, Azm61.0000°; P -1.4402, Plg23.0000°, Azm154.0000°;*

AEIC ***23*** *00:35:11.0±1.4, 55°.14N±0°.06×159°.25W±0°.09, h39km±5km Error ellipse: s-maj=9.8km s-min=4.8km az=144.0*

NEIC ***23*** *00:35:11.2, 55°.11N×159°.22W, h38km*

ISC 23 00:35:09.8±0.5, 55°.11N±0°.06×159°.14W±0°.04, h35km, n232, σ1s34/227, mb4.2/44, MS3.4/7, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.39**	**222**		**Pn**	**00 35 20.4**	**+1.6**
CNBA					**Sn**	**00 35 27.0**	**+1.9**
CNBA				IAML		00 35 27.6	
	comp=E,14μm,0.2s						
CNBA				IAML		00 35 31.1	
	comp=N,8μm,0.4s						
SDPT	**Sand Point**	**0.81**	**288**	P	**Pn**	**00 35 24.9**	**+0.3**
SDPT	**Sand Point**	**0.81**	**288**	S	**Sn**	**00 35 34.5**	**-0.8**
SDPT	**Sand Point**	**0.81**	**288**		**Pn**	**00 35 24.9**	**+0.3**
SDPT					**Sn**	**00 35 34.5**	**-0.8**
SDPT				IAML		00 35 35.2	
	comp=N,7μm,0.8s						
SDPT				IAML		00 35 37.7	
	comp=E,5μm,0.5s						
VNKR	**Veniaminof 5**	**0.94**	**352**		**Pn**	**00 35 27.3**	**+0.8**
VNSS	**Veniaminof 8**	**1.14**	**351**		**Pn**	**00 35 30.9**	**+1.5**
VNFG	**Fog Glacier, M**	**1.20**	**349**		**Pn**	**00 35 31.7**	**+1.5**
VNFG				Sn	**Sn**	**00 35 48.5**	**+3.1**
VNFG	**Fog Glacier, M**	**1.20**	**349**		**Pn**	**00 35 31.9**	**+1.7**
CHGN	**Chignik**	**1.27**	**19**		**Pn**	**00 35 31.9**	**+1.0**
CHGN				Sn	**Sn**	**00 35 47.6**	**+0.9**
BPBCA	**Veniaminof**	**1.54**	**14**		**Pn**	**00 35 36.2**	**+1.5**
DOL	**Dolgoi Island**	**1.57**	**273**		**Pn**	**00 35 36.0**	**+0.9**
PS4A	**Pavlof South-4**	**1.58**	**280**		**Pn**	**00 35 36.0**	**+0.8**
PS4A					**Sn**	**00 35 56.0**	**+1.6**
PN7A	**Pavlof North-7**	**1.67**	**282**		**

N15K	**Kwethluk River**	**5.10**	**355**			**Pn**	**00 36 25.3**	**+1.6**
N15K				IAML			00 37 57.3	
	comp=E,111nm,0.9s							
N15K				IAML			00 37 59.9	
	comp=N,84nm,0.8s							
O18K	**Koktuh Hills**	**5.21**	**22**			**Pn**	**00 36 27.2**	**+2.0**
N17K	**Nushagak Hills**	**5.53**	**10**			**Pn**	**00 36 31.1**	**+1.5**
M13K	**Dall Lake**	**5.78**	**339**			**Pn**	**00 36 34.4**	**+1.5**
N18K	**Kilae Creek**	**5.85**	**16**			**Pn**	**00 36 35.7**	**+1.8**
ILSW	**Iliamna Southw**	**5.86**	**31**			**Pn**	**00 36 36.0**	**+1.8**
M14K	**Bethel**	**5.86**	**346**			**Pn**	**00 36 34.7**	**+0.7**
M16K	**Timber Creek**	**5.93**	**1**			**Pn**	**00 36 36.9**	**+1.8**
CNPM	**China Poot**	**6.16**	**41**			**Pn**	**00 36 39.7**	**+1.5**
N19K	**Bonanza Creek**	**6.23**	**21**			**Pn**	**00 36 41.9**	**+2.6**
RED	**Redoubt Volcan**	**6.32**	**30**			**Pn**	**00 36 42.5**	**+2.1**
M17K	**Holitna River**	**6.38**	**7**			**Pn**	**00 36 42.8**	**+1.7**
BRLK	**Bradley Lake**	**6.45**	**40**			**Pn**	**00 36 43.7**	**+1.5**
M11K	**Mekoryuk**	**6.50**	**327**			**Pn**	**00 36 43.6**	**+0.8**
L14K	**Kuka Creek**	**6.53**	**345**			**Pn**	**00 36 43.9**	**+0.7**
SPIA	**Saint Paul Isl**	**6.55**	**293**	Pn		**Pn**	**00 36 44.0**	**+0.6**
L16K	**Owhat River**	**6.63**	**359**			**Pn**	**00 36 45.9**	**+1.4**
SPU	**Mount Spurr**	**7.15**	**29**			**Pn**	**00 36 54.0**	**+2.2**
SLKM	**Skilak Lake**	**7.21**	**38**			**Pn**	**00 36 55.3**	**+2.7**
SEW	**Seward**	**7.22**	**42**			**Pn**	**00 36 54.6**	**+1.9**
L18K	**Granite Mounta**	**7.25**	**9**			**Pn**	**00 36 54.4**	**+1.3**
K15K	**Wolf Creek Mou**	**7.32**	**351**			**Pn**	**00 36 55.6**	**+1.6**
K13K	**Kusilvak Mount**	**7.43**	**339**			**Pn**	**00 36 56.5**	**+1.0**
L19K	**White Mountain**	**7.44**	**16**			**Pn**	**00 36 57.5**	**+1.8**
STLK	**Strandline Lak**	**7.47**	**28**			**Pn**	**00 36 57.8**	**+1.6**
M20K	**Styx River**	**7.49**	**22**			**Pn**	**00 36 59.1**	**+2.7**
K17K	**Iditarod**	**7.64**	**3**			**Pn**	**00 36 59.9**	**+1.4**
RC01	**Rabbit Creek A**	**7.79**	**36**			**Pn**	**00 37 01.9**	**+1.4**
SKT	**Skwentna**	**7.95**	**27**			**Pn**	**00 37 04.2**	**+1.4**
PWL	**Port Wells**	**8.13**	**40**			**Pn**	**00 37 06.8**	**+1.6**
J16K	**Anvik River**	**8.24**	**355**			**Pn**	**00 37 07.8**	**+1.2**
J17K	**VABM Dome**	**8.32**	**0**			**Pn**	**00 37 08.4**	**+0.7**
HIN	**Hinchinbrook I**	**8.58**	**47**			**Pn**	**00 37 12.7**	**+1.4**
PPLA	**Purkeypile**	**8.59**	**22**			**Pn**	**00 37 14.2**	**+2.5**
K20K	**Telida**	**8.67**	**15**			**Pn**	**00 37 14.2**	**+1.6**
SML	**Sawmill**	**8.78**	**36**			**Pn**	**00 37 15.5**	**+1.4**
I17K	**Unalakleet**	**8.84**	**356**			**Pn**	**00 37 16.1**	**+1.2**
J19K	**Poorman**	**9.09**	**10**			**Pn**	**00 37 19.9**	**+1.6**
SCM	**Sheep Creek Mo**	**9.14**	**38**			**Pn**	**00 37 20.8**	**+1.7**
ATKA	**Atka Island**	**9.40**	**258**	Pn		**Pn**	**00 37 24.3**	**+1.7**
J20K	**Nowinta River**	**9.44**	**13**			**Pn**	**00 37 25.0**	**+1.9**
KLU	**Klutina**	**9.44**	**42**			**Pn**	**00 37 25.2**	**+2.1**
KTH	**Kantishna Hill**	**9.45**	**23**			**Pn**	**00 37 25.4**	**+2.2**
M24K	**Tolsona, Glenn**	**9.73**	**39**			**Pn**	**00 37 29.2**	**+2.1**
H17K	**Granite Mounta**	**9.87**	**358**			**Pn**	**00 37 30.3**	**+1.3**
H18K	**Honhosa River**	**10.09**	**2**			**Pn**	**00 37 33.3**	**+1.4**
GLB	**Gilahina Butte**	**10.25**	**46**			**Pn**	**00 37 36.2**	**+1.9**
VRDI	**Verde Repeater**	**10.29**	**47**			**Pn**	**00 37 36.5**	**+1.6**
G16K	**Koyuk River**	**10.44**	**353**			**Pn**	**00 37 38.4**	**+1.6**
GSTR	**Great Sitkin T**	**10.50**	**260**	Pn		**Pn**	**00 37 39.0**	**+1.4**
H19K	**Roundabout Mou**	**10.54**	**6**			**Pn**	**00 37 39.3**	**+1.2**
PAX	**Paxson**	**10.55**	**36**			**Pn**	**00 37 39.6**	**+1.3**
I21K	**Tanana**	**10.71**	**16**			**Pn**	**00 37 41.9**	**+1.5**
NEA2	**Nenana**	**10.76**	**24**			**Pn**	**00 37 41.3**	**+0.2**
MLY	**Manley**	**10.79**	**19**			**Pn**	**00 37 42.7**	**+1.1**
GRNC	**Granite Creek**	**10.81**	**52**			**Pn**	**00 37 43.4**	**+1.4**
G18K	**Tagagawik**	**10.83**	**1**			**Pn**	**00 37 43.5**	**+1.4**
ADK	**Adak**	**10.94**	**260**	P		**Pn**	**00 37 45.1**	**+1.5**
ADK	**Adak**	**10.94**	**260**	Pn		**Pn**	**00 37 44.0**	**+0.4**
M26K	**Nabesna, AK**	**11.10**	**42**			**Pn**	**00 37 46.2**	**+0.4**
G19K	**Purcell Mounta**	**11.12**	**4**			**Pn**	**00 37 47.1**	**+1.1**
HDA	**Harding Lake**	**11.15**	**28**			**Pn**	**00 37 45.8**	**-0.6**
KIWB	**Kanaga Island**	**11.21**	**261**	Pn		**Pn**	**00 37 47.9**	**+0.5**
IMAR	**Indian Mountai**	**11.22**	**11**			**Pn**	**00 37 48.9**	**+1.4**
RIDG	**Independent Ri**	**11.28**	**34**			**Pn**	**00 37 49.6**	**+1.3**
IL31		**11.45**	**27**			**Pn**	**00 37 50.4**	**-0.1**
ILAR	**Eielson Array**	**11.45**	**27**	Pn		**Pn**	**00 37 47.9**	**-2.7**
	comp=N,0.5nm,0.3s,baz=219,slow=14,SNR=23							
ILAR				Sn		Sn	00 39 48.7	-8.3
	comp=N,0.2nm,0.3s,baz=220,slow=23,SNR=6.1							
	comp=N,1.0nm,0.5s							
ILAR	**Eielson Array**	**11.45**	**27**			**Pn**	**00 37 49.5**	**-1.1**
H22K	**Ishtalina Cre**	**11.46**	**16**			**Pn**	**00 37 51.9**	**+1.1**
J25K	**Salcha River,**	**11.75**	**30**			**Pn**	**00 37 53.7**	**-1.0**
G21K	**Allakaket**	**11.77**	**11**			**Pn**	**00 37 55.8**	**+0.9**
F19K	**Shaleruckik Mo**	**11.79**	**3**			**Pn**	**00 37 56.9**	**+1.8**
L27K	**Beaver Creek,**	**11.91**	**41**			**Pn**	**00 37 57.3**	**+0.4**
BCAR	**Beaver Creek A**	**11.93**	**41**			**Pn**	**00 37 57.8**	**+0.6**
F20K	**Avaraart Lake**	**12.09**	**6**			**Pn**	**00 38 01.0**	**+1.7**
O29M	**Mount Kennedy**	**12.14**	**56**			**Pn**	**00 38 01.5**	**+1.3**
G24K	**Hadweenzic Riv**	**12.91**	**21**			**Pn**	**00 38 11.9**	**+1.4**
N30M	**Aishikik Lake**	**13.19**	**52**	Pn		**Pn**	**00 38 15.8**	**+1.4**
AMKA	**Amchitka**	**13.43**	**263**	Pn		**Pn**	**00 38 18.0**	**+0.4**
D19K	**Kuna River**	**13.45**	**2**			**Pn**	**00 38 21.1**	**+3.2**
F24K	**Squaw Lake**	**13.54**	**19**			**Pn**	**00 38 19.6**	**+0.4**
E21K	**Killik River**	**13.60**	**8**			**Pn**	**00 38 21.4**	**+1.5**
C18K	**Utukok River**	**13.62**	**357**			**Pn**	**00 38 21.2**	**+0.9**
D20K	**Etivluk River**	**13.71**	**4**			**Pn**	**00 38 22.3**	**+1.0**
S32K	**Killisnoo**	**13.82**	**70**	Pn		**Pn**	**00 38 23.0**	**+0.1**
E24K	**Your Creek**	**13.93**	**17**			**Pn**	**00 38 24.5**	**+0.1**
G26K	**Porcupine Rive**	**13.95**	**26**			**Pn**	**00 38 24.1**	**-0.6**
K29M	**Barlow Dome**	**13.97**	**43**			**Pn**	**00 38 25.5**	**+0.4**
I28M	**Miner Creek**	**14.00**	**35**			**Pn**	**00 38 25.8**	**+0.3**
H27K	**Steamboat Moun**	**14.03**	**30**			**Pn**	**00 38 25.8**	**0.0**
G27K	**Doyon Strip**	**14.41**	**29**			**Pn**	**00 38 30.5**	**-0.5**
D23K	**Nanushuk River**	**14.44**	**12**			**Pn**	**00 38 31.2**	**-0.1**
F26K	**Sheenjek River**	**14.46**	**23**	Pn		**Pn**	**00 38 31.6**	**-0.1**
J30M	**Hart River**	**14.79**	**41**			**Pn**	**00 38 37.8**	**+1.7**
H29M	**Whitestone**	**14.99**	**34**			**Pn**	**00 38 40.5**	**+1.8**
H29M				IAmb	IAmb	IAmb	00 38 57.2	
	comp=Z,8.4nm,0.7s							
I30M	**Mount Dempster**	**15.10**	**39**			**Pn**	**00 38 41.7**	**+1.4**
I30M				IAmb	IAmb	IAmb	00 38 57.7	
	comp=Z,15nm,0.8s							
C23K	**Itkillik River**	**15.27**	**11**			**Pn**	**00 38 43.6**	**+1.2**
C23K				IAmb	IAmb	IAmb	00 38 48.5	
	comp=Z,25nm,1.0s							
D25K	**Kavik River**	**15.40**	**17**			**Pn**	**00 38 45.8**	**+1.7**
E27K	**Coleen River**	**15.45**	**25**	Pn		**Pn**	**00 38 45.6**	**+0.8**
F28M	**Old Crow**	**15.47**	**28**			**Pn**	**00 38 44.8**	**-0.2**
G29M	**Pine Creek**	**15.53**	**32**			**Pn**	**00 38 46.7**	**+0.8**
G29M				IAmb	IAmb	IAmb	00 38 53.7	
	comp=Z,6.9nm,0.5s							
EPYK	**Eagle Plains**	**15.61**	**35**			**Pn**	**00 38 48.4**	**+1.4**
G30M	**tAoh Zraii Nji**	**16.13**	**33**			**Pn**	**00 38 53.9**	**+0.3**
G30M				IAmb	IAmb	IAmb	00 38 59.7	
	comp=Z,15nm,0.5s							
MMPY	**Sheldon Lake,**	**16.15**	**51**			**Pn**	**00 38 54.7**	**+0.9**
E29M	**Blow River**	**16.55**	**28**			**Pn**	**00 38 59.0**	**+0.2**
F30M	**Barrier River**	**16.65**	**32**			**Pn**	**00 39 01.2**	**+1.1**
G31M	**Satah River**	**16.73**	**35**			**Pn**	**00 39 02.0**	**+1.0**
G31M				IAmb	IAmb	IAmb	00 39 17.3	
	comp=Z,12nm,0.9s							
INK	**Inuvik**	**17.75**	**32**	P		**P**	**00 39 15.3**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=232,slow=12,SNR=20							
	comp=Z,3.5nm,0.3s							
INK	**Inuvik**	**17.75**	**32**			**Pn**	**00 39 13.6**	**-0.1**
C36M	**Paulatuk**	**21.25**	**34**	P		**P**	**00 39 52.1**	**-0.2**
C36M				IAmb	IAmb	IAmb	00 39 59.9	
	comp=Z,37nm,1.4s							
YKA	**Yellowknife Ar**	**23.79**	**54**	P		**P**	**00 40 20.1**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=277,slow=9.5,SNR=6.6							
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**23.79**	**54**	P		**P**	**00 40 18.5**	**-0.3**
PETK	**Petropavlovsk-**	**25.09**	**283**	P		**P**	**00 40 28.4**	**-2.4**
	comp=Z,4.5nm,0.6s,baz=67,slow=13,SNR=6.4							
	comp=Z,4.5nm,0.6s							
PETK	**Petropavlovsk-**	**25.09**	**283**	P		**P**	**00 40 29.9**	**-0.9**
YBH	**Yreka Blue Hor**	**27.28**	**104**	LR		LR	00 49 26.7	
	comp=Z,83nm,21.7s,baz=274,slow=32							
NVAR	**Mina Array Bea**	**32.00**	**104**	P		**P**	**00 41 31.5**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=343,slow=9.1,SNR=2.9							
	comp=Z,0.3nm,0.3s							
TIXI	**Tiksi**	**33.64**	**327**	LR		LR	00 56 35.3	
	comp=Z,52nm,18.5s,baz=149,slow=38							
PDAR	**Pinedale Array**	**34.10**	**90**	P		**P**	**00 41 49.8**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=312,slow=8.7,SNR=1.4							
	comp=Z,0.1nm,0.3s							
FRB	**Frobisher Bay**	**43.08**	**41**	LR		LR	01 01 38.2	
	comp=Z,56nm,21.8s,baz=329,slow=37							
H11N2	**WAKE ISLAND Hy**	**43.65**	**230**	T		T	01 29 25.4	
	baz=28,slow=76,SNR=13							
H11N3	**WAKE ISLAND Hy**	**43.65**	**230**	T		T	01 29 14.9	
	baz=28,slow=76,SNR=11							
H11N1	**WAKE ISLAND Hy**	**43.66**	**230**	T		T	01 29 33.5	
	baz=28,slow=76,SNR=9.5							
H11S1	**WAKE ISLAND Hy**	**44.81**	**229**	T		T	01 30 55.7	
	baz=28,slow=76,SNR=4.6							
H11S2	**WAKE ISLAND Hy**	**44.83**	**229**	T		T	01 30 56.8	
	baz=28,slow=76,SNR=5.1							
H11S3	**WAKE ISLAND Hy**	**44.83**	**229**	T		T	01 30 52.5	
	baz=28,slow=76,SNR=0.5							
NRIK	**Noril'sk**	**46.81**	**333**	P		**P**	**00 43 34.6**	**-0.8**
	comp=Z,3.8nm,0.5s,baz=45,slow=10.0,SNR=4.8							
	comp=Z,3.8nm,0.5s							
NRIK	**Noril'sk**	**46.81**	**333**	P		**P**	**00 43 34.6**	**-0.8**
NRIK				IAmb		IAmb	00 43 36.4	
	comp=Z,3.9nm,0.6s							
TXAR	**Lajitas Array**	**46.90**	**100**	P		**P**	**00 43 36.2**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=316,slow=7.3,SNR=1.5							
JGF	**Kuroka**	**46.90**	**273**	P		**P**	**00 43 36.3**	**-0.3**
JGF				IAmb		IAmb	00 43 36.5	
	comp=Z,10nm,1.4s							
KSRS	**Korea Array**	**50.97**	**282**	P		**P**	**00 44 04.7**	**-3.0**
	comp=Z,1.5nm,0.7s,baz=53,slow=7.3,SNR=4.9							
	comp=Z,1.5nm,0.7s							
SCO	**Scoresbysund**	**51.01**	**17**	P		**P**	**00 44 08.4**	**+0.8**
SCO				IAmb		IAmb	00 44 09.0	
	comp=Z,2.9nm,1.1s							
SONM	**Songino Array**	**54.93**	**305**	P		**P**	**00 44 34.6**	**-2.3**
	comp=Z,1.2nm,0.5s,baz=71,slow=5.7,SNR=3.7							
	comp=Z,1.2nm,0.5s							
ARCES	**ARCESS Array B**	**55.62**	**358**	P		**P**	**00 44 40.1**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=7.7,slow=6.0,SNR=4.4							
ARCES				LR		LR	01 12 17.9	
	comp=Z,19nm,18.1s,baz=62,slow=40							
	comp=Z,0.7nm,0.5s							
ARCES	**ARCESS Array B**	**55.62**	**358**	P		**P**	**00 44 40.8**	**-0.6**
ZALV	**Zalesovo Beam**	**59.27**	**322**	P		**P**	**00 45 06.2**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=46,slow=6.6,SNR=7.3							
ZALV				LR		LR	01 10 48.3	
	comp=Z,42nm,19.8s,baz=72,slow=36							
	comp=Z,1.2nm,0.7s							
FINES	**FINESS Array B**	**63.72**	**357**	P		**P**	**00 45 36.7**	**-0.5**
	comp=Z,5.6nm,1.1s,baz=1.2,slow=6.9,SNR=9.8							
	comp=Z,5.6nm,1.1s							
FINES	**FINESS Array B**	**63.72**	**357**	P		**P**	**00 45 36.9**	**-0.3**
NOA	**NORSAR Array B**	**63.95**	**5**	P		**P**	**00 45 38.2**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=355,slow=9.3,SNR=2.5							
	comp=Z,0.5nm,0.6s							
KURK	**Kurchatov**	**64.10**	**323**	P		**P**	**00 45 39.2**	**-0.6**
KURK				IAmb		IAmb	00 45 41.1	
	comp=Z,2.0nm,0.9s							
KURBB	**Kurchatov Arra**	**64.20**	**323**	P		**P**	**00 45 39.6**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=29,slow=5.7,SNR=8.0							
	comp=Z,1.4nm,0.9s							
BVAR	**Borovoye Array**	**64.73**	**329**	P		**P**	**00 45 42.3**	**-1.6**
	comp=Z,2.7nm,0.6s,baz=28,slow=6.5,SNR=9.8							
	comp=Z,2.7nm,0.6s							
ARTI	**Arti**	**64.74**	**338**	P		**P**	**00 45 43.4**	**-0.6**
HFS	**Hagfors**	**64.97**	**4**	P		**P**	**00 45 45.0**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=5.7,slow=5.8,SNR=10							
	comp=Z,1.9nm,0.5s							
MKAR	**Makanchi Array**	**66.06**	**319**	P		**P**	**00 45 51.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=44,slow=5.2,SNR=9.2							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**66.06**	**319**	P		**P**	**00 45 52.0**	**-0.7**
EKA	**Eskdalemuir Ar**	**68.18**	**15**	P		**P**	**00 46 06.3**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=347,slow=5.9,SNR=12							
	comp=Z,1.4nm,0.5s							
AB31	**Akbulak array**	**70.97**	**334**	P		**P**	**00 46 23.5**	**+0.2**
AB31				IAmb		IAmb	00 46 24.2	
	comp=Z,3.7nm,0.7s							
ABKAR	**Akbulak array**	**70.97**	**334**	P		**P**	**00 46 23.4**	**+0.1**
RNPP1	**Kostyukhnivka**	**73.83**	**357**	P		**P**	**00 46 40.1**	**-0.2**
AK21	**Malin Array Si**	**74.27**	**355**	P		**P**	**00 46 42.3**	**-0.5**
AK21				pP		**pP**	**00 46 54.6**	**+1.0**
AK22	**Malin Array Si**	**74.28**	**355**	P		**P**	**00 46 42.3**	**-0.6**
AK22				pP		**pP**	**00 46 54.6**	**+0.9**
AK20	**Malin Array Si**	**74.30**	**355**	P		**P**	**00 46 42.4**	**-0.6**
AK03	**Malin Array Si**	**74.31**	**354**	P		**P**	**00 46 42.8**	**-0.2**
AK04	**Malin Array Si**	**74.31**	**355**	P		**P**	**00 46 42.7**	**-0.4**
AK18	**Malin Array Si**	**74.32**	**355**	P		**P**	**00 46 42.5**	**-0.6**
AKASG	**Malin Array Be**	**74.33**	**354**	P		**P**	**00 46 42.7**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=9.7,slow=5.8,SNR=13							
	comp=Z,1.2nm,0.3s							
AKBB	**Malin Array Si**	**74.33**	**354**	P		**P**	**00 46 42.9**	**-0.3**
AKBB				IAmb		IAmb	00 47 00.1	
	comp=Z,3.9nm,0.7s							
KIEV	**Kiev**	**74.34**	**354**	P		**P**	**00 46 42.4**	**-0.8**
	comp=Z,22nm,0.7s							
AK01	**Malin Array Si**	**74.34**	**354**	P		**P**	**00 46 42.9**	**-0.3**
AK11	**Malin Array Si**	**74.36**	**355**	P		**P**	**00 46 42.8**	**-0.5**
AK17	**Malin Array Si**	**74.36**	**355**	P		**P**	**00 46 43.1**	**-0.2**
LUBAR	**Lubar, Ukraine**	**75.18**	**355**	P		**P**	**00 46 47.5**	**-0.6**
KWP	**Kalwaria Pacla**	**75.62**	**359**	P		**P**	**00 46 51.3**	**+0.6**
	comp=Z,7.2nm,1.1s							
KHC	**Kasperske Hory**	**75.95**	**5**	P		**P**	**00 46 53.1**	**+0.5**
	comp=Z,2.6nm,1.1s							
GERES	**GERESS Array B**	**76.25**	**5**	P		**P**	**00 46 54.7**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=354,slow=6.1,SNR=8.5							
	comp=Z,0.5nm,0.6s							
GERES	**GERESS Array B**	**76.25**	**5**	P		**P**	**00 46 54.9**	**+0.6**
KMPD	**K-Podol'skiy**	**76.59**	**356**	P		**P**	**00 46 56.5**	**+0.3**
KMPD				pP		**PcP**	**00 47 08.6**	**+1.0**
SORM	**Soroca**	**76.94**	**355**	P		**P**	**00 46 57.8**	**-0.3**
	comp=Z,286nmcomp=Z,3.9nm,0.6s							
CONA	**Conrad Observa**	**77.25**	**3**	*i* P		**P**	**00 47 00.5**	**+0.5**
	comp=Z,2.5nm,1.1s							
RETA	**Reutte**	**77.42**	**7**	*e*P		**P**	**00 47 02.5**	**+1.5**
	comp=Z,1.0nm,0.9s							
BUR08	**Bucovina Ar. S**	**77.56**	**357**	P		**P**	**00 47 01.8**	**0.0**
BUR08				IAmb		IAmb	00 47 02.8	
	comp=Z,2.4nm,1.0s							
BURAR	**Bucovina Array**	**77.58**	**357**	P		**P**	**00 47 01.9**	**-0.1**
BURAR				IAmb		IAmb	00 47 04.1	
	comp=Z,1.8nm,1.1s							
MOTA	**Moosalm**	**77.59**	**7**	*e*P		**P**	**00 47 02.8**	**+0.7**
	comp=Z,2.1nm,0.9s							
LESA	**Schwarzleotal**	**77.61**	**6**	*e*P		**P**	**00 47 02.4**	**+0.4**
	comp=Z,2.1nm,0.7s							
WTTA	**Wattenberg**	**77.70**	**6**	*i* P		**P**	**00 47 03.6**	**+0.9**
	comp=Z,2.7nm,0.5s							
SQTA	**Sankt Quirin**	**77.72**	**7**	*e*P		**P**	**00 47 04.2**	**+1.5**
	comp=Z,2.9nm,0.8s							
FETA	**Feichten**	**77.89**	**7**	*i* P		**P**	**00 47 02.7**	**-1.0**
	comp=Z,2.5nm,1.1s							
KBA	**Koelnbreinsper**	**77.99**	**5**	*e*P		**P**	**00 47 06.0**	**+1.7**
	comp=Z,1.9nm,0.5s							
SOKA	**Soboth**	**78.47**	**4**	*i* P		**P**	**00 47 08.1**	**+1.3**
	comp=Z,1.6nm,0.6s							
OBKA	**Obir**	**78.62**	**4**	*i* P		**P**	**00 47 08.8**	**+1.2**
	comp=Z,4.4nm,0.5s							
KBZ	**Khabaz**	**79.77**	**344**	P		**P**	**00 47 14.7**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=14,slow=8.3,SNR=5.4							
KBZ				LR		LR	01 26 36.9	
	comp=Z,32nm,18.2s,baz=120,slow=39							
	comp=Z,2.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**81.67**	**290**	P		**P**	**00 47 23.6**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=34,slow=5.2,SNR=12							
	comp=Z,1.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**81.67**	**290**	P		**P**	**00 47 24.5**	**+0.1**
GNI	**Garni**	**82.94**	**342**	LR		LR	01 29 36.0	
	comp=Z,20nm,19.3s,baz=132,slow=39							
ESDC	**Sonseca Array**	**83.23**	**19**	P		**P**	**00 47 33.6**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=337,slow=4.3,SNR=9.9							
	comp=Z,1.1nm,0.7s							
ESDC	**Sonseca Array**	**83.23**	**19**	P		**P**	**00 47 33.4**	**+1.1**
RDO	**Rodhopi**	**84.03**	**356**	P		**P**	**00 47 36.7**	**+0.3**
VSL	**Villasalto**	**85.25**	**9**	P		**P**	**00 47 42.9**	**+0.3**
BNN	**Bunyan**	**85.53**	**348**	P		**P**	**00 47 44.7**	**+0.5**
H03N2	**Juan Fernandez**	**111.54**	**118**	T		T	02 54 48.0	
	baz=319							
H03N1	**Juan Fernandez**	**111.55**	**118**	T		T	02 54 45.0	
	baz=319							
H03N3	**Juan Fernandez**	**111.56**	**118**	T		T	02 54 45.6	
	baz=319							
QSPA	**South Pole Qui**	**144.88**	**180**	PKP		**PKPab**	**00 54 40.2**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=88,slow=3.7,SNR=3.1							
QSPA	**South Pole Qui**	**144.88**	**180**			PKPbc	00 54 41.7	+0.9
GRTLG	**Ghanzi**	**146.30**	**359**	PKPdf		**PKPdf**	**00 54 45.6**	**+0.2**
KOOLE	**Kule**	**147.93**	**1**	PKPbc		**PKPbc**	**00 54 51.7**	**+0.5**
LBTB	**Lobatse**	**149.74**	**351**	PKPbc		**PKPbc**	**00 54 56.1**	**+0.4**
BOSA	**Boshof**	**153.34**	**351**	PKPbc		**PKPbc**	**00 55 03.8**	**-0.2**
	comp=Z,3.9nm,1.1s,baz=0.0,slow=1.0,SNR=2.8							

KRSC 23 00:46:43.1±1.7, 49°33N×156°55E, h65$^{km}_{\pm 29}$, MI3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.38**	**348**	*e*S	Sn	00 47 25.0	+1.3
PAU	**Pauzhetka**	**2.15**	**4**	*e*P	Pn	00 47 19.0	+2.4
PAU				*e*S	Sn	00 47 44.7	+2.5
KDTR	**Khodutka, Kamc**	**2.67**	**21**	*e*P	Pn	00 47 26.7	+3.1
KDTR				*e*S	Sn	00 47 58.2	+3.4
ASAK	**Asacha**	**3.17**	**15**	*e*P	Pn	00 47 34.1	+3.4
MTVR	**Mutnovka**	**3.32**	**18**	*e*P	Pn	00 47 36.3	+3.5
MTVR				*e*S	Sn	00 48 14.5	+3.4
RUS	**Russkaya**	**3.34**	**21**	*e*P	Pn	00 47 35.5	+2.6
RUS				*e*S	Sn	00 48 13.5	+2.2
GRL	**Gorelyy**	**3.37**	**16**	*e*P	Pn	00 47 37.2	+3.8
GRL				*e*S	Sn	00 48 16.7	+4.6
APC	**Apacha**	**3.62**	**6**	*e*P	Pn	00 47 39.4	+2.8
KOK	**Koryaka**	**4.18**	**17**	*e*P	Pn	00 47 48.2	+3.9
SDLR	**Sedlovina**	**4.21**	**19**	*e*P	Pn	00 47 47.8	+2.9
KRX	**Arik**	**4.24**	**17**	*e*P	Pn	00 47 48.9	+3.6
SPN	**Mys Shipunski**	**4.36**	**29**	*e*P	Pn	00 47 51.1	+4.3
SPN				*e*S	Sn	00 48 39.3	+3.1
GNL	**Ganaly**	**4.46**	**11**	*e*P	Pn	00 47 50.7	+2.5
MKZ	**Mys Kozlova**	**6.13**	**29**	*e*P	Pn	00 48 13.0	+2.0

*IDC **23** 00:47:42.0±0.5, 30.°34N×94.°80E, h0^{km}, mb4.3/27, mbtmp4.3/31, ML4.3/4, MS3.2/2, Error ellipse: s-maj=15.8km s-min=9.3km az=46.0*
*MOS **23** 00:47:42.7±1.1, 30.°31N×94.°81E, h16^{km}, mb4.9/62, Error ellipse: s-maj=6.8km s-min=3.1km az=124.9*
*BJI **23** 00:47:43.0, 30.°34N×94.°86E, h5^{km}, mB4.4/9, mb4.4/34, ML4.0/11, Ms4.0/34, Ms7 3.9/35*
*NEIC **23** 00:47:43.9±1.2, 30.°38N±0.°07×94.°72E±0.°07, h10$^{km}_{\pm 1}$, mb4.9/107, Error ellipse: s-maj=11.6km s-min=10.8km az=194.0*
*GFZ **23** 00:47:45.6±0.3, 30.°0N±3.°×9.°5E±.°, h10^{km}, M4.5/27, mb4.7/27*
*NDI **23** 00:47:48.9±

GUNA IAmb IAmb 00 51 34.7
comp=Z,17nm,1.1s
WUS Wushi 16.61 315 Pn 00 51 36.3 -0.3
WHN Wuhan 16.89 84 P Pn **00 51 38.9 -1.2**
WHN sP P **00 51 43.9 +1.7**
WHN L L
comp=Z,1μm,11.1s
BHPL Bhopal 17.01 250 *e*P P **00 51 43.3 -0.3**
BHPL IAmb IAmb 00 51 46.6
comp=Z,99nm,1.6s
HHC Hu-ho-hao-te 17.19 48 *e*P Pn **00 51 44.3 +0.3**
HHC pP P 00 51 47.1 +1.5
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,52nm,3.8s
HHC L L
comp=Z,220nm,7.7s
HHC L L
comp=Z,110nm,8.3s
HHC L L
comp=Z,220nm,8.9s
SHLS Shalkode 17.69 321 *e*P Pn **00 51 48.2 -1.9**
SHLS Shalkode 17.69 321 *e*P Pn **00 51 48.2 -1.9**
QIZ Qiongzhong 17.71 126 P Pn **00 51 48.5 -2.0**
QIZ S Sn **00 55 05.3 -2.6**
QIZ L L
comp=Z,220nm,10.1s
QIZ L L
comp=Z,260nm,11.3s
QIZ L L
comp=Z,220nm,10.2s
TARG Taragay, Kyrgy 17.78 314 P Pn **00 51 51.5 -0.1**
TARG pmax pmax
comp=Z,31nm,1.1s
TARG Taragay, Kyrgy 17.78 314 Pn 00 51 51.5 -0.1
TARG Taragay, Kyrgy 17.78 314 P P **00 51 56.3 +3.9**
PDGK Podgornoye 17.79 321 P Pn **00 51 49.1 -2.3**
PDGK Podgornoye 17.79 321 Pn 00 51 49.1 -2.3
PRZ Przheval'sk 17.86 317 P Pn **00 51 50.6 -1.8**
PRZ pmax pmax
comp=Z,171nm,1.4s
PRZ Przheval'sk 17.86 317 Pn 00 51 50.6 -1.8
PRZ IAmb IAmb 00 52 00.8
comp=Z,171nm,1.4s
PRZ Przheval'sk 17.86 317 P Pn **00 51 52.1 -0.3**
UZB Uzunbulak 17.92 320 *e*P P **00 51 54.0 +0.3**
UZB Uzunbulak 17.92 320 *e*P P **00 51 54.0 +0.3**
HNS HongShan 17.98 62 ⇑P P **00 51 59.5 +5.4**
HNS pmax pmax
comp=Z,9.0nm,0.8s
HNS L L
comp=Z,270nm,10.4s
HNS L L
comp=Z,280nm,12.5s
KSH2 Kashi 18.04 304 P P **00 51 56.4 +1.4**
KSH2 pmax pmax
comp=Z,17nm,1.4s
AJM Ajmer 18.14 263 *e*P P **00 51 58.1 +2.0**
AJM IAmb IAmb 00 52 03.2
comp=Z,18nm,1.1s
SATY Saty 18.21 319 *e*P P **00 51 57.7 +0.8**
SATY *e*S S **00 55 21.7 -3.7**
SATY Saty 18.21 319 *e*P P **00 51 57.8 +0.8**
SATY *e*S S **00 55 21.7 -3.7**
KPKS Kokpek 18.32 320 *e*P P **00 51 58.7 +0.8**
KPKS Kokpek 18.32 320 *e*P P **00 51 58.8 +0.8**
KDJ Kajisay 18.39 315 P P **00 51 58.9 0.0**
KDJ pmax pmax
comp=Z,37nm,1.0s
KDJ Kajisay 18.39 315 P 00 51 58.9 0.0
KDJ Kajisay 18.39 315 P P **00 52 03.5 +4.6**
NIL Nilore 18.54 286 P P **00 51 57.5 -3.0**
NIL pmax pmax
comp=Z,66nm,1.0s
NIL Nilore 18.54 286 P 00 51 57.5 -3.0
NIL IAmb IAmb 00 52 05.8
comp=Z,66nm,0.9s
NIL Nilore 18.54 286 P P **00 51 59.7 -0.7**
AKL Akola 18.66 243 *e*P Pn **00 52 06.4 +4.3**
AKL IAmb IAmb 00 52 08.1
comp=Z,13nm,1.1s
ZSN Zaisan 18.72 339 *e*P Pn **00 52 03.1 +0.5**
ZSN *e*S S **00 55 33.2 -2.1**
ZSN Zaisan 18.72 339 *e*P Pn **00 52 03.2 +0.5**
ZSN *e*S S **00 55 33.2 -2.1**
TNSS Tian-Shan 19.05 317 *e*P Pn **00 52 07.1 0.0**
TNSS Tian-Shan 19.05 317 *e*P Pn **00 52 07.2 0.0**
MDOK Medeo 19.07 317 *e*P Pn **00 52 07.5 +0.5**
MDOK *e*S S **00 55 42.0 -0.7**
MDOK Medeo 19.07 317 *e*P Pn **00 52 07.5 +0.5**
MDOK *e*S S **00 55 42.0 -0.7**
MK31 Makanchi Array 19.07 333*d* *i*P Pn **00 52 06.6 -0.3**
MK31 pmax pmax
comp=Z,12nm,1.1s
MKAR Makanchi Array 19.07 333 P P **00 52 05.8 -0.3**
comp=Z,0.4nm,0.3s,baz=139,slow=13,SNR=18
MKAR S Sn **00 55 39.0 -1.4**
comp=Z,0.3nm,0.7s,baz=123,slow=28,SNR=1.4
MKAR PcP PcP **00 56 30.7 +0.1**
comp=Z,0.9nm,0.9s,baz=212,slow=1.8,SNR=2.2
comp=Z,4.3nm,0.8s
MKAR Makanchi Array 19.07 333 *i*P P **00 52 06.0 -0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 19.07 333 P 00 52 04.5 -1.6
AAA Alma-Ata 19.17 317 *e*P Pn **00 52 08.5 +0.3**
AAA Alma-Ata 19.17 317 *e*P Pn **00 52 08.6 +0.3**
MAKZ Makanchi 19.20 332 P P **00 52 06.3 -1.3**
MAKZ pmax pmax
comp=Z,32nm,1.3s
MAKZ Makanchi 19.20 332 P 00 52 06.2 -1.3
MAKZ Makanchi 19.20 332 P Pn **00 52 08.7 +0.2**
BOOM Boomskoye usch 19.36 314 P P **00 52 09.6 +0.1**
BOOM pmax pmax
comp=Z,43nm,1.2s
BOOM Boomskoye usch 19.36 314 P P **00 52 09.6 +0.1**
BOOM Boomskoye usch 19.36 314 P Pn **00 52 13.0 +2.4**
TDK Taldyqorghan 19.49 323 *e*P Pn **00 52 11.6 -0.3**
TDK Taldyqorghan 19.49 323 *e*P Pn **00 52 11.7 -0.3**
HYB Hyderabad 19.60 233 *e*P Pn **00 52 13.1 -0.3**
HYB *e*S Sn **00 56 03.0 +9.4**
SONM Songino Array 19.62 24 P P **00 52 12.8 +0.5**
comp=Z,0.6nm,0.3s,baz=211,slow=13,SNR=27
SONM LR LR 01 00 55.3
comp=Z,87nm,19.8s,baz=301,slow=40
comp=Z,12nm,1.1s
SONM Songino Array 19.62 24 *e*P P **00 52 11.4 -0.9**
SONM Songino Array 19.62 24 P P **00 52 11.4 -0.9**
TKM2 Tokmak 2 19.80 315 P Pn **00 52 17.7 +1.8**
SNR=8.6
ULN Ulaanbaatar 19.89 25*d* *i*P P **00 52 15.9 +0.7**
ULN pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 19.89 25 P P **00 52 14.0 -1.2**
ULN Ulaanbaatar 19.89 25 P P **00 52 15.7 +0.5**
comp=Z,47nm,1.1s
ULN Ulaanbaatar 19.89 25 P P **00 52 16.0 +0.8**
KUU Kurty 19.91 318 *e*P Pn **00 52 16.7 -0.3**
KUU Kurty 19.91 318 *e*P Pn **00 52 16.8 -0.3**
BJI2 Beijing 19.94 55 P P **00 52 16.4 +0.7**
BJI2 pmax pmax
comp=Z,6.0nm,1.5s
BJI2 pmax pmax
comp=Z,62nm,3.5s
BJI2 L L
comp=Z,220nm,6.9s
BJI2 L L
comp=Z,200nm,8.2s
BJI2 L L
comp=Z,270nm,8.3s
KBK Karagaybulak 20.07 313 P Pn 00 52 21.3 +2.3
SNR=5.6
DGZ Jazzator, Alta 20.12 346 *e*P Pn 00 52 18.4 -1.1
DGZ *i* *PP pP 00 52 22.2 +0.7
DGZ pmax pmax
comp=Z,41nm,1.4s
AAK Ala-Archa 20.34 313 P P **00 52 19.9 -0.4**
comp=Z,2.6nm,0.3s,baz=131,slow=12,SNR=42
AAK S Sn 00 56 13.1 +1.6
comp=Z,1.5nm,0.4s,baz=187,slow=16,SNR=1.4
comp=Z,2.6nm,0.3s
AAK Ala-Archa 20.34 313 P Pn 00 52 22.9 +0.6
SNR=34

AAK Ala-Archa 20.34 313*c* *i*P Pn 00 52 23.1 +0.8
AAK pmax pmax
comp=Z,120nm,1.4s
AAK Ala-Archa 20.34 313 P 00 52 20.2 -0.1
AAK IAmb IAmb 00 52 27.2
comp=Z,134nm,1.4s
AAK Ala-Archa 20.34 313 P Pn 00 52 23.3 +1.0
CHMS Chumysh 20.37 314 P Pn 00 52 23.7 +1.3
SNR=5.9
OHH Osh 20.55 306 P Pn 00 52 23.6 -1.0
OHH Osh 20.55 306 P Pn 00 52 23.6 -1.0
USP Ospenovka 20.67 314 P Pn 00 52 26.1 +0.2
SNR=24
NJ2 Nanjing 20.67 79 *e*P P **00 52 23.4 -0.2**
NJ2 pmax pmax
comp=Z,22nm,0.6s
SGDS Sogindy 20.69 315 *e*P Pn 00 52 24.8 -1.4
ARSB Arslanbob 20.73 308 P P **00 52 23.6 -0.8**
ARSB pmax pmax
comp=Z,69nm,1.3s
ARSB Arslanbob 20.73 308 P P **00 52 23.6 -0.8**
ARSB IAmb IAmb 00 52 29.1
comp=Z,69nm,1.3s
EKS2 Erkin-Say 20.82 312 P Pn 00 52 27.8 +0.1
SNR=15
DRK Karamyk 20.88 302 P P **00 52 26.4 +0.2**
DRK pmax pmax
comp=Z,92nm,1.3s
DRK Karamyk 20.88 302 P P **00 52 26.4 +0.2**
DRK IAmb IAmb 00 52 30.8
comp=Z,92nm,1.3s
ZAK Zakamensk 21.02 15 *e*P P **00 52 27.8 +0.4**
ZAK pmax pmax
comp=Z,34nm,1.6s
XLT XiLinHaoTe 21.64 45 *e*P P **00 52 34.6 +0.4**
XLT pP pP 00 52 39.5 +1.4
XLT sP sP 00 52 42.8 +2.9
XLT pmax pmax
comp=Z,14nm,1.2s
XLT L L
comp=Z,180nm,9.1s
XLT L L
comp=Z,140nm,10.5s
BTK Batken 21.79 303 P P **00 52 36.3 +0.6**
BTK pmax pmax
comp=Z,124nm,1.4s
BTK Batken 21.79 303 P P **00 52 36.3 +0.6**
MOY Mondy 21.80 10 *e*P P **00 52 37.5 +1.7**
MOY pmax pmax
comp=Z,48nm,1.7s
BTLS Baital 21.92 318 *e*P P **00 52 38.0 +1.0**
BTLS Baital 21.92 318 *e*P P **00 52 38.1 +1.0**
TRKS Terek-Say 22.08 307 P P **00 52 40.2 +1.2**
KBL Kabul 22.09 288 P P **00 52 38.6 -0.6**
KBL pmax pmax
comp=Z,113nm,1.1s
KBL Kabul 22.09 288 P 00 52 38.6 -0.6
KBL Kabul 22.09 288 P P **00 52 40.7 +1.5**
TLY Talaya 22.32 15*c* *i*P P **00 52 42.0 +0.8**
TLY pmax pmax
comp=Z,10.0nm,1.3s
TLY Talaya 22.32 15 P P **00 52 40.9 -0.3**
TLY Talaya 22.32 15 P P **00 52 45.8 +4.5**
DZA Taraz 22.52 310 *e*P P **00 52 44.9 +1.4**
DZA pmax pmax
comp=Z,22nm,1.2s
DZA Taraz 22.52 310 *e*P P **00 52 44.9 +1.4**
comp=Z,22nm,1.2s
IRK Irkutsk 22.98 15 *e*P P **00 52 48.9 +0.7**
IRK pmax pmax
comp=Z,60nm,1.5s
IUG Iuzhnay 23.08 307 *e*P P **00 52 50.6 +1.1**
IUG pmax pmax
comp=Z,27nm,1.3s
IUG Iuzhnay 23.08 307 *e*P P **00 52 50.7 +1.1**
comp=Z,27nm,1.3s
KK31 Karatay Array 23.15 310 P P **00 52 49.1 -1.0**
KK31 pmax pmax
comp=Z,43nm,1.4s
KK31 Karatay Array 23.15 310 P P **00 52 49.1 -1.0**
KK31 IAmb IAmb 00 52 54.8
comp=Z,43nm,1.4s
KKAR Karatay Array 23.15 310 P P **00 52 48.9 -1.2**
KKAR Karatay Array 23.15 310 P P **00 52 48.9 -1.2**
CHM Chimkent 23.44 308 *e*P P **00 52 54.5 +1.5**
CHM pmax pmax
comp=Z,20nm,1.2s
CHM Chimkent 23.44 308 *e*P P **00 52 54.6 +1.5**
comp=Z,20nm,1.2s
BRLS Borolday 23.57 309 *e*P P **00 52 55.7 +1.4**
BRLS Borolday 23.57 309 *e*P P **00 52 55.7 +1.4**
KURBB Kurchatov Arra 23.63 334 P P **00 52 54.7 -0.1**
comp=Z,14nm,1.0s,baz=145,slow=10,SNR=50
KURBB PcP PcP **00 56 38.8 -0.5**
comp=Z,1.3nm,1.0s,baz=150,slow=1.8,SNR=5.2
KURBB S S **00 57 15.2 +6.0**
comp=Z,0.2nm,0.9s,baz=149,slow=18,SNR=4.0
comp=Z,14nm,1.0s
KURK Kurchatov 23.67 334*c* *i*P P **00 52 55.2 0.0**
KURK pmax pmax
comp=Z,41nm,1.3s
KURK Kurchatov 23.67 334 P P 00 52 54.4 -0.8
KURK Kurchatov 23.67 334 P P **00 52 55.4 +0.3**
ZAA0 Zalesovo Array 24.67 346 P P **00 53 03.4 -1.1**
ZAA0 IAmb IAmb 00 53 07.2
comp=Z,39nm,1.4s
ZALV Zalesovo Beam 24.67 346 P P **00 53 04.6 +0.1**
comp=Z,4.3nm,0.6s,baz=160,slow=9.0,SNR=25
ZALV PcP PcP **00 56 41.4 -0.1**
comp=Z,0.4nm,0.6s,baz=159,slow=4.3,SNR=1.4
ZALV S S **00 57 30.1 +4.2**
comp=Z,0.2nm,0.2s,baz=146,slow=14,SNR=1.4
comp=Z,4.3nm,0.6s
ZALV Zalesovo Beam 24.67 346 *i*P P **00 53 04.9 +0.5**
ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZALV Zalesovo Beam 24.67 346 P P **00 53 03.4 -1.1**
SNY Shenyang 25.83 56 ⇑P P **00 53 15.8 +0.7**
SNY pmax pmax
comp=Z,9.0nm,1.6s
HIA Hailar 26.73 38 P P **00 53 22.5 -0.7**
HIA pmax pmax
comp=Z,66nm,2.0s
HIA Hailar 26.73 38 P P **00 53 22.5 -0.7**
HIA IAmb IAmb 00 53 28.3
comp=Z,66nm,2.0s
HILR Hailar Array B 26.91 37 P P **00 53 24.2 -0.6**
comp=Z,0.7nm,0.3s,baz=224,slow=12,SNR=5.3
comp=Z,0.7nm,0.3s
HRA Herat 27.70 287 P P **00 53 30.8 -1.5**
CN2 Changchun 27.75 53 P P **00 53 32.8 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KSRS Korea Array 28.32 67 P P **00 53 36.6 -0.9**
comp=Z,0.5nm,0.3s,baz=245,slow=11,SNR=2.1
KSRS LR LR 01 05 13.0
comp=Z,38nm,20.0s,baz=190,slow=37
comp=Z,0.5nm,0.3s
BVAR Borovoye Array 28.81 329 P P **00 53 40.0 -1.8**
comp=Z,3.7nm,0.8s,baz=131,slow=7.4,SNR=15
BVAR PcP PcP **00 56 52.4 +1.1**
comp=Z,1.7nm,0.7s,baz=129,slow=3.9,SNR=4.8
comp=Z,3.7nm,0.8s
BORK Borovoye 28.86 329*d* *i*P P **00 53 43.1 +0.9**
BORK pmax pmax
comp=Z,24nm,1.4s
BORK Borovoye 28.86 329 P P 00 53 41.2 -1.0
BNX BinXian 29.70 50 ⇑P P **00 53 49.3 -0.4**
BNX pmax pmax
comp=Z,9.0nm,1.5s
AB31 Akbulak array 32.36 316 *i*P P **00 54 14.4 +1.3**
AB31 pmax pmax
comp=Z,10.0nm,1.2s
AB31 Akbulak array 32.36 316 P P 00 54 12.8 -0.3
ABKAR Akbulak array 32.36 316 P P **00 54 12.3 -0.9**
USRK Ussuriysk Ar. 32.40 54 P P **00 54 11.8 -1.7**
comp=Z,1.0nm,0.7s,baz=243,slow=9.5,SNR=1.3
comp=Z,1.0nm,0.7s
SVE Sverdlovsk 35.59 328 *e*P P **00 54 42.9 +1.9**
SVE pmax pmax
comp=Z,39nm,1.3s
ARTI Arti 36.41 326*c* *i*P P **00 54 49.3 +1.2**
ARTI pmax pmax
comp=Z,22nm,1.4s
ARTI Arti 36.41 326 P P 00 54 47.1 -1.0

MAJO Matsushiro 36.54 68 *e*P P **00 54 49.8 +0.3**
MAJO pmax pmax
comp=Z,2.0nm,1.4s
MJAR Matsushiro Arr 36.54 68 P P **00 54 50.5 +1.0**
comp=Z,1.1nm,0.8s,baz=269,slow=9.4,SNR=4.4
comp=Z,1.1nm,0.8s
LKRN Lenkeran, Azer 38.47 295 P P **00 55 04.8 -0.9**
YAK Yakutsk 38.97 25 *e*P P **00 55 09.1 -0.5**
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=E,12nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.1s
AKT Akhty 39.25 300 *e*P P **00 55 13.3 +0.8**
AKT *e* 00 57 23.0
AKT pmax pmax
comp=Z,25nm,1.4s
NRIK Noril'sk 39.26 356 P P **00 55 11.8 -0.2**
comp=Z,5.0nm,0.8s,baz=165,slow=7.8,SNR=9.9
comp=Z,5.0nm,0.8s
NRIK Noril'sk 39.26 356*d* *i*P P **00 55 13.0 +1.0**
NRIK pmax pmax
comp=Z,19nm,1.3s
NRIK Noril'sk 39.26 356 P P 00 55 11.8 -0.2
SEKA Sheki 39.65 299 P P **00 55 14.1 -1.6**
MNGR Mingechevir, A 39.74 299 P P **00 55 15.6 -0.7**
YSS Yuzhno-Sakhali 40.31 52 *e*P P **00 55 22.1 +1.1**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=E,200nm,15.0s
GANJ Ganja 40.32 298 P P **00 55 20.3 -0.9**
BELG Belogornoye 40.76 317*c* *i*P P **00 55 25.6 +1.0**
BELG pmax pmax
comp=Z,7.0nm,1.5s
GNI Garni 41.54 298 P P **00 55 31.1 -0.4**
GNI pmax pmax
comp=Z,39nm,1.3s
GNI Garni 41.54 298 P P **00 55 31.1 -0.4**
GNI IAmb IAmb 00 55 37.1
comp=Z,39nm,1.2s
GNI Garni 41.54 298 P P **00 55 34.7 +3.2**
comp=Z,25nm,1.3s
GNI Garni 41.54 298 P P **00 55 35.0 +3.5**
KIRV Kirov 41.73 326*c* *i*P P **00 55 33.1 +0.6**
GOF Gofitskoye 42.77 305*ce*P P **00 55 43.2 +2.0**
KBZ Khabaz 42.85 303 P P **00 55 42.0 +0.2**
comp=Z,2.3nm,0.8s,baz=95,slow=14,SNR=4.8
comp=Z,2.3nm,0.8s
KBZ Khabaz 42.85 303⇓ *i*P P **00 55 44.2 +2.3**
KBZ pmax pmax
comp=Z,8.0nm,1.3s
KIV Kislovodsk 43.00 303 ⇑P P **00 55 45.5 +2.2**
KIV Kislovodsk 43.00 303 *e*P P **00 55 45.4 +2.1**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV Kislovodsk 43.00 303 P P **00 55 43.3 0.0**
KIV IAmb IAmb 00 55 49.5
comp=Z,32nm,1.2s
KIV Kislovodsk 43.00 303 P P **00 55 45.8 +2.5**
comp=Z,18nm,1.5s
KIV Kislovodsk 43.00 303 P P **00 55 46.1 +2.8**
SHA1 Shidzhatmaz 43.02 303*c* *i*P P **00 55 45.7 +2.1**
GURO Guroymak-BITLI 43.75 296 P P **00 55 49.6 +0.1**
GURO IAmb IAmb 00 55 54.9
comp=Z,24nm,1.2s
VRH Novokhopyorsk 44.14 314 *e*P P **00 55 53.4 +1.2**
VRH pmax pmax
comp=Z,23nm,0.7s
RAYN Ar Rayn 44.17 273 P P **00 55 52.3 -0.6**
RAYN pmax pmax
comp=Z,14nm,1.4s
RAYN Ar Rayn 44.17 273 P P **00 55 52.3 -0.6**
RAYN Ar Rayn 44.17 273 P P **00 55 54.0 +1.1**
SOC Sochi 45.16 303 *e*P P **00 56 01.5 +1.1**
SOC *e* 00 57 45.5
SOC *e*PPP PPP 00 58 26.8
SOC *e*S S **01 02 41.7 +1.7**
SOC *e*SSS SSS 01 06 48.6
SOC pmax pmax
comp=Z,43nm,1.4s
SOC MLR MLR
comp=Z,31nm,16.0s
TIXI Tiksi 45.29 14⇑ *e*P P **00 56 00.3 -0.8**
TIXI pmax pmax
comp=Z,6.0nm,1.2s
TIXI Tiksi 45.29 14 P P **00 55 59.7 -1.4**
TIXI IAmb IAmb 00 56 02.6
comp=Z,18nm,1.4s
VORD Divnogorie 45.64 313 *e*P P **00 56 03.0 -1.1**
VORD pmax pmax
comp=Z,20nm,1.2s
VSR Storozhevoye 45.74 314 *e*P P **00 56 05.3 +0.4**
VSR pmax pmax
comp=Z,20nm,1.1s
VORR Voronezh 45.76 314 *e*P P **00 56 06.4 +1.4**
VORR pmax pmax
comp=Z,53nm,1.2s
LPSR Galich'ya Gora 46.02 315 *e*P P **00 56 07.6 +0.5**
LPSR pmax pmax
comp=Z,36nm,1.0s
ANN Anapa 46.75 305 *e*P P **00 56 10.7 -2.3**
ANN *e**PP **pP 00 56 15.6 -1.9**
ANN *e*S S **01 02 58.9 -4.0**
ANN pmax pmax
comp=Z,34nm,0.9s
MOS Moscow 47.17 320 *e*P P **00 56 17.1 +1.0**
MOS *e* 00 57 46.2
MOS *e* 00 58 08.6
MOS pmax pmax
comp=Z,100nm,1.7s
MOS pmax pmax
comp=Z,77nm,1.4s
KLMR Klimovskoe 47.20 327 *e*P P **00 56 15.1 -1.1**
KLMR *e* 00 58 04.9
KLMR pmax pmax
comp=Z,65nm,1.4s
MA2 Magadan 47.26 35⇑ *i*P P **00 56 17.8 +1.1**
MA2 pmax pmax
comp=Z,12nm,1.3s
MA2 Magadan 47.26 35 P P **00 56 15.9 -0.8**
MA2 IAmb IAmb 00 57 34.3
comp=Z,7.2nm,0.9s
OBN Obninsk 47.69 319*de*P P **00 56 21.8 +1.6**
OBN *e* 00 56 29.1
OBN *e* 00 57 51.8
OBN *e* 00 58 11.9
OBN *e*PPP PPP 00 59 00.9
OBN pmax pmax
comp=Z,36nm,1.3s
OBN MLR MLR
comp=Z,24nm,18.0s
OBN Obninsk 47.69 319 P P **00 56 19.9 -0.2**
OBN Obninsk 47.69 319 P P **00 56 21.9 +1.8**
comp=Z,22nm,1.4s
OBN Obninsk 47.69 319 P P **00 56 21.8 +1.6**
TOKA Tokat 47.83 299 P P **00 56 20.9 -0.6**
TOKA IAmb IAmb 00 56 26.8
comp=Z,19nm,1.1s
BNN Bunyan 48.51 297 P P **00 56 26.2 -0.7**
SEY Seymchan 48.80 31⇑ *i*P P **00 56 28.5 -0.1**
SEY pmax pmax
comp=Z,7.0nm,1.4s
KIRS Kirsehir-Merke 49.95 297 ⇑P P **00 56 38.2 +0.2**
BR131 Keskin Array S 50.07 298⇑ *i*P P **00 56 39.9 +1.1**
BR131 Keskin Array S 50.07 298 P P **00 56 38.7 -0.2**
BR104 Keskin Array S 50.07 298 P P **00 56 40.7 +1.9**
comp=Z,5.2nm,1.2s
BRTR Keskin Array B 50.07 298 P P **00 56 39.6 +0.8**
comp=Z,3.0nm,0.8s,baz=92,slow=6.1,SNR=8.2
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 50.07 298 *i*P P **00 56 39.5 +0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 50.07 298 P P 00 56 38.6 -0.3
BR106 Keskin Array S 50.08 298 P P **00 56 40.4 +1.4**
comp=Z,7.1nm,1.0s
PETK Petropavlovsk- 50.34 44 P P **00 56 41.9 +1.4**
comp=Z,2.3nm,0.7s,baz=290,slow=8.6,SNR=3.9
comp=Z,2.3nm,0.7s
CY604 RAF Akrotiri, 50.42 291 P P **00 56 41.5 +0.4**
CY604 IAmb IAmb 00 56 46.8
comp=Z,9.9nm,0.8s
EIL Elat 51.26 285 P P **00 56 47.5 -0.3**

MDUB	Mudurnu	51.79	300	P		P	00 56 51.0	-0.7	
BAL3X	Bal3x, Balta	51.97	309	P		P	00 56 53.6	+0.8	
AK09	Malin Array Si	51.98	313	P		P	00 56 53.3	+0.5	
AK08	Malin Array Si	52.00	313	P		P	00 56 53.3	+0.3	
AK10	Malin Array Si	52.00	313	P		P	00 56 53.5	+0.5	
AKASG	Malin Array Be	52.01	313	P		P	00 56 52.6	-0.5	
	comp=Z,12nm,1.1s,baz=81,slow=6.6,SNR=20								
	comp=Z,12nm,1.1s								
AKASG	Malin Array Be	52.01	313	*i* P		P	00 56 53.4	+0.3	
AKASG				pmax		pmax			
	comp=Z,10.0nm,0.9s								
AKASG	Malin Array Be	52.01	313	P		P	00 56 52.2	-0.8	
AKASG				IAmb		IAmb	00 56 56.1		
	comp=Z,16nm,1.5s								
AKBB	Malin Array Si	52.01	313⇑	*i* P		P	00 56 53.5	+0.4	
AKBB				pmax		pmax			
	comp=Z,34nm,1.3s								
AKBB	Malin Array Si	52.01	313			P	00 56 52.1	-1.0	
AK01	Malin Array Si	52.02	313	P		P	00 56 53.7	+0.6	
KIEV	Kiev	52.02	313	P		P	00 56 53.5	+0.3	
KIEV	Kiev	52.02	313	P		P	00 56 53.2	0.0	
	comp=Z,83nm,1.2s								
KIEV	Kiev	52.02	313	P		P	00 56 53.1	0.0	
AK02	Malin Array Si	52.03	313	P		P	00 56 53.6	+0.4	
AK07	Malin Array Si	52.03	313	P		P	00 56 53.7	+0.5	
AK04	Malin Array Si	52.05	313	P		P	00 56 53.6	+0.2	
AK12	Malin Array Si	52.06	313	P		P	00 56 53.7	+0.3	
AK18	Malin Array Si	52.11	313	P		P	00 56 54.0	+0.2	
MNK	Minsk	52.69	318	*i* P		P	00 56 57.3	-0.8	
	comp=E,18nm,1.0s								
MNK				*i* P		P	00 56 57.3	-0.8	
	comp=N,11nm,1.1s								
MNK				*i* P		P	00 56 57.3	-0.8	
	comp=Z,20nm,1.2s,baz=89								
MNK				*i* PP		PP	00 58 57.5	+0.5	
MNK				*i* PPP		PPP	01 00 01.6		
MNK				*i* S		S	01 04 26.1	+0.6	
MNK				*i* SS		SS	01 08 05.4	+1.8	
MNK				*i* SSS		SSS	01 09 51.3		
MNK				*i* LRM		MLR	01 23 10.5		
	comp=N,70nm,22.6s								
MNK				*i* LRM		MLR	01 23 22.7		
	comp=E,97nm,23.2s								
MNK				*i* LRM		MLR	01 23 22.7		
	comp=Z,23nm,16.4s								
MNK	Minsk	52.69	318	*i* P		P	00 56 57.2	-0.8	
MNK				*i*			00 58 57.4		
MNK				*i* PPP		PPP	01 00 01.6		
MNK				*i* S		S	01 04 26.1	+0.6	
MNK				*i* SS		SS	01 08 05.4	+1.8	
MNK				*i* SSS		SSS	01 09 51.2		
MNK				pmax		pmax			
	comp=E,18nm,1.0s								
MNK				pmax		pmax			
	comp=N,11nm,1.1s								
MNK				pmax		pmax			
	comp=Z,20nm,1.2s								
MNK				MLR		MLR			
	comp=N,70nm,23.0s								
MNK				MLR		MLR			
	comp=E,97nm,23.0s								
MNK				MLR		MLR			
	comp=Z,23nm,16.0s								
SORM	Soroca	52.78	310	⇓P		P	00 56 58.5	-0.3	
SORM	Soroca	52.78	310	⇓P		P	00 56 58.5	-0.3	
SORM	Soroca	52.78	310	P		P	00 56 58.9	+0.1	
	comp=Z,13nm,1.4s								
MI28	Mi28,Pidlybu	52.98	313	P		P	00 57 01.0	+0.7	
LUBAR	Lubar, Ukraine	53.01	312	P		P	00 57 00.7	+0.2	
TPGR	Topolog	53.13	305	⇑P		P	00 57 01.5	0.0	
TIRR	Tirgusor	53.20	305	P		P	00 57 03.2	+1.3	
	comp=Z,7.5nm,1.2s								
CFR	Carcaliu	53.29	306	⇑P		P	00 57 01.8	-0.8	
CFR	Carcaliu	53.29	306	⇑P		P	00 57 01.8	-0.8	
VSU	Vasula	53.31	323*c*	*i* P		P	00 57 03.8	+1.3	
VSU				pmax		pmax			
	comp=Z,37nm,1.2s								
VSU	Vasula	53.31	323	P		P	00 57 02.0	-0.5	
ELL	Elmali	53.53	295	P		P	00 57 04.0	-0.7	
ELL				pmax		pmax			
	comp=Z,44nm,1.1s								
ELL	Elmali	53.53	295			P	00 57 04.0	-0.7	
FIA1	FINESS Array S	53.72	326	P		P	00 57 05.0	-0.5	
FINES	FINESS Array B	53.72	326	P		P	00 57 05.9	+0.4	
	comp=Z,3.2nm,0.6s,baz=90,slow=8.3,SNR=20								
	comp=Z,3.2nm,0.6s								
FINES	FINESS Array B	53.72	326	*i* P		P	00 57 06.0	+0.4	
FINES				pmax		pmax			
	comp=Z,3.0nm,0.6s								
FINES	FINESS Array B	53.72	326	P		P	00 57 05.5	0.0	
KMPD	K-Podol'skiy	53.99	310	P		P	00 57 08.2	+0.5	
RNPP9	Sopachiv	54.06	314	P		P	00 57 08.8	+0.6	
RNPP5	Staryi Chortor	54.08	314	P		P	00 57 08.6	+0.3	
RNPP8	Varash	54.09	314	P		P	00 57 08.9	+0.5	
TESR	Tescani	54.13	308	P		P	00 57 10.4	+1.6	
	comp=Z,8.7nm,1.3s								
TESR	Tescani	54.13	308	P		P	00 57 09.6	+0.8	
VRI	Vrincioaia	54.17	307	⇓P		P	00 57 09.7	+0.6	
VRI	Vrincioaia	54.17	307	⇓P		P	00 57 09.7	+0.6	
VRI	Vrincioaia	54.17	307	P		P	00 57 10.7	+1.6	
	comp=Z,311nmcomp=Z,27nm,1.4s								
VRI	Vrincioaia	54.17	307	P		P	00 57 11.0	+1.9	
ARCES	ARCESS Array B	54.68	336	P		P	00 57 13.9	+1.5	
	comp=Z,2.7nm,1.0s,baz=64,slow=6.1,SNR=1.9								
	comp=Z,2.7nm,1.0s								
MLR	Muntele Rosu	54.77	307	⇑P		P	00 57 14.8	+1.2	
MLR	Muntele Rosu	54.77	307	⇑P		P	00 57 14.8	+1.2	
MLR	Muntele Rosu	54.77	307			P	00 57 13.6	-0.1	
MLR	Muntele Rosu	54.77	307	P		P	00 57 15.1	+1.5	
	comp=Z,316nmcomp=Z,35nm,1.3s								
MLR	Muntele Rosu	54.77	307	P		P	00 57 15.5	+1.9	
BURAR	Bucovina Array	54.94	309	P		P	00 57 15.4	+0.6	
BURAR				pmax		pmax			
	comp=Z,5.0nm,1.2s								
BURAR	Bucovina Array	54.94	309			P	00 57 14.3	-0.5	
BUR08	Bucovina Ar. S	54.95	309			P	00 57 14.3	-0.5	
BUR08				IAmb		IAmb	00 57 20.0		
	comp=Z,13nm,1.6s								
BILL	Bilibino	55.33	26⇓	*i* P		P	00 57 16.6	-0.5	
BILL				pmax		pmax			
	comp=Z,9.0nm,1.3s								
BILL	Bilibino	55.33	26	P		P	00 57 17.0	-0.1	
BILL				IAmb		IAmb	00 58 34.4		
	comp=Z,6.8nm,0.5s								
VOIR		55.40	307	P		P	00 57 20.0	+1.9	
VOIR		55.40	307	P		P	00 57 20.0	+1.9	
SUW	Suwalki	55.47	317	P		P	00 57 17.9	-0.4	
SUW	Suwalki	55.47	317	P		P	00 57 17.9	-0.4	
RDO	Rodhopi	55.88	301	P		P	00 57 21.0	-0.5	
RDO				IAmb		IAmb	00 57 25.2		
	comp=Z,18nm,1.2s								
BMR	Baia Mare	56.08	310	P		P	00 57 24.5	+1.6	
BMR	Baia Mare	56.08	310	P		P	00 57 24.5	+1.6	
LOT	Lotru	56.28	307	P		P	00 57 25.5	+1.0	
KWP	Kalwaria Pacla	56.29	312	P		P	00 57 25.7	+1.4	
KWP	Kalwaria Pacla	56.29	312	P		P	00 57 25.5	+1.1	
	comp=Z,41nm,1.4s								
MARR	Marisel-Cluj	56.50	308	⇑P		P	00 57 27.0	+0.9	
TRPA	Tarpa	56.64	310	P		P	00 57 27.7	+0.9	
KOLS	Kolonicke sedl	56.68	311	*e*P		P	00 57 29.1	+2.0	
KOLS				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KOLS	Kolonicke sedl	56.68	311	*e*P		P	00 57 29.1	+2.0	
DRGR		56.76	309	⇑P		P	00 57 27.5	-0.3	
DRGR		56.76	309	⇑P		P	00 57 27.5	-0.3	
DEV	Deva	56.80	308	P		P	00 57 29.7	+1.7	
DEV	Deva	56.80	308	P		P	00 57 29.7	+1.7	
ABAH	Abaujker	57.47	311	P		P	00 57 33.8	+1.2	
SIRR	Siria	57.57	308	⇓P		P	00 57 33.1	-0.4	
NIE	Niedzica	57.87	312	P		P	00 57 37.3	+1.7	
	comp=Z,4.5nm,1.4s								
OJC	Ojcow	58.05	313	P		P	00 57 36.9	+0.1	
OJC	Ojcow	58.05	313			P	00 57 36.9	+0.1	
AMBH	Ambrzfalva	58.19	308	P		P	00 57 39.7	+1.9	
PSZ	Piszkesteto	58.42	310	P		P	00 57 39.2	-0.3	
PSZ				pmax		pmax			
	comp=Z,5.0nm,1.1s								
PSZ	Piszkesteto	58.42	310			P	00 57 39.2	-0.3	
PSZ	Piszkesteto	58.42	310	P		P	00 57 41.4	+1.9	
MORC	Moravsky Berou	59.56	313	P		P	00 57 47.0	-0.4	
MORC				pmax		pmax			
	comp=Z,17nm,1.5s								
MORC	Moravsky Berou	59.56	313			P	00 57 47.0	-0.4	
MORC				IAmb		IAmb	00 57 51.0		
	comp=Z,17nm,1.5s								
MORC	Moravsky Berou	59.56	313	*e*P		P	00 57 48.2	+0.8	
MORC	Moravsky Berou	59.56	313	P		P	00 57 48.8	+1.4	
ITM	Ithomi	59.59	298	P		P	00 57 46.4	-1.4	
MORH	Mrgy, Hungar	59.63	309	⇑P		P	00 57 48.2	+0.5	
MORH	Mrgy, Hungar	59.63	309	P		P	00 57 48.0	+0.2	
	comp=Z,7.6nm,1.2s								
JAVC	Velka Javorina	59.68	312	*e*P		P	00 57 50.1	+1.9	
HFS	Hagfors	59.85	325	P		P	00 57 49.3	+0.3	
	comp=Z,5.5nm,0.9s,baz=77,slow=3.3,SNR=4.3								
	comp=Z,5.5nm,0.9s								
SMOL	Smolenice	59.91	311	*e*P		P	00 57 50.7	+1.0	
SMOL				pmax		pmax			
	comp=Z,1.0nm,0.8s								
KRLC	Kraliky	59.98	313	*e*P		P	00 57 51.6	+1.4	
KRLC	Kraliky	59.98	313	*e*P		P	00 57 51.6	+1.4	
PDG	Podgorica	60.13	304			P	00 57 49.8	-1.6	
PDG				IAmb		IAmb	00 57 53.9		
	comp=Z,24nm,1.6s								
DPC	Dobruska-Polom	60.21	314	*e*P		P	00 57 53.3	+1.5	
DPC	Dobruska-Polom	60.21	314	*e*P		P	00 57 53.3	+1.5	
DPC	Dobruska-Polom	60.21	314	P		P	00 57 53.2	+1.5	
OSTC	Ostas	60.23	314	*e*P		P	00 57 54.2	+2.3	
OSTC	Ostas	60.23	314	*e*P		P	00 57 54.2	+2.3	
VRAC	Vranov	60.27	312	P		P	00 57 54.6	+2.4	
VRAC	Vranov	60.27	312	*e*P		P	00 57 53.3	+1.1	
CHVC	Chvalec	60.32	314	*e*P		P	00 57 53.5	+1.0	
CHVC	Chvalec	60.32	314	*e*P		P	00 57 53.5	+1.0	
KRUC	Moravsky	60.45	312	P		P	00 57 55.7	+2.3	
KRUC	Moravsky	60.45	312	*e*P		P	00 57 54.7	+1.3	
NC405	NORSAR Array S	60.65	326	P		P	00 57 54.3	-0.3	
SOP	Sopron	60.67	311	P		P	00 57 56.8	+1.9	
NORES	NORESS Array B	60.80	326	P		P	00 57 55.9	+0.3	
RONA	Rosalia, Austr	60.84	311	*i* pP		P	00 57 58.0	+1.9	
	comp=Z,10nm,1.2s,SNR=6.7								
NB2	NORSAR Subarra	60.90	326	P		P	00 57 56.2	-0.1	
	comp=Z,1.4nm,0.6s,baz=79,slow=6.9								
NB2	NORSAR Subarra	60.90	326	P		P	00 57 56.5	+0.2	
NB2				pmax		pmax			
	comp=Z,1.0nm,0.5s								
NOA	NORSAR Array B	60.90	326	P		P	00 57 56.0	-0.3	
	comp=Z,2.4nm,0.7s,baz=78,slow=6.7,SNR=7.4								
	comp=Z,2.4nm,0.7s								
CONA	Conrad Observa	61.06	311	*i* pP		P	00 57 58.5	+0.8	
	comp=Z,25nm,1.7s,SNR=14								
PRU	Pruhonice	61.41	314	P		P	00 58 02.2	+2.3	
ARSA	Arzberg	61.46	310			P	00 57 59.6	-0.7	
ARSA				IAmb		IAmb	00 58 04.0		
	comp=Z,8.7nm,1.3s								
ARSA	Arzberg	61.46	310	*i* pP		P	00 58 02.1	+1.8	
	comp=Z,6.3nm,1.1s								
BRG	Berggiesshubel	61.56	315	*e*P		P	00 58 02.0	+1.1	
BRG				Amp			00 58 04.6		
	comp=Z,3.8nm,1.0s								
ZVC	Zvikov	61.76	313	*e*P		P	00 58 03.8	+1.5	
CKRC	Cesky Krumlov	61.84	312	*e*P		P	00 58 04.2	+1.3	
CKRC	Cesky Krumlov	61.84	312	*e*P		P	00 58 04.2	+1.3	
SOKA	Soth	61.93	310	*i* pP		P	00 58 03.9	+0.3	
	comp=Z,12nm,1.4s,SNR=10								
LODK	Lodwar	62.03	257	P		P	00 58 03.8	-0.8	
CLL	Collm	62.03	315	*i* P		P	00 58 04.5	+0.4	
CLL				pmax		pmax			
	comp=Z,6.0nm,1.3s								
CLL	Collm	62.03	315	*i* P		P	00 58 04.5	+0.4	
	comp=Z,6.0nm,1.3s								
CLL				*e*PP		PP	01 00 22.0	+1.7	
MOA	Molln	62.12	311	*i* pP		P	00 58 05.6	+0.8	
	comp=Z,16nm,1.7s								
GEC2	GERESS Array S	62.23	312			P	00 58 05.4	-0.2	
GEC2				IAmb		IAmb	00 58 09.9		
	comp=Z,14nm,1.4s								
GERES	GERESS Array B	62.23	312	P		P	00 58 06.5	+0.9	
	comp=Z,1.5nm,0.7s,baz=78,slow=6.8,SNR=18								
	comp=Z,1.5nm,0.7s								
GERES	GERESS Array B	62.23	312	P		P	00 58 05.3	-0.2	
KHC	Kasperske Hory	62.23	313⇓	*i* P		P	00 58 06.2	+0.7	
KHC				pmax		pmax			
	comp=Z,6.0nm,1.6s								
KHC	Kasperske Hory	62.23	313	*e*P		P	00 58 06.6	+1.1	
KHC	Kasperske Hory	62.23	313	P		P	00 58 04.2	-1.3	
KHC				IAmb		IAmb	00 58 07.8		
	comp=Z,13nm,1.8s								
OBKA	Obir	62.30	310	*i* pP		P	00 58 06.8	+0.7	
	comp=Z,7.8nm,1.6s								
BIOA	Bad Ischl, Aus	62.57	311	*i* pP		P	00 58 09.2	+1.4	
	comp=Z,4.2nm,1.0s								
WB0	Warramunga Arr	62.73	137	P		P	00 58 08.7	-0.4	
WB0				IAmb		IAmb	01 00 18.5		
	comp=Z,23nm,1.6s								
SGRT	San Giovanni R	62.83	304	P		P	00 58 08.7	-1.0	
SGRT				IAmb		IAmb	00 58 11.8		
	comp=Z,6.2nm,0.9s								
WRA	Warramunga Arr	62.84	138	P		P	00 58 09.6	-0.2	
	comp=Z,2.0nm,0.9s,baz=323,slow=6.9,SNR=13								
	comp=Z,2.0nm,0.9s								
WRA	Warramunga Arr	62.84	138	*i* P		P	00 58 10.8	+1.0	
WRA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
WRA	Warramunga Arr	62.84	138	P		P	00 58 09.6	-0.2	
MYKA	Terra Mystica	62.87	310	*e*pP		pP	00 58 12.4	-2.1	
	comp=Z,3.3nm,0.9s								
TIP	Timpagrande	62.88	301	⇑P		P	00 58 08.1	-2.0	
TIP	Timpagrande	62.88	301	P		P	00 58 09.1	-1.0	
TIP				IAmb		IAmb	00 58 13.8		
	comp=Z,13nm,1.2s								
KBA	Koelnbreinsper	62.94	311	*e*pP		P	00 58 12.2	+1.8	
	comp=Z,2.6nm,0.7s								
TRI	Trieste	63.05	309	P		P	00 58 10.5	-0.4	
TRI				pmax		pmax			
	comp=Z,16nm,1.0s								
TRI	Trieste	63.05	309	P		P	00 58 10.5	-0.4	
LESA	Schwarzleotal	63.27	311	*i* pP		P	00 58 12.9	+0.3	
	comp=Z,19nm,1.4s,SNR=16								
GRA1	Grafenberg Arr	63.56	314	P		P	00 58 14.3	0.0	
GRF	Grafenberg Arr	63.56	314	P		P	00 58 14.3	0.0	
GRF				pmax		pmax			
	comp=Z,22nm,1.5s								
ABTA	Abfaltersbach	63.58	310	*i* pP		P	00 58 15.3	+0.8	
	comp=Z,7.3nm,1.7s								
STAL	STALIGIAL	63.59	310	P		P	00 58 13.9	-0.7	
STAL				IAmb		IAmb	00 58 17.3		
	comp=Z,8.9nm,1.0s								
CEL	Celeste	63.82	301	P		P	00 58 16.0	-0.3	
WTTA	Wattenberg	64.00	311	*e*pP		P	00 58 17.8	+0.3	
	comp=Z,7.8nm,1.2s								
WATA	Walderalm	64.02	311	*e*pP		P	00 58 19.3	+1.7	
	comp=Z,3.6nm,0.6s								
INTR	Introdacqua	64.06	305	P		P	00 58 17.1	-0.7	
INTR				IAmb		IAmb	00 58 22.0		
	comp=Z,12nm,1.1s								
SQTA	Sankt Quirin	64.29	311	*i* pP		P	00 58 19.9	+0.6	
	comp=Z,4.4nm,0.8s								
AQU	L'Aquila	64.31	306	P		P	00 58 18.7	-0.7	
AQU				pmax		pmax			
	comp=Z,8.0nm,0.9s								
AQU	L'Aquila	64.31	306	P		P	00 58 18.7	-0.7	
AQU				IAmb		IAmb	00 58 39.3		
	comp=Z,7.7nm,0.9s								
MOTA	Moosalm	64.32	311	*i* pP		P	00 58 20.2	+0.7	
	comp=Z,10nm,1.3s,SNR=6.0								
CTI	Castel Tesino	64.36	310	P		P	00 58 19.2	-0.5	
CTI				pmax		pmax			
	comp=Z,14nm,1.5s								
CTI	Castel Tesino	64.36	310	P		P	00 58 19.2	-0.5	
CTI				IAmb		IAmb	00 58 26.2		
	comp=Z,14nm,1.5s								
RETA	Reutte	64.50	312	*i* pP		P	00 58 21.1	+0.5	
	comp=Z,9.0nm,1.1s,SNR=5.5								
FETA	Feichten	64.66	311	*i* P		P	00 58 21.5	-0.3	
	comp=Z,9.8nm,1.1s,SNR=12								
GAMB	Gambell	64.75	29	P		P	00 58 20.3	-1.4	
	baz=288								
FUORN	Ofenpass-Fuorn	65.09	311	P		P	00 58 24.0	-0.7	
STU	Stuttgart	65.10	313	P		P	00 58 24.4	0.0	
STU				pmax		pmax			
	comp=Z,13nm,1.2s								
STU	Stuttgart	65.10	313	P		P	00 58 24.4	0.0	
STU				IAmb		IAmb	00 58 28.6		
	comp=Z,13nm,1.2s								
DAVA	Damuels	65.13	312	*i* pP		P	00 58 25.7	+0.9	
	comp=Z,11nm,1.3s								
ASAR	Alice Springs	65.53	141	P		P	00 58 27.4	-0.1	
	comp=Z,2.0nm,0.6s,baz=323,slow=6.4,SNR=17								
	comp=Z,2.0nm,0.6s								
ASAR	Alice Springs	65.53	141	P		P	00 58 27.1	-0.3	
TNA	Tin City	65.72	27	P		P	00 58 26.5	-1.6	
	baz=290								
C16K	Lisburne Hills	65.72	24	P		P	00 58 26.7	-1.3	
	baz=291								
BFO	Black Forest	65.79	313	P		P	00 58 28.1	-0.8	
BFO				pmax		pmax			
	comp=Z,5.0nm,1.0s								
BFO	Black Forest	65.79	313	P		P	00 58 28.1	-0.8	
C17K	DeLong Mountai	66.39	23	P		P	00 58 31.3	-1.2	
	baz=293								
ECH	Echery	66.56	313	P		P	00 58 32.5	-1.4	
ECH				pmax		pmax			
	comp=Z,4.0nm,1.0s								
ECH	Echery	66.56	313	P		P	00 58 32.5	-1.4	
RDOG	Red Dog Mine	66.65	24	P		P	00 58 33.2	-0.8	
	baz=293								
WLF	Walferdange	66.70	315	P		P	00 58 34.3	-0.4	
WLF				pmax		pmax			
	comp=Z,26nm,1.3s								
WLF	Walferdange	66.70	315	P		P	00 58 34.2	-0.4	
D17K	Noatak River	66.73	24	P		P	00 58 33.4	-1.1	
	baz=293								
F15K	North Star Dit	66.93	26	P		P	00 58 34.8	-1.1	
	baz=293								
C18K	Utukok River	66.99	23	P		P	00 58 35.9	-0.4	
	baz=294								
ANM	Nome	67.08	28	P		P	00 58 36.7	-0.2	
	baz=292								
SENIN	Lac Senin/Sane	67.11	311	P		P	00 58 36.7	-0.9	
SENIN				IAmb		IAmb	00 58 40.0		
	comp=Z,5.7nm,0.8s								
A21K	Barrow	67.24	19	P		P	00 58 37.5	-0.2	
	baz=297								
C19K	Lookout Ridge	67.33	22	P		P	00 58 38.4	0.0	
	baz=296								
E17K	Hotham Inlet	67.42	24	P		P	00 58 39.1	+0.1	
	baz=294								
G15K	Niukluk	67.44	27	P		P	00 58 39.7	+0.5	
	baz=293								
B20K	Meade River	67.69	21	P		P	00 58 41.0	+0.5	
	baz=297								
E18K	Tukpahlearik C	67.71	24	P		P	00 58 39.9	-0.9	
	baz=295								
A22K	Sinclair Lake	67.86	19	P		P	00 58 41.3	-0.3	
	baz=299								
F17K	Baldwin Pennin	67.90	25	P		P	00 58 41.8	-0.1	
	baz=295								
G16K	Koyuk River	67.93	26	P		P	00 58 42.9	+0.8	
G16K				IAmb		IAmb	00 58 45.7		
	comp=Z,14nm,1.2s								
G16K	Koyuk River	67.93	26	P		P	00 58 41.4	-0.8	
	baz=295								
D19K	Kuna River	68.08	22	P		P	00 58 42.0	-1.1	
	baz=297								
MBAR	Mbarara	68.08	256	*i* P		P	00 58 46.1	+1.9	
MBAR				pmax		pmax			
	comp=Z,8.0nm,1.4s								
M11K	Mekoryuk	68.36	32	P		P	00 58 44.0	-0.9	
	baz=293								
F18K	Selawik	68.41	24	P		P	00 58 44.2	-0.9	
	baz=296								
K13K	Kusilvak Mount	68.42	30	P		P	00 58 44.5	-0.8	
	baz=294								
D20K	Etivluk River	68.46	22			P	00 58 45.5	0.0	
D20K	Etivluk River	68.46	22	P		P	00 58 44.6	-1.0	
	baz=298								
G17K	Kiwalik Mounta	68.53	26	P		P	00 58 45.0	-1.0	
	baz=296								
J14K	Nanvaranak Lak	68.55	29	P		P	00 58 45.2	-0.9	
	baz=295								
B22K	Teshekpuk Lake	68.64	20			P	00 58 47.1	+0.6	
B22K	Teshekpuk Lake	68.64	20	P		P	00 58 45.9	-0.6	
	baz=301								
B21K	Ikpikpuk River	68.65	21	P		P	00 58 45.9	-0.7	
	baz=300								
E20K	Nigu River	68.82	22	P		P	00 58 46.8	-1.0	
	baz=299								
C21K	Knifeblade Rid	68.83	21	P		P	00 58 46.8	-0.9	
	baz=300								
E19K	Redstone River	68.86	23	P		P	00 58 46.8	-1.2	
	baz=298								
F19K	Shaleruckik Mo	68.96	24			P	00 58 48.6	0.0	
F19K				IAmb		IAmb	00 58 50.9		
	comp=Z,9.8nm,1.3s								
F19K	Shaleruckik Mo	68.96	24	P		P	00 58 47.9	-0.7	
	baz=298								
H17K	Granite Mounta	69.06	26			P	00 58 49.9	+0.7	
H17K	Granite Mounta	69.06	26	P		P	00 58 48.6	-0.6	
	baz=297								
G18K	Tagagawik	69.09	25	P		P	00 58 48.8	-0.6	
	baz=298								
I17K	Unalakleet	69.23	27	P		P	00 58 49.2	-1.0	
	baz=297								
E21K	Killik River	69.44	22	P		P	00 58 50.8	-0.9	
	baz=301								
L14K	Kuka Creek	69.53	30	P		P	00 58 51.7	-0.5	
	baz=296								
G19K	Purcell Mounta	69.53	24	P		P	00 58 50.8	-1.4	
	baz=299,SNR=5.3								
J16K	Anvik River	69.53	28	P		P	00 58 51.7	-0.6

J19K	Poorman	71.14	26	P	P	00 59 01.3	-0.8
	baz=301,SNR=11						
I20K	Naaghedeneel	71.16	25	P	P	00 59 01.7	-0.4
	baz=301						
N15K	Kwethluk River	71.19	31	P	P	00 59 02.3	-0.1
	baz=298						
D25K	Kavik River	71.24	19	P	P	00 59 02.9	+0.3
D25K	Kavik River	71.24	19	P	P	00 59 02.6	0.0
	baz=307,SNR=11						
M16K	Timber Creek	71.28	30	P	P	00 59 02.8	-0.1
	baz=299						
C26K	Camden Bay	71.28	18	P	P	00 59 02.9	+0.1
	baz=308						
H21K	Melozitna Rive	71.30	24	P	P	00 59 02.6	-0.4
	baz=303						
COLD	Coldfoot	71.30	22	P	P	00 59 03.6	+0.6
	baz=304						
E24K	Your Creek	71.36	21	P	P	00 59 03.0	-0.4
	baz=306,SNR=12						
J20K	Nowinta River	71.60	26	P	P	00 59 04.5	-0.3
	baz=302,SNR=8.0						
N16K	Nishlik Lake	71.62	30	P	P	00 59 05.4	+0.3
	baz=299						
L18K	Granite Mounta	71.63	28	P	P	00 59 04.6	-0.4
	baz=300						
G23K	Bananza Creek	71.66	22	P	P	00 59 05.4	+0.2
	baz=305						
H22K	Ishtalitna Cre	71.66	23	P	P	00 59 05.6	+0.4
	baz=304,SNR=7.6						
M17K	Holitna River	71.73	29	P	P	00 59 05.8	+0.1
	baz=300						
C27K	Jago River	71.79	18	P	P	00 59 05.4	-0.5
	baz=309,SNR=13						
F24K	Squaw Lake	71.87	21	P	P	00 59 05.5	-0.9
	baz=306						
K20K	Telida	72.07	26	P	P	00 59 07.0	-0.7
	baz=302						
E25K	Arctic Village	72.21	20	P	P	00 59 08.0	-0.5
E25K				IAmb	IAmb	00 59 10.7	
	comp=Z,17nm,1.6s						
E25K	Arctic Village	72.21	20	P	P	00 59 07.2	-1.2
	baz=308,SNR=6.7						
N17K	Nushagak Hills	72.28	30	P	P	00 59 08.3	-0.7
	baz=300						
H23K	Yukon River	72.32	23	P	P	00 59 08.6	-0.6
	baz=305						
M18K	Stony River	72.35	28	P	P	00 59 09.0	-0.4
	baz=301						
O16K	Kokwok River B	72.36	31	P	P	00 59 09.1	-0.3
	baz=300						
MLY	Manley	72.37	24		P	00 59 09.3	-0.2
MLY				IAmb	IAmb	00 59 12.4	
	comp=Z,14nm,1.5s						
MLY	Manley	72.37	24	P	P	00 59 09.3	-0.2
	baz=304,SNR=10						
L19K	White Mountain	72.38	27	P	P	00 59 09.0	-0.6
	baz=302,SNR=6.8						
CHUM	Lake Minchumin	72.44	25	P	P	00 59 10.0	+0.2
	baz=304						
G24K	Hadweenzic Riv	72.48	22	P	P	00 59 09.8	-0.3
	baz=307						
SUMG	Summit	72.49	347	P	P	00 59 09.7	-0.8
SUMG				pmax	pmax		
	comp=Z,13nm,1.3s						
SUMG	Summit	72.49	347	P	P	00 59 09.7	-0.8
SUMG				IAmb	IAmb	00 59 14.9	
	comp=Z,12nm,1.3s						
F25K	Christian Rive	72.51	20	P	P	00 59 09.9	-0.4
	baz=308,SNR=8.8						
O17K	Koliganek Bris	72.70	30	P	P	00 59 11.2	-0.3
	baz=301						
N18K	Kilae Creek	72.75	29	P	P	00 59 11.8	0.0
	baz=301						
I23K	Minto, Yukon-K	72.78	23	P	P	00 59 12.0	+0.2
	baz=306						
D27M	Malcolm River	72.78	18	P	P	00 59 11.9	0.0
	baz=312						
CAST	Castle Rocks	72.78	26	P	P	00 59 11.5	-0.5
	baz=304,SNR=13						
H24K	Noodor Dome	72.87	22	P	P	00 59 12.2	-0.3
	baz=307						
G25K	Bearman Lake	72.88	21	P	P	00 59 12.4	0.0
	baz=308						
F26K	Sheenjek River	72.89	20	P	P	00 59 12.0	-0.6
	baz=309						
PPLA	Purkeypile	73.04	26	P	P	00 59 12.9	-0.7
	baz=304,SNR=6.6						
KTH	Kantishna Hill	73.14	25	P	P	00 59 13.7	-0.4
KTH				IAmb	IAmb	00 59 21.1	
	comp=Z,12nm,1.2s						
NEA2	Nenana	73.20	24	P	P	00 59 14.2	-0.2
	baz=306						
M20K	Styx River	73.23	27	P	P	00 59 14.5	-0.2
	baz=303						
N19K	Bonanza Creek	73.27	29	P	P	00 59 14.9	0.0
	baz=302						
P17K	Kvichak River	73.29	31	P	P	00 59 14.6	-0.3
	baz=301						
E27K	Coleen River	73.31	19	P	P	00 59 14.7	-0.3
E27K				IAmb	IAmb	00 59 18.0	
	comp=Z,20nm,1.4s						
E27K	Coleen River	73.31	19	P	P	00 59 14.7	-0.3
	baz=311,SNR=13						
S14K	Fog Glacier	73.33	34	P	P	00 59 15.5	+0.1
	baz=300						
SDPT	Sand Point	73.33	35	P	P	00 59 15.0	-0.3
	baz=299						
TRF	Thorofare Moun	73.43	25	P	P	00 59 15.7	-0.3
	baz=305						
POKR	Poker Plat Res	73.45	23	P	P	00 59 15.3	-0.6
	baz=307						
COLA	College	73.46	23	P	P	00 59 15.7	-0.2
	baz=307						
O18K	Koktuh Hills	73.47	30	P	P	00 59 15.9	-0.1
	baz=302						
G26K	Porcupine Rive	73.48	21	P	P	00 59 15.4	-0.5
	baz=310						
E28M	Babbage River	73.59	18	P	P	00 59 16.2	-0.4
	baz=313,SNR=15						
CCB	Clear Creek Bu	73.61	23	P	P	00 59 15.7	-1.0
P18K	Big Mountain,	73.71	30	P	P	00 59 17.2	-0.3
	baz=302						
L22K	Petersville	73.78	26	P	P	00 59 17.2	-0.7
	baz=305,SNR=10.0						
SKT	Skwentna	73.81	27		P	00 59 17.3	-0.7
SKT				IAmb	IAmb	00 59 20.7	
	comp=Z,13nm,1.2s						
SKT	Skwentna	73.81	27	P	P	00 59 17.5	-0.5
	baz=305						
PRP	Porcupine Dome	73.84	22	P	P	00 59 18.0	-0.3
	baz=309						
IL31		73.85	23	P	P	00 59 18.0	-0.1
ILAR	Eielson Array	73.85	23	P	P	00 59 17.8	-0.4
	comp=Z,4.0nm,1.1s,baz=314,slow=5.8,SNR=20						
	comp=Z,4.0nm,1.1s						
ILAR	Eielson Array	73.85	23	P	P	00 59 18.1	-0.1
ILAR	Eielson Array	73.85	23		P	00 59 18.1	-0.1
HDA	Harding Lake	74.05	23	P	P	00 59 18.5	-0.9
	baz=308						
R17L	Mt. Peulik Vol	74.14	32	P	P	00 59 18.9	-1.2
	baz=302						
F28M	Old Crow	74.18	19	P	P	00 59 19.9	-0.2
	baz=313,SNR=9.1						
E29M	Blow River	74.18	18	P	P	00 59 19.3	-0.8
	baz=314,SNR=12						
G27K	Doyon Strip	74.21	20	P	P	00 59 20.2	-0.1
	baz=312,SNR=9.8						
WAT1	Susitna Watana	74.44	25	P	P	00 59 21.0	-0.7
	baz=307						
O20K	Slope Mountain	74.44	29	P	P	00 59 21.2	-0.6
	baz=304						
J25K	Salcha River,	74.46	23	P	P	00 59 21.4	-0.4
	baz=309						
H27K	Steamboat Moun	74.63	20	P	P	00 59 22.1	-0.7
	baz=312,SNR=15						
DHY	Denali Highway	74.72	25	P	P	00 59 22.9	-0.5
	baz=308						
K24K	Donnelly Dome	74.83	24	P	P	00 59 23.7	-0.3
	baz=309						
WAT6	Susitna Watana	74.89	25	P	P	00 59 23.6	-0.9
	baz=308						
RC01	Rabbit Creek A	75.02	27	P	P	00 59 24.4	-0.7
	baz=306						
I27K	Kandik River	75.03	21	P	P	00 59 25.5	+0.4
I27K				IAmb	IAmb	00 59 29.2	
	comp=Z,21nm,1.2s						
I27K	Kandik River	75.03	21	P	P	00 59 24.5	-0.6
	baz=312,SNR=18						
SML	Sawmill	75.14	26	P	P	00 59 26.3	+0.6
SML				IAmb	IAmb	00 59 32.9	
	comp=Z,20nm,1.2s						
SML	Sawmill	75.14	26	P	P	00 59 25.1	-0.6
	baz=307						
G29M	Pine Creek	75.19	19	P	P	00 59 25.4	-0.6
	baz=315,SNR=6.1						
RIDG	Independent Ri	75.19	23	P	P	00 59 25.8	-0.3
	baz=310,SNR=6.0						
F30M	Barrier River	75.30	18	P	P	00 59 26.3	-0.2
	baz=316,SNR=5.8						
KNK	Knik Glacier	75.33	26	P	P	00 59 26.4	-0.5
	baz=307						
SCRK	Sand Creek	75.33	23		P	00 59 26.4	-0.5
SCRK				IAmb	IAmb	00 59 28.3	
	comp=Z,31nm,1.8s						
SCRK	Sand Creek	75.33	23	P	P	00 59 26.2	-0.7
	baz=310,SNR=11						
INK	Inuvik	75.36	17	P	P	00 59 26.8	-0.1
INK				pmax	pmax		
	comp=Z,12nm,1.2s						
INK	Inuvik	75.36	17		P	00 59 26.8	-0.1
INK				IAmb	IAmb	00 59 30.6	
	comp=Z,12nm,1.1s						
INK	Inuvik	75.36	17	P	P	00 59 25.7	-1.2
	baz=318						
BRSE	Bradley Lake S	75.41	28	P	P	00 59 26.3	-1.1
	baz=306						
PAX	Paxson	75.46	24	P	P	00 59 26.7	-1.0
	baz=309						
SCM	Sheep Creek Mo	75.50	26	P	P	00 59 27.9	0.0
	baz=308						
H29M	Whitestone	75.58	20	P	P	00 59 27.2	-1.0
	baz=314,SNR=6.6						
G30M	tAoh Zraii Nji	75.64	18	P	P	00 59 27.7	-0.8
	baz=316,SNR=15						
I28M	Miner Creek	75.65	21	P	P	00 59 27.5	-1.3
	baz=313,SNR=7.8						
PWL	Port Wells	75.71	27	P	P	00 59 28.1	-0.9
	baz=307						
SII	Sitkinak Islan	75.72	32	P	P	00 59 28.6	-0.6
	baz=304						
M24K	Tolsona, Glenn	75.75	25	P	P	00 59 28.7	-0.7
	baz=309						
KDAK	Kodiak Island	75.76	31	P	P	00 59 28.8	-0.6
	baz=305						
OHAK	Old Harbor	75.76	31	P	P	00 59 28.7	-0.7
	baz=304						
EPYK	Eagle Plains	75.94	19	P	P	00 59 29.6	-0.7
	baz=316						
HARP	HAARP	75.94	25	P	P	00 59 30.1	-0.3
	baz=310						
F31M	Tsiigehtchic	75.95	17	P	P	00 59 29.8	-0.5
	baz=318						
STKA	Stephens Creek	76.17	140	P	P	00 59 31.5	-0.4
	comp=Z,3nm,0.9s,baz=318,slow=12,SNR=2.9						
	comp=Z,2.3nm,0.9s						
GLI	Glacier Island	76.18	26	P	P	00 59 30.9	-0.8
	baz=308						
G31M	Satah River	76.20	18	P	P	00 59 31.0	-0.7
	baz=318						
KLU	Klutina	76.23	26	P	P	00 59 31.4	-0.7
	baz=309						
C36M	Paulatuk	76.64	13	P	P	00 59 33.5	-0.6
	baz=326						
N25K	Chitina, Valde	76.65	25	P	P	00 59 33.4	-1.0
	baz=310						
L27K	Beaver Creek,	76.66	23	P	P	00 59 33.4	-1.1
	baz=312						
BCAR	Beaver Creek A	76.68	23		P	00 59 35.1	+0.6
M26K	Nabesna, AK	76.70	24	P	P	00 59 34.3	-0.4
	baz=311						
DAWY	Dawson	76.77	21	P	P	00 59 34.6	-0.5
	baz=314						
I30M	Mount Dempster	76.87	20	P	P	00 59 35.2	-0.5
	baz=316,SNR=13						
EYAK	Cordova Ski Ar	76.90	26	P	P	00 59 35.3	-0.4
	baz=310						
H31M	Peel River	77.02	19	P	P	00 59 36.2	-0.2
	baz=318,SNR=10						
BMRM	Bremner River	77.06	26		P	00 59 37.1	+0.3
BMRM				IAmb	IAmb	00 59 40.6	
	comp=Z,11nm,1.0s						
BMRM	Bremner River	77.06	26	P	P	00 59 36.9	+0.1
	baz=310						
M27K	Edge Creek, AK	77.12	24	P	P	00 59 36.9	-0.3
	baz=312						
J30M	Hart River	77.35	20	P	P	00 59 38.1	-0.3
	baz=316						
MCARA	McCarthy VSAT	77.37	25	P	P	00 59 38.4	0.0
	baz=312						
Q23K	Middleton Isla	77.38	27	P	P	00 59 38.3	-0.2
	baz=309						
ESBB	Sonseca Array	77.39	309		P	00 59 38.8	-0.2
ESBB				IAmb	IAmb	00 59 50.0	
	comp=Z,11nm,1.4s						
ESDC	Sonseca Array	77.39	309	P	P	00 59 38.3	-0.7
	comp=Z,5.2nm,1.1s,baz=74,slow=6.3,SNR=16						
	comp=Z,5.2nm,1.1s						
ESDC	Sonseca Array	77.39	309	P	P	00 59 38.2	-0.8
BVCY	Beaver Creek	77.43	23	P	P	00 59 38.3	-0.5
	baz=313						
K29M	Barlow Dome	77.52	21	P	P	00 59 38.4	-1.0
	baz=316						
L29M	L29M	77.85	22	P	P	00 59 39.9	-1.2
	baz=315						
YUK3	Moose Creek	78.01	24	P	P	00 59 41.7	-0.5
	baz=314						
M29M	Somme Creek	78.21	22	P	P	00 59 42.6	-0.6
	baz=315						
LSZ	Lusaka	78.46	245	P	P	00 59 44.3	-1.0
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSZ	Lusaka	78.46	245		P	00 59 44.3	-1.0
YUK8	Steele Glacier	78.59	24	P	P	00 59 45.1	-0.5
	baz=314						
M30M	Minto, Yukon	78.66	22	P	P	00 59 45.5	-0.1
	baz=316						
YUK4	Talbot Arm	78.93	23	P	P	00 59 46.4	-0.9
	baz=315						
PINM	Pinnacle	79.25	25	P	P	00 59 48.4	-0.5
	baz=314						
YUK6	Outpost Mounta	79.31	23	P	P	00 59 48.8	-0.7
	baz=315						
N30M	Aishikik Lake	79.37	23	P	P	00 59 49.2	-0.4
	baz=316						
MTE	Manteigas	79.42	311	eP	P	00 59 51.9	+1.7
PVIS	Viseu	79.48	311	eP	P	00 59 52.2	+1.6
PCBR	Castelo Branco	79.66	310	eP	P	00 59 55.7	+4.3
HYT	Haines Junctio	79.69	23		P	00 59 50.9	-0.5
HYT	Haines Junctio	79.69	23	P	P	00 59 51.1	-0.3
	baz=316						
M31M	Drury Creek, Y	79.69	21	P	P	00 59 51.1	-0.2
	baz=318						
O29M	Mount Kennedy	79.70	24	P	P	00 59 50.9	-0.6
	baz=315						
N31M	Braeburn, Yuko	79.78	22	P	P	00 59 51.8	0.0
	baz=317						
PMRV	Marv??o	79.81	310	eP	P	00 59 55.2	+2.9
O30N	Mendenhall	80.21	23	P	P	00 59 54.1	0.0
	baz=317						
PBAR	Barrancos	80.22	308	eP	P	00 59 56.1	+1.6
MMPY	Sheldon Lake,	80.32	20	P	P	00 59 54.4	-0.2
	baz=321						
P30M	Million Dollar	80.39	23	P	P	00 59 54.5	-0.6
	baz=317						
P29M	Windy Craggy	80.47	24	P	P	00 59 55.4	-0.1
	baz=316						
PARRA	Arraiolos	80.56	309	eP	P	00 59 58.0	+1.6
EVO	Evora	80.69	309	eP	P	00 59 58.5	+1.4
WHY	Whitehorse	80.69	22	P	P	00 59 55.9	-0.9
	baz=318						
PLBC	Pleasant Camp	81.08	24	P	P	00 59 58.6	-0.2
	baz=317						
SKAG	Skagway	81.44	23	P	P	01 00 00.4	-0.1
	baz=318						
P33M	Teslin, Yukon	81.70	22	P	P	01 00 02.3	+0.2
	baz=320						
P32M	Atlin	81.88	23	P	P	01 00 03.4	+0.3
	baz=319						
S31K	Pelican	82.23	25	P	P	01 00 04.5	-0.3
	baz=317						
KSANE	Kasane	82.28	244	P	P	01 00 05.2	-0.6
KSANE				IAmb	IAmb	01 00 09.7	
	comp=Z,17nm,1.2s						
Q32M	Nakina River	82.85	22	P	P	01 00 07.7	-0.6
	baz=320						
R33M	Jennings River	82.93	22	P	P	01 00 08.0	-0.6
	baz=322						
DLBC	Dease Lake	83.99	22	P	P	01 00 13.8	-0.2
	baz=322						
S34M	Telegraph Cree	84.04	23	P	P	01 00 14.3	+0.1
	baz=322						
YKA	Yellowknife Ar	84.53	13	P	P	01 00 14.7	-1.9
	comp=Z,1.4nm,0.9s,baz=340,slow=4.5,SNR=6.2						
	comp=Z,1.4nm,0.9s						
U33K	Whale Pass	84.74	25	P	P	01 00 17.8	+0.1
	baz=320						
WRAK	Wrangell Islan	84.78	24	P	P	01 00 17.4	-0.5
	baz=321						
T35M	Bob Quinn	85.07	23	P	P	01 00 18.7	-0.7
	baz=322						
TORD	Torodi Ar. Bea	86.08	283	P	P	01 00 25.3	+0.1
	comp=Z,8.8nm,1.1s,baz=49,slow=5.2,SNR=16						
TORD				PP	PP	01 03 44.2	-1.0
	comp=Z,2.3nm,1.2s,baz=75,slow=6.1,SNR=5.9						
	comp=Z,8.8nm,1.1s						
TORD	Torodi Ar. Bea	86.08	283	P	P	01 00 23.7	-1.5
TORD				IAmb	IAmb	01 00 29.1	
	comp=Z,9.0nm,1.1s						
LBTB	Lobatse	86.13	238	P	P	01 00 24.9	-0.3
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LBTB	Lobatse	86.13	238		P	01 00 24.9	-0.3
LBTB				IAmb	IAmb	01 00 26.5	
	comp=Z,8.2nm,0.9s						
MAKGR	Makgori	87.17	238	P	P	01 00 29.5	-0.8
GRTLG	Ghanzi	87.35	244	P	P	01 00 30.8	-0.6
TXAR	Lajitas Array	118.11	18	PKP	PKPdf	01 06 30.9	-0.5
	comp=Z,0.4nm,1.0s,baz=236,slow=1.1,SNR=2.5						
TXAR	Lajitas Array	118.11	18		PKPdf	01 06 30.4	-1.0

KRNET ***23*** *00:58:12.1±0.1, 41.90N×72.07E, h22km, mb2.9*
SOME ***23*** *00:58:12.7, 41.95N×72.07E, h20km*
NNC ***23*** *00:58:13.9±0.8, 42.03N×72.09E, h0km, mb3.0, mpv3.1,*
Error ellipse: s-maj=8.3km s-min=2.5km az=174.0
ISU ***23*** *00:58:14, 41.86N×72.02E, h16km*
ISC 23 00:58:13.2±1.1, **41.92N**±0.02×**72.09E**±0.02, **h3**km±10km,
n42, σ0**s88/75, 23C-19D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.16**	**218**	↑	*eP*		**Pg**	**00 58 15.9**	**-0.4**
ARK				↑	*eS*		**Sg**	**00 58 18.5**	**+0.2**
MNAS	**Manas**	**0.64**	**28**	↑	*eP*		**Pg**	**00 58 25.0**	**-0.6**
MNAS				↑	*eS*		**Sg**	**00 58 34.3**	**+0.4**
TRKS	**Terek-Say**	**0.81**	**242**	↑	*eP*		**Pg**	**00 58 27.4**	**-1.4**
TRKS				↑	*eS*		**Sg**	**00 58 38.4**	**-0.9**
ARSB	**Arslanbob**	**0.90**	**131**	↓	*eP*		**Pg**	**00 58 29.1**	**-1.2**
ARSB				↓	*iS*		**Sg**	**00 58 41.2**	**-0.7**
MRKS	**Merke**	**1.18**	**45**		P		**Pg**	**00 58 35.2**	**-0.5**
	1.8nm,0.1s								
MRKS					S		**Sg**	**00 58 50.9**	**-0.1**
	78nm,0.2s								
MRKS	**Merke**	**1.18**	**45**		*eP*		**Pg**	**00 58 35.2**	**-0.5**
	1.8nm,0.1s								
MRKS					*eS*		**Sg**	**00 58 50.9**	**-0.1**
	78nm,0.2s								
PSK	**Pskem**	**1.28**	**271**		P		**Pg**	**00 58 37.2**	**-0.6**
PSK					S		**Sg**	**00 58 54.3**	**-0.1**
TSTA	**Tashata**	**1.37**	**168**		P		**Pg**	**00 58 41.6**	**+2.1**
TSTA					S		**Sn**	**00 58 59.9**	**+1.9**
EKS2	**Erkin-Say**	**1.45**	**59**	↑	*iP*		**Pn**	**00 58 39.3**	**-1.2**
EKS2				↑	*eS*		**Sb**	**00 58 59.0**	**-0.9**
OHH	**Osh**	**1.49**	**159**	↓	*eP*		**Pn**	**00 58 39.3**	**-1.7**
OHH				↓	*eS*		**Sn**	**00 58 59.0**	**-2.0**
IUG	**Iuzhnay**	**1.55**	**279**		P		**Pn**	**00 58 42.2**	**+0.4**
	13nm,0.2s								
IUG					S		**Sb**	**00 59 03.0**	**+0.2**
	59nm,0.2s								
IUG	**Iuzhnay**	**1.55**	**279**		*eP*		**Pn**	**00 58 42.2**	**+0.4**
	13nm,0.2s								
IUG					*eS*		**Sb**	**00 59 03.0**	**+0.2**
	59nm,0.2s								
FRG	**Fergana**	**1.56**	**189**		P		**Pg**	**00 58 44.3**	**+1.2**
FRG					S		**Sg**	**00 59 04.9**	**+1.5**
CHMG	**Chimgan**	**1.60**	**257**		P		Pn	00 58 33.0	-10
CHMG					S		Sn	00 58 53.7	-10
CHRV	**Charvak**	**1.62**	**261**		P		**Pg**	**00 58 45.0**	**+0.7**
CHRV					S		**Sg**	**00 59 06.4**	**+1.0**
KK31	**Karatay Array**	**1.66**	**316**	↑	Pn		**Pn**	**00 58 43.0**	**-0.3**
	1.7nm,0.2s,baz=130,slow=17,SNR=46								
KK31				↑	Sn		**Sn**	**00 59 05.2**	**+0.1**
	5.8nm,0.2s,baz=139,slow=30,SNR=12								
SALK	**Salom-Alik**	**1.66**	**128**	↓	*eP*		**Pn**	**00 58 42.6**	**-0.8**
SALK				↓	*eS*		**Sn**	**00 59 04.6**	**-0.8**
TVKS	**Tavaksay**	**1.86**	**260**		P		**Pb**	**00 58 48.0**	**+0.2**
TVKS					S		**Sg**	**00 59 12.7**	**-0.2**
AAK	**Ala-Archa**	**1.92**	**67**	↑	Pg		**Pb**	**00 58 49.4**	**+0.4**
	2.3nm,0.4s								
AAK				↓	Lg		Lg	00 59 14.1	
	4.6nm,0.6s								
AAK	**Ala-Archa**	**1.92**	**67**	↓	*eP*		**Pn**	**00 58 46.8**	**-0.2**
AAK				↓	*eS*		**Sn**	**00 59 11.9**	**+0.1**
BRLS	**Borolday**	**2.00**	**304**		Pg		**Pb**	**00 58 49.8**	**-0.5**
	2.6nm,0.2s								
BRLS					Lg		Lg	00 59 16.4	
	33nm,0.4s								
BRLS	**Borolday**	**2.00**	**304**		*eP*		**Pb**	**00 58 49.8**	**-0.5**
	2.6nm,0.2s								
BRLS					*eS*		**Sb**	**00 59 16.4**	**+0.7**
	33nm,0.4s								
FRU1	**Bishkek**	**2.08**	**64**	↓	*eP*		**Pn**	**00 58 48.9**	**-0.2**
FRU1				↓	*eS*		**Sn**	**00 59 15.5**	**-0.1**
BTK	**Batken**	**2.10**	**208**	↑	*eP*		**Pn**	**00 58 48.5**	**-0.8**
BTK				↑	*eS*		**Sn**	**00 59 14.8**	**-1.1**
SFK	**Sufi-Kurgan**	**2.19**	**150**	↑	*eP*		**Pn**	**00 58 50.1**	**-0.6**
SFK				↑	*eS*		**Sn**	**00 59 17.5**	**-0.9**
USP	**Ospenovka**	**2.23**	**52**	↑	*eP*		**Pn**	**00 58 51.0**	**-0.1**
USP				↑	*eS*		**Sn**	**00 59 19.1**	**-0.1**
CHMS	**Chumysh**	**2.24**	**60**	↓	*eP*		**Pn**	**00 58 51.1**	**-0.2**
CHMS				↓	*iS*		**Sn**	**00 59 19.4**	**-0.1**
KBK	**Karagaybulak**	**2.24**	**70**	↑	*eP*		**Pn**	**00 58 51.2**	**-0.2**
KBK				↑	*eS*		**Sn**	**00 59 19.6**	**-0.1**
SGDS	**Sogindy**	**2.42**	**50**		Pg		**Pb**	**00 58 56.7**	**-0.7**
	5.3nm,0.3s								
SGDS					Lg		Lg	00 59 28.8	
	45nm,0.3s								
TKM2	**Tokmak 2**	**2.78**	**68**	↓	*eP*		**Pn**	**00 58 58.8**	**0.0**
TKM2				↓	*eS*		**Sn**	**00 59 32.6**	**-0.4**
JNKS	**Jany-Kuch**	**2.79**	**107**	↑	*eP*		**Pn**	**00 58 59.1**	**+0.1**
JNKS				↑	*iS*		**Sn**	**00 59 33.1**	**-0.3**
BOOM	**Boomskoye usch**	**2.92**	**77**	↑	*eP*		**Pn**	**00 59 00.5**	**-0.2**
BOOM				↑	*eS*		**Sn**	**00 59 35.8**	**-0.5**
NRN	**Naryn**	**2.97**	**98**	↓	*eP*		**Pn**	**00 59 00.9**	**-0.6**
NRN				↓	*eS*		**Sn**	**00 59 36.5**	**-1.3**
KST	**Kastek**	**3.08**	**67**		Pg		**Pb**	**00 58 08.1**	**-0.5**
	1.4nm,0.2s								
KST					Lg		Lg	00 59 47.2	
	13nm,0.4s								
KST	**Kastek**	**3.08**	**67**		*eP*		**Pb**	**00 58 08.1**	**-0.5**
	1.4nm,0.2s								
KST					*eS*		**Sb**	**00 59 47.2**	**+0.6**

*SDD **23** 01:01:45.5±0.5, 18.32N×70.92W, h10km±2km, MD2.5, ML1.8, MW2.1, Presumed earthquake*

ISC 23 01:01:44.1±1.0, 18°25N±0.06×70°86W±0.04, h10km, n7, σ1§55/13, 4C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BANI	**BANI**	**0.50**	**73**	⇑*i*	P	**Pb**	**01 01 55.1**	**+0.1**
BANI				⇓*i*	S	**Sb**	**01 02 02.7**	**+0.3**
BANI					IAML		01 02 03.4	
	comp=N,116nm,0.6s							
LODU1	**El Espartillar**	**0.59**	**280**	*i*	P	**Pn**	**01 01 57.6**	**-0.9**
LODU1					IAML		01 02 09.9	
	comp=Z,45nm,2.0s							
LOVI	**El Cajuil, Ovi**	**0.66**	**227**	*i*	P	**Pn**	**01 01 59.9**	**+0.5**
LOVI				*eS*		**Sn**	**01 02 12.0**	**+2.1**
LOVI					IAML		01 02 14.3	
	comp=Z,35nm,0.9s							
LONE3	**El Aguacate, B**	**0.67**	**302**	*i*	P	**Pb**	**01 01 57.5**	**-0.4**
LONE3				*eS*		**Sb**	**01 02 07.1**	**-0.2**
LONE3					IAML		01 02 09.3	
	comp=Z,10nm,1.3s							
SDDR	**Presa de Saban**	**0.83**	**331**	*i*	P	**Pg**	**01 01 59.0**	**-1.1**
SDDR				*eS*		**Sg**	**01 02 09.6**	**-1.5**
SDDR					IAML		01 02 13.0	
	comp=Z,225nm,0.1s							
REDR	**Restauracion**	**1.04**	**331**	⇓*i*	P	**Pn**	**01 02 06.8**	**+2.1**
REDR				⇑*i*	S	**Sn**	**01 02 22.3**	**+2.9**
REDR					IAML		01 02 28.6	
	comp=N,12nm,0.6s							
HATOM	**Hato Mayor del**	**1.50**	**69**	⇑*i*	P	**Pb**	**01 02 11.3**	**-0.8**
HATOM				⇑*i*	S	**Sb**	**01 02 30.1**	**-1.2**
HATOM					IAML		01 02 30.8	
	comp=N,12nm,1.4s							

*GCG **23** 01:04:23.3±0.4, 12.71N×89.61W, h34km±999km, MD3.8, Presumed earthquake*

SNET 23 01:04:24.3±3.4, 12.73N×89.51W, h15km, ML2.7, Presumed earthquake, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.92**	**4**	*i*	P	Pb	01 04 39.9	-2.2
JAYA	**Jayaque - finc**	**0.92**	**4**	*i*	P	Pb	01 04 40.6	-1.6
JAYA				*eS*		Sb	01 04 54.0	-0.2
PMON	**Piamonte**	**1.00**	**11**	*i*	P	Pg	01 04 43.6	-0.1
PMON				*eS*		Sn	01 04 58.5	+0.8
PAVA	**Las Pavas**	**1.13**	**30**	*eS*		Sn	01 05 03.3	+2.3
NUBE	**Las Nubes**	**1.20**	**347**	*i*	P	Pn	01 04 44.0	-2.6
NUBE				*i*	S	Sb	01 05 00.3	-1.9
RBDL	**Robledal**	**1.39**	**353**	*i*	P	Pn	01 04 48.1	-1.2
MTO3	**Montecristo**	**1.67**	**5**	*i*	P	Pn	01 04 51.3	-1.9
MTO3	**Montecristo**	**1.67**	**5**	*i*	P	Pn	01 04 51.6	-1.6
MTO3				*eS*		Sb	01 05 15.6	-0.2

*IDC **23** 01:04:23.8±0.8, 33.00N×86.85E, h0km, mb3.8/13, mbtmp3.8/18, ML3.9/5, MS3.0/1, Error ellipse: s-maj=23.8km s-min=14.8km az=39.0*
*NEIC **23** 01:04:25.8±1.9, 32.94N±0.08×86.61E±0.08, h10km±1km, mb4.3/29, Error ellipse: s-maj=14.4km s-min=10.6km az=26.0*

ISC 23 01:04:25.4±0.5, 33.01N±0.07×86.73E±0.06, h10km, n92, σ1§31/91, mb4.3/33, 3C, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.02**	**130**	Pn		**Pn**	**01 05 40.9**	**-0.3**
EVN	**Everest**	**5.04**	**179**			**Pn**	**01 05 40.4**	**-1.2**
SMLA	**Simla**	**8.33**	**260**	*eP*		**Pn**	**01 06 29.6**	**+3.4**
SHL	**Shillong**	**8.67**	**147**	Pn		**Pn**	**01 06 31.2**	**+0.1**
WMQ	**Urumqi**	**10.82**	**4**	*eP*		**Pn**	**01 07 03.9**	**+3.5**
MORE	**Moreh**	**10.98**	**141**			**Pn**	**01 07 03.2**	**+0.7**
TARG	**Taragay, Kyrgy**	**11.22**	**323**			**Pn**	**01 07 07.0**	**+0.8**
NIL	**Nilore**	**11.29**	**277**	Pn		**Pn**	**01 07 07.5**	**+0.6**
PDGK	**Podgornoye**	**11.77**	**333**			**Pn**	**01 07 13.5**	**+0.1**
BHPL	**Bhopal**	**12.73**	**222**	*eP*		**Pn**	**01 07 26.4**	**-0.1**
BHPL				*eS*		Sn	01 09 25.4	-23
BOOM	**Boomskoye usch**	**12.73**	**321**			**Pn**	**01 07 26.2**	**-0.5**
AAK	**Ala-Archa**	**13.62**	**318**	Pn		**Pn**	**01 07 40.9**	**+2.1**
	0.4nm,0.3s,baz=120,slow=20,SNR=1.6 0.9nm,0.3s							
AAK	**Ala-Archa**	**13.62**	**318**			**Pn**	**01 07 36.9**	**-1.9**
MKAR	**Makanchi Array**	**14.18**	**347**	Pn		**Pn**	**01 07 45.2**	**-1.0**
	0.1nm,0.3s,baz=156,slow=13,SNR=7.6							
MKAR					LR	LR	01 14 16.1	
	comp=Z,61nm,21.0s,baz=88,slow=42 1.3nm,0.7s							
LZDM	**Lanzhou Array**	**14.30**	**73**	Pn		**Pn**	**01 07 46.6**	**-1.6**
	baz=260,slow=13 2.2nm,0.4s							
PZH	**PanZhiHua**	**14.55**	**113**	P		**Pn**	**01 07 53.8**	**+2.2**
BTK	**Batken**	**14.59**	**303**	Pn		**Pn**	**01 07 50.3**	**-1.6**
KBL	**Kabul**	**14.79**	**281**	Pn		**Pn**	**01 07 53.4**	**-1.5**
CHGR	**Chuyangaron**	**15.32**	**297**	Pn		**Pn**	**01 08 02.3**	**+0.5**
CHGR					IAmb	IAmb	01 08 13.6	
	comp=Z,16nm,0.8s							
KMI2	**Kunming**	**16.03**	**115**	P		**Pn**	**01 08 13.4**	**+2.2**
KMI2				pmax		pmax		
	comp=Z,8.0nm,1.3s							
KMI2				LR		LR		
	comp=N,150nm,9.8s							
KMI2				LR		LR		
	comp=E,140nm,11.1s							
KMI2				LR		LR		
	comp=Z,190nm,24.9s							
KKAR	**Karatay Array**	**16.24**	**313**			**Pn**	**01 08 13.3**	**-0.3**
CM31	**Chiang Mai Arr**	**18.17**	**140**			**Pn**	**01 08 38.6**	**+0.7**
CM31					IAmb	IAmb	01 09 01.9	
	comp=Z,8.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**18.17**	**140**	P		**Pn**	**01 08 36.8**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=334,slow=10,SNR=8.9 comp=Z,1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**18.17**	**140**			**Pn**	**01 08 37.2**	**-0.7**
KURBB	**Kurchatov Arra**	**18.61**	**343**	P		**P**	**01 08 42.0**	**-0.7**
	baz=158,slow=12,SNR=16 comp=Z,3.9nm,1.0s							
KURK	**Kurchatov**	**18.67**	**344**			**P**	**01 08 42.5**	**-0.9**
KURK					IAmb	IAmb	01 08 44.5	
	comp=Z,13nm,1.3s							
SLVN	**Son La**	**19.17**	**123**	Pn		**Pn**	**01 08 51.7**	**+1.6**
ENH	**Enshi**	**19.56**	**92**	P		**P**	**01 08 53.7**	**+0.3**
ENH					IAmb	IAmb	01 08 55.5	
	comp=Z,16nm,1.1s							
HRA	**Herat**	**20.41**	**281**	P		**P**	**01 09 03.0**	**+0.1**
SONM	**Songino Array**	**20.97**	**39**	P		**P**	**01 09 08.7**	**0.0**
	comp=Z,1.0nm,0.6s,baz=224,slow=12,SNR=5.1 comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**20.97**	**39**	P		**P**	**01 09 07.7**	**-1.1**
ZAA0	**Zalesovo Array**	**20.97**	**357**			**P**	**01 09 08.4**	**-0.1**
ZAA0					IAmb	IAmb	01 09 10.0	
	comp=Z,12nm,1.4s							
ZALV	**Zalesovo Beam**	**20.97**	**357**	P		**P**	**01 09 08.6**	**0.0**
	comp=Z,3.0nm,0.7s,baz=179,slow=10,SNR=16 comp=Z,3.0nm,0.7s							
ZALV	**Zalesovo Beam**	**20.97**	**357**			**P**	**01 09 08.3**	**-0.2**
HHC	**Hu-ho-hao-te**	**21.29**	**61**	*eP*		**P**	**01 09 13.5**	**+1.3**
HHC				pmax		pmax		
	comp=Z,13nm,0.5s							
HHC				pmax		pmax		
	comp=Z,56nm,5.5s							
BVAR	**Borovoye Array**	**23.20**	**334**	P		**P**	**01 09 32.2**	**0.0**
	comp=Z,1.9nm,0.9s,baz=138,slow=8.9,SNR=7.8 comp=Z,1.9nm,0.9s							
BORK	**Borovoye**	**23.24**	**334**			**P**	**01 09 32.8**	**+0.2**
AB31	**Akbulak array**	**25.70**	**317**	P		**P**	**01 09 54.8**	**-0.8**
AB31					IAmb	IAmb	01 09 59.3	
	comp=Z,4.0nm,1.1s							
ABKAR	**Akbulak array**	**25.70**	**317**	P		**P**	**01 09 54.6**	**-1.0**
KS19	**Wonju Array Si**	**33.70**	**71**	P		**P**	**01 11 07.0**	**+0.3**
KSAR	**Wonju Array Be**	**33.72**	**71**	P		**P**	**01 11 07.0**	**+0.1**
KSRS	**Korea Array**	**33.74**	**71**	P		**P**	**01 11 05.8**	**-1.3**
	comp=Z,2.2nm,0.7s,baz=276,slow=9.4,SNR=6.6 comp=Z,2.2nm,0.7s							
GEVA	**Gevas**	**35.62**	**291**	P		**P**	**01 11 22.0**	**-1.6**
JMN	**Monobe**	**39.11**	**76**	P		**P**	**01 11 54.3**	**+1.3**
JMN					IAmb	IAmb	01 12 33.9	
	comp=Z,16nm,1.2s							
ASAJ	**Asahikawa**	**44.30**	**59**	P		**P**	**01 12 34.5**	**-0.8**
	comp=Z,25nm,0.3s,baz=285,slow=20,SNR=4.5							
AKASG	**Malin Array Be**	**45.13**	**311**	P		**P**	**01 12 42.0**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=82,slow=7.3,SNR=7.3 comp=Z,1.6nm,0.8s							
AKASG	**Malin Array Be**	**45.13**	**311**	P		**P**	**01 12 41.8**	**0.0**
AKASG					IAmb	IAmb	01 12 45.9	
	comp=Z,2.5nm,1.0s							
AKBB	**Malin Array Si**	**45.13**	**311**	P		**P**	**01 12 42.8**	**+0.9**
AKBB					IAmb	IAmb	01 12 47.0	
	comp=Z,3.3nm,0.7s							
LVZ	**Lovozero**	**45.79**	**335**	P		**P**	**01 12 47.3**	**+0.4**
VRI	**Vrincioaia**	**47.05**	**304**	⇑P		**P**	**01 12 59.5**	**+2.4**
MLR	**Muntele Rosu**	**47.63**	**304**	⇑P		**P**	**01 13 04.1**	**+2.3**
MLR	**Muntele Rosu**	**47.63**	**304**	P		**P**	**01 13 02.2**	**+0.4**
BURAR	**Bucovina Array**	**47.90**	**307**	P		**P**	**01 13 03.6**	**-0.2**
MARR	**Marisel-Cluj**	**49.43**	**306**	⇑P		**P**	**01 13 17.5**	**+1.9**
MORC	**Moravsky Berou**	**52.67**	**310**	*eP*		**P**	**01 13 41.1**	**+1.3**
JAVC	**Velka Javorina**	**52.74**	**309**	*eP*		**P**	**01 13 43.8**	**+3.4**
VRAC	**Vranov**	**53.36**	**310**	*eP*		**P**	**01 13 46.6**	**+1.7**
KRUC	**Moravsky**	**53.53**	**310**	*eP*		**P**	**01 13 49.0**	**+2.9**
HFS	**Hagfors**	**53.69**	**324**	P		**P**	**01 13 46.0**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=92,slow=13,SNR=1.4 comp=Z,1.5nm,0.8s							
RONA	**Rosalia, Austr**	**53.85**	**308**	*i*	pP	**P**	**01 13 51.0**	**+2.4**
	comp=Z,4.1nm,1.3s							
CONA	**Conrad Observa**	**54.09**	**308**	*i*	P	**P**	**01 13 51.5**	**+1.1**
	comp=Z,1nm,0.7s							
ARSA	**Arzberg**	**54.46**	**308**	*ep*		pP	01 13 56.1	-1.6
	comp=Z,2.4nm,0.9s							
NOA	**NORSAR Array B**	**54.83**	**325**	P		**P**	**01 13 57.2**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=84,slow=7.2,SNR=3.8 comp=Z,0.8nm,0.7s							
SOKA	**Soboth**	**54.91**	**307**	*i*	P	**P**	**01 13 56.6**	**+0.3**
	comp=Z,8.8nm,1.8s							
MOA	**Moln**	**55.16**	**309**	*i*	pP	**P**	**01 13 59.5**	**+1.4**
	comp=Z,6.7nm,1.8s							
OBKA	**Obir**	**55.27**	**307**	*i*	pP	**P**	**01 14 00.3**	**+1.4**
	comp=Z,4.4nm,1.2s							
GEC2	**GERESS Array S**	**55.31**	**310**	P		**P**	**01 13 59.1**	**-0.1**
GEC2					IAmb	IAmb	01 14 03.8	
	comp=Z,6.2nm,1.3s							
GERES	**GERESS Array B**	**55.31**	**310**	P		**P**	**01 14 00.8**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=76,slow=7.1,SNR=9.4 comp=Z,0.9nm,0.8s							
GERES	**GERESS Array B**	**55.31**	**310**	P		**P**	**01 13 59.2**	**0.0**
BIOA	**Bad Ischl, Aus**	**55.61**	**308**	*eP*		**P**	**01 14 01.4**	**+0.2**
	comp=Z,4.1nm,1.3s							
LESA	**Schwarzleotal**	**56.30**	**308**	*i*	pP	**P**	**01 14 07.6**	**+1.3**
	comp=Z,7.0nm,1.9s							
WTTA	**Wattenberg**	**57.03**	**308**	*i*	pP	**P**	**01 14 12.7**	**+1.1**
	comp=Z,2.7nm,0.8s							
WATA	**Walderalm**	**57.05**	**308**	*i*	pP	**P**	**01 14 13.4**	**+1.7**
	comp=Z,2.7nm,0.8s							
CTI	**Castel Tesino**	**57.33**	**307**	P		**P**	**01 14 13.2**	**-0.5**
CTI					IAmb	IAmb	01 14 13.6	
	comp=Z,4.2nm,1.2s							
MOTA	**Moosalm**	**57.36**	**309**	*eP*		**P**	**01 14 13.3**	**-0.7**
	comp=Z,2.1nm,1.3s							
MURB	**Monte Urbino**	**57.50**	**304**	P		**P**	**01 14 14.8**	**-0.1**
RETA	**Reutte**	**57.55**	**309**	*i*	P	**P**	**01 14 16.2**	**+1.1**
	comp=Z,4.5nm,1.5s							
FETA	**Feichten**	**57.69**	**308**	*i*	P	**P**	**01 14 16.8**	**+0.6**
	comp=Z,2.5nm,1.3s							
FUORN	**Ofenpass-Fuorn**	**58.10**	**308**		P	**P**	**01 14 18.4**	**-0.9**
FUORN					IAmb	IAmb	01 14 24.6	
	comp=Z,2.7nm,1.0s							
SENIN	**Lac Senin/Sane**	**60.14**	**308**		P	**P**	**01 14 33.6**	**+0.2**
SENIN					IAmb	IAmb	01 14 37.3	
	comp=Z,3.8nm,1.1s							
MBAR	**Mbarara**	**62.34**	**249**		P	**P**	**01 14 46.8**	**-1.8**
MBAR					IAmb	IAmb	01 15 06.8	
	comp=Z,8.2nm,1.3s							
EKA	**Eskdalemuir Ar**	**63.52**	**320**	P		**P**	**01 14 57.5**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=58,slow=5.9,SNR=2.1 comp=Z,0.6nm,0.6s							
AMKA	**Amchitka**	**66.49**	**43**	P		**P**	**01 15 16.1**	**+1.1**
WRA	**Warramunga Arr**	**69.57**	**132**	P		**P**	**01 15 34.4**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=317,slow=6.5,SNR=4.2 comp=Z,1.0nm,0.9s							
WRA	**Warramunga Arr**	**69.57**	**132**	P		**P**	**01 15 34.6**	**-0.2**
ASAR	**Alice Springs**	**72.11**	**135**	P		**P**	**01 15 50.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=318,slow=6.7,SNR=7.2 comp=Z,0.9nm,0.7s							
ASAR	**Alice Springs**	**72.11**	**135**	P		**P**	**01 15 50.6**	**+0.5**
ILAR	**Eielson Array**	**73.96**	**21**	P		**P**	**01 15 59.8**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=319,slow=5.2,SNR=3.7 comp=Z,0.4nm,0.9s							
ILAR	**Eielson Array**	**73.96**	**21**	P		**P**	**01 15 59.2**	**-1.4**
TORD	**Torodi Ar. Bea**	**78.85**	**278**	P		**P**	**01 16 29.6**	**+0.4**
	comp=Z,1.0nm,1.0s,baz=53,slow=5.5,SNR=3.2 comp=Z,1.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**78.85**	**278**	P		**P**	**01 16 29.1**	**-0.1**
TORD					IAmb	IAmb	01 16 45.0	
	comp=Z,3.9nm,1.1s							
LPAZ	**La Paz**		**151.84**	PKPbc		**PKPbc**	**01 24 20.3**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=45,slow=7.1,SNR=4.5							

*KRSC **23** 01:06:25.3±1.1, 53.46N×161.15E, h44km±17km, Mc3.6, Ml4.5, Felt [IV] at kordon Aerodrom.*
*MOS **23** 01:06:27.5±0.8, 53.48N×161.02E, h42km, mb4.3/16, Error ellipse: s-maj=6.8km s-min=3.8km az=85.1*
*NEIC **23** 01:06:28.3±1.6, 53.70N±0.08×160.8E±0.1, h35km±2km, mb4.3/21, Error ellipse: s-maj=15.3km s-min=10.7km az=137.0*
*IDC **23** 01:06:31.8±1.9, 53.72N×160.60E, h67km±16km, mb3.7/30, mbtmp4.0/31, MS3.1/8, Error ellipse: s-maj=16.7km s-min=12.0km az=139.0*

ISC 23 01:06:26.9±0.9, 53.62N±0.03×161.02E±0.03, h30km±6km, n240, σ1§38/306, mb4.2/63, MS3.3/6, 17C-7D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.79**	**229**	Pn		**Pb**	**01 06 41.7**	**-0.4**
SPN					S	**Sb**	**01 06 51.4**	**-1.1**
SPN	**Mys Shipunski**	**0.79**	**229**	*eP*		**Pb**	**01 06 41.8**	**-0.4**
SPN				*eS*		**Sb**	**01 06 51.5**	**-1.1**
KII	**Karymskiy**	**1.02**	**295**	Pn		**Pn**	**01 06 46.0**	**+0.8**
KII					S	**Sn**	**01 06 59.1**	**+0.6**
KII	**Karymskiy**	**1.02**	**295**	*eP*		**Pn**	**01 06 46.1**	**+0.8**
KII				*eS*		**Sn**	**01 06 59.1**	**+0.6**
MKZ	**Mys Kozlova**	**1.03**	**24**	Pn		**Pn**	**01 06 46.1**	**+1.0**
MKZ					S	**Sn**	**01 06 59.6**	**+1.1**
MKZ	**Mys Kozlova**	**1.03**	**24**	*eP*		**Pn**	**01 06 46.2**	**+1.0**
MKZ				*eS*		**Sn**	**01 06 59.7**	**+1.1**
NLC	**Nalytchevo**	**1.10**	**247**	*eS*		**Sb**	**01 06 59.9**	**-1.3**
SDLR	**Sedlovina**	**1.32**	**256**	PN		**Pb**	**01 06 49.8**	**-1.3**
SDLR					S	**Sn**	**01 07 06.6**	**+0.6**
SDLR	**Sedlovina**	**1.32**	**256**	*eP*		**Pb**	**01 06 49.9**	**-1.3**
SDLR				*eS*		**Sn**	**01 07 06.6**	**+0.6**
SMAR	**Somma**	**1.38**	**256**	PN		**Pn**	**01 06 50.6**	**+0.4**
SMAR					S	**Sn**	**01 07 07.7**	**+0.3**
SMAR	**Somma**	**1.38**	**256**	*eP*		**Pn**	**01 06 50.6**	**+0.4**
SMAR				*eS*		**Sn**	**01 07 07.8**	**+0.3**
KRER	**Koryakskii**	**1.40**	**258**	PN		**Pb**	**01 06 51.2**	**-1.1**
KRER	**Koryakskii**	**1.40**	**258**	*eP*		**Pb**	**01 06 51.3**	**-1.1**
AVH	**Avacha**	**1.41**	**256**	PN		**Pb**	**01 06 51.3**	**-1.3**
AVH					S	**Sb**	**01 07 09.5**	**-0.7**
AVH	**Avacha**	**1.41**	**256**	*eP*		**Pb**	**01 06 51.4**	**-1.3**
AVH				*eS*		**Sb**	**01 07 09.5**	**-0.7**
KRX	**Arik**	**1.44**	**261**	PN		**Pn**	**01 06 51.5**	**+0.5**
KRX					S	**Sb**	**01 07 09.9**	**-1.2**
KRX	**Arik**	**1.44**	**261**	*eP*		**Pn**	**01 06 51.6**	**+0.5**
KRX				*eS*		**Sb**	**01 07 09.9**	**-1.2**
KOK	**Koryaka**	**1.46**	**258**	PN		**Pb**	**01 06 52.0**	**-1.5**
KOK	**Koryaka**	**1.46**	**258**	*eP*		**Pb**	**01 06 52.0**	**-1.5**
DALK	**Dalny**	**1.48**	**247**	PN		**Pn**	**01 06 51.4**	**0.0**
DALK					S	**Sn**	**01 07 09.5**	**-0.2**
DALK	**Dalny**	**1.48**	**247**	*eP*		**Pn**	**01 06 51.5**	**0.0**
DALK				*eS*		**Sn**	**01 07 09.5**	**-0.2**
PET	**Petropavlovsk**	**1.54**	**248**	*eP*	N	**Pn**	**01 06 52.4**	**+0.2**
PET				*eS*		**Sn**	**01 07 12.3**	**+1.1**
PET					smax	smax		
	comp=N,2μm,0.5s							
PET					smax	smax		
	comp=E,2μm,0.5s							
PET	**Petropavlovsk**	**1.54**	**248**			**Pn**	**01 06 52.5**	**+0.2**
PET					Sn	**Sn**	**01 07 11.0**	**-0.3**
PET	**Petropavlovsk**	**1.54**	**248**	*eP*		**Pn**	**01 06 52.4**	**+0.2**
PET				*eS*		**Sn**	**01 07 10.9**	**-0.3**
INSR	**Institute**	**1.55**	**250**	PN		**Pn**	**01 06 52.9**	**+0.5**
INSR					S	**Sn**	**01 07 11.6**	**+0.2**
INSR	**Institute**	**1.55**	**250**	*eP*		**Pn**	**01 06 52.9**	**+0.5**
INSR				*eS*		**Sn**	**01 07 11.6**	**+0.2**
TUMD	**Tumrok D**	**1.63**	**347**	PN		**Pb**	**01 06 55.9**	**-0.3**
TUMD					S	**Sb**	**01 07 16.1**	**-0.2**
TUMD	**Tumrok D**	**1.63**	**347**	*eP*		**Pb**	**01 06 56.0**	**-0.3**
TUMD				*eS*		**Sb**	**01 07 16.2**	**-0.2**
TUMR	**Tumrok**	**1.74**	**343**	PN		**Pb**	**01 06 58.5**	**+0.3**
TUMR					S	**Sb**	**01 07 20.6**	**+0.8**
TUMR	**Tumrok**	**1.74**	**343**	*eP*		**Pb**	**01 06 58.6**	**+0.3**
TUMR				*eS*		**Sb**	**01 07 20.6**	**+0.8**
GNL	**Ganaly**	**1.83**	**274**	PN		**Pb**	**01 06 58.3**	**-1.5**
GNL					S	**Sb**	**01 07 21.4**	**-0.9**
GNL	**Ganaly**	**1.83**	**274**	*eP*		**Pb**	**01 06 58.3**	**-1.5**
GNL				*eS*		**Sb**	**01 07 21.5**	**-0.9**
KRMR	**Karymshinskiy**	**1.91**	**247**	PN		**Pn**	**01 06 57.8**	**+0.5**
KRMR					S	**Sn**	**01 07 21.4**	**+1.1**
KRMR	**Karymshinskiy**	**1.91**	**247**	*eP*		**Pn**	**01 06 57.9**	**+0.5**
KRMR				*eS*		**Sn**	**01 07 21.4**	**+1.1**
RUS	**Russkaya**	**1.93**	**233**	PN		**Pn**	**01 06 57.0**	**-0.5**
RUS					S	**Sn**	**01 07 20.0**	**-0.6**
RUS	**Russkaya**	**1.93**	**233**	*eP*		**Pn**	**01 06 57.0**	**-0.5**
RUS				*eS*		**Sn**	**01 07 20.1**	**-0.6**
PEA0B	**Petropavlovsk-**	**2.06**	**257**	*ce*	PN	**Pn**	**01 07 00.7**	**+1.4**
PEA0B	**Petropavlovsk-**	**2.06**	**257**			**Pn**	**01 07 00.5**	**+1.2**
PETK	**Petropavlovsk-**	**2.06**	**257**	P		**Pn**	**01 07 00.7**	**+1.3**
	comp=E,162nm,0.4s,baz=68,slow=16,SNR=256							
PETK					S	**Sn**	**01 07 24.2**	**+0.2**
	comp=E,136nm,0.6s,baz=80,slow=19,SNR=4.9							
PETK					LR	LR	01 07 58.1	
	comp=E,325nm,19.8s,baz=79,slow=47							
PETK	**Petropavlovsk-**	**2.06**	**257**			**Pn**	**01 07 00.5**	**+1.2**
PETK						**Sn**	**01 07 23.9**	**0.0**
MTVR	**Mutnovka**	**2.06**	**238**	PN		**Pn**	**01 06 59.5**	**0.0**
MTVR					S	**Sn**	**01 07 23.3**	**-0.8**
MTVR	**Mutnovka**	**2.06**	**238**	*eP*		**Pn**	**01 06 59.5**	**0.0**
MTVR				*eS*		**Sn**	**01 07 23.4**	**-0.8**
GRL	**Gorelyy**	**2.08**	**240**	PN		**Pn**	**01 07 00.3**	**+0.6**
GRL					S	**Sn**	**01 07 24.6**	**+0.1**
GRL	**Gorelyy**	**2.08**	**240**	*eP*		**Pn**	**01 07 00.3**	**+0.6**
GRL				*eS*		**Sn**	**01 07 24.7**	**+0.1**
KMNR	**Kamenistaya**	**2.19**	**348**	PN		**Pb**	**01 07 05.4**	**-0.4**
KMNR					S	**Sb**	**01 07 34.2**	**+1.7**
KMNR	**Kamenistaya**	**2.19**	**348**	*eP*		**Pb**	**01 07 05.5**	**-0.4**
KMNR				*eS*		**Sb**	**01 07 34.2**	**+1.7**
ASAK	**Asacha**	**2.26**	**238**	PN		**Pn**	**01 07 03.0**	**+0.9**
ASAK					S	**Sn**	**01 07 30.6**	**+1.6**
ASAK	**Asacha**	**2.26**	**238**	*eP*		**Pn**	**01 07 03.0**	**+0.9**
ASAK				*eS*		**Sn**	**01 07 30.7**	**+1.6**
BZP	**Bezymyannyi-Pe**	**2.31**	**353**	PN		**Pb**	**01 07 06.9**	**-1.0**
BZP					S	**Sb**	**01 07 35.4**	**-0.7**
BZP	**Bezymyannyi-Pe**	**2.31**	**353**	*eP*		**Pb**	**01 07 07.0**	**-1.0**
BZP				*eS*		**Sb**	**01 07 35.5**	**-0.7**
BZGR	**Bezymyannyi-Gr**	**2.33**	**355**	PN		**Pb**	**01 07 07.0**	**-1.2**
BZGR					S	**Sb**	**01 07 36.6**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.33**	**355**	*eP*		**Pb**	**01 07 07.1**	**-1.2**
BZGR				*eS*		**Sb**	**01 07 36.6**	**-0.1**
BZMR	**Bezymyannaya**	**2.34**	**353**	PN		**Pb**	**01 07 07.2**	**-1.2**
BZMR					S	**Sb**	**01 07 37.6**	**+0.7**
BZMR	**Bezymyannaya**	**2.34**	**353**	*eP*		**Pb**	**01 07 07.3**	**-1.2**
BZMR				*eS*		**Sb**	**01 07 37.7**	**+0.7**
BZWR	**Bezymyannyi-We**	**2.37**	**353**	PN		**Pb**	**01 07 07.7**	**-1.2**
BZWR					S	**Sb**	**01 07 38.0**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.37**	**353**	*eP*		**Pb**	**01 07 07.8**	**-1.2**
BZWR				*eS*		**Sb**	**01 07 38.0**	**+0.2**
KIRR	**Kirishev**	**2.37**	**351**	PN		**Pb**	**01 07 07.6**	**-1.3**
KIRR					S	**Sb**	**01 07 37.8**	**0.0**
KIRR	**Kirishev**	**2.37**	**351**	*eP*		**Pb**	**01 07 07.7**	**-1.3**
KIRR				*eS*		**Sb**	**01 07 37.8**	**0.0**
KPT	**Kopyto**	**2.40**	**349**	PN		**Pb**	**01 07 07.9**	**-1.4**
KPT					S	**Sb**	**01 07 38.0**	**-0.4**
KPT	**Kopyto**	**2.40**	**349**	*eP

MJAR	**Matsushiro Arr**	**23.31**	**232**	P		**P**	**01 11 32.3**	**+0.2**
	comp=Z,4.0nm,0.5s,baz=38,slow=9.4,SNR=14							
	comp=Z,4.0nm,0.5s							
MJAR	**Matsushiro Arr**	**23.31**	**232**	P		**P**	**01 11 30.7**	**-1.4**
MJAR				pmax	pmax			
	comp=Z,6.0nm,1.5s							
MJAR	**Matsushiro Arr**	**23.31**	**232**	P		**P**	**01 11 30.7**	**-1.4**
MAJO	**Matsushiro**	**23.31**	**232**	*c* i P		**P**	**01 11 32.5**	**+0.4**
MAJO				pmax	pmax			
	comp=Z,9.0nm,0.9s							
MAJO	**Matsushiro**	**23.31**	**232**	P		**P**	**01 11 32.4**	**+0.2**
MAJO				IAmb	IAmb		01 11 33.7	
	comp=Z,9.2nm,0.7s							
E19K	**Redstone River**	**24.15**	**39**	P		**P**	**01 11 41.2**	**+1.3**
B20K	**Meade River**	**24.92**	**33**	P		**P**	**01 11 47.8**	**+1.0**
JHJ	**Hachijo jima 2**	**25.48**	**225**	LR		LR	01 23 28.4	
	comp=Z,32nm,19.6s,baz=98,slow=40							
B21K	**Ikpikpuk River**	**25.65**	**34**	P		**P**	**01 11 54.4**	**+1.1**
B21K				IAmb		IAmb	01 11 55.7	
	comp=Z,3.4nm,0.7s							
HILR	**Hailar Array B**	**25.70**	**278**	P		**P**	**01 11 53.6**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=72,slow=9.3,SNR=3.6							
	comp=Z,1.0nm,0.3s							
KSRS	**Korea Array**	**27.93**	**248**	P		**P**	**01 12 14.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=46,slow=9.2,SNR=1.7							
KSRS				LR		LR	01 22 36.9	
	comp=Z,18nm,19.8s,baz=150,slow=35							
	comp=Z,1.0nm,0.5s							
ILAR	**Eielson Array**	**28.05**	**46**	P		**P**	**01 12 16.1**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=277,slow=7.7,SNR=5.0							
ILAR				PcP		**PcP**	**01 15 28.5**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=278,slow=2.6,SNR=2.3							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**28.05**	**46**	P		**P**	**01 12 16.8**	**+1.7**
D25K	**Kavik River**	**28.44**	**36**	P		**P**	**01 12 19.8**	**+1.2**
ULN	**Ulaanbaatar**	**33.92**	**283**	⇑*eP*		**P**	**01 13 06.8**	**-0.3**
ULN				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TLY	**Talaya**	**34.06**	**291**	LR		LR	01 27 44.2	
	comp=Z,41nm,18.1s,baz=62,slow=38							
H11N2	**WAKE ISLAND Hy**	**34.13**	**170**	T		T	01 49 30.6	
	baz=354,slow=76,SNR=343							
H11N3	**WAKE ISLAND Hy**	**34.14**	**170**	T		T	01 49 31.7	
	baz=354,slow=76,SNR=200							
H11N1	**WAKE ISLAND Hy**	**34.15**	**170**	T		T	01 49 31.9	
	baz=354,slow=76,SNR=404							
SONM	**Songino Array**	**34.32**	**283**	P		**P**	**01 13 08.0**	**-2.6**
	comp=Z,0.7nm,0.4s,baz=63,slow=9.5,SNR=2.0							
SONM				PcP		**PcP**	**01 15 44.1**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=66,slow=4.9,SNR=2.7							
	comp=Z,0.7nm,0.4s							
SONM	**Songino Array**	**34.32**	**283**	P		**P**	**01 13 08.0**	**-2.6**
SONM				IAmb		IAmb	01 13 46.5	
	comp=Z,3.6nm,1.4s							
SONM						**PcP**	**01 15 45.2**	**-0.8**
H11S1	**WAKE ISLAND Hy**	**35.32**	**171**	T		T	01 50 54.8	
	baz=352,slow=76,SNR=14							
H11S3	**WAKE ISLAND Hy**	**35.33**	**171**	T		T	01 50 58.3	
	baz=352,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**35.34**	**171**	T		T	01 50 59.9	
	baz=352,slow=76,SNR=5.5							
NRIK	**Noril'sk**	**35.80**	**324**	LR		LR	01 29 33.6	
	comp=Z,70nm,18.3s,baz=112,slow=39							
NRIK	**Noril'sk**	**35.80**	**324**	⇓*iP*		**P**	**01 13 24.5**	**+1.6**
NRIK				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**42.40**	**43**	P		**P**	**01 14 19.4**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=298,slow=8.4,SNR=2.3							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**42.40**	**43**	P		**P**	**01 14 19.0**	**+1.0**
YKA	**Yellowknife Ar**	**42.40**	**43**	P		**P**	**01 14 19.0**	**+1.0**
ZALV	**Zalesovo Beam**	**42.96**	**303**	P		**P**	**01 14 19.7**	**-3.0**
	comp=Z,0.7nm,0.5s,baz=54,slow=7.3,SNR=3.8							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**42.96**	**303**	P		**P**	**01 14 20.2**	**-2.5**
ZALV	**Zalesovo Beam**	**42.96**	**303**	P		**P**	**01 14 20.2**	**-2.5**
DGZ	**Jazzator, Alta**	**43.94**	**296**	*eP*		**P**	**01 14 31.5**	**+0.7**
DGZ				pmax	pmax			
	comp=Z,1.0nm,1.0s							
SPA0	**Spitsbergen Ar**	**46.71**	**351**	*eP*		**P**	**01 14 53.4**	**+1.1**
SPA0				IAmb		IAmb	01 14 56.9	
	comp=Z,35nm,1.3s							
SPITS	**Spitsbergen Ar**	**46.71**	**351**	P		**P**	**01 14 52.7**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=38,slow=7.3,SNR=13							
	comp=Z,3.9nm,0.6s							
KURK	**Kurchatov**	**47.93**	**302**	⇓*iP*		**P**	**01 15 01.2**	**-0.8**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KURK	**Kurchatov**	**47.93**	**302**	P		**P**	**01 15 00.6**	**-1.4**
KURBB	**Kurchatov Arra**	**48.03**	**302**	P		**P**	**01 15 00.2**	**-2.6**
	comp=Z,2.4nm,0.5s,baz=56,slow=7.7,SNR=17							
	comp=Z,2.4nm,0.5s							
MK31	**Makanchi Array**	**48.43**	**296**	*c* i P		**P**	**01 15 05.4**	**-0.6**
MKAR	**Makanchi Array**	**48.43**	**296**	P		**P**	**01 15 04.0**	**-2.0**
	comp=Z,0.7nm,0.4s,baz=51,slow=6.8,SNR=9.6							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**48.43**	**296**	P		**P**	**01 15 04.5**	**-1.5**
MKAR	**Makanchi Array**	**48.43**	**296**	P		**P**	**01 15 04.5**	**-1.5**
BVAR	**Borovoye Array**	**50.50**	**308**	P		**P**	**01 15 19.9**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=49,slow=7.7,SNR=8.8							
BVAR				PcP		**PcP**	**01 16 38.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=42,slow=4.5,SNR=2.3							
	comp=Z,1.0nm,0.3s							
BORK	**Borovoye**	**50.52**	**309**	*d* i P		**P**	**01 15 20.3**	**-1.5**
BORK				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BORK	**Borovoye**	**50.52**	**309**	P		**P**	**01 15 20.6**	**-1.2**
BORK				IAmb		IAmb	01 15 23.5	
	comp=Z,1.7nm,0.8s							
ARCES	**ARCESS Array B**	**52.96**	**342**	P		**P**	**01 15 39.5**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=34,slow=6.6,SNR=12							
	comp=Z,1.4nm,0.5s							
ARCES	**ARCESS Array B**	**52.96**	**342**	P		**P**	**01 15 39.8**	**0.0**
ARCES				pmax	pmax			
	comp=Z,13nm,1.4s							
ARCES	**ARCESS Array B**	**52.96**	**342**	P		**P**	**01 15 39.8**	**0.0**
ARTI	**Arti**	**53.48**	**318**	*d* i P		**P**	**01 15 43.8**	**0.0**
ARTI				pmax	pmax			
	comp=Z,4.0nm,1.6s							
KTK1	**Kautokeino**	**53.82**	**343**	*eP*		**P**	**01 15 45.9**	**-0.3**
KTK1				IAmb		IAmb	01 15 51.2	
	comp=Z,95nm,2.2s							
JETT	**Jettan, Norway**	**53.83**	**344**	*eP*		**P**	**01 15 44.6**	**-1.7**
JETT				IAmb		IAmb	01 15 47.5	
	comp=Z,11nm,0.5s							
YNE	**Yellowstone No**	**54.99**	**60**	P		**P**	**01 15 56.9**	**+1.5**
YNE				IAmb		IAmb	01 15 58.5	
	comp=Z,2.6nm,0.7s							
NVAR	**Mina Array Bea**	**55.04**	**71**	P		**P**	**01 15 58.3**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=314,slow=6.6,SNR=1.6							
	comp=Z,0.3nm,0.3s							
NVAR	**Mina Array Bea**	**55.04**	**71**	P		**P**	**01 15 57.6**	**+1.8**
FAUS	**Fauske**	**56.62**	**345**	*eP*		**P**	**01 16 06.6**	**+0.3**
FAUS				IAmb		IAmb	01 16 09.0	
	comp=Z,36nm,1.4s							
PDAR	**Pinedale Array**	**56.78**	**62**	P		**P**	**01 16 10.2**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=316,slow=8.1,SNR=2.1							
	comp=Z,0.2nm,0.4s							
PDAR	**Pinedale Array**	**56.78**	**62**	P		**P**	**01 16 09.2**	**+1.1**
AB31	**Akbulak array**	**57.88**	**311**	P		**P**	**01 16 14.5**	**-0.9**
CMAR	**Chiang Mai Ar**	**58.83**	**259**	P		**P**	**01 16 22.5**	**0.0**
	comp=Z,2.0nm,0.5s,baz=39,slow=7.0,SNR=7.5							
CMAR				LR		LR	01 43 51.3	
	comp=Z,27nm,19.0s,baz=270,slow=38							
	comp=Z,2.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**58.83**	**259**	*ceP*		**P**	**01 16 23.3**	**+0.8**
CMAR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**58.83**	**259**	P		**P**	**01 16 21.1**	**-1.4**
FINES	**FINESS Array B**	**59.86**	**337**	P		**P**	**01 16 28.9**	**-0.1**
	comp=Z,5.5nm,0.4s,baz=26,slow=6.1,SNR=55							
	comp=Z,5.5nm,0.4s							
FINES	**FINESS Array B**	**59.86**	**337**	*i* P		**P**	**01 16 29.6**	**+0.6**
FINES				pmax	pmax			
	comp=Z,6.0nm,0.4s							
BELG	**Belogornoye**	**60.68**	**320**	*eP*		**P**	**01 16 36.6**	**+1.9**
BELG				pmax	pmax			
	comp=Z,1.0nm,0.8s							
CHGR	**Chuyangaron**	**61.02**	**297**	*i* P		**P**	**01 16 37.6**	**+0.2**
OBN	**Obninsk**	**62.37**	**328**	⇑*iP*		**P**	**01 16 46.6**	**+0.5**
OBN				*e**PP		**pwP**	**01 17 01.3**	**+2.5**
OBN				*e**SP		sP	01 17 07.1	+10
OBN				*e*			01 17 27.3	
OBN				*e*			01 19 03.0	
OBN				*e*PPP		PPP	01 20 31.2	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.7s							
OBN				MLR	MLR			
	comp=Z,26nm,18.0s							
AKN	**Aaknes**	**62.74**	**347**	*eP*		**P**	**01 16 49.1**	**+0.6**
NB2	**NORSAR Subarra**	**63.19**	**344**	P		**P**	**01 16 51.8**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=21,slow=6.9							
NB2	**NORSAR Subarra**	**63.19**	**344**	P		**P**	**01 16 51.7**	**+0.2**
NB2				pmax	pmax			
	comp=Z,1.0nm,0.5s							
NB2	**NORSAR Subarra**	**63.19**	**344**	P		**P**	**01 16 51.8**	**+0.2**
NOA	**NORSAR Array B**	**63.19**	**344**	P		**P**	**01 16 51.2**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=20,slow=6.6,SNR=13							
	comp=Z,2.2nm,0.7s							
NC602	**NORSAR Array S**	**63.42**	**344**	*eP*		**P**	**01 16 50.3**	**-2.8**
NORES	**NORESS Array B**	**63.42**	**344**	P		**P**	**01 16 53.2**	**+0.2**
HFS	**Hagfors**	**63.62**	**342**	P		**P**	**01 16 53.7**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=20,slow=4.6,SNR=15							
	comp=Z,2.2nm,0.6s							
SCHQ	**Schefferville**	**64.92**	**28**	P		**P**	**01 17 03.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=283,slow=18,SNR=1.1							
	comp=Z,0.8nm,0.6s							
SCHQ	**Schefferville**	**64.92**	**28**	P		**P**	**01 17 03.6**	**+0.6**
SCHQ				IAmb		IAmb	01 17 16.0	
	comp=Z,3.1nm,1.0s							
AKASG	**Malin Array Be**	**68.45**	**329**	P		**P**	**01 17 24.4**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=31,slow=6.6,SNR=9.8							
	comp=Z,1.8nm,0.5s							
AKASG	**Malin Array Be**	**68.45**	**329**	P		**P**	**01 17 23.8**	**-1.6**
AKASG				IAmb		IAmb	01 17 57.9	
	comp=Z,1.6nm,0.8s							
AKBB	**Malin Array Si**	**68.45**	**329**	*i* P		**P**	**01 17 25.1**	**-0.4**
AKBB				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KBZ	**Khabaz**	**69.53**	**317**	P		**P**	**01 17 33.0**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=45,slow=1.4,SNR=2.2							
	comp=Z,1.1nm,0.6s							
KBZ	**Khabaz**	**69.53**	**317**	P		**P**	**01 17 33.0**	**+0.7**
TXAR	**Lajitas Array**	**69.92**	**68**	P		**P**	**01 17 37.1**	**+2.0**
	comp=Z,2.2nm,0.5s,baz=328,slow=11,SNR=3.5							
	comp=Z,2.0nm,0.5s							
EKA	**Eskdalemuir Ar**	**70.63**	**350**	P		**P**	**01 17 39.5**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=15,slow=5.8,SNR=14							
	comp=Z,0.8nm,0.4s							
SORM	**Soroca**	**70.98**	**329**	⇓P		**P**	**01 17 40.3**	**-0.8**
SORM	**Soroca**	**70.98**	**329**	P		**P**	**01 17 40.3**	**-0.8**
CLL	**Collm**	**72.06**	**340**	⇓*iP*		**P**	**01 17 48.3**	**+0.7**
CLL				pmax	pmax			
	comp=Z,8.0nm,1.2s							
CLL	**Collm**	**72.06**	**340**	⇓*iP*		**P**	**01 17 48.3**	**+0.7**
	comp=Z,8.0nm,1.2s							
BURAR	**Bucovina Array**	**72.39**	**330**	⇑P		**P**	**01 17 49.6**	**-0.2**
BURAR	**Bucovina Array**	**72.39**	**330**	⇑P		**P**	**01 17 49.6**	**-0.2**
MORC	**Moravsky Berou**	**72.47**	**336**	*eP*		**P**	**01 17 51.0**	**+0.9**
JAVC	**Velka Javorina**	**73.29**	**336**	*eP*		**P**	**01 17 55.5**	**+0.5**
KRUC	**Moravsky**	**73.41**	**337**	*eP*		**P**	**01 17 56.2**	**+0.5**
CFR	**Carcaliu**	**73.68**	**327**	⇑P		**P**	**01 17 57.0**	**-0.2**
CFR	**Carcaliu**	**73.68**	**327**	⇑P		**P**	**01 17 57.0**	**-0.2**
TPGR	**Topolog**	**73.87**	**327**	⇑P		**P**	**01 17 58.4**	**-0.1**
KHC	**Kasperske Hory**	**73.99**	**338**	*ceP*		**P**	**01 18 01.4**	**+2.3**
KHC				pmax	pmax			
	comp=Z,4.0nm,1.3s							
NEHR	**Nehoiu**	**74.04**	**329**	⇑P		P	01 18 07.0	+7.6
MLR	**Muntele Rosu**	**74.09**	**329**	⇑P		**P**	**01 17 59.9**	**+0.1**
MLR	**Muntele Rosu**	**74.09**	**329**	⇑P		**P**	**01 17 59.9**	**+0.1**
GERES	**GERESS Array B**	**74.23**	**338**	P		**P**	**01 18 00.9**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=22,slow=4.9,SNR=9.0							
	comp=Z,0.8nm,0.6s							
GERES	**GERESS Array B**	**74.23**	**338**	P		**P**	**01 18 01.0**	**+0.4**
GERES	**GERESS Array B**	**74.23**	**338**	P		**P**	**01 18 00.6**	**0.0**
CONA	**Conrad Observa**	**74.60**	**337**	*eP*		**P**	**01 18 04.4**	**+1.7**
	comp=Z,1.3nm,0.6s							
RONA	**Rosalia, Austr**	**74.71**	**336**	*eP*		**P**	**01 18 04.4**	**+1.1**
	comp=Z,8nm,1.1s							
LESA	**Schwarzleonal**	**75.80**	**338**	*eP*		**P**	**01 18 11.6**	**+1.9**
	comp=Z,2.0nm,1.0s							
SOKA	**Soboth**	**75.97**	**337**	*eP*		**P**	**01 18 11.5**	**+0.9**
	comp=Z,3.8nm,1.0s							
KBA	**Koelnbreinsper**	**75.98**	**338**	*i* P		**P**	**01 18 12.8**	**+2.0**
	comp=Z,6.4nm,0.9s							
WATA	**Walderalm**	**76.12**	**339**	*eP*		**P**	**01 18 13.1**	**+1.5**
	comp=Z,2.0nm,0.8s							
WTTA	**Wattenberg**	**76.18**	**339**	*i* P		**P**	**01 18 13.6**	**+1.7**
	comp=Z,2.8nm,0.6s							
MOTA	**Moosalm**	**76.21**	**339**	*i* P		**P**	**01 18 13.4**	**+1.3**
	comp=Z,3.7nm,0.9s							
OBKA	**Obir**	**76.24**	**337**	*i* P		**P**	**01 18 13.7**	**+1.5**
	comp=Z,4.6nm,1.0s							
SQTA	**Sankt Quirin**	**76.31**	**339**	*eP*		**P**	**01 18 12.3**	**-0.3**
	comp=Z,4.2nm,1.0s							
ABTA	**Abfaltersbach**	**76.48**	**338**	*i* P		**P**	**01 18 15.0**	**+1.5**
	comp=Z,3.1nm,0.9s							
BR131	**Keskin Array S**	**76.56**	**321**	P		**P**	**01 18 15.1**	**+0.9**
BR131				pmax	pmax			
	comp=Z,6.0nm,1.4s							
BR131	**Keskin Array S**	**76.56**	**321**	P		**P**	**01 18 15.1**	**+0.9**
BR131				IAmb		IAmb	01 18 33.4	
	comp=Z,6.4nm,1.4s							
BRTR	**Keskin Array B**	**76.57**	**321**	P		**P**	**01 18 14.2**	**0.0**
BRTR	**Keskin Array B**	**76.57**	**321**	P		**P**	**01 18 14.2**	**0.0**
FETA	**Feichten**	**76.60**	**340**	*i* P		**P**	**01 18 15.7**	**+1.4**
	comp=Z,3.5nm,1.0s							
WB0	**Warramunga Arr**	**76.61**	**206**	P		**P**	**01 18 14.4**	**+0.1**
WB2	**Warramunga Ar**	**76.79**	**206**	P		**P**	**01 18 14.9**	**-0.4**
WRA	**Warramunga Arr**	**76.80**	**206**	P		**P**	**01 18 15.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=16,slow=5.8,SNR=5.6							
	comp=Z,0.7nm,0.6s							
WRA	**Warramunga Arr**	**76.80**	**206**	*i* P		**P**	**01 18 15.1**	**-0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
WRA	**Warramunga Arr**	**76.80**	**206**	P		**P**	**01 18 14.1**	**-1.2**
STAL	**STALIGIAL**	**76.90**	**338**	P		**P**	**01 18 13.9**	**-1.9**
STAL				IAmb		IAmb	01 18 46.3	
	comp=Z,2.9nm,1.0s							
ASAR	**Alice Springs**	**80.47**	**205**	P		**P**	**01 18 36.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=15,slow=6.4,SNR=6.4							
	comp=Z,1.2nm,0.8s							
ASAR	**Alice Springs**	**80.47**	**205**	P		**P**	**01 18 35.8**	**+0.3**
ASAR	**Alice Springs**	**80.47**	**205**	P		**P**	**01 18 35.8**	**+0.3**
MMAI	**Mount Meron Ar**	**81.72**	**316**	P		**P**	**01 18 41.7**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=44,slow=8.6,SNR=6.4							
	comp=Z,1.1nm,0.4s							
ESDC	**Sonseca Array**	**86.18**	**348**	P		**P**	**01 19 05.5**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=2.5,slow=6.0,SNR=4.8							
	comp=Z,0.5nm,0.7s							
ESDC	**Sonseca Array**	**86.18**	**348**	P		**P**	**01 19 03.9**	**-1.1**
ESDC				IAmb		IAmb	01 19 20.6	
	comp=Z,4.0nm,1.3s							
KEST	**Kesra**	**87.69**	**337**	P		**P**	**01 19 11.4**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=357,slow=2.5,SNR=5.9							
	comp=Z,0.8nm,0.4s							
QSPA	**South Pole Qui**	**143.37**	**180**	PKhKP		PKPpre	01 25 52.5	
	comp=Z,0.5nm,0.5s,baz=12,slow=1.4,SNR=7.8							
QSPA	**South Pole Qui**	**143.37**	**180**			PKPab	01 25 52.9	+0.1

IDC 23 01:13:47.9±1.5, 33°03'N×86°77'E, h0km, mb3.5/4, mbtmp3.4/5, ML2.8/1, Error ellipse: s-maj=54.2km s-min=30.7km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.16**	**347**	Pn		Pn	01 17 10.2	+0.4
	baz=158,slow=14,SNR=1.0							
	0.1nm,0.4s							
ZALV	**Zalesovo Beam**	**20.95**	**357**	P		P	01 18 31.6	-0.6
	0.5nm,0.4s,baz=178,slow=12,SNR=4.2							
	0.5nm,0.4s							
GERES	**GERESS Array B**	**55.33**	**310**	P		P	01 23 23.1	-0.3
	0.4nm,0.7s,baz=78,slow=8.7,SNR=6.0							
	0.4nm,0.7s							
WRA	**Warramunga Arr**	**69.56**	**132**	P		P	01 24 59.0	+0.1
	0.5nm,0.9s,baz=317,slow=6.3,SNR=2.5							
	0.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**78.88**	**278**	P		P	01 25 53.7	+0.2
	0.6nm,1.0s,baz=31,slow=4.4,SNR=2.6							
	0.6nm,1.0s							

*IDC **23** 01:25:12.0±1.3, 53°50S×141°23E, h0km, mb3.7/6, mbtmp3.8/6, Error ellipse: s-maj=76.5km s-min=18.4km az=88.0*

*NEIC **23** 01:25:13.3±1.1, 53°46S±0°09×140°8E±0°3, h10km±1km, mb4.5/11, Error ellipse: s-maj=30.3km s-min=14.0km az=77.0*

ISC 23 01:25:13.2±0.8, 53°46S±0°10×140°9E±0°2, h10km, n24, σ0s78/18, mb4.2/11, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CASY	**Casey**	**19.67**	**217**	P		**P**	**01 29 41.5**	**-0.5**
ODZ	**Otahua Downs**	**21.01**	**78**	P		**P**	**01 29 56.5**	**-0.2**
ODZ				IAmb		IAmb	01 29 58.6	
	comp=Z,65nm,1.4s							
STKA	**Stephens Creek**	**21.58**	**2**	P		**P**	**01 30 03.8**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=166,slow=9.8,SNR=6.3							
	comp=Z,3.0nm,0.7s							
VNDA	**Vanda**	**25.33**	**170**	P		**P**	**01 30 39.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=328,slow=10,SNR=4.0							
	comp=Z,0.5nm,0.7s							
VNDA	**Vanda**	**25.33**	**170**	P		**P**	**01 30 39.6**	**0.0**
VNDA				IAmb		IAmb	01 30 57.0	
	comp=Z,2.4nm,1.1s							
H01W1	**Cape Leeuwin H**	**26.46**	**304**	T		T	01 58 30.9	
	baz=142,slow=74,SNR=6.1							
H01W2	**Cape Leeuwin H**	**26.47**	**304**	T		T	01 58 32.8	
	baz=142,slow=74,SNR=7.1							
H01W3	**Cape Leeuwin H**	**26.48**	**304**	T		T	01 58 29.5	
	baz=142,slow=74,SNR=6.1							
ASAR	**Alice Springs**	**30.23**	**347**	P		**P**	**01 31 24.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=164,slow=11,SNR=5.3							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**30.23**	**347**	P		**P**	**01 31 23.7**	**-0.2**
MORW	**Morawa**	**30.43**	**313**	P		**P**	**01 31 24.8**	**-0.9**
MORW				IAmb		IAmb	01 31 57.9	
	comp=Z,25nm,1.4s							
WR8	**Warramunga Arr**	**33.81**	**349**	P		**P**	**01 31 54.8**	**-0.6**
WR8				IAmb		IAmb	01 32 37.5	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**33.84**	**349**	P		**P**	**01 31 56.9**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=174,slow=8.2,SNR=9.5							
	comp=Z,0.9nm,0.6s							
WRA	**Warramunga Arr**	**33.84**	**349**	P		**P**	**01 31 56.6**	**+0.9**
WRAB	**Tennant Creek**	**33.85**	**349**	P		**P**	**01 31 54.4**	**-1.3**
WB0	**Warramunga Arr**	**34.01**	**349**	P		**P**	**01 31 56.0**	**-1.2**
WB0				IAmb		IAmb	01 31 57.2	
	comp=Z,9.7nm,1.3s							
MBWA	**Marble Bar**	**36.10**	**325**	P		**P**	**01 32 15.0**	**-0.2**
QSPA	**South Pole Qui**	**36.65**	**180**	P		**P**	**01 32 19.4**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=9.3,slow=11,SNR=4.3							
	comp=Z,2.1nm,0.9s							
QSPA	**South Pole Qui**	**36.65**	**180**	P		**P**	**01 32 19.3**	**-0.3**
QSPA				IAmb		IAmb	01 32 23.8	
	comp=Z,9.7nm,1.4s							
MAW	**Mawson**	**38.03**	**217**	P		**P**	**01 32 32.1**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=63,slow=6.8,SNR=2.0							
	comp=Z,0.9nm,0.5s							
H04S1	**CROZET ISLANDS**	**53.86**	**238**	T		T	02 33 17.7	
	baz=130,slow=76,SNR=5.8							
H04S2	**CROZET ISLANDS**	**53.86**	**238**	T		T	02 33 13.6	
	baz=130,slow=76,SNR=5.7							
H04S3	**CROZET ISLANDS**	**53.87**	**238**	T		T	02 33 15.2	
	baz=130,slow=76,SNR=3.7							
CHTO	**Chiang Mai**	**80.56**	**320**	P		**P**	**01 37 25.6**	**+0.1**
CHTO				IAmb		IAmb	01 37 44.2	
	comp=Z,2.9nm,1.1s							

*CATAC **23** 01:25:59.7±0.2, 11°N±2°×8°6W±°, h47km±3km, M3.5/30, MLv3.5/30, Error ellipse: s-maj=5.8km s-min=2.1km az=44.3, confirmed*

*UCR **23** 01:25:59.1±0.9, 11°25N×86°01W, h53km±11km, MW4.0, Presumed earthquake*

ISC 23 01:26:00.2±1.3, 11°24N±0°04×85°99W±0°04, h60km±8km, n80, σ0s72/104, 14C-6D, Nicaragua

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

LIMN	Finca el Limon	1.85	348	⇓P		Pn	01 26 29.3 -0.4
LIMN				S		Sn	01 26 52.8 +0.7
HDC	Heredia	2.21	124	*eP*		Pn	01 26 34.5 -0.2
RCON	San Juan de Ri	2.23	356	P		Pn	01 26 35.4 +0.4
RCPN	Sur Rio San Ju	2.27	357	P		Pn	01 26 35.8 +0.3
BLUN	Bluefields	2.30	70	⇓P		Pn	01 26 35.4 -0.3
TRT2	Tortugero	2.31	107	P		Pn	01 26 34.8 -1.1
TRT2				S		Sn	01 27 02.5 -0.7
ABRB	Las Abras (San	2.55	119	*eP*		Pn	01 26 39.0 -0.3
EDPE	Pejibaye, P	3.15	131	*eP*		Pn	01 26 48.9 +1.5
PIRO	Carate, Puerto	3.84	137	*eP*		Pn	01 26 57.6 +0.7
ALCO	Alturas Coton,	3.85	126	*eP*		Pn	01 26 58.5 +1.4

IDC ***23*** *01:47:26.1±0.9, 33˚.16N×86˚.80E, h0km, mb3.6/13, mbtmp3.6/15, ML2.8/2, MS3.0/1, Error ellipse: s-maj=28.2km s-min=18.0km az=40.0*

ISC 23 01:47:28.1±1.0, 33˚.3N±0˚.2×86˚.9E±0˚.1, h10km, n18, σ0ᵒ98/15, mb3.7/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.98**	**347**	Pn	**Pn**	**01 50 45.9**	**-0.3**
	baz=173,slow=14,SNR=2.0						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	18.42	343	P	P	01 51 44.2	+0.7
	baz=156,slow=10,SNR=5.5						
	0.2nm,0.5s						
SONM	**Songino Array**	**20.69**	**40**	P	**P**	**01 52 09.5**	**+1.1**
	0.3nm,0.5s,baz=235,slow=9.8,SNR=3.7						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**20.75**	**357**	P	**P**	**01 52 08.8**	**+0.1**
	1.3nm,0.6s,baz=169,slow=8.4,SNR=5.9						
	1.3nm,0.6s						
BVAR	**Borovoye Array**	**23.05**	**334**	P	**P**	**01 52 31.4**	**-2.0**
	0.3nm,0.3s,baz=139,slow=9.5,SNR=1.4						
	0.3nm,0.3s						
KSRS	**Korea Array**	**33.53**	**71**	P	**P**	**01 54 07.3**	**-0.6**
	1.0nm,0.5s,baz=272,slow=9.0,SNR=2.7						
	1.0nm,0.5s						
KBZ	**Khabaz**	**35.63**	**300**	P	P	01 54 23.4	-2.6
	0.6nm,0.5s,baz=90,slow=5.1,SNR=3.6						
	0.6nm,0.5s						
KVAR	**Kislovodsk Arr**	**35.78**	**301**	LR	LR	02 09 40.6	
	comp=Z,25nm,19.9s,baz=98,slow=37						
AKASG	**Malin Array Be**	**45.09**	**311**	P	**P**	**01 55 44.3**	**+0.1**
	0.4nm,0.4s,baz=86,slow=6.7,SNR=6.4						
	0.4nm,0.4s						
HFS	**Hagfors**	**53.59**	**323**	P	**P**	**01 56 47.9**	**-1.1**
	3.3nm,0.9s,baz=82,slow=11,SNR=3.0						
	3.3nm,0.9s						
NB2	**NORSAR Subarra**	**54.72**	**325**	P	**P**	**01 56 58.2**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=84,slow=7.4						
NOA	**NORSAR Array B**	**54.72**	**325**	P	**P**	**01 56 56.6**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=84,slow=7.1,SNR=3.5						
	comp=Z,0.8nm,0.7s						
GERES	**GERESS Array B**	**55.27**	**310**	P	**P**	**01 57 02.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=75,slow=6.9,SNR=12						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**69.62**	**132**	P	**P**	**01 58 37.2**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=322,slow=6.3,SNR=4.8						
	comp=Z,0.2nm,0.4s						
ESDC	**Sonseca Array**	**70.29**	**305**	P	**P**	**01 58 41.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=79,slow=8.2,SNR=2.6						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**72.17**	**135**	P	**P**	**01 58 53.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=317,slow=9.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**78.96**	**278**	P	P	01 59 30.1	-2.4
	comp=Z,0.3nm,0.7s,baz=59,slow=3.6,SNR=1.4						
	comp=Z,0.3nm,0.7s						
LPAZ	**La Paz**	**151.85**	**301**	PKPbc	**PKPbc**	**02 07 25.9**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=51,slow=6.5,SNR=1.8						

IDC ***23*** *02:03:30.9±0.8, 22˚.59S×12˚.69W, h0km, mb3.9/11, mbtmp3.9/11, MS3.8/28, Error ellipse: s-maj=25.0km s-min=18.8km az=126.0*

NEIC ***23*** *02:03:32.9±0.6, 22˚.59S±0˚.03×12˚.7W±0˚.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=17.8km s-min=5.6km az=269.0*

ISC 23 02:03:32.1±0.5, 22˚.57S±0˚.09×12˚.74W±0˚.10, h9km, n59, σ0ᵒ73/35, mb4.3/15, MS3.8/28, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEL	**Horse Pasture**	**9.32**	**46**	Pn	**Pn**	**02 05 47.3**	**+0.5**
H10S2	**ASCENSION HYDR**	**13.66**	**352**	T	T	02 20 24.8	
	baz=172,slow=74,SNR=57						
H10S3	**ASCENSION HYDR**	**13.67**	**352**	T	T	02 20 25.5	
	baz=48,slow=74,SNR=49						
RCBR	**Riachuelo**	**27.88**	**303**	LR	LR	02 17 24.9	
	comp=Z,76nm,20.5s,baz=96,slow=30						
RCBR	**Riachuelo**	**27.88**	**303**	P	**P**	**02 09 20.9**	**-1.6**
RCBR				IAmb	IAmb	02 09 50.6	
	comp=Z,24nm,1.1s						
TSUM	**Tsumeb**	**28.50**	**89**	LR	LR	02 18 34.4	
	comp=Z,343nm,20.9s,baz=315,slow=32						
DBIC	**Dimbokro**	**30.07**	**16**	P	**P**	**02 09 42.2**	**+0.3**
	comp=Z,5.6nm,1.0s,baz=195,slow=11,SNR=3.3						
DBIC				LR	LR	02 19 42.5	
	comp=Z,86nm,18.8s,baz=187,slow=32						
	comp=Z,5.6nm,1.0s						
DBIC	**Dimbokro**	**30.07**	**16**	P	**P**	**02 09 41.9**	**0.0**
DBIC				IAmb	IAmb	02 09 50.3	
	comp=Z,20nm,1.4s						
SUR	**Sutherland**	**31.22**	**116**	LR	LR	02 20 09.6	
	comp=Z,153nm,18.3s,baz=278,slow=32						
SUR	**Sutherland**	**31.22**	**116**	P	**P**	**02 09 50.7**	**-1.5**
SUR				IAmb	IAmb	02 10 04.2	
	comp=Z,25nm,1.4s						
BDFB	**Brasilia**	**33.98**	**275**	P	**P**	**02 10 17.4**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=100,slow=11,SNR=4.1						
BDFB				LR	LR	02 21 37.3	
	comp=Z,127nm,20.7s,baz=120,slow=32						
	comp=Z,1.6nm,0.4s						
BDFB	**Brasilia**	**33.98**	**275**	P	**P**	**02 10 16.0**	**-0.4**
BDFB				IAmb	IAmb	02 10 18.1	
	comp=Z,13nm,1.4s						
BOSA	**Boshof**	**34.69**	**108**	P	**P**	**02 10 23.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=254,slow=7.4,SNR=1.8						
BOSA				LR	LR	02 22 20.0	
	comp=Z,192nm,18.6s,baz=276,slow=33						
	comp=Z,0.9nm,0.5s						
BOSA	**Boshof**	**34.69**	**108**	P	**P**	**02 10 21.6**	**-0.9**
LBTB	**Lobatse**	**35.09**	**102**	LR	LR	02 22 59.7	
	comp=Z,180nm,18.7s,baz=246,slow=33						
HOPE	**Hope Point**	**36.37**	**203**	P	**P**	**02 10 36.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**38.22**	**23**	P	**P**	**02 10 52.8**	**+0.3**
	comp=Z,5.6nm,0.6s,baz=200,slow=8.9,SNR=32						
	comp=Z,5.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**38.22**	**23**	P	**P**	**02 10 51.9**	**-0.6**
TORD				IAmb	IAmb	02 11 04.2	
	comp=Z,9.4nm,1.2s						
MATP	**Matopo**	**38.34**	**95**	LR	LR	02 25 03.2	
	comp=Z,210nm,18.7s,baz=270,slow=34						
LSZ	**Lusaka**	**39.29**	**87**	LR	LR	02 25 33.4	
	comp=Z,405nm,19.8s,baz=256,slow=34						
AQDB	**Aquidauana**	**39.92**	**265**	P	**P**	**02 11 07.1**	**+0.3**
AQDB				IAmb	IAmb	02 11 22.1	
	comp=Z,7.8nm,1.1s						
CPUP	**Villa Florida**	**40.62**	**255**	P	**P**	**02 11 13.4**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=107,slow=8.6,SNR=4.8						
CPUP				LR	LR	02 25 34.1	
	comp=Z,181nm,19.5s,baz=76,slow=32						
	comp=Z,0.6nm,0.5s						
CPUP	**Villa Florida**	**40.62**	**255**	P	**P**	**02 11 12.3**	**-0.2**
ORCD	**Orcadas**	**44.15**	**202**	P	**P**	**02 11 41.0**	**+0.2**
PTLB	**Pontes e Lacer**	**44.30**	**271**		**P**	**02 11 42.0**	**-0.6**
TRQA	**Tornquist**	**44.71**	**238**	P	**P**	**02 11 45.9**	**+0.2**
SIV	**San Ignacio**	**45.93**	**269**	LR	LR	02 29 17.9	
	comp=Z,280nm,20.3s,baz=118,slow=34						
MBAR	**Mbarara**	**47.57**	**69**	LR	LR	02 31 00.2	
	comp=Z,73nm,18.3s,baz=227,slow=35						
MDP	**Montagnes des**	**47.73**	**300**	LR	LR	02 29 59.3	
	comp=Z,66nm,21.3s,baz=105,slow=33						
SNAA	**Sanae**	**49.45**	**176**	P	**P**	**02 12 23.2**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=350,slow=17,SNR=2.3						
	comp=Z,0.5nm,0.3s						
SNAA	**Sanae**	**49.45**	**176**	P	**P**	**02 12 22.4**	**+0.1**
SNAA				IAmb	IAmb	02 12 23.4	
	comp=Z,4.5nm,1.3s						
MT09	**Talagante**	**51.95**	**244**	P	**P**	**02 12 41.9**	**+0.1**
MT09				IAmb	IAmb	02 13 16.3	
	comp=Z,10nm,1.3s						
LPAZ	**La Paz**	**52.37**	**266**	P	**P**	**02 12 46.1**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=45,slow=4.3,SNR=1.7						
LPAZ				LR	LR	02 34 22.9	
	comp=Z,108nm,18.1s,baz=79,slow=35						
	comp=Z,0.5nm,0.7s						
LPAZ	**La Paz**	**52.37**	**266**	P	**P**	**02 12 44.8**	**-0.9**
MG03	**Isla Dawson**	**53.14**	**219**	P	**P**	**02 12 50.4**	**+0.3**
ESDC	**Sonseca Array**	**62.46**	**8**	P	**P**	**02 13 56.3**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=179,slow=7.9,SNR=4.2						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**62.46**	**8**	P	**P**	**02 13 56.0**	**+0.3**
SDV	**Santo Domingo**	**64.73**	**292**	LR	LR	02 40 32.6	
	comp=Z,94nm,18.8s,baz=74,slow=34						
ATAH	**Atahualpa**	**64.84**	**273**	LR	LR	02 41 22.8	
	comp=Z,416nm,19.7s,baz=101,slow=35						
ROSC	**El Rosal**	**66.02**	**286**	LR	LR	02 42 16.8	
	comp=Z,162nm,18.9s,baz=78,slow=35						
QSPA	**South Pole Qui**	**67.63**	**180**	P	**P**	**02 14 28.0**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=210,slow=8.8,SNR=4.2						
	comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**67.63**	**180**	P	**P**	**02 14 30.0**	**+0.8**
QSPA				IAmb	IAmb	02 14 42.4	
	comp=Z,6.1nm,1.4s						
EIL	**Elat**	**69.30**	**43**	LR	LR	02 42 06.8	
	comp=Z,55nm,18.9s,baz=256,slow=33						
MMAI	**Mount Meron Ar**	**71.87**	**41**	LR	LR	02 43 23.4	
	comp=Z,34nm,20.7s,baz=192,slow=33						
ASF	**Jabal al Asfar**	**72.22**	**43**	LR	LR	02 43 06.7	
	comp=Z,41nm,21.0s,baz=206,slow=33						
GERES	**GERESS Array B**	**74.92**	**18**	P	**P**	**02 15 12.3**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=212,slow=9.0,SNR=1.9						
	comp=Z,0.2nm,0.5s						
GERES	**GERESS Array B**	**74.92**	**18**	P	**P**	**02 15 13.8**	**+0.4**
BRTR	**Keskin Array B**	**75.59**	**35**	LR	LR	02 46 55.2	
	comp=Z,14nm,21.0s,baz=133,slow=34						
VRAC	**Vranov**	**76.18**	**19**	LR	LR	02 48 59.9	
	comp=Z,29nm,18.5s,baz=140,slow=36						
JTS	**Las Juntas de**	**77.87**	**287**	LR	LR	02 49 32.8	
	comp=Z,56nm,19.4s,baz=120,slow=35						
AKASG	**Malin Array Be**	**81.81**	**25**	P	**P**	**02 15 51.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=222,slow=5.7,SNR=2.0						
	comp=Z,0.1nm,0.3s						
AKASG	**Malin Array Be**	**81.81**	**25**	P	**P**	**02 15 52.0**	**+0.7**
AKASG				IAmb	IAmb	02 16 27.4	
	comp=Z,3.2nm,1.1s						
GNI	**Garni**	**82.20**	**41**	LR	LR	02 49 50.1	
	comp=Z,15nm,21.1s,baz=156,slow=34						
TKL	**Tuckaleechee C**	**88.67**	**310**	LR	LR	02 49 07.1	
	comp=Z,30nm,19.8s,baz=148,slow=31						
SCHQ	**Schefferville**	**89.87**	**332**	LR	LR	02 49 27.3	
	comp=Z,42nm,18.5s,baz=190,slow=31						
SADO	**Sadowa**	**90.25**	**319**	LR	LR	02 49 06.2	
	comp=Z,26nm,21.3s,baz=168,slow=30						
PALK	**Pallekele**	**95.91**	**85**	LR	LR	02 52 30.2	
	comp=Z,97nm,21.3s,baz=236,slow=31						
MJAR	**Matsushiro Arr**	**151.28**	**54**	PKPbc	**PKiKP**	**02 23 26.9**	**0.0**
	comp=Z,0.8nm,0.4s,baz=280,slow=3.6,SNR=5.3						
MJAR				PKPab	**PKPab**	**02 23 34.3**	**0.0**
	comp=Z,0.8nm,0.4s,baz=294,slow=3.9,SNR=3.4						
MJAR	**Matsushiro Arr**	**151.28**	**54**		**PKPdf**	**02 23 19.2**	**-1.2**

IDC ***23*** *02:29:34.0±1.1, 12˚.59N×140˚.19E, h0km, mb3.7/5, mbtmp3.8/6, ML4.3/1, MS3.3/25, Error ellipse: s-maj=27.4km s-min=23.7km az=92.0*

NEIC ***23*** *02:29:35.4±1.6, 12˚.6N±0˚.1×140˚.21E±0˚.10, h10km±1km, mb4.6/16, Error ellipse: s-maj=20.7km s-min=16.2km az=190.0*

ISC 23 02:29:34.8±0.7, 12˚.6N±0˚.1×140˚.16E±0˚.07, h10km, n51, σ1ᵒ03/30, mb4.5/12, MS3.3/20, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.69**	**77**	Pn	**Pn**	**02 30 47.2**	**+1.5**
	14nm,0.3s,baz=222,slow=12,SNR=3.9						
GUMO				Sn	**Sn**	**02 31 41.4**	**+1.2**
	52nm,0.3s,baz=354,slow=22,SNR=7.2						
GUMO				LR	LR	02 32 28.3	
	comp=Z,749nm,19.1s,baz=208,slow=37						
	16nm,0.3s						
GUMO	**Guam**	**4.69**	**77**		**Pn**	**02 30 45.7**	**0.0**
GUMO					**Sn**	**02 31 39.8**	**-0.4**
JCJ	**Chichijima**	**14.55**	**7**	Pn	Pn	02 32 47.9	-13
	3.5nm,0.3s,baz=192,slow=9.3,SNR=1.2						
JCJ				LR	LR	02 38 02.9	
	comp=Z,63nm,18.2s,baz=122,slow=35						
JAY	**Jayapura**	**15.02**	**178**	LR	LR	02 37 22.0	
	comp=Z,220nm,20.0s,baz=318,slow=31						
DAV	**Davao City (W)**	**15.38**	**250**	LR	LR	02 38 17.6	
	comp=Z,72nm,21.5s,baz=134,slow=34						
JMZ	**Minamidaito 2**	**15.62**	**329**	Pn	**Pn**	**02 33 15.4**	**+0.3**
JMZ				IAmb	IAmb	02 33 53.5	
	comp=Z,44nm,1.1s						
JOW	**Kunigami**	**18.03**	**324**	LR	LR	02 39 52.5	
	comp=Z,52nm,18.8s,baz=144,slow=34						
TGY	**Tagaytay City**	**18.77**	**277**	P	**P**	**02 33 55.1**	**+0.8**
	comp=Z,324nm,0.3s,baz=101,slow=13,SNR=2.2						
KRVT	**Keravat (AS076**	**20.52**	**144**	LR	LR	02 40 58.3	
	comp=Z,11nm,20.6s,baz=216,slow=33						
JNU	**Nakatsue**	**22.13**	**339**	LR	LR	02 41 50.7	
	comp=Z,71nm,20.8s,baz=150,slow=33						
PMG	**Port Moresby**	**22.93**	**162**	LR	LR	02 42 59.2	
	comp=Z,141nm,18.8s,baz=274,slow=35						
MJAR	**Matsushiro Arr**	**23.91**	**356**	LR	LR	02 44 14.0	
	comp=Z,64nm,18.5s,baz=186,slow=37						
KSRS	**Korea Array**	**27.07**	**338**	LR	LR	02 45 01.5	
	comp=Z,72nm,19.9s,baz=160,slow=34						
ASAJ	**Asahikawa**	**31.48**	**3**	LR	LR	02 49 03.7	
	comp=Z,21nm,20.7s,baz=196,slow=37						
USRK	**Ussuysk Ar.**	**32.27**	**349**	LR	LR	02 48 05.1	
	comp=Z,65nm,19.8s,baz=164,slow=34						
WB0	**Warramunga Arr**	**32.65**	**190**	P	**P**	**02 36 06.0**	**-1.2**
WB0				IAmb	IAmb	02 36 19.8	
	comp=Z,14nm,1.4s						
WR8	**Warramunga Arr**	**32.82**	**190**	P	**P**	**02 36 10.1**	**+1.4**
WRA	**Warramunga Arr**	**32.84**	**190**	P	**P**	**02 36 11.0**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=6.6,slow=9.7,SNR=8.0						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**32.84**	**190**	P	**P**	**02 36 07.5**	**-1.3**
CTA	**Charters Tower**	**33.02**	**169**	LR	LR	02 47 42.7	
	comp=Z,27nm,21.8s,baz=17,slow=33						
ASAR	**Alice Springs**	**36.55**	**190**	P	**P**	**02 36 40.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=20,slow=13,SNR=6.0						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**36.55**	**190**	P	**P**	**02 36 40.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**40.08**	**284**	P	**P**	**02 37 12.6**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=86,slow=5.8,SNR=4.8						
CMAR				LR	LR	02 52 06.6	
	comp=Z,24nm,20.3s,baz=255,slow=34						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.08**	**284**	P	**P**	**02 37 10.8**	**0.0**
PETK	**Petropavlovsk-**	**42.77**	**16**	LR	LR	02 52 10.3	
	comp=Z,33nm,20.5s,baz=207,slow=32						
STKA	**Stephens Creek**	**44.24**	**178**	LR	LR	02 55 05.8	
	comp=Z,42nm,19.9s,baz=27,slow=35						
SONM	**Songino Array**	**45.02**	**328**	LR	LR	02 57 21.9	
	comp=Z,61nm,19.4s,baz=140,slow=37						
TLY	**Talaya**	**48.85**	**331**	LR	LR	03 00 03.3	
	comp=Z,44nm,18.1s,baz=144,slow=37						
YAK	**Yakutsk**	**49.94**	**354**	LR	LR	02 56 50.2	
	comp=Z,35nm,22.0s,baz=169,slow=33						
KURK	**Kurchatov**	**62.42**	**321**	P	**P**	**02 39 58.0**	**0.0**
KURBB	**Kurchatov Arra**	**62.45**	**321**	P	**P**	**02 39 58.8**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=104,slow=6.9,SNR=8.4						
	comp=Z,1.0nm,0.7s						
NRIK	**Noril'sk**	**65.61**	**342**	LR	LR	03 09 35.7	
	comp=Z,48nm,18.9s,baz=146,slow=37						
RAR	**Rarotonga**	**67.88**	**119**	LR	LR	03 08 00.6	
	comp=Z,24nm,19.8s,baz=240,slow=34						
E19K	**Redstone River**	**68.09**	**22**	P	**P**	**02 40 33.2**	**-1.3**
E19K				IAmb	IAmb	02 40 59.5	
	comp=Z,2.7nm,0.9s						
D20K	**Etivluk River**	**68.76**	**20**	P	**P**	**02 40 39.2**	**+0.5**
D20K				IAmb	IAmb	02 40 54.0	
	comp=Z,5.8nm,1.1s						
D23K	**Nanushuk River**	**70.89**	**21**	P	**P**	**02 40 51.4**	**-0.4**
D23K				IAmb	IAmb	02 41 08.6	
	comp=Z,6.5nm,1.5s						
ILAR	**Eielson Array**	**71.44**	**26**	P	**P**	**02 40 55.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=259,slow=5.5,SNR=4.8						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**71.44**	**26**	P	**P**	**02 40 56.2**	**+1.1**
PCA	**Pinnacle**	**73.98**	**31**	P	**P**	**02 41 09.8**	**-0.7**
PCA				IAmb	IAmb	02 41 38.9	
	comp=Z,4.8nm,0.8s						
AB31	**Akbulak array**	**74.20**	**318**	P	**P**	**02 41 12.0**	**+0.2**
ABKAR	**Akbulak array**	**74.20**	**318**	P	**P**	**02 41 11.3**	**-0.5**
F28M	**Old Crow**	**74.62**	**23**	P	**P**	**02 41 13.6**	**-0.4**
ARTI	**Arti**	**75.07**	**325**	LR	LR	03 16 08.4	
	comp=Z,27nm,19.4s,baz=122,slow=37						
K29M	**Barlow Dome**	**75.40**	**27**	P	**P**	**02 41 18.1**	**-0.6**
S32K	**Killisnoo**	**76.95**	**34**	P	**P**	**02 41 27.1**	**-0.3**
S32K				IAmb	IAmb	02 41 52.8	
	comp=Z,4.7nm,1.1s						
ARCES	**ARCESS Array B**	**86.59**	**341**	LR	LR	03 23 35.3	
	comp=Z,30nm,21.4s,baz=67,slow=37						
G06A	**Carlson Farm,**	**87.54**	**44**	P	**P**	**02 42 23.6**	**+0.4**
G06A				IAmb	IAmb	02 42 59.7	
	comp=Z,5.3nm,1.2s						
FINES	**FINESS Array B**	**90.08**	**334**	LR	LR	03 26 05.7	
	comp=Z,24nm,19.1s,baz=59,slow=38						
AKBB	**Malin Array Si**	**93.13**	**324**	P	**P**	**02 42 47.9**	**-1.2**
NOA	**NORSAR Array B**	**96.28**	**338**	LR	LR	03 29 17.8	
	comp=Z,15nm,19.4s,baz=45,slow=37						
PV19	**Morning Glory**	**98.03**	**48**	P	**P**	**02 43 10.3**	**-1.7**

MDD ***23*** *02:56:07.4±0.5, 29˚.24N×16˚.28W, h30km, mb_Lg3.3/27, Error ellipse: s-maj=4.7km s-min=3.2km az=175.0*

INMG ***23*** *02:56:07.9±1.0, 29˚.33N×16˚.27W, h11km, ML2.8, Error ellipse: s-maj=2.4km s-min=1.4km az=93.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canary Islands, Spain Region*

ISC 23 02:56:00.2±0.8, 29˚.34N±0˚.03×16˚.28W±0˚.03, h10km, n33, σ1ᵒ82/66, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBAJ	**Bajamar**	**0.80**	**184**	P	**Pn**	**02 56 19.5**	**+1.9**
EBAJ				S	**Sn**	**02 56 28.1**	**-1.5**
EBAJ				*i* IVmb_Lg		02 56 32.0	
CREA	**Los Realejos,**	**1.02**	**195**	P	**Pn**	**02 56 22.4**	**+1.7**
CREA				S	**Sg**	**02 56 32.5**	**-0.7**
CREA				*i* IVmb_Lg		02 56 36.3	
CFOR	**Fortaleza, Los**	**1.06**	**195**	P	**Pn**	**02 56 23.2**	**+1.8**
CFOR				S	**Sb**	**02 56 34.4**	**-0.5**
CFOR				*i* IVmb_Lg		02 56 39.5	
CNOR	**Icod de los Vi**	**1.08**	**198**	P	**Pn**	**02 56 23.3**	**+1.9**
CNOR				S	**Sb**	**02 56 34.9**	**-0.4**
CDIE	**La Orotava (Te**	**1.08**	**193**	P	**Pn**	**02 56 23.3**	**+1.7**
CDIE				S	**Sb**	**02 56 35.0**	**-0.5**
MACI	**Morro de la Ar**	**1.11**	**190**	P	**Pn**	**02 56 23.6**	**+1.6**
MACI				S	**Sb**	**02 56 35.6**	**-0.5**
MACI				*i* IVmb_Lg		02 56 38.4	
CRAJ	**Montana Rajada**	**1.11**	**195**	P	**Pn**	**02 56 23.8**	**+1.7**
CRAJ				S	**Sb**	**02 56 36.0**	**-0.4**
CRAJ				*i* IVmb_Lg		02 56 41.4	
CDOS	**Garachico, Isl**	**1.12**	**201**	P	**Pn**	**02 56 24.3**	**+2.2**
CDOS				S	**Sb**	**02 56 36.4**	**-0.1**
CDOS				*i* IVmb_Lg		02 56 38.5	
CPVI	**La Orotava (Te**	**1.13**	**197**	P	**Pn**	**02 56 24.3**	**+1.8**
CPVI				S	**Sg**	**02 56 36.0**	**-0.7**
CBOL	**Buenavista del**	**1.13**	**205**	P	**Pn**	**02 56 23.7**	**+1.4**
CBOL				S	**Sg**	**02 56 35.2**	**-1.6**
CBOL				*i* IVmb_Lg		02 56 37.3	
CCAN	**Las Canadas**	**1.15**	**194**	P	**Pn**	**02 56 23.8**	**+1.2**
CCAN				S	**Sg**	**02 56 35.9**	**-1.5**
CCAN				*i* IVmb_Lg		02 56 38.3	
GUIA	**Guia de Isora,**	**1.16**	**200**	P	**Pn**	**02 56 24.5**	**+1.8**
GUIA				S	**Sb**	**02 56 37.4**	**-0.2**
GUIA				*i* IVmb_Lg		02 56 39.7	
CCHO	**La Orotava (Te**	**1.17**	**197**	P	**Pn**	**02 56 24.2**	**+1.4**
CCHO				S	**Sg**	**02 56 37.1**	**-0.8**
CCHO				*i* IVmb_Lg		02 56 40.8	
CLAJ	**Vilaflor (Tene**	**1.23**	**196**	P	**Pn**	**02 56 25.2**	**+1.5**
CLAJ				S	**Sg**	**02 56 37.5**	**-2.5**
CLAJ				*i* IVmb_Lg		02 56 40.7	
CADE	**Adeje, Tenerif**	**1.25**	**199**	P	**Pn**	**02 56 25.3**	**+1.5**
CADE				S	**Sb**	**02 56 38.2**	**-1.8**
CADE				*i* IVmb_Lg		02 56 40.8	
CGRA	**Granadilla de**	**1.25**	**190**	P	**Pn**	**02 56 26.1**	**+2.2**
CGRA				S	**Sb**	**02 56 38.2**	**-2.0**
CGRA				*i* IVmb_Lg		02 56 41.8	
CTFS	**San Miguel de**	**1.29**	**194**	P	**Pg**	**02 56 26.3**	**+1.2**
CTFS				S	**Sb**	**02 56 39.7**	**-1.6**
CTFS				*i* IVmb_Lg		02 56 42.2	
GGC	**Guia, Gran

GO07	**Milladeo Hill,**	**1.75**	**83**			**Pn**	03 13 15.3	-0.9
GO07				Sn		**Sn**	03 13 37.2	-1.3
GO07	**Milladeo Hill,**	**1.75**	**83**	P		**Pn**	03 13 15.4	-0.8
LL07	**Hotel Espejo d**	**1.94**	**76**	*e*P		**Pn**	03 13 18.6	-0.2
LL07				*e*S		**Sb**	03 13 44.0	-1.6
LL07				IAML			03 13 52.4	
	comp=N,3µm,0.5s							
LL07	**Hotel Espejo d**	**1.94**	**76**	Pn		**Pn**	03 13 18.7	-0.1
LL07	**Hotel Espejo d**	**1.94**	**76**	P		**Pn**	03 13 18.0	-0.8
LL06	**Loncomilla**	**2.10**	**58**	*e*P		**Pn**	03 13 21.5	+0.5
LL06				IAML			03 13 55.2	
	comp=N,2µm,0.6s							
RMBA	**Ra^{el} Marn B**	**2.34**	**105**	*i* P		**Pb**	03 13 25.8	-2.2
RMBA				*e*S		**Sb**	03 13 55.0	-1.9
VNTQ	**Ventisquero**	**2.67**	**81⇑**	*e*P		**Pn**	03 13 28.1	-0.7
LJUN	**La Junta**	**2.68**	**105**	*e*P		**Pn**	03 13 27.9	-1.1
TBIO	**Turbio**	**2.71**	**82⇑**	*e*P		**Pn**	03 13 28.7	-0.7
TBIO				*e*S		**Sn**	03 14 02.3	+0.1
LL05	**Los Muermos**	**2.71**	**45**	*e*P		**Pn**	03 13 29.9	+0.4
LL05				IAML			03 14 16.1	
	comp=N,644nm,0.8s							
LL05	**Los Muermos**	**2.71**	**45**			**Pn**	03 13 29.8	+0.4
LL05	**Los Muermos**	**2.71**	**45**	P		**Pb**	03 13 31.7	-2.7
PDRA	**Piedra**	**2.75**	**81⇑**	*e*P		**Pn**	03 13 29.4	-0.6
LL02	**Futaleuf**	**3.06**	**89**	*e*P		**Pn**	03 13 34.0	-0.2
LL02				*e*S		**Sn**	03 14 11.2	+0.2
LL02				IAML			03 14 21.3	
	comp=E,160nm,0.6s							
LL02	**Futaleuf**	**3.06**	**89**			**Pn**	03 13 33.9	-0.3
LL02	**Futaleuf**	**3.06**	**89**	P		**Pn**	03 13 34.2	-0.1
CHAC	**Puerto Chacabu**	**3.14**	**133**	*i* P		**Pn**	03 13 34.5	-0.8
AYSN	**Puerto Aysn**	**3.15**	**131**	*e*P		**Pn**	03 13 34.2	-1.1
AYSN				IAML			03 14 59.0	
	comp=E,190nm,0.5s							
CYQE	**Coyhaique**	**3.60**	**129⇑**	*e*P		**Pn**	03 13 44.5	+2.9
LR04	**Corral**	**3.98**	**30**	*e*P		**Pn**	03 13 45.9	-0.8
LR04	**Corral**	**3.98**	**30**			**Pn**	03 13 46.2	-0.5
LR05	**Currie**	**4.33**	**45**	*e*P		**Pn**	03 13 53.4	+1.8
LR05	**Currie**	**4.33**	**45**			**Pn**	03 13 51.6	-0.1
AY03	**Cochrane**	**4.61**	**149⇑**	*e*P		**Pn**	03 13 55.5	+0.1
AY03				*e*S		**Sn**	03 14 45.9	-3.0
AY03	**Cochrane**	**4.61**	**149**			**Pn**	03 13 55.0	-0.4
GO06	**Curarrehue**	**5.09**	**44**			**Pn**	03 14 01.7	-0.4
GO06	**Curarrehue**	**5.09**	**44**	P		**Pn**	03 14 03.8	+1.6
GO08	**Villa O'Higgin**	**5.67**	**156**			**Pn**	03 14 09.5	-0.5
GO08	**Villa O'Higgin**	**5.67**	**156**	P		**Pn**	03 14 10.6	+0.6
BI05	**Punta Hualpn**	**6.94**	**19**	Pn		**Pn**	03 14 26.3	-1.2
BI02	**San Fabin de**	**7.61**	**30**			**Pn**	03 14 36.2	-0.6
BI02	**San Fabin de**	**7.61**	**30**	P		**Pn**	03 14 37.9	+1.2
ML02	**Panimavida**	**8.37**	**27**			**Pn**	03 14 46.5	-0.6
ML02	**Panimavida**	**8.37**	**27**	P		**Pn**	03 14 46.7	-0.4
MG05	**Puerto Natales**	**8.68**	**165**	P		**Pn**	03 14 52.4	+1.2
GO05	**Hualane**	**8.91**	**22**			**Pn**	03 14 53.7	-0.9
GO05	**Hualane**	**8.91**	**22**	P		**Pn**	03 14 53.7	-0.9
BO03	**Pichilemu**	**9.39**	**21**	P		**Pn**	03 14 59.6	-1.4
BO02	**Sierra Bellavi**	**9.46**	**27**			**Pn**	03 15 01.4	-0.7
BO02	**Sierra Bellavi**	**9.46**	**27**	P		**Pn**	03 15 01.6	-0.6
H03S1	**Juan Fernandez**	**9.74**	**346**	Pn		**Pn**	03 15 02.7	-3.0
	baz=146,slow=7.8							
H03S1				T		T	03 26 18.9	
	baz=161,slow=74							
H03S2	**Juan Fernandez**	**9.76**	**346**	Pn		**Pn**	03 15 02.5	-3.3
	baz=146,slow=7.8							
H03S2				T		T	03 26 18.6	
	baz=161,slow=74							
H03S3	**Juan Fernandez**	**9.76**	**346**	Pn		**Pn**	03 15 02.8	-3.2
	baz=146,slow=7.8							
H03S3				T		T	03 26 18.9	
	baz=161,slow=74							
VA04	**Juan Fernndez**	**9.93**	**346**	P		**Pn**	03 15 07.8	-0.7
H03N3	**Juan Fernandez**	**10.13**	**346**	Pn		**Pn**	03 15 08.0	-3.0
	baz=50,slow=72							
H03N1	**Juan Fernandez**	**10.14**	**346**	Pn		**Pn**	03 15 07.8	-3.3
	baz=50,slow=72							
H03N2	**Juan Fernandez**	**10.14**	**346**	Pn		**Pn**	03 15 07.9	-3.2
	baz=50,slow=72							
MT01	**Popeta**	**10.18**	**23**			**Pn**	03 15 10.5	-1.4
VA05	**Santo Domingo**	**10.27**	**21**	P		**Pn**	03 15 12.6	-0.5
MT09	**Talagante**	**10.34**	**24**			**Pn**	03 15 12.3	-1.9
MT13	**San Alfonso**	**10.59**	**27**			**Pn**	03 15 16.8	-0.8
MT02	**Curacav**	**10.78**	**23**			**Pn**	03 15 18.2	-1.9
MT16	**CCHEN**	**10.80**	**25**			**Pn**	03 15 19.8	-0.7
MT08	**Bocatoma Ro**	**10.95**	**28**			**Pn**	03 15 23.0	+0.3
PEL	**Peldehue**	**11.02**	**24**			**Pn**	03 15 21.1	-2.3
PEL	**Peldehue**	**11.02**	**24**	P		**Pn**	03 15 21.6	-1.8
VA03	**San Esteban**	**11.41**	**24**			**Pn**	03 15 27.7	-1.2
VA03	**San Esteban**	**11.41**	**24**	P		**Pn**	03 15 28.5	-0.4
TRQA	**Tornquist**	**11.90**	**68**	Pn		**Pn**	03 15 36.9	+1.4
CO04	**Los Peladeros**	**11.97**	**21**			**Pn**	03 15 34.9	-1.7
CO04	**Los Peladeros**	**11.97**	**21**	P		**Pn**	03 15 36.0	-0.7
CO02	**Combarbal**	**12.76**	**20**			**Pn**	03 15 45.5	-1.8
CO02	**Combarbal**	**12.76**	**20**	P		**Pn**	03 15 45.9	-1.4
CO03	**El Pedregal**	**13.19**	**21**			**Pn**	03 15 51.9	-1.3
CO03	**El Pedregal**	**13.19**	**21**	P		**Pn**	03 15 51.3	-1.9
CFA	**Coronel Fontan**	**13.24**	**30**	Pn		**Pn**	03 15 52.4	-1.5
	comp=E,0.3nm,0.3s,baz=214,slow=11,SNR=8.3							
	comp=E,2.2nm,0.6s							
GO04	**Tololo Observa**	**13.79**	**19**	Pn		**Pn**	03 15 59.2	-2.3
GO04	**Tololo Observa**	**13.79**	**19**	P		**Pn**	03 16 01.0	-0.5
CO01	**Juntas del Tor**	**14.16**	**22**	P		**Pn**	03 16 06.3	-0.3
AC05	**El Transito**	**15.20**	**20**	Pn		**Pn**	03 16 19.2	-1.4
AC05	**El Transito**	**15.20**	**20**	P		**Pn**	03 16 19.5	-1.1
AC04	**Llanos de Chal**	**15.63**	**16**	Pn		**Pn**	03 16 23.9	-2.2
SALTA		**20.68**	**26**	P		Pn	03 17 28.1	-0.6
PB05	**IPOC Station P**	**21.00**	**15**	P		**P**	03 17 27.9	-1.5
PB05	**IPOC Station P**	**21.00**	**15**	P			03 17 30.9	
PB03	**IPOC Station P**	**21.87**	**16**	P		**P**	03 17 41.3	+2.4
PB07	**IPOC Station P**	**22.16**	**15**	P		**P**	03 17 42.8	+0.8
PMSA	**Palmer Station**	**22.52**	**167**	LR		LR	03 24 41.6	
	comp=E,195nm,20.6s,baz=310,slow=32							
PMSA	**Palmer Station**	**22.52**	**167**	P		**P**	03 17 45.4	+0.2
CPUP	**Villa Florida**	**22.80**	**48**	P		**P**	03 17 49.6	+0.9
	comp=E,11nm,0.7s,baz=221,slow=11,SNR=21							
CPUP				LR		LR	03 25 52.3	
	comp=E,53nm,20.0s,baz=239,slow=34							
	comp=E,11nm,0.7s							
CPUP	**Villa Florida**	**22.80**	**48**			**P**	03 17 47.9	-0.7
CPUP				IAmb		IAmb	03 17 57.3	
	comp=Z,16nm,0.8s							
CPUP	**Villa Florida**	**22.80**	**48**	P		**P**	03 17 49.8	+1.1
PB08	**IPOC Station P**	**23.84**	**16**	P		**P**	03 17 58.9	-0.7
PB11	**IPOC Station P**	**24.12**	**15**	P		**P**	03 18 05.3	+3.4
PSGCX	**Pisagua**	**24.19**	**14**	P		**P**	03 18 05.6	+3.1
GO01	**Chusmiza**	**24.30**	**16**	P		**P**	03 18 05.1	+1.2
SJPY	**San Joaquin**	**24.53**	**48**	*e*P		**P**	03 18 08.8	+3.3
MURT	**Porto Murtinho**	**26.52**	**41**	*e*P		**P**	03 18 23.8	+0.3
AMBA	**Amambai (Brazi**	**26.79**	**47**	*e*P		**P**	03 18 29.3	+3.3
PTGB	**Pitanga**	**27.05**	**54**	*e*P		**P**	03 18 32.4	+4.0
LPAZ	**La Paz**	**27.80**	**16**	P		**P**	03 18 35.6	-0.1
	comp=Z,0.7nm,0.9s,baz=213,slow=8.2,SNR=3.7							
	comp=Z,0.7nm,0.9s							
LPAZ	**La Paz**	**27.80**	**16**	P		**P**	03 18 33.6	-2.0
COIM	**Forte Coimbra**	**27.94**	**39**	*e*P		**P**	03 18 39.3	+3.1
AQDB	**Aquidauana**	**28.45**	**43**	*e*P		**P**	03 18 43.3	+2.4
LDASE	**Londrina, Braz**	**28.61**	**54**	*e*P		**P**	03 18 44.9	+2.5
SIV	**San Ignacio**	**30.10**	**30**	LR		LR	03 32 19.5	
	comp=Z,92nm,19.7s,baz=174,slow=39							
PP1B	**Ponte de Pedra**	**31.30**	**42**	*e*P		**P**	03 19 08.4	+2.3
PTLB	**Pontes e Lacer**	**31.33**	**33**	P		**P**	03 19 05.4	-0.9
PTLB				IAmb		IAmb	03 19 15.1	
	comp=Z,5.0nm,0.9s							
PTLB	**Pontes e Lacer**	**31.33**	**33**	*e*P		**P**	03 19 08.5	+2.2
RPN	**Rapa Nui**	**31.39**	**290**	LR		LR	03 28 00.8	
	comp=Z,227nm,19.6s,baz=132,slow=30							
BDFB	**Brasilia**	**36.51**	**50**	P		**P**	03 19 51.4	-0.2
	comp=Z,4.1nm,0.7s,baz=221,slow=8.2,SNR=6.8							
BDFB				LR		LR	03 37 31.8	
	comp=Z,46nm,18.6s,baz=176,slow=41							
	comp=Z,4.1nm,0.7s							
BDFB	**Brasilia**	**36.51**	**50**	P		**P**	03 19 50.1	-1.4
BDFB				IAmb		IAmb	03 19 60.0	
	comp=Z,5.2nm,0.9s							
CLDB	**Colider**	**36.82**	**35**	*e*P		**P**	03 19 55.7	+1.7
CLDB	**Colider**	**36.82**	**35**	P		**P**	03 19 55.0	+1.0
SNDB	**Serra Nova Dou**	**37.88**	**42**	*e*P		**P**	03 20 03.6	+0.6
SDBA	**SAO DESIDERIO**	**40.88**	**51**	*e*P		**P**	03 20 28.8	+0.7
VNA1	**Neumayer--Stat**	**42.54**	**153**	⇑P		**P**	03 20 45.2	+4.2
	comp=Z,2.8nm,0.9s							
VNA2	**Neumayer--Watz**	**42.84**	**153**	⇑P		**P**	03 20 46.7	+3.2
	comp=Z,8.9nm,0.7s,baz=271,slow=8.8							
VNA2	**Neumayer--Watz**	**42.84**	**153**	P		**P**	03 20 40.9	-2.6
SNAA	**Sanae**	**44.32**	**154**	P		**P**	03 20 56.4	+1.0
	comp=Z,2.6nm,0.7s,baz=292,slow=7.3,SNR=6.6							
SNAA	**Sanae**	**44.32**	**154**	P		**P**	03 20 55.9	+0.4
SNAA				IAmb		IAmb	03 21 07.8	
	comp=Z,7.7nm,1.2s							
NBPN	**Ponto Novo - B**	**44.86**	**55**	*e*P		**P**	03 21 02.5	+2.2
QSPA	**South Pole Qui**	**46.90**	**180**	P		**P**	03 21 16.5	+0.4
	comp=Z,4.0nm,0.8s,baz=148,slow=2.4,SNR=15							
	comp=Z,4.0nm,0.8s							
QSPA	**South Pole Qui**	**46.90**	**180**	P		**P**	03 21 16.1	0.0
QSPA				IAmb		IAmb	03 21 17.8	
	comp=Z,4.9nm,0.9s							
BOAV	**Boa Vista**	**47.63**	**21**	P		**P**	03 21 21.9	-0.1
BOAV				IAmb		IAmb	03 21 22.9	
	comp=Z,8.6nm,1.3s							
ROSC	**El Rosal**	**47.98**	**2**	LR		LR	03 39 16.2	
	comp=Z,95nm,19.4s,baz=186,slow=33							
NBPS	**Pedro II - PI**	**49.39**	**48**	*e*P		**P**	03 21 37.4	+1.6
SDV	**Santo Domingo**	**52.21**	**7**	LR		LR	03 41 41.2	
	comp=Z,52nm,21.8s,baz=248,slow=33							
VNDA	**Vanda**	**54.33**	**193**	LR		LR	03 44 15.0	
	comp=Z,71nm,18.4s,baz=234,slow=35							
CMIG	**Matias Romero**	**62.58**	**340**	LR		LR	03 43 56.7	
	comp=Z,37nm,20.6s,baz=187,slow=30							
PPT	**Papeete**	**66.27**	**268**	LR		LR	03 46 00.7	
	comp=Z,62nm,18.0s,baz=133,slow=30							
RAR	**Rarotonga**	**71.32**	**258**	LR		LR	03 46 38.7	
	comp=Z,56nm,20.0s,baz=146,slow=29							
SUR	**Sutherland**	**73.09**	**111**	LR		LR	03 51 30.6	
	comp=Z,58nm,19.7s,baz=162,slow=32							
LPIG	**La Paz**	**74.14**	**328**	LR		LR	03 49 13.5	
	comp=Z,35nm,20.5s,baz=188,slow=30							
TXAR	**Lajitas Array**	**76.64**	**335**	P		**P**	03 24 35.6	-1.0
	comp=Z,0.7nm,1.0s,baz=156,slow=5.6,SNR=7.4							
TXAR				LR		LR	03 52 47.1	
	comp=Z,32nm,20.5s,baz=209,slow=31							
	comp=Z,0.7nm,1.0s							
TXAR	**Lajitas Array**	**76.64**	**335**	P		**P**	03 24 36.0	-0.7
BOSA	**Boshof**	**78.45**	**118**	P		**P**	03 24 49.5	+2.4
	comp=Z,2.4nm,0.8s,baz=213,slow=6.1,SNR=4.5							
BOSA				LR		LR	03 53 13.4	
	comp=Z,51nm,22.0s,baz=199,slow=31							
	comp=Z,2.4nm,0.8s							
BOSA	**Boshof**	**78.45**	**118**	P		**P**	03 24 47.0	-0.1
BOSA				IAmb		IAmb	03 24 56.0	
	comp=Z,4.9nm,0.8s							
TSUM	**Tsumeb**	**79.63**	**106**	LR		LR	03 58 32.4	
	comp=Z,59nm,18.1s,baz=153,slow=34							
DBIC	**Dimbokro**	**81.09**	**72**	P		**P**	03 25 04.4	+3.0
	comp=Z,3.2nm,0.9s,baz=203,slow=4.8,SNR=6.5							
DBIC				LR		LR	03 57 08.0	
	comp=Z,34nm,18.1s,baz=164,slow=33							
	comp=Z,3.2nm,0.9s							
DBIC	**Dimbokro**	**81.09**	**72**	P		**P**	03 25 00.5	-0.8
LBTB	**Lobatse**	**81.14**	**116**	LR		LR	03 58 12.7	
	comp=Z,44nm,19.7s,baz=148,slow=34							
LBTB	**Lobatse**	**81.14**	**116**	P		**P**	03 25 01.1	-0.6
MATP	**Matopo**	**86.24**	**115**	LR		LR	03 59 18.4	
	comp=Z,44nm,20.7s,baz=136,slow=32							
SAO	**San Andreas Ge**	**89.79**	**325**	P		**P**	03 25 44.2	0.0
TORD	**Torodi Ar. Bea**	**90.21**	**72**	P		**P**	03 25 49.4	+2.7
	comp=Z,0.5nm,0.8s,baz=257,slow=1.4,SNR=4.4							
	comp=Z,0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**90.21**	**72**	P		**P**	03 25 45.5	-1.2
TORD				IAmb		IAmb	03 25 46.1	
	comp=Z,2.4nm,0.5s							
PDAR	**Pinedale Array**	**90.85**	**336**	LR		LR	04 02 46.7	
	comp=Z,25nm,18.2s,baz=184,slow=33							
ULM	**Lac du Bonnet**	**94.81**	**347**	LR		LR	04 07 13.6	
	comp=Z,30nm,20.3s,baz=20,slow=34							
ILAR	**Eielson Array**	**121.02**	**332**	PKPdf		**PKPdf**	03 31 37.0	-0.4
ARTI	**Arti**	**148.47**	**49**	PKPdf		**PKPdf**	03 32 28.1	-0.1
ABKAR	**Akbulak array**	**149.36**	**63**	PKPdf		**PKPdf**	03 32 30.9	+1.1
JHJ2	**Mitsune**	**150.24**	**262**	PKPdf		**PKPdf**	03 32 32.5	+0.8
PZH	**PanZhiHua**	**163.10**	**173**	PKP		**PKPdf**	03 32 47.3	-1.3
NJ2	**Nanjing**	**163.72**	**231**	*e*P		**PKPdf**	03 32 48.3	-0.5
NJ2				pmax		pmax		
	comp=Z,16nm,0.5s							
HHC	**Hu-ho-hao-te**	**173.82**	**249**	*e*P		**PKPdf**	03 32 49.9	-5.3

TRN 23 03:46:15.3,17.62N×61.90W,h29km,MD3.6,1D,Near West of Barbuda.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.12**	**66⇓**	*i*P	Pn	03 46 21.9	+0.7
ANWB				*e*S	Sb	03 46 25.3	+1.1
SKI	**Saint Kitts**	**0.85**	**251**	*e*P	Pb	03 46 33.2	+1.6
SKI				*e*S	Sn	03 46 44.8	+1.9
MBWH	**Windy Hill**	**0.92**	**198**	*e*P	Pb	03 46 34.4	+1.7
MBWH				*e*S	Sn	03 46 46.5	+1.9
SEUS	**St. Eustatius**	**1.04**	**263**	*e*P	Pb	03 46 36.1	+1.3
SEUS				*e*S	Sb	03 46 49.7	+1.7
SMRT	**St. Maarten**	**1.20**	**291**	*e*P	Pb	03 46 38.0	+0.5
SMRT				*e*S	Sb	03 46 53.3	+0.7
SABA	**Saba**	**1.28**	**270**	*e*P	Pb	03 46 39.2	+0.4
SABA				*e*S	Sb	03 46 55.9	+1.0
DHSZ	**Broadband at M**	**1.35**	**175**	*e*P	Pb	03 46 39.6	-0.3
DHSZ				*e*S	Sb	03 46 56.8	+0.1
DSDZ	**La Diserade, G**	**1.52**	**148**	*e*P	Pb	03 46 41.8	-1.1
DSDZ				*e*S	Sb	03 47 00.9	-0.9
MMLZ	**Guadeloupe Bro**	**1.58**	**172**	*e*P	Pb	03 46 43.6	-0.3
MMLZ				*e*S	Sb	03 47 02.9	-0.7
MAGL	**Barre de l'ile**	**1.76**	**160**	*e*P	Pb	03 46 46.1	-0.9
MAGL				*e*S	Sb	03 47 07.6	-1.1
TBG	**Guadaloupe-3**	**1.78**	**172**	*e*P	Pb	03 46 46.6	-0.6
TBG				*e*S	Sb	03 47 08.3	-0.8
DSLB	**Salisbury**	**2.22**	**168**	*e*P	Pb	03 46 52.6	-2.1
DSLB				*e*S	Sb	03 47 19.4	-2.4

*IDC **23** 04:19:29.5±2.5, 23.36S×179.23E, h562km±24km, mb3.0/3, mbtmp4.1/5, Error ellipse: s-maj=39.2km s-min=24.0km az=130.0*
*NEIC **23** 04:19:29.7±1.7, 23.36S±0.06×179.4E±0.1, h564km±10km, mb4.6/18, Error ellipse: s-maj=20.1km s-min=7.6km az=102.0*
*NOU **23** 04:19:30.3, 23.04S×179.64E, h615km, mb4.4/9, South of Fiji Islands*

ISC 23 04:19:28.6±0.7,**23.37S**±0.08×**179.3E**±0.1,**h548**km,**n43,** σ1§**63**/43,**mb4.4**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.41**	**19**	P	**P**	04 21 04.1	+2.2
MSVF	**Nonsavu**	**5.73**	**348**	P	**P**	04 21 06.0	+1.1
	4.8nm,0.6s,baz=163,slow=24,SNR=2.3						
MSVF	**Nonsavu**	**5.73**	**348**	P	**P**	04 21 05.6	+0.7
TAVE	**Taveuni**	**6.67**	**7**	P	**P**	04 21 15.5	+2.0
DGTI	**Dogotuki**	**7.04**	**3**	P	**P**	04 21 18.5	+1.4
NIUE	**Niue**	**10.92**	**69**	P	**P**	04 21 55.7	-0.3
OUZ	**Omahuta**	**12.81**	**202**	P	**P**	04 22 20.8	+5.5
KOUNC	**Koumac, New Ca**	**14.20**	**279**	P	**P**	04 22 32.7	+2.8
URZ	**Urewera**	**14.96**	**187**	P	**P**	04 22 38.7	+1.3
	15nm,0.7s,baz=0.0,slow=11,SNR=6.6						
URZ				S	**S**	04 25 09.9	-3.1
	12nm,0.9s,baz=183,slow=16,SNR=1.9						
URZ	**Urewera**	**14.96**	**187**	P	**P**	04 22 40.0	+2.6
BFZ	**Bieberstein**	**17.45**	**188**	P	**P**	04 23 01.4	+0.1
MRZ	**Mangatainoka R**	**17.52**	**189**	P	**P**	04 23 02.1	+0.1
MRZ				IAmb	IAmb	04 23 27.8	
	comp=Z,53nm,1.4s						
LUES	**Luesalemba Tem**	**17.96**	**312**	P	**P**	04 23 05.3	-1.0
MSWZ	**Moikau Station**	**18.31**	**190**	P	**P**	04 23 09.6	+0.4
QRZ	**Quartz Range**	**18.31**	**197**	P	**P**	04 23 13.2	+4.0
QRZ	**Quartz Range**	**18.31**	**197**	P	**P**	04 23 11.6	+2.4
PLWZ	**Palliser**	**18.46**	**190**	P	**P**	04 23 11.6	+1.0
NNZ	**Nelson**	**18.48**	**194**	P	**P**	04 23 11.6	+0.9
KHZ	**Kahutara**	**19.59**	**193**	P	**P**	04 23 22.2	+1.4
LBZ	**Lake Benmore**	**22.26**	**197**	P	**P**	04 23 45.7	+0.8
LBZ				IAmb	IAmb	04 24 29.4	
	comp=Z,59nm,1.4s						
JCZ	**Jackson Bay**	**22.39**	**200**	P	**P**	04 23 49.5	+3.4
MLZ	**Mavora Lakes**	**23.76**	**200**	P	**P**	04 24 00.2	+2.0
MLZ				IAmb	IAmb	04 24 17.2	
	comp=Z,49nm,1.3s						
CTAO	**Charters Tower**	**30.83**	**270**	P	**P**	04 25 01.1	+0.7
CTAO				IAmb	IAmb	04 25 33.1	
	comp=Z,17nm,1.3s						
BBOO	**Buckleboo**	**39.06**	**246**	P	**P**	04 26 07.4	-1.3
BBOO				IAmb	IAmb	04 26 41.5	
	comp=Z,21nm,1.4s						
ASAR	**Alice Springs**	**41.48**	**260**	P	**P**	04 26 28.2	-0.1
	comp=Z,0.8nm,0.5s,baz=87,slow=7.7,SNR=6.8						
	comp=Z,0.8nm,0.5s						
WR8	**Warramunga Arr**	**41.65**	**266**	P	**P**	04 26 29.1	-0.5
WR8				IAmb	IAmb	04 26 50.5	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**41.79**	**266**	P	**P**	04 26 29.9	-0.9
WB0				IAmb	IAmb	04 26 33.3	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	04 26 29.8	-1.0
	comp=Z,1.3nm,0.6s,baz=96,slow=8.0,SNR=37						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	04 26 30.0	-0.8
WAKE	**Wake Island**	**44.15**	**343**	P	**P**	04 26 48.0	-1.0
MTN	**Manton Dam**	**46.77**	**274**	P	**P**	04 27 07.9	-1.2
MTN				IAmb	IAmb	04 27 27.6	
	comp=Z,15nm,1.4s						
KNRA	**Kununurra**	**48.04**	**270**	P	**P**	04 27 18.3	-0.3
KNRA				IAmb	IAmb	04 27 31.5	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**50.22**	**265**	P	**P**	04 27 34.4	-0.4
CASY	**Casey**	**60.30**	**206**	P	**P**	04 28 42.2	-1.9
TOLI2	**Tolitoli**	**61.82**	**285**	P	**P**	04 28 54.2	-0.8
TOLI2				IAmb	IAmb	04 29 15.7	
	comp=Z,33nm,1.5s						
QSPA	**South Pole Qui**	**66.71**	**180**	P	**P**	04 29 27.6	+2.4
PETK	**Petropavlovsk-**	**78.44**	**347**	P	**P**	04 30 32.8	+0.2
	comp=Z,0.8nm,0.6s,baz=172,slow=6.0,SNR=2.2						
	comp=Z,0.8nm,0.6s						
HFS	**Hagfors**	**141.90**	**348**	PKhKP	PKPpre	04 37 52.7	
	comp=Z,2.3nm,0.8s,baz=68,slow=3.4,SNR=16						
AKASG	**Malin Array Be**	**144.18**	**327**	PKP	**PKPab**	04 38 00.8	-1.1
	comp=Z,0.9nm,0.4s,baz=43,slow=3.6,SNR=6.4						
AKBB	**Malin Array Si**	**144.18**	**327**	PKPbc	**PKPab**	04 38 00.9	-1.0
EKA	**Eskdalemuir Ar**	**148.03**	**3**	PKPbc	**PKPbc**	04 38 10.6	-1.6
	comp=Z,0.3nm,0.4s,baz=7.9,slow=2.3,SNR=3.9						
CLL	**Collm**	**150.16**	**343**	*i* PKPbc	**PKiKP**	04 38 17.3	-0.8
	comp=Z,4.0nm,0.7s						
CLL				*e*PKPab	**PKPab**	04 38 25.0	-1.0
GERES	**GERESS Array B**	**152.14**	**339**	PKPbc	**PKiKP**	04 38 21.7	-0.7
	comp=Z,0.1nm,0.4s,baz=7.4,slow=3.2,SNR=3.6						

*IDC **23** 04:22:16.7±1.7, 33.08N×86.76E, h0km, mb3.5/4, mbtmp3.4/6, ML2.6/2, MS3.1/3, Error ellipse: s-maj=48.9km s-min=25.5km az=52.0*

ISC 23 04:22:20.7±2.5,**33.4N**±0.3×**86.8E**±0.2,**h10**km,**n9,** σ0§**23**/5, **mb3.7**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.79**	**347**	Pn	**Pn**	04 25 35.9	-0.2
	baz=168,slow=14,SNR=2.9						
	0.4nm,0.7s						

baz=247
N14K **Kuskokwak Cree** 55.97 29 P P 04 50 55.6 +1.2
baz=246
L14K **Kuka Creek** 56.12 27 P P 04 50 56.9 +1.5
baz=244
TNA **Tin City** 56.18 21 P P 04 50 57.4 +1.7
baz=236
M14K **Bethel** 56.19 28 P P 04 50 57.1 +1.2
baz=245
CHGN **Chignik** 56.27 34 P P 04 50 57.5 +0.9
baz=252
J14K **Nanvaranak Lak** 56.39 25 P P 04 50 58.7 +1.4
baz=242
O15K **Ungalikthiuk R** 56.55 30 P P 04 50 59.5 +1.0
baz=248
ANM **Nome** 56.56 23 P P 04 50 59.8 +1.3
baz=240
F14K **Arctic Creek** 56.69 22 P P 04 51 00.9 +1.5
baz=238
M15K **Kasigluk River** 56.73 28 P P 04 51 00.8 +1.1
baz=247
L15K **Ungalak Mounta** 56.78 27 P P 04 51 01.4 +1.3
baz=245
N15K **Kwethluk River** 56.80 29 P P 04 51 01.3 +1.0
baz=248
K15K **Wolf Creek Mou** 57.03 26 P P 04 51 03.0 +1.2
baz=245
P16K **Nushagak River** 57.39 31 P P 04 51 05.1 +0.8
baz=250
F15K **North Star Dit** 57.41 22 P P 04 51 05.6 +1.1
baz=240
N16K **Nishlik Lake** 57.53 29 P P 04 51 06.6 +1.2
baz=249
O16K **Kokwok River B** 57.53 30 P P 04 51 06.3 +0.9
baz=250
CHIR **Chirikof Islan** 57.63 35 P P 04 51 06.7 +0.6
baz=254
M16K **Timber Creek** 57.64 28 P P 04 51 06.9 +0.8
baz=248
L16K **Owhat River** 57.67 28 P P 04 51 06.9 +0.6
baz=247
R17L **Mt. Peulik Vol** 57.76 33 P P 04 51 07.6 +0.6
baz=253
H16K **Elim** 57.78 24 P P 04 51 08.2 +1.2
baz=243
J16K **Anvik River** 57.83 26 P P 04 51 08.6 +1.2
baz=245
I17K **Unalakleet** 58.05 25 P P 04 51 09.9 +1.0
baz=245
O17K **Koliganek Bris** 58.07 30 P P 04 51 10.1 +1.0
baz=251
G16K **Koyuk River** 58.09 23 P P 04 51 10.2 +1.1
baz=242
P17K **Kvichak River** 58.20 31 P P 04 51 10.8 +0.9
baz=252
N17K **Nushagak Hills** 58.28 29 P P 04 51 11.6 +1.1
baz=250
L17K **Donlin** 58.35 27 P P 04 51 12.3 +1.3
baz=248
MKAR **Makanchi Array** 58.44 314 P P 04 51 13.5 +1.5
0.5nm,0.4s,baz=100,slow=8.2,SNR=6.2
0.5nm,0.4s
MKAR **Makanchi Array** 58.44 314 P P 04 51 13.8 +1.8
M17K **Holitna River** 58.47 28 P P 04 51 12.8 +1.0
baz=249
J17K **VABM Dome** 58.51 26 P P 04 51 13.2 +1.1
baz=247
C16K **Lisburne Hills** 58.52 19 P P 04 51 13.5 +1.5
baz=238
K17K **Iditarod** 58.57 27 P P 04 51 13.6 +1.0
baz=248
SII **Sitkinak Islan** 58.60 34 P P 04 51 13.7 +0.8
baz=255
MAKZ **Makanchi** 58.66 314 P P 04 51 15.5 +2.0
Q18K **Katmai Hardscr** 58.74 32 P P 04 51 14.6 +0.7
baz=253
G17K **Kiwalik Mounta** 58.77 23 P P 04 51 15.2 +1.4
baz=244
H17K **Granite Mounta** 58.81 24 P P 04 51 14.7 +0.5
H17K IAmb IAmb 04 51 16.3
comp=Z,5.2nm,1.0s
H17K **Granite Mounta** 58.81 24 P P 04 51 15.2 +1.0
baz=245
P18K **Big Mountain,** 58.85 31 P P 04 51 15.0 +0.4
baz=253
N18K **Kilae Creek** 58.93 29 P P 04 51 15.9 +0.8
N18K IAmb IAmb 04 51 19.3
comp=Z,10nm,1.2s
N18K **Kilae Creek** 58.93 29 P P 04 51 15.7 +0.7
baz=251
D17K **Noatak River** 58.95 20 P P 04 51 16.3 +1.3
baz=240
F17K **Baldwin Pennin** 58.98 22 P P 04 51 16.2 +0.9
baz=243
O18K **Koktuh Hills** 59.00 30 P P 04 51 16.6 +1.0
O18K **Koktuh Hills** 59.00 30 P P 04 51 16.1 +0.5
baz=252
E17K **Hotham Inlet** 59.08 21 P P 04 51 17.1 +1.2
baz=242
L18K **Granite Mounta** 59.09 28 P P 04 51 17.0 +1.0
baz=250
M18K **Stony River** 59.23 29 P P 04 51 18.0 +0.9
baz=251
OHAK **Old Harbor** 59.24 34 P P 04 51 17.9 +0.7
baz=256
C17K **DeLong Mountai** 59.31 20 P P 04 51 18.9 +1.3
baz=240
H18K **Honhosa River** 59.50 24 P P 04 51 19.5 +0.6
baz=246
J18K **Innoko River** 59.52 26 P P 04 51 19.9 +0.9
baz=249
O19K **Port Alsworth** 59.52 30 P P 04 51 19.9 +0.8
baz=253
F18K **Selawik** 59.62 22 P P 04 51 20.7 +1.0
baz=244
N19K **Bonanza Creek** 59.63 30 P P 04 51 20.8 +0.8
baz=253
E18K **Tukpahlearik C** 59.66 21 P P 04 51 20.8 +0.9
baz=243
G18K **Tagagawik** 59.69 23 P P 04 51 20.7 +0.6
G18K IAmb IAmb 04 51 22.0
comp=Z,4.5nm,1.1s
G18K **Tagagawik** 59.69 23 P P 04 51 20.8 +0.6
baz=246
KDAK **Kodiak Island** 59.75 33 P P 04 51 20.7 +0.1
comp=Z,19nm,1.2s,baz=192,slow=7.4,SNR=9.8
comp=Z,19nm,1.2s
KDAK **Kodiak Island** 59.75 33 P P 04 51 21.7 +1.0
KDAK **Kodiak Island** 59.75 33 P P 04 51 21.3 +0.6
baz=256
L19K **White Mountain** 59.88 28 P P 04 51 22.4 +0.8
baz=252
P19K **Oil Pt** 59.90 31 P P 04 51 22.3 +0.6
baz=254
C18K **Utukok River** 60.03 20 P P 04 51 23.6 +1.1
baz=242
J19K **Poorman** 60.16 26 P P 04 51 24.2 +0.8
baz=250
G19K **Purcell Mounta** 60.38 23 P P 04 51 25.5 +0.6
baz=247
H19K **Roundabout Mou** 60.38 24 P 04 51 25.7 +0.8
H19K IAmb IAmb 04 51 27.9
comp=Z,3.8nm,0.8s
H19K **Roundabout Mou** 60.38 24 P P 04 51 26.0 +1.1
baz=248
F19K **Shaleruckik Mo** 60.40 22 P P 04 51 26.1 +1.2
baz=246
M20K **Styx River** 60.57 29 P P 04 51 26.7 +0.4
baz=253
K20K **Telida** 60.60 27 P P 04 51 27.2 +0.8
baz=252
HOM **Homer** 60.68 31 P P 04 51 27.5 +0.6
baz=256
C19K **Lookout Ridge** 60.76 20 P 04 51 28.7 +1.2
C19K **Lookout Ridge** 60.76 20 P P 04 51 28.7 +1.2
baz=243
J20K **Nowinta River** 60.83 26 P 04 51 29.2 +1.3
J20K IAmb IAmb 04 51 29.9
comp=Z,2.8nm,0.5s
J20K **Nowinta River** 60.83 26 P P 04 51 29.0 +1.1
baz=251
E19K **Redstone River** 60.84 22 P P 04 51 29.1 +1.1
baz=246
I20K **Naaghedeneel** 60.90 25 P P 04 51 29.8 +1.4
baz=250
D19K **Kuna River** 60.97 21 P P 04 51 29.9 +1.0
baz=245
H20K **Anotleneega Mo** 60.98 24 P P 04 51 30.0 +1.1
baz=250
BRSE **Bradley Lake S** 61.14 31 P P 04 51 30.0 -0.1
baz=257
F20K **Avaraart Lake** 61.23 23 P P 04 51 31.7 +1.2
baz=248
PPLA **Purkeypile** 61.28 28 P P 04 51 31.8 +0.6
baz=254
KURK **Kurchatov** 61.28 318 P P 04 51 32.0 +0.9
SKT **Skwentna** 61.32 29 P P 04 51 31.1 -0.2
baz=255
KURBB **Kurchatov Arra** 61.33 318 P P 04 51 32.3 +0.8
comp=Z,1.4nm,0.4s,baz=95,slow=7.4,SNR=11
comp=Z,1.4nm,0.4s
CAST **Castle Rocks** 61.47 27 P P 04 51 32.9 +0.7
baz=254
E20K **Nigu River** 61.53 21 P P 04 51 33.5 +0.9
baz=247,SNR=7.0
D20K **Etivluk River** 61.57 21 P 04 51 33.9 +1.1
D20K **Etivluk River** 61.57 21 P P 04 51 33.8 +1.0
baz=246,SNR=13
NRIK **Noril'sk** 61.77 340 P P 04 51 34.3 +0.2
comp=Z,5.7nm,0.8s,baz=130,slow=6.4,SNR=3.6
comp=Z,5.7nm,0.8s
NRIK **Noril'sk** 61.77 340 P P 04 51 35.3 +1.2
NRIK IAmb IAmb 04 51 49.8
comp=Z,7.8nm,0.9s
L22K **Petersville** 61.81 28 P P 04 51 34.9 +0.3
baz=255
H21K **Melozitna Rive** 61.85 24 P P 04 51 35.9 +1.2
baz=252
G21K **Allakaket** 61.86 23 P P 04 51 35.8 +1.0
baz=250
B20K **Meade River** 61.92 19 P P 04 51 36.3 +1.2
baz=245
RC01 **Rabbit Creek A** 61.94 30 P P 04 51 35.6 +0.2
baz=257
I21K **Tanana** 62.03 25 P P 04 51 37.0 +1.1
baz=253
F21K **Alatna River** 62.11 23 P P 04 51 37.3 +0.9
baz=250
TRF **Thorofare Moun** 62.26 27 P P 04 51 37.8 +0.1
baz=255
PMR **Palmer** 62.34 29 P P 04 51 38.3 +0.3
baz=257
C21K **Knifeblade Rid** 62.35 20 P P 04 51 39.3 +1.3
baz=248
E21K **Killik River** 62.36 21 P P 04 51 39.1 +0.9
baz=249
H22K **Ishtalitna Cre** 62.48 24 P P 04 51 40.1 +1.1
baz=253
MLY **Manley** 62.49 25 P 04 51 40.0 +1.0
MLY IAmb IAmb 04 51 40.8
comp=Z,4.8nm,0.7s
MLY **Manley** 62.49 25 P P 04 51 39.8 +0.7
baz=254,SNR=11
PWL **Port Wells** 62.56 30 P P 04 51 39.8 +0.3
baz=258
B21K **Ikpikpuk River** 62.58 20 P P 04 51 40.4 +1.0
baz=248
KNK **Knik Glacier** 62.61 30 P P 04 51 40.3 +0.4
baz=258
F22K **John River** 62.68 23 P P 04 51 41.3 +1.1
baz=251
G22K **Bettles** 62.74 23 P P 04 51 41.7 +1.1
baz=252
SML **Sawmill** 62.75 29 P P 04 51 41.3 +0.5
baz=258
WAT1 **Susitna Watana** 62.88 28 P P 04 51 42.0 +0.4
baz=257
MCK **McKinley** 62.91 27 P P 04 51 42.4 +0.5
baz=256
A22K **Sinclair Lake** 63.00 18 P P 04 51 43.6 +1.3
baz=247
M23K **Glacier View** 63.03 29 P P 04 51 43.4 +0.7
baz=258
NEA2 **Nenana** 63.07 26 P P 04 51 43.6 +0.8
baz=256
I23K **Minto, Yukon-K** 63.09 25 P P 04 51 43.7 +0.8
baz=255,SNR=7.3
WAT6 **Susitna Watana** 63.19 28 P P 04 51 44.3 +0.4
baz=258
H23K **Yukon River** 63.19 25 P P 04 51 44.4 +0.8
baz=255
SCM **Sheep Creek Mo** 63.23 29 P P 04 51 44.8 +0.8
baz=259,SNR=5.0
B22K **Teshekpuk Lake** 63.23 19 P P 04 51 45.1 +1.4
baz=249
G23K **Bananza Creek** 63.24 24 P 04 51 45.0 +0.9
G23K IAmb IAmb 04 51 45.7
comp=Z,2.0nm,0.6s
G23K **Bananza Creek** 63.24 24 P P 04 51 44.9 +0.9
baz=254
COLD **Coldfoot** 63.32 23 P P 04 51 45.6 +1.1
baz=253
DHY **Denali Highway** 63.45 28 P P 04 51 46.4 +0.8
baz=258
D23K **Nanushuk River** 63.67 21 P P 04 51 47.9 +1.2
baz=252
EYAK **Cordova Ski Ar** 63.75 31 P P 04 51 48.3 +1.0
baz=261
E23K **Chandalar** 63.77 22 P 04 51 49.2 +1.7
E23K IAmb IAmb 04 51 50.1
comp=Z,8.6nm,1.1s
E23K **Chandalar** 63.77 22 P P 04 51 48.8 +1.4
baz=254,SNR=8.8
KLU **Klutina** 63.82 30 P P 04 51 48.9 +0.9
baz=260
H24K **Noodor Dome** 63.85 25 P 04 51 49.1 +1.1
H24K IAmb IAmb 04 51 49.4
comp=Z,2.5nm,0.6s
H24K **Noodor Dome** 63.85 25 P P 04 51 48.8 +0.8
baz=256
HDA **Harding Lake** 63.92 27 P P 04 51 49.1 +0.7
baz=258
TOLK **Toolik Lake Re** 63.96 22 P P 04 51 49.8 +1.1
baz=253,SNR=6.3
C23K **Itkillik River** 63.96 20 P P 04 51 50.0 +1.4
baz=252
ILAR **Eielson Array** 64.02 26 P P 04 51 48.3 -0.7
comp=Z,9nm,0.7s,baz=265,slow=7.2,SNR=28
comp=Z,2.9nm,0.7s
ILAR **Eielson Array** 64.02 26 P 04 51 48.6 -0.4
E24K **Your Creek** 64.19 22 P P 04 51 51.2 +1.1
baz=255
G24K **Hadweenzic Riv** 64.22 24 P P 04 51 51.1 +0.8
baz=256
F24K **Squaw Lake** 64.26 23 P P 04 51 51.7 +1.1
baz=256,SNR=5.2
PAX **Paxson** 64.29 28 P 04 51 51.7 +0.8
PAX IAmb IAmb 04 51 52.3
comp=Z,4.5nm,0.6s
PAX **Paxson** 64.29 28 P P 04 51 51.4 +0.5
baz=260,SNR=5.9
K24K **Donnelly Dome** 64.30 27 P P 04 51 51.7 +0.8
baz=259
HARP **HAARP** 64.33 29 P P 04 51 51.8 +0.7
baz=261
D24K **Happy Valley** 64.36 21 P P 04 51 52.4 +1.3
baz=254,SNR=9.3
BMRM **Bremner River** 64.37 31 P P 04 51 52.3 +0.8
baz=262
N25K **Chitina, Valde** 64.47 30 P P 04 51 53.1 +1.0
baz=262
J25K **Salcha River,** 64.63 26 P P 04 51 52.8 -0.2
baz=259,SNR=5.3
RIDG **Independent Ri** 64.70 27 P P 04 51 53.7 +0.2
baz=260,SNR=5.3
PRP **Porcupine Dome** 64.74 25 P P 04 51 54.7 +0.8
baz=259
G25K **Bearman Lake** 64.77 24 P P 04 51 54.8 +1.0
baz=258
CRQE **Cirque** 65.08 31 P P 04 51 56.5 +0.4
baz=263
SCRK **Sand Creek** 65.11 27 P 04 51 56.7 +0.4
SCRK IAmb IAmb 04 51 57.6
comp=Z,5.3nm,1.1s
SCRK **Sand Creek** 65.11 27 P P 04 51 56.3 +0.1
baz=261,SNR=7.2
F25K **Christian Rive** 65.12 23 P P 04 51 57.3 +1.1
baz=258,SNR=8.1
MCARA **McCarthy VSAT** 65.19 30 P P 04 51 57.5 +0.9
baz=263
D25K **Kavik River** 65.25 21 P P 04 51 58.2 +1.2
baz=256
E25K **Arctic Village** 65.26 23 P P 04 51 58.6 +1.6
baz=258
I26K **Coal Creek Min** 65.68 26 P P 04 52 00.7 +1.0
baz=261
G26K **Porcupine Rive** 65.70 24 P P 04 52 01.1 +1.3
baz=260
F26K **Sheenjek River** 65.70 23 P P 04 52 01.0 +1.2
baz=259,SNR=7.4
M27K **Edge Creek, AK** 65.84 29 P P 04 52 01.9 +0.9
baz=264
C26K **Camden Bay** 65.89 21 P P 04 52 02.6 +1.6
baz=257
L27K **Beaver Creek,** 65.94 28 P 04 52 02.3 +0.8
L27K IAmb IAmb 04 52 02.8
comp=Z,1.9nm,0.5s
L27K **Beaver Creek,** 65.94 28 P P 04 52 02.3 +0.8
baz=263
C27K **Jago River** 66.23 21 P P 04 52 04.2 +1.0
baz=259
BVCY **Beaver Creek** 66.32 29 P P 04 52 04.7 +0.8
baz=264
I27K **Kandik River** 66.36 26 P P 04 52 04.7 +0.6
baz=262
PINM **Pinnacle** 66.42 32 P P 04 52 05.3 +0.7
baz=266
YUK3 **Moose Creek** 66.45 30 P P 04 52 05.5 +0.6
baz=265
H27K **Steamboat Moun** 66.48 25 P 04 52 06.2 +1.3
H27K IAmb IAmb 04 52 06.9
comp=Z,5.2nm,0.8s
H27K **Steamboat Moun** 66.48 25 P P 04 52 05.8 +0.9
baz=262,SNR=6.5
O28M **Mount Upton** 66.50 31 P P 04 52 05.7 +0.4
baz=266
BVAR **Borovoye Array** 66.50 320 P P 04 52 06.3 +1.1
comp=Z,2.7nm,0.4s,baz=97,slow=7.9,SNR=6.9
comp=Z,2.7nm,0.4s
G27K **Doyon Strip** 66.51 24 P P 04 52 06.3 +1.3
baz=262
E27K **Coleen River** 66.73 23 P P 04 52 07.3 +0.9
baz=261
YUK8 **Steele Glacier** 66.74 30 P P 04 52 07.8 +0.9
baz=266
I28M **Miner Creek** 67.03 26 P 04 52 09.2 +0.8
I28M **Miner Creek** 67.03 26 P P 04 52 09.1 +0.7
baz=264
BRWY **Burwash Landin** 67.10 30 P P 04 52 09.8 +1.0
baz=267
D27M **Malcolm River** 67.12 22 P P 04 52 10.5 +1.6
baz=261
DAWY **Dawson** 67.13 27 P P 04 52 10.2 +1.2
baz=265
O29M **Mount Kennedy** 67.26 32 P P 04 52 10.8 +0.8
baz=267
YUK4 **Talbot Arm** 67.28 30 P P 04 52 11.7 +1.4
baz=267
F28M **Old Crow** 67.30 24 P P 04 52 11.4 +1.4
baz=263
YUK6 **Outpost Mounta** 67.40 31 P P 04 52 12.4 +1.4
baz=267
M29M **Somme Creek** 67.43 29 P P 04 52 12.3 +1.3
baz=267,SNR=8.1
E28M **Babbage River** 67.55 23 P P 04 52 13.0 +1.5
baz=263
L29M **L29M** 67.62 29 P P 04 52 13.4 +1.3
baz=267,SNR=10
P29M **Windy Craggy** 67.66 32 P P 04 52 13.5 +1.1
baz=268
H29M **Whitestone** 67.75 25 P P 04 52 14.5 +1.8
baz=265
HYT **Haines Junctio** 67.81 31 P P 04 52 14.8 +1.3
baz=268,SNR=8.7
K29M **Barlow Dome** 67.94 28 P 04 52 15.6 +1.4
K29M IAmb IAmb 04 52 16.3
comp=Z,5.2nm,1.0s
K29M **Barlow Dome** 67.94 28 P P 04 52 15.2 +1.1
baz=267
G29M **Pine Creek** 67.94 24 P P 04 52 15.4 +1.4
baz=265
N30M **Aishikik Lake** 68.03 30 P P 04 52 15.9 +1.1
baz=268
P30M **Million Dollar** 68.06 32 P P 04 52 15.9 +0.9
baz=269
M30M **Minto, Yukon** 68.21 29 P P 04 52 16.8 +1.0
baz=268
PLBC **Pleasant Camp** 68.36 33 P P 04 52 17.8 +1.2
baz=270,SNR=5.5
EPYK **Eagle Plains** 68.42 25 P P 04 52 17.9 +0.8
baz=267
J30M **Hart River** 68.49 27 P P 04 52 18.6 +0.9
baz=268
I30M **Mount Dempster** 68.50 26 P P 04 52 18.3 +0.7
baz=267
O30N **Mendenhall** 68.50 31 P P 04 52 18.3 +0.7
baz=269
G30M **tAoh Zraii Nji** 68.66 24 P P 04 52 20.0 +1.5
baz=267
N31M **Braeburn, Yuko** 68.66 30 P P 04 52 19.9 +1.3
baz=269,SNR=5.3
F30M **Barrier River** 68.86 24 P P 04 52 21.1 +1.4
F30M IAmb IAmb 04 52 21.6
comp=Z,13nm,1.1s
F30M **Barrier River** 68.86 24 P P 04 52 20.7 +1.1
baz=267
SIT **Sitka** 68.93 35 P P 04 52 21.0 +0.8
baz=272
WHY **Whitehorse** 69.10 31 P P 04 52 22.3 +0.9
baz=270
S32K **Killisnoo** 69.32 35 P P 04 52 23.3 +0.6
baz=272
M31M **Drury Creek, Y** 69.33 30 P P 04 52 23.5 +0.9
baz=270
R32K **Eaglecrest** 69.33 34 P P 04 52 23.5 +0.8
baz=272
H31M **Peel River** 69.37 26 P 04 52 24.2 +1.3
H31M IAmb IAmb 04 52 24.6
comp=Z,4.2nm,0.8s
H31M **Peel River** 69.37 26 P P 04 52 23.9 +1.1
baz=269
G31M **Satah River** 69.42 25 P 04 52 24.1 +1.0
G31M **Satah River** 69.42 25 P P 04 52 23.7 +0.6
baz=269
F31M **Tsiigehtchic** 69.64 24 P P 04 52 25.1 +0.7
baz=269
INK **Inuvik** 69.74 23 P P 04 52 25.1 +0.1
comp=Z,3.0nm,0.5s,baz=256,slow=4.4,SNR=6.1
comp=Z,3.0nm,0.5s
INK **Inuvik** 69.74 23 P 04 52 25.5 +0.5
INK IAmb IAmb 04 52 26.2
comp=Z,4.1nm,0.8s
INK **Inuvik** 69.74 23 P P 04 52 25.4 +0.5
baz=269
N32M **Quiet Lake** 69.97 31 P P 04 52 27.9 +1.2
baz=272
P33M **Teslin, Yukon** 70.13 32 P P 04 52 28.8 +1.1
baz=272
U33K **Whale Pass** 70.19 36 P P 04 52 29.1 +1.1
baz=274
Q32M **Nakina River** 70.47 33 P P 04 52 30.8 +0.8
baz=273
WRAK **Wrangell Islan** 70.60 36 P P 04 52 31.8 +1.4
baz=274
MMPY **Sheldon Lake,** 70.77 29 P P 04 52 32.8 +1.3
baz=273
R33M **Jennings River** 71.11 33 P P 04 52 34.9 +1.2
baz=274
S34M **Telegraph Cree** 71.14 34 P P 04 52 35.2 +1.5
baz=275
DLBC **Dease Lake** 71.68 33 P P 04 52 37.8 +0.8
comp=Z,2.1nm,0.6s,baz=246,slow=8.6,SNR=5.4
comp=Z,2.1nm,0.6s
DLBC **Dease Lake** 71.68 33 P P 04 52 38.5 +1.5
baz=276
T35M **Bob Quinn** 71.70 35 P P 04 52 39.1 +1.9
baz=276
A36M **Sachs Harbour** 72.43 19 P P 04 52 42.1 +1.0
baz=275
C36M **Paulatuk** 73.11 22 P P 04 52 45.8 +0.7
baz=277
AB31 **Akbulak array** 73.34 317 P P 04 52 46.7 -0.2
ABKAR **Akbulak array** 73.34 317 P P 04 52 47.2 +0.3
YKA **Yellowknife Ar** 78.37 28 P P 04 53 15.3 +0.3
comp=Z,3.1nm,0.8s,baz=290,slow=5.5,SNR=17
comp=Z,3.1nm,0.8s
SPITS **Spitsbergen Ar** 79.39 351 P P 04 53 20.8 +0.4
comp=Z,0.5nm,0.4s,baz=101,slow=7.7,SNR=1.0
comp=Z,0.5nm,0.4s
ARCES **ARCESS Array B** 82.66 342 P P 04 53 37.7 -0.1
comp=Z,4.6nm,1.0s,baz=73,slow=8.1,SNR=3.8
comp=Z,4.6nm,1.0s
ARCES **ARCESS Array B** 82.66 342 P P 04 53 38.1 +0.3
NVAR **Mina Array Bea** 83.54 52 P P 04 53 43.9 +0.7

comp=Z,4.9nm,0.7s,baz=270,slow=5.6,SNR=35
comp=Z,4.9nm,0.7s
FINES FINESS Array B 87.01 335 P **P** **04 53 58.4 -1.2**
comp=Z,1.7nm,0.5s,baz=62,slow=5.3,SNR=3.8
comp=Z,1.7nm,0.5s
FINES FINESS Array B 87.01 335 P **P** **04 54 00.0 +0.4**
HWUT Hardware Ranch 87.30 47 P **P** **04 54 02.2 +0.6**
RLMT Red Lodge 87.48 43 P **P** **04 54 03.8 +1.3**
RLMT IAmb IAmb 04 54 05.5
comp=Z,2.0nm,0.5s
CCUT Cedar City 87.51 51 P **P** **04 54 03.0 +0.2**
CCUT IAmb IAmb 04 54 05.0
comp=Z,6.2nm,1.5s
PDAR Pinedale Array 88.23 45 P **P** **04 54 05.7 -0.4**
comp=Z,0.6nm,0.3s,baz=161,slow=1.0,SNR=16
comp=Z,0.6nm,0.3s
PDAR Pinedale Array 88.23 45 P **P** **04 54 06.2 +0.1**
HFS Hagfors 92.53 338 P P 04 54 19.9 -5.5
comp=Z,2.3nm,0.6s,baz=97,slow=5.8,SNR=8.7
NOA NORSAR Array B 92.73 340 P **P** **04 54 24.1 -2.3**
comp=Z,7.1nm,0.9s,baz=67,slow=4.7,SNR=9.6
ULM Lac du Bonnet 92.99 34 P **P** **04 54 26.9 -0.8**
comp=Z,2.0nm,0.8s,baz=218,slow=1.3,SNR=4.8
comp=Z,2.0nm,0.8s
ULM Lac du Bonnet 92.99 34 P **P** **04 54 26.0 -1.7**
ULM IAmb IAmb 04 54 28.3
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 98.23 55 P **P** **04 54 50.7 -1.4**
comp=Z,0.1nm,0.5s,baz=299,slow=3.9,SNR=3.8
comp=Z,0.1nm,0.5s
TXAR Lajitas Array 98.23 55 P Pdif 04 54 51.3 -0.8
GO01 Chusmiza 147.32 98 PKPdf **PKPbc** **05 00 56.2 -2.3**
PB08 IPOC Station P 147.38 99 PKPbc **PKPab** **05 00 59.7 -1.2**
LPAZ La Paz 147.96 91 PKPbc **PKiKP** **05 01 00.2 -1.9**
comp=Z,2.7nm,0.5s,baz=352,slow=3.6,SNR=17
LPAZ La Paz 147.96 91 **PKiKP** **05 01 00.8 -1.2**
MACA Manacapuru-AM 150.31 62 PKPbc **PKiKP** **05 01 05.1 -1.1**

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*DJA **23** 04:41:45.6±3.7, 16°N±9°×12°1E±°, h15km±24km, M4.8/12, mb4.8/12, mB5.4/4, Mw(mB)4.8/4*
*MAN **23** 04:41:47.0, 14°98N×119°73E, h17km, MS3.7*
*NEIC **23** 04:41:48.7±1.9, 14°91N±0°06×119°59E±0°08, h35km±1km, mb4.7/113, Error ellipse: s-maj=13.7km s-min=8.9km az=239.0*
*IDC **23** 04:41:49.4±5.7, 14°98N×119°94E, h39km±49km, mb4.0/15, mbtmp4.2/16, ML4.4/1, MS3.8/26, Error ellipse: s-maj=24.6km s-min=13.9km az=93.0*
ISC 23 04:41:49.0±0.5, 14°88N±0°05×119°63E±0°08, h39km±3km, n383, σ0°82/338, mb4.7/73, MS3.9/27, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QVPH	**Quezon City--P**	**1.40**	**99**	*i* P	**Pn**	**04 42 11.7**	**-0.2**
QVPH				*i* S	Sn	04 42 38.1	+8.9
TGY	**Tagaytay City**	**1.48**	**121**	Pn	**Pn**	**04 42 13.8**	**+0.6**
	1μm,0.3s,baz=290,slow=3.5,SNR=39						
TGY				Sn	**Sn**	**04 42 31.4**	**+0.1**
	2μm,0.3s,baz=83,slow=22,SNR=9.9						
TGY	**Tagaytay City**	**1.48**	**121**	*e*P	**Pn**	**04 42 13.9**	**+0.8**
TGY				*e*S	**Sn**	**04 42 33.6**	**+2.3**
BOLP	**Bolinao**	**1.52**	**10**	*i* P	**Pn**	**04 42 11.0**	**-2.7**
LQP	**Lukban**	**2.00**	**112**	*e*P	**Pn**	**04 42 20.7**	**+0.3**
LQP				*e*S	**Sn**	**04 42 48.6**	**+4.3**
GQP	**Guinayangan**	**2.89**	**109**	*e*P	**Pn**	**04 42 33.3**	**+0.8**
GQP				*i* S	Sn	04 43 24.5	+18
ABRA	**Dolores**	**2.95**	**20**	*e*P	**Pn**	**04 42 36.6**	**+3.4**
ABRA				*i* S	**Sn**	**04 43 07.6**	**+0.2**
SIPP	**Brgy, Tapao**	**3.13**	**15**	*e*P	**Pn**	**04 42 36.5**	**+0.7**
SIPP				*e*S	**Sn**	**04 43 14.8**	**+2.8**
AUQP	**San Andres**	**3.33**	**117**	*e*P	Pn	04 42 44.4	+5.8
PACPP	**Pamplona Cagay**	**3.93**	**25**	*i* P	**Pn**	**04 42 46.6**	**-0.2**
PACPP				*e*S	**Sn**	**04 43 31.7**	**+0.1**
PLP	**Palo**	**6.38**	**125**	*e*P	Pn	04 43 26.6	+6.1
TWG	**Pinlang**	**8.02**	**10**	Pn	**Pn**	**04 43 42.5**	**-0.5**
TPUB	**Ta-pu**	**8.43**	**6**	Pn	**Pn**	**04 43 47.8**	**-0.9**
YULB	**Yu-li**	**8.62**	**10**		**Pn**	**04 43 49.4**	**-1.7**
SSLB	**Suanglung**	**8.95**	**8**		**Pn**	**04 43 56.5**	**+0.7**
DAV	**Davao City (W)**	**9.71**	**142**	LR	LR	04 48 33.0	
	comp=Z,1μm,18.9s,baz=324,slow=42						
QIZ	**Qiongzhong**	**10.24**	**295**		**Pn**	**04 44 12.1**	**-1.3**
GTOI	**Gorontalo**	**14.54**	**166**	P	**P**	**04 45 14.6**	**-3.4**
	37nm,1.1s						
APSI	**Ampana**	**15.81**	**173**	P	**P**	**04 45 35.4**	**+3.2**
	52nm,1.4s						
SLVN	**Son La**	**16.27**	**296**		**Pn**	**04 45 34.9**	**+0.2**
KAPI	**Kappang**	**19.76**	**180**	P	**Pn**	**04 46 17.1**	**-0.4**
	1.1nm,0.3s,baz=116,slow=4.8,SNR=5.3						
KAPI				S	**Sn**	**04 50 00.3**	**+1.6**
	2.0nm,0.3s,baz=237,slow=18,SNR=1.5						
KAPI				LR	LR	04 53 52.7	
	comp=Z,164nm,19.3s,baz=3.5,slow=36						
	7.8nm,0.8s						
KAPI	**Kappang**	**19.76**	**180**	P	**P**	**04 46 15.8**	**+0.1**
KAPI				IAmb	IAmb	04 46 33.8	
	comp=Z,49nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.14**	**283**	P	Pn	04 46 23.4	+1.5
	comp=Z,5.2nm,0.8s,baz=96,slow=9.4,SNR=39						
CMAR				PcP	**PcP**	**04 50 33.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=109,slow=2.1,SNR=4.6						
CMAR				LR	LR	04 54 28.1	
	comp=Z,271nm,19.1s,baz=100,slow=37						
	comp=Z,5.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.14**	**283**		Pn	04 46 20.9	-1.0
CMAR					**PcP**	**04 50 32.8**	**-1.2**
MYKOM	**Kota Tinggi**	**20.29**	**232**	P	Pn	04 46 34.6	+11
	comp=Z,32nm,1.1s						
JNU	**Nakatsue**	**20.84**	**27**	P	**P**	**04 46 28.0**	**+0.6**
	comp=Z,6.9nm,0.9s,baz=89,slow=11,SNR=1.8						
JNU				LR	LR	04 54 50.0	
	comp=Z,167nm,20.1s,baz=202,slow=38						
CD2	**Chengdu**	**21.60**	**320**	P	**P**	**04 46 36.6**	**+1.0**
CD2				pP	pP	04 46 46.1	+1.2
CD2				sP	pwP	04 46 50.8	+2.6
CD2				S	Sn	04 50 38.9	-4.0
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,170nm,6.7s						
CD2				LR	LR		
	comp=N,820nm,14.7s						
CD2				LR	LR		
	comp=E,730nm,13.9s						
CD2				LR	LR		
	comp=Z,1μm,14.0s						
JMN	**Monobe**	**22.78**	**32**		**P**	**04 46 48.7**	**+0.6**
JMN				IAmb	IAmb	04 46 57.1	
	comp=Z,31nm,1.3s						
PLAI	**Plampang**	**23.62**	**185**	P	P	04 47 09.1	+13
KSRS	**Korea Array**	**23.66**	**17**	P	**P**	**04 46 54.1**	**-2.7**
	comp=Z,3.6nm,0.8s,baz=200,slow=11,SNR=11						
KSRS				LR	LR	04 56 42.4	
	comp=Z,203nm,20.1s,baz=205,slow=38						
	comp=Z,3.6nm,0.8s						
PSI	**Prapat**	**23.68**	**242**	P	P	04 47 10.7	+13
	comp=Z,22nm,1.1s						
MNSI	**Mandailing Nat**	**24.25**	**237**	P	P	04 47 15.7	+13
KCSI	**Kotacane, Aceh**	**24.32**	**244**	P	P	04 47 12.3	+9.2
KLSI		**24.41**	**218**	P	P	04 47 20.3	+16
JHJ	**Hachijo jima 2**	**25.78**	**42**	LR	LR	04 56 20.1	
	comp=Z,102nm,21.7s,baz=42,slow=34						
GTA2	**Gaotai**	**30.09**	**328**	*e*P	**P**	**04 47 58.5**	**+3.7**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA2				LR	LR		
	comp=N,390nm,15.5s						
GTA2				LR	LR		
	comp=E,420nm,16.2s						
GTA2				LR	LR		
	comp=Z,710nm,16.5s						
SONM	**Songino Array**	**34.65**	**344**	P	**P**	**04 48 35.3**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=170,slow=8.8,SNR=5.0						
SONM				LR	LR	05 03 33.7	
	comp=Z,174nm,19.6s,baz=128,slow=38						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**34.65**	**344**	P	**P**	**04 48 34.5**	**-0.2**
ASAJ	**Asahikawa**	**35.09**	**29**	LR	LR	05 02 35.7	
	comp=Z,106nm,21.0s,baz=332,slow=36						
TLY	**Talaya**	**38.89**	**344**	LR	LR	05 07 51.7	
	comp=Z,150nm,18.3s,baz=140,slow=40						
PALK	**Pallekele**	**38.90**	**263**	LR	LR	05 04 40.0	
	comp=Z,145nm,18.2s,baz=82,slow=35						
CTA	**Charters Tower**	**43.50**	**142**	LR	LR	05 08 21.9	
	comp=Z,32nm,19.8s,baz=218,slow=37						
MKAR	**Makanchi Array**	**44.48**	**324**	P	**P**	**04 49 57.8**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=120,slow=8.5,SNR=7.1						
MKAR				LR	LR	05 09 43.2	
	comp=Z,138nm,18.4s,baz=112,slow=38						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.48**	**324**		**P**	**04 49 58.0**	**+1.6**
MKAR				PcP	**PcP**	**04 51 39.8**	**+0.5**
AAK	**Ala-Archa**	**47.51**	**315**	LR	LR	05 11 46.1	
	comp=Z,281nm,21.5s,baz=94,slow=38						
ZALV	**Zalesovo Beam**	**47.54**	**333**	P	**P**	**04 50 20.7**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=126,slow=7.4,SNR=5.0						
ZALV				LR	LR	05 11 16.9	
	comp=Z,175nm,18.4s,baz=124,slow=37						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**47.54**	**333**		**P**	**04 50 20.5**	**+0.1**
YAK	**Yakutsk**	**47.64**	**6**	LR	LR	05 13 31.0	
	comp=Z,61nm,18.4s,baz=168,slow=40						
PETK	**Petropavlovsk-**	**48.51**	**30**	P	**P**	**04 50 27.0**	**-0.9**
	comp=Z,5.5nm,0.8s,baz=243,slow=8.1,SNR=13						
PETK				LR	LR	05 09 50.0	
	comp=Z,60nm,21.9s,baz=250,slow=35						
	comp=Z,5.5nm,0.8s						
PETK	**Petropavlovsk-**	**48.51**	**30**	P	**P**	**04 50 26.0**	**-1.9**
KURBB	**Kurchatov Arra**	**48.64**	**326**	P	**P**	**04 50 30.2**	**+1.3**
	comp=Z,3.6nm,0.9s,baz=121,slow=8.3,SNR=14						
	comp=Z,3.6nm,0.9s						
KURK	**Kurchatov**	**48.64**	**326**		**P**	**04 50 29.3**	**+0.4**
KURK				IAmb	IAmb	04 50 42.5	
	comp=Z,7.5nm,0.7s						
MA2	**Magadan**	**50.15**	**20**	LR	LR	05 14 02.6	
	comp=Z,78nm,18.4s,baz=198,slow=39						
KKAR	**Karatay Array**	**50.42**	**314**		**P**	**04 50 44.0**	**+1.3**
BVAR	**Borovoye Array**	**54.22**	**326**	P	**P**	**04 51 12.2**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=224,slow=41,SNR=2.1						
	comp=Z,1.0nm,0.6s						
BORK	**Borovoye**	**54.27**	**326**	P	**P**	**04 51 12.5**	**+1.5**
BORK				IAmb	IAmb	04 51 24.9	
	comp=Z,4.5nm,0.8s						
TIXI	**Tiksi**	**57.02**	**3**	LR	LR	05 18 59.9	
	comp=Z,91nm,18.5s,baz=186,slow=39						
AB31	**Akbulak array**	**59.17**	**319**		**P**	**04 51 46.4**	**+0.5**
ABKAR	**Akbulak array**	**59.17**	**319**		**P**	**04 51 46.4**	**+0.5**
AKTO	**Aktyubinsk**	**60.65**	**320**	LR	LR	05 20 01.9	
	comp=Z,190nm,18.6s,baz=230,slow=38						
ARTI	**Arti**	**61.92**	**326**	LR	LR	05 20 33.9	
	comp=Z,126nm,18.1s,baz=100,slow=38						
SPIA	**Saint Paul Isl**	**66.86**	**34**	P	**P**	**04 52 36.0**	**-0.7**
	baz=261						
KIRV	**Kirov**	**67.12**	**328**	LR	LR	05 23 50.4	
	comp=Z,172nm,18.5s,baz=95,slow=38						
GAMB	**Gambell**	**67.37**	**27**	P	**P**	**04 52 39.7**	**-0.1**
	baz=257						
TNA	**Tin City**	**69.31**	**25**	P	**P**	**04 52 52.2**	**+0.2**
	baz=260						
M11K	**Mekoryuk**	**69.36**	**31**	P	**P**	**04 52 52.2**	**-0.1**
	baz=264						
F14K	**Arctic Creek**	**69.95**	**25**	P	**P**	**04 52 56.2**	**+0.2**
	baz=262						
ANM	**Nome**	**70.23**	**26**	P	**P**	**04 52 57.9**	**+0.2**
	baz=263						
K13K	**Kusilvak Mount**	**70.27**	**29**	P	**P**	**04 52 57.7**	**-0.2**
	baz=264						
KBZ	**Khabaz**	**70.33**	**311**	P	**P**	**04 52 59.5**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=180,slow=15,SNR=4.6						
	comp=Z,2.7nm,1.0s						
F15K	**North Star Dit**	**70.68**	**25**	P	**P**	**04 53 00.5**	**+0.1**
	baz=263						
C16K	**Lisburne Hills**	**70.74**	**22**	P	**P**	**04 53 01.5**	**+0.8**
	baz=262						
M13K	**Dall Lake**	**70.78**	**31**	P	**P**	**04 53 00.4**	**-0.6**
	baz=266						
G15K	**Niukluk**	**70.85**	**26**	P	**P**	**04 53 01.6**	**+0.2**
	baz=264						
J14K	**Nanvaranak Lak**	**70.85**	**28**	P	**P**	**04 53 01.4**	**0.0**
	baz=265						
L14K	**Kuka Creek**	**71.16**	**30**	P	**P**	**04 53 03.1**	**-0.3**
	baz=266						
M14K	**Bethel**	**71.48**	**30**	P	**P**	**04 53 05.0**	**-0.3**
	baz=267						
D17K	**Noatak River**	**71.52**	**23**	P	**P**	**04 53 05.9**	**+0.5**
	baz=264						
C17K	**DeLong Mountai**	**71.57**	**22**	P	**P**	**04 53 06.3**	**+0.6**
	baz=264						
N14K	**Kuskokwak Cree**	**71.58**	**31**	P	**P**	**04 53 05.6**	**-0.3**
	baz=268						
H16K	**Elim**	**71.58**	**26**	P	**P**	**04 53 05.9**	**+0.1**
	baz=266						
G16K	**Koyuk River**	**71.59**	**26**	P	**P**	**04 53 05.9**	**0.0**
	baz=265						
L15K	**Ungalak Mounta**	**71.75**	**30**	P	**P**	**04 53 06.6**	**-0.4**
	baz=267						
K15K	**Wolf Creek Mou**	**71.76**	**29**	P	**P**	**04 53 06.7**	**-0.3**
	baz=267						
E17K	**Hotham Inlet**	**71.94**	**24**	P	**P**	**04 53 08.3**	**+0.3**
	baz=265						
M15K	**Kasigluk River**	**72.10**	**31**	P	**P**	**04 53 08.8**	**-0.3**
	baz=268						
F17K	**Baldwin Pennin**	**72.12**	**25**	P	**P**	**04 53 09.3**	**+0.3**
	baz=266						
I17K	**Unalakleet**	**72.21**	**27**	P	**P**	**04 53 09.7**	**+0.1**
	baz=267						
J16K	**Anvik River**	**72.23**	**28**	P	**P**	**04 53 09.7**	**-0.1**
	baz=268						
C18K	**Utukok River**	**72.31**	**22**	P	**P**	**04 53 10.8**	**+0.6**
	baz=265						
G17K	**Kiwalik Mounta**	**72.31**	**26**	P	**P**	**04 53 10.3**	**+0.1**
	baz=267						
E18K	**Tukpahlearik C**	**72.44**	**23**	P	**P**	**04 53 11.2**	**+0.3**
	baz=266						
H17K	**Granite Mounta**	**72.60**	**26**	P	**P**	**04 53 11.9**	**0.0**
	baz=268						
L16K	**Owhat River**	**72.71**	**30**	P	**P**	**04 53 12.3**	**-0.3**
	baz=269						
F18K	**Selawik**	**72.77**	**24**	P	**P**	**04 53 13.0**	**+0.1**
	baz=267						
J17K	**VABM Dome**	**72.92**	**28**	P	**P**	**04 53 14.9**	**+1.0**
J17K	**VABM Dome**	**72.92**	**28**	P	**P**	**04 53 13.8**	**-0.1**
	baz=269						
C19K	**Lookout Ridge**	**72.92**	**22**	P	**P**	**04 53 14.1**	**+0.3**
	baz=267						
M16K	**Timber Creek**	**72.95**	**30**	P	**P**	**04 53 13.8**	**-0.4**
	baz=270						
N16K	**Nishlik Lake**	**73.05**	**31**	P	**P**	**04 53 14.0**	**-0.8**
	baz=270						
G18K	**Tagagawik**	**73.15**	**25**	P	**P**	**04 53 14.9**	**-0.3**
	baz=269						
H18K	**Honhosa River**	**73.26**	**26**	P	**P**	**04 53 15.7**	**-0.2**
	baz=269						
K17K	**Iditarod**	**73.27**	**28**	P	**P**	**04 53 16.7**	**+0.7**
K17K				IAmb	IAmb	04 53 17.4	
	comp=Z,9.2nm,1.0s						
K17K	**Iditarod**	**73.27**	**28**	P	**P**	**04 53 15.5**	**-0.5**
	baz=270						
O16K	**Kokwok River B**	**73.40**	**32**	P	**P**	**04 53 16.0**	**-0.7**
	baz=271						
D19K	**Kuna River**	**73.43**	**22**	P	**P**	**04 53 17.7**	**+0.8**
D19K				IAmb	IAmb	04 53 17.8	
	comp=Z,7.1nm,1.1s						
D19K	**Kuna River**	**73.43**	**22**	P	**P**	**04 53 17.1**	**+0.2**
	baz=268						
F19K	**Shaleruckit Mo**	**73.53**	**24**	P	**P**	**04 53 17.5**	**+0.2**
	baz=269						
M17K	**Holitna River**	**73.69**	**30**	P	**P**	**04 53 18.0**	**-0.4**
	baz=271						
E19K	**Redstone River**	**73.74**	**24**	P	**P**	**04 53 19.0**	**+0.3**
	baz=269						
G19K	**Purcell Mounta**	**73.80**	**25**	P	**P**	**04 53 18.9**	**-0.1**
	baz=270						
B20K	**Meade River**	**73.81**	**21**	P	**P**	**04 53 19.6**	**+0.6**
	baz=269						
N17K	**Nushagak Hills**	**73.83**	**31**	P	**P**	**04 53 19.0**	**-0.3**
	baz=271						
GCSA	**Galena City Sc**	**73.89**	**26**	P	**P**	**04 53 19.7**	**+0.2**
	baz=270						
O17K	**Koliganek Bris**	**73.90**	**32**	P	**P**	**04 53 19.2**	**-0.5**
	baz=272						
J18K	**Innoko River**	**73.98**	**28**	P	**P**	**04 53 20.0**	**-0.2**
	baz=271						
D20K	**Etivluk River**	**73.98**	**22**	P	**P**	**04 53 20.4**	**+0.3**
	baz=270						
OBN	**Obninsk**	**73.98**	**324**	LR	LR	05 27 35.0	
	comp=Z,156nm,18.5s,baz=323,slow=37						
L18K	**Granite Mounta**	**74.02**	**29**	P	**P**	**04 53 20.1**	**-0.3**
	baz=271						
H19K	**Roundabout Mou**	**74.06**	**26**		**P**	**04 53 21.1**	**+0.6**
H19K				IAmb	IAmb	04 53 21.3	
	comp=Z,5.2nm,0.8s						
H19K	**Roundabout Mou**	**74.06**	**26**	P	**P**	**04 53 20.6**	**+0.1**
	baz=271						
E20K	**Nigu River**	**74.14**	**23**	P	**P**	**04 53 21.7**	**+0.6**
	baz=270						
P17K	**Kvichak River**	**74.25**	**32**		**P**	**04 53 22.0**	**+0.2**
P17K	**Kvichak River**	**74.25**	**32**	P	**P**	**04 53 21.5**	**-0.3**
	baz=272						
F20K	**Avaraart Lake**	**74.33**	**24**	P	**P**	**04 53 20.9**	**-1.2**
F20K	**Avaraart Lake**	**74.33**	**24**	P	**P**	**04 53 22.2**	**+0.1**
	baz=271						
R17L	**Mt. Peulik Vol**	**74.38**	**34**	P	**P**	**04 53 21.0**	**-1.6**
	baz=273						
J19K	**Poorman**	**74.45**	**27**	P	**P**	**04 53 23.0**	**+0.1**
	baz=272						
M18K	**Stony River**	**74.46**	**30**	P	**P**	**04 53 22.8**	**-0.1**
	baz=272						
N18K	**Kilae Creek**	**74.46**	**31**	P	**P**	**04 53 22.6**	**-0.5**
	baz=272						
A22K	**Sinclair Lake**	**74.55**	**20**	P	**P**	**04 53 24.0**	**+0.8**
	baz=270						
Q17K	**Contact Creek**	**74.59**	**33**	P	**P**	**04 53 23.1**	**-0.9**
	baz=273						
C21K	**Knifeblade Rid**	**74.64**	**22**	P	**P**	**04 53 24.7**	**+0.8**
	baz=271						
B21K	**Ikpikpuk River**	**74.69**	**21**	P	**P**	**04 53 24.9**	**+0.8**
	baz=271						
H20K	**Anotleneega Mo**	**74.72**	**26**	P	**P**	**04 53 24.6**	**+0.2**
	baz=272,SNR=6.2						
O18K	**Koktuh Hills**	**74.85**	**31**	P	**P**	**04 53 24.3**	**-0.9**
O18K	**Koktuh Hills**	**74.85**	**31**	P	**P**	**04 53 24.9**	**-0.4**
	baz=273						
P18K	**Big Mountain,**	**74.86**	**32**	P	**P**	**04 53 25.0**	**-0.4**
	baz=273						
L19K	**White Mountain**	**74.88**	**29**		**P**	**04 53 24.7**	**-0.7**
L19K				IAmb	IAmb	04 53 26.7	
	comp=Z,12nm,1.4s						
L19K	**White Mountain**	**74.88**	**29**	P	**P**	**04 53 25.3**	**-0.2**
	baz=273						
I20K	**Naaghedeneel**	**74.92**	**26**	P	**P**	**04 53 25.8**	**+0.3**
	baz=273						
Q18K	**Katmai Hardscr**	**75.03**	**33**	P	**P**	**04 53 25.9**	**-0.6**
	baz=274						
B22K	**Teshekpuk Lake**	**75.08**	**20**	P	**P**	**04 53 27.2**	**+0.8**
	baz=272						
J20K	**Nowinta River**	**75.09**	**27**		**P**	**04 53 26.5**	**-0.1**
J20K	**Nowinta River**	**75.09**	**27**	P	**P**	**04 53 26.8**	**+0.2**
	baz=273						
N19K	**Bonanza Creek**	**75.14**	**30**	P	**P**	**04 53 26.8**	**-0.3**
	baz=274						
IMAR	**Indian Mountai**	**75.16**	**25**	P	**P**	**04 53 26.8**	**-0.1**
K20K	**Telida**	**75.18**	**28**	P	**P**	**04 53 27.0**	**-0.1**
K20K	**Telida**	**75.18**	**28**	P	**P**	**04 53 27.1**	**-0.1**
	baz=273						
F21K	**Alatna River**	**75.20**	**24**	P	**P**	**04 53 27.7**	**+0.5**
	baz=273						
G21K	**Allakaket**	**75.23**	**24**		**P**	**04 53 26.1**	**-1.2**
G21K				IAmb	IAmb	04 53 28.4	
	comp=Z,6.8nm,1.0s						
G21K	**Allakaket**	**75.23**	**24**	P	**P**	**04 53 27.8**	**+0.4**
	baz=273,SNR=7.5						
O19K	**Port Alsworth**	**75.27**	**31**	P	**P**	**04 53 27.3**	**-0.3**
	baz=274						
H21K	**Melozitna Rive**	**75.57**	**25**	P	**P**	**04 53 28.1**	**-1.2**
H21K				IAmb	IAmb	04 53 43.1	
	comp=Z,11nm,1.3s						
H21K	**Melozitna Rive**	**75.57**	**25**	P	**P**	**04 53 29.7**	**+0.4**
	baz=274						
SII	**Sitkinak Islan**	**75.64**	**35**	P	**P**	**04 53 29.3**	**-0.6**
	baz=275						
F22K	**John River**	**75.69**	**23**	P	**P**	**04 53 30.2**	**+0.3**
	baz=274						
M20K	**Styx River**	**75.72**	**29**	P	**P**	**04 53 30.0**	**-0.3**
M20K				IAmb	IAmb	04 53 34.0	
	comp=Z,12nm,1.4s						
M20K	**Styx River**	**75.72**	**29**	P	**P**	**04 53 29.7**	**-0.6**
	baz=275						
P19K	**Oil Pt**	**75.86**	**32**	P	**P**	**04 53 30.5**	**-0.6**
	baz=275						
CHUM	**Lake Minchumin**	**75.92**	**27**	P	**P**	**04 53 31.2**	**-0.1**
	baz=275						
I21K	**Tanana**	**75.95**	**26**	P	**P**	**04 53 31.3**	**-0.1**
	baz=275						
G22K	**Bettles**	**75.99**	**24**	P	**P**	**04 53 31.8**	**+0.1**
	baz=275						
CAST	**Castle Rocks**	**76.06**	**28**	P	**P**	**04 53 31.7**	**-0.5**
CAST				IAmb	IAmb	04 53 33.1	
	comp=Z,12nm,1.0s						
CAST	**Castle Rocks**	**76.06**	**28**	P	**P**	**04 53 32.0**	**-0.2**
	baz=275						
OHAK	**Old Harbor**	**76.06**	**34**	P	**P**	**04 53 31.6**	**-0.6**
	baz=276						
PPLA	**Purkeypile**	**76.06**	**28**	P	**P**	**04 53 32.2**	**-0.1**
	baz=275						
C23K	**Itkillik River**	**76.07**	**21**	P	**P**	**04 53 32.8**	**+0.7**
	baz=275						
O20K	**Slope Mountain**	**76.12**	**31**	P	**P**	**04 53 32.1**	**-0.5**
	baz=276						
D23K	**Nanuskuk River**	**76.12**	**22**	P	**P**	**04 53 32.8**	**+0.4**
	baz=275						
H22K	**Ishtalitna Cre**	**76.14**	**25**		**P**	**04 53 32.1**	**-0.5**
H22K				IAmb	IAmb	04 53 34.2	
	comp=Z,8.6nm,1.2s						
H22K	**Ishtalitna Cre**	**76.14**	**25**	P	**P**	**04 53 32.7**	**+0.1**
	baz=275,SNR=5.5						
KDAK	**Kodiak Island**	**76.38**	**33**	P	**P**	**04 53 33.4**	**-0.6**
	baz=276						
SKT	**Skwentna**	**76.46**	**29**		**P**	**04 53 32.0**	**-2.4**
SKT				IAmb	IAmb	04 53 34.9	
	comp=Z,11nm,1.2s						
SKT	**Skwentna**	**76.46**	**29**	P	**P**	**04 53 33.5**	**-0.9**
	baz=276						
COLD	**Coldfoot**	**76.47**	**24**	P	**P**	**04 53 34.5**	**+0.1**
	baz=276						
MLY	**Manley**	**76.49**	**26**		**P**	**04 53 34.1**	**-0.5**
MLY				IAmb	IAmb	04 53 35.6	
	comp=Z,5.6nm,1.0s						
MLY	**Manley**	**76.49**	**26**	P	**P**	**04 53 34.4**	**-0.2**
	baz=276,SNR=8.5						
TOLK	**Toolik Lake Re**	**76.56**	**22**	P	**P**	**04 53 34.9**	**0.0**
	baz=276						
G23K	**Bananza Creek**	**76.60**	**24**	P	**P**	**04 53 35.2**	**0.0**
	baz=276						
E23K	**Chandalar**	**76.61**	**

	baz=278								
WRH	Wood River Hil	77.69	26	P		P	04 53 40.4	-0.9	
SEW	Seward	77.70	31	P		P	04 53 41.1	-0.3	
	baz=278								
WAT1	Susitna Watana	77.73	28	P		P	04 53 41.4	-0.2	
	baz=278								
CCB	Clear Creek Bu	77.78	26	P		P	04 53 40.6	-1.2	
POKR	Poker Plat Res	77.87	26	P		P	04 53 42.5	+0.2	
	baz=279								
SML	Sawmill	77.98	29	P		P	04 53 42.2	-0.8	
SML	Sawmill	77.98	29	P		P	04 53 42.8	-0.3	
	baz=279								
KNK	Knik Glacier	77.98	29	P		P	04 53 42.5	-0.5	
	baz=279								
C26K	Camden Bay	78.02	21	P		P	04 53 43.5	+0.5	
	baz=280								
E25K	Arctic Village	78.10	22	P		P	04 53 43.8	+0.2	
	baz=280								
PWL	Port Wells	78.13	30	P		P	04 53 43.0	-0.8	
	baz=279								
G25K	Bearman Lake	78.13	24	P		P	04 53 43.7	+0.1	
	baz=280								
WAT6	Susitna Watana	78.14	28	P		P	04 53 43.1	-0.9	
	baz=279								
ILAR	Eielson Array	78.15	26	P		P	04 53 43.6	-0.2	
	comp=Z,1.5nm,0.9s,baz=261,slow=6.5,SNR=6.6								
	comp=Z,1.5nm,0.9s								
F25K	Christian Rive	78.17	23	P		P	04 53 44.2	+0.2	
	baz=280								
HDA	Harding Lake	78.19	26	P		P	04 53 42.7	-1.3	
	baz=280								
DHY	Denali Highway	78.22	28	P		P	04 53 43.7	-0.8	
	baz=279								
SPITS	Spitsbergen Ar	78.24	348	P		P	04 53 44.7	+0.5	
	comp=Z,5.6nm,0.6s,baz=95,slow=8.8,SNR=6.7								
	comp=Z,5.6nm,0.6s								
EIL	Elat	78.25	298	LR		LR	05 34 09.9		
	comp=Z,61nm,18.0s,baz=74,slow=40								
M23K	Glacier View	78.27	29	P		P	04 53 44.1	-0.5	
	baz=279								
SCM	Sheep Creek Mo	78.45	29	P		P	04 53 45.1	-0.6	
	baz=280								
C27K	Jago River	78.48	21	IAmb		IAmb	04 53 46.9		
	comp=Z,5.6nm,0.9s								
C27K	Jago River	78.48	21	P		P	04 53 46.3	+0.7	
	baz=281								
PRP	Porcupine Dome	78.59	25	P		P	04 53 46.5	+0.1	
	baz=280								
F26K	Sheenjek River	78.71	23	P		P	04 53 47.2	+0.3	
	baz=281								
GLI	Glacier Island	78.73	30	P		P	04 53 46.6	-0.5	
	baz=280								
P23K	Montague Islan	78.73	31	P		P	04 53 46.9	-0.2	
	baz=280								
FINES	FINESS Array B	78.76	331	P		P	04 53 47.4	+0.2	
K24K	Donnelly Dome	78.80	27	P		P	04 53 47.4	-0.1	
	baz=281								
KBS	Kingsbay	78.84	349	P		P	04 53 48.1	+0.6	
M24K	Tolsona, Glenn	78.94	29	P		P	04 53 48.0	-0.3	
	baz=281								
G26K	Porcupine Rive	79.00	23	P		P	04 53 48.9	+0.5	
	baz=282								
PAX	Paxson	79.09	28	P		P	04 53 48.9	-0.3	
	baz=281								
KLU	Klutina	79.17	29	IAmb		IAmb	04 53 50.7		
	comp=Z,8.8nm,1.2s								
KLU	Klutina	79.17	29	P		P	04 53 49.2	-0.4	
	baz=281								
RIDG	Independent Ri	79.22	27	P		P	04 53 49.4	-0.4	
	baz=282,SNR=10.0								
HARP	HAARP	79.35	28	P		P	04 53 49.5	-1.0	
HARP	HAARP	79.35	28	P		P	04 53 50.2	-0.3	
	baz=281								
EYAK	Cordova Ski Ar	79.44	30	P		P	04 53 50.6	-0.3	
	baz=281								
D27M	Malcolm River	79.51	21	P		P	04 53 51.8	+0.5	
	baz=284								
SCRK	Sand Creek	79.54	26	P		P	04 53 51.5	-0.2	
	baz=282								
E27K	Coleen River	79.54	22	P		P	04 53 51.7	+0.2	
	baz=284								
I26K	Coal Creek Min	79.60	25	IAmb		IAmb	04 53 52.2		
	comp=Z,11nm,1.1s								
I26K	Coal Creek Min	79.60	25	P		P	04 53 51.6	-0.2	
	baz=283								
N25K	Chitina, Valde	79.77	29	P		P	04 53 52.4	-0.5	
	baz=282								
G27K	Doyon Strip	79.85	23	P		P	04 53 53.5	+0.4	
	baz=284								
MENT	Mentasta	79.88	27	P		P	04 53 53.3	-0.2	
BMRM	Bremner River	79.90	30	P		P	04 53 52.7	-0.9	
BMRM				IAmb		IAmb	04 53 54.1		
	comp=Z,12nm,1.2s								
BMRM	Bremner River	79.90	30	P		P	04 53 53.2	-0.4	
	baz=282								
H27K	Steamboat Moun	80.04	24	P		P	04 53 54.4	+0.2	
	baz=284								
I27K	Kandik River	80.16	25	P		P	04 53 54.8	-0.1	
I27K				IAmb		IAmb	04 54 03.7		
	comp=Z,9.2nm,1.1s								
I27K	Kandik River	80.16	25	P		P	04 53 55.1	+0.2	
	baz=284,SNR=5.4								
GLB	Gilahina Butte	80.17	29			P	04 53 54.4	-0.7	
GLB				IAmb		IAmb	04 53 55.8		
	comp=Z,8.9nm,1.0s								
E28M	Babbage River	80.18	21	P		P	04 53 55.7	+0.8	
	baz=285								
D28M	Stokes Point	80.25	21	P		P	04 53 55.5	+0.2	
	baz=286								
F28M	Old Crow	80.32	22	IAmb		IAmb	04 53 56.7		
	comp=Z,5.6nm,0.9s								
F28M	Old Crow	80.32	22	P		P	04 53 56.1	+0.5	
	baz=285								
M26K	Nabesna, AK	80.33	28			P	04 53 55.9	0.0	
M26K				IAmb		IAmb	04 53 57.2		
	comp=Z,13nm,1.1s								
M26K	Nabesna, AK	80.33	28	P		P	04 53 55.7	-0.2	
	baz=283,SNR=6.3								
K27K	Chicken	80.35	26	P		P	04 53 55.8	-0.1	
K27K				IAmb		IAmb	04 53 57.4		
	comp=Z,9.4nm,1.0s								
MCARA	McCarthy VSAT	80.56	29	P		P	04 53 56.2	-0.8	
MCARA				IAmb		IAmb	04 53 59.7		
	comp=Z,8.8nm,0.8s								
MCARA	McCarthy VSAT	80.56	29	P		P	04 53 56.9	-0.1	
	baz=284								
TIRR	Tirgusor	80.60	313	P		P	04 53 57.7	+0.1	
CRQM	Cirque	80.65	30	P		P	04 53 57.1	-0.7	
CRQM				IAmb		IAmb	04 53 59.4		
	comp=Z,11nm,1.1s								
CRQE	Cirque	80.67	30	P		P	04 53 57.3	-0.5	
	baz=284								
L27K	Beaver Creek,	80.69	27	IAmb		IAmb	04 53 59.3		
	comp=Z,6.8nm,0.9s								
L27K	Beaver Creek,	80.69	27	P		P	04 53 58.0	+0.2	
	baz=284,SNR=11								
BCAR	Beaver Creek A	80.71	27			P	04 53 57.3	-0.6	
E29M	Blow River	80.82	21	P		P	04 53 58.6	+0.3	
	baz=287								
M27K	Edge Creek, AK	80.85	28	P		P	04 53 58.7	0.0	
	baz=284								
I28M	Miner Creek	80.87	25	IAmb		IAmb	04 54 00.1		
	comp=Z,5.4nm,0.9s								
I28M	Miner Creek	80.87	25	P		P	04 53 58.8	0.0	
	baz=286								
CASY	Casey	81.20	184			P	04 53 59.4	-0.7	
CASY				IAmb		IAmb	04 54 01.7		
	comp=Z,11nm,1.0s								
G29M	Pine Creek	81.20	23	IAmb		IAmb	04 54 01.3		
	comp=Z,6.8nm,0.9s								
G29M	Pine Creek	81.20	23	P		P	04 54 00.5	+0.1	
	baz=287								
BARN	Barnard Glacie	81.28	29	P		P	04 54 00.5	-0.6	
BARN				IAmb		IAmb	04 54 02.3		
	comp=Z,8.8nm,0.8s								
H29M	Whitestone	81.28	24	IAmb		IAmb	04 54 01.7		
	comp=Z,8.1nm,1.0s								
H29M	Whitestone	81.28	24	P		P	04 54 00.9	+0.1	
	baz=287								
BVCY	Beaver Creek	81.29	28	P		P	04 54 00.5	-0.4	
	baz=285,SNR=5.3								
DAWY	Dawson	81.48	26	IAmb		IAmb	04 54 02.9		
	comp=Z,7.0nm,1.0s								
DAWY	Dawson	81.48	26	P		P	04 54 02.0	0.0	
	baz=286,SNR=6.3								
YUK3	Moose Creek	81.64	28	P		P	04 54 02.9	-0.1	
	baz=286,SNR=5.9								
F30M	Barrier River	81.81	22	P		P	04 54 03.7	+0.1	
F30M				IAmb		IAmb	04 54 04.0		
	comp=Z,6.8nm,0.9s								
F30M	Barrier River	81.81	22	P		P	04 54 03.7	+0.1	
	baz=289								
G30M	tAoh Zraii Nji	81.86	23	IAmb		IAmb	04 54 04.5		
	comp=Z,6.4nm,1.0s								
G30M	tAoh Zraii Nji	81.86	23	P		P	04 54 04.1	+0.2	
	baz=289								
EPYK	Eagle Plains	81.87	23	IAmb		IAmb	04 54 04.2		
	comp=Z,6.8nm,1.0s								
EPYK	Eagle Plains	81.87	23	P		P	04 54 03.8	-0.2	
	baz=288								
O28M	Mount Upton	82.04	29	P		P	04 54 04.7	-0.6	
	baz=286								
MLR	Muntele Rosu	82.09	315	LR		LR	05 34 10.4		
	comp=Z,85nm,18.6s,baz=24,slow=38								
BURAR	Bucovina Array	82.10	317	P		P	04 54 05.7	+0.1	
YUK8	Steele Glacier	82.10	29	P		P	04 54 05.8	+0.3	
	baz=286								
BUR08	Bucovina Ar. S	82.10	317			P	04 54 05.3	-0.4	
PCA	Pinnacle	82.20	30	P		P	04 54 06.1	+0.3	
PINM	Pinnacle	82.20	30	P		P	04 54 05.8	-0.1	
	baz=286								
L29M	L29M	82.30	27	P		P	04 54 06.8	+0.5	
	baz=287,SNR=13								
K29M	Barlow Dome	82.33	26	IAmb		IAmb	04 54 07.8		
	comp=Z,7.8nm,0.8s								
K29M	Barlow Dome	82.33	26	P		P	04 54 06.9	+0.3	
	baz=288,SNR=9.5								
M29M	Somme Creek	82.35	27	IAmb		IAmb	04 54 08.4		
	comp=Z,7.0nm,0.8s								
M29M	Somme Creek	82.35	27	P		P	04 54 07.2	+0.5	
	baz=287,SNR=12								
I30M	Mount Dempster	82.37	24	IAmb		IAmb	04 54 07.4		
	comp=Z,8.1nm,0.9s								
I30M	Mount Dempster	82.37	24	P		P	04 54 06.7	0.0	
	baz=289								
INK	Inuvik	82.38	21	P		P	04 54 05.3	-1.2	
	comp=Z,2.3nm,0.8s,baz=276,slow=20,SNR=3.6								
	comp=Z,2.3nm,0.8s								
INK	Inuvik	82.38	21	P		P	04 54 07.1	+0.6	
	baz=291								
BRWY	Burwash Landin	82.41	28	P		P	04 54 06.5	-0.4	
	baz=287								
J30M	Hart River	82.60	25	P		P	04 54 08.0	+0.1	
	baz=289								
YUK4	Talbot Arm	82.60	28	P		P	04 54 07.6	-0.5	
	baz=287								
G31M	Satah River	82.60	22	P		P	04 54 08.3	+0.7	
	baz=290								
F31M	Tsiigehtchic	82.61	22	IAmb		IAmb	04 54 08.0		
	comp=Z,7.4nm,0.9s								
F31M	Tsiigehtchic	82.61	22	P		P	04 54 08.1	+0.3	
	baz=291								
YUK6	Outpost Mounta	82.85	29	P		P	04 54 09.7	+0.3	
	baz=288								
O29M	Mount Kennedy	82.94	29	P		P	04 54 09.7	-0.1	
	baz=287								
H31M	Peel River	82.97	24	IAmb		IAmb	04 54 10.7		
	comp=Z,11nm,1.1s								
H31M	Peel River	82.97	24	P		P	04 54 10.1	+0.4	
	baz=290								
M30M	Minto, Yukon	83.05	27	IAmb		IAmb	04 54 11.9		
	comp=Z,9.3nm,1.1s								
M30M	Minto, Yukon	83.05	27	P		P	04 54 10.6	+0.4	
	baz=289,SNR=12								
N30M	Aishikik Lake	83.28	28	IAmb		IAmb	04 54 13.1		
	comp=Z,7.3nm,0.8s								
N30M	Aishikik Lake	83.28	28	P		P	04 54 12.1	+0.7	
	baz=289								
HYT	Haines Junctio	83.29	29			P	04 54 12.1	+0.5	
HYT				IAmb		IAmb	04 54 13.1		
	comp=Z,5.9nm,1.0s								
HYT	Haines Junctio	83.29	29	P		P	04 54 12.1	+0.5	
	baz=288,SNR=5.3								
A36M	Sachs Harbour	83.41	16	P		P	04 54 13.8	+2.0	
	baz=298								
P29M	Windy Craggy	83.55	30	IAmb		IAmb	04 54 14.5		
	comp=Z,7.4nm,0.9s								
P29M	Windy Craggy	83.55	30	P		P	04 54 13.3	+0.4	
	baz=288								
P30M	Million Dollar	83.77	29	P		P	04 54 14.2	+0.2	
	baz=289								
N31M	Braeburn, Yuko	83.86	28	IAmb		IAmb	04 54 16.0		
	comp=Z,6.2nm,0.8s								
N31M	Braeburn, Yuko	83.86	28	P		P	04 54 15.1	+0.7	
	baz=290								
O30N	Mendenhall	83.96	29	IAmb		IAmb	04 54 16.4		
	comp=Z,5.2nm,0.7s								
O30N	Mendenhall	83.96	29	P		P	04 54 15.3	+0.4	
	baz=290,SNR=7.4								
M31M	Drury Creek, Y	84.23	27	P		P	04 54 16.7	+0.5	
	baz=291								
PLBC	Pleasant Camp	84.27	30	P		P	04 54 16.9	+0.4	
	baz=289								
WHY	Whitehorse	84.56	28	P		P	04 54 18.7	+0.7	
	baz=290,SNR=7.1								
SKAG	Skagway	84.77	30	P		P	04 54 19.5	+0.6	
	baz=290								
S31K	Pelican	84.84	31	P		P	04 54 19.1	-0.2	
S31K	Pelican	84.84	31	P		P	04 54 19.9	+0.6	
	baz=290								
C36M	Paulatuk	85.04	19	P		P	04 54 21.5	+1.4	
	baz=300								
N32M	Quiet Lake	85.20	28	P		P	04 54 21.6	+0.5	
	baz=292,SNR=11								
MMPY	Sheldon Lake,	85.42	26	IAmb		IAmb	04 54 24.3		
	comp=Z,6.9nm,1.0s								
MMPY	Sheldon Lake,	85.42	26	P		P	04 54 22.9	+0.6	
	baz=294								
P32M	Atlin	85.49	29	P		P	04 54 22.6	0.0	
	baz=292								
R32K	Eaglecrest	85.58	31	IAmb		IAmb	04 54 24.8		
	comp=Z,6.3nm,0.9s								
R32K	Eaglecrest	85.58	31	P		P	04 54 23.3	+0.2	
	baz=291								
NC303	NORSAR Array S	85.60	333	P		P	04 54 23.0	-0.1	
SIT	Sitka	85.61	32	P		P	04 54 23.4	+0.2	
	baz=290								
P33M	Teslin, Yukon	85.67	29			P	04 54 23.8	+0.1	
P33M	Teslin, Yukon	85.67	29	P		P	04 54 23.7	+0.1	
	baz=292,SNR=8.6								
NB2	NORSAR Subarra	85.75	332	P		P	04 54 23.1	-0.8	
	comp=Z,14nm,1.1s,baz=67,slow=4.8								
NB2	NORSAR Subarra	85.75	332	P		P	04 54 23.1	-0.8	
S32K	Killisnoo	85.84	31	P		P	04 54 24.4	+0.1	
	baz=291								
NC204	NORSAR Array S	85.85	333			P	04 54 23.8	-0.7	
NBO00	NORSAR Array S	85.94	332	P		P	04 54 24.6	-0.2	
MORC	Moravsky Berou	86.39	321	*eP*		P	04 54 32.5	+5.2	
Q32M	Nakina River	86.42	30	P		P	04 54 27.3	-0.1	
	baz=293								
JAVC	Velka Javorina	86.61	320	*eP*		P	04 54 30.0	+1.6	
R33M	Jennings River	86.86	29	IAmb		IAmb	04 54 31.4		
	comp=Z,6.5nm,0.9s								
R33M	Jennings River	86.86	29	P		P	04 54 29.8	+0.3	
	baz=294								
U33K	Whale Pass	87.09	32	P		P	04 54 30.7	+0.2	
	baz=292								
VRAC	Vranov	87.13	320	*eP*		P	04 54 31.9	+1.0	
KRUC	Moravsky	87.33	320	*eP*		P	04 54 31.5	-0.3	
WRAK	Wrangell Islan	87.37	32	P		P	04 54 32.2	+0.4	
	baz=294								
S34M	Telegraph Cree	87.38	30	P		P	04 54 32.4	+0.6	
	baz=294								
WTLY	Watson Lake, Y	87.55	28	P		P	04 54 32.5	-0.2	
DLBC	Dease Lake	87.70	30	P		P	04 54 33.4	-0.1	
	comp=Z,2.6nm,0.9s,baz=318,slow=23,SNR=4.7								
	comp=Z,2.6nm,0.9s								
DLBC	Dease Lake	87.70	30	P		P	04 54 34.1	+0.6	
	baz=295								
V35K	Ketchikan	88.18	33	P		P	04 54 36.4	+0.6	
	baz=294								
CLL	Collm	88.57	323	*i* P		P	04 54 38.4	+0.7	
CLL				AMS		AMS	05 36 00.0		
	comp=Z,100nm,18.5s								
GEC2	GERESS Array S	89.07	321	P		P	04 54 40.3	0.0	
GEC2				IAmb		IAmb	04 54 41.9		
	comp=Z,3.2nm,1.1s								
GERES	GERESS Array B	89.07	321	P		P	04 54 41.2	+1.0	
	comp=Z,1.5nm,0.9s,baz=51,slow=4.8,SNR=9.7								
	comp=Z,1.5nm,0.9s								
GERES	GERESS Array B	89.07	321	P		P	04 54 39.6	-0.6	
MBAR	Mbarara	89.08	269	LR		LR	05 32 23.2		
	comp=Z,21nm,21.2s,baz=102,slow=34								
FUORN	Ofenpass-Fuorn	92.07	319			P	04 54 54.2	-0.3	
YKA	Yellowknife Ar	92.09	22	P		P	04 54 53.2	-0.6	
	comp=Z,2.3nm,0.8s,baz=312,slow=4.4,SNR=9.7								
	comp=Z,2.3nm,0.8s								
YKAW1	Yellowknife Wh	92.14	22	P		P	04 54 54.3	+0.3	
YKAW1				IAmb		IAmb	04 54 54.5		
	comp=Z,4.6nm,1.0s								
PPT2	Papeete2	95.13	107	*e*LR		LR	05 25 38.9		
	comp=Z,138nm,31.2s								
PPT2				*e*LR		LR	05 25 44.1		
	comp=Z,90nm,23.8s								
BORG	Borgarnes	95.26	344	LR		LR	05 42 09.4		
	comp=Z,47nm,18.1s,baz=351,slow=38								
PV03	Paradox Valley	110.32	39	Pdif		Pdif	04 56 13.9	-2.6	
TXAR	Lajitas Array	119.35	43	PKP		PKPdf	05 00 34.1	-0.8	
	comp=Z,1.6nm,0.8s,baz=316,slow=1.9,SNR=16								
TXAR	Lajitas Array	119.35	43			PKPdf	05 00 33.9	-1.0	
TUL3	Leonard	119.39	33	PKPdf		PKPdf	05 00 33.4	-1.3	
PKME	Peaks-Kenny Pk	119.60	7	PKPdf		PKPdf	05 00 34.5	-0.3	
DR12	Loma Pena Alta	145.39	15	PKPbc		PKPab	05 01 24.3	+0.6	

IDC ***23*** *04:44:12.7±1.3, 17°.66N×66°.86W, h0km, mb3.6/5, mbtmp3.6/5, MS2.9/1, Error ellipse: s-maj=29.1km s-min=10.9km az=154.0*

OSPL ***23*** *04:44:15.6±0.9, 17°.75N×66°.83W, h2km±20km, ML3.7, Presumed earthquake*

PTWC ***23*** *04:44:15, 17°.90N×66°.80W, Ml4.3/16, PUERTO RICO REGION*

NEIC ***23*** *04:44:15.8±1.2, 17°.86N±0°.03×66°.84W±0°.01, h10km±1km, mb4.4/3, ML4.1/35, Mwr3.7/21, ML3.9/14(RSPR), Mwr3.7/15(SLM), Error ellipse: s-maj=5.4km s-min=2.0km az=11.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.78; $M_{\theta\theta}$=2.11; $M_{\phi\phi}$=0.67; $M_{r\theta}$=0.47; $M_{\theta\phi}$=3.18; $M_{r\phi}$=2.25; Fault plane solution: M_o=4.66000×10^{14} NP1: ϕ_s=204.02000°, δ65.08000°, λ-124.84000°. NP2: ϕ_s=82.83000°, δ41.90000°, λ-39.13000°. Principal axes: T 5.0656, Plg13.0000°, Azm319.0000°; N -0.9683, Plg31.0000°, Azm220.0000°; P -4.0993, Plg56.0000°, Azm69.0000°;*

RSPR ***23*** *04:44:16.4, 17°.90N×66°.86W, h12km, MD3.5/14*

NEIC ***23*** *04:44:16, 17°.90N×66°.86W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.67; $M_{\theta\theta}$=2.53; $M_{\phi\phi}$=1.86; $M_{r\theta}$=0.20; $M_{\theta\phi}$=3.13; $M_{r\phi}$=2.22; Fault plane solution: M_o=4.47000×10^{14} NP1:ϕ_s=200.00000°, δ81.00000°, λ-150.00000°. NP2:ϕ_s=105.00000°, δ60.00000°, λ-10.00000°. Principal axes: T 4.4642, Plg14.0000°, Azm329.0000°; N -0.0022, Plg59.0000°, Azm214.0000°; P -4.4620, Plg27.0000°, Azm67.0000°;*

NEIC ***23*** *04:44:16.2, 17°.89N×66°.83W, h10km*

SDD ***23*** *04:44:17.1±1.1, 17°.90N×66°.85W, h10km±5km, MD3.0, ML3.8, MW3.5, Presumed earthquake*

ISC 23 04:44:15.0±0.9, 17°.83N±0°.04×66°.84W±0°.02, h18km±3km, n96, σ1°44/133, mb3.9/5, 9C-17D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GBPR	Guanica, Bosqu	0.15	346			Pg	04 44 19.4	+0.2
GBPR	Guanica, Bosqu	0.15	346	↑*eP*		Pg	04 44 19.4	+0.2
MLPR	Magueyes Islan	0.23	306			Pb	04 44 20.7	+0.1
MLPR				Sg		Sg	04 44 23.8	-0.4
MLPR				IAML			04 44 24.7	
	47μm,0.3s							
MLPR	Magueyes Islan	0.23	306	P		Pb	04 44 20.7	+0.1
MLPR	Magueyes Islan	0.23	306	↑*iP*		Pb	04 44 20.7	+0.1
MLPR				↓↓*iS*		Sg	04 44 24.2	0.0
MLPR				IAML			04 44 24.3	
	comp=N,46μm,0.4s							
MLPR	Magueyes Islan	0.23	306	↑*iP*		Pb	04 44 20.7	+0.1
CRPR	Cabo Rojo, PR	0.31	304			Pb	04 44 21.7	-0.2
CRPR				Sg		Sb	04 44 25.6	-1.1
CRPR				IAML			04 44 27.2	
	comp=N,34μm,0.4s							
CRPR	Cabo Rojo, PR	0.31	304	P		Pb	04 44 21.7	-0.2
CRPR				S		Sb	04 44 25.8	-0.8
CRPR	Cabo Rojo, PR	0.31	304	↑↑*eP*		Pb	04 44 21.8	-0.2
OBIP	Obispado Ponce	0.31	47			Pb	04 44 21.7	-0.3
OBIP				Sg		Sb	04 44 25.8	-0.9
OBIP	Obispado Ponce	0.31	47	P		Pb	04 44 21.5	-0.5
OBIP	Obispado Ponce	0.31	47	*i* P		Pb	04 44 22.1	+0.1
OBIP				*e*S		Sb	04 44 26.7	+0.1
OBIP				IAML			04 44 27.4	
	comp=Z,29μm,0.1s							
OBIP	Obispado Ponce	0.31	47	↓↓*iP*		Pb	04 44 22.1	+0.1
OBIP				*e*S		Sb	04 44 26.8	+0.1
CELP	Cerrillos	0.35	46			Pb	04 44 22.7	0.0
CELP				Sg		Sb	04 44 26.9	-1.0
CELP				IAML			04 44 28.4	
	comp=Z,15μm,0.5s							
CELP	Cerrillos	0.35	46	P		Pb	04 44 22.8	+0.1
CELP				S		Sb	04 44 27.0	-1.0
CELP	Cerrillos	0.35	46	↓*iP*		Pb	04 44 22.7	0.0
CELP				↓↓*i*Sg		Sb	04 44 27.9	0.0
CELP				IAML			04 44 28.4	
	comp=N,3μm,0.4s							
CELP	Cerrillos	0.35	46	↓↓*iP*		Pb	04 44 22.9	+0.1
LSP	Las Mesas	0.41	326			Pb	04 44 23.5	-0.3
LSP	Las Mesas	0.41	326	↓↓*iP*		Pb	04 44 23.5	-0.3
UUPR	Utuado, UPR, P	0.43	16			Pb	04 44 23.6	-0.6
UUPR				Sg		Sg	04 44 27.9	-1.9
UUPR	Utuado, UPR, P	0.43	16	P		Pb	04 44 23.7	-0.4
UUPR				S		Sb	04 44 29.2	-1.2
UUPR	Utuado, UPR, P	0.43	16	↑*iP*		Pb	04 44 23.8	-0.4
PRSN	Puerto Rico Se	0.48	323			Pb	04 44 24.1	-0.8
PRSN				Sg		Sb	04 44 30.7	-0.9
PRSN				IAML			04 44 33.0	
	comp=N,24μm,0.3s							
PRSN				IAML			04 44 33.0	
	comp=N,26μm,0.2s							
PRSN	Puerto Rico Se	0.48	323	P		Pb	04 44 24.5	-0.4
PRSN	Puerto Rico Se	0.48	323	↑*iP*		Pb	04 44 24.4

	comp=N,6μm,0.5s								
SJG	**San Juan**	**0.72**	**67**	P		**Pg**	**04 44 28.0**	**-1.1**
SJG	**San Juan**	**0.72**	**67**	*eP*		**Pb**	**04 44 29.0**	**+0.1**
SJG	**San Juan**	**0.72**	**67**	⇓*i*P		**Pb**	**04 44 29.0**	**+0.1**
SJG				⇓*i*Sg		**Sb**	**04 44 39.2**	**+0.8**
SJG	**San Juan**	**0.72**	**67**	*i* P		**Pb**	**04 44 29.0**	**+0.1**
SJG				*eS*		**Sb**	**04 44 38.7**	**+0.3**
SJG	**San Juan**	**0.72**	**67**	⇓*i*P		**Pb**	**04 44 29.2**	**+0.3**
PDPR	**Patillas Dam,**	**0.80**	**77**			**Pb**	**04 44 30.6**	**+0.2**
PDPR				Sg		**Sb**	**04 44 41.7**	**+0.8**
PDPR	**Patillas Dam,**	**0.80**	**77**	⇓*eP*		**Pb**	**04 44 30.6**	**+0.2**
IDE	**Isla Desecheo**	**0.81**	**313**			**Pb**	**04 44 30.1**	**-0.5**
IDE						**Sb**	**04 44 40.8**	**-0.5**
IDE	**Isla Desecheo**	**0.81**	**313**	⇓*i*P		**Pb**	**04 44 30.1**	**-0.5**
IDE				*eS*		**Sb**	**04 44 40.8**	**-0.5**
HUMP	**Col San Antoni**	**0.99**	**72**			**Pg**	**04 44 33.5**	**-0.8**
HUMP				IAML			04 44 50.3	
	comp=N,3μm,0.7s							
HUMP	**Col San Antoni**	**0.99**	**72**			**Sb**	**04 44 47.2**	**+0.8**
HUMP	**Col San Antoni**	**0.99**	**72**	⇓*i*P		**Pb**	**04 44 33.7**	**0.0**
PCDR	**Punta Cana, DR**	**1.61**	**295**			**Pb**	**04 44 43.6**	**-0.5**
PCDR	**Punta Cana, DR**	**1.61**	**295**	⇓*i*P		**Pb**	**04 44 43.6**	**-0.5**
PCDR				IAML			04 45 22.9	
	comp=N,587nm,0.8s							
PCDR	**Punta Cana, DR**	**1.61**	**295**	*i* P		**Pb**	**04 44 43.7**	**-0.5**
PCDR				IAML			04 45 19.0	
	comp=Z,467nm,1.2s							
HIDR	**Higuey Centro**	**1.93**	**293**	⇑*i*P		**Pn**	**04 44 48.3**	**+1.3**
HIDR				IAML			04 45 23.1	
	comp=N,688nm,0.2s							
DR12	**Loma Pena Alta**	**2.59**	**292**			**Pn**	**04 44 57.7**	**+1.6**
SABA	**Saba**	**3.44**	**93**			**Pn**	**04 45 09.3**	**+1.6**
SABA	**Saba**	**3.44**	**93**	*eP*		**Pn**	**04 45 08.8**	**+1.1**
SABA				*eS*		**Sn**	**04 45 52.3**	**+4.3**
SMRT	**St. Maarten**	**3.59**	**86**			**Pn**	**04 45 10.5**	**+0.7**
SMRT	**St. Maarten**	**3.59**	**86**	*eP*		**Pn**	**04 45 10.7**	**+0.8**
SMRT				*eS*		**Sn**	**04 45 50.5**	**-1.4**
SKI	**Saint Kitts**	**3.95**	**97**	*eP*		**Pn**	**04 45 16.4**	**+1.7**
SKI				*eS*		**Sn**	**04 45 59.2**	**-1.3**
LOVI	**El Cajuil, Ovi**	**4.31**	**270**	*i* P		**Pn**	**04 45 20.0**	**+0.3**
LOVI				IAML			04 46 10.2	
	comp=Z,88nm,1.3s							
SDDR	**Presa de Saban**	**4.37**	**286**			**Pn**	**04 45 22.2**	**+1.7**
SDDR	**Presa de Saban**	**4.37**	**286**	*eP*		**Pb**	**04 45 29.4**	**-2.0**
SDDR				*eS*		**Sb**	**04 46 25.5**	**+1.7**
SDDR				IAML			04 46 32.2	
	comp=Z,98nm,0.3s							
SDDR				IAML			04 46 32.2	
	comp=Z,139nm,0.5s							
LODU1	**El Espartillar**	**4.43**	**277**	*i* P		**Pn**	**04 45 23.0**	**+1.6**
LODU1				IAML			04 46 20.1	
	comp=Z,73nm,0.5s							
LOBH	**Bahia de las A**	**4.57**	**271**	*i* P		**Pn**	**04 45 23.4**	**+0.2**
LOBH				IAML			04 46 19.7	
	comp=Z,71nm,2.1s							
MBWH	**Windy Hill**	**4.58**	**103**	*eP*		**Pn**	**04 45 24.7**	**+1.3**
MBWH				*eS*		**Sn**	**04 46 16.2**	**+0.1**
ANWB	**Willy Bob**	**4.82**	**91**	*eP*		**Pn**	**04 45 27.8**	**+1.1**
ANWB				*eS*		**Sn**	**04 46 21.9**	**-0.3**
DHSZ	**Broadband at M**	**5.10**	**107**	*eP*		**Pn**	**04 45 32.3**	**+1.8**
DHSZ				*eS*		**Sn**	**04 46 28.8**	**-0.2**
MMLZ	**Guadeloupe Bro**	**5.26**	**109**	*eP*		**Pn**	**04 45 34.2**	**+1.4**
MMLZ				*eS*		**Sn**	**04 46 33.5**	**+0.5**
TBG	**Guadaloupe-3**	**5.35**	**111**	*eP*		**Pn**	**04 45 34.9**	**+0.9**
GRTK	**Grand Turk**	**5.45**	**313**	*i* P		**Pn**	**04 45 36.5**	**+1.1**
GRTK				IAML			04 46 45.6	
	comp=Z,98nm,1.6s							
GRTK	**Grand Turk**	**5.45**	**313**	*eP*		**Pn**	**04 45 37.7**	**+2.4**
GRTK				IAML			04 45 40.0	
	comp=Z,28nm,0.2s							
MAGL	**Barre de l'ile**	**5.64**	**109**	*eP*		**Pn**	**04 45 38.8**	**+0.7**
MAGL				*eS*		**Sn**	**04 46 41.8**	**-0.6**
DSLB	**Salisbury**	**5.72**	**114**	*eP*		**Pn**	**04 45 39.9**	**+0.9**
DSLB				*eS*		**Sn**	**04 46 41.6**	**-2.6**
DSDZ	**La Diserade, G**	**5.73**	**104**	*eP*		**Pn**	**04 45 40.5**	**+1.3**
DSDZ				*eS*		**Sn**	**04 46 39.2**	**-5.3**
BIM	**Bigot**	**6.45**	**120**	*eP*		**Pn**	**04 45 49.2**	**+0.1**
BIM				*eS*		**Sn**	**04 46 57.7**	**-4.7**
SLCP	**Castries, St.**	**6.79**	**123**	*eS*		**Sn**	**04 47 03.8**	**-6.9**
SLBI	**Saint Lucia, B**	**6.80**	**123**	*eP*		**Pn**	**04 45 53.8**	**-0.1**
SLBI				*eS*		**Sn**	**04 47 03.9**	**-6.9**
MASC	**Masc**	**7.37**	**290**	*eP*		**Pn**	**04 46 03.1**	**+1.4**
QMBU	**Quimbuelo**	**7.90**	**289**	*eP*		**Pn**	**04 46 10.4**	**+1.4**
QMBU				*i* S		**Sn**	**04 47 36.8**	**-1.2**
QMBU				IAML			04 47 44.8	
	comp=N,10nm,0.3s							
QMBU				IAML			04 47 47.1	
	comp=E,8.4nm,0.3s							
JTS	**Las Juntas de**	**19.09**	**249**	LR		LR	04 55 55.6	
	comp=E,36nm,18.2s,baz=96,slow=37							
TXAR	**Lajitas Array**	**35.50**	**296**	P		**P**	**04 51 12.1**	**+1.1**
	comp=E,0.2nm,0.6s,baz=108,slow=10,SNR=4.1							
	comp=E,0.2nm,0.6s							
ULM	**Lac du Bonnet**	**39.82**	**331**	P		**P**	**04 51 47.6**	**+0.5**
	comp=E,1.0nm,0.6s,baz=127,slow=10,SNR=3.0							
	comp=E,1.0nm,0.6s							
ULM	**Lac du Bonnet**	**39.82**	**331**	IAmb		IAmb	04 52 18.0	
	comp=Z,5.5nm,1.4s							
CPUP	**Villa Florida**	**44.86**	**168**	P		**P**	**04 52 27.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=339,slow=8.6,SNR=3.0							
	comp=Z,0.8nm,0.6s							
CPUP	**Villa Florida**	**44.86**	**168**	IAmb		IAmb	04 53 06.5	
	comp=Z,7.8nm,1.5s							
YKA	**Yellowknife Ar**	**55.47**	**335**	P		**P**	**04 53 50.2**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=113,slow=7.1,SNR=5.3							
	comp=Z,0.4nm,0.5s							
ESDC	**Sonseca Array**	**58.08**	**54**	P		**P**	**04 54 09.1**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=266,slow=6.5,SNR=6.1							
	comp=Z,0.8nm,0.7s							
ESDC	**Sonseca Array**	**58.08**	**54**	IAmb		IAmb	04 54 24.8	
	comp=Z,9.2nm,1.5s							

*GII **23** 04:48:01.6±0.0,32°.617N±0°.001×35°.620E±0°.001,h0km, Mws2.5, confirmed*
*GRAL **23** 04:48:02.9±0.3,32°.61N×35°.60E,h0km±1km,MD3.2*
*JSO **23** 04:48:02.5±0.0,33°N±1°×3°.6E±°,h6km±1km,M3.1/9, Md2.9/9,ML3.2/8,MLv3.1/9*

ISC 23 04:48:02.0±1.0,32°.61N±0°.02×35°.66E±0°.04,h12km±8km, n34,σ0s50/57,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MMLI	**Mount Malkishu**	**0.26**	**229**		P	**Pg**	**04 48 07.1**	**-0.4**
MMLI					S	**Sg**	**04 48 11.6**	**+0.4**
KNHM	**Kefar Nahum**	**0.28**	**347**		P	**Pg**	**04 48 07.6**	**-0.2**
KNHM					S	**Sg**	**04 48 12.3**	**+0.6**
QRNJ	**Al-Qirein**	**0.28**	**194**		P	**Pg**	**04 48 08.1**	**+0.2**
ZEFT	**Zefat**	**0.38**	**339**		P	**Pg**	**04 48 09.6**	**-0.1**
ZEFT					S	**Sg**	**04 48 15.7**	**+0.8**
ROII	**Roi**	**0.39**	**201**		P	**Pg**	**04 48 09.9**	**+0.1**
ROII					S	**Sb**	**04 48 16.4**	**-0.3**
KSHT	**Keshet**	**0.39**	**19**		P	**Pb**	**04 48 10.3**	**-0.7**
KSHT					S	**Sb**	**04 48 16.9**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.41**	**287**		P	**Pg**	**04 48 09.8**	**-0.4**
BLGI					S	**Sg**	**04 48 15.6**	**-0.1**
HULT	**Hulata**	**0.44**	**355**		P	**Pg**	**04 48 10.9**	**+0.2**
HULT					S	**Sb**	**04 48 18.1**	**-0.2**
MMA0B	**Mount Meron ar**	**0.46**	**332**		P	**Pg**	**04 48 10.4**	**-0.6**
MMA0B					S	**Sg**	**04 48 17.6**	**+0.4**
RGMN	**Argaman**	**0.46**	**194**		P	**Pg**	**04 48 11.2**	**+0.2**
RGMN					S	**Sb**	**04 48 18.7**	**+0.1**
OFRI	**`Ofer**	**0.57**	**271**		P	**Pg**	**04 48 12.6**	**-0.5**
OFRI					S	**Sg**	**04 48 20.9**	**+0.2**
GEM	**Giv'at Ha'Em**	**0.60**	**1**		P	**Pg**	**04 48 13.9**	**+0.2**
GEM	**Giv'at Ha'Em**	**0.60**	**1**		P	**Pg**	**04 48 13.6**	**-0.1**
GEM					S	**Sb**	**04 48 23.1**	**+0.3**
KIRY	**Kiryat Shemona**	**0.60**	**353**		P	**Pg**	**04 48 13.5**	**-0.3**
KIRY					S	**Sb**	**04 48 23.0**	**+0.1**
HNTI	**Hanita**	**0.62**	**319**		P	**Pg**	**04 48 13.8**	**-0.4**
HNTI					S	**Sg**	**04 48 23.1**	**+0.7**
SLTI	**Sal'it**	**0.64**	**235**		P	**Pg**	**04 48 13.7**	**-0.8**
SLTI					S	**Sg**	**04 48 21.9**	**-1.0**
NATI	**Neve Ativ**	**0.65**	**6**		P	**Pg**	**04 48 14.8**	**+0.1**
NATI					S	**Sb**	**04 48 24.6**	**+0.2**
SALP	**Salfit**	**0.67**	**216**		P	**Pg**	**04 48 14.8**	**-0.3**
HSUJ	**Al Zarqa**	**0.68**	**138**		P	**Pn**	**04 48 16.4**	**-1.1**
YITV	**Yitav**	**0.69**	**197**		P	**Pg**	**04 48 15.6**	**+0.2**
YITV					S	**Sb**	**04 48 25.6**	**+0.2**
SHBL	**Chebaa**	**0.74**	**6**		*eP*	**Pg**	**04 48 16.1**	**-0.3**
SHBL					*eS*	**Sg**	**04 48 26.1**	**0.0**
RCY	**Rachaya**	**0.90**	**10**		*eP*	**Pg**	**04 48 18.9**	**-0.5**
RCY					*eS*	**Sb**	**04 48 31.2**	**-0.3**
QRWL	**Qaraoun**	**0.93**	**1**		*eP*	**Pg**	**04 48 19.7**	**-0.4**
MZS	**Mizpe Shalem**	**1.06**	**192**		P	**Pg**	**04 48 22.2**	**-0.3**
MZS					S	**Sn**	**04 48 37.1**	**-0.2**
DQRL	**Deir Qamar**	**1.09**	**356**		*eP*	**Pg**	**04 48 22.4**	**-0.7**
ASF	**Jabal al Asfar**	**1.14**	**112**		P	**Pn**	**04 48 24.2**	**+0.4**
AMAZ	**Amatzia**	**1.25**	**211**		P	**Pn**	**04 48 25.4**	**+0.1**
AMAZ					S	**Sn**	**04 48 43.0**	**+1.1**
BHL	**Bhannes**	**1.29**	**360**		*eP*	**Pn**	**04 48 25.8**	**-0.1**
MSBI	**Mazada**	**1.32**	**191**		P	**Pn**	**04 48 26.2**	**0.0**
MSBI	**Mazada**	**1.32**	**191**		P	**Pn**	**04 48 26.4**	**+0.3**
MSBI					S	**Sg**	**04 48 44.3**	**-0.2**
YTIR	**Yattir**	**1.33**	**200**		P	**Pn**	**04 48 26.8**	**+0.4**
HWQ	**Hawqa**	**1.68**	**8**		*eP*	**Pb**	**04 48 32.4**	**-0.5**
HWQ					*eS*	**Sb**	**04 48 54.3**	**+0.2**
BEIL	**Beino**	**1.98**	**13**		*eP*	**Pn**	**04 48 36.4**	**+1.1**
KZIT	**Kziot**	**2.01**	**213**		P	**Pn**	**04 48 36.6**	**+0.9**
KZIT					S	**Sb**	**04 49 04.5**	**+1.1**

*IDC **23** 04:53:01.2±0.8,55°.22N×158°.76W,h0km,mb4.0/16, mbtmp3.9/20,ML3.8/4,MS3.3/14,Error ellipse: s-maj=18.4km s-min=13.6km az=171.0*
*AEIC **23** 04:53:04±1.3,55°.07N±0°.05×158°.31W±0°.06,h28km±5km, Error ellipse: s-maj=7.4km s-min=3.9km az=160.0*
*NEIC **23** 04:53:05.6,55°.10N×158°.42W,h30km*
*NEIC **23** 04:53:06.1±1.2,55°.12N±0°.06×158°.39W±0°.06,h31km±4km, mb4.0/16,ML3.9/38,Mwr3.9/62,ML3.8(AEIC),Error ellipse: s-maj=9.2km s-min=3.1km az=149.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.10; Mθθ-0.12; Mθφ0.02; Mrθ0.85; Mθφ0.21; Mφr0.53; Fault plane solution: M₀1.03000×10¹⁵ NP1:φs60.91000°, δ89.76000°,λ80.19000°. NP2:φs329.54000°,δ9.81000°, λ178.62000°. Principal axes: T 1.1116, Plg44.0000°, Azm321.0000°; N -0.1998, Plg10.0000°, Azm61.0000°; P -0.9118, Plg44.0000°, Azm161.0000°;*

ISC 23 04:53:05.7±0.5,55°.16N±0°.06×158°.36W±0°.04,h30km, n126,σ1s19/114,mb4.2/21,MS3.4/10,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.78**	**246**		P	**Pn**	**04 53 19.9**	**-0.7**
CNBA	**Chernabura Isl**	**0.78**	**245**			**Pn**	**04 53 19.6**	**-1.1**
CNBA					Sg	**Sb**	**04 53 29.2**	**-1.8**
VNKR	**Veniaminof 5**	**1.05**	**327**			**Pn**	**04 53 24.5**	**+0.2**
CHGN	**Chignik**	**1.15**	**359**		Pn	**Pn**	**04 53 25.8**	**+0.2**
CHGN						**Sn**	**04 53 40.8**	**+0.5**
CHGN					IAML		04 53 42.4	
	comp=N,4μm,0.7s							
VNHG	**Veniaminof 1**	**1.16**	**337**			**Pn**	**04 53 26.6**	**+0.7**
SDPT	**Sand Point**	**1.23**	**280**		P	**Pn**	**04 53 26.6**	**-0.1**
SDPT	**Sand Point**	**1.23**	**280**			**Pn**	**04 53 26.0**	**-0.7**
SDPT						**Sn**	**04 53 42.0**	**-0.3**
SDPT					IAML		04 53 47.3	
	comp=E,2μm,0.7s							
SDPT					IAML		04 53 51.8	
	comp=N,2μm,1.0s							
VNSS	**Veniaminof 8**	**1.24**	**330**			**Pn**	**04 53 28.0**	**+0.9**
VNFG	**Fog Glacier, M**	**1.32**	**330**			**Pn**	**04 53 29.6**	**+1.5**
VNFG	**Fog Glacier, M**	**1.32**	**330**		Pn	**Pn**	**04 53 29.2**	**+1.1**
VNFG						**Sn**	**04 53 46.2**	**+1.5**
VNFG					IAML		04 53 52.4	
	comp=N,6μm,0.8s							
VNFG					IAML		04 53 52.6	
	comp=E,6μm,0.7s							
ANPB	**Aniakchak Plen**	**1.65**	**2**			**Pn**	**04 53 33.8**	**+1.1**
CHIR	**Chirikof Islan**	**1.69**	**66**		P	**Pn**	**04 53 33.9**	**+0.7**
CHIR	**Chirikof Islan**	**1.69**	**66**		S	**Sn**	**04 53 54.6**	**+0.8**
CHIR	**Chirikof Islan**	**1.69**	**66**			**Pn**	**04 53 33.8**	**+0.7**
CHIR					IAML		04 54 05.9	
	comp=E,2μm,0.7s							
CHIR					IAML		04 54 09.5	
	comp=N,2μm,0.9s							
ANNW	**Aniakchak Nort**	**1.81**	**3**			**Pn**	**04 53 37.9**	**+3.0**
DOL	**Dolgoi Island**	**2.01**	**271**			**Pn**	**04 53 37.7**	**+0.1**
PS4A	**Pavlof South-4**	**2.01**	**277**			**Pn**	**04 53 37.8**	**+0.3**
PN7A	**Pavlof North-7**	**2.10**	**279**			**Pn**	**04 53 39.5**	**+0.7**
DT1	**Dutton Round H**	**2.25**	**270**			**Pn**	**04 53 41.0**	**+0.1**
SII	**Sitkinak Islan**	**2.74**	**57**		P	**Pn**	**04 53 48.2**	**+0.6**
SII	**Sitkinak Islan**	**2.74**	**57**			**Pn**	**04 53 48.3**	**+0.7**
SII					IAML		04 54 45.4	
	comp=N,783nm,0.8s							
SII					IAML		04 54 49.4	
	comp=E,843nm,0.7s							
ACHA	**Angle Creek He**	**3.49**	**27**			**Pn**	**04 53 58.8**	**+0.9**
OHAK	**Old Harbor**	**3.51**	**52**		P	**Pn**	**04 53 58.5**	**+0.4**
OHAK	**Old Harbor**	**3.51**	**52**			**Pn**	**04 53 58.3**	**+0.2**
OHAK					IAML		04 55 00.7	
	comp=N,160nm,1.0s							
P16K	**Nushagak River**	**3.89**	**3**			**Pn**	**04 54 08.4**	**+1.5**
O15K	**Ungalikthiuk R**	**4.11**	**349**			**Pn**	**04 54 07.5**	**+1.1**
O15K					IAML		04 54 57.2	
	comp=N,120nm,0.8s							
O15K					IAML		04 55 30.9	
	comp=E,147nm,1.2s							
KDAK	**Kodiak Island**	**4.15**	**48**		Pn	**Pn**	**04 54 07.0**	**+0.2**
	comp=E,2.6nm,0.3s,baz=108,slow=1.4,SNR=25							
KDAK					Sn	**Sn**	**04 54 51.3**	**-2.9**
	comp=E,4.7nm,0.3s,baz=213,slow=8.7,SNR=3.7							
KDAK					LR	LR	04 55 09.4	
	comp=E,53nm,18.1s,baz=222,slow=30							
KDAK					Lg	Lg	04 55 16.5	
	comp=E,5.1nm,0.3s,baz=28,slow=13,SNR=2.3							
	comp=E,5.4nm,0.3s							
KDAK	**Kodiak Island**	**4.15**	**48**			**Pn**	**04 54 06.8**	**0.0**
KDAK					IAML		04 55 35.4	
	comp=E,104nm,1.2s							
P17K	**Kvichak River**	**4.18**	**14**			**Pn**	**04 54 08.4**	**+1.1**
O14K	**Tigyukauivet M**	**4.40**	**340**			**Pn**	**04 54 11.5**	**+1.2**
O14K					IAML		04 55 36.3	
	comp=N,107nm,0.9s							
O14K					IAML		04 55 40.0	
	comp=E,93nm,1.2s							
AKUT	**Akutan**	**4.42**	**260**		P	**Pn**	**04 54 13.9**	**+3.2**
AKUT	**Akutan**	**4.42**	**260**		Pn	**Pn**	**04 54 11.0**	**+0.4**
AKUT					IAML		04 55 27.1	
	comp=E,94nm,1.0s							
AKUT					IAML		04 55 27.2	
	comp=N,119nm,0.9s							
O16K	**Kokwok River B**	**4.45**	**2**			**Pn**	**04 54 11.6**	**+0.6**
O16K					IAML		04 55 47.5	
	comp=E,80nm,1.1s							
UNV	**Unalaska Valle**	**4.92**	**258**		P	**Pn**	**04 54 19.5**	**+2.0**
UNV	**Unalaska Valle**	**4.92**	**258**		Pn	**Pn**	**04 54 17.6**	**0.0**
O18K	**Koktuh Hills**	**5.01**	**19**			**Pn**	**04 54 19.8**	**+1.2**
O18K					IAML		04 55 33.9	
	comp=N,53nm,0.9s							
O18K					IAML		04 56 02.1	
	comp=E,51nm,1.3s							
N14K	**Kuskokwak Cree**	**5.10**	**341**			**Pn**	**04 54 20.9**	**+1.0**
N15K	**Kwethluk River**	**5.11**	**350**			**Pn**	**04 54 21.3**	**+1.2**
N15K					IAML		04 55 52.1	
	comp=E,123nm,0.9s							
N15K					IAML		04 56 06.0	
	comp=N,131nm,1.1s							
N17K	**Nushagak Hills**	**5.42**	**6**			**Pn**	**04 54 24.8**	**+0.4**
CNPM	**China Poot**	**5.83**	**38**			**Pn**	**04 54 31.8**	**+1.7**
M14K	**Bethel**	**5.93**	**343**			**Pn**	**04 54 32.0**	**+0.7**
M11K	**Mekoryuk**	**6.71**	**325**			**Pn**	**04 54 42.8**	**+0.9**
SPIA	**Saint Paul Isl**	**6.94**	**292**		P	**Pn**	**04 54 46.5**	**+1.3**
K17K	**Iditarod**	**7.58**	**0**			**Pn**	**04 54 55.0**	**+1.0**
J14K	**Nanvaranak Lak**	**8.07**	**343**			**Pn**	**04 55 01.6**	**+1.0**
K20K	**Telida**	**8.51**	**13**			**Pn**	**04 55 08.1**	**+1.4**
EYAK	**Cordova Ski Ar**	**8.62**	**46**		P	**Pn**	**04 55 10.5**	**+2.3**
KLU	**Klutina**	**9.11**	**41**			**Pn**	**04 55 15.7**	**+0.7**
ATKA	**Atka Island**	**9.85**	**259**		P	**Pn**	**04 55 26.1**	**+1.1**
H18K	**Honhosa River**	**10.03**	**360**			**Pn**	**04 55 28.4**	**+0.9**
MLY	**Manley**	**10.60**	**18**			**Pn**	**04 55 36.3**	**+1.0**
G18K	**Tagagawik**	**10.78**	**359**			**Pn**	**04 55 38.9**	**+1.2**
H21K	**Melozitna Rive**	**10.88**	**12**			**Pn**	**04 55 40.9**	**+1.7**
ILAR	**Eielson Array**	**11.20**	**26**		Pn	**Pn**	**04 55 38.8**	**-4.7**
	comp=N,0.5nm,0.3s,baz=219,slow=13,SNR=23							
ILAR					Sn	Sn	04 57 36.3	-11
	comp=N,0.1nm,0.3s,baz=294,slow=34,SNR=2.5							
ILAR					LR	LR	05 00 11.9	
	comp=N,87nm,18.8s,baz=247,slow=38							
	comp=N,0.4nm,0.4s							
ILAR	**Eielson Array**	**11.20**	**26**			**Pn**	**04 55 43.1**	**-0.4**
ADK	**Adak**	**11.38**	**261**		P	**Pn**	**04 55 49.9**	**+3.9**
L27K	**Beaver Creek,**	**11.58**	**40**			**Pn**	**04 55 50.0**	**+1.2**
PRP	**Porcupine Dome**	**12.15**	**26**			**Pn**	**04 55 55.5**	**-1.0**

I28M	**Miner Creek**	**13.71**	**34**		Pn	**Pn**	**04 56 18.5**	**+0.7**
E27K	**Coleen River**	**15.21**	**24**		Pn	**Pn**	**04 56 38.9**	**+0.8**
F28M	**Old Crow**	**15.22**	**28**		Pn	**Pn**	**04 56 38.7**	**+0.6**
S34M	**Telegraph Cree**	**15.23**	**68**		Pn	**Pn**	**04 56 39.3**	**+1.1**
S34M					IAmb	IAmb	04 56 56.9	
	comp=Z,7.7nm,1.1s							
G29M	**Pine Creek**	**15.25**	**31**		Pn	**Pn**	**04 56 40.1**	**+1.5**
G29M					IAmb	IAmb	04 56 55.7	
	comp=Z,9.2nm,0.8s							
MMPY	**Sheldon Lake,**	**15.77**	**51**		Pn	**Pn**	**04 56 46.2**	**+0.8**
DLBC	**Dease Lake**	**15.81**	**66**		Pn	**Pn**	**04 56 47.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=266,slow=13,SNR=3.4							
	comp=Z,0.5nm,0.5s							
H31M	**Peel River**	**15.81**	**38**		Pn	**Pn**	**04 56 46.1**	**+0.3**
H31M					IAmb	IAmb	04 57 11.5	
	comp=Z,5.9nm,0.8s							
G30M	**tAoh Zraii Nji**	**15.85**	**33**		Pn	**Pn**	**04 56 46.2**	**-0.1**
G30M					IAmb	IAmb	04 57 07.9	
	comp=Z,9.9nm,0.8s							
G31M	**Satah River**	**16.44**	**35**		Pn	**Pn**	**04 56 54.0**	**+0.3**
G31M					IAmb	IAmb	04 57 01.6	
	comp=Z,9.5nm,1.1s							
INK	**Inuvik**	**17.47**	**31**		P	**Pn**	**04 57 07.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=240,slow=15,SNR=13							
INK					S	**Sn**	**05 00 17.4**	**-2.6**
	comp=Z,1.2nm,0.8s,baz=318,slow=14,SNR=1.8							
INK					LR	LR	05 04 23.3	
	comp=Z,58nm,20.6s,baz=226,slow=39							
	comp=Z,2.0nm,0.4s							
INK	**Inuvik**	**17.47**	**31**			**Pn**	**04 57 07.7**	**+1.0**
BBB	**Bella Bella**	**18.09**	**87**		LR	LR	05 02 47.2	
	comp=Z,46nm,20.5s,baz=224,slow=32							
YKA	**Yellowknife Ar**	**23.40**	**54**		P	**P**	**04 58 11.4**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=272,slow=8.8,SNR=4.6							
PETK	**Petropavlovsk-**	**25.51**	**284**		P	**P**	**04 58 27.9**	**-3.2**
	comp=Z,5.7nm,0.9s,baz=75,slow=12,SNR=9.4							
	comp=Z,5.7nm,0.9s							
PETK	**Petropavlovsk-**	**25.51**	**284**		P	**P**	**04 58 30.2**	**-1.0**
NEW	**Newport**	**26.15**	**88**		LR	LR	05 07 27.7	
	comp=Z,38nm,19.5s,baz=282,slow=33							
J05D	**Fort Rock, OR**	**26.67**	**101**		P	**P**	**04 58 42.2**	**+0.3**
YBH	**Yreka Blue Hor**	**26.86**	**105**		LR	LR	05 06 51.7	
	comp=Z,108nm,21.9s,baz=288,slow=31							
LYMT	**Lyon Mountain**	**29.61**	**87**		P	**P**	**04 59 08.5**	**+0.4**
RES	**Resolute Bay**	**30.95**	**28**		LR	LR	05 14 29.9	
	comp=Z,30nm,19.5s,baz=22,slow=42							
NVAR	**Mina Array Bea**	**31.58**	**105**		P	**P**	**04 59 27.5**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=300,slow=8.1,SNR=6.5							
NVAR					LR	LR	05 09 46.5	
	comp=Z,78nm,20.7s,baz=257,slow=32							
	comp=Z,0.7nm,0.6s							
YHH	**Holmes Hill**	**31.68**	**89**		P	**P**	**04 59 26.7**	**+0.1**
PDAR	**Pinedale Array**	**33.65**	**91**		P	**P**	**04 59 46.1**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=336,slow=3.3,SNR=6.9							
	comp=Z,0.6nm,0.7s							
PDAR	**Pinedale Array**	**33.65**	**91**		P	**P**	**04 59 43.9**	**+0.2**
PFO	**Pinyon Flats O**	**36.13**	**109**		LR	LR	05 12 37.6	
	comp=Z,53nm,18.9s,baz=328,slow=32							
ANMO	**Albuquerque**	**40.73**	**98**		LR	LR	05 16

0.1nm,0.5s,baz=304,slow=316,SNR=1.1
I07AU WARRAMUNGA INF 3.61 199 I I 07 20 20.0
baz=21,slow=322,SNR=1.2

*ASRS **23** 04:58:01.0±0.7,54˚.70N×83˚.69E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 04:58:03.9±2.3, 54˚.62N×83˚.86E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=17.9km s-min=10.1km az=170.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**140**	I	I	05 03 30.0	
	baz=319,slow=312,SNR=2.9						
ZALV	**Zalesovo Beam**	**0.88**	**140**	Pg	Pg	04 58 20.1	-0.5
	3.1nm,0.3s,baz=318,slow=18,SNR=19						
ZALV				Lg	Lg	04 58 33.9	
	6.8nm,0.3s,baz=322,slow=29,SNR=27						
KURBB	**Kurchatov Arra**	**5.16**	**221**	Pn	Pn	04 59 22.9	+0.7
	baz=37,slow=14,SNR=4.3						
KURBB				Sn	Sn	05 00 21.6	-0.8
	0.1nm,0.3s,baz=262,slow=34,SNR=1.8						
KURBB				Lg	Lg	05 00 48.6	
	0.1nm,0.3s,baz=42,slow=30,SNR=4.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.90**	**188**	Pn	Pn	04 59 59.1	-0.9
	0.1nm,0.3s,baz=11,slow=13,SNR=2.4						
MKAR				Lg	Lg	05 02 16.2	
	0.1nm,0.3s,baz=19,slow=29,SNR=2.0						
	0.2nm,0.5s						

*CATAC **23** 05:04:48.9, 14˚N±2˚×91˚2W±˚, h24km±2km, M3.0/10, MLv3.0/10, confirmed*
*GCG **23** 05:04:49.7±1.3, 13˚.99N×91˚.47W, h49km±34km, MD3.6, ML3.4, Presumed earthquake*
ISC 23 05:04:48.8±1.7, 13˚.88N±0˚.09×91˚.23W±0˚.06, h13km±11km, n19, σ1s28/33, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.53**	**347**	*i* P	**Pn**	**05 05 03.6**	**+1.5**
STG5				*e*P	**Pn**	**05 05 03.6**	**+1.5**
STG8	**El Palmar, Qui**	**0.58**	**348**	*i* P	**Pn**	**05 05 04.7**	**+1.8**
STG8				*i* S	**Sn**	**05 05 16.1**	**+3.8**
STG8				IAML		05 05 17.2	
	comp=N,1μm,0.1s						
FG8	**Yepocapa, Chim**	**0.75**	**60**	*i* P	**Pb**	**05 05 03.8**	**+0.1**
RTAL	**Retalhuleu**	**0.78**	**325**	P	**Pg**	**05 05 02.7**	**-1.4**
RTAL				S	**Sb**	**05 05 12.9**	**-1.9**
FG16	**Alotenango, Sa**	**0.80**	**61**	*i* P	**Pn**	**05 05 04.8**	**-1.1**
FG16				*i* S	**Sn**	**05 05 16.6**	**-1.2**
PCG5	**San Vicente Pa**	**0.89**	**68**	*i* P	**Pn**	**05 05 06.5**	**-0.6**
PCG5				*i* S	**Sn**	**05 05 19.1**	**-0.8**
FAME	**Alcaldia de Sa**	**1.18**	**92**	P	**Pg**	**05 05 12.3**	**+0.8**
FAME				S	**Sg**	**05 05 28.9**	**+2.0**
APG	**El Apazote**	**1.34**	**34**	*i* P	**Pg**	**05 05 14.6**	**0.0**
NUBE	**Las Nubes**	**1.41**	**89**	P	**Pg**	**05 05 16.1**	**+0.2**
NUBE				S	**Sg**	**05 05 35.4**	**+1.1**
NUBE	**Las Nubes**	**1.41**	**89**	*i* P	**Pg**	**05 05 16.0**	**+0.2**
HUEH	**Huehuetenango**	**1.45**	**349**	P	**Pn**	**05 05 14.1**	**-0.9**
HUEH				S	**Sb**	**05 05 33.3**	**-1.0**
CEVE	**Cerro Verde**	**1.56**	**92**	P	**Pg**	**05 05 18.6**	**-0.3**
CEVE				S	**Sg**	**05 05 40.4**	**+1.3**
UNIC	**Universidad Ca**	**1.63**	**86**	P	**Pg**	**05 05 19.5**	**-0.7**
UNIC				S	**Sg**	**05 05 42.8**	**+1.3**
JAYA	**Jayaque - finc**	**1.74**	**97**	P	**Pb**	**05 05 20.5**	**-0.3**
JAYA				S	**Sg**	**05 05 44.5**	**-0.6**
JAYA	**Jayaque - finc**	**1.74**	**97**	*i* P	**Pb**	**05 05 20.6**	**-0.1**
PMON	**Piamonte**	**1.87**	**95**	P	**Pb**	**05 05 23.4**	**+0.5**
PMON				S	**Sg**	**05 05 48.5**	**-0.4**
MTO3	**Montecristo**	**1.88**	**74**	P	**Pb**	**05 05 22.4**	**-0.7**
MTO3				S	**Sg**	**05 05 48.8**	**-0.7**
MTO3	**Montecristo**	**1.88**	**74**	*i* P	**Pb**	**05 05 22.5**	**-0.6**
COEG	**Centro de Oper**	**2.30**	**96**	P	**Pb**	**05 05 28.9**	**-1.2**
COEG				S	**Sb**	**05 05 59.5**	**+1.0**

*SNET **23** 05:15:37.8±2.6, 12˚.94N×89˚.15W, h21km, ML2.8, Presumed earthquake*
*CATAC **23** 05:15:38.4±0.5, 13˚N±3˚×8˚.9W±˚, h31km±3km, M2.8/16, MLv2.8/16, Error ellipse: s-maj=7.2km s-min=3.4km az=29.6, confirmed*
*GCG **23** 05:15:40.7±0.5, 13˚.17N×89˚.21W, h59km±8km, MD3.6, Presumed earthquake*
ISC 23 05:15:37.9±1.8, 12˚.93N±0˚.08×89˚.17W±0˚.04, h32km±11km, n31, σ0s55/53, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOMA	**Loma Larga**	**0.71**	**360**	P	**Pn**	**05 15 52.0**	**0.0**
LOMA				S	**Sn**	**05 16 02.4**	**+0.4**
TECO	**Alcaldia de Te**	**0.71**	**32**	P	**Pn**	**05 15 51.7**	**-0.3**
TECO				S	**Sn**	**05 16 02.1**	**+0.3**
COEG	**Centro de Oper**	**0.74**	**22**	P	**Pn**	**05 15 52.3**	**-0.1**
COEG				S	**Sn**	**05 16 03.6**	**+1.0**
COEG	**Centro de Oper**	**0.74**	**22**	*e*P	**Pn**	**05 15 51.5**	**-0.8**
COEG				*e*S	**Sn**	**05 16 02.3**	**-0.3**
JAYA	**Jayaque - finc**	**0.78**	**339**	P	**Pb**	**05 15 53.0**	**-0.1**
JAYA	**Jayaque - finc**	**0.78**	**339**	*i* P	**Pb**	**05 15 53.0**	**-0.1**
JAYA				*i* S	**Sb**	**05 16 02.2**	**-1.2**
JAYA	**Jayaque - finc**	**0.78**	**339**	*e*P	**Pb**	**05 15 54.0**	**+0.9**
JAYA				*e*S	**Sn**	**05 16 03.7**	**+0.2**
UEES	**Universidad Ev**	**0.79**	**355**	P	**Pb**	**05 15 53.6**	**+0.3**
UEES				S	**Sn**	**05 16 04.4**	**+0.7**
PMON	**Piamonte**	**0.80**	**350**	P	**Pb**	**05 15 53.4**	**-0.1**
PMON	**Piamonte**	**0.80**	**350**	*i* P	**Pb**	**05 15 53.5**	**+0.1**
PMON				*e*S	**Sn**	**05 16 04.3**	**+0.3**
PAVA	**Las Pavas**	**0.81**	**16**	P	**Pn**	**05 15 53.4**	**0.0**
PAVA				S	**Sn**	**05 16 05.0**	**+0.6**
PAVA	**Las Pavas**	**0.81**	**16**	*i* P	**Pb**	**05 15 53.7**	**0.0**
PACA	**Pacayal**	**0.98**	**57**	P	**Pb**	**05 15 56.3**	**-0.2**
PACA	**Pacayal**	**0.98**	**57**	*i* P	**Pn**	**05 15 56.0**	**+0.3**
PACA				*e*S	**Sb**	**05 16 10.3**	**+1.1**
RANC	**El Ranchito**	**0.99**	**59**	P	**Pb**	**05 15 56.5**	**-0.2**
RANC				S	**Sb**	**05 16 10.1**	**+0.5**
CEVE	**Cerro Verde**	**1.00**	**334**	P	**Pn**	**05 15 56.4**	**+0.3**
CEVE				S	**Sb**	**05 16 09.9**	**-0.1**
CEVE	**Cerro Verde**	**1.00**	**334**	*e*S	**Sb**	**05 16 11.5**	**+1.5**
INTP	**Intipuca**	**1.12**	**76**	*e*S	**Sn**	**05 16 12.0**	**+0.3**
P5NO	**Presa 5 de nov**	**1.13**	**21**	P	**Pn**	**05 15 57.3**	**-0.2**
P5NO				S	**Sn**	**05 16 11.7**	**-0.3**
NUBE	**Las Nubes**	**1.14**	**328**	P	**Pn**	**05 15 57.9**	**+0.1**
NUBE				S	**Sn**	**05 16 12.4**	**-0.1**
NUBE	**Las Nubes**	**1.14**	**328**	*i* P	**Pn**	**05 15 57.9**	**+0.1**
NUBE				*i* S	**Sn**	**05 16 11.9**	**-0.6**
SLOZ	**Alcaldia de Sa**	**1.25**	**331**	P	**Pn**	**05 15 58.9**	**-0.4**
SLOZ				S	**Sb**	**05 16 15.9**	**-0.8**
RBDL	**Robledal**	**1.28**	**337**	*i* P	**Pn**	**05 16 00.1**	**+0.3**
RBDL				*e*S	**Sn**	**05 16 16.2**	**+0.1**
LCND	**La Caada**	**1.30**	**73**	P	**Pn**	**05 16 00.6**	**+0.7**
LCND	**La Caada**	**1.30**	**73**	*e*S	**Sn**	**05 16 16.4**	**+0.2**
CNCH	**Conchagua**	**1.34**	**75**	P	**Pn**	**05 16 01.2**	**+0.6**
CNCH				S	**Sb**	**05 16 18.6**	**-0.9**
MTO3	**Montecristo**	**1.48**	**353**	P	**Pn**	**05 16 02.5**	**0.0**
MTO3				S	**Sn**	**05 16 20.4**	**-0.5**
MTO3	**Montecristo**	**1.48**	**353**	*i* P	**Pn**	**05 16 02.5**	**0.0**
SARH	**Santa Rosa de**	**1.88**	**12**	P	**Pn**	**05 16 07.5**	**-0.5**
SARH				S	**Sn**	**05 16 30.4**	**-0.2**
LIMN	**Finca el Limon**	**2.73**	**87**	P	**Pn**	**05 16 19.3**	**-0.4**
LIMN				S	**Sn**	**05 16 52.0**	**+0.3**
RCVN	**Varillal2**	**2.97**	**77**	P	**Pn**	**05 16 22.8**	**-0.2**
RCVN				S	**Sn**	**05 16 56.7**	**-0.9**

IDC 23 05:20:47.6±9.9, 27˚.46S×23˚.11E, h0km, Error ellipse: s-maj=55.8km s-min=43.6km az=123.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.21**	**122**	I	I	05 34 05.0	
	0.1nm,1.0s,baz=302,slow=348,SNR=0.7						
BOSA	**Boshof**	**2.22**	**122**	Pg	Pb	05 21 28.2	-0.5
	baz=300,slow=17,SNR=1.3						
BOSA				Lg	Lg	05 21 58.2	
	0.5nm,0.3s,baz=218,slow=18,SNR=9.5						
I35NA	**TSUMEB INFRASO**	**9.67**	**327**	I	I	06 17 20.0	
	baz=152,slow=322,SNR=2.0						

*IDC **23** 05:41:01.2±5.3, 22˚.25S×175˚.94W, h164km±41km, mb3.7/6, mbtmp4.1/7, MS3.7/4, Error ellipse: s-maj=40.1km s-min=24.2km az=115.0*
ISC 23 05:40:59.4±1.0, 22˚.2S±0˚.2×175˚.7W±0˚.2, h150km, n12, σ1s71/12, mb3.9/7, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.40**	**306**	P	**Pn**	**05 42 45.2**	**+0.3**
	10nm,0.7s,baz=113,slow=20,SNR=5.8						
MSVF				LR	LR	05 45 31.1	
	comp=Z,294nm,21.3s,baz=145,slow=37						
URZ	**Urewera**	**17.12**	**200**	LR	LR	05 50 45.9	
	comp=Z,111nm,18.3s,baz=352,slow=34						
ASAR	**Alice Springs**	**46.24**	**258**	P	**P**	**05 49 08.2**	**-1.7**
	3.9nm,0.9s,baz=93,slow=8.3,SNR=23						
ASAR				PcP	**PcP**	**05 50 44.1**	**+1.0**
	0.7nm,0.7s,baz=107,slow=4.0,SNR=2.7						
ASAR				LR	LR	06 08 22.5	
	comp=Z,102nm,18.3s,baz=120,slow=36						
	3.9nm,0.9s						
WRA	**Warramunga Arr**	**46.51**	**263**	P	**P**	**05 49 09.4**	**-2.7**
	2.2nm,0.7s,baz=100,slow=8.2,SNR=20						
WRA				PcP	**PcP**	**05 50 44.8**	**+0.7**
	0.7nm,0.9s,baz=93,slow=4.2,SNR=2.9						
	2.2nm,0.7s						
QSPA	**South Pole Qui**	**67.83**	**180**	P	**P**	**05 51 41.6**	**+0.4**
	1.6nm,1.1s,baz=40,slow=5.2,SNR=1.3						
	1.6nm,1.1s						
MJAR	**Matsushiro Arr**	**72.89**	**323**	P	**P**	**05 52 12.5**	**+0.4**
	0.7nm,0.3s,baz=155,slow=6.7,SNR=4.3						
	0.7nm,0.3s						
PETK	**Petropavlovsk-**	**78.52**	**344**	P	**P**	**05 52 43.5**	**-0.2**
	2.2nm,0.8s,baz=124,slow=7.5,SNR=5.3						
	2.2nm,0.8s						
PMSA	**Palmer Station**	**78.83**	**156**	LR	LR	06 23 45.9	
	comp=Z,180nm,18.0s,baz=260,slow=32						
ILAR	**Eielson Array**	**89.55**	**12**	P	**P**	**05 53 37.7**	**-1.6**
	0.6nm,0.9s,baz=219,slow=5.7,SNR=5.4						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**92.72**	**289**	P	**P**	**05 53 58.4**	**+3.4**
	1.2nm,0.3s,baz=113,slow=4.8,SNR=11						
KURBB	**Kurchatov Arra**	**116.78**	**317**	PKP	**PKPdf**	**05 59 25.1**	**-0.7**
	0.3nm,0.7s,baz=80,slow=2.2,SNR=4.8						
AKASG	**Malin Array Be**	**145.57**	**332**	PKPbc	**PKPdf**	**06 00 19.3**	**-0.3**
	2.2nm,0.7s,baz=43,slow=4.2,SNR=10						

*IDC **23** 05:42:21.1±0.9, 55˚.22N×158˚.95W, h0km, mb4.0/18, mbtmp3.9/22, ML3.7/4, MS3.2/20, Error ellipse: s-maj=21.1km s-min=12.4km az=157.0*
*AEIC **23** 05:42:25±1.4, 55˚.05N±0˚.06×158˚.75W±0˚.07, h24km±5km, Error ellipse: s-maj=8.7km s-min=5.4km az=175.0*
*NEIC **23** 05:42:26.6±1.4, 55˚.09N±0˚.07×158˚.82W±0˚.05, h43km±8km, mb4.0/18, ML3.9/38, ML3.8(AEIC), Error ellipse: s-maj=10.3km s-min=4.0km az=178.0*
ISC 23 05:42:25.2±0.5, 55˚.11N±0˚.05×158˚.74W±0˚.04, h30km, n224, σ1s27/203, mb4.2/22, MS3.3/16, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.56**	**241**	P	**Pb**	**05 42 35.2**	**-1.4**
CHNA	**Chernabura Isl**	**0.56**	**241**	S	**Sb**	**05 42 43.6**	**-0.8**
CNBA	**Chernabura Isl**	**0.57**	**240**		**Pb**	**05 42 36.0**	**-0.6**
CNBA					**Sb**	**05 42 44.3**	**-0.2**
VNKR	**Veniaminof 5**	**0.99**	**339**		**Pb**	**05 42 43.8**	**0.0**
SDPT	**Sand Point**	**1.03**	**285**	P	**Pn**	**05 42 43.4**	**-0.1**
SDPT	**Sand Point**	**1.03**	**285**	S	**Sn**	**05 42 56.4**	**-0.4**
SDPT	**Sand Point**	**1.03**	**285**		**Pn**	**05 42 43.2**	**-0.2**
SDPT					**Sn**	**05 42 56.3**	**-0.4**
SDPT				IAML		05 43 00.2	
	comp=E,2μm,0.5s						
SDPT				IAML		05 43 02.4	
	comp=N,3μm,0.7s						
VNSS	**Veniaminof 8**	**1.20**	**340**		**Pb**	**05 42 47.4**	**+0.1**
CHGN	**Chignik**	**1.21**	**9**		**Pn**	**05 42 46.5**	**+0.5**
CHGN				IAML		05 43 05.9	
	comp=E,2μm,0.1s						
CHGN				IAML		05 43 07.7	
	comp=N,2μm,0.6s						
VNFG	**Fog Glacier, M**	**1.27**	**339**		**Pb**	**05 42 48.7**	**+0.2**
VNFG	**Fog Glacier, M**	**1.27**	**339**		**Pb**	**05 42 48.7**	**+0.2**
ANPB	**Aniakchak Plen**	**1.72**	**8**		**Pn**	**05 42 54.6**	**+1.6**
DOL	**Dolgoi Island**	**1.80**	**273**		**Pn**	**05 42 54.4**	**+0.3**
PS4A	**Pavlof South-4**	**1.80**	**279**		**Pn**	**05 42 54.6**	**+0.5**
ANNW	**Aniakchak Nort**	**1.89**	**9**		**Pb**	**05 42 57.8**	**-1.2**
PN7A	**Pavlof North-7**	**1.90**	**281**		**Pn**	**05 42 56.5**	**+1.0**
CHIR	**Chirikof Islan**	**1.91**	**67**	P	**Pn**	**05 42 56.0**	**+0.3**
CHIR	**Chirikof Islan**	**1.91**	**67**		**Pn**	**05 42 56.4**	**+0.7**
CHIR				IAML		05 43 32.7	
	comp=N,1μm,0.9s						
CHIR				IAML		05 43 35.4	
	comp=E,1μm,0.8s						
DTNA	**Dutton South F**	**2.02**	**273**		**Pn**	**05 42 57.7**	**+0.6**
DT1	**Dutton Round H**	**2.04**	**272**		**Pn**	**05 42 57.8**	**+0.4**
ISNN	**Isanotski Nort**	**2.92**	**267**		**Pn**	**05 43 11.2**	**+1.7**
PLK1	**Peulik 1**	**2.95**	**23**		**Pn**	**05 43 11.6**	**+1.7**
SII	**Sitkinak Islan**	**2.95**	**59**	P	**Pn**	**05 43 11.8**	**+1.8**
SII	**Sitkinak Islan**	**2.95**	**59**		**Pn**	**05 43 11.6**	**+1.6**
SSLN	**Shishaldin Nor**	**3.05**	**267**		**Pn**	**05 43 13.2**	**+1.9**
PLK5	**Peulik 5**	**3.08**	**19**		**Pn**	**05 43 13.9**	**+2.3**
ANCK	**Angle Creek**	**3.58**	**29**		**Pn**	**05 43 20.6**	**+1.9**
ACHA	**Angle Creek He**	**3.64**	**30**		**Pn**	**05 43 21.0**	**+1.5**
KABU	**Katmai Buttres**	**3.70**	**30**		**Pn**	**05 43 24.5**	**+4.2**
OHAK	**Old Harbor**	**3.71**	**53**	P	**Pn**	**05 43 20.3**	**-0.1**
OHAK	**Old Harbor**	**3.71**	**53**		**Pn**	**05 43 20.7**	**+0.3**
OHAK				IAML		05 44 36.8	
	comp=N,143nm,1.0s						
KAKN	**Katmai Knife C**	**3.79**	**31**		**Pn**	**05 43 25.5**	**+4.0**
KAWH	**Katmai**	**3.94**	**32**		**Pn**	**05 43 27.5**	**+4.0**
P16K	**Nushagak River**	**3.96**	**6**		**Pn**	**05 43 25.3**	**+1.6**
P16K				IAML		05 44 47.7	
	comp=N,305nm,1.0s						
Q18K	**Katmai Hardscr**	**4.10**	**28**		**Pn**	**05 43 29.5**	**+3.7**
O15K	**Ungalikthiuk R**	**4.13**	**352**		**Pn**	**05 43 27.2**	**+1.1**
O15K				IAML		05 44 53.5	
	comp=E,107nm,1.1s						
AKUT	**Akutan**	**4.20**	**260**	P	**Pn**	**05 43 28.4**	**+1.3**
AKUT	**Akutan**	**4.20**	**260**	S	**Sn**	**05 44 17.8**	**+2.7**
AKUT	**Akutan**	**4.20**	**260**	Pn	**Pn**	**05 43 28.3**	**+1.2**
AKUT				IAML		05 44 36.1	
	comp=N,159nm,0.9s						
AKUT				IAML		05 44 38.0	
	comp=E,150nm,0.5s						
P17K	**Kvichak River**	**4.29**	**16**		**Pn**	**05 43 30.0**	**+1.8**
P17K				IAML		05 44 32.9	
	comp=N,246nm,1.0s						
KDAK	**Kodiak Island**	**4.34**	**49**	Pn	**Pn**	**05 43 27.6**	**-1.4**
	comp=N,1.1nm,0.3s,baz=101,slow=0.6,SNR=42						
KDAK				Sn	**Sn**	**05 44 16.1**	**-2.4**
	comp=N,2.0nm,0.3s,baz=219,slow=14,SNR=1.6						
KDAK				Lg	Lg	05 44 39.4	
	comp=N,1.9nm,0.3s,baz=176,slow=18,SNR=4.2						
	comp=N,6.0nm,0.3s						
KDAK	**Kodiak Island**	**4.34**	**49**	Pn	**Pn**	**05 43 29.3**	**+0.3**
KDAK				IAML		05 44 56.0	
	comp=N,89nm,0.9s						
O14K	**Tigyukauivet M**	**4.38**	**343**		**Pn**	**05 43 30.9**	**+1.3**
O14K				IAML		05 44 50.3	
	comp=N,120nm,0.8s						
O14K				IAML		05 44 57.4	
	comp=E,96nm,0.9s						
O16K	**Kokwok River B**	**4.51**	**4**		**Pn**	**05 43 32.5**	**+1.1**
P18K	**Big Mountain,**	**4.70**	**22**		**Pn**	**05 43 36.5**	**+2.5**
UNV	**Unalaska Valle**	**4.70**	**258**	P	**Pn**	**05 43 34.2**	**+0.3**
UNV	**Unalaska Valle**	**4.70**	**258**		**Pn**	**05 43 34.3**	**+0.3**
UNV				IAML		05 44 53.4	
	comp=N,70nm,1.1s						
UNV				IAML		05 44 56.5	
	comp=E,95nm,0.9s						
O17K	**Koliganek Bris**	**4.76**	**10**		**Pn**	**05 43 36.0**	**+1.2**
N14K	**Kuskokwak Cree**	**5.09**	**343**		**Pn**	**05 43 40.8**	**+1.6**
N14K				IAML		05 45 13.3	
	comp=E,101nm,0.8s						
N14K				IAML		05 45 21.9	
	comp=N,100nm,0.9s						
O18K	**Koktuh Hills**	**5.13**	**20**		**Pn**	**05 43 41.3**	**+1.5**
N15K	**Kwethluk River**	**5.13**	**352**		**Pn**	**05 43 41.3**	**+1.5**
N15K				IAML		05 45 19.5	
	comp=N,79nm,0.9s						
N17K	**Nushagak Hills**	**5.50**	**8**		**Pn**	**05 43 46.2**	**+1.3**
O19K	**Port Alsworth**	**5.63**	**23**		**Pn**	**05 43 47.6**	**+0.9**
M15K	**Kasigluk River**	**5.70**	**350**		**Pn**	**05 43 48.9**	**+1.3**
N18K	**Kilae Creek**	**5.79**	**14**		**Pn**	**05 43 50.8**	**+1.8**

M13K	**Dall Lake**	**5.87**	**337**		**Pn**	**05 43 51.4**	**+1.5**
M14K	**Bethel**	**5.92**	**344**		**Pn**	**05 43 51.9**	**+1.3**
M16K	**Timber Creek**	**5.94**	**359**		**Pn**	**05 43 52.5**	**+1.6**
CNPM	**China Poot**	**6.01**	**39**		**Pn**	**05 43 52.2**	**+0.2**
N19K	**Bonanza Creek**	**6.16**	**20**		**Pn**	**05 43 55.8**	**+1.8**
M17K	**Holitna River**	**6.35**	**6**		**Pn**	**05 43 57.9**	**+1.3**
L14K	**Kuka Creek**	**6.59**	**343**		**Pn**	**05 44 00.9**	**+1.1**
M11K	**Mekoryuk**	**6.63**	**326**		**Pn**	**05 44 01.8**	**+1.5**
L16K	**Owhat River**	**6.64**	**357**		**Pn**	**05 44 01.4**	**+0.9**
SPIA	**Saint Paul Isl**	**6.76**	**293**	P	**Pn**	**05 44 03.9**	**+1.7**
SPIA	**Saint Paul Isl**	**6.76**	**293**	Pn	**Pn**	**05 44 03.6**	**+1.4**
SEW	**Seward**	**7.07**	**41**	Pn	**Pn**	**05 44 07.4**	**+1.0**
SLKM	**Skilak Lake**	**7.07**	**37**	Pn	**Pn**	**05 44 06.9**	**+0.4**
L18K	**Granite Mounta**	**7.21**	**8**		**Pn**	**05 44 08.7**	**+0.3**
K15K	**Wolf Creek Mou**	**7.36**	**350**		**Pn**	**05 44 11.8**	**+1.4**
L19K	**White Mountain**	**7.38**	**14**		**Pn**	**05 44 12.3**	**+1.6**
K13K	**Kusilvak Mount**	**7.51**	**338**		**Pn**	**05 44 14.0**	**+1.5**
K17K	**Iditarod**	**7.64**	**2**		**Pn**	**05 44 15.5**	**+1.3**
RC01	**Rabbit Creek A**	**7.66**	**35**	Pn	**Pn**	**05 44 15.6**	**+1.1**
P23K	**Montague Islan**	**7.82**	**47**	Pn	**Pn**	**05 44 17.4**	**+0.7**
SKT	**Skwentna**	**7.85**	**26**		**Pn**	**05 44 18.8**	**+1.6**
J14K	**Nanvaranak Lak**	**8.06**	**344**		**Pn**	**05 44 20.8**	**+0.9**
J16K	**Anvik River**	**8.26**	**354**		**Pn**	**05 44 24.0**	**+1.3**
J17K	**VABM Dome**	**8.32**	**359**		**Pn**	**05 44 24.5**	**+0.9**
KNK	**Knik Glacier**	**8.32**	**36**	Pn	**Pn**	**05 44 25.8**	**+2.1**
HIN	**Hinchinbrook I**	**8.42**	**46**	Pn	**Pn**	**05 44 25.5**	**+0.6**
GHO	**Glory Hole Cre**	**8.43**	**34**	Pn	**Pn**	**05 44 26.8**	**+1.7**
J18K	**Innoko River**	**8.45**	**6**		**Pn**	**05 44 26.0**	**+0.6**
GLI	**Glacier Island**	**8.46**	**42**	Pn	**Pn**	**05 44 26.1**	**+0.5**
L22K	**Petersville**	**8.51**	**26**		**Pn**	**05 44 26.5**	**+0.3**
PPLA	**Purkeypile**	**8.51**	**21**		**Pn**	**05 44 28.2**	**+1.9**
K20K	**Telida**	**8.61**	**14**		**Pn**	**05 44 28.9**	**+1.3**
I17K	**Unalakleet**	**8.87**	**354**		**Pn**	**05 44 32.3**	**+1.3**
CAST	**Castle Rocks**	**9.00**	**19**		**Pn**	**05 44 35.0**	**+2.0**
SCM	**Sheep Creek Mo**	**9.00**	**37**	Pn	**Pn**	**05 44 34.0**	**+1.0**
J19K	**Poorman**	**9.05**	**9**		**Pn**	**05 44 35.0**	**+1.4**
KAIM	**Kayak Island**	**9.09**	**52**	Pn	**Pn**	**05 44 35.4**	**+1.4**
KLU	**Klutina**	**9.29**	**41**		**Pn**	**05 44 37.6**	**+0.7**
KTH	**Kantishna Hill**	**9.36**	**22**		**Pn**	**05 44 39.1**	**+1.2**
J20K	**Nowinta River**	**9.39**	**12**		**Pn**	**05 44 40.0**	**+1.8**
TRF	**Thorofare Moun**	**9.41**	**24**		**Pn**	**05 44 40.0**	**+1.3**
BMRM	**Bremner River**	**9.51**	**46**	Pn	**Pn**	**05 44 41.4**	**+1.5**
BERG	**Berg Lake**	**9.62**	**50**	Pn	**Pn**	**05 44 42.4**	**+1.1**
ATKA	**Atka Island**	**9.63**	**259**	P	**Pn**	**05 44 42.2**	**+0.7**
ATKA	**Atka Island**	**9.63**	**259**	Pn	**Pn**	**05 44 42.5**	**+1.0**
RND	**Reindeer**	**9.73**	**27**		**Pn**	**05 44 43.7**	**+0.7**
H17K	**Granite Mounta**	**9.88**	**357**		**Pn**	**05 44 45.3**	**+0.4**
DHY	**Denali Highway**	**9.89**	**31**	Pn	**Pn**	**05 44 47.0**	**+1.8**
ANM	**Nome**	**10.05**	**343**	Pn	**Pn**	**05 44 48.0**	**+0.8**
H18K	**Honhosa River**	**10.08**	**1**		**Pn**	**05 44 48.4**	**+0.7**
VRDI	**Verde Repeater**	**10.12**	**47**	Pn	**Pn**	**05 44 49.6**	**+1.1**
PAX	**Paxson**	**10.41**	**35**		**Pn**	**05 44 53.6**	**+1.2**
H19K	**Roundabout Mou**	**10.52**	**5**		**Pn**	**05 44 54.7**	**+1.1**
GRNC	**Granite Creek**	**10.63**	**51**		**Pn**	**05 44 56.1**	**+0.7**
I21K	**Tanana**	**10.64**	**16**		**Pn**	**05 44 56.4**	**+1.1**
MLY	**Manley**	**10.72**	**19**		**Pn**	**05 44 57.3**	**+0.9**
WRH	**Wood River Hil**	**10.80**	**25**		**Pn**	**05 44 56.2**	**-1.3**
BARN	**Barnard Glacie**	**10.81**	**50**	Pn	**Pn**	**05 44 59.0**	**+1.2**
G18K	**Tagagawik**	**10.83**	**0**		**Pn**	**05 44 57.2**	**-0.7**
K24K	**Donnelly Dome**	**10.91**	**32**		**Pn**	**05 45 01.2**	**+2.2**
H21K	**Melozitna Rive**	**10.98**	**13**		**Pn**	**05 45 01.2**	**+1.2**
CCB	**Clear Creek Bu**	**11.01**	**25**		**Pn**	**05 44 59.7**	**-0.7**
F15K	**North Star Dit**	**11.02**	**347**	Pn	**Pn**	**05 45 00.7**	**+0.1**
HDA	**Harding Lake**	**11.04**	**28**		**Pn**	**05 45 01.1**	**+0.4**
I23K	**Minto, Yukon-K**	**11.09**	**21**		**Pn**	**05 45 01.6**	**+0.1**
G19K	**Purcell Mounta**	**

	comp=Z,31nm,18.5s,baz=25,slow=36						
RES	**Resolute Bay**	**31.10**	**28**	LR	LR	06 03 58.7	
	comp=Z,20nm,21.7s,baz=227,slow=42						
NVAR	**Mina Array Bea**	**31.78**	**105**	P	**P**	**05 48 48.9**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=317,slow=6.8,SNR=2.9						
NVAR				LR	LR	05 59 23.5	
	comp=Z,76nm,18.7s,baz=315,slow=32						
	comp=Z,0.2nm,0.3s						
ELK	**Elko**	**31.92**	**98**	LR	LR	06 00 48.2	
	comp=Z,47nm,18.3s,baz=0.0,slow=34						
TIXI	**Tiksi**	**33.77**	**327**	LR	LR	06 04 19.5	
	comp=Z,51nm,18.1s,baz=136,slow=39						
PDAR	**Pinedale Array**	**33.87**	**91**	P	**P**	**05 49 06.8**	**+1.7**
	comp=Z,0.2nm,0.8s,baz=317,slow=5.6,SNR=4.3						
	comp=Z,0.2nm,0.8s						
PDAR	**Pinedale Array**	**33.87**	**91**	P	**P**	**05 49 05.3**	**+0.2**
PFO	**Pinyon Flats O**	**36.32**	**109**	LR	LR	06 01 43.4	
	comp=Z,45nm,20.2s,baz=236,slow=32						
O20A	**White River Ci**	**36.32**	**93**	P	**P**	**05 49 28.6**	**+2.4**
ULM	**Lac du Bonnet**	**37.27**	**71**	LR	LR	06 04 38.7	
	comp=Z,38nm,18.1s,baz=34,slow=36						
ANMO	**Albuquerque**	**40.93**	**97**	LR	LR	06 06 03.3	
	comp=Z,44nm,18.5s,baz=319,slow=35						
FRB	**Frobisher Bay**	**42.93**	**41**	LR	LR	06 10 41.2	
	comp=Z,34nm,20.7s,baz=158,slow=40						
H11N2	**WAKE ISLAND Hy**	**43.82**	**230**	T	T	06 36 42.7	
	baz=28,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**43.83**	**230**	T	T	06 36 43.0	
	baz=28,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**43.84**	**230**	T	T	06 36 44.5	
	baz=28,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**44.98**	**230**	T	T	06 38 42.7	
	baz=28,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**45.00**	**230**	T	T	06 38 43.5	
	baz=28,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**45.00**	**230**	T	T	06 38 43.7	
	baz=28,slow=76,SNR=9.9						
TXAR	**Lajitas Array**	**46.67**	**100**	LR	LR	06 08 59.0	
	comp=Z,52nm,18.6s,baz=306,slow=34						
NRIK	**Noril'sk**	**46.91**	**334**	LR	LR	06 14 39.8	
	comp=Z,20nm,18.0s,baz=88,slow=42						
KSRS	**Korea Array**	**51.19**	**282**	P	**P**	**05 51 24.9**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=54,slow=8.0,SNR=4.1						
	comp=Z,1.7nm,0.7s						
TLY	**Talaya**	**53.63**	**310**	LR	LR	06 14 55.7	
	comp=Z,31nm,19.8s,baz=16,slow=37						
SONM	**Songino Array**	**55.12**	**305**	P	**P**	**05 51 53.4**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=54,slow=6.7,SNR=5.3						
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**59.41**	**322**	P	**P**	**05 52 23.9**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=23,slow=8.0,SNR=5.4						
ZALV				LR	LR	06 20 07.4	
	comp=Z,52nm,18.6s,baz=51,slow=38						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**59.41**	**322**	P	**P**	**05 52 23.7**	**-0.6**
FINES	**FINESS Array B**	**63.73**	**357**	P	**P**	**05 52 53.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=38,slow=5.3,SNR=4.2						
	comp=Z,2.8nm,0.9s						
FINES	**FINESS Array B**	**63.73**	**357**	P	**P**	**05 52 53.3**	**0.0**
NOA	**NORSAR Array B**	**63.93**	**5**	P	**P**	**05 52 55.0**	**+0.3**
	comp=Z,1.6nm,1.0s,baz=352,slow=6.7,SNR=4.3						
	comp=Z,1.6nm,1.0s						
KURK	**Kurchatov**	**64.23**	**324**	P	**P**	**05 52 56.5**	**-0.3**
KURK				IAmb	IAmb	05 52 57.4	
	comp=Z,1.6nm,0.8s						
KURBB	**Kurchatov Arra**	**64.34**	**324**	P	**P**	**05 52 57.2**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=18,slow=6.2,SNR=7.8						
KURBB				LR	LR	06 23 32.0	
	comp=Z,43nm,18.3s,baz=164,slow=38						
	comp=Z,1.0nm,0.8s						
GTA2	**Gaotai**	**64.56**	**303**	*eP*	**P**	**05 52 58.9**	**-0.4**
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BVAR	**Borovoye Array**	**64.84**	**330**	P	**P**	**05 53 00.8**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=46,slow=6.4,SNR=5.2						
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**64.95**	**4**	P	**P**	**05 53 00.9**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=47,slow=6.5,SNR=5.3						
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**66.21**	**319**	P	**P**	**05 53 08.8**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=36,slow=6.1,SNR=8.8						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**66.21**	**319**	P	**P**	**05 53 09.2**	**-0.5**
MAKZ	**Makanchi**	**66.32**	**319**	P	**P**	**05 53 09.8**	**-0.6**
MAKZ				IAmb	IAmb	05 53 09.9	
	comp=Z,1.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**68.12**	**15**	P	**P**	**05 53 22.1**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=330,slow=4.8,SNR=2.5						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**74.35**	**355**	P	**P**	**05 53 58.7**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=5.0,slow=5.3,SNR=9.4						
	comp=Z,0.9nm,0.4s						
KIEV	**Kiev**	**74.36**	**355**	P	**P**	**05 53 59.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**81.89**	**290**	P	**P**	**05 54 40.9**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=9.9,slow=4.9,SNR=7.2						
	comp=Z,1.4nm,0.3s						
ESDC	**Sonseca Array**	**83.16**	**19**	P	**P**	**05 54 48.5**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=350,slow=4.4,SNR=13						
	comp=Z,2.5nm,0.9s						
BRTR	**Keskin Array B**	**84.95**	**350**	P	**P**	**05 54 58.1**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=290,slow=4.2,SNR=2.9						
	comp=Z,1.8nm,0.9s						
H03N2	**Juan Fernandez**	**111.33**	**118**	T	T	08 01 36.8	
	baz=323,slow=77						
H03N1	**Juan Fernandez**	**111.35**	**118**	T	T	08 01 35.6	
	baz=323,slow=77						
H03N3	**Juan Fernandez**	**111.35**	**118**	T	T	08 01 34.5	
	baz=323,slow=77						
QSPA	**South Pole Qui**	**144.88**	**180**	PKPbc	**PKPab**	**06 01 56.1**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=90,slow=2.5,SNR=6.8						
QSPA	**South Pole Qui**	**144.88**	**180**		**PKPab**	**06 01 56.7**	**-0.2**

*DJA **23** 05:44:07.2±0.4,3°N±4°×12°7E±°, h10km, M3.9/6, MLv3.9/6*
*MAN **23** 05:44:08.0, 2°.60N×126°.92E, h31km, MS3.7*
ISC 23 05:44:08.7±1.2, 2°.78N±0°.07×127°.2E±0°.1, h35km, n8, σ3°35/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.09**	**149**	P	**Pn**	**05 44 27.7**	**+0.1**
GAMI				S	**Sn**	**05 44 41.1**	**-0.4**
SGSI	**Sangihe**	**1.92**	**298**	P	**Pn**	**05 44 39.2**	**+0.3**
SGSI				S	**Sn**	**05 45 02.1**	**+0.3**
KCP	**Kidapawan**	**4.71**	**333**	*eP*	Pn	05 45 22.5	+5.1
KCP				*i* S	**Sn**	**05 46 15.8**	**+5.0**
GTOI	**Gorontalo**	**4.72**	**243**	P	Pn	05 45 17.8	+0.4
BIPH	**Bislig**	**5.44**	**351**	*eP*	**Pn**	**05 45 27.7**	**+0.4**
BIPH				*eS*	**Sn**	**05 46 30.9**	**+2.3**
CGP	**Cagayan de Oro**	**6.17**	**336**	*eP*	**Pn**	**05 45 35.9**	**-1.5**
CGP				*eS*	**Sn**	**05 46 40.1**	**-6.7**
ZCP	**Zamboanga City**	**6.58**	**309**	*eP*	Pn	05 46 09.8	+27
KSH2	**Kashi**	**59.19**	**315**	P	**P**	**05 54 06.8**	**+0.2**
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.7s						

RSNC 23 05:46:51.6±0.0, 7°N±2°×7°3W±°, h4km±4km, M1.1, ML0.8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.44**	**213**	P	Pg	05 46 59.9	-0.2
BARC				S	Sg	05 47 05.4	-0.4
PAMC	**Pamplona, Colo**	**0.45**	**32**	P	Pg	05 47 00.6	+0.3
PAMC				S	Sg	05 47 05.7	-0.5
RUSC	**La Rusia**	**1.07**	**188**	P	Pg	05 47 11.2	-1.0
RUSC				S	Sg	05 47 25.6	-0.5
OCAC	**Ocana**	**1.32**	**344**	P	Pg	05 47 15.7	-1.4
PTBC	**PUERTO BERRIO,**	**1.56**	**255**	P	Pn	05 47 18.9	-1.3
PTBC				S	Sn	05 47 39.3	-1.6
SPBC	**San Pablo de B**	**1.72**	**221**	P	Pn	05 47 21.0	-1.4

*NNC **23** 05:59:22.0±3.0, 54°.69N×87°.32E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=19.0km s-min=14.4km az=63.0, Suspected Mining explosion.*
*IDC **23** 05:59:27.7±2.8, 54°.42N×86°.96E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=23.1km s-min=16.7km az=59.0*
ASRS 23 05:59:27.0±1.0, 54°.39N×86°.91E, h0km, M2.6(MOS), 6C-2D, The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

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

I46RU	**ZALESOVO INFRA**	**1.30**	**251**	I	I	06 07 40.0	
	baz=69,slow=322,SNR=4.2						
ZAA0	**Zalesovo Array**	**1.30**	**251**	⇑P	Pg	05 59 51.7	-0.3
	1.2nm,0.3s,baz=68,slow=15						
ZAA0				⇑S	Sn	06 00 14.0	+3.4
	2.9nm,0.3s,baz=60,slow=27						
ZALV	**Zalesovo Beam**	**1.30**	**251**	Pg	Pg	05 59 51.7	-0.3
	1.5nm,0.3s,baz=64,slow=16,SNR=18						
ZALV				Lg	Lg	06 00 10.9	
	2.2nm,0.3s,baz=69,slow=26,SNR=9.9						
KURK	**Kurchatov**	**6.25**	**237**	⇓Pn	Pn	06 00 58.9	-1.5
	0.2nm,0.3s						
KURK				⇓Sn	Sn	06 02 18.2	+5.7
	0.6nm,0.9s						
KURK				⇑Lg	Lg	06 02 50.8	
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**6.35**	**237**	⇑Pn	Pn	06 01 03.7	+1.9
	0.1nm,0.3s,baz=53,slow=14,SNR=12						
KURBB				Sn	Sn	06 02 16.9	+1.9
	0.1nm,0.3s,baz=54,slow=24,SNR=4.2						
KURBB				Lg	Lg	06 02 51.3	
	baz=54,slow=34,SNR=1.4						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**6.35**	**237**	⇑Pn	Pn	06 01 03.4	+1.6
	1.1nm,0.5s						
KURBB				⇑Sn	Sn	06 02 20.1	+5.1
	1.3nm,0.3s						
KURBB				⇑Lg	Lg	06 02 56.0	
	1.9nm,0.8s						
MKAR	**Makanchi Array**	**8.15**	**203**	Pn	Pn	06 01 29.4	+2.8
	0.1nm,0.3s,baz=16,slow=9.8,SNR=5.0						
MKAR				Sn	Sn	06 02 59.1	-0.3
	0.1nm,0.3s,baz=16,slow=27,SNR=2.4						
MKAR				Lg	Lg	06 03 46.4	
	baz=26,slow=31,SNR=1.6						
	0.1nm,0.3s						

*VAO **23** 06:00:00.4±5.1, 32°.36S×72°.84W, h20km±28km, mb4.4, Presumed earthquake*
*SJA **23** 06:00:03.5±0.6, 31°.87S×72°.39W, h15km±2km, ML4.3, MW4.5*
*IDC **23** 06:00:05.7±0.6, 31°.84S×72°.07W, h0km, mb4.1/11, mbtmp4.1/15, ML3.7/4, MS3.6/4, Error ellipse: s-maj=19.6km s-min=17.4km az=106.0*
*NEIC **23** 06:00:06.2±1.4, 31°.91S±0°.03×72°.21W±0°.03, h10km±1km, mb4.3/17, ML4.2(GUC), Error ellipse: s-maj=6.3km s-min=3.3km az=323.0*
*GFZ **23** 06:00:06.2±0.3, 32°.5±2°×7°2W±°, h10km, M4.5/11, mb4.5/11*
*GUC **23** 06:00:08.0±0.6, 31°.91S×72°.14W, h31km±2km, ML4.2*
ISC 23 06:00:05.7±2.0, 31°.90S±0°.02×72°.25W±0°.04, h8km±12km, n172, σ1$27/208, mb4.4/13, 13C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO04	**Los Peladeros**	**1.09**	**98**	⇓*i*P	**Pb**	**06 00 26.6**	**-0.4**
CO04				*i* S	**Sb**	**06 00 40.7**	**-0.8**
CO04				IAML		06 00 45.3	
	comp=N,12μm,0.5s						
CO04	**Los Peladeros**	**1.09**	**98**		**Pb**	**06 00 26.6**	**-0.4**
CO04				Sg	**Sb**	**06 00 40.9**	**-0.5**
CO04	**Los Peladeros**	**1.09**	**98**	P	**Pb**	**06 00 26.7**	**-0.4**
VA01	**Torpederas**	**1.23**	**156**	*eP*	**Pn**	**06 00 28.6**	**-0.5**
VA01				*eS*	**Sb**	**06 00 44.5**	**-0.7**
VA01	**Torpederas**	**1.23**	**156**		**Pn**	**06 00 28.7**	**-0.5**
VA01				Sg	**Sb**	**06 00 44.8**	**-0.3**
VA01	**Torpederas**	**1.23**	**156**	P	**Pn**	**06 00 28.9**	**-0.2**
CO02	**Combarbal**	**1.27**	**57**	*eP*	Pn	06 00 23.9	-5.9
CO02				*eP*	**Pn**	**06 00 29.2**	**-0.7**
CO02				*eS*	**Sg**	**06 00 48.0**	**+1.3**
CO02				IAML		06 00 48.9	
	comp=Z,6μm,1.0s						
CO02	**Combarbal**	**1.27**	**57**	⇑*i*P	**Pn**	**06 00 29.0**	**-0.9**
CO02				*i* S	**Sb**	**06 00 45.7**	**-0.8**
CO02				IAML		06 00 49.9	
	comp=E,11μm,0.3s						
CO02	**Combarbal**	**1.27**	**57**		**Pn**	**06 00 29.3**	**-0.7**
CO02					**Sn**	**06 00 46.9**	**-0.3**
CO02	**Combarbal**	**1.27**	**57**	P	**Pn**	**06 00 29.2**	**-0.7**
ROCH	**El Roble**	**1.50**	**136**	⇑*i*P	**Pn**	**06 00 33.0**	**0.0**
ROCH				⇑*i*P	**Pn**	**06 00 33.0**	**0.0**
ROCH				*i* S	**Sn**	**06 00 50.9**	**-1.9**
ROCH				*i* S	**Sb**	**06 00 52.1**	**-0.9**
ROCH				IAML		06 01 01.1	
	comp=N,10μm,0.8s						
ROCH				IAML		06 01 01.1	
	comp=N,4μm,0.6s						
MT02	**Curacav**	**1.65**	**146**	*eP*	**Pn**	**06 00 35.3**	**+0.4**
MT02				*eS*	**Sn**	**06 00 55.8**	**-0.5**
MT02				IAML		06 01 04.2	
	comp=Z,2μm,0.7s						
MT02	**Curacav**	**1.65**	**146**	⇑*i*P	**Pn**	**06 00 35.1**	**+0.1**
MT02				*i* S	**Sn**	**06 00 54.3**	**-2.0**
MT02	**Curacav**	**1.65**	**146**		**Pn**	**06 00 35.1**	**+0.1**
MT02				Sn	**Sn**	**06 00 54.8**	**-1.5**
VA03	**San Esteban**	**1.67**	**121**	*eP*	**Pn**	**06 00 35.8**	**+0.4**
VA03				IAML		06 01 09.9	
	comp=Z,3μm,0.8s						
VA03	**San Esteban**	**1.67**	**121**	⇑*i*P	**Pn**	**06 00 35.6**	**+0.1**
VA03				*i* S	**Sn**	**06 00 56.5**	**-0.6**
VA03				IAML		06 01 04.8	
	comp=N,6μm,0.7s						
VA03	**San Esteban**	**1.67**	**121**		**Pn**	**06 00 35.5**	**+0.1**
VA03	**San Esteban**	**1.67**	**121**	P	**Pn**	**06 00 35.7**	**+0.4**
CO03	**El Pedregal**	**1.70**	**52**	*eP*	**Pn**	**06 00 35.8**	**0.0**
CO03				*eS*	**Sn**	**06 00 54.9**	**-2.8**
CO03				*eS*	**Sb**	**06 01 00.2**	**+1.3**
CO03				IAML		06 01 04.2	
	comp=Z,2μm,0.9s						
CO03	**El Pedregal**	**1.70**	**52**	*eP*	**Pn**	**06 00 35.6**	**-0.2**
CO03				*i* S	**Sn**	**06 00 57.8**	**+0.1**
CO03				IAML		06 00 59.3	
	comp=E,2μm,0.4s						
CO03	**El Pedregal**	**1.70**	**52**		**Pn**	**06 00 35.7**	**-0.1**
CO03	**El Pedregal**	**1.70**	**52**	P	**Pn**	**06 00 35.8**	**0.0**
PEL	**Peldehue**	**1.81**	**134**		**Pn**	**06 00 37.6**	**+0.4**
PEL	**Peldehue**	**1.81**	**134**	P	**Pn**	**06 00 37.9**	**+0.6**
VA05	**Santo Domingo**	**1.83**	**163**	⇑*eP*	**Pn**	**06 00 37.4**	**0.0**
VA05	**Santo Domingo**	**1.83**	**163**		**Pn**	**06 00 37.3**	**-0.2**
VA05	**Santo Domingo**	**1.83**	**163**	P	**Pn**	**06 00 37.5**	**0.0**
MT05	**Renca**	**1.96**	**140**	*eP*	**Pn**	**06 00 40.1**	**+0.9**
MT05				IAML		06 01 14.8	
	comp=Z,3μm,0.7s						
MT05	**Renca**	**1.96**	**140**	*eP*	**Pn**	**06 00 39.7**	**+0.4**
MT05				*i* S	**Sn**	**06 01 03.5**	**-0.5**
MT05				IAML		06 01 15.4	
	comp=N,4μm,0.7s						
MT05	**Renca**	**1.96**	**140**		**Pn**	**06 00 39.6**	**+0.4**
MT10	**Hacienda Santa**	**1.99**	**134**	⇑*i*P	**Pn**	**06 00 40.4**	**+0.6**
MT10				*i* S	**Sb**	**06 01 06.4**	**-0.8**
MT14	**Cerro Cal¡n**	**2.08**	**136**	⇑*eP*	**Pn**	**06 00 41.5**	**+0.6**
MT14				IAML		06 01 21.2	
	comp=N,5μm,0.7s						
MT16	**CCHEN**	**2.11**	**137**	⇑*eP*	**Pn**	**06 00 41.9**	**+0.6**
MT16				*i* S	**Sb**	**06 01 10.8**	**+0.3**
MT16				IAML		06 01 19.4	
	comp=N,3μm,0.8s						
MT16	**CCHEN**	**2.11**	**137**		**Pn**	**06 00 42.0**	**+0.7**
GO04	**Tololo Observa**	**2.12**	**36**	*eP*	**Pn**	**06 00 41.5**	**-0.2**
GO04				*eS*	**Sb**	**06 01 09.9**	**-1.3**
GO04				IAML		06 01 20.4	
	comp=Z,3μm,0.8s						
GO04	**Tololo Observa**	**2.12**	**36**	*eP*	**Pn**	**06 00 41.2**	**-0.5**
GO04				*i* S	**Sb**	**06 01 12.0**	**+0.8**
GO04	**Tololo Observa**	**2.12**	**36**		**Pn**	**06 00 41.3**	**-0.5**
GO04	**Tololo Observa**	**2.12**	**36**	P	**Pn**	**06 00 41.4**	**-0.3**
MT01	**Popeta**	**2.13**	**157**	*eP*	**Pn**	**06 00 41.9**	**+0.3**
MT01				*eS*	**Sb**	**06 01 13.4**	**+2.3**
MT01				IAML		06 01 21.5	
	comp=Z,2μm,0.7s						
MT01	**Popeta**	**2.13**	**157**	⇑*i*P	**Pn**	**06 00 41.6**	**0.0**
MT01				IAML		06 01 20.8	
	comp=E,2μm,0.4s						
MT01	**Popeta**	**2.13**	**157**		**Pn**	**06 00 41.6**	**0.0**
MT09	**Talagante**	**2.15**	**151**	*eP*	**Pn**	**06 00 42.6**	**+0.6**
MT09	**Talagante**	**2.15**	**151**		**Pn**	**06 00 42.9**	**+0.9**
MT04	**Ro Olivares**	**2.33**	**131**	*eP*	**Pn**	**06 00 45.7**	**+1.2**
MT04	**Ro Olivares**	**2.33**	**131**	*eP*	**Pn**	**06 00 45.2**	**+0.7**
MT04				IAML		06 01 23.1	
	comp=E,1μm,0.3s						

MT08	**Bocatoma Ro**	**2.43**	**130**	*eP*	**Pn**	**06 00 47.9**	**+2.0**
MT08				*eS*	**Sn**	**06 01 16.9**	**+0.9**
MT08				IAML		06 01 34.5	
	comp=Z,674nm,0.7s						
MT08	**Bocatoma Ro**	**2.43**	**130**	⇑*eP*	**Pn**	**06 00 47.1**	**+1.2**
MT08				IAML		06 01 32.3	
	comp=N,1μm,0.6s						
MT13	**San Alfonso**	**2.47**	**139**	*eP*	**Pn**	**06 00 48.0**	**+1.6**
MT13				*eS*	**Sb**	**06 01 19.4**	**-1.7**
MT13				IAML		06 01 29.9	
	comp=Z,1μm,0.6s						
MT13	**San Alfonso**	**2.47**	**139**	⇑*eP*	**Pn**	**06 00 47.4**	**+1.1**
MT13	**San Alfonso**	**2.47**	**139**		**Pn**	**06 00 47.5**	**+1.1**
BO04	**La Punta**	**2.50**	**147**	⇑*iP*	**Pn**	**06 00 47.8**	**+1.1**
BO04				IAML		06 01 37.1	
	comp=E,2μm,0.8s						
BO04	**La Punta**	**2.50**	**147**		**Pn**	**06 00 47.8**	**+1.1**
RTLS	**Leoncito**	**2.51**	**88**	*eP*	**Pn**	**06 00 49.8**	**+2.7**
RTLS				*eS*	**Sb**	**06 01 21.9**	**-0.5**
RTLS				IAML		06 01 28.5	
	comp=Z,4μm,0.9s						
BO03	**Pichilemu**	**2.60**	**175**	P	**Pn**	**06 00 48.3**	**+0.3**
CO01	**Juntas del Tor**	**2.66**	**45**	*eP*	**Pn**	**06 00 49.7**	**+0.5**
CO01				*eS*	**Sn**	**06 01 23.9**	**+2.2**
CO01				IAML		06 01 32.4	
	comp=Z,1μm,1.1s						
CO01	**Juntas del Tor**	**2.66**	**45**	*eP*	**Pn**	**06 00 49.8**	**+0.7**
CO01				IAML		06 01 32.5	
	comp=E,1μm,0.8s						
CO01	**Juntas del Tor**	**2.66**	**45**		**Pn**	**06 00 50.0**	**+0.9**
CO01	**Juntas del Tor**	**2.66**	**45**	P	**Pn**	**06 00 50.0**	**+0.9**
ARCO	**CERRO ARCO**	**2.96**	**109**	*eP*	**Pn**	**06 00 54.9**	**+1.8**
ARCO				*eS*	**Sg**	**06 01 42.9**	**+2.1**
ZON	**Zonda**	**3.06**	**84**	*eP*	**Pb**	**06 00 58.2**	**-2.3**
ZON				*eS*	**Sb**	**06 01 40.9**	**+2.9**
GO05	**Hualane**	**3.11**	**175**	*eP*	**Pn**	**06 00 55.5**	**+0.4**
GO05				*eS*	**Sn**	**06 01 30.5**	**-2.0**
GO05				IAML		06 01 56.4	
	comp=Z,459nm,1.0s						
GO05	**Hualane**	**3.11**	**175**		**Pn**	**06 00 54.9**	**-0.2**
GO05	**Hualane**	**3.11**	**175**	P	**Pn**	**06 00 55.2**	**+0.1**
AAGR	**Agrelo**	**3.12**	**113**	*eP*	**Pb**	**06 00 59.6**	**-2.0**
BO02	**Sierra Bellavi**	**3.13**	**157**	*eP*	**Pn**	**06 00 56.6**	**+1.1**
BO02				*eS*	**Sn**	**06 01 35.4**	**+2.3**
BO02				*eS*	**Sb**	**06 01 40.9**	**+0.8**
BO02	**Sierra Bellavi**	**3.13**	**157**		**Pn**	**06 00 56.5**	**+1.1**
BO02	**Sierra Bellavi**	**3.13**	**157**	P	**Pn**	**06 00 56.7**	**+1.1**
LCO	**Las Campanas**	**3.17**	**25**	*eP*	**Pn**	**06 00 56.4**	**+0.3**
LCO				*eS*	**Sb**	**06 01 38.4**	**-3.0**
LCO	**Las Campanas**	**3.17**	**25**		**Pn**	**06 00 55.4**	**-0.8**
CFA	**Coronel Fontan**	**3.43**	**86**	Pn	**Pn**	**06 00 60.0**	**+0.5**
	comp=Z,9.8nm,0.3s,baz=253,slow=11,SNR=42						
CFA				Sn	**Sn**	**06 01 40.9**	**+0.5**
	comp=Z,6.8nm,0.3s,baz=257,slow=14,SNR=5.5						
	comp=Z,23nm,0.7s						
CFA	**Coronel Fontan**	**3.43**	**86**	*eP*	**Pn**	**06 01 02.2**	**+2.7**
CFA				*eS*	**Sb**	**06 01 47.9**	**-0.6**
AC05	**El Transito**	**3.50**	**30**	*eP*	**Pn**	**06 01 00.9**	**+0.4**
AC05				*eS*	**Sn**	**06 01 43.5**	**+1.3**
AC05				*eS*	**Sb**	**06 01 47.9**	**-2.7**
AC05	**El Transito**	**3.50**	**30**		**Pn**	**06 01 01.3**	**+0.7**
AC05	**El Transito**	**3.50**	**30**	P	**Pn**	**06 01 01.2**	**+0.7**
AC04	**Llanos de Chal**	**3.82**	**16**	*eP*	**Pn**	**06 01 04.0**	**-0.8**
AC04				*eS*	**Sb**	**06 02 03.9**	**+4.1**
AC04	**Llanos de Chal**	**3.82**	**16**		**Pn**	**06 01 03.8**	**-1.1**
AC04	**Llanos de Chal**	**3.82**	**16**	P	**Pn**	**06 01 04.5**	**-0.3**
ML02	**Panimavida**	**3.91**	**170**	*eP*	**Pn**	**06 01 06.8**	**+0.7**
ML02				*eS*	**Sb**	**06 02 08.4**	**+6.0**
ML02	**Panimavida**	**3.91**	**170**	P	**Pn**	**06 01 06.4**	**+0.3**
ACAN	**Cantantal**	**4.31**	**96**	*eP*	**Pn**	**06 01 14.1**	**+2.5**
GO03	**Copiapo**	**4.63**	**23**	*eP*	**Pn**	**06 01 12.9**	**-3.2**
GO03				*eP*	Pb	06 01 16.8	-11
GO03				*eS*	**Sn**	**06 02 13.4**	**+3.3**
GO03	**Copiapo**	**4.63**	**23**		**Pn**	**06 01 16.3**	**+0.2**
GO03	**Copiapo**	**4.63**	**23**	P	**Pn**	**06 01 16.4**	**+0.4**
VCA	**Vinchina**	**4.71**	**49**	*eP*	**Pn**	**06 01 21.1**	**+3.9**
BI02	**San Fabin de**	**4.82**	**171**		**Pn**	**06 01 19.5**	**+0.9**
BI02	**San Fabin de**	**4.82**	**171**	P	**Pn**	**06 01 19.2**	**+0.6**
BI05	**Punta Hualpn**	**4.90**	**189**		**Pn**	**06 01 19.5**	**-0.1**
ACLC	**CERRO LA CRUZ**	**5.19**	**63**	*eP*	**Pn**	**06 01 25.2**	**+1.4**
AC02	**Maricunga**	**5.73**	**29**		**Pn**	**06 01 30.9**	**-0.6**
**AC02

NBPS	**Pedro II - PI**	**39.78**	**53**	*e*P		**P**	**06 07 37.9**	**-1.5**
BLUN	**Bluefields**	**45.03**	**344**	P		**P**	**06 08 22.6**	**+0.7**
BELA	**Belgrano 2**	**48.97**	**170**	P		**P**	**06 08 51.8**	**-0.3**
BELA				IAmb		IAmb	06 08 52.8	
	comp=Z,5.3nm,1.1s							
SNAA	**Sanae**	**53.59**	**158**	P		**P**	**06 09 28.1**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=278,slow=6.3,SNR=5.1							
	comp=Z,3.9nm,1.0s							
SNAA	**Sanae**	**53.59**	**158**	P		**P**	**06 09 26.8**	**-0.1**
SNAA				IAmb		IAmb	06 09 40.8	
	comp=Z,3.6nm,0.8s							
SNAA	**Sanae**	**53.59**	**158**	P		**P**	**06 09 26.0**	**-0.9**
QSPA	**South Pole Qui**	**58.33**	**180**	P		**P**	**06 10 03.0**	**+2.0**
	comp=Z,3.4nm,0.9s,baz=148,slow=3.9,SNR=8.1							
	comp=Z,3.4nm,0.9s							
QSPA	**South Pole Qui**	**58.33**	**180**	P		**P**	**06 10 01.9**	**+0.8**
QSPA				IAmb		IAmb	06 10 03.7	
	comp=Z,5.6nm,1.1s							
VNDA	**Vanda**	**66.12**	**191**	P		**P**	**06 10 55.6**	**+2.7**
	comp=Z,0.3nm,0.8s,baz=95,slow=3.3,SNR=4.3							
	comp=Z,0.3nm,0.8s							
VNDA	**Vanda**	**66.12**	**191**	P		**P**	**06 10 53.5**	**+0.6**
VNDA				IAmb		IAmb	06 11 14.4	
	comp=Z,0.9nm,0.9s							
TXAR	**Lajitas Array**	**67.82**	**331**	P		**P**	**06 11 06.1**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=151,slow=8.4,SNR=5.2							
	comp=Z,0.5nm,0.7s							
TXAR	**Lajitas Array**	**67.82**	**331**	P		**P**	**06 11 04.5**	**+0.1**
DBIC	**Dimbokro**	**74.69**	**72**	P		**P**	**06 11 46.0**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=226,slow=6.4,SNR=7.3							
DBIC				LR		LR	06 41 03.5	
	comp=Z,28nm,21.0s,baz=160,slow=33							
	comp=Z,6.1nm,0.8s							
DBIC	**Dimbokro**	**74.69**	**72**	P		**P**	**06 11 45.3**	**-0.9**
BOSA	**Boshof**	**81.20**	**118**	P		**P**	**06 12 22.8**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=304,slow=5.2,SNR=3.4							
	comp=Z,3.1nm,0.9s							
BOSA	**Boshof**	**81.20**	**118**	P		**P**	**06 12 21.4**	**-1.1**
PDAR	**Pinedale Array**	**81.81**	**333**	P		**P**	**06 12 27.4**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=124,slow=3.7,SNR=1.9							
	comp=Z,0.1nm,0.3s							
PDAR	**Pinedale Array**	**81.81**	**333**	P		**P**	**06 12 25.6**	**+0.2**
NVAR	**Mina Array Bea**	**82.06**	**325**	P		**P**	**06 12 28.6**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=159,slow=4.6,SNR=5.2							
	comp=Z,0.6nm,0.7s							
NVAR	**Mina Array Bea**	**82.06**	**325**	P		**P**	**06 12 27.0**	**+0.3**
ELK	**Elko**	**82.49**	**328**	LR		LR	06 47 15.7	
	comp=Z,56nm,19.0s,baz=352,slow=34							
TORD	**Torodi Ar. Bea**	**83.67**	**70**	P		**P**	**06 12 35.8**	**+0.5**
	comp=Z,5.0nm,0.7s,baz=262,slow=4.3,SNR=21							
	comp=Z,5.0nm,0.7s							
WRA	**Warramunga Arr**	**122.50**	**210**	PKP		**PKPdf**	**06 19 02.1**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=163,slow=1.7,SNR=6.4							
WRA	**Warramunga Arr**	**122.50**	**210**	PKPdf		**PKPdf**	**06 19 01.2**	**-1.1**
BVAR	**Borovoye Array**	**145.84**	**41**	PKPbc		**PKPab**	**06 19 45.8**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=302,slow=3.3,SNR=6.5							
KURBB	**Kurchatov Arra**	**151.43**	**41**	PKPbc		**PKiKP**	**06 20 00.3**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=299,slow=3.0,SNR=28							
KURBB				PKPab		**PKPab**	**06 20 09.1**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=300,slow=3.1,SNR=9.5							
KURK	**Kurchatov**	**151.43**	**40**			**PKiKP**	**06 20 01.0**	**+0.8**
ZALV	**Zalesovo Beam**	**152.52**	**30**	PKPbc		**PKiKP**	**06 20 03.2**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=308,slow=3.8,SNR=16							
ZALV				PKPab		**PKPab**	**06 20 12.7**	**+0.2**
	comp=Z,4.0nm,0.5s,baz=297,slow=2.9,SNR=11							
ZALV	**Zalesovo Beam**	**152.52**	**30**			**PKiKP**	**06 20 02.9**	**+0.5**
MKAR	**Makanchi Array**	**155.47**	**45**	PKPab		**PKPab**	**06 20 25.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=270,slow=3.6,SNR=3.9							
PZH	**PanZhiHua**	**172.48**	**134**	PKP		**PKPdf**	**06 20 14.8**	**-1.0**

*IDC **23** 06:03:14.6±5.3,41.56S×86.96W, h0km, mb3.9/6, mbtmp3.9/6, MS3.8/20, Error ellipse: s-maj=141.6km s-min=34.8km az=2.0*

*GCMT **23** 06:03:18.0±0.5,41.49S±0.03×87.18W±0.03, h13km±2km, MW4.8/73, Moment Tensor Solution. s10,c10; s73,c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.12±.09; Mθθ=0.43±.09; Mφφ=-0.31±.09; Mrθ=0.09±.22; Mrφ=-1.55±.08; Mθφ=-0.47±.23; Best double couple: M=1.66400×10^16 NP1:φs=83.00000°,δ73.00000°,λ=-179.00000°. NP2: φs=353.00000°,δ89.00000°,λ=-17.00000°. Principal axes: T 1.7250, Plg11.0000°, Azm39.0000°; N -0.1220, Plg73.0000°, Azm171.0000°; P -1.6030, Plg12.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 06:03:15.8±4.7, 41.6S±0.9×86.9W±0.2, h10km, n29, σ0§46/6, mb3.8/6, MS3.8/19, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**10.03**	**42**	T	T	06 15 53.6	
	baz=216,slow=73,SNR=112						
H03S1	**Juan Fernandez**	**10.04**	**42**	T	T	06 15 54.9	
	baz=216,slow=73,SNR=138						
H03S3	**Juan Fernandez**	**10.04**	**42**	T	T	06 15 50.7	
	baz=216,slow=73,SNR=297						
H03N3	**Juan Fernandez**	**10.34**	**40**	T	T	06 16 19.2	
	baz=218,slow=73,SNR=48						
H03N2	**Juan Fernandez**	**10.35**	**40**	T	T	06 16 13.9	
	baz=218,slow=73,SNR=113						
H03N1	**Juan Fernandez**	**10.36**	**40**	T	T	06 16 13.7	
	baz=218,slow=73,SNR=53						
CFA	**Coronel Fontan**	**18.00**	**62**	LR	LR	06 12 53.5	
	comp=Z,258nm,20.2s,baz=106,slow=32						
RPN	**Rapa Nui**	**23.40**	**301**	LR	LR	06 14 55.2	
	comp=Z,297nm,21.2s,baz=120,slow=30						
CPUP	**Villa Florida**	**28.72**	**67**	LR	LR	06 20 01.7	
	comp=Z,198nm,18.6s,baz=248,slow=35						
LPAZ	**La Paz**	**30.00**	**38**	P	**P**	**06 09 25.6**	**+0.3**
	0.8nm,0.7s,baz=221,slow=10,SNR=2.3						
LPAZ				LR	LR	06 18 53.7	
	comp=Z,157nm,18.1s,baz=192,slow=31						
	0.8nm,0.7s						
SIV	**San Ignacio**	**33.90**	**49**	P	**P**	**06 09 58.8**	**-0.2**
	2.1nm,0.9s,baz=229,slow=9.3,SNR=6.4						
SIV				LR	LR	06 22 34.9	
	comp=Z,185nm,20.6s,baz=274,slow=34						
	2.1nm,0.9s						
ATAH	**Atahualpa**	**35.19**	**15**	LR	LR	06 20 53.7	
	comp=Z,267nm,20.9s,baz=210,slow=30						
BDFB	**Brasilia**	**42.33**	**64**	P	**P**	**06 11 10.1**	**0.0**
	4.9nm,0.9s,baz=232,slow=7.0,SNR=7.3						
BDFB				LR	LR	06 28 29.3	
	comp=Z,155nm,18.7s,baz=242,slow=36						
	4.9nm,0.9s						
QSPA	**South Pole Qui**	**48.59**	**180**	LR	LR	06 30 24.5	
	comp=Z,68nm,18.6s,baz=152,slow=34						
SDV	**Santo Domingo**	**52.46**	**20**	LR	LR	06 32 24.0	
	comp=Z,61nm,20.9s,baz=236,slow=33						
VNDA	**Vanda**	**54.05**	**195**	LR	LR	06 32 09.0	
	comp=Z,86nm,18.4s,baz=133,slow=32						
SJG	**San Juan**	**62.48**	**22**	LR	LR	06 38 59.2	
	comp=Z,49nm,19.7s,baz=236,slow=34						
URZ	**Urewera**	**69.71**	**237**	LR	LR	06 38 59.8	
	comp=Z,105nm,18.1s,baz=153,slow=31						
RPZ	**Rata Peaks**	**69.97**	**229**	LR	LR	06 36 40.4	
	comp=Z,84nm,20.5s,baz=144,slow=29						
TXAR	**Lajitas Array**	**72.30**	**345**	P	**P**	**06 14 41.0**	**-0.4**
	1.1nm,0.8s,baz=169,slow=7.9,SNR=13						
	1.1nm,0.8s						
TKL	**Tuckaleechee C**	**76.98**	**3**	LR	LR	06 43 22.2	
	comp=Z,34nm,19.8s,baz=176,slow=31						
PFO	**Pinyon Flats O**	**79.66**	**335**	LR	LR	06 43 04.3	
	comp=Z,36nm,18.1s,baz=216,slow=30						
NVAR	**Mina Array Bea**	**84.68**	**336**	P	**P**	**06 15 50.3**	**+0.6**
	0.2nm,0.5s,baz=150,slow=3.5,SNR=2.4						
	0.2nm,0.5s						
BOSA	**Boshof**	**86.17**	**125**	LR	LR	06 48 16.7	
	comp=Z,63nm,18.5s,baz=195,slow=31						
SADO	**Sadowa**	**86.31**	**6**	LR	LR	06 53 11.1	
	comp=Z,22nm,18.2s,baz=162,slow=35						
PDAR	**Pinedale Array**	**86.47**	**343**	P	**P**	**06 15 58.4**	**-0.1**
	0.2nm,0.6s,baz=174,slow=4.4,SNR=2.0						
	0.2nm,0.6s						
LBTB	**Lobatse**	**88.97**	**123**	LR	LR	06 49 58.9	
	comp=Z,43nm,18.9s,baz=186,slow=32						
STKA	**Stephens Creek**	**94.28**	**220**	LR	LR	06 51 41.2	
	comp=Z,92nm,18.1s,baz=203,slow=31						
SCHQ	**Schefferville**	**97.62**	**12**	LR	LR	06 59 34.9	
	comp=Z,18nm,20.0s,baz=114,slow=35						

*IDC **23** 06:05:31.9±2.7,53.98N×86.80E, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=22.8km s-min=13.8km az=67.0*

*ASRS **23** 06:05:33.0±0.8,53.99N×86.57E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*NNC **23** 06:05:37.4±2.0,53.90N×86.49E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=12.7km s-min=5.7km az=87.0, Suspected Mining explosion.*

ISC 23 06:05:32.0±5.0, 54.2N±0.3×86.7E±0.2, h0km, n9, σ1§30/8, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.15**	**259**	I	I	06 12 44.9	
	baz=89,slow=320,SNR=2.8						
ZAA0	**Zalesovo Array**	**1.15**	**259**	⇑P	**Pn**	**06 05 55.6**	**+0.3**
	0.7nm,0.1s,baz=89,slow=17						
ZAA0				⇑S	**Sb**	**06 06 10.4**	**+0.2**
	3.1nm,0.2s,baz=94,slow=29						
ZALV	**Zalesovo Beam**	**1.15**	**259**	Pg	**Pg**	**06 05 53.0**	**-1.0**
	0.8nm,0.3s,baz=85,slow=19,SNR=7.2						
ZALV				Lg	Lg	06 06 10.6	
	1.7nm,0.3s,baz=90,slow=29,SNR=12						
KURK	**Kurchatov**	**6.05**	**238**	⇑Pn	**Pn**	**06 07 04.5**	**+2.0**
	0.4nm,0.6s						
KURK				⇓Lg	Lg	06 08 41.5	
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.15**	**238**	Pn	**Pn**	**06 07 03.3**	**-0.6**
	0.1nm,0.3s,baz=56,slow=14,SNR=7.7						
KURBB				Lg	Lg	06 08 47.5	
	0.1nm,0.3s,baz=64,slow=17,SNR=8.4						
	0.4nm,0.2s						
KURBB	**Kurchatov Arra**	**6.15**	**238**	⇓Pn	**Pn**	**06 07 05.3**	**+1.3**
	0.6nm,0.5s						
KURBB				⇓Lg	Lg	06 08 45.2	
	3.0nm,0.8s						
MK31	**Makanchi Array**	**7.91**	**203**	⇑Pn	**Pn**	**06 07 29.2**	**+1.0**
	baz=346,slow=23,SNR=7.7						
MK31				⇑Lg	Lg	06 09 39.6	
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.91**	**203**	Pn	**Pn**	**06 07 27.5**	**-0.7**
	0.2nm,0.3s,baz=25,slow=13,SNR=5.3						
MKAR				Lg	Lg	06 09 36.7	
	0.1nm,0.3s,baz=20,slow=36,SNR=6.0						
	0.2nm,0.3s						
MAKZ	**Makanchi**	**7.97**	**204**	⇓Pn	Pn	06 07 32.1	+3.1
	0.5nm,0.6s						
MAKZ				⇑Lg	Lg	06 09 41.1	
	1.0nm,0.7s						

*ASRS **23** 06:15:09.0±0.7,54.24N×86.20E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 23 06:15:11.2±2.6, 54.22N×86.13E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=18.9km s-min=11.7km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.82**	**251**	I	I	06 21 00.0	
	baz=68,slow=320,SNR=2.1						
ZALV	**Zalesovo Beam**	**0.82**	**251**	Pg	Pg	06 15 25.8	-1.1
	0.7nm,0.3s,baz=73,slow=16,SNR=6.9						
ZALV				Lg	Lg	06 15 38.8	
	1.5nm,0.3s,baz=74,slow=30,SNR=6.8						
KURBB	**Kurchatov Arra**	**5.88**	**235**	Pn	Pn	06 16 40.4	+0.9
	0.1nm,0.3s,baz=51,slow=13,SNR=7.5						
KURBB				Sn	Sn	06 17 46.7	-0.8
	baz=7.7,slow=23,SNR=1.7						
KURBB				Lg	Lg	06 18 19.7	
	baz=57,slow=34,SNR=2.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.82**	**200**	Pn	Pn	06 17 07.4	+1.2
	0.1nm,0.3s,baz=22,slow=13,SNR=5.4						
MKAR				Sn	Sn	06 18 34.1	-1.3
	0.1nm,0.3s,baz=1.2,slow=26,SNR=4.2						
MKAR				Lg	Lg	06 19 19.1	
	baz=32,slow=39,SNR=1.2						
	0.2nm,0.3s						
HHC	**Hu-ho-hao-te**	**21.61**	**118**	*e*P	P	06 20 09.3	+6.6

*NNC **23** 06:30:18.6±4.9,54.01N×87.48E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=33.5km s-min=17.3km az=84.0, Suspected Mining explosion.*

*ASRS **23** 06:30:20.0±0.6,54.16N×87.15E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*IDC **23** 06:30:23.0±3.0,54.15N×87.13E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=26.1km s-min=17.2km az=67.0*

ISC 23 06:30:17.4±6.0, 54.5N±0.6×87.4E±0.3, h0km, n7, σ1§82/6, 2C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**252**	I	I	06 39 10.0	
	baz=78,slow=323,SNR=5.2						
ZAA0	**Zalesovo Array**	**1.61**	**252**	⇑P	**Pn**	**06 30 46.8**	**-0.3**
	2.4nm,0.1s,baz=81,slow=17						
ZAA0				⇑S	**Sn**	**06 31 08.6**	**0.0**
	4.2nm,0.2s,baz=89,slow=29						
ZALV	**Zalesovo Beam**	**1.61**	**252**	Pg	Pn	**06 30 47.4**	**+0.3**
	1.4nm,0.3s,baz=84,slow=16,SNR=12						
ZALV				Lg	Lg	06 31 07.0	
	1.2nm,0.3s,baz=84,slow=30,SNR=6.3						
KURK	**Kurchatov**	**6.55**	**238**	⇓Pn	**Pn**	**06 31 53.4**	**-1.5**
	0.2nm,0.4s						
KURK				⇓Lg	Lg	06 33 40.9	
	1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**6.65**	**238**	Pn	**Pn**	**06 31 58.9**	**+2.6**
	0.1nm,0.3s,baz=53,slow=13,SNR=4.6						
KURBB				Lg	Lg	06 33 43.9	
	baz=56,slow=30,SNR=1.4						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**6.65**	**238**	⇓Pn	**Pn**	**06 31 55.3**	**-1.0**
	0.8nm,0.6s						
KURBB				⇓Lg	Lg	06 33 43.7	
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**8.36**	**205**	Pn	Pn	06 32 21.3	+1.6
	0.1nm,0.3s,baz=18,slow=18,SNR=2.0						
MKAR				Lg	Lg	06 34 35.4	
	baz=27,slow=38,SNR=1.7						
	0.1nm,0.4s						

*NDI **23** 06:47:36.6±2.0,31.00N×72.34E, h10km, ML3.5, MW3.5, Presumed earthquake*

*IDC **23** 06:47:44.1±8.4,31.82N×73.09E, h123km±77km, mb3.4/5, mbtmp3.8/8, MS2.7/1, Error ellipse: s-maj=44.0km s-min=32.8km az=24.0*

ISC 23 06:47:35.1±1.4, 30.92N±0.08×72.34E±0.09, h10km, n20, σ1§50/20, mb3.6/4, 3C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.82**	**48**	*e*P	**Pn**	**06 48 21.5**	**+1.2**
JMU				*e*S	**Sn**	**06 48 53.6**	**-0.7**
JMU				*i* x	x	06 49 05.7	
TLWR	**Talawar**	**3.26**	**71**	*e*P	**Pn**	**06 48 28.1**	**+1.7**
TLWR				*e*S	**Sn**	**06 49 06.5**	**+1.3**
TLWR				*i* x	x	06 49 20.2	
THN	**Thein Dam**	**3.29**	**62**	*ex*	**Pn**	**06 48 25.6**	**-1.1**
THN				*e*SN	**Sn**	**06 49 06.2**	**+0.3**
THN				*i* x	x	06 49 22.1	
THN				IAML		06 49 26.2	
	comp=E,245nm,0.4s						
THN				IAML		06 49 26.8	
	comp=N,202nm,0.4s						
BHK	**Bhakra**	**3.50**	**81**	*e*P	**Pn**	**06 48 30.3**	**+0.7**
BHK				*e*S	**Sn**	**06 49 13.5**	**+2.4**
BHK				*i* x	x	06 54 51.2	
DHRM	**DHARAMSHALA**	**3.63**	**68**	*e*P	**Pn**	**06 48 32.1**	**+0.4**
DHRM				*e*S	**Sn**	**06 49 15.1**	**+0.4**
DHRM				*i* x	x	06 49 36.3	
DHRM				IAML		06 49 36.9	
	comp=N,413nm,0.8s						
DHRM				IAML		06 49 38.1	
	comp=E,338nm,0.4s						
DHRM				*i* x	x	06 54 16.2	
TSSA	**Tissa**	**3.76**	**59**	*ex*	Pn	06 48 26.3	-7.2
TSSA				*e*S	**Sn**	**06 49 15.2**	**-2.7**
TSSA				IAML		06 49 17.1	
	comp=E,168nm,0.3s						
TSSA				IAML		06 49 17.7	
	comp=N,227nm,0.2s						
TSSA				*i* x	**Sg**	**06 49 35.7**	**-0.4**
TSSA				*i* x	x	06 54 11.3	
SMLA	**Simla**	**4.15**	**86**	*e*P	**Pn**	**06 48 39.6**	**+1.0**
SMLA				*e*S	**Sn**	**06 49 25.2**	**-2.0**
SMLA				IAML		06 50 01.2	
	comp=E,178nm,0.5s						
SMLA				*i* x	x	06 50 02.7	
SMLA				IAML		06 50 17.0	
	comp=E,235nm,0.6s						
SMLA				*i* x	x	06 53 53.8	
KLP	**Kalpa**	**5.10**	**82**	*e*P	**Pn**	**06 48 52.5**	**+0.5**
KLP				*e*S	**Sn**	**06 49 48.5**	**-2.6**
KLP				IAML		06 50 07.9	
	comp=E,71nm,0.4s						
KLP				IAML		06 50 09.6	
	comp=N,30nm,0.5s						
KLP				*i* x	x	06 53 29.4	
HNLY	**HANLEY**	**5.94**	**70**	*ex*	**Pn**	**06 49 04.7**	**+1.0**
HNLY				*ex*	x	06 52 50.5	
UDPR	**Udaipur**	**6.43**	**169**	*e*P	**Pn**	**06 49 11.4**	**+1.3**
UDPR				*e*S	**Sn**	**06 50 22.4**	**-1.2**
AAK	**Ala-Archa**	**11.82**	**8**	P	Pn	06 50 15.9	-8.0
	comp=N,3.8nm,0.3s,baz=194,slow=12,SNR=5.7						
AAK				S	Sn	06 52 16.7	-19
	comp=N,1.1nm,0.3s,baz=0.0,slow=20,SNR=1.4						
AAK	**Ala-Archa**	**11.82**	**8**	⇑P	Pn	06 50 15.8	-8.1
	comp=N,0.8nm,0.4s						
AAK				⇑S	Sn	06 52 16.0	-20
	comp=N,3.0nm,0.9s						
KK31	**Karatay Array**	**12.24**	**354**	P	Pn	06 50 17.3	-12
	comp=N,1.7nm,0.3s,baz=181,slow=13,SNR=31						
KK31				⇑S	Sn	06 52 24.2	-22
	comp=N,1.2nm,0.4s,baz=171,slow=22,SNR=4.7						
MKAR	**Makanchi Array**	**17.62**	**23**	P	Pn	06 51 30.7	-10
	comp=N,0.8nm,0.6s,baz=200,slow=13,SNR=10						
MKAR				LR	LR	06 57 46.5	
	comp=N,30nm,22.0s,baz=152,slow=36						
KURBB	**Kurchatov Arra**	**20.22**	**11**	P	P	06 51 59.5	-11
	comp=N,0.4nm,0.2s,baz=205,slow=9.4,SNR=4.6						
BVAR	**Borovoye Array**	**22.13**	**357**	P	P	06 52 19.1	-12
	comp=N,0.9nm,0.4s,baz=158,slow=15,SNR=4.1						
	comp=N,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**24.71**	**18**	P	P	06 52 43.9	-12
	comp=N,4.2nm,0.3s,baz=198,slow=9.3,SNR=12						
	comp=N,4.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**66.85**	**272**	P	**P**	**06 58 27.5**	**-0.2**
	comp=N,0.4nm,0.8s,baz=44,slow=6.0,SNR=2.1						
	comp=N,0.4nm,0.8s						
WRA	**Warramunga Arr**	**78.10**	**122**	P	P	06 59 29.5	-5.1
	comp=N,0.3nm,0.4s,baz=319,slow=5.3,SNR=5.5						
	comp=N,0.3nm,0.4s						
ASAR	**Alice Springs**	**80.15**	**125**	P	P	06 59 40.8	-5.1
	comp=N,0.3nm,0.5s,baz=308,slow=5.9,SNR=4.8						
	comp=N,0.3nm,0.5s						

*MOS **23** 06:48:39.9±1.0,33.06N×86.76E, h10km, mb4.5/15, Error ellipse: s-maj=10.6km s-min=4.9km az=116.2*

*IDC **23** 06:48:40.2±0.8,32.94N×86.69E, h0km, mb4.0/16, mbtmp4.0/19, ML3.9/3, MS3.4/15, Error ellipse: s-maj=24.4km s-min=14.5km az=43.0*

*NEIC **23** 06:48:41.8±0.6,33.21N±0.08×87.05E±0.03, h10km±1km, mb4.2/16, Error ellipse: s-maj=12.9km s-min=5.3km az=3.0*

ISC 23 06:48:42.0±0.4, 33.16N±0.06×86.91E±0.06, h10km, n129, σ1§02/120, mb4.3/39, MS3.4/14, 11C-6D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.01**	**132**	P	**Pn**	**06 49 56.0**	**-1.6**
LSA	**Lhasa**	**5.01**	**132**	Pn	**Pn**	**06 49 56.0**	**-1.6**
EVN	**Everest**	**5.19**	**181**		**Pn**	**06 50 00.9**	**+0.6**
SHL	**Shillong**	**8.72**	**149**	P	**Pn**	**06 50 47.3**	**-1.1**
SHL	**Shillong**	**8.72**	**149**	Pn	**Pn**	**06 50 47.3**	**-1.1**
WUS	**Wushi**	**10.09**	**325**	Pn	**Pn**	**06 51 06.9**	**-0.2**
WMQ	**Urumqi**	**10.66**	**3**	*e*P	**Pn**	**06 51 14.0**	**-0.8**
WMQ				S	**Sn**	**06 53 09.4**	**-4.8**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,75nm,17.3s						
TARG	**Taragay, Kyrgy**	**11.19**	**322**	P	**Pn**	**06 51 22.1**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.19**	**322**		**Pn**	**06 51 22.1**	**-0.3**
NIL	**Nilore**	**11.43**	**276**	P	**Pn**	**06 51 26.0**	**+0.7**
NIL	**Nilore**	**11.43**	**276**	Pn	**Pn**	**06 51 26.0**	**+0.7**
PRZ	**Przheval'sk**	**11.47**	**327**	P	**Pn**	**06 51 25.6**	**-0.4**
PRZ	**Przheval'sk**	**11.47**	**327**	Pn	**Pn**	**06 51 25.6**	**-0.4**
PDGK	**Podgornoye**	**11.70**	**332**	P	**Pn**	**06 51 28.4**	**-0.7**
PDGK	**Podgornoye**	**11.70**	**332**		**Pn**	**06 51 28.4**	**-0.7**
KDJ	**Kajisay**	**11.80**	**322**	P	**Pn**	**06 51 30.3**	**-0.3**
KDJ	**Kajisay**	**11.80**	**322**	Pn	**Pn**	**06 51 30.3**	**-0.3**
BOOM	**Boomskoye usch**	**12.71**	**320**	P	**Pn**	**06 51 43.1**	**+0.1**
BOOM	**Boomskoye usch**	**12.71**	**320**	Pn	**Pn**	**06 51 43.0**	**+0.1**
AAK	**Ala-Archa**	**13.61**	**318**	LR	LR	06 58 24.1	
	comp=Z,67nm,20.7s,baz=140,slow=43						
ARSB	**Arslanbob**	**13.75**	**310**	P	**Pn**	**06 51 55.4**	**-1.7**
ARSB	**Arslanbob**	**13.75**	**310**	Pn	**Pn**	**06 51 55.4**	**-1.7**
MK31	**Makanchi Array**	**14.06**	**347**	*c* iP	**Pn**	**06 52 02.5**	**+1.3**
MKAR	**Makanchi Array**	**14.06**	**347**	Pn	**Pn**	**06 52 02.5**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=157,slow=15,SNR=13						
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**14.06**	**347**	Pn	**Pn**	**06 52 00.4**	**-0.9**
LZDM	**Lanzhou Array**	**14.11**	**74**	LR	LR	06 58 19.0	
	comp=Z,57nm,20.9s,baz=150,slow=40						
MAKZ	**Makanchi**	**14.14**	**346**	P	**Pn**	**06 52 01.8**	**-0.5**
MAKZ	**Makanchi**	**14.14**

comp=Z,1.0nm,0.5s,baz=141,slow=9.6,SNR=4.8
comp=Z,1.0nm,0.5s
BORK Borovoye 23.17 334 eP P 06 53 49.8 +1.3
BORK pmax pmax
comp=Z,10.0nm,1.5s
BORK Borovoye 23.17 334 P P 06 53 46.3 -2.2
BORK lAmb lAmb 06 54 00.1
comp=Z,5.1nm,1.1s
QIZ Qiongzhong 24.87 119 P P 06 54 04.5 -0.4
QIZ S S 06 58 30.3 +2.2
QIZ LR LR
comp=Z,170nm,13.5s
AB31 Akbulak array 25.69 317 P 06 54 11.9 -0.2
AB31 lAmb lAmb 06 54 15.8
comp=Z,3.5nm,0.9s
ABKAR Akbulak array 25.69 317 P 06 54 12.2 +0.1
PALK Pallekele 26.40 194 P P 06 54 18.6 -0.2
PALK pmax pmax
comp=Z,20nm,1.2s
PALK Pallekele 26.40 194 P P 06 54 18.6 -0.2
AKTO Aktyubinsk 27.35 318 LR LR 07 05 54.8
comp=Z,59nm,18.2s,baz=78,slow=38
ARTI Arti 30.42 328 eP P 06 54 53.8 -0.5
ARTI pmax pmax
comp=Z,7.0nm,1.4s
PSI Prapat 32.23 157 P P 06 55 10.6 -0.2
PSI pmax pmax
comp=Z,6.0nm,1.0s
RPSI Rantau Prapat 32.33 157 P P 06 55 10.6 -0.9
RPSI lAmb lAmb 06 55 17.7
comp=Z,6.0nm,1.0s
KSRS Korea Array 33.55 71 P P 06 55 24.1 +2.0
comp=Z,2.6nm,0.7s,baz=278,slow=8.1,SNR=8.5
comp=Z,2.6nm,0.7s
BELG Belogornoye 34.09 316 eP P 06 55 27.1 +0.6
BELG pmax pmax
comp=Z,2.0nm,0.6s
GNI Garni 34.29 294 eP P 06 55 29.4 +0.8
GNI pmax pmax
comp=Z,6.0nm,0.6s
GNI Garni 34.29 294 P P 06 55 28.9 +0.3
comp=Z,9.1nm,0.5s
KIRV Kirov 35.67 327 eP P 06 55 40.4 +0.4
KIV Kislovodsk 35.83 301 eP P 06 55 41.8 0.0
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,24nm,16.0s
VLA Vladivostok 36.36 61 eP P 06 55 48.6 +2.4
VLA pmax pmax
comp=Z,14nm,0.6s
OBN Obninsk 41.13 318 eP P 06 56 26.9 +0.9
OBN e 06 58 03.7
OBN e 06 58 24.9
OBN ePPP PPP 06 58 30.5
OBN pmax pmax
comp=Z,8.0nm,0.9s
ASF Jabal al Asfar 41.78 283 LR LR 07 15 52.5
comp=Z,52nm,18.8s,baz=27,slow=39
MAJO Matsushiro 41.83 70 eP P 06 56 29.8 -2.3
MAJO pmax pmax
comp=Z,8.0nm,1.6s
MJAR Matsushiro Arr 41.83 70 P P 06 56 33.3 +1.2
comp=Z,1.3nm,0.8s,baz=280,slow=9.9,SNR=4.3
comp=Z,1.3nm,0.8s
MMAI Mount Meron Ar 42.78 285 LR LR 07 17 27.3
comp=Z,61nm,18.0s,baz=83,slow=40
NE56 Odesa 44.13 305 P P 06 56 50.4 -0.1
AK09 Malin Array Si 45.10 311 P P 06 56 58.1 -0.1
AK08 Malin Array Si 45.12 311 P P 06 56 58.3 -0.1
AK08 pP **pP 06 57 01.5 -1.6**
AK10 Malin Array Si 45.12 311 P P 06 56 58.4 0.0
AKASG Malin Array Be 45.14 311 P P 06 56 59.0 +0.4
comp=Z,2.9nm,0.8s,baz=85,slow=7.0,SNR=9.4
comp=Z,2.9nm,0.8s
AKASG Malin Array Be 45.14 311 P P 06 56 59.0 +0.4
AKBB Malin Array Si 45.14 311 eP P 06 56 58.5 0.0
AKBB pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 45.14 311 P 06 56 58.4 -0.2
AK01 Malin Array Si 45.15 311 P P 06 56 58.6 0.0
KIEV Kiev 45.15 311 P P 06 56 58.6 0.0
KIEV pmax pmax
comp=Z,4.0nm,0.8s
KIEV Kiev 45.15 311 P P 06 56 58.6 0.0
KIEV lAmb lAmb 06 57 00.6
comp=Z,4.3nm,0.8s
KIEV Kiev 45.15 311 P P 06 56 58.6 0.0
comp=Z,25nm,0.9s
AK07 Malin Array Si 45.16 310 P P 06 56 58.6 0.0
AK05 Malin Array Si 45.16 311 P P 06 56 58.6 0.0
AK06 Malin Array Si 45.16 311 P P 06 56 58.8 +0.1
AK14 Malin Array Si 45.22 311 P P 06 56 59.1 0.0
LUBAR Lubar, Ukraine 46.10 310 P P 06 57 06.1 0.0
MI28 Mi28,Pidlybu 46.13 311 P P 06 57 05.4 -0.9
KMPD K-Podol'skiy 47.02 308 P P 06 57 13.3 0.0
VRI Vrincioaia 47.08 304 P P 06 57 13.7 -0.2
comp=Z,1umcomp=Z,5.7nm,2.3s
RNPP9 Sopachiv 47.23 312 P P 06 57 15.1 +0.1
RNPP5 Staryi Chortor 47.24 311 P P 06 57 15.0 -0.1
RNPP8 Varash 47.26 312 P P 06 57 15.0 -0.2
FINES FINESS Array B 47.63 325 P P 06 57 18.6 +0.7
comp=Z,1.5nm,0.7s,baz=98,slow=18,SNR=1.2
comp=Z,1.5nm,0.7s
FINES FINESS Array B 47.63 325 P P 06 57 17.8 -0.1
MLR Muntele Rosu 47.67 304 LR LR 07 21 40.0
comp=Z,72nm,18.1s,baz=114,slow=42
MLR Muntele Rosu 47.67 304 P P 06 57 18.5 -0.2
MLR pmax pmax
comp=Z,11nm,0.8s
MLR Muntele Rosu 47.67 304 P P 06 57 18.5 -0.2
MLR Muntele Rosu 47.67 304 P P 06 57 19.1 +0.4
comp=Z,15nm,0.9s
BURAR Bucovina Array 47.93 307 P P 06 57 20.7 +0.1
BURAR pmax pmax
comp=Z,2.0nm,1.0s
BURAR Bucovina Array 47.93 307 P 06 57 20.7 +0.1
BURAR lAmb lAmb 06 57 22.4
comp=Z,1.8nm,1.0s
BUR08 Bucovina Ar. S 47.94 307 P P 06 57 21.0 +0.3
BUR08 lAmb lAmb 06 57 21.8
comp=Z,2.2nm,1.0s
VOIR 48.30 304 P P 06 57 23.4 -0.1
comp=Z,2.2nm,0.8s
MA2 Magadan 48.95 37 LR LR 07 21 01.8
comp=Z,27nm,20.2s,baz=204,slow=39
SEY Seymchan 49.95 33 eP P 06 57 37.5 +1.8
SEY pmax pmax
comp=Z,6.0nm,1.5s
VRAC Vranov 53.38 310 LR LR 07 24 39.5
comp=Z,49nm,20.8s,baz=82,slow=40
HFS Hagfors 53.66 323 P P 06 58 03.3 -0.2
comp=Z,2.6nm,0.7s,baz=94,slow=7.4,SNR=3.5
comp=Z,2.6nm,0.7s
SPITS Spitsbergen Ar 53.82 346 P P 06 58 05.4 +1.0
comp=Z,3.1nm,0.8s,baz=32,slow=8.5,SNR=2.3
comp=Z,3.1nm,0.8s
RONA Rosalia, Austr 53.87 308 iP P 06 58 05.1 -0.2
comp=Z,4.5nm,1.2s
CONA Conrad Observa 54.12 308 iP P 06 58 07.2 +0.1
comp=Z,6.6nm,1.2s
NC405 NORSAR Array S 54.55 325 P P 06 58 10.2 +0.3
NOA NORSAR Array B 54.80 325 P P 06 58 12.0 +0.2
comp=Z,1.7nm,0.9s,baz=83,slow=8.2,SNR=5.6
NOA LR LR 07 22 38.8
comp=Z,24nm,18.8s,baz=235,slow=37
comp=Z,1.7nm,0.9s
NOA NORSAR Array B 54.80 325 P P 06 58 12.0 +0.2
SOKA Soboth 54.94 307 eP P 06 58 13.1 0.0
comp=Z,4.0nm,0.9s
MOA Molln 55.18 308 eP P 06 58 15.4 +0.6
comp=Z,3.1nm,1.5s
GERES GERESS Array B 55.33 310 P P 06 58 15.6 -0.3
comp=Z,1.3nm,0.8s,baz=95,slow=3.2,SNR=8.8
comp=Z,1.3nm,0.8s
BATI Baumata 55.55 134 LR LR 07 26 28.6
comp=Z,219nm,18.4s,baz=168,slow=41
BILL Bilibino 55.76 27 eP P 06 58 19.6 +1.0
WRA Warramunga Arr 69.56 132 P P 06 59 51.7 +0.4
comp=Z,1.5nm,0.9s,baz=326,slow=6.6,SNR=7.8
comp=Z,1.5nm,0.9s
ASAR Alice Springs 72.11 135 P P 07 00 06.7 -0.1
comp=Z,1.1nm,0.8s,baz=320,slow=5.6,SNR=8.4
comp=Z,1.1nm,0.8s
ASAR Alice Springs 72.11 135 P P 07 00 06.0 -0.8
COLA College 73.40 21 deP P 07 00 15.5 +1.7
ILAR Eielson Array 73.77 21 P P 07 00 17.1 +1.1
comp=Z,0.8nm,0.9s,baz=308,slow=5.5,SNR=7.9
comp=Z,0.8nm,0.9s
ILAR Eielson Array 73.77 21 P P 07 00 15.8 -0.3
TORD Torodi Ar. Bea 78.97 279 P P 07 00 44.6 -1.8
comp=Z,0.6nm,0.9s,baz=10,slow=3.2,SNR=2.8
comp=Z,0.6nm,0.9s
YKA Yellowknife Ar 83.11 10 P P 07 01 08.3 +0.6
comp=Z,1.0nm,0.8s,baz=338,slow=5.9,SNR=5.5
comp=Z,1.0nm,0.8s

IDC 23 06:56:46.1±1.7, 0°24N×118°98E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=284.5km s-min=28.7km az=58.0, Borneo

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.07**	**144**	P	P	07 02 12.2	-0.4
	0.4nm,0.8s,baz=324,slow=9.1,SNR=4.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**27.83**	**150**	P	P	07 02 38.1	+0.6
	0.2nm,0.5s,baz=328,slow=8.8,SNR=1.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**56.36**	**330**	P	P	07 06 29.0	-0.2
	0.3nm,0.5s,baz=132,slow=6.9,SNR=3.8						
	0.3nm,0.5s						

IDC 23 06:58:24.1±1.2,2.°57S×139.°29E, h0km, mb3.3/4, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=20.4km s-min=13.3km az=148.0
DJA 23 06:58:24.1±0.6,2.°5S×13.°9E, h10km, M4.0/6, MLv4.0/6
ISC 23 06:58:28.6±0.9, 2°37S±0.°08×139°24E±0.°05, h37km, n11, σ1=66/13, mb3.5/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.65**	**306**	P	Pn	06 58 41.1	-0.4
GENI	**Genyem**	**0.95**	**103**	P	Pn	06 58 44.2	-1.2
GENI				S	Sn	06 58 57.8	0.0
JAY	**Jayapura**	**1.47**	**96**	Pg	Pn	06 58 50.6	-2.0
	13nm,0.3s,baz=270,slow=10,SNR=30						
JAY				Lg	Lg	06 59 09.1	
	22nm,0.3s,baz=117,slow=16,SNR=7.8						
JAY	**Jayapura**	**1.47**	**96**	P	Pn	06 58 52.2	-0.4
WAMI	**Wamena**	**1.59**	**199**	P	Pn	06 58 55.1	+0.9
SRPI	**Serui, Papua**	**3.04**	**279**	P	Pn	06 59 11.3	-2.9
WRA	**Warramunga Arr**	**18.11**	**195**	P	Pn	07 02 35.8	-1.6
	0.3nm,0.3s,baz=17,slow=13,SNR=9.1						
WRA				S	Sn	07 05 44.4	-14
	0.6nm,1.0s,baz=4.9,slow=24,SNR=1.7						
	1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.55**	**220**	P	P	07 03 04.0	-0.1
	1.3nm,0.6s,baz=37,slow=20,SNR=1.2						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**21.79**	**193**	P	P	07 03 15.9	-1.6
	0.3nm,0.4s,baz=24,slow=8.9,SNR=8.8						
ASAR				S	S	07 07 16.9	+0.3
	0.4nm,0.8s,baz=18,slow=24,SNR=1.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**69.85**	**322**	P	P	07 09 37.7	+2.1
	0.3nm,0.6s,baz=122,slow=6.4,SNR=3.9						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.31**	**24**	P	P	07 11 03.3	+1.8
	0.3nm,0.9s,baz=256,slow=5.7,SNR=2.9						
	0.3nm,0.9s						

IDC 23 07:02:19.8±12.0, 45.°91N×149.°03E, h117km±114km, mb3.4/15, mbtmp3.7/15, Error ellipse: s-maj=22.3km s-min=20.6km az=128.0
SKHL 23 07:02:20.0±0.6, 44.°70N×150.°50E, h41km±4km, mb4.6/4
JMA 23 07:02:25.0±0.5, 45°N±3°×15°0E±°, h148km, MV3.5/10, SE OFF ETOROFU
ISC 23 07:02:18.7±0.9, 44°85N±0.°10×150°45E±0.°08, h100km, n40, σ2=50/29, mb3.6/15, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**1.77**	**284**	eP	Pn	07 02 49.8	+1.5
REI				AMB	AMB	07 02 50.7	
	80nm,0.2s						
REI				eS	Sn	07 03 11.7	+0.9
REI				A	A	07 03 13.8	
	130nm,0.2s						
REI				A	A	07 03 13.8	
	80nm,0.2s						
KUR	**Kuril'sk**	**1.87**	**283**	eP	Pn	07 02 50.2	+0.7
KUR				AMB	AMB	07 02 53.1	
	110nm,0.2s						
KUR				*i* S	Sn	07 03 13.3	+0.3
KUR				A	A	07 03 15.7	
	600nm,0.3s						
KUR				A	A	07 03 15.7	
	260nm,0.3s						
SHO	**Shikotan**	**2.77**	**251**	eP	Pn	07 03 17.6	+16
SHO				AMB	AMB	07 03 19.5	
	30nm,0.2s						
SHO				eS	Sn	07 03 47.8	+14
SHO				A	A	07 03 48.8	
	210nm,0.4s						
SHO				A	A	07 03 48.8	
	130nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.38**	**258**	eP	Pn	07 03 12.2	+2.7
YUK				AMB	AMB	07 03 13.7	
	120nm,0.3s						
YUK				eS	Sn	07 03 49.3	+0.5
YUK				A	A	07 03 52.4	
	280nm,0.5s						
YUK				A	A	07 03 52.4	
	270nm,0.5s						
NEM2	**Nemuro 2**	**3.70**	**248**	P	Pn	07 03 16.4	+2.6
NEM2				S	Sn	07 03 55.4	-0.9
NMR	**Nemuro--Hokkai**	**3.71**	**248**	*i* P	Pn	07 03 16.2	+2.4
NMR				*i* S	Sn	07 03 55.3	-1.2
JNK	**Nakash**	**4.31**	**255**	P	Pn	07 03 23.8	+1.8
AKK	**Akkeshi**	**4.44**	**248**	eP	Pn	07 03 25.5	+1.7
JAK	**Akkeshi**	**4.55**	**248**	P	Pn	07 03 27.2	+2.0
JAK				S	Sn	07 04 14.7	-2.2
JAR	**Ashorobuto**	**5.05**	**254**	P	Pn	07 03 33.6	+1.6
JAR				eS	Sn	07 04 27.2	-2.1
JOB	**Onbets**	**5.16**	**250**	eP	Pn	07 03 35.2	+1.7
JOB				S	Sn	07 04 29.9	-1.9
JCH	**Churui**	**5.60**	**249**	P	Pn	07 03 40.8	+1.3
JCH				eS	Sn	07 04 37.7	-4.7
JKK2	**Kamakawa 2**	**5.61**	**263**	eP	Pn	07 03 39.6	+0.1
JNBK	**Urakawa-nobuka**	**6.15**	**248**	eP	Pn	07 03 46.7	-0.2
JANG	**Nango**	**7.96**	**239**	P	Pn	07 04 11.8	+0.2
JANG				S	Sn	07 05 33.5	-6.4
H11N2	**WAKE ISLAND Hy**	**28.54**	**146**	T	T	07 39 30.8	
	baz=335,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.55**	**146**	T	T	07 39 39.6	
	baz=335,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy**	**28.55**	**146**	T	T	07 39 34.6	
	baz=335,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**29.57**	**147**	T	T	07 40 48.1	
	baz=336,slow=76,SNR=48						
H11S3	**WAKE ISLAND Hy**	**29.57**	**147**	T	T	07 40 46.4	
	baz=336,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	**29.58**	**147**	T	T	07 40 48.2	
	baz=336,slow=76,SNR=40						
ILAR	**Eielson Array**	**39.19**	**37**	P	P	07 09 33.9	-2.7
	0.4nm,0.8s,baz=277,slow=8.5,SNR=5.5						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**42.23**	**307**	P	P	07 09 49.0	-13
	0.4nm,0.3s,baz=49,slow=6.5,SNR=1.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**46.17**	**298**	P	P	07 10 21.8	-11
	0.3nm,0.6s,baz=73,slow=8.6,SNR=4.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**46.96**	**304**	P	P	07 10 27.8	-11
	1.2nm,0.6s,baz=72,slow=8.8,SNR=8.6						
	1.2nm,0.6s						
BVAR	**Borovoye Array**	**50.63**	**310**	P	P	07 10 55.3	-12
	0.5nm,0.6s,baz=81,slow=12,SNR=1.5						
	0.5nm,0.6s						
YKA	**Yellowknife Ar**	**53.56**	**35**	P	P	07 11 26.1	-2.6
	0.2nm,0.4s,baz=303,slow=6.8,SNR=4.4						
	0.2nm,0.4s						
ARCES	**ARCESS Array B**	**59.02**	**340**	P	P	07 11 56.3	-11
	2.0nm,0.8s,baz=60,slow=6.5,SNR=1.7						
	2.0nm,0.8s						
FINES	**FINESS Array B**	**64.95**	**334**	P	P	07 12 37.4	-10
	2.2nm,0.6s,baz=53,slow=5.8,SNR=2.8						
	2.2nm,0.6s						
WRA	**Warramunga Arr**	**66.13**	**197**	P	P	07 12 58.9	+3.6
	0.4nm,0.5s,baz=13,slow=6.4,SNR=1.9						
	0.4nm,0.5s						
NB2	**NORSAR Subarra**	**69.40**	**340**	P	P	07 13 06.1	-9.3
	comp=Z,0.6nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.40**	**340**	P	P	07 13 06.4	-9.0
	comp=Z,0.5nm,0.5s,baz=28,slow=6.6,SNR=7.3						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**69.56**	**339**	P	P	07 13 06.8	-10
	comp=Z,1.1nm,0.5s,baz=42,slow=4.8,SNR=8.4						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**69.84**	**196**	P	P	07 13 22.4	+3.9
	comp=Z,0.3nm,0.5s,baz=10,slow=6.2,SNR=4.4						
	comp=Z,0.3nm,0.5s						
AKASG	**Malin Array Be**	**72.06**	**325**	P	P	07 13 22.3	-9.3
	comp=Z,0.9nm,0.5s,baz=38,slow=6.3,SNR=4.8						
	comp=Z,0.9nm,0.5s						
GERES	**GERESS Array B**	**79.31**	**333**	P	P	07 14 04.8	-8.3
	comp=Z,0.6nm,0.6s,baz=42,slow=6.2,SNR=5.0						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**80.06**	**58**	P	P	07 14 18.3	+0.8
	comp=Z,0.2nm,0.7s,baz=24,slow=3.3,SNR=2.1						
	comp=Z,0.2nm,0.7s						
H03N2	**Juan Fernandez**	**140.60**	**91**	T	T	09 59 21.2	
	baz=306						
H03N3	**Juan Fernandez**	**140.62**	**91**	T	T	09 59 23.3	
	baz=306						
H03N1	**Juan Fernandez**	**140.62**	**91**	T	T	09 59 33.0	
	baz=306						

IDC 23 07:09:05.1±0.8,2.°94S×126.°34E, h0km, mb4.0/6, mbtmp4.1/10, ML4.3/4, MS2.8/1, Error ellipse: s-maj=24.2km s-min=16.8km az=57.0
NEIC 23 07:09:07.4±1.9,2.°96S±0.°06×126.°29E±0.°07, h10km±1km, mb4.3/10, Error ellipse: s-maj=11.8km s-min=9.7km az=266.0
ISC 23 07:09:10.0±0.6,2.°97S±0.°07×126°32E±0.°06, h32km, n30, σ0=79/34, mb4.1/9, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**3.86**	**16**	Pn	Pn	07 10 07.5	+0.3
LUWI	**Luwuk**	**4.03**	**298**	Pn	Pn	07 10 07.2	-2.4
SIJI	**Sorong**	**5.37**	**67**	Pn	Pn	07 10 27.9	0.0
	12nm,0.3s,baz=245,slow=17,SNR=15						
SIJI				Sn	Sn	07 11 29.1	+0.4
	5.8nm,0.3s,baz=233,slow=20,SNR=5.5						
	27nm,0.3s						
FAKI	**Fak Fak**	**5.92**	**90**	Pn	Pn	07 10 34.8	-0.7
KAPI	**Kappang**	**6.86**	**253**	Pn	Pn	07 10 49.1	+0.7
	1.3nm,0.3s,baz=106,slow=5.9,SNR=4.0						
KAPI				Sn	Sn	07 12 06.1	+0.6
	0.9nm,0.3s,baz=72,slow=20,SNR=1.5						
KAPI				LR	LR	07 13 36.3	
	comp=Z,67nm,19.7s,baz=92,slow=39						
	7.9nm,0.6s						
KAPI	**Kappang**	**6.86**	**253**		Pn	07 10 48.2	-0.2
TOLI2	**Tolitoli**	**6.87**	**306**	Pn	Pn	07 10 48.1	-0.4
FITZ	**Fitzroy Crossi**	**15.05**	**182**	Pn	Pn	07 12 41.2	+0.8
	1.8nm,0.3s,baz=16,slow=7.8,SNR=32						
	3.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**15.05**	**182**	P	P	07 12 45.6	+0.2
FITZ				lAmb	lAmb	07 12 47.2	
	comp=Z,2.1nm,0.6s						
WB0	**Warramunga Arr**	**18.46**	**155**	P	P	07 13 23.1	-0.1
WB0				lAmb	lAmb	07 13 25.7	
	comp=Z,24nm,1.4s						
WRA	**Warramunga Arr**	**18.59**	**156**	P	P	07 13 24.5	-0.2
	comp=Z,1.0nm,0.3s,baz=333,slow=13,SNR=43						
	comp=Z,3.9nm,0.5s						
WRA	**Warramunga Arr**	**18.59**	**156**	P	P	07 13 22.4	-2.3
COEN	**Coen**	**19.90**	**124**	P	P	07 13 39.5	+0.4
COEN				lAmb	lAmb	07 13 39.6	
	comp=Z,28nm,1.5s						
AS31	**Alice Springs**	**21.84**	**161**	P	P	07 13 60.0	0.0
ASAR	**Alice Springs**	**21.84**	**161**	P	P	07 13 59.9	-0.1
	comp=Z,7.3nm,0.5s,baz=343,slow=12,SNR=141						
	comp=Z,7.3nm,0.5s						
ASAR	**Alice Springs**	**21.84**	**161**	P	P	07 13 59.7	-0.3
FORT	**Forrest**	**27.71**	**177**	P	P	07 14 54.7	-0.8
FORT				lAmb	lAmb	07 15 17.7	
	comp=Z,12nm,1.0s						
BBOO	**Buckleboo**	**31.05**	**164**	P	P	07 15 24.7	-0.5
STKA	**Stephens Creek**	**32.15**	**155**	P	P	07 15 33.8	-1.0
	comp=Z,1.8nm,0.7s,baz=341,slow=13,SNR=3.5						
	comp=Z,1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**34.36**	**309**	P	P	07 15 54.4	+0.2
	comp=Z,0.7nm,0.3s,baz=89,slow=8.1,SNR=1.4						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**34.36**	**309**	P	P	07 15 54.3	+0.1
ARMA	**Armidale**	**36.31**	**141**	P	P	07 16 11.4	+0.4
JGF	**Kuroka**	**39.74**	**14**	P	P	07 16 40.6	+0.9
JGF				lAmb	lAmb	07 16 54.5	
	comp=Z,14nm,1.5s						
MKAR	**Makanchi Array**	**62.88**	**328**	P	P	07 19 33.7	+0.7
	comp=Z,0.6nm,0.5s,baz=120,slow=8.2,SNR=6.5						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**62.88**	**328**	P	P	07 19 33.8	+0.8
KURBB	**Kurchatov Arra**	**67.19**	**329**	P	P	07 20 00.7	-0.2
	comp=Z,0.6nm,0.7s,baz=125,slow=5.6,SNR=5.7						
KURBB				PcP	PcP	07 20 28.4	-0.3
	comp=Z,0.1nm,0.3s,baz=128,slow=5.4,SNR=1.1						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**67.20**	**329**	P	P	07 20 00.8	-0.1
KURK				lAmb	lAmb	07 20 01.9	
	comp=Z,1.5nm,0.6s						
KURK					PcP	07 20 28.9	+0.1
BVAR	**Borovoye Array**	**72.73**	**328**	P	P	07 20 33.9	-1.1
	comp=Z,1.0nm,0.5s,baz=147,slow=8.1,SNR=4.7						
	comp=Z,1.0nm,0.5s						
CPUP	**Villa Florida**	**150.66**	**173**	PKPbc	**PKiKP**	07 29 00.2	-0.2
	comp=Z,0.7nm,0.6s,baz=187,slow=1.7,SNR=3.1						
LPAZ	**La Paz**	**156.12**	**144**	PKPab	**PKPab**	07 29 30.1	-0.3
	comp=Z,0.5nm,0.6s,baz=225,slow=5.7,SNR=2.0						

IDC 23 07:32:59.6±1.4,8.°68S×124.°26E, h0km, mb3.7/2, mbtmp3.7/5, ML3.8/3, MS3.1/2, Error ellipse: s-maj=46.5km s-min=19.3km az=86.0
NEIC 23 07:33:07.1±1.1,8.°9S±0.°1×123.°9E±0.°1, h73km±15km, mb4.3/8, Error ellipse: s-maj=27.7km s-min=5.1km az=220.0
ISC 23 07:33:06.5±0.6,8.°91S±0.°06×124°07E±0.°08, h74km, n27, σ2=34/30, mb4.2/5, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.86**	**167**		Pn	07 33 25.2	+1.5
SOEI				Sn	Sn	07 33 38.0	+1.5
BATI	**Baumata**	**1.35**	**197**	Pn	Pn	07 33 29.8	0.0
	27nm,0.3s,baz=83,slow=2.8,SNR=5.9						
BATI				Sn	Sn	07 33 52.3	+5.2
	17nm,0.3s,baz=287,slow=19,SNR=6.2						
MMRI	**Maumere**	**1.83**	**278**	Pn	Pn	07 33 33.9	-2.1
KAPI	**Kappang**	**5.77**	**312**	Pn	Pn	07 34 27.4	-2.3
MTN	**Manton Dam**	**7.96**	**120**	Pn	Pn	07 35 02.3	+2.7
KNRA	**Kununurra**	**8.14**	**146**	Pn	Pn	07 35 04.0	+2.0
FITZ	**Fitzroy Crossi**	**9.26**	**171**	Pn	Pn	07 35 17.0	-0.3
	0.6nm,0.3s,baz=353,slow=8.1,SNR=12						
FITZ				Sn	Sn	07 37 00.6	+0.6
	0.8nm,0.3s,baz=288,slow=20,SNR=8.4						
	2.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**9.26**	**171**		Pn	07 35 18.0	+0.7
WB0	**Warramunga Arr**	**14.71**	**138**	Pn	Pn	07 36 30.6	-0.1
WRA	**Warramunga Arr**	**14.80**	**139**	Pn	Pn	07 36 30.9	-0.9
	0.6nm,0.3s,baz=314,slow=15,SNR=12						
WRA				Sn	Sn	07 39 09.0	-5.9
	0.2nm,0.3s,baz=303,slow=22,SNR=1.5						
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**14.80**	**139**	Pn	Pn	07 36 32.3	+0.4
BBJI	**Bungbulang**	**16.32**	**274**		Pn	07 36 51.3	0.0
BBJI				lAmb	lAmb	07 37 18.6	
	comp=Z,20nm,1.2s						
AS31	**Alice Springs**	**17.43**	**148**		P	07 37 05.7	+0.5
ASAR	**Alice Springs**	**17.43**	**148**	P	P	07 37 05.8	+0.6
	comp=Z,0.2nm,0.3s,baz=320,slow=12,SNR=29						
ASAR				S	Sn	07 40 12.0	-6.7
	comp=Z,0.3nm,0.8s,baz=323,slow=18,SNR=1.8						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**17.43**	**148**		P	07 37 07.1	+1.9
JCJ	**Chichijima**	**39.

MAJO				IAmb	IAmb	07 41 44.7	
	comp=Z,2.7nm,0.8s						
MJB9	**Matsu-Tunnel**	**47.13**	**16**	P	**P**	**07 41 32.0**	**+0.6**
MJB9				IAmb	IAmb	07 41 45.6	
	comp=Z,2.6nm,0.8s						
JYT	**Yasato**	**47.39**	**18**	P	**P**	**07 41 33.1**	**-0.3**
BJT	**Baijiatuan**	**49.23**	**352**	P	**P**	**07 41 47.4**	**0.0**
BJT				IAmb	IAmb	07 41 58.3	
	comp=Z,5.2nm,0.6s						
SONM	**Songino Array**	**58.63**	**346**	P	**P**	**07 42 56.9**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=171,slow=10,SNR=2.2						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**07 43 52.4**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=121,slow=6.9,SNR=4.5						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**07 43 49.6**	**-0.5**
PEA0B	**Petropavlovsk-**	**68.08**	**21**	P	**P**	**07 43 59.7**	**+1.4**
KIRV	**Kirov**	**89.66**	**330**	LR	LR	08 28 41.1	
	comp=Z,22nm,18.6s,baz=125,slow=37						

SKO ***23*** *07:38:38.8,41.˚43N×19.˚49E,h0km,ML2.7*
RHSSO ***23*** *07:38:39.4±0.8,41.˚32N×19.˚59E,h5km±2km,ML3.0/5*
TIR ***23*** *07:38:40.1,41.˚40N×19.˚62E,h8km±2km,Ml2.9/7*
PDG ***23*** *07:38:40.5±0.3,41.˚43N×19.˚59E,h12km±1km,ML2.9/13, Error ellipse: s-maj=0.5km s-min=1.2km az=0.0*
BEO ***23*** *07:38:41.7±0.8,41.˚44N×19.˚78E,h8km±3km,ML2.7/6*

ISC 23 07:38:39.4±1.1,41.˚42N±0.˚02×19.˚55E±0.˚02,h5km±9km, n54,σ1°25/99,11C-2D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.25**	**107**	Pg	**Pg**	**07 38 44.3**	**0.0**
TIR				Sg	**Sg**	**07 38 46.9**	**-0.6**
TIR				AML	AML	07 38 47.5	
	13nm,0.2s						
TIR				AML	AML	07 38 47.6	
	21nm,0.3s						
ULC	**Ulcinj**	**0.59**	**337**	*e*Pg	**Pb**	**07 38 51.6**	**-0.6**
ULC				*i* Sg	**Sb**	**07 39 01.0**	**+0.1**
SDA	**Shkodra**	**0.63**	**356**	Pg	**Pb**	**07 38 53.0**	**0.0**
SDA				Sg	**Sb**	**07 39 02.8**	**+0.8**
SDA				AML	AML	07 39 08.5	
	0.7nm,0.2s						
PHP	**Peshkopia**	**0.72**	**68**	Pg	**Pg**	**07 38 51.8**	**-1.5**
PHP				Sg	**Sg**	**07 39 03.0**	**+0.5**
PHP				AML	AML	07 39 06.3	
	1.5nm,0.4s						
DRME	**Dracevica, Mon**	**0.81**	**340**	⇑*i*Pg	**Pb**	**07 38 55.7**	**-0.3**
DRME				*e*Sg	**Sn**	**07 39 09.1**	**-0.8**
DRME	**Dracevica, Mon**	**0.81**	**340**	*e*Pg	**Pb**	**07 38 55.6**	**-0.4**
DRME				*i* Sg	**Sn**	**07 39 08.6**	**-1.3**
VLO	**Vlora**	**0.95**	**183**	Pg	**Pg**	**07 38 58.1**	**+0.4**
VLO				AML	AML	07 39 24.1	
	3.5nm,0.5s						
OHR	**Ohrid**	**0.99**	**108**	*i* Pg	**Pg**	**07 38 57.3**	**-1.1**
OHR				*i* Sg	**Sg**	**07 39 12.1**	**+0.8**
OHR				*e*Lg	Lg	07 39 13.4	
	comp=N,161nm,0.6s						
OHR				*e*Lg	Lg	07 39 15.3	
	comp=E,125nm,0.5s						
BUM	**Brajici-Budva**	**1.01**	**331**	*e*Pg	**Pb**	**07 38 59.3**	**-0.1**
BUM				*i* Sg	**Sn**	**07 39 15.2**	**+0.4**
PDG	**Podgorica**	**1.03**	**348**	⇑P	**Pg**	**07 38 59.2**	**0.0**
PDG				⇑S	**Sn**	**07 39 16.4**	**+1.0**
PDG	**Podgorica**	**1.03**	**348**	Pg	**Pb**	**07 38 59.9**	**+0.1**
PDG				Sg	**Sn**	**07 39 16.1**	**+0.8**
PDG	**Podgorica**	**1.03**	**348**	*e*Pg	**Pb**	**07 38 59.8**	**+0.1**
PDG				*e*Sg	**Sn**	**07 39 16.6**	**+1.3**
PDG	**Podgorica**	**1.03**	**348**	⇑*i*Pg	**Pb**	**07 38 59.7**	**0.0**
PDG				*e*Sg	**Sn**	**07 39 15.8**	**+0.5**
PDG	**Podgorica**	**1.03**	**348**	*e*Pg	**Pb**	**07 38 59.5**	**-0.2**
PDG				*i* Sg	**Sn**	**07 39 15.9**	**+0.6**
PVY	**Plav**	**1.21**	**14**	⇑*i*Pg	**Pb**	**07 39 02.7**	**-0.2**
PVY				*i* Sg	**Sn**	**07 39 21.6**	**+1.7**
CEME	**Cevo**	**1.22**	**337**	⇓*i*Pg	**Pn**	**07 39 03.1**	**-0.1**
CEME				*i* Sg	**Sn**	**07 39 22.3**	**+2.2**
KBN	**Korca**	**1.23**	**130**	P	**Pg**	**07 39 03.1**	**+0.1**
KBN				S	**Sg**	**07 39 19.4**	**+0.4**
KBN				AML	AML	07 39 25.8	
	comp=E,0.7nm,0.5s						
HCY	**Herceg Novi**	**1.29**	**323**	*e*Pg	**Pn**	**07 39 04.2**	**+0.1**
HCY				*e*Sg	**Sn**	**07 39 23.5**	**+1.7**
HCY	**Herceg Novi**	**1.29**	**323**	*e*Pg	**Pn**	**07 39 04.6**	**+0.5**
HCY				*i* Sg	**Sn**	**07 39 24.6**	**+2.8**
NKME	**Niksic**	**1.42**	**342**	⇑*i*Pg	**Pb**	**07 39 06.7**	**+0.4**
NKME				*i* Sg	**Sn**	**07 39 28.3**	**+3.4**
KOME	**Kolasin**	**1.43**	**359**	*e*Pg	**Pb**	**07 39 06.8**	**+0.2**
KOME				*i* Sg	**Sn**	**07 39 28.5**	**+3.2**
IVA	**Berane**	**1.47**	**10**	*e*Pg	**Pn**	**07 39 07.1**	**+0.4**
IVA				*i* Sg	**Sn**	**07 39 29.3**	**+3.0**
SKO	**Skopje**	**1.52**	**68**	*i* Pn	**Pn**	**07 39 07.6**	**+0.4**
TREB	**Trebinje**	**1.57**	**326**	*e*Pn	**Pg**	**07 39 09.0**	**-0.6**
TREB				*e*Sn	**Sg**	**07 39 30.3**	**+0.3**
SRN	**Sarande**	**1.58**	**167**	Pn	**Pg**	**07 39 09.8**	**+0.1**
SRN				Sn	**Sg**	**07 39 31.8**	**+1.7**
SRN				AML	AML	07 39 37.7	
	comp=E,0.3nm,0.5s						
BRY	**Bratogost**	**1.66**	**333**	⇑*i*Pn	**Pg**	**07 39 10.7**	**-0.5**
BRY				*e*Sn	**Sg**	**07 39 33.7**	**+0.9**
BRY	**Bratogost**	**1.66**	**333**	*e*Pn	**Pb**	**07 39 10.5**	**0.0**
BRY				*i* Sn	**Sg**	**07 39 34.3**	**+1.5**
UPM	**Unac-Piva**	**1.84**	**345**	*e*Pn	**Pb**	**07 39 13.3**	**-0.4**
UPM				*e*Sn	**Sg**	**07 39 38.6**	**-0.1**
UPM	**Unac-Piva**	**1.84**	**345**	*e*Pn	**Pb**	**07 39 13.1**	**-0.6**
UPM				*i* Sn	**Sg**	**07 39 38.6**	**-0.1**
SJES	**Sjenica**	**1.86**	**10**	*e*Pg	**Pb**	**07 39 14.1**	**+0.1**
SJES				*e*Sg	**Sg**	**07 39 40.1**	**+0.7**
SJES	**Sjenica**	**1.86**	**10**	⇑*i*Pn	**Pb**	**07 39 13.3**	**-0.7**
SJES				*e*Sn	**Sb**	**07 39 37.9**	**+0.2**
KLINJ	**Klinje**	**1.89**	**338**	*e*Pn	**Pb**	**07 39 14.2**	**-0.2**
KLINJ				*e*Sn	**Sg**	**07 39 39.1**	**-1.0**
PLE	**Pljevlja**	**1.91**	**356**	*e*Pn	**Pb**	**07 39 13.9**	**-0.9**
PLE				*i* Sn	**Sg**	**07 39 40.2**	**-0.6**
NOCI	**Noci**	**1.98**	**252**	Pn	**Pn**	**07 39 14.7**	**+1.1**
NOCI				AML	AML	07 39 53.3	
	comp=E,0.6nm,0.4s						
STON	**Ston**	**2.00**	**317**	*e*Pn	**Pb**	**07 39 16.3**	**+0.1**
STON				*e*Sn	**Sg**	**07 39 44.4**	**+0.8**
SELS	**Selova**	**2.14**	**32**	*e*Pn	**Pn**	**07 39 16.6**	**+0.8**
SELS				*e*Sn	**Sn**	**07 39 41.5**	**-1.2**
BARS	**Barje**	**2.19**	**50**	*e*Pn	**Pn**	**07 39 17.3**	**+0.9**
IVAS	**Ivanjica**	**2.20**	**11**	*e*Pn	**Pn**	**07 39 16.7**	**+0.1**
IVAS				*e*Sn	**Sn**	**07 39 44.8**	**+0.6**
MATE	**Matera**	**2.29**	**251**	⇑P	**Pn**	**07 39 10.1**	**-7.6**
GOCS	**Kraljevo Serbi**	**2.35**	**24**	*e*Pn	**Pn**	**07 39 20.4**	**+1.6**
GOCS				*e*Sn	**Sn**	**07 39 46.2**	**-1.9**
LSTV	**Lastovo**	**2.39**	**305**	*e*Pn	**Pn**	**07 39 19.3**	**+0.1**
LSTV				Sn	**Sn**	**07 39 46.2**	**-2.7**
BOSS	**Bosilegrad**	**2.43**	**63**	*e*Pn	**Pn**	**07 39 19.6**	**-0.2**
BOSS				*e*Sn	**Sn**	**07 39 47.6**	**-2.4**
BBLS	**Lazi&#263i**	**2.44**	**358**	*e*Pn	**Pb**	**07 39 23.1**	**-0.8**
BBLS	**Lazi&#263i**	**2.44**	**358**	⇑*i*Pn	**Pn**	**07 39 21.4**	**+1.4**
BBLS				*e*Sn	**Sb**	**07 39 52.7**	**-1.6**
MAKA	**Makarska**	**2.65**	**316**	*e*Pn	**Pn**	**07 39 22.7**	**0.0**
MAKA				Sn	**Sn**	**07 39 52.6**	**-2.5**
ZAPS	**Zavoj**	**2.94**	**50**	*e*Pn	**Pn**	**07 39 28.1**	**+1.3**
ZAPS				*e*Sn	**Sn**	**07 40 00.8**	**-1.7**
TIP	**Timpagrande**	**3.10**	**225**	⇑P	**Pn**	**07 39 28.4**	**-0.5**
TEKS	**Tekeris**	**3.13**	**360**	*e*Pn	**Pn**	**07 39 30.3**	**+1.0**
TEKS				*e*Sn	**Sn**	**07 40 08.8**	**+1.8**
BLKB	**Belogradchik**	**3.19**	**45**	⇓S	**Sn**	**07 40 08.8**	**+0.2**
KIJV	**Kijevo**	**3.47**	**319**	*i* Pn	**Pn**	**07 39 34.8**	**+0.7**
KIJV				Sn	**Sn**	**07 40 12.8**	**-2.7**
MORI	**Morici**	**3.74**	**312**	*e*Pn	**Pn**	**07 39 37.8**	**+0.1**
MORI				Sn	**Sn**	**07 40 20.2**	**-2.0**
BLY	**Banja Luka**	**3.75**	**333**	*e*Pn	**Pn**	**07 39 38.8**	**+0.9**
BLY				*e*Sn	**Sn**	**07 40 24.4**	**+2.0**
DUGI	**Dugi Otok**	**4.19**	**309**	*e*Pn	**Pn**	**07 39 44.5**	**+0.6**
DUGI				Sn	**Sn**	**07 40 31.3**	**-2.0**
NVLJ	**Novalja**	**4.65**	**314**	*e*Pn	**Pn**	**07 39 50.3**	**0.0**
NVLJ				Sn	**Sn**	**07 40 41.7**	**-2.9**

IDC ***23*** *07:38:43.3±4.6,54.˚70N×160.˚05W,h53km±34km,mb3.6/9, mbtmp3.8/12,ML3.3/3,MS3.1/2,Error ellipse: s-maj=59.8km s-min=21.3km az=158.0*
NEIC ***23*** *07:38:44.2±1.9,54.˚85N±0.˚08×160.˚3W±0.˚1,h35km±4km, mb3.9/29,ML3.6/36,Error ellipse: s-maj=12.4km s-min=7.2km az=152.0*

ISC 23 07:38:43.8±0.6,54.˚84N±0.˚05×160.˚32W±0.˚04,h38km,n98, σ1°11/95,mb4.1/16,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.42**	**91**	P	**Pn**	**07 38 53.2**	**0.0**
CNBA	**Chernabura Isl**	**0.43**	**93**		**Pn**	**07 38 53.5**	**+0.3**
CNBA					**Sn**	**07 39 00.0**	**-0.1**
CNBA				IAML		07 39 04.2	
	comp=E,3μm,0.4s						
CNBA				IAML		07 39 04.4	
	comp=N,2μm,0.4s						
SDPT	**Sand Point**	**0.52**	**350**	P	**Pn**	**07 38 54.6**	**0.0**
SDPT	**Sand Point**	**0.52**	**350**		**Pn**	**07 38 54.8**	**+0.1**
SDPT					**Sn**	**07 39 02.4**	**+0.1**
SDPT				IAML		07 39 02.6	
	comp=E,5μm,0.7s						
VNFG	**Fog Glacier, M**	**1.51**	**17**		**Pn**	**07 39 09.9**	**+1.5**
CHGN	**Chignik**	**1.82**	**36**		**Pn**	**07 39 13.9**	**+1.4**
CHGN				Sn	**Sn**	**07 39 35.6**	**+1.4**
CHIR	**Chirikof Islan**	**2.86**	**68**	Pn	**Pn**	**07 39 28.0**	**+1.3**
CHIR				IAML		07 40 17.2	
	comp=N,240nm,0.9s						
CHIR				IAML		07 40 24.3	
	comp=E,182nm,1.2s						
AKUT	**Akutan**	**3.26**	**260**	P	**Pn**	**07 39 34.7**	**+2.5**
AKUT	**Akutan**	**3.26**	**260**	Pn	**Pn**	**07 39 33.7**	**+1.5**
AKUT				IAML		07 40 29.0	
	comp=N,118nm,0.5s						
AKUT				IAML		07 40 30.6	
	comp=E,154nm,0.6s						
LVA	**Lava Point**	**3.40**	**261**	Pn	**Pn**	**07 39 35.3**	**+1.1**
LVA				IAML		07 40 30.9	
	comp=E,143nm,0.6s						
LVA				IAML		07 40 36.7	
	comp=N,210nm,0.6s						
UNV	**Unalaska Valle**	**3.75**	**257**	P	**Pn**	**07 39 40.6**	**+1.6**
UNV	**Unalaska Valle**	**3.75**	**257**	Pn	**Pn**	**07 39 40.4**	**+1.4**
SII	**Sitkinak Islan**	**3.88**	**61**	Pn	**Pn**	**07 39 42.5**	**+1.7**
O15K	**Ungalikthiuk R**	**4.36**	**3**		**Pn**	**07 39 48.0**	**+0.7**
O15K				IAML		07 41 07.5	
	comp=E,41nm,0.9s						
ACHA	**Angle Creek He**	**4.37**	**37**		**Pn**	**07 39 49.3**	**+1.8**
P16K	**Nushagak River**	**4.39**	**16**	Pn	**Pn**	**07 39 49.2**	**+1.5**
O14K	**Tigyukauivet M**	**4.45**	**354**		**Pn**	**07 39 49.5**	**+0.9**
O14K				IAML		07 41 22.4	
	comp=N,36nm,0.8s						
OHAK	**Old Harbor**	**4.61**	**56**	Pn	**Pn**	**07 39 51.2**	**+0.4**
OHAK				IAML		07 41 03.2	
	comp=N,40nm,1.1s						
P17K	**Kvichak River**	**4.85**	**24**		**Pn**	**07 39 56.6**	**+2.6**
O16K	**Kokwok River B**	**4.92**	**13**		**Pn**	**07 39 56.2**	**+1.2**
N14K	**Kuskokwak Cree**	**5.15**	**352**		**Pn**	**07 39 59.1**	**+1.0**
N14K				IAML		07 41 36.7	
	comp=E,45nm,0.9s						
N14K				IAML		07 41 37.4	
	comp=N,40nm,1.4s						
KDAK	**Kodiak Island**	**5.22**	**52**	P	**Pn**	**07 39 59.7**	**+0.6**
	comp=N,0.9nm,0.3s,baz=131,slow=1.1,SNR=24						
KDAK				S	**Sn**	**07 40 56.8**	**-1.1**
	comp=N,8.7nm,0.5s,baz=157,slow=19,SNR=1.8						
	comp=N,2.1nm,0.3s						
KDAK	**Kodiak Island**	**5.22**	**52**	Pn	**Pn**	**07 40 01.1**	**+2.0**
KDAK				IAML		07 41 23.1	
	comp=N,33nm,1.3s						
KDAK				IAML		07 41 31.3	
	comp=N,37nm,1.1s						
N15K	**Kwethluk River**	**5.34**	**1**		**Pn**	**07 40 01.7**	**+0.8**
N15K				IAML		07 41 44.3	
	comp=E,31nm,0.8s						
N15K				IAML		07 41 48.3	
	comp=N,33nm,0.8s						
O18K	**Koktuh Hills**	**5.74**	**27**		**Pn**	**07 40 08.8**	**+2.5**
M13K	**Dall Lake**	**5.82**	**345**		**Pn**	**07 40 08.7**	**+1.4**
N17K	**Nushagak Hills**	**5.94**	**15**		**Pn**	**07 40 10.5**	**+1.4**
M14K	**Bethel**	**5.99**	**352**		**Pn**	**07 40 10.3**	**+0.7**
M16K	**Timber Creek**	**6.24**	**6**		**Pn**	**07 40 14.2**	**+1.1**
N18K	**Kilae Creek**	**6.32**	**20**	Pn	**Pn**	**07 40 15.6**	**+1.4**
ILAR	**Eielson Array**	**12.00**	**29**	P	**Pn**	**07 41 31.6**	**-0.5**
	comp=N,0.1nm,0.3s,baz=227,slow=12,SNR=4.7						
ILAR				S	**Sn**	**07 43 46.2**	**+1.8**
	comp=N,0.2nm,0.6s,baz=212,slow=20,SNR=1.3						
	comp=N,0.1nm,0.3s						
ILAR	**Eielson Array**	**12.00**	**29**		**Pn**	**07 41 32.1**	**+0.1**
F19K	**Shaleruckik Mo**	**12.10**	**5**	Pn	**Pn**	**07 41 34.2**	**+1.0**
G21K	**Allakaket**	**12.17**	**13**	Pn	**Pn**	**07 41 34.9**	**+0.6**
F20K	**Avaraart Lake**	**12.45**	**8**	Pn	**Pn**	**07 41 39.4**	**+1.4**
F21K	**Alatna River**	**12.84**	**12**	Pn	**Pn**	**07 41 43.5**	**0.0**
I26K	**Coal Creek Min**	**13.49**	**32**	Pn	**Pn**	**07 41 51.5**	**-0.7**
E21K	**Killik River**	**13.96**	**10**	Pn	**Pn**	**07 41 59.8**	**+1.1**
D20K	**Etivluk River**	**14.03**	**6**	Pn	**Pn**	**07 42 00.2**	**+0.6**
L29M	**L29M**	**14.06**	**45**	Pn	**Pn**	**07 42 00.0**	**0.0**
G26K	**Porcupine Rive**	**14.49**	**27**	Pn	**Pn**	**07 42 06.5**	**+0.6**
N31M	**Braeburn, Yuko**	**14.50**	**53**	Pn	**Pn**	**07 42 05.3**	**-0.7**
I28M	**Miner Creek**	**14.61**	**35**	Pn	**Pn**	**07 42 08.7**	**+1.1**
D23K	**Nanushuk River**	**14.85**	**14**	Pn	**Pn**	**07 42 11.7**	**+1.0**
B20K	**Meade River**	**15.29**	**4**	Pn	**Pn**	**07 42 16.9**	**+0.5**
B20K				IAmb	IAmb	07 42 22.2	
	comp=Z,5.7nm,1.1s						
J30M	**Hart River**	**15.44**	**41**	Pn	**Pn**	**07 42 18.8**	**+0.3**
J30M				IAmb	IAmb	07 42 30.7	
	comp=Z,4.0nm,0.5s						
H29M	**Whitestone**	**15.59**	**34**	Pn	**Pn**	**07 42 21.0**	**+0.6**
H29M				IAmb	IAmb	07 42 36.7	
	comp=Z,4.3nm,1.1s						
D25K	**Kavik River**	**15.86**	**18**	Pn	**Pn**	**07 42 24.5**	**+0.6**
F28M	**Old Crow**	**16.03**	**29**	Pn	**Pn**	**07 42 26.2**	**+0.1**
G29M	**Pine Creek**	**16.12**	**33**	Pn	**Pn**	**07 42 28.0**	**+0.8**
EPYK	**Eagle Plains**	**16.22**	**35**	Pn	**Pn**	**07 42 29.7**	**+1.2**
EPYK				IAmb	IAmb	07 42 42.4	
	comp=Z,6.2nm,0.8s						
G30M	**tAoh Zraii Nji**	**16.73**	**34**	Pn	**Pn**	**07 42 35.0**	**+0.1**
G30M				IAmb	IAmb	07 43 05.6	
	comp=Z,7.7nm,1.3s						
H31M	**Peel River**	**16.76**	**39**	Pn	**P**	**07 42 36.1**	**-1.0**
H31M				IAmb	IAmb	07 42 54.5	
	comp=Z,6.5nm,1.1s						
MMPY	**Sheldon Lake,**	**16.85**	**51**	Pn	**Pn**	**07 42 35.8**	**-0.6**
F30M	**Barrier River**	**17.24**	**32**	Pn	**Pn**	**07 42 41.2**	**0.0**
F30M				IAmb	IAmb	07 43 05.5	
	comp=Z,12nm,1.5s						
G31M	**Satah River**	**17.34**	**36**	Pn	**Pn**	**07 42 42.6**	**+0.2**
HG4B	**Hotspring**	**17.43**	**86**		**P**	**07 42 43.9**	**-0.7**
HG4B				IAmb	IAmb	07 42 46.9	
	comp=Z,22nm,1.1s						
F31M	**Tsiigehtchic**	**17.80**	**34**		**P**	**07 42 48.6**	**+0.1**
INK	**Inuvik**	**18.34**	**32**	P	**P**	**07 42 52.9**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=245,slow=13,SNR=5.3						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**18.34**	**32**	P	**P**	**07 42 53.5**	**-0.9**
BBB	**Bella Bella**	**19.25**	**85**	LR	LR	07 48 49.0	
	comp=Z,60nm,18.6s,baz=250,slow=32						
C36M	**Paulatuk**	**21.85**	**34**	P	**P**	**07 43 31.3**	**-1.3**
C36M				IAmb	IAmb	07 43 34.6	
	comp=Z,24nm,1.5s						
A05A	**Maple Falls**	**24.07**	**88**	P	**P**	**07 43 54.1**	**-1.1**
A05A				IAmb	IAmb	07 44 15.4	
	comp=Z,6.5nm,0.9s						
PEA0B	**Petropavlovsk-**	**24.49**	**283**	P	**P**	**07 43 58.6**	**-0.4**
PEA0B				IAmb	IAmb	07 44 27.7	
	comp=Z,21nm,1.4s						
PETK	**Petropavlovsk-**	**24.49**	**283**	P	**P**	**07 43 58.3**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=78,slow=13,SNR=25						
	comp=Z,2.8nm,0.5s						
PETK	**Petropavlovsk-**	**24.49**	**283**	P	**P**	**07 43 58.4**	**-0.6**
YKAW3	**Yellowknife Wh**	**24.49**	**53**	P	**P**	**07 43 59.5**	**+0.6**
YKAW3				IAmb	IAmb	07 44 06.1	
	comp=Z,3.3nm,1.4s						
YKA	**Yellowknife Ar**	**24.50**	**53**	P	**P**	**07 43 56.2**	**-2.7**
	comp=Z,0.7nm,0.9s,baz=290,slow=6.0,SNR=4.7						
	comp=Z,0.7nm,0.9s						
YKA	**Yellowknife Ar**	**24.50**	**53**	P	**P**	**07 43 58.9**	**0.0**
MA2	**Magadan**	**26.41**	**300**	LR	LR	07 55 36.8	
	comp=Z,35nm,18.7s,baz=236,slow=38						
YPT	**Yellepit**	**27.41**	**91**	P	**P**	**07 44 25.0**	**-0.4**
YPT				IAmb	IAmb	07 44 50.5	
	comp=Z,7.4nm,0.8s						
BLKN	**Baker Lake**	**32.49**	**47**	P	**P**	**07 45 10.9**	**+0.8**
ILON	**Igloolik, Nuna**	**36.52**	**36**	P	**P**	**07 45 46.1**	**+1.2**
KNB	**Kanab**	**36.70**	**99**	P	**P**	**07 45 47.2**	**+0.2**
KNB				IAmb	IAmb	07 46 01.4	
	comp=Z,3.3nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**42.96**	**228**	T	T	08 32 36.9	
	baz=28,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**42.96**	**228**	T	T	08 32 37.8	
	baz=28,slow=76,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**42.97**	**228**	T	T	08 32 38.3	
	baz=28,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**44.12**	**228**	T	T	08 34 05.4	
	baz=28						
H11S2	**WAKE ISLAND Hy**	**44.14**	**228**	T	T	08 34 05.3	
	baz=28						
H11S3	**WAKE ISLAND Hy**	**44.14**	**228**	T	T	08 34 06.3	
	baz=28						
RLO	**Rose Lookout**	**47.56**	**85**	P	**P**	**07 47 17.1**	**+1.9**
UALR	**University of**	**50.08**	**84**	P	**P**	**07 47 35.0**	**+0.4**
SADO	**Sadowa**	**50.53**	**66**	P	**P**	**07 47 38.8**	**+0.9**
SONM	**Songino Array**	**54.52**	**304**	P	**P**	**07 48 05.9**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=103,slow=6.4,SNR=1.6						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**55.86**	**358**	P	**P**	**07 48 15.1**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=24,slow=7.1,SNR=4.1						
	comp=Z,1.4nm,0.7s						
ARCES	**ARCESS Array B**	**55.86**	**358**	P	**P**	**07 48 16.7**	**0.0**
KURK	**Kurchatov**	**63.90**	**323**	P	**P**	**07 49 12.4**	**+0.3**
KURK				IAmb	IAmb	07 49 22.0	
	comp=Z,3.5nm,1.5s						
FINES	**FINESS Array B**	**63.95**	**357**	P	**P**	**07 49 11.4**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=6.5,slow=6.8,SNR=12						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**63.95**	**357**	P	**P**	**07 49 11.7**	**-0.6**
KURBB	**Kurchatov Arra**	**64.01**	**323**	P	**P**	**07 49 13.4**	**+0.5**
	comp=Z,0.1nm,0.2s,baz=45,slow=12,SNR=4.0						
	comp=Z,0.1nm,0.2s						
ABKAR	**Akbulak array**	**70.91**	**333**	P	**P**	**07 49 56.4**	**-0.1**
KK31	**Karatay Array**	**73.27**	**324**	P	**P**	**07 50 10.6**	**-0.2**
KK31				IAmb	IAmb	07 50 17.9	
	comp=Z,1.4nm,1.2s						
KKAR	**Karatay Array**	**73.27**	**324**	P	**P**	**07 50 10.9**	**+0.1**
AKASG	**Malin Array Be**	**74.53**	**354**	P	**P**	**07 50 17.3**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=16,slow=7.1,SNR=4.0						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**81.11**	**289**	P	**P**	**07 50 54.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=13,slow=5.0,SNR=7.5						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**81.11**	**289**	P	**P**	**07 50 55.4**	**+0.3**
ESDC	**Sonseca Array**	**83.70**	**18**	P	**P**	**07 51 06.1**	**-2.3**
	comp=Z,0.5nm,0.5s,baz=341,slow=4.9,SNR=2.8						
	comp=Z,0.5nm,0.5s						
ESDC	**Sonseca Array**	**83.70**	**18**	P	**P**	**07 51 09.1**	**+0.7**

WEL ***23*** *07:44:43.6±0.4,40.˚5S±2.˚×17.˚5E±.˚,h22km±4km,M3.6/13, ML3.7/12,MLv3.6/13,Error ellipse: s-maj=4.0km s-min=2.6km az=71.5*
NOU ***23*** *07:44:44.9,40.˚14S×174.˚83E,h38km,MLv3.8/18,Cook Strait, New Zealand*

ISC 23 07:44:44.4±0.9,40.˚14S±0.˚02×174.˚85E±0.˚02,h32km±9km, n117,σ0°79/134,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHWZ	**Ohakea**	**0.36**	**101**	P	**Pb**	**07 44 52.6**	**-0.2**
OHWZ				S	**Sn**	**07 44 59.5**	**+0.1**
WAZ	**Wanganui**	**0.40**	**15**	P	**Pb**	**07 44 53.0**	**-0.4**
WAZ				S	**Sb**	**07 44 59.6**	**+0.1**
FXBS	**Foxton Beach S**	**0.43**	**139**	P	**Pb**	**07 44 53.5**	**-0.4**
FXBS				S	**Sn**	**07 45 01.2**	**0.0**
OGWZ	**Otaki Gorge**	**0.72**	**160**	P	**Pb**	**07 44 57.9**	**-0.7**
OGWZ				S	**Sb**	**07 45 07.7**	**-0.4**
KIW	**Kapiti Island**	**0.72**	**177**	P	**Pb**	**07 44 57.7**	**-0.9**
KIW				S	**Sb**	**07 45 07.0**	**-1.2**
POWZ	**Post Office Ro**	**0.74**	**110**	P	**Pn**	**07 44 58.7**	**0.0**
POWZ				S	**Sn**	**07 45 09.2**	**+0.3**

QRZ	Quartz Range	1.90	248	P	Pn	07 45 14.3	-0.3
QRZ	Quartz Range	1.90	248	S	Sn	07 45 37.4	-0.1
QRZ	Quartz Range	1.90	248	P	Pn	07 45 14.7	0.0
WPRZ	Whakapapatarin	1.91	33	P	Pb	07 45 17.2	-1.3
ALRZ	Allen Road	1.95	37	P	Pn	07 45 15.6	+0.2
MTHZ	Maungataniwha	2.00	51	P	Pn	07 45 18.0	+2.0
PRRZ	Plateau Road	2.03	37	P	Pn	07 45 16.7	+0.4
MRNZ	Matariki Terra	2.03	231	P	Pn	07 45 17.3	+0.9
RAHZ	Arahi	2.11	55	P	Pb	07 45 21.5	-0.5
THZ	Tophouse	2.19	222	P	Pn	07 45 19.6	+0.9
RRRZ	Republican Roa	2.21	36	P	Pn	07 45 21.0	+2.1
MUGZ	Murupara	2.23	42	P	Pn	07 45 20.4	+1.2
OMRZ	Omania	2.35	31	P	Pn	07 45 23.2	+2.4
TOZ	Tahuroa Road	2.46	12	P	Pn	07 45 21.4	-0.8
KHZ	Kahutara	2.48	203	P	Pn	07 45 22.4	-0.2
KHZ	Kahutara	2.48	203	S	Sn	07 45 52.3	+0.5
KHZ	Kahutara	2.48	203	P	Pn	07 45 22.8	+0.2
URZ	Urewera	2.57	44	P	Pn	07 45 23.4	-0.4
URZ	Urewera	2.57	44	P	Pn	07 45 23.6	-0.2
TGRZ	Tauranga	2.64	25	P	Pn	07 45 27.8	+2.9
MWZ	Matawai	2.75	50	P	Pn	07 45 26.8	+0.5
DSZ	Denniston Nort	2.81	234	P	Pn	07 45 27.7	+0.5
TKGZ	Te Karaka	2.88	55	P	Pn	07 45 28.2	+0.2
MKAZ	Moumakai	3.04	5	P	Pn	07 45 29.9	-0.3
AWAZ	Awhitu Peninsu	3.07	357	P	Pn	07 45 31.4	+0.6
RUGZ	Raukumara Rang	3.09	46	P	Pn	07 45 30.9	-0.2
GVZ	Greta Valley S	3.14	205	P	Pn	07 45 31.2	-0.4
MXZ	Matakaoa Point	3.73	47	P	Pn	07 45 40.3	+0.6
ODZ	Otahua Downs	5.80	211	P	Pn	07 46 07.9	-0.3
JCZ	Jackson Bay	5.99	227	P	Pn	07 46 12.2	+1.4

*IDC **23** 07:54:33.9±1.0,27°.60N×100°.10E, h0km, mb3.7/7, mbtmp3.7/8, ML4.0/1, MS3.3/6, Error ellipse: s-maj=31.5km s-min=17.4km az=77.0*

*NEIC **23** 07:54:34.4±1.4,27°.6N±0°.1×100°.0E±0°.1, h10km±1km, mb4.0/11, Error ellipse: s-maj=19.6km s-min=15.1km az=216.0*

ISC 23 07:54:34.3±0.6, **27°.59N**±0°.08×**99°.98E**±0°.06, **h10**km, **n35,** σ1§**31**/33, **mb4.0**/10, **MS3.2**/6, **Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**6.47**	**263**	*eP*	**Pn**	**07 56 11.8**	**+2.2**
TEZP				*eS*	**Sn**	**07 57 24.6**	**+1.0**
SHL	**Shillong**	**7.53**	**256**	*eP*	**Pn**	**07 56 24.3**	**0.0**
SHL				*eS*	**Sn**	**07 57 47.1**	**-2.7**
GUWA	**GUWAHATI**	**7.53**	**261**	*eP*	**Pn**	**07 56 26.4**	**+2.3**
GUWA				*eS*	**Sn**	**07 57 47.8**	**-1.9**
CMAR	**Chiang Mai Arr**	**9.13**	**186**	Pn	**Pn**	**07 56 48.0**	**+1.8**
	0.4nm,0.3s,baz=4.3,slow=11,SNR=5.9						
CMAR				Pg		07 57 26.7	
	0.9nm,0.3s,baz=3.4,slow=17,SNR=4.1						
CMAR				Lg	Lg	07 59 25.7	
	0.4nm,0.3s,baz=1.5,slow=27,SNR=8.5 1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**9.13**	**186**	Pn	**Pn**	**07 56 46.4**	**+0.2**
EVN	**Everest**	**11.67**	**275**		**Pn**	**07 57 21.3**	**-0.2**
QIZ	**Qiongzhong**	**12.43**	**131**	Pn	**Pn**	**07 57 29.8**	**-1.5**
HKPS	**Hong Kong Po S**	**13.89**	**109**	Pn	**Pn**	**07 57 50.6**	**-0.6**
SSLB	**Suanglung**	**19.27**	**97**	P	**P**	**07 58 59.0**	**-0.2**
SSLB				IAmb	IAmb	07 59 23.7	
	comp=Z,10nm,1.2s						
SONM	**Songino Array**	**20.83**	**12**	P	**P**	**07 59 16.7**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=194,slow=12,SNR=7.6 comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**20.83**	**12**	P	**P**	**07 59 16.0**	**-0.1**
ULN	**Ulaanbaatar**	**20.99**	**13**	P	**P**	**07 59 17.2**	**-0.6**
ULN				IAmb	IAmb	07 59 24.6	
	comp=Z,5.2nm,0.8s						
WUS	**Wushi**	**21.79**	**314**	P	**P**	**07 59 25.2**	**-1.4**
WUS				IAmb	IAmb	07 59 54.3	
	comp=Z,4.8nm,0.5s						
PDGK	**Podgornoye**	**22.83**	**319**	P	**P**	**07 59 36.3**	**-1.3**
TARG	**Taragay, Kyrgy**	**22.98**	**314**	P	**P**	**07 59 37.9**	**-1.5**
TARG				IAmb	IAmb	07 59 55.1	
	comp=Z,2.5nm,1.0s						
KDJ	**Kajisay**	**23.58**	**314**	P	**P**	**07 59 43.9**	**-1.4**
MKAR	**Makanchi Array**	**23.70**	**329**	P	**P**	**07 59 46.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=130,slow=9.7,SNR=6.6 comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**23.70**	**329**	P	**P**	**07 59 45.3**	**-1.0**
NIL	**Nilore**	**23.75**	**291**	P	**P**	**07 59 45.6**	**-1.2**
KSRS	**Korea Array**	**25.45**	**60**	P	**P**	**08 00 02.2**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=258,slow=12,SNR=5.0						
KSRS				LR	LR	08 10 09.6	
	comp=Z,28nm,19.6s,baz=175,slow=37 comp=Z,0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**30.53**	**49**	LR	LR	08 14 13.4	
	comp=Z,57nm,18.5s,baz=330,slow=39						
ASAJ	**Asahikawa**	**37.81**	**53**	LR	LR	08 17 37.1	
	comp=Z,29nm,18.9s,baz=174,slow=37						
YAK	**Yakutsk**	**39.67**	**21**	LR	LR	08 17 36.0	
	comp=Z,30nm,19.1s,baz=209,slow=35						
AKASG	**Malin Array Be**	**57.22**	**314**	P	**P**	**08 04 23.7**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=77,slow=5.8,SNR=4.9 comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**57.22**	**314**	P	**P**	**08 04 21.4**	**-0.1**
AKASG				IAmb	IAmb	08 04 37.9	
	comp=Z,2.8nm,1.1s						
WRA	**Warramunga Arr**	**57.78**	**141**	P	**P**	**08 04 26.4**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=329,slow=7.5,SNR=9.3 comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**57.78**	**141**	P	**P**	**08 04 24.6**	**-1.3**
ARCES	**ARCESS Array B**	**59.02**	**337**	LR	LR	08 30 41.7	
	comp=Z,44nm,19.2s,baz=53,slow=37						
AS31	**Alice Springs**	**60.56**	**144**	P	**P**	**08 04 44.8**	**-0.3**
AS31				IAmb	IAmb	08 05 12.3	
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	**60.56**	**144**	P	**P**	**08 04 45.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=331,slow=6.2,SNR=9.2 comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**60.56**	**144**	P	**P**	**08 04 45.1**	**0.0**
ILAR	**Eielson Array**	**74.53**	**24**	P	**P**	**08 06 15.1**	**+2.2**
	comp=Z,0.7nm,1.1s,baz=301,slow=6.4,SNR=3.3 comp=Z,0.7nm,1.1s						
ILAR	**Eielson Array**	**74.53**	**24**	P	**P**	**08 06 13.4**	**+0.6**
HDA	**Harding Lake**	**74.70**	**24**	P	**P**	**08 06 13.6**	**-0.3**
HDA				IAmb	IAmb	08 06 27.7	
	comp=Z,1.9nm,0.8s						
SFJD	**Kangerlussuaq**	**83.13**	**349**	LR	LR	08 47 30.9	
	comp=Z,68nm,19.0s,baz=5.0,slow=38						

*AEIC **23** 07:58:04±0.6, 58°.34N±0°.03×133°.61W±0°.05, h6km±7km, Error ellipse: s-maj=4.2km s-min=3.0km az=144.0*

NEIC 23 07:58:02.2±1.3, **58°.36N**±0°.03×**133°.60W**±0°.05, **h5**km±2km, **ML3.1**/40, **ML2.8**(AEIC), **Error ellipse: s-maj=5.7km s-min=3.3km az=134.0, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R32K	**Eaglecrest**	**0.49**	**261**	Pg	Pg	07 58 11.9	+0.2
BESE	**Bessie Mountai**	**0.70**	**289**	Pg	Pg	07 58 15.4	-0.2
Q32M	**Nakina River**	**0.92**	**48**	Pg	Pb	07 58 20.5	-0.3
S32K	**Killisnoo**	**1.03**	**211**	Pg	Pg	07 58 22.0	0.0
S32K				IAML		07 58 39.3	
	comp=E,295nm,0.9s						
P32M	**Atlin**	**1.24**	**357**	Pg	Pg	07 58 23.7	-2.3
P32M				IAML		07 58 45.9	
	comp=E,214nm,0.5s						
S34M	**Telegraph Cree**	**1.38**	**108**	Pn	Pn	07 58 26.6	-1.5
SKAG	**Skagway**	**1.43**	**322**	Pn	Pb	07 58 29.1	-0.1
SKAG				IAML		07 58 35.4	
	comp=N,208nm,0.9s						
S31K	**Pelican**	**1.45**	**255**	Pn	Pn	07 58 28.8	-0.3
SIT	**Sitka**	**1.60**	**216**	Pn	Pn	07 58 31.6	+0.5
SIT				IAML		07 58 59.7	
	comp=E,133nm,0.8s						
R33M	**Jennings River**	**1.72**	**52**	Pn	Pn	07 58 33.6	+0.7
R33M				IAML		07 58 58.0	
	comp=E,249nm,0.9s						
P33M	**Teslin, Yukon**	**1.90**	**12**	Pn	Pn	07 58 35.8	+0.4
P33M				IAML		07 59 04.1	
	comp=N,103nm,1.0s						
P33M				IAML		07 59 07.9	
	comp=E,105nm,0.8s						
WRAK	**Wrangell Islan**	**2.06**	**160**	Pn	Pn	07 58 36.7	-0.7
WRAK				IAML		07 59 15.3	
	comp=E,133nm,0.7s						
U33K	**Whale Pass**	**2.26**	**173**	Pn	Pn	07 58 40.0	-0.2
U33K				IAML		07 59 00.2	
	comp=N,65nm,0.9s						
T35M	**Bob Quinn**	**2.27**	**126**	Pn	Pn	07 58 40.3	0.0
WHY	**Whitehorse**	**2.40**	**345**	Pn	Pn	07 58 43.0	+0.8
O30N	**Mendenhall**	**2.73**	**333**	Pn	Pn	07 58 47.1	+0.3
CRAG	**Craig**	**2.91**	**175**	Pn	Pn	07 58 49.0	0.0
CRAG				IAML		07 59 23.2	
	comp=E,56nm,1.0s						
U35K	**Hyder**	**3.13**	**140**	Pn	Pn	07 58 51.1	-1.0
HYT	**Haines Junctio**	**3.17**	**323**	Pn	Pn	07 58 52.4	-0.6
O29M	**Mount Kennedy**	**3.21**	**310**	Pn	Pn	07 58 53.4	-0.1

*IDC **23** 08:09:58.7±1.0, 33°.14N×86°.50E, h0km, mb3.7/9, mbtmp3.7/11, ML4.5/1, MS3.2/8, Error ellipse: s-maj=31.7km s-min=19.7km az=45.0*

ISC 23 08:10:04.0±0.9, **33°.2N**±0°.1×**86°.5E**±0°.2, **h35**km, **n16,** σ0§**89**/12, **mb3.7**/7, **MS3.3**/5, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.37**	**318**	LR	LR	08 18 38.7	
	comp=Z,53nm,19.9s,baz=82,slow=39						
MKAR	**Makanchi Array**	**13.96**	**348**	Pn	**Pn**	**08 13 18.3**	**-0.9**
	0.3nm,0.6s,baz=177,slow=13,SNR=2.8						
MKAR				LR	LR	08 19 45.1	
	comp=Z,56nm,18.3s,baz=141,slow=42						
CMAR	**Chiang Mai Arr**	**18.42**	**140**	P	**Pn**	**08 14 16.6**	**0.0**
	0.6nm,0.3s,baz=324,slow=13,SNR=5.3						
CMAR				LR	LR	08 22 26.3	
	comp=Z,36nm,19.5s,baz=190,slow=41 0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**20.77**	**357**	P	**P**	**08 14 43.0**	**+1.3**
	1.5nm,0.6s,baz=194,slow=8.6,SNR=5.4 1.5nm,0.6s						
SONM	**Songino Array**	**20.92**	**40**	P	**P**	**08 14 44.4**	**+0.9**
	0.8nm,0.7s,baz=240,slow=12,SNR=3.6 0.8nm,0.7s						
KSRS	**Korea Array**	**33.83**	**71**	P	**P**	**08 16 42.2**	**-0.7**
	1.3nm,0.7s,baz=269,slow=9.3,SNR=3.6						
KSRS				LR	LR	08 31 59.1	
	comp=Z,21nm,18.2s,baz=150,slow=39 1.3nm,0.7s						
AKASG	**Malin Array Be**	**44.88**	**311**	P	**P**	**08 18 15.7**	**+0.9**
	0.7nm,0.6s,baz=85,slow=7.0,SNR=5.3 0.7nm,0.6s						
MLR	**Muntele Rosu**	**47.40**	**304**	LR	LR	08 42 39.7	
	comp=Z,40nm,18.3s,baz=8.5,slow=41						
JCJ	**Chichijima**	**48.03**	**82**	LR	LR	08 39 43.6	
	comp=Z,34nm,19.7s,baz=126,slow=37						
HFS	**Hagfors**	**53.44**	**323**	P	**P**	**08 19 19.1**	**-1.1**
	5.6nm,1.1s,baz=76,slow=7.6,SNR=2.0 5.6nm,1.1s						
NOA	**NORSAR Array B**	**54.59**	**325**	P	**P**	**08 19 28.5**	**-0.1**
	1.0nm,0.9s,baz=84,slow=7.1,SNR=3.7						
NOA				LR	LR	08 44 05.7	
	comp=Z,22nm,19.5s,baz=65,slow=38 1.0nm,0.9s						
GERES	**GERESS Array B**	**55.07**	**310**	P	**P**	**08 19 31.9**	**-0.4**
	0.3nm,0.4s,baz=86,slow=4.1,SNR=6.0 0.3nm,0.4s						
BORG	**Borgarnes**	**67.54**	**334**	LR	LR	08 51 10.2	
	comp=Z,39nm,19.1s,baz=292,slow=37						
ASAR	**Alice Springs**	**72.35**	**135**	P	**P**	**08 21 26.1**	**-0.3**
	0.6nm,0.8s,baz=334,slow=8.2,SNR=4.5 0.6nm,0.8s						
ILAR	**Eielson Array**	**73.84**	**21**	P	**P**	**08 21 34.6**	**0.0**
	0.4nm,0.8s,baz=296,slow=6.9,SNR=3.6 0.4nm,0.8s						
VNDA	**Vanda**	**119.06**	**166**	PKP	**PKiKP**	**08 28 48.9**	**+1.1**
	0.6nm,1.0s,baz=270,slow=4.0,SNR=2.2						

*IDC **23** 08:40:23.4±2.0, 54°.64N×160°.31W, h0km, mb4.0/15, mbtmp4.0/18, ML3.7/3, MS3.0/8, Error ellipse: s-maj=50.3km s-min=16.6km az=151.0*

*NEIC **23** 08:40:31.3±1.2, 54°.85N±0°.07×160°.28W±0°.06, h42km±6km, mb4.0/35, ML3.8/38, ML3.6(AEIC), Error ellipse: s-maj=10.5km s-min=5.0km az=172.0*

*AEIC **23** 08:40:31.7±3.4, 54°.88N±0°.05×160°.33W±0°.05, h22km±4km, Error ellipse: s-maj=6.7km s-min=4.1km az=191.0*

ISC 23 08:40:31.1±0.8, **54°.90N**±0°.05×**160°.22W**±0°.03, **h41**km±7km, **n127,** σ1§**33**/122, **mb4.1**/20, **MS3.1**/5, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.37**	**100**	P	**Pn**	**08 40 40.3**	**+0.1**
CHNA	**Chernabura Isl**	**0.37**	**100**	S	**Sn**	**08 40 46.1**	**-0.4**
CNBA	**Chernabura Isl**	**0.38**	**101**		**Pn**	**08 40 40.8**	**+0.5**
CNBA					**Sn**	**08 40 47.7**	**+1.1**
SDPT	**Sand Point**	**0.48**	**342**	P	**Pn**	**08 40 41.8**	**+0.3**
SDPT	**Sand Point**	**0.48**	**342**	S	**Sn**	**08 40 49.4**	**+0.5**
SDPT	**Sand Point**	**0.48**	**342**		**Pn**	**08 40 42.0**	**+0.5**
SDPT					**Sn**	**08 40 49.6**	**+0.8**
SDPT				IAML		08 40 51.1	
	comp=E,7μm,0.3s						
DOL	**Dolgoi Island**	**0.98**	**286**		**Pn**	**08 40 48.3**	**0.0**
DOL					**Sn**	**08 41 00.8**	**-0.2**
PS1A	**Pavlof South-1**	**1.02**	**302**		**Pn**	**08 40 49.5**	**+0.6**
PS1A					**Sn**	**08 41 02.6**	**+0.7**
PS4A	**Pavlof South-4**	**1.04**	**296**		**Pn**	**08 40 49.6**	**+0.4**
PS4A					**Sn**	**08 41 03.1**	**+0.6**
PN7A	**Pavlof North-7**	**1.15**	**299**		**Pn**	**08 40 51.7**	**+1.0**
PN7A					**Sn**	**08 41 05.6**	**+0.3**
DTNA	**Dutton South F**	**1.20**	**283**		**Pn**	**08 40 51.7**	**+0.4**
DT1	**Dutton Round H**	**1.20**	**281**		**Pn**	**08 40 51.3**	**-0.1**
VNFG	**Fog Glacier, M**	**1.44**	**15**		**Pn**	**08 40 57.3**	**+2.5**
VNFG	**Fog Glacier, M**	**1.44**	**15**	Pn	**Pn**	**08 40 56.9**	**+2.1**
VNFG				IAML		08 41 23.8	
	comp=N,4μm,0.4s						
VNFG				IAML		08 41 27.3	
	comp=E,3μm,0.5s						
CHGN	**Chignik**	**1.74**	**35**		**Pn**	**08 41 00.9**	**+2.1**
CHGN				Sn	**Sn**	**08 41 23.0**	**+3.3**
CHGN				IAML		08 41 27.2	
	comp=N,1μm,0.4s						
ANNW	**Aniakchak Nort**	**2.36**	**28**		**Pn**	**08 41 09.8**	**+2.4**
CHIR	**Chirikof Islan**	**2.79**	**69**	P	**Pn**	**08 41 15.2**	**+2.1**
CHIR	**Chirikof Islan**	**2.79**	**69**	S	**Sn**	**08 41 49.8**	**+4.4**
CHIR	**Chirikof Islan**	**2.79**	**69**	Pn	**Pn**	**08 41 14.5**	**+1.4**
CHIR				IAML		08 42 03.6	
	comp=N,388nm,0.8s						
CHIR				IAML		08 42 04.1	
	comp=E,273nm,1.0s						
AKUT	**Akutan**	**3.32**	**259**	P	**Pn**	**08 41 22.3**	**+1.9**
AKUT	**Akutan**	**3.32**	**259**	S	**Sn**	**08 42 01.0**	**+2.4**
AKUT	**Akutan**	**3.32**	**259**	Pn	**Pn**	**08 41 21.1**	**+0.6**
AKUT				IAML		08 42 15.6	
	comp=N,152nm,0.7s						
AKUT				IAML		08 42 18.1	
	comp=E,187nm,0.6s						
LVA	**Lava Point**	**3.46**	**260**	Pn	**Pn**	**08 41 22.6**	**+0.1**
LVA				IAML		08 42 21.5	
	comp=E,154nm,0.7s						
SII	**Sitkinak Islan**	**3.80**	**62**	P	**Pn**	**08 41 28.9**	**+1.9**
SII	**Sitkinak Islan**	**3.80**	**62**	Pn	**Pn**	**08 41 27.3**	**+0.3**
SII				IAML		08 42 44.5	
	comp=E,206nm,0.6s						
UNV	**Unalaska Valle**	**3.82**	**257**	P	**Pn**	**08 41 27.9**	**+0.6**
UNV	**Unalaska Valle**	**3.82**	**257**	S	**Sn**	**08 42 13.4**	**+2.5**
UNV	**Unalaska Valle**	**3.82**	**257**		**Pn**	**08 41 27.4**	**+0.1**
ACHA	**Angle Creek He**	**4.29**	**37**		**Pn**	**08 41 33.0**	**-0.8**
O15K	**Ungalikthiuk R**	**4.30**	**3**		**Pn**	**08 41 34.8**	**+0.9**
O15K				IAML		08 42 56.4	
	comp=E,65nm,0.7s						
P16K	**Nushagak River**	**4.32**	**16**		**Pn**	**08 41 34.5**	**+0.4**
P16K				IAML		08 43 07.2	
	comp=N,148nm,1.1s						
P16K				IAML		08 43 16.1	
	comp=E,165nm,1.1s						
O14K	**Tigyukauivet M**	**4.41**	**353**		**Pn**	**08 41 36.4**	**+1.1**
O14K				IAML		08 42 27.4	
	comp=N,61nm,0.9s						
O14K				IAML		08 43 00.1	
	comp=E,57nm,0.8s						
OHAK	**Old Harbor**	**4.53**	**56**	P	**Pn**	**08 41 39.3**	**+2.2**
OHAK	**Old Harbor**	**4.53**	**56**	Pn	**Pn**	**08 41 38.0**	**+1.0**
OHAK				IAML		08 42 52.3	
	comp=N,55nm,0.7s						
P17K	**Kvichak River**	**4.78**	**24**		**Pn**	**08 41 41.6**	**+1.1**
O16K	**Kokwok River B**	**4.85**	**13**		**Pn**	**08 41 42.7**	**+1.3**
O16K				IAML		08 43 13.2	
	comp=E,44nm,0.7s						
N14K	**Kuskokwak Cree**	**5.10**	**352**		**Pn**	**08 41 46.1**	**+1.2**
N14K				IAML		08 43 53.9	
	comp=N,94nm,1.6s						
KDAK	**Kodiak Island**	**5.14**	**53**	Pn	**Pn**	**08 41 45.1**	**-0.3**
	comp=N,1.8nm,0.3s,baz=62,slow=1.2,SNR=30						
KDAK				Sn	**Sn**	**08 42 40.3**	**-3.1**
	comp=N,1.2nm,0.3s,baz=140,slow=22,SNR=1.4						
KDAK				Lg	Lg	08 43 04.0	
	comp=N,5.2nm,0.3s,baz=268,slow=18,SNR=7.5 comp=N,4.3nm,0.4s						
KDAK	**Kodiak Island**	**5.14**	**53**	Pn	**Pn**	**08 41 47.1**	**+1.7**
KDAK				IAML		08 43 15.8	
	comp=N,75nm,0.8s						
KDAK				IAML		08 43 17.3	
	comp=N,66nm,0.6s						
N15K	**Kwethluk River**	**5.29**	**1**		**Pn**	**08 41 49.2**	**+1.7**
N15K				IAML		08 43 27.3	
	comp=N,51nm,0.9s						
N15K				IAML		08 43 27.3	
	comp=E,82nm,1.1s						
M13K	**Dall Lake**	**5.78**	**344**		**Pn**	**08 41 55.9**	**+1.8**
SPIA	**Saint Paul Isl**	**6.07**	**296**	P	**Pn**	**08 41 59.6**	**+1.5**
ATKA	**Atka Island**	**8.75**	**258**	P	**Pn**	**08 42 36.1**	**+1.3**
EYAK	**Cordova Ski Ar**	**9.58**	**48**	P	**Pn**	**08 42 47.5**	**+1.3**
ADK	**Adak**	**10.28**	**260**	P	**Pn**	**08 42 56.6**	**+0.7**
ILAR	**Eielson Array**	**11.93**	**29**	Pn	Pn	08 43 13.2	-5.0
	comp=E,0.2nm,0.3s,baz=218,slow=12,SNR=7.4						
ILAR				Sn	**Sn**	**08 45 23.3**	**-6.5**
	comp=E,0.1nm,0.3s,baz=204,slow=24,SNR=1.5 comp=E,0.2nm,0.3s						
ILAR	**Eielson Array**	**11.93**	**29**	Pn	**Pn**	**08 43 19.0**	**+0.7**
F19K	**Shaleruckik Mo**	**12.04**	**5**	Pn	**Pn**	**08 43 21.6**	**+1.9**
G21K	**Allakaket**	**12.10**	**13**	Pn	**Pn**	**08 43 23.1**	**+2.4**
J25K	**Salcha River,**	**12.25**	**31**	Pn	**Pn**	**08 43 22.4**	**-0.4**
L27K	**Beaver Creek,**	**12.48**	**42**	Pn	**Pn**	**08 43 27.7**	**+1.7**
BCAR	**Beaver Creek A**	**12.50**	**42**	Pn	**Pn**	**08 43 28.1**	**+1.8**
AMKA	**Amchitka**	**12.78**	**262**	Pn	**Pn**	**08 43 29.7**	**-0.2**
F21K	**Alatna River**	**12.78**	**12**		**Pn**	**08 43 30.9**	**+1.0**
M29M	**Somme Creek**	**13.56**	**47**		**Pn**	**08 43 40.8**	**+0.2**
E25K	**Arctic Village**	**14.93**	**22**	Pn	**Pn**	**08 44 00.5**	**+1.5**
B21K	**Ikpikpuk River**	**15.00**	**8**		**P**	**08 44 05.4**	**+0.8**
B21K				IAmb	IAmb	08 44 46.3	
	comp=Z,6.8nm,1.4s						
M31M	**Drury Creek, Y**	**15.25**	**51**	Pn	**Pn**	**08 44 04.0**	**+0.7**
M31M				IAmb	IAmb	08 44 21.3	
	comp=Z,5.8nm,1.0s						
SHEM	**Shemya Is, Ala**	**15.29**	**272**	LR	LR	08 48 50.9	
	comp=Z,28nm,21.4s,baz=300,slow=33						
J30M	**Hart River**	**15.36**	**41**	Pn	**Pn**	**08 44 05.1**	**+0.4**
J30M				IAmb	IAmb	08 44 28.8	
	comp=Z,5.7nm,0.7s						
U33K	**Whale Pass**	**15.37**	**74**	Pn	**Pn**	**08 44 05.3**	**+0.6**
U33K				IAmb	IAmb	08 44 09.1	
	comp=Z,11nm,1.2s						
CRAG	**Craig**	**15.46**	**77**	Pn	**Pn**	**08 44 06.1**	**+0.2**
CRAG				IAmb	IAmb	08 44 14.0	
	comp=Z,18nm,1.3s						
C23K	**Itkillik River**	**15.61**	**12**	Pn	**Pn**	**08 44 08.2**	**+0.4**
C23K				IAmb	IAmb	08 44 33.4	
	comp=Z,14nm,1.4s						
I30M	**Mount Dempster**	**15.65**	**39**	Pn	**Pn**	**08 44 08.6**	**0.0**
I30M				IAmb	IAmb	08 44 30.8	
	comp=Z,14nm,0.8s						
Q32M	**Nakina River**	**15.73**	**64**	Pn	**Pn**	**08 44 10.0**	**+0.3**
WRAK	**Wrangell Islan**	**15.76**	**73**	Pn	**Pn**	**08 44 09.7**	**-0.1**
WRAK				IAmb	IAmb	08 44 16.8	
	comp=Z,6.6nm,0.7s						
B22K	**Teshekpuk Lake**	**15.80**	**8**	Pn	**Pn**	**08 44 10.5**	**+0.4**
B22K				IAmb	IAmb	08 44 17.5	
	comp=Z,12nm,1.1s						
F28M	**Old Crow**	**15.96**	**29**	P	**P**	**08 44 14.8**	**-0.5**
G29M	**Pine Creek**	**16.05**	**33**	P	**P**	**08 44 15.8**	**-0.5**
G29M				IAmb	IAmb	08 44 18.2	
	comp=Z,8.7nm,0.9s						
EPYK	**Eagle Plains**	**16.15**	**35**		**P**	**08 44 18.3**	**+0.8**
EPYK				IAmb	IAmb	08 44 37.9	
	comp=Z,7.7nm,0.6s						
G30M	**tAoh Zraii Nji**	**16.66**	**34**		**P**	**08 44 23.7**	**+0.6**
H31M	**Peel River**	**16.68**	**39**		**P**	**08 44 23.5**	**+0.1**
H31M				IAmb	IAmb	08 44 41.2	
	comp=Z,15nm,1.1s						
MMPY	**Sheldon Lake,**	**16.77**	**51**		**P**	**08 44 24.5**	**0.0**
DLBC	**Dease Lake**	**16.89**	**66**	LR	LR	08 50 18.2	
	comp=Z,8nm,19.2s,baz=202,slow=35						
F30M	**Barrier River**	**17.16**	**32**		**P**	**08 44 28.2**	**-0.5**
G31M	**Satah River**	**17.27**	**36**		**P**	**08 44 30.0**	**+0.2**
F31M	**Tsiigehtchic**	**17.72**	**34**	P	**P**	**08 44 34.9**	**+0.1**
INK	**Inuvik**	**18.26**	**32**	P	**P**	**08 44 40.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=249,slow=15,SNR=9.3 comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**18.26**	**32**	P	**Pn**	**08 44 41.4**	**+0.5**
BBB	**Bella Bella**	**19.18**	**85**	LR	LR	08 50 33.2	
	comp=Z,42nm,19.8s,baz=216,slow=32						
YKAW3	**Y

AKASG	**Malin Array Be**	**74.48**	**354**	P	**P**		**08 52 05.2**	**+0.5**
AKASG				IAmb	IAmb		08 52 30.9	
	comp=Z,3.8nm,1.3s							
AKBB	**Malin Array Si**	**74.48**	**354**	P	**P**		**08 52 04.2**	**-0.5**
AKBB				IAmb	IAmb		08 52 05.2	
	comp=Z,3.1nm,0.8s							
KIEV	**Kiev**	**74.48**	**354**	P	**P**		**08 52 04.1**	**-0.6**
KIEV				IAmb	IAmb		08 52 05.2	
	comp=Z,2.8nm,0.8s							
DAV	**Davao City (W)**	**75.17**	**261**	LR	LR		09 32 03.3	
	comp=Z,7.9nm,18.7s,baz=55,slow=41							
LSA	**Lhasa**	**76.00**	**302**	P	**P**		**08 52 13.5**	**-0.9**
CHGR	**Chuyangaron**	**77.68**	**323**	P	**P**		**08 52 23.4**	**+0.1**
KBZ	**Khabaz**	**79.80**	**343**	P	**P**		**08 52 34.0**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=51,slow=5.1,SNR=5.1							
	comp=Z,2.1nm,0.8s							
MYLDM	**Lahad Datu**	**80.77**	**266**	P	**P**		**08 52 40.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**81.15**	**289**	P	**P**		**08 52 42.5**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=19,slow=5.7,SNR=13							
	comp=Z,1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**81.15**	**289**	P	**P**		**08 52 41.9**	**-0.4**
ESDC	**Sonseca Array**	**83.63**	**18**	P	**P**		**08 52 55.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=349,slow=4.8,SNR=7.1							
	comp=Z,0.8nm,0.6s							
ESDC	**Sonseca Array**	**83.63**	**18**	P	**P**		**08 52 55.4**	**+0.4**

*IDC **23** 08:46:54.6±1.4, 13°.21N×144°.76E, h55km±10km, mb3.1/5, mbtmp3.4/5, MS3.0/1, Error ellipse: s-maj=41.8km s-min=24.2km az=102.0*
*NEIC **23** 08:46:55.1±1.0, 13°.2N±0°.1×144°.7E±0°.3, h57km±7km, mb4.0/7, Error ellipse: s-maj=41.5km s-min=7.9km az=111.0*

ISC 23 08:46:54.4±0.8, 13°.1N±0°.1×144°.6E±0°.3, h54km, n26, σ0^{s}73/21, mb3.7/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.51**	**26**	P	**Pn**	**08 47 06.2**	**+0.1**
	1μm,0.3s,baz=340,slow=21,SNR=421						
GUMO				S	**Sn**	**08 47 15.1**	**+0.6**
	1μm,0.2s,baz=359,slow=22,SNR=16						
DPSS	**Saipan**	**2.38**	**28**	Pn	**Pn**	**08 47 31.1**	**+0.1**
DPSS				Sn	**Sn**	**08 47 59.3**	**+0.3**
H11S3	**WAKE ISLAND Hy 21.87**		**73**	T	T	09 14 16.1	
	baz=259,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy 21.88**		**73**	T	T	09 14 17.0	
	baz=259,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy 21.89**		**73**	T	T	09 14 17.8	
	baz=259,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy 22.32**		**70**	T	T	09 14 48.4	
	baz=256,slow=75,SNR=45						
H11N2	**WAKE ISLAND Hy 22.32**		**70**	T	T	09 14 56.9	
	baz=256,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy 22.33**		**70**	T	T	09 14 51.2	
	baz=256,slow=75,SNR=29						
KNRA	**Kununurra**	**32.64**	**209**	P	**P**	**08 53 21.6**	**+0.3**
AS31	**Alice Springs**	**38.04**	**196**	P	**P**	**08 54 08.1**	**+0.3**
AS31				IAmb	IAmb	08 54 21.1	
	comp=Z,1.9nm,1.4s						
ASAR	**Alice Springs**	**38.04**	**196**	P	**P**	**08 54 08.5**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=23,slow=7.3,SNR=4.5						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**38.04**	**196**	P	**P**	**08 54 06.8**	**-0.9**
MA2	**Magadan**	**46.59**	**4**	LR	LR	09 12 28.3	
	comp=Z,19nm,20.3s,baz=141,slow=33						
MKAR	**Makanchi Array**	**61.66**	**316**	P	**P**	**08 57 07.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=97,slow=8.1,SNR=2.1						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**61.66**	**316**	P	**P**	**08 57 05.7**	**-1.1**
KURK	**Kurchatov**	**64.79**	**320**	P	**P**	**08 57 27.5**	**+0.1**
KURBB	**Kurchatov Arra**	**64.83**	**320**	P	**P**	**08 57 27.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=104,slow=5.9,SNR=4.5						
	comp=Z,0.2nm,0.5s						
IL31		**69.08**	**25**	P	**P**	**08 57 53.9**	**-0.4**
IL31				IAmb	IAmb	08 58 15.3	
	comp=Z,4.0nm,1.5s						
ILAR	**Eielson Array**	**69.08**	**25**	P	**P**	**08 57 53.1**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=248,slow=5.9,SNR=10						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**69.08**	**25**	P	**P**	**08 57 54.2**	**-0.2**
VRDI	**Verde Repeater**	**69.89**	**29**	P	**P**	**08 57 57.8**	**-1.9**
VRDI				IAmb	IAmb	08 58 15.9	
	comp=Z,4.5nm,1.2s						
D25K	**Kavik River**	**70.43**	**21**	P	**P**	**08 58 02.6**	**0.0**
D25K				IAmb	IAmb	08 58 26.9	
	comp=Z,2.9nm,1.2s						
L27K	**Beaver Creek,**	**70.93**	**28**	P	**P**	**08 58 05.5**	**-0.4**
L27K				IAmb	IAmb	08 58 19.4	
	comp=Z,1.9nm,1.4s						
BCAR	**Beaver Creek A**	**70.95**	**28**	P	**P**	**08 58 06.4**	**+0.4**
YKA	**Yellowknife Ar**	**83.37**	**27**	P	**P**	**08 59 15.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=288,slow=5.2,SNR=2.2						
	comp=Z,0.3nm,0.6s						
LPAZ	**La Paz**	**148.17**	**100**	PKPbc	**PKPbc**	**09 06 36.5**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=270,slow=2.0,SNR=2.1						

*IDC **23** 08:57:13.5±9.6, 58°.20S×26°.00W, h264km±87km, mb3.3/5, mbtmp3.9/5, Error ellipse: s-maj=59.2km s-min=20.7km az=115.0*

ISC 23 08:56:52.6±1.2, 58°.1S±0°.2×26°.0W±0°.4, h64km, n10, σ2^{s}72/8, mb3.8/4, 2C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.68**	**156**	⇑P	P	09 00 34.2	+13
	comp=Z,2.4nm,0.4s						
VNA2	**Neumayer--Watz**	**15.08**	**156**	⇑P	P	09 00 39.7	+14
	comp=Z,0.7nm,0.2s,baz=307,slow=14						
QSPA	**South Pole Qui**	**32.18**	**180**	P	**P**	**09 03 15.2**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=350,slow=7.8,SNR=8.4						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**44.59**	**182**	P	**P**	**09 04 58.1**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=356,slow=3.1,SNR=5.5						
	comp=Z,0.3nm,0.5s						
BOSA	**Boshof**	**45.88**	**73**	P	**P**	**09 05 09.2**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=192,slow=7.7,SNR=4.4						
	comp=Z,0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**74.51**	**28**	P	**P**	**09 08 24.2**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=197,slow=6.4,SNR=14						
	comp=Z,1.2nm,0.3s						
ASAR	**Alice Springs**	**96.87**	**161**	P	**P**	**09 10 13.2**	**-3.4**
	comp=Z,0.3nm,0.7s,baz=175,slow=3.0,SNR=5.6						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**125.86**	**28**	PKP	**PKPdf**	**09 15 42.0**	**-3.5**
	comp=Z,3.4nm,1.1s,baz=233,slow=8.3,SNR=4.7						
SONM	**Songino Array**	**150.15**	**89**	PKPbc	**PKPdf**	**09 16 32.8**	**+2.7**
	comp=Z,2.0nm,0.6s,baz=210,slow=2.9,SNR=6.6						
ILAR	**Eielson Array**	**151.92**	**309**	PKPbc	**PKPdf**	**09 16 34.0**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=145,slow=3.3,SNR=2.9						

*NEIC **23** 09:14:40.6±1.6, 1°.80N±0°.05×127°.32E±0°.08, h99km±2km, mb4.4/24, Error ellipse: s-maj=12.0km s-min=7.5km az=78.0*
*DJA **23** 09:14:41.4±0.4, 2°.N±3°×12°.7E±°, h84km±8km, M4.6/19, mB5.2/6, mb4.7/8, MLv4.5/19, Mw(mB)4.6/6*
*IDC **23** 09:14:42.5±2.0, 1°.78N×127°.49E, h122km±19km, mb4.0/11, mbtmp4.4/15, MS3.0/4, Error ellipse: s-maj=26.9km s-min=10.4km az=76.0*

ISC 23 09:14:40.4±0.5, 1°.78N±0°.05×127°.36E±0°.08, h100km, n76, σ1^{s}10/75, mb4.4/24, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.00**	**179**		**Pn**	**09 14 59.7**	**-1.1**
TNTI	**Ternate**	**1.00**	**179**	P	**Pn**	**09 14 59.7**	**-1.1**
MNI	**Manado**	**2.54**	**263**	P	**Pn**	**09 15 21.0**	**+1.0**
SGSI	**Sangihe**	**2.63**	**316**	P	**Pn**	**09 15 20.0**	**-1.2**
SANI	**Sanana**	**4.04**	**200**	P	**Pn**	**09 15 40.9**	**+0.8**
SIJI	**Sorong**	**4.71**	**124**	P	**Pn**	**09 15 50.9**	**+1.7**
	9.1nm,0.4s,baz=308,slow=18,SNR=4.9						
SIJI				LR	LR	09 17 59.2	
	comp=Z,77nm,19.7s,baz=254,slow=43						
SIJI	**Sorong**	**4.71**	**124**	P	**Pn**	**09 15 51.1**	**+1.9**
LUWI	**Luwuk**	**5.37**	**239**	Pn	**Pn**	**09 15 59.3**	**+1.1**
DAV	**Davao City (W)**	**5.55**	**341**	P	**Pn**	**09 16 04.0**	**+3.5**
	123nm,0.3s,baz=106,slow=7.4,SNR=2.1						
DAV				S	**Sn**	**09 17 02.2**	**-0.9**
	216nm,0.4s,baz=275,slow=21,SNR=1.9						
DAV				LR	LR	09 17 48.4	
	comp=Z,64nm,19.5s,baz=132,slow=33						
DAV	**Davao City (W)**	**5.55**	**341**		**Pn**	**09 15 58.6**	**-1.9**
KCP	**Kidapawan**	**5.67**	**337**	*i* P	**Pn**	**09 16 01.9**	**-0.3**
KCP				*i* S	**Sn**	**09 17 05.5**	**-0.5**
CDOP	**Cateel, Davao**	**6.04**	**351**	*i* P	**Pn**	**09 16 06.6**	**-0.6**
CDOP				*i* S	**Sn**	**09 17 12.6**	**-2.3**
APSI	**Ampana**	**6.30**	**245**	P	**Pn**	**09 16 13.2**	**+2.4**
	0.7nm952nm33nm,0.4s						
TOLI2	**Tolitoli**	**6.61**	**264**	Pn	**Pn**	**09 16 13.8**	**-1.1**
FAKI	**Fak Fak**	**6.76**	**134**	Pn	**Pn**	**09 16 16.6**	**-0.4**
KAPI	**Kappang**	**10.16**	**228**	P	**Pn**	**09 17 05.5**	**+2.2**
	14nm,0.3s,baz=18,slow=9.7,SNR=8.0						
KAPI				S	**Sn**	**09 18 53.4**	**-2.0**
	11nm,0.4s,baz=45,slow=14,SNR=4.6						
KAPI	**Kappang**	**10.16**	**228**		**Pn**	**09 17 04.6**	**+1.3**
TGY	**Tagaytay City**	**13.79**	**333**	LR	LR	09 24 00.3	
	comp=Z,168nm,22.0s,baz=180,slow=40						
DRS	**Darwin Rock St**	**14.55**	**166**	P	**P**	**09 18 07.2**	**+2.0**
MTN	**Manton Dam**	**15.00**	**166**		**Pn**	**09 18 06.8**	**-0.4**
KNRA	**Kununurra**	**17.40**	**175**		**P**	**09 18 37.2**	**+0.4**
KNRA				IAmb	IAmb	09 18 42.1	
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.82**	**185**	P	**P**	**09 19 03.2**	**-0.1**
	comp=Z,8.7nm,0.6s,baz=18,slow=8.3,SNR=22						
FITZ	**Fitzroy Crossi**	**19.82**	**185**		**P**	**09 19 03.0**	**-0.2**
TWG	**Pinlang**	**21.79**	**344**	P	**P**	**09 19 22.2**	**-2.1**
TWG				IAmb	IAmb	09 19 22.5	
	comp=Z,13nm,0.7s						
YULB	**Yu-li**	**22.27**	**345**	P	**P**	**09 19 28.3**	**-1.1**
YULB				IAmb	IAmb	09 19 29.4	
	comp=Z,10nm,0.7s						
WB0	**Warramunga Arr**	**22.50**	**162**		**P**	**09 19 31.7**	**-0.1**
WB0				IAmb	IAmb	09 19 32.6	
	comp=Z,34nm,1.1s						
WRAB	**Tennant Creek**	**22.64**	**163**	P	**P**	**09 19 32.8**	**-0.5**
WRAB	**Tennant Creek**	**22.64**	**163**	P	**P**	**09 19 33.3**	**0.0**
WRAB				IAmb	IAmb	09 19 34.0	
	comp=Z,18nm,0.5s						
WRA	**Warramunga Arr**	**22.65**	**163**	P	**P**	**09 19 33.0**	**-0.3**
	comp=Z,9.7nm,0.3s,baz=343,slow=10,SNR=148						
	comp=Z,9.7nm,0.3s						
WRA	**Warramunga Arr**	**22.65**	**163**	P	**P**	**09 19 32.1**	**-1.2**
WR8	**Warramunga Arr**	**22.71**	**162**		**P**	**09 19 33.9**	**0.0**
WR8				IAmb	IAmb	09 19 34.6	
	comp=Z,16nm,0.8s						
SSLB	**Suanglung**	**22.74**	**345**		**P**	**09 19 33.3**	**-0.9**
SSLB				IAmb	IAmb	09 19 36.3	
	comp=Z,13nm,0.8s						
YHNB	**Yeheng**	**23.48**	**346**	P	**P**	**09 19 40.8**	**-0.5**
YHNB				IAmb	IAmb	09 19 41.8	
	comp=Z,35nm,1.4s						
MBWA	**Marble Bar**	**23.99**	**198**	P	**P**	**09 19 46.0**	**+0.2**
MBWA	**Marble Bar**	**23.99**	**198**	P	**P**	**09 19 44.9**	**-0.9**
MBWA				IAmb	IAmb	09 20 25.9	
	comp=Z,40nm,1.4s						
JOW	**Kunigami**	**24.93**	**2**	P	**P**	**09 19 55.3**	**+1.0**
JOW				IAmb	IAmb	09 19 57.6	
	comp=Z,14nm,1.2s						
QIS	**Mount Isa**	**25.24**	**152**	P	**P**	**09 19 58.0**	**+0.8**
AS31	**Alice Springs**	**26.08**	**166**		**P**	**09 20 05.1**	**+0.2**
ASAR	**Alice Springs**	**26.08**	**166**	P	**P**	**09 20 04.8**	**0.0**
	comp=Z,4.8nm,0.4s,baz=344,slow=7.5,SNR=160						
	comp=Z,4.8nm,0.4s						
ASAR	**Alice Springs**	**26.08**	**166**	P	**P**	**09 20 04.5**	**-0.3**
AS01	**Alice Springs**	**26.09**	**166**	P	**P**	**09 20 04.9**	**0.0**
MEEK	**Meekatharra**	**29.48**	**196**	P	**P**	**09 20 35.3**	**+0.1**
FORT	**Forrest**	**32.38**	**179**	P	**P**	**09 21 00.4**	**-0.2**
MORW	**Morawa**	**32.53**	**199**	P	**P**	**09 21 02.3**	**+0.4**
MORW	**Morawa**	**32.53**	**199**	P	**P**	**09 21 01.8**	**-0.1**
BLDU	**Ballidu**	**33.77**	**197**	P	**P**	**09 21 12.8**	**+0.1**
KLBR	**Kelberrin**	**34.42**	**195**	P	**P**	**09 21 18.2**	**-0.1**
MUN	**Mundaring**	**35.20**	**197**	P	**P**	**09 21 25.3**	**+0.3**
BBOO	**Buckleboo**	**35.37**	**167**	P	**P**	**09 21 26.3**	**-0.2**
BBOO	**Buckleboo**	**35.37**	**167**	P	**P**	**09 21 26.6**	**+0.1**
KSRS	**Korea Array**	**35.51**	**1**	P	**P**	**09 21 27.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=180,slow=9.8,SNR=4.1						
	comp=Z,0.7nm,0.5s						
NWAO	**Narrogin (SRO)**	**35.82**	**195**	P	**P**	**09 21 30.4**	**+0.1**
MJAR	**Matsushiro Arr**	**36.02**	**15**	P	**P**	**09 21 30.3**	**-1.7**
	comp=Z,2.2nm,0.4s,baz=186,slow=9.1,SNR=10						
	comp=Z,2.2nm,0.4s						
MJAR	**Matsushiro Arr**	**36.02**	**15**	IAmb	IAmb	09 21 32.3	
	comp=Z,1.2nm,0.5s						
MJB9	**Matsu-Tunnel**	**36.02**	**15**	P	**P**	**09 21 31.6**	**-0.4**
MJB9				IAmb	IAmb	09 21 33.2	
	comp=Z,4.3nm,0.6s						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**09 21 33.1**	**+0.4**
	comp=Z,12nm,0.3s,baz=340,slow=7.6,SNR=51						
	comp=Z,12nm,0.3s						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**09 21 32.7**	**0.0**
HTT	**Hallett**	**36.68**	**164**	P	**P**	**09 21 38.2**	**+0.5**
CMSA	**Cobar Meteorol**	**37.43**	**154**	P	**P**	**09 21 45.2**	**+1.2**
LZH	**Lanzhou**	**40.49**	**330**	*e*P	**P**	**09 22 12.4**	**+2.7**
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
CAN	**Canberra**	**42.10**	**153**	P	**P**	**09 22 23.1**	**+0.4**
CAN				IAmb	IAmb	09 22 25.1	
	comp=Z,11nm,1.0s						
GTA2	**Gaotai**	**45.17**	**330**	*e*P	**P**	**09 22 48.6**	**+1.2**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	**Songino Array**	**49.34**	**341**	P	**P**	**09 23 19.7**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=156,slow=6.9,SNR=4.1						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.51**	**326**	P	**P**	**09 24 33.8**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=120,slow=8.3,SNR=30						
	comp=Z,3.2nm,0.5s						
MKAR	**Makanchi Array**	**59.51**	**326**		**P**	**09 24 33.4**	**+0.2**
ZALV	**Zalesovo Beam**	**62.60**	**333**	P	**P**	**09 24 54.7**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=114,slow=6.5,SNR=1.9						
	comp=Z,0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**63.71**	**328**	P	**P**	**09 25 01.5**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=129,slow=6.1,SNR=21						
	comp=Z,3.2nm,0.7s						
KURK	**Kurchatov**	**63.71**	**328**		**P**	**09 25 01.4**	**+0.1**
KKAR	**Karatay Array**	**65.08**	**317**	P	**P**	**09 25 10.8**	**+0.4**
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**09 26 45.1**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=323,slow=6.4,SNR=10						
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**81.42**	**173**	IAmb	IAmb	09 26 46.2	
	comp=Z,1.5nm,0.7s						
QSPA	**South Pole Qui**	**91.70**	**180**	P	**P**	**09 27 35.6**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=264,slow=3.7,SNR=5.5						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**91.70**	**180**	IAmb	IAmb	09 27 43.1	
	comp=Z,9.2nm,1.5s						
FINES	**FINESS Array B**	**93.84**	**332**	LR	LR	10 15 39.7	
	comp=Z,14nm,18.2s,baz=105,slow=39						
TXAR	**Lajitas Array**	**122.27**	**53**	PKP	**PKPdf**	**09 33 23.8**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=348,slow=1.2,SNR=2.1						
TORD	**Torodi Ar. Bea**	**124.10**	**287**	PKP	**PKPdf**	**09 33 27.6**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=45,slow=2.1,SNR=1.3						

*IDC **23** 09:25:05.0±1.4, 29°.2N×95°.72E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=61.8km s-min=20.0km az=67.0*

ISC 23 09:25:06.4±1.6, 29°.3N±0°.2×95°.7E±0°.4, h10km, n7, σ1^{s}12/7, mb3.8/5, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**20.30**	**21**	P	**P**	**09 29 43.5**	**+0.9**
	0.6nm,0.4s,baz=209,slow=12,SNR=3.5						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**20.41**	**333**	P	**P**	**09 29 44.5**	**+1.0**
	0.4nm,0.4s,baz=139,slow=11,SNR=5.3						
	0.4nm,0.4s						
TLY	**Talaya**	**23.17**	**13**	P	**P**	**09 30 12.2**	**-0.8**
	3.0nm,0.6s,baz=188,slow=15,SNR=2.2						
	3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**24.97**	**334**	P	**P**	**09 30 29.2**	**-0.7**
	0.4nm,0.6s,baz=141,slow=12,SNR=2.9						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**25.92**	**345**	P	**P**	**09 30 38.0**	**-0.6**
	0.8nm,0.4s,baz=141,slow=9.3,SNR=4.9						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**61.48**	**138**	P	**P**	**09 35 22.7**	**-0.8**
	1.2nm,0.9s,baz=322,slow=8.5,SNR=2.4						
	1.2nm,0.9s						
ASAR	**Alice Springs**	**64.17**	**141**	P	**P**	**09 35 42.4**	**+1.0**
	0.3nm,0.5s,baz=329,slow=6.9,SNR=7.1						
	0.3nm,0.5s						

*SOME **23** 09:47:34.0, 43°.67N×69°.68E*
*NNC **23** 09:47:35.4±1.8, 43°.61N×69°.71E, h0km, mb3.7, mpv3.1, Error ellipse: s-maj=10.5km s-min=5.8km az=133.0,*
Suspected Mining explosion.

ISC 23 09:47:35.8±2.1, 43°.65N±0°.08×69°.9E±0°.1, h0km, n10, σ1^{s}41/13, 2C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Boroldaу**	**0.62**	**184**	P	**Pn**	**09 47 50.7**	**-1.3**
	3.4nm,0.2s						
BRLS				S	**Sn**	**09 48 02.3**	**-0.3**
	18nm,0.4s						
KK31	**Karatay Array**	**0.70**	**141**	⇓P	**Pg**	**09 47 49.0**	**-0.3**
	4.1nm,0.5s,baz=314,slow=16,SNR=20						
KK31				⇑S	**Sb**	**09 48 01.3**	**+0.1**
	23nm,0.5s,baz=308,slow=28,SNR=19						
IUG	**Iuzhnay**	**1.50**	**176**	P	**Pg**	**09 48 04.3**	**-0.4**
	25nm,0.3s						
IUG				S	**Sg**	**09 48 25.9**	**+1.7**
	42nm,0.6s						
MRKS	**Merke**	**2.59**	**109**	Pg	**Pg**	**09 48 25.3**	**-0.3**
	2.8nm,0.3s						
MRKS				Lg	Lg	09 49 01.3	
	10nm,0.4s						
BTLS	**Baital**	**3.28**	**63**	Pg	**Pg**	**09 48 39.7**	**+0.9**
	11nm,0.4s						
BTLS				Lg	Lg	09 49 26.1	
	8.7nm,0.5s						
SGDS	**Sogindy**	**3.44**	**92**	Pg	**Pg**	**09 48 42.0**	**+0.2**
	2.5nm,0.4s						
SGDS				Lg	Lg	09 49 30.8	
	6.5nm,0.4s						
AAK	**Ala-Archa**	**3.51**	**105**	⇑Pg	**Pb**	**09 48 40.5**	**+1.5**
	1.6nm,0.5s						
AAK				⇓Lg	Lg	09 49 31.3	
	1.1nm,0.4s						
KRBS	**Karabastau**	**4.19**	**87**	Pg	**Pg**	**09 48 55.6**	**-0.5**
	2.4nm,0.5s						
KRBS				Lg	Lg	09 49 53.4	
	1.9nm,0.4s						
KST	**Kastek**	**4.46**	**96**	Pg	**Pg**	**09 48 59.6**	**-1.7**
	2.6nm,0.3s						
KST				Lg	Lg	09 50 00.3	
	5.3nm,0.6s						
KTBS	**Karatobe**	**4.92**	**87**	Pg	**Pg**	**09 49 07.2**	**-2.9**
	0.3nm,0.1s						
KTBS				Lg	Lg	09 50 14.1	
	7.1nm,0.5s						

*IDC **23** 10:40:47.4±0.8, 54°.75N×159°.96W, h0km, mb4.3/29, mbtmp4.3/33, ML4.1/4, MS3.4/19, Error ellipse: s-maj=20.8km s-min=11.8km az=171.0*
*NEIC **23** 10:40:52.8±1.8, 54°.68N±0°.08×159°.8W±0°.1, h35km±5km, mb4.3/77, ML4.5/34, Error ellipse: s-maj=11.7km s-min=8.3km az=148.0*

ISC 23 10:40:51.4±0.8, 54°.72N±0°.06×159°.71W±0°.04, h23km±4km, n209, σ1^{s}14/162, mb4.5/76, MS3.4/14, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.12**	**35**		**Pn**	**10 40 57.1**	**-0.8**
CNBA				IAML		10 41 02.4	
	comp=E,69μm,0.5s						
CNBA				IAML		10 41 02.7	
	comp=N,91μm,0.5s						
CHNA	**Chernabura Isl**	**0.13**	**32**	P	**Pb**	**10 40 56.5**	**+0.4**
CHNA	**Chernabura Isl**	**0.13**	**32**	S	**Sb**	**10 40 57.8**	**-1.5**
SDPT	**Sand Point**	**0.77**	**325**	P	**Pb**	**10 41 06.2**	**+0.1**
SDPT	**Sand Point**	**0.77**	**325**	S	**Sn**	**10 41 16.7**	**-1.0**
SDPT	**Sand Point**	**0.77**	**325**		**Pb**	**10 41 06.0**	**-0.2**
SDPT				IAML		10 41 17.1	
	comp=N,22μm,0.8s						
SDPT				IAML		10 41 17.1	
	comp=E,27μm,0.6s						
VNFG	**Fog Glacier, M**	**1.57**	**3**		**Pb**	**10 41 19.6**	**-0.2**
CHGN	**Chignik**	**1.75**	**24**		**Pn**	**10 41 21.2**	**+1.0**
CHGN				IAML		10 41 52.3	
	comp=N,5μm,0.5s						
AKUT	**Akutan**	**3.59**	**263**	P	**Pn**	**10 41 46.3**	**+0.8**
AKUT	**Akutan**	**3.59**	**263**	S	**Sn**	**10 42 28.8**	**+1.7**
AKUT	**Akutan**	**3.59**	**263**		**Pn**	**10 41 46.3**	**+0.8**
AKUT				IAML		10 42 44.6	
	comp=E,586nm,1.0s						
SII	**Sitkinak Islan**	**3.63**	**57**	P	**Pn**	**10 41 46.4**	**+0.2**
SII	**Sitkinak Islan**	**3.63**	**57**	S	**Sn**	**10 42 31.2**	**+2.9**
SII	**Sitkinak Islan**	**3.63**	**57**		**Pn**	**10 41 46.5**	**+0.4**
SII				IAML		10 43 02.5	
	comp=N,2μm,0.9s						
SII				IAML		10 43 05.7	
	comp=E,1μm,0.8s						
LVA	**Lava Point**	**3.74**	**264**		**Pn**	**10 41 48.4**	**+0.8**
LVA				IAML		10 42 48.7	
	comp=N,923nm,1.0s						
UNV	**Unalaska Valle**	**4.08**	**260**	P	**Pn**	**10 41 51.8**	**-0.4**
UNV	**Unalaska Valle**	**4.08**	**260**		**

M31M	**Drury Creek, Y**	**15.14**	**50**	IAmb	IAmb	10 44 39.6		
	comp=Z,20nm,0.8s							
CRAG	**Craig**	**15.21**	**76**	P	**Pn**	**10 44 25.5**	**+1.1**	
J30M	**Hart River**	**15.29**	**40**	IAmb	IAmb	10 44 40.1		
	comp=Z,28nm,0.8s							
B20K	**Meade River**	**15.39**	**3**	IAmb	IAmb	10 44 55.1		
	comp=Z,45nm,1.4s							
P33M	**Teslin, Yukon**	**15.41**	**58**	IAmb	IAmb	10 44 42.9		
	comp=Z,18nm,0.9s							
Q32M	**Nakina River**	**15.54**	**63**	IAmb	IAmb	10 44 44.8		
	comp=Z,11nm,0.8s							
SHEM	**Shemya Is, Ala**	**15.60**	**273**	LR	LR	10 50 28.2		
	comp=Z,88nm,20.5s,baz=84,slow=38							
B22K	**Teshekpuk Lake**	**15.93**	**8**	IAmb	IAmb	10 44 43.7		
	comp=Z,16nm,0.7s							
G29M	**Pine Creek**	**16.04**	**32**	IAmb	IAmb	10 44 44.8		
	comp=Z,24nm,0.9s							
H31M	**Peel River**	**16.63**	**38**	IAmb	IAmb	10 45 01.9		
	comp=Z,25nm,0.7s							
G30M	**tAoh Zraii Nji**	**16.64**	**33**	IAmb	IAmb	10 44 48.5		
	comp=Z,54nm,1.1s							
DLBC	**Dease Lake**	**16.70**	**65**	Pn	**P**	**10 44 45.2**	**-0.5**	
	comp=Z,0.3nm,0.3s,baz=298,slow=7.0,SNR=7.7							
DLBC				LR	LR	10 50 23.2		
	comp=Z,50nm,18.9s,baz=245,slow=34							
	comp=Z,1.6nm,0.4s							
F30M	**Barrier River**	**17.15**	**32**	IAmb	IAmb	10 45 08.1		
	comp=Z,15nm,0.7s							
G31M	**Satah River**	**17.24**	**35**		**Pn**	**10 44 49.5**	**-0.8**	
G31M				IAmb	IAmb	10 44 55.4		
	comp=Z,22nm,1.0s							
F31M	**Tsiigehtchic**	**17.70**	**34**	IAmb	IAmb	10 45 05.1		
	comp=Z,13nm,0.6s							
INK	**Inuvik**	**18.25**	**32**	P	**Pn**	**10 45 01.9**	**-0.9**	
	comp=Z,1.2nm,0.3s,baz=222,slow=13,SNR=23							
INK				S	**Sn**	**10 48 23.7**	**-1.8**	
	comp=Z,1.4nm,0.8s,baz=340,slow=11,SNR=1.0							
INK				LR	LR	10 52 33.1		
	comp=Z,128nm,19.6s,baz=236,slow=38							
	comp=Z,14nm,0.8s							
INK	**Inuvik**	**18.25**	**32**		**P**	**10 45 02.9**	**+0.1**	
INK				IAmb	IAmb	10 45 06.5		
	comp=Z,16nm,0.9s							
BBB	**Bella Bella**	**18.90**	**85**	LR	LR	10 50 52.6		
	comp=Z,86nm,20.1s,baz=247,slow=32							
C36M	**Paulatuk**	**21.75**	**34**		**P**	**10 45 40.1**	**-0.6**	
A36M	**Sachs Harbour**	**22.65**	**27**	P	**P**	**10 45 52.1**	**+1.8**	
A36M				IAmb	IAmb	10 45 57.2		
	comp=Z,20nm,0.9s							
YKAW3	**Yellowknife Wh**	**24.28**	**53**		**P**	**10 46 07.2**	**+0.7**	
YKA	**Yellowknife Ar**	**24.28**	**53**	P	**P**	**10 46 06.4**	**-0.1**	
	comp=Z,2.1nm,0.6s,baz=270,slow=26,SNR=17							
YKA				LR	LR	10 56 59.6		
	comp=Z,80nm,18.1s,baz=301,slow=40							
	comp=Z,2.1nm,0.6s							
YKA	**Yellowknife Ar**	**24.28**	**53**	P	**P**	**10 46 07.3**	**+0.8**	
PET	**Petropavlovsk**	**24.35**	**283**	P	**P**	**10 46 08.6**	**+1.4**	
	comp=Z,26nm,1.0s							
PEA0B	**Petropavlovsk-**	**24.86**	**284**		**P**	**10 46 10.8**	**-1.1**	
PETK	**Petropavlovsk-**	**24.86**	**284**	P	**P**	**10 46 10.8**	**-1.0**	
	comp=Z,11nm,0.4s,baz=78,slow=13,SNR=65							
PETK				LR	LR	10 55 59.2		
	comp=Z,39nm,20.1s,baz=80,slow=37							
	comp=Z,11nm,0.4s							
PETK	**Petropavlovsk-**	**24.86**	**284**		**P**	**10 46 11.2**	**-0.7**	
B08A	**Colville Reser**	**25.62**	**88**	P	**P**	**10 46 20.6**	**+1.8**	
B08A				IAmb	IAmb	10 46 23.8		
	comp=Z,4.5nm,0.8s							
EPH	**Ephrata**	**25.98**	**90**	IAmb	IAmb	10 46 24.5		
	comp=Z,6.8nm,1.0s							
HAWA	**Hanford**	**26.53**	**92**	IAmb	IAmb	10 46 30.0		
	comp=Z,9.8nm,1.2s							
MA2	**Magadan**	**26.77**	**301**	LR	LR	10 57 01.4		
	comp=Z,58nm,19.2s,baz=104,slow=37							
NEW	**Newport**	**26.95**	**86**	LR	LR	10 55 32.9		
	comp=Z,24nm,20.5s,baz=288,slow=33							
NEW	**Newport**	**26.95**	**86**	IAmb	IAmb	10 46 33.3		
	comp=Z,4.4nm,0.8s							
YBH	**Yreka Blue Hor**	**27.51**	**103**	LR	LR	10 55 02.7		
	comp=Z,142nm,20.4s,baz=307,slow=31							
MFID	**Camas Ranch**	**30.40**	**93**	IAmb	IAmb	10 47 04.0		
	comp=Z,3.5nm,1.0s							
RES	**Resolute Bay**	**31.70**	**27**	LR	LR	11 02 53.3		
	comp=Z,76nm,18.2s,baz=346,slow=42							
KVN	**Kaiserville**	**31.91**	**102**	IAmb	IAmb	10 47 58.0		
	comp=Z,4.0nm,1.2s							
NVAR	**Mina Array Bea**	**32.23**	**103**	LR	LR	10 57 58.3		
	comp=Z,100nm,20.1s,baz=352,slow=32							
YHL	**Hebgen Lake**	**32.24**	**87**	IAmb	IAmb	10 47 19.9		
	comp=Z,2.9nm,0.9s							
ELK	**Elko**	**32.42**	**97**	LR	LR	10 58 17.2		
	comp=Z,89nm,20.6s,baz=308,slow=32							
YMR	**Madison River**	**32.47**	**88**	IAmb	IAmb	10 47 22.4		
	comp=Z,4.0nm,0.7s							
YNE	**Yellowstone No**	**32.83**	**86**	P	**P**	**10 47 24.9**	**+1.7**	
YNE				IAmb	IAmb	10 47 25.4		
	comp=Z,2.9nm,1.0s							
HVU	**Hansel Valley**	**33.18**	**93**	P	**P**	**10 47 26.8**	**+0.7**	
HVU				IAmb	IAmb	10 47 28.8		
	comp=Z,5.8nm,0.9s							
TIXI	**Tiksi**	**33.79**	**327**	LR	LR	11 02 49.1		
	comp=Z,66nm,18.3s,baz=54,slow=39							
DUG	**Dugway, Tooele**	**34.18**	**95**	IAmb	IAmb	10 47 38.1		
	comp=Z,6.8nm,1.1s							
PDAR	**Pinedale Array**	**34.43**	**89**	P	**P**	**10 47 38.2**	**+1.1**	
	comp=Z,0.9nm,0.6s,baz=294,slow=4.8,SNR=15							
	comp=Z,0.9nm,0.6s							
Q16A	**Castle Valley**	**35.98**	**96**	IAmb	IAmb	10 47 53.2		
	comp=Z,6.0nm,1.0s							
ILON	**Igloolik, Nuna**	**36.41**	**36**		**P**	**10 47 53.9**	**+0.4**	
PFO	**Pinyon Flats O**	**36.73**	**107**	LR	LR	11 00 06.3		
	comp=Z,88nm,19.1s,baz=322,slow=31							
ULM	**Lac du Bonnet**	**37.93**	**70**	P	**P**	**10 48 06.7**	**0.0**	
	comp=Z,2.1nm,0.7s,baz=292,slow=6.1,SNR=4.6							
ULM				LR	LR	11 03 28.9		
	comp=Z,76nm,18.4s,baz=242,slow=36							
	comp=Z,2.1nm,0.7s							
ULM	**Lac du Bonnet**	**37.93**	**70**	IAmb	IAmb	10 48 24.9		
	comp=Z,6.7nm,1.3s							
MVCO	**Mesa Verde**	**38.68**	**95**	IAmb	IAmb	10 48 14.9		
	comp=Z,3.1nm,0.8s							
AGMN	**Agassiz Nation**	**39.01**	**72**	IAmb	IAmb	10 48 16.6		
	comp=Z,4.0nm,0.8s							
NEEM	**North Greenlan**	**41.05**	**18**	*i* P	**P**	**10 48 32.0**	**-0.6**	
NEEM				IAmb	IAmb	10 48 36.0		
	comp=Z,7.4nm,0.7s							
KULLO	**Kullorsuaq**	**41.30**	**23**	*i* P	**P**	**10 48 35.9**	**+1.5**	
KULLO				IAmb	IAmb	10 48 40.8		
	comp=Z,7.4nm,0.8s							
ANMO	**Albuquerque**	**41.45**	**96**	LR	LR	11 03 16.0		
	comp=Z,29nm,18.5s,baz=309,slow=32							
EYMN	**Ely**	**41.61**	**70**		**P**	**10 48 37.7**	**+0.5**	
EYMN				IAmb	IAmb	10 48 39.4		
	comp=Z,6.6nm,0.7s							
E38A	**The Farm, Brul**	**42.37**	**72**	IAmb	IAmb	10 48 44.0		
	comp=Z,4.8nm,0.6s							
NOR	**Nord**	**42.48**	**8**	*i* P	**P**	**10 48 43.2**	**-0.8**	
NOR				IAmb	IAmb	10 48 47.3		
	comp=Z,3.1nm,0.8s							
UPNV	**Upernavik**	**42.52**	**25**	*i* P	**P**	**10 48 46.2**	**+1.8**	
UPNV				IAmb	IAmb	10 48 46.8		
	comp=Z,16nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**43.15**	**229**	T	T	11 34 57.0		
	baz=28,slow=76,SNR=216							
H11N3	**WAKE ISLAND Hy**	**43.15**	**229**	T	T	11 34 56.6		
	baz=28,slow=76,SNR=279							
H11N1	**WAKE ISLAND Hy**	**43.16**	**229**	T	T	11 34 58.4		
	baz=28,slow=76,SNR=160							
FRB	**Frobisher Bay**	**43.59**	**40**	LR	LR	11 08 45.9		
	comp=Z,97nm,19.0s,baz=322,slow=38							
H11S1	**WAKE ISLAND Hy**	**44.31**	**229**	T	T	11 36 26.5		
	baz=28,slow=76,SNR=75							
H11S2	**WAKE ISLAND Hy**	**44.32**	**229**	T	T	11 36 27.2		
	baz=28,slow=76,SNR=114							
H11S3	**WAKE ISLAND Hy**	**44.33**	**229**	T	T	11 36 29.6		
	baz=28,slow=76,SNR=70							
MNTX	**Cornudas Mount**	**44.41**	**98**		**P**	**10 49 01.0**	**+0.8**	
VHRN	**Van Horn**	**45.32**	**99**		**P**	**10 49 07.9**	**+0.5**	
VHRN				IAmb	IAmb	10 49 10.1		
	comp=Z,7.3nm,1.4s							
MAJO	**Matsushiro**	**45.44**	**273**	P	**P**	**10 49 08.9**	**+0.7**	
MJAR	**Matsushiro Arr**	**45.44**	**273**	P	**P**	**10 49 07.4**	**-0.9**	
	comp=Z,2.7nm,0.7s,baz=36,slow=6.2,SNR=9.0							
	comp=Z,2.7nm,0.7s							
MJAR	**Matsushiro Arr**	**45.44**	**273**		**P**	**10 49 08.2**	**-0.1**	
MJB9	**Matsu-Tunnel**	**45.44**	**273**		**P**	**10 49 07.5**	**-0.8**	
DAG	**Danmarks Havn**	**46.47**	**12**	*i* P	**P**	**10 49 15.0**	**-0.8**	
DAG				IAmb	IAmb	10 49 19.2		
	comp=Z,4.7nm,0.6s							
KBS	**Kingsbay**	**46.52**	**2**	*e*P	**P**	**10 49 17.2**	**+1.1**	
KBS				IAmb	IAmb	10 49 21.4		
	comp=Z,14nm,0.9s							
KBS	**Kingsbay**	**46.52**	**2**	*i* P	**P**	**10 49 16.0**	**-0.2**	
SUMG	**Summit**	**46.69**	**21**		**P**	**10 49 18.1**	**+0.1**	
SUMG	**Summit**	**46.69**	**21**	*i* P	**P**	**10 49 18.4**	**+0.3**	
SUMG				IAmb	IAmb	10 49 20.0		
	comp=Z,7.7nm,1.0s							
NRIK	**Noril'sk**	**47.01**	**333**	P	**P**	**10 49 18.4**	**-1.7**	
	comp=Z,6.6nm,0.7s,baz=47,slow=5.5,SNR=5.6							
	comp=Z,6.6nm,0.7s							
NRIK	**Noril'sk**	**47.01**	**333**		**P**	**10 49 19.0**	**-1.1**	
TX31	**Lajitas Ar. Si**	**47.16**	**99**	IAmb	IAmb	10 49 23.9		
	comp=Z,5.5nm,1.4s							
TXAR	**Lajitas Array**	**47.16**	**99**	P	**P**	**10 49 22.8**	**+0.9**	
	comp=Z,1.8nm,0.7s,baz=301,slow=6.0,SNR=43							
TXAR				LR	LR	11 08 13.2		
	comp=Z,71nm,18.6s,baz=295,slow=35							
	comp=Z,1.8nm,0.7s							
SPA0	**Spitsbergen Ar**	**47.34**	**1**	*e*P	**P**	**10 49 21.9**	**-0.7**	
SPITS	**Spitsbergen Ar**	**47.34**	**1**	P	**P**	**10 49 21.8**	**-0.9**	
	comp=Z,1.1nm,0.3s,baz=29,slow=5.7,SNR=19							
	comp=Z,1.1nm,0.3s							
DBG	**Daneborg**	**48.42**	**14**	*i* P	**P**	**10 49 31.3**	**+0.3**	
DBG				IAmb	IAmb	10 49 31.8		
	comp=Z,2.6nm,0.6s							
SCHQ	**Schefferville**	**49.65**	**49**	P	**P**	**10 49 40.0**	**-0.7**	
	comp=Z,3.3nm,0.8s,baz=274,slow=4.4,SNR=4.5							
	comp=Z,3.3nm,0.8s							
SCHQ	**Schefferville**	**49.65**	**49**	IAmb	IAmb	10 49 43.4		
	comp=Z,5.2nm,0.9s							
KSRS	**Korea Array**	**50.72**	**282**	P	**P**	**10 49 47.5**	**-1.5**	
	comp=Z,2.3nm,0.8s,baz=54,slow=6.7,SNR=5.0							
	comp=Z,2.3nm,0.8s							
WVT	**Wavy**	**51.38**	**80**		**P**	**10 49 53.5**	**-0.4**	
L56A	**Greenwood**	**52.89**	**68**		**P**	**10 50 05.0**	**-0.2**	
SONM	**Songino Array**	**54.88**	**305**	P	**P**	**10 50 19.0**	**-0.7**	
	comp=Z,3.9nm,0.9s,baz=46,slow=7.5,SNR=10							
	comp=Z,3.9nm,0.9s							
SONM	**Songino Array**	**54.88**	**305**		**P**	**10 50 18.8**	**-1.0**	
SONM				IAmb	IAmb	10 50 20.5		
	comp=Z,3.2nm,0.9s							
VADS	**Vadso**	**55.29**	**356**	*e*P	**P**	**10 50 22.8**	**+0.6**	
VADS				IAmb	IAmb	10 50 24.3		
	comp=Z,19nm,1.0s							
TRO	**Tromso**	**55.95**	**1**	*e*P	**P**	**10 50 28.7**	**+1.8**	
ARCES	**ARCESS Array B**	**55.99**	**358**	P	**P**	**10 50 26.4**	**-0.9**	
	comp=Z,1.2nm,0.4s,baz=28,slow=7.4,SNR=9.8							
	comp=Z,1.2nm,0.4s							
JETT	**Jettan, Norway**	**56.03**	**360**	*e*P	**P**	**10 50 29.9**	**+2.3**	
HHC	**Hu-ho-hao-te**	**57.28**	**296**	*e*P	**P**	**10 50 38.3**	**+1.3**	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,65nm,5.2s							
STEI	**Steigen**	**57.61**	**2**	*e*P	**P**	**10 50 39.1**	**+0.3**	
STEI				IAmb	IAmb	10 50 42.6		
	comp=Z,119nm,2.0s							
LEIR	**Leirfjorden**	**59.37**	**3**	*e*P	**P**	**10 50 53.3**	**+2.3**	
ZALV	**Zalesovo Beam**	**59.37**	**322**	P	**P**	**10 50 49.9**	**-1.3**	
	comp=Z,0.7nm,0.3s,baz=12,slow=7.7,SNR=4.5							
	comp=Z,0.7nm,0.3s							
MOL	**Molde**	**62.62**	**7**	*e*P	**P**	**10 51 13.6**	**+0.5**	
AKN	**Aaknes**	**62.98**	**7**	*e*P	**P**	**10 51 15.9**	**+0.4**	
DOMB	**Dombas**	**63.24**	**6**	*e*P	**P**	**10 51 17.7**	**+0.3**	
DOMB				IAmb	IAmb	10 51 21.4		
	comp=Z,8.5nm,0.8s							
FINES	**FINESS Array B**	**64.09**	**357**	P	**P**	**10 51 22.1**	**-0.7**	
	comp=Z,2.8nm,0.6s,baz=30,slow=8.8,SNR=12							
	comp=Z,2.8nm,0.6s							
KURK	**Kurchatov**	**64.21**	**323**	P	**P**	**10 51 23.2**	**-0.6**	
GTA2	**Gaotai**	**64.29**	**302**	*e*P	**P**	**10 51 24.0**	**-0.7**	
GTA2				pmax	pmax			
	comp=Z,9.0nm,1.0s							
KURBB	**Kurchatov Arra**	**64.32**	**323**	P	**P**	**10 51 23.0**	**-1.6**	
	comp=Z,1.0nm,0.3s,baz=25,slow=6.1,SNR=6.7							
	comp=Z,1.0nm,0.3s							
NB2	**NORSAR Subarra**	**64.36**	**5**	P	**P**	**10 51 24.1**	**-0.6**	
	comp=Z,2.3nm,0.5s,baz=354,slow=6.5							
NB2	**NORSAR Subarra**	**64.36**	**5**	P	**P**	**10 51 24.1**	**-0.6**	
NOA	**NORSAR Array B**	**64.36**	**5**	P	**P**	**10 51 23.2**	**-1.5**	
	comp=Z,2.2nm,0.6s,baz=355,slow=6.6,SNR=7.4							
	comp=Z,2.2nm,0.6s							
SKAR	**Skarslia**	**64.55**	**6**	*e*P	**P**	**10 51 26.6**	**+0.6**	
NC602	**NORSAR Array S**	**64.68**	**5**	*e*P	**P**	**10 51 26.2**	**-0.5**	
BVAR	**Borovoye Array**	**64.89**	**329**	P	**P**	**10 51 27.4**	**-0.9**	
	comp=Z,5.7nm,0.6s,baz=34,slow=7.5,SNR=14							
	comp=Z,5.7nm,0.6s							
LZDM	**Lanzhou Array**	**65.03**	**297**	P	**P**	**10 51 28.7**	**-1.2**	
	comp=Z,2.2nm,0.5s,baz=4.6,slow=9.2,SNR=3.8							
	comp=Z,2.2nm,0.5s							
HFS	**Hagfors**	**65.37**	**4**	P	**P**	**10 51 30.6**	**-0.7**	
	comp=Z,5.1nm,0.6s,baz=0.0,slow=4.9,SNR=17							
	comp=Z,5.1nm,0.6s							
KONO	**Kongsberg**	**65.66**	**6**	*e*P	**P**	**10 51 36.7**	**+3.6**	
BLS5	**Blasjo**	**65.67**	**8**	*e*P	**P**	**10 51 32.8**	**-0.4**	
MKAR	**Makanchi Array**	**66.13**	**318**	P	**P**	**10 51 35.0**	**-1.5**	
	comp=Z,1.5nm,0.5s,baz=45,slow=5.8,SNR=11							
	comp=Z,1.5nm,0.5s							
MKAR	**Makanchi Array**	**66.13**	**318**		**P**	**10 51 35.0**	**-1.5**	
WMQ	**Urumqi**	**66.38**	**313**	*e*P	**P**	**10 51 42.6**	**+4.5**	
WMQ				pmax	pmax			
	comp=Z,12nm,0.9s							
EKA	**Eskdalemuir Ar**	**68.63**	**14**	P	**P**	**10 51 52.4**	**+0.3**	
	comp=Z,4.5nm,0.7s,baz=340,slow=4.9,SNR=13							
	comp=Z,4.5nm,0.7s							
AAK	**Ala-Archa**	**72.58**	**321**	P	**P**	**10 52 15.5**	**-1.1**	
	comp=Z,1.8nm,0.3s,baz=296,slow=1.2,SNR=4.0							
	comp=Z,1.8nm,0.3s							
AAK	**Ala-Archa**	**72.58**	**321**	IAmb	IAmb	10 52 19.9		
	comp=Z,3.0nm,0.8s							
PZH	**PanZhiHua**	**73.49**	**292**	P	**P**	**10 52 23.6**	**+1.5**	
CLL	**Collm**	**74.17**	**5**	*i* P	**P**	**10 52 25.8**	**+0.3**	
CLL				*i* pP	**sP**	**10 52 36.0**	**+0.2**	
AKASG	**Malin Array Be**	**74.68**	**354**	P	**P**	**10 52 27.3**	**-1.2**	
	comp=Z,1.7nm,0.3s,baz=8.7,slow=5.6,SNR=9.2							
	comp=Z,1.7nm,0.3s							
GERES	**GERESS Array B**	**76.66**	**4**	P	**P**	**10 52 40.1**	**+0.1**	
	comp=Z,1.0nm,0.7s,baz=350,slow=4.1,SNR=7.9							
	comp=Z,1.0nm,0.7s							
CONA	**Conrad Observa**	**77.66**	**3**	*e*P	**P**	**10 52 46.3**	**+0.7**	
	comp=Z,3.6nm,0.9s							
RONA	**Rosalia, Austr**	**77.90**	**3**	*e*P	**P**	**10 52 47.3**	**+0.4**	
	comp=Z,1.3nm,0.5s							
MOTA	**Moosalm**	**78.01**	**6**	*e*P	**P**	**10 52 48.1**	**+0.5**	
	comp=Z,4.5nm,0.8s							
LESA	**Schwarzleotal**	**78.03**	**5**	*e*P	**P**	**10 52 47.3**	**-0.3**	
	comp=Z,1.6nm,0.5s							
WATA	**Walderalm**	**78.05**	**6**	*e*P	**P**	**10 52 49.1**	**+1.2**	
	comp=Z,7.8nm,0.8s							
WTTA	**Wattenberg**	**78.13**	**6**	*i* P	**P**	**10 52 48.2**	**-0.2**	
	comp=Z,6.4nm,0.8s							
SQTA	**Sankt Quirin**	**78.14**	**6**	*e*P	**P**	**10 52 47.9**	**-0.5**	
	comp=Z,5.0nm,0.7s							
FETA	**Feichten**	**78.31**	**7**	*i* P	**P**	**10 52 48.7**	**-0.6**	
	comp=Z,3.4nm,0.9s							
ARSA	**Arzberg**	**78.32**	**3**	*e*P	**P**	**10 52 49.7**	**+0.4**	
	comp=Z,3.5nm,1.0s							
KBA	**Koelnbreinsper**	**78.41**	**5**	*e*P	**P**	**10 52 50.7**	**+0.8**	
	comp=Z,6.1nm,1.0s							
ABTA	**Abfaltersbach**	**78.69**	**5**	*e*P	**P**	**10 52 50.9**	**-0.4**	
	comp=Z,1.7nm,0.6s							
SOKA	**Soboth**	**78.88**	**4**	*i* P	**P**	**10 52 52.7**	**+0.3**	
	comp=Z,2.0nm,0.6s							
OBKA	**Obir**	**79.03**	**4**	*i* P	**P**	**10 52 53.6**	**+0.4**	
	comp=Z,8.3nm,0.8s							
KBZ	**Khabaz**	**80.05**	**344**	P	**P**	**10 52 58.2**	**-0.4**	
	comp=Z,2.7nm,0.8s,baz=325,slow=5.4,SNR=7.1							
	comp=Z,2.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**81.49**	**290**	P	**P**	**10 53 06.0**	**-0.8**	
	comp=Z,4.2nm,0.8s,baz=12,slow=5.9,SNR=16							
	comp=Z,4.2nm,0.8s							
ESDC	**Sonseca Array**	**83.70**	**19**	P	**P**	**10 53 18.8**	**+0.7**	
	comp=Z,3.3nm,0.8s,baz=340,slow=4.7,SNR=24							
	comp=Z,3.3nm,0.8s							
ESDC	**Sonseca Array**	**83.70**	**19**	P	**P**	**10 53 18.6**	**+0.5**	
BRTR	**Keskin Array B**	**85.23**	**350**	P	**P**	**10 53 25.7**	**-0.3**	
	comp=Z,1.4nm,0.8s,baz=343,slow=3.9,SNR=4.4							
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**96.43**	**238**	P	**P**	**10 54 17.1**	**-1.2**	
	comp=Z,0.3nm,0.8s,baz=40,slow=3.3,SNR=2.8							
	comp=Z,0.3nm,0.8s							
H03N2	**Juan Fernandez**	**111.65**	**117**	T	T	13 00 27.0		
	baz=323,slow=77,SNR=7.4							
H03N1	**Juan Fernandez**	**111.66**	**117**	T	T	13 00 26.4		
	baz=323,slow=77,SNR=20							
H03N3	**Juan Fernandez**	**111.67**	**117**	T	T	13 00 26.4		
	baz=323,slow=77,SNR=9.4							
QSPA	**South Pole Qui**	**144.50**	**180**	PKP	**PKPab**	**11 00 21.9**	**-0.8**	
	comp=Z,4.1nm,0.6s,baz=92,slow=2.1,SNR=52							
QSPA	**South Pole Qui**	**144.50**	**180**		**PKPab**	**11 00 21.5**	**-1.2**	
BELA	**Belgrano 2**	**150.06**	**160**		**PKPbc**	**11 00 36.4**	**-1.8**	

AFAD ***23*** *10:45:28.8, 35.26N × 36.91E, h5km ± 4km, ML3.0*
ISK ***23*** *10:45:29.4, 35.31N × 36.38E, h14km, ML3.0/13*
GRAL ***23*** *10:45:30.3 ± 0.6, 35.37N × 36.53E, h0km ± 3km, MD3.2*
ISC 23 10:45:29.3 ± 1.5, 35.32N ± 0.03 × 36.50E ± 0.05, h5km ± 12km, n32, σ0s 87/46, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.78**	**336**	P	**Pn**	**10 45 48.5**	**+1.4**
YAYL				S	**Sn**	**10 46 00.9**	**+1.7**
BEIL	**Beino**	**0.82**	**198**	*e*P	**Pb**	**10 45 45.6**	**-0.4**
BEIL				*e*S	**Sb**	**10 45 57.5**	**+0.2**
RHAN	**Hatay/Reyhanl**	**0.94**	**5**	P	**Pg**	**10 45 47.3**	**-0.1**
RHAN				S	**Sb**	**10 46 01.8**	**+0.9**
RHAN				IAML		10 46 03.0	
	comp=N,353nm,0.2s						
RHAN				IAML		10 46 03.0	
	comp=E,483nm,0.7s						
TAHT	**Tahtakopru-Hat**	**1.08**	**347**	Pg	**Pg**	**10 45 50.5**	**+0.4**
TAHT				Sg	**Sb**	**10 46 05.9**	**+0.9**
HWQ	**Hawqa**	**1.13**	**204**	*e*P	**Pb**	**10 45 51.6**	**+0.2**
HWQ				*e*S	**Sn**	**10 46 07.5**	**-0.4**
HASA	**Hatay-Hassa-Ha**	**1.43**	**360**	P	**Pn**	**10 45 54.8**	**-1.1**
HASA				S	**Sb**	**10 46 15.0**	**+0.1**
HASA				IAML		10 46 18.0	
	comp=N,235nm,0.4s						
HASA				IAML		10 46 18.0	
	comp=E,174nm,0.3s						
KUZU	**Kuzuini**	**1.52**	**18**	P	**Pn**	**10 45 55.2**	**-2.1**
KUZU				S	**Sn**	**10 46 16.1**	**-1.4**
KUZU				IAML		10 46 17.0	
	comp=N,387nm,0.4s						
KUZU				IAML		10 46 20.0	
	comp=E,490nm,0.4s						
BHL	**Bhannes**	**1.57**	**206**	*e*P	**Pb**	**10 45 59.1**	**+0.1**
DQRL	**Deir Qamar**	**1.78**	**206**	*e*P	**Pb**	**10 46 02.0**	**-0.5**
KAMA	**Osmaniye**	**1.87**	**4**	P	**Pn**	**10 46 01.1**	**-0.9**
KAMA				S	**Sb**	**10 46 28.2**	**+0.5**
QRWL	**Qaraoun**	**1.89**	**201**	*e*P	**Pb**	**10 46 03.5**	**-0.9**
RCY	**Rachaya**	**1.90**	**197**	*e*P	**Pn**	**10 46 03.5**	**+1.0**
RCY				*e*S	**Sb**	**10 46 28.6**	**0.0**
ERENN	**Erenkoy**	**1.91**	**277**	Pn	**Pn**	**10 46 01.1**	**-1.4**
GAZ	**Gaziantep**	**1.94**	**17**	Pn	**Pn**	**10 46 03.5**	**+0.5**
GAZ				Sn	**Sn**	**10 46 28.2**	**+0.5**
NZIP	**Nizip/Gaziante**	**1.97**	**29**	P	**Pb**	**10 46 04.9**	**-0.7**
NZIP				S	**Sb**	**10 46 29.7**	**-0.8**
NZIP				IAML		10 46 33.0	
	comp=E,100nm,0.3s						
NZIP				IAML		10 46 35.0	
	comp=N,162nm,0.3s						
SHBL	**Chebaa**	**2.06**	**198**	*e*P	**Pn**	**10 46 05.7**	**+0.9**
KMRS	**Kahramanmaras**	**2.21**	**8**	Pn	**Pn**	**10 46 06.9**	**+0.3**
GZT	**Gaziantep**	**2.21**	**23**	P	**Pn**	**10 46 05.7**

comp=Z,77nm,0.7s
TSSA Tissa 8.92 271 *e*P **Pn 10 52 20.6 +2.7**
THN Thein Dam 9.29 269 *e*P **Pn 10 52 26.4 +3.6**
BOK Bokaro 9.31 185 *e*P **Pn 10 52 21.1 -2.0**
BOK *i* x x 10 56 43.7
NPLP NPLP New Delhi 9.37 244 *e*P **Pn 10 52 25.7 +1.9**
AYAN Aya Nagar 9.48 243 *e*P **Pn 10 52 27.4 +2.0**
KOHI KOHIMA 9.75 137 *e*P **Pn 10 52 32.8 +3.6**
WUS Wushi 10.07 325 Pn 10 52 33.9 +0.5
KUDL Kundal 10.14 243 *e*P **Pn 10 52 35.8 +1.4**
IMP Imphal 10.37 141 *e*P **Pn 10 52 40.4 +2.9**
WMQ Urumqi 10.72 4 *e*P **Pn 10 52 43.8 +1.5**
WMQ S **Sn 10 54 42.3 0.0**
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ pmax pmax
comp=Z,150nm,4.1s
WMQ L L
comp=Z,1μm,13.3s
WMQ L L
comp=Z,2μm,14.3s
KSH2 Kashi 10.87 307 P **Pn 10 52 47.1 +2.6**
KSH2 S **Sn 10 54 47.1 +0.9**
KSH2 pmax pmax
comp=Z,10.0nm,1.7s
KSH2 pmax pmax
comp=Z,280nm,4.6s
KSH2 L L
comp=Z,5μm,15.8s
KSH2 L L
comp=Z,3μm,19.2s
KSH2 L L
comp=Z,5μm,24.4s
MORE Moreh 11.04 141 Pn 10 52 47.8 +1.1
TARG Taragay, Kyrgy 11.16 323 P **Pn 10 52 50.1 +1.4**
TARG Taragay, Kyrgy 11.16 323 Pn 10 52 50.1 +1.4
TARG Taragay, Kyrgy 11.16 323 P **Pn 10 52 50.4 +1.7**
ASAI AK-SAY(Kyrgyzs 11.30 317 P **Pn 10 52 52.6 +2.1**
NIL Nilore 11.31 276 P **Pn 10 52 51.5 +1.1**
NIL Nilore 11.31 276 Pn 10 52 51.5 +1.1
NIL Nilore 11.31 276 P **Pn 10 52 53.0 +2.6**
SHLS Shalkode 11.55 332 *e*P **Pn 10 52 52.4 -1.3**
SHLS Shalkode 11.55 332 *e*P **Pn 10 52 52.5 -1.3**
PDGK Podgornoye 11.69 333 P **Pn 10 52 56.8 +1.2**
PDGK Podgornoye 11.69 333 Pn 10 52 56.8 +1.2
BLSP Bilaspur 11.70 201 *e*P **Pn 10 52 55.5 -0.2**
BLSP IAmb IAmb 10 52 58.2
comp=Z,22nm,0.6s
BLSP *i* x x 10 58 11.6
UZB Uzynbulak 11.72 331 *e*P **Pn 10 52 56.8 +0.7**
UZB *e*S **Sn 10 55 08.7 +1.7**
UZB Uzynbulak 11.72 331 *e*P **Pn 10 52 56.8 +0.7**
UZB *e*S **Sn 10 55 08.8 +1.7**
KDJ Kajisay 11.77 323 P **Pn 10 52 57.3 +0.5**
KDJ Kajisay 11.77 323 Pn 10 52 57.3 +0.5
KDJ Kajisay 11.77 323 P **Pn 10 52 58.3 +1.5**
SATY Saty 11.91 329 *e*P **Pn 10 52 59.4 +0.8**
SATY *e*S **Sn 10 55 13.4 +1.9**
SATY Saty 11.91 329 *e*P **Pn 10 52 59.4 +0.8**
SATY *e*S **Sn 10 55 13.5 +1.9**
KPKS Kokpek 12.12 331 *e*P **Pn 10 53 02.2 +0.7**
KPKS Kokpek 12.12 331 *e*P **Pn 10 53 02.3 +0.7**
GTA2 Gaotai 12.26 55 *e*P **Pn 10 53 02.8 -0.6**
GTA2 S **Sn 10 55 21.4 +1.4**
GTA2 pmax pmax
comp=Z,5.0nm,1.1s
GTA2 pmax pmax
comp=Z,200nm,5.7s
GTA2 L L
comp=Z,5μm,13.7s
GTA2 L L
comp=Z,2μm,14.0s
GTA2 L L
comp=Z,2μm,13.3s
AJM Ajmer 12.47 241 *e*P **Pn 10 53 07.4 +1.2**
AJM IAmb IAmb 10 53 09.7
comp=Z,24nm,1.0s
TNSS Tian-Shan 12.56 325 *e*P **Pn 10 53 08.5 +0.7**
TNSS Tian-Shan 12.56 325 *e*P **Pn 10 53 08.6 +0.7**
MDOK Medeo 12.61 326 *e*P **Pn 10 53 09.1 +0.9**
MDOK Medeo 12.61 326 *e*P **Pn 10 53 09.2 +1.0**
BOOM Boomskoye usch 12.68 321 P **Pn 10 53 09.4 +0.3**
BOOM Boomskoye usch 12.68 321 Pn **Pn 10 53 09.4 +0.3**
BOOM Boomskoye usch 12.68 321 P **Pn 10 53 10.2 +1.1**
AAA Alma-Ata 12.71 325 *e*P **Pn 10 53 10.4 +1.0**
AAA Alma-Ata 12.71 325 *e*P **Pn 10 53 10.5 +1.0**
BHPL Bhopal 12.82 222 *e*P **Pn 10 53 09.2 -1.9**
TNCH TengChong 13.05 125 P **Pn 10 53 15.4 +1.1**
TNCH S **Sn 10 55 43.8 +4.2**
TNCH pmax pmax
comp=Z,57nm,0.5s
TNCH pmax pmax
comp=Z,230nm,4.7s
TNCH L L
comp=Z,4μm,13.2s
TNCH L L
comp=Z,2μm,11.7s
TNCH L L
comp=Z,7μm,15.2s
MANEM Manem 13.09 294 Pn 10 53 13.9 -0.9
OHH Osh 13.41 307 P **Pn 10 53 20.0 +0.9**
OHH Osh 13.41 307 P **Pn 10 53 20.0 +0.9**
TDK Taldyqorghan 13.52 334 *e*P **Pn 10 53 21.4 +0.8**
TDK Taldyqorghan 13.52 334 *e*P **Pn 10 53 21.4 +0.8**
AAK Ala-Archa 13.57 318 P **Pn 10 53 22.5 +1.2**
comp=Z,0.2nm,0.3s,baz=133,slow=14,SNR=15
AAK LR LR 10 59 09.5
comp=Z,2μm,18.7s,baz=130,slow=39
comp=Z,1.9nm,0.5s
AAK Ala-Archa 13.57 318*d**e*P **Pn 10 53 23.5 +2.2**
AAK Ala-Archa 13.57 318 P **Pn 10 53 24.2 +2.9**
DRK Karamyk 13.63 302 P **Pn 10 53 23.4 +1.0**
DRK Karamyk 13.63 302 Pn **Pn 10 53 23.4 +1.0**
NGP Nagpur 13.73 212 *e*P **Pn 10 53 22.3 -1.1**
NGP IAmb IAmb 10 53 26.4
comp=Z,33nm,0.9s
SGDS Sogindy 14.04 321 *e*P **Pn 10 53 28.9 +1.2**
MK31 Makanchi Array 14.09 347*c* *i*P **Pn 10 53 27.9 -0.4**
MKAR Makanchi Array 14.09 347 P **Pn 10 53 29.2 +0.9**
comp=Z,0.2nm,0.3s,baz=153,slow=14,SNR=14
MKAR LR LR 11 00 04.3
comp=Z,1μm,21.1s,baz=156,slow=42
comp=Z,1.8nm,0.6s
MKAR Makanchi Array 14.09 347 *i* P **Pn 10 53 27.8 -0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 14.09 347 Pn 10 53 27.6 -0.6
MAKZ Makanchi 14.16 346 P **Pn 10 53 28.7 -0.6**
MAKZ Makanchi 14.16 346 Pn 10 53 28.7 -0.6
MAKZ Makanchi 14.16 346 P **Pn 10 53 29.2 0.0**
UDPR Udaipur 14.24 237 *e*P **Pn 10 53 29.6 -0.9**
LZDM Lanzhou Array 14.24 74 P **Pn 10 53 32.6 +1.9**
baz=235,slow=6.7
LZDM LR LR 10 59 31.7
comp=Z,1μm,21.4s,baz=275,slow=39
comp=Z,1.4nm,0.3s
LZH Lanzhou 14.38 73 *e*P **Pn 10 53 32.3 -0.1**
LZH pP P 10 53 40.1 +0.6
LZH S **Sn 10 56 15.8 +3.9**
LZH SS **S 10 56 33.5 +1.3**
LZH pmax pmax
comp=Z,170nm,4.8s
LZH L L
comp=Z,6μm,11.8s
LZH L L
comp=Z,3μm,12.1s
LZH L L
comp=Z,3μm,12.5s
ZSN Zaisan 14.40 355 *e*P **Pn 10 53 32.8 +0.3**
ZSN *e*S **Sn 10 56 13.0 +0.9**
ZSN Zaisan 14.40 355 *e*P **Pn 10 53 32.8 +0.3**
ZSN *e*S **Sn 10 56 13.0 +0.9**
GAR Garm 14.54 298 Pn **Pn 10 53 33.7 -0.9**
GAR Garm 14.54 298 P **Pn 10 53 33.3 -1.3**
BTK Batken 14.56 303 P **Pn 10 53 35.3 +0.5**
BTK Batken 14.56 303 Pn 10 53 35.2 +0.5
BTK Batken 14.56 303 P **Pn 10 53 35.0 +0.2**
CD2 Chengdu 14.59 94 P **Pn 10 53 35.1 -0.1**
CD2 S **Sn 10 56 20.3 +3.4**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,400nm,5.9s
CD2 L L
comp=Z,4μm,11.1s
CD2 L L
comp=Z,7μm,11.9s
CD2 L L
comp=Z,7μm,11.3s
KBL Kabul 14.80 280 P **Pn 10 53 36.0 -2.3**
KBL Kabul 14.80 280 Pn 10 53 36.0 -2.3
KBL Kabul 14.80 280 P **Pn 10 53 35.7 -2.6**
TRKS Terek-Say 14.99 309 P **P 10 53 44.2 -2.0**
AKL Akola 15.10 217 *ex* **Pn 10 53 38.9 -3.2**
AKL IAmb IAmb 10 53 42.8
comp=Z,34nm,0.9s
CHGR Chuyangaron 15.30 296⇓ *e*P **P 10 53 47.5 -2.1**
BTLS Baital 15.45 324 *e*P **Pn 10 53 47.6 +1.0**
BTLS Baital 15.45 324 *e*P **Pn 10 53 47.7 +1.0**
DZA Taraz 15.58 313 *e*P **Pn 10 53 49.8 +1.5**
DZA Taraz 15.58 313 *e*P **Pn 10 53 49.9 +1.5**
NPW Naypyitaw 15.70 145 P **Pn 10 53 50.3 +0.4**
SHAA Shahritus 15.85 292 IAmb IAmb 10 54 00.6
comp=Z,71nm,0.9s
IUG Iuzhnay 16.01 309 *e*P **Pn 10 53 55.6 +1.6**
IUG Iuzhnay 16.01 309 *e*P **Pn 10 53 55.6 +1.6**
KMI2 Kunming 16.05 115⇑ P **Pn 10 53 54.5 -0.2**
KMI2 S **Sn 10 56 54.4 +1.6**
KMI2 pmax pmax
comp=Z,31nm,1.2s
KMI2 pmax pmax
comp=Z,350nm,3.7s
KMI2 L L
comp=Z,2μm,13.2s
KMI2 L L
comp=Z,2μm,14.0s
KMI2 L L
comp=Z,3μm,15.1s
KK31 Karatay Array 16.20 313 P **Pn 10 53 57.0 +0.7**
KK31 pmax pmax
comp=Z,17nm,1.3s
KK31 Karatay Array 16.20 313 Pn **Pn 10 53 57.0 +0.7**
KKAR Karatay Array 16.20 313 P **Pn 10 53 56.7 +0.4**
KKAR Karatay Array 16.20 313 Pn **Pn 10 53 56.7 +0.4**
CHM Chimkent 16.38 309 *e*P **P 10 54 00.2 -1.2**
CHM Chimkent 16.38 309 *e*P **P 10 54 00.2 -1.2**
BRLS Borolday 16.58 312 *e*P **Pn 10 54 02.4 +1.2**
BRLS Borolday 16.58 312 *e*P **Pn 10 54 02.4 +1.2**
DGZ Jazzator, Alta 16.58 2*d* *i*P **Pn 10 54 00.1 -1.2**
HYB Hyderabad 17.29 207 *e*P **P 10 54 12.5 +0.8**
HYB *e*S S 10 57 51.5 +20
CHTO Chiang Mai 17.94 140 P **Pn 10 54 18.3 0.0**
CHTO pmax pmax
comp=Z,28nm,1.0s
CHTO Chiang Mai 17.94 140 Pn 10 54 18.3 0.0
CHTO Chiang Mai 17.94 140 P **P 10 54 18.6 -0.3**
comp=Z,32nm,1.1s
CHTO Chiang Mai 17.94 140 P **P 10 54 19.1 +0.3**
CM31 Chiang Mai Arr 18.23 140 Pn 10 54 21.7 -0.2
CMAR Chiang Mai Arr 18.23 140 P **P 10 54 23.1 +1.0**
comp=Z,0.3nm,0.3s,baz=320,slow=13,SNR=49
CMAR PcP **PcP 10 58 52.2 -2.4**
comp=Z,0.5nm,0.3s,baz=30,slow=1.8,SNR=4.2
CMAR LR LR 11 02 40.2
comp=Z,643nm,18.4s,baz=320,slow=41
comp=Z,9.8nm,0.9s
CMAR Chiang Mai Arr 18.23 140 P **Pn 10 54 21.8 -0.1**
XAN Xi'an 18.48 81⇓ P **P 10 54 23.3 -1.6**
XAN S **Sn 10 57 51.0 -0.5**
XAN pmax pmax
comp=Z,26nm,0.9s
XAN pmax pmax
comp=Z,590nm,6.5s
XAN L L
comp=Z,2μm,7.6s
XAN L L
comp=Z,4μm,11.0s
XAN L L
comp=Z,3μm,11.0s
GYA Guiyang 18.49 106⇑ P **Pn 10 54 25.8 +0.7**
GYA S **Sn 10 57 50.6 -1.2**
GYA pmax pmax
comp=Z,61nm,1.2s
GYA L L
comp=Z,1μm,13.9s
GYA L L
comp=Z,1μm,16.1s
GYA L L
comp=Z,4μm,21.9s
KURBB Kurchatov Arra 18.52 343 P **P 10 54 24.9 -0.2**
comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=25
KURBB LR LR 11 02 34.5
comp=Z,1μm,20.9s,baz=165,slow=40
comp=Z,5.8nm,0.6s
KURK Kurchatov 18.59 344*d* *i*P **P 10 54 24.7 -1.0**
KURK pmax pmax
comp=Z,19nm,1.0s
KURK Kurchatov 18.59 344 P **P 10 54 24.8 -1.0**
KURK Kurchatov 18.59 344 P **P 10 54 25.1 -0.6**
KNGR Kungurtug, Tuv 19.19 21⇑ *i*P **Pn 10 54 34.2 +0.7**
KNGR pmax pmax
comp=Z,43nm,1.3s
KAD Karad 19.39 219 *e*P **Pn 10 54 36.9 +0.8**
ENH Enshi 19.54 92 P **P 10 54 36.1 -0.2**
ENH IAmb IAmb 10 54 39.5
comp=Z,156nm,1.9s
BTO2 Baotou 19.95 61 *e*P **P 10 54 41.3 +0.3**
BTO2 sP **sP 10 54 47.9 +0.4**
BTO2 PP **PnPn 10 54 58.9 +2.2**
BTO2 S **Sn 10 58 26.3 -0.6**
BTO2 pmax pmax
comp=Z,28nm,1.0s
BTO2 pmax pmax
comp=Z,1μm,4.5s
BTO2 L L
comp=Z,4μm,16.7s
BTO2 L L
comp=Z,2μm,13.3s
BTO2 L L
comp=Z,4μm,12.8s
HRA Herat 20.42 280 P **P 10 54 46.8 +0.6**
SONM Songino Array 20.87 39 P **P 10 54 51.8 +0.9**
comp=Z,33nm,1.0s,baz=233,slow=12,SNR=52
SONM LR LR 11 04 37.8
comp=Z,202nm,18.2s,baz=232,slow=41
comp=Z,33nm,1.0s
SONM Songino Array 20.87 39 P **P 10 54 51.6 +0.7**
ZAA0 Zalesovo Array 20.88 357 P **P 10 54 50.3 -0.4**
ZALV Zalesovo Beam 20.88 357 P **P 10 54 50.9 +0.2**
comp=Z,32nm,1.0s,baz=178,slow=10,SNR=69
ZALV LR LR 11 03 56.4
comp=Z,625nm,18.6s,baz=182,slow=39
comp=Z,32nm,1.0s
ZALV Zalesovo Beam 20.88 357 P **P 10 54 50.8 0.0**
ZAK Zakamensk 21.12 30 *e*P **P 10 54 52.9 -0.7**
ZAK pmax pmax
comp=Z,28nm,1.3s
HHC Hu-ho-hao-te 21.22 62 *e*P **P 10 54 55.3 +0.6**
HHC sP sP 10 55 01.5 +0.3
HHC S **S 10 58 44.3 -6.2**
HHC sS Sn 10 58 55.8 -1.6
HHC pmax pmax
comp=Z,33nm,1.2s
HHC pmax pmax
comp=Z,350nm,4.8s
HHC L L
comp=Z,2μm,17.1s
HHC L L
comp=Z,1μm,17.3s
HHC L L
comp=Z,820nm,17.9s
MOY Mondy 21.24 25 *e*P **P 10 54 55.9 +1.0**
MOY pmax pmax
comp=Z,60nm,2.7s
ULN Ulaanbaatar 21.25 40*d* *i*P **P 10 54 55.3 +0.3**
ULN pmax pmax
comp=Z,55nm,1.0s
ULN Ulaanbaatar 21.25 40 P **P 10 54 55.5 +0.5**
ULN Ulaanbaatar 21.25 40 P **P 10 54 55.4 +0.5**
comp=Z,3μmcomp=Z,184nm,1.0s
ULN Ulaanbaatar 21.25 40 P **P 10 54 55.7 +0.7**
LYN LuoYang 21.39 79 P **P 10 54 56.6 +0.2**
LYN S **S 10 58 57.1 +3.4**
LYN pmax pmax
comp=Z,25nm,0.9s
LYN pmax pmax
comp=Z,290nm,3.7s
LYN L L
comp=Z,1μm,11.0s
LYN L L
comp=Z,2μm,11.7s
LYN L L
comp=Z,5μm,17.5s
TIY Taiyuan 21.39 70 P **P 10 54 56.3 -0.2**
TIY S **S 10 58 54.6 +0.7**
TIY pmax pmax
comp=Z,61nm,1.0s
TIY L L
comp=Z,1μm,10.6s
TIY L L
comp=Z,850nm,9.4s
TIY L L
comp=Z,990nm,14.6s
GULI GuiLin 21.99 105 P **P 10 55 02.3 -0.7**
GULI S **S 10 59 02.3 -3.4**
GULI pmax pmax
comp=Z,39nm,1.0s
GULI L L
comp=Z,780nm,10.8s
GULI L L
comp=Z,1μm,11.9s
GULI L L
comp=Z,3μm,19.5s
TLY Talaya 22.26 29*d* *i*P **P 10 55 06.5 +0.9**
TLY pmax pmax
comp=Z,16nm,1.4s
IRK Irkutsk 22.94 28 *e*P **P 10 55 13.6 +0.8**
IRK pmax pmax
comp=E,144nm,2.8s
CNSH ChangSha 23.02 95 P **P 10 55 14.3 +0.5**
CNSH S **S 10 59 25.8 +1.4**
CNSH pmax pmax
comp=E,17nm,1.8s
CNSH L L
comp=E,820nm,9.3s
CNSH L L
comp=E,1μm,16.5s
CNSH L L
comp=E,1μm,14.0s
BVAR Borovoye Array 23.12 334 P **P 10 55 15.5 +0.8**
comp=E,16nm,1.1s,baz=140,slow=9.5,SNR=18
comp=E,16nm,1.1s
BORK Borovoye 23.16 334*d* *i*P **P 10 55 14.9 -0.2**
BORK pmax pmax
comp=Z,23nm,1.5s
BORK Borovoye 23.16 334 P **P 10 55 14.7 -0.4**
HNS HongShan 23.18 71⇑ P **P 10 55 15.6 +0.2**
HNS S **S 10 59 29.4 +2.4**
HNS pmax pmax
comp=Z,50nm,1.2s
HNS pmax pmax
comp=Z,550nm,5.4s
HNS L L
comp=Z,800nm,14.6s
HNS L L
comp=Z,900nm,13.2s
HNS L L
comp=Z,1μm,17.3s
WHN Wuhan 23.55 89⇑ P **P 10 55 20.4 +1.2**
WHN sP **sP 10 55 27.0 +1.0**
WHN S **S 10 59 38.3 +5.1**
WHN pmax pmax
comp=Z,79nm,1.0s
WHN pmax pmax
comp=Z,2μm,6.6s
WHN L L
comp=Z,4μm,8.0s
WHN L L
comp=Z,2μm,9.8s
WHN L L
comp=Z,5μm,19.7s
KOD Kodaikanal 24.33 203 *e*P **P 10 55 25.2 -1.8**
BJI2 Beijing 24.53 65 P **P 10 55 29.1 +0.8**
BJI2 S **S 10 59 49.0 +0.2**
BJI2 pmax pmax
comp=Z,270nm,4.2s
BJI2 L L
comp=Z,320nm,10.9s
BJI2 L L
comp=Z,420nm,12.1s
BJI2 L L
comp=Z,540nm,10.9s
QIZ Qiongzhong 24.95 118 P **P 10 55 31.9 -0.4**
QIZ S **S 10 59 59.1 +3.2**
QIZ pmax pmax
comp=Z,11nm,1.6s
QIZ pmax pmax
comp=Z,320nm,5.2s
QIZ L L
comp=Z,610nm,13.2s
QIZ L L
comp=Z,800nm,16.4s
QIZ L L
comp=Z,1μm,18.5s
XLT XiLinHaoTe 25.22 56 *e*P **P 10 55 35.8 +1.2**
XLT pP pP 10 55 39.4 0.0
XLT S **S 10 59 58.6 -1.4**
XLT pmax pmax
comp=Z,22nm,0.9s
XLT L L
comp=Z,110nm,12.7s
XLT L L
comp=Z,890nm,11.5s
XLT L L
comp=Z,940nm,11.6s
GZH2 Guangzhou 25.40 105 P **P 10 55 37.1 +0.7**
GZH2 S **S 11 00 07.3 +4.3**
GZH2 L L
comp=Z,1μm,8.4s
GZH2 L L
comp=Z,960nm,9.4s
GZH2 L L
comp=Z,4μm,19.1s
AB31 Akbulak array 25.65 317 P **P 10 55 39.5 +1.1**
AB31 IAmb IAmb 10 55 45.3
comp=Z,67nm,1.9s
ABKAR Akbulak array 25.65 317 P **P 10 55 39.5 +1.1**
NJ2 Nanjing 27.01 83 *e*P **P 10 55 50.0 -0.8**
NJ2 pmax pmax
comp=Z,22nm,0.5s
NJ2 L L
comp=Z,4μm,9.2s
NJ2 L L
comp=Z,3μm,14.7s
NJ2 L L
comp=Z,6μm,20.8s
AKTO Aktyubinsk 27.31 318 LR LR 11 07 41.2
comp=Z,910nm,20.0s,baz=96,slow=38
DL2 Dalian 28.67 68 P **P 10 56 06.0 +0.4**
DL2 S **S 11 00 53.8 -0.5**
DL2 pmax pmax
comp=Z,48nm,1.2s
DL2 pmax pmax
comp=Z,620nm,7.1s
DL2 L L
comp=Z,1μm,17.3s
DL2 L L
comp=Z,510nm,17.5s
DL2 L L
comp=Z,1μm,17.5s
SSE Sheshan 29.15 85 P **P 10 56 08.1 -1.9**
SSE S **S 11 00 59.8 -2.2**
SSE pmax pmax
comp=Z,12nm,1.6s
SSE pmax pmax
comp=Z,150nm,3.5s
SSE L L
comp=Z,230nm,17.5s
SSE L L
comp=Z,530nm,16.7s
HILR Hailar Array B 29.42 46 P **P 10 56 12.9 +0.7**
comp=Z,7.6nm,0.7s,baz=238,slow=8.5,SNR=5.8
HILR LR LR 11 08 51.8
comp=Z,581nm,19.8s,baz=85,slow=38
comp=Z,7.6nm,0.7s
ARTI Arti 30.40 329 LR LR 11 09 59.9
comp=Z,1μm,19.6s,baz=123,slow=39
ARTI Arti 30.40 329*c* *i*P **P 10 56 21.4 +0.6**
ARTI 10 57 17.8
ARTI S **S 11 01 23.6 +2.5**
ARTI SS **ScP 11 03 01.6 -1.0**
ARTI pmax pmax
comp=Z,11nm,1.0s
ARTI MLR MLR
comp=Z,1μm,18.0s

ARTI Arti 30.40 329 P **P** 10 56 20.9 +0.1
KULM Kulim 30.55 152 P **P** 10 56 22.5 0.0
KULM IAmb IAmb 10 56 23.7
comp=Z,34nm,1.2s
KULM Kulim 30.55 152 P **P** 10 56 23.0 +0.5
comp=Z,27nm,1.4s
KULM Kulim 30.55 152 P **P** 10 56 23.1 +0.5
YULB Yu-li 31.80 99 P **P** 10 56 33.4 -0.1
YULB IAmb IAmb 10 56 38.8
comp=Z,15nm,1.0s
YULB Yu-li 31.80 99 P **P** 10 56 35.4 +1.9
CN2 Changchun 31.86 59 P **P** 10 56 33.8 +0.1
CN2 S **S** 11 01 40.3 -3.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 L L
comp=Z,2μm,14.0s
CN2 L L
comp=Z,1μm,14.0s
CN2 L L
comp=Z,1μm,10.0s
MAK Makhachkala 32.20 299 *e*P **P** 10 56 34.0 -2.7
MAK *e* 10 57 44.8
MAK *e*S **S** 11 01 46.5 -3.0
MAK *e*SS **SnSn** 11 03 37.8 -2.4
MAK pmax pmax
comp=Z,36nm,0.3s
MAK MLR MLR
comp=Z,1μm,16.0s
PSI Prapat 32.23 157 P **P** 10 56 36.9 -0.5
PSI pmax pmax
comp=Z,21nm,1.0s
PSI Prapat 32.23 157 P **P** 10 56 36.9 -0.5
comp=Z,25nm,1.1s
RPSI Rantau Prapat 32.33 157 P **P** 10 56 36.9 -1.3
RPSI IAmb IAmb 10 56 38.0
comp=Z,21nm,1.0s
INCN Inchon 32.66 71 P **P** 10 56 40.7 -0.2
INCN pmax pmax
comp=Z,340nm,1.8s
INCN Inchon 32.66 71 P **P** 10 56 40.7 -0.2
GANJ Ganja 32.99 295 P **P** 10 56 45.9 +2.1
BNX BinXian 33.48 56 ⇓P **P** 10 56 47.4 -0.5
BNX pmax pmax
comp=Z,10.0nm,1.4s
KSAR Wonju Array Be 33.66 71 P **P** 10 56 49.1 -0.5
KSAR Wonju Array Be 33.66 71 P **P** 10 56 49.1 -0.5
KSRS Korea Array 33.68 71 P **P** 10 56 49.1 -0.7
comp=Z,14nm,0.7s,baz=271,slow=8.6,SNR=34
KSRS LR LR 11 10 49.5
comp=Z,444nm,20.0s,baz=265,slow=37
comp=Z,14nm,0.7s
BELG Belogornoye 34.05 316 LR LR 11 13 07.7
comp=Z,311nm,18.3s,baz=106,slow=40
BELG Belogornoye 34.05 316 *d* *i*P **P** 10 56 53.0 +0.2
BELG pmax pmax
comp=Z,3.0nm,1.0s
GNI Garni 34.20 294 *c* *i*P **P** 10 56 57.4 +2.9
GNI pmax pmax
comp=Z,37nm,1.5s
GNI Garni 34.20 294 P **P** 10 56 55.4 +0.9
GNI Garni 34.20 294 P **P** 10 56 57.5 +2.9
MNSI Mandailing Nat 34.33 157 P **P** 10 56 55.3 -0.2
comp=Z,61nm,0.8s
HEH HeiHe 34.34 48 *e*P **P** 10 56 55.8 +0.4
HEH pmax pmax
comp=Z,17nm,1.3s
HEH L L
comp=Z,330nm,9.4s
HEH L L
comp=Z,1μm,11.6s
HEH L L
comp=Z,2μm,13.1s
ZEA Zeya 35.26 42 *e*P **P** 10 57 04.7 +1.5
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,300nm,9.0s
ZEA MLR MLR
comp=N,200nm,10.0s
ZEA MLR MLR
comp=Z,400nm,10.0s
GOF Gofitskoye 35.57 303 *c*P **P** 10 57 06.6 +0.6
KBZ Khabaz 35.60 300 LR LR 11 15 09.2
comp=Z,611nm,19.1s,baz=90,slow=42
KBZ Khabaz 35.60 300 ⇓ *i*P **P** 10 57 08.6 +2.3
KBZ pmax pmax
comp=Z,4.0nm,1.2s
KIRV Kirov 35.65 327 LR LR 11 13 15.5
comp=Z,638nm,19.6s,baz=122,slow=39
KIRV Kirov 35.65 327 *d* *i*P **P** 10 57 06.9 +0.4
PSTR Posyet 35.69 62 ⇓ *e*P **P** 10 57 07.9 +0.8
EPOS Posof 35.70 297 P **P** 10 57 10.6 +3.3
KIV Kislovodsk 35.76 301 *e*P **P** 10 57 09.3 +1.5
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,461nm,16.0s
SHA1 Shidzhatmaz 35.77 300 ⇑ *e*P **P** 10 57 09.8 +1.7
PDSI Padang 36.22 156 P **P** 10 57 10.6 -1.3
comp=Z,3μmcomp=Z,40nm,0.9s
NRIK Noril'sk 36.28 0 P **P** 10 57 12.1 +0.3
comp=Z,21nm,0.8s,baz=167,slow=6.4,SNR=17
NRIK LR LR 11 13 09.5
comp=Z,536nm,21.8s,baz=188,slow=38
comp=Z,21nm,0.8s
NRIK Noril'sk 36.28 0 *d* *i*P **P** 10 57 11.9 +0.1
NRIK pmax pmax
comp=Z,35nm,1.1s
NRIK Noril'sk 36.28 0 P **P** 10 57 11.5 -0.4
NRIK IAmb IAmb 10 57 13.1
comp=Z,32nm,1.1s
TGY Tagaytay City 36.35 113 LR LR 11 12 51.1
comp=Z,850nm,18.3s,baz=246,slow=37
VLA Vladivostok 36.49 61 ⇓ *e*P **P** 10 57 14.5 +0.6
VLA pmax pmax
comp=Z,45nm,1.7s
USRK Ussuriysk Ar. 36.59 59 P **P** 10 57 15.1 +0.3
comp=Z,8.0nm,1.0s,baz=251,slow=5.8,SNR=11
USRK LR LR 11 13 47.4
comp=Z,500nm,21.3s,baz=268,slow=39
comp=Z,8.0nm,1.0s
USRK Ussuriysk Ar. 36.59 59 **P** 10 57 14.1 -0.7
JNU Nakatsue 36.74 78 LR LR 11 12 55.6
comp=Z,589nm,20.9s,baz=288,slow=37
LABN Labinsk 37.19 302 *e*P **P** 10 57 20.8 +0.9
LABN *e**PP **pP** 10 57 24.0 -0.9
LABN *e*S **S** 11 03 08.3 +1.8
LABN pmax pmax
comp=Z,21nm,0.5s
LABN MLR MLR
comp=Z,555nm,15.0s
LABN MLR MLR
comp=N,829nm,15.0s
VRH Novokhopyorsk 37.28 313 *e*P **P** 10 57 21.3 +0.8
VRH pmax pmax
comp=Z,33nm,1.0s
RAYN Ar Rayn 37.36 266 P **P** 10 57 22.0 +0.4
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 37.36 266 P **P** 10 57 22.0 +0.4
RAYN Ar Rayn 37.36 266 P **P** 10 57 21.8 +0.1
ERBR Yeremizino-Bor 37.41 304 *e*P **P** 10 57 21.9 +0.2
ERBR *e**PP **pP** 10 57 25.3 -1.4
ERBR *e*S **S** 11 03 10.8 +1.0
ERBR pmax pmax
comp=Z,10.0nm,0.5s
VSLR Vesyoloye 37.67 300 *i* P **P** 10 57 22.3 -1.7
VSLR pmax pmax
comp=Z,51nm,1.5s
SOC Sochi 37.90 300 *e*P **P** 10 57 26.7 +0.8
SOC *e* 10 58 50.3
SOC *e*S **S** 11 03 18.9 +1.6
SOC *e*SS **SnSn** 11 05 57.5 -0.9
SOC MLR MLR
comp=Z,419nm,16.0s
VORD Divnogorie 38.75 312 *e*P **P** 10 57 30.8 -2.1
VORD pmax pmax
comp=Z,30nm,1.0s
VSR Storozhevoye 38.87 312 *e*P **P** 10 57 34.2 +0.3
VSR pmax pmax
comp=Z,14nm,0.5s
VORR Voronezh 38.91 313 *e*P **P** 10 57 34.2 -0.1
VORR pmax pmax
comp=Z,41nm,0.3s

JMN Monobe 39.06 76 P **P** 10 57 35.5 -0.3
JMN IAmb IAmb 10 57 36.9
comp=Z,26nm,0.9s
ARPR Arapgir-MALATY 39.21 293 P **P** 10 57 40.2 +3.0
LPSR Galich'ya Gora 39.24 314 *e*P **P** 10 57 35.5 -1.6
LPSR pmax pmax
comp=Z,36nm,1.0s
ANN Anapa 39.54 302 *e*P **P** 10 57 41.4 +1.8
ANN *e**PP **pP** 10 57 44.6 0.0
ANN *e*S **S** 11 03 45.1 +3.2
ANN pmax pmax
comp=Z,55nm,1.1s
ANN MLR MLR
comp=E,485nm,16.0s
ANN MLR MLR
comp=Z,544nm,16.0s
YAK Yakutsk 39.71 30 *e*P **P** 10 57 41.8 +1.0
YAK pmax pmax
comp=Z,22nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK Yakutsk 39.71 30 P **P** 10 57 40.5 -0.3
YAK IAmb IAmb 10 57 42.8
comp=Z,38nm,0.9s
GRNR Gornyy 40.09 49 ⇓ *i*P **P** 10 57 44.5 +0.3
GRNR pmax pmax
comp=Z,30nm,1.1s
GRNR MLR MLR
comp=N,220nm,13.0s
GRNR MLR MLR
comp=Z,420nm,10.0s
MOS Moscow 40.63 319 *e*P **P** 10 57 49.2 +0.7
MOS *e* 10 59 25.9
MOS *e* 10 59 46.4
MOS *e*PPP PPP 10 59 55.7
MOS *e*S **S** 11 04 03.9 +5.9
MOS pmax pmax
comp=Z,44nm,0.7s
OBN Obninsk 41.09 318 LR LR 11 16 14.7
comp=Z,257nm,19.9s,baz=64,slow=38
OBN Obninsk 41.09 318 *c* *e*P **P** 10 57 53.3 +1.0
OBN *e* 10 59 25.7
OBN *e*PPP PPP 10 59 54.5
OBN pmax pmax
comp=Z,38nm,1.3s
OBN MLR MLR
comp=Z,271nm,18.0s
KLMR Klimovskoe 41.15 327 *e*P **P** 10 57 52.3 -0.4
KLMR *e* 10 59 28.0
KLMR pmax pmax
comp=Z,27nm,1.5s
KLMR MLR MLR
comp=Z,706nm,16.0s
INU Inuyama 41.25 72 P **P** 10 57 51.7 -2.2
INU Inuyama 41.25 72 P **P** 10 57 52.0 -1.9
ASF Jabal al Asfar 41.68 283 LR LR 11 18 46.8
comp=Z,589nm,21.0s,baz=26,slow=41
MJB9 Matsu-Tunnel 41.96 70 IAmb IAmb 10 58 00.7
comp=Z,22nm,0.9s
MAJO Matsushiro 41.96 70 *d* *i*P **P** 10 57 58.4 -1.4
MAJO pmax pmax
comp=Z,26nm,1.0s
MAJO Matsushiro 41.96 70 P **P** 10 57 58.4 -1.4
MAJO IAmb IAmb 10 57 59.7
comp=Z,23nm,0.9s
MAJO Matsushiro 41.96 70 P **P** 10 57 59.2 -0.6
MJAR Matsushiro Arr 41.96 70 P **P** 10 57 59.3 -0.5
comp=Z,30nm,1.1s,baz=286,slow=8.9,SNR=49
MJAR PcP **PcP** 10 59 54.6 -0.5
comp=Z,0.5nm,0.5s,baz=265,slow=2.5,SNR=5.3
MJAR LR LR 11 16 00.3
comp=Z,169nm,18.7s,baz=266,slow=37
comp=Z,30nm,1.1s
MJAR Matsushiro Arr 41.96 70 P **P** 10 57 58.7 -1.1
MJAR IAmb IAmb 10 58 01.5
comp=Z,28nm,1.1s
KIRS Kirsehir-Merke 42.61 294 ⇑P **P** 10 58 04.5 -0.7
MMAI Mount Meron Ar 42.68 285 LR LR 11 18 56.7
comp=Z,659nm,19.9s,baz=84,slow=40
BR131 Keskin Array S 42.74 295 ⇓ *e*P **P** 10 58 07.7 +1.5
BRTR Keskin Array B 42.74 295 P **P** 10 58 07.3 +1.1
comp=Z,2.5nm,0.9s,baz=111,slow=6.9,SNR=9.0
BRTR LR LR 11 20 32.2
comp=Z,67nm,18.9s,baz=110,slow=42
comp=Z,2.5nm,0.9s
BRTR Keskin Array B 42.74 295 P **P** 10 58 06.6 +0.4
BR104 Keskin Array S 42.74 295 P **P** 10 58 06.3 +0.1
comp=Z,46nmcomp=Z,4.4nm,1.2s
BR106 Keskin Array S 42.75 295 P **P** 10 58 06.6 +0.3
comp=Z,53nmcomp=Z,4.9nm,1.1s
BR105 Keskin Array S 42.75 295 P **P** 10 58 06.5 +0.1
comp=Z,62nmcomp=Z,5.4nm,1.2s
JHJ Hanhijo jima 2 44.00 75 LR LR 11 17 33.7
comp=Z,292nm,18.9s,baz=82,slow=37
EIL Elat 44.00 280 LR LR 11 19 28.4
EIL Elat 44.00 280 P **P** 10 58 18.4 +2.1
TYV Tymovskoe 44.04 49 *e*P **P** 10 58 17.1 +0.7
TYV *e*S **S** 11 04 51.4 +3.0
TYV pmax pmax
comp=Z,200nm,3.5s
TYV pmax pmax
comp=Z,15nm,1.1s
TYV smax smax
comp=N,300nm,6.0s
TYV smax smax
comp=E,100nm,6.0s
YSS Yuzhno-Sakhali 44.14 55 *e*P **P** 10 58 14.0 -3.2
YSS pmax pmax
comp=Z,200nm,3.0s
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=N,400nm,14.0s
YSS MLR MLR
comp=E,600nm,14.0s
YSS MLR MLR
comp=Z,400nm,14.0s
ASAJ Asahikawa 44.22 59 LR LR 11 17 52.4
comp=Z,737nm,18.2s,baz=281,slow=38
DAV Davao City (W) 44.31 117 LR LR 11 18 33.9
comp=Z,460nm,19.8s,baz=331,slow=38
LEM Lembang 44.39 150 LR LR 11 20 47.3
comp=Z,204nm,18.6s,baz=319,slow=41
TIXI Tiksi 44.53 18 ⇓ *i*P **P** 10 58 19.3 -0.7
TIXI pmax pmax
comp=Z,39nm,2.3s
TIXI Tiksi 44.53 18 P **P** 10 58 19.7 -0.3
PURM Purcari 44.78 305 P **P** 10 58 23.4 +1.0
AK09 Malin Array Si 45.05 311 P **P** 10 58 24.7 +0.3
AK08 Malin Array Si 45.07 311 P **P** 10 58 24.6 0.0
AK10 Malin Array Si 45.07 311 P **P** 10 58 24.8 +0.2
AKASG Malin Array Be 45.09 311 P **P** 10 58 25.3 +0.5
comp=Z,5.4nm,0.7s,baz=81,slow=7.4,SNR=18
AKASG LR LR 11 21 22.1
comp=Z,541nm,19.2s,baz=92,slow=41
comp=Z,5.4nm,0.7s
AKASG Malin Array Be 45.09 311 *i* P **P** 10 58 25.2 +0.5
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKASG Malin Array Be 45.09 311 P **P** 10 58 24.9 +0.1
AKBB Malin Array Si 45.09 311 *c* *i*P **P** 10 58 25.4 +0.7
AKBB pmax pmax
comp=Z,19nm,0.8s
AKBB Malin Array Si 45.09 311 IAmb IAmb 10 58 29.3
comp=Z,18nm,0.8s
AKBB Malin Array Si 45.09 311 P **P** 10 58 24.9 +0.2
AK03 Malin Array Si 45.09 311 P **P** 10 58 24.7 -0.1
KIEV Kiev 45.10 311 ⇓P **P** 10 58 25.1 +0.2
KIEV Kiev 45.10 311 P **P** 10 58 25.0 +0.2
KIEV Kiev 45.10 311 P **P** 10 58 24.8 0.0
comp=Z,2μmcomp=Z,106nm,1.2s
AK14 Malin Array Si 45.16 311 P **P** 10 58 25.4 +0.1
AK22 Malin Array Si 45.19 311 P **P** 10 58 25.6 +0.1
ATD Arta Tunnel 45.53 252 LR LR 11 18 49.9
comp=Z,6.6nm,18.9s,baz=31,slow=38
LVZ Lovozero 45.71 335 *c* *i*P **P** 10 58 30.5 +1.0
LVZ pmax pmax
comp=Z,66nm,1.6s
SORM Soroca 45.72 307 ⇑P **P** 10 58 30.2 +0.4
SORM Soroca 45.72 307 P **P** 10 58 30.2 +0.4
SORM Soroca 45.72 307 P **P** 10 58 30.1 +0.3
comp=Z,8μmcomp=Z,16nm,1.1s
TPGR Topolog 45.94 303 ⇓P **P** 10 58 31.3 -0.3

MNK Minsk 46.00 316 *i* P P 10 58 45.9 +14
comp=E,44nm,1.0s
MNK *i* P P 10 58 45.9 +14
comp=N,29nm,0.8s
MNK *i* P P 10 58 45.9 +14
comp=Z,13nm,0.7s,baz=90
MNK *i* PP PP 11 00 38.5 +19
MNK *i* PPP PPP 11 01 31.3
MNK *i* S S 11 05 44.2 +27
MNK *i* SS **SnSn** 11 09 13.9 +1.2
MNK *i* SSS SSS 11 10 19.4
MNK *i* LQ LQ 11 15 15.7
MNK *i* LR LR 11 19 06.4
MNK *i* LRM MLR 11 21 31.6
comp=Z,347nm,19.6s
MNK *i* LRM MLR 11 21 38.6
comp=N,382nm,19.5s
MNK *i* LRM MLR 11 21 55.1
comp=E,177nm,15.4s
MNK Minsk 46.00 316 *i* P P 10 58 45.8 +14
MNK pmax pmax
comp=N,29nm,0.8s
MNK pmax pmax
comp=E,44nm,1.0s
MNK pmax pmax
comp=Z,13nm,0.7s
MNK MLR MLR
comp=Z,347nm,20.0s
MNK MLR MLR
comp=N,382nm,20.0s
MNK MLR MLR
comp=E,177nm,15.0s
APA Apatity 46.03 335 *e*P **P** 10 58 31.0 -1.0
APA *e* 11 00 07.2
APA *e* 11 00 19.1
APA *e*S **S** 11 05 14.5 -2.3
APA *e* 11 08 27.3
APA pmax pmax
comp=Z,7.0nm,1.2s
APA MLR MLR
comp=Z,1μm,17.2s
LUBAR Lubar, Ukraine 46.04 310 P **P** 10 58 32.3 0.0
MI28 MI28,Pidlybu 46.07 311 P **P** 10 58 31.8 -0.7
VLDR Vladesti 46.08 304 ⇑P **P** 10 58 33.0 +0.4
CFR Carcaliu 46.10 303 ⇑P **P** 10 58 33.3 +0.5
CFR Carcaliu 46.10 303 P **P** 10 58 33.3 +0.5
ELL Elmali 46.18 291 P **P** 10 58 36.4 +2.6
ELL pmax pmax
comp=Z,135nm,1.2s
ICOR Ion Corvin 46.46 302 ⇑P **P** 10 58 36.6 +0.9
NACGM Naroch 46.66 317 *e*P **P** 10 58 39.3 +2.2
comp=Z,42nm,1.1s,baz=92
KMPD K-Podol'skiy 46.95 308 P **P** 10 58 39.8 +0.3
TESR Tescani 47.00 305 ⇑P **P** 10 58 39.4 -0.5
TESR Tescani 47.00 305 P **P** 10 58 40.2 +0.3
comp=Z,520nmcomp=Z,24nm,1.3s
VRI Vrincioaia 47.01 304 ⇑P **P** 10 58 40.7 +0.6
VRI Vrincioaia 47.01 304 P **P** 10 58 40.7 +0.6
VRI Vrincioaia 47.01 304 P **P** 10 58 40.3 +0.2
comp=Z,494nmcomp=Z,33nm,1.1s
GIRR Girov 47.06 306 ⇑P **P** 10 58 41.8 +1.4
SAHR Sahastru 47.06 304 ⇑P **P** 10 58 40.0 -0.5
PLOR Plostina 47.07 304 ⇓P **P** 10 58 40.8 +0.3
PLOR Plostina 47.07 304 P **P** 10 58 40.8 +0.3
RNPP9 Sopachiv 47.18 312 P **P** 10 58 41.2 0.0
RNPP5 Staryi Chortor 47.19 312 P **P** 10 58 41.6 +0.3
ONER Baraj Valea Uz 47.19 305 ⇑P **P** 10 58 42.8 +1.3
RNPP8 Varash 47.21 312 P **P** 10 58 41.4 0.0
ISR Istrita 47.23 303 ⇑P **P** 10 58 42.6 +0.7
ISR Istrita 47.23 303 P **P** 10 58 42.5 +0.7
BIZ Bicaz 47.33 306 ⇑P **P** 10 58 42.5 0.0
NEHR Nehoiu 47.37 304 ⇓P **P** 10 58 43.7 +0.9
RAZG Razgrad 47.47 301 ⇑P **P** 10 58 44.0 +0.4
MLR Muntele Rosu 47.60 304 LR LR 11 22 58.5
comp=Z,827nm,18.5s,baz=69,slow=41
MLR Muntele Rosu 47.60 304 ⇓P **P** 10 58 45.1 +0.3
MLR Muntele Rosu 47.60 304 P **P** 10 58 45.1 +0.3
MLR Muntele Rosu 47.60 304 P **P** 10 58 45.0 +0.2
comp=Z,791nmcomp=Z,69nm,1.3s
FINES FINESS Array B 47.60 325 P **P** 10 58 44.6 +0.2
comp=Z,2.7nm,0.7s,baz=102,slow=8.8,SNR=7.1
FINES LR LR 11 20 37.7
comp=Z,739nm,18.7s,baz=92,slow=38
comp=Z,2.7nm,0.7s
OZUR 47.64 305 ⇓P **P** 10 58 45.1 +0.1
JCJ Chichijima 47.86 82 LR LR 11 20 42.1
comp=Z,233nm,18.2s,baz=286,slow=38
BURAR Bucovina Array 47.87 307 ⇑P **P** 10 58 47.1 +0.3
BURAR Bucovina Array 47.87 307 P **P** 10 58 47.0 +0.3
BURAR Bucovina Array 47.87 307 P **P** 10 58 47.4 +0.6
BUR08 Bucovina Ar. S 47.87 307 P **P** 10 58 46.2 -0.6
BUR08 IAmb IAmb 10 58 50.5
comp=Z,13nm,1.1s
DOPR Dopca 47.93 304 ⇑P **P** 10 58 48.0 +0.8
VOIR 48.23 304 ⇑P **P** 10 58 49.0 -0.7
VOIR 48.23 304 P **P** 10 58 48.9 -0.7
VOIR 48.23 304 P **P** 10 58 49.8 +0.2
comp=Z,15nm,0.8s
PABE Paberze 48.29 317 *e*P **P** 10 58 45.4 -4.3
ARR Arges 48.53 304 ⇑P **P** 10 58 52.1 +0.2
MA2 Magadan 49.06 37 *d* *i*P **P** 10 58 55.7 0.0
MA2 pmax pmax
comp=Z,39nm,1.1s
MA2 Magadan 49.06 37 P **P** 10 58 55.1 -0.5
MA2 Magadan 49.06 37 P **P** 10 58 55.5 -0.2
comp=Z,505nmcomp=Z,37nm,1.1s
KAPI Kappang 49.15 134 LR LR 11 23 02.0
comp=Z,230nm,19.0s,baz=305,slow=40
ARCES ARCESS Array B 49.39 336 P **P** 10 58 58.3 +0.2
comp=Z,8.9nm,1.0s,baz=89,slow=11,SNR=6.1
ARCES LR LR 11 21 44.0
comp=Z,526nm,18.5s,baz=103,slow=38
comp=Z,8.9nm,1.0s
ARCES ARCESS Array B 49.39 336 P **P** 10 58 57.5 -0.5
MARR Marisel-Cluj 49.40 306 ⇓P **P** 10 58 59.3 +0.7
DRGR 49.66 306 ⇑P **P** 10 59 00.6 0.0
DRGR 49.66 306 P **P** 10 59 00.5 0.0
KOLS Kolonicke sedl 49.68 309 *e*P **P** 10 59 04.1 +3.5
KOLS pmax pmax
comp=Z,6.0nm,0.9s
KOLS Kolonicke sedl 49.68 309 *e*P **P** 10 59 04.1 +3.5
GZR Gura Zlata 49.83 304 ⇑P **P** 10 59 01.6 -0.2
GZR Gura Zlata 49.83 304 P **P** 10 59 01.6 -0.2
SEY Seymchan 50.06 33 ⇓ *i*P **P** 10 59 03.8 +0.6
SEY pmax pmax
comp=Z,28nm,1.5s
STHS Stebnicka Huta 50.30 309 *e*P **P** 10 59 06.1 +0.8
STHS pmax pmax
comp=Z,13nm,1.1s
STHS Stebnicka Huta 50.30 309 *e*P **P** 10 59 06.1 +0.8
SIRR Siria 50.46 305 ⇓P **P** 10 59 07.1 +0.6
BZS Buzias 50.59 304 ⇓P **P** 10 59 06.8 -0.8
BZS Buzias 50.59 304 P **P** 10 59 06.7 -0.8
MDVR Moldovita 50.67 303 ⇑P **P** 10 59 08.6 +0.4
OJC Ojcow 51.13 311 P **P** 10 59 11.6 +0.1
comp=Z,9.0nm,1.5s
PSZ Piszkesteto 51.39 308 P **P** 10 59 15.0 +1.4
PSZ pmax pmax
comp=Z,19nm,1.3s
PSZ Piszkesteto 51.39 308 P **P** 10 59 15.0 +1.4
OKC Ostrava-Krasne 52.23 310 AMS AMS 11 23 50.0
comp=Z,400nm,15.2s
MORH Mrgy, Hungar 52.53 306 P **P** 10 59 22.0 0.0
comp=Z,241nmcomp=Z,11nm,1.1s
SKR Severo-Kuril's 52.57 49 *e*P **P** 10 59 24.8 +2.6
SKR *e* 11 01 19.4
SKR *e*S **S** 11 06 48.5 -0.4
SKR pmax pmax
comp=Z,300nm,3.0s
SKR pmax pmax
comp=Z,58nm,1.3s
SKR MLR MLR
comp=Z,800nm,16.0s
MORC Moravsky Berou 52.63 310 IAmb IAmb 10 59 26.8
comp=Z,26nm,1.5s
MORC Moravsky Berou 52.63 310 *e*P **P** 10 59 23.5 +0.7
JAVC Velka Javorina 52.70 309 *e*P **P** 10 59 25.5 +2.2
PDG Podgorica 52.90 301 IAmb IAmb 10 59 27.8
comp=Z,29nm,1.2s
MODS Modra-Piesok 53.04 309 *e*P **P** 10 59 27.6 +1.8
MODS pmax pmax
comp=Z,11nm,1.4s
MODS Modra-Piesok 53.04 309 *e*P **P** 10 59 27.6 +1.8
KRLC Kraliky 53.07 311 *e*P **P** 10 59 28.1 +2.1

KRLC MLR MLR
comp=Z,500nm,15.2s
KRLC Kraliky 53.07 311 *e*P **P** **10 59 28.1 +2.1**
KRLC AMS AMS 11 24 10.0
comp=Z,500nm,15.2s
MPLH Magyarpolny 53.09 307 P **P** **10 59 26.3 +0.2**
comp=Z,48nm,1.2s
PEA0B Petropavlovsk- 53.20 45⇓ *e*P **P** **10 59 28.2 +1.4**
PETK Petropavlovsk- 53.20 45 P **P** **10 59 26.4 -0.4**
comp=Z,3.1nm,0.7s,baz=266,slow=3.9,SNR=7.5
comp=Z,3.1nm,0.7s
DPC Dobruska-Polom 53.31 311 *e*P **P** **10 59 29.0 +1.2**
DPC MLR MLR
comp=Z,500nm,15.5s
DPC Dobruska-Polom 53.31 311 *e*P **P** **10 59 29.0 +1.2**
DPC AMS AMS 11 24 20.0
comp=Z,500nm,15.5s
DPC Dobruska-Polom 53.31 311 P **P** **10 59 28.0 +0.2**
comp=Z,10nm,1.1s
VRAC Vranov 53.32 310 P **P** **10 59 31.9 +4.1**
VRAC Vranov 53.32 310 *e*P **P** **10 59 29.3 +1.5**
UPC Upice 53.48 311 AMS AMS 11 23 50.0
comp=Z,500nm,16.6s
KRUC Moravsky 53.49 310 P **P** **10 59 32.7 +3.7**
HFS Hagfors 53.63 324 P **P** **10 59 30.1 +0.2**
comp=Z,6.7nm,0.7s,baz=95,slow=7.9,SNR=11
HFS LR LR 11 24 15.3
comp=Z,673nm,18.9s,baz=90,slow=38
comp=Z,6.7nm,0.7s
SOP Sopron 53.64 308 P **P** **10 59 31.2 +1.0**
PET Petropavlovsk 53.78 45⇓ *i*P **P** **10 59 30.4 -0.7**
PET pmax pmax
comp=Z,16nm,1.0s
RONA Rosalia, Austr 53.81 308 *i* P **P** **10 59 32.9 +1.4**
comp=Z,8.1nm,1.1s
SIJI Sorong 53.82 120 LR LR 11 24 59.1
comp=Z,103nm,20.1s,baz=26,slow=39
BLY Banja Luka 53.84 304⇓ P **P** **10 59 31.2 -0.4**
BLY Banja Luka 53.84 304 IAmb IAmb 10 59 35.3
comp=Z,29nm,1.3s
TREC Trest 54.03 310 AMS AMS 11 25 50.0
comp=Z,600nm,23.8s
CONA Conrad Observa 54.05 308 *i* P **P** **10 59 35.0 +1.7**
comp=Z,11nm,1.1s
ARSA Arzberg 54.42 308 P **P** **10 59 33.2 -2.7**
ARSA IAmb IAmb 10 59 41.1
comp=Z,23nm,1.5s
ARSA Arzberg 54.42 308 *i* P **P** **10 59 37.0 +1.1**
comp=Z,6.7nm,1.6s
PRU Pruhonice 54.50 311 AMS AMS 11 25 10.0
comp=Z,400nm,15.2s
NC405 NORSAR Array S 54.52 325 P **P** **10 59 35.4 -1.0**
NC405 IAmb IAmb 10 59 39.7
comp=Z,23nm,1.2s
GROS Grobnik 54.60 307 *e*P **P** **10 59 37.7 +0.4**
NC602 NORSAR Array S 54.64 324 P **P** **10 59 36.7 -0.5**
NC602 IAmb IAmb 10 59 39.0
comp=Z,28nm,1.3s
NORES NORESS Array B 54.64 324 P **P** **10 59 37.4 +0.1**
NORES pmax pmax
comp=Z,13nm,1.1s
NC303 NORSAR Array S 54.68 325 IAmb IAmb 10 59 39.5
comp=Z,28nm,1.3s
BRG Berggiesshubel 54.71 312 *e*P **P** **10 59 38.8 +0.9**
BRG Amp 10 59 42.5
comp=Z,10nm,1.2s
BRG Berggiesshubel 54.71 312 S **S** **11 07 24.0 +6.0**
BRG Berggiesshubel 54.71 312 SS SKiKP 11 11 06.0 +20
NB2 NORSAR Subarra 54.77 325 P **P** **10 59 37.5 -0.7**
comp=Z,26nm,1.4s,baz=84,slow=7.4
NB2 NORSAR Subarra 54.77 325 P **P** **10 59 37.5 -0.7**
NB2 pmax pmax
comp=Z,91nm,3.2s
NOA NORSAR Array B 54.77 325 P **P** **10 59 37.8 -0.4**
comp=Z,5.2nm,0.9s,baz=94,slow=6.7,SNR=11
NOA LR LR 11 24 49.4
comp=Z,734nm,18.4s,baz=85,slow=38
comp=Z,5.2nm,0.9s
PERS Pernice 54.83 307 *e*P **P** **10 59 39.2 +0.3**
ZVC Zvikov 54.83 310 AMS AMS 11 26 50.0
comp=Z,500nm,18.4s
SOKA Soboth 54.87 307 *i* P **P** **10 59 40.0 +0.8**
comp=Z,17nm,1.2s
NC204 NORSAR Array S 54.96 325 IAmb IAmb 10 59 50.5
comp=Z,32nm,1.6s
MOA Molln 55.12 308 *i* P **P** **10 59 42.3 +1.3**
comp=Z,7.2nm,1.1s
CLL Collm 55.21 313 *e*P **P** **10 59 42.0 +0.5**
CLL *e*S **S** **11 07 24.0 -0.7**
CLL pmax pmax
comp=Z,13nm,1.5s
CLL MLR MLR
comp=Z,500nm,21.1s
CLL Collm 55.21 313 *e*P **P** **10 59 42.0 +0.5**
comp=Z,13nm,1.5s
CLL *ex* x 11 06 54.0
CLL *e*S **S** **11 07 24.0 -0.7**
CLL *ex* x 11 08 06.0
CLL *e*SS **SS** **11 11 12.0 +3.6**
CLL *e*SSS SSS 11 13 18.0
CLL AMS AMS 11 27 00.0
comp=Z,500nm,21.1s
OBKA Obir 55.23 307 *i* P **P** **10 59 43.1 +1.2**
comp=Z,9.2nm,1.4s
GEC2 GERESS Array S 55.27 310 IAmb IAmb 10 59 45.9
comp=Z,35nm,1.6s
GERES GERESS Array B 55.27 310 P **P** **10 59 42.9 +0.7**
comp=Z,4.1nm,0.7s,baz=76,slow=5.6,SNR=15
comp=Z,4.1nm,0.7s
GERES GERESS Array B 55.27 310 P **P** **10 59 42.5 +0.4**
KHC Kasperske Hory 55.29 310*d* *i*P **P** **10 59 43.3 +1.1**
KHC pmax pmax
comp=Z,11nm,1.4s
KHC Kasperske Hory 55.29 310 *e*S **S** **11 07 21.8 -4.1**
KHC AMS AMS 11 26 30.0
comp=Z,500nm,16.8s
KHC Kasperske Hory 55.29 310 P **P** **10 59 42.4 +0.2**
comp=Z,7.1nm,2.7s
BIOA Bad Ischl, Aus 55.57 308 *e*P **P** **10 59 45.6 +1.3**
comp=Z,3.4nm,1.0s
TIP Timpagrande 55.59 298 IAmb IAmb 10 59 47.4
comp=Z,21nm,1.2s
TIP Timpagrande 55.59 298 P **P** **10 59 44.9 +0.3**
comp=Z,246nmcomp=Z,14nm,1.3s
BATI Baumata 55.60 134 LR LR 11 26 38.6
comp=Z,222nm,19.6s,baz=248,slow=39
NKC Novy Kostel 55.77 312 AMS AMS 11 25 10.0
comp=Z,500nm,17.3s
VOJS Vojsko 55.80 306 *i* P **P** **10 59 46.0 0.0**
BILL Bilibino 55.86 27*d* *i*P **P** **10 59 46.8 +0.9**
BILL pmax pmax
comp=Z,14nm,0.9s
BILL Bilibino 55.86 27 P **P** **10 59 46.9 +0.9**
BILL IAmb IAmb 10 59 48.0
comp=Z,15nm,1.0s
KBA Koelnbreinsper 55.91 308 *i* P **P** **10 59 48.3 +1.5**
comp=Z,6.3nm,0.7s
TRI Trieste 55.96 306 P **P** **10 59 46.5 -0.5**
TRI pmax pmax
comp=Z,21nm,0.8s
TRI Trieste 55.96 306 P **P** **10 59 46.5 -0.5**
GUMO Guam 56.07 96 LR LR 11 23 33.1
comp=Z,202nm,20.8s,baz=322,slow=36
LESA Schwarzleotal 56.27 308 *i* P **P** **10 59 50.5 +1.2**
comp=Z,7.1nm,0.7s
LODK Lodwar 56.30 250 P **P** **10 59 50.2 +0.3**
LODK IAmb IAmb 10 59 53.5
comp=Z,18nm,1.3s
CEL Celeste 56.51 297 P **P** **10 59 51.4 +0.3**
comp=Z,437nmcomp=Z,44nm,1.2s
ABTA Abfaltersbach 56.54 308 *i* P **P** **10 59 51.7 +0.4**
comp=Z,9.1nm,1.4s
INTR Introdacqua 56.85 302 P **P** **10 59 54.2 +0.7**
WTTA Wattenberg 56.99 308 *i* P **P** **10 59 55.4 +0.8**
comp=Z,6.9nm,1.1s
WATA Walderalm 57.01 308 *e*P **P** **10 59 56.0 +1.4**
comp=Z,4.0nm,0.6s
FDMO Fiordimonte 57.14 303 P **P** **10 59 55.5 +0.1**
FDMO IAmb IAmb 10 59 59.0
comp=Z,29nm,1.4s
NRCA Norcia 57.17 303 P **P** **10 59 55.7 -0.1**
NRCA IAmb IAmb 11 00 07.5
comp=Z,17nm,1.4s
SQTA Sankt Quirin 57.28 308 *e*P **P** **10 59 58.1 +1.5**
comp=Z,8.3nm,1.0s
MOTA Moosalm 57.32 308 *i* P **P** **10 59 58.1 +1.3**
comp=Z,6.9nm,0.9s
MURB Monte Urbino 57.47 303 P **P** **10 59 59.0 +1.1**
FETA Feichten 57.65 308 *i* P **P** **10 59 59.1 -0.1**
comp=Z,11nm,1.2s
VAE Valguarnera 57.87 296 LR LR 11 30 26.0
comp=Z,335nm,18.1s,baz=82,slow=42
RAFF Raffo Rosso 57.99 296 P **P** **11 00 02.0 +0.4**
DAVA Damuels 58.14 309 *i* P **P** **11 00 04.2 +1.6**
comp=Z,10nm,1.1s
NOR Nord 59.40 350 *i* P **P** **11 00 10.4 -0.2**
NOR IAmb IAmb 11 00 12.0
comp=Z,5.5nm,0.9s
DAG Danmarks Havn 61.47 345 P **P** **11 00 25.1 +0.3**
DAG pmax pmax
comp=Z,7.0nm,2.2s
DAG Danmarks Havn 61.47 345 *i* P **P** **11 00 23.1 -1.7**
DAG IAmb IAmb 11 00 24.9
comp=Z,2.2nm,0.7s
JAY Jayapura 61.97 114 LR LR 11 26 03.6
comp=Z,204nm,21.4s,baz=2.0,slow=35
KEST Kesra 62.30 296 P **P** **11 00 31.6 +0.3**
comp=Z,9.2nm,1.0s,baz=249,slow=1.5,SNR=7.1
comp=Z,9.2nm,1.0s
KEST Kesra 62.30 296 P **P** **11 00 30.8 -0.5**
KEST IAmb IAmb 11 00 34.5
comp=Z,17nm,1.1s
MBAR Mbarara 62.40 249 LR LR 11 30 34.8
comp=Z,87nm,18.7s,baz=50,slow=39
MBAR Mbarara 62.40 249 P **P** **11 00 31.6 -0.6**
MBAR pmax pmax
comp=Z,64nm,0.3s
MBAR Mbarara 62.40 249 P **P** **11 00 31.6 -0.6**
FITZ Fitzroy Crossi 63.02 138 P **P** **11 00 34.2 -1.8**
comp=Z,4.0nm,0.8s,baz=248,slow=6.8,SNR=3.2
FITZ LR LR 11 32 01.5
comp=Z,124nm,18.4s,baz=349,slow=40
comp=Z,4.0nm,0.8s
EKA Eskdalemuir Ar 63.46 320 P **P** **11 00 38.3 -0.2**
comp=Z,1.8nm,0.7s,baz=74,slow=7.2,SNR=3.5
EKA LR LR 11 30 12.3
comp=Z,283nm,21.4s,baz=70,slow=38
comp=Z,1.8nm,0.7s
SCO Scoresbysund 65.07 339 *i* P **P** **11 00 44.4 -4.4**
SCO IAmb IAmb 11 00 45.1
comp=Z,2.8nm,0.5s
GAMB Gambell 65.64 29 P **P** **11 00 51.7 -0.8**
baz=296
C16K Lisburne Hills 65.88 23 P **P** **11 00 53.3 -0.8**
baz=299
A19K Wainwright 66.22 20 P **P** **11 00 55.3 -0.9**
baz=302
TNA Tin City 66.28 26 P **P** **11 00 55.7 -1.0**
baz=298
C17K DeLong Mountai 66.48 22 P **P** **11 00 57.0 -1.0**
baz=301
NEEM North Greenlan 66.77 351 *i* P **P** **11 00 59.4 -0.7**
NEEM IAmb IAmb 11 01 00.6
comp=Z,28nm,1.0s
RDOG Red Dog Mine 66.78 23 P **P** **11 00 59.1 -0.8**
baz=301
A21K Barrow 66.83 18 P **P** **11 00 59.4 -0.7**
baz=305
D17K Noatak River 66.91 23 P **P** **11 00 59.9 -0.8**
baz=301
F14K Arctic Creek 66.91 26 P **P** **11 00 59.6 -1.1**
baz=299
C18K Utukok River 67.01 22 IAmb IAmb 11 01 04.3
comp=Z,22nm,1.2s
C18K Utukok River 67.01 22 P **P** **11 01 00.2 -1.2**
baz=302
C19K Lookout Ridge 67.25 21 P **P** **11 01 01.8 -1.1**
baz=304
F15K North Star Dit 67.40 25 P **P** **11 01 02.6 -1.2**
baz=300
B20K Meade River 67.44 20 P **P** **11 01 03.0 -1.0**
baz=305
A22K Sinclair Lake 67.44 18 P **P** **11 01 03.4 -0.6**
baz=307
E17K Hotham Inlet 67.65 23 P **P** **11 01 04.9 -0.5**
baz=302
ANM Nome 67.72 26 P **P** **11 01 05.2 -0.7**
baz=300
E18K Tukpahlearik C 67.86 23 P **P** **11 01 06.1 -0.6**
baz=303,SNR=9.2
G15K Niuluk 67.99 26 P **P** **11 01 06.5 -1.0**
baz=301
D19K Kuna River 68.04 21 IAmb IAmb 11 01 09.6
comp=Z,14nm,1.1s
D19K Kuna River 68.04 21 P **P** **11 01 07.3 -0.6**
baz=305
SUMG Summit 68.12 345 P **P** **11 01 08.2 -0.6**
SUMG pmax pmax
comp=Z,32nm,1.2s
SUMG Summit 68.12 345 P **P** **11 01 08.2 -0.6**
SUMG Summit 68.12 345 *i* P **P** **11 01 08.0 -0.8**
SUMG IAmb IAmb 11 01 11.7
comp=Z,32nm,1.2s
F17K Baldwin Pennin 68.19 24 P **P** **11 01 07.7 -1.1**
baz=303
B22K Teshekpuk Lake 68.26 18 P **P** **11 01 08.8 -0.4**
baz=308
D20K Etivluk River 68.36 21 P **P** **11 01 09.3 -0.6**
baz=306
G16K Koyuk River 68.38 25 P **P** **11 01 09.7 -0.3**
baz=302
B21K Ikpikpuk River 68.38 19 P **P** **11 01 10.1 +0.2**
baz=308
C21K Knifeblade Rid 68.62 20 P **P** **11 01 11.4 -0.1**
baz=308
F18K Selawik 68.63 23 P **P** **11 01 11.6 +0.1**
baz=304,SNR=5.1
E20K Nigu River 68.75 21 P **P** **11 01 11.8 -0.6**
baz=307
H16K Elim 68.83 26 P **P** **11 01 12.3 -0.5**
baz=303
E19K Redstone River 68.91 22 IAmb IAmb 11 01 16.8
comp=Z,21nm,1.4s
E19K Redstone River 68.91 22 P **P** **11 01 13.3 0.0**
baz=306
G17K Kiwalik Mounta 68.91 24 P **P** **11 01 13.0 -0.3**
baz=304
F19K Shaleruckik Mo 69.11 22 IAmb IAmb 11 01 17.5
comp=Z,16nm,1.2s
F19K Shaleruckik Mo 69.11 22 P **P** **11 01 14.6 +0.1**
baz=306,SNR=7.7
E21K Killik River 69.30 20 IAmb IAmb 11 01 18.8
comp=Z,17nm,1.1s
E21K Killik River 69.30 20 P **P** **11 01 15.6 -0.1**
baz=308
SPIA Saint Paul Isl 69.31 35 P **P** **11 01 15.9 0.0**
baz=299
C23K Itkillik River 69.33 18 P **P** **11 01 16.2 +0.4**
baz=311,SNR=5.7
K13K Kusilvak Mount 69.36 29 P **P** **11 01 16.5 +0.3**
baz=302
J14K Nanvaranak Lak 69.36 28 P **P** **11 01 16.6 +0.5**
baz=302
G18K Tagagawik 69.37 24 P **P** **11 01 16.3 +0.1**
baz=305
H17K Granite Mounta 69.49 25 IAmb IAmb 11 01 19.1
comp=Z,20nm,1.1s
H17K Granite Mounta 69.49 25 P **P** **11 01 17.9 +1.0**
baz=305,SNR=7.1
WB0 Warramunga Arr 69.52 132 P **P** **11 01 17.3 -0.4**
WB0 IAmb IAmb 11 01 19.6
comp=Z,17nm,1.1s
M11K Mekoryuk 69.53 30 P **P** **11 01 17.4 +0.3**
baz=301
TULEG Thule 69.54 354 *i* P **P** **11 01 15.2 -1.8**
TULEG IAmb IAmb 11 01 16.6
comp=Z,18nm,1.1s
WRA Warramunga Arr 69.61 132 P **P** **11 01 17.4 -0.8**
comp=Z,9.6nm,1.1s,baz=328,slow=6.7,SNR=8.3
comp=Z,9.6nm,1.1s
WRA Warramunga Arr 69.61 132 *i* P **P** **11 01 17.3 -1.0**
WRA pmax pmax
comp=Z,10.0nm,1.1s
WRAB Tennant Creek 69.61 132⇓ *e*P **P** **11 01 17.2 -1.1**
WRAB pmax pmax
comp=Z,21nm,1.4s
F20K Avaaart Lake 69.63 22 P **P** **11 01 17.7 0.0**
baz=307,SNR=5.2
G19K Purcell Mounta 69.74 23 IAmb IAmb 11 01 21.9
comp=Z,15nm,1.2s
G19K Purcell Mounta 69.74 23 P **P** **11 01 18.9 +0.4**
baz=307,SNR=9.2
I17K Unalakleet 69.81 26 P **P** **11 01 18.9 0.0**
baz=304
D23K Nanushuk River 69.88 19 IAmb IAmb 11 01 24.1
comp=Z,35nm,1.9s
D23K Nanushuk River 69.88 19 P **P** **11 01 19.5 +0.3**
baz=311
H18K Honhosa River 69.90 24 IAmb IAmb 11 01 23.0
comp=Z,15nm,1.2s
H18K Honhosa River 69.90 24 P **P** **11 01 19.8 +0.3**
baz=306
E22K Anaktuvuk Pass 70.11 20 IAmb IAmb 11 01 24.0
comp=Z,27nm,1.6s
E22K Anaktuvuk Pass 70.11 20 P **P** **11 01 20.7 0.0**
baz=310
J16K Anvik River 70.18 26 P **P** **11 01 21.4 +0.2**
baz=305
F21K Alatna River 70.21 21 IAmb IAmb 11 01 23.1
comp=Z,23nm,1.5s
F21K Alatna River 70.21 21 P **P** **11 01 21.4 +0.1**
baz=309,SNR=10
D24K Happy Valley 70.25 18 P **P** **11 01 21.4 -0.2**
baz=313
ESDC Sonseca Array 70.28 305 P **P** **11 01 22.5 +0.2**
comp=Z,2.5nm,0.9s,baz=54,slow=5.8,SNR=10
comp=Z,2.5nm,0.9s
ESDC Sonseca Array 70.28 305 P **P** **11 01 21.3 -1.0**
H19K Roundabout Mou 70.32 23 P **P** **11 01 22.7 +0.7**
baz=307,SNR=7.9
K15K Wolf Creek Mou 70.39 27 P **P** **11 01 23.3 +0.8**
baz=304
TOLK Toolik Lake Re 70.40 19 P **P** **11 01 22.7 +0.2**
baz=312,SNR=7.2
F22K John River 70.41 20 P **P** **11 01 22.9 +0.3**
baz=310
L14K Kuka Creek 70.47 29 P **P** **11 01 22.9 -0.1**
baz=304
GCSA Galena City Sc 70.65 24 P **P** **11 01 24.3 +0.3**
baz=307
J17K VABM Dome 70.68 26 IAmb IAmb 11 01 29.4
comp=Z,27nm,1.5s
J17K VABM Dome 70.68 26 P **P** **11 01 25.0 +0.8**
baz=306
C26K Camden Bay 70.70 17 P **P** **11 01 24.4 +0.2**
baz=316
M13K Dall Lake 70.71 30 P **P** **11 01 24.4 0.0**
baz=303
L15K Ungalak Mounta 70.76 28 P **P** **11 01 24.4 -0.4**
baz=304
D25K Kavik River 70.77 18 IAmb IAmb 11 01 28.1
comp=Z,21nm,1.6s
D25K Kavik River 70.77 18 P **P** **11 01 24.7 -0.1**
baz=315,SNR=7.3
E23K Chandalar 70.78 19 IAmb IAmb 11 01 30.6
comp=Z,18nm,1.8s
E23K Chandalar 70.78 19 P **P** **11 01 24.9 0.0**
baz=312
H20K Anotleneega Mo 70.86 23 P **P** **11 01 25.7 +0.4**
baz=309,SNR=12
TAM Tamanrasset 70.89 285 P **P** **11 01 26.2 -0.2**
TAM pmax pmax
comp=Z,41nm,0.3s
TAM Tamanrasset 70.89 285 **P** **11 01 26.2 -0.2**
IMAR Indian Mountai 70.91 22 P **P** **11 01 24.4 -1.2**
G22K Bettles 71.00 21 P **P** **11 01 26.0 -0.1**
baz=311
E24K Your Creek 71.08 19 IAmb IAmb 11 01 30.1
comp=Z,35nm,1.8s
E24K Your Creek 71.08 19 P **P** **11 01 26.8 +0.1**
baz=313,SNR=11
M14K Bethel 71.09 29 IAmb IAmb 11 01 31.6
comp=Z,24nm,1.2s
M14K Bethel 71.09 29 P **P** **11 01 27.2 +0.5**
baz=304
COLD Coldfoot 71.17 20 P **P** **11 01 27.7 +0.5**
COLD Coldfoot 71.17 20 P **P** **11 01 27.5 +0.3**
baz=312,SNR=6.7
C27K Jago River 71.20 17 P **P** **11 01 27.7 +0.4**
C27K IAmb IAmb 11 01 28.6
comp=Z,10nm,0.9s
C27K Jago River 71.20 17 P **P** **11 01 27.7 +0.4**
baz=317,SNR=9.5
K17K Iditarod 71.37 26 P **P** **11 01 29.2 +0.7**
baz=307
H21K Melozitna Rive 71.42 22 IAmb IAmb 11 01 32.2
comp=Z,17nm,1.4s
H21K Melozitna Rive 71.42 22 P **P** **11 01 29.3 +0.6**
baz=310,SNR=7.9
I20K Naaghedeneel 71.43 23 IAmb IAmb 11 01 32.6
comp=Z,26nm,1.2s
I20K Naaghedeneel 71.43 23 P **P** **11 01 29.4 +0.6**
baz=309
J18K Innoko River 71.49 25 IAmb IAmb 11 01 34.1
comp=Z,16nm,1.2s
J18K Innoko River 71.49 25 P **P** **11 01 29.9 +0.8**
baz=308,SNR=7.3
L16K Owhat River 71.52 27 P **P** **11 01 29.9 +0.6**
baz=306
J19K Poorman 71.55 24 IAmb IAmb 11 01 32.8
comp=Z,17nm,1.0s
J19K Poorman 71.55 24 P **P** **11 01 30.6 +1.1**
baz=308,SNR=13
G23K Bananza Creek 71.57 21 P **P** **11 01 29.8 +0.2**
baz=312
F24K Squaw Lake 71.63 19 IAmb IAmb 11 01 32.4
comp=Z,20nm,1.9s
F24K Squaw Lake 71.63 19 P **P** **11 01 29.9 -0.1**
baz=314
M15K Kasigluk River 71.64 29 P **P** **11 01 29.9 -0.2**
baz=305
N14K Kuskokwak Cree 71.67 30 P **P** **11 01 30.7 +0.5**
baz=305
NWAO Narrogin (SRO) 71.68 153 LR LR 11 36 36.0
comp=Z,92nm,19.2s,baz=294,slow=39
H22K Ishtalitna Cre 71.71 22 P **P** **11 01 30.8 +0.3**
baz=311,SNR=5.3
L17K Donlin 71.72 27 P **P** **11 01 31.4 +0.8**
baz=307
E25K Arctic Village 71.83 18 P **P** **11 01 31.3 +0.1**
baz=316,SNR=8.8
J20K Nowinta River 71.94 24 IAmb IAmb 11 01 35.6
comp=Z,22nm,1.3s
J20K Nowinta River 71.94 24 P **P** **11 01 32.6 +0.8**
baz=310,SNR=9.0
KRVT Keravat (AS076 71.96 108 LR LR 11 30 57.8
comp=Z,111nm,21.6s,baz=218,slow=34
I21K Tanana 72.00 22 P **P** **11 01 32.5 +0.4**
baz=311
M16K Timber Creek 72.13 28 P **P** **11 01 33.2 +0.2**
baz=306
D27M Malcolm River 72.14 16 P **P** **11 01 33.0 -0.1**
baz=319
ASAR Alice Springs 72.15 135 P **P** **11 01 33.1 -0.5**
comp=Z,7.7nm,1.1s,baz=323,slow=6.1,SNR=16
comp=Z,7.7nm,1.1s
ASAR Alice Springs 72.15 135 P **P** **11 01 31.5 -2.2**
N15K Kwethluk River 72.19 29 P **P** **11 01 33.3 -0.1**
baz=306
F25K Christian Rive 72.19 19 P **P** **11 01 33.8 +0.5**
baz=316,SNR=9.7
SAATT Saattut 72.21 347 *i* P **P** **11 01 33.7 +0.4**
SAATT IAmb IAmb 11 01 35.2
comp=Z,15nm,0.5s
O14K Tigyukauivet M 72.23 30 P **P** **11 01 33.9 +0.2**
baz=305
L18K Granite Mounta 72.27 26 P **P** **11 01 34.2 +0.4**
baz=308
G24K Hadweenzic Riv 72.32 20 IAmb IAmb 11 01 37.8
comp=Z,30nm,1.8s
G24K Hadweenzic Riv 72.32 20 P **P** **11 01 34.3 +0.2**
baz=314
H23K Yukon River 72.32 21 IAmb IAmb 11 01 38.0
comp=Z,22nm,1.6s
H23K Yukon River 72.32 21 P **P** **11 01 34.6 +0.5**
baz=313
K20K Telida 72.49 24 P **P** **11 01 35.7 +0.5**
baz=310,SNR=11
MLY Manley 72.49 22 IAmb IAmb 11 01 38.7
comp=Z,23nm,1.6s
MLY Manley 72.49 22 P **P** **11 01 35.5 +0.3**
baz=312,SNR=7.0
M17K Holitna River 72.49 27 IAmb IAmb 11 01 38.6
comp=Z,15nm,1.2s
M17K Holitna River 72.49 27 P **P** **11 01 35.4 +0.2**
baz=308
F26K Sheenjek River 72.51 18 P **P** **11 01 35.6 +0.3**
baz=317
N16K Nishlik Lake 72.53 28 P **P** **11 01 35.9 +0.4**
baz=307
G25K Bearman Lake 72.66 19 P **P** **11 01 36.5 +0.4**
baz=316

CHUM	**Lake Minchumin** baz=311	72.74	23	P		P		11 01 37.0	+0.3
E27K	**Coleen River** baz=319,SNR=7.8	72.79	17	P		P		11 01 37.4	+0.4
H24K	**Noodor Dome** baz=314,SNR=5.5	72.81	21	P		P		11 01 37.4	+0.3
I23K	**Minto, Yukon-K** baz=313,SNR=6.5	72.84	22	P		P		11 01 37.5	+0.3
UNV	**Unalaska Valle** baz=303	72.86	36	P		P		11 01 37.4	0.0
O15K	**Ungalikthiuk R** baz=306	72.88	30	P		P		11 01 37.8	+0.3
L19K	**White Mountain** baz=310,SNR=8.9	72.96	26	P		P		11 01 39.0	+1.0
E28M	**Babbage River** baz=321,SNR=5.7	72.96	16	P		P		11 01 38.2	+0.3
M18K	**Stony River** baz=309	73.04	26	P		P		11 01 39.3	+0.9
N17K	**Nushagak Hills** baz=308	73.12	28	P		P		11 01 39.2	+0.3
CAST	**Castle Rocks**	73.13	24	P		P		11 01 39.4	+0.4
CAST	**Castle Rocks** baz=311	73.13	24	P		P		11 01 39.3	+0.4
G26K	**Porcupine Rive** comp=Z,36nm,1.9s	73.16	19	IAmb		IAmb		11 01 42.8	
G26K	**Porcupine Rive** baz=317,SNR=8.8	73.16	19	P		P		11 01 39.7	+0.7
M19K	**Big River Lodg** baz=310	73.31	26	P		P		11 01 41.0	+0.9
NEA2	**Nenana** comp=Z,12nm,0.9s	73.31	22	IAmb		IAmb		11 01 41.2	
NEA2	**Nenana** baz=314,SNR=11	73.31	22	P		P		11 01 40.1	+0.1
O16K	**Kokwok River B** baz=308,SNR=6.0	73.34	29	P		P		11 01 40.9	+0.7
ILULI	**Ilulissat**	73.40	346	*i* P		P		11 01 39.2	-1.2
ILULI	comp=Z,13nm,0.6s			IAmb		IAmb		11 01 40.6	
PPLA	**Purkeypile** baz=311	73.44	24	P		P		11 01 41.2	+0.2
POKR	**Poker Plat Res** baz=315	73.45	21	P		P		11 01 40.7	-0.1
COLA	**College**	73.49	21	*d i* P		P		11 01 40.8	-0.2
COLA	comp=Z,13nm,0.9s			pmax		pmax			
COLA	**College**	73.49	21	P		P		11 01 40.2	-0.8
COLA	comp=Z,24nm,1.2s			IAmb		IAmb		11 01 43.9	
COLA	**College** baz=314	73.49	21	P		P		11 01 40.8	-0.2
E29M	**Blow River** comp=Z,9.3nm,0.8s	73.51	16	IAmb		IAmb		11 01 42.2	
E29M	**Blow River** baz=322,SNR=11	73.51	16	P		P		11 01 41.4	+0.3
N18K	**Kilae Creek** baz=309	73.53	27	P		P		11 01 41.1	-0.3
O17K	**Koliganek Bris** baz=308	73.63	28	P		P		11 01 41.3	-0.6
F28M	**Old Crow** baz=320,SNR=8.5	73.65	17	P		P		11 01 41.8	-0.2
CCB	**Clear Creek Bu**	73.67	21	P		P		11 01 41.6	-0.5
TRF	**Thorofare Moun** baz=313	73.70	23	P		P		11 01 42.0	-0.6
PRP	**Porcupine Dome** comp=Z,37nm,1.9s	73.72	20	IAmb		IAmb		11 01 46.3	
PRP	**Porcupine Dome** baz=316,SNR=6.4	73.72	20	P		P		11 01 42.0	-0.6
P16K	**Nushagak River** baz=308	73.72	29	P		P		11 01 42.1	-0.4
M20K	**Styx River** baz=311,SNR=7.3	73.78	25	P		P		11 01 43.6	+0.7
G27K	**Doyon Strip** baz=319,SNR=5.3	73.82	18	P		P		11 01 43.3	+0.3
IL31		73.86	21	P		P		11 01 42.6	-0.5
ILAR	**Eielson Array** comp=Z,4.3nm,1.0s,baz=307,slow=5.0,SNR=40	73.86	21	P		P		11 01 42.8	-0.5
ILAR	comp=Z,1.4nm,1.0s,baz=304,slow=8.2,SNR=5.4			PP		PP		11 04 26.4	-1.0
ILAR	comp=Z,4.3nm,1.0s **Eielson Array**	73.86	21			P		11 01 42.2	-1.0
MCK	**McKinley** baz=314	73.95	22	P		P		11 01 43.1	-0.7
N19K	**Bonanza Creek** baz=310	73.98	27	P		P		11 01 43.9	-0.2
HDA	**Harding Lake** baz=315	74.10	21	P		P		11 01 43.6	-1.0
L22K	**Petersville** comp=Z,26nm,1.4s	74.17	24	IAmb		IAmb		11 01 47.9	
L22K	**Petersville** baz=313	74.17	24	P		P		11 01 44.8	-0.4
P17K	**Kvichak River** baz=309	74.25	29	P		P		11 01 45.2	-0.4
SKT	**Skwentna**	74.28	25			P		11 01 45.7	-0.1
SKT	**Skwentna** baz=312,SNR=13	74.28	25	P		P		11 01 45.1	-0.6
H27K	**Steamboat Moun** baz=319,SNR=5.2	74.30	18	P		P		11 01 45.4	-0.4
O18K	**Koktuh Hills** baz=310	74.32	28	P		P		11 01 45.4	-0.6
J25K	**Salcha River,** baz=317	74.42	21	P		P		11 01 45.5	-1.1
CUT	**Chulitna** baz=313	74.43	24	P		P		11 01 45.8	-0.7
O19K	**Port Alsworth** baz=310	74.44	27	P		P		11 01 45.8	-0.8
Q16K	**King Salmon** baz=309	74.49	29	P		P		11 01 46.1	-0.8
STLK	**Strandline Lak** comp=Z,18nm,1.2s	74.50	25	IAmb		IAmb		11 01 51.4	
INK	**Inuvik** comp=Z,26nm,1.6s	74.53	14	IAmb		IAmb		11 01 48.4	
INK	**Inuvik** baz=326	74.53	14	P		P		11 01 46.4	-0.7
P18K	**Big Mountain,** baz=310	74.61	28	P		P		11 01 46.8	-0.9
F30M	**Barrier River** comp=Z,20nm,1.1s	74.61	16	IAmb		IAmb		11 01 52.1	
F30M	**Barrier River** baz=324	74.61	16	P		P		11 01 47.6	0.0
G29M	**Pine Creek** comp=Z,38nm,1.6s	74.65	17	IAmb		IAmb		11 01 52.3	
G29M	**Pine Creek** baz=322	74.65	17	P		P		11 01 47.4	-0.5
WAT1	**Susitna Watana** baz=314	74.71	23	P		P		11 01 47.3	-0.9
S14K	**Fog Glacier** baz=307	74.73	32	P		P		11 01 47.7	-0.9
I27K	**Kandik River** comp=Z,23nm,1.4s	74.75	19	IAmb		IAmb		11 01 53.1	
I27K	**Kandik River** baz=319,SNR=7.5	74.75	19	P		P		11 01 48.4	-0.1
K24K	**Donnelly Dome** baz=316,SNR=9.4	74.89	21	P		P		11 01 48.5	-0.8
DHY	**Denali Highway**	74.91	22	P		P		11 01 49.6	+0.1
DHY	**Denali Highway** baz=315	74.91	22	P		P		11 01 48.5	-1.1
M22K	**Willow** baz=313	74.92	24	P		P		11 01 49.0	-0.4
G30M	**tAoh Zraii Nji** comp=Z,13nm,1.1s	75.02	16	IAmb		IAmb		11 01 51.0	
G30M	**tAoh Zraii Nji** baz=324,SNR=8.9	75.02	16	P		P		11 01 49.5	-0.5
SFJD	**Kangerlussuaq** comp=Z,78nm,21.7s,baz=356,slow=41	75.10	344	LR		LR		11 41 39.8	
SFJD	**Kangerlussuaq**	75.10	344	*i* P		P		11 01 49.9	-0.4
SFJD	comp=Z,26nm,1.0s			IAmb		IAmb		11 01 52.4	
H29M	**Whitestone** baz=322,SNR=6.6	75.11	17	P		P		11 01 50.2	-0.3
WAT6	**Susitna Watana** baz=315	75.15	23	P		P		11 01 49.9	-1.1
Q18K	**Katmai Hardscr** baz=310	75.17	28	P		P		11 01 50.3	-0.8
F31M	**Tsiigehtchic** comp=Z,36nm,1.9s	75.20	15	IAmb		IAmb		11 01 53.9	
F31M	**Tsiigehtchic** baz=326	75.20	15	P		P		11 01 50.4	-0.5
P19K	**Oil Pt** baz=311	75.21	27	P		P		11 01 50.6	-0.6
RIDG	**Independent Ri** comp=Z,9.8nm,0.8s	75.22	21	IAmb		IAmb		11 01 51.1	
RIDG	**Independent Ri** baz=317	75.22	21	P		P		11 01 50.6	-0.6
R17L	**Mt. Peulik Vol** baz=309	75.27	30	P		P		11 01 51.0	-0.6
SCRK	**Sand Creek** baz=318,SNR=16	75.30	21	P		P		11 01 51.6	-0.2
I28M	**Miner Creek** baz=321,SNR=6.8	75.32	18	P		P		11 01 51.5	-0.3
C36M	**Paulatuk** baz=334	75.37	11	P		P		11 01 51.1	-0.7
PMR	**Palmer**	75.38	24	P		P		11 01 51.9	-0.1
PMR	comp=Z,44nm,1.8s			pmax		pmax			
PMR	**Palmer**	75.38	24	P		P		11 01 51.9	-0.1
PMR	comp=Z,44nm,1.8s			IAmb		IAmb		11 01 56.2	
PMR	**Palmer** baz=314	75.38	24	P		P		11 01 51.9	-0.1
EPYK	**Eagle Plains** comp=Z,21nm,1.4s	75.40	17	IAmb		IAmb		11 01 52.8	
EPYK	**Eagle Plains** baz=323,SNR=5.6	75.40	17	P		P		11 01 51.9	-0.3
SML	**Sawmill**	75.50	24	P		P		11 01 52.5	-0.3
SML	comp=Z,22nm,1.0s			IAmb		IAmb		11 01 58.1	
SML	**Sawmill** baz=315,SNR=5.8	75.50	24	P		P		11 01 53.0	+0.2
G31M	**Satah River** comp=Z,13nm,0.8s	75.52	16	IAmb		IAmb		11 01 53.1	
G31M	**Satah River** baz=325,SNR=8.3	75.52	16	P		P		11 01 52.2	-0.5
RC01	**Rabbit Creek A** comp=Z,23nm,1.0s	75.52	25	IAmb		IAmb		11 01 57.2	
RC01	**Rabbit Creek A** baz=314	75.52	25	P		P		11 01 52.4	-0.5
PAX	**Paxson** baz=317	75.59	22	P		P		11 01 52.8	-0.7
M23K	**Glacier View** baz=315,SNR=5.3	75.71	24	P		P		11 01 53.6	-0.4
KNK	**Knik Glacier** baz=315	75.73	24	P		P		11 01 53.7	-0.4
HOM	**Homer** baz=312	75.81	26	P		P		11 01 54.0	-0.5
SCM	**Shep Creek Mo** baz=316,SNR=5.6	75.82	23	P		P		11 01 54.1	-0.6
K27K	**Chicken** comp=Z,22nm,1.4s	75.82	20	IAmb		IAmb		11 01 56.5	
M24K	**Tolsona, Glenn** baz=316	76.00	23	P		P		11 01 54.9	-0.8
BRSE	**Bradley Lake S** baz=313	76.08	26	P		P		11 01 55.4	-0.8
HARP	**HAARP** baz=317	76.11	22	P		P		11 01 55.5	-0.8
PWL	**Port Wells** baz=315	76.17	24	P		P		11 01 55.7	-1.0
L26K	**Log Cabin Wild** baz=318	76.21	21	P		P		11 01 56.1	-0.8
SEW	**Seward** baz=314	76.30	25	P		P		11 01 56.8	-0.6
I30M	**Mount Dempster** comp=Z,9.8nm,0.8s	76.41	17	IAmb		IAmb		11 01 58.8	
I30M	**Mount Dempster** baz=324,SNR=15	76.41	17	P		P		11 01 57.7	-0.4
H31M	**Peel River** comp=Z,32nm,1.4s	76.42	16	IAmb		IAmb		11 02 00.9	
H31M	**Peel River** baz=325,SNR=6.8	76.42	16	P		P		11 01 57.6	-0.4
KLU	**Klutina** baz=317	76.53	23	P		P		11 01 58.0	-0.8
DAWY	**Dawson**	76.55	19	P		P		11 01 57.7	-1.1
DAWY	comp=Z,14nm,1.4s			IAmb		IAmb		11 01 60.0	
DAWY	**Dawson** baz=322,SNR=8.5	76.55	19	P		P		11 01 58.7	-0.1
GLI	**Glacier Island** baz=316	76.58	24	P		P		11 01 58.8	-0.2
L27K	**Beaver Creek,** comp=Z,18nm,1.2s	76.63	21	IAmb		IAmb		11 02 03.0	
L27K	**Beaver Creek,** baz=320,SNR=16	76.63	21	P		P		11 01 59.6	+0.3
BCAR	**Beaver Creek A**	76.64	21	P		P		11 01 59.6	+0.3
KDAK	**Kodiak Island** comp=Z,112nm,19.9s,baz=294,slow=37	76.71	28	LR		LR		11 37 55.8	
KDAK	**Kodiak Island** baz=312	76.71	28	P		P		11 01 59.9	+0.1
CHIR	**Chirikof Islan** baz=310	76.74	31	P		P		11 01 59.7	-0.3
M26K	**Nabesna, AK** baz=319	76.78	21	P		P		11 01 59.7	-0.5
OHAK	**Old Harbor** baz=312	76.80	29	P		P		11 02 00.1	-0.1
SII	**Sitkinak Islan** baz=311	76.87	30	P		P		11 02 00.7	-0.1
N25K	**Chitina, Valde** baz=318,SNR=9.4	76.88	23	P		P		11 02 01.1	+0.3
J30M	**Hart River** comp=Z,35nm,1.9s	76.95	18	IAmb		IAmb		11 02 04.1	
J30M	**Hart River** baz=324,SNR=7.9	76.95	18	P		P		11 02 01.3	+0.2
MATP	**Matopo** comp=Z,105nm,21.3s,baz=66,slow=33	76.97	235	LR		LR		11 32 26.9	
P23K	**Montague Islan** baz=316	77.11	25	P		P		11 02 02.1	+0.1
M27K	**Edge Creek, AK** comp=Z,22nm,1.3s	77.16	21	IAmb		IAmb		11 02 06.1	
M27K	**Edge Creek, AK** baz=320,SNR=7.6	77.16	21	P		P		11 02 02.9	+0.5
K29M	**Barlow Dome** comp=Z,13nm,1.2s	77.23	19	IAmb		IAmb		11 02 07.0	
K29M	**Barlow Dome** baz=323,SNR=9.2	77.23	19	P		P		11 02 03.0	+0.2
EYAK	**Cordova Ski Ar** baz=317	77.28	24	P		P		11 02 03.1	+0.3
BMRM	**Bremner River** comp=Z,21nm,1.2s	77.35	23	IAmb		IAmb		11 02 05.0	
BMRM	**Bremner River** baz=318	77.35	23	P		P		11 02 03.5	+0.2
BVCY	**Beaver Creek** baz=321	77.42	21	P		P		11 02 03.9	+0.2
ILON	**Igloolik, Nuna**	77.48	356			P		11 02 02.8	-1.0
ILON	comp=Z,14nm,1.1s			IAmb		IAmb		11 02 03.8	
MCARA	**McCarthy VSAT** baz=319,SNR=6.1	77.55	22	P		P		11 02 04.9	+0.6
CTA	**Charters Tower** comp=Z,85nm,21.4s,baz=292,slow=37	77.59	124	LR		LR		11 37 29.5	
L29M	**L29M** comp=Z,15nm,1.2s	77.65	19	IAmb		IAmb		11 02 08.5	
L29M	**L29M** baz=323	77.65	19	P		P		11 02 04.9	-0.1
Q23K	**Middleton Isla** baz=317	77.89	25	P		P		11 02 06.0	-0.2
CRQM	**Cirque** comp=Z,19nm,1.0s	77.98	23	IAmb		IAmb		11 02 14.2	
CRQE	**Cirque** baz=319	78.00	23	P		P		11 02 06.7	-0.4
YUK3	**Moose Creek** baz=321	78.03	21	P		P		11 02 06.8	-0.6
M29M	**Somme Creek** baz=322,SNR=11	78.09	20	P		P		11 02 08.0	+0.5
KAIM	**Kayak Island** baz=318	78.19	24	P		P		11 02 07.5	-0.4
GRNC	**Granite Creek** comp=Z,26nm,1.4s	78.44	22	IAmb		IAmb		11 02 13.4	
M30M	**Minto, Yukon** baz=324	78.45	19	P		P		11 02 09.0	-0.4
YUK8	**Steele Glacier** baz=322	78.63	21	P		P		11 02 10.1	-0.7
TORD	**Torodi Ar. Bea** comp=Z,2.3nm,0.8s,baz=46,slow=4.4,SNR=13	78.86	278	P		P		11 02 11.3	-1.2
O28M	**Mount Upton** comp=Z,2.3nm,0.8s baz=321	78.90	21	P		P		11 02 11.6	-0.7
YUK4	**Talbot Arm** baz=323	78.91	20	P		P		11 02 11.6	-0.6
N30M	**Aishikik Lake** baz=324	79.27	20	P		P		11 02 13.7	-0.3
YUK6	**Outpost Mounta** baz=323	79.31	21	P		P		11 02 13.8	-0.7
M31M	**Drury Creek, Y** comp=Z,19nm,1.3s	79.40	18	IAmb		IAmb		11 02 17.9	
M31M	**Drury Creek, Y** baz=326,SNR=8.1	79.40	18	P		P		11 02 14.5	-0.2
PINM	**Pinnacle** baz=321	79.41	22	P		P		11 02 14.8	0.0
N31M	**Braeburn, Yuko** comp=Z,26nm,1.0s	79.61	19	IAmb		IAmb		11 02 19.4	
N31M	**Braeburn, Yuko** baz=325,SNR=12	79.61	19	P		P		11 02 16.1	+0.2
HYT	**Haines Junctio** comp=Z,13nm,1.0s	79.66	20	IAmb		IAmb		11 02 19.8	
HYT	**Haines Junctio** baz=324,SNR=8.6	79.66	20	P		P		11 02 16.4	+0.1
O29M	**Mount Kennedy** baz=323	79.76	21	P		P		11 02 15.5	-1.3
MMPY	**Sheldon Lake,** comp=Z,33nm,1.6s	79.84	17	IAmb		IAmb		11 02 21.1	
MMPY	**Sheldon Lake,** baz=328,SNR=7.7	79.84	17	P		P		11 02 16.8	-0.3
O30N	**Mendenhall** comp=Z,17nm,1.2s	80.11	20	IAmb		IAmb		11 02 22.2	
O30N	**Mendenhall** baz=325,SNR=7.7	80.11	20	P		P		11 02 18.5	-0.1
P30M	**Million Dollar** baz=324	80.39	21	P		P		11 02 19.9	-0.2
WHY	**Whitehorse** baz=326	80.54	19	P		P		11 02 20.7	-0.3
P29M	**Windy Craggy** baz=323	80.55	21	P		P		11 02 20.8	-0.2
N32M	**Quiet Lake** comp=Z,21nm,1.1s	80.62	18	IAmb		IAmb		11 02 24.3	
N32M	**Quiet Lake** baz=327	80.62	18	P		P		11 02 20.7	-0.6
WRGLY	**Wrigley** baz=335	81.01	13	P		P		11 02 22.0	-1.2
PLBC	**Pleasant Camp** baz=324	81.11	21	P		P		11 02 23.8	0.0
HNR	**Honiara** comp=Z,6.8nm,19.0s,baz=50,slow=36	81.31	107	LR		LR		11 38 39.5	
SKAG	**Skagway** comp=Z,12nm,1.0s	81.41	20	IAmb		IAmb		11 02 29.6	
SKAG	**Skagway** baz=325	81.41	20	P		P		11 02 25.1	-0.3
P33M	**Teslin, Yukon** comp=Z,24nm,1.3s	81.48	19	IAmb		IAmb		11 02 29.2	
P33M	**Teslin, Yukon** baz=327,SNR=17	81.48	19	P		P		11 02 25.7	-0.3
P32M	**Atlin** comp=Z,28nm,1.4s	81.76	19	IAmb		IAmb		11 02 31.1	
P32M	**Atlin** baz=327	81.76	19	P		P		11 02 27.2	-0.2
LBTB	**Lobatse** comp=Z,59nm,18.0s,baz=48,slow=35	82.03	233	LR		LR		11 37 36.3	
LBTB	**Lobatse**	82.03	233	P		P		11 02 28.9	-0.4
LBTB	comp=Z,11nm,1.2s			pmax		pmax			
R31K	**City Hall, Gus** baz=325	82.15	21	P		P		11 02 28.4	-0.9
S31K	**Pelican** baz=325	82.37	22	P		P		11 02 29.5	-1.0
WTLY	**Watson Lake, Y** comp=Z,28nm,1.6s	82.61	17	IAmb		IAmb		11 02 34.8	
WTLY	**Watson Lake, Y** baz=330	82.61	17	P		P		11 02 30.2	-1.5
R32K	**Eaglecrest** comp=Z,18nm,1.1s	82.63	21	IAmb		IAmb		11 02 36.0	
R32K	**Eaglecrest** baz=326,SNR=12	82.63	21	P		P		11 02 31.6	-0.3
R33M	**Jennings River** comp=Z,20nm,1.3s	82.67	18	IAmb		IAmb		11 02 36.0	
R33M	**Jennings River** baz=329,SNR=11	82.67	18	P		P		11 02 31.9	-0.4
Q32M	**Nakina River** comp=Z,17nm,1.4s	82.69	19	IAmb		IAmb		11 02 36.2	
Q32M	**Nakina River** baz=328	82.69	19	P		P		11 02 32.1	-0.4
STKA	**Stephens Creek** comp=Z,11nm,1.1s,baz=327,slow=8.7,SNR=7.1	82.79	135	P		P		11 02 31.1	-1.9
BLKN	comp=Z,11nm,1.1s **Baker Lake** comp=Z,13nm,1.3s	82.87	1	IAmb		IAmb		11 02 33.1	
YKA	**Yellowknife Ar** comp=Z,6.8nm,1.1s,baz=344,slow=4.7,SNR=13	83.19	10	P		P		11 02 34.0	-0.7
YKA	comp=Z,6.8nm,1.1s **Yellowknife Ar**	83.19	10	*i* P		P		11 02 34.0	-0.7
YKA	comp=Z,8.0nm,1.2s			pmax		pmax			
YKA	**Yellowknife Ar**	83.19	10	P		P		11 02 33.1	-1.6
YKAW1	**Yellowknife Wh** comp=Z,19nm,1.2s	83.21	10	IAmb		IAmb		11 02 37.1	
S32K	**Killisnoo** baz=326	83.28	21	P		P		11 02 35.1	-0.1
SIT	**Sitka** baz=326	83.39	22	P		P		11 02 35.6	-0.2
KOTAN	**Kotaneelee Air** baz=334	83.69	15	P		P		11 02 37.2	-0.2
DLBC	**Dease Lake** comp=Z,78nm,20.2s,baz=292,slow=38	83.75	18	LR		LR		11 43 47.7	
DLBC	**Dease Lake** baz=330	83.75	18	P		P		11 02 37.6	-0.2
LIRD	**Liard River Hi** baz=333	83.88	16	P		P		11 02 38.3	-0.1
S34M	**Telegraph Cree** baz=329	83.90	19	P		P		11 02 38.2	-0.3
TSUM	**Tsumeb** comp=Z,114nm,18.3s,baz=150,slow=36	84.02	243	LR		LR		11 40 05.3	
T33K	**Petersburg** baz=327	84.31	21	P		P		11 02 40.5	0.0
BOSA	**Boshof** comp=Z,4.1nm,1.0s,baz=42,slow=4.1,SNR=4.0	84.67	231	P		P		11 02 41.3	-1.5
BOSA	comp=Z,82nm,19.2s,baz=38,slow=35			LR		LR		11 39 31.2	
BOSA	**Boshof** comp=Z,4.1nm,1.0s	84.67	231	IAmb		IAmb		11 02 43.2	
WRAK	**Wrangell Islan** baz=328	84.83	21	P		P		11 02 43.1	0.0
U33K	**Whale Pass** baz=327	84.86	21	P		P		11 02 43.0	-0.2
T35M	**Bob Quinn** comp=Z,19nm,1.4s	84.95	19	IAmb		IAmb		11 02 48.2	
T35M	**Bob Quinn** baz=330	84.95	19	P		P		11 02 43.6	-0.2
CRAG	**Craig** baz=327	85.40	21	P		P		11 02 45.6	-0.4
V35K	**Ketchikan** baz=329	85.97	21	P		P		11 02 48.2	-0.7
DBIC	**Dimbokro** comp=Z,194nm,20.2s,baz=60,slow=38	87.76	276	LR		LR		11 46 06.6	
SCHQ	**Schefferville** comp=Z,131nm,21.0s,baz=340,slow=39	89.51	345	LR		LR		11 47 47.3	
BBB	**Bella Bella** comp=Z,76nm,21.4s,baz=338,slow=38	89.74	21	LR		LR		11 47 33.7	
SUR	**Sutherland** comp=Z,102nm,20.1s,baz=66,slow=34	90.02	231	LR		LR		11 41 06.6	
FFC	**Flin Flon**	92.20	5	P		P		11 03 17.5	-0.9
FFC	comp=Z,16nm,1.3s			pmax		pmax			
FFC	**Flin Flon**	92.20	5			P		11 03 17.5	-0.9
CBB	**Campbell River** comp=Z,11nm,1.1s	92.45	20	IAmb		IAmb		11 03 22.4	
B08A	**Colville Reser** comp=Z,9.2nm,1.2s	95.60	17	IAmb		IAmb		11 03 35.5	
NEW	**Newport** comp=Z,48nm,18.1s,baz=347,slow=40	96.22	16	LR		LR		11 54 43.6	
TXAR	**Lajitas Array** comp=Z,0.3nm,0.8s,baz=349,slow=1.0,SNR=3.7	117.11	10	PKP		PKPdf		11 08 53.8	-0.6
VNA2	**Neumayer--Watz** comp=Z,3.1nm,0.7s,baz=50,slow=1.9	122.24	203	⇑PKPdf		PKPdf		11 09 01.8	-0.9
VNA1	**Neumayer--Stat** comp=Z,3.6nm,0.8s	122.49	203	PKPdf		PKPdf		11 09 02.7	-0.4
QSPA	**South Pole Qui** comp=Z,1.8nm,0.9s,baz=307,slow=3.1,SNR=3.3	122.90	180	PKP		PKPdf		11 09 02.2	-1.9
PPT2	**Papeete2** comp=Z,273nm,33.2s	127.37	87	*e*LR		LR		11 49 12.9	
PPT2	comp=Z,204nm,36.5s			*e*LR		LR		11 49 13.8	
TAOE	**Nuku Hiva Isla** comp=Z,146nm,25.3s	130.52	72	*e*LR		LR		11 50 35.8	
VILB	**Vilhena**	143.81	296			PKPbc		11 09 42.3	0.0
PTLB	**Pontes e Lacer**	144.50	291			PKPab		11 09 43.6	-0.6
SIV	**San Ignacio** comp=Z,12nm,1.1s,baz=89,slow=4.0,SNR=25	146.33	293	PKPbc		PKPdf		11 09 49.3	+0.3
CPUP	**Villa Florida** comp=Z,5.4nm,0.8s,baz=56,slow=3.2,SNR=10	148.21	273	PKPbc		PKPbc		11 09 53.9	-1.2
CPUP	**Villa Florida**	148.21	273	PKIKP		PKPdf		11 09 49.9	-1.9
CPUP	**Villa Florida**	148.21	273			PKPdf		11 09 49.9	-1.9
LPAZ	**La Paz** comp=Z,7.0nm,1.0s,baz=355,slow=8.1,SNR=6.0	151.82	300	PKPbc		PKPbc		11 10 04.3	-0.6
PB16	**IPOC Station P**	154.13	299			PKPbc		11 10 07.2	-2.8

IDC ***23*** *10:52:21.6±1.3, 6°37S×127°98E, h379km±16km, mb3.4/9, mbtmp4.4/16, Error ellipse: s-maj=20.7km s-min=12.2km az=82.0*

DJA ***23*** *10:52:22.9±0.3, 6°S±3°×12°8E±°, h388km±7km, M4.4/19, mB4.8/6, mb4.3/12, MLv4.7/19, Mw(mB)4.1/6*

NEIC ***23*** *10:52:22.4±1.5, 6°31S±0°05×127°95E±0°09, h390km±6km, mb4.0/10, Error ellipse: s-maj=13.3km s-min=7.6km az=78.0*

ISC 23 10:52:22.2±0.5, 6°35S±0°05×128°07E±0°08, h400km, n46,

σ1§84/49, **mb3.8**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.57**	**45**	P	**Pn**	**10 53 21.6**	**-0.6**
NLAI	**Namlea**	**3.23**	**343**	P	**Pn**	**10 53 28.6**	**+1.1**
SAUI	**Saumlaki**	**3.59**	**117**	Pn	**Pn**	**10 53 30.7**	**+0.1**
SAUI	**Saumlaki**	**3.59**	**117**	P	**Pn**	**10 53 30.4**	**-0.2**
SANI	**Sanana**	**4.75**	**334**	P	**Pn**	**10 53 40.1**	**-1.6**
SOEI	**Soe**	**5.06**	**228**		**Pn**	**10 53 44.2**	**-0.8**
SOEI	**Soe**	**5.06**	**228**	P	**Pn**	**10 53 44.7**	**-0.4**
	1.2nm2μm62nm,0.4s						
FAKI	**Fak Fak**	**5.38**	**51**		**Pn**	**10 53 47.6**	**-0.7**
FAKI	**Fak Fak**	**5.38**	**51**	P	**Pn**	**10 53 47.4**	**-0.9**
BBSI	**Bau Bau**	**5.54**	**279**	P	**Pn**	**10 53 51.4**	**+1.4**
	0.2nm56nm,1.1s						
BATI	**Baumata**	**5.81**	**228**	P	**Pn**	**10 53 49.5**	**-3.3**
	48nm,0.4s,baz=358,slow=1.8,SNR=9.9						
BATI				S	S	10 54 54.1	-13
	229nm,0.6s,baz=314,slow=16,SNR=14						
BATI	**Baumata**	**5.81**	**228**	P	**Pn**	**10 53 48.8**	**-4.1**
SIJI	**Sorong**	**6.31**	**30**	P	**Pn**	**10 53 58.0**	**-0.3**
	16nm,0.5s,baz=270,slow=23,SNR=24						
SIJI				S	**S**	**10 55 08.8**	**-7.8**
	41nm,0.3s,baz=74,slow=23,SNR=15						
SIJI	**Sorong**	**6.31**	**30**	P	**Pn**	**10 53 57.7**	**-0.6**
	0.5nm2μm21nm,0.5s						
SWI	**Sorong**	**6.31**	**30**	P	**Pn**	**10 53 57.6**	**-0.7**
	0.6nm36nm,1.1s						
MTN	**Manton Dam**	**7.13**	**155**		**Pn**	**10 54 07.7**	**+0.4**
KAPI	**Kappang**	**8.38**	**279**	P	**Pn**	**10 54 19.7**	**-2.0**
	6.4nm,0.6s,baz=119,slow=19,SNR=1.4						
KNRA	**Kununurra**	**9.30**	**176**	P	**P**	**10 54 32.6**	**+0.6**
TOLI2	**Tolitoli**	**10.38**	**315**	P	**P**	**10 54 43.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.92**	**191**	P	**P**	**10 55 01.9**	**+0.8**
	7.2nm,0.5s,baz=17,slow=6.9,SNR=54						
FITZ				S	**S**	**10 57 08.2**	**-4.1**
	1.6nm,0.4s,baz=88,slow=22,SNR=1.1						
JAY	**Jayapura**	**13.16**	**74**	P	**P**	**10 55 16.1**	**+1.3**
	16nm,0.8s,baz=338,slow=2.6,SNR=5.9						
WB0	**Warramunga Arr**	**14.69**	**156**		**P**	**10 55 32.0**	**+0.6**
WRAB	**Tennant Creek**	**14.82**	**156**	P	**P**	**10 55 33.4**	**+0.5**
WRA	**Warramunga Arr**	**14.82**	**156**	P	**P**	**10 55 33.4**	**+0.5**
	7.2nm,0.3s,baz=336,slow=11,SNR=113						
WRA				S	**S**	**10 58 08.4**	**-2.3**
	4.2nm,0.7s,baz=336,slow=17,SNR=5.7						
WRA	**Warramunga Arr**	**14.82**	**156**	P	**P**	**10 55 32.5**	**-0.4**
WR8	**Warramunga Arr**	**14.90**	**156**		**P**	**10 55 34.4**	**+0.7**
COEN	**Coen**	**16.67**	**118**	P	**P**	**10 55 53.5**	**+0.7**
COEN				IAmb	IAmb	10 56 00.1	
	comp=Z,18nm,1.5s						
MBWA	**Marble Bar**	**16.79**	**208**	P	**P**	**10 55 54.4**	**+0.3**
AS31	**Alice Springs**	**18.11**	**163**	P	**P**	**10 56 08.9**	**+0.9**
ASAR	**Alice Springs**	**18.11**	**163**	P	**P**	**10 56 08.8**	**+0.7**
	comp=Z,23nm,0.4s,baz=343,slow=12,SNR=398						
ASAR				S	**S**	**10 59 13.3**	**-1.4**
	comp=Z,8.7nm,0.9s,baz=337,slow=17,SNR=23						
ASAR	**Alice Springs**	**18.11**	**163**	P	**P**	**10 56 08.9**	**+0.9**
BBOO	**Buckleboo**	**27.36**	**165**	P	**P**	**10 57 34.0**	**+1.2**
BBOO				IAmb	IAmb	10 58 06.4	
	comp=Z,11nm,1.2s						
STKA	**Stephens Creek**	**28.37**	**155**	P	**P**	**10 57 42.9**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=340,slow=9.0,SNR=3.7						
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	**43.57**	**360**	P	**P**	**10 59 50.4**	**+1.7**
	comp=Z,2.4nm,0.6s,baz=180,slow=9.2,SNR=11						
	comp=Z,2.4nm,0.6s						
MJAR	**Matsushiro Arr**	**43.71**	**12**	P	**P**	**10 59 49.6**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=192,slow=9.0,SNR=6.8						
	comp=Z,1.7nm,0.5s						
MAJO	**Matsushiro**	**43.71**	**12**	P	**P**	**10 59 49.0**	**-0.8**
MAJO				IAmb	IAmb	10 59 50.8	
	comp=Z,4.7nm,0.8s						
MJB9	**Matsu-Tunnel**	**43.71**	**12**	P	**P**	**10 59 50.0**	**+0.1**
MJB9				IAmb	IAmb	10 59 51.8	
	comp=Z,4.5nm,0.8s						
SONM	**Songino Array**	**57.24**	**343**	P	**P**	**11 01 31.3**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=152,slow=6.5,SNR=4.0						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**57.24**	**343**	P	**P**	**11 01 30.4**	**+0.7**
PETK	**Petropavlovsk-**	**64.33**	**19**	P	**P**	**11 02 18.7**	**+2.2**
	comp=Z,1.4nm,0.5s,baz=202,slow=7.4,SNR=2.8						
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**66.64**	**328**	P	**P**	**11 02 32.9**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=125,slow=8.2,SNR=12						
	comp=Z,1.1nm,0.5s						
ZALV	**Zalesovo Beam**	**70.16**	**334**	P	**P**	**11 02 53.4**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=123,slow=5.5,SNR=5.6						
	comp=Z,1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**70.96**	**329**	P	**P**	**11 02 59.1**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=129,slow=5.0,SNR=12						
	comp=Z,1.4nm,0.3s						
KURK	**Kurchatov**	**70.97**	**329**	P	**P**	**11 02 59.2**	**+1.5**
KURK				IAmb	IAmb	11 02 59.7	
	comp=Z,2.5nm,0.8s						
QSPA	**South Pole Qui**	**83.63**	**180**	P	**P**	**11 04 07.3**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=319,slow=11,SNR=6.0						
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**83.63**	**180**	IAmb	IAmb	11 04 28.7	
	comp=Z,3.0nm,1.2s						

*BJI **23** 11:08:34.5,55˚.31N×160˚.09W, h25km, mB5.1/11, mb5.4/53, Ms4.7/21, Ms7 4.5/23*

*MOS **23** 11:08:36.5±0.9, 55˚.34N×159˚.70W, h38km, mb5.4/102, MS4.4/10, Error ellipse: s-maj=8.0km s-min=3.5km az=94.2*

*GFZ **23** 11:08:38.2, 55˚.29N×159˚.71W, h55km, Mw5.0/27, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr2.22; Mθθ-2.37; Mφφ0.15; Mrθ2.06; Mθφ-0.45; Mφr1.24; Fault plane solution: M₀3.35513×10¹⁶ NP1:φs65.05609°, δ68.42193°, λ77.62235°. NP2:φs275.88152°, δ24.72821°, λ118.45785°. Principal axes: T 3.3329, Plg64.4645°, Azm314.4699°; N 0.0441, Plg11.4979°, Azm69.6704°; P -3.3770, Plg22.4710°, Azm164.4967°;*

*NEIC **23** 11:08:38.4±2.3, 55˚.21N±0˚.08×159˚.62W±0˚.07, h45km±4km, mb5.1/466, ML5.1/38, Mww5.0/61 Error ellipse: s-maj=11.0km s-min=5.9km az=173.0*

*GFZ **23** 11:08:38.2±0.1, 55˚N-3˚×16˚0W±˚, h36km, M5.0/161, mB5.5/60, mb5.3/161, Mw(mB)5.0/60*

*ANF **23** 11:08:38.5±0.6, 55˚.15N×159˚.49W, h60km±6km, ML5.3/23, Error ellipse: s-maj=7.2km s-min=3.1km az=21.0*

*IDC **23** 11:08:38.2±0.4, 55˚.29N×159˚.68W, h40km±2km, mb4.8/32, mbtmp5.0/37, ML4.5/6, MS4.0/73, Error ellipse: s-maj=11.5km s-min=7.8km az=3.0*

*NEIC **23** 11:08:38.5, 55˚.22N×159˚.64W, h43km*

*PMR **23** 11:08:39.0, 55˚.28N×159˚.48W, h21km*

*GCMT **23** 11:08:40.4±0.2, 55˚.14N±0˚.02×159˚.40W±0˚.02, h52km±1km, MW5.0/101, Moment Tensor Solution. s66,c97; s101,c161; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.70±.12; Mθθ-2.38±.10; Mφφ-0.32±.09; Mrθ1.90±.09; Mθφ-1.56±.07; Mφr0.88±.07; Best double couple: M₀3.62700×10¹⁶ NP1:φs239.00000°, δ27.00000°, λ85.00000°. NP2:φs64.00000°, δ63.00000°, λ92.00000°. Principal axes: T 3.3690, Plg72.0000°, Azm339.0000°; N 0.5130, Plg2.0000°, Azm243.0000°; P -3.8850, Plg18.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **23** 11:08:41.8, 55˚.72N×160˚.04W, h45km±1km, mb5.3, Ms4.2*

*NEIC **23** 11:08:41, 55˚.02N×159˚.46W, h50km, Moment Tensor Solution. Duration: 1§6 Moment tensor: Scale 10¹⁶Nm; Mrr3.21; Mθθ-2.51; Mφφ-0.71; Mrθ1.61; Mθφ-1.12; Mφr0.77; Fault plane solution: M₀3.60000×10¹⁶ NP1: φs244.35000°, δ30.16000°, λ89.98000°. NP2:φs64.37000°, δ59.84000°, λ90.01000°. Principal axes: T 3.6874, Plg75.0000°, Azm334.0000°; N -0.1726, Plg0.0000°, Azm244.0000°; P -3.5149, Plg15.0000°, Azm154.0000°;*

ISC 23 11:08:37.7±0.3, 55˚.22N±0˚.04×159˚.59W±0˚.03, h40km±2km, h40km:pP-P, n1390, σ1§14/1269, mb5.2/459, MS4.2/82, 56C-32D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.39**	**180**	P	**Pn**	**11 08 46.2**	**-0.8**
CHNA	**Chernabura Isl**	**0.39**	**180**	S	**Sn**	**11 08 52.0**	**-1.5**
CHNA	**Chernabura Isl**	**0.39**	**180**	P	**Pn**	**11 08 46.5**	**-0.5**
	baz=7.9,SNR=1000						
CHNA				S	**Sn**	**11 08 52.6**	**-0.9**
	baz=7.9						
CNBA	**Chernabura Isl**	**0.40**	**180**		**Pn**	**11 08 46.6**	**-0.5**
CNBA				Sn	**Sn**	**11 08 52.2**	**-1.5**
CNBA				IAML		11 08 53.1	
	comp=E,124μm,0.4s						
CNBA				IAML		11 08 53.4	
	comp=N,85μm,0.5s						
SDPT	**Sand Point**	**0.52**	**285**	P	**Pn**	**11 08 49.1**	**+0.4**
SDPT	**Sand Point**	**0.52**	**285**	S	**Sn**	**11 08 55.8**	**-0.7**
SDPT	**Sand Point**	**0.52**	**285**		**Pn**	**11 08 49.8**	**+1.1**
SDPT				Sn	**Sn**	**11 08 58.1**	**+1.6**
SDPT				IAML		11 08 59.5	
	comp=E,56μm,1.1s						
SDPT				IAML		11 08 59.6	
	comp=N,131μm,0.9s						
SDPT	**Sand Point**	**0.52**	**285**	P	**Pn**	**11 08 49.8**	**+1.1**
	baz=96,SNR=1000						
SDPT				S	**Sn**	**11 08 58.4**	**+1.9**
	baz=96						
S14K	**Fog Glacier**	**1.07**	**1**	P	**Pn**	**11 08 58.5**	**+2.3**
	baz=178,SNR=1000						
VNFG	**Fog Glacier, M**	**1.07**	**1**		**Pn**	**11 08 58.3**	**+2.1**
CHIR	**Chirikof Islan**	**2.33**	**73**		**Pn**	**11 09 14.2**	**+0.7**
CHIR				IAML		11 09 53.0	
	comp=E,13μm,0.9s						
CHIR				IAML		11 09 54.7	
	comp=N,14μm,0.9s						
CHIR	**Chirikof Islan**	**2.33**	**73**	P	**Pn**	**11 09 14.1**	**+0.7**
	baz=258						
CHIR				S	**Sn**	**11 09 41.6**	**+0.6**
	baz=258						
R17L	**Mt. Peulik Vol**	**3.01**	**35**	P	**Pn**	**11 09 25.0**	**+2.2**
	baz=218						
SII	**Sitkinak Islan**	**3.33**	**64**	P	**Pn**	**11 09 28.0**	**+0.8**
SII	**Sitkinak Islan**	**3.33**	**64**	S	**Sn**	**11 10 08.2**	**+2.8**
SII	**Sitkinak Islan**	**3.33**	**64**		**Pn**	**11 09 27.8**	**+0.6**
SII	**Sitkinak Islan**	**3.33**	**64**	P	**Pn**	**11 09 27.8**	**+0.6**
	baz=249,SNR=19						
Q17K	**Contact Creek**	**3.67**	**32**	P	**Pn**	**11 09 33.6**	**+1.6**
	baz=215						
AKUT	**Akutan**	**3.75**	**256**	P	**Pn**	**11 09 35.2**	**+2.3**
AKUT	**Akutan**	**3.75**	**256**	S	**Sn**	**11 10 20.4**	**+4.6**
AKUT	**Akutan**	**3.75**	**256**		**Pn**	**11 09 35.1**	**+2.2**
AKUT				IAML		11 10 38.1	
	comp=E,3μm,0.8s						
ACHA	**Angle Creek He**	**3.81**	**36**		**Pn**	**11 09 35.8**	**+1.9**
Q16K	**King Salmon**	**3.82**	**24**	P	**Pn**	**11 09 36.0**	**+2.1**
	baz=206,SNR=113						
LVA	**Lava Point**	**3.89**	**257**		**Pn**	**11 09 36.1**	**+1.2**
LVA				IAML		11 10 51.8	
	comp=E,3μm,0.8s						
P16K	**Nushagak River**	**3.92**	**12**		**Pn**	**11 09 36.9**	**+1.7**
P16K				IAML		11 10 45.7	
	comp=N,4μm,0.9s						
P16K	**Nushagak River**	**3.92**	**12**	P	**Pn**	**11 09 37.4**	**+2.2**
	baz=193,SNR=44						
O15K	**Ungalikthiuk R**	**3.97**	**358**		**Pn**	**11 09 36.9**	**+0.9**
O15K	**Ungalikthiuk R**	**3.97**	**358**	P	**Pn**	**11 09 37.4**	**+1.4**
	baz=177,SNR=300						
OHAK	**Old Harbor**	**4.05**	**58**	P	**Pn**	**11 09 37.4**	**+0.4**
OHAK	**Old Harbor**	**4.05**	**58**		**Pn**	**11 09 37.2**	**+0.1**
OHAK				IAML		11 10 53.1	
	comp=N,2μm,1.6s						
OHAK				IAML		11 11 02.7	
	comp=E,2μm,1.0s						
OHAK	**Old Harbor**	**4.05**	**58**	P	**Pn**	**11 09 37.2**	**+0.1**
	baz=243,SNR=20						
O14K	**Tigyukauivet M**	**4.14**	**348**		**Pn**	**11 09 39.9**	**+1.6**
O14K				IAML		11 11 05.2	
	comp=N,2μm,0.9s						
O14K	**Tigyukauivet M**	**4.14**	**348**	P	**Pn**	**11 09 40.0**	**+1.6**
	baz=166,SNR=387						
Q18K	**Katmai Hardscr**	**4.25**	**34**	P	**Pn**	**11 09 41.8**	**+1.8**
	baz=218,SNR=266						
UNV	**Unalaska Valle**	**4.26**	**254**	P	**Pn**	**11 09 41.6**	**+1.7**
UNV	**Unalaska Valle**	**4.26**	**254**		**Pn**	**11 09 41.2**	**+1.3**
UNV				IAML		11 10 56.4	
	comp=E,1μm,0.8s						
UNV	**Unalaska Valle**	**4.26**	**254**	P	**Pn**	**11 09 41.5**	**+1.6**
	baz=68,SNR=42						
P17K	**Kvichak River**	**4.34**	**22**		**Pn**	**11 09 43.0**	**+2.0**
P17K	**Kvichak River**	**4.34**	**22**	P	**Pn**	**11 09 43.2**	**+2.2**
	baz=204,SNR=128						
O16K	**Kokwok River B**	**4.46**	**10**		**Pn**	**11 09 44.3**	**+1.6**
O16K	**Kokwok River B**	**4.46**	**10**	P	**Pn**	**11 09 44.2**	**+1.5**
	baz=190,SNR=152						
KDAK	**Kodiak Island**	**4.65**	**54**	P	**Pn**	**11 09 45.0**	**-0.3**
	comp=E,16nm,0.3s,baz=209,slow=5.5,SNR=153						
KDAK				S	**Sn**	**11 10 36.3**	**-1.7**
	comp=E,250nm,0.5s,baz=212,slow=8.8,SNR=3.8						
KDAK				LR	LR	11 11 53.9	
	comp=E,3μm,20.0s,baz=222,slow=42						
	comp=E,34nm,0.3s						
KDAK	**Kodiak Island**	**4.65**	**54**	*d iP*	**Pn**	**11 09 45.6**	**+0.3**
KDAK	**Kodiak Island**	**4.65**	**54**		**Pn**	**11 09 45.8**	**+0.4**
KDAK				IAML		11 11 02.4	
	comp=E,1μm,0.9s						
KDAK				IAML		11 11 09.2	
	comp=E,2μm,1.0s						
KDAK	**Kodiak Island**	**4.65**	**54**	P	**Pn**	**11 09 45.6**	**+0.3**
	baz=240						
KDAK	**Kodiak Island**	**4.65**	**54**	P	**Pn**	**11 09 46.2**	**+0.9**
O17K	**Koliganek Bris**	**4.76**	**15**	P	**Pn**	**11 09 48.7**	**+1.9**
	baz=197,SNR=251						
P18K	**Big Mountain,**	**4.80**	**28**	P	**Pn**	**11 09 49.5**	**+2.0**
	baz=211,SNR=92						
N14K	**Kuskokwak Cree**	**4.85**	**347**	IAML		11 11 33.9	
	comp=N,2μm,1.4s						
N14K				IAML		11 11 38.0	
	comp=E,2μm,1.4s						
N14K	**Kuskokwak Cree**	**4.85**	**347**	P	**Pn**	**11 09 49.8**	**+1.8**
	baz=165,SNR=237						
N15K	**Kwethluk River**	**4.97**	**357**	IAML		11 11 22.4	
	comp=E,2μm,1.2s						
N15K				IAML		11 11 22.4	
	comp=N,1μm,1.0s						
N15K	**Kwethluk River**	**4.97**	**357**	P	**Pn**	**11 09 51.4**	**+1.7**
	baz=176,SNR=536						
O18K	**Koktuh Hills**	**5.21**	**25**	IAML		11 11 06.0	
	comp=N,1μm,1.0s						
O18K	**Koktuh Hills**	**5.21**	**25**	P	**Pn**	**11 09 55.3**	**+2.3**
	baz=208,SNR=167						
N16K	**Nishlik Lake**	**5.29**	**4**	P	**Pn**	**11 09 56.3**	**+2.2**
	baz=184,SNR=581						
N17K	**Nushagak Hills**	**5.47**	**13**	P	**Pn**	**11 09 58.3**	**+1.7**
	baz=194,SNR=154						
M15K	**Kasigluk River**	**5.52**	**354**	P	**Pn**	**11 09 58.5**	**+1.3**
	baz=173,SNR=496						
M13K	**Dall Lake**	**5.58**	**340**	P	**Pn**	**11 10 00.3**	**+2.3**
	baz=156,SNR=122						
P19K	**Oil Pt**	**5.61**	**35**	P	**Pn**	**11 10 00.1**	**+1.6**
	baz=220						
M14K	**Bethel**	**5.69**	**348**		**Pn**	**11 10 00.6**	**+1.1**
M14K	**Bethel**	**5.69**	**348**	P	**Pn**	**11 10 01.0**	**+1.5**
	baz=165,SNR=731						
O19K	**Port Alsworth**	**5.73**	**27**	P	**Pn**	**11 10 02.4**	**+2.3**
	baz=212,SNR=186						
N18K	**Kilae Creek**	**5.82**	**18**	P	**Pn**	**11 10 03.1**	**+1.8**
	baz=201,SNR=55						
M16K	**Timber Creek**	**5.83**	**3**	P	**Pn**	**11 10 03.5**	**+2.0**
	baz=183,SNR=361						
ILSW	**Iliamna Southw**	**5.90**	**33**		**Pn**	**11 10 04.3**	**+1.8**
O20K	**Slope Mountain**	**6.14**	**35**	P	**Pn**	**11 10 08.2**	**+2.4**
	baz=220,SNR=30						
HOM	**Homer**	**6.18**	**41**	P	**Pn**	**11 10 08.3**	**+2.0**
	baz=227,SNR=21						
N19K	**Bonanza Creek**	**6.23**	**24**	P	**Pn**	**11 10 09.2**	**+2.1**
	baz=208,SNR=101						
SPIA	**Saint Paul Isl**	**6.26**	**293**	P	**Pn**	**11 10 09.7**	**+2.3**
SPIA	**Saint Paul Isl**	**6.26**	**293**		**Pn**	**11 10 09.0**	**+1.6**
SPIA	**Saint Paul Isl**	**6.26**	**293**	P	**Pn**	**11 10 09.3**	**+1.9**
	baz=103,SNR=7.9						
M11K	**Mekoryuk**	**6.27**	**328**	P	**Pn**	**11 10 09.2**	**+1.7**
	baz=142,SNR=39						
M17K	**Holitna River**	**6.30**	**9**	P	**Pn**	**11 10 10.2**	**+2.3**
	baz=191,SNR=219						
L14K	**Kuka Creek**	**6.35**	**346**	P	**Pn**	**11 10 10.0**	**+1.4**
	baz=163,SNR=381						
RED	**Redoubt Volcan**	**6.36**	**32**		**Pn**	**11 10 10.8**	**+2.1**
L16K	**Owhat River**	**6.51**	**0**	P	**Pn**	**11 10 12.1**	**+1.4**
	baz=180,SNR=367						
L15K	**Ungalak Mounta**	**6.55**	**352**	P	**Pn**	**11 10 12.1**	**+0.7**
	baz=170,SNR=189						
BRSE	**Bradley Lake S**	**6.58**	**43**	P	**Pn**	**11 10 11.8**	**0.0**
	baz=230,SNR=30						
M18K	**Stony River**	**6.59**	**16**	P	**Pn**	**11 10 13.3**	**+1.4**
	baz=199,SNR=846						
L17K	**Donlin**	**6.97**	**5**	P	**Pn**	**11 10 18.3**	**+1.2**
	baz=186,SNR=225						
SPCR	**Spurr Chakacha**	**7.15**	**30**	P	**Pn**	**11 10 21.1**	**+1.5**
	baz=216,SNR=24						
K15K	**Wolf Creek Mou**	**7.17**	**353**	P	**Pn**	**11 10 21.9**	**+2.1**
	baz=170,SNR=136						
SPU	**Mount Spurr**	**7.18**	**31**		**Pn**	**11 10 22.0**	**+1.9**
L18K	**Granite Mounta**	**7.18**	**11**	P	**Pn**	**11 10 22.0**	**+2.1**
	baz=193,SNR=159						
M19K	**Big River Lodg**	**7.23**	**20**	P	**Pn**	**11 10 23.5**	**+2.8**
	baz=204						
K13K	**Kusilvak Mount**	**7.23**	**341**	P	**Pn**	**11 10 22.3**	**+1.6**
	baz=156,SNR=181						
SEW	**Seward**	**7.31**	**44**	P	**Pn**	**11 10 23.4**	**+1.7**
	baz=232,SNR=18						
L19K	**White Mountain**	**7.40**	**17**	P	**Pn**	**11 10 25.0**	**+1.9**
	baz=201,SNR=187						
O22K	**Cooper Landing**	**7.45**	**41**	P	**Pn**	**11 10 25.6**	**+2.0**
	baz=229,SNR=23						
M20K	**Styx River**	**7.48**	**24**	P	**Pn**	**11 10 27.0**	**+2.8**
	baz=209,SNR=176						
K17K	**Iditarod**	**7.55**	**5**	P	**Pn**	**11 10 26.4**	**+1.4**
	baz=185,SNR=336						
J14K	**Nanvaranak Lak**	**7.82**	**346**	P	**Pn**	**11 10 29.7**	**+1.0**
	baz=162,SNR=36						
RC01	**Rabbit Creek A**	**7.85**	**37**		**Pn**	**11 10 30.2**	**+1.0**
RC01	**Rabbit Creek A**	**7.85**	**37**	P	**Pn**	**11 10 30.2**	**+1.0**
	baz=226,SNR=19						
SKT	**Skwentna**	**7.97**	**29**	P	**Pn**	**11 10 31.9**	**+1.0**
	baz=215,SNR=88						
P23K	**Montague Islan**	**8.10**	**49**		**Pn**	**11 10 33.4**	**+0.8**
P23K	**Montague Islan**	**8.10**	**49**	P	**Pn**	**11 10 33.0**	**+0.3**
	baz=239,SNR=7.5						
J16K	**Anvik River**	**8.11**	**357**	P	**Pn**	**11 10 34.0**	**+1.4**
	baz=175,SNR=309						
J17K	**VABM Dome**	**8.21**	**2**	P	**Pn**	**11 10 34.7**	**+0.7**
	baz=182,SNR=145						
M22K	**Willow**	**8.21**	**33**	P	**Pn**	**11 10 34.5**	**+0.5**
	baz=221,SNR=93						
PWL	**Port Wells**	**8.21**	**42**	P	**Pn**	**11 10 33.5**	**-0.7**
	baz=231,SNR=64						
J18K	**Innoko River**	**8.40**	**9**	P	**Pn**	**11 10 38.2**	**+1.6**
	baz=191,SNR=248						
PMR	**Palmer**	**8.41**	**36**	P	**Pn**	**11 10 36.3**	**-0.6**
PMR	**Palmer**	**8.41**	**36**	P	**Pn**	**11 10 36.7**	**-0.1**
	baz=225,SNR=30						
KNK	**Knik Glacier**	**8.53**	**39**	P	**Pn**	**11 10 38.6**	**+0.1**
	baz=228,SNR=26						
PPLA	**Purkeypile**	**8.58**	**23**	P	**Pn**	**11 10 40.6**	**+1.2**
	baz=209,SNR=89						
L22K	**Petersville**	**8.62**	**28**	P	**Pn**	**11 10 40.4**	**+0.5**
	baz=216,SNR=47						
K20K	**Telida**	**8.63**	**17**	P	**Pn**	**11 10 41.2**	**+1.3**
	baz=201,SNR=90						
CUT	**Chulitna**	**8.67**	**30**	P	**Pn**	**11 10 40.8**	**+0.5**
	baz=218,SNR=22						
GLI	**Glacier Island**	**8.71**	**44**	Pn	**Pn**	**11 10 41.6**	**+0.6**
GLI	**Glacier Island**	**8.71**	**44**	P	**Pn**	**11 10 41.5**	**+0.5**
	baz=235,SNR=18						
I17K	**Unalakleet**	**8.71**	**357**	P	**Pn**	**11 10 42.3**	**+1.3**
	baz=175,SNR=102						
SML	**Sawmill**	**8.84**	**37**	P	**Pn**	**11 10 42.5**	**-0.3**
	baz=227,SNR=21						
J19K	**Poorman**	**9.03**	**11**	P	**Pn**	**11 10 47.2**	**+1.9**
	baz=194,SNR=278						
M23K	**Glacier View**	**9.04**	**38**	P	**Pn**	**11 10 46.3**	**+0.8**
	baz=228,SNR=34						
CAST	**Castle Rocks**	**9.07**	**22**	P	**Pn**	**11 10 48.0**	**+2.2**
	baz=208						
EYAK	**Cordova Ski Ar**	**9.09**	**48**	P	**Pn**	**11 10 46.1**	**0.0**
EYAK	**Cordova Ski Ar**	**9.09**	**48**	P	**Pn**	**11 10 46.1**	**0.0**
	baz=240,SNR=18						
ATKA	**Atka Island**	**9.17**	**257**	P	**Pn**	**11 10 48.8**	**+1.5**
SCM	**Sheep Creek Mo**	**9.21**	**39**	P	**Pn**	**11 10 47.8**	**-0.1**
	baz=229,SNR=52						
J20K	**Nowinta River**	**9.39**	**15**	P	**Pn**	**11 10 52.0**	**+1.7**
	baz=199,SNR=154						
KAIM	**Kayak Island**	**9.41**	**54**	P	**Pn**	**11 10 51.0**	**+0.5**
	baz=247,SNR=9.5						
CHUM	**Lake Minchumin**	**9.43**	**20**	P	**Pn**	**11 10 52.7**	**+1.9**
	baz=206,SNR=22						
WAT1	**Susitna Watana**	**9.50**	**32**	P	**Pn**	**11 10 50.5**	**-1.3**
	baz=222						
TRF	**Thorofare Moun**	**9.51**	**26**	P	**Pn**	**11 10 52.1**	**+0.1**
	baz=214,SNR=100						
KLU	**Klutina**	**9.53**	**43**	P	**Pn**	**11 10 52.5**	**+0.2**
	baz=235,SNR=134						
H16K	**Elim**	**9.54**	**353**	P	**Pn**	**11 10 53.3**	**+1.1**
	baz=170,SNR=40						
WAT6	**Susitna Watana**	**9.58**	**35**	P	**Pn**	**11 10 52.1**	**-0.9**
	baz=225,SNR=32						
GCSA	**Galena City Sc**	**9.65**	**7**	P	**Pn**	**11 10 55.6**	**+1.8**
	baz=189,SNR=23						
H17K	**Granite Mounta**	**9.75**	**359**	P	**Pn**	**11 10 56.5**	**+1.3**
	baz=178,SNR=161						
BMRM	**Bremner River**	**9.79**	**48**	P	**Pn**	**11 10 56.3**	**+0.6**

M26K	Nabesna, AK	11.19	43	P		Pn	11 11 14.9	0.0	
	baz=237,SNR=41								
MENT	Mentasta	11.22	40	P		Pn	11 11 16.1	+0.8	
F17K	Baldwin Pennin	11.29	357	P		Pn	11 11 17.8	+1.6	
	baz=175,SNR=7.4								
COLA	College	11.30	26	*d*	*i*P	Pn	11 11 14.5	-1.7	
COLA	College	11.30	26			Pn	11 11 15.4	-0.8	
COLA	College	11.30	26	P		Pn	11 11 15.4	-0.8	
	baz=216								
COLA	College	11.30	26	P		Pn	11 11 15.2	-1.1	
RIDG	Independent Ri	11.33	35	P		Pn	11 11 17.4	+0.6	
	baz=228,SNR=46								
L26K	Log Cabin Wild	11.41	40	P		Pn	11 11 18.6	+0.8	
	baz=234,SNR=48								
F18K	Selawik	11.42	360	P		Pn	11 11 20.6	+2.6	
	baz=180,SNR=28								
H22K	Ishtalitna Cre	11.43	17	P		Pn	11 11 19.3	+1.1	
	baz=204,SNR=66								
PINM	Pinnacle	11.43	57	P		Pn	11 11 18.6	+0.4	
	baz=253,SNR=9.2								
IL31		11.47	28			Pn	11 11 17.0	-1.6	
ILAR	Eielson Array	11.47	28	P		Pn	11 11 17.2	-1.4	
	comp=N,1.3nm,0.3s,baz=214,slow=13,SNR=190								
ILAR				S		Sn	11 13 14.1	-11	
	comp=N,4.9nm,0.8s,baz=223,slow=21,SNR=1.0								
ILAR				LR		LR	11 15 58.6		
	comp=N,1µm,19.8s,baz=228,slow=38								
	comp=N,8.1nm,0.5s								
ILAR	Eielson Array	11.47	28			Pn	11 11 16.9	-1.7	
POKR	Poker Plat Res	11.60	26	P		Pn	11 11 18.6	-1.9	
	baz=217								
M27K	Edge Creek, AK	11.61	45	P		Pn	11 11 21.2	+0.4	
	baz=240,SNR=23								
O28M	Mount Upton	11.67	54	P		Pn	11 11 22.1	+0.4	
	baz=250,SNR=35								
F19K	Shaleruckik Mo	11.69	4	P		Pn	11 11 23.4	+1.8	
	baz=185,SNR=74								
G21K	Allakaket	11.71	12	P		Pn	11 11 22.9	+1.0	
	baz=197								
H23K	Yukon River	11.71	21	P		Pn	11 11 21.4	-0.6	
	baz=209								
SCRK	Sand Creek	11.78	36	P		Pn	11 11 21.8	-1.1	
	baz=229,SNR=23								
J25K	Salcha River,	11.78	31	P		Pn	11 11 20.9	-2.1	
	baz=223,SNR=57								
YUK3	Moose Creek	11.94	49	P		Pn	11 11 25.6	+0.4	
	baz=245,SNR=59								
E17K	Hotham Inlet	11.95	356	P		Pn	11 11 26.2	+1.0	
	baz=174,SNR=6.6								
L27K	Beaver Creek,	12.00	42	P		Pn	11 11 26.0	+0.1	
	baz=237,SNR=91								
F20K	Avaraart Lake	12.01	7	P		Pn	11 11 28.5	+2.5	
	baz=190,SNR=159								
BCAR	Beaver Creek A	12.02	42			Pn	11 11 25.9	-0.3	
YUK8	Steele Glacier	12.05	52	P		Pn	11 11 27.9	+1.1	
	baz=249,SNR=59								
BVCY	Beaver Creek	12.05	46	P		Pn	11 11 27.2	+0.5	
	baz=242								
H24K	Noodor Dome	12.08	24	P		Pn	11 11 27.2	+0.2	
	baz=214,SNR=23								
E18K	Tukpahlearik C	12.25	358			Pn	11 11 31.0	+1.7	
E18K	Tukpahlearik C	12.25	358	P		Pn	11 11 31.5	+2.2	
	baz=177,SNR=31								
O29M	Mount Kennedy	12.29	57	P		Pn	11 11 31.3	+1.3	
	baz=255,SNR=47								
E19K	Redstone River	12.33	4	P		Pn	11 11 32.7	+2.3	
	baz=186								
G22K	Bettles	12.36	15	P		Pn	11 11 32.0	+1.3	
	baz=202								
F21K	Alatna River	12.39	11	P		Pn	11 11 33.0	+1.8	
	baz=196,SNR=98								
G23K	Bananza Creek	12.41	18	P		Pn	11 11 32.0	+0.5	
	baz=206,SNR=63								
BRWY	Burwash Landin	12.41	52	P		Pn	11 11 31.4	-0.1	
	baz=249								
PRP	Porcupine Dome	12.41	28	P		Pn	11 11 31.8	+0.1	
	baz=220,SNR=35								
P29M	Windy Craggy	12.55	60	P		Pn	11 11 33.9	+0.5	
	baz=259,SNR=27								
YUK4	Talbot Arm	12.57	52	P		Pn	11 11 35.4	+1.4	
	baz=250								
YUK6	Outpost Mounta	12.58	54	P		Pn	11 11 34.7	+0.7	
	baz=252,SNR=14								
D17K	Noatak River	12.63	354	P		Pn	11 11 36.7	+2.2	
	baz=170,SNR=9.4								
F22K	John River	12.82	13	P		Pn	11 11 38.8	+1.8	
	baz=199								
COLD	Coldfoot	12.84	17	P		Pn	11 11 38.7	+1.3	
	baz=205,SNR=30								
G24K	Hadweenzic Riv	12.90	22	P		Pn	11 11 39.7	+1.5	
	baz=212,SNR=34								
HYT	Haines Junctio	12.94	55			Pn	11 11 39.8	+0.9	
HYT	Haines Junctio	12.94	55	P		Pn	11 11 39.5	+0.6	
	baz=254,SNR=14								
RDOG	Red Dog Mine	12.97	354	P		Pn	11 11 41.3	+2.2	
	baz=171,SNR=15								
P30M	Million Dollar	13.04	59	P		Pn	11 11 39.7	-0.4	
	baz=258								
M29M	Somme Creek	13.07	48	P		Pn	11 11 41.0	+0.5	
	baz=246,SNR=351								
S31K	Pelican	13.14	68	P		Pn	11 11 41.4	0.0	
	baz=268,SNR=11								
E20K	Nigu River	13.18	6	P		Pn	11 11 44.8	+2.8	
	baz=188								
AMKA	Amchitka	13.18	262			Pn	11 11 42.1	0.0	
PLBC	Pleasant Camp	13.21	62	P		Pn	11 11 42.6	+0.2	
	baz=262,SNR=33								
G25K	Bearman Lake	13.26	24	P		Pn	11 11 42.1	-0.9	
	baz=216,SNR=12								
N30M	Aishikik Lake	13.32	53	P		Pn	11 11 43.1	-0.9	
	baz=252								
D19K	Kuna River	13.34	2	P		Pn	11 11 46.5	+2.3	
	baz=183								
C16K	Lisburne Hills	13.37	351			Pn	11 11 47.4	+2.8	
C16K	Lisburne Hills	13.37	351	P		Pn	11 11 47.0	+2.5	
	baz=165								
C17K	DeLong Mountai	13.41	354	P		Pn	11 11 47.1	+2.0	
	baz=171,SNR=14								
E22K	Anaktuvuk Pass	13.46	13	P		Pn	11 11 47.5	+1.7	
	baz=199								
DAWY	Dawson	13.46	41	P		Pn	11 11 45.8	-0.1	
	baz=238,SNR=72								
L29M	L29M	13.49	45	P		Pn	11 11 46.9	+0.6	
	baz=244,SNR=42								
C18K	Utukok River	13.50	357	P		Pn	11 11 48.6	+2.3	
	baz=176,SNR=14								
F24K	Squaw Lake	13.52	19	P		Pn	11 11 44.6	-2.0	
	baz=210,SNR=9.1								
E21K	Killik River	13.52	9	P		Pn	11 11 48.2	+1.6	
	baz=194								
O30N	Mendenhall	13.60	56	P		Pn	11 11 47.9	+0.2	
	baz=256,SNR=9.6								
I27K	Kandik River	13.62	33	P		Pn	11 11 46.5	-1.4	
	baz=229,SNR=8.7								
SIT	Sitka	13.63	72	P		Pn	11 11 47.8	-0.4	
SIT	Sitka	13.63	72	P		Pn	11 11 47.6	-0.6	
SIT	Sitka	13.63	72			Pn	11 11 47.6	-0.6	
SIT	Sitka	13.63	72	P		Pn	11 11 47.7	-0.4	
	baz=273								
E23K	Chandalar	13.70	16	P		Pn	11 11 50.6	+1.5	
	baz=205,SNR=50								
SKAG	Skagway	13.73	62	P		Pn	11 11 51.1	+1.5	
SKAG	Skagway	13.73	62	P		Pn	11 11 50.4	+0.9	
	baz=263,SNR=6.3								
M30M	Minto, Yukon	13.83	49	P		Pn	11 11 51.4	+0.4	
	baz=248,SNR=56								
BESE	Bessie Mountai	13.90	66			Pn	11 11 53.5	+1.7	
E24K	Your Creek	13.90	18	P		Pn	11 11 52.1	+0.3	
	baz=207,SNR=15								
N31M	Braeburn, Yuko	13.93	54	P		Pn	11 11 52.5	+0.2	
	baz=254,SNR=36								
C19K	Lookout Ridge	13.94	0	P		Pn	11 11 55.1	+2.8	
	baz=180								
G26K	Porcupine Rive	13.96	26	P		Pn	11 11 47.3	-5.3	
	baz=220,SNR=9.1								
S32K	Killisnoo	14.03	71			Pn	11 11 54.4	+0.9	
S32K	Killisnoo	14.03	71	P		Pn	11 11 53.1	-0.4	
	baz=272,SNR=10								
F25K	Christian Rive	14.04	22	P		Pn	11 11 48.9	-4.8	
	baz=214,SNR=12								
I28M	Miner Creek	14.06	35	P		Pn	11 11 53.2	-0.8	
	baz=232,SNR=23								
R32K	Eaglecrest	14.06	67	P		Pn	11 11 55.0	+1.0	
	baz=268								
H27K	Steamboat Moun	14.06	31	P		Pn	11 11 51.7	-2.4	
	baz=227,SNR=16								
K29M	Barlow Dome	14.07	43	P		Pn	11 11 54.0	-0.2	
	baz=242,SNR=22								

J29N	Klondike Camp	14.10	40	P		Pn	11 11 55.5	+1.0	
	baz=239,SNR=11								
JIS	Juneau Island	14.13	67	P		Pn	11 11 56.6	+1.7	
WHY	Whitehorse	14.16	57	P		Pn	11 11 55.7	+0.3	
	baz=258,SNR=16								
C21K	Knifeblade Rid	14.16	7	P		Pn	11 11 58.2	+3.0	
	baz=191,SNR=84								
TOLK	Toolik Lake Re	14.24	15	P		Pn	11 11 58.3	+1.9	
	baz=204,SNR=73								
D23K	Nanushuk River	14.38	13	P		Pn	11 11 59.5	+1.2	
	baz=201,SNR=30								
G27K	Doyon Strip	14.43	29	P		Pn	11 11 57.9	-1.1	
	baz=225,SNR=9.5								
F26K	Sheenjek River	14.46	24	P		Pn	11 11 57.8	-1.6	
	baz=218,SNR=21								
E25K	Arctic Village	14.49	21	P		Pn	11 11 58.6	-1.2	
	baz=214,SNR=39								
P32M	Atlin	14.57	62	P		Pn	11 12 02.2	+1.3	
	baz=264,SNR=9.0								
B21K	Ikpikpuk River	14.63	7	P		Pn	11 12 03.7	+2.1	
	baz=191,SNR=39								
M31M	Drury Creek, Y	14.77	52	P		Pn	11 12 04.2	+0.7	
	baz=253,SNR=33								
J30M	Hart River	14.87	42	P		Pn	11 12 05.3	+0.3	
	baz=242,SNR=92								
B20K	Meade River	14.88	3	P		Pn	11 12 05.7	+0.7	
	baz=185,SNR=11								
U33K	Whale Pass	14.93	76	P		Pn	11 12 06.2	+0.6	
	baz=278								
CRAG	Craig	15.03	78	P		Pn	11 12 07.1	+0.2	
	baz=280								
H29M	Whitestone	15.04	34	P		Pn	11 12 05.3	-1.8	
	baz=233,SNR=94								
A19K	Wainwright	15.06	358	P		Pn	11 12 08.2	+1.0	
	baz=176								
P33M	Teslin, Yukon	15.09	60	P		Pn	11 12 07.6	-0.3	
	baz=263,SNR=73								
N32M	Quiet Lake	15.12	56	IAmb		IAmb	11 12 16.3		
	comp=Z,99nm,0.8s								
N32M	Quiet Lake	15.12	56	P		Pn	11 12 08.3	+0.2	
	baz=259								
I30M	Mount Dempster	15.17	39	P		Pn	11 12 08.7	-0.2	
	baz=240,SNR=19								
C23K	Itkillik River	15.21	12	P		Pn	11 12 09.2	-0.1	
	baz=200,SNR=221								
Q32M	Nakina River	15.26	65	P		Pn	11 12 09.7	-0.5	
	baz=268,SNR=43								
D25K	Kavik River	15.37	18	P		Pn	11 12 10.6	-0.7	
	baz=209,SNR=51								
B22K	Teshekpuk Lake	15.42	8	IAmb		IAmb	11 12 14.9		
	comp=Z,185nm,1.2s								
B22K	Teshekpuk Lake	15.42	8	P		Pn	11 12 12.1	+0.1	
	baz=193,SNR=30								
E27K	Coleen River	15.45	26	P		Pn	11 12 10.5	-2.0	
	baz=222,SNR=10								
F28M	Old Crow	15.49	29	P		Pn	11 12 08.5	-4.5	
	baz=226,SNR=14								
G29M	Pine Creek	15.57	33	P		Pn	11 12 11.4	-2.6	
	baz=232,SNR=41								
SHEM	Shemya Is, Ala	15.64	272	P		Pn	11 12 13.1	-1.9	
	comp=Z,3.3nm,0.3s,baz=30,slow=2.6,SNR=5.1								
SHEM				LR		LR	11 18 07.2		
	comp=Z,560nm,21.5s,baz=80,slow=36								
	comp=Z,40nm,0.9s								
EPYK	Eagle Plains	15.67	35	P		Pn	11 12 13.6	-1.7	
	baz=236,SNR=269								
S34M	Telegraph Cree	15.86	69	P		Pn	11 12 17.7	-0.1	
	baz=272,SNR=29								
V35K	Ketchikan	15.90	78	P		Pn	11 12 18.4	+0.1	
	baz=281,SNR=5.4								
R33M	Jennings River	15.95	63	P		Pn	11 12 17.5	-1.5	
	baz=267,SNR=49								
H02S1	DAWSON INLET T	15.95	86	T		T	11 28 19.5		
	SNR=3.8								
A22K	Sinclair Lake	15.97	5	P		Pn	11 12 18.2	-0.8	
	baz=189,SNR=6.7								
C27K	Jago River	16.12	20	P		Pn	11 12 19.3	-1.7	
	baz=214,SNR=21								
C26K	Camden Bay	16.14	18	P		Pn	11 12 20.8	-0.4	
	baz=211,SNR=8.2								
G30M	tAoh Zraii Nji	16.18	34	IAmb		IAmb	11 12 27.3		
	comp=Z,175nm,0.7s								
G30M	tAoh Zraii Nji	16.18	34	P		Pn	11 12 20.0	-1.8	
	baz=234,SNR=97								
H31M	Peel River	16.20	39	IAmb		IAmb	11 12 27.8		
	comp=Z,381nm,1.6s								
H31M	Peel River	16.20	39	P		Pn	11 12 21.3	-0.8	
	baz=241,SNR=99								
MMPY	Sheldon Lake,	16.28	51	P		P	11 12 24.5	-1.1	
	baz=256,SNR=50								
E28M	Babbage River	16.28	27	P		Pn	11 12 22.9	-0.2	
	baz=224,SNR=7.3								
T35M	Bob Quinn	16.41	72	P		Pn	11 12 24.7	-0.1	
	baz=276,SNR=9.6								
D27M	Malcolm River	16.41	24	P		Pn	11 12 24.2	-0.5	
	baz=220,SNR=9.0								
DLBC	Dease Lake	16.43	67	P		Pn	11 12 25.5	+0.5	
	comp=Z,1.0nm,0.3s,baz=218,slow=15,SNR=13								
DLBC				S		Sn	11 15 21.2	-4.9	
	comp=Z,2.5nm,0.8s,baz=147,slow=22,SNR=1.2								
DLBC				LR		LR	11 18 12.5		
	comp=Z,346nm,19.7s,baz=263,slow=35								
	comp=Z,14nm,1.1s								
DLBC	Dease Lake	16.43	67	P		Pn	11 12 23.4	-1.6	
	baz=272,SNR=18								
E29M	Blow River	16.57	29	P		Pn	11 12 25.0	-1.6	
	baz=228,SNR=24								
F30M	Barrier River	16.69	33			Pn	11 12 28.9	+0.7	
F30M				IAmb		IAmb	11 12 35.1		
	comp=Z,93nm,0.7s								
F30M	Barrier River	16.69	33	P		Pn	11 12 27.3	-0.9	
	baz=234,SNR=52								
G31M	Satah River	16.79	36	P		Pn	11 12 27.8	-1.6	
	baz=238,SNR=51								
WTLY	Watson Lake, Y	17.08	61	P		P	11 12 34.9	+0.4	
	baz=267,SNR=8.7								
F31M	Tsiigehtchic	17.24	35	P		Pn	11 12 33.5	-1.5	
	baz=237,SNR=39								
INK	Inuvik	17.79	32	P		Pn	11 12 41.0	-0.8	
	comp=Z,5.4nm,0.3s,baz=235,slow=12,SNR=72								
INK				S		Sn	11 15 50.6	-8.1	
	comp=Z,4.4nm,1.0s,baz=294,slow=30,SNR=1.0								
INK				LR		LR	11 20 09.0		
	comp=Z,641nm,18.4s,baz=232,slow=39								
INK				ScP		ScP	11 20 48.4	-0.1	
	comp=Z,4.4nm,0.9s,baz=180,slow=3.0,SNR=3.7								
	comp=Z,80nm,0.7s								
INK	Inuvik	17.79	32	IAmb		IAmb	11 12 44.4		
	comp=Z,90nm,0.7s								
INK	Inuvik	17.79	32	P		Pn	11 12 41.1	-0.6	
	baz=235,SNR=83								
INK	Inuvik	17.79	32	P		Pn	11 12 41.2	-0.6	
LIRD	Liard River Hi	18.44	63	P		Pn	11 12 51.5	+1.7	
	baz=272,SNR=9.7								
BBB	Bella Bella	18.80	86	P		P	11 12 53.8	+0.4	
	comp=Z,0.3nm,0.3s,baz=279,slow=14,SNR=3.3								
BBB				LR		LR	11 18 30.8		
	comp=Z,596nm,21.4s,baz=292,slow=31								
KOTAN	Kotaneelee Air	19.46	61	P		Pn	11 13 02.5	+0.5	
	baz=271,SNR=16								
BILL	Bilibino	20.32	323	*ce*	P	P	11 13 10.3	+0.4	
BILL				pmax		pmax			
	comp=Z,23nm,0.9s								
BILL	Bilibino	20.32	323	P		P	11 13 09.6	-0.4	
CBB	Campbell River	21.27	90	P		P	11 13 18.7	-1.5	
C36M	Paulatuk	21.30	35	P		P	11 13 20.1	-0.3	
C36M	Paulatuk	21.30	35	P		P	11 13 19.5	-0.8	
	baz=246,SNR=31								
A36M	Sachs Harbour	22.17	28	P		P	11 13 27.5	-2.2	
A36M				IAmb		IAmb	11 13 47.3		
	comp=Z,72nm,0.9s								
A36M	Sachs Harbour	22.17	28	P		P	11 13 28.0	-1.7	
	baz=239,SNR=8.2								
CLRS	Cowichan Lake	22.56	92	P		P	11 13 32.0	-2.1	
NLWA	Neilton Lookou	23.45	95	P		P	11 13 45.7	+2.5	
A05A	Maple Falls	23.64	90	IAmb		IAmb	11 13 60.0		
	comp=Z,71nm,1.1s								
YKAW3	Yellowknife Wh	23.93	54	P		P	11 13 46.4	-1.1	
YKA	Yellowknife Ar	23.93	54	P		P	11 13 47.8	+0.2	
	comp=Z,19nm,0.7s,baz=276,slow=9.4,SNR=58								
YKA				PcP		PcP	11 17 29.1	+0.3	
	comp=Z,4.0nm,0.8s,baz=278,slow=2.0,SNR=7.4								
YKA				pPcP			11 17 41.8		
	comp=Z,1.7nm,0.5s,baz=282,slow=2.1,SNR=5.7								
YKA				ScP		ScP	11 21 03.0	-0.6	
	comp=Z,2.2nm,0.8s,baz=280,slow=2.2,SNR=6.8								
YKA				LR		LR	11 23 35.7		
	comp=Z,331nm,20.6s,baz=248,slow=37								

	comp=Z,19nm,0.7s								
YKA	Yellowknife Ar	23.93	54	*i*	P	P	11 13 47.7	+0.2	
YKA					pmax	pmax			
	comp=Z,23nm,0.8s								
PET	Petropavlovsk	24.31	282	*eP*		P	11 13 50.8	-0.2	
PET				*e**	PP	pP	11 14 02.9	+0.9	
PET				*eS*		S	11 18 06.5	-0.6	
PET					pmax	pmax			
	comp=Z,59nm,1.3s								
PET					MLR	MLR			
	comp=Z,400nm,17.0s								
PET	Petropavlovsk	24.31	282	P		P	11 13 50.4	-0.7	
PET					IAmb	IAmb	11 13 52.1		
	comp=Z,93nm,1.3s								
PET	Petropavlovsk	24.31	282	P		P	11 13 49.9	-1.1	
	comp=Z,52nm,1.3s								
PET	Petropavlovsk	24.31	282	P		P	11 13 49.5	-1.6	
PEA0B	Petropavlovsk-	24.81	283	*c*	*i*P	P	11 13 55.2	-0.5	
PEA0B	Petropavlovsk-	24.81	283		IAmb	IAmb	11 13 56.3		
	comp=Z,68nm,0.8s								
PETK	Petropavlovsk-	24.81	283	P		P	11 13 55.0	-0.6	
	comp=Z,68nm,0.8s,baz=76,slow=12,SNR=161								
PETK				pP		pP	11 14 07.2	+0.6	
	comp=Z,30nm,0.5s,baz=76,slow=13,SNR=11								
PETK				PcP		PcP	11 17 31.2	+0.4	
	comp=Z,5.3nm,0.9s,baz=54,slow=2.5,SNR=5.8								
	comp=Z,68nm,0.8s								
PETK	Petropavlovsk-	24.81	283	P		P	11 13 54.9	-0.7	
SEY	Seymchan	25.30	307	LR		LR	11 25 06.0		
	comp=Z,1µm,19.1s,baz=85,slow=39								
SEY	Seymchan	25.30	307	*c*	*i*P	P	11 13 58.6	-1.4	
SEY					pmax	pmax			
	comp=Z,37nm,0.8s								
B08A	Colville Reser	25.54	89	IAmb		IAmb	11 14 16.4		
	comp=Z,53nm,1.0s								
MA2	Magadan	26.58	300	LR		LR	11 26 17.3		
	comp=Z,336nm,18.2s,baz=94,slow=40								
MA2	Magadan	26.58	300	*d*	*i*P	P	11 14 12.3	+0.7	
MA2					pmax	pmax			
	comp=Z,27nm,0.8s								
MA2	Magadan	26.58	300	P		P	11 14 10.1	-1.4	
MA2	Magadan	26.58	300	P		P	11 14 11.1	-0.5	
SKR	Severo-Kuril's	26.71	279	‖	*i*P	P	11 14 11.9	-0.9	
EDM	Edmonton	26.73	75	P		P	11 14 14.2	+1.1	
EDM					pmax	pmax			
	comp=Z,48nm,1.1s								
EDM	Edmonton	26.73	75	P		P	11 14 14.2	+1.1	
EDM					IAmb	IAmb	11 14 26.6		
	comp=Z,48nm,1.1s								
NEW	Newport	26.85	87	LR		LR	11 23 21.0		
	comp=Z,354nm,21.1s,baz=297,slow=33								
NEW	Newport	26.85	87	P		P	11 14 16.0	+1.8	
NEW	Newport	26.85	87	IAmb		IAmb	11 14 28.0		
	comp=Z,50nm,1.0s								
NEW	Newport	26.85	87	P		P	11 14 16.1	+1.9	
YBH	Yreka Blue Hor	27.56	104	LR		LR	11 22 55.8		
	comp=Z,955nm,21.3s,baz=311,slow=31								
F10A	Beach Ranch, E	28.04	91	P		P	11 14 26.9	+2.0	
WVOR	Wild Horse Val	29.39	99	P		P	11 14 38.7	+1.7	
WVOR	Wild Horse Val	29.39	99	P		P	11 14 38.7	+1.7	
MFID	Camas Ranch	30.36	94	P		P	11 14 47.4	+1.8	
HLID	Hailey	31.08	93	P		P	11 14 54.9	+2.9	
RES	Resolute Bay	31.22	28	LR		LR	11 28 45.2		
	comp=Z,223nm,19.9s,baz=254,slow=39								
RES	Resolute Bay	31.22	28	P		P	11 14 52.5	-0.1	
BOZ	Bozeman (W)	31.46	88	P		P	11 14 56.4	+1.1	
BLKN	Baker Lake	31.93	48	IAmb		IAmb	11 15 00.2		
	comp=Z,18nm,0.8s								
YHL	Hebgen Lake	32.16	88	IAmb		IAmb	11 15 15.4		
	comp=Z,30nm,0.9s								
YHB	Horse Butte	32.21	88	IAmb		IAmb	11 15 15.7		
	comp=Z,39nm,1.0s								
NVAR	Mina Array Bea	32.28	104	P		P	11 15 02.8	+0.2	
	comp=Z,3.0nm,0.7s,baz=302,slow=8.5,SNR=24								
NVAR				pP		pP	11 15 15.6	+2.0	
	comp=Z,13nm,0.6s,baz=306,slow=8.6,SNR=45								
NVAR				PcP		PcP	11 17 50.8	+0.9	
	comp=Z,4.7nm,0.7s,baz=300,slow=2.5,SNR=12								
NVAR				pPcP			11 18 03.5		
	comp=Z,3.1nm,0.7s,baz=309,slow=2.8,SNR=6.2								
NVAR				ScP		ScP	11 21 29.6	-0.5	
	comp=Z,0.7nm,0.8s,baz=299,slow=2.9,SNR=4.5								
NVAR				LR		LR	11 25 51.2		
	comp=Z,643nm,21.4s,baz=324,slow=32								
	comp=Z,3.0nm,0.7s								
ELK	Elko	32.42	98	LR		LR	11 26 49.1		
	comp=Z,487nm,19.2s,baz=299,slow=34								
YNE	Yellowstone No	32.73	87	IAmb		IAmb	11 15 20.2		
	comp=Z,32nm,1.0s								
LKWY	Lake	32.77	88	IAmb		IAmb	11 15 22.0		
	comp=Z,36nm,0.8s								
YMP	Mirror Lake Pl	32.81	88	IAmb		IAmb	11 15 21.4		
	comp=Z,33nm,1.1s								
FLWY	Flagg Ranch	32.89	89	IAmb		IAmb	11 15 22.4		
	comp=Z,34nm,1.0s								
RLMT	Red Lodge	33.09	86	IAmb		IAmb	11 15 24.1		
	comp=Z,28nm,1.1s								
DSP	Deep Springs	33.

YAK comp=E,19nm,1.4s pmax pmax
YAK comp=N,9.0nm,1.1s pmax pmax
YAK comp=Z,80nm,2.8s pmax pmax
YAK comp=N,100nm,5.7s pmax pmax
YAK comp=E,47nm,2.5s smax smax
YAK comp=N,85nm,4.6s smax smax
YAK comp=E,101nm,4.3s MLR MLR
YAK comp=N,241nm,22.0s MLR MLR
YAK comp=Z,702nm,27.0s MLR MLR
YAK comp=E,390nm,21.0s
YAK Yakutsk 35.72 310 P **P** **11 15 30.8 -1.1**
Q16A Castle Valley 35.96 96 IAmb IAmb 11 15 48.8
comp=Z,30nm,1.0s
ILON Igloolik, Nuna 35.96 36 P **P** **11 15 34.5 +0.6**
P18A Preston Nutter 36.01 95 IAmb IAmb 11 15 49.0
comp=Z,28nm,1.2s
YSS Yuzhno-Sakhali 36.19 281 *e*P **P** **11 15 36.2 +0.2**
YSS *e* 11 15 48.4
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS Yuzhno-Sakhali 36.19 281 P **P** **11 15 36.3 +0.2**
YSS IAmb IAmb 11 15 38.1
comp=Z,17nm,0.8s
POIN Pond Inlet 36.20 30 IAmb IAmb 11 15 37.9
comp=Z,17nm,0.9s
PKCU Pink Cliffs 36.34 99 P **P** **11 15 39.4 +1.5**
PKCU IAmb IAmb 11 15 52.2
comp=Z,26nm,1.0s
KNB Kanab 36.35 100 IAmb IAmb 11 15 51.9
comp=Z,46nm,1.8s
ALE Alert 36.59 13 P **P** **11 15 39.2 +0.1**
ALE Alert 36.59 13 P **P** **11 15 38.9 -0.2**
ALE PcP **PcP** **11 18 01.9 +0.6**
RSSD Black Hills 36.68 84 P **P** **11 15 41.2 +0.6**
RSSD pmax pmax
comp=Z,19nm,1.0s
RSSD Black Hills 36.68 84 P **P** **11 15 41.2 +0.6**
RSSD IAmb IAmb 11 15 53.8
comp=Z,19nm,0.9s
RSSD Black Hills 36.68 84 P **P** **11 15 41.8 +1.3**
RSSD pP **pP** **11 15 52.5 +0.7**
RSSD Black Hills 36.68 84 P **P** **11 15 41.8 +1.3**
RSSD PcP **PcP** **11 18 02.6 +0.1**
BELC Belle Mtn. Jos 36.78 107 IAmb IAmb 11 15 54.8
comp=Z,20nm,0.7s
PFO Pinyon Flats O 36.82 108 LR LR 11 28 21.3
comp=Z,447nm,20.0s,baz=329,slow=32
PFO Pinyon Flats O 36.82 108 ⇓*e*P **P** **11 15 44.6 +2.9**
PFO pmax pmax
comp=Z,18nm,2.5s
PFO Pinyon Flats O 36.82 108 P **P** **11 15 42.7 +1.0**
PFO Pinyon Flats O 36.82 108 P P 11 15 54.0 +12
PMD Palm Desert 36.84 108 P **P** **11 15 43.5 +1.7**
PMD IAmb IAmb 11 15 55.1
comp=Z,18nm,0.8s
IRM Iron Mountain 37.13 106 IAmb IAmb 11 15 58.3
comp=Z,30nm,0.8s
W13A Hualapai Mount 37.13 104 IAmb IAmb 11 15 58.4
comp=Z,19nm,1.0s
BAR Barrett 37.41 109 IAmb IAmb 11 16 00.2
comp=Z,16nm,0.8s
PV10 Paradox Valley 37.55 95 IAmb IAmb 11 16 01.9
comp=Z,28nm,1.0s
PV04 Paradox Valley 37.61 95 IAmb IAmb 11 16 15.0
comp=Z,59nm,1.8s
PV20 West Nyswonger 37.61 95 IAmb IAmb 11 16 02.7
comp=Z,34nm,0.9s
PV16 Nyswonger Mesa 37.66 95 IAmb IAmb 11 16 03.3
comp=Z,28nm,1.3s
ULM Lac du Bonnet 37.70 70 P **P** **11 15 49.4 +0.6**
comp=Z,13nm,0.8s,baz=304,slow=8.0,SNR=16
ULM pP **pP** **11 16 00.8 +0.8**
comp=Z,7.0nm,0.5s,baz=295,slow=8.2,SNR=7.6
ULM LR LR 11 31 25.2
comp=Z,217nm,18.5s,baz=316,slow=36
comp=Z,13nm,0.8s
ULM Lac du Bonnet 37.70 70 IAmb IAmb 11 15 50.3
comp=Z,25nm,1.2s
PV18 Skein Mesa, Pa 37.71 95 IAmb IAmb 11 16 04.2
comp=Z,31nm,0.9s
PV05 Paradox Valley 37.72 96 IAmb IAmb 11 16 02.9
comp=Z,27nm,1.0s
PV12 Saucer Basin, 37.72 95 IAmb IAmb 11 16 09.2
comp=Z,19nm,0.8s
BLYC Blythe 37.78 106 IAmb IAmb 11 16 03.7
comp=Z,32nm,1.0s
PV15 Paradox Valley 37.89 95 IAmb IAmb 11 16 04.2
comp=Z,28nm,1.1s
JKA Kamikawa-asahi 37.97 278 P **P** **11 15 50.9 -0.2**
JKA IAmb IAmb 11 15 52.0
comp=Z,31nm,0.8s
ASAJ Asahikawa 37.97 278 LR LR 11 33 10.1
comp=Z,99nm,18.9s,baz=55,slow=39
ASAJ Asahikawa 37.97 278 P **P** **11 15 50.9 -0.3**
ASAJ pmax pmax
comp=Z,31nm,0.8s
PV01 Paradox Valley 37.98 95 IAmb IAmb 11 16 05.0
comp=Z,27nm,1.1s
ISCO Idaho Springs 38.54 91 P **P** **11 15 57.7 +1.2**
MVCO Mesa Verde 38.66 96 P **P** **11 15 57.1 -0.3**
MVCO pP **pP** **11 16 09.7 +1.0**
AGMN Agassiz Nation 38.79 73 IAmb IAmb 11 16 10.6
comp=Z,23nm,0.9s
AGMN Agassiz Nation 38.79 73 P **P** **11 15 58.6 +0.5**
NEEM North Greenlan 40.55 19 *i*P **P** **11 16 11.8 -0.9**
NEEM IAmb IAmb 11 16 12.8
comp=Z,23nm,0.7s
ZEA Zeya 40.72 299 *e*P **P** **11 16 13.2 -0.8**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.7s
KULLO Kullorsuaq 40.81 24 P **P** **11 16 13.6 -1.0**
TUC Tucson 40.93 103 P **P** **11 16 17.6 +1.5**
TUC pmax pmax
comp=Z,12nm,0.9s
TUC Tucson 40.93 103 P **P** **11 16 17.6 +1.5**
TUC Tucson 40.93 103 P **P** **11 16 18.5 +2.4**
TUC Tucson 40.93 103 P P 11 16 29.2 +13
TUC PcP **PcP** **11 18 17.0 +1.1**
JTM Tenmabayashi 40.96 275 IAmb IAmb 11 16 17.0
comp=Z,31nm,1.0s
ECSD EROS Data Cent 41.12 79 P **P** **11 16 17.5 0.0**
EYMN Ely 41.37 71 P **P** **11 16 19.7 +0.2**
EYMN IAmb IAmb 11 16 20.8
comp=Z,27nm,0.7s
EYMN Ely 41.37 71 P **P** **11 16 20.1 +0.6**
ANMO Albuquerque 41.43 97 LR LR 11 32 46.9
comp=Z,293nm,18.0s,baz=306,slow=35
ANMO Albuquerque 41.43 97 ⇓*e*P **P** **11 16 21.8 +1.5**
ANMO pmax pmax
comp=Z,3.0nm,1.8s
ANMO Albuquerque 41.43 97 P **P** **11 16 21.1 +0.8**
ANMO Albuquerque 41.43 97 P **P** **11 16 20.7 +0.4**
LENM Lemitar 41.70 98 P **P** **11 16 24.6 +2.1**
NOR Nord 41.98 8 P **P** **11 16 24.1 +0.1**
NOR Nord 41.98 8 P **P** **11 16 24.1 +0.1**
NOR Nord 41.98 8 *e*P **P** **11 16 23.8 -0.2**
NOR IAmb IAmb 11 16 24.4
comp=Z,8.9nm,0.9s
UPNV Upernavik 42.04 26 *i*P **P** **11 16 25.2 +0.6**
UPNV IAmb IAmb 11 16 25.6
comp=Z,26nm,1.0s
E38A The Farm, Brul 42.15 72 IAmb IAmb 11 16 38.2
comp=Z,32nm,0.9s
HEH HeiHe 42.61 295 *e*P **P** **11 16 27.9 -1.6**
HEH PcP **PcP** **11 18 20.5 -0.5**
HEH pmax pmax
comp=Z,21nm,0.8s
I37A Lemond, Waseca 42.74 77 IAmb IAmb 11 16 43.5
comp=Z,40nm,1.0s
FRB Frobisher Bay 43.16 41 P **P** **11 16 33.8 0.0**
FRB Frobisher Bay 43.16 41 P **P** **11 16 33.8 0.0**

NUUG Nuugaatsiaq 43.50 26 *e*P **P** **11 16 36.4 0.0**
NUUG IAmb IAmb 11 16 37.1
comp=Z,52nm,0.9s
H11N2 WAKE ISLAND Hy 43.52 229 T T 12 02 52.0
baz=28,slow=76
H11N3 WAKE ISLAND Hy 43.53 229 T T 12 02 55.6
baz=28,slow=76
H11N1 WAKE ISLAND Hy 43.54 229 T T 12 02 51.7
baz=28,slow=76
NIAQ Niaqornat 43.84 27 *i*P **P** **11 16 39.8 +0.6**
NIAQ IAmb IAmb 11 16 42.5
comp=Z,77nm,1.1s
USRK Ussuriysk Ar. 43.87 285 P **P** **11 16 38.2 -1.5**
comp=Z,3.2nm,0.8s,baz=58,slow=6.4,SNR=5.8
USRK LR LR 11 36 28.5
comp=Z,159nm,19.4s,baz=44,slow=38
comp=Z,3.2nm,0.8s
SAATT Saattut 44.35 27 *i*P **P** **11 16 43.5 +0.2**
SAATT IAmb IAmb 11 16 44.3
comp=Z,34nm,0.8s
I40A Norwalk 44.37 75 IAmb IAmb 11 16 56.3
comp=Z,47nm,1.1s
MNTX Cornudas Mount 44.42 99 P **P** **11 16 46.5 +2.1**
GDL2 Guadalupe Moun 44.63 98 P **P** **11 16 47.1 +1.0**
H11S1 WAKE ISLAND Hy 44.69 228 T T 12 04 23.0
baz=28,slow=76
H11S2 WAKE ISLAND Hy 44.70 228 T T 12 04 21.1
baz=28,slow=76
H11S3 WAKE ISLAND Hy 44.71 228 T T 12 04 27.4
baz=28,slow=76
SAQQ Saqqaq 44.78 28 *e*P **P** **11 16 46.7 0.0**
SAQQ IAmb IAmb 11 16 47.9
comp=Z,34nm,0.8s
GDH Godhavn 44.83 29 *i*P **P** **11 16 47.6 +0.6**
GDH IAmb IAmb 11 16 48.4
comp=Z,33nm,1.1s
TPB28 44.94 98 IAmb IAmb 11 17 02.9
comp=Z,19nm,1.2s
JFWS Jewell Farm 45.21 76 IAmb IAmb 11 16 50.8
comp=Z,16nm,0.7s
L40A Anamosa 45.23 77 IAmb IAmb 11 17 02.5
comp=Z,29nm,1.1s
I42A Draeger Farm, 45.31 74 IAmb IAmb 11 16 52.3
comp=Z,24nm,0.9s
VHRN Van Horn 45.33 99 IAmb IAmb 11 17 05.9
comp=Z,28nm,1.3s
BNX BinXian 45.39 290 ⇓P **P** **11 16 51.4 -0.4**
BNX pmax pmax
comp=Z,24nm,0.9s
MAJO Matsushiro 45.49 273*c* *i*P **P** **11 16 52.6 -0.2**
MAJO pmax pmax
comp=Z,57nm,1.1s
MAJO Matsushiro 45.49 273 P **P** **11 16 51.9 -0.9**
MAJO Matsushiro 45.49 273 P **P** **11 16 52.9 +0.1**
MAJO Matsushiro 45.49 273 P **P** **11 16 52.8 +0.1**
MAJO pP **pP** **11 17 04.8 +0.6**
MAJO PcP **PcP** **11 18 31.3 +0.3**
MJAR Matsushiro Arr 45.49 273 P **P** **11 16 52.5 -0.3**
comp=Z,11nm,0.7s,baz=36,slow=6.2,SNR=41
MJAR pP **pP** **11 17 04.4 +0.2**
comp=Z,7.9nm,0.5s,baz=36,slow=6.8,SNR=9.5
MJAR LR LR 11 36 25.8
comp=Z,68nm,19.6s,baz=38,slow=37
comp=Z,11nm,0.7s
MJAR Matsushiro Arr 45.49 273 P **P** **11 16 52.5 -0.3**
MJAR IAmb IAmb 11 16 53.9
comp=Z,35nm,1.3s
MJB9 Matsu-Tunnel 45.49 273 P **P** **11 16 53.4 +0.6**
ILULI Ilulissat 45.52 28 IAmb IAmb 11 16 53.5
comp=Z,24nm,0.8s
ILULI Ilulissat 45.52 28 *e*P **P** **11 16 52.7 +0.2**
ILULI IAmb IAmb 11 16 53.2
comp=Z,24nm,0.8s
PSTR Posyet 45.53 284 ⇑*i*P **P** **11 16 53.3 +0.4**
P38A Dawn 45.56 81 IAmb IAmb 11 17 05.4
comp=Z,31nm,0.8s
POST Post 45.62 94 IAmb IAmb 11 17 06.8
comp=Z,34nm,1.6s
OK051 E0350 and S346 45.83 87 IAmb IAmb 11 17 08.0
comp=Z,17nm,0.9s
OK048 Pawnee Station 45.83 87 IAmb IAmb 11 17 08.0
comp=Z,24nm,1.0s
DAG Danmarks Havn 45.97 12 P **P** **11 16 55.4 -0.6**
DAG pmax pmax
comp=Z,58nm,1.0s
DAG Danmarks Havn 45.97 12 P **P** **11 16 55.8 -0.2**
DAG Danmarks Havn 45.97 12 *i*P **P** **11 16 55.0 -1.0**
DAG IAmb IAmb 11 16 56.5
comp=Z,56nm,1.1s
WMOK Wichita Mounta 45.97 90 P **P** **11 16 57.6 +1.0**
WMOK Wichita Mounta 45.97 90 P **P** **11 16 57.6 +1.0**
KBS Kingsbay 46.01 2*ce*P **P** **11 16 57.6 +1.3**
KBS pmax pmax
comp=Z,66nm,1.0s
KBS Kingsbay 46.01 2 *e*P **P** **11 16 57.6 +1.3**
KBS IAmb IAmb 11 16 58.0
comp=Z,54nm,0.9s
KBS Kingsbay 46.01 2 P **P** **11 16 56.6 +0.3**
KBS Kingsbay 46.01 2 P **P** **11 16 57.8 +1.4**
KBS Kingsbay 46.01 2 P **P** **11 16 57.2 +0.8**
KBS PcP **PcP** **11 18 33.4 +1.2**
KBS Kingsbay 46.01 2 *i*P **P** **11 16 57.4 +1.1**
L42A Oliver, Polo 46.13 76 IAmb IAmb 11 17 09.8
comp=Z,24nm,1.1s
SUMG Summit 46.19 21 P **P** **11 16 58.6 +0.3**
SUMG pmax pmax
comp=Z,28nm,1.4s
SUMG Summit 46.19 21 IAmb IAmb 11 17 00.0
comp=Z,58nm,1.4s
SUMG Summit 46.19 21 P **P** **11 16 58.8 +0.5**
SUMG Summit 46.19 21 *i*P **P** **11 16 58.5 +0.1**
SUMG IAmb IAmb 11 16 59.5
comp=Z,15nm,0.7s
E46A Sault Ste Mari 46.21 68 IAmb IAmb 11 16 59.4
comp=Z,19nm,0.7s
OK052 Battle Ridge R 46.21 88 IAmb IAmb 11 17 10.9
comp=Z,27nm,0.8s
N41A Harden Midland 46.34 78 IAmb IAmb 11 17 20.3
comp=Z,35nm,1.0s
NRIK Noril'sk 46.59 333 P **P** **11 17 00.8 -0.2**
comp=Z,21nm,0.6s,baz=65,slow=6.3,SNR=19
NRIK PcP **PcP** **11 18 34.9 +0.5**
comp=Z,12nm,0.9s,baz=90,slow=2.4,SNR=5.0
NRIK LR LR 11 39 46.0
comp=Z,452nm,18.9s,baz=58,slow=40
comp=Z,21nm,0.6s
NRIK Noril'sk 46.59 333*c* *i*P **P** **11 17 00.6 -0.4**
NRIK pmax pmax
comp=Z,26nm,0.8s
NRIK Noril'sk 46.59 333 IAmb IAmb 11 17 02.6
comp=Z,23nm,0.7s
JGF Kuroka 46.64 272 IAmb IAmb 11 17 15.0
comp=Z,30nm,0.9s
JGF Kuroka 46.64 272 P **P** **11 17 01.7 -0.2**
SPA0 Spitsbergen Ar 46.84 1 *e*P **P** **11 17 02.4 -0.4**
SPA0 IAmb IAmb 11 17 03.8
comp=Z,41nm,1.1s
SPITS Spitsbergen Ar 46.84 1 P **P** **11 17 02.5 -0.3**
comp=Z,19nm,0.8s,baz=2.3,slow=4.2,SNR=6.6
SPITS PcP **PcP** **11 18 35.6 +0.4**
comp=Z,10nm,0.7s,baz=55,slow=4.4,SNR=10
SPITS LR LR 11 36 04.1
comp=Z,164nm,21.5s,baz=35,slow=35
comp=Z,19nm,0.8s
SPB2 Spitsbergen Ar 46.84 1 IAmb IAmb 11 17 04.1
comp=Z,32nm,1.1s
HILR Hailar Array B 46.96 298 P **P** **11 17 03.4 -0.8**
comp=Z,6.8nm,0.5s,baz=56,slow=8.0,SNR=7.4
HILR PcP **PcP** **11 18 36.1 0.0**
comp=Z,3.5nm,0.7s,baz=66,slow=4.9,SNR=2.0
comp=Z,6.8nm,0.5s
INU Inuyama 47.01 272 P **P** **11 17 03.7 -1.0**
INU IAmb IAmb 11 17 21.5
comp=Z,17nm,1.0s
INU Inuyama 47.01 272 P **P** **11 17 04.2 -0.6**
JHJ Hachijo jima 2 47.03 268 LR LR 11 35 11.0
comp=Z,141nm,21.7s,baz=102,slow=34
SFJD Kangerlussuaq 47.12 30 P **P** **11 17 05.4 +0.2**
SFJD pmax pmax
comp=Z,73nm,0.9s
SFJD Kangerlussuaq 47.12 30 P **P** **11 17 05.4 +0.2**
SFJD Kangerlussuaq 47.12 30 P **P** **11 17 06.1 +0.9**
SFJD Kangerlussuaq 47.12 30 P **P** **11 17 06.2 +1.1**
SFJD Kangerlussuaq 47.12 30 *e*P **P** **11 17 04.9 -0.2**
SFJD *i*P pP 11 17 05.7 -11
SFJD IAmb IAmb 11 17 06.7

comp=Z,72nm,0.8s
TXAR Lajitas Array 47.17 100 P **P** **11 17 07.4 +1.2**
comp=Z,2.3nm,0.8s,baz=308,slow=5.2,SNR=24
TXAR pP **pP** **11 17 17.6 0.0**
comp=Z,6.2nm,0.7s,baz=313,slow=6.0,SNR=30
TXAR PcP **PcP** **11 18 37.6 +0.5**
comp=Z,3.8nm,0.7s,baz=262,slow=1.1,SNR=6.1
TXAR ScP **ScP** **11 22 28.6 +1.1**
comp=Z,0.3nm,0.8s,baz=316,slow=5.2,SNR=3.4
TXAR LR LR 11 35 46.2
comp=Z,447nm,20.0s,baz=310,slow=34
comp=Z,2.3nm,0.8s
TXAR Lajitas Array 47.17 100 P **P** **11 17 07.1 +1.0**
LPIG La Paz 47.59 110 LR LR 11 35 03.7
comp=Z,116nm,18.3s,baz=328,slow=33
HHAR Hobbs 47.64 85 IAmb IAmb 11 17 21.2
comp=Z,14nm,0.9s
CN2 Changchun 47.71 289 P **P** **11 17 09.5 -0.5**
CN2 pP pP 11 17 18.9 -2.6
CN2 pmax pmax
comp=Z,50nm,0.8s
HPIG 47.90 103 P **P** **11 17 11.5 -0.4**
DBG Daneborg 47.91 14 P **P** **11 17 11.1 -0.2**
DBG Daneborg 47.91 14 *e*P **P** **11 17 10.2 -1.0**
DBG IAmb IAmb 11 17 11.7
comp=Z,32nm,0.9s
CCM Cathedral Cave 47.93 81 P **P** **11 17 11.3 -0.5**
CCM pmax pmax
comp=Z,11nm,1.0s
CCM Cathedral Cave 47.93 81 P **P** **11 17 10.6 -1.2**
JWT Wachi 47.98 274 IAmb IAmb 11 17 11.7
comp=Z,11nm,0.6s
HSPB Hornsund (broa 48.01 1 P **P** **11 17 12.0 +0.1**
FVM French Village 48.45 81 IAmb IAmb 11 17 27.8
comp=Z,36nm,1.2s
HOPEN Hopen 48.50 359 *e*P **P** **11 17 16.2 +0.4**
HOPEN IAmb IAmb 11 17 18.1
comp=Z,180nm,1.3s
JCT Junction City 48.51 95 P **P** **11 17 16.7 +0.3**
JCT pmax pmax
comp=Z,11nm,0.8s
JCT Junction City 48.51 95 P **P** **11 17 16.7 +0.3**
JCT IAmb IAmb 11 17 32.1
comp=Z,11nm,0.8s
VLDQ Val d'Or 48.64 62 IAmb IAmb 11 17 16.3
comp=Z,21nm,0.9s
NUUK Nuuk 48.71 34 *e*P **P** **11 17 18.0 +0.5**
NUUK IAmb IAmb 11 17 19.4
comp=Z,42nm,0.9s
MIAR Mount Ida 49.09 86 P **P** **11 17 21.4 +0.6**
MIAR AP **pP** **11 17 32.3 0.0**
MIAR Mount Ida 49.09 86 IAmb IAmb 11 17 33.3
comp=Z,24nm,1.1s
MIAR Mount Ida 49.09 86 P **P** **11 17 21.4 +0.6**
MIAR pP **pP** **11 17 32.3 0.0**
SCHQ Schefferville 49.27 50 P **P** **11 17 21.9 0.0**
comp=Z,12nm,0.8s,baz=304,slow=7.9,SNR=13
SCHQ pP **pP** **11 17 32.9 -0.5**
comp=Z,6.6nm,0.6s,baz=309,slow=6.6,SNR=4.6
comp=Z,12nm,0.8s
SCHQ Schefferville 49.27 50 IAmb IAmb 11 17 22.6
comp=Z,17nm,0.9s
WHAR Wooly Hollow 49.29 85 IAmb IAmb 11 17 47.4
comp=Z,32nm,1.7s
LCAR Lake Charles 49.38 83 P **P** **11 17 21.7 -1.3**
BUKO Buck Lake 49.40 66 IAmb IAmb 11 17 23.9
comp=Z,22nm,1.0s
N49A Columbus Grove 49.90 73 IAmb IAmb 11 17 27.3
comp=Z,32nm,1.0s
JMN Monobe 49.97 273 P **P** **11 17 28.3 +0.7**
JCJ Chichijima 50.19 261 LR LR 11 44 23.6
comp=Z,19nm,18.0s,baz=70,slow=43
P48A Milroy 50.22 76 IAmb IAmb 11 17 29.4
comp=Z,25nm,0.8s
BJO1 Bjornoya 50.55 0 *e*P **P** **11 17 31.3 -0.1**
BJO1 IAmb IAmb 11 17 37.1
comp=Z,83nm,1.1s
KSRS Korea Array 50.69 281 P **P** **11 17 33.2 +0.3**
comp=Z,20nm,0.9s,baz=51,slow=6.8,SNR=33
KSRS pP **pP** **11 17 44.6 +0.2**
comp=Z,3.7nm,0.6s,baz=48,slow=7.3,SNR=3.5
KSRS PcP **PcP** **11 18 50.8 +1.1**
comp=Z,6.1nm,0.8s,baz=52,slow=4.2,SNR=6.6
KSRS LR LR 11 39 54.3
comp=Z,46nm,19.3s,baz=60,slow=37
comp=Z,20nm,0.9s
KSAR Wonju Array Be 50.72 281 P **P** **11 17 32.8 -0.3**
KSAR Wonju Array Be 50.72 281 P **P** **11 17 32.8 -0.3**
SCO Scoresbysund 50.98 17 P **P** **11 17 33.0 -1.6**
SCO Scoresbysund 50.98 17 IAmb IAmb 11 17 36.0
comp=Z,18nm,0.7s
SCO Scoresbysund 50.98 17 P **P** **11 17 33.0 -1.6**
SCO Scoresbysund 50.98 17 *e*P **P** **11 17 34.7 +0.1**
SCO IAmb IAmb 11 17 35.9
comp=Z,12nm,0.7s
SOEG Soedalen 51.11 22 *i*P **P** **11 17 35.3 -0.3**
SOEG IAmb IAmb 11 17 36.7
comp=Z,74nm,0.9s
HKT Hockley 51.17 92 P **P** **11 17 39.5 +3.0**
WVT Waverly 51.22 80 P **P** **11 17 37.0 +0.1**
WVT pmax pmax
comp=Z,31nm,0.8s
WVT Waverly 51.22 80 P **P** **11 17 37.0 +0.1**
WVT Waverly 51.22 80 P **P** **11 17 37.1 +0.2**
WVT Waverly 51.22 80 P **P** **11 17 37.1 +0.2**
TRQ Mont Tremblant 51.37 62 IAmb IAmb 11 17 39.0
comp=Z,31nm,1.1s
R50A Paris 51.66 76 IAmb IAmb 11 17 40.8
comp=Z,26nm,0.9s
PECO Prince Edward 51.68 66 IAmb IAmb 11 17 41.4
comp=Z,20nm,1.1s
ANGG Ammassalik, Gr 51.71 27 P **P** **11 17 39.9 -0.2**
ANGG Ammassalik, Gr 51.71 27 *e*P **P** **11 17 39.3 -0.8**
ANGG IAmb IAmb 11 17 40.3
comp=Z,79nm,1.1s
O52A Adamsville 51.74 73 IAmb IAmb 11 17 41.0
comp=Z,19nm,0.9s
N53A Lisbon 51.80 71 IAmb IAmb 11 17 41.5
comp=Z,17nm,0.7s
LDAQ Lac Daran 51.83 59 IAmb IAmb 11 17 42.0
comp=Z,21nm,1.3s
WBO Williamsburg 51.84 64 IAmb IAmb 11 17 41.9
comp=Z,24nm,0.9s
O53A New Philadelph 51.99 72 IAmb IAmb 11 17 42.7
comp=Z,12nm,0.8s
IVI Ivigtut 51.99 35 *e*P **P** **11 17 42.9 +0.7**
IVI IAmb IAmb 11 17 43.9
comp=Z,28nm,0.8s
V48A Smith Brothers 52.07 80 IAmb IAmb 11 18 02.3
comp=Z,11nm,0.7s
CLTN Cedars of Leba 52.10 79 IAmb IAmb 11 17 56.2
comp=Z,28nm,1.0s
JNU Nakatsue 52.13 275 LR LR 11 38 38.7
comp=Z,177nm,21.5s,baz=106,slow=35
T50A Nancy 52.27 78 IAmb IAmb 11 17 57.0
comp=Z,29nm,1.4s
Q52A Bidwell 52.32 74 IAmb IAmb 11 17 56.6
comp=Z,23nm,1.3s
MNTQ Montreal, Queb 52.34 62 IAmb IAmb 11 17 45.0
comp=Z,18nm,0.9s
JMIC Jan Mayen 52.42 12 LR LR 11 41 00.4
comp=Z,209nm,19.9s,baz=30,slow=37
P53A Whipple 52.43 73 IAmb IAmb 11 17 46.0
comp=Z,11nm,0.7s
IRK Irkutsk 52.51 310 *e*P **P** **11 17 44.1 -2.2**
IRK pmax pmax
comp=Z,20nm,1.6s
S51A Beattyville 52.52 76 IAmb IAmb 11 17 47.1
comp=Z,19nm,0.9s
CFNY Clifton-Fine, 52.53 64 IAmb IAmb 11 17 47.4
comp=Z,24nm,0.7s
LMQ La Malbaie 52.57 59 IAmb IAmb 11 17 47.0
comp=Z,14nm,0.9s
J57A Williamstown 52.57 66 IAmb IAmb 11 17 47.8
comp=Z,28nm,0.9s
XLT XiLinHaoTe 52.61 295 *e*P **P** **11 17 47.1 -0.2**
XLT pP pP 11 17 54.4 -4.5
ICQ Pointe Anglais 52.66 55 IAmb IAmb 11 17 48.0
comp=Z,35nm,1.0s
K57A Scipio Center 52.77 67 IAmb IAmb 11 17 49.4
comp=Z,25nm,1.3s
FRNY Flat Rock 52.82 63 IAmb IAmb 11 17 48.7
comp=Z,15nm,0.9s
X48A Hartselle 52.88 81 IAmb IAmb 11 18 00.9
comp=Z,35nm,1.4s
NCB Newcomb 53.10 64 IAmb IAmb 11 17 51.7
comp=Z,26nm,1.2s

MCWV Mont Chateau 53.15 72 IAmb IAmb 11 17 51.6
comp=Z,19nm,0.8s
TLY Talaya 53.18 309 LR LR 11 42 15.3
comp=Z,153nm,18.8s,baz=18,slow=38
TLY Talaya 53.18 309 *ce*P **P** **11 17 51.4 +0.1**
TLY pmax pmax
comp=Z,19nm,0.9s
J59A Piesco 53.31 65 IAmb IAmb 11 17 53.0
comp=Z,18nm,0.8s
W50A Signal Mountai 53.31 79 IAmb IAmb 11 18 04.5
comp=Z,27nm,0.9s
TZTN Tazewell 53.33 77 IAmb IAmb 11 17 53.4
comp=Z,19nm,0.9s
TZTN Tazewell 53.33 77 P **P** **11 17 52.4 -0.2**
BINY Binghamton 53.42 67 IAmb IAmb 11 17 54.4
comp=Z,29nm,1.1s
BINY Binghamton 53.42 67 P **P** **11 17 52.4 -0.8**
M57A Sunshine Farm, 53.43 68 IAmb IAmb 11 17 53.6
comp=Z,13nm,0.6s
D62A Allapoint, All 53.52 58 IAmb IAmb 11 17 54.4
comp=Z,22nm,0.9s
CPCT Cooper Cave 53.58 79 IAmb IAmb 11 17 54.7
comp=Z,14nm,0.9s
FPAL Fort Paine 53.62 80 IAmb IAmb 11 18 06.6
comp=Z,33nm,1.3s
TKL Tuckaleechee C 53.84 78 IAmb IAmb 11 18 08.3
comp=Z,22nm,1.1s
L59A Walton 53.92 66 IAmb IAmb 11 17 58.1
comp=Z,20nm,0.8s
N58A Sunbury 54.00 69 IAmb IAmb 11 17 58.1
comp=Z,49nm,1.6s
X51A Calhoun 54.03 80 IAmb IAmb 11 18 10.4
comp=Z,26nm,1.3s
LBNH Lisbon 54.09 62 IAmb IAmb 11 17 58.7
comp=Z,13nm,0.8s
G62A West of Eustis 54.10 61 IAmb IAmb 11 17 58.7
comp=Z,25nm,0.9s
W52A Murphy 54.17 79 IAmb IAmb 11 18 11.4
comp=Z,42nm,1.4s
H62A Milan 54.24 62 IAmb IAmb 11 17 59.7
comp=Z,25nm,0.9s
ZAK Zakamensk 54.26 308 *e*P **P** **11 17 57.6 -1.7**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
P57A Homestead Farm 54.27 71 IAmb IAmb 11 18 00.0
comp=Z,27nm,1.0s
HNH Hanover 54.28 63 IAmb IAmb 11 18 00.3
comp=Z,14nm,0.9s
U54A Nelsons Funny 54.31 76 IAmb IAmb 11 18 12.3
comp=Z,22nm,1.0s
ULN Ulaanbaatar 54.32 304 *ce*P **P** **11 17 59.3 -0.5**
ULN pmax pmax
comp=Z,16nm,1.1s
ULN Ulaanbaatar 54.32 304 P **P** **11 17 59.5 -0.3**
ULN IAmb IAmb 11 18 00.5
comp=Z,16nm,1.1s
ULN Ulaanbaatar 54.32 304 P **P** **11 17 59.0 -0.8**
comp=Z,60nm,0.9s
ULN Ulaanbaatar 54.32 304 P **P** **11 17 59.7 -0.1**
ULN Ulaanbaatar 54.32 304 P **P** **11 17 59.4 -0.5**
ULN PcP **PcP** **11 19 04.1 +0.7**
ULN ScP **ScP** **11 22 58.1 0.0**
V53A Saluda 54.37 77 IAmb IAmb 11 18 01.6
comp=Z,24nm,1.1s
J61A Chester 54.40 64 IAmb IAmb 11 18 01.3
comp=Z,23nm,0.9s
PAGS Pennsylvania G 54.43 69 IAmb IAmb 11 18 00.6
comp=Z,18nm,0.7s
BLA Blacksburg 54.59 74 IAmb IAmb 11 18 02.5
comp=Z,15nm,0.8s
SONM Songino Array 54.65 305 P **P** **11 18 02.2 0.0**
comp=Z,15nm,0.6s,baz=49,slow=7.2,SNR=67
SONM PcP **PcP** **11 19 05.5 +0.8**
comp=Z,11nm,0.8s,baz=35,slow=2.0,SNR=9.3
SONM LR LR 11 43 16.8
comp=Z,333nm,20.3s,baz=43,slow=38
comp=Z,15nm,0.6s
SONM Songino Array 54.65 305 P **P** **11 18 01.9 -0.3**
SONM IAmb IAmb 11 18 03.3
comp=Z,19nm,0.8s
PKME Peaks-Kenny Pk 54.68 60 IAmb IAmb 11 18 02.8
comp=Z,16nm,0.9s
F64A Sherman 54.72 59 IAmb IAmb 11 18 02.8
comp=Z,25nm,1.0s
VADS Vadso 54.80 356 *e*P **P** **11 18 02.1 -0.6**
VADS IAmb IAmb 11 18 02.8
comp=Z,50nm,1.1s
BG3 Lake Jocassee 54.80 78 IAmb IAmb 11 18 15.4
comp=Z,20nm,1.1s
WVL Waterville 55.00 61 IAmb IAmb 11 18 04.9
comp=Z,21nm,1.0s
V55A Taylorsville 55.13 76 IAmb IAmb 11 18 06.4
comp=Z,13nm,0.9s
U56A King 55.23 75 IAmb IAmb 11 18 07.1
comp=Z,13nm,0.9s
KEV Kevo 55.24 357 P **P** **11 18 05.1 -0.8**
KEV pmax pmax
comp=Z,73nm,1.2s
KEV Kevo 55.24 357 P **P** **11 18 05.1 -0.8**
KEV Kevo 55.24 357 P **P** **11 18 05.2 -0.7**
KEV Kevo 55.24 357 P **P** **11 18 05.4 -0.5**
KEV PcP **PcP** **11 19 06.7 +0.4**
BJI2 Beijing 55.31 292 P **P** **11 18 06.4 -0.5**
BJI2 pmax pmax
comp=Z,6.0nm,0.9s
R58B Mineral 55.44 72 IAmb IAmb 11 18 08.9
comp=Z,21nm,1.3s
TRO Tromso 55.45 1 P **P** **11 18 07.6 +0.2**
TRO Tromso 55.45 1 *e*P **P** **11 18 07.6 +0.2**
TRO IAmb IAmb 11 18 08.0
comp=Z,64nm,1.1s
ARA0 ARCESS Array S 55.50 358 *e*P **P** **11 18 07.3 -0.6**
ARA0 IAmb IAmb 11 18 08.3
comp=Z,53nm,1.2s
ARCES ARCESS Array B 55.50 358 P **P** **11 18 07.0 -0.8**
comp=Z,18nm,0.8s,baz=23,slow=7.0,SNR=35
ARCES pP **pP** **11 18 18.2 -1.3**
comp=Z,1.6nm,0.4s,baz=1.1,slow=6.1,SNR=1.8
ARCES PcP **PcP** **11 19 07.6 +0.3**
comp=Z,12nm,0.7s,baz=6.7,slow=4.2,SNR=8.4
ARCES LR LR 11 43 42.8
comp=Z,123nm,19.0s,baz=4.5,slow=38
comp=Z,18nm,0.8s
ARCES ARCESS Array B 55.50 358 P **P** **11 18 07.1 -0.8**
ARCES pmax pmax
comp=Z,40nm,1.2s
ARCES ARCESS Array B 55.50 358 P **P** **11 18 07.1 -0.8**
JETT Jettan, Norway 55.53 0 *e*P **P** **11 18 07.9 -0.2**
JETT IAmb IAmb 11 18 10.4
comp=Z,32nm,0.6s
WSPT Westport, CT 55.55 66 IAmb IAmb 11 18 09.5
comp=Z,25nm,0.7s
G65A Princeton 55.58 59 IAmb IAmb 11 18 09.1
comp=Z,20nm,0.9s
KMSC Kings Mountain 55.58 77 IAmb IAmb 11 18 09.3
comp=Z,19nm,1.0s
GOGA Godfrey 55.66 80 P **P** **11 18 07.8 -1.7**
WES Weston 55.72 64 IAmb IAmb 11 18 10.7
comp=Z,34nm,1.0s
HODGE Hodges 55.73 78 IAmb IAmb 11 18 10.1
comp=Z,15nm,0.9s
EMMW East Machias 55.99 59 IAmb IAmb 11 18 12.0
comp=Z,27nm,0.8s
GGN Saint George 55.99 59 P **P** **11 18 10.8 -0.9**
GGN IAmb IAmb 11 18 11.9
comp=Z,20nm,0.8s
M63A Gales Ferry 56.05 65 P **P** **11 18 11.6 -0.6**
KTK1 Kautokeino 56.06 359 *e*P **P** **11 18 11.0 -0.9**
KTK1 IAmb IAmb 11 18 12.3
comp=Z,18nm,0.8s
BORG Borgarnes 56.16 20 P **P** **11 18 13.8 +1.2**
BORG pmax pmax
comp=Z,68nm,1.3s
BORG Borgarnes 56.16 20 P **P** **11 18 13.8 +1.2**
JSC Jenkinsville 56.26 77 IAmb IAmb 11 18 25.5
comp=Z,30nm,1.3s
T59A Double "B" Far 56.33 72 IAmb IAmb 11 18 15.0
comp=Z,23nm,0.7s
V58A Windy Hill, Pi 56.34 74 IAmb IAmb 11 18 15.0
comp=Z,20nm,0.8s
KNGR Kungurtug, Tuv 56.62 312 *i* P **P** **11 18 17.0 +0.7**
KNGR pmax pmax
comp=Z,24nm,1.0s
LVZ Lovozero 56.74 354 *d* iP **P** **11 18 15.7 -1.1**
LVZ pmax pmax
comp=Z,80nm,1.0s
LVZ Lovozero 56.74 354 P **P** **11 18 16.0 -0.8**
LVZ Lovozero 56.74 354 P **P** **11 18 16.3 -0.5**
LVZ Lovozero 56.74 354 P **P** **11 18 16.5 -0.3**
LVZ Lovozero 56.74 354 P **P** **11 18 16.2 -0.6**
LVZ ScP **ScP** **11 23 08.8 +0.6**
STEI Steigen 57.10 2 *e*P **P** **11 18 19.0 -0.2**
STEI IAmb IAmb 11 18 19.5
comp=Z,34nm,1.1s
HHC Hu-ho-hao-te 57.13 295 *e*P **P** **11 18 20.3 +0.3**
HHC pmax pmax
comp=Z,28nm,0.7s
HHC pmax pmax
comp=Z,83nm,4.5s
HHC L L
comp=Z,150nm,16.7s
HHC L L
comp=Z,200nm,16.1s
HHC L L
comp=Z,150nm,17.5s
APA Apatity 57.14 354 *e*P **P** **11 18 18.1 -1.4**
APA *e* 11 19 11.8
APA *e* 11 20 23.6
APA pmax pmax
comp=Z,15nm,1.0s
DRLN Deer Lake 57.28 50 IAmb IAmb 11 18 21.4
comp=Z,25nm,0.8s
SGF Sodankyl 57.57 357 P **P** **11 18 22.3 -0.2**
SGF pmax pmax
comp=Z,67nm,0.9s
SGF Sodankyl 57.57 357 P **P** **11 18 22.5 -0.1**
FAUS Fauske 57.66 2 *e*P **P** **11 18 22.9 -0.3**
FAUS IAmb IAmb 11 18 23.5
comp=Z,30nm,0.9s
HAL Halifax 57.92 57 IAmb IAmb 11 18 25.7
comp=Z,16nm,0.9s
HNS HongShan 58.01 291 ⇑P **P** **11 18 26.5 +0.5**
VAGH Vaagaholmen 58.25 3 *e*P **P** **11 18 28.4 +1.1**
JOW Kunigami 58.33 272 LR LR 11 41 19.0
comp=Z,63nm,21.4s,baz=10,slow=34
JOW Kunigami 58.33 272 P **P** **11 18 27.9 -0.5**
KONS Konsvik 58.48 3 *e*P **P** **11 18 29.0 +0.1**
KONS IAmb IAmb 11 18 29.9
comp=Z,53nm,1.1s
RAUS Rausandaksla 58.57 3 *e*P **P** **11 18 29.6 0.0**
MSF Maaselka 59.01 356 P **P** **11 18 31.6 -1.1**
MSF Maaselka 59.01 356 P **P** **11 18 31.6 -1.1**
ZAA0 Zalesovo Array 59.02 322 P **P** **11 18 32.6 -0.3**
ZAA0 IAmb IAmb 11 18 34.4
comp=Z,35nm,1.3s
ZALV Zalesovo Beam 59.02 322 P **P** **11 18 32.6 -0.3**
comp=Z,9.6nm,0.7s,baz=26,slow=5.1,SNR=35
ZALV LR LR 11 46 08.2
comp=Z,610nm,19.4s,baz=40,slow=38
comp=Z,9.6nm,0.7s
ZALV Zalesovo Beam 59.02 322 P **P** **11 18 32.2 -0.7**
GUMO Guam 59.56 248 LR LR 11 41 17.1
comp=Z,41nm,20.5s,baz=96,slow=33
NJ2 Nanjing 59.72 283 *e*P **P** **11 18 37.4 -0.6**
OUL Oulu 59.95 357 P **P** **11 18 38.8 -0.2**
OUL pmax pmax
comp=Z,52nm,1.0s
OUL Oulu 59.95 357 P **P** **11 18 38.8 -0.2**
LYN LuoYang 61.34 290 P **P** **11 18 49.6 +0.6**
LYN sP sP 11 19 06.0 +0.5
LYN pmax pmax
comp=Z,340nm,6.6s
DGZ Jazzator, Alta 61.44 317 *c i*P **P** **11 18 49.8 +0.1**
DGZ pmax pmax
comp=Z,14nm,0.7s
CMIG Matias Romero 61.74 101 LR LR 11 43 18.1
comp=Z,138nm,21.7s,baz=348,slow=34
AKN Aaknes 62.47 7 *e*P **P** **11 18 56.9 +0.7**
AKN IAmb IAmb 11 18 58.3
comp=Z,29nm,0.8s
DOMB Dombas 62.74 6 *e*P **P** **11 18 57.9 -0.2**
DOMB IAmb IAmb 11 18 58.4
comp=Z,14nm,0.7s
KLMR Klimovskoe 63.28 350 *e*P **P** **11 19 00.4 -1.2**
KLMR *e**PP **pP** **11 19 12.7 -0.7**
KLMR pmax pmax
comp=Z,74nm,1.0s
KLMR MLR MLR
comp=Z,153nm,17.0s
WHN Wuhan 63.36 286 P **P** **11 19 01.9 -0.7**
SUE Sulen 63.41 8 *e*P **P** **11 19 03.9 +1.5**
HYA Hoyanger 63.41 8 *e*P **P** **11 19 02.8 +0.4**
FINES FINESS Array B 63.59 357 P **P** **11 19 03.1 -0.5**
comp=Z,16nm,0.8s,baz=14,slow=8.0,SNR=33
FINES pP **pP** **11 19 14.9 -0.6**
comp=Z,14nm,0.8s,baz=26,slow=9.3,SNR=6.5
FINES LR LR 11 47 39.8
comp=Z,80nm,20.8s,baz=32,slow=37
comp=Z,16nm,0.8s
FINES FINESS Array B 63.59 357 P **P** **11 19 03.2 -0.4**
XAN Xi'an 63.62 292 ⇑P **P** **11 19 03.9 -0.5**
XAN pmax pmax
comp=Z,71nm,1.0s
XAN Xi'an 63.62 292 P **P** **11 19 04.2 -0.2**
SVE Sverdlovsk 63.63 337 *de*P **P** **11 19 04.2 +0.2**
SVE pmax pmax
comp=Z,83nm,0.8s
NC303 NORSAR Array S 63.68 5 IAmb IAmb 11 19 23.3
comp=Z,25nm,0.9s
LRW Lerwick 63.71 12 *e*P **P** **11 19 05.0 +0.5**
LRW IAmb IAmb 11 19 05.9
comp=Z,22nm,0.7s
NBO00 NORSAR Array S 63.84 5 IAmb IAmb 11 19 24.7
comp=Z,22nm,1.1s
KURK Kurchatov 63.85 323 *c i*P **P** **11 19 05.3 -0.2**
KURK pmax pmax
comp=Z,42nm,0.8s
KURK Kurchatov 63.85 323 P **P** **11 19 05.6 0.0**
KURK Kurchatov 63.85 323 P **P** **11 19 05.5 0.0**
KURK Kurchatov 63.85 323 P **P** **11 19 06.1 +0.6**
NB201 NORSAR Array S 63.85 5 IAmb IAmb 11 19 25.0
comp=Z,30nm,1.0s
NB2 NORSAR Subarra 63.85 5 P **P** **11 19 05.0 -0.5**
comp=Z,7.0nm,0.7s,baz=354,slow=6.5
NB2 NORSAR Subarra 63.85 5 P **P** **11 19 05.0 -0.5**
NOA NORSAR Array B 63.85 5 P **P** **11 19 05.3 -0.1**
comp=Z,9.3nm,0.7s,baz=354,slow=6.6,SNR=36
NOA pP **pP** **11 19 17.9 +0.6**
comp=Z,6.7nm,0.8s,baz=354,slow=6.6,SNR=6.5
NOA LR LR 11 44 50.7
comp=Z,64nm,21.4s,baz=345,slow=34
comp=Z,9.3nm,0.7s
YHNB Yeheng 63.94 276 P **P** **11 19 06.0 -0.6**
YHNB IAmb IAmb 11 20 10.9
comp=Z,14nm,0.9s
KURBB Kurchatov Arra 63.96 323 P **P** **11 19 06.0 -0.2**
comp=Z,22nm,0.9s,baz=23,slow=6.5,SNR=124
KURBB LR LR 11 49 23.9
comp=Z,528nm,18.0s,baz=164,slow=38
comp=Z,22nm,0.9s
ASK Askoy 64.01 8 *e*P **P** **11 19 06.8 +0.5**
NAO01 NORSAR Array S 64.03 5 IAmb IAmb 11 19 25.4
comp=Z,25nm,1.1s
NAO01 NORSAR Array S 64.03 5 P **P** **11 19 06.9 +0.3**
SKAR Skarslia 64.05 7 *e*P **P** **11 19 07.1 +0.3**
SKAR IAmb IAmb 11 19 07.2
comp=Z,14nm,0.7s
GTA2 Gaotai 64.08 302 *e*P **P** **11 19 06.8 -0.6**
GTA2 sP sP 11 19 23.5 -0.4
GTA2 pmax pmax
comp=Z,56nm,1.0s
GTA2 L L
comp=Z,260nm,16.2s
GTA2 L L
comp=Z,97nm,15.9s
GTA2 L L
comp=Z,300nm,17.1s
KIRV Kirov 64.17 344 LR LR 11 50 49.2
comp=Z,184nm,20.8s,baz=27,slow=40
KIRV Kirov 64.17 344 *c* iP **P** **11 19 06.7 -0.8**
NC602 NORSAR Array S 64.17 5 *e*P **P** **11 19 07.4 -0.1**
NORES NORESS Array B 64.17 5 P **P** **11 19 10.8 +3.3**
NORES pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 64.50 329 P **P** **11 19 09.8 0.0**
comp=Z,47nm,0.7s,baz=38,slow=7.5,SNR=131
BVAR pP **pP** **11 19 22.9 +1.3**
comp=Z,23nm,0.8s,baz=43,slow=13,SNR=8.2
comp=Z,47nm,0.7s
BORK Borovoye 64.50 329 *c* iP **P** **11 19 10.0 +0.3**
BORK pmax pmax
comp=Z,38nm,0.9s
BORK Borovoye 64.50 329 P **P** **11 19 09.6 -0.2**
ARTI Arti 64.54 338 LR LR 11 50 29.7
comp=Z,286nm,20.3s,baz=30,slow=39
ARTI Arti 64.54 338 *c i*P **P** **11 19 09.6 -0.3**
ARTI 11 19 40.4
ARTI 11 21 30.2
ARTI S **S** **11 27 48.6 +2.7**
ARTI pmax pmax
comp=Z,87nm,0.7s
ARTI Arti 64.54 338 P **P** **11 19 09.3 -0.6**
ARTI Arti 64.54 338 P **P** **11 19 09.9 0.0**
LZH Lanzhou 64.69 297 *e*P **P** **11 19 11.3 -0.2**
LZH sP sP 11 19 28.0 0.0
LZH pmax pmax
comp=Z,76nm,1.3s
LZH L L
comp=Z,290nm,13.2s
LZH L L
comp=Z,290nm,13.2s
LZH L L
comp=Z,400nm,12.5s
SSLB Suanglung 64.86 276 P **P** **11 19 11.5 -1.1**
SSLB Suanglung 64.86 276 P **P** **11 19 12.1 -0.5**
LZDM Lanzhou Array 64.87 297 P **P** **11 19 13.1 +0.2**
comp=Z,18nm,0.7s,baz=304,slow=0.5,SNR=19
LZDM LR LR 11 50 26.7
comp=Z,184nm,18.7s,baz=115,slow=39
comp=Z,18nm,0.7s
HFS Hagfors 64.87 4 P **P** **11 19 11.8 -0.2**
comp=Z,22nm,0.6s,baz=28,slow=4.0,SNR=45
HFS LR LR 11 45 23.6
comp=Z,80nm,21.7s,baz=5.5,slow=34
comp=Z,22nm,0.6s
YULB Yu-li 64.98 275 P **P** **11 19 12.1 -1.2**
YULB IAmb IAmb 11 19 18.1
comp=Z,20nm,1.0s
YULB Yu-li 64.98 275 P **P** **11 19 14.2 +0.9**
PUL Pulkovo 65.08 354 ⇓*e*P **P** **11 19 14.9 +1.5**
PUL pmax pmax
comp=Z,66nm,0.7s
LINV Loch Inver, As 65.11 15 *e*P **P** **11 19 14.2 +0.6**
LINV IAmb IAmb 11 19 15.2
comp=Z,11nm,0.6s
KONO Kongsberg 65.15 6 *ce*P **P** **11 19 14.0 +0.1**
KONO pmax pmax
comp=Z,23nm,0.9s
KONO Kongsberg 65.15 6 *e*P **P** **11 19 14.4 +0.6**
KONO Kongsberg 65.15 6 P **P** **11 19 14.3 +0.6**
KONO Kongsberg 65.15 6 P **P** **11 19 14.5 +0.6**
BLS5 Blasjo 65.16 8 *e*P **P** **11 19 14.5 +0.5**
BLS5 IAmb IAmb 11 19 14.6
comp=Z,13nm,0.7s
TPUB Ta-pu 65.43 276 P **P** **11 19 18.7 +2.5**
MK31 Makanchi Array 65.80 318 *c* iP **P** **11 19 17.5 -0.8**
MKAR Makanchi Array 65.80 318 P **P** **11 19 17.6 -0.7**
comp=Z,12nm,0.6s,baz=45,slow=5.8,SNR=164
MKAR LR LR 11 50 55.8
comp=Z,181nm,20.5s,baz=17,slow=39
comp=Z,12nm,0.6s
MKAR Makanchi Array 65.80 318 P **P** **11 19 17.8 -0.6**
MKAR Makanchi Array 65.80 318 P **P** **11 19 17.8 -0.6**
KPL Plockton 65.83 15 *e*P **P** **11 19 18.6 +0.4**
KPL IAmb IAmb 11 19 20.1
comp=Z,16nm,0.8s
STRU Stroemstad 65.86 5 *i* P **P** **11 19 18.5 +0.2**
MAKZ Makanchi 65.91 319 P **P** **11 19 18.7 -0.3**
MAKZ pmax pmax
comp=Z,20nm,0.7s
MAKZ Makanchi 65.91 319 P **P** **11 19 18.7 -0.3**
MAKZ IAmb IAmb 11 19 19.3
comp=Z,20nm,0.7s
MAKZ Makanchi 65.91 319 P **P** **11 19 18.5 -0.6**
MAKZ Makanchi 65.91 319 P **P** **11 19 18.7 -0.3**
MCD Coleburn Disti 65.93 14 *e*P **P** **11 19 19.6 +0.6**
MCD IAmb IAmb 11 19 20.9
comp=Z,56nm,0.9s
WMQ Urumqi 66.09 313 ⇑P **P** **11 19 20.8 +0.5**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,180nm,5.5s
WMQ L L
comp=Z,240nm,23.9s
WMQ L L
comp=Z,290nm,24.9s
WMQ L L
comp=Z,260nm,23.8s
ENH Enshi 66.23 289 P **P** **11 19 21.3 -0.1**
VSU Vasula 66.56 356 *c i*P **P** **11 19 21.7 -1.2**
VSU pmax pmax
comp=Z,72nm,0.8s
VSU Vasula 66.56 356 P **P** **11 19 22.0 -0.8**
DRUM Mains of Drumt 66.69 13 P **P** **11 19 24.4 +0.6**
DRUM Mains of Drumt 66.69 13 *e*P **P** **11 19 24.2 +0.5**
DRUM IAmb IAmb 11 19 25.1
comp=Z,108nm,0.6s
TJOU Tjoern 66.88 5 *i* P **P** **11 19 25.2 +0.2**
LAWE Loch Awe, Argy 66.91 15 *e*P **P** **11 19 25.8 +0.6**
LAWE IAmb IAmb 11 19 27.0
comp=Z,27nm,0.9s
EAB Aberfoyle 67.13 15 *e*P **P** **11 19 27.2 +0.6**
EAB IAmb IAmb 11 19 28.6
comp=Z,37nm,0.8s
ONAU Onsala 67.53 5 *i* P **P** **11 19 28.8 -0.2**
EDI Edinburgh 67.55 14 *e*P **P** **11 19 29.8 +0.6**
EDI IAmb IAmb 11 19 31.5
comp=Z,22nm,0.8s
IDGL Inch Island, C 67.71 17 P **P** **11 19 31.3 +1.0**
IDGL Inch Island, C 67.71 17 P **P** **11 19 31.1 +0.8**
IDGL Inch Island, C 67.71 17 *e*P **P** **11 19 31.1 +0.8**
IDGL IAmb IAmb 11 19 32.4
comp=Z,20nm,0.8s
FABU Falkenberg 67.96 5 *i* P **P** **11 19 31.5 -0.3**
EKA Eskdalemuir Ar 68.13 14 P **P** **11 19 33.5 +0.6**
comp=Z,28nm,0.7s,baz=333,slow=4.9,SNR=68
EKA pP **pP** **11 19 46.0 +1.1**
comp=Z,23nm,0.7s,baz=339,slow=5.1,SNR=11
EKA LR LR 11 50 09.9
comp=Z,147nm,20.2s,baz=17,slow=37
comp=Z,28nm,0.7s
EKA Eskdalemuir Ar 68.13 14 P **P** **11 19 33.8 +0.9**
EKA pmax pmax
comp=Z,42nm,0.9s
ESK Eskdalemuir 68.14 14 P **P** **11 19 33.4 +0.4**
ESK pmax pmax
comp=Z,30nm,0.8s
ESK Eskdalemuir 68.14 14 P **P** **11 19 33.4 +0.4**
ESK Eskdalemuir 68.14 14 P **P** **11 19 33.8 +0.8**
ESK pP **pP** **11 19 45.9 +1.0**
GAL1 Galloway 68.36 15 *e*P **P** **11 19 34.8 +0.5**
GAL1 IAmb IAmb 11 19 36.0
comp=Z,34nm,0.9s
MOS Moscow 68.51 350 *e*P **P** **11 19 35.4 +0.1**
MOS *e* 11 19 59.5
DEL Delary 68.54 4 *i* P **P** **11 19 35.6 +0.1**
TDK Taldyqorghan 68.77 320 *e*P **P** **11 19 37.4 +0.3**
TDK pmax pmax
comp=Z,16nm,0.7s
TDK Taldyqorghan 68.77 320 *e*P **P** **11 19 37.5 +0.3**
comp=Z,16nm,0.7s
EDMD Edmundbyers 68.78 14 P **P** **11 19 37.6 +0.6**
EDMD Edmundbyers 68.78 14 *e*P **P** **11 19 37.6 +0.6**
EDMD IAmb IAmb 11 19 39.5
comp=Z,17nm,0.8s
CD2 Chengdu 68.78 294 P **P** **11 19 37.8 +0.3**
BJUU Bjuv 68.90 4 *i* P **P** **11 19 37.6 0.0**
ILTH Belurgan, Co L 68.91 17 P **P** **11 19 38.4 +0.6**
ILTH Belurgan, Co L 68.91 17 P **P** **11 19 38.4 +0.6**
IGLA Glengowla, Co 68.97 19 P **P** **11 19 38.7 +0.6**
OBN Obninsk 69.23 350 LR LR 11 53 40.6
comp=Z,222nm,21.5s,baz=354,slow=39
OBN Obninsk 69.23 350 *c i*P **P** **11 19 39.0 -0.7**
OBN *e**PP **pP** **11 19 49.9 -1.8**
OBN *e**SP **sP** **11 19 54.8 -1.5**
OBN *e* 11 20 02.5
OBN *e*PPP PPP 11 23 52.4
OBN *e*S **S** **11 28 43.9 +1.5**
OBN pmax pmax
comp=Z,60nm,1.5s
OBN MLR MLR
comp=Z,237nm,21.0s
LUNU Lund 69.36 4 *i* P **P** **11 19 40.6 0.0**
DSB Dublin 69.66 17 P **P** **11 19 43.0 +0.6**
SHLS Shalkode 69.94 318 *e*P **P** **11 19 43.8 -0.8**
SHLS pmax pmax
comp=Z,24nm,1.1s

SHLS **Shalkode** 69.94 318 *e*P P 11 19 43.8 -0.8
comp=Z,24nm,1.1s
KPKS **Kokpek** 69.98 319 *e*P P 11 19 45.1 +0.4
KPKS **Kokpek** 69.98 319 *e*P P 11 19 45.2 +0.4
UZB **Uzynbulak** 70.12 318 *e*P P 11 19 45.7 0.0
UZB pmax pmax
comp=Z,9.0nm,1.0s
UZB **Uzynbulak** 70.12 318 *e*P P 11 19 45.7 0.0
comp=Z,8.6nm,1.0s
AKTO **Aktyubinsk** 70.14 335 LR LR 11 56 48.9
comp=Z,78nm,18.3s,baz=11,slow=41
SIUN **Universidad Ur** 70.19 94 P P 11 19 44.8 -1.4
SIUN IAmb IAmb 11 20 29.2
comp=Z,111nm,0.5s
LBWR **Ladybower, Pea** 70.21 14 P P 11 19 47.0 +1.2
VAL **Valentia** 70.22 20 P P 11 19 47.2 +1.3
BTLS **Baital** 70.30 323 *e*P P 11 19 46.9 +0.4
BTLS **Baital** 70.30 323 *e*P P 11 19 47.0 +0.4
BELG **Belogornoye** 70.41 343 LR LR 11 55 43.7
comp=Z,225nm,19.0s,baz=42,slow=40
BELG **Belogornoye** 70.41 343 *i* P P 11 19 46.4 -0.6
BELG pmax pmax
comp=Z,26nm,1.4s
IWEX **Carrickbyrne,** 70.43 17 P P 11 19 47.9 +0.7
SATY **Saty** 70.43 319*c* *i*P P 11 19 47.7 +0.2
SATY pmax pmax
comp=Z,10.0nm,0.8s
SATY **Saty** 70.43 319⇑ *i*P P 11 19 47.8 +0.2
comp=Z,10nm,0.8s
MNK **Minsk** 70.47 355 *i* P P 11 19 47.2 -0.2
comp=E,11nm,0.6s
MNK *i* P P 11 19 47.2 -0.2
comp=N,13nm,0.7s
MNK *i* P P 11 19 47.2 -0.2
comp=Z,35nm,0.9s,baz=4.4
MNK *i* PP PP 11 22 22.5 -0.5
MNK *i* PPP PPP 11 24 08.6
MNK *i* S S 11 28 58.1 +1.1
MNK *i* SS SS 11 33 31.3 +4.1
MNK *i* SSS SSS 11 36 49.9
MNK *i* LQ LQ 11 45 34.6
MNK *i* LR LR 11 51 45.9
MNK **Minsk** 70.47 355 *i* P P 11 19 47.2 -0.2
MNK *i* 11 22 22.4
MNK *i* PPP PPP 11 24 08.6
MNK *i* S S 11 28 58.1 +1.1
MNK *i* SS SS 11 33 31.3 +4.1
MNK pmax pmax
comp=N,13nm,0.7s
MNK pmax pmax
comp=E,11nm,0.6s
MNK pmax pmax
comp=Z,35nm,0.9s
MNK MLR MLR
comp=N,396nm,22.0s
FOEL **Foel Wylfa** 70.50 15 P P 11 19 48.5 +0.8
FOEL **Foel Wylfa** 70.50 15 *e*P P 11 19 48.2 +0.6
FOEL IAmb IAmb 11 19 50.2
comp=Z,46nm,0.8s
ABKAR **Akbulak array** 70.76 334 P P 11 19 49.1 -0.1
MDOK **Medeo** 70.85 320 *e*P P 11 19 50.3 +0.2
MDOK **Medeo** 70.85 320 *e*P P 11 19 50.3 +0.2
AAA **Alma-Ata** 70.86 320 *e*P P 11 19 50.3 +0.2
AAA pmax pmax
comp=Z,9.0nm,0.5s
AAA **Alma-Ata** 70.86 320 *e*P P 11 19 50.4 +0.3
comp=Z,8.7nm,0.5s
BSEG **Bad Segeberg** 70.89 6 P P 11 19 50.7 +0.8
BSEG **Bad Segeberg** 70.89 6 P P 11 19 50.7 +0.8
CWF **Charnwood Fore** 70.91 14 P P 11 19 51.3 +1.2
PRZ **Przheval'sk** 70.92 318 P P 11 19 51.7 +1.1
TNSS **Tian-Shan** 71.00 320 *e*P P 11 19 51.2 -0.1
TNSS **Tian-Shan** 71.00 320 *e*P P 11 19 51.3 -0.1
WACR **West Acre** 71.18 13 P P 11 19 52.7 +1.0
MCH1 **Michaelchurch** 71.39 15 *e*P P 11 19 53.6 +0.6
MCH1 IAmb IAmb 11 19 55.0
comp=Z,20nm,0.9s
KRVT **Keravat (AS076** 71.44 232 LR LR 11 43 32.3
comp=Z,20nm,21.5s,baz=344,slow=29
LPSR **Galich'ya Gora** 71.45 348 *e*P P 11 19 52.2 -1.2
LPSR pmax pmax
comp=Z,41nm,1.1s
SGDS **Sogindy** 71.48 321⇑ *i*P P 11 19 54.2 +0.4
comp=Z,4.6nm,0.6s
TKM2 **Tokmak 2** 71.59 321 P P 11 19 54.5 -0.2
SNR=17
USP **Ospenovka** 71.69 321 P P 11 19 55.6 +0.5
SNR=13
WUS **Wushi** 71.71 317 P P 11 19 55.8 +0.5
TARG **Taragay, Kyrgy** 71.80 318 P P 11 19 57.1 +0.9
TARG **Taragay, Kyrgy** 71.80 318 IAmb IAmb 11 19 58.2
comp=Z,19nm,0.6s
TARG **Taragay, Kyrgy** 71.80 318 P P 11 19 57.1 +0.9
CHMS **Chumysh** 71.83 321 P P 11 19 56.6 +0.7
SNR=6.0
BOOM **Boomskoye usch** 71.84 320 P P 11 19 56.9 +0.8
BOOM **Boomskoye usch** 71.84 320 P P 11 19 56.9 +0.8
ULHL **Ulahol** 71.94 320 P P 11 19 57.3 +0.5
SNR=6.2
RETH **Rethem/Aller,** 72.02 7 *e*P P 11 19 57.5 +0.8
comp=Z,15nm,1.0s,baz=355,slow=5.8
RETH **Rethem/Aller,** 72.02 7 P P 11 19 57.7 +1.0
AAK **Ala-Archa** 72.24 321 LR LR 11 54 22.2
comp=Z,669nm,19.0s,baz=34,slow=38
AAK **Ala-Archa** 72.24 321 P P 11 19 59.2 +0.7
SNR=12
AAK **Ala-Archa** 72.24 321 *i* P P 11 19 58.8 +0.3
AAK pmax pmax
comp=Z,34nm,1.3s
AAK **Ala-Archa** 72.24 321 P P 11 19 58.6 +0.1
AAK IAmb IAmb 11 19 59.6
comp=Z,17nm,0.7s
AAK **Ala-Archa** 72.24 321 P P 11 19 59.2 +0.7
AAK **Ala-Archa** 72.24 321 P P 11 19 59.2 +0.7
IBBN **Ibbenburen** 72.33 8 *e*P P 11 19 59.8 +1.2
comp=Z,28nm,0.8s,baz=355,slow=5.8
IBBN **Ibbenburen** 72.33 8 P P 11 19 59.5 +0.9
VORR **Voronezh** 72.33 348 *e*P P 11 19 57.8 -0.9
VORR pmax pmax
comp=Z,58nm,0.4s
VRH **Novokhopyorsk** 72.47 346 *e*P P 11 19 58.2 -1.3
VRH pmax pmax
comp=Z,21nm,0.6s
EKS2 **Erkin-Say** 72.47 322 P P 11 20 00.6 +0.7
SNR=16
RUE **Ruedersdorf** 72.53 4 *e*P P 11 20 01.2 +1.5
comp=Z,55nm,0.9s,baz=355,slow=5.8
FLTG **Flechtingen** 72.55 6 *e*P P 11 20 00.1 +0.2
comp=Z,24nm,1.0s,baz=355,slow=5.8
FLTG *e*pP pP 11 20 12.8 +0.9
ASSE **Asse, Remlinge** 72.71 6 *e*P P 11 20 01.3 +0.5
comp=Z,15nm,0.9s,baz=355,slow=5.8
ASSE *e*pP pP 11 20 14.4 +1.5
ASSE **Asse, Remlinge** 72.71 6 P P 11 20 01.5 +0.7
DYA **Yadsworthy** 72.77 16 *e*P P 11 20 01.7 +0.3
DYA IAmb IAmb 11 20 03.5
comp=Z,22nm,0.8s
VSR **Storozhevoye** 72.79 348 *e*P P 11 20 00.4 -1.0
VSR pmax pmax
comp=Z,28nm,0.8s
CLZ **Clausthal** 72.98 6 *e*P P 11 20 03.5 +0.9
comp=Z,32nm,0.9s,baz=355,slow=5.8
CLZ **Clausthal** 72.98 6 P P 11 20 03.5 +0.9
ASAI **AK-SAY(Kyrgyzs** 72.99 319 P P 11 20 04.1 +0.9
PPT **Papeete** 73.00 170 LR LR 11 44 01.5
comp=Z,157nm,20.2s,baz=322,slow=29
VORD **Divnogorie** 73.02 348 *e*P P 11 20 00.7 -2.0
VORD *e**SP pP 11 20 16.9 +2.1
VORD pmax pmax
comp=Z,20nm,0.9s
DZA **Taraz** 73.12 323 *e*P P 11 20 04.0 +0.4
DZA pmax pmax
comp=Z,9.0nm,0.5s
DZA **Taraz** 73.12 323 *e*P P 11 20 04.0 +0.4
comp=Z,8.9nm,0.5s
BUG **Bochum--Univer** 73.15 9 P P 11 20 03.9 +0.4
BUG **Bochum--Univer** 73.15 9 *e*P P 11 20 04.2 +0.7
comp=Z,37nm,0.9s,baz=355,slow=5.8
BUG **Bochum--Univer** 73.15 9 P P 11 20 03.9 +0.4
KK31 **Karatay Array** 73.21 324 IAmb IAmb 11 20 05.2
comp=Z,30nm,0.8s
KKAR **Karatay Array** 73.21 324 P P 11 20 04.1 0.0
KKAR **Karatay Array** 73.21 324 P P 11 20 04.0 0.0
GTTG **Gottingen** 73.25 7 *e*P P 11 20 05.3 +1.2
comp=Z,53nm,1.1s,baz=355,slow=5.8
GTTG *e*pP pP 11 20 17.7 +1.6
GTTG **Gottingen** 73.25 7 P P 11 20 05.2 +1.0
PZH **PanZhiHua** 73.36 292 P P 11 20 06.3 +1.0
WIMM **Wimmelburg** 73.37 6 P P 11 20 05.4 +0.6
KASTN **Kahler Asten** 73.47 8 *e*P P 11 20 06.1 +0.6
comp=Z,18nm,1.0s,baz=355,slow=5.8
KASTN *e*pP pP 11 20 19.1 +1.5
BRLS **Borolday** 73.50 324 *e*P P 11 20 07.3 +1.5
BRLS **Borolday** 73.50 324 *e*P P 11 20 07.4 +1.5
UCC **Uccle** 73.50 11 *d*P P 11 20 06.0 +0.4
comp=Z,16nm,0.9s
CLL **Collm** 73.66 5⇑ *i*P P 11 20 06.6 0.0
CLL *e**PP pP 11 20 18.0 -0.6
CLL *e**SP sP 11 20 23.0 -0.2
CLL pmax pmax
comp=Z,28nm,1.0s
CLL **Collm** 73.66 5 *e*P P 11 20 06.8 +0.2
comp=Z,25nm,0.9s,baz=355,slow=5.8
CLL *e*pP pP 11 20 19.7 +1.1
CLL **Collm** 73.66 5 P P 11 20 06.5 0.0
comp=Z,385nmcomp=Z,29nm,0.9s
CLL **Collm** 73.66 5⇑ *i*P P 11 20 06.6 0.0
comp=Z,28nm,1.0s
CLL *i* pP pP 11 20 19.5 +0.9
CLL *e*PcP sP 11 20 23.0 -0.2
CLL *i* sP PcP 11 20 25.1 +2.9
comp=Z,32nm,1.3s
CLL AMS AMS 12 16 00.0
comp=Z,100nm,19.2s
HGN **Heimansgroeve** 73.70 10 P P 11 20 07.7 +1.0
NEUB **Neuenburg** 73.70 6 *e*P P 11 20 07.5 +0.8
comp=Z,48nm,0.9s,baz=355,slow=5.8
NEUB **Neuenburg** 73.70 6 P P 11 20 07.5 +0.8
RNPP8 **Varash** 73.72 356 P P 11 20 06.3 -0.6
RNPP5 **Staryi Chortor** 73.82 356 P P 11 20 07.0 -0.5
MEM **Membach** 73.86 9 P P 11 20 08.3 +0.6
MEM **Membach** 73.86 9 *d*P P 11 20 08.1 +0.4
comp=Z,18nm,1.0s
MEM **Membach** 73.86 9 P P 11 20 08.3 +0.6
ARK **Arkit** 73.87 322 P P 11 20 08.6 +0.5
ARK **Arkit** 73.87 322 P P 11 20 08.6 +0.5
KMI2 **Kunming** 73.91 291 ⇑P P 11 20 08.5 -0.2
KMI2 sP sP 11 20 25.4 0.0
KMI2 pmax pmax
comp=Z,10.0nm,1.1s
KMI2 pmax pmax
comp=Z,100nm,8.6s
BCLA **Clavier** 73.98 10 *d*P P 11 20 08.7 +0.3
BCLA *d*PcP PcP 11 20 23.8 +0.2
BMRD **Maredsous** 74.04 10 *d*P P 11 20 09.1 +0.4
comp=Z,21nm,1.1s
BMRD *d*pP pP 11 20 21.3 +0.5
MI28 **Mi28,Pidlybu** 74.05 355 P P 11 20 07.6 -1.2
AK21 **Malin Array Si** 74.13 354 P P 11 20 08.4 -0.9
AK23 **Malin Array Si** 74.14 354 P P 11 20 08.5 -0.8
BRG **Berggiesshubel** 74.14 4 P P 11 20 09.0 -0.4
BRG **Berggiesshubel** 74.14 4 *e*P P 11 20 10.1 +0.7
comp=Z,24nm,0.9s,baz=355,slow=5.8
BRG *e*pP pP 11 20 22.6 +1.2
BRG **Berggiesshubel** 74.14 4 P P 11 20 10.0 +0.7
BRG **Berggiesshubel** 74.14 4⇓ *i*P P 11 20 10.1 +0.7
BRG Amp 11 20 10.9
comp=Z,24nm,0.9s
BRG pP pP 11 20 22.7 +1.3
BRG Amp 11 20 24.0
comp=Z,15nm,1.0s
AK22 **Malin Array Si** 74.14 354 P P 11 20 08.3 -1.0
AK20 **Malin Array Si** 74.16 354 P P 11 20 08.8 -0.7
AKASG **Malin Array Be** 74.19 354 P P 11 20 09.0 -0.6
comp=Z,11nm,0.5s,baz=8.7,slow=5.6,SNR=59
AKASG pP pP 11 20 21.4 -0.3
comp=Z,14nm,0.6s,baz=10,slow=6.0,SNR=8.6
AKASG LR LR 11 55 46.3
comp=Z,134nm,19.5s,baz=32,slow=38
comp=Z,11nm,0.5s
AKASG **Malin Array Be** 74.19 354 P P 11 20 09.2 -0.5
AKASG pmax pmax
comp=Z,43nm,0.8s
AKASG **Malin Array Be** 74.19 354 P P 11 20 09.2 -0.5
AKBB **Malin Array Si** 74.19 354 *i* P P 11 20 08.8 -0.9
AKBB pmax pmax
comp=Z,60nm,1.3s
AKBB **Malin Array Si** 74.19 354 P P 11 20 08.7 -0.9
KIEV **Kiev** 74.20 354 ⇓P P 11 20 09.4 -0.3
KIEV **Kiev** 74.20 354 P P 11 20 09.4 -0.3
KIEV **Kiev** 74.20 354 P P 11 20 09.1 -0.5
KIEV **Kiev** 74.20 354 P P 11 20 08.9 -0.8
comp=Z,3μmcomp=Z,284nm,0.8s
KIEV **Kiev** 74.20 354 P P 11 20 09.2 -0.5
KIEV **Kiev** 74.20 354 P P 11 20 09.2 -0.4
KIEV pP pP 11 20 21.4 -0.3
KIEV sP sP 11 20 27.5 +1.1
CHM **Chimkent** 74.22 324 *e*P P 11 20 10.4 +0.4
CHM pmax pmax
comp=Z,20nm,0.6s
CHM **Chimkent** 74.22 324 *e*P P 11 20 10.4 +0.4
comp=Z,20nm,0.6s
AK17 **Malin Array Si** 74.22 354 P P 11 20 09.1 -0.7
BAIF **Baives** 74.22 11 *e*P P 11 20 09.8 0.0
BAIF pmax pmax
comp=Z,34nm,1.1s
DOU **Dourbes** 74.22 11 *d*P P 11 20 10.3 +0.4
comp=Z,12nm,1.0s
IUG **Iuzhnay** 74.22 324*c* *i*P P 11 20 10.5 +0.4
IUG pmax pmax
comp=Z,16nm,0.4s
IUG **Iuzhnay** 74.22 324⇑ *i*P P 11 20 10.6 +0.4
comp=Z,16nm,0.4s
RCHB **Rochefort** 74.23 10 P P 11 20 10.3 +0.5
GIVF **Givet** 74.24 10 *e*P P 11 20 09.8 -0.2
GIVF pmax pmax
comp=Z,23nm,1.0s
MOX **Moxa** 74.25 6 P P 11 20 10.7 +0.7
MOX **Moxa** 74.25 6 *e*P P 11 20 10.6 +0.5
comp=Z,38nm,1.0s,baz=355,slow=5.8
MOX *e*L L 12 15 56.4
comp=Z,156nm,21.9s
MOX **Moxa** 74.25 6 P P 11 20 10.7 +0.7
JSA **Saint Aubin** 74.25 15 *e*P P 11 20 10.6 +0.6
JSA IAmb IAmb 11 20 11.8
comp=Z,28nm,0.9s
TRKS **Terek-Say** 74.39 323 P P 11 20 11.8 +0.6
PLN **Plauen** 74.44 5 *e*P P 11 20 11.7 +0.5
comp=Z,6.2nm,0.8s,baz=355,slow=5.8
TNS **Taunus Mts** 74.45 8 P P 11 20 11.9 +0.6
TNS **Taunus Mts** 74.45 8 *e*P P 11 20 11.8 +0.5
comp=Z,23nm,0.8s,baz=355,slow=5.8
TNS *e*pP PcP 11 20 24.7 -1.0
TNS **Taunus Mts** 74.45 8 P P 11 20 11.9 +0.6
RICC **Richard** 74.47 4 *e*P P 11 20 12.7 +1.4
TANN **Tannenbergstha** 74.53 5 *e*P P 11 20 12.2 +0.5
comp=Z,11nm,1.0s,baz=355,slow=5.8
TANN *e*pP PcP 11 20 25.3 -0.8
TANN **Tannenbergstha** 74.53 5 P P 11 20 12.3 +0.6
OSTC **Ostas** 74.53 3 *e*P P 11 20 12.1 +0.4
OSTC **Ostas** 74.53 3 *e*P P 11 20 12.1 +0.4
UPC **Upice** 74.58 3 *e*P P 11 20 12.8 +0.9
UPC **Upice** 74.58 3 *e*P P 11 20 12.8 +0.9
NKC **Novy Kostel** 74.70 5 *e*P P 11 20 13.6 +0.9
NKC **Novy Kostel** 74.70 5 *e*P P 11 20 13.6 +0.9
OHH **Osh** 74.70 321 P P 11 20 10.0 -2.9
DPC **Dobruska-Polom** 74.74 3 *e*P P 11 20 13.8 +0.9
DPC **Dobruska-Polom** 74.74 3 *e*P P 11 20 13.8 +0.9
DPC **Dobruska-Polom** 74.74 3 P P 11 20 13.2 +0.2
comp=Z,323nmcomp=Z,34nm,1.0s
DPC **Dobruska-Polom** 74.74 3 P P 11 20 13.8 +0.9
WLF **Walferdange** 74.81 10 IAmb IAmb 11 20 15.2
comp=Z,28nm,0.9s
WLF **Walferdange** 74.81 10 *d*P P 11 20 14.3 +1.0
comp=Z,24nm,1.0s
WLF **Walferdange** 74.81 10 *e*P P 11 20 14.4 +1.0
comp=Z,25nm,0.8s,baz=355,slow=5.8
WLF **Walferdange** 74.81 10 P P 11 20 14.2 +1.0
KSH2 **Kashi** 74.89 319 P P 11 20 15.1 +1.0
KSH2 PcP sP 11 20 30.3 -0.5
KSH2 pmax pmax
comp=Z,64nm,0.8s
KSH2 L L
comp=Z,1μm,23.0s
KSH2 L L
comp=Z,550nm,22.3s
KSH2 L L
comp=Z,320nm,23.4s
ROSF **Rostrenen** 74.91 16 *e*P P 11 20 13.9 0.0
ROSF pmax pmax
comp=Z,27nm,1.0s
FLN **La Foliniere** 74.91 14 *e*P P 11 20 13.5 -0.4
FLN pmax pmax
comp=Z,29nm,1.0s
QIZ **Qiongzhong** 74.92 282 IAmb IAmb 11 20 16.4
comp=Z,38nm,1.2s
QIZ **Qiongzhong** 74.92 282 P P 11 20 15.3 +0.9
OJC **Ojcow** 74.93 0 P P 11 20 14.3 +0.3
OJC **Ojcow** 74.93 0 P P 11 20 14.2 +0.3
KRLC **Kraliky** 75.03 2 *e*P P 11 20 15.3 +0.7
KRLC **Kraliky** 75.03 2 *e*P P 11 20 15.3 +0.7
PRU **Pruhonice** 75.05 4 *e*P P 11 20 15.4 +0.8
PRU pmax pmax
comp=Z,9.0nm,0.6s
PRU **Pruhonice** 75.05 4 *e*P P 11 20 15.4 +0.8
comp=Z,8.9nm,0.6s
PRU **Pruhonice** 75.05 4 P P 11 20 15.3 +0.7
LUBAR **Lubar, Ukraine** 75.05 355 P P 11 20 13.8 -0.8
SGMF **Saint Gilles** 75.10 16 *e*P P 11 20 15.0 0.0
SGMF pmax pmax
comp=Z,38nm,1.1s
GRA3 **Grafenberg Arr** 75.11 6 P P 11 20 16.0 +0.9
MSVF **Nonsavu** 75.11 202 LR LR 11 46 16.6
comp=Z,184nm,21.3s,baz=356,slow=30
LDF **La Druitiere** 75.13 14 *e*P P 11 20 14.7 -0.4
LDF pmax pmax
comp=Z,34nm,1.1s
GRA1 **Grafenberg Arr** 75.17 6 P P 11 20 16.8 +1.4
GRF **Grafenberg Arr** 75.17 6 P P 11 20 16.8 +1.4
GRF **Grafenberg Arr** 75.17 6 *e*P P 11 20 16.5 +1.1
comp=Z,30nm,0.8s,baz=355,slow=5.8
GRF *e*L L 12 15 54.3
comp=Z,134nm,21.3s
GRFO **Grafenberg** 75.18 6 P P 11 20 16.8 +1.4
STEB **Steborice** 75.19 2 *e*P P 11 20 16.0 +0.5
GRA2 **Grafenberg Arr** 75.22 6 P P 11 20 16.8 +1.1
GRR **Gorron** 75.23 14 *e*P P 11 20 15.4 -0.3
GRR pmax pmax
comp=Z,19nm,0.8s
OKC **Ostrava-Krasne** 75.30 2 P P 11 20 17.1 +1.0
QUIF **Quistinic** 75.34 16 *e*P P 11 20 16.2 -0.1
QUIF pmax pmax
comp=Z,22nm,1.2s
JAY **Jayapura** 75.34 243 LR LR 11 46 46.1
comp=Z,45nm,21.9s,baz=6.0,slow=30
MORC **Moravsky Berou** 75.34 2 ⇑P P 11 20 17.4 +1.0
MORC **Moravsky Berou** 75.34 2 P P 11 20 17.4 +1.0
MORC **Moravsky Berou** 75.34 2 IAmb IAmb 11 20 17.8
comp=Z,16nm,0.9s
MORC **Moravsky Berou** 75.34 2 *e*P P 11 20 16.4 0.0
MORC **Moravsky Berou** 75.34 2 P P 11 20 16.8 +0.4
GRB4 **Grafenberg Arr** 75.42 6 P P 11 20 18.1 +1.2
GRB1 **Grafenberg Arr** 75.50 6 P P 11 20 18.3 +1.0
KWP **Kalwaria Pacla** 75.50 358 P P 11 20 17.5 +0.2
comp=Z,63nm,1.0s
GRB3 **Grafenberg Arr** 75.56 6 P P 11 20 18.5 +0.9
DAV **Davao City (W)** 75.58 262 LR LR 11 47 31.4
comp=Z,60nm,21.5s,baz=20,slow=31
ZVC **Zvikov** 75.58 4 *e*P P 11 20 18.7 +1.0
GRB2 **Grafenberg Arr** 75.62 6 P P 11 20 18.7 +0.7
GENI **Genyem** 75.68 244 P P 11 20 24.2 +5.5
STHS **Stebnicka Huta** 75.73 359 *e*P P 11 20 19.5 +0.9
STHS pmax pmax
comp=Z,35nm,0.9s
STHS **Stebnicka Huta** 75.73 359 *e*P P 11 20 19.5 +0.9
NIE **Niedzica** 75.73 0 P P 11 20 18.7 +0.1
comp=Z,7.0nm,1.0s
MAUC **Maruska** 75.76 2 *e*P P 11 20 19.5 +0.7
TREC **Trest** 75.77 3 P P 11 20 19.0 +0.1
GRB5 **Grafenberg Arr** 75.78 6 P P 11 20 19.7 +0.8
VRAC **Vranov** 75.79 3 ⇓P P 11 20 20.0 +1.0
VRAC **Vranov** 75.79 3 P P 11 20 19.9 +1.0
VRAC **Vranov** 75.79 3 *e*P P 11 20 19.0 0.0
VRAC **Vranov** 75.79 3 P P 11 20 19.5 +0.6
BTK **Batken** 75.81 322 P P 11 20 19.4 +0.1
BTK **Batken** 75.81 322 IAmb IAmb 11 20 20.5
comp=Z,21nm,0.8s
BTK **Batken** 75.81 322 P P 11 20 19.4 +0.1
WET **Wettzell** 75.81 5 P P 11 20 19.6 +0.5
WET **Wettzell** 75.81 5 *e*P P 11 20 19.9 +0.8
comp=Z,19nm,1.2s,baz=355,slow=5.8
WET **Wettzell** 75.81 5 P P 11 20 19.6 +0.5
KHC **Kasperske Hory** 75.86 5 *e*P P 11 20 20.4 +1.0
KHC *e* 11 20 32.0
KHC pmax pmax
comp=Z,9.0nm,0.6s
KHC **Kasperske Hory** 75.86 5 *e*P P 11 20 20.4 +1.0
comp=Z,8.8nm,0.6s
KHC *e*pP PcP 11 20 32.0 +0.2
KHC **Kasperske Hory** 75.86 5 IAmb IAmb 11 20 21.4
comp=Z,33nm,1.0s
KHC **Kasperske Hory** 75.86 5 P P 11 20 19.6 +0.2
comp=Z,394nmcomp=Z,37nm,1.1s
STU **Stuttgart** 75.95 8 P P 11 20 19.1 -0.8
STU pmax pmax
comp=Z,99nm,0.6s
DRK **Karamyk** 75.98 321 P P 11 20 21.3 +0.8
DRK **Karamyk** 75.98 321 P P 11 20 21.3 +0.8
GRC3 **Grafenberg Arr** 76.00 6 P P 11 20 20.8 +0.6
CLF **Chambon-Foret** 76.00 12 P P 11 20 21.4 +1.2
CLF **Chambon-Foret** 76.00 12 P P 11 20 21.3 +1.2
GRC2 **Grafenberg Arr** 76.01 6 P P 11 20 21.1 +1.0
KRUC **Moravsky** 76.03 3 P P 11 20 20.8 +0.5
KRUC **Moravsky** 76.03 3 *e*P P 11 20 20.1 -0.2
KRUC **Moravsky** 76.03 3 P P 11 20 20.8 +0.5
RAR **Rarotonga** 76.12 180 LR LR 11 47 23.2
comp=Z,145nm,20.1s,baz=338,slow=30
LSA **Lhasa** 76.14 302 P P 11 20 22.6 +0.8
LSA **Lhasa** 76.14 302 P P 11 20 22.6 +0.8
CDF **Champ du Feu** 76.15 9 *e*P P 11 20 20.9 -0.2
CDF pmax pmax
comp=Z,20nm,1.0s
GEC2 **GERESS Array S** 76.15 5 IAmb IAmb 11 20 22.6
comp=Z,17nm,0.9s
GEC2 **GERESS Array S** 76.15 5 *e*P P 11 20 21.6 +0.4
comp=Z,17nm,0.9s,baz=355,slow=5.8
GERES **GERESS Array B** 76.15 5 P P 11 20 21.5 +0.4
comp=Z,13nm,0.9s,baz=343,slow=4.2,SNR=56
GERES pP pP 11 20 33.3 0.0
comp=Z,3.8nm,0.7s,baz=330,slow=5.1,SNR=5.4
comp=Z,13nm,0.9s
KOLS **Kolonicke sedl** 76.20 359 *e*P P 11 20 22.3 +1.0
KOLS pmax pmax
comp=Z,22nm,1.0s
KOLS **Kolonicke sedl** 76.20 359 P P 11 20 22.5 +1.2
KOLS **Kolonicke sedl** 76.20 359 *e*P P 11 20 22.3 +1.0
JAVC **Velka Javorina** 76.27 2 *e*P P 11 20 23.2 +1.5
JAVC **Velka Javorina** 76.27 2 P P 11 20 23.5 +1.8
BFO **Black Forest** 76.32 8 P P 11 20 21.9 -0.1
BFO pmax pmax
comp=Z,14nm,0.8s
BFO **Black Forest** 76.32 8 P P 11 20 21.9 -0.1
BFO IAmb IAmb 11 20 23.3
comp=Z,14nm,0.8s
BFO **Black Forest** 76.32 8 *e*P P 11 20 22.4 +0.4
comp=Z,14nm,0.9s,baz=355,slow=5.8
ECH **Echery** 76.33 9 P P 11 20 22.6 +0.5
ECH **Echery** 76.33 9 IAmb IAmb 11 20 23.6
comp=Z,27nm,0.9s
ECH **Echery** 76.33 9 P P 11 20 22.6 +0.5
ECH **Echery** 76.33 9 P P 11 20 22.7 +0.6
SLVN **Son La** 76.36 288 IAmb IAmb 11 20 24.1
comp=Z,26nm,0.8s
KMPD **K-Podol'skiy** 76.46 356 P P 11 20 22.2 -0.5
HAU **Haudompre** 76.47 10 *e*P P 11 20 22.5 -0.3
HAU pmax pmax
comp=Z,25nm,0.9s
HINF **Hinteralfeld** 76.70 9 *e*P P 11 20 23.7 -0.5
HINF pmax pmax
comp=Z,13nm,1.0s
MODS **Modra-Piesok** 76.74 2 *e*P P 11 20 26.0 +1.6
MODS pmax pmax
comp=Z,79nm,1.1s
MODS **Modra-Piesok** 76.74 2 P P 11 20 25.6 +1.2
MODS **Modra-Piesok** 76.74 2 *e*P P 11 20 26.0 +1.6
SORM **Soroca** 76.80 355 P P 11 20 24.1 -0.5
comp=Z,7μmcomp=Z,44nm,0.9s
SLE **Schleitheim** 76.90 8 P P 11 20 25.5 +0.2
SLE **Schleitheim** 76.90 8 P P 11 20 25.5 +0.2
GAR **Garm** 76.93 322 P P 11 20 26.0 +0.3
LOR **Lormes** 76.93 11 *e*P P 11 20 25.2 -0.3
LOR pmax pmax
comp=Z,26nm,1.0s

WINA Alland / Wiene 76.98 3 *i* P P 11 20 26.5 +0.8
SNR=8.3
TRPA Tarpa 77.00 359 P P 11 20 26.5 +0.7
CELP Cerrillos 77.05 77 P P 11 20 27.3 +0.8
MFF Saint Martin d 77.08 14 *e*P P 11 20 26.3 +0.1
MFF pmax pmax
comp=Z,246nm,0.9s
CONA Conrad Observa 77.15 3 *i* P P 11 20 27.6 +0.9
comp=Z,22nm,0.8s,SNR=18
BOURR Bourrignon 77.16 9 P P 11 20 27.5 +0.7
MOA Molln 77.17 4 *i* P P 11 20 27.2 +0.4
comp=Z,9.8nm,1.1s
MOA Molln 77.17 4 P P 11 20 27.3 +0.4
RJOB Jochberg 77.21 5 P P 11 20 27.9 +0.8
PSZ Piszkesteto 77.23 0 ⇓P P 11 20 28.6 +1.3
PSZ Piszkesteto 77.23 0 P P 11 20 28.5 +1.3
PSZ Piszkesteto 77.23 0 IAmb IAmb 11 20 29.3
comp=Z,28nm,1.0s
PSZ Piszkesteto 77.23 0 P P 11 20 28.1 +0.9
BIOA Bad Ischl, Aus 77.30 5 *e*P P 11 20 28.6 +1.0
comp=Z,14nm,1.0s
RETA Reutte 77.34 7 *i* P P 11 20 28.4 +0.5
comp=Z,14nm,1.1s,SNR=6.6
AVF Avril sur Loir 77.35 12 *e*P P 11 20 27.3 -0.4
AVF pmax pmax
comp=Z,24nm,0.9s
RONA Rosalia, Austr 77.39 3 *i* P P 11 20 29.2 +1.1
comp=Z,14nm,1.0s,SNR=7.3
SOP Sopron 77.42 3 P P 11 20 29.6 +1.5
SOP Sopron 77.42 3 P P 11 20 27.8 -0.3
BUR08 Bucovina Ar. S 77.43 357 IAmb IAmb 11 20 29.7
comp=Z,14nm,0.9s
BURAR Bucovina Array 77.46 357 ⇓P P 11 20 28.9 +0.4
BURAR Bucovina Array 77.46 357 P P 11 20 28.9 +0.4
BURAR Bucovina Array 77.46 357 P P 11 20 28.8 +0.3
BURAR IAmb IAmb 11 20 30.2
comp=Z,17nm,0.9s
DAVA Damuels 77.48 7 *i* P P 11 20 29.4 +0.7
comp=Z,12nm,0.9s,SNR=6.0
DAVA Damuels 77.48 7 P P 11 20 29.2 +0.5
MOTA Moosalm 77.51 6 *i* P P 11 20 29.5 +0.7
comp=Z,43nm,1.0s,SNR=16
BGF Bois d'Agland 77.52 12 *e*P P 11 20 28.4 -0.3
BGF pmax pmax
comp=Z,28nm,1.0s
LESA Schwarzleotal 77.52 5 *i* P P 11 20 29.6 +0.8
comp=Z,25nm,1.4s,SNR=9.8
WATA Walderalm 77.55 6 *i* P P 11 20 29.8 +0.7
comp=Z,41nm,1.1s,SNR=8.0
SMF Signal de Mont 77.55 12 *e*P P 11 20 28.5 -0.4
SMF pmax pmax
comp=Z,33nm,1.0s
WTTA Wattenberg 77.62 6 P P 11 20 30.3 +0.8
WTTA Wattenberg 77.62 6 *i* P P 11 20 30.4 +0.8
comp=Z,38nm,0.7s,SNR=16
WTTA Wattenberg 77.62 6 P P 11 20 30.3 +0.8
SQTA Sankt Quirin 77.64 6 *i* P P 11 20 30.5 +0.9
comp=Z,44nm,0.8s,SNR=22
CHGR Chuyangaron 77.64 323 *c i*P P 11 20 29.7 0.0
CHGR pmax pmax
comp=Z,146nm,0.8s
CHGR Chuyangaron 77.64 323 P P 11 20 29.8 +0.1
BNALP Bannalp 77.78 8 P P 11 20 31.3 +0.9
FETA Feichten 77.80 7 *i* P P 11 20 31.5 +1.0
comp=Z,39nm,0.9s,SNR=19
ARSA Arzberg 77.82 3 IAmb IAmb 11 20 32.4
comp=Z,21nm,1.0s
ARSA Arzberg 77.82 3 *i* P P 11 20 31.4 +1.0
comp=Z,18nm,0.8s,SNR=9.7
ARSA Arzberg 77.82 3 P P 11 20 31.4 +1.0
CABF La Chapelle 77.82 10 *e*P P 11 20 30.6 +0.1
CABF pmax pmax
comp=Z,19nm,0.9s
KBA Koelnbreinsper 77.90 5 P P 11 20 32.2 +1.1
KBA Koelnbreinsper 77.90 5 *i* P P 11 20 32.2 +1.1
comp=Z,32nm,0.7s,SNR=19
KBA Koelnbreinsper 77.90 5 P P 11 20 32.2 +1.1
GIMEL St. Georges / 77.92 10 P P 11 20 31.5 +0.4
SESA Seetaler Alpe, 77.92 4 *i* P P 11 20 32.2 +1.0
SNR=17
BIZ Bicaz 78.10 356 ⇓P P 11 20 32.7 +0.7
FUORN Ofenpass-Fuorn 78.17 7 IAmb IAmb 11 20 34.8
comp=Z,36nm,1.1s
FUORN Ofenpass-Fuorn 78.17 7 P P 11 20 33.9 +1.2
ABTA Abfaltersbach 78.19 6 *i* P P 11 20 33.6 +1.1
comp=Z,27nm,0.9s,SNR=12
TUE Stuetta 78.25 8 IAmb IAmb 11 20 35.1
comp=Z,16nm,0.9s
TUE Stuetta 78.25 8 P P 11 20 33.1 0.0
comp=Z,82nm,1.0s
TUE Stuetta 78.25 8 P P 11 20 34.2 +1.1
GOF Gofitskoye 78.27 344 *c i*P P 11 20 32.9 0.0
DRGR 78.34 358 P P 11 20 33.7 +0.3
DRGR 78.34 358 P P 11 20 33.7 +0.3
MYKA Terra Mystica 78.36 5 *i* P P 11 20 34.0 +0.5
comp=Z,16nm,1.2s,SNR=6.5
SOKA Soboth 78.37 4 *i* P P 11 20 34.4 +0.8
comp=Z,49nm,1.1s,SNR=8.4
PERS Pernice 78.42 4 *i* P P 11 20 34.3 +0.5
ACOM Acomizza, Ital 78.44 5 P P 11 20 34.4 +0.3
MARR Marisel-Cluj 78.45 358 ⇑P P 11 20 34.2 +0.2
TESR Tescani 78.50 356 ⇑P P 11 20 34.2 0.0
TESR Tescani 78.50 356 P P 11 20 34.3 +0.1
comp=Z,14nm,0.9s
TESR Tescani 78.50 356 P P 11 20 34.0 -0.2
OBKA Obir 78.52 4 *i* P P 11 20 35.0 +0.7
comp=Z,70nm,0.7s,SNR=43
OBKA Obir 78.52 4 P P 11 20 35.1 +0.7
PRED Cave del Predi 78.54 5 IAmb IAmb 11 20 36.1
comp=Z,21nm,1.1s
RJF Les Rejaudoux 78.58 13 *e*P P 11 20 34.2 -0.4
RJF pmax pmax
comp=Z,114nm,1.0s
ONER Baraj Valea Uz 78.69 356 ⇓P P 11 20 36.5 +1.3
CADS Cadrg 78.77 5 *i* P P 11 20 35.5 -0.2
DRE Drenchia 78.82 5 P P 11 20 35.9 -0.1
LFF La Frestale 78.83 14 *e*P P 11 20 36.0 0.0
LFF pmax pmax
comp=Z,279nm,1.0s
GHRR 78.92 355 P P 11 20 36.8 +0.3
GHRR 78.92 355 P P 11 20 37.3 +0.8
MORH Mrgy, Hungar 78.93 1 ⇓P P 11 20 37.0 +0.5
MORH Mrgy, Hungar 78.93 1 P P 11 20 36.6 +0.1
comp=Z,13nm,1.1s
MORH Mrgy, Hungar 78.93 1 P P 11 20 36.8 +0.3
LPL La Plagne 78.97 10 *e*P P 11 20 37.6 +0.5
LPL pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 78.97 11 P P 11 20 38.0 +1.1
SSB Saint Sauveur 78.97 11 P P 11 20 37.5 +0.6
SHAA Shahritus 78.98 323 IAmb IAmb 11 20 38.6
comp=Z,70nm,1.1s
TURR Turia 78.99 356 ⇑P P 11 20 38.5 +1.6
LPG La Plagne 78.99 10 *e*P P 11 20 34.7 -2.6
LPG pmax pmax
comp=Z,22nm,1.2s
SABO M.te Sabotino 79.01 5 IAmb IAmb 11 20 37.9
comp=Z,22nm,0.9s
CGRP Cima Grappa 79.01 6 P P 11 20 37.1 -0.1
CAF Calviac 79.02 13 *e*P P 11 20 36.9 -0.2
CAF pmax pmax
comp=Z,20nm,1.0s
HNLY HANLEY 79.06 313 *e*P P 11 20 38.6 +0.5
HNLY IAmb IAmb 11 20 44.3
comp=Z,14nm,1.0s
DOPR Dopca 79.10 356 ⇑P P 11 20 38.6 +1.1
VRI Vrincioaia 79.14 356 ⇑P P 11 20 38.7 +0.9
VRI Vrincioaia 79.14 356 P P 11 20 38.6 +0.9
VRI Vrincioaia 79.14 356 P P 11 20 38.1 +0.4
comp=Z,12nm,0.9s
VRI Vrincioaia 79.14 356 P P 11 20 38.2 +0.5
PLOR Plostina 79.16 356 ⇓P P 11 20 38.7 +0.8
PLOR Plostina 79.16 356 P P 11 20 38.6 +0.8
PTJ Puntijarka 79.17 3 P P 11 20 38.4 +0.4
COVR Voineasa-Covas 79.19 356 ⇑P P 11 20 39.6 +1.6
SHL Shillong 79.20 299 P P 11 20 37.1 -1.5
SHL pmax pmax
comp=Z,28nm,0.9s
SHL Shillong 79.20 299 IAmb IAmb 11 20 37.8
comp=Z,15nm,0.7s
SHL Shillong 79.20 299 *i* x x 11 20 55.1
ANN Anapa 79.31 348 *e*P P 11 20 37.5 -1.1
ANN *e**PP **PcP** 11 20 48.2 +1.5
ANN *e*S **S** 11 30 34.3 -1.4
ANN pmax pmax
comp=Z,40nm,1.4s
KVAR Kislovodsk Arr 79.40 344 LR LR 11 59 00.6
comp=Z,105nm,20.5s,baz=273,slow=38
KIV Kislovodsk 79.40 344 ⇑P P 11 20 40.6 +1.3
KIV Kislovodsk 79.40 344 *e*P P 11 20 39.7 +0.4
KIV pmax pmax
comp=Z,45nm,1.0s
KIV MLR MLR
comp=Z,96nm,19.0s
KIV Kislovodsk 79.40 344 P P 11 20 39.2 -0.1
KIV Kislovodsk 79.40 344 P P 11 20 39.1 -0.1
comp=Z,381nmcomp=Z,48nm,0.9s
KIV Kislovodsk 79.40 344 P P 11 20 40.0 +0.7
KIV Kislovodsk 79.40 344 P P 11 20 40.4 +1.2
KIV pP **pP** 11 20 51.5 0.0
VIVF Saint-Julien-l 79.41 11 *e*P P 11 20 39.2 0.0
VIVF pmax pmax
comp=Z,15nm,1.0s
ORIF Oris-en-Rattie 79.48 10 *e*P P 11 20 39.7 0.0
ORIF pmax pmax
comp=Z,9.0nm,0.9s
GBRS Gornja Briga 79.51 4 *i* P P 11 20 40.0 +0.2
MAK Makhachkala 79.51 340 *e*P P 11 20 40.1 +0.4
MAK *e*PPP PPP 11 25 26.1
MAK *e*S **S** 11 30 38.9 +1.0
MAK pmax pmax
comp=Z,136nm,1.0s
MAK MLR MLR
comp=Z,383nm,20.0s
SIM Simferopol' 79.53 350 *e*P P 11 20 39.3 -0.5
SIM *e* 11 20 48.0
SIM pmax pmax
comp=Z,44nm,0.9s
BZS Buzias 79.53 359 ⇑P P 11 20 40.0 +0.2
BZS Buzias 79.53 359 P P 11 20 40.9 +1.1
BZS Buzias 79.53 359 P P 11 20 40.3 +0.4
MLR Muntele Rosu 79.55 356 LR LR 11 56 37.7
comp=Z,113nm,21.9s,baz=22,slow=36
MLR Muntele Rosu 79.55 356 ⇑P P 11 20 41.8 +1.6
MLR Muntele Rosu 79.55 356 P P 11 20 41.7 +1.6
MLR Muntele Rosu 79.55 356 P P 11 20 40.2 +0.1
comp=Z,16nm,1.3s
MLR Muntele Rosu 79.55 356 P P 11 20 41.6 +1.5
KBZ Khabaz 79.59 344 P P 11 20 40.9 +0.8
comp=Z,32nm,0.9s,baz=332,slow=3.8,SNR=64
KBZ LR LR 11 59 36.3
comp=Z,154nm,21.2s,baz=5.5,slow=38
comp=Z,32nm,0.9s
KBZ Khabaz 79.59 344 *c i*P P 11 20 40.8 +0.7
KBZ pmax pmax
comp=Z,36nm,0.9s
SHA1 Shidzhatmaz 79.62 344 *d i*P P 11 20 41.6 +1.0
VOIR 79.64 357 ⇑P P 11 20 40.9 +0.3
VOIR 79.64 357 P P 11 20 41.0 +0.5
VOIR 79.64 357 P P 11 20 40.7 +0.2
comp=Z,14nm,0.9s
VOIR 79.64 357 P P 11 20 41.1 +0.5
LOT Lotru 79.66 358 ⇓P P 11 20 40.8 +0.1
EVN Everest 79.67 305 P P 11 20 42.0 +0.3
NCK Nalchik 79.70 343 ⇑*e*P P 11 20 42.0 +1.2
NCK pmax pmax
comp=Z,98nm,0.9s
ARR Arges 79.72 357 ⇑P P 11 20 42.4 +1.4
ARR Arges 79.72 357 P P 11 20 42.2 +1.3
GZR Gura Zlata 79.74 358 ⇑P P 11 20 41.6 +0.6
GZR Gura Zlata 79.74 358 P P 11 20 41.6 +0.6
MBDF Montbardon 79.75 10 *e*P P 11 20 42.8 +1.5
MBDF pmax pmax
comp=Z,18nm,0.8s
CFR Carcaliu 79.76 354 ⇑P P 11 20 40.3 -0.7
CFR Carcaliu 79.76 354 P P 11 20 40.3 -0.7
ISR Istrita 79.90 356 P P 11 20 42.0 +0.1
comp=Z,25nm,0.9s
TPGR Topolog 80.06 354 ⇓P P 11 20 42.6 -0.1
PGAV Gavieira, Arco 80.15 21 *e*P P 11 20 44.8 +1.4
PGAV *e*pP **pP** 11 20 58.0 +2.4
PGAV *i* IAmb IAmb 11 20 58.7
comp=Z,37nm,2.1s
PGAV *e*LR LR 11 50 03.0
PGAV *i* IAMs_20 IAMs_20 11 56 28.4
comp=Z,101nm,22.0s
SOC Sochi 80.21 346 *e*P P 11 20 43.6 +0.1
SOC *e* 11 23 45.9
SOC *e*PPP PPP 11 25 36.0
SOC *e*S **S** 11 30 46.2 +0.9
SOC *e*SS **SS** 11 35 55.1 0.0
SOC *e*SSS SSS 11 39 23.9
SOC pmax pmax
comp=Z,33nm,0.7s
SOC MLR MLR
comp=Z,266nm,23.0s
HERR Herculane 80.26 359 ⇑P P 11 20 44.0 +0.2
VSLR Vesyoloye 80.28 346 ⇑*e*P P 11 20 44.3 +0.3
VSLR pmax pmax
comp=Z,25nm,0.8s
ISO Isola 80.32 10 P P 11 20 45.6 +1.4
ISO Isola 80.32 10 P P 11 20 45.6 +1.4
MDVR Moldovita 80.36 359 ⇑P P 11 20 44.8 +0.4
BLY Banja Luka 80.37 2 P P 11 20 45.0 +0.6
RUSF Rustrel 80.40 11 P P 11 20 45.8 +1.2
ATE Arette 80.43 16 P P 11 20 46.1 +1.4
KLP Kalpa 80.44 313 *e*P P 11 20 45.4 0.0
PCAB Cabril 80.44 21 *e*P P 11 20 46.1 +1.2
PCAB *i* IAmb IAmb 11 20 47.2
comp=Z,39nm,2.0s
PCAB *e*pP **pP** 11 20 58.4 +1.3
TIRR Tirgusor 80.46 354 ⇓P P 11 20 45.4 +0.5
TIRR Tirgusor 80.46 354 P P 11 20 45.3 +0.5
TIRR Tirgusor 80.46 354 IAmb IAmb 11 20 46.6
comp=Z,33nm,0.9s
TIRR Tirgusor 80.46 354 P P 11 20 45.6 +0.8
NIL Nilore 80.60 318 P P 11 20 46.4 +0.5
NIL pmax pmax
comp=Z,101nm,0.8s
NIL Nilore 80.60 318 P P 11 20 46.4 +0.5
NIL Nilore 80.60 318 P P 11 20 46.6 +0.8
PBRG Braganca 80.61 20 *e*P P 11 20 46.4 +0.6
PBRG *e*pP **pP** 11 21 00.2 +2.2
PBRG *i* IAmb IAmb 11 21 13.2
comp=Z,18nm,1.5s
DHRM DHARAMSHALA 80.62 315 *e*P P 11 20 46.6 +0.3
DHRM IAmb IAmb 11 20 48.8
comp=Z,31nm,0.7s
DHRM *i* pP **sP** 11 21 03.1 +0.1
ETSF Etsaut 80.64 15 *e*P P 11 20 46.6 +0.7
ETSF pmax pmax
comp=Z,20nm,0.8s
ESCA l'Escarene 80.70 10 P P 11 20 47.3 +1.1
POLO Lamas de Olo 80.82 21 *e*P P 11 20 47.8 +0.8
POLO *i* IAmb IAmb 11 21 11.8
comp=Z,18nm,1.3s
PTO Porto 80.87 22 *e*P P 11 20 47.7 +0.6
PTO *i* IAmb IAmb 11 20 49.0
comp=Z,33nm,0.9s
AKT Akhty 80.89 340 *e*P P 11 20 47.7 +0.3
AKT 11 23 51.0
AKT pmax pmax
comp=Z,73nm,0.8s
AKT MLR MLR
comp=Z,477nm,21.0s
CHTO Chiang Mai 81.09 290 P P 11 20 47.6 -1.0
CHTO pmax pmax
comp=Z,29nm,1.1s
CHTO Chiang Mai 81.09 290 P P 11 20 47.6 -1.0
CHTO IAmb IAmb 11 21 06.4
comp=Z,29nm,1.1s
CHTO Chiang Mai 81.09 290 P P 11 20 47.6 -1.0
comp=Z,397nmcomp=Z,28nm,1.2s
CHTO Chiang Mai 81.09 290 P P 11 20 47.9 -0.8
CEST Esterri de Car 81.20 14 IAmb IAmb 11 20 51.1
comp=Z,22nm,1.1s
SMLA Simla 81.24 313 *e*P P 11 20 49.4 +0.2
SMLA IAmb IAmb 11 20 53.1
comp=Z,71nm,0.9s
SEKA Sheki 81.26 340 P P 11 20 49.8 +0.5
KBL Kabul 81.38 321 P P 11 20 49.0 -1.2
KBL pmax pmax
comp=Z,27nm,0.8s
KBL Kabul 81.38 321 P P 11 20 49.0 -1.2
KBL IAmb IAmb 11 20 50.0
comp=Z,26nm,0.8s
KBL Kabul 81.38 321 P P 11 20 49.2 -1.0
CMAR Chiang Mai Arr 81.39 290 P P 11 20 50.1 0.0
comp=Z,44nm,0.9s,baz=14,slow=5.4,SNR=186
CMAR pP **pP** 11 21 03.4 +1.0
comp=Z,28nm,0.8s,baz=15,slow=5.9,SNR=5.7
CMAR LR LR 12 00 18.5
comp=Z,74nm,19.5s,baz=45,slow=38
comp=Z,44nm,0.9s
PVIS Viseu 81.43 21 *e*P P 11 20 51.5 +1.3
PVIS *e*pP **pP** 11 21 04.6 +2.2
EPOS Posof 81.78 343 P P 11 20 53.2 +1.1
NPW Naypyitaw 81.80 293 P P 11 20 51.9 -0.4
MTE Manteigas 81.80 21 *e*P P 11 20 53.3 +1.1
MTE *e*pP **pP** 11 21 06.2 +1.8
MTE *i* IAmb IAmb 11 21 13.1
comp=Z,43nm,1.0s
MTE *e*LR LR 11 49 20.6
MTE *i* IAMs_20 IAMs_20 11 55 45.2
comp=Z,90nm,22.0s
MTE Manteigas 81.80 21 P P 11 20 53.6 +1.4
FDMO Fiordimonte 81.92 5 IAmb IAmb 11 20 54.7
comp=Z,18nm,1.1s
PCAS Casmilo, Conde 81.94 22 *e*P P 11 20 54.0 +1.2
PCAS *i* IAmb IAmb 11 20 56.0
comp=Z,49nm,1.9s
PCAS *e*pP **pP** 11 21 06.9 +1.9
GANJ Ganja 81.97 340 P P 11 20 53.7 +0.7
CASP Castiglione de 82.02 7 IAmb IAmb 11 20 55.2
comp=Z,20nm,0.9s
PGF Pioggiola 82.12 8 *e*P P 11 20 53.7 -0.1
PGF pmax pmax
comp=Z,29nm,0.8s
NRCA Norcia 82.12 5 IAmb IAmb 11 20 55.7
comp=Z,28nm,1.1s
SDV Santo Domingo 82.18 86 LR LR 11 59 14.3
comp=Z,70nm,20.2s,baz=36,slow=37
CESX Cesi 82.31 6 IAmb IAmb 11 21 14.5
comp=Z,20nm,1.2s
PCBR Castelo Branco 82.36 21 *e*P P 11 20 55.8 +0.9
PCBR *i* IAmb IAmb 11 20 56.6
comp=Z,30nm,1.1s
PCBR *e*pP **pP** 11 21 08.7 +1.5
AQU L'Aquila 82.61 5 P P 11 20 57.2 +0.8
PDG Podgorica 82.72 1 ⇓P P 11 20 57.3 +0.5
PDG Podgorica 82.72 1 P P 11 20 57.1 +0.3
GNI Garni 82.75 341 LR LR 12 04 41.1
comp=Z,87nm,18.3s,baz=18,slow=41
GNI Garni 82.75 341 *c i*P P 11 20 58.2 +0.9
GNI pmax pmax
comp=Z,23nm,0.9s
GNI Garni 82.75 341 P P 11 20 57.5 +0.3
GNI IAmb IAmb 11 21 15.9
comp=Z,25nm,0.9s
GNI Garni 82.75 341 P P 11 20 57.9 +0.6
PMRV Marv??o 82.77 21 *e*P P 11 20 57.9 +0.7
PMRV *e*pP **pP** 11 21 10.6 +1.2
PMRV *i* IAmb IAmb 11 21 19.2
comp=Z,30nm,1.4s
PMRV *e*LR LR 11 49 44.7
PMRV *i* IAMs_20 IAMs_20 11 55 47.4
comp=Z,76nm,22.0s
PMTG Montargil 82.94 22 *e*P P 11 20 58.3 +0.3
PMTG *e*pP **pP** 11 21 11.9 +1.6
PMTG *i* IAmb IAmb 11 21 18.5
comp=Z,24nm,1.3s
INTR Introdacqua 82.98 5 P P 11 20 58.9 +0.6
INTR IAmb IAmb 11 21 00.1
comp=Z,15nm,0.7s
ESBB Sonseca Array 83.20 19 IAmb IAmb 11 21 01.5
comp=Z,30nm,0.9s
ESDC Sonseca Array 83.20 19 P P 11 21 00.4 +0.9
comp=Z,25nm,0.8s,baz=341,slow=4.7,SNR=152
ESDC pP **pP** 11 21 12.9 +1.2
comp=Z,14nm,0.9s,baz=342,slow=4.6,SNR=12
comp=Z,25nm,0.8s
ESDC Sonseca Array 83.20 19 P P 11 21 00.1 +0.6
PARRA Arraiolos 83.22 22 *e*P P 11 21 00.1 +0.6
PARRA *i* IAmb IAmb 11 21 01.0
comp=Z,34nm,0.9s
PARRA *e*pP **pP** 11 21 12.7 +1.0
PAB San Pablo 83.26 19 P P 11 21 00.0 +0.2
PAB pmax pmax
comp=Z,17nm,0.9s
PAB San Pablo 83.26 19 P P 11 20 60.0 +0.2
PAB IAmb IAmb 11 21 01.8
comp=Z,17nm,0.8s
PESTR Estremoz 83.27 22 *e*P P 11 21 00.5 +0.8
PESTR *i* IAmb IAmb 11 21 01.9
comp=Z,31nm,1.5s
PESTR *e*pP **pP** 11 21 13.7 +1.7
PESTR Estremoz 83.27 22 P P 11 21 00.4 +0.6
LKRN Lenkeran, Azer 83.34 338 P P 11 21 01.5 +1.4
MOE Montemor 83.44 22 *e*P P 11 21 01.4 +0.8
MOE *e*pP **pP** 11 21 14.7 +1.9
MOE *i* IAmb IAmb 11 21 16.5
comp=Z,53nm,1.7s
PHP Peshkopia 83.47 360 P P 11 21 01.1 +0.3
PHP Peshkopia 83.47 360 P P 11 21 01.1 +0.3
EVO Evora 83.50 22 *e*P P 11 21 01.6 +0.7
EVO *e*pP **pP** 11 21 14.9 +1.7
KOPT Kop Dagi 83.59 345 IAmb IAmb 11 21 04.6
comp=Z,21nm,1.1s
KELT Kelkit 83.64 346 P P 11 21 03.1 +1.2
HRA Herat 83.82 326 IAmb IAmb 11 21 04.3
comp=Z,20nm,1.0s
SAHE Sakarya_HENDEK 83.88 352 ⇑P P 11 21 03.9 +1.1
PLOUS Minas do Lousa 83.89 23 *e*P P 11 21 03.9 +1.0
PLOUS *e*pP **pP** 11 21 16.6 +1.5
PLOUS *i* IAmb IAmb 11 21 18.7
comp=Z,41nm,1.8s
RDO Rodhopi 83.90 356 P P 11 21 03.8 +0.9
PBAR Barrancos 84.05 21 *e*P P 11 21 04.7 +0.9
PBAR *i* IAmb IAmb 11 21 06.1
comp=Z,75nm,1.0s
PBAR *e*pP **pP** 11 21 18.1 +2.1
MESJ Messejana 84.12 22 *e*P P 11 21 04.9 +0.8
MESJ IAmb IAmb 11 21 05.3
comp=Z,13nm,0.8s
MESJ Messejana 84.12 22 *e*P P 11 21 04.3 +0.2
MESJ *i* IAmb IAmb 11 21 28.4
comp=Z,23nm,2.1s
MESJ Messejana 84.12 22 *e*P P 11 21 04.9 +0.8
KUDL Kundal 84.14 313 *e*P P 11 21 04.3 0.0
KUDL *i* x x 11 21 21.5
ALBI Allahabad 84.25 307 *e*P P 11 21 04.1 -0.8
ALBI IAmb IAmb 11 21 05.5
comp=Z,21nm,0.8s
ALBI *i* x x 11 21 21.4
PTEO Sao Teotonio 84.29 23 *e*P P 11 21 06.0 +1.1
PTEO *i* IAmb IAmb 11 21 07.7
comp=Z,70nm,2.1s
PTEO *e*pP **pP** 11 21 18.8 +1.6
PCVE Castro Verde 84.36 22 *e*P P 11 21 06.2 +0.9
PCVE *i* IAmb IAmb 11 21 08.6
comp=Z,25nm,1.2s
PCVE *e*pP **pP** 11 21 19.6 +2.0
MATE Matera 84.45 3 P P 11 21 06.5 +0.8
MORF Marmelete 84.54 23 *e*P P 11 21 07.0 +0.7
MORF IAmb IAmb 11 21 08.1
comp=Z,25nm,0.9s
MORF Marmelete 84.54 23 *e*P P 11 21 07.0 +0.7
PVAQ Vaqueiros 84.65 22 *e*P P 11 21 07.9 +1.2
PVAQ *e*pP **pP** 11 21 21.1 +2.1
PVAQ *i* IAmb IAmb 11 21 22.9
comp=Z,44nm,1.7s
PVAQ *e*LR LR 11 52 50.3
PVAQ *i* IAMs_20 IAMs_20 11 57 03.5
comp=Z,110nm,20.0s
PVAQ Vaqueiros 84.65 22 P P 11 21 08.1 +1.4
PFVI Vila Bisbo 84.66 23 *e*P P 11 21 07.7 +0.8
PFVI *i* IAmb IAmb 11 21 24.8
comp=Z,78nm,1.5s
BR106 Keskin Array S 84.74 350 P P 11 21 07.3 -0.1
comp=Z,117nmcomp=Z,15nm,1.0s
BR131 Keskin Array S 84.75 350 *ce*P P 11 21 07.9 +0.4
BR131 Keskin Array S 84.75 350 IAmb IAmb 11 21 09.1
comp=Z,22nm,1.0s
BRTR Keskin Array B 84.75 350 P P 11 21 07.8 +0.4
comp=Z,12nm,1.0s,baz=29,slow=2.8,SNR=32
BRTR LR LR 12 04 15.4
comp=Z,86nm,20.1s,baz=356,slow=39
comp=Z,12nm,1.0s
BRTR Keskin Array B 84.75 350 P P 11 21 08.0 +0.5
BRTR Keskin Array B 84.75 350 P P 11 21 08.0 +0.5
PBDV Barranco-do-Ve 84.75 22 *e*P P 11 21 08.6 +1.3
PBDV *i* IAmb IAmb 11 21 10.8
comp=Z,60nm,1.8s

BR105	**Keskin Array S**	**84.76**	**350**	P		**P**	**11 21 07.5**	**0.0**	
	comp=Z,139nmcomp=Z,18nm,1.1s								
MARCO	**Tramutola**	**84.77**	**4**	P		**P**	**11 21 08.2**	**+0.7**	
ARPR	**Arapgir-MALATY**	**84.81**	**346**	P		**P**	**11 21 09.3**	**+1.6**	
VSL	**Villasalto**	**85.18**	**9**	P		**P**	**11 21 09.8**	**+0.3**	
BALY	**Balya**	**85.21**	**354**	P		**P**	**11 21 10.4**	**+0.8**	
SRN	**Sarande**	**85.27**	**0**	P		**P**	**11 21 10.5**	**+0.6**	
KIRS	**Kirsehir-Merke**	**85.31**	**349**	⇑P		**P**	**11 21 11.1**	**+1.0**	
KKUL	**Konya-Kulu**	**85.37**	**350**	P		**P**	**11 21 11.8**	**+1.3**	
KEK	**Kerkira**	**85.43**	**0**	P		**P**	**11 21 10.7**	**0.0**	
HAKT	**HAKKARI**	**85.46**	**342**	P		**P**	**11 21 12.2**	**+1.0**	
TIP	**Timpagrande**	**85.92**	**3**	⇑P		**P**	**11 21 13.8**	**+0.6**	
TIP	**Timpagrande**	**85.92**	**3**	P		**P**	**11 21 13.5**	**+0.3**	
	comp=Z,305nmcomp=Z,37nm,0.9s								
TIP	**Timpagrande**	**85.92**	**3**	P		**P**	**11 21 13.7**	**+0.6**	
EMAL	**Malaga-Limoner**	**85.94**	**20**	P		**P**	**11 21 13.8**	**+0.6**	
ANDN	**Andirin**	**86.56**	**347**	P		**P**	**11 21 17.8**	**+1.3**	
CEL	**Celeste**	**86.81**	**4**	P		**P**	**11 21 16.0**	**-1.6**	
CEL	**Celeste**	**86.81**	**4**	P		**P**	**11 21 16.5**	**-1.1**	
GAZ	**Gaziantep**	**86.85**	**347**	IAmb		IAmb	11 21 38.6		
	comp=Z,16nm,1.0s								
AYDN	**Tasoluk**	**87.26**	**354**	P		**P**	**11 21 20.3**	**+0.5**	
CLTB	**Caltabellotta**	**87.36**	**6**	P		**P**	**11 21 18.3**	**-2.0**	
ITM	**Ithomi**	**87.96**	**359**	P		**P**	**11 21 23.2**	**+0.2**	
BHPL	**Bhopal**	**88.02**	**309**	*eP*		**P**	**11 21 22.8**	**-0.8**	
BHPL				IAmb		IAmb	11 21 24.8		
	comp=Z,21nm,1.1s								
BHPL				*i* x		x	11 21 40.1		
KAPI	**Kappang**	**88.77**	**259**	LR		LR	12 04 38.3		
	comp=Z,11nm,18.9s,baz=20,slow=38								
KEST	**Kesra**	**88.91**	**9**	P		**P**	**11 21 28.1**	**+0.4**	
	comp=Z,13nm,0.9s,baz=347,slow=3.1,SNR=11								
	comp=Z,13nm,0.9s								
KEST	**Kesra**	**88.91**	**9**	IAmb		IAmb	11 21 30.1		
	comp=Z,12nm,0.9s								
DGPR	**DIGLIPUR**	**88.97**	**292**	*ex*		x	11 19 54.6		
DGPR				*i* x		x	11 20 08.7		
MD01	**Midelt array s**	**89.64**	**21**	P		**P**	**11 21 31.2**	**0.0**	
MD31	**MD31**	**89.64**	**21**	IAmb		IAmb	11 21 32.6		
	comp=Z,10nm,0.7s								
MMAI	**Mount Meron Ar**	**91.18**	**347**	LR		LR	12 06 31.8		
	comp=Z,57nm,22.0s,baz=1.0,slow=38								
KULM	**Kulim**	**91.24**	**281**	IAmb		IAmb	11 21 58.8		
	comp=Z,14nm,1.0s								
KULM	**Kulim**	**91.24**	**281**	P		**P**	**11 21 38.0**	**-0.7**	
	comp=Z,14nm,0.8s								
KULM	**Kulim**	**91.24**	**281**	P		**P**	**11 21 38.5**	**-0.2**	
QIS	**Mount Isa**	**91.39**	**235**	P		**P**	**11 21 37.1**	**-2.0**	
	comp=Z,11nm,1.2s								
ASF	**Jabal al Asfar**	**91.81**	**346**	LR		LR	12 08 20.0		
	comp=Z,33nm,18.9s,baz=26,slow=39								
HYB	**Hyderabad**	**92.58**	**306**	*eP*		**P**	**11 21 44.4**	**-0.5**	
HYB	**Hyderabad**	**92.58**	**306**	*eP*		**P**	**11 21 44.7**	**-0.2**	
HYB				*eS*		**S**	**11 32 45.6**	**-0.7**	
RPN	**Rapa Nui**	**92.59**	**137**	LR		LR	11 53 13.7		
	comp=Z,77nm,19.5s,baz=0.5,slow=29								
WR8	**Warramunga Ar**	**93.33**	**239**	P		**P**	**11 21 47.1**	**-1.0**	
WRA	**Warramunga Arr**	**93.40**	**239**	P		**P**	**11 21 47.2**	**-1.2**	
	comp=Z,2.9nm,0.8s,baz=39,slow=5.0,SNR=7.4								
WRA				pP		**pP**	**11 22 00.0**	**-0.8**	
	comp=Z,5.0nm,1.0s,baz=41,slow=5.3,SNR=6.3								
	comp=Z,2.9nm,0.8s								
WRA	**Warramunga Arr**	**93.40**	**239**	*i* P		**P**	**11 21 47.9**	**-0.5**	
WRA				pmax		pmax			
	comp=Z,3.0nm,0.8s								
PSI	**Prapat**	**94.25**	**281**	P		**P**	**11 21 52.7**	**-0.1**	
PSI	**Prapat**	**94.25**	**281**	P		**P**	**11 21 51.7**	**-1.1**	
	comp=Z,14nm,0.7s								
EIL	**Elat**	**94.54**	**347**	LR		LR	12 08 48.7		
	comp=Z,34nm,21.0s,baz=280,slow=38								
URZ	**Urewera**	**95.23**	**198**	LR		LR	11 56 26.9		
	comp=Z,113nm,20.5s,baz=348,slow=30								
MDP	**Montagnes des**	**95.39**	**73**	LR		LR	12 06 58.6		
	comp=Z,71nm,19.2s,baz=71,slow=37								
ASAR	**Alice Springs**	**96.76**	**238**	P		**P**	**11 22 03.4**	**-0.4**	
	comp=Z,1.9nm,0.9s,baz=35,slow=5.5,SNR=14								
ASAR				LR		LR	11 58 04.1		
	comp=Z,79nm,20.9s,baz=10,slow=31								
	comp=Z,1.9nm,0.9s								
RAYN	**Ar Rayn**	**98.69**	**337**	P		**P**	**11 22 12.6**	**-0.1**	
RAYN				pmax		pmax			
	comp=Z,7.0nm,0.8s								
RAYN	**Ar Rayn**	**98.69**	**337**	P		**P**	**11 22 12.6**	**-0.1**	
RAYN				IAmb		IAmb	11 22 13.6		
	comp=Z,7.5nm,0.8s								
RAYN	**Ar Rayn**	**98.69**	**337**	P		Pdif	11 22 13.0	+0.3	
H03N2	**Juan Fernandez**	**111.82**	**117**	T		T	13 28 16.0		
	baz=323,slow=77,SNR=14								
H03N1	**Juan Fernandez**	**111.83**	**117**	T		T	13 28 15.8		
	baz=323,slow=77,SNR=18								
H03N3	**Juan Fernandez**	**111.84**	**117**	T		T	13 28 12.0		
	baz=323,slow=77,SNR=13								
TSUM	**Tsumeb**	**143.98**	**5**	P		PKPbc	11 28 06.8	+0.2	
QSPA	**South Pole Qui**	**145.00**	**180**	PKPbc		PKPbc	11 28 08.4	0.0	
	comp=Z,22nm,0.7s,baz=335,slow=0.2,SNR=162								
QSPA				pPKPbc		pPKPdf	11 28 20.3	-1.4	
	comp=Z,27nm,0.8s,baz=13,slow=3.1,SNR=11								
QSPA	**South Pole Qui**	**145.00**	**180**			PKPbc	11 28 07.9	-0.5	
SOOWA	**Sowa**	**145.12**	**350**	P		**PKPdf**	**11 28 11.1**	**+0.5**	
BROLN	**Tlhalogang**	**145.53**	**349**	P		**PKPab**	**11 28 12.0**	**+0.3**	
GRTLG	**Ghanzi**	**146.19**	**359**	P		**PKPab**	**11 28 14.0**	**-0.2**	
KHWEE	**KHWEE**	**146.56**	**351**	P		**PKPab**	**11 28 15.1**	**-0.5**	
WIN	**Windhoek**	**147.30**	**6**	PKP2		**PKPbc**	**11 28 17.4**	**+0.6**	
KOOLE	**Kule**	**147.81**	**0**	P		**PKPbc**	**11 28 19.0**	**+0.9**	
LKGWB	**Lokgwabe**	**148.92**	**359**	P		**PKiKP**	**11 28 21.6**	**-0.6**	
SKOMA	**Sekoma**	**149.22**	**354**	P		**PKiKP**	**11 28 22.3**	**-0.6**	
LBTB	**Lobatse**	**149.59**	**351**	P		**PKiKP**	**11 28 23.4**	**-0.2**	
POGA	**Pongola**	**150.96**	**339**	P		**PKiKP**	**11 28 26.3**	**+0.1**	
BOSA	**Boshof**	**153.18**	**351**	PKP		**PKPdf**	**11 28 23.2**	**-0.1**	
	comp=Z,2.9nm,0.9s,baz=348,slow=2.9,SNR=4.5								
BOSA				PKPbc		**PKiKP**	**11 28 30.9**	**0.0**	
	comp=Z,14nm,0.7s,baz=21,slow=1.6,SNR=36								
BOSA	**Boshof**	**153.18**	**351**	P		**PKiKP**	**11 28 31.1**	**+0.1**	
MAW	**Mawson**	**156.78**	**221**	PKP		**PKPdf**	**11 28 26.6**	**-0.2**	
	comp=Z,1.7nm,0.8s,baz=15,slow=5.4,SNR=3.8								
MAW				PKPab		**PKPab**	**11 28 57.3**	**+0.6**	
	comp=Z,12nm,0.8s,baz=103,slow=6.2,SNR=23								

*IDC **23** 11:17:01.0±4.4, 68°.24N×32°.85E, h0km, mbtmp2.8/2, ML2.1/2, Error ellipse: s-maj=57.9km s-min=18.2km az=66.0*
*KOLA **23** 11:17:00.2, 68°.08N×32°.98E, h0km, ML1.6, Error ellipse: s-maj=7.3km s-min=1.8km az=70.0, Olenegorsk City, Mines*

ISC 23 11:16:57.3±2.1, 68°.16N±0°.08×33°.3E±0°.2, h0km, n8, σ0≥98/11, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
APA0	**Apatity Array**	**0.56**	**190**	P		**Pg**	**11 17 08.2**	**+0.2**
APA0				S		**Sg**	**11 17 14.2**	**-1.2**
APA	**Apatity**	**0.59**	**174**	S		**Sg**	**11 17 16.4**	**0.0**
KVDA	**Kovda**	**1.48**	**186**	P		**Pn**	**11 17 24.8**	**-0.4**
KVDA				S		**Sg**	**11 17 44.5**	**-0.3**
VADS	**Vadso**	**2.41**	**327**	P		**Pb**	**11 17 41.8**	**+0.3**
VADS				S		**Sb**	**11 18 10.4**	**-1.4**
ARCES	**ARCESS Array B**	**3.13**	**300**	Pn		**Pn**	**11 17 48.9**	**+1.0**
	0.1nm,0.3s,baz=118,slow=14,SNR=5.0							
ARCES				Sn		**Sn**	**11 18 25.0**	**-0.9**
	0.3nm,0.3s,baz=111,slow=22,SNR=4.1							
	1.2nm,0.7s							
ARCES	**ARCESS Array B**	**3.13**	**300**	S		**Sn**	**11 18 25.9**	**0.0**
I37NO	**I37NO**	**5.43**	**286**	I		I	11 49 10.0	
	baz=92,slow=315,SNR=3.1							
FINES	**FINESS Array B**	**7.40**	**208**	Pn		**Pn**	**11 18 47.9**	**+1.5**
	0.1nm,0.3s,baz=8.9,slow=10,SNR=1.4							
	1.9nm,0.8s							

IDC 23 11:26:43.4±5.1, 33°.16N×86°.60E, h0km, mb3.5/3, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=90.0km s-min=46.4km az=159.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKAR	**Makanchi Array**	**14.01**	**348**	Pn		Pn	11 30 02.7	-0.4
	baz=167,slow=13,SNR=3.5							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**20.82**	**357**	P		P	11 31 25.7	-0.6
	0.6nm,0.4s,baz=176,slow=11,SNR=3.7							
	0.6nm,0.4s							
SONM	**Songino Array**	**20.92**	**40**	P		P	11 31 27.8	+0.1
	1.1nm,0.6s,baz=226,slow=12,SNR=4.3							
	1.1nm,0.6s							
GERES	**GERESS Array B**	**55.14**	**310**	P		P	11 36 17.5	0.0
	0.3nm,0.3s,baz=67,slow=8.7,SNR=3.9							
	0.3nm,0.3s							

*ATH **23** 11:43:56.4, 39°.74N×20°.40E, h6km±1km, ML2.6/9, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 23 11:43:57.1±1.1, 39°.68N±0°.03×20°.39E±0°.03, h8km±13km, n28, σ1≥25/34, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAN	**Janina**	**0.36**	**94**	P		**Pg**	**11 44 03.6**	**-0.5**
KRK1	**kERKIRA**	**0.37**	**260**	P		**Pg**	**11 44 04.1**	**-0.2**
KRK1				S		**Sg**	**11 44 09.5**	**+0.3**
PRGA	**Parga**	**0.40**	**179**	P		**Pg**	**11 44 05.1**	**+0.3**
PRGA				S		**Sg**	**11 44 11.3**	**+1.3**
KEK	**Kerkira**	**0.46**	**274**	P		**Pg**	**11 44 04.8**	**-1.2**
KEK				S		**Sg**	**11 44 11.5**	**-0.5**
PRMD	**Pramanda**	**0.57**	**105**	P		**Pg**	**11 44 07.8**	**-0.3**
PRMD				S		**Sg**	**11 44 16.1**	**+0.6**
ART2	**Arta**	**0.71**	**139**	P		**Pg**	**11 44 10.4**	**-0.5**
TETR	**Tetrakomo, Epi**	**0.76**	**116**	P		**Pg**	**11 44 11.2**	**-0.6**
PENT	**Pentalofos**	**0.77**	**48**	P		**Pg**	**11 44 10.9**	**-1.1**
PENT				S		**Sg**	**11 44 20.2**	**-1.8**
AMPL	**Ampelaki**	**0.99**	**140**	P		**Pg**	**11 44 15.7**	**-0.5**
FSK	**Fiskardo**	**1.23**	**174**	P		**Pn**	**11 44 20.6**	**0.0**
KZN	**Kozani**	**1.23**	**59**	P		**Pg**	**11 44 18.6**	**-2.1**
EVR	**Evrytania**	**1.34**	**124**	P		**Pn**	**11 44 21.6**	**-0.7**
PVO	**Paravola**	**1.38**	**140**	P		**Pn**	**11 44 22.3**	**-0.5**
OHR	**Ohrid**	**1.46**	**12**	*i* Pn		**Pg**	**11 44 26.5**	**+1.3**
OHR				*i* Sn		**Sg**	**11 44 49.2**	**+5.0**
PLEV	**Plevrona-Mesol**	**1.50**	**148**	P		**Pn**	**11 44 24.5**	**+0.2**
VLS	**Valsamata**	**1.51**	**174**	P		**Pn**	**11 44 24.1**	**-0.5**
ANX	**Ano Chora**	**1.61**	**132**	P		**Pn**	**11 44 26.4**	**+0.3**
AXS	**Araxos**	**1.67**	**152**	P		**Pn**	**11 44 27.3**	**+0.6**
EFP	**Efpalio**	**1.72**	**136**	P		**Pn**	**11 44 27.9**	**+0.4**
MG00	**Magoula, Dorid**	**1.75**	**136**	P		**Pn**	**11 44 27.9**	**0.0**
PYRG	**Pyrgos, Dorida**	**1.79**	**135**	P		**Pn**	**11 44 28.6**	**+0.1**
SERG	**Sergoula**	**1.81**	**134**	P		**Pn**	**11 44 28.1**	**+0.4**
ORTH	**Orthonies,Zaky**	**1.84**	**172**	P		**Pn**	**11 44 28.9**	**-0.2**
DRO	**Drossia**	**2.01**	**149**	P		**Pn**	**11 44 32.4**	**+1.0**
KLV	**Kalavryta, Ach**	**2.14**	**139**	P		**Pn**	**11 44 34.0**	**+0.8**
GUR	**Goura**	**2.32**	**138**	P		**Pn**	**11 44 36.1**	**+0.3**
PLG	**Polygyros**	**2.45**	**73**	P		**Pn**	**11 44 36.5**	**-0.9**
TIP	**Timpagrande**	**2.86**	**261**	P		**Pn**	**11 44 42.1**	**-1.0**

*KRNET **23** 11:45:47.9±0.1, 41°.07N×70°.13E, h13km, mb2.5*
*SOME **23** 11:45:47.3, 40°.90N×70°.28E, h0km*

ISC 23 11:45:48.6±1.8, 41°.00N±0°.03×70°.25E±0°.07, h2km±12km, n12, σ1≥58/24, 18C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TRKS	**Terek-Say**	**0.85**	**52**	⇑*eP*		**Pg**	**11 46 04.9**	**-0.1**
TRKS				⇑*eS*		**Sb**	**11 46 17.2**	**-1.0**
BTK	**Batken**	**1.04**	**155**	⇑*eP*		**Pn**	**11 46 09.6**	**-0.6**
BTK				⇑*eS*		**Sn**	**11 46 25.6**	**+0.2**
IUG	**Iuzhnay**	**1.15**	**352**	*eP*		**Pn**	**11 46 13.6**	**+1.7**
	30nm,0.2s							
IUG				*eS*		**Sn**	**11 46 32.5**	**+4.3**
	61nm,0.3s							
ARK	**Arkit**	**1.51**	**58**	⇑*eP*		**Pg**	**11 46 17.3**	**-0.3**
ARK				⇑*eS*		**Sg**	**11 46 38.8**	**+1.5**
DRK	**Karamyk**	**1.93**	**142**	⇑*eP*		**Pg**	**11 46 18.6**	**0.0**
DRK				⇑*eS*		**Sg**	**11 46 53.1**	**+2.5**
OHH	**Osh**	**1.98**	**103**	⇑*eP*		**Pg**	**11 46 26.3**	**-0.3**
OHH				⇑*eS*		**Sg**	**11 46 54.2**	**+1.8**
BRLS	**Borolday**	**2.05**	**351**	*eP*		**Pn**	**11 46 22.7**	**-1.4**
	6.4nm,0.2s							
BRLS				*eS*		**Sn**	**11 46 48.5**	**-1.7**
	7.7nm,0.3s							
KK31	**Karatay Array**	**2.11**	**5**	⇑Pn		**Pg**	**11 46 27.7**	**-1.3**
	3.1nm,0.5s,baz=199,slow=18,SNR=24							
KK31				⇑Sn		**Sg**	**11 46 57.3**	**+1.0**
	5.3nm,0.5s,baz=193,slow=27,SNR=8.0							
MNAS	**Manas**	**2.25**	**48**	⇑*eP*		**Pb**	**11 46 28.8**	**-1.2**
MNAS				⇑*iS*		**Sb**	**11 46 58.5**	**+0.2**
SFK	**Sufi-Kurgan**	**2.67**	**111**	⇑*eP*		**Pb**	**11 46 36.0**	**-1.3**
SFK				⇑*eS*		**Sb**	**11 47 10.6**	**0.0**
SALK	**Salom-Alik**	**2.71**	**91**	⇑*eP*		**Pb**	**11 46 36.0**	**-1.9**
SALK				⇑*eS*		**Sb**	**11 47 11.3**	**-0.3**
MRKS	**Merke**	**2.82**	**51**	*eP*		**Pb**	**11 46 40.6**	**+0.8**
	2.4nm,0.3s							
MRKS				*eS*		**Sg**	**11 47 18.7**	**-0.6**
	4.1nm,0.5s							

*IDC **23** 11:59:29.9±0.9, 40°.02N×29°.72W, h0km, mb4.0/11, mbtmp4.0/12, MS3.6/54, Error ellipse: s-maj=29.5km s-min=18.1km az=15.0*
*NEIC **23** 11:59:31.6±2.2, 39°.9N±0°.2×29°.7W±0°.1, h10km±1km, mb4.5/43, Error ellipse: s-maj=29.3km s-min=16.2km az=202.0*
*GCMT **23** 11:59:32.5±0.4, 40°.33N±0°.06×29°.75W±0°.05, h22km±1km, MW4.7/75, Moment Tensor Solution. s20,c22; s75,c97; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=.1.64±.14; Mθθ=0.51±.09; Mφφ=1.14±.09; Mrθ=0.48±.18; Mφθ=-0.01±.06; Mrφ=0.56±.13; Best double couple: Mo=1.55100×10¹⁶ NP1:φs=355.00000°, δ34.00000°, λ=-107.00000°. NP2: φs=196.00000°, δ58.00000°, λ=-79.00000°. Principal axes: T 1.2590, Plg12.0000°, Azm277.0000°; N 0.5880, Plg10.0000°, Azm9.0000°; P -1.8420, Plg75.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*SVSA **23** 11:59:32.5±1.1, 40°.06N×29°.61W, h5km, ML3.5(INMG) Error ellipse: s-maj=7.3km s-min=4.3km az=79.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia AtIntico N*

ISC 23 11:59:32.5±1.4, 39°.80N±0°.07×29°.54W±0°.07, h19km±5km, n118, σ1≥07/75, mb4.5/26, MS3.6/53, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCED	**Cedros**	**1.34**	**151**	*eP*		**Pb**	**11 59 56.9**	**-0.1**
PCED				*eS*		**Sg**	**12 00 14.6**	**-1.3**
PCED				*i* IAML			12 00 16.4	
PCED				*i* IAML			12 00 17.9	
PCED				*i* IAML			12 00 20.2	
CALA	**Caldeira**	**1.38**	**152**	*eP*		**Pb**	**11 59 57.3**	**-0.5**
CALA				*eS*		**Sb**	**12 00 15.8**	**+0.7**
CALA				*i* IAML			12 00 19.2	
CALA				*i* IAML			12 00 19.5	
CALA				*i* IAML			12 00 19.6	
PSCRZ	**Santa Cruz da**	**1.38**	**121**	*eP*		**Pn**	**11 59 55.9**	**-0.9**
PSCRZ				*i* IAML			12 00 16.8	
PFCBR	**Castelo Branco**	**1.43**	**153**	*eS*		**Sb**	**12 00 16.8**	**+0.5**
PFCBR				*i* IAML			12 00 17.6	
PFCBR				*i* IAML			12 00 18.5	
PFCBR				*i* IAML			12 00 20.4	
PGRA	**Graciosa**	**1.43**	**122**	*eP*		**Pn**	**11 59 56.4**	**-1.1**
PGRA				*eS*		**Sn**	**12 00 15.1**	**-0.6**
PGRA				*i* IAML			12 00 18.1	
PGRA				*i* IAML			12 00 20.8	
PGRA				*i* IAML			12 00 21.4	
HOR	**Horta**	**1.46**	**151**	*eS*		**Sb**	**12 00 17.4**	**+0.2**
HOR				*i* IAML			12 00 19.1	
HOR				*i* IAML			12 00 19.9	
HOR				*i* IAML			12 00 20.3	
ROSA	**Rosais**	**1.48**	**137**	*eP*		**Pn**	**11 59 57.8**	**-0.3**
ROSA				*eS*		**Sb**	**12 00 16.9**	**-0.8**
ROSA				*i* IAML			12 00 19.7	
ROSA				*i* IAML			12 00 19.9	
ROSA				*i* IAML			12 00 20.0	
PICO	**Pico**	**1.56**	**146**	*eP*		**Pb**	**11 59 59.8**	**-1.0**
PICO				*eS*		**Sb**	**12 00 20.0**	**-0.2**
PICO				*i* IAML			12 00 21.8	
PICO				*i* IAML			12 00 22.3	
PICO				*i* IAML			12 00 23.2	
PCAN	**Candelaria**	**1.57**	**148**	*eP*		**Pb**	**11 59 59.9**	**-1.0**
PCAN				*eS*		**Sb**	**12 00 20.2**	**-0.2**
PCAN				*i* IAML			12 00 21.7	
PCAN				*i* IAML			12 00 25.4	
PCAN				*i* IAML			12 00 26.6	
PMAN	**Manadas**	**1.62**	**136**	*eP*		**Pn**	**11 59 59.9**	**-0.2**
PMAN				*eS*		**Sn**	**12 00 20.3**	**-0.2**
PMAN				*i* IAML			12 00 21.0	
PMAN				*i* IAML			12 00 22.3	
PMAN				*i* IAML			12 00 22.6	
PSBA	**Serra de Santa**	**2.00**	**120**	*eP*		**Pn**	**12 00 04.8**	**-0.6**
PSBA				*eS*		**Sn**	**12 00 29.5**	**-0.4**
PSBA				*i* IAML			12 00 32.5	
PSBA				*i* IAML			12 00 33.3	
PSBA				*i* IAML			12 00 34.4	
PAGU	**Agualva, Azore**	**2.10**	**119**	*eP*		**Pn**	**12 00 06.0**	**-0.6**
PAGU				*eS*		**Sn**	**12 00 31.3**	**-0.9**
PAGU				*i* IAML			12 00 33.9	
PAGU				*i* IAML			12 00 34.5	
PAGU				*i* IAML			12 00 34.8	
ADH	**Angra Heroismo**	**2.12**	**122**	*eP*		**Pn**	**12 00 06.6**	**-0.4**
ADH				*eS*		**Sn**	**12 00 32.7**	**-0.1**
ADH				*i* IAML			12 00 34.5	
ADH				*i* IAML			12 00 35.1	
ADH				*i* IAML			12 00 35.8	
PSCM	**Serra do Cume**	**2.18**	**120**	*eP*		**Pn**	**12 00 07.0**	**-0.7**
PSCM				*eS*		**Sn**	**12 00 34.7**	**+0.5**
PSCM				*i* IAML			12 00 36.8	
PSCM				*i* IAML			12 00 38.0	
PSCM				*i* IAML			12 00 38.1	
PSET	**Sete Cidades**	**3.58**	**122**	*eP*		**Pn**	**12 00 27.4**	**+0.4**
CMLA	**Cha da Macela**	**3.74**	**122**	*eP*		**Pn**	**12 00 29.2**	**0.0**
CMLA				*eS*		**Sn**	**12 01 13.1**	**+0.4**
CMLA				*i* IAML			12 01 17.1	
CMLA				*i* IAML			12 01 17.2	
CMLA				*i* IAML			12 01 17.5	
CMLA	**Cha da Macela**	**3.74**	**122**	Pn		**Pn**	**12 00 29.8**	**+0.6**
BART	**Pico Bartolome**	**3.97**	**119**	*eP*		**Pn**	**12 00 32.3**	**-0.2**
PSMN	**Pico do Norte,**	**4.49**	**127**	*eP*		**Pn**	**12 00 39.5**	**0.0**
PSMN				*eS*		**Sn**	**12 01 29.8**	**-1.4**
PSMN				*i* IAML			12 01 33.6	
PSMN				*i* IAML			12 01 33.7	
PSMN				*i* IAML			12 01 34.8	
PMPST	**Porto Santo, M**	**12.56**	**118**	*eP*		Pn	12 02 34.6	+4.4
PGAV	**Gavieira, Arco**	**16.23**	**75**	*eP*		**Pn**	**12 03 19.2**	**-0.3**
PGAV						IAMs_20	IAMs_20	12 08 18.6
	comp=Z,298nm,20.0s							
PTEO	**Sao Teotonio**	**16.41**	**91**	*eP*		**P**	**12 03 22.5**	**-1.9**
PMTG	**Montargil**	**16.48**	**86**	*eP*		**P**	**12 03 25.3**	**+0.1**
MOE	**Montemor**	**16.48**	**88**	*eP*		**P**	**12 03 23.9**	**-1.3**
PLOUS	**Minas do Lousa**	**16.53**	**89**	*eP*		**Pn**	**12 03 22.6**	**-0.5**
PARRA	**Arraiolos**	**16.66**	**87**	*eP*		**P**	**12 03 25.9**	**-1.4**
MESJ	**Messejana**	**16.73**	**90**	*eP*		**P**	**12 03 26.3**	**-1.7**
PCVE	**Castro Verde**	**16.91**	**91**	*eP*		**P**	**12 03 29.3**	**-0.7**
PBDV	**Barranco-do-Ve**	**17.09**	**92**	*eP*		**P**	**12 03 32.6**	**+0.6**
PBAR	**Barrancos**	**17.56**	**88**	*eP*		**P**	**12 03 38.4**	**+1.2**
ESDC	**Sonseca Array**	**19.65**	**82**	P		**Pn**	**12 04 01.7**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=287,slow=9.6,SNR=16							
ESDC					LR	LR	12 10 39.1	
	comp=Z,343nm,18.2s,baz=250,slow=34							
ESDC	**Sonseca Array**	**19.65**	**82**	P		**Pn**	**12 04 00.6**	**-1.0**
ESBB	**Sonseca Array**	**19.65**	**82**	P		**Pn**	**12 04 00.8**	**-0.8**
MD01	**Midelt array s**	**21.09**	**101**	P		**P**	**12 04 18.1**	**+2.2**
MD31	**MD31**	**21.09**	**101**	P		**P**	**12 04 18.4**	**+2.5**
MDT	**Midelt**	**21.23**	**101**	P		**P**	**12 04 19.9**	**+2.5**
	comp=Z,5.2nm,1.1s,baz=286,slow=11,SNR=5.6							
MDT					LR	LR	12 10 38.7	
	comp=Z,163nm,21.9s,baz=328,slow=31							
	comp=Z,5.2nm,1.1s							
BORG	**Borgarnes**	**25.44**	**8**	LR		LR	12 12 04.7	
	comp=Z,120nm,21.2s,baz=150,slow=30							
SCHQ	**Schefferville**	**29.00**	**314**	LR		LR	12 15 47.0	
	comp=Z,107nm,19.1s,baz=96,slow=34							
DAVOX	**Davos/Dischmat**	**29.29**	**63**	LR		LR	12 15 44.1	
	comp=Z,91nm,18.4s,baz=261,slow=33							
SFJD	**Kangerlussuaq**	**29.68**	**343**	LR		LR	12 14 36.3	
	comp=Z,58nm,20.4s,baz=137,slow=31							

PD31	**Pinedale Array**	**58.02**	**301**	IAmb	IAmb	12 09 29.2		
	comp=Z,4.0nm,1.1s							
PDAR	**Pinedale Array**	**58.02**	**301**	P	**P**	**12 09 22.7**	**-1.6**	
	comp=Z,2.0nm,1.0s,baz=67,slow=8.7,SNR=9.1							
PDAR				LR	LR	12 34 06.8		
	comp=Z,103nm,18.3s,baz=69,slow=36							
	comp=Z,2.0nm,1.0s							
PDAR	**Pinedale Array**	**58.02**	**301**		**P**	**12 09 22.3**	**-2.0**	
INK	**Inuvik**	**58.49**	**335**	LR	LR	12 31 20.1		
	comp=Z,32nm,19.6s,baz=93,slow=33							
AKTO	**Aktyubinsk**	**59.25**	**48**	LR	LR	12 34 46.9		
	comp=Z,59nm,19.4s,baz=73,slow=36							
ANMO	**Albuquerque**	**59.55**	**292**	LR	LR	12 34 25.3		
	comp=Z,54nm,19.2s,baz=60,slow=35							
TPB28		**59.77**	**288**	P	**P**	**12 09 37.3**	**+0.8**	
TPB28				IAmb	IAmb	12 09 40.0		
	comp=Z,5.2nm,1.3s							
NEW	**Newport**	**60.26**	**310**	LR	LR	12 33 53.4		
	comp=Z,122nm,21.1s,baz=52,slow=34							
LENM	**Lemitar**	**60.31**	**291**	P	**P**	**12 09 38.4**	**-1.9**	
TXAR	**Lajitas Array**	**60.35**	**285**	P	**P**	**12 09 40.1**	**-0.4**	
	comp=Z,3.4nm,0.9s,baz=70,slow=6.3,SNR=24							
TXAR				LR	LR	12 34 15.7		
	comp=Z,69nm,19.9s,baz=70,slow=35							
	comp=Z,3.4nm,0.9s							
TXAR	**Lajitas Array**	**60.35**	**285**		**P**	**12 09 39.2**	**-1.3**	
TX31	**Lajitas Ar. Si**	**60.35**	**285**		**P**	**12 09 39.4**	**-1.1**	
TX31				IAmb	IAmb	12 09 42.6		
	comp=Z,5.3nm,1.0s							
CMIG	**Matias Romero**	**60.43**	**268**	LR	LR	12 32 44.5		
	comp=Z,81nm,21.1s,baz=49,slow=33							
VHRN	**Van Horn**	**60.57**	**287**		**P**	**12 09 41.7**	**-0.4**	
VHRN				IAmb	IAmb	12 09 44.3		
	comp=Z,4.4nm,1.0s							
DLBC	**Dease Lake**	**62.06**	**324**	LR	LR	12 34 22.0		
	comp=Z,33nm,18.9s,baz=55,slow=34							
ELK	**Elko**	**62.72**	**302**	LR	LR	12 37 26.0		
	comp=Z,92nm,18.6s,baz=66,slow=36							
PRN	**Pahroc Range**	**64.30**	**298**	P	**P**	**12 10 06.8**	**-0.1**	
BBB	**Bella Bella**	**64.42**	**318**	LR	LR	12 35 47.2		
	comp=Z,52nm,18.2s,baz=94,slow=34							
ATAH	**Atahualpa**	**64.89**	**236**	LR	LR	12 37 14.7		
	comp=Z,68nm,20.5s,baz=37,slow=35							
TPH	**Tonopah**	**65.41**	**300**	IAmb	IAmb	12 10 16.1		
	comp=Z,4.3nm,1.2s							
MTPC	**Mountain Pass**	**65.66**	**297**	IAmb	IAmb	12 10 18.5		
	comp=Z,3.6nm,1.0s							
GMN	**Gold Mountain**	**65.85**	**299**	IAmb	IAmb	12 10 20.3		
	comp=Z,3.0nm,1.3s							
NVAR	**Mina Array Bea**	**65.94**	**301**	LR	LR	12 39 09.1		
	comp=Z,110nm,18.4s,baz=28,slow=36							
GWY	**Greenwater Val**	**66.05**	**298**	P	**P**	**12 10 17.3**	**-0.9**	
GWY				IAmb	IAmb	12 10 24.6		
	comp=Z,4.8nm,1.1s							
YBH	**Yreka Blue Hor**	**66.99**	**306**	LR	LR	12 38 39.0		
	comp=Z,72nm,19.6s,baz=52,slow=35							
PFO	**Pinyon Flats O**	**67.31**	**295**	LR	LR	12 40 12.6		
	comp=Z,55nm,18.1s,baz=82,slow=36							
MBAR	**Mbarara**	**67.96**	**110**	LR	LR	12 41 41.0		
	comp=Z,46nm,18.2s,baz=182,slow=37							
LPIG	**La Paz**	**68.17**	**284**	LR	LR	12 39 55.5		
	comp=Z,45nm,20.0s,baz=18,slow=36							
KURK	**Kurchatov**	**70.15**	**40**	P	**P**	**12 10 43.3**	**-0.2**	
KURK	**Kurchatov**	**70.15**	**40**	IAmb	IAmb	12 10 45.3		
	comp=Z,1.6nm,0.8s							
KURBB	**Kurchatov Arra**	**70.16**	**40**	P	**P**	**12 10 43.3**	**-0.3**	
	comp=Z,1.0nm,0.7s,baz=314,slow=6.5,SNR=8.2							
	comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**70.94**	**35**	P	**P**	**12 10 48.4**	**+0.1**	
ZALV				LR	LR	12 41 19.8		
	comp=Z,32nm,20.5s,baz=360,slow=35							
	comp=Z,0.4nm,0.4s							
AAK	**Ala-Archa**	**72.99**	**48**	LR	LR	12 44 17.7		
	comp=Z,47nm,18.7s,baz=324,slow=37							
MKAR	**Makanchi Array**	**74.54**	**41**	P	**P**	**12 11 09.8**	**-0.1**	
	comp=Z,0.8nm,0.8s,baz=330,slow=4.9,SNR=6.5							
MKAR				LR	LR	12 44 37.3		
	comp=Z,67nm,18.2s,baz=340,slow=36							
	comp=Z,0.8nm,0.8s							
TLY	**Talaya**	**80.17**	**27**	LR	LR	12 46 56.2		
	comp=Z,21nm,18.7s,baz=298,slow=36							
SONM	**Songino Array**	**84.36**	**28**	P	**P**	**12 12 03.1**	**-0.4**	
	comp=Z,0.4nm,0.4s,baz=328,slow=5.1,SNR=3.8							
	comp=Z,0.4nm,0.4s							
SONM	**Songino Array**	**84.36**	**28**	IAmb	IAmb	12 12 09.1		
	comp=Z,2.1nm,1.1s							
SHEM	**Shemya Is, Ala**	**85.59**	**346**	LR	LR	12 51 57.0		
	comp=Z,18nm,18.4s,baz=318,slow=37							

IDC 23 12:10:13.5±3.0, 10.84S×115.30E, h0km, mb3.5/5, mbtmp3.6/5, MS3.0/3, Error ellipse: s-maj=181.3km s-min=23.4km az=47.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.28**	**38**	LR		LR	12 14 57.4	
	comp=Z,69nm,18.7s,baz=280,slow=39							
WRA	**Warramunga Arr**	**20.45**	**119**	P		Pn	12 14 54.0	-0.8
	0.6nm,0.7s,baz=296,slow=10,SNR=1.5							
	0.6nm,0.7s							
DAV	**Davao City (W)**	**20.52**	**30**	LR		LR	12 23 56.8	
	comp=Z,34nm,20.0s,baz=168,slow=40							
ASAR	**Alice Springs**	**21.84**	**128**	P		P	12 15 07.0	-0.7
	0.9nm,0.7s,baz=304,slow=9.2,SNR=12							
	0.9nm,0.7s							
JOW	**Kunigami**	**39.51**	**18**	LR		LR	12 35 54.4	
	comp=Z,33nm,20.3s,baz=12,slow=39							
MKAR	**Makanchi Array**	**64.51**	**336**	P		P	12 20 52.5	+0.4
	0.4nm,0.6s,baz=155,slow=8.9,SNR=5.8							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**69.07**	**336**	P		P	12 21 21.1	+0.1
	0.4nm,0.4s,baz=152,slow=4.7,SNR=5.1							
	0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**69.53**	**341**	P		P	12 21 23.3	-0.6
	0.9nm,0.6s,baz=131,slow=5.9,SNR=2.9							
	0.9nm,0.6s							

VAO ***23*** *12:47:06.2±1.6, 22.55S×69.19W, h72km±7km, mb5.0, Presumed earthquake*

SJA ***23*** *12:47:33.3±0.7, 22.38S×67.25W, h194km±7km, ML4.6, MW4.2*

NEIC ***23*** *12:47:33.7±2.5, 22.32S±0.07×67.15W±0.08, h168km±7km, mb4.5/16, Error ellipse: s-maj=11.0km s-min=9.5km az=98.0*

IDC ***23*** *12:47:33.5±1.4, 22.29S×67.09W, h169km±12km, mb3.9/10, mbtmp4.4/15, Error ellipse: s-maj=16.0km s-min=11.2km az=69.0*

GFZ ***23*** *12:47:34.4±0.2, 22.2°S±2.2°×67.7°W±.1°, h193km±5km, M4.5/23, mb4.5/23*

SCB ***23*** *12:47:34.5±1.6, 22.34S×67.27W, h172km±20km, MB5.2, ML4.8/2, Error ellipse: s-maj=7.2km s-min=4.0km az=0.0*

ISC 23 12:47:33.9±0.6, 22.30S±0.04×67.19W±0.04, h183km±5km, n218, σ1877/235, mb4.2/14, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.12**	**234**	*eP*		**Pn**	**12 48 04.4**	**+1.2**
AF01				*eS*		**Sn**	**12 48 31.0**	**+5.1**
AF01	**San Pedro de A**	**1.12**	**234**	*i*P		**Pn**	**12 48 04.4**	**+1.2**
AF01				*eS*		**Sn**	**12 48 26.9**	**+1.0**
AF01				IAML			12 48 35.5	
	comp=E,2µm,0.5s							
AF01	**San Pedro de A**	**1.12**	**234**			**Pn**	**12 48 04.2**	**+1.0**
YJA	**Yavi**	**1.56**	**86**	*eP*		**Pn**	**12 48 08.8**	**+1.6**
YJA				*eS*		**Sn**	**12 48 34.4**	**+1.5**
YJA	**Yavi**	**1.56**	**86**	*eP*		**Pn**	**12 48 08.7**	**+1.4**
YJA	**Yavi**	**1.56**	**86**	P		**Pn**	**12 48 08.6**	**+1.4**
MOCB	**Mochara**	**1.78**	**54**	P		**Pn**	**12 48 10.9**	**+1.5**
HJA	**Humahuaca**	**1.88**	**119**	*eP*		**Pn**	**12 48 11.9**	**+1.5**
HJA				*eS*		**Sn**	**12 48 40.3**	**+1.7**
PB09	**IPOC Station P**	**1.97**	**284**	*eP*		**Pn**	**12 48 11.8**	**+0.7**
PB09				*eS*		**Sn**	**12 48 44.1**	**+4.3**
PB09				IAML			12 48 55.2	
	comp=Z,936nm,0.2s							
PB09	**IPOC Station P**	**1.97**	**284**	*i*P		**Pn**	**12 48 11.9**	**+0.9**
PB09	**IPOC Station P**	**1.97**	**284**			**Pn**	**12 48 11.8**	**+0.7**
PB09	**IPOC Station P**	**1.97**	**284**	P		**Pn**	**12 48 11.3**	**+0.3**
PB09	**IPOC Station P**	**1.97**	**284**	P		**Pn**	**12 48 12.0**	**+0.9**
SALTA		**2.07**	**158**	*eP*		**Pn**	**12 48 11.7**	**-0.8**
SALTA				*eP*			12 48 14.4	
SALTA		**2.07**	**158**	P		**Pn**	**12 48 14.3**	**+1.8**
PB06	**IPOC Station P**	**2.24**	**259**	*eP*		**Pn**	**12 48 13.9**	**-0.1**
PB06				*eS*		**Sn**	**12 48 45.9**	**+0.8**
PB06				IAML			12 48 50.5	
	comp=Z,2µm,0.3s							
PB06	**IPOC Station P**	**2.24**	**259**	*i*P		**Pn**	**12 48 13.7**	**-0.3**
PB06				*eS*		**Sn**	**12 48 43.6**	**-1.5**
PB06				IAML			12 48 46.3	
	comp=E,2µm,0.1s							
PB06	**IPOC Station P**	**2.24**	**259**			**Pn**	**12 48 13.7**	**-0.3**
PB06	**IPOC Station P**	**2.24**	**259**	P		**Pn**	**12 48 13.7**	**-0.3**
PB06	**IPOC Station P**	**2.24**	**259**	P		**Pn**	**12 48 13.8**	**-0.1**
PB03	**IPOC Station P**	**2.39**	**276**	*eP*		**Pn**	**12 48 15.5**	**-0.1**
PB03				*eS*		**Sn**	**12 48 46.8**	**-1.3**
PB03				IAML			12 48 48.8	
	comp=Z,3µm,0.2s							
PB03	**IPOC Station P**	**2.39**	**276**	*i*P		**Pn**	**12 48 15.6**	**-0.1**
PB03				*eS*		**Sn**	**12 48 46.3**	**-1.8**
PB03				IAML			12 48 47.3	
	comp=N,5µm,0.2s							
PB03	**IPOC Station P**	**2.39**	**276**			**Pn**	**12 48 15.5**	**-0.1**
PB03	**IPOC Station P**	**2.39**	**276**	P		**Pn**	**12 48 15.6**	**-0.1**
AOVT	**TarijaAcel**	**2.43**	**72**	P		**Pn**	**12 48 17.8**	**+1.6**
PB07	**IPOC Station P**	**2.56**	**282**	*eP*		**Pn**	**12 48 17.7**	**0.0**
PB07				*eS*		**Sn**	**12 48 50.6**	**-1.2**
PB07				IAML			12 48 52.4	
	comp=Z,2µm,0.2s							
PB07	**IPOC Station P**	**2.56**	**282**			**Pn**	**12 48 17.4**	**-0.3**
PB07	**IPOC Station P**	**2.56**	**282**	P		**Pn**	**12 48 17.7**	**0.0**
PB02	**IPOC Station P**	**2.69**	**291**	*eP*		**Pn**	**12 48 19.1**	**-0.2**
PB02				*eS*		**Sn**	**12 48 54.0**	**-0.5**
PB02				IAML			12 48 57.8	
	comp=Z,2µm,0.3s							
PB02	**IPOC Station P**	**2.69**	**291**	*i*P		**Pn**	**12 48 19.0**	**-0.2**
PB02	**IPOC Station P**	**2.69**	**291**			**Pn**	**12 48 18.9**	**-0.3**
PB02	**IPOC Station P**	**2.69**	**291**	P		**Pn**	**12 48 18.9**	**-0.3**
PB02				S		**Sn**	**12 48 52.5**	**-1.9**
PB02				IAML			12 48 55.0	
	comp=Z,2µm,0.4s							
PB02	**IPOC Station P**	**2.69**	**291**	P		**Pn**	**12 48 19.1**	**-0.2**
PB08	**IPOC Station P**	**2.82**	**319**	*eP*		**Pn**	**12 48 22.3**	**+1.3**
PB08				*eS*		**Sn**	**12 48 58.9**	**+1.3**
PB08				IAML			12 49 02.0	
	comp=Z,742nm,0.5s							
PB08	**IPOC Station P**	**2.82**	**319**			**Pn**	**12 48 22.3**	**+1.3**
PB08	**IPOC Station P**	**2.82**	**319**	P		**Pn**	**12 48 22.1**	**+1.1**
PB08	**IPOC Station P**	**2.82**	**319**	P		**Pn**	**12 48 22.5**	**+1.5**
PB05	**IPOC Station P**	**2.84**	**258**	*eP*		**Pn**	**12 48 20.3**	**-0.5**
PB05				*eS*		**Sn**	**12 48 55.7**	**-1.8**
PB05				IAML			12 48 58.2	
	comp=Z,1µm,0.6s							
PB05	**IPOC Station P**	**2.84**	**258**			**Pn**	**12 48 20.1**	**-0.7**
PB05	**IPOC Station P**	**2.84**	**258**	P		**Pn**	**12 48 20.3**	**-0.5**
SLA	**San Lorenzo**	**2.87**	**148**	*eP*		**Pn**	**12 48 22.9**	**+1.6**
SLA				*eS*		Sn	12 48 47.8	-10
SLA	**San Lorenzo**	**2.87**	**148**	*eP*		**Pn**	**12 48 22.9**	**+1.6**
GO01	**Chusmiza**	**3.22**	**324**	*eP*		**Pn**	**12 48 26.8**	**+0.9**
GO01				*eP*			12 48 27.0	
GO01				*eS*		**Sn**	**12 49 08.0**	**+1.6**
GO01				IAML			12 49 12.0	
	comp=Z,693nm,0.6s							
GO01	**Chusmiza**	**3.22**	**324**	*i*P		**Pn**	**12 48 26.8**	**+0.9**
GO01				*eS*		**Sn**	**12 49 07.2**	**+0.8**
GO01				IAML			12 49 10.3	
	comp=N,3µm,0.4s							
GO01	**Chusmiza**	**3.22**	**324**			**Pn**	**12 48 26.8**	**+0.9**
GO01	**Chusmiza**	**3.22**	**324**	P		**Pn**	**12 48 26.8**	**+0.9**
GO01	**Chusmiza**	**3.22**	**324**	P		**Pn**	**12 48 26.9**	**+0.9**
TA02	**Huaiquique**	**3.40**	**306**	*eP*		**Pn**	**12 48 27.0**	**-0.7**
TA02				*eS*		**Sn**	**12 49 08.8**	**-0.8**
TA02				IAML			12 49 10.9	
	comp=Z,923nm,0.6s							
TA02	**Huaiquique**	**3.40**	**306**	P		**Pn**	**12 48 26.6**	**-1.0**
PB11	**IPOC Station P**	**3.42**	**317**	*eP*		**Pn**	**12 48 27.6**	**-0.4**
PB11				*eS*		**Sn**	**12 49 08.5**	**-1.7**
PB11				IAML			12 49 11.5	
	comp=Z,1µm,0.2s							
PB11	**IPOC Station P**	**3.42**	**317**			**Pn**	**12 48 27.6**	**-0.4**
PB11	**IPOC Station P**	**3.42**	**317**	P		**Pn**	**12 48 27.8**	**-0.2**
PB11				S		**Sn**	**12 49 08.1**	**-2.1**
PB11				IAML			12 49 10.8	
	comp=Z,2µm,0.2s							
PB11	**IPOC Station P**	**3.42**	**317**	P		**Pn**	**12 48 27.7**	**-0.4**
PB14	**IPOC Station P**	**3.75**	**231**	*eP*		**Pn**	**12 48 32.0**	**-0.2**
PB14				*eS*		**Sn**	**12 49 14.9**	**-3.1**
PB14				IAML			12 49 15.6	
	comp=Z,2µm,0.3s							
PB14	**IPOC Station P**	**3.75**	**231**			**Pn**	**12 48 31.7**	**-0.5**
PB14	**IPOC Station P**	**3.75**	**231**	P		**Pn**	**12 48 31.8**	**-0.5**
PB14	**IPOC Station P**	**3.75**	**231**	P		**Pn**	**12 48 31.8**	**-0.5**
SOEO	**Opoqueri**	**3.77**	**350**	P		**Pn**	**12 48 34.7**	**+1.9**
PSGCX	**Pisagua**	**3.84**	**314**	*eP*		**Pn**	**12 48 31.8**	**-1.4**
PSGCX				*eS*		**Sn**	**12 49 16.4**	**-3.2**
PSGCX				IAML			12 49 18.7	
	comp=Z,607nm,0.5s							
PSGCX	**Pisagua**	**3.84**	**314**			**Pn**	**12 48 31.8**	**-1.4**
PSGCX	**Pisagua**	**3.84**	**314**	P		**Pn**	**12 48 31.9**	**-1.4**
FSA	**Cafayete**	**3.95**	**164**	*eP*		**Pn**	**12 48 36.5**	**+1.8**
FSA				*eS*		Sn	12 49 03.2	-19
AOEA	**Aiquile**	**4.49**	**25**	P		**Pn**	**12 48 42.7**	**+1.0**
PB16	**IPOC Station P**	**4.50**	**331**			**Pn**	**12 48 42.6**	**+0.4**
PB16	**IPOC Station P**	**4.50**	**331**	P		**Pn**	**12 48 42.7**	**+0.6**
PB16	**IPOC Station P**	**4.50**	**331**	P		**Pn**	**12 48 43.0**	**+0.8**
PB12	**IPOC Station P**	**4.70**	**321**	*eP*		**Pn**	**12 48 42.5**	**-1.7**
PB12				*eS*		**Sn**	**12 49 36.3**	**-3.1**
PB12				IAML			12 49 42.1	
	comp=Z,402nm,0.4s							
PB12	**IPOC Station P**	**4.70**	**321**			**Pn**	**12 48 42.5**	**-1.7**
PB12	**IPOC Station P**	**4.70**	**321**	P		**Pn**	**12 48 42.4**	**-1.9**
AC02	**Maricunga**	**4.85**	**201**	*eP*		**Pn**	**12 48 46.8**	**+0.4**
AC02				*eS*		**Sn**	**12 49 38.4**	**-5.0**
AC02				IAML			12 49 51.8	
	comp=Z,164nm,0.2s							
AC02	**Maricunga**	**4.85**	**201**			**Pn**	**12 48 46.4**	**0.0**
AC02	**Maricunga**	**4.85**	**201**	P		**Pn**	**12 48 46.6**	**+0.2**
AP01	**Chacalluta**	**4.90**	**322**	*eP*		**Pn**	**12 48 45.5**	**-1.2**
AP01				*eS*		**Sn**	**12 49 38.2**	**-5.6**
AP01				IAML			12 49 45.4	
	comp=Z,770nm,0.5s							
AP01	**Chacalluta**	**4.90**	**322**	P		**Pn**	**12 48 44.8**	**-1.9**
AC01	**Pan de Azucar**	**4.93**	**218**	*eP*		**Pn**	**12 48 45.2**	**-1.9**
AC01				*eS*		Sn	12 49 28.4	-16
AC01				IAML			12 49 42.2	
	comp=Z,413nm,0.2s							
AC01	**Pan de Azucar**	**4.93**	**218**			**Pn**	**12 48 45.5**	**-1.6**
AC01	**Pan de Azucar**	**4.93**	**218**	P		**Pn**	**12 48 43.7**	**-3.4**
PB18	**Visviri**	**5.16**	**335**			**Pn**	**12 48 51.9**	**+1.3**
PB18	**Visviri**	**5.16**	**335**	P		**Pn**	**12 48 52.9**	**+2.3**
BBOJ	**La Paz, Jacaqu**	**5.38**	**350**	P		**Pn**	**12 48 55.2**	**+1.8**
SOEJ	**Jacaque**	**5.38**	**350**	P		**Pn**	**12 48 55.2**	**+1.8**
BBOD	**La Paz, Gloria**	**5.79**	**347**	P		**Pn**	**12 49 00.0**	**+1.3**
GO03	**Copiapo**	**5.95**	**207**	P		**Pn**	**12 48 58.2**	**-2.1**
LPAZ	**La Paz**	**6.04**	**351**	P		**Pn**	**12 49 03.1**	**+0.9**
	comp=Z,25nm,0.4s,baz=127,slow=5.2,SNR=155							
LPAZ				S		**Sn**	**12 50 11.7**	**0.0**
	comp=Z,30nm,0.6s,baz=304,slow=16,SNR=6.3							
LPAZ	**La Paz**	**6.04**	**351**			**Pn**	**12 49 03.3**	**+1.1**
LPAZ	**La Paz**	**6.04**	**351**	P		**Pn**	**12 49 04.4**	**+2.2**
BBOB	**La Paz, Bander**	**6.19**	**352**	P		**Pn**	**12 49 05.1**	**+1.1**
AC04	**Llanos de Chal**	**6.85**	**210**	P		**Pn**	**12 49 08.8**	**-3.3**
AC05	**El Transito**	**7.08**	**203**			**Pn**	**12 49 12.7**	**-2.5**
AC05	**El Transito**	**7.08**	**203**	P		**Pn**	**12 49 13.4**	**-1.8**
LCO	**Las Campanas**	**7.39**	**205**			**Pn**	**12 49 16.5**	**-3.0**
BBSD	**Serra de San D**	**8.02**	**52**	P		**Pn**	**12 49 27.0**	**-0.5**
BBSD	**Serra de San D**	**8.02**	**52**	*eP*		**Pn**	**12 49 23.7**	**-3.8**
CO01	**Juntas del Tor**	**8.08**	**198**			**Pn**	**12 49 27.2**	**-1.2**
CO01	**Juntas del Tor**	**8.08**	**198**	P		**Pn**	**12 49 27.4**	**-1.1**
GO04	**Tololo Observa**	**8.48**	**202**	P		**Pn**	**12 49 31.8**	**-1.9**
SIV	**San Ignacio**	**8.53**	**44**	P		**Pn**	**12 49 32.4**	**-1.9**
	comp=Z,220nm,0.5s,baz=220,slow=9.8,SNR=331							
SIV				S		**Sn**	**12 51 01.5**	**-8.4**
	comp=Z,51nm,0.5s,baz=129,slow=23,SNR=13							
SIV	**San Ignacio**	**8.53**	**44**	P		**Pn**	**12 49 33.2**	**-1.1**
MURT	**Porto Murtinho**	**8.91**	**88**	*eP*		**Pn**	**12 49 37.5**	**-1.7**
CO03	**El Pedregal**	**9.06**	**199**			**Pn**	**12 49 38.4**	**-2.8**
CO03	**El Pedregal**	**9.06**	**199**	P		**Pn**	**12 49 38.6**	**-2.6**
COIM	**Forte Coimbra**	**9.09**	**77**	*eP*		**Pn**	**12 49 38.9**	**-2.7**
ZON	**Zonda**	**9.30**	**188**			**Pn**	**12 49 42.7**	**-1.6**
ZON	**Zonda**	**9.30**	**188**	P		**Pn**	**12 49 44.5**	**+0.2**
CFA	**Coronel Fontan**	**9.31**	**186**	P		**Pn**	**12 49 42.7**	**-1.7**
	comp=Z,8.1nm,0.7s,baz=1.6,slow=13,SNR=20							
CFA				S		**Sn**	**12 51 21.7**	**-6.7**
	comp=Z,6.3nm,0.3s,baz=299,slow=23,SNR=9.7							
CO02	**Combarbal**	**9.50**	**200**			**Pn**	**12 49 42.8**	**-4.1**
CO02	**Combarbal**	**9.50**	**200**	P		**Pn**	**12 49 45.3**	**-1.6**
CPUP	**Villa Florida**	**9.85**	**116**	P		**Pn**	**12 49 49.2**	**-2.2**
	comp=Z,6.5nm,0.8s,baz=294,slow=13,SNR=16							
CPUP	**Villa Florida**	**9.85**	**116**			**Pn**	**12 49 50.5**	**-0.9**
CPUP	**Villa Florida**	**9.85**	**116**	P		**Pn**	**12 49 51.4**	**0.0**
PTLB	**Pontes e Lacer**	**10.22**	**50**			**Pn**	**12 49 54.7**	**-1.6**
PTLB	**Pontes e Lacer**	**10.22**	**50**	*eP*		**Pn**	**12 49 52.5**	**-3.8**
SJPY	**San Joaquin**	**10.51**	**107**	*eP*		**Pn**	**12 49 59.1**	**-1.0**
VA03	**San Esteban**	**10.84**	**195**	P		**Pn**	**12 50 05.8**	**+1.5**
AQDB	**Aquidauana**	**10.86**	**83**			**Pn**	**12 50 04.2**	**-0.4**
AQDB	**Aquidauana**	**10.86**	**83**	*eP*		**Pn**	**12 50 04.4**	**-0.2**
AQDB	**Aquidauana**	**10.86**	**83**	P		**Pn**	**12 50 04.7**	**0.0**
PEL	**Peldehue**	**11.24**	**195**	P		**Pn**	**12 50 08.5**	**-0.9**
AMBA	**Amambai (Brazi**	**11.29**	**95**	*eP*		**Pn**	**12 50 09.9**	**-0.2**
MT08	**Bocatoma Ro**	**11.38**	**192**			**Pn**	**12 50 11.9**	**+0.4**
VILB	**Vilhena**	**11.43**	**37**			**Pn**	**12 50 12.3**	**+0.2**
VILB	**Vilhena**	**11.43**	**37**	*eP*		Pn	12 50 04.0	-8.1
MT16	**CCHEN**	**11.47**	**194**			**Pn**	**12 50 10.3**	**-2.1**
VA05	**Santo Domingo**	**11.97**	**198**	P		**Pn**	**12 50 17.7**	**-1.1**
PSAL	**Palomas, Salto**	**12.24**	**138**	*eP*		Pn	12 50 10.9	-11
PP1B	**Ponte de Pedra**	**12.48**	**70**	*eP*		**Pn**	**12 50 24.1**	**-1.5**
SALV	**Santo Antonio**	**12.59**	**62**	*eP*		**Pn**	**12 50 26.4**	**-0.5**
BO02	**Sierra Bellavi**	**12.84**	**193**	P		**Pn**	**12 50 31.1**	**+1.2**
BO03	**Pichilemu**	**12.85**	**198**	P		**Pn**	**12 50 29.3**	**-0.7**
GO05	**Hualane**	**13.33**	**197**	P		**Pn**	**12 50 36.0**	**0.0**
TRCB	**Terra Rica**	**13.46**	**95**	P		**P**	**12 50 43.4**	**+2.5**
NNA	**Nana**	**13.78**	**316**	P		**P**	**12 50 43.3**	**-1.3**
	comp=Z,7.9nm,0.3s,baz=131,slow=9.2,SNR=4.5							
ML02	**Panimavida**	**13.91**	**194**	P		**Pn**	**12 50 42.9**	**-0.4**
PTGB	**Pitanga**	**14.09**	**103**	*eP*		**P**	**12 50 47.5**	**-0.3**
ITAB	**Concordia**	**14.53**	**113**	P		**P**	**12 50 51.8**	**-0.9**
ITAB	**Concordia**	**14.53**	**113**	*eP*		**Pn**	**12 50 49.6**	**-1.5**
ITAB	**Concordia**	**14.53**	**113**	P		**P**	**12 50 52.6**	**-0.1**
CPSB	**Cacapava Do Su**	**14.73**	**126**	P		**Pn**	**12 50 52.6**	**-0.8**
CPSB	**Cacapava Do Su**	**14.73**	**126**	*eP*		**Pn**	**12 50 48.8**	**-4.7**
CPSB	**Cacapava Do Su**	**14.73**	**126**	P		**P**	**12 50 53.8**	**-1.0**
BI02	**San Fabin de**	**14.75**	**193**	P		**Pn**	**12 50 53.3**	**-0.4**
LDASE	**Londrina, Braz**	**14.86**	**97**	*eP*		**P**	**12 50 55.6**	**-0.8**
CLDB	**Colider**	**15.75**	**46**	*eP*		**Pn**	**12 51 03.0**	**-3.1**
CLDB	**Colider**	**15.75**	**46**	P		**P**	**12 51 06.9**	**+0.6**
ARAG	**Araguaiana, MT**	**15.95**	**68**	*eP*		**P**	**12 51 07.0**	**-1.5**
CNLB	**Canela**	**16.28**	**119**	*eP*		**P**	**12 51 09.0**	**-3.0**
CNLB	**Canela**	**16.28**	**119**	P		**Pn**	**12 51 12.6**	**+0.2**
FRTB	**Fartura**	**16.29**	**97**	*eP*		**Pn**	**12 51 12.9**	**+0.3**
FRTB	**Fartura**	**16.29**	**97**	P		**Pn**	**12 51 13.3**	**+0.7**
BB19B	**Bebedouro**	**17.39**	**89**	*eP*		**Pn**	**12 51 25.0**	**-0.8**
GO06	**Curarrehue**	**17.61**	**191

*NNC **23** 13:02:57.7±5.9, 37.°32N×71.°03E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=46.4km s-min=39.5km az=168.0*

ISC 23 13:02:49.7±1.3, 36.°54N±0.°08×71.°1E±0.°1, h100km, n8, σ3°34/16, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**5.59**	**130**	*e*P	**Pn**	**13 04 14.1**	**+3.5**
TSSA				*e*S	**Sn**	**13 05 11.4**	**-2.2**
TSSA				IAML		13 05 14.2	
	comp=N,82nm,0.1s						
TSSA				IAML		13 05 14.3	
	comp=E,96nm,0.1s						
THN	**Thein Dam**	**5.64**	**135**	*e*P	**Pn**	**13 04 14.6**	**+3.5**
THN				*e*S	**Sn**	**13 05 14.8**	**+0.2**
THN				IAML		13 05 16.3	
	comp=E,54nm,0.2s						
THN				IAML		13 05 17.2	
	comp=N,55nm,0.1s						
DHRM	**DHARAMSHALA**	**6.09**	**133**	*e*P	**Pn**	**13 04 20.2**	**+2.8**
DHRM				*e*S	**Sn**	**13 05 24.1**	**-1.8**
DHRM				IAML		13 05 27.7	
	comp=N,53nm,0.3s						
DHRM				IAML		13 05 29.5	
	comp=E,87nm,0.5s						
KK31	**Karatay Array**	**6.56**	**356**	P	**Pn**	**13 04 26.3**	**+2.7**
	comp=E,6.0nm,0.3s,baz=181,slow=13,SNR=76						
KK31				⇓S	**Sn**	**13 05 34.0**	**-2.9**
	comp=E,9.9nm,0.3s,baz=181,slow=23,SNR=13						
AAK	**Ala-Archa**	**6.64**	**22**	⇑P	**Pn**	**13 04 27.0**	**+2.3**
	comp=E,5.7nm,0.5s						
AAK				⇓S	**Sn**	**13 05 35.7**	**-3.3**
	comp=E,3.0nm,0.4s						
SMLA	**Simla**	**7.42**	**135**	*e*P	**Pn**	**13 04 37.0**	**+1.8**
SMLA				*e*S	**Sn**	**13 05 53.5**	**-4.2**
SMLA				IAML		13 05 57.4	
	comp=E,50nm,0.5s						
SMLA				IAML		13 05 57.6	
	comp=N,38nm,0.1s						
KUDL	**Kundal**	**9.55**	**150**	*e*P	**Pn**	**13 05 06.2**	**+1.9**
KUDL				*e*S	**Sn**	**13 06 43.2**	**-6.5**
KUDL				IAML		13 06 45.4	
	comp=E,11nm,0.5s						
AB31	**Akbulak array**	**15.07**	**331**	⇓P	**P**	**13 06 19.6**	**-0.3**
	comp=E,0.6nm,0.4s,baz=172,slow=10.0,SNR=27						
AB31				⇑S	**Sn**	**13 09 00.9**	**-2.3**
	comp=E,1.1nm,0.6s,baz=160,slow=26,SNR=4.3						

*NAO **23** 13:06:59.6±0.6, 78.°51N×6.°34E, h10km, ML3.1*
*DNK **23** 13:07:01.7±2.5, 78.°46N×6.°70E, h33km±20km, ML1.8, Presumed earthquake*
*KOLA **23** 13:07:02.3, 78.°44N×7.°57E, h0km, ML2.3, Error ellipse: s-maj=15.3km s-min=10.7km az=120.0, Greenland sea, Knipovich ridge, middle*
*BER **23** 13:07:02.8±2.4, 78.°54N×6.°33E, h23km±21km, Mw3.9, ML3.1(NAO), Confirmed Earthquake*
*FCIAR **23** 13:07:04.0, 78.°51N×8.°67E, h5km, station OMEGA has station magnitude of 3.60*

ISC 23 13:06:58.5±1.0, 78.°55N±0.°06×6.°31E±0.°04, h10km, n34, σ1°98/57, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.17**	**68**	Pb	**Pb**	**13 07 21.9**	**+1.1**
KBS				Sb	**Sb**	**13 07 35.0**	**-1.0**
KBS	**Kingsbay**	**1.17**	**68**	⇑*i*P	**Pb**	**13 07 21.9**	**+1.1**
KBS				IAML		13 07 22.7	
	comp=Z,317nm,0.1s						
KBS				*e*S	**Sb**	**13 07 34.9**	**-1.1**
KBS	**Kingsbay**	**1.17**	**68**	P	**Pb**	**13 07 21.4**	**+0.5**
KBS				S	**Sb**	**13 07 34.7**	**-1.3**
KBS	**Kingsbay**	**1.17**	**68**	*i* P	**Pb**	**13 07 21.9**	**+1.1**
KBS				*i* S	**Sb**	**13 07 35.0**	**-1.0**
BRBB	**Barentsburg B**	**1.67**	**102**	Pb	**Pn**	**13 07 29.0**	**+1.2**
BRBB				Sb	**Sn**	**13 07 47.3**	**-1.9**
BRBB	**Barentsburg B**	**1.67**	**102**	*e*P	**Pn**	**13 07 28.9**	**+1.2**
BRBB				*e*S	**Sn**	**13 07 47.4**	**-1.8**
BRBB	**Barentsburg B**	**1.67**	**102**	P	**Pn**	**13 07 28.8**	**+1.0**
BRBB				S	**Sn**	**13 07 47.3**	**-1.9**
BRBA	**Barentsburg A**	**1.69**	**103**	Pb	**Pn**	**13 07 29.2**	**+1.3**
BRBA				Sb	**Sn**	**13 07 47.9**	**-1.7**
BRBA	**Barentsburg A**	**1.69**	**103**	*e*P	**Pn**	**13 07 29.1**	**+1.1**
BRBA				*e*S	**Sn**	**13 07 48.1**	**-1.4**
SPA0	**Spitsbergen Ar**	**2.07**	**95**	Pn	**Pn**	**13 07 35.6**	**+2.3**
	baz=276,slow=14						
SPA0				Sn	**Sn**	**13 08 00.6**	**+1.4**
	baz=289,slow=28						
SPA0	**Spitsbergen Ar**	**2.07**	**95**	Pn	**Pn**	**13 07 35.6**	**+2.3**
SPA0				Sn	**Sn**	**13 08 00.6**	**+1.4**
SPA0	**Spitsbergen Ar**	**2.07**	**95**	*e*P	**Pn**	**13 07 35.2**	**+1.9**
SPA0				*e*S	**Sn**	**13 07 56.6**	**-2.6**
SPITS	**Spitsbergen Ar**	**2.07**	**95**	P	**Pn**	**13 07 35.3**	**+1.9**
SPITS				S	**Sn**	**13 07 59.4**	**+0.2**
HSPB	**Hornsund (broa**	**2.50**	**124**	Pn	**Pn**	**13 07 40.4**	**+1.3**
HSPB				Sn	**Sn**	**13 08 07.5**	**-2.2**
HSPB	**Hornsund (broa**	**2.50**	**124**	*e*P	**Pn**	**13 07 40.5**	**+1.3**
HSPB				*e*S	**Sn**	**13 08 07.7**	**-1.9**
HSPB				IAML		13 08 10.7	
	comp=Z,23nm,0.6s						
HSPB	**Hornsund (broa**	**2.50**	**124**	*e*P	**Pn**	**13 07 39.0**	**-0.2**
HSPB				*e*S	**Sn**	**13 08 07.1**	**-2.6**
HSPB	**Hornsund (broa**	**2.50**	**124**	P	**Pn**	**13 07 40.5**	**+1.3**
HSPB				S	**Sn**	**13 08 08.4**	**-1.2**
HOPEN	**Hopen**	**4.53**	**107**	Pn	**Pn**	**13 08 08.0**	**+1.1**
HOPEN				Sn	**Sn**	**13 08 56.7**	**-2.8**
HOPEN	**Hopen**	**4.53**	**107**	*e*P	**Pn**	**13 08 08.2**	**+1.3**
HOPEN				IAML		13 08 08.4	
	comp=Z,17nm,0.6s						
HOPEN				*e*S	**Sn**	**13 08 56.7**	**-2.8**
HOPEN	**Hopen**	**4.53**	**107**	*e*P	**Pn**	**13 08 07.1**	**+0.2**
HOPEN				*e*S	**Sn**	**13 08 56.1**	**-3.3**
NOR	**Nord**	**4.98**	**319**	Pn	**Pn**	**13 08 13.8**	**+0.6**
NOR				Sn	**Sn**	**13 09 06.8**	**-3.8**
NOR	**Nord**	**4.98**	**319**	*e*P	**Pn**	**13 08 13.7**	**+0.6**
NOR				*e*S	**Sn**	**13 09 07.7**	**-3.0**
NOR	**Nord**	**4.98**	**319**	*i* P	**Pn**	**13 08 14.0**	**+0.9**
NOR				*i* S	**Sn**	**13 09 08.1**	**-2.5**
NOR				IAML		13 09 14.8	
	comp=Z,2.3nm,0.3s						
DAG	**Danmarks Havn**	**5.61**	**264**	*e*P	**Pn**	**13 08 22.2**	**+0.4**
DAG				*e*S	**Sn**	**13 09 21.7**	**-4.3**
DAG	**Danmarks Havn**	**5.61**	**264**	*i* P	**Pn**	**13 08 21.6**	**-0.2**
DAG				*i* S	**Sn**	**13 09 21.8**	**-4.3**
DAG				IAML		13 09 26.8	
	comp=Z,3.5nm,0.2s						
DBG	**Daneborg**	**7.47**	**249**	Pn	**Pn**	**13 08 48.0**	**+0.6**
DBG				Sn	Sn	13 10 03.5	-8.5
DBG	**Daneborg**	**7.47**	**249**	*e*P	**Pn**	**13 08 47.5**	**+0.1**
DBG				*e*S	Sn	13 10 04.7	-7.3
DBG	**Daneborg**	**7.47**	**249**	*i* P	**Pn**	**13 08 47.6**	**+0.3**
DBG				*i* S	Sn	13 10 04.6	-7.4
DBG				IAML		13 10 11.0	
	comp=Z,2.8nm,0.3s						
OMEGA	**Omega**	**7.62**	**54**	*e*P	Pn	13 08 48.5	-0.9
	comp=Z,16nm,1.0s						
OMEGA				*e*S	Sn	13 10 10.5	-5.1
JNW	**Jan Mayen West**	**8.45**	**214**	*e*P	**Pn**	**13 09 03.6**	**+3.0**
JNE	**Jan Mayen East**	**8.47**	**214**	*e*P	**Pn**	**13 09 03.9**	**+2.9**
JMIC	**Jan Mayen**	**8.49**	**215**	*e*P	**Pn**	**13 09 03.9**	**+2.5**
JMI	**Jan Mayen**	**8.57**	**215**	*e*P	**Pn**	**13 09 05.3**	**+2.9**
NEEM	**North Greenlan**	**11.57**	**293**	*i* P	Pn	13 09 42.4	-1.4
NEEM				*i* S	Sn	13 11 42.0	-11
NEEM				IAML		13 11 49.6	
	comp=Z,3.1nm,0.6s						

WEL 23 13:08:25.3±1.4, 35.°S±8.°×17.°9E±1.°5, h12km, M4.0/12, ML3.9/12, MLv4.0/12, Error ellipse: s-maj=19.5km s-min=10.5km az=87.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.17**	**193**	P	Pn	13 09 16.8	+1.8
HAZ	**Te Kaha**	**3.27**	**202**	P	Pn	13 09 17.2	+0.9
HAZ				S	Sn	13 09 56.7	+1.6
PUZ	**Puketiti**	**3.45**	**194**	P	Pn	13 09 19.5	+0.7
PUZ				S	Sn	13 09 59.8	+0.2
RUGZ	**Raukumara Rang**	**3.49**	**202**	P	Pn	13 09 20.1	+0.5
TWGZ	**Tauwhareparae**	**3.61**	**197**	P	Pn	13 09 22.7	+1.6
TWGZ				S	Sn	13 10 06.0	+2.3
CNGZ	**Carnagh Statio**	**3.86**	**193**	P	Pn	13 09 24.9	+0.4
MWZ	**Matawai**	**3.88**	**201**	P	Pn	13 09 25.0	+0.2
MWZ				S	Sn	13 10 09.7	-0.6
TKGZ	**Te Karaka**	**3.89**	**197**	P	Pn	13 09 24.9	0.0
URZ	**Urewera**	**3.95**	**206**	P	Pn	13 09 25.6	-0.1
RAGZ	**Rawiri**	**4.06**	**202**	P	Pn	13 09 27.3	0.0
RIGZ	**Rimuhau**	**4.17**	**197**	P	Pn	13 09 28.1	-0.6
WCZ	**Waipu Caves**	**4.24**	**252**	P	Pn	13 09 29.5	-0.2
MUGZ	**Murupara**	**4.27**	**208**	P	Pn	13 09 29.4	-0.7
TOZ	**Tahuroa Road**	**4.30**	**225**	P	Pn	13 09 32.5	+2.0
PRGZ	**Paritu Road**	**4.34**	**195**	P	Pn	13 09 29.9	-1.2
RAHZ	**Arahi**	**4.55**	**202**	P	Pn	13 09 32.7	-1.3
MHGZ	**Mahia Peninsul**	**4.56**	**194**	P	Pn	13 09 33.0	-1.2
MTHZ	**Maungataniwha**	**4.57**	**205**	P	Pn	13 09 32.7	-1.7
MRHZ	**Matea Rd**	**4.71**	**209**	P	Pn	13 09 34.5	-1.8
NMHZ	**Naumai**	**4.80**	**204**	P	Pn	13 09 35.9	-1.6
ARHZ	**Aropaoanui**	**4.89**	**202**	P	Pn	13 09 36.6	-2.1
MCHZ	**McNeill Hill**	**5.15**	**203**	P	Pn	13 09 39.9	-2.4
HIZ	**Hauiti**	**5.21**	**222**	P	Pn	13 09 44.2	+1.1
BHHZ	**Black Hill Sta**	**5.42**	**208**	P	Pn	13 09 43.0	-3.0
KAHZ	**Kahuranaki**	**5.42**	**200**	P	Pn	13 09 42.9	-3.0
MOVZ	**Moawhango**	**5.47**	**210**	P	Pn	13 09 43.5	-3.2
PKVZ	**Pokaka**	**5.55**	**214**	P	Pn	13 09 46.0	-1.8
PXZ	**Pawanui**	**5.64**	**200**	P	Pn	13 09 44.8	-4.2
PNHZ	**Pukenui**	**5.74**	**205**	P	Pn	13 09 45.9	-4.5
WPHZ	**Waipukurau**	**5.80**	**202**	P	Pn	13 09 47.2	-3.9
PRHZ	**Porangahau**	**5.93**	**200**	P	Pn	13 09 48.4	-4.5
TSZ	**Takapari Road**	**5.96**	**206**	P	Pn	13 09 48.6	-4.8
DVHZ	**Dannevirke**	**6.10**	**203**	P	Pn	13 09 50.3	-5.0
BFZ	**Birch Farm**	**6.42**	**201**	P	Pn	13 09 54.4	-5.3
TIWZ	**Tintock**	**6.62**	**203**	P	Pn	13 09 57.3	-5.2
MRZ	**Mangatainoka R**	**6.62**	**205**	P	Pn	13 09 56.4	-6.0
HOWZ	**Holdsworth Sta**	**6.86**	**205**	P	Pn	13 09 59.1	-6.6
OGWZ	**Otaki Gorge**	**6.91**	**207**	P	Pn	13 10 00.4	-6.0
TMWZ	**Te Maipa**	**6.92**	**202**	P	Pn	13 10 00.6	-6.0
KIW	**Kapiti Island**	**7.05**	**208**	P	Pn	13 10 02.4	-5.9
MTW	**Mount Morrison**	**7.09**	**204**	P	Pn	13 10 02.3	-6.6
CAW	**Cannon Point**	**7.20**	**207**	P	Pn	13 10 03.9	-6.5
PAWZ	**Paruwai Farm**	**7.32**	**204**	P	Pn	13 10 05.5	-6.6

TRN 23 13:08:38.4, 17.°60N×61.°72W, h35km, MD3.7, Near East coast of Antigua., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.10**	**320**	*e*P	Pn	13 08 45.5	+1.1
ANWB				*e*S	Sn	13 08 50.7	+2.1
MBWH	**Windy Hill**	**0.96**	**208**	*e*P	Pn	13 08 57.1	+1.8
MBWH				*e*S	Sn	13 09 10.0	+2.2
SKI	**Saint Kitts**	**1.01**	**255**	*e*P	Pn	13 08 57.9	+1.9
SKI				*e*S	Sn	13 09 11.9	+2.9
SEUS	**St. Eustatius**	**1.21**	**265**	*e*S	Sn	13 09 15.6	+1.7
DHSZ	**Broadband at M**	**1.32**	**182**	*e*P	Pn	13 09 01.6	+1.4
DHSZ				*e*S	Sn	13 09 18.6	+2.0
DSDZ	**La Diserade, G**	**1.42**	**154**	*e*P	Pn	13 09 02.8	+1.2
DSDZ				*e*S	Sn	13 09 20.6	+1.4
MMLZ	**Guadeloupe Bro**	**1.54**	**178**	*e*P	Pn	13 09 04.8	+1.5
MMLZ				*e*S	Sn	13 09 24.5	+2.4
MAGL	**Barre de l'ile**	**1.69**	**166**	*e*P	Pn	13 09 07.6	+2.3
MAGL				*e*S	Sn	13 09 28.1	+2.3
TBG	**Guadaloupe-3**	**1.73**	**178**	*e*P	Pn	13 09 07.6	+1.6
TBG				*e*S	Sn	13 09 29.8	+2.9
DSLB	**Salisbury**	**2.16**	**172**	*e*P	Pn	13 09 14.0	+2.1
DSLB				*e*S	Sn	13 09 40.0	+2.5

*IDC **23** 13:19:02.5±0.6, 36.°71N×142.°15E, h0km, mb4.2/23, mbtmp4.2/31, ML3.6/7, MS3.9/56, Error ellipse: s-maj=14.6km s-min=13.5km az=142.0*
*NIED **23** 13:19:03.3, 36.°72N×142.°30E, h19km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr5.36; Mθθ-0.84; Mϕϕ-4.52; Mrθ 1.93; Mθϕ-2.74; Mϕr6.03; Fault plane solution: Mw8.50000×10^15 NP1: ϕs218.00000°, δ22.00000°, λ106.00000°. NP2: ϕs20.00000°, δ69.00000°, λ84.00000°.*
*JMA **23** 13:19:03.3±0.3, 36.°7N±0.°7×14.°2E±.°, h19km, MD4.6/32, MW4.6/32, E OFF FUKUSHIMA PREF*
*BJI **23** 13:19:05.7, 36.°64N×142.°09E, h30km, mB4.8/15, mb4.7/49, Ms4.5/36, Ms7 4.4/33*
*MOS **23** 13:19:06.9±0.8, 37.°15N×142.°04E, h21km, mb5.0/30, Error ellipse: s-maj=7.7km s-min=4.9km az=105.1*
*NEIC **23** 13:19:08.2±1.4, 36.°76N±0.°04×142.°21E±0.°10, h35km±1km, mb4.6/65, Error ellipse: s-maj=13.2km s-min=7.6km az=271.0*
*GFZ **23** 13:19:09.1±0.4, 37.°N±5.°×14.°2E±.°, h27km, M4.8/24, mb4.8/24*

ISC 23 13:19:06.3±0.5, 36.°75N±0.°04×142.°25E±0.°04, h25km±3km, h25km:pP-P,n504, σ1°19/439, mb4.6/91, MS4.1/62, 12C-16D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.22**	**287**	*i* P	**Pn**	**13 19 25.9**	**-1.9**
ONAJ				*e*S	**Sb**	**13 19 43.6**	**-0.4**
JFK	**Kawauchi**	**1.26**	**300**	*i* P	**Pn**	**13 19 26.4**	**-2.0**
JFK				S	**Sb**	**13 19 43.8**	**-1.5**
JHO	**Hitachi**	**1.36**	**265**	*i* P	**Pn**	**13 19 27.8**	**-1.9**
JFFD	**Fukushimafurud**	**1.40**	**285**	*i* P	**Pn**	**13 19 28.1**	**-2.1**
JFFD				S	**Sn**	**13 19 46.9**	**-1.0**
JHYU	**Hitachinakayam**	**1.40**	**254**	A	A	13 19 28.5	
	comp=N,10.0nm,3.4s,comp=E,12nm,1.7s						
JMST	**Minamisoumatoc**	**1.46**	**312**	A	A	13 19 29.6	
	comp=N,6.0nm,1.6s,comp=E,5.0nm,3.1s						
JCAJ	**Choshiashikaji**	**1.52**	**228**	A	A	13 19 30.1	
	comp=N,13nm,1.6s,comp=E,9.0nm,2.4s						
JIHU	**Itakohorinouch**	**1.60**	**241**	A	A	13 19 31.2	
	comp=N,34nm,5.2s,comp=E,31nm,3.2s						
JMM	**Marumori**	**1.61**	**314**	P	**Pn**	**13 19 31.8**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.73**	**298**	*i* P	**Pn**	**13 19 33.9**	**-1.0**
JOTO				A	A	13 19 33.9	
	comp=N,12nm,1.3s,comp=E,10.0nm,2.3s						
JOTO				S	**Sb**	**13 19 57.1**	**-1.8**
JYT	**Yasato**	**1.74**	**253**	Pn	**Pn**	**13 19 34.7**	**-0.2**
JYT	**Yasato**	**1.74**	**253**	A	A	13 19 33.5	
	comp=N,9.0nm,2.9s,comp=E,7.0nm,6.7s						
JSMT	**Sammumatsuo**	**1.83**	**233**	A	A	13 19 34.6	
	comp=N,21nm,5.5s,comp=E,19nm,1.9s						
JIO	**Ouri**	**1.85**	**337**	P	**Pn**	**13 19 35.4**	**-1.0**
JIO				*e*S	**Sn**	**13 19 59.0**	**0.0**
JSB	**Shiboa**	**1.88**	**277**	A	A	13 19 35.9	
	comp=N,23nm,1.4s,comp=E,20nm,2.5s						
JYAR	**Yonezawaarcadi**	**2.04**	**305**	A	A	13 19 38.2	
	comp=N,15nm,1.2s,comp=E,15nm,1.2s						
JOU	**Okura**	**2.05**	**322**	P	**Pn**	**13 19 38.8**	**-0.4**
JOU				A	A	13 19 38.8	
	comp=N,14nm,1.5s,comp=E,18nm,1.2s						
JCCN	**Chibachonan**	**2.13**	**231**	A	A	13 19 38.9	
	comp=N,20nm,3.0s,comp=E,23nm,2.3s						
JOFO	**Osakifurukawao**	**2.13**	**330**	A	A	13 19 39.5	
	comp=N,31nm,2.6s,comp=E,37nm,1.6s						
JFY	**Yanaizu**	**2.14**	**289**	P	**Pn**	**13 19 40.4**	**-0.1**
JFY				A	A	13 19 40.4	
	comp=N,5.0nm,2.4s,comp=E,6.0nm,3.5s						
JKMT	**Kesennumamotoy**	**2.15**	**344**	A	A	13 19 39.7	
	comp=N,4.0nm,7.3s,comp=E,5.0nm,3.7s						
JAG	**Ashikaga**	**2.28**	**263**	*i* P	**Pn**	**13 19 41.5**	**-0.8**
JAG				A	A	13 19 41.5	
	comp=N,4.0nm,2.9s,comp=E,3.0nm,3.3s						
TOK	**Tokyo**	**2.28**	**243**	A	A	13 19 41.2	
	comp=N,18nm,3.5s,comp=E,16nm,2.3s						
BSO1	**Boso 1**	**2.33**	**207**	P	**Pn**	**13 19 42.1**	**-0.5**
JMK	**Ichinoseki**	**2.35**	**340**	*i* P	**Pn**	**13 19 42.9**	**-0.4**
OFUJ	**Ofunato**	**2.37**	**349**	A	A	13 19 42.9	
	comp=N,3.0nm,4.0s,comp=E,3.0nm,4.1s						
JKT	**Katashina**	**2.41**	**271**	A	A	13 19 43.5	
	comp=N,4.0nm,2.3s,comp=E,5.0nm,3.6s						
TATJ	**Tateyama 2**	**2.57**	**229**	A	A	13 19 45.2	
	comp=N,12nm,3.4s,comp=E,10.0nm,3.6s						
JNS	**Sasagawa**	**2.57**	**295**	A	A	13 19 45.9	
	comp=N,2.0nm,2.9s,comp=E,2.0nm,1.8s						
JYK	**Kaneyama**	**2.63**	**326**	P	**Pn**	**13 19 46.8**	**-0.5**
JSGW	**Sagamiharawaka**	**2.72**	**246**	A	A	13 19 47.5	
	comp=N,3.0nm,1.8s,comp=E,5.0nm,1.6s						
JYA	**Atsumi**	**2.73**	**313**	A	A	13 19 48.0	
	comp=N,5.0nm,1.1s,comp=E,5.0nm,1.0s						
JGK	**Kuni**	**2.91**	**267**	A	A	13 19 50.5	
	comp=N,4.0nm,3.1s,comp=E,7.0nm,3.8s						
JYYZ	**Yamagatayuzo**	**2.92**	**322**	A	A	13 19 50.7	
	comp=N,13nm,3.0s,comp=E,17nm,4.6s						
JRG	**Rokugo**	**2.94**	**335**	A	A	13 19 51.0	
	comp=N,6.0nm,2.5s,comp=E,5.0nm,4.3s						
JIZZ	**Izumozaki**	**2.94**	**287**	A	A	13 19 51.0	
	comp=N,11nm,3.8s,comp=E,13nm,2.4s						
JIM2	**Oshima 3**	**3.06**	**229**	A	A	13 19 52.2	
	comp=N,4.0nm,1.6s,comp=E,4.0nm,3.7s						
JSZI	**Iwateshizukuis**	**3.16**	**341**	A	A	13 19 54.0	
	comp=N,8.0nm,5.5s,comp=E,8.0nm,4.3s						
JHTM	**Izuhatsma**	**3.18**	**237**	A	A	13 19 54.0	
	comp=N,9.0nm,5.5s,comp=E,7.0nm,1.8s						
MJAR	**Matsushiro Arr**	**3.26**	**268**	Pn	**Pn**	**13 19 55.6**	**-0.3**
	comp=E,6.1nm,0.3s,baz=85,slow=14,SNR=237						
MJAR				Lg	Lg	13 20 44.8	
	comp=E,2.5nm,0.3s,baz=101,slow=34,SNR=4.4						
MJAR				LR	LR	13 21 27.1	
	comp=E,3μm,18.6s,baz=152,slow=46						
	comp=E,120nm,0.8s						
MJAR	**Matsushiro Arr**	**3.26**	**268**	P	**Pn**	**13 19 55.8**	**0.0**
MJAR	**Matsushiro Arr**	**3.26**	**268**		**Pn**	**13 19 55.8**	**0.0**
MAJO	**Matsushiro**	**3.26**	**268**	*c* *i*P	**Pn**	**13 19 56.9**	**+1.0**
MAJO	**Matsushiro**	**3.26**	**268**		**Pn**	**13 19 56.4**	**+0.5**
MAJO	**Matsushiro**	**3.26**	**268**	P	**Pn**	**13 19 56.6**	**+0.7**
MJB9	**Matsu-Tunnel**	**3.26**	**268**		**Pn**	**13 19 57.4**	**+1.5**
JFNN	**Fujinakano**	**3.28**	**243**	A	A	13 19 55.5	
	comp=N,8.0nm,2.8s,comp=E,7.0nm,5.8s						
JJN	**Nakama**	**3.30**	**277**	A	A	13 19 56.0	
	comp=N,4.0nm,3.0s,comp=E,6.0nm,5.8s						
JNY	**Yasuok**	**3.82**	**250**	A	A	13 20 03.2	
	comp=N,4.0nm,6.0s,comp=E,3.0nm,1.7s						
JNTW	**Nonhirotokiwa**	**3.88**	**336**	A	A	13 20 04.3	
	comp=N,12nm,4.9s,comp=E,8.0nm,2.5s						
JGF	**Kuroka**	**4.12**	**255**		**Pn**	**13 20 09.1**	**+1.3**
JGF	**Kuroka**	**4.12**	**255**	P	**Pn**	**13 20 09.4**	**+1.7**
JTM	**Tenmabayashi**	**4.14**	**347**		**Pn**	**13 20 07.7**	**-0.2**
JTM	**Tenmabayashi**	**4.14**	**347**	P	**Pn**	**13 20 06.8**	**-1.1**
JHJ2	**Mitsune**	**4.14**	**210**		**Pn**	**13 20 07.3**	**-0.6**
JHJ	**Hachijo jima 2**	**4.15**	**210**	Pn	**Pn**	**13 20 07.5**	**-0.6**
	comp=E,27nm,0.3s,baz=92,slow=23,SNR=16						
JHJ				Sn	**Sn**	**13 20 51.6**	**-4.2**
	comp=E,73nm,0.3s,baz=226,slow=23,SNR=7.6						
	comp=E,79nm,0.3s						
INU	**Inuyama**	**4.47**	**253**		**Pn**	**13 20 12.8**	**+0.4**
INU	**Inuyama**	**4.47**	**253**	P	**Pn**	**13 20 14.2**	**+1.7**
JAHD	**Aomorihigashid**	**4.57**	**351**	A	A	13 20 13.8	
	comp=N,6.0nm,3.9s,comp=E,5.0nm,9.9s						
ERM	**Erimo**	**5.31**	**7**	*d* *i*P	**Pn**	**13 20 22.7**	**-1.2**
ERM	**Erimo**	**5.31**	**7**		**Pn**	**13 20 22.7**	**-1.2**
ERM	**Erimo**	**5.31**	**7**	P	**Pn**	**13 20 23.4**	**-0.6**
NMR	**Nemuro--Hokkai**	**7.13**	**21**	*e*P	**Pn**	**13 20 45.8**	**-3.1**
NMR				*i* S	**Sn**	**13 22 02.1**	**-7.0**
ASAJ	**Asahikawa**	**7.37**	**2**	Pn	**Pn**	**13 20 51.4**	**-0.8**
	comp=E,4.8nm,0.3s,baz=212,slow=11,SNR=20						
ASAJ				Lg	Lg	13 22 53.8	
	baz=311,slow=32						
	comp=E,15nm,0.4s						
JKA	**Kamikawa-asahi**	**7.37**	**2**		**Pn**	**13 20 51.2**	**-1.0**
JKA	**Kamikawa-asahi**	**7.37**	**2**	P	**Pn**	**13 20 52.0**	**-0.1**
JMN	**Monobe**	**7.48**	**249**		**Pn**	**13 20 55.7**	**+1.8**
JMN	**Monobe**	**7.48**	**249**	P	**Pn**	**13 20 55.2**	**+1.3**
RUSJ	**Misakicho**	**7.69**	**16**	*e*P	**Pn**	**13 20 54.2**	**-2.5**
RUSJ				*e*S	**Sn**	**13 22 16.6**	**-6.4**
YUK	**Yuzh-Kuril'sk**	**7.78**	**20**	*e*P	**Pn**	**13 20 55.6**	**-2.3**
YUK				*i* S	Sn	13 22 16.5	-8.6
YUK				pmax	pmax		
	comp=Z,127nm,0.4s						
YUK				pmax	pmax		
	comp=E,61nm,0.3s						
KUR	**Kuril'sk**	**9.48**	**25**	P	**Pn**	**13 21 23.6**	**+2.5**
KUR				*e*S	**Sn**	**13 23 02.1**	**-4.7**
KUR				pmax	pmax		
	comp=Z,44nm,0.7s						
KUR				smax	smax		
	comp=N,67nm,0.6s						
KUR				smax	smax		
	comp=E,40nm,0.6s						
JCJ	**Chichijima**	**9.62**	**180**	Pn	**Pn**	**13 21 19.5**	**-3.7**
	comp=E,29nm,0.4s,baz=11,slow=20,SNR=6.0						
JCJ				Sn	Sn	13 22 59.8	-11
	comp=E,20nm,0.3s,baz=115,slow=24,SN

comp=Z,7.2nm,0.8s
NJ2 Nanjing 19.85 263 eP Pn 13 23 38.0 +0.9
NJ2 pmax pmax
comp=Z,31nm,0.5s
NJ2 L L
comp=Z,940nm,10.0s
NJ2 L L
comp=Z,3μm,14.4s
NJ2 L L
comp=Z,2μm,12.8s
ZEA Zeya 19.93 333 eP P 13 23 35.0 -1.1
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA MLR MLR
comp=E,200nm,13.0s
ZEA MLR MLR
comp=N,300nm,15.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
HILR Hailar Array B 20.72 315 P P 13 23 42.1 -2.7
comp=Z,2.7nm,0.5s,baz=114,slow=12,SNR=4.0
comp=Z,2.7nm,0.5s
XLT XiLinHaoTe 21.14 298 eP P 13 23 46.9 -2.5
XLT pmax pmax
comp=Z,29nm,0.9s
XLT L L
comp=Z,760nm,18.2s
XLT L L
comp=Z,800nm,18.3s
HNS HongShan 21.96 280 ⇓P P 13 23 55.5 -2.7
HNS S S 13 27 54.0 -5.4
HNS pmax pmax
comp=Z,21nm,0.9s
HNS L L
comp=Z,280nm,14.1s
HNS L L
comp=Z,890nm,16.5s
HNS L L
comp=Z,860nm,15.0s
GUMO Guam 23.18 174 LR LR 13 32 14.8
comp=Z,72nm,21.5s,baz=352,slow=34
MA2 Magadan 23.50 11 LR LR 13 34 00.4
comp=Z,84nm,18.3s,baz=197,slow=38
MA2 Magadan 23.50 11 deP P 13 24 14.4 +0.4
MA2 pmax pmax
comp=Z,17nm,0.9s
MA2 Magadan 23.50 11 P P 13 24 13.8 -0.2
comp=Z,23nm,1.1s
HHC Hu-ho-hao-te 24.20 289 eP P 13 24 22.4 +1.4
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,93nm,4.0s
HHC L L
comp=Z,390nm,11.5s
HHC L L
comp=Z,190nm,12.0s
LYN LuoYang 24.26 274 P P 13 24 21.8 +0.4
LYN pmax pmax
comp=Z,25nm,1.1s
LYN L L
comp=Z,720nm,17.2s
LYN L L
comp=Z,940nm,16.8s
LYN L L
comp=Z,1μm,17.5s
YAK Yakutsk 26.50 347 LR LR 13 35 17.1
comp=Z,109nm,18.7s,baz=154,slow=37
YAK Yakutsk 26.50 347 eP P 13 24 40.8 -0.6
YAK e*PP pP 13 24 43.8 -4.1
YAK e 13 25 20.5
YAK ePPP PPP 13 25 28.6
YAK e 13 28 05.5
YAK eS S 13 29 15.5 +1.8
YAK e*SS sS 13 29 29.3 +4.1
YAK eSS SnSn 13 30 19.2 +3.1
YAK eSSS SSS 13 30 31.7
YAK e 13 35 36.1
YAK pmax pmax
comp=Z,32nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,88nm,3.3s
YAK pmax pmax
comp=N,39nm,2.3s
YAK pmax pmax
comp=E,32nm,2.4s
YAK smax smax
comp=E,44nm,3.5s
YAK smax smax
comp=N,41nm,2.3s
YAK MLR MLR
comp=Z,559nm,16.0s
YAK MLR MLR
comp=N,266nm,13.0s
YAK MLR MLR
comp=E,90nm,13.0s
YAK Yakutsk 26.50 347 P 13 24 39.5 -1.9
YAK Yakutsk 26.50 347 P P 13 24 41.8 +0.4
SEY Seymchan 26.95 10 ceP P 13 24 46.4 +1.0
SEY pmax pmax
comp=Z,18nm,1.0s
XAN Xi'an 27.23 274 ⇓P P 13 24 47.6 -0.8
XAN pmax pmax
comp=Z,12nm,0.7s
SHEM Shemya Is, Ala 27.40 44 LR LR 13 34 14.4
comp=Z,77nm,20.8s,baz=260,slow=33
H11N2 WAKE ISLAND Hy 27.42 121 T T 13 53 38.3
baz=314,slow=75,SNR=30
H11N1 WAKE ISLAND Hy 27.43 122 T T 13 53 28.6
baz=314,slow=75,SNR=32
H11N3 WAKE ISLAND Hy 27.44 121 T T 13 53 26.4
baz=314,slow=75,SNR=30
ENH Enshi 27.98 266 P 13 24 54.0 -1.1
ENH Enshi 27.98 266 P P 13 24 54.0 -1.1
ULN Ulaanbaatar 28.07 304 diP P 13 24 56.5 +0.6
ULN pmax pmax
comp=Z,15nm,1.1s
ULN Ulaanbaatar 28.07 304 P 13 24 56.1 +0.2
ULN IAmb IAmb 13 24 57.3
comp=Z,12nm,1.1s
ULN Ulaanbaatar 28.07 304 P P 13 24 56.5 +0.6
H11S1 WAKE ISLAND Hy 28.14 124 T T 13 54 23.0
baz=316,slow=76,SNR=31
H11S3 WAKE ISLAND Hy 28.14 124 T T 13 54 22.8
baz=316,slow=76,SNR=20
H11S2 WAKE ISLAND Hy 28.16 124 T T 13 54 34.7
baz=316,slow=76,SNR=21
SONM Songino Array 28.50 304 P P 13 24 59.7 0.0
comp=Z,12nm,0.8s,baz=104,slow=9.0,SNR=33
SONM LR LR 13 36 31.3
comp=Z,244nm,19.2s,baz=110,slow=37
comp=Z,12nm,0.8s
SONM Songino Array 28.50 304 P P 13 24 59.8 +0.1
SONM pmax pmax
comp=Z,12nm,0.9s
SONM Songino Array 28.50 304 P 13 24 59.8 +0.1
SONM IAmb IAmb 13 25 01.1
comp=Z,12nm,0.9s
LZH Lanzhou 30.78 280 eP P 13 25 20.1 +0.1
LZH sP sP 13 25 30.5 +1.1
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,100nm,4.3s
LZH L L
comp=Z,430nm,12.5s
LZH L L
comp=Z,840nm,12.5s
LZH L L
comp=Z,1μm,13.8s
LZDM Lanzhou Array 30.93 280 P P 13 25 20.0 -1.5
comp=Z,2.0nm,0.4s,baz=57,slow=4.1,SNR=5.4
LZDM LR LR 13 38 34.6
comp=Z,508nm,19.0s,baz=20,slow=38
comp=Z,2.0nm,0.4s
ZAK Zakamensk 30.97 309 eP P 13 25 20.4 -1.1
ZAK pmax pmax
comp=Z,12nm,1.5s
TLY Talaya 31.03 311 LR LR 13 38 31.6
comp=Z,454nm,18.1s,baz=98,slow=38
TLY Talaya 31.03 311 ciP P 13 25 22.2 +0.3
TLY pmax pmax
comp=Z,14nm,1.3s
CD2 Chengdu 32.35 271 P P 13 25 32.8 -0.9
CD2 S S 13 30 45.8 -0.6
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,110nm,5.0s
CD2 L L
comp=Z,480nm,12.0s
CD2 L L
comp=Z,770nm,15.2s
CD2 L L
comp=Z,780nm,15.3s
MOY Mondy 32.64 310 eP P 13 25 36.2 +0.1
MOY pmax pmax
comp=Z,11nm,1.7s
GTA2 Gaotai 33.32 288 eP P 13 25 42.5 +0.2
GTA2 pmax pmax
comp=Z,8.0nm,0.9s
GTA2 L L
comp=Z,310nm,16.5s
GTA2 L L
comp=Z,340nm,16.8s
GTA2 L L
comp=Z,290nm,17.1s
QIZ Qiongzhong 33.43 247 P P 13 25 44.3 +1.1
QIZ S S 13 31 07.0 +3.8
QIZ L L
comp=Z,170nm,14.1s
QIZ L L
comp=Z,170nm,16.4s
QIZ L L
comp=Z,250nm,14.3s
BILL Bilibino 34.11 16⇓eP P 13 25 47.0 -1.6
BILL pmax pmax
comp=Z,10.0nm,1.3s
KNGR Kungurtug, Tuv 34.65 308⇑eP P 13 25 54.9 +1.3
KNGR pmax pmax
comp=Z,10.0nm,1.2s
TIXI Tiksi 35.66 353 LR LR 13 42 26.1
comp=Z,196nm,18.4s,baz=184,slow=39
TIXI Tiksi 35.66 353⇓iP P 13 26 01.7 -0.2
TIXI pmax pmax
comp=Z,4.0nm,0.8s
PZH PanZhiHua 35.75 265 P P 13 26 04.8 +1.5
GOMU GeErMu 37.84 284 P P 13 26 21.4 0.0
GOMU pmax pmax
comp=Z,19nm,1.3s
SIJI Sorong 38.79 198 LR LR 13 40 49.4
comp=Z,52nm,18.4s,baz=207,slow=34
DGZ Jazzator, Alta 41.10 306 ciP P 13 26 49.3 +1.1
DGZ pmax pmax
comp=Z,20nm,0.9s
K13K Kusilvak Mount 41.15 35 P P 13 26 46.9 -1.3
baz=258
F14K Arctic Creek 41.37 30 P P 13 26 48.4 -1.6
baz=252
WMQ Urumqi 41.57 297 eP P 13 26 53.8 +1.8
WMQ pP pP 13 27 00.1 +1.4
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ L L
comp=Z,200nm,15.9s
WMQ L L
comp=Z,300nm,16.3s
WMQ L L
comp=Z,210nm,21.3s
CHTO Chiang Mai 41.88 257 P P 13 26 55.0 +0.4
CHTO pP sP 13 27 04.1 -0.1
CMAR Chiang Mai Arr 42.08 256 P P 13 26 54.9 -1.4
comp=Z,0.6nm,0.3s,baz=44,slow=7.8,SNR=5.2
CMAR LR LR 13 47 25.2
comp=Z,104nm,18.7s,baz=40,slow=40
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 42.08 256 iP P 13 26 58.7 +2.4
G15K Niukluk 42.16 31 P P 13 26 55.5 -0.8
baz=255
M14K Bethel 42.21 37 P P 13 26 56.3 -0.5
baz=261
N14K Kuskokwak Cree 42.23 38 P P 13 26 55.7 -1.3
baz=263
O14K Tigyukauivet M 42.36 39 P P 13 26 56.9 -1.2
baz=264
ZAA0 Zalesovo Array 42.60 313 P 13 27 00.3 +0.2
ZAA0 IAmb IAmb 13 27 01.2
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 42.60 313 P P 13 26 59.5 -0.7
comp=Z,5.7nm,0.9s,baz=91,slow=5.9,SNR=22
ZALV LR LR 13 45 29.6
comp=Z,358nm,18.1s,baz=80,slow=37
comp=Z,5.7nm,0.9s
ZALV Zalesovo Beam 42.60 313 iP P 13 27 00.4 +0.2
ZALV pmax pmax
comp=Z,6.0nm,0.9s
ZALV Zalesovo Beam 42.60 313 P 13 26 59.8 -0.4
ZSN Zaisan 43.00 303 eP P 13 27 03.9 +0.4
ZSN pmax pmax
comp=Z,15nm,1.4s
ZSN Zaisan 43.00 303 eP P 13 27 04.0 +0.4
comp=Z,16nm,1.4s
O15K Ungalikthiuk R 43.09 40 P P 13 27 03.3 -0.7
baz=265
D17K Noatak River 43.29 27 P P 13 27 05.0 -0.5
baz=253
RDOG Red Dog Mine 43.46 27 P P 13 27 05.9 -1.0
baz=253
C17K DeLong Mountai 43.49 26 P P 13 27 06.3 -0.9
baz=252
L16K Owhat River 43.53 36 P P 13 27 06.9 -0.7
baz=263
NPW Naypyitaw 43.55 260 P P 13 27 08.8 +0.5
E17K Hotham Inlet 43.58 28 P P 13 27 06.6 -1.3
baz=255
F17K Baldwin Pennin 43.64 29 P P 13 27 07.5 -0.8
baz=256
G17K Kiwalik Mounta 43.66 30 P P 13 27 08.5 -0.1
baz=258
M16K Timber Creek 43.70 37 P P 13 27 08.2 -0.7
baz=264
N16K Nishlik Lake 43.74 38 P P 13 27 08.6 -0.6
baz=265
NRIK Noril'sk 43.81 335 P P 13 27 09.2 -0.4
comp=Z,2.4nm,0.5s,baz=167,slow=4.2,SNR=5.8
NRIK LR LR 13 46 46.7
comp=Z,359nm,18.1s,baz=98,slow=38
comp=Z,2.4nm,0.5s
NRIK Noril'sk 43.81 335ceP P 13 27 09.3 -0.4
NRIK pmax pmax
comp=Z,7.0nm,0.9s
NRIK Noril'sk 43.81 335 P P 13 27 09.9 +0.2
H17K Granite Mounta 43.85 31 P P 13 27 09.8 -0.3
baz=259
J17K VABM Dome 43.95 34 P P 13 27 10.2 -0.7
baz=261
O16K Kokwok River B 44.00 39 P P 13 27 11.2 -0.1
baz=266
P16K Nushagak River 44.02 40 P P 13 27 11.5 0.0
baz=267
L17K Donlin 44.14 36 P P 13 27 12.1 -0.4
baz=263
C18K Utukok River 44.24 26 P P 13 27 13.4 +0.2
baz=254
F18K Selawik 44.30 29 P P 13 27 13.7 +0.1
baz=258
M17K Holitna River 44.47 37 P P 13 27 15.5 +0.4
baz=265
N17K Nushagak Hills 44.52 38 P P 13 27 15.8 +0.3
baz=266
O17K Koliganek Bris 44.52 39 P P 13 27 15.6 +0.1
baz=267
H18K Honhosa River 44.54 31 IAmb IAmb 13 27 18.2
comp=Z,14nm,1.2s
H18K Honhosa River 44.54 31 P P 13 27 16.2 +0.5
baz=260
G18K Tagagawik 44.55 30 P P 13 27 15.7 0.0
baz=259
Q16K King Salmon 44.70 41 P P 13 27 17.4 +0.5
baz=268
P17K Kvichak River 44.83 40 P P 13 27 17.6 -0.3
baz=268
R17L Mt. Peulik Vol 44.84 42 P P 13 27 17.4 -0.8
baz=270
MK31 Makanchi Array 44.84 302 ciP P 13 27 18.3 0.0
MKAR Makanchi Array 44.84 302 P P 13 27 17.7 -0.6
comp=Z,3.0nm,0.7s,baz=87,slow=9.6,SNR=28
MKAR LR LR 13 46 19.5
comp=Z,141nm,21.1s,baz=88,slow=36
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 44.84 302 iP P 13 27 18.2 -0.1
MKAR Makanchi Array 44.84 302 P 13 27 17.9 -0.4
L18K Granite Mounta 44.90 36 P P 13 27 17.9 -0.6
baz=265
C19K Lookout Ridge 44.92 26 P P 13 27 18.1 -0.5
baz=255
J18K Innoko River 45.01 34 P P 13 27 18.9 -0.5
baz=264
MAKZ Makanchi 45.05 303 P P 13 27 19.9 -0.1
MAKZ Makanchi 45.05 303 P 13 27 19.9 -0.1
MAKZ IAmb IAmb 13 27 30.6
comp=Z,6.5nm,0.9s
MAKZ Makanchi 45.05 303 P P 13 27 20.2 +0.2
F19K Shaleruckik Mo 45.08 29 P P 13 27 19.4 -0.4
baz=259
N18K Kilae Creek 45.17 38 P P 13 27 20.7 0.0
baz=267
G19K Purcell Mounta 45.23 30 P P 13 27 21.0 0.0
baz=261
M18K Stony River 45.25 37 P P 13 27 20.7 -0.6
baz=266
H19K Roundabout Mou 45.39 31 P P 13 27 21.7 -0.7
baz=262,SNR=5.6
E19K Redstone River 45.41 28 IAmb IAmb 13 27 24.9
comp=Z,5.4nm,0.7s
E19K Redstone River 45.41 28 P P 13 27 22.7 +0.2
baz=259
P18K Big Mountain, 45.45 40 P P 13 27 22.1 -0.9
baz=269
O18K Koktuh Hills 45.48 39 P P 13 27 21.7 -1.5
baz=268
J19K Poorman 45.55 33 IAmb IAmb 13 27 36.5
comp=Z,10nm,1.0s
J19K Poorman 45.55 33 P P 13 27 23.1 -0.6
baz=264,SNR=5.3
L19K White Mountain 45.75 36 P P 13 27 25.3 0.0
baz=267
N19K Bonanza Creek 45.86 38 P P 13 27 26.2 -0.1
baz=268
E20K Nigu River 45.95 27 P P 13 27 27.1 +0.3
baz=259
B20K Meade River 45.97 25 P P 13 27 27.4 +0.6
baz=257
H20K Anotleneega Mo 46.03 31 P P 13 27 27.2 -0.3
baz=263
SII Sitkinak Islan 46.05 44 P P 13 27 28.2 +0.5
baz=273
I20K Naaghedeneel 46.13 32 P P 13 27 28.3 +0.1
baz=264
K20K Telida 46.19 34 IAmb IAmb 13 27 42.0
comp=Z,6.2nm,0.9s
K20K Telida 46.19 34 P P 13 27 28.8 +0.1
baz=266
J20K Nowinta River 46.22 33 IAmb IAmb 13 27 42.1
comp=Z,6.8nm,1.0s
J20K Nowinta River 46.22 33 P P 13 27 28.9 +0.1
baz=265
A21K Barrow 46.46 23 P P 13 27 31.2 +0.6
baz=256
OHAK Old Harbor 46.51 43 P P 13 27 31.9 +0.6
baz=273
M20K Styx River 46.55 36 P P 13 27 32.0 +0.4
baz=268
C21K Knifeblade Rid 46.61 26 P P 13 27 32.1 +0.2
baz=260
KURK Kurchatov 46.64 308 ciP P 13 27 32.0 -0.4
KURK pmax pmax
comp=Z,20nm,1.3s
KURK Kurchatov 46.64 308 P 13 27 32.1 -0.2
KURK Kurchatov 46.64 308 P P 13 27 32.3 0.0
KURBB Kurchatov Arra 46.71 308 P P 13 27 32.8 -0.2
comp=Z,8.3nm,0.9s,baz=82,slow=8.1,SNR=59
KURBB LR LR 13 47 51.7
comp=Z,357nm,19.2s,baz=178,slow=37
comp=Z,8.3nm,0.9s
G21K Allakaket 46.71 30 P P 13 27 33.3 +0.5
baz=264
B21K Ikpikpuk River 46.76 25 P P 13 27 33.5 +0.4
baz=260
F21K Alatna River 46.80 29 P P 13 27 33.3 -0.2
baz=263
H21K Melozitna Rive 46.91 31 P P 13 27 34.5 +0.1
baz=265
CHUM Lake Minchumin 47.00 33 P P 13 27 35.3 +0.3
baz=267
PPLA Purkeypile 47.02 35 P P 13 27 35.9 +0.5
baz=268
CAST Castle Rocks 47.08 34 P P 13 27 36.2 +0.4
baz=268
EVN Everest 47.09 276 P 13 27 37.5 +0.5
EVN Everest 47.09 276 P P 13 27 36.8 -0.1
I21K Tanana 47.22 32 IAmb IAmb 13 27 50.1
comp=Z,5.4nm,1.0s
I21K Tanana 47.22 32 P P 13 27 37.3 +0.6
baz=266
H22K Ishtalitna Cre 47.52 31 P P 13 27 39.4 +0.3
baz=266
G22K Bettles 47.54 29 P P 13 27 39.6 +0.4
baz=265
E22K Anaktuvuk Pass 47.54 28 IAmb IAmb 13 27 52.3
comp=Z,9.2nm,1.1s
E22K Anaktuvuk Pass 47.54 28 P P 13 27 39.7 +0.4
baz=264
SHLS Shalkode 47.56 298 eP P 13 27 38.0 -1.9
SHLS Shalkode 47.56 298 eP P 13 27 38.0 -1.9
L22K Petersville 47.66 35 IAmb IAmb 13 27 52.1
comp=Z,4.8nm,0.8s
L22K Petersville 47.66 35 P P 13 27 40.1 -0.2
baz=270
MLY Manley 47.73 32 IAmb IAmb 13 27 54.0
comp=Z,7.9nm,1.0s
MLY Manley 47.73 32 P P 13 27 41.4 +0.6
baz=268,SNR=6.6
TDK Taldyqorghan 47.86 301 eP P 13 27 42.4 +0.4
TDK Taldyqorghan 47.86 301 eP P 13 27 42.4 +0.4
TRF Thorofare Moun 47.89 34 P P 13 27 42.4 +0.3
baz=270
KPKS Kokpek 48.04 299 eP P 13 27 44.0 +0.5
KPKS Kokpek 48.04 299 eP P 13 27 44.0 +0.5
D23K Nanushuk River 48.05 27 P P 13 27 42.9 -0.2
baz=264
COLD Coldfoot 48.08 29 P P 13 27 43.4 0.0
baz=266
G23K Bananza Creek 48.11 30 P P 13 27 44.0 +0.3
baz=267
C23K Itkillik River 48.17 25 P P 13 27 44.2 +0.2
baz=263
RC01 Rabbit Creek A 48.18 37 P P 13 27 45.0 +0.8
baz=272
WUS Wushi 48.26 296 P P 13 27 45.4 0.0
H23K Yukon River 48.27 31 IAmb IAmb 13 27 58.5
comp=Z,7.0nm,1.0s
H23K Yukon River 48.27 31 P P 13 27 44.9 0.0
baz=268
I23K Minto, Yukon-K 48.32 32 P P 13 27 45.4 +0.2
baz=269
SATY Saty 48.34 298 eP P 13 27 46.1 +0.2
SATY Saty 48.34 298 eP P 13 27 46.1 +0.2
E23K Chandalar 48.36 28 IAmb IAmb 13 27 58.9
comp=Z,6.8nm,0.9s
E23K Chandalar 48.36 28 P P 13 27 46.0 +0.4
baz=266,SNR=6.5
TOLK Toolik Lake Re 48.42 27 P P 13 27 45.7 -0.4
baz=266
NEA2 Nenana 48.44 32 P P 13 27 46.4 +0.2
baz=270
PMR Palmer 48.45 37 P P 13 27 45.2 -1.1
baz=272
MCK McKinley 48.50 34 P P 13 27 46.0 -0.7
baz=270
RND Reindeer 48.54 34 IAmb IAmb 13 27 49.2
comp=Z,7.7nm,1.1s
WAT1 Susitna Watana 48.69 35 P P 13 27 47.9 -0.3
baz=272
D24K Happy Valley 48.73 26 IAmb IAmb 13 27 51.0
comp=Z,7.4nm,0.9s
D24K Happy Valley 48.73 26 P P 13 27 48.4 0.0
baz=266
E24K Your Creek 48.78 28 IAmb IAmb 13 28 02.3
comp=Z,6.2nm,1.1s
E24K Your Creek 48.78 28 P P 13 27 49.4 +0.5
baz=267,SNR=5.9
SML Sawmill 48.83 36 P P 13 27 49.1 -0.2
baz=273
HNR Honiara 48.85 157 LR LR 13 47 45.4
comp=Z,5.0nm,19.7s,baz=74,slow=35
PWL Port Wells 48.87 37 P P 13 27 48.9 -0.7
baz=274
H24K Noodor Dome 48.95 31 IAmb IAmb 13 28 03.1
comp=Z,5.8nm,1.0s

H24K Noodor Dome 48.95 31 P P 13 27 49.3 -0.9
baz=270
COLA College 48.96 32‖ *e*P P 13 27 52.0 +1.8
COLA pmax pmax
comp=Z,5.0nm,0.9s
F24K Squaw Lake 48.98 29 P P 13 27 49.9 -0.5
baz=268
WAT6 Susitna Watana 49.07 35 P P 13 27 50.6 -0.7
baz=272
M23K Glacier View 49.11 36 P P 13 27 50.4 -1.1
baz=273
G24K Hadweenzic Riv 49.12 30 IAmb IAmb 13 27 54.6
comp=Z,9.2nm,1.3s
G24K Hadweenzic Riv 49.12 30 P P 13 27 50.3 -1.2
baz=269
TARG Taragay, Kyrgy 49.13 297 P P 13 27 53.7 +1.3
TARG Taragay, Kyrgy 49.13 297 IAmb IAmb 13 28 03.9
comp=Z,4.7nm,0.7s
TARG Taragay, Kyrgy 49.13 297 P P 13 27 53.7 +1.3
POKR Poker Flat Res 49.14 32 P P 13 27 50.9 -0.7
baz=271
DHY Denali Highway 49.21 34 P P 13 27 51.8 -0.6
baz=272
MDOK Medeo 49.27 299 *e*P P 13 27 53.3 +0.3
MDOK Medeo 49.27 299 *e*P P 13 27 53.4 +0.3
SCM Sheep Creek Mo 49.30 36 P P 13 27 52.6 -0.4
baz=274
HDA Harding Lake 49.36 33 P P 13 27 52.4 -0.8
baz=272
TNSS Tian-Shan 49.37 299 *e*P P 13 27 54.1 -0.1
TNSS Tian-Shan 49.37 299 *e*P P 13 27 54.1 -0.1
IL31 49.38 32 IAmb IAmb 13 28 05.3
comp=Z,6.9nm,0.8s
ILAR Eielson Array 49.38 32 P P 13 27 54.2 +0.8
comp=Z,3.3nm,0.7s,baz=267,slow=6.5,SNR=42
ILAR LR LR 13 52 21.6
comp=Z,19nm,18.0s,baz=274,slow=40
comp=Z,3.3nm,0.7s
ILAR Eielson Array 49.38 32 P P 13 27 53.5 +0.1
GLI Glacier Island 49.48 37 P P 13 27 53.9 -0.3
baz=275
D25K Kavik River 49.61 26 IAmb IAmb 13 28 07.5
comp=Z,5.1nm,0.8s
D25K Kavik River 49.61 26 P P 13 27 55.1 -0.1
baz=268
G25K Bearman Lake 49.67 30 P P 13 27 55.9 +0.4
baz=270
M24K Tolsona, Glenn 49.82 36 P P 13 27 56.7 -0.2
baz=274
F25K Christian Rive 49.85 29 P P 13 27 56.9 -0.1
baz=270
E25K Arctic Village 49.88 28 IAmb IAmb 13 28 10.3
comp=Z,5.2nm,1.0s
E25K Arctic Village 49.88 28 P P 13 27 57.4 +0.2
baz=270
K24K Donnelly Dome 49.90 33 P P 13 27 57.3 -0.1
baz=273
PRP Porcupine Dome 49.93 31 P P 13 27 58.0 +0.3
baz=272
Q23K Middleton Isla 49.98 39 P P 13 27 58.0 -0.1
baz=276
KLU Klutina 49.99 37 P P 13 27 58.0 -0.3
baz=275
J25K Salcha River, 50.03 32 P P 13 27 58.7 +0.2
baz=273
PAX Paxson 50.09 35 P P 13 27 58.9 0.0
baz=274
C26K Camden Bay 50.14 25 P P 13 27 59.8 +0.7
baz=269
EYAK Cordova Ski Ar 50.17 38 P P 13 27 59.7 +0.3
baz=276
HARP HAARP 50.28 35 P P 13 28 00.2 -0.1
baz=275
ASAI AK-SAY(Kyrgyzs 50.29 296 P P 13 28 02.0 +0.9
RIDG Independent Ri 50.31 34 P P 13 28 00.6 0.0
baz=274
F26K Sheenjek River 50.42 28 IAmb IAmb 13 28 15.2
comp=Z,6.5nm,0.9s
F26K Sheenjek River 50.42 28 P P 13 28 01.9 +0.6
baz=271,SNR=9.9
C27K Jago River 50.55 26 P P 13 28 02.1 -0.1
baz=270
G26K Porcupine Rive 50.58 29 P P 13 28 02.7 +0.2
baz=272
N25K Chitina, Valde 50.61 36 P P 13 28 02.9 0.0
baz=276
SCRK Sand Creek 50.68 33 IAmb IAmb 13 28 15.1
comp=Z,8.2nm,1.2s
SCRK Sand Creek 50.68 33 P P 13 28 03.6 +0.2
baz=275,SNR=5.8
BMRM Bremner River 50.68 37 P P 13 28 03.7 +0.3
baz=277
SGDS Sogindy 50.88 300 *e*P P 13 28 05.7 +0.5
L26K Log Cabin Wild 51.05 34 P P 13 28 06.1 0.0
baz=276
AAK Ala-Archa 51.22 299 LR LR 13 51 10.8
comp=Z,544nm,18.9s,baz=78,slow=38
AAK Ala-Archa 51.22 299‖ *i*P P 13 28 08.4 +0.6
BVAR Borovoye Array 51.26 313 P P 13 28 08.1 +0.2
comp=Z,0.9nm,0.3s,baz=74,slow=7.9,SNR=6.1
comp=Z,0.9nm,0.3s
M26K Nabesna, AK 51.28 35 P P 13 28 07.2 -0.6
baz=277
BORK Borovoye 51.30 313 *ce*P P 13 28 08.1 0.0
BORK pmax pmax
comp=Z,5.0nm,1.0s
E27K Coleen River 51.36 28 IAmb IAmb 13 28 21.9
comp=Z,7.4nm,1.3s
E27K Coleen River 51.36 28 P P 13 28 08.9 +0.5
baz=273
MCARA McCarthy VSAT 51.39 36 P P 13 28 09.3 +0.6
baz=278
G27K Doyon Strip 51.43 29 P P 13 28 09.3 +0.4
baz=274
H27K Steamboat Moun 51.53 30 IAmb IAmb 13 28 23.0
comp=Z,7.1nm,1.1s
H27K Steamboat Moun 51.53 30 P P 13 28 09.8 +0.1
baz=275
D27M Malcolm River 51.53 26 P P 13 28 09.0 -0.7
baz=273
I27K Kandik River 51.55 31 P P 13 28 09.9 +0.1
baz=275
KSH2 Kashi 51.56 294 P P 13 28 11.8 +1.4
KSH2 pP sP 13 28 20.5 +0.5
KSH2 pmax pmax
comp=Z,6.0nm,0.7s
L27K Beaver Creek, 51.73 34 P P 13 28 11.5 +0.2
baz=277
BCAR Beaver Creek A 51.75 34 P P 13 28 11.8 +0.4
M27K Edge Creek, AK 51.80 35 P P 13 28 12.0 +0.1
baz=278
F28M Old Crow 52.05 28 IAmb IAmb 13 28 27.2
comp=Z,7.0nm,1.2s
F28M Old Crow 52.05 28 P P 13 28 13.9 +0.4
baz=275
E28M Babbage River 52.09 27 P P 13 28 13.8 -0.1
baz=275
I28M Miner Creek 52.26 31 P P 13 28 15.0 -0.2
baz=277
YUK3 Moose Creek 52.55 36 P P 13 28 16.8 -0.7
baz=279
DAWY Dawson 52.68 33 P P 13 28 16.7 -1.5
baz=278
E29M Blow River 52.72 27 IAmb IAmb 13 28 31.6
comp=Z,7.2nm,1.0s
E29M Blow River 52.72 27 P P 13 28 19.4 +1.0
baz=276,SNR=5.3
H29M Whitestone 52.80 30 P P 13 28 18.9 -0.2
baz=278
O28M Mount Upton 52.84 37 P P 13 28 19.6 -0.2
baz=280
G29M Pine Creek 52.85 29 P P 13 28 19.7 +0.2
baz=278,SNR=6.4
J29N Klondike Camp 53.12 32 P P 13 28 21.5 -0.1
baz=279
ARK Arkit 53.27 299 P P 13 28 23.9 +0.9
BRWY Burwash Landin 53.29 36 P P 13 28 22.9 +0.1
baz=281
DZA Taraz 53.35 300 *e*P P 13 28 24.0 +0.5
DZA pmax pmax
comp=Z,5.0nm,0.6s
DZA Taraz 53.35 300 *e*P P 13 28 24.0 +0.5
comp=Z,4.9nm,0.6s
M29M Somme Creek 53.36 35 P P 13 28 23.2 -0.1
baz=280
L29M L29M 53.39 34 P P 13 28 24.1 +0.6
baz=280,SNR=6.8
EPYK Eagle Plains 53.44 30 P P 13 28 24.1 +0.3
baz=279,SNR=9.2
K29M Barlow Dome 53.53 33 P P 13 28 24.4 -0.3
baz=280
G30M tAoh Zraii Nji 53.54 29 P P 13 28 24.2 -0.4
baz=279
F30M Barrier River 53.61 28 P P 13 28 24.7 -0.3
baz=279
YUK6 Outpost Mounta 53.69 37 P P 13 28 25.6 -0.4
baz=282
O29M Mount Kennedy 53.72 37 P P 13 28 25.5 -0.6
baz=282
I30M Mount Dempster 53.77 31 P P 13 28 25.8 -0.6
baz=280,SNR=11
KK31 Karatay Array 53.85 301 IAmb IAmb 13 28 29.4
comp=Z,9.6nm,1.2s
KKAR Karatay Array 53.85 301 P P 13 28 26.5 -0.7
KKAR Karatay Array 53.85 301 P P 13 28 26.5 -0.7
J30M Hart River 53.91 32 P P 13 28 26.9 -0.5
baz=281
TRKS Terek-Say 53.94 299 P P 13 28 28.8 +0.8
M30M Minto, Yukon 54.09 34 P P 13 28 28.7 +0.1
baz=282
HYT Haines Junctio 54.13 37 P P 13 28 28.2 -0.9
baz=282
N30M Aishikik Lake 54.19 36 P P 13 28 28.6 -0.8
baz=282
P29M Windy Craggy 54.27 38 P P 13 28 30.0 0.0
baz=283
G31M Satah River 54.31 29 P P 13 28 29.4 -0.6
baz=281
INK Inuvik 54.33 27 LR LR 13 54 35.3
comp=Z,55nm,18.1s,baz=238,slow=39
INK Inuvik 54.33 27 P P 13 28 30.1 -0.2
baz=280
F31M Tsiigehtchic 54.41 28 P P 13 28 30.5 -0.3
baz=281
H31M Peel River 54.49 30 P P 13 28 32.9 +1.4
H31M Peel River 54.49 30 P P 13 28 30.9 -0.6
baz=282,SNR=5.2
IUG luzhnay 54.50 300 *e*P P 13 28 32.4 +0.4
IUG pmax pmax
comp=Z,9.0nm,1.6s
IUG luzhnay 54.50 300 *e*P P 13 28 32.5 +0.4
comp=Z,8.9nm,1.6s
CHM Chimkent 54.74 300 *e*P P 13 28 34.0 +0.4
CHM Chimkent 54.74 300 *e*P P 13 28 34.1 +0.4
N31M Braeburn, Yuko 54.80 36 P P 13 28 33.5 -0.3
baz=283
O30N Mendenhall 54.81 36 P P 13 28 34.0 0.0
baz=284
PLBC Pleasant Camp 55.00 38 P P 13 28 35.3 +0.1
baz=284
M31M Drury Creek, Y 55.27 35 P P 13 28 37.1 -0.1
baz=284
WHY Whitehorse 55.42 36 P P 13 28 38.2 -0.2
baz=285
GAR Garm 55.43 296 P P 13 28 39.2 +0.4
SIT Sitka 56.16 41 P P 13 28 43.7 +0.1
baz=287
R32K Eaglecrest 56.23 39 P P 13 28 43.9 -0.3
baz=286
P32M Atlin 56.27 37 P P 13 28 43.9 -0.4
baz=286
CHGR Chuyangaron 56.40 296‖ *i*P P 13 28 46.5 +0.8
CHGR pmax pmax
comp=Z,55nm,1.1s
CHGR Chuyangaron 56.40 296 P P 13 28 46.2 +0.5
S32K Killisnoo 56.44 40 P P 13 28 45.2 -0.3
baz=287
P33M Teslin, Yukon 56.52 37 P P 13 28 45.9 -0.4
baz=286
MMPY Sheldon Lake, 56.56 34 P P 13 28 47.2 +0.7
baz=286
CTA Charters Tower 56.65 175 LR LR 13 53 22.1
comp=Z,18nm,20.4s,baz=304,slow=36
WRAB Tennant Creek 56.87 189‖ *e*P P 13 28 48.6 -0.4
WRAB pmax pmax
comp=Z,22nm,2.5s
WRA Warramunga Arr 56.88 189 P P 13 28 48.2 -0.8
comp=Z,2.6nm,0.8s,baz=5.4,slow=7.2,SNR=4.5
comp=Z,2.6nm,0.8s
ARTI Arti 57.12 319 LR LR 13 55 31.6
comp=Z,260nm,18.8s,baz=50,slow=38
ARTI Arti 57.12 319 *c i*P P 13 28 50.4 -0.1
ARTI pmax pmax
comp=Z,18nm,1.3s
ARTI Arti 57.12 319 P P 13 28 50.6 +0.1
Q32M Nakina River 57.16 38 P P 13 28 50.4 -0.5
baz=288
C36M Paulatuk 57.41 25 P P 13 28 51.7 -0.5
baz=288
R33M Jennings River 57.66 37 P P 13 28 53.6 -0.8
baz=288
KBL Kabul 58.15 291 P P 13 28 58.3 0.0
KBL Kabul 58.15 291 P P 13 28 58.3 0.0
DLBC Dease Lake 58.44 38 P P 13 28 59.0 -0.7
baz=290
WTLY Watson Lake, Y 58.47 36 P P 13 28 59.3 -0.6
baz=290
AB31 Akbulak array 58.64 310 IAmb IAmb 13 29 01.9
comp=Z,5.2nm,0.9s
ABKAR Akbulak array 58.64 310 P P 13 28 60.0 -1.2
V35K Ketchikan 58.68 42 P P 13 29 00.4 -0.9
baz=290
T35M Bob Quinn 58.82 40 P P 13 29 02.0 -0.4
baz=290
AKTO Aktyubinsk 59.37 312 LR LR 13 55 56.4
comp=Z,204nm,18.7s,baz=312,slow=37
ASAR Alice Springs 60.60 189 P P 13 29 14.7 -0.3
comp=Z,1.9nm,0.8s,baz=9.4,slow=6.7,SNR=14
ASAR LR LR 13 54 28.6
comp=Z,43nm,21.3s,baz=338,slow=35
comp=Z,1.9nm,0.8s
ASAR Alice Springs 60.60 189 P P 13 29 14.4 -0.5
KOTAN Kotaneelee Air 60.67 35 P P 13 29 15.0 -0.1
baz=293
KIRV Kirov 60.88 323 LR LR 13 57 53.5
comp=Z,101nm,18.0s,baz=58,slow=38
KIRV Kirov 60.88 323 *de*P P 13 29 17.2 +0.8
SPITS Spitsbergen Ar 60.93 349 LR LR 13 58 39.2
comp=Z,119nm,18.8s,baz=42,slow=39
YKA Yellowknife Ar 63.72 30 P P 13 29 36.0 +0.6
comp=Z,0.8nm,0.6s,baz=304,slow=6.5,SNR=3.8
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 63.72 30 *i*P P 13 29 36.2 +0.8
MSVF Nonsavu 63.86 142 LR LR 13 55 01.1
comp=Z,89nm,18.3s,baz=12,slow=34
ARCES ARCESS Array B 64.50 340 LR LR 14 00 27.5
comp=Z,92nm,21.4s,baz=27,slow=38
OBN Obninsk 68.73 324 *e*P P 13 30 08.4 +0.8
OBN *e**PP **pwP** 13 30 18.5 +0.4
OBN *e* 13 30 33.6
OBN pmax pmax
comp=Z,6.0nm,1.0s
FINES FINESS Array B 69.38 333 P P 13 30 11.0 -0.5
comp=Z,2.4nm,0.7s,baz=20,slow=6.1,SNR=5.6
FINES LR LR 14 02 49.4
comp=Z,156nm,18.3s,baz=18,slow=38
comp=Z,2.4nm,0.7s
FINES FINESS Array B 69.38 333 P P 13 30 11.1 -0.4
YBH Yreka Blue Hor 69.98 53 LR LR 13 56 26.5
comp=Z,24nm,21.6s,baz=304,slow=32
KBZ Khabaz 71.60 311 P P 13 30 25.9 +0.5
comp=Z,4.2nm,0.9s,baz=71,slow=3.7,SNR=10
KBZ LR LR 14 06 35.1
comp=Z,150nm,18.8s,baz=74,slow=40
comp=Z,4.2nm,0.9s
KBZ Khabaz 71.60 311 *d i*P P 13 30 26.4 +1.0
KBZ pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 71.60 311 *e*P P 13 30 26.3 +0.7
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,103nm,18.0s
GNI Garni 72.42 307 LR LR 14 05 22.1
comp=Z,113nm,18.2s,baz=84,slow=38
MNK Minsk 73.11 326 *i*P P 13 30 35.1 +0.9
comp=E,33nm,0.9s
MNK *i*P P 13 30 35.1 +0.9
comp=N,9.0nm,0.5s
MNK *i*P P 13 30 35.1 +0.9
comp=Z,10.0nm,0.7s,baz=50
MNK *i*P PP 13 33 18.5 +1.9
MNK *i*PPP PPP 13 35 04.1
MNK *i*S S 13 40 01.0 +1.0
MNK *i*SS SS 13 44 42.4 +2.1
MNK *i*SSS SSS 13 48 05.1
MNK *i*LR LR 14 03 27.9
MNK *i*LRM MLR 14 06 15.8
comp=E,83nm,14.3s
MNK *i*LRM MLR 14 06 23.4
comp=Z,122nm,15.0s
MNK *i*LRM MLR 14 06 44.2
comp=N,84nm,15.5s
MNK Minsk 73.11 326 *i*P P 13 30 35.1 +0.9
MNK *i* 13 33 18.4
MNK *i*PPP PPP 13 35 04.1
MNK *i*S S 13 40 01.0 +1.0
MNK *i*SS SS 13 44 42.4 +2.1
MNK pmax pmax
comp=E,33nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK pmax pmax
comp=N,9.0nm,0.5s
MNK MLR MLR
comp=E,83nm,14.0s
MNK MLR MLR
comp=Z,122nm,15.0s
MNK MLR MLR
comp=N,84nm,16.0s
HLID Hailey 74.07 47 P P 13 30 43.0 +2.6
NVAR Mina Array Bea 74.62 53 P P 13 30 44.8 +1.1
comp=N,0.7nm,0.6s,baz=294,slow=6.1,SNR=7.9
NVAR LR LR 13 58 10.5
comp=N,21nm,20.7s,baz=257,slow=31
comp=N,0.7nm,0.6s
NVAR Mina Array Bea 74.62 53 P P 13 30 44.0 +0.3
HFS Hagfors 74.62 336 P P 13 30 44.0 +1.0
comp=N,1.5nm,0.8s,baz=58,slow=11,SNR=4.4
HFS LR LR 14 06 28.0
comp=N,305nm,19.0s,baz=35,slow=38
comp=N,1.5nm,0.8s
HFS Hagfors 74.62 336 P P 13 30 44.0 +1.0
NB2 NORSAR Subarra 74.71 338 P P 13 30 43.8 +0.2
comp=Z,0.6nm,0.7s,baz=38,slow=5.9
NOA NORSAR Array B 74.71 338 P P 13 30 44.1 +0.5
comp=Z,2.4nm,1.0s,baz=40,slow=5.7,SNR=6.1
NOA LR LR 14 07 11.8
comp=Z,157nm,18.8s,baz=45,slow=39
comp=Z,2.4nm,1.0s
AKASG Malin Array Be 74.93 323 P P 13 30 45.0 +0.1
comp=Z,3.1nm,0.7s,baz=46,slow=6.3,SNR=15
AKASG LR LR 14 05 47.9
comp=Z,85nm,18.5s,baz=58,slow=37
comp=Z,3.1nm,0.7s
AKASG Malin Array Be 74.93 323 *i*P P 13 30 45.0 +0.1
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 74.93 323 *d i*P P 13 30 45.3 +0.3
AKBB pmax pmax
comp=Z,14nm,1.4s
AKBB Malin Array Si 74.93 323 P P 13 30 44.5 -0.5
AK01 Malin Array Si 74.94 323 P P 13 30 45.0 0.0
KIEV Kiev 74.94 323 P P 13 30 44.6 -0.4
comp=Z,29nm,0.9s
AK02 Malin Array Si 74.97 323 P P 13 30 45.2 0.0
AK17 Malin Array Si 75.03 323 P P 13 30 45.2 -0.3
RNPP9 Spachiv 76.05 325 P P 13 30 51.3 -0.1
SFJD Kangerlussuaq 76.11 5 LR LR 14 07 10.3
comp=Z,38nm,18.3s,baz=350,slow=38
LUBAR Lubar, Ukraine 76.16 323 P P 13 30 51.7 -0.3
SORM Soroca 77.04 321 P P 13 30 57.4 +0.4
ARPR Arapgir-MALATY 77.07 309 P P 13 30 59.3 +1.7
PDAR Pinedale Array 77.39 46 P P 13 31 00.5 +1.1
comp=Z,1.0nm,0.6s,baz=277,slow=2.6,SNR=9.6
PDAR LR LR 14 06 36.2
comp=Z,7.0nm,18.1s,baz=318,slow=37
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 77.39 46 P P 13 31 00.0 +0.6
KMPD K-Podol'skiy 77.69 322 P P 13 31 00.6 -0.1
BORG Borgarnes 78.02 353 LR LR 14 07 34.5
comp=Z,33nm,18.0s,baz=23,slow=37
PFO Pinyon Flats O 78.64 57 LR LR 14 00 22.7
comp=Z,63nm,19.6s,baz=238,slow=32
BURAR Bucovina Array 78.95 322 P P 13 31 08.2 +0.4
ANDN Andirin 79.23 309 P P 13 31 10.8 +1.3
RAR Rarotonga 79.45 126 LR LR 14 05 55.4
comp=Z,62nm,18.1s,baz=300,slow=35
BRTR Keskin Array B 79.54 312 P P 13 31 10.3 -1.0
comp=Z,1.5nm,0.8s,baz=214,slow=1.3,SNR=3.9
BRTR LR LR 14 10 19.8
comp=Z,54nm,18.0s,baz=83,slow=39
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 79.54 312 *i*P P 13 31 12.3 +1.0
BRTR pmax pmax
comp=Z,2.0nm,0.9s
OJC Ojcow 79.65 327 P P 13 31 12.8 +1.3
OJC Ojcow 79.65 327 P P 13 31 11.6 +0.2
comp=Z,10nm,1.1s
OJC Ojcow 79.65 327 P P 13 31 12.8 +1.3
NIE Niedzica 80.01 326 P P 13 31 13.9 +0.5
comp=Z,3.0nm,2.2s
MLR Muntele Rosu 80.04 320 LR LR 14 09 00.1
comp=Z,183nm,20.6s,baz=41,slow=38
KSP Ksiaz 80.70 329 P P 13 31 16.9 -0.2
MORC Moravsky Berou 80.96 327 P P 13 31 19.7 +1.1
MORC Moravsky Berou 80.96 327 *e*P P 13 31 19.1 +0.5
MORC Moravsky Berou 80.96 327 P P 13 31 19.7 +1.1
DPC Dobruska-Polom 81.06 328 P P 13 31 20.7 +1.6
DPC Dobruska-Polom 81.06 328 P P 13 31 20.7 +1.6
JAVC Velka Javorina 81.59 327 *e*P P 13 31 23.4 +1.5
CLL Collm 81.68 331 *i*P P 13 31 22.3 0.0
CLL *i* 13 31 28.7
CLL *e**PP **sP** 13 31 33.0 +0.9
CLL pmax pmax
comp=Z,10.0nm,1.2s
CLL Collm 81.68 331 *i*P P 13 31 22.3 0.0
comp=Z,10.0nm,1.2s
CLL *i* PcP **PcP** 13 31 28.7 +0.7
CLL *e*pP **sP** 13 31 33.0 +0.9
CLL AMS AMS 14 07 00.0
comp=N,100nm,21.5s
CLL AMS AMS 14 07 00.0
comp=E,100nm,20.9s
VRAC Vranov 81.72 327 LR LR 14 11 35.1
comp=E,133nm,18.1s,baz=39,slow=39
VRAC Vranov 81.72 327 *e*P P 13 31 23.0 +0.4
KRUC Moravsky 82.00 327 *e*P P 13 31 24.6 +0.6
ASF Jabal al Asfar 82.22 304 LR LR 14 11 34.6
comp=E,84nm,19.0s,baz=26,slow=38
MMAI Mount Meron Ar 82.68 306 LR LR 14 12 06.0
comp=E,97nm,18.1s,baz=42,slow=38
GERES GERESS Array B 83.31 329 P P 13 31 30.6 -0.4
comp=E,0.8nm,0.5s,baz=36,slow=5.0,SNR=10
GERES LR LR 14 12 48.6
comp=E,93nm,18.3s,baz=326,slow=39
comp=E,0.8nm,0.5s
GERES GERESS Array B 83.31 329 P P 13 31 31.2 +0.2
GERES GERESS Array B 83.31 329 P P 13 31 31.2 +0.2
ANMO Albuquerque 84.25 50‖ *e*P P 13 31 38.4 +2.2
ANMO pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 84.25 50 P P 13 31 38.8 +2.6
HRFI Mount Harif 84.81 304 P P 13 31 39.4 +0.5
EIL Elat 85.10 303 LR LR 14 13 07.0
comp=Z,76nm,21.1s,baz=86,slow=38
SCHQ Schefferville 85.42 16 LR LR 14 12 52.8
comp=Z,44nm,19.0s,baz=267,slow=38
LPIG La Paz 88.74 61 LR LR 14 10 54.4
comp=Z,25nm,18.0s,baz=188,slow=35
TXAR Lajitas Array 89.76 53 P P 13 32 04.0 +1.1
comp=Z,0.7nm,0.7s,baz=302,slow=2.6,SNR=10
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 89.76 53 P P 13 32 04.0 +1.1
TXAR Lajitas Array 89.76 53 P P 13 32 03.3 +0.3
MIAR Mount Ida 92.07 43 P P 13 32 15.1 +1.7
MIAR Mount Ida 92.07 43 P P 13 32 15.2 +1.7
MIAR pP **sP** 13 32 24.2 +1.0
KEST Kesra 95.66 323 LR LR 14 21 18.5
comp=Z,109nm,18.5s,baz=341,slow=39
ESDC Sonseca Array 97.84 334 LR LR 14 21 28.9
comp=Z,158nm,19.4s,baz=8.5,slow=38
LPAZ La Paz 146.25 61 PKPbc **PKPdf** 13 38 45.4 +0.7
comp=Z,1.9nm,0.7s,baz=350,slow=1.6,SNR=6.9

*GFZ **23** 13:19:21.3±1.1, 17°S±8°×7°1W±1°0, h120km, M4.7/13, mb4.6/13*
*IDC **13** 13:19:25.8±2.5, 17°72S×70°75W, h110km±18km, mb3.8/7, mbtmp4.3/11, Error ellipse: s-maj=29.1km s-min=17.0km*

az=10.0
*GUC **23** 13:19:25.9±0.5, 17.47S×71.04W, h98km±3km, ML4.4*
*NEIC **23** 13:19:26.2±1.8, 17.57S±0.06×70.85W±0.08, h115km±8km, mb4.2/5, Mwr4.2(GUC), Error ellipse: s-maj=12.9km s-min=6.3km az=127.0*
*SJA **23** 13:19:26.2±0.6, 17.62S×70.83W, h114km±4km, ML4.5, MW4.1*
*VAO **23** 13:19:26.0±1.3, 17.35S×70.66W, h101km±7km, mb4.6, Presumed earthquake*

ISC 23 13:19:25.8±0.8, 17.54S±0.05×70.78W±0.07, h113km±7km, n120, σ1§50/136, mb3.8/7, 10D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**0.93**	**154**	*eP*	**Pn**	**13 19 47.5**	**+1.0**
AP01				*eS*	**Sn**	**13 20 02.6**	**+0.5**
AP01				IAML		13 20 05.2	
	comp=Z,23µm,0.2s						
AP01	**Chacalluta**	**0.93**	**154**	⇓*iP*	**Pn**	**13 19 47.4**	**+0.9**
AP01				*i* S	**Sn**	**13 20 02.6**	**+0.5**
AP01	**Chacalluta**	**0.93**	**154**		**Pn**	**13 19 47.5**	**+1.0**
AP01				Sn	**Sn**	**13 20 02.8**	**+0.7**
AP01	**Chacalluta**	**0.93**	**154**	P	**Pn**	**13 19 47.5**	**+1.0**
PB12	**IPOC Station P**	**1.15**	**158**	*eP*	**Pn**	**13 19 49.5**	**+0.6**
PB12				*eS*	**Sn**	**13 20 07.2**	**+0.7**
PB12				IAML		13 20 08.5	
	comp=Z,6µm,0.2s						
PB12	**IPOC Station P**	**1.15**	**158**	⇓*iP*	**Pn**	**13 19 49.6**	**+0.6**
PB12				*eS*	**Sn**	**13 20 06.8**	**+0.3**
PB12				IAML		13 20 08.1	
	comp=E,25µm,0.2s						
PB12	**IPOC Station P**	**1.15**	**158**		**Pn**	**13 19 49.2**	**+0.2**
PB12	**IPOC Station P**	**1.15**	**158**	P	**Pn**	**13 19 49.7**	**+0.7**
PB18	**Visviri**	**1.24**	**93**	⇓*iP*	**Pn**	**13 19 52.6**	**+2.3**
PB18				*eS*	**Sn**	**13 20 12.5**	**+3.7**
PB18	**Visviri**	**1.24**	**93**		**Pn**	**13 19 51.9**	**+1.6**
PB18	**Visviri**	**1.24**	**93**	P	**Pn**	**13 19 52.7**	**+2.3**
PB16	**IPOC Station P**	**1.44**	**124**	*eP*	**Pn**	**13 19 54.2**	**+1.4**
PB16				*eS*	**Sn**	**13 20 15.3**	**+2.2**
PB16	**IPOC Station P**	**1.44**	**124**	⇓*iP*	**Pn**	**13 19 54.1**	**+1.4**
PB16				*i* S	**Sn**	**13 20 14.0**	**+0.9**
PB16	**IPOC Station P**	**1.44**	**124**		**Pn**	**13 19 53.4**	**+0.7**
PB16	**IPOC Station P**	**1.44**	**124**	P	**Pn**	**13 19 54.2**	**+1.4**
PX02	**IPOC Station P**	**1.52**	**159**	*eP*	**Pn**	**13 19 53.0**	**-0.2**
PX02				*eS*	**Sn**	**13 20 13.6**	**-0.3**
PX02				IAML		13 20 15.1	
	comp=N,3µm,0.3s						
PSGCX	**Pisagua**	**2.14**	**163**	*eP*	**Pn**	**13 20 01.6**	**+0.8**
PSGCX				*eS*	**Sn**	**13 20 27.7**	**+0.1**
PSGCX				IAML		13 20 29.9	
	comp=Z,2µm,0.3s						
PSGCX	**Pisagua**	**2.14**	**163**	⇓*iP*	**Pn**	**13 20 01.6**	**+0.8**
PSGCX	**Pisagua**	**2.14**	**163**		**Pn**	**13 20 01.1**	**+0.3**
PSGCX	**Pisagua**	**2.14**	**163**	P	**Pn**	**13 20 01.8**	**+0.9**
PB11	**IPOC Station P**	**2.45**	**155**	*eP*	**Pn**	**13 20 05.5**	**+0.6**
PB11				*eS*	**Sn**	**13 20 35.2**	**+0.3**
PB11	**IPOC Station P**	**2.45**	**155**	⇓*iP*	**Pn**	**13 20 05.4**	**+0.6**
PB11				IAML		13 20 39.8	
	comp=N,1µm,0.2s						
PB11	**IPOC Station P**	**2.45**	**155**		**Pn**	**13 20 05.3**	**+0.4**
PB11	**IPOC Station P**	**2.45**	**155**	P	**Pn**	**13 20 05.6**	**+0.6**
GO01	**Chusmiza**	**2.60**	**145**	*eP*	**Pn**	**13 20 09.2**	**+2.2**
GO01				*eS*	**Sn**	**13 20 42.2**	**+3.5**
GO01	**Chusmiza**	**2.60**	**145**	⇓*iP*	**Pn**	**13 20 09.1**	**+2.0**
GO01	**Chusmiza**	**2.60**	**145**		**Pn**	**13 20 09.1**	**+2.0**
GO01	**Chusmiza**	**2.60**	**145**	P	**Pn**	**13 20 09.2**	**+2.2**
TA02	**Huaiquique**	**2.79**	**167**	*eP*	**Pn**	**13 20 09.9**	**+0.8**
TA02				*eS*	**Sn**	**13 20 41.8**	**-0.6**
TA02				IAML		13 20 43.9	
	comp=Z,1µm,0.2s						
TA02	**Huaiquique**	**2.79**	**167**	*eP*	**Pn**	**13 20 09.8**	**+0.8**
TA02				*i* S	**Sn**	**13 20 41.7**	**-0.8**
TA02	**Huaiquique**	**2.79**	**167**	P	**Pn**	**13 20 09.9**	**+0.8**
LPAZ	**La Paz**	**2.82**	**64**	P	**Pn**	**13 20 12.5**	**+2.4**
	comp=Z,387nm,0.4s,baz=251,slow=8.9,SNR=1632						
LPAZ				S	**Sn**	**13 20 45.8**	**+1.7**
	comp=Z,62nm,0.6s,baz=344,slow=24,SNR=10						
LPAZ	**La Paz**	**2.82**	**64**	*eP*	**Pn**	**13 20 12.6**	**+2.4**
LPAZ	**La Paz**	**2.82**	**64**	*eP*	**Pn**	**13 20 08.2**	**-2.0**
LPAZ	**La Paz**	**2.82**	**64**	P	**Pn**	**13 20 11.6**	**+1.4**
PB08	**IPOC Station P**	**3.01**	**150**	*eP*	**Pn**	**13 20 14.0**	**+1.6**
PB08				*eS*	**Sn**	**13 20 49.5**	**+1.2**
PB08	**IPOC Station P**	**3.01**	**150**	⇓*iP*	**Pn**	**13 20 14.1**	**+1.6**
PB08				*eS*	**Sn**	**13 20 49.2**	**+0.9**
PB08				IAML		13 20 54.8	
	comp=E,772nm,0.2s						
PB08	**IPOC Station P**	**3.01**	**150**		**Pn**	**13 20 13.8**	**+1.4**
PB08	**IPOC Station P**	**3.01**	**150**	P	**Pn**	**13 20 14.1**	**+1.6**
PB02	**IPOC Station P**	**3.85**	**168**	*eP*	**Pn**	**13 20 24.2**	**+0.8**
PB02				*eS*	**Sn**	**13 21 06.8**	**-1.2**
PB02				IAML		13 21 08.6	
	comp=Z,1µm,0.4s						
PB02	**IPOC Station P**	**3.85**	**168**	*i* P	**Pn**	**13 20 24.0**	**+0.6**
PB02	**IPOC Station P**	**3.85**	**168**		**Pn**	**13 20 24.0**	**+0.6**
PB02	**IPOC Station P**	**3.85**	**168**	P	**Pn**	**13 20 24.2**	**+0.8**
PB07	**IPOC Station P**	**4.25**	**169**	*eP*	**Pn**	**13 20 29.7**	**+0.9**
PB07				*eS*	**Sn**	**13 21 15.8**	**-1.9**
PB07				IAML		13 21 16.6	
	comp=Z,464nm,0.5s						
PB07	**IPOC Station P**	**4.25**	**169**	⇓*iP*	**Pn**	**13 20 29.4**	**+0.6**
PB07	**IPOC Station P**	**4.25**	**169**		**Pn**	**13 20 29.4**	**+0.6**
PB07	**IPOC Station P**	**4.25**	**169**	P	**Pn**	**13 20 28.7**	**-0.1**
PB09	**IPOC Station P**	**4.48**	**161**	*eP*	**Pn**	**13 20 33.0**	**+1.1**
PB09				*eS*	**Sn**	**13 21 24.7**	**+1.7**
PB09				IAML		13 21 28.8	
	comp=Z,249nm,0.8s						
PB09	**IPOC Station P**	**4.48**	**161**	⇓*iP*	**Pn**	**13 20 32.9**	**+1.1**
PB09	**IPOC Station P**	**4.48**	**161**		**Pn**	**13 20 32.7**	**+0.9**
PB09	**IPOC Station P**	**4.48**	**161**	P	**Pn**	**13 20 32.0**	**+0.2**
PB03	**IPOC Station P**	**4.59**	**168**	*eP*	**Pn**	**13 20 34.1**	**+0.8**
PB03				*eS*	**Sn**	**13 21 23.5**	**-2.2**
PB03				IAML		13 21 27.8	
	comp=Z,517nm,0.2s						
PB03	**IPOC Station P**	**4.59**	**168**		**Pn**	**13 20 33.9**	**+0.6**
PB03	**IPOC Station P**	**4.59**	**168**	P	**Pn**	**13 20 34.1**	**+0.8**
PB06	**IPOC Station P**	**5.27**	**168**		**Pn**	**13 20 42.1**	**+0.3**
PB06	**IPOC Station P**	**5.27**	**168**	P	**Pn**	**13 20 42.6**	**+0.2**
PB05	**IPOC Station P**	**5.32**	**174**		**Pn**	**13 20 42.8**	**-0.3**
PB05	**IPOC Station P**	**5.32**	**174**	P	**Pn**	**13 20 43.0**	**-0.1**
PB14	**IPOC Station P**	**7.06**	**177**	P	**Pn**	**13 21 05.4**	**-1.5**
SALTA		**7.84**	**149**	P	**Pn**	**13 21 18.9**	**+1.3**
NNA	**Nana**	**8.05**	**312**	P	**Pn**	**13 21 20.3**	**+0.2**
	comp=Z,13nm,0.3s,baz=98,slow=9.3,SNR=4.1						
NNA	**Nana**	**8.05**	**312**	Pn	**Pn**	**13 21 19.4**	**-0.7**
AC01	**Pan de Azucar**	**8.57**	**179**		**Pn**	**13 21 25.6**	**-1.5**
AC01	**Pan de Azucar**	**8.57**	**179**	P	**Pn**	**13 21 25.5**	**-1.5**
AC02	**Maricunga**	**9.38**	**171**	Pn	**Pn**	**13 21 38.3**	**-0.1**
AC02	**Maricunga**	**9.38**	**171**	P	**Pn**	**13 21 38.1**	**-0.4**
SIV	**San Ignacio**	**9.42**	**82**	P	**Pn**	**13 21 38.2**	**-0.5**
	comp=Z,19nm,0.3s,baz=263,slow=11,SNR=70						
SIV				S	**Sn**	**13 23 16.4**	**-6.5**
	comp=Z,3.4nm,0.5s,baz=181,slow=18,SNR=3.1						
BBSD	**Serra de San D**	**9.71**	**89**	*eP*	**Pn**	**13 21 39.6**	**-3.0**
CZSB	**Cruzeiro do Su**	**9.93**	**349**	Pn	**Pn**	**13 21 43.9**	**-1.6**
CZSB	**Cruzeiro do Su**	**9.93**	**349**	*eP*	**Pn**	**13 21 43.3**	**-2.2**
GO03	**Copiapo**	**10.02**	**177**	P	**Pn**	**13 21 45.1**	**-1.7**
AC04	**Llanos de Chal**	**10.62**	**181**	Pn	**Pn**	**13 21 51.7**	**-3.1**
AC04	**Llanos de Chal**	**10.62**	**181**	P	**Pn**	**13 21 51.8**	**-3.1**
VILB	**Vilhena**	**11.17**	**67**		**Pn**	**13 22 00.3**	**-2.1**
VILB	**Vilhena**	**11.17**	**67**	*eP*	**Pn**	**13 21 59.1**	**-3.2**
AC05	**El Transito**	**11.26**	**178**	P	**Pn**	**13 22 01.4**	**-2.1**
PTLB	**Pontes e Lacer**	**11.35**	**81**	*eP*	**Pn**	**13 22 04.0**	**-0.7**
LCO	**Las Campanas**	**11.42**	**180**	P	**Pn**	**13 22 04.1**	**-1.7**
CO01	**Juntas del Tor**	**12.40**	**177**	P	**Pn**	**13 22 17.5**	**-1.2**
GO04	**Tololo Observa**	**12.58**	**180**	Pn	**Pn**	**13 22 19.1**	**-2.0**
GO04	**Tololo Observa**	**12.58**	**180**	P	**Pn**	**13 22 19.0**	**-2.0**
CFA	**Coronel Fontan**	**14.20**	**171**	P	**Pn**	**13 22 39.5**	**-2.3**
	comp=Z,2.0nm,0.4s,baz=14,slow=16,SNR=8.1						
CO04	**Los Peladeros**	**14.45**	**181**	P	**Pn**	**13 22 42.4**	**-2.9**
SALV	**Santo Antonio**	**14.54**	**86**	*eP*	**Pn**	**13 22 46.0**	**-0.2**
CLDB	**Colider**	**15.95**	**67**	*eP*	**Pn**	**13 23 03.1**	**-0.9**
CLDB	**Colider**	**15.95**	**67**	P	**Pn**	**13 23 04.0**	**0.0**
MACA	**Manacapuru-AM**	**17.38**	**36**	*eP*	**P**	**13 23 20.1**	**-1.1**
H03N1	**Juan Fernandez**	**17.45**	**203**	T	T	13 41 09.9	
	baz=27,slow=73,SNR=95						
H03N2	**Juan Fernandez**	**17.45**	**203**	T	T	13 41 10.2	
	baz=27,slow=73,SNR=165						
H03N3	**Juan Fernandez**	**17.46**	**203**	T	T	13 41 09.3	
	baz=27,slow=73,SNR=108						
ARAG	**Araguaiana, MT**	**18.26**	**87**	*eP*	**P**	**13 23 30.9**	**+0.1**
NPGB	**Novo Progresso**	**18.30**	**57**	*eP*	**P**	**13 23 30.4**	**-0.9**
PTGB	**Pitanga**	**18.85**	**115**	*eP*	**Pn**	**13 23 39.1**	**+0.1**
SNDB	**Serra Nova Dou**	**19.63**	**76**	*eP*	**P**	**13 23 44.1**	**-1.6**
ITTB	**Itaituba**	**19.71**	**50**	*eP*	**P**	**13 23 45.7**	**-0.8**
FRTB	**Fartura**	**20.69**	**110**	*eP*	**P**	**13 23 58.0**	**+0.9**
IPMB	**Ipameri, GO**	**21.49**	**95**	*eP*	**P**	**13 24 06.0**	**+0.2**
BDFB	**Brasilia**	**21.89**	**88**	P	**P**	**13 24 09.7**	**-0.4**
	comp=Z,6.2nm,0.4s,baz=239,slow=12,SNR=6.7						
	comp=Z,6.2nm,0.4s						
BDFB	**Brasilia**	**21.89**	**88**	P	**P**	**13 24 09.8**	**-0.4**
BDFB				IAmb	IAmb	13 24 13.5	
	comp=Z,7.7nm,0.7s						
BOAV	**Boa Vista**	**22.24**	**28**	P	**P**	**13 24 12.5**	**-1.1**
BOAV				IAmb	IAmb	13 24 14.0	
	comp=Z,8.9nm,0.8s						
BOAV	**Boa Vista**	**22.24**	**28**	*eP*	**P**	**13 24 12.7**	**-0.9**
SMTB	**Santa Maria do**	**24.14**	**72**	*eP*	**P**	**13 24 31.3**	**-0.3**
SDBA	**SAO DESIDERIO**	**25.50**	**82**	*eP*	**P**	**13 24 43.8**	**-0.2**
JANB	**Januaria**	**25.51**	**88**	*eP*	**P**	**13 24 43.8**	**-0.3**
DIAM	**Diamantina, MG**	**25.79**	**96**	*eP*	**P**	**13 24 46.8**	**+0.1**
TXAR	**Lajitas Array**	**56.39**	**325**	P	**P**	**13 28 57.4**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=163,slow=6.6,SNR=4.2						
	comp=Z,0.3nm,0.6s						
DBIC	**Dimbokro**	**69.38**	**76**	P	**P**	**13 30 22.3**	**+0.2**
	comp=Z,3.5nm,0.4s,baz=244,slow=7.5,SNR=7.4						
	comp=Z,3.5nm,0.4s						
DBIC	**Dimbokro**	**69.38**	**76**	P	**P**	**13 30 22.4**	**+0.4**
NVAR	**Mina Array Bea**	**71.30**	**322**	P	**P**	**13 30 36.0**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=142,slow=7.5,SNR=4.2						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.75**	**72**	P	**P**	**13 31 11.4**	**+0.4**
	comp=Z,3.7nm,0.5s,baz=257,slow=5.1,SNR=24						
	comp=Z,3.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.75**	**72**	P	**P**	**13 31 11.1**	**+0.1**
ESDC	**Sonseca Array**	**84.29**	**45**	P	**P**	**13 31 46.3**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=259,slow=5.1,SNR=8.7						
	comp=Z,0.9nm,0.8s						
YKA	**Yellowknife Ar**	**86.89**	**341**	P	**P**	**13 31 57.2**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=154,slow=5.2,SNR=3.7						
	comp=Z,0.7nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**25.53**	**280**	T	T	15 56 44.6	
	baz=100,slow=74,SNR=15						
H11S1	**WAKE ISLAND Hy**	**25.54**	**280**	T	T	15 56 54.5	
	baz=100,slow=74,SNR=3.1						
H11S3	**WAKE ISLAND Hy**	**25.55**	**280**	T	T	15 56 39.8	
	baz=100,slow=74,SNR=5.1						
ZALV	**Zalesovo Beam**	**139.04**	**22**	PKP	**PKiKP**	**13 38 41.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=132,slow=2.1,SNR=2.1						
MKAR	**Makanchi Array**	**143.32**	**31**	PKP	**PKPdf**	**13 38 47.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=255,slow=5.7,SNR=2.8						
HHC	**Hu-ho-hao-te**	**156.68**	**356**	*eP*	**PKPdf**	**13 39 09.8**	**+1.7**
PZH	**PanZhiHua**	**168.70**	**37**	PKP	**PKPdf**	**13 39 19.5**	**-0.7**

*GUC **23** 13:20:35.9±0.6, 41.50S×73.81W, h41km±3km, ML3.3*
*SJA **23** 13:20:36.2±0.7, 41.49S×73.57W, h104km±14km, ML3.5, MW3.9*

ISC 23 13:20:33.9±1.9, 41.46S±0.04×74.1W±0.1, h35km, n17, σ1§00/20, 2C-1D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LL05	**Los Muermos**	**0.49**	**84**	*eP*	**Pn**	**13 20 43.5**	**-0.9**
LL05				IAML		13 20 52.6	
	comp=E,14µm,0.2s						
LL06	**Loncomilla**	**0.84**	**154**	*eP*	**Pn**	**13 20 49.4**	**+0.1**
LL04	**Puerto Octay**	**1.41**	**68**	*eP*	**Pn**	**13 20 58.4**	**+1.4**
LL04				*eS*	**Sn**	**13 21 14.6**	**+0.3**
LL04	**Puerto Octay**	**1.41**	**68**	*eP*	**Pn**	**13 20 56.8**	**-0.2**
LL07	**Hotel Espejo d**	**1.46**	**161**	⇓*eP*	**Pn**	**13 20 58.1**	**+0.5**
LL07				IAML		13 21 20.1	
	comp=E,690nm,0.4s						
LR04	**Corral**	**1.66**	**19**	*eP*	**Pn**	**13 20 59.1**	**-1.4**
LR04				IAML		13 21 29.3	
	comp=Z,1µm,0.2s						
LR02	**Universidad Au**	**1.78**	**22**	*eP*	**Pn**	**13 21 04.3**	**+2.2**
VNTQ	**Ventisquero**	**1.89**	**139**	⇑*iP*	**Pn**	**13 21 03.7**	**0.0**
PDRA	**Piedra**	**1.92**	**137**	*eP*	**Pn**	**13 21 04.3**	**0.0**
PDRA				IAML		13 21 33.3	
	comp=E,214nm,0.5s						
TBIO	**Turbio**	**1.95**	**139**	⇑*eP*	**Pn**	**13 21 04.6**	**+0.1**
LR05	**Currie**	**2.02**	**53**	*eP*	**Pn**	**13 21 06.1**	**+0.6**
LR05				*eS*	**Sn**	**13 21 29.3**	**-0.3**
LR05				IAML		13 21 36.6	
	comp=Z,409nm,0.6s						
LR05	**Currie**	**2.02**	**53**	*eP*	**Pn**	**13 21 05.7**	**+0.2**
LR05				IAML		13 21 36.3	
	comp=E,1µm,0.3s						
LL02	**Futaleuf**	**2.42**	**136**	*eP*	**Pn**	**13 21 12.1**	**+1.1**
LL02				*eS*	**Sn**	**13 21 37.8**	**-1.6**
LL02				IAML		13 21 46.8	
	comp=Z,125nm,0.6s						
GO06	**Curarrehue**	**2.76**	**48**	*eP*	**Pn**	**13 21 16.6**	**+0.9**
GO06				IAML		13 22 01.2	
	comp=Z,72nm,0.6s						
GO06	**Curarrehue**	**2.76**	**48**	*eP*	**Pn**	**13 21 16.4**	**+0.8**
GO06				IAML		13 22 02.3	
	comp=E,94nm,0.6s						
LJUN	**La Junta**	**2.81**	**155**	*eP*	**Pn**	**13 21 17.4**	**+1.0**
BI05	**Punta Hualpn**	**4.76**	**9**	*eP*	**Pn**	**13 21 42.5**	**-0.6**
BI05				IAML		13 23 06.6	
	comp=Z,54nm,0.8s						

*IDC **23** 14:27:52.7±1.6, 0.60S×122.42E, h0km, mb3.6/3, mbtmp3.8/4, ML4.1/1, MS3.3/2, Error ellipse: s-maj=55.8km s-min=26.1km az=65.0*
*DJA **23** 14:27:55.5±0.2, 1.3S±2.2×12.2E±?, h10km, M4.0/24, mb4.1/1, MLv4.0/24*

ISC 23 14:27:56.9±1.3, 0.73S±0.1×122.41E±0.07, h35km, n13, σ1§73/13, mb3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.49**	**133**	P	**Pn**	**14 28 06.2**	**-1.3**
LUWI				S	**Sn**	**14 28 12.2**	**-2.7**
APSI	**Ampana**	**0.79**	**255**	P	**Pn**	**14 28 07.9**	**-3.7**
PCI	**Palu**	**2.58**	**265**	P	**Pn**	**14 28 37.2**	**+0.9**
KDI	**Kendari**	**3.24**	**176**	P	**Pn**	**14 28 45.4**	**+0.1**
SPSI	**Sidrap Palu**	**4.18**	**219**	P	**Pn**	**14 28 58.5**	**+0.2**
BBSI	**Bau Bau**	**4.76**	**178**	P	**Pn**	**14 29 06.5**	**+0.3**
KAPI	**Kappang**	**5.04**	**212**	Pn	**Pn**	**14 29 10.5**	**+0.4**
	7.6nm,0.3s,baz=37,slow=7.7,SNR=18						
KAPI				Sn	**Sn**	**14 30 06.1**	**-1.1**
	4.4nm,0.3s,baz=227,slow=23,SNR=9.2						
	24nm,0.4s						
KAPI	**Kappang**	**5.04**	**212**	P	**Pn**	**14 29 10.1**	**0.0**
BATI	**Baumata**	**9.53**	**173**	LR	LR	14 34 49.5	
	comp=Z,185nm,18.9s,baz=148,slow=43						
WRA	**Warramunga Arr**	**22.41**	**149**	P	**P**	**14 32 54.5**	**+1.8**
	3.1nm,0.9s,baz=332,slow=10.0,SNR=5.4						
	3.1nm,0.9s						
ASAR	**Alice Springs**	**25.41**	**155**	P	**P**	**14 33 22.6**	**+1.2**
	0.9nm,0.7s,baz=345,slow=14,SNR=17						
	0.9nm,0.3s						
JOW	**Kunigami**	**27.95**	**11**	LR	LR	14 44 23.5	
	comp=Z,65nm,20.9s,baz=141,slow=36						
MKAR	**Makanchi Array**	**58.90**	**329**	P	**P**	**14 37 53.3**	**+0.8**
	0.3nm,0.6s,baz=130,slow=8.1,SNR=4.2						
	0.3nm,0.6s						

*IDC **23** 14:31:24.2±0.9, 56.23N×164.33E, h0km, mb3.6/10, mbtmp3.7/12, ML3.2/2, MS3.2/16, Error ellipse: s-maj=32.9km s-min=17.0km az=157.0*
*KRSC **23** 14:31:25.3±1.5, 56.12N×164.48E, h48km±21km, Ml4.1*
*MOS **23** 14:31:27.2±0.8, 56.15N×164.49E, h35km, mb4.2/5, Error ellipse: s-maj=8.5km s-min=5.1km az=53.0*

ISC 23 14:31:24.2±1.3, 56.12N±0.04×164.50E±0.03, h1km±9km, n114, σ1§52/114, mb3.8/13, MS3.2/14, 2C-6D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.94**	**276**	PN	**Pg**	**14 31 41.8**	**-0.4**
KBTR				S	**Sg**	**14 31 54.0**	**-0.4**
KBTR	**Krutoberegovo**	**0.94**	**276**	*eP*	**Pg**	**14 31 41.9**	**-0.4**
KBTR				*eS*	**Sg**	**14 31 54.0**	**-0.4**
BKI	**Bering**	**1.25**	**137**	PN	**Pg**	**14 31 47.6**	**-0.4**
BKI				S	**Sg**	**14 32 03.8**	**-0.3**
BKI	**Bering**	**1.25**	**137**	*eP*	**Pg**	**14 31 47.7**	**-0.4**
BKI				*eS*	**Sg**	**14 32 03.9**	**-0.3**
SMKR	**Semkarok**	**1.75**	**287**	PN	**Pn**	**14 31 55.0**	**-0.7**
SMKR				S	**Sn**	**14 32 18.1**	**-0.6**
SMKR	**Semkarok**	**1.75**	**287**	*eP*	**Pn**	**14 31 55.1**	**-0.7**
SMKR				*eS*	**Sn**	**14 32 18.1**	**-0.6**
ZLN	**Zelenaya**	**2.07**	**269**	PN	**Pn**	**14 32 00.7**	**+0.5**
ZLN	**Zelenaya**	**2.07**	**269**	*eP*	**Pn**	**14 32 00.8**	**+0.5**
CIRR	**Tsirk**	**2.10**	**271**	PN	**Pn**	**14 32 01.0**	**+0.4**
CIRR	**Tsirk**	**2.10**	**271**	*eP*	**Pn**	**14 32 01.1**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**2.14**	**267**	PN	**Pn**	**14 32 01.6**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**2.14**	**267**	*eP*	**Pn**	**14 32 01.7**	**+0.4**
KLY	**Klyuchi**	**2.15**	**277**	PN	**Pn**	**14 31 59.7**	**-1.5**
KLY				S	**Sn**	**14 32 25.2**	**-3.4**
KLY	**Klyuchi**	**2.15**	**277**	*eP*	**Pn**	**14 31 59.7**	**-1.5**
KLY				*eS*	**Sn**	**14 32 25.2**	**-3.4**
MKZ	**Mys Kozlova**	**2.23**	**226**	PN	**Pn**	**14 32 01.7**	**-0.5**
MKZ				S	**Sn**	**14 32 28.1**	**-2.2**
MKZ	**Mys Kozlova**	**2.23**	**226**	*eP*	**Pn**	**14 32 01.7**	**-0.5**
MKZ				*eS*	**Sn**	**14 32 28.2**	**-2.2**
BZP	**Bezymyannyi-Pe**	**2.23**	**266**	PN	**Pn**	**14 32 02.8**	**+0.3**
BZP	**Bezymyannyi-Pe**	**2.23**	**266**	*eP*	**Pn**	**14 32 02.8**	**+0.3**
BZWR	**Bezymyannyi-We**	**2.25**	**268**	PN	**Pn**	**14 32 03.4**	**+0.7**
BZWR	**Bezymyannyi-We**	**2.25**	**268**	*eP*	**Pn**	**14 32 03.5**	**+0.7**
BZMR	**Bezymyannaya**	**2.26**	**267**	PN	**Pn**	**14 32 03.4**	**+0.6**
BZMR	**Bezymyannaya**	**2.26**	**267**	*eP*	**Pn**	**14 32 03.5**	**+0.6**
KIRR	**Kirishev**	**2.34**	**268**	PN	**Pn**	**14 32 04.0**	**+0.1**
KIRR	**Kirishev**	**2.34**	**268**	*eP*	**Pn**	**14 32 04.1**	**+0.1**
KPT	**Kopyto**	**2.40**	**268**	PN	**Pn**	**14 32 06.0**	**+1.3**
KPT	**Kopyto**	**2.40**	**268**	*eP*	**Pn**	**14 32 06.1**	**+1.3**
KMNR	**Kamenistaya**	**2.42**	**263**	PN	**Pn**	**14 32 06.1**	**+1.1**
KMNR	**Kamenistaya**	**2.42**	**263**	*eP*	**Pn**	**14 32 06.2**	**+1.1**
KOZ	**Kozyrevsk**	**2.59**	**270**	PN	**Pn**	**14 32 08.5**	**+1.2**
KOZ	**Kozyrevsk**	**2.59**	**270**	*eP*	**Pn**	**14 32 08.5**	**+1.2**
TUMR	**Tumrok**	**2.60**	**253**	PN	**Pn**	**14 32 08.7**	**+1.2**
TUMR				S	**Sn**	**14 32 40.7**	**+0.9**
TUMR	**Tumrok**	**2.60**	**253**	*eP*	**Pn**	**14 32 08.8**	**+1.2**
TUMR				*eS*	**Sn**	**14 32 40.7**	**+0.9**
SRDR	**Sredinnyy**	**2.67**	**276**	PN	**Pn**	**14 32 09.4**	**+0.9**
SRDR				S	**Sn**	**14 32 42.0**	**+0.4**
SRDR	**Sredinnyy**	**2.67**	**276**	*eP*	**Pn**	**14 32 09.4**	**+0.9**
SRDR				*eS*	**Sn**	**14 32 42.0**	**+0.4**
OSSR	**Ossora**	**3.23**	**347**	PN	**Pn**	**14 32 13.9**	**-2.1**
OSSR	**Ossora**	**3.23**	**347**	*eP*	**Pn**	**14 32 14.0**	**-2.1**
ESO	**Esso**	**3.26**	**269**	PN	**Pn**	**14 32 17.0**	**+0.5**
ESO	**Esso**	**3.26**	**269**	*eP*	**Pn**	**14 32 17.0**	**+0.5**
PALN	**Palana**	**3.84**	**323**	PN	**Pn**	**14 32 25.4**	**+1.0**
PALN	**Palana**	**3.84**	**323**	*eP*	**Pn**	**14 32 25.4**	**+1.0**
SPN	**Mys Shipunski**	**3.99**	**222**	PN	**Pn**	**14 32 28.0**	**+1.5**
SPN	**Mys Shipunski**	**3.99**	**222**	*eP*	**Pn**	**14 32 28.1**	**+1.5**
SPN				*eS*	**Sn**	**14 33 09.7**	**-4.2**
NLC	**Nalytchevo**	**4.21**	**227**	*eS*	**Sn**	**14 33 16.6**	**-2.6**
SDLR	**Sedlovina**	**4.33**	**231**	PN	**Pn

	comp=Z,19nm,18.2s,baz=325,slow=37							
CMAR	**Chiang Mai Arr**	**61.27**	**260**	P	**P**	**14 41 39.5**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=23,slow=7.8,SNR=5.4							
CMAR				LR	LR	15 12 39.2		
	comp=Z,23nm,18.3s,baz=245,slow=40							
	comp=Z,0.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**61.27**	**260**	*i* P	**P**	**14 41 40.2**	**-0.9**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TXAR	**Lajitas Array**	**67.16**	**71**	P	**P**	**14 42 19.2**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=305,slow=5.2,SNR=2.6							
	comp=Z,0.1nm,0.6s							
VRAC	**Vranov**	**71.58**	**338**	LR	LR	15 19 47.1		
	comp=Z,17nm,18.8s,baz=70,slow=41							
MLR	**Muntele Rosu**	**72.92**	**331**	LR	LR	15 16 28.0		
	comp=Z,33nm,19.6s,baz=312,slow=37							
ASAR	**Alice Springs**	**83.61**	**208**	P	**P**	**14 43 55.1**	**+1.1**
	comp=Z,0.5nm,1.0s,baz=21,slow=4.8,SNR=4.6							
	comp=Z,0.5nm,1.0s							

BER 23 14:45:57.7±2.5, 76°98N × 7°90E, h14km ± 11km, Mw3.5, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**1.73**	**85**	*e*P	Pn	14 46 25.3	-1.9
HSPB				*e*Pg	Pb	14 46 26.1	-3.0
HSPB				IAML		14 46 26.6	
	comp=Z,27nm,0.2s						
HSPB				*e*S	Sn	14 46 45.4	-3.6
BRBB	**Barentsburg B**	**1.77**	**48**	*e*P	Pn	14 46 26.5	-1.3
BRBB				*e*Pg	Pb	14 46 29.0	-0.8
BRBB				*e*S	Sn	14 46 45.8	-4.2
KBS	**Kingsbay**	**2.13**	**21**	*e*P	Pn	14 46 31.8	-1.0
KBS				IAML		14 46 33.0	
	comp=Z,6.8nm,0.3s						
KBS				*e*Pg	Pb	14 46 33.1	-3.0
KBS				*e*S	Sn	14 46 55.0	-4.0
SPA0	**Spitsbergen Ar**	**2.19**	**53**	*e*P	Pn	14 46 33.5	-0.1
SPA0				IAML		14 46 34.3	
	comp=Z,8.6nm,0.5s						
SPA0				*e*S	Sn	14 46 58.6	-1.9
HOPEN	**Hopen**	**3.96**	**88**	*e*P	Pn	14 46 56.9	-1.0
HOPEN				*e*S	Sn	14 47 39.5	-4.5
HOPEN				IAMLHF		14 47 44.2	
	comp=Z,1.2nm,0.2s						
DAG	**Danmarks Havn**	**6.02**	**281**	*e*S	Sn	14 48 27.4	-7.3

*IDC **23** 14:58:07.1±1.0, 54°.68N × 158°.55W, h0km, mb3.8/16, mbtmp3.8/19, ML3.9/3, MS3.2/17, Error ellipse: s-maj=25.1km s-min=16.4km az=10.0*
*AEIC **23** 14:58:10±1.9, 54°.86N±0°.06 × 158°.50W±0°.05, h21km±6km, Error ellipse: s-maj=9.8km s-min=2.4km az=157.0*
*NEIC **23** 14:58:10.4±1.4, 54°.85N±0°.08 × 158°.49W±0°.05, h18km±5km, mb4.1/7, ML4.0/33, ML3.8(AEIC), Error ellipse: s-maj=12.2km s-min=4.1km az=177.0*

ISC 23 14:58:10.5±1.6, 54°89N±0°.06 × 158°46W±0°.04, h16km±10km, n93, σ1§37/79, mb3.9/18, MS3.2/14, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.66**	**265**		**Pg**	**14 58 23.0**	**-0.3**
CNBA				Sg	**Sn**	**14 58 33.7**	**-1.3**
CNBA				IAML		14 58 34.0	
	comp=E,9μm,0.6s						
CNBA				IAML		14 58 34.5	
	comp=N,9μm,0.3s						
SDPT	**Sand Point**	**1.25**	**293**		**Pn**	**14 58 31.4**	**-1.8**
SDPT				IAML		14 58 54.6	
	comp=N,3μm,0.8s						
SDPT				IAML		14 58 55.5	
	comp=E,3μm,0.7s						
SDPT	**Sand Point**	**1.25**	**293**		**Sb**	**14 58 47.9**	**-1.6**
VNKR	**Veniaminof 5**	**1.26**	**336**		**Pn**	**14 58 32.3**	**-1.1**
VNSS	**Veniaminof 8**	**1.46**	**338**		**Pn**	**14 58 36.3**	**0.0**
VNSS					**Sb**	**14 58 56.0**	**+0.3**
VNFG	**Fog Glacier, M**	**1.54**	**337**		**Pn**	**14 58 37.0**	**-0.3**
VNFG	**Fog Glacier, M**	**1.54**	**337**		**Pn**	**14 58 37.3**	**+0.1**
VNFG	**Fog Glacier, M**	**1.54**	**337**		**Sg**	**14 58 59.7**	**-0.3**
CHIR	**Chirikof Islan**	**1.87**	**59**		**Pn**	**14 58 41.4**	**-0.4**
CHIR				IAML		14 59 18.6	
	comp=E,2μm,0.9s						
CHIR				IAML		14 59 21.1	
	comp=N,2μm,0.6s						
ANPB	**Aniakchak Plen**	**1.93**	**3**		**Pn**	**14 58 42.6**	**+0.1**
PS1A	**Pavlof South-1**	**1.96**	**287**		**Pn**	**14 58 42.2**	**-0.7**
PS1A					**Sn**	**14 59 06.9**	**-0.3**
DOL	**Dolgoi Island**	**1.98**	**279**		**Pn**	**14 58 42.3**	**-1.0**
DOL					**Sn**	**14 59 06.7**	**-1.0**
PS4A	**Pavlof South-4**	**2.01**	**285**		**Pn**	**14 58 42.9**	**-0.7**
PS4A					**Sn**	**14 59 08.0**	**-0.3**
ANNW	**Aniakchak Nort**	**2.09**	**4**		**Pn**	**14 58 46.1**	**+1.2**
PN7A	**Pavlof North-7**	**2.10**	**287**		**Pn**	**14 58 44.6**	**-0.4**
DTNA	**Dutton South F**	**2.20**	**278**		**Sn**	**14 59 12.0**	**-1.1**
DT1	**Dutton Round H**	**2.21**	**277**		**Sn**	**14 59 12.7**	**-0.8**
SII	**Sitkinak Islan**	**2.94**	**53**		**Pn**	**14 58 56.1**	**-0.4**
ISNN	**Isanotski Nort**	**3.08**	**271**		**Pn**	**14 58 58.1**	**-0.2**
PLK1	**Peulik 1**	**3.10**	**19**		**Pn**	**14 58 58.6**	**0.0**
PLK5	**Peulik 5**	**3.24**	**15**		**Pn**	**14 59 00.3**	**-0.2**
OHAK	**Old Harbor**	**3.73**	**49**		**Pn**	**14 59 06.7**	**-0.5**
OHAK				IAML		15 00 18.7	
	comp=N,164nm,0.8s						
OHAK				IAML		15 00 30.5	
	comp=E,174nm,1.3s						
MGLS	**Mageik Landsli**	**3.73**	**28**		**Pn**	**14 59 07.1**	**-0.3**
ACHA	**Angle Creek He**	**3.76**	**26**		**Pn**	**14 59 08.8**	**+1.1**
KABU	**Katmai Buttres**	**3.82**	**26**		**Pn**	**14 59 07.7**	**-0.9**
P16K	**Nushagak River**	**4.17**	**3**		**Pn**	**14 59 13.4**	**+0.1**
P16K				IAML		15 00 46.5	
	comp=E,272nm,0.8s						
AKUT	**Akutan**	**4.33**	**263**		**Pn**	**14 59 15.8**	**+0.4**
AKUT				IAML		15 00 30.4	
	comp=E,151nm,0.8s						
AKUT				IAML		15 00 33.4	
	comp=N,174nm,1.3s						
O15K	**Ungalikthiuk R**	**4.37**	**351**		**Pn**	**14 59 16.0**	**-0.1**
KDAK	**Kodiak Island**	**4.37**	**46**	Pn	**Pn**	**14 59 15.6**	**-0.5**
	comp=N,3.2nm,0.3s,baz=124,slow=0.8,SNR=63							
KDAK				Sn	**Sn**	**15 00 00.6**	**-6.0**
	comp=N,2.2nm,0.3s,baz=32,slow=19,SNR=5.6							
KDAK				LR	LR	15 01 18.7		
	comp=N,211nm,18.2s,baz=236,slow=42							
	comp=N,6.9nm,0.3s							
KDAK	**Kodiak Island**	**4.37**	**46**		**Pn**	**14 59 16.2**	**+0.1**
KDAK				IAML		15 00 45.3	
	comp=N,126nm,0.8s						
KDAK				IAML		15 00 47.6	
	comp=N,110nm,1.3s						
P17K	**Kvichak River**	**4.46**	**13**		**Pn**	**14 59 17.4**	**+0.1**
O14K	**Tigyukauivet M**	**4.64**	**342**		**Pn**	**14 59 19.3**	**-0.5**
O14K				IAML		15 00 48.7	
	comp=E,98nm,0.8s						
O14K				IAML		15 00 54.2	
	comp=N,114nm,0.8s						
O16K	**Kokwok River B**	**4.73**	**2**		**Pn**	**14 59 20.4**	**-0.6**
UNV	**Unalaska Valle**	**4.82**	**261**		**Pn**	**14 59 21.9**	**-0.4**
UNV				IAML		15 00 44.4	
	comp=N,78nm,0.9s						
O18K	**Koktuh Hills**	**5.28**	**18**	IAML		15 00 60.0	
	comp=E,57nm,0.9s						
ILSW	**Iliamna Southw**	**5.86**	**27**		**Pn**	**14 59 37.2**	**+0.5**
N18K	**Kilae Creek**	**5.97**	**12**		**Pn**	**14 59 38.5**	**+0.4**
M13K	**Dall Lake**	**6.13**	**337**		**Pn**	**14 59 40.2**	**-0.1**
M17K	**Holitna River**	**6.56**	**4**		**Pn**	**14 59 45.9**	**-0.2**
H17K	**Granite Mounta**	**10.11**	**356**		**Pn**	**15 00 36.6**	**+1.8**
H19K	**Roundabout Mou**	**10.72**	**5**		**Pn**	**15 00 43.5**	**+0.4**
IL31		**11.47**	**26**		**Pn**	**15 00 51.9**	**-1.5**
ILAR	**Eielson Array**	**11.47**	**26**	Pn	**Pn**	**15 00 49.6**	**-3.7**
	comp=E,0.6nm,0.3s,baz=220,slow=13,SNR=16							
ILAR				LR	LR	15 05 35.2		
	comp=E,63nm,18.2s,baz=187,slow=38							
	comp=E,0.9nm,0.5s							
J25K	**Salcha River,**	**11.75**	**29**		**Pn**	**15 00 55.2**	**-2.0**
O29M	**Mount Kennedy**	**11.94**	**55**		**Pn**	**15 01 01.6**	**+1.7**
F20K	**Avaraart Lake**	**12.28**	**5**		**Pn**	**15 01 04.8**	**+0.4**
M29M	**Somme Creek**	**12.82**	**46**		**Pn**	**15 01 13.2**	**+1.3**
N32M	**Quiet Lake**	**14.77**	**55**	P	**P**	**15 01 48.3**	**+3.9**
I30M	**Mount Dempster**	**15.03**	**38**	IAmb	IAmb	15 02 04.7	
	comp=Z,6.1nm,0.8s						
G29M	**Pine Creek**	**15.52**	**31**	IAmb	IAmb	15 02 09.1	
	comp=Z,9.4nm,0.8s						
DLBC	**Dease Lake**	**15.97**	**66**	LR	LR	15 07 21.5	
	comp=Z,47nm,19.1s,baz=299,slow=34						
G31M	**Satah River**	**16.69**	**34**	P	**P**	**15 02 06.9**	**+1.4**
G31M				IAmb	IAmb	15 02 14.0	
	comp=Z,6.1nm,0.9s						
INK	**Inuvik**	**17.74**	**31**	P	**Pn**	**15 02 15.8**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=241,slow=16,SNR=7.8							
	comp=Z,3.1nm,0.5s							
INK	**Inuvik**	**17.74**	**31**	P	**Pn**	**15 02 16.1**	**-0.2**
YKA	**Yellowknife Ar**	**23.61**	**53**	P	**P**	**15 03 18.9**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=268,slow=8.6,SNR=4.1							
YKA				LR	LR	15 12 56.9		
	comp=Z,44nm,18.3s,baz=306,slow=37							
	comp=Z,0.3nm,0.4s							
PETK	**Petropavlovsk-**	**25.52**	**284**	P	**P**	**15 03 35.9**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=76,slow=13,SNR=14							
PETK				LR	LR	15 14 38.6		
	comp=Z,27nm,19.3s,baz=197,slow=39							
	comp=Z,0.9nm,0.5s							
NEW	**Newport**	**26.22**	**87**	LR	LR	15 12 18.9		
	comp=Z,38nm,18.9s,baz=258,slow=32							
YBH	**Yreka Blue Hor**	**26.84**	**104**	LR	LR	15 12 15.8		
	comp=Z,66nm,18.5s,baz=308,slow=32							
MA2	**Magadan**	**27.31**	**301**	LR	LR	15 14 29.2		
	comp=Z,18nm,21.9s,baz=98,slow=36							
NVAR	**Mina Array Bea**	**31.56**	**105**	P	**P**	**15 04 31.2**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=307,slow=8.7,SNR=4.9							
NVAR				LR	LR	15 15 11.7		
	comp=Z,51nm,19.4s,baz=354,slow=32							
	comp=Z,0.7nm,0.5s							
ELK	**Elko**	**31.73**	**98**	LR	LR	15 15 08.4		
	comp=Z,53nm,19.0s,baz=0.0,slow=32							
YHH	**Holmes Hill**	**31.74**	**88**	P	**P**	**15 04 35.4**	**+1.6**
LAO	**LASA Array**	**33.32**	**82**		**P**	**15 04 44.5**	**-2.7**
PDAR	**Pinedale Array**	**33.71**	**90**	P	**P**	**15 04 49.9**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=308,slow=5.9,SNR=5.8							
	comp=Z,0.6nm,0.6s							
TIXI	**Tiksi**	**34.04**	**327**	LR	LR	15 20 52.1		
	comp=Z,60nm,18.0s,baz=192,slow=40							
PFO	**Pinyon Flats O**	**36.09**	**109**	LR	LR	15 17 21.6		
	comp=Z,52nm,20.6s,baz=218,slow=32							
PV13	**Radium Mtn., P**	**37.14**	**96**	IAmb	IAmb	15 05 22.6		
	comp=Z,3.1nm,0.9s							
ANMO	**Albuquerque**	**40.74**	**97**	LR	LR	15 20 46.5		
	comp=Z,25nm,18.2s,baz=339,slow=33							
FRB	**Frobisher Bay**	**42.99**	**41**	LR	LR	15 25 31.8		
	comp=Z,53nm,18.2s,baz=38,slow=38							
H11N2	**WAKE ISLAND Hy**	**43.80**	**231**	T	T	15 52 33.2		
	baz=28,slow=76,SNR=11							
H11N3	**WAKE ISLAND Hy**	**43.81**	**231**	T	T	15 52 27.6		
	baz=28,slow=76,SNR=7.5							
H11N1	**WAKE ISLAND Hy**	**43.82**	**231**	T	T	15 52 34.5		
	baz=28,slow=76,SNR=6.9							
TX31	**Lajitas Ar. Si**	**46.47**	**100**	P	**P**	**15 06 36.1**	**-0.5**
TX31				IAmb	IAmb	15 06 38.9		
	comp=Z,2.8nm,1.1s							
TXAR	**Lajitas Array**	**46.47**	**100**	P	**P**	**15 06 37.2**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=305,slow=5.9,SNR=10							
TXAR				LR	LR	15 24 46.8		
	comp=Z,48nm,20.2s,baz=326,slow=34							
	comp=Z,0.7nm,0.5s							
TXAR	**Lajitas Array**	**46.47**	**100**	P	**P**	**15 06 36.6**	**0.0**
NRIK	**Noril'sk**	**47.18**	**334**	LR	LR	15 28 55.7		
	comp=Z,25nm,18.0s,baz=152,slow=39							
KSRS	**Korea Array**	**51.40**	**282**	LR	LR	15 29 40.8		
	comp=Z,18nm,20.4s,baz=155,slow=37							
ARCES	**ARCESS Array B**	**55.85**	**358**	P	**P**	**15 07 48.3**	**+1.9**
	comp=Z,1.9nm,0.9s,baz=8.6,slow=9.0,SNR=3.7							
	comp=Z,1.9nm,0.9s							
ZALV	**Zalesovo Beam**	**59.69**	**322**	P	**P**	**15 08 14.7**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=35,slow=3.5,SNR=2.5							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**59.69**	**322**	P	**P**	**15 08 12.1**	**-1.4**
FINES	**FINESS Array B**	**63.96**	**358**	P	**P**	**15 08 43.3**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=7.0,slow=13,SNR=3.5							
	comp=Z,2.6nm,0.9s							
BVAR	**Borovoye Array**	**65.12**	**330**	P	**P**	**15 08 48.9**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=38,slow=7.5,SNR=5.2							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**66.48**	**319**	P	**P**	**15 08 59.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=34,slow=5.5,SNR=2.7							
	comp=Z,0.2nm,0.4s							
EKA	**Eskdalemuir Ar**	**68.29**	**15**	P	**P**	**15 09 11.6**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=330,slow=4.9,SNR=4.0							
	comp=Z,1.0nm,0.7s							
AKASG	**Malin Array Be**	**74.59**	**355**	P	**P**	**15 09 47.4**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=7.3,slow=5.6,SNR=4.7							
	comp=Z,0.4nm,0.4s							
GERES	**GERESS Array B**	**76.43**	**5**	P	**P**	**15 09 59.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=347,slow=5.5,SNR=3.5							
	comp=Z,0.1nm,0.3s							
KBZ	**Khabaz**	**80.09**	**344**	P	**P**	**15 10 21.0**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=270,slow=3.6,SNR=3.7							
	comp=Z,0.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**82.11**	**291**	P	**P**	**15 10 30.7**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=34,slow=4.7,SNR=4.6							
	comp=Z,0.5nm,0.3s							
ESDC	**Sonseca Array**	**83.31**	**20**	P	**P**	**15 10 36.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=343,slow=3.3,SNR=6.4							
	comp=Z,0.4nm,0.6s							
H03N2	**Juan Fernandez**	**111.09**	**118**	T	T	17 17 33.4		
	baz=323							
H03N1	**Juan Fernandez**	**111.10**	**118**	T	T	17 17 24.6		
	baz=323,SNR=3.2							
H03N3	**Juan Fernandez**	**111.11**	**118**	T	T	17 17 31.1		
	baz=323							
QSPA	**South Pole Qui**	**144.66**	**180**	PKP	**PKPab**	**15 17 41.6**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=64,slow=0.2,SNR=6.9							

*HEL **23** 15:00:01.9±0.1, 67°.69N × 26°.99E, h0km, ML1.4, Explosion*
*IDC **23** 15:00:02.4±1.5, 67°.73N × 26°.68E, h0km, mbtmp3.1/1, ML1.9/1, Error ellipse: s-maj=34.4km s-min=13.0km az=85.0*
*BER **23** 15:00:03.8±0.8, 67°.62N × 26°.74E, h0km, Suspected explosion*

ISC 23 15:00:01.1±0.8, 67°76N±0°.04 × 26°99E±0°.04, h0km, n14, σ0§44/21, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.00**	**89**	PG	**Pg**	**15 00 20.0**	**-0.2**
	baz=262						
VRF				smax	smax	15 00 32.5	
	comp=Z,3.5nm,0.2s						
VRF				SG	**Sg**	**15 00 32.7**	**-0.4**
HEF	**Hetta**	**1.41**	**299**	*e*P	**Pg**	**15 00 28.1**	**0.0**
HEF				*e*S	**Sn**	**15 00 47.0**	**-0.2**
HEF	**Hetta**	**1.41**	**299**	PG	**Pg**	**15 00 28.0**	**0.0**
	baz=123						
HEF				smax	smax	15 00 45.2	
	comp=Z,6.7nm,0.2s						
HEF				SG	**Sn**	**15 00 47.0**	**-0.2**
ARA0	**ARCESS Array S**	**1.87**	**344**	*e*P	**Pg**	**15 00 36.5**	**-0.4**
ARA0				*e*S	**Sg**	**15 01 01.1**	**+0.1**
ARCES	**ARCESS Array B**	**1.87**	**344**	Pn	**Pb**	**15 00 35.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=162,slow=17,SNR=15							
ARCES				Sn	**Sg**	**15 01 00.6**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=169,slow=27,SNR=15							
KTK1	**Kautokeino**	**1.88**	**314**	*e*P	**Pb**	**15 00 36.2**	**0.0**
LANU	**Lannavaara**	**1.91**	**281**	*e*P	**Pn**	**15 00 35.2**	**+0.3**
TOF	**Tornio**	**1.99**	**213**	PG	**Pn**	**15 00 36.1**	**+0.3**
	baz=35						
TOF				smax	smax	15 00 59.2	
	comp=Z,2.7nm,0.2s						
TOF				SG	**Sn**	**15 01 01.7**	**+0.3**
KEV	**Kevo**	**2.01**	**0**	PG	**Pb**	**15 00 38.5**	**+0.1**
	baz=189						
KEV				SB	**Sb**	**15 01 04.3**	**+0.4**
KU6	**Riekki**	**2.08**	**145**	PG	**Pn**	**15 00 37.9**	**+0.7**
	baz=324						
KU6				smax	smax	15 01 02.0	
	comp=Z,1.1nm,0.2s						
OBF4	**Vikkela, Lumij**	**3.06**	**195**	PB	**Pn**	**15 00 51.3**	**+0.7**
	baz=16						
OBF4				smax	smax	15 01 29.7	
	comp=Z,0.6nm,0.2s						
I37NO	**I37NO**	**3.37**	**297**	I	I	15 20 05.0	
	baz=110,slow=320,SNR=6.7						
OUF	**Merijarvi**	**3.53**	**196**	PN	**Pn**	**15 00 57.7**	**+0.7**
OUF				SG	**Sb**	**15 01 46.7**	**-0.9**
FINES	**FINESS Array B**	**6.35**	**184**	Pn	**Pn**	**15 01 36.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=13,slow=7.6,SNR=1.8							
	comp=Z,1.9nm,0.9s							

*IDC **23** 15:02:59.8±1.3, 2°.39S × 121°.32E, h0km, mb3.8/5, mbtmp3.8/6, ML3.9/1, MS3.3/2, Error ellipse: s-maj=37.7km s-min=23.4km az=70.0*
*DJA **23** 15:03:01.9±0.2, 2°.3S±2°× 12°1E±°, h10km, M4.3/30, mb4.6/3, ML4.2/30*
*NEIC **23** 15:03:01.1±1.7, 2°.38S±0°.04 × 121°.29E±0°.05, h10km±1km, mb4.2/5, Error ellipse: s-maj=9.0km s-min=7.4km az=76.0*

ISC 23 15:03:00.9±0.7, 2°37S±0°.04 × 121°27E±0°.04, h10km, n31, σ1§20/33, mb4.0/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**1.50**	**15**	P	**Pb**	**15 03 29.4**	**+0.5**
TTSI	**Tana Toraja**	**1.59**	**245**	P	**Pn**	**15 03 28.0**	**-1.2**
KKSI	**Kolaka, Sulawe**	**1.83**	**168**	P	**Pb**	**15 03 33.9**	**-0.6**
LUWI	**Luwuk**	**2.00**	**49**		**Pn**	**15 03 36.1**	**+1.2**
LUWI				Sn	**Sn**	**15 03 59.4**	**-0.6**
LUWI	**Luwuk**	**2.00**	**49**	P	**Pb**	**15 03 36.7**	**-0.8**
PCI	**Palu**	**2.04**	**316**	P	**Pb**	**15 03 38.3**	**+0.2**
KDI	**Kendari**	**2.08**	**139**	P	**Pg**	**15 03 40.3**	**-0.5**
SPSI	**Sidrap Palu**	**2.18**	**223**	P	**Pn**	**15 03 37.0**	**-0.2**
PMSI	**Majene**	**2.60**	**244**	P	**Pn**	**15 03 43.4**	**+0.3**
KAPI	**Kappang**	**3.03**	**210**	Pn	**Pn**	**15 03 49.8**	**+0.9**
	16nm,0.3s,baz=19,slow=6.8,SNR=18							
KAPI				Sn	**Sn**	**15 04 28.4**	**+3.1**
	8.5nm,0.3s,baz=188,slow=20,SNR=7.9							
	56nm,0.3s							
KAPI	**Kappang**	**3.03**	**210**		**Pn**	**15 03 49.7**	**+0.7**
KAPI	**Kappang**	**3.03**	**210**	P	**Pn**	**15 03 49.3**	**+0.3**
MKS	**Makassar**	**3.35**	**212**	P	**Pn**	**15 03 53.9**	**+0.5**
BBSI	**Bau Bau**	**3.36**	**157**	P	**Pn**	**15 03 54.7**	**+1.2**
TOLI2	**Tolitoli**	**3.49**	**352**		**Pn**	**15 03 57.1**	**+1.8**
TOLI2				Sn	**Sn**	**15 04 37.0**	**+0.2**
BSSI	**Bau Bau, Buton**	**3.83**	**192**	P	**Pn**	**15 04 00.7**	**+0.7**
BKB	**Balikpapan**	**4.50**	**284**	Pn	**Pn**	**15 04 09.4**	**+0.1**
BKB				Sn	**Sn**	**15 05 03.8**	**+2.0**
SOEI	**Soe**	**7.92**	**158**		**Pn**	**15 04 59.2**	**+2.8**
BATI	**Baumata**	**8.14**	**163**	LR	LR	15 09 00.7	
	comp=Z,176nm,18.6s,baz=178,slow=44							
WB0	**Warramunga Arr**	**21.53**	**144**	P	**P**	**15 07 49.8**	**-0.7**
WB0				IAmb	IAmb	15 08 33.7	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**21.64**	**145**	P	**P**	**15 07 51.4**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=321,slow=12,SNR=5.2							
	comp=Z,2.4nm,0.8s							
WR8	**Warramunga Arr**	**21.74**	**144**	P	**P**	**15 07 51.8**	**-0.9**
WR8				IAmb	IAmb	15 07 58.2	
	comp=Z,7.3nm,1.0s						
AS31	**Alice Springs**	**24.45**	**151**	P	**P**	**15 08 18.1**	**-2.1**
ASAR	**Alice Springs**	**24.45**	**151**	P	**P**	**15 08 20.4**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=316,slow=9.2,SNR=11							
ASAR				LR	LR	15 18 38.8		
	comp=Z,58nm,18.0s,baz=308,slow=38							
	comp=Z,1.7nm,0.9s							
ASAR	**Alice Springs**	**24.45**	**151**	P	**P**	**15 08 19.0**	**-1.2**
YULB	**Yu-li**	**25.61**	**0**	P	**P**	**15 08 30.1**	**-0.6**
STKA	**Stephens Creek**	**35.05**	**149**	P	**P**	**15 09 54.5**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=346,slow=11,SNR=4.6							
	comp=Z,2.5nm,0.8s							
MKAR	**Makanchi Array**	**59.75**	**330**	P	**P**	**15 13 07.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=126,slow=7.2,SNR=6.6							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**59.75**	**330**	P	**P**	**15 13 05.7**	**-0.4**
QSPA	**South Pole Qui**	**87.58**	**180**	P	**P**	**15 15 48.1**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=280,slow=6.1,SNR=1.0							
	comp=Z,0.4nm,0.8s							
QSPA	**South Pole Qui**	**87.58**	**180**	IAmb	IAmb	15 16 09.9		
	comp=Z,3.5nm,1.4s							

*JMA **23** 15:09:18.5±0.1, 42°.6N±0°.3 × 145°.3E±0°.7, h46km±1km, MV3.0/40, OFF NEMURO PENINSULA*
*SKHL **23** 15:09:19.0±0.6, 42°.60N × 145°.40E, h34km±4km, mb4.5/4*

ISC 23 15:09:21.0±1.7, 42°73N±0°.09 × 145°24E±0°.05, h31km±9km, n15, σ1§79/28, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.35**	**351**	P	**Pb**	**15 09 29.1**	**-0.3**
JKHN				S	**Sn**	**15 09 36.8**	**+0.8**
AKK	**Akkeshi**	**0.41**	**315**	*e*P	**Pb**	**15 09 29.8**	**-0.3**
AKK				*e*S	**Sb**	**15 09 36.9**	**+0.6**
JAK	**Akkeshi**	**0.48**	**304**	P	**Pb**	**15 09 30.8**	**-0.4**
JAK				S	**Sn**	**15 09 39.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.73**	**29**	*i* P	**Pn**	**15 09 33.2**	**-2.0**
NMR				*i* S	**Sb**	**15 09

	0.7nm,0.7s,baz=219,slow=13,SNR=4.5 0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**20.76**	**357**	P		**P**	**15 22 23.4**	**+0.7**
	1.0nm,0.4s,baz=177,slow=12,SNR=7.1 1.0nm,0.4s							
BVAR	**Borovoye Array**	**23.05**	**334**	P		**P**	**15 22 47.8**	**+0.8**
	0.4nm,0.5s,baz=138,slow=9.7,SNR=1.9 0.4nm,0.5s							
KSRS	**Korea Array**	**33.58**	**71**	P		**P**	**15 24 22.8**	**+1.1**
	1.1nm,0.7s,baz=278,slow=9.9,SNR=4.7 1.1nm,0.7s							
MJAR	**Matsushiro Arr**	**41.85**	**71**	P		**P**	**15 25 32.0**	**+0.4**
	1.8nm,1.0s,baz=289,slow=7.1,SNR=4.4 1.8nm,1.0s							
BRTR	**Keskin Array B**	**42.76**	**295**	LR		LR	15 45 15.8	
	comp=Z,21nm,21.3s,baz=100,slow=39							
AKASG	**Malin Array Be**	**45.07**	**311**	P		**P**	**15 25 56.6**	**-0.7**
	0.2nm,0.3s,baz=104,slow=11,SNR=4.1							
AKASG				LR		LR	15 49 00.2	
	comp=Z,29nm,18.5s,baz=43,slow=42 0.2nm,0.3s							
MLR	**Muntele Rosu**	**47.60**	**304**	LR		LR	15 49 47.6	
	comp=Z,28nm,19.4s,baz=33,slow=40							
VRAC	**Vranov**	**53.30**	**310**	LR		LR	15 53 15.0	
	comp=Z,28nm,20.0s,baz=55,slow=40							
HFS	**Hagfors**	**53.58**	**323**	P		**P**	**15 27 03.0**	**+0.8**
	1.5nm,0.8s,baz=91,slow=12,SNR=2.2 1.5nm,0.8s							
NOA	**NORSAR Array B**	**54.72**	**325**	P		**P**	**15 27 09.7**	**-0.8**
	1.0nm,0.8s,baz=89,slow=6.8,SNR=3.2 1.0nm,0.8s							
GERES	**GERESS Array B**	**55.26**	**310**	P		**P**	**15 27 16.3**	**+1.6**
	1.1nm,0.8s,baz=90,slow=8.0,SNR=6.4 1.1nm,0.8s							
DAVOX	**Davos/Dischmat**	**58.26**	**308**	LR		LR	15 58 56.0	
	comp=Z,30nm,18.2s,baz=327,slow=42							
ASAR	**Alice Springs**	**72.19**	**135**	P		**P**	**15 29 06.3**	**-0.1**
	0.4nm,0.8s,baz=326,slow=6.3,SNR=4.4 0.4nm,0.8s							
ILAR	**Eielson Array**	**73.72**	**21**	P		**P**	**15 29 15.2**	**+0.2**
	0.3nm,0.8s,baz=305,slow=5.0,SNR=4.1 0.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.92**	**278**	P		**P**	**15 29 45.2**	**-0.1**
	0.4nm,0.5s,baz=36,slow=5.4,SNR=2.2 0.4nm,0.5s							

*IDC **23** 15:46:26.8±1.0, 53.78S×134.28W, h0km, mb3.9/6, mbtmp3.9/6, MS3.7/14, Error ellipse: s-maj=37.3km s-min=23.8km az=170.0*

*NEIC **23** 15:46:28.2±0.9, 53.8S±0.2×134.3W±0.1, h10km±1km, mb4.3/10, Error ellipse: s-maj=29.0km s-min=8.6km az=11.0*

ISC 23 15:46:27.9±1.0, 53.8S±0.2×134.3W±0.1, h10km, n44, σ0§47/18, mb4.1/9, MS3.8/14, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**32.37**	**45**	LR	LR	16 02 38.3	
	comp=Z,166nm,19.1s,baz=350,slow=30						
VNDA	**Vanda**	**32.60**	**201**	P	**P**	**15 52 59.4**	**+0.5**
	0.5nm,0.2s,baz=94,slow=7.4,SNR=8.0 0.5nm,0.2s						
VNDA	**Vanda**	**32.60**	**201**	P	**P**	**15 52 58.8**	**-0.1**
SMAI	**San Martin Ant**	**33.64**	**141**	P	**P**	**15 53 08.1**	**0.0**
SMAI				IAmb	IAmb	15 53 16.0	
	comp=Z,2.5nm,0.9s						
PMSA	**Palmer Station**	**35.58**	**136**	LR	LR	16 03 27.2	
	comp=Z,342nm,20.7s,baz=231,slow=29						
URZ	**Urewera**	**36.37**	**275**	LR	LR	16 04 28.5	
	comp=Z,126nm,19.5s,baz=144,slow=30						
QSPA	**South Pole Qui**	**36.39**	**180**	P	**P**	**15 53 32.4**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=96,slow=3.1,SNR=3.1						
QSPA				LR	LR	16 05 11.6	
	comp=Z,88nm,19.3s,baz=72,slow=31 comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**36.39**	**180**	P	**P**	**15 53 32.1**	**0.0**
QSPA				IAmb	IAmb	15 53 40.0	
	comp=Z,6.0nm,1.4s						
RPZ	**Rata Peaks**	**36.57**	**263**	LR	LR	16 04 21.9	
	comp=Z,40nm,18.7s,baz=78,slow=29						
PPT	**Papeete**	**38.05**	**336**	LR	LR	16 05 34.0	
	comp=Z,189nm,18.1s,baz=152,slow=30						
RAO	**Raoul Island**	**39.95**	**290**	LR	LR	16 06 07.1	
	comp=Z,65nm,20.1s,baz=289,slow=30						
H03S2	**Juan Fernandez**	**43.37**	**86**	T	T	16 40 44.3	
	baz=223,slow=74,SNR=27						
H03S1	**Juan Fernandez**	**43.38**	**86**	T	T	16 40 43.0	
	baz=223,slow=74,SNR=24						
H03S3	**Juan Fernandez**	**43.39**	**86**	T	T	16 40 43.8	
	baz=223,slow=74,SNR=20						
H03N3	**Juan Fernandez**	**43.64**	**85**	T	T	16 41 08.8	
	baz=226,slow=72,SNR=188						
H03N2	**Juan Fernandez**	**43.65**	**85**	T	T	16 40 56.7	
	baz=226,slow=72,SNR=243						
H03N1	**Juan Fernandez**	**43.66**	**85**	T	T	16 41 03.0	
	baz=226,slow=72,SNR=162						
PLCA	**Paso Flores**	**43.71**	**100**	P	**P**	**15 54 33.3**	**+0.3**
	comp=Z,2.8nm,1.0s,baz=158,slow=8.3,SNR=3.1						
PLCA				LR	LR	16 08 11.5	
	comp=Z,44nm,19.4s,baz=226,slow=30 comp=Z,2.8nm,1.0s						
SNAA	**Sanae**	**50.26**	**162**	LR	LR	16 14 13.3	
	comp=Z,108nm,21.0s,baz=206,slow=33						
CASY	**Casey**	**50.66**	**208**	P	**P**	**15 55 27.0**	**+0.3**
CASY				IAmb	IAmb	15 55 49.2	
	comp=Z,7.2nm,1.4s						
PB14	**IPOC Station P**	**55.16**	**85**	P	**P**	**15 56 00.2**	**-0.6**
MAW	**Mawson**	**58.25**	**188**	LR	LR	16 18 46.6	
	comp=Z,78nm,18.7s,baz=108,slow=33						
MAW	**Mawson**	**58.25**	**188**	P	**P**	**15 56 21.2**	**-0.6**
NNA	**Nana**	**61.40**	**70**	LR	LR	16 17 20.7	
	comp=Z,120nm,18.7s,baz=200,slow=30						
CPUP	**Villa Florida**	**61.62**	**96**	LR	LR	16 18 45.6	
	comp=Z,73nm,21.2s,baz=255,slow=32						
LPAZ	**La Paz**	**62.95**	**80**	P	**P**	**15 56 55.7**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=200,slow=0.9,SNR=6.1						
LPAZ				LR	LR	16 17 54.8	
	comp=Z,29nm,20.7s,baz=248,slow=30 comp=Z,2.3nm,0.9s						
LPAZ	**La Paz**	**62.95**	**80**	P	**P**	**15 56 55.2**	**-0.1**
ASAR	**Alice Springs**	**72.30**	**254**	P	**P**	**15 57 53.6**	**0.0**
	comp=Z,0.9nm,0.8s,baz=140,slow=6.9,SNR=11 comp=Z,0.9nm,0.8s						
H01W1	**Cape Leeuwin H**	**73.80**	**233**	T	T	17 19 37.4	
	baz=144,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**73.80**	**233**	T	T	17 19 36.9	
	baz=144,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**73.81**	**233**	T	T	17 19 38.0	
	baz=144,slow=75,SNR=16						
NWAO	**Narrogin (SRO)**	**73.91**	**236**	P	**P**	**15 58 02.5**	**-0.5**
WR8	**Warramunga Arr**	**74.86**	**257**	P	**P**	**15 58 08.8**	**+0.1**
WR8				IAmb	IAmb	15 58 29.5	
	comp=Z,6.2nm,1.2s						
WRA	**Warramunga Arr**	**74.96**	**257**	P	**P**	**15 58 10.0**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=141,slow=5.5,SNR=4.6 comp=Z,1.4nm,0.7s						
WB0	**Warramunga Arr**	**75.07**	**257**	P	**P**	**15 58 09.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**81.39**	**251**	LR	LR	16 32 23.3	
	comp=Z,92nm,18.6s,baz=6.5,slow=34						
H11S2	**WAKE ISLAND Hy**	**87.93**	**305**	T	T	17 36 49.6	
	baz=148,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**87.94**	**305**	T	T	17 36 54.6	
	baz=148,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**87.95**	**306**	T	T	17 36 59.6	
	baz=148,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**88.88**	**306**	T	T	17 37 52.8	
	baz=148,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**88.89**	**306**	T	T	17 38 10.9	
	baz=148,slow=76,SNR=8.1						
H11N2	**WAKE ISLAND Hy**	**88.90**	**306**	T	T	17 38 02.2	
	baz=148,slow=76,SNR=9.1						
MKAR	**Makanchi Array**	**155.82**	**268**	PKPab	**PKPab**	**16 06 48.7**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=130,slow=4.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**157.14**	**286**	PKPab	**PKPab**	**16 06 53.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=106,slow=3.1,SNR=3.6						

*BJI **23** 15:47:38.2, 56.05N×164.79E, h17km, mB5.0/16, mb4.5/40, Ms5.2/38, Ms7 4.9/38*

*MOS **23** 15:47:39.1±0.9, 56.24N×164.48E, h53km, mb5.1/49, MS4.5/15, Error ellipse: s-maj=5.3km s-min=3.7km az=67.5*

*KRSC **23** 15:47:40.6±1.3, 56.17N×164.50E, h54km±20km, Mc5.8, Ml4.9*

*IDC **23** 15:47:41.1±0.5, 56.18N×164.35E, h0km, mb4.1/32, mbtmp4.1/38, ML4.5/4, MS4.3/89, Error ellipse: s-maj=13.3km s-min=9.5km az=168.0*

*NEIC **23** 15:47:41.8±1.3, 56.22N±0.09×164.3E±0.1, h10km±1km, mb4.9/303, Error ellipse: s-maj=16.9km s-min=10.7km az=147.0*

*GFZ **23** 15:47:43.4±0.2, 56°N±4.4°×16°4E±°, h10km, M4.8/24, mb4.8/24*

*GCMT **23** 15:47:44.8±0.1, 56.24N±0.01×164.52E±0.01, h12km, MW5.0/136, Moment Tensor Solution. s78,c114; s136,c231; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.47±.07; Mθθ-3.49±.07; Mφφ3.96±.06; Mrθ-0.72±.18; Mθφ-2.60±.06; Mφr0.12±.16; Best double couple: Mo4.60700×10^16 NP1:φs27.00000°, δ81.00000°, λ-4.00000°. NP2:φs118.00000°, δ86.00000°, λ-171.00000°. Principal axes: T 4.7990, Plg4.0000°, Azm252.0000°; N -0.3810, Plg80.0000°, Azm141.0000°; P -4.4150, Plg9.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 15:47:41.2±0.7, 56.14N±0.03×164.47E±0.03, h5km±4km, n887, σ1§56/764, mb4.8/225, MS4.5/105, 15C-13D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.93**	**275**	PN	**Pg**	**15 47 58.1**	**-0.8**
KBTR				S	**Sg**	**15 48 09.7**	**-1.2**
KBTR	**Krutoberegovo**	**0.93**	**275**	*e*P	**Pg**	**15 47 58.1**	**-0.8**
KBTR				*e*S	**Sg**	**15 48 09.8**	**-1.2**
KBG	**Krutoberegovo**	**0.99**	**278**	PN	**Pg**	**15 47 59.3**	**-0.9**
KBG	**Krutoberegovo**	**0.99**	**278**	*e*P	**Pg**	**15 47 59.4**	**-0.9**
BKI	**Bering**	**1.26**	**137**	PN	**Pn**	**15 48 03.7**	**-1.8**
BKI				S	**Sb**	**15 48 18.9**	**-3.1**
BKI	**Bering**	**1.26**	**137**	*e*P	**Pn**	**15 48 03.8**	**-1.8**
BKI				*e*S	**Sb**	**15 48 18.9**	**-3.1**
SMKR	**Semkarok**	**1.73**	**286**	PN	**Pn**	**15 48 11.5**	**-0.5**
SMKR	**Semkarok**	**1.73**	**286**	*e*P	**Pn**	**15 48 11.5**	**-0.5**
CIRR	**Tsirk**	**2.08**	**271**	PN	**Pn**	**15 48 17.2**	**+0.3**
CIRR	**Tsirk**	**2.08**	**271**	*e*P	**Pn**	**15 48 17.3**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.12**	**266**	PN	**Pn**	**15 48 17.9**	**+0.5**
BZGR				S	**Sn**	**15 48 42.6**	**-1.6**
BZGR	**Bezymyannyi-Gr**	**2.12**	**266**	*e*P	**Pn**	**15 48 17.9**	**+0.5**
BZGR				*e*S	**Sn**	**15 48 42.7**	**-1.6**
KLY	**Klyuchi**	**2.14**	**276**	PN	**Pn**	**15 48 16.0**	**-1.5**
KLY				S	**Sn**	**15 48 40.2**	**-4.2**
KLY	**Klyuchi**	**2.14**	**276**	*e*P	**Pn**	**15 48 16.1**	**-1.5**
KLY				*e*S	**Sn**	**15 48 40.2**	**-4.2**
BZP	**Bezymyannyi-Pe**	**2.22**	**266**	PN	**Pn**	**15 48 19.1**	**+0.4**
BZP				S	**Sn**	**15 48 43.9**	**-2.7**
BZP	**Bezymyannyi-Pe**	**2.22**	**266**	*e*P	**Pn**	**15 48 19.1**	**+0.4**
BZP				*e*S	**Sn**	**15 48 44.0**	**-2.7**
MKZ	**Mys Kozlova**	**2.22**	**226**	PN	**Pn**	**15 48 17.9**	**-0.8**
MKZ	**Mys Kozlova**	**2.22**	**226**	*e*P	**Pn**	**15 48 17.9**	**-0.8**
MKZ				*e*S	**Sn**	**15 48 43.4**	**-3.2**
BZWR	**Bezymyannyi-We**	**2.23**	**267**	PN	**Pn**	**15 48 19.6**	**+0.6**
BZWR	**Bezymyannyi-We**	**2.23**	**267**	*e*P	**Pn**	**15 48 19.6**	**+0.6**
BZMR	**Bezymyannaya**	**2.24**	**267**	PN	**Pn**	**15 48 19.7**	**+0.6**
BZMR				S	**Sn**	**15 48 43.8**	**-3.4**
BZMR	**Bezymyannaya**	**2.24**	**267**	*e*P	**Pn**	**15 48 19.7**	**+0.6**
BZMR				*e*S	**Sn**	**15 48 43.9**	**-3.4**
KIRR	**Kirishev**	**2.32**	**267**	PN	**Pn**	**15 48 20.8**	**+0.6**
KIRR				S	**Sn**	**15 48 48.7**	**-0.5**
KIRR	**Kirishev**	**2.32**	**267**	*e*P	**Pn**	**15 48 20.8**	**+0.6**
KIRR				*e*S	**Sn**	**15 48 48.7**	**-0.5**
KPT	**Kopyto**	**2.39**	**268**	PN	**Pn**	**15 48 21.7**	**+0.7**
KPT	**Kopyto**	**2.39**	**268**	*e*P	**Pn**	**15 48 21.8**	**+0.7**
KMNR	**Kamenistaya**	**2.41**	**263**	PN	**Pn**	**15 48 22.1**	**+0.8**
KMNR	**Kamenistaya**	**2.41**	**263**	*e*P	**Pn**	**15 48 22.1**	**+0.8**
TUMD	**Tumrok D**	**2.49**	**250**	PN	**Pn**	**15 48 23.3**	**+1.0**
TUMD				S	**Sn**	**15 48 51.6**	**-1.4**
TUMD	**Tumrok D**	**2.49**	**250**	*e*P	**Pn**	**15 48 23.4**	**+1.0**
TUMD				*e*S	**Sn**	**15 48 51.6**	**-1.4**
KOZ	**Kozyrevsk**	**2.58**	**270**	PN	**Pn**	**15 48 24.4**	**+0.9**
KOZ				S	**Sn**	**15 48 53.9**	**-1.3**
KOZ	**Kozyrevsk**	**2.58**	**270**	*e*P	**Pn**	**15 48 24.4**	**+0.9**
KOZ				*e*S	**Sn**	**15 48 54.0**	**-1.3**
TUMR	**Tumrok**	**2.59**	**253**	PN	**Pn**	**15 48 24.8**	**+1.0**
TUMR				S	**Sn**	**15 48 55.6**	**-0.1**
TUMR	**Tumrok**	**2.59**	**253**	*e*P	**Pn**	**15 48 24.8**	**+1.0**
TUMR				*e*S	**Sn**	**15 48 55.6**	**-0.1**
SRDR	**Sredinnyy**	**2.66**	**276**	PN	**Pn**	**15 48 25.6**	**+0.9**
SRDR	**Sredinnyy**	**2.66**	**276**	*e*P	**Pn**	**15 48 25.7**	**+0.9**
OSSR	**Ossora**	**3.21**	**347**	PN	**Pn**	**15 48 29.6**	**-2.7**
OSSR	**Ossora**	**3.21**	**347**	*e*P	**Pn**	**15 48 29.6**	**-2.7**
OSSR				*e*S	**Sn**	**15 49 05.4**	**-5.6**
ESO	**Esso**	**3.24**	**269**	PN	**Pn**	**15 48 33.0**	**+0.3**
ESO	**Esso**	**3.24**	**269**	*e*P	**Pn**	**15 48 33.0**	**+0.3**
ESO				*e*S	**Sn**	**15 49 09.9**	**-1.8**
KII	**Karymskiy**	**3.57**	**236**	PN	**Pn**	**15 48 38.6**	**+1.4**
KII	**Karymskiy**	**3.57**	**236**	*e*P	**Pn**	**15 48 38.7**	**+1.4**
KII				*e*S	**Sn**	**15 49 19.6**	**-0.2**
PALN	**Palana**	**3.83**	**323**	PN	**Pn**	**15 48 39.0**	**-1.6**
PALN				S	**Sn**	**15 49 24.0**	**-2.0**
PALN	**Palana**	**3.83**	**323**	*e*P	**Pn**	**15 48 39.1**	**-1.6**
PALN				*e*S	**Sn**	**15 49 24.0**	**-2.0**
SPN	**Mys Shipunski**	**3.99**	**222**	PN	**Pn**	**15 48 43.5**	**+0.6**
SPN	**Mys Shipunski**	**3.99**	**222**	*e*P	**Pn**	**15 48 43.6**	**+0.6**
SPN				*e*S	**Sn**	**15 49 25.7**	**-4.4**
NLC	**Nalytchevo**	**4.20**	**227**	PN	**Pn**	**15 48 45.6**	**-0.2**
NLC	**Nalytchevo**	**4.20**	**227**	*e*P	**Pn**	**15 48 45.6**	**-0.2**
NLC				*e*S	**Sn**	**15 49 33.7**	**-1.6**
SDLR	**Sedlovina**	**4.32**	**231**	PN	**Pn**	**15 48 48.0**	**+0.4**
SDLR	**Sedlovina**	**4.32**	**231**	*e*P	**Pn**	**15 48 48.0**	**+0.4**
SDLR				*e*S	**Sn**	**15 49 37.7**	**-0.7**
KRER	**Koryakskii**	**4.36**	**232**	PN	**Pn**	**15 48 49.5**	**+1.3**
KRER	**Koryakskii**	**4.36**	**232**	*e*P	**Pn**	**15 48 49.6**	**+1.3**
KRER				*e*S	**Sn**	**15 49 37.5**	**-2.0**
SMAR	**Somma**	**4.37**	**231**	PN	**Pn**	**15 48 49.4**	**+1.1**
SMAR	**Somma**	**4.37**	**231**	*e*P	**Pn**	**15 48 49.4**	**+1.1**
KRX	**Arik**	**4.37**	**233**	PN	**Pn**	**15 48 49.7**	**+1.4**
KRX	**Arik**	**4.37**	**233**	*e*P	**Pn**	**15 48 49.8**	**+1.4**
AVH	**Avacha**	**4.39**	**232**	PN	**Pn**	**15 48 49.0**	**+0.4**
AVH	**Avacha**	**4.39**	**232**	*e*P	**Pn**	**15 48 49.1**	**+0.4**
UGLR	**Uglovaya**	**4.40**	**231**	PN	**Pn**	**15 48 49.1**	**+0.5**
UGLR	**Uglovaya**	**4.40**	**231**	*e*P	**Pn**	**15 48 49.2**	**+0.5**
TILK	**Tilichiki**	**4.41**	**11**	PN	**Pn**	**15 48 47.1**	**-1.6**
TILK	**Tilichiki**	**4.41**	**11**	*e*P	**Pn**	**15 48 47.2**	**-1.6**
TILK				*e*S	**Sn**	**15 49 36.2**	**-4.3**
KOK	**Koryaka**	**4.42**	**232**	PN	**Pn**	**15 48 50.6**	**+1.6**
KOK	**Koryaka**	**4.42**	**232**	*e*P	**Pn**	**15 48 50.6**	**+1.6**
GNL	**Ganaly**	**4.49**	**240**	PN	**Pn**	**15 48 51.6**	**+1.7**
GNL	**Ganaly**	**4.49**	**240**	*e*P	**Pn**	**15 48 51.6**	**+1.7**
DALK	**Dalny**	**4.55**	**229**	PN	**Pn**	**15 48 51.6**	**+1.0**
DALK	**Dalny**	**4.55**	**229**	*e*P	**Pn**	**15 48 51.6**	**+1.0**
DALK				*e*S	**Sn**	**15 49 42.0**	**-1.9**
INSR	**Institute**	**4.59**	**230**	PN	**Pn**	**15 48 51.8**	**+0.6**
INSR	**Institute**	**4.59**	**230**	*e*P	**Pn**	**15 48 51.9**	**+0.6**
INSR				*e*S	**Sn**	**15 49 44.0**	**-0.9**
PET	**Petropavlovsk**	**4.60**	**230**	*e*PN	**Pn**	**15 48 52.5**	**+1.2**
PET				MLR	MLR		
	comp=Z,4μm,15.0s						
PET				MLR	MLR		
	comp=Z,4μm,12.0s						
PET	**Petropavlovsk**	**4.60**	**230**		**Pn**	**15 48 51.6**	**+0.3**
PET				Sn	**Sn**	**15 49 42.9**	**-2.2**
PET	**Petropavlovsk**	**4.60**	**230**	*e*P	**Pn**	**15 48 51.9**	**+0.6**
PET				*e*S	**Sn**	**15 49 43.4**	**-1.6**
PET	**Petropavlovsk**	**4.60**	**230**	P	**Pn**	**15 48 52.5**	**+1.2**
PET	**Petropavlovsk**	**4.60**	**230**	P	**Pn**	**15 48 53.0**	**+1.7**
KRMR	**Karymshinskiy**	**4.96**	**231**	PN	**Pn**	**15 48 57.7**	**+1.5**
KRMR	**Karymshinskiy**	**4.96**	**231**	*e*P	**Pn**	**15 48 57.8**	**+1.5**
KRMR				*e*S	**Sn**	**15 49 53.6**	**-0.3**
PEA0B	**Petropavlovsk-**	**4.97**	**235**	*ce*PN	**Pn**	**15 48 57.7**	**+1.3**
PEA0B	**Petropavlovsk-**	**4.97**	**235**		**Pn**	**15 48 56.2**	**-0.2**
PETK	**Petropavlovsk-**	**4.97**	**235**	Pn	**Pn**	**15 48 57.5**	**+1.1**
	comp=Z,15nm,0.6s,baz=66,slow=16,SNR=96						
PETK				Sn	**Sn**	**15 49 53.5**	**-0.6**
	comp=Z,4.1nm,0.3s,baz=320,slow=14,SNR=3.5						
PETK	**Petropavlovsk-**	**4.97**	**235**	PN	**Pn**	**15 48 56.2**	**-0.2**
PETK	**Petropavlovsk-**	**4.97**	**235**		**Pn**	**15 48 56.2**	**-0.2**
RUS	**Russkaya**	**5.09**	**226**	PN	**Pn**	**15 48 58.6**	**+0.6**
RUS	**Russkaya**	**5.09**	**226**	*e*P	**Pn**	**15 48 58.7**	**+0.6**
RUS				*e*S	**Sn**	**15 49 54.5**	**-2.6**
GRL	**Gorelyy**	**5.18**	**229**	PN	**Pn**	**15 49 01.4**	**+2.0**
GRL	**Gorelyy**	**5.18**	**229**	*e*P	**Pn**	**15 49 01.5**	**+2.0**
MTVR	**Mutnovka**	**5.19**	**228**	PN	**Pn**	**15 49 00.9**	**+1.4**
MTVR	**Mutnovka**	**5.19**	**228**	*e*P	**Pn**	**15 49 00.9**	**+1.4**
MTVR				*e*S	**Sn**	**15 49 56.9**	**-2.9**
APC	**Apacha**	**5.33**	**236**	PN	**Pn**	**15 49 03.1**	**+1.7**
APC	**Apacha**	**5.33**	**236**	*e*P	**Pn**	**15 49 03.2**	**+1.7**
APC				*e*S	**Sn**	**15 50 03.7**	**+0.5**
ASAK	**Asacha**	**5.38**	**228**	PN	**Pn**	**15 49 04.1**	**+2.0**
ASAK	**Asacha**	**5.38**	**228**	*e*P	**Pn**	**15 49 04.2**	**+2.0**
KDTR	**Khodutka, Kamc**	**5.74**	**224**	PN	**Pn**	**15 49 07.4**	**+0.4**
KDTR	**Khodutka, Kamc**	**5.74**	**224**	*e*P	**Pn**	**15 49 07.5**	**+0.4**
KDTR				*e*S	**Sn**	**15 50 09.1**	**-4.1**
MIPR	**Malaya Ipel'ka**	**5.95**	**233**	PN	**Pn**	**15 49 12.4**	**+2.6**
MIPR	**Malaya Ipel'ka**	**5.95**	**233**	*e*P	**Pn**	**15 49 12.5**	**+2.6**
PAU	**Pauzhetka**	**6.51**	**227**	PN	**Pn**	**15 49 19.0**	**+1.4**
PAU	**Pauzhetka**	**6.51**	**227**	*e*P	**Pn**	**15 49 19.0**	**+1.4**
SHEM	**Shemya Is, Ala**	**6.57**	**117**	Pn	**Pn**	**15 49 20.7**	**+2.3**
	comp=Z,7.7nm,0.3s,baz=34,slow=2.4,SNR=7.9						
SHEM				LR	LR	15 51 06.3	
	comp=Z,2μm,18.4s,baz=292,slow=31 comp=Z,52nm,0.5s						
SHEM	**Shemya Is, Ala**	**6.57**	**117**	Pn	**Pn**	**15 49 17.8**	**-0.6**
SHEM				Sn	**Sn**	**15 50 31.9**	**-1.7**
SMY	**Shemya**	**6.57**	**117**	PN	**Pn**	**15 49 19.5**	**+1.1**
SMY	**Shemya**	**6.57**	**117**		**Pn**	**15 49 17.9**	**-0.6**
SKR	**Severo-Kuril's**	**7.39**	**226**	*e*PN	**Pn**	**15 49 31.6**	**+1.9**
SKR				pmax	pmax		
	comp=Z,400nm,3.8s						
SKR				pmax	pmax		
	comp=Z,214nm,1.0s						
SKR	**Severo-Kuril's**	**7.39**	**226**	*e*P	**Pn**	**15 49 30.3**	**+0.7**
MA2	**Magadan**	**8.08**	**301**	Pn	**Pn**	**15 49 41.0**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=109,slow=5.2,SNR=3.7						
MA2				LR	LR	15 52 44.1	
	comp=Z,830nm,21.2s,baz=108,slow=38 comp=Z,1.9nm,0.6s						
MA2	**Magadan**	**8.08**	**301**	PN	**Pn**	**15 49 41.0**	**+2.0**
MA2	**Magadan**	**8.08**	**301**	Pn	**Pn**	**15 49 34.9**	**-4.1**
SEY	**Seymchan**	**9.16**	**323**	Pn	**Pn**	**15 49 54.1**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=132,slow=20,SNR=4.3						
SEY				LR	LR	15 53 34.6	
	comp=Z,3μm,21.0s,baz=132,slow=39						
AMKA	**Amchitka**	**9.99**	**112**	Pn	**Pn**	**15 50 05.3**	**+0.1**
KIWB	**Kanaga Island**	**11.63**	**104**	Pn	**Pn**	**15 50 26.4**	**-1.2**
ADK	**Adak**	**11.87**	**103**	PN	**Pn**	**15 50 33.8**	**+2.9**
ADK	**Adak**	**11.87**	**103**		**Pn**	**15 50 29.6**	**-1.3**
ADK	**Adak**	**11.87**	**103**	P	**Pn**	**15 50 33.9**	**+3.0**
BILL	**Bilibino**	**11.98**	**3**	*ce*PN	**Pn**	**15 50 33.6**	**+1.2**
BILL				MLR	MLR		
	comp=Z,4μm,13.0s						
BILL	**Bilibino**	**11.98**	**3**		**Pn**	**15 50 28.8**	**-3.5**
GSTR	**Great Sitkin T**	**12.11**	**101**		**Pn**	**15 50 32.0**	**-2.2**
OKH	**Okha**	**12.67**	**267**	*c i*PN	Pn	15 50 35.4	-6.4
OKH				pmax	pmax		
	comp=Z,200nm,10.1s						
OKH				MLR	MLR		
	comp=Z,2μm,13.0s						
OKH				MLR	MLR		
	comp=E,2μm,14.0s						
ATKA	**Atka Island**	**13.09**	**99**		**Pn**	**15 50 44.8**	**-2.7**
SPIA	**Saint Paul Isl**	**13.92**	**75**	P	**Pn**	**15 50 58.6**	**-0.3**
	baz=277						
TYV	**Tymovskoe**	**13.99**	**257**	*e*P	**Pn**	**15 51 02.8**	**+3.0**
TYV				*e*S	**Sn**	**15 53 41.2**	**+5.9**
TYV				pmax	pmax		
	comp=Z,24nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,3.9s						
TYV				smax	smax		
	comp=N,200nm,3.9s						
TYV				smax	smax		
	comp=E,300nm,3.9s						
TYV				smax	smax		
	comp=N,10.0nm,1.6s						
TYV				smax	smax		
	comp=E,6.0nm,1.6s						
GAMB	**Gambell**	**14.10**	**47**	Pn	**Pn**	**15 51 01.9**	**+0.5**
GAMB	**Gambell**	**14.10**

L15K	**Ungalak Mounta**	18.28	58	P		P		15 51 56.5	+1.1
	baz=268								
K15K	**Wolf Creek Mou**	18.30	56			Pn		15 51 55.8	+0.3
K15K	**Wolf Creek Mou**	18.30	56	P		P		15 51 57.1	+1.5
	baz=266,SNR=8.9								
H16K	**Elim**	18.31	49	P		P		15 51 56.8	+1.0
	baz=258,SNR=5.6								
C16K	**Lisburne Hills**	18.34	37	P		Pn		15 51 55.5	-0.5
C16K	**Lisburne Hills**	18.34	37	P		P		15 51 56.4	+0.3
	baz=244								
JKA	**Kamikawa-asahi**	18.37	238			Pn		15 51 54.6	-2.0
JKA	**Kamikawa-asahi**	18.37	238	P		P		15 51 57.0	+0.3
ASAJ	**Asahikawa**	18.38	238	P		P		15 51 57.4	+0.8
	comp=Z,2.8nm,0.3s,baz=59,slow=9.7,SNR=27								
ASAJ				LR		LR		15 59 39.2	
	comp=Z,3µm,18.3s,baz=46,slow=39								
	comp=Z,52nm,0.8s								
ASAJ	**Asahikawa**	18.38	238	P		P		15 51 56.9	+0.3
G16K	**Koyuk River**	18.44	46	P		P		15 51 56.9	-0.2
G16K	**Koyuk River**	18.44	46	P		Pn		15 51 57.9	+0.7
	baz=256								
O14K	**Tigyukauivet M**	18.45	66	P		P		15 51 57.6	+0.2
O14K	**Tigyukauivet M**	18.45	66	P		Pn		15 51 59.0	+1.6
	baz=276,SNR=5.4								
YAK	**Yakutsk**	18.65	303	P		Pn		15 52 00.8	+1.0
	comp=Z,1.8nm,0.3s,baz=90,slow=21,SNR=6.3								
YAK				LR		LR		15 59 01.0	
	comp=Z,645nm,18.6s,baz=95,slow=37								
	comp=Z,11nm,0.5s								
YAK	**Yakutsk**	18.65	303	*e*P		P		15 51 59.7	+0.2
YAK				*e*S		Sn		15 55 28.6	+0.3
YAK				pmax		pmax			
	comp=Z,13nm,1.4s								
YAK				pmax		pmax			
	comp=N,1.0nm,1.1s								
YAK				pmax		pmax			
	comp=E,10.0nm,1.4s								
YAK				smax		smax			
	comp=N,127nm,1.8s								
YAK				smax		smax			
	comp=E,62nm,1.8s								
YAK				MLR		MLR			
	comp=Z,768nm,16.0s								
YAK				MLR		MLR			
	comp=N,335nm,16.0s								
YAK				MLR		MLR			
	comp=E,311nm,13.0s								
YAK	**Yakutsk**	18.65	303			P		15 51 56.6	-2.8
YAK	**Yakutsk**	18.65	303	P		Pn		15 52 00.1	+0.4
M15K	**Kasigluk River**	18.66	61	P		Pn		15 52 01.3	+1.4
	baz=272,SNR=5.9								
J16K	**Anvik River**	18.81	53	P		P		15 52 00.4	-0.9
J16K	**Anvik River**	18.81	53	P		Pn		15 52 02.6	+0.9
	baz=264								
I17K	**Unalakleet**	18.84	52	P		P		15 52 00.7	-0.9
I17K				IAmb		IAmb		15 52 13.5	
	comp=Z,118nm,1.6s								
I17K	**Unalakleet**	18.84	52	P		Pn		15 52 03.0	+0.8
	baz=262								
D17K	**Noatak River**	18.88	39	P		Pn		15 52 02.7	+0.1
	baz=248								
N15K	**Kwethluk River**	18.98	63			P		15 52 02.3	-0.9
N15K				IAmb		IAmb		15 52 15.8	
	comp=Z,75nm,1.1s								
N15K	**Kwethluk River**	18.98	63	P		Pn		15 52 04.3	+0.5
	baz=274,SNR=8.3								
RDOG	**Red Dog Mine**	19.08	38	P		P		15 52 03.2	-1.0
RDOG	**Red Dog Mine**	19.08	38	P		Pn		15 52 05.5	+0.5
	baz=248								
E17K	**Hotham Inlet**	19.12	42	P		Pn		15 52 05.9	+0.4
	baz=252,SNR=6.0								
F17K	**Baldwin Pennin**	19.15	44	P		Pn		15 52 06.2	+0.4
	baz=254								
C17K	**DeLong Mountai**	19.15	37	P		Pn		15 52 05.9	+0.1
	baz=246								
G17K	**Kiwalik Mounta**	19.16	47	P		Pn		15 52 06.6	+0.7
	baz=258								
O15K	**Ungalikthiuk R**	19.20	66			P		15 52 05.6	0.0
O15K	**Ungalikthiuk R**	19.20	66	P		Pn		15 52 07.4	+1.0
	baz=277,SNR=6.5								
L16K	**Owhat River**	19.24	58			P		15 52 05.0	-0.9
L16K	**Owhat River**	19.24	58	P		Pn		15 52 07.9	+1.0
	baz=270								
H17K	**Granite Mounta**	19.35	48	IAmb		IAmb		15 52 20.1	
	comp=Z,59nm,1.1s								
H17K	**Granite Mounta**	19.35	48	P		Pn		15 52 08.8	+0.6
	baz=260,SNR=8.5								
M16K	**Timber Creek**	19.50	60	P		P		15 52 09.0	+0.2
M16K				IAmb		IAmb		15 52 21.1	
	comp=Z,115nm,1.6s								
M16K	**Timber Creek**	19.50	60	P		Pn		15 52 10.7	+0.6
	baz=272								
J17K	**VABM Dome**	19.51	53	P		Pn		15 52 10.6	+0.5
	baz=265								
N16K	**Nishlik Lake**	19.62	62	P		Pn		15 52 11.8	+0.3
	baz=274,SNR=5.5								
SDPT	**Sand Point**	19.63	78	P		P		15 52 10.1	-0.1
SDPT				IAmb		IAmb		15 52 23.7	
	comp=Z,111nm,1.4s								
SDPT	**Sand Point**	19.63	78	P		Pn		15 52 11.9	+0.3
	baz=287								
E18K	**Tukpahlearik C**	19.68	41	IAmb		IAmb		15 52 24.4	
	comp=Z,53nm,1.3s								
E18K	**Tukpahlearik C**	19.68	41	P		Pn		15 52 11.9	-0.3
	baz=252								
ERM	**Erimo**	19.74	233	⇓*e*P		P		15 52 09.4	-2.2
ERM	**Erimo**	19.74	233			P		15 52 10.5	-1.1
ERM				IAmb		IAmb		15 52 21.4	
	comp=Z,69nm,1.4s								
L17K	**Donlin**	19.80	57	P		Pn		15 52 13.8	+0.2
	baz=270,SNR=7.9								
F18K	**Selawik**	19.81	44	P		P		15 52 12.9	+0.7
	baz=256								
K17K	**Iditarod**	19.82	55	IAmb		IAmb		15 52 24.4	
	comp=Z,57nm,1.2s								
K17K	**Iditarod**	19.82	55	P		Pn		15 52 13.7	-0.1
	baz=268								
S14K	**Fog Glacier**	19.87	75	P		Pn		15 52 14.8	+0.1
	baz=285,SNR=5.4								
VNFG	**Fog Glacier, M**	19.87	75			Pn		15 52 14.4	-0.2
C18K	**Utukok River**	19.89	37			P		15 52 13.2	0.0
C18K	**Utukok River**	19.89	37	P		Pn		15 52 14.3	-0.4
	baz=248								
O16K	**Kokwok River B**	20.03	65	P		Pn		15 52 16.4	0.0
	baz=277								
H18K	**Honhosa River**	20.03	48	IAmb		IAmb		15 52 28.4	
	comp=Z,125nm,1.6s								
H18K	**Honhosa River**	20.03	48	P		Pn		15 52 16.5	+0.1
	baz=261								
G18K	**Tagagawik**	20.05	46	IAmb		IAmb		15 52 28.3	
	comp=Z,84nm,1.6s								
G18K	**Tagagawik**	20.05	46	P		Pn		15 52 16.6	0.0
	baz=259,SNR=6.3								
P16K	**Nushagak River**	20.16	66	P		P		15 52 15.9	-0.1
P16K	**Nushagak River**	20.16	66	P		Pn		15 52 17.6	-0.2
	baz=278								
M17K	**Holitna River**	20.22	59	P		Pn		15 52 18.7	+0.1
	baz=272,SNR=12								
N17K	**Nushagak Hills**	20.39	62	P		Pn		15 52 20.0	-0.6
	baz=275,SNR=5.8								
O17K	**Koliganek Bris**	20.51	64	P		Pn		15 52 21.6	-0.5
	baz=277								
L18K	**Granite Mounta**	20.56	57	IAmb		IAmb		15 52 32.5	
	comp=Z,61nm,1.4s								
L18K	**Granite Mounta**	20.56	57	P		Pn		15 52 22.3	-0.2
	baz=271,SNR=8.4								
A19K	**Wainwright**	20.56	33	P		P		15 52 21.0	+0.7
	baz=245								
J18K	**Innoko River**	20.57	53	IAmb		IAmb		15 52 32.4	
	comp=Z,84nm,1.2s								
J18K	**Innoko River**	20.57	53	P		Pn		15 52 22.0	-0.8
	baz=267,SNR=27								
F19K	**Shaleruckik Mo**	20.59	44	IAmb		IAmb		15 52 35.4	
	comp=Z,36nm,0.9s								
F19K	**Shaleruckik Mo**	20.59	44	P		Pn		15 52 22.2	-0.7
	baz=257,SNR=21								
C19K	**Lookout Ridge**	20.60	37			P		15 52 21.3	+0.4
C19K				IAmb		IAmb		15 52 33.0	
	comp=Z,69nm,0.9s								
C19K	**Lookout Ridge**	20.60	37	P		P		15 52 22.2	+1.3
	baz=249,SNR=9.4								
GCSA	**Galena City Sc**	20.60	50	P		Pn		15 52 22.3	-0.7
	baz=264								
G19K	**Purcell Mounta**	20.72	46	IAmb		IAmb		15 52 38.2	
	comp=Z,106nm,1.9s								
G19K	**Purcell Mounta**	20.72	46	P		P		15 52 23.3	+1.2
	baz=260								
H19K	**Roundabout Mou**	20.88	47	P		Pn		15 52 25.5	-0.8
	baz=262,SNR=9.5								
Q16K	**King Salmon**	20.90	67	P		Pn		15 52 26.1	-0.4
	baz=280								
D19K	**Kuna River**	20.91	39	IAmb		IAmb		15 52 38.8	
	comp=Z,127nm,1.6s								
D19K	**Kuna River**	20.91	39	P		P		15 52 25.5	+1.4
	baz=253								
P17K	**Kvichak River**	20.92	65	P		P		15 52 25.7	+1.4
	baz=279								
E19K	**Redstone River**	20.94	42	P		Pn		15 52 26.4	-0.7
	baz=256								
M18K	**Stony River**	20.99	59	P		P		15 52 26.3	+1.2
	baz=273,SNR=6.5								
N18K	**Kilae Creek**	21.02	61	P		P		15 52 26.7	+1.3
	baz=276								
J19K	**Poorman**	21.09	52	IAmb		IAmb		15 52 41.2	
	comp=Z,63nm,1.4s								
J19K	**Poorman**	21.09	52	P		P		15 52 27.0	+1.0
	baz=267,SNR=9.8								
R17L	**Mt. Peulik Vol**	21.26	70	P		P		15 52 28.9	+1.0
	baz=283								
ZEA	**Zeya**	21.35	279	*e*P		P		15 52 28.4	-0.5
ZEA				pmax		pmax			
	comp=E,10.0nm,1.4s								
ZEA				pmax		pmax			
	comp=N,10.0nm,1.0s								
ZEA				pmax		pmax			
	comp=Z,20nm,1.0s								
ZEA				MLR		MLR			
	comp=E,400nm,12.0s								
ZEA				MLR		MLR			
	comp=Z,800nm,12.0s								
ZEA				MLR		MLR			
	comp=N,300nm,13.0s								
Q17K	**Contact Creek**	21.37	68	P		P		15 52 30.2	+1.0
	baz=282								
L19K	**White Mountain**	21.42	57	IAmb		IAmb		15 52 41.4	
	comp=Z,79nm,1.6s								
L19K	**White Mountain**	21.42	57	P		P		15 52 30.9	+1.2
	baz=272,SNR=7.1								
F20K	**Avaraart Lake**	21.43	43	P		P		15 52 30.5	+0.9
	baz=259,SNR=6.0								
O18K	**Koktuh Hills**	21.45	63	IAmb		IAmb		15 52 41.6	
	comp=Z,45nm,1.0s								
O18K	**Koktuh Hills**	21.45	63	P		P		15 52 31.0	+1.0
	baz=278								
D20K	**Etivluk River**	21.50	39	IAmb		IAmb		15 52 41.6	
	comp=Z,49nm,1.0s								
D20K	**Etivluk River**	21.50	39	P		P		15 52 31.3	+0.9
	baz=254								
P18K	**Big Mountain,**	21.51	65	P		P		15 52 31.6	+1.0
	baz=279								
E20K	**Nigu River**	21.52	40	P		P		15 52 31.8	+1.0
	baz=256								
H20K	**Anotleneega Mo**	21.53	48	P		P		15 52 31.5	+0.7
	baz=264,SNR=12								
TIXI	**Tiksi**	21.55	330	P		P		15 52 31.8	+0.9
	comp=Z,11nm,0.9s,baz=133,slow=11,SNR=18								
TIXI				LR		LR		16 01 36.6	
	comp=Z,2µm,20.1s,baz=143,slow=39								
	comp=Z,11nm,0.9s								
TIXI	**Tiksi**	21.55	330	*d i*P		P		15 52 31.3	+0.4
TIXI				pmax		pmax			
	comp=Z,64nm,1.3s								
TIXI				MLR		MLR			
	comp=Z,2µm,15.0s								
TIXI	**Tiksi**	21.55	330			P		15 52 29.8	-1.1
TIXI				IAmb		IAmb		15 52 43.2	
	comp=Z,38nm,0.8s								
I20K	**Naaghedeneel**	21.63	50	P		P		15 52 32.6	+0.8
	baz=266								
M19K	**Big River Lodg**	21.65	58	IAmb		IAmb		15 52 51.3	
	comp=Z,86nm,1.8s								
M19K	**Big River Lodg**	21.65	58	P		P		15 52 32.8	+0.6
	baz=274								
JTM	**Tenmabayashi**	21.67	235	P		P		15 52 31.1	-1.4
JTM				IAmb		IAmb		15 52 45.0	
	comp=Z,76nm,1.2s								
JTM	**Tenmabayashi**	21.67	235	P		P		15 52 33.0	+0.5
ACHA	**Angle Creek He**	21.67	68	P		P		15 52 33.4	+0.9
N19K	**Bonanza Creek**	21.69	61	IAmb		IAmb		15 52 48.6	
	comp=Z,43nm,1.2s								
N19K	**Bonanza Creek**	21.69	61	P		P		15 52 32.8	+0.1
	baz=276								
B20K	**Meade River**	21.72	35			P		15 52 32.4	-0.3
B20K	**Meade River**	21.72	35	P		P		15 52 33.1	+0.3
	baz=250								
J20K	**Nowinta River**	21.74	51	P		P		15 52 33.2	+0.1
	baz=268,SNR=7.5								
Q18K	**Katmai Hardscr**	21.75	66	P		P		15 52 33.9	+0.6
	baz=281								
K20K	**Telida**	21.76	54	P		P		15 52 33.7	+0.5
	baz=270,SNR=7.9								
O19K	**Port Alsworth**	21.84	62	P		P		15 52 35.2	+1.0
	baz=278								
IMAR	**Indian Mountai**	22.05	47	P		P		15 52 36.6	+0.3
CHIR	**Chirikof Islan**	22.12	74	P		P		15 52 38.5	+1.3
	baz=288								
G21K	**Allakaket**	22.21	45	IAmb		IAmb		15 52 51.5	
	comp=Z,79nm,1.6s								
G21K	**Allakaket**	22.21	45	P		P		15 52 38.7	+0.6
	baz=263								
M20K	**Styx River**	22.25	58	P		P		15 52 38.6	0.0
	baz=275								
C21K	**Knifeblade Rid**	22.25	38	P		P		15 52 39.0	+0.5
	baz=255								
F21K	**Alatna River**	22.32	43	IAmb		IAmb		15 52 50.6	
	comp=Z,89nm,1.9s								
F21K	**Alatna River**	22.32	43	P		P		15 52 39.5	+0.2
	baz=261,SNR=6.8								
E21K	**Killik River**	22.37	40	P		P		15 52 39.6	-0.2
	baz=258								
H21K	**Melozitna Rive**	22.40	48	IAmb		IAmb		15 52 53.0	
	comp=Z,51nm,1.4s								
H21K	**Melozitna Rive**	22.40	48	P		P		15 52 40.4	+0.2
	baz=266,SNR=6.8								
B21K	**Ikpikpuk River**	22.44	37	P		P		15 52 40.6	+0.2
	baz=254								
ILSW	**Iliamna Southw**	22.46	63	IAmb		IAmb		15 52 59.7	
	comp=Z,29nm,1.1s								
P19K	**Oil**	22.47	63	P		P		15 52 41.4	+0.4
	baz=280								
CHUM	**Lake Minchumin**	22.54	52	P		P		15 52 41.7	+0.1
	baz=270								
RED	**Redoubt Volcan**	22.58	61	P		P		15 52 43.5	+1.3
PPLA	**Purkeypile**	22.62	55	IAmb		IAmb		15 53 02.3	
	comp=Z,47nm,1.2s								
PPLA	**Purkeypile**	22.62	55	P		P		15 52 42.7	0.0
	baz=273,SNR=7.1								
CAST	**Castle Rocks**	22.65	53	P		P		15 52 42.9	0.0
	baz=272								
SII	**Sitkinak Islan**	22.68	72	P		P		15 52 44.6	+1.4
SII	**Sitkinak Islan**	22.68	72	P		P		15 52 42.8	-0.4
	baz=287								
O20K	**Slope Mountain**	22.70	62	P		P		15 52 42.4	-1.1
	baz=279								
I21K	**Tanana**	22.71	49	IAmb		IAmb		15 52 59.3	
	comp=Z,74nm,1.8s								
I21K	**Tanana**	22.71	49	P		P		15 52 43.4	-0.1
	baz=268								
A22K	**Sinclair Lake**	22.75	33	P		P		15 52 43.2	-0.5
	baz=251								
SPCR	**Spurr Chakacha**	22.75	59	P		P		15 52 43.1	-0.9
	baz=277								
HEH	**HeiHe**	22.76	271	*e*P		P		15 52 41.8	-2.3
HEH				pP		pwP		15 52 49.3	-0.4
HEH				S		S		15 56 48.8	-4.3
HEH				sS		Sn		15 57 01.8	-5.4
HEH				pmax		pmax			
	comp=Z,12nm,0.6s								
HEH				pmax		pmax			
	comp=Z,150nm,4.1s								
HEH				L		L			
	comp=Z,1µm,11.3s								
HEH				L		L			
	comp=Z,2µm,13.5s								
HEH				L		L			
	comp=Z,3µm,12.8s								
F22K	**John River**	22.86	43	P		P		15 52 44.2	-0.9
	baz=262								
STLK	**Strandline Lak**	22.90	58	IAmb		IAmb		15 52 57.5	
	comp=Z,65nm,1.7s								
OHAK	**Old Harbor**	22.97	70	P		P		15 52 46.1	-0.1
	baz=286								
SKT	**Skwentna**	22.99	57	IAmb		IAmb		15 52 59.6	
	comp=Z,35nm,1.4s								
SKT	**Skwentna**	22.99	57	P		P		15 52 45.5	-0.9
	baz=276,SNR=5.9								
H22K	**Ishtalitna Cre**	23.01	47	IAmb		IAmb		15 52 58.2	
	comp=Z,67nm,1.7s								
H22K	**Ishtalitna Cre**	23.01	47	P		P		15 52 45.7	-0.9
	baz=266								
B22K	**Teshekpuk Lake**	23.04	35	P		P		15 52 46.1	-0.7
	baz=254								
G22K	**Bettles**	23.05	44	P		P		15 52 46.2	-0.7
	baz=264,SNR=8.7								
E22K	**Anaktuvuk Pass**	23.10	41	IAmb		IAmb		15 52 58.9	
	comp=Z,51nm,1.4s								
E22K	**Anaktuvuk Pass**	23.10	41	P		P		15 52 47.1	-0.4
	baz=261								
KDAK	**Kodiak Island**	23.19	68	P		P		15 52 48.8	+0.3
	comp=Z,12nm,1.1s,baz=346,slow=2.7,SNR=5.2								
KDAK				LR		LR		16 01 41.0	
	comp=Z,1µm,19.1s,baz=262,slow=36								
	comp=Z,12nm,1.1s								
KDAK	**Kodiak Island**	23.19	68	P		P		15 52 48.3	-0.2
KDAK				pmax		pmax			
	comp=Z,79nm,1.6s								
KDAK	**Kodiak Island**	23.19	68	P		P		15 52 48.3	-0.2
KDAK				IAmb		IAmb		15 53 10.3	
	comp=Z,79nm,1.6s								
KDAK	**Kodiak Island**	23.19	68	P		P		15 52 48.5	0.0
	baz=285								
MLY	**Manley**	23.23	49	IAmb		IAmb		15 53 03.1	
	comp=Z,47nm,1.6s								
MLY	**Manley**	23.23	49	P		P		15 52 48.4	-0.5
	baz=269,SNR=8.3								
L22K	**Petersville**	23.30	56	P		P		15 52 49.6	-0.1
	baz=275								
TRF	**Thorofare Moun**	23.46	53	IAmb		IAmb		15 53 03.1	
	comp=Z,29nm,0.9s								
TRF	**Thorofare Moun**	23.46	53	P		P		15 52 51.1	-0.3
	baz=273								
CNPM	**China Poot**	23.49	63	IAmb		IAmb		15 53 12.6	
	comp=Z,23nm,0.8s								
CUT	**Chulitna**	23.54	56	IAmb		IAmb		15 53 02.1	
	comp=Z,39nm,1.0s								
CUT	**Chulitna**	23.54	56	P		P		15 52 51.9	0.0
	baz=276								
COLD	**Coldfoot**	23.59	44	IAmb		IAmb		15 53 02.0	
	comp=Z,78nm,2.0s								
COLD	**Coldfoot**	23.59	44	P		P		15 52 52.0	-0.4
	baz=265								
G23K	**Bananza Creek**	23.61	45	IAmb		IAmb		15 53 16.3	
	comp=Z,48nm,1.6s								
G23K	**Bananza Creek**	23.61	45	P		P		15 52 52.3	-0.4
	baz=266								
D23K	**Nanushuk River**	23.65	39	IAmb		IAmb		15 53 04.1	
	comp=Z,35nm,1.4s								
D23K	**Nanushuk River**	23.65	39	P		P		15 52 52.5	-0.6
	baz=260								
BRSE	**Bradley Lake S**	23.70	63	P		P		15 52 53.7	+0.2
	baz=281								
USA0B	**Ussuriysk Arra**	23.74	254	P		P		15 52 50.5	-3.6
USA0B				pmax		pmax			
	comp=Z,7.0nm,0.8s								
USA0B	**Ussuriysk Arra**	23.74	254	P		P		15 52 50.5	-3.6
USRK	**Ussuriysk Ar.**	23.74	254	P		P		15 52 53.2	-0.9
	comp=Z,4.0nm,0.7s,baz=39,slow=7.3,SNR=5.2								
USRK				LR		LR		16 03 04.4	
	comp=Z,2µm,18.9s,baz=57,slow=39								
	comp=Z,4.0nm,0.7s								
USRK	**Ussuriysk Ar.**	23.74	254	P		P		15 52 50.1	-4.0
USRK	**Ussuriysk Ar.**	23.74	254	P		P		15 52 50.1	-4.0
H23K	**Yukon River**	23.76	47	IAmb		IAmb		15 53 20.1	
	comp=Z,52nm,1.4s								
H23K	**Yukon River**	23.76	47	P		P		15 52 54.3	+0.2
	baz=268								
I23K	**Minto, Yukon-K**	23.82	49	IAmb		IAmb		15 53 10.9	
	comp=Z,47nm,1.2s								
I23K	**Minto, Yukon-K**	23.82	49	P		P		15 52 54.8	+0.2
	baz=270,SNR=20								
C23K	**Itkillik River**	23.84	37	P		P		15 52 54.9	0.0
C23K				IAmb		IAmb		15 53 20.7	
	comp=Z,63nm,1.4s								
C23K	**Itkillik River**	23.84	37	P		P		15 52 55.4	+0.6
	baz=258								
E23K	**Chandalar**	23.90	42	IAmb		IAmb		15 53 14.7	
	comp=Z,25nm,0.8s								
E23K	**Chandalar**	23.90	42	P		P		15 52 55.2	-0.3
	baz=263,SNR=8.5								
NEA2	**Nenana**	23.95	50	P		P		15 52 55.7	-0.2
	baz=272								
RC01	**Rabbit Creek A**	23.95	59	P		P		15 52 56.1	+0.1
	baz=279								
TOLK	**Toolik Lake Re**	24.00	40	P		P		15 52 55.9	-0.5
	baz=262,SNR=6.5								
MCK	**McKinley**	24.05	53	IAmb		IAmb		15 53 22.1	
	comp=Z,32nm,1.1s								
MCK	**McKinley**	24.05	53	P		P		15 52 56.4	-0.5
	baz=274								
O22K	**Cooper Landing**	24.06	61	P		P		15 52 56.5	-0.5
	baz=280								
RND	**Reindeer**	24.10	53	IAmb		IAmb		15 53 21.4	
	comp=Z,37nm,1.1s								
GHO	**Glory Hole Cre**	24.24	57	IAmb		IAmb		15 53 24.5	
	comp=Z,62nm,1.8s								
SEW	**Seward**	24.26	61	P		P		15 52 57.6	-1.3
	baz=281								
WAT1	**Susitna Watana**	24.29	55	P		P		15 52 58.2	-0.9
	baz=276								
E24K	**Your Creek**	24.32	42	IAmb		IAmb		15 53 19.6	
	comp=Z,22nm,0.8s								
E24K	**Your Creek**	24.32	42	P		P		15 52 58.8	-0.7
	baz=264,SNR=11								
D24K	**Happy Valley**	24.34	39	P		P		15 52 59.1	-0.4
	baz=262								
WRH	**Wood River Hil**	24.38	51	IAmb		IAmb		15 53 15.4	
	comp=Z,40nm,1.1s								
H24K	**Noodor Dome**	24.44	47	IAmb		IAmb		15 53 12.2	
	comp=Z,21nm,1.1s								
H24K	**Noodor Dome**	24.44	47	P		P		15 52 59.8	-0.7
	baz=270								
COLA	**College**	24.46	50	⇓*e*P		P		15 53 01.9	+1.2
COLA				pmax		pmax			
	comp=Z,54nm,2.1s								
COLA	**College**	24.46	50	P		P		15 53 00.8	+0.2
COLA	**College**	24.46	50	P		P		15 53 00.0	-0.6
	baz=272								
COLA	**

ILAR	**Eielson Array**	24.88	50			P	P	15 53 03.4	-1.0
SCM	**Sheep Creek Mo**	24.98	57	P		P	P	15 53 04.7	-0.8
	baz=279,SNR=5.8								
G25K	**Bearman Lake**	25.17	45	P		P	P	15 53 05.7	-1.3
	baz=270,SNR=5.3								
D25K	**Kavik River**	25.23	39	IAmb		IAmb		15 53 18.9	
	comp=Z,23nm,0.8s								
D25K	**Kavik River**	25.23	39	P		P	P	15 53 06.5	-1.0
	baz=264								
GLI	**Glacier Island**	25.26	59	P		P	P	15 53 06.6	-1.3
	baz=281								
BNX	**BinXian**	25.27	261	⇑P		P	P	15 53 05.4	-2.7
BNX					pmax	pmax			
	comp=Z,16nm,1.3s								
P23K	**Montague Islan**	25.29	61	P		P	P	15 53 06.9	-1.3
	baz=283								
F25K	**Christian Rive**	25.37	43	IAmb		IAmb		15 53 21.1	
	comp=Z,18nm,0.8s								
F25K	**Christian Rive**	25.37	43	P		P	P	15 53 06.9	-1.9
	baz=268,SNR=10.0								
E25K	**Arctic Village**	25.42	42	P		P	P	15 53 07.6	-1.7
	baz=267,SNR=5.8								
PRP	**Porcupine Dome**	25.42	48	IAmb		IAmb		15 53 32.2	
	comp=Z,17nm,0.9s								
PRP	**Porcupine Dome**	25.42	48	P		P	P	15 53 08.3	-1.2
	baz=273,SNR=8.0								
PSTR	**Posyet**	25.43	252	⇓eP		P	P	15 53 10.9	+1.4
K24K	**Donnelly Dome**	25.44	52	P		P	P	15 53 09.2	-0.3
	baz=276								
M24K	**Tolsona, Glenn**	25.48	56	P		P	P	15 53 08.7	-1.2
	baz=279								
FYU	**Fort Yukon**	25.52	46	IAmb		IAmb		15 53 22.5	
	comp=Z,22nm,0.8s								
J25K	**Salcha River,**	25.54	50	P		P	P	15 53 09.1	-1.4
	baz=275,SNR=7.7								
PAX	**Paxson**	25.68	54	P		P	P	15 53 09.7	-2.1
	baz=278								
KLU	**Klutina**	25.70	57	IAmb		IAmb		15 53 44.2	
	comp=Z,20nm,0.8s								
KLU	**Klutina**	25.70	57	P		P	P	15 53 10.2	-1.8
	baz=281								
C26K	**Camden Bay**	25.80	38	P		P	P	15 53 10.7	-2.1
	baz=264								
DIV	**Divide**	25.84	58	P		P	P	15 53 12.4	-0.8
DIV				IAmb		IAmb		15 53 36.0	
	comp=Z,20nm,1.1s								
RIDG	**Independent Ri**	25.86	52	IAmb		IAmb		15 53 40.3	
	comp=Z,16nm,1.0s								
RIDG	**Independent Ri**	25.86	52	P		P	P	15 53 11.2	-2.2
	baz=277								
HARP	**HAARP**	25.90	55	P		P	P	15 53 11.9	-1.9
	baz=280								
Q23K	**Middleton Isla**	25.94	62	P		P	P	15 53 12.6	-1.4
	baz=285								
F26K	**Sheenjek River**	25.94	43	P		P	P	15 53 14.2	+0.1
F26K	**Sheenjek River**	25.94	43	P		P	P	15 53 11.9	-2.2
	baz=269								
EYAK	**Cordova Ski Ar**	25.97	60	P		P	P	15 53 13.1	-1.2
	baz=283								
G26K	**Porcupine Rive**	26.08	45	IAmb		IAmb		15 53 31.6	
	comp=Z,21nm,1.0s								
G26K	**Porcupine Rive**	26.08	45	P		P	P	15 53 13.7	-1.6
	baz=271								
C27K	**Jago River**	26.19	39	IAmb		IAmb		15 53 45.6	
	comp=Z,24nm,1.0s								
C27K	**Jago River**	26.19	39	P		P	P	15 53 14.7	-1.6
	baz=266								
SCRK	**Sand Creek**	26.21	51	IAmb		IAmb		15 53 26.5	
	comp=Z,17nm,1.0s								
SCRK	**Sand Creek**	26.21	51	P		P	P	15 53 15.3	-1.3
	baz=277,SNR=7.4								
N25K	**Chitina, Valde**	26.30	57	P		P	P	15 53 16.2	-1.3
	baz=282								
MJB9	**Matsu-Tunnel**	26.42	233				P	15 53 18.2	-0.5
MAJO	**Matsushiro**	26.42	233	*c iP*			P	15 53 19.0	+0.4
MAJO					pmax	pmax			
	comp=Z,71nm,1.1s								
MAJO	**Matsushiro**	26.42	233	P		P	P	15 53 17.9	-0.7
MAJO	**Matsushiro**	26.42	233	P		P	P	15 53 19.3	+0.7
MJAR	**Matsushiro Arr**	26.42	233	P		P	P	15 53 19.1	+0.4
	comp=Z,11nm,0.9s,baz=14,slow=8.0,SNR=40								
MJAR					LR	LR		16 04 23.4	
	comp=Z,1μm,19.6s,baz=35,slow=38								
	comp=Z,11nm,0.9s								
MJAR	**Matsushiro Arr**	26.42	233	P		P	P	15 53 18.5	-0.1
MJAR					pmax	pmax			
	comp=Z,77nm,1.3s								
MJAR	**Matsushiro Arr**	26.42	233				P	15 53 18.5	-0.1
BMRM	**Bremner River**	26.43	58	IAmb		IAmb		15 53 55.2	
	comp=Z,28nm,0.9s								
BMRM	**Bremner River**	26.43	58	P		P	P	15 53 17.4	-1.1
	baz=283								
KAIM	**Kayak Island**	26.77	61	P		P	P	15 53 20.4	-1.1
	baz=285								
M26K	**Nabesna, AK**	26.89	55	P		P	P	15 53 21.2	-1.5
	baz=281								
E27K	**Coleen River**	26.91	42	P		P	P	15 53 20.9	-1.9
	baz=271								
G27K	**Doyon Strip**	26.93	45	P		P	P	15 53 21.6	-1.4
	baz=273								
H27K	**Steamboat Moun**	27.02	46	P		P	P	15 53 22.4	-1.4
	baz=275								
K27K	**Chicken**	27.03	51	IAmb		IAmb		15 54 04.5	
	comp=Z,15nm,0.9s								
I27K	**Kandik River**	27.04	48	P		P	P	15 53 22.6	-1.4
	baz=276								
MCARA	**McCarthy VSAT**	27.09	57	P		P	P	15 53 22.5	-2.0
	baz=283								
D27M	**Malcolm River**	27.14	40	P		P	P	15 53 22.5	-2.4
	baz=269								
CRQE	**Cirque**	27.20	58	P		P	P	15 53 23.7	-1.9
	baz=284								
L27K	**Beaver Creek,**	27.30	53	P		P	P	15 53 24.6	-1.8
	baz=281,SNR=6.2								
BCAR	**Beaver Creek A**	27.32	53				P	15 53 26.3	-0.2
HILR	**Hailar Array B**	27.39	275	LR		LR	LR	16 05 37.2	
	comp=Z,750nm,19.3s,baz=75,slow=39								
M27K	**Edge Creek, AK**	27.41	55	IAmb		IAmb		15 53 46.2	
	comp=Z,16nm,1.0s								
M27K	**Edge Creek, AK**	27.41	55	P		P	P	15 53 25.7	-1.8
	baz=282,SNR=5.9								
HIA	**Hailar**	27.55	275	P		P	P	15 53 27.1	-1.6
HIA					pmax	pmax			
	comp=Z,7.0nm,0.6s								
HIA	**Hailar**	27.55	275	P		P	P	15 53 27.1	-1.6
F28M	**Old Crow**	27.58	43	P		P	P	15 53 27.1	-1.7
	baz=273								
JGF	**Kuroka**	27.59	233				P	15 53 28.2	-0.9
JGF	**Kuroka**	27.59	233	P			P	15 53 29.8	+0.7
E28M	**Babbage River**	27.66	41	P		P	P	15 53 27.5	-2.0
	baz=272								
I28M	**Miner Creek**	27.75	48	IAmb		IAmb		15 54 03.6	
	comp=Z,22nm,1.6s								
I28M	**Miner Creek**	27.75	48	P		P	P	15 53 28.2	-2.3
	baz=278								
BVCY	**Beaver Creek**	27.86	54	P		P	P	15 53 31.3	-0.1
	baz=282								
INU	**Inuyama**	27.95	234				P	15 53 31.5	-0.8
INU	**Inuyama**	27.95	234	P		P	P	15 53 33.2	+0.8
DAWY	**Dawson**	28.19	51	P		P	P	15 53 32.5	-1.9
	baz=280								
E29M	**Blow River**	28.28	41	P		P	P	15 53 33.2	-1.8
	baz=274								
H29M	**Whitestone**	28.30	46	IAmb		IAmb		15 53 58.5	
	comp=Z,14nm,0.9s								
H29M	**Whitestone**	28.30	46	P		P	P	15 53 33.3	-1.9
	baz=277								
G29M	**Pine Creek**	28.35	44	IAmb		IAmb		15 53 59.5	
	comp=Z,16nm,0.8s								
G29M	**Pine Creek**	28.35	44	P		P	P	15 53 33.4	-2.3
	baz=276,SNR=5.1								
O28M	**Mount Upton**	28.57	58	P		P	P	15 53 36.0	-2.0
	baz=286								
YUK8	**Steele Glacier**	28.64	56	P		P	P	15 53 36.9	-1.7
	baz=285								
PINM	**Pinnacle**	28.73	59	P		P	P	15 53 37.3	-2.0
	baz=287								
EPYK	**Eagle Plains**	28.94	45	P		P	P	15 53 39.0	-1.9
	baz=278								
L29M	**L29M**	28.94	52	IAmb		IAmb		15 54 15.6	
	comp=Z,11nm,0.8s								
L29M	**L29M**	28.94	52	P		P	P	15 53 39.1	-1.9
	baz=283								
M29M	**Somme Creek**	28.95	54	P		P	P	15 53 40.1	-1.1
	baz=284								
K29M	**Barlow Dome**	29.05	51	P		P	P	15 53 41.6	-0.5
	baz=282								
G30M	**tAoh Zraii Nji**	29.05	44	P		P	P	15 53 41.0	-0.9
	baz=278								
I30M	**Mount Dempster**	29.26	48	P		P	P	15 53 43.1	-0.9
	baz=281								
J30M	**Hart River**	29.41	49	P		P	P	15 53 43.8	-1.4
	baz=282								
O29M	**Mount Kennedy**	29.47	58	P		P	P	15 53 45.0	-0.8
	baz=288								
M30M	**Minto, Yukon**	29.66	53	P		P	P	15 53 46.9	-0.5
	baz=285								
G31M	**Satah River**	29.82	44	P		P	P	15 53 47.8	-0.8
	baz=279								
HYT	**Haines Junctio**	29.82	57	P		P	P	15 53 48.5	-0.4
	baz=288								
N30M	**Aishikik Lake**	29.83	55	P		P	P	15 53 48.7	-0.3
	baz=287								
INK	**Inuvik**	29.90	41	P		P	P	15 53 49.6	+0.2
	comp=Z,2.3nm,0.6s,baz=305,slow=8.5,SNR=4.0								
	comp=Z,2.3nm,0.6s								
INK	**Inuvik**	29.90	41	IAmb		IAmb		15 54 05.8	
	comp=Z,24nm,1.2s								
INK	**Inuvik**	29.90	41	P		P	P	15 53 49.4	+0.1
	baz=278								
F31M	**Tsiigehtchic**	29.94	43	P		P	P	15 53 50.0	+0.3
	baz=279								
H31M	**Peel River**	29.98	46	P		P	P	15 53 50.5	+0.2
H31M	**Peel River**	29.98	46	P		P	P	15 53 50.4	+0.2
	baz=281								
P29M	**Windy Craggy**	30.09	59	P		P	P	15 53 50.7	-0.4
	baz=289								
P30M	**Million Dollar**	30.30	58	P		P	P	15 53 52.5	-0.6
	baz=289								
N31M	**Braeburn, Yuko**	30.42	55	P		P	P	15 53 54.0	-0.2
	baz=288								
KS19	**Wonju Array Si**	30.71	248	P		P	P	15 53 56.0	-0.9
KSRS	**Korea Array**	30.72	248	P		P	P	15 53 56.3	-0.6
	comp=Z,2.3nm,0.8s,baz=38,slow=8.4,SNR=8.1								
KSRS						LR	LR	16 06 44.9	
	comp=Z,776nm,18.2s,baz=40,slow=37								
	comp=Z,2.3nm,0.8s								
JMN	**Monobe**	30.73	236	P		P	P	15 53 55.4	-1.7
KSAR	**Wonju Array Be**	30.75	248	P		P	P	15 53 54.6	-2.5
KSAR	**Wonju Array Be**	30.75	248	P		P	P	15 53 54.6	-2.5
WHY	**Whitehorse**	31.10	56	P		P	P	15 54 00.5	+0.3
	baz=289								
MMPY	**Sheldon Lake,**	32.10	52	P		P	P	15 54 09.9	+0.9
	baz=289								
R32K	**Eaglecrest**	32.13	60	P		P	P	15 54 09.0	-0.1
	baz=293								
P33M	**Teslin, Yukon**	32.21	56	P		P	P	15 54 10.2	+0.3
	baz=291								
S32K	**Killisnoo**	32.42	62	P		P	P	15 54 12.9	+1.2
	baz=294								
JNU	**Nakatsue**	32.65	239	LR		LR		16 06 53.2	
	comp=Z,629nm,20.7s,baz=40,slow=35								
Q32M	**Nakina River**	32.95	58	P		P	P	15 54 16.7	+0.2
	baz=293								
DL2	**Dalian**	33.01	257	P		P	P	15 54 18.6	+1.6
DL2				S		S	S	15 59 36.6	+0.9
DL2					pmax	pmax			
	comp=Z,49nm,1.5s								
DL2					pmax	pmax			
	comp=Z,660nm,7.9s								
DL2					L	L			
	comp=Z,2μm,17.4s								
DL2					L	L			
	comp=Z,2μm,19.4s								
DL2					L	L			
	comp=Z,2μm,17.1s								
C36M	**Paulatuk**	33.09	38	P		P	P	15 54 17.5	+0.2
C36M				IAmb		IAmb		15 54 30.4	
	comp=Z,26nm,1.3s								
JCJ	**Chichijima**	33.15	218	LR		LR		16 07 46.9	
	comp=Z,117nm,20.4s,baz=56,slow=36								
R33M	**Jennings River**	33.39	57	IAmb		IAmb		15 55 08.2	
	comp=Z,38nm,1.9s								
DLBC	**Dease Lake**	34.23	58	P		P	P	15 54 29.2	+1.7
	comp=Z,2.1nm,0.7s,baz=209,slow=7.9,SNR=5.1								
DLBC						LR	LR	16 09 08.8	
	comp=Z,909nm,19.0s,baz=280,slow=38								
	comp=Z,2.1nm,0.7s								
T35M	**Bob Quinn**	34.76	61	IAmb		IAmb		15 55 08.0	
	comp=Z,13nm,1.0s								
NRIK	**Norik**	34.95	323	LR		LR		16 09 30.9	
	comp=Z,887nm,20.6s,baz=77,slow=38								
NRIK	**Noril'sk**	34.95	323	*i* P		P	P	15 54 33.0	-0.5
NRIK					pmax	pmax			
	comp=Z,16nm,1.7s								
NRIK					MLR	MLR			
	comp=Z,956nm,17.0s								
NRIK	**Noril'sk**	34.95	323	P		P	P	15 54 33.1	-0.5
NRIK				IAmb		IAmb		15 55 20.4	
	comp=Z,17nm,1.4s								
TLY	**Talaya**	35.08	289	LR		LR		16 08 45.5	
	comp=Z,1μm,18.7s,baz=44,slow=36								
ULN	**Ulaanbaatar**	35.35	281	*d iP*		P	P	15 54 36.6	-0.8
ULN					pmax	pmax			
	comp=Z,23nm,1.5s								
ULN	**Ulaanbaatar**	35.35	281	P		P	P	15 54 39.4	+1.9
ULN	**Ulaanbaatar**	35.35	281				P	15 54 36.2	-1.2
ULN				IAmb		IAmb		15 54 45.9	
	comp=Z,25nm,1.4s								
ULN	**Ulaanbaatar**	35.35	281	P		P	P	15 54 37.2	-0.2
	comp=Z,58nm,1.4s								
ULN	**Ulaanbaatar**	35.35	281	P		P	P	15 54 37.1	-0.4
SONM	**Songino Array**	35.73	282	P		P	P	15 54 40.2	-0.5
	comp=Z,1.7nm,0.4s,baz=66,slow=9.1,SNR=15								
SONM						LR	LR	16 10 27.0	
	comp=Z,432nm,18.5s,baz=58,slow=38								
	comp=Z,1.7nm,0.4s								
SONM	**Songino Array**	35.73	282	P		P	P	15 54 39.2	-1.5
SONM					pmax	pmax			
	comp=Z,40nm,2.0s								
SONM	**Songino Array**	35.73	282				P	15 54 39.2	-1.5
SONM				IAmb		IAmb		15 54 50.6	
	comp=Z,40nm,2.0s								
ZAK	**Zakamensk**	35.98	287	*eP*		P	P	15 54 42.5	-0.2
ZAK					pmax	pmax			
	comp=Z,8.0nm,2.4s								
H11N2	**WAKE ISLAND Hy**	36.39	176	T		T		16 33 49.8	
	baz=357,slow=76,SNR=3419								
H11N3	**WAKE ISLAND Hy**	36.41	176	T		T		16 33 50.9	
	baz=357,slow=76,SNR=2398								
H11N1	**WAKE ISLAND Hy**	36.41	176	T		T		16 33 51.1	
	baz=357,slow=76,SNR=1646								
MOY	**Mondy**	36.49	290	*eP*		P		15 54 56.3	+9.2
HHC	**Hu-ho-hao-te**	37.25	269	*eP*		P	P	15 54 51.8	-1.8
HHC					pmax	pmax			
	comp=Z,10.0nm,0.6s								
HHC					pmax	pmax			
	comp=Z,68nm,5.7s								
HHC					L	L			
	comp=Z,1μm,15.4s								
HHC					L	L			
	comp=Z,2μm,15.4s								
HHC					L	L			
	comp=Z,1μm,15.5s								
BBB	**Bella Bella**	38.25	67	LR		LR		16 09 29.9	
	comp=Z,711nm,20.5s,baz=300,slow=34								
BTO2	**Baotou**	38.26	270	*eP*		P		15 55 01.9	-0.4
BTO2				sP		pwP		15 55 09.4	+1.4
BTO2				S		S		16 00 56.0	-0.6
BTO2					pmax	pmax			
	comp=Z,11nm,0.5s								
BTO2					pmax	pmax			
	comp=Z,230nm,4.7s								
BTO2					L	L			
	comp=Z,4μm,15.8s								
BTO2					L	L			
	comp=Z,4μm,14.7s								
BTO2					L	L			
	comp=Z,2μm,15.9s								
JMZ	**Minamidaito 2**	38.65	232	P		P	P	15 55 04.3	-1.2
JOW	**Kunigami**	39.13	237	LR		LR		16 13 09.1	
	comp=Z,462nm,18.2s,baz=10,slow=39								
JOW	**Kunigami**	39.13	237				P	15 55 08.0	-1.4
JOW	**Kunigami**	39.13	237	P		P	P	15 55 09.9	+0.5
YKA	**Yellowknife Ar**	39.21	46	P		P	P	15 55 10.2	+0.5
	comp=Z,1.0nm,0.7s,baz=301,slow=8.2,SNR=4.6								
	comp=Z,1.0nm,0.7s								
RES	**Resolute Bay**	39.52	24	LR		LR		16 13 52.0	
	comp=Z,249nm,18.4s,baz=274,slow=40								
NJ2	**Nanjing**	39.63	252	*eP*		P	P	15 55 12.3	-1.3
NJ2					pmax	pmax			
	comp=Z,15nm,0.6s								
NJ2					L	L			
	comp=Z,3μm,14.7s								
NJ2					L	L			
	comp=Z,2μm,13.3s								
NJ2					L	L			
	comp=Z,2μm,15.6s								
ZAA0	**Zalesovo Array**	43.30	302	P		P	P	15 55 42.5	-0.9
ZALV	**Zalesovo Beam**	43.30	302	P		P	P	15 55 45.0	+1.5
	comp=Z,0.2nm,0.2s,baz=77,slow=9.3,SNR=3.8								
ZALV					PP		PcP	15 57 29.6	-2.5
	comp=Z,2.7nm,0.9s,baz=45,slow=9.0,SNR=4.5								
ZALV					LR	LR		16 16 07.8	
	comp=Z,518nm,18.2s,baz=50,slow=40								
	comp=Z,0.2nm,0.2s								
ZALV	**Zalesovo Beam**	43.30	302	P		P	P	15 55 42.3	-1.2
ZALV								15 57 30.4	
ZALV	**Zalesovo Beam**	43.30	302	P		P	P	15 55 42.3	-1.2
ZALV							PcP	15 57 30.4	-1.7
KBS	**Kingsbay**	44.20	353	P		P	P	15 55 49.9	-0.5
KBS					pmax	pmax			
	comp=Z,37nm,1.6s								
KBS	**Kingsbay**	44.20	353	P		P	P	15 55 49.9	-0.5
KBS				IAmb		IAmb		15 55 54.6	
	comp=Z,37nm,1.6s								
SPITS	**Spitsbergen Ar**	44.54	351	P		P	P	15 55 53.0	-0.1
	comp=Z,23nm,0.9s,baz=78,slow=8.1,SNR=12								
SPITS					LR	LR		16 14 16.4	
	comp=Z,264nm,18.4s,baz=16,slow=36								
	comp=Z,23nm,0.9s								
SPITS	**Spitsbergen Ar**	44.54	351	P		P	P	15 55 51.8	-1.4
SPITS					pmax	pmax			
	comp=Z,42nm,1.0s								
SPB2	**Spitsbergen Ar**	44.54	351				P	15 55 52.0	-1.2
DGZ	**Jazzator, Alta**	44.62	296	⇓*eP*			P	15 55 53.9	-0.5
DGZ					pmax	pmax			
	comp=Z,18nm,1.2s								
GTA2	**Gaotai**	44.77	277	*eP*		P	P	15 55 54.6	-1.1
GTA2				sP		pwP		15 56 03.0	+1.6
GTA2				S		S	S	16 02 28.4	-4.7
GTA2					pmax	pmax			
	comp=Z,10.0nm,1.2s								
GTA2					L	L			
	comp=Z,2μm,20.0s								
GTA2					L	L			
	comp=Z,2μm,20.0s								
GTA2					L	L			
	comp=Z,880nm,21.3s								
LON	**Longmire**	44.80	70	P		P	P	15 55 56.2	+0.5
LON					pmax	pmax			
	comp=Z,12nm,1.5s								
LON	**Longmire**	44.80	70	P		P	P	15 55 56.2	+0.5
NEEM	**North Greenlan**	44.86	10	*i P*			P	15 55 56.5	+0.5
NEEM					IAmb	IAmb		15 56 05.8	
	comp=Z,13nm,0.5s								
LZH	**Lanzhou**	44.90	270	*eP*		P	P	15 55 58.3	+1.6
LZH				sP		pwP		15 56 06.8	+4.3
LZH					pmax	pmax			
	comp=Z,19nm,1.3s								
LZH					L	L			
	comp=Z,2μm,12.5s								
LZH					L	L			
	comp=Z,2μm,12.1s								
LZH					L	L			
	comp=Z,3μm,12.8s								
EDM	**Edmonton**	44.94	57	P		P	P	15 55 56.3	-0.4
EDM					pmax	pmax			
	comp=Z,19nm,1.0s								
EDM	**Edmonton**	44.94	57				P	15 55 56.3	-0.4
EDM				IAmb		IAmb		15 56 08.0	
	comp=Z,19nm,1.0s								
B08A	**Colville Reser**	45.05	66	IAmb		IAmb		15 56 08.4	
	comp=Z,33nm,1.8s								
GUMO	**Guam**	45.07	207	LR		LR		16 12 27.3	
	comp=Z,116nm,21.4s,baz=36,slow=33								
LTY	**Liberty**	45.07	68	IAmb		IAmb		15 56 08.7	
	comp=Z,28nm,1.7s								
LZDM	**Lanzhou Array**	45.08	270	P		P	P	15 55 59.1	+0.8
	comp=Z,1.2nm,0.3s,baz=76,slow=7.8,SNR=5.1								
LZDM					LR	LR		16 17 19.7	
	comp=Z,672nm,18.4s,baz=55,slow=40								
	comp=Z,1.2nm,0.3s								
BLKN	**Baker Lake**	45.14	37				P	15 55 58.3	+0.3
BLKN				IAmb		IAmb		15 56 15.2	
	comp=Z,19nm,1.0s								
YULB	**Yu-li**	45.39	242	P		P	P	15 55 59.7	-0.9
MXC	**Moxie City**	45.71	69	P		P	P	15 56 03.0	+0.1
MXC				IAmb		IAmb		15 57 13.0	
	comp=Z,23nm,1.8s								
TPUB	**Ta-pu**	45.80	243	P		P	P	15 56 01.9	-1.9
HOOD	**Mount Hood Mea**	45.82	71	IAmb		IAmb		15 56 27.6	
	comp=Z,17nm,1.0s								
NEW	**Newport**	46.24	65	P		P	P	15 56 08.5	+1.4
	comp=Z,0.5nm,0.3s,baz=314,slow=13,SNR=3.8								
NEW					LR	LR		16 13 51.6	
	comp=Z,719nm,21.3s,baz=310,slow=34								
	comp=Z,0.5nm,0.3s								
NEW	**Newport**	46.24	65	IAmb		IAmb		15 56 17.5	
	comp=Z,11nm,1.4s								
NEW	**Newport**	46.24	65	P		P	P	15 56 10.6	+3.5
WIFE	**Three Sisters-**	46.58	72	P		P	P	15 56 10.3	+0.3
WIFE				IAmb		IAmb		15 56 21.0	
	comp=Z,16nm,1.4s								
KULLO	**Kullorsuaq**	46.64	14	*i* P		P	P	15 56 10.3	+0.5
KULLO				IAmb		IAmb		15 56 11.4	
	comp=Z,16nm,1.1s								
PINE	**Pine Mountain**	47.22	72	IAmb		IAmb		15 56 26.3	
	comp=Z,11nm,1.1s								
DAG	**Danmarks Havn**	47.34	1	P		P	P	15 56 14.6	-0.7
DAG	**Danmarks Havn**	47.34	1	P		P	P	15 56 14.6	-0.7
DAG	**Danmarks Havn**	47.34	1	*i* P		P	P	15 56 18.2	+2.9
DAG				IAmb		IAmb		15 56 18.7	
	comp=Z,3.5nm,0.9s								
ZSN	**Zaisan**	47.38	295	*eP*		P	P	15 56 15.4	-0.6
ZSN					pmax	pmax			
	comp=Z,11nm,1.8s								
ZSN	**Zaisan**	47.38	295	*eP*		P	P	15 56 15.4	-0.6
	comp=Z,11nm,1.8s								
L04D	**Klamath Falls**	47.57	75				P	15 56 18.2	+0.5
YBH	**Yreka Blue Hor**	47.68	75	LR		LR		16 14 50.8	
	comp=Z,180nm,18.2s,baz=312,slow=34								
YBH	**Yreka Blue Hor**	47.68	75	P		P	P	15 56 18.9	+0.4
YBH					pmax	pmax			
	comp=

PLID Pearl Lake 48.94 68 IAmb IAmb 15 56 38.8
comp=Z,13nm,1.4s
MK31 Makanchi Array 49.12 296⇑ *e*P **P** **15 56 26.7 -2.8**
MKAR Makanchi Array 49.12 296 P **P** **15 56 28.7 -0.8**
comp=Z,0.4nm,0.4s,baz=56,slow=6.1,SNR=9.3
MKAR S **S** **16 03 34.8 -0.1**
comp=Z,0.7nm,1.0s,baz=41,slow=13,SNR=3.8
MKAR LR LR 16 18 11.5
comp=Z,362nm,21.3s,baz=30,slow=37
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 49.12 296 P **P** **15 56 27.5 -2.0**
MKAR Makanchi Array 49.12 296 **P** **15 56 27.5 -2.0**
O03E Paynes Creek 49.18 76 **P** **15 56 29.6 -0.4**
O03E IAmb IAmb 15 56 50.1
comp=Z,15nm,1.1s
MAKZ Makanchi 49.27 296 P **P** **15 56 28.6 -2.0**
MAKZ pmax pmax
comp=Z,13nm,1.2s
MAKZ Makanchi 49.27 296 **P** **15 56 28.6 -2.0**
MAKZ IAmb IAmb 15 56 39.2
comp=Z,13nm,1.2s
MAKZ Makanchi 49.27 296 P **P** **15 56 29.2 -1.4**
WVOR Wild Horse Val 49.38 72 P **P** **15 56 32.6 +1.0**
WVOR Wild Horse Val 49.38 72 P **P** **15 56 32.4 +0.8**
BVAR Borovoye Array 50.48 309 P **P** **15 56 39.6 0.0**
comp=Z,3.2nm,0.5s,baz=59,slow=8.2,SNR=20
BVAR PP **PP** **15 58 40.5 +5.6**
comp=Z,11nm,1.1s,baz=52,slow=9.6,SNR=4.7
comp=Z,3.2nm,0.5s
DLMT Dillon 50.49 65 IAmb IAmb 15 56 51.2
comp=Z,16nm,1.2s
BORK Borovoye 50.50 309 *c i*P **P** **15 56 39.9 +0.1**
BORK pmax pmax
comp=Z,24nm,1.0s
BORK Borovoye 50.50 309 **P** **15 56 37.4 -2.4**
BORK IAmb IAmb 15 56 48.8
comp=Z,16nm,0.8s
SUMG Summit 50.60 9 P **P** **15 56 39.7 -1.1**
SUMG pmax pmax
comp=Z,30nm,1.4s
SUMG Summit 50.60 9 P **P** **15 56 39.7 -1.1**
SUMG Summit 50.60 9 *i* P **P** **15 56 39.3 -1.5**
SUMG IAmb IAmb 15 56 50.9
comp=Z,6.7nm,1.0s
HLID Hailey 50.81 68 P **P** **15 56 43.4 +0.9**
ARCES ARCESS Array B 51.16 343 LR LR 16 21 02.1
comp=Z,206nm,18.0s,baz=52,slow=39
PNTR Pine Nut 51.23 76 IAmb IAmb 15 57 17.8
comp=Z,15nm,0.8s
APA Apatity 51.39 338 *e*P **P** **15 56 46.8 +0.6**
APA *e* 15 57 59.5
APA *e* 15 58 37.1
APA pmax pmax
comp=Z,5.0nm,1.3s
APA MLR MLR
comp=Z,753nm,22.3s
SVE Sverdlovsk 51.79 317 *e*P P 15 56 57.6 +8.2
SVE pmax pmax
comp=Z,33nm,1.4s
YPP Pitchstone Pla 52.17 65 IAmb IAmb 15 57 19.8
comp=Z,25nm,1.8s
ILULI Ilulissat 52.31 15 P **P** **15 56 52.3 -0.8**
ILULI pmax pmax
comp=Z,40nm,1.6s
ILULI Ilulissat 52.31 15 P **P** **15 56 52.3 -0.8**
TDK Taldyqorghan 52.32 297 *e*P **P** **15 56 53.0 -0.5**
TDK Taldyqorghan 52.32 297 *e*P **P** **15 56 53.1 -0.5**
ELK Elko 52.38 71 LR LR 16 16 48.7
comp=Z,349nm,21.2s,baz=322,slow=33
NVAR Mina Array Bea 52.40 75 P **P** **15 56 56.1 +1.6**
comp=Z,1.3nm,0.8s,baz=302,slow=8.5,SNR=7.2
NVAR LR LR 16 17 12.9
comp=Z,270nm,20.6s,baz=318,slow=34
comp=Z,1.3nm,0.8s
NVAR Mina Array Bea 52.40 75 P **P** **15 56 55.3 +0.8**
LHV Little Huntoon 52.42 75 IAmb IAmb 15 57 06.4
comp=Z,12nm,1.1s
MDPB Devils Postpil 52.56 76 IAmb IAmb 15 57 27.4
comp=Z,34nm,1.8s
LOHW Long Hollow 52.74 65 IAmb IAmb 15 57 08.8
comp=Z,16nm,1.4s
ARTI Arti 52.96 318 LR LR 16 22 47.2
comp=Z,459nm,18.8s,baz=46,slow=40
ARTI Arti 52.96 318 *d i*P **P** **15 56 58.1 0.0**
ARTI 15 58 05.3
ARTI 15 58 58.8
ARTI S **S** **16 04 27.9 +0.3**
ARTI SS **SS** **16 08 06.0 +0.3**
ARTI pmax pmax
comp=Z,17nm,2.1s
ARTI MLR MLR
comp=Z,385nm,14.0s
ARTI Arti 52.96 318 **P** **15 56 56.6 -1.4**
PDGK Podgornoye 52.96 294 P **P** **15 56 56.4 -2.1**
PDGK Podgornoye 52.96 294 **P** **15 56 56.4 -2.1**
JMIC Jan Mayen 53.08 357 LR LR 16 19 32.8
comp=Z,103nm,18.5s,baz=18,slow=36
SHLS Shalkode 53.10 294 *e*P **P** **15 56 57.2 -2.2**
SHLS pmax pmax
comp=Z,12nm,0.9s
SHLS Shalkode 53.10 294 *e*P **P** **15 56 57.3 -2.2**
comp=Z,12nm,0.9s
TPH Tonopah 53.24 75 IAmb IAmb 15 57 12.0
comp=Z,11nm,1.1s
KPKS Kokpek 53.27 295 *e*P **P** **15 57 00.2 -0.5**
KPKS Kokpek 53.27 295 *e*P **P** **15 57 00.2 -0.5**
PZH PanZhiHua 53.30 263 P **P** **15 57 00.8 -0.3**
UZB Uzynbulak 53.33 295 *e*P **P** **15 57 00.4 -0.8**
UZB Uzynbulak 53.33 295 *e*P **P** **15 57 00.5 -0.8**
DSP Deep Springs 53.35 76 IAmb IAmb 15 57 33.4
comp=Z,33nm,1.8s
TGY Tagaytay City 53.53 236 LR LR 16 23 04.1
comp=Z,298nm,18.0s,baz=78,slow=40
SCO Scoresbysund 53.60 3 P **P** **15 57 02.4 -0.1**
SCO pmax pmax
comp=Z,21nm,1.7s
SCO Scoresbysund 53.60 3 P **P** **15 57 02.4 -0.1**
SCO IAmb IAmb 15 57 26.7
comp=Z,21nm,1.7s
FRB Frobisher Bay 53.67 26 LR LR 16 23 10.7
comp=Z,299nm,18.5s,baz=318,slow=40
SATY Saty 53.71 295 *e*P **P** **15 57 03.3 -0.6**
SATY Saty 53.71 295 *e*P **P** **15 57 03.4 -0.6**
VES Vestal, Richgr 53.87 78 P **P** **15 57 05.2 +0.2**
BW06 Boulder Array 53.88 65 IAmb IAmb 15 57 16.0
comp=Z,9.6nm,1.1s
PD31 Pinedale Array 53.88 65 IAmb IAmb 15 57 16.0
comp=Z,9.3nm,1.1s
PDAR Pinedale Array 53.88 65 P **P** **15 57 06.3 +1.0**
comp=Z,1.0nm,0.8s,baz=319,slow=4.3,SNR=12
PDAR LR LR 16 21 11.5
comp=Z,216nm,20.2s,baz=322,slow=37
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 53.88 65 **P** **15 57 05.1 -0.2**
CWC Cottonwood Cre 53.98 77 IAmb IAmb 15 57 18.2
comp=Z,27nm,1.8s
DUG Dugway, Tooele 54.05 70 P **P** **15 57 06.7 +0.1**
DUG Dugway, Tooele 54.05 70 P **P** **15 57 06.7 +0.1**
PRZ Przheval'sk 54.13 294 P **P** **15 57 05.2 -1.9**
PRZ pmax pmax
comp=Z,13nm,1.0s
PRZ Przheval'sk 54.13 294 P **P** **15 57 05.2 -1.9**
PRZ IAmb IAmb 15 57 17.3
comp=Z,12nm,1.0s
MDOK Medeo 54.32 296 *e*P **P** **15 57 07.6 -0.9**
MDOK Medeo 54.32 296 *e*P **P** **15 57 07.7 -0.8**
SFJD Kangerlussuaq 54.42 16 LR LR 16 23 03.5
comp=Z,280nm,18.0s,baz=339,slow=39
KIRV Kirov 54.43 324 LR LR 16 23 30.9
comp=Z,546nm,18.5s,baz=42,slow=40
KIRV Kirov 54.43 324 *c e*P **P** **15 57 09.3 +0.5**
TNSS Tian-Shan 54.46 296 *e*P **P** **15 57 08.8 -1.0**
TNSS Tian-Shan 54.46 296 *e*P **P** **15 57 08.9 -1.0**
MPMC Manual Prospec 54.58 77 IAmb IAmb 15 57 41.7
comp=Z,30nm,1.9s
PSUT Pine Spring 54.72 72 IAmb IAmb 15 57 51.3
comp=Z,8.7nm,1.0s
QIZ Qiongzhong 54.89 251 P **P** **15 57 10.5 -2.1**
QIZ S **S** **16 04 52.9 -1.6**
QIZ L L
comp=Z,480nm,14.5s
QIZ L L
comp=Z,350nm,12.7s
QIZ L L
comp=Z,560nm,13.8s

ULM Lac du Bonnet 54.90 51 LR LR 16 22 20.6
comp=Z,172nm,18.8s,baz=348,slow=38
PRN Pahroc Range 54.91 74 IAmb IAmb 15 57 34.8
comp=Z,8.9nm,0.9s
GWY Greenwater Val 54.93 76 IAmb IAmb 15 57 38.9
comp=Z,12nm,1.0s
KDJ Kajisay 55.01 295 P **P** **15 57 11.0 -2.5**
KDJ pmax pmax
comp=Z,9.0nm,1.1s
KDJ Kajisay 55.01 295 P **P** **15 57 11.0 -2.5**
KDJ IAmb IAmb 15 57 22.9
comp=Z,9.1nm,1.1s
SGDS Sogindy 55.32 298 *e*P **P** **15 57 15.1 -0.5**
GSC Goldstone, Bar 55.51 77 IAmb IAmb 15 57 46.8
comp=Z,11nm,0.9s
KLMR Klimovskoe 55.56 331 *e*P **P** **15 57 16.2 -0.7**
KLMR pmax pmax
comp=Z,24nm,1.4s
KLMR MLR MLR
comp=Z,724nm,15.0s
RSSD Black Hills 55.64 61 P **P** **15 57 17.7 -0.4**
RSSD pmax pmax
comp=Z,9.0nm,1.0s
RSSD Black Hills 55.64 61 **P** **15 57 17.7 -0.4**
RSSD IAmb IAmb 15 57 28.5
comp=Z,9.3nm,1.0s
P18A Preston Nutter 55.81 69 IAmb IAmb 15 57 52.4
comp=Z,7.5nm,0.9s
SZCU Shurtz Canyon 55.82 72 IAmb IAmb 15 57 33.5
comp=Z,7.3nm,0.9s
AAK Ala-Archa 55.98 297 LR LR 16 20 57.3
comp=Z,421nm,20.0s,baz=46,slow=36
AAK Ala-Archa 55.98 297⇓ *e*P **P** **15 57 17.6 -2.9**
AAK pmax pmax
comp=Z,15nm,1.0s
AAK MLR MLR
comp=Z,215nm,15.0s
AAK Ala-Archa 55.98 297 P **P** **15 57 24.7 +4.2**
AAK Ala-Archa 55.98 297 **P** **15 57 18.9 -1.6**
AAK IAmb IAmb 15 57 30.0
comp=Z,12nm,1.0s
AAK Ala-Archa 55.98 297 P **P** **15 57 20.6 +0.1**
SRU San Rafael Swe 56.05 69 IAmb IAmb 15 57 46.9
comp=Z,14nm,0.9s
TNCH TengChong 56.25 265 *e*P **P** **15 57 22.3 -0.3**
TNCH sP pwP 15 57 28.3 -0.1
TNCH S **S** **16 05 10.8 -2.1**
TNCH pmax pmax
comp=Z,9.0nm,0.6s
TNCH pmax pmax
comp=Z,150nm,6.2s
TNCH L L
comp=Z,400nm,15.3s
TNCH L L
comp=Z,420nm,13.6s
TNCH L L
comp=Z,660nm,18.6s
AGMN Agassiz Nation 56.36 52 P **P** **15 57 23.8 +0.9**
O20A White River Ci 56.48 67 IAmb IAmb 15 57 35.5
comp=Z,9.8nm,0.7s
PFO Pinyon Flats O 56.97 78 LR LR 16 19 10.4
comp=Z,278nm,20.2s,baz=294,slow=33
DZA Taraz 57.36 299 *e*P **P** **15 57 29.6 -0.5**
DZA Taraz 57.36 299 *e*P **P** **15 57 29.6 -0.5**
PV03 Paradox Valley 57.56 69 IAmb IAmb 15 57 55.0
comp=Z,10nm,1.1s
KK31 Karatay Array 57.60 300 P **P** **15 57 31.0 -0.7**
KK31 pmax pmax
comp=Z,30nm,1.1s
KK31 Karatay Array 57.60 300 **P** **15 57 31.0 -0.7**
KKAR Karatay Array 57.60 300 P **P** **15 57 31.2 -0.6**
KKAR Karatay Array 57.60 300 **P** **15 57 31.2 -0.6**
AKTO Aktyubinsk 57.61 313 LR LR 16 23 12.0
comp=Z,411nm,18.7s,baz=4.5,slow=37
PV02 Paradox Valley 57.65 69 P **P** **15 57 33.4 +0.9**
AB31 Akbulak array 57.73 311 **P** **15 57 31.7 -0.8**
ABKAR Akbulak array 57.73 311 **P** **15 57 31.4 -1.1**
DAV Davao City (W) 57.74 227 LR LR 16 23 48.8
comp=Z,205nm,18.5s,baz=3.5,slow=38
BRLS Borolday 57.98 300 *e*P **P** **15 57 35.7 +1.3**
BRLS pmax pmax
comp=Z,17nm,1.5s
BRLS Borolday 57.98 300 *e*P **P** **15 57 35.8 +1.3**
comp=Z,18nm,1.5s
KSH2 Kashi 58.04 294 P **P** **15 57 35.0 -0.1**
KSH2 pmax pmax
comp=Z,4.0nm,1.7s
KSH2 L L
comp=Z,920nm,16.8s
KSH2 L L
comp=Z,1μm,14.8s
KSH2 L L
comp=Z,770nm,16.2s
ISCO Idaho Springs 58.07 65 P **P** **15 57 37.3 +1.8**
ISCO Idaho Springs 58.07 65 P **P** **15 57 37.3 +1.8**
FINES FINESS Array B 58.29 338 P **P** **15 57 36.2 -0.1**
comp=Z,1.7nm,0.8s,baz=108,slow=6.2,SNR=6.1
FINES LR LR 16 26 07.2
comp=Z,441nm,18.1s,baz=38,slow=40
comp=Z,1.7nm,0.8s
EYMN Ely 58.53 50 IAmb IAmb 15 57 48.6
comp=Z,9.1nm,1.1s
EYMN Ely 58.53 50 P **P** **15 57 39.2 +1.0**
IUG luzhnay 58.55 300 *e*P **P** **15 57 38.1 -0.4**
IUG pmax pmax
comp=Z,25nm,1.3s
IUG luzhnay 58.55 300 *e*P **P** **15 57 38.1 -0.4**
comp=Z,25nm,1.3s
BORG Borgarnes 59.36 3 LR LR 16 25 01.7
comp=Z,133nm,18.1s,baz=351,slow=38
SHL Shillong 59.54 271 P **P** **15 57 43.8 -1.9**
SHL pmax pmax
comp=Z,22nm,1.1s
SHL Shillong 59.54 271 P **P** **15 57 48.1 +2.4**
SHL Shillong 59.54 271 P **P** **15 57 43.8 -1.9**
BELG Belogornoye 60.01 321 *c i*P **P** **15 57 48.8 +0.5**
BELG pmax pmax
comp=Z,20nm,1.2s
MOS Moscow 60.43 329 *e*P P 15 58 00.5 +9.4
MOS pmax pmax
comp=Z,51nm,0.8s
EVN Everest 60.51 277 **P** **15 57 50.3 -2.5**
GAR Garm 60.81 297 **P** **15 57 53.1 -1.1**
GAR Garm 60.81 297 P **P** **15 57 57.0 +2.9**
VSU Vasula 60.85 336⇓ *e*P **P** **15 57 53.6 -0.3**
VSU pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai 60.97 260 P **P** **15 57 55.8 +0.5**
CHTO Chiang Mai 60.97 260 P **P** **15 57 55.9 +0.5**
CHTO Chiang Mai 60.97 260 **P** **15 57 54.0 -1.3**
CHTO Chiang Mai 60.97 260 P **P** **15 57 55.6 +0.3**
comp=Z,16nm,1.1s
CHTO Chiang Mai 60.97 260 P **P** **15 57 55.8 +0.5**
KRVT Keravat (AS076 61.10 194 LR LR 16 19 15.4
comp=Z,47nm,21.7s,baz=330,slow=31
NC204 NORSAR Array S 61.12 346 P **P** **15 57 55.4 -0.4**
CMAR Chiang Mai Arr 61.26 260 P **P** **15 57 57.8 +0.5**
comp=Z,4.2nm,0.9s,baz=20,slow=7.0,SNR=23
CMAR LR LR 16 26 18.1
comp=Z,473nm,19.3s,baz=35,slow=38
comp=Z,4.2nm,0.9s
CMAR Chiang Mai Arr 61.26 260 **P** **15 57 56.2 -1.0**
OBN Obninsk 61.27 329 LR LR 16 28 36.0
comp=Z,285nm,18.6s,baz=5.0,slow=40
OBN Obninsk 61.27 329⇑ *e*P **P** **15 57 56.8 -0.1**
OBN *e* 16 00 12.1
OBN *e*PPP PPP 16 01 36.5
OBN *e*S **S** **16 06 19.4 +2.4**
OBN *e*SS **SS** **16 10 19.0 +2.8**
OBN *e*SSS SSS 16 12 57.9
OBN pmax pmax
comp=Z,29nm,1.1s
OBN MLR MLR
comp=Z,426nm,16.0s
NB2 NORSAR Subarra 61.28 346 P **P** **15 57 56.9 0.0**
comp=Z,12nm,1.2s,baz=18,slow=6.9
NOA NORSAR Array B 61.28 346 P **P** **15 57 56.4 -0.6**
comp=Z,1.3nm,0.6s,baz=22,slow=7.3,SNR=7.5
NOA LR LR 16 25 20.7
comp=Z,125nm,20.2s,baz=15,slow=37
comp=Z,1.3nm,0.6s
ANMO Albuquerque 61.32 69 LR LR 16 24 13.2
comp=Z,205nm,19.1s,baz=330,slow=36
JAY Jayapura 61.59 207 LR LR 16 21 49.4
comp=Z,104nm,21.7s,baz=8.5,slow=33
CHGR Chuyangaron 61.65 298⇓ *e*P **P** **15 57 57.4 -2.4**
CHGR pmax pmax
comp=Z,99nm,1.3s
CHGR Chuyangaron 61.65 298 **P** **15 57 59.1 -0.7**
CHGR Chuyangaron 61.65 298 P **P** **15 58 00.6 +0.8**
NPW Naypyitaw 61.74 263 P **P** **15 58 00.8 +0.2**
SCHQ Schefferville 61.75 31 LR LR 16 29 53.6
comp=Z,226nm,18.1s,baz=298,slow=41
HFS Hagfors 61.78 344 P **P** **15 57 59.3 -0.9**
comp=Z,1.6nm,0.5s,baz=27,slow=3.6,SNR=9.9
HFS LR LR 16 24 13.7
comp=Z,254nm,21.9s,baz=22,slow=36
comp=Z,1.6nm,0.5s
LPSR Galich'ya Gora 62.73 326 *e*P P 15 58 13.8 +7.1
LPSR pmax pmax
comp=Z,26nm,1.0s
DHRM DHARAMSHALA 62.92 288 *e*P **P** **15 58 09.8 +1.2**
SHAA Shahritus 63.01 298 **P** **15 58 08.2 -0.7**
SHAA IAmb IAmb 15 58 18.5
comp=Z,113nm,1.2s
VRH Novokhopyorsk 63.03 324 *e*P **P** **15 58 13.4 +4.7**
VRH pmax pmax
comp=Z,21nm,0.9s
SMLA Simla 63.33 287 *e*P **P** **15 58 11.7 +0.6**
NIL Nilore 63.44 291 P **P** **15 58 14.8 +3.0**
NIL Nilore 63.44 291 P **P** **15 58 14.8 +3.0**
VORR Voronezh 63.44 325 *e*P **P** **15 58 12.9 +1.4**
VORR pmax pmax
comp=Z,36nm,0.4s
VSR Storozhevoye 63.85 325 *e*P **P** **15 58 13.5 -0.7**
VSR pmax pmax
comp=Z,19nm,0.4s
MNK Minsk 64.16 334 *i* P **P** **15 58 15.3 -0.9**
MNK *i* P **P** **15 58 15.3 -0.9**
comp=N,11nm,0.8s
MNK *i* P **P** **15 58 15.3 -0.9**
comp=Z,7.0nm,0.7s,baz=25
MNK *i* PP **PP** **16 00 42.8 +6.3**
MNK *i* PPP PPP 16 02 09.9
MNK *i* S **S** **16 06 54.3 +1.0**
MNK *i* SS **SS** **16 11 04.7 +3.5**
MNK *i* SSS SSS 16 14 05.5
MNK *i* LQ LQ 16 22 23.7
MNK *i* LR LR 16 26 58.6
MNK *i* LRM MLR 16 29 46.4
comp=N,329nm,15.9s
MNK *i* LRM MLR 16 29 48.9
comp=E,292nm,18.6s
MNK *i* LRM MLR 16 29 56.5
comp=Z,522nm,18.1s
MNK Minsk 64.16 334 *i* P **P** **15 58 15.2 -0.9**
MNK *i* 16 00 42.8
MNK *i* PPP PPP 16 02 09.8
MNK *i* S **S** **16 06 54.3 +1.0**
MNK *i* SS **SS** **16 11 04.7 +3.5**
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK MLR MLR
comp=N,329nm,16.0s
MNK MLR MLR
comp=E,292nm,19.0s
MNK MLR MLR
comp=Z,522nm,18.0s
MNTX Cornudas Mount 64.40 71 **P** **15 58 18.7 +0.6**
MNTX IAmb IAmb 15 58 29.2
comp=Z,9.8nm,1.2s
KBL Kabul 64.91 295 P **P** **15 58 26.3 +4.6**
SNR=6.9
KBL P **P** **15 58 26.3 +4.6**
SNR=6.9
WMOK Wichita Mounta 65.43 64 P **P** **15 58 24.3 -0.5**
WMOK pmax pmax
comp=Z,7.0nm,1.0s
WMOK Wichita Mounta 65.43 64 **P** **15 58 24.3 -0.5**
WMOK IAmb IAmb 15 58 35.5
comp=Z,7.4nm,1.0s
SADO Sadowa 66.15 44 LR LR 16 29 25.9
comp=Z,266nm,18.1s,baz=360,slow=38
TRQ Mont Tremblant 66.65 40 IAmb IAmb 15 58 47.9
comp=Z,14nm,1.2s
PMG Port Moresby 66.87 199 LR LR 16 22 19.7
comp=Z,164nm,20.8s,baz=37,slow=31
TX31 Lajitas Ar. Si 67.17 71 IAmb IAmb 15 58 47.5
comp=Z,5.2nm,0.9s
TXAR Lajitas Array 67.17 71 P **P** **15 58 36.9 +0.7**
comp=Z,1.8nm,0.8s,baz=299,slow=4.3,SNR=16
comp=Z,1.8nm,0.8s
TXAR Lajitas Array 67.17 71 P **P** **15 58 36.4 +0.3**
TXAR Lajitas Array 67.17 71 **P** **15 58 36.4 +0.3**
AK04 Malin Array Si 67.25 331 P **P** **15 58 36.9 +0.8**
AKASG Malin Array Be 67.25 331 P **P** **15 58 36.1 0.0**
comp=Z,0.4nm,0.3s,baz=28,slow=6.3,SNR=6.3
AKASG LR LR 16 31 56.8
comp=Z,767nm,18.5s,baz=24,slow=40
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 67.25 331 IAmb IAmb 15 59 10.8
comp=Z,8nm,1.4s
AKBB Malin Array Si 67.25 331⇑ *e*P **P** **15 58 34.1 -2.0**
AKBB pmax pmax
comp=Z,12nm,1.1s
KIEV Kiev 67.26 331 P **P** **15 58 37.3 +1.1**
comp=Z,31nm,1.4s
AK20 Malin Array Si 67.27 331 P **P** **15 58 36.3 0.0**
AK18 Malin Array Si 67.27 331 P **P** **15 58 36.8 +0.5**
AK11 Malin Array Si 67.29 331 P **P** **15 58 37.6 +1.2**
RNPP9 Sopachiv 67.47 333 P **P** **15 58 38.1 +0.5**
RNPP8 Varash 67.55 333 P **P** **15 58 39.1 +1.0**
RNPP5 Staryi Chortor 67.64 333 P **P** **15 58 39.9 +1.3**
LPIG La Paz 67.72 80 LR LR 16 25 55.4
comp=Z,124nm,19.4s,baz=331,slow=34
GOF Gofitskoye 67.81 319 *c e*P **P** **15 58 42.8 +3.0**
MAK Makhachkala 67.89 315 *e*P **P** **15 58 35.6 -4.7**
MAK *e*PPP PPP 16 02 42.2
MAK *e*S **S** **16 07 31.4 -7.7**
MAK *e*SS **SS** **16 11 56.4 -3.3**
MAK pmax pmax
comp=Z,91nm,0.9s
MAK MLR MLR
comp=Z,499nm,16.0s
LUBAR Lubar, Ukraine 68.36 332 P **P** **15 58 44.1 +1.0**
HRA Herat 68.42 300 P **P** **15 58 42.6 -1.5**
EKA Eskdalemuir Ar 68.43 352 P **P** **15 58 43.6 +0.1**
comp=Z,2.7nm,1.0s,baz=27,slow=5.6,SNR=4.7
EKA LR LR 16 25 09.9
comp=Z,75nm,21.2s,baz=8.0,slow=33
comp=Z,2.7nm,1.0s
EKA Eskdalemuir Ar 68.43 352 P **P** **15 58 42.6 -0.9**
KVAR Kislovodsk Arr 68.88 319 LR LR 16 32 01.0
comp=Z,496nm,19.9s,baz=275,slow=39
KIV Kislovodsk 68.89 319 *e*P **P** **15 58 47.6 +0.9**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,322nm,17.0s
L56A Greenwood 68.99 45 **P** **15 58 47.4 +0.1**
L56A IAmb IAmb 15 59 02.2
comp=Z,10nm,1.0s
KBZ Khabaz 69.00 319 P **P** **15 58 47.6 +0.4**
comp=Z,1.5nm,0.5s,baz=212,slow=2.3,SNR=4.7
KBZ LR LR 16 33 04.8
comp=Z,496nm,18.3s,baz=24,slow=40
comp=Z,1.5nm,0.5s
KBZ Khabaz 69.00 319⇓ *e*P **P** **15 58 47.2 -0.1**
KBZ pmax pmax
comp=Z,17nm,1.1s
AKT Akhty 69.05 314 *e*P **P** **15 58 46.5 -1.3**
AKT *e* 15 59 12.5
AKT *e*S **S** **16 07 57.3 +4.1**
AKT pmax pmax
comp=Z,33nm,1.2s
KMPD K-Podol'skiy 69.94 332 P **P** **15 58 53.5 +0.5**
OJC Ojcow 70.02 337 P **P** **15 58 52.5 -1.0**
OJC Ojcow 70.02 337 **P** **15 58 52.5 -1.0**
OJC Ojcow 70.02 337 P **P** **15 58 54.0 +0.5**
SOC Sochi 70.28 321 *e*P **P** **15 58 55.1 -0.1**
SOC *e* 16 01 34.2
SOC *e*PPP PPP 16 03 10.9
SOC *e*S **S** **16 08 07.6 +0.2**
SOC *e*SS **SS** **16 12 39.9 +3.4**
SOC MLR MLR
comp=Z,356nm,14.0s
CLL Collm 70.35 341 *e*P **P** **15 58 55.0 -0.4**
CLL pmax pmax
comp=Z,15nm,1.6s

CLL	**Collm**	**70.35 341**	*e*P	**P**	**15 58 55.0**	**-0.4**
	comp=Z,15nm,1.6s					
CLL			*i* x	x	15 59 03.4	
	comp=Z,40nm,2.1s					
CLL			*e*PP	**PP**	**16 01 31.0**	**+0.7**
CLL			*e*PPPP		16 04 05.0	
CLL			*e*S	**S**	**16 08 09.0**	**+1.1**
CLL			*e*SS	**SS**	**16 12 42.0**	**+5.0**
CLL			*e*SSS	SSS	16 16 00.0	
CLL			*e*SSSS		16 17 18.0	
BRG	**Berggiesshubel**	**70.59 341**	*e*P	**P**	**15 59 00.0**	**+3.1**
BRG			Amp		15 59 01.9	
	comp=Z,1.6nm,0.7s					
BRG	**Berggiesshubel**	**70.59 341**	P	P	15 59 05.7	+8.8
BRG			Amp		15 59 07.9	
	comp=Z,3.0nm,0.9s					
BRG	**Berggiesshubel**	**70.59 341**	S	S	16 08 20.0	+9.2
MORC	**Moravsky Berou**	**70.93 338**	P	**P**	**15 58 58.4**	**-0.7**
MORC			pmax	pmax		
	comp=Z,9.0nm,1.2s					
MORC	**Moravsky Berou**	**70.93 338**	P	**P**	**15 58 58.4**	**-0.7**
MORC			IAmb	IAmb	15 59 24.0	
	comp=Z,9.1nm,1.2s					
MORC	**Moravsky Berou**	**70.93 338**	*e*P	**P**	**15 58 59.3**	**+0.2**
KAPI	**Kappang**	**71.07 228**	LR	LR	16 34 41.8	
	comp=Z,36nm,18.0s,baz=44,slow=40					
LANS	**Liptovska Anna**	**71.10 337**	*e*P	**P**	**15 58 57.6**	**-2.5**
LANS			pmax	pmax		
	comp=Z,4.0nm,0.9s					
LANS	**Liptovska Anna**	**71.10 337**	*e*P	**P**	**15 58 57.6**	**-2.5**
GNI	**Garni**	**71.37 315**	LR	LR	16 33 13.7	
	comp=Z,506nm,20.6s,baz=29,slow=38					
GNI	**Garni**	**71.37 315**	P	P	15 59 07.8	+5.7
GNI			P	P	15 59 07.8	+5.7
VRAC	**Vranov**	**71.57 338**	LR	LR	16 35 04.2	
	comp=Z,236nm,18.2s,baz=26,slow=40					
VRAC	**Vranov**	**71.57 338**	*e*P	**P**	**15 59 03.6**	**+0.7**
JAVC	**Velka Javorina**	**71.77 338**	*e*P	**P**	**15 59 05.7**	**+1.5**
TKL	**Tuckaleechee C**	**71.83 53**	LR	LR	16 31 33.4	
	comp=Z,881nm,20.7s,baz=355,slow=37					
KRUC	**Moravsky**	**71.84 339**	*e*P	**P**	**15 59 05.0**	**+0.4**
COEN	**Coen**	**72.07 202**	P	**P**	**15 59 09.3**	**+3.1**
	comp=Z,13nm,0.9s					
GERES	**GERESS Array B**	**72.58 340**	P	**P**	**15 59 09.5**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=36,slow=5.0,SNR=5.0					
	comp=Z,0.9nm,1.0s					
MLR	**Muntele Rosu**	**72.91 331**	LR	LR	16 33 45.8	
	comp=Z,626nm,20.9s,baz=30,slow=38					
CONA	**Conrad Observa**	**73.03 339**	*i* P	**P**	**15 59 13.1**	**+1.3**
	comp=Z,5.6nm,1.2s					
RONA	**Rosalia, Austr**	**73.16 338**	*i* P	**P**	**15 59 14.5**	**+2.0**
	comp=Z,3.6nm,1.1s					
MOA	**Molln**	**73.43 340**	*i* P	**P**	**15 59 15.0**	**+0.9**
	comp=Z,6.3nm,1.5s					
BIOA	**Bad Ischl, Aus**	**73.70 340**	*e*P	**P**	**15 59 17.2**	**+1.6**
	comp=Z,1.3nm,0.4s					
ARSA	**Arzberg**	**73.75 339**	*i* P	**P**	**15 59 18.4**	**+2.4**
	comp=Z,2.6nm,0.8s					
152A	**Waverly Hall**	**73.90 55**	IAmb	IAmb	15 59 26.0	
	comp=Z,13nm,1.0s					
LESA	**Schwarzleotal**	**74.14 341**	*i* P	**P**	**15 59 19.1**	**+0.8**
	comp=Z,3.3nm,1.2s					
MTN	**Manton Dam**	**74.15 214**	P	**P**	**15 59 22.2**	**+3.7**
	comp=Z,7.9nm,1.3s					
KBA	**Koelnbreinsper**	**74.34 340**	*i* P	**P**	**15 59 21.0**	**+1.4**
	comp=Z,8.1nm,1.2s					
SOKA	**Soboth**	**74.39 339**	*i* P	**P**	**15 59 21.1**	**+1.3**
	comp=Z,5.9nm,1.6s					
RETA	**Reutte**	**74.42 342**	*e*P	**P**	**15 59 20.0**	**+0.1**
	comp=Z,1.6nm,0.6s					
WATA	**Walderalm**	**74.43 341**	*e*P	**P**	**15 59 21.3**	**+1.3**
	comp=Z,3.5nm,0.7s					
MSVF	**Nonsavu**	**74.47 167**	LR	LR	16 26 06.3	
	comp=Z,230nm,20.2s,baz=358,slow=31					
WTTA	**Wattenberg**	**74.48 341**	*i* P	**P**	**15 59 21.0**	**+0.5**
	comp=Z,3.6nm,0.7s					
MOTA	**Moosalm**	**74.50 342**	*e*P	**P**	**15 59 21.4**	**+0.9**
	comp=Z,2.0nm,0.6s					
SQTA	**Sankt Quirin**	**74.60 341**	*i* P	**P**	**15 59 20.2**	**-0.8**
	comp=Z,5.5nm,1.0s					
OBKA	**Obir**	**74.65 339**	*i* P	**P**	**15 59 23.0**	**+1.6**
	comp=Z,7.5nm,1.3s					
MYKA	**Terra Mystica**	**74.72 340**	*e*P	**P**	**15 59 22.5**	**+0.8**
	comp=Z,3.1nm,0.9s					
DAVA	**Damuels**	**74.77 342**	*i* P	**P**	**15 59 22.8**	**+0.8**
	comp=Z,3.8nm,1.0s					
ABTA	**Abfaltersbach**	**74.82 340**	*e*P	**P**	**15 59 24.3**	**+2.0**
	comp=Z,1.7nm,0.5s					
FETA	**Feichten**	**74.88 342**	*i* P	**P**	**15 59 22.3**	**-0.4**
	comp=Z,3.8nm,1.2s					
DAVOX	**Davos/Dischmat**	**75.26 342**	LR	LR	16 35 22.0	
	comp=Z,296nm,20.9s,baz=80,slow=38					
BRTR	**Keskin Array B**	**75.81 323**	P	**P**	**15 59 27.5**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=46,slow=3.6,SNR=4.4					
BRTR			LR	LR	16 36 11.4	
	comp=Z,242nm,21.4s,baz=42,slow=38					
	comp=Z,0.7nm,0.5s					
MTSU	**Mount Surprise**	**75.91 200**	P	P	15 59 39.2	+11
	comp=Z,7.5nm,1.1s					
CTA	**Charters Tower**	**77.47 198**	LR	LR	16 32 58.4	
	comp=Z,40nm,19.8s,baz=25,slow=35					
LEM	**Lembang**	**78.10 238**	LR	LR	16 34 37.9	
	comp=Z,110nm,20.9s,baz=176,slow=36					
SHME	**Shamm**	**78.25 299**	P	**P**	**15 59 43.9**	**+2.0**
UOSS	**Minazif**	**79.15 299**	P	**P**	**15 59 48.5**	**+1.6**
QIS	**Mount Isa**	**79.24 204**	P	P	15 59 56.6	+9.5
	comp=Z,7.0nm,1.1s					
HATD	**Hatta, Dubai**	**79.28 299**	P	P	15 59 54.7	+7.0
	SNR=5.5					
HATD			P	P	15 59 54.7	+7.0
	SNR=5.5					
NAZ	**Nazwa, Dubai**	**79.38 299**	P	P	15 59 55.1	+7.0
NAZ			P	P	15 59 55.1	+7.0
ASHO	**Ashiyiah**	**79.44 299**	P	P	15 59 56.3	+7.8
	SNR=5.7					
ASHO			P	P	15 59 56.3	+7.8
	SNR=5.7					
FAQ	**Al Faqa, Dubai**	**79.61 299**	P	P	15 59 58.3	+8.9
SOHO	**SOHO**	**79.66 298**	P	P	15 59 56.8	+7.1
SOHO			P	P	15 59 56.8	+7.1
HOQ	**Hoqain**	**79.74 297**	P	P	15 59 57.3	+7.2
HOQ			P	P	15 59 57.3	+7.2
SMDO	**Samad**	**79.81 296**	P	P	15 59 58.2	+7.6
SMDO			P	P	15 59 58.2	+7.6
JLN	**Jalan Bani Buh**	**79.88 295**	P	P	16 00 00.2	+9.3
JLN			P	P	16 00 00.2	+9.3
WR8	**Warramunga Arr**	**79.92 209**	P	**P**	**15 59 53.5**	**+2.7**
WRA	**Warramunga Arr**	**79.95 209**	P	**P**	**15 59 52.9**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=19,slow=4.9,SNR=6.6					
	comp=Z,1.3nm,0.8s					
WRA	**Warramunga Arr**	**79.95 209**	P	**P**	**15 59 51.0**	**-0.1**
WRA			pmax	pmax		
	comp=Z,1.0nm,0.9s					
WRA	**Warramunga Arr**	**79.95 209**	P	**P**	**15 59 51.0**	**-0.1**
ALNE	**Al Ain**	**80.12 298**	P	P	15 59 59.7	+7.5
ARQ	**Araqi**	**80.34 297**	P	P	16 00 01.0	+7.7
ARQ			P	P	16 00 01.0	+7.7
JMDO	**Jabal Madar**	**80.35 296**	P	P	16 00 01.0	+7.6
JMDO			P	P	16 00 01.0	+7.6
BSY	**Bisya**	**80.50 297**	P	P	16 00 02.2	+8.0
BSY			P	P	16 00 02.2	+8.0
PALK	**Pallekele**	**80.53 269**	LR	LR	16 38 32.4	
	comp=Z,213nm,21.4s,baz=40,slow=38					
FITZ	**Fitzroy Crossi**	**80.85 217**	LR	LR	16 44 11.3	
	comp=Z,39nm,18.0s,baz=6.5,slow=42					
MMAI	**Mount Meron Ar**	**81.20 319**	LR	LR	16 40 18.2	
	comp=Z,146nm,18.1s,baz=36,slow=39					
ASF	**Jabal al Asfar**	**81.40 317**	LR	LR	16 41 59.2	
	comp=Z,296nm,18.1s,baz=26,slow=40					
MHTO	**MHTO**	**81.58 295**	P	P	16 00 08.0	+8.0
	SNR=6.8					
CMIG	**Matias Romero**	**81.77 72**	LR	LR	16 34 57.4	
	comp=Z,82nm,20.1s,baz=332,slow=35					
MZR	**Muzera**	**82.11 300**	P	P	16 00 10.3	+7.6
MZR			P	P	16 00 10.3	+7.6
IDI	**Anoyia**	**82.65 328**	LR	LR	16 40 08.2	
	comp=Z,141nm,18.7s,baz=30,slow=38					
RAR	**Rarotonga**	**82.77 147**	LR	LR	16 29 44.6	
	comp=Z,140nm,21.7s,baz=334,slow=30					
PPT	**Papeete**	**82.95 136**	LR	LR	16 29 08.8	
	comp=Z,146nm,21.4s,baz=330,slow=30					
VAE	**Valguarnera**	**83.33 336**	LR	LR	16 41 39.7	
	comp=Z,256nm,19.2s,baz=346,slow=39					
AS15	**Alice Springs**	**83.58 208**	P	**P**	**16 00 14.3**	**+4.1**
	comp=Z,11nm,1.0s					
AS17	**Alice Springs**	**83.59 208**	P	**P**	**16 00 12.2**	**+2.0**
	comp=Z,9.4nm,0.9s					
AS31	**Alice Springs**	**83.61 208**	P	**P**	**16 00 11.4**	**+1.1**
	comp=Z,2.7nm,0.9s					
ASAR	**Alice Springs**	**83.61 208**	P	**P**	**16 00 09.8**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=15,slow=5.7,SNR=11					
ASAR			LR	LR	16 35 21.4	
	comp=Z,82nm,21.8s,baz=26,slow=34					
	comp=Z,1.1nm,0.8s					
ASAR	**Alice Springs**	**83.61 208**		**P**	**16 00 10.3**	**-0.1**
AS09	**Alice Springs**	**83.64 208**	P	P	16 00 20.1	+10
	comp=Z,12nm,1.0s					
ESDC	**Sonseca Array**	**84.05 351**	P	**P**	**16 00 13.7**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=347,slow=6.1,SNR=5.6					
	comp=Z,0.3nm,0.5s					
ESDC	**Sonseca Array**	**84.05 351**	P	**P**	**16 00 12.3**	**-0.4**
EIL	**Elat**	**84.37 318**	LR	LR	16 43 43.7	
	comp=Z,463nm,18.2s,baz=76,slow=40					
RAYN	**Ar Rayn**	**85.41 306**	P	**P**	**16 00 18.3**	**-1.4**
RAYN			pmax	pmax		
	comp=Z,19nm,1.4s					
RAYN	**Ar Rayn**	**85.41 306**		**P**	**16 00 18.3**	**-1.4**
KEST	**Kesra**	**86.07 340**	LR	LR	16 45 18.6	
	comp=Z,168nm,18.0s,baz=7.5,slow=40					
RAO	**Raoul Island**	**86.36 165**	LR	LR	16 32 42.0	
	comp=Z,267nm,20.4s,baz=342,slow=31					
WRKA	**Warakurna**	**86.49 212**	P	**P**	**16 00 26.5**	**+1.8**
CMSA	**Cobar Meteorol**	**88.78 196**	P	P	16 00 46.5	+11
	comp=Z,10nm,1.4s					
STKA	**Stephens Creek**	**89.81 199**	LR	LR	16 35 49.0	
	comp=Z,100nm,20.5s,baz=21,slow=32					
JTS	**Las Juntas de**	**92.67 67**	LR	LR	16 44 59.7	
	comp=Z,74nm,21.6s,baz=341,slow=37					
URZ	**Urewera**	**94.64 170**	LR	LR	16 38 18.3	
	comp=Z,110nm,19.9s,baz=19,slow=32					
SJG	**San Juan**	**94.69 48**	LR	LR	16 46 56.5	
	comp=Z,146nm,19.1s,baz=90,slow=38					
ATD	**Arta Tunnel**	**97.07 303**	LR	LR	16 52 11.5	
	comp=Z,6.8nm,18.1s,baz=16,slow=40					
RPZ	**Rata Peaks**	**99.63 175**	LR	LR	16 42 14.6	
	comp=Z,29nm,18.8s,baz=12,slow=33					
MAW	**Mawson**	**143.95 220**	P	**PKiKP**	**16 07 23.1**	**+3.6**
MAW	**Mawson**	**143.95 220**	PKP	**PKPdf**	**16 07 16.1**	**+0.1**
	comp=Z,4.8nm,1.0s,baz=22,slow=1.7,SNR=8.2					
MAW	**Mawson**	**143.95 220**	PKIKP	**PKPdf**	**16 07 15.0**	**-1.0**
MAW	**Mawson**	**143.95 220**		**PKPdf**	**16 07 15.0**	**-1.0**
QSPA	**South Pole Qui**	**145.89 180**	PKPbc	**PKPab**	**16 07 20.7**	**0.0**
	comp=Z,1.8nm,0.8s,baz=319,slow=1.2,SNR=21					
QSPA	**South Pole Qui**	**145.89 180**		**PKPbc**	**16 07 20.3**	**+0.1**
VNA2	**Neumayer--Watz**	**164.74 190**	||PKPab	PKPab	16 08 49.1	+8.8
	comp=Z,2.6nm,0.7s,baz=165,slow=2.0					
VNA1	**Neumayer--Stat**	**165.09 189**	PKPab	PKPab	16 08 50.1	+8.3

TAP ***23*** *15:52:01.1,24.°69N×122.°68E,h114km,ML2.8,D*
JMA ***23*** *15:52:01.6±0.2,25.°N±2.°×122.°7E±0.°7,h112km±1km,*
MV1.7/12,NW OFF ISHIGAKIJIMA IS

ISC 23 15:52:01.7±1.7,24.°66N±0.°06×122.°66E±0.°03,
h111km±10km,n48,σ0.81/80,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.34**	**129**	*e*S	**Sn**	**15 52 29.7**	**-0.1**
YOJ	**Yonaguni jima**	**0.38**	**122**	P	**Pn**	**15 52 17.8**	**-0.2**
YOJ				S	**Sn**	**15 52 30.1**	**-0.1**
EOS2	**EOS2**	**0.46**	**238**	*e*S	**Sn**	**15 52 32.2**	**+1.4**
EOS3	**EOS3**	**0.48**	**220**	P	**Pn**	**15 52 19.1**	**+0.6**
EOS3				S	**Sn**	**15 52 32.6**	**+1.6**
EOS4	**EOS4**	**0.62**	**210**	P	**Pn**	**15 52 20.0**	**+0.9**
EOS4				S	**Sn**	**15 52 32.9**	**+0.6**
TWC	**Suao**	**0.74**	**266**	*e*S	**Sn**	**15 52 33.8**	**-0.8**
TIPB	**Shuangxi**	**0.81**	**292**	*i* P	**Pn**	**15 52 21.3**	**0.0**
TIPB				S	**Sn**	**15 52 36.0**	**0.0**
EWUT	**Wuta**	**0.83**	**255**	*e*S	**Sn**	**15 52 36.3**	**+0.1**
NDS	**Dongshan**	**0.86**	**268**	*e*S	**Sn**	**15 52 35.9**	**-0.7**
ENA	**Nanau**	**0.86**	**255**	P	**Pn**	**15 52 20.1**	**-1.7**
ENA				*e*S	**Sn**	**15 52 35.3**	**-1.5**
EAHA	**Aohua**	**0.90**	**249**	*e*S	**Sn**	**15 52 37.6**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.98**	**276**	P	**Pn**	**15 52 22.8**	**-0.1**
FUSB				*e*S	**Sn**	**15 52 38.2**	**-0.7**
IRIF	**Iriomote-Funau**	**1.03**	**108**	P	**Pn**	**15 52 23.2**	**-0.1**
IRIF				*e*S	**Sn**	**15 52 39.3**	**-0.4**
LATG	**Datong**	**1.04**	**263**	P	**Pn**	**15 52 23.7**	**+0.2**
LATG				S	**Sn**	**15 52 40.2**	**+0.2**
NDT	**Datong Townshi**	**1.04**	**267**	*e*S	**Sn**	**15 52 40.6**	**+0.7**
NWLT	**Wulai**	**1.05**	**276**	*e*S	**Sn**	**15 52 40.6**	**+0.4**
NACB	**Ninganchiao**	**1.08**	**244**	S	**Sn**	**15 52 39.6**	**-1.0**
YM01	**YM01**	**1.10**	**296**	*e*S	**Sn**	**15 52 40.2**	**-0.8**
ZUZH	**Zhuzihu**	**1.12**	**296**	*e*P	**Pn**	**15 52 24.2**	**-0.2**
ETLH	**Xiulin Townshi**	**1.16**	**247**	P	**Pn**	**15 52 23.6**	**-1.2**
ETLH				S	**Sn**	**15 52 41.6**	**-0.8**
YHNB	**Yeheng**	**1.17**	**271**	*i* P	**Pn**	**15 52 25.3**	**+0.4**
YHNB				*i* S	**Sn**	**15 52 42.2**	**-0.2**
NSK	**Sanguang**	**1.18**	**271**	P	**Pn**	**15 52 25.3**	**+0.3**
NSK				*i* S	**Sn**	**15 52 42.5**	**-0.2**
NNSB	**Datong**	**1.18**	**259**	*e*P	**Pn**	**15 52 25.1**	**0.0**
NNSB				S	**Sn**	**15 52 42.7**	**-0.1**
NNS	**Nan Shan**	**1.19**	**260**	S	**Sn**	**15 52 43.0**	**+0.1**
HATJ	**Hateruma jima**	**1.21**	**120**	*e*S	**Sn**	**15 52 44.0**	**+0.9**
ETM	**Tongmen**	**1.27**	**237**	P	**Pn**	**15 52 25.6**	**-0.4**
ETM				S	**Sn**	**15 52 43.4**	**-0.8**
LXIB	**Xiulin Townshi**	**1.30**	**241**	P	**Pn**	**15 52 25.9**	**-0.6**
LXIB				S	**Sn**	**15 52 43.8**	**-1.4**
JKRS	**Kuro-shima**	**1.30**	**109**	P	**Pn**	**15 52 26.7**	**+0.3**
JKRS				S	**Sn**	**15 52 45.1**	**+0.1**
SHUL	**Shoufeng**	**1.32**	**229**	P	**Pn**	**15 52 27.6**	**+1.0**
SHUL				S	**Sn**	**15 52 45.2**	**-0.1**
WHF	**Hehuan Shan**	**1.37**	**248**	P	**Pn**	**15 52 27.7**	**+0.1**
WHF				S	**Sn**	**15 52 46.6**	**-0.4**
JIJ	**Ishigaki jima**	**1.39**	**102**	P	**Pn**	**15 52 27.2**	**-0.1**
JIJ				*e*S	**Sn**	**15 52 45.8**	**-0.9**
NFF	**Wufeng Townshi**	**1.40**	**269**	*e*S	**Sn**	**15 52 46.9**	**-0.1**
LIOB	**Emei**	**1.49**	**270**	*e*P	**Pn**	**15 52 29.0**	**+0.4**
LIOB				*e*S	**Sn**	**15 52 48.8**	**-0.2**
WARBT	**Fenglin Townsh**	**1.49**	**231**	*i* P	**Pn**	**15 52 27.9**	**-0.7**
WARBT				S	**Sn**	**15 52 47.2**	**-1.8**
NSTT	**Nanjuang**	**1.51**	**269**	*e*P	**Pn**	**15 52 28.6**	**-0.1**
NSTT				S	**Sn**	**15 52 49.2**	**0.0**
JISG	**Ishigakijimahi**	**1.51**	**93**	P	**Pn**	**15 52 28.6**	**-0.1**
OWD	**Renai**	**1.52**	**243**	P	**Pn**	**15 52 29.4**	**+0.3**
OWD				S	**Sn**	**15 52 49.1**	**-0.7**
WUSB	**Renai**	**1.55**	**245**	P	**Pn**	**15 52 29.8**	**+0.4**
WUSB				S	**Sn**	**15 52 50.1**	**-0.3**
WHP	**Taichung City**	**1.60**	**257**	P	**Pn**	**15 52 30.8**	**+0.9**
WHP				S	**Sn**	**15 52 51.9**	**+0.4**
HGSD	**Ruisui**	**1.62**	**224**	P	**Pn**	**15 52 30.6**	**+0.5**
HGSD				*e*S	**Sn**	**15 52 51.5**	**-0.2**
VWDT	**VWDT**	**1.65**	**237**	P	**Pn**	**15 52 30.8**	**+0.3**
VWDT				S	**Sn**	**15 52 52.7**	**-0.3**
EHYH	**Wanrong**	**1.67**	**226**	P	**Pn**	**15 52 29.7**	**-1.0**
EHYH				*e*S	**Sn**	**15 52 51.1**	**-1.6**
WCS	**Beigang Elemen**	**1.70**	**250**	P	**Pn**	**15 52 32.3**	**+1.3**
WCS				*e*S	**Sn**	**15 52 55.1**	**+1.7**
YULB	**Yu-li**	**1.77**	**225**	P	**Pn**	**15 52 31.2**	**-0.8**
YULB				*e*S	**Sn**	**15 52 53.3**	**-1.7**
SSLB	**Suanglung**	**1.78**	**241**	P	**Pn**	**15 52 33.2**	**+1.1**
SSLB				*e*S	**Sn**	**15 52 56.8**	**+1.6**
JTJ	**Tarama**	**1.86**	**90**	P	**Pn**	**15 52 33.1**	**+0.1**
WHYT	**Xinyi Township**	**1.91**	**240**	P	**Pn**	**15 52 35.0**	**+1.4**
WHYT				*e*S	**Sn**	**15 52 59.4**	**+1.4**
FULB	**Fuli**	**1.92**	**221**	*e*P	**Pn**	**15 52 33.2**	**-0.6**
FULB				*e*S	**Sn**	**15 52 58.9**	**+0.7**

IDC ***23*** *15:54:41.9±1.1,56.°19N×164.°45E,h0km,mb3.5/7,*
mbtmp3.6/9,ML2.9/2,MS3.5/1,Error ellipse: s-maj=42.3km
s-min=19.3km az=149.0
KRSC ***23*** *15:54:42.8±1.3,56.°11N×164.°44E,h46km±19km,Ml3.9*

ISC 23 15:54:41.6±3.2,56.°12N±0.°05×164.°52E±0.°04,h3km±21km,
n48,σ1.968/67,mb3.6/7,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.96**	**276**	*e*P	**Pb**	**15 54 59.5**	**-1.3**
KBTR				*e*S	**Sb**	**15 55 12.1**	**-1.7**
KBG	**Krutoberegovo**	**1.02**	**278**	*e*P	**Pb**	**15 55 00.6**	**-1.3**
KBG				*e*S	**Sb**	**15 55 14.7**	**-1.1**
BKI	**Bering**	**1.23**	**138**	*e*P	**Pn**	**15 55 04.8**	**-0.9**
BKI				*e*S	**Sb**	**15 55 21.1**	**-0.6**
SMKR	**Semkarok**	**1.76**	**286**	*e*P	Pn	15 55 11.5	-1.6
SMKR				*e*S	**Sn**	**15 55 34.5**	**-1.4**
ZLN	**Zelenaya**	**2.09**	**269**	*e*P	**Pn**	**15 55 18.1**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**2.16**	**267**	*e*P	**Pn**	**15 55 19.0**	**+0.5**
BZGR				*e*S	**Sn**	**15 55 42.7**	**-3.1**
MKZ	**Mys Kozlova**	**2.24**	**227**	*e*P	**Pn**	**15 55 19.6**	**+0.1**
MKZ				*e*S	**Sn**	**15 55 45.5**	**-2.1**
BZP	**Bezymyannyi-Pe**	**2.25**	**266**	*e*P	**Pn**	**15 55 19.9**	**+0.1**
BZP				*e*S	**Sn**	**15 55 46.1**	**-2.0**
BZWR	**Bezymyannyi-We**	**2.27**	**268**	*e*P	**Pn**	**15 55 21.2**	**+1.2**
BZWR				*e*S	**Sn**	**15 55 46.0**	**-2.6**
BZMR	**Bezymyannaya**	**2.27**	**267**	*e*P	**Pn**	**15 55 20.6**	**+0.5**
KIRR	**Kirishev**	**2.35**	**268**	*e*P	**Pn**	**15 55 22.0**	**+0.8**
KIRR				*e*S	**Sn**	**15 55 48.3**	**-2.3**
KPT	**Kopyto**	**2.42**	**268**	*e*P	**Pn**	**15 55 23.1**	**+1.0**
KPT				*e*S	**Sn**	**15 55 50.2**	**-2.0**
KMNR	**Kamenistaya**	**2.44**	**263**	*e*P	**Pn**	**15 55 23.4**	**+1.0**
KMNR				*e*S	**Sn**	**15 55 50.3**	**-2.4**
TUMD	**Tumrok D**	**2.51**	**250**	*e*P	**Pn**	**15 55 24.0**	**+0.7**
TUMD				*e*S	**Sn**	**15 55 52.1**	**-2.3**
KOZ	**Kozyrevsk**	**2.61**	**270**	*e*P	**Pn**	**15 55 26.0**	**+1.4**
TUMR	**Tumrok**	**2.62**	**253**	*e*P	**Pn**	**15 55 25.6**	**+0.8**
TUMR				*e*S	**Sn**	**15 55 55.4**	**-1.7**
SRDR	**Sredinnyy**	**2.69**	**276**	*e*P	**Pn**	**15 55 26.7**	**+0.9**
SRDR				*e*S	**Sn**	**15 55 58.7**	**-0.2**
OSSR	**Ossora**	**3.23**	**347**	*e*P	**Pn**	**15 55 31.8**	**-1.4**
ESO	**Esso**	**3.27**	**269**	*e*P	**Pn**	**15 55 35.9**	**+2.2**
KII	**Karymskiy**	**3.59**	**236**	*e*P	**Pn**	**15 55 39.3**	**+1.1**
KII				*e*S	**Sn**	**15 56 19.9**	**-1.1**
PALN	**Palana**	**3.85**	**322**	*e*P	**Pn**	**15 55 43.8**	**+2.2**
SPN	**Mys Shipunski**	**4.00**	**223**	*e*P	**Pn**	**15 55 45.3**	**+1.6**
SPN				*e*S	**Sn**	**15 56 27.1**	**-4.0**
NLC	**Nalytchevo**	**4.22**	**228**	*e*S	**Sn**	**15 56 35.6**	**-0.8**
SDLR	**Sedlovina**	**4.34**	**231**	*e*P	**Pn**	**15 55 49.7**	**+1.2**
KRER	**Koryakskii**	**4.38**	**232**	*e*P	**Pn**	**15 55 49.9**	**+0.7**
SMAR	**Somma**	**4.39**	**232**	*e*P	**Pn**	**15 55 49.9**	**+0.6**
KRX	**Arik**	**4.39**	**233**	*e*P	**Pn**	**15 55 50.7**	**+1.5**
AVH	**Avacha**	**4.41**	**232**	*e*P	**Pn**	**15 55 50.8**	**+1.4**
UGLR	**Uglovaya**	**4.41**	**231**	*e*P	**Pn**	**15 55 50.9**	**+1.4**
KOK	**Koryaka**	**4.44**	**233**	*e*P	**Pn**	**15 55 51.7**	**+1.8**
GNL	**Ganaly**	**4.51**	**240**	*e*P	**Pn**	**15 55 52.7**	**+1.8**
DALK	**Dalny**	**4.57**	**230**	*e*P	**Pn**	**15 55 52.7**	**+1.2**
DALK				*e*S	**Sn**	**15 56 42.5**	**-2.5**
PET	**Petropavlovsk**	**4.62**	**230**	*e*P	**Pn**	**15 55 53.4**	**+1.3**
PET				*e*S	**Sn**	**15 56 45.4**	**-0.8**
KRMR	**Karymshinskiy**	**4.98**	**231**	*e*S	**Sn**	**15 56 54.9**	**-0.2**
PETK	**Petropavlovsk-**	**4.99**	**236**	Pn	**Pn**	**15 55 58.8**	**+1.5**
	0.4nm,0.3s,baz=76,slow=17,SNR=7.5						
PETK				Sn	**Sn**	**15 56 57.3**	**+1.9**
	baz=77,slow=19						
PETK				LR	LR	15 58 15.0	
	comp=Z,468nm,20.4s,baz=15,slow=43						
	3.1nm,0.9s						
RUS	**Russkaya**	**5.11**	**226**	*e*P	**Pn**	**15 56 00.4**	**+1.5**
GRL	**Gorelyy**	**5.20**	**229**	*e*P	**Pn**	**15 56 02.1**	**+1.8**
MTVR	**Mutnovka**	**5.20**	**228**	*e*P	**Pn**	**15 56 02.5**	**+2.1**
ASAK	**Asacha**	**5.40**	**229**	*e*P	**Pn**	**15 56 05.2**	**+2.2**
KDTR	**Khodutka, Kamc**	**5.76**	**224**	*e*P	**Pn**	**15 56 08.7**	**+0.9**
KDTR				*e*S	**Sn**	**15 57 09.7**	**-4.6**
ASAJ	**Asahikawa**	**18.40**	**238**	P	**P**	**15 58 59.2**	**+1.7**
	0.1nm,0.3s,baz=61,slow=3.9,SNR=3.9						
	6.6nm,0.8s						
ILAR	**Eielson Array**	**24.86**	**50**	P	**P**	**16 00 06.4**	**+1.4**
	0.6nm,1.0s,baz=272,slow=9.1,SNR=4.5						
	0.6nm,1.0s						
MJAR	**Matsushiro Arr**	**26.44**	**233**	P	**P**	**16 00 19.8**	**+

ULHL	**Ulahol**	**7.62**	**50**	P		**Pn**	**16 48 00.3**	**+0.7**
	SNR=7.3								
TKM2	**Tokmak 2**	**7.67**	**43**	P		**Pn**	**16 48 01.3**	**+1.0**
	SNR=42								
MDOK	**Medeo**	**8.64**	**47**	⇑Pn		**Pn**	**16 48 14.6**	**+1.0**
	11nm,0.7s								
MDOK				⇑Lg		Lg	16 50 40.1		
	12nm,1.2s								
PDGK	**Podgornoye**	**10.21**	**52**	⇑Pn		**Pn**	**16 48 34.5**	**-0.6**
	7.2nm,1.3s								
PDGK				⇑Lg		Lg	16 51 30.6		
	8.4nm,0.9s								
AB31	**Akbulak array**	**13.22**	**335**	⇓Pn		**Pn**	**16 49 14.6**	**-1.5**
	2.0nm,0.5s,baz=154,slow=13,SNR=41								
AB31				⇑Sn		**Sn**	**16 51 41.8**	**0.0**
	2.0nm,0.5s,baz=154,slow=23,SNR=5.7								
AB31				⇑Lg		Lg	16 53 02.6		
	3.5nm,0.7s								
MKAR	**Makanchi Array**	**13.80**	**44**	Pn		**Pn**	**16 49 23.4**	**-0.6**
	0.1nm,0.3s,baz=232,slow=14,SNR=20								
	2.5nm,0.9s								
AKTO	**Aktyubinsk**	**14.89**	**333**	Pn		**Pn**	**16 49 39.0**	**+0.2**
	0.2nm,0.3s,baz=147,slow=14,SNR=6.4								
AKTO				Sn		**Sn**	**16 52 20.9**	**-1.6**
	0.2nm,0.3s,baz=323,slow=22,SNR=3.7								
	1.9nm,0.7s								
AKTO	**Aktyubinsk**	**14.89**	**333**	⇑Pn		**Pn**	**16 49 37.7**	**-1.0**
	2.0nm,0.7s								
AKTO				⇑Sn		**Sn**	**16 52 20.7**	**-1.7**
	1.5nm,0.7s								
AKTO				⇑Lg		Lg	16 53 55.6		
	7.5nm,1.4s								
KURBB	**Kurchatov Arra**	**14.93**	**26**	Pn		**Pn**	**16 49 36.3**	**-3.0**
	baz=215,slow=12,SNR=12								
KURBB				Lg		Lg	16 54 03.6		
	baz=220,slow=26,SNR=4.0								
	1.3nm,0.7s								
BVAR	**Borovoye Array**	**15.54**	**4**	Pn		**Pn**	**16 49 44.4**	**-2.9**
	baz=180,slow=8.2,SNR=4.2								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**19.91**	**29**	P		**P**	**16 50 39.2**	**-0.2**
	1.6nm,0.5s,baz=217,slow=11,SNR=9.8								
	1.6nm,0.5s								
ARTI	**Arti**	**20.02**	**344**	P		**Pn**	**16 50 44.0**	**+1.5**
	2.6nm,0.5s,baz=143,slow=8.1,SNR=4.8								
	2.6nm,0.5s								
KBZ	**Khabaz**	**20.30**	**296**	P		Pn	16 50 45.0	-0.9	
	1.5nm,0.6s,baz=134,slow=9.6,SNR=4.2								
	1.5nm,0.6s								
BELG	**Belogornoye**	**20.80**	**322**	P		Pn	16 50 51.5	-0.1	
	23nm,0.8s,baz=309,slow=1.6,SNR=7.3								
	23nm,0.8s								
CMAR	**Chiang Mai Arr**	**32.76**	**117**	P		**P**	**16 52 39.7**	**-1.1**
	0.4nm,0.4s,baz=298,slow=7.8,SNR=7.1								
	0.4nm,0.4s								
HFS	**Hagfors**	**40.98**	**321**	P		**P**	**16 53 50.8**	**+0.6**
	0.9nm,0.6s,baz=92,slow=14,SNR=1.1								
	0.9nm,0.6s								
NOA	**NORSAR Array B**	**42.31**	**323**	P		**P**	**16 54 02.6**	**+1.4**
	0.8nm,0.8s,baz=96,slow=8.1,SNR=2.2								
	0.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**63.71**	**267**	P		**P**	**16 56 39.8**	**+0.4**
	0.5nm,0.6s,baz=54,slow=6.5,SNR=3.3								
	0.5nm,0.6s								

KRSC 23 16:55:52.8±1.2, 56°10N×164°52E, h46km±18km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.96**	**277**	*eP*	Pn	16 56 09.5	-0.3
KBTR				*eS*	Sn	16 56 22.4	+0.1
BKI	**Bering**	**1.22**	**137**	*eP*	Pn	16 56 15.1	+1.8
BKI				*eS*	Sn	16 56 31.2	+2.6
SMKR	**Semkarok**	**1.77**	**287**	*eP*	Pn	16 56 22.5	+1.6
SMKR				*eS*	Sn	16 56 45.0	+2.7
ZLN	**Zelenaya**	**2.09**	**269**	*eP*	Pn	16 56 28.4	+3.0
CIRR	**Tsirk**	**2.11**	**272**	*eP*	Pn	16 56 28.6	+2.8
BZGR	**Bezymyannyi-Gr**	**2.15**	**267**	*eP*	Pn	16 56 29.5	+3.2
KLY	**Klyuchi**	**2.17**	**277**	*eP*	Pn	16 56 27.3	+0.8
KLY				*eS*	Sn	16 56 53.3	+1.3
MKZ	**Mys Kozlova**	**2.22**	**227**	*eP*	Pn	16 56 29.0	+2.0
MKZ				*eS*	Sn	16 56 56.1	+2.8
BZP	**Bezymyannyi-Pe**	**2.25**	**267**	*eP*	Pn	16 56 30.5	+3.0
BZWR	**Bezymyannyi-We**	**2.26**	**268**	*eP*	Pn	16 56 30.8	+3.0
BZMR	**Bezymyannaya**	**2.27**	**268**	*eP*	Pn	16 56 31.2	+3.3
KIRR	**Kirishev**	**2.35**	**268**	*eP*	Pn	16 56 32.1	+3.1
KPT	**Kopyto**	**2.42**	**269**	*eP*	Pn	16 56 33.1	+3.2
KMNR	**Kamenistaya**	**2.44**	**264**	*eP*	Pn	16 56 33.8	+3.7
KOZ	**Kozyrevsk**	**2.61**	**271**	*eP*	Pn	16 56 36.2	+3.8
KOZ				*eS*	Sn	16 57 07.1	+4.3
TUMR	**Tumrok**	**2.61**	**254**	*eP*	Pn	16 56 36.1	+3.6
SRDR	**Sredinnyy**	**2.69**	**277**	*eP*	Pn	16 56 37.1	+3.5
SRDR				*eS*	Sn	16 57 09.9	+4.9
OSSR	**Ossora**	**3.26**	**347**	*eP*	Pn	16 56 43.6	+2.3
ESO	**Esso**	**3.27**	**269**	*eP*	Pn	16 56 46.8	+5.2
SDLR	**Sedlovina**	**4.32**	**232**	*eP*	Pn	16 56 59.7	+3.6
SMAR	**Somma**	**4.37**	**232**	*eP*	Pn	16 57 00.5	+3.7
KRX	**Arik**	**4.37**	**234**	*eP*	Pn	16 57 00.7	+3.9
AVH	**Avacha**	**4.39**	**232**	*eP*	Pn	16 57 01.2	+4.2
UGLR	**Uglovaya**	**4.40**	**231**	*eP*	Pn	16 57 01.0	+3.9
KOK	**Koryaka**	**4.42**	**233**	*eP*	Pn	16 57 00.7	+3.3
GNL	**Ganaly**	**4.50**	**240**	*eP*	Pn	16 57 02.4	+3.9
DALK	**Dalny**	**4.55**	**230**	*eP*	Pn	16 57 02.5	+3.5
PET	**Petropavlovsk**	**4.60**	**230**	*eP*	Pn	16 57 02.7	+3.0
RUS	**Russkaya**	**5.09**	**226**	*eP*	Pn	16 57 09.8	+3.4
GRL	**Gorelyy**	**5.18**	**229**	*eP*	Pn	16 57 13.0	+5.1
MTVR	**Mutnovka**	**5.19**	**228**	*eP*	Pn	16 57 12.3	+4.4
ASAK	**Asacha**	**5.38**	**229**	*eP*	Pn	16 57 15.1	+4.6

*IDC **23** 17:00:44.6±1.0, 67°09N×21°31E, h0km, mbtmp2.8/4, ML1.8/4, Error ellipse: s-maj=19.5km s-min=8.9km az=113.0*
*HEL **23** 17:00:44.7±0.9, 67°09N×21°00E, h0km, ML1.8, Explosion*
*UPP **23** 17:00:52.6±0.1, 67°04N×20°94E, h0km, ML2.0, Suspected explosion*

ISC 23 17:00:46.5±0.8, 67°04N±0°03×21°33E±0°04, h0km, n26, σ3s 02/28, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.31**	**286**	P	**Pb**	**17 00 56.0**	**+1.2**
	baz=60						
DUNU				S	**Sg**	**17 00 58.5**	**+2.2**
MASU	**Masugnsbyn**	**0.49**	**32**	P	**Pn**	**17 01 03.8**	**+3.0**
MASU				S	**Sb**	**17 01 11.7**	**+5.8**
ERTU	**Ertsjaerv**	**0.59**	**145**	P	**Pn**	**17 01 05.8**	**+3.7**
ERTU				S	**Sn**	**17 01 15.5**	**+3.0**
ERTU	**Ertsjaerv**	**0.59**	**145**	*eP*	**Pg**	**17 00 57.3**	**-0.5**
ERTU				*eS*	**Pn**	**17 01 05.8**	**+3.7**
HARU	**Harads**	**0.89**	**189**	P	**Pn**	**17 01 08.7**	**+2.5**
KUA	**Kurravaara**	**1.00**	**338**	P	**Pn**	**17 01 10.6**	**+2.9**
RATU	**Laukkuluspa**	**1.03**	**320**	P	**Pn**	**17 01 10.2**	**+1.9**
LANU	**Lannavaara**	**1.04**	**14**	*eP*	**Pg**	**17 01 03.1**	**-3.4**
LANU	**Lannavaara**	**1.04**	**14**	P	**Pn**	**17 01 12.8**	**+4.4**
LANU	**Lannavaara**	**1.04**	**14**	*eP*	**Pg**	**17 01 03.1**	**-3.4**
KLF	**Kolari**	**1.05**	**78**	*eP*	**Pg**	**17 01 05.5**	**-1.0**
KLF				smax	smax	17 01 15.4	
	comp=Z,11nm,0.2s						
SALU	**Saltoluokta**	**1.15**	**289**	*eP*	Pg	17 01 02.3	-6.2
SALU	**Saltoluokta**	**1.15**	**289**	P	**Pn**	**17 01 11.5**	**+1.6**
NIKU	**Nikkaluokta**	**1.21**	**314**	P	**Pn**	**17 01 13.3**	**+2.7**
TOF	**Tornio**	**1.54**	**127**	*eP*	**Pg**	**17 01 15.0**	**-0.9**
HEF	**Hetta**	**1.64**	**32**	*eP*	**Pn**	**17 01 14.0**	**-2.5**
RNF	**Rovaniemi**	**1.90**	**101**	*eP*	**Pb**	**17 01 20.6**	**-1.4**
SGF	**Sodankyl**	**2.06**	**76**	*eP*	**Pb**	**17 01 23.0**	**-1.7**
I37NO	**I37NO**	**2.29**	**335**	I	I	17 14 30.0	
	baz=156,slow=326,SNR=3.3						
OBF4	**Vikkela, Lumij**	**2.72**	**144**	smax	smax	17 02 15.2	
	comp=Z,2.0nm,0.2s						
OBF0	**Syolatti, Pyha**	**2.82**	**153**	smax	smax	17 02 19.9	
	comp=Z,2.6nm,0.2s						
OBF8	**Ulkokalla**	**2.86**	**161**	smax	smax	17 02 22.2	
	comp=Z,3.4nm,0.2s						
ARCES	**ARCESS Array B**	**2.95**	**30**	Pn	**Pn**	**17 01 32.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=211,slow=14,SNR=8.8						
ARCES				Sn	**Sn**	**17 02 08.3**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=211,slow=19,SNR=5.7						
	comp=Z,0.3nm,0.3s						
FINES	**FINESS Array B**	**5.99**	**158**	Pn	**Pn**	**17 02 16.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=9.0						
FINES				Sn	**Sn**	**17 03 22.4**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=348,slow=20,SNR=1.4						
	comp=Z,1.6nm,0.9s						
NOA	**NORSAR Array B**	**7.47**	**221**	Pn	**Pn**	**17 02 33.3**	**-3.3**
	baz=34,slow=11,SNR=1.8						
	comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**7.71**	**210**	Pn	**Pn**	**17 02 35.4**	**-4.5**
	baz=35,slow=14,SNR=1.5						
HFS				Sn	**Sn**	**17 04 04.6**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=19,slow=25,SNR=1.6						
	comp=Z,1.6nm,0.8s						

*NEIC **23** 17:02:31.2±1.8, 14°06S±0°10×167°8E±0°2, h178km±8km, mb4.4/9, Error ellipse: s-maj=23.1km s-min=11.9km az=67.0*
*IDC **23** 17:02:39.6±4.6, 14°54S×167°36E, h230km±43km, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=37.3km s-min=27.2km az=164.0*

ISC 23 17:02:33.4±1.1, 14°24S±0°09×167°7E±0°2, h200km, n20, σ1s 36/18, mb4.1/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**7.09**	**207**	Pn	**Pn**	**17 04 16.1**	**+1.3**
MARNC	**Mare, Loyalty**	**7.21**	**178**	Pn	**Pn**	**17 04 15.7**	**-0.7**
DZM	**Mont Dzumac**	**7.89**	**189**	P	**Pn**	**17 04 27.6**	**+2.3**
	7.0nm,0.9s,baz=62,slow=13,SNR=8.9						
DZM				S	**Sn**	**17 05 51.7**	**-2.7**
	2.1nm,0.6s,baz=104,slow=22,SNR=1.0						
STKA	**Stephens Creek**	**29.66**	**229**	P	**P**	**17 08 21.3**	**+0.8**
	1.5nm,0.4s,baz=57,slow=7.9,SNR=8.3						
	1.5nm,0.4s						
WB0	**Warramunga Arr**	**32.33**	**256**	P	**P**	**17 08 43.1**	**-0.9**
WB0				IAmb	IAmb	17 08 50.2	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**32.39**	**255**	P	**P**	**17 08 43.5**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=86,slow=9.4,SNR=5.9						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**32.39**	**255**	IAmb	IAmb	17 08 46.5	
	comp=Z,0.3nm,1.5s						
AS31	**Alice Springs**	**33.27**	**249**	P	**P**	**17 08 51.4**	**-0.9**
ASAR	**Alice Springs**	**33.28**	**249**	P	**P**	**17 08 51.3**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=76,slow=9.5,SNR=40						
	comp=Z,0.5nm,0.3s						
BBOO	**Buckleboo**	**34.24**	**232**	P	**P**	**17 09 00.7**	**+0.3**
BBOO				IAmb	IAmb	17 09 22.1	
	comp=Z,26nm,1.4s						
SAUI	**Saumlaki**	**36.26**	**276**	P	**P**	**17 09 18.6**	**+0.8**
FAKI	**Fak Fak**	**36.79**	**284**	P	**P**	**17 09 20.8**	**-1.5**
KNRA	**Kununurra**	**37.65**	**263**	P	**P**	**17 09 29.5**	**0.0**
KNRA				IAmb	IAmb	17 09 36.5	
	comp=Z,13nm,1.1s						
QSPA	**South Pole Qui**	**75.79**	**180**	P	**P**	**17 13 58.4**	**+1.3**
	comp=Z,1.1nm,1.1s,baz=124,slow=3.9,SNR=3.1						
	comp=Z,1.1nm,1.1s						
QSPA	**South Pole Qui**	**75.79**	**180**	P	**P**	**17 13 58.4**	**+1.3**
QSPA				IAmb	IAmb	17 14 34.1	
	comp=Z,3.8nm,1.5s						
ILSW	**Iliamna Southw**	**80.39**	**19**	P	**P**	**17 14 21.4**	**-0.9**
ILSW				IAmb	IAmb	17 14 22.5	
	comp=Z,7.8nm,0.7s						
ILAR	**Eielson Array**	**85.92**	**18**	P	P	17 14 55.8	+5.4
	comp=Z,0.5nm,0.7s,baz=203,slow=5.2,SNR=6.5						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**97.16**	**316**	P	Pdif	17 15 46.9	+3.7
	comp=Z,0.2nm,0.6s,baz=87,slow=7.4,SNR=2.3						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**97.16**	**316**	P	**P**	**17 15 42.8**	**-0.3**
ARCES	**ARCESS Array B**	**119.89**	**346**	PKP	**PKiKP**	**17 21 00.5**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=56,slow=2.2,SNR=4.0						

*NEIC **23** 17:10:35.0±1.9, 38°13N±0°02×117°91W±0°03, h12km±4km, ML3.9/216, Mwr3.9/128, ML4.2/18(REN), Error ellipse: s-maj=3.4km s-min=2.8km az=77.0*
*REN **23** 17:10:35.2±1.7, 38°11N±0°02×117°92W±0°02, h11km±5km, Error ellipse: s-maj=3.2km s-min=1.1km az=46.0*
*IDC **23** 17:10:36.7±0.7, 38°18N×117°88W, h0km, mb3.4/2, mbtmp3.4/7, ML3.4/5, MS2.6/7, Error ellipse: s-maj=7.1km s-min=4.9km az=27.0*

ISC 23 17:10:35.6±0.9, 38°12N±0°02×117°91W±0°02, h11km±6km, n122, σ0s 89/91, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COLR	**Columbus**	**0.12**	**283**		**Pg**	**17 10 38.7**	**-0.1**
COLR					**Sg**	**17 10 41.2**	**+0.1**
NV11	**Mina Array Sit**	**0.37**	**328**		**Sb**	**17 10 48.5**	**-1.6**
NV11	**Mina Array Sit**	**0.37**	**328**		**Pg**	**17 10 42.9**	**-0.2**
NV11				IAML		17 10 49.4	
	comp=E,7μm,0.9s						
NV11				IAML		17 10 49.5	
	comp=N,3μm,0.5s						
NV06	**Mina Array Sit**	**0.42**	**316**		**Pg**	**17 10 43.9**	**-0.1**
NV07	**Mina Array Sit**	**0.42**	**314**		**Pg**	**17 10 44.0**	**-0.1**
NV08	**Mina Array Sit**	**0.43**	**311**		**Pg**	**17 10 44.0**	**-0.2**
NV03	**Mina Array Sit**	**0.44**	**315**		**Pg**	**17 10 44.1**	**-0.1**
NV03					**Sb**	**17 10 50.6**	**-1.5**
NV04	**Mina Array Sit**	**0.44**	**314**		**Pg**	**17 10 44.3**	**0.0**
NV01	**Mina Array Sit**	**0.44**	**315**		**Pg**	**17 10 44.2**	**-0.1**
NV01					**Sb**	**17 10 51.1**	**-1.1**
NVAR	**Mina Array Bea**	**0.44**	**315**	Pg	**Pg**	**17 10 44.0**	**-0.4**
	comp=N,2μm,0.3s,baz=134,slow=16						
NVAR				Lg	Lg	17 10 50.2	
	comp=N,1μm,0.3s,baz=138,slow=30,SNR=13						
NVAR	**Mina Array Bea**	**0.44**	**315**		**Pg**	**17 10 44.1**	**-0.3**
NV02	**Mina Array Sit**	**0.45**	**316**		**Pg**	**17 10 44.4**	**-0.1**
NV05	**Mina Array Sit**	**0.45**	**317**		**Pg**	**17 10 44.3**	**-0.1**
NV05					**Sb**	**17 10 51.1**	**-1.3**
NV09	**Mina Array Sit**	**0.46**	**313**		**Pg**	**17 10 44.6**	**-0.1**
LHV	**Little Huntoon**	**0.49**	**286**		**Sb**	**17 10 52.2**	**-1.2**
LHV	**Little Huntoon**	**0.49**	**286**		**Pg**	**17 10 44.8**	**-0.4**
LHV	**Little Huntoon**	**0.49**	**286**	IAML		17 10 52.7	
	comp=E,18μm,0.7s						
LHV				IAML		17 10 52.8	
	comp=N,18μm,0.7s						
TPH	**Tonopah**	**0.54**	**94**		**Sg**	**17 10 53.9**	**+0.5**
TPH	**Tonopah**	**0.54**	**94**		**Pg**	**17 10 45.8**	**-0.3**
TPH	**Tonopah**	**0.54**	**94**	IAML		17 10 54.2	
	comp=N,13μm,0.7s						
TPH				IAML		17 10 54.3	
	comp=E,8μm,0.7s						
DSP	**Deep Springs**	**0.75**	**184**		**Sg**	**17 10 59.6**	**-0.2**
DSP	**Deep Springs**	**0.75**	**184**		**Pg**	**17 10 49.4**	**-0.7**
DSP	**Deep Springs**	**0.75**	**184**	IAML		17 11 00.0	
	comp=E,3μm,0.7s						
DSP				IAML		17 11 02.1	
	comp=N,2μm,0.5s						
MLAC	**Mammoth, Mammo**	**0.88**	**237**		**Pg**	**17 10 52.3**	**-0.4**
MLAC					**Sb**	**17 11 04.6**	**-0.3**
LCH	**Last Change Ra**	**0.91**	**167**		**Pg**	**17 10 52.6**	**-0.5**
LCH					**Sg**	**17 11 08.6**	**-0.3**
Q09A	**Carvers**	**0.91**	**38**		**Pb**	**17 10 53.3**	**-0.2**
Q09A					**Sn**	**17 11 06.8**	**-1.0**
MCBM	**Casa Benchmark**	**0.92**	**239**		**Pg**	**17 10 52.6**	**-0.6**
MCBM					**Sb**	**17 11 05.7**	**-0.2**
KVN	**Kaiserville**	**0.94**	**351**		**Sb**	**17 11 06.1**	**-0.6**
KVN	**Kaiserville**	**0.94**	**351**		**Pg**	**17 10 53.0**	**-0.9**
KVN	**Kaiserville**	**0.94**	**351**	IAML		17 11 09.8	
	comp=N,2μm,0.7s						
KVN				IAML		17 11 10.2	
	comp=E,2μm,0.5s						
GMN	**Gold Mountain**	**0.96**	**148**		**Pg**	**17 10 53.4**	**-0.8**
MDYM	**Dry Creek**	**0.99**	**243**		**Pg**	**17 10 54.3**	**-0.3**
MDPB	**Devils Postpil**	**1.05**	**243**		**Sg**	**17 11 08.6**	**-0.9**
MDPB	**Devils Postpil**	**1.05**	**243**		**Pg**	**17 10 54.7**	**-1.1**
MDPB	**Devils Postpil**	**1.05**	**243**	IAML		17 11 13.3	
	comp=E,2μm,0.7s						
MDPB				IAML		17 11 15.2	
	comp=N,1μm,0.8s						
TIN	**Tinemaha, Big**	**1.09**	**194**		**Sg**	**17 11 10.9**	**+0.1**
TIN	**Tinemaha, Big**	**1.09**	**194**	Pg	**Pb**	**17 10 55.9**	**-0.6**
WAKR	**Walker**	**1.27**	**288**		**Pn**	**17 10 58.6**	**-0.8**
WAKR					**Sg**	**17 11 15.8**	**-0.7**
KCC	**Kaiser Creek**	**1.37**	**235**		**Pn**	**17 11 00.3**	**-0.4**
KCC					**Sb**	**17 11 18.3**	**-0.5**
MCA	**Marble Canyon**	**1.55**	**161**		**Pn**	**17 11 02.9**	**-0.2**
EBP	**Ebbets Pass**	**1.57**	**288**		**Pb**	**17 11 04.3**	**-0.4**
PNTR	**Pine Nut**	**1.65**	**307**		**Pn**	**17 11 03.7**	**-0.9**
PNTR				IAML		17 11 34.8	
	comp=N,2μm,0.8s						
PNTR				IAML		17 11 36.4	
	comp=E,2μm,0.8s						
WCT	**Wildcat Mounta**	**1.67**	**142**		**Pn**	**17 11 04.1**	**-0.7**
WCT				IAML		17 11 31.2	
	comp=N,988nm,0.5s						
WCT				IAML		17 11 33.9	
	comp=E,1μm,0.4s						
CWC	**Cottonwood Cre**	**1.68**	**185**		**Pn**	**17 11 04.4**	**-0.6**
TPNV	**Topopah Spring**	**1.76**	**131**		**Pn**	**17 11 05.8**	**-0.3**
TPNV	**Topopah Spring**	**1.76**	**131**	IAML		17 11 37.4	
	comp=E,2μm,0.7s						
TPNV				IAML		17 11 39.2	
	comp=E,2μm,0.8s						
S11A	**Rachel**	**1.77**	**105**		**Pn**	**17 11 05.8**	**-0.4**
SDH	**Striped Hills**	**1.93**	**139**		**Pn**	**17 11 08.4**	**0.0**
CMB	**Columbia Colle**	**1.96**	**268**		**Pn**	**17 11 08.1**	**-0.7**
CMB				IAML		17 11 38.8	
	comp=N,707nm,1.2s						
PAHR	**Pah Rah Range**	**1.96**	**324**		**Pn**	**17 11 08.3**	**-0.6**
MPK	**Martis Peak**	**2.04**	**306**		**Pn**	**17 11 09.6**	**-0.4**
MPK				IAML		17 11 44.8	
	comp=N,642nm,0.8s						
MPK				IAML		17 11 48.7	
	comp=E,780nm,1.1s						
MPMC	**Manual Prospec**	**2.08**	**171**		**Pn**	**17 11 10.2**	**-0.4**
MPMC				IAML		17 11 46.0	
	comp=E,757nm,0.9s						
MPMC				IAML		17 11 49.0	
	comp=N,716nm,0.8s						
AMDNV	**Amargosa**	**2.11**	**142**		**Pn**	**17 11 11.2**	**+0.4**
GWY	**Greenwater Val**	**2.17**	**153**		**Pn**	**17 11 11.1**	**-0.7**
GWY				IAML		17 11 47.7	
	comp=N,1μm,0.5s						
PEAR	**Peavine Mounta**	**2.19**	**313**		**Pn**	**17 11 12.9**	**+0.8**
DONR	**Donner Summit**	**2.26**	**304**		**Pn**	**17 11 13.6**	**+0.6**
QSM	**Queen of Sheba**	**2.30**	**159**		**Pn**	**17 11 13.1**	**-0.4**
QSM				IAML		17 11 51.7	
	comp=E,937nm,0.7s						
QSM				IAML		17 11 58.2	
	comp=N,706nm,0.8s						
TOW	**Tower One**	**2.31**	**177**		**Pn**	**17 11 14.6**	**+1.0**
BMN	**Battle Mountai**	**2.37**	**13**		**Pn**	**17 11 14.2**	**-0.4**
BMN				IAML		17 11 51.5	
	comp=E,924nm,0.6s						
PRN	**Pahroc Range**	**2.37**	**107**		**Pn**	**17 11 13.2**	**-1.3**
VES	**Vestal, Richgr**	**2.46**	**203**		**Pn**	**17 11 16.0**	**+0.4**
ISA	**Isabella, Lake**	**2.49**	**191**		**Pb**	**17 11 20.7**	**+0.3**
ISA				IAML		17 11 55.9	
	comp=E,513nm,1.1s						
AFDM	**Forest Hills D**	**2.54**	**290**		**Pn**	**17 11 16.6**	**-0.2**
AFDM				IAML		17 11 59.3	
	comp=E,355nm,0.6s						
AFDM				IAML		17 11 59.4	
	comp=N,472nm,0.8s						
BEKR	**Beckworth**	**2.59**	**313**		**Pn**	**17 11 17.5**	**-0.1**
CCCA	**Chr Cany lake**	**2.62**	**170**		**Pn**	**17 11 18.1**	**+0.2**
LRMC	**Laurel Mtn Rad**	**2.64**	**176**		**Pb**	**17 11 20.9**	**-2.0**
LRMC				IAML		17 12 01.7	
	comp=E,401nm,0.6s						
LRMC				IAML		17 12 04.5	
	comp=N,304nm,0.6s						
BBGB	**Big Mountain B**	**2.93**	**239**		**Pn**	**17 11 22.4**	**+0.2**
GSC	**Goldstone, Bar**	**2.95**	**162**	IAML		17 12 13.8	
	comp=N,503nm,0.8s						
GSC				IAML		17 12 17.3	
	comp=E,605nm,0.8s						
PMPB	**Monarch Peak**	**2.99**	**232**		**Pn**	**17 11 23.2**	**+0.2**
PMPB				IAML		17 12 24.1	
	comp=E,552nm,1.0s						
PKD	**Bear Valley Ra**	**3.02**	**225**		**Pn**	**17 11 23.7**	**+0.2**
PKD				IAML		17 12 16.0	
	comp=N,208nm,1.0s						
PKD				IAML		17 12 24.9	
	comp=E,273nm,1.3s						
MHC	**Mount Hamilton**	**3.06**	**256**		**Pn**	**17 11 23.8**	**-0.2**
MHC				IAML		17 12 13.9	
	comp=N,592nm,0.7s						
MHC				IAML		17 12 15.2	
	comp=E,510nm,1.3s						
TUQ	**Turquoise Moun**	**3.11**	**149**		**Pn**	**17 11 24.6**	**-0.1**
SAO	**San Andreas Ge**	**3.13**	**245**		**Pn**	**17 11 24.6**	**-0.2**
ORV	**Oroville**	**3.15**	**298**		**Pn**	**17 11 25.0**	**-0.2**
PSUT	**Pine Spring**	**3.21**	**81**		**Pn**	**17 11 25.7**	**-0.5**
PSUT				IAML		17 12 22.9	
	comp=N,386nm,1.1s						
PSUT				IAML		17 12 26.0	
	comp=E,396nm,0.6s						
SUTB	**Sutter Butte**	**3.23**	**291**	IAML		17 12 23.5	
	comp=N,416nm,0.6s						
SUTB				IAML		17 12 33.6	
	comp=E,466nm,0.8s						
MTPC	**Mountain Pass**	**3.23

BELC				IAML			17 13 01.1	
	comp=E,128nm,1.1s							
W13A	**Hualapai Mount**	**4.42**	**132**	IAML			17 13 09.3	
	comp=E,82nm,0.8s							
ELS	**Elsinore Mount**	**4.48**	**175**	IAML			17 13 03.2	
	comp=E,72nm,1.6s							
MTPU	**Mount Pierson**	**4.51**	**89**	IAML			17 12 59.6	
	comp=E,95nm,0.8s							
M03C	**McCloud**	**4.53**	**315**	IAML			17 13 25.0	
	comp=N,70nm,1.3s							
M03C				IAML			17 13 25.8	
	comp=E,94nm,1.1s							
IRM	**Iron Mountain**	**4.54**	**150**	IAML			17 13 01.0	
	comp=E,82nm,0.5s							
PFO	**Pinyon Flats O**	**4.65**	**165**	Pn	**Pn**		**17 11 49.2**	**+3.4**
	comp=E,1.0nm,0.3s,baz=7.1,slow=18,SNR=6.2							
PFO				Pg	**Pb**		**17 12 00.3**	**+3.1**
	comp=E,2.3nm,0.3s,baz=342,slow=8.4,SNR=25							
PFO				Lg	Lg		17 13 02.6	
	comp=E,1.9nm,0.3s,baz=272,slow=19,SNR=8.8							
PFO				LR	LR		17 13 54.3	
	comp=E,67nm,19.4s,baz=26,slow=42							
	comp=E,2.9nm,0.4s							
PFO	**Pinyon Flats O**	**4.65**	**165**	IAML			17 13 10.5	
	comp=E,69nm,2.0s							
BGU	**Big Grassy Mou**	**4.70**	**52**	IAML			17 13 09.0	
	comp=E,88nm,0.9s							
BGU				IAML			17 13 17.3	
	comp=N,69nm,1.0s							
KCPM	**Cahto Peak**	**4.70**	**291**	IAML			17 13 24.5	
	comp=E,75nm,3.0s							
BC3	**Big Chuckawall**	**4.88**	**155**	IAML			17 13 18.4	
	comp=N,49nm,1.4s							
BC3				IAML			17 13 21.5	
	comp=E,50nm,0.9s							
NLU	**North Lily Min**	**4.90**	**66**	IAML			17 13 19.8	
	comp=N,58nm,1.1s							
NLU				IAML			17 13 21.5	
	comp=E,59nm,1.6s							
KMRM	**Mail Ridge**	**4.98**	**297**	IAML			17 13 32.9	
	comp=N,49nm,2.0s							
KMRM				IAML			17 13 48.4	
	comp=E,47nm,2.7s							
BORC	**Borrego Spring**	**4.99**	**166**	IAML			17 13 15.7	
	comp=E,62nm,1.3s							
BLYC	**Blythe**	**5.15**	**147**	IAML			17 13 24.0	
	comp=E,92nm,0.9s							
BLYC				IAML			17 13 24.7	
	comp=N,71nm,0.8s							
YBH	**Yreka Blue Hor**	**5.17**	**316**	Pn	**Pn**		**17 11 54.9**	**+2.1**
	comp=N,0.3nm,0.3s,baz=150,slow=11,SNR=5.4							
YBH				LR	LR		17 13 55.0	
	comp=N,59nm,21.3s,baz=156,slow=39							
	comp=N,1.3nm,0.5s							
YBH	**Yreka Blue Hor**	**5.17**	**316**	IAML			17 13 05.6	
	comp=N,114nm,0.6s							
DPP	**Dos Picos Cty**	**5.17**	**171**	IAML			17 13 21.3	
	comp=E,49nm,1.4s							
Q16A	**Castle Valley**	**5.34**	**79**	IAML			17 13 27.1	
	comp=N,50nm,1.3s							
Q16A				IAML			17 13 28.9	
	comp=E,39nm,0.7s							
PDAR	**Pinedale Array**	**7.88**	**51**	Pn	Pn		17 12 34.8	+4.5
	comp=E,0.2nm,0.3s,baz=242,slow=14,SNR=16							
PDAR				LR	LR		17 15 40.0	
	comp=E,27nm,21.8s,baz=228,slow=39							
	comp=E,2.4nm,1.0s							
ANMO	**Albuquerque**	**9.74**	**105**	Pg	Pn		17 13 35.1	+39
	comp=E,0.2nm,0.3s,baz=286,slow=14,SNR=8.2							
ANMO				Lg	Lg		17 15 40.4	
	comp=E,0.1nm,0.3s,baz=7.7,slow=24,SNR=5.8							
TXAR	**Lajitas Array**	**14.72**	**122**	Pn	**P**		**17 14 08.8**	**-1.1**
	baz=305,slow=4.4,SNR=4.6							
	comp=E,0.4nm,0.9s							
LPIG	**La Paz**	**15.40**	**153**	LR	LR		17 19 37.7	
	comp=E,33nm,19.5s,baz=35,slow=35							
BBB	**Bella Bella**	**15.78**	**336**	LR	LR		17 20 34.2	
	comp=E,38nm,18.4s,baz=38,slow=38							
DLBC	**Dease Lake**	**21.81**	**343**	P	**P**		**17 15 29.2**	**+1.7**
	comp=E,0.8nm,0.4s,baz=143,slow=20,SNR=4.0							
DLBC				LR	LR		17 23 40.8	
	comp=E,35nm,21.5s,baz=25,slow=36							
	comp=E,0.8nm,0.4s							
ILAR	**Eielson Array**	**31.67**	**337**	P	**P**		**17 17 00.3**	**+1.8**
	comp=E,0.4nm,0.7s,baz=150,slow=9.2,SNR=5.1							
	comp=E,0.4nm,0.7s							

WEL 23 17:16:18.0±0.7, 45°S±5°×16°7E±°, h86km±6km, M3.6/15, ML3.5/8, MLv3.6/15, Error ellipse: s-maj=7.5km s-min=5.1km az=133.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.42**	**48**	P	Pn	17 16 33.5	+1.9
TAFS	**Te Anau Fire S**	**0.49**	**161**	P	Pn	17 16 33.8	+1.6
TAFS				S	Sn	17 16 45.4	+2.6
DCZ	**Deep Cove**	**0.56**	**205**	P	Pn	17 16 33.6	+0.8
MLZ	**Mavora Lakes**	**0.60**	**133**	P	Pn	17 16 34.3	+1.1
MLZ				S	Sn	17 16 46.5	+1.9
GLNY	**Glenorchy**	**0.65**	**82**	P	Pn	17 16 35.1	+1.4
QTPS	**Queenstown Pol**	**0.83**	**96**	P	Pn	17 16 36.8	+1.3
QTPS				S	Sn	17 16 50.2	+1.6
MOSS	**Mossburn Schoo**	**0.89**	**144**	P	Pn	17 16 37.2	+1.1
MOSS				S	Sn	17 16 51.4	+1.8
WHZ	**Wether Hill Ro**	**0.99**	**161**	P	Pn	17 16 37.7	+0.4
WHZ				S	Sn	17 16 52.2	+0.4
WKZ	**Wanaka**	**1.09**	**84**	P	Pn	17 16 39.6	+1.1
WKZ				S	Sn	17 16 55.1	+1.3
RRKS	**Rarakau**	**1.19**	**181**	P	Pn	17 16 40.3	+0.6
NSBS	**Neils Beach**	**1.27**	**42**	P	Pn	17 16 40.9	+0.3
JCZ	**Jackson Bay**	**1.28**	**47**	P	Pn	17 16 41.3	+0.5
EAZ	**Earnscleugh**	**1.31**	**103**	P	Pn	17 16 41.8	+0.6
EAZ				S	Sn	17 16 58.5	-0.2
PYZ	**Puysegur Point**	**1.34**	**205**	P	Pn	17 16 42.3	+0.8
ORPS	**Orepuki**	**1.35**	**172**	P	Pn	17 16 41.7	+0.1
HDWS	**Hasst DOC Work**	**1.54**	**47**	P	Pn	17 16 44.1	0.0
TUZ	**Tuapeka**	**1.81**	**124**	P	Pn	17 16 47.6	+0.1
APZ	**The Paps**	**1.91**	**170**	P	Pn	17 16 48.6	-0.3
SYZ	**Scrubby Hill**	**1.96**	**145**	P	Pn	17 16 49.3	-0.1
TWAS	**Twizel Area Sc**	**1.99**	**70**	P	Pn	17 16 49.4	-0.5
LBZ	**Lake Benmore**	**2.00**	**74**	P	Pn	17 16 49.3	-0.8
BDCS	**Balclutha Dist**	**2.03**	**130**	P	Pn	17 16 50.2	-0.2
FOZ	**Fox Glacier**	**2.19**	**50**	P	Pn	17 16 51.8	-0.8
TMBS	**Taieri Mouth B**	**2.20**	**121**	P	Pn	17 16 52.7	0.0
MCNS	**Mount Cook Ann**	**2.23**	**58**	P	Pn	17 16 52.7	-0.5
ODZ	**Otahua Downs**	**2.24**	**93**	P	Pn	17 16 52.4	-0.7
DUNS	**Dunedin Corsto**	**2.30**	**115**	P	Pn	17 16 53.9	-0.1
DCDS	**Dunedin Civil**	**2.31**	**115**	P	Pn	17 16 54.1	0.0
HHSZ	**Highcliff Hill**	**2.38**	**114**	P	Pn	17 16 54.9	-0.1
TMZ	**Timaru**	**2.57**	**78**	P	Pn	17 16 56.2	-1.5
GCSZ	**Gaunt Creek Bo**	**2.62**	**52**	P	Pn	17 16 56.9	-1.3
ARCZ	**Arundel**	**2.82**	**70**	P	Pn	17 16 59.1	-2.0
RPZ	**Rata Peaks**	**2.84**	**65**	P	Pn	17 16 59.5	-1.7
WVZ	**Waitaha Valley**	**3.00**	**52**	P	Pn	17 17 01.8	-1.6
MHCZ	**Mount Hutt**	**3.25**	**66**	P	Pn	17 17 04.6	-2.3
WACZ	**Wakanui South**	**3.27**	**74**	P	Pn	17 17 05.1	-2.0
RACZ	**Rakaia**	**3.55**	**71**	P	Pn	17 17 09.4	-1.4
INZ	**Inchbonnie**	**3.62**	**53**	P	Pn	17 17 10.1	-1.7
OXZ	**Oxford**	**3.65**	**65**	P	Pn	17 17 09.6	-2.7
MQZ	**McQueen's Vall**	**3.91**	**73**	P	Pn	17 17 13.4	-2.2
LTZ	**Lake Taylor**	**4.08**	**60**	P	Pn	17 17 15.5	-2.6
AMCZ	**Amberley**	**4.12**	**66**	P	Pn	17 17 16.5	-2.1
OKCZ	**Okains Bay**	**4.18**	**75**	P	Pn	17 17 18.3	-1.1
GVZ	**Greta Valley S**	**4.46**	**66**	P	Pn	17 17 20.9	-2.4
DSZ	**Denniston Nort**	**4.49**	**46**	P	Pn	17 17 21.8	-1.8
THZ	**Tophouse**	**5.07**	**53**	P	Pn	17 17 29.2	-2.4
MRNZ	**Matariki Terra**	**5.24**	**49**	P	Pn	17 17 32.3	-1.5
QRZ	**Quartz Range**	**5.54**	**44**	P	Pn	17 17 37.2	-0.7
TKNZ	**Takaka Hill**	**5.60**	**48**	P	Pn	17 17 38.5	-0.3

*SOF **23** 17:23:45.3, 41°.47N±0°.02×19°.32E±0°.03, h10km±1km, MD3.9/8*
*TIR **23** 17:23:46.4, 41°.54N×19°.45E, h28km±2km, Md2.9/8, Ml3.6/5*
*PDG **23** 17:23:47.0±0.3, 41°.48N×19°.46E, h11km, MD3.4/7, ML3.3/13, Error ellipse: s-maj=0.2km s-min=0.8km az=0.0*
*NEIC **23** 17:23:47.1±2.1, 41°.48N±0°.04×19°.43E±0°.03, h10km±7km, mb4.1/3, Error ellipse: s-maj=6.4km s-min=2.4km az=149.0*
*RHSSO **23** 17:23:47.6±0.7, 41°.44N×19°.50E, h5km±2km, ML3.5/7*
*BEO **23** 17:23:48.6±0.4, 41°.50N×19°.51E, h11km±2km, ML3.4/14*
*IDC **23** 17:23:48.8±5.2, 41°.87N×19°.97E, h0km, mb4.0/5,*

mbtmp3.8/8, ML2.9/3, MS2.8/3, Error ellipse: s-maj=99.2km s-min=21.5km az=26.0
ISC 23 17:23:47.0±1.0, 41°.48N±0°.02×19°.46E±0°.02, h12km±7km, n146, σ1§29/220, mb4.1/6, 24C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**113**	P	**Pg**	**17 23 54.3**	**+0.6**
TIR				S	**Sg**	**17 23 58.4**	**+0.1**
TIR				AML	AML	17 23 59.3	
	40nm,0.2s						
TIR				AMd		17 24 34.2	
ULC	**Ulcinj**	**0.51**	**342**	*e*Pg	**Pg**	**17 23 56.6**	**-0.5**
ULC				*i* Sg	**Sb**	**17 24 04.7**	**-0.7**
SDA	**Shkodra**	**0.57**	**3**	P	**Pg**	**17 23 57.2**	**-1.0**
SDA				S	**Sg**	**17 24 04.1**	**-1.7**
SDA				AML	AML	17 24 10.7	
	3.9nm,0.4s						
SDA				AMd		17 24 57.0	
DRME	**Dracevica, Mon**	**0.74**	**344**	↑*i* Pg	**Pg**	**17 24 01.5**	**+0.2**
DRME				*e*Sg	**Sb**	**17 24 13.0**	**+1.1**
DRME	**Dracevica, Mon**	**0.74**	**344**	*e*Pg	**Pg**	**17 24 00.7**	**-0.6**
DRME				*i* Sg	**Sb**	**17 24 12.3**	**+0.4**
PHP	**Peshkopia**	**0.77**	**74**	P	**Pg**	**17 24 00.8**	**-1.1**
PHP				S	**Sg**	**17 24 11.5**	**-0.4**
PHP				AML	AML	17 24 18.2	
	8.9nm,0.6s						
PHP				AMd		17 24 51.8	
BUM	**Brajici-Budva**	**0.92**	**333**	*e*Pg	**Pg**	**17 24 04.0**	**-0.9**
BUM				*i* Sg	**Sn**	**17 24 18.6**	**-0.5**
PDG	**Podgorica**	**0.96**	**351**	⇓P	**Pg**	**17 24 04.8**	**-0.8**
PDG				⇓S	**Sg**	**17 24 14.4**	**-3.8**
PDG	**Podgorica**	**0.96**	**351**	P	**Pg**	**17 24 04.7**	**-1.0**
PDG				S	**Sb**	**17 24 18.4**	**+0.1**
PDG				AMd		17 25 13.6	
PDG	**Podgorica**	**0.96**	**351**		**Pg**	**17 24 04.8**	**-0.8**
PDG	**Podgorica**	**0.96**	**351**	*e*Pg	**Pg**	**17 24 04.9**	**-0.8**
PDG				*e*Sg	**Sn**	**17 24 19.8**	**-0.2**
PDG	**Podgorica**	**0.96**	**351**	↑*i* Pg	**Pg**	**17 24 04.8**	**-0.8**
PDG				*e*Sg	**Sb**	**17 24 19.4**	**+1.1**
PDG	**Podgorica**	**0.96**	**351**	↑*i* Pg	**Pg**	**17 24 04.8**	**-0.8**
PDG				*i* Sg	**Sn**	**17 24 20.0**	**0.0**
VLO	**Vlora**	**1.01**	**178**	P	**Pg**	**17 24 05.8**	**-0.7**
VLO				S	**Sn**	**17 24 21.3**	**+0.3**
VLO				AML	AML	17 24 29.6	
	6.1nm,0.2s						
VLO				AMd		17 25 21.2	
OHR	**Ohrid**	**1.07**	**109**	*i* Pg	**Pg**	**17 24 07.1**	**-0.6**
OHR				*i* Sg	**Sn**	**17 24 24.8**	**+1.9**
CEME	**Cevo**	**1.14**	**340**	*e*Pg	**Pb**	**17 24 08.0**	**-0.7**
CEME				*i* Sg	**Sn**	**17 24 25.9**	**+1.4**
PVY	**Plav**	**1.18**	**18**	*e*Pg	**Pb**	**17 24 08.2**	**-1.2**
PVY				*i* Sg	**Sn**	**17 24 27.3**	**+1.8**
HCY	**Herceg Novi**	**1.21**	**324**	*e*Pg	**Pg**	**17 24 10.2**	**0.0**
HCY				*e*Sg	**Sn**	**17 24 27.1**	**+1.1**
HCY	**Herceg Novi**	**1.21**	**324**	*e*Pg	**Pb**	**17 24 09.3**	**-0.5**
HCY				*i* Sg	**Sn**	**17 24 28.1**	**+2.1**
KBN	**Korca**	**1.32**	**130**	P	**Pg**	**17 24 13.2**	**+0.8**
KBN				S	**Sg**	**17 24 31.0**	**+1.4**
KBN				AMd		17 25 26.4	
NKME	**Niksic**	**1.34**	**344**	*e*Pg	**Pn**	**17 24 12.1**	**+0.5**
NKME				*i* Sg	**Sg**	**17 24 32.8**	**+2.5**
KOME	**Kolasin**	**1.37**	**2**	*e*Pg	**Pn**	**17 24 12.3**	**+0.2**
KOME				*i* Sg	**Sg**	**17 24 33.9**	**+2.6**
IVA	**Berane**	**1.43**	**13**	*e*Pg	**Pn**	**17 24 13.1**	**+0.2**
IVA				*i* Sg	**Sg**	**17 24 35.4**	**+2.3**
TREB	**Trebinje**	**1.49**	**327**	*e*Pg	**Pb**	**17 24 14.7**	**+0.1**
TREB				*e*Sg	**Sg**	**17 24 37.1**	**+2.2**
TREB	**Trebinje**	**1.49**	**327**	↑*i* Pn	**Pb**	**17 24 14.5**	**-0.1**
TREB				*e*Sn	**Sg**	**17 24 35.8**	**+0.9**
SKO	**Skopje**	**1.56**	**71**	*i* Pn	**Pb**	**17 24 16.2**	**+0.3**
SKO				*i* Sn	**Sg**	**17 24 38.3**	**+1.0**
BRY	**Bratogost**	**1.58**	**335**	*e*Pn	**Pb**	**17 24 16.5**	**+0.3**
BRY				*e*Sn	**Sg**	**17 24 38.2**	**+0.4**
BRY	**Bratogost**	**1.58**	**335**	*e*Pn	**Pb**	**17 24 16.0**	**-0.2**
BRY				*i* Sn	**Sg**	**17 24 38.8**	**+1.0**
SRN	**Sarande**	**1.65**	**165**	P	**Pb**	**17 24 17.2**	**-0.1**
SRN				S	**Sg**	**17 24 40.8**	**+0.8**
SRN				AMd		17 25 47.4	
UPM	**Unac-Piva**	**1.77**	**347**	↑*i* Pn	**Pb**	**17 24 19.6**	**0.0**
UPM				*e*Sn	**Sb**	**17 24 43.0**	**+1.2**
UPM	**Unac-Piva**	**1.77**	**347**	*e*Pn	**Pn**	**17 24 18.6**	**+0.9**
UPM				*i* Sn	**Sg**	**17 24 43.5**	**-0.6**
KEK	**Kerkira**	**1.78**	**171**		**Pn**	**17 24 17.4**	**-0.2**
KLINJ	**Klinje**	**1.81**	**339**	*e*Pn	**Pb**	**17 24 20.4**	**+0.2**
KLINJ				*e*Sn	**Sb**	**17 24 44.0**	**+1.2**
SJES	**Sjenica**	**1.82**	**12**	*e*Pn	**Pb**	**17 24 20.5**	**+0.1**
SJES				*e*Sg	**Sg**	**17 24 45.2**	**-0.5**
SJES	**Sjenica**	**1.82**	**12**	↑*i* Pn	**Pb**	**17 24 19.9**	**-0.5**
SJES				*e*Sn	**Sb**	**17 24 43.9**	**+0.7**
PLE	**Pljevlja**	**1.85**	**358**	*e*Pn	**Pn**	**17 24 19.7**	**+1.0**
PLE				*i* Sn	**Sb**	**17 24 45.4**	**+1.4**
STON	**Ston**	**1.91**	**317**	*e*Pn	**Pn**	**17 24 20.4**	**+1.0**
STON				*e*Sn	**Sb**	**17 24 45.6**	**+0.1**
STON				*e*Sg	**Sg**	**17 24 49.3**	**+0.9**
NOCI	**Noci**	**1.93**	**250**	P	**Pn**	**17 24 20.3**	**+0.6**
NOCI				S	**Sn**	**17 24 43.3**	**-0.7**
NOCI				AML	AML	17 24 52.8	
	0.7nm,0.5s						
IGT	**Igoumenitsa**	**2.06**	**161**	*e*Pn	**Pn**	**17 24 22.7**	**+1.3**
IGT				*e*Sn	**Sb**	**17 24 49.7**	**-0.1**
SELS	**Selova**	**2.13**	**35**	*e*Pn	**Pn**	**17 24 20.8**	**+1.3**
SELS				*e*Sn	**Sn**	**17 24 50.8**	**+1.9**
BARS	**Barje**	**2.21**	**52**	*e*Pn	**Pn**	**17 24 24.5**	**+1.0**
BARS				*e*Sn	**Sn**	**17 24 51.3**	**+0.6**
MATE	**Matera**	**2.24**	**249**	⇓P	**Pn**	**17 24 25.2**	**+1.3**
GOCS	**Kraljevo Serbi**	**2.33**	**26**	*e*Pn	**Pn**	**17 24 26.9**	**+1.6**
GOCS				*e*Sn	**Sn**	**17 24 55.4**	**+1.5**
BBLS	**Lazi&#263i**	**2.39**	**359**	*e*Pn	**Pn**	**17 24 28.1**	**+2.1**
BBLS	**Lazi&#263i**	**2.39**	**359**	*e*Pn	**Pn**	**17 24 27.9**	**+1.9**
BBLS				*e*Sn	**Sn**	**17 24 57.4**	**+2.2**
BOSS	**Bosilegrad**	**2.47**	**65**	*e*Pn	**Pn**	**17 24 28.3**	**+1.2**
BOSS				*e*Sn	**Sn**	**17 24 57.2**	**-0.1**
PEHC	**Pehcevo**	**2.60**	**82**	*i* Pn	Pn	17 24 16.5	-12
PEHC				*i* Sn	Sn	17 24 38.3	-22
DIVS	**Divibare**	**2.65**	**8**	*e*Pn	**Pn**	**17 24 30.7**	**+1.1**
LIT	**Litokhoron**	**2.68**	**120**		**Pn**	**17 24 30.6**	**+0.5**
TRAN	**Tran**	**2.73**	**59**	P	**Pn**	**17 24 32.3**	**+1.5**
KKB	**Krupnik**	**2.77**	**81**	P	**Pn**	**17 24 32.7**	**+1.4**
SGRT	**San Giovanni R**	**2.80**	**277**		**Pn**	**17 24 32.1**	**+0.4**
TRUS	**Trudelj**	**2.83**	**14**	*e*Pn	**Pn**	**17 24 33.9**	**+1.8**
TRUS				*e*Sn	**Sn**	**17 25 07.5**	**+1.4**
ZAPS	**Zavoj**	**2.96**	**52**	*e*Pn	**Pn**	**17 24 35.2**	**+1.3**
ZAPS				*e*Sn	**Sn**	**17 25 09.8**	**+0.5**
TEKS	**Tekeris**	**3.07**	**1**	*e*Pn	**Pn**	**17 24 36.8**	**+1.4**
TEKS				*e*Sn	**Sn**	**17 25 14.7**	**+2.7**
TIP	**Timpagrande**	**3.09**	**223**		**Pn**	**17 24 36.0**	**+0.3**
ZAGS	**Zajecar**	**3.10**	**40**	*e*Pn	**Pn**	**17 24 37.2**	**+1.4**
ZAGS				*e*Sn	**Sn**	**17 25 13.2**	**+0.4**
PLNA	**Plana**	**3.12**	**70**	P	**Pn**	**17 24 38.1**	**+1.9**
SRS	**Serrai**	**3.14**	**95**	*e*Pn	**Pn**	**17 24 37.3**	**+1.0**
BLSH	**Balsha**	**3.16**	**63**	P	**Pn**	**17 24 38.5**	**+1.9**
BLKB	**Belogradchik**	**3.20**	**47**	⇑S	**Sn**	**17 25 16.1**	**+0.8**
BLKB	**Belogradchik**	**3.20**	**47**	*e*Pn	**Pn**	**17 24 38.7**	**+1.5**
BLKB				*e*Sn	**Sn**	**17 25 15.5**	**+0.2**
MMB	**Musomishta**	**3.22**	**87**	P	**Pn**	**17 24 38.9**	**+1.4**
AVAS	**Avala Beograd**	**3.31**	**13**	*e*Pn	**Pn**	**17 24 39.8**	**+1.2**
AVAS				*e*Sn	**Sn**	**17 25 17.3**	**-0.6**
KUBS	**Kucevo**	**3.35**	**28**	*e*Pn	**Pn**	**17 24 38.9**	**-0.4**
KUBS				*e*Sn	**Sn**	**17 25 17.4**	**-1.6**
PGB	**Panagyurishte**	**3.66**	**72**	P	**Pn**	**17 24 45.5**	**+2.0**
BLY	**Banja Luka**	**3.67**	**334**		**Pn**	**17 24 43.6**	**0.0**
BLY	**Banja Luka**	**3.67**	**334**	*e*Pn	**Pn**	**17 24 44.9**	**+1.3**
BLY				*e*Sn	**Sn**	**17 25 28.8**	**+2.1**
MPEP	**Malo Peshtene**	**3.69**	**58**	P	**Pn**	**17 24 45.6**	**+1.8**
FRGS	**Fruska Gora**	**3.69**	**4**	*e*Pn	**Pn**	**17 24 45.9**	**+2.1**
FRGS				*e*Sn	**Sn**	**17 25 28.8**	**+1.6**
FRGS	**Fruska Gora**	**3.69**	**4**	↑*i* Pn	**Pn**	**17 24 45.9**	**+2.1**
FRGS				*e*Sn	**Sn**	**17 25 28.3**	**+1.1**
MDVR	**Moldovita**	**3.69**	**26**	⇓P	**Pn**	**17 24 45.0**	**+1.1**
MDVR				⇓S	**Sn**	**17 25 26.9**	**-0.5**
MDVR	**Moldovita**	**3.69**	**26**	*e*Pn	**Pn**	**17 24 44.8**	**+0.9**
MDVR				*e*Sn	**Sn**	**17 25 26.5**	**-0.9**
PAOL	**Paolisi**	**3.71**	**265**		**Pn**	**17 24 43.5**	**-0.8**
VRSS	**Vrsac**	**3.89**	**20**	*e*Pn	**Pn**	**17 24 48.3**	**+1.7**
VRSS				*e*Sn	**Sn**	**17 25 30.9**	**-1.3**
RZN	**Rozhen**	**3.97**	**85**	P	**Pn**	**17 24 49.4**	**+1.6**
PLD	**Plovdiv**	**4.01**	**79**	P	**Pn**	**17 24 50.0**	**+1.7**
PLD	**Plovdiv**	**4.01**	**79**	*e*Pn	**Pn**	**17 24 49.9**	**+1.7**
PLD				*e*Sn	**Sn**	**17 25 32.8**	**-2.3**
HERR	**Herculane**	**4.03**	**31**	⇑P	**Pn**	**17 24 49.8**	**+1.3**
INTR	**Introdacqua**	**4.19**	**279**		**Pn**	**17 24 51.1**	**+0.3**
SRE	**Strehaia**	**4.20**	**40**	⇑P	**Pn**	**17 24 52.3**	**+1.4**
SRE				⇑S	**Sn**	**17 25 40.8**	**+0.9**
CEL	**Celeste**	**4.22**	**222**	Pn	**Pn**	**17 24 51.0**	**-0.3**
PLVB	**Pleven**	**4.27**	**62**	⇑P	**Pn**	**17 24 53.9**	**+2.1**
BZS	**Buzias**	**4.42**	**20**	⇓P	**Pn**	**17 24 54.7**	**+0.8**
BZS	**Buzias**	**4.42**	**20**	*e*Pn	**Pn**	**17 24 54.7**	**+0.8**
BZS				*e*Sn	**Sn**	**17 25 43.7**	**-1.7**
RDO	**Rodhopi**	**4.59**	**92**		**Pn**	**17 24 56.9**	**+0.7**
GZR	**Gura Zlata**	**4.60**	**31**	⇓S	**Sn**	**17 25 49.6**	**-0.1**
GZR	**Gura Zlata**	**4.60**	**31**	*e*Pn	**Pn**	**17 24 58.2**	**+1.8**
GZR				*e*Sn	**Sn**	**17 25 49.7**	**-0.1**
AQU	**L'Aquila**	**4.60**	**283**	Pn	**Pn**	**17 24 57.7**	**+1.3**
MORH	**Mrgy, Hungar**	**4.77**	**353**	⇑P	**Pn**	**17 24 58.9**	**+0.2**
MORH	**Mrgy, Hungar**	**4.77**	**353**	⇑*i* Pn	**Pn**	**17 25 00.7**	**+2.0**
MORH				*e*Sn	**Sn**	**17 25 54.4**	**+0.5**
GUMA	**Gualdo di Mace**	**4.81**	**291**	Pn	**Pn**	**17 24 58.9**	**-0.3**
NRCA	**Norcia**	**4.91**	**288**		**Pn**	**17 25 01.3**	**+0.6**
FDMO	**Fiordimonte**	**4.98**	**290**		**Pn**	**17 25 02.2**	**+0.6**
SIRR	**Siria**	**5.05**	**18**	⇑P	**Pn**	**17 25 03.6**	**+1.1**
SIRR				⇑S	**Sn**	**17 25 59.4**	**-1.3**
SIRR	**Siria**	**5.05**	**18**	*e*Pn	**Pn**	**17 25 04.1**	**+1.6**
SIRR				*e*Sn	**Sn**	**17 25 58.3**	**-2.4**
BOJS	**Bojanci**	**5.05**	**324**	*e*Pn	**Pn**	**17 25 04.0**	**+1.4**
LOT	**Lotru**	**5.06**	**37**	⇓P	**Pn**	**17 25 04.2**	**+1.4**
HUMR	**Humele**	**5.07**	**51**	⇑P	**Pn**	**17 25 04.6**	**+1.8**
CESX	**Cesi**	**5.24**	**285**	Pn	**Pn**	**17 25 06.3**	**+1.1**
ARR	**Arges**	**5.42**	**42**	⇑P	**Pn**	**17 25 09.1**	**+1.5**
ARR				⇓S	**Sn**	**17 26 10.1**	**+0.2**
MURB	**Monte Urbino**	**5.44**	**291**		**Pn**	**17 25 08.5**	**+0.6**
MTUR	**Matau**	**5.54**	**46**	⇓P	**Pn**	**17 25 11.1**	**+1.7**
CEY	**Cerknica**	**5.61**	**321**	*e*Pn	**Pn**	**17 25 10.3**	**0.0**
SKDS	**Skadanscina**	**5.67**	**318**	*e*Pn	**Pn**	**17 25 11.2**	**+0.1**
SKDS				*e*Sn	**Sn**	**17 26 14.5**	**-1.7**
VOIR		**5.68**	**44**	⇑P	**Pn**	**17 25 12.6**	**+1.3**
VOIR				⇑S	**Sn**	**17 26 17.6**	**+1.3**
MARR	**Marisel-Cluj**	**5.83**	**26**	⇑P	**Pn**	**17 25 13.6**	**+0.3**
SOKA	**Soboth**	**6.10**	**330**	*i* Pn	**Pn**	**17 25 18.1**	**+1.1**
	3.2nm,0.6s						
SOKA				*e*Sn	**Sn**	**17 26 28.6**	**+1.9**
	1.3nm,0.4s						
OBKA	**Obir**	**6.15**	**327**	*i* Pn	**Pn**	**17 25 18.3**	**+0.6**
	0.6nm,0.2s						
OBKA				*e*Sn	**Sn**	**17 26 28.7**	**+0.7**
	2.2nm,0.4s						
SABO	**M.te Sabotino**	**6.18**	**319**	Pn	**Pn**	**17 25 21.2**	**+3.1**
MLR	**Muntele Rosu**	**6.19**	**47**	⇑P	**Pn**	**17 25 20.3**	**+2.0**
MLR	**Muntele Rosu**	**6.19**	**47**		**Pn**	**17 25 21.1**	**+2.8**
ISR	**Istrita**	**6.32**	**52**	⇑P	**Pn**	**17 25 21.7**	**+1.7**
ARSA	**Arzberg**	**

PUZ	**Puketiti**	**7.55**	**208**	P	**Pn**	**17 35 14.8**	**-0.4**
PUZ				S	**Sn**	**17 36 39.2**	**-0.9**
RUGZ	**Raukumara Rang**	**7.71**	**211**	P	**Pn**	**17 35 17.9**	**+0.4**
RUGZ				S	**Sn**	**17 36 39.9**	**-4.1**
TWGZ	**Tauwhareparae**	**7.76**	**209**	P	**Pn**	**17 35 18.6**	**+0.6**
TWGZ				S	**Sn**	**17 36 45.4**	**+0.3**
CNGZ	**Carnagh Statio**	**7.93**	**207**	P	**Pn**	**17 35 20.8**	**+0.4**
CNGZ				S	**Sn**	**17 36 51.7**	**+2.4**
TKGZ	**Te Karaka**	**8.03**	**209**	P	**Pn**	**17 35 20.8**	**-1.0**
MWZ	**Matawai**	**8.08**	**211**	P	**Pn**	**17 35 21.6**	**-0.9**
URZ	**Urewera**	**8.21**	**213**	Pn	**Pn**	**17 35 23.4**	**-0.8**
	3.7nm,0.3s,baz=268,slow=4.0,SNR=28						
URZ				Sn	**Sn**	**17 36 53.4**	**-2.6**
	4.1nm,0.3s,baz=85,slow=18,SNR=19						
	7.9nm,0.3s						
URZ	**Urewera**	**8.21**	**213**	P	**Pn**	**17 35 23.2**	**-1.0**
RAGZ	**Rawiri**	**8.26**	**210**	P	**Pn**	**17 35 24.9**	**-0.2**
WCZ	**Waipu Caves**	**8.29**	**235**	P	Pn	17 35 31.4	+6.0
RIGZ	**Rimuhau**	**8.30**	**208**	P	**Pn**	**17 35 25.5**	**0.0**
PRGZ	**Paritu Road**	**8.44**	**207**	P	**Pn**	**17 35 26.2**	**-1.2**
OUZ	**Omahuta**	**8.52**	**241**	P	Pn	17 35 34.9	+6.5
MUGZ	**Murupara**	**8.54**	**213**	P	**Pn**	**17 35 27.4**	**-1.3**
MHGZ	**Mahia Peninsul**	**8.63**	**206**	P	**Pn**	**17 35 28.8**	**-1.1**
HIZ	**Hauiti**	**9.55**	**220**	P	**Pn**	**17 35 45.3**	**+2.7**
RPZ	**Rata Peaks**	**15.32**	**214**	Pn	**Pn**	**17 36 57.4**	**-3.8**
	0.2nm,0.3s,baz=309,slow=6.8,SNR=7.1						
RPZ				Sn	Sn	17 39 35.7	-14
	0.1nm,0.3s,baz=143,slow=23,SNR=7.1						
ASAR	**Alice Springs**	**43.69**	**268**	P	**P**	**17 41 31.6**	**+1.8**
	0.4nm,0.3s,baz=107,slow=7.6,SNR=20						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**44.77**	**273**	P	**P**	**17 41 39.4**	**+0.9**
	0.9nm,0.5s,baz=112,slow=8.1,SNR=8.1						
	0.9nm,0.5s						
FINES	**FINESS Array B**	**146.36**	**340**	PKPbc	**PKiKP**	**17 53 07.8**	**+0.2**
	2.8nm,0.9s,baz=45,slow=4.7,SNR=9.0						

*CATAC **23** 17:48:40.2±0.2, 13°N±2′×8°7W±′, h6km±1km, M3.8/25, MLv3.8/25, Error ellipse: s-maj=4.7km s-min=1.7km az=33.1, confirmed*
*SNET **23** 17:48:41.0±2.9, 12°.97N×87°.36W, h5km, ML3.7, Presumed earthquake*
ISC 23 17:48:39.7±0.9, 12°.97N±0°.04×87°.40W±0°.02, h17km±6km, n36, σ0°76/59, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.15**	**274**	P	**Pg**	**17 48 44.3**	**+0.3**
CSGN				S	**Sg**	**17 48 47.3**	**+0.4**
CRIN	**San Cristobal**	**0.43**	**128**	P	**Pb**	**17 48 49.9**	**+0.9**
CRIN				S	**Sb**	**17 48 57.1**	**+1.9**
CNCH	**Conchagua**	**0.52**	**306**	P	**Pb**	**17 48 50.9**	**+0.3**
CNCH				S	**Sn**	**17 48 59.3**	**-1.8**
CNCH	**Conchagua**	**0.52**	**306**	*e*P	**Pb**	**17 48 51.1**	**+0.6**
CNCH				*e*S	**Sn**	**17 49 01.1**	**0.0**
LCND	**La Caada**	**0.59**	**306**	P	**Pb**	**17 48 51.8**	**+0.3**
LCND	**La Caada**	**0.59**	**306**	*e*P	**Pn**	**17 48 53.5**	**+0.1**
LCND				*e*S	**Sn**	**17 49 00.9**	**-1.6**
QUEN	**Al S del Volca**	**0.65**	**125**	P	**Pg**	**17 48 51.2**	**-1.4**
HERN	**Volcan Telica**	**0.66**	**123**	P	**Pb**	**17 48 53.1**	**+0.3**
HERN				S	**Sb**	**17 49 01.8**	**+0.1**
HOYN	**Al Sur del Vol**	**0.67**	**123**	P	**Pb**	**17 48 53.5**	**+0.5**
HOYN				S	**Sb**	**17 49 02.8**	**+0.8**
INTP	**Intipuca**	**0.68**	**290**	*e*P	**Pn**	**17 48 53.9**	**-0.6**
INTP				*e*S	**Sn**	**17 49 04.1**	**-0.7**
CNGN	**Cerro Negro**	**0.83**	**124**	P	**Pg**	**17 48 55.8**	**0.0**
CNGN				S	**Sg**	**17 49 07.1**	**+0.3**
CNGA	**Al SSO del Vol**	**0.83**	**124**	P	**Pg**	**17 48 56.0**	**+0.1**
LEVN	**Ruinas Leon Vi**	**0.95**	**126**	P	**Pg**	**17 48 58.0**	**-0.2**
LEVN				S	**Sn**	**17 49 11.5**	**+0.1**
MOM3	**MOM3**	**0.97**	**118**	P	**Pn**	**17 48 58.5**	**-0.1**
MOM3				S	**Sn**	**17 49 12.3**	**+0.3**
RANC	**El Ranchito**	**0.98**	**298**	P	**Pn**	**17 48 59.3**	**+0.4**
RANC				S	**Sn**	**17 49 13.5**	**+1.0**
MOMN	**Momotombo**	**1.01**	**123**	P	**Pg**	**17 48 59.1**	**-0.1**
MOMN				S	**Sn**	**17 49 12.7**	**-0.2**
LIMN	**Finca el Limon**	**1.01**	**84**	P	**Pn**	**17 48 58.8**	**-0.5**
LIMN				S	**Sn**	**17 49 13.1**	**0.0**
PACA	**Pacayal**	**1.03**	**299**	P	**Pg**	**17 48 59.8**	**0.0**
PACA				S	**Sn**	**17 49 14.5**	**+0.9**
MOM2	**El Cardon**	**1.04**	**120**	P	**Pg**	**17 48 59.8**	**-0.1**
MOM2				S	**Sn**	**17 49 14.7**	**+1.1**
COPN	**Copaltepe**	**1.11**	**135**	P	**Pn**	**17 48 59.7**	**-0.8**
OCON	**Estacion meteo**	**1.11**	**54**	P	**Pg**	**17 49 02.0**	**+0.6**
OCON				S	**Sn**	**17 49 16.6**	**+1.0**
SAPS	**Ciudad Sandino**	**1.25**	**129**	S	**Sg**	**17 49 20.2**	**-0.1**
APYN	**Apoyeque**	**1.26**	**125**	P	**Pg**	**17 49 03.5**	**-0.6**
APYN				S	**Sg**	**17 49 20.1**	**-0.3**
RCFN	**Al S de San Ju**	**1.28**	**64**	P	**Pg**	**17 49 04.0**	**-0.6**
RCFN				S	**Sg**	**17 49 20.8**	**-0.6**
RCON	**San Juan de Ri**	**1.32**	**67**	P	**Pg**	**17 49 04.5**	**-0.7**
RCON				S	**Sg**	**17 49 23.1**	**+0.7**
RCVN	**Varillal2**	**1.32**	**62**	P	**Pg**	**17 49 04.5**	**-0.9**
TISN	**Laguna Tiscapa**	**1.37**	**126**	P	**Pn**	**17 49 04.2**	**+0.1**
RCPN	**Sur Rio San Ju**	**1.39**	**66**	P	**Pg**	**17 49 05.8**	**-0.8**
MATN	**Matagalpa**	**1.44**	**91**	P	**Pg**	**17 49 06.1**	**-1.4**
MAS3	**Al N del Volca**	**1.52**	**128**	P	**Pb**	**17 49 07.1**	**-0.4**
SABN	**Sabanita**	**1.57**	**130**	P	**Pn**	**17 49 07.1**	**+0.3**
NANN	**Nandasmo**	**1.61**	**129**	P	**Pg**	**17 49 10.3**	**-0.5**
LOMA	**Loma Larga**	**1.85**	**292**	*e*P	**Pg**	**17 49 14.3**	**-1.1**
LOMA				*e*S	**Sg**	**17 49 39.7**	**+0.3**
JAYA	**Jayaque - finc**	**2.11**	**289**	*e*P	**Pg**	**17 49 18.1**	**+0.4**
JAYA				*e*S	**Sg**	**17 49 46.6**	**-1.0**
CONN	**Concepcion**	**2.23**	**129**	P	**Pb**	**17 49 18.6**	**-0.9**
CEVE	**Cerro Verde**	**2.33**	**292**	*e*P	**Pb**	**17 49 22.4**	**+1.0**
CEVE				*e*S	**Sg**	**17 49 54.0**	**-0.7**

*IDC **23** 18:01:34.7±0.8, 11°.99N×139°.70E, h0km, mb3.8/12, mbtmp3.9/14, ML4.2/2, MS3.5/55, Error ellipse: s-maj=27.2km s-min=15.3km az=81.0*
*NEIC **23** 18:01:36.8±1.6, 12°.1N±0°.1×139°.8E±0°.1, h10km±1km, mb4.5/19, Error ellipse: s-maj=20.7km s-min=17.4km az=106.0*
ISC 23 18:01:39.4±0.6, 12°.02N±0°.08×139°.9E±0°.1, h35km, n87, σ1°29/40, mb4.3/23, MS3.6/51, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.13**	**72**	Pn	**Pn**	**18 02 54.2**	**+0.4**
	8.2nm,0.3s,baz=206,slow=6.2,SNR=7.2						
GUMO				T	T	18 08 01.1	
	70nm,0.4s,baz=163,slow=21,SNR=8.8						
	68nm,0.7s						
GUMO	**Guam**	**5.13**	**72**		**Pn**	**18 02 51.0**	**-2.8**
JAY	**Jayapura**	**14.46**	**177**	Pn	**Pn**	**18 05 02.0**	**+0.3**
	1.1nm,0.3s,baz=338,slow=7.2,SNR=9.4						
JAY				LR	LR	18 09 30.4	
	comp=Z,248nm,18.8s,baz=7.5,slow=33						
	4.0nm,0.7s						
JCJ	**Chichijima**	**15.16**	**8**	LR	LR	18 09 37.5	
	comp=Z,176nm,21.4s,baz=113,slow=32						
SIJI	**Sorong**	**15.39**	**214**	LR	LR	18 10 04.7	
	comp=Z,282nm,19.2s,baz=70,slow=33						
JOW	**Kunigami**	**18.32**	**325**	LR	LR	18 11 31.2	
	comp=Z,159nm,21.5s,baz=21,slow=33						
TGY	**Tagaytay City**	**18.55**	**278**	LR	LR	18 11 30.7	
	comp=Z,420nm,19.8s,baz=86,slow=32						
KRVT	**Keravat (AS076**	**20.23**	**143**	LR	LR	18 12 43.4	
	comp=Z,77nm,19.0s,baz=262,slow=33						
YULB	**Yu-li**	**20.96**	**305**	P	**P**	**18 06 19.0**	**-0.5**
YULB				IAmb	IAmb	18 06 46.6	
	comp=Z,14nm,1.0s						
JHJ	**Hachijo jima 2**	**21.00**	**360**	LR	LR	18 12 46.4	
	comp=Z,185nm,21.6s,baz=12,slow=32						
SSLB	**Suanglung**	**21.43**	**306**	P	**P**	**18 06 27.9**	**+3.3**
SSLB				IAmb	IAmb	18 06 33.6	
	comp=Z,33nm,1.4s						
MJAR	**Matsushiro Arr**	**24.46**	**357**	P	**P**	**18 06 57.1**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=179,slow=9.9,SNR=4.5						
	comp=Z,0.6nm,0.7s						
MJAR	**Matsushiro Arr**	**24.46**	**357**	P	**P**	**18 06 55.4**	**+0.3**
KAPI	**Kappang**	**26.19**	**231**	LR	LR	18 17 12.8	
	comp=Z,60nm,18.3s,baz=36,slow=36						
BATI	**Baumata**	**27.32**	**217**	LR	LR	18 16 52.6	
	comp=Z,269nm,19.8s,baz=88,slow=34						
KSRS	**Korea Array**	**27.50**	**339**	LR	LR	18 15 34.7	
	comp=Z,63nm,21.1s,baz=160,slow=31						
HNR	**Honiara**	**29.20**	**136**	LR	LR	18 17 27.1	
	comp=Z,6.5nm,20.0s,baz=36,slow=32						
WB0	**Warramunga Arr**	**32.04**	**190**	P	**P**	**18 08 03.7**	**+0.8**
WB0				IAmb	IAmb	18 08 27.6	
	comp=Z,8.7nm,1.2s						
ASAJ	**Asahikawa**	**32.07**	**4**	LR	LR	18 21 08.7	
	comp=Z,48nm,21.3s,baz=182,slow=37						
WRA	**Warramunga Arr**	**32.22**	**190**	P	**P**	**18 08 03.4**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=3.9,slow=9.6,SNR=9.8						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**32.22**	**190**	P	**P**	**18 08 02.4**	**-2.1**
CTA	**Charters Tower**	**32.52**	**169**	LR	LR	18 21 58.1	
	comp=Z,66nm,18.0s,baz=333,slow=38						
USRK	**Ussuriysk Ar.**	**32.78**	**350**	LR	LR	18 19 20.4	
	comp=Z,85nm,21.4s,baz=172,slow=32						
ASAR	**Alice Springs**	**35.94**	**189**	P	**P**	**18 08 35.9**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=18,slow=13,SNR=8.1						
ASAR				LR	LR	18 23 38.2	
	comp=Z,94nm,18.1s,baz=350,slow=37						
	comp=Z,0.3nm,0.7s						
HEH	**HeiHe**	**39.47**	**347**	*e*P	**P**	**18 09 05.6**	**-0.7**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INKA	**Innaminka**	**39.53**	**179**	P	**P**	**18 09 08.8**	**+1.8**
CMAR	**Chiang Mai Arr**	**39.92**	**284**	P	**P**	**18 09 09.2**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=83,slow=6.2,SNR=8.4						
CMAR				LR	LR	18 23 52.9	
	comp=Z,76nm,21.3s,baz=95,slow=34						
	comp=Z,0.6nm,0.7s						
LZDM	**Lanzhou Array**	**40.38**	**312**	LR	LR	18 25 14.8	
	comp=Z,113nm,21.8s,baz=80,slow=35						
PETK	**Petropavlovsk-**	**43.40**	**16**	LR	LR	18 23 54.5	
	comp=Z,41nm,20.9s,baz=209,slow=31						
STKA	**Stephens Creek**	**43.68**	**178**	P	**P**	**18 09 43.0**	**+2.0**
	comp=Z,8.0nm,1.0s,baz=356,slow=10,SNR=8.1						
STKA				LR	LR	18 28 43.9	
	comp=Z,114nm,18.6s,baz=25,slow=37						
	comp=Z,8.0nm,1.0s						
FORT	**Forrest**	**44.04**	**195**	P	**P**	**18 09 42.9**	**-1.0**
GTA2	**Gaotai**	**44.75**	**315**	*e*P	**P**	**18 09 50.3**	**+0.6**
SONM	**Songino Array**	**45.35**	**329**	P	**P**	**18 09 55.3**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=3.1						
SONM				LR	LR	18 30 20.3	
	comp=Z,53nm,19.4s,baz=122,slow=38						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**45.35**	**329**	P	**P**	**18 09 53.6**	**-0.8**
MSVF	**Nonsavu**	**47.92**	**127**	LR	LR	18 28 17.2	
	comp=Z,80nm,20.2s,baz=188,slow=33						
MA2	**Magadan**	**48.16**		LR	LR	18 28 25.6	
	comp=Z,23nm,21.6s,baz=195,slow=33						
SHEM	**Shemya Is, Ala**	**49.00**	**27**	LR	LR	18 28 17.3	
	comp=Z,74nm,21.9s,baz=305,slow=33						
TLY	**Talaya**	**49.20**	**331**	LR	LR	18 33 09.0	
	comp=Z,50nm,19.8s,baz=122,slow=38						
NWAO	**Narrogin (SRO)**	**49.64**	**205**	LR	LR	18 34 49.6	
	comp=Z,34nm,18.1s,baz=136,slow=40						
YAK	**Yakutsk**	**50.47**	**354**	LR	LR	18 31 25.0	
	comp=Z,131nm,20.0s,baz=165,slow=36						
EVN	**Everest**	**51.91**	**296**	P	**P**	**18 10 43.1**	**-2.7**
EVN				IAmb	IAmb	18 11 08.6	
	comp=Z,6.6nm,1.2s						
PALK	**Pallekele**	**58.42**	**271**	LR	LR	18 35 24.9	
	comp=Z,16nm,19.5s,baz=98,slow=35						
MKAR	**Makanchi Array**	**59.28**	**318**	P	**P**	**18 11 37.3**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=97,slow=8.7,SNR=8.1						
MKAR				LR	LR	18 39 19.0	
	comp=Z,32nm,18.8s,baz=102,slow=38						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**59.28**	**318**	P	**P**	**18 11 37.9**	**+0.2**
MAKZ	**Makanchi**	**59.49**	**318**	P	**P**	**18 11 39.2**	**+0.1**
MAKZ				IAmb	IAmb	18 11 48.1	
	comp=Z,3.6nm,1.2s						
TIXI	**Tiksi**	**59.97**	**356**	LR	LR	18 35 57.6	
	comp=Z,36nm,21.5s,baz=197,slow=34						
TIXI	**Tiksi**	**59.97**	**356**	P	**P**	**18 11 41.9**	**0.0**
TIXI				IAmb	IAmb	18 12 00.4	
	comp=Z,4.3nm,1.1s						
ZALV	**Zalesovo Beam**	**60.12**	**326**	P	**P**	**18 11 44.2**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=100,slow=6.3,SNR=4.3						
ZALV				LR	LR	18 38 01.6	
	comp=Z,25nm,20.6s,baz=102,slow=36						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**60.12**	**326**	P	**P**	**18 11 41.4**	**-1.8**
WUS	**Wushi**	**60.15**	**311**	P	**P**	**18 11 43.3**	**-0.6**
WUS				IAmb	IAmb	18 12 07.4	
	comp=Z,2.1nm,0.8s						
PDGK	**Podgornoye**	**60.37**	**313**	P	**P**	**18 11 46.4**	**+1.0**
URZ	**Urewera**	**60.96**	**147**	LR	LR	18 36 26.5	
	comp=Z,39nm,18.2s,baz=338,slow=34						
KURK	**Kurchatov**	**62.68**	**321**		**P**	**18 12 00.4**	**-0.2**
KURBB	**Kurchatov Arra**	**62.71**	**321**	P	**P**	**18 12 01.1**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=102,slow=7.1,SNR=26						
	comp=Z,2.3nm,0.8s						
AAK	**Ala-Archa**	**63.86**	**312**	LR	LR	18 42 06.7	
	comp=Z,38nm,19.1s,baz=112,slow=38						
NRIK	**Noril'sk**	**66.06**	**342**	LR	LR	18 40 06.8	
	comp=Z,45nm,20.9s,baz=140,slow=35						
RAR	**Rarotonga**	**67.86**	**119**	LR	LR	18 40 51.6	
	comp=Z,28nm,18.1s,baz=300,slow=35						
KDAK	**Kodiak Island**	**67.99**	**32**	LR	LR	18 44 36.4	
	comp=Z,22nm,18.1s,baz=234,slow=38						
BVAR	**Borovoye Array**	**68.15**	**322**	P	**P**	**18 12 35.4**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=89,slow=6.2,SNR=7.6						
	comp=Z,1.8nm,0.7s						
BORK	**Borovoye**	**68.20**	**322**	P	**P**	**18 12 37.2**	**+1.0**
BORK				IAmb	IAmb	18 12 48.7	
	comp=Z,3.5nm,0.8s						
E23K	**Chandalar**	**71.68**	**22**	P	**P**	**18 12 58.3**	**+0.8**
HDA	**Harding Lake**	**71.99**	**26**	P	**P**	**18 13 00.6**	**+1.3**
HDA				IAmb	IAmb	18 13 07.3	
	comp=Z,4.3nm,0.8s						
IL31		**72.08**	**26**	P	**P**	**18 12 59.8**	**+0.1**
IL31				IAmb	IAmb	18 13 09.3	
	comp=Z,4.7nm,1.1s						
ILAR	**Eielson Array**	**72.08**	**26**	P	**P**	**18 13 00.2**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=249,slow=6.2,SNR=6.7						
ILAR				LR	LR	18 41 26.8	
	comp=Z,28nm,21.9s,baz=266,slow=33						
	comp=Z,0.7nm,0.9s						
AB31	**Akbulak array**	**74.42**	**318**	P	**P**	**18 13 14.2**	**+0.2**
AB31				IAmb	IAmb	18 13 31.3	
	comp=Z,2.9nm,1.1s						
ABKAR	**Akbulak array**	**74.42**	**318**	P	**P**	**18 13 14.2**	**+0.2**
H27K	**Steamboat Moun**	**74.49**	**24**	P	**P**	**18 13 15.1**	**+1.0**
ARTI	**Arti**	**75.37**	**325**	LR	LR	18 48 21.1	
	comp=Z,74nm,19.7s,baz=63,slow=37						
AKTO	**Aktyubinsk**	**75.65**	**319**	LR	LR	18 48 23.5	
	comp=Z,41nm,19.7s,baz=1.0,slow=37						
BBB	**Bella Bella**	**81.86**	**38**	LR	LR	18 43 50.7	
	comp=Z,31nm,20.9s,baz=226,slow=31						
SPITS	**Spitsbergen Ar**	**84.77**	**350**	LR	LR	18 52 16.9	
	comp=Z,26nm,20.0s,baz=34,slow=36						
YKA	**Yellowknife Ar**	**86.47**	**27**	LR	LR	18 52 23.7	
	comp=Z,41nm,20.2s,baz=298,slow=35						
KBZ	**Khabaz**	**86.76**	**314**	LR	LR	18 56 38.7	
	comp=Z,33nm,19.9s,baz=89,slow=38						
ARCES	**ARCESS Array B**	**87.03**	**341**	LR	LR	18 56 21.0	
	comp=Z,24nm,20.9s,baz=46,slow=38						
RES	**Resolute Bay**	**87.17**	**13**	LR	LR	18 54 37.1	
	comp=Z,5.9nm,20.1s,baz=31,slow=36						
YBH	**Yreka Blue Hor**	**87.57**	**48**	LR	LR	18 47 51.8	
	comp=Z,23nm,20.0s,baz=316,slow=32						
NEW	**Newport**	**89.62**	**41**	LR	LR	18 48 13.1	
	comp=Z,45nm,19.4s,baz=334,slow=31						
VNDA	**Vanda**	**90.26**	**175**	LR	LR	18 52 37.3	
	comp=Z,30nm,21.7s,baz=332,slow=34						
FINES	**FINESS Array B**	**90.47**	**334**	P	**P**	**18 14 38.0**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=46,slow=5.5,SNR=6.1						
FINES				LR	LR	18 58 29.4	
	comp=Z,32nm,19.8s,baz=58,slow=38						
	comp=Z,2.5nm,1.0s						
NVAR	**Mina Array Bea**	**91.70**	**50**	LR	LR	18 49 24.7	
	comp=Z,28nm,20.4s,baz=243,slow=31						
ELK	**Elko**	**93.25**	**47**	LR	LR	18 49 28.6	
	comp=Z,42nm,21.8s,baz=292,slow=31						
AKASG	**Malin Array Be**	**93.42**	**323**	LR	LR	18 58 20.6	
	comp=Z,26nm,20.8s,baz=1.0,slow=36						
BRTR	**Keskin Array B**	**94.53**	**312**	LR	LR	19 03 30.6	
	comp=Z,9.5nm,18.7s,baz=90,slow=39						
MMAI	**Mount Meron Ar**	**95.33**	**305**	LR	LR	19 01 50.3	
	comp=Z,32nm,21.0s,baz=125,slow=38						
HFS	**Hagfors**	**96.31**	**336**	LR	LR	19 03 09.6	
	comp=Z,2nm,18.1s,baz=54,slow=38						
NOA	**NORSAR Array B**	**96.70**	**337**	LR	LR	19 01 12.5	
	comp=Z,22nm,21.4s,baz=75,slow=37						
MLR	**Muntele Rosu**	**97.58**	**320**	LR	LR	19 02 07.3	
	comp=Z,26nm,20.9s,baz=51,slow=37						

*ZUR **23** 18:38:09.2, 47°.31N×9°.94E, h5km±1km, MLh2.6/36, Error ellipse: s-maj=1975.2km s-min=438.8km az=110.0*
*VIE **23** 18:38:09.5±0.1, 47°.28N×9°.92E, h5km, mb2.0/16, ml2.6/16, Error ellipse: s-maj=1.2km s-min=0.9km az=6.0 4 km E of Damls felt 3-4 ems98 at Damuels / Vorarlberg*
*PRU **23** 18:38:09.0, 47°.39N×9°.88E, h1km, Damils*
*BGR **23** 18:38:09.8±0.2, 47°.31N×9°.92E, h3km±1km, ML2.3/34, Error ellipse: s-maj=3.3km s-min=1.1km az=3.0*
*ROM **23** 18:38:09.5±0.4, 47°.32N±0°.03×9°.87E±0°.03, h10km, ML2.2/21, Error ellipse: s-maj=2.9km s-min=1.8km az=343.0*
*LDG **23** 18:38:10.0±0.1, 47°.29N×9°.93E, h5km, Ml2.6/14, Error ellipse: s-maj=2.1km s-min=1.7km az=64.0*
ISC 23 18:38:08.9±0.8, 47°.30N±0°.01×9°.893E±0°.010, h7km±4km, n164, σ1°14/266, 10C-10D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.02**	**207**	⇓Pg	**Pg**	**18 38 10.6**	**+0.1**
DAVA				Sg	**Sg**	**18 38 11.5**	**-0.1**
DAVA	**Damuels**	**0.02**	**207**	*e*Pg	**Pg**	**18 38 10.6**	**+0.1**
DAVA				*e*Sg	**Sg**	**18 38 11.2**	**-0.4**
DAVA	**Damuels**	**0.02**	**207**	*i* Pg	**Pg**	**18 38 10.6**	**+0.1**
	233nm,0.1s						
DAVA				*i* Sg	**Sg**	**18 38 11.5**	**-0.1**
	2µm,0.1s						
SHEK	**Heerbrugg, Kan**	**0.21**	**302**	Pg	**Pg**	**18 38 14.5**	**+1.3**
SHEK				Sg	**Sg**	**18 38 18.8**	**+2.7**
SMFL	**Mauren, Feuerw**	**0.25**	**248**	Pg	**Pg**	**18 38 14.7**	**+0.8**
OBER	**Oberstdorf**	**0.29**	**69**	*e*Pg	**Pg**	**18 38 14.6**	**-0.1**
OBER				*e*Sg	**Sg**	**18 38 19.7**	**+1.1**
STRW	**Triesenberg, W**	**0.30**	**231**	⇑Pg	**Pg**	**18 38 15.4**	**+0.5**
STRW				Sg	**Sb**	**18 38 21.1**	**-0.7**
SBUH	**Buchs, Hochsch**	**0.32**	**245**	Pg	**Pg**	**18 38 15.8**	**+0.7**
SBUA2	**Buchs, Altendo**	**0.32**	**243**	Pg	**Pg**	**18 38 15.9**	**+0.7**
SGT05	**Eggersriet**	**0.33**	**295**	⇑Pg	**Pb**	**18 38 16.6**	**-0.5**
SGT05				Sg	**Sb**	**18 38 22.4**	**-0.2**
SAPK	**Appenzell, Kan**	**0.33**	**275**	⇑Pg	**Pg**	**18 38 16.5**	**+1.0**
SAPK				Sg	**Sb**	**18 38 22.6**	**-0.2**
SBUB	**Buchserberg Ma**	**0.35**	**243**	⇑Pg	**Pg**	**18 38 16.6**	**+0.7**
SBUB				Sg	**Sb**	**18 38 23.3**	**0.0**
STGK	**St. Gallen Klo**	**0.37**	**289**	Sg	**Sb**	**18 38 23.7**	**-0.1**
SGT04	**Schlatt-Haslen**	**0.37**	**277**	⇑Pg	**Pg**	**18 38 17.3**	**+1.0**
SGT04				Sg	**Sb**	**18 38 23.7**	**-0.2**
SARE	**Arbon, Evangel**	**0.38**	**304**	Sg	**Sb**	**18 38 24.0**	**-0.1**
TETT	**Tettnang**	**0.40**	**332**	⇓Pg	**Pb**	**18 38 17.8**	**-0.6**
TETT				Sg	**Sb**	**18 38 24.5**	**-0.3**
TETT	**Tettnang**	**0.40**	**332**	Pg	**Pb**	**18 38 18.0**	**-0.4**
TETT				Sg	**Sb**	**18 38 24.3**	**-0.5**
SMELS	**Mels Schulhaus**	**0.41**	**231**	Pg	**Pg**	**18 38 17.8**	**+0.9**
SGT00	**Sennhlsen**	**0.41**	**287**	Sg	**Sb**	**18 38 25.1**	**0.0**
PLONS	**Plons/SG**	**0.43**	**234**	⇑Pg	**Pg**	**18 38 17.9**	**+0.6**
PLONS				Sg	**Sb**	**18 38 24.9**	**-0.7**
PLONS	**Plons/SG**	**0.43**	**234**	*e*Pg	**Pg**	**18 38 18.0**	**+0.6**
PLONS				*e*Sg	**Sb**	**18 38 24.7**	**-1.0**
PLONS	**Plons/SG**	**0.43**	**234**	P	**Pg**	**18 38 18.2**	**+0.9**
PLONS				S	**Sb**	**18 38 25.1**	**-0.6**
ROMAN	**Romanshorn, Fo**	**0.46**	**305**	Pg	**Pb**	**18 38 19.1**	**-0.3**
ROMAN				Sg	**Sb**	**18 38 26.3**	**-0.1**
ROMAN	**Romanshorn, Fo**	**0.46**	**305**	Pg	**Pb**	**18 38 19.1**	**-0.3**
ROMAN				Sg	**Sb**	**18 38 26.3**	**-0.1**
SGT18	**Golfpark Waldk**	**0.47**	**291**	⇑Pg	**Pb**	**18 38 19.2**	**-0.3**
SGT18				Sg	**Sb**	**18 38 26.7**	**0.0**
DAVOX	**Davos/Dischmat**	**0.52**	**181**	⇓Pg	**Pg**	**18 38 19.7**	**+0.6**
DAVOX

	comp=E,102µm,0.4s										
TUE					AML	AML					
	comp=E,100µm,0.3s										
MUO	**Muotathal**		**0.92**	**249**	⇓Pg	**Pb**	**18**	**38**	**27.4**	**0.0**
EMING	**Emmingen-Lipti**		**0.92**	**310**	Pg	**Pb**	**18**	**38**	**27.7**	**+0.4**
EMING					Sg	**Sb**	**18**	**38**	**40.4**	**+0.7**
EMING	**Emmingen-Lipti**		**0.92**	**310**	*e*Pg	**Pb**	**18**	**38**	**27.7**	**+0.4**
EMING					*e*Sg	**Sb**	**18**	**38**	**40.4**	**+0.7**
GUT	**Gutenstein**		**0.93**	**326**	⇓Pg	**Pb**	**18**	**38**	**27.4**	**0.0**
GUT	**Gutenstein**		**0.93**	**326**	Pg	**Pb**	**18**	**38**	**27.4**	**0.0**
GUT					Sg	**Sb**	**18**	**38**	**40.3**	**+0.4**
FLACH	**Flaach**		**0.94**	**287**	⇓Pg	**Pb**	**18**	**38**	**28.0**	**+0.5**
EWZT2	**Wettswil, ZR**		**0.95**	**273**	Pg	**Pb**	**18**	**38**	**28.0**	**+0.2**
QEG00	**Eglisau, Reser**		**0.96**	**287**	Pg	**Pb**	**18**	**38**	**28.5**	**+0.5**
QEG00					Sg	**Sb**	**18**	**38**	**42.1**	**+1.3**
ZWI	**Zwiefalten, Ha**		**1.00**	**343**	Pg	**Pb**	**18**	**38**	**28.7**	**+0.1**
ZWI					PmP		18	38	29.7	
A108A	**Ulm, Ringingen**		**1.04**	**358**	Pg	**Pb**	**18**	**38**	**29.8**	**+0.4**
SLE	**Schleitheim**		**1.05**	**296**	*e*Pg	**Pb**	**18**	**38**	**29.9**	**+0.3**
SLE					*e*Sg	**Sb**	**18**	**38**	**44.4**	**+0.9**
FREU	**Neufra-Freuden**		**1.06**	**332**	Pg	**Pb**	**18**	**38**	**30.1**	**+0.5**
MSS	**Messtetten**		**1.08**	**325**	*e*Pn	**Pn**	**18**	**38**	**30.6**	**+0.1**
MSS	**Messtetten**		**1.08**	**325**	*e*Pn	**Pn**	**18**	**38**	**31.1**	**+0.6**
MSS	**Messtetten**		**1.08**	**325**	Pg	**Pn**	**18**	**38**	**30.6**	**+0.1**
MSS					PmP		18	38	31.1	
MSS					Sg	**Sn**	**18**	**38**	**45.4**	**-0.3**
BE1	**Monatshausen**		**1.08**	**55**	*e*Pg	**Pb**	**18**	**38**	**30.0**	**0.0**
BE1					*e*Sg	**Sn**	**18**	**38**	**45.4**	**-0.4**
BNALP	**Bannalp**		**1.09**	**247**	AML	AML					
	comp=E,69µm,0.4s										
BNALP					AML	AML					
	comp=N,73µm,0.8s										
BNALP					AML	AML					
	comp=E,75µm,0.9s										
BNALP					AML	AML					
	comp=N,73µm,1.2s										
BNALP					AML	AML					
	comp=N,70µm,0.5s										
ROSI	**Rosskopf**		**1.10**	**109**	P	**Pg**	**18**	**38**	**29.8**	**-0.3**
ROSI					AML	AML					
	comp=E,192µm,0.4s										
ROSI					AML	AML					
	comp=N,173µm,1.0s										
WATA	**Walderalm**		**1.15**	**88**	*e*Pg	**Pb**	**18**	**38**	**31.1**	**0.0**
	comp=N,2.5nm,0.2s										
WATA					*e*Sg	**Sn**	**18**	**38**	**50.0**	**+2.6**
	comp=N,24nm,0.2s										
ROTE	**Rottweil**		**1.18**	**316**	Pn	**Pn**	**18**	**38**	**32.7**	**+0.8**
ROTE					Sn	**Sb**	**18**	**38**	**47.8**	**+0.6**
METMA	**Mettma DE**		**1.19**	**291**	*e*Pg	**Pb**	**18**	**38**	**32.0**	**+0.3**
METMA					PmP		18	38	33.0	
METMA					*e*Sg	**Sb**	**18**	**38**	**48.0**	**+0.8**
WTTA	**Wattenberg**		**1.19**	**91**	*e*Pg	**Pb**	**18**	**38**	**31.8**	**-0.1**
WTTA					*e*Sg	**Sn**	**18**	**38**	**48.8**	**+0.2**
WTTA	**Wattenberg**		**1.19**	**91**	P	**Pb**	**18**	**38**	**31.7**	**-0.1**
WTTA					AML	AML					
	comp=E,176µm,0.7s										
WTTA					AML	AML					
	comp=N,234µm,1.5s										
WTTA					AML	AML					
	comp=N,234µm,0.5s										
WTTA					AML	AML					
	comp=E,169µm,0.5s										
WTTA					AML	AML					
	comp=N,223µm,0.4s										
WTTA	**Wattenberg**		**1.19**	**91**	*i* Pg	**Pn**	**18**	**38**	**33.6**	**+1.5**
	comp=N,10nm,0.1s										
WTTA					*e*Sg	**Sn**	**18**	**38**	**51.5**	**+2.9**
	comp=N,38nm,0.2s										
WTTA	**Wattenberg**		**1.19**	**91**	*e*Sg	**Sn**	**18**	**38**	**48.9**	**+0.3**
	comp=N,12nm,0.4s										
OZOL	**Ozolo**		**1.20**	**138**	P	**Pn**	**18**	**38**	**33.5**	**+1.2**
OZOL					AML	AML					
	comp=E,865µm,1.7s										
OZOL					AML	AML					
	comp=E,89µm,0.7s										
OZOL					AML	AML					
	comp=N,72µm,0.4s										
OZOL					AML	AML					
	comp=N,208µm,1.2s										
BUCH	**Bad Urach**		**1.20**	**343**	Pn	**Pg**	**18**	**38**	**32.0**	**0.0**
BUCH					PmP		18	38	33.0	
SULZ	**Cheisacher**		**1.23**	**281**	Pn	**Pn**	**18**	**38**	**33.0**	**+0.4**
SULZ					*e*Pg	**Pb**	**18**	**38**	**34.0**	**+1.5**
SULZ					*e*Sg	**Sn**	**18**	**38**	**50.3**	**+0.9**
FUR	**Furstenfeldbru**		**1.27**	**47**	*e*Pg	**Pg**	**18**	**38**	**33.5**	**+0.2**
FUR					*e*Sg	**Sn**	**18**	**38**	**51.0**	**+0.5**
BERGE	**Lenzkirch (DE)**		**1.29**	**297**	*e*Pg	**Pn**	**18**	**38**	**33.6**	**+0.2**
BERGE					Sn	**Sb**	**18**	**38**	**50.5**	**+0.1**
BERGE					*e*Sg	**Sn**	**18**	**38**	**52.0**	**+1.0**
HDH	**Heidenheim-Cha**		**1.30**	**9**	⇓Pn	**Pn**	**18**	**38**	**32.8**	**-0.6**
DEGG	**Deggingen-Nord**		**1.31**	**355**	Pn	**Pn**	**18**	**38**	**33.3**	**-0.4**
A100A	**Rottenburg, We**		**1.32**	**331**	Pg	**Pg**	**18**	**38**	**34.8**	**+0.5**
A100A					Sn	**Sn**	**18**	**38**	**52.5**	**+0.8**
BRES	**Bressanone**		**1.40**	**115**	P	**Pg**	**18**	**38**	**37.1**	**+1.4**
BRES					AML	AML					
	comp=N,66µm,0.5s										
BRES					AML	AML					
	comp=E,74µm,0.8s										
FELD	**Feldberg im Sc**		**1.40**	**295**	Pn	**Pn**	**18**	**38**	**35.1**	**+0.1**
FELD					PmP		18	38	36.5	
FELD					Sn	**Sb**	**18**	**38**	**53.1**	**-0.5**
BFO	**Black Forest**		**1.47**	**315**	*e*Pn	**Pg**	**18**	**38**	**37.6**	**+0.5**
BFO					*e*Pg	**Pb**	**18**	**38**	**40.2**	**+3.6**
BFO					*e*Sg	**Sg**	**18**	**38**	**56.4**	**+0.1**
BALST	**Balsthal**		**1.50**	**272**	*e*Pn	**Pn**	**18**	**38**	**36.5**	**+0.3**
BALST					*e*Pg	**Pg**	**18**	**38**	**38.4**	**+0.7**
BALST					*e*Sg	**Sg**	**18**	**38**	**58.5**	**+1.4**
NORI	**Noerdlinger Ri**		**1.50**	**19**	*e*Pn	**Pn**	**18**	**38**	**35.5**	**-0.7**
NORI					*e*Sg	**Sg**	**18**	**38**	**57.7**	**+0.5**
ENDD	**Endenburg**		**1.52**	**286**	Pn	**Pn**	**18**	**38**	**36.6**	**+0.1**
ENDD					PmP		18	38	38.6	
URBA	**Urbach, Forsts**		**1.55**	**352**	Pn	**Pn**	**18**	**38**	**36.5**	**-0.4**
VARE	**Varese**		**1.63**	**209**	P	**Pg**	**18**	**38**	**40.7**	**+0.5**
VARE					AML	AML					
	comp=E,88µm,0.3s										
VARE					AML	AML					
	comp=N,104µm,0.6s										
VARE					AML	AML					
	comp=N,104µm,1.4s										
VARE					AML	AML					
	comp=N,104µm,0.6s										
VARE					AML	AML					
	comp=E,88µm,0.3s										
GALG	**Neuhausen (Enz**		**1.66**	**334**	Pn	**Pn**	**18**	**38**	**38.4**	**-0.1**
VOGT	**Vogtsburg - To**		**1.69**	**298**	Sg	**Sg**	**18**	**39**	**03.9**	**+0.7**
BOURR	**Bourrignon**		**1.81**	**274**	Sg	**Sg**	**18**	**39**	**08.6**	**+1.4**
ABTA	**Abfaltersbach**		**1.88**	**106**	*e*Pg	**Pg**	**18**	**38**	**44.8**	**-0.1**
	comp=E,3.9nm,0.2s										
ABTA					*e*Sg	**Sg**	**18**	**39**	**10.3**	**+1.1**
	comp=E,6.8nm,0.3s										
LESA	**Schwarzleotal**		**1.90**	**85**	*e*Pg	**Pb**	**18**	**38**	**44.3**	**+0.4**
	comp=E,4.3nm,0.2s,SNR=16										
LESA					*e*Sg	**Sg**	**18**	**39**	**10.0**	**+0.1**
	comp=E,10.0nm,0.3s,SNR=5.9										
GRC1	**Grafenberg Arr**		**2.01**	**32**	Pn	**Pn**	**18**	**38**	**42.3**	**-1.1**
GRC1					Sn	**Sn**	**18**	**39**	**07.1**	**-1.6**
RJOB	**Jochberg**		**2.01**	**77**	*e*Pg	**Pg**	**18**	**38**	**46.9**	**-0.7**
RJOB					*e*Sg	**Sg**	**18**	**39**	**14.0**	**+0.3**
WLS	**Welschbruch**		**2.04**	**304**	*e*Sg	**Sg**	**18**	**39**	**15.0**	**+0.5**
ECH	**Echery**		**2.06**	**297**	*e*Pn	**Pn**	**18**	**38**	**44.1**	**+0.2**
ECH					*e*Pg	**Pg**	**18**	**38**	**48.6**	**+0.2**
ECH					*e*Sg	**Sg**	**18**	**39**	**14.6**	**-0.5**
CDF	**Champ du Feu**		**2.08**	**303**	*e*Pn	**Pn**	**18**	**38**	**45.6**	**+1.3**
CDF					*e*Pg	**Pg**	**18**	**38**	**49.9**	**+1.1**
CDF					*e*Sg	**Sg**	**18**	**39**	**15.7**	**-0.1**
	comp=E,22nm,0.5s										
HINF	**Hinteralfeld**		**2.12**	**285**	*e*Pn	**Pn**	**18**	**38**	**44.6**	**-0.2**
HINF					*e*Pg	**Pg**	**18**	**38**	**51.6**	**+2.0**
HINF					*e*Sg	**Sg**	**18**	**39**	**16.2**	**-0.9**
	comp=E,8.2nm,0.3s										
CHMF	**Charmoille**		**2.21**	**270**	Pn	**Pn**	**18**	**38**	**46.3**	**+0.3**
CHMF					Pg	**Pg**	**18**	**38**	**50.7**	**-0.5**
KBA	**Koelnbreinsper**		**2.37**	**94**	*e*Pg	**Pg**	**18**	**38**	**53.2**	**-1.0**
KBA					*e*Sg	**Sg**	**18**	**39**	**23.8**	**-1.1**
KBA	**Koelnbreinsper**		**2.37**	**94**	*e*Pg	**Pg**	**18**	**38**	**53.3**	**-1.0**
	comp=E,12nm,0.3s										
KBA					*e*Sg	**Sg**	**18**	**39**	**24.2**	**-0.7**
	comp=E,7.4nm,0.3s										
HAU	**Haudompre**		**2.50**	**288**	*e*Pn	**Pn**	**18**	**38**	**50.3**	**+0.3**
HAU					*e*Pg	**Pg**	**18**	**38**	**56.0**	**-0.8**
HAU					*e*Sg	**Sg**	**18**	**39**	**28.4**	**-0.7**
	comp=E,60nm,0.5s										
GRF	**Grafenberg Arr**		**2.55**	**20**	*e*Sg	**Sb**	**18**	**39**	**28.5**	**+2.1**
BIOA	**Bad Ischl, Aus**		**2.57**	**80**	*e*Pg	**Pg**	**18**	**38**	**57.9**	**-0.2**
	comp=E,8.5nm,0.3s										
BIOA					*e*Sg	**Sg**	**18**	**39**	**33.1**	**+1.7**
	comp=E,2.1nm,0.2s										
BIOA	**Bad Ischl, Aus**		**2.57**	**80**	*e*Sg	**Sg**	**18**	**39**	**35.6**	**+4.2**
	comp=E,20nm,0.4s										
MYKA	**Terra Mystica**		**2.65**	**103**	*e*Sg	**Sg**	**18**	**39**	**35.4**	**+1.2**
	comp=E,3.4nm,0.4s										
CABF	**La Chapelle**		**2.70**	**256**	*e*Pg	**Pg**	**18**	**39**	**00.0**	**-0.6**
CABF					*e*Sg	**Sg**	**18**	**39**	**35.2**	**-0.3**
	comp=E,7.1nm,0.5s										
WET	**Wettzell**		**2.71**	**46**	*e*Pn	**Pn**	**18**	**38**	**52.5**	**-0.5**
WET					*e*Sn	**Sn**	**18**	**39**	**25.1**	**-0.9**
WET					*e*Sg	**Sg**	**18**	**39**	**33.8**	**-2.3**
LPL	**La Plagne**		**2.83**	**232**	*e*Pg	**Pg**	**18**	**39**	**01.9**	**-1.2**
LPL					*e*Sg	**Sg**	**18**	**39**	**39.3**	**-0.4**
	comp=E,2.6nm,0.5s										
LPG	**La Plagne**		**2.83**	**231**	*e*Pg	**Pg**	**18**	**39**	**01.8**	**-1.3**
ROTZ	**Rotzenmuhle**		**2.91**	**31**	*e*Pn	**Pn**	**18**	**38**	**53.8**	**-1.8**
ROTZ					*e*Sn	**Sn**	**18**	**39**	**28.1**	**-2.6**
ROTZ					*e*Sg	**Sg**	**18**	**39**	**39.7**	**-2.5**
GEC2	**GERESS Array S**		**2.98**	**57**	*e*Sn	**Sn**	**18**	**39**	**32.2**	**-0.5**
GEC2					*e*Sg	**Sb**	**18**	**39**	**41.7**	**+2.6**
ABH	**Alteburg**		**3.01**	**330**	*e*Pn	**Pn**	**18**	**38**	**57.6**	**+0.6**
KHC	**Kasperske Hory**		**3.07**	**52**	*e*PN	**Pn**	**18**	**38**	**58.5**	**+0.7**
KHC					*e*PG	**Pb**	**18**	**39**	**04.7**	**+0.9**
KHC					*e*SN	**Sn**	**18**	**39**	**33.7**	**-1.0**
KHC					*e*SG	**Sb**	**18**	**39**	**44.3**	**+2.9**
	comp=E,9.0nm,0.5s										
PAGF	**Fort de Pagny**		**3.07**	**296**	*e*Pn	**Pn**	**18**	**38**	**57.5**	**-0.3**
PAGF					*e*Pg	**Pg**	**18**	**39**	**07.4**	**-0.3**
PAGF					*e*Sg	**Sg**	**18**	**39**	**46.8**	**-0.7**
	comp=E,3.4nm,0.2s										
TNS	**Taunus Mts**		**3.07**	**342**	*e*Pn	**Pn**	**18**	**38**	**58.6**	**+0.7**
RIVT	**Riveris**		**3.18**	**320**	*e*Pn	**Pn**	**18**	**39**	**00.8**	**+1.5**
SESA	**Seetaler Alpe,**		**3.19**	**92**	*e*Pg	**Pg**	**18**	**39**	**08.4**	**-1.6**
	comp=E,3.7nm,0.3s										
SESA	**Seetaler Alpe,**		**3.19**	**92**	Sg	**Sg**	**18**	**39**	**50.9**	**-0.5**
	comp=E,4.0nm,0.2s										
OBKA	**Obir**		**3.29**	**102**	*e*Sg	**Sg**	**18**	**39**	**56.4**	**+1.9**
	comp=E,4.5nm,0.6s										
CKRC	**Cesky Krumlov**		**3.33**	**61**	*e*SG	**Sg**	**18**	**39**	**53.1**	**-2.7**
	comp=E,5.5nm,0.2s										
CRUX	**Bergwerk Schwa**		**3.35**	**10**	*e*Pn	**Pn**	**18**	**38**	**59.6**	**-2.2**
MBDF	**Montbardon**		**3.37**	**221**	*e*Pn	**Pn**	**18**	**39**	**04.4**	**+2.3**
MBDF					*e*Sg	**Sg**	**18**	**39**	**55.4**	**-1.8**
	comp=E,1.0nm,0.3s										
NKC	**Novy Kostel**		**3.38**	**29**	*e*SG	**Sg**	**18**	**39**	**56.1**	**-1.5**
	comp=E,7.8nm,0.3s										
SOKA	**Soboth**		**3.57**	**98**	*e*Sg	**Sg**	**18**	**40**	**04.9**	**+1.3**
	comp=E,1.2nm,0.4s										
ZVC	**Zvikov**		**3.57**	**52**	*e*SG	**Sb**	**18**	**39**	**59.5**	**+3.5**
	comp=E,4.1nm,0.4s										
ORIF	**Oris-en-Rattie**		**3.67**	**231**	*e*Pn	**Pn**	**18**	**39**	**06.6**	**+0.4**
ORIF					*e*Pg	**Pg**	**18**	**39**	**18.1**	**-1.2**
ORIF					*e*Sg	**Sg**	**18**	**40**	**06.5**	**-0.3**
	comp=E,2.5nm,0.4s										
ARSA	**Arzberg**		**3.83**	**89**	*e*Pg	**Pg**	**18**	**39**	**20.2**	**-2.1**
	comp=E,1.5nm,0.3s										
CONA	**Conrad Observa**		**4.08**	**79**	*e*Pn	**Pn**	**18**	**39**	**12.9**	**+1.0**
	comp=E,0.3nm,0.2s										
CONA	**Conrad Observa**		**4.08**	**79**	*e*Sg	**Sg**	**18**	**40**	**20.4**	**+0.3**
	comp=E,2.1nm,0.3s										
PRU	**Pruhonice**		**4.09**	**47**	*e*SG	**Sg**	**18**	**40**	**17.9**	**-2.2**
	comp=E,3.8nm,0.6s										
LOR	**Lormes**		**4.11**	**272**	*e*Pn	**Pn**	**18**	**39**	**13.1**	**+1.0**
LOR					*e*Sg	**Sg**	**18**	**40**	**18.4**	**-2.4**
	comp=E,2.0nm,0.2s										
SMF	**Signal de Mont**		**4.20**	**263**	*e*Pg	**Pg**	**18**	**39**	**27.5**	**-1.8**
SMF					*e*Sg	**Sg**	**18**	**40**	**22.3**	**-1.3**
	comp=E,1.3nm,0.2s										
SSF	**Saint Saulge**		**4.36**	**269**	*e*Pn	**Pn**	**18**	**39**	**16.1**	**+0.5**
SSF					*e*Pg	**Pg**	**18**	**39**	**30.5**	**-2.0**
SSF					*e*Sg	**Sg**	**18**	**40**	**26.1**	**-2.9**
	comp=E,1.3nm,0.3s										
VIVF	**Saint-Julien-l**		**4.38**	**238**	*e*Pn	**Pn**	**18**	**39**	**16.0**	**+0.2**
VIVF					*e*Sn	**Sn**	**18**	**40**	**04.1**	**-3.0**
BRG	**Berggiesshubel**		**4.45**	**35**	Pg	**Pg**	**18**	**39**	**34.8**	**+0.6**
BRG					Sg	**Sg**	**18**	**40**	**29.1**	**-2.8**
BRG					Amp		18	40	32.0	
	comp=Z,2.5nm,0.3s										
CLL	**Collm**		**4.49**	**26**	*e*Sg	**Sg**	**18**	**40**	**31.0**	**-2.2**
	comp=Z,3.0nm,0.7s										
AVF	**Avril sur Loir**		**4.50**	**266**	*e*Pn	**Pn**	**18**	**39**	**17.1**	**-0.3**
BAIF	**Baives**		**4.67**	**308**	*e*P	**Pn**	**18**	**39**	**22.5**	**+2.8**
KRUC	**Moravsky**		**4.69**	**66**	*e*SN	**Sn**	**18**	**40**	**14.7**	**0.0**
KRUC					*e*SG	**Sg**	**18**	**40**	**38.0**	**-1.5**
MCIV	**Monte Civitell**		**4.70**	**164**	AML	AML					
	comp=E,30µm,0.1s										
MCIV					AML	AML					
	comp=E,30µm,0.1s										
MCIV					AML	AML					
	comp=N,89µm,0.1s										
MCIV					AML	AML					
	comp=N,88µm,0.1s										
BGF	**Bois d'Agland**		**4.88**	**264**	*e*Pn	**Pn**	**18**	**39**	**23.2**	**+0.5**
VRAC	**Vranov**		**4.90**	**63**	*e*SG	**Sg**	**18**	**40**	**45.9**	**-0.3**
DPC	**Dobruska-Polom**		**5.23**	**52**	*e*SG	**Sg**	**18**	**40**	**53.7**	**-3.0**
	comp=N,3.2nm,0.5s										
LASF	**Ste Croix**		**5.32**	**235**	*e*Pn	**Pn**	**18**	**39**	**29.1**	**+0.4**
LASF					*e*Sg	**Sg**	**18**	**40**	**55.0**	**-4.7**
	comp=N,0.6nm,0.1s										
TCF	**Toulx Ste Croi**		**5.37**	**262**	*e*Pn	**Pn**	**18**	**39**	**29.0**	**-0.5**
TCF					*e*Sn	**Sn**	**18**	**40**	**29.1**	**-2.5**
	comp=N,1.8nm,0.5s										
MORC	**Moravsky Berou**		**5.65**	**61**	*e*SG	**Sg**	**18**	**41**	**07.3**	**-3.0**
VIVA	**Pratoni del Vi**		**5.92**	**159**	AML	AML					
	comp=N,503µm,1.3s										
VIVA					AML	AML					
	comp=E,597µm,1.3s										
VIVA					AML	AML					
	comp=N,503µm,0.7s										
VIVA					AML	AML					
	comp=E,597µm,0.7s										
UNV					IAML		18	52	12.3		
	comp=N,38nm,0.2s										
UNV					IAML		18	52	40.2		
	comp=E,34nm,0.6s										
O14K	**Tigyukauivet M**		**4.27**	**348**		**Pn**	**18**	**51**	**31.3**	**+1.0**
P17K	**Kvichak River**		**4.45**	**21**		**Pn**	**18**	**51**	**34.8**	**+1.9**
O16K	**Kokwok River B**		**4.58**	**10**		**Pn**	**18**	**51**	**35.9**	**+1.3**
KDAK	**Kodiak Island**		**4.73**	**52**	Pn	**Pn**	**18**	**51**	**37.5**	**+0.9**
	comp=E,1.1nm,0.3s,baz=25,slow=1.1,SNR=25										
KDAK					Sn	**Sn**	**18**	**52**	**27.2**	**-2.9**
	baz=259,slow=18										
KDAK					LR	LR	18	53	34.5		
	comp=E,50nm,18.7s,baz=222,slow=38										
	comp=E,2.8nm,0.3s										
KDAK	**Kodiak Island**		**4.73**	**52**	Pn	**Pn**	**18**	**51**	**37.5**	**+0.9**
KDAK					IAML		18	52	52.0		
	comp=E,23nm,0.6s										
KDAK					IAML		18	52	54.1		
	comp=E,35nm,0.9s										
N14K	**Kuskokwak Cree**		**4.97**	**348**		**Pn**	**18**	**51**	**41.0**	**+1.0**
N14K					IAML		18	53	08.0		
	comp=N,40nm,1.0s										
N14K					IAML		18	53	19.0		
	comp=E,33nm,1.1s										
N15K	**Kwethluk River**		**5.09**	**357**		**Pn**	**18**	**51**	**43.0**	**+1.3**
N15K					IAML		18	53	19.2		
	comp=E,32nm,0.8s										
N15K					IAML		18	53	24.3		
	comp=N,24nm,0.8s										
O18K	**Koktuh Hills**		**5.32**	**25**		**Pn**	**18**	**51**	**47.3**	**+2.5**
O18K					IAML		18	52	56.6		
	comp=E,15nm,1.2s										
O18K					IAML		18	52	57.1		
	comp=N,19nm,1.1s										
N17K	**Nushagak Hills**		**5.59**	**12**		**Pn**	**18**	**51**	**50.2**	**+1.6**
M13K	**Dall Lake**		**5.70**	**341**		**Pn**	**18**	**51**	**51.3**	**+1.3**
M14K	**Bethel**		**5.81**	**348**		**Pn**	**18**	**51**	**52.3**	**+0.8**
N18K	**Kilae Creek**		**5.94**	**18**		**Pn**	**18**	**51**	**54.2**	**+0.9**
M16K	**Timber Creek**		**5.95**	**3**		**Pn**	**18**	**51**	**54.9**	**+1.4**
ILSW	**Iliamna Southw**		**6.00**	**33**		**Pn**	**18**	**51**	**55.4**	**+1.1**
SPIA	**Saint Paul Isl**		**6.32**	**294**	Pn	**Pn**	**18**	**52**	**00.0**	**+1.6**
CNPM	**China Poot**		**6.34**	**42**	Pn	**Pn**	**18**	**52**	**00.6**	**+1.9**
N19K	**Bonanza Creek**		**6.34**	**23**		**Pn**	**18**	**52**	**01.6**	**+2.7**
RED	**Redoubt Volcan**		**6.46**	**32**	Pn	**Pn**	**18**	**52**	**02.1**	**+1.5**
L14K	**Kuka Creek**		**6.47**	**347**		**Pn**	**18**	**52**	**01.0**	**+0.4**
L16K	**Owhat River**		**6.63**	**0**		**Pn**	**18**	**52**	**03.7**	**+0.9**
K15K	**Wolf Creek Mou**		**7.29**	**353**		**Pn**	**18**	**52**	**12.6**	**+0.8**
L19K	**White Mountain**		**7.52**	**17**		**Pn**	**18**	**52**	**16.4**	**+1.4**
J14K	**Nanvaranak Lak**		**7.95**	**347**	Pn	**Pn**	**18**	**52**	**22.1**	**+1.3**
SKT	**Skwentna**		**8.08**	**28**	Pn	**Pn**	**18**	**52**	**24.2**	**+1.6**
PWL	**Port Wells**		**8.31**	**41**		**Pn**	**18**	**52**	**26.3**	**+0.5**
J18K	**Innoko River**		**8.52**	**9**		**Pn**	**18**	**52**	**29.6**	**+0.9**
PPLA	**Purkeypile**		**8.70**	**23**	Pn	**Pn**	**18**	**52**	**32.9**	**+1.6**
GHO	**Glory Hole Cre**		**8.71**	**35**	Pn	**Pn**	**18**	**52**	**30.4**	**-0.9**
L22K	**Petersville**		**8.73**	**28**	Pn	**Pn**	**18**	**52**	**31.3**	**-0.3**
K20K	**Telida**		**8.75**	**17**	Pn	**Pn**	**18**	**52**	**31.9**	**0.0**
HIN	**Hinchinbrook I**		**8.78**	**47**	Pn	**Pn**	**18**	**52**	**32.9**	**+0.7**
GLI	**Glacier Island**		**8.80**	**44**	Pn	**Pn**	**18**	**52**	**33.4**	**+0.9**
I17K	**Unalakleet**		**8.84**	**357**	Pn	**Pn**	**18**	**52**	**33.9**	**+0.9**
FID	**Port Fidalgo**		**8.98**	**46**	Pn	**Pn**	**18**	**52**	**34.9**	**-0.1**
J19K	**Poorman**		**9.15**	**11**		**Pn**	**18**	**52**	**37.9**	**+0.6**
CAST	**Castle Rocks**		**9.18**	**22**		**Pn**	**18**	**52**	**39.2**	**+1.5**
SCM	**Sheep Creek Mo**		**9.31**	**39**	Pn	**Pn**	**18**	**52**	**40.2**	**+0.7**
RAGM	**Ragged Mountai**		**9.56**	**50**	Pn	**Pn**	**18**	**52**	**44.1**	**+1.1**
ILAR	**Eielson Array**		**11.58**	**28**	Pn	**Pn**	**18**	**53**	**07.8**	**-2.7**
	comp=N,0.1nm,0.3s,baz=216,slow=14,SNR=3.3										
	comp=N,0.3nm,0.5s										
ILAR	**Eielson Array**		**11.58**	**28**		**Pn**	**18**	**53**	**07.3**	**-3.1**
PETK	**Petropavlovsk-**		**24.84**	**283**	P	**P**	**18**	**55**	**45.2**	**-1.4**
	comp=N,1.6nm,0.8s,baz=72,slow=12,SNR=4.5										
	comp=N,1.6nm,0.8s										
PETK	**Petropavlovsk-**		**24.84**	**283**	P	**P**	**18**	**55**	**44.9**	**-1.7**
SONM	**Songino Array**		**54.72**	**305**	P	**P**	**18**	**59**	**53.3**	**-0.1**
	comp=N,0.4nm,0.6s,baz=42,slow=5.1,SNR=2.7										
	comp=N,0.4nm,0.6s										
SONM	**Songino Array**		**54.72**	**305**	P	**P**	**18**	**59**	**52.3**	**-1.1**
ARCES	**ARCESS Array B**		**55.62**	**358**	LR	LR	19	26	42.9		
	comp=N,17nm,18.9s,baz=82,slow=39										
FINES	**FINESS Array B**		**63.72**	**357**	P	**P**	**19**	**00**	**55.1**	**-0.1**
	comp=N,2.8nm,0.9s,baz=15,slow=7.9,SNR=6.2										
	comp=N,2.8nm,0.9s										
FINES	**FINESS Array B**	

0.7nm,0.7s,baz=92,slow=7.3,SNR=7.6
CMAR LR LR 19 23 43.5
comp=Z,36nm,18.1s,baz=335,slow=39
0.7nm,0.7s
WRA Warramunga Arr 33.52 165 P **P 19 13 25.6 -1.0**
0.4nm,0.8s,baz=336,slow=10,SNR=5.9
0.4nm,0.8s
GTA2 Gaotai 35.16 324 *eP* **P 19 13 42.0 +1.2**
GTA2 pmax pmax
comp=Z,2.0nm,0.9s
ASAR Alice Springs 37.01 167 P **P 19 13 56.6 0.0**
comp=Z,0.4nm,0.3s,baz=348,slow=7.0,SNR=21
comp=Z,0.4nm,0.3s
SONM Songino Array 38.57 339 P **P 19 14 09.5 -0.3**
comp=Z,0.2nm,0.5s,baz=134,slow=8.3,SNR=1.9
comp=Z,0.2nm,0.5s
H11N1 WAKE ISLAND Hy 40.16 74 T T 19 57 41.6
baz=266,slow=74,SNR=16
H11N2 WAKE ISLAND Hy 40.16 74 T T 19 57 48.6
baz=266,slow=74,SNR=14
H11N3 WAKE ISLAND Hy 40.17 74 T T 19 57 48.7
baz=266,slow=74,SNR=16
STKA Stephens Creek 46.86 161 P **P 19 15 16.8 -0.2**
comp=Z,1.1nm,0.7s,baz=322,slow=9.4,SNR=3.8
comp=Z,1.1nm,0.7s
YAK Yakutsk 49.37 3 LR LR 19 35 03.0
comp=Z,12nm,21.8s,baz=180,slow=34
MKAR Makanchi Array 49.76 322 P **P 19 15 38.4 -0.9**
comp=Z,0.6nm,0.8s,baz=123,slow=8.8,SNR=6.2
comp=Z,0.6nm,0.8s
ZALV Zalesovo Beam 52.24 331 P **P 19 15 57.5 -0.3**
comp=Z,0.3nm,0.3s,baz=132,slow=5.3,SNR=2.3
comp=Z,0.3nm,0.3s
KURBB Kurchatov Arra 53.76 325 P **P 19 16 09.4 +0.4**
comp=Z,1.0nm,0.6s,baz=125,slow=7.5,SNR=12
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 59.35 325 P **P 19 16 49.3 +0.5**
comp=Z,0.7nm,0.6s,baz=104,slow=6.3,SNR=4.0
comp=Z,0.7nm,0.6s

KRSC 23 19:28:39.2±1.0, 55°98N×164°40E, h19km±17km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.91**	**285**	*eP*	Pb	19 28 55.6	-0.7
KBTR				*eS*	Sb	19 29 08.0	0.0
BKI	**Bering**	**1.19**	**130**	*eP*	Pn	19 29 00.7	0.0
BKI				*eS*	Sn	19 29 16.8	+0.6
SMKR	**Semkarok**	**1.74**	**291**	*eP*	Pn	19 29 09.0	+0.6
ZLN	**Zelenaya**	**2.02**	**272**	*eP*	Pb	19 29 14.4	-0.9
CIRR	**Tsirk**	**2.05**	**275**	*eP*	Pb	19 29 14.3	-1.5
BZGR	**Bezymyannyi-Gr**	**2.08**	**270**	*eP*	Pb	19 29 15.3	-1.0
MKZ	**Mys Kozlova**	**2.09**	**228**	*eP*	Pb	19 29 15.0	-1.4
MKZ				*eS*	Sb	19 29 41.7	-0.2
KLY	**Klyuchi**	**2.12**	**281**	*eP*	Pn	19 29 13.4	-0.1
BZP	**Bezymyannyi-Pe**	**2.17**	**270**	*eP*	Pb	19 29 16.1	-1.7
BZWR	**Bezymyannyi-We**	**2.19**	**271**	*eP*	Pb	19 29 16.6	-1.6
BZMR	**Bezymyannaya**	**2.20**	**270**	*eP*	Pb	19 29 16.9	-1.5
KIRR	**Kirishev**	**2.28**	**271**	*eP*	Pb	19 29 17.9	-1.8
KPT	**Kopyto**	**2.35**	**271**	*eP*	Pb	19 29 18.9	-1.9
KMNR	**Kamenistaya**	**2.35**	**266**	*eP*	Pb	19 29 19.2	-1.7
TUMD	**Tumrok D**	**2.40**	**253**	*eP*	Pb	19 29 20.4	-1.3
TUMR	**Tumrok**	**2.51**	**256**	*eP*	Pb	19 29 21.9	-1.7
KOZ	**Kozyrevsk**	**2.54**	**274**	*eP*	Pb	19 29 21.9	-2.2
SRDR	**Sredinnyy**	**2.64**	**279**	*eP*	Pn	19 29 23.0	+2.3
ESO	**Esso**	**3.20**	**271**	*eP*	Pn	19 29 30.0	+1.6
SPN	**Mys Shipunski**	**3.85**	**223**	*eS*	Sn	19 30 24.3	+2.3
SDLR	**Sedlovina**	**4.20**	**232**	*eP*	Pn	19 29 45.3	+3.1
SMAR	**Somma**	**4.24**	**232**	*eP*	Pn	19 29 47.9	+5.0
AVH	**Avacha**	**4.27**	**233**	*eP*	Pn	19 29 47.0	+3.9
KOK	**Koryaka**	**4.30**	**234**	*eP*	Pn	19 29 47.3	+3.8
GNL	**Ganaly**	**4.38**	**241**	*eP*	Pn	19 29 48.0	+3.4
GRL	**Gorelyy**	**5.05**	**230**	*eP*	Pn	19 29 58.8	+4.9

*KRNET **23** 19:33:22.6±0.1, 41°.56N×73°.00E, h30km, mb3.0*
*SOME **23** 19:33:23.1, 41°.52N×73°.05E, h20km*
*NNC **23** 19:33:24.2±0.7, 41°.64N×72°.97E, h1km±4km, mb3.5, mpv3.3, Error ellipse: s-maj=6.2km s-min=2.8km az=173.0*
*KNET **23** 19:33:26.7±0.4, 41°.72N×73°.17E, h4km±1km, ml2.3, Error ellipse: s-maj=3.9km s-min=2.3km az=97.0*
*ISU **23** 19:33:26, 41°.56N×72°.98E, h30km*

ISC 23 19:33:22.4±1.0, 41°60N±0°.02×73°01E±0°.02, h18km±9km, n70, σ1s78/121, 38C-21D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.81**	**284**	⇓*eP*	**Pn**	**19 33 38.1**	**-1.0**
ARK				⇓*eS*	**Sn**	**19 33 49.4**	**-1.3**
SALK	**Salom-Alik**	**0.94**	**139**	⇑*eP*	**Pb**	**19 33 39.9**	**-0.5**
SALK				⇑*eS*	**Sb**	**19 33 52.5**	**-0.1**
MNAS	**Manas**	**0.96**	**337**	⇑*eP*	**Pn**	**19 33 41.3**	**+0.1**
MNAS				⇑*eS*	**Sn**	**19 33 54.8**	**+0.3**
OHH	**Osh**	**1.09**	**189**	⇑*eP*	**Pb**	**19 33 42.1**	**-0.7**
OHH				⇑*eS*	**Sb**	**19 33 56.1**	**-0.7**
TSTA	**Tashata**	**1.10**	**202**	P	**Pn**	**19 33 44.1**	**+1.1**
TSTA				S	**Sn**	**19 34 00.1**	**+2.3**
MRKS	**Merke**	**1.15**	**8**	P	**Pn**	**19 33 45.8**	**+2.0**
	6.8nm,0.2s						
MRKS				S	**Sn**	**19 34 01.7**	**+2.5**
	48nm,0.2s						
MRKS	**Merke**	**1.15**	**8**	*eP*	**Pn**	**19 33 45.8**	**+2.0**
	6.8nm,0.2s						
MRKS				*eS*	**Sn**	**19 34 01.7**	**+2.5**
	48nm,0.2s						
EKS2	**Erkin-Say**	**1.20**	**28**	⇓P	**Pn**	**19 33 46.7**	**+2.2**
	5.0nm,0.1s,SNR=17						
EKS2				⇑S	**Sn**	**19 34 03.1**	**+2.6**
	12nm,0.2s						
EKS2	**Erkin-Say**	**1.20**	**28**	⇑*eP*	**Pn**	**19 33 45.4**	**+0.9**
EKS2				⇑*eS*	**Sn**	**19 34 02.0**	**+1.5**
KSNS	**Kasansay**	**1.20**	**249**	P	Pn	19 33 49.2	+4.7
KSNS				S	**Sn**	**19 34 06.6**	**+6.2**
UCH	**Uchtor**	**1.28**	**60**	⇑P	**Pg**	**19 33 48.5**	**+1.2**
	5.4nm,0.1s,SNR=7.7						
TRKS	**Terek-Say**	**1.40**	**268**	⇑*eP*	**Pg**	**19 33 47.7**	**-1.8**
TRKS				⇑*eS*	**Sg**	**19 34 05.9**	**-1.9**
AAK	**Ala-Archa**	**1.51**	**46**	⇓P	**Pg**	**19 33 52.3**	**+0.7**
	6.7nm,0.2s						
AAK				⇓S	**Sg**	**19 34 12.7**	**+1.4**
	20nm,0.2s						
AAK	**Ala-Archa**	**1.51**	**46**	⇓P	**Pg**	**19 33 52.9**	**+1.3**
	2.7nm,0.5s						
AAK				⇑S	**Sg**	**19 34 12.6**	**+1.3**
	5.6nm,0.5s						
AAK	**Ala-Archa**	**1.51**	**46**	⇓*eP*	**Pg**	**19 33 50.4**	**-1.2**
AAK				⇓*eS*	**Sg**	**19 34 10.6**	**-0.7**
FRG	**Fergana**	**1.54**	**217**	P	**Pg**	**19 33 53.1**	**+1.1**
FRG				S	**Sg**	**19 34 14.9**	**+2.9**
SFK	**Sufi-Kurgan**	**1.63**	**167**	⇑*eP*	**Pb**	**19 33 51.2**	**-0.9**
SFK				⇑*eS*	**Sb**	**19 34 11.7**	**-0.8**
FRU1	**Bishkek**	**1.71**	**44**	⇑*eP*	**Pb**	**19 33 53.2**	**-0.1**
FRU1				⇑*eS*	**Sg**	**19 34 15.4**	**-2.0**
KBK	**Karagaybulak**	**1.79**	**53**	⇑P	**Pg**	**19 33 57.5**	**+0.8**
	13nm,0.1s,SNR=14						
KBK				⇓S	**Sg**	**19 34 21.6**	**+1.6**
	30nm,0.2s						
KBK	**Karagaybulak**	**1.79**	**53**	⇑*eP*	**Pb**	**19 33 54.2**	**-0.5**
KBK				⇑*eS*	**Sb**	**19 34 17.2**	**+0.3**
DZA	**Taraz**	**1.79**	**317**	P	**Pg**	**19 33 58.5**	**+1.7**
	31nm,0.1s						
DZA				S	**Sg**	**19 34 23.9**	**+3.8**
	292nm,0.3s						
DZA	**Taraz**	**1.79**	**317**	*eP*	**Pg**	**19 33 58.5**	**+1.7**
	31nm,0.1s						
DZA				*eS*	**Sg**	**19 34 23.9**	**+3.8**
	292nm,0.3s						
CHMS	**Chumysh**	**1.90**	**42**	⇑P	**Pg**	**19 33 59.7**	**+0.8**
	8.7nm,0.2s,SNR=16						
CHMS				⇓S	**Sg**	**19 34 24.9**	**+1.2**
	14nm,0.2s						
CHMS	**Chumysh**	**1.90**	**42**	⇓*eP*	**Pb**	**19 33 55.8**	**-0.8**
CHMS				⇓*eS*	**Sb**	**19 34 19.9**	**-0.2**
USP	**Ospenovka**	**2.00**	**33**	⇑P	**Pg**	**19 34 01.0**	**+0.3**
	26nm,0.4s,SNR=31						
USP				⇑S	**Sg**	**19 34 27.1**	**+0.4**
	55nm,0.3s						
USP	**Ospenovka**	**2.00**	**33**	⇓*eP*	**Pb**	**19 33 57.1**	**-1.1**
USP				⇓*eS*	**Sb**	**19 34 22.2**	**-0.6**
PSK	**Pskem**	**2.00**	**280**	P	**Pg**	**19 34 01.1**	**+0.3**
PSK				S	**Sg**	**19 34 28.6**	**+1.9**
JNKS	**Jany-Kuch**	**2.05**	**105**	⇑*eP*	**Pb**	**19 33 57.6**	**-1.6**
JNKS				⇑*eS*	**Sb**	**19 34 23.2**	**-1.2**
SGDS	**Sogindy**	**2.20**	**32**	P*g*	**Pg**	**19 34 04.7**	**0.0**
	4.5nm,0.2s						
SGDS				Lg	Lg	19 34 34.6	
	56nm,0.5s						
CHMG	**Chimgan**	**2.25**	**270**	P	**Pn**	**19 33 55.0**	**-3.9**
CHMG				S	**Sn**	**19 34 25.5**	**-0.8**
NRN	**Naryn**	**2.25**	**93**	⇓*eP*	**Pn**	**19 34 00.1**	**+1.0**
NRN				⇓*eS*	**Sn**	**19 34 27.3**	**+0.6**
BTK	**Batken**	**2.27**	**228**	⇑*eP*	**Pn**	**19 34 00.0**	**+0.9**
BTK				⇑*eS*	**Sn**	**19 34 27.2**	**+0.5**
IUG	**Iuzhnay**	**2.29**	**285**	P*g*	**Pg**	**19 34 05.3**	**-1.0**
	27nm,0.3s						
IUG				Lg	Lg	19 34 35.7	
	162nm,0.4s						
IUG	**Iuzhnay**	**2.29**	**285**	*eP*	**Pg**	**19 34 05.3**	**-1.0**
	27nm,0.3s						
IUG				*eS*	**Sg**	**19 34 35.7**	**-0.4**
	162nm,0.4s						
CHRV	**Charvak**	**2.29**	**272**	P	**Pg**	**19 34 06.1**	**-0.3**
CHRV				S	**Sg**	**19 34 37.5**	**+1.4**
DRK	**Karamyk**	**2.31**	**204**	⇑*eP*	**Pn**	**19 34 00.6**	**+0.7**
DRK				⇑*eS*	**Sn**	**19 34 28.2**	**+0.1**
TKM2	**Tokmak 2**	**2.33**	**55**	⇓*iP*	**Pb**	**19 34 01.8**	**-2.2**
TKM2				⇓*eS*	**Sn**	**19 34 30.2**	**+1.8**
BOOM	**Boomskoye usch**	**2.36**	**67**	⇓*eP*	**Pb**	**19 34 02.1**	**-2.4**
BOOM				⇓*eS*	**Sn**	**19 34 30.8**	**+1.8**
KK31	**Karatay Array**	**2.38**	**310**	⇑Pg	**Pg**	**19 34 07.8**	**-0.3**
	2.1nm,0.2s,baz=120,slow=12,SNR=43						
KK31				⇑Lg	Lg	19 34 39.3	
	8.7nm,0.3s,baz=132,slow=25,SNR=9.8						
ULHL	**Ulahol**	**2.50**	**74**	⇑P	**Pg**	**19 34 09.5**	**-0.8**
	3.9nm,0.2s,SNR=14						
ULHL				⇑S	**Sg**	**19 34 41.9**	**-0.8**
	10nm,0.2s						
ULHL	**Ulahol**	**2.50**	**74**	⇑*eP*	**Pn**	**19 34 04.0**	**+1.6**
ULHL				⇑*eS*	**Sn**	**19 34 34.1**	**+1.6**
TVKS	**Tavaksay**	**2.52**	**270**	P	**Pg**	**19 34 08.9**	**-1.8**
TVKS				S	**Sg**	**19 34 42.8**	**-0.5**
KST	**Kastek**	**2.62**	**56**	P*g*	**Pg**	**19 34 12.4**	**-0.3**
	9.6nm,0.4s						
KST				Lg	Lg	19 34 48.2	
	34nm,0.5s						
KST	**Kastek**	**2.62**	**56**	*eP*	**Pg**	**19 34 12.4**	**-0.3**
	9.6nm,0.4s						
KST				*eS*	**Sg**	**19 34 48.2**	**+1.5**
	34nm,0.5s						
KRBS	**Karabastau**	**2.87**	**42**	P*g*	**Pg**	**19 34 15.7**	**-1.7**
	2.1nm,0.4s						
KRBS				Lg	Lg	19 34 54.1	
	101nm,0.6s						
KRBS	**Karabastau**	**2.87**	**42**	*eP*	**Pg**	**19 34 15.7**	**-1.7**
	2.1nm,0.4s						
KRBS				*eS*	**Sg**	**19 34 54.1**	**-0.6**
	101nm,0.6s						
IZV	**Izvestkoviy**	**3.03**	**61**	P*g*	**Pg**	**19 34 18.2**	**-2.4**
	5.8nm,0.2s						
IZV				Lg	Lg	19 34 58.3	
	19nm,0.6s						
IZV	**Izvestkoviy**	**3.03**	**61**	*eP*	**Pg**	**19 34 18.2**	**-2.4**
IZV				*eS*	**Sg**	**19 34 58.3**	**-1.5**
KDJ	**Kajisay**	**3.16**	**79**	⇑*eP*	**Pn**	**19 34 13.2**	**+1.7**
KDJ				⇑*eS*	**Sn**	**19 34 50.2**	**+1.4**
TNSS	**Tian-Shan**	**3.25**	**63**	P*g*	**Pg**	**19 34 24.0**	**-0.8**
	1.5nm,0.3s						
TNSS				Lg	Lg	19 35 07.5	
	4.7nm,0.5s						
TNSS	**Tian-Shan**	**3.25**	**63**	*eP*	**Pg**	**19 34 24.0**	**-0.8**
	1.5nm,0.3s						
TNSS				*eS*	**Sg**	**19 35 07.5**	**+0.6**
	4.7nm,0.5s						
KUU	**Kurty**	**3.35**	**46**	P*g*	**Pg**	**19 34 24.5**	**-2.2**
	2.0nm,0.1s						
KUU				Lg	Lg	19 35 08.4	
	10nm,0.5s						
KUU	**Kurty**	**3.35**	**46**	*eP*	**Pg**	**19 34 24.5**	**-2.2**
	2.0nm,0.1s						
KUU				*eS*	**Sg**	**19 35 08.4**	**-1.7**
	10nm,0.5s						
MDOK	**Medeo**	**3.37**	**61**	Pn	**Pb**	**19 34 20.3**	**-1.5**
	2.8nm,0.6s						
MDOK				P*g*	**Pg**	**19 34 25.8**	**-1.3**
	9.6nm,0.5s						
MDOK				Lg	Lg	19 35 10.6	
	27nm,0.9s						
MDOK				Lg	Lg	19 35 11.5	
	9.0nm,0.8s						
MDOK	**Medeo**	**3.37**	**61**	*eP*	**Pg**	**19 34 25.8**	**-1.3**
	9.6nm,0.5s						
MDOK				*eS*	**Sg**	**19 35 10.6**	**-0.2**
	27nm,0.9s						
BTLS	**Baital**	**3.52**	**12**	P*g*	**Pg**	**19 34 28.1**	**-1.7**
	0.6nm,0.3s						
BTLS				Lg	Lg	19 35 14.6	
	6.3nm,0.2s						
BTLS	**Baital**	**3.52**	**12**	*eP*	**Pg**	**19 34 28.1**	**-1.7**
	0.6nm,0.3s						
BTLS				*eS*	**Sg**	**19 35 14.7**	**-0.7**
	6.3nm,0.2s						
KURS	**Kuram**	**4.25**	**62**	P*g*	**Pg**	**19 34 41.2**	**-2.6**
	2.2nm,0.4s						
KURS				Lg	Lg	19 35 36.9	
	4.6nm,0.6s						
KURS	**Kuram**	**4.25**	**62**	*eP*	**Pg**	**19 34 41.2**	**-2.6**
	2.2nm,0.4s						
KURS				*eS*	**Sg**	**19 35 36.9**	**-2.0**
	4.6nm,0.6s						
SATY	**Saty**	**4.26**	**68**	P*g*	**Pg**	**19 34 42.7**	**-1.2**
	1.6nm,0.3s						
SATY				Lg	Lg	19 35 39.6	
	7.7nm,0.3s						
SATY	**Saty**	**4.26**	**68**	*eP*	**Pg**	**19 34 42.7**	**-1.2**
	1.6nm,0.3s						
SATY				*eS*	**Sg**	**19 35 39.6**	**+0.5**
	7.7nm,0.3s						
KPKS	**Kokpek**	**4.59**	**64**	P*g*	**Pg**	**19 34 47.9**	**-2.4**
	15nm,0.8s						
KPKS				Lg	Lg	19 35 48.3	
KPKS	**Kokpek**	**4.59**	**64**	*eP*	**Pg**	**19 34 47.9**	**-2.4**
	15nm,0.8s						
KPKS				*eS*	**Sg**	**19 35 48.3**	**-1.4**
UZB	**Uzunbulak**	**4.71**	**69**	P*g*	**Pg**	**19 34 50.3**	**-2.4**
	1.7nm,0.3s						
UZB				Lg	Lg	19 35 52.4	
	4.1nm,0.5s						
UZB	**Uzunbulak**	**4.71**	**69**	*eP*	**Pg**	**19 34 50.3**	**-2.4**
UZB				*eS*	**Sg**	**19 35 52.4**	**-1.4**
SHLS	**Shalkode**	**5.03**	**70**	P*g*	**Pg**	**19 35 00.4**	**+1.8**
	1.8nm,0.5s						
SHLS				Lg	Lg	19 36 09.7	
	7.0nm,0.5s						
SHLS	**Shalkode**	**5.03**	**70**	*eP*	**Pg**	**19 35 00.4**	**+1.8**
	1.8nm,0.5s						
SHLS				*eS*	**Sg**	**19 36 09.7**	**+6.0**
	7.0nm,0.5s						
PDGK	**Podgornoye**	**5.09**	**68**	⇑Pn	Pn	19 34 43.4	+5.4
	1.3nm,0.6s						
PDGK				⇓Lg	Lg	19 36 06.9	
	5.5nm,0.8s						
DJR	**Jarkent**	**5.67**	**59**	P*g*	**Pg**	**19 35 08.5**	**-2.5**
	0.7nm,0.3s						
DJR				Lg	Lg	19 36 23.7	
	3.0nm,0.7s						
DJR	**Jarkent**	**5.67**	**59**	*eP*	**Pg**	**19 35 08.5**	**-2.5**
	0.7nm,0.3s						
DJR				*eS*	**Sg**	**19 36 23.7**	**-0.8**
	3.0nm,0.7s						

*SOME **23** 19:38:41.2, 44°.55N×86°.35E, h10km*
*NNC **23** 19:38:43.4±2.1, 43°.87N×86°.39E, h8km±8km, mb3.5, mpv3.2, Error ellipse: s-maj=15.1km s-min=10.8km az=123.0*

ISC 23 19:38:43.9±2.3, 43°87N±0°.09×86°27E±0°.09, h10km, n20, σ2s63/26, 5C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.72**	**345**	P*g*	**Pg**	**19 39 52.8**	**-2.3**
	6.8nm,0.6s						
ZSN				Lg	Lg	19 40 44.8	
	25nm,0.7s						
ZSN	**Zaisan**	**3.72**	**345**	*eP*	**Pn**	**19 39 40.8**	**-0.6**
	1.5nm,0.2s						
ZSN				*eS*	**Sn**	**19 40 23.5**	**-1.7**
	8.5nm,0.4s						
MK31	**Makanchi Array**	**4.06**	**318**	⇑Pn	**Pn**	**19 39 46.6**	**+0.5**
	0.3nm,0.3s,baz=136,slow=15,SNR=90						
MK31				⇓Sn	**Sn**	**19 40 36.3**	**+2.7**
	0.9nm,0.3s,baz=136,slow=27,SNR=4.1						
MAKZ	**Makanchi**	**4.22**	**316**	⇑Pn	**Pn**	**19 39 48.6**	**+0.4**
	1.1nm,0.3s						
MAKZ				⇑Sn	**Sn**	**19 40 39.2**	**+1.5**
	5.7nm,0.8s						
MAKZ				⇓Lg	Lg	19 40 58.0	
	8.2nm,0.5s						
KTMS	**Ketmen**	**4.31**	**266**	P*g*	**Pb**	**19 40 03.3**	**+3.4**
	0.9nm,0.3s						
KTMS				Lg	Lg	19 41 01.9	
	7.1nm,0.4s						
KTMS	**Ketmen**	**4.31**	**266**	*eP*	**Pb**	**19 40 03.3**	**+3.4**
	0.9nm,0.3s						
KTMS				*eS*	**Sg**	**19 41 01.9**	**-0.5**
	7.1nm,0.4s						
PDGK	**Podgornoye**	**4.95**	**266**	⇓Pn	**Pn**	**19 39 59.1**	**+0.6**
	0.9nm,0.4s						
PDGK				⇑Lg	Lg	19 41 23.2	
	23nm,1.1s						
SHLS	**Shalkode**	**5.00**	**264**	P*g*	**Pb**	**19 40 11.1**	**-0.5**
	3.6nm,0.6s						
SHLS				Lg	Lg	19 41 15.2	
	44nm,1.0s						
SHLS	**Shalkode**	**5.00**	**264**	*eP*	**Pb**	**19 40 11.1**	**-0.5**
	3.6nm,0.6s						
SHLS				*eS*	**Sb**	**19 41 15.2**	**+3.4**
	44nm,1.0s						
KNOS	**Konyrlen**	**5.13**	**278**	P*g*	**Pb**	**19 40 18.5**	**+4.8**
	0.8nm,0.2s						
KNOS				Lg	Lg	19 41 28.5	
	9.1nm,0.3s						
UZB	**Uzynbulak**	**5.32**	**265**	P*g*	**Pb**	**19 40 20.9**	**+3.9**
	1.6nm,0.4s						
UZB				Lg	Lg	19 41 32.1	
	5.8nm,0.7s						
UZB	**Uzynbulak**	**5.32**	**265**	*eP*	**Pb**	**19 40 20.9**	**+3.9**
	1.6nm,0.4s						
UZB				*eS*	**Sg**	**19 41 32.1**	**-2.6**
	5.8nm,0.7s						
KPKS	**Kokpek**	**5.52**	**268**	P*g*	**Pg**	**19 40 26.3**	**-3.2**
	0.5nm,0.3s						
KPKS				Lg	Lg	19 41 41.5	
	14nm,0.4s						
KPKS	**Kokpek**	**5.52**	**268**	*eP*	**Pg**	**19 40 26.3**	**-3.2**
	0.5nm,0.3s						
KPKS				*eS*	**Sg**	**19 41 41.5**	**+0.6**
	14nm,0.4s						
TDK	**Taldyqorghan**	**5.75**	**284**	P*g*	**Pg**	**19 40 34.3**	**+0.4**
	14nm,0.3s						
TDK				Lg	Lg	19 41 56.5	
	39nm,0.6s						
SATY	**Saty**	**5.78**	**265**	P*g*	**Pg**	**19 40 31.9**	**-2.6**
	1.8nm,0.4s						
SATY				Lg	Lg	19 41 52.0	
	6.3nm,0.6s						
SATY	**Saty**	**5.78**	**265**	*eP*	**Pg**	**19 40 31.9**	**-2.6**
	1.8nm,0.4s						
SATY				*eS*	**Sg**	**19 41 52.0**	**+2.6**
	6.3nm,0.6s						
ARXS	**Arharly**	**6.10**	**276**	P*g*	Pb	19 40 35.5	+5.3
	1.0nm,0.6s						
ARXS				Lg	Lg	19 41 58.1	
	6.5nm,0.5s						
ARXS	**Arharly**	**6.10**	**276**	*eP*	Pb	19 40 35.5	+5.3
	1.0nm,0.6s						
ARXS				*eS*	**Sg**	**19 41 58.1**	**-1.4**
	6.5nm,0.5s						
MDOK	**Medeo**	**6.74**	**267**	⇑Lg	Lg	19 42 21.3	
	5.2nm,1.0s						

*ISK **23** 19:43:52.2, 38°.87N×26°.18E, h7km, ML2.7/14*
*AFAD **23** 19:43:52.4, 38°.87N×26°.18E, h12km±2km, ML2.6*
*ATH **23** 19:43:52.4, 38°.88N×26°.14E, h12km±2km, ML2.3/6, Latitude uncertainty: 0 km; Longitude uncertainty: 2 km*

ISC 23 19:43:52.6±0.9, 38°87N±0°.02×26°17E±0°.02, h16km±7km, n55, σ0s52/83, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARB	**zmir-Karabur**	**0.28**	**138**	P	**Pg**	**19 43 58.5**	**0.0**
KARB				S	**Sg**	**19 44 02.6**	**0.0**
KARB				IAML		19 44 03.0	
	comp=N,1μm,0.2s						
KARB				IAML		19 44 03.0	
	comp=E,1μm,0.3s						
EAG2	**Marmaro, Chios**	**0.33**	**189**	P	**Pg**	**19 43 59.5**	**+0.1**
EAG2				S	**Sg**	**19 44 04.3**	**+0.2**
PRK	**Paraskevi**	**0.38**	**12**	P	**Pg**	**19 44 00.0**	**-0.4**
PRK				S	**Sg**	**19 44 05.5**	**-0.2**
KRBN	**Karaburun**	**0.41**	**133**	P*g*	**Pg**	**19 44 00.8**	**0.0**
KRBN				S*g*	**Sb**	**19 44 06.8**	**-0.6**
FOCM	**Foa**	**0.47**	**110**	P*g*	**Pg**	**19 44 01.5**	**-0.3**
FOCM				S*g*	**Sg**	**19 44 08.2**	**+0.1**
CHOS	**Chios island**	**0.49**	**191**	P*g*	**Pg**	**19 44 02.2**	**-0.2**
CHOS	**Chios island**	**0.49**	**191**	P	**Pg**	**19 44 02.0**	**-0.3**
CHOS				S	**Sg**	**19 44 09.2**	**+0.2**
BAGT	**Foa**	**0.57**	**112**	P	**Pb**	**19 44 04.0**	**-0.2**
BAGT				S	**Sb**	**19 44 11.9**	**-0.3**
GPNR	**Gulpinar-Canak**	**0.58**	**357**	P*g*	**Pg**	**19 44 03.9**	**-0.2**
AYVA	**Ayvalik**	**0.59**	**43**	P	**Pg**	**19 44 04.0**	**-0.3**
AYVA				S	**Sg**	**19 44 11.9**	**-0.4**
AYVA				IAML		19 44 16.0	
	comp=N,247nm,0.4s						
DKL	**Dikili**	**0.61**	**70**	P*g*	**Pg**	**19 44 04.5**	**0.0**
DKL	**Dikili**	**0.61**	**70**	P	**Pg**	**19 44 04.5**	**0.0**
DKL				S	**Sb**	**19 44 13.3**	**+0.2**
URLA	**Izmir**	**0.61**	**147**	P*g*	**Pg**	**19 44 04.4**	**-0.1**
URLA				S*g*	**Sb**	**19 44 13.1**	**-0.1**
URLA	**Izmir**	**0.61**	**147**	P	**Pg**	**19 44 04.2**	**-0.3**
URLA				S	**Sg**	**19 44 12.1**	**-0.5**
URLA				IAML		19 44 15.0	
	comp=E,265nm,0.5s						
URLA				IAML		19 44 16.0	
	comp=N,309nm,0.7s						
KOCA	**Canakkale, Ayv**	**0.63**	**358**	P	**Pg**	**19 44 04.6**	**-0.4**
KOCA				S	**Sn**	**19 44 15.7**	**-1.0**
ZEDA	**zmir-

CANM	**Can-anakkale**	**1.33**	**31**	Pn	**Pg**	**19 44 17.9**	**-0.3**
GADA	**Gvkgeada**	**1.33**	**351**	Pn	**Pb**	**19 44 17.2**	**0.0**
YENI	**Yenice-Canakka**	**1.35**	**38**	Pn	**Pg**	**19 44 18.5**	**-0.1**
BALY	**Balya**	**1.42**	**52**	P	**Pn**	**19 44 17.0**	**-0.8**
BALY				S	**Sg**	**19 44 37.6**	**-0.8**
BALY				IAML		19 44 42.0	
	comp=N,140nm,0.4s						
BALY				IAML		19 44 42.0	
	comp=E,73nm,0.3s						
GCAM	**G?zelcaml?**	**1.44**	**144**	P	**Pg**	**19 44 20.0**	**-0.2**
GCAM				S	**Sg**	**19 44 38.5**	**-0.4**
GCAM				IAML		19 44 44.0	
	comp=N,97nm,0.5s						
LAPS	**Lapseki, ANA**	**1.47**	**20**	P	**Pn**	**19 44 18.4**	**-0.1**
LAPS				S	**Sn**	**19 44 37.5**	**+0.1**
LAPS				IAML		19 44 43.0	
	comp=E,66nm,0.8s						
KTTT	**Salihli**	**1.51**	**96**	P	**Pn**	**19 44 18.7**	**-0.4**
KTTT				S	**Sb**	**19 44 39.9**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.54**	**9**	Pn	**Pb**	**19 44 20.9**	**+0.1**
BKES	**Balkesir-Mer**	**1.61**	**57**	P	**Pn**	**19 44 20.7**	**+0.3**
BKES				IAML		19 44 46.0	
	comp=E,73nm,0.8s						
ATIT	**Gnen**	**1.62**	**41**	P	**Pb**	**19 44 22.4**	**+0.3**
ATIT				IAML		19 44 45.0	
	comp=E,63nm,0.9s						
KYMI	**Kymi, Euboea I**	**1.64**	**262**	P	**Pn**	**19 44 21.0**	**+0.2**
SMTH	**Samothraki Isl**	**1.67**	**343**	P	**Pn**	**19 44 21.8**	**+0.5**
AYDN	**Tasoluk**	**1.81**	**131**	P	**Pb**	**19 44 24.8**	**-0.5**
AYDN				S	**Sb**	**19 44 48.3**	**+0.6**
GOKT	**Kean, EDRN**	**1.82**	**11**	P	**Pn**	**19 44 23.9**	**+0.6**
GOKT				S	**Sn**	**19 44 46.6**	**+0.6**
GOKT				IAML		19 44 54.0	
	comp=E,62nm,0.7s						
KIRA	**zmir-Kiraz**	**1.87**	**110**	P	**Pn**	**19 44 24.0**	**-0.1**
KIRA				S	**Sg**	**19 44 52.1**	**-0.8**
MANT	**Manisa**	**1.91**	**101**	P	**Pg**	**19 44 29.1**	**-0.1**
DION	**Dionisos Attik**	**1.93**	**246**	P	**Pb**	**19 44 25.2**	**+0.5**
DEMI	**Demirci**	**1.99**	**84**	P	**Pb**	**19 44 29.2**	**+0.8**
ESEN	**Aydn-Nazilli**	**2.02**	**121**	P	**Pb**	**19 44 30.0**	**+1.1**
BDRM	**Kayabasi**	**2.06**	**150**	P	**Pb**	**19 44 30.8**	**+1.1**
SULTU	**Buldan**	**2.20**	**111**	P	**Pg**	**19 44 33.3**	**-1.3**
USAK	**Uak-Merkez**	**2.23**	**93**	P	**Pn**	**19 44 30.2**	**+1.3**
RDO	**Rodhopi**	**2.32**	**348**	P	**Pn**	**19 44 31.0**	**+0.9**
VLI	**Veliai**	**3.34**	**231**	P	**Pn**	**19 44 43.9**	**-0.3**

IDC ***23*** *19:50:49.0±11.0, 6˚.71S×127˚.34E, h359km±131km, mb3.1/4, mbtmp3.9/6, Error ellipse: s-maj=138.0km s-min=42.4km az=59.0*

ISC 23 19:50:47.6±1.5, 6˚.3S±0˚.7×12˚.8E±˚, h350km, n6, σ1º61/6, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.80**	**157**	P	**P**	**19 53 59.5**	**-0.7**
	1.1nm,0.3s,baz=329,slow=10,SNR=69						
ASAR	**Alice Springs**	**18.11**	**163**	P	**P**	**19 54 36.1**	**+0.3**
	1.4nm,0.4s,baz=346,slow=12,SNR=33						
STKA	**Stephens Creek**	**28.35**	**155**	P	**P**	**19 56 11.2**	**+0.5**
	1.0nm,0.5s,baz=336,slow=5.8,SNR=5.3						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**66.68**	**328**	P	**P**	**20 01 01.4**	**-0.4**
	0.2nm,0.4s,baz=140,slow=7.6,SNR=2.9						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**70.19**	**334**	P	**P**	**20 01 23.4**	**+0.3**
	0.4nm,0.4s,baz=123,slow=7.1,SNR=2.6						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**70.99**	**329**	P	**P**	**20 01 27.9**	**-0.1**
	0.8nm,0.6s,baz=131,slow=5.4,SNR=11						
	0.8nm,0.6s						

IDC ***23*** *19:55:13.4±0.7, 7˚.31N×126˚.65E, h0km, mb3.9/10, mbtmp3.9/11, ML4.6/2, MS3.5/1, Error ellipse: s-maj=13.9km s-min=11.9km az=174.0*

DJA ***23*** *19:55:14.9±1.9, 8˚.1N±17˚×12˚.6E±˚, h101km±14km, M4.7/13, mb4.7/13, mB5.0/7, ML4.9/8, Mw(mB)4.3/7*

MAN ***23*** *19:55:15.0, 7˚.16N×126˚.46E, h3km, MS4.3*

NEIC ***23*** *19:55:15.7±1.0, 7˚.27N±0˚.08×126˚.53E±0˚.05, h7km±5km, mb4.5/26, Error ellipse: s-maj=11.3km s-min=7.2km az=179.0*

ISC 23 19:55:16.0±1.3, 7˚.28N±0˚.03×126˚.50E±0˚.04, h15km±8km, n71, σ1º46/82, mb4.1/21, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDOP	**Cateel, Davao**	**0.50**	**353**	*i* P	**Pn**	**19 55 28.1**	**-0.7**
CDOP				*i* S	**Sn**	**19 55 36.4**	**-0.7**
BIPH	**Bislig**	**0.91**	**351**	*e*P	**Pg**	**19 55 33.5**	**-0.1**
BIPH				*i* S	**Sg**	**19 55 45.4**	**-0.2**
DAV	**Davao City (W)**	**0.94**	**257**	Pg	**Pb**	**19 55 34.0**	**0.0**
	510nm,0.3s,baz=97,slow=1.4,SNR=49						
DAV				Lg	Lg	19 55 49.2	
	708nm,0.3s,baz=309,slow=23,SNR=35						
DAV				LR	LR	19 56 04.5	
	comp=Z,532nm,20.2s,baz=202,slow=47						
DAV	**Davao City (W)**	**0.94**	**257**		**Pb**	**19 55 34.1**	**0.0**
DAV				Sn	**Sn**	**19 55 49.6**	**+1.7**
DAV	**Davao City (W)**	**0.94**	**257**	P	**Pg**	**19 55 34.5**	**+0.3**
DAV	**Davao City (W)**	**0.94**	**257**	P	**Pb**	**19 55 33.0**	**-1.1**
DMPH	**Davao City--Mi**	**1.00**	**259**	*i* P	**Pg**	**19 55 36.5**	**+1.0**
DMPH				*i* S	**Sn**	**19 55 51.4**	**+1.8**
KCP	**Kidapawan**	**1.43**	**259**	*i* P	**Pn**	**19 55 41.7**	**+0.2**
KCP				*i* S	**Sn**	**19 55 59.9**	**-0.2**
BUKP	**Musuan**	**1.54**	**293**	*i* P	**Pb**	**19 55 44.7**	**+0.3**
BUKP				*i* S	**Sg**	**19 56 06.8**	**+0.9**
TSSP	**Tandag City**	**1.77**	**350**	*e*P	**Pn**	**19 55 46.8**	**+0.6**
TSSP				*e*S	**Sg**	**19 56 14.9**	**+1.7**
GSPH	**General Santos**	**1.95**	**232**	*i* P	**Pn**	**19 55 46.3**	**-2.4**
GSPH				*i* S	Sn	19 56 02.1	-11
CGP	**Cagayan de Oro**	**2.13**	**303**	*i* P	**Pb**	**19 55 53.4**	**-1.1**
CGP				*i* S	**Sg**	**19 56 24.0**	**-0.8**
CTBH	**Cotabato--PC H**	**2.24**	**269**	*i* P	**Pn**	**19 55 53.3**	**+0.7**
DCPH	**Dipolog City**	**3.38**	**293**	*e*P	Pn	19 55 57.9	-10
LSIP	**Lazi, Siquijor**	**3.38**	**303**	*i* P	**Pn**	**19 56 10.6**	**+2.2**
LSIP				*i* S	**Sn**	**19 56 51.4**	**+3.1**
SGSI	**Sangihe**	**3.70**	**195**	P	**Pn**	**19 56 14.1**	**+1.3**
SNPH	**Sibulan**	**3.82**	**303**	*e*P	**Pb**	**19 56 19.1**	**-4.2**
SNPH				*e*S	**Sb**	**19 57 08.4**	**-1.2**
LLP	**Lapu-Lapu**	**3.92**	**320**	*e*P	**Pn**	**19 56 17.6**	**+1.8**
LLP				*e*S	**Sb**	**19 57 07.8**	**-4.4**
PLP	**Palo**	**4.14**	**339**	*e*P	**Pn**	**19 56 22.2**	**+3.4**
PLP				*e*S	**Sb**	**19 57 17.2**	**-1.3**
ZCP	**Zamboanga City**	**4.41**	**266**	*e*P	**Pn**	**19 56 23.3**	**+0.9**
ZCP				*e*S	**Sn**	**19 57 13.2**	**-0.4**
TNTI	**Ternate**	**6.53**	**172**		**Pn**	**19 56 50.9**	**-0.7**
TNTI				Sn	**Sn**	**19 58 06.6**	**+0.8**
TNTI	**Ternate**	**6.53**	**172**	P	**Pn**	**19 56 55.6**	**+4.0**
	0.2nm45nm,0.8s						
LQP	**Lukban**	**8.36**	**325**	*e*P	Pn	19 57 24.8	+7.9
TOLI2	**Tolitoli**	**8.37**	**223**	Pn	**Pn**	**19 57 14.4**	**-2.6**
TGY	**Tagaytay City**	**8.71**	**322**	Sn	Sn	19 59 10.6	+11
	53nm,0.3s,baz=150,slow=23,SNR=6.8						
SWI	**Sorong**	**9.38**	**149**	P	**Pn**	**19 57 32.4**	**+1.6**
	24nm,0.9s						
SIJI	**Sorong**	**9.39**	**149**	Pn	**Pn**	**19 57 30.6**	**-0.4**
	1.6nm,0.3s,baz=248,slow=22,SNR=16						
	4.0nm,0.3s						
SIJI	**Sorong**	**9.39**	**149**	P	**Pn**	**19 57 31.8**	**+0.8**
NLAI	**Namlea**	**10.47**	**177**	P	**Pn**	**19 57 45.9**	**+0.2**
	45nm,0.6s						
FAKI	**Fak Fak**	**11.64**	**150**	Pn	**Pn**	**19 58 03.2**	**+1.3**
SOEI	**Soe**	**17.07**	**188**	Pn	**Pn**	**19 59 14.5**	**0.0**
SOEI				IAmb	IAmb	19 59 14.6	
	comp=Z,48nm,1.3s						
BATI	**Baumata**	**17.60**	**189**	P	**Pn**	**19 59 20.3**	**-0.8**
	comp=Z,8.0nm,0.3s,baz=151,slow=2.5,SNR=9.1						
JOW	**Kunigami**	**19.52**	**5**	P	**Pn**	**19 59 45.3**	**+1.0**
JOW				IAmb	IAmb	19 59 46.1	
	comp=Z,16nm,0.7s						
JAGI	**Jajag, Banyuwa**	**19.91**	**218**	P	**P**	**19 59 44.7**	**-2.7**
JAGI				IAmb	IAmb	20 00 07.2	
	comp=Z,50nm,1.1s						
MTN	**Manton Dam**	**20.52**	**167**	P	**P**	**19 59 52.1**	**-1.8**
KNRA	**Kununurra**	**22.92**	**174**	P	**P**	**20 00 19.4**	**-0.3**
KNRA				IAmb	IAmb	20 00 20.5	
	comp=Z,16nm,0.9s						
MYKOM	**Kota Tinggi**	**23.22**	**257**	P	**P**	**20 00 23.1**	**+0.3**
MYKOM				IAmb	IAmb	20 00 26.1	
	comp=Z,18nm,1.2s						
BBJI	**Bungbulang**	**23.83**	**232**	P	**P**	**20 00 29.6**	**+0.6**
BBJI				IAmb	IAmb	20 00 33.0	
	comp=Z,21nm,1.0s						
FITZ	**Fitzroy Crossi**	**25.23**	**182**	P	**P**	**20 00 40.8**	**-0.8**
FITZ				IAmb	IAmb	20 00 53.3	
	comp=Z,5.2nm,1.4s						
WB0	**Warramunga Arr**	**27.98**	**164**	P	**P**	**20 01 06.2**	**-0.3**
WB0				IAmb	IAmb	20 01 42.2	
	comp=Z,9.3nm,1.3s						
WRA	**Warramunga Arr**	**28.13**	**164**	P	**P**	**20 01 06.8**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=343,slow=10,SNR=19						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**28.13**	**164**	P	**P**	**20 01 06.1**	**-1.7**
WR8	**Warramunga Arr**	**28.19**	**164**	P	**P**	**20 01 08.1**	**-0.3**
WR8				IAmb	IAmb	20 01 47.0	
	comp=Z,8.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**29.02**	**295**	P	**P**	**20 01 17.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=101,slow=8.3,SNR=5.4						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.02**	**295**	P	**P**	**20 01 16.6**	**+0.8**
MBWA	**Marble Bar**	**29.04**	**193**	P	**P**	**20 01 14.6**	**-1.2**
GSI	**Gunungsitoli**	**29.44**	**260**	P	**P**	**20 01 19.1**	**-0.4**
MJAR	**Matsushiro Arr**	**31.02**	**18**	P	**P**	**20 01 31.9**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=192,slow=9.1,SNR=6.0						
	comp=Z,1.1nm,0.8s						
AS31	**Alice Springs**	**31.60**	**167**	P	**P**	**20 01 37.2**	**-1.3**
ASAR	**Alice Springs**	**31.60**	**167**	P	**P**	**20 01 38.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=352,slow=7.8,SNR=19						
	comp=Z,0.9nm,0.5s						
INKA	**Innaminka**	**37.45**	**159**	P	**P**	**20 02 29.1**	**+0.1**
MORW	**Morawa**	**37.52**	**195**	P	**P**	**20 02 29.2**	**-0.4**
ERM	**Erimo**	**37.61**	**20**		**P**	**20 02 31.7**	**+1.5**
FORT	**Forrest**	**37.87**	**178**	P	**P**	**20 02 33.0**	**+0.5**
FORT				IAmb	IAmb	20 03 10.8	
	comp=Z,26nm,1.5s						
GTA2	**Gaotai**	**40.06**	**327**	*e*P	**P**	**20 02 52.8**	**+1.8**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BBOO	**Buckleboo**	**40.90**	**168**	P	**P**	**20 02 57.7**	**-0.1**
NWAO	**Narrogin (SRO)**	**40.95**	**192**	P	**P**	**20 02 58.2**	**0.0**
STKA	**Stephens Creek**	**41.52**	**160**	P	**P**	**20 03 02.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=332,slow=13,SNR=4.9						
	comp=Z,1.2nm,0.5s						
SONM	**Songino Array**	**43.89**	**340**	P	**P**	**20 03 22.6**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=144,slow=12,SNR=3.0						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**54.55**	**324**	P	**P**	**20 04 44.2**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=112,slow=6.9,SNR=36						
MKAR				PcP	**PcP**	**20 05 47.0**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=115,slow=4.9,SNR=5.3						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**54.55**	**324**	P	**P**	**20 04 43.9**	**+0.2**
PDGK	**Podgornoye**	**54.57**	**319**	P	**P**	**20 04 44.4**	**+0.4**
MAKZ	**Makanchi**	**54.74**	**324**	P	**P**	**20 04 42.4**	**-2.7**
MAKZ				IAmb	IAmb	20 04 44.9	
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**57.35**	**332**	P	**P**	**20 05 02.8**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=132,slow=6.4,SNR=3.1						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**57.35**	**332**	P	**P**	**20 05 02.4**	**-1.1**
KURK	**Kurchatov**	**58.66**	**326**	P	**P**	**20 05 12.2**	**-0.6**
KURK				IAmb	IAmb	20 05 19.4	
	comp=Z,1.6nm,0.8s						
KURBB	**Kurchatov Arra**	**58.66**	**326**	P	**P**	**20 05 12.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=126,slow=7.3,SNR=22						
	comp=Z,0.7nm,0.4s						
KK31	**Karatay Array**	**60.52**	**316**	P	**P**	**20 05 25.6**	**-0.2**
KK31				IAmb	IAmb	20 05 28.3	
	comp=Z,6.3nm,1.5s						
KKAR	**Karatay Array**	**60.52**	**316**	P	**P**	**20 05 25.9**	**0.0**
BVAR	**Borovoye Array**	**64.25**	**326**	P	**P**	**20 05 49.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=102,slow=5.7,SNR=7.1						
	comp=Z,0.5nm,0.3s						
RAR	**Rarotonga**	**77.64**	**114**	LR	LR	20 38 09.9	
	comp=Z,28nm,20.8s,baz=294,slow=33						

BJI ***23*** *19:56:47.1, 55˚.08N×161˚.08W, h27km, mB5.0/8, mb5.1/55, Ms4.6/12, Ms7 4.4/16*

ANF ***23*** *19:56:49.8±0.9, 54˚.71N×160˚.64W, h44km±8km, ML5.2/15, Error ellipse: s-maj=9.8km s-min=3.5km az=23.0*

AEIC ***23*** *19:56:49±2.9, 54˚.77N±0˚.04×160˚.67W±0˚.04, h30km±3km, Error ellipse: s-maj=0.0km s-min=0.0km az=78.0*

IDC ***23*** *19:56:49.9±0.7, 54˚.88N×160˚.89W, h39km±5km, mb4.6/38, mbtmp4.8/42, ML4.5/4, MS3.7/72, Error ellipse: s-maj=13.2km s-min=9.1km az=171.0*

NEIC ***23*** *19:56:49.9, 54˚.80N×160˚.64W, h43km*

NEIC ***23*** *19:56:50.2±2.7, 54˚.85N±0˚.06×160˚.66W±0˚.05, h41km±4km, mb4.8/258, ML4.9/32, Mwr4.7/44, ML4.7(AEIC), Error ellipse: s-maj=9.4km s-min=4.1km az=181.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.90; Mθθ-0.59; Mφφ-0.31; Mrθ0.20; Mθφ-0.38; Mφr0.87; Fault plane solution: M₀1.25000×10¹⁶ NP1:ϕ₁28.85000°, δ68.05000°, λ71.69000°. NP2:ϕ₂250.36000°, δ28.29000°, λ127.93000°. Principal axes: T 1.3509, Plg62.0000°, Azm270.0000°; N -0.2382, Plg17.0000°, Azm36.0000°; P -1.1128, Plg21.0000°, Azm133.0000°;*

GFZ ***23*** *19:56:50.1±0.2, 55˚.N±4˚×16˚.1W±˚, h37km, M4.8/96, mb5.1/96*

ISC 23 19:56:49.7±0.4, 54˚.85N±0˚.05×160˚.71W±0˚.03, h42km±3km, h41km:pP-P, n862, σ1º14/745, mb4.9/227, MS3.8/74, 24C-30D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.52**	**15**		**Pn**	**19 57 01.4**	**+0.7**
SDPT	**Sand Point**	**0.52**	**15**		**Sn**	**19 57 09.8**	**+1.2**
SDPT	**Sand Point**	**0.52**	**15**	P	**Pn**	**19 57 01.7**	**+0.9**
	baz=190,SNR=1000						
SDPT				S	**Sn**	**19 57 10.1**	**+1.5**
	baz=190						
CHNA	**Chernabura Isl**	**0.65**	**91**	P	**Pn**	**19 57 01.7**	**-0.8**
	baz=268,SNR=1000						
CNBA	**Chernabura Isl**	**0.65**	**92**		**Pn**	**19 57 01.2**	**-1.3**
CNBA					**Sn**	**19 57 09.9**	**-1.8**
DOL	**Dolgoi Island**	**0.73**	**295**		**Pn**	**19 57 04.3**	**+0.6**
DOL					**Sn**	**19 57 15.0**	**+1.4**
PS1A	**Pavlof South-1**	**0.83**	**315**		**Pn**	**19 57 06.0**	**+1.1**
PS1A					**Sn**	**19 57 18.4**	**+2.4**
PS4A	**Pavlof South-4**	**0.83**	**308**		**Pn**	**19 57 06.0**	**+1.0**
PS4A					**Sn**	**19 57 18.4**	**+2.4**
DTNA	**Dutton South F**	**0.94**	**289**		**Pn**	**19 57 07.4**	**+0.9**
DT1	**Dutton Round H**	**0.94**	**287**		**Pn**	**19 57 07.3**	**+0.8**
DT1					**Sn**	**19 57 20.0**	**+1.2**
PN7A	**Pavlof North-7**	**0.94**	**309**		**Pn**	**19 57 08.1**	**+1.5**
VNSS	**Veniaminof 8**	**1.56**	**27**		**Pn**	**19 57 17.3**	**+2.2**
S14K	**Fog Glacier**	**1.58**	**24**	P	**Pn**	**19 57 17.4**	**+2.1**
	baz=203,SNR=434						
VNFG	**Fog Glacier, M**	**1.58**	**24**		**Pn**	**19 57 17.9**	**+2.5**
ISNN	**Isanotski Nort**	**1.78**	**271**		**Pn**	**19 57 19.8**	**+1.8**
CHGN	**Chignik**	**1.96**	**41**		**Pn**	**19 57 22.3**	**+1.9**
CHGN				IAML		19 57 50.9	
	comp=E,12µm,0.5s						
CHGN				IAML		19 57 53.6	
	comp=N,9µm,0.7s						
CHGN	**Chignik**	**1.96**	**41**	P	**Pn**	**19 57 22.0**	**+1.6**
	baz=221,SNR=1000						
CHGN				S	**Sn**	**19 57 47.4**	**+3.8**
	baz=221						
SSBA	**Shishaldin**	**1.98**	**269**		**Pn**	**19 57 23.0**	**+2.2**
AKUT	**Akutan**	**3.04**	**258**		**Pn**	**19 57 37.3**	**+2.1**
CHIR	**Chirikof Islan**	**3.06**	**69**		**Pn**	**19 57 36.2**	**+0.6**
CHIR				IAML		19 58 32.8	
	comp=E,4µm,1.1s						
CHIR				IAML		19 58 34.4	
	comp=N,5µm,0.7s						
CHIR	**Chirikof Islan**	**3.06**	**69**	P	**Pn**	**19 57 36.5**	**+0.9**
	baz=252,SNR=35						
LVA	**Lava Point**	**3.18**	**260**		**Pn**	**19 57 38.9**	**+1.7**
LVA				IAML		19 58 32.4	
	comp=N,4µm,0.9s						
LVA				IAML		19 58 33.7	
	comp=E,3µm,0.7s						
R17L	**Mt. Peulik Vol**	**3.70**	**39**	P	**Pn**	**19 57 47.2**	**+2.9**
	baz=222						
SII	**Sitkinak Islan**	**4.07**	**62**		**Pn**	**19 57 49.8**	**+0.4**
SII	**Sitkinak Islan**	**4.07**	**62**	P	**Pn**	**19 57 50.1**	**+0.7**
	baz=247,SNR=30						
Q17K	**Contact Creek**	**4.34**	**36**	P	**Pn**	**19 57 55.2**	**+2.0**
	baz=219						
O15K	**Ungalikthiuk R**	**4.37**	**6**		**Pn**	**19 57 54.8**	**+1.4**
O15K				IAML		19 58 48.2	
	comp=N,1µm,0.6s						
O15K				IAML		19 59 18.1	
	comp=E,1µm,0.8s						
O15K	**Ungalikthiuk R**	**4.37**	**6**	P	**Pn**	**19 57 54.9**	**+1.4**
	baz=186,SNR=238						
O14K	**Tigyukauivet M**	**4.43**	**356**		**Pn**	**19 57 55.9**	**+1.6**
O14K				IAML		19 59 27.9	
	comp=N,941nm,0.8s						
O14K	**Tigyukauivet M**	**4.43**	**356**	P	**Pn**	**19 57 56.0**	**+1.7**
	baz=175,SNR=130						
Q16K	**King Salmon**	**4.44**	**28**	P	**Pn**	**19 57 57.2**	**+2.8**
	baz=211						
ACHA	**Angle Creek He**	**4.50**	**39**		**Pn**	**19 57 57.0**	**+1.7**
OHAK	**Old Harbor**	**4.79**	**57**		**Pn**	**19 57 59.1**	**-0.2**
OHAK				IAML		19 59 25.1	
	comp=N,727nm,0.9s						
OHAK	**Old Harbor**	**4.79**	**57**	P	**Pn**	**19 57 59.5**	**+0.2**
	baz=243,SNR=27						
Q18K	**Katmai Hardscr**	**4.93**	**37**	P	**Pn**	**19 58 03.2**	**+1.8**
	baz=221,SNR=93						
O16K	**Kokwok River B**	**4.97**	**16**		**Pn**	**19 58 02.9**	**+1.2**
O16K				IAML		19 59 41.4	
	comp=E,707nm,0.9s						
O16K				IAML		19 59 46.4	
	comp=N,563nm,0.9s						
O16K	**Kokwok River B**	**4.97**	**16**	P	**Pn**	**19 58 03.3**	**+1.6**
	baz=197,SNR=207						
N14K	**Kuskokwak Cree**	**5.12**	**354**		**Pn**	**19 58 05.6**	**+1.9**
N14K				IAML		19 59 57.2	
	comp=E,1µm,1.1s						
N14K	**Kuskokwak Cree**	**5.12**	**354**	P	**Pn**	**19 58 05.7**	**+1.9**
	baz=173,SNR=411						
O17K	**Koliganek Bris**	**5.31**	**20**	P	**Pn**	**19 58 08.2**	**+1.8**
	baz=203,SNR=45						
N15K	**Kwethluk River**	**5.35**	**3**		**Pn**	**19 58 08.5**	**+1.6**
N15K				IAML		19 59 12.6	
	comp=N,709nm,0.5s						
N15K	**Kwethluk River**	**5.35**	**3**	P	**Pn**	**19 58 08.7**	**+1.8**
	baz=183,SNR=138						
KDAK	**Kodiak Island**	**5.39**	**54**	Pn	**Pn**	**19 58 07.4**	**-0.1**
	comp=N,19nm,0.3s,baz=134,slow=1.8,SNR=113						
KDAK				Sn	**Sn**	**19 59 06.9**	**-1.4**
	comp=N,23nm,0.3s,baz=144,slow=22,SNR=5.5						
KDAK				LR	LR	20 00 33.8	
	comp=N,1µm,19.4s,baz=233,slow=41						
	comp=N,41nm,0.3s						
KDAK	**Kodiak Island**	**5.39**	**54**		**Pn**	**19 58 07.6**	**+0.1**
KDAK				IAML		19 59 32.3	
	comp=N,562nm,0.8s						
KDAK				IAML		19 59 33.6	
	comp=N,786nm,0.8s						
KDAK	**Kodiak Island**	**5.39**	**54**	P	**Pn**	**19 58 07.7**	**+0.2**
	baz=240						
KDAK	**Kodiak Island**	**5.39**	**54**	P	**Pn**	**19 58 07.8**	**+0.2**
P18K	**Big Mountain,**	**5.45**	**31**	P	**Pn**	**19 58 10.4**	**+2.1**
	baz=215,SNR=48						
N16K	**Nishlik Lake**	**5.74**	**10**	P	**Pn**	**19 58 14.7**	**+2.4**
	baz=191,SNR=414						
M13K	**Dall Lake**	**5.76**	**347**	P	**Pn**	**19 58 14.4**	**+1.9**
	baz=164,SNR=40						
CLES	**Cleveland East**	**5.80**	**253**	Pn	**Pn**	**19 58 15.0**	**+1.8**
M15K	**Kasigluk River**	**5.86**	**0**	P	**Pn**	**19 58 15.2**	**+1.2**
	baz=180,SNR=79						
M14K	**Bethel**	**5.96**	**354**		**Pn**	**19 58 16.7**	**+1.4**
M14K	**Bethel**	**5.96**	**354**	P	**Pn**	**19 58 17.0**	**+1.8**
	baz=173,SNR=357						
N17K	**Nushagak Hills**	**6.00**	**17**		**Pn**	**19 58 17.8**	**+1.9**
N17K	**Nushagak Hills**	**6.00**	**17**	P	**Pn**	**19 58 17.5**	**+1.7**
	baz=198,SNR=80						
M16K	**Timber Creek**	**6.26**	**8**	P	**Pn**	**19 58 21.2**	**+1.8**
	baz=189,SNR=196						
M11K	**Mekoryuk**	**6.29**	**334**		**Pn**	**19 58 21.1**	**+1.4**
M11K	**Mekoryuk**	**6.29**	**334**	P	**Pn**	**19 58 21.3**	**+1.5**
	baz=150,SNR=35						
P19K	**Oil Pt**	**6.29**	**37**	P	**Pn**	**19 58 22.6**	**+2.6**
	baz=223						
N18K	**Kilae Creek**	**6.39**	**22**	Pn	**Pn**	**19 58 22.2**	**+0.9**
N18K	**Kilae Creek**	**6.39**	**22**	P	**Pn**	**19 58 23.6**	**+2.3**
	baz=205						
ILSW	**Iliamna Southw**	**6.57**	**35**		**Pn**	**19 58 26.7**	**+2.9**
L14K	**Kuka Creek**	**6.60**	**352**	P	**Pn**	**19 58 25.6**	**+1.6**
	baz=170,SNR=391						
M17K	**Holitna River**	**6.80**	**13**	P	**Pn**	**19 58 28.6**	**+1.9**
	baz=196,SNR=52						
O20K	**Slope Mountain**	**6.82**	**36**	P	**Pn**	**19 58 28.3**	**+1.2**
	baz=223						
N19K	**Bonanza Creek**	**6.84**	**27**	P	**Pn**	**19 58 29.9**	**+2.5**
	baz=211,SNR=118

H17K **Granite Mounta** 10.13 2 Pn 19 59 13.5 +1.1
H17K **Granite Mounta** 10.13 2 P Pn 19 59 13.2 +0.7
baz=182,SNR=16
TRF **Thorofare Moun** 10.14 28 P Pn 19 59 13.8 +1.1
baz=216
KAIM **Kayak Island** 10.15 53 P Pn 19 59 13.6 +1.0
baz=247,SNR=10
WAT1 **Susitna Watana** 10.17 33 P Pn 19 59 13.5 +0.6
baz=223
KLU **Klutina** 10.24 44 P Pn 19 59 14.2 +0.2
baz=236,SNR=75
WAT6 **Susitna Watana** 10.26 36 P Pn 19 59 14.3 0.0
baz=226
KIWB **Kanaga Island** 10.28 260 Pn 19 59 15.9 +1.5
G15K **Niukluk** 10.31 352 P Pn 19 59 16.6 +1.7
baz=169,SNR=33
H18K **Honhosa River** 10.40 5 P Pn 19 59 17.5 +1.3
baz=187,SNR=10
I20K **Naaghedeneel** 10.45 15 P Pn 19 59 19.5 +2.7
baz=200
M24K **Tolsona, Glenn** 10.51 40 P Pn 19 59 18.4 +0.7
baz=232,SNR=8.2
BMRM **Bremner River** 10.52 48 P Pn 19 59 17.8 0.0
baz=241,SNR=18
GAMB **Gambell** 10.55 332 Pn 19 59 19.4 +1.3
GAMB **Gambell** 10.55 332 P Pn 19 59 19.6 +1.5
baz=143
G16K **Koyuk River** 10.61 356 P Pn 19 59 20.8 +1.8
baz=175,SNR=9.6
G17K **Kiwalik Mounta** 10.69 0 P Pn 19 59 21.7 +1.7
baz=180
DHY **Denali Highway** 10.72 34 P Pn 19 59 19.6 -1.0
baz=225
MCK **McKinley** 10.73 29 P Pn 19 59 21.4 +0.7
baz=219
N25K **Chitina, Valde** 10.84 45 P Pn 19 59 22.6 +0.4
baz=238,SNR=24
H19K **Roundabout Mou** 10.92 9 P Pn 19 59 24.7 +1.6
baz=193,SNR=42
F14K **Arctic Creek** 11.02 348 P Pn 19 59 26.8 +2.3
baz=163
H20K **Anotleneega Mo** 11.06 13 P Pn 19 59 26.8 +1.7
baz=198,SNR=50
F15K **North Star Dit** 11.07 351 Pn 19 59 26.8 +1.6
F15K **North Star Dit** 11.07 351 P Pn 19 59 27.0 +1.8
baz=168,SNR=30
CRQE **Cirque** 11.08 51 P Pn 19 59 25.4 -0.2
baz=245,SNR=15
GLB **Gilahina Butte** 11.08 47 Pn 19 59 24.9 -0.6
G18K **Tagagawik** 11.13 4 P Pn 19 59 28.0 +2.0
baz=186,SNR=10
VRDI **Verde Repeater** 11.13 48 Pn 19 59 26.3 -0.1
I21K **Tanana** 11.23 19 P Pn 19 59 29.1 +1.7
baz=206,SNR=30
PAX **Paxson** 11.30 38 P Pn 19 59 28.9 +0.4
baz=230
TNA **Tin City** 11.32 345 P Pn 19 59 30.6 +2.0
baz=158
MLY **Manley** 11.35 22 P Pn 19 59 31.5 +2.4
baz=210
MCARA **McCarthy VSAT** 11.39 48 P Pn 19 59 30.4 +0.8
baz=242
G19K **Purcell Mounta** 11.47 7 P Pn 19 59 32.1 +1.4
baz=190,SNR=9.5
H21K **Melozitna Rive** 11.52 17 P Pn 19 59 33.1 +1.7
baz=203,SNR=40
IMAR **Indian Mountai** 11.68 14 Pn 19 59 34.7 +1.1
K24K **Donnelly Dome** 11.74 34 P Pn 19 59 35.5 +1.0
baz=227
I23K **Minto, Yukon-K** 11.76 24 P Pn 19 59 35.8 +1.1
baz=214
F18K **Selawik** 11.80 2 P Pn 19 59 37.1 +1.9
baz=183
HDA **Harding Lake** 11.82 30 P Pn 19 59 34.2 -1.2
baz=222,SNR=15
M26K **Nabesna, AK** 11.90 43 P Pn 19 59 37.8 +1.1
baz=238
COLA **College** 11.92 27 P Pn 19 59 38.7 +1.9
RIDG **Independent Ri** 12.01 36 P Pn 19 59 39.1 +0.9
baz=229,SNR=30
ILAR **Eielson Array** 12.11 29 Pn Pn 19 59 36.5 -2.8
comp=N,1.0nm,0.3s,baz=223,slow=13,SNR=18
ILAR Sn Sn 20 01 46.7 -6.1
comp=N,1.1nm,0.3s,baz=207,slow=6.2,SNR=4.8
ILAR LR LR 20 04 45.4
comp=N,232nm,19.6s,baz=226,slow=39
comp=N,1.8nm,0.3s
ILAR **Eielson Array** 12.11 29 Pn 19 59 37.4 -1.9
F19K **Shaleruckik Mo** 12.11 6 P Pn 19 59 41.4 +1.9
baz=188,SNR=32
PINM **Pinnacle** 12.17 56 P Pn 19 59 40.5 +0.1
baz=253
G21K **Allakaket** 12.21 14 P Pn 19 59 41.6 +0.7
baz=200,SNR=28
POKR **Poker Plat Res** 12.22 27 P Pn 19 59 41.7 +0.7
baz=219
E17K **Hotham Inlet** 12.29 358 P Pn 19 59 43.7 +1.9
baz=177
H23K **Yukon River** 12.29 22 P Pn 19 59 28.7 -13
baz=211
M27K **Edge Creek, AK** 12.33 45 P Pn 19 59 42.8 +0.2
baz=241
O28M **Mount Upton** 12.41 53 P Pn 19 59 44.3 +0.5
baz=250,SNR=14
J25K **Salcha River,** 12.44 32 P Pn 19 59 42.8 -1.1
baz=225,SNR=14
F20K **Avaraart Lake** 12.47 9 P Pn 19 59 46.5 +2.1
baz=193,SNR=24
AMKA **Amchitka** 12.49 262 Pn 19 59 45.1 +0.4
E18K **Tukpahlearik C** 12.62 0 P Pn 19 59 49.1 +2.8
baz=180
YUK3 **Moose Creek** 12.67 49 P Pn 19 59 47.7 +0.4
baz=246,SNR=12
H24K **Noodor Dome** 12.68 25 P Pn 19 59 41.4 -5.9
baz=216
L27K **Beaver Creek,** 12.71 42 P Pn 19 59 47.9 +0.3
baz=238,SNR=14
BCAR **Beaver Creek A** 12.73 42 Pn 19 59 47.3 -0.6
E19K **Redstone River** 12.76 6 P Pn 19 59 50.5 +2.2
baz=189
BVCY **Beaver Creek** 12.78 46 P Pn 19 59 49.2 +0.7
baz=242
YUK8 **Steele Glacier** 12.79 51 P Pn 19 59 50.0 +1.0
baz=249,SNR=12
F21K **Alatna River** 12.89 13 P Pn 19 59 52.7 +2.6
baz=199,SNR=30
G23K **Bananza Creek** 12.96 19 P Pn 19 59 51.4 +0.3
baz=208
O29M **Mount Kennedy** 13.04 56 P Pn 19 59 53.5 +1.3
baz=255,SNR=22
PRP **Porcupine Dome** 13.05 29 P Pn 19 59 52.7 +0.3
baz=222
RDOG **Red Dog Mine** 13.29 356 P Pn 19 59 57.0 +1.5
baz=174
P29M **Windy Craggy** 13.29 60 P Pn 19 59 56.5 +0.8
baz=259
YUK4 **Talbot Arm** 13.31 52 P Pn 19 59 57.5 +1.5
baz=250
F22K **John River** 13.33 14 P Pn 19 59 59.0 +2.9
baz=202
E20K **Nigu River** 13.62 7 P Pn 20 00 03.4 +3.3
baz=191,SNR=14
C16K **Lisburne Hills** 13.65 353 P Pn 20 00 03.4 +3.1
baz=168
C17K **DeLong Mountai** 13.72 356 P Pn 20 00 04.6 +3.1
baz=174
M29M **Somme Creek** 13.80 48 P Pn 20 00 02.7 +0.2
baz=246,SNR=28
C18K **Utukok River** 13.85 359 Pn 20 00 06.0 +2.7
S31K **Pelican** 13.88 67 P Pn 20 00 04.0 +0.5
baz=267,SNR=36
PLBC **Pleasant Camp** 13.96 61 P Pn 20 00 05.4 +0.8
baz=261,SNR=28
D20K **Etivluk River** 14.04 6 P Pn 20 00 07.3 +1.5
baz=190
N30M **Aishikik Lake** 14.06 52 P Pn 20 00 05.4 -0.7
baz=252
L29M **L29M** 14.21 45 P Pn 20 00 08.5 +0.4
baz=244,SNR=6.6
I27K **Kandik River** 14.28 33 P Pn 20 00 08.8 -0.2
baz=230,SNR=7.1
O30N **Mendenhall** 14.34 56 P Pn 20 00 09.9 -0.1
baz=256
SIT **Sitka** 14.36 71 P Pn 20 00 08.9 -1.2
baz=272
E24K **Your Creek** 14.45 19 P Pn 20 00 12.6 +1.2
baz=209,SNR=27
SKAG **Skagway** 14.48 61 P Pn 20 00 12.8 +1.2
baz=262
M30M **Minto, Yukon** 14.56 48 P Pn 20 00 13.0 +0.2
baz=248
G26K **Porcupine Rive** 14.59 27 P Pn 20 00 13.0 -0.1
baz=222
F25K **Christian Rive** 14.63 23 P Pn 20 00 14.1 +0.3
baz=216
N31M **Braeburn, Yuko** 14.67 53 P Pn 20 00 13.4 -0.9
baz=254
H27K **Steamboat Moun** 14.72 32 P Pn 20 00 14.5 -0.4
baz=228,SNR=9.6
I28M **Miner Creek** 14.74 36 P Pn 20 00 13.4 -1.8
baz=234
S32K **Killisnoo** 14.76 69 P Pn 20 00 15.5 +0.1
baz=271,SNR=14
TOLK **Toolik Lake Re** 14.77 16 P Pn 20 00 17.3 +1.8
baz=206,SNR=23
K29M **Barlow Dome** 14.78 43 P Pn 20 00 15.9 +0.1
baz=243
R32K **Eaglecrest** 14.80 66 P Pn 20 00 16.7 +0.7
baz=268,SNR=12
D23K **Nanushuk River** 14.90 14 P Pn 20 00 18.7 +1.4
baz=203,SNR=9.4
WHY **Whitehorse** 14.90 57 P Pn 20 00 18.3 +0.9
baz=258,SNR=7.4
SHEM **Shemya Is, Ala** 15.01 272 LR LR 20 05 58.7
comp=N,304nm,19.8s,baz=78,slow=37
F26K **Sheenjek River** 15.07 25 P Pn 20 00 20.9 +1.4
baz=219
G27K **Doyon Strip** 15.07 30 P Pn 20 00 20.6 +1.1
baz=226,SNR=14
B21K **Ikpikpuk River** 15.08 8 P P 20 00 23.0 -1.2
baz=194
B20K **Meade River** 15.30 5 IAmb IAmb 20 00 47.4
comp=Z,137nm,1.4s
P32M **Atlin** 15.31 61 P Pn 20 00 24.3 +1.6
baz=264
D24K **Happy Valley** 15.35 16 IAmb IAmb 20 00 44.4
comp=Z,109nm,1.5s
M31M **Drury Creek, Y** 15.50 51 IAmb IAmb 20 00 47.6
comp=Z,63nm,0.9s
J30M **Hart River** 15.58 42 P Pn 20 00 28.1 +1.8
baz=242,SNR=120
U33K **Whale Pass** 15.65 74 P Pn 20 00 27.5 +0.5
baz=277
H29M **Whitestone** 15.71 35 IAmb IAmb 20 00 48.9
comp=Z,45nm,0.6s
H29M **Whitestone** 15.71 35 P Pn 20 00 27.6 -0.2
baz=234
C23K **Itkillik River** 15.72 13 IAmb IAmb 20 00 44.7
comp=Z,46nm,0.8s
C23K **Itkillik River** 15.72 13 P Pn 20 00 28.6 +0.8
baz=202,SNR=11
CRAG **Craig** 15.74 76 P Pn 20 00 28.9 +0.7
baz=279
P33M **Teslin, Yukon** 15.84 59 P Pn 20 00 30.1 +0.6
baz=262,SNR=11
I30M **Mount Dempster** 15.87 39 P Pn 20 00 30.7 +0.8
baz=240,SNR=94
D25K **Kavik River** 15.92 19 P Pn 20 00 31.5 +0.9
baz=211,SNR=13
Q32M **Nakina River** 16.00 64 IAmb IAmb 20 00 48.0
comp=Z,30nm,0.8s
Q32M **Nakina River** 16.00 64 P Pn 20 00 30.1 -1.7
baz=267
WRAK **Wrangell Islan** 16.05 73 P Pn 20 00 32.5 +0.4
baz=276,SNR=7.3
E27K **Coleen River** 16.07 26 P Pn 20 00 33.4 +1.0
baz=223
F28M **Old Crow** 16.13 29 P Pn 20 00 34.4 +1.2
baz=228
G29M **Pine Creek** 16.24 33 IAmb IAmb 20 00 48.2
comp=Z,87nm,0.9s
G29M **Pine Creek** 16.24 33 P Pn 20 00 35.5 +1.0
baz=233,SNR=36
EPYK **Eagle Plains** 16.35 36 IAmb IAmb 20 00 50.5
comp=Z,96nm,0.8s
EPYK **Eagle Plains** 16.35 36 P P 20 00 37.6 -0.7
baz=236,SNR=57
V35K **Ketchikan** 16.61 76 P Pn 20 00 40.0 +0.8
baz=280,SNR=8.1
DIB **Dawson Inlet,** 16.62 84 Pn 20 00 36.2 -3.3
R33M **Jennings River** 16.69 62 P Pn 20 00 41.4 +1.0
baz=267,SNR=22
C27K **Jago River** 16.70 21 P P 20 00 41.4 -0.8
baz=216,SNR=8.6
C26K **Camden Bay** 16.70 19 P Pn 20 00 41.0 +0.7
baz=213
G30M **tAoh Zraii Nji** 16.85 34 IAmb IAmb 20 00 57.2
comp=Z,57nm,0.6s
G30M **tAoh Zraii Nji** 16.85 34 P Pn 20 00 41.9 -0.4
baz=236,SNR=37
H31M **Peel River** 16.89 39 P Pn 20 00 42.5 -0.3
baz=242,SNR=43
MMPY **Sheldon Lake,** 17.02 51 P Pn 20 00 44.7 +0.3
baz=256,SNR=16
T35M **Bob Quinn** 17.14 70 P Pn 20 00 45.6 -0.3
baz=276
DLBC **Dease Lake** 17.17 65 P Pn 20 00 43.8 -2.5
comp=Z,5.6nm,1.0s,baz=232,slow=11,SNR=3.8
DLBC LR LR 20 06 54.8
comp=Z,268nm,19.4s,baz=244,slow=35
DLBC **Dease Lake** 17.17 65 P Pn 20 00 45.1 -1.2
baz=271,SNR=13
E29M **Blow River** 17.21 29 P Pn 20 00 46.9 +0.3
baz=229
F30M **Barrier River** 17.35 33 IAmb IAmb 20 01 02.8
comp=Z,40nm,0.6s
F30M **Barrier River** 17.35 33 P Pn 20 00 47.8 -0.6
baz=235,SNR=12
G31M **Satah River** 17.47 36 IAmb IAmb 20 01 13.8
comp=Z,52nm,0.9s
G31M **Satah River** 17.47 36 P Pn 20 00 49.6 -0.3
baz=239,SNR=27
F31M **Tsiigehtchic** 17.92 35 P Pn 20 00 55.2 -0.1
baz=238
INK **Inuvik** 18.45 32 P P 20 01 00.6 -0.9
comp=Z,3.3nm,0.3s,baz=230,slow=12,SNR=20
INK LR LR 20 09 05.0
comp=Z,291nm,20.3s,baz=233,slow=40
comp=Z,17nm,0.5s
INK **Inuvik** 18.45 32 P P 20 01 01.6 +0.1
baz=236,SNR=12
INK **Inuvik** 18.45 32 P P 20 00 59.8 -1.6
BBB **Bella Bella** 19.47 84 P Pn 20 01 14.5 +0.3
comp=Z,0.7nm,0.3s,baz=297,slow=12,SNR=11
BBB LR LR 20 07 21.3
comp=Z,334nm,20.0s,baz=282,slow=32
comp=Z,8.1nm,0.7s
C36M **Paulatuk** 21.97 34 P P 20 01 38.3 -1.2
C36M IAmb IAmb 20 01 48.6
comp=Z,27nm,0.6s
C36M **Paulatuk** 21.97 34 P P 20 01 38.5 -1.0
baz=247
A36M **Sachs Harbour** 22.80 28 P P 20 01 46.5 -1.9
A36M IAmb IAmb 20 01 58.8
comp=Z,36nm,0.9s
CLRS **Cowichan Lake** 23.20 90 IAmb IAmb 20 01 56.5
comp=Z,20nm,1.0s
PET **Petropavlovsk** 23.76 282 P P 20 01 58.0 0.0
PET **Petropavlovsk** 23.76 282 P P 20 01 56.8 -1.1
comp=Z,1;µmcomp=Z,118nm,0.9s
PET **Petropavlovsk** 23.76 282 P P 20 01 58.4 +0.5
NLWA **Neilton Lookou** 24.07 93 IAmb IAmb 20 02 14.9
comp=Z,20nm,0.9s
PETK **Petropavlovsk-** 24.27 283 P P 20 02 02.5 -0.2
comp=Z,48nm,0.5s,baz=73,slow=13,SNR=114
PETK LR LR 20 11 10.0
comp=Z,148nm,21.2s,baz=88,slow=36
comp=Z,48nm,0.5s
GNW **Green Mountain** 24.58 91 P P 20 02 05.0 -0.5
YKA **Yellowknife Ar** 24.67 53 P P 20 02 06.4 +0.2
comp=Z,2.0nm,0.5s,baz=271,slow=9.1,SNR=12
YKA PcP PcP 20 05 42.3 0.0
comp=Z,1.9nm,0.6s,baz=301,slow=2.3,SNR=4.2
YKA LR LR 20 12 28.2
comp=Z,225nm,18.9s,baz=255,slow=38
comp=Z,2.0nm,0.5s
YKA **Yellowknife Ar** 24.67 53 P P 20 02 06.2 0.0
SEY **Seymchan** 25.02 308 LR LR 20 13 08.6
comp=Z,336nm,18.4s,baz=144,slow=39
B08A **Colville Reser** 26.20 87 IAmb IAmb 20 02 38.4
comp=Z,24nm,1.5s
MA2 **Magadan** 26.21 300 LR LR 20 13 28.1
comp=Z,161nm,18.7s,baz=101,slow=38
MA2 **Magadan** 26.21 300 P P 20 02 18.6 -1.6
MA2 IAmb IAmb 20 02 37.7
comp=Z,15nm,1.0s
MA2 **Magadan** 26.21 300 P P 20 02 19.3 -0.9
WAH2 **Wahluke Slope** 26.90 90 IAmb IAmb 20 02 29.5
comp=Z,15nm,0.6s
HAWA **Hanford** 27.11 91 IAmb IAmb 20 02 41.9
comp=Z,13nm,0.9s
EDM **Edmonton** 27.45 74 P P 20 02 32.2 +0.7
EDM IAmb IAmb 20 02 43.7
comp=Z,13nm,0.8s
NEW **Newport** 27.52 86 LR LR 20 11 51.3
comp=Z,232nm,20.9s,baz=310,slow=33
NEW **Newport** 27.52 86 P P 20 02 32.5 +0.3
YBH **Yreka Blue Hor** 28.10 102 LR LR 20 11 21.8
comp=Z,344nm,20.7s,baz=320,slow=31
PNTR **Pine Nut** 31.63 103 IAmb IAmb 20 03 27.5
comp=Z,9.8nm,0.8s
HLID **Hailey** 31.71 91 P P 20 03 11.3 +1.9
HLID pP pP 20 03 21.8 +1.0
RES **Resolute Bay** 31.85 27 LR LR 20 17 22.1
comp=Z,104nm,20.3s,baz=43,slow=39
EGMT **Eagleton** 31.87 81 P P 20 03 10.9 +0.2
EGMT IAmb IAmb 20 03 39.6
comp=Z,6.7nm,0.8s
BLKN **Baker Lake** 32.65 47 IAmb IAmb 20 03 29.3
comp=Z,24nm,0.9s
NVAR **Mina Array Bea** 32.82 102 P P 20 03 21.5 +2.2
comp=Z,1.3nm,0.7s,baz=306,slow=8.6,SNR=10
NVAR pP pP 20 03 31.2 +0.6
comp=Z,4.5nm,0.7s,baz=292,slow=11,SNR=17
NVAR PcP PcP 20 06 04.3 +0.9
comp=Z,1.7nm,0.6s,baz=304,slow=2.9,SNR=7.3
NVAR ScP ScP 20 09 44.4 +0.7
comp=Z,0.2nm,0.3s,baz=336,slow=1.8,SNR=3.8
NVAR LR LR 20 14 17.7
comp=Z,217nm,21.4s,baz=318,slow=32
comp=Z,1.3nm,0.7s
ELK **Elko** 33.01 96 LR LR 20 14 57.1
comp=Z,237nm,20.3s,baz=312,slow=33
TIXI **Tiksi** 33.37 327 LR LR 20 18 52.7
comp=Z,180nm,18.8s,baz=72,slow=40
TIXI **Tiksi** 33.37 327 P P 20 03 21.6 -1.8
HVU **Hansel Valley** 33.77 93 IAmb IAmb 20 03 40.8
comp=Z,8.9nm,0.8s
DUG **Dugway, Tooele** 34.77 95 IAmb IAmb 20 03 49.5
comp=Z,16nm,1.1s
DUG **Dugway, Tooele** 34.77 95 P P 20 03 38.3 +2.2
DUG pP pP 20 03 48.5 +1.0
MPMC **Manual Prospec** 34.96 104 IAmb IAmb 20 03 53.1
comp=Z,11nm,1.4s
PDAR **Pinedale Array** 35.01 89 LR LR 20 16 01.6
comp=Z,49nm,20.7s,baz=302,slow=33
FURC **Furnace Creek,** 35.02 103 IAmb IAmb 20 03 51.4
comp=Z,6.9nm,0.9s
TPNV **Topopah Spring** 35.02 102 IAmb IAmb 20 03 52.0
comp=Z,13nm,1.1s
QSM **Queen of Sheba** 35.37 104 IAmb IAmb 20 03 56.3
comp=Z,6.7nm,0.8s
PRN **Pahroc Range** 35.38 100 IAmb IAmb 20 04 00.7
comp=Z,23nm,1.4s
YAK **Yakutsk** 35.47 310 LR LR 20 19 31.7
comp=Z,360nm,20.3s,baz=79,slow=38
YAK **Yakutsk** 35.47 310 P P 20 03 39.4 -2.2
YAK **Yakutsk** 35.47 310 P P 20 03 40.3 -1.4
BSUT **Blindstream Ca** 35.73 93 IAmb IAmb 20 03 57.8
comp=Z,15nm,1.3s
BFSC **Mount Baldy Ra** 36.19 107 IAmb IAmb 20 03 51.7
comp=Z,8.0nm,1.0s
P18A **Preston Nutter** 36.62 93 IAmb IAmb 20 04 11.6
comp=Z,10nm,1.1s
ILON **Igloolik, Nuna** 36.64 36 P P 20 03 51.4 -0.2
PKCU **Pink Cliffs** 36.92 98 IAmb IAmb 20 04 14.0
comp=Z,12nm,1.0s
DNR **Dunn Ranch,Anz** 37.26 106 IAmb IAmb 20 04 01.1
comp=Z,15nm,0.7s
PFO **Pinyon Flats O** 37.33 106 LR LR 20 16 45.1
comp=Z,131nm,18.8s,baz=308,slow=32
HMU **Henry Mountain** 37.48 96 IAmb IAmb 20 04 12.7
comp=Z,18nm,0.8s
BORC **Borrego Spring** 37.60 107 IAmb IAmb 20 04 13.4
comp=Z,7.7nm,1.1s
U15A **North Rim** 37.64 99 IAmb IAmb 20 04 19.3
comp=Z,9.8nm,1.4s
IRM **Iron Mountain** 37.66 104 IAmb IAmb 20 04 20.0
comp=Z,12nm,1.1s
TULEG **Thule** 37.94 22 *i* P P 20 04 02.2 -0.3
TULEG IAmb IAmb 20 04 02.8
comp=Z,9.5nm,0.7s
PV10 **Paradox Valley** 38.16 94 IAmb IAmb 20 04 21.4
comp=Z,11nm,0.9s
CBX **Cerro Bola** 38.19 108 IAmb IAmb 20 04 08.9
comp=Z,19nm,0.8s
PV20 **West Nyswonger** 38.23 94 IAmb IAmb 20 04 19.1
comp=Z,12nm,0.7s
PV18 **Skein Mesa, Pa** 38.32 94 IAmb IAmb 20 04 18.9
comp=Z,15nm,0.7s
PV05 **Paradox Valley** 38.33 94 IAmb IAmb 20 04 19.2
comp=Z,7.3nm,0.6s
PV12 **Saucer Basin,** 38.34 94 IAmb IAmb 20 04 40.3
comp=Z,8.8nm,0.7s
PV07 **Paradox Valley** 38.34 93 IAmb IAmb 20 04 27.6
comp=Z,5.5nm,0.7s
PV03 **Paradox Valley** 38.35 94 IAmb IAmb 20 04 19.2
comp=Z,6.9nm,0.8s
ULM **Lac du Bonnet** 38.43 69 P P 20 04 08.0 +1.1
comp=Z,7.0nm,0.5s,baz=301,slow=7.8,SNR=7.9
ULM pP pP 20 04 18.0 -0.4
comp=Z,15nm,0.9s,baz=294,slow=6.7,SNR=7.4
ULM LR LR 20 19 56.9
comp=Z,219nm,18.5s,baz=6.0,slow=36
comp=Z,7.0nm,0.5s
ULM **Lac du Bonnet** 38.43 69 IAmb IAmb 20 04 19.0
comp=Z,12nm,0.9s
PV13 **Radium Mtn., P** 38.43 94 IAmb IAmb 20 04 20.0
comp=Z,15nm,0.7s
PV02 **Paradox Valley** 38.45 94 IAmb IAmb 20 04 20.2
comp=Z,17nm,0.8s
PV01 **Paradox Valley** 38.59 94 IAmb IAmb 20 04 26.2
comp=Z,8.6nm,0.8s
WUAZ **Wupatki** 38.81 99 IAmb IAmb 20 04 23.6
comp=Z,8.2nm,0.9s
MVCO **Mesa Verde** 39.27 95 P P 20 04 15.9 +1.4
AGMN **Agassiz Nation** 39.52 72 IAmb IAmb 20 04 28.0
comp=Z,19nm,0.7s
AGMN **Agassiz Nation** 39.52 72 P P 20 04 17.1 +1.0
EPLO **Experimental L** 39.91 69 IAmb IAmb 20 04 32.3
comp=Z,14nm,0.7s
SDCO **Great Sand Dun** 40.63 91 P P 20 04 27.2 +1.4
NEEM **North Greenlan** 41.10 18 *i* P P 20 04 28.6 -0.6
NEEM IAmb IAmb 20 04 29.7
comp=Z,23nm,1.0s
KULLO **Kullorsuaq** 41.41 23 *i* P P 20 04 31.2 -0.2
KULLO IAmb IAmb 20 04 32.8
comp=Z,14nm,0.8s
TUC **Tucson** 41.48 102 P P 20 04 34.0 +1.4
ANMO **Albuquerque** 42.03 95 LR LR 20 20 55.6
comp=Z,70nm,19.4s,baz=313,slow=34
EYMN **Ely** 42.11 70 P P 20 04 38.0 +0.6
EYMN IAmb IAmb 20 04 49.5
comp=Z,26nm,0.7s
EYMN **Ely** 42.11 70 P P 20 04 38.5 +1.1
EYMN pP pP 20 04 48.3 -0.7
HEH **HeiHe** 42.18 295 *eP* P 20 04 36.5 -1.5
HEH pmax pmax
comp=Z,20nm,0.8s
NOR **Nord** 42.43 7 P P 20 04 39.9 +0.2
NOR **Nord** 42.43 7 *i* P P 20 04 39.5 -0.1
NOR IAmb IAmb 20 04 40.6
comp=Z,9.1nm,0.6s
UPNV **Upernavik** 42.66 25 *i* P P 20 04 41.0 -0.5
UPNV IAmb IAmb 20 04 42.3
comp=Z,16nm,0.5s
H11N2 **WAKE ISLAND Hy** 42.79 228 T T 20 49 38.7
baz=27,slow=76,SNR=168
H11N3 **WAKE ISLAND Hy** 42.80 228 T T 20 49 39.3
baz=27,slow=76,SNR=207
H11N1 **WAKE ISLAND Hy** 42.81 228 T T 20 49 45.5
baz=27,slow=76,SNR=151
E38A **The Farm, Brul** 42.88 71 IAmb IAmb 20 04 55.5
comp=Z,21nm,0.8s
USRK **Ussuriysk Ar.** 43.34 285 P P 20 04 45.8 -1.6
comp=Z,2.8nm,0.6s,baz=58,slow=9.8,SNR=9.7
USRK LR LR 20 24 19.7
comp=Z,65nm,19.2s,baz=30,slow=38
comp=Z,2.8nm,0.6s
USRK **Ussuriysk Ar.** 43.34 285 P P 20 04 46.0 -1.4
I37A **Lemond, Waseca** 43.46 75 IAmb IAmb 20 05 01.9
comp=Z,32nm,1.1s
FRB **Frobisher Bay** 43.87 40 LR LR 20 24 44.4

comp=Z,179nm,18.4s,baz=291,slow=38
FRB Frobisher Bay 43.87 40 P **P** **20 04 51.8 +0.4**
H11S1 WAKE ISLAND Hy 43.96 227 T T 20 51 09.9
baz=26,slow=76,SNR=27
H11S2 WAKE ISLAND Hy 43.98 227 T T 20 51 02.0
baz=26,slow=76,SNR=25
H11S3 WAKE ISLAND Hy 43.98 227 T T 20 51 17.4
baz=26,slow=76,SNR=23
NUUG Nuugaatsiaq 44.12 26 *i* P **P** **20 04 53.2 -0.1**
NUUG IAmb IAmb 20 04 53.3
comp=Z,134nm,1.8s
MDJ Mudanjiang 44.41 287 IAmb IAmb 20 04 56.6
comp=Z,11nm,1.0s
G40A Rib Lake 44.45 72 IAmb IAmb 20 05 12.5
comp=Z,10nm,0.8s
MJAR Matsushiro Arr 44.86 272 P **P** **20 04 59.8 +0.1**
comp=Z,6.8nm,0.5s,baz=35,slow=7.0,SNR=38
MJAR LR LR 20 22 03.3
comp=Z,96nm,21.5s,baz=60,slow=34
comp=Z,6.8nm,0.5s
MJAR Matsushiro Arr 44.86 272 P **P** **20 04 59.5 -0.3**
MJAR IAmb IAmb 20 05 00.9
comp=Z,40nm,1.5s
MAJO Matsushiro 44.86 272 P **P** **20 04 59.1 -0.6**
MAJO Matsushiro 44.86 272 P **P** **20 05 00.0 +0.3**
BNX BinXian 44.91 289 ⇓P **P** **20 04 59.6 -0.4**
BNX pmax pmax
comp=Z,21nm,0.8s
MNTX Cornudas Mount 45.01 98 P **P** **20 05 02.2 +1.2**
VHRN Van Horn 45.91 98 IAmb IAmb 20 05 26.6
comp=Z,7.0nm,1.0s
JGF Kuroka 46.01 272 P **P** **20 05 09.2 +0.3**
I42A Draeger Farm, 46.03 73 IAmb IAmb 20 05 20.7
comp=Z,20nm,0.9s
INU Inuyama 46.38 272 IAmb IAmb 20 05 17.2
comp=Z,13nm,0.9s
INU Inuyama 46.38 272 P **P** **20 05 11.7 -0.1**
KBS Kingsbay 46.41 2 *eP* **P** **20 05 12.4 +1.0**
KBS IAmb IAmb 20 05 13.0
comp=Z,20nm,0.8s
KBS Kingsbay 46.41 2 P **P** **20 05 12.1 +0.7**
KBS Kingsbay 46.41 2 P **P** **20 05 12.8 +1.4**
DAG Danmarks Havn 46.46 11 P **P** **20 05 11.8 0.0**
DAG Danmarks Havn 46.46 11 *i* P **P** **20 05 11.0 -0.8**
DAG IAmb IAmb 20 05 12.4
comp=Z,19nm,0.7s
HILR Hailar Array B 46.57 298 P **P** **20 05 12.4 -0.7**
comp=Z,3.3nm,0.4s,baz=55,slow=10,SNR=6.4
comp=Z,3.3nm,0.4s
WMOK Wichita Mounta 46.62 89 IAmb IAmb 20 05 30.6
comp=Z,6.0nm,0.8s
WMOK Wichita Mounta 46.62 89 P **P** **20 05 14.4 +0.8**
NRIK Noril'sk 46.63 333 P **P** **20 05 13.0 -0.3**
comp=Z,8.5nm,0.6s,baz=81,slow=8.2,SNR=6.1
NRIK LR LR 20 27 59.4
comp=Z,129nm,18.1s,baz=46,slow=40
comp=Z,8.5nm,0.6s
SUMG Summit 46.77 20 P **P** **20 05 15.0 +0.2**
SUMG IAmb IAmb 20 05 15.8
comp=Z,6.8nm,0.7s
SUMG Summit 46.77 20 P **P** **20 05 15.4 +0.6**
SUMG Summit 46.77 20 *i* P **P** **20 05 15.0 +0.2**
SUMG IAmb IAmb 20 05 15.7
comp=Z,7.0nm,0.6s
P40A Paris 47.16 79 IAmb IAmb 20 05 33.5
comp=Z,10nm,0.7s
CN2 Changchun 47.22 289 P **P** **20 05 17.8 -0.4**
CN2 pmax pmax
comp=Z,30nm,0.8s
SPA0 Spitsbergen Ar 47.22 1 *eP* **P** **20 05 17.3 -0.5**
SPA0 IAmb IAmb 20 05 18.6
comp=Z,32nm,1.3s
SPITS Spitsbergen Ar 47.22 1 P **P** **20 05 17.6 -0.2**
comp=Z,1.9nm,0.4s,baz=41,slow=5.5,SNR=20
SPITS PcP **PcP** **20 06 48.7 +0.3**
comp=Z,2.9nm,0.5s,baz=90,slow=2.9,SNR=3.5
comp=Z,1.9nm,0.4s
S39A Bolivar 47.69 82 IAmb IAmb 20 06 01.4
comp=Z,3.2nm,0.5s
TX31 Lajitas Ar. Si 47.75 98 IAmb IAmb 20 05 35.7
comp=Z,5.7nm,1.0s
TXAR Lajitas Array 47.75 98 P **P** **20 05 24.1 +1.5**
comp=Z,1.9nm,0.6s,baz=301,slow=5.6,SNR=32
TXAR PcP **PcP** **20 06 52.0 +0.8**
comp=Z,1.3nm,0.6s,baz=260,slow=0.6,SNR=5.2
TXAR LR LR 20 23 52.8
comp=Z,160nm,21.1s,baz=311,slow=34
comp=Z,1.9nm,0.6s
TXAR Lajitas Array 47.75 98 P **P** **20 05 23.8 +1.2**
SFJD Kangerlussuaq 47.77 30 LR LR 20 27 01.9
comp=Z,85nm,19.7s,baz=313,slow=38
SFJD Kangerlussuaq 47.77 30 *i* P **P** **20 05 22.9 +0.8**
SFJD IAmb IAmb 20 05 24.0
comp=Z,21nm,0.7s
R40A Maddies Statio 47.88 81 IAmb IAmb 20 05 23.3
comp=Z,5.8nm,0.6s
U38A Gravette 47.95 84 IAmb IAmb 20 05 24.6
comp=Z,8.9nm,0.8s
LPIG La Paz 48.08 109 LR LR 20 21 06.0
comp=Z,41nm,21.1s,baz=282,slow=30
JMN Monobe 49.35 273 P **P** **20 05 34.7 -0.1**
T42A Van Buren 49.43 81 IAmb IAmb 20 05 43.0
comp=Z,11nm,1.3s
JCJ Chichijima 49.49 260 LR LR 20 23 26.5
comp=Z,62nm,21.5s,baz=113,slow=32
MIAR Mount Ida 49.76 85 IAmb IAmb 20 06 10.4
comp=Z,4.8nm,0.8s
SCHQ Schefferville 50.00 49 P **P** **20 05 41.6 +2.2**
comp=Z,2.2nm,0.4s,baz=325,slow=6.2,SNR=7.9
SCHQ LR LR 20 26 41.3
comp=Z,106nm,21.3s,baz=286,slow=36
comp=Z,2.2nm,0.4s
SCHQ Schefferville 50.00 49 IAmb IAmb 20 05 53.2
comp=Z,6.0nm,0.7s
KSRS Korea Array 50.13 281 P **P** **20 05 41.2 +0.6**
comp=Z,18nm,0.8s,baz=48,slow=7.1,SNR=34
KSRS LR LR 20 27 47.9
comp=Z,37nm,19.7s,baz=70,slow=37
comp=Z,18nm,0.8s
SADO Sadowa 50.73 66 LR LR 20 26 34.1
comp=Z,73nm,19.8s,baz=348,slow=35
SCO Scoresbysund 51.52 16 P **P** **20 05 50.6 0.0**
SCO IAmb IAmb 20 05 52.9
comp=Z,14nm,1.4s
SCO Scoresbysund 51.52 16 *i* P **P** **20 05 51.4 +0.8**
SCO IAmb IAmb 20 05 51.7
comp=Z,4.0nm,0.4s
SOEG Soedalen 51.69 22 *i* P **P** **20 05 52.4 +0.5**
SOEG IAmb IAmb 20 05 52.9
comp=Z,18nm,0.9s
WVT Waverly 51.92 79 P **P** **20 05 54.5 +0.4**
WVT IAmb IAmb 20 06 06.7
comp=Z,13nm,0.7s
WVT Waverly 51.92 79 P **P** **20 05 54.7 +0.6**
TRQ Mont Tremblant 52.12 61 IAmb IAmb 20 06 08.7
comp=Z,17nm,1.1s
XLT XiLinHaoTe 52.18 295 *eP* **P** **20 05 56.8 +0.7**
XLT pmax pmax
comp=Z,30nm,0.8s
XLT pmax pmax
comp=Z,180nm,4.5s
ANGG Ammassalik, Gr 52.33 26 *i* P **P** **20 05 56.0 -0.7**
ANGG IAmb IAmb 20 05 56.4
comp=Z,16nm,0.7s
CLTN Cedars of Leba 52.80 78 IAmb IAmb 20 06 13.5
comp=Z,9.8nm,0.9s
JMIC Jan Mayen 52.91 11 LR LR 20 29 36.0
comp=Z,29nm,21.6s,baz=358,slow=37
TLY Talaya 52.92 309 LR LR 20 28 51.1
comp=Z,94nm,21.9s,baz=32,slow=36
TLY Talaya 52.92 309 P **P** **20 06 01.1 -0.2**
TLY IAmb IAmb 20 06 02.7
comp=Z,7.3nm,0.8s
ULN Ulaanbaatar 53.99 304 P **P** **20 06 08.7 -0.7**
ULN IAmb IAmb 20 06 09.9
comp=Z,9.8nm,1.1s
ULN Ulaanbaatar 53.99 304 P **P** **20 06 09.4 0.0**
SONM Songino Array 54.33 304 P **P** **20 06 12.0 +0.2**
comp=Z,8.1nm,0.6s,baz=44,slow=6.6,SNR=64
SONM PcP **PcP** **20 07 15.8 +0.4**
comp=Z,6.1nm,0.7s,baz=66,slow=2.2,SNR=11
SONM ScP **ScP** **20 11 09.7 -0.2**
comp=Z,1.0nm,0.8s,baz=49,slow=3.7,SNR=5.7
SONM LR LR 20 31 55.9
comp=Z,167nm,19.3s,baz=70,slow=39
comp=Z,8.1nm,0.6s
SONM Songino Array 54.33 304 P **P** **20 06 11.5 -0.3**
SONM IAmb IAmb 20 06 12.8
comp=Z,8.7nm,0.7s
TKL Tuckaleechee C 54.55 77 LR LR 20 29 02.3
comp=Z,171nm,20.2s,baz=352,slow=35
BATG Bathurst New B 55.56 55 P **P** **20 06 20.9 +0.4**
TRO Tromso 55.83 0 *eP* **P** **20 06 22.4 +0.3**
TRO IAmb IAmb 20 06 22.6
comp=Z,21nm,0.6s
ARA0 ARCESS Array S 55.84 357 *eP* **P** **20 06 21.2 -1.0**
ARCES ARCESS Array B 55.84 357 P **P** **20 06 21.4 -0.9**
comp=Z,4.1nm,0.6s,baz=24,slow=6.7,SNR=23
ARCES PcP **PcP** **20 07 20.5 -0.2**
comp=Z,4.5nm,0.8s,baz=3.6,slow=3.9,SNR=4.5
ARCES LR LR 20 34 40.9
comp=Z,44nm,18.1s,baz=354,slow=41
comp=Z,4.1nm,0.6s
ARCES ARCESS Array B 55.84 357 P **P** **20 06 21.9 -0.4**
JETT Jettan, Norway 55.90 360 *eP* **P** **20 06 22.8 +0.1**
JETT IAmb IAmb 20 06 23.1
comp=Z,63nm,1.4s
KTK1 Kautokeino 56.42 358 *eP* **P** **20 06 25.6 -0.8**
HHC Hu-ho-hao-te 56.71 295 *eP* **P** **20 06 33.3 +4.4**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,78nm,4.2s
HHC L L
comp=Z,140nm,12.8s
HHC L L
comp=Z,130nm,12.5s
HHC L L
comp=Z,90nm,13.3s
BORG Borgarnes 56.73 20 LR LR 20 33 38.5
comp=Z,41nm,19.2s,baz=312,slow=39
STEI Steigen 57.50 2 *eP* **P** **20 06 33.7 -0.2**
STEI IAmb IAmb 20 06 34.4
comp=Z,15nm,0.6s
HNS HongShan 57.53 290 ⇑P **P** **20 06 35.3 +0.7**
HNS pmax pmax
comp=Z,28nm,0.7s
HNS L L
comp=Z,200nm,20.2s
BTO2 Baotou 57.66 296 *eP* **P** **20 06 35.5 -0.2**
BTO2 S **S** **20 14 30.0 -1.1**
BTO2 pmax pmax
comp=Z,18nm,0.6s
BTO2 pmax pmax
comp=Z,190nm,4.0s
BTO2 L L
comp=Z,130nm,5.8s
BTO2 L L
comp=Z,160nm,4.6s
BTO2 L L
comp=Z,220nm,11.3s
SGF Sodankyl 57.91 357 P **P** **20 06 36.9 0.0**
FAUS Fauske 58.05 2 *eP* **P** **20 06 37.5 -0.3**
FAUS IAmb IAmb 20 06 43.5
comp=Z,31nm,1.2s
VAGH Vaagaholmen 58.66 3 *eP* **P** **20 06 42.0 -0.1**
GUMO Guam 58.83 248 LR LR 20 28 40.5
comp=Z,19nm,20.4s,baz=54,slow=32
KONS Konsvik 58.89 3 *eP* **P** **20 06 43.6 0.0**
ZAA0 Zalesovo Array 58.91 321 P **P** **20 06 43.4 -0.6**
ZALV Zalesovo Beam 58.91 321 P **P** **20 06 43.9 -0.2**
comp=Z,1.9nm,0.4s,baz=40,slow=6.6,SNR=12
ZALV PcP **PcP** **20 07 32.7 -0.2**
comp=Z,2.0nm,0.5s,baz=30,slow=3.9,SNR=7.1
comp=Z,1.9nm,0.4s
ZALV Zalesovo Beam 58.91 321 P **P** **20 06 43.0 -1.0**
ZALV PcP **PcP** **20 07 32.9 0.0**
RAUS Rausandaksla 58.97 2 *eP* **P** **20 06 44.0 -0.3**
RAUS IAmb IAmb 20 06 44.3
comp=Z,14nm,0.6s
NJ2 Nanjing 59.17 283 *eP* **P** **20 06 48.8 +2.6**
NJ2 pmax pmax
comp=Z,22nm,0.5s
MOR8 Moi Rana 59.25 2 *eP* **P** **20 06 44.8 -1.4**
MOR8 IAmb IAmb 20 06 45.9
comp=Z,13nm,0.9s
LEIR Leirfjorden 59.27 3 *eP* **P** **20 06 46.5 +0.2**
MSF Maaselka 59.34 355 P **P** **20 06 47.1 +0.3**
OUL Oulu 60.29 357 P **P** **20 06 53.1 -0.2**
NSS Nanisos 60.82 4 *eP* **P** **20 06 57.0 +0.1**
LYN LuoYang 60.85 289 P **P** **20 06 58.3 +0.6**
LYN pmax pmax
comp=Z,49nm,0.7s
CMIG Matias Romero 62.30 100 LR LR 20 32 30.0
comp=Z,57nm,21.4s,baz=341,slow=34
MOL Molde 62.56 6 *eP* **P** **20 07 08.9 +0.2**
MOL IAmb IAmb 20 07 09.1
comp=Z,13nm,0.8s
AKN Aaknes 62.91 6 *eP* **P** **20 07 11.8 +0.6**
AKN IAmb IAmb 20 07 12.2
comp=Z,23nm,0.7s
XAN Xi'an 63.16 291 ⇑P **P** **20 07 13.1 -0.2**
XAN pmax pmax
comp=Z,22nm,0.8s
DOMB Dombas 63.17 5 *eP* **P** **20 07 12.8 -0.1**
DOMB IAmb IAmb 20 07 13.2
comp=Z,20nm,0.6s
NACB Ninganchiao 63.59 275 P **P** **20 07 14.4 -1.7**
GTA2 Gaotai 63.73 302 *eP* **P** **20 07 16.8 -0.2**
GTA2 pmax pmax
comp=Z,24nm,0.9s
GTA2 L L
comp=Z,170nm,14.6s
GTA2 L L
comp=Z,99nm,16.5s
GTA2 L L
comp=Z,190nm,16.8s
KURK Kurchatov 63.76 322 P **P** **20 07 16.3 -0.5**
KURK IAmb IAmb 20 07 17.6
comp=Z,6.1nm,0.6s
KURK **PcP** **20 07 51.9 -0.6**
KURK Kurchatov 63.76 322 P **P** **20 07 16.7 -0.1**
KURBB Kurchatov Arra 63.87 322 P **P** **20 07 17.3 -0.2**
comp=Z,4.7nm,0.9s,baz=27,slow=6.9,SNR=28
KURBB PcP **PcP** **20 07 52.6 -0.4**
comp=Z,1.5nm,0.5s,baz=35,slow=3.5,SNR=7.5
KURBB LR LR 20 37 23.2
comp=Z,188nm,18.2s,baz=174,slow=38
comp=Z,4.7nm,0.9s
SUE Sulen 63.87 8 *eP* **P** **20 07 22.1 +4.7**
FINES FINESS Array B 63.93 356 P **P** **20 07 17.3 -0.5**
comp=Z,15nm,0.7s,baz=15,slow=7.8,SNR=83
comp=Z,15nm,0.7s
FINES FINESS Array B 63.93 356 P **P** **20 07 16.7 -1.1**
ZSN Zaisan 64.10 317 *eP* **P** **20 07 19.1 -0.1**
comp=Z,5.6nm,0.7s
LRW Lerwick 64.21 11 *eP* **P** **20 07 19.9 +0.3**
LRW IAmb IAmb 20 07 21.4
comp=Z,26nm,0.8s
SSLB Suanglung 64.26 275 P **P** **20 07 19.6 -1.0**
SSLB Suanglung 64.26 275 P **P** **20 07 18.9 -1.7**
NBO00 NORSAR Array S 64.27 5 IAmb IAmb 20 07 20.9
comp=Z,12nm,0.8s
NB201 NORSAR Array S 64.27 4 IAmb IAmb 20 07 21.0
comp=Z,15nm,0.8s
NB2 NORSAR Subarra 64.28 4 P **P** **20 07 20.1 -0.1**
comp=Z,6.5nm,0.6s,baz=357,slow=6.5
NB2 NORSAR Subarra 64.28 4 P **P** **20 07 20.1 -0.1**
NOA NORSAR Array B 64.28 4 P **P** **20 07 20.1 -0.1**
comp=Z,9.7nm,0.7s,baz=356,slow=6.6,SNR=35
comp=Z,9.7nm,0.7s
LZH Lanzhou 64.28 296 *eP* **P** **20 07 20.9 +0.1**
LZH sP pP 20 07 30.3 -2.6
LZH pmax pmax
comp=Z,48nm,1.3s
LZH L L
comp=Z,160nm,16.1s
LZH L L
comp=Z,170nm,18.9s
LZH L L
comp=Z,210nm,20.9s
YULB Yu-li 64.37 275 P **P** **20 07 21.0 -0.3**
YULB IAmb IAmb 20 07 34.4
comp=Z,11nm,0.7s
LZDM Lanzhou Array 64.46 297 P **P** **20 07 22.2 +0.1**
comp=Z,13nm,0.4s,baz=349,slow=0.8,SNR=20
LZDM LR LR 20 37 08.1
comp=Z,88nm,21.4s,baz=240,slow=38
comp=Z,13nm,0.4s
NAO01 NORSAR Array S 64.46 5 P **P** **20 07 21.5 +0.1**
ASK Askoy 64.47 8 *eP* **P** **20 07 21.8 +0.4**
ASK IAmb IAmb 20 07 23.3
comp=Z,13nm,0.8s
BVAR Borovoye Array 64.48 329 P **P** **20 07 21.7 +0.1**
comp=Z,16nm,0.5s,baz=34,slow=6.3,SNR=84
comp=Z,16nm,0.5s
BORK Borovoye 64.49 329 P **P** **20 07 21.3 -0.3**
BORK IAmb IAmb 20 07 22.4
comp=Z,11nm,0.7s
SKAR Skarslia 64.49 6 *eP* **P** **20 07 21.9 +0.3**
SKAR IAmb IAmb 20 07 22.4
comp=Z,22nm,0.6s
BER Bergen 64.58 8 *eP* **P** **20 07 20.6 -1.4**
NC602 NORSAR Array S 64.60 4 *eP* **P** **20 07 22.2 0.0**
NC602 NORSAR Array S 64.60 4 IAmb IAmb 20 07 46.7
comp=Z,14nm,1.4s
ARTI Arti 64.64 337 LR LR 20 40 14.5
comp=Z,66nm,19.7s,baz=344,slow=40
ARTI Arti 64.64 337 P **P** **20 07 21.7 -0.8**
ODD1 Odda 65.14 7 *eP* **P** **20 07 26.3 +0.5**
ODD1 IAmb IAmb 20 07 27.0
comp=Z,10nm,0.8s
HFS Hagfors 65.28 3 P **P** **20 07 26.4 -0.3**
comp=Z,22nm,0.5s,baz=5.7,slow=3.0,SNR=146
comp=Z,22nm,0.5s
OSL Oslo 65.36 5 *eP* **P** **20 07 27.8 +0.7**
KONO Kongsberg 65.59 5 *eP* **P** **20 07 29.3 +0.7**
KONO IAmb IAmb 20 07 29.8
comp=Z,17nm,0.7s
KONO Kongsberg 65.59 5 P **P** **20 07 28.9 +0.3**
BLS5 Blasjo 65.62 7 *eP* **P** **20 07 29.2 +0.4**
BLS5 IAmb IAmb 20 07 29.8
comp=Z,13nm,0.7s
MKAR Makanchi Array 65.65 318 P **P** **20 07 28.7 -0.6**
comp=Z,3.4nm,0.5s,baz=46,slow=5.6,SNR=46
MKAR LR LR 20 38 21.2
comp=Z,180nm,19.4s,baz=14,slow=38
comp=Z,3.4nm,0.5s
MKAR Makanchi Array 65.65 318 P **P** **20 07 28.1 -1.2**
ENH Enshi 65.74 288 P **P** **20 07 29.8 -0.4**
MAKZ Makanchi 65.76 318 P **P** **20 07 29.0 -1.0**
MAKZ IAmb IAmb 20 07 30.0
comp=Z,6.0nm,0.8s
MAKZ Makanchi 65.76 318 P **P** **20 07 29.4 -0.6**
WMQ Urumqi 65.87 312 *eP* **P** **20 07 31.3 +0.5**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ L L
comp=Z,130nm,23.8s
STRU Stroemstad 66.28 5 *i* P **P** **20 07 32.9 -0.1**
MCD Coleburn Disti 66.44 13 *eP* **P** **20 07 34.8 +0.6**
MCD IAmb IAmb 20 07 36.5
comp=Z,27nm,0.8s
SNART Snartemo 66.75 7 *i* P **P** **20 07 36.8 +0.8**
HOMB Homborsund 66.90 6 *i* P **P** **20 07 37.9 +0.9**
DRUM Mains of Drumt 67.20 13 P **P** **20 07 39.6 +0.6**
DRUM Mains of Drumt 67.20 13 *eP* **P** **20 07 38.9 0.0**
DRUM IAmb IAmb 20 07 40.6
comp=Z,45nm,0.7s
TJOU Tjoern 67.30 4 *i* P **P** **20 07 39.6 +0.1**
LAWE Loch Awe, Argy 67.43 15 *eP* **P** **20 07 40.0 -0.5**
LAWE IAmb IAmb 20 07 43.1
comp=Z,7.9nm,0.7s
INVG Invergeldie, C 67.46 14 *eP* **P** **20 07 40.9 +0.2**
INVG IAmb IAmb 20 07 42.7
comp=Z,10nm,0.9s
EAB Aberfoyle 67.65 14 *eP* **P** **20 07 42.5 +0.6**
EAB IAmb IAmb 20 07 43.7
comp=Z,14nm,0.7s
ONAU Onsala 67.95 4 *i* P **P** **20 07 43.4 -0.3**
CD2 Chengdu 68.34 293 P **P** **20 07 47.3 +0.6**
CD2 pmax pmax
comp=Z,90nm,0.6s
FABU Falkenberg 68.38 4 *i* P **P** **20 07 46.0 -0.4**
TDK Taldyqorghan 68.63 319 *eP* **P** **20 07 48.2 0.0**
comp=Z,9.5nm,0.8s
EKA Eskdalemuir Ar 68.65 14 P **P** **20 07 48.6 +0.6**
comp=Z,9.3nm,0.7s,baz=347,slow=4.5,SNR=32
comp=Z,9.3nm,0.7s
ESK Eskdalemuir 68.66 14 P **P** **20 07 48.1 -0.1**
ESK IAmb IAmb 20 07 49.7
comp=Z,13nm,0.9s
ESK Eskdalemuir 68.66 14 *eP* **P** **20 07 48.7 +0.6**
ESK IAmb IAmb 20 07 50.0
comp=Z,9.6nm,0.9s
GOMU GeErMu 68.73 303 P **P** **20 07 48.6 -0.8**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
DEL Delary 68.95 3 *i* P **P** **20 07 49.9 -0.1**
BJUU Bjuv 69.32 4 *i* P **P** **20 07 52.2 0.0**
OBN Obninsk 69.49 350 LR LR 20 42 06.1
comp=Z,75nm,20.7s,baz=200,slow=39
LUNU Lund 69.78 4 *i* P **P** **20 07 55.0 0.0**
SHLS Shalkode 69.79 317 *eP* **P** **20 07 54.6 -1.0**
comp=Z,8.8nm,0.7s
PABE Paberze 69.94 357 P **P** **20 07 56.3 +0.2**
UZB Uzynbulak 69.97 318 *eP* **P** **20 07 56.6 -0.1**
BTLS Baital 70.20 322 *eP* **P** **20 07 57.9 0.0**
AKTO Aktyubinsk 70.21 335 P **P** **20 07 57.6 -0.2**
comp=Z,41nm,0.8s,baz=343,slow=4.6,SNR=6.1
AKTO LR LR 20 43 20.3
comp=Z,65nm,19.4s,baz=356,slow=40
comp=Z,41nm,0.8s
SATY Saty 70.28 318 *eP* **P** **20 07 58.6 0.0**
NACGM Naroch 70.44 355 ⇑P **P** **20 07 58.9 -0.2**
comp=Z,30nm,0.8s,baz=4.7
MDOK Medeo 70.71 319 *eP* **P** **20 08 01.1 -0.1**
PRZ Przheval'sk 70.77 318 IAmb IAmb 20 08 03.5
comp=Z,7.8nm,0.8s
MNK Minsk 70.78 355 *i* LRM MLR 20 42 23.6
comp=E,90nm,23.2s
MNK Minsk 70.78 355 *i* P **P** **20 08 01.2 0.0**
comp=E,10.0nm,0.9s
MNK Minsk 70.78 355 *i* P **P** **20 08 01.2 0.0**
comp=N,8.0nm,1.1s
MNK Minsk 70.78 355 *i* P **P** **20 08 01.2 0.0**
comp=Z,32nm,0.8s,baz=5.3
MNK Minsk 70.78 355 *i* PP PP 20 10 36.9 -0.8
MNK Minsk 70.78 355 *i* PPP PPP 20 12 19.4
MNK Minsk 70.78 355 *i* S S **20 17 12.7 +0.2**
MNK Minsk 70.78 355 *i* SS SS 20 21 44.9 +1.0
MNK Minsk 70.78 355 *i* SSS SSS 20 25 03.2
MNK Minsk 70.78 355 *i* LRM MLR 20 41 48.1
comp=N,52nm,19.2s
MNK Minsk 70.78 355 *i* LRM MLR 20 42 19.5
comp=Z,50nm,21.8s
ABKAR Akbulak array 70.80 333 P **P** **20 08 00.9 -0.5**
TNSS Tian-Shan 70.86 319 *eP* **P** **20 08 02.1 -0.3**
FOEL Foel Wylfa 71.02 14 *eP* **P** **20 08 03.5 +0.7**
FOEL IAmb IAmb 20 08 05.1
comp=Z,12nm,0.9s
BSEG Bad Segeberg 71.33 6 P **P** **20 08 05.5 +1.0**
SGDS Sogindy 71.36 321 *eP* **P** **20 08 05.2 +0.1**
TKM2 Tokmak 2 71.47 320 P **P** **20 08 06.4 +0.5**
SNR=7.0
WUS Wushi 71.54 316 IAmb IAmb 20 08 07.5
comp=Z,11nm,0.6s
WUS Wushi 71.54 316 P **P** **20 08 06.6 +0.4**
KDJ Kajisay 71.55 318 IAmb IAmb 20 08 07.6
comp=Z,8.5nm,0.9s
KDJ Kajisay 71.55 318 P **P** **20 08 06.8 +0.4**
USP Ospenovka 71.57 321 P **P** **20 08 07.0 +0.7**
SNR=6.0
TARG Taragay, Kyrgy 71.65 318 IAmb IAmb 20 08 09.0
comp=Z,6.0nm,0.6s
TARG Taragay, Kyrgy 71.65 318 P **P** **20 08 07.0 -0.2**
BOOM Boomskoye usch 71.71 319 P **P** **20 08 08.0 +0.7**
CHMS Chumysh 71.71 320 P **P** **20 08 08.1 +0.9**
SNR=8.5
ULHL Ulahol 71.81 319 P **P** **20 08 08.5 +0.5**
SNR=7.7
KBK Karagaybulak 71.94 320 P **P** **20 08 09.4 +0.7**
SNR=10
AAK Ala-Archa 72.12 320 P **P** **20 08 10.3 +0.6**
comp=Z,7.4nm,0.6s,baz=122,slow=1.7,SNR=14
AAK LR LR 20 42 20.5
comp=Z,239nm,18.8s,baz=31,slow=38
comp=Z,7.4nm,0.6s
AAK Ala-Archa 72.12 320 P **P** **20 08 10.4 +0.6**
SNR=6.0
AAK Ala-Archa 72.12 320 P **P** **20 08 10.0 +0.3**
AAK IAmb IAmb 20 08 11.0
comp=Z,7.8nm,0.7s
AAK Ala-Archa 72.12 320 P **P** **20 08 10.4 +0.6**
EKS2 Erkin-Say 72.36 321 P **P** **20 08 11.7 +0.5**
SNR=10
NRN Naryn 72.59 319 IAmb IAmb 20 08 14.1
comp=Z,9.6nm,0.6s
PPT Papeete 72.75 169 LR LR 20 33 12.8

comp=Z,53nm,20.9s,baz=355,slow=30
IBBN Ibbenburen 72.78 7 P P 20 08 14.1 +0.9
PZH PanZhiHua 72.90 292 P P 20 08 14.6 0.0
DZA Taraz 73.03 323 eP P 20 08 15.0 0.0
KK31 Karatay Array 73.13 323 IAmb IAmb 20 08 16.3
comp=Z,12nm,0.8s
KKAR Karatay Array 73.13 323 P P 20 08 15.0 -0.6
CLZ Clausthal 73.42 6 P P 20 08 18.1 +1.0
JTS Las Juntas de 73.45 96 LR LR 20 42 01.8
comp=Z,21nm,20.8s,baz=353,slow=37
BUG Bochum--Univer 73.61 8 P P 20 08 18.9 +0.8
GTTG Gottingen 73.69 6 P P 20 08 19.5 +0.8
ARK Arkit 73.77 322 P P 20 08 20.0 +0.5
WIMM Wimmelburg 73.80 5 P P 20 08 20.2 +1.0
RNPP9 Sopachiv 73.97 356 P P 20 08 19.8 -0.5
UCC Uccle 73.99 10 dP P 20 08 20.4 0.0
RNPP8 Varash 74.04 356 P P 20 08 20.5 -0.2
CLL Collm 74.08 4 IAmb IAmb 20 08 22.0
comp=Z,8.5nm,0.8s
CLL Collm 74.08 4 P P 20 08 20.3 -0.7
comp=Z,14nm,1.1s
CLL Collm 74.08 4 i P P 20 08 21.1 +0.1
comp=Z,10.0nm,0.9s
CLL i pP pP 20 08 32.9 -0.4
CLL i sP sP 20 08 37.2 -0.8
NEUB Neuenburg 74.13 5 P P 20 08 21.9 +0.7
CHM Chimkent 74.14 324 eP P 20 08 21.6 +0.1
comp=Z,9.5nm,0.6s
IUG luzhnay 74.14 323 eP P 20 08 21.7 +0.1
comp=Z,7.0nm,0.5s
MEM Membach 74.33 9 dP P 20 08 22.7 +0.3
comp=Z,6.6nm,0.9s
QIZ Qiongzhong 74.36 281 IAmb IAmb 20 08 25.1
comp=Z,24nm,1.3s
MI28 Mi28,Pidlybu 74.36 355 P P 20 08 21.1 -1.5
SDDR Presa de Saban 74.38 79 P P 20 08 23.4 +0.2
AK21 Malin Array Si 74.43 354 P P 20 08 22.5 -0.5
AK23 Malin Array Si 74.44 354 P P 20 08 22.5 -0.5
AK22 Malin Array Si 74.44 354 P P 20 08 22.6 -0.5
AK20 Malin Array Si 74.47 354 P P 20 08 22.7 -0.5
AK03 Malin Array Si 74.47 353 P P 20 08 22.6 -0.6
AK04 Malin Array Si 74.48 354 P P 20 08 22.9 -0.3
AK18 Malin Array Si 74.48 354 P P 20 08 22.6 -0.7
AK19 Malin Array Si 74.49 354 P P 20 08 22.6 -0.7
AKASG Malin Array Be 74.49 353 P P 20 08 22.8 -0.5
comp=Z,14nm,0.4s,baz=10,slow=5.9,SNR=116
AKASG LR LR 20 41 13.5
comp=Z,41nm,21.9s,baz=14,slow=36
comp=Z,14nm,0.4s
AKASG Malin Array Be 74.49 353 P P 20 08 22.5 -0.8
KIEV Kiev 74.50 353 ⇑P P 20 08 22.9 -0.4
KIEV Kiev 74.50 353 P P 20 08 22.5 -0.8
KIEV Kiev 74.50 353 P P 20 08 22.6 -0.8
comp=Z,2μmcomp=Z,223nm,0.7s
KIEV Kiev 74.50 353 P P 20 08 23.0 -0.4
BMRD Maredsous 74.52 10 dP P 20 08 23.8 +0.3
comp=Z,6.5nm,1.0s
BMRD dpP pP 20 08 35.9 +0.1
MSVF Nonsavu 74.53 201 LR LR 20 35 13.8
comp=Z,71nm,20.7s,baz=100,slow=31
AK02 Malin Array Si 74.54 353 P P 20 08 22.7 -0.9
BRG Berggiesshubel 74.55 4 P P 20 08 23.6 -0.1
BRG Berggiesshubel 74.55 4 i P P 20 08 23.9 +0.2
BRG Amp 20 08 25.2
comp=Z,9.5nm,1.0s
BRG pP pP 20 08 35.6 -0.4
BRG Amp 20 08 36.7
comp=Z,5.4nm,1.1s
BRG sP sP 20 08 39.9 -0.8
BRG Amp 20 08 41.4
comp=Z,5.2nm,1.0s
AK12 Malin Array Si 74.56 354 P P 20 08 22.8 -0.9
AK08 Malin Array Si 74.56 353 P P 20 08 22.8 -0.9
KHAM Kharkiv 74.56 349 P P 20 08 23.2 -0.6
AK14 Malin Array Si 74.57 354 P P 20 08 22.9 -0.9
JAY Jayapura 74.60 242 LR LR 20 35 38.4
comp=Z,25nm,21.6s,baz=339,slow=31
MOX Moxa 74.68 5 P P 20 08 25.1 +0.6
DOU Dourbes 74.70 10 dP P 20 08 24.9 +0.4
comp=Z,3.8nm,1.1s
DOU dpP pP 20 08 36.7 -0.3
RCHB Rochefort 74.71 9 dP P 20 08 24.8 +0.2
RCHB dpP pP 20 08 36.5 -0.4
KSH2 Kashi 74.74 318 P P 20 08 26.1 +0.9
KSH2 sP pP 20 08 38.0 +0.5
KSH2 PcP sP 20 08 41.3 -0.9
KSH2 pmax pmax
comp=Z,30nm,0.8s
KSH2 L L
comp=Z,310nm,21.3s
KSH2 L L
comp=Z,200nm,18.6s
KSH2 L L
comp=Z,330nm,21.6s
DAV Davao City (W) 74.89 261 LR LR 20 36 08.8
comp=Z,52nm,20.5s,baz=47,slow=32
CHVC Chvalec 74.90 2 eP P 20 08 26.2 +0.4
TNS Taunus Mts 74.91 7 P P 20 08 26.6 +0.8
OSTC Ostas 74.94 2 eP P 20 08 26.3 +0.3
TANN Tannenbergstha 74.95 5 P P 20 08 25.6 -0.5
UPC Upice 74.98 2 eP P 20 08 26.7 +0.5
NKC Novy Kostel 75.13 5 eP P 20 08 27.7 +0.6
DPC Dobruska-Polom 75.14 2 eP P 20 08 27.7 +0.5
comp=Z,7.5nm,0.8s
DPC Dobruska-Polom 75.14 2 P P 20 08 28.1 +0.9
WLF Walferdange 75.28 9 dP P 20 08 28.6 +0.7
comp=Z,7.5nm,1.1s
OJC Ojcow 75.30 360 P P 20 08 28.5 +0.4
LUBAR Lubar, Ukraine 75.36 354 P P 20 08 27.6 -0.8
KRLC Kraliky 75.43 2 eP P 20 08 29.5 +0.7
PRU Pruhonice 75.46 3 eP P 20 08 29.5 +0.6
comp=Z,3.3nm,0.6s
PRU Pruhonice 75.46 3 P P 20 08 29.6 +0.6
GRA3 Grafenberg Arr 75.55 5 P P 20 08 30.3 +0.9
STEB Steborice 75.58 1 eP P 20 08 30.2 +0.5
GRA2 Grafenberg Arr 75.66 5 P P 20 08 31.1 +1.0
OKC Ostrava-Krasne 75.68 1 P P 20 08 30.9 +0.7
BTK Batken 75.71 322 IAmb IAmb 20 08 31.2
comp=Z,6.8nm,0.7s
BTK Batken 75.71 322 P P 20 08 30.9 +0.2
MORC Moravsky Berou 75.74 1 ⇓P P 20 08 31.3 +0.7
MORC Moravsky Berou 75.74 1 IAmb IAmb 20 08 31.9
comp=Z,8.8nm,0.9s
MORC Moravsky Berou 75.74 1 eP P 20 08 30.7 +0.1
MORC Moravsky Berou 75.74 1 P P 20 08 31.1 +0.5
LSA Lhasa 75.79 301 P P 20 08 31.7 -0.1
SLVN Son La 75.85 287 IAmb IAmb 20 08 33.2
comp=Z,17nm,0.8s
GRB4 Grafenberg Arr 75.85 5 P P 20 08 32.1 +0.9
KWP Kalwaria Pacla 75.85 358 P P 20 08 31.0 -0.2
comp=Z,34nm,0.8s
DRK Karamyk 75.87 321 IAmb IAmb 20 08 34.3
comp=Z,13nm,0.6s
DRK Karamyk 75.87 321 P P 20 08 32.4 +0.6
GRB1 Grafenberg Arr 75.93 5 P P 20 08 32.9 +1.2
GRB3 Grafenberg Arr 75.99 5 P P 20 08 32.9 +0.9
ZVC Zvikov 76.00 3 eP P 20 08 32.6 +0.6
GRB2 Grafenberg Arr 76.06 5 P P 20 08 33.1 +0.7
STHS Stebnicka Huta 76.09 359 eP P 20 08 33.4 +0.8
NIE Niedzica 76.10 359 P P 20 08 32.8 +0.1
comp=Z,4.2nm,0.9s
MAUC Maruska 76.15 1 eP P 20 08 33.6 +0.6
VRAC Vranov 76.19 2 ⇓P P 20 08 34.2 +1.0
VRAC Vranov 76.19 2 eP P 20 08 33.4 +0.2
VRAC Vranov 76.19 2 P P 20 08 33.7 +0.6
WET Wettzell 76.24 4 P P 20 08 34.2 +0.7
KHC Kasperske Hory 76.28 4 eP P 20 08 34.6 +0.9
comp=Z,3.4nm,0.6s
KHC Kasperske Hory 76.28 4 P P 20 08 33.8 +0.1
comp=Z,13nm,1.0s
LANS Liptovska Anna 76.37 360 eP P 20 08 35.3 +1.1
GRC3 Grafenberg Arr 76.43 5 P P 20 08 35.2 +0.7
KRUC Moravsky 76.43 2 eP P 20 08 34.5 0.0
KRUC Moravsky 76.43 2 P P 20 08 34.5 0.0
CLF Chambon-Foret 76.50 12 IAmb IAmb 20 08 49.0
comp=Z,19nm,0.9s
CLF Chambon-Foret 76.50 12 P P 20 08 36.1 +1.2
KOLS Kolonicke sedl 76.56 358 P P 20 08 36.4 +1.2
KOLS Kolonicke sedl 76.56 358 eP P 20 08 36.1 +0.8
GEC2 GERESS Array S 76.57 4 IAmb IAmb 20 08 36.8
comp=Z,4.8nm,0.8s
GERES GERESS Array B 76.57 4 P P 20 08 35.8 +0.4
comp=Z,4.3nm,0.8s,baz=343,slow=4.2,SNR=34
comp=Z,4.3nm,0.8s

GERES GERESS Array B 76.57 4 P P 20 08 34.7 -0.8
CKRC Cesky Krumlov 76.62 3 eP P 20 08 36.1 +0.5
JAVC Velka Javorina 76.66 1 eP P 20 08 37.2 +1.3
JAVC Velka Javorina 76.66 1 P P 20 08 37.7 +1.8
BFO Black Forest 76.78 7 P P 20 08 36.4 -0.1
BFO IAmb IAmb 20 08 37.7
comp=Z,5.8nm,1.0s
ECH Echery 76.80 8 IAmb IAmb 20 08 38.0
comp=Z,9.1nm,1.0s
ECH Echery 76.80 8 P P 20 08 37.2 +0.6
GAR Garm 76.83 322 P P 20 08 37.3 +0.2
SORM Soroca 77.11 354 P P 20 08 37.3 -1.0
comp=Z,848nmcomp=Z,48nm,0.9s
MODS Modra-Piesok 77.14 1 P P 20 08 39.6 +1.1
MODS Modra-Piesok 77.14 1 eP P 20 08 39.5 +1.0
BAL3X Bal3x, Balta 77.22 353 P P 20 08 38.1 -0.8
TRPA Tarpa 77.36 358 P P 20 08 40.5 +0.8
WINA Alland / Wiene 77.38 2 i P P 20 08 40.9 +1.1
CHGR Chuyangaron 77.55 322 P P 20 08 41.1 0.0
CONA Conrad Observa 77.56 2 eP P 20 08 42.0 +1.0
comp=Z,6.4nm,0.8s,SNR=10.0
KOHI KOHIMA 77.56 297 eP P 20 08 41.2 -0.1
KOHI IAmb IAmb 20 08 45.1
comp=Z,26nm,0.7s
PSZ Piszkesteto 77.61 360 ⇑P P 20 08 42.3 +1.1
PSZ Piszkesteto 77.61 360 IAmb IAmb 20 08 43.2
comp=Z,14nm,1.0s
PSZ Piszkesteto 77.61 360 P P 20 08 42.4 +1.1
MANEM Manem 77.62 320 IAmb IAmb 20 08 43.6
comp=Z,31nm,1.1s
RJOB Jochberg 77.64 4 P P 20 08 42.3 +0.9
BUR08 Bucovina Ar. S 77.76 356 IAmb IAmb 20 08 43.4
comp=Z,8.6nm,0.7s
BURAR Bucovina Array 77.79 356 ⇑P P 20 08 42.5 +0.2
BURAR Bucovina Array 77.79 356 P P 20 08 42.8 -0.3
RONA Rosalia, Austr 77.79 2 i P P 20 08 43.5 +1.3
comp=Z,2.9nm,0.5s,SNR=5.1
MOTA Moosalm 77.95 6 eP P 20 08 43.9 +0.7
comp=Z,2.8nm,0.5s,SNR=6.5
LESA Schwarzleotal 77.95 5 eP P 20 08 43.9 +0.8
comp=Z,2.5nm,0.7s,SNR=6.2
SJG San Juan 77.97 76 LR LR 20 43 46.5
comp=Z,34nm,19.0s,baz=100,slow=36
WATA Walderalm 77.98 5 eP P 20 08 44.1 +0.7
comp=Z,3.1nm,0.6s,SNR=6.9
WTTA Wattenberg 78.06 5 eP P 20 08 44.7 +0.9
comp=Z,9.2nm,0.8s,SNR=8.1
WTTA Wattenberg 78.06 5 P P 20 08 44.9 +1.0
SQTA Sankt Quirin 78.08 6 eP P 20 08 44.9 +1.0
comp=Z,3.6nm,0.5s,SNR=9.1
SIJI Sorong 78.22 251 P P 20 08 45.2 +0.3
comp=Z,24nm,0.6s,baz=358,slow=9.6,SNR=9.9
SIJI LR LR 20 37 36.9
comp=Z,18nm,20.9s,baz=56,slow=31
comp=Z,24nm,0.6s
ARSA Arzberg 78.22 3 IAmb IAmb 20 08 46.6
comp=Z,8.5nm,0.9s
ARSA Arzberg 78.22 3 eP P 20 08 45.7 +1.1
comp=Z,5.7nm,0.9s,SNR=7.4
ARSA Arzberg 78.22 3 P P 20 08 45.5 +0.9
BNALP Bannalp 78.24 8 P P 20 08 46.1 +1.2
FETA Feichten 78.25 6 eP P 20 08 46.0 +1.0
comp=Z,4.0nm,0.6s,SNR=6.4
KBA Koelnbreinsper 78.32 4 eP P 20 08 46.4 +1.1
comp=Z,5.3nm,0.5s,SNR=13
KBA Koelnbreinsper 78.32 4 P P 20 08 46.6 +1.2
SESA Seetaler Alpe, 78.33 3 i P P 20 08 46.4 +1.0
comp=Z,5.6nm,0.5s,SNR=7.6
MPLH Magyarpolny 78.34 1 P P 20 08 46.5 +1.2
IMP Imphal 78.37 297 eP P 20 08 45.5 -0.3
IMP IAmb IAmb 20 08 47.0
comp=Z,28nm,0.5s
GIMEL St. Georges / 78.39 9 P P 20 08 46.9 +1.3
BIZ Bicaz 78.42 355 ⇑P P 20 08 46.4 +0.7
ABTA Abfaltersbach 78.62 5 eP P 20 08 48.1 +1.2
comp=Z,2.8nm,0.6s
FUORN Ofenpass-Fuorn 78.62 6 IAmb IAmb 20 09 05.6
comp=Z,5.5nm,0.7s
FUORN Ofenpass-Fuorn 78.62 6 P P 20 08 48.2 +1.1
VASR Vaslui 78.63 354 ⇓P P 20 08 47.2 +0.4
MYKA Terra Mystica 78.78 4 eP P 20 08 49.1 +1.3
comp=Z,1.9nm,0.4s
SOKA Soboth 78.78 3 eP P 20 08 49.0 +1.2
comp=Z,7.4nm,0.9s,SNR=13
MARR Marisel-Cluj 78.80 357 ⇑P P 20 08 48.0 +0.1
SHAA Shahritus 78.89 322 IAmb IAmb 20 08 49.8
comp=Z,27nm,0.9s
OBKA Obir 78.94 3 i P P 20 08 49.6 +0.9
comp=Z,18nm,0.6s,SNR=22
OBKA Obir 78.94 3 P P 20 08 49.5 +0.9
PRED Cave del Predi 78.97 4 IAmb IAmb 20 08 49.8
comp=Z,7.0nm,1.1s
ONER Baraj Valea Uz 79.01 355 ⇓P P 20 08 49.9 +1.0
GHRR 79.23 354 ⇑P P 20 08 51.0 +0.9
GHRR 79.23 354 P P 20 08 51.1 +0.9
MORH Mrgy, Hungar 79.31 0 ⇑P P 20 08 50.8 +0.3
MORH Mrgy, Hungar 79.31 0 P P 20 08 50.1 -0.4
TURR Turia 79.31 355 ⇑P P 20 08 51.8 +1.2
VLDR Vlasiesti 79.41 354 ⇑P P 20 08 51.6 +0.6
DOPR Dopca 79.43 356 ⇑P P 20 08 52.3 +1.1
CGRP Cima Grappa 79.44 5 P P 20 08 51.7 +0.2
VRI Vrincioaia 79.46 355 ⇓P P 20 08 52.0 +0.6
PLOR Plostina 79.48 355 ⇓P P 20 08 52.2 +0.7
COVR Voineasa-Covas 79.51 355 ⇑P P 20 08 52.9 +1.2
KVAR Kislovodsk Arr 79.57 343 P P 20 08 53.3 +1.1
comp=Z,4.7nm,0.7s,baz=292,slow=18,SNR=6.7
comp=Z,4.7nm,0.7s
KIV Kislovodsk 79.58 343 ⇑P P 20 08 52.9 +0.7
KIV Kislovodsk 79.58 343 P P 20 08 52.0 -0.2
KIV Kislovodsk 79.58 343 P P 20 08 52.9 +0.7
SAHR Sahastru 79.60 355 ⇓P P 20 08 53.5 +1.3
NEGRR Negrea 79.72 354 ⇓P P 20 08 53.7 +0.9
KBZ Khabaz 79.76 343 P P 20 08 53.9 +0.9
comp=Z,18nm,0.9s,baz=334,slow=4.1,SNR=39
comp=Z,18nm,0.9s
SCHL Schela 79.76 354 ⇓P P 20 08 53.4 +0.5
SCHLR Schela 79.79 354 ⇓P P 20 08 53.5 +0.3
MLR Muntele Rosu 79.88 355 LR LR 20 49 07.5
comp=Z,34nm,18.3s,baz=4.5,slow=39
MLR Muntele Rosu 79.88 355 ⇑P P 20 08 54.6 +0.8
MLR Muntele Rosu 79.88 355 IAmb IAmb 20 08 56.3
comp=Z,4.5nm,0.6s
BZS Buzias 79.89 358 ⇑P P 20 08 54.1 +0.4
BZS Buzias 79.89 358 P P 20 08 54.2 +0.4
VOIR 79.97 356 ⇓P P 20 08 55.1 +0.8
VOIR 79.97 356 P P 20 08 54.8 +0.6
TSSA Tissa 79.97 314 eP P 20 08 54.8 +0.2
TSSA IAmb IAmb 20 08 57.4
comp=Z,13nm,0.8s
LOT Lotru 80.01 357 P P 20 08 54.3 -0.2
TLCR 80.01 353 ⇓P P 20 08 54.2 -0.1
ARR Arges 80.06 356 ⇓P P 20 08 55.8 +1.1
ARR Arges 80.06 356 P P 20 08 55.5 +0.8
CFR Carcaliu 80.06 354 ⇓P P 20 08 55.0 +0.4
GZR Gura Zlata 80.09 358 ⇑P P 20 08 55.6 +0.7
MTUR Matau 80.18 356 ⇓P P 20 08 56.2 +0.8
KLP Kalpa 80.22 312 eP P 20 08 55.9 -0.2
KLP IAmb IAmb 20 08 58.6
comp=Z,51nm,1.1s
TPGR Topolog 80.37 353 ⇓P P 20 08 56.9 +0.5
DHRM DHARAMSHALA 80.42 314 eP P 20 08 56.6 -0.4
DHRM IAML 20 09 00.7
comp=Z,12nm,0.6s
DHRM i pP pP 20 09 09.7 +0.2
DHRM ex x 20 09 36.5
DHRM ex x 20 21 52.5
NIL Nilore 80.44 317 P P 20 08 57.3 +0.4
NIL Nilore 80.44 317 P P 20 08 57.6 +0.7
HERR Herculane 80.61 358 ⇑P P 20 08 58.7 +1.1
CHTO Chiang Mai 80.61 289 P P 20 08 57.5 -0.5
CHTO IAmb IAmb 20 08 58.9
comp=Z,8.6nm,0.6s
CHTO Chiang Mai 80.61 289 P P 20 08 57.7 -0.3
TLBR Topalu 80.70 354 ⇑P P 20 08 58.8 +0.8
MDVR Moldovita 80.72 358 ⇑P P 20 08 58.7 +0.4
TIRR Tirgusor 80.76 353 ⇑P P 20 08 58.6 +0.2
ISO Isola 80.79 9 P P 20 08 57.6 -1.1
CMAR Chiang Mai Arr 80.90 289 P P 20 08 59.6 +0.1
comp=Z,26nm,0.8s,baz=19,slow=5.5,SNR=151
CMAR pP pP 20 09 11.2 -0.8
comp=Z,16nm,0.9s,baz=16,slow=5.6,SNR=6.0
CMAR LR LR 20 48 23.0
comp=Z,31nm,18.7s,baz=40,slow=38
comp=Z,26nm,0.8s

CMAR Chiang Mai Arr 80.90 289 P P 20 08 59.2 -0.3
SMLA Simla 81.03 313 eP P 20 08 59.1 -0.9
SMLA IAML 20 09 03.2
comp=Z,27nm,0.6s
PTH Pithoragarh 81.03 310 eP P 20 08 60.0 -0.4
LGTI Lohaghat 81.25 310 eP P 20 09 00.6 -0.9
KBL Kabul 81.26 320 P P 20 08 60.0 -1.5
KBL Kabul 81.26 320 P P 20 09 00.4 -1.1
NPW Naypyitaw 81.34 292 P P 20 09 01.7 -0.1
POLO Lamas de Olo 81.39 20 eP P 20 09 03.8 +1.8
POLO epP pP 20 09 14.9 +0.5
PVRL Vila Real 81.50 20 eP P 20 09 03.9 +1.5
PVRL epP pP 20 09 15.8 +0.9
EPOS Posof 81.95 342 P P 20 09 05.9 +1.0
PVIS Viseu 82.01 21 eP P 20 09 06.6 +1.5
PVIS epP pP 20 09 18.6 +1.0
PLVB Pleven 82.03 356 ⇓P P 20 09 05.4 +0.2
MURB Monte Urbino 82.09 5 IAmb IAmb 20 09 25.5
comp=Z,17nm,1.0s
FDMO Fiordimonte 82.35 5 IAmb IAmb 20 09 24.6
comp=Z,11nm,1.1s
MTE Manteigas 82.38 20 eP P 20 09 07.3 +0.2
MTE epP pP 20 09 19.7 +0.1
PCAS Casmilo, Conde 82.52 21 eP P 20 09 08.5 +0.7
PCAS epP pP 20 09 19.0 -1.2
NRCA Norcia 82.55 5 IAmb IAmb 20 09 26.7
comp=Z,5.7nm,0.8s
SDV Santo Domingo 82.85 85 LR LR 20 47 44.6
comp=Z,45nm,20.1s,slow=37
DIGO Kars 82.89 342 P P 20 09 11.5 +1.5
GNI Garni 82.90 341 P P 20 09 09.9 0.0
comp=Z,10nm,0.7s,baz=347,slow=10,SNR=6.3
comp=Z,10nm,0.7s
GNI Garni 82.90 341 P P 20 09 10.4 +0.5
GNI IAmb IAmb 20 09 12.1
comp=Z,11nm,0.8s
PCBR Castelo Branco 82.94 20 eP P 20 09 10.8 +0.9
PCBR epP pP 20 09 23.1 +0.7
KTUT Trabzon 82.94 345 ⇑P P 20 09 13.6 +3.7
PSARD Sardoal 83.03 21 eP P 20 09 11.7 +1.3
PSARD epP pP 20 09 23.8 +0.8
PDG Podgorica 83.09 0 ⇓P P 20 09 11.1 +0.4
PDG Podgorica 83.09 0 IAmb IAmb 20 09 11.8
comp=Z,14nm,0.8s
PDG Podgorica 83.09 0 P P 20 09 09.9 -0.8
UCM Universidad Co 83.27 17 P P 20 09 10.6 -1.1
PMRV Marv??o 83.35 20 eP P 20 09 13.3 +1.2
PMRV epP pP 20 09 25.2 +0.7
PMTG Montargil 83.52 21 eP P 20 09 13.7 +0.8
PMTG epP pP 20 09 24.2 -1.2
ESBB Sonseca Array 83.76 18 IAmb IAmb 20 09 27.7
comp=Z,8.2nm,0.8s
ESDC Sonseca Array 83.76 18 P P 20 09 15.1 +0.8
comp=Z,6.9nm,0.7s,baz=342,slow=4.7,SNR=56
ESDC pP pP 20 09 27.1 +0.3
comp=Z,7.2nm,0.7s,baz=344,slow=4.3,SNR=16
ESDC LR LR 20 49 33.2
comp=Z,22nm,18.6s,baz=322,slow=38
comp=Z,6.9nm,0.7s
ESDC Sonseca Array 83.76 18 P P 20 09 14.9 +0.6
KOPT Kop Dagi 83.77 344 IAmb IAmb 20 09 17.4
comp=Z,12nm,1.0s
PARRA Arraiolos 83.81 21 eP P 20 09 15.4 +1.0
PARRA epP pP 20 09 27.1 +0.2
PHP Peshkopia 83.83 359 P P 20 09 15.3 +0.7
KELT Kelkit 83.84 345 P P 20 09 16.1 +1.3
ROSC El Rosal 83.99 90 LR LR 20 49 11.6
comp=Z,17nm,18.1s,baz=127,slow=37
EVO Evora 84.08 21 eP P 20 09 15.9 0.0
EVO epP pP 20 09 28.6 +0.2
RDO Rodhopi 84.23 355 P P 20 09 17.5 +1.0
KNT Kendrikon 84.31 357 P P 20 09 19.2 +2.2
SRS Serrai 84.34 357 P P 20 09 18.1 +1.0
GRG Griva 84.53 358 P P 20 09 19.2 +1.1
PBAR Barrancos 84.63 21 eP P 20 09 20.2 +1.6
PBAR epP pP 20 09 32.0 +0.8
SOH Sokhos 84.64 357 P P 20 09 19.7 +1.0
GEVA Gevas 84.99 341 IAmb IAmb 20 09 22.7
comp=Z,14nm,1.0s
BR131 Keskin Array S 85.00 349 IAmb IAmb 20 09 22.1
comp=Z,11nm,0.9s
BRTR Keskin Array B 85.00 349 P P 20 09 21.2 +0.6
comp=Z,7.2nm,0.8s,baz=38,slow=2.5,SNR=33
comp=Z,7.2nm,0.8s
BRTR Keskin Array B 85.00 349 P P 20 09 20.9 +0.3
RAO Raoul Island 85.06 195 LR LR 20 40 35.2
comp=Z,109nm,19.7s,baz=256,slow=31
MARCO Tramutola 85.18 3 P P 20 09 22.1 +0.6
PVAQ Vaqueiros 85.23 21 eP P 20 09 23.4 +1.7
LIT Litokhoron 85.38 358 IAmb IAmb 20 09 23.4
comp=Z,12nm,0.9s
LIT Litokhoron 85.38 358 P P 20 09 22.6 +0.2
KIRS Kirsehir-Merke 85.55 349 ⇑P P 20 09 24.2 +0.9
HAKT HAKKARI 85.60 341 P P 20 09 24.6 +0.8
KKUL Konya-Kulu 85.62 349 P P 20 09 24.8 +1.1
XOR Xorichti 86.10 357 P P 20 09 24.5 -1.5
TIP Timpagrande 86.32 2 ⇓P P 20 09 27.9 +0.8
TIP Timpagrande 86.32 2 P P 20 09 27.8 +0.7
GUNA GUNA 86.57 309 eP P 20 09 27.5 -1.1
GUNA IAmb IAmb 20 09 30.2
comp=Z,39nm,0.2s
CTA Charters Tower 87.23 229 LR LR 20 48 03.5
comp=Z,26nm,19.4s,baz=27,slow=35
BHPL Bhopal 87.75 309 eP P 20 09 33.1 -1.1
KAPI Kappang 88.06 259 LR LR 20 58 39.6
comp=Z,39nm,18.1s,baz=68,slow=42
IDI Anoyia 90.10 355 LR LR 20 52 00.5
comp=Z,35nm,20.8s,baz=122,slow=37
MD01 Midelt array s 90.22 20 P P 20 09 44.9 -1.0
MDT Midelt 90.30 20 LR LR 20 56 36.3
comp=Z,16nm,18.3s,baz=38,slow=40
ASF Jabal al Asfar 92.02 345 P P 20 09 54.2 +0.1
comp=Z,2.3nm,0.7s,baz=99,slow=2.7,SNR=4.8
comp=Z,2.3nm,0.7s
WRA Warramunga Arr 92.65 239 P P 20 09 56.2 -0.7
comp=Z,3.3nm,1.0s,baz=35,slow=5.7,SNR=18
comp=Z,3.3nm,1.0s
WRA Warramunga Arr 92.65 239 P P 20 09 56.0 -0.9
RPN Rapa Nui 92.77 136 LR LR 20 41 37.0
comp=Z,28nm,18.5s,baz=276,slow=29
URZ Urewera 94.67 197 LR LR 20 43 37.8
comp=Z,40nm,21.1s,baz=333,slow=30
EIL Elat 94.75 346 LR LR 20 58 31.4
comp=Z,18nm,18.3s,baz=69,slow=39
FITZ Fitzroy Crossi 95.57 246 P P 20 10 09.1 -1.2
comp=Z,2.3nm,0.7s,baz=332,slow=7.9,SNR=5.7
comp=Z,2.3nm,0.7s
FITZ Fitzroy Crossi 95.57 246 IAmb IAmb 20 10 51.0
comp=Z,4.7nm,1.5s
ASAR Alice Springs 96.01 237 P P 20 10 12.1 -0.3
comp=Z,1.4nm,0.8s,baz=30,slow=4.7,SNR=11
ASAR LR LR 20 47 26.8
comp=Z,44nm,21.3s,baz=348,slow=32
comp=Z,1.4nm,0.8s
ASAR Ice Springs 96.01 237 P P 20 10 11.5 -0.8
MDP Montagnes des 96.12 72 LR LR 20 52 49.8
comp=Z,25nm,20.3s,baz=346,slow=35
NNA Nana 96.19 102 LR LR 20 53 03.9
comp=Z,56nm,18.4s,baz=315,slow=35
RAYN Ar Rayn 98.77 336 P P 20 10 24.9 -0.1
PALK Pallekele 99.90 298 LR LR 21 02 01.0
comp=Z,28nm,18.4s,baz=16,slow=39
H03N2 Juan Fernandez 112.23 117 T T 22 17 30.4
baz=323,slow=76,SNR=6.1
H03N1 Juan Fernandez 112.24 117 T T 22 17 32.6
baz=323,slow=76,SNR=6.6
H03N3 Juan Fernandez 112.24 117 T T 22 17 39.8
baz=323,SNR=6.1
QSPA South Pole Qui 144.62 180 PKP PKPbc 20 16 19.2 0.0
comp=Z,18nm,0.6s,baz=306,slow=0.5,SNR=58
QSPA South Pole Qui 144.62 180 PKPab 20 16 18.7 -0.2
BOSA Boshof 153.43 348 PKPbc PKPbc 20 16 42.2 -1.1
comp=Z,4.3nm,0.5s,baz=8.6,slow=3.8,SNR=14
BOSA Boshof 153.43 348 PKiKP 20 16 43.3 -0.1
MAW Mawson 156.07 221 PKPab PKPab 20 17 06.2 +0.6
comp=Z,4.1nm,0.7s,baz=129,slow=4.9,SNR=10.0
MAW Mawson 156.07 221 PKPab 20 17 06.1 +0.5
VNA2 Neumayer--Watz 160.11 154 ⇑PKPdf PKPdf 20 16 43.9 +1.2
comp=Z,2.2nm,0.6s,baz=236,slow=1.5

*IDC **23** 20:07:17.5±0.9,31°46N×59°96E,h0km,mb3.8/16, mbtmp3.8/18,ML3.7/2,MS3.3/17,Error ellipse: s-maj=23.1km s-min=16.1km az=1.0*

*TEH **23** 20:07:17.6,31˚.55N×59˚.98E,h8km±10km,ML4.4, Presumed earthquake*
*THR **23** 20:07:19.0±0.0,31˚.62N×60˚.04E,h10km±20km,ML4.4, Presumed earthquake*
ISC 23 20:07:19.7±0.6,**31˚.57N**±0˚.04×**60˚.01E**±0˚.05,**h15km,n80,** σ1¶**39**/**69,mb3.8**/**19,MS3.4**/14,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NHDN	**Nehbandan**	**0.18**	**170**	Pg	**Pg**	**20 07 21.3**	**-2.8**
BSRN	**Basiran**	**0.85**	**298**	*e*Pg	**Pg**	**20 07 34.2**	**-2.1**
BSRN				IAML		20 07 51.2	
	comp=Z,4μm,1.0s						
BSRN	**Basiran**	**0.85**	**298**	Pg	**Pg**	**20 07 34.3**	**-2.1**
IDAH	**Dahanechah**	**1.17**	**354**	Pg	**Pg**	**20 07 40.6**	**-1.8**
IKOO	**Kooshah**	**1.21**	**315**	Pg	**Pn**	**20 07 40.8**	**-1.5**
BAGH	**Bagheran - Bir**	**1.39**	**331**	Pg	**Pg**	**20 07 45.2**	**-1.3**
IMON	**Monand**	**1.64**	**350**	Pg	**Pg**	**20 07 50.4**	**-1.0**
ITEG	**Tejag**	**1.70**	**321**	Pg	**Pb**	**20 07 49.6**	**-1.2**
AFRZ	**Afriz**	**2.03**	**336**	Pn	**Pb**	**20 07 54.3**	**-2.1**
SHRT	**Shahrakht**	**2.08**	**6**	*e*Pn	**Pb**	**20 07 55.3**	**-2.0**
SHRT				IAML		20 08 24.5	
	comp=Z,380nm,1.0s						
SHRT	**Shahrakht**	**2.08**	**6**	Pn	**Pb**	**20 07 55.5**	**-1.8**
KRM1	**Kerman Provinc**	**2.58**	**246**	Pn	**Pn**	**20 08 01.6**	**+0.4**
CHMN	**Cheshme madani**	**2.73**	**232**	Pn	**Pn**	**20 08 03.6**	**+0.3**
KBAM	**BAM**	**2.77**	**209**	Pn	**Pn**	**20 08 03.5**	**-0.3**
ZRDN	**Zarand Kerman**	**3.04**	**260**	Pn	**Pn**	**20 08 08.2**	**+0.8**
TPRV	**Parvadeh(Tabas**	**3.17**	**298**	Pn	**Pn**	**20 08 10.0**	**+0.9**
TABS	**Tabas**	**3.20**	**311**	*e*Pn	**Pn**	**20 08 10.5**	**+0.9**
TABS				IAML		20 09 10.6	
	comp=Z,530nm,1.0s						
KRBR	**Kerman**	**3.21**	**241**	*e*Pn	**Pn**	**20 08 12.6**	**+2.6**
KRBR				IAML		20 09 12.2	
	comp=Z,1μm,1.0s						
KHGB	**Koh Gabri**	**3.26**	**250**	Pn	**Pn**	**20 08 11.3**	**+0.8**
NGRK	**Negar Kerman**	**3.42**	**237**	Pn	**Pn**	**20 08 13.4**	**+0.6**
TBJM	**Torbat-e-JAM**	**3.70**	**4**	Pn	**Pn**	**20 08 18.1**	**+1.6**
IBAF	**Bafgh**	**3.79**	**271**	Pn	**Pn**	**20 08 18.7**	**+0.9**
KHNJ	**Kahnooj**	**4.13**	**210**	Pn	**Pn**	**20 08 23.2**	**+0.9**
IMEH	**Mehriz**	**4.62**	**269**	Pn	**Pn**	**20 08 30.2**	**+1.0**
SRVN	**Saravan**	**4.64**	**153**	*e*Pn	**Pn**	**20 08 31.9**	**+2.4**
SRVN				IAML		20 10 16.8	
	comp=Z,95nm,1.0s						
SRVN	**Saravan**	**4.64**	**153**	Pn	**Pn**	**20 08 30.5**	**+1.0**
YZKH	**Yazd**	**4.68**	**281**	*e*Pn	**Pn**	**20 08 31.2**	**+1.3**
YZKH				IAML		20 09 54.3	
	comp=Z,450nm,1.0s						
DOBD	**Dorbid, Yazd**	**4.70**	**277**	Pn	**Pn**	**20 08 31.2**	**+0.8**
ICHK	**Chekchek**	**4.81**	**280**	Pn	**Pn**	**20 08 32.8**	**+0.9**
SBZV	**Sabzevar**	**5.20**	**338**	*e*Pn	**Pn**	**20 08 38.8**	**+1.5**
SBZV				IAML		20 10 24.8	
	comp=Z,66nm,1.0s						
SBZV	**Sabzevar**	**5.20**	**338**	Pn	**Pn**	**20 08 38.7**	**+1.5**
BNDS	**Bandar-Abbas**	**5.34**	**220**	*e*Pn	**Pn**	**20 08 40.4**	**+1.4**
SHRO	**Shahrood**	**5.53**	**324**	*e*Pn	**Pn**	**20 08 42.6**	**+1.0**
SHRO				IAML		20 09 45.1	
	comp=Z,2.4nm,1.0s						
ANAR	**Anarak**	**5.56**	**289**	Pn	**Pn**	**20 08 42.8**	**+0.8**
NASN	**Na'in**	**6.23**	**283**	*e*Pn	**Pn**	**20 08 54.3**	**+2.9**
NASN				IAML		20 10 51.5	
	comp=Z,100nm,1.0s						
BJRD	**Bojnurd**	**6.48**	**341**	*e*Pn	**Pn**	**20 08 55.7**	**+1.0**
BJRD				IAML		20 11 19.5	
	comp=Z,13nm,1.0s						
MRVT	**Maraveh tapeh**	**6.88**	**333**	*e*Pn	**Pn**	**20 09 01.9**	**+1.8**
MRVT				IAML		20 11 23.8	
	comp=Z,19nm,1.0s						
DAMV	**Damavand**	**7.83**	**303**	*e*Pn	**Pn**	**20 09 14.5**	**+1.1**
DAMV				IAML		20 09 44.8	
	comp=Z,5.2nm,1.0s						
GHVR	**GHOM**	**7.87**	**294**	*e*Pn	**Pn**	**20 09 15.9**	**+2.1**
GHVR				IAML		20 11 04.1	
	comp=Z,400nm,1.0s						
CHTH	**Charan**	**8.57**	**303**	*e*Pn	**Pn**	**20 09 24.9**	**+1.4**
CHTH				IAML_BB		20 09 41.6	
	comp=Z,280nm,1.0s						
THKV	**Tehran--Karaj**	**8.75**	**302**	*e*Pn	**Pn**	**20 09 27.0**	**+1.1**
THKV				IAML_BB		20 09 48.8	
	comp=Z,480nm,1.0s						
ASAO	**Ashtian**	**8.89**	**292**	*e*Pn	**Pn**	**20 09 30.7**	**+2.8**
ASAO				IAML_BB		20 09 55.8	
	comp=Z,320nm,1.0s						
GTMR	**Gotvand**	**9.30**	**278**	*e*Pn	**Pn**	**20 09 35.6**	**+2.3**
KSH2	**Kashi**	**14.76**	**55**	P	**Pn**	**20 10 49.5**	**+1.4**
KSH2				sP	P	20 10 58.9	+4.8
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GNI	**Garni**	**15.04**	**309**	LR	LR	20 17 47.1	
	comp=Z,91nm,20.4s,baz=117,slow=42						
AAK	**Ala-Archa**	**15.96**	**42**	Pn	**Pn**	**20 11 03.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=219,slow=12,SNR=3.9						
AAK				Lg	Lg	20 15 57.1	
	comp=Z,0.6nm,0.3s,baz=222,slow=7.5,SNR=1.9						
AAK				LR	LR	20 18 32.2	
	comp=Z,93nm,20.5s,baz=242,slow=42						
	comp=Z,1.3nm,0.3s						
AKTO	**Aktyubinsk**	**18.91**	**356**	LR	LR	20 19 45.2	
	comp=Z,38nm,18.5s,baz=56,slow=39						
ASF	**Jabal al Asfar**	**19.64**	**278**	P	**Pn**	**20 11 49.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=94,slow=12,SNR=3.7						
	comp=Z,2.2nm,0.8s						
MMAI	**Mount Meron Ar**	**20.85**	**281**	LR	LR	20 21 31.6	
	comp=Z,58nm,21.9s,baz=66,slow=41						
EIL	**Elat**	**21.64**	**271**	LR	LR	20 21 18.6	
	comp=Z,80nm,18.1s,baz=89,slow=39						
BVAR	**Borovoye Array**	**22.73**	**16**	P	**P**	**20 12 22.2**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=190,slow=7.5,SNR=7.0						
BVAR				PcP	**PcP**	**20 16 14.0**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=204,slow=3.2,SNR=3.9						
	comp=Z,2.2nm,0.7s						
BRTR	**Keskin Array B**	**22.87**	**298**	P	**P**	**20 12 23.4**	**+0.7**
	comp=Z,3.0nm,1.1s,baz=116,slow=10.0,SNR=7.3						
BRTR				LR	LR	20 21 41.7	
	comp=Z,18nm,20.5s,baz=87,slow=38						
	comp=Z,3.0nm,1.1s						
MKAR	**Makanchi Array**	**22.89**	**42**	P	**P**	**20 12 24.9**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=234,slow=10,SNR=7.6						
MKAR				PcP	**PcP**	**20 16 14.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=224,slow=5.2,SNR=4.2						
MKAR				LR	LR	20 22 14.3	
	comp=Z,46nm,18.5s,baz=166,slow=39						
	comp=Z,0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**23.48**	**31**	P	**P**	**20 12 29.6**	**+0.9**
	comp=Z,2.2nm,1.2s,baz=227,slow=9.1,SNR=6.6						
	comp=Z,2.2nm,1.2s						
ZALV	**Zalesovo Beam**	**28.57**	**31**	P	**P**	**20 13 15.8**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=242,slow=9.2,SNR=4.7						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**29.73**	**319**	P	**P**	**20 13 24.4**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=106,slow=9.8,SNR=4.2						
	comp=Z,0.3nm,0.4s						
PALK	**Pallekele**	**30.94**	**137**	LR	LR	20 28 11.6	
	comp=Z,76nm,20.2s,baz=316,slow=41						
FINES	**FINESS Array B**	**37.14**	**334**	P	**P**	**20 14 30.2**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=138,slow=9.2,SNR=7.1						
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**38.68**	**310**	P	**P**	**20 14 43.1**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=106,slow=8.5,SNR=15						
	comp=Z,1.3nm,0.7s						
LESA	**Schwarzleotal**	**39.17**	**308**	*e*P	**P**	**20 14 47.4**	**+0.4**
	comp=Z,3.1nm,0.5s						
ABTA	**Abfaltersbach**	**39.21**	**307**	*e*P	**P**	**20 14 46.8**	**-0.6**
	comp=Z,2.5nm,0.8s						
CLL	**Collm**	**39.57**	**314**	*e*P	**P**	**20 14 49.0**	**-1.1**
FETA	**Feichten**	**40.46**	**307**	*e*P	**P**	**20 14 58.2**	**+0.4**
	comp=Z,3.3nm,1.0s						
RETA	**Reutte**	**40.47**	**308**	*e*P	**P**	**20 14 56.7**	**-1.1**
	comp=Z,3.0nm,1.3s						
HFS	**Hagfors**	**41.75**	**327**	P	**P**	**20 15 09.2**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=108,slow=9.4,SNR=2.3						
	comp=Z,1.5nm,0.6s						
MBAR	**Mbarara**	**42.35**	**227**	LR	LR	20 32 59.9	
	comp=Z,44nm,19.1s,baz=78,slow=36						
ARCES	**ARCESS Array B**	**42.69**	**343**	P	**P**	**20 15 16.6**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=119,slow=7.8,SNR=1.9						
	comp=Z,1.8nm,1.0s						
NOA	**NORSAR Array B**	**43.22**	**328**	P	**P**	**20 15 20.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=111,slow=8.5,SNR=3.2						
NOA				LR	LR	20 35 33.9	
	comp=Z,33nm,18.5s,baz=350,slow=39						
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**49.63**	**318**	P	**P**	**20 16 09.7**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=101,slow=7.3,SNR=3.7						
	comp=Z,0.8nm,0.8s						
YAK	**Yakutsk**	**53.18**	**34**	LR	LR	20 41 26.8	
	comp=Z,61nm,18.7s,baz=270,slow=38						
TIXI	**Tiksi**	**53.72**	**21**	LR	LR	20 42 33.7	
	comp=Z,40nm,19.4s,baz=222,slow=39						
KSRS	**Korea Array**	**55.19**	**64**	P	**P**	**20 16 51.4**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=287,slow=8.3,SNR=2.2						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**56.33**	**265**	P	**P**	**20 16 59.7**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=62,slow=6.8,SNR=9.4						
	comp=Z,2.4nm,0.7s						
ASAJ	**Asahikawa**	**63.85**	**53**	LR	LR	20 48 06.6	
	comp=Z,42nm,20.0s,baz=195,slow=38						
LBTB	**Lobatse**	**65.18**	**214**	LR	LR	20 49 38.2	
	comp=Z,36nm,21.8s,baz=82,slow=39						
RES	**Resolute Bay**	**72.73**	**353**	LR	LR	20 56 40.0	
	comp=Z,18nm,18.6s,baz=10,slow=41						
SCHQ	**Schefferville**	**82.60**	**332**	LR	LR	20 58 02.8	
	comp=Z,19nm,18.0s,baz=44,slow=37						
WRA	**Warramunga Arr**	**87.69**	**115**	P	**P**	**20 20 07.8**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=318,slow=4.1,SNR=7.8						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**89.47**	**118**	P	**P**	**20 20 16.8**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=308,slow=4.7,SNR=5.1						
	comp=Z,0.7nm,1.0s						
SADO	**Sadowa**	**95.41**	**332**	LR	LR	21 05 45.0	
	comp=Z,31nm,18.3s,baz=333,slow=37						

*SJA **23** 20:32:45.8±0.7,30˚.72S×71˚.47W,h31km±1km, ML3.2, MW3.6*
*GUC **23** 20:32:46.9±0.9,30˚.74S×71˚.42W,h48km±2km, ML3.4*
ISC 23 20:32:48.2±1.0,**30˚.75S**±0˚.02×**71˚.34W**±0˚.04,**h28**km±10km, **n35,**σ1¶**31**/**58,5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.27**	**287**	⇓*i*P	**Pb**	**20 32 54.7**	**-0.3**
CO06				*i* S	**Sb**	**20 33 00.1**	**+0.4**
CO02	**Combarbal**	**0.54**	**147**	*e*P	**Pb**	**20 32 59.0**	**-0.2**
CO02				*e*S	**Sn**	**20 33 08.9**	**+0.6**
CO02				IAML		20 33 09.6	
	comp=Z,1μm,0.2s						
CO02	**Combarbal**	**0.54**	**147**	⇓*i*P	**Pb**	**20 32 59.4**	**+0.2**
CO02				*i* S	**Sn**	**20 33 08.2**	**-0.1**
CO02				IAML		20 33 09.1	
	comp=E,4μm,0.3s						
CO03	**El Pedregal**	**0.56**	**99**	*e*P	**Pn**	**20 33 00.1**	**-0.5**
CO03				*e*S	**Sn**	**20 33 09.5**	**+0.5**
CO03				IAML		20 33 13.9	
	comp=Z,600nm,0.3s						
CO03	**El Pedregal**	**0.56**	**99**	⇓*i*P	**Pn**	**20 33 00.1**	**-0.5**
CO03				*i* S	**Sn**	**20 33 09.2**	**+0.2**
GO04	**Tololo Observa**	**0.74**	**39**	*e*P	**Pb**	**20 33 02.0**	**-0.7**
GO04				*e*S	**Sn**	**20 33 13.9**	**+0.4**
GO04				IAML		20 33 14.2	
	comp=Z,2μm,0.4s						
GO04	**Tololo Observa**	**0.74**	**39**	⇓*i*P	**Pb**	**20 33 02.0**	**-0.7**
GO04				*i* S	**Sn**	**20 33 13.6**	**0.0**
GO04				IAML		20 33 15.6	
	comp=E,5μm,0.4s						
CO01	**Juntas del Tor**	**1.32**	**55**	*e*P	**Pn**	**20 33 11.4**	**+0.3**
CO01				*e*S	**Sb**	**20 33 29.1**	**-0.1**
CO01				IAML		20 33 31.0	
	comp=Z,300nm,0.2s						
CO01	**Juntas del Tor**	**1.32**	**55**	⇓*i*P	**Pn**	**20 33 11.2**	**+0.1**
CO01				*i* S	**Sb**	**20 33 29.0**	**-0.2**
CO01				IAML		20 33 30.0	
	comp=N,684nm,0.4s						
CO04	**Los Peladeros**	**1.32**	**167**	*i* P	**Pn**	**20 33 10.0**	**-1.2**
CO04				*i* S	**Sn**	**20 33 27.9**	**-0.2**
CO04				IAML		20 33 31.5	
	comp=N,1μm,0.1s						
AROD	**Rodeo**	**1.71**	**71**	*e*P	**Pb**	**20 33 18.6**	**-0.6**
AROD				*e*S	**Sb**	**20 33 41.8**	**+1.3**
LCO	**Las Campanas**	**1.82**	**18**	*e*P	**Pn**	**20 33 17.1**	**-0.9**
LCO				IAML		20 33 47.9	
	comp=Z,434nm,0.2s						
ACCO	**Cerro Coronel**	**1.96**	**86**	*e*P	**Pb**	**20 33 23.0**	**-0.6**
ACCO				IAML		20 33 52.8	
	comp=Z,141nm,0.9s						
ACDV	**Cuesta del Vie**	**2.00**	**74**	*e*P	Pn	20 33 03.6	-17
ACDV				*e*S	**Sn**	**20 33 45.3**	**+0.7**
ACDV				IAML		20 33 51.5	
	comp=Z,110nm,0.4s						
RTLS	**Leoncito**	**2.04**	**121**	*e*P	**Pb**	**20 33 23.4**	**-1.3**
RTLS				*e*S	Sn	20 33 36.6	-9.0
RTLS				IAML		20 33 55.7	
	comp=Z,440nm,0.7s						
VA03	**San Esteban**	**2.12**	**162**	*e*P	**Pn**	**20 33 22.4**	**+0.5**
VA03				*e*S	Sn	20 33 31.4	-16
VA03				IAML		20 33 58.9	
	comp=Z,175nm,0.7s						
VA03	**San Esteban**	**2.12**	**162**	*i* P	**Pn**	**20 33 22.1**	**+0.2**
VA03				*i* S	**Sn**	**20 33 48.1**	**+0.8**
VA03				IAML		20 33 55.2	
	comp=N,476nm,0.5s						
AC05	**El Transito**	**2.12**	**26**	*e*P	**Pn**	**20 33 22.3**	**+0.4**
AC05				*e*S	**Sn**	**20 33 48.5**	**+1.0**
AC05				IAML		20 33 55.5	
	comp=Z,114nm,0.4s						
AC05	**El Transito**	**2.12**	**26**	*i* P	**Pn**	**20 33 22.1**	**+0.2**
AC05				*i* S	**Sn**	**20 33 47.9**	**+0.4**
AC05				IAML		20 33 52.5	
	comp=E,259nm,0.4s						
ROCH	**El Roble**	**2.23**	**173**	*e*P	**Pn**	**20 33 22.9**	**-0.6**
ROCH				*i* P		20 33 23.1	
ROCH				*i* S	**Sn**	**20 33 51.1**	**+0.8**
ROCH				*e*S		20 33 51.2	
VA01	**Torpederas**	**2.28**	**187**	*e*P	**Pn**	**20 33 22.2**	**-1.8**
VA01				IAML		20 33 58.6	
	comp=Z,65nm,0.4s						
ZON	**Zonda**	**2.41**	**110**	*e*P	**Pb**	**20 33 28.9**	**-2.1**
ZON				*e*S	**Sb**	**20 33 59.1**	**-1.2**
ZON				IAML		20 34 16.5	
	comp=Z,149nm,0.6s						
PEL	**Peldehue**	**2.45**	**167**	*e*P	**Pn**	**20 33 25.7**	**-0.7**
PEL				*e*S	**Sb**	**20 34 03.7**	**+2.3**
PEL				IAML		20 34 15.1	
	comp=Z,111nm,0.7s						
SJA	**San Juan**	**2.50**	**109**	*e*P	**Pb**	**20 33 32.4**	**-0.1**
SJA				IAML		20 34 22.4	
	comp=Z,94nm,0.4s						
MT02	**Curacav**	**2.51**	**176**	*e*P	**Pn**	**20 33 26.5**	**-0.7**
MT02				IAML		20 34 13.3	
	comp=Z,88nm,0.6s						
MT02	**Curacav**	**2.51**	**176**	*e*P	**Pn**	**20 33 26.2**	**-1.0**
MT02				*e*S	**Sn**	**20 33 56.8**	**0.0**
RTLL	**Cerro Villicun**	**2.52**	**104**	*e*P	**Pn**	**20 33 30.1**	**+2.6**
RTLL				*e*S	**Sb**	**20 34 03.3**	**-0.2**
RTLL				IAML		20 34 09.7	
	comp=Z,142nm,0.4s						
AC04	**Llanos de Chal**	**2.55**	**5**	*e*P	**Pn**	**20 33 27.1**	**-0.6**
AC04				*e*S	**Sn**	**20 33 59.8**	**+1.9**
AC04				IAML		20 34 17.8	
	comp=Z,91nm,0.8s						
MT05	**Renca**	**2.68**	**169**	*e*P	**Pn**	**20 33 30.1**	**+0.5**
MT05				*e*S	**Sb**	**20 34 08.8**	**+0.8**
CFA	**Coronel Fontan**	**2.79**	**109**	*e*P	**Pn**	**20 33 33.5**	**+2.5**
CFA				*e*S	**Sb**	**20 34 07.3**	**-3.9**
CFA				IAML		20 34 15.8	
	comp=Z,82nm,0.5s						
MT04	**Ro Olivares**	**2.83**	**159**	*e*P	**Pn**	**20 33 34.3**	**+2.4**
MT04				*e*S	**Sn**	**20 34 06.6**	**+1.3**
MT04				IAML		20 34 17.1	
	comp=Z,80nm,0.8s						
MT04	**Ro Olivares**	**2.83**	**159**	*e*P	**Pn**	**20 33 33.3**	**+1.4**
MT04				IAML		20 34 15.4	
	comp=E,112nm,0.5s						
MT08	**Bocatoma Ro**	**2.91**	**158**	*e*P	**Pn**	**20 33 34.9**	**+2.0**
MT08				*e*S	**Sn**	**20 34 09.9**	**+2.8**
ARCO	**CERRO ARCO**	**2.92**	**136**	*e*P	**Pb**	**20 33 36.8**	**-3.0**
TINO	**Tinogasta**	**4.24**	**52**	IAML		20 34 54.5	
	comp=Z,57nm,0.6s						

*KRNET **23** 20:34:07.6±0.1,41˚.54N×72˚.97E,h22km,mb3.7*
*NNC **23** 20:34:08.8±0.8,41˚.61N×72˚.97E,h5km±5km,mb4.2, mpv3.7,Error ellipse: s-maj=7.0km s-min=3.3km az=173.0*
*SOME **23** 20:34:08.0,41˚.55N×73˚.03E,h10km*
*ISU **23** 20:34:09,41˚.69N×73˚.15E,h26km*
*KNET **23** 20:34:11.2±0.3,41˚.69N×73˚.17E,h3km±1km,ml3.0,Error ellipse: s-maj=3.0km s-min=1.6km az=108.0*
ISC 23 20:34:08.1±1.1,**41˚.56N**±0˚.02×**73˚.00E**±0˚.01,**h0**km±10km, **n85,**σ1¶**45**/142,**50C-28D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.81**	**287**	⇑*i*P	**Pg**	**20 34 22.9**	**-0.7**
ARK				⇑*i*S	**Sg**	**20 34 33.8**	**-0.4**
SALK	**Salom-Alik**	**0.92**	**137**	⇓*i*P	**Pg**	**20 34 24.8**	**-0.9**
SALK				⇓*i*S	**Sg**	**20 34 37.1**	**-0.5**
MNAS	**Manas**	**0.99**	**338**	⇑*i*P	**Pg**	**20 34 26.6**	**-0.6**
MNAS				⇑*i*S	**Sg**	**20 34 40.3**	**+0.2**
OHH	**Osh**	**1.05**	**189**	⇑*i*P	**Pg**	**20 34 26.3**	**-1.9**
OHH				⇑*i*S	**Sg**	**20 34 40.3**	**-1.5**
TSTA	**Tashata**	**1.06**	**202**	P	**Pg**	**20 34 28.9**	**+0.5**
KSNS	**Kasansay**	**1.18**	**251**	P	**Pn**	**20 34 32.8**	**+0.8**
KSNS				S	**Sn**	**20 34 52.5**	**+3.7**
MRKS	**Merke**	**1.19**	**8**	P	**Pg**	**20 34 30.9**	**-0.1**
	56nm,0.3s						
MRKS				S	**Sb**	**20 34 46.9**	**-0.8**
	171nm,0.2s						
MRKS	**Merke**	**1.19**	**8**	*e*P	**Pg**	**20 34 30.9**	**-0.1**
	56nm,0.3s						
MRKS				*e*S	**Sb**	**20 34 46.9**	**-0.8**
	171nm,0.2s						
EKS2	**Erkin-Say**	**1.24**	**28**	⇓P	**Pg**	**20 34 31.6**	**-0.3**
	19nm,0.2s,SNR=35						
EKS2				⇑S	**Sb**	**20 34 48.4**	**-0.7**
	65nm,0.2s						
EKS2	**Erkin-Say**	**1.24**	**28**	⇓*i*P	**Pg**	**20 34 31.1**	**-0.8**
EKS2				⇓*i*S	**Sg**	**20 34 48.0**	**0.0**
UCH	**Uchtor**	**1.31**	**59**	⇑P	**Pg**	**20 34 33.1**	**-0.2**
	20nm,0.1s,SNR=21						
UCH	**Uchtor**	**1.31**	**59**	⇑*i*P	**Pg**	**20 34 32.5**	**-0.8**
UCH				⇑*i*S	**Sg**	**20 34 50.5**	**+0.2**
TRKS	**Terek-Say**	**1.40**	**269**	⇓*i*P	**Pn**	**20 34 32.6**	**-2.4**
TRKS				⇓*i*S	**Sg**	**20 34 50.7**	**-2.2**
FRG	**Fergana**	**1.50**	**218**	P	**Pg**	**20 34 37.7**	**+0.8**
FRG				S	**Sg**	**20 35 00.4**	**+4.1**
AAK	**Ala-Archa**	**1.55**	**46**	⇑P	**Pb**	**20 34 37.3**	**-0.4**
	24nm,0.1s,SNR=16						
AAK				⇓S	**Sg**	**20 34 57.8**	**0.0**
	67nm,0.2s						
AAK	**Ala-Archa**	**1.55**	**46**	⇓P	**Pb**	**20 34 37.3**	**-0.4**
	22nm,0.8s						
AAK				⇑S	**Sg**	**20 34 57.6**	**-0.2**
	22nm,0.5s						
AAK	**Ala-Archa**	**1.55**	**46**	⇑*i*P	**Pn**	**20 34 36.5**	**-0.6**
AAK				⇑*i*S	**Sb**	**20 34 57.4**	**-0.5**
SFK	**Sufi-Kurgan**	**1.59**	**166**	⇓*i*P	**Pn**	**20 34 36.4**	**-1.4**
SFK				⇓*i*S	**Sn**	**20 34 57.1**	**-2.1**
FRU1	**Bishkek**	**1.74**	**44**	⇑*i*P	**Pn**	**20 34 39.9**	**+0.3**
FRU1				⇑*i*S	**Sg**	**20 35 03.5**	**-0.5**
KBK	**Karagaybulak**	**1.82**	**52**	⇑P	**Pb**	**20 34 42.4**	**+0.1**
	50nm,0.2s,SNR=39						
KBK				⇓S	**Sg**	**20 35 06.7**	**+0.2**
	210nm,0.3s						
KBK	**Karagaybulak**	**1.82**	**52**	⇓*i*P	**Pn**	**20 34 41.1**	**+0.3**
KBK				⇓*i*S	**Sb**	**20 35 05.2**	**-0.5**
DZA	**Taraz**	**1.82**	**318**	P	**Pg**	**20 34 42.8**	**-0.1**
	88nm,0.3s						
DZA				S	**Sg**	**20 35 07.7**	**+1.2**
	1μm,0.4s						
DZA	**Taraz**	**1.82**	**318**	*e*P	**Pg**	**20 34 42.8**	**-0.1**
	88nm,0.3s						
DZA				*e*S	**Sg**	**20 35 07.7**	**+1.2**
	1μm,0.4s						
CHMS	**Chumysh**	**1.94**	**42**	⇑P	**Pb**	**20 34 44.3**	**0.0**
	34nm,0.2s,SNR=44						
CHMS				⇑S	**Sg**	**20 35 10.3**	**-0.1**
	82nm,0.3s						
CHMS	**Chumysh**	**1.94**	**42**	⇑*i*P	**Pn**	**20 34 42.6**	**+0.3**
CHMS				⇑*i*S	**Sb**	**20 35 08.0**	**-1.0**
PSK	**Pskem**	**2.00**	**281**	P	**Pb**	**20 34 45.1**	**-0.3**
PSK				S	**Sg**	**20 35 13.6**	**+1.3**
USP	**Ospenovka**	**2.03**	**33**	⇓P	**Pb**	**20 34 46.1**	**+0.2**
	48nm,0.2s,SNR=98						
USP				⇑S	**Sg**	**20 35 12.7**	**-0.7**
	235nm,0.4s						
USP	**Ospenovka**	**2.03**	**33**	⇑*i*P	**Pn**	**20 34 43.9**	**+0.3**
USP				⇑*i*S	**Sb**	**20 35 10.4**	**-1.4**
JNKS	**Jany-Kuch**	**2.04**	**104**	⇑*i*P	**Pn**	**20 34 44.2**	**+0.3**
JNKS				⇑*i*S	**Sn**	**20 35 10.8**	**+0.5**
BTK	**Batken**	**2.24**	**226**	⇓*i*P	**Pn**	**20 34 45.8**	**-0.6**
BTK			

MDOK	**Medeo**	**3.40**	**61**	⇑Pg		**Pb**	**20 35 10.1**	**+0.8**
	15nm,0.6s								
MDOK				Pg		**Pb**	**20 35 10.4**	**+1.1**
	45nm,0.5s								
MDOK				Lg		Lg	20 35 55.4		
	120nm,0.6s								
MDOK				⇑Lg		Lg	20 35 55.5		
	38nm,0.9s								
MDOK	**Medeo**	**3.40**	**61**	*e*P		**Pb**	**20 35 10.4**	**+1.1**
	45nm,0.5s								
MDOK				*e*S		**Sg**	**20 35 55.4**	**-1.9**
	120nm,0.6s								
KTBS	**Karatobe**	**3.46**	**50**	Pg		**Pb**	**20 35 11.0**	**+0.7**
	0.4nm,0.2s								
KTBS				Lg		Lg	20 35 55.8		
	108nm,0.3s								
KTBS	**Karatobe**	**3.46**	**50**	*e*P		**Pb**	**20 35 11.0**	**+0.7**
	0.4nm,0.2s								
KTBS				*e*S		**Sb**	**20 35 55.8**	**+2.8**
	108nm,0.3s								
BTLS	**Baital**	**3.56**	**12**	Pg		**Pb**	**20 35 12.3**	**+0.4**
	2.0nm,0.1s								
BTLS				Lg		Lg	20 35 58.3		
	20nm,0.3s								
BTLS	**Baital**	**3.56**	**12**	*e*P		**Pb**	**20 35 12.3**	**+0.4**
	2.0nm,0.1s								
BTLS				*e*S		**Sb**	**20 35 58.3**	**+2.6**
	20nm,0.3s								
TARG	**Taragay, Kyrgy**	**3.60**	**86**	⇑*i*P		**Pn**	**20 35 05.9**	**+0.3**
TARG				⇑*i*S		**Sn**	**20 35 48.4**	**-0.6**
ANVS	**Anan'yevo**	**3.68**	**69**	⇑*i*P		**Pn**	**20 35 06.8**	**+0.4**
ANVS				⇑*i*S		**Sn**	**20 35 49.9**	**-0.6**
PRZ	**Przheval'sk**	**4.13**	**75**	⇓*i*P		**Pn**	**20 35 13.1**	**+0.6**
PRZ				⇓*i*S		**Sn**	**20 36 00.8**	**-0.8**
CHGR	**Chuyangaron**	**4.13**	**227**	⇑*e*P		**Pn**	**20 35 12.2**	**-0.3**
CHGR				⇑*i*S		**Sn**	**20 35 59.4**	**-2.2**
KURS	**Kuram**	**4.28**	**62**	Pg		**Pb**	**20 35 26.3**	**+2.1**
	5.0nm,0.4s								
KURS				Lg		Lg	20 36 22.4		
	18nm,1.4s								
KURS	**Kuram**	**4.28**	**62**	*e*P		**Pb**	**20 35 26.3**	**+2.1**
	5.0nm,0.4s								
KURS				*e*S		**Sg**	**20 36 22.4**	**-3.1**
	18nm,1.4s								
SATY	**Saty**	**4.28**	**68**	Pg		**Pb**	**20 35 26.4**	**+2.1**
	8.1nm,0.6s								
SATY				Lg		Lg	20 36 22.3		
	35nm,0.5s								
SATY	**Saty**	**4.28**	**68**	*e*P		**Pb**	**20 35 26.4**	**+2.1**
	8.1nm,0.6s								
SATY				*e*S		**Sg**	**20 36 22.3**	**-3.3**
	35nm,0.5s								
KPKS	**Kokpek**	**4.61**	**64**	Pg		**Pb**	**20 35 32.6**	**+2.7**
	0.2nm,0.2s								
KPKS				Lg		Lg	20 36 33.0		
	58nm,0.8s								
KPKS	**Kokpek**	**4.61**	**64**	*e*P		**Pb**	**20 35 32.6**	**+2.7**
	0.2nm,0.2s								
KPKS				*e*S		**Sg**	**20 36 33.0**	**-3.3**
	58nm,0.8s								
UZB	**Uzynbulak**	**4.74**	**68**	Pg		**Pb**	**20 35 35.4**	**+3.3**
	8.5nm,0.6s								
UZB				Lg		Lg	20 36 37.7		
	16nm,0.5s								
UZB	**Uzynbulak**	**4.74**	**68**	*e*P		**Pb**	**20 35 35.4**	**+3.3**
UZB				*e*S		**Sg**	**20 36 37.7**	**-2.6**
SHLS	**Shalkode**	**5.05**	**69**	Pg		**Pg**	**20 35 44.9**	**+0.1**
	6.7nm,0.5s								
SHLS				Lg		Lg	20 36 54.0		
	26nm,0.7s								
SHLS	**Shalkode**	**5.05**	**69**	*e*P		**Pg**	**20 35 44.9**	**+0.1**
	6.7nm,0.5s								
SHLS				*e*S		**Sg**	**20 36 54.0**	**+3.8**
	26nm,0.7s								
PDGK	**Podgornoye**	**5.12**	**68**	⇓Pg		**Pg**	**20 35 45.1**	**-1.0**
	4.9nm,0.6s								
PDGK				⇓Lg		Lg	20 36 51.3		
	25nm,0.8s								
KNOS	**Konyrlen**	**5.33**	**56**	Pg		**Pb**	**20 35 45.4**	**+3.3**
	3.7nm,0.7s								
KNOS				Lg		Lg	20 36 54.9		
	16nm,0.4s								
ZRB	**Zarabog**	**6.22**	**238**	P		**Pn**	**20 35 41.0**	**-0.2**
MAKZ	**Makanchi**	**8.31**	**48**	Pn		**Pn**	**20 36 12.6**	**+2.8**
	1.5nm,1.1s								
MAKZ				⇑Lg		Lg	20 38 30.3		
	4.1nm,0.9s								
MK31	**Makanchi Array**	**8.48**	**49**	Pn		**Pn**	**20 36 14.2**	**+2.1**
	0.2nm,0.3s,baz=228,slow=13,SNR=13								
MK31				⇓Lg		Lg	20 38 34.5		
	1.4nm,0.7s,baz=237,slow=27,SNR=4.0								
KURK	**Kurchatov**	**9.95**	**21**	⇑Lg		Lg	20 39 22.2		
	3.4nm,1.1s								

SSNC ***23*** *20:40:17.5±0.9, 19°.54N×70°.41W, h0km, MD2.5, ML2.0, Presumed earthquake*
OSPL ***23*** *20:40:20.7±0.3, 19°.85N×70°.96W, h30km±2km, ML1.7, Presumed earthquake*
SDD ***23*** *20:40:22.9±1.6, 19°.71N×70°.91W, h12km±15km, MD2.7, ML2.1, MW3.1, Presumed earthquake*

ISC 23 20:40:20.5±1.4, 19°.73N±0°.05×70°.90W±0°.05, h21km±2km, n10, σ0s61/17, 6C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MADR	**Mao Valverde**	**0.25**	**230**	⇓*i*P	**Pb**	**20 40 27.0**	**+0.4**
MADR				⇑*i*Sg	**Sb**	**20 40 31.4**	**+0.6**
MADR				IAML		20 40 32.8	
	comp=N,375nm,0.7s						
LOPP1	**Punta Rusia, P**	**0.31**	**294**	*i* P	**Pb**	**20 40 26.7**	**-0.7**
LOPP1				*e*S	**Sb**	**20 40 30.9**	**-1.1**
LOPP1				IAML		20 40 32.8	
	comp=Z,98nm,0.9s						
SC01	**Santiago de lo**	**0.34**	**152**	*i* P	**Pn**	**20 40 29.8**	**-0.5**
SC01				*e*S	**Sn**	**20 40 36.8**	**+0.2**
SC01				IAML		20 40 37.5	
	comp=Z,31nm,0.3s						
MCDR	**Montecristi**	**0.73**	**283**	⇓*i*P	**Pn**	**20 40 36.5**	**+0.8**
MCDR				⇑*i*Sg	**Sn**	**20 40 45.7**	**-0.5**
MCDR				IAML		20 40 50.6	
	comp=N,74nm,1.5s						
SDDR	**Presa de Saban**	**0.83**	**206**	⇑*i*P	**Pb**	**20 40 36.2**	**-0.1**
SDDR				⇑*i*Sg	**Sn**	**20 40 48.8**	**+0.1**
SDDR				IAML		20 40 49.2	
	comp=N,52nm,0.3s						
SDDR	**Presa de Saban**	**0.83**	**206**	*i* P	**Pb**	**20 40 36.1**	**-0.2**
SDDR				*e*S	**Sb**	**20 40 47.6**	**+0.6**
SDDR				IAML		20 40 49.7	
	comp=Z,440nm,0.3s						
SDDR	**Presa de Saban**	**0.83**	**206**	*i* P	**Pb**	**20 40 36.0**	**-0.3**
SDDR				*e*		20 40 36.2	
	baz=58,slow=7.9						
SDDR				*i* S	**Sn**	**20 40 48.1**	**-0.6**
SDDR				IAML		20 40 49.4	
	comp=Z,52nm,0.3s						
SDDR				IAML		20 40 51.6	
	comp=Z,29nm,0.4s						
BANI	**BANI**	**1.43**	**159**	⇑*i*P	**Pb**	**20 40 46.1**	**-0.4**
BANI				IAML		20 41 20.4	
	comp=N,67nm,2.2s						
HATOM	**Hato Mayor del**	**1.71**	**123**	⇑*i*P	**Pb**	**20 40 51.4**	**+0.1**
HATOM				IAML		20 41 16.7	
	comp=N,16nm,0.9s						
GRTK	**Grand Turk**	**1.79**	**353**	*e*P	**Pn**	**20 40 50.8**	**+0.6**

TEH 23 20:41:47.2, 31°.25N×56°.83E, h8km±19km, ML3.5, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZRDN	**Zarand Kerman**	**0.37**	**222**	Pg	Pb	20 41 56.0	-0.2
KRM1	**Kerman Provinc**	**0.84**	**153**	Pg	Pb	20 42 04.2	+0.1
KHGB	**Koh Gabri**	**0.92**	**199**	Pg	Pn	20 42 06.1	-0.5
IBAF	**Bafgh**	**1.13**	**288**	Pg	Pb	20 42 09.0	-0.1
CHMN	**Cheshme madani**	**1.51**	**156**	Pg	Pg	20 42 17.2	+1.0
NGRK	**Negar Kerman**	**1.60**	**183**	Pg	Pg	20 42 19.2	+1.3
TPRV	**Parvadeh(Tabas**	**1.78**	**356**	Pg	Pg	20 42 20.9	-0.4
IMEH	**Mehriz**	**1.90**	**275**	Pn	Pb	20 42 22.8	+0.6
BSRN	**Basiran**	**2.09**	**69**	Pn	Pb	20 42 24.8	-0.7
DOBD	**Dorbid, Yazd**	**2.11**	**291**	Pn	Pb	20 42 26.0	+0.2
IKOO	**Kooshah**	**2.19**	**57**	Pn	Pb	20 42 27.0	-0.3
ICHK	**Chekchek**	**2.29**	**296**	Pn	Pb	20 42 28.4	-0.5
ITEG	**Tejag**	**2.32**	**44**	Pn	Pb	20 42 28.9	-0.5
TAFT	**Taft - Yazd**	**2.32**	**282**	Pn	Pb	20 42 28.9	-0.4
TKDS	**Koohdasht(Taba**	**2.37**	**6**	Pn	Pb	20 42 29.2	-1.0
TSHB	**Tabas_ShorAb**	**2.46**	**353**	Pn	Pb	20 42 30.6	-1.1
TNSJ	**Nastanj**	**2.71**	**356**	Pn	Pb	20 42 34.1	-2.0
NHDN	**Nehbandan**	**2.76**	**86**	Pn	Pn	20 42 34.3	+2.4
AFRZ	**Afriz**	**2.85**	**40**	Pn	Pb	20 42 36.3	-2.2
ANAR	**Anarak**	**3.26**	**307**	Pn	Pn	20 42 41.3	+2.6
SBZV	**Sabzevar**	**5.17**	**7**	Pn	Pn	20 43 08.0	+3.0
ISHM	**Shahmirzad**	**5.42**	**328**	Pn	Pn	20 43 11.3	+2.8
IPAY	**Payeh**	**5.49**	**19**	Pn	Pn	20 43 12.5	+3.0
IAKL	**Akhelmad**	**5.58**	**16**	Pn	Pn	20 43 14.0	+3.3
ISFR	**Sfrayin**	**5.87**	**9**	Pn	Pn	20 43 18.0	+3.2

NEIC ***23*** *20:49:39.4±1.2, 18°.6S±0°.1×177°.6W±0°.1, h628km±6km, mb4.0/22, Error ellipse: s-maj=19.8km s-min=14.0km az=64.0*
IDC ***23*** *20:49:40.4±1.7, 18°.58S×177°.78W, h640km±20km, mb3.1/8, mbtmp4.1/9, Error ellipse: s-maj=20.3km s-min=15.7km az=128.0*

ISC 23 20:49:37.2±0.7, 18°.7S±0°.1×177°.6W±0°.1, h600km, n40, σ1s48/38, mb3.9/20, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.22**	**282**	P	**P**	**20 51 08.4**	**+4.0**
	111nm,0.7s,baz=130,slow=8.2,SNR=60						
MSVF	**Nonsavu**	**4.22**	**282**	P	**P**	**20 51 08.1**	**+3.6**
CAN	**Canberra**	**33.86**	**234**	P	**P**	**20 55 31.4**	**-0.2**
CTAO	**Charters Tower**	**34.07**	**262**	P	**P**	**20 55 32.8**	**-0.8**
TOO	**Toolangi**	**37.29**	**232**	P	**P**	**20 56 00.7**	**+0.8**
TOO				IAmb	IAmb	20 56 44.4	
	comp=Z,5.8nm,1.4s						
COEN	**Coen**	**37.87**	**271**	P	**P**	**20 56 05.8**	**+0.9**
BBOO	**Buckleboo**	**43.71**	**242**	P	**P**	**20 56 50.9**	**0.0**
WB0	**Warramunga Arr**	**45.21**	**260**	P	**P**	**20 57 02.1**	**-0.4**
WB0				IAmb	IAmb	20 57 33.5	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.24**	**260**	P	**P**	**20 57 02.3**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=96,slow=8.3,SNR=43						
	comp=Z,1.3nm,0.4s						
WRA	**Warramunga Arr**	**45.24**	**260**	P	**P**	**20 57 02.0**	**-0.8**
AS31	**Alice Springs**	**45.32**	**255**	P	**P**	**20 57 02.5**	**-0.8**
ASAR	**Alice Springs**	**45.32**	**255**	P	**P**	**20 57 03.0**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=87,slow=8.2,SNR=31						
ASAR				PcP	**PcP**	**20 58 29.3**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=90,slow=4.3,SNR=2.4						
ASAR				S	**S**	**21 02 57.8**	**-3.8**
	comp=Z,0.5nm,0.9s,baz=91,slow=14,SNR=2.7						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**45.32**	**255**	P	**P**	**20 57 02.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.65**	**261**	P	**P**	**20 58 04.0**	**-0.4**
VNDA	**Vanda**	**59.76**	**185**	P	**P**	**20 58 46.2**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=50,slow=1.4,SNR=2.1						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**59.76**	**185**	P	**P**	**20 58 46.0**	**+0.9**
MJAR	**Matsushiro Arr**	**68.96**	**323**	P	**P**	**20 59 43.2**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=155,slow=7.1,SNR=5.7						
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**68.96**	**323**	IAmb	IAmb	20 59 44.0	
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**71.40**	**180**	P	**P**	**20 59 58.2**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=27,slow=2.3,SNR=12						
	comp=Z,2.3nm,0.6s						
QSPA	**South Pole Qui**	**71.40**	**180**	IAmb	IAmb	20 59 58.7	
	comp=Z,3.5nm,0.8s						
PETK	**Petropavlovsk-**	**74.60**	**345**	P	**P**	**21 00 15.8**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=159,slow=5.8,SNR=5.2						
	comp=Z,2.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.45**	**43**	P	**P**	**21 00 42.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=264,slow=3.7,SNR=2.4						
	comp=Z,0.5nm,0.7s						
BELA	**Belgrano 2**	**81.33**	**173**	P	**P**	**21 00 51.2**	**-0.5**
BELA				IAmb	IAmb	21 01 34.5	
	comp=Z,6.5nm,1.5s						
GHO	**Glory Hole Cre**	**83.36**	**13**	P	**P**	**21 01 01.6**	**-0.4**
K20K	**Telida**	**83.80**	**10**	P	**P**	**21 01 04.4**	**+0.3**
K20K				IAmb	IAmb	21 01 13.2	
	comp=Z,4.5nm,1.4s						
CAST	**Castle Rocks**	**84.21**	**11**	P	**P**	**21 01 04.7**	**-1.5**
CAST				IAmb	IAmb	21 01 05.8	
	comp=Z,2.5nm,0.7s						
CCB	**Clear Creek Bu**	**86.15**	**12**	P	**P**	**21 01 14.6**	**-0.8**
CCB				IAmb	IAmb	21 01 14.9	
	comp=Z,2.5nm,0.4s						
IMAR	**Indian Mountai**	**86.29**	**10**	P	**P**	**21 01 15.8**	**-0.3**
ILAR	**Eielson Array**	**86.45**	**13**	P	**P**	**21 01 15.9**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=223,slow=5.2,SNR=9.8						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**86.45**	**13**	P	**P**	**21 01 16.4**	**-0.5**
J25K	**Salcha River,**	**86.64**	**13**	P	**P**	**21 01 16.7**	**-1.1**
J25K				IAmb	IAmb	21 01 18.4	
	comp=Z,1.4nm,0.6s						
G21K	**Allakaket**	**86.82**	**9**	P	**P**	**21 01 18.5**	**0.0**
G21K				IAmb	IAmb	21 01 18.9	
	comp=Z,1.9nm,0.9s						
M30M	**Minto, Yukon**	**87.12**	**18**	P	**P**	**21 01 20.3**	**+0.2**
M30M				IAmb	IAmb	21 01 21.5	
	comp=Z,5.7nm,1.4s						
E19K	**Redstone River**	**87.18**	**8**	P	**P**	**21 01 20.2**	**0.0**
E19K				IAmb	IAmb	21 01 29.4	
	comp=Z,3.3nm,0.9s						
ELIB	**Princess Elisa**	**88.50**	**186**	*d*P	**P**	**21 01 26.1**	**-0.6**
	comp=Z,2.8nm,0.5s						
MMPY	**Sheldon Lake,**	**88.82**	**20**	IAmb	IAmb	21 01 26.2	
	comp=Z,4.8nm,1.0s						
EKA	**Eskdalemuir Ar**	**143.15**	**5**	PKP	PKPab	21 08 00.9	-0.8
	comp=Z,0.6nm,0.5s,baz=343,slow=2.5,SNR=7.8						
GERES	**GERESS Array B**	**148.53**	**346**	PKPbc	**PKPdf**	**21 08 15.9**	**+2.9**
	comp=Z,0.3nm,0.7s,baz=21,slow=6.3,SNR=3.6						
GERES	**GERESS Array B**	**148.53**	**346**		**PKPdf**	**21 08 10.1**	**-2.9**
ESDC	**Sonseca Array**	**158.35**	**13**	PKPab	**PKPab**	**21 09 03.9**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=352,slow=4.4,SNR=1.6						

JMA ***23*** *20:50:02.9±0.2, 33°.2°.2×13°.8E±°, h373km, MV3.2/50, FAR S OFF TOKAI DISTRICT*
IDC ***23*** *20:50:07.1±0.9, 33°.41N×137°.97E, h359km±16km, mb2.8/6, mbtmp3.5/9, Error ellipse: s-maj=47.8km s-min=15.4km az=65.0*

ISC 23 20:50:06.7±0.9, 33°.44N±0°.08×137°.82E±0°.08, h350km, n24, σ1s15/31, mb3.0/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**1.33**	**316**	*e*P	**Pn**	**20 50 54.1**	**+0.2**
JKN2	**Miekihoku**	**1.52**	**302**	*e*P	**Pn**	**20 50 54.7**	**-0.1**
JHJ	**Hachijo jima 2**	**1.68**	**100**	P	**Pn**	**20 50 57.6**	**+1.8**
	33nm,0.5s,baz=48,slow=15,SNR=1.8						
JHJ				S	**S**	**20 51 36.3**	**+1.0**
	22nm,0.4s,baz=35,slow=23,SNR=1.1						
JTNC	**Tanabenakahech**	**1.88**	**282**	*e*P	**Pn**	**20 50 56.4**	**-0.7**
JWY	**Kouya**	**2.01**	**293**	*e*P	**Pn**	**20 50 58.0**	**-0.1**
BSO4	**Boso 4**	**2.60**	**53**	*e*P	**Pn**	**20 51 03.2**	**+0.8**
BSO3	**Boso 3**	**2.61**	**58**	*e*S	**S**	**20 51 46.8**	**-0.3**
JHU2	**Hanno**	**2.68**	**26**	*e*P	**Pn**	**20 51 04.5**	**+1.3**
JWT	**Wachi**	**2.72**	**313**	*e*P	**Pn**	**20 51 03.8**	**+0.3**
JAI	**Aioi**	**2.83**	**278**	*e*P	**Pn**	**20 51 03.6**	**-0.9**
BSO1	**Boso 1**	**2.89**	**64**	*e*P	**Pn**	**20 51 04.1**	**-0.3**
BSO1				*e*S	**S**	**20 51 50.5**	**-0.4**
MJAR	**Matsushiro Arr**	**3.11**	**6**	P	**Pn**	**20 51 08.8**	**+1.8**
	0.8nm,0.4s,baz=181,slow=9.9,SNR=7.8						
MJAR				S	**S**	**20 51 57.3**	**+1.8**
	0.2nm,0.3s,baz=218,slow=19,SNR=0.9						
JAG	**Ashikaga**	**3.27**	**24**	*e*P	**Pn**	**20 51 09.0**	**+0.6**
JAG				*e*S	**S**	**20 51 56.3**	**-1.9**
JYT	**Yasato**	**3.40**	**34**	*e*P	**Pn**	**20 51 09.6**	**0.0**
JYT				*e*S	**S**	**20 51 58.7**	**-1.6**
JHO	**Hitachi**	**3.89**	**35**	*e*P	**Pn**	**20 51 14.7**	**+0.3**
JHO				*e*S	**S**	**20 52 06.8**	**-2.3**
JFK	**Kawauchi**	**4.64**	**32**	*e*P	**Pn**	**20 51 22.8**	**+0.4**
JFK				*e*S	**S**	**20 52 21.6**	**-2.0**
KSRS	**Korea Array**	**9.01**	**299**	P	**Pn**	**20 52 13.7**	**+0.9**
	1.2nm,0.4s,baz=123,slow=10,SNR=4.2						
USRK	**Ussuriysk Ar.**	**11.66**	**339**	P	**P**	**20 52 45.0**	**+0.6**
	2.6nm,0.7s,baz=155,slow=11,SNR=3.3						
SONM	**Songino Array**	**27.62**	**311**	P	**P**	**20 55 24.5**	**+1.3**
	0.3nm,0.3s,baz=115,slow=9.8,SNR=4.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**43.64**	**305**	P	**P**	**20 57 38.5**	**+0.7**
	0.1nm,0.4s,baz=86,slow=9.3,SNR=2.3						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**45.99**	**310**	P	**P**	**20 57 56.7**	**+0.8**
	0.2nm,0.4s,baz=183,slow=17,SNR=4.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.19**	**184**	P	**P**	**20 58 49.3**	**-0.8**
	0.5nm,0.9s,baz=4.6,slow=7.8,SNR=1.9						
	0.5nm,0.9s						
FINES	**FINESS Array B**	**70.60**	**332**	P	**P**	**21 00 44.0**	**-0.4**
	1.4nm,0.9s,baz=157,slow=7.5,SNR=4.0						
	1.4nm,0.9s						
MMAI	**Mount Meron Ar**	**81.58**	**304**	P	**P**	**21 01 45.3**	**-1.2**
	0.2nm,0.3s,baz=24,slow=11,SNR=2.2						
	0.2nm,0.3s						

PRU ***23*** *21:00:11.1, 47°.35N×9°.89E, h10km, Damoils*
ZUR ***23*** *21:00:11.7, 47°.30N×9°.93E, h6km±1km, MLh2.7/37, Error ellipse: s-maj=2876.6km s-min=770.8km az=106.0*
LDG ***23*** *21:00:12.4±0.1, 47°.30N×9°.94E, h5km, Ml2.6/17, Error ellipse: s-maj=2.1km s-min=1.6km az=70.0*
VIE ***23*** *21:00:12.3±0.2, 47°.28N×9°.92E, h2km, mb2.2/19, ml2.4/20, Error ellipse: s-maj=1.8km s-min=1.0km az=174.0 5 km E of Damls felt 3 ems98 at Damuels / Vorarlberg*
BGR ***23*** *21:00:12.4±0.2, 47°.32N×9°.92E, h3km±1km, ML2.3/37, Error ellipse: s-maj=3.3km s-min=1.1km az=3.0*

ISC 23 21:00:11.4±0.8, 47°.29N±0°.01×9°.906E±0°.010, h9km±4km, n167, σ1s18/288, 11C-19D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVA	**Damuels**	**0.02**	**252**	⇓Pg	**Pg**	**21 00 13.1**	**-0.1**
DAVA				Sg	**Sg**	**21 00 14.1**	**-0.3**
DAVA	**Damuels**	**0.02**	**252**	*e*Pg	**Pg**	**21 00 13.2**	**-0.1**
DAVA				*e*Sg	**Sg**	**21 00 14.0**	**-0.5**
DAVA	**Damuels**	**0.02**	**252**	*i* Pg	**Pg**	**21 00 13.1**	**-0.1**
	477nm,0.2s,SNR=1203						
DAVA				*e*Sg	**Sg**	**21 00 14.2**	**-0.3**
	6μm,0.2s						
SHEK	**Heerbrugg, Kan**	**0.23**	**303**	Pg	**Pg**	**21 00 17.1**	**+1.1**
SHEK				Sg	**Sg**	**21 00 21.5**	**+2.4**
SMFL	**Mauren, Feuerw**	**0.26**	**252**	⇓Pg	**Pg**	**21 00 17.2**	**+0.6**
OBER	**Oberstdorf**	**0.29**	**66**	*e*Pg	**Pg**	**21 00 16.8**	**-0.4**
OBER				*e*Sg	**Sg**	**21 00 22.1**	**+1.1**
STRW	**Triesenberg, W**	**0.30**	**234**	⇓Pg	**Pg**	**21 00 18.1**	**+0.7**
STRW				Sg	**Sb**	**21 00 23.7**	**-0.5**
SBUH	**Buchs, Hochsch**	**0.32**	**248**	Pg	**Pg**	**21 00 18.5**	**+0.8**
SBUA2	**Buchs, Altendo**	**0.33**	**246**	⇓Pg	**Pg**	**21 00 18.5**	**+0.6**
SGT05	**Eggersriet**	**0.34**	**296**	⇑Pg	**Pb**	**21 00 19.2**	**-0.6**
SGT05				Sg	**Sb**	**21 00 25.1**	**-0.3**
SAPK	**Appenzell, Kan**	**0.34**	**277**	⇑Pg	**Pb**	**21 00 19.2**	**-0.6**
SAPK				Sg	**Sb**	**21 00 25.2**	**-0.2**
SBUB	**Buchserberg Ma**	**0.35**	**246**	Pg	**Pg**	**21 00 19.0**	**+0.6**
STGK	**St. Gallen Klo**	**0.38**	**290**	Sg	**Sb**	**21 00 26.4**	**-0.2**
SGT04	**Schlatt-Haslen**	**0.38**	**279**	⇑Pg	**Pb**	**21 00 19.9**	**-0.6**
SGT04				Sg	**Sb**	**21 00 26.3**	**-0.2**
SARE	**Arbon, Evangel**	**0.39**	**305**	⇓Pg	**Pb**	**21 00 20.3**	**-0.3**
SARE				Sg	**Sb**	**21 00 26.6**	**-0.2**
SMELS	**Mels Schulhaus**	**0.41**	**233**	⇓Pg	**Pb**	**21 00 20.4**	**-0.5**
TETT	**Tettnang**	**0.42**	**332**	Pg	**Pb**	**21 00 20.6**	**-0.5**
TETT				Sg	**Sb**	**21 00 27.1**	**-0.4**
TETT	**Tettnang**	**0.42**	**332**	Pg	**Pb**	**21 00 20.5**	**-0.5**
TETT				Sg	**Sb**	**21 00 27.1**	**-0.4**
SGT00	**Sennhlsen**	**0.43**	**288**	⇑Pg	**Pb**	**21 00 20.8**	**-0.4**
SGT00	**Sennhlsen**	**0.43**	**288**	Sg	**Sb**	**21 00 27.7**	**-0.1**
PLONS	**Plons/SG**	**0.43**	**236**	⇑Pg	**Pg**	**21 00 20.5**	**+0.6**
PLONS	**Plons/SG**	**0.43**	**236**	*e*Pg	**Pg**	**21 00 20.6**	**+0.6**
PLONS				*e*Sg	**Sb**	**21 00 27.3**	**-0.7**
SWAS	**Walenstadt, Sp**	**0.44**	**248**	Pg	**Pb**	**21 00 21.0**	**-0.4**
ROMAN	**Romanshorn, Fo**	**0.47**	**305**	⇓Pg	**Pb**	**21 00 21.7**	**-0.3**
ROMAN				Sg	**Sb**	**21 00 28.9**	**-0.1**
ROMAN	**Romanshorn, Fo**	**0.47**	**305**	Pg	**Pb**	**21 00 21.7**	**-0.3**
ROMAN				Sg	**Sb**	**21 00 29.0**	**-0.1**
SGT18	**Golfpark Waldk**	**0.48**	**291**	⇑Pg	**Pb**	**21 00 21.9**	**-0.3**
SGT18				Sg	**Sb**	**21 00 29.3**	**-0.1**
SCUG	**Chur Gewerbesc**	**0.51**	**211**	Sg	**Sb**	**21 00 30.2**	**+0.1**
DAVOX	**Davos/Dischmat**	**0.51**	**182**	⇓Pg	**Pb**	**21 00 22.1**	**-0.6**
DAVOX				Sg	**Sb**	**21 00 30.5**	**+0.1**
A103D	**Ravensburg, Wa**	**0.56**	**335**	Pg	**Pb

SLE					*e*Sg		**Sn**	**21 00 47.2 -0.5**
FREU	**Neufra-Freuden**	**1.08**	**331**		Pg		**Pb**	**21 00 32.5 +0.1**
FREU					PmP			21 00 33.4
BE1	**Monatshausen**	**1.08**	**55**		*e*Pg		**Pb**	**21 00 32.7 +0.2**
BE1					*e*Sg		**Sn**	**21 00 47.9 -0.3**
MSS	**Messtetten**	**1.09**	**325**		*e*Pn		**Pn**	**21 00 33.0 0.0**
MSS	**Messtetten**	**1.09**	**325**		*e*Pn		**Pn**	**21 00 33.8 +0.7**
MSS	**Messtetten**	**1.09**	**325**		Pg		**Pn**	**21 00 33.0 0.0**
MSS					PmP			21 00 33.8
MSS					SmS			21 00 49.2
WATA	**Walderalm**	**1.14**	**87**		*e*Pg		**Pn**	**21 00 34.3 +0.5**
	4.2nm,0.2s,SNR=7.9							
WATA					*e*Sg		**Sn**	**21 00 50.6 +1.0**
	36nm,0.3s							
WTTA	**Wattenberg**	**1.18**	**91**		*e*Pg		**Pb**	**21 00 34.2 +0.1**
WTTA					*e*Sg		**Sn**	**21 00 51.1 +0.5**
WTTA	**Wattenberg**	**1.18**	**91**		*e*Pg		**Pg**	**21 00 33.9 -0.2**
	6.1nm,0.2s,SNR=7.8							
WTTA					*e*Sg		**Sn**	**21 00 51.2 +0.5**
	36nm,0.3s							
METMA	**Mettma DE**	**1.20**	**291**		*e*Pg		**Pn**	**21 00 34.6 +0.2**
METMA					PmP			21 00 35.6
METMA					*e*Sg		**Sb**	**21 00 50.5 +0.6**
ROTE	**Rottweil**	**1.20**	**316**		Pn		**Pn**	**21 00 35.2 +0.7**
ROTE					Sg		**Sn**	**21 00 51.8 +0.8**
BUCH	**Bad Urach**	**1.22**	**342**		⇓Pn		**Pb**	**21 00 34.6 0.0**
BUCH					⇓Pg		**Pg**	**21 00 35.6 +0.8**
BUCH					Sn		**Sg**	**21 00 51.0 +0.4**
BUCH					Sg		**Sn**	**21 00 52.4 +1.0**
SULZ	**Cheisacher**	**1.24**	**282**		*e*Pg		**Pg**	**21 00 36.6 +1.4**
SULZ					*e*Sg		**Sn**	**21 00 53.1 +1.1**
FUR	**Furstenfeldbru**	**1.27**	**46**		*e*Pg		**Pg**	**21 00 36.7 +0.8**
FUR					*e*Sg		**Sn**	**21 00 53.5 +0.8**
BERGE	**Lenzkirch (DE)**	**1.31**	**297**		*e*Pn		**Pg**	**21 00 37.1 +0.6**
BERGE					*e*Sg		**Sn**	**21 00 54.6 +1.0**
HDH	**Heidenheim-Cha**	**1.31**	**9**		⇓Pn		**Pn**	**21 00 35.4 -0.5**
HDH					Pg		**Pg**	**21 00 36.8 +0.3**
DEGG	**Deggingen-Nord**	**1.32**	**354**		Pn		**Pn**	**21 00 35.9 -0.3**
DEGG					Pg		**Pg**	**21 00 37.3 +0.5**
A100A	**Rottenburg, We**	**1.34**	**331**		Pg		**Pg**	**21 00 37.5 +0.5**
TUBL	**Tuebingen-Lenn**	**1.35**	**336**		Pn		**Pn**	**21 00 36.4 -0.1**
TUBL					Pg		**Pg**	**21 00 37.7 +0.3**
FELD	**Feldberg im Sc**	**1.41**	**295**		⇑Pn		**Pn**	**21 00 37.7 +0.2**
FELD					Pg		**Pg**	**21 00 39.1 +0.6**
BFO	**Black Forest**	**1.49**	**315**		*e*Pg		**Pg**	**21 00 40.6 +0.7**
BFO					*e*Sg		**Sg**	**21 00 59.3 +0.1**
KIZ	**Kirchzarten**	**1.50**	**297**		Pg		**Pg**	**21 00 40.6 +0.5**
KIZ					Sg		**Sg**	**21 01 00.5 +0.9**
BALST	**Balsthal**	**1.50**	**272**		*e*Pn		**Pn**	**21 00 39.2 +0.5**
BALST					*e*Pg		**Pg**	**21 00 41.0 +0.7**
NORI	**Noerdlinger Ri**	**1.51**	**18**		*e*Pn		**Pn**	**21 00 38.1 -0.6**
NORI					*e*Pg		**Pb**	**21 00 39.7 0.0**
NORI					*e*Sg		**Sg**	**21 01 00.3 +0.4**
ENDD	**Endenburg**	**1.53**	**287**		Pn		**Pn**	**21 00 39.2 +0.2**
ENDD					Pg		**Pg**	**21 00 41.1 +0.4**
ENDD					Sg		**Sg**	**21 01 01.4 +0.8**
STU	**Stuttgart**	**1.56**	**342**		*e*Sg		**Sg**	**21 01 01.6 +0.1**
URBA	**Urbach, Forsts**	**1.56**	**352**		Pn		**Pn**	**21 00 39.0 -0.4**
URBA					Sg		**Sg**	**21 01 01.8 +0.2**
OPP	**Oppenau**	**1.67**	**317**		Pn		**Pn**	**21 01 41.4 +0.5**
GALG	**Neuhausen (Enz**	**1.68**	**334**		Pn		**Pn**	**21 00 41.0 0.0**
GALG					Sn		**Sn**	**21 01 00.8 -1.8**
GALG					Sg		**Sg**	**21 01 05.5 +0.2**
WOER	**Woert**	**1.74**	**8**		⇓Pn		**Pn**	**21 00 41.0 -0.9**
WOER					Sn		**Sn**	**21 01 02.9 -1.4**
BOURR	**Bourrignon**	**1.82**	**274**		Pn		**Pn**	**21 00 43.5 +0.4**
BOURR					Pg		**Pg**	**21 00 46.9 +0.5**
BABA	**Baden-Baden-Ne**	**1.83**	**322**		Sg		**Sg**	**21 01 09.6 -0.7**
ABTA	**Abfaltersbach**	**1.86**	**106**		*e*Pg		**Pg**	**21 00 47.5 +0.4**
	3.7nm,0.3s,SNR=13							
ABTA					*e*Sn		**Sg**	**21 01 10.7 -0.6**
	1.5nm,0.2s							
LESA	**Schwarzleotal**	**1.89**	**85**		*e*Pg		**Pb**	**21 00 46.9 +0.7**
	5.4nm,0.4s,SNR=22							
LESA					Sn		**Sg**	**21 01 13.1 +1.0**
	6.9nm,0.2s							
KW1	**Garching a.d.**	**2.00**	**64**		*e*Sg		**Sg**	**21 01 16.3 +0.7**
RJOB	**Jochberg**	**2.01**	**76**		*e*Pg		**Pb**	**21 00 49.2 +1.0**
RJOB					*e*Sg		**Sg**	**21 01 16.6 +0.6**
GRC1	**Grafenberg Arr**	**2.02**	**32**		Pn		**Pn**	**21 00 44.7 -1.0**
WLS	**Welschbruch**	**2.05**	**304**		*e*Sg		**Sg**	**21 01 17.7 +0.3**
SIND	**Sindeldorf**	**2.07**	**355**		Pn		**Pn**	**21 00 45.5 -0.9**
ECH	**Echery**	**2.07**	**297**		*e*Pn		**Pn**	**21 00 46.6 +0.1**
ECH					*e*Pg		**Pg**	**21 00 51.1 -0.1**
ECH					*e*Sg		**Sg**	**21 01 17.4 -0.6**
CDF	**Champ du Feu**	**2.10**	**303**		*e*Pn		**Pn**	**21 00 47.1 +0.2**
CDF					*e*Pg		**Pg**	**21 00 51.1 -0.5**
CDF					*e*Sg		**Sg**	**21 01 18.0 -0.8**
	7.4nm,0.2s							
HINF	**Hinteralfeld**	**2.13**	**285**		*e*Pn		**Pn**	**21 00 47.3 0.0**
HINF					*e*Pg		**Pb**	**21 00 51.3 +1.0**
HINF					*e*Sg		**Sb**	**21 01 18.3 +1.4**
	6.7nm,0.1s							
CHMF	**Charmoille**	**2.22**	**270**		Pg		**Pg**	**21 00 53.4 -0.5**
GRB2	**Grafenberg Arr**	**2.30**	**30**		Pn		**Pn**	**21 00 48.5 -1.1**
PEB	**Petersbachel**	**2.31**	**321**		Pn		**Pn**	**21 00 50.1 +0.4**
KBA	**Koelnbreinsper**	**2.35**	**94**		*e*Pg		**Pg**	**21 00 55.7 -0.9**
KBA					*e*Sg		**Sg**	**21 01 26.6 -0.5**
KBA	**Koelnbreinsper**	**2.35**	**94**		*i* Pg		**Pg**	**21 00 55.7 -0.9**
	8.2nm,0.3s,SNR=37							
KBA					Sg		**Sg**	**21 01 26.7 -0.5**
	2.3nm,0.2s							
WBA	**Furth**	**2.47**	**343**		Pn		**Pn**	**21 00 51.5 -0.4**
HAU	**Haudompre**	**2.51**	**288**		*e*Pn		**Pn**	**21 00 52.9 +0.4**
HAU					*e*Pg		**Pg**	**21 00 58.6 -0.9**
HAU					*e*Sg		**Sg**	**21 01 31.0 -1.0**
	46nm,0.4s							
GRFO	**Grafenberg**	**2.56**	**20**		*e*Pn		**Pn**	**21 00 51.5 -1.6**
GRFO					*e*Pg		**Pb**	**21 00 57.9 +0.5**
GRF	**Grafenberg Arr**	**2.56**	**20**		*e*Pn		**Pn**	**21 00 51.5 -1.6**
GRF					*e*Pg		**Pb**	**21 00 58.6 +1.1**
GRF					*e*Sg		**Sb**	**21 01 31.5 +2.5**
BIOA	**Bad Ischl, Aus**	**2.56**	**80**		*e*Pg		**Pg**	**21 01 00.4 -0.1**
	8.0nm,0.3s							
BIOA					*e*Sg		**Sg**	**21 01 35.6 +1.9**
	12nm,0.3s							
CABF	**La Chapelle**	**2.70**	**257**		*e*Pn		**Pn**	**21 00 54.8 -0.4**
CABF					*e*Pg		**Pg**	**21 01 02.1 -1.1**
CABF					*e*Sg		**Sg**	**21 01 37.3 -0.9**
	13nm,0.7s							
WET	**Wettzell**	**2.72**	**46**		*e*Pn		**Pn**	**21 00 55.0 -0.3**
WET					*e*Sg		**Sb**	**21 01 35.8 +2.1**
LPL	**La Plagne**	**2.82**	**232**		*e*Pn		**Pn**	**21 00 56.8 -0.2**
LPL					*e*Pg		**Pg**	**21 01 04.8 -0.7**
LPL					*e*Sg		**Sg**	**21 01 42.5 +0.4**
	5.2nm,0.7s							
LPG	**La Plagne**	**2.83**	**232**		*e*Pg		**Pg**	**21 01 04.6 -1.0**
LPG					*e*Sg		**Sg**	**21 01 43.3 +1.1**
	3.7nm,0.3s							
ROTZ	**Rotzenmuhle**	**2.91**	**31**		*e*Pn		**Pn**	**21 00 56.4 -1.6**
ROTZ					*e*Pg		**Pg**	**21 01 06.5 -0.7**
ROTZ					*e*Sg		**Sb**	**21 01 42.2 +2.9**
GEC2	**GERESS Array S**	**2.98**	**57**		*e*Sn		**Sn**	**21 01 35.3 +0.3**
GEC2					*e*Sg		**Sb**	**21 01 43.9 +2.5**
MOA	**Molln**	**3.00**	**78**		*e*Pg		**Pg**	**21 01 07.6 -1.4**
MOA					*e*Sg		**Sg**	**21 01 46.5 -1.4**
MOA	**Molln**	**3.00**	**78**		*e*Pg		**Sg**	**21 01 07.6 -1.4**
	1.2nm,0.2s,SNR=9.8							
MOA					*e*Sg		**Sg**	**21 01 47.4 -0.5**
	3.1nm,0.3s							
ABH	**Alteburg**	**3.03**	**330**		Pn		**Pn**	**21 01 00.2 +0.6**
KHC	**Kasperske Hory**	**3.07**	**52**		*e*PN		**Pn**	**21 01 00.5 +0.3**
KHC					*e*PG		**Pg**	**21 01 12.0 +1.8**
KHC					*e*SN		**Sn**	**21 01 35.6 -1.4**
KHC					*e*SG		**Sb**	**21 01 47.1 +3.3**
	comp=Z,8.9nm,0.3s							
PAGF	**Fort de Pagny**	**3.08**	**296**		*e*Pg		**Pg**	**21 01 09.7 -0.8**
PAGF	**Fort de Pagny**	**3.08**	**296**		*e*Pg		**Pg**	**21 01 10.4 -0.1**
PAGF					*e*Sg		**Sg**	**21 01 49.1 -1.3**
	5.9nm,0.3s							
PAGF					*e*Sg		**Sb**	**21 01 49.2 +5.0**
	3.6nm,0.3s							
TNS	**Taunus Mts**	**3.09**	**342**		*e*Pn		**Pn**	**21 01 00.9 +0.5**
SESA	**Seetaler Alpe,**	**3.18**	**92**		*e*Pg		**Pg**	**21 01 11.1 -1.3**
	4.1nm,0.3s							
SESA					*e*Sg		**Sg**	**21 01 54.3 +0.6**
	9.4nm,0.4s							
OBKA	**Obir**	**3.28**	**102**		Pg		**Pg**	**21 01 12.2 -2.1**
	1.1nm,0.4s							
OBKA					*e*Sg		**Sg**	**21 01 58.9 +2.2**
	3.6nm,0.6s							
CKRC	**Cesky Krumlov**	**3.33**	**61**		*e*SG		**Sg**	**21 01 55.5 -2.7**
	comp=Z,5.8nm,0.4s							
MBDF	**Montbardon**	**3.37**	**222**		*e*P		**Pn**	**21 01 06.6 +2.2**
MBDF					*e*Pg		**Pb**	**21 01 13.6 +2.2**
NKC	**Novy Kostel**	**3.39**	**29**		*e*SG		**Sg**	**21 01 58.6 -1.6**
	comp=Z,8.2nm,0.4s							
SFTF	**Sexfontaines**	**3.41**	**287**		*e*Pg		**Pg**	**21 01 17.4 +0.7**
SFTF					*e*Sn		**Sn**	**21 01 43.2 -2.2**
SFTF					*e*Sg		**Sg**	**21 01 59.6 -1.3**
SAVF	**Savonnieres en**	**3.48**	**294**		*e*Sg		**Sg**	**21 02 00.7 -2.3**
	1.8nm,0.2s							
MEZF	**Maizieres J'vi**	**3.48**	**292**		*e*Sn		**Sg**	**21 02 02.3 -0.9**
	6.0nm,0.5s							
SOKA	**Soboth**	**3.56**	**98**		Pg		**Pg**	**21 01 19.4 -0.3**
	0.6nm,0.3s							
SOKA					*e*Sn		**Sn**	**21 01 52.1 +2.8**
	0.5nm,0.2s							
SOKA					Sg		**Sg**	**21 02 08.0 +2.2**
	0.5nm,0.3s							
ZVC	**Zvikov**	**3.58**	**51**		*e*SG		**Sb**	**21 02 02.1 +3.8**
	comp=Z,3.5nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.67**	**231**		*e*P		**Pn**	**21 01 11.3 +2.8**
ORIF					*e*Pg		**Pg**	**21 01 20.6 -1.2**
ORIF					*e*Sg		**Sg**	**21 02 08.1 -1.2**
	1.7nm,0.3s							
ARSA	**Arzberg**	**3.82**	**89**		Pg		**Pg**	**21 01 23.1 -1.5**
	2.7nm,0.5s							
SBF	**Sospel**	**3.84**	**208**		*e*Pn		**Pn**	**21 01 11.6 +0.7**
SBF					*e*Sn		**Sn**	**21 01 53.2 -3.0**
	2.4nm,0.2s							
CONA	**Conrad Observa**	**4.08**	**79**		Sg		**Sg**	**21 02 21.8 -0.6**
	2.3nm,0.4s							
PRU	**Pruhonice**	**4.09**	**47**		*e*SG		**Sg**	**21 02 18.5 -4.2**
	comp=Z,3.1nm,0.5s							
LOR	**Lormes**	**4.12**	**272**		*e*Pg		**Pg**	**21 01 28.2 -2.1**
LOR					*e*Sg		**Sg**	**21 02 21.5 -2.1**
	3.2nm,0.3s							
SMF	**Signal de Mont**	**4.20**	**263**		*e*Pg		**Pg**	**21 01 29.5 -2.4**
SMF					*e*Sg		**Sg**	**21 02 24.4 -1.9**
RONA	**Rosalia, Austr**	**4.35**	**82**		Pg		**Pg**	**21 01 33.6 -1.1**
	0.8nm,0.4s							
SSF	**Saint Saulge**	**4.37**	**269**		*e*Pn		**Pn**	**21 01 19.0 +1.0**
VIVF	**Saint-Julien-l**	**4.38**	**238**		*e*Pn		**Pn**	**21 01 19.5 +1.3**
VIVF					*e*Sn		**Sn**	**21 02 09.7 +0.3**
	2.1nm,0.5s							
BRG	**Berggiesshubel**	**4.46**	**35**		Sg		**Sg**	**21 02 31.6 -3.0**
BRG					Amp			21 02 34.6
	comp=Z,2.4nm,0.3s							
CLL	**Collm**	**4.50**	**26**		*e*Pn		**Pn**	**21 01 17.0 -2.8**
CLL					*ex*		x	21 01 24.0
CLL					*e*(Pg)		**Pg**	**21 01 39.0 +1.4**
CLL					*ex*		x	21 02 22.0
CLL					*e*Sg		**Sg**	**21 02 33.0 -2.9**
	comp=Z,4.0nm,0.9s							
AVF	**Avril sur Loir**	**4.51**	**266**		*e*Pn		**Pn**	**21 01 20.5 +0.6**
LMR	**La Mourre**	**4.63**	**212**		*e*P		**Pn**	**21 01 24.0 +2.5**
LMR					*e*Sn		**Sn**	**21 02 14.6 -0.8**
	comp=Z,5.4nm,0.8s							
KRUC	**Moravsky**	**4.69**	**65**		*e*SG		**Sg**	**21 02 38.1 -3.8**
BGF	**Bois d'Agland**	**4.89**	**264**		*e*Pn		**Pn**	**21 01 25.2 0.0**
VRAC	**Vranov**	**4.90**	**63**		*e*SG		**Sg**	**21 02 43.3 -5.3**
DPC	**Dobruska-Polom**	**5.23**	**52**		*e*SG		**Sg**	**21 02 56.3 -2.9**
	comp=Z,2.6nm,0.5s							
LASF	**Ste Croix**	**5.32**	**235**		*e*Pn		**Pn**	**21 01 31.8 +0.7**
LASF					*e*Pg		**Pg**	**21 01 52.4 -0.9**
LASF					*e*Sn		**Sn**	**21 02 30.6 -1.9**
	comp=Z,0.1nm,0.1s							
TCF	**Toulx Ste Croi**	**5.38**	**262**		*e*Pn		**Pn**	**21 01 32.3 +0.4**
MORC	**Moravsky Berou**	**5.65**	**61**		*e*SG		**Sg**	**21 03 09.4 -3.3**

*PTWC **23** 21:10:41, 18˚.00N×66˚.80W, MI4.0/14*
*TRN **23** 21:10:42.4, 17˚.42N×66˚.55W, h1km, MD0.0, South of Puerto Rico.*
*OSPL **23** 21:10:42.6±1.0, 17˚.82N×66˚.77W, h8km±12km, ML3.7, Presumed earthquake*
*NEIC **23** 21:10:42.4±2.5, 18˚.01N±0˚.01×66˚.795W±0˚.009, h10km±1km, ML4.0/35, Mwr3.8/24, Md3.8/9(RSPR), Error ellipse: s-maj=2.7km s-min=1.9km az=175.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=5.77; Mθθ6.08; Mϕϕ-0.31; Mrθ0.06; Mθϕ-1.34; Mϕr1.60; Fault plane solution: M0 6.29000×10^14^ NP1: ϕs116.46000°, δ48.32000°, λ-68.79000°. NP2: ϕs266.18000°, δ45.87000°, λ-112.12000°. Principal axes: T 6.3565, Plg1.0000°, Azm192.0000°; N -0.1357, Plg16.0000°, Azm282.0000°; P -6.2208, Plg74.0000°, Azm97.0000°;*
*NEIC **23** 21:10:42.8, 18˚.01N×66˚.80W, h10km*
*SDD **23** 21:10:43.5±1.9, 17˚.99N×66˚.81W, h15km±9km, MD2.8, ML3.7, MW3.6, Presumed earthquake*
*RSPR **23** 21:10:43.2, 18˚.02N×66˚.83W, h12km, MD3.8/9*

ISC 23 21:10:41.6±0.8, 17˚.96N±0˚.04×66˚.81W±0˚.02, h24km±5km, n84, σ1°05/120, 18C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GBPR	**Guanica, Bosqu**	**0.07**	**287**			**Pb**	**21 10 46.0**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.07**	**287**	⇑	*i*P	**Pb**	**21 10 46.0**	**+0.2**
OBIP	**Obispado Ponce**	**0.21**	**66**			**Pb**	**21 10 47.5**	**+0.2**
OBIP					Sg	**Sb**	**21 10 51.2**	**+0.1**
OBIP	**Obispado Ponce**	**0.21**	**66**		P	**Pb**	**21 10 47.6**	**+0.3**
OBIP					S	**Sb**	**21 10 50.8**	**-0.4**
OBIP	**Obispado Ponce**	**0.21**	**66**	*i*	P	**Pb**	**21 10 47.6**	**+0.3**
OBIP					*e*S	**Sb**	**21 10 51.4**	**+0.1**
OBIP					IAML		21 10 51.6	
	comp=Z,170μm,0.2s							
OBIP	**Obispado Ponce**	**0.21**	**66**	⇑	*e*P	**Pb**	**21 10 47.7**	**+0.3**
OBIP					*e*S	**Sb**	**21 10 51.4**	**+0.1**
MLPR	**Magueyes Islan**	**0.22**	**274**			**Pb**	**21 10 47.5**	**+0.1**
MLPR					Sg	**Sb**	**21 10 51.2**	**-0.1**
MLPR					IAML		21 10 51.7	
	comp=Z,11μm,0.4s							
MLPR					IAML		21 10 51.8	
	comp=Z,19μm,0.5s							
MLPR	**Magueyes Islan**	**0.22**	**274**		P	**Pb**	**21 10 47.4**	**+0.1**
MLPR	**Magueyes Islan**	**0.22**	**274**	⇓	*i*P	**Pb**	**21 10 47.6**	**+0.2**
MLPR				⇑	*i*Sg	**Sb**	**21 10 51.2**	**-0.1**
MLPR					IAML		21 10 51.5	
	comp=N,4μm,0.4s							
MLPR	**Magueyes Islan**	**0.22**	**274**	⇓	*e*P	**Pb**	**21 10 47.5**	**+0.1**
CELP	**Cerrillos**	**0.25**	**62**			**Pb**	**21 10 48.2**	**+0.4**
CELP					Sg	**Sb**	**21 10 52.2**	**+0.2**
CELP					IAML		21 10 52.6	
	comp=N,31μm,0.2s							
CELP					IAML		21 10 52.7	
	comp=N,52μm,0.6s							
CELP	**Cerrillos**	**0.25**	**62**		P	**Pb**	**21 10 48.2**	**+0.4**
CELP					S	**Sb**	**21 10 52.3**	**+0.2**
CELP	**Cerrillos**	**0.25**	**62**	⇓	*i*P	**Pb**	**21 10 48.4**	**+0.6**
CELP				⇓	*i*Sg	**Sb**	**21 10 52.3**	**+0.2**
CELP					IAML		21 10 52.5	
	comp=N,11μm,0.2s							
CELP	**Cerrillos**	**0.25**	**62**	⇓	*e*P	**Pb**	**21 10 48.4**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.29**	**280**			**Pb**	**21 10 48.2**	**0.0**
CRPR					IAML		21 10 52.8	
	comp=N,14μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.29**	**280**		P	**Pb**	**21 10 48.3**	**0.0**
CRPR					S	**Sb**	**21 10 52.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.29**	**280**	⇓	*e*P	**Pb**	**21 10 48.5**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.31**	**17**			**Pb**	**21 10 48.8**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.31**	**17**		Sg	**Sb**	**21 10 52.8**	**-0.7**
UUPR					IAML		21 10 53.6	
	comp=N,86μm,0.3s							
UUPR					IAML		21 10 54.4	
	comp=N,55μm,0.3s							
UUPR	**Utuado, UPR, P**	**0.31**	**17**		P	**Pb**	**21 10 48.6**	**0.0**
UUPR	**Utuado, UPR, P**	**0.31**	**17**	⇑	*e*P	**Pb**	**21 10 48.8**	**+0.2**
LSP	**Las Mesas**	**0.34**	**310**			**Pb**	**21 10 49.2**	**+0.1**
LSP	**Las Mesas**	**0.34**	**310**	⇑	*e*P	**Pb**	**21 10 49.2**	**+0.1**
AOPR	**Arecibo Observ**	**0.39**	**8**			**Pb**	**21 10 49.9**	**0.0**
AOPR					Sg	**Sb**	**21 10 55.1**	**-0.6**
AOPR	**Arecibo Observ**	**0.39**	**8**		P	**Pb**	**21 10 49.0**	**-1.0**
AOPR					S	**Sb**	**21 10 55.2**	**-0.5**
AOPR	**Arecibo Observ**	**0.39**	**8**	⇑	*i*P	**Pb**	**21 10 50.0**	**0.0**
AOPR				⇓	*i*Sg	**Sb**	**21 10 55.4**	**-0.3**
AOPR					IAML		21 10 55.5	
	comp=N,49μm,0.2s							
AOPR	**Arecibo Observ**	**0.39**	**8**	⇑	*e*P	**Pb**	**21 10 50.1**	**+0.1**
PRSN	**Puerto Rico Se**	**0.41**	**310**			**Pb**	**21 10 50.3**	**+0.1**
PRSN					Sg	**Sb**	**21 10 55.6**	**-0.5**
PRSN	**Puerto Rico Se**	**0.41**	**310**		P	**Pb**	**21 10 50.2**	**+0.1**
PRSN					S	**Sb**	**21 10 55.8**	**-0.3**
PRSN	**Puerto Rico Se**	**0.41**	**310**	⇑	*i*P	**Pb**	**21 10 50.4**	**+0.1**
PRSN				⇓	*i*Sg	**Sb**	**21 10 56.3**	**+0.2**
PRSN					IAML		21 10 58.5	
	comp=N,47μm,0.3s							
PRSN	**Puerto Rico Se**	**0.41**	**310**	⇑	*e*P	**Pb**	**21 10 50.3**	**+0.1**
ECPR	**Experimental S**	**0.56**	**50**			**Pb**	**21 10 52.8**	**0.0**
ECPR					Sg	**Sb**	**21 11 00.3**	**-0.1**
ECPR					IAML		21 11 02.0	
	comp=N,7μm,0.2s							
ECPR					IAML		21 11 02.9	
	comp=N,7μm,0.2s							
ECPR	**Experimental S**	**0.56**	**50**		P	**Pb**	**21 10 52.8**	**0.0**
ECPR					S	**Sb**	**21 11 01.3**	**+0.9**
ECPR	**Experimental S**	**0.56**	**50**	⇑	*e*P	**Pb**	**21 10 53.0**	**+0.2**
AGPR	**Aguadilla, PR**	**0.58**	**331**			**Pb**	**21 10 53.0**	**-0.2**
AGPR					Sg	**Sb**	**21 11 00.6**	**-0.5**
AGPR					IAML		21 11 01.4	
	comp=N,10μm,0.5s							
AGPR					IAML		21 11 05.6	
	comp=N,6μm,0.6s							
AGPR	**Aguadilla, PR**	**0.58**	**331**	⇓	*i*P	**Pb**	**21 10 53.4**	**+0.2**
AGPR				⇓	*i*Sg	**Sb**	**21 11 01.2**	**+0.1**
AGPR					IAML		21 11 05.4	
	comp=N,4μm,0.6s							
AGPR	**Aguadilla, PR**	**0.58**	**331**	⇑	*e*P	**Pb**	**21 10 53.2**	**+0.1**
EMPR	**Esperanza - Ma**	**0.58**	**27**			**Pb**	**21 10 53.9**	**+0.7**
EMPR						**Sb**	**21 11 01.5**	**+0.4**
EMPR	**Esperanza - Ma**	**0.58**	**27**		P	**Pb**	**21 10 53.3**	**+0.1**
EMPR	**Esperanza - Ma**	**0.58**	**27**	⇓	*e*P	**Pb**	**21 10 53.9**	**+0.7**
EMPR					*e*S	**Sb**	**21 11 01.5**	**+0.4**
SJG	**San Juan**	**0.65**	**76**		Pg	**Pb**	**21 10 54.4**	**+0.1**
SJG	**San Juan**	**0.65**	**76**			**Sb**	**21 11 03.2**	**+0.3**
SJG	**San Juan**	**0.65**	**76**		P	**Pb**	**21 10 54.4**	**+0.1**
SJG	**San Juan**	**0.65**	**76**	⇓	*i*P	**Pb**	**21 10 54.4**	**+0.1**
SJG				⇑	*i*Sg	**Sb**	**21 11 02.8**	**-0.1**
SJG	**San Juan**	**0.65**	**76**	*i*	P	**Pb**	**21 10 54.5**	**+0.1**
SJG					*e*S	**Sb**	**21 11 03.4**	**+0.5**
SJG	**San Juan**	**0.65**	**76**	⇓	*e*P	**Pb**	**21 10 54.6**	**+0.4**
IGPR	**InterUniversit**	**0.67**	**89**			**Pb**	**21 10 55.1**	**+0.7**
IGPR					S	**Sb**	**21 11 04.4**	**+0.8**
IGPR	**InterUniversit**	**0.67**	**89**		P	**Pb**	**21 10 55.2**	**+0.5**
IGPR					S	**Sn**	**21 11 04.9**	**-0.5**
IGPR	**InterUniversit**	**0.67**	**89**	⇓	*e*P	**Pb**	**21 10 55.4**	**+0.7**
PDPR	**Patillas Dam,**	**0.76**	**85**			**Pb**	**21 10 56.4**	**+0.3**
PDPR					Sg	**Sb**	**21 11 06.5**	**+0.6**
PDPR					IAML		21 11 07.6	
	comp=N,5μm,0.5s							
PDPR	**Patillas Dam,**	**0.76**	**85**		P	**Pb**	**21 10 56.3**	**+0.3**
PDPR					S	**Sn**	**21 11 07.0**	**-0.4**
PDPR	**Patillas Dam,**	**0.76**	**85**	⇑	*e*P	**Pb**	**21 10 56.7**	**+0.6**
IDE	**Isla Desecheo**	**0.76**	**304**			**Pb**	**21 10 56.3**	**+0.1**
IDE	**Isla Desecheo**	**0.76**	**304**	⇑	*i*P	**Pb**	**21 10 56.3**	**+0.1**
HUMP	**Col San Antoni**	**0.94**	**78**			**Pb**	**21 10 59.3**	**0.0**
HUMP	**Col San

NNS				S		**Sn**	**21 47 38.0**	**-0.6**
HATJ	**Hateruma jima**	**1.41**	**136**	*eP*		**Pn**	**21 47 15.9**	**+0.4**
JKRS	**Kuro-shima**	**1.43**	**126**	*eP*		**Pn**	**21 47 16.1**	**+0.5**
JKRS				S		**Sn**	**21 47 39.0**	**0.0**
ETLH	**Xiulin Townshi**	**1.44**	**233**	*i* P		**Pn**	**21 47 15.5**	**-0.4**
ETLH				*eS*		**Sn**	**21 47 38.0**	**-1.2**
KSHI	**Guanxi Townshi**	**1.45**	**258**	P		**Pn**	**21 47 15.8**	**-0.1**
KSHI				S		**Sn**	**21 47 39.7**	**+0.4**
JIJ	**Ishigaki jima**	**1.47**	**119**	*eP*		**Pn**	**21 47 15.9**	**-0.1**
JIJ				*eS*		**Sn**	**21 47 38.8**	**-0.8**
JISG	**Ishigakijimahi**	**1.51**	**109**	*eP*		**Pn**	**21 47 16.5**	**0.0**
JISG				*eS*		**Sn**	**21 47 40.0**	**-0.4**
NFF	**Wufeng Townshi**	**1.54**	**253**	*i* P		**Pn**	**21 47 16.4**	**-0.5**
NFF				*i* S		**Sn**	**21 47 39.9**	**-1.1**
ETM	**Tongmen**	**1.59**	**226**	P		**Pn**	**21 47 16.5**	**-0.8**
ETM				*i* S		**Sn**	**21 47 40.7**	**-1.1**
FUSS	**Fushou**	**1.59**	**239**	*eP*		**Pn**	**21 47 15.7**	**-1.9**
FUSS				*i* S		**Sn**	**21 47 41.7**	**-0.6**
LXIB	**Xiulin Townshi**	**1.60**	**229**	*i* P		**Pn**	**21 47 16.9**	**-0.7**
LIOB	**Emei**	**1.62**	**255**	*i* P		**Pn**	**21 47 17.6**	**0.0**
LIOB				*i* S		**Sn**	**21 47 41.6**	**-0.8**
WHF	**Hehuan Shan**	**1.63**	**235**	*i* P		**Pn**	**21 47 18.9**	**+0.7**
WHF				*i* S		**Sn**	**21 47 43.1**	**-0.3**
NSTT	**Nanjuang**	**1.64**	**254**	*i* P		**Pn**	**21 47 17.5**	**-0.3**
NSTT				*i* S		**Sn**	**21 47 41.1**	**-1.5**
TWT	**Tachien**	**1.64**	**240**	*eP*		**Pn**	**21 47 17.1**	**-0.9**
TWT				*i* S		**Sn**	**21 47 43.6**	**+0.6**
SHUL	**Shoufeng**	**1.68**	**220**	*i* P		**Pn**	**21 47 17.7**	**-0.5**
SHUL				*i* S		**Sn**	**21 47 43.5**	**+0.1**
OWD	**Renai**	**1.81**	**232**	*i* P		**Pn**	**21 47 19.4**	**-0.4**
OWD				*i* S		**Sn**	**21 47 45.8**	**-0.4**
WHP	**Taichung City**	**1.81**	**244**	*i* P		**Pn**	**21 47 19.8**	**0.0**
WHP				*i* S		**Sn**	**21 47 45.6**	**0.6**
WUSB	**Renai**	**1.83**	**234**	*eP*		**Pn**	**21 47 19.9**	**-0.1**
WUSB				S		**Sn**	**21 47 46.1**	**-0.5**
WARBT	**Fenglin Townsh**	**1.83**	**222**	*i* P		**Pn**	**21 47 18.7**	**-1.2**
WARBT				*i* S		**Sn**	**21 47 44.3**	**-2.1**
JTJ	**Tarama**	**1.84**	**103**	*eP*		**Pn**	**21 47 20.1**	**+0.2**
JTJ				*eS*		**Sn**	**21 47 46.3**	**-0.1**
WCS	**Beigang Elemen**	**1.95**	**239**	*i* P		**Pn**	**21 47 21.5**	**+0.4**
WCS				*i* S		**Sn**	**21 47 48.4**	**-0.2**
VWDT	**VWDT**	**1.96**	**228**	*i* P		**Pn**	**21 47 21.5**	**+0.2**
VWDT				*i* S		**Sn**	**21 47 49.0**	**0.0**
HGSD	**Ruisui**	**1.98**	**217**	*i* P		**Pn**	**21 47 21.3**	**-0.3**
HGSD				S		**Sn**	**21 47 49.3**	**-0.1**
SMLT	**Sun Moon Lake**	**2.06**	**235**	P		**Pn**	**21 47 23.4**	**+1.0**
SMLT				*eS*		**Sn**	**21 47 52.6**	**+1.6**
SSLB	**Suanglung**	**2.07**	**232**	*i* P		**Pn**	**21 47 23.2**	**+0.6**
SSLB				*i* S		**Sn**	**21 47 51.5**	**+0.3**
WHYT	**Xinyi Township**	**2.20**	**232**	*i* P		**Pn**	**21 47 25.1**	**+1.1**
WHYT				*eS*		**Sn**	**21 47 55.2**	**+1.3**
JIRJ	**Irabujima**	**2.24**	**96**	*eS*		**Sn**	**21 47 53.6**	**-1.0**
ALS	**Alishan**	**2.36**	**229**	*eP*		**Pn**	**21 47 27.6**	**+1.5**
ALS				*eS*		**Sn**	**21 47 58.8**	**+1.3**

ANF ***23*** *21:59:41.5±0.3,59°.62N×139°.42W,h8km±2km,ML4.1/50, Error ellipse: s-maj=1.9km s-min=1.0km az=175.0*

NEIC ***23*** *21:59:42.8±1.1,59°.68N±0°.04×139°.47W±0°.05,h20km±6km, ML3.9/116,Mwr3.9/55,ML3.7(AEIC),Error ellipse: s-maj=6.5km s-min=3.0km az=195.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}7.16; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$-5.89; $M_{r\theta}$4.85; $M_{r\phi}$2.64; $M_{\theta\phi}$-1.92; Fault plane solution: M_o8.83000×10^{14} NP1:φs352.71000°, δ33.69000°,λ123.98000°. NP2:φs133.70000°,δ62.61000°, λ69.56000°. Principal axes: T 9.4020, Plg66.0000°, Azm6.0000°; N -1.2817, Plg18.0000°, Azm143.0000°; P -8.1203, Plg15.0000°, Azm239.0000°;*

NEIC ***23*** *21:59:42.6,59°.65N×139°.48W,h19km*

AEIC ***23*** *21:59:43±1.1,59°.66N±0°.03×139°.48W±0°.05,h21km±7km, Error ellipse: s-maj=4.6km s-min=3.4km az=178.0*

IDC ***23*** *21:59:45.1±1.7,59°.74N×139°.45W,h34km±13km,mb3.6/17, mbtmp3.7/22,ML3.4/5,MS3.0/8,Error ellipse: s-maj=15.3km s-min=8.3km az=33.0*

ISC 23 21:59:43.0±0.6,**59°.63N**±0°.03×**139°.50W**±0°.03,**h22**km±4km, **n248,**σ**1$04**/267,**mb4.0**/17,**MS2.7**/3,**Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YKU2	**Yakutat**	**0.15**	**217**	Pg		**Pb**	**21 59 47.2**	**-0.7**
YKU2				Sg		**Sb**	**21 59 52.2**	**+0.9**
PINM	**Pinnacle**	**0.60**	**321**	P		**Pb**	**21 59 53.5**	**-1.4**
	baz=140,SNR=1000							
PINM				S		**Sb**	**22 00 02.2**	**-0.9**
	baz=140							
PCA	**Pinnacle**	**0.60**	**321**			**Pb**	**21 59 53.5**	**-1.5**
PCA				Sg		**Sb**	**22 00 01.8**	**-1.4**
O29M	**Mount Kennedy**	**0.82**	**34**			**Pb**	**21 59 57.1**	**-1.5**
O29M				Sg		**Sb**	**22 00 07.7**	**-1.5**
O29M				IAML			22 00 09.2	
	comp=E,6μm,0.5s							
O29M	**Mount Kennedy**	**0.82**	**34**	P		**Pb**	**21 59 57.2**	**-1.5**
	baz=212,SNR=1000							
O29M				Sb		**Sb**	**22 00 08.6**	**-0.7**
	baz=212							
P29M	**Windy Craggy**	**0.89**	**89**			**Pb**	**21 59 58.0**	**-1.8**
P29M				Sg		**Sb**	**22 00 09.5**	**-1.8**
P29M				IAML			22 00 11.7	
	comp=E,4μm,0.6s							
P29M				IAML			22 00 15.5	
	comp=N,4μm,0.4s							
P29M	**Windy Craggy**	**0.89**	**89**	P		**Pb**	**21 59 58.1**	**-1.8**
	baz=269,SNR=612							
P29M				S		**Sb**	**22 00 09.5**	**-1.8**
	baz=269							
YUK7	**Dusty Glacier**	**1.13**	**36**			**Pn**	**22 00 03.0**	**-0.7**
YUK7						**Sn**	**22 00 17.9**	**-0.7**
O28M	**Mount Upton**	**1.20**	**343**			**Pn**	**22 00 03.5**	**-1.1**
O28M						**Sn**	**22 00 19.1**	**-1.3**
O28M				IAML			22 00 20.0	
	comp=E,2μm,0.6s							
O28M				IAML			22 00 20.6	
	comp=N,3μm,0.7s							
O28M	**Mount Upton**	**1.20**	**343**	P		**Pn**	**22 00 03.5**	**-1.1**
	baz=162,SNR=1000							
O28M				S		**Sn**	**22 00 19.4**	**-0.9**
	baz=162							
P30M	**Million Dollar**	**1.37**	**68**	P		**Pn**	**22 00 06.6**	**-0.2**
	baz=248							
P30M				S		**Sn**	**22 00 24.4**	**+0.1**
	baz=248							
LOGN	**Logan Glacier**	**1.41**	**329**			**Pn**	**22 00 06.4**	**-1.1**
LOGN				Sn		**Sn**	**22 00 25.6**	**+0.1**
LOGN				IAML			22 00 27.8	
	comp=E,2μm,0.5s							
LOGN				IAML			22 00 27.8	
	comp=N,1μm,0.5s							
YUK6	**Outpost Mounta**	**1.43**	**23**			**Pn**	**22 00 08.0**	**+0.1**
YUK6	**Outpost Mounta**	**1.43**	**23**	P		**Pn**	**22 00 08.0**	**+0.1**
	baz=202,SNR=742							
YUK6				S		**Sn**	**22 00 27.2**	**+1.1**
	baz=202							
HYT	**Haines Junctio**	**1.56**	**39**			**Pn**	**22 00 08.5**	**-0.9**
HYT				Sn		**Sn**	**22 00 29.7**	**+0.7**
HYT				IAML			22 00 31.8	
	comp=E,1μm,0.5s							
HYT				IAML			22 00 32.1	
	comp=N,1μm,1.0s							
HYT	**Haines Junctio**	**1.56**	**39**	P		**Pn**	**22 00 09.4**	**-0.1**
	baz=219,SNR=1000							
HYT				S		**Sn**	**22 00 30.2**	**+1.2**
	baz=219							
CYK	**Cape Yakataga**	**1.58**	**288**			**Pn**	**22 00 09.6**	**0.0**
GRNC	**Granite Creek**	**1.58**	**315**			**Pn**	**22 00 08.8**	**-1.1**
GRNC				Sn		**Sn**	**22 00 29.6**	**-0.1**
GRNC				IAML			22 00 32.2	
	comp=N,1μm,0.9s							
PLBC	**Pleasant Camp**	**1.60**	**95**			**Pn**	**22 00 09.6**	**-0.4**
PLBC						**Sn**	**22 00 30.6**	**+0.7**
PLBC	**Pleasant Camp**	**1.60**	**95**	P		**Pn**	**22 00 09.6**	**-0.4**
	baz=277,SNR=1000							
PLBC				S		**Sn**	**22 00 30.9**	**+0.9**
	baz=277							
YUK8	**Steele Glacier**	**1.66**	**356**	P		**Pn**	**22 00 11.7**	**+0.7**
	baz=174,SNR=737							
YUK8				S		**Sn**	**22 00 33.8**	**+1.9**
	baz=174							
BRWY	**Burwash Landin**	**1.76**	**7**	P		**Pn**	**22 00 12.8**	**+0.6**
	baz=187							
BRWY				S		**Sb**	**22 00 36.8**	**+0.5**
	baz=187							
YUK4	**Talbot Arm**	**1.77**	**13**	P		**Pn**	**22 00 14.5**	**+2.0**
	baz=194,SNR=245							
YUK4				S		**Sb**	**22 00 39.1**	**+2.4**
	baz=194							
BARN	**Barnard Glacie**	**1.79**	**324**			**Pn**	**22 00 12.2**	**-0.6**
KIAG	**Kiagna River**	**1.93**	**314**			**Pn**	**22 00 14.5**	**-0.1**
TGL	**Tana Glacier**	**2.01**	**306**			**Pn**	**22 00 15.2**	**-0.5**
TGL				IAML			22 00 44.4	
	comp=N,563nm,0.7s							
O30N	**Mendenhall**	**2.05**	**55**			**Pn**	**22 00 16.0**	**-0.2**
O30N				IAML			22 00 46.5	
	comp=N,752nm,0.8s							
O30N				IAML			22 00 47.2	
	comp=E,643nm,0.9s							
O30N	**Mendenhall**	**2.05**	**55**	P		**Pn**	**22 00 16.3**	**+0.1**
	baz=236,SNR=706							
O30N				S		**Sn**	**22 00 41.7**	**+0.7**
	baz=236							
CRQE	**Cirque**	**2.12**	**304**	P		**Pn**	**22 00 16.9**	**-0.3**
	baz=121							
CRQE				S		**Sn**	**22 00 44.9**	**+2.0**
	baz=121							
SKAG	**Skagway**	**2.13**	**93**			**Pn**	**22 00 16.8**	**-0.4**
SKAG				IAML			22 00 47.4	
	comp=E,603nm,0.6s							
SKAG	**Skagway**	**2.13**	**93**	P		**Pn**	**22 00 17.3**	**+0.1**
	baz=276,SNR=77							
SKAG				S		**Sn**	**22 00 44.2**	**+1.3**
	baz=276							
CRQM	**Cirque**	**2.14**	**303**			**Pn**	**22 00 16.4**	**-1.1**
CRQM				IAML			22 00 47.8	
	comp=E,840nm,0.8s							
CRQM				IAML			22 00 54.5	
	comp=N,951nm,0.9s							
N30M	**Aishikik Lake**	**2.19**	**32**			**Pn**	**22 00 17.7**	**-0.4**
N30M				IAML			22 00 53.8	
	comp=N,643nm,0.8s							
N30M				IAML			22 00 55.0	
	comp=E,643nm,0.9s							
N30M	**Aishikik Lake**	**2.19**	**32**	P		**Pn**	**22 00 18.1**	**+0.1**
	baz=213,SNR=231							
YUK3	**Moose Creek**	**2.20**	**348**	P		**Pn**	**22 00 19.0**	**+0.5**
	baz=167,SNR=1000							
YUK3				S		**Sn**	**22 00 47.8**	**+2.7**
	baz=167							
BERG	**Berg Lake**	**2.25**	**292**			**Pn**	**22 00 18.3**	**-0.5**
S31K	**Pelican**	**2.38**	**133**			**Pn**	**22 00 20.6**	**-0.1**
S31K	**Pelican**	**2.38**	**133**	P		**Pn**	**22 00 19.2**	**-1.4**
	baz=316							
MCARA	**McCarthy VSAT**	**2.48**	**317**			**Pn**	**22 00 21.9**	**-0.1**
MCARA				IAML			22 01 00.9	
	comp=E,790nm,0.6s							
MCARA	**McCarthy VSAT**	**2.48**	**317**	P		**Pn**	**22 00 22.9**	**+0.8**
	baz=134,SNR=306							
KAIM	**Kayak Island**	**2.51**	**279**			**Pn**	**22 00 22.5**	**+0.1**
KAIM				IAML			22 01 15.6	
	comp=N,710nm,0.9s							
KAIM				IAML			22 01 18.3	
	comp=E,765nm,0.7s							
KAIM	**Kayak Island**	**2.51**	**279**	P		**Pn**	**22 00 22.1**	**-0.3**
	baz=95							
WHY	**Whitehorse**	**2.53**	**64**			**Pn**	**22 00 22.7**	**-0.1**
WHY				IAML			22 01 11.2	
	comp=E,670nm,1.1s							
WHY	**Whitehorse**	**2.53**	**64**	P		**Pn**	**22 00 23.0**	**+0.2**
	baz=247,SNR=76							
WHY				S		**Sn**	**22 00 53.9**	**+0.9**
	baz=247							
VRDI	**Verde Repeater**	**2.53**	**311**			**Pn**	**22 00 22.7**	**-0.2**
VRDI				IAML			22 01 01.4	
	comp=N,395nm,0.5s							
N31M	**Braeburn, Yuko**	**2.61**	**43**			**Pn**	**22 00 23.9**	**-0.1**
N31M	**Braeburn, Yuko**	**2.61**	**43**	P		**Pn**	**22 00 24.4**	**+0.5**
	baz=225							
BESE	**Bessie Mountai**	**2.62**	**112**			**Pn**	**22 00 23.3**	**-0.6**
BESE				IAML			22 01 02.6	
	comp=E,463nm,0.6s							
BESE				IAML			22 01 10.4	
	comp=N,384nm,0.7s							
RAGM	**Ragged Mountai**	**2.71**	**288**			**Pn**	**22 00 24.7**	**-0.5**
GLB	**Gilahina Butte**	**2.80**	**312**			**Pn**	**22 00 26.0**	**-0.5**
M29M	**Somme Creek**	**2.87**	**10**			**Pn**	**22 00 27.3**	**-0.2**
M29M				IAML			22 01 13.1	
	comp=E,470nm,0.9s							
M29M				IAML			22 01 16.0	
	comp=N,298nm,0.7s							
M29M	**Somme Creek**	**2.87**	**10**	P		**Pn**	**22 00 27.9**	**+0.5**
	baz=190,SNR=93							
M29M				S		**Sn**	**22 01 01.7**	**+0.4**
	baz=190							
BVCY	**Beaver Creek**	**2.87**	**347**	P		**Pn**	**22 00 27.9**	**+0.4**
	baz=166,SNR=30							
BMRM	**Bremner River**	**2.88**	**300**			**Pn**	**22 00 27.4**	**-0.2**
BMRM				IAML			22 01 10.3	
	comp=N,546nm,0.7s							
BMRM				IAML			22 01 10.6	
	comp=E,560nm,0.5s							
BMRM	**Bremner River**	**2.88**	**300**	P		**Pn**	**22 00 27.6**	**+0.1**
	baz=116							
R32K	**Eaglecrest**	**2.92**	**116**			**Pn**	**22 00 27.2**	**-0.8**
R32K				IAML			22 01 12.1	
	comp=N,273nm,1.0s							
R32K	**Eaglecrest**	**2.92**	**116**	P		**Pn**	**22 00 27.8**	**-0.2**
	baz=300							
P32M	**Atlin**	**2.94**	**88**			**Pn**	**22 00 27.3**	**-1.1**
P32M				IAML			22 01 14.0	
	comp=N,320nm,0.7s							
P32M	**Atlin**	**2.94**	**88**	P		**Pn**	**22 00 27.7**	**-0.6**
	baz=273,SNR=27							
M27K	**Edge Creek, AK**	**2.97**	**338**			**Pn**	**22 00 28.9**	**-0.1**
M27K				IAML			22 01 16.3	
	comp=E,249nm,0.9s							
M27K	**Edge Creek, AK**	**2.97**	**338**	P		**Pn**	**22 00 29.5**	**+0.6**
	baz=156,SNR=58							
N25K	**Chitina, Valde**	**3.20**	**310**	P		**Pn**	**22 00 32.7**	**+0.7**
	baz=126							
M30M	**Minto, Yukon**	**3.23**	**23**	Pn		**Pn**	**22 00 32.7**	**+0.2**
M30M	**Minto, Yukon**	**3.23**	**23**	P		**Pn**	**22 00 32.6**	**+0.2**
	baz=204,SNR=54							
M26K	**Nabesna, AK**	**3.26**	**330**			**Pn**	**22 00 33.0**	**+0.2**
M26K	**Nabesna, AK**	**3.26**	**330**	P		**Pn**	**22 00 33.5**	**+0.6**
	baz=147							
EYAK	**Cordova Ski Ar**	**3.27**	**289**			**Pn**	**22 00 32.9**	**+0.1**
EYAK	**Cordova Ski Ar**	**3.27**	**289**	P		**Pn**	**22 00 32.5**	**-0.2**
	baz=104							
S32K	**Killisnoo**	**3.37**	**128**			**Pn**	**22 00 34.2**	**0.0**
S32K	**Killisnoo**	**3.37**	**128**	P		**Pn**	**22 00 33.5**	**-0.7**
	baz=312							
SIT	**Sitka**	**3.39**	**138**			**Pn**	**22 00 34.4**	**-0.1**
SIT	**Sitka**	**3.39**	**138**	P		**Pn**	**22 00 35.2**	**+0.7**
	baz=321							
P33M	**Teslin, Yukon**	**3.41**	**77**			**Pn**	**22 00 33.9**	**-1.0**
P33M				IAML			22 01 26.7	
	comp=N,259nm,1.0s							
P33M	**Teslin, Yukon**	**3.41**	**77**	P		**Pn**	**22 00 33.9**	**-1.0**
	baz=262,SNR=42							
DIV	**Divide**	**3.46**	**298**			**Pn**	**22 00 35.4**	**-0.2**
Q23K	**Middleton Isla**	**3.50**	**270**	P		**Pn**	**22 00 35.5**	**-0.5**
	baz=84							
N32M	**Quiet Lake**	**3.53**	**62**	P		**Pn**	**22 00 36.8**	**+0.3**
	baz=246							
L29M	**L29M**	**3.55**	**10**			**Pn**	**22 00 37.1**	**+0.3**
L29M				IAML			22 01 40.4	
	comp=N,324nm,0.6s							
L29M	**L29M**	**3.55**	**10**	P		**Pn**	**22 00 37.5**	**+0.7**
	baz=191,SNR=97							
M31M	**Drury Creek, Y**	**3.59**	**42**			**Pn**	**22 00 37.4**	**+0.2**
M31M				IAML			22 01 39.2	
	comp=N,222nm,1.0s							
M31M				IAML			22 01 41.9	
	comp=E,245nm,1.1s							
M31M	**Drury Creek, Y**	**3.59**	**42**	P		**Pn**	**22 00 37.9**	**+0.7**
	baz=226,SNR=12							
HIN	**Hinchinbrook I**	**3.60**	**285**			**Pn**	**22 00 37.3**	**-0.2**
BCAR	**Beaver Creek A**	**3.62**	**343**			**Pn**	**22 00 36.6**	**-1.1**
L27K	**Beaver Creek,**	**3.62**	**343**	P		**Pn**	**22 00 37.8**	**0.0**
	baz=161							
FID	**Port Fidalgo**	**3.66**	**291**			**Pn**	**22 00 38.8**	**+0.5**
KLU	**Klutina**	**3.68**	**303**			**Pn**	**22 00 38.8**	**+0.2**
KLU				IAML			22 01 33.6	
	comp=E,256nm,0.6s							
KLU	**Klutina**	**3.68**	**303**	P		**Pn**	**22 00 39.3**	**+0.7**
	baz=118							
Q32M	**Nakina River**	**3.77**	**97**			**Pn**	**22 00 39.7**	**-0.2**
Q32M				IAML			22 01 40.7	
	comp=N,174nm,1.1s							
Q32M	**Nakina River**	**3.77**	**97**	P		**Pn**	**22 00 39.4**	**-0.5**
	baz=283,SNR=50							
L26K	**Log Cabin Wild**	**3.88**	**333**			**Pn**	**22 00 40.8**	**-0.5**
L26K	**Log Cabin Wild**	**3.88**	**333**	P		**Pn**	**22 00 41.9**	**+0.6**
	baz=150,SNR=18							
MENT	**Mentasta**	**3.89**	**330**			**Pn**	**22 00 41.1**	**-0.3**
MENT				IAML			22 02 03.6	
	comp=E,113nm,0.9s							
HARP	**HAARP**	**3.91**	**318**			**Pn**	**22 00 41.5**	**-0.2**
HARP				IAML			22 02 11.0	
	comp=E,123nm,1.1s							
HARP	**HAARP**	**3.91**	**318**	P		**Pn**	**22 00 42.5**	**+0.8**
	baz=133							
GLI	**Glacier Island**	**3.99**	**292**	Pn		**Pn**	**22 00 42.7**	**-0.1**
GLI	**Glacier Island**	**3.99**	**292**	P		**Pn**	**22 00 43.0**	**+0.3**
	baz=105							
P23K	**Montague Islan**	**4.01**	**279**	P		**Pn**	**22 00 43.0**	**0.0**
	baz=92							
M24K	**Tolsona, Glenn**	**4.10**	**310**			**Pn**	**22 00 43.8**	**-0.6**
M24K				IAML			22 01 54.5	
	comp=N,146nm,1.0s							
M24K	**Tolsona, Glenn**	**4.10**	**310**	P		**Pn**	**22 00 45.8**	**+1.4**
	baz=124							
K29M	**Barlow Dome**	**4.33**	**12**			**Pn**	**22 00 47.4**	**-0.1**
K29M				IAML			22 02 04.1	
	comp=N,165nm,0.8s							
K29M	**Barlow Dome**	**4.33**	**12**	P		**Pn**	**22 00 48.6**	**+1.1**
	baz=193,SNR=106							
R33M	**Jennings River**	**4.35**	**89**			**Pn**	**22 00 47.4**	**-0.4**
R33M				IAML			22 01 59.0	
	comp=E,128nm,0.9s							
R33M	**Jennings River**	**4.35**	**89**	P		**Pn**	**22 00 47.5**	**-0.4**
	baz=276,SNR=27							
PAX	**Paxson**	**4.42**	**322**			**Pn**	**22 00 48.2**	**-0.5**
PAX	**Paxson**	**4.42**	**322**	P		**Pn**	**22 00 49.1**	**+0.3**
	baz=137							
SCM	**Sheep Creek Mo**	**4.43**	**303**			**Pn**	**22 00 48.6**	**-0.3**
SCM				IAML			22 01 55.1	
	comp=E,133nm,0.8s							
SCM				IAML			22 02 00.7	
	comp=N,132nm,0.9s							
SCM	**Sheep Creek Mo**	**4.43**	**303**	P		**Pn**	**22 00 50.3**	**+1.4**
	baz=117							
DAWY	**Dawson**	**4.45**	**1**			**Pn**	**22 00 49.3**	**+0.1**
DAWY				IAML			22 02 06.2	
	comp=E,94nm,1.0s							
DAWY				IAML			22 02 12.7	
	comp=N,77nm,0.8s							
DAWY	**Dawson**	**4.45**	**1**	P		**Pn**	**22 00 49.9**	**+0.8**
	baz=180,SNR=90							
PWL	**Port Wells**	**4.58**	**289**	IAML			22 02 02.4	
	comp=N,70nm,0.7s							
M23K	**Glacier View**	**4.59**	**302**	P		**Pn**	**22 00 52.2**	**+1.2**
	baz=115							
S34M	**Telegraph Cree**	**4.68**	**108**	IAML			22 02 16.4	
	comp=E,113nm,0.8s							
S34M	**Telegraph Cree**	**4.68**	**108**	P		**Pn**	**22 00 52.1**	**-0.2**
	baz=285,SNR=8.1							
KNK	**Knik Glacier**	**4.78**	**296**			**Pn**	**22 00 53.2**	**-0.4**
KNK				IAML			22 02 09.3	
	comp=E,92nm,0.8s							
KNK				IAML			22 02 20.9	
	comp=N,77nm,1.1s							
KNK	**Knik Glacier**	**4.78**	**296**	P		**Pn**	**22 00 54.6**	**+1.0**
	baz=108							
SML	**Sawmill**	**4.86**	**300**			**Pn**	**22 00 55.0**	**+0.3**
SML				IAML			22 02 12.1	
	comp=E,70nm,0.6s							
SML				IAML			22 02 21.6	
	comp=N,84nm,0.7s							
SML	**Sawmill**	**4.86**	**300**	P		**Pn**	**22 00 56.1**	**+1.4**
	baz=113							
J29N	**Klondike Camp**	**4.88**	**7**			**Pn**	**22 00 55.5**	**+0.6**
WAT6	**Susitna Watana**	**4.97**	**310**	P		**Pn**	**22 00 56.8**	**+0.4**
	baz=123							
WRAK	**Wrangell Islan**	**4.98**	**127**	IAML			22 02 26.0	
	comp=N,61nm,1.1s							
WRAK				IAML			22 02 39.9	
	comp=N,56nm,0.8s							
MMPY	**Sheldon Lake,**	**4.99**	**50**	P		**Pn**	**22 00 57.2**	**+0.6**
	baz=236							
DLBC	**Dease Lake**	**5.04**	**100**	Pn		**Pn**	**22 00 57.2**	**0.0**
	comp=N,1.2nm,0.3s,baz=284,slow=7.1,SNR=16							
DLBC				Pg		**Pb**	**22 01 11.0**	**+0.6**
	comp=N,1.8nm,0.3s,baz=277,slow=15,SNR=14							
DLBC				Sn		**Sn**	**22 01 53.0**	**-1.6**
	comp=N,5.6nm,0.3s,baz=308,slow=24,SNR=5.1							
DLBC				Lg		Lg	22 02 18.9	
	comp=N,8.4nm,0.3s,baz=108,slow=14,SNR=7.3							
DLBC				LR		LR	22 03 10.9	
	comp=N,101nm,20.3s,baz=187,slow=41 comp=N,2.5nm,0.3s							
DLBC	**Dease Lake**	**5.04**	**100**	P		**Pn**	**22 00 56.6**	**-0.6**
	baz=288,SNR=16							
SEW	**Seward**	**5.04**	**280**	P		**Pn**	**22 00 56.3**	**-0.9**
	baz=91							
GHO	**Glory Hole Cre**	**5.11**	**299**	IAML			22 02 16.7	
	comp=E,68nm,0.7s							
GHO				IAML			22 02 29.4	
	comp=N,58nm,0.9s							
DHY	**Denali Highway**	**5.13**	**316**	P		**Pn**	**22 00 59.9**	**+1.4**
	baz=129							
K24K	**Donnelly Dome**	**5.14**	**327**	P		**Pn**	**22 01 00.4**	**+1.8**
	baz=142							
J30M	**Hart River**	**5.18**	**15**	P		**Pn**	**22 01 00.3**	**+1.1**
	baz=198,SNR=30							
RC01	**Rabbit Creek A**	**5.29**	**290**	IAML			22 02 24.6	
	comp=N,50nm,0.9s							
WAT1	**Susitna Watana**	**5.42**	**310**	P		**Pn**

CHUM Lake Minchumin 7.42 311 P Pn **22 01 30.6 +0.8**
baz=119
G30M tAoh Zraii Nji 7.52 10 P Pn **22 01 31.3 0.0**
baz=193,SNR=10
H02S1 DAWSON INLET T 7.52 146 Pn Pn **22 01 31.2 -0.1**
H02S1 Sn Sn **22 02 50.8 -4.9**
H02S2 DAWSON INLET T 7.52 146 Pn Pn **22 01 32.3 +1.1**
H02S2 Sn Sn **22 02 50.2 -5.5**
MLY Manley 7.53 321 P Pn **22 01 32.1 +0.8**
baz=131
N19K Bonanza Creek 7.56 285 P Pn **22 01 31.8 0.0**
baz=93
OHAK Old Harbor 7.63 258 P Pn **22 01 31.5 -1.2**
baz=66
G31M Satah River 7.69 16 P Pn **22 01 33.4 0.0**
baz=200,SNR=26
H23K Yukon River 7.73 328 P Pn **22 01 34.7 +0.6**
baz=139
K20K Telida 7.90 304 P Pn **22 01 36.8 +0.4**
baz=112
L19K White Mountain 7.91 295 P Pn **22 01 37.2 +0.6**
baz=102
O18K Koktuh Hills 7.94 278 P Pn **22 01 36.5 -0.5**
baz=85
P18K Big Mountain, 8.01 275 P Pn **22 01 38.0 +0.1**
baz=82
F28M Old Crow 8.02 359 P Pn **22 01 38.4 +0.4**
baz=178
Q18K Katmai Hardscr 8.04 270 P Pn **22 01 38.2 -0.2**
baz=77
F30M Barrier River 8.18 10 P Pn **22 01 40.6 +0.5**
baz=193
N18K Kilae Creek 8.24 284 P Pn **22 01 40.9 -0.3**
baz=90
M18K Stony River 8.26 290 P Pn **22 01 41.5 +0.3**
baz=96
J20K Nowinta River 8.27 310 P Pn **22 01 42.5 +1.0**
baz=117
H22K Ishtalitna Cre 8.30 324 P Pn **22 01 42.1 +0.2**
baz=134
F26K Sheenjek River 8.35 348 P Pn **22 01 43.7 +1.1**
baz=163,SNR=19
SII Sitkinak Islan 8.37 255 P Pn **22 01 42.4 -0.4**
baz=62
F25K Christian Rive 8.44 344 P Pn **22 01 44.8 +0.9**
baz=158,SNR=8.2
G23K Bananza Creek 8.54 331 P Pn **22 01 46.1 +1.0**
baz=141
Q17K Contact Creek 8.58 268 P Pn **22 01 46.1 +0.3**
baz=74
H21K Melozitna Rive 8.59 320 P Pn **22 01 46.8 +0.9**
baz=128
E27K Coleen River 8.64 355 P Pn **22 01 47.4 +0.9**
baz=173
P17K Kvichak River 8.65 274 P Pn **22 01 46.7 0.0**
baz=80
F24K Squaw Lake 8.75 338 P Pn **22 01 48.9 +0.9**
baz=151
L18K Granite Mounta 8.76 295 P Pn **22 01 48.7 +0.6**
baz=100
J19K Poorman 8.79 307 P Pn **22 01 49.1 +0.6**
baz=113
E29M Blow River 8.82 4 P Pn **22 01 48.8 -0.1**
baz=185,SNR=8.2
N17K Nushagak Hills 8.89 283 P Pn **22 01 49.6 -0.3**
baz=88
O17K Koliganek Bris 8.90 279 P Pn **22 01 49.8 -0.2**
baz=84
E28M Babbage River 9.01 360 P Pn **22 01 51.0 -0.6**
baz=180
M17K Holitna River 9.02 289 P Pn **22 01 51.8 +0.1**
baz=94
R17L Mt. Peulik Vol 9.02 264 P Pn **22 01 51.9 +0.2**
baz=70
J18K Innoko River 9.06 302 P Pn **22 01 52.4 +0.1**
baz=107
INK Inuvik 9.09 14 Pn Pn **22 01 52.7 +0.1**
comp=N,0.2nm,0.3s,baz=202,slow=23,SNR=2.3
INK Sn Sn **22 03 30.4 -3.7**
comp=N,0.2nm,0.3s,baz=274,slow=30,SNR=2.0
INK Lg Lg 22 04 27.5
comp=N,0.3nm,0.3s,baz=296,slow=24,SNR=5.3
comp=N,1.7nm,0.6s
H20K Anotleneega Mo 9.20 316 P Pn **22 01 54.9 +0.7**
baz=123
E24K Your Creek 9.35 339 P Pn **22 01 56.9 +0.7**
baz=151
G21K Allakaket 9.36 323 P Pn **22 01 56.9 +0.4**
baz=131
O16K Kokwok River B 9.42 278 Pn Pn **22 01 57.0 -0.2**
O16K Kokwok River B 9.42 278 P Pn **22 01 57.1 -0.2**
baz=82
CHIR Chirikof Islan 9.43 253 Pn Pn **22 01 56.4 -0.9**
CHIR Chirikof Islan 9.43 253 P Pn **22 01 57.5 +0.2**
baz=60
P16K Nushagak River 9.47 274 Pn Pn **22 01 58.0 +0.1**
P16K Nushagak River 9.47 274 P Pn **22 01 58.1 +0.3**
baz=79
L17K Donlin 9.49 293 P Pn **22 01 58.4 +0.2**
baz=97
E23K Chandalar 9.55 337 Pn Pn **22 02 00.6 +1.5**
K17K Iditarod 9.59 297 P Pn **22 02 00.1 +0.6**
baz=100
N16K Nishlik Lake 9.67 283 P Pn **22 02 00.6 -0.1**
baz=87
F22K John River 9.70 330 P Pn **22 02 01.4 +0.4**
baz=138
M16K Timber Creek 9.75 287 P Pn **22 02 02.1 +0.4**
baz=90
H19K Roundabout Mou 9.78 314 P Pn **22 02 02.4 +0.3**
baz=119
BBB Bella Bella 9.81 135 LR LR 22 05 43.9
comp=N,67nm,20.5s,baz=152,slow=36
L16K Owhat River 10.01 291 P Pn **22 02 06.3 +0.9**
baz=93
J17K VABM Dome 10.07 300 P Pn **22 02 06.5 +0.4**
baz=103
D25K Kavik River 10.16 346 P Pn **22 02 09.2 +1.8**
baz=160,SNR=12
H18K Honhosa River 10.33 310 P Pn **22 02 10.1 +0.4**
baz=114
N15K Kwethluk River 10.35 282 P Pn **22 02 10.4 +0.4**
baz=84
O15K Ungalikthiuk R 10.37 276 P Pn **22 02 11.4 +1.2**
baz=79
M15K Kasigluk River 10.61 285 P Pn **22 02 13.2 -0.2**
baz=87
G18K Tagagawik 10.76 314 P Pn **22 02 16.1 +0.6**
baz=117
H17K Granite Mounta 10.86 308 P Pn **22 02 17.5 +0.6**
baz=110
CHNA Chernabura Isl 11.88 255 P Pn **22 02 31.5 +0.7**
baz=58
YKA Yellowknife Ar 12.36 66 Pn Pn **22 02 36.6 -0.8**
comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=1.3
YKA Lg Lg 22 06 08.4
baz=264,slow=26,SNR=5.3
comp=N,0.6nm,0.7s
NEW Newport 17.30 121 P P **22 03 44.3 +0.1**
comp=N,0.1nm,0.3s,baz=348,slow=8.2,SNR=3.3
NEW LR LR 22 10 43.4
comp=N,47nm,18.1s,baz=171,slow=38
comp=N,1.0nm,0.6s
YBH Yreka Blue Hor 20.73 142 LR LR 22 12 22.7
comp=N,33nm,18.9s,baz=328,slow=36
RES Resolute Bay 22.11 30 P P **22 04 36.3 +0.1**
comp=N,0.9nm,0.6s,baz=243,slow=10,SNR=1.6
comp=N,0.9nm,0.6s
PDAR Pinedale Array 24.91 119 P P **22 05 06.6 +2.2**
comp=N,0.3nm,0.7s,baz=311,slow=7.7,SNR=4.7
comp=N,0.3nm,0.7s
NVAR Mina Array Bea 25.15 138 P P **22 05 07.4 +0.9**
comp=N,0.4nm,0.7s,baz=328,slow=10,SNR=2.1
comp=N,0.4nm,0.7s
ULM Lac du Bonnet 26.30 91 P P **22 05 17.1 +0.5**
comp=N,1.4nm,0.7s,baz=280,slow=12,SNR=3.4
ULM LR LR 22 16 51.4
comp=N,17nm,18.7s,baz=19,slow=39
comp=N,1.4nm,0.7s
ARCES ARCESS Array B 50.68 7 P P **22 08 37.9 -2.1**
comp=N,1.8nm,0.7s,baz=343,slow=5.8,SNR=4.9
comp=N,1.8nm,0.7s
H11N2 WAKE ISLAND Hy 55.04 248 T T 23 08 29.9
baz=31,slow=76,SNR=30
H11N3 WAKE ISLAND Hy 55.04 248 T T 23 08 35.8
baz=31,slow=76,SNR=51
H11N1 WAKE ISLAND Hy 55.06 248 T T 23 08 28.1
baz=31,slow=76,SNR=3.4
H11S1 WAKE ISLAND Hy 56.19 247 T T 23 10 05.1
baz=30,slow=76,SNR=61
H11S2 WAKE ISLAND Hy 56.20 247 T T 23 10 01.6
baz=30,slow=76,SNR=21
H11S3 WAKE ISLAND Hy 56.20 247 T T 23 09 53.0
baz=30,slow=76,SNR=23
FINES FINESS Array B 58.74 8 P P **22 09 38.0 -0.4**
comp=N,1.2nm,0.8s,baz=266,slow=5.6,SNR=4.0
comp=N,1.2nm,0.8s
HFS Hagfors 58.76 15 P P **22 09 38.3 -0.3**
comp=N,3.9nm,0.9s,baz=2.5,slow=10,SNR=4.5
comp=N,3.9nm,0.9s
KSRS Korea Array 59.78 293 P P **22 09 47.2 +1.2**
comp=N,1.0nm,0.6s,baz=38,slow=7.4,SNR=1.9
comp=N,1.0nm,0.6s
EKA Eskdalemuir Ar 60.21 27 P P **22 09 49.2 +0.5**
comp=N,1.8nm,0.7s,baz=347,slow=5.0,SNR=8.0
comp=N,1.8nm,0.7s
SONM Songino Array 60.22 315 P P **22 09 50.7 +1.6**
comp=N,0.5nm,0.4s,baz=22,slow=9.3,SNR=4.5
comp=N,0.5nm,0.4s
JCJ Chichijima 61.19 275 LR LR 22 36 47.3
comp=N,60nm,19.2s,baz=111,slow=36
ZALV Zalesovo Beam 61.33 332 P P **22 09 54.9 -1.4**
comp=N,0.6nm,0.5s,baz=1.1,slow=7.2,SNR=3.8
comp=N,0.6nm,0.5s
KURBB Kurchatov Arra 65.86 335 P P **22 10 25.1 -1.1**
comp=N,0.4nm,0.3s,baz=25,slow=6.3,SNR=7.2
comp=N,0.4nm,0.3s
MKAR Makanchi Array 68.56 331 P P **22 10 41.8 -1.7**
comp=N,0.2nm,0.5s,baz=28,slow=6.5,SNR=3.1
comp=N,0.2nm,0.5s
AKASG Malin Array Be 69.64 8 P P **22 10 49.9 -0.2**
comp=N,1.1nm,0.5s,baz=354,slow=5.9,SNR=6.9
comp=N,1.1nm,0.5s
GERES GERESS Array B 69.69 19 P P **22 10 50.9 +0.3**
comp=N,0.6nm,0.9s,baz=356,slow=5.8,SNR=5.4
comp=N,0.6nm,0.9s
ESDC Sonseca Array 74.46 34 P P **22 11 20.0 +0.8**
comp=N,1.3nm,0.8s,baz=334,slow=6.2,SNR=11
comp=N,1.3nm,0.8s
CMAR Chiang Mai Arr 88.93 306 P P **22 12 34.8 -0.9**
comp=N,1.1nm,0.6s,baz=358,slow=5.1,SNR=6.7
comp=N,1.1nm,0.6s
QSPA South Pole Qui 149.44 180 PKPbc **PKPbc 22 19 29.4 +0.8**
comp=N,3.0nm,1.0s,baz=138,slow=1.2,SNR=5.2

*IDC **23** 22:08:40.4±1.6,52°.60N×178°.19W,h231km±15km, mb3.2/18,mbtmp3.9/22,Error ellipse: s-maj=19.2km s-min=10.6km az=2.0*
*NEIC **23** 22:08:40.3±2.1,52°.4N±0°.1×178°.16W±0°.09,h234km±7km, mb4.3/104,ML3.9/12,Error ellipse: s-maj=18.7km s-min=7.9km az=178.0*
ISC 23 22:08:40.0±0.6,52°.52N±0°.09×178°.09W±0°.04, h230km±6km,n167,σ1$38/159,mb3.9/30,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**0.88**	**139**		**Pn**		**22 09 12.4**	**+0.1**
KIWB					Sn	**S**	**22 09 37.4**	**0.0**
KIWB					IAML		22 09 38.2	
	comp=E,657nm,0.6s							
KIWB					IAML		22 09 40.7	
	comp=N,676nm,0.4s							
ADK	**Adak**	**1.07**	**126**		**Pn**		**22 09 13.2**	**-0.1**
ADK					Sn	**S**	**22 09 39.0**	**-0.3**
ADK					IAML		22 09 44.9	
	comp=N,609nm,0.4s							
GSTR	**Great Sitkin T**	**1.32**	**108**		**Pn**		**22 09 15.6**	**+0.5**
GSTR					Sn	**S**	**22 09 41.8**	**-0.7**
AMKA	**Amchitka**	**1.98**	**236**		**Pn**		**22 09 20.3**	**-0.3**
AMKA					Sn	**S**	**22 09 50.8**	**-1.5**
AMKA					IAML		22 09 53.0	
	comp=N,437nm,0.2s							
AMKA					IAML		22 09 53.2	
	comp=E,448nm,0.3s							
ATKA	**Atka Island**	**2.41**	**96**	Pn	**Pn**		**22 09 25.1**	**+0.3**
ATKA				Sn	**S**		**22 09 59.7**	**-0.2**
SHEM	**Shemya Is, Ala**	**4.76**	**276**	P	**Pn**		**22 09 52.2**	**+0.1**
	comp=E,47nm,0.9s,baz=81,slow=13,SNR=2.1							
SHEM				S	**S**		**22 10 48.5**	**-0.8**
	comp=E,9.4nm,0.3s,baz=294,slow=23,SNR=5.9							
SMY	**Shemya**	**4.76**	**276**	Pn	**Pn**		**22 09 51.5**	**-0.7**
SMY				Sn	**S**		**22 10 45.8**	**-3.5**
SMY				IAML			22 10 46.1	
	comp=N,72nm,1.2s							
UNV	**Unalaska Valle**	**7.09**	**75**	Pn	**Pn**		**22 10 23.8**	**+2.3**
AKUT	**Akutan**	**7.55**	**73**	Pn	**Pn**		**22 10 28.3**	**+0.9**
SDPT	**Sand Point**	**10.76**	**68**	Pn	**Pn**		**22 11 07.4**	**-0.8**
CNBA	**Cornabura Isl**	**11.21**	**71**	Pn	**Pn**		**22 11 12.9**	**-1.0**
M13K	**Dall Lake**	**11.34**	**40**	Pn	**Pn**		**22 11 17.9**	**+2.4**
O14K	**Tigyukauivet M**	**11.59**	**48**	Pn	**Pn**		**22 11 20.0**	**+1.4**
N14K	**Kuskokwak Cree**	**11.74**	**44**		**Pn**		**22 11 23.0**	**+2.5**
K13K	**Kusilvak Mount**	**11.89**	**32**		**P**		**22 11 25.0**	**-1.2**
CHGN	**Chignik**	**12.06**	**64**	Pn	**Pn**		**22 11 25.3**	**+0.7**
M14K	**Bethel**	**12.09**	**41**		**Pn**		**22 11 26.6**	**+1.8**
O15K	**Ungalikthiuk R**	**12.21**	**50**		**Pn**		**22 11 27.9**	**+1.4**
N15K	**Kwethluk River**	**12.55**	**45**		**P**		**22 11 33.3**	**-0.3**
J14K	**Nanvaranak Lak**	**12.84**	**31**		**P**		**22 11 36.4**	**-0.3**
P16K	**Nushagak River**	**13.03**	**52**	P	**P**		**22 11 39.0**	**+0.1**
O16K	**Kokwok River B**	**13.19**	**50**		**Pn**		**22 11 40.2**	**+1.6**
K15K	**Wolf Creek Mou**	**13.21**	**36**		**P**		**22 11 40.9**	**+0.1**
M16K	**Timber Creek**	**13.46**	**43**	P	**P**		**22 11 43.9**	**+0.2**
CHIR	**Chirikof Islan**	**13.55**	**67**	Pn	**Pn**		**22 11 43.0**	**-0.1**
L16K	**Owhat River**	**13.62**	**40**		**P**		**22 11 46.1**	**+0.6**
P17K	**Kvichak River**	**13.83**	**53**		**Pn**		**22 11 47.5**	**+1.1**
N17K	**Nushagak Hills**	**14.00**	**47**	P	**P**		**22 11 50.2**	**+0.6**
ACHA	**Angle Creek He**	**14.11**	**57**		**P**		**22 11 51.7**	**+0.8**
J16K	**Anvik River**	**14.18**	**34**		**P**		**22 11 53.6**	**+2.0**
M17K	**Holitna River**	**14.29**	**43**		**P**		**22 11 53.7**	**+0.8**
SII	**Sitkinak Islan**	**14.42**	**64**		**Pn**		**22 11 53.6**	**-0.1**
I17K	**Unalakleet**	**14.56**	**32**		**P**		**22 11 56.6**	**+0.8**
PETK	**Petropavlovsk-**	**14.64**	**282**	P	**P**		**22 11 56.7**	**-0.1**
	comp=N,1.6nm,0.9s,baz=150,slow=5.7,SNR=2.2							
N18K	**Kilae Creek**	**14.64**	**47**		**P**		**22 11 57.6**	**+0.8**
O18K	**Koktuh Hills**	**14.65**	**51**		**P**		**22 11 58.4**	**+1.6**
K17K	**Iditarod**	**14.65**	**38**	P	**P**		**22 11 58.4**	**+1.6**
J17K	**VABM Dome**	**14.78**	**35**		**P**		**22 12 00.3**	**+2.1**
F15K	**North Star Dit**	**14.87**	**22**	P	**P**		**22 12 01.8**	**+2.6**
L18K	**Granite Mounta**	**15.01**	**41**		**Pn**		**22 12 02.3**	**+1.5**
L18K				IAmb	IAmb		22 12 05.0	
	comp=Z,5.9nm,0.6s							
G16K	**Koyuk River**	**15.18**	**26**	P	**Pn**		**22 12 04.3**	**+1.6**
G16K				IAmb	IAmb		22 12 06.2	
	comp=Z,14nm,1.0s							
N19K	**Bonanza Creek**	**15.33**	**48**		**Pn**		**22 12 06.2**	**+1.5**
KDAK	**Kodiak Island**	**15.45**	**60**	P	**P**		**22 12 06.2**	**+0.5**
	comp=Z,7.8nm,0.3s,baz=258,slow=7.8,SNR=54							
KDAK				S	**S**		**22 14 47.1**	**-9.0**
	comp=Z,11nm,1.3s,baz=239,slow=7.3,SNR=1.8							
KDAK	**Kodiak Island**	**15.45**	**60**	P	**P**		**22 12 05.7**	**+0.1**
H17K	**Granite Mounta**	**15.53**	**30**		**Pn**		**22 12 08.0**	**+1.0**
H17K				IAmb	IAmb		22 12 12.0	
	comp=Z,7.2nm,0.8s							
J18K	**Innoko River**	**15.67**	**37**		**Pn**		**22 12 10.0**	**+1.3**
J18K				IAmb	IAmb		22 12 12.3	
	comp=Z,18nm,1.1s							
L19K	**White Mountain**	**15.74**	**43**		**Pn**		**22 12 10.6**	**+1.0**
L19K				IAmb	IAmb		22 12 13.2	
	comp=Z,7.8nm,0.8s							
H18K	**Honhosa River**	**16.16**	**31**	P	**Pn**		**22 12 15.9**	**+1.4**
H18K				IAmb	IAmb		22 12 17.1	
	comp=Z,12nm,0.9s							
M20K	**Styx River**	**16.35**	**45**		**Pn**		**22 12 17.9**	**+1.0**
M20K				IAmb	IAmb		22 12 21.3	
	comp=Z,12nm,1.0s							
J19K	**Poorman**	**16.37**	**37**		**P**		**22 12 16.7**	**+0.9**
J19K				IAmb	IAmb		22 12 21.3	
	comp=Z,12nm,1.2s							
CNPM	**China Poot**	**16.48**	**54**	P	**P**		**22 12 18.4**	**+1.3**
CNPM					**Pn**		**22 12 18.6**	**+0.2**
CNPM				IAmb	IAmb		22 12 33.4	
	comp=Z,14nm,1.2s							
SPU	**Mount Spurr**	**16.57**	**48**	P	**Pn**		**22 12 20.6**	**+1.1**
SPU				IAmb	IAmb		22 12 23.7	
	comp=Z,14nm,1.0s							
G18K	**Tagagawik**	**16.59**	**29**		**Pn**		**22 12 19.7**	**+0.1**
G18K					**P**		**22 12 20.1**	**+2.0**
K20K	**Telida**	**16.62**	**40**	P	**Pn**		**22 12 20.0**	**-0.1**
K20K				IAmb	IAmb		22 12 24.0	
	comp=Z,12nm,1.2s							
STLK	**Strandline Lak**	**16.78**	**47**	P	**Pn**		**22 12 22.7**	**+0.8**
STLK				IAmb	IAmb		22 12 24.3	
	comp=Z,13nm,0.9s							
C16K	**Lisburne Hills**	**16.95**	**16**	P	**Pn**		**22 12 24.1**	**+0.3**
H19K	**Roundabout Mou**	**17.01**	**32**	P	**P**		**22 12 24.2**	**+1.5**
J20K	**Nowinta River**	**17.02**	**37**		**Pn**		**22 12 24.8**	**+0.2**
J20K				IAmb	IAmb		22 12 25.7	
	comp=Z,8.8nm,0.7s							
SKT	**Skwentna**	**17.09**	**46**		**Pn**		**22 12 25.9**	**+0.5**
PPLA	**Purkeypile**	**17.17**	**43**		**Pn**		**22 12 27.1**	**+0.6**
PPLA				IAmb	IAmb		22 12 34.1	
	comp=Z,14nm,1.0s							
E18K	**Tukpahlearik C**	**17.21**	**23**	P	**Pn**		**22 12 26.7**	**-0.1**
E18K				IAmb	IAmb		22 12 31.0	
	comp=Z,16nm,1.1s							
SLKM	**Skilak Lake**	**17.22**	**51**	P	**P**		**22 12 25.6**	**+0.5**
G19K	**Purcell Mounta**	**17.22**	**29**		**Pn**		**22 12 27.4**	**+0.4**
G19K				IAmb	IAmb		22 12 32.0	
	comp=Z,5.9nm,0.6s							
BILL	**Bilibino**	**17.30**	**340**	P	**P**		**22 12 26.6**	**+0.8**
BILL				IAmb	IAmb		22 12 28.6	
	comp=Z,14nm,1.1s							
CAST	**Castle Rocks**	**17.44**	**41**	P	**Pn**		**22 12 29.5**	**-0.2**
CAST				IAmb	IAmb		22 12 31.4	
	comp=Z,13nm,0.8s							
O22K	**Cooper Landing**	**17.45**	**52**	P	**P**		**22 12 28.6**	**+1.1**
F19K	**Shaleruckik Mo**	**17.50**	**27**		**Pn**		**22 12 30.0**	**-0.3**
F19K				IAmb	IAmb		22 12 31.4	
	comp=Z,8.8nm,0.8s							
L22K	**Petersville**	**17.62**	**45**	P	**Pn**		**22 12 31.5**	**-0.2**
KTH	**Kantishna Hill**	**17.97**	**42**	P	**Pn**		**22 12 35.6**	**-0.3**
C18K	**Utukok River**	**18.07**	**20**	P	**Pn**		**22 12 36.3**	**-0.6**
E19K	**Redstone River**	**18.10**	**26**	P	**Pn**		**22 12 36.7**	**-0.5**
E19K				IAmb	IAmb		22 12 37.9	
	comp=Z,10nm,0.8s							
IMAR	**Indian Mountai**	**18.18**	**33**	P	**P**		**22 12 36.8**	**+1.5**
GHO	**Glory Hole Cre**	**18.18**	**48**	P	**P**		**22 12 36.2**	**+0.7**
GHO				IAmb	IAmb		22 12 39.1	
	comp=Z,6.8nm,0.6s							
F20K	**Avaraart Lake**	**18.23**	**28**		**P**		**22 12 37.8**	**+1.8**
H21K	**Melozitna Rive**	**18.31**	**34**	P	**Pn**		**22 12 39.0**	**-0.8**
H21K				IAmb	IAmb		22 12 39.9	
	comp=Z,7.5nm,0.8s							
SML	**Sawmill**	**18.46**	**48**	P	**P**		**22 12 39.1**	**+0.6**
SML				IAmb	IAmb		22 12 42.5	
	comp=Z,5.3nm,0.6s							
P23K	**Montague Islan**	**18.48**	**54**	P	**P**		**22 12 40.4**	**+1.7**
G21K	**Allakaket**	**18.57**	**32**		**P**		**22 12 41.5**	**+1.8**
D19K	**Kuna River**	**18.64**	**23**	P	**P**		**22 12 41.8**	**+1.4**
SEY	**Seymchan**	**18.72**	**315**	P	**P**		**22 12 40.7**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=72,slow=16,SNR=3.6							
MLY	**Manley**	**18.72**	**37**		**P**		**22 12 43.0**	**+1.7**
RND	**Reindeer**	**18.76**	**43**	P	**P**		**22 12 43.1**	**+1.3**
RND				IAmb	IAmb		22 13 00.1	
	comp=Z,5.3nm,0.6s							
C19K	**Lookout Ridge**	**18.78**	**21**	P	**P**		**22 12 43.4**	**+1.5**
C19K				IAmb	IAmb		22 12 48.0	
	comp=Z,9.3nm,1.1s							
GLI	**Glacier Island**	**18.80**	**51**	P	**P**		**22 12 42.3**	**+0.1**
GLI				IAmb	IAmb		22 12 43.5	
	comp=Z,11nm,0.8s							
BWN	**Browne**	**18.82**	**41**	P	**P**		**22 12 44.5**	**+2.2**
SCM	**Sheep Creek Mo**	**18.93**	**48**	P	**P**		**22 12 44.7**	**+1.1**
H22K	**Ishtalitna Cre**	**18.93**	**35**		**P**		**22 12 45.0**	**+1.4**
HIN	**Hinchinbrook I**	**18.99**	**53**	P	**P**		**22 12 44.9**	**+0.6**
FID	**Port Fidalgo**	**19.07**	**52**	P	**P**		**22 12 45.2**	**+0.1**
FID				IAmb	IAmb		22 12 48.6	
	comp=Z,11nm,1.0s							
NEA2	**Nenana**	**19.15**	**40**	P	**P**		**22 12 47.2**	**+1.3**
D20K	**Etivluk River**	**19.17**	**24**	P	**P**		**22 12 47.7**	**+1.7**
DHY	**Denali Highway**	**19.27**	**45**	P	**P**		**22 12 48.4**	**+1.0**
I23K	**Minto, Yukon-K**	**19.29**	**38**	P	**P**		**22 12 48.7**	**+1.4**
DIV	**Divide**	**19.48**	**51**	P	**P**		**22 12 49.5**	**-0.1**
DIV				IAmb	IAmb		22 13 00.3	
	comp=Z,16nm,1.1s							
WRH	**Wood River Hil**	**19.49**	**40**	P	**P**		**22 12 49.4**	**0.0**
WRH				IAmb	IAmb		22 12 52.8	
	comp=Z,4.3nm,0.6s							
M24K	**Tolsona, Glenn**	**19.52**	**48**	P	**P**		**22 12 50.9**	**+1.0**
CCB	**Clear Creek Bu**	**19.67**	**40**	P	**P**		**22 12 51.2**	**-0.2**
CCB				IAmb	IAmb		22 12 55.7	
	comp=Z,4.4nm,0.5s							
G23K	**Bananza Creek**	**19.83**	**33**		**P**		**22 12 54.6**	**+1.4**
G23K				IAmb	IAmb		22 12 57.3	
	comp=Z,7.9nm,0.8s							
RAGM	**Ragged Mountai**	**19.89**	**54**	P	**P**		**22 12 55.7**	**+1.9**
RAGM				IAmb	IAmb		22 12 58.8	
	comp=Z,11nm,0.8s							
HDA	**Harding Lake**	**19.92**	**41**	P	**P**		**22 12 55.1**	**+1.0**
B20K	**Meade River**	**20.02**	**21**	P	**P**		**22 12 55.5**	**+0.5**
B20K				IAmb	IAmb		22 13 10.0	
	comp=Z,13nm,1.0s							
PAX	**Paxson**	**20.07**	**46**	IAmb	IAmb		22 12 59.3	
	comp=Z,6.2nm,0.6s							
ILAR	**Eielson Array**	**20.08**	**40**	P	**P**		**22 12 54.5**	**-1.4**
	comp=Z,1.4nm,0.5s,baz=232,slow=8.7,SNR=21							
	comp=Z,1.4nm,0.5s							
ILAR	**Eielson Array**	**20.08**	**40**	P	**P**		**22 12 55.9**	**0.0**
H24K	**Noodor Dome**	**20.15**	**37**		**P**		**22 12 57.2**	**+0.6**
K24K	**Donnelly Dome**	**20.19**	**43**	P	**P**		**22 12 57.0**	**-0.1**
K24K				IAmb	IAmb		22 12 57.8	
	comp=Z,8.7nm,0.7s							
GLB	**Gilahina Butte**	**20.48**	**51**		**P**		**22 13 00.4**	**+0.3**
RIDG	**Independent Ri**	**20.56**	**44**	IAmb	IAmb		22 13 10.9	
	comp=Z,3.6nm,0.5s							
VRDI	**Verde Repeater**	**20.61**	**51**	P	**P**		**22 13 02.0**	**+0.4**
VRDI				IAmb	IAmb		22 13 04.5	
	comp=Z,10nm,1.1s							
G24K	**Hadweenzic Riv**	**20.70**	**35**	IAmb	IAmb		22 13 04.9	
	comp=Z,11nm,0.8s							
MENT	**Mentasta**	**20.83**	**47**	P	**P**		**22 13 02.5**	**-1.4**
MCARA	**McCarthy VSAT**	**20.84**	**51**	P	**P**		**22 13 04.3**	**+0.5**
MCARA				IAmb	IAmb		22 13 05.5	
	comp=Z,7.2nm,0.7s							
D23K	**Nanushuk River**	**20.93**	**28**	IAmb	IAmb		22 13 06.6	
	comp=Z,10nm,0.9s							
E24K	**Your Creek**	**21.07**	**31**		**P**		**22 13 08.2**	**+1.9**
GRNC	**Granite Creek**	**21.36**	**53**	IAmb	IAmb		22 13 11.8	
	comp=Z,6.7nm,0.8s							
C23K	**Itkillik River**	**21.50**	**26**		**P**		**22 13 11.4**	**+1.0**
BCAR	**Beaver Creek A**	**21.72**	**47**	P	**P**		**22 13 14.2**	**+1.5**
E25K	**Arctic Village**	**22.03**	**32**	IAmb	IAmb		22 13 18.7	
	comp=Z,8.0nm,0.8s							
D25K	**Kavik River**	**22.39**	**29**	IAmb	IAmb		22 13 21.8	
	comp=Z,6.8nm,0.6s							
I28M	**Miner Creek**	**23.08**	**41**		**P**		**22 13 25.7**	**+0.5**
M29M	**Somme Creek**	**23.13**	**49**	IAmb	IAmb		22 13 29.9	
	comp=Z,5.2nm,0.7s							
C27K	**Jago River**	**23.36**	**30**	IAmb	IAmb		22 13 30.7	
	comp=Z,5.0nm,0.6s							
L29M	**L29M**	**23.37**	**47**	IAmb	IAmb		22 13 32.8	
	comp=Z,4.8nm,0.7s							
E27K	**Coleen River**	**23.39**	**34**	IAmb	IAmb		22 13 31.5	
	comp=Z,4.0nm,0.6s							
K29M	**Barlow Dome**	**23.75**	**46**		**P**		**22 13 32.3**	**+1.0**
K29M				IAmb	IAmb		22 13 37.0	
	comp=Z,6.1nm,0.9s							
M30M	**Minto, Yukon**	**23.91**	**49**	P	**P**		**22 13 34.2**	**+1.5**
D27M	**Malcolm River**	**24.04**	**32**	IAmb	IAmb		22 13 37.9	
	comp=Z,4.5nm,0.5s							
E29M	**Blow River**	**24.75**	**35**		**P**		**22 13 43.2**	**+3.1**
E29M				IAmb	IAmb		22 13 45.6	
	comp=Z,5.9nm,0.8s							
INK	**Inuvik**	**26.27**	**36**	P	**P**		**22 13 54.4**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=205,slow=9.3,SNR=2.0							
	comp=Z,1.9nm,0.6s							
H02S2	**DAWSON INLET T**	**27.19**	**70**	T	T		22 42 20.1	
	SNR=4.3							
YKA	**Yellowknife Ar**	**

comp=Z,0.5nm,0.5s,baz=324,slow=11,SNR=1.2
comp=Z,0.5nm,0.5s
NVAR Mina Array Bea 42.99 84 P **P** **22 16 18.8 +2.1**
comp=Z,1.4nm,0.8s,baz=295,slow=8.4,SNR=7.1
comp=Z,1.4nm,0.8s
NVAR Mina Array Bea 42.99 84 P **P** **22 16 17.1 +0.4**
YPP Pitchstone Pla 43.93 73 P **P** **22 16 23.0 -1.3**
CCCA Chr Cary lake 45.44 87 P **P** **22 16 38.3 +2.3**
PDAR Pinedale Array 45.55 74 P **P** **22 16 37.2 +0.2**
comp=Z,0.6nm,0.6s,baz=308,slow=2.3,SNR=8.2
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 45.55 74 P **P** **22 16 36.1 -0.9**
GSC Goldstone, Bar 45.93 87 P **P** **22 16 41.9 +2.1**
HHC Hu-ho-hao-te 47.80 285 *eP* **P** **22 16 55.3 +1.0**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,79nm,3.9s
PV22 Blue Mesa, Par 48.66 78 P **P** **22 16 58.5 -2.5**
PV13 Radium Mtn., P 48.89 78 P **P** **22 17 02.4 -0.3**
SPITS Spitsbergen Ar 49.27 356 P **P** **22 17 04.9 +0.1**
comp=Z,2.5nm,0.5s,baz=40,slow=6.9,SNR=11
comp=Z,2.5nm,0.5s
SPB2 Spitsbergen Ar 49.27 356 P **P** **22 17 05.2 +0.5**
SPB2 IAmb IAmb 22 17 07.3
comp=Z,15nm,1.2s
ARCES ARCESS Array B 57.04 350 P **P** **22 18 01.1 -0.3**
comp=Z,2.0nm,0.8s,baz=23,slow=7.9,SNR=6.6
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 58.05 82 P **P** **22 18 09.8 +0.6**
comp=Z,0.5nm,0.3s,baz=308,slow=5.7,SNR=11
TXAR PcP **PcP** **22 18 58.0 -0.3**
comp=Z,0.2nm,0.4s,baz=339,slow=6.1,SNR=3.7
comp=Z,0.5nm,0.3s
TXAR Lajitas Array 58.05 82 P **P** **22 18 09.3 +0.2**
KURBB Kurchatov Arra 58.66 313 P **P** **22 18 12.4 -0.4**
comp=Z,0.2nm,0.2s,baz=61,slow=7.6,SNR=1.6
comp=Z,0.2nm,0.2s
WMQ Urumqi 59.09 303 *eP* **P** **22 18 18.5 +2.5**
WMQ LR LR
comp=N,2μm,23.7s
WMQ LR LR
comp=E,860nm,17.5s
WMQ LR LR
comp=Z,320nm,24.2s
MKAR Makanchi Array 59.67 308 P **P** **22 18 18.8 -1.1**
comp=Z,0.1nm,0.3s,baz=42,slow=6.4,SNR=1.5
comp=Z,0.1nm,0.3s
BVAR Borovoye Array 60.30 320 P **P** **22 18 23.9 -0.2**
comp=Z,0.4nm,0.3s,baz=52,slow=6.5,SNR=5.2
comp=Z,0.4nm,0.3s
PZH PanZhiHua 63.59 280 P **P** **22 18 46.8 +0.4**
H62A Milan 64.76 49 P **P** **22 18 52.8 -0.8**
H62A IAmb IAmb 22 18 57.6
comp=Z,6.4nm,1.1s
FINES FINESS Array B 64.77 347 P **P** **22 18 52.8 -0.5**
comp=Z,1.1nm,0.8s,baz=21,slow=7.3,SNR=1.0
comp=Z,1.1nm,0.8s
HFS Hagfors 67.30 354 P **P** **22 19 09.4 0.0**
comp=Z,0.8nm,0.7s,baz=327,slow=9.3,SNR=1.1
comp=Z,0.8nm,0.7s
EKA Eskdalemuir Ar 72.43 3 P **P** **22 19 40.7 0.0**
comp=Z,0.7nm,0.6s,baz=353,slow=3.8,SNR=3.7
comp=Z,0.7nm,0.6s
WRA Warramunga Arr 83.14 224 P **P** **22 20 40.1 0.0**
comp=Z,0.3nm,0.8s,baz=22,slow=5.4,SNR=1.5
comp=Z,0.3nm,0.8s
ESDC Sonseca Array 88.04 5 P **P** **22 21 02.1 -1.9**
comp=Z,0.2nm,0.6s,baz=12,slow=3.8,SNR=1.7
comp=Z,0.2nm,0.6s
QSPA South Pole Qui 142.27 180 PKP **PKPdf** **22 27 43.1 -0.4**
comp=Z,0.8nm,0.8s,baz=135,slow=0.9,SNR=2.0
BOSA Boshof 150.51 315 PKPbc **PKPbc** **22 28 03.4 -0.8**
comp=Z,1.5nm,0.9s,baz=45,slow=2.9,SNR=1.7

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*IDC **23** 22:11:34.2±0.6,56˚29N×164˚27E,h0km,mb3.9/24, mbtmp3.9/26,ML3.4/2,MS4.0/5,Error ellipse: s-maj=17.3km s-min=12.1km az=155.0*
*KRSC **23** 22:11:34.4±1.4,56˚13N×164˚50E,h48km±20km,Ml4.6*
*NEIC **23** 22:11:36.3±1.6,56˚24N±0˚06×164˚2E±0˚1,h10km±1km, mb4.4/77,Error ellipse: s-maj=12.9km s-min=8.9km az=71.0*
*MOS **23** 22:11:38.1±1.0,56˚10N×164˚36E,h51km,mb4.6/17,Error ellipse: s-maj=7.1km s-min=4.5km az=56.3*
*GFZ **23** 22:11:46.7±0.3,56˚N±5˚×16˚3E±˚,h65km,M4.5/19, mb4.5/19*
ISC 23 22:11:37.4±2.0,56˚16N±0˚03×164˚42E±0˚03,h24km±14km, n277,σ1§36/302,mb4.3/62,MS4.3/10,6C-10D,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.90**	**274**	PN		**Pn**	**22 11 51.6**	**-2.9**
KBTR				S		**Sn**	**22 12 04.7**	**-1.9**
KBTR	**Krutoberegovo**	**0.90**	**274**	*eP*		**Pn**	**22 11 51.6**	**-2.9**
KBTR				*eS*		**Sn**	**22 12 04.8**	**-1.9**
KBG	**Krutoberegovo**	**0.96**	**277**	PN		**Pn**	**22 11 52.8**	**-2.5**
KBG				S		**Sn**	**22 12 05.6**	**-2.7**
KBG	**Krutoberegovo**	**0.96**	**277**	*eP*		**Pn**	**22 11 52.9**	**-2.5**
KBG				*eS*		**Sn**	**22 12 05.7**	**-2.7**
BKI	**Bering**	**1.30**	**137**	PN		Pn	22 11 56.5	-3.4
BKI				S		**Sn**	**22 12 12.4**	**-4.1**
BKI	**Bering**	**1.30**	**137**	*eP*		Pn	22 11 56.6	-3.4
BKI				*eS*		**Sn**	**22 12 12.5**	**-4.1**
SMKR	**Semkarok**	**1.70**	**286**	PN		**Pn**	**22 12 04.9**	**-0.6**
SMKR				S		**Sn**	**22 12 25.8**	**-0.7**
SMKR	**Semkarok**	**1.70**	**286**	*eP*		**Pn**	**22 12 04.9**	**-0.6**
SMKR				*eS*		**Sn**	**22 12 25.9**	**-0.7**
BDR	**Baidarnaya**	**1.83**	**284**	*eS*		**Sn**	**22 12 29.6**	**-0.3**
ZLN	**Zelenaya**	**2.03**	**268**	PN		**Pn**	**22 12 10.5**	**+0.3**
ZLN				S		**Sn**	**22 12 34.0**	**-0.8**
ZLN	**Zelenaya**	**2.03**	**268**	*eP*		**Pn**	**22 12 10.6**	**+0.3**
ZLN				*eS*		**Sn**	**22 12 34.1**	**-0.8**
CIRR	**Tsirk**	**2.06**	**270**	PN		**Pn**	**22 12 10.5**	**0.0**
CIRR				S		**Sn**	**22 12 34.1**	**-1.4**
CIRR	**Tsirk**	**2.06**	**270**	*eP*		**Pn**	**22 12 10.5**	**0.0**
CIRR				*eS*		**Sn**	**22 12 34.2**	**-1.4**
LGNR	**Loginova**	**2.09**	**270**	*eS*		**Sn**	**22 12 34.6**	**-1.9**
BZGR	**Bezymyannyi-Gr**	**2.10**	**266**	PN		**Pn**	**22 12 11.1**	**0.0**
BZGR				S		**Sn**	**22 12 35.9**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**2.10**	**266**	*eP*		**Pn**	**22 12 11.2**	**0.0**
BZGR				*eS*		**Sn**	**22 12 35.9**	**-0.6**
KLY	**Klyuchi**	**2.11**	**276**	PN		**Pn**	**22 12 09.0**	**-2.1**
KLY				S		**Sn**	**22 12 33.7**	**-2.9**
KLY	**Klyuchi**	**2.11**	**276**	*eP*		**Pn**	**22 12 09.1**	**-2.1**
KLY				*eS*		**Sn**	**22 12 33.7**	**-2.9**
BZP	**Bezymyannyi-Pe**	**2.19**	**265**	PN		**Pn**	**22 12 12.6**	**+0.2**
BZP				S		**Sn**	**22 12 37.7**	**-1.1**
BZP	**Bezymyannyi-Pe**	**2.19**	**265**	*eP*		**Pn**	**22 12 12.7**	**+0.2**
BZP				*eS*		**Sn**	**22 12 37.8**	**-1.1**
BZWR	**Bezymyannyi-We**	**2.21**	**267**	PN		**Pn**	**22 12 13.3**	**+0.6**
BZWR				S		**Sn**	**22 12 39.6**	**+0.3**
BZWR	**Bezymyannyi-We**	**2.21**	**267**	*eP*		**Pn**	**22 12 13.4**	**+0.6**
BZWR				*eS*		**Sn**	**22 12 39.7**	**+0.3**
BZMR	**Bezymyannaya**	**2.21**	**266**	PN		**Pn**	**22 12 13.1**	**+0.3**
BZMR				S		**Sn**	**22 12 38.0**	**-1.4**
BZMR	**Bezymyannaya**	**2.21**	**266**	*eP*		**Pn**	**22 12 13.1**	**+0.3**
BZMR				*eS*		**Sn**	**22 12 38.0**	**-1.4**
MKZ	**Mys Kozlova**	**2.22**	**225**	PN		**Pn**	**22 12 11.2**	**-1.4**
MKZ				S		**Sn**	**22 12 37.3**	**-2.0**
MKZ	**Mys Kozlova**	**2.22**	**225**	*eP*		**Pn**	**22 12 11.2**	**-1.4**
MKZ				*eS*		**Sn**	**22 12 37.3**	**-2.0**
KIRR	**Kirishev**	**2.30**	**267**	PN		**Pn**	**22 12 14.0**	**+0.1**
KIRR				S		**Sn**	**22 12 40.5**	**-0.9**
KIRR	**Kirishev**	**2.30**	**267**	*eP*		**Pn**	**22 12 14.0**	**+0.1**
KIRR				*eS*		**Sn**	**22 12 40.6**	**-0.9**
KPT	**Kopyto**	**2.36**	**267**	PN		**Pn**	**22 12 15.5**	**+0.8**
KPT				S		**Sn**	**22 12 43.2**	**+0.3**
KPT	**Kopyto**	**2.36**	**267**	*eP*		**Pn**	**22 12 15.6**	**+0.8**
KPT				*eS*		**Sn**	**22 12 43.3**	**+0.3**
KMNR	**Kamenistaya**	**2.38**	**262**	PN		**Pn**	**22 12 16.0**	**+1.0**
KMNR	**Kamenistaya**	**2.38**	**262**	*eP*		**Pn**	**22 12 16.0**	**+1.0**
TUMD	**Tumrok D**	**2.47**	**249**	PN		**Pn**	**22 12 16.5**	**+0.4**
TUMD				S		**Sn**	**22 12 45.8**	**+0.3**
TUMD	**Tumrok D**	**2.47**	**249**	*eP*		**Pn**	**22 12 16.6**	**+0.4**
TUMD				*eS*		**Sn**	**22 12 45.8**	**+0.3**
KOZ	**Kozyrevsk**	**2.55**	**270**	PN		**Pn**	**22 12 18.0**	**+0.8**
KOZ				S		**Sn**	**22 12 47.9**	**+0.5**
KOZ	**Kozyrevsk**	**2.55**	**270**	*eP*		**Pn**	**22 12 18.0**	**+0.8**
KOZ				*eS*		**Sn**	**22 12 47.9**	**+0.5**
TUMR	**Tumrok**	**2.57**	**252**	PN		**Pn**	**22 12 18.1**	**+0.5**
TUMR				S		**Sn**	**22 12 48.8**	**+0.7**
TUMR	**Tumrok**	**2.57**	**252**	*eP*		**Pn**	**22 12 18.1**	**+0.5**
TUMR				*eS*		**Sn**	**22 12 48.9**	**+0.7**
SRDR	**Sredinnyy**	**2.63**	**275**	PN		**Pn**	**22 12 19.3**	**+1.0**
SRDR				S		**Sn**	**22 12 50.8**	**+1.3**
SRDR	**Sredinnyy**	**2.63**	**275**	*eP*		**Pn**	**22 12 19.4**	**+1.0**
SRDR				*eS*		**Sn**	**22 12 50.8**	**+1.3**
OSSR	**Ossora**	**3.19**	**347**	PN		**Pn**	**22 12 23.0**	**-2.9**
OSSR	**Ossora**	**3.19**	**347**	*eP*		**Pn**	**22 12 23.0**	**-2.9**
ESO	**Esso**	**3.22**	**268**	PN		**Pn**	**22 12 26.7**	**+0.3**
ESO	**Esso**	**3.22**	**268**	*eP*		**Pn**	**22 12 26.7**	**+0.3**
KII	**Karymskiy**	**3.56**	**235**	PN		**Pn**	**22 12 32.2**	**+1.1**
KII	**Karymskiy**	**3.56**	**235**	*eP*		**Pn**	**22 12 32.2**	**+1.1**
PALN	**Palana**	**3.79**	**323**	PN		**Pn**	**22 12 33.6**	**-0.6**
PALN	**Palana**	**3.79**	**323**	*eP*		**Pn**	**22 12 33.7**	**-0.6**
SPN	**Mys Shipunski**	**3.99**	**222**	PN		**Pn**	**22 12 37.5**	**+0.5**
SPN				S		**Sn**	**22 13 19.7**	**-3.2**
SPN	**Mys Shipunski**	**3.99**	**222**	*eP*		**Pn**	**22 12 37.5**	**+0.5**
SPN				*eS*		**Sn**	**22 13 19.8**	**-3.2**
NLC	**Nalytchevo**	**4.20**	**227**	PN		**Pn**	**22 12 40.6**	**+0.8**
NLC				S		**Sn**	**22 13 26.7**	**-1.3**
NLC	**Nalytchevo**	**4.20**	**227**	*eP*		**Pn**	**22 12 40.7**	**+0.8**
NLC				*eS*		**Sn**	**22 13 26.7**	**-1.3**
SDLR	**Sedlovina**	**4.31**	**230**	PN		**Pn**	**22 12 42.0**	**+0.5**
SDLR				S		**Sn**	**22 13 30.0**	**-1.1**
SDLR	**Sedlovina**	**4.31**	**230**	*eP*		**Pn**	**22 12 42.0**	**+0.5**
SDLR				*eS*		**Sn**	**22 13 30.0**	**-1.1**
KRER	**Koryakskii**	**4.35**	**231**	PN		**Pn**	**22 12 42.9**	**+0.7**
KRER				S		**Sn**	**22 13 32.8**	**+0.6**
KRER	**Koryakskii**	**4.35**	**231**	*eP*		**Pn**	**22 12 42.9**	**+0.7**
KRER				*eS*		**Sn**	**22 13 32.8**	**+0.6**
SMAR	**Somma**	**4.36**	**231**	PN		**Pn**	**22 12 42.8**	**+0.6**
SMAR				S		**Sn**	**22 13 32.8**	**+0.4**
SMAR	**Somma**	**4.36**	**231**	*eP*		**Pn**	**22 12 42.9**	**+0.6**
SMAR				*eS*		**Sn**	**22 13 32.8**	**+0.4**
KRX	**Arik**	**4.36**	**232**	PN		**Pn**	**22 12 43.2**	**+1.0**
KRX				S		**Sn**	**22 13 31.5**	**-0.8**
KRX	**Arik**	**4.36**	**232**	*eP*		**Pn**	**22 12 43.2**	**+1.0**
KRX				*eS*		**Sn**	**22 13 31.6**	**-0.8**
AVH	**Avacha**	**4.39**	**231**	PN		**Pn**	**22 12 43.0**	**+0.5**
AVH				S		**Sn**	**22 13 32.1**	**-0.8**
AVH	**Avacha**	**4.39**	**231**	*eP*		**Pn**	**22 12 43.0**	**+0.5**
AVH				*eS*		**Sn**	**22 13 32.1**	**-0.8**
TILK	**Tilichiki**	**4.40**	**11**	PN		**Pn**	**22 12 41.6**	**-0.9**
TILK	**Tilichiki**	**4.40**	**11**	*eP*		**Pn**	**22 12 41.7**	**-0.9**
KOK	**Koryaka**	**4.41**	**232**	PN		**Pn**	**22 12 43.9**	**+1.0**
KOK	**Koryaka**	**4.41**	**232**	*eP*		**Pn**	**22 12 44.0**	**+1.0**
GNL	**Ganaly**	**4.48**	**239**	PN		**Pn**	**22 12 44.9**	**+1.1**
GNL	**Ganaly**	**4.48**	**239**	*eP*		**Pn**	**22 12 44.9**	**+1.1**
DALK	**Dalny**	**4.54**	**229**	PN		**Pn**	**22 12 44.2**	**-0.4**
DALK				S		**Sn**	**22 13 34.9**	**-1.7**
DALK	**Dalny**	**4.54**	**229**	*eP*		**Pn**	**22 12 44.2**	**-0.4**
DALK				*eS*		**Sn**	**22 13 35.0**	**-1.7**
PET	**Petropavlovsk**	**4.59**	**229**	*ePN*		**Pn**	**22 12 46.5**	**+1.3**
PET				*eS*		**Sn**	**22 13 39.3**	**+1.5**
PET				pmax	pmax			
	comp=Z,96nm,0.7s							
PET				smax	smax			
	comp=E,195nm,0.6s							
PET				smax	smax			
	comp=N,199nm,0.6s							
PET				MLR	MLR			
	comp=Z,3μm,9.0s							
PET				MLR	MLR			
	comp=Z,2μm,8.0s							
PET	**Petropavlovsk**	**4.59**	**229**			**Pn**	**22 12 44.9**	**-0.3**
PET	**Petropavlovsk**	**4.59**	**229**	*eP*		**Pn**	**22 12 46.2**	**+1.0**
PET				*eS*		**Sn**	**22 13 37.4**	**-0.4**
PET	**Petropavlovsk**	**4.59**	**229**	P		**Pn**	**22 12 46.0**	**+0.7**
KRMR	**Karymshinskiy**	**4.95**	**230**	PN		**Pn**	**22 12 51.6**	**+1.4**
KRMR				S		**Sn**	**22 13 47.4**	**+0.8**
KRMR	**Karymshinskiy**	**4.95**	**230**	*eP*		**Pn**	**22 12 51.6**	**+1.4**
KRMR				*eS*		**Sn**	**22 13 47.5**	**+0.8**
PEA0B	**Petropavlovsk-**	**4.96**	**235**	‖*ePN*		**Pn**	**22 12 51.1**	**+0.8**
PEA0B	**Petropavlovsk-**	**4.96**	**235**			**Pn**	**22 12 50.6**	**+0.3**
PETK	**Petropavlovsk-**	**4.96**	**235**	Pn		**Pn**	**22 12 50.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=57,slow=16,SNR=18							
	comp=Z,7.4nm,0.7s							
PETK	**Petropavlovsk-**	**4.96**	**235**			**Pn**	**22 12 50.2**	**-0.1**
RUS	**Russkaya**	**5.09**	**225**	PN		**Pn**	**22 12 52.0**	**0.0**
RUS	**Russkaya**	**5.09**	**225**	*eP*		**Pn**	**22 12 52.1**	**0.0**
GRL	**Gorelyy**	**5.18**	**228**	PN		**Pn**	**22 12 55.2**	**+1.8**
GRL	**Gorelyy**	**5.18**	**228**	*eP*		**Pn**	**22 12 55.3**	**+1.8**
MTVR	**Mutnovka**	**5.18**	**227**	PN		**Pn**	**22 12 54.0**	**+0.5**
MTVR	**Mutnovka**	**5.18**	**227**	*eP*		**Pn**	**22 12 54.0**	**+0.5**
APC	**Apacha**	**5.32**	**236**	PN		**Pn**	**22 12 55.7**	**+0.4**
APC	**Apacha**	**5.32**	**236**	*eP*		**Pn**	**22 12 55.7**	**+0.4**
ASAK	**Asacha**	**5.37**	**228**	PN		**Pn**	**22 12 57.5**	**+1.5**
ASAK	**Asacha**	**5.37**	**228**	*eP*		**Pn**	**22 12 57.6**	**+1.5**
KDTR	**Khodutka, Kamc**	**5.74**	**223**	PN		**Pn**	**22 13 00.3**	**-0.7**
KDTR	**Khodutka, Kamc**	**5.74**	**223**	*eP*		**Pn**	**22 13 00.4**	**-0.7**
KDTR				*eS*		**Sn**	**22 14 02.0**	**-4.1**
MIPR	**Malaya Ipel'ka**	**5.94**	**232**	PN		**Pn**	**22 13 05.6**	**+1.8**
MIPR	**Malaya Ipel'ka**	**5.94**	**232**	*eP*		**Pn**	**22 13 05.6**	**+1.8**
PAU	**Pauzhetka**	**6.51**	**227**	PN		**Pn**	**22 13 12.1**	**+0.6**
PAU	**Pauzhetka**	**6.51**	**227**	*eP*		**Pn**	**22 13 12.2**	**+0.6**
SHEM	**Shemya Is, Ala**	**6.61**	**117**	Pn		Pn	22 13 06.2	-6.7
	comp=Z,5.1nm,0.3s,baz=308,slow=15,SNR=2.2							
SKR	**Severo-Kuril's**	**7.39**	**226**	*ePN*		**Pn**	**22 13 23.7**	**+0.1**
SKR				*eS*		Sn	22 14 58.0	+11
SKR				pmax	pmax			
	comp=Z,100nm,2.9s							
SKR				pmax	pmax			
	comp=Z,31nm,1.1s							
SKR				MLR	MLR			
	comp=Z,1μm,16.0s							
SKR	**Severo-Kuril's**	**7.39**	**226**	*eP*		**Pn**	**22 13 21.3**	**-2.3**
SEY	**Seymchan**	**9.13**	**323**	Pn		Pn	22 13 36.8	-11
	comp=Z,0.8nm,0.3s,baz=107,slow=16,SNR=5.3							
BILL	**Bilibino**	**11.96**	**3**	‖*ePN*		**Pn**	**22 14 27.1**	**+1.0**
BILL	**Bilibino**	**11.96**	**3**	Pn		**Pn**	**22 14 25.4**	**-0.7**
UGL	**Uglegorsk**	**15.27**	**252**	*eP*		**Pn**	**22 15 10.7**	**-0.4**
UGL				S		**Sn**	**22 17 55.0**	**-4.3**
UGL				MLR	MLR			
	comp=Z,2μm,16.0s							
UGL				MLR	MLR			
	comp=E,2μm,11.0s							
YSS	**Yuzhno-Sakhali**	**16.26**	**245**	*eP*		P	22 15 36.7	+10
YSS				pmax	pmax			
	comp=Z,20nm,0.7s							
K13K	**Kusilvak Mount**	**16.81**	**57**			**Pn**	**22 15 31.6**	**+0.7**
M14K	**Bethel**	**18.05**	**61**			**P**	**22 15 48.8**	**+2.3**
M14K				IAmb	IAmb		22 16 11.1	
	comp=Z,23nm,0.9s							
N14K	**Kuskokwak Cree**	**18.21**	**64**			**P**	**22 15 49.1**	**+0.8**
N14K				IAmb	IAmb		22 15 59.9	
	comp=Z,25nm,0.9s							
K15K	**Wolf Creek Mou**	**18.31**	**56**			**P**	**22 15 49.4**	**0.0**
JKA	**Kamikawa-asahi**	**18.36**	**238**			**P**	**22 15 49.1**	**-1.0**
JKA	**Kamikawa-asahi**	**18.36**	**238**	P		**P**	**22 15 48.9**	**-1.2**
ASAJ	**Asahikawa**	**18.36**	**238**	P		**P**	**22 15 50.4**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=26,slow=7.0,SNR=16							
ASAJ				S		**Sn**	**22 19 13.4**	**-1.1**
	comp=Z,4.5nm,0.8s,baz=134,slow=17,SNR=1.1							
	comp=Z,31nm,0.8s							
ASAJ	**Asahikawa**	**18.36**	**238**	P		**P**	**22 15 49.1**	**-1.0**
ASAJ				pmax	pmax			
	comp=Z,46nm,0.9s							
YAK	**Yakutsk**	**18.61**	**303**	P		**Pn**	**22 15 56.0**	**+2.9**
	comp=Z,16nm,0.6s,baz=50,slow=1.7,SNR=4.6							
YAK	**Yakutsk**	**18.61**	**303**	*eP*		**Pn**	**22 15 53.3**	**+0.2**
YAK				*eS*		**S**	**22 19 20.9**	**-2.2**
YAK				pmax	pmax			
	comp=E,4.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,10.0nm,0.7s							
YAK				smax	smax			
	comp=E,18nm,1.8s							
YAK				smax	smax			
	comp=N,38nm,2.2s							
YAK				MLR	MLR			
	comp=N,893nm,15.0s							
YAK				MLR	MLR			
	comp=Z,442nm,20.0s							
YAK				MLR	MLR			
	comp=E,287nm,13.0s							
N15K	**Kwethluk River**	**18.99**	**63**			**Pn**	**22 15 58.2**	**+0.5**
N15K				IAmb	IAmb		22 16 07.6	
	comp=Z,29nm,1.1s							
L16K	**Owhat River**	**19.25**	**58**			**Pn**	**22 16 01.7**	**+0.8**
H17K	**Granite Mounta**	**19.35**	**49**	P		**Pn**	**22 16 02.2**	**+0.1**
ERM	**Erimo**	**19.73**	**233**	P		**P**	**22 16 05.4**	**+0.3**
K17K	**Iditarod**	**19.83**	**55**	P		**P**	**22 16 07.5**	**+1.5**
K17K				IAmb	IAmb		22 16 21.6	
	comp=Z,19nm,1.0s							
O16K	**Kokwok River B**	**20.05**	**65**			**P**	**22 16 09.6**	**+1.2**
G18K	**Tagagawik**	**20.05**	**46**	P		Pn	22 16 10.5	+0.2
P16K	**Nushagak River**	**20.17**	**66**	P		**P**	**22 16 10.9**	**+1.1**
P16K				IAmb	IAmb		22 16 15.1	
	comp=Z,25nm,0.9s							
M17K	**Holitna River**	**20.23**	**59**			**P**	**22 16 12.2**	**+1.7**
M17K				IAmb	IAmb		22 16 33.0	
	comp=Z,21nm,0.9s							
N17K	**Nushagak Hills**	**20.41**	**62**	P		Pn	22 16 14.6	+0.1
N17K				IAmb	IAmb		22 16 22.2	
	comp=Z,18nm,1.4s							
CHGN	**Chignik**	**20.50**	**74**			**P**	**22 16 15.4**	**+2.0**
L18K	**Granite Mounta**	**20.57**	**57**			**P**	**22 16 15.0**	**+0.9**
J18K	**Innoko River**	**20.58**	**53**			**P**	**22 16 13.4**	**-0.8**
J18K				IAmb	IAmb		22 16 29.5	
	comp=Z,13nm,0.8s							
F19K	**Shaleruckik Mo**	**20.60**	**44**			**P**	**22 16 15.8**	**+1.5**
C19K	**Lookout Ridge**	**20.60**	**37**	P		Pn	22 16 16.3	-0.5
G19K	**Purcell Mounta**	**20.73**	**46**	P		Pn	22 16 17.9	-0.3
G19K				IAmb	IAmb		22 16 30.1	
	comp=Z,17nm,1.2s							
H19K	**Roundabout Mou**	**20.89**	**48**			**P**	**22 16 18.7**	**+1.2**
H19K				IAmb	IAmb		22 16 39.2	
	comp=Z,14nm,1.1s							
E19K	**Redstone River**	**20.95**	**42**	P		Pn	22 16 19.8	-0.9
E19K				IAmb	IAmb		22 16 52.5	
	comp=Z,23nm,1.3s							
N18K	**Kilae Creek**	**21.03**	**61**	P		**P**	**22 16 21.9**	**+2.8**
ZEA	**Zeya**	**21.32**	**279**	*eP*		**P**	**22 16 21.6**	**-0.6**
O18K	**Koktuh Hills**	**21.46**	**63**			**P**	**22 16 24.5**	**+0.8**
O18K				IAmb	IAmb		22 16 41.6	
	comp=Z,23nm,1.4s							
TIXI	**Tiksi**	**21.51**	**330**	P		**P**	**22 16 24.4**	**+0.3**
	comp=Z,6.4nm,0.7s,baz=117,slow=9.9,SNR=27							
	comp=Z,6.4nm,0.7s							
TIXI	**Tiksi**	**21.51**	**330**	⇑*iP*		**P**	**22 16 24.8**	**+0.7**
TIXI				pmax	pmax			
	comp=Z,7.0nm,0.8s							
TIXI	**Tiksi**	**21.51**	**330**			**P**	**22 16 24.9**	**+0.8**
TIXI				IAmb	IAmb		22 16 44.5	
	comp=Z,14nm,0.8s							
JTM	**Tenmabayashi**	**21.66**	**235**	P		**P**	**22 16 25.3**	**-0.6**
J20K	**Nowinta River**	**21.75**	**51**	P		**P**	**22 16 28.1**	**+1.4**
K20K	**Telida**	**21.77**	**54**	P		**P**	**22 16 26.5**	**-0.4**
IMAR	**Indian Mountai**	**22.05**	**47**	P		**P**	**22 16 30.6**	**+0.6**
HEH	**HeiHe**	**22.73**	**271**	*eP*		**P**	**22 16 34.8**	**-2.5**
HEH				pmax	pmax			
	comp=Z,5.0nm,0.7s							
SKT	**Skwentna**	**23.00**	**57**	IAmb	IAmb		22 16 59.6	
	comp=Z,17nm,1.4s							
KTH	**Kantishna Hill**	**23.18**	**53**	P		**P**	**22 16 45.1**	**+3.1**
KTH				IAmb	IAmb		22 17 13.3	
	comp=Z,23nm,1.5s							
KDAK	**Kodiak Island**	**23.21**	**68**	P		**P**	**22 16 43.0**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=279,slow=11,SNR=2.6							
	comp=Z,5.1nm,0.9s							
KDAK	**Kodiak Island**	**23.21**	**68**	P		**P**	**22 16 43.0**	**+0.8**
KDAK	**Kodiak Island**	**23.21**	**68**	IAmb	IAmb		22 16 50.7	
	comp=Z,15nm,1.2s							
MLY	**Manley**	**23.24**	**49**	P		**P**	**22 16 44.3**	**+1.7**
MLY				IAmb	IAmb		22 17 11.2	
	comp=Z,14nm,1.4s							
I23K	**Minto, Yukon-K**	**23.83**	**49**	IAmb	IAmb		22 17 17.7	
	comp=Z,22nm,1.4s							
E23K	**Chandalar**	**23.90**	**42**	IAmb	IAmb		22 17 09.2	
	comp=Z,15nm,1.1s							
E24K	**Your Creek**	**24.33**	**42**	IAmb	IAmb		22 17 03.1	
	comp=Z,9.7nm,0.8s							
WRH	**Wood River Hil**	**24.39**	**51**	IAmb	IAmb		22 17 20.5	
	comp=Z,11nm,0.8s							
COLA	**College**	**24.47**	**50**	P	P		22 17 04.0	+10
CCB	**Clear Creek Bu**	**24.50**	**50**	IAmb	IAmb		22 17 17.2	
	comp=Z,10nm,0.9s							
G24K	**Hadweenzic Riv**	**24.63**	**45**			**P**	**22 16 56.4**	**+0.9**
DHY	**Denali Highway**	**24.81**	**54**	P		**P**	**22 16

H11S3 WAKE ISLAND Hy 37.64 176 T T 22 59 13.4
baz=360,slow=74,SNR=5.0
H11S2 WAKE ISLAND Hy 37.64 176 T T 22 59 13.9
baz=360
HNS HongShan 37.87 262 ⇑P **P** **22 18 51.8 -0.3**
HNS LR LR
comp=N,1μm,16.3s
HNS LR LR
comp=E,850nm,16.3s
HNS LR LR
comp=Z,940nm,18.2s
YKA Yellowknife Ar 39.21 46 P **P** **22 19 02.4 -0.7**
comp=Z,0.6nm,0.6s,baz=296,slow=8.3,SNR=2.0
comp=Z,0.6nm,0.6s
SPITS Spitsbergen Ar 44.51 351 P **P** **22 19 44.1 -2.2**
comp=Z,4.8nm,0.7s,baz=40,slow=11,SNR=4.1
comp=Z,4.8nm,0.7s
DGZ Jazzator, Alta 44.59 296⇓ *e*P **P** **22 19 48.3 +0.9**
DGZ pmax pmax
comp=Z,5.0nm,1.2s
GTA2 Gaotai 44.74 277 *e*P **P** **22 19 48.6 -0.1**
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
YULB Yu-li 45.38 242 P **P** **22 19 53.6 -0.1**
KURK Kurchatov 48.25 302⇑ *i*P **P** **22 20 16.1 +0.2**
KURK pmax pmax
comp=Z,7.0nm,1.9s
KURK Kurchatov 48.25 302 P **P** **22 20 15.6 -0.3**
KURK IAmb IAmb 22 20 33.9
comp=Z,1.9nm,0.8s
KURK Kurchatov 48.25 302 P **P** **22 20 16.4 +0.5**
WMQ Urumqi 48.33 289 *e*P **P** **22 20 19.0 +2.3**
WMQ pP pP 22 20 24.4 +1.6
WMQ PcP **PcP** **22 21 40.3 -2.8**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ LR LR
comp=N,1μm,22.1s
WMQ LR LR
comp=E,730nm,21.3s
WMQ LR LR
comp=Z,320nm,24.1s
KURBB Kurchatov Arra 48.36 302 P **P** **22 20 15.8 -0.9**
comp=Z,0.6nm,0.5s,baz=53,slow=8.0,SNR=7.2
comp=Z,0.6nm,0.5s
MK31 Makanchi Array 49.09 296⇓ *e*P **P** **22 20 21.3 -1.2**
MKAR Makanchi Array 49.09 296 P **P** **22 20 21.8 -0.7**
comp=Z,0.6nm,0.7s,baz=56,slow=7.6,SNR=6.9
comp=Z,0.6nm,0.7s
MKAR Makanchi Array 49.09 296 *i* P **P** **22 20 25.0 +2.5**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 49.09 296 P **P** **22 20 21.4 -1.1**
BVAR Borovoye Array 50.45 309 P **P** **22 20 32.0 -0.7**
comp=Z,3.8nm,0.8s,baz=56,slow=7.7,SNR=18
comp=Z,3.8nm,0.8s
BVAR Borovoye Array 50.45 309 P **P** **22 20 32.0 -0.7**
BORK Borovoye 50.46 309⇑ *i*P **P** **22 20 32.7 -0.1**
BORK pmax pmax
comp=Z,5.0nm,0.8s
BORK Borovoye 50.46 309 **P** **22 20 32.4 -0.4**
ELK Elko 52.40 71 LR LR 22 42 45.0
comp=Z,133nm,18.9s,baz=323,slow=36
NVAR Mina Array Bea 52.42 75 P **P** **22 20 48.8 +0.9**
comp=Z,0.5nm,0.6s,baz=317,slow=3.0,SNR=4.1
comp=Z,0.5nm,0.6s
ARTI Arti 52.92 318 *c i*P **P** **22 20 51.5 +0.4**
ARTI 22 22 01.9
ARTI 22 22 49.2
ARTI S **S** **22 28 19.1 +0.6**
ARTI SS **SS** **22 31 53.0 -3.8**
ARTI pmax pmax
comp=Z,5.0nm,1.1s
ARTI MLR MLR
comp=Z,219nm,13.0s
ARTI Arti 52.92 318 P **P** **22 20 50.9 -0.2**
ARTI IAmb IAmb 22 21 02.2
comp=Z,5.3nm,0.9s
JMIC Jan Mayen 53.05 357 LR LR 22 44 40.8
comp=Z,57nm,18.3s,baz=22,slow=38
PZH PanZhiHua 53.27 263 P **P** **22 20 55.6 +1.4**
TGY Tagaytay City 53.52 236 LR LR 22 46 16.4
comp=Z,121nm,18.1s,baz=273,slow=39
PDAR Pinedale Array 53.89 65 P **P** **22 20 59.3 +0.6**
comp=Z,0.7nm,0.8s,baz=300,slow=2.9,SNR=7.6
comp=Z,0.7nm,0.8s
KIRV Kirov 54.40 324 *de*P **P** **22 21 02.7 +0.9**
QIZ Qiongzhong 54.87 250 P **P** **22 21 05.9 +0.1**
QIZ S **S** **22 28 47.3 +1.7**
QIZ LR LR
comp=N,230nm,17.6s
QIZ LR LR
comp=E,260nm,16.9s
QIZ LR LR
comp=Z,340nm,19.6s
AAK Ala-Archa 55.95 297⇓ *e*P **P** **22 21 14.1 +0.6**
AAK pmax pmax
comp=Z,5.0nm,1.1s
AAK Ala-Archa 55.95 297 P **P** **22 21 13.7 +0.2**
ASAI AK-SAY(Kyrgyzs 56.20 294 P **P** **22 21 15.1 -0.4**
LSA Lhasa 56.72 275 P **P** **22 21 18.2 -1.3**
PV23 Carpenter Ridg 57.35 69 P **P** **22 21 24.8 +1.2**
KKAR Karatay Array 57.56 300 P **P** **22 21 23.8 -1.0**
KKAR Karatay Array 57.56 300 **P** **22 21 23.8 -1.0**
AB31 Akbulak array 57.69 311 **P** **22 21 24.9 -0.6**
ABKAR Akbulak array 57.69 311 **P** **22 21 25.2 -0.3**
GLA Glamis 58.30 77 P **P** **22 21 32.1 +2.0**
GLA pmax pmax
comp=Z,10.0nm,0.8s
GLA Glamis 58.30 77 P **P** **22 21 32.1 +2.0**
BTK Batken 59.71 297 P **P** **22 21 39.2 -0.7**
BELG Belogornoye 59.97 321⇓ *e*P **P** **22 21 39.8 -1.5**
BELG pmax pmax
comp=Z,4.0nm,0.9s
EVN Everest 60.48 277 P **P** **22 21 44.6 -1.3**
T25A Trinidad 60.72 66 P **P** **22 21 48.9 +2.0**
T25A IAmb IAmb 22 21 58.3
comp=Z,3.2nm,1.1s
GAR Garm 60.77 297 P **P** **22 21 47.2 +0.1**
CHTO Chiang Mai 60.94 260 P **P** **22 21 47.4 -1.0**
CHTO pmax pmax
comp=Z,9.0nm,1.4s
CHTO Chiang Mai 60.94 260 P **P** **22 21 47.4 -1.0**
CHTO Chiang Mai 60.94 260 P **P** **22 21 48.7 +0.3**
CMAR Chiang Mai Arr 61.23 260 P **P** **22 21 49.7 -0.7**
comp=Z,1.4nm,0.3s,baz=20,slow=6.2,SNR=13
comp=Z,1.4nm,0.3s
CMAR Chiang Mai Arr 61.23 260 *i* P **P** **22 21 51.2 +0.8**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 61.23 260 P **P** **22 21 49.6 -0.8**
OBN Obninsk 61.24 329 *e*P **P** **22 21 51.2 +1.3**
OBN *e*PPP PPP 22 25 30.3
OBN pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 61.25 346 P **P** **22 21 49.3 -0.7**
comp=Z,0.9nm,0.8s,baz=16,slow=6.9
NOA NORSAR Array B 61.25 346 P **P** **22 21 48.7 -1.2**
comp=Z,0.6nm,0.6s,baz=18,slow=6.9,SNR=3.3
comp=Z,0.6nm,0.6s
CHGR Chuyangaron 61.61 298⇓ *e*P **P** **22 21 54.1 +1.3**
CHGR pmax pmax
comp=Z,16nm,1.1s
CHGR Chuyangaron 61.61 298 **P** **22 21 53.0 +0.2**
CHGR Chuyangaron 61.61 298 P **P** **22 21 53.4 +0.6**
NPW Naypyitaw 61.72 263 P **P** **22 21 54.0 +0.4**
HFS Hagfors 61.75 344 P **P** **22 21 52.4 -0.9**
comp=Z,1.7nm,0.8s,baz=56,slow=11,SNR=4.4
comp=Z,1.7nm,0.8s
SHAA Shahritus 62.98 298 **P** **22 22 01.4 -0.5**
SHAA IAmb IAmb 22 22 12.0
comp=Z,34nm,1.2s
MNTX Cornudas Mount 64.42 71 P P 22 22 20.1 +8.6
MNTX pP PcP 22 22 37.1 -8.6
KBL Kabul 64.88 295 P **P** **22 22 15.1 +0.4**
TXAR Lajitas Array 67.19 71 P **P** **22 22 30.1 +0.7**
comp=Z,0.7nm,0.7s,baz=287,slow=4.1,SNR=6.3
comp=Z,0.7nm,0.7s
AKASG Malin Array Be 67.22 331 P **P** **22 22 29.2 0.0**
comp=Z,0.4nm,0.5s,baz=28,slow=5.8,SNR=5.4
comp=Z,0.4nm,0.5s
AKASG Malin Array Be 67.22 331 IAmb IAmb 22 22 30.4
comp=Z,3.5nm,1.3s
EKA Eskdalemuir Ar 68.41 352 P **P** **22 22 37.0 +0.4**
comp=Z,1.0nm,0.8s,baz=21,slow=6.2,SNR=2.4
comp=Z,1.0nm,0.8s
EKA Eskdalemuir Ar 68.41 352 P **P** **22 22 37.0 +0.4**
KIV Kislovodsk 68.85 319 *e*P **P** **22 22 41.3 +1.6**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KBZ Khabaz 68.97 319 P **P** **22 22 40.8 +0.6**
comp=Z,1.4nm,0.8s,baz=79,slow=5.2,SNR=3.9
comp=Z,1.4nm,0.8s
KBZ Khabaz 68.97 319⇑ *e*P **P** **22 22 41.1 +0.9**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 70.90 338 *e*P P 22 23 02.0 +10
JAVC Velka Javorina 71.74 338 *e*P P 22 23 07.7 +11
JAVC Velka Javorina 71.74 338 P **P** **22 22 59.6 +2.4**
KRUC Moravsky 71.81 338 *e*P P 22 23 05.9 +8.3
GERES GERESS Array B 72.55 340 P **P** **22 23 02.6 +0.5**
comp=Z,0.2nm,0.6s,baz=10,slow=5.2,SNR=2.3
comp=Z,0.2nm,0.6s
KBA Koelnbreinsper 74.31 340 P **P** **22 23 14.0 +1.3**
WRA Warramunga Arr 79.95 209 P **P** **22 23 45.9 +1.7**
comp=Z,0.7nm,1.0s,baz=15,slow=5.7,SNR=6.9
comp=Z,0.7nm,1.0s
IDI Anoyia 82.62 328 LR LR 23 05 26.3
comp=Z,97nm,18.9s,baz=310,slow=39
ASAR Alice Springs 83.62 208 P **P** **22 24 04.7 +1.2**
comp=Z,0.6nm,0.8s,baz=12,slow=5.1,SNR=9.3
comp=Z,0.6nm,0.8s
ESDC Sonseca Array 84.03 351 P **P** **22 24 05.5 -0.1**
comp=Z,0.2nm,0.6s,baz=5.5,slow=4.8,SNR=2.4
comp=Z,0.2nm,0.6s
KEST Kesra 86.04 340 LR LR 23 09 19.3
comp=Z,99nm,18.1s,baz=326,slow=40
QSPA South Pole Qui 145.91 180 PKPbc **PKPbc** **22 31 14.1 +0.8**
comp=Z,3.4nm,0.8s,baz=356,slow=9.2,SNR=17

IDC ***23*** *22:12:48.4±0.6,56.37N×164.29E,h0km,mb4.0/27, mbtmp4.1/29,ML3.8/2,MS4.1/12,Error ellipse: s-maj=18.2km s-min=12.2km az=153.0*
MOS ***23*** *22:12:48.3±0.9,56.23N×164.43E,h16km,mb4.7/17,Error ellipse: s-maj=9.5km s-min=6.8km az=65.1*
GCMT ***23*** *22:12:49.5±0.2,56.21N±0.01×164.49E±0.02,h15km, MW4.9/117,Moment Tensor Solution. s33,c41; s117,c178; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.42±.08; Mθθ-2.53±.07; Mϕϕ2.95±.07; Mrθ0.09±.23; Mθϕ-1.44±.07; Mϕr-0.04±.23; Best double couple: M=3.09700×10^16 NP1:ϕ=211.00000°,δ88.00000°, λ-1.00000°. NP2:ϕ=301.00000°,δ89.00000°, λ-178.00000°. Principal axes: T 3.3060, Plg1.0000°, Azm76.0000°; N -0.4160, Plg88.0000°, Azm317.0000°; P -2.8880, Plg2.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KRSC ***23*** *22:12:49.5±1.2,55.97N×164.32E,h15km±17km,Ml4.7*
NEIC ***23*** *22:12:49.5±1.7,56.32N±0.09×164.3E±0.1,h10km±1km, mb4.7/63,Error ellipse: s-maj=15.5km s-min=10.7km az=152.0*

ISC 23 22:12:48.9±0.4,56.21N±0.04×164.41E±0.03,h10km,n191, σ1ŝ**49**/195,**mb4.4**/60,**MS4.2**/11,**5C-9D,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.89**	**271**	PN		**Pg**	**22 13 05.5**	**-0.4**
KBTR				S		**Sg**	**22 13 14.5**	**-3.0**
KBTR	**Krutoberegovo**	**0.89**	**271**	*e*P		**Pg**	**22 13 05.6**	**-0.4**
KBTR				*e*S		**Sg**	**22 13 14.5**	**-3.0**
BKI	**Bering**	**1.34**	**138**	PN		**Pn**	**22 13 11.1**	**-2.5**
BKI				S		**Sn**	**22 13 26.9**	**-4.6**
BKI	**Bering**	**1.34**	**138**	*e*P		**Pn**	**22 13 11.2**	**-2.5**
BKI				*e*S		**Sn**	**22 13 26.9**	**-4.6**
BDR	**Baidarnaya**	**1.81**	**283**	*e*S		**Sb**	**22 13 43.9**	**-1.2**
KLY	**Klyuchi**	**2.10**	**274**	*e*S		**Sn**	**22 13 47.7**	**-2.5**
MKZ	**Mys Kozlova**	**2.25**	**224**	PN		**Pn**	**22 13 26.6**	**+0.5**
MKZ				S		**Sn**	**22 13 51.7**	**-2.2**
MKZ	**Mys Kozlova**	**2.25**	**224**	*e*P		**Pn**	**22 13 26.6**	**+0.5**
MKZ				*e*S		**Sn**	**22 13 51.8**	**-2.2**
KIRR	**Kirishev**	**2.29**	**265**	PN		**Pb**	**22 13 28.9**	**-1.5**
KIRR				S		**Sn**	**22 13 55.8**	**+0.6**
KIRR	**Kirishev**	**2.29**	**265**	*e*P		**Pb**	**22 13 29.0**	**-1.5**
KIRR				*e*S		**Sn**	**22 13 55.9**	**+0.6**
KPT	**Kopyto**	**2.36**	**266**	*e*S		**Sb**	**22 13 58.9**	**-1.7**
KOZ	**Kozyrevsk**	**2.54**	**268**	*e*S		**Sn**	**22 14 03.2**	**+2.0**
TUMR	**Tumrok**	**2.58**	**251**	PN		**Pn**	**22 13 31.1**	**+0.3**
TUMR	**Tumrok**	**2.58**	**251**	*e*P		**Pn**	**22 13 31.2**	**+0.3**
SRDR	**Sredinnyy**	**2.62**	**274**	PN		**Pb**	**22 13 34.5**	**-1.4**
SRDR				S		**Sb**	**22 14 06.1**	**-2.0**
SRDR	**Sredinnyy**	**2.62**	**274**	*e*P		**Pb**	**22 13 34.5**	**-1.4**
SRDR				*e*S		**Sb**	**22 14 06.2**	**-2.0**
OSSR	**Ossora**	**3.13**	**347**	PN		**Pb**	**22 13 44.8**	**+0.2**
OSSR	**Ossora**	**3.13**	**347**	*e*P		**Pb**	**22 13 44.9**	**+0.2**
KII	**Karymskiy**	**3.58**	**235**	PN		**Pn**	**22 13 46.3**	**+1.8**
KII	**Karymskiy**	**3.58**	**235**	*e*P		**Pn**	**22 13 46.4**	**+1.8**
SPN	**Mys Shipunski**	**4.02**	**221**	PN		**Pn**	**22 13 52.8**	**+2.3**
SPN	**Mys Shipunski**	**4.02**	**221**	*e*P		**Pn**	**22 13 52.8**	**+2.3**
SPN				*e*S		**Sn**	**22 14 33.5**	**-4.2**
NLC	**Nalytchevo**	**4.23**	**226**	*e*S		**Sn**	**22 14 40.5**	**-2.1**
SDLR	**Sedlovina**	**4.34**	**230**	*e*S		**Sn**	**22 14 44.1**	**-1.6**
KRER	**Koryakskii**	**4.38**	**231**	*e*S		**Sn**	**22 14 46.0**	**-0.7**
SMAR	**Somma**	**4.39**	**230**	*e*S		**Sn**	**22 14 45.8**	**-1.1**
AVH	**Avacha**	**4.41**	**230**	*e*S		**Sn**	**22 14 47.5**	**+0.1**
KOK	**Koryaka**	**4.44**	**231**	*e*S		**Sn**	**22 14 47.7**	**-0.3**
PET	**Petropavlovsk**	**4.62**	**229**	PN		**Pn**	**22 13 59.7**	**+1.0**
PET	**Petropavlovsk**	**4.62**	**229**	Pn		**Pn**	**22 13 59.7**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.98**	**234**	PN		**Pn**	**22 14 04.1**	**+0.5**
PEA0B	**Petropavlovsk-**	**4.98**	**234**	Pn		**Pn**	**22 14 04.1**	**+0.5**
PETK	**Petropavlovsk-** 4.0nm,0.3s,baz=58,slow=17,SNR=4.7	**4.98**	**234**	Pn		**Pn**	**22 14 06.5**	**+2.9**
PETK				Sn		**Sn**	**22 15 04.4**	**+3.2**
	baz=71,slow=19							
PETK				LR		LR	22 16 14.3	
	comp=Z,3μm,19.2s,baz=50,slow=41							
PETK	**Petropavlovsk-** 19nm,0.8s	**4.98**	**234**			**Pn**	**22 14 03.5**	**-0.2**
PETK						**Sn**	**22 15 03.2**	**+2.0**
MIPR	**Malaya Ipel'ka**	**5.97**	**232**	PN		**Pn**	**22 14 17.5**	**+0.3**
MIPR	**Malaya Ipel'ka**	**5.97**	**232**	*e*P		**Pn**	**22 14 17.6**	**+0.3**
SHEM	**Shemya Is, Ala** 9.6nm,0.3s,baz=350,slow=0.2,SNR=6.0	**6.64**	**118**	Pn		**Pn**	**22 14 25.5**	**-0.9**
SHEM				LR		LR	22 16 12.9	
	comp=Z,2μm,18.2s,baz=284,slow=30							
SHEM	**Shemya Is, Ala**	**6.64**	**118**			**Pn**	**22 14 28.4**	**+2.0**
SMY	**Shemya**	**6.64**	**118**	PN		**Pn**	**22 14 27.3**	**+0.9**
SMY	**Shemya**	**6.64**	**118**	Pn		**Pn**	**22 14 27.3**	**+0.9**
MA2	**Magadan** 3.2nm,0.3s,baz=131,slow=9.5,SNR=4.0	**8.01**	**301**	Pn		**Pn**	**22 14 40.6**	**-4.5**
MA2				LR		LR	22 17 40.6	
	comp=Z,207nm,20.1s,baz=107,slow=37							
MA2	**Magadan**	**8.01**	**301**	PN		**Pn**	**22 14 41.0**	**-4.2**
MA2	**Magadan**	**8.01**	**301**			**Pn**	**22 14 41.0**	**-4.2**
SEY	**Seymchan** comp=Z,2μm,19.7s,baz=131,slow=40	**9.08**	**323**	LR		LR	22 18 41.5	
BILL	**Bilibino**	**11.91**	**3**	Pn		**Pn**	**22 15 37.6**	**-0.9**
GSTR	**Great Sitkin T**	**12.16**	**102**	Pn		**Pn**	**22 15 40.2**	**-1.8**
TNA	**Tin City**	**16.25**	**44**	Pn		**Pn**	**22 16 36.6**	**-0.4**
TNA				IAmb		IAmb	22 16 50.6	
	comp=Z,50nm,1.1s							
YSS	**Yuzhno-Sakhali**	**16.27**	**244**	*e*P		**Pn**	**22 16 38.7**	**+1.4**
YSS				*e*S		**Sn**	**22 19 38.3**	**+0.6**
YSS				pmax		pmax		
	comp=Z,20nm,1.2s							
YSS				MLR		MLR		
	comp=Z,1μm,14.0s							
YSS				MLR		MLR		
	comp=N,800nm,15.0s							
YSS				MLR		MLR		
	comp=E,700nm,16.0s							
UNV	**Unalaska Valle**	**16.79**	**86**	Pn		**Pn**	**22 16 44.9**	**+1.1**
K13K	**Kusilvak Mount**	**16.79**	**57**			**Pn**	**22 16 43.8**	**0.0**
AKUT	**Akutan**	**17.10**	**84**	Pn		**Pn**	**22 16 47.9**	**+0.2**
M13K	**Dall Lake**	**17.34**	**63**	Pn		**Pn**	**22 16 50.7**	**-0.1**
M13K				IAmb		IAmb	22 17 25.0	
	comp=Z,110nm,1.4s							
J14K	**Nanvaranak Lak**	**17.39**	**55**			**Pn**	**22 16 51.0**	**-0.4**
L14K	**Kuka Creek**	**17.69**	**60**			**P**	**22 16 57.5**	**+1.7**
L14K				IAmb		IAmb	22 17 18.4	
	comp=Z,54nm,1.1s							
M14K	**Bethel**	**18.03**	**62**	P		**Pn**	**22 16 59.0**	**-0.2**
M14K				IAmb		IAmb	22 17 33.6	
	comp=Z,90nm,1.2s							
K15K	**Wolf Creek Mou**	**18.28**	**57**	P		**P**	**22 17 03.1**	**+0.6**
C16K	**Lisburne Hills**	**18.30**	**37**	Pn		**Pn**	**22 16 59.2**	**-3.4**
JKA	**Kamikawa-asahi**	**18.38**	**238**			**Pn**	**22 17 04.8**	**+1.1**
JKA				IAmb		IAmb	22 17 15.8	
	comp=Z,51nm,1.0s							
ASAJ	**Asahikawa**	**18.39**	**238**	P		**Pn**	**22 17 05.1**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=24,slow=6.8,SNR=6.8							
ASAJ				LR		LR	22 23 50.9	
	comp=Z,2μm,18.6s,baz=48,slow=36							
	comp=Z,34nm,0.8s							
ASAJ	**Asahikawa**	**18.39**	**238**	P		**Pn**	**22 17 04.8**	**+1.1**
ASAJ				pmax		pmax		
	comp=Z,51nm,1.0s							
YAK	**Yakutsk**	**18.58**	**303**⇑ *e*P			**P**	**22 17 03.6**	**-2.1**
YAK				pmax		pmax		
	comp=Z,16nm,0.7s							
I17K	**Unalakleet**	**18.83**	**52**			**Pn**	**22 17 09.4**	**+0.4**
I17K				IAmb		IAmb	22 17 39.2	
	comp=Z,69nm,1.4s							
N15K	**Kwethluk River**	**18.98**	**63**	P		**P**	**22 17 09.8**	**-0.3**
N15K				IAmb		IAmb	22 17 46.5	
	comp=Z,63nm,1.4s							
O15K	**Ungalikthiuk R**	**19.20**	**66**	P		**P**	**22 17 13.4**	**+0.9**
O15K				IAmb		IAmb	22 17 37.0	
	comp=Z,57nm,1.4s							
ERM	**Erimo**	**19.76**	**233**	P		**P**	**22 17 19.3**	**+0.5**
ERM				pmax		pmax		
	comp=Z,55nm,1.2s							
ERM	**Erimo**	**19.76**	**233**	P		**P**	**22 17 19.3**	**+0.5**
ERM				IAmb		IAmb	22 17 23.6	
	comp=Z,55nm,1.2s							
C18K	**Utukok River**	**19.86**	**38**	P		**P**	**22 17 18.8**	**-0.9**
C18K				IAmb		IAmb	22 17 58.9	
	comp=Z,55nm,1.4s							
VNFG	**Fog Glacier, M**	**19.89**	**75**	P		**P**	**22 17 20.8**	**+0.6**
O16K	**Kokwok River B**	**20.03**	**65**	P		**P**	**22 17 22.5**	**+0.9**
N17K	**Nushagak Hills**	**20.39**	**62**	P		Pn	22 17 26.9	-0.7
N17K				IAmb		IAmb	22 18 08.4	
	comp=Z,48nm,1.4s							
CHGN	**Chignik**	**20.50**	**74**			**P**	**22 17 26.9**	**+0.2**
J18K	**Innoko River**	**20.55**	**53**	P		**P**	**22 17 27.7**	**+0.4**
J18K				IAmb		IAmb	22 17 39.2	
	comp=Z,27nm,0.9s							
F19K	**Shaleruckik Mo**	**20.56**	**44**	P		Pn	22 17 28.8	-0.7
C19K	**Lookout Ridge**	**20.56**	**37**	P		Pn	22 17 28.9	-0.7
C19K				IAmb		IAmb	22 17 40.8	
	comp=Z,49nm,1.1s							
E19K	**Redstone River**	**20.91**	**42**	P		**P**	**22 17 30.6**	**-0.6**
E19K				IAmb		IAmb	22 18 07.4	
	comp=Z,33nm,1.2s							
J19K	**Poorman**	**21.07**	**52**	P		**P**	**22 17 33.5**	**+0.6**
ZEA	**Zeya**	**21.30**	**279**	*e*P		**P**	**22 17 36.6**	**+1.2**
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
O18K	**Koktuh Hills**	**21.45**	**63**	P		**P**	**22 17 35.4**	**-1.6**
TIXI	**Tiksi**	**21.46**	**330**	P		**P**	**22 17 36.9**	**-0.1**
	comp=Z,9.7nm,0.7s,baz=133,slow=7.7,SNR=5.9							
TIXI				LR		LR	22 26 43.6	
	comp=Z,719nm,19.7s,baz=144,slow=39							
	comp=Z,9.7nm,0.7s							
TIXI	**Tiksi**	**21.46**	**330**⇓ *e*P			**P**	**22 17 38.8**	**+1.8**
TIXI				pmax		pmax		
	comp=Z,11nm,0.8s							
TIXI	**Tiksi**	**21.46**	**330**	P		**P**	**22 17 36.2**	**-0.8**
B20K	**Meade River**	**21.68**	**35**	P		**P**	**22 17 39.1**	**-0.2**
N19K	**Bonanza Creek**	**21.69**	**61**	P		**P**	**22 17 39.3**	**-0.3**
N19K				IAmb		IAmb	22 18 18.4	
	comp=Z,25nm,1.1s							
CHIR	**Chirikof Islan**	**22.14**	**74**	P		**P**	**22 17 44.4**	**+0.1**
G21K	**Allakaket**	**22.18**	**45**	P		**P**	**22 17 45.6**	**+0.9**
G21K				IAmb		IAmb	22 18 25.6	
	comp=Z,47nm,1.4s							
KTH	**Kantishna Hill**	**23.15**	**53**	P		**P**	**22 17 56.8**	**+1.7**
KTH				IAmb		IAmb	22 18 18.2	
	comp=Z,27nm,1.2s							
KDAK	**Kodiak Island**	**23.20**	**68**	P		**P**	**22 17 55.8**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=273,slow=9.7,SNR=3.5							
KDAK				LR		LR	22 26 26.7	
	comp=Z,998nm,20.1s,baz=259,slow=35							
	comp=Z,4.6nm,0.8s							
KDAK	**Kodiak Island**	**23.20**	**68**	P		**P**	**22 17 55.4**	**-0.1**
KDAK				pmax		pmax		
	comp=Z,55nm,1.5s							
KDAK	**Kodiak Island**	**23.20**	**68**	P		**P**	**22 17 55.4**	**-0.1**
L22K	**Petersville**	**23.29**	**56**	P		**P**	**22 17 56.0**	**-0.4**
L22K				IAmb		IAmb	22 18 17.1	
	comp=Z,23nm,1.4s							
CNPM	**China Poot**	**23.49**	**63**	P		**P**	**22 17 57.9**	**-0.6**
C23K	**Itkillik River**	**23.81**	**37**	P		**P**	**22 18 00.7**	**-0.8**
SLKM	**Skilak Lake**	**23.81**	**61**	P		**P**	**22 18 02.8**	**+1.2**
E23K	**Chandalar**	**23.87**	**42**	P		**P**	**22 18 02.4**	**+0.2**
E23K				IAmb		IAmb	22 18 29.1	
	comp=Z,19nm,1.1s							
D24K	**Happy Valley**	**24.30**	**39**	P		**P**	**22 18 06.8**	**+0.7**
D24K				IAmb		IAmb	22 18 30.3	
	comp=Z,24nm,1.1s							
CCB	**Clear Creek Bu**	**24.47**	**50**	P		**P**	**22 18 08.5**	**+0.8**
CCB				IAmb		IAmb	22 18 30.7	
	comp=Z,13nm,0.8s							
SML	**Sawmill**	**24.51**	**57**	P		**P**	**22 18 08.0**	**-0.1**
SML				pmax		pmax		
	comp=Z,26nm,0.9s							
SML	**Sawmill**	**24.51**	**57**	P		**P**	**22 18 09.0**	**+0.9**
G24K	**Hadweenzic Riv**	**24.59**	**45**	P		**P**	**22 18 09.5**	**+0.7**
G24K				IAmb		IAmb	22 18 30.3	
	comp=Z,18nm,0.9s							
PWL	**Port Wells**	**24.66**	**59**	P		**P**	**22 18 08.4**	**-1.0**
DHY	**Denali Highway**	**24.78**	**54**	P		**P**	**22 18 11.3**	**+0.6**
DHY				IAmb		IAmb	22 18 52.5	
	comp=Z,33nm,1.4s							
IL31		**24.86**	**50**	P		**P**	**22 18 12.0**	**+0.9**
IL31				IAmb		IAmb	22 18 38.9	
	comp=Z,15nm,0.9s							
ILAR	**Eielson Array**	**24.86**	**50**	P		**P**	**22 18 12.1**	**+1.0**
	comp=Z,6.0nm,1.0s,baz=273,slow=9.6,SNR=5.5							
	comp=Z,6.0nm,1.0s							
SCM	**Sheep Creek Mo**	**24.97**	**57**	P		**P**	**22 18 13.9**	**+1.6**
SCM				pmax		pmax		
	comp=Z,51nm,1.0s							
SCM	**Sheep Creek Mo**	**24.97**	**57**	P		**P**	**22 18 13.9**	**+1.6**
D25K	**Kavik River**	**25.19**	**39**	P		**P**	**22 18 13.3**	**-0.9**
D25K				IAmb		IAmb	22 18 39.2	
	comp=Z,18nm,0.9s							
BNX	**BinXian**	**25.24**	**261**	⇓P		**P**	**22 18 13.1**	**-1.7**
BNX				pmax		pmax		
	comp=Z,9.0nm,1.2s							
MJB9	**Matsu-Tunnel**	**26.44**	**233**	P		**P**	**22 18 26.1**	**+0.4**
MJB9				IAmb		IAmb	22 18 37.6	
	comp=Z,19nm,1.0s							
MAJO	**Matsushiro**	**26.44**	**233**	⇑ *i*P		**P**	**22 18 26.6**	**+0.9**
MAJO				pmax		pmax		
	comp=Z,21nm,1.0s							
MAJO	**Matsushiro**	**26.44**	**233**	P		**P**	**22 18 26.4**	**+0.6**
MAJO				IAmb		IAmb	22 18 36.7	
	comp=Z,21nm,1.0s							
MJAR	**Matsushiro Arr**	**26.44**	**233**	P		**P**	**22 18 26.2**	**+0.5**
	comp=Z,5.6nm,0.7s,baz=33,slow=7.2,SNR=6.3							
	comp=Z,5.6nm,0.7s							
MJAR	**Matsushiro Arr**	**26.44**	**233**	P		**P**	**22 18 26.0**	**+0.3**
MJAR				pmax		pmax		
	comp=Z,13nm,1.4s							
MJAR	**Matsushiro Arr**	**26.44**	**233**			**P**	**22

comp=Z,2.6nm,0.8s,baz=63,slow=7.2,SNR=6.1
comp=Z,2.6nm,0.8s
SONM Songino Array 35.68 282 P **P** **22 19 46.9 -0.2**
SONM pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 35.68 282 P **P** **22 19 46.9 -0.2**
H11N2 WAKE ISLAND Hy 36.47 176 T T 22 58 49.5
baz=357,slow=76,SNR=378
H11N3 WAKE ISLAND Hy 36.48 176 T T 22 58 47.4
baz=357,slow=76,SNR=6.1
H11N1 WAKE ISLAND Hy 36.48 176 T T 22 58 40.6
baz=357,slow=76,SNR=6.0
H11S1 WAKE ISLAND Hy 37.68 176 T T 23 00 30.1
baz=54,slow=71,SNR=14
H11S3 WAKE ISLAND Hy 37.69 176 T T 23 00 20.4
baz=54,slow=71,SNR=13
H11S2 WAKE ISLAND Hy 37.69 176 T T 23 00 08.4
baz=54,slow=71,SNR=4.6
KNGR Kungurtug, Tuv 38.84 291 ⇓ *iP* **P** **22 20 14.0 +0.1**
KNGR pmax pmax
comp=Z,3.0nm,1.2s
YKA Yellowknife Ar 39.18 47 P **P** **22 20 17.8 +1.3**
comp=Z,1.0nm,0.6s,baz=297,slow=7.4,SNR=1.8
comp=Z,1.0nm,0.6s
SPITS Spitsbergen Ar 44.46 351 P **P** **22 20 59.9 +0.4**
comp=Z,9.8nm,0.8s,baz=39,slow=7.4,SNR=6.3
comp=Z,9.8nm,0.8s
SPB2 Spitsbergen Ar 44.46 351 **P** **22 21 00.4 +1.0**
DGZ Jazzator, Alta 44.56 296 ⇓ *eP* **P** **22 21 00.6 -0.2**
DGZ pmax pmax
comp=Z,5.0nm,1.6s
GTA2 Gaotai 44.73 276 *eP* **P** **22 21 02.8 +0.6**
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
GTA2 LR LR
comp=N,1μm,19.0s
GTA2 LR LR
comp=E,1μm,18.7s
GTA2 LR LR
comp=Z,530nm,20.3s
LZDM Lanzhou Array 45.04 270 P **P** **22 21 05.7 +0.8**
comp=Z,1.0nm,0.3s,baz=15,slow=6.0,SNR=1.5
comp=Z,1.0nm,0.3s
BLKN Baker Lake 45.10 37 P **P** **22 21 05.4 +0.7**
BLKN IAmb IAmb 22 21 33.6
comp=Z,11nm,1.0s
KURK Kurchatov 48.22 302 ⇓ *eP* **P** **22 21 28.8 -0.5**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 48.22 302 P **P** **22 21 28.8 -0.5**
KURBB Kurchatov Arra 48.32 302 P **P** **22 21 29.6 -0.4**
comp=Z,2.1nm,0.8s,baz=54,slow=7.9,SNR=4.4
comp=Z,2.1nm,0.8s
MK31 Makanchi Array 49.06 296 ⇓ *eP* **P** **22 21 36.5 +0.6**
MKAR Makanchi Array 49.06 296 P **P** **22 21 35.1 -0.8**
comp=Z,1.4nm,0.8s,baz=44,slow=7.1,SNR=5.2
comp=Z,1.4nm,0.8s
BVAR Borovoye Array 50.41 309 P **P** **22 21 45.8 -0.2**
comp=Z,4.4nm,0.6s,baz=50,slow=8.7,SNR=11
comp=Z,4.4nm,0.6s
BORK Borovoye 50.43 309 *de* **P** **P** **22 21 46.2 +0.1**
BORK pmax pmax
comp=Z,5.0nm,0.7s
BORK Borovoye 50.43 309 **P** **22 21 45.9 -0.2**
BORK IAmb IAmb 22 21 55.7
comp=Z,6.0nm,0.8s
YNM Yellowstone No 51.90 64 P **P** **22 21 55.7 -1.9**
NVAR Mina Array Bea 52.42 75 P **P** **22 22 02.5 +1.0**
comp=Z,1.0nm,0.7s,baz=322,slow=8.8,SNR=2.7
NVAR LR LR 22 41 04.6
comp=Z,132nm,21.9s,baz=320,slow=32
comp=Z,1.0nm,0.7s
ARTI Arti 52.88 318 *c iP* **P** **22 22 05.7 +1.3**
ARTI 22 23 13.0
ARTI 22 24 04.6
ARTI S **S** **22 29 35.0 +2.2**
ARTI SS **SS** **22 33 05.7 -5.2**
ARTI pmax pmax
comp=Z,4.0nm,0.8s
PDAR Pinedale Array 53.88 65 P **P** **22 22 13.2 +0.9**
comp=Z,0.6nm,0.6s,baz=314,slow=8.1,SNR=4.0
PDAR LR LR 22 44 44.4
comp=Z,141nm,21.7s,baz=316,slow=36
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 53.88 65 P **P** **22 22 12.5 +0.3**
KLMR Klimovskoe 55.48 331 *eP* **P** **22 22 21.2 -2.0**
KLMR pmax pmax
comp=Z,11nm,1.5s
KLMR MLR MLR
comp=Z,414nm,18.0s
AAK Ala-Archa 55.92 297 ⇑ *eP* **P** **22 22 26.3 -0.6**
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 55.92 297 P **P** **22 22 25.7 -1.2**
AAK IAmb IAmb 22 22 41.0
comp=Z,4.4nm,0.8s
KKAR Karatay Array 57.53 300 P **P** **22 22 38.4 +0.2**
KKAR Karatay Array 57.53 300 **P** **22 22 38.4 +0.2**
AB31 Akbulak array 57.65 311 P **P** **22 22 38.3 -0.6**
AB31 IAmb IAmb 22 22 49.0
comp=Z,8.9nm,1.4s
ABKAR Akbulak array 57.65 311 P **P** **22 22 37.6 -1.2**
CHTO Chiang Mai 60.95 260 P **P** **22 23 01.8 -0.2**
CHTO pmax pmax
comp=Z,5.0nm,0.8s
CHTO Chiang Mai 60.95 260 **P** **22 23 01.8 -0.2**
CHTO IAmb IAmb 22 23 11.0
comp=Z,4.6nm,0.8s
NB201 NORSAR Array S 61.18 345 P **P** **22 23 03.1 -0.1**
OBN Obninsk 61.19 329 LR LR 22 51 56.9
comp=Z,161nm,18.1s,baz=28,slow=38
OBN Obninsk 61.19 329 *eP* **P** **22 23 03.1 -0.1**
OBN *e* 22 23 45.2
OBN *e* PPP PPP 22 26 42.8
OBN pmax pmax
comp=Z,5.0nm,0.9s
NB2 NORSAR Subarra 61.20 345 P **P** **22 23 02.0 -1.3**
comp=Z,1.6nm,0.6s,baz=18,slow=6.9
NOA NORSAR Array B 61.20 345 P **P** **22 23 02.3 -1.0**
comp=Z,1.4nm,0.7s,baz=13,slow=6.8,SNR=5.4
comp=Z,1.4nm,0.7s
CMAR Chiang Mai Arr 61.23 260 P **P** **22 23 04.9 +0.9**
comp=Z,1.7nm,0.3s,baz=36,slow=6.5,SNR=8.7
comp=Z,1.7nm,0.3s
CHGR Chuyangaron 61.58 298 ⇑ *eP* **P** **22 23 05.9 -0.4**
CHGR pmax pmax
comp=Z,27nm,1.3s
HFS Hagfors 61.70 344 P **P** **22 23 06.1 -0.5**
comp=Z,1.4nm,0.5s,baz=43,slow=6.5,SNR=7.0
comp=Z,1.4nm,0.5s
AKASG Malin Array Be 67.17 331 P **P** **22 23 42.3 -0.2**
comp=Z,0.6nm,0.5s,baz=27,slow=5.9,SNR=2.5
comp=Z,0.6nm,0.5s
TXAR Lajitas Array 67.18 71 P **P** **22 23 44.0 +0.9**
comp=Z,0.7nm,0.6s,baz=320,slow=6.4,SNR=4.3
comp=Z,0.7nm,0.6s
TXAR Lajitas Array 67.18 71 P **P** **22 23 43.3 +0.2**
TXAR Lajitas Array 67.18 71 P **P** **22 23 43.3 +0.2**
EKA Eskdalemuir Ar 68.36 352 P **P** **22 23 49.7 -0.2**
comp=Z,0.9nm,0.7s,baz=16,slow=6.1,SNR=3.4
comp=Z,0.9nm,0.7s
EKA Eskdalemuir Ar 68.36 352 P **P** **22 23 49.6 -0.3**
EKA pmax pmax
comp=Z,6.0nm,1.2s
KIV Kislovodsk 68.81 319 *eP* **P** **22 23 53.2 +0.1**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,134nm,17.0s
KBZ Khabaz 68.93 319 P **P** **22 23 54.6 +1.0**
comp=Z,1.9nm,0.8s,baz=5.6,slow=4.7,SNR=1.7
comp=Z,1.9nm,0.8s
KBZ Khabaz 68.93 319 ⇓ *eP* **P** **22 23 55.1 +1.5**
CLL Collm 70.27 341 *eP* **P** **22 24 02.0 +0.2**
CLL Collm 70.27 341 *eP* **P** **22 24 02.0 +0.2**
CLL *e* SS SS 22 37 36.0 -6.2
CLL *ex* x 22 38 54.0
CLL *e* SSS SSS 22 41 12.0
GERES GERESS Array B 72.50 340 P **P** **22 24 15.2 -0.2**
comp=Z,0.3nm,0.5s,baz=9.9,slow=6.3,SNR=2.4
comp=Z,0.3nm,0.5s
GERES GERESS Array B 72.50 340 P **P** **22 24 14.1 -1.3**
RGRS Roger Stewart 75.71 52 P **P** **22 24 33.5 -0.8**
BRTR Keskin Array B 75.73 323 P **P** **22 24 35.0 +0.5**
comp=Z,0.8nm,0.8s,baz=66,slow=5.1,SNR=2.6
comp=Z,0.8nm,0.8s
BRTR Keskin Array B 75.73 323 P **P** **22 24 34.5 -0.1**
BRTR Keskin Array B 75.73 323 P **P** **22 24 34.5 -0.1**
WRA Warramunga Arr 79.99 209 P **P** **22 25 01.6 +3.5**
comp=Z,1.3nm,0.9s,baz=23,slow=5.6,SNR=2.0
comp=Z,1.3nm,0.9s
WRA Warramunga Arr 79.99 209 P **P** **22 24 59.2 +1.1**
WRA Warramunga Arr 79.99 209 P **P** **22 24 59.2 +1.1**
ASAR Alice Springs 83.66 208 P **P** **22 25 19.1 +1.7**
comp=Z,0.6nm,0.8s,baz=14,slow=5.2,SNR=7.0
comp=Z,0.6nm,0.8s
ESDC Sonseca Array 83.97 351 P **P** **22 25 19.8 +0.7**
comp=Z,0.6nm,0.8s,baz=2.0,slow=4.9,SNR=4.2
comp=Z,0.6nm,0.8s
MDT Midelt 90.84 351 LR LR 23 09 30.7
comp=Z,35nm,18.4s,baz=36,slow=38
QSPA South Pole Qui 145.96 180 PKPbc **PKPdf** **22 32 26.7 +0.3**
comp=Z,1.4nm,0.8s,baz=26,slow=3.3,SNR=1.3

*MDD **23** 22:22:33.9±1.1, 36.°80N×11.°22W, h0km, mb_Lg2.8/10,*
Error ellipse: s-maj=9.0km s-min=7.6km az=10.0
*IGIL **23** 22:22:36.3, 36.°66N×11.°29W, h24km, ML1.8*
*INMG **23** 22:22:36.5±1.3, 36.°65N×11.°28W, h23km±10km, ML2.0,*
Error ellipse: s-maj=9.6km s-min=3.7km az=72.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe
*CNRM **23** 22:22:39.2, 36.°38N×10.°68W, h74km*

ISC 23 22:22:31.0±2.3, 36.°54N±0.°05×11.°5W±0.°1, h35km, n56, σ2s21/101, 2C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.19**	**73**	Pn		**Pn**		**22 23 07.5**	**+2.7**
PFVI				Sn		**Sn**		**22 23 29.5**	**-1.2**
PFVI	**Vila Bisbo**	**2.19**	**73**	↑ *iP*		**Pn**		**22 23 07.5**	**+2.7**
PFVI				*eS*		**Sn**		**22 23 30.3**	**-0.4**
PFVI				*i*	IAML			22 23 30.9	
PFVI				*i*	IAML			22 23 31.2	
PFVI				*i*	IAML			22 23 35.8	
PFVI	**Vila Bisbo**	**2.19**	**73**	P		**Pn**		**22 23 06.5**	**+1.6**
PFVI				S		**Sn**		**22 23 27.9**	**-2.8**
MORF	**Marmelete**	**2.37**	**70**	*eP*		**Pn**		**22 23 10.0**	**+2.6**
MORF				*eS*		**Sn**		**22 23 34.6**	**-0.6**
MORF					IAML			22 23 36.6	
	comp=N,10.0nm,0.2s								
MORF	**Marmelete**	**2.37**	**70**	*eP*		**Pn**		**22 23 10.0**	**+2.6**
MORF				*eS*		**Sn**		**22 23 35.3**	**0.0**
MORF				*i*	IAML			22 23 37.7	
MORF				*i*	IAML			22 23 37.9	
MORF				*i*	IAML			22 23 38.4	
PTEO	**Sao Teotonio**	**2.40**	**64**	*eP*		**Pn**		**22 23 10.5**	**+2.7**
PTEO				*eS*		**Sn**		**22 23 35.6**	**-0.4**
PTEO				*i*	IAML			22 23 36.3	
PTEO				*i*	IAML			22 23 37.1	
PTEO				*i*	IAML			22 23 37.3	
PLOUS	**Minas do Lousa**	**2.84**	**57**	⇓ *eP*		**Pn**		**22 23 45.1**	**+2.3**
PLOUS				*eS*		**Sn**		**22 23 45.8**	**-1.0**
PLOUS				*i*	IAML			22 23 51.2	
PLOUS				*i*	IAML			22 23 51.6	
PLOUS				*i*	IAML			22 23 52.3	
MESJ	**Messejana**	**2.89**	**62**	*eP*		**Pn**		**22 23 17.0**	**+2.5**
MESJ				*eS*		**Sn**		**22 23 46.7**	**-1.3**
MESJ					IAML			22 23 49.5	
	comp=N,2.6nm,0.2s								
MESJ	**Messejana**	**2.89**	**62**	*eP*		**Pn**		**22 23 17.0**	**+2.5**
MESJ				*eS*		**Sn**		**22 23 47.6**	**-0.4**
MESJ				*i*	IAML			22 23 51.0	
MESJ				*i*	IAML			22 23 53.0	
MESJ				*i*	IAML			22 24 00.3	
PBDV	**Barranco-do-Ve**	**2.91**	**75**	Pn		**Pn**		**22 23 17.9**	**+3.1**
PBDV	**Barranco-do-Ve**	**2.91**	**75**	*eP*		**Pn**		**22 23 17.9**	**+3.1**
PBDV				*eS*		**Sn**		**22 23 48.6**	**+0.1**
PBDV				*i*	IAML			22 23 52.0	
PBDV				*i*	IAML			22 23 52.6	
PBDV				*i*	IAML			22 23 57.0	
PCVE	**Castro Verde**	**2.94**	**67**	Pn		**Pn**		**22 23 17.9**	**+2.7**
PCVE				Sn		**Sn**		**22 23 48.4**	**-0.9**
PCVE	**Castro Verde**	**2.94**	**67**	⇑ *eP*		**Pn**		**22 23 17.9**	**+2.7**
PCVE				*eS*		**Sn**		**22 23 48.4**	**-0.9**
PCVE				*i*	IAML			22 23 49.5	
PCVE				*i*	IAML			22 23 51.4	
PCVE				*i*	IAML			22 23 52.7	
PVAQ	**Vaqueiros**	**3.11**	**73**	*eP*		**Pn**		**22 23 20.5**	**+3.0**
PVAQ				*eS*		**Sn**		**22 23 52.8**	**-0.7**
PVAQ				*i*	IAML			22 23 53.4	
PVAQ				*i*	IAML			22 23 55.1	
PVAQ				*i*	IAML			22 23 56.6	
PVAQ	**Vaqueiros**	**3.11**	**73**	P		**Pn**		**22 23 19.0**	**+1.4**
PVAQ				S		**Sn**		**22 23 49.4**	**-4.1**
MOE	**Montemor**	**3.16**	**50**	*eP*		**Pn**		**22 23 30.7**	**+2.4**
MOE				*eS*		**Sn**		**22 23 54.1**	**-0.7**
MOE				*i*	IAML			22 23 56.2	
MOE				*i*	IAML			22 23 57.2	
MOE				*i*	IAML			22 23 58.5	
PBEJ	**Beja**	**3.22**	**61**	*eP*		**Pn**		**22 23 22.2**	**+3.1**
PBEJ				*eS*		**Sn**		**22 23 55.1**	**-1.1**
PBEJ				*i*	IAML			22 23 57.0	
PBEJ				*i*	IAML			22 23 58.7	
PBEJ				*i*	IAML			22 23 59.3	
EGRO	**El Granado**	**3.33**	**71**	Pn		**Pn**		**22 23 23.3**	**+2.8**
EGRO				Sn		**Sn**		**22 23 57.4**	**-1.4**
EGRO	**El Granado**	**3.33**	**71**	P		**Pn**		**22 23 22.7**	**+2.2**
EGRO				S		**Sn**		**22 23 58.0**	**-0.8**
EGRO				*i*	IVmb_Lg			22 24 02.0	
EVO	**Evora**	**3.38**	**53**	Sn		**Sn**		**22 23 59.3**	**-0.9**
EVO	**Evora**	**3.38**	**53**	*eS*		**Sn**		**22 23 59.3**	**-0.9**
PARRA	**Arraiolos**	**3.54**	**49**	*eP*		**Pn**		**22 23 25.4**	**+2.0**
PARRA				*eS*		**Sn**		**22 24 02.4**	**-1.6**
PARRA				*i*	IAML			22 24 04.9	
PARRA				*i*	IAML			22 24 05.0	
PARRA				*i*	IAML			22 24 06.0	
PMTG	**Montargil**	**3.59**	**44**	*eP*		**Pn**		**22 23 26.1**	**+1.9**
PMTG				*eS*		**Sn**		**22 24 04.0**	**-1.4**
PMTG				*i*	IAML			22 24 06.4	
PMTG				*i*	IAML			22 24 08.7	
PMTG				*i*	IAML			22 24 18.6	
PSBE	**So Bento**	**3.64**	**34**	*eS*		**Sn**		**22 24 06.5**	**0.0**
PESTR	**Estremoz**	**3.85**	**52**	*eP*		**Pn**		**22 23 30.3**	**+2.7**
PESTR				*eS*		**Sn**		**22 24 10.7**	**-0.9**
PESTR				*i*	IAML			22 24 19.4	
PESTR				*i*	IAML			22 24 21.0	
PESTR				*i*	IAML			22 24 21.9	
PESTR	**Estremoz**	**3.85**	**52**	P		**Pn**		**22 23 31.5**	**+3.9**
PESTR				S		**Sn**		**22 24 10.7**	**-0.9**
PBAR	**Barrancos**	**3.88**	**64**	Pn		**Pn**		**22 23 30.7**	**+2.7**
PBAR				Sn		**Sn**		**22 24 10.6**	**-1.8**
PBAR	**Barrancos**	**3.88**	**64**	*eP*		**Pn**		**22 23 30.8**	**+2.7**
PBAR				*eS*		**Sn**		**22 24 10.5**	**-1.8**
PBAR				*i*	IAML			22 24 12.8	
PBAR				*i*	IAML			22 24 13.5	
PBAR				*i*	IAML			22 24 13.9	
EMIN	**Mina Concepcio**	**4.01**	**71**	Pn		**Pn**		**22 23 32.3**	**+2.4**
EMIN	**Mina Concepcio**	**4.01**	**71**	P		**Pn**		**22 23 31.7**	**+1.8**
EMIN				S		**Sn**		**22 24 14.7**	**-1.0**
EMIN				*i*	IVmb_Lg			22 24 20.2	
PSARD	**Sardoal**	**4.01**	**39**	*eP*		**Pn**		**22 23 32.1**	**+2.1**
PSARD				*eS*		**Sn**		**22 24 14.0**	**-1.8**
PSARD				*i*	IAML			22 24 17.8	
PSARD				*i*	IAML			22 24 21.4	
PSARD				*i*	IAML			22 24 22.7	
EBAD	**Badajoz**	**4.16**	**56**	Pn		**Pn**		**22 23 34.3**	**+2.3**
EBAD				Sn		**Sn**		**22 24 16.9**	**-2.5**
EBAD	**Badajoz**	**4.16**	**56**	P		**Pn**		**22 23 33.7**	**+1.7**
EBAD				S		**Sn**		**22 24 17.1**	**-2.3**
EBAD				*i*	IVmb_Lg			22 24 21.8	
PCAS	**Casmilo, Conde**	**4.21**	**33**	*eP*		**Pn**		**22 23 34.8**	**+2.1**
PCAS				*eS*		**Sn**		**22 24 19.4**	**-1.2**
PCAS				*i*	IAML			22 24 25.7	
PCAS				*i*	IAML			22 24 27.0	
PCAS				*i*	IAML			22 24 33.2	
PMRV	**Marv??o**	**4.32**	**47**	*eP*		**Pn**		**22 23 35.9**	**+1.8**
PMRV				*eS*		**Sn**		**22 24 20.6**	**-2.6**
PMRV				*i*	IAML			22 24 22.9	
PMRV				*i*	IAML			22 24 25.3	
PMRV				*i*	IAML			22 24 25.5	
ESPR	**Espera**	**4.51**	**84**	Pn		**Pn**		**22 23 39.9**	**+3.2**
ESPR				Sn		**Sn**		**22 24 26.6**	**-1.3**
ESPR	**Espera**	**4.51**	**84**	P		**Pn**		**22 23 39.7**	**+2.9**
ESPR				S		**Sn**		**22 24 27.5**	**-0.4**
ESPR				*i*	IVmb_Lg			22 24 29.4	
PCBR	**Castelo Branco**	**4.55**	**42**	*eP*		**Pn**		**22 23 40.0**	**+2.7**
PCBR				*eS*		**Sn**		**22 24 27.1**	**-1.8**
ZHG	**ZHG**	**5.01**	**127**	P		**Pn**		**22 23 44.3**	**+0.6**
ZHG				Sn		Sn		22 24 35.7	-4.6
PVIS	**Viseu**	**5.02**	**33**	*eP*		**Pn**		**22 23 45.5**	**+1.7**
PVIS				*eS*		**Sn**		**22 24 38.4**	**-2.2**
ECAB	**El Cabril**	**5.05**	**70**	Pn		**Pn**		**22 23 46.7**	**+2.5**
ECAB	**El Cabril**	**5.05**	**70**	P		**Pn**		**22 23 45.8**	**+1.6**
ECAB				S		**Sn**		**22 24 38.3**	**-3.0**
ECAB				*i*	IVmb_Lg			22 24 42.7	
POLO	**Lamas de Olo**	**5.61**	**29**	*eP*		**Pn**		**22 23 53.5**	**+1.6**
POLO				*eS*		**Sn**		**22 24 51.7**	**-3.5**
POLO				*i*	IAML			22 24 59.5	
EADA	**Adamuz**	**5.71**	**71**	Pn		**Pn**		**22 23 55.6**	**+2.3**
EADA				Sn		**Sn**		**22 24 55.9**	**-1.8**
EADA	**Adamuz**	**5.71**	**71**	P		**Pn**		**22 23 54.7**	**+1.4**
EADA				S		**Sn**		**22 24 55.1**	**-2.6**
EADA				*i*	IVmb_Lg			22 25 01.7	
PCAB	**Cabril**	**5.81**	**26**	*eP*		**Pn**		**22 23 56.2**	**+1.6**
PCAB				*eS*		**Sn**		**22 24 57.5**	**-2.6**
ELOB	**Lobios**	**5.94**	**25**	P		**Pn**		**22 23 56.3**	**-0.2**
ELOB				S		**Sn**		**22 24 58.4**	**-4.9**
ELOB				*i*	IVmb_Lg			22 25 00.0	
PGAV	**Gavieira, Arco**	**5.96**	**23**	*eP*		**Pn**		**22 23 59.0**	**+2.3**
PGAV				*eS*		**Sn**		**22 25 00.1**	**-3.7**
PGAV				*i*	IAML			22 25 03.4	
PGAV				*i*	IAML			22 25 10.4	
PGAV				*i*	IAML			22 25 12.6	
IFR	**Ifrane**	**6.00**	**118**	Sn		**Sn**		**22 25 02.4**	**-2.6**
OUK	**Oukaimeden**	**6.09**	**150**	P		**Pn**		**22 24 00.4**	**+1.6**
OUK				Sn		Sn		22 25 04.0	-3.5
PAB	**San Pablo**	**6.36**	**60**	P		**Pn**		**22 24 03.6**	**+1.4**
PAB				S		**Sn**		**22 25 09.7**	**-4.0**
PAB				*i*	IVmb_Lg			22 25 20.2	
PSIM	**Granatula de C**	**6.51**	**67**	P		**Pn**		**22 24 05.5**	**+1.1**
PSIM				S		**Sn**		**22 25 14.8**	**-2.7**
MD31	**MD31**	**6.62**	**122**	P		**Pn**		**22 24 06.5**	**+0.7**
MD31				Sn		Sn		22 25 13.2	-6.8
MDT	**Midelt**	**6.75**	**121**	P		**Pn**		**22 24 07.9**	**+0.3**
MDT				Sn		Sn		22 25 17.4	-5.9
EQES	**Quesada**	**6.81**	**77**	P		**Pn**		**22 24 10.0**	**+1.5**
EQES				S		**Sn**		**22 25 21.4**	**-3.4**
EQES				*i*	IVmb_Lg			22 25 31.9	
OUZM	**OUZ**	**6.84**	**144**	P		**Pn**		**22 24 11.6**	**+2.7**
OUZM				Sn		**Sn**		**22 25 23.3**	**-2.2**

*IDC **23** 23:05:44.7±1.2, 53.°87S×133.°54W, h0km, mb4.0/5,*
mbtmp4.0/5, MS3.5/5, Error ellipse: s-maj=37.4km
s-min=33.1km az=163.0

ISC 23 23:05:46.2±1.2, 53.°9S±0.°2×133.°5W±0.°2, h10km, n25, σ0s83/8, mb4.2/7, MS3.5/5, 2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**32.13**	**43**	LR		LR	LR	23 22 27.1	
	comp=Z,63nm,18.5s,baz=241,slow=31								
VNDA	**Vanda**	**32.66**	**201**	LR		LR	LR	23 21 36.7	
	comp=Z,105nm,21.6s,baz=13,slow=29								
QSPA	**South Pole Qui**	**36.27**	**180**	P		**P**		**23 12 50.6**	**+1.2**
	6.0nm,1.0s,baz=84,slow=3.5,SNR=10								
	6.0nm,1.0s								
H03S2	**Juan Fernandez**	**42.91**	**85**	T		T		23 59 32.5	
	baz=222,slow=74,SNR=11								
H03S1	**Juan Fernandez**	**42.91**	**85**	T		T		23 59 35.2	
	baz=222,slow=74,SNR=10								
H03S3	**Juan Fernandez**	**42.92**	**85**	T		T		23 59 38.2	
	baz=222,slow=74,SNR=8.5								
H03N3	**Juan Fernandez**	**43.18**	**84**	T		T		23 59 50.4	
	baz=226,slow=72,SNR=34								
H03N2	**Juan Fernandez**	**43.18**	**84**	T		T		23 59 49.3	
	baz=226,slow=72,SNR=23								
H03N1	**Juan Fernandez**	**43.20**	**84**	T		T		23 59 46.9	
	baz=226,slow=72,SNR=24								
VNA2	**Neumayer--Watz**	**49.71**	**160**	⇓ P		**P**		**23 14 37.6**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=212,slow=6.8								
VNA1	**Neumayer--Stat**	**49.74**	**159**	⇓ P		**P**		**23 14 37.8**	**-0.2**
	comp=Z,1.8nm,0.3s								
MAW	**Mawson**	**58.20**	**187**	P		**P**		**23 15 38.6**	**-1.1**
	comp=Z,2.9nm,1.1s,baz=169,slow=10,SNR=3.9								
	comp=Z,2.9nm,1.1s								
LPAZ	**La Paz**	**62.50**	**80**	P		**P**		**23 16 10.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=237,slow=11,SNR=2.0								
	comp=Z,0.4nm,0.5s								
ASAR	**Alice Springs**	**72.72**	**254**	P		**P**		**23 17 14.3**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=134,slow=5.4,SNR=7.7								
	comp=Z,0.9nm,0.8s								
H01W1	**Cape Leeuwin H**	**74.10**	**232**	T		T		00 39 18.9	
	baz=145,slow=76,SNR=48								
H01W2	**Cape Leeuwin H**	**74.11**	**232**	T		T		00 39 20.2	
	baz=145,slow=76,SNR=43								
H01W3	**Cape Leeuwin H**	**74.12**	**232**	T		T		00 39 21.1	
	baz=145,slow=76,SNR=41								
WRA	**Warramunga Arr**	**75.40**	**256**	P		**P**		**23 17 30.1**	**0.0**
	comp=Z,0.9nm,0.9s,baz=143,slow=5.5,SNR=7.3								
	comp=Z,0.9nm,0.9s								
H11S2	**WAKE ISLAND Hy**	**88.38**	**305**	T		T		00 56 47.5	
	baz=148,slow=76,SNR=9.3								
H11S3	**WAKE ISLAND Hy**	**88.39**	**305**	T		T		00 56 41.9	
	baz=148,slow=76,SNR=7.9								
H11S1	**WAKE ISLAND Hy**	**88.40**	**305**	T		T		00 56 42.1	
	baz=148,slow=76,SNR=5.7								
NVAR	**Mina Array Bea**	**92.89**	**12**	LR		LR		23 51 43.9	
	comp=Z,24nm,20.0s,baz=215,slow=30								
YBH	**Yreka Blue Hor**	**95.71**	**8**	LR		LR		23 52 53.4	
	comp=Z,23nm,21.2s,baz=196,slow=30								
PDAR	**Pinedale Array**	**98.45**	**18**	LR		LR		23 56 16.7	
	comp=Z,16nm,19.4s,baz=144,slow=31								
ILAR	**Eielson Array**	**118.79**	**353**	PKP		**PKiKP**		**23 24 33.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=200,slow=2.4,SNR=4.4								

TRN 23 23:14:51.6, 17.°90N×62.°69W, h16km, MD3.9, Near East of St. Bartholemy., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.89**	**105**	*eP*		Pn		23 15 11.0	+1.6
ANWB				*eS*		Sn		23 15 25.5	+3.5
DHSZ	**Broadband at M**	**1.84**	**151**	*eP*		Pb		23 15 24.1	-0.8
DHSZ				*eS*		Sb		23 15 47.9	+0.3
MMLZ	**Guadeloupe Bro**	**2.08**	**152**	*eP*		Pb		23 15 28.0	-1.0
MMLZ				*eS*		Sb		23 15 54.4	-0.3
DSDZ	**La Diserade, G**	**2.21**	**135**	*eP*		Pb		23 15 29.8	-1.4
DSDZ				*eS*		Sb		23 15 57.3	-1.0
TBG	**Guadaloupe-3**	**2.27**	**154**	*eS*		Sb		23 15 58.9	-0.9
DSLB	**Salisbury**	**2.73**	**153**	*eP*		Pn		23 15 36.6	+1.9
DSLB				*eS*		Sn		23 16 09.9	+2.5

*ISK **23** 23:20:08.9, 34.°13N×36.°34E, h1km, ML3.6/25*
*GII **23** 23:20:09.5±0.0, 34.°105N±0.°003×36.°283E±0.°001,*
h0km, Mws3.6, confirmed
*GRAL **23** 23:20:10.9±0.3, 34.°08N×36.°32E, h10km

HULT	**Hulata**	**1.21**	**209**	P	**Pn**	**23 20 32.6**	**-1.0**
HULT				S	**Sb**	**23 20 49.9**	**+0.5**
ZEFT	**Zefat**	**1.33**	**211**	P	**Pn**	**23 20 34.4**	**-0.9**
ZEFT				S	**Sb**	**23 20 53.4**	**+0.5**
MMA0B	**Mount Meron ar**	**1.33**	**215**	P	**Pn**	**23 20 34.3**	**-1.1**
MMA0B				S	**Sb**	**23 20 52.8**	**-0.2**
KNHM	**Kefar Nahum**	**1.37**	**207**	P	**Pn**	**23 20 35.0**	**-0.8**
KNHM				S	**Sn**	**23 20 54.1**	**-0.1**
HNTI	**Hanita**	**1.40**	**223**	P	**Pn**	**23 20 35.4**	**-0.8**
HNTI				S	**Sn**	**23 20 55.3**	**+0.4**
BLGI	**Bet Lehem HaGe**	**1.67**	**215**	P	**Pn**	**23 20 39.6**	**-0.2**
BLGI				S	**Sn**	**23 21 02.2**	**+0.7**
MMLI	**Mount Malkishu**	**1.83**	**205**	P	**Pn**	**23 20 42.5**	**+0.3**
MMLI				S	**Sn**	**23 21 06.5**	**+1.0**
MMLI	**Mount Malkishu**	**1.83**	**205**	P	**Pn**	**23 20 42.4**	**+0.2**
MMLI				S	**Sn**	**23 21 06.1**	**+0.6**
OFRI	**`Ofer**	**1.86**	**217**	P	**Pn**	**23 20 42.5**	**-0.1**
OFRI				S	**Sn**	**23 21 07.4**	**+1.1**
QRNJ	**Al-Qirein**	**1.88**	**200**	P	**Pn**	**23 20 43.3**	**+0.6**
YAYL	**Yayladag**	**1.93**	**355**	P	**Pn**	**23 20 44.8**	**+1.2**
YAYL				S	**Sn**	**23 21 08.5**	**+0.4**
ROII	**Roi**	**1.98**	**201**	P	**Pn**	**23 20 44.5**	**+0.2**
ASF	**Jabal al Asfar**	**1.99**	**166**	P	**Pn**	**23 20 43.7**	**-0.8**
HSUJ	**Al Zarqa**	**2.00**	**183**	P	**Pn**	**23 20 44.7**	**+0.1**
RGMN	**Argaman**	**2.05**	**199**	P	**Pn**	**23 20 44.5**	**-0.6**
PARAL	**Paralimni**	**2.08**	**296**	P	**Pn**	**23 20 46.9**	**+1.4**
PARAL				S	**Sn**	**23 21 11.6**	**0.0**
SLTI	**Sal'it**	**2.15**	**210**	P	**Pn**	**23 20 45.9**	**-0.7**
RHAN	**Hatay/Reyhanl**	**2.16**	**6**	P	**Pn**	**23 20 46.8**	**+0.1**
RHAN				S	**Sn**	**23 21 14.4**	**+0.8**
SALP	**Salfit**	**2.25**	**205**	P	**Pn**	**23 20 49.2**	**+1.3**
TAHT	**Tahtakopru-Hat**	**2.26**	**357**	Pn	**Pn**	**23 20 48.4**	**+0.3**
EREN	**Erenkoy**	**2.27**	**309**	Pn	**Pn**	**23 20 48.8**	**+0.7**
EREN				Sn	**Sn**	**23 21 17.7**	**+1.4**
UJAP	**Al Uja**	**2.27**	**199**	Pn	**Pn**	**23 20 49.2**	**+1.1**
UJAP				Sn	**Sn**	**23 21 18.5**	**+2.2**
UJAP	**Al Uja**	**2.27**	**199**	P	**Pn**	**23 20 49.4**	**+1.3**
YITV	**Yitav**	**2.29**	**199**	P	**Pn**	**23 20 49.0**	**+0.7**
MVOU	**Mavrovouni**	**2.40**	**293**	P	**Pn**	**23 20 50.8**	**+0.9**
MVOU				S	**Sn**	**23 21 17.5**	**-1.9**
MVOU				AML	AML	23 21 20.9	
	0.2nm,0.3s						
MVOU				AML	AML	23 21 29.5	
	0.2nm,0.7s						
ALMO	**Almog**	**2.42**	**198**	P	**Pn**	**23 20 51.3**	**+1.0**
ALMO				S	**Sn**	**23 21 21.2**	**+1.0**
JER	**Jerusalem**	**2.52**	**202**	P	**Pn**	**23 20 53.0**	**+1.4**
LFK	**Lefkose**	**2.58**	**298**	Pn	**Pn**	**23 20 53.3**	**+0.8**
LFK				Sn	**Sn**	**23 21 25.7**	**+1.7**
CSS	**Mathiatis**	**2.61**	**290**	Pn	**Pn**	**23 20 53.6**	**+0.7**
CSS	**Mathiatis**	**2.61**	**290**	P	**Pn**	**23 20 52.4**	**-0.5**
ASGA	**Asgata**	**2.63**	**286**	P	**Pn**	**23 20 53.8**	**+0.7**
ASGA				S	**Sn**	**23 21 24.4**	**-0.8**
ASGA				AML	AML	23 21 35.0	
	0.1nm,0.3s						
ASGA				AML	AML	23 21 36.7	
	0.2nm,0.4s						
HASA	**Hatay-Hassa-Ha**	**2.64**	**3**	P	**Pn**	**23 20 53.6**	**+0.3**
HASA				S	**Sb**	**23 21 28.5**	**-2.0**
MIZS	**Mizpe Shalem**	**2.65**	**197**	P	**Pn**	**23 20 54.8**	**+1.1**
KUZU	**Kuzuini**	**2.73**	**13**	P	**Pn**	**23 20 55.3**	**+0.7**
KUZU				S	**Sn**	**23 21 30.6**	**+2.8**
AMAZ	**Amatzia**	**2.83**	**205**	P	**Pn**	**23 20 57.5**	**+1.6**
AMAZ				S	**Sb**	**23 21 36.0**	**0.0**
AMAZ	**Amatzia**	**2.83**	**205**	P	**Pn**	**23 20 57.9**	**+2.0**
AMAZ	**Amatzia**	**2.83**	**205**	P	**Pn**	**23 20 55.3**	**-0.6**
AMAZ				S	**Sn**	**23 21 31.4**	**+1.2**
XYLS	**Xyliatos**	**2.84**	**289**	P	**Pn**	**23 20 56.6**	**+0.5**
XYLS				S	**Sn**	**23 21 30.8**	**+0.1**
XYLS				AML	AML	23 21 36.8	
	0.2nm,0.5s						
XYLS				AML	AML	23 21 39.6	
	0.2nm,0.3s						
GHAJ	**Ghor Haditha**	**2.87**	**193**	P	**Pn**	**23 20 57.4**	**+1.0**
GHAJ	**Ghor Haditha**	**2.87**	**193**	P	**Pn**	**23 20 57.4**	**+1.0**
MSBI	**Mazada**	**2.91**	**196**	P	**Pn**	**23 20 59.5**	**+2.6**
MSBI	**Mazada**	**2.91**	**196**	P	**Pn**	**23 20 57.6**	**+0.7**
MSBI				S	**Sn**	**23 21 33.3**	**+1.3**
APOL	**The Sanctuary**	**2.91**	**282**	P	**Pn**	**23 20 56.8**	**-0.3**
APOL				S	**Sn**	**23 21 31.8**	**-0.5**
APOL				AML	AML	23 21 35.2	
	0.5nm,0.3s						
APOL				AML	AML	23 21 38.5	
	0.4nm,0.5s						
YTIR	**Yattir**	**2.92**	**201**	P	**Pn**	**23 20 59.1**	**+1.9**
TROD	**Troodos**	**2.97**	**287**	P	**Pn**	**23 20 58.9**	**+0.8**
TROD				S	**Sn**	**23 21 34.6**	**+0.6**
TROD				AML	AML	23 21 39.4	
	0.2nm,0.4s						
TROD				AML	AML	23 21 46.9	
	0.2nm,0.4s						
SILI	**Silifke-Mersin**	**2.99**	**320**	Pn	**Pn**	**23 20 59.0**	**+1.0**
SILI				Sn	**Sn**	**23 21 35.5**	**+1.5**
KARG	**Kargicak-Mersi**	**2.99**	**315**	Pn	**Pn**	**23 20 59.1**	**+1.0**
SLFK	**Silifke-Mersin**	**2.99**	**320**	Pn	**Pn**	**23 20 59.2**	**+1.1**
YESI	**Yesilovacik-Me**	**3.02**	**314**	Pn	**Pn**	**23 20 59.5**	**+1.0**
IKL	**Isikli**	**3.03**	**315**	Pn	**Pn**	**23 20 59.4**	**+0.8**
AKK2	**Akkuyu-Mersin**	**3.04**	**312**	Pn	**Pn**	**23 21 00.0**	**+1.2**
BECE	**Buyukeceli-Mer**	**3.05**	**313**	Pn	**Pn**	**23 20 59.8**	**+0.9**
BECE	**Buyukeceli-Mer**	**3.05**	**313**	Pn	**Pn**	**23 21 00.0**	**+1.1**
AKK1	**Akkuyu-Mersin**	**3.05**	**312**	Pn	**Pn**	**23 21 00.0**	**+1.1**
KAMA	**Osmaniye**	**3.08**	**5**	P	**Pn**	**23 20 59.5**	**+0.1**
KAMA				S	**Sn**	**23 21 38.3**	**+1.7**
NZIP	**Nizip/Gaziante**	**3.13**	**20**	P	**Pn**	**23 20 59.8**	**-0.2**
NZIP				S	**Sb**	**23 21 44.0**	**-0.6**
YORU	**Yoruktepe-Mers**	**3.14**	**311**	Pn	**Pn**	**23 21 01.3**	**+1.1**
GAZ	**Gaziantep**	**3.14**	**13**	Pn	**Pn**	**23 21 00.6**	**+0.4**
GAZ	**Gaziantep**	**3.14**	**13**	P	**Pn**	**23 21 00.6**	**+0.4**
GAZ				S	**Sn**	**23 21 40.0**	**+2.0**
KEBE	**Keben-Mersin**	**3.16**	**318**	Pn	**Pn**	**23 21 01.4**	**+0.9**
CAYT	**Sariam**	**3.16**	**345**	P	**Pn**	**23 21 01.3**	**+0.9**
CAYT				S	**Sn**	**23 21 37.5**	**-0.9**
NATA	**Nata**	**3.17**	**283**	P	**Pn**	**23 21 02.0**	**+1.4**
NATA				S	**Sn**	**23 21 40.4**	**+1.8**
NATA				AML	AML	23 21 49.1	
	0.5nm,0.6s						
ALFC	**Alefka**	**3.24**	**290**	P	**Pn**	**23 21 03.4**	**+1.8**
ALFC				S	**Sn**	**23 21 40.1**	**-0.3**
ALFC				AML	AML	23 21 43.8	
	0.3nm,0.4s						
ALFC				AML	AML	23 21 51.4	
	0.3nm,0.4s						
TEVE	**Tevekalti-Mers**	**3.31**	**315**	Pn	**Pn**	**23 21 03.4**	**+0.9**
TEKE	**Tekeli-Mersin**	**3.32**	**309**	Pn	**Pn**	**23 21 03.9**	**+1.3**
SURC	**SANLIURFA_SURC**	**3.34**	**33**	P	**Pn**	**23 21 02.6**	**-0.3**
SURC				S	**Sb**	**23 21 47.8**	**-2.8**
KHMN	**Narli-Kahraman**	**3.34**	**12**	P	**Pn**	**23 21 03.1**	**+0.1**
BERE	**Bereket-Mersin**	**3.38**	**312**	Pn	**Pn**	**23 21 04.8**	**+1.2**
KOZT	**Kozan**	**3.39**	**353**	Pn	**Pn**	**23 21 04.5**	**+0.9**
GZT	**Gaziantep**	**3.39**	**17**	P	**Pn**	**23 21 03.9**	**+0.2**
GZT				S	**Sn**	**23 21 48.5**	**+4.1**
GULE	**Gulek**	**3.41**	**339**	P	**Pn**	**23 21 05.6**	**+1.6**
AKMS	**Akamas**	**3.41**	**287**	P	**Pn**	**23 21 06.0**	**+2.1**
AKMS				S	**Sn**	**23 21 45.9**	**+1.4**
AKMS				AML	AML	23 21 54.3	
	0.4nm,0.4s						
AKMS				AML	AML	23 21 60.0	
	0.2nm,0.5s						
KMRS	**Kahramanmaras**	**3.42**	**8**	Pn	**Pn**	**23 21 04.8**	**+0.7**
KAHM	**Kahramanmaras,**	**3.44**	**9**	P	**Pn**	**23 21 05.7**	**+1.4**
ANDN	**Andirin**	**3.46**	**0**	P	**Pn**	**23 21 05.2**	**+0.5**
ANDN				S	**Sn**	**23 21 44.4**	**-1.6**
OSC2	**CSNet OBS 4**	**3.54**	**254**	P	**Pn**	**23 21 06.7**	**+1.1**
OSC2				S	**Sn**	**23 21 48.3**	**+0.7**
KZIT	**Kziot**	**3.58**	**207**	P	**Pn**	**23 21 05.6**	**+1.0**
KZIT				S	**Sb**	**23 21 56.8**	**-0.9**
KZIT	**Kziot**	**3.58**	**207**	P	**Pn**	**23 21 08.5**	**+2.2**
KZIT	**Kziot**	**3.58**	**207**	P	**Pn**	**23 21 06.9**	**+0.7**
KZIT				S	**Sn**	**23 21 49.3**	**+0.5**
ZFRI	**Zfri**	**3.67**	**196**	P	**Pn**	**23 21 07.7**	**+0.2**
CMRD	**Camardi-Nigde**	**3.71**	**343**	Pn	**Pn**	**23 21 09.3**	**+1.2**
ATAB	**Bozova**	**3.72**	**25**	P	**Pn**	**23 21 08.8**	**+0.7**
ATAB				S	**Sb**	**23 22 02.0**	**+0.5**
KERG	**Konya-Eregli**	**3.75**	**332**	P	**Pn**	**23 21 10.6**	**+2.0**
KERG				S	**Sn**	**23 21 52.6**	**-0.5**
SANL	**SANLIURFA_Merk**	**3.75**	**35**	P	**Pn**	**23 21 08.8**	**+0.3**
SANL				S	**Sb**	**23 22 01.6**	**-0.9**
ERMK	**Ermenek**	**3.76**	**313**	P	**Pn**	**23 21 10.0**	**+1.1**
AKCA	**Adyaman/G¶l**	**3.84**	**16**	P	**Pn**	**23 21 10.6**	**+0.8**
AKCA				S	**Sb**	**23 22 02.4**	**-2.8**
SAIM	**ADANA**	**3.86**	**357**	P	**Pn**	**23 21 12.1**	**+1.9**
HSNJ	**Maan**	**3.88**	**188**	P	**Pn**	**23 21 14.4**	**+3.9**
GAZI	**Gazipasa**	**3.91**	**304**	Pn	**Pn**	**23 21 12.1**	**+1.4**
GAZI	**Gazipasa**	**3.91**	**304**	P	**Pn**	**23 21 09.5**	**-1.2**
GAZI				S	**Sn**	**23 21 52.7**	**-4.0**
KRMN	**Karaman**	**3.94**	**322**	Pn	**Pn**	**23 21 12.7**	**+1.4**
AZEY	**Adyaman-Merk**	**4.01**	**22**	P	**Pn**	**23 21 12.8**	**+0.6**
AZEY				S	**Sb**	**23 22 10.6**	**+0.5**
HANM	**anlurfa/Hi**	**4.04**	**30**	P	**Pn**	**23 21 13.9**	**+1.4**
HANM				S	**Sb**	**23 22 08.3**	**-2.5**
YAHY	**KAYSERI_Yahyal**	**4.05**	**349**	P	**Pn**	**23 21 14.9**	**+2.1**
NIDE	**Nigde/Merkez-G**	**4.08**	**343**	P	**Pn**	**23 21 16.0**	**+2.9**
KKBE	**Karaman, Kazim**	**4.15**	**319**	P	**Pn**	**23 21 15.2**	**+1.1**
KKBE				S	**Sn**	**23 21 58.6**	**-4.2**
HRFI	**Mount Harif**	**4.21**	**195**	P	**Pn**	**23 21 17.0**	**+2.2**
HRFI	**Mount Harif**	**4.21**	**195**	P	**Pn**	**23 21 15.0**	**+0.2**
HRFI				S	**Sn**	**23 22 05.8**	**+1.6**
YESY	**Yesilyurt**	**4.22**	**331**	Pn	**Pn**	**23 21 16.8**	**+1.7**
HDMB	**Hadim**	**4.23**	**313**	Pn	**Pn**	**23 21 16.9**	**+1.6**
NARI	**Adyaman-Kaht**	**4.25**	**27**	P	**Pn**	**23 21 15.7**	**+0.2**
NARI				S	**Sb**	**23 22 13.7**	**-3.4**
AKCD	**Akcadag**	**4.37**	**17**	P	**Pn**	**23 21 17.2**	**0.0**
AKCD				S	**Sb**	**23 22 21.5**	**+1.0**
BSIR	**Belisirma, Guz**	**4.46**	**339**	P	**Pn**	**23 21 19.8**	**+1.4**
BSIR				S	**Sn**	**23 22 04.7**	**-6.0**
MAYA	**Malatya/Merkez**	**4.54**	**21**	P	**Pn**	**23 21 20.3**	**+0.8**
MAYA				S	**Sb**	**23 22 27.6**	**+2.4**
GULA	**Gulagac**	**4.55**	**339**	Pn	**Pn**	**23 21 21.2**	**+1.6**
EIL	**Elat**	**4.58**	**195**	P	**Pn**	**23 21 24.3**	**+4.4**
EIL	**Elat**	**4.58**	**195**	P	**Pn**	**23 21 20.8**	**+0.9**
EIL				S	**Sn**	**23 22 14.5**	**+1.2**
CNGT	**ngs**	**4.75**	**30**	P	**Pn**	**23 21 22.9**	**+0.5**
CNGT				S	**Sb**	**23 22 30.0**	**-1.4**
ELZG	**Elazig**	**4.88**	**25**	P	**Pn**	**23 21 24.7**	**+0.5**
SVRC	**Sivrice-ELAZID**	**4.90**	**29**	Pn	**Pn**	**23 21 25.7**	**+1.2**
SEYD	**Seydisehir-KON**	**4.91**	**313**	Pn	**Pn**	**23 21 26.6**	**+2.0**
CUAYA	**Sivas-Altinyay**	**5.16**	**4**	P	**Pn**	**23 21 28.3**	**+0.3**

*IDC **24** 23:28:34.2±10.0, 26°.42N×53°.52E, h0km, mb3.6/6, mbtmp3.6/7, ML3.2/1, MS2.8/1, Error ellipse: s-maj=198.5km s-min=32.6km az=4.0*
*TEH **23** 23:28:35.9, 26°.51N×53°.47E, h8km±88km, ML3.3, Presumed earthquake*
ISC 23 23:28:37.0±1.7, **26°.5N**±0°.1×**53°.47E**±0°.08, **h10**km, **n18,** σ1s**28**/17, **mb3.6/6, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.84**	**341**	Pg	**Pg**		**Pn**	**23 28 53.0**	**-0.1**
KHL1	**Khalili_Fars**	**1.10**	**352**	Pg	**Pg**		**Pb**	**23 28 57.6**	**-0.5**
JHRM	**Jahrom**	**1.96**	**3**	Pn	**Pn**		**Pb**	**23 29 11.7**	**-1.1**
QIR1	**Qir**	**1.96**	**349**	Pn	**Pn**		**Pn**	**23 29 11.2**	**+0.9**
GENO	**Geno**	**2.56**	**70**	Pn	**Pn**		**Pn**	**23 29 19.2**	**+0.5**
DSBU	**Dashti - Bushe**	**2.67**	**313**	Pn	**Pn**		**Pn**	**23 29 21.9**	**+1.8**
NGRK	**Negar Kerman**	**4.22**	**42**	Pn	**Pn**		**Pn**	**23 29 43.9**	**+2.1**
CHMN	**Cheshme madani**	**4.88**	**46**	Pn	**Pn**		**Pn**	**23 29 53.0**	**+2.2**
IMEH	**Mehriz**	**4.93**	**11**	Pn	**Pn**		**Pn**	**23 29 52.9**	**+1.6**
KBAM	**BAM**	**5.11**	**59**	Pn	**Pn**		**Pn**	**23 29 55.1**	**+1.4**
KBZ	**Khabaz**	**19.17**	**336**	P	**Pn**		**Pn**	**23 33 01.1**	**-0.4**
	0.1nm,0.3s,baz=135,slow=8.6,SNR=4.8								
	1.7nm,0.9s								
BRTR	**Keskin Array B**	**21.12**	**313**	P	**P**		**P**	**23 33 23.0**	**+1.0**
	0.8nm,0.9s,baz=138,slow=12,SNR=4.4								
	0.8nm,0.9s								
BVAR	**Borovoye Array**	**29.32**	**21**	P	**P**		**P**	**23 34 39.6**	**0.0**
	1.3nm,0.8s,baz=200,slow=5.9,SNR=5.2								
	1.3nm,0.8s								
AKASG	**Malin Array Be**	**30.41**	**329**	P	**P**		**P**	**23 34 48.9**	**-0.4**
	0.2nm,0.3s,baz=124,slow=6.8,SNR=4.3								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**30.44**	**41**	P	**P**		**P**	**23 34 49.3**	**-0.3**
	0.2nm,0.7s,baz=237,slow=10,SNR=1.7								
	0.2nm,0.7s								
KURBB	**Kurchatov Arra**	**30.74**	**32**	LR	LR			23 50 17.2	
	comp=Z,15nm,18.5s,baz=189,slow=42								
ZALV	**Zalesovo Beam**	**35.83**	**32**	P	**P**		**P**	**23 35 35.8**	**-0.8**
	0.9nm,0.6s,baz=233,slow=8.9,SNR=5.5								
	0.9nm,0.6s								
FINES	**FINESS Array B**	**39.47**	**340**	P	**P**		**P**	**23 36 06.0**	**-1.1**
	3.0nm,1.1s,baz=141,slow=9.8,SNR=6.0								
	3.0nm,1.1s								

*IDC **24** 00:06:03.1±2.8, 9°.52S×112°.06E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=135.0km s-min=21.7km az=42.0*
*DJA **24** 00:06:11.2±1.0, 10°.5S±10°×11°.2E±°, h10km, M3.8/14, MLv3.8/14*
ISC 24 00:06:11.2±1.3, **9°.6S**±0°.1×**112°.16E**±0°.07, **h40**km, **n11,** σ1s**76**/13, **mb3.0/3, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNJI	**Sawahan-Nganju**	**1.86**	**348**	P			**Pn**	**00 06 41.9**	**+1.2**
SJI	**Sawahan**	**1.90**	**348**	P			**Pn**	**00 06 42.3**	**+1.1**
WOJI	**Wonogiri, Jawa**	**2.14**	**325**	P			**Pn**	**00 06 46.1**	**+1.7**
JAGI	**Jajag, Banyuwa**	**2.27**	**60**	P			**Pn**	**00 06 46.9**	**+0.7**
BLJI	**Banyuglugur**	**2.33**	**38**	P			**Pn**	**00 06 48.3**	**+1.2**
UGM	**Wanagama**	**2.33**	**316**	P			**Pn**	**00 06 49.2**	**+2.1**
ABJI	**Asem Bagus**	**2.73**	**49**	P			**Pn**	**00 06 53.5**	**+1.0**
ABJI				S			**Sn**	**00 07 24.5**	**+0.2**
RTBI	**Rangdo, Negare**	**2.98**	**68**	P			**Pn**	**00 06 58.0**	**+2.0**
WRA	**Warramunga Arr**	**23.75**	**118**	P			**P**	**00 11 19.1**	**-1.0**
	0.4nm,0.8s,baz=297,slow=9.3,SNR=2.0								
WRA				S			**S**	**00 15 35.3**	**+2.3**
	0.7nm,1.1s,baz=286,slow=22,SNR=2.2								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**25.04**	**127**	P			**P**	**00 11 31.3**	**-0.5**
	0.2nm,0.5s,baz=308,slow=10,SNR=1.8								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**62.15**	**337**	P			**P**	**00 16 25.6**	**-2.7**
	0.3nm,0.5s,baz=146,slow=7.3,SNR=5.5								
	0.3nm,0.5s								

*IDC **24** 00:11:49.2±2.2, 34°.51N×45°.59E, h0km, mb3.7/6, mbtmp3.7/6, MS3.7/1, Error ellipse: s-maj=64.2km s-min=27.7km az=151.0*
*TEH **24** 00:11:51.0, 34°.46N×45°.65E, h8km±52km, ML3.4, Presumed earthquake*
*ISN **24** 00:11:55.0±1.8, 34°.48N×45°.66E, h25km±16km, ML3.3, Presumed earthquake*
*AFAD **24** 00:12:00.0, 34°.74N×45°.00E, h15km, ML2.9*
ISC 24 00:11:52.0±1.6, **34°.58N**±0°.03×**45°.65E**±0°.04, **h12**km±11km, **n27,** σ2s**13**/37, **mb3.6/5, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.62**	**79**	Pg	**Pg**		**Pg**	**00 12 03.7**	**-0.4**
IDHR				Sg	**Sb**		**Sb**	**00 12 13.6**	**+0.1**
IGHG	**Ghaleghazi**	**0.80**	**108**	Pg	**Pg**		**Pg**	**00 12 06.6**	**-0.9**
IGHG				Sg	**Sb**		**Sb**	**00 12 18.8**	**0.0**
KCHF	**Cheshme Sefid,**	**1.19**	**105**	Pg	**Pg**		**Pg**	**00 12 13.1**	**-1.8**
KCHF				Sg	**Sb**		**Sb**	**00 12 29.9**	**0.0**
SNJK	**Sanadaj _Korde**	**1.45**	**54**	Pg	**Pg**		**Pg**	**00 12 19.8**	**0.0**
SNQR	**Sonqor, Kerman**	**1.65**	**80**	Pg	**Pg**		**Pb**	**00 12 22.9**	**+0.4**
BHD	**Baghdad**	**1.68**	**219**	*i* P			**Pb**	**00 12 23.9**	**+1.0**
	baz=41,slow=28								
BHD				*i* S			**Sn**	**00 12 45.0**	**+2.3**
BHD				IAML				00 12 48.0	
	comp=E,498nm,0.5s								
BHD				IAML				00 12 53.1	
	comp=N,449nm,0.7s								
IBZA	**Bozab**	**1.82**	**93**	Pn			**Pb**	**00 12 24.9**	**-0.6**
MAHB	**Mahabad**	**2.18**	**1**	Pn			**Pb**	**00 12 31.5**	**0.0**
RAFI	**Al-Rafai**	**2.88**	**172**	*i* P			**Pn**	**00 12 38.5**	**+0.9**
RAFI				*i* S			**Sn**	**00 13 13.4**	**+1.3**
IHSH	**Hashtrud**	**3.02**	**25**	Pn			**Pn**	**00 12 42.9**	**+3.1**
IAZR	**Azarshahr**	**3.10**	**5**	Pn			**Pn**	**00 12 44.4**	**+3.4**
YOVA	**Hakkari_Yksek**	**3.20**	**340**	P			**Pn**	**00 12 45.5**	**+3.3**
YOVA				S			**Sn**	**00 13 22.2**	**+1.9**
HAKT	**HAKKARI**	**3.36**	**333**	P			**Pn**	**00 12 47.0**	**+2.5**
HAKT				S			**Sn**	**00 13 23.5**	**-1.0**
HAKT				IAML				00 13 30.0	
	comp=N,43nm,0.5s								
HAKT				IAML				00 13 51.0	
	comp=N,33nm,0.5s								
ISHB	**Shabestar**	**3.69**	**360**	Pn			**Pn**	**00 12 52.6**	**+3.5**
PERV	**Siirt/Pervari-**	**4.20**	**324**	P			**Pn**	**00 12 59.0**	**+3.1**
PERV				S			**Sn**	**00 13 42.8**	**-2.1**
PERV				IAML				00 13 55.0	
	comp=N,26nm,0.5s								
PERV				IAML				00 13 56.0	
	comp=N,31nm,0.7s								
AMIS	**Naft Sefid**	**4.21**	**133**	Pn			**Pn**	**00 12 56.1**	**0.0**
MIDY	**Mardin/Midyat-**	**4.46**	**310**	P			**Pn**	**00 13 01.9**	**+2.5**
MIDY				S			**Sn**	**00 13 51.8**	**+0.6**
SRTM	**Siirt_Merkez**	**4.54**	**320**	P			**Pn**	**00 13 02.5**	**+1.8**
SRTM				S			**Sn**	**00 13 49.1**	**-4.4**
SRTM				IAML				00 14 34.0	
	comp=N,22nm,1.1s								
GRMI	**Germi**	**4.59**	**22**	Pn			**Pn**	**00 13 04.4**	**+3.1**
MUSM	**Mu-Merkez**	**5.31**	**322**	P			**Pn**	**00 13 11.3**	**+0.1**
MUSM				S			**Sn**	**00 14 07.8**	**-4.6**
BVAR	**Borovoye Array**	**25.45**	**36**	P			**P**	**00 17 17.5**	**-2.1**
	comp=N,0.3nm,0.4s,baz=247,slow=7.4,SNR=2.2								
	comp=N,0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**28.73**	**46**	P			**P**	**00 17 49.5**	**+0.5**
	comp=N,0.4nm,0.4s,baz=255,slow=9.1,SNR=4.6								
	comp=N,0.4nm,0.4s								
FINES	**FINESS Array B**	**29.65**	**341**	P			**P**	**00 17 57.1**	**0.0**
	comp=N,3.3nm,1.0s,baz=190,slow=15,SNR=1.9								
	comp=N,3.3nm,1.0s								
MKAR	**Makanchi Array**	**30.07**	**55**	P			**P**	**00 18 01.5**	**+0.5**
	comp=N,0.2nm,0.5s,baz=265,slow=7.1,SNR=1.8								
	comp=N,0.2nm,0.5s								
NRIK	**Noril'sk**	**41.74**	**21**	P			**P**	**00 19 40.5**	**0.0**
	comp=N,1.6nm,0.4s,baz=154,slow=15,SNR=4.0								
	comp=N,1.6nm,0.4s								
TORD	**Torodi Ar. Bea**	**45.07**	**253**	P			**P**	**00 20 06.3**	**-1.7**
	comp=N,0.3nm,0.6s,baz=44,slow=8.6,SNR=2.1								
	comp=N,0.3nm,0.6s								
MATP	**Matopo**	**57.09**	**199**	LR	LR			00 47 06.3	
	comp=N,56nm,18.5s,baz=81,slow=37								

*IDC **24** 00:13:22.8±1.9, 18°.15N×66°.76W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=62.5km s-min=24.4km az=23.0*
*TRN **24** 00:13:23.1, 17°.74N×66°.90W, h102km, MD0.0, South of Puerto Rico.*
*NEIC **24** 00:13:24.8, 17°.99N×66°.73W, h10km*
*NEIC **24** 00:13:24.8±2.0, 17°.99N±0°.02×66°.726W±0°.005, h10km±1km, ML3.9/35, Mwr3.5/17, Md3.6/25(RSPR), Mwr3.5/14(SLM), Error ellipse: s-maj=3.7km s-min=2.3km az=5.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.38; $M_{\theta\theta}$1.21; $M_{\theta\phi}$0.17; $M_{r\theta}$-0.75; $M_{r\phi}$ 1.37; $M_{\theta\theta}$-0.20; Fault plane solution: $M_0$2.05000×10^{14} NP1: ϕ_s216.19000°, δ36.73000°, λ-118.62000°. NP2: ϕ_s70.43000°, δ58.33000°, λ-70.33000°. Principal axes: T 2.3061, Plg11.0000°, Azm146.0000°; N -0.6971, Plg17.0000°, Azm240.0000°; P -1.6090, Plg70.0000°, Azm24.0000°;*
*PTWC **24** 00:13:25, 18°.00N×66°.80W, Ml4.1/14*
*NEIC **24** 00:13:25, 17°.99N×66°.76W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.02; $M_{\theta\theta}$1.54; $M_{\theta\phi}$0.48; $M_{r\theta}$-0.71; $M_{r\phi}$0.88; M_{rr}-0.21; Fault plane solution: $M_0$2.16000×10^{14} NP1: ϕ_s65.00000°, δ55.00000°, λ-85.00000°. NP2: $\

IGPR	InterUniversit	0.61	88	⇑*i*P		Pb	00 13 36.4	+0.2
AGPR	Aguadilla, PR	0.62	326			Pb	00 13 35.8	-0.6
AGPR					Sg	Sg	00 13 42.5	-2.0
AGPR					IAML		00 13 50.3	
	comp=N,3μm,0.5s							
AGPR	Aguadilla, PR	0.62	326	P		Pb	00 13 35.8	-0.6
AGPR	Aguadilla, PR	0.62	326	⇓*i*P		Pb	00 13 36.0	-0.3
AGPR				⇓*i*Sg		Sb	00 13 44.5	-0.2
AGPR				IAML			00 13 48.1	
	comp=N,2μm,0.2s							
AGPR	Aguadilla, PR	0.62	326	⇑*i*P		Pb	00 13 35.8	-0.6
PDPR	Patillas Dam,	0.69	84			Pb	00 13 37.5	0.0
PDPR					Sg	Sg	00 13 46.6	-0.3
PDPR					IAML		00 13 48.5	
	comp=N,4μm,0.4s							
PDPR	Patillas Dam,	0.69	84	P		Pb	00 13 37.6	0.0
PDPR	Patillas Dam,	0.69	84	⇑*i*P		Pb	00 13 37.6	0.0
IDE	Isla Desecheo	0.82	302			Pb	00 13 39.3	-0.4
IDE						Sb	00 13 50.4	0.0
IDE	Isla Desecheo	0.82	302	⇑*i*P		Pb	00 13 39.3	-0.4
IDE				*e*S		Sb	00 13 50.4	0.0
HUMP	Col San Antoni	0.88	77			Pg	00 13 40.3	-0.7
HUMP					Sg	Sg	00 13 51.5	-1.0
HUMP	Col San Antoni	0.88	77	P		Pg	00 13 40.5	-0.5
HUMP	Col San Antoni	0.88	77	⇓*i*P		Pg	00 13 40.5	-0.5
PCDR	Punta Cana, DR	1.65	290			Pn	00 13 52.5	+0.4
PCDR					Sg	Sg	00 14 18.6	+1.3
PCDR					IAML		00 14 22.1	
	comp=N,822nm,0.7s							
PCDR	Punta Cana, DR	1.65	290	⇑*i*P		Pn	00 13 51.5	-0.7
PCDR					IAML		00 14 22.0	
	comp=N,444nm,0.5s							
PCDR	Punta Cana, DR	1.65	290	*i* P		Pg	00 13 54.6	-1.1
PCDR				*e*S		Sg	00 14 17.7	+0.4
PCDR					IAML		00 14 23.5	
	comp=Z,141nm,0.4s							
PCDR	Punta Cana, DR	1.65	290	⇓*e*P		Pb	00 13 52.9	-1.0
HIDR	Higuey Centro	1.98	289	⇓*i*P		Pn	00 13 57.4	+0.8
HIDR					IAML		00 14 29.6	
	comp=N,408nm,0.3s							
HIDR	Higuey Centro	1.98	289	⇑*e*P		Pn	00 13 57.6	+1.0
HIDR				*e*S		Sb	00 14 22.3	-1.6
DR12	Loma Pena Alta	2.64	289			Pn	00 14 06.8	+1.1
DR12					Sn	Sn	00 14 39.4	+2.0
HATOM	Hato Mayor del	2.64	289	⇑*i*P		Pn	00 14 07.8	+2.1
HATOM					IAML		00 14 51.3	
	comp=N,185nm,1.1s							
SMDR	Samana, DR	2.67	300			Pb	00 14 10.8	-0.5
SMDR						Sb	00 14 43.3	-0.5
SABA	Saba	3.35	95	Pn		Pn	00 14 16.1	+0.5
BANI	BANI	3.46	278			Pn	00 14 19.0	+1.8
SMRT	St. Maarten	3.50	88	Pn		Pn	00 14 18.0	+0.5
SMRT	St. Maarten	3.50	88	*e*P		Pn	00 14 18.0	+0.5
SMRT				*e*S		Sn	00 15 01.2	+2.7
SKI	Saint Kitts	3.87	98	*e*P		Pn	00 14 22.8	+0.1
SKI				*e*S		Sn	00 15 08.5	+0.7
SC01	Santiago de lo	4.05	292			Pn	00 14 25.9	+0.7
MBWH	Windy Hill	4.51	105	*e*P		Pn	00 14 33.0	+1.4
MBWH				*e*S		Sn	00 15 22.4	-1.2
ANWB	Willy Bob	4.74	93	*e*P		Pn	00 14 36.3	+1.8
DHSZ	Broadband at M	5.05	109	*e*P		Pn	00 14 38.8	0.0
DHSZ				*e*S		Sn	00 15 34.2	-2.6
GDHS	Morne Mazeau,	5.05	109	Pn		Pn	00 14 38.9	0.0
CBE	Ff, Capester	5.26	110	Pn		Pn	00 14 42.0	+0.2
TBG	Guadaloupe-3	5.31	112	*e*S		Sn	00 15 39.8	-3.5
TDBA	Terre de Bas,	5.32	112	Pn		Pn	00 14 42.6	0.0
MAGL	Barre de l'ile	5.59	110	Pn		Pn	00 14 44.4	-2.0
DSDZ	La Diserade, G	5.67	106	*e*P		Pn	00 14 47.4	0.0
DSDZ				*e*S		Sn	00 15 49.0	-3.2
H05N1	Guadeloupe/Mar	5.68	106	Pn		Pn	00 14 49.7	+2.2
H05N1				Sn		Sn	00 15 51.5	-0.9
DSLB	Salisbury	5.68	115	*e*P		Pn	00 14 47.4	-0.2
DSLB				*e*S		Sn	00 15 49.0	-3.5
FDFM	Morne la Roset	6.24	120	Pn		Pn	00 14 54.2	-1.1
BIM	Bigot	6.43	121	*e*P		Pn	00 14 57.6	-0.3
BIM				*e*S		Sn	00 16 05.6	-5.4
MPOM	Morne Pois Mar	6.64	121	Pn		Pn	00 15 01.1	+0.4
H05S1	Guadeloupe/Mar	6.67	121	Pn		Pn	00 15 03.0	+1.8
H05S1				Sn		Sn	00 16 14.3	-2.5
BBGH	Gun Hill	8.41	124	Pn		Pn	00 15 25.6	+0.5
TXAR	Lajitas Array	35.53	295	P		P	00 20 21.4	+1.1
	comp=N,0.2nm,0.5s,baz=100,slow=9.1,SNR=4.7							
	comp=N,0.2nm,0.5s							
ESDC	Sonseca Array	57.94	54	P		P	00 23 17.4	+1.9
	comp=N,0.5nm,0.7s,baz=265,slow=7.3,SNR=4.7							
	comp=N,0.5nm,0.7s							
ILAR	Eielson Array	69.72	333	P		P	00 24 33.0	+0.4
	comp=N,0.2nm,0.8s,baz=78,slow=4.8,SNR=2.0							
	comp=N,0.2nm,0.8s							
ARCES	ARCESS Array B	74.12	21	P		P	00 24 58.6	-0.4
	comp=N,2.8nm,1.0s,baz=251,slow=2.8,SNR=2.3							
	comp=N,2.8nm,1.0s							

*IDC **24** 00:22:38.3±0.8, 45°.36S×15°.61W, h0km, mb4.3/6, mbtmp4.3/6, MS3.4/19, Error ellipse: s-maj=44.1km s-min=19.8km az=82.0*
*NEIC **24** 00:22:39.6±1.7, 45°.25S±0°.05×15°.9W±0°.1, h10km±1km, mb4.7/23, Error ellipse: s-maj=15.2km s-min=7.7km az=68.0*

ISC 24 00:22:38.9±0.5, **45°.33S**±0°.09×**15°.90W**±0°.10, **h10**km, **n56,** σ1**9**, **21**/36, **mb4.7**/15, **MS3.5**/19, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TRIS	Tristan da Cun	8.68	19	Pn		Pn	00 24 41.8	-2.6
HOPE	Hope Point	15.98	229	Pn		Pn	00 26 22.4	-1.2
HOPE				IAmb		IAmb	00 26 52.3	
	comp=Z,118nm,1.4s							
ORCD	Orcadas	22.94	217	P		P	00 27 39.6	-3.2
ORCD				IAmb		IAmb	00 27 44.3	
	comp=Z,70nm,1.0s							
SNAA	Sanae	27.16	171	LR		LR	00 36 28.3	
	comp=Z,105nm,20.6s,baz=30,slow=31							
SUR	Sutherland	31.10	78	LR		LR	00 38 00.2	
	comp=Z,64nm,20.6s,baz=252,slow=30							
H10S2	ASCENSION HYDR	36.25	2	T		T	01 08 06.4	
	baz=183,slow=74,SNR=3.5							
H10S3	ASCENSION HYDR	36.26	2	T		T	01 08 07.0	
	baz=37,slow=74,SNR=4.1							
BOSA	Boshof	36.42	77	LR		LR	00 42 35.2	
	comp=Z,37nm,18.1s,baz=104,slow=33							
KOOLE	Kule	36.81	65	P		P	00 29 47.6	+0.4
KOOLE				IAmb		IAmb	00 29 55.4	
	comp=Z,6.2nm,0.7s							
H10N1	ASCENSION HYDR	37.36	2	T		T	01 09 26.4	
	baz=181							
H10N3	ASCENSION HYDR	37.36	2	T		T	01 09 28.0	
	baz=181,SNR=3.3							
H10N2	ASCENSION HYDR	37.38	2	T		T	01 09 28.9	
	baz=181							
TSUM	Tsumeb	38.02	58	LR		LR	00 42 39.4	
	comp=Z,67nm,19.4s,baz=159,slow=32							
CPUP	Villa Florida	38.06	286	LR		LR	00 42 57.0	
	comp=Z,27nm,20.6s,baz=180,slow=32							
GRTLG	Ghanzi	38.64	64	P		P	00 30 02.3	-0.4
LBTB	Lobatse	38.97	73	LR		LR	00 42 00.3	
	comp=Z,37nm,21.2s,baz=96,slow=30							
BDFB	Brasilia	40.05	307	P		P	00 30 18.2	+3.9
	comp=Z,1.4nm,0.5s,baz=117,slow=4.5,SNR=2.0							
BDFB				LR		LR	00 42 45.2	
	comp=Z,91nm,22.0s,baz=133,slow=30							
	comp=Z,1.4nm,0.5s							
BDFB	Brasilia	40.05	307	P		P	00 30 14.2	-0.1
LR03	Panguipulli	41.29	257	P		P	00 30 23.4	-0.9
LR03				IAmb		IAmb	00 30 26.5	
	comp=Z,19nm,1.3s							
RCBR	Riachuelo	43.03	330	LR		LR	00 45 12.9	
	comp=Z,21nm,18.9s,baz=203,slow=31							
MT01	Popeta	43.38	265	P		P	00 30 40.2	-1.2
MT01				IAmb		IAmb	00 30 55.6	
	comp=Z,15nm,1.5s							
VA01	Torpederas	44.11	266	P		P	00 30 47.3	0.0
VA01				IAmb		IAmb	00 30 56.4	
	comp=Z,12nm,0.9s							
CO02	Combarbal	44.67	269	P		P	00 30 51.7	-0.2
CO02				IAmb		IAmb	00 30 56.1	
	comp=Z,18nm,1.4s							
CO01	Juntas del Tor	44.73	271	P		P	00 30 52.7	+0.1
CO01				IAmb		IAmb	00 30 55.5	
	comp=Z,7.1nm,1.1s							
QSPA	South Pole Qui	44.94	180	P		P	00 30 54.4	+0.8
	comp=Z,6.6nm,0.7s,baz=203,slow=3.5,SNR=41							
QSPA					LR	LR	00 47 30.6	
	comp=Z,76nm,18.0s,baz=203,slow=33							
	comp=Z,6.6nm,0.7s							
QSPA	South Pole Qui	44.94	180	P		P	00 30 54.1	+0.4
QSPA				IAmb		IAmb	00 30 58.8	
	comp=Z,9.2nm,0.9s							
MAW	Mawson	44.98	148	P		P	00 30 54.1	+0.4
	comp=Z,5.7nm,0.8s,baz=254,slow=9.1,SNR=13							
	comp=Z,5.7nm,0.8s							
MAW	Mawson	44.98	148	P		P	00 30 55.3	+1.6
LCO	Las Campanas	45.73	271	P		P	00 31 00.2	-0.3
LCO				IAmb		IAmb	00 31 00.7	
	comp=Z,15nm,1.4s							
AC02	Maricunga	45.93	275	P		P	00 31 02.3	-0.1
LSZ	Lusaka	47.57	65	LR		LR	00 48 52.2	
	comp=Z,49nm,20.4s,baz=192,slow=33							
DBIC	Dimbokro	52.70	14	LR		LR	00 48 55.4	
	comp=Z,55nm,20.0s,baz=188,slow=30							
FOMA	Nahampoana Res	53.88	90	P		P	00 32 01.6	-0.6
EDA	Edea	54.12	33	P		P	00 32 03.4	-0.7
EDA				IAmb		IAmb	00 32 08.5	
	comp=Z,6.7nm,0.8s							
VNDA	Vanda	57.42	179	P		P	00 32 27.8	+0.8
	comp=Z,2.9nm,1.0s,baz=178,slow=7.2,SNR=5.4							
VNDA					LR	LR	00 54 20.8	
	comp=Z,59nm,20.1s,baz=184,slow=33							
	comp=Z,2.9nm,1.0s							
VNDA	Vanda	57.42	179	P		P	00 32 27.2	+0.2
VNDA				IAmb		IAmb	00 32 38.4	
	comp=Z,4.7nm,1.1s							
MDP	Montagnes des	59.97	316	LR		LR	00 54 52.9	
	comp=Z,44nm,20.7s,baz=178,slow=32							
TORD	Torodi Ar. Bea	60.34	20	P		P	00 32 49.5	+1.6
	comp=Z,3.9nm,0.9s,baz=192,slow=6.2,SNR=13							
	comp=Z,3.9nm,0.9s							
SACV	Santiago Islan	60.41	351	P		P	00 32 48.9	+0.4
MBAR	Mbarara	60.54	57	P		P	00 32 49.7	0.0
NNA	Nana	61.22	283	P		P	00 32 54.5	+0.4
RPN	Rapa Nui	73.52	248	LR		LR	01 01 06.0	
	comp=Z,22nm,20.3s,baz=183,slow=31							
SJG	San Juan	77.88	312	LR		LR	01 05 49.6	
	comp=Z,19nm,21.0s,baz=81,slow=33							
MDT	Midelt	78.44	10	LR		LR	01 04 11.6	
	comp=Z,36nm,20.8s,baz=212,slow=32							
JTS	Las Juntas de	82.97	292	LR		LR	01 12 10.9	
	comp=Z,18nm,18.5s,baz=123,slow=36							
MGAN	Managua	85.19	292	P		P	00 35 15.9	+0.4
ESDC	Sonseca Array	85.30	9	P		P	00 35 16.7	+1.2
	comp=Z,1.1nm,0.9s,baz=190,slow=5.1,SNR=8.2							
ESDC					LR	LR	01 08 19.9	
	comp=Z,22nm,21.3s,baz=169,slow=32							
	comp=Z,1.1nm,0.9s							
ESDC	Sonseca Array	85.30	9	P		P	00 35 15.2	-0.3
MTE	Manteigas	85.67	6	P		P	00 35 17.9	+0.5
MTE				IAmb		IAmb	00 35 28.2	
	comp=Z,13nm,1.1s							
DAVOX	Davos/Dischmat	94.49	17	LR		LR	01 16 13.6	
	comp=Z,25nm,20.4s,baz=75,slow=34							
KURBB	Kurchatov Arra	125.52	51	PKP		PKPdf	00 41 38.2	-1.2
	comp=Z,0.1nm,0.5s,baz=188,slow=1.9,SNR=1.8							
MKAR	Makanchi Array	125.73	57	PKP		PKPdf	00 41 40.2	+0.2
	comp=Z,0.2nm,0.6s,baz=204,slow=3.2,SNR=2.5							
ILAR	Eielson Array	147.00	324	PKPbc		PKPdf	00 42 19.0	+0.5
	comp=Z,0.8nm,0.9s,baz=76,slow=2.3,SNR=6.6							
ILAR	Eielson Array	147.00	324			PKPdf	00 42 17.6	-0.9
JMZ	Minamidaito 2	147.24	115	PKPdf		PKPdf	00 42 20.4	+0.3
FID	Port Fidalgo	147.44	316	PKPbc		PKiKP	00 42 24.2	+0.1

*IDC **24** 00:33:04.6±1.4, 29°.35N×96°.06E, h0km, mb3.4/9, mbtmp3.5/10, ML3.8/1, Error ellipse: s-maj=33.4km s-min=23.5km az=44.0*

ISC 24 00:33:09.9±1.2, **29°.5N**±0°.2×**96°.1E**±0°.1, **h35**km, **n10,** σ1**9**, **00**/10, **mb3.5**/7, **Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LZDM	Lanzhou Array	9.09	43	Pn		Pn	00 35 18.7	-0.1
	baz=243,slow=16							
	1.2nm,0.4s							
SONM	Songino Array	19.99	21	P		Pn	00 37 41.3	+0.1
	0.2nm,0.4s,baz=238,slow=14,SNR=1.8							
	0.2nm,0.4s							
MKAR	Makanchi Array	20.38	332	P		P	00 37 42.3	-1.2
	0.5nm,0.8s,baz=144,slow=12,SNR=4.4							
	0.5nm,0.8s							
KURBB	Kurchatov Arra	24.94	333	P		P	00 38 30.5	+0.8
	0.9nm,0.9s,baz=142,slow=11,SNR=7.6							
	0.9nm,0.9s							
ZALV	Zalesovo Beam	25.81	345	P		P	00 38 38.4	+0.9
	1.1nm,0.9s,baz=145,slow=10,SNR=3.9							
	1.1nm,0.9s							
BVAR	Borovoye Array	30.17	329	P		P	00 39 17.5	+1.0
	0.8nm,0.8s,baz=140,slow=9.1,SNR=3.8							
	0.8nm,0.8s							
PETK	Petropavlovsk-	50.16	44	P		P	00 42 02.0	+0.2
	0.5nm,0.5s,baz=280,slow=8.5,SNR=1.7							
	0.5nm,0.5s							
BRTR	Keskin Array B	51.52	299	P		P	00 42 13.4	+1.0
	0.4nm,0.8s,baz=88,slow=7.4,SNR=4.0							
	0.4nm,0.8s							
AKASG	Malin Array Be	53.46	313	P		P	00 42 25.0	-1.4
	0.9nm,0.8s,baz=76,slow=7.1,SNR=1.7							
	0.9nm,0.8s							
WRA	Warramunga Arr	61.41	138	P		P	00 43 22.5	-0.2
	0.3nm,0.9s,baz=311,slow=6.3,SNR=4.7							
	0.3nm,0.9s							

*TIF **24** 01:11:16.8, 39°.76N×42°.53E, h4km*
*ISK **24** 01:11:16.8, 39°.77N×42°.51E, h5km, ML3.5/18*
*AFAD **24** 01:11:17.6, 39°.77N×42°.53E, h6km±1km, MW3.6*
*NSSP **24** 01:11:19.3, 39°.88N×42°.70E, h10km, Ms3.0*

ISC 24 01:11:17.7±0.9, **39°.77N**±0°.01×**42°.53E**±0°.01, **h5**km±8km, **n88,** σ0**98**/138, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EATA	Eleskirt	0.09	341	P		Pg	01 11 19.8	-0.1
EATA				S		Sg	01 11 21.8	+0.3
AGRB	Hanur-Agry	0.41	119	Pg		Pg	01 11 26.1	+0.5
AGRB				Sg		Sb	01 11 33.4	-0.7
DORK	Agr/Tutak/Do	0.43	153	P		Pg	01 11 25.7	-0.3
DORK				S		Sb	01 11 33.3	-1.4
KOTA	Agri, Merkez-K	0.52	87	P		Pg	01 11 27.7	0.0
KOTA				S		Sb	01 11 36.2	-1.1
HOMI	Horasan	0.55	300	P		Pg	01 11 28.7	+0.3
HOMI				S		Sg	01 11 36.0	+0.4
KOPR	Koprukoy-ERZUR	0.56	293	Pg		Pg	01 11 28.8	+0.2
MLAZ	Malazgirt-MUS	0.63	179	Pg		Pg	01 11 29.8	-0.1
MLAZ				Sg		Sb	01 11 40.5	0.0
SENK	Senkaya-Erzuru	0.80	350	Pg		Pg	01 11 33.1	+0.1
EOLT	Oltu	0.88	331	P		Pg	01 11 34.3	-0.4
EOLT				S		Sg	01 11 45.0	-1.1
BOZK	Kars-Merkez-Bo	0.88	23	P		Pg	01 11 34.5	-0.2
BOZK				S		Sb	01 11 46.9	-0.9
ERZM	Erzurum	0.91	279	P		Pb	01 11 36.2	+0.2
ERZM				S		Sb	01 11 49.2	+0.7
DIGO	Kars	0.91	45	P		Pg	01 11 35.5	+0.3
DIGO				S		Sn	01 11 50.3	-0.7
DYDN	Diyadin	0.92	104	P		Pg	01 11 35.1	-0.3
DYDN				S		Sg	01 11 46.4	-1.0
KARS	Kars	0.95	26	Pg		Pb	01 11 36.4	-0.3
AKDA	Akdag	0.96	291	P		Pg	01 11 36.0	0.0
AKDA				S		Sn	01 11 51.2	-0.8
ADCV	BITLIS_Adilcev	0.98	171	P		Pg	01 11 35.9	-0.5
ADCV				S		Sb	01 11 49.8	-0.6
ERCV	ERCIS-VAN	0.98	140	Pg		Pb	01 11 36.8	-0.4
ERCV	ERCIS-VAN	0.98	140	P		Pg	01 11 36.3	-0.1
ERCV				S		Sb	01 11 50.6	+0.2
VRTB	Varto-Mus	1.03	234	Pg		Pb	01 11 37.8	-0.3
VNNZ	Vanand	1.05	71	*e*P		Pn	01 11 38.6	-0.5
VNNZ				*e*S		Sb	01 11 52.5	+0.2
GOLE	Ardahan-G¶le	1.06	3	P		Pg	01 11 37.9	-0.2
GOLE				S		Sb	01 11 52.4	-0.6
ETEKE	Tekederesi - E	1.07	272	P		Pg	01 11 38.0	-0.3
ETEKE				S		Sn	01 11 54.0	-0.9
VMUR	Van-Muradiye	1.12	134	P		Pg	01 11 38.7	-0.5
VMUR				S		Sg	01 11 53.6	-0.2
IGDI	IGDIR	1.20	85	P		Pg	01 11 39.7	-0.9
IGDI				S		Sg	01 11 55.6	-0.6
ECAT	Cat-ERZURUM	1.21	263	P		Pg	01 11 40.3	-0.7
ECAT				S		Sb	01 11 57.3	+0.1
EMRE	Erzurum,Aziziy	1.22	283	P		Pg	01 11 41.0	-0.1
EMRE				S		Sn	01 11 59.3	+0.6
EAK	Akyaka	1.23	42	P		Pn	01 11 42.2	+0.6
EAK				S		Sn	01 12 01.0	+2.3
KARO	Karliova-Bingo	1.24	248	Pn		Pn	01 11 41.5	-0.3
METS	Metsamor	1.25	72	*e*P		Pn	01 11 42.4	+0.6
METS				*e*S		Sn	01 11 58.8	-0.2
DDEM	Demirkent	1.27	332	P		Pn	01 11 41.2	-0.9
GURO	Guroymak-BITLI	1.28	198	Pn		Pn	01 11 41.9	-0.4
ARUZ	Aruch	1.30	67	*e*P		Pg	01 11 43.0	+0.4
ARUZ				*e*S		Sn	01 11 60.0	-0.5
MUSM	Mu-Merkez	1.31	217	P		Pn	01 11 41.8	-1.0
MUSM				S		Sg	01 11 58.5	-1.4
TASB	TASBURUN-IGDIR	1.33	80	Pn		Pg	01 11 43.7	+0.5
KRIK	Erzurum-spir	1.35	295	P		Pg	01 11 43.5	-0.1
DAGI	Agillar	1.39	340	P		Pn	01 11 43.1	-0.7
DAGI				S		Sb	01 12 01.8	-0.3
AHAN	Ardahan-Merkez	1.39	3	P		Pb	01 11 44.0	-0.3
AHAN				S		Sb	01 12 01.1	-1.2
BLIS	Bitlis-Merkez	1.40	194	P		Pn	01 11 43.0	-0.9
BLIS				S		Sb	01 12 00.6	-1.9
DBAD	Bademkaya	1.40	333	P		Pb	01 11 44.1	-0.2
TVAN	Van	1.42	151	P		Pb	01 11 44.5	-0.2
TVAN				S		Sg	01 12 03.8	+0.5
SLHN	Bingol, Solhan	1.43	236	P		Pn	01 11 43.7	-0.7
SLHN				S		Sg	01 12 04.0	+0.5
AMBZ	Amberd	1.46	65	*e*P		Pg	01 11 46.0	+0.3
AMBZ				*e*S		Sg	01 12 05.2	+0.6
AKDM	Akdamar-Van	1.48	166	Pn		Pb	01 11 45.7	-0.1
KMOZ	Kamo	1.51	46	*e*P		Pg	01 11 46.4	-0.2
KMOZ				*e*S		Sn	01 12 05.2	-0.3
GEVA	Gevas	1.52	164	P		Pb	01 11 46.0	-0.4
YEDI	Yedisu-Bingol	1.57	258	Pn		Pb	01 11 46.7	-0.6
KOPT	Kop Dagi	1.58	280	P		Pg	01 11 48.0	0.0
KOPT				S		Sg	01 12 12.4	+3.8
OZAP	Van, Ozalp-Mer	1.59	134	P		Pg	01 11 48.5	+0.3
OZAP				S		Sg	01 12 11.0	+2.2
BNGB	Bingl	1.63	242	Pn		Pn	01 11 47.5	+0.3
BGD	Bogdanovka	1.70	28	P		Pg	01 11 50.4	+0.1
DBOC	Borcka	1.70	338	P		Pn	01 11 48.5	+0.4
EPOS	Posof	1.73	5	P		Pg	01 11 50.5	-0.4
EPOS				S		Sb	01 12 11.7	-0.5
GNI	Garni	1.74	77	Pn		Pb	01 11 49.4	-0.8
GNI	Garni	1.74	77	*e*P		Pb	01 11 49.8	-0.4
GNI				*e*S		Sn	01 12 11.4	0.0
KAPZ	Kaputan	1.75	71	*e*P		Pb	01 11 50.6	+0.2
KAPZ				*e*S		Sb	01 12 13.0	+0.2
BAYB	BAYBURT	1.81	286	P		Pg	01 11 51.8	-0.6
BAYB				S		Sg	01 12 16.0	+0.1
HOPA	Hopa-Artvin	1.81	333	Pn		Pb	01 11 50.3	-1.0
IZDR	Rize	1.81	304	P		Pg	01 11 52.2	-0.3
IZDR				S		Sg	01 12 15.2	-0.7
PERV	Siirt/Pervari-	1.82	180	P		Pb	01 11 50.9	-0.8
SRTM	Siirt_Merkez	1.84	195	P		Pb	01 11 51.8	0.0
SRTM				S		Sg	01 12 16.4	-0.4
SRTK	Saratovka	1.88	46	*e*P		Pb	01 11 52.2	-0.4
SRTK				*e*S		Sn	01 12 15.2	+0.4
CHOM	Cayeli-Rize	1.89	315	Pn		Pb	01 11 51.7	-1.0
SVAN	Silvan-Diyarba	1.93	213	Pn		Pn	01 11 51.9	+0.8
BATM	Batumi	1.94	341	Pn		Pb	01 11 52.3	-1.1
BATM	Batumi	1.94	341	P		Pb	01 11 53.6	+0.1
MAYK		1.98	239	P		Pb	01 11 53.2	-1.0
BTMN	Batman	2.12	208	P		Pb	01 11 56.1	-0.5
BTMN				S		Sb	01 12 23.2	-0.1
ERZN	Erzincan	2.17	266	Pn		Pn	01 11 55.5	+0.9
EUZM	Uzumlu	2.19	269	P		Pb	01 11 57.8	0.0
EUZM				S		Sg	01 12 29.2	+1.3
SIRN	Sirnak	2.28	182	P		Pb	01 11 58.0	+0.8
SIRN				S		Sg	01 12 30.6	-0.2
LSVT	Lusahovit	2.33	60	*e*P		Pb	01 11 58.3	-1.9
LSVT				*e*S		Sn	01 12 25.5	-0.3
KOVA	Elazig, Kovanc	2.37	244	P		Pb	01 12 00.8	0.0
HAKT	HAKKARI	2.40	157	P		Pb	01 12 00.6	-0.8
TNCL	Tunceli-Merkez	2.41	255	P		Pb	01 12 00.2	-1.3
TNCL				S		Sb	01 12 32.2	+0.7
MACK	Trabzon	2.41	300	P		Pb	01 12 02.1	+0.6
MIDY	Mardin/Midyat-	2.52	201	P		Pb	01 12 03.0	-0.5
MIDY				S		Sb	01 12 34.3	-0.6
AYRK	Ayrk	2.53

GCMT 24 01:18:47.0±0.4, 25.94S±0.06×13.78W±0.04, h24km±1km, MW4.8/74, Moment Tensor Solution. s15,c18; s74,c90; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-1.96±.20; Mθθ 0.33±.12; Mφφ 1.63±.13; Mrθ-0.34±.16; Mθφ-0.16±.08; Mφr-0.82±.13; Best double couple: M0 2.00200×1016 NP1:φs165.00000°,δ34.00000°, λ-106.00000°. NP2:φs4.00000°,δ58.00000°,λ-80.00000°.
Principal axes: T 1.8130, Plg12.0000°, Azm87.0000°; N 0.3820, Plg9.0000°, Azm179.0000°; P -2.1910, Plg75.0000°, Azm304.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

IDC 24 01:28:40.4±2.1, 15.51S×173.33W, h0km, mb3.6/4, mbtmp3.6/4, MS2.9/2 Error ellipse: s-maj=128.8km s-min=28.5km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAR	**Rarotonga**	**14.06**	**116**		LR	LR	01 36 30.9	
	comp=Z,33nm,18.4s,baz=288,slow=34							
PPT	**Papeete**	**22.86**	**98**		LR	LR	01 42 19.8	
	comp=Z,36nm,18.0s,baz=301,slow=36							
PPT2	**Papeete2**	**22.86**	**99**	*e*	LR	LR	01 38 37.0	
	111nm,25.2s							
H11S2	**WAKE ISLAND Hy**	**39.09**	**329**		T	T	02 18 58.0	
	baz=146							
H11S3	**WAKE ISLAND Hy**	**39.11**	**329**		T	T	02 18 48.9	
	baz=146							
H11S1	**WAKE ISLAND Hy**	**39.11**	**329**		T	T	02 18 33.0	
	baz=146							
WRA	**Warramunga Arr**	**49.88**	**257**		P	P	01 37 35.4	-0.6
	0.4nm,0.6s,baz=90,slow=7.2,SNR=5.0							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**50.14**	**252**		P	P	01 37 38.2	+0.2
	1.6nm,0.8s,baz=91,slow=8.0,SNR=11							
	1.6nm,0.8s							
TXAR	**Lajitas Array**	**80.62**	**56**		P	P	01 40 55.4	-0.1
	0.3nm,1.0s,baz=245,slow=5.9,SNR=5.3							
	0.3nm,1.0s							
ILAR	**Eielson Array**	**82.54**	**11**		P	P	01 41 04.8	+0.2
	0.4nm,0.8s,baz=210,slow=7.1,SNR=4.2							
	0.4nm,0.8s							

KRNET 24 01:34:51.3±0.1, 41.86N×76.99E, h19km, mb3.4
SOME 24 01:34:52.1, 41.92N×76.97E, h10km
KNET 24 01:34:53.6±0.4, 41.94N×76.88E, h12km±2km, ml3.0, Error ellipse: s-maj=4.7km s-min=2.5km az=38.0
NNC 24 01:34:54.0±0.9, 42.01N×76.98E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=6.2km s-min=4.2km az=165.0

ISC 24 01:34:51.7±1.1, 41.88N±0.03×76.94E±0.02, h5km±10km, n77, σ1s41/132, 38C-35D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KDJ	**Kajisay**	**0.31**	**35**	↑	*iP*	**Pg**	**01 34 58.1**	**+0.3**
KDJ				↑	*iS*	**Sg**	**01 35 02.3**	**+0.3**
ULHL	**Ulahol**	**0.64**	**306**	↑	P	**Pb**	**01 35 04.8**	**-0.7**
ULHL	58nm,0.1s			↑	S	**Sb**	**01 35 13.5**	**-1.2**
	424nm,0.2s							
ULHL	**Ulahol**	**0.64**	**306**	↑	*iP*	**Pg**	**01 35 04.2**	**+0.3**
ULHL				↑	*iS*	**Sb**	**01 35 13.8**	**-0.9**
TARG	**Taragay, Kyrgy**	**0.66**	**102**	↑	*iP*	**Pg**	**01 35 03.3**	**-1.2**
TARG				↑	*iS*	**Sg**	**01 35 11.7**	**-1.4**
NRN	**Naryn**	**0.83**	**238**	↓	*iP*	**Pg**	**01 35 07.9**	**+0.3**
NRN				↓	*iS*	**Sb**	**01 35 19.8**	**-0.5**
BOOM	**Boomskoye usch**	**0.96**	**310**	↑	*iP*	**Pg**	**01 35 10.1**	**-0.1**
BOOM				↑	*iS*	**Sb**	**01 35 23.8**	**-0.3**
ANVS	**Anan'yevo**	**1.06**	**31**	↓	*iP*	**Pg**	**01 35 11.0**	**-0.9**
ANVS				↓	*iS*	**Sg**	**01 35 25.3**	**-0.3**
TNSS	**Tian-Shan**	**1.16**	**0**		P	**Pg**	**01 35 14.0**	**+0.1**
TNSS	26nm,0.1s				S	**Sb**	**01 35 29.7**	**-0.2**
	44nm,0.2s							
TNSS	**Tian-Shan**	**1.16**	**0**	*e*	P	**Pg**	**01 35 14.0**	**+0.1**
TNSS	26nm,0.1s							
				e	S	**Sb**	**01 35 29.7**	**-0.2**
	45nm,0.2s							
PRZ	**Przheval'sk**	**1.25**	**60**	↑	*iP*	**Pn**	**01 35 14.1**	**-1.8**
PRZ				↑	*iS*	**Sb**	**01 35 30.4**	**-1.8**
JNKS	**Jany-Kuch**	**1.28**	**231**	↓	*iP*	**Pn**	**01 35 15.1**	**-1.4**
JNKS				↓	*iS*	**Sb**	**01 35 32.2**	**-1.1**
MDOK	**Medeo**	**1.29**	**4**	↑	P	**Pn**	**01 35 14.4**	**-2.1**
MDOK	40nm,0.4s				Pg	**Pb**	**01 35 16.2**	**-0.3**
	178nm,0.3s							
MDOK				↓	S	**Sb**	**01 35 31.7**	**-1.7**
	52nm,0.5s							
MDOK					Lg	Lg	01 35 33.8	
	170nm,0.3s							
MDOK	**Medeo**	**1.29**	**4**	*e*	P	**Pb**	**01 35 16.2**	**-0.3**
	178nm,0.3s							
MDOK				*e*	S	**Sn**	**01 35 33.8**	**-0.4**
	170nm,0.2s							
MTBS	**Maitube**	**1.31**	**343**		P	**Pg**	**01 35 16.9**	**+0.1**
	114nm,0.1s							
MTBS					S	**Sg**	**01 35 35.0**	**+1.2**
	210nm,0.1s							
MTBS	**Maitube**	**1.31**	**343**	*e*	P	**Pg**	**01 35 16.9**	**+0.1**
	114nm,0.1s							
MTBS				*e*	S	**Sg**	**01 35 35.0**	**+1.2**
	210nm,0.1s							
AAA	**Alma-Ata**	**1.33**	**359**		P	**Pn**	**01 35 13.0**	**-4.0**
	395nm,0.2s							
AAA					S	**Sb**	**01 35 28.6**	**-6.0**
	7.3nm,0.1s							
KNDC	**Almaty**	**1.34**	**1**	↑	P	**Pg**	**01 35 17.4**	**+0.1**
	113nm,0.2s							
KST	**Kastek**	**1.37**	**329**		P	**Pg**	**01 35 18.2**	**+0.2**
	33nm,0.2s							
KST					S	**Sg**	**01 35 36.6**	**+0.8**
	147nm,0.2s							
KST	**Kastek**	**1.37**	**329**	*e*	P	**Pg**	**01 35 18.2**	**+0.2**
	33nm,0.2s							
KST				*e*	S	**Sg**	**01 35 36.6**	**+0.8**
	148nm,0.2s							
TKM2	**Tokmak 2**	**1.44**	**317**	↑	P	**Pg**	**01 35 19.2**	**-0.1**
	45nm,0.2s,SNR=125							
TKM2				↑	S	**Sg**	**01 35 39.6**	**+1.6**
	93nm,0.1s							
TKM2	**Tokmak 2**	**1.44**	**317**	↑	*iP*	**Pn**	**01 35 18.5**	**-0.1**
TKM2				↑	*iS*	**Sg**	**01 35 38.4**	**+0.4**
SATY	**Saty**	**1.61**	**42**		P	**Pg**	**01 35 22.1**	**-0.4**
	21nm,0.1s							
SATY					S	**Sg**	**01 35 43.4**	**+0.1**
	526nm,0.1s							
SATY	**Saty**	**1.61**	**42**	*e*	P	**Pg**	**01 35 22.1**	**-0.4**
	21nm,0.1s							
SATY				*e*	S	**Sg**	**01 35 43.4**	**+0.1**
	526nm,0.1s							
KBK	**Karagaybulak**	**1.67**	**299**	↓	P	**Pg**	**01 35 23.9**	**+0.2**
	34nm,0.1s,SNR=20							
KBK				↑	S	**Sg**	**01 35 46.7**	**+1.4**
	186nm,0.2s							
KBK	**Karagaybulak**	**1.67**	**299**	↑	*iP*	**Pb**	**01 35 22.5**	**-0.5**
KBK				↑	*iS*	**Sg**	**01 35 45.4**	**0.0**
UCH	**Uchtor**	**1.84**	**282**	↑	P	**Pg**	**01 35 27.0**	**0.0**
	3.5nm,0.1s							
UCH	**Uchtor**	**1.84**	**282**	↓	*iP*	**Pb**	**01 35 25.3**	**-0.8**
UCH				↓	*iS*	**Sb**	**01 35 49.9**	**+0.4**
KTBS	**Karatobe**	**1.85**	**354**		P	**Pb**	**01 35 25.5**	**-0.4**
	12nm,0.1s							
KTBS					S	**Sb**	**01 35 49.3**	**-0.1**
	416nm,0.5s							
KTBS	**Karatobe**	**1.85**	**354**	*e*	P	**Pb**	**01 35 25.5**	**-0.4**
	12nm,0.1s							
KTBS				*e*	S	**Sb**	**01 35 49.3**	**-0.1**
	416nm,0.5s							
KURS	**Kuram**	**1.85**	**29**		P	**Pb**	**01 35 26.1**	**+0.1**
	18nm,0.5s							
KURS					S	**Sg**	**01 35 50.8**	**-0.3**
	77nm,0.4s							
KURS	**Kuram**	**1.85**	**29**	*e*	P	**Pb**	**01 35 26.1**	**+0.1**
	18nm,0.5s							
KURS				*e*	S	**Sg**	**01 35 50.8**	**-0.3**
	77nm,0.4s							
FRU1	**Bishkek**	**1.95**	**299**	↑	*iP*	**Pb**	**01 35 26.7**	**-1.0**
FRU1				↑	*iS*	**Sb**	**01 35 52.5**	**+0.2**
AAK	**Ala-Archa**	**1.97**	**294**	↑	P	**Pb**	**01 35 28.6**	**+0.5**
	16nm,0.2s,SNR=14							
AAK				↓	S	**Sg**	**01 35 54.9**	**0.0**
	74nm,0.2s							
AAK	**Ala-Archa**	**1.97**	**294**	↑	Pn	**Pb**	**01 35 28.6**	**+0.5**
	80nm,0.4s							
AAK				↓	Sn	**Sg**	**01 35 54.9**	**0.0**
	449nm,0.6s							
AAK	**Ala-Archa**	**1.97**	**294**	↓	*iP*	**Pb**	**01 35 27.0**	**-1.1**
AAK				↓	*iS*	**Sb**	**01 35 52.9**	**0.0**
CHMS	**Chumysh**	**1.97**	**305**	↑	P	**Pb**	**01 35 28.7**	**+0.7**
	24nm,0.2s,SNR=34							
CHMS				↓	S	**Sg**	**01 35 55.4**	**+0.5**
	76nm,0.2s							
CHMS	**Chumysh**	**1.97**	**305**	↓	*iP*	**Pb**	**01 35 26.6**	**-1.4**
CHMS				↓	*iS*	**Sb**	**01 35 52.5**	**-0.4**
UZB	**Uzynbulak**	**2.00**	**50**		P	**Pb**	**01 35 28.0**	**-0.5**
	23nm,0.4s							
UZB					S	**Sb**	**01 35 53.6**	**-0.2**
	164nm,0.2s							
UZB	**Uzynbulak**	**2.00**	**50**	*e*	P	**Pb**	**01 35 28.0**	**-0.5**
UZB				*e*	S	**Sb**	**01 35 53.6**	**-0.2**
KRBS	**Karabastau**	**2.04**	**333**		Pg	**Pg**	**01 35 30.1**	**-0.7**
	126nm,0.3s							
KRBS					Lg	Lg	01 35 58.8	
	71nm,0.4s							
KRBS	**Karabastau**	**2.04**	**333**	*e*	P	**Pg**	**01 35 30.1**	**-0.7**
	126nm,0.3s							
KRBS				*e*	S	**Sg**	**01 35 57.5**	**+0.2**
	71nm,0.4s							
KPKS	**Kokpek**	**2.05**	**38**		Pg	**Pb**	**01 35 29.5**	**+0.2**
	0.3nm,0.2s							
KPKS					Lg	Lg	01 35 56.0	
	480nm,0.5s							
KPKS	**Kokpek**	**2.05**	**38**	*e*	P	**Pb**	**01 35 29.5**	**+0.2**
	0.3nm,0.2s							
KPKS				*e*	S	**Sg**	**01 35 56.0**	**-1.4**
	480nm,0.5s							
KUU	**Kurty**	**2.06**	**348**		Pg	**Pb**	**01 35 30.3**	**+0.7**
	30nm,0.2s							
KUU					Lg	Lg	01 35 58.0	
	137nm,0.5s							
KUU	**Kurty**	**2.06**	**348**	*e*	P	**Pb**	**01 35 30.3**	**+0.7**
	30nm,0.2s							
KUU				*e*	S	**Sg**	**01 35 58.0**	**0.0**
	137nm,0.5s							
SHLS	**Shalkode**	**2.26**	**55**		Pg	**Pg**	**01 35 38.2**	**+3.2**
	49nm,0.2s							
SHLS					Lg	Lg	01 36 11.0	
	388nm,0.4s							
SHLS	**Shalkode**	**2.26**	**55**	*e*	P	**Pg**	**01 35 38.2**	**+3.2**
	49nm,0.2s							
SHLS				*e*	S	**Sg**	**01 36 11.0**	**+6.7**
	388nm,0.4s							
USP	**Ospenovka**	**2.28**	**308**	↓	P	**Pb**	**01 35 32.6**	**-0.6**
	49nm,0.2s,SNR=112							
USP	**Ospenovka**	**2.28**	**308**	↑	*iP*	**Pn**	**01 35 31.1**	**+1.2**
USP				↑	*iS*	**Sb**	**01 35 59.9**	**-1.8**
SGDS	**Sogindy**	**2.32**	**314**		Pg	**Pb**	**01 35 34.8**	**+0.8**
	109nm,0.3s							
SGDS					Lg	Lg	01 36 05.9	
	129nm,0.2s							
PDGK	**Podgornoye**	**2.38**	**52**	↓	Pg	**Pb**	**01 35 33.6**	**-1.4**
	46nm,0.7s							
PDGK				↓	Lg	Lg	01 36 05.3	
	252nm,0.7s							
ARXS	**Arharly**	**2.43**	**15**		Pg	**Pb**	**01 35 35.9**	**0.0**
	21nm,0.5s							
ARXS					Lg	Lg	01 36 07.5	
	288nm,0.5s							
ARXS	**Arharly**	**2.43**	**15**	*e*	P	**Pb**	**01 35 35.9**	**0.0**
	21nm,0.5s							
ARXS				*e*	S	**Sg**	**01 36 07.5**	**-2.1**
	288nm,0.5s							
EKS2	**Erkin-Say**	**2.47**	**290**	↓	*eP*	**Pn**	**01 35 33.9**	**+1.2**
EKS2				↓	*iS*	**Sb**	**01 36 05.0**	**-2.5**
BLB	**Baldybastay**	**2.49**	**26**		Pg	**Pb**	**01 35 37.4**	**+0.5**
	33nm,0.3s							
BLB					Lg	Lg	01 36 09.9	
	353nm,0.3s							
SALK	**Salom-Alik**	**2.55**	**248**	↑	*iP*	**Pn**	**01 35 34.7**	**+0.9**
SALK				↑	*iS*	**Sn**	**01 36 06.3**	**+1.1**
MRKS	**Merke**	**2.89**	**289**		Pg	**Pg**	**01 35 46.3**	**-0.6**
	18nm,0.3s							
MRKS					Lg	Lg	01 36 24.9	
	116nm,0.3s							
MRKS	**Merke**	**2.89**	**289**	*e*	P	**Pg**	**01 35 46.3**	**-0.6**
	18nm,0.3s							
MRKS				*e*	S	**Sg**	**01 36 24.9**	**+0.5**
	116nm,0.3s							
KNOS	**Konyrlen**	**2.98**	**33**		Pg	**Pb**	**01 35 46.1**	**+0.9**
	5.9nm,0.2s							
KNOS					Lg	Lg	01 36 24.3	
	71nm,0.5s							
SFK	**Sufi-Kurgan**	**3.20**	**236**	↑	*iP*	**Pn**	**01 35 43.7**	**+0.9**
SFK				↑	*iS*	**Sn**	**01 36 22.0**	**+0.6**
DJR	**Jarkent**	**3.22**	**39**		Pg	**Pb**	**01 35 49.7**	**+0.3**
	6.7nm,0.4s							
DJR					Lg	Lg	01 36 30.8	
	56nm,0.4s							
DJR	**Jarkent**	**3.22**	**39**	*e*	P	**Pb**	**01 35 49.7**	**+0.3**
	6.7nm,0.4s							
DJR				*e*	S	**Sb**	**01 36 30.8**	**+1.8**
	56nm,0.4s							
TDK	**Taldyqorghan**	**3.30**	**18**		Pg	**Pb**	**01 35 51.6**	**+0.9**
	21nm,0.3s							
TDK					Lg	Lg	01 36 33.0	
	169nm,0.3s							
TDK	**Taldyqorghan**	**3.30**	**18**	*e*	P	**Pb**	**01 35 51.6**	**+0.9**
	21nm,0.3s							
TDK				*e*	S	**Sb**	**01 36 34.0**	**+2.8**
	169nm,0.3s							
MNAS	**Manas**	**3.35**	**282**	↓	*eP*	**Pn**	**01 35 46.0**	**+1.2**
MNAS				↓	*iS*	**Sn**	**01 36 26.0**	**+0.9**
ARK	**Arkit**	**3.72**	**270**	↓	*iP*	**Pn**	**01 35 51.1**	**+1.3**
ARK				↓	*iS*	**Sn**	**01 36 34.5**	**+0.5**
BTLS	**Baital**	**3.80**	**327**		Pg	**Pb**	**01 36 01.5**	**+2.3**
	11nm,0.5s							
BTLS					Lg	Lg	01 36 51.0	
	34nm,0.5s							
BTLS	**Baital**	**3.80**	**327**	*e*	P	**Pb**	**01 36 01.5**	**+2.3**
	11nm,0.5s							
BTLS				*e*	S	**Sg**	**01 36 51.0**	**-2.7**
	34nm,0.5s							
TRKS	**Terek-Say**	**4.36**	**267**	↓	*iP*	**Pn**	**01 35 59.7**	**+1.1**
TRKS				↓	*iS*	**Sn**	**01 36 49.4**	**-0.4**
KK31	**Karatay Array**	**4.91**	**287**	↑	Pg	**Pg**	**01 36 24.1**	**-1.5**
	1.2nm,0.3s,baz=101,slow=15,SNR=28							
KK31				↑	Lg	Lg	01 37 27.1	
	5.7nm,0.4s,baz=101,slow=31,SNR=8.9							
BTK	**Batken**	**4.98**	**251**	↓	*iP*	**Pn**	**01 36 08.3**	**+1.2**
BTK				↓	*iS*	**Sn**	**01 37 04.4**	**-0.6**
IUG	**Iuzhnay**	**5.15**	**275**		Pg	**Pg**	**01 36 28.5**	**-1.9**
	3.2nm,0.2s							
IUG					Lg	Lg	01 37 37.4	
	22nm,0.7s							
IUG	**Iuzhnay**	**5.15**	**275**	*e*	P	**Pg**	**01 36 28.5**	**-1.9**
	3.2nm,0.2s							
IUG				*e*	S	**Sg**	**01 37 37.4**	**+0.2**
	22nm,0.7s							
MAKZ	**Makanchi**	**6.11**	**35**	↓	Pn	**Pn**	**01 36 24.0**	**+1.4**
	0.4nm,0.4s							
MAKZ				↓	Pg	**Pg**	**01 36 45.1**	**-3.6**
	1.6nm,0.6s							
MAKZ				↑	Lg	Lg	01 38 05.0	
	3.0nm,0.5s							
MK31	**Makanchi Array**	**6.24**	**36**	↓	Pn	**Pn**	**01 36 26.6**	**+2.2**
	0.2nm,0.4s,baz=211,slow=15,SNR=6.9							
MK31				↓	Pg	Pg	01 36 46.3	-4.8
	0.5nm,0.3s,baz=227,slow=14,SNR=4.4							
MK31				↓	Lg	Lg	01 38 06.9	
	1.3nm,0.5s,baz=216,slow=25,SNR=4.0							
KURBB	**Kurchatov Arra**	**8.82**	**7**	↑	Lg	Lg	01 39 30.9	
	14nm,0.7s							
KURK	**Kurchatov**	**8.92**	**7**	↑	Lg	Lg	01 39 32.8	
	4.2nm,0.9s							

NIED 24 01:35:57.9, 29.29N×130.41E, h57km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 0.71; Mθθ -0.32; Mφφ -0.38; Mrθ 0.61; Mθφ -0.64; Mφr 0.54; Fault plane solution: M0 1.18000×10^15 NP1: φs217.00000°, δ23.00000°, λ80.00000°. NP2:φs48.00000°, δ67.00000°, λ94.00000°.
JMA 24 01:35:57.9±0.1, 29.3N±0.5×13.0E±, h57km±3km, MV3.5/30, NEAR AMAMI-OSHIMA ISLAND

NEIC 24 01:36:08.9±1.1, 30.15N±0.10×130.2E±0.1, h91km±6km, mb4.4/10, Error ellipse: s-maj=16.7km s-min=13.8km az=73.0
IDC 24 01:36:10.4±2.6, 30.18N×130.16E, h110km±24km, mb3.6/17, mbtmp4.0/19, MS3.2/8, Error ellipse: s-maj=31.3km s-min=16.4km az=66.0

ISC 24 01:35:56.1±1.3, 29.29N±0.04×130.46E±0.07, h25km±9km, n58, σ1s36/56, mb4.2/22, MS3.1/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JNN	**Nakanoshima**	**0.75**	**317**		P	**Pn**	**01 36 12.2**	**+1.2**
JNN					S	**Sn**	**01 36 23.3**	**+1.7**
JYAK	**Yakushimahirau**	**0.94**	**3**	*i*	P	**Pn**	**01 36 15.2**	**+1.5**
JYAK					S	**Sn**	**01 36 29.2**	**+2.8**
JZK	**Kikaishima**	**1.07**	**204**	*e*	P	**Pb**	**01 36 16.9**	**+1.0**
JTAJ	**Takarajima**	**1.11**	**263**		P	**Pb**	**01 36 17.2**	**+0.6**
JAM	**Amami Oshima**	**1.16**	**221**		P	**Pb**	**01 36 17.6**	**+0.2**
JAM				*e*	S	**Sn**	**01 36 33.3**	**+1.6**
JMTN	**Minamitane**	**1.16**	**19**		P	**Pb**	**01 36 18.2**	**+0.7**
JMTN				*e*	S	**Sn**	**01 36 34.9**	**+3.0**
JKC	**Kuchinoerabu**	**1.19**	**349**		P	**Pb**	**01 36 19.0**	**+1.0**
JTN	**Tanegashima 3**	**1.43**	**18**		P	**Pb**	**01 36 21.9**	**-0.1**
JAMN	**Amaminishikomi**	**1.54**	**227**	*e*	P	**Pb**	**01 36 22.9**	**-1.0**
JAMN					S	**Sb**	**01 36 43.6**	**+0.6**
JTSR	**Tashiro 2**	**1.91**	**12**		P	**Pb**	**01 36 29.0**	**-1.3**
JTSR				*e*	S	**Sb**	**01 36 52.4**	**-1.2**
JTK	**Tokunoshima**	**2.01**	**222**		P	**Pb**	**01 36 30.0**	**-1.9**
JSU	**Suzuyama**	**2.21**	**360**			**Pn**	**01 36 32.9**	**+1.8**
JSU	**Suzuyama**	**2.21**	**360**		P	**Pn**	**01 36 33.0**	**+1.8**
JNAR	**Kushima--Naru**	**2.33**	**17**		P	**Pb**	**01 36 35.4**	**-2.1**
JNAR					S	**Sb**	**01 37 04.2**	**-1.6**
JSJ	**Shimokoshiki**	**2.46**	**345**		P	**Pn**	**01 36 36.6**	**+2.0**
JTZ	**Takazaki**	**2.66**	**12**		P	**Pn**	**01 36 39.8**	**+2.4**
JNU	**Nakatsue**	**3.83**	**5**		P	**Pn**	**01 36 56.0**	**+2.5**
	23nm,0.6s,baz=180,slow=18,SNR=9.0							
JNU					S	**Sn**	**01 37 38.5**	**+0.6**
	28nm,0.7s,baz=199,slow=6.8,SNR=1.7							
JMN	**Monobe**	**5.30**	**33**		Pn	**Pn**	**01 37 14.9**	**+1.2**
KSRS	**Korea Array**	**8.41**	**346**		P	**Pn**	**01 37 56.6**	**+0.3**
	1.4nm,0.5s,baz=167,slow=13,SNR=2.4							
ASAJ	**Asahikawa**	**17.68**	**30**		LR	LR	01 46 52.1	
	comp=Z,46nm,20.7s,baz=208,slow=38							
HILR	**Hailar Array B**	**21.82**	**341**		P	**P**	**01 40 45.6**	**-0.8**
	2.8nm,0.5s,baz=146,slow=10,SNR=1.3							
	2.8nm,0.5s							
LZDM	**Lanzhou Array**	**23.46**	**293**		P	**P**	**01 41 03.8**	**-0.2**
	2.1nm,0.4s,baz=93,slow=10,SNR=2.0							
	2.1nm,0.4s							
SONM	**Songino Array**	**26.22**	**322**		P	**P**	**01 41 25.5**	**-3.5**
	0.7nm,0.7s,baz=134,slow=8.2,SNR=4.0							
SONM					LR	LR	01 52 43.3	
	comp=Z,58nm,20.2s,baz=108,slow=39							
	0.7nm,0.7s							
TLY	**Talaya**	**29.97**	**326**		LR	LR	01 54 26.3	
	comp=Z,40nm,18.7s,baz=106,slow=38							
CMAR	**Chiang Mai Arr**	**30.68**	**257**		LR	LR	01 54 31.3	
	comp=Z,24nm,18.1s,baz=70,slow=36							
PETK	**Petropavlovsk-**	**31.06**	**32**		LR	LR	01 57 00.7	
	comp=Z,19nm,18.5s,baz=267,slow=41							
MKAR	**Makanchi Array**	**41.06**	**309**		P	**P**	**01 43 37.2**	**-0.4**
	0.8nm,0.4s,baz=98,slow=10,SNR=9.4							
	0.8nm,0.4s							
MKAR	**Makanchi Array**	**41.06**	**309**		P	**P**	**01 43 37.3**	**-0.3**
ZALV	**Zalesovo Beam**	**41.09**	**320**		P	**P**	**01 43 37.0**	**-0.7**
	1.2nm,0.5s,baz=111,slow=10,SNR=4.1							
	1.2nm,0.5s							
KURK	**Kurchatov**	**44.04**	**314**		P	**P**	**01 44 02.1**	**+0.5**
KURBB	**Kurchatov Arra**	**44.08**	**314**		P	**P**	**01 44 02.0**	**0.0**
	5.0nm,0.5s,baz=100,slow=9.0,SNR=27							
	5.0nm,0.5s							
AAK	**Ala-Archa**	**46.43**	**302**		LR	LR	02 06 13.0	
	comp=Z,38nm,19.5s,baz=168,slow=39							
WRA	**Warramunga Arr**	**49.09**	**175**		P	P	01 44 53.0	+12
	1.1nm,0.7s,baz=350,slow=7.6,SNR=6.7							
	1.1nm,0.7s							
WR8	**Warramunga Arr**	**49.12**	**175**		P	P	01 44 53.2	+11
WR8					IAmb	IAmb	01 45 09.9	
	comp=Z,9.2nm,1.4s							
KKAR	**Karatay Array**	**49.32**	**303**		P	**P**	**01 44 43.4**	**+0.2**
BVAR	**Borovoye Array**	**49.37**	**316**		P	**P**	**01 44 42.7**	**-0.7**
	comp=Z,4.5nm,0.6s,baz=91,slow=10.0,SNR=19							
	comp=Z,4.5nm,0.6s							
BORK	**Borovoye**	**49.41**	**316**		P	**P**	**01 44 43.8**	**+0.1**
BORK					IAmb	IAmb	01 44 44.6	
	comp=Z,6.7nm,0.7s							
ASAR	**Alice Springs**	**52.76**	**176**		P	P	01 45 21.6	+13
	comp=Z,0.6nm,0.6s,baz=356,slow=8.2,SNR=4.2							
	comp=Z,0.6nm,0.6s							
AB31	**Akbulak array**	**56.04**	**312**			**P**	**01 45 32.7**	**0.0**
ABKAR	**Akbulak array**	**56.04**	**312**			**P**	**01 45 32.8**	**0.0**
ARTI	**Arti**	**56.35**	**321**		LR	LR	02 12 45.2	
	comp=Z,30nm,19.7s,baz=352,slow=40							
J19K	**Poorman**	**57.07**	**30**		P	**P**	**01 45 41.4**	**+1.5**
J19K					IAmb	IAmb	01 45 46.9	
	comp=Z,4.3nm,1.2s							
AKTO	**Aktyubinsk**	**57.13**	**313**		LR	LR	02 12 17.4	
	comp=Z,66nm,18.5s,baz=194,slow=38							
ILAR	**Eielson Array**	**60.81**	**29**		P	**P**	**01 46 06.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=282,slow=6.3,SNR=2.8							
	comp=Z,0.3nm,0.7s							
E27K	**Coleen River**	**62.41**	**25**		P	**P**	**01 46 17.2**	**+0.7**
E27K					IAmb	IAmb	01 46 30.0	
	comp=Z,5.5nm,1.4s							
**K

*CATAC **24** 02:05:59.9±0.3, 12°N±2°×8°8W±°, h32km±3km, M3.8/47, MLv3.8/47, Error ellipse: s-maj=4.5km s-min=1.4km az=26.0, confirmed*
*SNET **24** 02:06:01.1±1.4, 12°57N×88°01W, h42km, ML3.7, Presumed earthquake*

ISC 24 02:06:00.4±1.3, 12°46N±0°05×88°04W±0°03, h50km, n70, σ0s50/120, 15C-3D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.70**	**43**	⇓P	**Pn**	**02 06 13.6**	**-0.6**
CSGN				S	**Sn**	**02 06 24.5**	**+0.3**
INTP	**Intipuca**	**0.73**	**359**	*eP*	**Pn**	**02 06 14.1**	**-0.6**
INTP				*eS*	**Sn**	**02 06 23.6**	**-1.4**
CNCH	**Conchagua**	**0.84**	**14**	⇑P	**Pn**	**02 06 15.8**	**-0.3**
CNCH	**Conchagua**	**0.84**	**14**	*eP*	**Pn**	**02 06 15.8**	**-0.3**
CNCH				*eS*	**Sn**	**02 06 27.4**	**-0.1**
LCND	**La Caada**	**0.86**	**10**	⇑P	**Pn**	**02 06 15.8**	**-0.4**
LCND				S	**Sn**	**02 06 27.8**	**0.0**
LCND	**La Caada**	**0.86**	**10**	*eP*	**Pn**	**02 06 15.8**	**-0.4**
LCY	**Lacayo**	**0.99**	**346**	*eP*	**Pn**	**02 06 17.8**	**-0.3**
CRIN	**San Cristobal**	**1.00**	**76**	P	**Pn**	**02 06 18.6**	**+0.4**
CRIN				S	**Sn**	**02 06 33.1**	**+1.8**
RANC	**El Ranchito**	**1.00**	**346**	P	**Pn**	**02 06 18.0**	**-0.3**
RANC				S	**Sn**	**02 06 31.6**	**+0.2**
PACA	**Pacayal**	**1.04**	**345**	P	**Pn**	**02 06 18.7**	**-0.2**
PACA				S	**Sn**	**02 06 33.0**	**+0.6**
PACA	**Pacayal**	**1.04**	**345**	*iP*	**Pn**	**02 06 18.5**	**-0.3**
PACA				*eS*	**Sn**	**02 06 32.6**	**+0.2**
TEL3	**Telica 3**	**1.18**	**84**	P	**Pn**	**02 06 20.9**	**+0.3**
HERN	**Volcan Telica**	**1.19**	**83**	⇓P	**Pn**	**02 06 20.4**	**-0.4**
HERN				S	**Sn**	**02 06 36.2**	**+0.3**
HOYN	**Al Sur del Vol**	**1.19**	**83**	⇑P	**Pn**	**02 06 20.5**	**-0.3**
HOYN				S	**Sn**	**02 06 36.3**	**+0.3**
PQSS	**Presa 15 de Se**	**1.26**	**337**	P	**Pn**	**02 06 21.9**	**+0.2**
PQSS				S	**Sn**	**02 06 38.0**	**+0.4**
TECO	**Alcaldia de Te**	**1.29**	**326**	⇑P	**Pn**	**02 06 21.7**	**-0.5**
TECO				S	**Sn**	**02 06 37.5**	**-0.8**
CNGA	**Al SSO del Vol**	**1.31**	**88**	⇑P	**Pn**	**02 06 22.2**	**-0.2**
CNGN	**Cerro Negro**	**1.31**	**88**	⇑P	**Pn**	**02 06 22.2**	**-0.2**
CNGN				S	**Sn**	**02 06 39.0**	**+0.1**
LEVN	**Ruinas Leon Vi**	**1.39**	**92**	P	**Pn**	**02 06 23.2**	**-0.3**
LEVN				S	**Sn**	**02 06 41.5**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.40**	**332**	S	**Sn**	**02 06 42.3**	**+1.1**
COEG	**Centro de Oper**	**1.41**	**325**	⇑P	**Pn**	**02 06 23.5**	**-0.3**
COEG				S	**Sn**	**02 06 41.6**	**+0.2**
COPN	**Copaltepe**	**1.45**	**101**	⇑P	**Pn**	**02 06 23.0**	**-1.1**
MOMN	**Momotombo**	**1.47**	**92**	P	**Pn**	**02 06 24.5**	**0.0**
MOMN				S	**Sn**	**02 06 42.7**	**0.0**
SJTE	**Alcalda de S**	**1.48**	**321**	*eP*	**Pn**	**02 06 24.6**	**-0.2**
SJTE				*eS*	**Sn**	**02 06 42.7**	**-0.4**
MOM3	**MOM3**	**1.49**	**88**	⇑P	**Pn**	**02 06 24.6**	**-0.2**
MOM3				S	**Sn**	**02 06 44.4**	**+1.3**
PAVA	**Las Pavas**	**1.52**	**325**	⇑P	**Pn**	**02 06 25.4**	**+0.1**
PAVA				S	**Sn**	**02 06 44.8**	**+0.8**
PAVA	**Las Pavas**	**1.52**	**325**	*eP*	**Pn**	**02 06 25.8**	**+0.4**
PAVA				*eS*	**Sn**	**02 06 45.4**	**+1.4**
MOM2	**El Cardon**	**1.52**	**91**	⇑P	**Pn**	**02 06 24.8**	**-0.4**
MOM2				S	**Sn**	**02 06 44.0**	**+0.1**
LFRS	**El Faro**	**1.52**	**319**	*eP*	**Pn**	**02 06 25.4**	**0.0**
LFRS				*eS*	**Sn**	**02 06 43.6**	**-0.5**
PANCS	**Alcalda de**	**1.59**	**316**	P	**Pn**	**02 06 25.9**	**-0.4**
PANCS				S	**Sn**	**02 06 45.0**	**-0.8**
LBRS	**Las Brisas**	**1.60**	**323**	*eP*	**Pn**	**02 06 26.9**	**+0.5**
LOMA	**Loma Larga**	**1.61**	**317**	⇑P	**Pn**	**02 06 26.4**	**-0.1**
LOMA	**Loma Larga**	**1.61**	**317**	*eP*	**Pn**	**02 06 26.5**	**-0.1**
LOMA				*eS*	**Sn**	**02 06 46.0**	**-0.3**
SAPS	**Ciudad Sandino**	**1.63**	**100**	P	**Pn**	**02 06 26.2**	**-0.4**
SAPS				S	**Sn**	**02 06 46.0**	**-0.4**
P5NO	**Presa 5 de nov**	**1.67**	**335**	⇓P	**Pn**	**02 06 27.1**	**-0.2**
SEMO	**Seminario San**	**1.69**	**317**	P	**Pn**	**02 06 27.2**	**-0.4**
SEMO				S	**Sn**	**02 06 47.9**	**-0.2**
APQ2	**Apoyeque**	**1.70**	**99**	P	**Pn**	**02 06 27.4**	**-0.2**
APQ2				S	**Sn**	**02 06 48.5**	**+0.3**
UEES	**Universidad Ev**	**1.71**	**317**	P	**Pn**	**02 06 27.5**	**-0.4**
UEES				S	**Sn**	**02 06 49.3**	**+0.6**
ABCN	**Banco Central**	**1.73**	**101**	P	**Pn**	**02 06 27.7**	**-0.4**
ABCN				S	**Sn**	**02 06 48.9**	**0.0**
PIC2	**El Picacho**	**1.74**	**317**	*eP*	**Pn**	**02 06 28.9**	**+0.5**
PIC2				*eS*	**Sn**	**02 06 50.4**	**+0.8**
LIMN	**Finca el Limon**	**1.74**	**70**	⇑P	**Pn**	**02 06 27.9**	**-0.4**
LIMN				S	**Sn**	**02 06 48.8**	**+0.4**
BOQS	**Boqueron**	**1.75**	**317**	*eP*	**Pn**	**02 06 28.8**	**+0.2**
BOQS				*eS*	**Sn**	**02 06 49.7**	**-0.1**
PMON	**Piamonte**	**1.76**	**315**	⇑P	**Pn**	**02 06 28.5**	**0.0**
PMON				S	**Sn**	**02 06 49.8**	**0.0**
TISN	**Laguna Tiscapa**	**1.76**	**100**	P	**Pn**	**02 06 27.7**	**-0.8**
MGAN	**Managua**	**1.78**	**100**	P	**Pn**	**02 06 28.4**	**-0.4**
MGAN				S	**Sn**	**02 06 51.0**	**+0.7**
JAYA	**Jayaque - finc**	**1.81**	**311**	⇑P	**Pn**	**02 06 29.2**	**-0.2**
JAYA	**Jayaque - finc**	**1.81**	**311**	*eP*	**Pn**	**02 06 29.1**	**-0.2**
JAYA				*eS*	**Sn**	**02 06 50.6**	**-0.7**
WILN	**Americas 2**	**1.84**	**99**	P	**Pn**	**02 06 29.3**	**-0.2**
WILN				S	**Sn**	**02 06 52.1**	**+0.5**
CEDA	**San Andres**	**1.88**	**316**	P	**Pn**	**02 06 30.2**	**+0.1**
CEDA				S	**Sn**	**02 06 53.2**	**+0.6**
MAS3	**Al N del Volca**	**1.88**	**103**	P	**Pn**	**02 06 30.0**	**-0.1**
MAS3				S	**Sn**	**02 06 52.3**	**-0.4**
LLGN	**La Laguna**	**1.91**	**333**	P	**Pn**	**02 06 30.5**	**-0.3**
LLGN				S	**Sn**	**02 06 53.8**	**+0.3**
OCON	**Estacion meteo**	**1.92**	**52**	P	**Pn**	**02 06 30.5**	**-0.3**
OCON				S	**Sn**	**02 06 53.7**	**0.0**
NANN	**Nandasmo**	**1.95**	**105**	P	**Pn**	**02 06 30.7**	**-0.4**
NANN				S	**Sn**	**02 06 55.4**	**+1.0**
CEVE	**Cerro Verde**	**2.06**	**312**	S	**Sn**	**02 06 57.8**	**+0.5**
SBLS	**San Blas**	**2.06**	**312**	*eP*	**Pn**	**02 06 33.2**	**+0.3**
RCFN	**Al S de San Ju**	**2.08**	**59**	P	**Pn**	**02 06 32.1**	**-0.9**
RCFN				S	**Sn**	**02 06 57.1**	**-0.7**
NADN	**Granada**	**2.09**	**110**	S	**Sn**	**02 06 57.8**	**0.0**
RCON	**San Juan de Ri**	**2.10**	**61**	P	**Pn**	**02 06 33.4**	**+0.1**
RCON				S	**Sn**	**02 06 58.6**	**+0.3**
UNIC	**Universidad Ca**	**2.11**	**316**	P	**Pn**	**02 06 33.4**	**+0.1**
UNIC				S	**Sn**	**02 06 59.0**	**+0.6**
MATN	**Matagalpa**	**2.12**	**77**	P	**Pn**	**02 06 33.2**	**-0.3**
MATN				S	**Sn**	**02 06 58.4**	**-0.3**
RCVN	**Varillal2**	**2.12**	**58**	P	**Pn**	**02 06 34.0**	**+0.5**
RCVN				S	**Sn**	**02 06 59.0**	**+0.2**
RCPN	**Sur Rio San Ju**	**2.17**	**61**	P	**Pn**	**02 06 34.4**	**+0.1**
NUBE	**Las Nubes**	**2.22**	**310**	P	**Pn**	**02 06 34.6**	**-0.3**
NUBE	**Las Nubes**	**2.22**	**310**	*eP*	**Pn**	**02 06 35.1**	**+0.2**
NUBE				*eS*	**Sn**	**02 07 01.1**	**-0.1**
MTO3	**Montecristo**	**2.31**	**327**	P	**Pn**	**02 06 36.6**	**+0.3**
MTO3				S	**Sn**	**02 07 04.3**	**+0.6**
BOAB	**BOACO BROADBAN**	**2.32**	**90**	P	**Pn**	**02 06 35.6**	**-0.6**
FAME	**Alcaldia de Sa**	**2.36**	**306**	P	**Pn**	**02 06 36.5**	**-0.2**
FAME				S	**Sn**	**02 07 04.5**	**-0.1**
SARH	**Santa Rosa de**	**2.41**	**343**	P	**Pn**	**02 06 37.2**	**-0.2**
ESQI	**Esquipulas**	**2.44**	**329**	P	**Pn**	**02 06 37.8**	**-0.1**
ESQI				S	**Sn**	**02 07 07.4**	**+0.8**
ACON	**Acoyapa**	**2.85**	**100**	P	**Pn**	**02 06 43.1**	**-0.3**

*IDC **24** 02:19:15.1±0.9, 39°79N×30°53E, h0km, mb3.8/10, mbtmp3.7/17, ML3.3/6, MS3.0/8, Error ellipse: s-maj=15.0km s-min=11.1km az=25.0*
*MCSM **24** 02:19:15.3±0.7, 40°N±3°×3°0E±°, h8km±5km, mb4.0, mB4.7, MLv4.0, Mw(mB)4.0*
*ISK **24** 02:19:15.3, 39°89N×30°47E, h2km, ML3.9/42*
*AFAD **24** 02:19:15.1, 39°85N×30°44E, h11km±3km, MW4.1*
*CFUSG **24** 02:19:20.0, 40°12N×30°63E, h9km, Mb3.1/6, MD3.5/8, MSH3.5/8*

ISC 24 02:19:15.4±1.0, 39°86N±0°01×30°48E±0°01, h3km±8km, n209, σ1s09/245, mb3.7/9, MS2.9/6, 13C-11D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRCK	**Saricakaya, Es**	**0.22**	**32**	Pg	**Pg**	**02 19 20.1**	**+0.5**
SRCK				Sg	**Sg**	**02 19 23.8**	**+1.4**
AUBOZ	**BOZOYUK**	**0.35**	**279**	P	**Pg**	**02 19 22.2**	**+0.1**
AUBOZ				S	**Sg**	**02 19 26.6**	**0.0**
SGAZ	**Eskisehir, Sey**	**0.43**	**140**	P	Pg	02 19 17.5	-6.1
SGAZ				S	**Sg**	**02 19 23.6**	**-5.6**
GPA	**Golpazari**	**0.45**	**343**	Pg	**Pg**	**02 19 24.0**	**0.0**
GPA				Sg	**Sg**	**02 19 30.8**	**+0.9**
BILE	**Bilecik/Merkez**	**0.55**	**303**	P	**Pg**	**02 19 25.7**	**-0.4**
BILE				S	**Sg**	**02 19 32.3**	**-0.9**
SUSU	**Bolu-G¶ynk-**	**0.56**	**30**	P	**Pg**	**02 19 26.6**	**+0.5**
SUSU				S	**Sg**	**02 19 34.0**	**+0.7**
ANDZ	**Kutahya, Merke**	**0.57**	**232**	P	**Pg**	**02 19 25.8**	**-0.4**
ANDZ				S	**Sg**	**02 19 33.2**	**-0.4**
GULT	**Gulveren**	**0.57**	**3**	Pg	**Pb**	**02 19 27.0**	**-1.1**
KUTH	**Kutahya**	**0.58**	**218**	P	**Pg**	**02 19 26.8**	**+0.3**
KUTH				S	**Sg**	**02 19 34.4**	**+0.3**
CAVI	**Cavuskoy**	**0.60**	**305**	Pg	**Pg**	**02 19 27.3**	**+0.5**
DOMA	**Ktahya-Doman**	**0.61**	**264**	P	**Pg**	**02 19 26.9**	**-0.1**
DOMA				S	**Sg**	**02 19 35.5**	**+0.6**
GEYV	**SAKARYA_Geyve**	**0.64**	**348**	P	**Pg**	**02 19 27.9**	**+0.2**
CIFT	**Cifteler, Eski**	**0.67**	**137**	Pg	**Pb**	**02 19 29.9**	**+0.2**
HISA	**Bilecik-Osmane**	**0.74**	**325**	P	**Pg**	**02 19 29.2**	**-0.4**
HISA				S	**Sb**	**02 19 41.1**	**-0.5**
ADVT	**Abdulvahap**	**0.81**	**316**	Pg	**Pg**	**02 19 30.5**	**-0.4**
BTAS	**Taskesti**	**0.82**	**29**	P	**Pb**	**02 19 31.5**	**-0.7**
BTAS				S	**Sn**	**02 19 45.8**	**-0.6**
ALT	**Altintas**	**0.85**	**200**	Pg	**Pg**	**02 19 31.8**	**+0.1**
TVSB	**Tavsanli**	**0.88**	**243**	Pg	**Pg**	**02 19 32.7**	**+0.4**
SAUV	**Serdivan-Sakar**	**0.89**	**353**	Pg	**Pb**	**02 19 32.9**	**-0.5**
SAUV				Sg	**Sb**	**02 19 45.9**	**+0.2**
SVRH	**Sivrihisar-ESK**	**0.91**	**117**	Pg	**Pb**	**02 19 34.0**	**+0.3**
AUSIV	**SIVRIHISAR**	**0.92**	**117**	P	**Pg**	**02 19 33.4**	**+0.4**
AUSIV				S	**Sb**	**02 19 46.0**	**-0.7**
OSMT	**Osmaniye**	**0.95**	**322**	Pg	**Pb**	**02 19 34.0**	**-0.6**
BYAT	**Afyon-Bayat**	**0.99**	**157**	P	**Pg**	**02 19 34.5**	**+0.2**
EMET	**Ktahya-Emet**	**1.01**	**242**	P	**Pg**	**02 19 34.5**	**-0.3**
EMET				S	**Sb**	**02 19 49.1**	**-0.3**
SAHE	**Sakarya_HENDEK**	**1.03**	**16**	P	**Pb**	**02 19 35.4**	**-0.5**
SAHE				S	**Sb**	**02 19 50.4**	**+0.4**
IGD	**Bursa**	**1.06**	**293**	P	**Pg**	**02 19 34.4**	**-1.3**
IGD				S	**Sg**	**02 19 49.1**	**-0.4**
ULDT	**Uludag**	**1.07**	**286**	P	**Pg**	**02 19 35.5**	**-0.4**
ULDT				S	**Sg**	**02 19 49.7**	**0.0**
YUVA	**Yuva-Kibriscik**	**1.07**	**60**	Pg	**Pg**	**02 19 35.7**	**+0.1**
AFYO	**Afyonkarahisar**	**1.08**	**187**	P	**Pg**	**02 19 36.0**	**0.0**
AFYO				S	**Sg**	**02 19 50.4**	**+0.4**
GDZ	**Gediz**	**1.09**	**225**	P	**Pg**	**02 19 35.5**	**-0.7**
GDZ				S	**Sg**	**02 19 50.8**	**+0.5**
YLV	**Yalova**	**1.10**	**310**	Pn	**Pb**	**02 19 37.0**	**-0.1**
YLV	**Yalova**	**1.10**	**310**	Pg	**Pg**	**02 19 35.9**	**-0.6**
KAYN	**Sakarya, Kayna**	**1.11**	**355**	P	**Pb**	**02 19 37.1**	**-0.2**
GEML	**Gemlik-BURSA**	**1.14**	**302**	Pn	**Pb**	**02 19 37.8**	**0.0**
HRT	**Hereke**	**1.15**	**328**	Pn	**Pg**	**02 19 37.3**	**0.0**
GEDZ	**Gediz**	**1.16**	**226**	Pn	**Pn**	**02 19 38.7**	**+0.2**
SEMS	**Kocaeli-K¶rfe**	**1.16**	**331**	P	**Pb**	**02 19 37.6**	**-0.4**
SEMS				S	**Sg**	**02 19 51.5**	**-1.1**
KURO	**Afyon-Bolvadin**	**1.18**	**162**	P	**Pg**	**02 19 38.1**	**+0.2**
KURO				S	**Sb**	**02 19 54.9**	**+0.9**
YLVH	**Yalova**	**1.19**	**315**	Pn	**Pn**	**02 19 38.6**	**-0.3**
KIBS	**BOLU**	**1.19**	**61**	P	**Pn**	**02 19 38.8**	**-0.2**
KIBS				S	**Sb**	**02 19 54.9**	**+0.3**
KUT	**Yalova, Merkez**	**1.22**	**307**	P	**Pb**	**02 19 38.7**	**-0.3**
GBZT	**Gebze**	**1.22**	**320**	P	**Pb**	**02 19 38.8**	**-0.2**
CTIK	**Konya-Celtik**	**1.22**	**132**	P	**Pn**	**02 19 39.6**	**+0.2**
ORLT	**Orhaneli**	**1.23**	**279**	Pn	**Pn**	**02 19 39.7**	**+0.2**
ORLT	**Orhaneli**	**1.23**	**279**	P	**Pg**	**02 19 39.0**	**0.0**
LAFA	**Gebze-Kocaeli**	**1.25**	**317**	Pn	**Pn**	**02 19 39.7**	**+0.1**
BNAZ	**Uak-Banaz**	**1.27**	**202**	P	**Pg**	**02 19 39.2**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.28**	**230**	Pn	**Pn**	**02 19 40.9**	**+0.7**
BOLU	**Bolu-Merkez-Mu**	**1.30**	**44**	P	**Pn**	**02 19 40.5**	**+0.1**
BOLU				S	**Sg**	**02 19 57.0**	**-0.2**
POLA	**Polatl-ANKAR**	**1.31**	**96**	Pn	**Pb**	**02 19 41.4**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.32**	**293**	Pn	**Pb**	**02 19 41.3**	**+0.5**
RUZG	**Kolk¶y-BOLU**	**1.33**	**49**	Pn	**Pb**	**02 19 41.4**	**+0.4**
TUZL	**Tuzla-Istanbul**	**1.33**	**316**	Pn	**Pb**	**02 19 41.3**	**+0.4**
SMAA	**Simav-Kutahya**	**1.38**	**237**	Pn	**Pb**	**02 19 42.7**	**+0.8**
UCKU	**Afyonkarahisar**	**1.43**	**149**	P	**Pg**	**02 19 42.8**	**+0.2**
UCKU				S	**Sb**	**02 20 01.4**	**+0.3**
ARMT	**Armutlu**	**1.43**	**300**	Pn	**Pb**	**02 19 42.8**	**-0.3**
SILT	**Sile**	**1.44**	**334**	⇑P	**Pg**	**02 19 43.6**	**+0.6**
SILT				⇓S	**Sn**	**02 20 03.4**	**+1.6**
SILT	**Sile**	**1.44**	**334**	Pn	**Pg**	**02 19 43.0**	**0.0**
BUYA	**Buyukada-Istan**	**1.44**	**315**	Pn	**Pg**	**02 19 43.1**	**0.0**
DST	**Dursunbey**	**1.46**	**261**	Pn	**Pg**	**02 19 43.5**	**+0.2**
SDAG	**Sultandagi-AFY**	**1.46**	**166**	Pn	**Pg**	**02 19 44.0**	**+0.7**
KIZT	**Kizilcal**	**1.46**	**131**	Pn	**Pn**	**02 19 42.7**	**0.0**
SATE	**Sancaktepe,**	**1.47**	**322**	P	**Pn**	**02 19 42.7**	**0.0**
HYBA	**Heybeliada-Ist**	**1.47**	**314**	Pn	**Pg**	**02 19 43.5**	**-0.1**
BRGA	**Burgazada-Ista**	**1.49**	**314**	Pn	**Pg**	**02 19 43.7**	**-0.2**
BCAM	**Yenicaga**	**1.55**	**51**	P	**Pb**	**02 19 44.5**	**-0.2**
BCAM				S	**Sg**	**02 20 05.7**	**+0.6**
DURS	**Dursunbey**	**1.57**	**261**	P	**Pb**	**02 19 44.8**	**-0.2**
DURS				S	**Sn**	**02 20 04.3**	**-0.7**
DEMI	**Demirci**	**1.59**	**240**	P	**Pn**	**02 19 44.8**	**+0.3**
USAK	**Uak-Merkez**	**1.61**	**225**	P	**Pn**	**02 19 45.5**	**-0.3**
USAK				S	**Sn**	**02 20 05.5**	**-0.5**
KAVV	**Kandilli-Istan**	**1.62**	**319**	Pn	**Pb**	**02 19 45.7**	**-0.3**
KAVV	**Kandilli-Istan**	**1.62**	**319**	Pn	**Pb**	**02 19 45.6**	**-0.3**
ISK	**Istanbul-Kandi**	**1.62**	**319**	Pn	**Pb**	**02 19 45.5**	**-0.4**
IMRA	**Mudanya**	**1.65**	**296**	P	**Pn**	**02 19 44.7**	**-0.5**
CMDR	**Camlidere-ANKA**	**1.66**	**67**	P	**Pb**	**02 19 46.1**	**-0.5**
CMDR				S	**Sg**	**02 20 08.2**	**-0.4**
HVHR	**Bakirkoy-Istan**	**1.67**	**312**	Pn	**Pg**	**02 19 47.9**	**+0.5**
KCTX	**Karacabey (Bur**	**1.68**	**285**	Pn	**Pb**	**02 19 46.8**	**-0.1**
YVAC	**Isparta, Yalva**	**1.69**	**159**	P	**Pn**	**02 19 46.6**	**+0.7**
YVAC				S	**Sn**	**02 20 06.9**	**-1.2**
PASA	**Karahalli, USA**	**1.69**	**207**	P	**Pn**	**02 19 46.0**	**+0.1**
KHL	**Karahalli**	**1.70**	**206**	Pn	**Pb**	**02 19 47.4**	**+0.1**
DEVR	**Zonguldak/Devr**	**1.72**	**41**	P	**Pg**	**02 19 47.7**	**-0.5**
AVCI	**Avcilar-stanb**	**1.76**	**311**	Pn	**Pb**	**02 19 47.6**	**-0.6**
LOD	**Lodumlu**	**1.76**	**88**	Pn	**Pb**	**02 19 47.9**	**-0.4**
KLYT	**Kilyos**	**1.77**	**322**	Pn	**Pb**	**02 19 47.8**	**-0.7**
KLYT	**Kilyos**	**1.77**	**322**	Pg	**Pb**	**02 19 48.2**	**-0.3**
YKBL	**Yakuplu-Istanb**	**1.79**	**310**	Pn	**Pb**	**02 19 48.1**	**-0.6**
SUSR	**Susurluk-Balik**	**1.84**	**274**	Pn	**Pb**	**02 19 48.9**	**-0.8**
BGKT	**Bogazkoy**	**1.85**	**316**	Pn	**Pb**	**02 19 48.9**	**-1.0**
BAND	**Balkesir-Ban**	**1.89**	**286**	P	**Pn**	**02 19 48.5**	**0.0**
CMHT	**Manyas**	**1.93**	**275**	P	**Pn**	**02 19 48.6**	**-0.5**
KULA	**Kula-Manisa**	**1.95**	**227**	Pn	**Pb**	**02 19 50.8**	**-0.7**
BASM	**Basmaki-Afyon**	**1.96**	**190**	Pn	**Pb**	**02 19 51.2**	**-0.6**
BKES	**Balkesir-Mer**	**1.97**	**267**	P	**Pn**	**02 19 49.6**	**0.0**
BALB	**Balikesir**	**2.01**	**265**	Pn	**Pb**	**02 19 51.5**	**-1.1**
GORD	**Gordes-Manisa**	**2.02**	**243**	Pn	**Pb**	**02 19 51.7**	**-1.0**
MANT	**Manisa**	**2.02**	**228**	P	**Pn**	**02 19 50.8**	**+0.2**
CTKS	**Kestanelik-??a**	**2.04**	**313**	Pn	**Pb**	**02 19 51.6**	**-1.4**
EDC	**Edincik**	**2.06**	**285**	Pn	**Pn**	**02 19 52.0**	**+1.1**
KULU	**Kulu**	**2.12**	**112**	Pn	**Pn**	**02 19 53.0**	**+1.3**
STEP	**BALIKESIR_Sava**	**2.19**	**258**	P	**Pn**	**02 19 52.8**	**+0.2**
KTTT	**Salihli**	**2.19**	**239**	P	**Pn**	**02 19 53.5**	**+0.9**
CATL	**atalca, ST**	**2.19**	**313**	P	**Pn**	**02 19 52.1**	**-0.6**
BALY	**Balya**	**2.21**	**268**	P	**Pn**	**02 19 52.8**	**-0.1**
SLVT	**Silivri**	**2.21**	**309**	Pn	**Pn**	**02 19 52.9**	**+1.1**
ATIT	**Gnen**	**2.25**	**277**	P	**Pn**	**02 19 53.1**	**-0.6**
CTYL	**Yalikoy Yolu**	**2.32**	**315**	Pg	**Pb**	**02 19 58.2**	**+0.4**
CTYL				Sg	**Sg**	**02 20 29.6**	**-0.3**
BR106	**Keskin Array S**	**2.42**	**92**	Pn	**Pn**	**02 19 56.4**	**+0.4**
BR105	**Keskin Array S**	**2.42**	**92**	Pn	**Pn**	**02 19 56.5**	**+0.5**
BRTR	**Keskin Array B** 12nm,0.3s,baz=260,slow=13,SNR=279	**2.44**	**92**	Pn	**Pn**	**02 19 56.7**	**+0.5**
BRTR				Sn	**Sn**	**02 20 27.1**	**+0.5**
BR104	**Keskin Array S** 20nm,0.3s,baz=279,slow=16,SNR=14	**2.44**	**93**	Pn	**Pn**	**02 19 56.8**	**+0.6**
CIDE	**Kastamonu/Cide** 37nm,0.5s	**2.76**	**42**	⇓P	**Pn**	**02 20 00.4**	**0.0**
BLCB	**Balcova**	**3.05**	**242**	P	**Pg**	**02 20 16.7**	**+0.9**
EZN	**Ezine**	**3.20**	**271**	Pn	**Pn**	**02 20 08.5**	**+2.0**
YER	**Yerkesik**	**3.22**	**213**	P	**Pn**	**02 20 07.6**	**+0.8**
PRK	**Paraskevi**	**3.31**	**261**	P	**Pn**	**02 20 07.7**	**-0.3**
ENEZ	**Enez**	**3.42**	**286**	P	**Pn**	**02 20 10.6**	**+1.0**
GADA	**Gvkgeada**	**3.53**	**277**	P	**Pn**	**02 20 12.3**	**+1.2**
ALN	**Alexandroupoli**	**3.54**	**288**	P	**Pn**	**02 20 11.7**	**+0.5**
CHOS	**Chios island**	**3.74**	**248**	P	**Pn**	**02 20 17.0**	**+3.0**
SMTH	**Samothraki Isl**	**3.84**	**281**	P	**Pn**	**02 20 15.5**	**+0.1**
JMB	**Yambol**	**3.98**	**313**	P	**Pn**	**02 20 18.0**	**+0.8**
JMB	**Yambol**	**3.98**	**313**	P	**Pn**	**02 20 17.7**	**+0.5**
RDO	**Rodhopi**	**3.98**	**290**	P	**Pn**	**02 20 17.9**	**+0.6**
PRD	**Provadia**	**4.02**	**326**	P	**Pn**	**02 20 18.4**	**+0.6**
LIA	**Limnos Island**	**4.07**	**272**	P	**Pn**	**02 20 20.5**	**+2.0**
PSN	**Preselentsi**	**4.16**	**336**	P	**Pn**	**02 20 20.1**	**+0.3**
NEF	**NEVSHA**	**4.17**	**326**	P	**Pn**	**02 20 20.5**	**+0.7**
KDZ	**Kurdzhali**	**4.29**	**296**	P	**Pn**	**02 20 22.2**	**+0.7**
KDZ	**Kurdzhali**	**4.29**	**296**	P	**Pn**	**02 20 22.2**	**+0.7**
DIM	**Dimitrovgrad**	**4.31**	**302**	P	**Pn**	**02 20 22.2**	**+0.5**
KAVA	**Kavala**	**4.69**	**286**	P	**Pn**	**02 20 27.6**	**+0.6**
RZN	**Rozhen**	**4.73**	**295**	P	**Pn**	**02 20 27.8**	**+0.1**
SZH	**Strazhitsa**	**4.79**	**317**	P	**Pn**	**02 20 29.3**	**+0.9**
SZH	**Strazhitsa**	**4.79**	**317**	P	**Pn**	**02 20 29.6**	**+1.2**
TIRR	**Tirgusor**	**4.85**	**342**	⇓P	**Pn**	**02 20 30.3**	**+1.2**
TIRR	**Tirgusor**	**4.85**	**342**	Pn	**Pn**	**02 20 29.1**	**0.0**
OUR	**Ouranopolis**	**5.00**	**278**	P	**Pn**	**02 20 31.5**	**+0.2**
JURR	**Jurilovca**	**5.05**	**347**	⇑P	**Pn**	**02 20 32.5**	**+0.6**
TPGR	**Topolog**	**5.22**	**344**	⇓P	**Pn**	**02 20 35.4**	**+1.0**
SEV	**Sevastopol'**	**5.25**	**26**	*eP*	**Pn**	**02 20 35.2**	**+0.6**
SEV	comp=Z,4.0nm,0.3s			pmax	pmax	02 20 37.7	
SEV				*iS*	**Sn**	**02 21 34.2**	**-1.4**
SEV	comp=N,5.0nm,0.3s			smax	smax	02 21 34.4	
SEV	comp=E,24nm,0.4s			smax	smax	02 21 34.4	
NVR	**Nevrokopi**	**5.25**	**289**	P	**Pn**	**02 20 35.5**	**+0.7**
YAL	**Yalta**	**5.37**	**29**	*eP*	**Pn**	**02 20 37.2**	**+0.9**
YAL	comp=Z,10.0nm,0.2s			pmax	pmax	02 20 39.0	
YAL				*iS*	**Sn**	**02 21 36.9**	**-1.8**
YAL	comp=N,8.0nm,0.3s			smax	smax	02 21 40.7	
YAL	comp=E,43nm,0.4s			smax	smax	02 21 40.7	
MMB	**Musomishta**	**5.38**	**290**	P	**Pn**	**02 20 37.9**	**+1.3**
CSS	**Mathiatis** comp=E,0.1nmcomp=E,17nm,1.0s	**5.39**	**154**	Pn	**Pn**	**02 20 36.2**	**-0.4**
SRS	**Serrai**	**5.40**	**286**	P	**Pn**	**02 20 37.1**	**+0.4**
PLG	**Polygyros**	**5.42**	**278**	P	**Pn**	**02 20 37.7**	**+0.7**
TLCR		**5.46**	**348**	⇑P	**Pn**	**02 20 39.3**	**+1.7**
CFR	**Carcaliu**	**5.59**	**343**	⇓P	**Pn**	**02 20 40.1**	**+0.7**
ALU	**Alushta**	**5.63**	**30**	*eP*	**Pn**	**02 20 38.

	comp=E,0.7nm,0.6s							
BORG	**Borgarnes**	**38.67**	**327**	LR	LR	02 44 15.6		
	comp=E,19nm,18.3s,baz=81,slow=39							
ZALV	**Zalesovo Beam**	**38.73**	**50**	P	**P**	**02 26 40.5**	**+0.1**	
	comp=E,1.0nm,0.5s,baz=267,slow=8.5,SNR=3.7							
	comp=E,1.0nm,0.5s							
KSRS	**Korea Array**	**72.11**	**56**	P	**P**	**02 30 42.2**	**+1.2**	
	comp=E,1.7nm,0.7s,baz=314,slow=3.9,SNR=2.7							
	comp=E,1.7nm,0.7s							

IDC ***24*** *02:42:52.2±4.9, 17.37S×178.93W, h557km±22km, mb3.2/5, mbtmp4.0/6, Error ellipse: s-maj=129.8km s-min=37.9km az=28.0*

ISC 24 02:42:53.4±4.2, 17.7S±0.6×179.1W±0.4, h550km, n6, σθ55/6, mb3.6/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.75**	**268**	P	**P**	**02 44 07.4**	**+0.3**
	18nm,0.8s,baz=76,slow=4.2,SNR=8.9						
STKA	**Stephens Creek**	**38.19**	**241**	P	**P**	**02 49 26.8**	**+0.2**
	1.6nm,0.4s,baz=101,slow=10,SNR=4.4						
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.06**	**259**	P	**P**	**02 50 12.4**	**-0.8**
	0.5nm,0.3s,baz=92,slow=7.9,SNR=25						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**44.25**	**254**	P	**P**	**02 50 14.7**	**0.0**
	5.4nm,0.4s,baz=88,slow=8.1,SNR=75						
	5.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**52.45**	**260**	P	**P**	**02 51 15.8**	**+0.1**
	1.8nm,0.6s,baz=121,slow=5.9,SNR=1.5						
	1.8nm,0.6s						
QSPA	**South Pole Qui**	**72.37**	**180**	P	**P**	**02 53 23.6**	**-0.1**
	0.2nm,0.5s,baz=256,slow=4.2,SNR=1.2						
	0.2nm,0.5s						

UPA ***24*** *02:54:40.4±1.7, 5.99N×82.69W, h10km±91km, ML3.6, MW4.2, Presumed earthquake*

IDC ***24*** *02:54:41.3±1.0, 5.99N×82.71W, h0km, mb3.7/9, mbtmp4.0/15, ML3.6/5, MS3.8/12, Error ellipse: s-maj=28.8km s-min=15.4km az=47.0*

NEIC ***24*** *02:54:43.4±2.4, 6.05N±0.07×82.63W±0.08, h10km±1km, mb4.4/20, Error ellipse: s-maj=15.7km s-min=10.1km az=235.0*

GFZ ***24*** *02:54:44.1±0.3, 6.1N±4.4×8.3W±.1, h10km, M4.7/14, mb4.7/14*

GCMT ***24*** *02:54:45.4±0.3, 5.93N±0.01×82.55W±0.02, h18km±1km, MW4.8/87, Moment Tensor Solution. s25,c26; s87,c130; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.40±.09; Mθθ 1.17±.08; Mϕϕ -0.76±.09; Mrθ 0.23±.18; Mϕθ 1.80±.06; Mϕr 0.02±.16; Best double couple: Mo 2.05600×10^16 NP1: ϕs 14.00000°, δ 84.00000°, λ 180.00000°. NP2: ϕs 104.00000°, δ 90.00000°, λ 6.00000°. Principal axes: T 2.2610, Plg4.0000°, Azm329.0000°; N -0.4080, Plg84.0000°, Azm106.0000°; P -1.8510, Plg4.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

CATAC ***24*** *02:54:46.8±0.7, 6.1N±3.3×8.3W±.1, h37km±17km, M4.6/22, mb4.9/18, mB5.1/12, MLv4.7/22, Mw(mB)4.5/12, MwMwp5.0/2, Mwp5.2/2 Error ellipse: s-maj=6.2km s-min=2.9km az=31.4, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=4.78; Mθθ 0.67; Mϕϕ 5.45; Mrθ -6.67; Mθϕ -4.28; Mϕr 1.66; Fault plane solution: Ms 9.59717×10^16 NP1: ϕs 119.76189°, δ 72.11001°, λ -122.47937°. NP2: ϕs 4.00106°, δ 36.60207°, λ -31.01087°. Principal axes: T 9.3687, Plg20.5146°, Azm233.6796°; N 0.4417, Plg30.7325°, Azm130.8263°; P -9.8104, Plg51.7095°, Azm351.9705°; confirmed*

UCR ***24*** *02:54:55.3±0.4, 7.13N×82.65W, h2km±44km, MW4.0, MB4.4(NEIC), Presumed earthquake*

ISC 24 02:54:44.8±2.8, 6.00N±0.04×82.58W±0.05, h26km±22km, n207, σ2s27/231, mb4.3/14, MS3.9/7, 5C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMNES	**Limones**	**2.10**	**352**	*i* P	**Pn**	**02 55 14.8**	**-3.6**
GMAL	**Guarumal, Vera**	**2.20**	**37**	P	**Pn**	**02 55 16.8**	**-3.0**
GMAL				S	**Sn**	**02 55 43.5**	**-2.7**
GMAL	**Guarumal, Vera**	**2.20**	**37**	*e*P	**Pn**	**02 55 16.8**	**-3.0**
GMAL				*e*S	**Sn**	**02 55 43.5**	**-2.7**
PTPA	**Petro Terminal**	**2.20**	**352**	*e*P	**Pn**	**02 55 16.3**	**-3.4**
PIRO	**Carate, Puerto**	**2.50**	**343**	S	**Sn**	**02 55 51.3**	**-2.3**
PIRO	**Carate, Puerto**	**2.50**	**343**		**Pn**	**02 55 20.0**	**-3.9**
PIRO	**Carate, Puerto**	**2.50**	**343**	*e*P	**Pn**	**02 55 20.3**	**-3.6**
PIRO	**Carate, Puerto**	**2.50**	**343**	*i* P	**Pn**	**02 55 17.7**	**-4.2**
BGUAL	**Bijagual, Pana**	**2.50**	**6**	*i* P	**Pn**	**02 55 20.6**	**-3.4**
BGUAL				*e*S	**Sn**	**02 55 51.0**	**-2.7**
CDITO	**Canoas**	**2.57**	**354**	P	**Pn**	**02 55 21.9**	**-3.0**
CDITO				S	**Sn**	**02 55 51.7**	**-3.6**
NELY	**Ciudad Neily**	**2.66**	**352**	*e*P	**Pn**	**02 55 23.0**	**-3.0**
NELY	**Ciudad Neily**	**2.66**	**352**	⇑*e*P	**Pn**	**02 55 22.6**	**-3.4**
NELY				*e*S	**Sn**	**02 55 54.0**	**-3.4**
CLLRA	**Cordillera,**	**2.73**	**359**	⇑*i*P	**Pn**	**02 55 24.3**	**-2.8**
CLLRA				*e*S	**Sn**	**02 55 58.4**	**-1.0**
BQTLY	**Boquete Panama**	**2.74**	**2**	*e*P	**Pn**	**02 55 24.7**	**-2.6**
BQTLY	**Boquete Panama**	**2.74**	**2**	*e*P	**Pn**	**02 55 24.5**	**-2.8**
BRU2	**Volcan**	**2.78**	**358**	P	**Pn**	**02 55 25.3**	**-2.5**
BRU2				S	**Sn**	**02 55 56.6**	**-4.0**
BRU2	**Volcan**	**2.78**	**358**		**Pn**	**02 55 25.0**	**-2.8**
BRU2	**Volcan**	**2.78**	**358**	*e*P	**Pn**	**02 55 25.1**	**-2.8**
BRU2	**Volcan**	**2.78**	**358**	P	**Pn**	**02 55 25.1**	**-2.7**
BRU2	**Volcan**	**2.78**	**358**	⇑*i*P	**Pn**	**02 55 25.0**	**-2.8**
BRU2				*e*S	**Sn**	**02 55 59.6**	**-0.9**
SCLRA	**Santa Clara, W**	**2.82**	**356**	*e*P	**Pn**	**02 55 26.0**	**-2.4**
SCLRA	**Santa Clara, W**	**2.82**	**356**	*i* P	**Pn**	**02 55 25.5**	**-2.9**
SCLRA				⇑*e*P	Pb	02 55 26.0	-8.7
RBALA	**Bur**	**2.89**	**8**	*e*P	**Pn**	**02 55 27.2**	**-2.1**
RBALA	**Bur**	**2.89**	**8**	*i* P	**Pn**	**02 55 26.9**	**-2.3**
RBALA				*e*P	Pb	02 55 27.3	-8.4
RBALA				*e*S	**Sn**	**02 56 02.1**	**-1.1**
PBNVO	**Pueblo Nuevo,**	**2.90**	**8**	*e*P	**Pn**	**02 55 26.6**	**-2.8**
PBNVO	**Pueblo Nuevo,**	**2.90**	**8**	*i* P	**Pn**	**02 55 26.1**	**-3.2**
PBNVO				*e*S	**Sn**	**02 55 59.8**	**-3.6**
PBNVO				IAML		02 56 03.3	
	comp=Z,196nm,0.8s						
AZU	**Azuero**	**2.90**	**52**	P	**Pn**	**02 55 26.5**	**-2.8**
AZU				S	**Sn**	**02 55 59.9**	**-3.5**
AZU	**Azuero**	**2.90**	**52**	*e*P	**Pn**	**02 55 26.6**	**-2.8**
KKNTU	**Kakint**ᵉ	**2.92**	**15**	*e*P	**Pn**	**02 55 27.4**	**-2.3**
KKNTU	**Kakint**ᵉ	**2.92**	**15**	⇑*e*P	**Pn**	**02 55 27.0**	**-2.7**
KKNTU				*e*S	**Sn**	**02 56 02.2**	**-1.7**
ALCO	**Alturas Coton,**	**2.94**	**355**	*e*P	**Pn**	**02 55 27.3**	**-2.8**
EDP2	**Potrero Grande**	**3.05**	**349**	*e*P	**Pn**	**02 55 29.2**	**-2.3**
EDPE	**Pejibaye, P**	**3.29**	**343**	*e*P	**Pn**	**02 55 32.4**	**-2.4**
DRK0	**Durika**	**3.31**	**349**	*e*P	Pn	02 55 21.8	-13
PNME	**Penonome**	**3.33**	**42**	P	Pn	02 55 24.2	-11
VTON	**El Valle, Cocl**	**3.56**	**43**	*i* P	**Pn**	**02 55 36.6**	**-1.9**
VTON				*e*S	**Sn**	**02 56 19.1**	**-0.8**
RGM0	**Gandoca**	**3.56**	**360**	P	**Pn**	**02 55 37.9**	**-0.6**
RGM0				S	**Sn**	**02 56 17.1**	**-2.8**
RGM0	**Gandoca**	**3.56**	**360**		**Pn**	**02 55 37.6**	**-0.9**
QUEP	**Quepos**	**3.75**	**335**	P	**Pn**	**02 55 38.4**	**-2.6**
QUEP				S	**Sn**	**02 56 22.1**	**-2.4**
PICV	**PH. Pirrs**	**3.94**	**336**	*e*P	**Pn**	**02 55 41.4**	**-2.4**
ABE2	**San Pablo**	**3.96**	**338**	*e*P	**Pn**	**02 55 42.2**	**-2.0**
VINA	**Juan Vinas**	**4.04**	**343**	*e*P	**Pn**	**02 55 43.7**	**-1.5**
VERB	**Verbena**	**4.07**	**344**	*e*P	**Pn**	**02 55 43.8**	**-1.8**
PCAYA	**Pacayas**	**4.08**	**343**	*e*P	**Pn**	**02 55 44.4**	**-1.3**
ACOS	**Acosta**	**4.08**	**337**	*e*P	**Pn**	**02 55 43.1**	**-2.7**
VTCV	**VTCV, Calle Va**	**4.12**	**344**	*e*P	**Pn**	**02 55 44.6**	**-1.7**
ABRB	**Las Abras (San**	**4.13**	**344**	*e*P	**Pn**	**02 55 45.3**	**-1.2**
RESJ	**San Isidro (Tu**	**4.14**	**345**	*e*P	**Pn**	**02 55 45.3**	**-1.2**
VICA	**Volcano Irazu**	**4.15**	**343**	*e*P	**Pn**	**02 55 45.1**	**-1.9**
BCIP	**Isla Barro Col**	**4.16**	**41**	P	**Pn**	**02 55 45.7**	**-0.9**
BCIP	**Isla Barro Col**	**4.16**	**41**		**Pn**	**02 55 45.1**	**-1.5**
BCIP	**Isla Barro Col**	**4.16**	**41**	P	**Pn**	**02 55 44.8**	**-1.9**
BCIP				S	**Sn**	**02 56 33.2**	**-1.2**
BCIP	**Isla Barro Col**	**4.16**	**41**	*e*P	**Pn**	**02 55 45.1**	**-1.5**
BCIP	**Isla Barro Col**	**4.16**	**41**	P	**Pn**	**02 55 45.2**	**-1.5**
VTR0	**Volcan Turrial**	**4.16**	**344**	*e*P	**Pn**	**02 55 45.5**	**-1.6**
CVTR	**Volcan Turrial**	**4.16**	**344**	*e*P	**Pn**	**02 55 45.6**	**-1.5**
CVIMO	**Finca Echandi**	**4.22**	**341**	*e*P	**Pn**	**02 55 50.5**	**+2.7**
DOMI	**Santo Domingo**	**4.23**	**339**	*e*P	**Pn**	**02 55 46.5**	**-1.3**
HDC	**Heredia**	**4.25**	**339**		**Pn**	**02 55 46.5**	**-1.7**
HDC	**Heredia**	**4.25**	**339**	*e*P	**Pn**	**02 55 46.7**	**-1.5**
HDC	**Heredia**	**4.25**	**339**	P	**Pn**	**02 55 46.7**	**-1.5**
HEME	**Heredia, Merce**	**4.26**	**339**	*e*P	**Pn**	**02 55 46.8**	**-1.4**
ATEO	**Atenas**	**4.33**	**336**	*e*P	**Pn**	**02 55 47.1**	**-2.1**
VBV1	**V. Barva**	**4.35**	**340**	*e*P	**Pn**	**02 55 48.0**	**-1.6**
TCS1	**Tacares**	**4.36**	**337**	P	**Pn**	**02 55 47.9**	**-1.7**
SRA1	**San Ramn**	**4.47**	**335**	*e*P	**Pn**	**02 55 49.1**	**-2.0**
TRT2	**Tortugero**	**4.67**	**346**	P	**Pn**	**02 55 52.3**	**-1.4**
TRT2				S	**Sn**	**02 56 44.6**	**-2.5**
JTS	**Las Juntas de**	**4.87**	**331**	Pn	**Pn**	**02 55 54.5**	**-1.9**
	comp=Z,88nm,0.3s,baz=83,slow=5.5,SNR=129						
JTS				Sn	**Sn**	**02 56 50.4**	**-1.6**
	comp=Z,8.7nm,0.3s,baz=54,slow=22,SNR=14						
JTS				LR	LR	02 57 07.1	
	comp=Z,237nm,21.9s,baz=108,slow=30						
JTS	**Las Juntas de**	**4.87**	**331**	P	**Pn**	**02 55 54.0**	**-2.4**
JTS				S	**Sn**	**02 56 49.6**	**-2.4**
JTS	**Las Juntas de**	**4.87**	**331**		**Pn**	**02 55 54.1**	**-2.3**
JTS	**Las Juntas de**	**4.87**	**331**	P	**Pn**	**02 55 54.2**	**-2.3**
JTS				S	**Sn**	**02 56 50.1**	**-1.9**
JTS	**Las Juntas de**	**4.87**	**331**	*e*P	**Pn**	**02 55 54.3**	**-2.2**
JTS	**Las Juntas de**	**4.87**	**331**	P	**Pn**	**02 55 54.4**	**-2.0**
PTAC	**Punta Ardita,**	**4.87**	**76**	P	**Pn**	**02 55 55.7**	**-0.8**
PTAC				S	**Sn**	**02 56 49.2**	**-3.0**
CMARA	**Lajas Hojancha**	**4.89**	**325**	P	**Pn**	**02 55 54.5**	**-2.2**
ARE1	**Arenal 1**	**4.91**	**335**	*e*P	**Pn**	**02 55 56.1**	**-1.0**
VARE2	**V. Arenal**	**4.91**	**335**	*e*P	**Pn**	**02 55 56.2**	**-0.9**
TABAC	**Tabacon**	**4.96**	**334**	*e*P	**Pn**	**02 55 57.1**	**-0.8**
COVE	**Coope Vega, Sa**	**5.02**	**339**	P	**Pn**	**02 55 56.7**	**-1.9**
JUD3	**Juan Diaz 3**	**5.07**	**325**		**Pn**	**02 55 57.2**	**-2.1**
JUD3	**Juan Diaz 3**	**5.07**	**325**	*e*P	**Pn**	**02 55 57.2**	**-2.1**
SOLC	**Bahia Solano**	**5.15**	**87**	P	**Pn**	**02 55 58.3**	**-2.0**
SOLC				S	**Sn**	**02 56 51.1**	**-7.8**
PIZC	**Pizarro, Choco**	**5.30**	**101**	P	**Pn**	**02 56 00.5**	**-1.8**
	comp=Z,1.3nmcomp=Z,295nm,0.9s						
PIZC				S	**Sn**	**02 56 59.5**	**-3.1**
	comp=Z,1.3nmcomp=Z,295nm,0.9s						
GR1C	**Gorgona, Isla**	**5.31**	**124**	P	**Pn**	**02 55 59.7**	**-2.9**
	comp=Z,0.4nmcomp=Z,95nm,0.9s						
GR1C				S	**Sn**	**02 56 57.6**	**-5.4**
	comp=Z,0.4nmcomp=Z,95nm,0.9s						
UPAL	**Upala**	**5.43**	**334**	P	**Pn**	**02 56 04.2**	**+0.1**
UPAL				S	**Sn**	**02 57 04.2**	**-1.6**
BLUN	**Bluefields**	**6.08**	**349**	P	**Pn**	**02 56 12.1**	**-1.0**
APAC	**Apartado, Choc**	**6.25**	**72**	P	**Pn**	**02 56 17.7**	**+2.3**
	comp=Z,3μmcomp=Z,1μmcomp=Z,70nm,0.8s						
APAC				S	**Sn**	**02 57 23.0**	**-3.0**
	comp=Z,3μmcomp=Z,1μmcomp=Z,70nm,0.8s						
ACON	**Acoyapa**	**6.46**	**337**	P	**Pn**	**02 56 16.3**	**-2.0**
JAMC	**Jamundi, Valle**	**6.50**	**115**	P	**Pn**	**02 56 18.0**	**-1.2**
	comp=Z,745nmcomp=Z,52nm,1.3s						
JAMC				S	**Sn**	**02 57 27.6**	**-5.1**
	comp=Z,745nmcomp=Z,52nm,1.3s						
YOTC	**Yotoco, Valle**	**6.53**	**108**	P	Pn	02 56 14.3	-5.1
	comp=Z,240nm,0.7s						
CBOC	**Ciudad Bolivar**	**6.53**	**91**	P	**Pn**	**02 56 17.1**	**-2.4**
	comp=Z,23nm,0.8s						
CBOC				S	**Sn**	**02 57 29.4**	**-3.9**
	comp=Z,23nm,0.8s						
BBAC	**Balboa, Cauca**	**6.63**	**126**	P	**Pn**	**02 56 18.5**	**-2.3**
	comp=Z,1μmcomp=Z,45nm,0.8s						
BBAC				S	**Sn**	**02 57 29.2**	**-6.5**
	comp=Z,1μmcomp=Z,45nm,0.8s						
LCBC	**Los crdobas,**	**6.78**	**65**	P	**Pn**	**02 56 23.9**	**+1.2**
	comp=Z,95nm,1.4s						
POPC	**Popayan, Colom**	**6.82**	**120**	P	**Pn**	**02 56 21.6**	**-1.9**
	comp=Z,601nmcomp=Z,25nm,1.1s						
PAC1	**Pacto, Paraso**	**6.84**	**146**	P	**Pn**	**02 56 20.1**	**-3.6**
PAC1				S	**Sn**	**02 57 34.8**	**-6.0**
OTAV	**Otavalo**	**7.05**	**144**		**Pn**	**02 56 24.3**	**-2.6**
BOAB	**BOACO BROADBAN**	**7.09**	**335**	P	**Pn**	**02 56 27.0**	**0.0**
BOAB	**BOACO BROADBAN**	**7.09**	**335**		**Pn**	**02 56 25.7**	**-1.3**
BOAB	**BOACO BROADBAN**	**7.09**	**335**	P	**Pn**	**02 56 26.6**	**-0.4**
MGAN	**Managua**	**7.10**	**330**	P	**Pn**	**02 56 26.4**	**-0.7**
TULM	**Tulcn-Chalpat**	**7.10**	**137**	P	**Pn**	**02 56 29.1**	**+1.5**
	comp=Z,26nm,1.0s						
CRUC	**La Cruz**	**7.14**	**128**	P	**Pn**	**02 56 28.0**	**0.0**
CRUC				S	**Sn**	**02 57 46.4**	**-2.0**
SAPS	**Ciudad Sandino**	**7.20**	**329**	P	**Pn**	**02 56 29.4**	**+0.9**
UREC	**San Jos de Ur**	**7.21**	**76**	P	**Pn**	**02 56 29.2**	**+0.6**
	comp=Z,34nm,0.8s						
UREC				S	**Sn**	**02 57 47.0**	**-2.8**
	comp=Z,34nm,0.8s						
GUY2C	**Guyana, Caldas**	**7.22**	**96**	P	**Pn**	**02 56 29.9**	**+0.7**
	comp=Z,1μmcomp=Z,45nm,0.8s						
GUY2C				S	**Sn**	**02 57 48.7**	**-2.0**
	comp=Z,1μmcomp=Z,45nm,0.8s						
COPN	**Copaltepe**	**7.31**	**327**	P	**Pn**	**02 56 30.0**	**+0.1**
CNGA	**Al SSO del Vol**	**7.63**	**328**	P	**Pn**	**02 56 35.2**	**+0.8**
CNGN	**Cerro Negro**	**7.63**	**328**	P	**Pn**	**02 56 35.2**	**+0.7**
CNGN	**Cerro Negro**	**7.63**	**328**	P	**Pn**	**02 56 34.2**	**-0.3**
MATN	**Matagalpa**	**7.63**	**335**	P	**Pn**	**02 56 34.4**	**-0.2**
CASC	**Dorado de Casc**	**7.83**	**138**	P	**Pn**	**02 56 38.1**	**+0.8**
	comp=Z,1μmcomp=Z,39nm,1.7s						
SLOR	**San Lorenzo -**	**7.83**	**149**		**Pn**	**02 56 36.3**	**-1.3**
BETC	**Betania**	**7.84**	**115**	P	**Pn**	**02 56 39.1**	**+1.7**
	comp=Z,43μmcomp=Z,133nm,0.8s						
BETC				S	**Sn**	**02 58 09.0**	**+3.5**
	comp=Z,43μmcomp=Z,133nm,0.8s						
VCES	**Cotopaxi**	**7.94**	**148**	P	**Pn**	**02 56 41.0**	**+1.8**
PRAC	**Prado**	**8.00**	**106**	P	**Pn**	**02 56 40.3**	**+0.8**
PRAC	**Prado**	**8.00**	**106**	P	**Pn**	**02 56 40.2**	**+0.8**
	comp=Z,2μmcomp=Z,1μmcomp=Z,136nm,1.0s						
PRAC				S	**Sn**	**02 58 09.2**	**0.0**
	comp=Z,2μmcomp=Z,1μmcomp=Z,136nm,1.0s						
GARC	**Garzon, Huila**	**8.02**	**118**	P	**Pn**	**02 56 40.9**	**+0.9**
	comp=Z,1μmcomp=Z,19nm,1.2s						
GARC				S	**Sn**	**02 58 07.9**	**-2.1**
	comp=Z,1μmcomp=Z,19nm,1.2s						
PTBC	**PUERTO BERRIO,**	**8.09**	**86**	P	**Pn**	**02 56 41.5**	**+0.7**
	comp=Z,921nmcomp=Z,41nm,0.9s						
PTBC				S	**Sn**	**02 58 11.6**	**+0.1**
	comp=Z,921nmcomp=Z,41nm,0.9s						
FLOC	**Florencia**	**8.19**	**122**	P	**Pn**	**02 56 42.3**	**+0.2**
FLOC	**Florencia**	**8.19**	**122**	P	**Pn**	**02 56 41.5**	**-0.6**
	comp=Z,587nmcomp=Z,54nm,1.1s						
FLOC				S	**Sn**	**02 58 13.3**	**-0.6**
	comp=Z,587nmcomp=Z,54nm,1.1s						
SJCC	**San Jacinto, C**	**8.29**	**62**	P	**Pn**	**02 56 43.5**	**0.0**
	comp=Z,2μmcomp=Z,712nmcomp=Z,23nm,1.3s						
ROSC	**El Rosal**	**8.30**	**98**	Pn	**Pn**	**02 56 46.8**	**+2.8**
	comp=Z,3.0nm,0.3s,baz=261,slow=5.4,SNR=13						
ROSC				Sn	**Sn**	**02 58 23.2**	**+6.0**
	baz=143,slow=20						
	comp=Z,21nm,0.5s						
ROSC	**El Rosal**	**8.30**	**98**	P	**Pn**	**02 56 44.2**	**+0.2**
ROSC	**El Rosal**	**8.30**	**98**		**Pn**	**02 56 46.5**	**+2.5**
ROSC	**El Rosal**	**8.30**	**98**	P	**Pn**	**02 56 46.5**	**+2.5**
	comp=Z,991nmcomp=Z,44nm,1.3s						
CHSH	**Refugio Sur-Vo**	**8.32**	**153**	P	**Pn**	**02 56 46.3**	**+2.0**
RCVN	**Varillal2**	**8.33**	**335**	P	**Pn**	**02 56 44.6**	**+0.4**
CVER	**Cruz Verde, Cu**	**8.60**	**99**	P	**Pn**	**02 56 50.1**	**+2.0**
	comp=Z,976nmcomp=Z,52nm,1.8s						
BRJC	**Barrancabermej**	**8.83**	**85**	P	**Pn**	**02 56 52.2**	**+1.3**
	comp=Z,896nmcomp=Z,51nm,0.9s						
CHIC	**Chingaza**	**8.91**	**98**	P	**Pn**	**02 56 54.8**	**+2.4**
	comp=Z,1μmcomp=Z,39nm,1.0s						
VILC	**Villavicencio,**	**9.05**	**102**	P	**Pn**	**02 56 55.9**	**+1.9**
VILC				S	**Sn**	**02 58 35.9**	**+0.7**
PACA	**Pacayal**	**9.33**	**323**	P	**Pn**	**02 56 57.2**	**-0.7**
BARC	**Barichara**	**9.36**	**86**	P	**Pn**	**02 57 00.5**	**+2.1**
	comp=Z,1μmcomp=Z,52nm,1.8s						
BARC				S	**Sn**	**02 58 37.9**	**-5.1**
	comp=Z,1μmcomp=Z,52nm,1.8s						
RUSC	**La Rusia**	**9.45**	**90**	P	**Pn**	**02 57 01.5**	**+1.7**
RUSC	**La Rusia**	**9.45**	**90**	P	**Pn**	**02 57 00.9**	**+1.1**
	comp=Z,417nmcomp=Z,24nm,1.1s						
RUSC				S	**Sn**	**02 58 42.6**	**-2.9**
	comp=Z,417nmcomp=Z,24nm,1.1s						
OCAC	**Ocana**	**9.45**	**76**	P	**Pn**	**02 57 00.7**	**+1.1**
	comp=Z,583nmcomp=Z,18nm,0.9s						
OCAC				S	**Sn**	**02 58 42.6**	**-2.6**
	comp=Z,583nmcomp=Z,18nm,0.9s						
MACC	**Macarena, Meta**	**9.51**	**113**	P	**Pn**	**02 57 00.9**	**+0.6**
	comp=Z,3μmcomp=Z,34nm,0.7s						
MACC				S	**Sn**	**02 58 46.8**	**+0.3**
	comp=Z,3μmcomp=Z,34nm,0.7s						
PTLC	**Puerto Leguiza**	**9.69**	**126**	P	**Pn**	**02 57 05.5**	**+2.8**
	comp=Z,26nm,1.2s						
PAMC	**Pamplona, Colo**	**9.90**	**82**	P	**Pn**	**02 57 07.4**	**+1.4**
	comp=Z,20nm,0.8s						
NUBE	**Las Nubes**	**10.58**	**318**	P	**Pn**	**02 57 14.5**	**-0.5**
MTO3	**Montecristo**	**10.68**	**322**	P	**Pn**	**02 57 16.0**	**-0.5**
MTO3	**Montecristo**	**10.68**	**322**		**Pn**	**02 57 19.2**	**+2.7**
ESQI	**Esquipulas**	**10.79**	**322**		**Pn**	**02 57 17.5**	**-0.4**
APG	**El Apazote**	**11.83**	**320**	Pn	**Pn**	**02 57 34.8**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=152,slow=8.2,SNR=9.8						
APG				LR	LR	03 01 36.8	
	comp=Z,68nm,21.5s,baz=260,slow=35						
SDV	**Santo Domingo**	**12.19**	**76**	Pn	**Pn**	**02 57 38.0**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=267,slow=7.7,SNR=18						
SDV				Sn	**Sn**	**02 59 48.3**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=201,slow=20,SNR=1.1						
SDV				LR	LR	03 02 20.7	
	comp=Z,468nm,19.4s,baz=256,slow=37						
	comp=Z,7.8nm,0.5s						
SDV	**Santo Domingo**	**12.19**	**76**		**Pn**	**02 57 37.3**	**+0.2**
ATAH	**Atahualpa**	**13.70**	**162**	Pn	**Pn**	**02 57 57.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=348,slow=16,SNR=4.7						
ATAH				LR	LR	03 02 43.8	
	comp=Z,1μm,20.3s,baz=349,slow=35						
	comp=Z,6.5nm,0.8s						
CMIG	**Matias Romero**	**16.32**	**314**	Pn	**Pn**	**02 58 31.3**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=131,slow=9.7,SNR=4.0						
CMIG				LR	LR	03 04 06.6	
	comp=Z,446nm,19.8s,baz=128,slow=35						
	comp=Z,0.5nm,0.3s						
SOR	**Soroa**	**16.70**	**359**	P	**Pn**	**02 58 35.5**	**-1.7**
CZSB	**Cruzeiro do Su**	**16.82**	**144**		**Pn**	**02 58 34.0**	**-4.9**
CZSB				IAmb	IAmb	02 58 41.9	
	comp=Z,66nm,1.3s						
SDDR	**Presa de Saban**	**16.95**	**39**	P	**Pn**	**02 58 40.6**	**+0.2**
NNA	**Nana**	**18.76**	**162**	P	**P**	**02 59 02.8**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=357,slow=8.9,SNR=3.6						
	comp=Z,15nm,0.8s						
NNA	**Nana**	**18.76**	**162**	IAmb	IAmb	02 59 10.8	
	comp=Z,67nm,1.4s						
NNA	**Nana**	**18.76**	**162**	P	**Pn**	**02 59 04.9**	**+2.1**
SJG	**San Juan**	**20.05**	**52**	P	Pn	02 59 18.2	+0.1
	comp=Z,8.5nm,0.8s,baz=262,slow=14,SNR=3.1						
SJG				LR	LR	03 07 27.7	
	comp=Z,202nm,19.9s,baz=256,slow=38						
	comp=Z,8.5nm,0.8s						
SJG	**San Juan**	**20.05**	**52**	P	**P**	**02 59 15.5**	**-0.7**
BOAV	**Boa Vista**	**22.28**	**98**	P	**P**	**02 59 40.4**	**0.0**
BOAV				IAmb	IAmb	02 59 45.8	
	comp=Z,16nm,1.1s						
MPOM	**Morne Pois Mar**	**22.94**	**67**	P	**P**	**02 59 48.9**	**+1.5**
MAGL	**Barre de l'ile**	**23.10**	**63**	P	**P**	**02 59 51.6**	**+2.7**
ABD	**La Joyeuse, An**	**23.13**	**62**	P	**P**	**02 59 51.3**	**+2.1**
ANWB	**Willy Bob**	**23.39**	**58**	P	**P**	**02 59 54.4**	**+2.6**
LPAZ	**La Paz**	**26.36**	**147**	P	**P**	**03 00 20.5**	**+0.7**
	comp=Z,3.4nm,1.1s,baz=307,slow=8.1,SNR=5.3						
LPAZ				LR	LR	03 11 48.2	
	comp=Z,784nm,20.6s,baz=313,slow=39						
	comp=Z,3.4nm,1.1s						
**LP

IDC ***24*** *03:07:08.0±1.8,54˚.88N×160˚.84W,h38km±13km,mb4.9/39, mbtmp5.1/42,ML4.5/3,MS4.3/32,Error ellipse: s-maj=13.6km s-min=8.5km az=4.0*

PMR ***24*** *03:07:08.0,54˚.79N×160˚.61W,h22km*

NEIC ***24*** *03:07:08.7,54˚.83N×160˚.70W,h44km*

NEIC ***24*** *03:07:08.3,54˚.84N×160˚.69W,h39km*

AEIC ***24*** *03:07:08.4±3.2,54˚.76N±0˚.05×160˚.67W±0˚.06,h12km±2km, Error ellipse: s-maj=7.4km s-min=5.1km az=193.0*

NEIC ***24*** *03:07:08.7±1.8,54˚.82N±0˚.05×160˚.67W±0˚.06,h43km±3km, mb5.2/542,ML5.2/38,Mwr5.0/46,Mww5.0/50,ML5.0(AEIC), Error ellipse: s-maj=7.8km s-min=5.1km az=163.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.65; Mθθ-1.32; Mϕϕ-0.33; Mrθ2.45; Mϕθ-0.42; Mϕr1.81; Fault plane solution: M₀3.43000×10¹⁶ NP1:ϕ₁55.57000°, δ76.68000°,λ84.44000°. NP2:ϕ₂258.48000°,δ14.41000°, λ112.27000°. Principal axes: T 3.5510, Plg58.0000°, Azm318.0000°; N -0.2611, Plg5.0000°, Azm57.0000°; P -3.2900, Plg31.0000°, Azm150.0000°;*

NEIC ***24*** *03:07:09.8,54˚.55N×160˚.52W,h50km,Moment Tensor Solution. Duration: 1§6 Moment tensor: Scale 10¹⁶Nm; Mrr3.76; Mθθ-2.89; Mϕϕ-0.87; Mrθ1.23; Mϕθ-1.74; Mϕr0.99; Fault plane solution: M₀4.14000×10¹⁶ NP1: ϕ₁243.69000°,δ34.02000°,λ95.83000°. NP2:ϕ₂56.67000°, δ56.18000°,λ86.08000°. Principal axes: T 4.0798, Plg78.0000°, Azm313.0000°; N 0.1210, Plg3.0000°, Azm59.0000°; P -4.2008, Plg11.0000°, Azm149.0000°;*

ANF ***24*** *03:07:09.2±0.5,54˚.78N×160˚.63W,h59km±4km,ML5.4/21 Error ellipse: s-maj=5.2km s-min=2.3km az=24.0*

GCMT ***24*** *03:07:10.7±0.2,54˚.77N±0˚.02×160˚.54W±0˚.02,h53km±1km, MW5.0/99,Moment Tensor Solution. s79,c113; s99,c142; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.40±.13; Mθθ-3.21±.12; Mϕϕ-0.18±.12; Mrθ1.91±.11; Mθϕ-2.30±.09; Mϕr1.23±.09; Best double couple: M₀4.53700×10¹⁶ NP1:ϕ₁246.00000°,δ30.00000°, λ96.00000°. NP2:ϕ₂59.00000°,δ60.00000°,λ86.00000°. Principal axes: T 4.0160, Plg75.0000°, Azm319.0000°; N 1.0480, Plg3.0000°, Azm60.0000°; P -5.0570, Plg15.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***24*** *03:07:12.1,55˚.40N×161˚.46W,h40km,mb5.4,Ms4.8*

ISC 24 03:07:08.0±0.3,54˚.83N±0˚.04×160˚.73W±0˚.03,h40km±2km, h40km:pP-P,n1642,σ1§04/1513,mb5.2/543,MS4.4/43, 109C-34D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.54**	**15**			**Pn**		**03 07 20.0**	**+0.7**
SDPT	comp=E,191µm,0.8s			IAML				03 07 29.0	
SDPT	**Sand Point**	**0.54**	**15**			**Sn**		**03 07 28.4**	**+1.2**
SDPT	**Sand Point** baz=188,SNR=1000	**0.54**	**15**	P		**Pn**		**03 07 19.9**	**+0.7**
SDPT	baz=188			S		**Sn**		**03 07 28.4**	**+1.2**
CHNA	**Chernabura Isl** baz=266,SNR=664	**0.66**	**89**	P		**Pn**		**03 07 19.7**	**-1.1**
CHNA	baz=266			S		**Sn**		**03 07 27.8**	**-2.2**
CNBA	**Chernabura Isl**	**0.66**	**90**			**Pn**		**03 07 19.6**	**-1.2**
DOL	**Dolgoi Island**	**0.73**	**297**			**Pn**		**03 07 22.5**	**+0.7**
DOL						**Sn**		**03 07 33.4**	**+1.6**
PS4A	**Pavlof South-4**	**0.83**	**309**			**Pn**		**03 07 24.4**	**+1.2**
PS4A						**Sn**		**03 07 36.6**	**+2.4**
PS1A	**Pavlof South-1**	**0.83**	**316**			**Pn**		**03 07 24.5**	**+1.3**
PS1A						**Sn**		**03 07 36.8**	**+2.5**
DTNA	**Dutton South F**	**0.94**	**291**			**Pn**		**03 07 25.5**	**+0.9**
DTNA						**Sn**		**03 07 38.9**	**+2.1**
DT1	**Dutton Round H**	**0.94**	**288**			**Pn**		**03 07 25.4**	**+0.8**
DT1						**Sn**		**03 07 38.5**	**+1.7**
PN7A	**Pavlof North-7**	**0.95**	**310**			**Pn**		**03 07 26.4**	**+1.5**
PN7A						**Sn**		**03 07 40.0**	**+2.8**
VNKR	**Veniaminof 5**	**1.44**	**32**			**Pn**		**03 07 32.9**	**+1.4**
VNSS	**Veniaminof 8**	**1.58**	**27**			**Pn**		**03 07 35.4**	**+1.8**
S14K	**Fog Glacier** baz=202,SNR=404	**1.61**	**24**	P		**Pn**		**03 07 36.3**	**+2.4**
VNFG	**Fog Glacier, M**	**1.61**	**24**			**Pn**		**03 07 36.2**	**+2.3**
VNFG	**Fog Glacier, M**	**1.61**	**24**			**Sn**		**03 07 35.9**	**+2.0**
ISNN	**Isanotski Nort**	**1.76**	**271**			**Pn**		**03 07 37.9**	**+1.9**
SSLN	**Shishaldin Nor**	**1.89**	**271**			**Pn**		**03 07 39.7**	**+1.9**
SSLS	**Shishaldin Sou**	**1.90**	**268**			**Pn**		**03 07 39.5**	**+1.6**
SSBA	**Shishaldin**	**1.97**	**270**			**Pn**		**03 07 40.4**	**+1.6**
CHGN	**Chignik**	**1.98**	**41**			**Pn**		**03 07 40.7**	**+1.8**
CHGN	comp=E,18µm,1.3s			IAML				03 08 09.0	
CHGN	**Chignik** baz=220,SNR=524	**1.98**	**41**	P		**Pn**		**03 07 40.7**	**+1.8**
CHGN	baz=220			S		**Sn**		**03 08 04.6**	**+2.2**
ANPB	**Aniakchak Plen**	**2.41**	**34**			**Pn**		**03 07 46.6**	**+1.7**
ANNW	**Aniakchak Nort**	**2.57**	**32**			**Pn**		**03 07 49.2**	**+2.2**
AKSA	**Akutan Strait**	**2.98**	**259**			**Pn**		**03 07 54.6**	**+2.0**
AKUT	**Akutan**	**3.02**	**259**			**Pn**		**03 07 55.6**	**+2.4**
AKUT	comp=N,7µm,0.7s			IAML				03 08 41.2	
AKUT	comp=E,6µm,0.5s			IAML				03 08 45.8	
AHB	**Akutan Harbor**	**3.05**	**259**			**Pn**		**03 07 55.7**	**+2.0**
CHIR	**Chirikof Islan**	**3.08**	**69**			**Pn**		**03 07 54.6**	**+0.6**
CHIR	comp=E,6µm,1.0s			IAML				03 08 47.9	
CHIR	comp=N,4µm,1.1s			IAML				03 08 50.4	
CHIR	**Chirikof Islan** baz=252,SNR=17	**3.08**	**69**	P		**Pn**		**03 07 54.6**	**+0.6**
AKLV	**Akutan Long Va**	**3.12**	**260**			**Pn**		**03 07 56.4**	**+1.8**
AKBBA	**Akutan Broad B**	**3.12**	**259**			**Pn**		**03 07 56.6**	**+2.0**
LVA	**Lava Point**	**3.17**	**260**			**Pn**		**03 07 57.4**	**+2.1**
LVA	comp=E,7µm,0.7s			IAML				03 08 52.4	
AKRB	**Akutan Reef Bi**	**3.19**	**260**			**Pn**		**03 07 57.2**	**+1.6**
UNV	**Unalaska Valle**	**3.52**	**256**			**Pn**		**03 08 01.7**	**+1.6**
UNV	comp=N,3µm,0.6s			IAML				03 08 54.9	
UNV	**Unalaska Valle** baz=72,SNR=79	**3.52**	**256**	P		**Pn**		**03 08 01.7**	**+1.6**
PLBL	**Peulik Blue Cr**	**3.61**	**36**			**Pn**		**03 08 03.1**	**+1.8**
R17L	**Mt. Peulik Vol** baz=222	**3.72**	**39**	P		**Pn**		**03 08 05.2**	**+2.4**
MGOD	**Makushin Gods**	**3.74**	**256**			**Pn**		**03 08 04.9**	**+1.7**
PLK1	**Peulik 1**	**3.76**	**36**			**Pn**		**03 08 05.4**	**+2.1**
MAPS	**Pakushin South**	**3.78**	**257**			**Pn**		**03 08 05.5**	**+1.8**
PLK5	**Peulik 5**	**3.83**	**32**			**Pn**		**03 08 06.2**	**+1.9**
SII	**Sitkinak Islan**	**4.09**	**62**			**Pn**		**03 08 08.3**	**+0.4**
SII	comp=N,5µm,0.8s			IAML				03 09 22.0	
SII	comp=E,4µm,0.8s			IAML				03 09 40.5	
SII	**Sitkinak Islan** baz=247,SNR=18	**4.09**	**62**	P		**Pn**		**03 08 08.4**	**+0.5**
Q17K	**Contact Creek**	**4.36**	**36**			**Pn**		**03 08 13.0**	**+1.3**
Q17K	**Contact Creek** baz=219	**4.36**	**36**	P		**Pn**		**03 08 13.4**	**+1.6**
O15K	**Ungalikthiuk R**	**4.39**	**6**			**Pn**		**03 08 13.3**	**+1.3**
O15K	comp=N,2µm,0.8s			IAML				03 09 39.2	
O15K	comp=E,2µm,1.1s			IAML				03 09 46.9	
O15K	**Ungalikthiuk R** baz=186,SNR=443	**4.39**	**6**	P		**Pn**		**03 08 13.5**	**+1.5**
O14K	**Tigyukauivet M**	**4.45**	**356**			**Pn**		**03 08 14.4**	**+1.6**
O14K	comp=E,2µm,1.2s			IAML				03 09 36.8	
O14K	comp=N,2µm,0.9s			IAML				03 09 38.6	
O14K	**Tigyukauivet M** baz=175,SNR=406	**4.45**	**356**	P		**Pn**		**03 08 14.6**	**+1.8**
ANCK	**Angle Creek**	**4.45**	**38**			**Pn**		**03 08 14.7**	**+1.7**
Q16K	**King Salmon** baz=211,SNR=78	**4.46**	**28**	P		**Pn**		**03 08 15.4**	**+2.5**
P16K	**Nushagak River** comp=E,4µm,0.9s	**4.47**	**18**	IAML				03 09 45.1	
P16K	**Nushagak River** baz=200	**4.47**	**18**	P		**Pn**		**03 08 14.9**	**+1.8**
ACHA	**Angle Creek He**	**4.52**	**39**			**Pn**		**03 08 15.6**	**+1.7**
OKTU	**Okmok Mt. Tuli**	**4.54**	**254**			**Pn**		**03 08 15.6**	**+1.5**
OKCE	**Okmok Cone E**	**4.59**	**255**			**Pn**		**03 08 16.3**	**+1.5**
KAKN	**Katmai Knife C**	**4.68**	**40**			**Pn**		**03 08 18.2**	**+2.1**
OHAK	**Old Harbor**	**4.81**	**57**			**Pn**		**03 08 17.8**	**-0.1**
OHAK	**Old Harbor** baz=242,SNR=22	**4.81**	**57**	P		**Pn**		**03 08 17.7**	**-0.1**
KAWH	**Katmai**	**4.84**	**40**			**Pn**		**03 08 19.7**	**+1.5**
KARR	**Katmai Rainbow**	**4.96**	**40**			**Pn**		**03 08 21.5**	**+1.7**
Q18K	**Katmai Hardscr**	**4.96**	**37**			**Pn**		**03 08 21.7**	**+1.8**
Q18K	**Katmai Hardscr** baz=221,SNR=350	**4.96**	**37**	P		**Pn**		**03 08 21.9**	**+1.9**
P17K	**Kvichak River**	**4.97**	**26**			**Pn**		**03 08 22.6**	**+2.7**
P17K	**Kvichak River** baz=209,SNR=149	**4.97**	**26**	P		**Pn**		**03 08 22.6**	**+2.7**
O16K	**Kokwok River B**	**4.99**	**16**			**Pn**		**03 08 21.5**	**+1.3**
O16K	comp=E,997nm,0.9s			IAML				03 10 15.3	
O16K	**Kokwok River B** baz=197,SNR=289	**4.99**	**16**	P		**Pn**		**03 08 21.6**	**+1.4**
KAHG	**Katmai Hook Gl**	**5.01**	**40**			**Pn**		**03 08 22.6**	**+2.0**
N14K	**Kuskokwak Cree**	**5.14**	**355**			**Pn**		**03 08 23.9**	**+1.7**
N14K	**Kuskokwak Cree** baz=173,SNR=767	**5.14**	**355**	P		**Pn**		**03 08 24.1**	**+1.9**
O17K	**Koliganek Bris** baz=202,SNR=177	**5.34**	**20**	P		**Pn**		**03 08 26.5**	**+1.6**
N15K	**Kwethluk River**	**5.37**	**3**			**Pn**		**03 08 27.4**	**+2.0**
N15K	**Kwethluk River** comp=E,2µm,1.1s	**5.37**	**3**	IAML				03 10 18.4	
N15K	comp=N,1µm,0.9s			IAML				03 10 27.5	
N15K	**Kwethluk River** baz=183,SNR=451	**5.37**	**3**	P		**Pn**		**03 08 27.2**	**+1.8**
KDAK	**Kodiak Island** comp=N,6.8nm,0.3s,baz=187,slow=0.8,SNR=174	**5.42**	**54**	Pn		**Pn**		**03 08 25.8**	**-0.2**
KDAK	comp=N,19nm,0.3s,baz=278,slow=21,SNR=3.9			Sn		**Sn**		**03 09 26.0**	**-1.1**
KDAK	comp=N,3µm,19.0s,baz=228,slow=40 comp=N,34nm,0.3s			LR		LR		03 10 45.6	
KDAK	**Kodiak Island**	**5.42**	**54**			**Pn**		**03 08 25.9**	**-0.2**
KDAK	comp=N,2µm,0.9s			IAML				03 09 51.9	
KDAK	comp=N,1µm,1.1s			IAML				03 09 53.9	
KDAK	**Kodiak Island** baz=239	**5.42**	**54**	P		**Pn**		**03 08 25.8**	**-0.2**
KDAK	**Kodiak Island**	**5.42**	**54**	P		**Pn**		**03 08 26.1**	**+0.1**
P18K	**Big Mountain,**	**5.47**	**31**			**Pn**		**03 08 28.9**	**+2.0**
P18K	**Big Mountain,** baz=215,SNR=197	**5.47**	**31**	P		**Pn**		**03 08 29.1**	**+2.2**
CLCO	**Concord Point,**	**5.71**	**253**			**Pn**		**03 08 31.7**	**+1.6**
N16K	**Nishlik Lake**	**5.76**	**10**			**Pn**		**03 08 33.0**	**+2.2**
N16K	**Nishlik Lake** baz=191,SNR=1000	**5.76**	**10**	P		**Pn**		**03 08 32.9**	**+2.0**
M13K	**Dall Lake**	**5.78**	**347**			**Pn**		**03 08 33.4**	**+2.4**
M13K	**Dall Lake** baz=164,SNR=143	**5.78**	**347**	P		**Pn**		**03 08 33.1**	**+2.1**
CLES	**Cleveland East**	**5.79**	**253**			**Pn**		**03 08 34.3**	**+3.1**
SPIA	**Saint Paul Isl**	**5.84**	**298**			**Pn**		**03 08 34.2**	**+2.4**
SPIA	**Saint Paul Isl** baz=110,SNR=54	**5.84**	**298**	P		**Pn**		**03 08 34.2**	**+2.4**
O18K	**Koktuh Hills**	**5.86**	**28**			**Pn**		**03 08 34.7**	**+2.6**
O18K	**Koktuh Hills** baz=212,SNR=237	**5.86**	**28**	P		**Pn**		**03 08 34.8**	**+2.6**
M15K	**Kasigluk River**	**5.88**	**0**			**Pn**		**03 08 33.7**	**+1.2**
M15K	**Kasigluk River** baz=180,SNR=288	**5.88**	**0**	P		**Pn**		**03 08 33.7**	**+1.2**
M14K	**Bethel** baz=172,SNR=709	**5.98**	**354**	P		**Pn**		**03 08 35.3**	**+1.6**
N17K	**Nushagak Hills**	**6.02**	**17**			**Pn**		**03 08 36.2**	**+1.8**
N17K	**Nushagak Hills** baz=199,SNR=117	**6.02**	**17**	P		**Pn**		**03 08 36.1**	**+1.7**
M16K	**Timber Creek**	**6.28**	**8**			**Pn**		**03 08 39.9**	**+1.9**
M16K	**Timber Creek** baz=189,SNR=341	**6.28**	**8**	P		**Pn**		**03 08 39.6**	**+1.6**
M11K	**Mekoryuk**	**6.30**	**334**			**Pn**		**03 08 39.8**	**+1.6**
M11K	**Mekoryuk** baz=149,SNR=31	**6.30**	**334**	P		**Pn**		**03 08 39.7**	**+1.6**
P19K	**Oil Pt** baz=222	**6.32**	**37**	P		**Pn**		**03 08 39.6**	**+1.1**
O19K	**Port Alsworth**	**6.39**	**30**			**Pn**		**03 08 41.0**	**+1.6**
O19K	**Port Alsworth** baz=215,SNR=56	**6.39**	**30**	P		**Pn**		**03 08 42.1**	**+2.7**
N18K	**Kilae Creek**	**6.41**	**22**			**Pn**		**03 08 41.7**	**+1.9**
N18K	**Kilae Creek** baz=205,SNR=106	**6.41**	**22**	P		**Pn**		**03 08 41.9**	**+2.1**
ILSW	**Iliamna Southw**	**6.59**	**35**			**Pn**		**03 08 43.9**	**+1.6**
L14K	**Kuka Creek**	**6.62**	**352**			**Pn**		**03 08 44.2**	**+1.8**
L14K	**Kuka Creek** baz=170,SNR=556	**6.62**	**352**	P		**Pn**		**03 08 44.0**	**+1.6**
IVE	**Iliamna Volcan**	**6.66**	**36**			**Pn**		**03 08 44.8**	**+1.6**
M17K	**Holitna River**	**6.82**	**13**			**Pn**		**03 08 47.1**	**+1.8**
M17K	**Holitna River** baz=196,SNR=99	**6.82**	**13**	P		**Pn**		**03 08 47.1**	**+1.8**
O20K	**Slope Mountain**	**6.84**	**36**			**Pn**		**03 08 47.2**	**+1.5**
O20K	**Slope Mountain** baz=222	**6.84**	**36**	P		**Pn**		**03 08 49.0**	**+3.3**
N19K	**Bonanza Creek** baz=211,SNR=174	**6.86**	**26**	P		**Pn**		**03 08 48.8**	**+2.8**
L15K	**Ungalak Mounta**	**6.88**	**357**			**Pn**		**03 08 47.2**	**+1.0**
L15K	**Ungalak Mounta** baz=176,SNR=158	**6.88**	**357**	P		**Pn**		**03 08 47.1**	**+1.0**
HOM	**Homer** baz=229	**6.91**	**42**	P		**Pn**		**03 08 49.3**	**+2.8**
L16K	**Owhat River** baz=185,SNR=292	**6.94**	**5**	P		**Pn**		**03 08 48.1**	**+1.2**
CNPM	**China Poot**	**6.98**	**44**			**Pn**		**03 08 48.2**	**+0.6**
RDSO	**Redoubt South**	**7.08**	**34**			**Pn**		**03 08 50.2**	**+1.2**
M18K	**Stony River**	**7.17**	**19**			**Pn**		**03 08 51.4**	**+1.4**
M18K	**Stony River** baz=203,SNR=197	**7.17**	**19**	P		**Pn**		**03 08 51.5**	**+1.4**
RDT	**Redoubt**	**7.28**	**34**			**Pn**		**03 08 52.2**	**+0.5**
BRSE	**Bradley Lake S**	**7.31**	**44**			**Pn**		**03 08 52.4**	**+0.3**
BRSE	**Bradley Lake S** baz=231,SNR=17	**7.31**	**44**	P		**Pn**		**03 08 52.4**	**+0.3**
K13K	**Kusilvak Mount** baz=162,SNR=649	**7.42**	**345**	P		**Pn**		**03 08 55.2**	**+1.8**
L17K	**Donlin** baz=190,SNR=171	**7.44**	**9**	P		**Pn**		**03 08 55.2**	**+1.4**
K15K	**Wolf Creek Mou** baz=176,SNR=113	**7.50**	**357**	P		**Pn**		**03 08 56.2**	**+1.6**
L18K	**Granite Mounta**	**7.71**	**14**			**Pn**		**03 08 59.0**	**+1.5**
L18K	**Granite Mounta** baz=197,SNR=78	**7.71**	**14**	P		**Pn**		**03 08 59.4**	**+1.9**
SPWE	**Spurr West**	**7.78**	**30**			**Pn**		**03 08 60.0**	**+1.4**
CKL	**Chakachamna La**	**7.78**	**31**			**Pn**		**03 08 59.4**	**+0.7**
SPBG	**Spurr Blockage**	**7.82**	**31**			**Pn**		**03 09 00.4**	**+1.2**
SPCR	**Spurr Chakacha** baz=218,SNR=13	**7.82**	**32**	P		**Pn**		**03 09 02.0**	**+2.9**
M19K	**Big River Lodg** baz=207	**7.84**	**23**	P		**Pn**		**03 09 01.9**	**+2.7**
L19K	**White Mountain** baz=205,SNR=136	**7.99**	**20**	P		**Pn**		**03 09 03.3**	**+1.9**
K17K	**Iditarod** baz=190,SNR=136	**8.01**	**8**	P		**Pn**		**03 09 02.9**	**+1.3**
SEW	**Seward**	**8.05**	**44**			**Pn**		**03 09 03.0**	**+0.8**
SEW	**Seward** baz=233	**8.05**	**44**	P		**Pn**		**03 09 03.2**	**+1.0**
J14K	**Nanvaranak Lak**	**8.08**	**351**			**Pn**		**03 09 03.9**	**+1.3**
J14K	**Nanvaranak Lak** baz=183,SNR=324	**8.08**	**351**	P		**Pn**		**03 09 03.8**	**+1.3**
M20K	**Styx River** baz=212	**8.12**	**26**	P		**Pn**		**03 09 06.6**	**+3.4**
STLK	**Strandline Lak**	**8.17**	**31**			**Pn**		**03 09 04.5**	**+0.6**
KOSE	**Korovin Southe**	**8.31**	**258**			**Pn**		**03 09 06.6**	**+0.8**
KOKL	**Mount Kliuchef**	**8.40**	**258**			**Pn**		**03 09 07.9**	**+0.8**
KOWE	**Korovin West**	**8.41**	**258**			**Pn**		**03 09 07.9**	**+0.7**
ATKA	**Atka Island**	**8.45**	**257**			**Pn**		**03 09 08.3**	**+0.7**
J16K	**Anvik River**	**8.48**	**0**			**Pn**		**03 09 09.3**	**+1.2**
J16K	**Anvik River** baz=180,SNR=407	**8.48**	**0**	P		**Pn**		**03 09 09.1**	**+1.0**
RC01	**Rabbit Creek A**	**8.57**	**38**			**Pn**		**03 09 10.0**	**+0.7**
RC01	**Rabbit Creek A** baz=227,SNR=24	**8.57**	**38**	P		**Pn**		**03 09 11.0**	**+1.8**
J17K	**VABM Dome**	**8.64**	**5**			**Pn**		**03 09 10.9**	**+0.7**
J17K	**VABM Dome** baz=186,SNR=169	**8.64**	**5**	P		**Pn**		**03 09 10.5**	**+0.3**
SKT	**Skwentna**	**8.64**	**30**			**Pn**		**03 09 11.9**	**+1.7**
SKT	**Skwentna** baz=217,SNR=73	**8.64**	**30**	P		**Pn**		**03 09 12.8**	**+2.6**
P23K	**Montague Islan**	**8.86**	**49**			**Pn**		**03 09 13.2**	**0.0**
P23K	**Montague Islan** baz=240,SNR=10.0	**8.86**	**49**	P		**Pn**		**03 09 13.4**	**+0.2**
M22K	**Willow** baz=223,SNR=33	**8.90**	**34**	P		**Pn**		**03 09 14.7**	**+0.9**
J18K	**Innoko River**	**8.90**	**12**			**Pn**		**03 09 14.7**	**+0.8**
J18K	**Innoko River** baz=195,SNR=104	**8.90**	**12**	P		**Pn**		**03 09 14.9**	**+1.0**
PWL	**Port Wells**	**8.95**	**42**			**Pn**		**03 09 14.4**	**0.0**
PWL	**Port Wells** baz=232,SNR=34	**8.95**	**42**	P		**Pn**		**03 09 15.0**	**+0.5**
Q23K	**Middleton Isla** baz=245	**9.07**	**54**	P		**Pn**		**03 09 16.8**	**+0.7**
I17K	**Unalakleet**	**9.09**	**0**			**Pn**		**03 09 17.5**	**+1.1**
I17K	**Unalakleet** baz=180,SNR=72	**9.09**	**0**	P		**Pn**		**03 09 18.0**	**+1.6**
PMR	**Palmer** baz=227,SNR=11	**9.12**	**37**	P		**Pn**		**03 09 18.6**	**+1.8**
K20K	**Telida**	**9.21**	**19**			**Pn**		**03 09 18.9**	**+0.8**
K20K	**Telida** baz=204,SNR=120	**9.21**	**19**	P		**Pn**		**03 09 19.0**	**+1.0**
PPLA	**Purkeypile** baz=212,SNR=109	**9.21**	**25**	P		**Pn**		**03 09 21.4**	**+3.2**
KNK	**Knik Glacier**	**9.25**	**40**			**Pn**		**03 09 18.9**	**+0.4**
KNK	**Knik Glacier** baz=229,SNR=17	**9.25**	**40**	P		**Pn**		**03 09 19.6**	**+1.0**
L22K	**Petersville** baz=218,SNR=42	**9.29**	**30**	P		**Pn**		**03 09 21.5**	**+2.3**
GHO	**Glory Hole Cre**	**9.32**	**37**			**Pn**		**03 09 19.6**	**0.0**
HIN	**Hinchinbrook I**	**9.45**	**48**			**Pn**		**03 09 21.2**	**-0.1**
GLI	**Glacier Island**	**9.45**	**45**			**Pn**		**03 09 20.8**	**-0.5**
GLI	**Glacier Island** baz=236,SNR=7.5	**9.45**	**45**	P		**Pn**		**03 09 21.1**	**-0.3**
SML	**Sawmill**	**9.55**	**38**			**Pn**		**03 09 23.4**	**+0.6**
SML	**Sawmill** baz=228,SNR=26	**9.55**	**38**	P		**Pn**		**03 09 22.7**	**-0.1**
J19K	**Poorman**	**9.55**	**14**			**Pn**		**03 09 23.5**	**+0.8**
J19K	**Poorman** baz=198,SNR=174	**9.55**	**14**	P		**Pn**		**03 09 24.1**	**+1.4**
GSMY	**Great Sitkin M**	**9.56**	**259**			**Pn**		**03 09 23.5**	**+0.5**
FID	**Port Fidalgo**	**9.64**	**46**			**Pn**		**03 09 22.9**	**-1.0**
CAST	**Castle Rocks**	**9.68**	**24**			**Pn**		**03 09 25.6**	**+1.0**
CAST	**Castle Rocks** baz=211,SNR=78	**9.68**	**24**	P		**Pn**		**03 09 26.4**	**+1.8**
M23K	**Glacier View** baz=230,SNR=26	**9.76**	**39**	P		**Pn**		**03 09 26.4**	**+0.8**
ETKA	**Kagalaska Isla**	**9.83**	**259**			**Pn**		**03 09 27.3**	**+0.6**
EYAK	**Cordova Ski Ar**	**9.85**	**48**			**Pn**		**03 09 26.3**	**-0.4**
EYAK	**Cordova Ski Ar** baz=240,SNR=13	**9.85**	**48**	P		**Pn**		**03 09 26.7**	**0.0**
H16K	**Elim**	**9.87**	**356**			**Pn**		**03 09 28.2**	**+1.1**
H16K	**Elim** baz=174,SNR=22	**9.87**	**356**	P		**Pn**		**03 09 28.2**	**+1.1**
SCM	**Sheep Creek Mo**	**9.93**	**40**	P		**Pn**		**03 09 28.3**	**+0.3**
SCM	**Sheep Creek Mo**	**9.93**	**40**			**Pn**		**03 09 28.3**	**+0.3**
SCM	**Sheep Creek Mo** baz=230,SNR=32	**9.93**	**40**	P		**Pn**		**03 09 28.5**	**+0.5**
J20K	**Nowinta River**	**9.95**	**17**			**Pn**		**03 09 29.4**	**+1.3**
J20K	**Nowinta River** baz=202,SNR=134	**9.95**	**17**	P		**Pn**		**03 09 29.7**	**+1.6**
ADK	**Adak**	**9.98**	**259**	P		**Pn**		**03 09 30.4**	**+1.8**
ADK	**Adak**	**9.98**	**259**			**Pn**		**03 09 30.4**	**+1.8**
ADK	**Adak**	**9.98**	**259**	P		**Pn**		**03 09 29.6**	**+1.0**
CHUM	**Lake Minchumin** baz=209,SNR=48	**10.04**	**22**	P		**Pn**		**03 09 31.8**	**+2.4**
ANM	**Nome**	**10.04**	**348**	P		**Pn**		**03 09 31.3**	**+1.9**
ANM	**Nome**	**10.04**	**348**			**Pn**		**03 09 31.3**	**+1.9**
ANM	**Nome** baz=164,SNR=12	**10.04**	**348**	P		**Pn**		**03 09 30.9**	**+1.5**
KTH	**Kantishna Hill**	**10.08**	**26**			**Pn**		**03 09 31.4**	**+1.4**
WAT7	**Susitna Watana**	**10.10**	**33**			**Pn**		**03 09 30.4**	**+0.1**
DIV	**Divide**	**10.13**	**45**			**Pn**		**03 09 29.8**	**-1.0**
GCSA	**Galena City Sc** baz=192,SNR=20	**10.13**	**9**	P		**Pn**		**03 09 32.1**	**+1.5**
H17K	**Granite Mounta** baz=182,SNR=90	**10.15**	**2**	P		**Pn**		**03 09 32.0**	**+1.1**
TRF	**Thorofare Moun** baz=216,SNR=99	**10.16**	**27**	P		**Pn**		**03 09 33.7**	**+2.5**
KAIM	**Kayak Island**	**10.17**	**53**			**Pn**		**03 09 31.8**	**+0.6**
KAIM	**Kayak Island** baz=246,SNR=12	**10.17**	**53**	P		**Pn**		**03 09 31.8**	**+0.6**
WAT1	**Susitna Watana** baz=223	**10.19**	**33**	P		**Pn**		**03 09 30.8**	**-0.7**
KIWB	**Kanaga Island**	**10.26**	**260**			**Pn**		**03 09 34.4**	**+1.9**
KLU	**Klutina**	**10.27**	**43**			**Pn**		**03 09 32.7**	**+0.1**
KLU	**Klutina** baz=236,SNR=81	**10.27**	**43**	P		**Pn**		**03 09 32.3**	**-0.3**
WAT6	**Susitna Watana** baz=226,SNR=31	**10.28**	**36**	P		**Pn**		**03 09 32.2**	**-0.6**
G15K	**Niukluk** baz=169	**10.33**	**352**	P		**Pn**		**03 09 34.4**	**+1.0**
H18K	**Honhosa River**	**10.43**	**6**			**Pn**		**03 09 36.1**	**+1.4**
H18K	**Honhosa River** baz=187,SNR=32	**10.43**	**6**	P		**Pn**		**03 09 35.7**	**+1.0**
I20K	**Naaghedeneel** baz=200,SNR=47	**10.48**	**15**	P		**Pn**		**03 09 37.0**	**+1.7**
M24K	**Tolsona, Glenn** baz=232,SNR=13	**10.53**	**40**	P		**Pn**		**03 09 35.8**	**-0.4**
BMRM	**Bremner River** baz=241,SNR=12	**10.54**	**48**	P		**Pn**		**03 09 36.0**	**-0.3**
GAMB	**Gambell** baz=143,SNR

PINM **Pinnacle** 12.20 56 P Pn 03 09 59.0 +0.1
baz=253,SNR=7.7
G21K **Allakaket** 12.24 14 P Pn 03 10 00.5 +1.1
baz=200,SNR=95
POKR **Poker Plat Res** 12.24 27 P Pn 03 10 00.4 +0.9
baz=218
E17K **Hotham Inlet** 12.31 358 P Pn 03 10 01.2 +0.8
baz=177,SNR=9.2
H23K **Yukon River** 12.32 22 P Pn 03 10 01.1 +0.6
baz=211
M27K **Edge Creek, AK** 12.35 45 P Pn 03 10 02.0 +0.8
baz=240,SNR=21
O28M **Mount Upton** 12.44 53 P Pn 03 10 02.2 -0.2
baz=250,SNR=21
J25K **Salcha River,** 12.46 32 P Pn 03 10 01.3 -1.2
baz=225,SNR=45
AMKA **Amchitka** 12.48 262 Pn 03 10 03.6 +0.9
F20K **Avaraart Lake** 12.49 9 P Pn 03 10 04.4 +1.6
baz=193
E18K **Tukpahlearik C** 12.64 0 P Pn 03 10 06.4 +1.6
baz=180
YUK3 **Moose Creek** 12.69 49 P Pn 03 10 05.9 +0.1
baz=246,SNR=51
H24K **Noodor Dome** 12.71 25 P Pn 03 10 07.1 +1.3
baz=215,SNR=40
L27K **Beaver Creek,** 12.73 42 P Pn 03 10 06.3 +0.1
baz=238,SNR=40
BCAR **Beaver Creek A** 12.75 42 Pn 03 10 05.7 -0.8
E19K **Redstone River** 12.78 6 P Pn 03 10 08.6 +1.7
baz=189,SNR=42
BVCY **Beaver Creek** 12.80 46 P Pn 03 10 07.7 +0.6
baz=242,SNR=10
YUK8 **Steele Glacier** 12.81 51 P Pn 03 10 08.1 +0.7
baz=249,SNR=39
F21K **Alatna River** 12.91 13 P Pn 03 10 10.7 +2.2
baz=199,SNR=113
G22K **Bettles** 12.91 16 P Pn 03 10 10.5 +1.9
baz=204,SNR=13
G23K **Bananza Creek** 12.99 19 P Pn 03 10 11.0 +1.3
baz=208,SNR=44
O29M **Mount Kennedy** 13.06 56 P Pn 03 10 11.5 +0.8
baz=255,SNR=30
PRP **Porcupine Dome** 13.07 29 P Pn 03 10 11.3 +0.4
baz=222,SNR=32
BRWY **Burwash Landin** 13.17 51 P Pn 03 10 12.9 +0.7
baz=250,SNR=15
RDOG **Red Dog Mine** 13.31 356 P Pn 03 10 16.2 +2.2
baz=174,SNR=13
P29M **Windy Craggy** 13.32 60 P Pn 03 10 14.9 +0.7
baz=259,SNR=12
YUK4 **Talbot Arm** 13.34 52 P Pn 03 10 15.9 +1.3
baz=250,SNR=8.0
YUK6 **Outpost Mounta** 13.34 54 P Pn 03 10 15.4 +0.8
baz=252,SNR=12
F22K **John River** 13.35 14 P Pn 03 10 16.4 +1.7
baz=202
COLD **Coldfoot** 13.41 18 P Pn 03 10 16.2 +0.7
baz=207
G24K **Hadweenzic Riv** 13.51 23 P Pn 03 10 17.1 +0.4
baz=214,SNR=95
E20K **Nigu River** 13.64 7 P Pn 03 10 20.7 +2.1
baz=191,SNR=74
C16K **Lisburne Hills** 13.67 353 P Pn 03 10 20.7 +1.9
baz=168
HYT **Haines Junctio** 13.71 55 P Pn 03 10 20.3 +0.7
baz=254,SNR=6.6
C17K **DeLong Mountai** 13.74 356 P Pn 03 10 22.3 +2.3
baz=174,SNR=12
D19K **Kuna River** 13.77 4 P Pn 03 10 22.2 +1.9
baz=186,SNR=37
P30M **Million Dollar** 13.80 58 P Pn 03 10 21.3 +0.5
baz=258
M29M **Somme Creek** 13.82 48 P Pn 03 10 21.1 0.0
baz=246,SNR=144
C18K **Utukok River** 13.87 359 P 03 10 25.5 -3.7
C18K **Utukok River** 13.87 359 P Pn 03 10 23.8 +2.1
baz=179,SNR=18
G25K **Bearman Lake** 13.88 25 P Pn 03 10 23.5 +1.7
baz=217,SNR=9.5
S31K **Pelican** 13.90 67 P Pn 03 10 22.2 +0.1
baz=267,SNR=8.0
PLBC **Pleasant Camp** 13.97 61 P Pn 03 10 23.8 +0.7
baz=261,SNR=14
E22K **Anaktuvuk Pass** 13.99 14 P Pn 03 10 25.2 +1.9
baz=201
E21K **Killik River** 14.02 10 P Pn 03 10 24.8 +1.1
baz=196
D20K **Etivluk River** 14.07 6 P Pn 03 10 26.4 +2.1
baz=190,SNR=22
N30M **Aishikik Lake** 14.08 52 P Pn 03 10 25.1 +0.5
baz=252,SNR=14
F24K **Squaw Lake** 14.11 21 P Pn 03 10 25.0 +0.1
baz=212,SNR=20
DAWY **Dawson** 14.19 41 P Pn 03 10 25.9 -0.1
baz=239,SNR=31
L29M **L29M** 14.23 45 P Pn 03 10 26.2 -0.4
baz=244,SNR=40
E23K **Chandalar** 14.26 17 P Pn 03 10 27.3 +0.2
baz=207,SNR=67
I27K **Kandik River** 14.30 33 P Pn 03 10 26.9 -0.7
baz=230,SNR=20
C19K **Lookout Ridge** 14.34 2 P Pn 03 10 28.0 0.0
baz=182
O30N **Mendenhall** 14.36 56 P Pn 03 10 28.2 -0.2
baz=256,SNR=26
SIT **Sitka** 14.38 71 P Pn 03 10 28.3 -0.2
baz=272
E24K **Your Creek** 14.47 19 P Pn 03 10 30.3 +0.4
baz=209
SKAG **Skagway** 14.50 61 P Pn 03 10 30.1 -0.1
baz=262
M30M **Minto, Yukon** 14.59 48 P Pn 03 10 30.8 -0.6
baz=248,SNR=20
G26K **Porcupine Rive** 14.61 27 P Pn 03 10 30.4 -1.3
baz=222,SNR=14
C21K **Knifeblade Rid** 14.64 8 P Pn 03 10 32.3 +0.3
baz=193,SNR=87
F25K **Christian Rive** 14.66 23 P Pn 03 10 31.5 -0.8
baz=216,SNR=23
N31M **Braeburn, Yuko** 14.69 53 P Pn 03 10 32.6 -0.2
baz=254,SNR=13
H27K **Steamboat Moun** 14.74 32 P Pn 03 10 32.0 -1.5
baz=228,SNR=16
I28M **Miner Creek** 14.76 36 P Pn 03 10 31.8 -2.0
baz=233,SNR=35
S32K **Killisnoo** 14.78 69 P Pn 03 10 33.6 -0.3
baz=271
TOLK **Toolik Lake Re** 14.79 16 P Pn 03 10 34.8 +0.7
baz=206,SNR=62
K29M **Barlow Dome** 14.80 43 P Pn 03 10 34.2 -0.1
baz=243,SNR=100
R32K **Eaglecrest** 14.82 66 P Pn 03 10 34.4 0.0
baz=268,SNR=6.1
J29N **Klondike Camp** 14.82 40 P Pn 03 10 33.9 -0.7
baz=240,SNR=11
D23K **Nanushuk River** 14.92 14 P Pn 03 10 35.8 0.0
baz=203,SNR=36
WHY **Whitehorse** 14.92 57 P Pn 03 10 36.2 +0.3
baz=258,SNR=20
SHEM **Shemya Is, Ala** 15.00 272 Pn Pn 03 10 34.0 -2.9
comp=N,2.4nm,0.3s,baz=73,slow=14,SNR=2.5
SHEM LR LR 03 16 07.1
comp=N,782nm,20.9s,baz=92,slow=36
comp=N,58nm,0.9s
SHEM **Shemya Is, Ala** 15.00 272 IAmb IAmb 03 10 41.5
comp=Z,92nm,1.0s
F26K **Sheenjek River** 15.09 25 P Pn 03 10 38.6 +0.5
baz=219,SNR=15
G27K **Doyon Strip** 15.10 30 P Pn 03 10 39.0 +0.8
baz=226,SNR=16
E25K **Arctic Village** 15.10 22 P Pn 03 10 38.5 +0.3
baz=215,SNR=13
B21K **Ikpikpuk River** 15.11 8 IAmb IAmb 03 10 44.4
comp=Z,86nm,0.8s
B21K **Ikpikpuk River** 15.11 8 P Pn 03 10 38.6 +0.4
baz=193
B20K **Meade River** 15.32 5 IAmb IAmb 03 10 46.8
comp=Z,113nm,0.7s
B20K **Meade River** 15.32 5 P Pn 03 10 41.3 +0.3
baz=188
P32M **Atlin** 15.33 61 P Pn 03 10 41.2 0.0
baz=263
D24K **Happy Valley** 15.37 16 IAmb IAmb 03 10 44.2
comp=Z,149nm,1.1s
D24K **Happy Valley** 15.37 16 P Pn 03 10 41.7 0.0
baz=206
M31M **Drury Creek, Y** 15.52 51 P Pn 03 10 43.7 -0.1
baz=253,SNR=57

J30M **Hart River** 15.60 42 IAmb IAmb 03 10 52.2
comp=Z,233nm,1.2s
J30M **Hart River** 15.60 42 P Pn 03 10 44.8 0.0
baz=242,SNR=129
U33K **Whale Pass** 15.67 74 P Pn 03 10 45.2 -0.3
baz=277
H29M **Whitestone** 15.74 35 IAmb IAmb 03 10 51.4
comp=Z,97nm,0.7s
H29M **Whitestone** 15.74 35 P Pn 03 10 46.2 -0.1
baz=234,SNR=79
C23K **Itkillik River** 15.74 13 IAmb IAmb 03 10 51.5
comp=Z,130nm,0.9s
C23K **Itkillik River** 15.74 13 P Pn 03 10 46.4 +0.1
baz=202,SNR=39
CRAG **Craig** 15.76 76 P Pn 03 10 46.5 -0.1
baz=279
P33M **Teslin, Yukon** 15.86 59 P Pn 03 10 47.8 -0.2
baz=262,SNR=21
N32M **Quiet Lake** 15.88 55 P Pn 03 10 48.2 -0.1
baz=259
I30M **Mount Dempster** 15.89 39 P Pn 03 10 48.3 -0.2
baz=240,SNR=434
B22K **Teshekpuk Lake** 15.91 9 IAmb IAmb 03 10 55.3
comp=Z,83nm,0.8s
B22K **Teshekpuk Lake** 15.91 9 P Pn 03 10 47.9 -0.6
baz=195,SNR=5.2
D25K **Kavik River** 15.95 19 P Pn 03 10 48.6 -0.5
baz=211
Q32M **Nakina River** 16.02 63 P Pn 03 10 49.6 -0.7
baz=267,SNR=7.2
WRAK **Wrangell Islan** 16.06 73 P Pn 03 10 49.9 -0.6
baz=276
E27K **Coleen River** 16.10 26 P Pn 03 10 50.2 -0.8
baz=223
F28M **Old Crow** 16.16 29 P Pn 03 10 51.1 -0.7
baz=227,SNR=21
G29M **Pine Creek** 16.26 33 IAmb IAmb 03 10 56.8
comp=Z,193nm,0.8s
G29M **Pine Creek** 16.26 33 P Pn 03 10 52.7 -0.4
baz=233,SNR=108
EPYK **Eagle Plains** 16.37 36 IAmb IAmb 03 10 58.4
comp=Z,159nm,0.8s
EPYK **Eagle Plains** 16.37 36 P Pn 03 10 54.1 -0.5
baz=236,SNR=82
A22K **Sinclair Lake** 16.43 7 P Pn 03 10 55.3 +0.1
baz=192
S34M **Telegraph Cree** 16.62 67 P Pn 03 10 57.0 -0.6
baz=272,SNR=11
V35K **Ketchikan** 16.63 76 P Pn 03 10 57.9 +0.2
baz=280
A21K **Barrow** 16.66 5 P Pn 03 10 57.4 -0.5
baz=188
R33M **Jennings River** 16.71 62 P Pn 03 10 57.7 -1.3
baz=267,SNR=11
C27K **Jago River** 16.72 21 P Pn 03 10 58.1 -0.8
baz=216,SNR=11
C26K **Camden Bay** 16.73 19 P Pn 03 10 58.1 -0.8
baz=213,SNR=13
G30M **tAoh Zraii Nji** 16.88 34 IAmb IAmb 03 11 04.5
comp=Z,96nm,0.8s
G30M **tAoh Zraii Nji** 16.88 34 P Pn 03 10 59.5 -1.4
baz=236,SNR=95
H31M **Peel River** 16.92 39 IAmb IAmb 03 11 10.0
comp=Z,229nm,1.1s
H31M **Peel River** 16.92 39 P Pn 03 11 00.8 -0.5
baz=242,SNR=174
E28M **Babbage River** 16.93 27 P Pn 03 11 01.1 -0.4
baz=226
D27M **Malcolm River** 17.03 24 P Pn 03 11 02.1 -0.7
baz=222
MMPY **Sheldon Lake,** 17.04 51 P Pn 03 11 02.3 -0.6
baz=255,SNR=41
T35M **Bob Quinn** 17.15 70 P Pn 03 11 03.1 -1.3
baz=276,SNR=12
DLBC **Dease Lake** 17.19 65 Pn Pn 03 11 00.2 -4.6
comp=Z,0.3nm,0.3s,baz=348,slow=22,SNR=4.5
DLBC LR LR 03 17 22.5
comp=Z,451nm,18.4s,baz=238,slow=36
DLBC **Dease Lake** 17.19 65 P Pn 03 11 03.4 -1.4
baz=271
E29M **Blow River** 17.23 29 P Pn 03 11 04.1 -1.1
baz=229,SNR=15
F30M **Barrier River** 17.38 33 P Pn 03 11 05.8 -1.2
baz=234,SNR=35
G31M **Satah River** 17.49 36 IAmb IAmb 03 11 15.3
comp=Z,70nm,0.7s
G31M **Satah River** 17.49 36 P Pn 03 11 07.4 -1.0
baz=239,SNR=61
F31M **Tsiigehtchic** 17.94 35 P Pn 03 11 11.9 -2.0
baz=238,SNR=20
INK **Inuvik** 18.48 32 P P 03 11 18.9 -1.1
comp=Z,1.5nm,0.3s,baz=239,slow=12,SNR=24
INK LR LR 03 19 27.0
comp=Z,1µm,18.2s,baz=233,slow=40
comp=Z,60nm,0.8s
INK **Inuvik** 18.48 32 P P 03 11 18.0 -2.0
baz=236,SNR=39
INK **Inuvik** 18.48 32 P P 03 11 17.4 -2.6
LIRD **Liard River Hi** 19.20 62 P P 03 11 26.3 -1.8
baz=271,SNR=12
BBB **Bella Bella** 19.48 84 LR LR 03 17 49.3
comp=Z,668nm,18.8s,baz=279,slow=33
BILL **Bilibino** 20.24 324 *e*P P 03 11 40.1 +0.8
BILL pmax pmax
comp=Z,59nm,1.4s
BILL **Bilibino** 20.24 324 P P 03 11 39.0 -0.3
BILL IAmb IAmb 03 11 56.2
comp=Z,103nm,1.4s
C36M **Paulatuk** 22.00 34 P P 03 11 57.0 -1.1
C36M IAmb IAmb 03 12 12.2
comp=Z,67nm,0.9s
C36M **Paulatuk** 22.00 34 P P 03 11 55.9 -2.3
baz=247
A36M **Sachs Harbour** 22.82 28 P P 03 12 04.8 -2.2
A36M IAmb IAmb 03 12 10.3
comp=Z,82nm,0.8s
A36M **Sachs Harbour** 22.82 28 P P 03 12 04.3 -2.6
baz=240,SNR=39
PET **Petropavlovsk** 23.75 282 *e*P P 03 12 15.9 -0.3
PET *e**PP pP 03 12 27.8 +0.9
PET *e*S S 03 16 26.0 -2.5
PET pmax pmax
comp=Z,300nm,2.6s
PET pmax pmax
comp=Z,100nm,4.3s
PET pmax pmax
comp=Z,269nm,0.7s
PET MLR MLR
comp=Z,300nm,19.0s
PET **Petropavlovsk** 23.75 282 P P 03 12 17.0 +0.7
PET **Petropavlovsk** 23.75 282 P P 03 12 16.8 +0.6
NLWA **Neilton Lookou** 24.08 93 P P 03 12 21.0 +1.6
PEA0B **Petropavlovsk-** 24.26 283 *c i*P P 03 12 20.5 -0.5
PEA0B **Petropavlovsk-** 24.26 283 P P 03 12 20.9 0.0
PETK **Petropavlovsk-** 24.26 283 P P 03 12 20.6 -0.4
comp=Z,130nm,0.6s,baz=76,slow=13,SNR=452
PETK PcP PcP 03 16 00.4 +0.5
comp=Z,1.7nm,0.5s,baz=48,slow=2.1,SNR=4.1
PETK LR LR 03 21 06.7
comp=Z,322nm,21.5s,baz=81,slow=35
comp=Z,130nm,0.6s
YKAW3 **Yellowknife Wh** 24.69 53 P P 03 12 24.4 -0.3
YKA **Yellowknife Ar** 24.69 53 P P 03 12 25.2 +0.5
comp=Z,5.7nm,0.5s,baz=259,slow=7.3,SNR=26
YKA PcP PcP 03 16 00.8 +0.1
comp=Z,6.0nm,0.7s,baz=272,slow=1.7,SNR=8.0
YKA LR LR 03 22 37.6
comp=Z,316nm,19.2s,baz=239,slow=38
comp=Z,5.7nm,0.5s
YKA **Yellowknife Ar** 24.69 53 P P 03 12 25.0 +0.2
YKAW1 **Yellowknife Wh** 24.75 53 P P 03 12 25.6 +0.3
SEY **Seymchan** 25.02 308 P P 03 12 26.6 -1.2
comp=Z,10nm,0.6s,baz=104,slow=8.9,SNR=35
SEY PcP PcP 03 16 01.9 +0.5
comp=Z,1.6nm,0.3s,baz=105,slow=2.3,SNR=4.9
SEY LR LR 03 23 27.6
comp=Z,882nm,18.8s,baz=95,slow=39
comp=Z,10nm,0.6s
SEY **Seymchan** 25.02 308 *i* P P 03 12 26.6 -1.2
SEY pmax pmax
comp=Z,24nm,1.3s
D05A **Enumclaw** 25.27 91 IAmb IAmb 03 12 44.8
comp=Z,112nm,1.3s
SKR **Severo-Kuril's** 26.13 279 *e*P P 03 12 36.7 -1.1
MA2 **Magadan** 26.21 300 P P 03 12 37.6 -1.0
comp=Z,26nm,0.7s,baz=76,slow=10.0,SNR=11
MA2 LR LR 03 23 55.4
comp=Z,486nm,18.9s,baz=93,slow=39
comp=Z,26nm,0.7s
MA2 **Magadan** 26.21 300 *e*P P 03 12 39.0 +0.5
MA2 pmax pmax
comp=Z,30nm,0.9s
MA2 **Magadan** 26.21 300 IAmb IAmb 03 12 55.7
comp=Z,40nm,1.0s
MA2 **Magadan** 26.21 300 P P 03 12 38.7 +0.2
comp=Z,44nm,0.9s
MA2 **Magadan** 26.21 300 P P 03 12 38.6 0.0
HAWA **Hanford** 27.12 91 P P 03 12 48.8 +1.9
NEW **Newport** 27.53 86 P P 03 12 51.5 +0.9
NEW pmax pmax
comp=Z,14nm,1.1s
NEW **Newport** 27.53 86 P P 03 12 51.5 +0.9
NEW **Newport** 27.53 86 P P 03 12 52.3 +1.7
WVOR **Wild Horse Val** 29.98 97 P P 03 13 12.4 -0.1
PNTR **Pine Nut** 31.64 103 IAmb IAmb 03 13 40.0
comp=Z,85nm,1.8s
HLID **Hailey** 31.72 91 P P 03 13 28.4 +0.5
RES **Resolute Bay** 31.87 27 LR LR 03 27 35.2
comp=Z,359nm,20.7s,baz=222,slow=38
RES **Resolute Bay** 31.87 27 P P 03 13 28.2 -0.4
RES pmax pmax
comp=Z,10.0nm,0.8s
RES **Resolute Bay** 31.87 27 P P 03 13 28.2 -0.4
RES **Resolute Bay** 31.87 27 P P 03 13 26.7 -1.9
WAKR **Walker** 32.14 103 IAmb IAmb 03 13 44.7
comp=Z,32nm,1.7s
BLKN **Baker Lake** 32.68 47 IAmb IAmb 03 13 37.3
comp=Z,42nm,0.8s
NVAR **Mina Array Bea** 32.83 102 P P 03 13 38.9 +1.2
comp=Z,2.5nm,0.8s,baz=297,slow=9.3,SNR=6.9
NVAR PcP PcP 03 16 22.6 +0.8
comp=Z,5.8nm,0.6s,baz=302,slow=2.5,SNR=13
comp=Z,2.5nm,0.8s
ELK **Elko** 33.02 96 P P 03 13 41.8 +2.4
FFC **Flin Flon** 33.02 66 P P 03 13 39.8 +0.9
FFC **Flin Flon** 33.02 66 P P 03 13 38.8 -0.2
TIXI **Tiksi** 33.38 327 P P 03 13 40.9 -0.9
comp=Z,14nm,0.8s,baz=96,slow=9.5,SNR=8.6
TIXI PcP PcP 03 16 22.2 -0.2
comp=Z,25nm,0.7s,baz=67,slow=3.9,SNR=12
TIXI LR LR 03 29 11.2
comp=Z,631nm,18.2s,baz=104,slow=40
comp=Z,14nm,0.8s
TIXI **Tiksi** 33.38 327 ⇑ *i*P P 03 13 40.6 -1.2
TIXI pmax pmax
comp=Z,19nm,1.0s
TIXI **Tiksi** 33.38 327 P P 03 13 40.6 -1.2
TYV **Tymovskoe** 33.62 287 *e*P P 03 13 44.8 +0.6
TYV *e*S S 03 19 03.8 0.0
TYV pmax pmax
comp=Z,73nm,1.2s
TYV pmax pmax
comp=Z,200nm,2.9s
TYV smax smax
comp=N,100nm,4.2s
TYV smax smax
comp=E,100nm,4.2s
HWUT **Hardware Ranch** 34.59 92 P P 03 13 53.0 +0.1
DUG **Dugway, Tooele** 34.78 95 P P 03 13 56.9 +2.4
DUG **Dugway, Tooele** 34.78 95 IAmb IAmb 03 14 07.6
comp=Z,44nm,1.1s
DUG **Dugway, Tooele** 34.78 95 P P 03 13 55.5 +1.0
DUG pP pP 03 14 06.6 +1.0
UGL **Uglegorsk** 34.86 285 *e*P P 03 13 56.0 +1.1
UGL *e*S S 03 19 22.0 -0.9
UGL pmax pmax
comp=Z,240nm,1.1s
PDAR **Pinedale Array** 35.02 89 P P 03 13 57.2 +0.5
comp=Z,0.6nm,0.6s,baz=319,slow=5.9,SNR=5.6
PDAR PcP PcP 03 16 27.4 -0.6
comp=Z,1.0nm,0.7s,baz=344,slow=5.3,SNR=2.3
TPNV **Topopah Spring** 35.03 102 IAmb IAmb 03 14 24.8
comp=Z,27nm,0.9s
FCC **Fort Churchill** 35.35 56 IAmb IAmb 03 14 10.9
comp=Z,27nm,0.9s
PRN **Pahroc Range** 35.38 100 IAmb IAmb 03 14 19.0
comp=Z,31nm,1.2s
YAK **Yakutsk** 35.47 310 P P 03 13 58.6 -1.4
comp=Z,99nm,0.7s,baz=150,slow=0.5,SNR=14
YAK PcP PcP 03 16 28.2 -0.4
comp=Z,33nm,0.5s,baz=74,slow=1.2,SNR=5.8
YAK LR LR 03 29 49.9
comp=Z,1µm,20.1s,baz=78,slow=38
comp=Z,99nm,0.7s
YAK **Yakutsk** 35.47 310 *e*P P 03 13 58.7 -1.4
YAK *e**PP pP 03 14 09.2 -1.9
YAK *e* 03 15 13.3
YAK *e*PPP PPP 03 15 35.3
YAK *e* 03 16 28.2
YAK *e*S S 03 19 32.0 0.0
YAK *e**SS sS 03 19 48.5 -2.0
YAK *e*SS SnSn 03 21 48.7 -4.9
YAK *e*SSS SSS 03 22 12.7
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=E,32nm,1.3s
YAK pmax pmax
comp=Z,118nm,1.1s
YAK pmax pmax
comp=Z,148nm,3.6s
YAK pmax pmax
comp=N,37nm,3.0s
YAK pmax pmax
comp=E,82nm,5.7s
YAK smax smax
comp=N,36nm,2.5s
YAK smax smax
comp=E,23nm,1.9s
YAK MLR MLR
comp=E,953nm,24.0s
YAK MLR MLR
comp=N,140nm,23.0s
YAK **Yakutsk** 35.47 310 P P 03 13 58.8 -1.3
YSS **Yuzhno-Sakhali** 35.62 281 *e*P P 03 14 00.8 -0.7
YSS *e* 03 15 22.2
YSS *e*SS S 03 19 31.5 -3.2
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=N,100nm,16.0s
BSUT **Blindstream Ca** 35.74 92 IAmb IAmb 03 14 15.9
comp=Z,21nm,1.1s
RDMU **Red Mountain** 36.41 91 IAmb IAmb 03 14 25.8
comp=Z,16nm,1.0s
Q16A **Castle Valley** 36.57 95 IAmb IAmb 03 14 23.3
comp=Z,29nm,1.1s
P18A **Preston Nutter** 36.63 93 IAmb IAmb 03 14 29.3
comp=Z,19nm,1.1s
SRU **San Rafael Swe** 36.82 94 IAmb IAmb 03 14 25.1
comp=Z,35nm,0.8s
GRNR **Gornyy** 37.09 290 ⇑ *i*P P 03 14 13.6 -0.4
GRNR pmax pmax
comp=Z,70nm,0.7s
ALE **Alert** 37.11 12 P P 03 14 13.8 0.0
ALE **Alert** 37.11 12 P P 03 14 13.8 0.0
ALE pP pP 03 14 26.1 +1.1
ALE PcP PcP 03 16 33.8 +0.5
DNR **Dunn Ranch,Anz** 37.27 106 IAmb IAmb 03 14 29.0
comp=Z,15nm,0.8s
PFO **Pinyon Flats O** 37.33 106 *e*P P 03 14 17.8 +1.4
PFO **Pinyon Flats O** 37.33 106 P P 03 14 17.8 +1.4
JKA **Kamikawa-asahi** 37.37 277 PcP 03 16 35.6 +1.0
JKA **Kamikawa-asahi** 37.37 277 P P 03 14 15.9 -0.5
JKA IAmb IAmb 03 14 18.3
comp=Z,27nm,1.0s
ASAJ **Asahikawa** 37.37 277 P P 03 14 16.1 -0.3
comp=Z,13nm,0.6s,baz=38,slow=3.6,SNR=16
ASAJ PcP PcP 03 16 35.6 +1.0
comp=Z,6.7nm,0.7s,baz=90,slow=2.0,SNR=2.4
ASAJ LR LR 03 31 39.4
comp=Z,182nm,19.2s,baz=54,slow=40
comp=Z,13nm,0.6s
RSSD **Black Hills** 37.38 83 P P 03 14 17.2 +0.4
RSSD pmax pmax
comp=Z,9.0nm,0.7s
RSSD **Black Hills** 37.38 83 P P 03 14 17.2 +0.4
RSSD **Black Hills** 37.38 83 P P 03 14 17.5 +0.8
RSSD **Black Hills** 37.38 83 P P 03 14 17.4 +0.6
RSSD PcP PcP 03 16 34.9 -0.1
O20A **White River Ci** 37.46 91 IAmb IAmb 03 14 29.8
comp=Z,29nm,0.9s
E28A **Huff** 37.83 77 IAmb IAmb 03 14 32.9
comp=Z,46nm,1.0s

BAR	**Barrett**	**37.91**	**107**		IAmb	IAmb	03 14 34.7		
	comp=Z,54nm,1.9s								
TULEG	**Thule**	**37.97**	**22**		IAmb	IAmb	03 14 21.6		
	comp=Z,16nm,0.8s								
TULEG	**Thule**	**37.97**	**22**	*i*	P	**P**	**03 14 20.0**	**-1.1**	
TULEG					IAmb	IAmb	03 14 20.9		
	comp=Z,16nm,0.8s								
PV23	**Carpenter Ridg**	**38.13**	**94**		IAmb	IAmb	03 14 48.5		
	comp=Z,15nm,0.7s								
CBX	**Cerro Bola**	**38.19**	**108**		IAmb	IAmb	03 14 38.4		
	comp=Z,19nm,0.9s								
PV20	**West Nyswonger**	**38.23**	**94**		IAmb	IAmb	03 14 37.2		
	comp=Z,20nm,0.8s								
BLYC	**Blythe**	**38.31**	**104**		IAmb	IAmb	03 14 43.7		
	comp=Z,20nm,0.9s								
PV18	**Skein Mesa, Pa**	**38.33**	**94**		IAmb	IAmb	03 14 43.7		
	comp=Z,25nm,0.9s								
ERM	**Erimo**	**38.35**	**274**	*c*	*i* P	**P**	**03 14 24.4**	**-0.3**	
ERM					pmax	pmax			
	comp=Z,52nm,1.0s								
ERM	**Erimo**	**38.35**	**274**		P	**P**	**03 14 24.5**	**-0.2**	
ERM	**Erimo**	**38.35**	**274**		P	**P**	**03 14 23.8**	**-0.9**	
PV12	**Saucer Basin,**	**38.35**	**94**		IAmb	IAmb	03 14 48.3		
	comp=Z,19nm,0.8s								
PV13	**Radium Mtn., P**	**38.44**	**94**		IAmb	IAmb	03 14 38.1		
	comp=Z,31nm,0.8s								
ULM	**Lac du Bonnet**	**38.45**	**69**		P	**P**	**03 14 26.2**	**+0.8**	
	comp=Z,28nm,0.8s,baz=304,slow=8.0,SNR=36								
	comp=Z,28nm,0.8s								
ULM	**Lac du Bonnet**	**38.45**	**69**		IAmb	IAmb	03 14 27.2		
	comp=Z,34nm,0.9s								
PV02	**Paradox Valley**	**38.46**	**94**		IAmb	IAmb	03 14 40.2		
	comp=Z,32nm,0.8s								
PV15	**Paradox Valley**	**38.52**	**93**		IAmb	IAmb	03 14 38.8		
	comp=Z,21nm,1.0s								
PV01	**Paradox Valley**	**38.60**	**94**		IAmb	IAmb	03 14 40.8		
	comp=Z,17nm,0.8s								
WUAZ	**Wupatki**	**38.81**	**99**		IAmb	IAmb	03 14 42.7		
	comp=Z,23nm,1.1s								
ISCO	**Idaho Springs**	**39.20**	**89**		P	**P**	**03 14 32.7**	**+0.4**	
MVCO	**Mesa Verde**	**39.28**	**95**		P	**P**	**03 14 33.6**	**+0.7**	
AGMN	**Agassiz Nation**	**39.54**	**72**		IAmb	IAmb	03 14 36.2		
	comp=Z,48nm,0.8s								
AGMN	**Agassiz Nation**	**39.54**	**72**		P	**P**	**03 14 35.3**	**+0.7**	
EPLO	**Experimental L**	**39.92**	**69**		IAmb	IAmb	03 14 39.5		
	comp=Z,35nm,1.0s								
ZEA	**Zeya**	**40.34**	**299**	*e*	P	**P**	**03 14 40.5**	**-0.7**	
ZEA					pmax	pmax			
	comp=N,10.0nm,0.6s								
ZEA					pmax	pmax			
	comp=E,10.0nm,0.6s								
ZEA					pmax	pmax			
	comp=Z,50nm,0.6s								
ZEA					MLR	MLR			
	comp=E,200nm,14.0s								
K30B	**Basset**	**40.80**	**81**		IAmb	IAmb	03 15 11.5		
	comp=Z,53nm,0.8s								
NEEM	**North Greenlan**	**41.13**	**18**	*i*	P	**P**	**03 14 47.1**	**-0.7**	
NEEM					IAmb	IAmb	03 14 48.3		
	comp=Z,84nm,1.0s								
KULLO	**Kullorsuaq**	**41.44**	**23**	*i*	P	**P**	**03 14 50.0**	**+0.1**	
KULLO					IAmb	IAmb	03 14 50.7		
	comp=Z,34nm,0.7s								
TUC	**Tucson**	**41.48**	**102**		P	**P**	**03 14 52.3**	**+1.4**	
TUC					pmax	pmax			
	comp=Z,14nm,1.3s								
TUC	**Tucson**	**41.48**	**102**		P	**P**	**03 14 52.3**	**+1.4**	
TUC	**Tucson**	**41.48**	**102**		P	**P**	**03 14 51.3**	**+0.4**	
TUC	**Tucson**	**41.48**	**102**		P	**P**	**03 14 53.3**	**+2.3**	
TUC					PcP	**PcP**	**03 16 49.3**	**+1.3**	
T25A	**Trinidad**	**41.69**	**91**		P	**P**	**03 14 52.4**	**-0.3**	
ECSD	**EROS Data Cent**	**41.84**	**78**		P	**P**	**03 14 53.6**	**-0.1**	
ECSD	**EROS Data Cent**	**41.84**	**78**		P	**P**	**03 14 53.8**	**+0.1**	
ECSD					pP	**pP**	**03 15 03.8**	**-1.2**	
TASM	**ASL Pad, Albuq**	**42.04**	**95**		IAmb	IAmb	03 15 08.3		
	comp=Z,12nm,1.5s								
ANMO	**Albuquerque**	**42.04**	**95**	*c*	*e* P	**P**	**03 14 57.2**	**+1.6**	
ANMO					pmax	pmax			
	comp=Z,8.0nm,1.3s								
ANMO	**Albuquerque**	**42.04**	**95**		P	**P**	**03 14 56.4**	**+0.8**	
ANMO	**Albuquerque**	**42.04**	**95**		P	**P**	**03 14 55.5**	**-0.1**	
ALQ	**Albuquerque**	**42.05**	**95**		IAmb	IAmb	03 15 08.3		
	comp=Z,17nm,1.6s								
EYMN	**Ely**	**42.12**	**70**		P	**P**	**03 14 56.4**	**+0.4**	
EYMN					IAmb	IAmb	03 14 57.5		
	comp=Z,54nm,0.8s								
EYMN	**Ely**	**42.12**	**70**		P	**P**	**03 14 56.7**	**+0.7**	
EYMN					pP	**pP**	**03 15 06.9**	**-0.3**	
HEH	**HeiHe**	**42.18**	**295**	*e*	P	**P**	**03 14 54.8**	**-1.5**	
HEH					pmax	pmax			
	comp=Z,57nm,0.8s								
HEH					pmax	pmax			
	comp=Z,120nm,3.8s								
HEH					L	L			
	comp=Z,190nm,16.1s								
HEH					L	L			
	comp=Z,300nm,14.5s								
HEH					L	L			
	comp=Z,510nm,16.4s								
DUN6	**Lazy B Ranch**	**42.27**	**100**		IAmb	IAmb	03 15 10.7		
	comp=Z,28nm,0.9s								
NOR	**Nord**	**42.45**	**7**		P	**P**	**03 14 58.5**	**+0.3**	
NOR	**Nord**	**42.45**	**7**		P	**P**	**03 14 58.5**	**+0.3**	
NOR	**Nord**	**42.45**	**7**	*i*	P	**P**	**03 14 58.3**	**+0.1**	
NOR					IAmb	IAmb	03 14 59.2		
	comp=Z,48nm,1.0s								
Y22A	**Socorro**	**42.47**	**97**		P	**P**	**03 15 00.8**	**+1.7**	
UPNV	**Upernavik**	**42.68**	**25**	*i*	P	**P**	**03 15 00.2**	**+0.1**	
UPNV					IAmb	IAmb	03 15 00.8		
	comp=Z,35nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**42.77**	**228**		T	T	04 00 16.9		
	baz=27,slow=76,SNR=534								
H11N3	**WAKE ISLAND Hy**	**42.78**	**228**		T	T	04 00 17.4		
	baz=27,slow=76,SNR=74								
H11N1	**WAKE ISLAND Hy**	**42.79**	**228**		T	T	04 00 10.8		
	baz=27,slow=76,SNR=68								
TBO	**Thunder Bay**	**42.83**	**68**		IAmb	IAmb	03 15 03.2		
	comp=Z,22nm,0.8s								
E38A	**The Farm, Brul**	**42.90**	**71**		IAmb	IAmb	03 15 03.5		
	comp=Z,59nm,0.8s								
SPMN	**Marine on St.**	**43.05**	**74**		P	**P**	**03 15 03.9**	**+0.5**	
SPMN					IAmb	IAmb	03 15 19.7		
	comp=Z,44nm,1.5s								
L34A	**Svendsen Farm,**	**43.10**	**80**		IAmb	IAmb	03 15 28.2		
	comp=Z,48nm,0.7s								
USRK	**Ussuriysk Ar.**	**43.34**	**285**		P	**P**	**03 15 03.6**	**-2.2**	
	comp=Z,10nm,0.7s,baz=38,slow=9.6,SNR=12								
USRK					LR	LR	03 34 46.7		
	comp=Z,157nm,19.8s,baz=46,slow=38								
	comp=Z,10nm,0.7s								
I37A	**Lemond, Waseca**	**43.48**	**75**		IAmb	IAmb	03 15 08.6		
	comp=Z,46nm,1.0s								
FRB	**Frobisher Bay**	**43.89**	**40**		P	**P**	**03 15 10.5**	**+0.6**	
FRB	**Frobisher Bay**	**43.89**	**40**		P	**P**	**03 15 10.5**	**+0.6**	
FRB					pP	**pP**	**03 15 20.6**	**-0.7**	
H11S1	**WAKE ISLAND Hy**	**43.94**	**227**		T	T	04 01 36.1		
	baz=26,slow=76,SNR=43								
H11S2	**WAKE ISLAND Hy**	**43.95**	**227**		T	T	04 01 41.6		
	baz=26,slow=76,SNR=28								
H11S3	**WAKE ISLAND Hy**	**43.96**	**227**		T	T	04 01 38.7		
	baz=26,slow=76,SNR=35								
NUUG	**Nuugaatsiaq**	**44.15**	**26**	*i*	P	**P**	**03 15 11.9**	**+0.1**	
NUUG					IAmb	IAmb	03 15 12.4		
	comp=Z,34nm,0.7s								
N35A	**Tabor**	**44.24**	**80**		IAmb	IAmb	03 15 38.4		
	comp=Z,51nm,0.7s								
BOD	**Bodaibo**	**44.40**	**310**	*e*	P	**P**	**03 15 12.3**	**-1.8**	
BOD					pmax	pmax			
	comp=Z,28nm,0.8s								
MDJ	**Mudanjiang**	**44.41**	**287**		IAmb	IAmb	03 15 14.2		
	comp=Z,24nm,0.9s								
MDJ	**Mudanjiang**	**44.41**	**287**		P	**P**	**03 15 13.3**	**-1.0**	
MDJ					pmax	pmax			
	comp=Z,35nm,0.8s								
MDJ	**Mudanjiang**	**44.41**	**287**		P	**P**	**03 15 13.5**	**-0.9**	
G40A	**Rib Lake**	**44.47**	**72**		IAmb	IAmb	03 15 16.2		
	comp=Z,27nm,0.7s								
NIAQ	**Niaqornat**	**44.49**	**27**	*i*	P	**P**	**03 15 15.1**	**+0.5**	
NIAQ					IAmb	IAmb	03 15 16.8		
	comp=Z,172nm,1.5s								
MJAR	**Matsushiro Arr**	**44.85**	**272**		P	**P**	**03 15 18.2**	**+0.2**	
	comp=Z,16nm,0.6s,baz=35,slow=7.0,SNR=90								
MJAR					LR	LR	03 33 04.9		
	comp=Z,172nm,21.9s,baz=40,slow=35								
	comp=Z,16nm,0.6s								
MJAR	**Matsushiro Arr**	**44.85**	**272**		P	**P**	**03 15 18.1**	**+0.1**	
MJAR					IAmb	IAmb	03 15 19.4		
	comp=Z,91nm,1.5s								
MAJO	**Matsushiro**	**44.85**	**272**	*c*	*i* P	**P**	**03 15 18.2**	**+0.2**	
MAJO					pmax	pmax			
	comp=Z,71nm,0.8s								
MAJO	**Matsushiro**	**44.85**	**272**		P	**P**	**03 15 18.1**	**+0.1**	
MAJO	**Matsushiro**	**44.85**	**272**		P	**P**	**03 15 18.4**	**+0.3**	
MAJO	**Matsushiro**	**44.85**	**272**		P	**P**	**03 15 18.3**	**+0.3**	
BNX	**BinXian**	**44.90**	**289**	⇑	P	**P**	**03 15 17.6**	**-0.7**	
BNX					pmax	pmax			
	comp=Z,69nm,0.8s								
PSTR	**Posyet**	**44.99**	**284**	*de*	P	**P**	**03 15 19.2**	**+0.2**	
SAATT	**Saattut**	**45.00**	**26**	*i*	P	**P**	**03 15 18.7**	**+0.1**	
SAATT					IAmb	IAmb	03 15 19.6		
	comp=Z,34nm,1.2s								
MNTX	**Cornudas Mount**	**45.02**	**98**		P	**P**	**03 15 20.6**	**+1.3**	
I40A	**Norwalk**	**45.11**	**74**		IAmb	IAmb	03 15 21.3		
	comp=Z,38nm,0.8s								
SAQQ	**Saqqaq**	**45.43**	**27**	*i*	P	**P**	**03 15 22.4**	**+0.4**	
SAQQ					IAmb	IAmb	03 15 23.2		
	comp=Z,36nm,0.9s								
GDH	**Godhavn**	**45.49**	**29**	*i*	P	**P**	**03 15 23.1**	**+0.6**	
GDH					IAmb	IAmb	03 15 24.2		
	comp=Z,19nm,0.9s								
N38A	**Joes South For**	**45.66**	**79**		IAmb	IAmb	03 15 43.1		
	comp=Z,33nm,0.9s								
JFWS	**Jewell Farm**	**45.94**	**74**		IAmb	IAmb	03 15 27.2		
	comp=Z,26nm,0.9s								
L40A	**Anamosa**	**45.95**	**76**		IAmb	IAmb	03 15 27.5		
	comp=Z,20nm,0.9s								
JGF	**Kuroka**	**46.00**	**272**		P	**P**	**03 15 27.5**	**+0.4**	
128A	**Castleberry Fa**	**46.01**	**94**		IAmb	IAmb	03 15 39.5		
	comp=Z,23nm,1.1s								
I42A	**Draeger Farm,**	**46.05**	**73**		IAmb	IAmb	03 15 28.7		
	comp=Z,37nm,0.8s								
BLOK	**Blackwell**	**46.11**	**86**		IAmb	IAmb	03 15 44.4		
	comp=Z,48nm,1.1s								
DKNS	**Dickens**	**46.15**	**92**		IAmb	IAmb	03 17 05.3		
	comp=Z,15nm,0.8s								
ILULI	**Ilulissat**	**46.17**	**28**		IAmb	IAmb	03 16 46.1		
	comp=Z,23nm,1.0s								
ILULI	**Ilulissat**	**46.17**	**28**	*i*	P	**P**	**03 15 27.7**	**-0.3**	
ILULI					IAmb	IAmb	03 15 29.1		
	comp=Z,20nm,1.1s								
P38A	**Dawn**	**46.27**	**80**		IAmb	IAmb	03 15 29.9		
	comp=Z,23nm,0.7s								
JHJ	**Hachijo jima 2**	**46.36**	**267**		LR	LR	03 33 20.6		
	comp=Z,135nm,21.5s,baz=82,slow=34								
INU	**Inuyama**	**46.37**	**272**		P	**P**	**03 15 29.3**	**-0.7**	
INU					IAmb	IAmb	03 15 30.7		
	comp=Z,27nm,0.9s								
INU	**Inuyama**	**46.37**	**272**		P	**P**	**03 15 29.8**	**-0.2**	
KBS	**Kingsbay**	**46.43**	**2**	*c*	*i* P	**P**	**03 15 30.6**	**+0.7**	
KBS					pmax	pmax			
	comp=Z,96nm,1.0s								
KBS	**Kingsbay**	**46.43**	**2**	*e*	P	**P**	**03 15 30.7**	**+0.8**	
KBS					IAmb	IAmb	03 15 31.5		
	comp=Z,72nm,0.8s								
KBS	**Kingsbay**	**46.43**	**2**		P	**P**	**03 15 30.8**	**+0.8**	
KBS	**Kingsbay**	**46.43**	**2**		P	**P**	**03 15 30.9**	**+0.9**	
KBS	**Kingsbay**	**46.43**	**2**		PcP	**PcP**	**03 17 05.1**	**+1.1**	
KBS	**Kingsbay**	**46.43**	**2**	*i*	P	**P**	**03 15 30.4**	**+0.5**	
DAG	**Danmarks Havn**	**46.48**	**11**		P	**P**	**03 15 30.2**	**-0.2**	
DAG	**Danmarks Havn**	**46.48**	**11**		P	**P**	**03 15 30.2**	**-0.1**	
DAG	**Danmarks Havn**	**46.48**	**11**	*i*	P	**P**	**03 15 30.1**	**-0.2**	
DAG					IAmb	IAmb	03 15 31.0		
	comp=Z,88nm,1.0s								
OK048	**Pawnee Station**	**46.51**	**86**		IAmb	IAmb	03 15 47.4		
	comp=Z,21nm,1.1s								
OK051	**E0350 and S346**	**46.51**	**86**		IAmb	IAmb	03 15 47.4		
	comp=Z,21nm,1.3s								
HILR	**Hailar Array B**	**46.57**	**298**		P	**P**	**03 15 30.9**	**-0.5**	
	comp=Z,9.6nm,0.5s,baz=64,slow=8.5,SNR=14								
	comp=Z,9.6nm,0.5s								
WMOK	**Wichita Mounta**	**46.63**	**89**		P	**P**	**03 15 32.9**	**+0.8**	
WMOK	**Wichita Mounta**	**46.63**	**89**		P	**P**	**03 15 32.8**	**+0.7**	
NRIK	**Noril'sk**	**46.65**	**333**		P	**P**	**03 15 30.9**	**-0.8**	
	comp=Z,16nm,0.6s,baz=63,slow=7.2,SNR=16								
NRIK					LR	LR	03 37 15.1		
	comp=Z,613nm,19.6s,baz=77,slow=39								
	comp=Z,16nm,0.6s								
NRIK	**Noril'sk**	**46.65**	**333**	*c*	*i* P	**P**	**03 15 31.2**	**-0.5**	
NRIK					pmax	pmax			
	comp=Z,19nm,0.7s								
NRIK	**Noril'sk**	**46.65**	**333**		P	**P**	**03 15 30.9**	**-0.8**	
NRIK					IAmb	IAmb	03 15 33.3		
	comp=Z,19nm,0.7s								
SUMG	**Summit**	**46.80**	**20**		P	**P**	**03 15 33.6**	**+0.3**	
SUMG					pmax	pmax			
	comp=Z,84nm,1.4s								
SUMG	**Summit**	**46.80**	**20**		P	**P**	**03 15 33.6**	**+0.3**	
SUMG	**Summit**	**46.80**	**20**		P	**P**	**03 15 33.8**	**+0.5**	
SUMG	**Summit**	**46.80**	**20**	*i*	P	**P**	**03 15 33.6**	**+0.3**	
SUMG					IAmb	IAmb	03 15 34.5		
	comp=Z,23nm,0.6s								
L42A	**Oliver, Polo**	**46.87**	**75**		IAmb	IAmb	03 15 34.3		
	comp=Z,22nm,1.1s								
OK052	**Battle Ridge R**	**46.89**	**86**		IAmb	IAmb	03 15 50.3		
	comp=Z,23nm,0.9s								
FNO	**Franklin**	**47.06**	**87**		IAmb	IAmb	03 16 06.2		
	comp=Z,12nm,0.7s								
K43A	**Burlington**	**47.15**	**73**		IAmb	IAmb	03 15 36.7		
	comp=Z,46nm,1.0s								
DEOK	**Depew**	**47.17**	**86**		IAmb	IAmb	03 15 47.6		
	comp=Z,21nm,1.1s								
P40A	**Paris**	**47.18**	**79**		IAmb	IAmb	03 15 47.2		
	comp=Z,22nm,0.7s								
CN2	**Changchun**	**47.21**	**289**	⇑	P	**P**	**03 15 35.8**	**-0.7**	
CN2					*e* pP	pP	03 15 49.8	+1.9	
CN2					*e* S	**S**	**03 22 23.3**	**-3.0**	
CN2					pmax	pmax			
	comp=Z,50nm,0.8s								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
SPA0	**Spitsbergen Ar**	**47.24**	**1**	*e*	P	**P**	**03 15 35.7**	**-0.6**	
SPA0					IAmb	IAmb	03 15 36.5		
	comp=Z,70nm,1.4s								
SPITS	**Spitsbergen Ar**	**47.24**	**1**		P	**P**	**03 15 35.7**	**-0.6**	
	comp=Z,16nm,0.8s,baz=26,slow=5.9,SNR=20								
SPITS					PcP	**PcP**	**03 17 07.1**	**+0.2**	
	comp=Z,9.7nm,0.7s,baz=86,slow=4.5,SNR=6.3								
	comp=Z,16nm,0.8s								
SPITS	**Spitsbergen Ar**	**47.24**	**1**		P	**P**	**03 15 36.0**	**-0.3**	
SPITS							03 17 07.1		
SPITS					pmax	pmax			
	comp=Z,46nm,1.2s								
SPB2	**Spitsbergen Ar**	**47.25**	**1**		IAmb	IAmb	03 15 37.6		
	comp=Z,34nm,1.0s								
TUL3	**Leonard**	**47.53**	**86**		IAmb	IAmb	03 15 40.1		
	comp=Z,15nm,0.8s								
ABTX	**Abilene, Hawle**	**47.65**	**92**		IAmb	IAmb	03 15 51.9		
	comp=Z,32nm,1.3s								
TX31	**Lajitas Ar. Si**	**47.76**	**98**		P	**P**	**03 15 42.5**	**+1.5**	
TXAR	**Lajitas Array**	**47.76**	**98**		P	**P**	**03 15 42.1**	**+1.1**	
	comp=Z,3.6nm,0.8s,baz=301,slow=5.7,SNR=56								
TXAR					PcP	**PcP**	**03 17 10.2**	**+0.6**	
	comp=Z,4.5nm,0.6s,baz=259,slow=1.5,SNR=11								
TXAR					ScP	**ScP**	**03 21 00.1**	**-0.2**	
	comp=Z,0.9nm,0.9s,baz=266,slow=3.8,SNR=4.4								
	comp=Z,3.6nm,0.8s								
TXAR	**Lajitas Array**	**47.76**	**98**		P	**P**	**03 15 42.5**	**+1.5**	
TXAR							03 17 10.2		
TXAR	**Lajitas Array**	**47.76**	**98**		P	**P**	**03 15 42.5**	**+1.5**	
RLO	**Rose Lookout**	**47.79**	**85**		IAmb	IAmb	03 15 41.9		
	comp=Z,14nm,0.8s								
SFJD	**Kangerlussuaq**	**47.80**	**30**		P	**P**	**03 15 41.4**	**+0.7**	
SFJD					pmax	pmax			
	comp=Z,94nm,0.8s								
SFJD	**Kangerlussuaq**	**47.80**	**30**		P	**P**	**03 15 41.4**	**+0.7**	
SFJD	**Kangerlussuaq**	**47.80**	**30**		P	**P**	**03 15 41.5**	**+0.9**	
SFJD	**Kangerlussuaq**	**47.80**	**30**	*i*	P	**P**	**03 15 41.4**	**+0.7**	
SFJD					IAmb	IAmb	03 15 42.1		
	comp=Z,90nm,0.8s								
R40A	**Maddies Statio**	**47.90**	**81**		IAmb	IAmb	03 16 00.6		
	comp=Z,12nm,0.7s								
U38A	**Gravette**	**47.97**	**84**		IAmb	IAmb	03 15 43.0		
	comp=Z,17nm,0.8s								
PLPT	**Palo Pinto**	**48.28**	**90**		IAmb	IAmb	03 17 12.7		
	comp=Z,17nm,0.8s								
HPIG		**48.45**	**102**		P	**P**	**03 15 48.3**	**+1.8**	
DBG	**Daneborg**	**48.45**	**13**		P	**P**	**03 15 45.5**	**-0.1**	
DBG	**Daneborg**	**48.45**	**13**	*i*	P	**P**	**03 15 45.3**	**-0.3**	
DBG					IAmb	IAmb	03 15 46.1		
	comp=Z,23nm,0.7s								
CCM	**Cathedral Cave**	**48.64**	**80**		P	**P**	**03 15 46.6**	**-1.0**	
CCM					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CCM	**Cathedral Cave**	**48.64**	**80**		P	**P**	**03 15 46.7**	**-0.9**	
CCM	**Cathedral Cave**	**48.64**	**80**		P	**P**	**03 15 46.7**	**-0.9**	
J47A	**Sunmer**	**48.73**	**71**		IAmb	IAmb	03 15 49.3		
	comp=Z,24nm,0.9s								
JCT	**Junction City**	**49.13**	**94**		IAmb	IAmb	03 16 08.7		
	comp=Z,17nm,0.8s								
FVM	**French Village**	**49.16**	**80**		IAmb	IAmb	03 16 02.5		
	comp=Z,67nm,1.7s								
Q44A	**Meyer Farm, Va**	**49.32**	**78**		IAmb	IAmb	03 16 11.2		
	comp=Z,31nm,0.8s								
JMN	**Monobe**	**49.34**	**273**		P	**P**	**03 15 54.5**	**+1.4**	
SFIN	**Lafayette**	**49.39**	**75**		IAmb	IAmb	03 16 11.9		
	comp=Z,27nm,0.8s								
VLDQ	**Val d'Or**	**49.40**	**61**		IAmb	IAmb	03 15 52.7		
	comp=Z,23nm,0.8s								
NUUK	**Nuuk**	**49.40**	**33**		P	**P**	**03 15 54.4**	**+1.4**	
NUUK	**Nuuk**	**49.40**	**33**	*i*	P	**P**	**03 15 53.7**	**+0.7**	
NUUK					IAmb	IAmb	03 15 55.5		
	comp=Z,44nm,1.0s								
T42A	**Van Buren**	**49.44**	**81**		IAmb	IAmb	03 17 16.2		
	comp=Z,12nm,0.8s								
JCJ	**Chichijima**	**49.47**	**260**		LR	LR	03 33 44.8		
	comp=Z,82nm,20.7s,baz=92,slow=32								
JCJ	**Chichijima**	**49.47**	**260**		P	**P**	**03 15 54.6**	**+0.5**	
FCAR	**Ozark Folk Cen**	**49.65**	**83**		IAmb	IAmb	03 15 55.7		
	comp=Z,17nm,0.9s								
MIAR	**Mount Ida**	**49.77**	**85**		P	**P**	**03 15 56.6**	**+0.3**	
MIAR	**Mount Ida**	**49.77**	**85**		IAmb	IAmb	03 17 17.8		
	comp=Z,14nm,0.8s								
MIAR	**Mount Ida**	**49.77**	**85**		P	**P**	**03 15 56.6**	**+0.3**	
P46A	**Rosedale**	**49.85**	**76**		IAmb	IAmb	03 16 14.9		
	comp=Z,30nm,0.9s								
PBMO	**Poplar Bluff**	**50.00**	**81**		IAmb	IAmb	03 15 59.1		
	comp=Z,11nm,0.7s								
SCHQ	**Schefferville**	**50.02**	**49**		P	**P**	**03 15 57.9**	**0.0**	
	comp=Z,20nm,1.1s,baz=313,slow=8.0,SNR=18								
	comp=Z,20nm,1.1s								
SCHQ	**Schefferville**	**50.02**	**49**		IAmb	IAmb	03 15 59.1		
	comp=Z,49nm,1.4s								
S44A	**Carbondale**	**50.03**	**79**		IAmb	IAmb	03 15 58.7		
	comp=Z,24nm,0.7s								
LCAR	**Lake Charles**	**50.08**	**82**		IAmb	IAmb	03 17 18.6		
	comp=Z,12nm,0.9s								
KS19	**Wonju Array Si**	**50.12**	**281**		P	**P**	**03 15 59.1**	**+0.2**	
KSRS	**Korea Array**	**50.12**	**281**		P	**P**	**03 15 59.6**	**+0.8**	
	comp=Z,44nm,0.8s,baz=48,slow=6.9,SNR=75								
KSRS					PcP	**PcP**	**03 17 18.8**	**+0.9**	
	comp=Z,4.3nm,0.7s,baz=50,slow=3.9,SNR=2.5								
KSRS					LR	LR	03 38 14.2		
	comp=Z,90nm,19.6s,baz=55,slow=37								
	comp=Z,44nm,0.8s								
KSAR	**Wonju Array Be**	**50.15**	**281**		P	**P**	**03 15 59.3**	**+0.2**	
KSAR	**Wonju Array Be**	**50.15**	**281**		P	**P**	**03 15 59.3**	**+0.2**	
BLO	**Bloomington**	**50.54**	**76**		IAmb	IAmb	03 16 19.8		
	comp=Z,27nm,1.1s								
SADO	**Sadowa**	**50.75**	**66**		IAmb	IAmb	03 16 04.3		
	comp=Z,23nm,0.8s								
INCN	**Inchon**	**50.83**	**282**		P	**P**	**03 16 04.6**	**+0.3**	
INCN					pmax	pmax			
	comp=Z,98nm,1.1s								
INCN	**Inchon**	**50.83**	**282**		P	**P**	**03 16 04.6**	**+0.3**	
P48A	**Milroy**	**50.96**	**75**		IAmb	IAmb	03 16 16.6		
	comp=Z,34nm,0.9s								
TJN	**Taejon**	**51.20**	**280**		P	**P**	**03 16 07.9**	**+0.9**	
JNU	**Nakatsue**	**51.51**	**275**		LR	LR	03 37 42.9		
	comp=Z,195nm,21.9s,baz=66,slow=36								
SCO	**Scoresbysund**	**51.55**	**16**		P	**P**	**03 16 09.5**	**+0.4**	
SCO	**Scoresbysund**	**51.55**	**16**		IAmb	IAmb	03 16 11.4		
	comp=Z,31nm,1.2s								
SCO	**Scoresbysund**	**51.55**	**16**		P	**P**	**03 16 09.5**	**+0.4**	
SCO

comp=Z,26nm,0.9s
CFNY Clifton-Fine, 53.30 64 lAmb lAmb 03 16 23.6
comp=Z,32nm,0.8s
LMQ La Malbaie 53.33 58 lAmb lAmb 03 16 23.2
comp=Z,15nm,0.9s
ICQ Pointe Anglais 53.42 54 lAmb lAmb 03 16 24.2
comp=Z,35nm,0.9s
K57A Scipio Center 53.53 66 lAmb lAmb 03 16 25.3
comp=Z,27nm,1.0s
X48A Hartselle 53.59 80 lAmb lAmb 03 16 24.9
comp=Z,11nm,0.8s
Q54A Coxs Mills 53.83 72 lAmb lAmb 03 16 37.5
comp=Z,56nm,1.6s
MCWV Mont Chateau 53.90 71 lAmb lAmb 03 16 27.6
comp=Z,35nm,0.9s
Z47A Carrollton 53.91 82 lAmb lAmb 03 16 27.6
comp=Z,30nm,0.8s
ULN Ulaanbaatar 53.99 304*c i*P **P 03 16 27.6 -0.1**
ULN pmax pmax
comp=Z,26nm,1.1s
ULN Ulaanbaatar 53.99 304 P **P 03 16 27.7 -0.1**
ULN lAmb lAmb 03 16 28.5
comp=Z,24nm,1.1s
ULN Ulaanbaatar 53.99 304 P **P 03 16 27.4 -0.3**
comp=Z,99nm,0.8s
ULN Ulaanbaatar 53.99 304 P **P 03 16 27.9 +0.1**
ULN Ulaanbaatar 53.99 304 P **P 03 16 27.6 -0.1**
ULN PcP **PcP 03 17 33.2 +0.8**
ZAK Zakamensk 53.99 308 *eP* **P 03 16 27.0 -0.6**
W50A Signal Mountai 54.03 78 lAmb lAmb 03 16 47.1
comp=Z,21nm,0.9s
TZTN Tazewell 54.06 76 lAmb lAmb 03 16 47.0
comp=Z,20nm,0.8s
TZTN Tazewell 54.06 76 P **P 03 16 27.4 -0.8**
J59A Piesco 54.07 64 lAmb lAmb 03 16 29.0
comp=Z,23nm,0.8s
MOY Mondy 54.11 310 *eP* **P 03 16 28.8 +0.3**
MOY pmax pmax
comp=Z,19nm,1.0s
BINY Binghamton 54.18 66 lAmb lAmb 03 16 30.3
comp=Z,35nm,1.0s
BINY Binghamton 54.18 66 P **P 03 16 29.1 +0.1**
M57A Sunshine Farm, 54.18 67 lAmb lAmb 03 16 30.0
comp=Z,34nm,1.2s
D62A Allapoint, All 54.28 57 lAmb lAmb 03 16 30.5
comp=Z,30nm,1.0s
CPCT Cooper Cave 54.30 78 lAmb lAmb 03 16 48.3
comp=Z,16nm,1.0s
SONM Songino Array 54.33 304 P **P 03 16 30.5 +0.3**
comp=Z,23nm,0.7s,baz=48,slow=7.3,SNR=108
SONM PcP **PcP 03 17 34.3 +0.6**
comp=Z,13nm,0.7s,baz=44,slow=2.0,SNR=11
SONM ScP **ScP 03 21 29.9 +1.5**
comp=Z,1.8nm,0.9s,baz=40,slow=4.6,SNR=4.9
SONM LR LR 03 42 14.4
comp=Z,566nm,19.2s,baz=74,slow=39
comp=Z,23nm,0.7s
SONM Songino Array 54.33 304 P **P 03 16 30.4 +0.3**
SONM lAmb lAmb 03 16 31.3
comp=Z,25nm,0.8s
FPAL Fort Paine 54.34 79 lAmb lAmb 03 16 30.7
comp=Z,14nm,1.0s
Y49A Blount Mountai 54.38 80 lAmb lAmb 03 16 30.6
comp=Z,13nm,0.8s
TKL Tuckaleechee C 54.57 77 lAmb lAmb 03 16 43.7
comp=Z,22nm,1.1s
L59A Walton 54.69 65 lAmb lAmb 03 16 34.1
comp=Z,34nm,0.8s
Q56A Snyder Ridge, 54.70 71 lAmb lAmb 03 17 36.0
comp=Z,14nm,0.7s
X51A Calhoun 54.75 79 lAmb lAmb 03 16 51.2
comp=Z,24nm,1.1s
KSPA Keystone Colle 54.75 66 lAmb lAmb 03 16 33.8
comp=Z,17nm,0.8s
N58A Sunbury 54.75 68 lAmb lAmb 03 16 34.1
comp=Z,21nm,0.9s
BJI2 Beijing 54.85 291 P **P 03 16 33.8 0.0**
BJI2 pmax pmax
comp=Z,6.0nm,0.6s
LBNH Lisbon 54.85 62 lAmb lAmb 03 16 49.5
comp=Z,15nm,1.0s
G62A West of Eustis 54.86 60 lAmb lAmb 03 16 34.8
comp=Z,27nm,0.8s
W52A Murphy 54.89 77 lAmb lAmb 03 16 34.2
comp=Z,13nm,0.7s
H62A Milan 55.00 61 lAmb lAmb 03 16 35.7
comp=Z,33nm,0.9s
P57A Homestead Farm 55.02 70 lAmb lAmb 03 16 35.9
comp=Z,33nm,0.9s
TRY Troy 55.02 64 lAmb lAmb 03 16 35.9
comp=Z,15nm,0.8s
HNH Hanover 55.04 62 lAmb lAmb 03 16 36.3
comp=Z,14nm,0.8s
U54A Nelsons Funny 55.05 75 lAmb lAmb 03 16 54.9
comp=Z,29nm,1.2s
V53A Saluda 55.10 76 lAmb lAmb 03 16 48.1
comp=Z,34nm,1.1s
VADS Vadso 55.14 356*eP* **P 03 16 35.0 -0.5**
VADS lAmb lAmb 03 16 35.6
comp=Z,51nm,0.9s
J61A Chester 55.16 63 lAmb lAmb 03 16 37.2
comp=Z,22nm,0.9s
PAGS Pennsylvania G 55.19 68 lAmb lAmb 03 16 47.4
comp=Z,27nm,0.9s
BLA Blacksburg 55.33 73 lAmb lAmb 03 16 49.5
comp=Z,19nm,0.8s
PKME Peaks-Kenny Pk 55.45 59 lAmb lAmb 03 16 38.8
comp=Z,24nm,1.1s
F64A Sherman 55.48 58 lAmb lAmb 03 16 38.9
comp=Z,35nm,0.9s
BG3 Lake Jocassee 55.53 77 lAmb lAmb 03 16 51.4
comp=Z,22nm,1.0s
MVL Millersville 55.55 68 lAmb lAmb 03 16 39.7
comp=Z,15nm,1.0s
KEV Kevo 55.60 357 P **P 03 16 38.1 -0.7**
KEV pmax pmax
comp=Z,56nm,0.8s
KEV Kevo 55.60 357 P **P 03 16 38.1 -0.7**
KEV Kevo 55.60 357 P **P 03 16 38.3 -0.5**
I63A Otisfield 55.66 61 lAmb lAmb 03 16 40.3
comp=Z,17nm,0.8s
SDMD Soldier's Deli 55.71 69 lAmb lAmb 03 16 40.6
comp=Z,11nm,0.9s
Y52A Lilburn 55.71 79 lAmb lAmb 03 16 57.4
comp=Z,20nm,1.1s
S57A Dark Hollow, R 55.74 72 lAmb lAmb 03 16 52.0
comp=Z,27nm,1.3s
WVL Waterville 55.76 60 lAmb lAmb 03 16 40.9
comp=Z,20nm,0.9s
TRO Tromso 55.85 0*eP* **P 03 16 40.5 -0.1**
TRO lAmb lAmb 03 16 41.1
comp=Z,40nm,0.7s
ARA0 ARCESS Array S 55.86 357*eP* **P 03 16 40.0 -0.8**
ARA0 lAmb lAmb 03 16 40.7
comp=Z,29nm,0.8s
ARCES ARCESS Array B 55.86 357 P **P 03 16 39.8 -1.0**
comp=Z,21nm,0.8s,baz=10,slow=7.4,SNR=36
ARCES PcP **PcP 03 17 38.6 -0.4**
comp=Z,14nm,0.8s,baz=7.1,slow=4.9,SNR=6.5
ARCES LR LR 03 42 39.1
comp=Z,172nm,18.5s,baz=358,slow=38
comp=Z,21nm,0.8s
ARCES ARCESS Array B 55.86 357 P **P 03 16 40.0 -0.8**
ARCES lAmb lAmb 03 16 40.9
comp=Z,26nm,0.8s
V55A Taylorsville 55.87 75 lAmb lAmb 03 16 59.9
comp=Z,15nm,0.9s
JETT Jettan, Norway 55.92 360*eP* **P 03 16 40.6 -0.6**
JETT lAmb lAmb 03 16 41.9
comp=Z,54nm,0.8s
U56A King 55.97 74 lAmb lAmb 03 17 00.7
comp=Z,15nm,0.9s
R58B Mineral 56.18 71 lAmb lAmb 03 16 45.2
comp=Z,15nm,1.0s
PAULI Pauline 56.28 76 lAmb lAmb 03 16 55.8
comp=Z,15nm,0.9s
WSPT Westport, CT 56.31 65 lAmb lAmb 03 16 45.3
comp=Z,25nm,0.7s
KMSC Kings Mountain 56.32 75 lAmb lAmb 03 16 56.2
comp=Z,23nm,1.0s
G65A Princeton 56.34 58 lAmb lAmb 03 16 45.1
comp=Z,24nm,0.9s
GOGA Godfrey 56.38 78 P **P 03 16 43.1 -1.8**
GOGA Godfrey 56.38 78 P **P 03 16 43.3 -1.6**
KNGR Kungurtug, Tuv 56.40 311⇓*eP* **P 03 16 45.9 +0.9**
KNGR pmax pmax
comp=Z,30nm,1.0s

KTK1 Kautokeino 56.44 358*eP* **P 03 16 44.2 -0.7**
KTK1 lAmb lAmb 03 16 44.8
comp=Z,27nm,0.8s
HODGE Hodges 56.46 77 lAmb lAmb 03 16 45.6
comp=Z,16nm,0.8s
WES Weston 56.48 63 lAmb lAmb 03 16 46.5
comp=Z,35nm,1.0s
HHC Hu-ho-hao-te 56.70 295*eP* **P 03 16 46.5 -0.8**
HHC pP pP 03 16 57.0 -1.9
HHC S **S 03 24 36.3 -0.6**
HHC sS pS 03 24 51.5 +0.9
HHC pmax pmax
comp=Z,22nm,0.6s
HHC pmax pmax
comp=Z,180nm,5.5s
HHC L L
comp=Z,230nm,16.8s
HHC L L
comp=Z,130nm,16.8s
HHC L L
comp=Z,390nm,17.6s
GGN Saint George 56.76 58 lAmb lAmb 03 16 47.8
comp=Z,21nm,0.7s
JSC Jenkinsville 56.98 76 lAmb lAmb 03 17 00.8
comp=Z,20nm,1.0s
LVZ Lovozero 57.06 353*c i*P **P 03 16 48.3 -1.0**
LVZ pmax pmax
comp=Z,84nm,1.0s
LVZ Lovozero 57.06 353 P **P 03 16 48.0 -1.3**
LVZ Lovozero 57.06 353 P **P 03 16 48.3 -1.0**
comp=Z,84nm,1.0s
LVZ Lovozero 57.06 353 P **P 03 16 49.2 -0.1**
TIA Tai'an 57.07 287 P **P 03 16 49.9 +0.1**
TIA pmax pmax
comp=Z,34nm,1.3s
V58A Windy Hill, Pi 57.08 73 lAmb lAmb 03 17 01.9
comp=Z,26nm,0.9s
LOF Lofoten 57.28 3*eP* **P 03 16 51.6 +0.8**
LOF lAmb lAmb 03 16 57.2
comp=Z,31nm,1.0s
APA Apatity 57.47 354*eP* **P 03 16 49.8 -2.3**
APA *e* 03 17 44.5
APA *e* 03 18 55.4
APA pmax pmax
comp=Z,13nm,0.9s
STEI Steigen 57.52 2*eP* **P 03 16 52.0 -0.4**
STEI lAmb lAmb 03 16 52.4
comp=Z,28nm,0.6s
HNS HongShan 57.53 290⇑P **P 03 16 53.6 +0.6**
HNS pmax pmax
comp=Z,81nm,1.1s
HNS L L
comp=Z,360nm,13.1s
HNS L L
comp=Z,210nm,12.0s
HNS L L
comp=Z,660nm,14.4s
BTO2 Baotou 57.66 296*eP* **P 03 16 54.4 +0.3**
BTO2 pP **pP 03 17 07.0 +1.3**
BTO2 sP **sP 03 17 12.8 +2.4**
BTO2 S **S 03 24 46.1 -3.4**
BTO2 pmax pmax
comp=Z,38nm,1.0s
BTO2 pmax pmax
comp=Z,210nm,5.9s
BTO2 L L
comp=Z,680nm,13.5s
BTO2 L L
comp=Z,550nm,14.0s
BTO2 L L
comp=Z,1μm,15.3s
SGF Sodankyl 57.93 357 P **P 03 16 55.4 0.0**
FAUS Fauske 58.07 2*eP* **P 03 16 56.0 -0.3**
FAUS lAmb lAmb 03 16 56.2
comp=Z,29nm,0.8s
VAGH Vaagaholmen 58.68 3*eP* **P 03 17 00.2 -0.4**
VAGH lAmb lAmb 03 17 00.5
comp=Z,27nm,0.8s
HAL Halifax 58.68 56 lAmb lAmb 03 17 01.0
comp=Z,15nm,0.9s
KONS Konsvik 58.91 3*eP* **P 03 17 02.1 0.0**
KONS lAmb lAmb 03 17 02.6
comp=Z,24nm,0.6s
ZAA0 Zalesovo Array 58.92 321 P **P 03 17 02.5 0.0**
ZAA0 lAmb lAmb 03 17 52.4
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 58.92 321 P **P 03 17 02.5 +0.1**
comp=Z,5.5nm,0.7s,baz=28,slow=5.8,SNR=22
ZALV PcP **PcP 03 17 51.5 +0.2**
comp=Z,9.4nm,0.8s,baz=25,slow=3.9,SNR=9.6
ZALV LR LR 03 44 35.0
comp=Z,787nm,19.4s,baz=54,slow=38
comp=Z,5.5nm,0.7s
ZALV Zalesovo Beam 58.92 321*i* P **P 03 17 02.5 +0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.6s
RAUS Rausandaksla 58.99 2*eP* **P 03 17 02.4 -0.4**
RAUS lAmb lAmb 03 17 03.2
comp=Z,68nm,1.0s
STOK Stokkvaagen 59.07 3*eP* **P 03 17 03.2 -0.1**
STOK lAmb lAmb 03 17 03.9
comp=Z,32nm,1.0s
NJ2 Nanjing 59.17 283*eP* **P 03 17 04.4 -0.1**
NJ2 pmax pmax
comp=Z,67nm,0.8s
MOR8 Moi Rana 59.27 2*eP* **P 03 17 03.5 -1.2**
MOR8 lAmb lAmb 03 17 03.9
comp=Z,20nm,0.8s
LEIR Leirfjorden 59.30 3*eP* **P 03 17 04.9 +0.1**
LEIR lAmb lAmb 03 17 05.5
comp=Z,72nm,1.2s
MSF Maaselka 59.36 355 P **P 03 17 05.3 0.0**
TLIG Tlapa 59.84 103 lAmb lAmb 03 17 22.6
comp=Z,15nm,0.9s
OUL Oulu 60.31 357 P **P 03 17 11.5 -0.3**
ADZR Andozero 60.66 350*eP* **P 03 17 12.5 -1.8**
ADZR pmax pmax
comp=Z,69nm,0.7s
NSS Namsos 60.84 4*eP* **P 03 17 15.0 -0.5**
NSS lAmb lAmb 03 17 15.8
comp=Z,31nm,1.0s
LYN LuoYang 60.85 289⇑P **P 03 17 16.5 +0.5**
LYN pP sP 03 17 30.9 -1.5
LYN L L
comp=Z,250nm,7.2s
LYN L L
comp=Z,200nm,8.2s
LYN L L
comp=Z,950nm,8.6s
DGZ Jazzator, Alta 61.28 317*ceP* **P 03 17 18.8 -0.1**
DGZ pmax pmax
comp=Z,11nm,0.7s
CMIG Matias Romero 62.31 100 P **P 03 17 26.4 +0.3**
comp=Z,3.5nm,0.7s,baz=325,slow=7.4,SNR=10
comp=Z,3.5nm,0.7s
YOJ Yonaguni jima 62.54 274 P **P 03 17 26.9 -0.6**
MOL Molde 62.58 6*eP* **P 03 17 27.4 +0.2**
MOL lAmb lAmb 03 17 27.6
comp=Z,29nm,0.8s
WHN Wuhan 62.83 285⇑P **P 03 17 29.3 -0.1**
WHN sP **sP 03 17 44.3 -1.5**
WHN pmax pmax
comp=Z,120nm,0.9s
AKN Aaknes 62.94 6*eP* **P 03 17 30.1 +0.4**
AKN lAmb lAmb 03 17 30.8
comp=Z,70nm,0.8s
XAN Xi'an 63.16 291⇑P **P 03 17 31.4 -0.2**
XAN pmax pmax
comp=Z,67nm,0.9s
XAN pmax pmax
comp=Z,150nm,3.6s
XAN L L
comp=Z,340nm,11.0s
XAN L L
comp=Z,490nm,14.4s
XAN L L
comp=Z,390nm,16.5s
XAN Xi'an 63.16 291 P **P 03 17 31.7 +0.1**
XAN PcP **PcP 03 18 08.7 -0.1**
DOMB Dombas 63.20 5*eP* **P 03 17 31.0 -0.4**
DOMB lAmb lAmb 03 17 31.7
comp=Z,47nm,0.7s
YHNB Yeheng 63.33 275 P **P 03 17 32.2 -0.6**
YHNB lAmb lAmb 03 17 32.5
comp=Z,27nm,0.9s
FOO Floro 63.38 8*eP* **P 03 17 32.5 0.0**
FOO lAmb lAmb 03 17 32.6
comp=Z,22nm,0.9s
KLMR Klimovskoe 63.55 349*eP* **P 03 17 32.0 -1.7**
KLMR pmax pmax
comp=Z,95nm,1.2s
KLMR MLR MLR
comp=Z,439nm,18.0s
NACB Ninganchiao 63.58 275 P **P 03 17 33.6 -0.8**
NACB Ninganchiao 63.58 275 P **P 03 17 34.2 -0.3**
GTA2 Gaotai 63.73 302*eP* **P 03 17 34.6 -0.8**
GTA2 sP sP 03 17 50.4 -1.4
GTA2 pmax pmax
comp=Z,71nm,1.0s
GTA2 L L
comp=Z,620nm,14.0s
GTA2 L L
comp=Z,470nm,15.9s
GTA2 L L
comp=Z,750nm,17.8s
SVE Sverdlovsk 63.73 336*deP* **P 03 17 35.0 +0.1**
SVE pmax pmax
comp=Z,89nm,0.9s
KURK Kurchatov 63.77 322*c i*P **P 03 17 34.6 -0.7**
KURK pmax pmax
comp=Z,20nm,0.8s
KURK Kurchatov 63.77 322 PcP 03 18 11.2 +0.3
KURK Kurchatov 63.77 322 P **P 03 17 35.2 0.0**
KURK lAmb lAmb 03 17 36.1
comp=Z,14nm,0.7s
KURK Kurchatov 63.77 322 P **P 03 17 34.9 -0.3**
KURK Kurchatov 63.77 322 P **P 03 17 35.6 +0.4**
KURK sP **sP 03 17 52.8 +1.1**
KURBB Kurchatov Arra 63.88 322 P **P 03 17 35.8 -0.2**
comp=Z,13nm,0.9s,baz=21,slow=6.7,SNR=46
KURBB PcP **PcP 03 18 11.2 -0.2**
comp=Z,6.5nm,0.8s,baz=33,slow=4.0,SNR=7.7
KURBB LR LR 03 47 42.0
comp=Z,649nm,18.8s,baz=154,slow=38
comp=Z,13nm,0.9s
HYA Hoyanger 63.89 7*eP* **P 03 17 36.0 +0.2**
HYA lAmb lAmb 03 17 39.3
comp=Z,15nm,0.9s
SUE Sulen 63.89 8*eP* **P 03 17 35.6 -0.3**
FIA1 FINESS Array S 63.95 356 P **P 03 17 35.9 -0.4**
FINES FINESS Array B 63.95 356 P **P 03 17 35.7 -0.6**
comp=Z,49nm,0.8s,baz=23,slow=7.6,SNR=117
comp=Z,49nm,0.8s
FINES FINESS Array B 63.95 356 P **P 03 17 35.9 -0.4**
FINES FINESS Array B 63.95 356 P **P 03 17 35.9 -0.4**
ZSN Zaisan 64.11 317*c i*P **P 03 17 37.6 0.0**
ZSN pmax pmax
comp=Z,22nm,0.8s
ZSN Zaisan 64.11 317⇑*i*P **P 03 17 37.7 0.0**
comp=Z,22nm,0.8s
LRW Lerwick 64.23 11*eP* **P 03 17 38.5 +0.4**
LRW lAmb lAmb 03 17 39.9
comp=Z,62nm,0.8s
SSLB Suanglung 64.25 275 P **P 03 17 38.7 -0.2**
LZH Lanzhou 64.28 296*eP* **P 03 17 39.4 +0.3**
LZH sP sP 03 17 54.5 -1.0
LZH pmax pmax
comp=Z,130nm,1.4s
NB2 NORSAR Subarra 64.30 4 P **P 03 17 38.3 -0.4**
comp=Z,60nm,0.8s,baz=356,slow=6.5
NB2 NORSAR Subarra 64.30 4 P **P 03 17 38.3 -0.4**
NOA NORSAR Array B 64.30 4 P **P 03 17 38.5 -0.1**
comp=Z,30nm,0.7s,baz=356,slow=6.6,SNR=83
comp=Z,30nm,0.7s
YULB Yu-li 64.36 275 P **P 03 17 38.5 -1.0**
YULB lAmb lAmb 03 17 52.9
comp=Z,25nm,0.8s
YULB Yu-li 64.36 275 P **P 03 17 39.3 -0.2**
KIRV Kirov 64.36 343 LR LR 03 47 29.1
comp=Z,301nm,21.9s,baz=32,slow=38
KIRV Kirov 64.36 343*c i*P **P 03 17 38.4 -0.6**
LZDM Lanzhou Array 64.46 296 P **P 03 17 40.6 +0.2**
comp=Z,25nm,0.5s,baz=315,slow=0.8,SNR=37
comp=Z,25nm,0.5s
NAO01 NORSAR Array S 64.48 5 P **P 03 17 40.1 +0.3**
ASK Askoy 64.49 8*eP* **P 03 17 40.2 +0.3**
ASK lAmb lAmb 03 17 40.7
comp=Z,33nm,0.8s
BVAR Borovoye Array 64.50 329 P **P 03 17 40.0 0.0**
comp=Z,60nm,0.8s,baz=42,slow=6.8,SNR=110
comp=Z,60nm,0.8s
BORK Borovoye 64.50 329*c i*P **P 03 17 39.8 -0.2**
BORK pmax pmax
comp=Z,58nm,1.1s
BORK Borovoye 64.50 329 P **P 03 17 40.3 +0.3**
SKAR Skarslia 64.51 6*eP* **P 03 17 40.2 +0.1**
SKAR lAmb lAmb 03 17 40.9
comp=Z,59nm,0.7s
BER Bergen 64.60 8*eP* **P 03 17 40.8 +0.3**
BER lAmb lAmb 03 17 41.4
comp=Z,22nm,0.8s
NC602 NORSAR Array S 64.62 4*eP* **P 03 17 40.4 -0.3**
NC602 lAmb lAmb 03 17 40.8
comp=Z,16nm,0.7s
NC602 NORSAR Array S 64.62 4 lAmb lAmb 03 17 56.7
comp=Z,28nm,1.0s
NORES NORESS Array B 64.62 4 P **P 03 17 40.4 -0.3**
NORES pmax pmax
comp=Z,6.0nm,0.5s
ARTI Arti 64.65 337 LR LR 03 47 59.9
comp=Z,343nm,18.2s,baz=10,slow=38
ARTI Arti 64.65 337*c i*P **P 03 17 40.5 -0.5**
ARTI 03 18 11.9
ARTI S **S 03 26 15.4 -2.2**
ARTI pmax pmax
comp=Z,107nm,0.7s
ARTI Arti 64.65 337 P **P 03 17 40.7 -0.3**
ARTI Arti 64.65 337 P **P 03 17 40.5 -0.5**
ODD1 Odda 65.16 7*eP* **P 03 17 44.8 +0.5**
ODD1 lAmb lAmb 03 17 45.3
comp=Z,32nm,0.8s
HFS Hagfors 65.30 3 P **P 03 17 44.8 -0.3**
comp=Z,64nm,0.7s,baz=28,slow=3.5,SNR=206
comp=Z,64nm,0.7s
OSL Oslo 65.38 5*eP* **P 03 17 45.9 +0.3**
OSL lAmb lAmb 03 17 46.5
comp=Z,80nm,1.7s
PUL Pulkovo 65.41 354⇓*i*P **P 03 17 46.1 +0.3**
PUL pmax pmax
comp=Z,48nm,0.5s
KONO Kongsberg 65.61 5*c i*P **P 03 17 47.4 +0.3**
KONO pmax pmax
comp=Z,49nm,0.8s
KONO Kongsberg 65.61 5*eP* **P 03 17 47.6 +0.4**
KONO Kongsberg 65.61 5 P **P 03 17 48.0 +0.8**
KONO Kongsberg 65.61 5 P **P 03 17 47.7 +0.6**
BLS5 Blasjo 65.64 7*eP* **P 03 17 47.8 +0.4**
BLS5 lAmb lAmb 03 17 48.3
comp=Z,38nm,0.7s
MK31 Makanchi Array 65.66 318*c i*P **P 03 17 46.8 -0.9**
MKAR Makanchi Array 65.66 318 P **P 03 17 47.0 -0.7**
comp=Z,11nm,0.7s,baz=45,slow=6.1,SNR=68
MKAR LR LR 03 48 30.0
comp=Z,573nm,19.6s,baz=33,slow=38
comp=Z,11nm,0.7s
MKAR Makanchi Array 65.66 318 P **P 03 17 47.2 -0.5**
MKAR Makanchi Array 65.66 318 P **P 03 17 47.2 -0.5**
LINV Loch Inver, As 65.66 14*eP* **P 03 17 47.8 +0.3**
LINV lAmb lAmb 03 17 49.4
comp=Z,12nm,0.9s
ENH Enshi 65.73 288 P **P 03 17 48.5 0.0**
MAKZ Makanchi 65.76 318 P **P 03 17 47.7 -0.7**
MAKZ pmax pmax
comp=Z,12nm,0.6s
MAKZ Makanchi 65.76 318 P **P 03 17 47.7 -0.7**
MAKZ lAmb lAmb 03 17 48.2
comp=Z,12nm,0.6s
MAKZ Makanchi 65.76 318 P **P 03 17 47.6 -0.8**
WMQ Urumqi 65.88 312*eP* **P 03 17 49.9 +0.7**
WMQ PcP **PcP 03 18 20.6 +0.7**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,130nm,5.3s
WMQ L L
comp=Z,320nm,14.5s
WMQ L L
comp=Z,270nm,20.5s
WMQ L L
comp=Z,340nm,24.7s
ARBE Arbavere 65.96 356 P **P 03 17 49.4 0.0**

STRU Stroemstad 66.30 5 *i* P P 03 17 51.5 0.0
KPL Plockton 66.38 14 *e*P P 03 17 52.2 +0.2
KPL IAmb IAmb 03 17 53.8
comp=Z,15nm,0.9s
MCD Coleburn Disti 66.47 13 *e*P P 03 17 53.0 +0.3
MCD IAmb IAmb 03 17 55.0
comp=Z,72nm,0.8s
SNART Snartemo 66.77 7 *e*P P 03 17 55.2 +0.7
SNART IAmb IAmb 03 17 56.1
comp=Z,3.3nm,0.8s
SNART Snartemo 66.77 7 *i* P P 03 17 55.3 +0.7
VSU Vasula 66.90 356*c* *i*P P 03 17 54.2 -1.2
VSU pmax pmax
comp=Z,85nm,0.8s
VSU Vasula 66.90 356 P P 03 17 54.5 -0.9
HOMB Homborsund 66.92 6 *e*P P 03 17 56.2 +0.7
HOMB IAmb IAmb 03 17 56.6
comp=Z,67nm,1.0s
HOMB Homborsund 66.92 6 *i* P P 03 17 56.0 +0.5
DRUM Mains of Drumt 67.22 13 P P 03 17 58.0 +0.5
DRUM Mains of Drumt 67.22 13 *e*P P 03 17 57.6 +0.1
DRUM IAmb IAmb 03 17 59.5
comp=Z,135nm,0.9s
TJOU Tjoern 67.33 4 *i* P P 03 17 58.0 -0.1
LAWE Loch Awe, Argy 67.45 15 *e*P P 03 17 59.1 +0.2
LAWE IAmb IAmb 03 18 01.1
comp=Z,33nm,1.1s
INVG Invergeldie, C 67.48 14 *e*P P 03 17 59.4 +0.2
INVG IAmb IAmb 03 18 01.2
comp=Z,24nm,0.8s
EAB Aberfoyle 67.68 14 *e*P P 03 18 00.6 +0.2
EAB IAmb IAmb 03 18 02.7
comp=Z,41nm,1.0s
ONAU Onsala 67.97 4 *i* P P 03 18 02.0 -0.2
PGBU Glenifferbraes 68.02 14 *e*P P 03 18 02.7 +0.2
PGBU IAmb IAmb 03 18 04.3
comp=Z,43nm,0.8s
EDI Edinburgh 68.09 13 *e*P P 03 18 03.1 +0.1
EDI IAmb IAmb 03 18 05.1
comp=Z,26nm,0.9s
IDGL Inch Island, C 68.28 16 P P 03 18 04.7 +0.6
IDGL Inch Island, C 68.28 16 P P 03 18 03.7 -0.4
IDGL Inch Island, C 68.28 16 *e*P P 03 18 04.0 -0.1
IDGL IAmb IAmb 03 18 07.7
comp=Z,13nm,0.8s
CD2 Chengdu 68.34 293 P P 03 18 05.1 +0.1
CD2 pmax pmax
comp=Z,180nm,5.7s
FABU Falkenberg 68.40 4 *i* P P 03 18 04.6 -0.3
TDK Taldyqorghan 68.64 319 *e*P P 03 18 06.7 +0.1
TDK pmax pmax
comp=Z,23nm,0.8s
TDK Taldyqorghan 68.64 319 *e*P P 03 18 06.8 +0.1
comp=Z,24nm,0.8s
EKA Eskdalemuir Ar 68.67 14 P P 03 18 07.0 +0.5
comp=Z,32nm,0.8s,baz=342,slow=4.9,SNR=65
comp=Z,32nm,0.8s
EKA Eskdalemuir Ar 68.67 14 P P 03 18 07.1 +0.5
EKA pmax pmax
comp=Z,46nm,1.0s
ESK Eskdalemuir 68.68 14 P P 03 18 06.6 -0.1
ESK pmax pmax
comp=Z,39nm,1.0s
ESK Eskdalemuir 68.68 14 P P 03 18 06.6 -0.1
ESK IAmb IAmb 03 18 08.2
comp=Z,39nm,0.9s
ESK Eskdalemuir 68.68 14 P P 03 18 05.3 -1.4
ESK Eskdalemuir 68.68 14 *e*P P 03 18 06.9 +0.3
ESK IAmb IAmb 03 18 09.0
comp=Z,27nm,0.9s
GOMU GeErMu 68.73 303 P P 03 18 07.3 -0.5
GOMU pmax pmax
comp=Z,16nm,1.0s
NEWG New Galloway 68.73 14 *e*P P 03 18 07.2 +0.2
NEWG IAmb IAmb 03 18 08.6
comp=Z,12nm,1.0s
MUD Monsted U'grnd 68.77 6 *i* P P 03 18 08.0 +0.8
MUD IAmb IAmb 03 18 08.7
comp=Z,46nm,0.9s
MOS Moscow 68.78 349 *e*P P 03 18 06.4 -0.8
MOS *e* 03 18 32.2
MOS *e* 03 20 36.8
MOS *e*S S 03 27 05.6 -1.8
MOS pmax pmax
comp=Z,53nm,0.6s
GAL1 Galloway 68.91 15 *e*P P 03 18 08.3 +0.2
GAL1 IAmb IAmb 03 18 09.8
comp=Z,22nm,0.8s
DEL Delary 68.97 3 *i* P P 03 18 08.3 -0.1
EDMD Edmundbyers 69.32 13 *e*P P 03 18 11.1 +0.5
EDMD IAmb IAmb 03 18 13.0
comp=Z,18nm,0.8s
BJUU Bjuv 69.34 4 *i* P P 03 18 10.5 -0.2
ILTH Belurgan, Co L 69.47 16 P P 03 18 12.0 +0.5
ILTH Belurgan, Co L 69.47 16 P P 03 18 12.0 +0.5
ILTH Belurgan, Co L 69.47 16 *e*P P 03 18 11.8 +0.2
ILTH IAmb IAmb 03 18 13.2
comp=Z,20nm,0.9s
OBN Obninsk 69.50 349*c* *i*P P 03 18 11.0 -0.7
OBN *e* 03 18 35.0
OBN *e* 03 20 35.3
OBN *e*S S 03 27 05.6 -10
OBN pmax pmax
comp=Z,39nm,0.6s
OBN MLR MLR
comp=Z,515nm,22.0s
OBN Obninsk 69.50 349 P P 03 18 11.0 -0.7
OBN Obninsk 69.50 349 P P 03 18 10.2 -1.5
comp=Z,914nmcomp=Z,80nm,0.9s
OBN Obninsk 69.50 349 P P 03 18 11.2 -0.5
IGLA Glengowla, Co 69.55 18 P P 03 18 12.4 +0.4
IGLA Glengowla, Co 69.55 18 P P 03 18 12.6 +0.6
IGLA Glengowla, Co 69.55 18 *e*P P 03 18 12.1 0.0
IGLA IAmb IAmb 03 18 13.2
comp=Z,18nm,0.7s
PDGK Podgornoye 69.64 318 P P 03 18 13.2 +0.2
PDGK Podgornoye 69.64 318 P P 03 18 13.2 +0.2
COP Copenhagen 69.71 4 *i* P P 03 18 13.0 +0.1
COP IAmb IAmb 03 18 14.0
comp=Z,132nm,1.2s
SHLS Shalkode 69.80 317*c* *i*P P 03 18 13.0 -1.0
SHLS pmax pmax
comp=Z,25nm,0.8s
SHLS Shalkode 69.80 317⇑ *i*P P 03 18 13.0 -1.0
comp=Z,25nm,0.8s
LUNU Lund 69.80 4 *i* P P 03 18 13.0 -0.5
KPKS Kokpek 69.84 318 *e*P P 03 18 14.3 +0.2
KPKS Kokpek 69.84 318 *e*P P 03 18 14.4 +0.2
PABE Paberze 69.96 357 P P 03 18 14.6 0.0
PABE Paberze 69.96 357 P P 03 18 14.7 +0.2
UZB Uzynbulak 69.97 318 *e*P P 03 18 15.0 -0.1
UZB Uzynbulak 69.97 318 *e*P P 03 18 15.0 -0.1
LLD Lille Linde 70.05 4 *i* P P 03 18 15.3 +0.2
LLD IAmb IAmb 03 18 16.2
comp=Z,63nm,0.9s
BTLS Baital 70.21 322 *e*P P 03 18 16.5 +0.2
BTLS Baital 70.21 322 *e*P P 03 18 16.5 +0.2
DSB Dublin 70.22 16 P P 03 18 16.6 +0.4
GYA Guiyang 70.25 288 ⇑P P 03 18 17.4 +0.4
GYA pmax pmax
comp=Z,88nm,1.0s
SATY Saty 70.29 318*c* *i*P P 03 18 16.9 -0.1
SATY Saty 70.29 318⇑ *i*P P 03 18 17.0 -0.1
BSD Bornholm Skovb 70.36 3 *i* P P 03 18 16.7 -0.3
BSD IAmb IAmb 03 18 19.0
comp=Z,45nm,1.3s
KUU Kurty 70.36 320 *e*P P 03 18 17.4 +0.1
KUU Kurty 70.36 320 *e*P P 03 18 17.4 +0.1
BELG Belogornoye 70.58 342 LR LR 03 53 28.3
comp=Z,370nm,18.9s,baz=19,slow=39
BELG Belogornoye 70.58 342*c* *i*P P 03 18 17.8 -0.6
BELG pmax pmax
comp=Z,24nm,0.9s
MDOK Medeo 70.72 319 *e*P P 03 18 19.5 -0.1
MDOK Medeo 70.72 319 *e*P P 03 18 19.6 -0.1
AAA Alma-Ata 70.73 319 *e*P P 03 18 19.7 +0.1
AAA pmax pmax
comp=Z,9.0nm,0.5s
AAA Alma-Ata 70.73 319 *e*P P 03 18 19.7 +0.1
comp=Z,9.1nm,0.5s
LBWR Ladybower, Pea 70.75 13 P P 03 18 20.5 +1.1
LBWR Ladybower, Pea 70.75 13 *e*P P 03 18 19.8 +0.3
LBWR IAmb IAmb 03 18 21.8
comp=Z,22nm,0.9s

PRZ Przheval'sk 70.78 318 P P 03 18 20.5 +0.5
MNK Minsk 70.80 355 *i* P P 03 18 20.2 +0.4
comp=E,51nm,0.9s
MNK *i* P P 03 18 20.2 +0.4
comp=N,26nm,0.8s
MNK *i* P P 03 18 20.2 +0.4
comp=Z,108nm,0.8s,baz=5.2
MNK *i* PcP PcP 03 18 40.5 +0.2
MNK *i* PP PP 03 20 57.0 +0.9
MNK *i* PPP PPP 03 22 40.1
MNK *i* S S 03 27 33.4 +2.1
MNK *i* ScS ScS 03 28 21.1 +1.3
MNK *i* SS SS 03 32 07.0 +4.4
MNK *i* SSS SSS 03 35 26.2
MNK *i* LQ LQ 03 43 28.0
MNK *i* LR LR 03 50 00.1
MNK *i* LRM MLR 03 51 24.2
comp=Z,212nm,16.4s
MNK *i* LRM MLR 03 51 29.3
comp=E,397nm,16.6s
MNK *i* LRM MLR 03 51 29.3
comp=N,318nm,16.6s
MNK Minsk 70.80 355 *i* P P 03 18 20.1 +0.4
MNK *i* 03 18 40.4
MNK *i* 03 20 57.0
MNK *i* PPP PPP 03 22 40.1
MNK *i* S S 03 27 33.3 +2.1
MNK *i* 03 28 21.0
MNK *i* SS SS 03 32 07.0 +4.4
MNK pmax pmax
comp=Z,108nm,0.8s
MNK pmax pmax
comp=E,51nm,0.9s
MNK pmax pmax
comp=N,26nm,0.8s
MNK MLR MLR
comp=Z,212nm,16.0s
MNK MLR MLR
comp=N,318nm,17.0s
MNK MLR MLR
comp=E,397nm,17.0s
VAL Valentia 70.80 19 P P 03 18 20.4 +0.7
SIUN Universidad Ur 70.81 93 P P 03 18 21.1 +0.8
SIUN IAmb IAmb 03 18 32.7
comp=Z,16nm,1.0s
AB31 Akbulak array 70.82 333⇑ *e*P P 03 18 19.8 -0.1
AB31 pmax pmax
comp=Z,45nm,0.6s
AB31 Akbulak array 70.82 333 P P 03 18 20.2 +0.3
ABKAR Akbulak array 70.82 333 P P 03 18 20.2 +0.3
TNSS Tian-Shan 70.87 319 *e*P P 03 18 20.5 -0.3
TNSS Tian-Shan 70.87 319 *e*P P 03 18 20.6 -0.3
RGN Rugen 70.88 4 *e*P P 03 18 21.5 +1.4
comp=Z,114nm,0.9s,baz=356,slow=5.8
STNC Stoke 70.98 14 P P 03 18 22.2 +1.3
STNC Stoke 70.98 14 *e*P P 03 18 21.7 +0.9
STNC IAmb IAmb 03 18 23.1
comp=Z,25nm,0.8s
IWEX Carrickbyrne, 71.00 17 P P 03 18 21.6 +0.7
IWEX Carrickbyrne, 71.00 17 *e*P P 03 18 20.8 -0.1
IWEX IAmb IAmb 03 18 22.4
comp=Z,10nm,0.8s
FOEL Foel Wylfa 71.04 14 P P 03 18 22.1 +0.9
FOEL Foel Wylfa 71.04 14 *e*P P 03 18 21.8 +0.6
FOEL IAmb IAmb 03 18 23.3
comp=Z,32nm,0.8s
BSEG Bad Segeberg 71.35 6 *e*P P 03 18 23.7 +0.7
comp=Z,28nm,1.0s,baz=356,slow=5.8
BSEG Bad Segeberg 71.35 6 P P 03 18 23.8 +0.8
SGDS Sogindy 71.37 321⇑ *i*P P 03 18 23.6 +0.1
CWF Charnwood Fore 71.45 13 P P 03 18 24.2 +0.6
CWF Charnwood Fore 71.45 13 *e*P P 03 18 24.0 +0.4
CWF IAmb IAmb 03 18 25.6
comp=Z,13nm,0.9s
HLM1 Long Mynd 71.45 14 *e*P P 03 18 23.8 +0.1
HLM1 IAmb IAmb 03 18 25.7
comp=Z,7.3nm,0.9s
TKM2 Tokmak 2 71.47 320 P P 03 18 24.7 +0.4
SNR=17
SUW Suwalki 71.48 358 *e*P P 03 18 23.5 -0.3
WUS Wushi 71.55 316 IAmb IAmb 03 18 25.9
comp=Z,30nm,0.7s
WUS Wushi 71.55 316 P P 03 18 25.1 +0.4
KDJ Kajisay 71.55 318 IAmb IAmb 03 18 26.2
comp=Z,25nm,0.9s
KDJ Kajisay 71.55 318 P P 03 18 25.2 +0.5
USP Ospenovka 71.58 321 P P 03 18 25.3 +0.6
SNR=12
TARG Taragay, Kyrgy 71.65 318 IAmb IAmb 03 18 27.5
comp=Z,15nm,0.6s
TARG Taragay, Kyrgy 71.65 318 P P 03 18 26.5 +0.9
LPSR Galich'ya Gora 71.70 348 *e*P P 03 18 24.1 -1.1
LPSR pmax pmax
comp=Z,76nm,0.8s
WACR West Acre 71.70 12 *e*P P 03 18 25.9 +0.8
WACR IAmb IAmb 03 18 27.3
comp=Z,106nm,0.9s
BOOM Boomskoye usch 71.72 319 P P 03 18 26.3 +0.6
RSBS Rosebush, Pemb 71.73 15 *e*P P 03 18 25.7 +0.4
RSBS IAmb IAmb 03 18 26.8
comp=Z,12nm,0.8s
ULHL Ulahol 71.81 319 P P 03 18 26.8 +0.4
SNR=22
MCH1 Michaelchurch 71.94 14 *e*P P 03 18 26.8 +0.2
MCH1 IAmb IAmb 03 18 28.6
comp=Z,12nm,0.8s
KBK Karagaybulak 71.94 320 P P 03 18 27.8 +0.7
SNR=14
AAK Ala-Archa 72.13 320 LR LR 03 52 38.6
comp=Z,621nm,18.3s,baz=56,slow=38
AAK Ala-Archa 72.13 320 P P 03 18 28.6 +0.4
SNR=14
AAK Ala-Archa 72.13 320*c* *i*P P 03 18 28.6 +0.4
AAK pmax pmax
comp=Z,22nm,0.7s
AAK Ala-Archa 72.13 320 P P 03 18 28.7 +0.5
AAK IAmb IAmb 03 18 29.1
comp=Z,20nm,0.7s
AAK Ala-Archa 72.13 320 P P 03 18 28.7 +0.5
AAK Ala-Archa 72.13 320 P P 03 18 28.9 +0.8
AAK pP pP 03 18 40.8 +0.7
GKP Gorka Klasztor 72.26 1 *e*P P 03 18 28.8 +0.3
GORT1 Trebel 72.35 5 *e*P P 03 18 29.9 +0.9
comp=Z,32nm,1.2s,baz=356,slow=5.8
EKS2 Erkin-Say 72.37 321 P P 03 18 30.0 +0.5
SNR=20
RETH Rethem/Aller, 72.49 6 *e*P P 03 18 30.6 +0.8
comp=Z,22nm,1.0s,baz=356,slow=5.8
RETH Rethem/Aller, 72.49 6 P P 03 18 30.7 +0.9
VORR Voronezh 72.58 347 *e*P P 03 18 29.5 -0.9
VORR pmax pmax
comp=Z,43nm,0.6s
NRN Naryn 72.60 319 IAmb IAmb 03 18 32.6
comp=Z,24nm,0.7s
VRH Novokhopyorsk 72.69 345 *e*P P 03 18 29.8 -1.3
VRH pmax pmax
comp=Z,60nm,0.7s
IBBN Ibbenburen 72.81 7 *e*P P 03 18 32.5 +0.8
comp=Z,43nm,1.0s,baz=356,slow=5.8
IBBN *e*pP pP 03 18 44.0 +0.2
IBBN Ibbenburen 72.81 7 P P 03 18 32.6 +0.8
ASAI AK-SAY(Kyrgyzs 72.85 318 P P 03 18 33.5 +0.8
PZH PanZhiHua 72.90 292 P P 03 18 33.8 +0.9
RUE Ruedersdorf 72.96 4 *e*P P 03 18 33.4 +0.7
comp=Z,66nm,0.9s,baz=356,slow=5.8
RUE Ruedersdorf 72.96 4 P P 03 18 33.5 +0.8
FLTG Flechtingen 73.00 5 *e*P P 03 18 32.9 0.0
comp=Z,36nm,1.0s,baz=356,slow=5.8
VSR Storozhevoye 73.03 347*c* *i*P P 03 18 32.4 -0.7
VSR pmax pmax
comp=Z,68nm,0.6s
DZA Taraz 73.04 323 *e*P P 03 18 33.4 0.0
DZA Taraz 73.04 323 *e*P P 03 18 33.5 0.0
WTSB Winterswijk 73.07 8 P P 03 18 33.8 +0.5
KK31 Karatay Array 73.14 323 IAmb IAmb 03 18 34.9
comp=Z,30nm,0.8s
KKAR Karatay Array 73.14 323 P P 03 18 33.9 -0.1
KKAR Karatay Array 73.14 323 P P 03 18 33.9 -0.1
ASSE Asse, Remlinge 73.17 6 *e*P P 03 18 34.3 +0.5
comp=Z,27nm,1.0s,baz=356,slow=5.8
ASSE Asse, Remlinge 73.17 6 P P 03 18 34.4 +0.5
VORD Divnogorie 73.26 347 *e*P P 03 18 31.7 -2.8
VORD pmax pmax
comp=Z,50nm,0.8s
DYA Yadsworthy 73.33 15 *e*P P 03 18 35.0 +0.2

DYA IAmb IAmb 03 18 37.1
comp=Z,19nm,1.0s
CCA1 Carnmenellis 73.36 16 *e*P P 03 18 35.6 +0.5
CCA1 IAmb IAmb 03 18 36.6
comp=Z,13nm,0.8s
KMI2 Kunming 73.44 290 P P 03 18 36.1 -0.1
KMI2 pP pP 03 18 48.8 +0.6
KMI2 pmax pmax
comp=Z,18nm,0.9s
BRLS Borolday 73.44 324 *e*P P 03 18 37.1 +1.4
BRLS Borolday 73.44 324 *e*P P 03 18 37.1 +1.4
CLZ Clausthal 73.44 6 *e*P P 03 18 36.4 +0.8
comp=Z,45nm,1.0s,baz=356,slow=5.8
CLZ Clausthal 73.44 6 P P 03 18 36.5 +0.8
BUG Bochum--Univer 73.63 8 *e*P P 03 18 37.1 +0.4
comp=Z,45nm,0.9s,baz=356,slow=5.8
BUG Bochum--Univer 73.63 8 P P 03 18 37.0 +0.4
BEL Belsk 73.70 359 *e*P P 03 18 37.9 +0.9
GTTG Gottingen 73.71 6 *e*P P 03 18 38.1 +0.9
comp=Z,58nm,1.0s,baz=356,slow=5.8
GTTG Gottingen 73.71 6 P P 03 18 38.2 +1.0
ARK Arkit 73.78 322 P P 03 18 38.2 +0.3
WIMM Wimmelburg 73.82 5 P P 03 18 38.3 +0.6
ARSB Arslanbob 73.83 321 IAmb IAmb 03 18 39.5
comp=Z,44nm,1.3s
KASTN Kahler Asten 73.95 7 *e*P P 03 18 39.2 +0.6
comp=Z,22nm,1.0s,baz=356,slow=5.8
RNPP9 Sopachiv 73.99 356 P P 03 18 38.2 -0.5
UCC Uccle 74.01 10 IAmb IAmb 03 18 55.5
comp=Z,18nm,0.9s
UCC Uccle 74.01 10 *d*P P 03 18 38.2 -0.6
UCC *d*pP pP 03 18 50.5 -0.4
UCC Uccle 74.01 10 P P 03 18 37.9 -1.0
RNPP8 Varash 74.06 356 P P 03 18 38.5 -0.7
CLL Collm 74.11 4⇑ *i*P P 03 18 39.5 +0.1
CLL *i* *PP pP 03 18 51.1 -0.3
CLL *e*S S 03 28 10.0 +1.0
CLL pmax pmax
comp=Z,34nm,1.0s
CLL Collm 74.11 4 IAmb IAmb 03 18 40.6
comp=Z,34nm,1.0s
CLL Collm 74.11 4 *e*P P 03 18 39.5 +0.1
comp=Z,31nm,0.9s,baz=356,slow=5.8
CLL Collm 74.11 4 P P 03 18 39.0 -0.4
comp=Z,450nmcomp=Z,38nm,1.0s
CLL Collm 74.11 4⇑ *i*P P 03 18 39.5 +0.1
comp=Z,34nm,1.0s
CLL *i* pP pP 03 18 51.1 -0.3
CLL *i* sP PcP 03 18 54.8 +0.4
comp=Z,36nm,1.1s
CLL *e*S S 03 28 10.0 +1.0
CHM Chimkent 74.15 324 *e*P P 03 18 40.1 +0.2
CHM pmax pmax
comp=Z,21nm,0.6s
CHM Chimkent 74.15 324 *e*P P 03 18 40.1 +0.2
comp=Z,21nm,0.6s
NEUB Neuenburg 74.15 5 *e*P P 03 18 40.2 +0.6
comp=Z,55nm,0.9s,baz=356,slow=5.8
NEUB Neuenburg 74.15 5 P P 03 18 40.3 +0.6
IUG luzhnay 74.15 323*c* *i*P P 03 18 40.2 +0.2
IUG pmax pmax
comp=Z,38nm,1.3s
IUG luzhnay 74.15 323⇑ *i*P P 03 18 40.2 +0.2
comp=Z,38nm,1.3s
HGN Heimansgroeve 74.19 9 P P 03 18 38.6 -1.4
QIZ Qiongzhong 74.35 281 IAmb IAmb 03 18 43.0
comp=Z,22nm,1.0s
MEM Membach 74.35 9 *d*P P 03 18 41.2 +0.3
comp=Z,20nm,1.0s
MEM *d*pP pP 03 18 52.6 -0.3
MEM Membach 74.35 9 P P 03 18 41.4 +0.6
MI28 Mi28,Pidlybu 74.38 354 P P 03 18 39.7 -1.3
SDDR Presa de Saban 74.39 79 P P 03 18 42.2 +0.5
UBBA Unterbreizbach 74.44 6 *e*P P 03 18 41.7 +0.5
comp=Z,14nm,1.3s,baz=356,slow=5.8
UBBA Unterbreizbach 74.44 6 P P 03 18 41.5 +0.2
AK21 Malin Array Si 74.45 354 P P 03 18 40.6 -0.8
AK23 Malin Array Si 74.46 354 P P 03 18 40.6 -0.9
AK22 Malin Array Si 74.46 354 P P 03 18 40.7 -0.8
BCLA Clavier 74.47 9 *d*P P 03 18 41.2 -0.4
comp=Z,8.4nm,1.2s
AK20 Malin Array Si 74.48 354 P P 03 18 40.8 -0.8
AK03 Malin Array Si 74.49 353 P P 03 18 40.8 -0.9
AK04 Malin Array Si 74.50 353 P P 03 18 40.6 -1.1
AK18 Malin Array Si 74.50 354 P P 03 18 41.2 -0.5
AK19 Malin Array Si 74.51 354 P P 03 18 41.3 -0.5
AKASG Malin Array Be 74.51 353 P P 03 18 41.2 -0.5
comp=Z,61nm,0.6s,baz=10.0,slow=6.0,SNR=54
comp=Z,61nm,0.6s
AKASG Malin Array Be 74.51 353 P P 03 18 41.3 -0.5
AKASG pmax pmax
comp=Z,89nm,0.7s
AKASG Malin Array Be 74.51 353 P P 03 18 41.3 -0.5
AKBB Malin Array Si 74.51 353*c* *i*P P 03 18 41.0 -0.8
AKBB pmax pmax
comp=Z,101nm,0.7s
AKBB Malin Array Si 74.51 353 P P 03 18 41.1 -0.8
KIEV Kiev 74.52 353 ⇑P P 03 18 41.4 -0.4
KIEV Kiev 74.52 353 P P 03 18 41.4 -0.4
KIEV Kiev 74.52 353 P P 03 18 41.2 -0.6
KIEV Kiev 74.52 353 P P 03 18 41.4 -0.4
BMRD Maredsous 74.54 10 *d*P P 03 18 42.3 +0.3
comp=Z,19nm,1.1s
BMRD *d*pP pP 03 18 53.1 -0.9
AK02 Malin Array Si 74.56 353 P P 03 18 41.2 -0.9
AK12 Malin Array Si 74.58 353 P P 03 18 41.2 -1.0
BRG Berggiesshubel 74.58 3 *e*P P 03 18 42.4 +0.2
comp=Z,32nm,1.0s,baz=356,slow=5.8
BRG Berggiesshubel 74.58 3 P P 03 18 42.5 +0.2
BRG Berggiesshubel 74.58 3 *i* P P 03 18 42.6 +0.4
BRG Amp 03 18 43.7
comp=Z,32nm,1.0s
BRG pP sP 03 18 58.2 -0.6
BRG Amp 03 18 59.7
comp=Z,24nm,1.0s
KHAM Kharkiv 74.58 349 P P 03 18 42.0 -0.3
OHH Osh 74.60 321 P P 03 18 41.7 -0.9
KSP Ksiaz 74.67 2 *e*P P 03 18 43.7 +1.0
MOX Moxa 74.70 5 *e*P P 03 18 43.5 +0.5
comp=Z,45nm,1.0s,baz=356,slow=5.8
MOX *e*pP pP 03 18 55.0 0.0
MOX *e*L L 03 44 04.3
comp=Z,616nm,18.3s
MOX Moxa 74.70 5 P P 03 18 43.5 +0.5
BAIF Baives 74.72 10 *e*P P 03 18 43.0 -0.1
BAIF pmax pmax
comp=Z,23nm,1.0s
DOU Dourbes 74.73 10 *d*P P 03 18 43.4 +0.3
DOU *d*pP pP 03 18 55.1 0.0
DOU *d*PcP PcP 03 18 58.3 +1.2
RCHB Rochefort 74.73 9 P P 03 18 43.5 +0.4
GIVF Givet 74.74 10 *e*P P 03 18 42.9 -0.3
GIVF pmax pmax
comp=Z,23nm,1.1s
KSH2 Kashi 74.75 318 P P 03 18 44.4 +0.8
KSH2 PcP pP 03 18 55.9 +0.3
KSH2 pmax pmax
comp=Z,80nm,0.9s
JSA Saint Aubin 74.80 14 *e*P P 03 18 43.9 +0.4
JSA IAmb IAmb 03 18 44.8
comp=Z,23nm,0.8s
PLN Plauen 74.89 5 *e*P P 03 18 44.3 +0.3
comp=Z,6.5nm,0.9s,baz=356,slow=5.8
CHVC Chvalec 74.92 2 *e*P P 03 18 44.5 +0.3
CHVC Chvalec 74.92 2 *e*P P 03 18 44.5 +0.3
TNS Taunus Mts 74.93 7 *e*P P 03 18 44.6 +0.3
comp=Z,28nm,1.0s,baz=356,slow=5.8
TNS *e*pP pP 03 18 56.4 0.0
TNS Taunus Mts 74.93 7 P P 03 18 44.8 +0.5
OSTC Ostas 74.95 2 *e*P P 03 18 44.8 +0.4
OSTC MLR MLR
comp=Z,1μm,16.7s
OSTC Ostas 74.95 2 *e*P P 03 18 44.8 +0.4
TANN Tannenbergstha 74.97 5 *e*P P 03 18 45.0 +0.4
comp=Z,13nm,1.0s,baz=356,slow=5.8
TANN *e*pP pP 03 18 56.6 0.0
TANN Tannenbergstha 74.97 5 P P 03 18 45.2 +0.7
UPC Upice 75.00 2 *e*P P 03 18 45.0 +0.3
UPC pmax pmax
comp=Z,30nm,0.9s
UPC Upice 75.00 2 *e*P P 03 18 45.0 +0.3
comp=Z,30nm,0.9s
DPC Dobruska-Polom 75.16 2 *e*P P 03 18 46.4 +0.7
DPC pmax pmax

comp=Z,16nm,0.7s
DPC Dobruska-Polom 75.16 2 *e*P **P 03 18 46.4 +0.7**
comp=Z,16nm,0.7s
DPC Dobruska-Polom 75.16 2 P **P 03 18 46.5 +0.8**
WLF Walferdange 75.30 9 P **P 03 18 43.2 -3.2**
WLF Walferdange 75.30 9 IAmb IAmb 03 18 48.5
comp=Z,42nm,1.1s
WLF Walferdange 75.30 9 *d*P **P 03 18 47.1 +0.8**
comp=Z,21nm,1.0s
WLF Walferdange 75.30 9 *e*P **P 03 18 47.2 +0.8**
comp=Z,42nm,1.1s,baz=356,slow=5.8
WLF *e*pP **pP 03 18 58.9 +0.4**
WLF Walferdange 75.30 9 P **P 03 18 47.4 +1.0**
OJC Ojcow 75.32 360 *e*P **P 03 18 47.0 +0.4**
OJC Ojcow 75.32 360 P **P 03 18 46.9 +0.4**
OJC Ojcow 75.32 360 P **P 03 18 46.8 +0.3**
LUBAR Lubar, Ukraine 75.38 354 P **P 03 18 46.0 -0.8**
BANI BANI 75.39 79 P **P 03 18 49.0 +1.5**
KRLC Kraliky 75.45 2 *e*P **P 03 18 47.8 +0.5**
KRLC Kraliky 75.45 2 *e*P **P 03 18 47.8 +0.5**
FLN La Foliniere 75.45 13 *e*P **P 03 18 46.8 -0.5**
FLN pmax pmax
comp=Z,30nm,1.2s
PRU Pruhonice 75.48 3 *e*P **P 03 18 48.0 +0.6**
PRU pmax pmax
comp=Z,7.0nm,0.6s
PRU Pruhonice 75.48 3 *e*P **P 03 18 48.0 +0.6**
comp=Z,7.4nm,0.6s
PRU Pruhonice 75.48 3 P **P 03 18 48.0 +0.6**
GRA3 Grafenberg Arr 75.57 5 P **P 03 18 48.7 +0.7**
STEB Steborice 75.60 1 *e*P **P 03 18 48.7 +0.6**
GRA1 Grafenberg Arr 75.63 5 IAmb IAmb 03 19 05.6
comp=Z,42nm,1.0s
GRA1 Grafenberg Arr 75.63 5 P **P 03 18 49.2 +0.8**
GRF Grafenberg Arr 75.63 5 *e*P **P 03 18 49.1 +0.8**
comp=Z,15nm,1.1s,baz=356,slow=5.8
GRF *e*pP **pP 03 19 00.6 +0.2**
GRF *e*L L 03 44 14.6
comp=Z,365nm,19.0s
GRFO Grafenberg 75.63 5 P **P 03 18 49.5 +1.2**
GRFO Grafenberg 75.63 5 P **P 03 18 49.5 +1.2**
GRFO Grafenberg 75.63 5 P **P 03 18 49.2 +0.9**
GRFO Grafenberg 75.63 5 P **P 03 18 49.0 +0.7**
SGMF Saint Gilles 75.66 15 *e*P **P 03 18 48.3 -0.2**
SGMF pmax pmax
comp=Z,23nm,1.0s
LDF La Druitiere 75.67 13 *e*P **P 03 18 47.9 -0.6**
LDF pmax pmax
comp=Z,38nm,1.2s
GRA2 Grafenberg Arr 75.68 5 P **P 03 18 49.5 +0.9**
OKC Ostrava-Krasne 75.70 1 *e*P **P 03 18 49.3 +0.6**
OKC Ostrava-Krasne 75.70 1 *e*P **P 03 18 49.3 +0.6**
OKC Ostrava-Krasne 75.70 1 P **P 03 18 49.4 +0.6**
BTK Batken 75.72 322 P **P 03 18 49.2 +0.1**
MORC Moravsky Berou 75.76 1 ⇑P **P 03 18 49.6 +0.4**
MORC Moravsky Berou 75.76 1 P **P 03 18 49.5 +0.4**
MORC Moravsky Berou 75.76 1 IAmb IAmb 03 18 50.5
comp=Z,28nm,0.9s
MORC Moravsky Berou 75.76 1 *e*P **P 03 18 49.3 +0.2**
MORC Moravsky Berou 75.76 1 P **P 03 18 49.5 +0.4**
GRR Gorron 75.77 14 *e*P **P 03 18 49.2 +0.1**
GRR pmax pmax
comp=Z,13nm,0.8s
LSA Lhasa 75.79 301 P **P 03 18 51.3 +1.2**
TNCH TengChong 75.80 293 P **P 03 18 50.0 +0.1**
TNCH pP PcP 03 19 02.4 0.0
TNCH pmax pmax
comp=Z,130nm,1.1s
KWP Kalwaria Pacla 75.87 358 *e*P **P 03 18 50.4 +0.7**
GRB4 Grafenberg Arr 75.87 5 P **P 03 18 50.5 +0.7**
DRK Karamyk 75.88 321 P **P 03 18 50.5 +0.2**
QUIF Quistinic 75.89 15 *e*P **P 03 18 50.6 +0.8**
QUIF pmax pmax
comp=Z,57nm,1.6s
GRB1 Grafenberg Arr 75.95 5 P **P 03 18 51.0 +0.8**
GRB3 Grafenberg Arr 76.01 5 P **P 03 18 51.3 +0.8**
ZVC Zvikov 76.02 3 *e*P **P 03 18 51.1 +0.6**
comp=Z,16nm,0.8s
GRB2 Grafenberg Arr 76.08 5 P **P 03 18 51.6 +0.7**
STHS Stebnicka Huta 76.11 359 *e*P **P 03 18 50.8 -0.3**
STHS pmax pmax
comp=Z,8.0nm,0.8s
STHS Stebnicka Huta 76.11 359 *e*P **P 03 18 50.8 -0.3**
NIE Niedzica 76.12 359 *e*P **P 03 18 52.1 +0.9**
MAUC Maruska 76.17 1 *e*P **P 03 18 52.1 +0.7**
TREC Trest 76.20 3 *e*P **P 03 18 52.0 +0.4**
TREC Trest 76.20 3 *e*P **P 03 18 52.0 +0.4**
VRAC Vranov 76.21 2 ⇑P **P 03 18 52.3 +0.7**
VRAC Vranov 76.21 2 P **P 03 18 52.6 +1.0**
VRAC Vranov 76.21 2 *e*P **P 03 18 52.1 +0.5**
VRAC Vranov 76.21 2 P **P 03 18 52.3 +0.7**
GRB5 Grafenberg Arr 76.24 5 P **P 03 18 52.2 +0.4**
GRC4 Grafenberg Arr 76.25 5 P **P 03 18 52.5 +0.6**
WET Wettzell 76.26 4 *e*P **P 03 18 52.6 +0.7**
comp=Z,24nm,1.1s,baz=356,slow=5.8
WET Wettzell 76.26 4 P **P 03 18 52.6 +0.7**
KHC Kasperske Hory 76.30 4 *e*P **P 03 18 52.9 +0.7**
KHC *e* 03 19 04.0
KHC pmax pmax
comp=Z,10.0nm,0.7s
KHC Kasperske Hory 76.30 4 *e*P **P 03 18 52.9 +0.7**
comp=Z,9.5nm,0.7s
KHC *e*pP **PcP 03 19 04.0 0.0**
LANS Liptovska Anna 76.39 360 *e*P **P 03 18 54.0 +1.3**
LANS pmax pmax
comp=Z,21nm,1.0s
LANS Liptovska Anna 76.39 360 *e*P **P 03 18 54.0 +1.3**
STU Stuttgart 76.42 7 *e*P **P 03 18 53.5 +0.6**
comp=Z,76nm,1.2s,baz=356,slow=5.8
STU *e*pP **pP 03 19 05.0 +0.1**
STU Stuttgart 76.42 7 P **P 03 18 53.4 +0.6**
GRC3 Grafenberg Arr 76.45 5 P **P 03 18 53.6 +0.6**
KRUC Moravsky 76.45 2 *e*P **P 03 18 53.1 +0.1**
KRUC Moravsky 76.45 2 P **P 03 18 53.4 +0.4**
GRC2 Grafenberg Arr 76.46 5 P **P 03 18 53.5 +0.5**
CLF Chambon-Foret 76.52 12 P **P 03 18 54.5 +1.1**
KOLS Kolonicke sedl 76.58 358 *e*P **P 03 18 54.9 +1.2**
KOLS pmax pmax
comp=Z,27nm,0.8s
KOLS Kolonicke sedl 76.58 358 P **P 03 18 54.9 +1.2**
KOLS Kolonicke sedl 76.58 358 *e*P **P 03 18 54.9 +1.2**
GEC2 GERESS Array S 76.59 4 IAmb IAmb 03 18 55.4
comp=Z,21nm,1.0s
GEC2 GERESS Array S 76.59 4 *e*P **P 03 18 54.1 +0.2**
comp=Z,21nm,1.0s,baz=356,slow=5.8
GERES GERESS Array B 76.59 4 P **P 03 18 54.2 +0.3**
comp=Z,13nm,0.9s,baz=343,slow=4.2,SNR=99
comp=Z,13nm,0.9s
GERES GERESS Array B 76.59 4 P **P 03 18 54.1 +0.2**
CKRC Cesky Krumlov 76.64 3 *e*P **P 03 18 54.3 +0.2**
CKRC pmax pmax
comp=Z,5.0nm,0.7s
CKRC Cesky Krumlov 76.64 3 *e*P **P 03 18 54.3 +0.2**
comp=Z,4.9nm,0.7s
JAVC Velka Javorina 76.68 1 *e*P **P 03 18 55.7 +1.4**
JAVC Velka Javorina 76.68 1 P **P 03 18 56.0 +1.7**
BFO Black Forest 76.80 7 P **P 03 18 55.6 +0.6**
BFO pmax pmax
comp=Z,21nm,1.0s
BFO Black Forest 76.80 7 P **P 03 18 55.6 +0.6**
BFO IAmb IAmb 03 19 11.7
comp=Z,21nm,1.0s
BFO Black Forest 76.80 7 *e*P **P 03 18 55.2 +0.2**
comp=Z,13nm,0.9s,baz=356,slow=5.8
KMPD K-Podol'skiy 76.80 355 P **P 03 18 53.5 -1.4**
ECH Echery 76.82 8 P **P 03 18 55.7 +0.5**
ECH Echery 76.82 8 IAmb IAmb 03 19 12.6
comp=Z,34nm,1.0s
ECH Echery 76.82 8 P **P 03 18 55.6 +0.5**
ECH Echery 76.82 8 P **P 03 18 55.6 +0.5**
GAR Garm 76.84 322 P **P 03 18 55.7 +0.2**
HAU Haudompre 76.96 9 *e*P **P 03 18 55.6 -0.3**
HAU pmax pmax
comp=Z,23nm,1.0s
SMOL Smolenice 77.02 1 *e*P **P 03 18 57.7 +1.5**
SMOL pmax pmax
comp=Z,13nm,0.8s
KECS Kecovo 77.06 359 *e*P **P 03 18 57.3 +0.9**
KECS pmax pmax
comp=Z,36nm,1.0s
KECS Kecovo 77.06 359 P **P 03 18 57.5 +1.1**
KECS Kecovo 77.06 359 *e*P **P 03 18 57.3 +0.9**
SORM Soroca 77.12 354 ⇑P **P 03 18 56.4 -0.4**
SORM Soroca 77.12 354 P **P 03 18 56.3 -0.4**
DRBR Darabani 77.15 355 ⇓P **P 03 18 56.5 -0.5**
MODS Modra-Piesok 77.16 1 *e*P **P 03 18 58.0 +1.0**
MODS pmax pmax
comp=Z,49nm,0.2s
MODS Modra-Piesok 77.16 1 P **P 03 18 58.2 +1.2**
MODS Modra-Piesok 77.16 1 *e*P **P 03 18 58.0 +1.0**
FUR Furstenfeldbru 77.16 5 *e*P **P 03 18 57.6 +0.6**
comp=Z,30nm,1.0s,baz=356,slow=5.8
FUR *e*pP **pP 03 19 09.2 +0.1**
FUR Furstenfeldbru 77.16 5 P **P 03 18 56.0 -1.0**
HINF Hinteralfeld 77.19 9 *e*P **P 03 18 56.8 -0.4**
HINF pmax pmax
comp=Z,17nm,1.2s
ABAH Abaujker 77.24 359 P **P 03 18 58.3 +1.0**
SLE Schleitheim 77.38 7 P **P 03 18 58.4 +0.2**
TRPA Tarpa 77.38 358 P **P 03 18 59.0 +0.8**
WINA Alland / Wiene 77.40 2 *i* P **P 03 18 59.3 +0.9**
SNR=17
LOR Lormes 77.45 11 *e*P **P 03 18 58.2 -0.4**
LOR pmax pmax
comp=Z,28nm,1.1s
CHGR Chuyangaron 77.56 322 *c i* P **P 03 18 59.4 -0.1**
CHGR pmax pmax
comp=Z,183nm,0.9s
CONA Conrad Observa 77.58 2 *i* P **P 03 19 00.1 +0.7**
comp=Z,43nm,1.0s,SNR=40
MOA Molln 77.61 3 *i* P **P 03 18 59.9 +0.4**
comp=Z,14nm,1.1s,SNR=12
MOA Molln 77.61 3 P **P 03 18 60.0 +0.4**
MFF Saint Martin d 77.62 14 *e*P **P 03 18 59.5 -0.1**
MFF pmax pmax
comp=Z,130nm,0.9s
MANEM Manem 77.62 320 IAmb IAmb 03 19 02.1
comp=Z,77nm,1.0s
PSZ Piszkesteto 77.63 360 ⇑P **P 03 19 00.4 +0.7**
PSZ Piszkesteto 77.63 360 P **P 03 19 00.9 +1.2**
PSZ Piszkesteto 77.63 360 P **P 03 19 00.7 +1.0**
BOURR Bourrignon 77.64 8 P **P 03 19 00.5 +0.7**
RJOB Jochberg 77.66 4 P **P 03 19 00.5 +0.6**
SRO Srobarova 77.73 1 P **P 03 19 01.2 +1.1**
BIOA Bad Ischl, Aus 77.74 4 *i* P **P 03 19 00.4 +0.1**
comp=Z,18nm,1.2s,SNR=11
BUR08 Bucovina Ar. S 77.78 356 IAmb IAmb 03 19 01.9
comp=Z,22nm,0.8s
RETA Rentte 77.81 6 *i* P **P 03 19 01.0 +0.3**
comp=Z,23nm,1.4s,SNR=11
BURAR Bucovina Array 77.81 356 ⇑P **P 03 19 00.8 +0.1**
BURAR Bucovina Array 77.81 356 P **P 03 19 00.9 +0.1**
BURAR Bucovina Array 77.81 356 P **P 03 19 01.3 +0.5**
BMR Baia Mare 77.81 357 ⇑P **P 03 19 01.1 +0.5**
BMR Baia Mare 77.81 357 P **P 03 19 01.1 +0.5**
BMR Baia Mare 77.81 357 P **P 03 19 01.2 +0.5**
RONA Rosalia, Austr 77.81 2 *i* P **P 03 19 01.4 +0.7**
comp=Z,20nm,0.9s,SNR=16
SOP Sopron 77.84 2 P **P 03 19 01.6 +0.8**
SOP Sopron 77.84 2 P **P 03 19 01.8 +1.1**
AVF Avril sur Loir 77.86 11 *e*P **P 03 19 00.4 -0.5**
AVF pmax pmax
comp=Z,12nm,0.7s
DAVA Damuels 77.95 7 *i* P **P 03 19 01.9 +0.3**
comp=Z,8.3nm,0.9s,SNR=5.9
DAVA Damuels 77.95 7 P **P 03 19 02.5 +0.8**
MOTA Moosalm 77.97 6 *i* P **P 03 19 02.0 +0.3**
comp=Z,41nm,1.0s,SNR=24
LESA Schwarzleotal 77.97 5 *i* P **P 03 19 02.0 +0.4**
comp=Z,30nm,1.4s,SNR=18
WATA Walderalm 78.00 5 *i* P **P 03 19 02.4 +0.5**
comp=Z,38nm,1.1s,SNR=17
BGF Bois d'Agland 78.04 12 *e*P **P 03 19 01.5 -0.4**
BGF pmax pmax
comp=Z,29nm,1.2s
SMF Signal de Mont 78.06 11 *e*P **P 03 19 01.5 -0.6**
SMF pmax pmax
comp=Z,31nm,1.2s
BUD Budapest 78.06 0 P **P 03 19 02.6 +0.6**
WTTA Wattenberg 78.08 5 *i* P **P 03 19 03.1 +0.7**
comp=Z,36nm,0.8s,SNR=19
WTTA Wattenberg 78.08 5 P **P 03 19 03.2 +0.9**
SQTA Sankt Quirin 78.10 6 *i* P **P 03 19 03.0 +0.6**
comp=Z,53nm,1.1s,SNR=28
PGRA Graciosa 78.14 36 *e*P **P 03 19 04.1 +1.5**
PGRA *i* IAmb IAmb 03 19 06.7
comp=Z,68nm,1.2s
SWI Sorong 78.20 251 P **P 03 19 03.8 +0.6**
comp=Z,73nm,0.9s
SIJI Sorong 78.21 251 P **P 03 19 03.7 +0.5**
comp=Z,59nm,0.9s
ERBR Yeremizino-Bor 78.23 345 *e*P **P 03 19 02.8 -0.2**
ERBR *e**PP **PcP 03 19 13.0 +0.7**
ERBR pmax pmax
comp=Z,116nm,0.8s
BSZH Besenyszg 78.24 359 P **P 03 19 03.6 +0.6**
ARSA Arzberg 78.25 3 IAmb IAmb 03 19 05.1
comp=Z,31nm,1.0s
ARSA Arzberg 78.25 3 *i* P **P 03 19 04.0 +0.9**
comp=Z,25nm,0.9s,SNR=19
ARSA Arzberg 78.25 3 P **P 03 19 04.1 +1.0**
PCED Cedros 78.25 36 *e*P **P 03 19 04.3 +1.1**
PCED *i* IAmb IAmb 03 19 05.5
comp=Z,62nm,1.1s
BNALP Bannalp 78.26 8 P **P 03 19 04.2 +0.9**
FETA Feichten 78.27 6 *i* P **P 03 19 04.0 +0.6**
comp=Z,36nm,1.0s,SNR=23
CALA Caldeira 78.29 36 *e*P **P 03 19 04.2 +0.6**
CALA *i* IAmb IAmb 03 19 06.0
comp=Z,99nm,1.1s
CABF La Chapelle 78.32 9 *e*P **P 03 19 03.6 0.0**
CABF pmax pmax
comp=Z,28nm,1.0s
ROSA Rosais 78.33 36 *e*P **P 03 19 04.9 +1.3**
ROSA *i* IAmb IAmb 03 19 06.2
comp=Z,62nm,0.9s
KBA Koelnbreinsper 78.34 4 *i* P **P 03 19 04.8 +1.0**
comp=Z,53nm,1.0s,SNR=41
KBA Koelnbreinsper 78.34 4 P **P 03 19 05.0 +1.1**
MESR Meseneti 78.35 357 ⇑P **P 03 19 04.8 +1.1**
SESA Seetaler Alpe, 78.36 3 *i* P **P 03 19 04.9 +1.0**
SNR=13
MPLH Magyarpolny 78.36 1 P **P 03 19 05.0 +1.3**
HOR Horta 78.37 36 *e*P **P 03 19 05.2 +1.3**
HOR *i* IAmb IAmb 03 19 06.2
comp=Z,73nm,0.8s
IMP Imphal 78.37 297 *e*P **P 03 19 04.2 +0.1**
GIRR Girov 78.41 355 ⇑P **P 03 19 03.8 -0.2**
GIMEL St. Georges / 78.41 9 P **P 03 19 05.0 +0.9**
BIZ Bicaz 78.44 355 ⇑P **P 03 19 04.8 +0.7**
PMAN Manadas 78.46 36 *e*P **P 03 19 05.7 +1.3**
PMAN *i* IAmb IAmb 03 19 06.8
comp=Z,76nm,1.3s
PICO Pico 78.46 36 *e*P **P 03 19 05.5 +1.0**
PICO *i* IAmb IAmb 03 19 08.3
comp=Z,72nm,1.8s
GOF Gofitskoye 78.46 343 *i* P **P 03 19 04.7 +0.4**
PCAN Candelaria 78.47 36 *e*P **P 03 19 05.6 +1.1**
PCAN *i* IAmb IAmb 03 19 06.8
comp=Z,37nm,0.9s
PPNO Prainha do Nor 78.54 36 *e*P **P 03 19 06.2 +1.3**
PPNO *i* IAmb IAmb 03 19 07.3
comp=Z,51nm,1.0s
ABTA Abfaltersbach 78.64 5 *i* P **P 03 19 05.5 +0.2**
comp=Z,28nm,1.1s,SNR=13
FUORN Ofenpass-Fuorn 78.64 6 IAmb IAmb 03 19 23.1
comp=Z,36nm,1.1s
FUORN Ofenpass-Fuorn 78.64 6 P **P 03 19 06.7 +1.1**
PAGU Agualva, Azore 78.64 35 *e*P **P 03 19 06.8 +1.5**
PAGU *i* IAmb IAmb 03 19 07.8
comp=Z,30nm,0.9s
VASR Vaslui 78.65 354 ⇓P **P 03 19 05.6 +0.3**
DRGR 78.71 358 ⇑P **P 03 19 05.9 +0.2**
DRGR 78.71 358 P **P 03 19 05.9 +0.2**
DRGR 78.71 358 P **P 03 19 06.1 +0.3**
TUE Stuetta 78.72 7 IAmb IAmb 03 19 23.5
comp=Z,17nm,1.0s
TUE Stuetta 78.72 7 P **P 03 19 07.0 +1.0**
CJR Cluj-Napoca 78.77 357 ⇑P **P 03 19 07.2 +1.1**
CJR Cluj-Napoca 78.77 357 P **P 03 19 07.1 +1.1**
LEOM Leova 78.79 354 P **P 03 19 05.9 -0.1**
MYKA Terra Mystica 78.80 4 *i* P **P 03 19 06.3 +0.1**
comp=Z,17nm,1.1s,SNR=7.7
SOKA Soboth 78.81 3 *i* P **P 03 19 06.7 +0.5**
comp=Z,53nm,1.0s,SNR=35
MARR Marisel-Cluj 78.82 357 ⇑P **P 03 19 06.7 +0.3**
SHL Shillong 78.82 299 IAmb IAmb 03 19 06.2
comp=Z,28nm,0.8s
SHL Shillong 78.82 299 *e*P **P 03 19 05.9 -0.9**
SHL IAmb IAmb 03 19 10.1
comp=Z,12nm,0.6s
TESR Tescani 78.84 355 ⇑P **P 03 19 06.1 -0.3**
TESR Tescani 78.84 355 P **P 03 19 06.3 -0.1**
PERS Pernice 78.85 3 *i* P **P 03 19 06.9 +0.4**
PERS *i* PcP **pP 03 19 18.6 0.0**
PERS *i* pP **sP 03 19 22.4 -0.7**
SHAA Shahritus 78.90 322 IAmb IAmb 03 19 08.4
comp=Z,108nm,1.0s
OBKA Obir 78.96 3 *i* P **P 03 19 07.7 +0.7**
comp=Z,82nm,0.8s,SNR=45
OBKA Obir 78.96 3 P **P 03 19 07.8 +0.7**
PRED Cave del Predi 78.99 4 IAmb IAmb 03 19 23.8
comp=Z,27nm,1.0s
ONER Baraj Valea Uz 79.03 355 ⇑P **P 03 19 08.1 +0.7**
GROS Grobnik 79.03 3 *i* P **P 03 19 07.9 +0.4**
BEHE Becsehely 79.05 2 IAmb IAmb 03 19 25.7
comp=Z,15nm,0.9s
BEHE Becsehely 79.05 2 P **P 03 19 05.8 -1.7**
KOGS Kog 79.07 2 *i* P **P 03 19 08.0 +0.4**
CIMO Cimolais 79.07 5 P **P 03 19 07.8 +0.1**
RJF Les Rejaudoux 79.11 13 *e*P **P 03 19 07.4 -0.4**
RJF pmax pmax
comp=Z,69nm,1.2s
CADS Cadrg 79.21 4 *i* P **P 03 19 07.9 -0.5**
LABN Labinsk 79.24 345 *e*P **P 03 19 08.2 -0.4**
LABN *e**PP **pP 03 19 19.1 -1.6**
LABN pmax pmax
comp=Z,56nm,1.6s
GHRR 79.25 354 ⇓P **P 03 19 09.7 +1.1**
GHRR 79.25 354 P **P 03 19 09.5 +0.9**
SIRR Siria 79.26 358 ⇑P **P 03 19 09.3 +0.7**
MDB Medias 79.31 356 ⇑P **P 03 19 09.8 +0.9**
MDB Medias 79.31 356 P **P 03 19 09.8 +0.9**
TURR Turia 79.33 355 ⇑P **P 03 19 10.1 +1.0**
MORH Mrgy, Hungar 79.33 0 ⇑P **P 03 19 09.2 +0.2**
MORH Mrgy, Hungar 79.33 0 ⇑*i*P **P 03 19 09.0 0.0**
MORH Mrgy, Hungar 79.33 0 P **P 03 19 09.3 +0.3**
EVN Everest 79.35 304 P **P 03 19 10.7 +0.5**
LFF La Frestale 79.37 13 *e*P **P 03 19 09.1 -0.1**
LFF pmax pmax
comp=Z,450nm,1.7s
VLDR Vladesti 79.42 354 ⇑P **P 03 19 10.0 +0.5**
DOPR Dopca 79.44 356 ⇑P **P 03 19 10.7 +1.0**
SABO M.te Sabotino 79.45 4 IAmb IAmb 03 19 26.6
comp=Z,29nm,1.0s
LPL La Plagne 79.47 9 *e*P **P 03 19 10.6 +0.5**
LPL pmax pmax
comp=Z,9.0nm,0.9s
VRI Vrincioaia 79.48 355 ⇑P **P 03 19 10.2 +0.3**
VRI Vrincioaia 79.48 355 P **P 03 19 10.1 +0.3**
VRI Vrincioaia 79.48 355 P **P 03 19 10.3 +0.3**
LPG La Plagne 79.48 9 *e*P **P 03 19 10.9 +0.6**
LPG pmax pmax
comp=Z,17nm,1.2s
SSB Saint Sauveur 79.49 11 P **P 03 19 11.0 +1.1**
SSB Saint Sauveur 79.49 11 IAmb IAmb 03 19 27.2
comp=Z,20nm,1.1s
SSB Saint Sauveur 79.49 11 P **P 03 19 11.0 +1.1**
PLOR Plostina 79.50 355 ⇑P **P 03 19 10.3 +0.3**
PLOR Plostina 79.50 355 P **P 03 19 10.3 +0.3**
COVR Voineasa-Covas 79.53 355 ⇑P **P 03 19 11.4 +1.2**
CAF Calviac 79.55 12 *e*P **P 03 19 10.0 -0.3**
CAF pmax pmax
comp=Z,10.0nm,1.0s
ODBI Odobesti 79.57 354 ⇑P **P 03 19 10.8 +0.5**
KIV Kislovodsk 79.59 343 ⇑P **P 03 19 11.4 +0.8**
KIV Kislovodsk 79.59 343 *e*P **P 03 19 11.1 +0.5**
KIV pmax pmax
comp=Z,72nm,0.9s
KIV MLR MLR
comp=Z,90nm,19.0s
KIV Kislovodsk 79.59 343 P **P 03 19 11.1 +0.5**
KIV Kislovodsk 79.59 343 P **P 03 19 11.4 +0.8**
KIV Kislovodsk 79.59 343 P **P 03 19 11.4 +0.8**
KIV PcP **PcP 03 19 18.9 +0.5**
DEV Deva 79.62 357 P **P 03 19 11.5 +0.9**
SAHR Sahastru 79.62 355 ⇓P **P 03 19 11.9 +1.2**
NEGRR Negrea 79.74 354 ⇓P **P 03 19 12.2 +0.9**
IZVR Izvoarele 79.74 354 ⇑P **P 03 19 11.7 +0.5**
KBZ Khabaz 79.78 343 P **P 03 19 12.3 +0.8**
comp=Z,57nm,0.9s,baz=333,slow=3.4,SNR=98
comp=Z,57nm,0.9s
KBZ Khabaz 79.78 343 *c i* P **P 03 19 12.2 +0.8**
KBZ pmax pmax
comp=Z,62nm,0.9s
SCHL Schela 79.78 354 ⇓P **P 03 19 11.8 +0.3**
SIM Simferopol' 79.80 349 *e*P **P 03 19 11.2 -0.4**
SIM pmax pmax
comp=Z,29nm,0.8s
TNR Turnu Rosu 79.81 356 ⇑P **P 03 19 12.1 +0.5**
TNR Turnu Rosu 79.81 356 P **P 03 19 12.1 +0.5**
SHA1 Shidzhatmaz 79.81 343 *c i* P **P 03 19 12.6 +0.6**
NCK Nalchik 79.88 342 *c i* P **P 03 19 13.2 +1.1**
NCK pmax pmax
comp=Z,164nm,0.8s
MLR Muntele Rosu 79.89 355 ⇑P **P 03 19 13.1 +0.8**
MLR Muntele Rosu 79.89 355 P **P 03 19 13.0 +0.8**
MLR Muntele Rosu 79.89 355 IAmb IAmb 03 19 14.4
comp=Z,50nm,1.5s
MLR Muntele Rosu 79.89 355 P **P 03 19 13.7 +1.4**
BZS Buzias 79.91 358 ⇑P **P 03 19 12.8 +0.6**
BZS Buzias 79.91 358 P **P 03 19 12.8 +0.6**
BZS Buzias 79.91 358 P **P 03 19 12.6 +0.4**
VIVF Saint-Julien-l 79.92 10 *e*P **P 03 19 12.2 -0.1**
VIVF pmax pmax
comp=Z,15nm,1.1s
NEHR Nehoiu 79.94 355 ⇑P **P 03 19 12.7 +0.3**
ORIF Oris-en-Rattie 79.98 10 *e*P **P 03 19 12.7 0.0**
ORIF pmax pmax
comp=Z,9.0nm,1.0s
VOIR 79.99 356 ⇑P **P 03 19 13.4 +0.6**
VOIR 79.99 356 P **P 03 19 13.3 +0.6**
VOIR 79.99 356 P **P 03 19 13.3 +0.6**
LOT Lotru 80.03 357 ⇓P **P 03 19 12.9 0.0**
LOT Lotru 80.03 357 P **P 03 19 12.7 -0.3**
TLCR 80.03 353 ⇓P **P 03 19 13.2 +0.3**
TLCR 80.03 353 P **P 03 19 13.1 +0.3**
ARR Arges 80.08 356 ⇑P **P 03 19 13.9 +0.7**
ARR Arges 80.08 356 P **P 03 19 13.9 +0.7**
CFR Carcaliu 80.08 354 ⇑P **P 03 19 13.3 +0.2**
CFR Carcaliu 80.08 354 P **P 03 19 13.3 +0.2**
GZR Gura Zlata 80.11 357 ⇑P **P 03 19 13.9 +0.5**
GZR Gura Zlata 80.11 357 P **P 03 19 13.8 +0.5**
KLP Kalpa 80.22 312 *e*P **P 03 19 14.6 +0.1**
ISR Istrita 80.24 355 ⇑P **P 03 19 14.2 +0.1**
ISR Istrita 80.24 355 P **P 03 19 14.1 +0.1**
MBDF Montbardon 80.25 9 *e*P **P 03 19 15.0 +0.8**
MBDF pmax pmax
comp=Z,17nm,0.7s
TPGR Topolog 80.39 353 ⇑P **P 03 19 14.8 0.0**
FRGS Fruska Gora 80.39 360 ⇑*i*P **P 03 19 15.0 +0.2**
SOC Sochi 80.43 345 *e*P **P 03 19 14.0 -1.0**
SOC *e* 03 22 15.7
SOC *e*PPP PPP 03 24 08.6
SOC *e*S **S 03 29 16.4 -1.5**
SOC *e*SS **SS 03 34 32.0 +3.4**
SOC *e*SSS SSS 03 37 58.8
SOC pmax pmax
comp=Z,39nm,0.8s
DHRM DHARAMSHALA 80.43 314 *e*P **P 03 19 15.6 +0.1**
JURR Jurilovca 80.44 353 ⇓P **P 03 19 14.8 -0.2**
NIL Nilore 80.44 317 P **P 03 19 16.0 +0.7**
NIL pmax pmax
comp=Z,119nm,1.0s
NIL Nilore 80.44 317 P **P 03 19 16.0 +0.7**
NIL Nilore 80.44 317 P **P 03 19 16.0 +0.7**
MYLDM Lahad Datu 80.47 265 IAmb IAmb 03 19 57.0
comp=Z,38nm,1.1s
MYLDM Lahad Datu 80.47 265 P **P 03 19 16.2 +0.6**
comp=Z,37nm,1.1s
MYLDM Lahad Datu 80.47 265 P **P 03 19 17.3 +1.7**
VSLR Vesyoloye 80.50 345 ⇑*e*P **P 03 19 15.6 +0.2**
VSLR pmax pmax
comp=Z,57nm,1.0s
CHTO Chiang Mai 80.61 289 P **P 03 19 15.8 -0.5**
CHTO pmax pmax
comp=Z,32nm,1.0s
CHTO Chiang Mai 80.61 289 P **P 03 19 15.8 -0.5**
CHTO IAmb IAmb 03 19 17.1
comp=Z,32nm,1.0s

CHTO	Chiang Mai	80.61	289		P		P	03 19 16.1	-0.2
	comp=Z,32nm,0.8s								
CHTO	Chiang Mai	80.61	289		P		P	03 19 16.2	-0.2
CHTO	Chiang Mai	80.61	289		P		P	03 19 16.0	-0.2
HERR	Herculane	80.63	358	⇓	P		P	03 19 16.5	+0.4
MDVR	Moldovita	80.74	358	⇑	P		P	03 19 17.1	+0.4
PGAV	Gavieira, Arco	80.75	20		eP		P	03 19 17.8	+0.9
PGAV					epP		pP	03 19 29.0	-0.1
BLY	Banja Luka	80.78	2	⇑	P		P	03 19 17.2	+0.3
BLY	Banja Luka	80.78	2	⇑	iP		P	03 19 17.0	+0.1
BLY	Banja Luka	80.78	2		P		P	03 19 17.3	+0.4
TIRR	Tirgusor	80.78	353	⇑	P		P	03 19 17.0	+0.2
TIRR	Tirgusor	80.78	353		P		P	03 19 17.0	+0.2
TIRR	Tirgusor	80.78	353		P		P	03 19 17.9	+0.3
ISO	Isola	80.82	9		P		P	03 19 18.5	+1.4
SRE	Strehaia	80.83	357	⇓	P		P	03 19 17.9	+0.7
SRE	Strehaia	80.83	357		P		P	03 19 17.8	+0.7
SJPF	Ste Jean	80.88	15		eP		P	03 19 18.6	+1.1
SJPF					pmax		pmax		
	comp=Z,13nm,1.0s								
CMAR	Chiang Mai Arr	80.90	289		P		P	03 19 18.1	+0.3
	comp=Z,70nm,0.8s,baz=17,slow=5.5,SNR=254								
CMAR					LR		LR	03 58 30.5	
	comp=Z,87nm,18.8s,baz=45,slow=38								
	comp=Z,70nm,0.8s								
HUMR	Humele	80.90	356	⇑	P		P	03 19 17.0	-0.5
HUMR	Humele	80.90	356		P		P	03 19 17.2	-0.3
RUSF	Rustrel	80.91	10		P		P	03 19 19.2	+1.6
ZCCA	Zocca	80.94	6		IAmb		IAmb	03 19 52.2	
	comp=Z,54nm,1.2s								
ATE	Arette	80.98	15		P		P	03 19 19.3	+1.3
TEKS	Tekeris	81.00	360	⇑	iP		P	03 19 18.1	0.0
AKT	Akhty	81.03	339	⇑	iP		P	03 19 18.8	+0.4
AKT					e			03 22 22.8	
AKT					ePPP		PPP	03 24 11.0	
AKT					eSS		SS	03 34 37.1	-0.9
AKT					pmax		pmax		
	comp=Z,124nm,0.9s								
SMLA	Simla	81.03	313		eP		P	03 19 18.7	+0.3
PCAB	Cabril	81.05	20		eP		P	03 19 19.7	+1.3
PCAB					epP		pP	03 19 31.3	+0.8
MTLF	Montolieu	81.13	13		eP		P	03 19 18.6	-0.2
MTLF					pmax		pmax		
	comp=Z,15nm,1.0s								
ICOR	Ion Corvin	81.16	354	⇓	P		P	03 19 19.9	+1.0
SBF	Sospel	81.17	9		eP		P	03 19 18.8	-0.2
SBF					pmax		pmax		
	comp=Z,30nm,0.9s								
EPF	Esparros	81.19	14		eP		P	03 19 15.9	-3.2
EPF					pmax		pmax		
	comp=Z,9.0nm,1.1s								
ETSF	Etsaut	81.19	15		eP		P	03 19 19.4	+0.2
ETSF					pmax		pmax		
	comp=Z,16nm,0.9s								
ESCA	l'Escarene	81.19	9		P		P	03 19 19.8	+0.7
PBRG	Braganca	81.21	19		eP		P	03 19 20.1	+0.9
PBRG					iAmb		IAmb	03 19 23.5	
	comp=Z,28nm,1.9s								
PBRG					epP		pP	03 19 32.2	+0.8
KBL	Kabul	81.27	320		P		P	03 19 18.9	-1.0
KBL					pmax		pmax		
	comp=Z,53nm,0.8s								
KBL	Kabul	81.27	320		P		P	03 19 18.9	-1.0
KBL	Kabul	81.27	320		P		P	03 19 18.8	-1.0
COPA	Copaceanca	81.28	356	⇓	P		P	03 19 19.4	-0.1
NPW	Naypyitaw	81.34	292		P		P	03 19 17.6	-2.6
SEKA	Sheki	81.40	339		P		P	03 19 20.9	+0.6
POLO	Lamas de Olo	81.42	20		eP		P	03 19 21.8	+1.3
POLO					epP		pP	03 19 33.4	+0.8
POLO					iAmb		IAmb	03 19 38.6	
	comp=Z,20nm,1.1s								
PTO	Porto	81.48	21		eP		P	03 19 21.5	+0.9
PTO					iAmb		IAmb	03 19 23.9	
	comp=Z,55nm,1.7s								
PTO					epP		pP	03 19 33.6	+0.9
PVRL	Vila Real	81.53	20		eP		P	03 19 22.1	+1.2
PVRL					iAmb		IAmb	03 19 25.1	
	comp=Z,44nm,1.9s								
PVRL					epP		pP	03 19 33.9	+0.8
LMR	La Mourre	81.61	9		eP		P	03 19 21.3	0.0
LMR					pmax		pmax		
	comp=Z,16nm,1.2s								
BBLS	Lazi&#263i	81.68	360	⇑	iP		P	03 19 22.5	+0.7
CEST	Esterri de Car	81.74	13		iAmb		IAmb	03 19 39.9	
	comp=Z,24nm,1.1s								
MNGR	Mingechevir, A	81.84	339		P		P	03 19 23.3	+0.8
EPOS	Posof	81.97	342		P		P	03 19 24.6	+1.2
PVIS	Viseu	82.03	21		eP		P	03 19 24.8	+1.1
PVIS					epP		pP	03 19 36.6	+0.9
PLVB	Pleven	82.05	356	⇓	P		P	03 19 24.0	+0.3
GANJ	Ganja	82.12	340		P		P	03 19 24.6	+0.5
SJES	Sjenica	82.28	359	⇑	iP		P	03 19 25.9	+0.9
UPM	Unac-Piva	82.34	0	⇑	iP		P	03 19 25.2	-0.2
FDMO	Fiordimonte	82.37	5		iAmb		IAmb	03 19 42.9	
	comp=Z,24nm,1.0s								
KLINJ	Klinje	82.38	1		eP		P	03 19 28.7	+3.3
MTE	Manteigas	82.41	20		eP		P	03 19 27.0	+1.3
MTE					iAmb		IAmb	03 19 44.4	
	comp=Z,45nm,1.4s								
MTE	Manteigas	82.41	20		P		P	03 19 27.3	+1.7
CASP	Castiglione de	82.49	6		IAmb		IAmb	03 19 43.0	
	comp=Z,60nm,1.6s								
PCAS	Casmilo, Conde	82.54	21		eP		P	03 19 26.7	+0.4
PCAS					iAmb		IAmb	03 19 30.4	
	comp=Z,70nm,1.6s								
PCAS					epP		pP	03 19 37.6	-0.8
NRCA	Norcia	82.57	5		IAmb		IAmb	03 19 44.0	
	comp=Z,25nm,0.9s								
PGF	Pioggiola	82.60	8		eP		P	03 19 26.5	-0.2
PGF					pmax		pmax		
	comp=Z,24nm,0.9s								
BRY	Bratogost	82.64	1	⇑	iP		P	03 19 26.7	-0.2
CESX	Cesi	82.77	5		IAmb		IAmb	03 19 40.4	
	comp=Z,12nm,0.9s								
TREB	Trebinje	82.83	1		eP		P	03 19 26.2	-1.5
SDV	Santo Domingo	82.86	85		P		P	03 19 27.5	-1.0
SDV					IAmb		IAmb	03 19 40.3	
	comp=Z,33nm,1.1s								
SDV	Santo Domingo	82.86	85		eP		P	03 19 28.4	-0.1
DIGO	Kars	82.91	342		P		P	03 19 29.8	+1.4
GNI	Garni	82.91	341	c	iP		P	03 19 28.7	+0.3
GNI					pmax		pmax		
	comp=Z,39nm,0.9s								
GNI	Garni	82.91	341		P		P	03 19 29.9	+1.5
GNI	Garni	82.91	341		P		P	03 19 29.0	+0.6
GNI	Garni	82.91	341		P		P	03 19 29.0	+0.6
PCBR	Castelo Branco	82.96	20		eP		P	03 19 29.4	+1.0
PCBR					iAmb		IAmb	03 19 30.0	
	comp=Z,47nm,0.9s								
PCBR					epP		pP	03 19 41.2	+0.6
KTUT	Trabzon	82.96	345	⇓	P		P	03 19 29.8	+1.5
PSBE	So Bento	83.00	22		eP		P	03 19 30.1	+1.4
PSBE					iAmb		IAmb	03 19 31.1	
	comp=Z,68nm,1.1s								
PSBE					epP		pP	03 19 41.8	+1.0
PSARD	Sardoal	83.05	21		eP		P	03 19 29.8	+0.9
PSARD					iAmb		IAmb	03 19 31.1	
	comp=Z,71nm,1.1s								
PSARD					epP		pP	03 19 41.4	+0.3
AQU	L'Aquila	83.06	4		eP		P	03 19 29.3	+0.3
AQU	L'Aquila	83.06	4		P		P	03 19 30.2	+1.2
HCY	Herceg Novi	83.10	1	⇑	iP		P	03 19 28.4	-0.7
PDG	Podgorica	83.12	0	⇑	P		P	03 19 29.2	0.0
PDG	Podgorica	83.12	0		eP		P	03 19 29.1	0.0
PDG	Podgorica	83.12	0		P		P	03 19 29.4	+0.2
BOK	Bokaro	83.29	302		eP		P	03 19 30.0	-0.4
BOK					iAmb		IAmb	03 19 32.2	
	comp=Z,12nm,0.8s								
UCM	Universidad Co	83.29	17		P		P	03 19 31.3	+1.1
DRME	Dracevica, Mon	83.36	0		eP		P	03 19 30.6	+0.2
PMRV	Marv??o	83.37	20		eP		P	03 19 31.2	+0.6
PMRV					epP		pP	03 19 42.5	-0.3
PMRV					iAmb		IAmb	03 19 45.4	
	comp=Z,39nm,1.6s								
INTR	Introdacqua	83.42	4		IAmb		IAmb	03 19 48.8	
	comp=Z,20nm,0.8s								
LKRN	Lenkeran, Azer	83.45	337		P		P	03 19 31.6	+0.6
PMTG	Montargil	83.55	21		eP		P	03 19 32.0	+0.6
PMTG					iAmb		IAmb	03 19 33.3	
	comp=Z,41nm,1.1s								
PMTG					epP		pP	03 19 43.5	-0.1
SKO	Skopje	83.56	358		iP		P	03 19 32.8	+1.3
MPSI	Mapaga	83.60	261		P		P	03 19 32.0	0.0
	comp=Z,32nm,1.0s								
LIS	Lisbon	83.69	22		eP		P	03 19 33.6	+1.5
NAX	Nakhchivan	83.71	340		P		P	03 19 33.0	+0.6
ESBB	Sonseca Array	83.78	18		IAmb		IAmb	03 19 34.6	
	comp=Z,26nm,0.8s								
ESDC	Sonseca Array	83.78	18		P		P	03 19 33.5	+0.7
	comp=Z,26nm,0.8s,baz=342,slow=4.8,SNR=187								
ESDC					PKKPbc		PKKPbc	03 37 46.6	+0.4
	comp=Z,0.1nm,0.4s,baz=182,slow=1.6,SNR=4.5								
	comp=Z,26nm,0.8s								
ESDC	Sonseca Array	83.78	18		P		P	03 19 33.3	+0.6
KOPT	Kop Dagi	83.79	344		IAmb		IAmb	03 19 35.9	
	comp=Z,33nm,1.0s								
PARRA	Arraiolos	83.83	21		eP		P	03 19 33.4	+0.5
PARRA					iAmb		IAmb	03 19 34.7	
	comp=Z,43nm,1.2s								
PARRA					epP		pP	03 19 45.5	+0.4
PAB	San Pablo	83.84	18		P		P	03 19 33.5	+0.4
PAB					pmax		pmax		
	comp=Z,15nm,0.8s								
PAB	San Pablo	83.84	18		P		P	03 19 33.5	+0.4
PAB					IAmb		IAmb	03 19 34.8	
	comp=Z,15nm,0.8s								
PHP	Peshkopia	83.86	359		P		P	03 19 33.4	+0.3
KELT	Kelkit	83.86	345		P		P	03 19 34.5	+1.2
PESTR	Estremoz	83.87	21		eP		P	03 19 33.6	+0.5
PESTR					epP		pP	03 19 45.1	-0.2
PESTR					iAmb		IAmb	03 19 53.2	
	comp=Z,37nm,1.7s								
PESTR	Estremoz	83.87	21		IAmb		IAmb	03 19 35.0	
	comp=Z,25nm,1.0s								
PESTR	Estremoz	83.87	21		P		P	03 19 34.4	+1.2
KUDL	Kundal	83.91	312		eP		P	03 19 33.5	+0.1
KUDL					pP		sP	03 19 48.6	-1.6
MOE	Montemor	84.05	21		eP		P	03 19 34.8	+0.8
MOE					epP		pP	03 19 46.1	-0.1
MOE					iAmb		IAmb	03 19 48.2	
	comp=Z,55nm,1.2s								
EVO	Evora	84.11	21		eP		P	03 19 34.9	+0.6
EVO					iAmb		IAmb	03 19 36.3	
	comp=Z,40nm,1.2s								
EVO					epP		pP	03 19 46.4	-0.1
RDO	Rodhopi	84.25	355		P		P	03 19 35.5	+0.5
KNT	Kendrikon	84.33	357		P		P	03 19 37.6	+2.2
SRS	Serrai	84.36	357		P		P	03 19 36.3	+0.7
OHR	Ohrid	84.42	359		iP		P	03 19 37.0	+1.0
PAOL	Paolisi	84.43	4		IAmb		IAmb	03 19 52.9	
	comp=Z,22nm,1.1s								
ALN	Alexandroupoli	84.47	355		P		P	03 19 36.7	+0.6
PLOUS	Minas do Lousa	84.50	22		eP		P	03 19 37.0	+0.6
GRG	Griva	84.55	358		P		P	03 19 37.6	+1.0
PBEJ	Beja	84.62	21		eP		P	03 19 38.5	+1.5
PBAR	Barrancos	84.65	21		eP		P	03 19 37.8	+0.7
PBAR					epP		pP	03 19 49.7	+0.4
PBAR					iAmb		IAmb	03 19 51.2	
	comp=Z,63nm,1.4s								
SOH	Sokhos	84.66	357		P		P	03 19 37.7	+0.5
MESJ	Messejana	84.73	22		eP		P	03 19 38.2	+0.7
MESJ					IAmb		IAmb	03 19 38.6	
	comp=Z,8.5nm,0.7s								
MESJ	Messejana	84.73	22		eP		P	03 19 38.7	+1.2
MESJ	Messejana	84.73	22		eP		P	03 19 38.2	+0.7
MATE	Matera	84.87	2	⇓	P		P	03 19 39.2	+1.1
MATE	Matera	84.87	2		P		P	03 19 39.0	+0.9
BAND	Balkesir-Ban	84.89	353	⇑	P		P	03 19 39.3	+1.1
PTEO	Sao Teotonio	84.90	22		eP		P	03 19 39.5	+1.2
KBN	Korca	84.91	359		P		P	03 19 38.8	+0.3
PCVE	Castro Verde	84.97	21		eP		P	03 19 39.8	+1.1
PCVE					epP		pP	03 19 51.6	+0.7
BR131	Keskin Array S	85.02	349	c	iP		P	03 19 39.5	+0.4
BRTR	Keskin Array B	85.02	349		P		P	03 19 39.5	+0.4
	comp=Z,26nm,0.9s,baz=38,slow=2.9,SNR=111								
BRTR					PKKPbc		PKKPbc	03 37 43.1	-0.3
	comp=Z,1.3nm,0.8s,baz=173,slow=5.0,SNR=6.8								
	comp=Z,26nm,0.9s								
BRTR	Keskin Array B	85.02	349	c	eP		P	03 19 39.5	+0.4
BRTR					pmax		pmax		
	comp=Z,27nm,0.9s								
ARPR	Arapgir-MALATY	85.03	345		P		P	03 19 40.9	+1.7
MORF	Marmelete	85.15	22		eP		P	03 19 40.3	+0.6
MORF					IAmb		IAmb	03 19 41.9	
	comp=Z,46nm,1.0s								
MORF	Marmelete	85.15	22		eP		P	03 19 40.3	+0.6
MARCO	Tramutola	85.20	3		P		P	03 19 40.6	+0.7
PVAQ	Vaqueiros	85.26	21		eP		P	03 19 41.0	+0.9
PFVI	Vila Bisbo	85.28	22		eP		P	03 19 41.2	+0.9
OTAV	Otavalo	85.35	96		P		P	03 19 41.8	+0.4
OTAV					pmax		pmax		
	comp=Z,8.0nm,0.8s								
OTAV	Otavalo	85.35	96		P		P	03 19 41.8	+0.4
OTAV					IAmb		IAmb	03 19 54.2	
	comp=Z,8.3nm,0.8s								
OTAV	Otavalo	85.35	96		P		P	03 19 42.2	+0.8
OTAV					pP		pP	03 19 53.8	+0.1
LIT	Litokhoron	85.40	358		P		P	03 19 41.2	+0.3
BALY	Balya	85.53	354		P		P	03 19 41.6	+0.1
KIRS	Kirsehir-Merke	85.57	349	⇑	P		P	03 19 42.7	+0.9
HAKT	HAKKARI	85.62	341		P		P	03 19 43.0	+0.7
KKUL	Konya-Kulu	85.64	349		P		P	03 19 43.4	+1.2
SRN	Sarande	85.66	359		P		P	03 19 42.8	+0.7
VSL	Villasalto	85.66	8		P		P	03 19 42.7	+0.5
SLOR	San Lorenzo -	86.11	97		IAmb		IAmb	03 19 59.3	
	comp=Z,9.3nm,0.7s								
XOR	Xorichti	86.12	357		P		P	03 19 44.2	-0.2
TIP	Timpagrande	86.34	2	⇑	P		P	03 19 46.0	+0.5
TIP	Timpagrande	86.34	2		P		P	03 19 46.1	+0.5
MTSU	Mount Surprise	86.35	231		P		P	03 19 46.2	+0.6
	comp=Z,8.4nm,0.8s								
AGG	Agios Georgios	86.48	358		P		P	03 19 45.5	-0.7
EMAL	Malaga-Limoner	86.53	19		P		P	03 19 47.3	+0.9
LKD2	Lefkada island	86.75	359		P		P	03 19 47.7	+0.2
ANDN	Andirin	86.80	346		P		P	03 19 49.1	+1.2
GAZ	Gaziantep	87.08	346		IAmb		IAmb	03 19 51.4	
	comp=Z,18nm,0.9s								
CTA	Charters Tower	87.21	229		P		P	03 19 50.7	+0.9
	comp=Z,11nm,0.8s								
CTA	Charters Tower	87.21	229		P		P	03 19 50.6	+0.9
CEL	Celeste	87.24	3		P		P	03 19 48.7	-1.2
KDU	Kakadu	87.45	244		P		P	03 19 51.2	+0.2
	comp=Z,12nm,0.8s								
AYDN	Tasoluk	87.58	353		P		P	03 19 52.0	+0.4
BHPL	Bhopal	87.75	309		eP		P	03 19 52.0	-0.7
BHPL					IAmb		IAmb	03 19 53.9	
	comp=Z,27nm,0.7s								
BHPL					i	x	x	03 20 07.7	
CLTB	Caltabellotta	87.81	5		P		P	03 19 52.5	-0.2
RAGD	RAYAGADA	88.33	302		eP		P	03 19 55.3	0.0
ITM	Ithomi	88.33	358		P		P	03 19 55.1	0.0
ELL	Elmali	88.33	351		IAmb		IAmb	03 20 12.8	
	comp=Z,25nm,1.1s								
NGP	Nagpur	88.80	306		eP		P	03 19 56.8	-0.7
NGP					i	x	x	03 20 12.8	
KEST	Kesra	89.40	8		P		P	03 20 00.6	+0.3
	comp=Z,7.5nm,0.9s,baz=359,slow=4.2,SNR=8.8								
	comp=Z,7.5nm,0.9s								
KEST	Kesra	89.40	8		IAmb		IAmb	03 20 20.4	
	comp=Z,9.7nm,0.8s								
VIS	Vishakhapatnam	89.69	301		eP		P	03 20 01.2	-0.6
VIS					IAmb		IAmb	03 20 03.4	
	comp=Z,18nm,0.8s								
VIS					i	x	x	03 20 17.4	
MD01	Midelt array s	90.24	20		P		P	03 20 04.3	0.0
MD31	MD31	90.24	20		IAmb		IAmb	03 20 05.5	
	comp=Z,6.5nm,0.8s								
MMAI	Mount Meron Ar	91.42	346		P		P	03 20 09.9	+0.2
	comp=Z,4.1nm,0.7s,baz=353,slow=5.9,SNR=3.7								
	comp=Z,4.1nm,0.7s								
HYB	Hyderabad	92.27	305		eP		P	03 20 13.5	-0.3
HYB					i	x	x	03 20 28.9	
HYB	Hyderabad	92.27	305		eP		P	03 20 14.2	+0.4
WR8	Warramunga Arr	92.56	238		P		P	03 20 14.4	-0.5
WR8					IAmb		IAmb	03 20 14.6	
	comp=Z,12nm,1.1s								
WRAB	Tennant Creek	92.62	239	c	eP		P	03 20 14.1	-1.0
WRAB					pmax		pmax		
	comp=Z,22nm,1.2s								
WRA	Warramunga Arr	92.63	239		P		P	03 20 14.5	-0.7
	comp=Z,7.4nm,1.0s,baz=38,slow=5.5,SNR=40								
	comp=Z,7.4nm,1.0s								
WRA	Warramunga Arr	92.63	239		P		P	03 20 13.5	-1.7
PSI	Prapat	93.68	280		P		P	03 20 20.3	-0.1
RPSI	Rantau Prapat	93.77	280		IAmb		IAmb	03 20 42.5	
	comp=Z,12nm,0.9s								
QLP	Quilpie	93.79	227		P		P	03 20 21.7	+1.3
KAD	Karad	94.39	308		eP		P	03 20 22.8	-0.8
CZSB	Cruzeiro do Su	95.12	96		eP		P	03 20 26.7	-0.1
ASAR	Alice Springs	95.99	237		P		P	03 20 30.2	-0.4
	comp=Z,3.5nm,0.8s,baz=34,slow=4.9,SNR=23								
ASAR					PKKPbc		PKKPdf	03 37 17.8	-0.2
	comp=Z,0.7nm,0.6s,baz=202,slow=2.2,SNR=7.5								
	comp=Z,3.5nm,0.8s								
RAYN	Ar Rayn	98.79	336		P		Pdif	03 20 43.7	+0.3
RAYN	Ar Rayn	98.79	336		P		Pdif	03 20 43.7	+0.2
RAYN	Ar Rayn	98.79	336		P		Pdif	03 20 43.7	+0.3
TORD	Torodi Ar. Bea	110.67	18		PKKPbc		PKKPbc	03 36 32.7	0.0
	comp=Z,1.3nm,0.5s,baz=164,slow=2.3,SNR=15								
PLCA	Paso Flores	122.11	116		PKP		PKPdf	03 25 57.3	-0.2
	comp=Z,2.8nm,0.7s,baz=307,slow=5.3,SNR=6.3								
VNDA	Vanda	134.11	191		PKP		PKPdf	03 26 18.9	-0.1
	comp=Z,1.1nm,0.6s,baz=45,slow=3.5,SNR=2.4								
VNDA					SKPbc		SKPbc	03 29 44.1	-0.8
	comp=Z,1.5nm,0.7s,baz=42,slow=4.1,SNR=4.2								
VNDA	Vanda	134.11	191		PKIKP		PKPdf	03 26 19.0	-0.1
TSUM	Tsumeb	144.41	3		iP		PKPdf	03 26 39.1	-0.7
TSUM	Tsumeb	144.41	3		P		PKPbc	03 26 38.2	-0.1
QSPA	South Pole Qui	144.60	180		PKP		PKPbc	03 26 37.4	0.0
	comp=Z,46nm,0.7s,baz=45,slow=0.7,SNR=230								
QSPA					SKPbc		SKPbc	03 30 12.8	-1.3
	comp=Z,7.2nm,1.0s,baz=104,slow=4.0,SNR=3.5								
QSPA	South Pole Qui	144.60	180				PKPab	03 26 37.2	-0.1
BLWY	Bulawayo	144.65	345		iP		PKPbc	03 26 39.5	+0.5
MATP	Matopo	144.95	345		iP		PKPab	03 26 39.5	-0.4
SOOWA	Sowa	145.39	348		P		PKPbc	03 26 42.0	+0.5
BROLN	Tlhalogang	145.78	347		P		PKPbc	03 26 42.6	+0.1
CKGRV	CKGRV	146.45	352		P		PKPbc	03 26 44.5	0.0
GRTLG	Ghanzi	146.55	357		P		PKPbc	03 26 45.1	+0.3
WIN	Windhoek	147.74	4		P		PKPbc	03 26 48.8	+0.5
KOOLE	Kule	148.20	358		P		PKPbc	03 26 50.0	+0.5
LEPH	Lephalale, Lim	148.42	345		eP		PKPbc	03 26 49.3	-0.6
LKGWB	Lokgwabe	149.29	357		P		PKPbc	03 26 52.5	+0.3
SKOMA	Sekoma	149.53	352		P		PKPbc	03 26 53.0	+0.3
LBTB	Lobatse	149.85	349		iP		PKPbc	03 26 53.0	-0.5
LBTB	Lobatse	149.85	349		eP		PKPbc	03 26 53.6	+0.1
LBTB	Lobatse	149.85	349		P		PKPbc	03 26 53.9	+0.4
HRAO	HartRAO	150.44	345		eP		PKPbc	03 26 53.6	-1.3
MAKGR	Makgori	150.73	350		P		PKPbc	03 26 55.8	+0.2
POGA	Pongola	151.08	337		P		PKiKP	03 26 56.7	0.0
BOSA	Boshof	153.45	348		PKPbc		PKPbc	03 27 01.7	0.0
	comp=Z,11nm,0.8s,baz=1.8,slow=3.4,SNR=26								
BOSA					PKPab		PKPab	03 27 13.4	-0.6
	comp=Z,6.8nm,0.7s,baz=41,slow=5.4,SNR=6.3								
BOSA	Boshof	153.45	348		iP		PKiKP	03 27 02.0	+0.2
BOSA	Boshof	153.45	348		eP		PKPbc	03 27 01.2	-0.4
BOSA	Boshof	153.45	348		P		PKPbc	03 27 01.6	-0.1
MAW	Mawson	156.05	221		PKPbc		PKPdf	03 27 05.7	+10
	comp=Z,3.0nm,0.8s,baz=147,slow=2.8,SNR=5.8								
MAW					PKPab		PKPab	03 27 24.0	+0.1
	comp=Z,9.8nm,0.8s,baz=118,slow=5.3,SNR=13								
MAW	Mawson	156.05	221		PKP2		PKPab	03 27 24.5	+0.6
MAW	Mawson	156.05	221				PKPab	03 27 24.5	+0.6
SNAA	Sanae	160.61	159	⇑	P		PKPab	03 27 54.4	+11
	comp=Z,82nm,0.7s								
SNAA	Sanae	160.61	159		PKPab		PKPab	03 27 42.3	-1.4
	comp=Z,3.4nm,0.8s,baz=245,slow=2.3,SNR=4.6								
NVL	N'lazarevskaya	163.67	171		ePKIKP		PKPdf	03 27 00.1	-4.6
NVL					e			03 34 00.4	
NVL					eSSS		SSS	03 58 27.8	
NVL					pmax		pmax		
	comp=Z,6.0nm,0.9s								

*IDC **24** 03:12:52.7±0.8,55°.42N×159°.96W, h0km, mb4.0/22, mbtmp4.0/24, ML4.2/2, Error ellipse: s-maj=22.6km s-min=14.8km az=0.0*
*NEIC **24** 03:12:58.5±2.2,55°.19N±0°.03×159°.61W±0°.06, h44km±5km, mb4.5/28, ML4.0/34, ML3.8(AEIC), Error ellipse: s-maj=4.8km s-min=4.6km az=204.0*
*

N15K				IAML			03 15 51.0	
	comp=N,90nm,0.8s							
O18K	**Koktuh Hills**	**5.21**	**25**			**Pn**	**03 14 15.4**	**+1.8**
O18K	**Koktuh Hills**	**5.21**	**25**	IAML			03 15 15.9	
	comp=E,56nm,0.9s							
O18K				IAML			03 15 24.3	
	comp=N,75nm,1.1s							
N16K	**Nishlik Lake**	**5.28**	**4**			**Pn**	**03 14 16.1**	**+1.5**
M13K	**Dall Lake**	**5.58**	**340**			**Pn**	**03 14 19.5**	**+0.9**
M14K	**Bethel**	**5.68**	**348**	Pn		**Pn**	**03 14 20.5**	**+0.4**
M16K	**Timber Creek**	**5.82**	**3**			**Pn**	**03 14 23.0**	**+1.0**
ILSW	**Iliamna Southw**	**5.89**	**33**			**Pn**	**03 14 24.6**	**+1.5**
ILS	**Iliamna Low So**	**5.90**	**34**			**Pn**	**03 14 24.8**	**+1.6**
N19K	**Bonanza Creek**	**6.22**	**24**			**Pn**	**03 14 29.3**	**+1.7**
CNPM	**China Poot**	**6.24**	**43**			**Pn**	**03 14 28.7**	**+0.9**
SPIA	**Saint Paul Isl**	**6.26**	**293**	Pn		**Pn**	**03 14 28.8**	**+0.8**
M11K	**Mekoryuk**	**6.26**	**328**			**Pn**	**03 14 28.7**	**+0.7**
M17K	**Holitna River**	**6.30**	**9**			**Pn**	**03 14 29.6**	**+1.1**
L16K	**Owhat River**	**6.50**	**0**	Pn		**Pn**	**03 14 31.8**	**+0.5**
M18K	**Stony River**	**6.59**	**16**			**Pn**	**03 14 33.6**	**+1.2**
K15K	**Wolf Creek Mou**	**7.16**	**353**	Pn		**Pn**	**03 14 40.7**	**+0.4**
L18K	**Granite Mounta**	**7.17**	**11**	Pn		**Pn**	**03 14 41.4**	**+0.9**
SLKM	**Skilak Lake**	**7.28**	**40**			**Pn**	**03 14 43.4**	**+1.4**
L19K	**White Mountain**	**7.40**	**18**			**Pn**	**03 14 44.8**	**+1.2**
K17K	**Iditarod**	**7.54**	**5**	Pn		**Pn**	**03 14 46.0**	**+0.5**
RC01	**Rabbit Creek A**	**7.85**	**38**			**Pn**	**03 14 50.4**	**+0.6**
J17K	**VABM Dome**	**8.20**	**2**	Pn		**Pn**	**03 14 54.3**	**-0.3**
PWL	**Port Wells**	**8.21**	**42**			**Pn**	**03 14 55.1**	**+0.4**
J18K	**Innoko River**	**8.39**	**9**			**Pn**	**03 14 58.5**	**+1.3**
KNK	**Knik Glacier**	**8.52**	**39**			**Pn**	**03 14 59.3**	**+0.2**
PPLA	**Purkeypile**	**8.58**	**23**	Pn		**Pn**	**03 15 02.0**	**+2.1**
HIN	**Hinchinbrook I**	**8.69**	**48**			**Pn**	**03 15 01.4**	**0.0**
I17K	**Unalakleet**	**8.71**	**357**	Pn		**Pn**	**03 15 01.9**	**+0.5**
FID	**Port Fidalgo**	**8.89**	**46**			**Pn**	**03 15 03.2**	**-0.8**
SCM	**Sheep Creek Mo**	**9.21**	**39**	Pn		**Pn**	**03 15 07.3**	**-1.1**
KLU	**Klutina**	**9.53**	**43**	Pn		**Pn**	**03 15 12.3**	**-0.5**
H18K	**Honhosa River**	**9.98**	**3**	Pn		**Pn**	**03 15 18.4**	**-0.5**
GLB	**Gilahina Butte**	**10.36**	**47**	Pn		**Pn**	**03 15 24.6**	**+0.5**
H19K	**Roundabout Mou**	**10.45**	**7**	Pn		**Pn**	**03 15 25.9**	**+0.6**
KIAG	**Kiagna River**	**10.74**	**51**			**Pn**	**03 15 29.4**	**-0.2**
F15K	**North Star Dit**	**10.80**	**349**	Pn		**Pn**	**03 15 30.4**	**+0.3**
GRNC	**Granite Creek**	**10.94**	**52**	Pn		**Pn**	**03 15 32.7**	**+0.5**
G19K	**Purcell Mounta**	**11.02**	**5**	Pn		**Pn**	**03 15 33.5**	**+0.4**
I23K	**Minto, Yukon-K**	**11.16**	**23**	Pn		**Pn**	**03 15 32.5**	**-2.5**
HDA	**Harding Lake**	**11.17**	**29**	Pn		**Pn**	**03 15 31.9**	**-3.3**
H22K	**Ishtalitna Cre**	**11.43**	**17**	Pn		**Pn**	**03 15 39.2**	**+0.6**
ILAR	**Eielson Array**	**11.46**	**28**	Pn		**Pn**	**03 15 36.1**	**-3.1**
	comp=N,0.3nm,0.3s,baz=216,slow=14,SNR=1.7							
M27K	**Edge Creek, AK**	**11.61**	**45**	Pn		**Pn**	**03 15 41.1**	**-0.2**
L27K	**Beaver Creek,**	**12.00**	**42**	Pn		**Pn**	**03 15 45.1**	**-1.4**
O29M	**Mount Kennedy**	**12.29**	**57**	Pn		**Pn**	**03 15 52.4**	**+1.8**
M29M	**Somme Creek**	**13.06**	**48**	Pn		**Pn**	**03 16 01.4**	**+0.3**
S31K	**Pelican**	**13.14**	**68**	Pn		**Pn**	**03 16 01.2**	**-0.8**
M30M	**Minto, Yukon**	**13.83**	**49**	Pn		**Pn**	**03 16 12.1**	**+0.6**
BESE	**Bessie Mountai**	**13.89**	**66**	Pn		**Pn**	**03 16 11.6**	**-0.9**
D23K	**Nanushuk River**	**14.38**	**13**	Pn		**Pn**	**03 16 18.6**	**-0.2**
U33K	**Whale Pass**	**14.93**	**76**	Pn		**Pn**	**03 16 25.7**	**-0.3**
C23K	**Itkillik River**	**15.21**	**12**	Pn		**P**	**03 16 31.8**	**-2.0**
C23K				IAmb		IAmb	03 16 34.6	
	comp=Z,25nm,1.1s							
EPYK	**Eagle Plains**	**15.67**	**35**	P		**P**	**03 16 39.6**	**+0.7**
F30M	**Barrier River**	**16.69**	**33**	P		**P**	**03 16 49.8**	**-0.4**
F30M				IAmb		IAmb	03 17 19.5	
	comp=Z,37nm,1.2s							
INK	**Inuvik**	**17.79**	**32**	P		**P**	**03 17 00.8**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=227,slow=9.7,SNR=9.3							
	comp=Z,3.9nm,0.4s							
INK	**Inuvik**	**17.79**	**32**	Pn		**P**	**03 17 00.2**	**-2.1**
C36M	**Paulatuk**	**21.30**	**35**	P		**P**	**03 17 39.6**	**-0.8**
C36M				IAmb		IAmb	03 17 40.1	
	comp=Z,35nm,1.4s							
YKA	**Yellowknife Ar**	**23.93**	**54**	P		**P**	**03 18 08.0**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=275,slow=9.4,SNR=4.5							
	comp=Z,1.3nm,0.8s							
PETK	**Petropavlovsk-**	**24.81**	**283**	P		**P**	**03 18 14.2**	**-1.4**
	comp=Z,5.0nm,0.7s,baz=73,slow=12,SNR=8.2							
	comp=Z,5.0nm,0.7s							
PETK	**Petropavlovsk-**	**24.81**	**283**	P		**P**	**03 18 15.8**	**+0.1**
NVAR	**Mina Array Bea**	**32.28**	**104**	P		**P**	**03 19 26.0**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=314,slow=7.4,SNR=1.7							
	comp=Z,0.2nm,0.3s							
PDAR	**Pinedale Array**	**34.36**	**90**	P		**P**	**03 19 43.6**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=311,slow=7.5,SNR=1.3							
	comp=Z,0.1nm,0.3s							
ILON	**Igloolik, Nuna**	**35.96**	**36**	P		**P**	**03 19 53.7**	**-0.1**
EYMN	**Ely**	**41.37**	**71**	P		**P**	**03 20 40.1**	**+0.6**
EYMN				IAmb		IAmb	03 21 15.3	
	comp=Z,8.9nm,1.2s							
ANMO	**Albuquerque**	**41.43**	**97**	P		**P**	**03 20 37.2**	**-3.1**
ALQ	**Albuquerque**	**41.44**	**97**	P		**P**	**03 20 37.7**	**-2.6**
H11N2	**WAKE ISLAND Hy**	**43.53**	**229**	T		T	04 07 15.3	
	baz=28,slow=76,SNR=2.3							
H11N3	**WAKE ISLAND Hy**	**43.53**	**229**	T		T	04 07 17.7	
	baz=28,slow=76,SNR=2.4							
H11N1	**WAKE ISLAND Hy**	**43.55**	**229**	T		T	04 07 18.4	
	baz=28,slow=76,SNR=5.0							
H11S1	**WAKE ISLAND Hy**	**44.69**	**228**	T		T	04 08 50.7	
	baz=25,slow=74							
H11S2	**WAKE ISLAND Hy**	**44.71**	**228**	T		T	04 08 45.5	
	baz=25,slow=74,SNR=4.0							
H11S3	**WAKE ISLAND Hy**	**44.71**	**228**	T		T	04 08 54.8	
	baz=25							
MJAR	**Matsushiro Arr**	**45.49**	**273**	P		**P**	**03 21 11.2**	**-1.5**
	comp=Z,1.0nm,0.8s,baz=30,slow=5.9,SNR=5.5							
	comp=Z,1.0nm,0.8s							
MJAR	**Matsushiro Arr**	**45.49**	**273**	IAmb		IAmb	03 21 14.6	
	comp=Z,3.6nm,1.3s							
SPITS	**Spitsbergen Ar**	**46.83**	**1**	P		**P**	**03 21 21.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=68,slow=3.9,SNR=7.1							
	comp=Z,0.3nm,0.3s							
TXAR	**Lajitas Array**	**47.17**	**100**	P		**P**	**03 21 29.1**	**+2.9**
	comp=Z,0.3nm,0.8s,baz=330,slow=8.0,SNR=1.4							
TXAR				PcP		**PcP**	**03 22 58.2**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=291,slow=1.7,SNR=3.6							
	comp=Z,0.3nm,0.8s							
KSRS	**Korea Array**	**50.69**	**281**	P		**P**	**03 21 53.1**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=57,slow=6.0,SNR=2.2							
	comp=Z,1.0nm,0.6s							
TRQ	**Mont Tremblant**	**51.37**	**62**	P		**P**	**03 21 56.9**	**-1.0**
TRQ				IAmb		IAmb	03 22 08.8	
	comp=Z,9.2nm,1.5s							
SONM	**Songino Array**	**54.65**	**305**	P		**P**	**03 22 21.8**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=50,slow=6.2,SNR=3.8							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**54.65**	**305**	IAmb		IAmb	03 22 22.4	
	comp=Z,0.9nm,0.6s							
F64A	**Sherman**	**54.72**	**59**	P		**P**	**03 22 21.9**	**-0.5**
BATG	**Bathurst New B**	**54.81**	**56**	P		**P**	**03 22 22.7**	**-0.4**
BATG				IAmb		IAmb	03 22 23.6	
	comp=Z,3.1nm,0.7s							
TRO	**Tromso**	**55.44**	**1**	*eP*		**P**	**03 22 27.3**	**0.0**
ARA0	**ARCESS Array S**	**55.49**	**358**	*eP*		**P**	**03 22 27.4**	**-0.2**
ARCES	**ARCESS Array B**	**55.49**	**358**	P		**P**	**03 22 27.0**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=23,slow=7.5,SNR=9.7							
	comp=Z,0.8nm,0.4s							
ARCES	**ARCESS Array B**	**55.49**	**358**	P		**P**	**03 22 26.3**	**-1.4**
GGN	**Saint George**	**55.99**	**59**	P		**P**	**03 22 31.2**	**-0.4**
GGN				IAmb		IAmb	03 22 38.3	
	comp=Z,7.0nm,1.2s							
KTK1	**Kautokeino**	**56.05**	**359**	*eP*		**P**	**03 22 31.9**	**+0.2**
STEI	**Steigen**	**57.10**	**2**	*eP*		**P**	**03 22 38.6**	**-0.5**
FINES	**FINESS Array B**	**63.59**	**357**	P		**P**	**03 23 23.0**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=6.5,slow=7.4,SNR=8.7							
	comp=Z,1.9nm,0.5s							
FINES	**FINESS Array B**	**63.59**	**357**	P		**P**	**03 23 22.9**	**-0.6**
NC303	**NORSAR Array S**	**63.67**	**5**	P		**P**	**03 23 23.3**	**-0.8**
KURK	**Kurchatov**	**63.84**	**323**	P		**P**	**03 23 25.2**	**-0.1**
KURK	**Kurchatov**	**63.84**	**323**	IAmb		IAmb	03 23 26.3	
	comp=Z,2.7nm,0.7s							
NB2	**NORSAR Subarra**	**63.85**	**5**	P		**P**	**03 23 24.9**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=353,slow=6.5							
NB2	**NORSAR Subarra**	**63.85**	**5**	P		**P**	**03 23 24.9**	**-0.4**
NOA	**NORSAR Array B**	**63.85**	**5**	P		**P**	**03 23 25.0**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=353,slow=6.5,SNR=3.8							
	comp=Z,1.3nm,0.8s							
KURBB	**Kurchatov Arra**	**63.95**	**323**	P		**P**	**03 23 25.2**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=25,slow=6.4,SNR=5.3							
	comp=Z,2.1nm,0.9s							
BVAR	**Borovoye Array**	**64.49**	**329**	P		**P**	**03 23 29.4**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=38,slow=7.5,SNR=9.2							
	comp=Z,3.4nm,0.7s							
ARTI	**Arti**	**64.53**	**338**			**P**	**03 23 29.5**	**-0.3**
HFS	**Hagfors**	**64.86**	**4**	P		**P**	**03 23 31.4**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=3.7,slow=4.5,SNR=10							
	comp=Z,2.4nm,0.6s							

MKAR	**Makanchi Array**	**65.80**	**318**	P		**P**	**03 23 37.1**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=35,slow=5.4,SNR=5.5							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**65.80**	**318**	P		**P**	**03 23 37.7**	**-0.5**
MAKZ	**Makanchi**	**65.90**	**319**	P		**P**	**03 23 38.4**	**-0.5**
EKA	**Eskdalemuir Ar**	**68.13**	**14**	P		**P**	**03 23 53.2**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=335,slow=5.0,SNR=10							
	comp=Z,2.0nm,0.6s							
PDGK	**Pongornoye**	**69.78**	**318**			**P**	**03 24 04.0**	**+0.5**
AB31	**Akbulak array**	**70.75**	**334**	P		**P**	**03 24 08.8**	**-0.3**
AB31				IAmb		IAmb	03 24 09.8	
	comp=Z,4.3nm,0.8s							
ABKAR	**Akbulak array**	**70.75**	**334**	P		**P**	**03 24 09.1**	**0.0**
TARG	**Taragay, Kyrgy**	**71.80**	**318**	P		**P**	**03 24 16.7**	**+0.6**
TARG				IAmb		IAmb	03 24 17.7	
	comp=Z,2.0nm,0.5s							
BOOM	**Boomskoye usch**	**71.83**	**320**	IAmb		IAmb	03 24 17.1	
	comp=Z,3.3nm,0.6s							
KK31	**Karatay Array**	**73.21**	**324**	IAmb		IAmb	03 24 24.6	
	comp=Z,3.0nm,0.8s							
KKAR	**Karatay Array**	**73.21**	**324**	P		**P**	**03 24 23.8**	**-0.1**
AKASG	**Malin Array Be**	**74.19**	**354**	P		**P**	**03 24 28.6**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=9.5,slow=5.7,SNR=12							
	comp=Z,1.6nm,0.4s							
GERES	**GERESS Array B**	**76.15**	**5**	P		**P**	**03 24 41.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=360,slow=7.0,SNR=4.0							
	comp=Z,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**81.38**	**290**	P		**P**	**03 25 10.2**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=14,slow=5.2,SNR=11							
	comp=Z,1.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**81.38**	**290**	P		**P**	**03 25 09.2**	**-0.8**
ESDC	**Sonseca Array**	**83.20**	**19**	P		**P**	**03 25 20.1**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=339,slow=4.6,SNR=7.9							
	comp=Z,1.4nm,0.9s							
ESDC	**Sonseca Array**	**83.20**	**19**	IAmb		IAmb	03 25 40.6	
	comp=Z,7.2nm,1.1s							
BRTR	**Keskin Array B**	**84.74**	**350**	P		**P**	**03 25 27.8**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=5.4,slow=3.0,SNR=3.7							
	comp=Z,1.1nm,0.9s							
QSPA	**South Pole Qui**	**145.00**	**180**	PKPbc		**PKPdf**	**03 32 28.3**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=104,slow=1.4,SNR=2.0							
BOSA	**Boshof**	**153.18**	**351**	PKPbc		**PKiKP**	**03 32 50.9**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=34,slow=3.6,SNR=13							

UCR ***24*** *03:18:46.3±2.4, 15°.80N×101°.36W, h15km±999km, MW4.6, Presumed earthquake*

IDC ***24*** *03:19:49.0±0.6, 15°.52N×95°.87W, h0km, mb4.5/21, mbtmp4.5/24, ML3.6/3, MS5.2/58, Error ellipse: s-maj=20.1km s-min=11.9km az=59.0*

NEIC ***24*** *03:19:51.0±2.3, 15°.56N±0°.06×96°.00W±0°.05, h11km±1km, mb5.5/747, Ms_20 5.4/510, Mwb5.6/100, Mww5.5/75, Error ellipse: s-maj=10.3km s-min=6.7km az=207.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.25; Mθθ-1.24; Mϕϕ-1.01; Mrθ0.25; Mθϕ1.82; Mϕr1.20; Fault plane solution: Mo2.93000×10¹⁷ NP1: ϕs336.62000°, δ57.11000°, λ120.78000°. NP2: ϕs108.97000°, δ43.82000°, λ51.64000°. Principal axes: T 2.8308, Plg63.0000°, Azm301.0000°; N 0.1961, Plg25.0000°, Azm139.0000°; P -3.0269, Plg7.0000°, Azm45.0000°;*

MOS ***24*** *03:19:50.1±0.9, 15°.65N×95°.82W, h12km, mb5.6/51, MS5.4/22 Error ellipse: s-maj=7.8km s-min=4.7km az=91.4*

NEIC ***24*** *03:19:50.4, 15°.58N×95°.99W, h5km*

IPGP ***24*** *03:19:51.0, 15°.62N×95°.89W, h11km, Mw5.7, Fault plane solution: NP1:ϕs267.00000°, δ22.00000°, λ78.00000°. NP2:ϕs100.00000°, δ68.00000°, λ95.00000°.*

MEX ***24*** *03:19:51.2±1.2, 15°.36N×96°.05W, h15km, MD5.7*

GFZ ***24*** *03:19:51.7±0.2, 16°.N×3°.×9°.6W±°, h10km, M5.5/47, mb5.0/47*

GFZ ***24*** *03:19:51.6, 15°.60N×95°.86W, h12km, Mw5.4/70, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.94; Mθθ-1.55; Mϕϕ-0.39; Mrθ-0.00; Mθϕ0.37; Mϕr-0.27; Fault plane solution: Mo1.83751×10¹⁷ NP1: ϕs112.97366°, δ46.53783°, λ98.98160°. NP2: ϕs280.03324°, δ44.19849°, λ80.64562°. Principal axes: T 1.9742, Plg83.3870°, Azm96.4253°; N -0.3138, Plg6.5064°, Azm286.7687°; P -1.6604, Plg1.1772°, Azm196.6344°;*

NEIC ***24*** *03:19:51.1, 15°.64N×95°.88W, h6km*

PTWC ***24*** *03:19:53, 15°.60N×95°.90W, Mwp5.6/9*

GCMT ***24*** *03:19:54.3±0.1, 15°.43N±0°.01×96°.03W±0°.01, h12km, MW5.6/157, Moment Tensor Solution. s130,c241; s157,c321; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr1.98±.02; Mθθ-1.68±.02; Mϕϕ-0.29±.02; Mrθ1.85±.05; Mθϕ0.33±.01; Mϕr-1.21±.06; Best double couple: Mo2.88600×10¹⁷ NP1:ϕs274.00000°, δ22.00000°, λ68.00000°. NP2:ϕs118.00000°, δ70.00000°, λ99.00000°. Principal axes: T 3.0540, Plg64.0000°, Azm41.0000°; N -0.3330, Plg8.0000°, Azm295.0000°; P -2.7180, Plg25.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***24*** *03:19:55.2, 14°.43N×94°.52W, h33km, mb5.4, Ms5.3*

NEIC ***24*** *03:20:00.7, 15°.64N×95°.88W, h12km, Moment Tensor Solution. Duration: 3s3 Moment tensor: Scale 10¹⁷Nm; Mrr2.00; Mθθ-1.62; Mϕϕ-0.38; Mrθ-0.16; Mθϕ0.47; Mϕr0.29; Fault plane solution: Mo1.93000×10¹⁷ NP1: ϕs103.16000°, δ41.51000°, λ81.61000°. NP2: ϕs294.31000°, δ49.03000°, λ97.36000°. Principal axes: T 2.0385, Plg83.0000°, Azm255.0000°; N -0.2460, Plg6.0000°, Azm109.0000°; P -1.7925, Plg4.0000°, Azm19.0000°;*

ISC 24 03:19:48.4±0.6, 15°.42N±0°.04×95°.97W±0°.03, h3km±3km, n1604, σ2s05/1409, mb5.5/475, MS5.4/325, 67C-20D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.38**	**338**	**i**	**eP**	**Pb**	**03 19 57.5**	**-0.3**
	baz=172,slow=16							
HUIG					*eS*	**Sb**	**03 20 03.7**	**-0.4**
HUIG	**Huatulco**	**0.38**	**338**			**Pb**	**03 19 57.5**	**-0.3**
PEIG	**Puerto Escondi**	**1.28**	**297**	**i**	**iP**	**Pn**	**03 20 09.6**	**-3.7**
	baz=120,slow=18							
PEIG	**Puerto Escondi**	**1.28**	**297**			**Pn**	**03 20 09.6**	**-3.7**
OXLC	**Oaxaca**	**1.79**	**337**		*eP*	**Pn**	**03 20 18.6**	**-1.8**
OXLC					*eS*	**Sn**	**03 20 39.5**	**-4.3**
OXLC	**Oaxaca**	**1.79**	**337**			**Pn**	**03 20 18.6**	**-1.8**
OXLC						**Sn**	**03 20 39.5**	**-4.3**
OXBJ	**Oaxaca**	**1.79**	**336**		*eP*	**Pn**	**03 20 18.4**	**-2.1**
OXBJ					*eS*	**Sn**	**03 20 39.7**	**-4.3**
OXBJ	**Oaxaca**	**1.79**	**336**			**Pn**	**03 20 18.4**	**-2.1**
OXBJ						**Sn**	**03 20 39.7**	**-4.3**
OXIG	**Oaxaca**	**1.80**	**336**			**Pn**	**03 20 20.1**	**-0.6**
VHO	**Vista Hermosa**	**1.80**	**336**	**i**	**iP**	**Pn**	**03 20 20.1**	**-0.6**
	baz=164,slow=18							
CMIG	**Matias Romero**	**1.96**	**32**	Pn		**Pn**	**03 20 22.5**	**-0.1**
	104nm,0.3s,baz=216,slow=11,SNR=605							
CMIG				Sn		**Sn**	**03 20 46.4**	**-1.4**
	184nm,0.3s,baz=200,slow=20,SNR=7.6							
CMIG	**Matias Romero**	**1.96**	**32**	*i*	*P*	**Pn**	**03 20 22.0**	**-0.6**
CMIG	**Matias Romero**	**1.96**	**32**			**Pn**	**03 20 22.0**	**-0.6**
YOIG	**Yosondua**	**2.09**	**313**			**Pn**	**03 20 23.3**	**-1.3**
YOIG	**Yosondua**	**2.09**	**313**			**Pn**	**03 20 23.3**	**-1.3**
CARR	**Arriaga**	**2.14**	**67**		*eP*	**Pn**	**03 20 23.6**	**-1.5**
CARR					*eS*	**Sn**	**03 20 50.6**	**-1.6**
NEUV	**Arroyo Zacate**	**2.29**	**4**	**i**	**eP**	**Pn**	**03 20 26.2**	**-0.9**
NEUV					*eS*	**Sn**	**03 20 53.3**	**-2.5**
NEUV	**Arroyo Zacate**	**2.29**	**4**			**Pn**	**03 20 26.2**	**-0.9**
NEUV						**Sn**	**03 20 53.3**	**-2.5**
TXIG	**Tlaxiaco**	**2.52**	**317**	**i**	**eP**	**Pn**	**03 20 29.7**	**-0.9**
TXIG					*eS*	**Sn**	**03 20 57.7**	**-4.2**
TXIG	**Tlaxiaco**	**2.52**	**317**			**Pn**	**03 20 29.7**	**-0.9**
TXIG						**Sn**	**03 20 57.7**	**-4.2**
TOIG	**Toxpalan**	**2.86**	**339**	**i**	**eP**	**Pn**	**03 20 35.0**	**-0.2**
TOIG					*eS*	**Sn**	**03 21 06.9**	**-3.4**
TOIG	**Toxpalan**	**2.86**	**339**			**Pn**	**03 20 35.0**	**-0.2**
TOIG						**Sn**	**03 21 06.9**	**-3.4**
MIHL	**Minatitlan**	**2.90**	**28**		*eP*	**Pn**	**03 20 34.8**	**-0.7**
MIHL					*eS*	**Sn**	**03 21 11.3**	**+0.4**
MIHL	**Minatitlan**	**2.90**	**28**			**Pn**	**03 20 34.8**	**-0.7**
MIHL						**Sn**	**03 21 11.3**	**+0.4**
HLIG	**Huajuapan de L**	**2.98**	**324**	**i**	**eP**	**Pn**	**03 20 36.8**	**-0.1**
HLIG					*eS*	**Sn**	**03 21 08.6**	**-4.6**
HLIG	**Huajuapan de L**	**2.98**	**324**			**Pn**	**03 20 36.8**	**-0.1**
HLIG						**Sn**	**03 21 08.6**	**-4.6**
TGIG		**3.05**	**63**	**i**	**P**	**Pn**	**03 20 37.8**	**+0.2**
TGIG		**3.05**	**63**		P	**Pn**	**03 20 37.5**	**-0.2**
PMUV	**Sontecomapan**	**3.21**	**14**		*eP*	**Pn**	**03 20 38.4**	**-1.6**
PMUV					*eS*	**Sn**	**03 21 16.8**	**-2.0**
PMUV	**Sontecomapan**	**3.21**	**14**			**Pn**	**03 20 38.4**	**-1.6**
PMUV						**Sn**	**03 21 16.8**	**-2.0**
FTIG	**Fresnillo de T**	**3.23**	**320**	**i**	**eP**	**Pn**	**03 20 39.9**	**-0.4**
FTIG					*eS*	**Sn**	**03 21 16.0**	**-3.4**
FTIG	**Fresnillo de T**	**3.23**	**320**			**Pn**	**03 20 39.9**	**-0.4**
FTIG						**Sn**	**03 21 16.0**	**-3.4**
TPIG	**Tehuac#an**	**3.27**	**336**		*eP*	**Pn**	**03 20 41.1**	**+0.2**
TPIG					*eS*	**Sn**	**03 21 18.7**	**-1.7**
TPIG	**Tehuac#an**	**3.27**	**336**			**Pn**	**03 20 41.1**	**+0.2**
TPIG						**Sn**	**03 21 18.7**	**-1.7**
TPIG	**Tehuac#an**	**3.27**	**336**	P		**Pn**	**03 20 41.8**	**+1.0**
TLIG	**Tlapa**	**3.28**	**311**	**i**	**eP**	**Pn**	**03 20 40.4**	**-0.6**
TLIG					*eS*	**Sn**	**03 21 16.3**	**-4.4**
TLIG	**Tlapa**	**3.28**	**311**			**Pn**	**03 20 40.8**	**-0.2**
TLIG	**Tlapa**	**3.28**	**311**			**Sn**	**03 21 16.3**	**-4.4**
TLIG	**Tlapa**	**3.28**	**311**		P	**Pn**	**03 20 40.8**	**-0.2**
CRIG	**Cruz Grande**	**3.31**	**294**	**i**	**eP**	**Pn**	**03 20 38.9**	**-2.3**
CRIG	**Cruz Grande**	**3.31**	**294**			**Pn**	**03 20 38.9**	**-2.3**
HMTT	**Tlapaneco**	**3.43**	**314**		*e*	**Pb**	**03 20 48.3**	**-1.7**
HMTT					*eS*	**Sn**	**03 21 20.9**	**-3.4**
HMTT	**Tlapaneco**	**3.43**	**314**			**Sn**	**03 21 20.9**	**-3.4**
THIG		**3.61**	**98**		*eP*	**Pn**	**03 20 44.5**	**-0.8**
THIG					*eS*	**Sn**	**03 21 25.1**	**-3.4**
THIG		**3.61**	**98**			**Pn**	**03 20 44.5**	**-0.8**
THIG						**Sn**	**03 21 25.1**	**-3.4**
PATR	**El Naranjo**	**3.61**	**94**		*eP*	**Pn**	**03 20 44.9**	**-0.7**
PATR	**El Naranjo**	**3.61**	**94**			**Pn**	**03 20 44.9**	**-0.7**
PATR	**El Naranjo**	**3.61**	**94**		P	**Pn**	**03 20 45.0**	**-0.7**
PAVE	**Pavencul**	**3.66**	**93**		*eP*	**Pn**	**03 20 46.1**	**-0.2**
PAVE	**Pavencul**	**3.66**	**93**			**Pn**	**03 20 46.1**	**-0.2**
CHUJ	**Union Juarez**	**3.74**	**94**		*eP*	**Pn**	**03 20 46.7**	**-0.6**
POHV	**Veracruz**	**3.84**	**341**			**Pn**	**03 20 47.8**	**-1.3**
DAIG	**Los Arroyos**	**3.88**	**295**	**i**	**eP**	**Pn**	**03 20 47.1**	**-2.0**
DAIG					*eS*	**Sn**	**03 21 30.9**	**-4.4**
DAIG	**Los Arroyos**	**3.88**	**295**			**Pn**	**03 20 47.1**	**-2.0**
DAIG						**Sn**	**03 21 30.9**	**-4.4**
JAUV	**Jalcomulco**	**4.01**	**349**	**i**	**eP**	**Pn**	**03 20 50.1**	**-0.8**
JAUV					*eS*	**Sn**

APVM Sn 03 22 05.6 0.0
PTVM Pico Tres Padr 5.12 325 *e*P Pn 03 21 05.5 -0.9
PTVM eS Sn 03 22 04.5 -1.8
PTVM Pico Tres Padr 5.12 325 Pn 03 21 05.5 -0.9
PTVM Sn 03 22 04.5 -1.8
TOVM TOLUCA 5.23 318⇑ *e*P Pn 03 21 08.9 +1.0
TOVM eS Sn 03 22 06.0 -3.0
TOVM TOLUCA 5.23 318 Pn 03 21 08.9 +1.0
TOVM Sn 03 22 06.0 -3.0
APG El Apazote 5.33 94 Pn Pn 03 21 10.6 +1.4
0.3nm,0.3s,baz=213,slow=14,SNR=16
APG Sn Sn 03 22 11.1 -0.1
0.7nm,0.3s,baz=96,slow=14,SNR=7.0
DHIG Demacu 5.67 329 Pn 03 21 13.8 -0.1
DHIG Sn 03 22 17.3 -2.4
DEIG Demacu 5.67 329⇑ *e*P Pn 03 21 13.8 -0.1
DEIG eS Sn 03 22 17.3 -2.4
ATVM ATLACOMULCO 5.69 320⇑ *e*P Pn 03 21 13.0 -1.1
ATVM eS Sn 03 22 18.5 -1.7
ATVM ATLACOMULCO 5.69 320 Pn 03 21 13.0 -1.1
ATVM Sn 03 22 18.5 -1.7
ZIIG Zihuatanejo 5.71 293⇑ *e*P Pn 03 21 13.4 -0.8
ZIIG eS Sn 03 22 15.7 -4.6
ZIIG Zihuatanejo 5.71 293 Pn 03 21 13.4 -0.8
ZIIG Sn 03 22 15.7 -4.6
ZIIG Zihuatanejo 5.71 293 P Pn 03 21 13.8 -0.4
SCIG Sabancuy 5.77 52⇓ *e*P Pn 03 21 13.4 -1.7
SCIG eS Sn 03 22 21.4 -0.5
SCIG Sabancuy 5.77 52 Pn 03 21 13.4 -1.7
SCIG Sn 03 22 21.4 -0.5
SCIG Sabancuy 5.77 52 P Pn 03 21 13.3 -1.7
PETF Flores 6.05 75 Pn 03 21 18.4 -0.4
PETF Flores 6.05 75 P Pn 03 21 18.8 0.0
CTUV Llano Grande 6.43 340 *e*P Pn 03 21 25.6 +1.4
CTUV eS Sn 03 22 36.8 -1.4
CTUV Llano Grande 6.43 340 Pn 03 21 25.6 +1.4
CTUV Sn 03 22 36.8 -1.4
ACAM Acambaro 6.46 316⇓ *e*P Pn 03 21 23.1 -1.6
ACAM eS Sn 03 22 37.5 -1.5
ACAM Acambaro 6.46 316 Pn 03 21 23.1 -1.6
ACAM Sn 03 22 37.5 -1.5
ESQI Esquipulas 6.46 97 Pn 03 21 25.5 +0.9
MTO3 Montecristo 6.46 98 Pn 03 21 25.5 +0.7
MOIG Morelia 6.54 311⇑ *e*P Pn 03 21 26.0 +0.1
MOIG eS Sn 03 22 37.5 -3.6
MOIG Morelia 6.54 311 Pn 03 21 27.4 +1.5
MOIG Morelia 6.54 311 Sn 03 22 37.5 -3.6
URUA Uruapan 7.06 305 *e*P Pn 03 21 31.7 -1.3
URUA eS Sn 03 22 50.8 -3.2
URUA Uruapan 7.06 305 Pn 03 21 31.7 -1.3
URUA Sn 03 22 50.8 -3.2
IGIG Irapuato, Guan 7.36 317 *e*P Pn 03 21 37.5 +0.4
IGIG eS Sn 03 22 58.9 -2.4
IGIG Irapuato, Guan 7.36 317 Pn 03 21 37.5 +0.4
IGIG Sn 03 22 58.9 -2.4
RPIG Rio Verde 7.47 330⇑ *e*P Pn 03 21 39.5 +0.9
RPIG eS Sn 03 23 03.2 -0.8
RPIG Rio Verde 7.47 330 Pn 03 21 39.5 +0.9
RPIG Sn 03 23 03.2 -0.8
MMIG Aquila 7.62 293⇑ *e*P Pn 03 21 40.1 -0.4
MMIG eS Sn 03 23 04.4 -3.1
MMIG Aquila 7.62 293 Pn 03 21 40.1 -0.4
MMIG Sn 03 23 04.4 -3.1
MYIG Merida 8.08 46⇓ *e*P Pn 03 21 48.2 +1.4
MYIG eS Sn 03 23 19.8 +1.0
MYIG Merida 8.08 46 Pn 03 21 48.2 +1.4
MYIG Sn 03 23 19.8 +1.0
GTIG Gomez Farias 8.19 339⇑ *e*P Pn 03 21 48.2 -0.1
GTIG eS Sn 03 23 21.1 -0.3
GTIG Gomez Farias 8.19 339 Pn 03 21 48.2 -0.1
GTIG Sn 03 23 21.1 -0.3
INCO Volcan de Coli 8.36 300⇑ *e*P Pn 03 21 51.8 +0.8
INCO eS Sn 03 23 23.5 -2.6
COMA Comala 8.40 299 *e*P Pn 03 21 51.6 +0.4
COMA eS Sn 03 23 24.6 -2.0
COMA Comala 8.40 299 Pn 03 21 51.6 +0.4
COMA Sn 03 23 24.6 -2.0
CDAR Ciudad de Arme 8.45 296⇓ *e*P Pn 03 21 52.3 +0.4
CDAR eS Sn 03 23 25.8 -2.0
CEGR Campo Tres 8.51 299 *e*P Pn 03 21 52.6 -0.2
CEGR eS Sn 03 23 26.8 -2.6
CEGR Campo Tres 8.51 299 Pn 03 21 52.6 -0.2
CEGR Sn 03 23 26.9 -2.6
TEIG Tepich 8.74 56 Pn 03 21 54.0 -1.9
TEIG Tepich 8.74 56 P Pn 03 21 53.1 -2.8
TEIG Tepich 8.74 56 P Pn 03 21 56.2 +0.3
CRIN San Cristobal 9.06 106 Pn 03 22 03.4 +3.0
CRIN San Cristobal 9.06 106 P Pn 03 22 03.5 +3.2
25µm6µm194nm,0.7s
CRIN San Cristobal 9.06 106 P Pn 03 22 03.5 +3.2
CIHU Emiliano Zapat 9.21 296⇓ *e*P Pn 03 22 01.8 -0.5
CIHU eS Sn 03 23 43.3 -3.2
CIHU Emiliano Zapat 9.21 296 Pn 03 22 01.8 -0.5
CIHU Sn 03 23 43.3 -3.2
HERN Volcan Telica 9.29 106 Pn 03 22 05.7 +2.2
CNGN Cerro Negro 9.45 107 P Pn 03 22 08.4 +2.7
CJM Chamela 9.57 296⇓ *e*P Pn 03 23 51.6 -1.2
CJM eS Sn 03 23 51.4 -3.9
ZAIG Zacatecas 9.61 321⇑ *e*P Pn 03 22 09.1 +1.0
ZAIG eS Sn 03 23 56.7 -0.1
ZAIG Zacatecas 9.61 321 Pn 03 22 09.8 +1.7
ZAIG Zacatecas 9.61 321 Sn 03 23 56.7 -0.1
ZAIG Zacatecas 9.61 321 P Pn 03 22 10.5 +2.5
ZAIG Zacatecas 9.61 321 P Pn 03 22 10.6 +2.5
ESTA Talpa de Allen 9.80 302⇑ *e*P Pn 03 22 10.1 -0.3
ESTA eS Sn 03 23 59.1 -2.1
ESTA Talpa de Allen 9.80 302 Pn 03 22 10.1 -0.3
ESTA Sn 03 23 59.1 -2.1
TOMAT Tomatlan 9.92 298⇑ *e*P Pn 03 22 11.9 -0.2
TOMAT eS Sn 03 24 01.9 -2.2
LNIG Linares 9.99 341⇑ *e*P Pn 03 22 13.6 +0.7
LNIG eS Sn 03 24 02.8 -2.9
LNIG Linares 9.99 341 Pn 03 22 13.6 +0.7
LNIG Sn 03 24 02.8 -2.9
YELA Yelapa 10.34 300⇑ *e*P Pn 03 22 17.6 -0.3
YELA eS Sn 03 24 12.1 -2.4
YELA Yelapa 10.34 300 Pn 03 22 17.6 -0.3
YELA Sn 03 24 12.1 -2.4
BOAB BOACO BROADBAN 10.42 105 Pn 03 22 21.0 +2.1
BOAB BOACO BROADBAN 10.42 105 P Pn 03 22 23.8 +4.9
SIUN Universidad Ur 10.97 97 Pn 03 22 27.9 +1.5
LAPC Finca la Perla 11.25 113 *e*P Pn 03 22 34.6 +4.3
JUD3 Juan Diaz 3 11.43 116 Pn 03 22 36.3 +3.5
JUD3 Juan Diaz 3 11.43 116 *e*P Pn 03 22 36.2 +3.4
CLARA Aguas Claras 11.47 112 *e*P Pn 03 22 37.5 +4.1
MESS Mesas 11.47 113 *e*P Pn 03 22 37.8 +4.4
CUI Cuipilapa 11.54 113 *e*P Pn 03 22 38.6 +4.3
TIMP Tierras Morena 11.70 113 *e*P Pn 03 22 40.6 +4.1
HBVL Hebbronville 11.86 348 Pn 03 22 39.8 +1.2
JTS Las Juntas de 11.88 114 Pn Pn 03 22 41.2 +2.2
2.3nm,0.3s,baz=316,slow=13,SNR=14
8.5nm,0.7s
JTS Las Juntas de 11.88 114 *c iP* Pn 03 22 42.6 +3.6
JTS Las Juntas de 11.88 114 Pn 03 22 42.6 +3.6
JTS Las Juntas de 11.88 114 P Pn 03 22 42.2 +3.2
JTS Las Juntas de 11.88 114 *e*P Pn 03 22 41.8 +2.8
JTS Las Juntas de 11.88 114 P Pn 03 22 43.4 +4.4
VARE2 V. Arenal 12.02 113 *e*P Pn 03 22 44.6 +3.8
ARE1 Arenal 1 12.02 113 *e*P Pn 03 22 44.8 +4.0
CEDE Laguna Cedeo 12.02 113 *e*P Pn 03 22 45.1 +4.2
MAIG Mazatlaan 12.54 310 *e*P Pn 03 22 49.0 +1.2
MAIG Mazatlaan 12.54 310 Pn 03 22 49.0 +1.2
HDC Heredia 12.75 114 *e*P Pn 03 22 52.8 +1.8
HDC Heredia 12.75 114 P Pn 03 22 55.2 +4.3
833A Chaparral WMA, 13.23 347 Pn 03 22 57.7 +0.4
MCIG Muzquiz 13.41 338 *e*P Pn 03 23 00.1 +0.2
MCIG eS Sn 03 25 26.7 -2.9
MCIG Muzquiz 13.41 338 Pn 03 23 00.1 +0.2
MCIG Sn 03 25 26.7 -2.9
735A Kenedy 13.48 353 Pn 03 23 00.1 -0.6
EF04 Eagle Ford 04 13.83 353 Pn 03 23 04.5 -1.0
MLDN Muldoon 14.33 356 Pn 03 23 11.2 -1.2
HNDO Hondo 14.37 348 Pn 03 23 11.8 -1.2
HKT Hockley 14.46 0 *c iP* Pn 03 23 12.1 -2.0
HKT Hockley 14.46 0 Pn 03 23 13.3 -0.8
HKT Hockley 14.46 0 P Pn 03 23 14.0 -0.1
BRU2 Volcan 14.55 115 P Pn 03 23 17.8 +2.2
HPIG 14.59 323⇑ *e*P Pn 03 23 16.4 +0.3
HPIG 14.59 323 Pn 03 23 16.4 +0.3
HPIG 14.59 323 P Pn 03 23 18.1 +1.9

435B Jarrell 15.37 355 Pn 03 23 26.4 +0.1
441A DeRidder 15.47 9 Pn 03 23 27.3 -0.4
441A lAmb lAmb 03 23 31.6
comp=Z,194nm,1.5s
SLBS Sierra La Lagu 15.52 304 P P 03 23 30.7 -2.3
SLBS Sierra La Lagu 15.52 304 P P 03 23 31.5 -1.6
SAND Sanderson 15.54 340 Pn 03 23 29.1 +0.5
TXAR Lajitas Array 15.56 334 Pn P 03 23 31.4 -2.1
baz=152,slow=11,SNR=41
TXAR LR LR 03 30 06.2
comp=Z,5µm,22.0s,baz=144,slow=40
comp=Z,37nm,1.1s
TXAR Lajitas Array 15.56 334 P P 03 23 30.5 -3.0
TXAR Lajitas Array 15.56 334 P 03 23 30.5 -3.0
TX31 Lajitas Ar. Si 15.57 334 P P 03 23 31.0 -2.6
CAMR Camarioca 15.73 59 *e*P Pn 03 23 21.4 -10
TSIG Topolobambo 15.88 312 *e*P Pn 03 23 33.0 0.0
TSIG Topolobambo 15.88 312 Pn 03 23 33.0 0.0
LPIG La Paz 16.02 305 Pn P 03 23 37.1 -1.4
comp=Z,10nm,0.3s,baz=150,slow=2.2,SNR=7.7
LPIG LR LR 03 28 35.3
comp=Z,10µm,21.4s,baz=124,slow=33
LPIG La Paz 16.02 305⇑ *e*P Pn 03 23 34.8 0.0
LPIG La Paz 16.02 305 Pn 03 23 34.8 0.0
BRDY Brady 16.04 351 Pn 03 23 33.6 -1.5
GMAL Guarumal, Vera 16.30 116 P P 03 23 45.8 +4.1
comp=Z,7µmcomp=Z,99nm,1.4s
NATX Nacogdoches 16.31 4 P Pn 03 23 36.4 -2.2
ALPN Alpine 16.47 336 lAmb lAmb 03 23 47.4
comp=Z,403nm,1.4s
MGV Manicaragua 16.53 64 *e*P Pn 03 23 33.8 -7.6
TPB05 Hovey Rd 16.84 338 lAmb lAmb 03 23 50.6
comp=Z,304nm,1.6s
MNHN Moahans 17.02 340 lAmb lAmb 03 23 53.1
comp=Z,735nm,1.9s
TPB01 Permian Basin 17.03 336 lAmb lAmb 03 23 52.8
comp=Z,442nm,1.7s
TMB01 Midkiff 17.11 342 lAmb lAmb 03 23 55.5
comp=Z,227nm,1.8s
AZU Azuero 17.13 115 P P 03 23 56.5 +5.7
comp=Z,7µmcomp=Z,4µmcomp=Z,141nm,1.8s
PLPT Palo Pinto 17.45 353 lAmb lAmb 03 23 55.9
comp=Z,493nm,1.9s
TPB06 Permian Basin 17.46 339 lAmb lAmb 03 23 58.1
comp=Z,428nm,1.9s
FW06 Azle 17.54 356 lAmb lAmb 03 23 56.7
comp=Z,392nm,1.9s
ODSA Odessa 17.68 341 lAmb lAmb 03 24 00.1
comp=Z,504nm,1.4s
Z38A Mt. Pleasant 17.79 3 P P 03 23 56.5 -1.5
Z38A lAmb lAmb 03 23 59.7
comp=Z,380nm,1.5s
MTDJ Mount Denham 17.86 78 *e*P Pn 03 23 50.5 -7.8
Z41A Richland Creek 17.99 9 lAmb lAmb 03 24 04.2
comp=Z,638nm,1.6s
CCCC Cccc 18.20 69 *e*P P 03 24 02.7 0.0
MNTX Cornudas Mount 18.34 334 P P 03 24 05.0 +0.8
CGIG 18.52 326⇑ *e*P Pn 03 24 08.2 +1.8
CGIG 18.52 326 P Pn 03 24 08.2 +1.8
LOOK Love County 18.53 357 lAmb lAmb 03 24 15.5
comp=Z,452nm,1.9s
LMGC Las Mercedes 18.64 73 *e*P P 03 24 02.6 -4.8
352A Blakely 18.90 30 lAmb lAmb 03 24 13.6
comp=Z,393nm,1.7s
CHIV Chivirico 19.17 73 *e*P P 03 24 06.8 -6.5
MIAR Mount Ida 19.17 6 lAmb lAmb 03 24 15.8
comp=Z,211nm,1.2s
MIAR Mount Ida 19.17 6 P Pn 03 24 12.7 -1.4
X34A Smith Ranch, M 19.18 355 lAmb lAmb 03 24 16.6
comp=Z,472nm,1.7s
SRIG Santa Rosalia 19.21 311⇑ *e*P Pn 03 24 15.4 +0.8
SRIG Santa Rosalia 19.21 311 P Pn 03 24 15.4 +0.8
SRIG Santa Rosalia 19.21 311 lAmb lAmb 03 24 18.5
comp=Z,58nm,1.2s
YAR Yar 19.29 72 *e*P P 03 24 10.3 -4.3
HSIG 19.35 317⇓ *e*P Pn 03 24 17.3 +1.0
HSIG 19.35 317 P Pn 03 24 17.3 +1.0
HSIG lAmb lAmb 03 24 21.2
comp=Z,403nm,1.7s
WMOK Wichita Mounta 19.41 353 P Pn 03 24 15.2 -1.7
WMOK Wichita Mounta 19.41 353 P Pn 03 24 15.4 -1.5
NZIG Nacozari, Sono 19.42 322⇑ *e*P Pn 03 24 18.5 +1.2
NZIG Nacozari, Sono 19.42 322 P Pn 03 24 18.5 +1.2
MSTX Muleshoe 19.47 343 lAmb lAmb 03 24 21.2
comp=Z,423nm,1.5s
UALR University of 19.55 9 lAmb lAmb 03 24 20.2
comp=Z,210nm,1.1s
W35A Tecumseh 19.67 358 lAmb lAmb 03 24 21.5
comp=Z,729nm,2.0s
HLGC Holguin 19.68 71 *e*P P 03 24 10.3 -8.5
RCC Rio Carpintero 19.83 74 *e*P P 03 24 15.8 -4.8
319A Douglas 20.01 325 lAmb lAmb 03 24 29.0
comp=Z,545nm,1.8s
121A Cookes Peak, D 20.14 330 lAmb lAmb 03 24 28.7
comp=Z,504nm,1.6s
OK029 Liberty Lake 20.34 357 lAmb lAmb 03 24 31.3
comp=Z,617nm,2.0s
GTBY Guantanamo Bay 20.36 74 *e*P P 03 24 21.5 -4.9
APAC Apartado, Choc 20.39 109 P Pn 03 24 31.1 +2.4
comp=Z,12µmcomp=Z,5µmcomp=Z,80nm,1.4s
TUL3 Leonard 20.41 0 lAmb lAmb 03 24 37.8
comp=Z,498nm,2.0s
OK052 Battle Ridge R 20.50 358 lAmb lAmb 03 24 32.8
comp=Z,448nm,1.4s
NMDO Nuevo Mundo 20.59 73 *e*P P 03 24 23.9 -5.0
PH02 Texas Public H 20.60 346 lAmb lAmb 03 24 34.1
comp=Z,270nm,1.8s
FCAR Ozark Folk Cen 20.68 9 lAmb lAmb 03 24 35.2
comp=Z,212nm,1.2s
QUOK Quay 20.68 358 lAmb lAmb 03 24 33.2
comp=Z,305nm,1.1s
QMBU Quimbuelo 20.69 74 *e*P P 03 24 23.0 -6.9
ELIS Ellis County 20.79 352 lAmb lAmb 03 24 33.6
comp=Z,235nm,1.5s
OK048 Pawnee Station 20.93 358 lAmb lAmb 03 24 36.2
comp=Z,327nm,1.3s
Y22A Socorro 20.95 334 lAmb lAmb 03 24 38.3
comp=Z,377nm,1.6s
U38A Gravette 20.98 4 lAmb lAmb 03 24 36.2
comp=Z,509nm,1.9s
OK051 E0350 and S346 21.02 358 lAmb lAmb 03 24 37.1
comp=Z,302nm,1.2s
CROK Carrier 21.08 355 lAmb lAmb 03 24 37.8
comp=Z,301nm,1.2s
OK038 West end E0370 21.12 354 lAmb lAmb 03 24 37.7
comp=Z,514nm,1.8s
GNAR Gosnell 21.14 13 lAmb lAmb 03 24 40.1
comp=Z,170nm,0.9s
GOGA Godfrey 21.19 30 P P 03 24 34.5 -0.7
GOGA Godfrey 21.19 30 P P 03 24 34.7 -0.5
Y52A Lilburn 21.28 28 lAmb lAmb 03 24 48.1
comp=Z,177nm,1.1s
NOKA Waynoka 21.30 353 lAmb lAmb 03 24 38.6
comp=Z,590nm,1.8s
UREC San Jos de Ur 21.40 109 P P 03 24 40.2 +2.5
comp=Z,6µmcomp=Z,3µmcomp=Z,109nm,1.5s
TUC Tucson 21.55 324 P P 03 24 41.5 +2.3
TUC pmax pmax
comp=Z,177nm,1.3s
TUC Tucson 21.55 324 P P 03 24 41.5 +2.3
TUC lAmb lAmb 03 24 52.1
comp=Z,177nm,1.3s
TUC Tucson 21.55 324 P P 03 24 41.8 +2.6
ALQ Albuquerque 21.61 336 lAmb lAmb 03 24 44.9
comp=Z,180nm,1.8s
ANMO Albuquerque 21.61 336 P P 03 24 41.3 +1.4
comp=Z,11nm,1.1s,baz=147,slow=12,SNR=45
comp=Z,11nm,1.1s
ANMO Albuquerque 21.61 336 *c iP* P 03 24 41.4 +1.4
ANMO pmax pmax
comp=Z,90nm,1.8s
ANMO Albuquerque 21.61 336 P P 03 24 40.7 +0.8
ANMO Albuquerque 21.61 336 P P 03 24 41.3 +1.4
SWET Sewanee 21.67 23 lAmb lAmb 03 24 46.1
comp=Z,267nm,2.0s
KAN01 Argonia South 21.71 356 lAmb lAmb 03 24 44.6
comp=Z,256nm,1.3s
CBOC Ciudad Bolivar 21.77 114 P P 03 24 45.9 +4.2
comp=Z,4µmcomp=Z,197nm,1.6s
RTBA Rita Blanca 21.79 345 lAmb lAmb 03 24 43.4
comp=Z,163nm,1.3s
V48A Smith Brothers 21.83 20 lAmb lAmb 03 24 45.7
comp=Z,232nm,1.5s
WVT Waverly 21.87 18 P P 03 24 40.1 -2.4
WVT pmax pmax
comp=Z,44nm,0.7s

WVT Waverly 21.87 18 P P 03 24 40.1 -2.4
WVT Waverly 21.87 18 P P 03 24 40.0 -2.4
PARMO Parma 21.87 14 lAmb lAmb 03 24 45.3
comp=Z,232nm,0.8s
T42A Van Buren 21.96 10 lAmb lAmb 03 24 46.7
comp=Z,347nm,1.5s
S39A Bolivar 22.31 6 lAmb lAmb 03 24 53.0
comp=Z,302nm,1.5s
JAMC Jamundi, Valle 22.54 121 P P 03 24 58.8 +8.7
GUY2C Guyana, Caldas 22.63 114 P P 03 24 55.0 +3.7
comp=Z,6µmcomp=Z,4µmcomp=Z,170nm,1.5s
NHSC New Hope 22.69 36 lAmb lAmb 03 24 55.3
comp=Z,260nm,1.5s
BG3 Lake Jocassee 22.74 29 lAmb lAmb 03 25 07.4
comp=Z,174nm,1.1s
BBAC Balboa, Cauca 22.76 124 P P 03 24 56.9 +4.5
comp=Z,5µmcomp=Z,3µmcomp=Z,107nm,1.4s
X18A Snowflake 22.82 329 lAmb lAmb 03 24 57.7
comp=Z,263nm,1.5s
T25A Trinidad 22.90 342 lAmb lAmb 03 25 07.6
comp=Z,262nm,1.5s
POPC Popayan, Colom 22.92 122 P P 03 24 57.7 +3.6
comp=Z,6µmcomp=Z,3µmcomp=Z,62nm,1.6s
TKL Tuckaleechee C 22.92 26 LR LR 03 35 36.8
comp=Z,3µm,18.9s,baz=202,slow=42
CCM Cathedral Cave 22.93 10 P P 03 24 52.3 -1.5
CCM pmax pmax
comp=Z,298nm,1.2s
CCM Cathedral Cave 22.93 10 P P 03 24 52.2 -1.5
CCM Cathedral Cave 22.93 10 P P 03 24 52.3 -1.5
OTAV Otavalo 22.95 129 P P 03 24 55.5 +0.8
OTAV pmax pmax
comp=Z,65nm,1.4s
OTAV Otavalo 22.95 129 P P 03 24 55.5 +0.8
FVM French Village 23.01 11 lAmb lAmb 03 24 56.0
comp=Z,199nm,1.4s
R32A Long Quarter, 23.04 354 lAmb lAmb 03 24 57.5
comp=Z,172nm,1.4s
TULM Tulcn-Chalpat 23.14 127 P P 03 25 03.1 +6.4
comp=Z,3µmcomp=Z,52nm,1.1s
W18A Petrified Fore 23.19 330 lAmb lAmb 03 25 01.2
comp=Z,398nm,1.8s
OCAC Ocana 23.27 105 P P 03 25 00.0 +2.3
comp=Z,4µmcomp=Z,3µmcomp=Z,49nm,1.8s
X16A Lo Mia Camp, P 23.50 326 lAmb lAmb 03 25 03.1
comp=Z,236nm,1.7s
SLOR San Lorenzo - 23.57 131 P P 03 25 04.0 +3.0
SPBC San Pablo de B 23.59 112 P P 03 25 04.8 +4.0
comp=Z,5µmcomp=Z,4µmcomp=Z,63nm,1.5s
KMSC Kings Mountain 23.63 31 lAmb lAmb 03 25 04.1
comp=Z,157nm,1.7s
113A Mohawk Valley, 23.65 320 lAmb lAmb 03 25 04.0
comp=Z,346nm,1.9s
ROSC El Rosal 23.73 114 P P 03 25 05.7 +3.1
comp=Z,43nm,1.1s,baz=295,slow=12,SNR=11
ROSC El Rosal 23.73 114 P P 03 25 07.2 +4.7
ROSC pmax pmax
comp=Z,268nm,1.3s
ROSC El Rosal 23.73 114 P P 03 25 07.2 +4.7
ROSC lAmb lAmb 03 25 25.3
comp=Z,268nm,1.3s
ROSC El Rosal 23.73 114 P P 03 25 08.3 +5.8
comp=Z,9µmcomp=Z,181nm,1.7s
TZTN Tazewell 23.77 25 P P 03 25 01.1 -1.2
PRAC Prado 23.78 117 P P 03 25 06.5 +3.8
comp=Z,5µmcomp=Z,4µmcomp=Z,138nm,2.4s
SDCO Great Sand Dun 23.79 341 lAmb lAmb 03 25 05.2
comp=Z,300nm,1.9s
SDDR Presa de Saban 23.83 78 *e*P P 03 24 55.4 -7.7
BARC Barichara 24.00 109 P P 03 25 09.4 +4.5
Y14A Wickenburg 24.01 323 lAmb lAmb 03 25 17.5
comp=Z,218nm,1.8s
CVER Cruz Verde, Cu 24.09 114 P P 03 25 11.2 +5.1
comp=Z,6µmcomp=Z,147nm,1.7s
PAMC Pamplona, Colo 24.16 107 P P 03 25 09.6 +2.9
X58A Rowland 24.23 35 lAmb lAmb 03 25 06.9
comp=Z,139nm,1.5s
S22A 4UR Ranch, Cre 24.23 339 lAmb lAmb 03 25 09.8
comp=Z,209nm,1.8s
V55A Taylorsville 24.25 30 lAmb lAmb 03 25 07.3
comp=Z,297nm,1.8s
WCI Wyandotte Cave 24.27 19 P P 03 25 05.1 -1.9
WCI pmax pmax
comp=Z,465nm,1.5s
WCI Wyandotte Cave 24.27 19 P P 03 25 05.1 -1.9
WCI Wyandotte Cave 24.27 19 P P 03 25 05.5 -1.5
FLOC Florencia 24.30 123 P P 03 25 11.8 +4.3
comp=Z,4µmcomp=Z,3µmcomp=Z,91nm,1.6s
WUAZ Wupatki 24.31 328 lAmb lAmb 03 25 20.9
comp=Z,221nm,1.3s
WUAZ lAMs_20 lAMs_20 03 33 58.3
comp=Z,19µm,18.0s
W57A Gilead 24.32 33 lAmb lAmb 03 25 07.5
comp=Z,138nm,1.3s
CHIC Chingaza 24.35 114 P P 03 25 13.5 +5.1
comp=Z,7µmcomp=Z,125nm,1.3s
RUSC La Rusia 24.37 110 P P 03 25 12.4 +3.7
comp=Z,6µmcomp=Z,199nm,1.6s
MVCO Mesa Verde 24.39 335 P P 03 25 10.1 +1.7
GLA Glamis 24.51 319 lAmb lAmb 03 25 13.6
comp=Z,152nm,1.4s
U54A Nelsons Funny 24.51 28 lAmb lAmb 03 25 09.7
comp=Z,157nm,1.4s
ESJX Sierra Juarez 24.57 316 lAmb lAmb 03 25 37.0
comp=Z,125nm,1.9s
R49A Shelbyville 24.70 21 lAmb lAmb 03 25 11.9
comp=Z,64nm,1.0s
BLYC Blythe 24.79 321 lAmb lAmb 03 25 16.3
comp=Z,182nm,1.7s
U56A King 25.05 31 lAmb lAmb 03 25 15.0
comp=Z,124nm,1.4s
CBX Cerro Bola 25.24 315 lAmb lAmb 03 25 40.4
comp=Z,130nm,1.6s
BC3 Big Chuckawall 25.30 319 lAmb lAmb 03 25 20.1
comp=Z,183nm,1.5s
TJIG Tijuana 25.32 316 *e*P P 03 25 16.4 -0.2
TJIG *e*P pP 03 25 17.4 +0.7
TJIG eS S 03 29 48.0 +4.5
TJIG Tijuana 25.32 316 P P 03 25 16.4 -0.2
TJIG pP 03 25 17.4 +0.7
TJIG S 03 29 48.0 +4.5
W13A Hualapai Mount 25.35 324 lAmb lAmb 03 25 31.4
comp=Z,123nm,1.6s
PV15 Paradox Valley 25.36 337 lAmb lAmb 03 25 33.4
comp=Z,116nm,1.2s
PV05 Paradox Valley 25.38 335 lAmb lAmb 03 25 32.8
comp=Z,140nm,1.7s
PV03 Paradox Valley 25.43 336 lAmb lAmb 03 25 30.5
comp=Z,207nm,1.5s
IRM Iron Mountain 25.44 321 lAmb lAmb 03 25 31.8
comp=Z,155nm,1.4s
IRM lAMs_20 lAMs_20 03 34 05.2
comp=Z,13µm,19.0s
BAR Barrett 25.47 316 lAMs_20 lAMs_20 03 34 22.3
comp=Z,8µm,20.0s
MACC Macarena, Meta 25.48 119 P P 03 25 21.3 +3.1
U15A North Rim 25.49 328 lAmb lAmb 03 25 44.7
comp=Z,229nm,1.6s
PV16 Nysw onger Mesa 25.51 336 lAmb lAmb 03 25 23.2
comp=Z,272nm,1.7s
SDV Santo Domingo 25.58 102 LR LR 03 36 59.4
comp=Z,4µm,18.7s,baz=301,slow=40
SDV Santo Domingo 25.58 102 P P 03 25 19.0 -0.4
SDV Santo Domingo 25.58 102 *e*P P 03 25 18.7 -0.6
PV10 Paradox Valley 25.61 336 lAmb lAmb 03 25 32.1
comp=Z,221nm,1.5s
PV22 Blue Mesa, Par 25.65 336 lAmb lAmb 03 25 24.8
comp=Z,240nm,1.6s
HDIL Hopedale 25.71 12 lAmb lAmb 03 25 22.6
comp=Z,106nm,0.8s
ISCO Idaho Springs 25.72 343 P P 03 25 21.7 +1.3
ISCO Idaho Springs 25.72 343 lAmb lAmb 03 25 24.6
comp=Z,84nm,1.4s
ISCO Idaho Springs 25.72 343 P P 03 25 21.8 +1.4
PV21 Cone Mtn., Par 25.75 336 lAmb lAmb 03 25 36.7
comp=Z,237nm,1.7s
PTLC Puerto Leguiza 25.82 124 P P 03 25 31.3 +10
BELC Belle Mtn. Jos 25.86 319 lAmb lAmb 03 25 25.4
comp=Z,146nm,1.7s
PFO Pinyon Flats O 25.91 318 LR LR 03 35 57.2
comp=Z,6µm,19.0s,baz=137,slow=37
PFO Pinyon Flats O 25.91 318 *c iP* P 03 25 23.9 +1.8
PFO pmax pmax
comp=Z,96nm,1.8s
PFO Pinyon Flats O 25.91 318 P P 03 25 23.9 +1.8
PFO lAmb lAmb 03 25 26.0
comp=Z,150nm,1.9s

PFO Pinyon Flats O 25.91 318 IAMs_20 IAMs_20 03 35 33.7
comp=Z,10µm,20.0s
HMU Henry Mountain 25.96 333 IAmb IAmb 03 25 36.7
comp=Z,271nm,1.7s
DNR Dunn Ranch,Anz 25.99 318 IAmb IAmb 03 25 30.4
comp=Z,146nm,1.9s
Q51A Peebles 26.00 23 IAmb IAmb 03 25 24.1
comp=Z,130nm,1.1s
KNB Kanab 26.21 328 IAmb IAmb 03 25 40.6
comp=Z,152nm,1.5s
L34A Svendsen Farm, 26.46 359 IAmb IAmb 03 25 30.4
comp=Z,196nm,1.3s
P51A Williamsport 26.51 23 IAmb IAmb 03 25 28.6
comp=Z,151nm,1.2s
MTPC Mountain Pass 26.59 322 IAmb IAmb 03 25 34.6
comp=Z,102nm,1.6s
V61A Roper 26.68 37 IAmb IAmb 03 25 29.4
comp=Z,119nm,1.2s
MTPU Mount Pierson 26.70 331 IAmb IAmb 03 25 35.9
comp=Z,115nm,1.6s
SZCU Shurtz Canyon 26.79 329 IAmb IAmb 03 25 36.8
comp=Z,155nm,2.0s
O20A White River Ci 26.86 339 IAmb IAmb 03 25 33.3
comp=Z,130nm,1.5s
HAYD Hayden 26.88 341 IAmb IAmb 03 25 34.8
comp=Z,139nm,2.0s
Q16A Castle Valley 26.96 333 IAmb IAmb 03 25 36.7
comp=Z,101nm,1.7s
Q54A Coxs Mills 26.98 27 IAmb IAmb 03 25 36.7
comp=Z,202nm,1.9s
P52A Corning 26.99 24 IAmb IAmb 03 25 33.0
comp=Z,137nm,1.3s
P53A Whipple 27.17 25 IAmb IAmb 03 25 35.2
comp=Z,153nm,1.4s
P18A Preston Nutter 27.17 335 IAmb IAmb 03 25 45.0
comp=Z,144nm,1.8s
ACSO Alum Creek Sta 27.19 22 IAmb IAmb 03 25 34.7
comp=Z,112nm,1.4s
MWC Mount Wilson 27.33 317 IAmb IAmb 03 25 38.7
comp=Z,134nm,1.8s
PASC Pasadena Art C 27.38 317 IAmb IAmb 03 25 39.1
comp=Z,102nm,1.8s
O52A Adamsville 27.52 24 IAmb IAmb 03 25 37.8
comp=Z,118nm,1.2s
CCCA Chr Cany lake 27.71 320 IAmb IAmb 03 25 48.6
comp=Z,234nm,2.0s
RDMU Red Mountain 27.72 337 IAmb IAmb 03 25 40.8
comp=Z,188nm,2.0s
GWY Greenwater Val 27.73 322 IAmb IAmb 03 25 42.1
comp=Z,93nm,1.8s
Q56A Snyder Ridge, 27.77 29 IAmb IAmb 03 25 39.6
comp=Z,164nm,2.0s
TPO Tropico Hills 27.84 318 IAmb IAmb 03 25 42.8
comp=Z,129nm,1.6s
LRMC Laurel Mtn Rad 27.88 320 IAmb IAmb 03 25 47.7
comp=Z,100nm,1.8s
LRMC IAMs_20 IAMs_20 03 37 11.8
comp=Z,12µm,18.0s
O53A New Philadelph 27.89 25 IAmb IAmb 03 25 41.2
comp=Z,79nm,1.1s
OSI Osito Audit: C 28.00 317 IAMs_20 IAMs_20 03 37 40.3
comp=Z,10µm,18.0s
TPNV Topopah Spring 28.01 324 IAmb IAmb 03 25 59.1
comp=Z,130nm,1.7s
TPNV IAMs_20 IAMs_20 03 35 32.6
comp=Z,12µm,19.0s
N51A Ashland 28.02 22 IAmb IAmb 03 25 41.6
comp=Z,213nm,2.0s
FURC Furnace Creek, 28.04 322 IAmb IAmb 03 25 44.9
comp=Z,128nm,1.7s
BSUT Blindstream Ca 28.15 336 IAmb IAmb 03 25 45.2
comp=Z,91nm,1.5s
O54A Avella 28.17 26 IAmb IAmb 03 25 44.9
comp=Z,62nm,1.2s
NLU North Lily Min 28.21 333 IAmb IAmb 03 25 45.6
comp=Z,105nm,2.0s
ECSD EROS Data Cent 28.23 359 IAmb IAmb 03 26 24.8
comp=Z,61nm,1.3s
ECSD EROS Data Cent 28.23 359 P P 03 25 42.4 -0.3
ATAH Atahualpa 28.38 141 LR LR 03 34 31.1
comp=Z,5µm,20.7s,baz=309,slow=31
ISA Isabella, Lake 28.49 319 IAmb IAmb 03 25 48.2
comp=Z,87nm,1.9s
ISA IAMs_20 IAMs_20 03 36 30.1
comp=Z,12µm,19.0s
S61A Accomac 28.53 35 IAMs_20 IAMs_20 03 39 06.9
comp=Z,9µm,19.0s
I37A Lemond, Waseca 28.59 4 IAmb IAmb 03 25 58.7
comp=Z,117nm,1.6s
K22A Casper 28.62 344 IAmb IAmb 03 25 49.3
comp=Z,182nm,1.7s
SJG San Juan 28.66 80 eP P 03 25 43.1 -3.7
P57A Homestead Farm 28.67 30 IAmb IAmb 03 25 46.7
comp=Z,79nm,1.7s
DUG Dugway, Tooele 28.73 332 P P 03 25 49.5 +2.1
DUG Dugway, Tooele 28.73 332 IAmb IAmb 03 25 50.3
comp=Z,91nm,1.8s
DUG IAMs_20 IAMs_20 03 36 22.8
comp=Z,8µm,20.0s
DUG Dugway, Tooele 28.73 332 P P 03 25 49.5 +2.1
AAM Ann Arbor 28.81 19 P P 03 25 47.2 -0.6
AAM Ann Arbor 28.81 19 IAmb IAmb 03 25 47.5
comp=Z,92nm,1.2s
GMN Gold Mountain 28.84 323 IAmb IAmb 03 25 52.3
comp=Z,85nm,1.7s
PAMR Moraine State 28.92 25 IAmb IAmb 03 25 49.5
comp=Z,113nm,1.6s
M52A Chesterland 28.94 23 IAmb IAmb 03 25 50.0
comp=Z,121nm,1.4s
VES Vestal, Richgr 28.99 319 IAmb IAmb 03 25 53.5
comp=Z,209nm,1.6s
I42A Draeger Farm, 29.01 11 IAmb IAmb 03 25 50.9
comp=Z,107nm,1.4s
R61A Willards 29.18 35 IAMs_20 IAMs_20 03 39 37.0
comp=Z,9µm,18.0s
DSP Deep Springs 29.30 322 IAmb IAmb 03 25 56.4
comp=Z,76nm,1.6s
HWUT Hardware Ranch 29.38 336 IAmb IAmb 03 25 55.5
comp=Z,110nm,1.9s
HWUT IAMs_20 IAMs_20 03 36 41.7
comp=Z,10µm,19.0s
HWUT Hardware Ranch 29.38 336 P P 03 25 54.7 +1.6
BGU Big Grassy Mou 29.42 333 IAmb IAmb 03 25 57.2
comp=Z,104nm,1.8s
RSSD Black Hills 29.42 348 P P 03 25 52.8 -0.7
RSSD pmax pmax
comp=Z,77nm,2.0s
RSSD Black Hills 29.42 348 P P 03 25 52.8 -0.7
RSSD Black Hills 29.42 348 P P 03 25 54.7 +1.2
ALLY Alegheny Colle 29.50 25 IAmb IAmb 03 25 55.5
comp=Z,158nm,1.4s
K50A Casco 29.57 20 IAmb IAmb 03 25 54.5
comp=Z,94nm,1.1s
PAOC Oil Creek Stat 29.58 25 IAmb IAmb 03 25 56.6
comp=Z,97nm,1.3s
BW06 Boulder Array 29.65 340 IAmb IAmb 03 25 57.4
comp=Z,108nm,1.9s
PD31 Pinedale Array 29.65 340 IAmb IAmb 03 25 57.4
comp=Z,106nm,1.9s
PDAR Pinedale Array 29.65 340 P P 03 25 56.4 +0.8
comp=Z,1.8nm,0.9s,baz=134,slow=8.4,SNR=19
comp=Z,1.8nm,0.9s
H43A Windswept, Lux 29.78 12 IAmb IAmb 03 25 56.7
comp=Z,125nm,1.4s
SPMN Marine on St. 29.83 4 IAMs_20 IAMs_20 03 39 55.3
comp=Z,6µm,20.0s
MVL Millersville 29.88 31 IAmb IAmb 03 25 59.9
comp=Z,110nm,2.0s
PKD Bear Valley Ra 29.99 318 P P 03 25 58.3 -0.1
PKD IAmb IAmb 03 26 01.2
comp=Z,149nm,1.9s
PKD IAMs_20 IAMs_20 03 39 25.8
comp=Z,10µm,18.0s
HVU Hansel Valley 30.02 334 IAmb IAmb 03 26 01.4
comp=Z,158nm,1.8s
MDPB Devils Postpil 30.13 322 IAmb IAmb 03 26 04.0
comp=Z,109nm,1.7s
G40A Rib Lake 30.15 8 IAmb IAmb 03 26 00.1
comp=Z,90nm,1.5s
AHID Auburn Hatcher 30.19 338 IAmb IAmb 03 26 02.4
comp=Z,107nm,1.8s
AHID IAMs_20 IAMs_20 03 38 59.1
comp=Z,13µm,19.0s
AHID Auburn Hatcher 30.19 338 P P 03 26 01.6 +1.2
NVAR Mina Array Bea 30.21 324 P P 03 26 02.8 +2.2
comp=Z,42nm,1.2s,baz=142,slow=7.8,SNR=63
NVAR LR LR 03 37 15.0
comp=Z,3µm,21.1s,baz=134,slow=35

NVAR Mina Array Bea 30.21 324 P P 03 26 02.4 +1.8
ELK Elko 30.29 330 P P 03 26 03.3 +2.0
PMPB Monarch Peak 30.32 318 P P 03 26 02.4 +1.0
PMPB IAmb IAmb 03 26 05.1
comp=Z,160nm,1.8s
N58A Sunbury 30.35 30 IAMs_20 IAMs_20 03 40 15.6
comp=Z,6µm,20.0s
HULI Fort Hunter Li 30.49 317 IAmb IAmb 03 26 36.3
comp=Z,106nm,1.4s
HULI IAMs_20 IAMs_20 03 37 42.1
comp=Z,13µm,18.0s
LOHW Long Hollow 30.75 339 IAMs_20 IAMs_20 03 39 27.9
comp=Z,10µm,18.0s
WAKR Walker 30.92 323 IAmb IAmb 03 26 11.3
comp=Z,103nm,1.7s
FXWY Fox Creek 30.92 338 IAmb IAmb 03 26 09.2
comp=Z,100nm,1.8s
F42A Maple Grove Fa 30.96 11 P P 03 26 05.6 -1.2
F42A IAmb IAmb 03 26 06.7
comp=Z,118nm,1.6s
L56A Greenwood 30.99 27 IAmb IAmb 03 27 06.5
comp=Z,97nm,1.9s
SAO San Andreas Ge 31.06 318 P P 03 26 10.0 +2.1
SAO San Andreas Ge 31.06 318 IAMs_20 IAMs_20 03 37 38.3
comp=Z,7µm,19.0s
FLWY Flagg Ranch 31.20 339 IAmb IAmb 03 26 12.9
comp=Z,134nm,1.8s
E28A Huff 31.31 354 IAmb IAmb 03 26 36.5
comp=Z,143nm,1.7s
MMNY Mt. Morris Dam 31.32 26 IAmb IAmb 03 26 12.6
comp=Z,102nm,1.2s
PNTR Pine Nut 31.40 323 IAmb IAmb 03 26 15.4
comp=Z,147nm,1.7s
YPP Pitchstone Pla 31.40 339 IAmb IAmb 03 26 28.0
comp=Z,88nm,2.0s
SABA Saba 31.43 81 eP P 03 26 06.1 -5.2
MEDO Medina 31.45 25 IAmb IAmb 03 26 12.5
comp=Z,153nm,1.6s
MHC Mount Hamilton 31.53 319 IAmb IAmb 03 26 15.0
comp=Z,60nm,1.5s
MHC IAMs_20 IAMs_20 03 38 18.7
comp=Z,14µm,21.0s
SMRT St. Maarten 31.58 81 eP P 03 26 15.1 +2.4
YMP Mirror Lake Pl 31.60 341 IAmb IAmb 03 26 33.9
comp=Z,87nm,1.6s
WELL Weller Preserv 31.64 321 IAMs_20 IAMs_20 03 38 34.0
comp=Z,10µm,19.0s
SEUS St. Eustatius 31.68 82 eP P 03 26 10.6 -2.9
PAHR Pah Rah Range 31.70 324 IAmb IAmb 03 26 16.8
comp=Z,120nm,1.8s
BINY Binghamton 31.75 29 IAmb IAmb 03 26 16.2
comp=Z,109nm,1.8s
BINY IAMs_20 IAMs_20 03 41 19.7
comp=Z,6µm,18.0s
BINY Binghamton 31.75 29 P P 03 26 12.8 -1.1
YNE Yellowstone No 31.80 341 IAmb IAmb 03 26 20.2
comp=Z,69nm,1.6s
K57A Scipio Center 31.93 28 IAmb IAmb 03 26 15.6
comp=Z,70nm,1.3s
YHL Hebgen Lake 32.04 339 IAmb IAmb 03 26 20.7
comp=Z,127nm,1.6s
HLID Hailey 32.17 334 P P 03 26 19.4 +1.6
L59A Walton 32.19 30 IAmb IAmb 03 26 19.9
comp=Z,176nm,1.9s
L59A IAMs_20 IAMs_20 03 41 23.4
comp=Z,5µm,19.0s
WSPT Westport, CT 32.30 33 IAmb IAmb 03 26 18.5
comp=Z,42nm,1.2s
LAO LASA Array 32.33 347 IAmb IAmb 03 26 20.5
comp=Z,124nm,1.7s
LAO IAMs_20 IAMs_20 03 39 21.1
comp=Z,8µm,18.0s
BEKR Beckworth 32.36 324 IAmb IAmb 03 26 22.6
comp=Z,80nm,1.6s
SADO Sadowa 32.54 23 LR LR 03 41 08.7
comp=Z,2µm,20.8s,baz=219,slow=40
SADO Sadowa 32.54 23 IAmb IAmb 03 26 21.4
comp=Z,40nm,0.9s
CZSB Cruzeiro do Su 32.56 133 P P 03 26 24.2 +3.0
CZSB IAmb IAmb 03 26 41.6
comp=Z,58nm,1.4s
CZSB Cruzeiro do Su 32.56 133 eP P 03 26 21.6 +0.4
FARB Farallon Islan 32.62 318 IAMs_20 IAMs_20 03 41 06.3
comp=Z,8µm,18.0s
EYMN Ely 32.65 6 P P 03 26 20.7 -1.0
CVS Carmenet Viney 32.65 319 IAMs_20 IAMs_20 03 40 34.2
comp=Z,13µm,22.0s
J57A Williamstown 32.70 27 IAmb IAmb 03 26 22.1
comp=Z,71nm,1.3s
SUTB Sutter Butte 32.78 321 IAmb IAmb 03 26 26.9
comp=Z,123nm,1.8s
AGMN Agassiz Nation 32.79 0 IAmb IAmb 03 26 23.5
comp=Z,95nm,1.4s
AGMN Agassiz Nation 32.79 0 P P 03 26 22.8 0.0
ANWB Willy Bob 32.81 81 eP P 03 26 15.1 -8.4
ORV Oroville 32.82 322 IAmb IAmb 03 26 26.6
comp=Z,83nm,1.8s
BOZ Bozeman (W) 32.85 340 P P 03 26 24.8 +1.2
BOZ Bozeman (W) 32.85 340 IAmb IAmb 03 26 27.4
comp=Z,179nm,2.0s
BOZ IAMs_20 IAMs_20 03 40 58.2
comp=Z,7µm,20.0s
DHSZ Broadband at M 32.89 84 eP P 03 26 14.7 -9.4
DELO Deloro Mine 32.91 24 IAmb IAmb 03 26 24.6
comp=Z,54nm,0.9s
MMLZ Guadeloupe Bro 33.00 84 eP P 03 26 22.7 -2.3
BBSR BB Station 33.03 54 P P 03 26 23.6 -1.6
BBSR IAmb IAmb 03 26 30.5
comp=Z,121nm,1.8s
BBSR BB Station 33.03 54 P P 03 26 25.8 +0.6
TBG Guadaloupe-3 33.03 85 eP P 03 26 22.7 -2.6
TDBA Terre de Bas, 33.04 85 eP P 03 26 24.3 -1.1
CBE Ff, Capester 33.05 84 IAMs_20 IAMs_20 03 40 40.4
comp=Z,5µm,19.0s
NNA Nana 33.16 144 LR LR 03 37 08.6
comp=Z,4µm,21.7s,baz=344,slow=31
WVOR Wild Horse Val 33.23 329 P P 03 26 28.5 +1.5
WVOR Wild Horse Val 33.23 329 IAmb IAmb 03 26 30.4
comp=Z,154nm,1.7s
WVOR Wild Horse Val 33.23 329 P P 03 26 28.7 +1.7
TRY Troy 33.27 31 IAmb IAmb 03 26 36.7
comp=Z,67nm,1.7s
DSLB Salisbury 33.28 85 eP P 03 26 27.8 +0.3
DWS Wesley 33.37 85 eP P 03 26 24.9 -3.5
MAGL Barre de l'ile 33.37 84 IAMs_20 IAMs_20 03 39 52.9
comp=Z,4µm,18.0s
MAGL Barre de l'ile 33.37 84 eP P 03 26 25.4 -3.0
J59A Piesco 33.42 29 IAmb IAmb 03 26 28.8
comp=Z,74nm,1.6s
HOPS Hopland Field 33.43 320 IAMs_20 IAMs_20 03 39 18.7
comp=Z,7µm,19.0s
GRGR Grenville 33.46 91 x x 03 31 45.0
GRGR Grenville 33.46 91 eP P 03 26 28.0 -1.1
DSDZ La Diserade, G 33.56 84 eP P 03 26 25.6 -4.4
SVN Savane Anatole 33.58 86 eP P 03 26 26.2 -4.0
HATC Hat Creek Radi 33.62 324 IAMs_20 IAMs_20 03 39 59.0
comp=Z,8µm,21.0s
GCMP Grenada, Carri 33.62 91 eP P 03 26 26.6 -4.0
GCMP x x 03 31 53.4
BIM Bigot 33.70 87 eP P 03 26 27.5 -3.8
CFNY Clifton-Fine, 33.72 28 IAmb IAmb 03 26 31.4
comp=Z,67nm,1.3s
J08A Circle Bar Ran 33.84 330 IAmb IAmb 03 26 34.9
comp=Z,140nm,1.6s
SLBI Saint Lucia, B 33.85 88 eP P 03 26 28.3 -4.2
MPOM Morne Pois Mar 33.91 87 IAMs_20 IAMs_20 03 41 16.4
comp=Z,5µm,18.0s
K62A Royalston 33.94 32 IAMs_20 IAMs_20 03 42 54.8
comp=Z,5µm,18.0s
TRN Trinidad (W) 33.98 94 eP P 03 26 28.4 -5.3
O02D Mt. Diablo Mer 33.98 322 IAMs_20 IAMs_20 03 39 09.8
comp=Z,11µm,19.0s
M65A Busby, Falmout 34.02 35 IAMs_20 IAMs_20 03 41 52.0
comp=Z,5µm,18.0s
PLID Pearl Lake 34.07 334 IAmb IAmb 03 26 36.5
comp=Z,132nm,1.6s
PLID IAMs_20 IAMs_20 03 40 02.0
comp=Z,9µm,18.0s
KCPM Cahto Peak 34.16 320 IAMs_20 IAMs_20 03 40 05.1
comp=Z,9µm,21.0s
L64A Middleborough 34.16 34 IAmb IAmb 03 26 35.4
comp=Z,57nm,1.2s
L64A IAMs_20 IAMs_20 03 42 50.9
comp=Z,6µm,19.0s
HRV Adam Dziewonsk 34.18 33 IAMs_20 IAMs_20 03 43 02.1
comp=Z,5µm,18.0s

WES Weston 34.22 33 IAMs_20 IAMs_20 03 43 00.2
comp=Z,6µm,19.0s
BCX Boston College 34.26 34 IAMs_20 IAMs_20 03 42 50.4
comp=Z,5µm,20.0s
WBO Williamsburg 34.28 26 IAmb IAmb 03 26 38.3
comp=Z,99nm,1.6s
LONY Lake Ozonia 34.28 28 IAmb IAmb 03 26 36.3
comp=Z,81nm,1.4s
M03C McCloud 34.30 324 IAmb IAmb 03 26 40.4
comp=Z,81nm,1.9s
BMO Blue Mountains 34.44 333 P P 03 26 37.8 +0.3
BMO Blue Mountains 34.44 333 IAmb IAmb 03 26 39.0
comp=Z,91nm,1.9s
BMO IAMs_20 IAMs_20 03 39 19.0
comp=Z,7µm,19.0s
EGMT Eagleton 34.45 344 IAMs_20 IAMs_20 03 43 09.4
comp=Z,5µm,18.0s
MSO Missoula 34.72 338 IAmb IAmb 03 26 41.8
comp=Z,85nm,1.6s
MSO IAMs_20 IAMs_20 03 40 41.8
comp=Z,6µm,19.0s
ULM Lac du Bonnet 34.74 0 P P 03 26 39.4 -0.4
comp=Z,10.0nm,1.0s,baz=180,slow=7.8,SNR=18
ULM LR LR 03 42 04.4
comp=Z,3µm,19.4s,baz=196,slow=38
comp=Z,10.0nm,1.0s
ULM Lac du Bonnet 34.74 0c iP P 03 26 38.9 -0.9
ULM Lac du Bonnet 34.74 0 IAmb IAmb 03 26 39.9
comp=Z,97nm,1.6s
M02C Callahan 34.79 323 IAMs_20 IAMs_20 03 41 30.1
comp=Z,6µm,18.0s
YBH Yreka Blue Hor 34.93 324 LR LR 03 42 22.4
comp=Z,13µm,18.7s,baz=278,slow=39
KHMM Horse Mountain 34.98 322 IAmb IAmb 03 26 45.7
comp=Z,81nm,1.6s
KHMM IAMs_20 IAMs_20 03 40 30.2
comp=Z,9µm,19.0s
L04D Klamath Falls 35.02 325 IAmb IAmb 03 26 44.4
comp=Z,94nm,1.7s
JCC Jacoby Creek, 35.12 322 IAMs_20 IAMs_20 03 42 01.0
comp=Z,9µm,18.0s
LBNH Lisbon 35.24 30 IAmb IAmb 03 26 54.1
comp=Z,102nm,1.8s
I62A Tamworth 35.26 31 IAmb IAmb 03 26 45.1
comp=Z,54nm,1.3s
I62A IAMs_20 IAMs_20 03 43 44.8
comp=Z,6µm,18.0s
F10A Beach Ranch, E 35.30 334 IAmb IAmb 03 26 46.6
comp=Z,156nm,1.8s
BBGH Gun Hill 35.33 89 IAMs_20 IAMs_20 03 42 54.1
comp=Z,5µm,20.0s
BBGH Gun Hill 35.33 89 eP P 03 26 37.7 -7.7
MNTQ Montreal, Queb 35.39 27 IAmb IAmb 03 26 46.1
comp=Z,144nm,1.5s
G08A Pilot Rock 35.53 332 IAmb IAmb 03 26 48.5
comp=Z,71nm,1.9s
TRQ Mont Tremblant 35.56 26 IAmb IAmb 03 26 47.6
comp=Z,88nm,1.3s
H62A Milan 35.86 31 IAMs_20 IAMs_20 03 44 06.5
comp=Z,5µm,19.0s
I05D Terrebonne, OR 35.97 328 IAmb IAmb 03 27 03.8
comp=Z,94nm,1.9s
VLDQ Val d'Or 36.00 21 IAmb IAmb 03 26 50.0
comp=Z,79nm,1.5s
WIFE Three Sisters- 36.02 328 IAmb IAmb 03 26 53.5
comp=Z,133nm,1.9s
I04A Tendick Farm, 36.15 327 IAmb IAmb 03 26 53.7
comp=Z,114nm,1.8s
G06A Carlson Farm, 36.27 330 IAmb IAmb 03 26 58.2
comp=Z,133nm,1.9s
J01E Myrtle Point 36.55 325 IAmb IAmb 03 26 58.1
comp=Z,145nm,1.5s
I03D Drain, OR 36.58 326 IAmb IAmb 03 26 57.7
comp=Z,78nm,1.4s
LDM Libby Dam 36.59 338 IAmb IAmb 03 26 58.8
comp=Z,201nm,1.7s
WVL Waterville 36.60 32 IAMs_20 IAMs_20 03 44 41.2
comp=Z,5µm,20.0s
G62A West of Eustis 36.63 31 IAmb IAmb 03 26 57.1
comp=Z,123nm,1.4s
G62A IAMs_20 IAMs_20 03 44 29.9
comp=Z,5µm,19.0s
BUCK Buck Mountain 36.72 327 IAmb IAmb 03 26 59.6
comp=Z,198nm,1.8s
H04D Lebanon 36.82 327 IAmb IAmb 03 27 35.6
comp=Z,115nm,1.8s
NEW Newport 37.10 336 P P 03 27 00.4 +0.3
NEW Newport 37.10 336 IAMs_20 IAMs_20 03 42 47.0
comp=Z,6µm,19.0s
NEW Newport 37.10 336 P P 03 27 00.5 +0.3
COR Corvallis 37.15 327 P P 03 27 01.5 +0.9
COR pmax pmax
comp=Z,125nm,1.6s
COR MLR MLR
comp=Z,10µm,18.0s
COR Corvallis 37.15 327 P P 03 27 01.5 +0.9
COR IAmb IAmb 03 27 03.8
comp=Z,125nm,1.6s
G04A Mulino 37.16 329 IAmb IAmb 03 27 02.6
comp=Z,88nm,1.3s
BOAV Boa Vista 37.25 107 P P 03 27 02.9 +1.1
BOAV Boa Vista 37.25 107 eP P 03 27 02.0 +0.3
G03D McMinnville, O 37.56 328 IAmb IAmb 03 27 07.4
comp=Z,191nm,1.7s
G65A Princeton 38.13 33 IAmb IAmb 03 27 09.3
comp=Z,65nm,1.3s
D62A Allapoint, All 38.68 30 IAmb IAmb 03 27 14.5
comp=Z,109nm,1.2s
D62A IAMs_20 IAMs_20 03 44 59.2
comp=Z,4µm,19.0s
MACA Manacapuru-AM 39.50 115 P P 03 27 21.0 +0.3
MACA IAmb IAmb 03 27 25.9
comp=Z,160nm,1.6s
MACA Manacapuru-AM 39.50 115 eP P 03 27 20.7 0.0
FFC Flin Flon 39.50 355 P P 03 27 20.2 0.0
FFC pmax pmax
comp=Z,85nm,1.6s
FFC MLR MLR
comp=Z,4µm,20.0s
FFC Flin Flon 39.50 355 P P 03 27 20.2 0.0
FFC Flin Flon 39.50 355 IAMs_20 IAMs_20 03 44 46.9
comp=Z,4µm,20.0s
FFC Flin Flon 39.50 355 P P 03 27 20.6 +0.4
EDM Edmonton 40.13 344 IAmb IAmb 03 27 29.3
comp=Z,244nm,1.7s
ICQ Pointe Anglais 41.26 28 P P 03 27 33.6 -1.2
GBN Guysborough 41.60 37 P P 03 27 37.0 -0.8
LPAZ La Paz 41.80 138 P P 03 27 41.5 +1.1
comp=Z,4.5nm,0.7s,baz=278,slow=4.0,SNR=15
LPAZ LR LR 03 45 08.2
comp=Z,2µm,18.1s,baz=312,slow=36
comp=Z,4.5nm,0.7s
LPAZ La Paz 41.80 138 eP P 03 27 41.4 +1.0
LPAZ La Paz 41.80 138 P P 03 27 41.4 +1.0
LPAZ La Paz 41.80 138 eP P 03 27 40.1 -0.3
LPAZ La Paz 41.80 138 P P 03 27 42.0 +1.6
PB18 Visviri 41.92 140 P P 03 27 46.8 +5.5
CBB Campbell River 41.95 332 P P 03 27 40.2 -0.3
PB16 IPOC Station P 42.48 141 P P 03 27 49.5 +3.7
FCC Fort Churchill 43.29 1 P P 03 27 51.8 +0.5
FCC pmax pmax
comp=Z,128nm,1.6s
FCC Fort Churchill 43.29 1 P P 03 27 51.8 +0.5
FCC IAmb IAmb 03 27 52.5
comp=Z,128nm,1.6s
GO01 Chusmiza 43.69 142 P P 03 27 59.3 +3.8
MDP Montagnes des 43.76 99 LR LR 03 46 43.6
comp=Z,3µm,21.3s,baz=288,slow=37
RPN Rapa Nui 44.24 197 LR LR 03 41 40.6
comp=Z,2µm,21.7s,baz=18,slow=30
ITTB Itaituba 44.42 113 eP P 03 28 00.4 -0.6
BBB Bella Bella 44.69 332 LR LR 03 46 19.3
comp=Z,9µm,18.2s,baz=166,slow=36
VILB Vilhena 45.24 127 P P 03 28 08.0 +0.5
VILB IAmb IAmb 03 28 24.3
comp=Z,64nm,1.3s
VILB Vilhena 45.24 127 eP P 03 28 07.6 0.0
SCHQ Schefferville 45.34 23 P P 03 28 07.0 -0.8
comp=Z,18nm,0.8s,baz=216,slow=6.1,SNR=21
SCHQ LR LR 03 50 56.1
comp=Z,3µm,18.1s,baz=214,slow=41
comp=Z,18nm,0.8s
DRLN Deer Lake 46.02 34 IAmb IAmb 03 28 13.7
comp=Z,101nm,1.2s
SIV San Ignacio 46.49 131 LR LR 03 46 55.0
comp=Z,2µm,18.6s,baz=324,slow=35
PTLB Pontes e Lacer 47.58 128 P P 03 28 26.2 +0.4

PTLB IAmb IAmb 03 28 47.5
comp=Z,32nm,1.3s
PTLB Pontes e Lacer 47.58 128 eP P 03 28 26.0 +0.1
CLDB Colider 47.59 121 eP P 03 28 25.0 -1.0
CLDB Colider 47.59 121 P P 03 28 25.2 -0.8
BBSD Serra de San D 47.60 131 eP P 03 28 26.0 0.0
V35K Ketchikan 48.34 334 IAMs_20 IAMs_20 03 47 30.6
comp=Z,5µm,19.0s
V35K Ketchikan 48.34 334 P P **03 28 33.4 +2.2**
baz=131
V35K S S **03 35 36.6 +4.6**
baz=131
YKAW1 Yellowknife Wh 48.80 349 IAmb IAmb 03 28 35.5
comp=Z,77nm,1.5s
YKA Yellowknife Ar 48.83 349 P P **03 28 34.4 -0.4**
comp=Z,10nm,1.0s,baz=154,slow=7.7,SNR=20
YKA LR LR 03 53 17.2
comp=Z,3µm,19.2s,baz=174,slow=41
comp=Z,10nm,1.0s
YKA Yellowknife Ar 48.83 349 P P **03 28 34.3 -0.5**
BLKN Baker Lake 48.85 360 P P **03 28 35.0 0.0**
BLKN IAmb IAmb 03 28 36.0
comp=Z,95nm,1.5s
SALTA 48.88 143 P P **03 28 39.7 +3.3**
YKAW3 Yellowknife Wh 48.89 349 IAmb IAmb 03 28 36.4
comp=Z,54nm,1.6s
T35M Bob Quinn 48.90 336 P P **03 28 38.2 +2.6**
baz=134,SNR=7.7
T35M S S **03 35 46.3 +6.4**
baz=134
CRAG Craig 49.09 333 P P **03 28 39.3 +2.3**
baz=129
CRAG S S 03 35 49.6 +7.1
baz=129
KOTAN Kotaneelee Air 49.11 342 P P **03 28 38.4 +1.3**
baz=143
KOTAN S S **03 35 44.6 +1.8**
baz=143
LIRD Liard River Hi 49.19 340 P P **03 28 38.8 +1.1**
baz=140
WRAK Wrangell Islan 49.37 334 P P **03 28 40.3 +1.2**
baz=131
WRAK S S **03 35 51.1 +4.6**
baz=131
U33K Whale Pass 49.50 334 P P **03 28 41.7 +1.6**
baz=130
U33K S S 03 35 55.4 +7.0
baz=130
DLBC Dease Lake 49.84 337 LR LR 03 48 49.2
comp=Z,10µm,18.6s,baz=118,slow=35
DLBC Dease Lake 49.84 337 P P **03 28 45.3 +2.5**
baz=135,SNR=25
DLBC S S 03 36 00.1 +6.9
baz=135
T33K Petersburg 49.89 334 P P **03 28 45.3 +2.3**
baz=130
S34M Telegraph Cree 49.89 336 P P **03 28 45.5 +2.4**
baz=133,SNR=5.4
S34M S S 03 36 01.6 +7.8
baz=133
LCO Las Campanas 50.47 151 P P **03 28 49.6 +1.5**
LCO pmax pmax
comp=Z,24nm,1.2s
LCO Las Campanas 50.47 151 P P **03 28 49.6 +1.5**
SALV Santo Antonio 50.49 126 eP P 03 28 48.0 -0.3
PRPB Parauapebas 50.50 112 eP P 03 28 48.5 +0.2
AC05 El Transito 50.52 150 P P **03 28 50.9 +2.5**
WTLY Watson Lake, Y 50.62 339 IAmb IAmb 03 28 51.1
comp=Z,101nm,1.5s
WTLY Watson Lake, Y 50.62 339 P P **03 28 50.3 +1.7**
baz=137,SNR=10.0
WTLY S S **03 36 08.1 +4.3**
baz=137
R33M Jennings River 50.86 338 IAmb IAmb 03 28 53.8
comp=Z,115nm,1.6s
R33M Jennings River 50.86 338 P P **03 28 53.0 +2.5**
baz=134,SNR=18
R33M S S **03 36 14.0 +6.5**
baz=134
S32K Killisnoo 50.99 334 IAmb IAmb 03 28 54.3
comp=Z,97nm,1.8s
S32K IAMs_20 IAMs_20 03 49 03.5
comp=Z,5µm,18.0s
S32K Killisnoo 50.99 334 P P **03 28 53.5 +2.2**
baz=129
S32K S S 03 36 17.2 +8.3
baz=129
Q32M Nakina River 51.05 337 IAmb IAmb 03 28 55.6
comp=Z,108nm,1.7s
Q32M IAMs_20 IAMs_20 03 50 46.8
comp=Z,6µm,20.0s
Q32M Nakina River 51.05 337 P P **03 28 54.6 +2.6**
baz=133,SNR=9.1
Q32M S S 03 36 17.6 +7.4
baz=133
SIT Sitka 51.05 334 P P **03 28 54.1 +2.3**
baz=128
SIT S S 03 36 16.9 +7.2
baz=128
COIM Forte Coimbra 51.39 132 eP P 03 28 54.4 -0.5
VA04 Juan Fernndez 51.45 162 IAMs_20 IAMs_20 03 44 51.4
comp=Z,3µm,20.0s
CO06 Fray Jorge 51.46 153 IAMs_20 IAMs_20 03 44 50.7
comp=Z,2µm,20.0s
WRGLY Wrigley 51.47 344 P P **03 28 55.8 +0.9**
baz=145
WRGLY S S **03 36 15.6 +0.1**
baz=145
R32K Eaglecrest 51.48 335 IAMs_20 IAMs_20 03 48 51.4
comp=Z,4µm,20.0s
R32K Eaglecrest 51.48 335 P P **03 28 57.5 +2.5**
baz=130
BESE Bessie Mountai 51.81 335 IAMs_20 IAMs_20 03 49 01.1
comp=Z,3µm,19.0s
FRB Frobisher Bay 51.88 15 LR LR 03 53 53.7
comp=Z,2µm,18.4s,baz=207,slow=40
FRB Frobisher Bay 51.88 15 P P **03 28 58.2 +0.3**
SNDB Serra Nova Dou 51.92 119 eP P 03 28 59.6 +0.6
S31K Pelican 51.99 334 IAMs_20 IAMs_20 03 49 41.0
comp=Z,5µm,20.0s
S31K Pelican 51.99 334 P P **03 29 01.0 +2.2**
baz=128
S31K S S 03 36 30.9 +8.2
baz=128
P32M Atlin 52.02 337 IAmb IAmb 03 29 02.0
comp=Z,62nm,1.5s
P32M Atlin 52.02 337 P P **03 29 01.3 +2.1**
baz=131,SNR=7.5
P32M S S **03 36 29.7 +6.3**
baz=131
R31K City Hall, Gus 52.06 335 P P **03 29 01.3 +1.9**
baz=128
P33M Teslin, Yukon 52.10 338 IAmb IAmb 03 29 02.6
comp=Z,73nm,1.7s
P33M Teslin, Yukon 52.10 338 P P **03 29 01.6 +1.8**
baz=133,SNR=10
P33M S S 03 36 31.8 +7.2
baz=133
PP1B Ponte de Pedra 52.12 127 eP P 03 29 01.0 +0.6
CO02 Combarbal 52.19 153 P P **03 29 02.9 +2.0**
PTCN Pitcairn Islan 52.22 220 IAMs_20 IAMs_20 03 44 58.1
comp=Z,4µm,22.0s
SKAG Skagway 52.56 336 P P **03 29 05.1 +2.0**
baz=130
SKAG S S 03 36 37.7 +7.2
baz=130
MURT Porto Murtinho 52.66 133 eP P 03 29 03.5 -0.8
N32M Quiet Lake 52.84 338 IAMs_20 IAMs_20 03 53 58.1
comp=Z,5µm,18.0s
N32M Quiet Lake 52.84 338 P P **03 29 07.0 +1.8**
baz=133
N32M S S **03 36 40.8 +6.2**
baz=133
PLBC Pleasant Camp 52.97 336 P P **03 29 08.5 +2.4**
baz=128,SNR=5.2
PLBC S S 03 36 44.4 +8.2
baz=128
WHY Whitehorse 53.16 337 IAmb IAmb 03 29 10.1
comp=Z,90nm,1.6s
WHY Whitehorse 53.16 337 P P **03 29 09.5 +1.8**
baz=131,SNR=5.1
WHY S S 03 36 47.1 +8.0
baz=131
MMPY Sheldon Lake, 53.26 341 P P **03 29 10.5 +2.2**
baz=136,SNR=36
MMPY S S 03 36 47.2 +7.0
baz=136

AQDB Aquidauana 53.26 131 eP P 03 29 08.7 -0.1
AQDB Aquidauana 53.26 131 P P **03 29 08.0 -0.9**
ARAG Araguaiana, MT 53.46 123 eP P 03 29 10.2 -0.1
P30M Million Dollar 53.62 336 P P **03 29 13.6 +2.6**
baz=128
P30M S S 03 36 55.0 +10
baz=128
P29M Windy Craggy 53.63 335 IAmb IAmb 03 29 15.2
comp=Z,156nm,1.8s
P29M Windy Craggy 53.63 335 P P **03 29 13.4 +2.4**
baz=127,SNR=8.2
P29M S S 03 36 53.3 +8.0
baz=127
SMTB Santa Maria do 53.65 113 eP P 03 29 11.9 0.0
O30N Mendenhall 53.69 337 IAmb IAmb 03 29 14.3
comp=Z,72nm,1.6s
O30N IAMs_20 IAMs_20 03 50 23.8
comp=Z,5µm,20.0s
O30N Mendenhall 53.69 337 P P **03 29 13.5 +2.0**
baz=129,SNR=11
O30N S S 03 36 53.7 +7.6
baz=129
MT02 Curacav 53.90 154 IAmb IAmb 03 29 25.1
comp=Z,38nm,1.3s
M31M Drury Creek, Y 54.02 339 IAmb IAmb 03 29 16.5
comp=Z,72nm,1.8s
M31M Drury Creek, Y 54.02 339 P P **03 29 15.5 +1.7**
baz=132,SNR=9.6
M31M S S **03 36 56.6 +6.2**
baz=132
N31M Braeburn, Yuko 54.04 338 IAmb IAmb 03 29 16.6
comp=Z,80nm,1.5s
N31M IAMs_20 IAMs_20 03 53 17.8
comp=Z,5µm,18.0s
N31M Braeburn, Yuko 54.04 338 P P **03 29 15.8 +1.9**
baz=130,SNR=12
N31M S S **03 36 57.4 +6.7**
baz=130
HYT Haines Junctio 54.27 336 P P **03 29 18.0 +2.2**
baz=128,SNR=15
HYT S S 03 37 03.1 +9.0
baz=128
O29M Mount Kennedy 54.37 335 IAmb IAmb 03 29 19.4
comp=Z,57nm,1.6s
O29M IAMs_20 IAMs_20 03 50 55.8
comp=Z,4µm,18.0s
O29M Mount Kennedy 54.37 335 P P **03 29 18.3 +1.7**
baz=126,SNR=6.2
O29M S S 03 37 03.5 +8.0
baz=126
N30M Aishikik Lake 54.50 337 IAmb IAmb 03 29 20.5
comp=Z,94nm,1.8s
N30M Aishikik Lake 54.50 337 P P **03 29 19.6 +2.1**
baz=129,SNR=12
N30M S S 03 37 04.8 +7.7
baz=129
MT08 Bocatoma Ro 54.54 153 IAmb IAmb 03 29 32.6
comp=Z,52nm,1.1s
MT08 IAMs_20 IAMs_20 03 46 25.3
comp=Z,2µm,19.0s
ILON Igloolik, Nuna 54.66 6 IAmb IAmb 03 29 19.5
comp=Z,101nm,1.3s
YUK6 Outpost Mounta 54.67 336 P P **03 29 21.4 +2.5**
baz=127,SNR=11
YUK6 S S 03 37 08.0 +8.3
baz=127
PINM Pinnacle 54.93 335 P P **03 29 22.9 +2.3**
baz=124
PINM S S **03 37 08.9 +6.0**
baz=124
YUK4 Talbot Arm 55.02 336 P P **03 29 23.8 +2.4**
baz=127,SNR=8.6
YUK4 S S 03 37 12.6 +8.2
baz=127
GO05 Hualane 55.10 156 P P **03 29 23.6 +1.5**
M30M Minto, Yukon 55.11 338 IAmb IAmb 03 29 24.1
comp=Z,71nm,1.7s
M30M Minto, Yukon 55.11 338 P P **03 29 23.1 +1.4**
baz=130,SNR=15
M30M S S **03 37 11.4 +6.3**
baz=130
BRWY Burwash Landin 55.19 336 P P **03 29 24.6 +2.2**
baz=126,SNR=9.7
BRWY S S 03 37 13.4 +7.1
baz=126
O28M Mount Upton 55.29 335 P P **03 29 25.7 +2.3**
baz=125
O28M S S 03 37 15.8 +7.6
baz=125
AMBA Amambai (Brazi 55.32 133 eP P 03 29 23.9 +0.1
BO02 Sierra Bellavi 55.37 155 IAmb IAmb 03 29 47.0
comp=Z,41nm,1.4s
BO02 Sierra Bellavi 55.37 155 P P **03 29 26.1 +2.1**
YUK8 Steele Glacier 55.42 336 P P **03 29 26.5 +2.2**
baz=126,SNR=12
YUK8 S S **03 37 16.0 +6.2**
baz=126
M29M Somme Creek 55.63 338 P P **03 29 27.6 +2.0**
baz=128,SNR=31
M29M S S 03 37 19.1 +6.9
baz=128
SJPY San Joaquin 55.89 135 eP P 03 29 27.9 0.0
L29M L29M 55.92 338 IAmb IAmb 03 29 30.0
comp=Z,76nm,1.4s
L29M IAMs_20 IAMs_20 03 51 32.5
comp=Z,2µm,20.0s
L29M L29M 55.92 338 P P **03 29 29.0 +1.4**
baz=128,SNR=24
L29M S S **03 37 20.9 +4.9**
baz=128
ML02 Panimavida 55.96 156 P P **03 29 29.3 +1.1**
CPUP Villa Florida 55.98 137 P P **03 29 28.7 +0.3**
comp=Z,2.9nm,1.0s,baz=337,slow=5.5,SNR=4.4
CPUP LR LR 03 53 29.0
comp=Z,1µm,19.2s,baz=326,slow=36
comp=Z,2.9nm,1.0s
CPUP Villa Florida 55.98 137 eP P 03 29 28.5 0.0
CPUP Villa Florida 55.98 137 P P **03 29 28.4 0.0**
YUK3 Moose Creek 55.98 336 P P **03 29 29.9 +1.6**
baz=125,SNR=9.6
YUK3 S S **03 37 23.3 +6.1**
baz=125
BI05 Punta Hualpn 56.16 158 IAMs_20 IAMs_20 03 47 22.8
comp=Z,2µm,19.0s
K29M Barlow Dome 56.17 339 IAmb IAmb 03 29 32.4
comp=Z,55nm,1.5s
K29M IAMs_20 IAMs_20 03 52 34.1
comp=Z,3µm,19.0s
K29M Barlow Dome 56.17 339 P P **03 29 30.6 +1.1**
baz=130,SNR=18
K29M S S **03 37 22.0 +2.5**
baz=130
J30M Hart River 56.25 340 P P **03 29 31.3 +1.2**
baz=131,SNR=11
J30M S S **03 37 23.6 +3.0**
baz=131
TGL Tana Glacier 56.36 335 IAMs_20 IAMs_20 03 53 39.6
comp=Z,5µm,20.0s
CRQE Cirque 56.47 334 P P **03 29 33.5 +1.8**
baz=122
H31M Peel River 56.47 342 IAmb IAmb 03 29 33.1
comp=Z,87nm,1.7s
H31M Peel River 56.47 342 P P **03 29 32.2 +0.7**
baz=134,SNR=12
H31M S S **03 37 26.8 +3.5**
baz=134
CRQM Cirque 56.49 334 IAMs_20 IAMs_20 03 51 51.4
comp=Z,5µm,20.0s
BVCY Beaver Creek 56.50 337 P P **03 29 33.6 +1.8**
baz=125,SNR=9.0
BVCY S S **03 37 30.3 +6.6**
baz=125
BDFB Brasilia 56.52 121 P P **03 29 33.4 +0.7**
comp=Z,4.8nm,0.8s,baz=293,slow=7.6,SNR=8.7
comp=Z,4.8nm,0.8s
KAIM Kayak Island 56.61 333 P P **03 29 35.1 +2.7**
baz=120
I30M Mount Dempster 56.70 341 IAmb IAmb 03 29 34.9
comp=Z,59nm,1.6s
I30M Mount Dempster 56.70 341 P P **03 29 34.0 +0.8**
baz=131,SNR=22
I30M S S **03 37 29.4 +2.9**
baz=131
MCARA McCarthy VSAT 56.78 335 IAmb IAmb 03 29 36.9
comp=Z,140nm,2.0s
MCARA McCarthy VSAT 56.78 335 P P **03 29 35.9 +2.2**
baz=122
MCARA S S 03 37 34.9 +7.6
baz=122
J29N Klondike Camp 56.80 340 P P **03 29 34.8 +1.0**
baz=129
J29N S S **03 37 30.4 +2.8**
baz=129
BI02 San Fabin de 56.80 156 IAmb IAmb 03 29 46.0
comp=Z,36nm,1.3s
BI02 San Fabin de 56.80 156 P P **03 29 35.5 +1.2**
M27K Edge Creek, AK 56.86 336 IAmb IAmb 03 29 37.1
comp=Z,76nm,1.7s
M27K Edge Creek, AK 56.86 336 P P **03 29 36.3 +1.9**
baz=124,SNR=10
M27K S S 03 37 35.5 +6.8
baz=124
VRDI Verde Repeater 56.87 335 IAmb IAmb 03 29 38.4
comp=Z,89nm,1.8s
VRDI IAMs_20 IAMs_20 03 52 06.0
comp=Z,5µm,19.0s
TRCB Terra Rica 56.93 131 eP P 03 29 34.9 -0.5
RAGM Ragged Mountai 56.95 334 IAmb IAmb 03 29 39.1
comp=Z,130nm,1.9s
DAWY Dawson 56.96 339 P P **03 29 35.4 +0.4**
baz=128,SNR=8.9
DAWY S S **03 37 31.9 +2.2**
baz=128
IVI Ivigtut 56.98 25 IAMs_20 IAMs_20 03 55 43.9
comp=Z,3µm,19.0s
IVI Ivigtut 56.98 25 *i* P P **03 29 34.9 -0.2**
IVI IAmb IAmb 03 29 42.5
comp=Z,34nm,1.1s
GLB Gilahina Butte 57.13 335 IAmb IAmb 03 29 39.1
comp=Z,66nm,1.6s
BMRM Bremner River 57.21 334 IAMs_20 IAMs_20 03 53 12.2
comp=Z,4µm,18.0s
BMRM Bremner River 57.21 334 P P **03 29 38.8 +1.9**
baz=120
BMRM S S 03 37 40.0 +6.8
baz=120
MID Middleton Isla 57.22 332 IAMs_20 IAMs_20 03 50 53.5
comp=Z,3µm,18.0s
Q23K Middleton Isla 57.22 332 P P **03 29 39.0 +2.2**
baz=118
BCAR Beaver Creek A 57.23 337 P P **03 29 38.3 +1.3**
G31M Satah River 57.24 343 P P **03 29 37.5 +0.6**
baz=135,SNR=25
G31M S S **03 37 35.1 +2.0**
baz=135
L27K Beaver Creek, 57.24 337 IAmb IAmb 03 29 39.5
comp=Z,71nm,1.6s
L27K Beaver Creek, 57.24 337 P P **03 29 38.5 +1.5**
baz=124,SNR=24
L27K S S **03 37 39.2 +5.7**
baz=124
NUUK Nuuk 57.31 21 P P **03 29 39.1 +1.8**
NUUK Nuuk 57.31 21 *i* P P **03 29 37.3 0.0**
NUUK IAmb IAmb 03 29 39.7
comp=Z,155nm,1.8s
M26K Nabesna, AK 57.32 336 IAmb IAmb 03 29 40.1
comp=Z,54nm,1.4s
M26K Nabesna, AK 57.32 336 P P **03 29 39.3 +1.7**
baz=123,SNR=13
M26K S S **03 37 41.1 +6.5**
baz=123
NBPS Pedro II - PI 57.45 106 eP P 03 29 38.5 -0.8
F31M Tsiigehtchic 57.46 344 IAmb IAmb 03 29 40.6
comp=Z,117nm,1.6s
F31M Tsiigehtchic 57.46 344 P P **03 29 39.1 +0.7**
baz=135,SNR=8.8
EYAK Cordova Ski Ar 57.49 333 P P **03 29 40.7 +2.0**
baz=119
N25K Chitina, Valde 57.54 335 P P **03 29 41.5 +2.3**
baz=121,SNR=9.4
EPYK Eagle Plains 57.57 342 IAmb IAmb 03 29 43.4
comp=Z,104nm,1.9s
EPYK IAMs_20 IAMs_20 03 55 39.8
comp=Z,5µm,21.0s
EPYK Eagle Plains 57.57 342 P P **03 29 40.0 +0.7**
baz=132,SNR=8.1
IPMB Ipameri, GO 57.58 123 eP P 03 29 39.3 -0.8
SDBA SÃO DESIDERIO 57.60 116 eP P 03 29 40.4 +0.1
DIV Divide 57.79 334 IAMs_20 IAMs_20 03 57 25.4
comp=Z,4µm,18.0s
L26K Log Cabin Wild 57.80 337 IAmb IAmb 03 29 43.3
comp=Z,52nm,1.4s
L26K IAMs_20 IAMs_20 03 53 35.3
comp=Z,5µm,18.0s
L26K Log Cabin Wild 57.80 337 P P **03 29 42.1 +1.2**
baz=123,SNR=9.5
G30M tAoh Zraii Nji 57.83 343 IAmb IAmb 03 29 43.3
comp=Z,71nm,1.9s
G30M tAoh Zraii Nji 57.83 343 P P **03 29 40.9 -0.3**
baz=132
K27K Chicken 57.89 338 IAmb IAmb 03 29 45.0
comp=Z,132nm,1.7s
MENT Mentasta 57.89 336 IAmb IAmb 03 29 43.9
comp=Z,59nm,1.5s
P23K Montague Islan 57.96 332 IAMs_20 IAMs_20 03 54 44.0
comp=Z,4µm,18.0s
P23K Montague Islan 57.96 332 P P **03 29 43.5 +1.5**
baz=117
H29M Whitestone 57.98 341 IAmb IAmb 03 29 43.8
comp=Z,78nm,1.6s
H29M IAMs_20 IAMs_20 03 54 47.6
comp=Z,4µm,19.0s
H29M Whitestone 57.98 341 P P **03 29 43.0 +0.9**
baz=130,SNR=14
I28M Miner Creek 57.99 340 IAmb IAmb 03 29 43.4
comp=Z,57nm,2.0s
I28M Miner Creek 57.99 340 P P **03 29 42.5 +0.2**
baz=128,SNR=7.5
INK Inuvik 58.03 345 LR LR 03 59 08.4
comp=Z,7µm,18.4s,baz=168,slow=41
INK Inuvik 58.03 345 IAmb IAmb 03 29 44.6
comp=Z,66nm,1.2s
INK Inuvik 58.03 345 P P **03 29 43.0 +0.6**
baz=136,SNR=20
INK Inuvik 58.03 345 P P **03 29 43.2 +0.8**
KLU Klutina 58.03 334 IAmb IAmb 03 29 45.3
comp=Z,90nm,1.6s
KLU IAMs_20 IAMs_20 03 52 59.7
comp=Z,4µm,20.0s
KLU Klutina 58.03 334 P P **03 29 44.5 +1.9**
baz=119,SNR=8.8
NRS Narsarsuaq 58.11 26 IAMs_20 IAMs_20 03 53 18.8
comp=Z,2µm,22.0s
NRS Narsarsuaq 58.11 26 P P **03 29 43.1 +0.1**
NRS Narsarsuaq 58.11 26 *i* P P **03 29 43.0 0.0**
NRS IAmb IAmb 03 29 44.8
comp=Z,167nm,1.6s
F30M Barrier River 58.14 343 IAmb IAmb 03 29 45.6
comp=Z,103nm,1.4s
F30M Barrier River 58.14 343 P P **03 29 44.0 +0.8**
baz=133,SNR=16
HARP HAARP 58.17 335 P P **03 29 45.0 +1.5**
baz=121,SNR=5.2
HARP S S **03 37 48.4 +2.7**
baz=121
POIN Pond Inlet 58.23 6 IAmb IAmb 03 29 45.1
comp=Z,102nm,1.5s
GLI Glacier Island 58.23 333 IAMs_20 IAMs_20 03 53 34.2
comp=Z,4µm,18.0s
GLI Glacier Island 58.23 333 P P **03 29 45.1 +1.1**
baz=118
GLI S S **03 37 51.1 +4.6**
baz=118
G29M Pine Creek 58.32 342 IAmb IAmb 03 29 46.1
comp=Z,63nm,1.5s
G29M Pine Creek 58.32 342 P P **03 29 45.1 +0.6**
baz=130,SNR=10
G29M S S **03 37 49.6 +2.2**
baz=130
LDASE Londrina, Braz 58.40 130 eP P 03 29 45.1 -0.7
M24K Tolsona, Glenn 58.44 335 IAMs_20 IAMs_20 03 53 26.4
comp=Z,2µm,19.0s
M24K Tolsona, Glenn 58.44 335 P P **03 29 47.3 +1.9**
baz=119,SNR=6.7
M24K S S **03 37 54.2 +4.9**
baz=119
PTGB Pitanga 58.52 132 eP P 03 29 46.2 -0.4
PAX Paxson 58.59 336 IAmb IAmb 03 29 48.5
comp=Z,77nm,1.5s
PAX Paxson 58.59 336 P P **03 29 47.7 +1.2**
baz=121,SNR=20
PAX S S **03 37 55.2 +3.9**
baz=121
I27K Kandik River 58.64 340 IAmb IAmb 03 29 48.4
comp=Z,38nm,1.6s
I27K IAMs_20 IAMs_20 03 56 33.4

comp=Z,4µm,19.0s
I27K **Kandik River** 58.64 340 P P 03 29 47.1 +0.3
baz=126,SNR=8.9
I27K S S 03 37 54.9 +3.1
baz=126
RIDG **Independent Ri** 58.75 337 P P 03 29 49.1 +1.5
baz=122,SNR=24
RIDG S S 03 37 58.0 +4.7
baz=122
PWL **Port Wells** 58.76 333 IAmb IAmb 03 29 49.5
comp=Z,46nm,1.4s
PWL IAMs_20 IAMs_20 03 54 12.2
comp=Z,4µm,19.0s
PWL **Port Wells** 58.76 333 P P 03 29 48.6 +0.9
baz=116
PWL S S 03 37 56.8 +3.4
baz=116
SCM **Sheep Creek Mo** 58.78 334 IAMs_20 IAMs_20 03 53 32.6
comp=Z,4µm,18.0s
SCM **Sheep Creek Mo** 58.78 334 P P 03 29 48.9 +1.0
baz=118,SNR=6.6
SCM S S 03 37 57.6 +3.8
baz=118
KIP **Kipapa** 58.86 286 e P P 03 29 50.4 +1.4
KIP pmax pmax
comp=Z,95nm,1.3s
KIP **Kipapa** 58.86 286 IAMs_20 IAMs_20 03 49 39.7
comp=Z,2µm,18.0s
LR04 **Corral** 58.89 160 IAMs_20 IAMs_20 03 50 21.1
comp=Z,2µm,18.0s
SEW **Seward** 58.93 332 P P 03 29 49.7 +1.0
baz=115
SEW S S 03 37 58.3 +2.8
baz=115
M23K **Glacier View** 58.93 334 P P 03 29 49.6 +0.8
baz=118
M23K S S 03 37 58.3 +2.7
baz=118
H27K **Steamboat Moun** 58.99 340 P P 03 29 50.1 +0.9
baz=126,SNR=31
H27K S S 03 37 58.6 +2.3
baz=126
BB19B **Bebedouro** 59.01 127 e P P 03 29 49.7 -0.3
LR03 **Panguipulli** 59.03 159 IAMs_20 IAMs_20 03 49 01.9
comp=Z,2µm,19.0s
KNK **Knik Glacier** 59.06 334 IAmb IAmb 03 29 52.8
comp=Z,105nm,1.7s
KNK IAMs_20 IAMs_20 03 53 31.2
comp=Z,3µm,19.0s
KNK **Knik Glacier** 59.06 334 P P 03 29 50.9 +1.1
baz=117
KNK S S 03 38 01.2 +3.8
baz=117
PSAL **Palomas, Salto** 59.13 142 e P P 03 29 50.9 +0.3
K24K **Donnelly Dome** 59.14 337 IAmb IAmb 03 29 52.4
comp=Z,66nm,1.4s
K24K **Donnelly Dome** 59.14 337 P P 03 29 51.1 +0.9
baz=121,SNR=7.6
K24K S S 03 38 02.3 +4.0
baz=121
A36M **Sachs Harbour** 59.15 350 IAMs_20 IAMs_20 03 55 55.2
comp=Z,4µm,20.0s
A36M **Sachs Harbour** 59.15 350 P P 03 29 50.4 +0.2
baz=147,SNR=13
A36M S S 03 37 58.6 +0.6
baz=147
SML **Sawmill** 59.19 334 IAMs_20 IAMs_20 03 52 53.4
comp=Z,3µm,18.0s
SML **Sawmill** 59.19 334 P P 03 29 51.4 +0.7
baz=117,SNR=13
SML S S 03 38 03.0 +4.0
baz=117
O22K **Cooper Landing** 59.21 332 IAMs_20 IAMs_20 03 53 44.2
comp=Z,4µm,19.0s
O22K **Cooper Landing** 59.21 332 P P 03 29 51.8 +1.1
baz=115
O22K S S 03 38 01.9 +2.7
baz=115
E29M **Blow River** 59.26 343 P P 03 29 52.1 +1.1
baz=131,SNR=23
E29M S S 03 38 01.4 +1.8
baz=131
RES **Resolute Bay** 59.27 0 LR LR 03 56 24.7
comp=Z,2µm,21.8s,baz=194,slow=37
RES **Resolute Bay** 59.27 0 P P 03 29 51.0 0.0
RES **Resolute Bay** 59.27 0 IAmb IAmb 03 29 51.7
comp=Z,78nm,1.8s
RES **Resolute Bay** 59.27 0 P P 03 29 51.0 0.0
GO06 **Curarrehue** 59.30 158 IAMs_20 IAMs_20 03 48 51.9
comp=Z,2µm,20.0s
PMNB **Patos De Minas** 59.30 123 e P P 03 29 52.4 +0.3
PMNB **Patos De Minas** 59.30 123 P P 03 29 53.3 +1.2
WAT6 **Susitna Watana** 59.31 335 P P 03 29 52.7 +1.1
baz=118,SNR=31
WAT6 S S 03 38 04.5 +3.7
baz=118
F28M **Old Crow** 59.32 342 IAMs_20 IAMs_20 03 56 48.1
comp=Z,5µm,22.0s
F28M **Old Crow** 59.32 342 P P 03 29 52.6 +1.1
baz=129,SNR=37
F28M S S 03 38 02.5 +2.0
baz=129
JANB **Januaria** 59.34 118 e P P 03 29 53.0 +0.5
BRSE **Bradley Lake S** 59.37 331 P P 03 29 53.1 +1.2
baz=114
BRSE S S 03 38 04.9 +3.6
baz=114
G27K **Doyon Strip** 59.38 341 IAmb IAmb 03 29 53.3
comp=Z,51nm,1.6s
G27K **Doyon Strip** 59.38 341 P P 03 29 52.4 +0.6
baz=126,SNR=14
G27K S S 03 38 03.6 +2.3
baz=126
SFJD **Kangerlussuaq** 59.38 19 LR LR 04 00 37.3
comp=Z,1µm,18.6s,baz=232,slow=41
SFJD **Kangerlussuaq** 59.38 19 IAMs_20 IAMs_20 03 55 30.8
comp=Z,2µm,21.0s
SFJD **Kangerlussuaq** 59.38 19 i P P 03 29 51.8 0.0
SFJD IAmb IAmb 03 29 53.2
comp=Z,72nm,1.5s
DHY **Denali Highway** 59.40 336 IAmb IAmb 03 29 56.5
comp=Z,47nm,1.7s
DHY **Denali Highway** 59.40 336 P P 03 29 53.1 +0.8
baz=119,SNR=9.3
DHY S S 03 38 05.7 +3.9
baz=119
J25K **Salcha River,** 59.41 338 IAmb IAmb 03 29 54.2
comp=Z,66nm,1.6s
J25K **Salcha River,** 59.41 338 P P 03 29 53.2 +1.1
baz=122,SNR=22
J25K S S 03 38 06.1 +4.3
baz=122
GHO **Glory Hole Cre** 59.43 334 IAmb IAmb 03 29 54.3
comp=Z,68nm,1.5s
GHO IAMs_20 IAMs_20 03 56 06.7
comp=Z,3µm,21.0s
PMR **Palmer** 59.43 334 IAmb IAmb 03 29 54.2
comp=Z,75nm,1.6s
PMR **Palmer** 59.43 334 P P 03 29 53.3 +1.1
baz=116,SNR=7.1
PMR S S 03 38 06.0 +4.0
baz=116
BRLK **Bradley Lake** 59.44 331 IAmb IAmb 03 29 54.4
comp=Z,93nm,1.6s
BRLK IAMs_20 IAMs_20 03 55 12.6
comp=Z,4µm,19.0s
SLKM **Skilak Lake** 59.45 332 IAMs_20 IAMs_20 03 53 52.4
comp=Z,3µm,19.0s
RC01 **Rabbit Creek A** 59.48 333 IAmb IAmb 03 29 58.2
comp=Z,69nm,1.4s
RC01 IAMs_20 IAMs_20 03 55 36.1
comp=Z,4µm,19.0s
RC01 **Rabbit Creek A** 59.48 333 P P 03 29 53.9 +1.3
baz=115,SNR=11
KDAK **Kodiak Island** 59.51 329 LR LR 03 55 50.8
comp=Z,3µm,18.1s,baz=109,slow=36
KDAK **Kodiak Island** 59.51 329 IAMs_20 IAMs_20 03 52 41.5
comp=Z,5µm,21.0s
KDAK **Kodiak Island** 59.51 329 P P 03 29 53.6 +0.7
baz=111
FRTB **Fartura** 59.52 129 e P P 03 29 49.4 -4.2
OHAK **Old Harbor** 59.67 328 IAmb IAmb 03 29 56.0
comp=Z,67nm,1.8s
OHAK **Old Harbor** 59.67 328 P P 03 29 54.9 +1.0
baz=110
LR05 **Currie** 59.68 159 IAMs_20 IAMs_20 03 49 23.1
comp=Z,2µm,21.0s
WAT1 **Susitna Watana** 59.75 335 P P 03 29 55.3 +0.7
baz=117
HOM **Homer** 59.76 331 IAMs_20 IAMs_20 03 55 38.8
comp=Z,4µm,18.0s
HOM **Homer** 59.76 331 P P 03 29 55.7 +1.2
baz=113
E28M **Babbage River** 59.86 343 P P 03 29 55.4 +0.3
baz=130,SNR=12
HDA **Harding Lake** 59.89 337 P P 03 29 56.0 +0.6
baz=120,SNR=16
SII **Sitkinak Islan** 59.92 327 P P 03 29 56.6 +0.9
baz=108
M22K **Willow** 59.93 334 IAMs_20 IAMs_20 03 53 57.0
comp=Z,3µm,21.0s
M22K **Willow** 59.93 334 P P 03 29 56.5 +0.8
baz=115
PRP **Porcupine Dome** 59.94 339 P P 03 29 56.9 +1.0
baz=122,SNR=5.5
GDH **Godhavn** 59.96 16 i P P 03 29 55.6 -0.2
GDH IAmb IAmb 03 29 57.6
comp=Z,98nm,1.6s
CAPN **Captain Cook N** 59.97 332 P P 03 29 57.8 +1.9
baz=114
ILAR **Eielson Array** 60.05 337 P P 03 29 57.0 +0.5
comp=Z,32nm,1.3s,baz=134,slow=3.9,SNR=90
ILAR LR LR 03 56 31.1
comp=Z,5µm,18.3s,baz=126,slow=37
comp=Z,32nm,1.3s
ILAR **Eielson Array** 60.05 337 P P 03 29 57.0 +0.5
ITAB **Concordia** 60.05 135 e P P 03 29 56.9 -0.1
D28M **Stokes Point** 60.11 344 P P 03 29 57.4 +0.6
baz=131
G26K **Porcupine Rive** 60.14 340 IAmb IAmb 03 29 58.6
comp=Z,49nm,1.6s
G26K **Porcupine Rive** 60.14 340 P P 03 29 57.9 +0.8
baz=124
E27K **Coleen River** 60.19 342 IAMs_20 IAMs_20 03 55 11.1
comp=Z,3µm,19.0s
E27K **Coleen River** 60.19 342 P P 03 29 58.6 +1.2
baz=127,SNR=22
E27K S S 03 38 13.8 +2.1
baz=127
LL05 **Los Muermos** 60.25 161 IAMs_20 IAMs_20 03 50 26.2
comp=Z,2µm,19.0s
CANS **Sao Roque de M** 60.26 125 e P P 03 29 58.8 +0.1
CUT **Chulitna** 60.27 334 P P 03 29 59.0 +0.9
baz=115
CUT S S 03 38 14.7 +2.0
baz=115
MCK **McKinley** 60.33 336 IAmb IAmb 03 30 01.2
comp=Z,81nm,1.5s
MCK **McKinley** 60.33 336 P P 03 29 59.5 +1.1
baz=118,SNR=9.7
MCK S S 03 38 17.0 +3.5
baz=118
CCB **Clear Creek Bu** 60.33 337 P P 03 29 58.5 +0.1
CCB IAmb IAmb 03 30 00.6
comp=Z,80nm,1.9s
WRH **Wood River Hil** 60.35 337 IAmb IAmb 03 29 59.7
comp=Z,31nm,1.5s
O20K **Slope Mountain** 60.38 331 P P 03 29 59.7 +0.8
baz=112
O20K S S 03 38 18.2 +3.8
baz=112
FYU **Fort Yukon** 60.41 340 IAMs_20 IAMs_20 03 56 32.0
comp=Z,4µm,19.0s
POKR **Poker Plat Res** 60.42 338 P P 03 29 59.7 +0.7
baz=120
POKR S S 03 38 17.4 +2.7
baz=120
CHIR **Chirikof Islan** 60.46 326 IAMs_20 IAMs_20 03 52 28.1
comp=Z,4µm,20.0s
CHIR **Chirikof Islan** 60.46 326 P P 03 30 00.5 +1.0
baz=107
COLA **College** 60.46 337 c i P P 03 29 59.5 +0.3
COLA pmax pmax
comp=Z,40nm,1.5s
COLA **College** 60.46 337 P P 03 29 59.3 +0.1
COLA **College** 60.46 337 P P 03 29 59.8 +0.5
baz=119
COLA S S 03 38 16.7 +1.6
baz=119
COLA **College** 60.46 337 P P 03 29 59.8 +0.5
P19K **Oil Pt** 60.50 331 P P 03 30 00.7 +1.0
baz=111
P19K S S 03 38 18.7 +2.8
baz=111
L22K **Petersville** 60.54 334 IAMs_20 IAMs_20 03 54 35.0
comp=Z,3µm,18.0s
L22K **Petersville** 60.54 334 P P 03 30 00.7 +0.7
baz=115,SNR=14
L22K S S 03 38 18.3 +1.9
baz=115
SPU **Mont Spurr** 60.54 332 IAmb IAmb 03 30 01.8
comp=Z,55nm,1.2s
STLK **Strandline Lak** 60.57 333 IAmb IAmb 03 30 02.0
comp=Z,45nm,1.5s
ILSW **Iliamna Southw** 60.58 331 IAmb IAmb 03 30 05.6
comp=Z,103nm,1.7s
ILULI **Ilulissat** 60.60 17 IAMs_20 IAMs_20 03 58 24.0
comp=Z,2µm,20.0s
ILULI **Ilulissat** 60.60 17 P P 03 30 00.7 +0.6
ILULI **Ilulissat** 60.60 17 i P P 03 30 00.2 +0.1
ILULI IAmb IAmb 03 30 00.9
comp=Z,81nm,1.5s
SPCR **Spurr Chakacha** 60.62 332 P P 03 30 01.2 +0.7
baz=113
SPCR S S 03 38 21.2 +3.8
baz=113
SKT **Skwentna** 60.63 333 IAMs_20 IAMs_20 03 54 28.6
comp=Z,4µm,18.0s
SKT **Skwentna** 60.63 333 P P 03 30 01.3 +0.8
baz=114,SNR=19
SKT S S 03 38 20.3 +2.8
baz=114
PLCA **Paso Flores** 60.64 158 P P 03 30 02.6 +1.8
comp=Z,7.6nm,1.0s,baz=342,slow=6.6,SNR=7.2
PLCA LR LR 03 51 38.2
comp=Z,2µm,18.2s,baz=342,slow=32
comp=Z,7.6nm,1.0s
PLCA **Paso Flores** 60.64 158 P P 03 30 02.7 +1.8
PLCA pmax pmax
comp=Z,40nm,1.5s
PLCA **Paso Flores** 60.64 158 P P 03 30 02.7 +1.8
PLCA IAmb IAmb 03 30 24.3
comp=Z,40nm,1.4s
PLCA **Paso Flores** 60.64 158 e P P 03 30 02.0 +1.1
D27M **Malcolm River** 60.66 343 IAmb IAmb 03 30 02.5
comp=Z,56nm,1.5s
D27M IAMs_20 IAMs_20 03 55 54.2
comp=Z,4µm,18.0s
D27M **Malcolm River** 60.66 343 P P 03 30 01.6 +0.9
baz=128
D27M S S 03 38 18.3 +0.6
baz=128
F26K **Sheenjek River** 60.68 341 IAmb IAmb 03 30 02.9
comp=Z,64nm,1.6s
F26K **Sheenjek River** 60.68 341 P P 03 30 02.0 +1.2
baz=124,SNR=19
F26K S S 03 38 21.5 +3.5
baz=124
BWN **Browne** 60.74 336 IAMs_20 IAMs_20 03 58 44.4
comp=Z,4µm,18.0s
TRF **Thorofare Moun** 60.74 335 P P 03 30 02.1 +0.7
baz=116,SNR=32
TRF S S 03 38 21.3 +2.2
baz=116
NEA2 **Nenana** 60.78 337 IAMs_20 IAMs_20 03 54 21.2
comp=Z,4µm,20.0s
NEA2 **Nenana** 60.78 337 P P 03 30 02.0 +0.4
baz=118
NEA2 S S 03 38 20.6 +1.3
baz=118
G25K **Bearman Lake** 60.81 340 P P 03 30 02.4 +0.8
baz=122,SNR=8.6
SAQQ **Saqqaq** 60.88 16 i P P 03 30 01.9 -0.2
SAQQ IAmb IAmb 03 30 05.1
comp=Z,39nm,1.1s
H24K **Noodor Dome** 60.94 338 IAMs_20 IAMs_20 03 54 14.4
comp=Z,3µm,20.0s
H24K **Noodor Dome** 60.94 338 P P 03 30 03.6 +0.9
baz=120,SNR=42
H24K S S 03 38 22.7 +1.2
baz=120
NIAQ **Niaqornat** 60.96 15 i P P 03 30 03.2 +0.7
Q18K **Katmai Hardscr** 61.01 329 P P 03 30 04.0 +0.6
baz=109,SNR=7.0
Q18K S S 03 38 25.3 +2.6
baz=109
NBMA **Muriti-CE** 61.02 108 e P P 03 30 02.5 -1.5
ACHA **Angle Creek He** 61.03 329 IAmb IAmb 03 30 07.5
comp=Z,54nm,1.8s
KTH **Kantishna Hill** 61.04 335 IAmb IAmb 03 30 04.8
comp=Z,86nm,1.7s
NBPN **Ponto Novo - B** 61.08 112 e P P 03 30 06.2 +1.9
F25K **Christian Rive** 61.10 340 P P 03 30 05.1 +1.4
baz=123,SNR=24
F25K S S 03 38 26.1 +2.7
baz=123
I23K **Minto, Yukon-K** 61.15 337 P P 03 30 05.2 +1.2
baz=118,SNR=19
I23K S S 03 38 26.1 +2.2
baz=118
O19K **Port Alsworth** 61.21 331 P P 03 30 05.3 +0.8
baz=110
G24K **Hadweenzic Riv** 61.24 339 P P 03 30 05.5 +0.9
baz=120,SNR=18
G24K S S 03 38 29.4 +4.3
baz=120
SPB **Sao Paulo** 61.26 128 IAMs_20 IAMs_20 03 55 52.8
comp=Z,2µm,22.0s
PPLA **Purkeypile** 61.29 334 P P 03 30 05.6 +0.5
baz=114,SNR=17
PPLA S S 03 38 27.8 +1.7
baz=114
M20K **Styx River** 61.29 333 IAMs_20 IAMs_20 03 56 31.9
comp=Z,4µm,19.0s
M20K **Styx River** 61.29 333 P P 03 30 06.0 +0.9
baz=112
M20K S S 03 38 29.8 +3.8
baz=112
VAO **Valinhos** 61.29 128 e P P 03 30 06.4 +0.7
Q17K **Contact Creek** 61.33 329 P P 03 30 05.8 +0.3
baz=108
Q17K S S 03 38 28.5 +1.8
baz=108
E25K **Arctic Village** 61.37 341 P P 03 30 06.7 +1.2
baz=123,SNR=11
E25K S S 03 38 29.2 +2.5
baz=123
P18K **Big Mountain,** 61.37 330 P P 03 30 06.0 +0.3
baz=109,SNR=15
P18K S S 03 38 28.4 +1.4
baz=109
R17L **Mt. Peulik Vol** 61.38 328 P P 03 30 06.5 +0.8
baz=107
R17L S S 03 38 28.8 +1.6
baz=107
DIAM **Diamantina, MG** 61.45 121 e P P 03 30 07.7 +0.8
CAST **Castle Rocks** 61.46 335 P P 03 30 06.3 +0.2
baz=114,SNR=28
CAST S S 03 38 29.6 +1.6
baz=114
SAATT **Saattut** 61.48 15 i P P 03 30 06.5 +0.4
SAATT IAmb IAmb 03 30 07.4
comp=Z,148nm,1.5s
N19K **Bonanza Creek** 61.50 332 P P 03 30 07.3 +0.7
baz=110,SNR=12
N19K S S 03 38 30.9 +2.2
baz=110
O18K **Koktuh Hills** 61.51 330 P P 03 30 06.7 +0.1
O18K **Koktuh Hills** 61.51 330 P P 03 30 06.9 +0.3
baz=109,SNR=10.0
O18K S S 03 38 31.0 +2.3
baz=109
LL07 **Hotel Espejo d** 61.54 161 IAMs_20 IAMs_20 03 50 55.4
comp=Z,3µm,18.0s
H23K **Yukon River** 61.54 338 P P 03 30 07.4 +0.8
baz=118
H23K S S 03 38 30.1 +1.1
baz=118
NUUG **Nuugaatsiaq** 61.58 14 i P P 03 30 07.6 +0.9
NUUG IAmb IAmb 03 30 09.3
comp=Z,218nm,1.7s
MLY **Manley** 61.62 337 P P 03 30 08.0 +0.8
baz=116,SNR=25
MLY S S 03 38 31.7 +1.6
baz=116
C27K **Jago River** 61.67 343 IAmb IAmb 03 30 09.4
comp=Z,77nm,1.6s
C27K **Jago River** 61.67 343 P P 03 30 08.8 +1.3
baz=126,SNR=5.9
C27K S S 03 38 32.6 +2.2
baz=126
GO07 **Milladeo Hill,** 61.74 162 IAMs_20 IAMs_20 03 50 51.7
comp=Z,3µm,18.0s
CHUM **Lake Minchumin** 61.74 335 P P 03 30 08.4 +0.4
baz=114,SNR=6.7
CHUM S S 03 38 33.2 +1.7
baz=114
PET01 **Itanhaem-SP** 61.78 129 e P P 03 30 09.7 +0.9
UPNV **Upernavik** 61.78 13 i P P 03 30 08.9 +0.8
UPNV IAmb IAmb 03 30 10.1
comp=Z,53nm,1.2s
F24K **Squaw Lake** 61.80 340 IAMs_20 IAMs_20 03 55 17.7
comp=Z,4µm,20.0s
F24K **Squaw Lake** 61.80 340 P P 03 30 09.7 +1.3
baz=120
F24K S S 03 38 34.2 +2.0
baz=120
Q16K **King Salmon** 61.84 329 P P 03 30 09.6 +0.8
baz=107
Q16K S S 03 38 34.6 +1.8
baz=107
M19K **Big River Lodg** 61.85 333 P P 03 30 09.6 +0.8
baz=111
M19K S S 03 38 35.6 +2.6
baz=111
P17K **Kvichak River** 61.89 329 IAMs_20 IAMs_20 03 57 09.4
comp=Z,4µm,18.0s
P17K **Kvichak River** 61.89 329 P P 03 30 09.8 +0.7
baz=108
P17K S S 03 38 35.6 +2.1
baz=108
BSCB **Bom Sucesso** 61.92 124 e P P 03 30 09.9 -0.1
BSCB **Bom Sucesso** 61.92 124 P P 03 30 08.9 -1.1
XMAS **Kiritimati** 61.99 264 IAMs_20 IAMs_20 03 51 30.9
comp=Z,2µm,20.0s
CHGN **Chignik** 62.09 326 P P 03 30 10.4 -0.1
baz=104
N18K **Kilae Creek** 62.10 331 P P 03 30 11.2 +0.6
baz=109,SNR=13
N18K S S 03 38 38.7 +2.5
baz=109
G23K **Bananza Creek** 62.13 339 IAMs_20 IAMs_20 04 01 56.6
comp=Z,3µm,18.0s
G23K **Bananza Creek** 62.13 339 P P 03 30 11.7 +1.0
baz=118,SNR=15
G23K S S 03 38 38.5 +2.0
baz=118
L19K **White Mountain** 62.15 333 IAmb IAmb 03 30 12.3
comp=Z,55nm,1.6s
L19K **White Mountain** 62.15 333 P P 03 30 11.4 +0.5
baz=111,SNR=7.3
L19K S S 03 38 38.7 +1.8
baz=111
I21K **Tanana** 62.16 337 P P 03 30 11.4 +0.6
baz=115
I21K S S 03 38 38.0 +1.3
baz=115
C26K **Camden Bay** 62.18 343 P P 03 30 12.2 +1.4
baz=124
C26K S S 03 38 40.1 +3.3
baz=124
PPT **Papeete** 62.19 240 LR LR 03 49 36.1
comp=Z,733nm,18.6s,baz=58,slow=29
H22K **Ishtalitna Cre** 62.24 338 IAmb IAmb 03 30 12.5
comp=Z,39nm,1.4s
H22K **Ishtalitna Cre** 62.24 338 P P 03 30 11.7 +0.3
baz=116,SNR=15
H22K S S 03 38 38.9 +1.1
baz=116
K20K **Telida** 62.25 334 IAMs_20 IAMs_20 03 55 03.4
comp=Z,3µm,18.0s
K20K **Telida** 62.25 334 P P 03 30 11.6 +0.1
baz=112,SNR=23
K20K S S 03 38 39.4 +1.3
baz=112
D25K **Kavik River** 62.27 342 P P 03 30 12.6 +1.1
baz=123
D25K S S 03 38 40.1 +1.9
baz=123
E24K **Your Creek** 62.27 340 IAmb IAmb 03 30 13.8
comp=Z,44nm,1.6s
E24K **Your Creek** 62.27 340 P P 03 30 12.9 +1.3
baz=120
E24K S S 03 38 41.1 +2.8

baz=120
M18K Stony River 62.34 332 P P 03 30 12.6 +0.4
baz=110,SNR=13
M18K S **S 03 38 40.7 +1.5**
baz=110
LL02 Futaleuf 62.38 160 P P 03 30 14.2 +1.7
LL02 IAms_20 IAms_20 03 51 50.5
comp=Z,2µm,19.0s
O17K Koliganek Bris 62.39 330 P P 03 30 13.2 +0.8
baz=107
O17K S **S 03 38 42.3 +2.6**
baz=107
CNBA Chernabura Isl 62.39 324 IAms_20 IAms_20 03 55 41.3
comp=Z,3µm,18.0s
CHNA Chernabura Isl 62.39 324 P P 03 30 12.5 0.0
baz=103
CHNA S **S 03 38 41.8 +1.8**
baz=103
COLD Coldfoot 62.43 339 IAmb IAmb 03 30 15.0
comp=Z,64nm,1.5s
COLD IAms_20 IAms_20 03 56 49.7
comp=Z,3µm,18.0s
COLD Coldfoot 62.43 339 P P 03 30 14.1 +1.5
baz=118,SNR=7.3
COLD S **S 03 38 44.2 +4.1**
baz=118
J20K Nowinta River 62.60 335 IAms_20 IAms_20 03 55 09.4
comp=Z,3µm,21.0s
J20K Nowinta River 62.60 335 P P 03 30 14.0 +0.2
baz=112,SNR=23
J20K S **S 03 38 43.7 +1.4**
baz=112
P16K Nushagak River 62.61 329 IAms_20 IAms_20 03 54 53.4
comp=Z,4µm,20.0s
P16K Nushagak River 62.61 329 P P 03 30 14.1 +0.3
baz=106
P16K S **S 03 38 45.2 +2.6**
baz=106
E23K Chandalar 62.63 340 P P 03 30 15.7 +1.6
baz=119,SNR=21
E23K S **S 03 38 46.6 +3.7**
baz=119
N17K Nushagak Hills 62.66 331 IAms_20 IAms_20 03 56 16.6
comp=Z,4µm,18.0s
N17K Nushagak Hills 62.66 331 P P 03 30 15.3 +1.0
baz=108,SNR=10.0
N17K S **S 03 38 45.5 +2.3**
baz=108
H21K Melozitna Rive 62.67 337 IAmb IAmb 03 30 15.2
comp=Z,46nm,1.6s
H21K Melozitna Rive 62.67 337 P P 03 30 14.5 +0.3
baz=114,SNR=11
H21K S **S 03 38 45.2 +1.9**
baz=114
VNFG Fog Glacier, M 62.71 326 IAms_20 IAms_20 03 54 36.4
comp=Z,3µm,18.0s
G22K Bettles 62.75 339 P P 03 30 15.8 +1.1
baz=116,SNR=13
G22K S **S 03 38 46.3 +2.3**
baz=116
TULEG Thule 62.75 7 IAms_20 IAms_20 03 58 58.5
comp=Z,2µm,19.0s
TULEG Thule 62.75 7 *i* P **P 03 30 14.7 +0.1**
TULEG IAmb IAmb 03 30 16.6
comp=Z,222nm,2.1s
O16K Kokwok River B 62.82 330 P P 03 30 16.0 +0.7
baz=106,SNR=7.2
O16K S **S 03 38 47.9 +2.7**
baz=106
CALA Caldeira 62.85 54 *eP* **P 03 30 15.8 -0.3**
CALA *i* IAmb IAmb 03 30 20.8
comp=Z,234nm,1.3s
PCED Cedros 62.86 54 *eP* **P 03 30 17.0 +1.1**
PCED *i* IAmb IAmb 03 30 20.8
comp=Z,175nm,1.7s
KULLO Kullorsuaq 62.88 11 *i* P **P 03 30 15.5 0.0**
KULLO IAmb IAmb 03 30 18.2
comp=Z,44nm,1.1s
TOLK Toolik Lake Re 62.91 341 P P 03 30 16.8 +0.9
baz=119,SNR=7.3
TOLK S **S 03 38 49.4 +3.2**
baz=119
HOR Horta 62.91 54 *eP* **P 03 30 17.1 +0.9**
HOR *i* IAmb IAmb 03 30 21.3
comp=Z,206nm,1.6s
D24K Happy Valley 62.93 341 P P 03 30 16.5 +0.7
baz=120
D24K S **S 03 38 49.5 +3.2**
baz=120
I20K Naaghedeneel 62.97 336 P P 03 30 16.6 +0.4
baz=112,SNR=6.1
I20K S **S 03 38 47.9 +0.9**
baz=112
L18K Granite Mounta 62.98 333 IAms_20 IAms_20 03 56 48.6
comp=Z,4µm,19.0s
L18K Granite Mounta 62.98 333 P P 03 30 16.9 +0.6
baz=109,SNR=11
L18K S **S 03 38 47.9 +0.8**
baz=109
SDPT Sand Point 63.01 325 P P 03 30 16.8 +0.2
baz=102
SDPT S **S 03 38 48.6 +0.9**
baz=102
PCAN Candelaria 63.02 54 *eP* **P 03 30 19.4 +2.4**
PCAN *i* IAmb IAmb 03 30 21.8
comp=Z,99nm,1.7s
M17K Holitna River 63.05 332 IAmb IAmb 03 30 18.2
comp=Z,73nm,1.6s
M17K Holitna River 63.05 332 P P 03 30 17.6 +0.8
baz=108,SNR=6.1
M17K S **S 03 38 49.1 +1.0**
baz=108
PICO Pico 63.07 54 *eP* **P 03 30 19.4 +2.0**
PICO *i* IAmb IAmb 03 30 22.4
comp=Z,205nm,1.5s
RCBR Riachuelo 63.11 105 LR LR 03 59 14.5
comp=Z,957nm,19.6s,baz=306,slow=38
RCBR Riachuelo 63.11 105 IAms_20 IAms_20 03 58 19.9
comp=Z,2µm,20.0s
RCBR Riachuelo 63.11 105 *eP* **P 03 30 16.2 -1.8**
J19K Poorman 63.13 335 IAms_20 IAms_20 03 56 48.6
comp=Z,3µm,18.0s
J19K Poorman 63.13 335 P P 03 30 17.4 +0.1
baz=111,SNR=23
J19K S **S 03 38 49.3 +0.2**
baz=111
IMAR Indian Mountai 63.16 337 P P 03 30 17.0 -0.4
PPNO Prainha do Nor 63.20 54 *eP* **P 03 30 21.1 +2.8**
PPNO *i* IAmb IAmb 03 30 23.2
comp=Z,196nm,1.7s
ANGG Ammassalik, Gr 63.22 23 P P 03 30 17.9 +0.1
ANGG Ammassalik, Gr 63.22 23 *i* P **P 03 30 17.1 -0.7**
ANGG IAmb IAmb 03 30 19.1
comp=Z,187nm,1.9s
ROSA Rosais 63.22 54 *eP* **P 03 30 19.9 +1.5**
ROSA *i* IAmb IAmb 03 30 23.1
comp=Z,139nm,1.8s
ROSA Rosais 63.22 54 P P 03 30 19.8 +1.5
F22K John River 63.24 339 P P 03 30 19.2 +1.2
baz=116
F22K S **S 03 38 53.0 +2.6**
baz=116
G21K Allakaket 63.29 338 IAmb IAmb 03 30 19.7
comp=Z,52nm,1.6s
G21K Allakaket 63.29 338 P P 03 30 18.8 +0.4
baz=114,SNR=11
G21K S **S 03 38 52.3 +1.4**
baz=114
PMAN Manadas 63.34 54 *eP* **P 03 30 20.8 +1.7**
PMAN *i* IAmb IAmb 03 30 22.3
comp=Z,102nm,1.4s
SRBC Serra Branca 63.38 54 *eP* **P 03 30 20.9 +1.4**
SRBC *i* IAmb IAmb 03 30 24.0
comp=Z,343nm,1.4s
N16K Nishlik Lake 63.40 330 P P 03 30 19.9 +0.7
baz=106,SNR=7.9
N16K S **S 03 38 55.5 +3.0**
baz=106
H20K Anotleneega Mo 63.40 336 P P 03 30 19.2 +0.1
baz=112,SNR=11
H20K S **S 03 38 53.4 +1.1**
baz=112
E22K Anaktuvuk Pass 63.40 340 IAmb IAmb 03 30 23.5
comp=Z,83nm,1.6s
E22K IAms_20 IAms_20 03 58 34.9
comp=Z,4µm,20.0s
E22K Anaktuvuk Pass 63.40 340 P P 03 30 19.9 +0.8
baz=117
E22K S **S 03 38 54.7 +2.4**
baz=117
J18K Innoko River 63.40 334 IAmb IAmb 03 30 21.1
comp=Z,79nm,1.8s
J18K IAms_20 IAms_20 04 00 14.8
comp=Z,3µm,20.0s
J18K Innoko River 63.40 334 P P 03 30 19.6 +0.4
baz=110,SNR=11
J18K S **S 03 38 53.1 +0.6**
baz=110
D23K Nanushuk River 63.42 341 IAms_20 IAms_20 03 54 11.5
comp=Z,3µm,19.0s
D23K Nanushuk River 63.42 341 P P 03 30 20.5 +1.3
baz=118,SNR=7.8
D23K S **S 03 38 54.5 +2.0**
baz=118
PGRA Graciosa 63.43 54 *eP* **P 03 30 21.1 +1.3**
PGRA *i* IAmb IAmb 03 30 24.4
comp=Z,194nm,1.7s
NBIT Itapeh - BA 63.48 116 *eP* **P 03 30 22.0 +1.6**
O15K Ungalikthiuk R 63.56 329 IAms_20 IAms_20 03 55 32.5
comp=Z,4µm,21.0s
O15K Ungalikthiuk R 63.56 329 P P 03 30 20.0 -0.2
baz=105,SNR=5.2
O15K S **S 03 38 54.6 +0.1**
baz=105
F21K Alatna River 63.58 338 IAms_20 IAms_20 03 58 14.9
comp=Z,4µm,19.0s
F21K Alatna River 63.58 338 P P 03 30 21.6 +1.4
baz=115,SNR=26
F21K S **S 03 38 56.9 +2.4**
baz=115
M16K Timber Creek 63.64 331 IAmb IAmb 03 30 22.4
comp=Z,35nm,1.4s
M16K Timber Creek 63.64 331 P P 03 30 21.3 +0.5
baz=106
M16K S **S 03 38 57.4 +2.0**
baz=106
L17K Donlin 63.66 332 P P 03 30 21.3 +0.4
baz=108,SNR=5.8
L17K S **S 03 38 56.2 +0.5**
baz=108
SJMB Sao Joao De Ma 63.70 120 *eP* **P 03 30 21.7 -0.1**
C23K Itkillik River 63.81 342 P **P 03 30 22.3 +0.6**
baz=119,SNR=6.8
C23K S **S 03 38 59.5 +2.1**
baz=119
K17K Iditarod 63.84 333 IAmb IAmb 03 30 23.9
comp=Z,62nm,1.7s
K17K Iditarod 63.84 333 P P 03 30 21.9 -0.1
baz=108
K17K S **S 03 38 58.1 +0.1**
baz=108
GCSA Galena City Sc 63.91 335 P P 03 30 22.6 +0.1
baz=110
GCSA S **S 03 38 59.5 +0.9**
baz=110
PSBA Serra de Santa 63.94 54 *eP* **P 03 30 24.4 +1.2**
PSBA *i* IAmb IAmb 03 30 27.8
comp=Z,191nm,1.8s
N15K Kwethluk River 63.95 330 P P 03 30 23.3 +0.5
baz=105
N15K S **S 03 39 00.8 +1.5**
baz=105
ADH Angra Heroismo 64.00 54 *eP* **P 03 30 25.2 +1.7**
ADH *i* IAmb IAmb 03 30 28.4
comp=Z,124nm,1.8s
H19K Roundabout Mou 64.02 336 P P 03 30 23.6 +0.5
baz=111,SNR=11
H19K S **S 03 39 00.5 +0.6**
baz=111
BSFB Barra de Sao F 64.05 120 *eP* **P 03 30 25.0 +0.9**
BSFB Barra de Sao F 64.05 120 P **P 03 30 24.9 +0.9**
PAGU Agualva, Azore 64.05 54 *eP* **P 03 30 25.1 +1.3**
PAGU *i* IAmb IAmb 03 30 28.6
comp=Z,175nm,1.6s
L16K Owhat River 64.07 332 P P 03 30 24.4 +0.8
baz=106,SNR=9.4
L16K S **S 03 39 03.0 +2.2**
baz=106
E21K Killik River 64.26 340 P P 03 30 25.6 +0.8
baz=115
E21K S **S 03 39 04.8 +1.8**
baz=115
O14K Tigyukauivet M 64.30 329 IAms_20 IAms_20 03 55 45.0
comp=Z,3µm,22.0s
O14K Tigyukauivet M 64.30 329 P P 03 30 24.8 -0.2
baz=103
O14K S **S 03 39 02.5 -1.1**
baz=103
F20K Avaraart Lake 64.31 338 P P 03 30 25.7 +0.7
baz=112
F20K S **S 03 39 05.5 +1.9**
baz=112
M15K Kasigluk River 64.37 330 P P 03 30 25.7 +0.2
baz=104
M15K S **S 03 39 06.3 +1.8**
baz=104
J17K VABM Dome 64.39 334 P P 03 30 25.8 +0.2
baz=107
J17K S **S 03 39 05.0 +0.4**
baz=107
G19K Purcell Mounta 64.48 337 IAmb IAmb 03 30 27.5
comp=Z,77nm,1.6s
G19K Purcell Mounta 64.48 337 P P 03 30 26.7 +0.5
baz=110,SNR=12
G19K S **S 03 39 07.0 +1.2**
baz=110
H18K Honhosa River 64.64 336 IAmb IAmb 03 30 28.9
comp=Z,61nm,1.8s
H18K IAms_20 IAms_20 03 57 21.4
comp=Z,4µm,18.0s
H18K Honhosa River 64.64 336 P P 03 30 27.9 +0.6
baz=109
H18K S **S 03 39 08.7 +0.9**
baz=109
RIB01 Linhares ES 64.65 120 *eP* **P 03 30 28.4 +0.4**
N14K Kuskokwak Cree 64.66 329 IAms_20 IAms_20 03 58 25.6
comp=Z,4µm,19.0s
N14K Kuskokwak Cree 64.66 329 P P 03 30 27.5 +0.1
baz=103
N14K S **S 03 39 08.6 +0.5**
baz=103
C21K Knifeblade Rid 64.82 340 P P 03 30 29.5 +1.1
baz=114
C21K S **S 03 39 12.2 +2.3**
baz=114
B22K Teshekpuk Lake 64.90 342 P P 03 30 28.9 +0.1
baz=116
E20K Nigu River 64.94 339 P P 03 30 30.0 +0.8
baz=112,SNR=7.1
E20K S **S 03 39 13.6 +2.2**
baz=112
B21K Ikpikpuk River 64.96 341 P P 03 30 29.8 +0.6
baz=114
B21K S **S 03 39 12.7 +1.2**
baz=114
F19K Shaleruckik Mo 64.98 337 IAms_20 IAms_20 03 57 02.2
comp=Z,4µm,19.0s
F19K Shaleruckik Mo 64.98 337 P P 03 30 30.4 +0.9
baz=110,SNR=11
F19K S **S 03 39 14.6 +2.8**
baz=110
M14K Bethel 64.99 330 P P 03 30 30.3 +0.8
baz=103,SNR=7.7
M14K S **S 03 39 15.4 +3.4**
baz=103
L15K Ungalak Mounta 64.99 331 P P 03 30 30.7 +1.1
baz=104,SNR=12
L15K S **S 03 39 14.4 +2.3**
baz=104
G18K Tagagawik 65.00 336 IAmb IAmb 03 30 31.5
comp=Z,78nm,1.7s
G18K IAms_20 IAms_20 03 56 35.8
comp=Z,4µm,19.0s
G18K Tagagawik 65.00 336 P P 03 30 30.7 +1.1
baz=109,SNR=7.5
G18K S **S 03 39 14.7 +2.6**
baz=109
E19K Redstone River 65.00 338 IAmb IAmb 03 30 33.8
comp=Z,84nm,1.9s
E19K Redstone River 65.00 338 P P 03 30 30.3 +0.7
baz=111,SNR=6.4
E19K S **S 03 39 14.4 +2.2**
baz=111
J16K Anvik River 65.01 333 P P 03 30 31.0 +1.3
baz=106,SNR=11
J16K S **S 03 39 15.6 +3.2**
baz=106
K15K Wolf Creek Mou 65.16 332 IAMs_20 IAMs_20 03 57 57.6
comp=Z,3µm,19.0s
K15K Wolf Creek Mou 65.16 332 P P 03 30 32.1 +1.4
baz=104,SNR=8.0
K15K S **S 03 39 18.2 +4.0**
baz=104
PSET Sete Cidades 65.20 55 *eP* **P 03 30 32.7 +1.3**
PSET *i* IAmb IAmb 03 30 36.5
comp=Z,155nm,1.8s
H17K Granite Mounta 65.20 335 IAMs_20 IAMs_20 03 56 24.2
comp=Z,3µm,19.0s
H17K Granite Mounta 65.20 335 P P 03 30 32.1 +1.2
baz=107,SNR=12
H17K S **S 03 39 17.8 +3.1**
baz=107
I17K Unalakleet 65.22 334 IAMs_20 IAMs_20 03 57 59.9
comp=Z,3µm,18.0s
I17K Unalakleet 65.22 334 P P 03 30 32.6 +1.6
baz=106
I17K S **S 03 39 19.3 +4.4**
baz=106
PDA Ponta Delgada 65.24 55 *eP* **P 03 30 32.4 +0.7**
PDA *i* IAmb IAmb 03 30 36.7
comp=Z,241nm,1.6s
D20K Etivluk River 65.25 339 P P 03 30 31.8 +0.6
baz=112
D20K S **S 03 39 17.0 +1.8**
baz=112
CMLA Cha da Macela 65.35 55 *eP* **P 03 30 33.8 +1.4**
CMLA *i* IAmb IAmb 03 30 37.4
comp=Z,159nm,1.3s
CMLA Cha da Macela 65.35 55 P P 03 30 33.4 +1.0
CMLA pmax pmax
comp=Z,353nm,1.8s
CMLA Cha da Macela 65.35 55 P P 03 30 33.4 +1.0
CMLA Cha da Macela 65.35 55 P P 03 30 34.2 +1.8
L14K Kuka Creek 65.47 331 IAMs_20 IAMs_20 03 57 17.7
comp=Z,2µm,19.0s
L14K Kuka Creek 65.47 331 P P 03 30 33.7 +1.0
baz=103
L14K S **S 03 39 20.6 +2.6**
baz=103
PGRON Lagoa das Cont 65.47 55 *eP* **P 03 30 32.4 -0.8**
PGRON *i* IAmb IAmb 03 30 38.2
comp=Z,245nm,1.2s
M13K Dall Lake 65.58 330 IAMs_20 IAMs_20 03 56 37.8
comp=Z,4µm,21.0s
M13K Dall Lake 65.58 330 P P 03 30 34.4 +1.0
baz=102
M13K S **S 03 39 21.7 +2.3**
baz=102
F18K Selawik 65.61 337 P P 03 30 34.3 +0.8
baz=108
F18K S **S 03 39 23.1 +3.6**
baz=108
BART Pico Bartolome 65.64 55 *eP* **P 03 30 35.1 +0.8**
BART *i* IAmb IAmb 03 30 39.2
comp=Z,226nm,1.8s
A22K Sinclair Lake 65.65 342 P P 03 30 34.5 +0.8
baz=115
G17K Kiwalik Mounta 65.66 336 P P 03 30 35.4 +1.5
baz=107,SNR=8.4
G17K S **S 03 39 24.1 +3.9**
baz=107
D19K Kuna River 65.69 339 P P 03 30 34.5 +0.5
baz=110
D19K S **S 03 39 21.5 +0.9**
baz=110
PSMN Pico do Norte, 65.73 56 *eP* **P 03 30 34.9 +0.1**
PSMN *i* IAmb IAmb 03 30 39.0
comp=Z,146nm,1.8s
SUMG Summit 65.92 16 P P 03 30 36.4 +0.5
SUMG pmax pmax
comp=Z,60nm,1.8s
SUMG MLR MLR
comp=Z,3µm,21.0s
SUMG Summit 65.92 16 P P 03 30 36.4 +0.5
SUMG IAmb IAmb 03 31 17.6
comp=Z,60nm,1.8s
SUMG IAms_20 IAms_20 04 03 34.4
comp=Z,3µm,21.0s
SUMG Summit 65.92 16 P P 03 30 36.6 +0.7
SUMG Summit 65.92 16 *i* P **P 03 30 36.0 +0.1**
SUMG IAmb IAmb 03 30 38.5
comp=Z,972nm,2.7s
B20K Meade River 65.93 341 P P 03 30 36.7 +1.3
baz=112
B20K S **S 03 39 24.7 +1.4**
baz=112
NEEM North Greenlan 65.97 10 *i* P **P 03 30 36.8 +0.7**
NEEM IAmb IAmb 03 30 38.0
comp=Z,2µm,3.3s
H16K Elim 66.07 334 P P 03 30 38.0 +1.5
baz=105
H16K S **S 03 39 29.8 +4.6**
baz=105
F17K Baldwin Pennin 66.17 336 P P 03 30 37.7 +0.6
baz=107
F17K S **S 03 39 29.8 +3.4**
baz=107
J14K Nanvaranak Lak 66.18 332 P P 03 30 39.0 +1.7
baz=103,SNR=8.6
J14K S **S 03 39 31.6 +5.0**
baz=103
E18K Tukpahlearik C 66.22 338 P P 03 30 38.0 +0.5
baz=108
E18K S **S 03 39 27.7 +0.7**
baz=108
UNV Unalaska Valle 66.22 322 P P 03 30 37.4 -0.2
baz=96
UNV S **S 03 39 27.9 +0.5**
baz=96
A21K Barrow 66.27 342 P P 03 30 38.3 +0.7
baz=113
G16K Koyuk River 66.32 335 P P 03 30 39.5 +1.5
baz=105
G16K S **S 03 39 31.4 +3.2**
baz=105
C19K Lookout Ridge 66.40 339 P P 03 30 40.0 +1.4
baz=109
C19K S **S 03 39 31.5 +2.3**
baz=109
SOEG Soedalen 66.44 22 *i* P **P 03 30 39.5 +0.7**
SOEG IAmb IAmb 03 30 39.9
comp=Z,155nm,1.6s
K13K Kusilvak Mount 66.51 331 IAMs_20 IAMs_20 04 02 11.3
comp=Z,2µm,18.0s
K13K Kusilvak Mount 66.51 331 P P 03 30 40.4 +1.0
baz=101
K13K S **S 03 39 33.4 +2.7**
baz=101
E17K Hotham Inlet 66.57 337 P P 03 30 40.6 +0.9
baz=106
E17K S **S 03 39 34.4 +3.1**
baz=106
C18K Utukok River 66.81 339 P P 03 30 41.3 +0.1
baz=108
G15K Niukluk 66.91 335 P P 03 30 43.1 +1.2
baz=103
G15K S **S 03 39 38.2 +2.8**
baz=103
GO08 Villa O'Higgin 66.93 163 IAMs_20 IAMs_20 03 53 51.1
comp=Z,2µm,19.0s
M11K Mekoryuk 66.97 329 P P 03 30 43.2 +0.9
baz=99
M11K S **S 03 39 39.7 +3.5**
baz=99
D17K Noatak River 67.21 338 P P 03 30 44.7 +1.0
baz=105
D17K S **S 03 39 40.5 +1.5**
baz=105
RDOG Red Dog Mine 67.24 338 P P 03 30 45.7 +1.8
baz=106
A19K Wainwright 67.25 340 P P 03 30 44.8 +0.9
baz=108
F15K North Star Dit 67.32 335 IAmb IAmb 03 30 46.7
comp=Z,75nm,1.5s
F15K IAms_20 IAms_20 03 58 18.2
comp=Z,3µm,18.0s
F15K North Star Dit 67.32 335 P P 03 30 45.7 +1.2
baz=103
F15K S **S 03 39 43.9 +3.5**
baz=103
ANM Nome 67.37 334 IAMs_20 IAMs_20 03 59 34.7
comp=Z,3µm,19.0s
ANM Nome 67.37 334 P P 03 30 46.0 +1.2
baz=102

ANM S **S** **03 39 44.9 +3.9**
baz=102
C17K DeLong Mountai 67.46 338 P **P** **03 30 46.3 +0.9**
baz=106
F14K Arctic Creek 67.95 335 P **P** **03 30 49.8 +1.3**
baz=101
F14K S **S** **03 39 50.9 +3.0**
baz=101
C16K Lisburne Hills 68.18 338 IAms_20 IAms_20 03 58 54.7
comp=Z,3µm,18.0s
C16K Lisburne Hills 68.18 338 P **P** **03 30 50.8 +1.0**
baz=103
ALE Alert 68.44 4 P **P** **03 30 51.2 -0.1**
TNA Tin City 68.62 335 IAms_20 IAms_20 03 59 38.7
comp=Z,2µm,18.0s
TNA Tin City 68.62 335 P **P** **03 30 53.7 +1.1**
baz=100
TNA S **S** **03 39 59.5 +3.7**
baz=100
SPIA Saint Paul Isl 68.66 326 IAms_20 IAms_20 03 56 38.8
comp=Z,2µm,20.0s
SPIA Saint Paul Isl 68.66 326 P **P** **03 30 53.7 +0.6**
baz=94
BORG Borgarnes 69.62 26 LR LR 04 03 24.3
comp=Z,827nm,18.5s,baz=280,slow=38
BORG Borgarnes 69.62 26 P **P** **03 31 00.5 +1.7**
GAMB Gambell 69.99 333 IAms_20 IAms_20 04 01 13.0
comp=Z,3µm,19.0s
GAMB Gambell 69.99 333 P **P** **03 31 01.9 +0.8**
baz=96
GAMB S **S** **03 40 16.1 +4.1**
baz=96
SCO Scoresbysund 70.24 20 P **P** **03 31 02.7 +0.1**
SCO pmax pmax
comp=Z,91nm,2.0s
SCO MLR MLR
comp=Z,3µm,18.0s
SCO Scoresbysund 70.24 20 P **P** **03 31 02.7 +0.1**
SCO IAmb IAmb 03 31 04.1
comp=Z,91nm,2.0s
SCO IAMs_20 IAMs_20 04 04 06.8
comp=Z,3µm,18.0s
SCO Scoresbysund 70.24 20 *i* P **P** **03 31 02.7 +0.1**
SCO IAmb IAmb 03 31 05.1
comp=Z,258nm,2.5s
DBG Daneborg 71.41 16 *i* P **P** **03 31 09.5 -0.1**
DBG IAmb IAmb 03 31 10.8
comp=Z,41nm,1.5s
DAG Danmarks Havn 72.19 14 P **P** **03 31 14.3 0.0**
DAG Danmarks Havn 72.19 14 *i* P **P** **03 31 14.0 -0.3**
DAG IAmb IAmb 03 31 14.8
comp=Z,105nm,1.6s
ADK Adak 72.32 320 IAMs_20 IAMs_20 03 57 07.6
comp=Z,1µm,20.0s
RAR Rarotonga 72.41 241 LR LR 03 55 34.0
comp=Z,634nm,18.1s,baz=52,slow=30
PMOZ Porto Moniz, M 72.50 60 *eP* **P** **03 31 14.5 -2.6**
PMOZ *i* IAmb IAmb 03 31 28.7
comp=Z,191nm,1.9s
PMPST Porto Santo, M 73.19 60 *eP* **P** **03 31 22.5 +1.4**
NOR Nord 73.28 9 *i* P **P** **03 31 20.7 -0.1**
NOR IAmb IAmb 03 31 22.7
comp=Z,1µm,3.5s
USHA Ushuaia 73.78 164 LR LR 03 58 41.7
comp=Z,2µm,18.4s,baz=306,slow=32
EFI East Falkland 74.50 157 IAMs_20 IAMs_20 04 01 05.2
comp=Z,3µm,18.0s
JMIC Jan Mayen 74.72 20 LR LR 04 06 28.6
comp=Z,488nm,18.4s,baz=272,slow=38
VAL Valentia 75.40 40 P **P** **03 31 34.2 +0.7**
MIDW Midway 75.44 296 IAMs_20 IAMs_20 04 03 28.8
comp=Z,1µm,18.0s
IGLA Glengowla, Co 75.76 38 P **P** **03 31 36.0 +0.4**
IDGL Inch Island, C 76.64 36 P **P** **03 31 41.7 +1.1**
IWEX Carrickbyrne, 77.46 39 P **P** **03 31 46.0 +0.7**
ILTH Belurgan, Co L 77.47 37 P **P** **03 31 46.5 +1.3**
DSB Dublin 77.56 38 P **P** **03 31 47.0 +1.2**
SHEM Shemya Is, Ala 77.86 322 LR LR 04 06 06.8
comp=Z,846nm,18.4s,baz=68,slow=36
PTO Porto 78.07 50 *eP* **P** **03 31 44.3 -4.6**
LIS Lisbon 78.08 53 *eP* **P** **03 31 49.3 +0.3**
LIS *eS* **S** **03 41 43.7 -0.4**
LIS IAMs_20 IAMs_20 04 01 25.9
comp=E,5µm,28.6s
LIS Lisbon 78.08 53 *eP* **P** **03 31 49.3 +0.3**
LIS *eS* **S** **03 41 43.7 -0.4**
PGAV Gavieira, Arco 78.17 50 *eP* **P** **03 31 50.0 +0.4**
PGAV *i* IAmb IAmb 03 31 52.4
comp=E,48nm,1.6s
PGAV *eS* **SKSac** **03 41 55.3 -10**
PGAV *eLR* LR 03 56 31.0
PGAV *i* IAMs_20 IAMs_20 04 02 18.8
comp=E,2µm,22.0s
PSBE So Bento 78.21 52 *eP* **P** **03 31 50.4 +0.6**
PSBE *i* IAmb IAmb 03 31 55.6
comp=E,63nm,2.1s
PCAS Casmilo, Conde 78.34 52 *eP* **P** **03 31 51.3 +0.8**
PCAS *i* IAmb IAmb 03 31 56.3
comp=E,95nm,1.6s
KBS Kingsbay 78.35 11 *c iP* **P** **03 31 51.0 +1.2**
KBS pmax pmax
comp=Z,99nm,2.5s
KBS Kingsbay 78.35 11 P **P** **03 31 51.9 +2.1**
KBS IAmb IAmb 03 31 52.6
comp=Z,82nm,1.5s
KBS IAMs_20 IAMs_20 04 11 37.7
comp=Z,2µm,22.0s
KBS Kingsbay 78.35 11 *i* P **P** **03 31 51.7 +2.0**
PCAB Cabril 78.40 50 *eP* **P** **03 31 48.7 -2.0**
PCAB *i* IAmb IAmb 03 32 05.4
comp=Z,42nm,1.6s
PFVI Vila Bisbo 78.62 55 *eP* **P** **03 31 47.7 -4.3**
PTEO Sao Teotonio 78.62 54 *eP* **P** **03 31 51.7 -0.4**
POLO Lamas de Olo 78.63 50 *eP* **P** **03 31 52.7 +0.5**
POLO *i* IAmb IAmb 03 32 06.8
comp=Z,18nm,2.0s
PVIS Viseu 78.68 51 *eP* **P** **03 31 52.7 +0.4**
PSARD Sardoal 78.68 52 *eP* **P** **03 31 52.7 +0.3**
PVRL Vila Real 78.71 50 *eP* **P** **03 31 52.6 +0.1**
PVRL *i* IAmb IAmb 03 32 07.2
comp=Z,38nm,1.5s
BILL Bilibino 78.71 338 *c iP* **P** **03 31 53.0 +1.1**
BILL pmax pmax
comp=Z,73nm,1.7s
BILL Bilibino 78.71 338 P **P** **03 31 52.8 +0.9**
BILL IAmb IAmb 03 31 54.6
comp=Z,101nm,1.6s
BILL IAMs_20 IAMs_20 04 10 35.0
comp=Z,3µm,19.0s
MORF Marmelete 78.73 54 *eP* **P** **03 31 52.9 +0.2**
MORF *eS* **S** **03 41 50.7 -0.5**
MORF IAMs_20 IAMs_20 04 08 08.1
comp=E,1µm,11.1s
MORF Marmelete 78.73 54 *eP* **P** **03 31 52.9 +0.2**
MORF *eS* **S** **03 41 50.7 -0.5**
PMTG Montargil 78.73 52 *eP* **P** **03 31 52.9 +0.3**
PMTG *i* IAmb IAmb 03 31 58.1
comp=E,46nm,1.7s
MOE Montemor 78.73 53 *eP* **P** **03 31 53.3 +0.7**
MOE *i* IAmb IAmb 03 32 05.2
comp=E,60nm,1.7s
PLOUS Minas do Lousa 78.77 54 *eP* **P** **03 31 53.6 +0.8**
PLOUS *i* IAmb IAmb 03 31 58.5
comp=E,34nm,1.7s
PARRA Arraiolos 78.92 53 *eP* **P** **03 31 53.1 -0.5**
PARRA *i* IAmb IAmb 03 31 59.3
comp=E,41nm,1.8s
MESJ Messejana 78.96 54 *eP* **P** **03 31 54.2 +0.3**
MESJ *eS* **S** **03 41 53.2 -0.4**
MESJ IAMs_20 IAMs_20 04 03 25.8
comp=Z,1µm,22.6s
MESJ Messejana 78.96 54 *eP* **P** **03 31 54.3 +0.3**
MESJ *i* IAmb IAmb 03 31 59.6
comp=Z,44nm,1.7s
MESJ Messejana 78.96 54 *eP* **P** **03 31 54.2 +0.3**
MESJ *eS* **S** **03 41 53.2 -0.4**
EVO Evora 78.99 53 *eP* **P** **03 31 54.5 +0.5**
EVO *i* IAmb IAmb 03 31 59.8
comp=Z,52nm,1.7s
MTE Manteigas 79.00 51 *eP* **P** **03 31 53.5 -0.6**
MTE *i* IAmb IAmb 03 31 55.8
comp=Z,59nm,1.5s
MTE *eS* **SKSac** **03 42 03.0 -8.1**
MTE *eLR* LR 04 00 50.9
MTE *i* IAMs_20 IAMs_20 04 03 13.9
comp=Z,2µm,20.0s
MTE Manteigas 79.00 51 IAmb IAmb 03 31 57.8
comp=Z,62nm,1.5s
MTE IAMs_20 IAMs_20 04 02 39.7
comp=Z,2µm,20.0s
ESK Eskdalemuir 79.03 36 P **P** **03 31 53.2 -0.7**
ESK pmax pmax
comp=Z,38nm,1.4s
ESK MLR MLR
comp=Z,1µm,21.0s
ESK Eskdalemuir 79.03 36 P **P** **03 31 53.1 -0.7**
ESK IAmb IAmb 03 31 57.7
comp=Z,38nm,1.4s
ESK Eskdalemuir 79.03 36 IAMs_20 IAMs_20 04 06 37.7
comp=Z,1µm,21.0s
EKA Eskdalemuir Ar 79.06 36 P **P** **03 31 54.0 0.0**
comp=Z,3.1nm,0.7s,baz=280,slow=5.0,SNR=9.9
EKA LR LR 04 05 07.4
comp=Z,837nm,21.9s,baz=292,slow=34
comp=Z,3.1nm,0.7s
PCVE Castro Verde 79.14 54 *eP* **P** **03 31 55.2 +0.3**
PCVE *i* IAmb IAmb 03 31 60.0
comp=Z,65nm,1.7s
PCBR Castelo Branco 79.15 52 *eP* **P** **03 31 55.4 +0.6**
PCBR *i* IAmb IAmb 03 31 56.9
comp=Z,40nm,1.4s
PBEJ Beja 79.20 53 *eP* **P** **03 31 56.6 +1.4**
PBEJ *i* IAmb IAmb 03 32 01.0
comp=Z,48nm,1.6s
PESTR Estremoz 79.25 53 *eP* **P** **03 31 55.9 +0.4**
PMRV Marv??o 79.30 52 *eP* **P** **03 31 55.9 +0.2**
PMRV *i* IAmb IAmb 03 32 01.2
comp=Z,56nm,1.8s
PMRV *eS* **S** **03 42 02.9 +5.7**
PMRV *eLR* LR 04 01 00.9
PMRV *i* IAMs_20 IAMs_20 04 03 25.3
comp=Z,2µm,20.0s
PBDV Barranco-do-Ve 79.30 54 *eP* **P** **03 31 57.1 +1.3**
PBDV *i* IAmb IAmb 03 32 02.1
comp=Z,74nm,1.6s
PBRG Braganca 79.33 50 *eP* **P** **03 31 56.1 +0.3**
PBRG *i* IAmb IAmb 03 32 01.6
comp=Z,36nm,1.7s
PVAQ Vaqueiros 79.44 54 *eP* **P** **03 31 57.6 +1.1**
PVAQ *i* IAmb IAmb 03 32 09.3
comp=Z,55nm,1.6s
PVAQ *eS* **SKSac** **03 42 08.7 -5.5**
PVAQ *eLR* LR 03 57 27.5
PVAQ *i* IAMs_20 IAMs_20 04 05 22.1
comp=Z,1µm,20.0s
SPITS Spitsbergen Ar 79.46 11 P **P** **03 31 56.0 +0.1**
comp=Z,3.1nm,0.6s,baz=185,slow=8.1,SNR=3.6
SPITS LR LR 04 09 59.6
comp=Z,1µm,18.6s,baz=292,slow=38
comp=Z,3.1nm,0.6s
HSPB Hornsund (broa 79.79 12 *eP* **P** **03 31 59.4 +1.8**
PBAR Barrancos 79.81 53 *eP* **P** **03 31 58.9 +0.4**
PBAR *i* IAmb IAmb 03 32 04.3
comp=Z,40nm,1.6s
AVE Averroes 80.52 58 IAMs_20 IAMs_20 04 06 22.9
comp=Z,1µm,19.0s
PAB San Pablo 81.58 51 P **P** **03 32 07.7 -0.4**
PAB pmax pmax
comp=Z,86nm,1.7s
PAB San Pablo 81.58 51 P **P** **03 32 07.7 -0.4**
PAB IAmb IAmb 03 32 25.1
comp=Z,86nm,1.6s
PAB San Pablo 81.58 51 IAMs_20 IAMs_20 04 04 18.0
comp=Z,2µm,20.0s
ESDC Sonseca Array 81.84 51 P **P** **03 32 09.3 -0.1**
comp=Z,10nm,1.2s,baz=294,slow=5.2,SNR=36
ESDC LR LR 04 07 41.4
comp=Z,2µm,18.2s,baz=286,slow=35
comp=Z,10nm,1.2s
ESDC Sonseca Array 81.84 51 P **P** **03 32 09.7 +0.3**
ESBB Sonseca Array 81.84 51 IAmb IAmb 03 32 13.7
comp=Z,57nm,1.6s
GRR Gorron 81.97 42 *eP* **P** **03 32 10.4 +0.6**
GRR pmax pmax
comp=Z,40nm,1.2s
FLN La Foliniere 82.12 42 *eP* **P** **03 32 11.3 +0.7**
FLN pmax pmax
comp=Z,73nm,1.5s
LDF La Druitiere 82.39 42 *eP* **P** **03 32 12.6 +0.5**
LDF pmax pmax
comp=Z,57nm,1.6s
MD01 Midelt array s 82.78 58 P **P** **03 32 13.9 -0.7**
MFF Saint Martin d 82.88 44 *eP* **P** **03 32 15.0 +0.4**
MFF pmax pmax
comp=Z,250nm,1.7s
MDT Midelt 82.92 58 LR LR 04 05 03.9
comp=Z,867nm,20.1s,baz=292,slow=33
ETSF Etsaut 83.55 47 *eP* **P** **03 32 19.0 +0.7**
ETSF pmax pmax
comp=Z,25nm,1.4s
PMSA Palmer Station 83.56 167 LR LR 04 01 52.4
comp=Z,918nm,18.9s,baz=324,slow=30
CLF Chambon-Foret 84.08 42 IAMs_20 IAMs_20 04 07 13.9
comp=Z,2µm,20.0s
EPF Esparros 84.15 47 *eP* **P** **03 32 21.9 +0.6**
EPF pmax pmax
comp=Z,58nm,1.9s
RJF Les Rejaudoux 84.34 45 *eP* **P** **03 32 22.4 +0.2**
RJF pmax pmax
comp=Z,288nm,1.8s
NC204 NORSAR Array S 84.42 28 IAmb IAmb 03 32 24.3
comp=Z,77nm,1.6s
KONO Kongsberg 84.48 29 *c iP* **P** **03 32 23.8 +1.2**
KONO pmax pmax
comp=Z,88nm,1.6s
KONO Kongsberg 84.48 29 P **P** **03 32 23.6 +1.1**
KONO Kongsberg 84.48 29 IAMs_20 IAMs_20 04 10 54.1
comp=Z,935nm,18.0s
UCC Uccle 84.58 39 *dP* **P** **03 32 23.5 +0.3**
comp=Z,8.9nm,1.4s
CART Cartagena 84.60 53 IAMs_20 IAMs_20 04 06 02.1
comp=Z,1µm,20.0s
BAIF Baives 84.71 40 *eP* **P** **03 32 24.6 +0.7**
BAIF pmax pmax
comp=Z,57nm,1.5s
NC303 NORSAR Array S 84.71 28 IAmb IAmb 03 32 25.8
comp=Z,83nm,1.8s
NB2 NORSAR Subarra 84.71 28 P **P** **03 32 24.7 +0.9**
comp=Z,275nm,2.5s,baz=296,slow=5.1
NB2 NORSAR Subarra 84.71 28 P **P** **03 32 25.1 +1.3**
NB2 pmax pmax
comp=Z,699nm,3.7s
NB2 NORSAR Subarra 84.71 28 P **P** **03 32 24.7 +0.9**
NOA NORSAR Array B 84.71 28 P **P** **03 32 24.5 +0.7**
comp=Z,8.6nm,1.1s,baz=296,slow=4.9,SNR=7.5
NOA LR LR 04 09 32.0
comp=Z,932nm,21.2s,baz=290,slow=35
comp=Z,8.6nm,1.1s
CAF Calviac 84.82 45 *eP* **P** **03 32 26.6 +1.9**
CAF pmax pmax
comp=Z,72nm,2.0s
BGF Bois d'Agland 84.88 43 *eP* **P** **03 32 25.1 +0.2**
BGF pmax pmax
comp=Z,95nm,1.8s
NC405 NORSAR Array S 84.91 28 IAmb IAmb 03 32 27.5
comp=Z,31nm,1.3s
DOU Dourbes 84.94 39 *dP* **P** **03 32 25.2 +0.2**
comp=Z,8.1nm,1.6s
BMRD Maredsous 84.98 39 *dP* **P** **03 32 25.9 +0.7**
comp=Z,13nm,1.4s
NORES NORESS Array B 84.98 28 P **P** **03 32 27.0 +1.9**
NORES pmax pmax
comp=Z,10.0nm,1.1s
GIVF Givet 85.07 39 *eP* **P** **03 32 26.6 +0.8**
GIVF pmax pmax
comp=Z,80nm,1.7s
AVF Avril sur Loir 85.14 43 *eP* **P** **03 32 24.9 -1.3**
AVF pmax pmax
comp=Z,43nm,1.7s
BGES Gesves 85.15 39 *dP* **P** **03 32 26.8 +0.6**
comp=Z,14nm,1.4s
BCLA Clavier 85.27 39 *dP* **P** **03 32 27.2 +0.5**
comp=Z,11nm,1.4s
RCHB Rochefort 85.30 39 *dP* **P** **03 32 26.7 -0.2**
comp=Z,12nm,1.5s
LOR Lormes 85.33 42 *eP* **P** **03 32 27.6 +0.4**
LOR pmax pmax
comp=Z,91nm,1.6s
BEBN Eben Emael 85.37 39 *dP* **P** **03 32 27.8 +0.6**
BSTI Sart Tilman 85.38 39 *dP* **P** **03 32 28.5 +1.2**
MTLF Montolieu 85.38 46 *eP* **P** **03 32 28.0 +0.5**
MTLF pmax pmax
comp=Z,92nm,1.7s
MUD Monsted U'grnd 85.42 33 *i* P **P** **03 32 27.7 +0.4**
MUD IAmb IAmb 03 32 29.7
comp=Z,92nm,1.9s
SMF Signal de Mont 85.51 43 *eP* **P** **03 32 28.0 0.0**
SMF pmax pmax
comp=Z,49nm,1.7s
MEM Membach 85.63 39 *dP* **P** **03 32 29.0 +0.5**
comp=Z,11nm,1.3s
CORI Orista 85.66 48 IAmb IAmb 03 32 30.3
comp=Z,82nm,1.6s
BHOU Houvegnez 85.71 39 *dP* **P** **03 32 29.8 +0.8**
comp=Z,9.4nm,1.5s
SEY Seymchan 85.86 335 LR LR 04 16 05.2
comp=Z,1µm,18.2s,baz=73,slow=39
SEY Seymchan 85.86 335 *c iP* **P** **03 32 30.5 +1.1**
SEY pmax pmax
comp=Z,36nm,1.7s
ARCES ARCESS Array B 85.97 18 P **P** **03 32 29.8 -0.1**
comp=Z,2.6nm,0.9s,baz=337,slow=1.8,SNR=5.4
ARCES LR LR 04 11 56.2
comp=Z,1µm,19.6s,baz=310,slow=36
comp=Z,2.6nm,0.9s
ARCES ARCESS Array B 85.97 18 IAmb IAmb 03 33 48.3
comp=Z,62nm,1.8s
SSRD Sdr. Stenderup 86.01 33 *i* P **P** **03 32 30.2 -0.1**
WLF Walferdange 86.03 40 P **P** **03 32 31.6 +1.1**
WLF Walferdange 86.03 40 IAmb IAmb 03 32 35.1
comp=Z,48nm,1.3s
WLF IAMs_20 IAMs_20 04 10 09.2
comp=Z,2µm,20.0s
WLF Walferdange 86.03 40 *dP* **P** **03 32 31.4 +0.9**
comp=Z,13nm,1.2s
WLF Walferdange 86.03 40 *eP* **P** **03 32 31.6 +1.1**
comp=Z,48nm,1.3s,baz=291,slow=4.7
IBBN Ibbenburen 86.10 37 *eP* **P** **03 32 31.7 +0.9**
comp=Z,118nm,1.9s,baz=291,slow=4.7
BUG Bochum--Univer 86.11 38 *eP* **P** **03 32 32.0 +1.2**
comp=Z,47nm,1.5s,baz=291,slow=4.7
HFS Hagfors 86.20 28 LR LR 04 10 13.5
comp=Z,858nm,21.4s,baz=283,slow=35
KEV Kevo 86.28 17 IAMs_20 IAMs_20 04 11 49.3
comp=Z,1µm,20.0s
SSB Saint Sauveur 86.39 44 P **P** **03 32 32.1 -0.4**
SSB pmax pmax
comp=Z,32nm,1.5s
SSB MLR MLR
comp=Z,1µm,20.0s
SSB Saint Sauveur 86.39 44 P **P** **03 32 32.1 -0.4**
SSB IAmb IAmb 03 32 33.7
comp=Z,32nm,1.5s
SSB Saint Sauveur 86.39 44 IAMs_20 IAMs_20 04 11 36.5
comp=Z,1µm,20.0s
VIVF Saint-Julien-l 86.61 44 *eP* **P** **03 32 34.5 +0.9**
VIVF pmax pmax
comp=Z,103nm,2.0s
HAU Haudompre 86.69 41 *eP* **P** **03 32 34.2 +0.3**
HAU pmax pmax
comp=Z,58nm,1.7s
PET Petropavlovsk 86.79 324 *eP* **P** **03 32 34.3 +0.1**
PET *e* 03 35 59.5
PET *e* 03 43 00.0
PET *eS* **S** **03 43 09.6 -3.1**
PET *eSS* **SS** **03 48 56.6 +3.0**
PET pmax pmax
comp=Z,600nm,7.9s
PET pmax pmax
comp=Z,400nm,8.6s
PET pmax pmax
comp=Z,300nm,11.8s
PET MLR MLR
comp=Z,2µm,16.0s
PET MLR MLR
comp=Z,1µm,15.0s
RETH Rethem/Aller, 86.86 36 *eP* **P** **03 32 35.6 +1.1**
comp=Z,88nm,1.8s,baz=291,slow=4.7
KASTN Kahler Asten 86.87 38 *eP* **P** **03 32 35.3 +0.6**
comp=Z,63nm,1.8s,baz=291,slow=4.7
BSEG Bad Segeberg 86.95 35 *eP* **P** **03 32 35.8 +0.9**
comp=Z,62nm,2.3s,baz=291,slow=4.7
CABF La Chapelle 86.99 42 *eP* **P** **03 32 35.8 +0.4**
CABF pmax pmax
comp=Z,57nm,1.8s
HINF Hinteralfeld 87.08 41 *eP* **P** **03 32 35.9 +0.1**
HINF pmax pmax
comp=Z,54nm,2.0s
ECH Echery 87.14 41 P **P** **03 32 36.4 +0.3**
ECH Echery 87.14 41 IAmb IAmb 03 32 40.1
comp=Z,65nm,2.0s
ECH IAMs_20 IAMs_20 04 09 52.7
comp=Z,2µm,20.0s
CDF Champ du Feu 87.14 40 *eP* **P** **03 32 36.5 +0.3**
CDF pmax pmax
comp=Z,64nm,2.0s
TNS Taunus Mts 87.23 39 *eP* **P** **03 32 36.7 +0.2**
comp=Z,52nm,1.6s,baz=291,slow=4.7
PEA0B Petropavlovsk- 87.29 325 *c iP* **P** **03 32 37.5 +0.8**
PETK Petropavlovsk- 87.29 325 P **P** **03 32 37.4 +0.8**
comp=Z,6.3nm,1.2s,baz=96,slow=14,SNR=5.3
PETK LR LR 04 11 21.9
comp=Z,975nm,20.1s,baz=28,slow=35
comp=Z,6.3nm,1.2s
PETK Petropavlovsk- 87.29 325 P **P** **03 32 37.1 +0.4**
ORIF Oris-en-Rattie 87.41 44 *eP* **P** **03 32 38.3 +0.8**
ORIF pmax pmax
comp=Z,63nm,2.0s
GTTG Gottingen 87.65 37 *eP* **P** **03 32 39.9 +1.5**
baz=291,slow=4.7
CLZ Clausthal 87.77 37 *eP* **P** **03 32 39.8 +0.7**
comp=Z,148nm,2.9s,baz=291,slow=4.7
LPG La Plagne 87.79 43 *eP* **P** **03 32 40.7 +1.1**
LPG pmax pmax
comp=Z,103nm,2.4s
BFO Black Forest 87.83 40 P **P** **03 32 40.1 +0.7**
BFO Black Forest 87.83 40 IAMs_20 IAMs_20 04 11 47.0
comp=Z,1µm,19.0s
BFO Black Forest 87.83 40 *eP* **P** **03 32 37.6 -1.8**
comp=Z,46nm,2.2s,baz=291,slow=4.7
ASSE Asse, Remlinge 87.83 36 *eP* **P** **03 32 40.6 +1.4**
comp=Z,82nm,2.3s,baz=291,slow=4.7
SENIN Lac Senin/Sane 87.86 42 IAmb IAmb 03 32 58.3
comp=Z,75nm,1.9s
SENIN IAMs_20 IAMs_20 04 08 53.1
comp=Z,2µm,20.0s
GORT1 Trebel 87.86 35 *eP* **P** **03 32 40.9 +1.7**
comp=Z,35nm,1.5s,baz=291,slow=4.7
MAHO Mahon 87.88 49 IAMs_20 IAMs_20 04 07 47.6
comp=Z,1µm,20.0s
UBBA Unterbreizbach 87.94 38 *eP* **P** **03 32 41.0 +1.3**
comp=Z,53nm,2.0s,baz=291,slow=4.7
TIXI Tiksi 88.06 347 LR LR 04 16 09.6
comp=Z,1µm,19.9s,baz=72,slow=38
TIXI Tiksi 88.06 347 *c iP* **P** **03 32 39.5 -0.4**
TIXI pmax pmax
comp=Z,58nm,1.8s
TIXI Tiksi 88.06 347 P **P** **03 32 39.5 -0.4**
TIXI IAMs_20 IAMs_20 04 12 12.3
comp=Z,2µm,22.0s
FLTG Flechtingen 88.08 36 *eP* **P** **03 32 40.5 +0.1**
comp=Z,24nm,1.6s,baz=291,slow=4.7
MA2 Magadan 88.08 332 LR LR 04 13 07.4
comp=Z,2µm,18.3s,baz=50,slow=36
MA2 Magadan 88.08 332 *c iP* **P** **03 32 41.3 +1.0**
MA2 pmax pmax
comp=Z,38nm,1.5s
MA2 Magadan 88.08 332 IAMs_20 IAMs_20 04 12 56.4
comp=Z,2µm,19.0s
SLE Schleitheim 88.13 41 P **P** **03 32 40.9 0.0**
STU Stuttgart 88.21 40 IAMs_20 IAMs_20 04 11 01.9
comp=Z,2µm,20.0s
STU Stuttgart 88.21 40 *eP* **P** **03 32 42.4 +1.3**
comp=Z,18nm,0.6s,baz=291,slow=4.7
RGN Rugen 88.33 33 IAMs_20 IAMs_20 04 10 40.3
comp=Z,1µm,19.0s
MOX Moxa 88.95 37 *eP* **P** **03 32 45.0 +0.3**
comp=Z,36nm,2.0s,baz=291,slow=4.7
MOX *eL* L 04 10 50.1
comp=Z,1µm,21.2s
GRA1 Grafenberg Arr 89.09 38 IAMs_20 IAMs_20 04 14 29.1
comp=Z,1µm,19.0s
GRF Grafenberg Arr 89.09 38 *eP* **P** **03 32 46.3 +1.0**
comp=Z,125nm,2.6s,baz=291,slow=4.7
GRF *eL* L 04 09 05.0
comp=Z,1µm,21.6s
GRFO Grafenberg 89.09 38 IAMs_20 IAMs_20 04 14 30.1
comp=Z,1µm,19.0s

SKR	Severo-Kuril's	89.14	323	‖	eP	P	03 32 45.9	+0.5	
TUE	Stuetta	89.14	42		IAmb	IAmb	03 32 54.7		
	comp=Z,24nm,1.6s								
TUE					IAMs_20	IAMs_20	04 09 58.0		
	comp=Z,2µm,20.0s								
DAVA	Damuels	89.18	41		i P	P	03 32 46.4	+0.5	
	comp=Z,9.7nm,1.5s								
DBIC	Dimbokro	89.31	83		LR	LR	04 11 28.8		
	comp=Z,1µm,19.6s,baz=294,slow=35								
PLN	Plauen	89.33	37		eP	P	03 32 47.1	+0.7	
	comp=Z,8.2nm,1.7s,baz=291,slow=4.7								
DAVOX	Davos/Dischmat	89.37	41		LR	LR	04 10 00.8		
	comp=Z,1µm,21.1s,baz=262,slow=34								
APA	Apatity	89.47	17		eP	P	03 32 47.9	+1.2	
APA					e		03 36 14.9		
APA					eS	SKSac	03 43 16.6	-1.1	
APA					eSS	SS	03 49 24.9	-7.0	
APA					pmax	pmax			
	comp=Z,5.0nm,1.1s								
APA					MLR	MLR			
	comp=Z,1µm,20.1s								
CLL	Collm	89.49	36		i P	P	03 32 47.1	0.0	
CLL					e		03 43 18.0		
CLL					pmax	pmax			
	comp=Z,20nm,1.7s								
CLL					MLR	MLR			
	comp=Z,1µm,20.8s								
CLL	Collm	89.49	36		IAMs_20	IAMs_20	04 11 33.4		
	comp=Z,1µm,20.0s								
CLL	Collm	89.49	36		eP	P	03 32 47.2	0.0	
	comp=Z,22nm,1.7s,baz=291,slow=4.7								
CLL	Collm	89.49	36		i P	P	03 32 47.1	0.0	
	comp=Z,20nm,1.7s								
CLL					ePlp		03 32 49.0		
	comp=Z,500nm,16.3s								
CLL					ePP	PP	03 36 17.0	-0.9	
CLL					ePPP	PPP	03 38 12.0		
CLL					eSKSac	SKSac	03 43 18.0	-0.4	
CLL					eS	SKKSac	03 43 30.0	-0.8	
CLL					ex	x	03 43 59.0		
CLL					ePS	PS	03 44 45.0	+1.6	
CLL					ePPS	PPS	03 45 18.0		
CLL					eSS	SS	03 49 36.0	+2.9	
CLL					eSSS	SSS	03 53 00.0		
CLL					AMS	AMS	04 11 00.0		
	comp=N,400nm,20.4s								
CLL					AMS	AMS	04 11 00.0		
	comp=E,1µm,20.6s								
CLL					AMS	AMS	04 11 00.0		
	comp=Z,1µm,20.8s								
TANN	Tannenbergstha	89.54	37		eP	P	03 32 47.8	+0.4	
	comp=Z,28nm,1.9s,baz=291,slow=4.7								
LVZ	Lovozero	89.60	17		IAMs_20	IAMs_20	04 13 38.2		
	comp=Z,2µm,19.0s								
RETA	Reutte	89.66	41		i P	P	03 32 48.5	+0.4	
	comp=Z,7.7nm,1.6s								
FUORN	Ofenpass-Fuorn	89.68	41		IAMs_20	IAMs_20	04 10 01.0		
	comp=Z,2µm,19.0s								
FETA	Feichten	89.82	41		i P	P	03 32 49.4	+0.5	
	comp=Z,5.0nm,1.4s								
MOTA	Moosalm	89.93	41		i P	P	03 32 49.7	+0.2	
	comp=Z,8.2nm,1.4s								
SQTA	Sankt Quirin	90.05	41		i P	P	03 32 50.3	+0.3	
	comp=Z,2.8nm,0.6s								
BRG	Berggiesshubel	90.21	37		eP	P	03 32 50.6	+0.1	
	comp=Z,19nm,1.6s,baz=291,slow=4.7								
BRG	Berggiesshubel	90.21	37		eP	P	03 32 50.8	+0.4	
BRG					Amp		03 32 53.4		
	comp=Z,6.9nm,1.1s								
BRG					PP	PP	03 36 21.7	-1.9	
BRG					Amp		03 36 29.9		
	comp=Z,5.0nm,1.2s								
BRG	Berggiesshubel	90.21	37		S	S	03 43 54.0	+8.7	
BRG	Berggiesshubel	90.21	37		PS	PS	03 44 58.0	+6.5	
BRG	Berggiesshubel	90.21	37		SS	SS	03 49 49.0	+5.5	
WATA	Walderalm	90.23	40		i P	P	03 32 51.4	+0.5	
	comp=Z,1.7nm,0.8s								
WTTA	Wattenberg	90.30	40		i P	P	03 32 51.8	+0.6	
	comp=Z,8.7nm,1.6s								
WET	Wettzell	90.30	38		eP	P	03 32 51.7	+0.7	
	comp=Z,38nm,1.8s,baz=291,slow=4.7								
RICC	Richard	90.44	37		AMS	AMS	04 19 20.0		
	comp=Z,2µm,16.8s								
RAO	Raoul Island	90.60	240		LR	LR	04 03 21.0		
	comp=Z,375nm,21.8s,baz=84,slow=29								
TARA	Tarawa	90.72	272		IAMs_20	IAMs_20	04 04 02.5		
	comp=Z,945nm,20.0s								
KHC	Kasperske Hory	90.73	38		eP	P	03 32 53.7	+0.7	
KHC					e		03 43 28.9		
KHC					MLR	MLR			
	comp=Z,2µm,19.0s								
KHC	Kasperske Hory	90.73	38		eP	P	03 32 53.7	+0.7	
KHC					eSKS	SKSac	03 43 28.9	+3.1	
KHC					AMS	AMS	04 12 50.0		
	comp=Z,2µm,19.0s								
FINES	FINESS Array B	90.81	24		P	P	03 32 53.1	0.0	
	comp=Z,1.8nm,0.8s,baz=321,slow=11,SNR=1.5								
	comp=Z,1.8nm,0.8s								
LESA	Schwarzleotal	90.88	40		i P	P	03 32 53.9	+0.1	
	comp=Z,8.8nm,1.5s								
MSVF	Nonsavu	90.89	252		LR	LR	04 04 09.2		
	comp=Z,1µm,20.4s,baz=62,slow=29								
MSVF	Nonsavu	90.89	252		P	P	03 33 00.0	+5.6	
GEC2	GERESS Array S	90.92	38		eP	P	03 32 54.8	+0.9	
	comp=Z,17nm,1.6s,baz=291,slow=4.7								
GERES	GERESS Array B	90.92	38		P	P	03 32 54.4	+0.4	
	comp=Z,1.4nm,0.9s,baz=242,slow=2.9,SNR=11								
GERES					PP	PP	03 36 26.4	-3.1	
	comp=Z,0.9nm,1.0s,baz=273,slow=5.8,SNR=3.8								
	comp=Z,1.4nm,0.9s								
GERES	GERESS Array B	90.92	38		P	P	03 32 54.0	0.0	
PRU	Pruhonice	90.93	37		eP	P	03 32 52.4	-1.5	
PRU					e		03 36 24.6		
PRU					e		03 43 29.8		
PRU					MLR	MLR			
	comp=Z,2µm,15.4s								
PRU	Pruhonice	90.93	37		eP	P	03 32 52.4	-1.5	
PRU					ePP	PP	03 36 24.6	-4.8	
PRU					eSKS	SKSac	03 43 29.8	+2.9	
PRU					AMS	AMS	04 20 30.0		
	comp=Z,2µm,15.4s								
ZVC	Zvikov	90.96	38		AMS	AMS	04 19 30.0		
	comp=Z,1µm,16.2s								
ABTA	Abfaltersbach	91.05	41		i P	P	03 32 55.1	+0.4	
	comp=Z,8.6nm,1.3s								
CKRC	Cesky Krumlov	91.30	38		eP	P	03 32 53.6	-2.0	
CKRC					e		03 43 32.0		
CKRC					MLR	MLR			
	comp=Z,2µm,18.9s								
CKRC	Cesky Krumlov	91.30	38		eP	P	03 32 53.6	-2.0	
CKRC					ePP	PP	03 36 26.7	-5.6	
CKRC					eSKS	SKSac	03 43 32.0	+2.9	
CKRC					AMS	AMS	04 13 10.0		
	comp=Z,2µm,18.9s								
BIOA	Bad Ischl, Aus	91.36	40		i P	P	03 32 56.7	+0.7	
	comp=Z,8.0nm,1.5s								
KBA	Koelnbreinsper	91.44	40		i P	P	03 32 57.0	+0.5	
	comp=Z,9.2nm,1.7s								
CHVC	Chvalec	91.54	36		eP	P	03 32 57.2	+0.5	
CHVC					e		03 43 33.1		
CHVC					MLR	MLR			
	comp=Z,1µm,15.6s								
CHVC	Chvalec	91.54	36		eP	P	03 32 57.2	+0.5	
CHVC					eSKS	SKSac	03 43 33.1	+2.7	
CHVC					AMS	AMS	04 21 20.0		
	comp=Z,1µm,15.6s								
UPC	Upice	91.56	36		eP	P	03 32 57.1	+0.3	
UPC					e		03 36 30.6		
UPC					e		03 43 31.8		
UPC					MLR	MLR			
	comp=Z,2µm,15.5s								
UPC	Upice	91.56	36		eP	P	03 32 57.1	+0.3	
UPC					ePP	PP	03 36 30.6	-3.7	
UPC					eSKS	SKSac	03 43 31.8	+1.4	
UPC					AMS	AMS	04 21 20.0		
	comp=Z,2µm,15.5s								
KSP	Ksiaz	91.56	36		eP	P	03 32 57.0	+0.2	
OSTC	Ostas	91.65	36		eSKS	SKSac	03 43 32.8	+1.8	
OSTC					AMS	AMS	04 20 40.0		
	comp=Z,1µm,16.7s								
MOA	Molln	91.68	39		i P	P	03 32 57.5	+0.1	
	comp=Z,9.0nm,1.7s								
VSL	Villasalto	91.72	48		IAMs_20	IAMs_20	04 10 40.2		
	comp=Z,1µm,19.0s								
TREC	Trest	91.79	38		eP	P	03 32 57.5	-0.4	
TREC					e		03 43 34.2		
TREC					MLR	MLR			
	comp=Z,1µm,17.1s								
TREC	Trest	91.79	38		eP	P	03 32 57.5	-0.4	
TREC					eSKS	SKSac	03 43 34.2	+2.4	
TREC					AMS	AMS	04 20 10.0		
	comp=Z,1µm,17.1s								
DPC	Dobruska-Polom	91.80	36		eP	P	03 32 59.1	+1.1	
DPC					e		03 36 35.7		
DPC					e		03 43 33.3		
DPC					MLR	MLR			
	comp=Z,1µm,16.8s								
DPC	Dobruska-Polom	91.80	36		eP	P	03 32 59.1	+1.1	
DPC					ePP	PP	03 36 35.7	-0.6	
DPC					eSKS	SKSac	03 43 33.3	+1.4	
DPC					AMS	AMS	04 22 20.0		
	comp=Z,1µm,16.8s								
MYKA	Terra Mystica	91.81	41		eP	P	03 32 58.1	0.0	
	comp=Z,3.0nm,0.8s								
KRLC	Kraliky	92.19	36		eP	P	03 33 00.9	+1.1	
KRLC					MLR	MLR			
	comp=Z,1µm,15.6s								
KRLC	Kraliky	92.19	36		eP	P	03 33 00.9	+1.1	
KRLC					AMS	AMS	04 20 40.0		
	comp=Z,1µm,15.6s								
KRUC	Moravsky	92.43	38		eP	P	03 33 00.2	-0.6	
KRUC					ePP	PP	03 36 38.8	-2.4	
KRUC					eSKS	SKSac	03 43 38.2	+2.8	
OBKA	Obir	92.43	40		i P	P	03 33 00.9	-0.1	
	comp=Z,9.2nm,1.4s								
VRAC	Vranov	92.43	37		LR	LR	04 12 17.8		
	comp=Z,735nm,21.8s,baz=296,slow=34								
VRAC	Vranov	92.43	37		eP	P	03 33 00.8	-0.1	
VRAC					ePP	PP	03 36 40.2	-1.1	
VRAC					eSKS	SKSac	03 43 38.4	+3.0	
CONA	Conrad Observa	92.62	39		i P	P	03 33 02.4	+0.5	
	comp=Z,8.2nm,1.4s								
SOKA	Soboth	92.66	40		i P	P	03 33 01.6	-0.4	
	comp=Z,8.6nm,1.4s								
ARSA	Arzberg	92.71	39		i P	P	03 33 02.3	+0.1	
	comp=Z,7.1nm,1.7s								
MORC	Moravsky Berou	92.77	37		P	P	03 33 03.2	+0.8	
MORC	Moravsky Berou	92.77	37		eP	P	03 33 02.7	+0.3	
MORC					ePP	PP	03 36 41.2	-2.7	
MORC					eSKS	SKSac	03 43 39.1	+1.8	
RONA	Rosalia, Austr	92.98	39		i P	P	03 33 04.0	+0.5	
	comp=Z,8.5nm,1.5s								
KEST	Kesra	93.07	52		LR	LR	04 13 19.8		
	comp=Z,878nm,18.4s,baz=302,slow=34								
OKC	Ostrava-Krasne	93.08	36		eP	P	03 33 05.0	+1.2	
OKC					MLR	MLR			
	comp=Z,900nm,14.4s								
OKC	Ostrava-Krasne	93.08	36		eP	P	03 33 05.0	+1.2	
OKC					AMS	AMS	04 21 50.0		
	comp=Z,900nm,14.4s								
PABE	Paberze	93.24	30		IAMs_20	IAMs_20	04 11 19.7		
	comp=Z,944nm,22.0s								
MODS	Modra-Piesok	93.26	38		eP	P	03 33 04.9	+0.2	
MODS					pmax	pmax			
	comp=Z,34nm,0.3s								
MODS	Modra-Piesok	93.26	38		eP	P	03 33 04.9	+0.2	
JAVC	Velka Javorina	93.27	37		eP	P	03 33 06.0	+1.2	
JAVC					eSKS	SKSac	03 43 41.7	+1.5	
SUW	Suwalki	93.67	31		eP	P	03 33 06.4	0.0	
SUW	Suwalki	93.67	31		IAMs_20	IAMs_20	04 11 25.2		
	comp=Z,1µm,22.0s								
TORD	Torodi Ar. Bea	93.76	75		P	P	03 33 08.4	+0.8	
	comp=Z,1.7nm,1.2s,baz=267,slow=7.1,SNR=4.0								
	comp=Z,1.7nm,1.2s								
OJC	Ojcow	93.83	35		eP	P	03 33 07.7	+0.4	
TAM	Tamanrasset	94.33	65		P	P	03 33 11.5	+1.2	
TAM	Tamanrasset	94.33	65		IAmb	IAmb	03 33 15.9		
	comp=Z,7.7nm,0.5s								
TAM					IAMs_20	IAMs_20	04 21 24.9		
	comp=Z,814nm,18.0s								
NIE	Niedzica	94.51	36		eP	P	03 33 11.4	+1.0	
BLY	Banja Luka	94.86	41		IAMs_20	IAMs_20	04 13 36.2		
	comp=Z,1µm,21.0s								
YAK	Yakutsk	94.87	340		LR	LR	04 18 17.7		
	comp=Z,1µm,19.9s,baz=44,slow=37								
YAK	Yakutsk	94.87	340		eP	P	03 33 10.5	-1.2	
YAK					e*PP	pwP	03 33 15.3	+0.1	
YAK					e		03 36 56.1		
YAK					ePPP	PPP	03 39 01.6		
YAK					eS	SKSac	03 43 45.6	-2.5	
YAK					e		03 44 21.1		
YAK					eSS	SS	03 50 43.6	-5.9	
YAK					eSSS	SSS	03 54 27.0		
YAK					pmax	pmax			
	comp=Z,12nm,1.3s								
YAK					pmax	pmax			
	comp=N,9.0nm,1.6s								
YAK					pmax	pmax			
	comp=E,7.0nm,1.5s								
YAK					pmax	pmax			
	comp=Z,399nm,5.8s								
YAK					pmax	pmax			
	comp=N,79nm,2.4s								
YAK					pmax	pmax			
	comp=E,141nm,5.8s								
YAK					smax	smax			
	comp=N,304nm,7.7s								
YAK					smax	smax			
	comp=E,499nm,10.3s								
YAK					MLR	MLR			
	comp=Z,3µm,25.0s								
YAK					MLR	MLR			
	comp=E,2µm,15.0s								
YAK					MLR	MLR			
	comp=N,2µm,19.0s								
PSZ	Piszkesteto	95.02	37		P	P	03 33 12.1	-0.8	
PSZ	Piszkesteto	95.02	37		IAmb	IAmb	03 33 16.0		
	comp=Z,51nm,1.8s								
PSZ					IAMs_20	IAMs_20	04 15 13.8		
	comp=Z,1µm,20.0s								
NRIK	Noril'sk	95.43	359		P	P	03 33 14.9	+0.7	
	comp=Z,2.1nm,0.7s,baz=46,slow=6.0,SNR=4.7								
NRIK					LR	LR	04 20 16.8		
	comp=Z,2µm,19.2s,baz=32,slow=38								
	comp=Z,2.1nm,0.7s								
NRIK	Noril'sk	95.43	359	c	iP	P	03 33 13.6	-0.6	
NRIK					pmax	pmax			
	comp=Z,14nm,1.8s								
MNK	Minsk	95.67	29		i P	P	03 33 15.7	+0.2	
	comp=E,13nm,0.9s								
MNK					i P	P	03 33 15.7	+0.2	
	comp=N,14nm,0.9s								
MNK					i P	P	03 33 15.7	+0.2	
	comp=Z,6.0nm,0.7s,baz=306								
MNK					i PP	PP	03 37 06.0	-0.2	
MNK					i PPP	PPP	03 39 08.1		
MNK					i S	SKSac	03 43 51.4	-1.3	
MNK					i PS	PS	03 45 51.1	-0.3	
MNK					i SS	SS	03 51 00.6	-0.7	
MNK					i SSS	SSS	03 54 43.6		
MNK	Minsk	95.67	29		i P	P	03 33 15.7	+0.2	
MNK					i		03 37 05.9		
MNK					i PPP	PPP	03 39 08.0		
MNK					i S	SKSac	03 43 51.4	-1.3	
MNK					i PS	PS	03 45 51.1	-0.3	
MNK					i SS	SS	03 51 00.5	-0.7	
MNK					i SSS	SSS	03 54 43.6		
MNK					pmax	pmax			
	comp=Z,6.0nm,0.7s								
MNK					pmax	pmax			
	comp=E,13nm,0.9s								
MNK					pmax	pmax			
	comp=N,14nm,0.9s								
MNK					MLR	MLR			
	comp=Z,980nm,22.0s								
MNK					MLR	MLR			
	comp=N,780nm,19.0s								
MNK					MLR	MLR			
	comp=E,305nm,17.0s								
UZHM	Uzhgorod	96.04	36		P	P	03 33 16.5	-0.9	
KLMR	Klimovskoe	96.10	20		eP	P	03 33 14.3	-3.1	
KLMR					pmax	pmax			
	comp=Z,27nm,1.3s								
VAE	Valguarnera	96.15	49		LR	LR	04 13 22.6		
	comp=Z,3µm,19.7s,baz=346,slow=34								
RNPP9	Sopachiv	96.48	32		P	P	03 33 18.9	-0.4	
RNPP8	Varash	96.50	32		P	P	03 33 19.0	-0.4	
RNPP5	Staryi Chortor	96.58	33		P	P	03 33 19.4	-0.4	
CEL	Celeste	96.88	47		IAMs_20	IAMs_20	04 14 03.5		
	comp=Z,873nm,20.0s								
URZ	Urewera	97.02	232		LR	LR	04 07 05.7		
	comp=Z,702nm,21.3s,baz=88,slow=29								
TIP	Timpagrande	97.08	46		IAMs_20	IAMs_20	04 18 14.7		
	comp=Z,1µm,20.0s								
BZS	Buzias	97.19	39		P	Pdif	03 33 23.5	+0.7	
PDG	Podgorica	97.28	42		IAMs_20	IAMs_20	04 17 55.3		
	comp=Z,850nm,19.0s								
KIEV	Kiev	98.60	32		IAMs_20	IAMs_20	04 26 56.7		
	comp=Z,1µm,18.0s								
AKASG	Malin Array Be	98.60	32		P	Pdif	03 33 29.4	+0.5	
	comp=Z,0.1nm,0.3s,baz=287,slow=3.8,SNR=4.9								
AKASG					PP	PP	03 37 23.5	-5.4	
	comp=Z,4.2nm,1.0s,baz=307,slow=7.3,SNR=9.5								
AKASG					LR	LR	04 17 39.3		
	comp=Z,419nm,19.9s,baz=316,slow=35								
	comp=Z,0.1nm,0.3s								
AKASG	Malin Array Be	98.60	32		i P	Pdif	03 33 28.3	-0.6	
AKASG	Malin Array Be	98.60	32		IAmb	IAmb	03 33 37.3		
	comp=Z,2.5nm,1.0s								
AKBB	Malin Array Si	98.60	32	⇑	eP	Pdif	03 33 27.9	-1.0	
AKBB					pmax	pmax			
	comp=Z,10.0nm,1.8s								
YSS	Yuzhno-Sakhali	98.66	324		eP	Pdif	03 33 28.4	-0.9	
YSS					e		03 44 09.0		
YSS					e		03 46 23.1		
YSS					MLR	MLR			
	comp=Z,1µm,15.0s								
YSS					MLR	MLR			
	comp=N,800nm,14.0s								
YSS					MLR	MLR			
	comp=E,900nm,15.0s								
YSS	Yuzhno-Sakhali	98.66	324		IAMs_20	IAMs_20	04 21 17.9		
	comp=Z,1µm,18.0s								
MOS	Moscow	99.10	25		eP	Pdif	03 33 28.9	-2.1	
MOS					e		03 37 31.7		
MOS					eS	SKSac	03 44 04.5	-5.8	
MOS					pmax	pmax			
	comp=Z,15nm,0.6s								
MOS					MLR	MLR			
	comp=N,900nm,21.0s								
MOS					MLR	MLR			
	comp=Z,800nm,21.0s								
OBN	Obninsk	99.11	25		LR	LR	04 18 55.2		
	comp=Z,782nm,20.6s,baz=332,slow=36								
OBN	Obninsk	99.11	25	⇑	eP	Pdif	03 33 30.6	-0.5	
OBN					ePP	PP	03 37 35.4	+2.8	
OBN					pmax	pmax			
	comp=Z,32nm,1.8s								
OBN	Obninsk	99.11	25		IAMs_20	IAMs_20	04 25 06.4		
	comp=Z,932nm,19.0s								
MLR	Muntele Rosu	99.83	37		IAMs_20	IAMs_20	04 19 39.2		
	comp=Z,1µm,21.0s								
ERM	Erimo	101.11	319		IAMs_20	IAMs_20	04 19 40.4		
	comp=Z,909nm,20.0s								
TIRR	Tirgusor	101.86	37		IAMs_20	IAMs_20	04 20 55.8		
	comp=Z,1µm,18.0s								
ARTI	Arti	105.31	14		IAMs_20	IAMs_20	04 30 54.2		
	comp=Z,2µm,20.0s								
QSPA	South Pole Qui	105.35	180		IAMs_20	IAMs_20	04 14 37.0		
	comp=Z,782nm,19.0s								
MDJ	Mudanjiang	107.30	328		IAMs_20	IAMs_20	04 25 45.5		
	comp=Z,1µm,18.0s								
BRTR	Keskin Array B	107.82	39		PP	PP	03 38 35.5	-2.8	
	comp=Z,0.9nm,1.0s,baz=271,slow=5.9,SNR=4.1								
KIV	Kislovodsk	109.89	30		IAMs_20	IAMs_20	04 30 17.2		
	comp=Z,1µm,18.0s								
CN2	Changchun	109.97	329		Pdif	Pdif	03 34 22.4	+2.7	
CN2					ePP	PP	03 38 59.8	+6.3	
CN2					L	L			
	comp=Z,500nm,20.0s								
CN2					L	L			
	comp=Z,600nm,20.0s								
CN2					L	L			
	comp=Z,700nm,21.0s								
BORK	Borovoye	110.80	9		IAMs_20	IAMs_20	04 31 00.1		
	comp=Z,1µm,20.0s								
ZALV	Zalesovo Beam	110.91	360		PP	PP	03 38 59.9	+0.2	
	comp=Z,0.6nm,0.4s,baz=353,slow=7.3,SNR=4.0								
MAK	Makhachkala	112.92	28		eP	Pdif	03 34 29.5	-3.3	
MAK					e		03 45 08.4		
MAK					ePS	PS	03 48 50.0	0.0	
MAK					eSS	SS	03 54 57.2	-0.9	
MAK					pmax	pmax			
	comp=Z,20nm,0.3s								
KURK	Kurchatov	113.98	4		IAMs_20	IAMs_20	04 31 34.4		
	comp=Z,1µm,20.0s								
KURBB	Kurchatov Arra	114.07	4		PP	PP	03 39 18.4	-3.9	
	comp=Z,0.6nm,0.2s,baz=351,slow=6.5,SNR=5.9								
AKT	Akhty	114.19	29		i PKIKP	PKPdf	03 38 31.4	+1.5	
AKT					e		03 39 23.9		
AKT					e		03 45 16.0		
AKT					ePS	PS	03 48 58.2	-3.7	
AKT					eSS	SS	03 55 13.7	-1.4	
AKT					pmax	pmax			
	comp=Z,6.0nm,0.5s								
DGZ	Jazzator, Alta	115.10	358	‖	iPKIKP	PKPdf	03 38 32.5	+1.0	
DL2	Dalian	115.53	328		ePKP	PKPdf	03 38 32.1	-0.3	
DL2					SS	SS	03 55 31.1	-1.6	
DL2					L	L			
	comp=Z,1µm,16.1s								
TSUM	Tsumeb	116.78	104		IAMs_20	IAMs_20	04 28 03.9		
	comp=Z,634nm,19.0s								
BJT	Baijiatuan	117.26	333		IAMs_20	IAMs_20	04 31 33.2		
	comp=Z,1µm,19.0s								
ZSN	Zaisan	117.42	359		ePKIKP	PKiKP	03 38 36.6	+0.8	
ZSN	Zaisan	117.42	359		ePKP	PKiKP	03 38 36.6	+0.8	
MAKZ	Makanchi	118.04	2		IAMs_20	IAMs_20	04 33 44.6		
	comp=Z,1µm,21.0s								
MKAR	Makanchi Array	118.06	1		PKP	PKiKP	03 38 37.4	+0.3	
	comp=Z,0.4nm,0.6s,baz=333,slow=1.6,SNR=2.8								
MKAR					PP	PP	03 39 43.8	-6.5	
	comp=Z,0.8nm,0.8s,baz=21,slow=6.2,SNR=5.8								
PMG	Port Moresby	118.24	267		IAMs_20	IAMs_20	04 24 24.2		
	comp=Z,784nm,19.0s								
HHC	Hu-ho-hao-te	118.47	336		ePKP	PKPdf	03 38 33.3	-4.9	
HHC					L	L			
	comp=Z,890nm,17.6s								
HHC					L	L			
	comp=Z,930nm,16.8s								
HHC					L	L			
	comp=Z,2µm,19.9s								
BTLS	Baital	119.15	8		ePKIKP	PKiKP	03 38 39.8	+0.5	
BTLS	Baital	119.15	8		ePKP	PKiKP	03 38 39.8	+0.5	
TDK	Taldyqorghan	119.65	5		ePKIKP	PKiKP	03 38 40.8	+0.5	
TDK	Taldyqorghan	119.65	5		ePKP	PKiKP	03 38 40.8	+0.5	
HNS	HongShan	120.06	332	‖	PKP	P

WUS	**Wushi**	**123.50**	**4**	IAMs_20	IAMs_20	04 36 11.0			
	comp=Z,1μm,22.0s								
CHGR	**Chuyangaron**	**124.43**	**14**	*e*PKIKP	**PKiKP**	**03 38 49.8**	**-0.2**		
KSH2	**Kashi**	**125.15**	**8**	PKP	**PKiKP**	**03 38 51.8**	**+0.3**		
KSH2				L	L				
	comp=Z,940nm,20.3s								
KSH2				L	L				
	comp=Z,730nm,23.7s								
KSH2				L	L				
	comp=Z,2μm,24.7s								
MBAR	**Mbarara**	**125.39**	**80**	IAMs_20	IAMs_20	04 32 13.0			
	comp=Z,1μm,19.0s								
XAN	**Xi'an**	**125.40**	**335**	PKP	**PKiKP**	**03 38 51.6**	**-0.4**		
XAN				L	L				
	comp=Z,2μm,18.5s								
XAN				L	L				
	comp=Z,2μm,15.8s								
XAN				L	L				
	comp=Z,1μm,19.2s								
TATO	**Taipei**	**125.73**	**317**	IAMs_20	IAMs_20	04 28 51.2			
	comp=Z,649nm,20.0s								
RAYN	**Ar Rayn**	**125.99**	**45**	IAMs_20	IAMs_20	04 42 51.9			
	comp=Z,667nm,19.0s								
YHNB	**Yeheng**	**126.01**	**317**	IAMs_20	IAMs_20	04 39 58.1			
	comp=Z,623nm,18.0s								
MAW	**Mawson**	**126.06**	**170**	PKP	**PKiKP**	**03 38 52.0**	**-0.1**		
	comp=Z,2.1nm,0.9s,baz=286,slow=0.8,SNR=4.3								
MAW	**Mawson**	**126.06**	**170**	PKiKP	**PKiKP**	**03 38 52.0**	**-0.1**		
NACB	**Ninganchiao**	**126.21**	**316**	IAMs_20	IAMs_20	04 35 11.4			
	comp=Z,670nm,20.0s								
LSZ	**Lusaka**	**126.28**	**98**	IAMs_20	IAMs_20	04 45 51.3			
	comp=Z,656nm,18.0s								
SSLB	**Suanglung**	**126.90**	**317**	IAMs_20	IAMs_20	04 37 16.6			
	comp=Z,546nm,18.0s								
TPUB	**Ta-pu**	**127.45**	**316**	IAMs_20	IAMs_20	04 36 48.2			
	comp=Z,591nm,18.0s								
TWG	**Pinlang**	**127.48**	**316**	IAMs_20	IAMs_20	04 46 35.1			
	comp=Z,573nm,19.0s								
KNMB	**Chin-men Tao**	**128.08**	**319**	IAMs_20	IAMs_20	04 43 05.6			
	comp=Z,576nm,20.0s								
LODK	**Lodwar**	**128.32**	**73**	IAMs_20	IAMs_20	04 36 09.7			
	comp=Z,707nm,19.0s								
ENH	**Enshi**	**128.38**	**332**	IAMs_20	IAMs_20	04 39 07.6			
	comp=Z,1μm,21.0s								
NIL	**Nilore**	**130.13**	**12**	IAMs_20	IAMs_20	04 43 10.0			
	comp=Z,1μm,18.0s								
CD2	**Chengdu**	**130.19**	**338**	PKP	**PKiKP**	**03 39 00.8**	**-0.8**		
CD2				sPKP	sPKPdf	03 39 07.5	+6.5		
CD2				PP	**PP**	**03 41 13.8**	**+1.6**		
CD2				SKKS		03 48 08.3			
CD2				SS	**SS**	**03 58 37.1**	**-1.5**		
CD2				L	L				
	comp=Z,2μm,20.3s								
CD2				L	L				
	comp=Z,2μm,15.8s								
FAKI	**Fak Fak**	**130.94**	**280**	IAMs_20	IAMs_20	04 30 47.5			
	comp=Z,1μm,19.0s								
ATD	**Arta Tunnel**	**131.22**	**59**	IAMs_20	IAMs_20	04 33 03.0			
	comp=Z,796nm,20.0s								
JMU	**Jammu**	**131.27**	**10**	*ex*	**PP**	**03 41 19.9**	**+1.0**		
TSSA	**Tissa**	**131.43**	**9**	*ex*	**PP**	**03 41 18.8**	**-1.4**		
UOSS	**Minazif**	**131.56**	**35**	IAMs_20	IAMs_20	04 45 39.7			
	comp=Z,535nm,21.0s								
THN	**Thein Dam**	**131.76**	**9**	*ex*	**PP**	**03 41 21.0**	**-1.1**		
WRA	**Warramunga Arr**	**132.00**	**257**	PKP	**PKiKP**	**03 39 04.8**	**-0.7**		
	comp=Z,3.1nm,1.1s,baz=103,slow=1.6,SNR=6.9								
DHRM	**DHARAMSHALA**	**132.03**	**9**	*ex*	**PP**	**03 41 24.1**	**+0.1**		
HKPS	**Hong Kong Po S**	**132.32**	**321**	IAMs_20	IAMs_20	04 42 28.0			
	comp=Z,839nm,19.0s								
ASAR	**Alice Springs**	**132.49**	**252**	PKP	**PKiKP**	**03 39 06.1**	**-0.2**		
	comp=Z,1.3nm,0.7s,baz=42,slow=3.8,SNR=6.1								
KIBK	**Kibwezi**	**132.87**	**79**	IAMs_20	IAMs_20	04 38 29.0			
	comp=Z,853nm,20.0s								
SMLA	**Simla**	**133.25**	**8**	*ex*	**PP**	**03 41 28.1**	**-3.5**		
SMLA				*i* x	**PKSbc**	**03 42 36.4**	**+0.5**		
UTK	**UTTARKASHI**	**133.81**	**7**	*ex*	**PP**	**03 41 32.8**	**-2.5**		
LSA	**Lhasa**	**134.62**	**351**	IAMs_20	IAMs_20	04 42 00.6			
	comp=Z,901nm,18.0s								
PZH	**PanZhiHua**	**134.91**	**337**	PKP	**PKiKP**	**03 39 10.5**	**-0.9**		
PTH	**Pithoragarh**	**135.11**	**5**	*ex*	**PP**	**03 41 44.7**	**+1.1**		
NDI	**New Delhi**	**135.66**	**9**	*ex*	**PP**	**03 41 46.8**	**-0.2**		
KMI2	**Kunming**	**135.75**	**335**	PKP	**PKiKP**	**03 39 12.0**	**-1.2**		
KMI2				PP	**PP**	**03 41 49.9**	**+1.8**		
KMI2				PKS	**PKSdf**	**03 42 43.5**	**-4.8**		
KMI2				PPMZ					
	comp=Z,340nm,8.8s								
KMI2				L	L				
	comp=Z,2μm,19.2s								
KMI2				L	L				
	comp=Z,1μm,20.0s								
QIZ	**Qiongzhong**	**137.37**	**323**	IAMs_20	IAMs_20	04 51 01.2			
	comp=Z,511nm,19.0s								
QIZ	**Qiongzhong**	**137.37**	**323**	Pdif	**Pdif**	**03 36 23.0**	**+1.0**		
QIZ				PKP	**pPKPdf**	**03 39 15.5**	**+0.9**		
QIZ				PP	**PP**	**03 41 58.6**	**+0.1**		
QIZ				SS	SS	04 00 08.0	+1.7		
QIZ				PPMZ					
	comp=Z,300nm,5.6s								
QIZ				L	L				
	comp=Z,670nm,16.7s								
QIZ				L	L				
	comp=Z,980nm,18.6s								
QIZ				L	L				
	comp=Z,450nm,17.7s								
TNCH	**TengChong**	**137.39**	**340**	PKP	**PKiKP**	**03 39 15.1**	**-1.4**		
TNCH				sPKP	sPKPdf	03 39 24.4	+10		
TNCH				PP	**PP**	**03 42 00.4**	**+2.2**		
TNCH				PPMZ					
	comp=Z,470nm,6.2s								
TNCH				L	L				
	comp=Z,480nm,17.7s								
TNCH				L	L				
	comp=Z,680nm,14.3s								
TNCH				L	L				
	comp=Z,920nm,18.1s								
AJM	**Ajmer**	**137.42**	**13**	*i* x	**PP**	**03 41 58.9**	**+0.9**		
SLVN	**Son La**	**138.60**	**331**	IAMs_20	IAMs_20	04 45 37.5			
	comp=Z,1μm,19.0s								
MORE	**Moreh**	**139.33**	**346**	IAMs_20	IAMs_20	04 38 46.7			
	comp=Z,684nm,21.0s								
ALBI	**Allahabad**	**139.46**	**3**	*i* x	**PP**	**03 42 13.2**	**+2.7**		
CHTO	**Chiang Mai**	**142.95**	**336**	IAMs_20	IAMs_20	04 45 32.8			
	comp=Z,582nm,18.0s								
CMAR	**Chiang Mai Arr**	**143.28**	**336**	PKhKP	PKPpre	03 39 21.5			
	comp=Z,0.8nm,0.4s,baz=351,slow=3.9,SNR=11								
BWNR	**Bhubaneshwar**	**144.51**	**357**	*e*P	**PKPdf**	**03 39 25.3**	**-2.0**		
POO	**Poona**	**144.81**	**17**	*e*P	**PKPdf**	**03 39 26.3**	**-1.6**		
RAGD	**RAYAGADA**	**145.55**	**1**	*e*P	**PKPab**	**03 39 28.5**	**-0.9**		
MBWA	**Marble Bar**	**145.68**	**255**		**PKPab**	**03 39 29.6**	**-0.2**		
KAD	**Karad**	**146.06**	**17**	*e*P	**PKPab**	**03 39 30.4**	**-1.0**		
HYB	**Hyderabad**	**146.93**	**10**	*e*P	**PKPbc**	**03 39 31.8**	**-1.6**		
VIS	**Vishakhapatnam**	**147.06**	**1**	*e*P	**PKPdf**	**03 39 31.2**	**-0.5**		
KULM	**Kulim**	**153.65**	**320**	IAMs_20	IAMs_20	05 01 31.0			
	comp=Z,645nm,20.0s								
PMBI	**Palembang**	**156.10**	**299**	IAMs_20	IAMs_20	05 06 31.6			
	comp=Z,562nm,19.0s								

RSNC 24 03:23:36.5±0.0, 7°N±1°×7°3W±°, h145km±2km, M2.6, mb4.5, mB5.2, ML2.6, Mw(mB)4.6, MwMwp4.8, Mwp5.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**190**	P		Pn	03 23 56.0	-0.6
BARC				P		Pn	03 23 56.0	-0.6
BARC				S		Sn	03 24 11.4	-0.5
BRJC	**Barrancabermej**	**0.62**	**283**	P		Pn	03 23 57.7	-0.2
BRJC				S		Sn	03 24 15.0	+0.8
PAMC	**Pamplona, Colo**	**0.67**	**41**	P		Pn	03 23 59.1	+0.2
PAMC				S		Sn	03 24 15.0	-0.8
RUSC	**La Rusia**	**0.93**	**177**	P		Pn	03 24 00.0	-0.8
RUSC				S		Sn	03 24 19.1	-0.2
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	P		Pn	03 24 02.5	-1.5
PTBC				S		Sn	03 24 24.1	-0.9
OCAC	**Ocana**	**1.41**	**353**	P		Pn	03 24 04.2	-0.7
OCAC				S		Sn	03 24 26.2	-0.5
SPBC	**San Pablo de B**	**1.49**	**218**	P		Pn	03 24 04.8	-0.9
SPBC				S		Sn	03 24 27.3	-0.8
NORC	**Norcasia**	**2.13**	**234**	P		Pn	03 24 11.9	-1.1
NORC				S		Sn	03 24 40.4	-0.5
CHIC	**Chingaza**	**2.26**	**195**	P		Pn	03 24 14.2	-0.7
CHIC				S		Sn	03 24 43.9	-0.5
ROSC	**El Rosal**	**2.30**	**211**	P		Pn	03 24 16.2	+0.9
ROSC				S		Sn	03 24 45.2	+0.1
CVER	**Cruz Verde, Cu**	**2.48**	**202**	P		Pn	03 24 17.6	0.0
UREC	**San Jos de Ur**	**2.54**	**291**	P		Pn	03 24 17.6	-0.4
UREC				S		Sn	03 24 47.2	-2.7
GUY2C	**Guyana, Caldas**	**2.73**	**234**	P		Pn	03 24 20.9	+0.2
GUY2C				S		Sn	03 24 56.5	+1.8
VILC	**Villavicencio,**	**2.76**	**192**	P		Pn	03 24 19.9	-0.9
VILC				S		Sn	03 24 54.6	-0.3
CBOC	**Ciudad Bolivar**	**3.01**	**252**	P		Pn	03 24 24.1	+0.1
CBOC				S		Sn	03 25 00.1	-0.6
ARGC	**Ariguani, Magd**	**3.20**	**340**	P		Pn	03 24 25.9	-0.4
ARGC				S		Sn	03 25 04.9	+0.1
PRAC	**Prado**	**3.55**	**209**	P		Pn	03 24 29.7	-1.1
PRAC				S		Sn	03 25 11.3	-1.7
APAC	**Apartado, Choc**	**3.57**	**288**	P		Pn	03 24 29.8	-1.3
APAC				S		Sn	03 25 13.3	-0.1
SJCC	**San Jacinto, C**	**3.66**	**327**	P		Pn	03 24 30.2	-2.0
SJCC				S		Sn	03 25 13.6	-1.8
FLOC	**Florencia**	**5.78**	**206**	P		Pn	03 24 58.3	-2.1
	3μm3μm82nm,1.5s							
BBAC	**Balboa, Cauca**	**6.29**	**221**	P		Pn	03 25 06.6	-0.7

*NEIC **24** 03:31:55.9±1.9, 14°.99N±0°.06×94°.23W±0°.04, h10km±2km, mb4.1/5, Md4.3/80(MEX), Error ellipse: s-maj=10.9km s-min=6.6km az=187.0*
*GCG **24** 03:31:57.8±2.3, 15°.05N×94°.27W, h26km±58km, MD5.0, Presumed earthquake*
*CATAC **24** 03:31:59.9±0.6, 15°N±3°×94°W±°, h18km±5km, M4.7/19, mb4.6/7, mB5.1/3, MLv4.7/19, Mw(mB)4.4/3, Error ellipse: s-maj=7.2km s-min=3.1km az=41.2, confirmed*
*MEX **24** 03:31:59.5±0.4, 15°.07N×94°.23W, h23km±15km, MD4.4*

ISC 24 03:31:59.5±1.2, 15°.06N±0°.04×94°.24W±0°.03, h35km±3km, n133, σ1°79/218, 1D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**1.22**	**15**	*e*P		**Pn**	**03 32 18.1**	**-1.9**
CARR				*i* P		**Pn**	**03 32 18.1**	**-1.9**
CARR				*e*S		**Sn**	**03 32 32.6**	**-2.8**
THIG		**1.92**	**94**	*e*P		**Pn**	**03 32 27.8**	**-1.8**
THIG				*e*S		**Sn**	**03 32 49.8**	**-2.7**
THIG		**1.92**	**94**	*e*P		**Pn**	**03 32 28.2**	**-1.4**
HUIG	**Huatulco**	**1.93**	**292**	*e*P		**Pn**	**03 32 28.7**	**-1.2**
HUIG				*e*S		**Sn**	**03 32 51.1**	**-1.9**
HUIG	**Huatulco**	**1.93**	**292**			**Pn**	**03 32 28.7**	**-1.2**
HUIG						**Sn**	**03 32 51.1**	**-1.9**
HUIG	**Huatulco**	**1.93**	**292**	*e*P		**Pn**	**03 32 28.8**	**-1.0**
PATR	**El Naranjo**	**1.94**	**88**	*e*P		**Pn**	**03 32 28.5**	**-1.6**
PATR				*e*S		**Sn**	**03 32 50.7**	**-2.7**
PATR	**El Naranjo**	**1.94**	**88**			**Pn**	**03 32 28.5**	**-1.6**
PATR						**Sn**	**03 32 50.7**	**-2.7**
PAVE	**Pavencul**	**2.00**	**86**	*e*P		**Pn**	**03 32 29.5**	**-1.4**
PAVE				*e*S		**Sn**	**03 32 52.8**	**-2.0**
PAVE	**Pavencul**	**2.00**	**86**			**Pn**	**03 32 29.5**	**-1.4**
PAVE						**Sn**	**03 32 52.8**	**-2.0**
TGIG		**2.02**	**32**	*e*P		**Pn**	**03 32 30.6**	**-0.5**
TGIG				*e*S		**Sn**	**03 32 55.8**	**+0.7**
TGIG		**2.02**	**32**			**Pn**	**03 32 30.6**	**-0.5**
TGIG						**Sn**	**03 32 55.8**	**+0.7**
TGIG		**2.02**	**32**	*e*P		**Pn**	**03 32 30.6**	**-0.5**
TGIG				*e*S		**Sn**	**03 32 55.8**	**+0.7**
CHUJ	**Union Juarez**	**2.06**	**89**	*e*P		**Pn**	**03 32 30.3**	**-1.5**
CHUJ				*e*S		**Sn**	**03 32 54.3**	**-2.2**
CMIG	**Matias Romero**	**2.11**	**343**	*e*P		**Pn**	**03 32 31.6**	**-0.7**
CMIG				*e*S		**Sn**	**03 32 56.9**	**-0.5**
CMIG	**Matias Romero**	**2.11**	**343**			**Pn**	**03 32 31.6**	**-0.7**
CMIG						**Sn**	**03 32 56.9**	**-0.5**
RTAL	**Retalhuleu**	**2.52**	**102**	P		**Pn**	**03 32 37.5**	**-0.4**
RTAL				S		**Sn**	**03 33 08.7**	**+1.3**
RTAL	**Retalhuleu**	**2.52**	**102**	*e*P		**Pn**	**03 32 37.0**	**-0.9**
RTAL				*e*S		**Sn**	**03 33 05.5**	**-1.9**
RTAL	**Retalhuleu**	**2.52**	**102**			**Pn**	**03 32 37.0**	**-0.9**
HUEH	**Huehuetenango**	**2.66**	**84**	P		**Pn**	**03 32 40.8**	**+0.8**
HUEH	**Huehuetenango**	**2.66**	**84**	*e*P		**Pn**	**03 32 40.1**	**+0.1**
HUEH				*e*S		**Sn**	**03 33 09.4**	**-1.8**
HUEH	**Huehuetenango**	**2.66**	**84**	Pn		**Pn**	**03 32 39.6**	**-0.4**
HUEH	**Huehuetenango**	**2.66**	**84**			**Sn**	**03 33 09.4**	**-1.8**
HUEH	**Huehuetenango**	**2.66**	**84**	*e*P		**Pn**	**03 32 40.6**	**+0.6**
HUEH				*e*S		**Sn**	**03 33 12.5**	**+1.4**
STG8	**El Palmar, Qui**	**2.86**	**102**	*e*P		Pn	03 32 37.4	-5.4
STG5	**El Palmar, Qui**	**2.87**	**103**	*e*P		Pn	03 32 38.0	-4.9
STG5				*e*S		Sn	03 33 07.1	-9.2
PEIG	**Puerto Escondi**	**2.95**	**289**	*e*P		**Pn**	**03 32 43.0**	**-0.9**
PEIG				*e*S		**Sn**	**03 33 16.7**	**-1.4**
PEIG	**Puerto Escondi**	**2.95**	**289**			**Pn**	**03 32 43.0**	**-0.9**
PEIG						**Sn**	**03 33 16.7**	**-1.4**
NEUV	**Arroyo Zacate**	**3.03**	**331**	*e*P		**Pn**	**03 32 45.3**	**+0.3**
NEUV				*e*S		**Sn**	**03 33 19.1**	**-1.0**
NEUV	**Arroyo Zacate**	**3.03**	**331**			**Pn**	**03 32 45.3**	**+0.3**
NEUV						**Sn**	**03 33 19.1**	**-1.0**
OXIG	**Oaxaca**	**3.12**	**310**			**Pn**	**03 32 47.9**	**+1.5**
OXIG						**Sn**	**03 33 21.3**	**-1.3**
VHO	**Vista Hermosa**	**3.12**	**310**	*i* P		**Pn**	**03 32 47.9**	**+1.5**
VHO				*e*S		**Sn**	**03 33 21.3**	**-1.3**
YOIG	**Yosondua**	**3.65**	**300**	*e*P		**Pn**	**03 32 54.9**	**+1.2**
YOIG				*e*S		**Sn**	**03 33 34.4**	**-1.3**
YOIG	**Yosondua**	**3.65**	**300**			**Pn**	**03 32 54.9**	**+1.2**
YOIG						**Sn**	**03 33 34.4**	**-1.3**
APG	**El Apazote**	**3.65**	**90**	*e*P		**Pn**	**03 32 53.8**	**+0.1**
FG8	**Yepocapa, Chim**	**3.65**	**102**	*e*P		Pn	03 32 47.0	-6.5
FG16	**Alotenango, Sa**	**3.69**	**102**	*e*P		**Pn**	**03 32 50.0**	**-4.2**
TXIG	**Tlaxiaco**	**4.03**	**303**	*e*P		**Pn**	**03 33 00.5**	**+1.5**
TXIG				*e*S		**Sn**	**03 33 43.9**	**-1.2**
TXIG	**Tlaxiaco**	**4.03**	**303**			**Pn**	**03 33 00.5**	**+1.5**
TXIG						**Sn**	**03 33 43.9**	**-1.2**
TOIG	**Toxpalan**	**4.05**	**318**	*e*P		**Pn**	**03 33 01.4**	**+2.2**
TOIG				*e*S		**Sn**	**03 33 44.4**	**-1.1**
TOIG	**Toxpalan**	**4.05**	**318**			**Pn**	**03 33 01.4**	**+2.2**
TOIG						**Sn**	**03 33 44.4**	**-1.1**
FAME	**Alcaldia de Sa**	**4.27**	**106**	P		**Pn**	**03 33 03.8**	**+1.7**
HLIG	**Huajuapan de L**	**4.39**	**309**	*e*P		**Pn**	**03 33 04.6**	**+0.7**
HLIG				*e*S		**Sn**	**03 33 53.1**	**-0.8**
HLIG	**Huajuapan de L**	**4.39**	**309**			**Pn**	**03 33 04.6**	**+0.7**
HLIG						**Sn**	**03 33 53.1**	**-0.8**
NUBE	**Las Nubes**	**4.47**	**104**	P		**Pn**	**03 33 06.1**	**+1.2**
NUBE				S		**Sn**	**03 33 58.3**	**+2.5**
NUBE	**Las Nubes**	**4.47**	**104**	*e*P		**Pn**	**03 33 05.0**	**+0.1**
TPIG	**Tehuac#an**	**4.48**	**319**	*e*P		**Pn**	**03 33 05.3**	**+0.2**
TPIG				*e*S		**Sn**	**03 33 56.6**	**+0.5**
TPIG	**Tehuac#an**	**4.48**	**319**			**Pn**	**03 33 05.3**	**+0.2**
TPIG						**Sn**	**03 33 56.6**	**+0.5**
PETF	**Flores**	**4.59**	**66**	P		**Pn**	**03 33 06.9**	**+0.5**
PETF				S		**Sn**	**03 33 59.5**	**+0.9**
PETF	**Flores**	**4.59**	**66**	*e*P		**Pn**	**03 33 07.2**	**+0.7**
PETF				*e*S		**Sn**	**03 33 57.0**	**-1.6**
PETF	**Flores**	**4.59**	**66**	Pn		**Pn**	**03 33 05.8**	**-0.7**
PETF	**Flores**	**4.59**	**66**			**Sn**	**03 33 57.0**	**-1.6**
PETF	**Flores**	**4.59**	**66**	*e*P		**Pn**	**03 33 06.3**	**-0.2**
CEVE	**Cerro Verde**	**4.64**	**105**	P		**Pn**	**03 33 09.7**	**+2.4**
CEVE				S		**Sn**	**03 34 02.6**	**+2.6**
UNIC	**Universidad Ca**	**4.67**	**103**	P		**Pn**	**03 33 09.1**	**+1.5**
UNIC				S		**Sn**	**03 34 02.9**	**+2.3**
FTIG	**Fresnillo de T**	**4.69**	**308**	*e*P		**Pn**	**03 33 09.6**	**+1.7**
FTIG				*e*S		**Sn**	**03 33 59.8**	**-1.3**
FTIG	**Fresnillo de T**	**4.69**	**308**			**Pn**	**03 33 09.6**	**+1.7**
FTIG						**Sn**	**03 33 59.8**	**-1.3**
MGIG	**Malinaltepec**	**4.74**	**298**	*e*P		**Pn**	**03 33 10.5**	**+1.9**
MGIG				*e*S		**Sn**	**03 34 01.9**	**-0.7**
MGIG	**Malinaltepec**	**4.74**	**298**			**Pn**	**03 33 10.5**	**+1.9**
MGIG						**Sn**	**03 34 01.9**	**-0.7**
ESQI	**Esquipulas**	**4.76**	**95**	P		**Pn**	**03 33 09.8**	**+0.9**
ESQI	**Esquipulas**	**4.76**	**95**	Pn		**Pn**	**03 33 05.2**	**-3.7**
MTO3	**Montecristo**	**4.77**	**97**	P		**Pn**	**03 33 10.4**	**+1.3**
MTO3				S		**Sn**	**03 34 06.8**	**+3.6**
MTO3	**Montecristo**	**4.77**	**97**	Pn		**Pn**	**03 33 06.2**	**-2.8**
TLIG	**Tlapa**	**4.84**	**302**	P		**Pn**	**03 33 12.6**	**+2.6**
TLIG				S		**Sn**	**03 34 08.4**	**+3.5**
TLIG	**Tlapa**	**4.84**	**302**	*e*P		**Pn**	**03 33 09.9**	**-0.1**
TLIG				*e*S		**Sn**	**03 34 03.3**	**-1.7**
TLIG	**Tlapa**	**4.84**	**302**			**Pn**	**03 33 12.3**	**+2.3**
TLIG	**Tlapa**	**4.84**	**302**			**Sn**	**03 34 03.3**	**-1.7**
JAYA	**Jayaque - finc**	**4.85**	**106**	P		**Pn**	**03 33 11.4**	**+1.3**
JAYA				S		**Sn**	**03 34 07.7**	**+2.5**
SCIG	**Sabancuy**	**4.86**	**37**	P		**Pn**	**03 33 09.6**	**-0.5**
SCIG	**Sabancuy**	**4.86**	**37**	*e*P		**Pn**	**03 33 09.6**	**-0.5**
SCIG				*e*S		**Sn**	**03 34 03.9**	**-1.3**
SCIG	**Sabancuy**	**4.86**	**37**			**Pn**	**03 33 09.6**	**-0.5**
SCIG						**Sn**	**03 34 03.9**	**-1.3**
JAUV	**Jalcomulco**	**4.93**	**331**	*e*P		**Pn**	**03 33 10.7**	**-0.4**
JAUV				*e*S		**Sn**	**03 34 03.2**	**-3.8**
JAUV	**Jalcomulco**	**4.93**	**331**			**Pn**	**03 33 10.7**	**-0.4**
JAUV						**Sn**	**03 34 03.2**	**-3.8**
PMON	**Piamonte**	**4.96**	**105**	P		**Pn**	**03 33 12.6**	**+1.0**
PMON				S		**Sn**	**03 34 11.7**	**+3.9**
CRIG	**Cruz Grande**	**4.99**	**290**	*e*P		**Pn**	**03 33 12.4**	**+0.5**
CRIG				*e*S		**Sn**	**03 34 06.8**	**-1.6**
CRIG	**Cruz Grande**	**4.99**	**290**			**Pn**	**03 33 12.4**	**+0.5**
CRIG						**Sn**	**03 34 06.8**	**-1.6**
LALI	**Alcalda de L**	**5.02**	**108**	P		**Pn**	**03 33 14.0**	**+1.7**
LALI				S		**Sn**	**03 34 13.3**	**+4.2**
UEES	**Universidad Ev**	**5.03**	**105**	P		**Pn**	**03 33 14.7**	**+2.2**
UEES				S		**Sn**	**03 34 11.7**	**+2.2**
LVIG	**Laguna Verde**	**5.08**	**336**	*e*P		**Pn**	**03 33 12.7**	**-0.5**
LVIG				*e*S		**Sn**	**03 34 04.7**	**-5.9**
LVIG	**Laguna Verde**	**5.08**	**336**			**Pn**	**03 33 12.7**	**-0.5**
LOMA	**Loma Larga**	**5.11**	**105**	P		**Pn**	**03 33 14.6**	**+0.9**
LOMA				S		**Sn**	**03 34 14.9**	**+3.4**
SARH	**Santa Rosa de**	**5.30**	**92**	P		**Pn**	**03 33 17.4**	**+1.1**
SARH				S		**Sn**	**03 34 17.6**	**+1.4**
PAVA	**Las Pavas**	**5.31**	**104**	P		**Pn**	**03 33 18.4**	**+1.9**
PAVA				S		**Sn**	**03 34 19.3**	**+2.9**
COEG	**Centro de Oper**	**5.39**	**105**	S		**Sn**	**03 34 20.7**	**+2.4**
P5NO	**Presa 5 de nov**	**5.42**	**101**	S		**Sn**	**03 34 21.4**	**+2.5**
TECO	**Alcaldia de Te**	**5.50**	**105**	P		**Pn**	**03 33 20.9**	**+1.9**
TECO				S		**Sn**	**03 34 24.3**	**+3.2**
DAIG	**Los Arroyos**	**5.55**	**291**	*e*P		**Pn**	**03 33 20.3**	**+0.6**
DAIG				*e*S		**Sn**	**03 34 20.7**	**-1.7**
DAIG	**Los Arroyos**	**5.55**	**291**			**Pn**	**03 33 20.3**	**+0.6**
DAIG						**Sn**	**03 34 20.7**	**-1.7**
PPM	**Popocatepetl**	**5.79**	**314**	*e*P		**Pn**	**03 33 23.4**	**+0.1**
PPM				*e*S		**Sn**	**03 34 28.0**	**-0.7**
PPIG	**Popocatepetl**	**5.79**	**314**			**Pn**	**03 33 23.4**	**+0.1**
PPIG						**Sn**	**03 34 28.0**	**-0.7**
MEIG	**Mezcala**	**5.89**	**300**	*e*P		**Pn**	**03 33 25.3**	**+0.9**
MEIG				*e*S		**Sn**	**03 34 27.0**	**-3.8**
YAIG	**Yautepec**	**5.97**	**310**	*e*P		**Pn**	**03 33 28.8**	**+3.3**
YAIG				*e*S		**Sn**	**03 34 32.4**	**-0.3**
YAIG	**Yautepec**	**5.97**	**310**			**Pn**	**03 33 25.5**	**0.0**
YAIG						**Sn**	**03 34 32.4**	**-0.3**
CXUV	**Coxquihui**	**6.00**	**328**	*e*P		**Pn**	**03 33 25.9**	**0.0**
CXUV				⇓*e*S		**Sn**	**03 34 31.8**	**-1.6**
CXUV	**Coxquihui**	**6.00**	**328**			**Pn**	**03 33 25.9**	**0.0**
CXUV						**Sn**	**03 34 31.8**	**-1.6**
PLIG	**Platanillo**	**6.03**	**304**	*e*P		**Pn**	**03 33 29.8**	**+3.5**
PLIG				*e*S		**Sn**	**03 34 33.4**	**-0.9**
PLIG	**Platanillo**	**6.03**	**304**			**Pn**	**03 33 29.8**	**+3.5**
PLIG						**Sn**	**03 34 33.4**	**-0.9**
CAIG	**El Cayaco**	**6.12**	**290**	*e*P		**Pn**	**03 33 26.5**	**-1.0**
CAIG				*e*S		**Sn**	**03 34 35.4**	**-0.9**
CAIG	**El Cayaco**	**6.12**	**290**			**Pn**	**03 33 26.5**	**

PETK	**Petropavlovsk-**	**63.78**	**18**	P		**P**	**03 44 29.5**	**+0.5**
	2.4nm,0.7s,baz=197,slow=4.6,SNR=5.4							
	2.4nm,0.7s							
MKAR	**Makanchi Array**	**68.14**	**327**	P		**P**	**03 44 57.6**	**+0.4**
	3.2nm,0.5s,baz=113,slow=9.0,SNR=16							
	3.2nm,0.5s							
ZALV	**Zalesovo Beam**	**71.43**	**334**	P		**P**	**03 45 16.7**	**-0.4**
	1.1nm,0.6s,baz=128,slow=9.3,SNR=1.6							
	1.1nm,0.6s							
KURBB	**Kurchatov Arra**	**72.41**	**328**	P		**P**	**03 45 23.1**	**0.0**
	0.9nm,0.5s,baz=127,slow=5.2,SNR=6.5							
	0.9nm,0.5s							

IDC ***24*** *03:39:38.4±0.8, 33°.04N×86°.87E, h0km, mb3.8/14, mbtmp3.9/18, ML3.9/4, MS4.6/2, Error ellipse: s-maj=23.7km s-min=14.1km az=39.0*
MOS ***24*** *03:39:39.0±1.1, 33°.21N×86°.86E, h10km, mb4.5/14, Error ellipse: s-maj=11.9km s-min=4.8km az=120.2*
NEIC ***24*** *03:39:40.6±1.6, 33°.15N±0°.08×86°.81E±0°.08, h10km±1km, mb4.4/22, Error ellipse: s-maj=12.9km s-min=11.5km az=7.0*
BJI ***24*** *03:39:40.0, 33°.04N×86°.93E, h7km, mB4.6/3, mb4.4/22, Ms3.9/6, Ms7 3.8/7*

ISC 24 03:39:41.1±0.5, 33°.13N±0°.07×86°.82E±0°.06, h10km, n158, σ1§24/138, mb4.4/59, MS4.5/5, 6C-9D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVN	**Everest**	**5.15**	**180**		**Pn**	**03 40 59.9**	**+1.0**
SMLA	**Simla**	**8.42**	**259**	*e*P	**Pn**	**03 41 44.5**	**+1.2**
SHL	**Shillong**	**8.73**	**148**	P	**Pn**	**03 41 48.1**	**+0.4**
SHL	**Shillong**	**8.73**	**148**		**Pn**	**03 41 47.2**	**-0.4**
DHRM	**DHARAMSHALA**	**8.91**	**267**	*e*P	**Pn**	**03 41 53.3**	**+3.1**
WMQ	**Urumqi**	**10.70**	**3**	*e*P	**Pn**	**03 42 15.6**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WMQ				L	L		
	comp=N,320nm,18.9s						
WMQ				L	L		
	comp=E,260nm,18.9s						
WMQ				L	L		
	comp=Z,330nm,24.3s						
TARG	**Taragay, Kyrgy**	**11.18**	**323**	P	**Pn**	**03 42 20.9**	**-0.4**
TARG	**Taragay, Kyrgy**	**11.18**	**323**		**Pn**	**03 42 20.9**	**-0.4**
NIL	**Nilore**	**11.35**	**276**	P	Pn	03 42 20.9	-2.6
NIL	**Nilore**	**11.35**	**276**		Pn	03 42 20.9	-2.6
PDGK	**Podgornoye**	**11.70**	**333**	P	Pn	03 42 26.8	-1.4
PDGK	**Podgornoye**	**11.70**	**333**		Pn	03 42 26.8	-1.4
KDJ	**Kajisay**	**11.79**	**322**	P	Pn	03 42 26.6	-2.9
KDJ	**Kajisay**	**11.79**	**322**		Pn	03 42 26.6	-2.9
NRN	**Naryn**	**11.95**	**317**	P	**Pn**	**03 42 31.0**	**-0.8**
NRN	**Naryn**	**11.95**	**317**		**Pn**	**03 42 31.0**	**-0.8**
BOOM	**Boomskoye usch**	**12.69**	**321**	P	**Pn**	**03 42 40.6**	**-1.2**
BOOM	**Boomskoye usch**	**12.69**	**321**		**Pn**	**03 42 40.6**	**-1.2**
AAK	**Ala-Archa**	**13.58**	**318**	Pn	**Pn**	**03 42 55.3**	**+1.3**
	0.4nm,0.3s,baz=128,slow=16,SNR=6.2						
	1.2nm,0.3s						
AAK	**Ala-Archa**	**13.58**	**318**	*c* *i*P	**Pn**	**03 42 53.9**	**-0.1**
MK31	**Makanchi Array**	**14.08**	**347**	*d* *i*P	**Pn**	**03 43 00.3**	**-0.4**
MKAR	**Makanchi Array**	**14.08**	**347**	Pn	**Pn**	**03 43 00.0**	**-0.7**
	0.1nm,0.3s,baz=161,slow=13,SNR=12						
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**14.08**	**347**		Pn	03 42 58.9	-1.8
MAKZ	**Makanchi**	**14.15**	**346**	P	Pn	03 42 59.1	-2.6
MAKZ	**Makanchi**	**14.15**	**346**		Pn	03 42 59.1	-2.6
GAR	**Garm**	**14.57**	**298**		Pn	03 43 02.7	-4.8
KBL	**Kabul**	**14.84**	**280**	P	Pn	03 43 07.6	-3.7
KBL	**Kabul**	**14.84**	**280**		Pn	03 43 07.5	-3.8
CHGR	**Chuyangaron**	**15.33**	**296**	P	**Pn**	**03 43 15.1**	**-2.6**
CHGR				pmax	pmax		
	comp=Z,39nm,1.1s						
CHGR	**Chuyangaron**	**15.33**	**296**		**Pn**	**03 43 15.1**	**-2.6**
SHAA	**Shahritus**	**15.88**	**291**		Pn	03 43 19.1	-5.7
SHAA				lAmb	lAmb	03 43 29.6	
	comp=Z,37nm,1.0s						
KMI2	**Kunming**	**16.02**	**116**	P	**Pn**	**03 43 30.6**	**+3.8**
KMI2				sP	pP	03 43 35.5	+1.0
KMI2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KKAR	**Karatay Array**	**16.22**	**313**	P	**Pn**	**03 43 28.4**	**-0.7**
KKAR	**Karatay Array**	**16.22**	**313**		**Pn**	**03 43 28.4**	**-0.7**
DGZ	**Jazzator, Alta**	**16.57**	**1⇓**	*e*P	**Pn**	**03 43 32.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**18.21**	**140**	P	**Pn**	**03 43 51.7**	**-2.4**
	comp=Z,0.9nm,0.3s,baz=327,slow=12,SNR=8.9						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**18.21**	**140**	*i* P	**Pn**	**03 43 55.0**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
XAN	**Xi'an**	**18.44**	**81**	P	**P**	**03 43 56.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KURBB	**Kurchatov Arra**	**18.52**	**343**	P	**P**	**03 43 56.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=162,slow=11,SNR=21						
	comp=Z,3.2nm,0.5s						
KURK	**Kurchatov**	**18.58**	**343**	*c* *i*P	**P**	**03 43 57.3**	**-0.9**
KURK				pmax	pmax		
	comp=Z,24nm,1.5s						
KURK	**Kurchatov**	**18.58**	**343**	P	**P**	**03 43 56.7**	**-1.6**
SONM	**Songino Array**	**20.83**	**39**	P	**P**	**03 44 21.7**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=234,slow=10,SNR=7.0						
	comp=Z,0.5nm,0.4s						
ZAA0	**Zalesovo Array**	**20.86**	**357**		**P**	**03 44 21.6**	**-1.4**
ZALV	**Zalesovo Beam**	**20.86**	**357**	P	**P**	**03 44 22.8**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=179,slow=10,SNR=24						
	comp=Z,7.3nm,0.7s						
ZALV	**Zalesovo Beam**	**20.86**	**357**		**P**	**03 44 22.0**	**-1.1**
HHC	**Hu-ho-hao-te**	**21.17**	**62**	*e*P	**P**	**03 44 25.5**	**-1.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,240nm,8.9s						
ULN	**Ulaanbaatar**	**21.20**	**40⇑**	*i*P	**P**	**03 44 28.6**	**+1.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BVAR	**Borovoye Array**	**23.12**	**334**	P	**P**	**03 44 46.7**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=144,slow=11,SNR=6.6						
	comp=Z,1.5nm,0.7s						
HNS	**HongShan**	**23.13**	**72**	⇑P	**P**	**03 44 48.5**	**+1.1**
HNS				pmax	pmax		
	comp=Z,11nm,0.9s						
BORK	**Borovoye**	**23.17**	**334**	*d* *i*P	**P**	**03 44 46.3**	**-1.4**
BORK				pmax	pmax		
	comp=Z,13nm,1.3s						
BORK	**Borovoye**	**23.17**	**334**		**P**	**03 44 46.0**	**-1.7**
BORK				lAmb	lAmb	03 44 58.1	
	comp=Z,19nm,1.5s						
QIZ	**Qiongzhong**	**24.92**	**119**	P	**P**	**03 45 05.4**	**+0.9**
QIZ				S	**S**	**03 49 29.8**	**+1.8**
QIZ				L	L		
	comp=Z,170nm,16.2s						
QIZ				L	L		
	comp=Z,160nm,10.0s						
QIZ				L	L		
	comp=Z,260nm,10.0s						
AB31	**Akbulak array**	**25.67**	**317**		**P**	**03 45 10.4**	**-0.6**
AB31				lAmb	lAmb	03 45 14.1	
	comp=Z,8.9nm,1.1s						
ABKAR	**Akbulak array**	**25.67**	**317**		**P**	**03 45 10.4**	**-0.6**
NJ2	**Nanjing**	**26.96**	**83**	*e*P	**P**	**03 45 23.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
ARTI	**Arti**	**30.41**	**328**	*c* *i*P	**P**	**03 45 53.4**	**0.0**
ARTI						03 46 48.1	
ARTI				S	**S**	**03 50 54.7**	**+0.8**
ARTI				SS	**SnSn**	**03 52 29.0**	**0.0**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CN2	**Changchun**	**31.81**	**59**	*e*P	**P**	**03 46 06.9**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AKT	**Akhty**	**31.97**	**297**	*e*P	**P**	**03 46 06.7**	**-0.8**
AKT				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KSRS	**Korea Array**	**33.64**	**71**	P	**P**	**03 46 20.6**	**-1.3**
	comp=Z,2.7nm,0.8s,baz=278,slow=9.2,SNR=4.2						
	comp=Z,2.7nm,0.8s						
BELG	**Belogornoye**	**34.07**	**316⇓**	*e*P	**P**	**03 46 27.2**	**+1.7**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GNI	**Garni**	**34.23**	**294⇓**	*e*P	**P**	**03 46 27.4**	**+0.1**
GNI				pmax	pmax		
	comp=Z,13nm,1.6s						
GNI	**Garni**	**34.23**	**294**	P	**P**	**03 46 26.4**	**-0.9**
	comp=Z,6.1nm,0.8s						
KIRV	**Kirov**	**35.66**	**327**	*de*P	**P**	**03 46 39.6**	**+0.5**
NRIK	**Noril'sk**	**36.26**	**0⇓**	*e*P	**P**	**03 46 44.0**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRH	**Novokhopyorsk**	**37.30**	**313**	*e*P	**P**	**03 46 52.4**	**-0.8**
VRH				pmax	pmax		
	comp=Z,16nm,0.6s						
VSR	**Storozhevoye**	**38.89**	**312**	*e*P	**P**	**03 47 05.5**	**-1.1**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VORR	**Voronezh**	**38.93**	**313**	*e*P	P	03 47 03.5	-3.5
VORR				pmax	pmax		
	comp=Z,29nm,0.4s						
LPSR	**Galich'ya Gora**	**39.27**	**314**	*e*P	P	03 47 07.4	-2.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MOS	**Moscow**	**40.65**	**319**	*e*P	**P**	**03 47 20.2**	**-1.0**
MOS				pmax	pmax		
	comp=Z,22nm,0.6s						
OBN	**Obninsk**	**41.11**	**318⇑**	*e*P	**P**	**03 47 24.5**	**-0.5**
OBN				*e*		03 48 58.6	
OBN				*e*S	**S**	**03 53 42.3**	**+4.6**
OBN				pmax	pmax		
	comp=Z,36nm,1.7s						
OBN				MLR	MLR		
	comp=Z,316nm,18.0s						
OBN	**Obninsk**	**41.11**	**318**	P	**P**	**03 47 24.0**	**-1.0**
	comp=Z,22nm,1.4s						
KLMR	**Klimovskoe**	**41.16**	**327**	*e*P	P	03 47 23.6	-1.8
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
MAJO	**Matsushiro**	**41.91**	**70⇓**	*e*P	**P**	**03 47 30.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MJAR	**Matsushiro Arr**	**41.91**	**70**	P	**P**	**03 47 30.7**	**-1.2**
	comp=Z,2.6nm,1.0s,baz=285,slow=9.3,SNR=7.3						
	comp=Z,2.6nm,1.0s						
MJAR	**Matsushiro Arr**	**41.91**	**70**	lAmb	lAmb	03 47 32.5	
	comp=Z,1.9nm,1.1s						
BRTR	**Keskin Array B**	**42.77**	**295**	P	**P**	**03 47 38.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=106,slow=9.1,SNR=3.6						
	comp=Z,0.6nm,0.8s						
BRTR	**Keskin Array B**	**42.77**	**295**	*i* P	**P**	**03 47 40.4**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AK09	**Malin Array Si**	**45.07**	**311**	P	**P**	**03 47 56.1**	**-1.0**
AK08	**Malin Array Si**	**45.09**	**311**	P	**P**	**03 47 56.3**	**-1.0**
AK10	**Malin Array Si**	**45.09**	**311**	P	**P**	**03 47 56.3**	**-1.0**
AKASG	**Malin Array Be**	**45.11**	**311**	P	**P**	**03 47 56.9**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=79,slow=7.6,SNR=9.1						
	comp=Z,1.4nm,0.6s						
AKASG	**Malin Array Be**	**45.11**	**311**	*i* P	**P**	**03 47 56.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**45.11**	**311**	lAmb	lAmb	03 47 59.9	
	comp=Z,7.0nm,1.3s						
AKBB	**Malin Array Si**	**45.11**	**311**	⇓*i*P	**P**	**03 47 56.1**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,11nm,1.4s						
AKBB	**Malin Array Si**	**45.11**	**311**	P	P	03 47 55.1	-2.3
AKBB	**Malin Array Si**	**45.11**	**311**	P	**P**	**03 47 56.3**	**-1.1**
KIEV	**Kiev**	**45.12**	**311**	P	**P**	**03 47 57.3**	**-0.2**
KIEV	**Kiev**	**45.12**	**311**		**P**	**03 47 57.2**	**-0.2**
AK02	**Malin Array Si**	**45.12**	**311**	P	**P**	**03 47 56.3**	**-1.2**
AK14	**Malin Array Si**	**45.18**	**311**	P	P	03 47 56.4	-1.6
AK16	**Malin Array Si**	**45.19**	**311**	P	P	03 47 56.4	-1.6
MNK	**Minsk**	**46.02**	**316**	*i* P	**P**	**03 48 04.7**	**0.0**
	comp=E,25nm,0.9s						
MNK				*i* P	**P**	**03 48 04.7**	**0.0**
	comp=N,15nm,1.0s						
MNK				*i* P	**P**	**03 48 04.7**	**0.0**
	comp=Z,12nm,0.7s,baz=93						
MNK				*i* PP	**PP**	**03 49 52.6**	**+0.3**
MNK				*i* PPP	PPP	03 50 33.2	
MNK				*i* S	**S**	**03 54 50.5**	**+0.9**
MNK				*i* SS	**SS**	**03 58 17.0**	**+2.8**
MNK				*i* SSS	SSS	03 59 07.6	
MNK				*i* LQ	LQ	04 05 11.8	
MNK				*i* LR	LR	04 07 32.9	
MNK				*i* LRM	MLR	04 10 51.5	
	comp=E,478nm,21.0s						
MNK	**Minsk**	**46.02**	**316**	*i* P	**P**	**03 48 04.6**	**0.0**
MNK				*i*		03 49 52.6	
MNK				*i* PPP	PPP	03 50 33.1	
MNK				*i* S	**S**	**03 54 50.5**	**+0.9**
MNK				*i*		03 58 00.5	
MNK				*i* SSS	SSS	03 59 07.6	
MNK				pmax	pmax		
	comp=E,25nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,1.0s						
MNK				pmax	pmax		
	comp=Z,12nm,0.7s						
MNK				MLR	MLR		
	comp=E,478nm,21.0s						
MNK				MLR	MLR		
	comp=Z,2μm,24.0s						
MNK				MLR	MLR		
	comp=N,1μm,21.0s						
LUBAR	**Lubar, Ukraine**	**46.06**	**310**	P	**P**	**03 48 04.1**	**-0.9**
MI28	**Mi28,Pidlybu**	**46.09**	**311**	P	P	03 48 03.3	-1.9
KMPD	**K-Podol'skiy**	**46.98**	**308**	P	**P**	**03 48 10.9**	**-1.3**
TESR	**Tescani**	**47.03**	**305**	P	**P**	**03 48 11.3**	**-1.4**
	comp=N,9.8nm,1.5s						
VRI	**Vrincioaia**	**47.04**	**304**	P	**P**	**03 48 14.0**	**+1.2**
VRI	**Vrincioaia**	**47.04**	**304**	P	**P**	**03 48 11.9**	**-0.9**
	comp=N,13nm,1.4s						
RNPP9	**Sopachiy**	**47.20**	**312**	P	**P**	**03 48 12.9**	**-1.0**
RNPP5	**Staryi Chortor**	**47.21**	**312**	P	**P**	**03 48 13.0**	**-1.0**
RNPP8	**Varash**	**47.23**	**312**	P	**P**	**03 48 13.1**	**-1.0**
FINES	**FINESS Array B**	**47.62**	**325**	LR	LR	04 11 52.0	
	comp=N,503nm,19.6s,baz=308,slow=40						
MLR	**Muntele Rosu**	**47.63**	**304**	P	**P**	**03 48 18.2**	**+0.7**
MLR				pmax	pmax		
	comp=Z,37nm,1.2s						
MLR	**Muntele Rosu**	**47.63**	**304**	P	**P**	**03 48 18.2**	**+0.7**
BURAR	**Bucovina Array**	**47.89**	**307**	P	**P**	**03 48 18.8**	**-0.7**
BURAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BURAR	**Bucovina Array**	**47.89**	**307**	P	**P**	**03 48 18.8**	**-0.7**
BURAR				lAmb	lAmb	03 48 20.3	
	comp=Z,1.8nm,0.8s						
BUR08	**Bucovina Ar. S**	**47.90**	**307**	lAmb	lAmb	03 48 21.5	
	comp=Z,4.2nm,1.2s						
VOIR		**48.26**	**304**	P	**P**	**03 48 21.3**	**-1.1**
	comp=Z,3.8nm,0.8s						
VOIR				pP	**pP**	**03 48 24.5**	**-2.5**
	comp=Z,3.8nm,0.8s						
KWP	**Kalwaria Pacla**	**49.35**	**310**	P	**P**	**03 48 31.6**	**+1.1**
DRGR		**49.69**	**306**	P	**P**	**03 48 33.6**	**+0.4**
BZS	**Buzias**	**50.62**	**304**	P	**P**	**03 48 41.2**	**+1.0**
MORC	**Moravsky Berou**	**52.65**	**310**	P	**P**	**03 48 57.0**	**+1.5**
MORC	**Moravsky Berou**	**52.65**	**310**	lAmb	lAmb	03 48 58.6	
	comp=Z,5.8nm,1.2s						
MORC	**Moravsky Berou**	**52.65**	**310**	*e*P	**P**	**03 48 55.0**	**-0.5**
JAVC	**Velka Javorina**	**52.72**	**309**	*e*P	**P**	**03 48 56.8**	**+0.8**
MODS	**Modra-Piesok**	**53.06**	**309**	*e*P	**P**	**03 48 58.4**	**-0.1**
MODS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MODS	**Modra-Piesok**	**53.06**	**309**	*e*P	**P**	**03 48 58.4**	**-0.1**
DPC	**Dobruska-Polom**	**53.34**	**311**	P	**P**	**03 48 59.5**	**-1.0**
DPC				pP	**pP**	**03 49 02.9**	**-2.3**
VRAC	**Vranov**	**53.34**	**310**	P	**P**	**03 49 04.1**	**+3.6**
VRAC	**Vranov**	**53.34**	**310**	*e*P	**P**	**03 49 00.6**	**+0.1**
KRUC	**Moravsky**	**53.51**	**310**	P	**P**	**03 49 04.5**	**+2.8**
KRUC	**Moravsky**	**53.51**	**310**	*e*P	**P**	**03 49 02.1**	**+0.4**
HFS	**Hagfors**	**53.64**	**324**	P	**P**	**03 49 01.8**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=72,slow=11,SNR=6.1						
	comp=Z,2.3nm,0.7s						
RONA	**Rosalia, Austr**	**53.84**	**308**	*i* P	**P**	**03 49 04.5**	**+0.3**
	comp=Z,6.7nm,1.3s						
CONA	**Conrad Observa**	**54.08**	**308**	*i* P	P	03 49 04.2	-1.8
	comp=Z,15nm,1.7s						
ARSA	**Arzberg**	**54.44**	**308**	*i* P	**P**	**03 49 08.8**	**+0.1**
	comp=Z,5.8nm,1.6s						
BRG	**Berggiesshubel**	**54.73**	**312**	*e*P	**P**	**03 49 10.9**	**+0.3**
BRG				Amp		03 49 13.0	
	comp=Z,3.3nm,0.9s						
NB2	**NORSAR Subarra**	**54.78**	**325**	P	P	03 49 09.4	-1.5
	comp=Z,0.3nm,0.5s,baz=82,slow=7.4						
NOA	**NORSAR Array B**	**54.78**	**325**	P	**P**	**03 49 09.9**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=79,slow=8.8,SNR=6.4						
	comp=Z,0.5nm,0.5s						
SOKA	**Soboth**	**54.90**	**307**	*i* P	**P**	**03 49 11.7**	**-0.2**
	comp=Z,12nm,1.2s						
MOA	**Molln**	**55.15**	**308**	*i* P	**P**	**03 49 13.7**	**0.0**
	comp=Z,7.4nm,1.1s						
OBKA	**Obir**	**55.26**	**307**	*i* P	**P**	**03 49 15.8**	**+1.2**
	comp=Z,7.4nm,0.9s						
GEC2	**GERESS Array S**	**55.30**	**310**	lAmb	lAmb	03 49 18.6	
	comp=Z,8.3nm,1.2s						
GERES	**GERESS Array B**	**55.30**	**310**	P	**P**	**03 49 14.8**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=91,slow=5.3,SNR=15						
	comp=Z,1.6nm,0.8s						
GERES	**GERESS Array B**	**55.30**	**310**	P	**P**	**03 49 14.1**	**-0.8**
BIOA	**Bad Ischl, Aus**	**55.59**	**308**	*i* P	**P**	**03 49 16.8**	**-0.1**
	comp=Z,2.7nm,0.9s						
LESA	**Schwarzleotal**	**56.29**	**308**	*i* P	**P**	**03 49 21.4**	**-0.6**
	comp=Z,13nm,1.5s						
WTTA	**Wattenberg**	**57.01**	**308**	*i* P	**P**	**03 49 26.6**	**-0.7**
	comp=Z,7.0nm,1.3s						
WATA	**Walderalm**	**57.04**	**308**	*i* P	**P**	**03 49 27.5**	**+0.1**
	comp=Z,2.8nm,0.6s						
SQTA	**Sankt Quirin**	**57.31**	**308**	*i* P	**P**	**03 49 28.6**	**-0.6**
	comp=Z,6.0nm,1.1s						
MOTA	**Moosalm**	**57.34**	**308**	*i* P	**P**	**03 49 28.9**	**-0.6**
	comp=Z,5.9nm,1.1s						
RETA	**Reutte**	**57.53**	**309**	*i* P	**P**	**03 49 30.0**	**-0.8**
	comp=Z,7.6nm,1.4s						
FETA	**Feichten**	**57.67**	**308**	*e*P	**P**	**03 49 30.6**	**-1.4**
	comp=Z,6.8nm,1.9s						
DAVA	**Damuels**	**58.16**	**309**	*i* P	**P**	**03 49 34.9**	**-0.4**
	comp=Z,8.8nm,1.6s						
SENIN	**Lac Senin/Sane**	**60.13**	**308**	P	**P**	**03 49 48.3**	**-0.7**
WRA	**Warramunga Arr**	**69.59**	**132**	P	**P**	**03 50 49.1**	**-1.5**
	comp=Z,1.4nm,0.9s,baz=326,slow=6.6,SNR=9.3						
	comp=Z,1.4nm,0.9s						
WRA	**Warramunga Arr**	**69.59**	**132**	*i* P	**P**	**03 50 50.0**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**69.59**	**132**	lAmb	lAmb	03 50 57.3	
	comp=Z,0.4nm,1.4s						
ESDC	**Sonseca Array**	**70.30**	**305**	P	**P**	**03 50 55.5**	**+0.5**
J19K	**Poorman**	**71.52**	**24**	P	**P**	**03 51 02.1**	**+0.3**
J19K				lAmb	lAmb	03 51 05.0	
	comp=Z,3.2nm,1.1s						
ASAR	**Alice Springs**	**72.14**	**135**	P	**P**	**03 51 04.3**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=328,slow=7.6,SNR=7.6						
	comp=Z,1.1nm,0.8s						
CAST	**Castle Rocks**	**73.09**	**24**	P	**P**	**03 51 11.3**	**0.0**
CAST				lAmb	lAmb	03 51 24.3	
	comp=Z,5.8nm,1.5s						
ILAR	**Eielson Array**	**73.83**	**21**	P	**P**	**03 51 14.8**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=311,slow=5.9,SNR=5.0						
	comp=Z,0.3nm,0.7s						
G31M	**Satah River**	**75.49**	**16**	P	**P**	**03 51 24.3**	**-0.8**
G31M				lAmb	lAmb	03 51 50.0	
	comp=Z,7.0nm,1.3s						
TORD	**Torodi Ar. Bea**	**78.91**	**278**	P	P	03 51 43.6	-1.7
	comp=Z,0.6nm,0.7s,baz=54,slow=6.3,SNR=3.6						
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.91**	**278**	lAmb	lAmb	03 51 55.5	
	comp=Z,6.0nm,1.5s						
BOSA	**Boshof**	**84.71**	**231**	LR	LR	04 28 45.2	
	comp=Z,451nm,18.2s,baz=278,slow=35						

IDC ***24*** *03:56:15.8±0.7, 8°.26N×127°.44E, h0km, mb4.1/13, mbtmp4.1/13, MS4.0/3, Error ellipse: s-maj=39.3km s-min=14.5km az=71.0*
MAN ***24*** *03:56:18.0, 8°.30N×127°.42E, h26km, MS3.8*
NEIC ***24*** *03:56:18.6±1.6, 8°.21N±0°.10×127°.3E±0°.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=23.2km s-min=16.3km az=84.0*

ISC 24 03:56:16.5±2.2, 8°.27N±0°.05×127°.41E±0°.07, h3km±12km, n50, σ1§10/58, mb4.4/22, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.04**	**265**	*i* P	**Pg**	**03 56 37.1**	**+0.6**
BIPH				*i* S	**Sg**	**03 56 48.3**	**-1.6**
CDOP	**Cateel, Davao**	**1.07**	**243**	*i* P	**Pg**	**03 56 37.3**	**+0.2**
CDOP				*e*S	**Sg**	**03 56 50.8**	**-0.3**
TSSP	**Tandag City**	**1.42**	**303**	*e*P	**Pn**	**03 56 43.0**	**-0.3**
TSSP				*e*S	**Sn**	**03 56 58.7**	**-3.8**
BUTP	**Butuan**	**1.90**	**292**	*i* P	**Pn**	**03 56 51.2**	**+1.4**
BUTP				*e*S	**Sn**	**03 57 13.9**	**-0.4**
DAV	**Davao City (W)**	**2.17**	**237**	LR	LR	03 57 50.6	
	comp=Z,451nm,18.2s,baz=348,slow=43						
KCP	**Kidapawan**	**2.62**	**242**	*i* P	**Pn**	**03 57 01.1**	**+1.4**
KCP				*i* S	**Sn**	**03 57 32.8**	**+0.7**
CGP	**Cagayan de Oro**	**2.69**	**274**	*e*P	**Pn**	**03 57 02.3**	**+1.6**
CGP				*i* S	**Sn**	**03 57 33.4**	**-0.5**
DDMP	**Don Marcelino,**	**2.73**	**218**	*i* P	**Pn**	**03 57 02.2**	**+1.0**
DDMP				*e*S	**Sn**	**03 57 34.9**	**0.0**
PLP	**Palo**	**3.74**	**320**	*e*P	**Pn**	**03 57 14.7**	**-0.5**
PLP				*e*S	**Sn**	**03 58 00.1**	**+0.2**
LSIP	**Lazi, Siquijor**	**3.83**	**283**	*i* P	**Pn**	**03 57 17.8**	**+1.4**
LSIP				*e*S	**Sn**	**03 58 03.0**	**+1.0**
LLP	**Lapu-Lapu**	**3.96**	**301**	*e*P	**Pn**	**03 57

D25K	**Kavik River**	**80.98**	**21**	P	**P**	**04 08 33.5**	**+1.1**
K27K	**Chicken**	**82.86**	**26**	P	**P**	**04 08 44.4**	**+2.2**
K27K				IAmb	IAmb	04 08 45.1	
	comp=Z,2.9nm,1.0s						
I27K	**Kandik River**	**82.94**	**25**	P	**P**	**04 08 44.5**	**+1.8**
I27K				IAmb	IAmb	04 08 48.7	
	comp=Z,3.2nm,1.0s						
I28M	**Miner Creek**	**83.65**	**25**	P	**P**	**04 08 48.4**	**+1.9**
I28M				IAmb	IAmb	04 08 49.0	
	comp=Z,3.4nm,0.9s						
G29M	**Pine Creek**	**84.25**	**23**	P	**P**	**04 08 50.9**	**+1.5**
ARCES	**ARCESS Array B**	**86.45**	**340**	P	**P**	**04 08 59.3**	**-1.0**
	comp=Z,6.7nm,1.2s,baz=51,slow=4.7,SNR=6.0						
	comp=Z,6.7nm,1.2s						
VNDA	**Vanda**	**87.82**	**173**	P	**P**	**04 09 06.5**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=307,slow=5.8,SNR=3.9						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**87.82**	**173**	P	**P**	**04 09 06.0**	**-0.6**
VNDA				IAmb	IAmb	04 09 07.6	
	comp=Z,4.8nm,1.3s						

*IDC **24** 04:09:11.4±3.1, 15°.42N×52°.15E, h0km, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=69.9km s-min=26.2km az=164.0*
*NEIC **24** 04:09:11.5±1.5, 15°.14N±0°.08×52°.0E±0°.1, h10km±2km, mb4.5/6, Error ellipse: s-maj=22.9km s-min=12.0km az=70.0*
*OMAN **24** 04:09:14.8±0.7, 15°.40N×52°.42E, h10km, mb3.5/8, ml3.5/3, Error ellipse: s-maj=11.1km s-min=7.3km az=123.0*
ISC 24 04:09:11.0±1.2, 15°.2N±0°.1×52°.1E±0°.1, h10km, n41, σ1s06/42, mb4.0/11, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RBK	**Rabkut**	**3.05**	**40**	P	**Pn**	**04 10 00.1**	**+0.7**
	SNR=17						
WHFO	**Wadi Hawf**	**3.15**	**30**	P	**Pn**	**04 09 59.4**	**-1.4**
	SNR=12						
WHFO				S	**Sn**	**04 10 35.4**	**-3.0**
DMTO	**DMTO**	**3.70**	**46**	P	**Pn**	**04 10 08.0**	**-0.2**
	SNR=24						
MZR	**Muzera**	**7.89**	**9**	P	**Pn**	**04 11 06.6**	**+0.7**
	SNR=5.4						
MHTO	**MHTO**	**8.01**	**43**	P	**Pn**	**04 11 06.9**	**-0.6**
	SNR=5.1						
BSY	**Bisya**	**8.93**	**32**	P	**Pn**	**04 11 19.6**	**-0.5**
ARQ	**Araqi**	**9.12**	**26**	P	**Pn**	**04 11 22.2**	**-0.5**
JMDO	**Jabal Madar**	**9.12**	**37**	P	**Pn**	**04 11 22.4**	**-0.3**
ALNE	**Al Ain**	**9.47**	**20**	P	**Pn**	**04 11 28.2**	**+0.6**
SMDO	**Samad**	**9.63**	**35**	P	**Pn**	**04 11 29.1**	**-0.7**
HOQ	**Hoqain**	**9.69**	**29**	P	**Pn**	**04 11 29.9**	**-0.6**
ATD	**Arta Tunnel**	**9.74**	**249**	Pn	**Pn**	**04 11 28.3**	**-3.0**
WBK	**Wadi Bani Khal**	**9.82**	**40**	P	**Pn**	**04 11 32.0**	**-0.5**
	SNR=7.6						
SOHO	**SOHO**	**9.83**	**24**	P	**Pn**	**04 11 32.6**	**+0.1**
ASUD	**Al Ashush, Dub**	**9.87**	**17**	P	**Pn**	**04 11 33.4**	**+0.3**
BIDO	**Bidbid**	**10.04**	**33**	P	**Pn**	**04 11 34.9**	**-0.5**
FAQ	**Al Faqa, Dubai**	**10.06**	**18**	P	**Pn**	**04 11 36.2**	**+0.6**
ASHO	**Ashiyiah**	**10.15**	**21**	P	**Pn**	**04 11 36.9**	**-0.1**
HATD	**Hatta, Dubai**	**10.31**	**21**	P	**Pn**	**04 11 40.1**	**+1.1**
RAYN	**Ar Rayn**	**10.40**	**324**		**Pn**	**04 11 38.7**	**-1.6**
MASF	**Masafi**	**10.82**	**20**	P	**Pn**	**04 11 46.3**	**+0.1**
BANOM	**Banah**	**11.38**	**19**	P	**Pn**	**04 11 53.7**	**0.0**
SHME	**Shamm**	**11.45**	**18**	P	**Pn**	**04 11 54.6**	**0.0**
AB31	**Akbulak array**	**34.59**	**9**	P	**P**	**04 16 01.4**	**+1.4**
ABKAR	**Akbulak array**	**34.59**	**9**		**P**	**04 16 01.0**	**+1.1**
AKASG	**Malin Array Be**	**39.98**	**337**	P	**P**	**04 16 45.8**	**+0.2**
	1.1nm,0.5s,baz=140,slow=7.3,SNR=11						
	1.1nm,0.5s						
AKBB	**Malin Array Si**	**39.98**	**337**	P	**P**	**04 16 46.5**	**+0.8**
AKBB				IAmb	IAmb	04 16 47.1	
	comp=Z,4.5nm,0.6s						
KIEV	**Kiev**	**39.98**	**337**	P	**P**	**04 16 46.8**	**+1.2**
MKAR	**Makanchi Array**	**40.30**	**32**	P	**P**	**04 16 49.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=225,slow=7.0,SNR=7.8						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**40.30**	**32**	P	**P**	**04 16 49.3**	**+0.8**
KURBB	**Kurchatov Arra**	**41.28**	**25**	P	**P**	**04 16 57.0**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=224,slow=8.1,SNR=5.5						
	comp=Z,0.2nm,0.4s						
ZCCA	**Zocca**	**45.35**	**318**	P	**P**	**04 17 28.6**	**-1.0**
ZCCA				IAmb	IAmb	04 18 11.9	
	comp=Z,17nm,1.4s						
ZALV	**Zalesovo Beam**	**46.36**	**26**	P	**P**	**04 17 36.7**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=217,slow=7.1,SNR=4.4						
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**48.87**	**274**	P	**P**	**04 17 58.8**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=84,slow=6.0,SNR=3.7						
	comp=Z,0.5nm,0.9s						
FINES	**FINESS Array B**	**49.84**	**344**	P	**P**	**04 18 04.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=150,slow=8.8,SNR=8.1						
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**49.84**	**344**	P	**P**	**04 18 04.4**	**+0.4**
HFS	**Hagfors**	**52.87**	**337**	P	**P**	**04 18 26.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=141,slow=9.6,SNR=7.9						
	comp=Z,0.9nm,0.4s						
NC602	**NORSAR Array S**	**54.07**	**337**	P	**P**	**04 18 35.5**	**-0.1**
ESDC	**Sonseca Array**	**54.48**	**308**	P	**P**	**04 18 41.0**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=98,slow=9.1,SNR=4.4						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**55.10**	**42**	P	**P**	**04 18 43.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=269,slow=8.6,SNR=2.7						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**56.84**	**349**	P	**P**	**04 18 54.1**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=143,slow=8.2,SNR=2.0						
	comp=Z,1.6nm,0.9s						

*CATAC **24** 05:07:23.5±0.6, 13°.N±3°.×9°.0W±°, h32km±4km, M3.0/16, MLv3.0/16, Error ellipse: s-maj=7.9km s-min=6.6km az=50.6, confirmed*
*GCG **24** 05:07:25.0±1.1, 13°.45N×90°.09W, h45km±13km, MD4.2, Presumed earthquake*
*SNET **24** 05:07:26.0±2.2, 13°.44N×90°.05W, h24km, ML2.9, Presumed earthquake*
ISC 24 05:07:27.2±1.5, 13°.41N±0°.07×89°.95W±0°.04, h35km±5km, n37, σ1s48/61, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.43**	**352**	P	**Pn**	**05 07 35.0**	**-2.1**
NUBE	**Las Nubes**	**0.51**	**19**	P	**Pn**	**05 07 36.9**	**-1.3**
NUBE	**Las Nubes**	**0.51**	**19**	*i* P	**Pn**	**05 07 36.8**	**-1.5**
NUBE				*i* S	**Sn**	**05 07 46.4**	**+0.5**
NUBE	**Las Nubes**	**0.51**	**19**	*i* P	**Pn**	**05 07 36.8**	**-1.5**
CEVE	**Cerro Verde**	**0.52**	**38**	P	**Pn**	**05 07 37.6**	**-0.8**
CEVE	**Cerro Verde**	**0.52**	**38**	*eP*	**Pn**	**05 07 37.5**	**-0.9**
CEVE				*eS*	**Sn**	**05 07 48.5**	**+2.3**
SBLS	**San Blas**	**0.53**	**37**	*i* P	**Pn**	**05 07 37.5**	**-1.1**
SBLS				*eS*	**Sn**	**05 07 47.9**	**+1.5**
JAYA	**Jayaque - finc**	**0.54**	**64**	P	**Pb**	**05 07 37.7**	**-1.0**
JAYA	**Jayaque - finc**	**0.54**	**64**	*eP*	**Pb**	**05 07 37.4**	**-1.4**
JAYA				*eS*	**Sb**	**05 07 46.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.54**	**64**	*eP*	**Pb**	**05 07 37.5**	**-1.2**
JAYA				*eS*	**Sn**	**05 07 48.2**	**+1.6**
LOAL	**Lomas de Alarc**	**0.60**	**16**	P	**Pn**	**05 07 38.1**	**-1.3**
LOAL				S	**Sn**	**05 07 49.0**	**+1.0**
LOAL	**Lomas de Alarc**	**0.60**	**16**	*eP*	**Pn**	**05 07 38.2**	**-1.1**
LALI	**Alcalda de L**	**0.62**	**83**	P	**Pn**	**05 07 38.4**	**-1.0**
LALI				S	**Sn**	**05 07 50.2**	**+2.0**
SLOZ	**Alcaldia de Sa**	**0.63**	**15**	P	**Pn**	**05 07 38.4**	**-1.4**
SLOZ				S	**Sn**	**05 07 49.7**	**+1.0**
CEDA	**San Andres**	**0.67**	**54**	P	**Pn**	**05 07 39.3**	**-0.9**
CEDA	**San Andres**	**0.67**	**54**	*eP*	**Pn**	**05 07 39.4**	**-0.9**
CEDA				*eS*	**Sn**	**05 07 51.1**	**+1.7**
PMON	**Piamonte**	**0.69**	**64**	P	**Pn**	**05 07 39.7**	**-0.9**
PMON	**Piamonte**	**0.69**	**64**	*eP*	**Pn**	**05 07 39.5**	**-1.1**
PMON				*eS*	**Sb**	**05 07 52.0**	**+1.6**
UNIC	**Universidad Ca**	**0.69**	**35**	P	**Pn**	**05 07 39.3**	**-1.3**
UNIC				S	**Sn**	**05 07 51.4**	**+1.3**
BOQS	**Boqueron**	**0.73**	**64**	*eP*	**Pn**	**05 07 40.2**	**-1.0**
RBDL	**Robledal**	**0.74**	**20**	*eP*	**Pn**	**05 07 40.0**	**-1.4**
RBDL				*eS*	**Sn**	**05 07 52.4**	**+0.9**
UEES	**Universidad Ev**	**0.75**	**66**	P	**Pn**	**05 07 39.7**	**-1.8**
UEES				S	**Sb**	**05 07 53.4**	**+1.2**
SEMO	**Seminario San**	**0.76**	**68**	P	**Pn**	**05 07 40.6**	**-1.0**
SEMO				S	**Sb**	**05 07 53.7**	**+1.3**
LOMA	**Loma Larga**	**0.79**	**73**	P	**Pn**	**05 07 41.3**	**-0.7**
LOMA				S	**Sn**	**05 07 53.8**	**+1.1**
LOMA	**Loma Larga**	**0.79**	**73**	*eP*	**Pn**	**05 07 40.9**	**-1.1**
PCG5	**San Vicente Pa**	**0.90**	**333**	*eP*	**Pb**	**05 07 43.8**	**-0.8**
PCG5				*eS*	**Sb**	**05 07 58.5**	**+2.1**

JUAM	**Asuncion Mita**	**0.95**	**14**	*eP*	**Pn**	**05 07 42.2**	**-1.9**
JUAM				*eS*	**Sb**	**05 07 56.4**	**-1.2**
FG16	**Alotenango, Sa**	**1.01**	**328**	*eP*	**Pb**	**05 07 46.7**	**+0.2**
FG16				*eS*	**Sb**	**05 08 03.1**	**+3.4**
PAVA	**Las Pavas**	**1.03**	**73**	P	**Pn**	**05 07 44.9**	**-0.4**
PAVA				S	**Sb**	**05 08 00.4**	**+0.4**
FG8	**Yepocapa, Chim**	**1.03**	**325**	*eP*	**Pb**	**05 07 47.1**	**+0.4**
FG8				*eS*	**Sb**	**05 08 04.1**	**+4.0**
COEG	**Centro de Oper**	**1.06**	**79**	P	**Pn**	**05 07 44.7**	**-0.9**
COEG				S	**Sn**	**05 08 00.9**	**+1.6**
MTO3	**Montecristo**	**1.14**	**30**	P	**Pn**	**05 07 45.1**	**-1.8**
MTO3				S	**Sn**	**05 08 01.1**	**-0.3**
MTO3	**Montecristo**	**1.14**	**30**	*eP*	**Pn**	**05 07 45.2**	**-1.6**
TECO	**Alcaldia de Te**	**1.14**	**84**	P	**Pn**	**05 07 45.6**	**-1.2**
TECO				S	**Sn**	**05 08 02.4**	**+1.1**
APG	**El Apazote**	**1.66**	**343**	*eP*	**Pn**	**05 07 51.7**	**-2.4**
STG5	**El Palmar, Qui**	**1.68**	**306**	*eP*	**Pb**	**05 07 56.0**	**-1.6**
STG5				*eS*	**Sb**	**05 08 18.4**	**-0.1**
SARH	**Santa Rosa de**	**1.78**	**40**	*i* P	**Pn**	**05 07 54.6**	**-1.0**

*IDC **24** 05:08:22.7±1.0, 21°.05N×122°.11E, h0km, mb3.8/9, mbtmp3.8/10, ML3.6/1, Error ellipse: s-maj=30.1km s-min=18.5km az=67.0*
*MAN **24** 05:08:25.0, 20°.89N×122°.05E, h1km, MS2.8*
*JMA **24** 05:08:25.3±0.8, 21°.N±3°.×12°.2E±°, h34km, MV3.7/9, TAIWAN REGION*
ISC 24 05:08:27.5±0.8, 21°.10N±0°.06×122°.2E±0°.1, h35km, n20, σ0s66/17, mb3.8/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PACPP	**Pamplona Cagay**	**2.73**	**196**	*i* P	**Pn**	**05 09 08.4**	**-0.5**
PACPP				*i* S	**Sn**	**05 09 40.4**	**-0.3**
HATJ	**Hateruma jima**	**3.32**	**27**	P	**Pn**	**05 09 16.8**	**-0.1**
HATJ				*eS*	**Sn**	**05 09 53.9**	**-1.2**
JYNG	**Yonagunijimaku**	**3.42**	**12**	*eP*	**Pn**	**05 09 17.6**	**-0.7**
JYNG				*eS*	**Sn**	**05 09 56.8**	**-0.8**
IRIF	**Iriomote-Funau**	**3.54**	**24**	*eP*	**Pn**	**05 09 19.8**	**-0.2**
KSRS	**Korea Array**	**17.05**	**16**	P	**Pn**	**05 12 24.0**	**+0.9**
	0.2nm,0.3s,baz=199,slow=12,SNR=6.0						
	1.4nm,0.6s						
MJAR	**Matsushiro Arr**	**20.80**	**39**	P	**P**	**05 13 07.1**	**+1.2**
	0.2nm,0.3s,baz=226,slow=9.1,SNR=5.0						
	0.2nm,0.3s						
LZDM	**Lanzhou Array**	**21.90**	**316**	P	**P**	**05 13 18.3**	**+0.3**
	1.4nm,0.3s,baz=166,slow=13,SNR=3.7						
	1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**21.99**	**267**	P	**P**	**05 13 18.8**	**0.0**
	1.1nm,0.3s,baz=75,slow=7.5,SNR=5.4						
	1.1nm,0.3s						
SONM	**Songino Array**	**29.55**	**338**	P	**P**	**05 14 28.5**	**-0.5**
	1.6nm,0.8s,baz=160,slow=8.7,SNR=7.3						
	1.6nm,0.8s						
MKAR	**Makanchi Array**	**41.19**	**318**	P	**P**	**05 16 09.1**	**+0.3**
	2.5nm,0.7s,baz=112,slow=9.9,SNR=18						
	2.5nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**41.85**	**84**	T	T	06 01 09.8	
	baz=281,slow=74,SNR=118						
H11N2	**WAKE ISLAND Hy**	**41.85**	**84**	T	T	06 01 09.4	
	baz=281,slow=74,SNR=140						
H11N3	**WAKE ISLAND Hy**	**41.87**	**84**	T	T	06 01 08.0	
	baz=281,slow=74,SNR=120						
H11S3	**WAKE ISLAND Hy**	**41.88**	**86**	T	T	06 01 05.4	
	baz=282,slow=75,SNR=241						
H11S1	**WAKE ISLAND Hy**	**41.89**	**85**	T	T	06 01 05.9	
	baz=282,slow=75,SNR=290						
H11S2	**WAKE ISLAND Hy**	**41.90**	**86**	T	T	06 01 08.8	
	baz=282,slow=75,SNR=293						
WRA	**Warramunga Arr**	**42.50**	**163**	P	**P**	**05 16 19.2**	**-0.5**
	0.2nm,0.5s,baz=344,slow=8.2,SNR=4.6						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**43.32**	**328**	P	**P**	**05 16 26.2**	**+0.3**
	1.5nm,0.6s,baz=119,slow=8.6,SNR=8.5						
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**45.05**	**322**	P	**P**	**05 16 40.2**	**+0.4**
	3.1nm,0.8s,baz=119,slow=7.5,SNR=15						
	3.1nm,0.8s						
ASAR	**Alice Springs**	**45.94**	**165**	P	**P**	**05 16 47.3**	**+0.1**
	0.4nm,0.5s,baz=342,slow=7.5,SNR=4.6						
	0.4nm,0.5s						

*OSPL **24** 05:39:01.4±0.5, 19°.11N×67°.74W, h31km±643km, ML2.6, Presumed earthquake*
SDD 24 05:38:59.6±1.8, 19°.13N×67°.57W, h8km±18km, MD2.8, ML2.1, MW2.2, 23C-3D, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.79**	**147**	⇑*i* P	Pg	05 39 14.8	+0.1
AGPR				⇑*i* S	Sg	05 39 23.7	-1.2
AGPR				IAML		05 39 24.9	
	comp=N,113nm,0.2s						
AGPR	**Aguadilla, PR**	**0.79**	**147**	⇑*i* P	Pg	05 39 14.3	-0.4
AGPR				⇑*i* S	Sg	05 39 23.6	-1.3
AGPR				IAML		05 39 24.9	
	comp=N,113nm,0.2s						
PCDR	**Punta Cana, DR**	**0.98**	**232**	⇑*i* P	Pg	05 39 16.4	-2.1
PCDR				IAML		05 39 39.2	
	comp=N,117nm,1.2s						
PCDR	**Punta Cana, DR**	**0.98**	**232**	⇑*i* P	Pg	05 39 14.8	-3.7
PCDR				⇑*i* S	Sg	05 39 26.1	-5.1
PCDR				IAML		05 39 30.3	
	comp=N,322nm,0.3s						
PCDR	**Punta Cana, DR**	**0.98**	**232**	*i* P	Pg	05 39 16.1	-2.4
PCDR				*eS*	Sg	05 39 26.4	-4.9
PCDR				IAML		05 39 30.3	
	comp=Z,108nm,1.2s						
PRSN	**Puerto Rico Se**	**0.99**	**156**	⇑*i* P	Pg	05 39 17.2	-1.5
PRSN				⇑*i* S	Sg	05 39 30.6	-0.8
PRSN				IAML		05 39 38.0	
	comp=N,73nm,0.3s						
AOPR	**Arecibo Observ**	**1.09**	**135**	⇑*i* P	Pg	05 39 18.7	-1.9
AOPR				IAML		05 39 46.0	
	comp=N,46nm,1.6s						
AOPR	**Arecibo Observ**	**1.09**	**135**	⇑*i* P	Pg	05 39 18.4	-2.2
AOPR				⇓*i* S	Sg	05 39 32.3	-2.5
AOPR				IAML		05 39 46.0	
	comp=N,46nm,1.6s						
HIDR	**Higuey Centro**	**1.21**	**244**	⇑*i* P	Pb	05 39 19.8	-3.1
HIDR				IAML		05 39 36.1	
	comp=N,49nm,2.2s						
HIDR				⇑*i* S	Sg	05 39 38.3	-0.3
HIDR	**Higuey Centro**	**1.21**	**244**	⇑*i* P	Pb	05 39 19.5	-3.3
HIDR				IAML		05 39 54.2	
	comp=N,57nm,2.5s						
MLPR	**Magueyes Islan**	**1.25**	**157**	⇑*i* P	Pn	05 39 21.9	-1.6
MLPR				IAML		05 39 38.5	
	comp=N,15nm,2.4s						
MLPR				⇑*i* Sg	Sb	05 39 38.9	-1.0
MLPR	**Magueyes Islan**	**1.25**	**157**	⇑*i* P	Pn	05 39 22.2	-1.3
MLPR				⇓*i* Sg	Sb	05 39 37.0	-2.9
MLPR				IAML		05 39 40.2	
	comp=N,88nm,0.4s						
CELP	**Cerrillos**	**1.41**	**138**	⇑*i* P	Pn	05 39 24.5	-1.1
CELP				⇑*i* Sg	Sb	05 39 43.0	-1.2
CELP				IAML		05 39 46.9	
	comp=N,10nm,1.0s						
CELP	**Cerrillos**	**1.41**	**138**	⇑*i* P	Pn	05 39 24.2	-1.4
CELP				⇑*i* Sg	Sb	05 39 42.8	-1.5
CELP				IAML		05 39 46.9	
	comp=N,10nm,1.0s						
OBIP	**Obispado Ponce**	**1.41**	**140**	*i* P	Pn	05 39 24.9	-0.8
OBIP				⇓*eS*	Sb	05 39 42.6	-1.8
OBIP				IAML		05 39 46.0	
	comp=Z,142nm,0.1s						
SJG	**San Juan**	**1.68**	**127**	*i* P	Pn	05 39 29.1	-0.3
HATOM	**Hato Mayor del**	**1.75**	**259**	⇑*i* P	Pn	05 39 30.1	-0.2
HATOM				⇑*i* Sg	Sn	05 39 52.7	-0.2
HATOM				IAML		05 39 56.2	
	comp=N,63nm,0.3s						

*NDI **24** 05:45:47.6±2.4, 22°.49N×93°.81E, h10km, ML3.6, MW4.1, Presumed earthquake*
*IDC **24** 05:45:54.3±1.0, 22°.98N×93°.42E, h0km, mb3.8/5, mbtmp3.8/5, MS3.0/2, Error ellipse: s-maj=24.6km s-min=19.1km az=41.0*
*BKK **24** 05:45:55.9±0.5, 23°.N±4°.×9°.3E±°, h10km, M4.1/12, mB5.2/4, mb3.8/6, Mjma3.9/12, ML4.5/11, MLv4.1/8, Mw(mB)4.5/4*
*NEIC **24** 05:45:56.8±1.8, 23°.07N±0°.04×93°.37E±0°.04, h10km±1km, mb4.1/11, Error ellipse: s-maj=6.4km s-min=5.6km az=182.0*
ISC 24 05:45:57.0±0.6, 23°.06N±0°.05×93°.44E±0°.05, h10km, n40, σ2s08/44, mb4.0/12, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORE	**Moreh**	**1.41**	**34**		**Pn**	**05 46 22.4**	**-0.4**
BRDH	**Bariadhala**	**1.70**	**258**	Pn	**Pn**	**05 46 24.9**	**-1.8**
	43nm,0.3s,baz=141,slow=14,SNR=7.2						
BRDH				Sn	**Sn**	**05 46 47.8**	**-0.8**
	30nm,0.3s,baz=239,slow=21,SNR=7.7						
SILR	**SILCHAR**	**1.81**	**341**	*eP*	**Pn**	**05 46 25.9**	**-2.3**
SILR				IAML		05 47 28.9	
	comp=N,522nm,0.9s						
SILR				IAML		05 47 30.1	
	comp=E,367nm,0.8s						
IMP	**Imphal**	**1.83**	**15**	*eP*	**Pn**	**05 46 26.6**	**-1.9**
IMP				*eS*	**Sb**	**05 46 55.9**	**+2.4**
BELO	**BELONIA**	**1.85**	**276**	*eP*	**Pg**	**05 46 34.7**	**+2.3**
BELO				*eS*	**Sg**	**05 47 02.2**	**+5.9**
SHL	**Shillong**	**2.88**	**331**		**Pn**	**05 46 40.7**	**-2.4**
SHL	**Shillong**	**2.88**	**331**	*eP*	**Pn**	**05 46 43.2**	**+0.1**
SHL				*eS*	**Sn**	**05 47 21.2**	**+3.4**
MOKO	**MOKOCHONG**	**3.39**	**16**	*eP*	**Pn**	**05 46 47.9**	**-2.2**
TEZP	**TEZPUR**	**3.59**	**351**	*eP*	**Pn**	**05 46 50.3**	**-2.5**
CMAI	**Chiengmai2**	**6.07**	**120**	P	**Pn**	**05 47 28.7**	**+1.7**
	comp=E,0.4nmcomp=E,442nmcomp=E,8.8nm,0.6s						
MHMT	**Maesarieng**	**6.42**	**138**	P	**Pn**	**05 47 32.2**	**+0.5**
	comp=E,0.2nmcomp=E,0.1nmcomp=E,0.1nmcomp=E,2μm						
	comp=E,4.3nm,0.5s						
CHTO	**Chiang Mai**	**6.65**	**128**	P	**Pn**	**05 47 35.6**	**+0.8**
	comp=E,0.1nmcomp=E,0.1nmcomp=E,0.3nmcomp=E,3.8nm,1.0s						
CHTO	**Chiang Mai**	**6.65**	**128**	Pn	**Pn**	**05 47 37.4**	**+2.5**
CM31	**Chiang Mai Arr**	**6.88**	**131**	Pn	**Pn**	**05 47 39.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**6.88**	**131**	Pn	**Pn**	**05 47 40.1**	**+2.0**
	comp=E,0.5nm,0.3s,baz=305,slow=13,SNR=11						
CMAR				LR	LR	05 50 28.9	
	comp=E,33nm,21.6s,baz=325,slow=40						
CMAR	**Chiang Mai Arr**	**6.88**	**131**		**Pn**	**05 47 39.4**	**+1.3**
CM02	**Chiang Mai Arr**	**6.90**	**131**	P	**Pn**	**05 47 40.4**	**+2.1**
	comp=E,0.1nmcomp=E,0.1nmcomp=E,3.5nm,0.8s						
BOK	**Bokaro**	**6.98**	**278**	*eP*	**Pn**	**05 47 35.2**	**-4.1**
BOK				*eS*	**Sn**	**05 48 55.0**	**-3.8**
EVN	**Everest**	**7.72**	**311**		**Pn**	**05 47 46.4**	**-3.7**
UTTA	**Uttaradit**	**8.51**	**127**	P	**Pn**	**05 48 00.7**	**+0.4**
	comp=E,4.4nm,0.5s						
WUS	**Wushi**	**21.68**	**330**	P	**P**	**05 50 46.0**	**-2.1**
WUS				IAmb	IAmb	05 50 53.9	
	comp=Z,4.8nm,0.8s						
GSI	**Gunungsitoli**	**21.99**	**169**	P	**P**	**05 50 51.8**	**+0.4**
GSI				IAmb	IAmb	05 50 53.0	
	comp=Z,10nm,0.8s						
TARG	**Taragay, Kyrgy**	**22.76**	**329**	P	**P**	**05 50 58.3**	**-1.6**
TARG				IAmb	IAmb	05 51 24.5	
	comp=Z,1.8nm,0.7s						
PDGK	**Podgornoye**	**23.29**	**334**	P	**P**	**05 51 03.5**	**-1.6**
MANEM	**Manem**	**23.62**	**313**	P	**P**	**05 51 07.6**	**-0.9**
MANEM				IAmb	IAmb	05 51 09.6	
	comp=Z,10nm,0.9s						
MKAR	**Makanchi Array**	**25.34**	**342**	P	**P**	**05 51 23.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=158,slow=8.3,SNR=10						
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**25.34**	**342**	P	**P**	**05 51 22.8**	**-1.2**
SONM	**Songino Array**	**26.81**	**20**	P	**P**	**05 51 36.9**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=216,slow=7.1,SNR=2.5						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**26.81**	**20**	P	**P**	**05 51 36.1**	**-1.4**
KURBB	**Kurchatov Arra**	**29.87**	**341**	P	**P**	**05 52 04.1**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=162,slow=7.9,SNR=4.9						
	comp=Z,0.5nm,0.7s						
JOW	**Kunigami**	**31.75**	**76**	LR	LR	06 06 22.4	
	comp=Z,122nm,20.5s,baz=197,slow=39						
DGAR	**Diego Garcia**	**36.59**	**217**	P	**P**	**05 53 04.0**	**+0.5**
AB31	**Akbulak array**	**37.12**	**323**	P	**P**	**05 53 06.7**	**-0.9**
AB31				IAmb	IAmb	05 53 36.2	
	comp=Z,1.6nm,1.2s						
ABKAR	**Akbulak array**	**37.12**	**323**	P	**P**	**05 53 06.9**	**-0.7**
JGF	**Kuroka**	**39.97**	**62**	P	**P**	**05 53 32.4**	**+0.

KAWH Katmai 3.73 30 Pn 05 54 52.8 +1.0
P16K Nushagak River 3.84 3 Pn 05 54 54.8 +1.5
P16K IAML 05 55 44.5
comp=N,371nm,1.1s
KARR Katmai Rainbow 3.85 30 Pn 05 54 54.6 +1.1
Q18K Katmai Hardscr 3.90 26 Pn 05 54 55.5 +1.3
O15K Ungalikthiuk R 4.07 349 Pn 05 54 57.6 +1.2
O15K IAML 05 55 47.6
comp=E,148nm,0.5s
O15K IAML 05 55 48.3
comp=N,148nm,0.5s
KDAK Kodiak Island 4.10 49 Pn Pn 05 54 57.0 +0.2
comp=N,2.4nm,0.3s,baz=204,slow=2.0,SNR=81
KDAK Sn Sn 05 55 41.4 -2.3
comp=N,7.3nm,0.3s,baz=32,slow=6.0,SNR=3.7
comp=N,11nm,0.5s
KDAK Kodiak Island 4.10 49 Pn 05 54 57.0 +0.2
KDAK IAML 05 56 23.1
comp=N,131nm,1.1s
P17K Kvichak River 4.13 14 Pn 05 54 58.4 +1.2
P17K IAML 05 56 20.6
comp=E,345nm,0.9s
P17K IAML 05 56 46.0
comp=N,343nm,1.1s
O14K Tigyukauivet M 4.36 340 Pn 05 55 01.9 +1.5
O14K IAML 05 55 56.0
comp=E,137nm,0.8s
O14K IAML 05 56 38.9
comp=N,131nm,0.9s
O16K Kokwok River B 4.40 2 Pn 05 55 01.9 +0.9
P18K Big Mountain, 4.52 21 Pn 05 55 03.9 +1.2
O17K Koliganek Bris 4.63 8 Pn 05 55 05.5 +1.4
UNV Unalaska Valle 4.95 257 Pn 05 55 07.8 -0.7
UNV IAML 05 56 36.4
comp=N,70nm,0.6s
O18K Koktuh Hills 4.96 19 Pn 05 55 10.0 +1.4
N14K Kuskokwak Cree 5.06 340 Pn 05 55 11.5 +1.5
N15K Kwethluk River 5.07 350 Pn 05 55 11.5 +1.3
N15K IAML 05 56 49.3
comp=E,166nm,0.8s
N15K IAML 05 56 52.2
comp=N,115nm,0.8s
N16K Nishlik Lake 5.29 358 Pn 05 55 14.7 +1.5
N17K Nushagak Hills 5.37 6 Pn 05 55 15.4 +1.1
ILSW Iliamna Southw 5.54 28 Pn 05 55 17.7 +1.0
IVE Iliamna Volcan 5.61 28 Pn 05 55 19.1 +1.5
N18K Kilae Creek 5.64 12 Pn 05 55 19.8 +1.7
M15K Kasigluk River 5.65 348 Pn 05 55 19.4 +1.4
CNPM China Poot 5.79 39 Pn 05 55 20.3 +0.3
M16K Timber Creek 5.84 357 Pn 05 55 22.6 +1.8
M13K Dall Lake 5.87 335 Pn 05 55 22.8 +1.7
M14K Bethel 5.89 342 Pn 05 55 22.2 +0.8
N19K Bonanza Creek 5.98 18 Pn 05 55 24.1 +1.4
RED Redoubt Volcan 6.01 27 Pn 05 55 25.5 +2.4
NCT North Crescent 6.09 26 Pn 05 55 25.5 +1.2
M17K Holitna River 6.23 4 Pn 05 55 27.3 +1.2
RDT Redoubt 6.24 28 Pn 05 55 27.6 +1.3
M18K Stony River 6.44 11 Pn 05 55 30.4 +1.4
L16K Owhat River 6.55 355 Pn 05 55 31.6 +1.1
L14K Kuka Creek 6.57 341 Pn 05 55 31.6 +1.0
M11K Mekoryuk 6.68 324 Pn 05 55 33.5 +1.3
L15K Ungalak Mounta 6.70 347 Pn 05 55 33.2 +0.7
SEW Seward 6.84 40 Pn Pn 05 55 35.1 +0.8
SPU Mount Spurr 6.85 26 Pn 05 55 35.6 +1.0
SLKM Skilak Lake 6.85 36 Pn 05 55 35.8 +1.2
SPIA Saint Paul Isl 6.94 291 Pn Pn 05 55 36.0 +0.2
L17K Donlin 6.95 0 Pn 05 55 37.1 +1.2
L18K Granite Mounta 7.09 6 Pn 05 55 38.7 +0.9
STLK Strandline Lak 7.17 26 Pn 05 55 40.1 +1.0
L19K White Mountain 7.23 13 Pn 05 55 41.2 +1.4
K15K Wolf Creek Mou 7.30 348 Pn 05 55 42.7 +2.0
K13K Kusilvak Mount 7.51 336 Pn 05 55 45.0 +1.3
K17K Iditarod 7.53 0 Pn 05 55 45.1 +1.2
SKT Skwentna 7.66 25 Pn 05 55 47.5 +1.8
PWL Port Wells 7.76 39 Pn 05 55 48.1 +1.1
PMR Palmer 8.02 33 Pn 05 55 51.5 +1.0
J14K Nanvaranak Lak 8.03 343 Pn 05 55 51.6 +0.9
HIN Hinchinbrook I 8.18 46 Pn 05 55 53.5 +0.7
J16K Anvik River 8.19 353 Pn 05 55 53.9 +1.0
J17K VABM Dome 8.23 358 Pn 05 55 54.2 +0.8
L22K Petersville 8.31 25 Pn 05 55 56.2 +1.5
J18K Innoko River 8.33 5 Pn 05 55 56.3 +1.5
PPLA Purkeypile 8.33 20 Pn 05 55 58.0 +3.0
FID Port Fidalgo 8.39 44 Pn 05 54 58 -1.0
K20K Telida 8.46 13 Pn 05 55 57.9 +1.2
EYAK Cordova Ski Ar 8.57 46 Pn 05 55 58.4 +0.2
SCM Sheep Creek Mo 8.78 36 Pn 05 56 02.2 +1.1
I17K Unalakleet 8.79 353 Pn 05 56 02.7 +1.6
CAST Castle Rocks 8.83 19 Pn 05 56 03.3 +1.6
J19K Poorman 8.92 8 Pn 05 56 04.4 +1.4
RAGM Ragged Mountai 8.94 49 Pn 05 56 04.2 +1.0
GOAT Goat Mountain 9.02 48 Pn 05 56 04.9 +0.6
KLU Klutina 9.06 41 Pn 05 56 06.0 +1.1
WAT7 Susitna Watana 9.07 29 Pn 05 56 05.7 +0.6
KTH Kantishna Hill 9.18 21 Pn 05 56 08.2 +1.7
J20K Nowinta River 9.24 11 Pn 05 56 08.8 +1.5
RND Reindeer 9.53 27 Pn 05 56 12.2 +0.8
DHY Denali Highway 9.68 31 Pn 05 56 14.5 +1.0
MCK McKinley 9.78 25 Pn 05 56 16.5 +1.7
CRQM Cirque 9.79 49 Pn Pn 05 56 15.6 +0.6
H17K Granite Mounta 9.80 356 Pn 05 56 16.4 +1.5
GLB Gilahina Butte 9.85 45 Pn 05 56 16.6 +0.8
H18K Honhosa River 9.98 360 Pn 05 56 18.7 +1.2
PAX Paxson 10.20 35 Pn 05 56 21.8 +1.3
GRNC Granite Creek 10.38 51 Pn 05 56 24.1 +0.9
H19K Roundabout Mou 10.40 4 Pn 05 56 24.2 +1.1
I21K Tanana 10.49 15 Pn 05 56 25.4 +1.1
NEA2 Nenana 10.49 22 Pn 05 56 24.0 -0.4
MLY Manley 10.55 18 Pn 05 56 25.3 +0.1
K24K Donnelly Dome 10.70 31 Pn 05 56 29.4 +2.1
G18K Tagagawik 10.73 359 Pn 05 56 28.9 +1.2
MENT Mentasta 10.77 38 Pn 05 56 29.1 +0.7
ILAR Eielson Array 11.15 26 Pn Pn 05 56 31.6 -1.8
comp=N,0.4nm,0.3s,baz=220,slow=14,SNR=22
ILAR Sn Sn 05 58 30.5 -6.4
comp=N,0.1nm,0.3s,baz=241,slow=14,SNR=1.1
ILAR LR LR 06 00 35.8
comp=N,66nm,20.4s,baz=263,slow=36
L27K Beaver Creek, 11.54 40 Pn 05 56 38.9 +0.2
G21K Allakaket 11.58 10 Pn 05 56 41.3 +1.9
F19K Shaleruckik Mo 11.67 1 Pn 05 56 42.3 +1.7
O29M Mount Kennedy 11.70 56 Pn 05 56 43.5 +2.4
P29M Windy Craggy 11.93 60 Pn 05 56 44.7 +0.6
G23K Bananza Creek 12.21 16 Pn 05 56 49.0 +1.0
M29M Somme Creek 12.55 47 Pn 05 56 53.0 +0.4
L29M L29M 12.99 44 Pn 05 56 59.4 +0.8
DAWY Dawson 13.01 39 Pn 05 56 59.3 +0.5
I28M Miner Creek 13.66 34 Pn 05 57 08.6 +0.8
G27K Doyon Strip 14.10 28 P Pn 05 57 15.4 +1.7
J30M Hart River 14.41 41 Pn 05 57 18.8 +0.8
P33M Teslin, Yukon 14.47 59 Pn 05 57 21.0 +2.1
I30M Mount Dempster 14.73 38 Pn 05 57 23.7 +1.3
C27K Jago River 15.90 19 Pn Pn 05 57 38.6 +1.1
INK Inuvik 17.42 31 P Pn 05 57 56.5 -0.2
comp=N,0.9nm,0.3s,baz=237,slow=12,SNR=11
comp=N,4.2nm,0.5s
A36M Sachs Harbour 21.85 27 P P 05 58 45.6 -0.2
A36M IAmb IAmb 05 58 48.1
comp=Z,10nm,0.8s
PEA0B Petropavlovsk- 25.52 284 P P 05 59 20.4 -1.4
PEA0B IAmb IAmb 05 59 36.1
comp=Z,11nm,1.1s
PETK Petropavlovsk- 25.52 284 P P 05 59 20.3 -1.5
comp=Z,7.2nm,0.8s,baz=75,slow=12,SNR=16
comp=Z,7.2nm,0.8s
PETK Petropavlovsk- 25.52 284 P P 05 59 20.6 -1.2
YBH Yreka Blue Hor 26.85 105 LR LR 06 07 53.4
comp=Z,77nm,19.5s,baz=316,slow=31
MA2 Magadan 27.21 300 P P 05 59 37.0 -0.1
LYMT Lyon Mountain 29.59 87 P P 06 00 00.3 +1.7
NVAR Mina Array Bea 31.57 105 P P 06 00 18.3 +2.1
comp=Z,0.2nm,0.5s,baz=319,slow=8.6,SNR=4.0
NVAR LR LR 06 11 17.4
comp=Z,64nm,18.0s,baz=346,slow=33
comp=Z,0.2nm,0.5s
YHH Holmes Hill 31.66 89 P P 06 00 15.4 -1.6
ELK Elko 31.70 99 LR LR 06 11 45.8
comp=Z,40nm,18.1s,baz=323,slow=34
PDAR Pinedale Array 33.64 91 P P 06 00 37.3 +3.1
comp=Z,0.2nm,0.6s,baz=291,slow=4.1,SNR=4.1
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 33.64 91 P P 06 00 34.2 0.0

TIXI Tiksi 33.81 327 LR LR 06 16 24.1
comp=Z,47nm,18.5s,baz=188,slow=40
ILON Igloolik, Nuna 35.55 36 P P 06 00 50.6 +0.5
ILON IAmb IAmb 06 00 52.9
comp=Z,3.2nm,0.7s
H11N2 WAKE ISLAND Hy 44.07 231 T T 06 49 02.7
baz=31,slow=74,SNR=3.5
H11N3 WAKE ISLAND Hy 44.07 231 T T 06 49 03.3
baz=31,slow=74,SNR=3.2
H11N1 WAKE ISLAND Hy 44.09 231 T T 06 49 01.1
baz=31
H11S1 WAKE ISLAND Hy 45.23 230 T T 06 50 28.1
baz=28,slow=76,SNR=19
H11S2 WAKE ISLAND Hy 45.24 230 T T 06 50 34.5
baz=28,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 45.25 230 T T 06 50 36.9
baz=28,slow=76,SNR=4.7
MJAR Matsushiro Arr 46.21 274 P P 06 02 16.9 -1.4
comp=Z,1.0nm,0.5s,baz=33,slow=7.0,SNR=5.5
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 46.46 101 P P 06 02 22.5 +2.1
comp=Z,0.1nm,0.5s,baz=306,slow=6.3,SNR=4.2
TXAR PcP PcP 06 03 54.9 +0.3
comp=Z,0.3nm,0.6s,baz=224,slow=1.7,SNR=5.6
comp=Z,0.1nm,0.5s
SPITS Spitsbergen Ar 46.84 1 P P 06 02 21.9 -0.8
comp=Z,1.2nm,0.4s,baz=37,slow=7.4,SNR=2.8
comp=Z,1.2nm,0.4s
NRIK Noril'sk 46.93 334 P P 06 02 22.5 -1.0
comp=Z,4.8nm,0.7s,baz=46,slow=5.4,SNR=4.4
comp=Z,4.8nm,0.7s
KSRS Korea Array 51.40 282 P P 06 02 57.7 -0.4
comp=Z,4.3nm,1.0s,baz=49,slow=5.7,SNR=6.0
comp=Z,4.3nm,1.0s
TLY Talaya 53.75 310 LR LR 06 26 20.5
comp=Z,20nm,20.6s,baz=21,slow=36
SONM Songino Array 55.25 305 P P 06 03 25.9 -0.6
comp=Z,2.3nm,0.6s,baz=48,slow=6.8,SNR=13
SONM PcP PcP 06 04 27.6 +0.6
comp=Z,1.1nm,0.6s,baz=67,slow=2.4,SNR=5.3
comp=Z,2.3nm,0.6s
ARCES ARCESS Array B 55.53 358 P P 06 03 27.5 -0.5
comp=Z,0.9nm,0.4s,baz=23,slow=6.9,SNR=16
comp=Z,0.9nm,0.4s
BORG Borgarnes 55.92 21 LR LR 06 29 32.0
comp=Z,18nm,18.9s,baz=16,slow=38
HHC Hu-ho-hao-te 57.79 296 eP P 06 03 45.9 +1.4
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,84nm,5.5s
ZALV Zalesovo Beam 59.48 322 P P 06 03 55.7 -0.2
comp=Z,0.7nm,0.5s,baz=25,slow=7.2,SNR=4.3
ZALV LR LR 06 31 41.5
comp=Z,35nm,18.1s,baz=4.5,slow=38
comp=Z,0.7nm,0.5s
FINES FINESS Array B 63.64 358 P P 06 04 23.6 -0.2
comp=Z,2.1nm,0.5s,baz=12,slow=7.0,SNR=14
comp=Z,2.1nm,0.5s
NB2 NORSAR Array 63.80 6 P P 06 04 25.1 +0.1
comp=Z,2.8nm,0.9s,baz=355,slow=6.9
NOA NORSAR Array B 63.80 6 P P 06 04 25.2 +0.2
comp=Z,1.5nm,0.7s,baz=354,slow=6.6,SNR=4.7
comp=Z,1.5nm,0.7s
KURBB Kurchatov Arra 64.40 324 P P 06 04 28.8 -0.3
comp=Z,0.5nm,0.4s,baz=26,slow=7.5,SNR=6.8
comp=Z,0.5nm,0.4s
GTA2 Gaotai 64.70 303 eP P 06 04 31.0 -0.3
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
HFS Hagfors 64.83 4 P P 06 04 31.6 -0.1
comp=Z,4.2nm,0.8s,baz=23,slow=4.2,SNR=14
comp=Z,4.2nm,0.8s
BVAR Borovoye Array 64.88 330 P P 06 04 32.1 0.0
comp=Z,2.4nm,0.6s,baz=42,slow=6.8,SNR=6.2
comp=Z,2.4nm,0.6s
MKAR Makanchi Array 66.29 319 P P 06 04 40.7 -0.7
comp=Z,0.7nm,0.5s,baz=51,slow=5.1,SNR=8.1
comp=Z,0.7nm,0.5s
EKA Eskdalemuir Ar 67.96 15 P P 06 04 52.2 +0.4
comp=Z,0.6nm,0.5s,baz=345,slow=5.4,SNR=4.5
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 74.28 355 P P 06 05 29.5 -0.5
comp=Z,2.0nm,0.3s,baz=8.8,slow=5.7,SNR=15
comp=Z,2.0nm,0.3s
KSH2 Kashi 75.37 320 P P 06 05 37.8 +0.9
KSH2 pmax pmax
comp=Z,5.0nm,0.7s
GERES GERESS Array B 76.11 5 P P 06 05 41.2 +0.4
comp=Z,0.4nm,0.4s,baz=330,slow=5.1,SNR=3.5
comp=Z,0.4nm,0.4s
KBZ Khabaz 79.80 345 P P 06 06 01.4 +0.2
comp=Z,1.8nm,0.8s,baz=225,slow=2.8,SNR=4.2
comp=Z,1.8nm,0.8s
CMAR Chiang Mai Arr 82.07 291 P P 06 06 13.6 -0.1
comp=Z,1.2nm,0.4s,baz=16,slow=4.6,SNR=5.5
comp=Z,1.2nm,0.4s
ESDC Sonseca Array 82.98 20 P P 06 06 19.2 +0.9
comp=Z,2.1nm,1.0s,baz=342,slow=4.8,SNR=8.4
comp=Z,2.1nm,1.0s
QSPA South Pole Qui 144.99 180 PKPbc PKPab 06 13 27.3 -1.0
comp=Z,0.8nm,0.7s,baz=346,slow=0.3,SNR=7.8

ASRS ***24*** *06:12:29.0±2.1,53°.38N×91°.05E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 06:12:35.6±4.0,53°.39N×90°.81E,h0km,mbtmp2.7/3, ML1.8/2,Error ellipse: s-maj=39.3km s-min=26.5km az=28.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.61	281	I	I	06 34 20.0	
	0.2nm,1.0s,baz=96,slow=316,SNR=9.4						
ZALV	Zalesovo Beam	3.61	281	Pn	Pn	06 13 32.9	+0.1
	0.1nm,0.3s,baz=97,slow=14,SNR=5.4						
ZALV				Sn	Sn	06 14 19.8	+3.8
	0.3nm,0.3s,baz=101,slow=23,SNR=5.2						
ZALV				Lg	Lg	06 14 29.6	
	0.4nm,0.3s,baz=96,slow=23,SNR=6.3						
	1.3nm,0.5s						
KURBB	Kurchatov Arra	8.07	255	Pn	Pn	06 14 34.2	+0.2
	baz=67,slow=14,SNR=2.6						
KURBB				Sn	Sn	06 16 04.6	-1.2
	baz=65,slow=27,SNR=5.7						
KURBB				Lg	Lg	06 16 51.2	
	baz=74,slow=30,SNR=6.5						
	0.1nm,0.2s						
MKAR	Makanchi Array	8.57	223	Pn	Pn	06 14 41.3	+0.4
	0.5nm,0.9s,baz=42,slow=9.7,SNR=1.4						
SONM	Songino Array	11.35	113	Lg	Lg	06 18 33.3	
	baz=304,slow=25,SNR=6.3						

ASRS ***24*** *06:15:10.0±1.2,54°.27N×86°.19E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 06:15:13.6±2.5,54°.16N×86°.10E,h0km,mbtmp3.0/2, ML2.9/2,Error ellipse: s-maj=19.2km s-min=11.3km az=57.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.78	255	I	I	06 20 40.0	
	0.1nm,0.8s,baz=77,slow=317,SNR=4.5						
ZALV	Zalesovo Beam	0.78	255	Pg	Pg	06 15 27.1	-1.4
	1.0nm,0.3s,baz=74,slow=15,SNR=10						
ZALV				Lg	Lg	06 15 40.2	
	3.0nm,0.3s,baz=74,slow=33,SNR=7.3						
KURBB	Kurchatov Arra	5.83	236	Pn	Pn	06 16 41.5	+0.3
	0.2nm,0.3s,baz=51,slow=13,SNR=7.7						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.76	200	Pn	Pn	06 17 08.9	+1.2
	0.4nm,0.3s,baz=18,slow=11,SNR=8.5						
MKAR				Sn	Sn	06 18 37.5	+1.2
	0.1nm,0.3s,baz=13,slow=27,SNR=1.8						
	0.4nm,0.4s						

ASRS ***24*** *06:24:36.0±2.2,53°.69N×91°.02E,h0km,M3.2(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***24*** *06:24:38.8±3.2,54°.51N×90°.84E,h4km±14km,mb3.5, mpv3.4,Error ellipse: s-maj=36.4km s-min=19.9km az=4.0, Suspected Mining explosion.*
IDC ***24*** *06:24:42.1±3.4,53°.81N×90°.70E,h0km,mbtmp3.1/3, ML2.9/2,Error ellipse: s-maj=31.7km s-min=23.0km az=32.0.*
ISC 24 06:24:37.2±4.6,54°.8N±0°.3×90°.6E±0°.2,h0km,n11,σ2≥15/11,8C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.48	258	I	I	06 46 25.0	
	0.1nm,1.3s,baz=90,slow=316,SNR=10						
ZAA0	Zalesovo Array	3.48	258	⇓Pg	Pg	06 25 43.7	-0.2
	7.7nm,0.8s						
ZAA0				⇓Lg	Lg	06 26 35.0	
	17nm,0.7s						
ZALV	Zalesovo Beam	3.48	258	Pn	Pb	06 25 38.6	-1.0
	0.5nm,0.4s,baz=95,slow=16,SNR=3.6						
ZALV				Pg	Pg	06 25 44.1	+0.3
	0.9nm,0.3s,baz=94,slow=15,SNR=12						
ZALV				Lg	Lg	06 26 32.7	
	1.9nm,0.3s,baz=86,slow=28,SNR=9.7						
KURK	Kurchatov	8.33	245	⇑Pn	Pn	06 26 41.1	+2.0
	0.6nm,0.8s						
KURK				⇑Sn	Sn	06 28 15.4	+1.6
	1.3nm,0.8s						
KURK				⇑Lg	Lg	06 29 03.7	
	7.3nm,1.1s						
KURBB	Kurchatov Arra	8.43	245	Pn	Pn	06 26 41.2	+0.7
	0.1nm,0.3s,baz=64,slow=14,SNR=6.7						
KURBB				Sn	Sn	06 28 12.0	-4.2
	baz=66,slow=25						
KURBB				Lg	Lg	06 29 00.9	
	baz=62,slow=32,SNR=4.6						
	1.2nm,0.4s						
KURBB	Kurchatov Arra	8.43	245	⇑Pn	Pn	06 26 39.9	-0.6
	2.2nm,0.6s						
KURBB				⇑Sn	Sn	06 28 19.3	+3.1
	6.4nm,0.7s						
KURBB				⇓Lg	Lg	06 29 05.0	
	24nm,0.8s						
TLY	Talaya	8.43	106	Lg	Lg	06 28 44.1	
	0.5nm,0.3s,baz=101,slow=23,SNR=3.8						
MK31	Makanchi Array	9.57	217	⇓Pn	Pn	06 26 56.0	-0.3
	0.2nm,0.4s,baz=39,slow=13,SNR=4.8						
MK31				⇑Lg	Lg	06 29 33.8	
	3.9nm,0.9s,baz=33,slow=31,SNR=4.9						
MKAR	Makanchi Array	9.57	217	Pn	Pn	06 26 51.7	-4.6
	0.2nm,0.3s,baz=38,slow=12,SNR=9.3						
MKAR				Lg	Lg	06 29 23.6	
	baz=32,slow=32						
	0.6nm,0.6s						
MAKZ	Makanchi	9.67	218	⇑Pn	Pn	06 26 58.4	+0.8
	0.6nm,0.5s						
MAKZ				⇑Lg	Lg	06 29 40.7	
	5.4nm,1.0s						
SONM	Songino Array	12.08	119	Lg	Lg	06 30 36.8	
	0.2nm,0.3s,baz=286,slow=33,SNR=7.2						

ASRS ***24*** *06:39:19.0±1.2,54°.34N×86°.66E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 06:39:20.8±3.3,54°.47N×86°.80E,h0km,mbtmp2.9/2, ML2.7/2,Error ellipse: s-maj=30.4km s-min=18.3km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.27	247	I	I	06 47 00.0	
	baz=67,slow=318,SNR=2.2						
ZALV	Zalesovo Beam	1.27	247	Pg	Pg	06 39 43.3	-1.8
	1.4nm,0.3s,baz=65,slow=17,SNR=12						
ZALV				Lg	Lg	06 40 02.1	
	1.5nm,0.3s,baz=63,slow=28,SNR=8.4						
KURBB	Kurchatov Arra	6.34	236	Pn	Pn	06 40 56.4	+1.0
	0.1nm,0.3s,baz=52,slow=13,SNR=6.1						
	0.4nm,0.4s						
MKAR	Makanchi Array	8.20	202	Pn	Pn	06 41 22.1	+1.2
	0.2nm,0.3s,baz=24,slow=14,SNR=8.6						
	0.3nm,0.3s						

IDC ***24*** *07:01:02.4±3.2,56°.30S×26°.64W,h60km±27km,mb4.1/10, mbtmp4.3/11,ML4.1/1,MS3.5/12,Error ellipse: s-maj=27.2km s-min=14.0km az=69.0*
NEIC ***24*** *07:01:02.2±0.9,56°.39S±0°.07×26°.8W±0°.2,h60km±9km, mb4.5/20,Error ellipse: s-maj=14.1km s-min=9.3km az=119.0*
ISC 24 07:01:01.2±0.5,56°.34S±0°.09×26°.7W±0°.1,h50km,n48, σ1≥07/41,mb4.5/16,MS3.5/11,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.94	286		Pn	07 02 27.4	+1.0
ORCD	Orcadas	10.38	237	Pn	Pn	07 03 27.5	+0.4
SNAA	Sanae	18.37	156	P	P	07 05 11.4	-0.1
	0.6nm,0.3s,baz=308,slow=7.8,SNR=5.8						
SNAA				LR	LR	07 10 48.2	
	comp=Z,100nm,21.7s,baz=34,slow=32						
	1.6nm,0.4s						
SNAA	Sanae	18.37	156		P	07 05 11.0	-0.4
BELA	Belgrano 2	21.80	184		P	07 05 47.4	-1.1
MG02	Cerro Sombrero	24.60	260	P	P	07 06 16.9	+0.6
MG05	Puerto Natales	26.90	260	P	P	07 06 36.9	-0.2
PLCA	Paso Flores	32.30	280	LR	LR	07 19 51.2	
	comp=Z,64nm,20.3s,baz=136,slow=35						
QSPA	South Pole Qui	33.91	180	P	P	07 07 39.1	+0.1
	6.2nm,0.6s,baz=201,slow=2.3,SNR=51						
QSPA				ScP	ScP	07 13 54.7	-1.8
	2.2nm,0.6s,baz=228,slow=3.6,SNR=18						
QSPA				LR	LR	07 21 23.0	
	comp=Z,83nm,18.7s,baz=214,slow=36						
	6.2nm,0.6s						
QSPA	South Pole Qui	33.91	180		P	07 07 38.9	-0.1
QSPA				IAmb	IAmb	07 07 42.1	
	comp=Z,6.0nm,0.7s						
BO02	Sierra Bellavi	36.76	287	P	P	07 08 03.6	-0.1
BO02				IAmb	IAmb	07 08 36.6	
	comp=Z,6.7nm,1.2s						
CPUP	Villa Florida	37.20	311	P	P	07 08 07.1	-0.3
	comp=Z,2.7nm,1.0s,baz=186,slow=13,SNR=5.4						
CPUP				PcP	PcP	07 10 25.8	-0.6
	comp=Z,0.7nm,0.4s,baz=210,slow=2.7,SNR=3.6						
CPUP				LR	LR	07 24 01.9	
	comp=Z,14nm,19.6s,baz=132,slow=37						
	comp=Z,2.7nm,1.0s						
CPUP	Villa Florida	37.20	311	P	P	07 08 06.7	-0.7
CPUP				IAmb	IAmb	07 08 08.7	
	comp=Z,4.4nm,1.1s						
MT08	Bocatoma Ro	37.39	289	P	P	07 08 09.4	+0.1
MT08				IAmb	IAmb	07 08 12.6	
	comp=Z,4.6nm,0.8s						
ZON	Zonda	38.18	293		P	07 08 14.2	-1.6
ZON				IAmb	IAmb	07 08 16.2	
	comp=Z,4.5nm,0.6s						
MAW	Mawson	39.76	143	P	P	07 08 28.4	-0.1
	comp=Z,0.7nm,0.3s,baz=224,slow=5.9,SNR=14						
MAW				LR	LR	07 22 58.7	
	comp=Z,50nm,19.4s,baz=250,slow=33						
	comp=Z,0.7nm,0.3s						
MAW	Mawson	39.76	143	P	P	07 08 28.2	-0.3
CO01	Juntas del Tor	40.16	293	P	P	07 08 32.0	-0.5
CO01				IAmb	IAmb	07 08 34.9	
	comp=Z,4.8nm,0.6s						
SUR	Sutherland	40.47	74	LR	LR	07 21 14.3	
	comp=Z,144nm,19.6s,baz=238,slow=30						
AC05	El Transito	41.18	293	P	P	07 08 39.3	-1.4
GRHM	Grahamstown, E	42.81	80	P	P	07 08 53.7	-0.3
BDFB	Brasilia	43.75	330	P	P	07 09 02.2	+0.5
	comp=Z,2.9nm,0.7s,baz=160,slow=8.7,SNR=5.6						
BDFB				LR	LR	07 26 31.9	
	comp=Z,37nm,18.5s,baz=206,slow=35						
	comp=Z,2.9nm,0.7s						
BDFB	Brasilia	43.75	330	P	P	07 09 01.7	0.0
BOSA	Boshof	45.80	75	LR	LR	07 24 30.4	
	comp=Z,97nm,19.9s,baz=208,slow=31						
VNDA	Vanda	46.29	183	P	P	07 09 22.0	+0.9
	comp=Z,3.7nm,0.7s,baz=191,slow=6.5,SNR=12						
	comp=Z,3.7nm,0.7s						
VNDA	Vanda	46.29	183	P	P	07 09 20.1	-1.0
VNDA				IAmb	IAmb	07 09 24.1	
	comp=Z,3.1nm,0.6s						
PB09	IPOC Station P	46.52	300	P	P	07 09 23.5	-0.2
PB09				IAmb	IAmb	07 10 02.6	
	comp=Z,13nm,1.2s						
PB07	IPOC Station P	46.89	299	P	P	07 09 25.8	-0.8
PTLB	Pontes e Lacer	47.69	316		P	07 09 32.1	-0.5
PTLB				IAmb	IAmb	07 09 32.8	
	comp=Z,5.0nm,0.8s						
SIV	San Ignacio	47.96	313	LR	LR	07 28 29.8	
	comp=Z,21nm,21.4s,baz=116,slow=34						
H10S2	ASCENSION HYDR	48.21	16	T	T	08 02 15.5	

baz=189,slow=74,SNR=80
H10S3 ASCENSION HYDR 48.22 16 T T 08 02 15.7
baz=31,slow=74,SNR=81
LBTB Lobatse 48.85 73 LR LR 07 26 43.4
comp=Z,56nm,18.9s,baz=188,slow=32
LPAZ La Paz 50.75 305 P **P** **07 09 56.7 -0.1**
comp=Z,5.5nm,0.5s,baz=88,slow=5.2,SNR=25
LPAZ PcP **PcP** **07 11 13.3 0.0**
comp=Z,0.9nm,0.3s,baz=163,slow=6.3,SNR=2.2
comp=Z,5.5nm,0.5s
DBIC Dimbokro 65.33 24 P **P** **07 11 37.9 0.0**
comp=Z,1.9nm,0.5s,baz=197,slow=7.4,SNR=1.7
DBIC LR LR 07 32 58.5
comp=Z,53nm,21.5s,baz=178,slow=29
comp=Z,1.9nm,0.5s
DBIC Dimbokro 65.33 24 P P 07 11 37.2 -0.7
TORD Torodi Ar. Bea 73.19 29 P **P** **07 12 26.3 -0.2**
comp=Z,1.7nm,0.4s,baz=200,slow=6.5,SNR=27
TORD LR LR 07 41 53.8
comp=Z,77nm,18.3s,baz=196,slow=34
comp=Z,1.7nm,0.4s
STKA Stephens Creek 91.57 170 P **P** **07 14 04.2 +1.8**
comp=Z,1.2nm,0.5s,baz=19,slow=2.9,SNR=3.9
comp=Z,1.2nm,0.5s
ASAR Alice Springs 98.63 162 P **P** **07 14 35.1 +0.3**
comp=Z,0.9nm,0.8s,baz=198,slow=5.2,SNR=6.5
comp=Z,0.9nm,0.8s
ASAR Alice Springs 98.63 162 P **P** **07 14 34.8 0.0**
AS31 Alice Springs 98.63 162 P **P** **07 14 34.4 -0.4**
AS31 IAmb IAmb 07 15 12.1
comp=Z,1.9nm,1.3s
PDAR Pinedale Array 120.72 302 PKP **PKPdf** **07 19 45.2 -1.7**
comp=Z,0.1nm,0.3s,baz=94,slow=6.0,SNR=4.3
NVAR Mina Array Bea 121.75 293 PKP **PKPdf** **07 19 50.5 +1.5**
comp=Z,0.1nm,0.4s,baz=71,slow=2.8,SNR=1.3
FINES FINESS Array B 124.53 28 PKP **PKPdf** **07 19 51.9 -1.3**
comp=Z,1.0nm,0.5s,baz=230,slow=1.5,SNR=5.6
ARCES ARCESS Array B 131.12 22 PKP **PKPdf** **07 20 05.0 -0.7**
comp=Z,1.1nm,0.7s,baz=209,slow=2.2,SNR=4.9
YKA Yellowknife Ar 136.56 318 PKP **PKPdf** **07 20 15.1 -1.0**
comp=Z,1.0nm,0.6s,baz=140,slow=2.2,SNR=6.4
INK Inuvik 146.19 320 PKPbc **PKPdf** **07 20 33.4 +0.3**
comp=Z,7.0nm,0.7s,baz=96,slow=3.0,SNR=12
SONM Songino Array 150.49 87 PKPbc **PKPdf** **07 20 45.3 +4.4**
comp=Z,1.1nm,0.6s,baz=204,slow=3.3,SNR=5.4

*ASRS **24** 07:02:31.0±0.9,54.˚63N×83.˚69E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 07:02:32.9±1.6, 54.˚64N×83.˚68E, h0km, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=15.2km s-min=10.0km az=6.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**135**	I		I	I	07 07 40.0	
	baz=317,slow=325,SNR=3.7								
ZALV	**Zalesovo Beam**	**0.96**	**135**	Pg		Pg	Pg	07 02 49.9	-1.4
	3.6nm,0.3s,baz=315,slow=15,SNR=17								
ZALV				Lg		Lg	Lg	07 03 06.3	
	10nm,0.3s,baz=314,slow=29,SNR=12								
KURBB	**Kurchatov Arra**	**5.10**	**220**	Pn		Pn	Pn	07 03 50.7	+0.2
	0.1nm,0.3s,baz=42,slow=14,SNR=3.7								
KURBB				Lg		Lg	Lg	07 05 14.8	
	0.1nm,0.3s,baz=42,slow=35,SNR=9.7								
	0.1nm,0.3s								
MKAR	**Makanchi Array**	**7.90**	**187**	Pn		Pn	Pn	07 04 29.2	+0.2
	0.3nm,0.3s,baz=0.0,slow=16,SNR=3.5								
	0.2nm,0.3s								
BVAR	**Borovoye Array**	**8.03**	**264**	Pn		Pn	Pn	07 04 29.9	-0.8
	0.1nm,0.3s,baz=68,slow=14,SNR=4.4								
	0.7nm,0.3s								

*PAS **24** 07:05:13.6±1.4, 36.˚445N±0.˚010×117.˚96W±0.˚01, h8km±4km, Error ellipse: s-maj=1.5km s-min=1.4km az=80.0*
NEIC 24 07:05:12.7±1.5, 36.˚451N±0.˚008×117.˚94W±0.˚01, h4km±2km, ML3.5/122, Mwr3.7/6(PAS), Error ellipse: s-maj=1.5km s-min=1.2km az=70.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CWC	**Cottonwood Cre**	**0.11**	**264**				Pg	07 05 15.9	+0.9
CWC							Sg	07 05 17.9	+1.4
CWC	**Cottonwood Cre**	**0.11**	**264**	IAML				07 05 18.2	
	comp=E,132µm,0.3s								
CWC				IAML				07 05 18.2	
	comp=N,86µm,0.2s								
CGO	**Cerro Gordo**	**0.15**	**49**				Pg	07 05 17.1	+1.3
DAC	**Darwin (Calif)**	**0.33**	**122**				Pg	07 05 19.9	+0.8
DAC							Sg	07 05 24.9	+1.4
MFS	**McCloud Flat S**	**0.34**	**168**				Pg	07 05 20.0	+0.7
MFS							Sg	07 05 25.1	+1.3
WLHM	**Little Horse**	**0.42**	**225**				Pg	07 05 21.3	+0.5
WRVM	**Rose V. Centra**	**0.44**	**174**				Pg	07 05 21.8	+0.5
WRVM							Sg	07 05 28.3	+1.3
WCSM	**Coso Springs S**	**0.45**	**161**				Pg	07 05 22.1	+0.8
WCSM							Sg	07 05 28.2	+1.1
JRC2	**Joshua Ridge**	**0.48**	**167**				Pg	07 05 22.6	+0.7
JRC2							Sg	07 05 29.5	+1.3
WVPM	**Volcano Peak E**	**0.51**	**168**				Pg	07 05 23.1	+0.6
WVPM							Sg	07 05 30.1	+0.9
MPMC	**Manual Prospec**	**0.54**	**137**				Pg	07 05 23.6	+0.6
MPMC							Sg	07 05 31.1	+1.1
MPMC	**Manual Prospec**	**0.54**	**137**	IAML				07 05 31.4	
	comp=N,2µm,0.8s								
MPMC				IAML				07 05 34.2	
	comp=E,2µm,0.6s								
RCWM	**Renegade Canyo**	**0.55**	**154**				Pg	07 05 24.0	+0.7
RCWM							Sg	07 05 31.6	+1.1
WCHM	**Chimney Peak**	**0.58**	**191**				Pg	07 05 24.1	+0.4
WNMM	**Nine Mile Cany**	**0.61**	**177**				Pg	07 05 24.7	+0.3
WNMM							Sg	07 05 32.8	+0.6
TIN	**Tinemaha, Big**	**0.65**	**339**	Pg			Pg	07 05 24.9	-0.1
TIN	**Tinemaha, Big**	**0.65**	**339**				Sb	07 05 34.9	-1.2
TIN	**Tinemaha, Big**	**0.65**	**339**	IAML				07 05 36.7	
	comp=E,5µm,0.8s								
TIN				IAML				07 05 40.7	
	comp=N,4µm,0.8s								
TOW	**Tower One**	**0.66**	**167**				Pb	07 05 26.3	-0.5
TOW							Sb	07 05 35.8	-0.5
SPG2	**Springville 2**	**0.71**	**250**				Pg	07 05 26.2	-0.1
SPG2							Sg	07 05 35.3	-0.2
SRTC	**Snort**	**0.77**	**168**				Pb	07 05 28.4	-0.4
SRTC							Sb	07 05 39.7	0.0
WORM	**Onyx Ranch**	**0.79**	**198**				Pg	07 05 27.8	-0.1
WORM							Sg	07 05 38.2	0.0
LCH	**Last Change Ra**	**0.82**	**17**				Pg	07 05 28.6	+0.2
LCH							Sg	07 05 39.9	+0.9
WHFM	**Hanning Flat**	**0.82**	**204**				Pg	07 05 28.6	+0.1
WHFM							Sg	07 05 39.3	+0.2
GPO	**China Lake**	**0.83**	**164**				Pb	07 05 29.4	-0.4
GPO							Sb	07 05 40.9	-0.5
WASM	**Alta Sierra Ca**	**0.87**	**215**				Pg	07 05 29.3	0.0
WASM							Sg	07 05 40.7	+0.1
FURC	**Furnace Creek,**	**0.87**	**89**	Pg			Pb	07 05 30.2	-0.2
FURC				IAML				07 05 46.6	
	comp=N,2µm,0.7s								
ISA	**Isabella, Lake**	**0.90**	**209**	Pg		Pg		07 05 29.8	-0.1
ISA				IAML				07 05 46.0	
	comp=N,1µm,0.7s								
ISA	**Isabella, Lake**	**0.90**	**209**				Pn	07 05 41.3	+9.1
DSP	**Deep Springs**	**0.92**	**359**				Pg	07 05 30.2	-0.1
DSP							Sg	07 05 42.7	+0.5
WBSM	**Bird Springs**	**0.93**	**190**				Pg	07 05 30.4	-0.1
WBSM							Sg	07 05 42.4	-0.1
LRMC	**Laurel Mtn Rad**	**0.99**	**168**				Sg	07 05 45.2	+0.7
LRMC	**Laurel Mtn Rad**	**0.99**	**168**				Pg	07 05 31.9	+0.2
LRMC	**Laurel Mtn Rad**	**0.99**	**168**	IAML				07 05 46.7	
	comp=N,1µm,0.3s								
LRMC				IAML				07 05 47.8	
	comp=E,2µm,0.4s								
QSM	**Queen of Sheba**	**0.99**	**119**				Pg	07 05 31.8	0.0
QSM				IAML				07 05 53.5	
	comp=E,1µm,0.8s								
GMN	**Gold Mountain**	**1.01**	**33**				Pb	07 05 32.7	-0.2
MTUM	**Tungsten Hills**	**1.03**	**331**				Pg	07 05 32.5	0.0
CCCA	**Chr Cany lake**	**1.04**	**153**				Sb	07 05 47.6	+0.4
CCCA	**Chr Cany lake**	**1.04**	**153**				Pb	07 05 32.9	-0.3
CCCA	**Chr Cany lake**	**1.04**	**153**	IAML				07 05 50.6	
	comp=E,4µm,0.9s								
CCCA				IAML				07 05 51.6	
	comp=N,3µm,1.0s								
GWY	**Greenwater Val**	**1.06**	**104**				Pg	07 05 33.2	+0.1
GWY	**Greenwater Val**	**1.06**	**104**	IAML				07 05 50.8	
	comp=E,1µm,0.6s								
GWY				IAML				07 05 50.8	
	comp=N,877nm,0.8s								
VES	**Vestal, Richgr**	**1.11**	**237**				Sb	07 05 48.9	-0.4
VES	**Vestal, Richgr**	**1.11**	**237**	Pg			Pg	07 05 33.7	-0.2
VES	**Vestal, Richgr**	**1.11**	**237**	IAML				07 05 52.5	
	comp=N,4µm,1.1s								
VES				IAML				07 05 52.5	
	comp=E,2µm,0.5s								
WCT	**Wildcat Mounta**	**1.11**	**72**				Pg	07 05 34.2	+0.1
VOG	**Valley Oaks Go**	**1.17**	**264**				Pg	07 05 34.9	-0.2
VOG							Sb	07 05 50.7	-0.3
DTP	**Desert Tortois**	**1.18**	**176**				Pg	07 05 35.1	-0.3
DTP							Sg	07 05 50.7	-0.1
CCAC	**Calif City Air**	**1.30**	**183**				Pg	07 05 37.2	-0.4
CCAC							Sg	07 05 54.2	-0.2
TEJ	**El Tejon**	**1.36**	**207**				Pn	07 05 38.0	-0.5
KCC	**Kaiser Creek**	**1.41**	**309**				Pn	07 05 38.7	-0.5
MCSM	**Casa Diablo Ho**	**1.43**	**328**				Pn	07 05 39.9	+0.1
TPNV	**Topopah Spring**	**1.45**	**69**				Pn	07 05 39.5	-0.4
TPNV				IAML				07 06 06.7	
	comp=E,839nm,1.0s								
TPNV				IAML				07 06 09.2	
	comp=E,948nm,0.7s								
BAKC	**Calstate**	**1.45**	**221**				Pg	07 05 40.5	-0.1
GSC	**Goldstone, Bar**	**1.47**	**141**				Pg	07 05 41.0	+0.1
GSC	**Goldstone, Bar**	**1.47**	**141**				Pn	07 05 39.8	-0.3
GSC	**Goldstone, Bar**	**1.47**	**141**	IAML				07 06 05.2	
	comp=N,994nm,1.0s								
MDPB	**Devils Postpil**	**1.49**	**323**	IAML				07 06 00.6	
	comp=E,525nm,0.6s								
MDPB				IAML				07 06 01.0	
	comp=N,965nm,0.5s								
MDPB	**Devils Postpil**	**1.49**	**323**				Pn	07 05 40.7	+0.1
MDPB							Sb	07 06 00.4	-0.1
ARVC	**Arvin**	**1.50**	**209**				Pb	07 05 41.1	-0.2
ARVC							Sb	07 06 00.9	+0.2
FRI	**Friant**	**1.52**	**291**				Pn	07 05 40.4	-0.2
FRI							Sn	07 06 00.7	-0.2
EDW2	**Edwards Air Fo**	**1.57**	**182**				Pn	07 05 41.0	-0.4
EDW2							Sn	07 06 01.9	-0.3
TPO	**Tropico Hills**	**1.59**	**188**				Pn	07 05 42.1	+0.5
TPO				IAML				07 06 08.7	
	comp=E,728nm,0.7s								
TPO				IAML				07 06 09.8	
	comp=N,812nm,0.9s								
HYS	**Haystack Butte**	**1.61**	**169**				Pg	07 05 43.5	-0.2
HYS							Sb	07 06 03.7	-0.2
THC	**Tehachapi Micr**	**1.65**	**201**				Pb	07 05 43.4	-0.4
FOXC	**Fox Airport**	**1.72**	**188**				Pb	07 05 45.1	+0.2
TPH	**Tonopah**	**1.72**	**19**				Pb	07 05 45.0	0.0
TPH				IAML				07 06 11.5	
	comp=E,435nm,0.5s								
RRX	**Edison Barstow**	**1.75**	**154**				Pg	07 05 46.8	+0.6
BTPC	**Burnt Peak**	**1.84**	**196**				Pg	07 05 48.0	0.0
LHV	**Little Huntoon**	**1.85**	**346**				Pn	07 05 45.8	+0.6
LHV				IAML				07 06 30.7	
	comp=E,311nm,1.6s								
CRGC	**Crocker Grade**	**1.88**	**231**				Pb	07 05 46.9	-0.8
MPI	**Mount Pinos, F**	**1.91**	**211**				Pb	07 05 48.2	0.0
CARC	**Carrizo Plain**	**1.92**	**234**				Pb	07 05 48.0	-0.3
YEG	**Yeguas Mountai**	**1.92**	**239**				Pb	07 05 48.0	-0.5
BCW	**Bitter Crk WRg**	**1.93**	**219**				Pb	07 05 48.3	-0.1
TUQ	**Turquoise Moun**	**1.93**	**121**				Pg	07 05 49.1	-0.6
OSI	**Osito Audit: C**	**1.94**	**199**				Pn	07 05 46.2	-0.4
LOK	**Lockwood Valle**	**1.96**	**209**				Pb	07 05 49.1	0.0
HOLC	**Holcomb Ridge**	**1.99**	**178**				Pg	07 05 50.3	-0.5
JNH	**Juniper Hills**	**2.00**	**180**				Pb	07 05 50.4	+0.6
SMMC	**Simmler**	**2.02**	**236**				Pn	07 05 48.8	+1.2
TSCN	**Private Proper**	**2.15**	**246**				Pb	07 05 52.1	-0.1
PKD	**Bear Valley Ra**	**2.16**	**257**				Pn	07 05 50.1	+0.5
PKD				IAML				07 06 33.3	
	comp=N,307nm,0.8s								
PKD				IAML				07 06 39.2	
	comp=E,406nm,1.0s								
MTPC	**Mountain Pass**	**2.17**	**116**				Pn	07 05 49.0	-0.8
MTPC				IAML				07 06 28.9	
	comp=E,250nm,0.6s								
PSMM	**Smith Mountain**	**2.18**	**261**				Pn	07 05 51.1	+1.3
BFSC	**Mount Baldy Ra**	**2.22**	**174**				Pn	07 05 49.8	-0.7
BFSC				IAML				07 06 24.1	
	comp=E,374nm,0.7s								
BFSC				IAML				07 06 28.1	
	comp=N,223nm,0.8s								
MWC	**Mount Wilson**	**2.22**	**182**				Pn	07 05 49.9	-0.7
MWC				IAML				07 06 28.5	
	comp=E,272nm,1.1s								
MWC				IAML				07 06 31.7	
	comp=N,298nm,0.8s								
PASC	**Pasadena Art C**	**2.28**	**185**				Pn	07 05 50.5	-0.7
PASC				IAML				07 06 34.1	
	comp=E,198nm,1.0s								
PMPB	**Monarch Peak**	**2.32**	**265**				Pn	07 05 51.9	+0.1
WAKR	**Walker**	**2.37**	**330**				Pn	07 05 52.9	+0.3
TPRS	**Tripped Ranch**	**2.42**	**193**				Pn	07 05 53.9	+0.9
PSAM	**San Ardo**	**2.42**	**261**				Pn	07 05 54.4	+1.3
RVR	**Riverside**	**2.50**	**169**				Pg	07 05 59.3	-1.2
BBGB	**Big Mountain B**	**2.50**	**274**				Pn	07 05 55.4	+1.1
PRN	**Pahroc Range**	**2.51**	**67**	Pn			Pn	07 05 54.2	-0.2
RAMR	**Ramage Ranch**	**2.51**	**252**				Pn	07 05 55.8	+1.5
CMB	**Columbia Colle**	**2.51**	**310**				Pn	07 05 55.6	+1.2
CMB				IAML				07 06 33.4	
	comp=E,267nm,0.7s								
CMB				IAML				07 06 34.1	
	comp=N,246nm,0.9s								
KVN	**Kaiserville**	**2.60**	**357**				Pn	07 05 55.8	0.0
HULI	**Fort Hunter Li**	**2.70**	**262**				Pn	07 05 57.0	+0.1
HULI				IAML				07 06 38.2	
	comp=E,216nm,0.9s								
HULI				IAML				07 06 53.0	
	comp=N,222nm,0.8s								
DANC	**Danby, Needles**	**2.76**	**130**				Pn	07 05 57.8	-0.1
ELS	**Elsinore Mount**	**2.83**	**171**				Pn	07 05 58.7	-0.1
SAO	**San Andreas Ge**	**2.84**	**277**				Pn	07 05 59.3	+0.4
HMTC	**Hemet**	**2.84**	**164**				Pn	07 06 00.8	+1.9
DGR	**Domenigoni Val**	**2.90**	**164**				Pn	07 06 01.8	+2.1
BELC	**Belle Mtn. Jos**	**2.92**	**146**				Pn	07 05 59.5	-0.6
BELC				IAML				07 06 47.9	
	comp=E,126nm,0.8s								
BELC				IAML				07 06 48.6	
	comp=N,158nm,0.5s								
PNTR	**Pine Nut**	**2.94**	**334**				Pn	07 06 00.9	+0.4
PNTR				IAML				07 06 51.9	
	comp=E,122nm,1.0s								
PNTR				IAML				07 07 07.4	
	comp=N,166nm,0.9s								
PMD	**Palm Desert**	**3.08**	**155**				Pn	07 06 01.6	-0.5
PFO	**Pinyon Flats O**	**3.08**	**156**				Pn	07 06 01.9	-0.5
PFO				IAML				07 06 57.9	
	comp=N,91nm,2.0s								
IRM	**Iron Mountain**	**3.24**	**134**				Pn	07 06 03.5	-0.8
IRM				IAML				07 07 03.6	
	comp=E,91nm,1.5s								
BORC	**Borrego Spring**	**3.41**	**158**				Pn	07 06 07.5	+0.7
BORC				IAML				07 07 07.2	
	comp=E,119nm,1.1s								
BORC				IAML				07 07 08.6	
	comp=N,87nm,0.9s								
BC3	**Big Chuckawall**	**3.46**	**143**				Pn	07 06 08.9	+1.4
BC3				IAML				07 07 05.3	
	comp=E,76nm,0.6s								
BC3				IAML				07 07 12.4	
	comp=N,82nm,1.0s								
DPP	**Dos Picos Cty**	**3.54**	**166**				Pn	07 06 08.3	-0.2
JRSC	**Jasper Ridge**	**3.57**	**287**				Pn	07 06 08.9	0.0
JRSC				IAML				07 07 29.5	
	comp=E,88nm,1.7s								
JRSC				IAML				07 07 30.9	
	comp=N,80nm,1.1s								
LCMT	**Little Creek M**	**3.82**	**80**				Pn	07 06 13.0	+0.6
CCUT	**Cedar City**	**3.83**	**72**				Pn	07 06 13.5	+0.9
BLYC	**Blythe**	**3.89**	**133**				Pn	07 06 12.7	-0.5
BLYC				IAML				07 07 20.1	
	comp=N,76nm,1.2s								
BLYC				IAML				07 07 26.8	
	comp=E,63nm,0.9s								
BAR	**Barrett**	**3.91**	**164**				Pn	07 06 13.3	-0.2
BAR				IAML				07 07 16.2	
	comp=E,63nm,0.5s								
BAR				IAML				07 07 16.6	
	comp=N,47nm,0.6s								
SZCU	**Shurtz Canyon**	**4.05**	**72**	Pn		Pn		07 06 16.6	+0.9
CVS	**Carmenet Viney**	**4.06**	**299**	Pn		Pn		07 06 16.6	+0.9
CVS				IAML				07 07 27.2	
	comp=E,66nm,1.5s								
CVS				IAML				07 07 43.8	
	comp=N,59nm,2.1s								
KNB	**Kanab**	**4.15**	**81**			Pn		07 06 18.0	+0.9
CBX	**Cerro Bola**	**4.26**	**165**			Pn		07 06 19.0	+0.5
PKCU	**Pink Cliffs**	**4.62**	**76**			Pn		07 06 25.3	+1.7
ESJX	**Sierra Juarez**	**4.73**	**159**			Pn		07 06 25.3	+0.2
ELK	**Elko**	**4.78**	**25**			Pn		07 06 26.4	+0.6
MTPU	**Mount Pierson**	**4.86**	**69**			Pn		07 06 29.0	+2.0

*ASRS **24** 07:15:53.0±1.6, 54.˚10N×86.˚42E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 07:15:52.2±2.7, 54.˚12N×86.˚44E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=22.2km s-min=13.0km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**261**	I		I	I	07 22 20.0	
	baz=79,slow=313,SNR=1.4								
ZALV	**Zalesovo Beam**	**0.97**	**260**	Pg		Pg	Pg	07 16 09.8	-0.9
	0.9nm,0.3s,baz=82,slow=18,SNR=15								
ZALV				Lg		Lg	Lg	07 16 24.5	
	1.2nm,0.3s,baz=78,slow=30,SNR=6.5								
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn		Pn	Pn	07 17 22.8	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=6.4								
	0.6nm,0.5s								
MKAR	**Makanchi Array**	**7.79**	**201**	Pn		Pn	Pn	07 17 47.7	+0.9
	0.3nm,0.3s,baz=26,slow=14,SNR=7.0								
	0.3nm,0.3s								

*IDC **24** 07:17:25.7±0.6, 55.˚34N×159.˚45W, h0km, mb4.7/32, mbtmp4.7/35, ML4.5/3, MS3.5/54, Error ellipse: s-maj=16.4km s-min=11.2km az=174.0*
*NEIC **24** 07:17:31.7±1.4, 55.˚19N±0.˚05×159.˚22W±0.˚07, h42km±6km, mb4.7/40, ML4.6/40, Mwr4.5/22, ML4.4(AEIC), Error ellipse: s-maj=7.6km s-min=4.8km az=144.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.29; $M_{\theta\theta}$-3.36; $M_{\phi\phi}$-0.93; $M_{r\theta}$6.04; $M_{r\phi}$-1.96; $M_{\theta\phi}$2.76; Fault plane solution: M_o7.95000×10^{15} NP1:$\varphi_8$64.78000°, δ73.36000°, λ92.30000°. NP2:$\varphi_8$236.79000°, δ16.80000°, λ82.35000°. Principal axes: T 7.8853, Plg62.0000°, Azm338.0000°; N 0.1346, Plg2.0000°, Azm244.0000°; P -8.0199, Plg28.0000°, Azm153.0000°;*
*GFZ **24** 07:17:31.8±0.2, 56.˚N±5.˚×15.˚9W±.˚, h31km, M5.0/54, mb4.9/54*
*NEIC **24** 07:17:32.1, 55.˚22N×159.˚23W, h41km*
*AEIC **24** 07:17:32.3±1.5, 55.˚20N±0.˚05×159.˚22W±0.˚06, h31km±5km, Error ellipse: s-maj=8.4km s-min=4.5km az=154.0*
ISC 24 07:17:30.0±0.6, 55.˚21N±0.˚05×159.˚29W±0.˚04, h30km±4km, n508, σ1°11/479, mb4.8/96, MS3.5/49, 18C-6D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.43**	**204**				**Pn**	**07 17 40.9**	**+0.8**
CNBA				IAML				07 17 49.1	
	comp=E,26µm,0.6s								
CNBA	**Chernabura Isl**	**0.43**	**204**				**Sn**	**07 17 48.6**	**+1.7**
SDPT	**Sand Point**	**0.69**	**282**				**Pn**	**07 17 44.9**	**+1.2**
SDPT				IAML				07 17 55.7	
	comp=N,30µm,0.8s								
SDPT	**Sand Point**	**0.69**	**282**				**Sn**	**07 17 55.2**	**+1.8**
VNKR	**Veniaminof 5**	**0.82**	**357**				**Pb**	**07 17 46.7**	**+0.9**
VNSS	**Veniaminof 8**	**1.02**	**355**				**Pb**	**07 17 50.3**	**+1.0**
VNFG	**Fog Glacier, M**	**1.08**	**352**				**Pb**	**07 17 50.8**	**+0.5**
VNFG	**Fog Glacier, M**	**1.08**	**352**				**Pb**	**07 17 51.3**	**+1.0**
VNFG	**Fog Glacier, M**	**1.08**	**352**				**Sb**	**07 18 05.8**	**+1.7**
CHGN	**Chignik**	**1.20**	**24**				**Pn**	**07 17 51.2**	**+0.5**
CHGN				IAML				07 18 09.8	
	comp=N,14µm,0.4s								
CHGN	**Chignik**	**1.20**	**24**				**Sb**	**07 18 07.1**	**-0.1**
PS1A	**Pavlof South-1**	**1.42**	**279**				**Pb**	**07 17 55.4**	**-0.5**
PS1A							**Sb**	**07 18 13.9**	**+0.5**
PVV	**Pavlof Volcano**	**1.44**	**277**				**Pb**	**07 17 55.3**	**-0.9**
PS4A	**Pavlof South-4**	**1.47**	**276**				**Pb**	**07 17 56.1**	**-0.7**
DOL	**Dolgoi Island**	**1.48**	**269**				**Pb**	**07 17 56.2**	**-0.7**
HAG	**Hague Volcano**	**1.50**	**275**				**Pb**	**07 17 56.7**	**-0.6**
PN7A	**Pavlof North-7**	**1.56**	**279**				**Pb**	**07 17 57.7**	**-0.6**
ANPB	**Aniakchak Plen**	**1.69**	**19**				**Pn**	**07 17 58.9**	**+1.4**
DTNA	**Dutton South F**	**1.70**	**269**				**Pb**	**07 17 59.4**	**-1.2**
DT1	**Dutton Round H**	**1.72**	**268**				**Pb**	**07 17 59.5**	**-1.5**
ANNE	**Aniakchak Nort**	**1.84**	**22**				**Pn**	**07 18 00.8**	**+1.3**
ANNW	**Aniakchak Nort**	**1.86**	**18**				**Pn**	**07 18 01.1**	**+1.3**
CHIR	**Chirikof Islan**	**2.17**	**72**				**Pn**	**07 18 04.8**	**+0.7**
CHIR				IAML				07 18 41.4	
	comp=E,6µm,0.8s								
ISNN	**Isanotski Nort**	**2.61**	**263**				**Pn**	**07 18 12.4**	**+2.3**
SSLN	**Shishaldin Nor**	**2.74**	**263**				**Pn**	**07 18 14.4**

N15K Kwethluk River 4.99 355 Pn 07 18 44.5 +1.7
N15K IAML 07 20 18.8
comp=E,419nm,1.2s
N15K IAML 07 20 23.5
comp=N,327nm,1.2s
O18K Koktuh Hills 5.15 24 Pn 07 18 46.7 +1.7
O18K Koktuh Hills 5.15 24 IAML 07 19 59.2
comp=N,255nm,0.8s
O18K IAML 07 20 01.4
comp=E,237nm,0.9s
N16K Nishlik Lake 5.28 3 Pn 07 18 48.6 +1.8
OKTU Okmok Mt. Tuli 5.44 254 Pn 07 18 51.4 +2.3
N17K Nushagak Hills 5.45 11 Pn **Pn 07 18 50.0 +1.0**
M15K Kasigluk River 5.55 353 Pn 07 18 51.8 +1.4
M13K Dall Lake 5.65 339 Pn 07 18 53.9 +2.1
O19K Port Alsworth 5.66 26 Pn **Pn 07 18 53.1 +1.1**
M14K Bethel 5.73 347 Pn 07 18 54.3 +1.4
N18K Kilae Creek 5.77 17 Pn **Pn 07 18 55.1 +1.6**
ILSW Iliamna Southw 5.81 32 Pn 07 18 55.1 +0.9
ILS Iliamna Low So 5.81 33 Pn 07 18 55.7 +1.5
M16K Timber Creek 5.83 2 Pn 07 18 56.1 +1.8
IVE Iliamna Volcan 5.88 32 Pn 07 18 56.5 +1.5
O20K Slope Mountain 6.05 34 Pn 07 18 58.9 +1.5
CNPM China Poot 6.14 42 Pn 07 18 58.6 +0.1
N19K Bonanza Creek 6.17 22 Pn 07 19 00.8 +1.8
RED Redoubt Volcan 6.27 31 Pn 07 19 01.5 +1.1
M17K Holitna River 6.28 8 Pn 07 19 01.9 +1.4
RDSO Redoubt South 6.31 31 Pn 07 19 02.7 +1.7
NCT North Crescent 6.34 30 Pn 07 19 03.1 +1.7
M11K Mekoryuk 6.36 327 Pn 07 19 03.5 +1.9
L14K Kuka Creek 6.40 345 Pn 07 19 03.6 +1.5
RDJH Redoubt Jeurge 6.40 30 Pn 07 19 04.0 +1.7
SPIA Saint Paul Isl 6.42 292 Pn 07 19 04.4 +2.0
BRLK Bradley Lake 6.43 41 Pn 07 19 02.1 -0.4
DFR Drift River 6.44 30 Pn 07 19 04.1 +1.4
BRSE Bradley Lake S 6.47 42 Pn 07 19 03.6 +0.5
RDT Redoubt 6.51 31 Pn 07 19 04.8 +1.2
L16K Owhat River 6.52 359 Pn 07 19 05.0 +1.3
M18K Stony River 6.55 15 Pn 07 19 05.9 +1.7
L15K Ungalak Mounta 6.58 351 Pn 07 19 05.5 +0.9
L17K Donlin 6.96 4 Pn 07 19 11.2 +1.4
CKL Chakachamna La 7.03 29 Pn 07 19 12.4 +1.5
SPCR Spurr Chakacha 7.07 29 Pn 07 19 12.9 +1.5
SPBG Spurr Blockage 7.08 28 Pn 07 19 13.0 +1.5
SPU Mount Spurr 7.10 30 Pn 07 19 12.4 +0.7
L18K Granite Mounta 7.16 10 Pn 07 19 13.7 +1.3
SLKM Skilak Lake 7.18 39 Pn 07 19 13.2 +0.4
K15K Wolf Creek Mou 7.20 352 Pn 07 19 14.4 +1.4
SPCG Spurr Capps Gl 7.20 29 Pn 07 19 14.6 +1.5
SEW Seward 7.20 43 Pn 07 19 14.1 +1.0
K13K Kusilvak Mount 7.30 340 Pn 07 19 16.1 +1.7
O22K Cooper Landing 7.34 40 Pn 07 19 17.2 +2.2
L19K White Mountain 7.36 16 Pn 07 19 16.4 +1.2
STLK Strandline Lak 7.42 29 Pn 07 19 17.8 +1.7
K17K Iditarod 7.54 3 Pn 07 19 19.1 +1.3
RC01 Rabbit Creek A 7.76 37 Pn 07 19 21.6 +0.9
J14K Nanvaranak Lak 7.87 346 Pn 07 19 23.1 +0.8
SKT Skwentna 7.90 28 Pn 07 19 24.1 +1.4
P23K Montague Islan 7.98 48 Pn 07 19 24.4 +0.7
PWL Port Wells 8.11 41 Pn 07 19 26.3 +0.8
M22K Willow 8.12 32 Pn 07 19 26.2 +0.5
J16K Anvik River 8.12 356 Pn 07 19 26.7 +1.0
J17K VABM Dome 8.21 1 Pn 07 19 27.8 +0.9
PMR Palmer 8.32 36 Pn 07 19 28.7 +0.3
J18K Innoko River 8.38 8 Pn 07 19 31.0 +1.8
KNK Knik Glacier 8.43 38 Pn 07 19 30.7 +0.8
GHO Glory Hole Cre 8.52 35 Pn 07 19 31.7 +0.5
L22K Petersville 8.55 28 Pn 07 19 32.1 +0.5
HIN Hinchinbrook I 8.57 48 Pn 07 19 32.3 +0.4
CUT Chulitna 8.59 29 Pn 07 19 32.4 +0.4
GLI Glacier Island 8.60 44 Pn 07 19 32.9 +0.6
I17K Unalakleet 8.73 356 Pn 07 19 36.0 +2.0
SML Sawmill 8.74 36 Pn 07 19 34.8 +0.5
FID Port Fidalgo 8.77 46 Pn 07 19 34.6 -0.1
M23K Glacier View 8.94 38 Pn 07 19 37.5 +0.6
EYAK Cordova Ski Ar 8.97 48 Pn 07 19 37.9 +0.6
J19K Poorman 9.00 10 Pn 07 19 38.0 +1.3
SCM Sheep Creek Mo 9.17 38 Pn 07 19 39.2 -0.1
DIV Divide 9.27 45 Pn 07 19 41.4 +0.1
KAIM Kayak Island 9.27 53 Pn 07 19 42.5 +1.0
WAT7 Susitna Watana 9.34 31 Pn 07 19 42.6 +0.2
J20K Nowinta River 9.36 14 Pn 07 19 44.0 +1.4
RAGM Ragged Mountai 9.36 50 Pn 07 19 43.1 +0.5
KLU Klutina 9.42 43 Pn 07 19 43.8 +0.3
WAT1 Susitna Watana 9.42 32 Pn 07 19 43.2 -0.3
GOAT Goat Mountain 9.43 49 Pn 07 19 43.5 -0.2
WAT6 Susitna Watana 9.49 34 Pn 07 19 44.0 -0.6
H16K Elim 9.57 352 Pn 07 19 46.1 +0.6
GCSA Galena City Sc 9.64 6 Pn 07 19 47.0 +0.6
BMRM Bremner River 9.67 47 Pn 07 19 47.5 +0.6
M24K Tolsona, Glenn 9.70 39 Pn 07 19 47.7 +0.3
H17K Granite Mounta 9.76 358 Pn 07 19 49.8 +1.7
RND Reindeer 9.78 29 Pn 07 19 47.9 -0.6
BERG Berg Lake 9.79 52 Pn 07 19 48.8 +0.2
I20K Naaghedeneel 9.91 12 Pn 07 19 50.8 +0.7
DHY Denali Highway 9.96 33 Pn 07 19 50.1 -0.9
H18K Honhosa River 9.98 2 Pn 07 19 52.5 +1.3
N25K Chitina, Valde 10.01 44 Pn 07 19 51.4 -0.2
MCK McKinley 10.02 27 Pn 07 19 52.0 +0.3
G15K Niukluk 10.09 348 Pn 07 19 53.4 +0.8
GLB Gilahina Butte 10.24 46 Pn 07 19 55.4 +0.6
HARP HAARP 10.26 40 Pn 07 19 56.1 +1.1
VRDI Verde Repeater 10.28 48 Pn 07 19 56.1 +0.6
G16K Koyuk River 10.32 353 Pn 07 19 57.6 +1.8
H19K Roundabout Mou 10.44 7 Pn 07 19 58.8 +1.4
PAX Paxson 10.51 37 Pn 07 19 58.5 -0.1
I21K Tanana 10.63 17 Pn 07 20 01.1 +1.1
MLY Manley 10.72 20 Pn 07 20 02.9 +1.6
G18K Tagagawik 10.72 1 Pn 07 20 02.7 +1.4
GRNC Granite Creek 10.81 52 Pn 07 20 03.0 +0.2
F15K North Star Dit 10.85 348 Pn 07 20 04.9 +1.8
BARN Barnard Glacie 10.99 51 Pn 07 20 06.2 +1.1
IMAR Indian Mountai 11.18 12 Pn 07 20 06.1 +1.2
COLA College 11.23 26 P **Pn 07 20 06.3 -1.8**
RIDG Independent Ri 11.24 35 Pn 07 20 08.7 +0.2
PCA Pinnacle 11.29 57 Pn 07 20 10.0 +0.9
ILAR Eielson Array 11.39 28 Pn **Pn 07 20 08.3 -2.1**
comp=E,1.0nm,0.3s,baz=216,slow=13,SNR=55
ILAR LR LR 07 24 48.6
comp=E,279nm,20.2s,baz=250,slow=39
M27K Edge Creek, AK 11.50 44 Pn 07 20 12.3 +0.3
O28M Mount Upton 11.54 53 Pn 07 20 13.7 +1.0
HYT Haines Junctio 12.81 55 Pn 07 20 30.9 +1.0
FYU Fort Yukon 13.24 25 Pn 07 20 35.1 -0.4
DAWY Dawson 13.35 40 Pn 07 20 36.1 -1.1
F24K Squaw Lake 13.47 19 Pn 07 20 37.6 -1.1
SIT Sitka 13.47 72 Pn **Pn 07 20 38.8 0.0**
SKAG Skagway 13.59 62 Pn 07 20 41.8 +1.5
D20K Etivluk River 13.61 4 Pn 07 20 41.0 +0.4
WHY Whitehorse 14.02 57 Pn 07 20 47.4 +1.0
P32M Atlin 14.42 62 Pn **Pn 07 20 53.6 +1.8**
M31M Drury Creek, Y 14.64 51 Pn **Pn 07 20 56.4 +1.7**
CRAG Craig 14.86 78 Pn **Pn 07 20 58.9 +1.1**
B22K Teshekpuk Lake 15.41 7 Pn **Pn 07 21 06.5 +1.6**
B22K IAmb IAmb 07 21 10.7
comp=Z,34nm,0.7s
SHEM Shemya Is, Ala 15.82 272 LR LR 07 27 15.5
comp=Z,168nm,20.6s,baz=103,slow=38
H31M Peel River 16.09 39 Pn **P 07 21 15.5 -1.3**
H31M IAmb IAmb 07 21 34.9
comp=Z,41nm,0.7s
MMPY Sheldon Lake, 16.15 51 Pn **P 07 21 16.0 -1.5**
DLBC Dease Lake 16.27 67 Pn **Pn 07 21 17.0 +0.9**
comp=Z,0.5nm,0.3s,baz=174,slow=12,SNR=6.7
DLBC LR LR 07 27 19.1
comp=Z,79nm,18.4s,baz=258,slow=36
comp=Z,3.5nm,1.0s
F30M Barrier River 16.61 32 P 07 21 21.6 -0.9
F30M IAmb IAmb 07 21 25.3
comp=Z,32nm,0.5s
INK Inuvik 17.71 32 P **Pn 07 21 32.5 -1.3**
comp=Z,4.7nm,0.3s,baz=228,slow=12,SNR=29
INK LR LR 07 29 47.5
comp=Z,83nm,19.2s,baz=228,slow=42
comp=Z,15nm,0.4s
INK Inuvik 17.71 32 Pn 07 21 33.6 -0.3
INK Inuvik 17.71 32 P **Pn 07 21 30.7 -3.2**
BBB Bella Bella 18.62 86 LR LR 07 27 29.5
comp=Z,143nm,20.6s,baz=326,slow=32
WRGLY Wrigley 19.77 52 P **P 07 21 57.9 +0.6**
WRGLY IAmb IAmb 07 22 27.3
comp=Z,36nm,0.8s
NLWA Neilton Lookou 23.28 95 P P 07 22 36.8 +2.0
YKA Yellowknife Ar 23.80 54 P P 07 22 39.5 -0.1
comp=Z,5.4nm,0.7s,baz=273,slow=8.8,SNR=15
YKA LR LR 07 32 23.4
comp=Z,91nm,19.1s,baz=202,slow=38
comp=Z,5.4nm,0.7s
PEA0B Petropavlovsk- 24.98 283 P P 07 22 50.5 -0.1
PEA0B IAmb IAmb 07 22 51.1
comp=Z,23nm,0.7s
PETK Petropavlovsk- 24.98 283 P P 07 22 50.3 -0.4
comp=Z,20nm,0.6s,baz=74,slow=12,SNR=56
PETK LR LR 07 32 05.3
comp=Z,60nm,21.5s,baz=88,slow=35
comp=Z,20nm,0.6s
PETK Petropavlovsk- 24.98 283 P P 07 22 50.4 -0.2
SEY Seymchan 25.44 307 LR LR 07 33 52.8
comp=Z,250nm,21.1s,baz=118,slow=39
NEW Newport 26.68 87 LR LR 07 32 09.6
comp=Z,84nm,21.3s,baz=299,slow=33
NEW Newport 26.68 87 P P 07 23 08.1 +2.0
MA2 Magadan 26.73 300 LR LR 07 33 19.5
comp=Z,72nm,21.7s,baz=93,slow=36
YBH Yreka Blue Hor 27.39 104 LR LR 07 31 45.1
comp=Z,232nm,21.3s,baz=310,slow=31
WVOR Wild Horse Val 29.21 99 P P 07 23 30.8 +1.9
LYMT Lyon Mountain 30.14 86 P P 07 23 38.4 +1.2
HLJD Hailey 30.91 93 P P 07 23 46.9 +3.0
MCMT McKenzie Canyo 31.04 90 P P 07 23 45.8 +0.6
RES Resolute Bay 31.15 28 LR LR 07 38 57.6
comp=Z,53nm,18.5s,baz=259,slow=42
BLKN Baker Lake 31.80 48 P P 07 23 51.3 -0.1
BLKN IAmb IAmb 07 23 52.2
comp=Z,10nm,0.9s
NVAR Mina Array Bea 32.11 104 P P 07 23 56.5 +1.9
comp=Z,3.1nm,0.7s,baz=298,slow=9.7,SNR=4.2
NVAR LR LR 07 34 40.4
comp=Z,170nm,21.2s,baz=338,slow=32
YHH Holmes Hill 32.21 88 P P 07 23 56.1 +0.6
YMR Madison River 32.22 89 P P 07 23 56.2 +0.8
ELK Elko 32.25 98 LR LR 07 35 28.2
comp=Z,112nm,19.3s,baz=301,slow=34
TIXI Tiksi 33.50 327 LR LR 07 39 45.2
comp=Z,132nm,18.8s,baz=52,slow=40
PDAR Pinedale Array 34.19 90 P P 07 24 14.2 +1.5
comp=Z,0.5nm,0.7s,baz=303,slow=4.4,SNR=7.0
PDAR LR LR 07 35 44.9
comp=Z,22nm,19.2s,baz=314,slow=32
PDAR Pinedale Array 34.19 90 P P 07 24 13.0 +0.3
YAK Yakutsk 35.85 310 LR LR 07 40 15.2
comp=Z,108nm,21.8s,baz=76,slow=38
ILON Igloolik, Nuna 35.87 36 P P 07 24 26.5 0.0
RSSD Black Hills 36.51 84 P P 07 24 31.4 -1.2
RSSD IAmb IAmb 07 24 45.8
comp=Z,6.8nm,0.9s
RSSD Black Hills 36.51 84 P P 07 24 34.2 +1.6
PFO Pinyon Flats O 36.65 108 LR LR 07 37 11.0
comp=Z,119nm,19.9s,baz=310,slow=32
ULM Lac du Bonnet 37.54 70 P P 07 24 41.3 +0.3
comp=Z,3.3nm,0.8s,baz=290,slow=8.2,SNR=4.3
ULM LR LR 07 40 22.4
comp=Z,66nm,18.1s,baz=12,slow=37
comp=Z,3.3nm,0.8s
ASAJ Asahikawa 38.14 278 LR LR 07 41 58.9
comp=Z,27nm,19.0s,baz=304,slow=39
MVCO Mesa Verde 38.49 96 P P 07 24 53.2 +3.8
AGMN Agassiz Nation 38.63 73 P P 07 24 50.5 +0.3
NEEM North Greenlan 40.50 19 *i* P **P 07 25 04.8 -1.0**
NEEM IAmb IAmb 07 25 05.6
comp=Z,6.4nm,0.5s
TUC Tucson 40.76 104 P P 07 25 12.2 +4.0
EYMN Ely 41.21 71 P P 07 25 11.8 +0.1
EYMN IAmb IAmb 07 25 26.2
comp=Z,7.9nm,0.7s
EYMN Ely 41.21 71 P P 07 25 12.0 +0.3
ANMO Albuquerque 41.26 97 LR LR 07 41 07.8
comp=Z,70nm,18.7s,baz=308,slow=34
TBO Thunder Bay 41.92 69 P P 07 25 17.0 -0.5
NOR Nord 41.96 8 *i* P **P 07 25 16.7 -0.7**
NOR IAmb IAmb 07 25 17.1
comp=Z,4.2nm,0.9s
FRB Frobisher Bay 43.06 41 LR LR 07 43 33.4
comp=Z,100nm,19.5s,baz=315,slow=36
FRB Frobisher Bay 43.06 41 P P 07 25 25.7 -0.8
H11N2 WAKE ISLAND Hy 43.65 229 T T 08 11 55.3
baz=28,slow=76,SNR=15
H11N3 WAKE ISLAND Hy 43.66 229 T T 08 11 54.2
baz=28,slow=76,SNR=12
H11N1 WAKE ISLAND Hy 43.67 229 T T 08 11 52.5
baz=28,slow=76,SNR=10.0
SAATT Saattut 44.28 27 *i* P **P 07 25 34.7 -1.5**
SAATT IAmb IAmb 07 25 37.1
comp=Z,17nm,0.9s
H11S1 WAKE ISLAND Hy 44.82 229 T T 08 13 42.2
baz=28,slow=76,SNR=11
H11S2 WAKE ISLAND Hy 44.83 229 T T 08 13 20.2
baz=28,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 44.83 229 T T 08 13 28.2
baz=28,slow=76,SNR=7.3
MAJO Matsushiro 45.66 273 P P 07 25 47.0 -0.6
MAJO IAmb IAmb 07 25 49.7
comp=Z,16nm,1.1s
MAJO Matsushiro 45.66 273 P P 07 25 47.8 +0.1
MJAR Matsushiro Arr 45.66 273 P P 07 25 47.5 -0.1
comp=Z,2.9nm,0.7s,baz=35,slow=6.2,SNR=13
MJAR LR LR 07 44 50.3
comp=Z,14nm,19.6s,baz=53,slow=36
comp=Z,2.9nm,0.7s
MJAR Matsushiro Arr 45.66 273 P P 07 25 47.6 -0.1
MJB9 Matsu-Tunnel 45.66 273 P P 07 25 48.4 +0.8
MJB9 IAmb IAmb 07 25 50.7
comp=Z,15nm,1.1s
WMOK Wichita Mounta 45.80 91 P P 07 25 50.0 +1.3
DAG Danmarks Havn 45.94 12 P P 07 25 48.6 -0.7
DAG Danmarks Havn 45.94 12 *i* P **P 07 25 48.0 -1.3**
DAG IAmb IAmb 07 25 49.1
comp=Z,12nm,0.6s
SUMG Summit 46.14 21 P P 07 25 51.8 +0.4
SUMG Summit 46.14 21 *i* P **P 07 25 51.3 -0.2**
SUMG IAmb IAmb 07 25 51.6
comp=Z,8.9nm,1.1s
NRIK Noril'sk 46.67 333 P P 07 25 54.6 -0.6
comp=Z,14nm,0.5s,baz=60,slow=6.5,SNR=15
NRIK LR LR 07 48 40.5
comp=Z,87nm,18.4s,baz=46,slow=40
comp=Z,14nm,0.5s
NRIK Noril'sk 46.67 333 P 07 25 54.6 -0.6
SPITS Spitsbergen Ar 46.84 1 P **P 07 25 55.7 -0.7**
comp=Z,1.2nm,0.5s,baz=38,slow=8.7,SNR=5.0
SPITS PcP **PcP 07 27 28.2 -0.6**
comp=Z,1.9nm,0.5s,baz=64,slow=3.8,SNR=6.8
SPITS LR LR 07 47 31.1
comp=Z,33nm,18.7s,baz=313,slow=39
comp=Z,1.2nm,0.5s
TXAR Lajitas Array 47.00 100 P P 07 25 59.6 +1.3
comp=Z,0.4nm,0.7s,baz=303,slow=6.9,SNR=6.8
TXAR LR LR 07 44 44.9
comp=Z,117nm,19.1s,baz=314,slow=35
TXAR Lajitas Array 47.00 100 P P 07 25 58.7 +0.4
SFJD Kangerlussuaq 47.04 31 LR LR 07 47 59.5
comp=Z,31nm,20.0s,baz=334,slow=39
LPIG La Paz 47.43 111 LR LR 07 43 37.5
comp=Z,26nm,18.8s,baz=342,slow=33
DBG Daneborg 47.88 14 *i* P **P 07 26 03.7 -0.8**
DBG IAmb IAmb 07 26 04.3
comp=Z,8.4nm,0.7s
MIAR Mount Ida 48.92 87 P P 07 26 13.1 +0.1
MIAR pP **sP 07 26 24.4 -1.3**
SCHQ Schefferville 49.14 50 P P 07 26 14.0 -0.5
comp=Z,2.4nm,0.6s,baz=287,slow=5.5,SNR=8.8
SCHQ LR LR 07 48 21.6
comp=Z,65nm,18.2s,baz=300,slow=38
comp=Z,2.4nm,0.6s
SADO Sadowa 49.83 67 LR LR 07 46 23.6
comp=Z,24nm,19.9s,baz=12,slow=35
KSRS Korea Array 50.86 281 P P 07 26 27.9 +0.2
comp=Z,5.8nm,0.8s,baz=52,slow=6.4,SNR=12
KSRS LR LR 07 50 37.5
comp=Z,12nm,18.0s,baz=55,slow=39
comp=Z,5.8nm,0.8s
SCO Scoresbysund 50.94 17 P P 07 26 27.5 -0.3
SCO IAmb IAmb 07 26 28.7
comp=Z,4.8nm,0.6s
SCO Scoresbysund 50.94 17 *i* P **P 07 26 27.7 -0.1**
SCO IAmb IAmb 07 26 28.8
comp=Z,4.6nm,0.6s
SOEG Soedalen 51.05 22 *i* P **P 07 26 28.2 -0.5**
SOEG IAmb IAmb 07 26 29.2
comp=Z,23nm,0.8s
WVT Waverly 51.05 81 P P 07 26 28.6 -0.6
WVT IAmb IAmb 07 26 41.8
comp=Z,8.8nm,0.7s
WVT Waverly 51.05 81 P **P 07 26 28.8 -0.4**
WVT pP **sP 07 26 40.9 -1.1**
TRQ Mont Tremblant 51.22 62 P 07 26 29.4 -1.0
TRQ IAmb IAmb 07 26 30.5
comp=Z,11nm,1.2s
ANGG Ammassalik, Gr 51.63 27 *i* P **P 07 26 31.8 -1.3**
ANGG IAmb IAmb 07 26 33.3
comp=Z,26nm,1.1s
L56A Greenwood 52.48 68 P 07 26 39.3 -0.5
XLT XiLinHaoTe 52.77 295 *eP* **P 07 26 42.0 0.0**
XLT pmax pmax
comp=Z,31nm,0.7s
TLY Talaya 53.32 310 LR LR 07 51 39.0
comp=Z,34nm,18.1s,baz=27,slow=39
SONM Songino Array 54.79 305 P **P 07 26 56.0 -0.8**
comp=Z,4.8nm,0.6s,baz=50,slow=7.3,SNR=19
SONM PcP **PcP 07 27 59.3 +0.4**
comp=Z,2.7nm,0.6s,baz=48,slow=3.0,SNR=6.2
SONM LR LR 07 52 12.6
comp=Z,87nm,19.0s,baz=47,slow=38
comp=Z,4.8nm,0.6s
VADS Vadso 54.81 356 *eP* **P 07 26 55.6 -0.8**
VADS IAmb IAmb 07 26 55.6
comp=Z,13nm,0.6s
KEV Kevo 55.25 357 P 07 26 58.6 -1.0
TRO Tromso 55.45 1 *eP* **P 07 27 00.2 -0.8**
TRO IAmb IAmb 07 27 00.7
comp=Z,16nm,0.8s
ARA0 ARCESS Array S 55.51 358 *eP* **P 07 27 00.3 -1.2**
ARCES ARCESS Array B 55.51 358 P **P 07 27 00.4 -1.1**
comp=Z,5.3nm,0.7s,baz=21,slow=7.1,SNR=31
ARCES PcP **PcP 07 28 00.6 -0.5**
comp=Z,3.3nm,0.6s,baz=2.7,slow=5.1,SNR=4.8
ARCES LR LR 07 52 34.0
comp=Z,25nm,19.6s,baz=24,slow=38
comp=Z,5.3nm,0.7s
JETT Jettan, Norway 55.54 0 *eP* **P 07 27 01.2 -0.6**
JETT IAmb IAmb 07 27 03.5
comp=Z,15nm,0.6s
KTK1 Kautokeino 56.07 359 *eP* **P 07 27 04.6 -0.9**
BORG Borgarnes 56.10 20 LR LR 07 52 12.4
comp=Z,22nm,21.4s,baz=320,slow=37
LVZ Lovozero 56.77 354 P **P 07 27 08.9 -1.6**
comp=Z,27nm,1.1s
STEI Steigen 57.10 2 *eP* **P 07 27 12.0 -0.8**
HHC Hu-ho-hao-te 57.29 296 *eP* **P 07 27 17.0 +2.3**
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,55nm,5.3s
SGF Sodankyl 57.59 357 P **P 07 27 15.1 -1.2**
HNS HongShan 58.17 291 ⇑P **P 07 27 21.1 +0.4**
HNS pmax pmax
comp=Z,22nm,1.0s
MSF Maaselka 59.03 356 P P 07 27 25.6 -0.7
ZALV Zalesovo Beam 59.13 322 P P 07 27 26.6 -0.6
comp=Z,4.6nm,0.7s,baz=26,slow=5.8,SNR=18
ZALV LR LR 07 55 03.1
comp=Z,144nm,19.4s,baz=36,slow=38
comp=Z,4.6nm,0.7s
OUL Oulu 59.96 357 P P 07 27 31.3 -1.4
CMIG Matias Romero 61.57 101 LR LR 07 53 04.5
comp=Z,43nm,20.6s,baz=326,slow=35
AKN Aaknes 62.45 7 *eP* **P 07 27 49.9 +0.2**
AKN IAmb IAmb 07 27 50.9
comp=Z,15nm,0.9s
FINES FINESS Array B 63.61 357 P P 07 27 56.5 -0.8
comp=Z,4.7nm,0.6s,baz=12,slow=8.2,SNR=23
FINES LR LR 07 57 15.7
comp=Z,19nm,18.9s,baz=44,slow=38
comp=Z,4.7nm,0.6s
NB2 NORSAR Subarra 63.85 5 P **P 07 27 58.6 -0.4**
comp=Z,2.7nm,0.8s,baz=355,slow=6.9
NB2 NORSAR Subarra 63.85 5 P P 07 28 15.5 +17
NOA NORSAR Array B 63.85 5 P **P 07 27 58.3 -0.7**
comp=Z,5.2nm,0.9s,baz=355,slow=6.6,SNR=8.1
NOA LR LR 07 53 42.2
comp=Z,14nm,21.9s,baz=110,slow=34
comp=Z,5.2nm,0.9s
KURK Kurchatov 63.96 323 P P 07 27 59.5 -0.3
SKAR Skarslia 64.03 7 *eP* **P 07 28 00.5 +0.3**
KURBB Kurchatov Arra 64.07 323 P P 07 27 59.9 -0.6
comp=Z,6.3nm,0.9s,baz=24,slow=6.6,SNR=40
KURBB PcP **PcP 07 28 35.3 -0.3**
comp=Z,1.6nm,0.6s,baz=42,slow=4.0,SNR=5.6
comp=Z,6.3nm,0.9s
NC602 NORSAR Array S 64.17 5 *eP* **P 07 28 00.4 -0.7**
KIRV Kirov 64.23 344 P P 07 28 00.5 -0.9
comp=Z,14nm,0.5s,baz=14,slow=12,SNR=5.6
KIRV LR LR 08 00 45.8
comp=Z,48nm,18.6s,baz=17,slow=41
comp=Z,14nm,0.5s
GTA2 Gaotai 64.23 302 *eP* **P 07 28 01.3 -0.7**
GTA2 pmax pmax
comp=Z,13nm,1.0s
BVAR Borovoye Array 64.59 329 P P 07 28 03.7 -0.3
comp=Z,20nm,0.7s,baz=38,slow=7.0,SNR=51
BVAR PcP **PcP 07 28 37.4 -0.3**
comp=Z,3.5nm,0.5s,baz=35,slow=3.6,SNR=4.2
comp=Z,20nm,0.7s
BORK Borovoye 64.59 329 P 07 28 03.7 -0.3
ARTI Arti 64.61 338 P P 07 28 03.3 -0.7
comp=Z,24nm,0.6s,baz=32,slow=3.9,SNR=39
ARTI LR LR 07 58 28.7
comp=Z,78nm,21.3s,baz=38,slow=38
comp=Z,24nm,0.6s
LZH Lanzhou 64.84 297 *eP* **P 07 28 05.0 -1.1**
LZH pmax pmax
comp=Z,21nm,1.6s
HFS Hagfors 64.86 4 P **P 07 28 05.0 -0.6**
comp=Z,6.0nm,0.6s,baz=20,slow=4.7,SNR=18
comp=Z,6.0nm,0.6s
LZDM Lanzhou Array 65.02 297 P P 07 28 06.9 -0.5
comp=Z,1.1nm,0.3s,baz=54,slow=3.8,SNR=3.6
comp=Z,1.1nm,0.3s
SSLB Suanglung 65.04 276 P P 07 28 06.8 -0.5
KONO Kongsberg 65.14 6 *eP* **P 07 28 08.2 +0.8**
BLS5 Blasjo 65.14 8 *eP* **P 07 28 07.8 +0.3**
MKAR Makanchi Array 65.92 319 P P 07 28 11.7 -1.0
comp=Z,3.2nm,0.7s,baz=46,slow=6.6,SNR=30
comp=Z,3.2nm,0.7s
MAKZ Makanchi 66.03 319 P P 07 28 12.4 -0.9
WMQ Urumqi 66.22 313 *eP* **P 07 28 15.0 +0.3**
WMQ sP sP 07 28 31.9 +4.2
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ LR LR
comp=Z,92nm,21.7s
DRUM Mains of Drumt 66.65 14 P P 07 28 17.4 +0.2
EKA Eskdalemuir Ar 68.09 14 P P 07 28 26.6 +0.2
comp=Z,11nm,0.7s,baz=335,slow=5.1,SNR=63
EKA LR LR 07 59 08.7
comp=Z,26nm,18.4s,baz=228,slow=37
comp=Z,11nm,0.7s
ESK Eskdalemuir 68.10 14 P 07 28 25.8 -0.5
AKTO Aktyubinsk 70.22 336 P P 07 28 39.1 -0.4
comp=Z,20nm,0.8s,baz=23,slow=5.0,SNR=43
AKTO LR LR 08 03 10.3
comp=Z,44nm,18.7s,baz=180,slow=39
comp=Z,20nm,0.8s
FOEL Foel Wylfa 70.46 15 P P 07 28 40.7 -0.3
BELG Belogornoye 70.46 343 P P 07 28 40.4 -0.6
comp=Z,22nm,0.4s,baz=355,slow=3.3,SNR=4.0
comp=Z,22nm,0.4s
ABKAR Akbulak array 70.84 334 P 07 28 43.3 0.0
KDJ Kajisay 71.81 319 P 07 28 49.3 -0.3
KDJ Kajisay 71.81 319 P **P 07 28 49.2 -0.3**
WUS Wushi 71.83 317 P **P 07 28 50.0 +0.3**
TARG Taragay, Kyrgy 71.92 319 P 07 28 50.7 +0.1
TARG Taragay, Kyrgy 71.92 319 P **P 07 28 50.4 -0.1**
BOOM Boomskoye usch 71.95 320 P 07 28 50.2 -0.3
BOOM IAmb IAmb 07 28 52.3
comp=Z,8.1nm,0.6s
BOOM Boomskoye usch 71.95 320 P **P 07 28 49.5 -1.0**
AAK Ala-Archa 72.35 321 P 07 28 52.8 0.0
AAK IAmb IAmb 07 28 54.2
comp=Z,13nm,1.4s
AAK Ala-Archa 72.35 321 P **P 07 28 53.2 +0.4**
PPT Papeete 72.96 170 LR LR 07 55 33.6
comp=Z,27nm,21.0s,baz=18,slow=31
ASAI AK-SAY(Kyrgyzs 73.10 319 P **P 07 28 57.9 +0.4**
KK31 Karatay Array 73.32 324 P 07 28 58.0 -0.4

KK31 IAmb IAmb 07 29 15.6
comp=Z,7.5nm,0.8s
KKAR Karatay Array 73.32 324 P P 07 28 57.7 -0.6
WIMM Wimmelburg 73.36 6 P P 07 28 57.8 -0.6
PZH PanZhiHua 73.52 293 P P 07 29 01.4 +1.5
CLL Collm 73.65 5 P P 07 28 59.9 -0.2
comp=Z,8.4nm,1.0s
CLL Collm 73.65 5 *i* P **P 07 28 59.9 -0.2**
comp=Z,11nm,1.3s
CLL *i* pP **sP 07 29 13.1 -0.1**
CLL *i* sP **PcP 07 29 17.9 +2.1**
RNPP5 Staryi Chortor 73.84 357 P **P 07 29 00.6 -0.6**
MI28 Mi28,Pidlybu 74.07 355 P **P 07 29 01.7 -0.8**
BRG Berggiesshubel 74.13 4 P **P 07 29 02.9 -0.1**
BRG Berggiesshubel 74.13 4 *eP* **P 07 29 02.9 0.0**
BRG Amp 07 29 04.0
comp=Z,5.6nm,0.8s
BRG Berggiesshubel 74.13 4 P P 07 29 09.5 +6.6
BRG Amp 07 29 10.2
comp=Z,3.6nm,0.8s
AK21 Malin Array Si 74.15 355 P **P 07 29 01.7 -1.3**
AK23 Malin Array Si 74.16 354 P **P 07 29 01.7 -1.4**
AK22 Malin Array Si 74.17 354 P **P 07 29 01.8 -1.3**
AK20 Malin Array Si 74.19 355 P **P 07 29 01.9 -1.3**
AK03 Malin Array Si 74.19 354 P **P 07 29 01.9 -1.4**
AK04 Malin Array Si 74.20 354 P **P 07 29 02.0 -1.3**
AK18 Malin Array Si 74.20 354 P **P 07 29 02.0 -1.3**
AK19 Malin Array Si 74.21 355 P **P 07 29 02.0 -1.4**
AKASG Malin Array Be 74.22 354 P **P 07 29 02.3 -1.1**
comp=Z,6.1nm,0.4s,baz=9.8,slow=5.8,SNR=41
AKASG LR LR 08 04 38.7
comp=Z,31nm,19.6s,baz=18,slow=38
comp=Z,6.1nm,0.4s
AKBB Malin Array Si 74.22 354 **P 07 29 02.9 -0.5**
AKBB Malin Array Si 74.22 354 P P **07 29 02.1 -1.3**
KIEV Kiev 74.22 354 ⇑P **P 07 29 02.7 -0.8**
KIEV Kiev 74.22 354 P **P 07 29 02.1 -1.3**
comp=Z,1µmcomp=Z,114nm,1.1s
KIEV Kiev 74.22 354 P **P 07 29 02.6 -0.9**
AK01 Malin Array Si 74.23 354 P **P 07 29 02.1 -1.4**
AK15 Malin Array Si 74.23 354 P **P 07 29 02.1 -1.4**
MOX Moxa 74.24 6 P **P 07 29 03.9 +0.3**
AK17 Malin Array Si 74.24 354 P **P 07 29 02.2 -1.4**
AK11 Malin Array Si 74.24 354 P **P 07 29 02.2 -1.4**
KSP Ksiaz 74.25 3 P **P 07 29 03.2 -0.4**
comp=Z,9.2nm,0.9s
AK16 Malin Array Si 74.25 354 P **P 07 29 02.3 -1.3**
AK02 Malin Array Si 74.26 354 P **P 07 29 02.3 -1.4**
AK12 Malin Array Si 74.28 354 P **P 07 29 02.4 -1.4**
AK08 Malin Array Si 74.28 354 P **P 07 29 02.4 -1.4**
AK14 Malin Array Si 74.29 354 P **P 07 29 02.5 -1.4**
AK05 Malin Array Si 74.30 354 P **P 07 29 02.5 -1.4**
AK09 Malin Array Si 74.30 354 P **P 07 29 02.5 -1.4**
AK13 Malin Array Si 74.31 354 P **P 07 29 02.6 -1.4**
AK10 Malin Array Si 74.32 354 P **P 07 29 02.7 -1.3**
AK06 Malin Array Si 74.33 354 P **P 07 29 02.7 -1.4**
OSTC Ostas 74.53 3 *eP* **P 07 29 06.2 +0.9**
DPC Dobruska-Polom 74.74 3 *eP* **P 07 29 07.0 +0.4**
DPC Dobruska-Polom 74.74 3 P **P 07 29 07.0 +0.4**
KSH2 Kashi 75.01 319 P **P 07 29 08.9 +0.5**
KSH2 sP PcP 07 29 25.3 +3.2
KSH2 pmax pmax
comp=Z,11nm,0.9s
KRLC Kraliky 75.03 3 *eP* **P 07 29 08.2 0.0**
PRU Pruhonice 75.04 4 *eP* **P 07 29 07.3 -0.9**
LUBAR Lubar, Ukraine 75.07 355 P **P 07 29 06.9 -1.5**
MSVF Nonsavu 75.17 202 LR LR 07 54 26.0
comp=Z,88nm,19.9s,baz=112,slow=30
STEB Steborice 75.19 2 *eP* **P 07 29 09.3 +0.2**
MORC Moravsky Berou 75.35 2 ⇑P **P 07 29 09.9 -0.2**
MORC Moravsky Berou 75.35 2 **P 07 29 09.6 -0.4**
MORC IAmb IAmb 07 29 28.7
comp=Z,11nm,1.3s
MORC Moravsky Berou 75.35 2 *eP* **P 07 29 09.5 -0.6**
MORC Moravsky Berou 75.35 2 P **P 07 29 10.4 +0.3**
GRB4 Grafenberg Arr 75.41 6 P **P 07 29 11.1 +0.7**
KWP Kalwaria Pacla 75.51 359 P **P 07 29 11.2 +0.2**
comp=Z,1µmcomp=Z,14nm,0.7s
GRB3 Grafenberg Arr 75.55 6 P **P 07 29 11.3 +0.1**
ZVC Zvikov 75.58 4 *eP* **P 07 29 11.6 +0.3**
STHS Stebnicka Huta 75.74 360 *eP* **P 07 29 10.8 -1.5**
VRAC Vranov 75.79 3 P **P 07 29 12.6 0.0**
comp=Z,2.9nm,0.3s,baz=344,slow=6.6,SNR=6.4
VRAC LR LR 08 03 35.3
comp=Z,18nm,20.3s,baz=338,slow=37
comp=Z,2.9nm,0.3s
VRAC Vranov 75.79 3 ⇑P **P 07 29 11.6 -1.0**
VRAC Vranov 75.79 3 *eP* **P 07 29 12.3 -0.3**
VRAC Vranov 75.79 3 P **P 07 29 12.8 +0.2**
WET Wettzell 75.81 5 P **P 07 29 12.8 +0.1**
KHC Kasperske Hory 75.86 5 *eP* **P 07 29 13.4 +0.4**
KHC Kasperske Hory 75.86 5 P **P 07 29 13.1 +0.1**
comp=Z,11nm,1.0s
BTK Batken 75.92 323 P **P 07 29 13.7 +0.1**
LANS Liptovska Anna 76.00 1 *eP* **P 07 29 14.3 +0.5**
KRUC Moravsky 76.03 3 *eP* **P 07 29 13.8 -0.1**
GEC2 GERESS Array S 76.15 5 **P 07 29 14.5 -0.2**
GERES GERESS Array B 76.15 5 P **P 07 29 14.6 -0.1**
comp=Z,2.7nm,0.7s,baz=343,slow=4.2,SNR=21
comp=Z,2.7nm,0.7s
KOLS Kolonicke sedl 76.22 359 P **P 07 29 15.2 +0.2**
KOLS Kolonicke sedl 76.22 359 *eP* **P 07 29 15.6 +0.6**
JAVC Velka Javorina 76.27 2 *eP* **P 07 29 16.0 +0.7**
JAVC Velka Javorina 76.27 2 P **P 07 29 15.7 +0.4**
LSA Lhasa 76.29 302 P **P 07 29 16.8 +0.5**
ECH Echery 76.31 9 **P 07 29 15.5 -0.1**
ECH IAmb IAmb 07 29 16.6
comp=Z,8.4nm,1.0s
ECH Echery 76.31 9 P **P 07 29 14.7 -0.9**
KMPD K-Podol'skiy 76.48 356 P **P 07 29 14.8 -1.7**
SLVN Son La 76.52 288 **P 07 29 17.3 +0.1**
SLVN IAmb IAmb 07 29 18.9
comp=Z,7.3nm,0.8s
MODS Modra-Piesok 76.74 2 P **P 07 29 18.9 +0.9**
MODS Modra-Piesok 76.74 2 *eP* **P 07 29 18.3 +0.3**
SORM Soroca 76.82 355 ⇓P **P 07 29 17.7 -0.7**
ABAH Abaujker 76.86 360 P **P 07 29 18.1 -0.5**
TRPA Tarpa 77.02 359 P **P 07 29 19.9 +0.5**
GAR Garm 77.04 322 P **P 07 29 19.3 -0.7**
CONA Conrad Observa 77.15 3 *eP* **P 07 29 20.7 +0.3**
comp=Z,6.8nm,0.8s
MOA Molln 77.17 4 *i* P **P 07 29 20.3 -0.1**
comp=Z,1.8nm,0.6s
RJOB Jochberg 77.20 5 P **P 07 29 21.3 +0.6**
PSZ Piszkesteto 77.24 1 ⇑P **P 07 29 21.1 +0.3**
PSZ Piszkesteto 77.24 1 **P 07 29 20.8 0.0**
PSZ IAmb IAmb 07 29 40.2
comp=Z,8.8nm,0.9s
PSZ Piszkesteto 77.24 1 P **P 07 29 21.5 +0.7**
BIOA Bad Ischl, Aus 77.30 5 *i* P **P 07 29 21.0 -0.1**
comp=Z,3.8nm,0.8s
RETA Reutte 77.33 7 *i* P **P 07 29 22.3 +0.9**
comp=Z,1.6nm,0.4s
RONA Rosalia, Austr 77.39 3 *i* P **P 07 29 21.6 0.0**
comp=Z,3.2nm,0.7s
DAVA Damuels 77.47 8 *eP* **P 07 29 22.5 +0.2**
comp=Z,2.4nm,0.7s
BURAR Bucovina Array 77.47 357 ⇑P **P 07 29 22.0 -0.2**
MOTA Moosalm 77.49 7 *i* P **P 07 29 22.5 +0.1**
comp=Z,12nm,1.0s,SNR=5.2
LESA Schwarzleotal 77.51 6 *i* P **P 07 29 22.7 +0.3**
comp=Z,2.4nm,0.6s
WATA Walderalm 77.53 6 *i* P **P 07 29 22.8 +0.2**
comp=Z,11nm,0.7s
WTTA Wattenberg 77.61 6 *i* P **P 07 29 23.2 +0.1**
comp=Z,8.2nm,0.6s
WTTA Wattenberg 77.61 6 P **P 07 29 23.6 +0.5**
SQTA Sankt Quirin 77.62 7 *i* P **P 07 29 23.2 +0.1**
comp=Z,18nm,1.1s,SNR=5.8
BNALP Bannalp 77.76 9 P **P 07 29 24.4 +0.6**
FETA Feichten 77.79 7 *i* P **P 07 29 24.0 -0.1**
comp=Z,8.0nm,0.9s,SNR=6.3
ARSA Arzberg 77.81 4 *eP* **P 07 29 24.2 +0.2**
comp=Z,8.4nm,1.1s
KBA Koelnbreinsper 77.89 5 *i* P **P 07 29 25.1 +0.5**
comp=Z,5.2nm,0.6s,SNR=10
KBA Koelnbreinsper 77.89 5 P **P 07 29 25.4 +0.8**
MPLH Magyarpolny 77.95 2 P **P 07 29 25.5 +0.7**
comp=Z,16nm,0.8s
BIZ Bicaz 78.12 356 ⇑P **P 07 29 25.9 +0.2**
ABTA Abfaltersbach 78.18 6 *i* P **P 07 29 26.5 +0.4**
comp=Z,7.0nm,1.1s
MYKA Terra Mystica 78.35 5 *i* P **P 07 29 27.5 +0.4**
comp=Z,2.0nm,0.5s
SOKA Soboth 78.37 4 *i* P **P 07 29 28.0 +0.8**
comp=Z,11nm,1.1s,SNR=7.6
PERS Pernice 78.41 4 *i* P **P 07 29 27.5 +0.1**
MARR Marisel-Cluj 78.46 358 ⇓P **P 07 29 27.7 -0.1**
OBKA Obir 78.52 4 *i* P **P 07 29 28.1 +0.1**
comp=Z,18nm,0.5s,SNR=8.2
OBKA Obir 78.52 4 P **P 07 29 28.4 +0.4**
GROS Grobnik 78.60 4 *i* P **P 07 29 28.4 0.0**
ONER Baraj Valea Uz 78.71 356 ⇑P **P 07 29 29.3 +0.3**
SHAA Shahritus 79.09 323 **P 07 29 31.1 -0.2**
SHAA IAmb IAmb 07 29 32.5
comp=Z,16nm,0.9s
DOPR Dopca 79.11 357 ⇑P **P 07 29 31.2 0.0**
VRI Vrincioaia 79.17 356 ⇓P **P 07 29 31.6 +0.1**
PLOR Plostina 79.18 356 ⇓P **P 07 29 32.0 +0.4**
SAHR Sahastru 79.31 356 ⇓P **P 07 29 32.0 -0.3**
BZS Buzias 79.54 359 ⇑P **P 07 29 33.2 -0.3**
BZS Buzias 79.54 359 P **P 07 29 33.4 -0.1**
MLR Muntele Rosu 79.57 356 LR LR 08 05 17.3
comp=Z,33nm,21.8s,baz=20,slow=36
KBZ Khabaz 79.64 344 P **P 07 29 34.2 +0.2**
comp=Z,9.6nm,0.9s,baz=333,slow=2.9,SNR=18
comp=Z,9.6nm,0.9s
VOIR 79.66 357 ⇑P **P 07 29 33.9 -0.4**
VOIR 79.66 357 P **P 07 29 34.8 +0.5**
LOT Lotru 79.68 358 ⇓P **P 07 29 33.8 -0.6**
ARR Arges 79.74 357 P **P 07 29 35.4 +0.7**
GZR Gura Zlata 79.75 359 ⇑P **P 07 29 34.8 0.0**
CFR Carcaliu 79.78 355 ⇑P **P 07 29 34.0 -0.8**
EVN Everest 79.81 305 **P 07 29 35.8 -0.3**
EVN Everest 79.81 305 P **P 07 29 36.0 -0.1**
TPGR Topolog 80.09 354 ⇑P **P 07 29 36.3 -0.3**
PGAV Gavieira, Arco 80.09 22 *eP* **P 07 29 36.1 -0.6**
PGAV *i* IAmb IAmb 07 29 38.2
comp=Z,11nm,1.1s
HERR Herculane 80.27 359 ⇑P **P 07 29 37.0 -0.5**
ISO Isola 80.30 10 P **P 07 29 38.2 +0.5**
MDVR Moldovita 80.38 359 ⇑P **P 07 29 37.9 -0.2**
TIRR Tirgusor 80.49 354 ⇑P **P 07 29 38.4 -0.2**
NIL Nilore 80.72 318 P **P 07 29 39.8 -0.3**
PVIS Viseu 81.37 22 *eP* **P 07 29 45.0 +1.6**
KBL Kabul 81.49 321 P **P 07 29 43.0 -1.5**
CMAR Chiang Mai Arr 81.55 290 P **P 07 29 44.6 -0.1**
comp=Z,18nm,1.0s,baz=13,slow=5.4,SNR=43
comp=Z,18nm,1.0s
CMAR Chiang Mai Arr 81.55 290 **P 07 29 44.1 -0.5**
GNI Garni 82.81 342 LR LR 08 12 45.1
comp=Z,29nm,18.6s,baz=142,slow=40
ESDC Sonseca Array 83.16 19 P **P 07 29 53.5 +0.6**
comp=Z,5.3nm,0.8s,baz=342,slow=4.8,SNR=34
ESDC LR LR 08 10 31.4
comp=Z,19nm,18.7s,baz=352,slow=38
comp=Z,5.3nm,0.8s
PARRA Arraiolos 83.16 22 *eP* **P 07 29 53.6 +0.8**
MOE Montemor 83.38 23 *eP* **P 07 29 54.8 +0.8**
PHP Peshkopia 83.47 0 P **P 07 29 54.3 -0.2**
RDO Rodhopi 83.92 356 P **P 07 29 57.0 +0.4**
KNT Kendrikon 83.98 358 P **P 07 29 58.0 +1.0**
PBAR Barrancos 83.99 22 *eP* **P 07 29 57.9 +0.8**
GRG Griva 84.19 359 P **P 07 29 58.3 +0.2**
PCVE Castro Verde 84.30 23 *eP* **P 07 29 59.8 +1.1**
MARCO Tramutola 84.77 4 P **P 07 30 01.6 +0.5**
BRTR Keskin Array B 84.79 350 P **P 07 30 01.4 +0.2**
comp=Z,3.4nm,0.8s,baz=346,slow=3.0,SNR=12
BRTR LR LR 08 10 59.5
comp=Z,24nm,21.4s,baz=48,slow=38
comp=Z,3.4nm,0.8s
TIP Timpagrande 85.92 3 ⇑P **P 07 30 06.6 -0.3**
TIP Timpagrande 85.92 3 P **P 07 30 07.0 +0.1**
VAE Valguarnera 87.52 5 LR LR 08 11 00.2
comp=Z,22nm,19.7s,baz=312,slow=37
MDT Midelt 89.67 21 LR LR 08 13 54.4
comp=Z,8.3nm,18.5s,baz=326,slow=38
WRA Warramunga Arr 93.54 240 P **P 07 30 42.1 -0.6**
comp=Z,1.6nm,0.9s,baz=42,slow=4.7,SNR=8.5
comp=Z,1.6nm,0.9s
ASAR Alice Springs 96.90 238 P **P 07 30 57.3 -0.8**
comp=Z,0.6nm,0.8s,baz=23,slow=6.8,SNR=4.2
comp=Z,0.6nm,0.8s
H03N2 Juan Fernandez 111.67 117 T T 09 37 06.9
baz=323,slow=78,SNR=5.8
H03N1 Juan Fernandez 111.68 117 T T 09 36 55.4
baz=323,slow=78,SNR=5.3
H03N3 Juan Fernandez 111.68 118 T T 09 37 11.2
baz=323,slow=78,SNR=4.3
QSPA South Pole Qui 144.99 180 PKPbc PKPbc 07 37 01.7 -0.4
comp=Z,3.3nm,0.8s,baz=302,slow=0.9,SNR=24
BOSA Boshof 153.22 351 PKPbc **PKPbc 07 37 24.4 -0.1**
comp=Z,4.2nm,0.7s,baz=352,slow=3.4,SNR=9.2
MAW Mawson 156.88 221 PKPab **PKPab 07 37 51.3 +0.4**
comp=Z,2.6nm,0.8s,baz=120,slow=5.3,SNR=7.2

*HEL **24** 07:30:14.8±0.1, 63°.97N×28°.11E, h0km, ML1.8, Explosion*
*IDC **24** 07:30:15.3±1.5, 63°.92N×28°.42E, h0km, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=22.4km s-min=9.5km az=104.0*
ISC 24 07:30:13.7±0.7, **63°.95N**±0°.02×**28°.16E**±0°.03, **h0km, n40, σ1s40/60, Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.58**	**196**	PG	**Pg**	**07 30 25.6**	**+0.8**
	baz=12						
NIF				SG	**Sg**	**07 30 32.6**	**+0.4**
NIF				smax	smax	07 30 33.7	
	comp=Z,18nm,0.2s						
RMF	**Romuvaara**	**0.82**	**70**	PG	**Pg**	**07 30 30.1**	**+0.6**
	baz=257						
RMF				smax	smax	07 30 40.7	
	comp=Z,10nm,0.2s						
RMF				SG	**Sg**	**07 30 40.8**	**+0.7**
OUL	**Oulu**	**1.51**	**320**	PG	**Pn**	**07 30 41.6**	**-0.3**
OUL				SN	**Sn**	**07 31 03.7**	**+1.5**
SUF	**Sumiainen**	**1.53**	**217**	*eP*	**Pg**	**07 30 43.0**	**+0.1**
SUF	**Sumiainen**	**1.53**	**217**	PG	**Pn**	**07 30 42.5**	**+0.3**
SUF				smax	smax	07 31 00.7	
	comp=Z,5.2nm,0.2s						
OUF	**Merijarvi**	**1.56**	**287**	PG	**Pn**	**07 30 42.2**	**-0.4**
OUF				smax	smax	07 31 00.7	
	comp=Z,11nm,0.2s						
OUF				SN	**Sn**	**07 31 02.7**	**-0.8**
OBF4	**Vikkela, Lumij**	**1.59**	**305**	PG	**Pn**	**07 30 43.0**	**0.0**
	baz=117						
OBF4				smax	smax	07 31 01.5	
	comp=Z,8.1nm,0.2s						
OBF4				SN	**Sg**	**07 31 06.2**	**+1.6**
KU1	**Kurvinen**	**1.73**	**20**	PG	**Pn**	**07 30 45.4**	**+0.4**
JOF	**Joensuu**	**1.75**	**125**	*eP*	**Pg**	**07 30 47.0**	**-0.2**
KU2	**Taivalkoski**	**1.77**	**1**	PG	**Pn**	**07 30 45.8**	**+0.2**
KU2				SN	**Sg**	**07 31 11.5**	**+1.0**
OBF0	**Syolatti, Pyha**	**1.80**	**290**	PG	**Pn**	**07 30 46.6**	**+0.7**
OBF0				smax	smax	07 31 07.7	
	comp=Z,11nm,0.2s						
OBF0				SG	**Sn**	**07 31 09.8**	**+0.3**
MSF	**Maaselka**	**2.01**	**10**	PG	**Pb**	**07 30 50.8**	**-0.2**
	baz=194						
KAF	**Kangasniemi**	**2.02**	**205**	PG	**Pb**	**07 30 51.0**	**-0.2**
	baz=23						
KAF				smax	smax	07 31 15.2	
	comp=Z,8.9nm,0.2s						
KAF				SG	**Sg**	**07 31 18.5**	**-0.1**
OBF8	**Ulkokalla**	**2.10**	**283**	PG	**Pb**	**07 30 51.8**	**-0.8**
OBF8				smax	smax	07 31 16.5	
	comp=Z,4.3nm,0.2s						
RANF	**Ranua**	**2.16**	**345**	PG	**Pn**	**07 30 52.4**	**+1.6**
	baz=167						
RANF				SG	**Sn**	**07 31 19.9**	**+1.6**
KEF	**Keuruu**	**2.33**	**221**	*eP*	**Pb**	**07 30 55.5**	**-1.0**
KEF	**Keuruu**	**2.33**	**221**	PG	**Pb**	**07 30 56.1**	**-0.4**
KEF				smax	smax	07 31 23.7	
	comp=Z,7.3nm,0.2s						
KEF				SG	**Sb**	**07 31 25.9**	**+0.1**
OLKF	**Oulanka, Finla**	**2.44**	**12**	PB	**Pb**	**07 30 57.4**	**-1.0**
OLKF				smax	smax	07 31 26.6	
	comp=Z,2.9nm,0.2s						
OLKF				SG	**Sb**	**07 31 29.3**	**+0.3**
RUF	**Ruokolahti**	**2.56**	**171**	PG	**Pb**	**07 31 00.3**	**0.0**
RUF				smax	smax	07 31 31.0	
	comp=Z,4.1nm,0.2s						
RUF				SG	**Sg**	**07 31 33.9**	**-1.8**
VAF	**Ylistaro**	**2.62**	**252**	*eP*	**Pb**	**07 31 00.3**	**-1.1**
VAF	**Ylistaro**	**2.62**	**252**	PG	**Pb**	**07 31 00.2**	**-1.3**
	baz=70						
VAF				smax	smax	07 31 31.8	
	comp=Z,5.1nm,0.2s						
FIA0	**FINESS Array S**	**2.69**	**202**	PB	**Pb**	**07 31 01.4**	**-1.2**
	baz=18						
FIA0				smax	smax	07 31 34.4	
	comp=Z,3.2nm,0.2s						
FIA0				SG	**Sb**	**07 31 36.0**	**-0.1**
FINES	**FINESS Array B**	**2.69**	**202**	Pn	**Pb**	**07 31 01.8**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=23,slow=14,SNR=10.0						
FINES				Sn	**Sb**	**07 31 35.9**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=27,slow=25,SNR=17						
	comp=Z,1.5nm,0.5s						
TOF	**Tornio**	**2.69**	**324**	PN	**Pn**	**07 30 59.1**	**+1.0**
TOF				smax	smax	07 31 33.1	
	comp=Z,2.3nm,0.2s						
TOF				SB	**Sb**	**07 31 34.2**	**-1.9**
RNF	**Rovaniemi**	**2.82**	**342**	PB	**Pb**	**07 31 03.1**	**-1.8**
RNF				SB	**Sb**	**07 31 38.8**	**-1.2**
BURU	**Burvik**	**3.03**	**285**	PN	**Pn**	**07 31 04.0**	**+1.2**
BURU				SN	**Sn**	**07 31 40.0**	**+0.3**
UMAU	**Umeaa**	**3.31**	**272**	PN	**Pn**	**07 31 07.4**	**+0.8**
	baz=82						
VJF	**Virojoki**	**3.43**	**185**	SB	**Sb**	**07 31 57.5**	**+0.1**
KPF	**Kankaanpaa**	**3.50**	**235**	PB	**Pn**	**07 31 12.4**	**+3.1**
ERTU	**Ertsjaerv**	**3.63**	**319**	PN	**Pn**	**07 31 13.1**	**+2.1**
ERTU				SB	**Sn**	**07 31 57.8**	**+3.3**
KLF	**Kolari**	**3.73**	**334**	PN	**Pn**	**07 31 13.5**	**+1.1**
KLF				SN	**Sn**	**07 31 56.8**	**-0.3**
MEF	**Metsahovi**	**4.14**	**207**	*eP*	**Pn**	**07 31 20.8**	**+2.8**
RAJF	**Raja-Jooseppi**	**4.55**	**1**	PB	**Pb**	**07 31 30.9**	**-3.4**
ARBE	**Arbavere**	**4.64**	**194**	SN	**Sn**	**07 32 18.5**	**-0.9**
HEMU	**Hemsoen**	**4.74**	**259**	PN	**Pn**	**07 31 27.1**	**+0.8**
LANU	**Lannavaara**	**4.83**	**331**	*eP*	**Pn**	**07 31 30.4**	**+2.9**
AAL	**Aland**	**5.39**	**229**	*eP*	**Pn**	**07 31 37.2**	**+2.1**
ARCES	**ARCESS Array B**	**5.71**	**351**	Pn	**Pn**	**07 31 40.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=164,slow=14,SNR=8.4						
ARCES				Sn	**Sn**	**07 32 44.0**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=166,slow=23,SNR=2.0						
ARCES				Lg	Lg	07 33 07.9	
	comp=Z,0.1nm,0.3s,baz=165,slow=30,SNR=3.4						
	comp=Z,0.5nm,0.6s						
I37NO	**I37NO**	**6.40**	**328**	I	I	08 06 45.0	
	baz=140,slow=316,SNR=7.4						
HFS	**Hagfors**	**7.79**	**247**	Pn	**Pn**	**07 32 09.6**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=59,slow=17,SNR=2.5						
HFS				Sn	**Sn**	**07 33 34.2**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=51,slow=9.4,SNR=1.3						
HFS				Lg	Lg	07 34 22.7	
	comp=Z,0.1nm,0.3s,baz=56,slow=26,SNR=1.8						
	comp=Z,2.7nm,0.9s						

*ISU **24** 07:30:51.41°.84N×70°.42E, h15km*
*KRNET **24** 07:30:52.3±0.1, 41°.78N×70°.22E, h15km, mb2.5*
ISC 24 07:30:51.2±1.1, **41°.75N**±0°.04×**70°.24E**±0°.04, **h4km**±11**km, n11, σ1s86/21, 12C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSK	**Pskem**	**0.20**	**28**	S	**Sg**	**07 30 56.2**	**-1.7**
PSK				S	**Sb**	**07 30 58.3**	**+0.4**
CHMG	**Chimgan**	**0.27**	**221**	P	Pg	07 30 49.5	-6.9
CHMG				S	**Sg**	**07 30 55.2**	**-4.7**
TVKS	**Tavaksay**	**0.48**	**249**	P	**Pb**	**07 31 03.4**	**+1.2**
TVKS				S	**Sb**	**07 31 11.7**	**+2.1**
TRKS	**Terek-Say**	**0.71**	**108**	⇓*i* P	**Pn**	**07 31 07.4**	**-0.8**
TRKS				⇓*i* S	**Sn**	**07 31 18.5**	**-1.1**
ARK	**Arkit**	**1.29**	**87**	⇑*i* P	**Pg**	**07 31 17.3**	**+1.4**
ARK				⇑*i* S	**Sg**	**07 31 35.5**	**+2.9**
BTK	**Batken**	**1.75**	**165**	⇑*i* P	**Pg**	**07 31 25.6**	**+0.9**
BTK				⇑*i* S	**Sg**	**07 31 49.8**	**+2.5**
MNAS	**Manas**	**1.84**	**66**	⇑*i* P	**Pg**	**07 31 26.8**	**+0.4**
MNAS				⇑*i* S	**Sg**	**07 31 51.8**	**+1.6**
ARSB	**Arslanbob**	**2.10**	**101**	⇑*eP*	**Pg**	**07 31 31.3**	**-0.2**
ARSB				⇑*i* S	**Sg**	**07 31 59.3**	**+0.6**
DRK	**Karamyk**	**2.56**	**152**	⇑*i* P	**Pb**	**07 31 37.8**	**-0.1**
DRK				⇑*i* S	**Sb**	**07 32 10.9**	**+1.1**
SALK	**Salom-Alik**	**2.83**	**107**	⇓*i* P	**Pb**	**07 31 41.4**	**-1.0**
SALK				⇓*i* S	**Sb**	**07 32 17.0**	**-0.5**
SFK	**Sufi-Kurgan**	**3.02**	**124**	⇑*i* P	**Pb**	**07 31 44.2**	**-1.5**
SFK				⇑*i* S	**Sb**	**07 32 22.0**	**-1.0**

*SJA **24** 07:33:10.6±0.6, 30°.61S×72°.35W, h12km, ML3.5, MW3.5*
*GUC **24** 07:33:16.5±0.7, 30°.66S×71°.92W, h19km±4km, ML3.9*
ISC 24 07:33:12.6±1.6, **30°.64S**±0°.02×**72°.07W**±0°.05, **h9km**±11**km, n51, σ1s97/82, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**1.08**	**122**	*eP*	**Pn**	**07 33 33.9**	**-0.1**
CO02				IAML		07 33 52.7	
	comp=Z,818nm,0.3s						
CO02	**Combarbal**	**1.08**	**122**	*eP*	**Pn**	**07 33 34.1**	**+0.1**
CO02				*i* S	**Sg**	**07 33 47.0**	**-0.3**
CO02				IAML		07 33 49.8	
	comp=N,7µm,0.3s						
GO04	**Tololo Observa**	**1.19**	**67**	*eP*	**Pg**	**07 33 36.1**	**+0.6**
GO04				IAML		07 34 00.8	
	comp=Z,1µm,0.7s						
GO04	**Tololo Observa**	**1.19**	**67**	*eP*	**Pg**	**07 33 36.0**	**+0.6**
GO04				*i* S	**Sg**	**07 33 51.2**	**+0.3**
CO03	**El Pedregal**	**1.21**	**100**	*eP*	**Pb**	**07 33 35.6**	**0.0**
CO03				*eS*	**Sb**	**07 33 49.7**	**-1.6**
CO03				IAML		07 33 52.8	
	comp=Z,586nm,0.3s						
CO03	**El Pedregal**	**1.21**	**100**	*eP*	**Pb**	**07 33 35.7**	**0.0**
CO03				*i* S	**Sb**	**07 33 50.0**	**-1.3**
CO04	**Los Peladeros**	**1.69**	**147**	*eP*	**Pb**	**07 33 43.9**	**-0.1**
CO04				*i* S	**Sb**	**07 34 05.6**	**+0.2**
CO01	**Juntas del Tor**	**1.83**	**69**	*eP*	Pn	07 33 35.5	-8.9
CO01				*eS*	**Sn**	**07 33 59.5**	**-8.4**
CO01				IAML		07 34 15.7	
	comp=Z,246nm,0.8s						
CO01	**Juntas del Tor**	**1.83**	**69**	*eP*	**Pb**	**07 33 46.5**	**+0.1**
CO01				*i* S	**Sb**	**07 34 08.8**	**-0.7**
LCO	**Las Campanas**	**2.01**	**37**	*eP*	**Pb**	**07 33 48.5**	**-0.9**
LCO				*eS*	**Sn**	**07 34 12.5**	**+0.2**
LCO				IAML		07 34 27.1	
	comp=Z,430nm,0.9s						
LCO	**Las Campanas**	**2.01**	**37**	*eP*	**Pb**	**07 33 48.3**	**-1.2**
LCO				*i* S	**Sb**	**07 34 15.2**	**+0.5**
AROD	**Rodeo**	**2.29**	**79**	*eP*	**Pb**	**07 33 55.1**	**+0.8**
AC05	**El Transito**	**2.38**	**41**	*eP*	**Pb**	**07 33 54.1**	**-1.5**
AC05				*eS*	**Sb**	**07 34 25.9**	**+0.7**
AC05				IAML		07 34 34.0	
	comp=Z,121nm,1.1s						
AC05	**El Transito**	**2.38**	**41**	⇑*eP*	**Pb**	**07 33 54.2**	**-1.5**
VA03	**San Esteban**	**2.48**	**149**	*eP*	**Pb**	**07 33 55.7**	**-1.8**
VA03				*eS*	**Sn**	**07 34 24.5**	**+0.7**
VA03				IAML		07 34 38.4	
	comp=Z,315nm,0.3s						
VA03	**San Esteban**	**2.48**	**149**	*eP*	**Pb**	**07 33 55.5**	**-1.9**
VA03				*i* S	**Sb**	**07 34 26.7**	**-1.5**
VA03				IAML		07 34 36.5	
	comp=E,2µm,0.1s						
**ROC

MT02				*i* S		**Sb**	**07 34 34.3**	**-0.9**
PEL	**Peldehue**	**2.76**	**155**	*e*P		**Pb**	**07 34 00.8**	**-1.4**
PEL				*e*S		**Sb**	**07 34 35.2**	**-0.9**
PEL				IAML			07 34 50.3	
	comp=Z,160nm,1.2s							
MT10	**Hacienda Santa**	**2.93**	**154**	*e*P		**Pn**	**07 34 01.9**	**+2.4**
MT10				*i* S		**Sb**	**07 34 38.1**	**-3.0**
MT10				IAML			07 34 49.3	
	comp=E,450nm,0.4s							
MT05	**Renca**	**2.97**	**158**	*e*P		**Pb**	**07 34 03.6**	**-2.1**
MT05				*e*S		**Sb**	**07 34 42.5**	**+0.4**
MT05				IAML			07 34 52.1	
	comp=Z,155nm,0.3s							
MT05	**Renca**	**2.97**	**158**	*e*P		**Pb**	**07 34 03.8**	**-1.9**
MT05				*i* S		**Sb**	**07 34 39.8**	**-2.4**
VA05	**Santo Domingo**	**3.04**	**173**	*e*P		**Pn**	**07 34 02.4**	**+1.6**
MT14	**Cerro Cal¡n**	**3.04**	**155**	*e*P		**Pb**	**07 34 04.7**	**-2.3**
MT14				*i* S		**Sb**	**07 34 46.8**	**+2.6**
MT14				IAML			07 34 54.0	
	comp=E,558nm,0.6s							
ZON	**Zonda**	**3.05**	**108**	*e*P		**Pb**	**07 34 05.8**	**-1.2**
ZON				*e*S		**Sb**	**07 34 44.3**	**0.0**
ZON				IAML			07 34 49.9	
	comp=Z,76nm,0.5s							
RTLL	**Cerro Villicun**	**3.16**	**104**	*e*P		**Pb**	**07 34 08.7**	**-0.3**
RTLL				*e*S		**Sb**	**07 34 50.6**	**+2.9**
RTLL				IAML			07 34 59.8	
	comp=Z,109nm,0.8s							
MT04	**Ro Olivares**	**3.21**	**150**	*e*P		**Pb**	**07 34 07.2**	**-2.7**
MT04				*e*S		**Sb**	**07 34 49.0**	**-0.2**
MT04				IAML			07 34 56.3	
	comp=Z,132nm,0.7s							
MT15	**Las Vizcachas**	**3.24**	**156**	*e*P		**Pb**	**07 34 07.1**	**-3.1**
MT15				*i* S		**Sb**	**07 34 51.9**	**+2.1**
MT15				IAML			07 35 00.2	
	comp=N,421nm,0.2s							
MT09	**Talagante**	**3.26**	**164**	*e*P		**Pb**	**07 34 07.2**	**-3.5**
MT09				*i* S		**Sn**	**07 34 46.4**	**+3.3**
MT09				IAML			07 35 02.9	
	comp=N,177nm,0.3s							
MT01	**Popeta**	**3.29**	**168**	*e*P		**Pn**	**07 34 06.2**	**+1.9**
MT01				IAML			07 35 04.8	
	comp=Z,64nm,0.6s							
MT08	**Bocatoma Ro**	**3.30**	**149**	*e*P		**Pb**	**07 34 09.9**	**-1.5**
MT08				*e*S		**Sb**	**07 34 51.0**	**-0.8**
MT08				IAML			07 35 05.0	
	comp=Z,107nm,0.6s							
MT12	**Pirque**	**3.35**	**158**	*e*P		**Pb**	**07 34 08.6**	**-3.5**
MT12				*i* S		**Sb**	**07 34 51.6**	**-1.3**
MT12				IAML			07 35 09.4	
	comp=E,242nm,0.6s							
CFA	**Coronel Fontan**	**3.42**	**107**	*e*P		**Pb**	**07 34 10.6**	**-2.9**
CFA				*e*S		**Sb**	**07 34 53.7**	**-1.5**
CFA				IAML			07 35 05.5	
	comp=Z,71nm,0.7s							
GO03	**Copiapo**	**3.43**	**28**	*e*P		**Pn**	**07 34 08.4**	**+2.2**
GO03				*e*S		**Sb**	**07 34 56.9**	**+1.5**
GO03				IAML			07 35 07.0	
	comp=Z,87nm,0.9s							
MT13	**San Alfonso**	**3.45**	**154**	*e*P		**Pb**	**07 34 11.0**	**-2.9**
MT13				*e*S		**Sb**	**07 34 55.2**	**-0.7**
MT13				IAML			07 35 04.8	
	comp=Z,74nm,0.5s							
BO04	**La Punta**	**3.56**	**160**	*e*P		**Pn**	**07 34 10.6**	**+2.5**
AAGR	**Agrelo**	**3.68**	**132**	IAML			07 35 25.6	
	comp=Z,57nm,1.3s							
VCA	**Vinchina**	**3.86**	**62**	*e*P		Pn	07 33 56.5	-16
VCA	**Vinchina**	**3.86**	**62**	*e*P		**Pb**	**07 34 17.6**	**-3.3**
GO05	**Hualane**	**4.36**	**178**	*e*P		**Pn**	**07 34 20.2**	**+1.2**
AC02	**Maricunga**	**4.58**	**35**	IAML			07 35 42.0	
	comp=Z,70nm,0.9s							
AC02	**Maricunga**	**4.58**	**35⇑**	*e*P		**Pn**	**07 34 24.4**	**+1.9**
AC01	**Pan de Azucar**	**4.66**	**17**	*e*P		**Pn**	**07 34 22.6**	**-0.5**
TCA	**Tanti**	**6.46**	**98**	*e*P		**Pn**	**07 34 49.5**	**+1.6**
VA04	**Juan Fernndez**	**6.47**	**241⇑**	*e*P		**Pn**	**07 34 48.5**	**+0.6**

*IDC **24** 07:36:19.4±3.8,54˚.35N×87˚.34E,h0km,mbtmp2.7/2, ML2.8/1,Error ellipse: s-maj=33.7km s-min=21.5km az=41.0*

ASRS 24 07:36:19.0±0.6,54˚20N×87˚06E,h0km,M2.3(MOS)**,The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**260**	I		I	07 45 20.0	
	baz=76,slow=316,SNR=7.5							
ZALV	**Zalesovo Beam**	**1.35**	**260**	Pg		Pb	07 36 45.9	+0.8
	0.8nm,0.3s,baz=70,slow=16,SNR=6.2							
ZALV				Lg		Lg	07 37 09.2	
	0.7nm,0.3s,baz=77,slow=27,SNR=5.5							
KURBB	**Kurchatov Arra**	**6.33**	**239**	Pn		Pn	07 37 57.1	+3.6
	0.3nm,0.4s,baz=53,slow=13,SNR=2.1							
MKAR	**Makanchi Array**	**8.01**	**204**	Pn		Pn	07 38 21.8	+5.2
	0.1nm,0.3s,baz=24,slow=13,SNR=1.3							
	0.2nm,0.3s							

*IDC **24** 07:43:32.3±0.7,16˚24S×73˚91W,h0km,mb4.3/8, mbtmp4.2/13,ML3.8/5,MS3.4/13,Error ellipse: s-maj=22.8km s-min=15.7km az=56.0*
*VAO **24** 07:43:35.6±0.5,16˚25S×74˚10W,h35km,mb4.4, Presumed earthquake*
*GFZ **24** 07:43:36.4±0.5,17˚S±4˚×7˚4W±˚,h10km,M4.5/12, mb4.6/12*
*NEIC **24** 07:43:38.8±0.7,16˚4S±0˚.1×73˚.82W±0˚.10,h35km±2km, mb4.4/13,Error ellipse: s-maj=17.6km s-min=15.2km az=158.0*

ISC 24 07:43:36.4±0.5,**16˚38S**±0˚.06×**74˚01W**±0˚.06,**h30**km,**n120, s1§36/101,mb4.4/11,MS3.3/10,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AP01	**Chacalluta**	**4.02**	**120**			**Pn**	**07 44 36.2**	**+0.3**
AP01	**Chacalluta**	**4.02**	**120**	P		**Pn**	**07 44 38.1**	**+2.1**
PB12	**IPOC Station P**	**4.16**	**123**			**Pn**	**07 44 37.6**	**-0.3**
PB12	**IPOC Station P**	**4.16**	**123**	P		**Pn**	**07 44 39.6**	**+1.7**
PB18	**Visviri**	**4.50**	**106**			**Pn**	**07 44 42.4**	**-0.6**
PB18	**Visviri**	**4.50**	**106**	P		Pb	07 44 46.3	-8.7
PB16	**IPOC Station P**	**4.72**	**115**			**Pn**	**07 44 46.9**	**+0.8**
PB16	**IPOC Station P**	**4.72**	**115**	P		Pn	07 44 49.3	+3.3
PSGCX	**Pisagua**	**4.89**	**131**			**Pn**	**07 44 47.9**	**-0.1**
PSGCX	**Pisagua**	**4.89**	**131**	P		**Pn**	**07 44 47.6**	**-0.4**
NNA	**Nana**	**5.16**	**327**	Pn		**Pn**	**07 44 50.5**	**-1.2**
	18nm,0.3s,baz=140,slow=7.4,SNR=16							
NNA				Sn		**Sn**	**07 45 50.6**	**+0.4**
	14nm,0.3s,baz=281,slow=10,SNR=4.6							
	5.6nm,0.4s							
NNA	**Nana**	**5.16**	**327**			**Pn**	**07 44 54.1**	**+2.4**
NNA	**Nana**	**5.16**	**327**	P		Pn	07 44 55.9	+4.3
PB11	**IPOC Station P**	**5.33**	**130**			**Pn**	**07 44 54.1**	**0.0**
PB11	**IPOC Station P**	**5.33**	**130**	P		**Pn**	**07 44 53.8**	**-0.3**
TA02	**Huaiquique**	**5.34**	**137**	P		**Pn**	**07 44 52.9**	**-1.2**
GO01	**Chusmiza**	**5.63**	**126**			**Pn**	**07 44 58.4**	**0.0**
GO01	**Chusmiza**	**5.63**	**126**	P		**Pn**	**07 44 59.0**	**+0.5**
LPAZ	**La Paz**	**5.64**	**90**	Pn		Pn	07 45 02.2	+3.4
	5.6nm,0.3s,baz=269,slow=9.0,SNR=167							
LPAZ				LR		LR	07 47 03.3	
	comp=Z,54nm,21.3s,baz=244,slow=38							
LPAZ	**La Paz**	**5.64**	**90**			Pn	07 45 03.1	+4.3
LPAZ	**La Paz**	**5.64**	**90**	*e*P		**Pn**	**07 45 00.3**	**+1.5**
LPAZ				*e*S		**Sn**	**07 46 07.7**	**+4.7**
LPAZ	**La Paz**	**5.64**	**90**	P		Pn	07 45 02.2	+3.4
PB08	**IPOC Station P**	**5.94**	**130**			**Pn**	**07 45 04.0**	**+1.4**
PB08	**IPOC Station P**	**5.94**	**130**	P		**Pn**	**07 45 03.1**	**+0.5**
PB02	**IPOC Station P**	**6.27**	**142**			**Pn**	**07 45 06.2**	**-0.8**
PB02	**IPOC Station P**	**6.27**	**142**	P		**Pn**	**07 45 05.6**	**-1.3**
PB07	**IPOC Station P**	**6.59**	**144**			**Pn**	**07 45 11.0**	**-0.5**
PB07	**IPOC Station P**	**6.59**	**144**	P		**Pn**	**07 45 10.8**	**-0.7**
PB03	**IPOC Station P**	**6.93**	**145**			**Pn**	**07 45 15.5**	**-0.5**
PB03	**IPOC Station P**	**6.93**	**145**	P		**Pn**	**07 45 15.1**	**-1.0**
PB09	**IPOC Station P**	**7.03**	**141**			**Pn**	**07 45 17.6**	**+0.3**
PB09	**IPOC Station P**	**7.03**	**141**	P		**Pn**	**07 45 17.1**	**-0.3**
PB05	**IPOC Station P**	**7.37**	**151**			**Pn**	**07 45 20.4**	**-1.7**
PB05	**IPOC Station P**	**7.37**	**151**	P		**Pn**	**07 45 19.6**	**-2.5**
PB06	**IPOC Station P**	**7.56**	**147**	P		**Pn**	**07 45 22.2**	**-2.4**
CZSB	**Cruzeiro do Su**	**8.69**	**9**			**Pn**	**07 45 40.6**	**+0.5**
CZSB	**Cruzeiro do Su**	**8.69**	**9**	*e*P		**Pn**	**07 45 38.9**	**-1.2**
PB14	**IPOC Station P**	**8.87**	**158**	P		**Pn**	**07 45 40.1**	**-2.8**
ATAH	**Atahualpa**	**10.14**	**334**	Pn		**Pn**	**07 45 58.5**	**-1.9**
	0.3nm,0.3s,baz=106,slow=7.4,SNR=2.2							
	4.3nm,0.7s							
SIV	**San Ignacio**	**12.43**	**90**	Pn		**Pn**	**07 46 30.4**	**-1.1**
	0.2nm,0.3s,baz=274,slow=10,SNR=38							
SIV				Sn		**Sn**	**07 48 50.4**	**+1.4**
	baz=143,slow=13							
SIV				LR		LR	07 51 47.9	
	comp=Z,275nm,20.1s,baz=297,slow=40							
	7.7nm,0.6s							
BBSD	**Serra de San D**	**12.86**	**96**	*e*P		**Pn**	**07 46 36.0**	**-1.2**
AC05	**El Transito**	**12.87**	**165**			**Pn**	**07 46 39.6**	**+2.2**
AC05	**El Transito**	**12.87**	**165**	P		**Pn**	**07 46 36.3**	**-1.1**
LCO	**Las Campanas**	**12.94**	**167**	Pn		**Pn**	**07 46 39.1**	**+0.6**
LCO	**Las Campanas**	**12.94**	**167**	P		**Pn**	**07 46 38.4**	**-0.1**
VILB	**Vilhena**	**13.79**	**78**			**Pn**	**07 46 50.2**	**+0.3**
VILB	**Vilhena**	**13.79**	**78**	*e*P		**Pn**	**07 46 48.3**	**-1.6**
CO01	**Juntas del Tor**	**14.00**	**166**	P		**Pn**	**07 46 53.0**	**0.0**
GO04	**Tololo Observa**	**14.04**	**168**	P		**Pn**	**07 46 52.0**	**-1.6**
PTLB	**Pontes e Lacer**	**14.34**	**88**			**Pn**	**07 46 57.6**	**+0.2**
PTLB	**Pontes e Lacer**	**14.34**	**88**	*e*P		**Pn**	**07 46 56.2**	**-1.2**
CO03	**El Pedregal**	**14.71**	**169**	P		**Pn**	**07 47 02.3**	**-0.2**
COIM	**Forte Coimbra**	**15.81**	**105**	*e*P		**Pn**	**07 47 13.3**	**-3.7**
CFA	**Coronel Fontan**	**16.04**	**162**	Pn		**P**	**07 47 21.9**	**-1.2**
	0.1nm,0.3s,baz=343,slow=12,SNR=19							
	6.5nm,0.9s							
MURT	**Porto Murtinho**	**16.37**	**111**	*e*P		**Pn**	**07 47 21.9**	**-2.2**
H03N1	**Juan Fernandez**	**17.56**	**194**	T		T	08 06 06.2	
	baz=16,slow=74,SNR=745							
H03N2	**Juan Fernandez**	**17.56**	**194**	T		T	08 06 03.5	
	baz=16,slow=74,SNR=1211							
H03N3	**Juan Fernandez**	**17.57**	**194**	T		T	08 06 03.0	
	baz=16,slow=74,SNR=988							
SALV	**Santo Antonio**	**17.60**	**91**	*e*P		**P**	**07 47 38.5**	**-1.9**
AQDB	**Aquidauana**	**17.84**	**106**	*e*P		**P**	**07 47 43.7**	**+0.7**
CPUP	**Villa Florida**	**18.40**	**125**	P		**Pn**	**07 47 49.0**	**-0.3**
	0.1nm,0.3s,baz=289,slow=14,SNR=4.0							
CPUP				LR		LR	07 56 22.9	
	comp=Z,81nm,20.5s,baz=268,slow=42							
	1.7nm,0.8s							
CPUP	**Villa Florida**	**18.40**	**125**	P		**Pn**	**07 47 48.7**	**-0.7**
CLDB	**Colider**	**18.52**	**75**	*e*P		**Pn**	**07 47 48.1**	**-2.8**
MACA	**Manacapuru-AM**	**18.55**	**46**			**Pn**	**07 47 50.1**	**-1.1**
MACA				IAmb		IAmb	07 48 05.0	
	comp=Z,17nm,0.7s							
MACA	**Manacapuru-AM**	**18.55**	**46**	*e*P		**Pn**	**07 47 49.7**	**-1.5**
SJPY	**San Joaquin**	**18.80**	**120**	*e*P		**Pn**	**07 47 54.6**	**+0.4**
AMBA	**Amambai (Brazi**	**19.05**	**113**	*e*P		**Pn**	**07 47 56.8**	**-0.4**
PSAL	**Palomas, Salto**	**20.93**	**137**	*e*P		Pn	07 48 17.5	-1.8
ROSC	**El Rosal**	**21.09**	**359**	P		**P**	**07 48 20.0**	**+1.1**
ROSC				IAmb		IAmb	07 48 51.7	
	comp=Z,17nm,1.1s							
TRCB	**Terra Rica**	**21.11**	**111**	P		**P**	**07 48 18.9**	**+0.1**
TRCB				IAmb		IAmb	07 48 23.0	
	comp=Z,23nm,0.6s							
ARAG	**Araguaiana, MT**	**21.34**	**91**	*e*P		**P**	**07 48 19.8**	**-1.5**
ITTB	**Itaituba**	**21.55**	**58**	*e*P		**P**	**07 48 22.1**	**-1.4**
PTGB	**Pitanga**	**22.14**	**116**	*e*P		**P**	**07 48 31.2**	**+1.4**
SNDB	**Serra Nova Dou**	**22.45**	**82**	*e*P		**P**	**07 48 31.2**	**-1.9**
LDASE	**Londrina, Braz**	**22.61**	**112**	*e*P		**P**	**07 48 34.4**	**-0.5**
BOAV	**Boa Vista**	**22.92**	**37**	P		**P**	**07 48 37.2**	**-0.9**
BOAV	**Boa Vista**	**22.92**	**37**	*e*P		**P**	**07 48 36.5**	**-1.6**
ITAB	**Concordia**	**22.97**	**122**	P		**P**	**07 48 38.6**	**+0.1**
ITAB				IAmb		IAmb	07 49 13.7	
	comp=Z,35nm,1.4s							
FRTB	**Fartura**	**23.99**	**111**	*e*P		**P**	**07 48 48.9**	**+0.3**
PLCA	**Paso Flores**	**24.45**	**174**	P		**P**	**07 48 53.9**	**+1.2**
	comp=Z,6.2nm,1.0s,baz=346,slow=10,SNR=5.7							
PLCA				LR		LR	07 56 37.3	
	comp=Z,58nm,19.4s,baz=356,slow=32							
	comp=Z,6.2nm,1.0s							
PLCA	**Paso Flores**	**24.45**	**174**	*e*P		**P**	**07 48 54.1**	**+1.4**
BB19B	**Bebedouro**	**24.57**	**105**	*e*P		**P**	**07 48 53.8**	**-0.1**
IPMB	**Ipameri, GO**	**24.69**	**97**	*e*P		**P**	**07 48 55.0**	**0.0**
BDFB	**Brasilia**	**24.99**	**92**	P		**P**	**07 48 57.5**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=252,slow=8.1,SNR=7.5							
BDFB				LR		LR	07 59 20.1	
	comp=Z,65nm,20.5s,baz=8.8,slow=38							
	comp=Z,4.2nm,0.7s							
BDFB	**Brasilia**	**24.99**	**92**	P		**P**	**07 48 57.0**	**-0.9**
BDFB				IAmb		IAmb	07 48 58.8	
	comp=Z,5.3nm,0.9s							
SDV	**Santo Domingo**	**25.32**	**8**	LR		LR	07 59 56.0	
	comp=Z,97nm,19.1s,baz=248,slow=39							
JANB	**Januaria**	**28.61**	**92**	*e*P		**P**	**07 49 30.3**	**-0.1**
MDP	**Montagnes des**	**30.04**	**46**	LR		LR	08 02 46.0	
	comp=Z,105nm,19.2s,baz=238,slow=39							
NBPN	**Ponto Novo - B**	**33.29**	**85**	*e*P		**P**	**07 50 11.3**	**-0.3**
OBIP	**Obispado Ponce**	**34.97**	**12**	P		**P**	**07 50 27.7**	**+1.6**
CMIG	**Matias Romero**	**39.11**	**327**	LR		LR	08 04 40.6	
	comp=Z,37nm,2.2s,baz=132,slow=32							
TKL	**Tuckaleechee C**	**52.57**	**350**	LR		LR	08 15 25.2	
	comp=Z,29nm,21.9s,baz=168,slow=36							
TXAR	**Lajitas Array**	**53.72**	**328**	P		**P**	**07 52 55.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=151,slow=7.8,SNR=6.8							
TXAR				PcP		**PcP**	**07 54 02.1**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=161,slow=4.4,SNR=1.6							
	comp=Z,0.4nm,0.6s							
ANMO	**Albuquerque**	**59.62**	**329**	LR		LR	08 18 06.4	
	comp=Z,16nm,20.5s,baz=96,slow=35							
PMPB	**Monarch Peak**	**68.49**	**321**	P		**P**	**07 54 38.0**	**+1.9**
ELK	**Elko**	**68.51**	**327**	LR		LR	08 23 07.0	
	comp=Z,37nm,18.2s,baz=128,slow=35							
SNAA	**Sanae**	**68.66**	**161**	P		**P**	**07 54 37.5**	**+1.0**
	comp=Z,2.7nm,0.6s,baz=254,slow=6.0,SNR=6.9							
	comp=Z,2.7nm,0.6s							
SNAA	**Sanae**	**68.66**	**161**	P		**P**	**07 54 37.4**	**+0.8**
SNAA				IAmb		IAmb	07 54 38.5	
	comp=Z,3.0nm,0.7s							
DBIC	**Dimbokro**	**72.12**	**77**	P		**P**	**07 54 58.1**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=222,slow=5.9,SNR=5.7							
DBIC				LR		LR	08 26 08.2	
	comp=Z,49nm,18.1s,baz=326,slow=36							
	comp=Z,7.0nm,0.9s							
DBIC	**Dimbokro**	**72.12**	**77**	P		**P**	**07 54 58.3**	**-0.3**
QSPA	**South Pole Qui**	**73.78**	**180**	P		**P**	**07 55 09.3**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=193,slow=0.3,SNR=11							
	comp=Z,1.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**80.35**	**73**	P		**P**	**07 55 45.2**	**-0.2**
	comp=Z,5.0nm,0.7s,baz=256,slow=5.0,SNR=20							
	comp=Z,5.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**80.35**	**73**	P		**P**	**07 55 44.8**	**-0.6**
TORD				IAmb		IAmb	07 55 46.0	
	comp=Z,4.0nm,0.8s							
VNDA	**Vanda**	**81.00**	**191**	P		**P**	**07 55 50.0**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=116,slow=4.7,SNR=2.1							
	comp=Z,0.7nm,0.6s							
VNDA	**Vanda**	**81.00**	**191**	P		**P**	**07 55 49.8**	**+2.0**
MAW	**Mawson**	**90.55**	**165**	LR		LR	08 37 53.3	
	comp=Z,43nm,18.6s,baz=330,slow=36							
H11N3	**WAKE ISLAND Hyl**	**22.25**	**283**	T		T	10 16 23.9	
	baz=98,slow=75,SNR=5.1							
H11N2	**WAKE ISLAND Hyl**	**22.26**	**283**	T		T	10 16 23.8	
	baz=98,slow=75,SNR=19							
H11N1	**WAKE ISLAND Hyl**	**22.26**	**283**	T		T	10 16 34.9	
	baz=98,slow=75,SNR=3.7							
H11S2	**WAKE ISLAND Hyl**	**22.27**	**282**	T		T	10 16 38.3	
	baz=98,slow=75,SNR=28							
H11S1	**WAKE ISLAND Hyl**	**22.28**	**282**	T		T	10 16 41.5	
	baz=98,slow=75,SNR=26							
H11S3	**WAKE ISLAND Hyl**	**22.29**	**282**	T		T	10 16 42.3	
	baz=98,slow=75,SNR=33							
WRA	**Warramunga Arr**	**134.41**	**219**	PKP		**PKiKP**	**08 02 52.8**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=135,slow=1.8,SNR=9.0							
ZALV	**Zalesovo Beam**	**139.04**	**19**	PKP		**PKiKP**	**08 03 00.3**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=243,slow=1.7,SNR=3.9							
MKAR	**Makanchi Array**	**143.85**	**28**	PKP		**PKPdf**	**08 03 07.4**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=336,slow=2.7,SNR=3.8							
MJAR	**Matsushiro Arr**	**145.10**	**311**	PKPbc		**PKPdf**	**08 03 10.6**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=88,slow=3.3,SNR=6.1							
SONM	**Songino Array**	**148.63**	**359**	PKPbc		**PKiKP**	**08 03 21.2**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=342,slow=1.1,SNR=16							
HHC	**Hu-ho-hao-te**	**155.14**	**350**	*e*P		**PKPdf**	**08 03 26.8**	**-0.2**
NJ2	**Nanjing**	**160.51**	**325**	*e*P		**PKPdf**	**08 03 34.9**	**+1.2**
NJ2				pmax		pmax		
	comp=Z,23nm,0.6s							
PZH	**PanZhiHua**	**169.18**	**21**	PKP		**PKPdf**	**08 03 41.1**	**-0.4**

*SJA **24** 07:50:08.5±0.8,20˚39S×69˚21W,h118km±3km,ML3.9, MW3.8*
*GUC **24** 07:50:09.4±0.8,20˚40S×69˚21W,h120km±3km,ML4.0*
*NEIC **24** 07:50:09.3±1.5,20˚43S±0˚.05×69˚20W±0˚.09,h114km±6km, mb4.1/8,ML3.9(GUC),Error ellipse: s-maj=11.7km s-min=7.2km az=100.0*
*IDC **24** 07:50:10.1±2.8,20˚43S×68˚83W,h108km±29km,mb3.5/3, mbtmp4.0/5,Error ellipse: s-maj=45.4km s-min=22.8km az=102.0*

ISC 24 07:50:08.9±0.7,**20˚41S**±0˚.02×**69˚25W**±0˚.06,**h120**km±6km, **n75,s1§05/95,2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB08	**IPOC Station P**	**0.28**	**19**	*e*P		**Pn**	**07 50 26.1**	**-0.2**
PB08				*e*S		**Sn**	**07 50 38.6**	**-0.7**
PB08				IAML			07 50 39.4	
	comp=Z,3μm,0.2s							
PB08	**IPOC Station P**	**0.28**	**19**	*e*P		**Pn**	**07 50 26.1**	**-0.2**
PB08				IAML			07 50 39.6	
	comp=N,7μm,0.2s							
PB08	**IPOC Station P**	**0.28**	**19**			**Pn**	**07 50 25.7**	**-0.6**
GO01	**Chusmiza**	**0.74**	**4**	*e*P		**Pn**	**07 50 29.0**	**-0.1**
GO01				*e*S		**Sn**	**07 50 44.6**	**+0.3**
GO01				IAML			07 50 46.6	
	comp=Z,2μm,0.3s							
GO01	**Chusmiza**	**0.74**	**4**	*e*P		**Pn**	**07 50 29.0**	**-0.1**
GO01				*i* S		**Sn**	**07 50 44.2**	**-0.1**
GO01	**Chusmiza**	**0.74**	**4**			**Pn**	**07 50 28.8**	**-0.3**
PB11	**IPOC Station P**	**0.75**	**330**	*e*P		**Pn**	**07 50 29.0**	**+0.1**
PB11				*e*S		**Sn**	**07 50 44.1**	**+0.3**
PB11				IAML			07 50 46.4	
	comp=Z,3μm,0.5s							
PB11	**IPOC Station P**	**0.75**	**330**	*e*P		**Pn**	**07 50 29.1**	**+0.3**
PB11				*i* S		**Sn**	**07 50 43.9**	**+0.1**
PB11				IAML			07 50 45.0	
	comp=N,14μm,0.2s							
PB11	**IPOC Station P**	**0.75**	**330**			**Pn**	**07 50 28.9**	**+0.1**
TA02	**Huaiquique**	**0.83**	**279**	*e*P		**Pn**	**07 50 30.0**	**+0.7**
TA02				IAML			07 50 47.1	
	comp=Z,5μm,0.1s							
TA02	**Huaiquique**	**0.83**	**279**	*e*P		**Pn**	**07 50 29.8**	**+0.5**
TA02				*i* S		**Sn**	**07 50 44.9**	**+0.2**
TA02				IAML			07 50 47.4	
	comp=E,11μm,0.1s							
PB02	**IPOC Station P**	**1.09**	**213**	*e*P		**Pn**	**07 50 32.9**	**+1.0**
PB02				*e*S		**Sn**	**07 50 50.7**	**+1.4**
PB02				IAML			07 50 50.9	
	comp=Z,3μm,0.3s							
PB02	**IPOC Station P**	**1.09**	**213**	*e*P		**Pn**	**07 50 32.5**	**+0.6**
PB02				*i* S		**Sn**	**07 50 49.6**	**+0.3**
PB02				IAML			07 50 50.9	
	comp=E,6μm,0.3s							
PB02	**IPOC Station P**	**1.09**	**213**			**Pn**	**07 50 32.6**	**+0.7**
PSGCX	**Pisagua**	**1.15**	**315**	*e*P		**Pn**	**07 50 32.8**	**+0.2**
PSGCX				*e*S		**Sn**	**07 50 51.4**	**+0.9**
PSGCX				IAML			07 50 52.9	
	comp=Z,1μm,0.3s							
PSGCX	**Pisagua**	**1.15**	**315**	*e*P		**Pn**	**07 50 32.5**	**0.0**
PSGCX				*i* S		**Sn**	**07 50 50.3**	**-0.1**
PSGCX	**Pisagua**	**1.15**	**315**			**Pn**	**07 50 32.5**	**0.0**
PB09	**IPOC Station P**	**1.38**	**180**	*e*P		**Pn**	**07 50 35.7**	**+0.6**
PB09				*e*S		**Sn**	**07 50 56.0**	**+1.0**
PB09				IAML			07 50 57.8	
	comp=Z,2μm,0.3s							
PB09	**IPOC Station P**	**1.38**	**180**	*e*P		**Pn**	**07 50 35.6**	**+0.6**
PB09				*i* S		**Sn**	**07 50 55.7**	**+0.7**
PB09				IAML			07 50 56.2	
	comp=N,2μm,0.3s							
PB09	**IPOC Station P**	**1.38**	**180**			**Pn**	**07 50 35.6**	**+0

comp=Z,1.1nm,0.4s,baz=258,slow=6.4,SNR=3.0
comp=Z,1.1nm,0.4s

BDFB	**Brasilia**	**20.74**	**80**	P	**P**	**07 54 37.9**	**-2.4**
BOAV	**Boa Vista**	**24.23**	**22**	P	**P**	**07 55 14.6**	**-0.1**
BOAV				IAmb	IAmb	07 55 16.4	
	comp=Z,6.0nm,0.7s						
SNAA	**Sanae**	**63.41**	**161**	P	**P**	**08 00 26.2**	**+0.8**
SNAA				IAmb	IAmb	08 00 26.8	
	comp=Z,2.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.30**	**71**	P	**P**	**08 01 51.4**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=255,slow=5.1,SNR=12						
	comp=Z,0.8nm,0.3s						
TORD	**Torodi Ar. Bea**	**77.30**	**71**	P	**P**	**08 01 51.1**	**+0.4**
H11S2	**WAKE ISLAND Hyl**	**27.42**	**278**	T	T	10 28 55.4	
	baz=102,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hyl**	**27.42**	**278**	T	T	10 28 57.2	
	baz=102,slow=75,SNR=14						
H11S3	**WAKE ISLAND Hyl**	**27.43**	**278**	T	T	10 28 54.2	
	baz=102,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hyl**	**27.47**	**280**	T	T	10 28 55.2	
	baz=101,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hyl**	**27.48**	**280**	T	T	10 28 52.7	
	baz=101,slow=75,SNR=6.2						
H11N1	**WAKE ISLAND Hyl**	**27.48**	**280**	T	T	10 28 58.4	
	baz=101,slow=75,SNR=10						
HHC	**Hu-ho-hao-te**	**159.61**	**358**	*e*P	**PKPdf**	**08 09 55.3**	**+1.5**
PZH	**PanZhiHua**	**169.75**	**52**	PKP	**PKPdf**	**08 10 02.5**	**-0.5**

*IDC **24** 08:05:33.6±2.2,55°.13N×159°.00W, h0km, mb3.7/3, mbtmp3.7/5, ML3.7/2, MS2.6/2, Error ellipse: s-maj=51.0km s-min=33.1km az=9.0*
*NEIC **24** 08:05:38.1±0.9,55°.01N±0°.03×158°.51W±0°.04, h24km±11km, ML3.5/34, ML3.4(AEIC), Error ellipse: s-maj=4.9km s-min=2.0km az=213.0*
*AEIC **24** 08:05:38.7±0.9,54°.98N±0°.05×158°.53W±0°.06, h20km±6km, Error ellipse: s-maj=7.6km s-min=4.6km az=161.0*
ISC 24 08:05:37.8±0.9,55°.02N±0°.06×158°.51W±0°.04,h30km,n84, σ0§98/88,mb3.8/3,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.66**	**253**		**Pb**	**08 05 49.7**	**-1.1**
CNBA				IAML		08 06 01.6	
	comp=E,3μm,0.4s						
CNBA				IAML		08 06 01.7	
	comp=N,3μm,0.4s						
CNBA	**Chernabura Isl**	**0.66**	**253**		**Sn**	**08 06 01.1**	**+0.8**
VNKR	**Veniaminof 5**	**1.13**	**335**		**Pn**	**08 05 57.8**	**+0.2**
VNKR					**Sn**	**08 06 12.2**	**+0.1**
SDPT	**Sand Point**	**1.18**	**287**		**Pn**	**08 05 57.6**	**-0.6**
SDPT				IAML		08 06 13.7	
	comp=N,1μm,0.5s						
SDPT				IAML		08 06 15.6	
	comp=E,729nm,0.5s						
SDPT	**Sand Point**	**1.18**	**287**		**Sn**	**08 06 12.7**	**-0.5**
CHGN	**Chignik**	**1.29**	**2**		**Pn**	**08 05 59.7**	**0.0**
CHGN				IAML		08 06 20.4	
	comp=N,953nm,0.2s						
CHGN	**Chignik**	**1.29**	**2**		**Sn**	**08 06 16.7**	**+0.8**
VNSS	**Veniaminof 8**	**1.33**	**336**		**Pn**	**08 06 01.3**	**+0.9**
VNFG	**Fog Glacier, M**	**1.40**	**335**		**Pn**	**08 06 02.3**	**+0.9**
VNFG	**Fog Glacier, M**	**1.40**	**335**		**Pn**	**08 06 02.5**	**+1.1**
VNFG	**Fog Glacier, M**	**1.40**	**335**		**Sn**	**08 06 20.7**	**+1.8**
ANPB	**Aniakchak Plen**	**1.79**	**4**		**Pn**	**08 06 07.8**	**+1.1**
CHIR	**Chirikof Islan**	**1.83**	**63**		**Pn**	**08 06 07.9**	**+0.7**
CHIR				IAML		08 06 41.7	
	comp=E,379nm,0.7s						
CHIR				IAML		08 06 45.8	
	comp=N,334nm,0.7s						
CHIR	**Chirikof Islan**	**1.83**	**63**		**Sn**	**08 06 29.7**	**+0.3**
PS1A	**Pavlof South-1**	**1.90**	**284**		**Pn**	**08 06 08.6**	**+0.5**
PS1A					**Sn**	**08 06 31.0**	**0.0**
DOL	**Dolgoi Island**	**1.93**	**275**		**Pn**	**08 06 08.8**	**+0.1**
DOL					**Sn**	**08 06 33.0**	**+1.1**
PS4A	**Pavlof South-4**	**1.95**	**281**		**Pn**	**08 06 09.2**	**+0.4**
PN7A	**Pavlof North-7**	**2.04**	**283**		**Pn**	**08 06 10.7**	**+0.6**
DTNA	**Dutton South F**	**2.16**	**275**		**Pn**	**08 06 12.3**	**+0.6**
DTNA					**Sn**	**08 06 39.4**	**+2.0**
DT1	**Dutton Round H**	**2.17**	**274**		**Pn**	**08 06 12.3**	**+0.4**
PLBL	**Peulik Blue Cr**	**2.85**	**19**		**Pn**	**08 06 22.6**	**+1.4**
R17L	**Mt. Peulik Vol**	**2.88**	**24**		**Pn**	**08 06 23.1**	**+1.4**
SII	**Sitkinak Islan**	**2.89**	**56**		**Pn**	**08 06 22.5**	**+0.7**
SII				IAML		08 07 18.9	
	comp=N,219nm,0.7s						
SII				IAML		08 07 25.8	
	comp=E,254nm,0.9s						
PLK3	**Peulik 3**	**2.95**	**24**		**Pn**	**08 06 23.9**	**+1.2**
PLK1	**Peulik 1**	**2.98**	**20**		**Pn**	**08 06 24.3**	**+1.2**
PLK2	**Peulik 2**	**3.01**	**23**		**Pn**	**08 06 24.7**	**+1.3**
ISNN	**Isanotski Nort**	**3.05**	**269**		**Pn**	**08 06 24.4**	**+0.5**
SSLN	**Shishaldin Nor**	**3.17**	**269**		**Pn**	**08 06 26.2**	**+0.6**
CAHL	**Cahill**	**3.52**	**29**		**Pn**	**08 06 31.1**	**+0.6**
ANCK	**Angle Creek**	**3.60**	**26**		**Pn**	**08 06 32.6**	**+1.1**
MGLS	**Mageik Landsli**	**3.63**	**29**		**Pn**	**08 06 33.0**	**+1.1**
ACHA	**Angle Creek He**	**3.65**	**27**		**Pn**	**08 06 33.2**	**+1.0**
OHAK	**Old Harbor**	**3.66**	**51**		**Pn**	**08 06 33.2**	**+0.9**
OHAK				IAML		08 07 51.4	
	comp=N,47nm,1.0s						
KABU	**Katmai Buttres**	**3.72**	**27**		**Pn**	**08 06 34.5**	**+1.4**
Q16K	**King Salmon**	**3.81**	**15**		**Pn**	**08 06 35.4**	**+1.1**
P16K	**Nushagak River**	**4.04**	**4**		**Pn**	**08 06 38.5**	**+1.1**
P16K				IAML		08 08 02.8	
	comp=N,104nm,0.9s						
Q18K	**Katmai Hardscr**	**4.12**	**26**		**Pn**	**08 06 39.4**	**+0.7**
O15K	**Ungalikthiuk R**	**4.23**	**351**		**Pn**	**08 06 40.5**	**+0.4**
O15K				IAML		08 07 32.1	
	comp=E,66nm,0.6s						
KDAK	**Kodiak Island**	**4.30**	**47**	Pn	**Pn**	**08 06 41.5**	**+0.4**
	comp=E,1.2nm,0.3s,baz=224,slow=6.5,SNR=39						
KDAK				Sn	**Sn**	**08 07 28.0**	**-2.2**
	comp=E,2.0nm,0.3s,baz=40,slow=18,SNR=3.8						
KDAK				LR	LR	08 08 07.1	
	comp=E,26nm,19.0s,baz=226,slow=35						
	comp=E,3.2nm,0.4s						
KDAK	**Kodiak Island**	**4.30**	**47**		**Pn**	**08 06 41.6**	**+0.4**
KDAK				IAML		08 08 00.3	
	comp=E,29nm,1.5s						
KDAK				IAML		08 08 03.9	
	comp=E,31nm,1.2s						
P17K	**Kvichak River**	**4.34**	**14**		**Pn**	**08 06 42.8**	**+1.2**
O14K	**Tigyukauivet M**	**4.50**	**342**		**Pn**	**08 06 44.5**	**+0.6**
O14K				IAML		08 07 40.0	
	comp=E,39nm,1.0s						
O14K				IAML		08 08 11.0	
	comp=N,36nm,1.5s						
O16K	**Kokwok River B**	**4.59**	**3**		**Pn**	**08 06 45.8**	**+0.7**
O17K	**Koliganek Bris**	**4.83**	**9**		**Pn**	**08 06 49.1**	**+0.8**
O18K	**Koktuh Hills**	**5.17**	**19**		**Pn**	**08 06 53.9**	**+0.9**
N14K	**Kuskokwak Cree**	**5.21**	**342**		**Pn**	**08 06 54.3**	**+0.7**
N15K	**Kwethluk River**	**5.24**	**351**		**Pn**	**08 06 54.7**	**+0.7**
N15K				IAML		08 08 38.5	
	comp=N,28nm,1.0s						
N15K				IAML		08 08 42.7	
	comp=E,34nm,1.0s						
N16K	**Nishlik Lake**	**5.47**	**359**		**Pn**	**08 06 58.1**	**+0.9**
N17K	**Nushagak Hills**	**5.57**	**7**		**Pn**	**08 06 59.1**	**+0.6**
O19K	**Port Alsworth**	**5.66**	**22**		**Pn**	**08 07 01.1**	**+1.4**
ILSW	**Iliamna Southw**	**5.76**	**28**		**Pn**	**08 07 02.1**	**+0.9**
M15K	**Kasigluk River**	**5.81**	**349**		**Pn**	**08 07 02.5**	**+0.7**
N18K	**Kilae Creek**	**5.85**	**13**		**Pn**	**08 07 03.9**	**+1.6**
M13K	**Dall Lake**	**6.00**	**336**		**Pn**	**08 07 05.8**	**+1.4**
M16K	**Timber Creek**	**6.03**	**358**		**Pn**	**08 07 05.7**	**+0.9**
M14K	**Bethel**	**6.04**	**344**		**Pn**	**08 07 05.5**	**+0.6**
N19K	**Bonanza Creek**	**6.19**	**19**		**Pn**	**08 07 08.4**	**+1.2**
M17K	**Holitna River**	**6.43**	**5**		**Pn**	**08 07 11.2**	**+0.9**
M18K	**Stony River**	**6.64**	**11**		**Pn**	**08 07 14.1**	**+0.8**
L14K	**Kuka Creek**	**6.71**	**343**		**Pn**	**08 07 14.7**	**+0.6**
L16K	**Owhat River**	**6.73**	**356**		**Pn**	**08 07 14.9**	**+0.5**
L15K	**Ungalak Mounta**	**6.86**	**348**		**Pn**	**08 07 16.3**	**+0.1**
L17K	**Donlin**	**7.14**	**1**		**Pn**	**08 07 20.5**	**+0.4**
L18K	**Granite Mounta**	**7.29**	**7**		**Pn**	**08 07 22.3**	**+0.3**
L19K	**White Mountain**	**7.43**	**13**		**Pn**	**08 07 24.9**	**+0.8**
M20K	**Styx River**	**7.44**	**20**		**Pn**	**08 07 25.6**	**+1.3**
K15K	**Wolf Creek Mou**	**7.47**	**349**		**Pn**	**08 07 25.7**	**+1.2**
K13K	**Kusilvak Mount**	**7.64**	**338**		**Pn**	**08 07 27.4**	**+0.4**
K17K	**Iditarod**	**7.72**	**1**		**Pn**	**08 07 28.5**	**+0.4**
PWL	**Port Wells**	**7.97**	**39**		**Pn**	**08 07 31.8**	**+0.3**
J16K	**Anvik River**	**8.36**	**353**		**Pn**	**08 07 37.3**	**+0.5**
J17K	**VABM Dome**	**8.41**	**358**		**Pn**	**08 07 37.4**	**-0.1**
J18K	**Innoko River**	**8.52**	**5**		**Pn**	**08 07 40.0**	**+1.0**
I17K	**Unalakleet**	**8.97**	**354**		**Pn**	**08 07 45.7**	**+0.7**
J19K	**Poorman**	**9.12**	**8**		**Pn**	**08 07 47.8**	**+0.6**
RAGM	**Ragged Mountai**	**9.14**	**48**		**Pn**	**08 07 48.0**	**+0.4**
KLU	**Klutina**	**9.27**	**40**		**Pn**	**08 07 50.4**	**+1.1**
PAX	**Paxson**	**10.41**	**35**		**Pn**	**08 08 05.6**	**+0.7**
ILAR	**Eielson Array**	**11.37**	**26**	Pn	**Pn**	**08 08 15.6**	**-2.3**
	comp=E,0.3nm,0.3s,baz=217,slow=13,SNR=17						
INK	**Inuvik**	**17.64**	**31**	P	**Pn**	**08 09 40.9**	**+0.1**
	comp=E,0.5nm,0.3s,baz=250,slow=12,SNR=6.8						
	comp=E,1.6nm,0.4s						
YBH	**Yreka Blue Hor**	**26.90**	**105**	LR	LR	08 19 37.3	
	comp=E,32nm,19.5s,baz=353,slow=31						
TXAR	**Lajitas Array**	**46.52**	**100**	P	**P**	**08 14 04.9**	**+2.4**
	comp=E,0.3nm,0.9s,baz=324,slow=7.1,SNR=2.4						
	comp=E,0.3nm,0.9s						
SONM	**Songino Array**	**55.28**	**305**	P	**P**	**08 15 06.4**	**-1.7**
	comp=E,0.6nm,0.6s,baz=64,slow=6.6,SNR=3.1						
	comp=E,0.6nm,0.6s						
ARCES	**ARCESS Array B**	**55.72**	**358**	P	**P**	**08 15 09.9**	**-0.9**
	comp=E,2.6nm,1.1s,baz=12,slow=4.6,SNR=4.0						
	comp=E,2.6nm,1.1s						

*IDC **24** 08:06:32.8±1.4,33°.00N×86°.49E, h0km, mb3.6/6, mbtmp3.7/9, ML3.1/2, MS3.4/30, Error ellipse: s-maj=43.3km s-min=19.8km az=65.0*
ISC 24 08:06:37.7±1.3,33°.1N±0°.2×86°.5E±0°.2,h35km,n33, σ0§67/9,mb3.6/5,MS3.5/26,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.46**	**319**	LR	LR	08 15 59.9	
	comp=Z,112nm,21.1s,baz=136,slow=42						
MKAR	**Makanchi Array**	**14.09**	**348**	Pn	**Pn**	**08 09 54.0**	**-0.7**
	0.2nm,0.3s,baz=161,slow=12,SNR=4.8						
MKAR				LR	LR	08 16 28.1	
	comp=Z,176nm,20.4s,baz=156,slow=42						
	0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.33**	**139**	P	**P**	**08 10 47.9**	**-1.1**
	1.7nm,0.3s,baz=334,slow=11,SNR=7.1						
CMAR				LR	LR	08 19 35.1	
	comp=Z,32nm,20.8s,baz=310,slow=43						
KURBB	**Kurchatov Arra**	**18.51**	**344**	P	**P**	**08 10 50.5**	**-0.2**
	baz=158,slow=12,SNR=5.5						
KURBB				LR	LR	08 18 58.4	
	comp=Z,118nm,18.0s,baz=232,slow=40						
	1.1nm,1.0s						
ZALV	**Zalesovo Beam**	**20.91**	**357**	P	**P**	**08 11 16.9**	**0.0**
	1.0nm,0.6s,baz=183,slow=14,SNR=3.6						
ZALV				LR	LR	08 20 39.5	
	comp=Z,96nm,19.1s,baz=182,slow=40						
	1.0nm,0.6s						
SONM	**Songino Array**	**21.05**	**40**	P	**P**	**08 11 19.0**	**+0.3**
	2.0nm,0.9s,baz=224,slow=11,SNR=6.5						
	2.0nm,0.9s						
TLY	**Talaya**	**22.41**	**29**	LR	LR	08 20 56.7	
	comp=Z,31nm,20.1s,baz=228,slow=38						
AKTO	**Aktyubinsk**	**27.20**	**318**	LR	LR	08 24 06.3	
	comp=Z,100nm,19.8s,baz=192,slow=39						
ARTI	**Arti**	**30.33**	**329**	LR	LR	08 26 33.0	
	comp=Z,139nm,18.9s,baz=65,slow=40						
KSRS	**Korea Array**	**33.91**	**71**	P	**P**	**08 13 17.5**	**+0.2**
	1.7nm,0.7s,baz=279,slow=9.6,SNR=3.5						
KSRS				LR	LR	08 27 07.0	
	comp=Z,25nm,18.0s,baz=185,slow=36						
	1.7nm,0.7s						
KBZ	**Khabaz**	**35.44**	**300**	LR	LR	08 30 48.1	
	comp=Z,70nm,21.2s,baz=72,slow=41						
KIRV	**Kirov**	**35.57**	**327**	LR	LR	08 28 46.7	
	comp=Z,38nm,21.1s,baz=132,slow=37						
NRIK	**Noril'sk**	**36.33**	**1**	LR	LR	08 30 35.2	
	comp=Z,51nm,18.2s,baz=176,slow=40						
OBN	**Obninsk**	**40.98**	**318**	LR	LR	08 34 16.3	
	comp=Z,28nm,21.0s,baz=175,slow=41						
ASF	**Jabal al Asfar**	**41.48**	**283**	LR	LR	08 34 39.5	
	comp=Z,68nm,18.7s,baz=26,slow=41						
MMAI	**Mount Meron Ar**	**42.48**	**284**	LR	LR	08 35 22.2	
	comp=Z,60nm,18.7s,baz=88,slow=41						
BRTR	**Keskin Array B**	**42.56**	**295**	LR	LR	08 34 59.2	
	comp=Z,29nm,20.3s,baz=99,slow=40						
DAV	**Davao City (W)**	**44.48**	**117**	LR	LR	08 35 01.3	
	comp=Z,47nm,18.8s,baz=158,slow=38						
AKASG	**Malin Array Be**	**44.96**	**311**	LR	LR	08 37 46.3	
	comp=Z,71nm,18.2s,baz=77,slow=42						
MLR	**Muntele Rosu**	**47.45**	**304**	LR	LR	08 38 41.5	
	comp=Z,99nm,19.5s,baz=58,slow=41						
FINES	**FINESS Array B**	**47.52**	**325**	LR	LR	08 36 52.8	
	comp=Z,72nm,18.6s,baz=54,slow=38						
KAPI	**Kappang**	**49.27**	**134**	LR	LR	08 39 08.7	
	comp=Z,42nm,19.2s,baz=306,slow=40						
VRAC	**Vranov**	**53.18**	**310**	LR	LR	08 42 32.2	
	comp=Z,71nm,21.3s,baz=72,slow=41						
NOA	**NORSAR Array B**	**54.69**	**325**	P	**P**	**08 16 03.6**	**+0.6**
	0.3nm,0.5s,baz=86,slow=7.4,SNR=2.9						
NOA				LR	LR	08 40 39.5	
	comp=Z,37nm,21.2s,baz=90,slow=37						
	0.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**58.14**	**308**	LR	LR	08 44 48.4	
	comp=Z,65nm,20.1s,baz=76,slow=40						
JMIC	**Jan Mayen**	**60.73**	**338**	LR	LR	08 46 18.7	
	comp=Z,31nm,19.6s,baz=72,slow=39						
BORG	**Borgarnes**	**67.66**	**334**	LR	LR	08 47 46.1	
	comp=Z,48nm,19.4s,baz=349,slow=36						
WRA	**Warramunga Arr**	**69.74**	**132**	P	**P**	**08 17 44.7**	**+0.4**
	0.4nm,0.6s,baz=326,slow=6.6,SNR=11						
	0.4nm,0.6s						
ESDC	**Sonseca Array**	**70.13**	**305**	LR	LR	08 52 04.9	
	comp=Z,34nm,18.1s,baz=1.5,slow=39						
ASAR	**Alice Springs**	**72.27**	**135**	P	**P**	**08 18 00.1**	**+0.5**
	0.5nm,0.9s,baz=323,slow=4.7,SNR=2.6						
	0.5nm,0.9s						
DLBC	**Dease Lake**	**83.86**	**18**	LR	LR	09 02 29.5	
	comp=Z,19nm,18.4s,baz=336,slow=40						
DBIC	**Dimbokro**	**87.55**	**276**	LR	LR	09 02 31.0	
	comp=Z,30nm,18.8s,baz=100,slow=38						
SCHQ	**Schefferville**	**89.50**	**345**	LR	LR	09 05 18.5	
	comp=Z,23nm,18.1s,baz=42,slow=39						

*AEIC **24** 08:15:41.6±0.9,51°.45N±0°.07×176°.74W±0°.06, h36km±8km, Error ellipse: s-maj=11.0km s-min=3.9km az=159.0*
NEIC 24 08:15:41.8±1.1,51°.4N±0°.1×176°.75W±0°.07,h42km±13km, ML3.8/10,ML3.5(AEIC),Error ellipse: s-maj=17.0km s-min=3.3km az=162.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.44**	**317**		Pn	08 15 51.4	-0.5
KIMD					Sn	08 15 58.7	-0.3
ADK	**Adak**	**0.44**	**5**		Sn	08 15 58.7	-0.3
ADK	**Adak**	**0.44**	**5**	Pn	Pn	08 15 51.4	-0.5
ADK				IAML		08 15 59.1	
	26μm,0.3s						
ADK				IAML		08 15 59.5	
	12μm,0.3s						
ETKA	**Kagalaska Isla**	**0.47**	**27**		Pn	08 15 51.5	-0.8
ETKA					Sn	08 15 59.0	-0.7
KIWB	**Kanaga Island**	**0.48**	**329**		Sn	08 16 00.3	+0.3
KIWB	**Kanaga Island**	**0.48**	**329**	Pn	Pn	08 15 52.2	-0.3
KIWB				IAML		08 16 00.5	
	comp=N,10μm,0.4s						
KIWB				IAML		08 16 00.7	
	comp=E,10μm,0.4s						
ADAG	**Mount Adagdak**	**0.55**	**9**		Pn	08 15 53.2	-0.1
ADAG					Sn	08 16 01.9	+0.5
GSCK	**Great Sitkin C**	**0.68**	**32**		Pn	08 15 54.6	-0.4
GSCK					Sn	08 16 04.5	0.0
GSTD	**Great Sitkin T**	**0.72**	**31**		Pn	08 15 55.3	-0.4
GSTD					Sn	08 16 05.6	0.0
GSSP	**Great Sitkin S**	**0.74**	**28**		Pn	08 15 55.7	-0.2
GSSP					Sn	08 16 06.2	+0.2
TAPA	**Tanaga Point A**	**0.76**	**300**		Pn	08 15 55.8	-0.4
TAPA					Sn	08 16 06.6	+0.1
GSTR	**Great Sitkin T**	**0.78**	**33**	Pn	Pn	08 15 55.7	-0.7
GSTR				IAML		08 16 10.5	
	comp=E,4μm,0.4s						
GSTR				IAML		08 16 11.8	
	comp=N,5μm,0.2s						
TAFL	**Tanaga Flats**	**0.78**	**294**		Pn	08 15 56.1	-0.3
TANO	**Tanaga North**	**0.98**	**300**		Pn	08 15 59.3	+0.3
GAEA	**Gareloi East**	**1.29**	**286**		Pn	08 16 03.9	+0.5
GALAA	**Gareloi Lava P**	**1.30**	**285**		Pn	08 16 04.0	+0.5
GANE	**Gareloi Northe**	**1.32**	**287**		Pn	08 16 04.3	+0.5
ATKA	**Atka Island**	**1.76**	**63**	Pn	Pn	08 16 09.4	-0.3
ATKA				IAML		08 16 36.2	
	comp=E,385nm,0.5s						
KOWE	**Korovin West**	**1.80**	**58**		Pn	08 16 10.2	-0.2
KOKL	**Mount Kliuchef**	**1.81**	**60**		Pn	08 16 10.7	+0.2
KOFP	**Korovin Flat P**	**1.84**	**62**		Pn	08 16 11.9	+0.9
KOSE	**Korovin Southe**	**1.90**	**61**		Pn	08 16 13.0	+1.2
CESW	**Semis' Southwe**	**2.34**	**283**		Pn	08 16 18.3	+0.5
AMKA	**Amchitka**	**2.48**	**270**		Pn	08 16 19.6	0.0
AMKA	**Amchitka**	**2.48**	**270**	IAML		08 16 59.4	
	comp=N,247nm,0.7s						
LSPA	**Little Sitkin**	**2.96**	**282**		Pn	08 16 25.9	-0.3
LSNW	**Little Sitkin**	**2.99**	**282**		Pn	08 16 26.7	0.0
UNV	**Unalaska Valle**	**6.68**	**65**	Pn	Pn	08 17 18.7	+1.4
SPIA	**Saint Paul Isl**	**6.89**	**31**	Pn	Pn	08 17 20.9	+0.9

*IDC **24** 08:20:13.7±3.2,53°.58N×87°.93E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=29.0km s-min=18.5km az=89.0*
ASRS 24 08:20:11.0±1.6,53°.60N×88°.02E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.93**	**282**	I	I	08 32 10.0	
	0.1nm,0.8s,baz=97,slow=317,SNR=6.9						
ZALV	**Zalesovo Beam**	**1.93**	**282**	Pn	Pb	08 20 46.9	-0.2
	1.3nm,0.3s,baz=96,slow=15,SNR=22						
ZALV				Sn	Sg	08 21 13.1	0.0
	3.1nm,0.3s,baz=102,slow=25,SNR=14						
KURBB	**Kurchatov Arra**	**6.56**	**247**	Pn	Pn	08 21 51.2	+2.5
	0.1nm,0.3s,baz=62,slow=14,SNR=4.4						
KURBB				Sn	Sn	08 23 04.3	+0.1
	baz=72,slow=23,SNR=2.5						
KURBB				Lg	Lg	08 23 39.9	
	baz=63,slow=31,SNR=6.3						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.74**	**211**	Pn	Pn	08 22 08.4	+3.5
	0.2nm,0.3s,baz=28,slow=13,SNR=2.2						
MKAR				Sn	Sn	08 23 34.4	+1.2
	0.2nm,0.3s,baz=39,slow=19,SNR=2.6						
MKAR				Lg	Lg	08 24 16.4	
	0.2nm,0.3s,baz=30,slow=32,SNR=2.6						
	0.2nm,0.3s						

IDC 24 08:34:19.7±52.0,16°.99S×175°.53W,h0km,mb3.8/3, mbtmp3.8/3,Error ellipse: s-maj=973.8km s-min=178.0km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.48**	**241**	P	P	08 42 09.5	+0.9
	1.4nm,0.9s,baz=60,slow=8.1,SNR=3.4						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**47.50**	**258**	P	P	08 42 56.4	-0.6
	0.4nm,0.6s,baz=96,slow=7.5,SNR=14						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**47.68**	**253**	P	P	08 42 58.1	-0.3
	2.2nm,0.6s,baz=92,slow=8.0,SNR=45						
	2.2nm,0.6s						

IDC 24 08:41:09.6±2.6,1°.43N×126°.98E,h0km,mb3.3/3, mbtmp3.4/3,Error ellipse: s-maj=232.1km s-min=27.5km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.43**	**162**	P	P	08 46 09.6	-0.6
	0.5nm,0.8s,baz=344,slow=12,SNR=5.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**25.84**	**165**	P	P	08 46 43.6	+0.6
	0.5nm,0.9s,baz=348,slow=11,SNR=6.3						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**59.58**	**326**	P	P	08 51 15.0	-0.2
	0.4nm,0.4s,baz=121,slow=7.2,SNR=4.0						
	0.4nm,0.4s						

*IDC **24** 08:41:47.9±6.5,4°.21S×103°.64E, h0km, mb3.3/2, mbtmp3.3/2, MS3.2/1, Error ellipse: s-maj=427.9km s-min=75.1km az=45.0*
*DJA **24** 08:41:51.7±0.3,5°.5S±3°×10°.3E±°, h17km±5km, M3.7/14, MLv3.7/14*
ISC 24 08:41:50.8±1.0,5°.26S±0°.06×102°.73E±0°.05,h34km,n12, σ0§99/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.46**	**258**	P	**Pn**	**08 42 01.6**	**+0.6**
EGSI				S	**Sb**	**08 42 07.4**	**-0.4**
MNAI	**Manna**	**0.92**	**14**	P	**Pb**	**08 42 08.6**	**+0.3**
MNAI				S	**Sn**	**08 42 19.2**	**-0.1**
KSI	**Kapahiang**	**1.60**	**355**	P	**Pb**	**08 42 18.8**	**-1.0**
LHSI	**Lahat**	**1.63**	**29**	P	**Pb**	**08 42 20.5**	**+0.3**
MDSI	**Maura Dua**	**1.63**	**62**	P	**Pb**	**08 42 19.7**	**-0.6**
MDSI				S	**Sb**	**08 42 40.8**	**+0.2**
KASI	**Kota Agung**	**1.78**	**99**	P	**Pb**	**08 42

	baz=34							
RMF				SG	**Sg**	**09 00 34.0**	**-1.9**	
RMF				smax	smax	09 00 34.1		
	comp=Z,8.1nm,0.2s							
KU1	**Kurvinen**	**0.88**	**329**	PG	**Pg**	**09 00 31.1**	**+0.1**	
KU1				SB	**Sn**	**09 00 46.5**	**-0.7**	
KU6	**Riekki**	**1.26**	**345**	PG	**Pg**	**09 00 37.7**	**-0.4**	
	baz=169							
KU6				smax	smax	09 00 54.1		
	comp=Z,3.9nm,0.2s							
KU6				SB	**Sb**	**09 00 55.5**	**+0.2**	
MSF	**Maaselka**	**1.29**	**329**	PB	**Pg**	**09 00 38.8**	**0.0**	
MSF				SN	**Sn**	**09 00 57.7**	**+0.3**	
KU2	**Taivalkoski**	**1.36**	**312**	PG	**Pg**	**09 00 39.4**	**-0.8**	
	baz=131							
KU2				SN	**Sn**	**09 01 00.4**	**+1.3**	
OLKF	**Oulanka, Finla**	**1.60**	**341**	PG	**Pn**	**09 00 43.9**	**+0.3**	
OLKF				smax	smax	09 01 03.9		
	comp=Z,4.2nm,0.2s							
OLKF				SN	**Sg**	**09 01 06.6**	**+1.2**	
NIF	**Nilsia**	**1.90**	**222**	PG	**Pn**	**09 00 47.4**	**-0.4**	
	baz=37							
NIF				smax	smax	09 01 09.6		
	comp=Z,5.4nm,0.2s							
NIF				SG	**Sn**	**09 01 12.4**	**0.0**	
OUL	**Oulu**	**2.05**	**280**	PG	**Pn**	**09 00 50.8**	**+1.1**	
	baz=95							
KVDA	**Kovda**	**2.09**	**25**	P	**Pn**	**09 00 50.9**	**+0.5**	
KVDA				S	**Sn**	**09 01 17.2**	**+0.2**	
OBF4	**Vikkela, Lumij**	**2.38**	**272**	PG	**Pn**	**09 00 55.7**	**+1.5**	
OBF4				smax	smax	09 01 24.6		
	comp=Z,7.5nm,0.2s							
OBF4				SG	**Sb**	**09 01 27.8**	**+0.2**	
OUF	**Merijarvi**	**2.60**	**263**	PB	**Pn**	**09 00 58.3**	**+1.0**	
OUF				smax	smax	09 01 30.6		
	comp=Z,4.0nm,0.2s							
OUF				SG	**Sb**	**09 01 33.1**	**-0.8**	
RNF	**Rovaniemi**	**2.63**	**315**	PB	**Pn**	**09 00 59.5**	**+1.8**	
RNF				SG	**Sb**	**09 01 35.3**	**+0.4**	
OBF0	**Syolatti, Pyha**	**2.78**	**266**	PB	**Pn**	**09 01 02.4**	**+2.5**	
OBF0				smax	smax	09 01 36.0		
	comp=Z,3.1nm,0.2s							
OBF0				SG	**Sb**	**09 01 40.2**	**+1.0**	
SUF	**Sumiainen**	**2.91**	**226**	PB	**Pn**	**09 01 03.1**	**+1.6**	
SUF				smax	smax	09 01 38.6		
	comp=Z,1.3nm,0.2s							
TOF	**Tornio**	**2.94**	**298**	PG	**Pb**	**09 01 07.2**	**0.0**	
TOF				smax	smax	09 01 41.2		
	comp=Z,1.5nm,0.2s							
TOF				SB	**Sb**	**09 01 42.8**	**-0.8**	
APA0	**Apatity Array**	**2.96**	**18**	P	**Pn**	**09 01 03.2**	**+1.0**	
APA0				S	**Sn**	**09 01 36.2**	**-2.2**	
VRF	**Varrio**	**2.97**	**352**	PN	**Pn**	**09 01 04.3**	**+1.8**	
VRF				smax	smax	09 01 43.5		
	comp=Z,1.7nm,0.2s							
VRF				SB	**Sb**	**09 01 45.0**	**+0.3**	
LVZ	**Lovozero**	**3.49**	**26**	SN	**Sn**	**09 01 52.5**	**+1.0**	
KLF	**Kolari**	**3.66**	**315**	SG	**Sg**	**09 02 10.5**	**-0.9**	
KEF	**Keuruu**	**3.72**	**227**	PN	**Pn**	**09 01 13.9**	**+1.3**	
RAJF	**Raja-Jooseppi**	**3.79**	**347**	PN	**Pn**	**09 01 14.4**	**+0.7**	
ERTU	**Ertsjaerv**	**3.91**	**300**	PG	**Pb**	**09 01 25.0**	**+1.2**	
	baz=111							
VAF	**Ylistaro**	**3.95**	**247**	PG	**Pb**	**09 01 24.8**	**+0.3**	
VAF				SG	**Sb**	**09 02 15.8**	**+3.0**	
FINES	**FINESS Array B**	**3.98**	**214**	Pn	**Pn**	**09 01 15.6**	**-0.6**	
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=1.0							
FINES				Lg	Lg	09 02 16.4		
	comp=Z,0.6nm,0.3s,baz=32,slow=28,SNR=11							
	comp=Z,0.5nm,0.4s							
UMAU	**Umeaa**	**4.44**	**262**	PN	**Pn**	**09 01 21.8**	**-0.8**	
VJF	**Virojoki**	**4.53**	**200**	SG	**Sb**	**09 02 32.3**	**+3.0**	
HEF	**Hetta**	**4.56**	**325**	SG	**Sg**	**09 02 35.8**	**-4.5**	
ARCES	**ARCESS Array B**	**5.14**	**339**	Pn	**Pn**	**09 01 32.6**	**+0.3**	
	comp=Z,0.1nm,0.3s,baz=158,slow=14,SNR=10							
ARCES				Sn	**Sn**	**09 02 30.1**	**-2.2**	
	comp=Z,0.2nm,0.3s,baz=157,slow=24,SNR=2.7							
ARCES				Lg	Lg	09 02 53.5		
	comp=Z,0.2nm,0.3s,baz=157,slow=28,SNR=3.0							
	comp=Z,0.2nm,0.3s							
ARCES	**ARCESS Array B**	**5.14**	**339**	P	**Pn**	**09 01 32.5**	**+0.3**	
ARCES				S	**Sn**	**09 02 31.4**	**-0.9**	
I37NO	**I37NO**	**6.37**	**317**	I	I	09 36 12.8		
	baz=127,slow=318,SNR=3.1							

*IDC **24** 09:04:48.3±3.4, 54.˚40N×87.˚16E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=31.9km s-min=20.0km az=43.0*

ASRS 24 09:04:49.0±1.1, 54.˚29N×86.˚88E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**255**	I	I	09 13 10.0	
	baz=73,slow=315,SNR=16						
ZALV	**Zalesovo Beam**	**1.26**	**255**	Pg	Pb	09 05 13.7	+0.1
	3.0nm,0.3s,baz=71,slow=18,SNR=21						
ZALV				Lg	Lg	09 05 34.7	
	2.8nm,0.3s,baz=71,slow=31,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.29**	**238**	Pn	Pn	09 06 25.5	+2.7
	baz=54,slow=14,SNR=4.2						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**8.05**	**203**	Pn	Pn	09 06 50.0	+2.9
	0.2nm,0.3s,baz=26,slow=14,SNR=9.8						
MKAR				Sn	Sn	09 08 09.8	-9.0
	0.1nm,0.3s,baz=323,slow=26,SNR=5.3						
	0.3nm,0.3s						

IDC 24 09:14:58.9±3.2, 54.˚01N×86.˚58E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=25.8km s-min=15.6km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**267**	I	I	09 22 20.0	
	baz=86,slow=309,SNR=5.3						
ZALV	**Zalesovo Beam**	**1.04**	**267**	Pg	Pg	09 15 18.4	-0.4
	0.8nm,0.3s,baz=86,slow=15,SNR=6.1						
ZALV				Lg	Lg	09 15 33.7	
	1.2nm,0.3s,baz=87,slow=27,SNR=7.5						
KURBB	**Kurchatov Arra**	**5.99**	**239**	Pn	Pn	09 16 28.4	-0.3
	0.1nm,0.3s,baz=56,slow=14,SNR=3.5						
	0.6nm,0.2s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	09 16 54.6	+2.0
	0.1nm,0.3s,baz=25,slow=14,SNR=1.5						
	0.1nm,0.3s						

*ANF **24** 09:19:58.6±0.2, 55.˚32N×159.˚19W, h25km, Error ellipse: s-maj=3.7km s-min=2.0km az=125.0*
*AEIC **24** 09:19:58.4±1.3, 55.˚30N±0.˚04×159.˚13W±0.˚06, h26km±7km, Error ellipse: s-maj=8.0km s-min=1.4km az=139.0*
*NEIC **24** 09:19:59.4±0.8, 55.˚31N±0.˚04×159.˚18W±0.˚07, h35km±2km, ML2.6/12, ML2.3(AEIC), Error ellipse: s-maj=8.7km s-min=3.8km az=311.0*

ISC 24 09:19:58.5±1.1, 55.˚31N±0.˚04×159.˚15W±0.˚04, h28km±13km, n27, σ0.945/35, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.55**	**208**	P	**Pb**	**09 20 09.7**	**+0.2**
	baz=29						
CHNA				S	**Sb**	**09 20 17.4**	**+0.4**
	baz=29						
CNBA	**Chernabura Isl**	**0.56**	**207**		**Pb**	**09 20 09.7**	**0.0**
CNBA					**Sb**	**09 20 17.4**	**+0.1**
CNBA				IAML		09 20 19.6	
	comp=E,225nm,0.3s						
VNKR	**Veniaminof 5**	**0.73**	**350**		**Pb**	**09 20 12.5**	**-0.2**
SDPT	**Sand Point**	**0.76**	**273**		**Pb**	**09 20 12.8**	**-0.3**
SDPT					**Sb**	**09 20 22.7**	**-0.3**
SDPT				IAML		09 20 23.6	
	comp=N,152nm,0.9s						
SDPT				IAML		09 20 23.7	
	comp=E,164nm,0.4s						
SDPT	**Sand Point**	**0.76**	**273**	P	**Pb**	**09 20 12.7**	**-0.3**
	baz=93						
SDPT				S	**Sb**	**09 20 22.7**	**-0.3**
	baz=93						
VNHG	**Veniaminof 1**	**0.91**	**360**		**Pb**	**09 20 15.5**	**-0.2**
S14K	**Fog Glacier**	**1.00**	**347**	P	**Pb**	**09 20 17.5**	**+0.3**
	baz=166						
VNFG	**Fog Glacier, M**	**1.00**	**347**		**Pb**	**09 20 17.2**	**0.0**
VNFG					**Sb**	**09 20 30.0**	**-0.1**
VNFG				IAML		09 20 33.9	
	comp=E,258nm,0.6s						
CHGN	**Chignik**	**1.07**	**23**		**Pn**	**09 20 17.3**	**-0.3**
CHGN					**Sn**	**09 20 31.2**	**-0.4**
CHGN	**Chignik**	**1.07**	**23**	P	**Pn**	**09 20 17.3**	**-0.3**
	baz=202						
PS1A	**Pavlof South-1**	**1.48**	**275**		**Pn**	**09 20 23.2**	**-0.1**
PS1A					**Sn**	**09 20 41.3**	**-0.4**
PVV	**Pavlof Volcano**	**1.51**	**273**		**Pn**	**09 20 23.5**	**-0.1**
PS4A	**Pavlof South-4**	**1.55**	**272**		**Pn**	**09 20 24.0**	**-0.1**
PS4A					**Sn**	**09 20 43.9**	**+0.6**
DOL	**Dolgoi Island**	**1.56**	**265**		**Pn**	**09 20 24.4**	**0.0**
PN7A	**Pavlof North-7**	**1.63**	**275**		**Pn**	**09 20 25.7**	**+0.3**
DTNA	**Dutton South F**	**1.78**	**266**		**Pn**	**09 20 27.5**	**0.0**
DT1	**Dutton Round H**	**1.81**	**265**		**Pn**	**09 20 27.8**	**0.0**
PLBL	**Peulik Blue Cr**	**2.72**	**27**		**Pn**	**09 20 41.0**	**+0.7**
R17L	**Mt. Peulik Vol**	**2.79**	**33**		**Pn**	**09 20 42.4**	**+1.1**
PLK1	**Peulik 1**	**2.86**	**28**		**Pn**	**09 20 42.7**	**+0.5**
PLK3	**Peulik 3**	**2.87**	**33**		**Pn**	**09 20 43.1**	**+0.7**
PLK2	**Peulik 2**	**2.91**	**31**		**Pn**	**09 20 43.6**	**+0.7**
SII	**Sitkinak Islan**	**3.06**	**64**	Pn	**Pn**	**09 20 43.9**	**-1.0**
SII				IAML		09 21 13.9	
	comp=N,24nm,1.0s						
SII				IAML		09 21 52.5	
	comp=E,35nm,1.0s						
Q17K	**Contact Creek**	**3.46**	**30**	P	**Pn**	**09 20 50.9**	**+0.4**
	baz=212						
P16K	**Nushagak River**	**3.78**	**9**	P	**Pn**	**09 20 55.4**	**+0.6**
	baz=190						
OHAK	**Old Harbor**	**3.79**	**57**	Pn	**Pn**	**09 20 54.6**	**-0.3**
OHAK	**Old Harbor**	**3.79**	**57**	P	**Pn**	**09 20 55.0**	**+0.1**
	baz=242						

*AEIC **24** 09:26:42.9±1.1, 58.˚67N±0.˚03×137.˚38W±0.˚07, h19km±2km, Error ellipse: s-maj=5.8km s-min=3.5km az=51.0*
*ANF **24** 09:26:43.7±0.2, 58.˚66N×137.˚34W, h0km, ML3.9/33, Error ellipse: s-maj=3.1km s-min=1.5km az=37.0*
*NEIC **24** 09:26:43.9±0.8, 58.˚70N±0.˚02×137.˚39W±0.˚05, h10km±2km, ML3.6/92, ML3.4(AEIC), Error ellipse: s-maj=4.9km s-min=3.0km az=241.0*
*PGC **24** 09:26:44.2±0.1, 58.˚61N×137.˚38W, h0km, ML3.7/30, ML3.5(AEIC), 154km southwest of Skagway, Ak Southeastern Alaska*

ISC 24 09:26:42.8±0.8, 58.˚67N±0.˚03×137.˚34W±0.˚02, h10km, n222, σ2.907/273, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R31K	**City Hall, Gus**	**0.88**	**106**	P	**Pn**	**09 27 00.6**	**-0.5**
R31K				S	**Sb**	**09 27 12.6**	**+0.8**
R31K	**City Hall, Gus**	**0.88**	**106**		**Pn**	**09 27 00.8**	**-0.3**
R31K					**Sn**	**09 27 13.0**	**-0.9**
R31K	**City Hall, Gus**	**0.88**	**106**	P	**Pn**	**09 27 00.8**	**-0.3**
	baz=287,SNR=16						
R31K				S	**Sn**	**09 27 12.9**	**-0.9**
	baz=287						
S31K	**Pelican**	**0.92**	**140**		**Pn**	**09 27 01.7**	**0.0**
S31K					**Sn**	**09 27 14.8**	**-0.2**
S31K				IAML		09 27 18.2	
	comp=E,2μm,0.6s						
S31K	**Pelican**	**0.92**	**140**	P	**Pb**	**09 27 01.1**	**+0.4**
	baz=320,SNR=104						
S31K				Sb	**Sn**	**09 27 15.8**	**+0.9**
	baz=320						
PLBC	**Pleasant Camp**	**0.94**	**32**	P	**Pn**	**09 27 01.6**	**-0.4**
PLBC				S	**Sn**	**09 27 14.3**	**-1.1**
PLBC	**Pleasant Camp**	**0.94**	**32**		**Pn**	**09 27 01.6**	**-0.4**
PLBC					**Sb**	**09 27 13.8**	**+0.3**
PLBC	**Pleasant Camp**	**0.94**	**32**	P	**Pn**	**09 27 01.5**	**-0.4**
	baz=213,SNR=732						
PLBC				S	**Sb**	**09 27 14.0**	**+0.5**
	baz=213						
P29M	**Windy Craggy**	**0.98**	**348**	P	**Pb**	**09 27 01.3**	**-0.6**
P29M				S	**Sb**	**09 27 14.1**	**-0.9**
P29M	**Windy Craggy**	**0.98**	**348**		**Pb**	**09 27 01.3**	**-0.6**
P29M				Sg	**Sg**	**09 27 13.8**	**-0.6**
P29M				IAML		09 27 15.1	
	comp=E,2μm,0.4s						
P29M				IAML		09 27 19.5	
	comp=N,1μm,0.7s						
P29M	**Windy Craggy**	**0.98**	**348**	P	**Pb**	**09 27 01.3**	**-0.6**
	baz=168,SNR=211						
P29M				S	**Sg**	**09 27 13.9**	**-0.6**
	baz=168						
BESE	**Bessie Mountai**	**1.30**	**93**	P	**Pg**	**09 27 08.3**	**+0.6**
BESE				S	**Sg**	**09 27 25.9**	**+1.3**
BESE	**Bessie Mountai**	**1.30**	**93**		**Pg**	**09 27 08.4**	**+0.6**
BESE					**Sg**	**09 27 26.0**	**+1.3**
SKAG	**Skagway**	**1.30**	**52**		**Pg**	**09 27 08.3**	**+0.5**
SKAG					**Sg**	**09 27 25.6**	**+0.9**
SKAG				IAML		09 27 28.4	
	comp=E,2μm,0.7s						
SKAG				IAML		09 27 29.4	
	comp=N,680nm,0.5s						
SKAG	**Skagway**	**1.30**	**52**	P	**Pg**	**09 27 08.3**	**+0.5**
	baz=233,SNR=124						
SKAG				S	**Sg**	**09 27 25.7**	**+0.9**
	baz=233						
P30M	**Million Dollar**	**1.47**	**7**	Pn	**Pg**	**09 27 10.4**	**-0.5**
P30M				Sn	**Sg**	**09 27 29.9**	**-0.1**
P30M	**Million Dollar**	**1.47**	**7**		**Sg**	**09 27 30.2**	**+0.2**
P30M	**Million Dollar**	**1.47**	**7**		**Pg**	**09 27 10.4**	**-0.5**
P30M	**Million Dollar**	**1.47**	**7**	P	**Pg**	**09 27 10.4**	**-0.5**
	baz=188,SNR=175						
P30M				S	**Sg**	**09 27 30.0**	**+0.1**
	baz=188						
YKU2	**Yakutat**	**1.47**	**306**		**Pg**	**09 27 10.2**	**-0.8**
YKU2				IAML		09 27 38.6	
	comp=N,1μm,0.6s						
R32K	**Eaglecrest**	**1.53**	**104**		**Pg**	**09 27 11.8**	**-0.4**
R32K					**Sg**	**09 27 32.0**	**0.0**
R32K				IAML		09 27 35.3	
	comp=N,880nm,0.4s						
R32K				IAML		09 27 36.2	
	comp=E,689nm,0.3s						
R32K	**Eaglecrest**	**1.53**	**104**	P	**Pg**	**09 27 11.8**	**-0.4**
	baz=286,SNR=96						
R32K				S	**Sg**	**09 27 32.6**	**+0.6**
	baz=286						
JIS	**Juneau Island**	**1.60**	**103**		**Pb**	**09 27 11.9**	**-0.5**
O29M	**Mount Kennedy**	**1.75**	**339**	Pn	**Pb**	**09 27 13.7**	**-1.3**
O29M				Sn	**Sg**	**09 27 38.8**	**-0.3**
O29M	**Mount Kennedy**	**1.75**	**339**		**Pb**	**09 27 13.8**	**-1.3**
O29M	**Mount Kennedy**	**1.75**	**339**	P	**Pb**	**09 27 13.8**	**-1.3**
	baz=159,SNR=226						
S32K	**Killisnoo**	**1.90**	**128**		**Pb**	**09 27 16.8**	**-0.6**
S32K				IAML		09 27 45.2	
	comp=E,391nm,0.6s						
S32K				IAML		09 27 45.5	
	comp=N,348nm,0.4s						
S32K	**Killisnoo**	**1.90**	**128**	P	**Pb**	**09 27 16.8**	**-0.6**
	baz=310,SNR=35						
YUK7	**Dusty Glacier**	**1.91**	**348**	Pn	**Pb**	**09 27 17.0**	**-0.8**
YUK7				Sn	**Sb**	**09 27 42.1**	**+0.4**
YUK7	**Dusty Glacier**	**1.91**	**348**		**Pb**	**09 27 16.7**	**-1.1**
SIT	**Sitka**	**1.94**	**146**		**Pb**	**09 27 17.1**	**-1.1**
SIT				IAML		09 27 47.6	
	comp=E,409nm,0.7s						
SIT	**Sitka**	**1.94**	**146**	P	**Pn**	**09 27 16.7**	**+0.9**
	baz=327						
PINM	**Pinnacle**	**2.07**	**315**	P	**Pn**	**09 27 18.0**	**+0.4**
	baz=133,SNR=31						
PCA	**Pinnacle**	**2.07**	**315**	Pn	**Pn**	**09 27 18.3**	**+0.7**
PCA				Sn	**Sb**	**09 27 46.0**	**-0.2**
PCA	**Pinnacle**	**2.07**	**315**		**Pn**	**09 27 18.2**	**+0.6**
P32M	**Atlin**	**2.08**	**62**	Pn	**Pb**	**09 27 19.2**	**-1.4**
P32M				Sn	**Sb**	**09 27 46.8**	**+0.2**
P32M	**Atlin**	**2.08**	**62**		**Pb**	**09 27 19.2**	**-1.4**
P32M				IAML		09 27 51.1	
	comp=E,421nm,0.3s						
P32M				IAML		09 27 51.5	
	comp=N,447nm,0.3s						
P32M	**Atlin**	**2.08**	**62**	P	**Pb**	**09 27 19.4**	**-1.2**
	baz=245,SNR=69						
HYT	**Haines Junctio**	**2.16**	**358**	Pn	**Pb**	**09 27 21.5**	**-0.5**
HYT				Sn	**Sb**	**09 27 48.8**	**-0.2**
HYT	**Haines Junctio**	**2.16**	**358**		**Pb**	**09 27 20.3**	**-1.7**
HYT				IAML		09 27 52.5	
	comp=N,266nm,0.4s						
HYT				IAML		09 27 55.5	
	comp=E,329nm,0.7s						
HYT	**Haines Junctio**	**2.16**	**358**	P	**Pb**	**09 27 21.2**	**-0.8**
	baz=178,SNR=186						
O30N	**Mendenhall**	**2.20**	**16**	Pn	**Pb**	**09 27 21.6**	**-1.0**
O30N				Sn	**Sb**	**09 27 50.4**	**+0.5**
O30N	**Mendenhall**	**2.20**	**16**		**Pb**	**09 27 20.9**	**-1.7**
O30N				IAML		09 27 53.7	
	comp=N,369nm,0.6s						
O30N	**Mendenhall**	**2.20**	**16**	P	**Pb**	**09 27 21.3**	**-1.3**
	baz=197,SNR=213						
YUK6	**Outpost Mounta**	**2.34**	**348**	Pn	**Pb**	**09 27 23.9**	**-1.1**
YUK6				Sn	**Sb**	**09 27 53.5**	**-0.5**
YUK6	**Outpost Mounta**	**2.34**	**348**	P	**Pb**	**09 27 22.8**	**-2.2**
	baz=167,SNR=90						
WHY	**Whitehorse**	**2.35**	**31**	Pn	**Pb**	**09 27 23.8**	**-1.5**
WHY				Sn	**Sb**	**09 27 54.2**	**-0.2**
WHY	**Whitehorse**	**2.35**	**31**	Pn	**Pn**	**09 27 23.0**	**+1.5**
WHY	**Whitehorse**	**2.35**	**31**	P	**Pb**	**09 27 23.6**	**-1.6**
	baz=213,SNR=308						
YUK5	**Granite Creek**	**2.48**	**354**	Pn	**Pb**	**09 27 26.1**	**-1.4**
YUK5				Sn	**Sb**	**09 27 56.9**	**-1.2**
O28M	**Mount Upton**	**2.56**	**327**	Sn	**Sb**	**09 27 57.6**	**-2.8**
O28M	**Mount Upton**	**2.56**	**327**		**Pn**	**09 27 24.6**	**+0.1**
O28M	**Mount Upton**	**2.56**	**327**	P	**Pn**	**09 27 25.8**	**+1.3**
	baz=145,SNR=12						
Q32M	**Nakina River**	**2.65**	**82**	Pn	**Pb**	**09 27 28.3**	**-2.1**
Q32M				Sn	**Sb**	**09 28 00.7**	**-2.4**
Q32M	**Nakina River**	**2.65**	**82**		**Pn**	**09 27 27.1**	**+1.4**
Q32M				IAML		09 28 15.8	
	comp=N,243nm,1.1s						
Q32M				IAML		09 28 18.1	
	comp=E,255nm,0.8s						
Q32M	**Nakina River**	**2.65**	**82**	P	**Pb**	**09 27 28.0**	**-2.4**
	baz=266						
YUK4	**Talbot Arm**	**2.76**	**347**	Pn	**Pb**	**09 27 31.0**	**-1.3**
YUK4	**Talbot Arm**	**2.76**	**347**	P	**Pb**	**09 27 31.1**	**-1.2**
	baz=167,SNR=28						
P33M	**Teslin, Yukon**	**2.78**	**54**	Pn	**Pn**	**09 27 29.2**	**+1.9**
P33M				Sn	**Sb**	**09 28 04.0**	**-2.6**
P33M	**Teslin, Yukon**	**2.78**	**54**		**Pn**	**09 27 28.8**	**+1.5**
P33M				IAML		09 28 14.9	
	comp=E,256nm,0.5s						
P33M	**Teslin, Yukon**	**2.78**	**54**	P	**Pn**	**09 27 29.0**	**+1.7**
	baz=238,SNR=97						
N30M	**Aishikik Lake**	**2.80**	**2**	Pn	**Pb**	**09 27 30.1**	**-2.7**
N30M				Sn	**Sb**	**09 28 04.9**	**-2.3**
N30M	**Aishikik Lake**	**2.80**	**2**	P	**Pn**	**09 27 29.6**	**+2.0**
	baz=183						
BRWY	**Burwash Landin**	**2.84**	**343**	Pn	**Pb**	**09 27 30.9**	**-2.6**
BRWY				Sn	**Sb**	**09 28 05.3**	**-2.9**
BRWY	**Burwash Landin**	**2.84**	**343**	P	**Pb**	**09 27 30.8**	**-2.7**
	baz=162,SNR=26						
LOGN	**Logan Glacier**	**2.85**	**321**	Pn	**Pn**	**09 27 29.6**	**+1.2**
LOGN				Sn	**Sn**	**09 28 04.8**	**+2.0**
LOGN	**Logan Glacier**	**2.85**	**321**		**Pn**	**09 27 29.2**	**+0.8**
LOGN				IAML		09 28 21.6	
	comp=N,133nm,0.8s						
YUK8	**Steele Glacier**	**2.89**	**336**	Pn	**Pn**	**09 27 31.1**	**+2.0**
YUK8				Sn	**Sb**	**09 28 06.6**	**-3.5**
YUK8	**Steele Glacier**	**2.89**	**336**		**Pn**	**09 27 30.8**	**+1.8**
YUK8	**Steele Glacier**	**2.89**	**336**	P	**Pn**	**09 27 31.1**	**+2.0**
	baz=154,SNR=27						
N31M	**Braeburn, Yuko**	**2.93**	**15**	Sn	**Sb**	**09 28 08.8**	**-2.1**
N31M	**Braeburn, Yuko**	**2.93**	**15**	Pn	**Pn**	**09 27 31.0**	**+1.6**
T33K	**Petersburg**	**3.00**	**127**	Sn	**Sn**	**09 28 08.5**	**+2.3**
GRNC	**Granite Creek**	**3.05**	**315**	Pn	**Pn**	**09 27 32.7**	**+1.5**
GRNC				Sn	**Sb**	**09 28 10.6**	**-3.8**
GRNC	**Granite Creek**	**3.05**	**315**		**Pn**	**09 27 32.0**	**+0.8**
GRNC				IAML		09 28 17.1	
	comp=N,110nm,1.0s						
BARN	**Barnard Glacie**	**3.24**	**320**		**Pn**	**09 27 35.4**	**+1.6**
BARN				IAML		09 28 21.1	
	comp=E,103nm,0.5s						
N32M	**Quiet Lake**	**3.28**	**39**	Pn	**Pn**	**09 27 37.0**	**+2.7**
N32M	**Quiet Lake**	**3.28**	**39**	P	**Pn**	**09 27 37.2**	**+3.0**
	baz=222						
S34M	**Telegraph Cree**	**3.36**	**100**	Pn	**Pn**	**09 27 37.4**	**+2.1**
S34M				Sg	**Sg**	**09 28 28.9**	**-1.8**
S34M	**Telegraph Cree**	**3.36**	**100**	Pn	**Pn**	**09 27 36.9**	**+1.6**
S34M	**Telegraph Cree**	**3.36**	**100**	P	**Pn**	**09 27 37.6**	**+2.3**
	baz=286,SNR=13						
R33M	**Jennings River**	**3.37**	**75**	Pn	**Pn**	**09 27 38.0**	**+2.5**
R33M				Sg	**Sg**	**09 28 29.9**	**-1.0**
R33M	**Jennings River**	**3.37**	**75**	IAML		09 28 36.2	
	comp=E,172nm,0.7s						
R33M	**Jennings River**	**3.37**	**75**	P	**Pn**	**09 27 37.3**	**+1.7**
	baz=260,SNR=14						
KIAG	**Kiagna River**	**3.40**	**314**	Pn	**Pn**	**09 27 37.9**	**+1.9**
KIAG				Sn	**Sn**	**09 28 18.8**	**+2.4**
U33K	**Whale Pass**	**3.43**	**137**	Pn	**Pn**	**09 27 38.3**	**+2.1**
BALM	**Baldy**	**3.46**	**315**	Sn	**Sn**	**09 28 20.8**	**+2.8**
TGL	**Tana Glacier**	**3.48**	**309**	Pn	**Pn**	**09 27 37.6**	**+0.6**
YUK3	**Moose Creek**	**3.48**	**335**	Pn	**Pn**	**09 27 39.6**	**+2.5**
YUK3				Sn	**Sn**	**09 28 21.7**	**+3.3**
YUK3	**Moose Creek**	**3.48**	**335**		**Pn**	**09 27 38.5**	**+1.4**
YUK3	**Moose Creek**	**3.48**	**335**	P	**Pn**	**09 27 39.3**	**+2.1**
	baz=152,SNR=8.9						
WRAK	**Wrangell Islan**	**3.51**	**128**	Pn	**Pn**	**09 27 39.1**	**+1.8**
WRAK				Sn	**Sn**	**09 28 20.9**	**+2.1**
WRAK	**Wrangell Islan**	**3.51**	**128**		**Pn**	**09 27 39.4**	**+2.1**
WRAK				IAML		09 28 40.2	
	comp=E,107nm,0.8s						
WRAK				IAML		09 28 47.5	
	comp=E,156nm,0.6s						
WRAK	**Wrangell Islan**	**3.51**	**128**	P	**Pn**	**09 27 38.8**	**+1.5**
	baz=312,

	baz=297					
GLB	**Gilahina Butte**	4.27	313	Pn	Pn	09 27 49.5 +1.6
M27K	**Edge Creek, AK**	4.33	331		Pn	09 27 50.0 +1.3
M27K	**Edge Creek, AK**	4.33	331	IAML		09 29 04.4
	comp=N,41nm,1.1s					
M27K	**Edge Creek, AK**	4.33	331	P	Pn	09 27 51.5 +2.9
	baz=147,SNR=11					
BMRM	**Bremner River**	4.33	305	Pn	Pn	09 27 50.0 +1.3
BMRM				IAML		09 29 02.5
	comp=E,57nm,0.6s					
BMRM				IAML		09 29 16.0
	comp=N,53nm,0.6s					
L29M	**L29M**	4.47	355	Pn	Pn	09 27 53.1 +2.6
L29M				Sn	Sn	09 28 45.9 +3.3
L29M	**L29M**	4.47	355	Pn	Pn	09 27 52.8 +2.3
L29M	**L29M**	4.47	355	P	Pn	09 27 53.4 +2.9
	baz=175,SNR=25					
WTLY	**Watson Lake, Y**	4.60	68	Pn	Pn	09 27 55.1 +2.8
WTLY				Sg	Sg	09 29 06.5 -3.8
N25K	**Chitina, Valde**	4.67	312	P	Pn	09 27 54.8 +1.5
	baz=126					
L27K	**Beaver Creek,**	4.92	335	Pn	Pn	09 27 59.2 +2.5
L27K	**Beaver Creek,**	4.92	335	P	Pn	09 27 58.9 +2.2
	baz=152					
MMPY	**Sheldon Lake,**	4.96	34	Pn	Pn	09 28 00.1 +2.8
MMPY				Sg	Sg	09 29 19.9 -1.9
MMPY	**Sheldon Lake,**	4.96	34	Pn	Pn	09 27 59.6 +2.4
MMPY	**Sheldon Lake,**	4.96	34	P	Pn	09 28 00.6 +3.3
	baz=220,SNR=14					
FID	**Port Fidalgo**	5.08	298	Pn	Pn	09 27 57.5 -1.3
FID				IAML		09 29 31.2
	comp=N,24nm,1.0s					
KLU	**Klutina**	5.14	307	P	Pn	09 28 01.5 +1.7
	baz=120					
K29M	**Barlow Dome**	5.19	359	Pn	Pn	09 28 03.1 +2.6
K29M	**Barlow Dome**	5.19	359	Pn	Pn	09 28 01.9 +1.3
K29M				IAML		09 29 29.1
	comp=N,29nm,0.9s					
K29M				IAML		09 29 37.5
	comp=E,45nm,0.8s					
K29M	**Barlow Dome**	5.19	359	P	Pn	09 28 03.2 +2.7
	baz=179,SNR=26					
L26K	**Log Cabin Wild**	5.26	329	P	Pn	09 28 04.3 +2.9
	baz=144,SNR=6.6					
MENT	**Mentasta**	5.30	327	Pn	Pn	09 28 02.8 +0.9
MENT				IAML		09 29 47.4
	comp=N,21nm,0.8s					
MENT				IAML		09 29 52.5
	comp=E,20nm,0.7s					
HARP	**HAARP**	5.37	317	Pn	Pn	09 28 01.4 -1.4
HARP				IAML		09 30 05.0
	comp=E,24nm,1.1s					
DAWY	**Dawson**	5.50	351	Pn	Pn	09 28 07.1 +2.4
DAWY				Sn	Sn	09 29 11.2 +3.2
DAWY	**Dawson**	5.50	351		Pn	09 28 07.0 +2.4
DAWY	**Dawson**	5.50	351	P	Pn	09 28 07.3 +2.6
	baz=169,SNR=88					
M24K	**Tolsona, Glenn**	5.57	312	Pn	Pn	09 28 07.1 +1.5
M24K	**Tolsona, Glenn**	5.57	312	P	Pn	09 28 08.8 +3.1
	baz=124					
J29N	**Klondike Camp**	5.82	356	Sg	Sg	09 29 44.7 -4.6
J29N	**Klondike Camp**	5.82	356	Pn	Pn	09 28 11.6 +2.5
K27K	**Chicken**	5.84	339		Pn	09 28 11.3 +2.0
LIRD	**Liard River Hi**	5.85	78	Sg	Sg	09 29 45.2 -5.1
PAX	**Paxson**	5.86	321	Pn	Pn	09 28 12.1 +2.4
PAX	**Paxson**	5.86	321	Pn	Pn	09 28 11.3 +1.6
PAX	**Paxson**	5.86	321	P	Pn	09 28 12.7 +3.0
	baz=134					
SCM	**Sheep Creek Mo**	5.90	307	Pn	Pn	09 28 11.7 +1.5
SCM	**Sheep Creek Mo**	5.90	307	P	Pn	09 28 12.1 +1.9
	baz=118					
J30M	**Hart River**	5.95	4	Pn	Pn	09 28 13.8 +3.0
J30M	**Hart River**	5.95	4		Pn	09 28 13.0 +2.1
J30M	**Hart River**	5.95	4	P	Pn	09 28 13.7 +2.9
	baz=185,SNR=26					
DIB	**Dawson Inlet,**	6.12	151	Pn	Pn	09 28 14.8 +1.6
SML	**Sawmill**	6.31	305	P	Pn	09 28 17.7 +1.9
	baz=115,SNR=6.4					
WAT6	**Susitna Watana**	6.45	312		Pn	09 28 19.7 +2.0
WAT6	**Susitna Watana**	6.45	312	P	Pn	09 28 20.1 +2.4
	baz=123					
I30M	**Mount Dempster**	6.59	4	Pn	Pn	09 28 22.4 +2.7
I30M	**Mount Dempster**	6.59	4	P	Pn	09 28 22.7 +3.0
	baz=184,SNR=25					
DHY	**Denali Highway**	6.59	316		Pn	09 28 21.5 +1.8
DHY	**Denali Highway**	6.59	316	P	Pn	09 28 22.3 +2.5
	baz=128					
I28M	**Miner Creek**	6.91	351	Pn	Pn	09 28 26.6 +2.6
I28M				Sn	Sn	09 29 42.9 +0.2
I28M	**Miner Creek**	6.91	351		Pn	09 28 26.3 +2.2
I28M	**Miner Creek**	6.91	351	P	Pn	09 28 26.7 +2.6
	baz=169,SNR=45					
NBC1	**NorthernBC 1**	7.02	76	Sg	Sg	09 30 21.3 -6.5
J25K	**Salcha River,**	7.08	331	P	Pn	09 28 28.6 +2.3
	baz=144					
I26K	**Coal Creek Min**	7.20	340	P	Pn	09 28 30.9 +3.1
	baz=155					
I27K	**Kandik River**	7.24	346	P	Pn	09 28 30.9 +2.4
	baz=162					
H31M	**Peel River**	7.29	10	Pn	Pn	09 28 32.1 +2.8
H31M	**Peel River**	7.29	10		Pn	09 28 32.0 +2.8
H31M	**Peel River**	7.29	10	P	Pn	09 28 32.5 +3.2
	baz=192,SNR=12					
RND	**Reindeer**	7.33	315		Pn	09 28 32.1 +2.4
H29M	**Whitestone**	7.59	357	Pn	Pn	09 28 35.5 +2.2
H29M	**Whitestone**	7.59	357	P	Pn	09 28 36.2 +2.9
	baz=176					
L22K	**Petersville**	7.65	306	P	Pn	09 28 36.7 +2.5
	baz=114,SNR=14					
H27K	**Steamboat Moun**	7.83	347	Pn	Pn	09 28 39.0 +2.4
H27K				Sn	Sn	09 30 04.6 -0.6
H27K	**Steamboat Moun**	7.83	347		Pn	09 28 39.0 +2.4
H27K	**Steamboat Moun**	7.83	347	P	Pn	09 28 39.5 +2.9
	baz=164,SNR=7.7					
TRF	**Thorofare Moun**	7.89	313	P	Pn	09 28 39.9 +2.3
	baz=122					
KDAK	**Kodiak Island**	8.10	270	P	Pn	09 28 41.4 +1.1
	baz=77					
NEA2	**Nenana**	8.14	322		Pn	09 28 42.6 +1.7
NEA2	**Nenana**	8.14	322	P	Pn	09 28 42.9 +2.0
	baz=132,SNR=6.5					
G29M	**Pine Creek**	8.28	358	Pn	Pn	09 28 45.5 +2.8
G30M	**tAoh Zraii Nji**	8.36	3	Pn	Pn	09 28 46.5 +2.7
G30M	**tAoh Zraii Nji**	8.36	3	P	Pn	09 28 46.9 +3.1
	baz=184					
G31M	**Satah River**	8.40	8	Pn	Pn	09 28 46.3 +2.0
G31M	**Satah River**	8.40	8		Pn	09 28 47.3 +3.0
G31M	**Satah River**	8.40	8	P	Pn	09 28 47.5 +3.1
	baz=191,SNR=15					
G27K	**Doyon Strip**	8.40	348	Pn	Pn	09 28 47.0 +2.5
G27K				Sn	Sn	09 30 21.6 +2.4
G27K	**Doyon Strip**	8.40	348		Pn	09 28 46.9 +2.4
G27K	**Doyon Strip**	8.40	348	P	Pn	09 28 47.7 +3.2
	baz=164,SNR=5.2					
CAST	**Castle Rocks**	8.58	310	P	Pn	09 28 49.4 +2.5
	baz=117					
OHAK	**Old Harbor**	8.61	267	P	Pn	09 28 46.7 -0.5
	baz=74					
G26K	**Porcupine Rive**	8.81	343	Pn	Pn	09 28 51.9 +1.9
G26K	**Porcupine Rive**	8.81	343	P	Pn	09 28 53.3 +3.3
	baz=158					
CHUM	**Lake Minchumin**	8.89	312	P	Pn	09 28 52.7 +1.6
	baz=119					
F31M	**Tsiigehtchic**	8.95	9	Pn	Pn	09 28 53.6 +1.8
F31M	**Tsiigehtchic**	8.95	9	P	Pn	09 28 54.9 +3.1
	baz=192					
MLY	**Manley**	8.97	321	P	Pn	09 28 54.1 +1.8
	baz=129					
F30M	**Barrier River**	9.00	4	Pn	Pn	09 28 54.2 +1.6
F28M	**Old Crow**	9.05	354	Pn	Pn	09 28 55.3 +2.1
F28M	**Old Crow**	9.05	354	P	Pn	09 28 56.4 +3.1
	baz=172					
L19K	**White Mountain**	9.34	300	P	Pn	09 28 58.3 +1.0
	baz=104					
K20K	**Telida**	9.37	307	P	Pn	09 28 59.0 +1.3
	baz=113					
I21K	**Tanana**	9.48	320	P	Pn	09 29 00.9 +1.8
	baz=127					
F26K	**Sheenjek River**	9.56	344	Pn	Pn	09 29 02.0 +1.8
F26K	**Sheenjek River**	9.56	344	P	Pn	09 29 02.7 +2.4
	baz=158					
M18K	**Stony River**	9.65	295	P	Pn	09 29 02.5 +1.0
	baz=99					
Q17K	**Contact Creek**	9.73	276	P	Pn	09 29 03.5 +0.9
	baz=80					
E27K	**Coleen River**	9.74	351	Pn	Pn	09 29 04.4 +1.7
E27K	**Coleen River**	9.74	351	P	Pn	09 29 05.9 +3.2
	baz=167					
J20K	**Nowinta River**	9.74	312	P	Pn	09 29 04.5 +1.7
	baz=117					
E29M	**Blow River**	9.76	359	Pn	Pn	09 29 04.6 +1.7
H21K	**Melozitna Rive**	10.04	321	P	Pn	09 29 09.4 +2.6
	baz=127					
C27K	**Jago River**	11.34	349	Pn	Pn	09 29 26.4 +1.9
C27K	**Jago River**	11.34	349	P	Pn	09 29 28.6 +4.1
	baz=163,SNR=5.6					
D25K	**Kavik River**	11.38	344	Pn	Pn	09 29 27.1 +1.8
D25K	**Kavik River**	11.38	344	P	Pn	09 29 29.4 +4.2
	baz=156					

*MDD **24** 09:54:52.4±1.5,34.°89N×11.°81W,h19km±40km,Mb3.8/4, M_mb3.1/4,Error ellipse: s-maj=50.1km s-min=8.7km az=80.0*
*INMG **24** 09:54:53.2±1.3,34.°81N×11.°93W,h40km,ML2.2,Error ellipse: s-maj=12.1km s-min=4.8km az=96.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Madeira Islands, Portugal Regi*

ISC 24 09:54:49.0±2.4,34.°79N±0.°05×11.°6W±0.°1,h10km,n28, σ2s31/51,4C,Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	3.21	43	Pn	Pn	Pn	09 55 42.2	+2.6
PFVI				Sn	Sn	Sn	09 56 18.1	+0.1
PFVI	**Vila Bisbo**	3.21	43	eP	Pn	Pn	09 55 42.1	+2.6
PFVI				eS	Sn	Sn	09 56 19.1	+1.1
PFVI				i IAML			09 56 21.5	
PFVI				i IAML			09 56 21.9	
PFVI				i IAML			09 56 23.1	
PTEO	**Sao Teotonio**	3.58	39	eP	Pb	Pb	09 55 50.2	-2.1
PTEO				eS	Sn	Sn	09 56 27.8	+1.0
PTEO				i IAML			09 56 32.0	
PBDV	**Barranco-do-Ve**	3.82	49	Sn	Sn	Sn	09 56 33.5	+0.6
PBDV	**Barranco-do-Ve**	3.82	49	eP	Pb	Pb	09 55 53.4	-3.1
PBDV				eS	Sn	Sn	09 56 36.3	+3.4
PBDV				i IAML			09 56 38.9	
PCVE	**Castro Verde**	4.01	44	Pn	Pn	Pn	09 55 53.5	+2.9
PCVE				Sn	Sn	Sn	09 56 38.0	+0.4
PCVE	**Castro Verde**	4.01	44	eP	Pb	Pb	09 55 55.6	-4.2
PCVE				eS	Sn	Sn	09 56 38.9	+1.3
PCVE				i IAML			09 56 40.8	
PCVE				i IAML			09 56 41.5	
PCVE				i IAML			09 56 44.8	
PVAQ	**Vaqueiros**	4.05	49	eP	Pn	Pn	09 55 55.0	+3.9
PVAQ				eS	Sn	Sn	09 56 38.9	+0.3
PVAQ				i IAML			09 56 44.6	
MESJ	**Messejana**	4.06	40	eP	Pn	Pn	09 55 54.5	+3.2
MESJ				eS	Sn	Sn	09 56 40.2	+1.4
MESJ				i IAML			09 56 41.7	
PLOUS	**Minas do Lousa**	4.10	37	eS		Sn	09 56 39.1	-0.7
PLOUS				i IAML			09 56 42.9	
EGRO	**El Granado**	4.28	49	Pn	Pn	Pn	09 55 57.2	+3.0
EGRO				Sn	Sn	Sn	09 56 44.7	+0.6
EGRO	**El Granado**	4.28	49	P	Pn	Pn	09 55 57.8	+3.5
EGRO				⇑i	Vmb_VC		09 55 59.5	
	135nm,SNR=1.3							
EGRO				S		Sn	09 56 45.2	+1.0
MOE	**Montemor**	4.53	34	eP	Pn	Pn	09 56 00.3	+2.7
MOE				eS	Sn	Sn	09 56 50.5	+0.2
MOE				i IAML			09 56 52.1	
MOE				i IAML			09 56 52.1	
EVO	**Evora**	4.69	36	Pn	Pn	Pn	09 56 03.5	+3.6
EVO				Sn	Sn	Sn	09 56 53.1	-1.3
PARRA	**Arraiolos**	4.91	34	eP	Pn	Pn	09 56 04.9	+2.0
PARRA				eS	Sn	Sn	09 56 59.0	-0.7
PARRA				i IAML			09 57 00.7	
PARRA				i IAML			09 57 02.2	
EMIN	**Mina Concepcio**	4.93	52	⇑i	Vmb_VC		09 56 05.7	
	69nm,SNR=1.0							
EMIN				S		Sn	09 56 59.9	-0.4
PBAR	**Barrancos**	4.96	46	Pn	Pn	Pn	09 56 07.2	+3.6
PBAR				Sn	Sn	Sn	09 56 59.7	-1.3
PBAR	**Barrancos**	4.96	46	eP	Pn	Pn	09 56 07.3	+3.7
PBAR				eS	Sn	Sn	09 57 01.6	+0.6
PBAR				i IAML			09 57 03.6	
PBAR				i IAML			09 57 04.5	
PMTG	**Montargil**	5.03	31	eP	Pn	Pn	09 56 05.9	+1.3
PMTG				eS	Sn	Sn	09 57 01.4	-1.4
PMTG				i IAML			09 57 02.8	
PMTG				i IAML			09 57 03.3	
PMTG				i IAML			09 57 03.8	
PESTR	**Estremoz**	5.16	37	Sn	Sn	Sn	09 57 04.1	-1.8
TIO	**Tiouine**	5.27	136	Pn	Pn	Pn	09 56 10.4	+2.3
TIO				Sn	Sn	Sn	09 57 08.3	-0.6
EBAD	**Badajoz**	5.38	41	Pn	Pn	Pn	09 56 12.3	+3.0
IFR	**Ifrane**	5.47	102	Pn	Pn	Pn	09 56 13.2	+2.5
IFR				Sn	Sn	Sn	09 57 12.1	-1.7
PMRV	**Marv??o**	5.70	34	eP	Pn	Pn	09 56 15.7	+2.0
PMRV				eS	Sn	Sn	09 57 16.4	-2.9
PMRV				i IAML			09 57 22.1	
PMRV				i IAML			09 57 24.5	
ECAB	**El Cabril**	5.93	55	Pn	Pn	Pn	09 56 19.4	+2.5
ECAB				Sn	Sn	Sn	09 57 23.8	-1.1
ECAB	**El Cabril**	5.93	55	P	Pn	Pn	09 56 19.4	+2.5
ECAB				⇑i	Vmb_VC		09 56 21.4	
	45nm,SNR=1.1							
ECAB				S		Sn	09 57 23.9	-1.0
EADA	**Adamuz**	6.55	57	Pn	Pn	Pn	09 56 29.2	+3.7
EADA				Sn	Sn	Sn	09 57 38.7	-1.5
EADA	**Adamuz**	6.55	57	⇑i	Vmb_VC		09 56 27.8	
	38nm,SNR=0.9							
EADA				P		Pn	09 56 27.8	+2.4
EADA				S		Sn	09 57 39.6	-0.6

*SJA **24** 09:55:18.6±0.8,33.°88S×72.°23W,h30km±2km,ML3.2, MW3.5*
*GUC **24** 09:55:20.4±0.7,33.°92S×72.°16W,h32km±6km,ML3.2*

ISC 24 09:55:19.1±1.3,33.°90S±0.°02×72.°21W±0.°04,h14km±9km, n51,σ0s91/90,5C-16D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	0.55	65	eP		Pb	09 55 31.0	+0.6
VA05				eS		Sb	09 55 38.1	0.0
VA05				IAML			09 55 38.7	
	comp=N,5μm,0.5s							
BO03	**Pichilemu**	0.63	161	eP		Pg	09 55 32.2	+0.8
BO03				eS		Sg	09 55 40.6	+0.7
BO03				IAML			09 55 41.1	
	comp=N,2μm,0.3s							
MT01	**Popeta**	0.80	88	eP		Pg	09 55 34.3	-0.3
MT01				IAML			09 55 46.2	
	comp=Z,762nm,0.3s							
MT01	**Popeta**	0.80	88	eP		Pg	09 55 34.4	-0.2
MT01				eS		Sg	09 55 44.5	-0.6
MT01				IAML			09 55 44.7	
	comp=N,2μm,0.1s							
VA01	**Torpederas**	0.99	29	eP		Pb	09 55 22.7	-15
VA01				eS		Sn	09 55 52.1	-0.1
VA01	**Torpederas**	0.99	29	eP		Pg	09 55 38.3	+0.1
VA01				eS		Sn	09 55 51.7	-0.5
VA01				IAML			09 55 55.3	
	comp=N,636nm,0.1s							
MT09	**Talagante**	1.02	84	eP		Pb	09 55 37.9	-0.7
MT09				eS		Sb	09 55 51.3	-0.7
MT09				IAML			09 55 53.3	
	comp=N,2μm,0.1s							
BO01	**Tunca**	1.06	118	eP		Pb	09 55 38.3	-0.8
BO01	**Tunca**	1.06	118	eP		Pb	09 55 38.0	-1.1
BO01				eS		Sb	09 55 52.0	-0.8
MT02	**Curacav**	1.10	55	eP		Pb	09 55 39.5	-0.3
MT02				eS		Sn	09 55 55.9	+1.0
MT02				IAML			09 55 57.2	
	comp=Z,283nm,0.2s							
MT02	**Curacav**	1.10	55	eP		Pb	09 55 39.3	-0.5
MT02				eS		Sb	09 55 53.0	-1.0
MT02				IAML			09 55 54.4	
	comp=N,434nm,0.4s							
GO05	**Hualane**	1.14	168	eP		Pb	09 55 40.4	-0.1
GO05				IAML			09 55 58.4	
	comp=Z,395nm,0.4s							
GO05	**Hualane**	1.14	168	⇑eP		Pb	09 55 40.2	-0.3
GO05				eS		Sb	09 55 54.9	-0.2
GO05				IAML			09 55 58.4	
	comp=E,1μm,0.2s							
MT05	**Renca**	1.33	68	eP		Pn	09 55 43.5	+0.3
MT05				IAML			09 56 03.7	
	comp=Z,242nm,0.7s							
MT05	**Renca**	1.33	68	⇓eP		Pn	09 55 42.9	-0.3
MT05				eS		Sb	09 56 00.4	-0.2
MT05				IAML			09 56 07.2	
	comp=E,825nm,0.4s							
BO04	**La Punta**	1.33	94	⇓eP		Pn	09 55 42.8	-0.5
BO04				eS		Sb	09 56 00.7	-0.1
BO04				IAML			09 56 08.1	
	comp=N,540nm,0.1s							
ROCH	**El Roble**	1.36	48	⇓eP		Pn	09 55 43.8	0.0
ROCH				eS		Sn	09 56 01.8	0.0
ROCH				IAML			09 56 05.5	
	comp=N,679nm,0.3s							
MT12	**Pirque**	1.39	84	⇓eP		Pn	09 55 43.7	-0.4
MT12				eS		Sn	09 56 02.2	-0.1
MT12				IAML			09 56 09.8	
	comp=E,882nm,0.5s							
MT15	**Las Vizcachas**	1.45	79	⇓eP		Pn	09 55 44.6	-0.2
MT15				eS		Sn	09 56 03.3	-0.4
MT15				IAML			09 56 07.8	
	comp=N,1μm,0.3s							
PEL	**Peldehue**	1.48	60	eP		Pn	09 55 45.9	+0.6
PEL				eS		Sg	09 56 07.5	+0.8
PEL				IAML			09 56 11.1	
	comp=Z,347nm,0.3s							
PEL	**Peldehue**	1.48	60	⇓eP		Pn	09 55 45.6	+0.4
PEL				eS		Sn	09 56 04.5	+0.2
PEL				IAML			09 56 10.6	
	comp=N,892nm,0.3s							
BO02	**Sierra Bellavi**	1.48	128	eP		Pn	09 55 45.0	-0.3
BO02				IAML			09 56 11.1	
	comp=Z,826nm,0.2s							
BO02	**Sierra Bellavi**	1.48	128	⇓eP		Pn	09 55 44.9	-0.5
BO02				eS		Sn	09 56 05.2	+0.7
MT14	**Cerro Cal¡n**	1.48	71	⇓eP		Pn	09 55 45.6	+0.3
MT14				eS		Sn	09 56 04.9	+0.4
MT14				IAML			09 56 12.2	
	comp=E,657nm,0.3s							
MT16	**CCHEN**	1.48	72	⇓eP		Pn	09 55 45.6	+0.3
MT16				eS		Sn	09 56 04.5	-0.1
MT16				IAML			09 56 15.0	
	comp=E,226nm,0.7s							
MT10	**Hacienda Santa**	1.53	66	⇓eP		Pn	09 55 46.4	+0.4
MT10				eS		Sb	09 56 06.7	+0.2
MT10				IAML			09 56 07.5	
	comp=N,948nm,0.3s							
MT13	**San Alfonso**	1.61	85	eP		Pn	09 55 47.4	+0.3
MT13				eS		Sb	09 56 08.5	-0.3
MT13				IAML			09 56 13.8	
	comp=Z,318nm,0.3s							
MT13	**San Alfonso**	1.61	85	⇓eP		Pn	09 55 47.2	+0.1
MT13				eS		Sn	09 56 08.2	+0.5
MT13				IAML			09 56 12.5	
	comp=E,783nm,0.2s							
VA03	**San Esteban**	1.79	51	eP		Pn	09 55 50.4	+0.8
VA03				eS		Sb	09 56 14.9	+0.9
VA03				IAML			09 56 21.7	
	comp=Z,339nm,0.9s							
VA03	**San Esteban**	1.79	51	⇑eP		Pn	09 55 50.3	+0.7
VA03				eS		Sb	09 56 13.3	-0.6
MT04	**Ro Olivares**	1.80	75	eP		Pn	09 55 50.4	+0.6
MT04				eS		Sn	09 56 13.4	+0.9
MT04				IAML			09 56 21.5	
	comp=Z,167nm,0.8s							
MT04	**Ro Olivares**	1.80	75	⇑eP		Pn	09 55 50.2	+0.4
MT04				eS		Sn	09 56 13.3	+0.8
MT04				IAML			09 56 17.6	
	comp=N,324nm,0.5s							
MT08	**Bocatoma Ro**	1.88	77	eP		Pn	09 55 52.0	+1.1
MT08				eS		Sb	09 56 17.3	+0.5
MT08				IAML			09 56 22.6	
	comp=Z,222nm,0.3s							
MT08	**Bocatoma Ro**	1.88	77	eP		Pn	09 55 51.8	+0.8
MT08				eS		Sb	09 56 16.4	-0.4
MT08				IAML			09 56 22.6	
	comp=E,238nm,0.4s							
ML02	**Panimavida**	1.97	161	eP		Pn	09 55 52.6	+0.6
ML02				eS		Sn	09 56 14.0	-2.5
ML02				IAML			09 56 30.7	
	comp=Z,229nm,0.5s							
ML02	**Panimavida**	1.97	161	eP		Pn	09 55 52.6	+0.6
ML02				eS		Sb	09 56 19.2	+0.1
ML02				IAML			09 56 24.9	
	comp=E,467nm,0.6s							
CO04	**Los Peladeros**	2.12	30	eP		Pn	09 55 54.0	-0.3
CO02	**Combarbal**	2.87	21	eP		Pn	09 56 05.0	+0.5
CO02				eS		Sn	09 56 39.0	+0.1
CO02				IAML			09 56 54.8	
	comp=Z,122nm,0.5s							
CO02	**Combarbal**	2.87	21	⇑eP		Pn	09 56 04.8	+0.3
CO02				eS		Sn	09 56 38.5	-0.4
ARCO	**CERRO ARCO**	2.94	70	eP		Pn	09 56 05.9	+0.5
ARCO				IAML			09 56 56.5	
	comp=Z,46nm,1.3s							
AAGR	**Agrelo**	2.94	75	eP		Pb	09 56 10.2	-1.1
EDS3	**Malargue**	2.97	130	eS		Sb	09 56 48.6	+0.5
AVIZ	**Vizcacheras**	3.11	83	eP		Pn	09 56 10.8	+3.1
RTLS	**Leoncito**	3.22	50	eP		Pn	09 56 12.6	+3.1
RTLS				eS		Sg	09 57 01.8	-0.8
RTLS				IAML			09 57 01.9	
	comp=Z,140nm,0.4s							
CO03	**El Pedregal**	3.31	23	eP		Pn	09 56 11.4	+0.9
CO03				eS		Sn	09 56 49.9	+0.3
CO03				IAML			09 57 08.4	
	comp=Z,44nm,0.3s							
GO04	**Tololo Observa**	3.90	18	eP		Pn	09 56 19.2	+0.5
GO04				eS		Sn	09 57 04.2	-0.3
GO04				IAML			09 57 26.6	
	comp=Z,47nm,0.7s							
CFA	**Coronel Fontan**	4.05	57	eP		Pn	09 56 22.7	+2.0
CFA				IAML			09 57 26.2	
	comp=Z,14nm,0.7s							
CO01	**Juntas del Tor**	4.30	25	eP		Pn	09 56 25.7	+1.5
CO01				eS		Sn	09 57 15.4	+1.1
CO01				IAML			09 57 37.2	
	comp=Z,18nm,0.8s							
AROD	**Rodeo**	4.38	33	eP		Pn	09 56 28.5	+3.0
AROD				eS		Sg	09 57 37.8	-2.1
LCO	**Las Campanas**	5.04	15	eP		Pn	09 56 34.5	+0.1
LCO				eS		Sn	09 57 31.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**4.46**	**115**	Pn	**Pn**	**10 09 44.4**	**0.0**
PB12	**IPOC Station P**	**4.58**	**118**		**Pn**	**10 09 46.6**	**+0.5**
NNA	**Nana**	**5.00**	**334**	Pn	**Pn**	**10 09 53.7**	**+1.7**
	1.0nm,0.3s,baz=312,slow=2.0,SNR=1.4						
NNA				Pg	**Pb**	**10 10 04.3**	**-0.2**
	11nm,0.3s,baz=119,slow=18,SNR=6.2						
NNA				Lg	Lg	10 11 06.4	
	15nm,0.3s,baz=234,slow=19,SNR=8.6						
	9.7nm,0.8s						
NNA	**Nana**	**5.00**	**334**		**Pn**	**10 09 51.9**	**-0.1**
PB18	**Visviri**	**5.02**	**103**	Pn	**Pn**	**10 09 52.3**	**-0.2**
PB16	**IPOC Station P**	**5.19**	**111**		**Pn**	**10 09 55.7**	**+0.8**
PSGCX	**Pisagua**	**5.25**	**126**		**Pn**	**10 09 54.4**	**-0.9**
PB11	**IPOC Station P**	**5.70**	**125**	Pn	**Pn**	**10 10 01.2**	**-0.4**
GO01	**Chusmiza**	**6.02**	**122**		**Pn**	**10 10 05.9**	**-0.4**
LPAZ	**La Paz**	**6.22**	**89**	Pn	**Pn**	**10 10 09.1**	**0.0**
	3.6nm,0.3s,baz=270,slow=9.2,SNR=78						
LPAZ				LR	LR	10 12 31.9	
	comp=Z,216nm,18.3s,baz=261,slow=41						
LPAZ	**La Paz**	**6.22**	**89**		**Pn**	**10 10 09.8**	**+0.7**
PB08	**IPOC Station P**	**6.30**	**126**		**Pn**	**10 10 08.7**	**-1.4**
PB02	**IPOC Station P**	**6.53**	**138**	Pn	**Pn**	**10 10 12.4**	**-0.5**
PB07	**IPOC Station P**	**6.83**	**140**	Pn	**Pn**	**10 10 15.7**	**-1.5**
PB03	**IPOC Station P**	**7.15**	**141**	Pn	**Pn**	**10 10 21.6**	**0.0**
PB09	**IPOC Station P**	**7.29**	**137**		**Pn**	**10 10 24.5**	**+1.0**
PB05	**IPOC Station P**	**7.54**	**147**	Pn	**Pn**	**10 10 26.7**	**-0.1**
CZSB	**Cruzeiro do Su**	**8.94**	**12**		**Pn**	**10 10 47.4**	**+1.5**
PB14	**IPOC Station P**	**8.97**	**155**	Pn	**Pn**	**10 10 45.8**	**-0.8**
AC01	**Pan de Azucar**	**10.28**	**159**	Pn	**Pn**	**10 11 03.0**	**-1.3**
AC02	**Maricunga**	**11.45**	**155**	Pn	**Pn**	**10 11 18.3**	**-2.5**
SIV	**San Ignacio**	**13.01**	**90**	Pn	**Pn**	**10 11 37.5**	**-4.2**
	0.1nm,0.3s,baz=275,slow=11,SNR=12						
SIV				LR	LR	10 16 55.3	
	comp=Z,142nm,19.1s,baz=298,slow=40						
	2.4nm,0.4s						
CFA	**Coronel Fontan**	**16.09**	**160**	Pn	**P**	**10 12 28.6**	**+2.1**
	0.1nm,0.3s,baz=343,slow=11,SNR=5.2						
	1.7nm,0.8s						
H03N1	**Juan Fernandez**	**17.29**	**192**	T	T	10 30 55.1	
	baz=16,slow=74,SNR=416						
H03N2	**Juan Fernandez**	**17.29**	**192**	T	T	10 30 51.9	
	baz=16,slow=74,SNR=606						
H03N3	**Juan Fernandez**	**17.30**	**192**	T	T	10 30 53.0	
	baz=16,slow=74,SNR=658						
CPUP	**Villa Florida**	**18.79**	**124**	P	**Pn**	**10 12 58.2**	**+1.4**
	baz=294,slow=7.6,SNR=2.9						
	0.9nm,0.6s						
CPUP	**Villa Florida**	**18.79**	**124**	P	**Pn**	**10 12 56.7**	**0.0**
MACA	**Manacapuru-AM**	**19.07**	**47**	P	**P**	**10 12 59.4**	**-0.1**
MACA				IAmb	IAmb	10 13 00.4	
	comp=Z,10nm,0.6s						
BOAV	**Boa Vista**	**23.39**	**38**	P	**P**	**10 13 46.2**	**+0.4**
BOAV				IAmb	IAmb	10 13 51.5	
	comp=Z,6.7nm,1.3s						
SDV	**Santo Domingo**	**25.55**	**9**	LR	LR	10 24 56.2	
	comp=Z,39nm,19.1s,baz=296,slow=39						
JTS	**Las Juntas de**	**28.54**	**338**	LR	LR	10 25 27.2	
	comp=Z,34nm,18.4s,baz=160,slow=36						
MDP	**Montagnes des**	**30.55**	**47**	LR	LR	10 26 59.1	
	comp=Z,31nm,21.2s,baz=248,slow=37						
RPN	**Rapa Nui**	**33.82**	**246**	LR	LR	10 25 36.5	
	comp=Z,32nm,19.4s,baz=268,slow=30						
TKL	**Tuckaleechee C**	**52.62**	**351**	LR	LR	10 42 08.0	
	comp=Z,17nm,18.1s,baz=38,slow=38						
TX31	**Lajitas Ar. Si**	**53.53**	**328**	P	**P**	**10 17 56.3**	**-1.6**
TXAR	**Lajitas Array**	**53.53**	**328**	P	**P**	**10 17 59.9**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=143,slow=6.9,SNR=2.0						
	comp=Z,0.1nm,0.5s						
TXAR	**Lajitas Array**	**53.53**	**328**	P	**P**	**10 17 57.4**	**-0.4**
BLA	**Blacksburg**	**53.73**	**354**	P	**P**	**10 17 57.8**	**-1.2**
T25A	**Trinidad**	**60.32**	**333**	P	**P**	**10 18 45.3**	**-0.7**
SNAA	**Sanae**	**68.71**	**161**	P	**P**	**10 19 40.7**	**+0.5**
QSPA	**South Pole Qui**	**73.64**	**180**	P	P	10 20 14.9	+4.7
	comp=Z,1.5nm,1.1s,baz=103,slow=15,SNR=2.1						
	comp=Z,1.5nm,1.1s						
QSPA	**South Pole Qui**	**73.64**	**180**	P	**P**	**10 20 11.2**	**+0.9**
QSPA				IAmb	IAmb	10 20 35.0	
	comp=Z,2.5nm,1.2s						
NEW	**Newport**	**74.81**	**332**	LR	LR	10 54 45.0	
	comp=Z,14nm,18.2s,baz=41,slow=37						
TORD	**Torodi Ar. Bea**	**80.94**	**73**	P	**P**	**10 20 51.1**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=260,slow=5.1,SNR=7.8						
	comp=Z,1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.94**	**73**	P	**P**	**10 20 51.5**	**-0.5**
ESDC	**Sonseca Array**	**86.24**	**47**	P	**P**	**10 21 17.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=235,slow=4.5,SNR=4.4						
	comp=Z,0.2nm,0.4s						
ESDC	**Sonseca Array**	**86.24**	**47**	P	**P**	**10 21 17.6**	**-1.1**
ESDC				IAmb	IAmb	10 21 35.1	
	comp=Z,5.0nm,1.5s						
H11N3	**WAKE ISLAND Hy**	**121.72**	**283**	T	T	12 41 44.5	
	baz=95						
H11N2	**WAKE ISLAND Hy**	**121.73**	**283**	T	T	12 41 43.7	
	baz=95						
H11N1	**WAKE ISLAND Hy**	**121.74**	**283**	T	T	12 41 46.2	
	baz=95						
H11S2	**WAKE ISLAND Hy**	**121.74**	**282**	T	T	12 41 44.4	
	baz=99,slow=75,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**121.75**	**282**	T	T	12 41 44.4	
	baz=99,slow=75,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**121.76**	**282**	T	T	12 41 43.6	
	baz=99,slow=75,SNR=6.4						
WRA	**Warramunga Arr**	**133.93**	**219**	PKP	**PKiKP**	**10 27 59.2**	**+2.8**
	comp=Z,0.3nm,0.9s,baz=127,slow=2.0,SNR=1.7						
BOOM	**Boomskoye usch**	**143.90**	**38**	PKPdf	**PKPdf**	**10 28 12.5**	**-0.3**
MKAR	**Makanchi Array**	**144.25**	**27**	PKPdf	**PKPdf**	**10 28 13.0**	**-0.1**
SONM	**Songino Array**	**148.77**	**359**	PKPbc	**PKiKP**	**10 28 25.3**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=356,slow=3.7,SNR=5.5						

*IDC **24** 10:09:08.3±0.9,28°.08N×104°.81E, h0km, mb3.7/6, mbtmp3.7/9, ML4.1/2, MS3.1/4, Error ellipse: s-maj=33.0km s-min=18.2km az=65.0*

*NEIC **24** 10:09:09.9±1.3, 28°.08N±0°.06×104°.68E±0°.09, h10km±1km, mb4.4/17, Error ellipse: s-maj=14.5km s-min=9.1km az=300.0*

ISC 24 10:09:12.8±0.6, 28°.08N±0°.07×104°.75E±0°.08, h35km, n38, σ0s79/37, mb3.9/9, MS3.0/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.68**	**61**		**Pn**	**10 10 21.4**	**+0.4**
SLVN	**Son La**	**6.76**	**187**	Pn	**Pn**	**10 10 48.8**	**-0.8**
LZDM	**Lanzhou Array**	**7.91**	**354**	Pn	**Pn**	**10 11 04.9**	**-0.7**
	baz=173,slow=15						
	2.1nm,0.3s						
CRAI	**Chiangrai**	**8.78**	**208**	Pn	**Pn**	**10 11 15.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**10.96**	**210**	Pn	**Pn**	**10 11 48.5**	**+1.3**
	0.4nm,0.3s,baz=30,slow=12,SNR=5.5						
CMAR				LR	LR	10 16 30.4	
	comp=Z,69nm,19.2s,baz=35,slow=40						
CMAR	**Chiang Mai Arr**	**10.96**	**210**		**Pn**	**10 11 45.9**	**-1.3**
TPUB	**Ta-pu**	**15.08**	**105**	Pn	**Pn**	**10 12 42.3**	**-1.1**
TPUB				IAmb	IAmb	10 13 08.0	
	comp=Z,28nm,1.5s						
SSLB	**Suanglung**	**15.19**	**103**	Pn	**Pn**	**10 12 44.0**	**-0.7**
SSLB				IAmb	IAmb	10 13 03.3	
	comp=Z,7.6nm,1.0s						
BJT	**Baijiatuau**	**15.19**	**35**	Pn	**Pn**	**10 12 44.0**	**-0.7**
BJT				IAmb	IAmb	10 12 45.3	
	comp=Z,4.7nm,0.7s						
YOJ	**Yonaguni jima**	**16.77**	**98**	P	**P**	**10 13 06.5**	**-0.4**
YOJ				IAmb	IAmb	10 13 14.3	
	comp=Z,54nm,1.0s						
SONM	**Songino Array**	**19.77**	**3**	Pn	**P**	**10 13 40.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=5.5						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**19.77**	**3**	P	**P**	**10 13 39.4**	**-0.5**
PBA	**Port Blair**	**19.83**	**217**	P	**P**	**10 13 40.4**	**-0.3**
PBA				IAmb	IAmb	10 13 56.5	
	comp=Z,63nm,1.2s						
ULN	**Ulaanbaatar**	**19.84**	**5**	P	**P**	**10 13 39.7**	**-1.0**
TGY	**Tagaytay City**	**20.49**	**129**	LR	LR	10 20 59.4	
	comp=Z,62nm,21.0s,baz=325,slow=35						
JOW	**Kunigami**	**20.91**	**88**	P	**P**	**10 13 52.3**	**0.0**
JOW				IAmb	IAmb	10 14 00.3	
	comp=Z,54nm,1.5s						
KSAR	**Wonju Array Be**	**21.53**	**58**	P	**P**	**10 13 58.9**	**-0.1**
KSRS	**Korea Array**	**21.57**	**58**	P	**P**	**10 13 59.8**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=241,slow=11,SNR=4.5						
	comp=Z,1.0nm,0.5s						
TLY	**Talaya**	**23.59**	**358**	LR	LR	10 24 29.2	
	comp=Z,44nm,20.6s,baz=168,slow=39						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**25.41**	**313**	P	**P**	**10 14 37.6**	**+0.5**
JMN	**Monobe**	**25.57**	**70**	P	**P**	**10 14 38.9**	**+0.3**
MKAR	**Makanchi Array**	**25.68**	**323**	P	**P**	**10 14 39.7**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=127,slow=11,SNR=11						
	comp=Z,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**29.70**	**336**	P	**P**	**10 15 14.2**	**-1.1**
KURBB	**Kurchatov Arra**	**30.02**	**326**	P	**P**	**10 15 18.7**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=131,slow=9.7,SNR=8.4						
KURBB				PcP	**PcP**	**10 18 20.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=132,slow=1.4,SNR=1.2						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**30.04**	**326**	P	**P**	**10 15 18.4**	**+0.1**
KURK					**PcP**	**10 18 20.7**	**+1.0**
KKAR	**Karatay Array**	**31.38**	**308**	P	**P**	**10 15 30.0**	**-0.3**
BBJI	**Bungbulang**	**35.44**	**175**	P	**P**	**10 16 06.4**	**+0.5**
TIXI	**Tiksi**	**45.61**	**10**	LR	LR	10 38 30.9	
	comp=Z,34nm,19.2s,baz=199,slow=39						
WB0	**Warramunga Arr**	**55.53**	**146**	P	**P**	**10 18 45.6**	**+0.9**
WB0				IAmb	IAmb	10 18 48.5	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr**	**55.66**	**146**	P	**P**	**10 18 45.6**	**0.0**
	comp=Z,0.9nm,0.9s,baz=318,slow=12,SNR=6.9						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**55.66**	**146**	P	**P**	**10 18 45.6**	**0.0**
WR8	**Warramunga Arr**	**55.75**	**146**	P	**P**	**10 18 47.2**	**+1.0**
WR8				IAmb	IAmb	10 19 00.1	
	comp=Z,10nm,1.3s						
AS31	**Alice Springs**	**58.62**	**148**	P	**P**	**10 19 07.2**	**+0.6**
AS31				IAmb	IAmb	10 19 37.9	
	comp=Z,1.8nm,1.2s						
ASAR	**Alice Springs**	**58.62**	**148**	P	**P**	**10 19 07.0**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=331,slow=6.6,SNR=6.6						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**58.62**	**148**	P	**P**	**10 19 06.4**	**-0.2**
BR131	**Keskin Array S**	**58.76**	**301**	P	**P**	**10 19 07.3**	**-0.3**
BRTR	**Keskin Array B**	**58.76**	**301**		**P**	**10 19 07.6**	**0.0**
HFS	**Hagfors**	**66.60**	**327**	P	**P**	**10 20 01.4**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=235,slow=41,SNR=1.2						
	comp=Z,0.5nm,0.5s						

AFAD 24 10:18:03.2, 37°.43N×35°.94E, h7km±3km, ML2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.35**	**64**	P	Pg	**10 18 10.8**	**+0.6**
ANDN				IAML		10 18 24.0	
	comp=E,422nm,0.3s						
ANDN				IAML		10 18 25.0	
	comp=N,570nm,0.2s						
CAYT	**Sariam**	**0.56**	**243**	P	Pg	10 18 14.4	+0.5
SAIM	**ADANA**	**0.56**	**11**	P	Pg	10 18 14.0	0.0
KAMA	**Osmaniye**	**0.62**	**112**	P	Pg	10 18 14.9	-0.4
KAMA				IAML		10 18 38.0	
	comp=N,260nm,0.4s						
KAMA				IAML		10 18 39.0	
	comp=E,319nm,0.3s						
HASA	**Hatay-Hassa-Ha**	**0.80**	**147**	P	Pg	10 18 18.9	+0.3
HASA				IAML		10 18 45.0	
	comp=N,471nm,0.3s						
HASA				IAML		10 18 46.0	
	comp=E,496nm,0.5s						
GULE	**Gulek**	**0.94**	**262**	P	Pb	10 18 21.7	-0.2
KHMN	**Narli-Kahraman**	**0.97**	**92**	P	Pn	10 18 23.0	-0.2
KHMN				IAML		10 18 49.0	
	comp=N,364nm,0.8s						
NIDE	**Nigde/Merkez-G**	**1.09**	**302**	P	Pg	10 18 23.4	-0.7
NIDE				IAML		10 18 51.0	
	comp=N,245nm,0.5s						
NIDE				IAML		10 18 59.0	
	comp=E,332nm,0.6s						
GZT	**Gaziantep**	**1.29**	**93**	P	Pn	10 18 27.5	-0.3
GZT				IAML		10 19 09.0	
	comp=E,276nm,0.6s						

*AFAD **24** 10:18:14.3, 37°.45N×35°.94E, h7km±4km, ML3.2*
*ISK **24** 10:18:15.3, 37°.45N×36°.00E, h7km, ML3.2/12*

ISC 24 10:18:14.8±1.1, 37°.45N±0°.03×35°.96E±0°.03, h19km±3km, n22, σ0s60/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**287**	Pg	**Pg**	**10 18 18.7**	**-0.1**
KOZT				Sg	**Sg**	**10 18 21.5**	**+0.1**
SAIM	**ADANA**	**0.54**	**11**	P	**Pg**	**10 18 25.4**	**-0.3**
SAIM				S	**Sn**	**10 18 35.4**	**-0.7**
SAIM				IAML		10 18 39.0	
	comp=E,2μm,0.6s						
SAIM				IAML		10 18 40.0	
	comp=N,1μm,0.2s						
CAYT	**Sariam**	**0.58**	**242**	P	**Pb**	**10 18 25.1**	**-1.2**
CAYT				S	**Sb**	**10 18 34.8**	**+0.7**
CAYT				IAML		10 18 35.0	
	comp=N,1μm,0.5s						
CAYT				IAML		10 18 35.0	
	comp=E,2μm,0.5s						
KMRS	**Kahramanmaras**	**0.75**	**85**	Pg	**Pg**	**10 18 29.4**	**-0.2**
KMRS				Sg	**Sn**	**10 18 40.2**	**-1.2**
HASA	**Hatay-Hassa-Ha**	**0.82**	**149**	P	**Pb**	**10 18 29.4**	**-1.0**
HASA				S	**Sg**	**10 18 42.1**	**+0.4**
GULE	**Gulek**	**0.95**	**260**	P	**Pb**	**10 18 32.0**	**-0.9**
GULE				S	**Sb**	**10 18 45.9**	**+0.7**
GULE				IAML		10 18 51.0	
	comp=N,643nm,0.6s						
GULE				IAML		10 18 53.0	
	comp=E,893nm,0.6s						
KHMN	**Narli-Kahraman**	**0.96**	**93**	Pg	**Pg**	**10 18 33.2**	**-0.2**
KHMN				Sg	**Sn**	**10 18 46.8**	**+0.3**
KHMN	**Narli-Kahraman**	**0.96**	**93**	P	**Pg**	**10 18 33.3**	**-0.2**
KHMN				P	**Pn**	**10 18 33.5**	**+0.2**
KHMN				S	**Sn**	**10 18 46.3**	**-0.1**
KHMN				S	**Sg**	**10 18 47.6**	**+1.5**
SARI	**SarD1z-Kayseri**	**1.02**	**21**	Pg	**Pg**	**10 18 34.9**	**+0.1**
GAZ	**Gaziantep**	**1.04**	**105**	Pg	**Pg**	**10 18 34.7**	**-0.3**
GAZ				Sg	**Sn**	**10 18 49.1**	**+0.6**
NIDE	**Nigde/Merkez-G**	**1.09**	**301**	P	**Pb**	**10 18 34.8**	**-0.3**
NIDE				S	**Sb**	**10 18 48.9**	**-0.1**
GZT	**Gaziantep**	**1.28**	**94**	P	**Pb**	**10 18 38.4**	**-0.1**
GZT				S	**Sg**	**10 18 56.6**	**+0.1**
BNN	**Bunyan**	**1.40**	**356**	Pn	**Pg**	**10 18 41.4**	**-0.6**
AKCA	**Adyaman/G¶l**	**1.42**	**75**	P	**Pb**	**10 18 40.4**	**-0.4**
AKCA				S	**Sg**	**10 19 00.9**	**+0.2**
AKCA				IAML		10 19 07.0	
	comp=N,339nm,0.6s						
AKCA				IAML		10 19 10.0	
	comp=E,282nm,0.8s						
GULA	**Gulagac**	**1.63**	**304**	Pn	**Pb**	**10 18 44.6**	**+0.2**
YESY	**Yesilyurt**	**1.79**	**281**	Pn	**Pb**	**10 18 47.7**	**+0.6**
KOZK	**Kozakli-Nevseh**	**1.96**	**334**	Pn	**Pb**	**10 18 50.1**	**+0.2**
KEBE	**Keben-Mersin**	**2.06**	**242**	Pn	**Pb**	**10 18 51.5**	**-0.1**
KRMN	**Karaman**	**2.17**	**264**	Pn	**Pb**	**10 18 53.4**	**-0.1**
IKL	**Isikli**	**2.19**	**237**	Pn	**Pb**	**10 18 53.7**	**-0.1**
YOZ	**Yozgat**	**2.24**	**347**	Pn	**Pb**	**10 18 53.9**	**-1.0**
TEVE	**Tevekalti-Mers**	**2.25**	**244**	Pn	**Pb**	**10 18 54.7**	**-0.3**

*NIED **24** 10:35:21.9, 39°.34N×142°.08E, h48km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr0.96; Mθθ0.49; Mφφ-1.45; Mrθ1.01; Mrφ0.11; Mθφ2.32; Fault plane solution: M0 2.84000×10^14 NP1: φs147.00000°, δ19.00000°, λ37.00000°. NP2: φs22.00000°, δ79.00000°, λ105.00000°.*

*JMA **24** 10:35:21.9±0.1, 39°.3N±0°.2×142°.1E±0°.5, h48km, MV3.5/40, E OFF IWATE PREF*

JMA Felt I J1 at E OFF IWATE PREF .

*IDC **24** 10:35:27.4±2.5, 39°.24N×141°.66E, h106km±22km, mb3.2/6, mbtmp3.5/9, Error ellipse: s-maj=31.0km s-min=21.6km az=102.0*

ISC 24 10:35:20.9±1.2, 39°.31N±0°.04×142°.13E±0°.10, h49km±8km, n28, σ1s08/32, mb3.5/6, 19D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.36**	**318**	*i* P	**Pn**	**10 35 30.8**	**+0.2**
MIYJ				⇓S	**Sn**	**10 35 37.0**	**-0.5**
OFUJ	**Ofunato**	**0.42**	**238**	*i* P	**Pn**	**10 35 31.9**	**+0.6**
OFUJ				S	**Sn**	**10 35 38.8**	**+0.2**
JTH	**Tanohata**	**0.66**	**342**	⇓*i* P	**Pn**	**10 35 34.3**	**+0.1**
JTH				⇓S	**Sn**	**10 35 43.0**	**-0.8**
JOM	**Ohasama**	**0.67**	**285**	⇓*i* P	**Pn**	**10 35 34.4**	**+0.2**
JOM				⇓S	**Sn**	**10 35 43.6**	**-0.4**
JKMT	**Kesennumamotoy**	**0.71**	**226**	⇓*i* P	**Pn**	**10 35 35.4**	**+0.6**
JKMT				⇓S	**Sn**	**10 35 44.9**	**0.0**
JMK	**Ichinoseki**	**0.79**	**244**	⇓*i* P	**Pn**	**10 35 36.3**	**+0.4**
JMK				⇓S	**Sn**	**10 35 46.6**	**-0.1**
JKZ	**Kuzumaki**	**0.92**	**318**	⇓*i* P	**Pn**	**10 35 38.1**	**+0.5**
JKZ				⇓S	**Sn**	**10 35 49.8**	**0.0**
JIO	**Ouri**	**1.05**	**216**	⇓*i* P	**Pn**	**10 35 39.9**	**+0.6**
JIO				⇓S	**Sn**	**10 35 52.7**	**-0.1**
JRG	**Rokugo**	**1.16**	**275**	⇓*i* P	**Pn**	**10 35 41.2**	**+0.4**
JRG				⇓S	**Sn**	**10 35 56.1**	**+0.5**
JANG	**Nango**	**1.17**	**336**	⇓*i* P	**Pn**	**10 35 41.0**	**+0.1**
JANG				⇓S	**Sn**	**10 35 55.1**	**-0.6**
JYK	**Kaneyama**	**1.43**	**255**	⇓*i* P	**Pn**	**10 35 45.2**	**+0.7**
JAH	**Hinai**	**1.45**	**308**	*i* P	**Pn**	**10 35 45.2**	**+0.4**
MJAR	**Matsushiro Arr**	**4.15**	**230**	P	**Pn**	**10 36 24.2**	**+2.4**
	3.3nm,0.7s,baz=34,slow=12,SNR=12						
ASAJ	**Asahikawa**	**4.82**	**4**	P	Pn	10 36 40.5	+10
	4.4nm,0.7s,baz=217,slow=11,SNR=4.6						
ASAJ				S	**Sn**	**10 37 26.2**	**+0.9**
	3.7nm,0.5s,baz=183,slow=34,SNR=1.4						
JHJ	**Hachijo jima 2**	**6.46**	**198**	S	**Sn**	**10 38 02.6**	**-3.2**
	44nm,0.9s,baz=70,slow=18,SNR=1.5						
USRK	**Ussuriysk Ar.**	**9.02**	**306**	P	**Pn**	**10 37 29.9**	**+1.5**
	2.9nm,0.9s,baz=113,slow=16,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**28.91**	**125**	T	T	11 11 43.3	
	baz=318,slow=76,SNR=124						
H11N1	**WAKE ISLAND Hy**	**28.92**	**125**	T	T	11 11 50.9	
	baz=318,slow=76,SNR=139						
H11N3	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	11 11 50.1	
	baz=318,slow=76,SNR=103						
H11S1	**WAKE ISLAND Hy**	**29.70**	**127**	T	T	11 12 49.8	
	baz=319,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**29.70**	**127**	T	T	11 12 46.8	
	baz=319,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	**29.72**	**127**	T	T	11 12 46.9	
	baz=319,slow=76,SNR=30						
ZALV	**Zalesovo Beam**	**40.84**	**310**	P	**P**	**10 42 55.6**	**-1.9**
	0.4nm,0.3s,baz=93,slow=9.9,SNR=3.6						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**43.43**	**300**	P	**P**	**10 43 17.9**	**-0.9**
	0.3nm,0.5s,baz=75,slow=8.8,SNR=2.2						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**45.08**	**306**	P	**P**	**10 43 30.5**	**-1.4**
	0.3nm,0.3s,baz=81,slow=8.3,SNR=5.5						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**47.28**	**33**	P	**P**	**10 43 50.6**	**+1.6**
	0.2nm,0.5s,baz=284,slow=7.1,SNR=2.4						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**59.39**	**189**	P	**P**	**10 45 17.9**	**-0.4**
	0.3nm,0.8s,baz=5.1,slow=7.2,SNR=1.5						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**67.07**	**332**	P	**P**	**10 46 08.8**	**+0.1**
	2.0nm,0.9s,baz=55,slow=4.7,SNR=1.4						
	2.0nm,0.9s						

*NEIC **24** 10:35:33.3±0.9, 22°.59S±0°.09×13°.00W±0°.09, h10km±1km, mb4.9/27, Error ellipse: s-maj=21.0km s-min=5.2km az=317.0*

*IDC **24** 10:35:33.4±4.0, 22°.77S×12°.90W, h0km, mb4.1/3, mbtmp4.1/3, MS3.6/20, Error ellipse: s-maj=109.9km s-min=43.1km az=67.0*

ISC 24 10:35:33.0±0.6, 22°.61S±0°.09×13°.0W±0°.1, h10km, n55, σ0s90/34, mb4.8/14, MS3.6/20, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**9.54**	**47**	Pn	**Pn**	**10 37 50.1**	**-0.5**
H10S2	**ASCENSION HYDR**	**13.66**	**353**	T	T	10 52 40.1	
	baz=48,slow=74,SNR=27						
H10S3	**ASCENSION HYDR**	**13.67**	**353**	T	T	10 52 30.7	
	baz=172,slow=74,SNR=22						
TRIS	**Tristan da Cun**	**14.42**	**178**	Pn	**Pn**	**10 38 56.9**	**-0.3**
RCBR	**Riachuelo**	**27.68**	**304**	LR	LR	10 50 18.4	
	comp=Z,27nm,19.1s,baz=115,slow=32						
RCBR	**Riachuelo**	**27.68**	**304**	P	**P**	**10 41 21.7**	**+0.2**
TSUM	**Tsumeb**	**28.77**	**89**	LR	LR	10 50 38.9	
	comp=Z,120nm,21.0s,baz=333,slow=32						
DBIC	**Dimbokro**	**30.18**	**16**	P	**P**	**10 41 42.6**	**-1.0**
DBIC				IAmb	IAmb	10 41 55.9	
	comp=Z,28nm,1.6s						
SUR	**Sutherland**	**31.44**	**115**	LR	LR	10 51 37.1	
	comp=Z,69nm,21.9s,baz=326,slow=31						
BDFB	**Brasilia**	**33.72**	**276**	LR	LR	10 54 59.8	
	comp=Z,58nm,18.2s,baz=154,

JTS	**Las Juntas de**	**77.63**	**287**	LR	LR	11 22 50.9	
	comp=Z,21nm,18.9s,baz=86,slow=36						
RPN	**Rapa Nui**	**85.24**	**243**	LR	LR	11 21 36.0	
	comp=Z,28nm,19.9s,baz=177,slow=32						
TKL	**Tuckaleechee C**	**88.50**	**310**	LR	LR	11 19 48.3	
	comp=Z,18nm,21.7s,baz=138,slow=30						
CMIG	**Matias Romero**	**89.22**	**289**	LR	LR	11 27 11.2	
	comp=Z,33nm,21.8s,baz=106,slow=35						
PALK	**Pallekele**	**96.18**	**85**	LR	LR	11 25 51.0	
	comp=Z,41nm,20.3s,baz=238,slow=31						
MJAR	**Matsushiro Arr**	**151.52**	**54**	PKPbc	**PKiKP**	**10 55 29.5**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=308,slow=2.9,SNR=4.5						

*KRNET **24** 10:37:21.5±0.1,41°.93N×72°.99E,h22km,mb2.0*
*SOME **24** 10:37:21.7,41°.97N×72°.93E,h5km*
*NNC **24** 10:37:22.8±1.2,41°.98N×72°.96E,h0km,mb2.9,mpv2.8, Error ellipse: s-maj=10.4km s-min=3.9km az=149.0*

ISC 24 10:37:21.3±1.2,41°.93N±0°.03×72°.98E±0°.03,h2km±11km, n15,σ0ᵗ68/27,10C-9D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.60**	**180**	⇓	*i*	P	**Pg**	**10 37 33.1**	**+0.2**
ARSB				⇓	*i*	S	**Sg**	**10 37 41.6**	**+0.8**
MNAS	**Manas**	**0.66**	**328**	⇑	*i*	P	**Pg**	**10 37 34.4**	**+0.4**
MNAS				⇑	*i*	S	**Sb**	**10 37 43.5**	**-1.9**
ARK	**Arkit**	**0.77**	**261**	⇑	*i*	P	**Pg**	**10 37 36.2**	**0.0**
ARK				⇑	*i*	S	**Sg**	**10 37 46.9**	**+0.7**
MRKS	**Merke**	**0.83**	**12**			P	**Pb**	**10 37 38.3**	**-0.3**
	2.0nm,0.1s								
MRKS						S	**Sb**	**10 37 49.8**	**-0.6**
	17nm,0.2s								
MRKS	**Merke**	**0.83**	**12**		*e*	P	**Pb**	**10 37 38.3**	**-0.3**
	2.0nm,0.1s								
MRKS					*e*	S	**Sb**	**10 37 49.8**	**-0.6**
	17nm,0.2s								
EKS2	**Erkin-Say**	**0.94**	**39**	⇓	*i*	P	**Pg**	**10 37 39.0**	**-0.3**
EKS2				⇓	*i*	S	**Sg**	**10 37 51.6**	**+0.1**
SALK	**Salom-Alik**	**1.22**	**149**	⇑	*i*	P	**Pg**	**10 37 44.0**	**-0.7**
SALK				⇑	*e*	S	**Sg**	**10 38 00.2**	**-0.3**
OHH	**Osh**	**1.41**	**186**	⇑	*i*	P	**Pn**	**10 37 47.4**	**-0.7**
OHH				⇑	*i*	S	**Sb**	**10 38 06.1**	**-0.8**
SGDS	**Sogindy**	**1.95**	**38**		Pg		**Pb**	**10 37 57.8**	**+0.3**
	0.7nm,0.2s								
SGDS					Lg		Lg	10 38 23.2	
	4.5nm,0.2s								
SFK	**Sufi-Kurgan**	**1.96**	**168**	⇓	*i*	P	**Pn**	**10 37 56.3**	**+0.6**
SFK				⇓	*e*	S	**Sn**	**10 38 21.7**	**+0.7**
KK31	**Karatay Array**	**2.17**	**304**		Pg		**Pb**	**10 38 01.2**	**-0.1**
	1.0nm,0.3s,baz=133,slow=16,SNR=7.1								
KK31				⇓	Lg		Lg	10 38 30.2	
	0.8nm,0.2s,baz=125,slow=29,SNR=5.2								
IUG	**Iuzhnay**	**2.21**	**277**		Pg		**Pg**	**10 38 03.6**	**-0.1**
	3.7nm,0.2s								
IUG					Lg		Lg	10 38 32.9	
	11nm,0.2s								
IUG	**Iuzhnay**	**2.21**	**277**		*e*	P	**Pg**	**10 38 03.6**	**-0.1**
	3.7nm,0.2s								
IUG					*e*	S	**Sg**	**10 38 32.9**	**+0.5**
	11nm,0.2s								
BOOM	**Boomskoye usch**	**2.27**	**75**	⇓	*i*	P	**Pn**	**10 38 00.7**	**+0.7**
BOOM				⇓	*i*	S	**Sn**	**10 38 29.2**	**+0.6**
NRN	**Naryn**	**2.31**	**101**	⇑	*e*	P	**Pn**	**10 38 01.4**	**+0.7**
NRN				⇑	*e*	S	**Sn**	**10 38 30.3**	**+0.4**

*NEIC **24** 10:39:16.2±2.1,35°.54N±0°.05×69°.1E±0°.1,h113km±10km, mb4.2/8, Error ellipse: s-maj=12.4km s-min=7.3km az=83.0*
*NNC **24** 10:39:24.8±4.6,36°.11N×69°.29E,h173km±61km,mb2.8, mpv3.4, Error ellipse: s-maj=44.4km s-min=30.9km az=64.0*

ISC 24 10:39:16.0±0.8,35°.65N±0°.06×69°.29E±0°.06,h100km,n34, σ2ᵖ26/42,mb4.2/3,5C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.12**	**191**				**Pn**	**10 39 38.5**	**+0.5**
KBL					Sn		**Sn**	**10 39 54.5**	**0.0**
SHAA	**Shahritus**	**2.13**	**334**				**Pn**	**10 39 52.7**	**+2.4**
SHAA					Sn		**Sn**	**10 40 18.4**	**+1.9**
MANEM	**Manem**	**2.69**	**45**				**Pn**	**10 40 02.4**	**+4.5**
CHGR	**Chuyangaron**	**3.00**	**358**		Pn		**Pn**	**10 40 04.8**	**+2.9**
GAR	**Garm**	**3.44**	**13**		Pn		**Pn**	**10 40 11.3**	**+3.6**
NIL	**Nilore**	**3.82**	**120**		Pn		**Pn**	**10 40 14.2**	**+1.4**
DRK	**Karamyk**	**4.31**	**27**		Pn		**Pn**	**10 40 21.3**	**+1.7**
BTK	**Batken**	**4.56**	**15**		Pn		**Pn**	**10 40 25.3**	**+2.5**
THN	**Thein Dam**	**6.25**	**119**		*e*S		**Sn**	**10 41 54.3**	**-1.4**
TSSA	**Tissa**	**6.33**	**114**		*e*S		**Sn**	**10 41 56.1**	**-1.9**
ARSB	**Arslanbob**	**6.36**	**26**		Pn		**Pn**	**10 40 49.2**	**+1.9**
DHRM	**DHARAMSHALA**	**6.74**	**118**		*e*P		**Pn**	**10 40 53.9**	**+1.4**
DHRM					*e*S		**Sn**	**10 42 04.7**	**-3.1**
KK31	**Karatay Array**	**7.50**	**7**	⇓			**Pn**	**10 41 05.8**	**+3.1**
	1.4nm,0.3s,baz=196,slow=15,SNR=17								
KK31				⇑	S		**Sn**	**10 42 25.9**	**-0.2**
	2.1nm,0.3s,baz=192,slow=24,SNR=4.1								
KK31	**Karatay Array**	**7.50**	**7**				**Pn**	**10 41 03.4**	**+0.7**
KKAR	**Karatay Array**	**7.50**	**7**				**Pn**	**10 41 02.2**	**-0.4**
SMLA	**Simla**	**7.98**	**122**		*e*P		**Pn**	**10 41 10.0**	**+0.9**
SMLA					*e*S		**Sn**	**10 42 33.8**	**-3.9**
SMLA					IAML			10 42 36.2	
	comp=N,41nm,0.3s								
SMLA					IAML			10 42 36.6	
	comp=E,42nm,0.5s								
AAK	**Ala-Archa**	**8.06**	**28**	⇑	P		**Pn**	**10 41 12.4**	**+2.1**
	comp=E,0.7nm,0.5s								
AAK				⇓	S		**Sn**	**10 42 40.4**	**+0.4**
	comp=E,1.8nm,0.6s								
AAK	**Ala-Archa**	**8.06**	**28**		Pn		**Pn**	**10 41 11.5**	**+1.1**
BOOM	**Boomskoye usch**	**8.56**	**35**		Pn		**Pn**	**10 41 18.2**	**+1.0**
TARG	**Taragay, Kyrgy**	**9.01**	**45**		Pn		**Pn**	**10 41 24.1**	**+0.7**
MAKZ	**Makanchi**	**14.65**	**37**		Pn		**Pn**	**10 42 39.5**	**+1.4**
MKAR	**Makanchi Array**	**14.80**	**37**		Pn		**Pn**	**10 42 40.3**	**+0.3**
AB31	**Akbulak array**	**15.23**	**336**	⇑	P		**Pn**	**10 42 45.6**	**+0.2**
	comp=E,0.9nm,0.4s,baz=271,slow=38,SNR=40								
AB31				⇑	S		**Sn**	**10 45 28.0**	**-5.5**
	comp=E,1.3nm,0.6s,baz=152,slow=24,SNR=3.5								
AB31	**Akbulak array**	**15.23**	**336**		Pn		**Pn**	**10 42 43.4**	**-2.0**
ABKAR	**Akbulak array**	**15.23**	**336**		Pn		**Pn**	**10 42 43.3**	**-2.1**
WMQ	**Urumqi**	**16.32**	**54**		*e*P		**P**	**10 43 03.1**	**+2.9**
KURK	**Kurchatov**	**16.50**	**21**		Pn		**Pn**	**10 43 01.0**	**-0.2**
AKTO	**Aktyubinsk**	**16.89**	**335**	⇑	P		**P**	**10 43 07.8**	**+1.4**
	comp=E,1.4nm,0.8s								
AKTO				⇓	S		**Sn**	**10 46 08.7**	**-4.8**
	comp=E,1.2nm,0.8s								
PZH	**PanZhiHua**	**29.14**	**99**		P		**P**	**10 45 10.3**	**+2.5**
NBO00	**NORSAR Array S**	**44.45**	**324**		P		**P**	**10 47 15.8**	**-0.9**
NBO00					IAmb		IAmb	10 47 31.3	
	comp=Z,15nm,1.4s								
NACB	**Ninganchiao**	**46.28**	**89**		P		**P**	**10 47 31.1**	**-0.5**
PET	**Petropavlovsk**	**62.10**	**43**		P		**P**	**10 49 25.6**	**-0.4**
F21K	**Alatna River**	**72.44**	**16**		P		**P**	**10 50 30.4**	**-0.7**
F21K					IAmb		IAmb	10 50 40.8	
	comp=Z,5.5nm,1.5s								
H21K	**Melozitna Rive**	**73.89**	**17**		P		**P**	**10 50 39.7**	**+0.1**
H21K					IAmb		IAmb	10 51 14.5	
	comp=Z,2.1nm,1.2s								

*IPEC **24** 10:44:15.8±0.2,51°.62N×16°.04E,h1km,ML2.5/8, Error ellipse: s-maj=2.0km s-min=1.1km az=63.0*
*VIE **24** 10:44:15.8±0.9,51°.60N×16°.05E,h0km,mb2.5/4,ml2.8/4, Error ellipse: s-maj=7.1km s-min=5.4km az=51.0 88 km NW of Wroclaw Suspected Mining induced.*
*PRU **24** 10:44:19.5,51°.49N×16°.00E,h0km*

ISC 24 10:44:14.8±0.8,51°.69N±0°.03×16°.05E±0°.03,h0km,n36, σ1ᵍ28/71,Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.86**	**170**		*e*Pg		**Pg**	**10 44 31.4**	**+0.1**
KSP					*e*Sg		**Sg**	**10 44 41.8**	**-0.7**
CHVC	**Chvalec**	**1.10**	**180**		*e*PG		**Pg**	**10 44 35.8**	**-0.1**
CHVC					*e*SG		**Sg**	**10 44 49.5**	**-0.7**
	comp=Z,56nm,0.6s								
OSTC	**Ostas**	**1.14**	**175**		*e*PG		**Pb**	**10 44 37.2**	**-0.2**
OSTC					*e*SG		**Sg**	**10 44 49.3**	**-2.1**
	comp=Z,47nm,0.4s								
UPC	**Upice**	**1.19**	**181**		*e*PG		**Pg**	**10 44 37.6**	**+0.1**
UPC					*e*SG		**Sg**	**10 44 50.6**	**-2.2**
DPC	**Dobruska-Polom**	**1.35**	**173**		*e*SG		**Sg**	**10 44 56.6**	**-1.6**
	comp=Z,46nm,0.6s								

PVCC	**Panska Ves**	**1.49**	**219**		*e*PG	**Pn**	**10 44 42.7**	**-0.2**
PVCC					*e*SG	**Sg**	**10 45 02.5**	**-0.2**
	comp=Z,117nm,0.2s							
PIVO	**Bartosovice**	**1.54**	**168**		*e*Pg	**Pn**	**10 44 43.1**	**-0.4**
	baz=348							
PIVO					*e*Sg	**Sg**	**10 45 01.9**	**-2.3**
	54nm,0.3s,baz=348							
BRG	**Berggiesshubel**	**1.56**	**239**		Pg	**Pn**	**10 44 44.0**	**+0.2**
BRG					Sg	**Sg**	**10 45 04.3**	**-0.5**
BRG					Amp		10 45 05.1	
	comp=Z,47nm,0.4s							
KRLC	**Kraliky**	**1.68**	**164**		*e*PG	**Pn**	**10 44 45.4**	**-0.1**
KRLC					*e*SG	**Sn**	**10 45 06.9**	**-0.9**
	comp=Z,64nm,0.4s							
ANAC	**Anensky vrch**	**1.82**	**152**		*e*Pn	**Pn**	**10 44 47.4**	**-0.1**
	baz=332							
ANAC					*e*Sg	**Sn**	**10 45 11.2**	**-0.1**
	comp=Z,37nm,0.3s,baz=332							
RYBC	**Ceska Rybna**	**1.89**	**180**		*e*Pn	**Pn**	**10 44 48.2**	**-0.1**
	baz=360							
RYBC					*e*Sg	**Sn**	**10 45 12.7**	**0.0**
	comp=Z,37nm,0.4s,baz=360							
CLL	**Collm**	**1.94**	**260**		*i* Pn	**Pn**	**10 44 48.5**	**-0.5**
CLL					*i* Pg	**Pb**	**10 44 51.5**	**+0.4**
CLL					*i* x	x	10 44 55.5	
CLL					*e*Sg	**Sb**	**10 45 17.0**	**+1.2**
	comp=Z,15nm,0.5s							
PRU	**Pruhonice**	**1.96**	**210**		*e*PN	**Pn**	**10 44 48.9**	**-0.3**
PRU					*e*PG	**Pb**	**10 44 50.6**	**-0.7**
PRU					*e*SG	**Sn**	**10 45 14.7**	**+0.3**
	comp=Z,21nm,0.4s							
STEB	**Steborice**	**2.07**	**148**		*e*PG	**Pb**	**10 44 53.7**	**+0.5**
STEB					*e*SG	**Sg**	**10 45 20.6**	**-0.7**
	comp=Z,67nm,0.4s							
MORC	**Moravsky Berou**	**2.14**	**153**		*e*Pn	**Pn**	**10 44 51.5**	**-0.2**
	baz=333							
MORC					*e*Sg	**Sb**	**10 45 21.0**	**-0.4**
	comp=Z,31nm,0.6s,baz=333							
MORC	**Moravsky Berou**	**2.14**	**153**		*e*PN	**Pn**	**10 44 51.6**	**-0.2**
MORC					*e*SG	**Sb**	**10 45 21.1**	**-0.4**
OKC	**Ostrava-Krasne**	**2.28**	**144**		*e*SG	**Sb**	**10 45 26.6**	**+1.0**
	comp=Z,32nm,0.4s							
VRAC	**Vranov**	**2.41**	**172**		*e*Pn	**Pn**	**10 44 55.4**	**0.0**
	baz=352							
VRAC					*e*Sg	**Sb**	**10 45 29.0**	**-0.2**
	comp=Z,17nm,0.4s,baz=352							
VRAC	**Vranov**	**2.41**	**172**		*e*PN	**Pn**	**10 44 55.5**	**0.0**
VRAC					*e*SG	**Sb**	**10 45 29.1**	**-0.2**
MAUC	**Maruska**	**2.59**	**153**		*e*SG	**Sg**	**10 45 36.7**	**-1.2**
KRUC	**Moravsky**	**2.64**	**175**		*e*Pn	**Pn**	**10 44 58.5**	**-0.1**
	baz=355							
KRUC					*e*Sg	**Sb**	**10 45 36.4**	**+0.5**
	comp=Z,18nm,0.7s,baz=355							
STAC	**Stalkov**	**2.71**	**191**		*e*Pn	**Pn**	**10 44 59.7**	**+0.1**
	baz=10							
STAC					*e*Sg	**Sb**	**10 45 38.6**	**+0.7**
	comp=Z,19nm,0.4s,baz=10							
OJC	**Ojcow**	**2.79**	**120**		*e*Pg	**Pg**	**10 45 08.9**	**+0.7**
OJC					*e*Sg	**Sg**	**10 45 44.5**	**+0.1**
KHC	**Kasperske Hory**	**3.01**	**213**		*e*PN	**Pn**	**10 45 05.3**	**+1.5**
KHC					*e*PG	**Pb**	**10 45 10.2**	**+0.9**
KHC					*e*SG	**Sb**	**10 45 48.3**	**+1.7**
	comp=Z,11nm,0.4s							
CKRC	**Cesky Krumlov**	**3.08**	**202**		*e*PG	**Pb**	**10 45 11.4**	**+0.9**
LANS	**Liptovska Anna**	**3.35**	**138**		*e*PG	**Pg**	**10 45 23.0**	**+4.0**
LANS					*e*SG	**Sg**	**10 46 00.8**	**-1.6**
LANS					*e*LG	Lg	10 46 04.8	
MODS	**Modra-Piesok**	**3.41**	**166**		*e*PG	**Pg**	**10 45 20.3**	**+0.1**
MODS					*e*SG	**Sg**	**10 46 04.8**	**+0.4**
BSD	**Bornholm Skovb**	**3.50**	**349**		*i* P	**Pn**	**10 45 10.9**	**+0.6**
BSD					*i* S	**Sn**	**10 45 49.7**	**-2.7**
BSD					IAML		10 45 52.1	
	comp=Z,16nm,1.2s							
CONA	**Conrad Observa**	**3.77**	**182**		*i* Pn	**Pn**	**10 45 14.7**	**+0.5**
	comp=Z,0.6nm,0.2s							
CONA					*e*Sg	**Sg**	**10 46 12.4**	**-3.4**
	comp=Z,5.8nm,0.3s							
RONA	**Rosalia, Austr**	**4.00**	**178**		*i* Pn	**Pn**	**10 45 17.0**	**-0.4**
	comp=Z,2.2nm,0.5s							
RONA					*e*Sg	**Sg**	**10 46 20.6**	**-2.6**
	comp=Z,8.6nm,0.4s							
MOA	**Molln**	**4.02**	**197**		*i* Pn	**Pn**	**10 45 17.4**	**-0.2**
	comp=Z,2.9nm,0.3s							
MOA					*e*Sg	**Sg**	**10 46 20.8**	**-2.9**
	comp=Z,8.5nm,0.5s							
LUNU	**Lund**	**4.24**	**340**		*i* P	**Pn**	**10 45 20.0**	**-0.6**
LUNU					*i* S	**Sn**	**10 46 10.3**	**-0.5**
BLEU	**Blekinge**	**4.62**	**358**		*e*P	**Pn**	**10 45 26.4**	**+0.5**
BLEU					*i* S	**Sn**	**10 46 19.2**	**-1.0**
BJUU	**Bjuv**	**4.74**	**339**		*i* P	**Pn**	**10 45 27.9**	**+0.4**
BJUU					*i* S	**Sn**	**10 46 22.4**	**-0.7**
KBA	**Koelnbreinsper**	**4.94**	**202**		*i* Pn	**Pn**	**10 45 30.8**	**+0.3**
	comp=Z,1.1nm,0.3s							
KBA					*e*Sg	**Sb**	**10 46 46.6**	**+4.2**
	comp=Z,2.3nm,0.5s							
DEL	**Delary**	**4.96**	**346**		*i* P	**Pn**	**10 45 30.5**	**+0.1**
DEL					*i* S	**Sn**	**10 46 26.6**	**-1.8**

*IDC **24** 10:56:41.6±1.1,33°.01N×86°.76E,h0km,mb3.7/7, mbtmp3.6/10,ML3.2/3,MS3.1/1, Error ellipse: s-maj=35.0km s-min=20.7km az=49.0*

ISC 24 10:56:46.8±0.9,33°.1N±0°.1×86°.8E±0°.2,h35km,n11, σ1ᵍ19/10,mb3.8/5,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.08**	**347**		Pn		**Pn**	**11 00 01.6**	**-2.1**
	0.1nm,0.3s,baz=146,slow=15,SNR=3.1								
	0.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**18.21**	**140**		P		**Pn**	**11 00 55.6**	**-1.3**
	0.1nm,0.3s,baz=320,slow=12,SNR=5.2								
	0.4nm,0.4s								
KURBB	**Kurchatov Arra**	**18.52**	**343**		P		**P**	**11 00 59.9**	**0.0**
	baz=155,slow=11,SNR=4.5								
	0.7nm,0.7s								
ZALV	**Zalesovo Beam**	**20.86**	**357**		P		**P**	**11 01 26.1**	**+0.7**
	0.7nm,0.3s,baz=184,slow=8.8,SNR=4.6								
	0.7nm,0.3s								
KSRS	**Korea Array**	**33.64**	**71**		P		**P**	**11 03 24.8**	**+0.8**
	1.5nm,0.8s,baz=272,slow=8.7,SNR=2.0								
	1.5nm,0.8s								
AKASG	**Malin Array Be**	**45.11**	**311**		LR		LR	11 28 10.4	
	comp=Z,21nm,18.8s,baz=186,slow=42								
HFS	**Hagfors**	**53.64**	**324**		P		**P**	**11 06 05.2**	**+0.7**
	2.6nm,0.8s,baz=84,slow=7.7,SNR=2.3								
	2.6nm,0.8s								
GERES	**GERESS Array B**	**55.30**	**310**		P		**P**	**11 06 18.1**	**+1.2**
	0.5nm,0.5s,baz=82,slow=7.3,SNR=6.4								
	0.5nm,0.5s								
WRA	**Warramunga Arr**	**69.59**	**132**		P		**P**	**11 07 52.3**	**-0.2**
	0.2nm,0.5s,baz=324,slow=6.6,SNR=5.4								
	0.2nm,0.5s								
ILAR	**Eielson Array**	**73.82**	**21**		P		**P**	**11 08 18.0**	**+0.6**
	0.5nm,1.0s,baz=307,slow=5.9,SNR=3.3								
	0.5nm,1.0s								
TORD	**Torodi Ar. Bea**	**78.91**	**278**		P		**P**	**11 08 46.5**	**-0.5**
	0.6nm,0.7s,baz=32,slow=4.7,SNR=3.5								
	0.6nm,0.7s								

*IDC **24** 11:07:19.8±0.8,57°.04S×24°.96W,h0km,mb4.1/6, mbtmp4.1/7,ML3.8/1,MS3.4/5,Error ellipse: s-maj=36.9km s-min=19.3km az=61.0*
*NEIC **24** 11:07:21.5±1.4,57°.0S±0°.1×24°.9W±0°.3,h10km±2km, mb4.5/13,Error ellipse: s-maj=31.1km s-min=8.5km az=49.0*

ISC 24 11:07:23.0±0.7,57°.0S±0°.1×24°.8W±0°.1,h22km,n36, σ0ᵍ92/26,mb4.3/9,MS3.3/5,3C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.13**	**288**		Pn		**Pn**	**11 09 08.4**	**+2.6**
VNA1	**Neumayer--Stat**	**15.43**	**159**	⇑	P		**Pn**	**11 10 58.1**	**-0.7**
	comp=Z,7.6nm,0.7s								
VNA2	**Neumayer--Watz**	**15.82**	**159**	⇑	P		**Pn**	**11 11 02.8**	**-1.2**
	comp=Z,5.8nm,0.6s,baz=321,slow=14								
SNAA	**Sanae**	**17.34**	**157**	⇑	P		**Pn**	**11 11 24.1**	**+0.9**
	comp=Z,122nm,1.1s								
SNAA	**Sanae**	**17.34**	**157**		P		**Pn**	**11 11 24.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=327,slow=15,SNR=6.0								
	comp=Z,4.7nm,0.9s								
SNAA	**Sanae**	**17.34**	**157**		P		**Pn**	**11 11 24.2**	**+0.9**
EFI	**East Falkland**	**19.95**	**271**		P		**P**	**11 11 52.9**	**-0.3**

PMSA	**Palmer Station**	**20.29**	**231**	LR	LR	11 18 32.0	
	comp=Z,110nm,19.1s,baz=30,slow=33						
BELA	**Belgrano 2**	**21.23**	**186**	P	**P**	**11 12 07.6**	**+0.7**
BELA				IAmb	IAmb	11 12 15.0	
	comp=Z,17nm,1.4s						
MG05	**Puerto Natales**	**27.82**	**260**	P	**P**	**11 13 09.1**	**-1.1**
QSPA	**South Pole Qui**	**33.24**	**180**	P	**P**	**11 13 58.1**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=28,slow=1.4,SNR=18						
	comp=Z,1.4nm,0.6s						
QSPA	**South Pole Qui**	**33.24**	**180**	P	**P**	**11 13 57.9**	**-0.3**
QSPA				IAmb	IAmb	11 14 06.8	
	comp=Z,7.5nm,1.4s						
PLCA	**Paso Flores**	**33.44**	**279**	LR	LR	11 27 20.0	
	comp=Z,50nm,18.2s,baz=143,slow=36						
CPUP	**Villa Florida**	**38.42**	**309**	P	**P**	**11 14 41.8**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=195,slow=6.9,SNR=3.6						
	comp=Z,1.0nm,0.6s						
CPUP	**Villa Florida**	**38.42**	**309**	P	**P**	**11 14 42.6**	**-0.1**
MAW	**Mawson**	**38.60**	**142**	P	**P**	**11 14 43.9**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=250,slow=8.7,SNR=7.1						
	comp=Z,0.8nm,0.5s						
MAW	**Mawson**	**38.60**	**142**	P	**P**	**11 14 44.2**	**+0.5**
SUR	**Sutherland**	**39.67**	**71**	LR	LR	11 27 31.8	
	comp=Z,87nm,18.4s,baz=212,slow=30						
AC05	**El Transito**	**42.40**	**292**	P	**P**	**11 15 14.4**	**-1.3**
AC05				IAmb	IAmb	11 15 31.4	
	comp=Z,16nm,1.4s						
BOSA	**Boshof**	**44.98**	**73**	LR	LR	11 30 58.5	
	comp=Z,50nm,19.4s,baz=204,slow=32						
PB07	**IPOC Station P**	**48.12**	**298**	P	**P**	**11 16 00.8**	**-0.4**
H10S2	**ASCENSION HYDR**	**48.59**	**13**	T	T	12 08 39.0	
	baz=198,slow=74,SNR=5.0						
H10S3	**ASCENSION HYDR**	**48.59**	**13**	T	T	12 08 39.6	
	baz=22,slow=74,SNR=4.7						
PTLB	**Pontes e Lacer**	**48.89**	**314**	P	**P**	**11 16 06.7**	**-0.3**
PTLB				IAmb	IAmb	11 16 10.2	
	comp=Z,3.3nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.70**	**14**	T	T	12 10 11.9	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.71**	**13**	T	T	12 10 10.2	
	baz=192						
H10N2	**ASCENSION HYDR**	**49.72**	**13**	T	T	12 10 11.9	
	baz=192						
PB16	**IPOC Station P**	**50.85**	**301**	P	**P**	**11 16 21.2**	**-1.4**
PB16				IAmb	IAmb	11 16 38.4	
	comp=Z,5.0nm,1.0s						
LPAZ	**La Paz**	**51.99**	**303**	P	**P**	**11 16 31.7**	**+0.5**
	comp=Z,7.7nm,0.6s,baz=157,slow=4.5,SNR=28						
	comp=Z,7.7nm,0.6s						
LPAZ	**La Paz**	**51.99**	**303**	P	**P**	**11 16 31.0**	**-0.1**
LPAZ				IAmb	IAmb	11 16 34.1	
	comp=Z,6.9nm,0.7s						
RPN	**Rapa Nui**	**64.76**	**259**	LR	LR	11 39 03.3	
	comp=Z,20nm,22.0s,baz=216,slow=29						
TORD	**Torodi Ar. Bea**	**73.28**	**27**	P	**P**	**11 18 53.3**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=199,slow=6.7,SNR=11						
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**97.67**	**160**	P	**P**	**11 20 55.4**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=186,slow=3.1,SNR=4.5						
	comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**101.38**	**160**	P	**Pdif**	**11 21 12.2**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=189,slow=4.1,SNR=1.3						
SONM	**Songino Array**	**149.49**	**86**	PKPbc	**PKPbc**	**11 27 09.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=205,slow=2.7,SNR=4.8						
ILAR	**Eielson Array**	**151.73**	**310**	PKPbc	**PKPbc**	**11 27 14.3**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=128,slow=1.7,SNR=8.1						

*SJA **24** 11:23:02.4±0.7,33°.91S×72°.14W,h25km±2km,ML3.4, MW3.8*
*GUC **24** 11:23:04.0±0.8,33°.92S×72°.11W,h33km±4km,ML3.4*

ISC 24 11:23:02.7±1.3,33°.92S±0°.02×72°.10W±0°.04,h11km±10km, n51,σ1ᵍ01/80,1C-10D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.48**	**57**	⇓	*i*	P	**Pn

MT13	**San Alfonso**	**1.52**	**84**	⇓*i*P		**Pb**	**11 23 30.3**	**-0.7**
MT13				*e*S		**Sb**	**11 23 50.8**	**+0.4**
MT13				IAML			11 23 55.7	
	comp=E,1μm,0.3s							
MT04	**Ro Olivares**	**1.72**	**73**	*e*P		**Pb**	**11 23 33.3**	**-1.1**
MT04				*e*S		**Sb**	**11 23 56.0**	**-0.1**
MT04				IAML			11 24 05.4	
	comp=Z,261nm,0.3s							
MT04	**Ro Olivares**	**1.72**	**73**	⇑*i*P		**Pn**	**11 23 33.1**	**+0.4**
MT04				*e*S		**Sb**	**11 23 55.6**	**-0.5**
MT04				IAML			11 24 00.8	
	comp=N,541nm,0.1s							
VA03	**San Esteban**	**1.74**	**49**	*e*P		**Pb**	**11 23 33.5**	**-1.1**
VA03				*e*S		**Sn**	**11 23 52.1**	**-3.0**
VA03				IAML			11 24 04.8	
	comp=Z,561nm,0.9s							
VA03	**San Esteban**	**1.74**	**49**	*e*P		**Pn**	**11 23 33.4**	**+0.5**
VA03				*e*S		**Sb**	**11 23 56.2**	**-0.3**
MT08	**Bocatoma Ro**	**1.80**	**75**	*e*P		**Pb**	**11 23 35.0**	**-0.9**
MT08				*e*S		**Sn**	**11 23 56.8**	**-0.1**
MT08				IAML			11 24 05.8	
	comp=Z,355nm,0.3s							
MT08	**Bocatoma Ro**	**1.80**	**75**	*e*P		**Pb**	**11 23 34.9**	**-1.0**
MT08				*e*S		**Sb**	**11 23 58.6**	**+0.1**
MT08				IAML			11 24 03.6	
	comp=N,260nm,0.3s							
ML02	**Panimavida**	**1.92**	**163**	*e*P		**Pn**	**11 23 36.0**	**+0.6**
ML02				IAML			11 24 18.7	
	comp=Z,470nm,0.7s							
ML02	**Panimavida**	**1.92**	**163**	*e*P		**Pn**	**11 23 36.1**	**+0.8**
ML02				IAML			11 24 08.2	
	comp=E,812nm,0.5s							
CO04	**Los Peladeros**	**2.10**	**27**	*e*P		**Pn**	**11 23 37.2**	**-0.8**
BI02	**San Fabin de**	**2.82**	**166**	*e*P		**Pn**	**11 23 49.1**	**+1.4**
BI02				IAML			11 24 33.6	
	comp=Z,122nm,0.7s							
AAGR	**Agrelo**	**2.86**	**74**	*e*P		**Pb**	**11 23 53.3**	**-0.5**
AAGR				IAML			11 24 45.1	
	comp=Z,71nm,0.5s							
ARCO	**CERRO ARCO**	**2.86**	**69**	*e*P		**Pn**	**11 23 48.5**	**+0.1**
ARCO				IAML			11 24 35.5	
	comp=Z,89nm,0.6s							
CO02	**Combarbal**	**2.87**	**19**	*e*P		**Pn**	**11 23 48.0**	**-0.4**
CO02				IAML			11 24 37.8	
	comp=Z,271nm,0.5s							
BI05	**Punta Hualpn**	**2.96**	**197**	*e*P		**Pn**	**11 23 49.3**	**-0.3**
BI05				IAML			11 24 44.8	
	comp=Z,70nm,0.8s							
RTLS	**Leoncito**	**3.17**	**49**	*e*P		**Pn**	**11 23 55.5**	**+2.7**
RTLS				IAML			11 24 47.1	
	comp=Z,325nm,0.5s							
CO03	**El Pedregal**	**3.30**	**22**	*e*P		**Pn**	**11 23 54.3**	**-0.1**
CO03				IAML			11 24 54.6	
	comp=Z,85nm,0.9s							
GO04	**Tololo Observa**	**3.90**	**17**	*e*P		**Pn**	**11 24 02.3**	**-0.5**
GO04				IAML			11 25 12.4	
	comp=Z,97nm,0.3s							
CFA	**Coronel Fontan**	**3.99**	**56**	*e*P		**Pn**	**11 24 06.7**	**+2.8**
CFA				*e*S		Sn	11 24 41.0	-10
CFA				IAML			11 25 15.6	
	comp=Z,30nm,0.8s							
ACCO	**Cerro Coronel**	**4.20**	**39**	*e*P		**Pn**	**11 24 10.0**	**+3.0**
ACCO				*e*S		**Sb**	**11 25 09.5**	**+1.7**
ACCO				IAML			11 25 21.6	
	comp=Z,43nm,0.5s							
CO01	**Juntas del Tor**	**4.29**	**24**	*e*P		**Pn**	**11 24 08.7**	**+0.5**
CO01				IAML			11 25 20.3	
	comp=Z,32nm,0.8s							
AROD	**Rodeo**	**4.36**	**32**	*e*P		**Pn**	**11 24 11.2**	**+2.1**
AROD				*e*S		**Sb**	**11 25 14.4**	**+2.2**
ACAN	**Cantantal**	**4.44**	**70**	*e*P		**Pn**	**11 24 12.5**	**+2.5**
ACAN				IAML			11 25 27.1	
	comp=Z,147nm,0.7s							
ACDV	**Cuesta del Vie**	**4.52**	**35**	*e*P		**Pn**	**11 24 13.6**	**+2.4**
ACDV				IAML			11 25 26.8	
	comp=Z,29nm,0.7s							

*AUST **24** 11:26:00.8±0.3, 18°S±3°×12°0E±°, h10km, ML3.3/8, Error ellipse: s-maj=7.1km s-min=3.8km az=139.9*
*IDC **24** 11:26:02.9±1.8, 18°70S×120°47E, h0km, mb3.4/2, mbtmp3.7/6, ML3.4/4, MS3.1/2, Error ellipse: s-maj=37.6km s-min=23.9km az=11.0*
ISC 24 11:26:00.9±0.9, 18°22S±0°06×120°33E±0°05, h10km, n40, σ2s34/48, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAAN	**Eighty Mile Be**	**1.53**	**133**	P		**Pg**	**11 26 32.9**	**+2.6**
CAAN				S		**Sg**	**11 26 54.2**	**+4.1**
AUBRM	**Broome Senior**	**1.82**	**82**	P		**Pg**	**11 26 37.2**	**+1.2**
AUBRM				S		**Sg**	**11 27 01.1**	**+1.4**
MBWA	**Marble Bar**	**2.98**	**191**	P		**Pn**	**11 26 51.1**	**+2.8**
MBWA				S		**Sn**	**11 27 26.8**	**+2.6**
FITZ	**Fitzroy Crossi**	**5.05**	**89**	P		**Pn**	**11 27 18.6**	**+1.9**
	comp=Z,5.6nm,1.0s,comp=Z,0.0nm							
FITZ				S		**Sn**	**11 28 13.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**5.05**	**89**	Pn		**Pn**	**11 27 18.6**	**+1.9**
	comp=Z,1.6nm,0.3s,baz=261,slow=14,SNR=130							
FITZ				Sn		**Sn**	**11 28 13.3**	**-1.8**
	comp=Z,4.3nm,0.3s,baz=327,slow=22,SNR=7.9							
FITZ				Lg		Lg	11 28 40.1	
	comp=Z,4.5nm,0.3s,baz=244,slow=17,SNR=1.8							
	comp=Z,3.5nm,0.3s							
GIRL	**Giralia**	**7.22**	**231**	P		**Pn**	**11 27 48.9**	**+2.3**
GIRL				S		**Sn**	**11 29 07.2**	**-1.4**
KNRA	**Kununurra**	**8.45**	**74**	P		**Pn**	**11 28 05.3**	**+1.8**
	comp=Z,7.9nm,0.4s,comp=Z,0.1nm							
KNRA				S		**Sn**	**11 29 40.0**	**+1.0**
CVQOZ	**Cooralya Stati**	**8.51**	**222**	S		**Sn**	**11 29 35.8**	**-4.5**
MEEK	**Meekatharra**	**8.53**	**190**	P		**Pn**	**11 28 06.9**	**+2.3**
	comp=Z,21nm,2.1s,comp=Z,0.1nm							
MEEK				S		**Sn**	**11 29 38.3**	**-2.7**
PLAI	**Plampang**	**9.66**	**345**	P		**Pn**	**11 28 19.7**	**-0.3**
	comp=Z,38nm,1.6s,comp=Z,0.1nm							
PLAI				S		Sn	11 29 59.3	-9.3
WRKA	**Warakurna**	**10.04**	**134**	P		**Pn**	**11 28 26.0**	**+0.7**
	comp=Z,5.4nm,1.9s,comp=Z,0.0nm							
WRKA				S		**Sn**	**11 30 12.4**	**-5.8**
MORW	**Morawa**	**11.49**	**199**	P		**Pn**	**11 28 45.1**	**0.0**
	comp=Z,12nm,2.5s							
MORW				S		Sn	11 30 44.5	-9.2
MTN	**Manton Dam**	**11.70**	**64**	P		**Pn**	**11 28 48.3**	**+0.3**
MTN				S		Sn	11 30 50.4	-8.3
DRS	**Darwin Rock St**	**11.70**	**62**	P		**Pn**	**11 28 49.7**	**+1.7**
	comp=Z,13nm,1.1s							
DRS				S		Sn	11 30 49.4	-9.4
BCON	**Beacon, Wester**	**12.29**	**190**	P		**Pn**	**11 28 57.0**	**+0.9**
	comp=Z,23nm,1.2s							
BCON				S		Sn	11 31 03.7	-9.5
WATNG	**Wattoning, WA**	**12.61**	**188**	P		**Pn**	**11 29 01.0**	**+0.5**
	comp=Z,25nm,2.6s							
BLDU	**Ballidu**	**12.78**	**194**	P		**Pn**	**11 29 02.8**	**+0.1**
	comp=Z,8.8nm,0.7s							
BLDU				S		Sn	11 31 14.4	-11
KORDA	**Koorda, Wester**	**12.87**	**191**	P		**Pn**	**11 29 04.6**	**+0.7**
	comp=Z,23nm,2.2s							
KORDA				S		Sn	11 31 16.5	-11
KDU	**Kakadu**	**12.93**	**67**	P		**Pn**	**11 29 06.3**	**+1.5**
	comp=Z,3.8nm,2.5s							
KMBL	**Kambalda**	**13.17**	**174**	P		**Pn**	**11 29 08.2**	**+0.1**
	comp=Z,4.4nm,0.9s							
WRA	**Warramunga Arr**	**13.35**	**100**	Pn		**Pn**	**11 29 11.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=272,slow=14,SNR=32							
WRA				Sn		Sn	11 31 30.9	-8.4
	comp=Z,0.9nm,0.3s,baz=277,slow=25,SNR=7.7							
	comp=Z,0.4nm,0.3s							
WRAB	**Tennant Creek**	**13.36**	**100**	P		**Pn**	**11 29 11.9**	**+1.2**
	comp=Z,3.8nm,0.5s							
WB2	**Warramunga Arr**	**13.36**	**100**	P		**Pn**	**11 29 11.3**	**+0.6**
	comp=Z,11nm,1.4s							
KLBR	**Kellerberrin**	**13.52**	**189**	P		**Pn**	**11 29 13.5**	**+0.6**
	comp=Z,21nm,1.1s							
AS15	**Alice Springs**	**13.78**	**115**	P		**Pn**	**11 29 18.6**	**+2.1**
	comp=Z,4.7nm,1.1s							
AS31	**Alice Springs**	**13.79**	**115**	P		**Pn**	**11 29 18.3**	**+1.7**
	comp=Z,1.7nm,0.6s							
ASAR	**Alice Springs**	**13.79**	**115**	Pn		**Pn**	**11 29 16.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=292,slow=12,SNR=13							
ASAR				Sn		**Sn**	**11 31 41.9**	**-8.0**
	comp=Z,0.7nm,0.3s,baz=279,slow=23,SNR=12							
	comp=Z,0.3nm,0.4s							
AS09	**Alice Springs**	**13.83**	**116**	P		**Pn**	**11 29 18.1**	**+1.0**
	comp=Z,5.4nm,0.8s							
MUN	**Mundaring**	**14.20**	**194**	P		**Pn**	**11 29 21.9**	**-0.3**
	comp=Z,24nm,2.2s							
MUN				S		Sn	11 31 49.2	-11
FORT	**Forrest**	**14.34**	**152**	P		**Pn**	**11 29 24.3**	**+0.2**
	comp=Z,13nm,0.9s							
FORT				S		**Sn**	**11 31 58.6**	**-4.7**
NWAO	**Narrogin (SRO)**	**14.91**	**190**	P		**Pn**	**11 29 31.1**	**-0.8**
NWAO				S		Sn	11 32 05.0	-12
NWAO	**Narrogin (SRO)**	**14.91**	**190**	Pn		**Pn**	**11 29 29.6**	**-2.2**
	comp=Z,1.7nm,0.3s,baz=18,slow=16,SNR=33							
NWAO				Sn		Sn	11 32 00.1	-17
	comp=Z,1.9nm,0.3s,baz=13,slow=6.1,SNR=6.8							
	comp=Z,3.5nm,0.3s							
ONGER	**Ongerup, WA**	**15.68**	**186**	P		**Pn**	**11 29 41.4**	**-0.6**
	comp=Z,32nm,2.6s							
ONGER				S		Sn	11 32 22.5	-13
RKGY	**Rocky Gully**	**16.60**	**190**	P		**Pn**	**11 29 53.8**	**0.0**
OOD	**Oodnadatta**	**17.04**	**127**	P		**Pn**	**11 29 59.1**	**-0.3**
MULG	**Mulgathing**	**17.33**	**136**	P		**Pn**	**11 30 03.9**	**+0.9**
STKA	**Stephens Creek**	**23.52**	**129**	P		**P**	**11 31 10.1**	**-1.2**
	comp=Z,21nm,1.0s,baz=309,slow=14,SNR=1.5							
	comp=Z,2.1nm,1.0s							
CTA	**Charters Tower**	**24.55**	**99**	LR		LR	11 41 46.2	
	comp=Z,57nm,20.9s,baz=235,slow=39							
DAV	**Davao City (W)**	**25.65**	**12**	LR		LR	11 44 01.0	
	comp=Z,30nm,18.9s,baz=24,slow=41							
MKAR	**Makanchi Array**	**73.23**	**334**	P		P	11 37 38.7	+6.6
	comp=Z,0.2nm,0.6s,baz=156,slow=7.3,SNR=1.9							
	comp=Z,0.2nm,0.6s							

*IDC **24** 11:40:36.8±1.6, 21°63N×143°20E, h283km±14km, mb3.7/25, mbtmp4.4/28, Error ellipse: s-maj=13.5km s-min=9.0km az=90.0*
*NEIC **24** 11:40:38.5±1.4, 21°63N±0°10×143°2E±0°1, h297km±8km, mb4.2/29, Error ellipse: s-maj=15.1km s-min=12.8km az=225.0*
*JMA **24** 11:40:42.0±0.4, 22°N±2°×14°3E±°, h302km, MV4.6/12, MARIANA ISLANDS REGION*
ISC 24 11:40:39.6±0.5, 21°68N±0°06×143°1E±0°1, h311km, n138, σ1§18/147, mb4.1/33, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**5.00**	**350**	*e*P		**Pn**	**11 41 57.5**	**0.0**
JHH2				*e*S		**S**	**11 42 57.4**	**-2.8**
CBIJ	**Chichi jima**	**5.46**	**351**	P		**Pn**	**11 42 02.4**	**-0.4**
CBIJ				*e*S		**S**	**11 43 06.6**	**-3.2**
JCJ	**Chichijima**	**5.46**	**351**	P		**Pn**	**11 42 01.1**	**-1.6**
	58nm,0.3s,baz=75,slow=23,SNR=19							
JCJ				S		**S**	**11 43 05.3**	**-4.4**
	144nm,0.4s,baz=284,slow=23,SNR=9.9							
JCJ	**Chichijima**	**5.46**	**351**			**Pn**	**11 42 01.7**	**-1.0**
JHJ2	**Mitsune**	**11.76**	**346**	P		**Pn**	**11 43 19.6**	**+0.7**
JHJ	**Hachijo jima 2**	**11.77**	**346**	P		**Pn**	**11 43 17.0**	**-2.0**
	16nm,0.3s,baz=233,slow=23,SNR=11							
JHJ				S		**S**	**11 45 27.7**	**-2.5**
	56nm,0.9s,baz=54,slow=20,SNR=1.7							
JMKN	**Mikurajimanish**	**12.56**	**346**	*e*P		**P**	**11 43 29.5**	**+0.5**
BSO1	**Boso 1**	**13.06**	**352**	*e*P		**P**	**11 43 34.5**	**+0.5**
JTNC	**Tanabenakahech**	**13.79**	**333**	*e*P		**Pn**	**11 43 45.8**	**+2.6**
JIE	**Ise**	**13.86**	**337**	*e*P		**Pn**	**11 43 46.0**	**+1.9**
JOD2	**Odawara 2**	**13.98**	**346**	P		**Pn**	**11 43 46.5**	**+0.9**
JOD2				*e*S		**S**	**11 46 17.4**	**-1.3**
INU	**Inuyama**	**14.63**	**340**	P		**P**	**11 43 51.4**	**-0.5**
JRY	**Ryogami san**	**14.75**	**346**	P		**Pn**	**11 43 54.5**	**-0.1**
JGF	**Kuroka**	**14.76**	**341**			**Pn**	**11 43 54.8**	**0.0**
MJAR	**Matsushiro Arr**	**15.41**	**345**	P		**P**	**11 43 59.4**	**-1.1**
	3.2nm,0.6s,baz=155,slow=8.0,SNR=6.4							
MJAR	**Matsushiro Arr**	**15.41**	**345**	P		**P**	**11 44 00.8**	**+0.3**
MAJO	**Matsushiro**	**15.41**	**345**			**P**	**11 44 00.4**	**-0.2**
MAJO				IAmb		IAmb	11 44 08.2	
	comp=Z,11nm,1.1s							
MJB9	**Matsu-Tunnel**	**15.42**	**345**			**P**	**11 44 01.3**	**+0.7**
MJB9				IAmb		IAmb	11 44 09.2	
	comp=Z,10nm,1.1s							
KSRS	**Korea Array**	**20.49**	**323**	P		**P**	**11 44 54.8**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=153,slow=8.3,SNR=6.8							
	comp=Z,1.9nm,0.7s							
MYLDM	**Lahad Datu**	**28.94**	**239**	P		**P**	**11 46 11.3**	**+0.3**
PETK	**Petropavlovsk-**	**33.31**	**16**	P		**P**	**11 46 50.0**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=202,slow=6.1,SNR=20							
PETK				PcP		**PcP**	**11 49 22.0**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=212,slow=2.7,SNR=3.2							
	comp=Z,2.1nm,0.6s							
PETK	**Petropavlovsk-**	**33.31**	**16**	P		**P**	**11 46 50.2**	**+1.6**
SONM	**Songino Array**	**39.31**	**321**	P		**P**	**11 47 40.4**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=118,slow=5.6,SNR=3.8							
	comp=Z,1.0nm,0.7s							
KNRA	**Kununurra**	**39.70**	**202**	P		**P**	**11 47 41.7**	**-0.9**
KNRA				IAmb		IAmb	11 47 42.5	
	comp=Z,8.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**41.51**	**274**	P		**P**	**11 47 58.6**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=85,slow=5.2,SNR=4.3							
	comp=Z,0.5nm,0.4s							
CMAR	**Chiang Mai Arr**	**41.51**	**274**	P		**P**	**11 47 57.9**	**+0.5**
CTAO	**Charters Tower**	**41.63**	**176**	P		**P**	**11 47 57.9**	**-0.4**
CTAO				IAmb		IAmb	11 48 08.1	
	comp=Z,22nm,1.4s							
WR8	**Warramunga Arr**	**42.23**	**192**	P		**P**	**11 48 02.2**	**-0.9**
WR8				IAmb		IAmb	11 48 03.0	
	comp=Z,9.4nm,1.1s							
WRAB	**Tennant Creek**	**42.24**	**192**	P		**P**	**11 48 02.2**	**-1.0**
WRAB				IAmb		IAmb	11 48 03.0	
	comp=Z,10nm,0.8s							
WRA	**Warramunga Arr**	**42.25**	**192**	P		**P**	**11 48 02.4**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=17,slow=9.1,SNR=166							
WRA				PcP		**PcP**	**11 49 51.0**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=18,slow=3.8,SNR=3.0							
	comp=Z,8.3nm,0.7s							
WRA	**Warramunga Arr**	**42.25**	**192**	P		**P**	**11 48 01.7**	**-1.5**
FITZ	**Fitzroy Crossi**	**43.08**	**205**	P		**P**	**11 48 09.3**	**-0.6**
AS31	**Alice Springs**	**45.95**	**192**			**P**	**11 48 31.8**	**-0.7**
ASAR	**Alice Springs**	**45.96**	**192**	P		**P**	**11 48 31.2**	**-1.2**
	comp=Z,1.6nm,0.4s,baz=13,slow=6.6,SNR=52							
ASAR				PcP		**PcP**	**11 50 03.7**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=15,slow=3.3,SNR=4.9							
	comp=Z,1.6nm,0.4s							
LVA	**Lava Point**	**50.03**	**37**	P		**P**	**11 49 03.0**	**0.0**
STKA	**Stephens Creek**	**53.27**	**182**	P		**P**	**11 49 26.0**	**-1.1**
	comp=Z,6.5nm,0.6s,baz=355,slow=7.1,SNR=9.3							
	comp=Z,6.5nm,0.6s							
FORT	**Forrest**	**54.13**	**196**	P		**P**	**11 49 31.9**	**-1.3**
ZAA0	**Zalesovo Array**	**54.18**	**322**			**P**	**11 49 34.2**	**+0.9**
ZALV	**Zalesovo Beam**	**54.18**	**322**	P		**P**	**11 49 33.9**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=96,slow=6.6,SNR=13							
ZALV				PcP		**PcP**	**11 50 33.2**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=138,slow=5.1,SNR=7.8							
	comp=Z,2.3nm,0.5s							
ZALV	**Zalesovo Beam**	**54.18**	**322**			**P**	**11 49 33.7**	**+0.3**
N14K	**Kuskokwak Cree**	**54.22**	**31**	P		**P**	**11 49 34.8**	**+1.3**
L14K	**Kuka Creek**	**54.27**	**29**	P		**P**	**11 49 34.5**	**+0.7**
L14K				IAmb		IAmb	11 50 10.9	
	comp=Z,19nm,1.5s							
M14K	**Bethel**	**54.38**	**30**	P		**P**	**11 49 35.7**	**+1.1**
M14K	**Bethel**	**54.38**	**30**	P		**P**	**11 49 36.2**	**+1.6**
	baz=249							
MK31	**Makanchi Array**	**54.66**	**313**	P		**P**	**11 49 37.5**	**+0.5**
MKAR	**Makanchi Array**	**54.66**	**313**	P		**P**	**11 49 38.1**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=91,slow=9.2,SNR=11							
MKAR				PcP		**PcP**	**11 50 35.8**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=78,slow=4.1,SNR=9.9							
	comp=Z,1.0nm,0.5s							
MAKZ	**Makanchi**	**54.88**	**313**	P		**P**	**11 49 39.8**	**+1.3**
O15K	**Ungalikthiuk R**	**54.88**	**32**	P		**P**	**11 49 38.7**	**+0.4**
O15K				IAmb		IAmb	11 49 43.4	
	comp=Z,12nm,1.1s							
O15K	**Ungalikthiuk R**	**54.88**	**32**	P		**P**	**11 49 39.4**	**+1.1**
	baz=252							
N15K	**Kwethluk River**	**55.06**	**31**	P		**P**	**11 49 40.5**	**+0.9**
N15K	**Kwethluk River**	**55.06**	**31**	P		**P**	**11 49 41.0**	**+1.4**
	baz=252							
K15K	**Wolf Creek Mou**	**55.12**	**28**	P		**P**	**11 49 41.3**	**+1.4**
	baz=249							
N16K	**Nishlik Lake**	**55.78**	**31**	P		**P**	**11 49 46.1**	**+1.5**
	baz=253							
O16K	**Kokwok River B**	**55.85**	**32**	P		**P**	**11 49 46.1**	**+1.0**
	baz=254							
J16K	**Anvik River**	**55.88**	**27**	P		**P**	**11 49 46.7**	**+1.4**
J16K				IAmb		IAmb	11 49 51.7	
	comp=Z,11nm,1.4s							
N18K	**Kilae Creek**	**57.20**	**31**	P		**P**	**11 49 55.9**	**+1.3**
	baz=255							
O18K	**Koktuh Hills**	**57.33**	**32**	P		**P**	**11 49 56.9**	**+1.3**
	baz=256							
KURK	**Kurchatov**	**57.44**	**317**			**P**	**11 49 57.3**	**+0.9**
KURK				IAmb		IAmb	11 49 57.8	
	comp=Z,3.5nm,0.4s							
KURBB	**Kurchatov Arra**	**57.49**	**317**	P		**P**	**11 49 57.5**	**+0.8**
	comp=Z,4.3nm,0.6s,baz=93,slow=7.5,SNR=50							
KURBB				PcP		**PcP**	**11 50 46.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=97,slow=4.4,SNR=2.7							
	comp=Z,4.3nm,0.6s							
J19K	**Poorman**	**58.21**	**27**	P		**P**	**11 50 02.6**	**+1.1**
	baz=254							
KDAK	**Kodiak Island**	**58.25**	**35**	P		**P**	**11 50 01.9**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=241,slow=6.1,SNR=2.9							
	comp=Z,2.4nm,0.5s							
KDAK	**Kodiak Island**	**58.25**	**35**	IAmb		IAmb	11 50 33.7	
	comp=Z,13nm,1.3s							
H19K	**Roundabout Mou**	**58.33**	**25**	P		**P**	**11 50 03.8**	**+1.5**
	baz=252							
K20K	**Telida**	**58.71**	**28**	P		**P**	**11 50 06.4**	**+1.5**
	baz=255							
J20K	**Nowinta River**	**58.88**	**27**	P		**P**	**11 50 07.7**	**+1.6**
	baz=255							
SKT	**Skwentna**	**59.54**	**30**	P		**P**	**11 50 10.8**	**+0.1**
	baz=259							
CAST	**Castle Rocks**	**59.59**	**28**	P		**P**	**11 50 11.8**	**+0.8**
	baz=257							
H21K	**Melozitna Rive**	**59.82**	**26**	P		**P**	**11 50 13.8**	**+1.3**
	baz=255							
L22K	**Petersville**	**60.00**	**29**	P		**P**	**11 50 13.7**	**0.0**
	baz=259							
I21K	**Tanana**	**60.03**	**26**	P		**P**	**11 50 15.5**	**+1.6**
	baz=256							
MLY	**Manley**	**60.52**	**26**	P		**P**	**11 50 18.4**	**+1.2**
	baz=258							
F22K	**John River**	**60.53**	**24**	P		**P**	**11 50 19.0**	**+1.8**
	baz=255							
PWL	**Port Wells**	**60.87**	**31**	P		**P**	**11 50 19.9**	**+0.2**
	baz=262							
I23K	**Minto, Yukon-K**	**61.11**	**26**	P		**P**	**11 50 22.3**	**+1.2**
	baz=259							
NEA2	**Nenana**	**61.13**	**27**	P		**P**	**11 50 21.7**	**+0.4**
	baz=260							
E23K	**Chandalar**	**61.61**	**23**	P		**P**	**11 50 26.1**	**+1.6**
	baz=257							
C23K	**Itkillik River**	**61.69**	**21**	P		**P**	**11 50 26.4**	**+1.5**
	baz=255							
TOLK	**Toolik Lake Re**	**61.76**	**23**	P		**P**	**11 50 26.9**	**+1.5**
	baz=257							
H24K	**Noodor Dome**	**61.84**	**26**	P		**P**	**11 50 27.2**	**+1.2**
	baz=260							
E24K	**Your Creek**	**62.03**	**23**	P		**P**	**11 50 28.8**	**+1.5**
	baz=258							
IL31		**62.08**	**27**	P		**P**	**11 50 26.9**	**-0.6**
IL31				IAmb		IAmb	11 50 27.6	
	comp=Z,2.7nm,0.7s							
ILAR	**Eielson Array**	**62.08**	**27**	P		**P**	**11 50 26.7**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=258,slow=5.4,SNR=20							
	comp=Z,2.3nm,0.6s							
ILAR	**Eielson Array**	**62.08**	**27**	P		**P**	**11 50 26.9**	**-0.7**
KLU	**Klutina**	**62.11**	**31**	P		**P**	**11 50 28.8**	**+0.9**
	baz=264							
BVAR	**Borovoye Array**	**62.64**	**320**	P		**P**	**11 50 32.5**	**+1.0**
	comp=Z,6.5nm,0.4s,baz=94,slow=7.7,SNR=25							
	comp=Z,6.5nm,0.4s							
RIDG	**Independent Ri**	**62.84**	**28**	P		**P**	**11 50 32.8**	**+0.2**
	baz=264							
F25K	**Christian Rive**	**63.01**	**24**	P		**P**	**11 50 35.5**	**+1.8**
	baz=261							
D25K	**Kavik River**	**63.03**	**22**	P		**P**	**11 50 35.2**	**+1.5**
	baz=260							
E25K	**Arctic Village**	**63.12**	**23**	P		**P**	**11 50 36.1**	**+1.7**
	baz=261							
F26K	**Sheenjek River**	**63.59**	**24**	P		**P**	**11 50 39.3**	**+1.9**
	baz=263							
G26K	**Porcupine Rive**	**63.64**	**25**	P		**P**	**11 50 39.3**	**+1.6**
	baz=263							
C27K	**Jago River**	**64.00**	**22**	P		**P**	**11 50 41.5**	**+1.5**
	baz=262							
H27K	**Steamboat Moun**	**64.47**	**26**	P		**P**	**11 50 44.7**	**+1.5**
	baz=266							
I28M	**Miner Creek**	**65.08**	**27**	P		**P**	**11 50 47.9**	**+0.8**
	baz=268							
F28M	**Old Crow**	**65.21**	**24**	P		**P**	**11 50

comp=Z,4.6nm,0.5s,baz=312,slow=1.8,SNR=17

*IDC **24** 11:41:30.4±0.6,54.6′60N×160.7′94W,h0km,mb4.1/24, mbtmp4.1/28,ML4.1/4,MS3.4/38,Error ellipse: s-maj=16.9km s-min=12.3km az=166.0*
*NEIC **24** 11:41:36.7±2.5,54.6′63N±0.04×160.7′74W±0.05,h35km±2km, mb4.4/132,ML4.4/34,ML4.2(AEIC),Error ellipse: s-maj=7.5km s-min=4.5km az=7.0*
*AEIC **24** 11:41:36.2±4.8,54.6′68N±0.04×160.8′2W±0.03,h4km±4km, Error ellipse: s-maj=6.3km s-min=2.5km az=175.0*

ISC 24 11:41:36.4±0.5,54.6′61N±0.08×160.7′2W±0.03,h39km±5km, n252,σ1ᵎ98/178,mb4.4/81,MS3.4/32,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.69**	**72**		**Pn**		**11 41 47.7**	**-2.0**
CNBA					**Sn**		**11 41 59.3**	**+0.1**
CNBA				IAML			11 42 00.8	
	comp=E,9μm,0.4s							
SDPT	**Sand Point**	**0.76**	**11**		**Pn**		**11 41 49.5**	**-1.1**
SDPT					**Sn**		**11 41 59.6**	**-1.2**
SDPT				IAML			11 42 00.3	
	comp=N,14μm,0.8s							
SDPT				IAML			11 42 05.6	
	comp=E,20μm,0.8s							
DOL	**Dolgoi Island**	**0.85**	**310**		**Pn**		**11 41 50.8**	**-1.1**
DOL					**Sn**		**11 42 02.3**	**-0.9**
PVV	**Pavlof Volcano**	**0.98**	**322**		**Pn**		**11 41 53.1**	**-0.6**
HAG	**Hague Volcano**	**0.98**	**317**		**Pn**		**11 41 53.3**	**-0.5**
PS4A	**Pavlof South-4**	**0.99**	**319**		**Pn**		**11 41 53.1**	**-0.6**
PS4A					**Sn**		**11 42 06.1**	**-0.4**
PS1A	**Pavlof South-1**	**1.00**	**325**		**Pn**		**11 41 53.2**	**-0.8**
PS1A					**Sn**		**11 42 06.5**	**-0.4**
DT1	**Dutton Round H**	**1.03**	**300**		**Pn**		**11 41 53.4**	**-0.9**
DT1					**Sn**		**11 42 06.9**	**-0.7**
DTNA	**Dutton South F**	**1.04**	**302**		**Pn**		**11 41 53.7**	**-0.8**
DTNA					**Sn**		**11 42 07.5**	**-0.2**
PN7A	**Pavlof North-7**	**1.11**	**319**		**Pn**		**11 41 55.2**	**-0.2**
PN7A					**Sn**		**11 42 09.6**	**+0.1**
VNSS	**Veniaminof 8**	**1.78**	**23**		**Pn**		**11 42 05.7**	**+1.0**
ISNN	**Isanotski Nort**	**1.79**	**278**		**Pn**		**11 42 05.5**	**+0.8**
VNFG	**Fog Glacier, M**	**1.81**	**21**		**Pn**		**11 42 06.2**	**+1.1**
VNFG	**Fog Glacier, M**	**1.81**	**21**	Pn	**Pn**		**11 42 06.0**	**+0.9**
VNFG				Sn	**Sn**		**11 42 29.2**	**+2.4**
VNFG				IAML			11 42 46.8	
	comp=E,9μm,0.6s							
VNFG				IAML			11 42 47.3	
	comp=N,9μm,0.6s							
SSLS	**Shishaldin Sou**	**1.91**	**274**		**Pn**		**11 42 07.3**	**+0.8**
SSLN	**Shishaldin Nor**	**1.91**	**277**		**Pn**		**11 42 06.7**	**+0.2**
CHGN	**Chignik**	**2.15**	**37**		**Sn**		**11 42 37.8**	**+2.9**
CHGN	**Chignik**	**2.15**	**37**	Pn	**Pn**		**11 42 10.3**	**+0.7**
CHGN				IAML			11 42 42.5	
	comp=N,5μm,0.4s							
ANPB	**Aniakchak Plen**	**2.60**	**31**		**Pn**		**11 42 16.6**	**+0.8**
AKUT	**Akutan**	**2.99**	**263**		**Pn**		**11 42 23.1**	**+1.9**
AKBBA	**Akutan Broad B**	**3.09**	**263**		**Pn**		**11 42 23.8**	**+1.2**
AKLV	**Akutan Long Va**	**3.09**	**264**		**Pn**		**11 42 23.7**	**+1.1**
ZRO	**Akutan Zero**	**3.12**	**263**		**Pn**		**11 42 23.9**	**+0.9**
LVA	**Lava Point**	**3.14**	**264**		**Pn**		**11 42 25.1**	**+1.8**
LVA				IAML			11 43 26.6	
	comp=N,703nm,0.9s							
CHIR	**Chirikof Islan**	**3.16**	**65**		**Pn**		**11 42 23.4**	**-0.2**
CHIR	**Chirikof Islan**	**3.16**	**65**	IAML			11 43 19.4	
	comp=N,1μm,1.1s							
CHIR				IAML			11 43 19.7	
	comp=E,2μm,0.8s							
UNV	**Unalaska Valle**	**3.48**	**260**	Pn	**Pn**		**11 42 27.2**	**-0.7**
MNAT	**Makushin Natee**	**3.57**	**261**		**Pn**		**11 42 30.1**	**+0.9**
MGOD	**Makushin Gods**	**3.70**	**260**		**Pn**		**11 42 31.7**	**+0.6**
PLBL	**Peulik Blue Cr**	**3.79**	**34**		**Pn**		**11 42 33.2**	**+1.0**
R17L	**Mt. Peulik Vol**	**3.89**	**37**		**Pn**		**11 42 34.8**	**+1.2**
PLK1	**Peulik 1**	**3.94**	**34**		**Pn**		**11 42 35.0**	**+0.8**
PLK5	**Peulik 5**	**4.02**	**31**		**Pn**		**11 42 36.6**	**+1.3**
SII	**Sitkinak Islan**	**4.19**	**60**		**Pn**		**11 42 37.8**	**0.0**
O15K	**Ungalikthiuk R**	**4.61**	**6**		**Pn**		**11 42 43.9**	**+0.4**
O15K				IAML			11 44 13.6	
	comp=N,193nm,0.9s							
O15K				IAML			11 44 15.9	
	comp=E,259nm,0.8s							
Q16K	**King Salmon**	**4.66**	**27**		**Pn**		**11 42 45.3**	**+1.2**
O14K	**Tigyukauivet M**	**4.67**	**357**	Pn	**Pn**		**11 42 44.8**	**+0.6**
O14K				IAML			11 44 11.0	
	comp=N,232nm,0.7s							
O14K				IAML			11 44 17.0	
	comp=E,210nm,1.1s							
P16K	**Nushagak River**	**4.68**	**18**		**Pn**		**11 42 45.7**	**+1.3**
P16K				IAML			11 44 14.9	
	comp=N,674nm,1.0s							
P16K				IAML			11 44 25.7	
	comp=E,686nm,0.9s							
ACHA	**Angle Creek He**	**4.69**	**37**		**Pn**		**11 42 45.9**	**+1.2**
KABU	**Katmai Buttres**	**4.75**	**37**		**Pn**		**11 42 46.7**	**+1.2**
KAKN	**Katmai Knife C**	**4.85**	**38**		**Pn**		**11 42 48.3**	**+1.5**
OHAK	**Old Harbor**	**4.93**	**55**		**Pn**		**11 42 47.1**	**-0.8**
OHAK				IAML			11 44 09.9	
	comp=N,380nm,0.9s							
OHAK				IAML			11 44 13.7	
	comp=E,226nm,1.0s							
KARR	**Katmai Rainbow**	**5.13**	**38**		**Pn**		**11 42 51.7**	**+1.2**
Q18K	**Katmai Hardscr**	**5.13**	**36**		**Pn**		**11 42 51.7**	**+1.0**
P17K	**Kvichak River**	**5.16**	**25**		**Pn**		**11 42 52.1**	**+1.1**
KAHG	**Katmai Hook Gl**	**5.18**	**39**		**Pn**		**11 42 52.3**	**+1.0**
O16K	**Kokwok River B**	**5.20**	**15**		**Pn**		**11 42 52.5**	**+1.0**
O16K	**Kokwok River B**	**5.20**	**15**	IAML			11 44 34.9	
	comp=N,132nm,0.8s							
O16K				IAML			11 44 41.3	
	comp=E,159nm,0.8s							
N14K	**Kuskokwak Cree**	**5.36**	**355**	IAML			11 44 42.9	
	comp=E,399nm,1.3s							
O17K	**Koliganek Bris**	**5.54**	**19**		**Pn**		**11 42 57.0**	**+0.8**
KDAK	**Kodiak Island**	**5.55**	**52**	Pn	**Pn**		**11 42 55.4**	**-0.9**
	comp=E,4.0nm,0.3s,baz=213,slow=5.7,SNR=111							
KDAK					**Sn**		**11 43 54.9**	**-3.8**
	comp=E,7.9nm,0.3s,baz=180,slow=20,SNR=12							
KDAK				LR	LR		11 45 24.4	
	comp=E,457nm,19.6s,baz=228,slow=41 comp=E,17nm,0.4s							
KDAK	**Kodiak Island**	**5.55**	**52**		**Pn**		**11 42 55.7**	**-0.6**
N15K	**Kwethluk River**	**5.59**	**3**	Pn	**Pn**		**11 42 57.7**	**+0.8**
P18K	**Big Mountain,**	**5.66**	**30**		**Pn**		**11 42 58.9**	**+1.1**
SPIA	**Saint Paul Isl**	**5.95**	**300**	Pn	**Pn**		**11 43 04.2**	**+2.5**
M13K	**Dall Lake**	**5.99**	**347**		**Pn**		**11 43 03.5**	**+1.1**
O18K	**Koktuh Hills**	**6.05**	**27**		**Pn**		**11 43 04.7**	**+1.4**
M14K	**Bethel**	**6.20**	**354**		**Pn**		**11 43 06.3**	**+1.1**
N17K	**Nushagak Hills**	**6.23**	**16**		**Pn**		**11 43 07.0**	**+1.3**
M11K	**Mekoryuk**	**6.50**	**335**		**Pn**		**11 43 10.5**	**+1.2**
M16K	**Timber Creek**	**6.50**	**8**		**Pn**		**11 43 10.2**	**+0.9**
O19K	**Port Alsworth**	**6.58**	**29**		**Pn**		**11 43 11.8**	**+1.3**
N18K	**Kilae Creek**	**6.62**	**21**		**Pn**		**11 43 12.3**	**+1.3**
ILSW	**Iliamna Southw**	**6.77**	**34**	Pn	**Pn**		**11 43 13.9**	**+0.6**
ILS	**Iliamna Low So**	**6.78**	**35**		**Pn**		**11 43 14.7**	**+1.4**
L14K	**Kuka Creek**	**6.83**	**352**		**Pn**		**11 43 14.8**	**+0.9**
M17K	**Holitna River**	**7.03**	**13**		**Pn**		**11 43 17.6**	**+1.0**
N19K	**Bonanza Creek**	**7.06**	**26**		**Pn**		**11 43 18.3**	**+1.1**
L16K	**Owhat River**	**7.15**	**5**		**Pn**		**11 43 19.2**	**+0.9**
RED	**Redoubt Volcan**	**7.22**	**33**		**Pn**		**11 43 20.6**	**+1.1**
RDSO	**Redoubt South**	**7.26**	**33**		**Pn**		**11 43 21.0**	**+1.0**
NCT	**North Crescent**	**7.29**	**32**		**Pn**		**11 43 21.3**	**+1.1**
M18K	**Stony River**	**7.37**	**19**		**Pn**		**11 43 22.4**	**+1.1**
DFR	**Drift River**	**7.39**	**32**		**Pn**		**11 43 22.6**	**+0.9**
RDT	**Redoubt**	**7.46**	**33**		**Pn**		**11 43 23.2**	**+0.6**
L17K	**Donlin**	**7.66**	**9**		**Pn**		**11 43 25.3**	**+0.1**
K15K	**Wolf Creek Mou**	**7.72**	**357**		**Pn**		**11 43 26.6**	**+0.5**
L18K	**Granite Mounta**	**7.92**	**14**		**Pn**		**11 43 29.5**	**+0.6**
SPWE	**Spurr West**	**7.96**	**30**		**Pn**		**11 43 30.3**	**+0.7**
SPNN	**North Nagishla**	**8.00**	**29**		**Pn**		**11 43 30.8**	**+0.7**
SPBG	**Spurr Blockage**	**8.01**	**30**		**Pn**		**11 43 30.7**	**+0.6**
SLKM	**Skilak Lake**	**8.17**	**39**		**Pn**		**11 43 33.1**	**+0.8**
L19K	**White Mountain**	**8.19**	**20**		**Pn**		**11 43 33.0**	**+0.4**
K17K	**Iditarod**	**8.23**	**8**		**Pn**		**11 43 33.2**	**+0.2**
J14K	**Nanvaranak Lak**	**8.30**	**351**		**Pn**		**11 43 34.1**	**+0.1**
J17K	**VABM Dome**	**8.86**	**5**		**Pn**		**11 43 41.3**	**-0.3**
P23K	**Montague Islan**	**9.00**	**48**		**Pn**		**11 43 43.2**	**-0.4**
PWL	**Port Wells**	**9.11**	**42**		**Pn**		**11 43 44.9**	**-0.2**
I17K	**Unalakleet**	**9.31**	**0**	Pn	**Pn**		**11 43 48.5**	**+0.7**
GHO	**Glory Hole Cre**	**9.49**	**36**		**Pn**		**11 43 50.3**	**-0.1**
HIN	**Hinchinbrook I**	**9.59**	**47**		**Pn**		**11 43 51.3**	**-0.5**
FID	**Port Fidalgo**	**9.79**	**45**		**Pn**		**11 43 53.0**	**-1.4**
EYAK	**Cordova Ski Ar**	**9.99**	**47**		**Pn**		**11 43 56.0**	**-1.1**
SCM	**Sheep Creek Mo**	**10.10**	**39**		**Pn**		**11 43 57.9**	**-0.8**
H17K	**Granite Mounta**	**10.37**	**2**		**Pn**		**11 44 03.5**	**+1.1**
G16K	**Koyuk River**	**10.85**	**356**	Pn	**Pn**		**11 44 10.1**	**+1.2**
F15K	**North Star Dit**	**11.30**	**352**		**Pn**		**11 44 16.7**	**+1.6**
IMAR	**Indian Mountai**	**11.91**	**14**		**Pn**		**11 44 24.8**	**+1.3**
ILAR	**Eielson Array**	**12.32**	**29**	Pn	Pn		11 44 24.0	-5.0
	comp=E,0.3nm,0.3s,baz=218,slow=14,SNR=13							
ILAR					Sn	Sn	11 46 35.1	-10
	comp=E,0.2nm,0.3s,baz=215,slow=23,SNR=2.2							
ILAR				LR	LR		11 49 34.9	
	comp=E,256nm,18.8s,baz=246,slow=39 comp=E,0.7nm,0.4s							
ILAR	**Eielson Array**	**12.32**	**29**	Pn	**Pn**		**11 44 26.2**	**-2.7**
G21K	**Allakaket**	**12.45**	**14**	Pn	**Pn**		**11 44 31.9**	**+1.2**
L27K	**Beaver Creek,**	**12.89**	**41**		**Pn**		**11 44 35.7**	**-1.1**
BCAR	**Beaver Creek A**	**12.91**	**41**		**Pn**		**11 44 36.1**	**-1.0**
P29M	**Windy Craggy**	**13.43**	**59**		**Pn**		**11 44 44.8**	**+0.6**
SHEM	**Shemya Is, Ala**	**15.02**	**273**	LR	LR		11 50 56.5	
	comp=E,95nm,18.5s,baz=346,slow=38							
D23K	**Nanushuk River**	**15.13**	**14**		**Pn**		**11 45 07.5**	**+0.5**
D23K				IAmb	IAmb		11 45 28.3	
	comp=Z,24nm,1.4s							
C23K	**Itkillik River**	**15.95**	**13**	IAmb	IAmb		11 45 30.5	
	comp=Z,24nm,0.8s							
G29M	**Pine Creek**	**16.44**	**33**	IAmb	IAmb		11 45 34.0	
	comp=Z,26nm,1.0s							
H31M	**Peel River**	**17.08**	**39**	IAmb	IAmb		11 45 45.9	
	comp=Z,21nm,0.7s							
DLBC	**Dease Lake**	**17.28**	**65**	P	**Pn**		**11 45 34.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=275,slow=7.9,SNR=7.9							
DLBC					LR	LR	11 51 57.6	
	comp=Z,34nm,19.8s,baz=232,slow=36 comp=Z,1.4nm,0.5s							
E29M	**Blow River**	**17.42**	**29**	P	**Pn**		**11 45 36.4**	**+0.4**
INK	**Inuvik**	**18.66**	**32**	P	**P**		**11 45 48.4**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=212,slow=11,SNR=11							
INK					LR	LR	11 53 55.0	
	comp=Z,223nm,18.6s,baz=228,slow=40 comp=Z,2.3nm,0.5s							
BBB	**Bella Bella**	**19.50**	**84**	LR	LR		11 51 39.6	
	comp=Z,68nm,22.0s,baz=244,slow=31							
A36M	**Sachs Harbour**	**23.02**	**28**	P	**P**		**11 46 35.1**	**-2.3**
A36M				IAmb	IAmb		11 46 48.9	
	comp=Z,9.7nm,0.8s							
PEA0B	**Petropavlovsk-**	**24.32**	**284**	P	**P**		**11 46 50.2**	**+0.3**
PEA0B				IAmb	IAmb		11 46 51.3	
	comp=Z,8.4nm,0.7s							
PETK	**Petropavlovsk-**	**24.32**	**284**	LR	LR		11 55 59.8	
	comp=Z,38nm,20.1s,baz=111,slow=36							
YKA	**Yellowknife Ar**	**24.82**	**53**	P	**P**		**11 46 53.1**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=273,slow=9.6,SNR=9.5							
YKA					LR	LR	11 57 57.6	
	comp=Z,66nm,19.0s,baz=349,slow=40 comp=Z,0.8nm,0.5s							
YKA	**Yellowknife Ar**	**24.82**	**53**	P	**P**		**11 46 53.7**	**-0.7**
MA2	**Magadan**	**26.32**	**301**	LR	LR		11 58 20.1	
	comp=Z,46nm,19.2s,baz=127,slow=38							
NEW	**Newport**	**27.55**	**85**	LR	LR		11 56 07.4	
	comp=Z,60nm,19.7s,baz=303,slow=32							
YBH	**Yreka Blue Hor**	**28.06**	**102**	LR	LR		11 55 48.9	
	comp=Z,98nm,21.6s,baz=317,slow=30							
PAHR	**Pah Rah Range**	**31.29**	**101**	P	**P**		**11 47 54.0**	**+1.4**
RES	**Resolute Bay**	**32.06**	**27**	LR	LR		12 02 13.2	
	comp=Z,79nm,19.9s,baz=252,slow=39							
RES	**Resolute Bay**	**32.06**	**27**	P	**P**		**11 47 58.2**	**-0.6**
RES				IAmb	IAmb		11 48 06.5	
	comp=Z,3.7nm,0.9s							
WAKR	**Walker**	**32.08**	**103**	IAmb	IAmb		11 48 03.4	
	comp=Z,4.7nm,1.1s							
NVAR	**Mina Array Bea**	**32.78**	**102**	P	**P**		**11 48 06.6**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=299,slow=9.0,SNR=17							
NVAR					LR	LR	11 58 55.4	
	comp=Z,57nm,20.7s,baz=348,slow=32 comp=Z,2.4nm,0.9s							
LHV	**Little Huntoon**	**32.79**	**102**	IAmb	IAmb		11 48 09.4	
	comp=Z,5.7nm,1.0s							
NV11	**Mina Array Sit**	**32.86**	**102**	IAmb	IAmb		11 48 09.7	
	comp=Z,5.7nm,1.2s							
MDPB	**Devils Postpil**	**32.89**	**104**	IAmb	IAmb		11 48 10.4	
	comp=Z,4.9nm,0.8s							
ELK	**Elko**	**32.99**	**96**	P	**P**		**11 48 09.5**	**+1.8**
TIXI	**Tiksi**	**33.56**	**327**	LR	LR		12 03 38.3	
	comp=Z,73nm,18.4s,baz=34,slow=40							
TPH	**Tonopah**	**33.64**	**101**	IAmb	IAmb		11 48 16.4	
	comp=Z,3.5nm,0.9s							
HVU	**Hansel Valley**	**33.76**	**92**	IAmb	IAmb		11 48 17.1	
	comp=Z,3.0nm,0.8s							
CWC	**Cottonwood Cre**	**34.30**	**104**	IAmb	IAmb		11 48 22.4	
	comp=Z,5.0nm,1.2s							
S11A	**Rachel**	**34.78**	**100**	IAmb	IAmb		11 48 28.1	
	comp=Z,7.9nm,1.3s							
MPMC	**Manual Prospec**	**34.91**	**104**	IAmb	IAmb		11 48 27.5	
	comp=Z,6.2nm,1.0s							
TPNV	**Topopah Spring**	**34.98**	**102**	P	**P**		**11 48 25.9**	**+1.1**
PD31	**Pinedale Array**	**35.02**	**88**	P	**P**		**11 48 26.1**	**+0.9**
PDAR	**Pinedale Array**	**35.02**	**88**	P	**P**		**11 48 25.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.2,SNR=5.4							
PDAR					LR	LR	12 00 51.4	
	comp=Z,14nm,18.4s,baz=294,slow=33 comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**35.02**	**88**	P	**P**		**11 48 26.2**	**+1.0**
LRMC	**Laurel Mtn Rad**	**35.21**	**105**	IAmb	IAmb		11 48 29.5	
	comp=Z,3.5nm,0.8s							
PSUT	**Pine Spring**	**35.26**	**97**	IAmb	IAmb		11 48 30.2	
	comp=Z,3.6nm,1.0s							
GWY	**Greenwater Val**	**35.28**	**103**	IAmb	IAmb		11 48 30.4	
	comp=Z,6.2nm,0.8s							
YAK	**Yakutsk**	**35.62**	**311**	LR	LR		12 04 24.2	
	comp=Z,110nm,19.4s,baz=84,slow=39							
GSC	**Goldstone, Bar**	**35.84**	**104**	IAmb	IAmb		11 48 35.2	
	comp=Z,7.6nm,1.1s							
CCUT	**Cedar City**	**36.21**	**98**	IAmb	IAmb		11 48 39.2	
	comp=Z,5.0nm,1.5s							
RDMU	**Red Mountain**	**36.40**	**91**	IAmb	IAmb		11 48 49.8	
	comp=Z,6.2nm,1.4s							
Q16A	**Castle Valley**	**36.55**	**95**	IAmb	IAmb		11 48 42.3	
	comp=Z,7.7nm,1.3s							
LCMT	**Little Creek M**	**36.65**	**99**	IAmb	IAmb		11 48 42.4	
	comp=Z,3.4nm,0.9s							
SRU	**San Rafael Swe**	**36.80**	**94**	IAmb	IAmb		11 48 42.8	
	comp=Z,4.8nm,0.7s							
ILON	**Igloolik, Nuna**	**36.84**	**35**	P	**P**		**11 48 40.4**	**+0.3**
ILON				IAmb	IAmb		11 48 49.6	
	comp=Z,5.5nm,0.8s							
PKCU	**Pink Cliffs**	**36.89**	**97**	IAmb	IAmb		11 48 44.8	
	comp=Z,6.1nm,1.0s							
KNB	**Kanab**	**36.89**	**98**	IAmb	IAmb		11 48 44.4	
	comp=Z,3.9nm,1.0s							
BELC	**Belle Mtn. Jos**	**37.24**	**105**	IAmb	IAmb		11 48 46.6	
	comp=Z,5.2nm,0.7s							
PFO	**Pinyon Flats O**	**37.27**	**106**	LR	LR		12 00 52.9	
	comp=Z,55nm,19.6s,baz=283,slow=31							
PFO	**Pinyon Flats O**	**37.27**	**106**	P	**P**		**11 48 45.7**	**+1.3**
PFO				IAmb	IAmb		11 48 47.0	
	comp=Z,6.8nm,1.1s							
PMD	**Palm Desert**	**37.28**	**106**	IAmb	IAmb		11 48 46.8	
	comp=Z,3.0nm,0.8s							
O20A	**White River Ci**	**37.45**	**91**	IAmb	IAmb		11 48 47.9	
	comp=Z,6.0nm,0.7s							
DPP	**Dos Picos Cty**	**37.45**	**107**	IAmb	IAmb		11 48 49.0	
	comp=Z,6.2nm,0.8s							
HMU	**Henry Mountain**	**37.46**	**95**	IAmb	IAmb		11 48 48.4	
	comp=Z,4.8nm,0.7s							
BORC	**Borrego Spring**	**37.55**	**106**	IAmb	IAmb		11 48 49.6	
	comp=Z,5.9nm,0.9s							
U15A	**North Rim**	**37.61**	**99**	IAmb	IAmb		11 48 50.6	
	comp=Z,5.4nm,1.1s							
W13A	**Hualapai Mount**	**37.64**	**102**	IAmb	IAmb		11 48 50.6	
	comp=Z,7.0nm,0.9s							
BAR	**Barrett**	**37.84**	**107**	IAmb	IAmb		11 48 51.7	
	comp=Z,5.5nm,0.8s							
PV10	**Paradox Valley**	**38.15**	**93**	IAmb	IAmb		11 48 54.6	
	comp=Z,3.5nm,0.7s							
PV19	**Morning Glory**	**38.23**	**93**	IAmb	IAmb		11 48 54.8	
	comp=Z,5.1nm,0.7s							
PV18	**Skein Mesa, Pa**	**38.32**	**93**	IAmb	IAmb		11 48 54.8	
	comp=Z,4.5nm,0.7s							
PV13	**Radium Mtn., P**	**38.43**	**93**	IAmb	IAmb		11 48 56.2	
	comp=Z,5.2nm,0.7s							
PV02	**Paradox Valley**	**38.44**	**93**	IAmb	IAmb		11 48 55.9	
	comp=Z,6.4nm,0.9s							
ULM	**Lac du Bonnet**	**38.52**	**69**	P	**P**		**11 48 54.8**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=307,slow=8.0,SNR=4.5							
ULM					LR	LR	12 03 54.4	
	comp=Z,30nm,19.5s,baz=30,slow=35 comp=Z,3.3nm,0.7s							
WUAZ	**Wupatki**	**38.78**	**99**	IAmb	IAmb		11 49 00.2	
	comp=Z,8.8nm,0.9s							
Y14A	**Wickenburg**	**38.98**	**102**	IAmb	IAmb		11 49 01.4	
	comp=Z,6.5nm,0.8s							
X16A	**Lo Mia Camp, P**	**39.52**	**100**	IAmb	IAmb		11 49 06.8	
	comp=Z,6.3nm,1.0s							
AGMN	**Agassiz Nation**	**39.60**	**71**	P	**P**		**11 49 04.0**	**+0.4**
AGMN				IAmb	IAmb		11 49 05.0	
	comp=Z,5.5nm,0.8s							
X18A	**Snowflake**	**40.30**	**99**	IAmb	IAmb		11 49 12.9	
	comp=Z,6.5nm,0.8s							
TUC	**Tucson**	**41.43**	**102**	P	**P**		**11 49 20.6**	**+1.6**
TUC				IAmb	IAmb		11 49 22.1	
	comp=Z,6.7nm,0.9s							
ANMO	**Albuquerque**	**42.02**	**95**	LR	LR		12 04 12.8	
	comp=Z,21nm,18.7s,baz=1.5,slow=32							
EYMN	**Ely**	**42.20**	**69**	P	**P**		**11 49 25.1**	**+0.1**
EYMN				IAmb	IAmb		11 49 26.4	
	comp=Z,6.2nm,0.7s							
Y22A	**Socorro**	**42.44**	**97**	IAmb	IAmb		11 49 30.4	
	comp=Z,5.2nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**42.63**	**228**	T	T		12 35 33.1	
	baz=28,slow=76,SNR=36							
H11N3	**WAKE ISLAND Hy**	**42.63**	**228**	T	T		12 35 33.6	
	baz=28,slow=76,SNR=40							
H11N1	**WAKE ISLAND Hy**	**42.65**	**228**	T	T		12 35 34.4	
	baz=28,slow=76,SNR=25							
H11S1	**WAKE ISLAND Hy**	**43.80**	**228**	T	T		12 36 59.2	
	baz=28,slow=75,SNR=16							
H11S2	**WAKE ISLAND Hy**	**43.81**	**228**	T	T		12 37 04.3	
	baz=28,slow=75,SNR=9.3							
H11S3	**WAKE ISLAND Hy**	**43.81**	**228**	T	T		12 37 00.2	
	baz=28,slow=75,SNR=6.3							
FRB	**Frobisher Bay**	**44.05**	**40**	LR	LR		12 09 36.7	
	comp=Z,75nm,18.4s,baz=250,slow=38							
MJAR	**Matsushiro Arr**	**44.86**	**272**	P	**P**		**11 49 44.6**	**-2.0**
	comp=Z,1.2nm,0.7s,baz=31,slow=7.9,SNR=4.6 comp=Z,1.2nm,0.7s							
MNTX	**Cornudas Mount**	**44.98**	**97**		**P**		**11 49 49.2**	**+1.6**
MNTX				IAmb	IAmb		11 49 50.3	
	comp=Z,5.9nm,0.9s							
TPB28		**45.51**	**97**	IAmb	IAmb		11 49 54.9	
	comp=Z,4.7nm,1.1s							
TPB11	**China Draw**	**45.59**	**96**	IAmb	IAmb		11 49 54.8	
	comp=Z,4.7nm,0.9s							
VHRN	**Van Horn**	**45.88**	**98**		**P**		**11 49 56.5**	**+1.5**
128A	**Castleberry Fa**	**45.99**	**94**	IAmb	IAmb		11 49 57.5	
	comp=Z,5.7nm,0.9s							
NRIK	**Norii'sk**	**46.84**	**333**	LR	LR		12 12 54.6	
	comp=Z,49nm,18.1s,baz=88,slow=40							
SPITS	**Spitsbergen Ar**	**47.46**	**1**	P	**P**		**11 50 06.1**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=49,slow=9.7,SNR=1.6 comp=Z,1.6nm,0.6s							
TXAR	**Lajitas Array**	**47.73**	**98**	P	**P**		**11 50 10.5**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=305,slow=5.8,SNR=51							
TXAR					PcP	**PcP**	**11 51 38.4**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=209,slow=1.4,SNR=4.6 comp=Z,3.2nm,0.7s							
TXAR	**Lajitas Array**	**47.73**	**98**		**PcP**		**11 51 38.3**	**+0.3**
SFJD	**Kangerlussuaq**	**47.98**	**30**	LR	LR		12 13 18.8	
	comp=Z,24nm,18.2s,baz=314,slow=40							
FCAR	**Ozark Folk Cen**	**49.68**	**83**	IAmb	IAmb		11 50 23.7	
	comp=Z,6.2nm,1.2s		

ESDC	Sonseca Array	83.99	18	P		P	11 54 02.9	+0.6	
	comp=Z,2.4nm,0.9s,baz=340,slow=5.3,SNR=12								
	comp=Z,2.4nm,0.9s								
ESDC	Sonseca Array	83.99	18	P		P	11 54 03.5	+1.2	
BRTR	Keskin Array B	85.23	349	P		P	11 54 09.1	+0.3	
	comp=Z,1.2nm,0.7s,baz=340,slow=3.3,SNR=4.5								
BRTR				LR		LR	12 37 21.8		
	comp=Z,13nm,19.4s,baz=132,slow=39								
	comp=Z,1.2nm,0.7s								
BRTR	Keskin Array B	85.23	349	P		P	11 54 09.3	+0.6	
WRA	Warramunga Arr	92.52	239	P		P	11 54 42.2	-1.0	
	comp=Z,0.7nm,1.0s,baz=35,slow=5.4,SNR=3.9								
	comp=Z,0.7nm,1.0s								
H03N2	Juan Fernandez	112.13	117	T		T	14 01 33.7		
	baz=323,slow=77,SNR=8.0								
H03N1	Juan Fernandez	112.14	117	T		T	14 01 36.1		
	baz=323,slow=77,SNR=8.8								
H03N3	Juan Fernandez	112.14	117	T		T	14 01 36.3		
	baz=323,slow=77,SNR=7.3								
QSPA	South Pole Qui	144.38	180	PKP		PKPab	12 01 04.7	-0.2	
	comp=Z,5.5nm,0.6s,baz=16,slow=0.2,SNR=49								
MAW	Mawson	155.89	220	PKPab		PKPab	12 01 50.5	-1.2	
	comp=Z,2.1nm,0.9s,baz=144,slow=3.1,SNR=3.7								

IDC ***24*** *11:54:53.1±0.5,2.˙09N×126.˙77E, h0km, mb4.3/25, mbtmp4.3/26, ML3.8/1, MS3.2/21, Error ellipse: s-maj=24.5km s-min=10.8km az=78.0*

BJI ***24*** *11:54:58.0, 2.˙32N×126.˙70E, h29km, mb4.7/17, mB5.3/3*

GFZ ***24*** *11:54:59.2±0.4, 2.˙1N±3.˙1×12.˙7E±.˙1, h46km±4km, M4.2/21, mb4.6/21, Error ellipse: s-maj=6.8km s-min=5.2km az=56.3, confirmed*

NEIC ***24*** *11:54:59.0±1.5, 2.˙14N±0.˙07×126.˙73E±0.˙08, h35km±1km, mb4.8/84, Error ellipse: s-maj=15.6km s-min=9.9km az=233.0*

DJA ***24*** *11:55:00.4±0.2, 2.˙1N±3.˙1×12.˙7E±.˙1, h53km±6km, M4.4/10, mB4.6/1, mb4.6/6, MLv4.3/10, Mw(mB)3.8/1*

ISC 24 11:54:59.8±0.3, 2.˙04N±0.˙04×126.˙69E±0.˙07, h47km, n348, g098/310, mb4.7/70, MS3.2/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.44	152		Pn	11 55 23.9	+0.4
TNTI				Sn	Sn	11 55 42.0	+0.9
TNTI	Ternate	1.44	152	P	Pn	11 55 24.1	+0.6
TNTI	Ternate	1.44	152	P	Pn	11 55 23.8	+0.4
SGSI	Sangihe	2.00	325	P	Pn	11 55 29.9	-1.3
SGSI				S	Sn	11 55 54.5	-0.5
SGSI	Sangihe	2.00	325	P	Pn	11 55 30.1	-1.1
DDMP	Don Marcelino,	4.15	346	eP	Pn	11 56 01.4	+0.6
DDMP				i S	Sn	11 56 52.0	+4.0
LUWI	Luwuk	4.97	232	Pn	Pn	11 56 13.2	+1.2
KCP	Kidapawan	5.18	342	i P	Pn	11 56 16.5	+1.5
SIJI	Sorong	5.42	122	Pn	Pn	11 56 15.2	-3.0
	2.9nm,0.3s,baz=148,slow=22,SNR=7.9						
	4.4nm,0.4s						
CDOP	Cateel, Davao	5.71	358	eP	Pn	11 56 23.6	+1.5
CDOP				i S	Sn	11 57 26.5	+0.1
APSI	Ampana	5.83	240	P	Pn	11 56 36.6	+13
APSI	Ampana	5.83	240	P	Pn	11 56 24.4	+0.6
TOLI2	Tolitoli	5.97	261		Pn	11 56 26.2	+0.4
TOLI2	Tolitoli	5.97	261	P	Pn	11 56 25.8	0.0
MPSI	Mapaga	7.00	256	P	Pn	11 56 40.4	+0.6
FAKI	Fak Fak	7.43	132	Pn	Pn	11 56 44.5	-1.2
MYLDM	Lahad Datu	8.74	291		Pn	11 57 06.9	+3.1
MYLDM	Lahad Datu	8.74	291	P	Pn	11 57 06.5	+2.7
MYLDM	Lahad Datu	8.74	291	P	Pn	11 57 03.5	-0.3
PMSI	Majene	9.52	235	P	Pn	11 57 15.1	+0.6
KAPI	Kappang	9.86	225	LR	LR	12 00 55.8	
	comp=Z,91nm,19.1s,baz=67,slow=36						
KAPI	Kappang	9.86	225	P	Pn	11 57 19.0	0.0
BAKI	Biak	9.95	109	P	Pn	11 57 27.7	+7.4
SAUI	Saumlaki	10.97	155	P	Pn	11 57 34.4	+0.1
KKM	Kota Kinabalu	11.18	291	Pn	Pn	11 57 41.1	+3.9
WBSI	Waikabubak, Su	13.70	212	P	Pn	11 58 11.7	+0.1
JAY	Jayapura	14.73	108	LR	LR	12 03 20.9	
	comp=Z,138nm,21.4s,baz=264,slow=35						
MTN	Manton Dam	15.44	163	Pn	Pn	11 58 34.1	-0.5
KNRA	Kununurra	17.73	173	P	Pn	11 59 04.3	+1.0
KPJI	Karang Pucung	20.02	242	P	P	11 59 28.4	-0.5
FITZ	Fitzroy Crossi	20.04	183	P	P	11 59 28.6	-0.5
	2.1nm,0.3s,baz=18,slow=9.7,SNR=25						
FITZ				LR	LR	12 07 55.1	
	comp=Z,59nm,19.5s,baz=2.5,slow=39						
	2.1nm,0.3s						
FITZ	Fitzroy Crossi	20.04	183		P	11 59 29.7	+0.5
FITZ	Fitzroy Crossi	20.04	183	P	P	11 59 29.9	+0.7
LEM	Lembang	20.98	245	LR	LR	12 08 31.9	
	comp=Z,73nm,19.3s,baz=30,slow=39						
TPUB	Ta-pu	21.93	345	P	P	11 59 45.9	-3.6
SSLB	Suanglung	22.32	346	P	P	11 59 52.1	-1.5
SSLB	Suanglung	22.32	346	P	P	11 59 51.6	-2.0
MYKOM	Kota Tinggi	22.82	270	P	P	11 59 58.6	-0.5
WB0	Warramunga Arr	22.96	161	P	P	11 59 59.6	-0.8
WB0				IAmb	IAmb	12 00 02.4	
	comp=Z,13nm,0.5s						
WRAB	Tennant Creek	23.10	161	P	P	12 00 01.5	-0.3
WRAB	Tennant Creek	23.10	161	P	P	12 00 01.3	-0.5
WRA	Warramunga Arr	23.11	161	P	P	12 00 01.2	-0.7
	comp=Z,11nm,0.5s,baz=340,slow=11,SNR=96						
WRA				PcP	PcP	12 03 50.5	+0.7
	comp=Z,0.3nm,0.5s,baz=336,slow=1.9,SNR=2.2						
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	23.11	161	P	P	11 59 59.7	-2.2
WR8	Warramunga Arr	23.17	161	P	P	12 00 02.1	-0.4
WR8				IAmb	IAmb	12 00 04.6	
	comp=Z,11nm,0.5s						
PMG	Port Moresby	23.35	119	LR	LR	12 10 35.2	
	comp=Z,96nm,19.4s,baz=278,slow=40						
MDSI	Maura Dua	23.41	254	P	P	12 00 04.6	-0.3
MBWA	Marble Bar	24.04	196	P	P	12 00 11.8	+1.1
MNAI	Manna	24.55	255	P	P	12 00 16.1	+0.6
JOW	Kunigami	24.69	3	P	P	12 00 17.1	+0.5
JOW				IAmb	IAmb	12 00 18.4	
	comp=Z,29nm,0.7s						
JOW	Kunigami	24.69	3	P	P	12 00 15.5	-1.1
MASI	Maura Aman, Be	24.98	258	P	P	12 00 19.6	+0.2
QIS	Mount Isa	25.79	151	P	P	12 00 27.1	+0.5
KRVT	Keravat (AS076	26.09	104	LR	LR	12 09 15.4	
	comp=Z,25nm,21.2s,baz=189,slow=33						
AS31	Alice Springs	26.50	165		P	12 00 33.5	+0.4
ASAR	Alice Springs	26.50	165	P	P	12 00 33.0	-0.1
	comp=Z,1.3nm,0.4s,baz=345,slow=7.6,SNR=28						
ASAR				PcP	PcP	12 03 57.6	+0.3
	comp=Z,0.5nm,0.5s,baz=355,slow=2.1,SNR=4.3						
ASAR				LR	LR	12 10 45.6	
	comp=Z,65nm,19.8s,baz=316,slow=36						
	comp=Z,1.3nm,0.4s						
ASAR	Alice Springs	26.50	165	P	P	12 00 33.6	+0.5
JCJ	Chichijima	29.00	29	LR	LR	12 13 48.1	
	comp=Z,11nm,18.8s,baz=259,slow=39						
CTA	Charters Tower	29.19	140	LR	LR	12 14 06.5	
	comp=Z,100nm,22.0s,baz=292,slow=40						
NJ2	Nanjing	30.75	347	eP	P	12 01 12.3	+1.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
CMAR	Chiang Mai Arr	31.71	303	P	P	12 01 20.1	+0.6
	comp=Z,1.3nm,0.8s,baz=118,slow=7.1,SNR=9.3						
CMAR				LR	LR	12 14 40.9	
	comp=Z,32nm,19.0s,baz=115,slow=37						
	comp=Z,1.3nm,0.8s						
CHTO	Chiang Mai	31.88	303		P	12 01 19.9	-1.0
CHTO				IAmb	IAmb	12 01 22.2	
	comp=Z,17nm,1.8s						
CHTO	Chiang Mai	31.88	303	P	P	12 01 20.7	-0.2
	comp=Z,4.6nm,0.5s						
QLP	Quilpie	33.12	150	P	P	12 01 31.6	0.0
JSG	Sagara	34.19	17	P	P	12 01 40.2	-0.7
INU	Inuyama	34.50	15		P	12 01 43.0	-0.6
INU	Inuyama	34.50	15	P	P	12 01 42.1	-1.5
INU	Inuyama	34.50	15	P	P	12 01 43.3	-0.2
KLBR	Kellerberrin	34.51	194	P	P	12 01 44.1	+0.5
JGF	Kuroka	34.83	15		P	12 01 46.3	-0.1
JGF				IAmb	IAmb	12 01 47.6	
	comp=Z,8.8nm,0.7s						
JGF	Kuroka	34.83	15	P	P	12 01 45.6	-0.9
KSAR	Wonju Array Be	35.24	2	P	P	12 01 49.9	0.0
KSRS	Korea Array	35.26	2	P	P	12 01 49.5	-0.4
	comp=Z,5.0nm,0.6s,baz=180,slow=9.8,SNR=25						
KSRS				LR	LR	12 16 14.3	
	comp=Z,19nm,21.3s,baz=185,slow=36						
	comp=Z,5.0nm,0.6s						
KS19	Wonju Array Si	35.30	2	P	P	12 01 50.8	+0.4

BBOO	Buckleboo	35.78	166	P	P	12 01 54.5	-0.1	
XAN	Xi'an	35.90	334	P	P	12 01 51.1	-4.6	
XAN				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MJAR	Matsushiro Arr	35.94	16	P	P	12 01 54.3	-1.7	
	comp=Z,5.6nm,0.8s,baz=187,slow=9.4,SNR=16							
	comp=Z,5.6nm,0.8s							
MJAR	Matsushiro Arr	35.94	16	P	P	12 01 54.9	-1.1	
MAJO	Matsushiro	35.94	16	P	P	12 01 54.8	-1.2	
MAJO				IAmb	IAmb	12 01 56.3		
	comp=Z,7.0nm,0.8s							
MAJO	Matsushiro	35.94	16	P	P	12 01 54.7	-1.3	
MJB9	Matsu-Tunnel	35.95	16	P	P	12 01 55.1	-0.9	
MJB9				IAmb	IAmb	12 01 57.2		
	comp=Z,6.8nm,0.8s							
STKA	Stephens Creek	36.58	158	P	P	12 02 00.2	-1.3	
	comp=Z,2.8nm,0.6s,baz=326,slow=8.4,SNR=5.9							
STKA				LR	LR	12 17 17.3		
	comp=Z,42nm,18.8s,baz=22,slow=37							
	comp=Z,2.8nm,0.6s							
HHC	Hu-ho-hao-te	40.98	342	eP	P	12 02 40.9	+2.6	
HHC				pmax	pmax			
	comp=Z,9.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,83nm,6.0s							
USA0B	Ussuriysk Arra	42.24	6	P	P	12 02 47.8	-0.6	
USA0B				IAmb	IAmb	12 02 49.6		
	comp=Z,16nm,0.8s							
USRK	Ussuriysk Ar.	42.24	6	P	P	12 02 48.8	+0.4	
	comp=Z,15nm,0.7s,baz=183,slow=6.4,SNR=19							
	comp=Z,15nm,0.7s							
USRK	Ussuriysk Ar.	42.24	6	P	P	12 02 48.7	+0.3	
ASAJ	Asahikawa	44.21	16	LR	LR	12 22 27.9		
	comp=Z,16nm,18.3s,baz=198,slow=38							
EVN	Everest	45.97	308	P	P	12 03 18.1	-1.3	
EVN				IAmb	IAmb	12 03 22.0		
	comp=Z,6.0nm,0.7s							
PALK	Pallekele	46.10	278	LR	LR	12 25 09.9		
	comp=Z,41nm,18.4s,baz=139,slow=39							
HILR	Hailar Array B	47.71	354	P	P	12 03 32.8	+0.9	
	comp=Z,1.7nm,0.5s,baz=182,slow=9.4,SNR=2.4							
	comp=Z,1.7nm,0.5s							
HEH	HeiHe	48.04	1	eP	P	12 03 34.1	-0.2	
HEH				pmax	pmax			
	comp=Z,9.0nm,0.9s							
SONM	Songino Array	48.87	342	P	P	12 03 40.6	-0.5	
	comp=Z,1.2nm,0.5s,baz=155,slow=8.1,SNR=5.8							
SONM				LR	LR	12 26 44.7		
	comp=Z,27nm,19.2s,baz=145,slow=39							
	comp=Z,1.2nm,0.5s							
SONM	Songino Array	48.87	342	P	P	12 03 40.5	-0.5	
TLY	Talaya	53.11	342	P	P	12 04 12.3	-0.3	
	comp=Z,2.0nm,0.7s,baz=80,slow=22,SNR=5.2							
TLY				LR	LR	12 28 06.1		
	comp=Z,17nm,21.2s,baz=132,slow=38							
	comp=Z,2.0nm,0.7s							
TLY	Talaya	53.11	342	P	P	12 04 12.6	0.0	
PEA0B	Petropavlovsk-	57.00	22	P	P	12 04 40.4	-0.3	
PEA0B				IAmb	IAmb	12 05 02.8		
	comp=Z,18nm,1.4s							
PETK	Petropavlovsk-	57.00	22	P	P	12 04 40.4	-0.3	
	comp=Z,2.9nm,0.6s,baz=210,slow=5.3,SNR=9.5							
	comp=Z,2.9nm,0.6s							
PETK	Petropavlovsk-	57.00	22	P	P	12 04 40.2	-0.5	
PDGK	Podgornoye	58.69	321	P	P	12 04 52.3	-0.6	
MKAR	Makanchi Array	58.91	326	P	P	12 04 53.5	-0.8	
	comp=Z,1.9nm,0.5s,baz=118,slow=7.7,SNR=19							
	comp=Z,1.9nm,0.5s							
MKAR	Makanchi Array	58.91	326	P	P	12 04 53.0	-1.2	
MKAR				PcP	PcP	12 05 42.0	-1.2	
TARG	Taragay, Kyrgy	58.98	319	P	P	12 04 54.3	-1.0	
MAKZ	Makanchi	59.10	326	P	P	12 04 54.8	-0.8	
MAKZ	Makanchi	59.10	326	P	P	12 04 54.5	-1.0	
YAK	Yakutsk	59.88	2	LR	LR	12 31 57.9		
	comp=Z,14nm,18.8s,baz=187,slow=37							
YAK	Yakutsk	59.88	2	P	P	12 04 60.0	-0.6	
URZ	Urewera	61.35	136	LR	LR	12 33 00.4		
	comp=Z,47nm,18.4s,baz=315,slow=37							
ZALV	Zalesovo Beam	62.06	333	P	P	12 05 14.3	-1.2	
	comp=Z,0.9nm,0.4s,baz=134,slow=7.3,SNR=4.4							
	comp=Z,0.9nm,0.4s							
GAR	Garm	63.03	313	P	P	12 05 21.3	-1.2	
GAR				IAmb	IAmb	12 05 25.7		
	comp=Z,9.2nm,0.9s							
KURBB	Kurchatov Arra	63.13	328	P	P	12 05 22.1	-0.6	
	comp=Z,3.3nm,0.5s,baz=129,slow=6.4,SNR=51							
	comp=Z,3.3nm,0.5s							
KURK	Kurchatov	63.13	328	P	P	12 05 21.5	-1.2	
KURK				IAmb	IAmb	12 05 22.9		
	comp=Z,5.8nm,0.6s							
KURK	Kurchatov	63.13	328	P	P	12 05 22.0	-0.7	
SEY	Seymchan	63.67	13	P	P	12 05 25.4	-0.7	
	comp=Z,7.2nm,0.9s,baz=209,slow=4.8,SNR=16							
	comp=Z,7.2nm,0.9s							
KKAR	Karatay Array	64.43	318	P	P	12 05 30.5	-1.0	
BVAR	Borovoye Array	68.70	327	P	P	12 05 58.5	-0.1	
	comp=Z,1.8nm,0.5s,baz=149,slow=9.6,SNR=8.4							
	comp=Z,1.8nm,0.5s							
TIXI	Tiksi	69.52	1	P	P	12 06 03.0	-0.2	
	comp=Z,2.6nm,0.6s,baz=158,slow=8.1,SNR=3.6							
	comp=Z,2.6nm,0.6s							
TIXI	Tiksi	69.52	1	P	P	12 06 03.5	+0.4	
AB31	Akbulak array	73.42	321	P	P	12 06 27.0	-0.2	
ABKAR	Akbulak array	73.42	321	P	P	12 06 26.7	-0.4	
UNV	Unalaska Valle	74.83	34	P	P	12 06 35.6	+0.4	
	baz=252							
RAR	Rarotonga	75.44	112	LR	LR	12 39 26.2		
	comp=Z,37nm,18.3s,baz=208,slow=36							
ARTI	Arti	76.41	328	P	P	12 06 43.7	-0.6	
M11K	Mekoryuk	77.07	28	P	P	12 06 48.6	+0.8	
	baz=251							
TNA	Tin City	78.15	23	P	P	12 06 54.4	+0.6	
	baz=248							
K13K	Kusilvak Mount	78.27	27	P	P	12 06 55.2	+0.6	
	baz=252							
M13K	Dall Lake	78.42	28	P	P	12 06 56.2	+0.8	
	baz=253							
SDPT	Sand Point	78.61	34	P	P	12 06 56.9	+0.4	
	baz=257							
CHNA	Chernabura Isl	78.99	34	P	P	12 06 59.0	+0.3	
	baz=258							
L14K	Kuka Creek	79.00	28	IAmb	IAmb	12 07 01.2		
	comp=Z,13nm,0.9s							
L14K	Kuka Creek	79.00	28	P	P	12 06 59.4	+0.8	
	baz=254							
J14K	Nanvaranak Lak	79.01	26	P	P	12 06 59.4	+0.8	
	baz=253							
N14K	Kuskokwak Cree	79.09	29	P	P	12 06 59.7	+0.6	
	baz=255							
O14K	Tigyukauivet M	79.13	30	P	P	12 06 59.6	+0.3	
	baz=256							
M14K	Bethel	79.18	28	P	P	12 07 00.4	+0.8	
	baz=255							
S14K	Fog Glacier	79.32	33	P	P	12 07 01.3	+0.6	
	baz=258							
F15K	North Star Dit	79.47	23	P	P	12 07 01.9	+0.8	
	baz=251							
G15K	Niukluk	79.49	24	P	P	12 07 02.2	+1.0	
	baz=252							
L15K	Ungalak Mounta	79.64	27	P	P	12 07 03.1	+1.0	
	baz=255							
M15K	Kasigluk River	79.77	28	P	P	12 07 03.4	+0.6	
	baz=256							
K15K	Wolf Creek Mou	79.78	27	P	P	12 07 03.3	+0.4	
	baz=255							
O15K	Ungalikthiuk R	79.83	30	P	P	12 07 03.4	+0.3	
	baz=257							
N15K	Kwethluk River	79.93	29	P	P	12 07 04.3	+0.6	
	baz=256							
C16K	Lisburne Hills	80.07	21	P	P	12 07 05.6	+1.3	
	baz=250							
H16K	Elim	80.12	24	P	P	12 07 05.6	+1.0	
	baz=254							
G16K	Kuzuk River	80.29	24	P	P	12 07 06.1	+0.6	
	baz=253							
J16K	Anvik River	80.45	26	IAmb	IAmb	12 07 08.9		
	comp=Z,9.2nm,0.9s							
J16K	Anvik River	80.45	26	P	P	12 07 07.6	+1.2	
	baz=255							
I17K	Unalakleet	80.57	25	P	P	12 07 08.4	+1.3	
	baz=255							
L16K	Owhat River	80.58	28	IAmb	IAmb	12 07 09.2		
	comp=Z,11nm,1.0s							
L16K	Owhat River	80.58	28	P	P	12 07 08.4	+1.2	
	baz=257							
N16K	Nishlik Lake	80.64	29	P	P	12 07 08.3	+0.8	
	baz=258							

M16K	Timber Creek	80.67	28	P	P	12 07 08.6	+1.0	
	baz=257							
D17K	Noatak River	80.69	21	P	P	12 07 08.6	+1.0	
	baz=252							
O16K	Kokwok River B	80.78	30	P	P	12 07 09.0	+0.7	
	baz=258							
RDOG	Red Dog Mine	80.86	21	P	P	12 07 09.1	+0.5	
	baz=252							
C17K	DeLong Mountai	80.89	21	P	P	12 07 09.4	+0.6	
	baz=252							
E17K	Hotham Inlet	80.97	22	P	P	12 07 10.0	+0.8	
	baz=254							
G17K	Kiwalik Mounta	81.00	24	P	P	12 07 10.8	+1.4	
	baz=255							
J17K	VABM Dome	81.15	26	IAmb	IAmb	12 07 13.1		
	comp=Z,7.9nm,0.8s							
J17K	VABM Dome	81.15	26	P	P	12 07 11.2	+1.1	
	baz=257							
H17K	Granite Mounta	81.16	24	P	P	12 07 11.0	+0.8	
	baz=256							
L17K	Donlin	81.22	27	P	P	12 07 11.6	+1.1	
	baz=258							
R17L	Mt. Peulik Vol	81.30	32	P	P	12 07 12.1	+0.9	
	baz=260							
O17K	Koliganek Bris	81.31	30	P	P	12 07 12.4	+1.3	
	baz=259							
K17K	Iditarod	81.34	27	P	P	12 07 12.6	+1.4	
	baz=258							
N17K	Nushagak Hills	81.41	29	P	P	12 07 12.9	+1.3	
	baz=259							
M17K	Holitna River	81.47	28	P	P	12 07 13.0	+1.1	
	baz=258							
E18K	Tukpahlearik C	81.53	22	P	P	12 07 13.5	+1.4	
	baz=255							
C18K	Utukok River	81.64	21	P	P	12 07 13.9	+1.1	
	baz=254							
Q17K	Contact Creek	81.66	31	P	P	12 07 13.3	+0.2	
	baz=260							
F18K	Selawik	81.68	23	P	P	12 07 13.7	+0.9	
	baz=256							
VNDA	Vanda	81.77	173	P	P	12 07 13.7	+0.5	
	comp=Z,1.2nm,0.4s,baz=317,slow=3.2,SNR=3.7							
	comp=Z,1.2nm,0.4s							
G18K	Tagagawik	81.90	24	P	P	12 07 14.8	+0.7	
	baz=257							
L18K	Granite Mounta	81.97	27	IAmb	IAmb	12 07 17.0		
	comp=Z,6.7nm,0.9s							
L18K	Granite Mounta	81.97	27	P	P	12 07 15.9	+1.3	
	baz=259							
N18K	Kilae Creek	82.07	29	P	P	12 07 16.3	+1.2	
	baz=260							
MAW	Mawson	82.17	200	P	P	12 07 16.6	+1.3	
	comp=Z,1.1nm,0.6s,baz=83,slow=5.3,SNR=8.8							
	comp=Z,1.1nm,0.6s							
MAW	Mawson	82.17	200	P	P	12 07 15.8	+0.5	
Q18K	Katmai Hardscr	82.18	31	P	P	12 07 16.8	+0.9	
	baz=261							
J18K	Innoko River	82.20	26	P	P	12 07 14.9	-0.8	
J18K				IAmb	IAmb	12 07 17.6		
	comp=Z,7.5nm,0.9s							
J18K	Innoko River	82.20	26	P	P	12 07 17.2	+1.4	
	baz=259,SNR=6.9							
M18K	Stony River	82.24	28	P	P	12 07 17.1	+1.1	
	baz=260							
O18K	Koktuh Hills	82.27	30	P	P	12 07 16.7	+0.5	
	baz=261							
C19K	Lookout Ridge	82.33	20	P	P	12 07 17.7	+1.3	
	baz=255							
F19K	Shaleruckik Mo	82.46	23	P	P	12 07 17.8	+0.8	
	baz=257							
G19K	Purcell Mounta	82.58	23	IAmb	IAmb	12 07 20.5		
	comp=Z,11nm,0.9s							
G19K	Purcell Mounta	82.58	23	P	P	12 07 18.6	+1.0	
	baz=258,SNR=7.3							
H19K	Roundabout Mou	82.71	24	P	P	12 07 19.7	+1.4	
	baz=259,SNR=13							
O19K	Port Alsworth	82.76	30	P	P	12 07 19.8	+1.2	
	baz=261							
N19K	Bonanza Creek	82.77	29	P	P	12 07 20.0	+1.1	
	baz=261							
J19K	Poorman	82.78	26	P	P	12 07 20.0	+1.3	
	baz=260							
E19K	Redstone River	82.80	22	P	P	12 07 19.9	+1.1	
	baz=258							
L19K	White Mountain	82.81	28	IAmb	IAmb	12 07 21.9		
	comp=Z,10nm,1.1s							
L19K	White Mountain	82.81	28	P	P	12 07 20.5	+1.5	
	baz=261,SNR=5.0							
OHAK	Old Harbor	82.88	33	P	P	12 07 20.4	+1.1	
	baz=263							
D20K	Etivluk River	83.28	21	P	P	12 07 22.5	+1.2	
	baz=258							
F20K	Avaraart Lake	83.29	23	P	P	12 07 22.5	+1.3	
	baz=259,SNR=6.6							
KDAK	Kodiak Island	83.33	32	P	P	12 07 22.4	+0.7	
	baz=263							
E20K	Nigu River	83.35	21	P	P	12 07 23.0	+1.3	
	baz=259							
H20K	Anotleneega Mo	83.35	24	P	P	12 07 22.5	+0.8	
	baz=260							
K20K	Telida	83.36	26	IAmb	IAmb	12 07 24.2		
	comp=Z,8.5nm,1.0s							
K20K	Telida	83.36	26	P	P	12 07 22.9	+1.1	
	baz=261							
I20K	Naaghedeneel	83.40	25	P	P	12 07 22.9	+1.0	
	baz=261							
J20K	Nowinta River	83.45	26	IAmb	IAmb	12 07 24.6		
	comp=Z,7.8nm,0.8s							
J20K	Nowinta River	83.45	26	P	P	12 07 23.2	+1.0	
	baz=261							
M20K	Styx River	83.57	28	IAmb	IAmb	12 07 25.2		
	comp=

RC01	Rabbit Creek A baz=265	85.11	29	P	P	12 07 31.8 +1.2
SEW	Seward baz=266	85.17	30	P	P	12 07 31.5 +0.5
PMR	Palmer comp=Z,6.9nm,0.9s	85.44	29	IAmb	IAmb	12 07 33.6
PMR	Palmer baz=266	85.44	29	P	P	12 07 32.8 +0.5
D23K	Nanushuk River baz=264	85.45	21	P	P	12 07 34.3 +2.1
COLD	Coldfoot comp=Z,6.8nm,0.9s	85.45	23	IAmb	IAmb	12 07 35.2
COLD	Coldfoot baz=264	85.45	23	P	P	12 07 33.8 +1.5
G23K	Bananza Creek baz=265	85.47	23	P	P	12 07 33.5 +1.1
C23K	Itkillik River baz=264	85.57	20	P	P	12 07 33.9 +1.1
H23K	Yukon River comp=Z,6.7nm,1.1s	85.59	24	IAmb	IAmb	12 07 35.7
H23K	Yukon River baz=265	85.59	24	P	P	12 07 33.9 +0.9
I23K	Minto, Yukon-K comp=Z,14nm,1.8s	85.61	25	IAmb	IAmb	12 08 03.3
I23K	Minto, Yukon-K baz=265	85.61	25	P	P	12 07 33.7 +0.7
MCK	McKinley baz=266	85.68	26	P	P	12 07 33.8 +0.3
NEA2	Nenana baz=266	85.69	25	P	P	12 07 34.3 +0.8
RND	Reindeer comp=Z,3.5nm,0.8s	85.69	27	IAmb	IAmb	12 07 34.6
KNK	Knik Glacier baz=266	85.75	29	P	P	12 07 34.7 +0.8
E23K	Chandalar comp=Z,6.0nm,0.7s	85.75	22	IAmb	IAmb	12 07 36.2
E23K	Chandalar baz=265,SNR=6.9	85.75	22	P	P	12 07 34.9 +1.1
PWL	Port Wells baz=267	85.77	29	P	P	12 07 34.8 +0.8
WAT1	Susitna Watana baz=266	85.79	27	P	P	12 07 34.5 +0.5
TOLK	Toolik Lake Re baz=265	85.82	21	P	P	12 07 35.0 +0.9
SML	Sawmill baz=267,SNR=5.8	85.83	28	P	P	12 07 35.0 +0.6
M23K	Glacier View baz=267	86.12	28	P	P	12 07 35.9 +0.2
D24K	Happy Valley baz=266	86.13	21	P	P	12 07 36.8 +1.2
WAT6	Susitna Watana baz=267	86.15	28	P	P	12 07 36.8 +0.7
E24K	Your Creek baz=266	86.18	22	P	P	12 07 36.8 +0.9
P23K	Montague Islan baz=268	86.19	30	P	P	12 07 36.8 +0.8
H24K	Noodor Dome baz=267	86.27	24	P	P	12 07 37.1 +0.7
SCM	Sheep Creek Mo baz=267	86.31	28	P	P	12 07 37.3 +0.6
DHY	Denali Highway baz=267	86.34	27	P	P	12 07 37.0 +0.1
F24K	Squaw Lake comp=Z,4.0nm,0.9s	86.37	23	IAmb	IAmb	12 07 39.6
F24K	Squaw Lake baz=267	86.37	23	P	P	12 07 37.6 +0.8
GLI	Glacier Island baz=268	86.38	29	P	P	12 07 37.8 +0.8
G24K	Hadweenzic Riv baz=267	86.48	23	P	P	12 07 38.0 +0.7
HDA	Harding Lake comp=Z,4.0nm,1.0s	86.59	26	IAmb	IAmb	12 07 37.8
HDA	Harding Lake baz=268	86.59	26	P	P	12 07 37.8 -0.2
ILAR	Eielson Array comp=Z,0.5nm,0.6s,baz=234,slow=5.5,SNR=8.5 comp=Z,0.5nm,0.6s	86.64	25	P	P	12 07 36.1 -2.1
M24K	Tolsona, Glenn baz=268	86.86	28	P	P	12 07 40.2 +0.8
KLU	Klutina baz=269	86.97	29	P	P	12 07 40.0 0.0
D25K	Kavik River baz=268	87.02	21	P	P	12 07 40.6 +0.6
G25K	Bearman Lake baz=268	87.03	23	P	P	12 07 40.8 +0.8
EYAK	Cordova Ski Ar baz=269	87.03	30	P	P	12 07 40.3 +0.2
PAX	Paxson baz=269	87.21	27	P	P	12 07 41.3 +0.2
F25K	Christian Rive baz=269	87.23	23	P	P	12 07 41.6 +0.5
E25K	Arctic Village comp=Z,7.3nm,1.1s	87.27	22	IAmb	IAmb	12 07 43.5
E25K	Arctic Village baz=269,SNR=6.5	87.27	22	P	P	12 07 41.7 +0.4
J25K	Salcha River, baz=269	87.28	26	P	P	12 07 41.4 0.0
RIDG	Independent Ri baz=270	87.50	26	P	P	12 07 42.5 +0.1
C26K	Camden Bay baz=269	87.54	20	P	P	12 07 42.9 +0.5
BMRM	Bremner River baz=270	87.60	29	P	P	12 07 43.3 +0.4
N25K	Chitina, Valde baz=270	87.60	29	P	P	12 07 43.4 +0.4
KAIM	Kayak Island baz=270	87.69	30	P	P	12 07 43.8 +0.4
F26K	Sheenjek River baz=270	87.81	22	P	P	12 07 44.3 +0.5
G26K	Porcupine Rive baz=270	87.95	23	P	P	12 07 45.2 +0.8
C27K	Jago River comp=Z,5.0nm,0.7s	87.96	21	IAmb	IAmb	12 07 46.2
C27K	Jago River baz=270	87.96	21	P	P	12 07 45.3 +0.8
L26K	Log Cabin Wild baz=271	88.18	27	P	P	12 07 45.8 +0.2
I26K	Coal Creek Min baz=271	88.22	25	P	P	12 07 46.5 +0.7
E27K	Coleen River baz=272	88.76	22	P	P	12 07 49.3 +1.0
G27K	Doyon Strip baz=272	88.79	23	P	P	12 07 49.4 +0.9
I27K	Kandik River comp=Z,4.0nm,0.8s	88.86	25	IAmb	IAmb	12 07 50.7
I27K	Kandik River baz=272,SNR=5.3	88.86	25	P	P	12 07 49.8 +0.9
H27K	Steamboat Moun baz=272	88.87	24	P	P	12 07 49.5 +0.6
L27K	Beaver Creek, baz=272,SNR=5.4	88.87	27	P	P	12 07 49.6 +0.7
M27K	Edge Creek, AK baz=272	88.87	28	P	P	12 07 49.7 +0.6
BCAR	Beaver Creek A	88.89	27	P	P	12 07 48.7 -0.3
D27M	Malcolm River baz=273	88.94	21	P	P	12 07 50.0 +0.8
BVCY	Beaver Creek baz=273	89.34	28	P	P	12 07 51.7 +0.6
F28M	Old Crow baz=274	89.44	22	P	P	12 07 52.3 +0.8
E28M	Babbage River baz=274	89.50	21	P	P	12 07 52.4 +0.7
I28M	Miner Creek comp=Z,3.3nm,0.7s	89.56	25	IAmb	IAmb	12 07 53.5
I28M	Miner Creek baz=274,SNR=5.2	89.56	25	P	P	12 07 52.7 +0.5
YUK3	Moose Creek baz=274	89.57	28	P	P	12 07 52.7 +0.2
DAWY	Dawson baz=274	89.90	26	P	P	12 07 54.4 +0.7
H29M	Whitestone baz=275	90.15	24	P	P	12 07 55.3 +0.5
G29M	Pine Creek baz=276	90.22	23	P	P	12 07 55.7 +0.5
M29M	Somme Creek baz=275	90.45	28	P	P	12 07 57.0 +0.6
YUK4	Talbot Arm baz=275	90.47	29	P	P	12 07 57.3 +0.6
L29M	L29M comp=Z,5.2nm,0.8s	90.55	27	IAmb	IAmb	12 07 58.7
L29M	L29M baz=276	90.55	27	P	P	12 07 57.4 +0.6
O29M	Mount Kennedy baz=275	90.59	30	P	P	12 07 57.3 +0.2
YUK6	Outpost Mounta baz=275	90.64	29	P	P	12 07 57.8 +0.3
K29M	Barlow Dome baz=276	90.74	26	P	P	12 07 58.0 +0.2
EPYK	Eagle Plains baz=277	90.79	24	P	P	12 07 58.5 +0.6
F30M	Barrier River baz=278	91.00	22	P	P	12 07 59.2 +0.4
I30M	Mount Dempster baz=277	91.07	25	P	P	12 07 59.4 +0.2
P29M	Windy Craggy baz=276	91.08	30	P	P	12 07 59.5 +0.2
J30M	Hart River baz=277	91.17	25	P	P	12 08 00.2 +0.5
N30M	Aishikik Lake baz=276	91.20	29	P	P	12 08 00.1 +0.2
M30M	Minto, Yukon baz=277	91.21	27	P	P	12 08 00.3 +0.4
INK	Inuvik baz=280	91.73	22	P	P	12 08 02.5 +0.4
O30N	Mendenhall baz=277	91.77	29	P	P	12 08 02.7 +0.2
F31M	Tsiigehtchic	91.80	22	P	P	12 08 01.3 -1.1
F31M	Tsiigehtchic baz=280	91.80	22	P	P	12 08 02.5 +0.1
H31M	Peel River baz=279	91.83	24	P	P	12 08 02.8 +0.1
QSPA	South Pole Qui comp=Z,0.8nm,0.9s,baz=299,slow=2.2,SNR=5.5 comp=Z,0.8nm,0.9s	91.96	180	P	P	12 08 02.8 -0.5
ARCES	ARCESS Array B comp=Z,1.3nm,0.8s,baz=61,slow=10.0,SNR=4.3 comp=Z,1.3nm,0.8s	92.00	340	P	P	12 08 03.5 +0.2
S31K	Pelican baz=277	92.05	32	P	P	12 08 04.0 +0.3
WHY	Whitehorse baz=278	92.37	29	P	P	12 08 05.4 0.0
M31M	Drury Creek, Y baz=279	92.37	28	P	P	12 08 05.5 +0.3
P32M	Atlin baz=279	93.11	30	P	P	12 08 08.8 +0.1
N32M	Quiet Lake baz=280	93.16	29	P	P	12 08 09.2 +0.3
FINES	FINESS Array B comp=Z,3.4nm,0.9s,baz=84,slow=5.3,SNR=3.6 comp=Z,3.4nm,0.9s	93.29	332	P	P	12 08 08.1 -1.3
FINES	FINESS Array B	93.29	332	P	P	12 08 09.3 -0.1
P33M	Teslin, Yukon baz=280	93.45	29	P	P	12 08 10.7 +0.3
MMPY	Sheldon Lake, comp=Z,6.3nm,1.1s	93.73	27	IAmb	IAmb	12 08 13.7
MMPY	Sheldon Lake, baz=282	93.73	27	P	P	12 08 11.8 +0.3
CRAG	Craig baz=280	94.10	34	P	P	12 08 13.4 +0.1
R33M	Jennings River baz=282	94.53	30	P	P	12 08 15.8 +0.4
S34M	Telegraph Cree baz=281	94.74	32	P	P	12 08 16.7 +0.6
DLBC	Dease Lake comp=Z,22nm,20.4s,baz=228,slow=32	95.20	31	LR	LR	12 45 17.6
WTLY	Watson Lake, Y comp=Z,4.2nm,0.9s	95.44	29	IAmb	IAmb	12 08 21.6
WTLY	Watson Lake, Y baz=284	95.44	29	P	P	12 08 20.0 +0.6
RES	Resolute Bay comp=Z,4.8nm,1.1s	99.47	10	P IAmb	Pdif IAmb	12 08 37.1 -0.1 12 08 53.5

*IDC **24** 12:22:00.1±1.4,4.°02S×131.°32E,h0km,mb3.7/4, mbtmp3.7/8,ML3.5/4,MS2.9/2,Error ellipse: s-maj=65.7km s-min=19.9km az=77.0*
*DJA **24** 12:22:06.6±1.0,4.°S±4.°×13.°2E±.°,h27km±12km,M3.7/8, MLv3.7/8*
ISC 24 12:22:03.2±0.8,3.°91S±0.°07×131.°64E±0.°09,h29km,n12, σ25°28/13,mb3.8/4,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.16	32	P	Pb	12 22 25.5	+0.9
FAKI				S	Sn	12 22 38.8	+0.5
BNDI	Bandanaira	1.83	250	P	Pb	12 22 37.9	+1.8
SIJI	Sorong	3.04	353	Pn	Pn	12 22 49.5	+0.1
SIJI	2.3nm,0.3s,baz=194,slow=22,SNR=18			Sn	Sn	12 23 21.7	-3.1
SIJI	7.9nm,0.3s,baz=202,slow=7.0,SNR=3.7			LR	LR	12 24 44.2	
SIJI	comp=Z,66nm,19.4s,baz=182,slow=52 15nm,0.5s			Sn	Sn	12 28 37.4	-9.4
SIJI	Sorong	3.04	353	P	Pn	12 22 49.2	-0.2
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=28,slow=9.2,SNR=14	15.28	202	Pn	Pn	12 25 32.2	-4.8
FITZ	0.2nm,0.3s,baz=320,slow=18,SNR=2.3 1.8nm,0.5s			Sn	Sn	12 28 13.7	-12
WRA	Warramunga Arr 0.1nm,0.3s,baz=355,slow=13,SNR=8.8	16.16	171	Pn	Pn	12 25 45.9	-2.5
WRA	0.2nm,0.3s,baz=349,slow=24,SNR=7.4 0.4nm,0.6s			Sn	Sn	12 28 37.4	-9.4
ASAR	Alice Springs 0.4nm,0.3s,baz=351,slow=10,SNR=42	19.77	174	P	P	12 26 32.2	+1.0
ASAR	0.4nm,0.8s,baz=351,slow=28,SNR=4.8 2.4nm,0.6s			S	S	12 30 03.0	-10
CMAR	Chiang Mai Arr 0.8nm,0.7s,baz=138,slow=6.8,SNR=6.0 0.8nm,0.7s	39.13	306	P	P	12 29 27.6	-1.0
MSVF	Nosavu comp=Z,43nm,20.1s,baz=212,slow=34	47.46	110	LR	LR	12 49 02.6	
MKAR	Makanchi Array 0.2nm,0.5s,baz=109,slow=8.1,SNR=2.1 0.2nm,0.5s	66.58	325	P	P	12 32 52.9	+2.1
KURBB	Kurchatov Arra 0.7nm,0.6s,baz=129,slow=5.6,SNR=10 0.7nm,0.6s	70.77	327	P	P	12 33 18.0	+1.2
QSPA	South Pole Qui 1.1nm,1.1s,baz=180,slow=1.3,SNR=6.0 1.1nm,1.1s	86.05	180	P	P	12 34 42.2	+1.2

*CATAC **24** 12:33:29.4±0.5,13.°N±3.°×9.°0W±.°,h15km±3km,M3.4/20, mB6.2/1,MLv3.4/20,Mw(mB)6.0/1,Error ellipse: s-maj=6.6km s-min=5.4km az=124.4,confirmed*
*SNET **24** 12:33:30.7±1.4,13.°29N×90.°22W,h34km,ML3.3, Presumed earthquake*
ISC 24 12:33:30.2±2.3,13.°27N±0.°07×90.°2W±0.°1,h22km±10km, n32,σ0°47/54,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	Alcaldia de Sa	0.60	17	P	Pb	12 33 42.4	+0.3
FAME				S	Sb	12 33 51.1	+0.9
NUBE	Las Nubes	0.75	33	P	Pb	12 33 44.9	+0.1
NUBE				S	Sn	12 33 55.7	-0.8
CEVE	Cerro Verde	0.79	45	P	Pb	12 33 45.7	+0.3
CEVE				S	Sn	12 33 57.1	-0.4
CEVE	Cerro Verde	0.79	45	eP	Pn	12 33 45.8	-0.5
CEVE				eS	Sn	12 33 58.4	+0.9
JAYA	Jayaque - finc	0.82	62	P	Pb	12 33 45.8	-0.2
JAYA				S	Sn	12 33 57.9	-0.3
JAYA	Jayaque - finc	0.82	62	eP	Pb	12 33 45.8	-0.2
JAYA				eS	Sn	12 33 58.3	+0.1
LOAL	Lomas de Alarc	0.83	29	P	Pn	12 33 46.4	-0.3
LOAL				S	Sn	12 33 58.4	+0.1
SLOZ	Alcaldia de Sa	0.85	28	P	Pb	12 33 46.5	0.0
SLOZ				S	Sn	12 33 59.2	+0.3
LALI	Alcalda de L	0.88	75	P	Pb	12 33 46.4	-0.5
LALI	Alcalda de L	0.88	75	eP	Pb	12 33 46.3	-0.5
LALI				eS	Sb	12 33 58.1	-0.1
CEDA	San Andres	0.94	56	P	Pb	12 33 47.8	-0.1
CEDA				S	Sn	12 34 01.3	+0.2
UNIC	Universidad Ca	0.95	42	P	Pb	12 33 47.8	-0.3
UNIC				S	Sn	12 34 01.3	+0.1
PMON	Piamonte	0.97	63	P	Pn	12 33 48.0	-0.6
PMON				S	Sn	12 34 01.8	+0.1
BOQS	Boqueron	1.01	62	eP	Pn	12 33 48.8	-0.5
UEES	Universidad Ev	1.03	64	P	Pn	12 33 49.0	-0.5
UEES				S	Sn	12 34 03.6	+0.3
LOMA	Loma Larga	1.07	69	P	Pn	12 33 49.2	-0.8
LOMA				S	Sn	12 34 04.5	+0.3
LBRS	Las Brisas	1.22	67	eP	Pn	12 33 51.4	-0.6
PAVA	Las Pavas	1.30	70	P	Pn	12 33 53.5	+0.3
PAVA				S	Sb	12 34 10.6	+0.1
COEG	Centro de Oper	1.33	75	P	Pn	12 33 53.4	-0.2
COEG				S	Sb	12 34 11.2	+0.1
COEG	Centro de Oper	1.33	75	eP	Pn	12 33 53.1	-0.4
MTO3	Montecristo	1.39	36	P	Pn	12 33 54.2	-0.3
MTO3				S	Sb	12 34 13.1	+0.1
TECO	Alcaldia de Te	1.40	79	P	Pn	12 33 54.2	-0.4
ESQI	Esquipulas	1.53	33	eP	Pn	12 33 55.5	-0.8
ESQI				eS	Sb	12 34 16.7	-0.3
PACA	Pacayal	1.83	84	P	Pn	12 34 00.6	0.0
PACA				S	Sn	12 34 24.2	+1.0
RANC	El Ranchito	1.86	85	P	Pn	12 34 00.7	-0.3
RANC				S	Sn	12 34 24.7	+0.8
SARH	Santa Rosa de	2.05	43	P	Pn	12 34 03.4	0.0
LCND	La Caada	2.25	89	P	Pn	12 34 05.8	-0.3
MARCA	Marcala la Paz	2.28	67	P	Pn	12 34 06.6	-0.1
MARCA				S	Sn	12 34 35.4	+1.2
CNCH	Conchagua	2.30	90	P	Pn	12 34 06.6	-0.3
CNCH				S	Sn	12 34 35.5	+0.8
CRIN	San Cristobal	3.12	100	P	Pn	12 34 18.1	-0.1
MOM2	El Cardon	3.71	102	P	Pn	12 34 26.3	0.0
CDITO	Canoas	8.57	122	P	Pn	12 35 32.7	-0.4

*IDC **24** 12:38:04.7±1.0,37.°38N×138.°76E,h0km,mb3.6/5, mbtmp3.6/7,ML3.3/2,Error ellipse: s-maj=30.3km s-min=10.5km az=115.0*
*NIED **24** 12:38:08.2,37.°35N×138.°59E,h25km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.38; Mθθ-0.92; Mφφ-1.47; Mrθ0.19; Mrφ-1.43; Mθφ0.12; Fault plane solution: M₀2.53000×10¹⁴ NP1: φs218.00000°,δ43.00000°,λ87.00000°. NP2:φs41.00000°, δ48.00000°,λ93.00000°.*
*JMA **24** 12:38:08.2±0.1,37.°4N±0.°4×138.°6E±0.°5,h25km±1km, MV3.5/20,MID NIIGATA PREF*
JMA Felt II J1 at MID NIIGATA PREF .
ISC 24 12:38:08.1±1.0,37.°29N±0.°05×138.°69E±0.°06,h24km±8km, n15,σ0°75/20,mb3.7/5,4D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIZZ	Izumozaki	0.24	4	*i* P	Pb	12 38 14.0	-0.3
JIZZ				S	Sb	12 38 18.8	+0.4
JUON	Uonuma	0.30	105	⇓P	Pn	12 38 16.2	-0.9
JUON				⇓S	Sn	12 38 22.1	-0.8
JJN	Nakama	0.46	246	*i* P	Pb	12 38 16.9	-0.6
JKT	Katashina	0.69	139	⇓P	Pn	12 38 22.8	+0.4
JKT				⇓S	Sn	12 38 33.4	+1.0
JGK	Kuni	0.72	183	P	Pn	12 38 23.2	+0.2
JNS	Sasagawa	0.73	43	*i* P	Pb	12 38 22.0	-0.2
JNS				eS	Sb	12 38 32.4	+0.7
MAT	Matsushiro	0.84	208	P	Pb	12 38 23.8	-0.2
MAT				S	Sn	12 38 35.3	-0.7
MJAR	Matsushiro Arr 4.1nm,0.3s,baz=2.3,slow=11,SNR=520	0.84	207	Pg	Pb	12 38 23.7	-0.3
MJAR	10nm,0.3s,baz=23,slow=24,SNR=21			Lg	Lg	12 38 35.8	
JHJ	Hachijo jima 2 3.2nm,0.3s,baz=327,slow=6.6,SNR=1.5 50nm,0.8s	4.25	167	Pn	Pn	12 39 11.9	+0.5
KSRS	Korea Array 0.5nm,0.3s,baz=89,slow=14,SNR=5.5 1.1nm,0.3s	8.57	274	Pn	Pn	12 40 12.2	+1.6
SONM	Songino Array 0.3nm,0.4s,baz=115,slow=9.7,SNR=2.1 0.3nm,0.4s	25.84	304	P	P	12 43 37.0	-0.7
ILAR	Eielson Array 0.3nm,0.7s,baz=274,slow=8.5,SNR=4.3 0.3nm,0.7s	50.45	32	P	P	12 47 02.6	-0.8
WRA	Warramunga Arr 1.3nm,0.6s,baz=359,slow=7.3,SNR=8.2 1.3nm,0.6s	57.07	185	P	P	12 47 52.2	-0.1
PDAR	Pinedale Array 0.3nm,0.4s,baz=100,slow=1.7,SNR=3.9 0.3nm,0.4s	79.02	44	P	P	12 50 10.8	+0.4
TXAR	Lajitas Array 0.2nm,0.6s,baz=336,slow=2.9,SNR=3.8 0.2nm,0.6s	91.67	51	P	P	12 51 14.4	+0.7

*TIF **24** 12:38:21.4,42.°98N×48.°23E,h20km±1km*
*MOS **24** 12:38:21.7,42.°91N×48.°15E,h16km,MPVA4.1*
*NORS **24** 12:38:21.1,43.°00N×48.°14E,h1km,MPVA4.1*
*DRS **24** 12:38:22.6,42.°99N×48.°19E,h18km*
ISC 24 12:38:20.2±0.9,43.°05N±0.°03×48.°29E±0.°03,h16km±5km, n72,σ1°78/121,3C-2D,Caspian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
MAK	Makhachkala	0.58	261	⇓*i*PG	Pn	12 38 33.4	-0.4
MAK				eS	Sb	12 38 41.6	+1.6
MAK	comp=Z,319nm,0.3s			pmax	pmax		
MAK	comp=E,1μm,0.5s			smax	smax		
MAK	comp=E,2μm,0.5s			smax	smax		
MAK	Makhachkala	0.58	261	ePg	Pb	12 38 32.7	+0.6
MAK				eSg	Sb	12 38 40.8	+0.7
SGKR	Sergokala	0.75	218	ePG	Pb	12 38 34.9	-0.1
SGKR	comp=Z,217nm,0.1s			pmax	pmax		
SGKR	Sergokala	0.75	218	ePg	Pb	12 38 34.9	-0.1
SGKR				eSg	Sb	12 38 44.6	-0.4
BUJR	Buynaksk	0.90	256	ePG	Pn	12 38 38.3	+0.1
BUJR	comp=Z,96nm,0.5s			pmax	pmax		
BUJR	Buynaksk	0.90	256	ePg	Pn	12 38 38.3	+0.1
BUJR				eSg	Sb	12 38 50.0	+0.9
DRN	Derbent	1.02	178	*i* PG	Pn	12 38 40.5	+0.6
DRN	comp=Z,166nm,1.1s			pmax	pmax		
DRN	Derbent	1.02	178	ePg	Pn	12 38 40.9	+1.0
DRN				eSg	Sn	12 38 54.8	+0.9
KRNR	Karanay	1.04	258	ePG	Pn	12 38 40.7	+0.5
KRNR	comp=Z,56nm,0.2s			pmax	pmax		
KRNR	Karanay	1.04	258	ePg	Pn	12 38 40.7	+0.5
KRNR				eSg	Sb	12 38 54.2	+0.8
ARKR	Arakani	1.05	245	ePG	Pn	12 38 40.3	-0.1
ARKR	comp=Z,54nm,0.3s			pmax	pmax		
ARKR	Arakani	1.05	245	ePg	Pn	12 38 40.3	-0.1
ARKR				eSg	Sb	12 38 53.6	-0.1
DBC	Dubki	1.07	269	ePG	Pn	12 38 40.7	+0.1
DBC	Dubki	1.07	269	ePg	Pn	12 38 40.8	+0.1
DBC				eSg	Sb	12 38 54.8	+0.6
UNCR	Uncukul	1.15	253	ePG	Pn	12 38 41.8	+0.1
UNCR	comp=Z,49nm,0.2s			pmax	pmax		
UNCR	Uncukul	1.15	253	ePg	Pn	12 38 41.8	+0.1
UNCR				eSg	Sb	12 38 56.7	+0.2
GNBR	Gunib	1.18	236	ePG	Pn	12 38 42.5	+0.4
GNBR	comp=Z,71nm,0.4s			pmax	pmax		
GNBR	Gunib	1.18	236	ePg	Pn	12 38 42.6	+0.4
GNBR				eSg	Sn	12 38 58.1	+0.2
DLMR	Dylym	1.22	271	ePG	Pn	12 38 44.1	+1.5
DLMR	comp=Z,359nm,0.2s			pmax	pmax		
DLMR	Dylym	1.22	271	ePg	Pn	12 38 44.1	+1.5
DLMR				eSg	Sn	12 39 00.3	+1.6
HNZR	Khunzah	1.26	247	ePG	Pn	12 38 43.6	+0.3
HNZR	comp=Z,39nm,0.4s			pmax	pmax		
XNZR	Khunzakh	1.27	247	ePg	Pb	12 38 43.7	-0.3
XNZR				eSg	Sb	12 39 00.2	+0.1
KMKR	Kumukh	1.27	224	ePG	Pn	12 38 44.0	+0.4
KMKR	comp=Z,213nm,0.2s			pmax	pmax		
KMKR	Kumukh	1.27	224	ePg	Pn	12 38 44.0	+0.4
KMKR				eSg	Sb	12 39 00.5	+0.3
KSMR	Kasumkent	1.46	185	ePN	Pg	12 38 46.9	-1.3
KSMR	comp=Z,215nm,0.3s			pmax	pmax		
KSMR	Kasumkent	1.46	185	ePg	Pg	12 38 46.9	-1.3
KSMR				eSg	Sb	12 39 05.6	+0.3
BTLR	Botlikh	1.57	256	ePN	Pg	12 38 49.6	-0.8
BTLR	Botlikh	1.57	256	ePg	Pg	12 38 49.1	-1.3
BTLR				eSg	Sg	12 39 09.4	-1.4
DVE	Vedeno	1.59	267	ePN	Pg	12 38 49.6	-1.2
AKT	Akhty	1.63	195	ePN	Pb	12 38 49.2	-0.7
AKT	comp=Z,77nm,0.3s			pmax	pmax		
AKT	Akhty	1.63	195	ePg	Pb	12 38 49.3	-0.7
AKT				eSg	Sn	12 39 10.0	+1.0

TLTR	**Tlyarata**	**1.71**	**237**	*e*PN		**Pb**	**12 38 51.1**	**-0.3**
TLTR				pmax	pmax				
	comp=Z,33nm,0.6s								
TLTR	**Tlyarata**	**1.71**	**237**	*e*Pg		**Pb**	**12 38 51.1**	**-0.3**
TLTR				*e*Sg		**Sb**	**12 39 13.0**	**+0.2**
GROC	**Groznyy**	**1.83**	**276**	*e*PN		**Pb**	**12 38 53.4**	**+0.1**
GROC	**Groznyy**	**1.83**	**276**	*e*Pg		**Pb**	**12 38 52.4**	**-0.9**
GROC				*e*Sg		**Sg**	**12 39 19.0**	**-0.1**
VSHL	**Vashlovani**	**2.30**	**218**	P		**Pb**	**12 39 01.8**	**+0.4**
SHTL	**Shatili**	**2.34**	**261**	P		**Pn**	**12 39 00.1**	**+1.9**
SHTL				S		**Sb**	**12 39 30.1**	**-0.7**
SHTL	**Shatili**	**2.34**	**261**	PN		**Pn**	**12 39 00.1**	**+1.9**
SHTL				S		**Sb**	**12 39 30.1**	**-0.7**
KMGR	**Komgaron**	**2.51**	**271**	*e*PN		**Pb**	**12 39 03.6**	**-1.3**
KMGR				*e*S		**Sb**	**12 39 34.6**	**-1.0**
KMGR	**Komgaron**	**2.51**	**271**	*e*Pn		**Pb**	**12 39 03.6**	**-1.3**
KMGR				*e*Sn		**Sb**	**12 39 34.6**	**-1.0**
CHRG	**Chargali**	**2.58**	**255**	P		**Pb**	**12 39 05.0**	**-1.3**
CHRG				S		**Sb**	**12 39 37.5**	**-0.3**
DGRG	**David-gareji**	**2.69**	**234**	P		**Pb**	**12 39 07.3**	**-0.8**
DGRG	**David-gareji**	**2.69**	**234**	PN		**Pb**	**12 39 07.3**	**-0.8**
ARNR	**Ardon**	**2.94**	**274**	*e*PN		**Pn**	**12 39 07.1**	**+0.9**
ARNR				*e*S		**Sn**	**12 39 42.7**	**+1.6**
LACR	**Lac**	**2.94**	**267**	*e*PN		**Pb**	**12 39 09.9**	**-2.4**
LACR				*e*S		**Sb**	**12 39 45.9**	**-2.2**
LACR	**Lac**	**2.94**	**267**	*e*Pn		**Pb**	**12 39 09.9**	**-2.4**
LACR				*e*Sn		**Sb**	**12 39 45.9**	**-2.2**
STDR	**Stavd-Durt**	**3.11**	**277**	*e*PN		**Pn**	**12 39 10.8**	**+2.2**
STDR				*e*S		**Sn**	**12 39 49.6**	**+4.3**
LSNR	**Lesken**	**3.27**	**275**	*e*PN		**Pn**	**12 39 11.6**	**+0.7**
LSNR				*e*S		**Sn**	**12 39 52.9**	**+3.4**
LSNR	**Lesken**	**3.27**	**275**	*e*Pn		**Pn**	**12 39 11.7**	**+0.7**
LSNR				*e*Sn		**Sn**	**12 39 52.9**	**+3.4**
NCK	**Nalchik**	**3.46**	**279**	*i* PN		**Pn**	**12 39 12.9**	**-0.5**
NCK				pmax	pmax				
	comp=Z,69nm,0.2s								
DIGR	**Digorskoe uzhe**	**3.46**	**269**	*e*PN		**Pn**	**12 39 15.7**	**+2.1**
DIGR				*e*S		**Sn**	**12 39 58.4**	**+4.1**
DIGR	**Digorskoe uzhe**	**3.46**	**269**	*e*Pn		**Pn**	**12 39 15.7**	**+2.1**
DIGR				*e*Sn		**Sn**	**12 39 58.4**	**+4.1**
PYA1	**Pyatigorsk**	**3.91**	**287**	*i* PN		**Pn**	**12 39 18.9**	**-0.7**
GNI	**Garni**	**3.94**	**224**	*i* PN		**Pn**	**12 39 21.4**	**+1.3**
KBZ	**Khabaz**	**3.99**	**282**	*e*PN		**Pn**	**12 39 21.9**	**+1.2**
KBZ				*e*S		**Sn**	**12 40 09.1**	**+2.1**
KBZ	**Khabaz**	**3.99**	**282**	*e*Pn		**Pn**	**12 39 21.9**	**+1.2**
KBZ				*e*Sn		**Sn**	**12 40 09.1**	**+2.1**
BEYR	**Belyy Ugol+**	**4.09**	**285**	*e*PN		**Pn**	**12 39 24.8**	**+2.6**
BEYR				*e*S		**Sn**	**12 40 11.0**	**+1.3**
BEYR	**Belyy Ugol+**	**4.09**	**285**	*e*Pn		**Pn**	**12 39 24.8**	**+2.6**
BEYR				*e*Sn		**Sn**	**12 40 11.0**	**+1.3**
SHA1	**Shidzhatmaz**	**4.16**	**281**	*e*PN		**Pn**	**12 39 25.0**	**+1.7**
SHA1				*e*S		**Sn**	**12 40 14.2**	**+2.5**
SHA1	**Shidzhatmaz**	**4.16**	**281**	*e*Pn		**Pn**	**12 39 25.0**	**+1.7**
SHA1				*e*Sn		**Sn**	**12 40 14.2**	**+2.5**
KIV	**Kislovodsk**	**4.17**	**284**	*e*PN		**Pn**	**12 39 27.7**	**+4.4**
KIV				*e*S		**Sn**	**12 40 13.7**	**+1.9**
KIV	**Kislovodsk**	**4.17**	**284**	*e*Pn		**Pn**	**12 39 27.7**	**+4.4**
KIV				*e*Sn		**Sn**	**12 40 13.7**	**+1.9**
DOMR	**Dombai**	**4.88**	**275**	*i* PN		**Pn**	**12 39 32.5**	**-0.6**
DOMR				pmax	pmax				
	comp=Z,22nm,0.1s								
BELG	**Belogornoye**	**9.36**	**357**	*i* P		**Pn**	**12 40 32.9**	**-1.4**
AKTO	**Aktyubinsk**	**9.95**	**39**	⇑Pn		**Pn**	**12 40 46.7**	**+4.3**
	comp=Z,0.9nm,0.8s								
AKTO				⇓Sn		**Sn**	**12 42 30.5**	**-3.1**
	comp=Z,0.4nm,0.4s								
AKTO	**Aktyubinsk**	**9.95**	**39**	P		**Pn**	**12 40 46.7**	**+4.3**
AKTO				S		**Sn**	**12 42 30.5**	**-3.1**
AB31	**Akbulak array**	**10.18**	**48**	Pn		**Pn**	**12 40 48.9**	**+3.2**
	comp=Z,0.3nm,0.5s,baz=243,slow=14,SNR=7.0								
AB31				⇑Sn		**Sn**	**12 42 37.4**	**-2.0**
	comp=Z,0.7nm,0.6s,baz=245,slow=34,SNR=5.6								
AB31	**Akbulak array**	**10.18**	**48**	P		**Pn**	**12 40 48.9**	**+3.2**
AB31				S		**Sn**	**12 42 37.4**	**-2.0**
OBN	**Obninsk**	**14.28**	**332**	⇑*e*P		**Pn**	**12 41 38.9**	**-2.6**
OBN				pmax	pmax				
	comp=Z,5.0nm,0.9s								
OBN				MLR	MLR				
	comp=Z,16nm,15.0s								
AKBB	**Malin Array Si**	**15.09**	**307**	*i* P		**Pn**	**12 41 51.4**	**-1.2**
MNK	**Minsk**	**17.59**	**318**	*i* P		**Pn**	**12 42 22.7**	**-1.8**
	comp=E,14nm,0.8s								
MNK				*i* P		**Pn**	**12 42 22.7**	**-1.8**
	comp=N,23nm,0.8s								
MNK				*i* P		**Pn**	**12 42 22.7**	**-1.8**
	comp=Z,13nm,0.7s,baz=122								
MNK				*i* PP		**sP**	**12 42 33.3**	**+1.3**
MNK				*i* S		**Sn**	**12 45 38.0**	**-1.9**
MNK				*i* SS		**SnSn**	**12 45 53.1**	**-0.1**
MNK				*i* LQ	LQ		12 48 05.6		
MNK				*i* LR	LR		12 48 59.1		
MNK				*i* LRM	MLR		12 50 59.1		
	comp=N,422nm,20.6s								
MNK				*i* LRM	MLR		12 51 02.9		
	comp=Z,45nm,22.9s								
MNK				*i* LRM	MLR		12 51 08.0		
	comp=E,595nm,22.6s								
MNK	**Minsk**	**17.59**	**318**	*i* P		**Pn**	**12 42 22.6**	**-1.8**
MNK				*i* S		**Sn**	**12 45 38.0**	**-1.9**
MNK				pmax	pmax				
	comp=E,14nm,0.8s								
MNK				pmax	pmax				
	comp=N,23nm,0.8s								
MNK				pmax	pmax				
	comp=Z,13nm,0.7s								
MNK				MLR	MLR				
	comp=N,422nm,21.0s								
MNK				MLR	MLR				
	comp=Z,45nm,23.0s								
MNK				MLR	MLR				
	comp=E,595nm,23.0s								

IDC ***24*** *12:38:53.2±0.9, 10°.14S×116°.24E, h0km, mb4.3/12, mbtmp4.3/13, ML3.6/1, MS3.4/7, Error ellipse: s-maj=39.7km s-min=14.6km az=56.0*

NEIC ***24*** *12:38:53.9±1.5, 10°.41S±0°.08×116°.09E±0°.10, h10km±1km, mb4.6/33, Error ellipse: s-maj=18.3km s-min=10.1km az=56.0*

DJA ***24*** *12:38:54.6±0.6, 11°.5±6"×11°.6E±", h10km, M4.6/15, mb4.8/1, MLv4.5/15*

ISC 24 12:38:56.4±0.5, 10°.64S±0°.07×115°.95E±0°.06, h35km, n78, σ1ᵎ75/74, mb4.4/29, MS3.5/4, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DNP	**Denpasar**	**2.08**	**339**	P		**Pn**	**12 39 31.8**	**+3.0**
DNP				S		**Sn**	**12 39 58.4**	**+4.9**
TWSI	**Taliwang, Sumb**	**2.10**	**26**	P		**Pn**	**12 39 28.4**	**-0.7**
TWSI				S		**Sn**	**12 39 56.6**	**+2.7**
KHKI	**Kahang-Kahang**	**2.28**	**351**	P		**Pn**	**12 39 32.4**	**+0.8**
RTBI	**Rangdo, Negare**	**2.38**	**335**	P		**Pn**	**12 39 34.1**	**+1.1**
PLAI	**Plampang**	**2.54**	**45**	P		**Pn**	**12 39 34.7**	**-0.5**
SRBI	**Singaraja**	**2.64**	**344**	P		**Pn**	**12 39 38.7**	**+2.2**
JAGI	**Jajag, Banyuwa**	**2.79**	**320**			**Pn**	**12 39 38.0**	**-0.6**
JAGI	**Jajag, Banyuwa**	**2.79**	**320**	P		**Pn**	**12 39 38.2**	**-0.4**
JAGI				S		**Sn**	**12 40 09.4**	**-1.7**
DBNI	**Kabupaten Domp**	**3.15**	**48**	P		**Pn**	**12 39 44.4**	**+0.9**
ABJI	**Asem Bagus**	**3.29**	**329**	P		**Pn**	**12 39 48.8**	**+3.3**
WBSI	**Waikabubak, Su**	**3.53**	**74**	P		**Pn**	**12 39 47.8**	**-1.0**
BLJI	**Banyuglugur**	**3.70**	**321**	P		**Pn**	**12 39 52.1**	**+1.0**
UGM	**Wanagama**	**6.00**	**296**	Pn		**Pn**	**12 40 21.3**	**-1.5**
KAPI	**Kappang**	**6.74**	**34**	LR		LR	12 43 26.3		
	comp=Z,266nm,20.1s,baz=218,slow=44								
BATI	**Baumata**	**7.60**	**87**	Sn		Sn	12 41 58.9	-11	
	6.9nm,0.3s,baz=321,slow=22,SNR=6.1								
BBJI	**Bungbulang**	**8.79**	**290**	Pn		**Pn**	**12 41 01.1**	**+0.1**
LEM	**Lembang**	**9.07**	**294**	LR		LR	12 45 01.5		
	comp=Z,212nm,19.7s,baz=9.5,slow=40								
FITZ	**Fitzroy Crossi**	**11.96**	**129**	Pn		**Pn**	**12 41 42.4**	**-2.1**
	0.5nm,0.3s,baz=331,slow=12,SNR=15								
FITZ				Sn		Sn	12 43 45.4	-11	
	0.9nm,0.3s,baz=323,slow=22,SNR=7.0								
FITZ				LR		LR	12 46 34.7		
	comp=Z,120nm,20.1s,baz=352,slow=38								
FITZ	**Fitzroy Crossi**	**11.96**	**129**			**Pn**	**12 41 43.5**	**-1.0**
KRJI	**Kerinci**	**16.71**	**300**	P		**P**	**12 42 53.7**	**+3.7**
FAKI	**Fak Fak**	**17.90**	**66**			**Pn**	**12 42 59.2**	**-3.5**
FAKI				IAmb		IAmb	12 43 17.9		
	comp=Z,39nm,1.2s								
WB0	**Warramunga Arr**	**19.96**	**119**	P		**Pn**	**12 43 27.7**	**+0.1**
WRA	**Warramunga Arr**	**19.98**	**120**	P		**P**	**12 43 27.9**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=293,slow=12,SNR=11								
	comp=Z,1.5nm,0.9s								
WRA	**Warramunga Arr**	**19.98**	**120**	P		**P**	**12 43 26.8**	**+0.8**
DAV	**Davao City (W)**	**20.03**	**29**	LR		LR	12 51 09.4		
	comp=Z,147nm,21.2s,baz=232,slow=38								
WR8	**Warramunga Arr**	**20.13**	**120**	P		**P**	**12 43 28.4**	**+0.9**
AS31	**Alice Springs**	**21.46**	**129**	P		**P**	**12 43 43.7**	**+1.7**
ASAR	**Alice Springs**	**21.46**	**129**	P		**P**	**12 43 44.8**	**+2.8**
	comp=Z,3.6nm,0.6s,baz=300,slow=10,SNR=42								
ASAR				S		**S**	**12 47 36.4**	**-2.0**
	comp=Z,2.8nm,1.0s,baz=303,slow=23,SNR=7.1								
	comp=Z,3.6nm,0.6s								
KCSI	**Kotacane, Aceh**	**22.92**	**307**	P		**P**	**12 43 58.0**	**+0.4**
BBOO	**Buckleboo**	**28.80**	**143**	P		**P**	**12 44 53.0**	**+1.7**
INKA	**Innaminka**	**28.85**	**130**	P		**P**	**12 44 54.8**	**+3.2**
STKA	**Stephens Creek**	**31.75**	**136**	P		**P**	**12 45 20.2**	**+2.9**
	comp=Z,1.6nm,0.5s,baz=309,slow=7.1,SNR=5.3								
	comp=Z,1.6nm,0.5s								
CM31	**Chiang Mai Arr**	**33.43**	**330**	P		**P**	**12 45 31.6**	**-0.5**
CM31				IAmb		IAmb	12 45 35.0		
	comp=Z,12nm,1.2s								
CMAR	**Chiang Mai Arr**	**33.43**	**330**	P		**P**	**12 45 32.7**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=158,slow=7.3,SNR=26								
	comp=Z,3.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**33.43**	**330**			**P**	**12 45 31.6**	**-0.5**
CHTO	**Chiang Mai**	**33.73**	**330**			**P**	**12 45 34.2**	**-0.6**
CHTO				IAmb		IAmb	12 45 36.7		
	comp=Z,3.8nm,0.8s								
CHTO	**Chiang Mai**	**33.73**	**330**	P		**P**	**12 45 37.6**	**+2.9**
YHNB	**Yeheng**	**35.49**	**9**	P		**P**	**12 45 48.5**	**-1.4**
MORE	**Moreh**	**40.60**	**329**			**P**	**12 46 32.6**	**-0.4**
SHL	**Shillong**	**42.95**	**327**	IAmb		IAmb	12 46 54.4		
	comp=Z,18nm,0.8s								
EVN	**Everest**	**47.62**	**324**			**P**	**12 47 28.0**	**-1.9**
EVN				IAmb		IAmb	12 47 30.8		
	comp=Z,7.3nm,0.7s								
JHJ	**Hachijo jima 2**	**49.09**	**27**	LR		LR	13 07 19.2		
	comp=Z,82nm,22.0s,baz=61,slow=35								
KSRS	**Korea Array**	**49.14**	**13**	LR		LR	13 13 10.6		
	comp=Z,12nm,18.3s,baz=170,slow=42								
MAJO	**Matsushiro**	**51.39**	**23**	P		**P**	**12 47 55.4**	**-2.5**
MAJO				IAmb		IAmb	12 48 00.6		
	comp=Z,5.8nm,1.1s								
MJAR	**Matsushiro Arr**	**51.39**	**23**	P		**P**	**12 47 54.8**	**-3.0**
	comp=Z,4.2nm,0.9s,baz=192,slow=7.6,SNR=14								
	comp=Z,4.2nm,0.9s								
MJAR	**Matsushiro Arr**	**51.39**	**23**	P		**P**	**12 47 55.7**	**-2.2**
BTO2	**Baotou**	**51.43**	**354**	*e*P		**P**	**12 48 01.0**	**+2.8**
BTO2				pP		**pP**	**12 48 05.3**	**-2.1**
BTO2				sP		**sP**	**12 48 08.1**	**-2.9**
BTO2				pmax	pmax				
	comp=Z,16nm,1.0s								
BTO2				pmax	pmax				
	comp=Z,100nm,6.7s								
ULN	**Ulaanbaatar**	**58.78**	**353**	P		**P**	**12 48 49.8**	**-1.3**
ULN				IAmb		IAmb	12 48 50.7		
	comp=Z,2.2nm,0.8s								
SONM	**Songino Array**	**58.83**	**352**	P		**P**	**12 48 50.6**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=172,slow=8.9,SNR=14								
	comp=Z,2.8nm,0.8s								
SONM	**Songino Array**	**58.83**	**352**	P		**P**	**12 48 50.3**	**-1.1**
SONM				IAmb		IAmb	12 48 51.5		
	comp=Z,2.8nm,0.8s								
URZ	**Urewera**	**60.90**	**128**	P		**P**	**12 49 07.7**	**+1.9**
	comp=Z,14nm,1.0s,baz=223,slow=6.3,SNR=3.7								
URZ				LR		LR	13 15 46.4		
	comp=Z,52nm,19.9s,baz=278,slow=36								
	comp=Z,14nm,1.0s								
HEH	**HeiHe**	**61.45**	**8**	*e*P		**P**	**12 49 07.9**	**-1.3**
HEH				pmax	pmax				
	comp=Z,6.0nm,0.7s								
TARG	**Taragay, Kyrgy**	**62.80**	**329**	IAmb		IAmb	12 49 23.3		
	comp=Z,3.8nm,0.8s								
PDGK	**Podgornoye**	**63.16**	**331**	P		**P**	**12 49 20.7**	**-0.3**
KBL	**Kabul**	**63.20**	**318**	P		**P**	**12 49 21.1**	**-0.4**
KBL				IAmb		IAmb	12 49 21.9		
	comp=Z,4.7nm,0.8s								
MANEM	**Manem**	**63.37**	**322**			**P**	**12 49 22.9**	**+0.3**
MANEM				IAmb		IAmb	12 49 23.9		
	comp=Z,36nm,1.5s								
BOOM	**Boomskoye usch**	**64.31**	**328**	P		**P**	**12 49 29.1**	**+0.4**
MK31	**Makanchi Array**	**64.60**	**335**	P		**P**	**12 49 30.0**	**-0.3**
MK31				IAmb		IAmb	12 49 31.5		
	comp=Z,2.9nm,0.9s								
MKAR	**Makanchi Array**	**64.60**	**335**	P		**P**	**12 49 30.0**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=145,slow=7.4,SNR=18								
	comp=Z,1.8nm,0.6s								
MKAR	**Makanchi Array**	**64.60**	**335**			**P**	**12 49 29.6**	**-0.6**
MAKZ	**Makanchi**	**64.74**	**335**	P		**P**	**12 49 30.5**	**-0.7**
MAKZ				IAmb		IAmb	12 49 31.3		
	comp=Z,2.7nm,1.1s								
BTK	**Batken**	**65.50**	**323**	P		**P**	**12 49 36.4**	**0.0**
KK31	**Karatay Array**	**67.65**	**326**	P		**P**	**12 49 49.6**	**-0.3**
KK31				IAmb		IAmb	12 50 05.7		
	comp=Z,2.1nm,0.9s								
KKAR	**Karatay Array**	**67.65**	**326**	P		**P**	**12 49 49.8**	**-0.1**
KURBB	**Kurchatov Arra**	**69.15**	**336**	P		**P**	**12 49 58.8**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=149,slow=5.3,SNR=26								
	comp=Z,2.6nm,0.7s								
KURK	**Kurchatov**	**69.19**	**336**			**P**	**12 49 58.9**	**-0.4**
KURK				IAmb		IAmb	12 49 60.0		
	comp=Z,3.9nm,0.8s								
ZAA0	**Zalesovo Array**	**69.55**	**341**	IAmb		IAmb	12 50 01.3		
	comp=Z,6.0nm,0.7s								
ZALV	**Zalesovo Beam**	**69.55**	**341**	P		**P**	**12 50 00.5**	**-1.0**
	comp=Z,6.6nm,0.6s,baz=143,slow=4.8,SNR=32								
	comp=Z,6.6nm,0.6s								
ZALV	**Zalesovo Beam**	**69.55**	**341**			**P**	**12 50 00.3**	**-1.2**
PEA0B	**Petropavlovsk-**	**72.79**	**25**	P		**P**	**12 50 21.3**	**+0.1**
PEA0B				IAmb		IAmb	12 50 26.4		
	comp=Z,14nm,1.4s								
PETK	**Petropavlovsk-**	**72.79**	**25**	P		**P**	**12 50 21.1**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=254,slow=2.2,SNR=16								
	comp=Z,3.0nm,0.7s								
PETK	**Petropavlovsk-**	**72.79**	**25**	P		**P**	**12 50 20.8**	**-0.3**
BVAR	**Borovoye Array**	**74.36**	**333**	P		**P**	**12 50 30.9**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=140,slow=7.4,SNR=10								
	comp=Z,2.9nm,0.7s								
ABKAR	**Akbulak array**	**77.20**	**326**			**P**	**12 50 47.0**	**+0.3**
QSPA	**South Pole Qui**	**79.37**	**180**	P		P	12 51 04.3	+5.7
	comp=Z,1.1nm,1.1s,baz=333,slow=10.0,SNR=1.7								
	comp=Z,1.1nm,1.1s								
QSPA	**South Pole Qui**	**79.37**	**180**	P		**P**	**12 51 01.4**	**+2.8**
ARTI	**Arti**	**81.91**	**332**	P		**P**	**12 51 12.2**	**0.0**
ARTI				IAmb		IAmb	12 51 13.3		
	comp=Z,13nm,1.4s								
PDAR	**Pinedale Array**	**129.15**	**43**	PKP		**PKiKP**	**12 58 02.8**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=269,slow=2.5,SNR=1.7								

MAN ***24*** *12:46:21.0, 3°.99N×122°.85E, h600km, MS4.8*

BJI ***24*** *12:46:22.2, 3°.96N×123°.00E, h603km, mb4.8/15, mb5.0/72*

GCMT ***24*** *12:46:23.7±0.6, 4°.14N±0°.04×122°.71E±0°.05, h584km±5km, MW5.1/48, Moment Tensor Solution. s48,c65; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.44±.24; Mθθ0.44±.32; Mϕϕ 1.01±.40; Mrθ-0.93±.33; Mθϕ-0.69±.31; Mϕr-6.28±.35; Best double couple: Mo6.49100×10¹⁶ NP1:ϕs134.00000°, δ8.00000°, λ-142.00000°. NP2: ϕs7.00000°, δ85.00000°, λ-83.00000°. Principal axes: T 6.1840, Plg40.0000°, Azm91.0000°; N 0.6200, Plg7.0000°, Azm186.0000°; P -6.7970, Plg50.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

DJA ***24*** *12:46:24.1±0.1, 4°.1N±2°×12°.3E±", h565km±2km, M4.9/109, mB5.4/63, mb5.1/109, MLv5.6/33, Mw(mB)4.8/63, MwMwp4.7/5, Mwp5.1/5*

IDC ***24*** *12:46:24.4±0.5, 4°.13N×122°.78E, h589km±5km, mb4.1/41, mbtmp5.1/46, Error ellipse: s-maj=9.7km s-min=5.6km az=70.0*

GFZ ***24*** *12:46:24.3±0.2, 4°.1N±4°×12°.3E±", h574km±4km, M4.8/20, mb5.1/20*

NEIC ***24*** *12:46:24.7±1.7, 4°.09N±0°.08×122°.72E±0°.09, h587km±7km, mb4.8/92, Error ellipse: s-maj=13.0km s-min=11.3km az=106.0*

ISC 24 12:46:24.1±0.4, 4°.11N±0°.03×122°.81E±0°.05, h590km±3km, n489, σ1ᵎ43/547, mb4.8/149, 7C-15D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**2.74**	**99**	P		**P**	**12 47 38.8**	**-2.2**
SGSI				S		**S**	**12 48 41.3**	**-2.3**
GSPH	**General Santos**	**2.90**	**47**	*i* P		**P**	**12 47 42.6**	**+0.5**
GSPH				*i* S		**S**	**12 48 48.4**	**+3.0**

ZCP	**Zamboanga City**	**2.90**	**345**	*e*P		**P**	**12 47 41.6**	**-0.2**
ZCP				*e*S		**S**	**12 48 40.6**	**-4.5**
DDMP	**Don Marcelino,**	**3.50**	**55**	*i* P		**P**	**12 47 43.8**	**-1.7**
DDMP				*i* S		**S**	**12 48 44.5**	**-7.3**
TOLI2	**Tolitoli**	**3.60**	**214**			**P**	**12 47 45.1**	**-1.1**
TOLI2	**Tolitoli**	**3.60**	**214**	P		**P**	**12 47 45.4**	**-0.8**
KCP	**Kidapawan**	**3.67**	**38**	*i* P		**P**	**12 47 46.2**	**-0.5**
KCP				*i* S		**S**	**12 48 54.2**	**+0.3**
PAGZ	**Pagadian**	**3.76**	**9**	*i* P		**P**	**12 47 47.3**	**+0.1**
DMPH	**Davao City--Mi**	**3.99**	**42**	*e*P		**P**	**12 47 47.9**	**-0.9**
DMPH				*i* S		**S**	**12 48 57.5**	**-0.3**
DAV	**Davao City (W)**	**4.03**	**43**	P		**P**	**12 47 49.2**	**+0.1**
	862nm,0.7s,baz=81,slow=2.8,SNR=15								
DAV				S		**S**	**12 48 58.2**	**0.0**
	693nm,0.4s,baz=259,slow=23,SNR=15								
DAV	**Davao City (W)**	**4.03**	**43**			**P**	**12 47 49.0**	**0.0**
DAV	**Davao City (W)**	**4.03**	**43**	P		**P**	**12 47 49.9**	**+0.8**
DAV				S		**S**	**12 48 56.1**	**-2.2**
DAV	**Davao City (W)**	**4.03**	**43**	P		**P**	**12 47 49.1**	**0.0**
DAV	**Davao City (W)**	**4.03**	**43**	P		**P**	**12 47 46.0**	**-3.1**
BUKP	**Musuan**	**4.36**	**31**	*i* P		**P**	**12 47 51.2**	**-0.4**
BUKP				*e*S		**S**	**12 49 00.9**	**-1.8**
MYLDM	**Lahad Datu**	**4.43**	**284**			**P**	**12 47 52.5**	**+0.6**
MYLDM	**Lahad Datu**	**4.43**	**284**	P		**P**	**12 47 52.3**	**+0.3**
MYLDM	**Lahad Datu**	**4.43**	**284**	P		**P**	**12 47 52.8**	**+0.8**
DCPH	**Dipolog City**	**4.48**	**7**	*i* P		**P**	**12 47 52.3**	**0.0**
DCPH				*i* S		S	12 48 32.7	-32	
CGP	**Cagayan de Oro**	**4.71**	**23**	*i* P		**P**	**12 47 53.5**	**-0.5**
MPSI	**Mapaga**	**4.75**	**218**	P		**P**	**12 47 53.0**	**-1.4**
LSIP	**Lazi, Siquijor**	**5.05**	**9**	*i* P		**P**	**12 47 55.9**	**-0.9**
LSIP				*i* S		**S**	**12 49 11.0**	**-1.5**
LUWI	**Luwuk**	**5.12**	**180**			**P**	**12 47 55.0**	**-2.3**
LUWI	**Luwuk**	**5.12**	**180**	P		**P**	**12 47 55.4**	**-2.0**
	5.8nm6µm529nm,1.3s								
LUWI				S		**S**	**12 49 07.5**	**-5.9**
	5.8nm6µm529nm,1.3s								
LUWI	**Luwuk**	**5.12**	**180**	P		**P**	**12 47 55.2**	**-2.1**
APSI	**Ampana**	**5.12**	**193**	P		**P**	**12 47 56.4**	**-1.0**
	3.9nm4µm341nm,0.5s								
CDOP	**Cateel, Davao**	**5.13**	**44**	*i* P		**P**	**12 47 55.2**	**-2.2**
CDOP				*i* S		**S**	**12 49 09.6**	**-4.0**
TARAI	**Tarakan**	**5.29**	**262**	P		**P**	**12 47 58.1**	**-0.7**
BIPH	**Bislig**	**5.37**	**41**	*i* P		**P**	**12 47 57.3**	**-2.1**
BIPH				*i* S		**S**	**12 49 14.9**	**-2.2**
TNTI	**Ternate**	**5.63**	**126**			**P**	**12 48 00.5**	**-1.1**
TNTI	**Ternate**	**5.63**	**126**	P		**P**	**12 48 00.3**	**-1.3**
	3.8nm12µm1µm,1.1s								
TNTI	**Ternate**	**5.63**	**126**	P		**P**	**12 48 00.6**	**-1.1**
PCI	**Palu**	**5.80**	**211**	P		**P**	**12 48 01.7**	**-1.4**
	4.8nm14µm600nm,0.6s								
TSSP	**Tandag City**	**5.95**	**34**	*e*P		**P**	**12 48 04.2**	**-0.1**
TSSP				*e*S		**S**	**12 49 27.5**	**+1.4**
LLP	**Lapu-Lapu**	**6.27**	**10**	*e*P		**P**	**12 48 04.0**	**-3.1**
LLP				*i* S		**S**	**12 49 29.4**	**-1.9**
KKM	**Kota Kinabalu**	**6.85**	**287**			**P**	**12 48 11.5**	**-1.0**
KKM	**Kota Kinabalu**	**6.85**	**287**	P		**P**	**12 48 11.4**	**-1.0**
	3.6nm8µm1µm,1.0s								
KKM	**Kota Kinabalu**	**6.85**	**287**	P		**P**	**12 48 11.7**	**-

KNRA Kununurra 20.52 163 P 12 50 23.5 +0.5
KASI Kota Agung 20.65 243 P P 12 50 25.5 +1.2
comp=Z,140nm,0.9s
LHSI Lahat 20.82 248 P P 12 50 27.1 +1.2
comp=Z,71nm,1.1s
MNAI Manna 21.55 247 P P 12 50 30.8 -1.6
MASI Maura Aman, Be 21.79 251 P P 12 50 35.7 +1.1
comp=Z,316nm,1.0s
SDSI Sungai Dareh 21.95 257 P P 12 50 35.5 -0.5
comp=Z,45nm,1.1s
BKNI Bangkinang 22.08 261 P P 12 50 37.7 +0.6
BKNI Bangkinang 22.08 261 P P 12 50 38.4 +1.3
comp=Z,2µmcomp=Z,255nm,0.9s
BKNI Bangkinang 22.08 261 P P 12 50 37.7 +0.6
KULM Kulim 22.12 274 P 12 50 37.3 -0.2
KULM Kulim 22.12 274 P P 12 50 37.6 +0.1
FITZ Fitzroy Crossi 22.24 173 P P 12 50 39.4 +0.9
comp=Z,4.0nm,1.1s
FITZ Fitzroy Crossi 22.24 173 P P 12 50 38.5 +0.1
comp=Z,11nm,0.8s,baz=1.0,slow=7.1,SNR=34
FITZ ScP **ScP 12 56 53.8 +0.1**
comp=Z,15nm,0.7s,baz=31,slow=1.3,SNR=12
comp=Z,11nm,0.8s
PPI Padang Panjang 22.85 259 P P 12 50 43.9 -0.1
comp=Z,56nm,0.9s
PDSI Padang 22.89 258 P P 12 50 44.7 +0.3
comp=Z,34nm,0.8s
JOW Kunigami 23.19 12 P P 12 50 47.9 +1.1
MNSI Mandailing Nat 23.44 263 P P 12 50 48.5 -0.7
comp=Z,47nm,0.8s
PSI Prapat 23.88 268 P P 12 50 53.0 -0.3
comp=Z,54nm,1.0s
GULI GuiLin 24.22 332 P P 12 50 54.8 -1.2
GULI pmax pmax
comp=Z,25nm,0.9s
KCSI Kotacane, Aceh 24.99 270 P P 12 51 01.9 -1.1
comp=Z,55nm,1.2s
SLVN Son La 25.11 315 P 12 51 04.6 +0.6
MANU Manus Island 25.29 104 P P 12 51 07.3 +1.8
MBWA Marble Bar 25.29 187 P P 12 51 05.0 -0.5
GSI Gunungsitoli 25.36 264 P 12 51 04.6 -1.7
GSI Gunungsitoli 25.36 264 P P 12 51 05.0 -1.2
comp=Z,134nm,1.0s
GSI Gunungsitoli 25.36 264 P P 12 51 05.2 -1.0
WRAB Tennant Creek 26.45 155 P P 12 51 15.4 -0.3
WRAB Tennant Creek 26.45 155 P P 12 51 15.6 -0.1
WRA Warramunga Arr 26.45 155 P P 12 51 15.4 -0.3
comp=Z,38nm,0.5s,baz=335,slow=9.6,SNR=851
WRA S **S 12 55 03.4 -5.9**
comp=Z,10.0nm,0.7s,baz=336,slow=15,SNR=8.9
WRA ScP **ScP 12 57 05.6 +0.1**
comp=Z,7.1nm,0.5s,baz=338,slow=3.1,SNR=16
comp=Z,38nm,0.5s
WRA Warramunga Arr 26.45 155 P P 12 51 15.3 -0.4
WRA **ScP 12 57 05.9 +0.3**
WR8 Warramunga Arr 26.53 155 P 12 51 16.0 -0.4
GYA Guiyang 27.07 327 ⇑P **P 12 51 22.8 +1.6**
GYA pmax pmax
comp=Z,52nm,0.8s
CMAR Chiang Mai Arr 27.35 303 P P 12 51 24.4 +0.7
comp=Z,20nm,1.0s,baz=123,slow=7.1,SNR=118
CMAR PcP **PcP 12 54 23.8 +0.8**
comp=Z,5.0nm,0.9s,baz=171,slow=1.7,SNR=11
CMAR ScP **ScP 12 57 08.8 +0.4**
comp=Z,2.1nm,0.9s,baz=137,slow=1.6,SNR=10
comp=Z,20nm,1.0s
CMAR Chiang Mai Arr 27.35 303 P 12 51 23.8 +0.2
CMAR **PcP 12 54 24.3 +1.3**
WHN Wuhan 27.48 344 ⇑P **P 12 51 26.6 +2.1**
CHTO Chiang Mai 27.52 304 P 12 51 25.7 +0.6
CHTO Chiang Mai 27.52 304 P P 12 51 25.4 +0.3
comp=Z,535nmcomp=Z,62nm,1.0s
CHTO Chiang Mai 27.52 304 P P 12 51 25.9 +0.8
PMG Port Moresby 27.73 119 P P 12 51 27.1 +0.1
comp=Z,61nm,0.8s,baz=24,slow=2.5,SNR=14
comp=Z,61nm,0.8s
PMG Port Moresby 27.73 119 P 12 51 26.9 -0.1
PMG Port Moresby 27.73 119 P P 12 51 27.4 +0.4
comp=Z,88nm,1.0s
PMG Port Moresby 27.73 119 P P 12 51 27.3 +0.4
NJ2 Nanjing 28.05 353 ⇓P **P 12 51 31.0 +1.6**
NJ2 pmax pmax
comp=Z,58nm,0.9s
KMI2 Kunming 28.45 319 ⇓P **P 12 51 35.0 +1.6**
KMI2 pmax pmax
comp=Z,29nm,1.2s
ENH Enshi 28.91 336 P 12 51 37.7 +0.7
JCJ Chichijima 29.41 37 P P 12 51 39.7 -1.6
comp=Z,239nm,0.7s,baz=191,slow=2.5,SNR=13
JCJ S **S 12 55 49.1 -5.9**
comp=Z,77nm,0.6s,baz=297,slow=23,SNR=18
comp=Z,239nm,0.7s
JCJ Chichijima 29.41 37 P 12 51 40.9 -0.4
JCJ Chichijima 29.41 37 P P 12 51 41.4 +0.1
WRKA Warakurna 29.46 170 P P 12 51 41.2 -0.6
comp=Z,19nm,0.9s
QIS Mount Isa 29.54 147 P P 12 51 43.6 +1.0
comp=Z,181nm,1.0s
QIS Mount Isa 29.54 147 P P 12 51 43.5 +1.0
AS31 Alice Springs 29.65 159 P P 12 51 44.2 +0.8
comp=Z,15nm,0.5s
AS31 Alice Springs 29.65 159 IAmb IAmb 12 51 44.7
comp=Z,10nm,0.7s
ASAR Alice Springs 29.65 159 P P 12 51 44.0 +0.6
comp=Z,22nm,0.5s,baz=340,slow=7.5,SNR=327
ASAR S **S 12 55 56.6 -2.2**
comp=Z,13nm,0.7s,baz=354,slow=23,SNR=18
ASAR ScP **ScP 12 57 15.9 +0.3**
comp=Z,16nm,0.8s,baz=341,slow=2.7,SNR=22
comp=Z,22nm,0.5s
NPW Naypyitaw 30.31 303 P P 12 51 50.8 +1.6
RABL Rabaul 30.46 105 P P 12 51 51.2 +0.6
MTSU Mount Surprise 30.63 137 P P 12 51 53.2 +1.3
TNCH TengChong 31.27 314 ⇓P **P 12 51 58.6 +1.0**
TNCH pmax pmax
comp=Z,56nm,0.7s
TNCH pmax pmax
comp=Z,200nm,2.8s
LYN LuoYang 31.78 344 P P 12 52 02.1 +0.6
LYN S **S 12 56 29.8 -1.3**
LYN ScP **ScP 12 57 18.8 -3.7**
LYN pmax pmax
comp=Z,60nm,0.8s
CD2 Chengdu 32.14 328 P P 12 52 05.3 +0.6
CD2 pmax pmax
comp=Z,80nm,1.0s
TIA Tai'an 32.38 351 P P 12 52 07.0 +0.5
TIA pmax pmax
comp=Z,15nm,0.8s
XAN Xi'an 32.47 338 ⇓P **P 12 52 07.4 0.0**
XAN PcP **PcP 12 54 37.4 +1.1**
XAN S **S 12 56 40.5 -1.2**
XAN pmax pmax
comp=Z,54nm,0.9s
XAN pmax pmax
comp=Z,100nm,3.6s
XAN Xi'an 32.47 338 P P 12 52 07.8 +0.4
XAN ScP **ScP 12 57 26.1 +1.1**
CTA Charters Tower 33.30 137 P P 12 52 16.1 +1.6
comp=Z,20nm,1.4s
CTA Charters Tower 33.30 137 P P 12 52 16.0 +1.5
comp=Z,21nm,0.7s,baz=282,slow=7.8,SNR=34
CTA ScP **ScP 12 57 28.6 +0.4**
comp=Z,10nm,0.8s,baz=286,slow=2.9,SNR=7.4
comp=Z,21nm,0.7s
CTAO Charters Tower 33.30 137 P 12 52 16.1 +1.6
CTAO IAmb IAmb 12 52 17.1
comp=Z,28nm,0.8s
CTAO Charters Tower 33.30 137 P P 12 52 16.0 +1.5
CTAO ScP **ScP 12 57 29.8 +1.7**
KSRS Korea Array 33.52 7 P P 12 52 16.9 +0.8
comp=Z,3.4nm,0.7s,baz=184,slow=9.7,SNR=8.0
KSRS ScP **ScP 12 57 28.9 +0.5**
comp=Z,4.0nm,0.7s,baz=207,slow=2.3,SNR=9.0
INU Inuyama 33.75 21 P 12 52 18.2 +0.1
INU IAmb IAmb 12 52 19.6
comp=Z,13nm,0.8s
INU Inuyama 33.75 21 P P 12 52 18.4 +0.3
HNS HongShan 33.95 348 ⇓P **P 12 52 20.3 +0.6**
HNS pmax pmax
comp=Z,23nm,1.2s
TIY Taiyuan 34.77 345 P P 12 52 27.5 +0.9
TIY pmax pmax
comp=Z,48nm,0.8s
MJAR Matsushiro Arr 35.25 22 P P 12 52 30.0 -0.5
comp=Z,14nm,0.8s,baz=191,slow=8.8,SNR=37
MJAR ScP **ScP 12 57 35.8 +0.9**
comp=Z,1.2nm,0.7s,baz=124,slow=2.3,SNR=5.4
comp=Z,14nm,0.8s
MJAR Matsushiro Arr 35.25 22 P 12 52 30.1 -0.5
MAJO Matsushiro 35.25 22 P P 12 52 30.1 -0.4
MAJO IAmb IAmb 12 52 30.9
comp=Z,13nm,0.9s
MAJO Matsushiro 35.25 22 P P 12 52 30.2 -0.4
MJB9 Matsu-Tunnel 35.25 22 IAmb IAmb 12 52 31.9
comp=Z,13nm,0.9s
BJT Baijiatuau 36.25 351 P P 12 52 39.0 +0.3
BJT IAmb IAmb 12 52 40.0
comp=Z,11nm,0.7s
BJI2 Beijing 36.25 351 P P 12 52 39.1 +0.4
BJI2 pmax pmax
comp=Z,8.0nm,0.9s
LZDM Lanzhou Array 36.27 333 P P 12 52 39.9 +0.6
comp=Z,2.8nm,0.4s,baz=156,slow=11,SNR=7.8
LZDM ScP **S 12 57 40.3 +1.0**
comp=Z,4.4nm,0.6s,baz=184,slow=4.0,SNR=4.1
comp=Z,2.8nm,0.4s
LZH Lanzhou 36.31 334 P P 12 52 40.9 +1.4
LZH pmax pmax
comp=Z,82nm,1.7s
LZH pmax pmax
comp=Z,190nm,4.6s
QLP Quilpie 36.88 147 P P 12 52 45.4 +1.2
comp=Z,87nm,1.1s
NWAO Narrogin (SRO) 37.21 188 P P 12 52 47.3 +0.6
comp=Z,13nm,0.5s,baz=23,slow=7.9,SNR=25
comp=Z,13nm,0.5s
HHC Hu-ho-hao-te 37.95 346 *eP* **P 12 52 52.5 -0.3**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,71nm,4.9s
BTO2 Baotou 38.29 344 *eP* **P 12 52 57.0 +1.5**
BTO2 pP **PP 12 54 39.8 -2.8**
BTO2 S **S 12 58 14.3 +5.8**
BTO2 pmax pmax
comp=Z,23nm,1.1s
BTO2 pmax pmax
comp=Z,150nm,7.5s
BBOO Buckleboo 38.81 162 P P 12 53 00.8 +1.1
LSA Lhasa 39.31 314 P P 12 53 06.0 +1.7
LSA Lhasa 39.31 314 P P 12 53 06.3 +2.0
CN2 Changchun 39.60 3 *eP* **P 12 53 05.8 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
STKA Stephens Creek 40.00 155 P P 12 53 10.8 +1.6
comp=Z,201nm,1.0s
STKA Stephens Creek 40.00 155 P P 12 53 10.4 +1.2
comp=Z,20nm,0.5s,baz=330,slow=8.1,SNR=48
STKA ScP **ScP 12 57 52.8 -0.2**
comp=Z,8.0nm,0.8s,baz=313,slow=4.9,SNR=7.9
STKA S **S 12 58 31.3 -2.2**
comp=Z,5.8nm,0.8s,baz=140,slow=19,SNR=7.9
comp=Z,20nm,0.5s
JTM Tenmabayashi 40.04 22 P 12 53 08.9 -0.5
JTM IAmb IAmb 12 53 10.7
comp=Z,29nm,0.7s
XLT XiLinHaoTe 40.07 352 *eP* **P 12 53 10.0 +0.3**
XLT pmax pmax
comp=Z,19nm,1.0s
EIDS Eidsvold 40.14 138 P P 12 53 11.3 +0.9
comp=Z,50nm,1.1s
EIDS Eidsvold 40.14 138 P 12 53 11.2 +0.7
EIDS IAmb IAmb 12 53 12.1
comp=Z,52nm,1.1s
HTT Hallett 40.33 159 P P 12 53 13.4 +1.6
comp=Z,19nm,0.9s
BOK Bokaro 40.63 302 *eP* **P 12 53 16.1 +1.7**
BOK IAmb IAmb 12 53 17.6
comp=Z,9.0nm,0.7s
USA0B Ussuriysk Arra 40.74 10 P P 12 53 15.2 +0.4
USRK Ussuriysk Ar. 40.74 10 P P 12 53 15.4 +0.6
comp=Z,6.0nm,0.6s,baz=200,slow=5.5,SNR=16
comp=Z,6.0nm,0.6s
USRK Ussuriysk Ar. 40.74 10 P P 12 53 15.3 +0.5
MDJ Mudanjiang 40.78 7 P P 12 53 16.3 +1.1
MDJ pmax pmax
comp=Z,25nm,1.2s
GTA2 Gaotai 40.95 332 P P 12 53 18.0 +1.2
GTA2 PcP **PcP 12 55 04.0 +1.4**
GTA2 ScP **ScP 12 57 58.3 +1.4**
GTA2 PcS **PcS 12 58 48.6 -6.2**
GTA2 ScS **SS 13 02 13.3 +0.1**
GTA2 pmax pmax
comp=Z,72nm,0.9s
VIS Vishakhapatnam 40.95 292 *eP* **P 12 53 18.2 +1.2**
VIS IAmb IAmb 12 53 19.3
comp=Z,20nm,1.0s
RAGD RAYAGADA 41.24 295 *eP* **P 12 53 20.2 +0.9**
GAYA Gaya 41.58 303 *eP* **P 12 53 22.7 +0.9**
GAYA IAmb IAmb 12 53 23.5
comp=Z,26nm,0.9s
CMSA Cobar Meteorol 41.61 150 P P 12 53 23.9 +2.0
comp=Z,70nm,0.9s
BNX BinXian 41.66 5 ⇓P **P 12 53 22.6 +0.5**
BNX pmax pmax
comp=Z,7.0nm,1.1s
BLSP Bilaspur 43.23 298 *eP* **P 12 53 35.4 +0.6**
BLSP IAmb IAmb 12 53 37.5
comp=Z,20nm,0.8s
ASAJ Asahikawa 43.50 21 P P 12 53 37.8 +1.3
comp=Z,26nm,0.7s,baz=238,slow=7.6,SNR=40
comp=Z,26nm,0.7s
JKA Kamikawa-asahi 43.50 21 P 12 53 37.4 +1.0
JKA IAmb IAmb 12 53 38.2
comp=Z,22nm,0.7s
ARMA Armidale 44.02 143 P 12 53 43.5 +2.6
ARPS Mount Arapiles 44.38 158 P P 12 53 44.6 +1.3
comp=Z,30nm,1.1s
ALBI Allahabad 44.64 302 *eP* **P 12 53 45.9 +0.3**
MGBR Mount Gambier 44.78 160 P P 12 53 48.2 +1.8
SALM Salem 44.82 282 *eP* **P 12 53 48.0 +0.9**
HIA Hailar 45.07 357 P P 12 53 49.5 +1.0
HYB Hyderabad 45.32 290 *eP* **P 12 53 51.5 +0.5**
HILR Hailar Array B 45.36 357 P P 12 53 51.5 +0.8
comp=Z,28nm,0.6s,baz=171,slow=10,SNR=19
comp=Z,28nm,0.6s
KOD Kodaikanal 45.37 280 *eP* **P 12 53 52.0 +0.4**
ULN Ulaanbaatar 45.65 345 P 12 53 53.8 +0.7
ULN IAmb IAmb 12 53 54.9
comp=Z,26nm,0.8s
ULN Ulaanbaatar 45.65 345 P P 12 53 53.7 +0.6
comp=Z,1µmcomp=Z,126nm,0.9s
ULN Ulaanbaatar 45.65 345 P P 12 53 54.0 +0.8
ULN PcP **PcP 12 55 19.4 +0.8**
ULN ScP **ScP 12 58 17.2 +1.2**
SONM Songino Array 45.80 345 P P 12 53 55.0 +0.8
comp=Z,24nm,0.8s,baz=160,slow=8.8,SNR=99
SONM PcP **PcP 12 55 18.7 -0.4**
comp=Z,3.6nm,0.8s,baz=152,slow=2.8,SNR=4.8
SONM ScP **ScP 12 58 17.1 +0.6**
comp=Z,3.8nm,0.8s,baz=158,slow=4.6,SNR=10
comp=Z,24nm,0.8s
SONM Songino Array 45.80 345 P 12 53 54.6 +0.4
SONM IAmb IAmb 12 53 55.8
comp=Z,26nm,0.8s
SONM **ScP 12 58 12.8 -3.7**
HEH HeiHe 46.15 4 *eP* **P 12 53 56.8 +0.2**
HEH pmax pmax
comp=Z,23nm,1.2s
CAN Canberra 46.29 150 P P 12 54 00.3 +2.3
comp=Z,97nm,1.1s
CAN Canberra 46.29 150 P P 12 54 00.1 +2.1
CAN ScP **ScP 12 58 19.9 +1.2**
CNB Canberra Magne 46.47 150 P P 12 54 01.6 +2.2
comp=Z,0.9nm,1.1s
TOO Toolangi 46.52 155 P P 12 54 02.1 +2.4
comp=Z,9.9nm,1.1s
TOO Toolangi 46.52 155 P 12 54 01.6 +1.9
AKL Akola 47.46 294 *i* x **P 12 54 07.8 +0.7**
PTH Pithoragarh 47.59 307 *eP* **P 12 54 07.9 -0.1**
PTH *i* x x 12 55 26.4
MILA Mila 47.75 151 P P 12 54 10.3 +1.4
BHPL Bhopal 47.76 298 *eP* **P 12 54 09.3 +0.1**
BHPL IAmb IAmb 12 54 10.6
comp=Z,48nm,0.9s
GUNA GUNA 48.25 300 *eP* **P 12 54 12.9 0.0**
UTK UTTARKASHI 49.44 308 *eP* **P 12 54 22.4 +0.7**
NDI New Delhi 49.67 305 *eP* **P 12 54 22.3 -0.9**
KLP Kalpa 49.92 308 *eP* **P 12 54 26.4 +1.0**
KLP IAmb IAmb 12 54 28.5
comp=Z,42nm,0.4s
TLY Talaya 50.04 345 P 12 54 26.6 +1.0
TLY IAmb IAmb 12 54 27.6
comp=Z,16nm,0.7s
TLY Talaya 50.04 345 P P 12 54 26.5 +1.0
KUDL Kundal 50.08 304 *eP* **P 12 54 25.3 -0.9**
WMQ Urumqi 50.23 327 ⇓P **P 12 54 28.1 +1.0**
WMQ PcP **PcP 12 55 30.6 -4.8**
WMQ PP **PP 12 56 30.9 -0.1**
WMQ pmax pmax
comp=Z,32nm,1.1s
WMQ pmax pmax
comp=Z,170nm,3.8s
WMQ Urumqi 50.23 327 P P 12 54 29.1 +1.9
SMLA Simla 50.61 307 *eP* **P 12 54 30.9 +0.9**
SMLA IAmb IAmb 12 54 33.7
comp=Z,68nm,0.6s
AJM Ajmer 51.11 301 *eP* **P 12 54 33.7 0.0**
AJM *i* x x 12 55 39.1
UDPR Udaipur 51.39 298 *eP* **P 12 54 36.3 +0.4**
DHRM DHARAMSHALA 51.73 308 *eP* **P 12 54 38.8 +0.5**
ZSN Zaisan 54.12 329 *eP* **P 12 54 55.4 +0.7**
SHLS Shalkode 54.60 322 *eP* **P 12 54 57.3 -1.1**
comp=Z,28nm,0.8s
NIL Nilore 54.62 309 P 12 54 59.0 +0.4
NIL IAmb IAmb 12 55 00.0
comp=Z,90nm,1.4s
UZB Uzynbulak 54.87 322 ⇓*i*P **P 12 55 00.8 +0.5**
comp=Z,15nm,0.8s
PRZ Przheval'sk 54.90 321 IAmb IAmb 12 55 03.5
comp=Z,62nm,0.8s
MKAR Makanchi Array 55.06 327 P P 12 55 02.1 +0.7
comp=Z,36nm,0.6s,baz=123,slow=8.5,SNR=279
MKAR PcP **PcP 12 55 53.6 -0.1**
comp=Z,20nm,0.7s,baz=125,slow=4.2,SNR=16
MKAR ScP **ScP 12 58 56.4 -0.1**
comp=Z,4.3nm,0.8s,baz=121,slow=4.9,SNR=6.0
comp=Z,36nm,0.6s
MKAR Makanchi Array 55.06 327 P P 12 55 02.2 +0.8
MKAR **PcP 12 55 53.9 +0.1**
KSH2 Kashi 55.16 316 P P 12 55 03.3 +0.9
KSH2 pmax pmax
comp=Z,29nm,0.9s
SATY Saty 55.20 321 ⇓*i*P **P 12 55 03.4 +0.8**
comp=Z,39nm,0.9s
MAKZ Makanchi 55.24 327 P 12 55 03.1 +0.5
MAKZ IAmb IAmb 12 55 04.2
comp=Z,76nm,1.2s
MAKZ Makanchi 55.24 327 P P 12 55 03.3 +0.7
MAKZ PcP **PcP 12 55 54.7 +0.2**
KPKS Kokpek 55.25 322 *eP* **P 12 55 03.7 +0.9**
KDJ Kajisay 55.50 320 IAmb IAmb 12 55 07.0
comp=Z,52nm,0.9s
MDOK Medeo 56.11 321 *eP* **P 12 55 09.5 +0.7**
TNSS Tian-Shan 56.11 321 *eP* **P 12 55 09.6 +0.5**
AAA Alma-Ata 56.21 321 *eP* **P 12 55 10.2 +0.8**
comp=Z,41nm,0.8s
TDK Taldyqorghan 56.24 323 *eP* **P 12 55 10.4 +0.8**
comp=Z,35nm,0.8s
BOOM Boomskoye usch 56.48 320 IAmb IAmb 12 55 13.5
comp=Z,36nm,1.2s
PEA0B Petropavlovsk- 56.63 24 P P 12 55 13.4 +1.4
PETK Petropavlovsk- 56.63 24 P P 12 55 13.0 +1.0
comp=Z,3.0nm,0.4s,baz=228,slow=3.6,SNR=12
comp=Z,3.0nm,0.4s
PETK Petropavlovsk- 56.63 24 P P 12 55 13.3 +1.3
TKM2 Tokmak 2 56.91 320 P P 12 55 15.3 +0.9
SNR=23
KUU Kurty 56.92 321 *eP* **P 12 55 15.0 +0.8**
comp=Z,26nm,0.9s
PET Petropavlovsk 56.96 25 P P 12 55 15.6 +1.3
KBK Karagaybulak 57.20 319 P P 12 55 17.9 +1.5
SNR=7.6
MANEM Manem 57.27 313 IAmb IAmb 12 55 20.1
comp=Z,54nm,0.7s
UCH Uchtor 57.28 319 P P 12 55 19.0 +1.7
SNR=7.3
AAK Ala-Archa 57.49 319 P P 12 55 19.4 +1.2
comp=Z,20nm,0.8s,baz=126,slow=5.5,SNR=26
AAK PcP **PcP 12 56 03.5 -0.1**
comp=Z,10nm,0.6s,baz=100,slow=2.5,SNR=5.9
comp=Z,20nm,0.8s
AAK Ala-Archa 57.49 319 P P 12 55 19.5 +1.2
SNR=13
AAK Ala-Archa 57.49 319 *i* P **P 12 55 19.2 +1.0**
SNR=14
AAK Ala-Archa 57.49 319 P P 12 55 19.8 +1.5
AAK PcP **PcP 12 56 04.2 +0.6**
USP Ospenovka 57.78 320 P P 12 55 20.9 +0.8
SNR=44
SGDS Sogindy 57.78 320 *eP* **P 12 55 20.6 +0.5**
ARSB Arslanbob 57.90 317 IAmb IAmb 12 55 23.0
comp=Z,54nm,1.0s
DRK Karamyk 57.94 315 IAmb IAmb 12 55 23.6
comp=Z,55nm,0.8s
EKS2 Erkin-Say 57.97 319 P P 12 55 22.7 +1.2
SNR=31
YAK Yakutsk 58.02 4 P 12 55 22.0 +0.8
YAK IAmb IAmb 12 55 22.5
comp=Z,45nm,0.8s
KBL Kabul 58.21 308 P 12 55 23.7 +0.3
KBL IAmb IAmb 12 55 24.6
comp=Z,44nm,0.8s
ZAA0 Zalesovo Array 58.53 335 IAmb IAmb 12 55 25.5
comp=Z,32nm,1.1s
ZALV Zalesovo Beam 58.53 335 P P 12 55 24.6 -0.2
comp=Z,17nm,0.8s,baz=122,slow=5.7,SNR=77
ZALV PcP **PcP 12 56 06.2 -1.1**
comp=Z,5.4nm,0.6s,baz=134,slow=4.3,SNR=6.5
ZALV ScP **ScP 12 59 11.0 -0.6**
comp=Z,0.8nm,0.5s,baz=150,slow=5.7,SNR=2.5
ZALV S **S 13 02 40.2 -4.0**
comp=Z,3.1nm,1.0s,baz=133,slow=12,SNR=9.9
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 58.53 335 P P 12 55 24.4 -0.5
ZALV PcP **PcP 12 56 05.2 -2.1**
BTLS Baital 58.92 321 *eP* **P 12 55 28.4 +0.7**
KURBB Kurchatov Arra 59.35 329 P P 12 55 30.6 +0.2
comp=Z,41nm,0.7s,baz=126,slow=6.3,SNR=302
KURBB PcP **PcP 12 56 10.6 -0.1**
comp=Z,3.9nm,0.6s,baz=128,slow=5.6,SNR=5.1
KURBB S **S 13 02 51.0 -3.7**
comp=Z,0.8nm,0.9s,baz=142,slow=12,SNR=5.3
comp=Z,41nm,0.7s
KURK Kurchatov 59.36 329 P 12 55 30.9 +0.4
KURK Kurchatov 59.36 329 P P 12 55 30.8 +0.3
KURK PcP **PcP 12 56 10.9 +0.2**
CHGR Chuyangaron 59.53 313 P 12 55 32.2 +0.2
DZA Taraz 59.68 318 *eP* **P 12 55 33.2 +0.4**
SHAA Shahritus 59.91 311 IAmb IAmb 12 55 57.8
comp=Z,27nm,1.0s
IUG Iuzhnay 60.25 317 ⇓*i*P **P 12 55 37.3 +0.6**
comp=Z,28nm,0.5s
KK31 Karatay Array 60.32 318 P P 12 55 37.3 +0.3
KK31 IAmb IAmb 12 55 38.4
comp=Z,34nm,0.8s
KKAR Karatay Array 60.32 318 P P 12 55 37.2 +0.2
CHM Chimkent 60.61 317 *eP* **P 12 55 39.7 +0.7**
comp=Z,14nm,0.7s
BRLS Borolday 60.74 318 *eP* **P 12 55 40.2 +0.4**
comp=Z,19nm,0.8s
MSZ Milford Sound 63.10 145 P P 12 55 56.5 +1.6
JCZ Jackson Bay 63.23 145 P P 12 55 57.2 +1.2
HRA Herat 63.55 306 P P 12 55 57.6 -0.8
HRA IAmb IAmb 12 55 59.5
comp=Z,30nm,1.4s
HRA PcP **PcP 12 56 28.9 +0.3**
QRZ Quartz Range 63.70 140 P P 12 56 00.4 +1.5
DSZ Denniston Nort 63.73 141 P P 12 56 00.9 +1.8
INZ Inchbonnie 64.04 142 P P 12 56 03.2 +2.2
MRNZ Matariki Terra 64.15 140 P P 12 56 02.3 +0.6
TOZ Tahuroa Road 64.15 136 P P 12 56 04.0 +2.2
EAZ Earnscleugh 64.22 145 P P 12 56 03.0 +0.9
LBZ Lake Benmore 64.23 144 P P 12 56 03.0 +0.8
RPZ Rata Peaks 64.36 143 P P 12 56 03.9 +0.9
THZ Tophouse 64.44 140 P P 12 56 03.9 +0.3
NNZ Nelson 64.45 140 P P 12 56 04.2 +0.6
APZ The Paps 64.47 147 P P 12 56 04.7 +1.0
ARCZ Arundel 64.57 143 P P 12 56 05.1 +0.7
MHCZ Mount Hutt 64.57 143 P P 12 56 05.0 +0.7
LTZ Lake Taylor 64.58 142 P P 12 56 05.3 +0.8
DUWZ D'Urville Isla 64.59 139 P P 12 56 05.7 +1.2
BVAR Borovoye Array 64.90 328 P P 12 56 06.3 0.0
comp=Z,28nm,0.9s,baz=138,slow=7.8,SNR=89
comp=Z,28nm,0.9s
TUWZ Tuamarina 64.92 140 P P 12 56 07.4 +0.8

OTVZ	**Oturere**	**64.94**	**137**	P	**P**	**12 56 09.2**	**+2.2**
WNVZ	**Wahianoa**	**64.98**	**137**	P	**P**	**12 56 08.7**	**+1.5**
MOVZ	**Moawhango**	**65.12**	**137**	P	**P**	**12 56 08.7**	**+0.7**
GVZ	**Greta Valley S**	**65.16**	**142**	P	**P**	**12 56 09.4**	**+1.3**
KHZ	**Kahutara**	**65.18**	**141**	P	**P**	**12 56 08.3**	**+0.2**
MRHZ	**Matea Rd**	**65.30**	**136**	P	**P**	**12 56 10.2**	**+1.1**
BHHZ	**Black Hill Sta**	**65.37**	**137**	P	**P**	**12 56 10.4**	**+0.9**
OGWZ	**Otaki Gorge**	**65.42**	**139**	P	**P**	**12 56 09.9**	**+0.3**
URZ	**Urewera**	**65.52**	**135**	P	**P**	**12 56 10.8**	**+0.5**
TSZ	**Takapari Road**	**65.57**	**138**	P	**P**	**12 56 11.0**	**+0.2**
KWHZ	**Kaweka Forest**	**65.58**	**137**	P	**P**	**12 56 12.0**	**+1.1**
RTZ	**Ruatahuna**	**65.59**	**136**	P	**P**	**12 56 11.2**	**+0.3**
RTZ	**Ruatahuna**	**65.59**	**136**	P	**P**	**12 56 11.8**	**+0.9**
MTHZ	**Maungataniwha**	**65.61**	**136**	P	**P**	**12 56 12.0**	**+1.1**
MRZ	**Mangatainoka R**	**65.61**	**138**	P	**P**	**12 56 10.7**	**-0.2**
KRHZ	**Kereru**	**65.65**	**137**	P	**P**	**12 56 12.2**	**+0.9**
NMHZ	**Naumai**	**65.69**	**136**	P	**P**	**12 56 13.6**	**+2.0**
RUGZ	**Raukumara Rang**	**65.79**	**135**	P	**P**	**12 56 12.2**	**0.0**
RAHZ	**Arahi**	**65.80**	**136**	P	**P**	**12 56 14.0**	**+1.8**
RAGZ	**Rawiri**	**65.84**	**135**	P	**P**	**12 56 13.7**	**+1.2**
PLWZ	**Palliser**	**65.84**	**139**	P	**P**	**12 56 12.7**	**+0.3**
MWZ	**Matawai**	**65.85**	**135**	P	**P**	**12 56 13.4**	**+0.9**
BFZ	**Birch Farm**	**66.06**	**138**	P	**P**	**12 56 14.6**	**+0.9**
BFZ				IAmb	IAmb	12 58 03.8	
	comp=Z,69nm,1.3s						
BFZ	**Birch Farm**	**66.06**	**138**	P	**P**	**12 56 14.4**	**+0.7**
KAHZ	**Kahuranaki**	**66.07**	**137**	P	**P**	**12 56 14.6**	**+0.8**
TWGZ	**Tauwhareparae**	**66.09**	**135**	P	**P**	**12 56 15.4**	**+1.4**
TKGZ	**Te Karaka**	**66.12**	**135**	P	**P**	**12 56 15.5**	**+1.4**
PXZ	**Pawanui**	**66.17**	**137**	P	**P**	**12 56 15.3**	**+1.0**
RIGZ	**Rimuhau**	**66.18**	**136**	P	**P**	**12 56 15.6**	**+1.1**
CNGZ	**Carnagh Statio**	**66.39**	**135**	P	**P**	**12 56 16.9**	**+1.1**
SOHO	**SOHO**	**66.70**	**294**	P	**P**	**12 56 17.3**	**-0.7**
UOSS	**Minazif**	**67.09**	**295**	P	**P**	**12 56 19.5**	**-0.9**
HATD	**Hatta, Dubai**	**67.14**	**295**	*i* P	**P**	**12 56 20.4**	**-0.3**
	SNR=6.4						
MSFE	**Esma-Masafi**	**67.17**	**296**	P	**P**	**12 56 21.8**	**+0.9**
ASHO	**Ashiyiah**	**67.19**	**295**	*i* P	**P**	**12 56 20.6**	**-0.4**
	SNR=7.1						
SHME	**Shamm**	**67.27**	**296**	P	**P**	**12 56 21.3**	**-0.2**
ALNE	**Al Ain**	**67.41**	**294**	*i* P	**P**	**12 56 21.7**	**-0.7**
	SNR=8.5						
TIXI	**Tiksi**	**67.56**	**2**	P	**P**	**12 56 21.9**	**-0.4**
TIXI				IAmb	IAmb	12 56 22.8	
	comp=Z,16nm,0.7s						
NAZ	**Nazwa, Dubai**	**67.58**	**295**	P	**P**	**12 56 23.1**	**-0.3**
FAQ	**Al Faqa, Dubai**	**67.62**	**295**	P	**P**	**12 56 23.2**	**-0.4**
ASUD	**Al Ashush, Dub**	**67.84**	**295**	P	**P**	**12 56 25.2**	**+0.2**
NRIK	**Noril'sk**	**69.17**	**347**	P	**P**	**12 56 32.4**	**+0.3**
	comp=Z,22nm,0.7s,baz=131,slow=5.7,SNR=25						
	comp=Z,22nm,0.7s						
NRIK	**Noril'sk**	**69.17**	**347**		**P**	**12 56 31.7**	**-0.3**
NRIK				IAmb	IAmb	12 56 33.3	
	comp=Z,24nm,0.7s						
MZR	**Muzera**	**69.39**	**293**	*i* P	**P**	**12 56 34.3**	**-0.1**
	SNR=16						
AB31	**Akbulak array**	**69.40**	**321**		**P**	**12 56 33.8**	**0.0**
AB31				IAmb	IAmb	12 56 34.9	
	comp=Z,25nm,0.8s						
ABKAR	**Akbulak array**	**69.40**	**321**	P	**P**	**12 56 33.8**	**0.0**
CASY	**Casey**	**70.78**	**185**	P	**P**	**12 56 42.4**	**+0.8**
AKTO	**Aktyubinsk**	**70.95**	**322**	P	**P**	**12 56 43.1**	**+0.1**
	comp=Z,20nm,0.3s,baz=104,slow=5.8,SNR=111						
	comp=Z,20nm,0.3s						
ARTI	**Arti**	**72.63**	**328**	P	**P**	**12 56 52.0**	**-0.5**
	comp=Z,16nm,0.7s,baz=128,slow=4.4,SNR=15						
ARTI				PP	**PP**	**12 59 46.7**	**+1.7**
	comp=Z,2.8nm,0.7s,baz=118,slow=9.6,SNR=4.3						
	comp=Z,16nm,0.7s						
ARTI	**Arti**	**72.63**	**328**	P	**P**	**12 56 52.1**	**-0.4**
ARTI				IAmb	IAmb	12 56 52.7	
	comp=Z,28nm,0.8s						
RAYN	**Ar Rayn**	**76.74**	**293**	*i* P	**P**	**12 57 15.6**	**-0.7**
	SNR=28						
RAYN	**Ar Rayn**	**76.74**	**293**		**P**	**12 57 16.0**	**-0.3**
RAYN				IAmb	IAmb	12 57 17.4	
	comp=Z,31nm,0.9s						
RAYN	**Ar Rayn**	**76.74**	**293**	P	**P**	**12 57 16.2**	**-0.1**
BELG	**Belogornoye**	**77.73**	**323**	P	**P**	**12 57 20.6**	**-0.3**
	comp=Z,66nm,0.9s,baz=306,slow=0.5,SNR=19						
	comp=Z,66nm,0.9s						
KIRV	**Kirov**	**77.88**	**329**	P	**P**	**12 57 21.2**	**-0.4**
	comp=Z,31nm,0.7s,baz=104,slow=3.6,SNR=13						
	comp=Z,31nm,0.7s						
GNI	**Garni**	**78.25**	**310**	P	**P**	**12 57 23.7**	**-0.6**
	comp=Z,5.7nm,0.5s,baz=116,slow=1.6,SNR=6.6						
	comp=Z,5.7nm,0.5s						
GNI	**Garni**	**78.25**	**310**	P	**P**	**12 57 24.0**	**-0.3**
	comp=Z,21nm,0.9s						
VOI	**Vohitsoka**	**78.62**	**247**	P	**P**	**12 57 26.1**	**-0.4**
VOI				IAmb	IAmb	12 57 26.9	
	comp=Z,37nm,0.7s						
SDPT	**Sand Point**	**79.08**	**34**	P	**P**	**12 57 28.5**	**+0.4**
SDPT				IAmb	IAmb	12 57 29.9	
	comp=Z,50nm,0.9s						
GEVA	**Gevas**	**79.43**	**308**	IAmb	IAmb	12 57 32.3	
	comp=Z,54nm,0.8s						
KBZ	**Khabaz**	**79.89**	**314**	P	**P**	**12 57 32.4**	**-0.2**
	comp=Z,11nm,0.9s,baz=119,slow=1.5,SNR=17						
	comp=Z,11nm,0.9s						
KIV	**Kislovodsk**	**80.05**	**314**	P	**P**	**12 57 33.2**	**-0.4**
	comp=Z,18nm,1.3s						
M16K	**Timber Creek**	**80.72**	**29**	IAmb	IAmb	12 57 39.4	
	comp=Z,12nm,0.7s						
KOPT	**Kop Dagi**	**81.49**	**310**	IAmb	IAmb	12 57 44.3	
	comp=Z,18nm,1.0s						
ACHA	**Angle Creek He**	**82.23**	**32**	P	**P**	**12 57 45.1**	**+0.7**
MAW	**Mawson**	**82.78**	**200**	P	**P**	**12 57 48.0**	**+1.2**
	comp=Z,1.4nm,2.8s						
MAW	**Mawson**	**82.78**	**200**	P	**P**	**12 57 47.3**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=48,slow=6.7,SNR=9.9						
	comp=Z,4.3nm,0.7s						
MAW	**Mawson**	**82.78**	**200**		**P**	**12 57 47.7**	**+0.9**
ARPR	**Arapgir-MALATY**	**83.14**	**309**	IAmb	IAmb	12 57 52.0	
	comp=Z,56nm,1.3s						
OHAK	**Old Harbor**	**83.26**	**33**	P	**P**	**12 57 50.6**	**+1.1**
IMAR	**Indian Mountai**	**83.59**	**24**	P	**P**	**12 57 52.2**	**+1.2**
KDAK	**Kodiak Island**	**83.66**	**32**	P	**P**	**12 57 53.5**	**+2.0**
KDAK				IAmb	IAmb	13 01 11.6	
	comp=Z,23nm,1.5s						
GAZ	**Gaziantep**	**84.04**	**307**	IAmb	IAmb	12 57 55.4	
	comp=Z,46nm,1.1s						
VNDA	**Vanda**	**84.31**	**172**	P	**P**	**12 57 55.1**	**+0.9**
OBN	**Obninsk**	**84.50**	**325**	P	**P**	**12 57 55.4**	**-0.3**
	comp=Z,14nm,0.3s,baz=60,slow=4.0,SNR=13						
	comp=Z,14nm,0.3s						
OBN	**Obninsk**	**84.50**	**325**	P	**P**	**12 57 55.5**	**-0.1**
	comp=Z,49nm,1.2s						
KIBK	**Kibwezi**	**84.95**	**267**	P	**P**	**12 57 58.8**	**0.0**
KIBK				IAmb	IAmb	12 58 00.8	
	comp=Z,21nm,1.0s						
LVZ	**Lovozero**	**85.53**	**338**	P	**P**	**12 57 59.2**	**-1.2**
	comp=Z,21nm,1.2s						
MMAI	**Mount Meron Ar**	**85.61**	**303**	P	**P**	**12 58 02.1**	**+0.4**
	comp=Z,16nm,0.7s,baz=65,slow=8.4,SNR=8.7						
	comp=Z,16nm,0.7s						
CY604	**RAF Akrotiri,**	**86.31**	**304**	P	**P**	**12 58 05.2**	**+0.8**
ILAR	**Eielson Array**	**86.44**	**25**	P	**P**	**12 58 03.4**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=249,slow=4.9,SNR=12						
ILAR				pP	**pP**	**13 00 11.9**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=258,slow=5.4,SNR=5.3						
	comp=Z,0.7nm,0.6s						
BRTR	**Keskin Array B**	**86.77**	**309**	P	**P**	**12 58 06.3**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=124,slow=4.9,SNR=14						
BRTR				PP	**PP**	**13 01 40.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=97,slow=4.2,SNR=4.3						
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**86.77**	**309**		**P**	**12 58 05.8**	**-1.3**
ARA0	**ARCESS Array S**	**88.74**	**340**	*e*P	**P**	**12 58 14.8**	**-0.6**
ARA0				IAmb	IAmb	12 58 15.2	
	comp=Z,11nm,0.9s						
ARCES	**ARCESS Array B**	**88.74**	**340**	P	**P**	**12 58 14.8**	**-0.6**
	comp=Z,6.6nm,0.8s,baz=86,slow=6.0,SNR=18						
	comp=Z,6.6nm,0.8s						
AK09	**Malin Array Si**	**89.10**	**321**	P	**P**	**12 58 16.4**	**-1.0**
AK08	**Malin Array Si**	**89.11**	**321**	P	**P**	**12 58 16.6**	**-0.9**
AK10	**Malin Array Si**	**89.12**	**320**	P	**P**	**12 58 16.7**	**-0.8**
AK03	**Malin Array Si**	**89.13**	**321**	P	**P**	**12 58 16.7**	**-0.9**
AKASG	**Malin Array Be**	**89.13**	**321**	P	**P**	**12 58 16.7**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=71,slow=4.3,SNR=13						
AKASG				pP	**pP**	**13 00 25.8**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=81,slow=3.6,SNR=1.9						
	comp=Z,2.6nm,0.5s						
AKASG	**Malin Array Be**	**89.13**	**321**	P	**P**	**12 58 16.3**	**-1.2**
AKASG				IAmb	IAmb	12 58 17.7	
	comp=Z,7.0nm,1.1s						
AKBB	**Malin Array Si**	**89.13**	**321**	IAmb	IAmb	12 58 17.4	
	comp=Z,8.1nm,0.9s						
AKBB	**Malin Array Si**	**89.13**	**321**	P	**P**	**12 58 16.7**	**-0.9**
AK01	**Malin Array Si**	**89.14**	**321**	P	**P**	**12 58 16.4**	**-1.2**
KIEV	**Kiev**	**89.14**	**321**		**P**	**12 58 16.9**	**-0.7**
KIEV	**Kiev**	**89.14**	**321**	P	**P**	**12 58 16.7**	**-0.9**
	comp=Z,39nm,1.1s						
AK02	**Malin Array Si**	**89.14**	**321**	P	**P**	**12 58 16.5**	**-1.1**
AK05	**Malin Array Si**	**89.15**	**321**	P	**P**	**12 58 16.5**	**-1.2**
AK06	**Malin Array Si**	**89.16**	**320**	P	**P**	**12 58 16.8**	**-0.9**
AK07	**Malin Array Si**	**89.16**	**320**	P	**P**	**12 58 16.8**	**-0.9**
AK04	**Malin Array Si**	**89.16**	**321**	P	**P**	**12 58 16.9**	**-0.8**
AK11	**Malin Array Si**	**89.17**	**321**	P	**P**	**12 58 16.9**	**-0.8**
AK12	**Malin Array Si**	**89.18**	**321**	P	**P**	**12 58 16.9**	**-0.9**
AK23	**Malin Array Si**	**89.19**	**321**	P	**P**	**12 58 17.0**	**-0.8**
AK15	**Malin Array Si**	**89.19**	**321**	P	**P**	**12 58 17.0**	**-0.9**
AK16	**Malin Array Si**	**89.21**	**321**	P	**P**	**12 58 17.1**	**-0.8**
AK14	**Malin Array Si**	**89.21**	**321**	P	**P**	**12 58 17.1**	**-0.8**
AK22	**Malin Array Si**	**89.22**	**321**	P	**P**	**12 58 17.1**	**-0.9**
AK18	**Malin Array Si**	**89.22**	**321**	P	**P**	**12 58 17.1**	**-0.9**
AK17	**Malin Array Si**	**89.23**	**321**	P	**P**	**12 58 17.2**	**-0.9**
AK21	**Malin Array Si**	**89.24**	**321**	P	**P**	**12 58 17.2**	**-0.9**
AK13	**Malin Array Si**	**89.24**	**321**	P	**P**	**12 58 17.2**	**-0.9**
AK20	**Malin Array Si**	**89.26**	**321**	P	**P**	**12 58 17.3**	**-0.9**
AK19	**Malin Array Si**	**89.26**	**321**	P	**P**	**12 58 17.3**	**-0.9**
SPA0	**Spitsbergen Ar**	**89.35**	**349**	*e*P	**P**	**12 58 18.1**	**-0.1**
SPA0				IAmb	IAmb	12 58 18.6	
	comp=Z,37nm,0.9s						
SPITS	**Spitsbergen Ar**	**89.35**	**349**	P	**P**	**12 58 18.0**	**-0.1**
	comp=Z,12nm,0.5s,baz=96,slow=8.5,SNR=28						
	comp=Z,12nm,0.5s						
FIA1	**FINESS Array S**	**89.64**	**331**	P	**P**	**12 58 19.3**	**-0.4**
FINES	**FINESS Array B**	**89.64**	**331**	P	**P**	**12 58 18.9**	**-0.9**
	comp=Z,9.0nm,0.6s,baz=59,slow=5.5,SNR=40						
	comp=Z,9.0nm,0.6s						
FINES	**FINESS Array B**	**89.64**	**331**	P	**P**	**12 58 19.1**	**-0.6**
KBS	**Kingsbay**	**89.94**	**350**	*i* P	**P**	**12 58 18.0**	**-2.8**
SORM	**Soroca**	**89.95**	**318**	⇓P	**P**	**12 58 20.2**	**-1.2**
LUBAR	**Lubar, Ukraine**	**90.14**	**320**	P	**P**	**12 58 21.1**	**-1.2**
JETT	**Jettan, Norway**	**90.50**	**340**	*e*P	**P**	**12 58 22.7**	**-0.8**
JETT				IAmb	IAmb	12 58 23.3	
	comp=Z,21nm,0.8s						
RNPP9	**Sopachiv**	**91.14**	**322**	P	**P**	**12 58 26.3**	**-0.5**
KMPD	**K-Podol'skiy**	**91.15**	**319**	P	**P**	**12 58 25.2**	**-1.8**
TESR	**Tescani**	**91.29**	**317**	⇑P	**P**	**12 58 27.6**	**-0.1**
VRI	**Vrincioaia**	**91.32**	**316**	⇓P	**P**	**12 58 27.4**	**-0.4**
SAHR	**Sahastru**	**91.36**	**316**	⇓P	**P**	**12 58 29.0**	**+0.9**
PLOR	**Plostina**	**91.37**	**316**	⇑P	**P**	**12 58 28.2**	**+0.1**
MLR	**Muntele Rosu**	**91.91**	**316**	⇑P	**P**	**12 58 30.2**	**-0.5**
MLR	**Muntele Rosu**	**91.91**	**316**	IAmb	IAmb	12 58 31.2	
	comp=Z,8.4nm,0.9s						
BURAR	**Bucovina Array**	**92.11**	**318**	⇑P	**P**	**12 58 31.3**	**-0.2**
BURAR	**Bucovina Array**	**92.11**	**318**	P	**P**	**12 58 31.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**92.12**	**318**	P	**P**	**12 58 31.6**	**0.0**
NOR	**Nord**	**92.36**	**355**	*i* P	**P**	**12 58 31.5**	**-0.4**
NOR				IAmb	IAmb	12 58 34.6	
	comp=Z,2.8nm,0.8s						
STEI	**Steigen**	**92.75**	**339**	*e*P	**P**	**12 58 32.8**	**-1.0**
STEI				IAmb	IAmb	12 58 33.1	
	comp=Z,18nm,0.8s						
FAUS	**Fauske**	**92.90**	**338**	*e*P	**P**	**12 58 33.6**	**-1.0**
FAUS				IAmb	IAmb	12 58 34.2	
	comp=Z,9.0nm,0.8s						
LOF	**Lofoten**	**93.29**	**339**	*e*P	**P**	**12 58 37.2**	**+0.9**
MARR	**Marisel-Cluj**	**93.67**	**317**	⇑P	**P**	**12 58 38.5**	**-0.2**
VAGH	**Vaagaholmen**	**93.86**	**338**	*e*P	**P**	**12 58 37.5**	**-1.4**
KONS	**Konsvik**	**93.99**	**338**	*e*P	**P**	**12 58 38.6**	**-1.0**
QSPA	**South Pole Qui**	**94.01**	**180**	P	**P**	**12 58 40.5**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=269,slow=1.0,SNR=12						
	comp=Z,0.6nm,0.5s						
STOK	**Stokkvaagen**	**94.09**	**338**	*e*P	**P**	**12 58 38.9**	**-1.1**
LEIR	**Leirfjorden**	**94.12**	**337**	*e*P	**P**	**12 58 39.3**	**-0.9**
LEIR				IAmb	IAmb	12 58 39.3	
	comp=Z,7.4nm,0.6s						
LSZ	**Lusaka**	**95.52**	**255**	P	**P**	**12 58 47.3**	**-0.5**
LSZ				IAmb	IAmb	12 58 47.9	
	comp=Z,7.8nm,0.9s						
HFS	**Hagfors**	**95.85**	**332**	P	**P**	**12 58 46.9**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=112,slow=4.0,SNR=10.0						
HFS				PP	**PP**	**13 02 49.0**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=70,slow=9.6,SNR=3.6						
	comp=Z,3.4nm,0.7s						
DAG	**Danmarks Havn**	**96.34**	**352**	*i* P	**P**	**12 58 49.3**	**-0.7**
DAG				IAmb	IAmb	12 58 49.9	
	comp=Z,8.3nm,1.0s						
NB2	**NORSAR Subarra**	**96.69**	**333**	P	**P**	**12 58 50.2**	**-1.8**
	comp=Z,4.2nm,0.9s,baz=71,slow=4.4						
NB2	**NORSAR Subarra**	**96.69**	**333**	P	**P**	**12 58 50.2**	**-1.8**
NOA	**NORSAR Array B**	**96.69**	**333**	P	**P**	**12 58 50.6**	**-1.3**
	comp=Z,2.4nm,0.8s,baz=70,slow=4.7,SNR=5.7						
	comp=Z,2.4nm,0.8s						
ELIB	**Princess Elisa**	**96.82**	**198**	*d*P	**P**	**12 58 53.3**	**+0.9**
NEEM	**North Greenlan**	**98.48**	**359**	*i* P	**P**	**12 59 00.8**	**+0.8**
NEEM				IAmb	IAmb	12 59 01.2	
	comp=Z,2.2nm,0.5s						
BRG	**Berggiesshubel**	**98.59**	**323**	⇓*e*Pif		12 59 00.9	
BRG				Amp		12 59 01.7	
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**99.02**	**323**	*e*Pdif	**Pdif**	**12 59 02.0**	**-0.5**
CLL				*e*(pPdif)		13 01 07.0	
GERES	**GERESS Array B**	**99.34**	**321**	P	**Pdif**	**12 59 03.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=70,slow=4.4,SNR=9.7						
	comp=Z,0.7nm,0.5s						
KEST	**Kesra**	**106.37**	**309**	PP	**PP**	**13 04 07.8**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=7.2,slow=11,SNR=3.6						
ESDC	**Sonseca Array**	**114.56**	**317**	PP	**PP**	**13 05 02.6**	**-3.8**
	comp=Z,1.0nm,1.0s,baz=62,slow=6.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**119.08**	**287**	PKP	**PKPdf**	**13 04 07.3**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=51,slow=2.1,SNR=35						
TORD				PP	**PP**	**13 05 30.6**	**-7.8**
	comp=Z,1.2nm,0.7s,baz=66,slow=7.1,SNR=5.1						
TORD				SKP	**SKPdf**	**13 06 46.4**	**-1.6**
	comp=Z,2.3nm,0.7s,baz=43,slow=2.5,SNR=8.2						
SCHQ	**Schefferville**	**120.72**	**6**	PKP	**PKPdf**	**13 04 09.9**	**0.0**
	comp=Z,1.7nm,0.5s,baz=208,slow=1.5,SNR=4.1						
TXAR	**Lajitas Array**	**124.41**	**50**	PKP	**PKiKP**	**13 04 18.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=288,slow=2.8,SNR=1.2						
TXAR				pPKP	**pPKPdf**	**13 06 34.2**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=285,slow=2.5,SNR=5.1						
TXAR				SKP	**SKPdf**	**13 06 57.8**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=212,slow=2.2,SNR=4.5						
DBIC	**Dimbokro**	**126.67**	**281**	PKP	**PKPdf**	**13 04 22.4**	**0.0**
	comp=Z,12nm,0.9s,baz=114,slow=1.5,SNR=7.9						
DBIC	**Dimbokro**	**126.67**	**281**		**PKiKP**	**13 04 23.0**	**+0.1**
PLCA	**Paso Flores**	**141.60**	**164**	SKP	**SKPdf**	**13 07 31.4**	**+2.5**
	comp=Z,1.5nm,0.6s,baz=194,slow=4.1,SNR=5.9						

NEIC ***24*** *12:52:25.2± 1.3, 24.98N± 0.10× 123.93E± 0.08, h124km± 7km, mb4.2/10, Error ellipse: s-maj=14.4km s-min=9.5km az=161.0*

NIED ***24*** *12:52:26.8, 25.08N× 123.80E, h116km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr=0.07; Mθθ=2.85; Mϕϕ=2.91; Mrθ=5.42; Mθϕ=1.56; Mϕr=4.41; Fault plane solution: M0=7.69000×10^14 NP1: ϕs=146.00000°, δ=25.00000°, λ=-178.00000°. NP2: ϕs=54.00000°, δ=89.00000°, λ=-65.00000°.*

JMA ***24*** *12:52:26.8± 0.2, 25.1N× 123.8E± 0.5, h116km± 2km, MV3.7/17, NW OFF ISHIGAKIJIMA IS*

IDC ***24*** *12:52:28.2± 9.9, 25.44N× 124.35E, h152km± 89km, mb3.5/11, mbtmp4.0/11, Error ellipse: s-maj=101.7km s-min=13.9km az=64.0*

ISC 24 12:52:25.9±0.7, 25.04N±0.09× 123.82E±0.04, h129km±7km, n51, σ0=90/66, mb3.9/14, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.64**	**135**	P	**Pn**	**12 52 45.6**	**0.0**
JISG				S	**Sn**	**12 52 60.0**	**-0.6**
IRIF	**Iriomote-Funau**	**0.71**	**186**	P	**Pn**	**12 52 46.1**	**-0.1**
IRIF				*e*S	**Sn**	**12 53 01.0**	**-0.5**
JIJ	**Ishigaki jima**	**0.74**	**156**	P	**Pn**	**12 52 46.3**	**-0.1**
JIJ				S	**Sn**	**12 53 01.4**	**-0.5**
JKRS	**Kuro-shima**	**0.82**	**168**	P	**Pn**	**12 52 47.5**	**+0.5**
JKRS				S	**Sn**	**12 53 03.8**	**+0.7**
JTJ	**Tarama**	**0.90**	**116**	P	**Pn**	**12 52 48.0**	**+0.3**
JTJ				S	**Sn**	**12 53 04.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.93**	**232**		**Pn**	**12 52 48.1**	**+0.1**
YOJ				Sn	**Sn**	**12 53 03.6**	**-1.2**
YOJ	**Yonaguni jima**	**0.93**	**232**	P	**Pn**	**12 52 48.3**	**+0.3**
YOJ				*e*S	**Sn**	**12 53 04.1**	**-0.6**
HATJ	**Hateruma jima**	**0.98**	**181**	P	**Pn**	**12 52 48.9**	**+0.5**
HATJ				S	**Sn**	**12 53 05.9**	**+0.3**
JYNG	**Yonagunijimaku**	**0.99**	**233**	P	**Pn**	**12 52 48.7**	**+0.3**
JYNG				*e*S	**Sn**	**12 53 05.0**	**-0.7**
JIRJ	**Irabujima**	**1.27**	**99**	*i* P	**Pn**	**12 52 51.5**	**+0.3**
JIRJ				S	**Sn**	**12 53 10.4**	**-0.2**
JIKM	**Ikemajima**	**1.30**	**95**	P	**Pn**	**12 52 52.2**	**+0.5**
JIKM				S	**Sn**	**12 53 12.4**	**+1.1**
JMJ2	**Miyako jima3**	**1.41**	**102**	*i* P	**Pn**	**12 52 53.5**	**+0.7**
JMJ2				S	**Sn**	**12 53 13.8**	**+0.5**
JOGS	**Gusukube**	**1.47**	**101**	P	**Pn**	**12 52 54.5**	**+1.0**
JOGS				S	**Sn**	**12 53 15.5**	**+1.0**
TATO	**Taipei**	**2.11**	**269**		**Pn**	**12 53 02.2**	**+1.1**
TATO				Sn	**Sn**	**12 53 29.5**	**+1.4**
NACB	**Ninganchiao**	**2.20**	**247**	Pn	**Pn**	**12 53 02.0**	**-0.2**
NACB				Sn	**Sn**	**12 53 28.1**	**-2.0**
YHNB	**Yeheng**	**2.25**	**261**	Pn	**Pn**	**12 53 04.0**	**+1.1**
YHNB				Sn	**Sn**	**12 53 31.5**	**+0.2**
YULB	**Yu-li**	**2.83**	**235**	Pn	**Pn**	**12 53 09.8**	**-0.4**
SSLB	**Suanglung**	**2.89**	**245**		**Pn**	**12 53 11.4**	**+0.4**
TWG	**Pinlang**	**3.35**	**229**		**Pn**	**12 53 16.1**	**-0.8**
TPUB	**Ta-pu**	**3.39**	**240**		**Pn**	**12 53 19.1**	**+1.6**
JOW	**Kunigami**	**4.39**	**65**		**Pn**	**12 53 29.7**	**-1.1**
JMZ	**Minamidaito 2**	**6.74**	**82**	Pn	**Pn**	**12 54 00.1**	**-2.3**
LZDM	**Lanzhou Array**	**20.43**	**307**	P	Pn	12 56 57.4	+0.7
	1.7nm,0.3s,baz=139,slow=12,SNR=3.8						
	1.7nm,0.3s						
JKA	**Kamikawa-asahi**	**24.42**	**34**	P	**P**	**12 57 31.2**	**-1.1**
SONM	**Songino Array**	**26.59**	**333**	P	**P**	**12 57 51.7**	**-0.5**
	0.5nm,0.4s,baz=150,slow=7.1,SNR=2.0						
	0.5nm,0.4s						
SONM	**Songino Array**	**26.59**	**333**	P	**P**	**12 57 52.4**	**+0.3**
SONM				IAmb	IAmb	12 58 18.1	
	comp=Z,4.5nm,0.9s						
MKAR	**Makanchi Array**	**39.42**	**314**	P	**P**	**12 59 42.6**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=99,slow=8.8,SNR=10.0						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**39.42**	**314**	P	**P**	**12 59 43.4**	**+0.2**
ZAA0	**Zalesovo Array**	**40.86**	**325**	P	**P**	**12 59 54.7**	**-0.2**
ZALV	**Zalesovo Beam**	**40.86**	**325**	P	**P**	**12 59 53.2**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=110,slow=9.7,SNR=4.3						
	comp=Z,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**40.86**	**325**	P	**P**	**12 59 53.8**	**-1.2**
KURBB	**Kurchatov Arra**	**43.03**	**318**	P	**P**	**13 00 12.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=111,slow=7.0,SNR=1.9						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**45.87**	**166**	P	**P**	**13 00 37.4**	**+1.9**
	comp=Z,2.0nm,0.5s,baz=348,slow=8.9,SNR=18						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**45.87**	**166**	P	**P**	**13 00 33.9**	**-1.5**
GAR	**Garm**	**46.82**	**301**	P	**P**	**13 00 43.5**	**+0.6**
GAR				IAmb	IAmb	13 00 44.7	
	comp=Z,4.8nm,0.8s						
BVAR	**Borovoye Array**	**48.55**	**320**	P	**P**	**13 00 55.8**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=

cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
*BGR **24** 13:24:44.4,55.79N,161.23W,h33km±2km, mb5.5, Ms4.0*
*NEIC **24** 13:24:46.1,54.89N,160.52W,h50km, Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^{16}Nm; Mrr3.81; Mθθ-2.51; Mφφ-1.30; Mrθ1.76; Mrφ-1.83; Mθφ0.86; Fault plane solution: M0 4.29000×10^{16} NP1: φs229.78000°, δ31.76000°, λ82.51000°. NP2: φs58.57000°, δ58.54000°, λ94.62000°. Principal axes: T 4.2931, Plg76.0000°, Azm342.0000°; N -0.0008, Plg4.0000°, Azm236.0000°; P -4.2923, Plg13.0000°, Azm145.0000°;*
ISC 24 13:24:38.8±0.3, 54.90N±0.04×160.78W±0.03, h43km±2km, h43km:pP-P, n1687, σ1.01/1517, mb5.3/558, MS4.2/111, 93C-44D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SDPT	**Sand Point**	**0.48**	**21**			**Pn**	**13 24 50.5**	**+1.1**
SDPT						**Sn**	**13 24 58.5**	**+1.5**
SDPT				IAML			13 24 59.1	
	comp=N,138μm,1.1s							
SDPT				IAML			13 25 00.6	
	comp=E,133μm,1.0s							
SDPT	**Sand Point**	**0.48**	**21**	P		**Pn**	**13 24 50.4**	**+1.0**
	baz=200,SNR=1000							
SDPT				S		**Sn**	**13 24 57.9**	**+1.0**
	baz=200							
DOL	**Dolgoi Island**	**0.67**	**292**			**Pn**	**13 24 53.2**	**+1.3**
DOL						**Sn**	**13 25 03.8**	**+2.4**
CHNA	**Chernabura Isl**	**0.69**	**95**	P		**Pn**	**13 24 51.5**	**-0.6**
	baz=279,SNR=547							
CHNA				S		**Sn**	**13 25 00.6**	**-1.2**
	baz=279							
CNBA	**Chernabura Isl**	**0.69**	**96**			**Pn**	**13 24 51.6**	**-0.6**
CNBA	**Chernabura Isl**	**0.69**	**96**			**Sn**	**13 25 00.2**	**-1.6**
CNBA				IAML			13 25 07.6	
	comp=E,28μm,0.7s							
CNBA				IAML			13 25 09.4	
	comp=N,28μm,0.9s							
PS1A	**Pavlof South-1**	**0.76**	**314**			**Pn**	**13 24 54.5**	**+1.4**
PS1A						**Sn**	**13 25 05.4**	**+2.0**
PS4A	**Pavlof South-4**	**0.76**	**306**			**Pn**	**13 24 54.5**	**+1.3**
PS4A						**Sn**	**13 25 06.1**	**+2.5**
PN7A	**Pavlof North-7**	**0.88**	**308**			**Pn**	**13 24 56.6**	**+1.8**
DTNA	**Dutton South F**	**0.88**	**287**			**Pn**	**13 24 56.3**	**+1.5**
DTNA						**Sn**	**13 25 08.4**	**+1.9**
DT1	**Dutton Round H**	**0.89**	**284**			**Pn**	**13 24 56.0**	**+1.1**
VNKR	**Veniaminof 5**	**1.39**	**35**			**Pn**	**13 25 03.1**	**+1.4**
VNSS	**Veniaminof 8**	**1.53**	**29**			**Pn**	**13 25 05.6**	**+1.9**
S14K	**Fog Glacier**	**1.55**	**26**	P		**Pn**	**13 25 06.1**	**+2.1**
	baz=207,SNR=417							
VNFG	**Fog Glacier, M**	**1.55**	**26**			**Pn**	**13 25 06.1**	**+2.1**
VNFG	**Fog Glacier, M**	**1.55**	**26**			**Pn**	**13 25 06.1**	**+2.1**
ISNN	**Isanotski Nort**	**1.73**	**269**			**Pn**	**13 25 08.6**	**+2.1**
SSLN	**Shishaldin Nor**	**1.86**	**269**			**Pn**	**13 25 10.3**	**+2.0**
SSBA	**Shishaldin**	**1.94**	**268**			**Pn**	**13 25 11.2**	**+1.9**
CHGN	**Chignik**	**1.94**	**43**			**Pn**	**13 25 11.0**	**+1.7**
CHGN	**Chignik**	**1.94**	**43**	IAML			13 25 39.2	
	comp=N,13μm,1.0s							
CHGN				IAML			13 25 52.3	
	comp=E,22μm,0.8s							
CHGN	**Chignik**	**1.94**	**43**	P		**Pn**	**13 25 10.7**	**+1.4**
	baz=225,SNR=329							
ANNW	**Aniakchak Nort**	**2.52**	**34**			**Pn**	**13 25 19.4**	**+2.1**
AKSA	**Akutan Strait**	**2.97**	**257**			**Pn**	**13 25 25.6**	**+2.2**
AKUT	**Akutan**	**3.01**	**257**			**Pn**	**13 25 25.9**	**+2.0**
AKUT	**Akutan**	**3.01**	**257**	IAML			13 26 19.6	
	comp=E,7μm,0.7s							
AKUT				IAML			13 26 20.1	
	comp=N,6μm,0.9s							
AHB	**Akutan Harbor**	**3.04**	**257**			**Pn**	**13 25 26.3**	**+1.9**
CHIR	**Chirikof Islan**	**3.08**	**70**			**Pn**	**13 25 25.1**	**+0.2**
CHIR				IAML			13 26 22.0	
	comp=N,10μm,1.0s							
CHIR				IAML			13 26 26.4	
	comp=E,9μm,1.0s							
CHIR	**Chirikof Islan**	**3.08**	**70**	P		**Pn**	**13 25 25.5**	**+0.6**
	baz=255,SNR=16							
CHIR				S		**Sn**	**13 25 59.7**	**-0.8**
	baz=255							
AKLV	**Akutan Long Va**	**3.10**	**258**			**Pn**	**13 25 27.1**	**+1.9**
AKBBA	**Akutan Broad B**	**3.11**	**257**			**Pn**	**13 25 27.4**	**+2.1**
LVA	**Lava Point**	**3.15**	**259**			**Pn**	**13 25 28.0**	**+2.1**
LVA	**Lava Point**	**3.15**	**259**	IAML			13 26 18.6	
	comp=N,10μm,1.0s							
AKRB	**Akutan Reef Bi**	**3.18**	**258**			**Pn**	**13 25 28.3**	**+2.0**
UNV	**Unalaska Valle**	**3.51**	**255**			**Pn**	**13 25 32.5**	**+1.7**
UNV				IAML			13 26 23.4	
	comp=E,3μm,1.0s							
UNV	**Unalaska Valle**	**3.51**	**255**	P		**Pn**	**13 25 32.5**	**+1.7**
	baz=70,SNR=82							
R17L	**Mt. Peulik Vol**	**3.68**	**40**			**Pn**	**13 25 35.2**	**+2.0**
R17L	**Mt. Peulik Vol**	**3.68**	**40**	P		**Pn**	**13 25 35.5**	**+2.3**
	baz=224,SNR=338							
PLK5	**Peulik 5**	**3.78**	**33**			**Pn**	**13 25 36.7**	**+2.2**
SII	**Sitkinak Islan**	**4.08**	**63**	Pn		**Pn**	**13 25 39.0**	**+0.3**
SII				IAML			13 26 43.4	
	comp=E,5μm,1.1s							
SII	**Sitkinak Islan**	**4.08**	**63**	P		**Pn**	**13 25 39.2**	**+0.6**
	baz=249,SNR=16							
O15K	**Ungalikthiuk R**	**4.32**	**7**	Pn		**Pn**	**13 25 42.8**	**+1.0**
O15K				IAML			13 27 16.1	
	comp=E,2μm,1.1s							
O15K	**Ungalikthiuk R**	**4.32**	**7**	P		**Pn**	**13 25 42.9**	**+1.0**
	baz=187,SNR=177							
Q17K	**Contact Creek**	**4.32**	**37**	P		**Pn**	**13 25 43.0**	**+0.9**
	baz=221							
O14K	**Tigyukauivet M**	**4.37**	**357**			**Pn**	**13 25 44.4**	**+1.9**
O14K	**Tigyukauivet M**	**4.37**	**357**	IAML			13 27 10.8	
	comp=E,2μm,0.9s							
O14K				IAML			13 27 11.8	
	comp=N,1μm,0.8s							
O14K	**Tigyukauivet M**	**4.37**	**357**	P		**Pn**	**13 25 43.9**	**+1.3**
	baz=176,SNR=242							
Q16K	**King Salmon**	**4.41**	**29**	P		**Pn**	**13 25 45.0**	**+1.9**
	baz=213,SNR=189							
ANCK	**Angle Creek**	**4.41**	**39**			**Pn**	**13 25 45.2**	**+2.0**
P16K	**Nushagak River**	**4.41**	**19**			**Pn**	**13 25 45.0**	**+1.9**
P16K	**Nushagak River**	**4.41**	**19**	P		**Pn**	**13 25 44.5**	**+1.4**
	baz=207,SNR=46							
ACHA	**Angle Creek He**	**4.48**	**40**			**Pn**	**13 25 45.8**	**+1.6**
OKTU	**Okmok Mt. Tuli**	**4.53**	**253**			**Pn**	**13 25 47.3**	**+2.4**
KABU	**Katmai Buttres**	**4.54**	**40**			**Pn**	**13 25 47.1**	**+2.1**
KAKN	**Katmai Knife C**	**4.64**	**41**			**Pn**	**13 25 48.6**	**+2.2**
OHAK	**Old Harbor**	**4.80**	**58**	Pn		**Pn**	**13 25 48.2**	**-0.2**
OHAK				IAML			13 27 14.3	
	comp=E,2μm,0.9s							
OHAK				IAML			13 27 15.8	
	comp=N,2μm,1.0s							
OHAK	**Old Harbor**	**4.80**	**58**	P		**Pn**	**13 25 48.3**	**-0.1**
	baz=244,SNR=28							
KAWH	**Katmai**	**4.80**	**41**			**Pn**	**13 25 50.2**	**+1.6**
P17K	**Kvichak River**	**4.91**	**27**	P		**Pn**	**13 25 51.6**	**+1.6**
	baz=211,SNR=96							
Q18K	**Katmai Hardscr**	**4.92**	**38**	P		**Pn**	**13 25 51.8**	**+1.6**
	baz=223,SNR=357							
O16K	**Kokwok River B**	**4.93**	**16**			**Pn**	**13 25 52.1**	**+1.9**
O16K	**Kokwok River B**	**4.93**	**16**	P		**Pn**	**13 25 51.1**	**+0.9**
	baz=198,SNR=133							
N14K	**Kuskokwak Cree**	**5.06**	**355**			**Pn**	**13 25 53.5**	**+1.5**
N14K	**Kuskokwak Cree**	**5.06**	**355**	P		**Pn**	**13 25 53.5**	**+1.5**
	baz=174,SNR=407							
O17K	**Koliganek Bris**	**5.28**	**21**			**Pn**	**13 25 56.6**	**+1.6**
O17K	**Koliganek Bris**	**5.28**	**21**	P		**Pn**	**13 25 56.0**	**+1.1**
	baz=204,SNR=116							
N15K	**Kwethluk River**	**5.29**	**4**	IAML			13 27 35.5	
	comp=N,1μm,1.1s							
N15K				IAML			13 27 39.1	
	comp=E,2μm,1.8s							
N15K	**Kwethluk River**	**5.29**	**4**	P		**Pn**	**13 25 56.5**	**+1.3**
	baz=184,SNR=220							
KDAK	**Kodiak Island**	**5.40**	**54**	Pn		**Pn**	**13 25 56.2**	**-0.4**
KDAK	comp=E,19nm,0.3s,baz=42,slow=1.8,SNR=152			Sn		**Sn**	**13 26 52.6**	**-4.7**
	comp=E,22nm,0.3s,baz=257,slow=13,SNR=1.2							
KDAK				Lg		Lg	13 27 15.1	
	comp=E,42nm,0.3s,baz=11,slow=22,SNR=15							
KDAK				LR		LR	13 28 16.0	
	comp=E,2μm,20.0s,baz=229,slow=40							
	comp=E,66nm,0.5s							
KDAK	**Kodiak Island**	**5.40**	**54**	P		**Pn**	**13 25 56.5**	**-0.1**
KDAK	**Kodiak Island**	**5.40**	**54**			**Pn**	**13 25 56.5**	**-0.1**
KDAK				IAML			13 27 18.3	
	comp=E,2μm,1.3s							
KDAK				IAML			13 27 23.8	
	comp=E,2μm,1.0s							
KDAK	**Kodiak Island**	**5.40**	**54**	P		**Pn**	**13 25 56.5**	**-0.1**
	baz=241							
KDAK	**Kodiak Island**	**5.40**	**54**	P		**Pn**	**13 25 56.9**	**+0.3**
P18K	**Big Mountain,**	**5.42**	**32**			**Pn**	**13 25 58.8**	**+1.8**
P18K	**Big Mountain,**	**5.42**	**32**	P		**Pn**	**13 25 59.1**	**+2.0**
	baz=216,SNR=178							
N16K	**Nishlik Lake**	**5.69**	**10**	P		**Pn**	**13 26 02.3**	**+1.6**
	baz=192,SNR=839							
M13K	**Dall Lake**	**5.70**	**347**			**Pn**	**13 26 02.6**	**+1.9**
M13K	**Dall Lake**	**5.70**	**347**	P		**Pn**	**13 26 02.7**	**+1.9**
	baz=165,SNR=114							
SPIA	**Saint Paul Isl**	**5.78**	**297**			**Pn**	**13 26 03.8**	**+2.0**
SPIA	**Saint Paul Isl**	**5.78**	**297**	P		**Pn**	**13 26 03.8**	**+2.0**
	baz=109,SNR=45							
O18K	**Koktuh Hills**	**5.81**	**29**	P		**Pn**	**13 26 03.9**	**+1.6**
	baz=214,SNR=332							
M15K	**Kasigluk River**	**5.81**	**0**	P		**Pn**	**13 26 03.1**	**+0.8**
	baz=180,SNR=137							
M14K	**Bethel**	**5.90**	**354**	P		**Pn**	**13 26 04.9**	**+1.4**
	baz=173,SNR=405							
N17K	**Nushagak Hills**	**5.96**	**17**	P		**Pn**	**13 26 05.6**	**+1.2**
	baz=200,SNR=82							
M16K	**Timber Creek**	**6.21**	**8**	P		**Pn**	**13 26 09.3**	**+1.4**
	baz=190,SNR=187							
M11K	**Mekoryuk**	**6.22**	**334**			**Pn**	**13 26 09.4**	**+1.5**
M11K	**Mekoryuk**	**6.22**	**334**	P		**Pn**	**13 26 09.3**	**+1.4**
	baz=156,SNR=29							
P19K	**Oil Pt**	**6.28**	**38**	P		**Pn**	**13 26 09.2**	**+0.4**
	baz=224							
O19K	**Port Alsworth**	**6.34**	**31**			**Pn**	**13 26 11.7**	**+2.1**
O19K	**Port Alsworth**	**6.34**	**31**	P		**Pn**	**13 26 12.0**	**+2.4**
	baz=216,SNR=120							
N18K	**Kilae Creek**	**6.36**	**22**	P		**Pn**	**13 26 11.5**	**+1.6**
	baz=206,SNR=77							
L14K	**Kuka Creek**	**6.54**	**352**	P		**Pn**	**13 26 13.7**	**+1.4**
	baz=170							
ILS	**Iliamna Low So**	**6.56**	**36**			**Pn**	**13 26 14.7**	**+2.0**
M17K	**Holitna River**	**6.75**	**14**			**Pn**	**13 26 16.9**	**+1.6**
M17K	**Holitna River**	**6.75**	**14**	P		**Pn**	**13 26 16.7**	**+1.4**
	baz=196,SNR=114							
O20K	**Slope Mountain**	**6.80**	**37**			**Pn**	**13 26 17.8**	**+1.9**
O20K	**Slope Mountain**	**6.80**	**37**	P		**Pn**	**13 26 17.3**	**+1.4**
	baz=224,SNR=23							
L15K	**Ungalak Mounta**	**6.81**	**357**	P		**Pn**	**13 26 16.6**	**+0.6**
	baz=176,SNR=145							
N19K	**Bonanza Creek**	**6.81**	**27**	P		**Pn**	**13 26 18.2**	**+2.1**
	baz=212,SNR=220							
L16K	**Owhat River**	**6.86**	**5**			**Pn**	**13 26 18.2**	**+1.5**
L16K	**Owhat River**	**6.86**	**5**	P		**Pn**	**13 26 17.6**	**+0.8**
	baz=186,SNR=156							
HOM	**Homer**	**6.87**	**42**			**Pn**	**13 26 18.6**	**+1.7**
HOM	**Homer**	**6.87**	**42**	P		**Pn**	**13 26 18.1**	**+1.2**
	baz=230,SNR=9.6							
M18K	**Stony River**	**7.11**	**20**			**Pn**	**13 26 22.0**	**+1.9**
M18K	**Stony River**	**7.11**	**20**	P		**Pn**	**13 26 21.2**	**+1.2**
	baz=204,SNR=160							
DFR	**Drift River**	**7.16**	**34**			**Pn**	**13 26 23.3**	**+2.4**
RDT	**Redoubt**	**7.24**	**35**			**Pn**	**13 26 24.6**	**+2.6**
BRSE	**Bradley Lake S**	**7.28**	**44**	P		**Pn**	**13 26 22.5**	**0.0**
	baz=233,SNR=14							
K13K	**Kusilvak Mount**	**7.34**	**346**	P		**Pn**	**13 26 24.4**	**+1.2**
	baz=162,SNR=303							
L17K	**Donlin**	**7.37**	**9**			**Pn**	**13 26 24.7**	**+1.0**
L17K	**Donlin**	**7.37**	**9**	P		**Pn**	**13 26 24.5**	**+0.8**
	baz=191,SNR=114							
K15K	**Wolf Creek Mou**	**7.42**	**357**	P		**Pn**	**13 26 25.6**	**+1.1**
	baz=176,SNR=90							
L18K	**Granite Mounta**	**7.64**	**15**			**Pn**	**13 26 28.8**	**+1.4**
L18K	**Granite Mounta**	**7.64**	**15**	P		**Pn**	**13 26 28.2**	**+0.8**
	baz=198,SNR=95							
SPNN	**North Nagishla**	**7.76**	**30**			**Pn**	**13 26 31.3**	**+2.1**
SPCR	**Spurr Chakacha**	**7.78**	**32**			**Pn**	**13 26 31.6**	**+2.3**
SPCR	**Spurr Chakacha**	**7.78**	**32**	P		**Pn**	**13 26 31.9**	**+2.6**
	baz=219							
CAPN	**Captain Cook N**	**7.80**	**37**	P		**Pn**	**13 26 29.5**	**-0.1**
	baz=225							
SPU	**Mount Spurr**	**7.81**	**33**			**Pn**	**13 26 31.8**	**+2.0**
SPCG	**Spurr Capps Gl**	**7.91**	**32**			**Pn**	**13 26 33.0**	**+1.8**
L19K	**White Mountain**	**7.93**	**21**	P		**Pn**	**13 26 32.8**	**+1.4**
	baz=206,SNR=103							
K17K	**Iditarod**	**7.94**	**8**	P		**Pn**	**13 26 32.4**	**+0.8**
	baz=190							
SLKM	**Skilak Lake**	**7.97**	**41**			**Pn**	**13 26 33.2**	**+1.3**
J14K	**Nanvaranak Lak**	**8.00**	**351**	P		**Pn**	**13 26 33.4**	**+1.1**
	baz=168,SNR=165							
SEW	**Seward**	**8.02**	**45**			**Pn**	**13 26 33.3**	**+0.7**
SEW	**Seward**	**8.02**	**45**	P		**Pn**	**13 26 33.3**	**+0.7**
	baz=234,SNR=16							
M20K	**Styx River**	**8.07**	**27**			**Pn**	**13 26 35.3**	**+2.0**
M20K	**Styx River**	**8.07**	**27**	P		**Pn**	**13 26 36.4**	**+3.1**
	baz=213,SNR=153							
STLK	**Strandline Lak**	**8.12**	**32**			**Pn**	**13 26 35.8**	**+1.7**
O22K	**Cooper Landing**	**8.14**	**42**	P		**Pn**	**13 26 35.6**	**+1.4**
	baz=231,SNR=20							
KOSE	**Korovin Southe**	**8.29**	**257**			**Pn**	**13 26 37.7**	**+1.3**
KOKL	**Mount Kliuchef**	**8.39**	**258**			**Pn**	**13 26 39.6**	**+1.9**
KOWE	**Korovin West**	**8.40**	**258**			**Pn**	**13 26 38.8**	**+0.9**
J16K	**Anvik River**	**8.41**	**1**	P		**Pn**	**13 26 38.6**	**+0.7**
	baz=180,SNR=157							
ATKA	**Atka Island**	**8.43**	**257**			**Pn**	**13 26 39.4**	**+1.1**
RC01	**Rabbit Creek A**	**8.53**	**39**			**Pn**	**13 26 40.4**	**+0.8**
RC01	**Rabbit Creek A**	**8.53**	**39**	P		**Pn**	**13 26 39.5**	**0.0**
	baz=228,SNR=19							
J17K	**VABM Dome**	**8.57**	**5**			**Pn**	**13 26 40.4**	**+0.3**
J17K	**VABM Dome**	**8.57**	**5**	P		**Pn**	**13 26 40.0**	**-0.1**
	baz=186,SNR=56							
SKT	**Skwentna**	**8.59**	**31**			**Pn**	**13 26 41.6**	**+1.2**
SKT	**Skwentna**	**8.59**	**31**	P		**Pn**	**13 26 42.7**	**+2.3**
	baz=218,SNR=75							
P23K	**Montague Islan**	**8.83**	**49**			**Pn**	**13 26 43.6**	**0.0**
P23K	**Montague Islan**	**8.83**	**49**	P		**Pn**	**13 26 43.7**	**0.0**
	baz=240,SNR=14							
J18K	**Innoko River**	**8.84**	**12**			**Pn**	**13 26 44.8**	**+1.0**
J18K	**Innoko River**	**8.84**	**12**	P		**Pn**	**13 26 44.5**	**+0.7**
	baz=195,SNR=98							
M22K	**Willow**	**8.86**	**35**	P		**Pn**	**13 26 44.6**	**+0.6**
	baz=224,SNR=104							
PWL	**Port Wells**	**8.91**	**43**	P		**Pn**	**13 26 45.0**	**+0.2**
	baz=233,SNR=27							
I17K	**Unalakleet**	**9.01**	**0**	P		**Pn**	**13 26 46.8**	**+0.6**
	baz=180,SNR=27							
Q23K	**Middleton Isla**	**9.05**	**54**	P		**Pn**	**13 26 47.7**	**+1.0**
	baz=36,SNR=6.8							
MID	**Middleton Isla**	**9.06**	**54**			**Pn**	**13 26 47.1**	**+0.3**
PMR	**Palmer**	**9.08**	**38**	P		**Pn**	**13 26 48.0**	**+0.9**
PMR	**Palmer**	**9.08**	**38**			**Pn**	**13 26 48.0**	**+0.9**
PMR	**Palmer**	**9.08**	**38**	P		**Pn**	**13 26 47.7**	**+0.6**
	baz=228,SNR=68							
K20K	**Telida**	**9.15**	**19**	P		**Pn**	**13 26 48.6**	**+0.5**
	baz=205							
PPLA	**Purkeypile**	**9.16**	**25**	P		**Pn**	**13 26 49.6**	**+1.3**
	baz=213,SNR=140							
KNK	**Knik Glacier**	**9.21**	**40**			**Pn**	**13 26 49.3**	**+0.4**
KNK	**Knik Glacier**	**9.21**	**40**	P		**Pn**	**13 26 49.0**	**+0.2**
	baz=230,SNR=17							
L22K	**Petersville**	**9.24**	**30**	P		**Pn**	**13 26 49.9**	**+0.6**
	baz=219,SNR=73							
GHO	**Glory Hole Cre**	**9.28**	**37**			**Pn**	**13 26 49.9**	**0.0**
CUT	**Chulitna**	**9.29**	**32**	P		**Pn**	**13 26 50.2**	**+0.2**
	baz=221,SNR=18							
HIN	**Hinchinbrook I**	**9.42**	**48**			**Pn**	**13 26 51.6**	**-0.1**
GLI	**Glacier Island**	**9.42**	**45**	P		**Pn**	**13 26 51.4**	**-0.4**
	baz=237							
J19K	**Poorman**	**9.49**	**14**	P		**Pn**	**13 26 53.7**	**+1.1**
	baz=198,SNR=181							
SML	**Sawmill**	**9.51**	**38**	P		**Pn**	**13 26 52.4**	**-0.7**
	baz=229,SNR=24							
CAST	**Castle Rocks**	**9.63**	**24**			**Pn**	**13 26 55.6**	**+0.9**
CAST	**Castle Rocks**	**9.63**	**24**	P		**Pn**	**13 26 55.9**	**+1.3**
	baz=211,SNR=82							
M23K	**Glacier View**	**9.72**	**39**	P		**Pn**	**13 26 56.2**	**+0.3**
	baz=231,SNR=37							
H16K	**Elim**	**9.80**	**356**	P		**Pn**	**13 26 57.7**	**+0.9**
	baz=175,SNR=21							
EYAK	**Cordova Ski Ar**	**9.82**	**49**	P		**Pn**	**13 26 57.3**	**+0.1**
	baz=242,SNR=16							
J20K	**Nowinta River**	**9.89**	**17**			**Pn**	**13 26 59.0**	**+0.8**
J20K	**Nowinta River**	**9.89**	**17**	P		**Pn**	**13 26 59.2**	**+1.1**
	baz=203,SNR=117							
SCM	**Sheep Creek Mo**	**9.89**	**40**	P		**Pn**	**13 26 58.8**	**+0.5**
	baz=231,SNR=56							
ANM	**Nome**	**9.96**	**348**	P		**Pn**	**13 27 00.3**	**+1.1**
ANM	**Nome**	**9.96**	**348**			**Pn**	**13 27 00.3**	**+1.1**
ANM	**Nome**	**9.96**	**348**	P		**Pn**	**13 27 00.1**	**+0.9**
	baz=164,SNR=17							
ADK	**Adak**	**9.97**	**259**	P		**Pn**	**13 27 01.1**	**+1.8**
ADK	**Adak**	**9.97**	**259**	Pn		**Pn**	**13 27 01.1**	**+1.8**
ADK	**Adak**	**9.97**	**259**	P		**Pn**	**13 26 58.1**	**-1.2**
CHUM	**Lake Minchumin**	**9.98**	**22**	P		**Pn**	**13 27 00.7**	**+1.3**
	baz=209,SNR=99							
WAT7	**Susitna Watana**	**10.05**	**33**			**Pn**	**13 27 00.5**	**0.0**
GCSA	**Galena City Sc**	**10.07**	**10**	P		**Pn**	**13 27 00.4**	**-0.1**
	baz=193,SNR=13							
H17K	**Granite Mounta**	**10.08**	**2**	P		**Pn**	**13 27 01.4**	**+0.7**
	baz=183,SNR=30							
TRF	**Thorofare Moun**	**10.11**	**28**	P		**Pn**	**13 27 01.3**	**0.0**
	baz=217,SNR=136							
WAT1	**Susitna Watana**	**10.14**	**34**	P		**Pn**	**13 27 00.9**	**-0.8**
	baz=224							
KAIM	**Kayak Island**	**10.15**	**54**	P		**Pn**	**13 27 01.7**	**-0.1**
	baz=248,SNR=40							
KLU	**Klutina**	**10.23**	**44**			**Pn**	**13 27 02.8**	**-0.2**
KLU	**Klutina**	**10.23**	**44**	P		**Pn**	**13 27 02.7**	**-0.3**
	baz=236,SNR=133							
WAT6	**Susitna Watana**	**10.24**	**36**	P		**Pn**	**13 27 02.0**	**-1.1**
	baz=227,SNR=25							
KIWB	**Kanaga Island**	**10.24**	**259**			**Pn**	**13 27 05.3**	**+2.2**
G15K	**Niukluk**	**10.26**	**352**	P		**Pn**	**13 27 04.1**	**+1.0**
	baz=169,SNR=48							
H18K	**Honhosa River**	**10.36**	**6**	P		**Pn**	**13 27 05.3**	**+0.7**
	baz=188							
I20K	**Naaghedeneel**	**10.41**	**15**	P		**Pn**	**13 27 06.0**	**+0.7**
	baz=200,SNR=86							
RND	**Reindeer**	**10.48**	**31**	P		**Pn**	**13 27 06.6**	**+0.3**
RND	**Reindeer**	**10.48**	**31**			**Pn**	**13 27 06.6**	**+0.3**
GAMB	**Gambell**	**10.48**	**332**			**Pn**	**13 27 07.5**	**+1.3**
GAMB	**Gambell**	**10.48**	**332**	P		**Pn**	**13 27 06.7**	**+0.4**
	baz=143,SNR=9.2							
M24K	**Tolsona, Glenn**	**10.49**	**41**	P		**Pn**	**13 27 06.5**	**0.0**
	baz=233,SNR=37							
BMRM	**Bremner River**	**10.51**	**48**	P		**Pn**	**13 27 06.5**	**-0.2**
	baz=242,SNR=28							
G16K	**Koyuk River**	**10.56**	**356**	P		**Pn**	**13 27 07.8**	**+0.6**
	baz=175,SNR=23							
G17K	**Kiwalik Mounta**	**10.64**	**0**	P		**Pn**	**13 27 09.2**	**+0.9**
	baz=180,SNR=33							
DHY	**Denali Highway**	**10.70**	**35**	P		**Pn**	**13 27 08.2**	**-1.2**
	baz=226,SNR=21							
MCK	**McKinley**	**10.71**	**29**	P		**Pn**	**13 27 09.4**	**+0.1**
	baz=220,SNR=30							
N25K	**Chitina, Valde**	**10.83**	**45**	P		**Pn**	**13 27 11.3**	**+0.1**
	baz=239,SNR=50							
H19K	**Roundabout Mou**	**10.87**	**10**	P		**Pn**	**13 27 12.0**	**+0.5**
	baz=193,SNR=167							
F14K	**Arctic Creek**	**10.96**	**348**	P		**Pn**	**13 27 13.4**	**+0.7**
	baz=163							
F15K	**North Star Dit**	**11.01**	**352**	P		**Pn**	**13 27 14.0**	**+0.5**
	baz=168,SNR=56							
H20K	**Anotleneega Mo**	**11.02**	**13**	P		**Pn**	**13 27 14.6**	**+1.0**
	baz=198,SNR=160							
HARP	**HAARP**	**11.05**	**41**	P		**Pn**	**13 27 14.0**	**-0.1**
	baz=234							
G18K	**Tagagawik**	**11.08**	**5**	P		**Pn**	**13 27 14.7**	**+0.2**
	baz=186,SNR=117							
CRQE	**Cirque**	**11.08**	**51**	P		**Pn**	**13 27 14.4**	**-0.2**
	baz=246,SNR=30							
I21K	**Tanana**	**11.19**	**19**	P		**Pn**	**13 27 17.5**	**+1.5**
	baz=207,SNR=106							
TNA	**Tin City**	**11.26**	**345**	P		**Pn**	**13 27 18.1**	**+1.3**
	baz=158							
PAX	**Paxson**	**11.28**	**38**	P		**Pn**	**13 27 17.7**	**+0.4**
	baz=231,SNR=14							
MLY	**Manley**	**11.32**	**22**	P		**Pn**	**13 27 18.2**	**+0.5**
	baz=211,SNR=88							
NEA2	**Nenana**	**11.35**	**26**	P		**Pn**	**13 27 18.0**	**-0.1**

COLD **Coldfoot** 13.35 18 P Pn 13 27 46.1 +0.7
baz=207,SNR=90
G24K **Hadweenzic Riv** 13.45 23 P Pn 13 27 46.2 -0.6
baz=215,SNR=50
E20K **Nigu River** 13.57 7 P Pn 13 27 48.3 -0.2
baz=191
I26K **Coal Creek Min** 13.58 33 P Pn 13 27 45.3 -3.2
baz=228
C16K **Lisburne Hills** 13.59 353 P Pn 13 27 48.7 +0.1
baz=169
C17K **DeLong Mountai** 13.67 356 P Pn 13 27 51.4 +1.6
baz=174
HYT **Haines Junctio** 13.69 55 P Pn 13 27 50.6 +0.5
baz=255,SNR=12
D19K **Kuna River** 13.70 4 P Pn 13 27 50.7 +0.5
baz=186
P30M **Million Dollar** 13.79 58 P Pn 13 27 51.3 -0.1
baz=258
M29M **Somme Creek** 13.79 48 P Pn 13 27 51.2 -0.4
baz=247,SNR=143
C18K **Utukok River** 13.80 359 Pn Pn 13 27 54.0 +2.4
C18K **Utukok River** 13.80 359 P Pn 13 27 52.8 +1.2
baz=179
G25K **Bearman Lake** 13.83 25 P Pn 13 27 52.3 +0.4
baz=218,SNR=14
S31K **Pelican** 13.89 67 P Pn 13 27 52.4 -0.4
baz=268,SNR=8.6
E21K **Killik River** 13.95 10 P Pn 13 27 54.4 +0.8
baz=196
PLBC **Pleasant Camp** 13.96 61 P Pn 13 27 54.9 +1.1
baz=262,SNR=26
D20K **Etivluk River** 13.99 6 P Pn 13 27 55.6 +1.4
baz=190
F24K **Squaw Lake** 14.05 21 P Pn 13 27 54.8 -0.2
baz=212,SNR=23
N30M **Aishikik Lake** 14.06 53 P Pn 13 27 54.6 -0.5
baz=253,SNR=24
DAWY **Dawson** 14.15 41 P Pn 13 27 55.4 -0.9
baz=240,SNR=60
E23K **Chandalar** 14.20 17 P Pn 13 27 57.5 +0.5
baz=207,SNR=78
L29M **L29M** 14.20 46 P Pn 13 27 56.2 -0.8
baz=245,SNR=49
I27K **Kandik River** 14.26 34 P Pn 13 27 56.6 -1.2
baz=230,SNR=32
C19K **Lookout Ridge** 14.27 2 P Pn 13 27 58.2 +0.3
baz=183,SNR=6.8
O30N **Mendenhall** 14.35 56 P Pn 13 27 58.6 -0.4
baz=257,SNR=34
SIT **Sitka** 14.38 71 P Pn 13 27 58.6 -0.8
baz=272
E24K **Your Creek** 14.41 19 P Pn 13 27 59.6 -0.2
baz=210,SNR=99
SKAG **Skagway** 14.49 61 P Pn 13 28 00.5 -0.3
baz=263,SNR=11
M30M **Minto, Yukon** 14.56 48 P Pn 13 28 01.0 -0.8
baz=249,SNR=39
G26K **Porcupine Rive** 14.56 27 P Pn 13 28 00.2 -1.5
baz=222,SNR=23
C21K **Knifeblade Rid** 14.57 9 P Pn 13 28 01.1 -0.7
baz=194,SNR=69
F25K **Christian Rive** 14.60 23 P Pn 13 28 00.6 -1.7
baz=217,SNR=15
N31M **Braeburn, Yuko** 14.67 53 P Pn 13 28 02.3 -1.0
baz=255,SNR=18
H27K **Steamboat Moun** 14.70 32 P Pn 13 28 01.5 -2.1
baz=229,SNR=26
I28M **Miner Creek** 14.72 36 P Pn 13 28 01.4 -2.5
baz=234,SNR=57
TOLK **Toolik Lake Re** 14.73 16 P Pn 13 28 05.1 +1.1
baz=206,SNR=79
K29M **Barlow Dome** 14.77 43 P Pn 13 28 04.4 -0.3
baz=244,SNR=173
S32K **Killisnoo** 14.78 69 P Pn 13 28 05.0 +0.4
baz=271,SNR=6.8
J29N **Klondike Camp** 14.79 41 P Pn 13 28 04.6 -0.3
baz=240
R32K **Eaglecrest** 14.81 66 P Pn 13 28 05.1 -0.1
baz=268,SNR=12
D23K **Nanushuk River** 14.86 14 P Pn 13 28 06.2 +0.5
baz=203,SNR=55
WHY **Whitehorse** 14.90 57 P Pn 13 28 06.2 -0.3
baz=259,SNR=29
SHEM **Shemya Is, Ala** 14.97 272 Pn Pn 13 28 06.0 -1.3
comp=E,5.6nm,0.3s,baz=22,slow=2.2,SNR=4.2
SHEM LR LR 13 34 30.2
comp=E,651nm,18.9s,baz=88,slow=40
comp=E,34nm,0.7s
F26K **Sheenjek River** 15.03 25 P Pn 13 28 07.3 -0.7
baz=220,SNR=23
B21K **Ikpikpuk River** 15.04 8 IAmb IAmb 13 28 14.3
comp=Z,92nm,0.8s
B21K **Ikpikpuk River** 15.04 8 P Pn 13 28 07.7 -0.3
baz=194,SNR=22
E25K **Arctic Village** 15.04 22 IAmb IAmb 13 28 15.3
comp=Z,211nm,1.8s
E25K **Arctic Village** 15.04 22 P Pn 13 28 07.5 -0.7
baz=216,SNR=29
G27K **Doyon Strip** 15.05 30 P Pn 13 28 07.0 -1.2
baz=227,SNR=15
B20K **Meade River** 15.25 5 IAmb IAmb 13 28 16.6
comp=Z,96nm,0.8s
B20K **Meade River** 15.25 5 P Pn 13 28 11.5 +0.7
baz=188
D24K **Happy Valley** 15.31 16 IAmb IAmb 13 28 14.1
comp=Z,199nm,1.1s
D24K **Happy Valley** 15.31 16 P Pn 13 28 11.8 +0.2
baz=207
P32M **Atlin** 15.32 61 P Pn 13 28 12.1 +0.2
baz=264,SNR=11
A19K **Wainwright** 15.36 360 P Pn 13 28 12.6 +0.4
baz=179
M31M **Drury Creek, Y** 15.50 51 IAmb IAmb 13 28 22.2
comp=Z,186nm,1.0s
M31M **Drury Creek, Y** 15.50 51 P Pn 13 28 14.1 -0.1
baz=254,SNR=32
J30M **Hart River** 15.56 42 IAmb IAmb 13 28 23.5
comp=Z,286nm,0.9s
J30M **Hart River** 15.56 42 P Pn 13 28 14.8 -0.2
baz=243,SNR=82
C23K **Itkillik River** 15.67 13 IAmb IAmb 13 28 24.4
comp=Z,163nm,0.8s
C23K **Itkillik River** 15.67 13 P Pn 13 28 15.8 -0.5
baz=202,SNR=72
U33K **Whale Pass** 15.68 74 P Pn 13 28 16.3 -0.1
baz=277
H29M **Whitestone** 15.69 35 P Pn 13 28 15.5 -1.0
baz=234,SNR=126
CRAG **Craig** 15.77 77 P Pn 13 28 17.9 +0.4
baz=280
B22K **Teshekpuk Lake** 15.84 9 IAmb IAmb 13 28 25.0
comp=Z,258nm,1.4s
B22K **Teshekpuk Lake** 15.84 9 P Pn 13 28 17.7 -0.7
baz=196
P33M **Teslin, Yukon** 15.84 59 P Pn 13 28 18.6 0.0
baz=263,SNR=33
I30M **Mount Dempster** 15.85 40 P Pn 13 28 18.3 -0.5
baz=241,SNR=444
N32M **Quiet Lake** 15.86 56 IAmb IAmb 13 28 26.2
comp=Z,111nm,1.0s
N32M **Quiet Lake** 15.86 56 P Pn 13 28 18.4 -0.4
baz=259
D25K **Kavik River** 15.89 19 P Pn 13 28 18.8 -0.3
baz=212,SNR=57
Q32M **Nakina River** 16.02 64 P Pn 13 28 20.2 -0.7
baz=268,SNR=14
E27K **Coleen River** 16.04 26 P Pn 13 28 20.3 -0.7
baz=223
WRAK **Wrangell Islan** 16.07 73 P 13 28 23.1 -1.0
WRAK **Wrangell Islan** 16.07 73 P Pn 13 28 20.1 -1.3
baz=277,SNR=11
F28M **Old Crow** 16.11 30 P Pn 13 28 20.9 -0.9
baz=228,SNR=21
G29M **Pine Creek** 16.21 33 P Pn 13 28 22.8 -0.5
baz=233,SNR=170
EPYK **Eagle Plains** 16.33 36 P Pn 13 28 23.8 -0.9
baz=237,SNR=156
V35K **Ketchikan** 16.64 77 P Pn 13 28 28.6 0.0
baz=281
C27K **Jago River** 16.66 21 P Pn 13 28 28.3 -0.6
baz=216,SNR=35
C26K **Camden Bay** 16.67 19 P Pn 13 28 29.1 +0.2
baz=213,SNR=38
R33M **Jennings River** 16.70 62 P Pn 13 28 29.5 -0.1
baz=268,SNR=28
G30M **tAoh Zraii Nji** 16.83 34 IAmb IAmb 13 28 34.5
comp=Z,146nm,0.8s
G30M **tAoh Zraii Nji** 16.83 34 P Pn 13 28 29.6 -1.5
baz=236,SNR=143
H31M **Peel River** 16.88 39 IAmb IAmb 13 28 39.9
comp=Z,284nm,1.1s
H31M **Peel River** 16.88 39 P Pn 13 28 30.7 -0.8
baz=242,SNR=164
E28M **Babbage River** 16.88 27 P Pn 13 28 31.3 -0.2
baz=226
D27M **Malcolm River** 16.98 24 P Pn 13 28 33.0 +0.2
baz=222,SNR=12
MMPY **Sheldon Lake,** 17.02 51 P P 13 28 34.1 -0.7
baz=256,SNR=94
T35M **Bob Quinn** 17.16 71 P Pn 13 28 35.6 +0.4
baz=276,SNR=9.6
E29M **Blow River** 17.18 29 P Pn 13 28 34.9 -0.4
baz=229,SNR=16
DLBC **Dease Lake** 17.18 66 P P 13 28 36.5 -0.2
comp=Z,0.3nm,0.3s,baz=250,slow=14,SNR=24
DLBC LR LR 13 34 54.2
comp=Z,391nm,18.0s,baz=265,slow=36
comp=Z,24nm,1.1s
DLBC **Dease Lake** 17.18 66 P Pn 13 28 35.1 -0.3
baz=272,SNR=21
F30M **Barrier River** 17.33 33 P Pn 13 28 36.9 -0.3
baz=235,SNR=45
G31M **Satah River** 17.45 36 IAmb IAmb 13 28 43.8
comp=Z,89nm,0.7s
G31M **Satah River** 17.45 36 P Pn 13 28 36.8 -1.8
baz=239,SNR=108
D28M **Stokes Point** 17.59 26 P Pn 13 28 39.4 -0.9
baz=226
WTLY **Watson Lake, Y** 17.84 60 P Pn 13 28 42.3 -1.2
baz=267,SNR=16
F31M **Tsiigehtchic** 17.89 35 P Pn 13 28 42.3 -1.7
baz=239,SNR=45
INK **Inuvik** 18.43 33 P P 13 28 49.1 -1.0
comp=Z,2.6nm,0.3s,baz=235,slow=11,SNR=82
INK PcP PcP 13 33 17.1 -1.7
comp=Z,7.3nm,0.8s,baz=290,slow=2.7,SNR=2.0
INK LR LR 13 36 56.5
comp=Z,1μm,18.2s,baz=233,slow=40
comp=Z,84nm,0.9s
INK **Inuvik** 18.43 33 P P 13 28 47.9 -2.2
baz=237,SNR=78
INK **Inuvik** 18.43 33 P P 13 28 48.7 -1.5
LIRD **Liard River Hi** 19.20 62 P P 13 28 58.7 +0.1
baz=272,SNR=26
BBB **Bella Bella** 19.50 84 P P 13 29 02.5 +0.5
comp=Z,0.1nm,0.3s,baz=326,slow=3.6,SNR=1.2
BBB LR LR 13 35 21.4
comp=Z,591nm,18.6s,baz=292,slow=33
BILL **Bilibino** 20.17 324 *ce*P P 13 29 08.1 -1.0
BILL pmax pmax
comp=Z,10.0nm,0.9s
BILL **Bilibino** 20.17 324 P P 13 29 10.0 +0.8
KOTAN **Kotaneelee Air** 20.21 60 P P 13 29 09.6 -0.1
baz=271,SNR=15
WRGLY **Wrigley** 20.64 51 P P 13 29 14.7 +0.4
WRGLY **Wrigley** 20.64 51 P P 13 29 13.7 -0.6
baz=264,SNR=9.0
C36M **Paulatuk** 21.95 35 P P 13 29 27.0 -1.3
C36M IAmb IAmb 13 29 31.1
comp=Z,73nm,0.7s
C36M **Paulatuk** 21.95 35 P P 13 29 26.8 -1.5
baz=247,SNR=18
A36M **Sachs Harbour** 22.77 28 P P 13 29 34.6 -2.4
baz=240,SNR=34
PET **Petropavlovsk** 23.71 282 *e*P P 13 29 45.4 -1.0
PET *e*S S 13 33 56.1 -2.1
PET pmax pmax
comp=Z,100nm,4.0s
PET pmax pmax
comp=Z,300nm,1.1s
PET pmax pmax
comp=Z,189nm,1.1s
PET MLR MLR
comp=Z,300nm,21.0s
PET **Petropavlovsk** 23.71 282 P P 13 29 45.3 -1.0
PET **Petropavlovsk** 23.71 282 P P 13 29 45.7 -0.7
comp=Z,2μmcomp=Z,163nm,1.0s
PET **Petropavlovsk** 23.71 282 P P 13 29 45.6 -0.7
PEA0B **Neilton Lookou** 24.11 93 P P 13 29 53.6 +3.3
NLWA IAmb IAmb 13 30 04.9
comp=Z,52nm,0.9s
PEA0B **Petropavlovsk-** 24.22 283 *i*P P 13 29 51.6 +0.5
PEA0B **Petropavlovsk-** 24.22 283 P P 13 29 50.7 -0.5
PEA0B IAmb IAmb 13 29 52.5
comp=Z,53nm,0.6s
PETK **Petropavlovsk-** 24.22 283 P P 13 29 50.3 -0.9
comp=Z,52nm,0.6s,baz=74,slow=12,SNR=247
PETK PcP PcP 13 33 30.2 -0.1
comp=Z,4.7nm,0.9s,baz=78,slow=2.0,SNR=5.4
PETK ScP ScP 13 37 03.9 -1.2
comp=Z,1.7nm,0.8s,baz=86,slow=9.4,SNR=4.0
PETK pScP 13 37 29.4
comp=Z,2.1nm,0.8s,baz=103,slow=11,SNR=5.3
PETK LR LR 13 38 37.0
comp=Z,291nm,21.4s,baz=84,slow=35
comp=Z,52nm,0.6s
PETK **Petropavlovsk-** 24.22 283 P P 13 29 50.9 -0.3
A05A **Maple Falls** 24.33 88 P P 13 29 55.8 +3.6
A05A IAmb IAmb 13 30 06.2
comp=Z,44nm,0.9s
YKA **Yellowknife Ar** 24.67 53 P P 13 29 55.6 +0.5
comp=Z,16nm,0.6s,baz=274,slow=8.8,SNR=56
YKA PcP PcP 13 33 31.2 +0.1
comp=Z,6.7nm,0.8s,baz=284,slow=2.2,SNR=7.0
YKA pPcP 13 33 44.4
comp=Z,3.9nm,0.8s,baz=274,slow=2.1,SNR=5.2
YKA ScP ScP 13 37 05.2 -0.9
comp=Z,3.1nm,1.0s,baz=273,slow=2.2,SNR=6.7
YKA LR LR 13 41 49.8
comp=Z,284nm,18.4s,baz=251,slow=42
comp=Z,16nm,0.6s
YKA **Yellowknife Ar** 24.67 53 *ce*P P 13 29 55.7 +0.5
YKA pmax pmax
comp=Z,17nm,0.6s
YKA **Yellowknife Ar** 24.67 53 PcP 13 33 31.5 +0.3
SEY **Seymchan** 24.95 308 LR LR 13 40 56.1
comp=Z,786nm,19.2s,baz=108,slow=39
SEY **Seymchan** 24.95 308 *ce*P P 13 29 56.1 -1.6
SEY pmax pmax
comp=Z,12nm,0.9s
D05A **Enumclaw** 25.31 92 IAmb IAmb 13 30 16.1
comp=Z,82nm,1.0s
SKR **Sero-Kuril's** 26.09 279 *ce*P P 13 30 07.8 -0.3
MA2 **Magadan** 26.15 300 LR LR 13 41 24.6
comp=Z,450nm,19.0s,baz=94,slow=39
MA2 **Magadan** 26.15 300 *ce*P P 13 30 09.2 +0.6
MA2 pmax pmax
comp=Z,23nm,0.9s
MA2 **Magadan** 26.15 300 P P 13 30 07.8 -0.8
comp=Z,33nm,0.8s
B08A **Colville Reser** 26.23 87 P P 13 30 09.5 0.0
WAH2 **Wahluke Slope** 26.94 90 IAmb IAmb 13 30 29.7
comp=Z,31nm,0.9s
I04A **Tendick Farm,** 27.01 98 IAmb IAmb 13 30 35.3
comp=Z,52nm,1.4s
HAWA **Hanford** 27.16 91 IAmb IAmb 13 30 31.9
comp=Z,32nm,0.9s
BBOR **Butler Butte** 27.43 100 IAmb IAmb 13 30 39.6
comp=Z,49nm,1.0s
EDM **Edmonton** 27.47 74 IAmb IAmb 13 30 35.1
comp=Z,62nm,0.9s
J04A **Umpqua Nationa** 27.53 99 IAmb IAmb 13 30 35.8
comp=Z,34nm,0.8s
NEW **Newport** 27.55 86 LR LR 13 39 41.9
comp=Z,418nm,21.3s,baz=292,slow=33
NEW **Newport** 27.55 86 P P 13 30 23.1 +1.7
NEW **Newport** 27.55 86 P P 13 30 23.2 +1.8
YBH **Yreka Blue Hor** 28.15 102 LR LR 13 39 12.8
comp=Z,854nm,20.9s,baz=312,slow=31
WVOR **Wild Horse Val** 30.02 97 P P 13 30 44.0 +0.6
WVOR **Wild Horse Val** 30.02 97 P P 13 30 44.0 +0.6
PNTR **Pine Nut** 31.68 103 IAmb IAmb 13 31 12.9
comp=Z,31nm,0.9s
HLID **Hailey** 31.75 91 P P 13 30 59.8 +1.1
RES **Resolute Bay** 31.82 27 LR LR 13 45 04.9
comp=Z,424nm,20.9s,baz=222,slow=38
RES **Resolute Bay** 31.82 27 P P 13 30 58.2 -0.6
RES pmax pmax
comp=Z,16nm,0.8s
RES **Resolute Bay** 31.82 27 P P 13 30 58.2 -0.6
RES **Resolute Bay** 31.82 27 P P 13 30 57.0 -1.8
EGMT **Eagleton** 31.90 81 IAmb IAmb 13 31 12.9
comp=Z,33nm,1.1s
BOZ **Bozeman (W)** 32.16 86 P P 13 31 03.4 +1.1
BLKN **Baker Lake** 32.65 47 IAmb IAmb 13 31 19.6
comp=Z,82nm,1.1s
NVAR **Mina Array Bea** 32.87 102 P P 13 31 10.7 +2.0
comp=Z,3.3nm,0.7s,baz=302,slow=8.4,SNR=23
NVAR pP pP 13 31 22.1 +1.9
comp=Z,12nm,0.7s,baz=299,slow=8.8,SNR=31
NVAR PcP PcP 13 33 53.1 +0.7
comp=Z,6.6nm,0.7s,baz=287,slow=2.5,SNR=13
NVAR pPcP 13 34 06.3
comp=Z,3.6nm,0.7s,baz=310,slow=2.3,SNR=6.3
NVAR ScP ScP 13 37 32.4 -0.3
comp=Z,1.8nm,0.9s,baz=289,slow=3.6,SNR=6.1
NVAR pScP 13 37 55.0
comp=Z,0.2nm,0.4s,baz=2.8,slow=4.3,SNR=1.7
NVAR LR LR 13 42 08.6
comp=Z,512nm,21.5s,baz=330,slow=32
comp=Z,3.3nm,0.7s
FFC **Flin Flon** 33.02 66 P P 13 31 09.7 +0.2
FFC pmax pmax
comp=Z,10.0nm,0.9s
FFC **Flin Flon** 33.02 66 P P 13 31 09.7 +0.2
FFC **Flin Flon** 33.02 66 P P 13 31 10.3 +0.8
ELK **Elko** 33.06 96 P P 13 31 12.6 +2.3
YMR **Madison River** 33.09 87 IAmb IAmb 13 31 32.3
comp=Z,40nm,1.2s
TIXI **Tiksi** 33.30 327 LR LR 13 46 39.4
comp=Z,546nm,18.0s,baz=102,slow=40
TIXI **Tiksi** 33.30 327 *ce*P P 13 31 10.9 -0.9
TIXI pmax pmax
comp=Z,24nm,1.0s
TIXI **Tiksi** 33.30 327 P P 13 31 10.8 -0.9
TIXI IAmb IAmb 13 31 12.1
comp=Z,19nm,0.9s
KIP **Kipapa** 33.49 175 *ce*P P 13 31 15.8 +1.9
KIP pmax pmax
comp=Z,79nm,1.3s
TYV **Tymovskoe** 33.58 287 *e*P P 13 31 15.0 +0.6
TYV pmax pmax
comp=Z,200nm,1.2s
TYV pmax pmax
comp=Z,77nm,0.9s
FLWY **Flagg Ranch** 33.59 88 IAmb IAmb 13 31 38.8
comp=Z,39nm,1.5s
RLMT **Red Lodge** 33.80 85 IAmb IAmb 13 31 30.7
comp=Z,24nm,1.1s
HVU **Hansel Valley** 33.81 93 IAmb IAmb 13 31 30.8
comp=Z,23nm,0.9s
HWUT **Hardware Ranch** 34.62 92 P P 13 31 25.5 +1.7
LAO **LASA Array** 34.65 81 IAmb IAmb 13 31 39.9
comp=Z,20nm,1.0s
UGL **Uglegorsk** 34.81 285 *e*P P 13 31 25.9 +0.8
UGL pmax pmax
comp=Z,230nm,0.9s
DUG **Dugway, Tooele** 34.81 95 P P 13 31 27.5 +2.1
DUG AP pP 13 31 38.4 +1.4
DUG **Dugway, Tooele** 34.81 95 IAmb IAmb 13 31 39.5
comp=Z,28nm,1.1s
DUG **Dugway, Tooele** 34.81 95 P P 13 31 27.5 +2.1
DUG pP pP 13 31 38.4 +1.4
TCUT **Toone Canyon** 35.02 92 IAmb IAmb 13 31 41.1
comp=Z,17nm,0.9s
PDAR **Pinedale Array** 35.05 89 P P 13 31 28.8 +1.3
comp=Z,1.9nm,0.8s,baz=316,slow=4.1,SNR=8.8
PDAR LR LR 13 44 53.3
comp=Z,67nm,18.8s,baz=299,slow=35
PDAR **Pinedale Array** 35.05 89 P P 13 31 26.2 -1.3
TPNV **Topopah Spring** 35.07 102 IAmb IAmb 13 31 42.1
comp=Z,26nm,0.9s
GWY **Greenwater Val** 35.38 103 IAmb IAmb 13 31 44.5
comp=Z,20nm,0.9s
YAK **Yakutsk** 35.40 310 LR LR 13 47 18.7
comp=Z,974nm,20.2s,baz=78,slow=38
YAK **Yakutsk** 35.40 310 *e*P P 13 31 26.8 -3.2
YAK *e**PP pP 13 31 40.0 -1.6
YAK *e* 13 32 45.3
YAK *e* 13 33 56.9
YAK *e*S S 13 36 57.5 -3.8
YAK *e*SS SnSn 13 39 19.1 -3.6
YAK *e* 13 41 41.7
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=Z,116nm,1.2s
YAK pmax pmax
comp=E,27nm,1.0s
YAK pmax pmax
comp=Z,60nm,3.3s
YAK pmax pmax
comp=N,43nm,3.5s
YAK pmax pmax
comp=E,30nm,1.8s
YAK smax smax
comp=E,30nm,2.0s
YAK smax smax
comp=N,26nm,2.3s
YAK MLR MLR
comp=N,266nm,19.0s
YAK MLR MLR
comp=E,984nm,28.0s
YAK **Yakutsk** 35.40 310 P P 13 31 28.2 -1.7
YAK **Yakutsk** 35.40 310 P P 13 31 28.3 -1.7
QSM **Queen of Sheba** 35.42 104 IAmb IAmb 13 31 44.8
comp=Z,21nm,0.9s
PRN **Pahroc Range** 35.43 100 IAmb IAmb 13 31 45.1
comp=Z,23nm,1.1s
CCCA **Chr Cany lake** 35.47 105 IAmb IAmb 13 31 45.4
comp=Z,45nm,0.9s
YSS **Yuzhno-Sakhali** 35.58 281 *e*P P 13 31 32.1 +0.4
YSS *e*S S 13 37 04.5 +0.1
YSS pmax pmax
comp=Z,100nm,3.9s
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=N,100nm,16.0s
YSS **Yuzhno-Sakhali** 35.58 281 P P 13 31 32.4 +0.7
YSS IAmb IAmb 13 31 35.0
comp=Z,27nm,1.0s
YSS **Yuzhno-Sakhali** 35.58 281 P P 13 31 31.2 -0.5
BSUT **Blindstream Ca** 35.77 93 IAmb IAmb 13 31 47.8
comp=Z,36nm,1.2s
GSC **Goldstone, Bar** 35.94 105 IAmb IAmb 13 31 49.4
comp=Z,20nm,1.1s
TCRU **Three Creeks R** 36.09 96 IAmb IAmb 13 31 50.8
comp=Z,19nm,0.8s
RDMU **Red Mountain** 36.44 91 IAmb IAmb 13 31 58.4
comp=Z,18nm,0.9s
Q16A **Castle Valley** 36.61 95 IAmb IAmb 13 31 55.2
comp=Z,29nm,1.0s
ILON **Igloolik, Nuna** 36.62 36 P P 13 31 40.8 +0.5
P18A **Preston Nutter** 36.67 93 IAmb IAmb 13 32 01.2
comp=Z,24nm,1.2s
POIN **Pond Inlet** 36.82 30 IAmb IAmb 13 31 46.6
comp=Z,18nm,0.9s
SRU **San Rafael Swe** 36.85 94 IAmb IAmb 13 31 57.0
comp=Z,40nm,0.9s
K22A **Casper** 36.87 86 IAmb IAmb 13 31 56.0
comp=Z,21nm,1.1s
PKCU **Pink Cliffs** 36.96 98 IAmb IAmb 13 31 58.5
comp=Z,22nm,0.9s
GRNR **Gornyy** 37.03 290 *i*P P 13 31 43.7 -0.4
GRNR pmax pmax
comp=Z,50nm,0.7s
ALE **Alert** 37.05 12 P P 13 31 43.8 -0.1
ALE **Alert** 37.05 12 P P 13 31 43.8 -0.1
ALE PcP PcP 13 34 04.2 +0.6
DNR **Dunn Ranch,Anz** 37.32 106 IAmb IAmb 13 32 02.0
comp=Z,31nm,0.8s
JKA **Kamikawa-asahi** 37.33 277 P P 13 31 46.4 -0.3
JKA IAmb IAmb 13 31 48.5
comp=Z,34nm,1.1s
ASAJ **Asahikawa** 37.33 277 LR LR 13 49 09.9
comp=Z,158nm,18.9s,baz=55,slow=40
ASAJ **Asahikawa** 37.33 277 P P 13 31 46.4 -0.3
ASAJ pmax pmax
comp=Z,34nm,1.1s
PFO **Pinyon Flats O** 37.38 106 LR LR 13 44 26.8
comp=Z,428nm,20.4s,baz=320,slow=32
PFO **Pinyon Flats O** 37.38 106 *i*P P 13 31 47.5 +0.1
PFO pmax pmax
comp=Z,12nm,1.0s
PFO **Pinyon Flats O** 37.38 106 P P 13 31 50.7 +3.3
RSSD **Black Hills** 37.40 83 P P 13 31 47.1 -0.4
RSSD pmax pmax
comp=Z,21nm,0.6s
RSSD **Black Hills** 37.40 83 P P 13 31 47.1 -0.4
RSSD IAmb IAmb 13 32 09.3

comp=Z,21nm,0.6s
RSSD Black Hills 37.40 83 P P 13 31 48.7 +1.2
RSSD pP **pP 13 31 59.4 +0.2**
RSSD Black Hills 37.40 83 P P 13 31 48.7 +1.2
RSSD PcP **PcP 13 34 05.6 +0.1**
O20A White River Ci 37.49 91 IAmb IAmb 13 32 06.8
comp=Z,33nm,0.9s
HMU Henry Mountain 37.52 96 IAmb IAmb 13 32 02.7
comp=Z,54nm,0.8s
DPP Dos Picos Cty 37.57 107 IAmb IAmb 13 32 03.3
comp=Z,21nm,1.0s
BORC Borrego Spring 37.66 107 IAmb IAmb 13 32 04.0
comp=Z,18nm,1.0s
TULEG Thule 37.91 22 IAmb IAmb 13 31 51.5
comp=Z,29nm,1.0s
TULEG Thule 37.91 22 *i* P **P 13 31 50.2 -0.9**
TULEG IAmb IAmb 13 31 51.1
comp=Z,28nm,1.0s
BAR Barrett 37.96 107 IAmb IAmb 13 32 06.6
comp=Z,24nm,1.2s
PV23 Carpenter Ridg 38.17 94 IAmb IAmb 13 32 32.1
comp=Z,22nm,0.8s
PV10 Paradox Valley 38.20 94 IAmb IAmb 13 32 08.9
comp=Z,36nm,1.0s
CBX Cerro Bola 38.24 108 IAmb IAmb 13 32 08.7
comp=Z,36nm,1.0s
PV20 West Nyswonger 38.27 94 IAmb IAmb 13 32 09.1
comp=Z,21nm,0.7s
PV19 Morning Glory 38.28 94 IAmb IAmb 13 32 08.6
comp=Z,76nm,1.7s
ERM Erimo 38.31 274 *ce* P **P 13 31 55.1 +0.2**
ERM pmax pmax
comp=Z,48nm,1.0s
ERM Erimo 38.31 274 P **P 13 31 55.2 +0.2**
ERM IAmb IAmb 13 31 56.6
comp=Z,33nm,0.8s
ERM Erimo 38.31 274 P **P 13 31 55.4 +0.4**
BLYC Blythe 38.36 104 IAmb IAmb 13 32 09.8
comp=Z,22nm,1.1s
PV18 Skein Mesa, Pa 38.37 94 IAmb IAmb 13 32 15.7
comp=Z,31nm,0.9s
PV12 Saucer Basin, 38.38 94 IAmb IAmb 13 32 20.4
comp=Z,22nm,0.9s
ULM Lac du Bonnet 38.45 69 P **P 13 31 56.8 +0.8**
comp=Z,40nm,0.9s,baz=299,slow=7.9,SNR=30
ULM pP **pP 13 32 07.7 -0.1**
comp=Z,54nm,0.8s,baz=305,slow=8.6,SNR=16
ULM LR LR 13 48 05.7
comp=Z,450nm,18.5s,baz=224,slow=36
comp=Z,40nm,0.9s
ULM Lac du Bonnet 38.45 69 *i* P **P 13 31 53.4 -2.6**
ULM Lac du Bonnet 38.45 69 IAmb IAmb 13 32 10.1
comp=Z,63nm,0.9s
PV13 Radium Mtn., P 38.48 94 IAmb IAmb 13 32 10.0
comp=Z,34nm,0.8s
PV02 Paradox Valley 38.49 94 IAmb IAmb 13 32 10.2
comp=Z,40nm,0.8s
PV15 Paradox Valley 38.55 93 IAmb IAmb 13 32 10.6
comp=Z,21nm,0.8s
PV01 Paradox Valley 38.64 94 IAmb IAmb 13 32 11.4
comp=Z,17nm,0.8s
WUAZ Wupatki 38.86 99 IAmb IAmb 13 32 14.1
comp=Z,21nm,0.8s
ISCO Idaho Springs 39.23 89 P **P 13 32 05.5 +2.4**
ISCO Idaho Springs 39.23 89 P **P 13 32 05.5 +2.4**
MVCO Mesa Verde 39.31 95 P **P 13 32 06.1 +2.4**
EPLO Experimental L 39.92 69 IAmb IAmb 13 32 22.4
comp=Z,44nm,0.9s
ZEA Zeya 40.28 299 *e* P **P 13 32 10.6 -0.7**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.7s
F33A 5 Mile Ranch, 40.74 75 IAmb IAmb 13 32 16.5
comp=Z,36nm,1.2s
NEEM North Greenlan 41.07 18 *i* P **P 13 32 17.3 -0.5**
NEEM IAmb IAmb 13 32 18.1
comp=Z,82nm,0.9s
KULLO Kullorsuaq 41.38 23 P **P 13 32 20.4 +0.3**
KULLO Kullorsuaq 41.38 23 *i* P **P 13 32 19.7 -0.4**
KULLO IAmb IAmb 13 32 20.5
comp=Z,47nm,0.8s
TUC Tucson 41.53 102 P **P 13 32 22.6 +0.7**
TUC pmax pmax
comp=Z,10.0nm,1.0s
TUC Tucson 41.53 102 P **P 13 32 22.6 +0.7**
TUC Tucson 41.53 102 P **P 13 32 24.4 +2.5**
ECSD EROS Data Cent 41.86 78 P **P 13 32 24.3 -0.1**
ECSD EROS Data Cent 41.86 78 P **P 13 32 24.0 -0.4**
ANMO Albuquerque 42.08 95 LR LR 13 48 55.4
comp=Z,142nm,18.7s,baz=310,slow=34
ANMO Albuquerque 42.08 95 *i* P **P 13 32 26.4 -0.1**
ANMO Albuquerque 42.08 95 P **P 13 32 28.0 +1.5**
HEH HeiHe 42.12 295 *e* P **P 13 32 24.9 -1.5**
HEH pmax pmax
comp=Z,39nm,0.8s
EYMN Ely 42.13 70 P **P 13 32 27.0 +0.5**
DUN6 Lazy B Ranch 42.31 100 IAmb IAmb 13 32 42.6
comp=Z,59nm,1.2s
NOR Nord 42.38 7 P **P 13 32 28.2 0.0**
NOR Nord 42.38 7 P **P 13 32 28.2 0.0**
NOR Nord 42.38 7 *i* P **P 13 32 28.0 -0.1**
NOR IAmb IAmb 13 32 29.0
comp=Z,56nm,1.1s
Y22A Socorro 42.51 97 P **P 13 32 32.5 +2.5**
UPNV Upernavik 42.62 25 P **P 13 32 30.1 -0.1**
UPNV Upernavik 42.62 25 *i* P **P 13 32 29.7 -0.5**
UPNV IAmb IAmb 13 32 30.6
comp=Z,50nm,0.7s
H11N2 WAKE ISLAND Hy 42.80 228 T T 14 17 39.0
baz=27,slow=76,SNR=202
H11N3 WAKE ISLAND Hy 42.81 228 T T 14 17 39.4
baz=27,slow=76,SNR=199
H11N1 WAKE ISLAND Hy 42.82 228 T T 14 17 40.3
baz=27,slow=76,SNR=179
TBO Thunder Bay 42.83 68 P **P 13 32 32.8 +0.6**
TBO IAmb IAmb 13 32 46.2
comp=Z,46nm,1.0s
SPMN Marine on St. 43.06 74 IAmb IAmb 13 32 47.8
comp=Z,44nm,1.0s
121A Cookes Peak, D 43.07 99 P **P 13 32 34.9 +0.4**
L34A Svendsen Farm, 43.12 80 IAmb IAmb 13 32 50.9
comp=Z,59nm,0.8s
CBKS Cedar Bluff 43.28 86 IAmb IAmb 13 32 38.7
comp=Z,32nm,0.8s
USA0B Ussuriysk Arra 43.29 285 *i* P **P 13 32 34.9 -1.0**
USRK Ussuriysk Ar. 43.29 285 P **P 13 32 34.3 -1.6**
comp=Z,7.8nm,0.7s,baz=52,slow=10,SNR=10
USRK LR LR 13 52 27.2
comp=Z,171nm,19.1s,baz=41,slow=39
comp=Z,7.8nm,0.7s
FRB Frobisher Bay 43.85 40 LR LR 13 52 28.8
comp=Z,255nm,18.2s,baz=298,slow=38
FRB Frobisher Bay 43.85 40 P **P 13 32 40.9 +0.7**
FRB Frobisher Bay 43.85 40 P **P 13 32 40.6 +0.4**
H11S1 WAKE ISLAND Hy 43.97 227 T T 14 19 02.4
baz=27,slow=76,SNR=138
H11S2 WAKE ISLAND Hy 43.98 227 T T 14 19 02.4
baz=27,slow=76,SNR=116
H11S3 WAKE ISLAND Hy 43.99 227 T T 14 19 01.9
baz=27,slow=76,SNR=57
VLA Vladivostok 44.03 284 *d* P **P 13 32 42.1 +0.2**
VLA pmax pmax
comp=Z,27nm,1.0s
NUUG Nuugaatsiaq 44.09 26 *i* P **P 13 32 41.8 -0.3**
NUUG IAmb IAmb 13 32 42.3
comp=Z,35nm,0.6s
N35A Tabor 44.26 80 IAmb IAmb 13 32 57.0
comp=Z,70nm,0.8s
MDJ Mudanjiang 44.36 287 P **P 13 32 43.5 -1.0**
MDJ pmax pmax
comp=Z,27nm,0.8s
PH02 Texas Public H 44.36 91 IAmb IAmb 13 33 04.2
comp=Z,27nm,1.0s
NIAQ Niaqornat 44.44 27 *i* P **P 13 32 45.4 +0.7**
NIAQ IAmb IAmb 13 32 46.8
comp=Z,140nm,1.3s
G40A Rib Lake 44.47 72 IAmb IAmb 13 32 46.7
comp=Z,45nm,0.7s
MJAR Matsushiro Arr 44.82 272 P **P 13 32 47.9 -0.5**
comp=Z,24nm,0.9s,baz=40,slow=6.4,SNR=53
MJAR ScP **ScP 13 38 16.7 -1.4**
comp=Z,1.5nm,0.9s,baz=51,slow=5.3,SNR=3.0
MJAR pScP 13 38 40.7
comp=Z,1.8nm,0.9s,baz=52,slow=5.1,SNR=4.8
MJAR LR LR 13 50 13.9
comp=Z,195nm,21.9s,baz=46,slow=34
comp=Z,24nm,0.9s
MJAR Matsushiro Arr 44.82 272 P **P 13 32 48.6 +0.3**
MJAR pmax pmax
comp=Z,67nm,1.4s
MJAR Matsushiro Arr 44.82 272 P **P 13 32 48.6 +0.3**
MJAR IAmb IAmb 13 32 49.5
comp=Z,67nm,1.4s
MJB9 Matsu-Tunnel 44.82 272 P **P 13 32 49.7 +1.4**
MJB9 IAmb IAmb 13 32 51.1
comp=Z,63nm,0.8s
MAJO Matsushiro 44.82 272 *c i* P **P 13 32 48.1 -0.2**
MAJO pmax pmax
comp=Z,79nm,1.0s
MAJO Matsushiro 44.82 272 P **P 13 32 48.7 +0.4**
MAJO IAmb IAmb 13 32 50.1
comp=Z,63nm,0.8s
MAJO Matsushiro 44.82 272 P **P 13 32 48.7 +0.4**
MAJO Matsushiro 44.82 272 P **P 13 32 48.5 +0.2**
MAJO pP **pP 13 33 00.7 +0.5**
MAJO sP **sP 13 33 05.6 +0.4**
BNX BinXian 44.85 289 ⇑ P **P 13 32 47.9 -0.5**
BNX pmax pmax
comp=Z,50nm,1.0s
KSU1 Kansas State U 44.88 83 IAmb IAmb 13 32 50.8
comp=Z,21nm,0.7s
PSTR Posyet 44.94 284 *d i* P **P 13 32 49.4 +0.2**
PSTR pmax pmax
comp=Z,8.0nm,0.9s
MNTX Cornudas Mount 45.05 98 P **P 13 32 52.5 +2.3**
SAQQ Saqqaq 45.38 27 *i* P **P 13 32 52.8 +0.5**
SAQQ IAmb IAmb 13 32 53.2
comp=Z,46nm,1.0s
TPB28 45.58 97 IAmb IAmb 13 33 09.0
comp=Z,16nm,1.2s
N38A Joes South For 45.67 79 IAmb IAmb 13 33 08.0
comp=Z,55nm,0.9s
VHRN Van Horn 45.96 98 IAmb IAmb 13 33 11.9
comp=Z,26nm,1.1s
L40A Anamosa 45.97 76 IAmb IAmb 13 33 10.8
comp=Z,55nm,1.0s
JGF Kuroka 45.97 272 P **P 13 32 57.9 +0.5**
128A Castleberry Fa 46.04 94 IAmb IAmb 13 33 11.4
comp=Z,26nm,1.2s
BLOK Blackwell 46.14 86 IAmb IAmb 13 33 00.5
comp=Z,42nm,0.9s
DKNS Dickens 46.19 92 IAmb IAmb 13 34 35.8
comp=Z,15nm,0.8s
P38A Dawn 46.28 80 IAmb IAmb 13 33 13.7
comp=Z,31nm,0.7s
INU Inuyama 46.34 272 P **P 13 33 00.3 -0.1**
INU IAmb IAmb 13 33 00.9
comp=Z,30nm,0.9s
INU Inuyama 46.34 272 P **P 13 33 00.4 +0.1**
KBS Kingsbay 46.36 2 *ce* P **P 13 33 00.4 +0.5**
KBS pmax pmax
comp=Z,107nm,1.3s
KBS Kingsbay 46.36 2 *e* P **P 13 33 00.7 +0.7**
KBS Kingsbay 46.36 2 P **P 13 33 00.3 +0.4**
KBS Kingsbay 46.36 2 P **P 13 33 00.7 +0.7**
KBS Kingsbay 46.36 2 P **P 13 33 00.6 +0.7**
KBS PcP **PcP 13 34 35.2 +1.0**
KBS Kingsbay 46.36 2 *i* P **P 13 33 00.8 +0.9**
DAG Danmarks Havn 46.42 11 P **P 13 32 59.5 -0.9**
DAG pmax pmax
comp=Z,126nm,0.9s
DAG Danmarks Havn 46.42 11 P **P 13 33 00.1 -0.3**
DAG Danmarks Havn 46.42 11 *i* P **P 13 32 59.5 -0.9**
DAG IAmb IAmb 13 33 00.7
comp=Z,128nm,1.1s
T35A Sooner Cattle 46.43 85 IAmb IAmb 13 33 25.4
comp=Z,23nm,1.1s
HILR Hailar Array B 46.51 298 P **P 13 33 00.1 -1.4**
comp=Z,4.1nm,0.4s,baz=59,slow=8.8,SNR=5.8
comp=Z,4.1nm,0.4s
OK048 Pawnee Station 46.53 86 IAmb IAmb 13 33 04.4
comp=Z,20nm,0.8s
NRIK Noril'sk 46.57 333 P **P 13 33 01.1 -0.5**
comp=Z,24nm,0.6s,baz=58,slow=8.2,SNR=21
NRIK LR LR 13 55 36.2
comp=Z,484nm,18.7s,baz=48,slow=40
comp=Z,24nm,0.6s
NRIK Noril'sk 46.57 333 *c i* P **P 13 33 00.6 -1.1**
NRIK pmax pmax
comp=Z,15nm,0.8s
NRIK Noril'sk 46.57 333 P **P 13 33 01.2 -0.5**
NRIK IAmb IAmb 13 33 03.3
comp=Z,25nm,0.7s
NRIK PcP **PcP 13 34 36.2 +1.2**
WMOK Wichita Mounta 46.66 89 P **P 13 33 03.8 +0.9**
WMOK Wichita Mounta 46.66 89 P **P 13 33 03.8 +0.9**
HIA Hailar 46.69 298 *i* P **P 13 33 01.9 -1.1**
HIA pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 46.74 20 P **P 13 33 03.5 +0.1**
SUMG pmax pmax
comp=Z,102nm,1.5s
SUMG Summit 46.74 20 P **P 13 33 03.5 +0.1**
SUMG Summit 46.74 20 P **P 13 33 03.6 +0.2**
SUMG Summit 46.74 20 *i* P **P 13 33 03.5 +0.1**
SUMG IAmb IAmb 13 33 04.0
comp=Z,30nm,0.7s
L42A Oliver, Polo 46.87 75 IAmb IAmb 13 33 17.6
comp=Z,43nm,1.0s
OK052 Battle Ridge R 46.91 86 IAmb IAmb 13 33 06.9
comp=Z,29nm,0.7s
N41A Harden Midland 47.07 77 IAmb IAmb 13 33 19.1
comp=Z,39nm,0.8s
CN2 Changchun 47.16 289 ⇑ P **P 13 33 06.0 -0.6**
CN2 *ep* P pP 13 33 17.0 -1.6
CN2 *e* S **S 13 39 52.8 -3.1**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 L L
comp=Z,500nm,11.0s
CN2 L L
comp=Z,500nm,11.0s
CN2 L L
comp=Z,600nm,12.0s
SPITS Spitsbergen Ar 47.17 1 P **P 13 33 05.1 -1.2**
comp=Z,21nm,0.9s,baz=90,slow=5.0,SNR=8.9
SPITS PcP **PcP 13 34 37.0 -0.1**
comp=Z,7.5nm,0.8s,baz=35,slow=5.3,SNR=2.6
SPITS LR LR 13 51 43.2
comp=Z,120nm,21.8s,baz=8.0,slow=34
comp=Z,21nm,0.9s
SPITS Spitsbergen Ar 47.17 1 P **P 13 33 06.1 -0.2**
SPITS pmax pmax
comp=Z,44nm,1.1s
SPB2 Spitsbergen Ar 47.17 1 IAmb IAmb 13 33 07.3
comp=Z,40nm,1.1s
DEOK Depew 47.19 86 IAmb IAmb 13 33 09.1
comp=Z,22nm,0.8s
P40A Paris 47.19 79 IAmb IAmb 13 33 08.3
comp=Z,29nm,0.7s
JWT Wachi 47.32 273 IAmb IAmb 13 34 11.7
comp=Z,11nm,0.6s
W35A Tecumseh 47.46 87 IAmb IAmb 13 33 28.9
comp=Z,40nm,1.5s
ABTX Abilene, Hawle 47.68 92 IAmb IAmb 13 33 30.0
comp=Z,15nm,0.8s
S39A Bolivar 47.73 82 IAmb IAmb 13 33 12.0
comp=Z,12nm,0.8s
SFJD Kangerlussuaq 47.75 30 LR LR 13 54 43.1
comp=Z,150nm,19.9s,baz=312,slow=38
SFJD Kangerlussuaq 47.75 30 P **P 13 33 11.0 +0.2**
SFJD pmax pmax
comp=Z,108nm,0.8s
SFJD Kangerlussuaq 47.75 30 P **P 13 33 11.0 +0.2**
SFJD Kangerlussuaq 47.75 30 P **P 13 33 11.5 +0.7**
SFJD Kangerlussuaq 47.75 30 P **P 13 33 11.1 +0.3**
SFJD Kangerlussuaq 47.75 30 *i* P **P 13 33 11.5 +0.7**
SFJD IAmb IAmb 13 33 12.0
comp=Z,106nm,0.8s
TX31 Lajitas Ar. Si 47.80 98 IAmb IAmb 13 33 25.2
comp=Z,12nm,0.8s
TXAR Lajitas Array 47.80 98 P **P 13 33 13.6 +1.7**
comp=Z,5.9nm,0.9s,baz=303,slow=5.6,SNR=54
TXAR pP **pP 13 33 24.2 +0.3**
comp=Z,9.9nm,0.7s,baz=308,slow=5.9,SNR=22
TXAR PcP **PcP 13 34 40.8 +0.5**
comp=Z,4.4nm,0.6s,baz=235,slow=1.6,SNR=10
TXAR pPcP 13 34 53.6
comp=Z,4.3nm,0.6s,baz=258,slow=1.8,SNR=6.6
TXAR ScP **ScP 13 38 30.0 -0.7**
comp=Z,0.7nm,0.9s,baz=320,slow=5.7,SNR=4.3
TXAR LR LR 13 51 43.7
comp=Z,377nm,21.6s,baz=310,slow=34
comp=Z,5.9nm,0.9s
TXAR Lajitas Array 47.80 98 P **P 13 33 12.9 +1.0**
RLO Rose Lookout 47.81 85 IAmb IAmb 13 33 13.6
comp=Z,26nm,0.7s
R40A Maddies Statio 47.91 81 IAmb IAmb 13 33 13.2
comp=Z,19nm,0.7s
U38A Gravette 47.99 84 IAmb IAmb 13 33 14.6
comp=Z,26nm,0.8s
OZNA Ozona 48.07 95 IAmb IAmb 13 33 27.2
comp=Z,38nm,1.8s
LOOK Love County 48.11 88 IAmb IAmb 13 33 46.3
comp=Z,17nm,0.7s
LPIG La Paz 48.13 109 LR LR 13 51 17.9
comp=Z,113nm,19.1s,baz=328,slow=33
PLPT Palo Pinto 48.31 90 IAmb IAmb 13 33 36.6
comp=Z,13nm,0.8s
HHAR Hobbs 48.35 84 IAmb IAmb 13 33 17.5
comp=Z,16nm,0.7s
DBG Daneborg 48.38 13 P **P 13 33 15.3 -0.5**
DBG Daneborg 48.38 13 *i* P **P 13 33 15.2 -0.5**
DBG IAmb IAmb 13 33 16.0
comp=Z,81nm,1.3s
CCM Cathedral Cave 48.66 80 P **P 13 33 17.6 -0.7**
CCM pmax pmax
comp=Z,10.0nm,0.9s
CCM Cathedral Cave 48.66 80 P **P 13 33 17.6 -0.7**
CCM Cathedral Cave 48.66 80 P **P 13 33 17.6 -0.7**
JCT Junction City 49.16 94 IAmb IAmb 13 33 46.5
comp=Z,39nm,1.1s
FVM French Village 49.17 80 IAmb IAmb 13 33 22.9
comp=Z,19nm,0.8s
Q44A Meyer Farm, Va 49.34 78 IAmb IAmb 13 33 24.8
comp=Z,42nm,0.9s
NUUK Nuuk 49.36 33 P **P 13 33 24.2 +1.0**
NUUK Nuuk 49.36 33 *i* P **P 13 33 23.9 +0.7**
NUUK IAmb IAmb 13 33 25.0
comp=Z,66nm,1.0s
WHTX Lake Whitney, 49.40 91 IAmb IAmb 13 33 45.8
comp=Z,16nm,0.9s
JCJ Chichijima 49.46 260 LR LR 13 51 14.9
comp=Z,65nm,20.8s,baz=61,slow=32
JCJ Chichijima 49.46 260 P **P 13 33 24.9 +0.4**
T42A Van Buren 49.46 81 IAmb IAmb 13 34 46.7
comp=Z,14nm,0.9s
FCAR Ozark Folk Cen 49.67 83 IAmb IAmb 13 33 26.4
comp=Z,26nm,0.8s
MIAR Mount Ida 49.80 85 P **P 13 33 27.4 +0.4**
MIAR Mount Ida 49.80 85 IAmb IAmb 13 33 28.2
comp=Z,22nm,1.0s
MIAR Mount Ida 49.80 85 P **P 13 33 27.4 +0.4**
P46A Rosedale 49.86 76 IAmb IAmb 13 33 40.0
comp=Z,42nm,0.9s
SCHQ Scheffville 50.00 49 P **P 13 33 28.1 -0.2**
comp=Z,21nm,0.7s,baz=317,slow=7.4,SNR=32
SCHQ pP **pP 13 33 40.5 +0.1**
comp=Z,63nm,1.1s,baz=324,slow=8.1,SNR=16
SCHQ LR LR 13 55 17.7
comp=Z,206nm,18.3s,baz=314,slow=37
comp=Z,21nm,0.7s
WHAR Wooly Hollow 50.00 83 IAmb IAmb 13 34 11.3
comp=Z,17nm,1.2s
PBMO Poplar Bluff 50.02 81 IAmb IAmb 13 33 33.8
comp=Z,33nm,1.0s
S44A Carbondale 50.04 79 IAmb IAmb 13 33 42.5
comp=Z,31nm,0.6s
KS19 Wonju Array Si 50.08 281 P **P 13 33 29.8 +0.7**
KSRS Korea Array 50.08 281 P **P 13 33 29.8 +0.6**
comp=Z,42nm,0.8s,baz=51,slow=6.9,SNR=81
KSRS pP **pP 13 33 40.3 -0.9**
comp=Z,14nm,0.7s,baz=44,slow=6.9,SNR=7.6
KSRS PcP **PcP 13 34 48.9 +0.7**
comp=Z,4.4nm,0.8s,baz=36,slow=4.0,SNR=2.9
KSRS pPcP 13 35 02.1
comp=Z,5.4nm,0.7s,baz=43,slow=3.8,SNR=4.8
KSRS LR LR 13 55 54.7
comp=Z,84nm,19.2s,baz=35,slow=38
comp=Z,42nm,0.8s
KSAR Wonju Array Be 50.11 281 P **P 13 33 28.5 -0.9**
KSAR Wonju Array Be 50.11 281 P **P 13 33 28.5 -0.9**
BLO Bloomington 50.55 76 IAmb IAmb 13 33 33.5
comp=Z,61nm,1.1s
SADO Sadowa 50.74 66 LR LR 13 55 43.7
comp=Z,153nm,19.2s,baz=347,slow=37
SADO Sadowa 50.74 66 IAmb IAmb 13 33 47.5
comp=Z,43nm,0.9s
INCN Inchon 50.79 282 P **P 13 33 35.1 +0.5**
INCN pmax pmax
comp=Z,68nm,1.1s
INCN Inchon 50.79 282 P **P 13 33 35.0 +0.5**
O49A Covington 51.07 73 IAmb IAmb 13 33 50.8
comp=Z,27nm,1.0s
TJN Taejon 51.16 280 *i* P **P 13 33 37.7 +0.5**
WCI Wyandotte Cave 51.34 76 P **P 13 33 37.9 -0.7**
WCI pmax pmax
comp=Z,22nm,1.2s
WCI Wyandotte Cave 51.34 76 P **P 13 33 37.9 -0.7**
WCI IAmb IAmb 13 33 39.3
comp=Z,22nm,1.1s
WCI Wyandotte Cave 51.34 76 P **P 13 33 38.3 -0.3**
JNU Nakatsue 51.48 274 LR LR 13 59 13.4
comp=Z,111nm,18.0s,baz=35,slow=40
SCO Scoresbysund 51.48 16 P **P 13 33 39.9 +0.7**
SCO Scoresbysund 51.48 16 P **P 13 33 39.9 +0.7**
SCO Scoresbysund 51.48 16 *i* P **P 13 33 39.6 +0.4**
SCO IAmb IAmb 13 33 41.6
comp=Z,35nm,1.1s
N51A Ashland 51.64 71 IAmb IAmb 13 33 41.1
comp=Z,39nm,0.7s
SOEG Soedalen 51.66 22 *i* P **P 13 33 40.6 +0.1**
SOEG IAmb IAmb 13 33 41.2
comp=Z,80nm,1.1s
ACSO Alum Creek Sta 51.78 72 IAmb IAmb 13 33 42.3
comp=Z,29nm,0.7s
HKT Hockley 51.85 91 P **P 13 33 44.4 +2.0**
WVT Waverly 51.95 79 P **P 13 33 43.3 +0.1**
WVT pmax pmax
comp=Z,44nm,0.7s
WVT Waverly 51.95 79 P **P 13 33 43.3 +0.1**
WVT Waverly 51.95 79 P **P 13 33 43.4 +0.2**
WVT Waverly 51.95 79 P **P 13 33 43.6 +0.4**
WVT PcP **PcP 13 34 55.8 +0.6**
H06N1 SOCORRO T-PHAS 52.02 113 T T 14 29 10.2
SNR=4.5
ERPA Erie 52.10 69 IAmb IAmb 13 33 58.1
comp=Z,44nm,1.1s
XLT XiLinHaoTe 52.12 295 *e* P **P 13 33 45.1 +0.6**
XLT pmax pmax
comp=Z,67nm,0.9s
P51A Williamsport 52.26 73 IAmb IAmb 13 33 46.4
comp=Z,52nm,1.4s
ANGG Ammassalik, Gr 52.30 26 P **P 13 33 44.5 -0.8**
ANGG Ammassalik, Gr 52.30 26 *i* P **P 13 33 44.0 -1.4**
ANGG IAmb IAmb 13 33 45.2
comp=Z,64nm,1.0s
PECO Prince Edward 52.44 65 IAmb IAmb 13 33 48.4
comp=Z,32nm,0.9s
DL2 Dalian 52.59 286 P **P 13 33 47.3 -0.6**
DL2 S **S 13 41 09.3 -2.5**
DL2 pmax pmax
comp=Z,61nm,0.9s
DL2 pmax pmax
comp=Z,260nm,7.6s
DL2 L L
comp=Z,510nm,14.6s
DL2 L L
comp=Z,420nm,12.0s
DL2 L L
comp=Z,570nm,13.1s
IVI Ivigtut 52.64 34 IAmb IAmb 13 33 49.5
comp=Z,34nm,0.9s
IVI Ivigtut 52.64 34 P **P 13 33 49.0 +1.0**
IVI Ivigtut 52.64 34 P **P 13 33 48.6 +0.7**
IVI PcP **PcP 13 34 57.4 +0.1**
IVI Ivigtut 52.64 34 *i* P **P 13 33 48.0 0.0**
IVI IAmb IAmb 13 33 49.2
comp=Z,29nm,0.8s
P52A Corning 52.67 72 IAmb IAmb 13 35 09.3
comp=Z,20nm,0.7s
PAOC Oil Creek Stat 52.69 69 IAmb IAmb 13 34 02.2
comp=Z,38nm,0.9s

O53A New Philadelph 52.74 71 IAmb IAmb 13 33 48.8
comp=Z,26nm,0.7s
V48A Smith Brothers 52.80 79 IAmb IAmb 13 33 51.4
comp=Z,11nm,0.7s
CLTN Cedars of Leba 52.83 78 IAmb IAmb 13 33 51.0
comp=Z,28nm,0.9s
U49A Red Boiling Sp 52.84 78 IAmb IAmb 13 34 59.6
comp=Z,18nm,0.9s
TLY Talaya 52.85 309 LR LR 13 56 38.0
comp=Z,250nm,20.5s,baz=42,slow=36
TLY Talaya 52.85 309 *ce* P **P** **13 33 49.7 0.0**
TLY pmax pmax
comp=Z,24nm,1.0s
TLY Talaya 52.85 309 P **P** **13 33 49.3 -0.4**
TLY IAmb IAmb 13 33 50.8
comp=Z,16nm,0.8s
TLY Talaya 52.85 309 P **P** **13 33 49.7 0.0**
TLY Talaya 52.85 309 P **P** **13 33 49.9 +0.2**
PAMR Moraine State 52.86 70 IAmb IAmb 13 33 50.3
comp=Z,36nm,0.8s
JMIC Jan Mayen 52.87 11 LR LR 13 55 53.0
comp=Z,184nm,21.7s,baz=42,slow=36
T50A Nancy 53.01 76 IAmb IAmb 13 33 51.8
comp=Z,26nm,0.9s
Q52A Bidwell 53.06 73 IAmb IAmb 13 33 51.6
comp=Z,52nm,1.4s
MNTQ Montreal, Queb 53.10 61 IAmb IAmb 13 34 04.2
comp=Z,46nm,1.0s
P53A Whipple 53.18 72 IAmb IAmb 13 33 52.5
comp=Z,25nm,0.8s
LONY Lake Ozonia 53.22 63 IAmb IAmb 13 34 05.7
comp=Z,31nm,1.0s
S51A Beattyville 53.27 75 IAmb IAmb 13 33 53.9
comp=Z,38nm,0.9s
LMQ La Malbaie 53.32 58 IAmb IAmb 13 34 06.3
comp=Z,50nm,1.1s
ZAIG Zacatecas 53.49 103 P **P** **13 33 56.4 +1.3**
K57A Scipio Center 53.53 66 IAmb IAmb 13 34 08.6
comp=Z,38nm,1.0s
NRS Narsarsuaq 53.56 33 P **P** **13 33 55.8 +1.1**
NRS Narsarsuaq 53.56 33 P **P** **13 33 55.8 +1.1**
NRS Narsarsuaq 53.56 33 *i* P **P** **13 33 55.7 +1.0**
NRS IAmb IAmb 13 34 03.9
comp=Z,95nm,1.3s
X48A Hartselle 53.60 80 IAmb IAmb 13 33 55.5
comp=Z,14nm,0.7s
SWET Sewanee 53.68 79 IAmb IAmb 13 34 17.1
comp=Z,9.4nm,0.7s
Q54A Coxs Mills 53.84 72 IAmb IAmb 13 33 57.1
comp=Z,21nm,0.7s
ULN Ulaanbaatar 53.93 304 *ce* P **P** **13 33 57.6 -0.3**
ULN pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 53.93 304 P **P** **13 33 57.5 -0.3**
ULN PcP **PcP** **13 35 02.6 -0.1**
ULN IAmb IAmb 13 35 04.0
comp=Z,16nm,0.9s
ULN Ulaanbaatar 53.93 304 P **P** **13 33 57.4 -0.4**
ULN Ulaanbaatar 53.93 304 P **P** **13 33 57.6 -0.3**
MOY Mondy 54.04 310 *eP* **P** **13 33 57.3 -1.2**
MOY pmax pmax
comp=Z,18nm,2.1s
W50A Signal Mountai 54.05 78 IAmb IAmb 13 33 59.3
comp=Z,33nm,0.9s
J59A Piesco 54.06 64 IAmb IAmb 13 33 59.4
comp=Z,32nm,0.9s
TZTN Tazewell 54.07 76 IAmb IAmb 13 33 59.7
comp=Z,43nm,1.1s
TZTN Tazewell 54.07 76 P **P** **13 33 58.9 0.0**
BINY Binghamton 54.18 66 IAmb IAmb 13 34 00.7
comp=Z,45nm,0.9s
BINY Binghamton 54.18 66 P **P** **13 33 59.9 +0.3**
M57A Sunshine Farm, 54.18 67 IAmb IAmb 13 34 13.4
comp=Z,57nm,1.3s
SONM Songino Array 54.26 304 P **P** **13 34 00.3 +0.1**
comp=Z,14nm,0.6s,baz=49,slow=7.1,SNR=58
SONM PcP **PcP** **13 35 04.4 +0.5**
comp=Z,16nm,0.8s,baz=58,slow=1.5,SNR=14
SONM pPcP 13 35 17.6
comp=Z,12nm,0.9s,baz=55,slow=2.9,SNR=5.9
SONM LR LR 13 59 43.0
comp=Z,511nm,19.2s,baz=22,slow=39
comp=Z,14nm,0.6s
SONM Songino Array 54.26 304 P **P** **13 34 00.2 -0.1**
SONM PcP **PcP** **13 35 04.5 +0.5**
SONM IAmb IAmb 13 35 05.3
comp=Z,18nm,0.9s
CPCT Cooper Cave 54.31 78 IAmb IAmb 13 34 00.9
comp=Z,22nm,1.0s
FPAL Fort Paine 54.35 79 IAmb IAmb 13 34 01.3
comp=Z,38nm,1.3s
Y49A Blount Mountai 54.39 80 IAmb IAmb 13 34 07.1
comp=Z,15nm,0.7s
TKL Tuckaleechee C 54.58 77 LR LR 13 57 12.4
comp=Z,319nm,18.5s,baz=328,slow=36
TKL Tuckaleechee C 54.58 77 IAmb IAmb 13 34 03.0
comp=Z,21nm,0.9s
Q56A Snyder Ridge, 54.70 71 IAmb IAmb 13 34 05.3
comp=Z,20nm,0.9s
R55A Marlinton 54.73 72 IAmb IAmb 13 34 04.6
comp=Z,54nm,1.4s
KSPA Keystone Colle 54.75 66 IAmb IAmb 13 34 04.6
comp=Z,26nm,0.9s
N58A Sunbury 54.75 68 IAmb IAmb 13 34 04.5
comp=Z,25nm,0.8s
X51A Calhoun 54.76 79 IAmb IAmb 13 34 04.4
comp=Z,35nm,1.2s
LBNH Lisbon 54.84 62 IAmb IAmb 13 34 18.0
comp=Z,35nm,1.0s
W52A Murphy 54.90 77 IAmb IAmb 13 34 05.3
comp=Z,44nm,1.3s
TRY Troy 55.02 64 IAmb IAmb 13 34 20.1
comp=Z,28nm,0.8s
HNH Hanover 55.03 62 IAmb IAmb 13 34 19.6
comp=Z,35nm,1.0s
U54A Nelsons Funny 55.05 75 IAmb IAmb 13 34 07.0
comp=Z,50nm,1.2s
VADS Vadso 55.07 356 *eP* **P** **13 34 04.7 -0.9**
VADS IAmb IAmb 13 34 05.5
comp=Z,43nm,0.9s
V53A Saluda 55.11 76 IAmb IAmb 13 34 07.9
comp=Z,36nm,1.1s
PAGS Pennsylvania G 55.19 68 IAmb IAmb 13 34 07.3
comp=Z,39nm,0.9s
BLA Blacksburg 55.33 73 IAmb IAmb 13 34 08.8
comp=Z,39nm,0.9s
KEV Kevo 55.52 357 P **P** **13 34 07.9 -0.9**
KEV pmax pmax
comp=Z,51nm,0.9s
KEV Kevo 55.52 357 P **P** **13 34 07.9 -0.9**
KEV Kevo 55.52 357 P **P** **13 34 08.0 -0.9**
KEV Kevo 55.52 357 P **P** **13 34 07.7 -1.1**
KEV PcP **PcP** **13 35 08.4 +0.2**
MVL Millersville 55.55 68 IAmb IAmb 13 34 10.0
comp=Z,26nm,1.1s
SDMD Soldier's Deli 55.71 69 IAmb IAmb 13 34 11.0
comp=Z,21nm,1.0s
Y52A Lilburn 55.72 79 IAmb IAmb 13 34 11.0
comp=Z,34nm,1.3s
S57A Dark Hollow, R 55.74 72 IAmb IAmb 13 34 11.8
comp=Z,31nm,1.1s
WVL Waterville 55.75 60 IAmb IAmb 13 34 24.1
comp=Z,61nm,1.2s
TRO Tromso 55.77 0 P **P** **13 34 10.3 -0.3**
TRO Tromso 55.77 0 *eP* **P** **13 34 10.3 -0.3**
TRO IAmb IAmb 13 34 10.9
comp=Z,53nm,0.8s
ARA0 ARCESS Array S 55.79 357 *eP* **P** **13 34 09.5 -1.3**
ARA0 IAmb IAmb 13 34 10.5
comp=Z,36nm,0.9s
ARCES ARCESS Array B 55.79 357 P **P** **13 34 09.6 -1.1**
comp=Z,21nm,0.8s,baz=10,slow=7.4,SNR=40
ARCES PcP **PcP** **13 35 09.4 +0.1**
comp=Z,12nm,0.8s,baz=4.9,slow=4.3,SNR=6.2
ARCES LR LR 13 59 20.9
comp=Z,101nm,19.6s,baz=346,slow=37
comp=Z,21nm,0.8s
ARCES ARCESS Array B 55.79 357 *eP* **P** **13 34 09.4 -1.4**
ARCES ARCESS Array B 55.79 357 P **P** **13 34 09.7 -1.1**
ARCES IAmb IAmb 13 34 10.7
comp=Z,31nm,0.9s
JETT Jettan, Norway 55.85 359 *eP* **P** **13 34 10.9 -0.3**
JETT IAmb IAmb 13 34 12.2
comp=Z,58nm,0.8s
250A Grady 55.85 82 IAmb IAmb 13 34 11.5
comp=Z,27nm,0.7s
V55A Taylorsville 55.88 75 IAmb IAmb 13 34 12.6
comp=Z,26nm,1.0s
U56A King 55.98 74 IAmb IAmb 13 34 13.3
comp=Z,53nm,1.3s
R58B Mineral 56.19 71 IAmb IAmb 13 34 15.7
comp=Z,27nm,1.0s
HRV Adam Dziewonsk 56.26 63 P **P** **13 34 14.5 0.0**
HRV pmax pmax
comp=Z,42nm,1.3s
HRV Adam Dziewonsk 56.26 63 P **P** **13 34 14.5 0.0**
HRV IAmb IAmb 13 34 28.5
comp=Z,42nm,1.2s
HRV Adam Dziewonsk 56.26 63 P **P** **13 34 14.7 +0.2**
PAULI Pauline 56.29 76 IAmb IAmb 13 34 15.1
comp=Z,22nm,0.9s
WSPT Westport, CT 56.31 65 IAmb IAmb 13 34 28.8
comp=Z,54nm,1.0s
KMSC Kings Mountain 56.33 75 IAmb IAmb 13 34 15.5
comp=Z,33nm,1.0s
KNGR Kungurtug, Tuv 56.33 311 *i* P **P** **13 34 15.3 +0.3**
KNGR pmax pmax
comp=Z,24nm,1.0s
G65A Princeton 56.33 58 IAmb IAmb 13 34 28.2
comp=Z,59nm,1.1s
KTK1 Kautokeino 56.36 358 *eP* **P** **13 34 13.9 -0.9**
KTK1 IAmb IAmb 13 34 14.6
comp=Z,28nm,0.9s
GOGA Godfrey 56.39 78 P P 13 34 25.1 +10
GOGA Godfrey 56.39 78 IAmb IAmb 13 34 15.3
comp=Z,13nm,0.8s
HODGE Hodges 56.47 77 IAmb IAmb 13 34 16.2
comp=Z,25nm,0.8s
HHC Hu-ho-hao-te 56.65 295 *eP* **P** **13 34 17.8 +0.4**
HHC S **S** **13 41 59.3 -7.1**
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,85nm,4.4s
HHC L L
comp=Z,200nm,18.3s
HHC L L
comp=Z,170nm,18.3s
HHC L L
comp=Z,300nm,20.6s
LVZ Lovozero 56.98 353 *ce* P **P** **13 34 18.2 -1.1**
LVZ pmax pmax
comp=Z,72nm,1.0s
LVZ Lovozero 56.98 353 P **P** **13 34 18.5 -0.9**
LVZ Lovozero 56.98 353 P **P** **13 34 18.7 -0.6**
LVZ Lovozero 56.98 353 P **P** **13 34 18.4 -0.9**
JSC Jenkinsville 57.00 76 IAmb IAmb 13 34 20.1
comp=Z,24nm,1.0s
TIA Tai'an 57.02 287 P **P** **13 34 19.9 -0.1**
TIA pmax pmax
comp=Z,22nm,1.2s
W57A Gilead 57.06 75 IAmb IAmb 13 34 20.6
comp=Z,27nm,1.1s
V58A Windy Hill, Pi 57.08 73 IAmb IAmb 13 34 21.1
comp=Z,44nm,0.8s
BIRD Birdtown, Kers 57.18 75 IAmb IAmb 13 34 21.4
comp=Z,56nm,1.2s
154A Montrose 57.18 79 IAmb IAmb 13 34 21.1
comp=Z,53nm,1.0s
LOF Lofoten 57.21 3 *eP* **P** **13 34 20.2 -0.7**
LOF IAmb IAmb 13 34 22.7
comp=Z,39nm,1.0s
APA Apatity 57.39 354 *eP* **P** **13 34 19.5 -2.6**
APA pmax pmax
comp=Z,20nm,1.0s
APA MLR MLR
comp=Z,322nm,19.6s
STEI Steigen 57.45 2 *eP* **P** **13 34 21.9 -0.6**
STEI IAmb IAmb 13 34 22.2
comp=Z,32nm,0.7s
HNS HongShan 57.47 290 ⇑P **P** **13 34 23.8 +0.7**
HNS pP **pP** **13 34 36.3 +0.9**
HNS sP **sP** **13 34 42.6 +2.2**
HNS pmax pmax
comp=Z,68nm,0.8s
HNS L L
comp=Z,280nm,12.4s
HNS L L
comp=Z,250nm,15.1s
HNS L L
comp=Z,320nm,17.5s
BTO2 Baotou 57.60 296 *eP* **P** **13 34 24.1 -0.1**
BTO2 pP **pP** **13 34 34.3 -2.2**
BTO2 sP **sP** **13 34 38.1 -3.3**
BTO2 S **S** **13 42 17.1 -2.0**
BTO2 sS **pS** **13 42 34.3 +0.8**
BTO2 SS **SS** **13 46 08.3 -0.6**
BTO2 pmax pmax
comp=Z,38nm,0.8s
BTO2 pmax pmax
comp=Z,170nm,6.9s
BTO2 L L
comp=Z,410nm,9.2s
BTO2 L L
comp=Z,630nm,14.0s
BTO2 L L
comp=Z,720nm,18.0s
JOW Kunigami 57.66 271 LR LR 13 57 33.7
comp=Z,54nm,21.6s,baz=310,slow=34
SGF Sodankyl 57.85 357 P **P** **13 34 25.1 -0.3**
SGF Sodankyl 57.85 357 P **P** **13 34 25.1 -0.3**
FAUS Fauske 58.00 2 *eP* **P** **13 34 25.9 -0.5**
FAUS IAmb IAmb 13 34 26.5
comp=Z,45nm,0.9s
VAGH Vaagaholmen 58.61 3 *eP* **P** **13 34 29.9 -0.7**
VAGH IAmb IAmb 13 34 30.3
comp=Z,39nm,0.9s
HAL Halifax 58.67 56 IAmb IAmb 13 34 44.8
comp=Z,36nm,1.0s
GUMO Guam 58.81 247 LR LR 13 57 00.1
comp=Z,40nm,21.4s,baz=77,slow=33
KONS Konsvik 58.83 3 *eP* **P** **13 34 31.9 -0.3**
KONS IAmb IAmb 13 34 32.7
comp=Z,31nm,0.7s
ZAA0 Zalesovo Array 58.84 321 IAmb IAmb 13 35 22.9
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 58.84 321 P **P** **13 34 32.4 -0.1**
comp=Z,2.8nm,0.5s,baz=30,slow=5.8,SNR=20
ZALV PcP **PcP** **13 35 21.8 +0.2**
comp=Z,14nm,0.8s,baz=36,slow=3.3,SNR=15
ZALV LR LR 14 02 03.6
comp=Z,673nm,19.7s,baz=38,slow=38
comp=Z,2.8nm,0.5s
ZALV Zalesovo Beam 58.84 321 P **P** **13 34 32.7 +0.2**
ZALV PcP **PcP** **13 35 21.2 -0.3**
RAUS Rausandaksla 58.92 2 *eP* **P** **13 34 32.4 -0.5**
RAUS IAmb IAmb 13 34 33.0
comp=Z,66nm,0.9s
STOK Stokkvaagen 59.00 3 *eP* **P** **13 34 33.1 -0.3**
STOK IAmb IAmb 13 34 33.7
comp=Z,58nm,1.0s
NJ2 Nanjing 59.12 283 *eP* **P** **13 34 34.4 -0.3**
NJ2 pmax pmax
comp=Z,69nm,0.7s
MOR8 Moi Rana 59.20 2 *eP* **P** **13 34 32.8 -2.0**
MOR8 IAmb IAmb 13 34 33.8
comp=Z,30nm,0.8s
LEIR Leirfjorden 59.22 3 *eP* **P** **13 34 34.8 -0.1**
LEIR IAmb IAmb 13 34 35.3
comp=Z,89nm,1.2s
MSF Maaselka 59.28 355 P **P** **13 34 35.0 -0.3**
MSF Maaselka 59.28 355 P **P** **13 34 35.0 -0.3**
OUL Oulu 60.23 357 P **P** **13 34 41.0 -0.9**
OUL pmax pmax
comp=Z,91nm,0.9s
OUL Oulu 60.23 357 P **P** **13 34 41.3 -0.6**
NSS Namsos 60.77 4 *eP* **P** **13 34 45.1 -0.4**
NSS IAmb IAmb 13 34 45.7
comp=Z,45nm,0.9s
LYN LuoYang 60.80 289 ⇑P **P** **13 34 46.4 +0.2**
LYN S **S** **13 42 56.6 -3.6**
LYN pmax pmax
comp=Z,110nm,0.8s
LYN L L
comp=Z,370nm,17.5s
LYN L L
comp=Z,220nm,13.5s
LYN L L
comp=Z,380nm,20.3s
DGZ Jazzator, Alta 61.21 317 *c i* P **P** **13 34 48.2 -0.8**
DGZ pmax pmax
comp=Z,10.0nm,0.9s
CMIG Matias Romero 62.35 100 LR LR 14 00 21.4
comp=Z,140nm,21.7s,baz=314,slow=34
VAF Ylistaro 62.36 358 P **P** **13 34 55.8 -0.5**
VAF pmax pmax
comp=Z,65nm,1.0s
MOL Molde 62.51 6 *eP* **P** **13 34 57.2 0.0**
MOL IAmb IAmb 13 34 57.8
comp=Z,46nm,1.1s
WHN Wuhan 62.78 285 ⇑P **P** **13 34 59.3 -0.3**
WHN pmax pmax
comp=Z,100nm,0.8s
AKN Aaknes 62.87 6 *eP* **P** **13 34 59.8 +0.1**
AKN IAmb IAmb 13 35 00.6
comp=Z,83nm,0.8s
XAN Xi'an 63.11 291 ⇑P **P** **13 35 01.4 -0.4**
XAN pP pP 13 35 13.5 -0.7
XAN pmax pmax
comp=Z,54nm,0.8s
XAN pmax pmax
comp=Z,150nm,3.9s
XAN L L
comp=Z,320nm,4.5s
XAN L L
comp=Z,610nm,4.1s
XAN L L
comp=Z,680nm,11.7s
XAN Xi'an 63.11 291 P **P** **13 35 01.8 0.0**
XAN PcP **PcP** **13 35 38.9 -0.3**
DOMB Dombas 63.12 5 *eP* **P** **13 35 01.0 -0.5**
DOMB IAmb IAmb 13 35 01.6
comp=Z,45nm,0.7s
KLMR Klimovskoe 63.47 349 *eP* **P** **13 35 02.2 -1.5**
KLMR *e*PP **pP** **13 35 12.1 -4.0**
KLMR pmax pmax
comp=Z,97nm,1.1s
NACB Ninganchiao 63.55 275 P **P** **13 35 03.9 -0.9**
NACB IAmb IAmb 13 35 05.0
comp=Z,31nm,0.8s
NACB Ninganchiao 63.55 275 P **P** **13 35 04.1 -0.6**
SVE Sverdlovsk 63.65 336 *de* P **P** **13 35 04.9 -0.1**
SVE pmax pmax
comp=Z,86nm,1.0s
GTA2 Gaotai 63.67 302 *eP* **P** **13 35 04.8 -0.7**
GTA2 pmax pmax
comp=Z,54nm,0.9s
GTA2 L L
comp=Z,320nm,15.2s
GTA2 L L
comp=Z,330nm,16.2s
GTA2 L L
comp=Z,440nm,16.5s
KURK Kurchatov 63.69 322 *ce* P **P** **13 35 04.6 -0.7**
KURK pmax pmax
comp=Z,19nm,1.0s
KURK Kurchatov 63.69 322 P **P** **13 35 05.3 0.0**
KURK IAmb IAmb 13 35 05.9
comp=Z,13nm,0.7s
KURK Kurchatov 63.69 322 P **P** **13 35 05.0 -0.3**
KURBB Kurchatov Arra 63.80 322 P **P** **13 35 05.5 -0.5**
comp=Z,11nm,0.8s,baz=21,slow=6.5,SNR=53
KURBB PcP **PcP** **13 35 40.9 -0.7**
comp=Z,7.9nm,0.7s,baz=34,slow=4.2,SNR=12
KURBB LR LR 14 05 10.6
comp=Z,622nm,18.6s,baz=194,slow=38
comp=Z,11nm,0.8s
HYA Hoyanger 63.82 7 *eP* **P** **13 35 05.9 -0.1**
HYA IAmb IAmb 13 35 06.1
comp=Z,22nm,1.0s
SUE Sulen 63.82 8 *eP* **P** **13 35 05.4 -0.6**
SUE IAmb IAmb 13 35 06.3
comp=Z,20nm,0.8s
FINES FINESS Array B 63.87 356 P **P** **13 35 05.5 -0.8**
comp=Z,61nm,0.8s,baz=15,slow=7.9,SNR=95
FINES LR LR 14 05 14.9
comp=Z,68nm,20.1s,baz=30,slow=38
comp=Z,61nm,0.8s
ZSN Zaisan 64.03 317 *eP* **P** **13 35 07.4 -0.2**
ZSN pmax pmax
comp=Z,15nm,0.8s
ZSN Zaisan 64.03 317 *eP* **P** **13 35 07.4 -0.2**
comp=Z,15nm,0.8s
LRW Lerwick 64.16 11 *eP* **P** **13 35 08.6 +0.3**
LRW IAmb IAmb 13 35 09.8
comp=Z,59nm,0.7s
SSLB Suanglung 64.21 275 P **P** **13 35 08.8 -0.4**
LZH Lanzhou 64.22 296 *eP* **P** **13 35 09.4 +0.1**
LZH pP pP 13 35 23.5 +1.8
LZH pmax pmax
comp=Z,100nm,1.7s
LZH L L
comp=Z,760nm,8.2s
LZH L L
comp=Z,730nm,8.9s
LZH L L
comp=Z,630nm,9.5s
NB2 NORSAR Subarra 64.23 4 P **P** **13 35 08.2 -0.6**
comp=Z,21nm,0.7s,baz=355,slow=6.5
NB2 NORSAR Subarra 64.23 4 P **P** **13 35 08.2 -0.6**
NOA NORSAR Array B 64.23 4 P **P** **13 35 08.4 -0.3**
comp=Z,36nm,0.8s,baz=356,slow=6.6,SNR=86
comp=Z,36nm,0.8s
KIRV Kirov 64.28 343 LR LR 14 05 22.9
comp=Z,256nm,21.2s,baz=17,slow=38
KIRV Kirov 64.28 343 *ce* P **P** **13 35 08.3 -0.7**
YULB Yu-li 64.32 275 P **P** **13 35 09.4 -0.5**
YULB IAmb IAmb 13 35 19.6
comp=Z,28nm,1.1s
YULB Yu-li 64.32 275 P **P** **13 35 10.1 +0.2**
LZDM Lanzhou Array 64.40 296 P **P** **13 35 10.4 -0.2**
comp=Z,15nm,0.4s,baz=14,slow=0.6,SNR=22
LZDM PcP **PcP** **13 35 44.6 -0.2**
comp=Z,5.7nm,0.5s,baz=354,slow=1.4,SNR=3.5
LZDM LR LR 14 06 43.6
comp=Z,149nm,18.7s,baz=70,slow=39
comp=Z,15nm,0.4s
NAO01 NORSAR Array S 64.41 5 P **P** **13 35 09.9 0.0**
BVAR Borovoye Array 64.42 329 P **P** **13 35 09.9 -0.2**
comp=Z,43nm,0.6s,baz=37,slow=7.0,SNR=188
BVAR PcP **PcP** **13 35 44.6 +0.4**
comp=Z,22nm,0.7s,baz=44,slow=3.8,SNR=8.7
BVAR PKP2bc P'P'bc 14 03 58.1 -12
comp=Z,0.8nm,0.4s,baz=188,slow=4.0,SNR=4.4
comp=Z,43nm,0.6s
ASK Askoy 64.42 8 *eP* **P** **13 35 10.0 +0.1**
ASK IAmb IAmb 13 35 10.6
comp=Z,111nm,1.4s
SKAR Skarslia 64.44 6 *eP* **P** **13 35 09.9 -0.2**
SKAR IAmb IAmb 13 35 10.8
comp=Z,60nm,0.7s
BER Bergen 64.53 8 *eP* **P** **13 35 10.7 0.0**
NC602 NORSAR Array S 64.55 4 *eP* **P** **13 35 10.2 -0.5**
NC602 IAmb IAmb 13 35 10.6
comp=Z,21nm,0.8s
ARTI Arti 64.57 337 LR LR 14 07 50.9
comp=Z,191nm,18.7s,baz=16,slow=40
ARTI Arti 64.57 337 *ce* P **P** **13 35 10.3 -0.7**
ARTI pmax pmax
comp=Z,112nm,0.8s
ARTI Arti 64.57 337 P **P** **13 35 10.4 -0.6**
ARTI Arti 64.57 337 P **P** **13 35 10.5 -0.6**
TPUB Ta-pu 64.78 275 P **P** **13 35 12.2 -0.6**
TPUB IAmb IAmb 13 35 29.3
comp=Z,22nm,0.9s
TPUB Ta-pu 64.78 275 P **P** **13 35 12.1 -0.8**
ODD1 Odda 65.09 7 *eP* **P** **13 35 14.4 0.0**
ODD1 IAmb IAmb 13 35 15.1
comp=Z,27nm,0.8s
HFS Hagfors 65.23 3 P **P** **13 35 14.6 -0.6**
comp=Z,64nm,0.7s,baz=28,slow=3.5,SNR=159
HFS LR LR 14 03 09.4
comp=Z,92nm,20.8s,baz=2.0,slow=35
comp=Z,64nm,0.7s
OSL Oslo 65.31 5 *eP* **P** **13 35 15.9 +0.2**
OSL IAmb IAmb 13 35 16.3
comp=Z,144nm,1.6s
PUL Pulkovo 65.33 354 *ce* P **P** **13 35 16.4 +0.6**
PUL pmax pmax
comp=Z,126nm,0.4s
KONO Kongsberg 65.54 5 *ce* P **P** **13 35 17.1 -0.1**
KONO pmax pmax
comp=Z,48nm,0.9s
KONO Kongsberg 65.54 5 *eP* **P** **13 35 17.5 +0.3**
KONO Kongsberg 65.54 5 P **P** **13 35 17.4 +0.3**
KONO Kongsberg 65.54 5 P **P** **13 35 17.6 +0.4**
KONO Kongsberg 65.54 5 P **P** **13 35 17.6 +0.3**
KONO pP **pP** **13 35 30.3 +0.6**
KONO sP **sP** **13 35 35.4 +0.8**

BLS5 Blasjo 65.57 7 *e*P **P 13 35 17.5 +0.1**
BLS5 lAmb lAmb 13 35 18.5
comp=Z,36nm,0.7s
MK31 Makanchi Array 65.58 318 *ce*P **P 13 35 16.4 -1.4**
MKAR Makanchi Array 65.58 318 P **P 13 35 17.0 -0.7**
comp=Z,8.2nm,0.7s,baz=44,slow=6.2,SNR=89
MKAR PKP2bc P'P'bc 14 03 54.4 -12
comp=Z,0.7nm,0.8s,baz=347,slow=5.0,SNR=4.8
MKAR LR LR 14 05 48.3
comp=Z,499nm,20.9s,baz=23,slow=38
comp=Z,8.2nm,0.7s
LINV Loch Inver, As 65.59 14 *e*P **P 13 35 17.8 +0.3**
LINV lAmb lAmb 13 35 18.8
comp=Z,17nm,0.7s
MAKZ Makanchi 65.69 318 P **P 13 35 18.0 -0.5**
MAKZ pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 65.69 318 P **P 13 35 18.0 -0.5**
MAKZ lAmb lAmb 13 35 18.5
comp=Z,12nm,0.8s
MAKZ Makanchi 65.69 318 P **P 13 35 17.3 -1.1**
WMQ Urumqi 65.80 312 ⇓P **P 13 35 19.8 +0.5**
WMQ pP pP 13 35 32.8 +1.0
WMQ PcP **PcP 13 35 47.0 -3.1**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,97nm,6.1s
WMQ L L
comp=Z,310nm,24.1s
WMQ L L
comp=Z,230nm,22.1s
WMQ L L
comp=Z,310nm,23.8s
ARBE Arbavere 65.88 356 P **P 13 35 19.4 -0.1**
STRU Stroemstad 66.23 5 *i* P **P 13 35 21.2 -0.5**
KPL Plockton 66.31 14 *e*P **P 13 35 22.3 +0.1**
KPL lAmb lAmb 13 35 23.6
comp=Z,26nm,0.8s
MCD Coleburn Disti 66.40 13 *e*P **P 13 35 23.2 +0.4**
MCD lAmb lAmb 13 35 24.5
comp=Z,102nm,0.8s
APG El Apazote 66.55 97 LR LR 14 03 15.3
comp=Z,6.9nm,21.8s,baz=52,slow=35
SNART Snartemo 66.70 7 *e*P **P 13 35 25.2 +0.5**
SNART lAmb lAmb 13 35 25.6
comp=Z,13nm,1.4s
SNART Snartemo 66.70 7 *i* P **P 13 35 24.7 0.0**
VSU Vasula 66.83 356 *ce*P **P 13 35 24.2 -1.3**
VSU pmax pmax
comp=Z,100nm,0.7s
VSU Vasula 66.83 356 P **P 13 35 24.4 -1.1**
HOMB Homborsund 66.85 6 *e*P **P 13 35 25.9 +0.3**
HOMB lAmb lAmb 13 35 26.1
comp=Z,69nm,1.0s
HOMB Homborsund 66.85 6 *i* P **P 13 35 25.3 -0.3**
DRUM Mains of Drumt 67.15 13 P **P 13 35 27.9 +0.3**
DRUM Mains of Drumt 67.15 13 *e*P **P 13 35 27.7 +0.1**
DRUM lAmb lAmb 13 35 28.9
comp=Z,186nm,0.7s
TJOU Tjoern 67.25 4 *i* P **P 13 35 28.2 +0.1**
LAWE Loch Awe, Argy 67.39 15 *e*P **P 13 35 29.2 +0.1**
LAWE lAmb lAmb 13 35 30.6
comp=Z,44nm,0.9s
INVG Invergeldie, C 67.42 14 *e*P **P 13 35 29.2 -0.1**
INVG lAmb lAmb 13 35 31.1
comp=Z,42nm,0.8s
EAB Aberfoyle 67.61 14 *e*P **P 13 35 30.7 +0.2**
EAB lAmb lAmb 13 35 32.1
comp=Z,69nm,0.8s
MTO3 Montecristo 67.66 97 P **P 13 35 32.1 +0.4**
MTO3 lAmb lAmb 13 35 44.8
comp=Z,12nm,0.9s
ONAU Onsala 67.90 4 *i* P **P 13 35 31.3 -0.9**
PGBU Glenifferbraes 67.96 14 *e*P **P 13 35 33.0 +0.3**
PGBU lAmb lAmb 13 35 34.1
comp=Z,82nm,0.9s
EDI Edinburgh 68.03 13 *e*P **P 13 35 33.0 -0.1**
EDI lAmb lAmb 13 35 35.0
comp=Z,42nm,0.8s
IDGL Inch Island, C 68.21 16 P **P 13 35 34.7 +0.4**
IDGL Inch Island, C 68.21 16 P **P 13 35 33.7 -0.6**
IDGL Inch Island, C 68.21 16 *e*P **P 13 35 34.6 +0.3**
IDGL lAmb lAmb 13 35 36.0
comp=Z,28nm,0.9s
CD2 Chengdu 68.28 293 P **P 13 35 35.4 +0.2**
CD2 pmax pmax
comp=Z,210nm,0.8s
FABU Falkenberg 68.33 4 *i* P **P 13 35 34.2 -0.7**
TDK Taldyqorghan 68.57 319 *e*P **P 13 35 36.5 -0.2**
TDK pmax pmax
comp=Z,9.0nm,0.6s
TDK Taldyqorghan 68.57 319 *e*P **P 13 35 36.6 -0.2**
comp=Z,9.0nm,0.6s
EKA Eskdalemuir Ar 68.61 14 P **P 13 35 37.0 +0.3**
comp=Z,59nm,0.8s,baz=343,slow=4.9,SNR=144
EKA PKP2bc P'P'bc 14 03 44.9 -13
comp=Z,2.2nm,1.0s,baz=90,slow=2.7,SNR=4.6
EKA LR LR 14 06 14.2
comp=Z,171nm,21.7s,baz=358,slow=36
comp=Z,59nm,0.8s
ESK Eskdalemuir 68.61 14 P **P 13 35 37.1 +0.3**
ESK pmax pmax
comp=Z,58nm,0.9s
ESK Eskdalemuir 68.61 14 P **P 13 35 37.1 +0.3**
ESK Eskdalemuir 68.61 14 P **P 13 35 37.3 +0.5**
ESK Eskdalemuir 68.61 14 *e*P **P 13 35 37.0 +0.2**
ESK lAmb lAmb 13 35 38.8
comp=Z,51nm,0.9s
ESK Eskdalemuir 68.61 14 P **P 13 35 37.2 +0.5**
NEWG New Galloway 68.67 14 *e*P **P 13 35 37.3 +0.2**
NEWG lAmb lAmb 13 35 38.5
comp=Z,20nm,0.8s
GOMU GeErMu 68.67 303 P **P 13 35 37.4 -0.5**
GOMU pmax pmax
comp=Z,9.0nm,0.6s
MOS Moscow 68.70 349 *e*P **P 13 35 36.7 -0.6**
MOS pmax pmax
comp=Z,57nm,0.7s
MUD Monsted U'grnd 68.70 6 *i* P **P 13 35 37.0 -0.3**
MUD lAmb lAmb 13 35 38.5
comp=Z,46nm,0.9s
GAL1 Galloway 68.84 15 *e*P **P 13 35 38.2 0.0**
GAL1 lAmb lAmb 13 35 40.0
comp=Z,55nm,0.9s
DEL Delary 68.90 3 *i* P **P 13 35 38.2 -0.4**
GULI GuiLin 69.07 284 ⇑P **P 13 35 37.8 -2.3**
GULI pmax pmax
comp=Z,84nm,0.9s
EDMD Edmundbyers 69.25 13 *e*P **P 13 35 40.9 +0.1**
EDMD lAmb lAmb 13 35 42.9
comp=Z,36nm,0.9s
BJUU Bjuv 69.27 4 *i* P **P 13 35 40.5 -0.3**
KESW Keswick, Cumbr 69.34 14 P **P 13 35 42.0 +0.7**
KESW Keswick, Cumbr 69.34 14 *e*P **P 13 35 41.5 +0.2**
KESW lAmb lAmb 13 35 43.3
comp=Z,41nm,0.9s
ILTH Belurgan, Co L 69.41 16 P **P 13 35 41.6 -0.1**
ILTH Belurgan, Co L 69.41 16 P **P 13 35 42.0 +0.3**
ILTH Belurgan, Co L 69.41 16 *e*P **P 13 35 41.5 -0.1**
ILTH lAmb lAmb 13 35 43.6
comp=Z,50nm,1.0s
OBN Obninsk 69.43 349 LR LR 14 09 11.4
comp=Z,278nm,21.1s,baz=352,slow=38
OBN Obninsk 69.43 349 *ce*P **P 13 35 40.9 -0.9**
OBN *e* 13 36 05.3
OBN *e* 13 38 17.3
OBN *e*S **sS 13 45 07.4 +1.1**
OBN pmax pmax
comp=Z,106nm,1.7s
OBN MLR MLR
comp=Z,539nm,16.0s
IGLA Glengowla, Co 69.49 18 P **P 13 35 42.4 +0.2**
IGLA Glengowla, Co 69.49 18 P **P 13 35 40.9 -1.3**
PDGK Podgornoye 69.56 317 P **P 13 35 42.7 -0.4**
PDGK Podgornoye 69.56 317 P **P 13 35 42.7 -0.4**
COP Copenhagen 69.63 4 *i* P **P 13 35 41.5 -1.5**
COP lAmb lAmb 13 35 44.0
comp=Z,96nm,0.7s
SHLS Shalkode 69.72 317 *e*P **P 13 35 42.8 -1.2**
SHLS pmax pmax
comp=Z,14nm,0.8s
SHLS Shalkode 69.72 317 *e*P **P 13 35 42.9 -1.2**
comp=Z,14nm,0.8s
LUNU Lund 69.73 3 *i* P **P 13 35 43.4 -0.3**

KPKS Kokpek 69.76 318 *e*P **P 13 35 44.1 -0.1**
KPKS Kokpek 69.76 318 *e*P **P 13 35 44.1 -0.1**
GDLE Glaisdale, N Y 69.80 12 *e*P **P 13 35 44.4 +0.3**
GDLE lAmb lAmb 13 35 46.1
comp=Z,42nm,0.9s
PABE Paberze 69.89 357 P **P 13 35 44.6 0.0**
UZB Uzynbulak 69.90 318 *e*P **P 13 35 44.9 -0.3**
UZB pmax pmax
comp=Z,12nm,1.2s
UZB Uzynbulak 69.90 318 *e*P **P 13 35 44.9 -0.3**
comp=Z,12nm,1.2s
BTLS Baital 70.13 322 *e*P **P 13 35 46.2 -0.1**
BTLS Baital 70.13 322 *e*P **P 13 35 46.3 -0.1**
AKTO Aktyubinsk 70.14 335 LR LR 14 11 07.8
comp=Z,178nm,19.6s,baz=24,slow=40
AKTO Aktyubinsk 70.14 335 *i* P **P 13 35 45.9 -0.4**
AKTO pmax pmax
comp=Z,62nm,0.7s
DSB Dublin 70.16 16 P **P 13 35 46.7 +0.3**
DSB Dublin 70.16 16 P **P 13 35 46.5 +0.2**
DSB lAmb lAmb 13 35 47.6
comp=Z,30nm,1.1s
GYA Guiyang 70.20 288 ⇑P **P 13 35 47.3 +0.1**
GYA pmax pmax
comp=Z,89nm,1.0s
SATY Saty 70.21 318 *e*P **P 13 35 46.9 -0.2**
SATY pmax pmax
comp=Z,19nm,1.2s
SATY Saty 70.21 318 *e*P **P 13 35 46.9 -0.2**
comp=Z,19nm,1.2s
KUU Kurty 70.29 320 *e*P **P 13 35 47.2 -0.2**
KUU Kurty 70.29 320 *e*P **P 13 35 47.2 -0.2**
BSD Bornholm Skovb 70.29 3 *i* P **P 13 35 47.1 0.0**
BSD lAmb lAmb 13 35 47.5
comp=Z,28nm,0.9s
BELG Belogornoye 70.50 342 LR LR 14 11 45.9
comp=Z,218nm,18.0s,baz=319,slow=40
BELG Belogornoye 70.50 342 *ce* *i*P **P 13 35 47.1 -1.3**
BELG pmax pmax
comp=Z,23nm,1.0s
MDOK Medeo 70.64 319 *e*P **P 13 35 49.4 -0.3**
MDOK Medeo 70.64 319 *e*P **P 13 35 49.5 -0.3**
AAA Alma-Ata 70.66 319 *e*P **P 13 35 49.6 -0.1**
AAA pmax pmax
comp=Z,26nm,1.2s
AAA Alma-Ata 70.66 319 *e*P **P 13 35 49.6 -0.1**
comp=Z,26nm,1.2s
LBWR Ladybower, Pea 70.68 13 P **P 13 35 50.0 +0.4**
LBWR Ladybower, Pea 70.68 13 *e*P **P 13 35 49.8 +0.2**
LBWR lAmb lAmb 13 35 51.7
comp=Z,40nm,0.9s
KRVT Keravat (AS076 70.70 231 LR LR 14 03 39.6
comp=Z,21nm,18.7s,baz=301,slow=33
PRZ Przheval'sk 70.71 318 P **P 13 35 51.1 +1.0**
PRZ Przheval'sk 70.71 318 lAmb lAmb 13 35 52.0
comp=Z,35nm,1.1s
PRZ Przheval'sk 70.71 318 P **P 13 35 51.1 +1.0**
MNK Minsk 70.73 355 *i* P **P 13 35 50.4 +0.5**
MNK comp=E,72nm,1.0s *i* P **P 13 35 50.4 +0.5**
MNK comp=N,39nm,0.8s *i* P **P 13 35 50.4 +0.5**
MNK comp=Z,115nm,0.8s,baz=5.2 *i* PcP **PcP 13 36 10.8 +0.4**
MNK *i* PP **PP 13 38 27.1 +1.0**
MNK *i* PPP PPP 13 40 10.1
MNK *i* S **S 13 45 03.2 +2.5**
MNK *i* ScS **ScS 13 45 51.1 +1.7**
MNK *i* SS **SS 13 49 36.5 +4.7**
MNK *i* SSS SSS 13 52 55.6
MNK Minsk 70.73 355 *i* P **P 13 35 50.3 +0.5**
MNK *i* 13 36 10.8
MNK *i* 13 38 27.0
MNK *i* PPP PPP 13 40 10.0
MNK *i* S **S 13 45 03.1 +2.5**
MNK *i* 13 45 51.1
MNK *i* SS **SS 13 49 36.5 +4.7**
MNK pmax pmax
comp=Z,115nm,0.8s
MNK pmax pmax
comp=E,72nm,1.0s
MNK pmax pmax
comp=N,39nm,0.8s
MNK MLR MLR
comp=Z,214nm,21.0s
MNK MLR MLR
comp=N,346nm,24.0s
MNK MLR MLR
comp=E,673nm,24.0s
AB31 Akbulak array 70.74 333 ⇑eP **P 13 35 49.7 -0.3**
AB31 pmax pmax
comp=Z,48nm,0.6s
ABKAR Akbulak array 70.74 333 P **P 13 35 49.7 -0.2**
VAL Valentia 70.74 19 P **P 13 35 50.2 +0.3**
TNSS Tian-Shan 70.79 319 *e*P **P 13 35 50.3 -0.6**
TNSS Tian-Shan 70.79 319 *e*P **P 13 35 50.4 -0.6**
RGN Rugen 70.81 4 *e*P **P 13 35 51.3 +1.1**
comp=Z,191nm,1.1s,baz=356,slow=5.8
STNC Stoke 70.92 13 P **P 13 35 52.2 +1.2**
IWEX Carrickbyrne, 70.93 17 P **P 13 35 51.5 +0.5**
IWEX Carrickbyrne, 70.93 17 P **P 13 35 51.6 +0.5**
FOEL Foel Wylfa 70.98 14 P **P 13 35 52.0 +0.6**
FOEL Foel Wylfa 70.98 14 *e*P **P 13 35 51.7 +0.3**
FOEL lAmb lAmb 13 35 53.2
comp=Z,66nm,0.8s
NMDO Nuevo Mundo 71.05 81 lAmb lAmb 13 35 53.3
comp=Z,40nm,1.0s
BSEG Bad Segeberg 71.28 6 P **P 13 35 53.8 +0.7**
BSEG Bad Segeberg 71.28 6 *e*P **P 13 35 53.7 +0.5**
comp=Z,36nm,1.0s,baz=356,slow=5.8
BSEG *e*PcP **sP 13 36 11.4 +0.8**
BSEG Bad Segeberg 71.28 6 P **P 13 35 53.8 +0.7**
SGDS Sogindy 71.30 321 *e*P **P 13 35 53.4 -0.2**
comp=Z,8.4nm,0.9s
CWF Charnwood Fore 71.38 13 P **P 13 35 54.3 +0.5**
CWF Charnwood Fore 71.38 13 *e*P **P 13 35 54.1 +0.3**
CWF lAmb lAmb 13 35 55.5
comp=Z,26nm,0.9s
HLM1 Long Mynd 71.39 14 *e*P **P 13 35 53.9 0.0**
HLM1 lAmb lAmb 13 35 55.1
comp=Z,11nm,0.8s
TKM2 Tokmak 2 71.40 320 P **P 13 35 54.5 +0.1**
SNR=18
SUW Suwalki 71.40 358 *e*P **P 13 35 53.3 -0.6**
KDJ Kajisay 71.48 318 P **P 13 35 55.1 +0.3**
KDJ Kajisay 71.48 318 lAmb lAmb 13 35 56.1
comp=Z,29nm,1.0s
USP Ospenovka 71.50 321 P **P 13 35 55.0 +0.2**
SNR=12
TARG Taragay, Kyrgy 71.58 318 P **P 13 35 56.5 +0.8**
TARG Taragay, Kyrgy 71.58 318 lAmb lAmb 13 35 57.5
comp=Z,14nm,0.7s
TARG Taragay, Kyrgy 71.58 318 P **P 13 35 56.5 +0.8**
LPSR Galich'ya Gora 71.62 347 *e*P **P 13 35 54.0 -1.2**
LPSR pmax pmax
comp=Z,70nm,0.8s
WACR West Acre 71.64 12 P **P 13 35 55.7 +0.4**
WACR West Acre 71.64 12 *e*P **P 13 35 55.2 -0.1**
WACR lAmb lAmb 13 35 57.2
comp=Z,156nm,0.9s
BOOM Boomskoye usch 71.64 319 P **P 13 35 56.3 +0.5**
BOOM Boomskoye usch 71.64 319 lAmb lAmb 13 35 57.1
comp=Z,41nm,0.8s
BOOM Boomskoye usch 71.64 319 P **P 13 35 56.3 +0.5**
CHMS Chumysh 71.64 320 P **P 13 35 56.5 +0.8**
SNR=7.9
RSBS Rosebush, Pemb 71.66 15 *e*P **P 13 35 55.7 +0.2**
RSBS lAmb lAmb 13 35 57.2
comp=Z,33nm,0.8s
ULHL Ulahol 71.74 319 P **P 13 35 56.9 +0.4**
SNR=5.3
FRU1 Bishkek 71.85 320 lAmb lAmb 13 35 58.6
comp=Z,62nm,1.0s
KBK Karagaybulak 71.87 320 P **P 13 35 57.3 +0.2**
SNR=17
MCH1 Michaelchurch 71.88 14 *e*P **P 13 35 56.8 0.0**
MCH1 lAmb lAmb 13 35 58.9
comp=Z,28nm,0.9s
AAK Ala-Archa 72.05 320 P **P 13 35 58.5 +0.3**
comp=Z,25nm,0.8s,baz=66,slow=2.2,SNR=36
AAK LR LR 14 10 16.8
comp=Z,578nm,18.5s,baz=33,slow=38
comp=Z,25nm,0.8s
AAK Ala-Archa 72.05 320 P **P 13 35 58.4 +0.3**
SNR=16

AAK Ala-Archa 72.05 320 *ce*P **P 13 35 58.3 +0.1**
AAK pmax pmax
comp=Z,31nm,1.0s
AAK Ala-Archa 72.05 320 P **P 13 35 58.8 +0.5**
AAK lAmb lAmb 13 35 59.5
comp=Z,30nm,0.9s
AAK Ala-Archa 72.05 320 P **P 13 35 58.6 +0.3**
AAK Ala-Archa 72.05 320 P **P 13 35 58.5 +0.3**
GKP Gorka Klasztor 72.18 1 *e*P **P 13 35 59.0 +0.4**
GORT1 Trebel 72.28 5 *e*P **P 13 35 59.9 +0.8**
comp=Z,41nm,1.1s,baz=356,slow=5.8
EKS2 Erkin-Say 72.29 321 P **P 13 36 00.0 +0.4**
SNR=20
RETH Rethem/Aller, 72.42 6 *e*P **P 13 36 00.4 +0.4**
comp=Z,35nm,1.1s,baz=356,slow=5.8
RETH *e*PcP **PcP 13 36 18.7 +1.1**
RETH Rethem/Aller, 72.42 6 P **P 13 36 00.6 +0.7**
VORR Voronezh 72.50 347 *e*P **P 13 35 59.5 -1.0**
VORR pmax pmax
comp=Z,39nm,0.4s
VRH Novokhopyorsk 72.61 345 *e*P **P 13 35 59.6 -1.6**
VRH pmax pmax
comp=Z,54nm,0.8s
HTL Hartland 72.63 15 *e*P **P 13 36 01.5 +0.2**
HTL lAmb lAmb 13 36 03.5
comp=Z,34nm,0.9s
IBBN Ibbenburen 72.73 7 *e*P **P 13 36 02.5 +0.6**
comp=Z,45nm,0.9s,baz=356,slow=5.8
IBBN *e*PcP **sP 13 36 20.2 +0.8**
PPT Papeete 72.81 169 LR LR 14 00 23.7
comp=Z,220nm,19.4s,baz=332,slow=29
PZH PanZhiHua 72.84 292 P **P 13 36 04.1 +1.0**
RUE Ruedersdorf 72.89 3 *e*P **P 13 36 03.2 +0.5**
comp=Z,90nm,1.0s,baz=356,slow=5.8
RUE Ruedersdorf 72.89 3 P **P 13 36 03.4 +0.6**
FLTG Flechtingen 72.93 5 *e*P **P 13 36 03.2 +0.2**
comp=Z,42nm,1.0s,baz=356,slow=5.8
FLTG *e*PcP **sP 13 36 21.2 +0.7**
VSR Storozhevoye 72.95 347 *c* *i*P **P 13 36 02.3 -0.9**
VSR pmax pmax
comp=Z,54nm,0.5s
DZA Taraz 72.97 323 *e*P **P 13 36 03.3 -0.2**
DZA pmax pmax
comp=Z,10.0nm,0.9s
DZA Taraz 72.97 323 *e*P **P 13 36 03.4 -0.2**
comp=Z,10nm,0.9s
WTSB Winterswijk 73.00 8 P **P 13 36 03.9 +0.4**
KK31 Karatay Array 73.06 323 ⇑eP **P 13 36 03.8 -0.3**
KK31 pmax pmax
comp=Z,32nm,0.8s
KK31 Karatay Array 73.06 323 lAmb lAmb 13 36 04.8
comp=Z,37nm,0.8s
KKAR Karatay Array 73.06 323 P **P 13 36 03.5 -0.6**
KKAR Karatay Array 73.06 323 P **P 13 36 03.5 -0.6**
ASSE Asse, Remlinge 73.10 5 *e*P **P 13 36 04.4 +0.4**
comp=Z,37nm,1.1s,baz=356,slow=5.8
ASSE *e*PcP **sP 13 36 22.2 +0.7**
ASSE Asse, Remlinge 73.10 5 P **P 13 36 03.7 -0.3**
VORD Divnogorie 73.18 347 *e*P **P 13 36 01.5 -3.0**
VORD pmax pmax
comp=Z,60nm,0.9s
JUD3 Juan Diaz 3 73.26 96 lAmb lAmb 13 36 18.5
comp=Z,16nm,0.8s
DYA Yadsworthy 73.26 15 *e*P **P 13 36 05.0 -0.1**
DYA lAmb lAmb 13 36 07.0
comp=Z,35nm,1.0s
CCA1 Carnmenellis 73.30 16 *e*P **P 13 36 05.5 +0.2**
CCA1 lAmb lAmb 13 36 07.5
comp=Z,43nm,1.2s
BRLS Borolday 73.36 324 *e*P **P 13 36 06.9 +1.1**
BRLS Borolday 73.36 324 *e*P **P 13 36 07.0 +1.1**
CLZ Clausthal 73.37 6 *e*P **P 13 36 06.4 +0.7**
comp=Z,51nm,0.9s,baz=356,slow=5.8
CLZ Clausthal 73.37 6 P **P 13 36 06.4 +0.7**
KMI2 Kunming 73.38 290 ⇑P **P 13 36 06.3 -0.2**
KMI2 pmax pmax
comp=Z,20nm,1.1s
KMI2 pmax pmax
comp=Z,63nm,3.6s
KMI2 L L
comp=Z,140nm,17.0s
KMI2 L L
comp=Z,150nm,16.6s
KMI2 L L
comp=Z,230nm,27.8s
JTS Las Juntas de 73.50 96 LR LR 14 10 23.2
comp=Z,52nm,19.9s,baz=333,slow=37
BUG Bochum--Univer 73.56 8 P **P 13 36 07.1 +0.3**
BUG Bochum--Univer 73.56 8 *e*P **P 13 36 06.9 +0.1**
comp=Z,64nm,0.9s,baz=356,slow=5.8
BUG Bochum--Univer 73.56 8 P **P 13 36 07.1 +0.3**
GTTG Gottingen 73.64 6 *e*P **P 13 36 08.0 +0.8**
comp=Z,65nm,0.9s,baz=356,slow=5.8
GTTG *e*PcP **sP 13 36 26.3 +1.5**
GTTG Gottingen 73.64 6 P **P 13 36 07.7 +0.4**
ARK Arkit 73.70 322 P **P 13 36 08.1 +0.1**
ARK Arkit 73.70 322 P **P 13 36 08.1 +0.1**
ARSB Arslanbob 73.75 321 lAmb lAmb 13 36 09.4
comp=Z,41nm,1.3s
WIMM Wimmelburg 73.75 5 P **P 13 36 08.2 +0.3**
KASTN Kahler Asten 73.88 7 *e*P **P 13 36 08.8 +0.1**
comp=Z,27nm,0.9s,baz=356,slow=5.8
KASTN *e*PcP **sP 13 36 27.2 +0.9**
RNPP9 Sopachiv 73.91 356 P **P 13 36 08.1 -0.7**
UCC Uccle 73.94 10 lAmb lAmb 13 36 10.0
comp=Z,23nm,0.9s
UCC Uccle 73.94 10 *d*P **P 13 36 08.8 -0.2**
comp=Z,18nm,1.0s
UCC Uccle 73.94 10 P **P 13 36 09.1 +0.1**
RNPP8 Varash 73.99 356 P **P 13 36 08.5 -0.8**
CLL Collm 74.03 4 ⇑*i*P **P 13 36 09.4 -0.1**
CLL *i* *SP **sP 13 36 26.7 -0.4**
CLL pmax pmax
comp=Z,40nm,1.0s
CLL Collm 74.03 4 lAmb lAmb 13 36 10.5
comp=Z,37nm,0.9s
CLL Collm 74.03 4 *e*P **P 13 36 09.5 -0.1**
comp=Z,37nm,0.9s,baz=356,slow=5.8
CLL *e*PcP **sP 13 36 27.8 +0.7**
CLL Collm 74.03 4 P **P 13 36 09.5 -0.1**
comp=Z,443nmcomp=Z,48nm,0.9s
CLL Collm 74.03 4 ⇑*i*P **P 13 36 09.4 -0.1**
comp=Z,40nm,1.0s
CLL *i* sP **sP 13 36 26.7 -0.4**
CLL *e*SS SS 13 50 18.0 -4.4
CLL *e*SSS SSS 13 53 48.0
CLL *ex* x 13 55 48.0
CHM Chimkent 74.07 324 *e*P **P 13 36 09.7 -0.3**
CHM Chimkent 74.07 324 *e*P **P 13 36 09.8 -0.3**
IUG Iuzhnay 74.08 323 *e*P **P 13 36 09.9 -0.2**
IUG pmax pmax
comp=Z,23nm,0.8s
IUG Iuzhnay 74.08 323 *e*P **P 13 36 09.9 -0.2**
comp=Z,23nm,0.8s
NEUB Neuenburg 74.08 5 *e*P **P 13 36 10.1 +0.3**
comp=Z,78nm,1.0s,baz=356,slow=5.8
NEUB *e*PcP **sP 13 36 28.4 +1.1**
NEUB Neuenburg 74.08 5 P **P 13 36 10.2 +0.4**
RNPP5 Staryi Chortor 74.09 356 P **P 13 36 09.4 -0.5**
HGN Heimansgroeve 74.12 9 P **P 13 36 10.3 +0.2**
MEM Membach 74.28 9 P **P 13 36 11.3 +0.3**
MEM Membach 74.28 9 *d*P **P 13 36 11.4 +0.3**
comp=Z,31nm,1.0s
MEM Membach 74.28 9 P **P 13 36 11.3 +0.3**
MI28 Mi28,Pidlybu 74.30 354 P **P 13 36 09.6 -1.5**
QIZ Qiongzhong 74.31 281 lAmb lAmb 13 36 13.3
comp=Z,26nm,0.9s
QIZ Qiongzhong 74.31 281 P **P 13 36 12.3 +0.7**
QIZ S **S 13 45 45.4 +2.9**
QIZ pmax pmax
comp=Z,30nm,0.9s
QIZ L L
comp=Z,180nm,10.4s
QIZ L L
comp=Z,110nm,6.6s
QIZ L L
comp=Z,200nm,9.6s
UBBA Unterbreizbach 74.37 6 *e*P **P 13 36 11.8 +0.4**
comp=Z,11nm,1.0s,baz=356,slow=5.8
UBBA Unterbreizbach 74.37 6 P **P 13 36 11.7 +0.3**
AK21 Malin Array Si 74.37 354 P **P 13 36 10.5 -1.0**
AK23 Malin Array Si 74.38 353 P **P 13 36 10.6 -1.0**
AK22 Malin Array Si 74.39 354 P **P 13 36 10.3 -1.3**
BCLA Clavier 74.41 9 *d*P **P 13 36 11.7 0.0**
comp=Z,11nm,1.2s

AK20 Malin Array Si 74.41 354 P **P** **13 36 10.8 -0.9**
SDDR Presa de Saban 74.41 79 P **P** **13 36 12.6 +0.3**
SDDR IAmb IAmb 13 36 25.8
comp=Z,41nm,0.8s
AK03 Malin Array Si 74.41 353 P **P** **13 36 10.8 -1.0**
AK04 Malin Array Si 74.42 353 P **P** **13 36 10.9 -0.9**
AK18 Malin Array Si 74.42 354 P **P** **13 36 10.9 -0.9**
AK19 Malin Array Si 74.43 354 P **P** **13 36 10.9 -1.0**
AKASG Malin Array Be 74.44 353 P **P** **13 36 11.1 -0.9**
comp=Z,66nm,0.7s,baz=8.3,slow=5.6,SNR=54
comp=Z,66nm,0.7s
AKASG Malin Array Be 74.44 353 P **P** **13 36 11.0 -0.9**
AKBB Malin Array Si 74.44 353 *ce*P **P** **13 36 11.1 -0.9**
AKBB Malin Array Si 74.44 353 P **P** **13 36 11.0 -0.9**
KIEV Kiev 74.44 353 ⇑P **P** **13 36 11.3 -0.7**
KIEV Kiev 74.44 353 P **P** **13 36 11.3 -0.7**
KIEV Kiev 74.44 353 P **P** **13 36 11.2 -0.7**
KIEV Kiev 74.44 353 P **P** **13 36 11.0 -0.9**
comp=Z,5μmcomp=Z,588nm,0.9s
KIEV Kiev 74.44 353 P **P** **13 36 11.3 -0.7**
KIEV Kiev 74.44 353 P **P** **13 36 11.3 -0.7**
AK01 Malin Array Si 74.45 353 P **P** **13 36 11.0 -1.0**
AK15 Malin Array Si 74.45 353 P **P** **13 36 11.0 -1.0**
AK11 Malin Array Si 74.46 353 P **P** **13 36 11.0 -1.1**
AK17 Malin Array Si 74.46 354 P **P** **13 36 11.0 -1.1**
BMRD Maredsous 74.47 10 *d*P **P** **13 36 12.3 +0.2**
comp=Z,26nm,1.1s
AK16 Malin Array Si 74.47 353 P **P** **13 36 11.1 -1.0**
AK02 Malin Array Si 74.48 353 P **P** **13 36 11.1 -1.1**
AK12 Malin Array Si 74.50 353 P **P** **13 36 11.2 -1.1**
AK08 Malin Array Si 74.50 353 P **P** **13 36 11.3 -1.0**
BRG Berggiesshubel 74.50 3 P **P** **13 36 12.5 +0.1**
BRG Berggiesshubel 74.50 3 *e*P **P** **13 36 12.4 +0.1**
comp=Z,39nm,1.0s,baz=356,slow=5.8
BRG *e*PcP **sP** **13 36 30.2 +0.4**
BRG Berggiesshubel 74.50 3 P **P** **13 36 12.5 +0.1**
BRG Berggiesshubel 74.50 3 ⇑*i*P **P** **13 36 12.4 +0.1**
BRG Amp 13 36 13.6
comp=Z,39nm,1.0s
AK14 Malin Array Si 74.51 353 P **P** **13 36 11.3 -1.1**
AK09 Malin Array Si 74.52 353 P **P** **13 36 11.3 -1.1**
AK05 Malin Array Si 74.52 353 P **P** **13 36 11.4 -1.0**
OHH Osh 74.52 320 P **P** **13 36 11.7 -1.0**
OHH Osh 74.52 320 P **P** **13 36 11.7 -1.0**
BHOU Houvegnez 74.53 9 *d*P **P** **13 36 12.8 +0.3**
comp=Z,12nm,1.0s
AK13 Malin Array Si 74.53 354 P **P** **13 36 11.4 -1.1**
AK10 Malin Array Si 74.54 353 P **P** **13 36 11.5 -1.0**
AK06 Malin Array Si 74.55 353 P **P** **13 36 11.6 -1.0**
AK07 Malin Array Si 74.59 353 P **P** **13 36 11.8 -1.0**
KSP Ksiaz 74.60 2 *e*P **P** **13 36 13.1 +0.3**
MOX Moxa 74.63 5 *e*P **P** **13 36 13.4 +0.3**
comp=Z,54nm,1.0s,baz=356,slow=5.8
MOX *e*PcP **sP** **13 36 31.6 +0.9**
MOX *e*L L 14 11 06.6
comp=Z,66nm,21.4s
MOX Moxa 74.63 5 P **P** **13 36 13.5 +0.3**
BAIF Baives 74.66 10 *e*P **P** **13 36 12.9 -0.3**
BAIF pmax pmax
comp=Z,33nm,1.0s
DOU Dourbes 74.66 10 *d*P **P** **13 36 13.3 +0.1**
comp=Z,17nm,1.0s
RCHB Rochefort 74.66 9 *d*P **P** **13 36 13.3 +0.1**
comp=Z,23nm,0.9s
RCHB Rochefort 74.66 9 P **P** **13 36 13.4 +0.1**
KSH2 Kashi 74.67 318 P **P** **13 36 14.3 +0.6**
KSH2 pmax pmax
comp=Z,88nm,0.8s
KSH2 L L
comp=Z,440nm,19.6s
KSH2 L L
comp=Z,350nm,20.3s
KSH2 L L
comp=Z,810nm,21.3s
GIVF Givet 74.67 10 *e*P **P** **13 36 12.8 -0.5**
GIVF pmax pmax
comp=Z,54nm,1.3s
PLN Plauen 74.82 5 *e*P **P** **13 36 14.2 +0.1**
comp=Z,8.1nm,0.8s,baz=356,slow=5.8
PLN *e*PcP **sP** **13 36 32.6 +0.9**
RICC Richard 74.84 3 *e*P **P** **13 36 15.0 +0.7**
CHVC Chvalec 74.85 2 *e*P **P** **13 36 14.7 +0.3**
CHVC Chvalec 74.85 2 *e*P **P** **13 36 14.7 +0.3**
DAV Davao City (W) 74.86 261 LR LR 14 06 39.3
comp=Z,59nm,20.5s,baz=346,slow=34
TNS Taunus Mts 74.86 7 P **P** **13 36 14.8 +0.3**
TNS Taunus Mts 74.86 7 *e*P **P** **13 36 14.7 +0.2**
comp=Z,39nm,0.9s,baz=356,slow=5.8
TNS *e*PcP **sP** **13 36 33.0 +1.0**
TNS Taunus Mts 74.86 7 P **P** **13 36 14.8 +0.3**
PVCC Panska Ves 74.87 3 *e*P **P** **13 36 14.8 +0.4**
PVCC MLR MLR
comp=Z,300nm,16.5s
PVCC Panska Ves 74.87 3 *e*P **P** **13 36 14.8 +0.4**
PVCC AMS AMS 14 17 20.0
comp=Z,300nm,16.5s
OSTC Ostas 74.88 2 *e*P **P** **13 36 14.9 +0.3**
OSTC MLR MLR
comp=Z,200nm,14.7s
OSTC Ostas 74.88 2 *e*P **P** **13 36 14.9 +0.3**
OSTC AMS AMS 14 17 20.0
comp=Z,200nm,14.7s
TANN Tannenbergstha 74.90 4 *e*P **P** **13 36 14.9 +0.2**
comp=Z,27nm,1.4s,baz=356,slow=5.8
TANN Tannenbergstha 74.90 4 P **P** **13 36 15.1 +0.4**
UPC Upice 74.93 2 AMS AMS 14 17 30.0
comp=Z,200nm,15.0s
NKC Novy Kostel 75.08 4 *e*P **P** **13 36 15.9 +0.2**
NKC MLR MLR
comp=Z,200nm,12.6s
NKC Novy Kostel 75.08 4 *e*P **P** **13 36 15.9 +0.2**
NKC AMS AMS 14 18 20.0
comp=Z,200nm,12.6s
DPC Dobruska-Polom 75.09 2 *e*P **P** **13 36 16.3 +0.5**
DPC pmax pmax
comp=Z,18nm,0.6s
DPC MLR MLR
comp=Z,200nm,12.5s
DPC Dobruska-Polom 75.09 2 *e*P **P** **13 36 16.3 +0.5**
comp=Z,18nm,0.6s
DPC AMS AMS 14 17 20.0
comp=Z,200nm,12.5s
DPC Dobruska-Polom 75.09 2 P **P** **13 36 15.8 0.0**
comp=Z,544nmcomp=Z,64nm,1.1s
DPC Dobruska-Polom 75.09 2 P **P** **13 36 16.4 +0.6**
WLF Walferdange 75.23 9 IAmb IAmb 13 36 18.3
comp=Z,51nm,1.0s
WLF Walferdange 75.23 9 *d*P **P** **13 36 17.1 +0.5**
comp=Z,32nm,1.0s
WLF Walferdange 75.23 9 *e*P **P** **13 36 17.2 +0.7**
comp=Z,50nm,1.0s,baz=356,slow=5.8
WLF *e*PcP **sP** **13 36 35.7 +1.7**
WLF Walferdange 75.23 9 P **P** **13 36 17.4 +0.9**
OJC Ojcow 75.25 360 *e*P **P** **13 36 17.1 +0.4**
OJC Ojcow 75.25 360 P **P** **13 36 16.8 +0.1**
OJC Ojcow 75.25 360 P **P** **13 36 16.8 +0.1**
LUBAR Lubar, Ukraine 75.30 354 P **P** **13 36 15.8 -1.1**
KRLC Kraliky 75.37 2 *e*P **P** **13 36 17.7 +0.3**
KRLC MLR MLR
comp=Z,200nm,17.6s
KRLC Kraliky 75.37 2 *e*P **P** **13 36 17.7 +0.3**
KRLC AMS AMS 14 17 00.0
comp=Z,200nm,17.6s
FLN La Foliniere 75.39 13 *e*P **P** **13 36 16.7 -0.7**
FLN pmax pmax
comp=Z,50nm,1.0s
ROSF Rostrenen 75.41 15 *e*P **P** **13 36 17.3 -0.3**
ROSF pmax pmax
comp=Z,57nm,1.2s
PRU Pruhonice 75.41 3 *e*P **P** **13 36 17.6 +0.1**
PRU pmax pmax
comp=Z,14nm,0.8s
PRU MLR MLR
comp=Z,200nm,17.1s
PRU Pruhonice 75.41 3 *e*P **P** **13 36 17.6 +0.1**
comp=Z,14nm,0.8s
PRU AMS AMS 14 17 20.0
comp=Z,200nm,17.1s
PRU Pruhonice 75.41 3 P **P** **13 36 17.9 +0.4**
GRA3 Grafenberg Arr 75.50 5 P **P** **13 36 18.9 +0.8**
STEB Steborice 75.53 1 *e*P **P** **13 36 18.5 +0.2**
GRA1 Grafenberg Arr 75.56 5 IAmb IAmb 13 36 20.1
comp=Z,41nm,0.9s
GRA1 Grafenberg Arr 75.56 5 P **P** **13 36 19.3 +0.8**
GRF Grafenberg Arr 75.56 5 P **P** **13 36 19.3 +0.8**
GRF Grafenberg Arr 75.56 5 *e*P **P** **13 36 19.1 +0.6**
comp=Z,39nm,0.9s,baz=356,slow=5.8
GRF *e*PcP **sP** **13 36 36.6 +0.6**
GRF *e*L L 14 08 49.5
comp=Z,88nm,21.5s
GRFO Grafenberg 75.56 5 P **P** **13 36 19.1 +0.6**
GRFO Grafenberg 75.56 5 P **P** **13 36 19.1 +0.6**
GRFO Grafenberg 75.56 5 P **P** **13 36 19.3 +0.8**
SGMF Saint Gilles 75.59 15 *e*P **P** **13 36 18.4 -0.2**
SGMF pmax pmax
comp=Z,66nm,1.2s
LDF La Druitiere 75.60 13 *e*P **P** **13 36 18.9 +0.2**
LDF pmax pmax
comp=Z,45nm,1.1s
GRA2 Grafenberg Arr 75.61 5 P **P** **13 36 19.4 +0.7**
OKC Ostrava-Krasne 75.63 1 *e*P **P** **13 36 19.1 +0.3**
OKC MLR MLR
comp=Z,400nm,13.8s
OKC Ostrava-Krasne 75.63 1 *e*P **P** **13 36 19.1 +0.3**
OKC AMS AMS 14 16 40.0
comp=Z,400nm,13.8s
OKC Ostrava-Krasne 75.63 1 P **P** **13 36 19.2 +0.4**
BTK Batken 75.64 322 P **P** **13 36 19.3 +0.1**
BTK Batken 75.64 322 P **P** **13 36 19.3 +0.1**
MORC Moravsky Berou 75.68 1 ⇑P **P** **13 36 19.5 +0.3**
MORC Moravsky Berou 75.68 1 P **P** **13 36 19.5 +0.3**
MORC Moravsky Berou 75.68 1 IAmb IAmb 13 36 20.4
comp=Z,31nm,0.9s
MORC Moravsky Berou 75.68 1 *e*P **P** **13 36 19.1 -0.1**
MORC Moravsky Berou 75.68 1 P **P** **13 36 19.4 +0.2**
GRR Gorron 75.70 14 *e*P **P** **13 36 18.7 -0.6**
GRR pmax pmax
comp=Z,34nm,1.0s
SLVN Son La 75.80 287 IAmb IAmb 13 36 21.8
comp=Z,45nm,0.8s
KWP Kalwaria Pacla 75.80 358 *e*P **P** **13 36 20.4 +0.6**
DRK Karamyk 75.80 321 IAmb IAmb 13 38 24.2
comp=Z,33nm,0.6s
GRB4 Grafenberg Arr 75.80 5 P **P** **13 36 20.4 +0.6**
RAR Rarotonga 75.81 179 LR LR 14 04 25.6
comp=Z,119nm,18.3s,baz=345,slow=32
QUIF Quistinic 75.83 15 *e*P **P** **13 36 20.8 +0.8**
QUIF pmax pmax
comp=Z,25nm,1.2s
GRB1 Grafenberg Arr 75.88 5 P **P** **13 36 21.0 +0.7**
GRB3 Grafenberg Arr 75.94 5 P **P** **13 36 21.2 +0.6**
ZVC Zvikov 75.95 3 *e*P **P** **13 36 21.3 +0.7**
ZVC AMS AMS 14 18 10.0
comp=Z,300nm,16.6s
GRB2 Grafenberg Arr 76.01 5 P **P** **13 36 21.5 +0.5**
STHS Stebnicka Huta 76.04 359 *e*P **P** **13 36 22.0 +0.8**
STHS pmax pmax
comp=Z,72nm,0.9s
STHS Stebnicka Huta 76.04 359 *e*P **P** **13 36 22.0 +0.8**
NIE Niedzica 76.05 359 *e*P **P** **13 36 22.3 +1.0**
MAUC Maruska 76.10 1 *e*P **P** **13 36 22.1 +0.5**
TREC Trest 76.13 3 *e*P **P** **13 36 21.7 0.0**
TREC MLR MLR
comp=Z,300nm,16.3s
TREC Trest 76.13 3 *e*P **P** **13 36 21.7 0.0**
TREC AMS AMS 14 17 40.0
comp=Z,300nm,16.3s
VRAC Vranov 76.14 2 ⇑P **P** **13 36 22.5 +0.7**
VRAC Vranov 76.14 2 P **P** **13 36 22.4 +0.7**
VRAC Vranov 76.14 2 *e*P **P** **13 36 22.0 +0.2**
VRAC Vranov 76.14 2 P **P** **13 36 22.3 +0.5**
GRB5 Grafenberg Arr 76.17 5 P **P** **13 36 22.4 +0.5**
GRC4 Grafenberg Arr 76.18 5 P **P** **13 36 22.4 +0.4**
WET Wettzell 76.19 4 P **P** **13 36 22.6 +0.5**
WET Wettzell 76.19 4 *e*P **P** **13 36 22.5 +0.5**
comp=Z,40nm,1.3s,baz=356,slow=5.8
WET *e*PcP **sP** **13 36 40.4 +0.8**
WET Wettzell 76.19 4 P **P** **13 36 22.6 +0.5**
KHC Kasperske Hory 76.23 4 *e*P **P** **13 36 23.0 +0.7**
KHC *e* 13 36 35.0
KHC pmax pmax
comp=Z,13nm,0.6s
KHC MLR MLR
comp=Z,300nm,13.9s
KHC Kasperske Hory 76.23 4 *e*P **P** **13 36 23.0 +0.7**
comp=Z,13nm,0.6s
KHC *ex* x 13 36 35.0
KHC AMS AMS 14 18 30.0
comp=Z,300nm,13.9s
GRC1 Grafenberg Arr 76.27 5 P **P** **13 36 23.0 +0.5**
LANS Liptovska Anna 76.32 360 *e*P **P** **13 36 23.7 +0.9**
LANS pmax pmax
comp=Z,30nm,0.8s
LANS Liptovska Anna 76.32 360 *e*P **P** **13 36 23.7 +0.9**
STU Stuttgart 76.36 7 P **P** **13 36 24.0 +1.0**
STU pmax pmax
comp=Z,104nm,1.0s
STU Stuttgart 76.36 7 *e*P **P** **13 36 23.6 +0.6**
comp=Z,84nm,1.0s,baz=356,slow=5.8
STU *e*PcP **sP** **13 36 41.6 +1.0**
STU Stuttgart 76.36 7 P **P** **13 36 23.5 +0.6**
GRC3 Grafenberg Arr 76.38 5 P **P** **13 36 23.1 0.0**
KRUC Moravsky 76.38 2 P **P** **13 36 23.4 +0.3**
KRUC Moravsky 76.38 2 *e*P **P** **13 36 23.1 0.0**
KRUC Moravsky 76.38 2 P **P** **13 36 23.4 +0.3**
GRC2 Grafenberg Arr 76.39 5 P **P** **13 36 23.5 +0.3**
CLF Chambon-Foret 76.45 12 P **P** **13 36 24.4 +0.9**
CLF Chambon-Foret 76.45 12 P **P** **13 36 24.4 +0.8**
CLF sP **sP** **13 36 42.6 +1.5**
KOLS Kolonicke sedl 76.51 358 *e*P **P** **13 36 24.4 +0.6**
KOLS pmax pmax
comp=Z,33nm,0.8s
KOLS Kolonicke sedl 76.51 358 P **P** **13 36 24.8 +0.9**
KOLS Kolonicke sedl 76.51 358 *e*P **P** **13 36 24.4 +0.6**
GEC2 GERESS Array S 76.52 4 IAmb IAmb 13 36 25.3
comp=Z,26nm,0.9s
GEC2 GERESS Array S 76.52 4 *e*P **P** **13 36 24.3 +0.2**
comp=Z,26nm,0.9s,baz=356,slow=5.8
GEC2 *e*PcP **sP** **13 36 42.1 +0.5**
GERES GERESS Array B 76.52 4 P **P** **13 36 24.2 +0.2**
comp=Z,21nm,0.9s,baz=345,slow=4.1,SNR=102
comp=Z,21nm,0.9s
GERES GERESS Array B 76.52 4 P **P** **13 36 24.0 0.0**
CKRC Cesky Krumlov 76.57 3 *e*P **P** **13 36 24.5 +0.3**
CKRC pmax pmax
comp=Z,29nm,0.9s
CKRC MLR MLR
comp=Z,300nm,14.9s
CKRC Cesky Krumlov 76.57 3 *e*P **P** **13 36 24.5 +0.3**
comp=Z,29nm,0.9s
CKRC AMS AMS 14 18 10.0
comp=Z,300nm,14.9s
CDF Champ du Feu 76.57 8 *e*P **P** **13 36 23.1 -1.2**
CDF pmax pmax
comp=Z,31nm,1.0s
JAVC Velka Javorina 76.60 1 *e*P **P** **13 36 25.8 +1.3**
JAVC Velka Javorina 76.60 1 P **P** **13 36 26.0 +1.5**
KMPD K-Podol'skiy 76.73 355 P **P** **13 36 23.5 -1.6**
BFO Black Forest 76.73 7 P **P** **13 36 25.2 +0.1**
BFO Black Forest 76.73 7 P **P** **13 36 25.2 +0.1**
BFO IAmb IAmb 13 36 26.2
comp=Z,22nm,0.9s
BFO Black Forest 76.73 7 *e*P **P** **13 36 25.3 +0.1**
comp=Z,20nm,0.9s,baz=356,slow=5.8
BFO *e*PcP **sP** **13 36 43.7 +1.0**
BFO Black Forest 76.73 7 P **P** **13 36 25.3 +0.1**
BFO sP **sP** **13 36 43.7 +1.0**
ECH Echery 76.75 8 P **P** **13 36 25.6 +0.3**
ECH Echery 76.75 8 IAmb IAmb 13 36 27.0
comp=Z,41nm,0.9s
ECH Echery 76.75 8 P **P** **13 36 25.5 +0.3**
ECH Echery 76.75 8 P **P** **13 36 25.5 +0.3**
GAR Garm 76.76 321 P **P** **13 36 25.6 0.0**
HAU Haudompre 76.89 9 *e*P **P** **13 36 25.5 -0.6**
HAU pmax pmax
comp=Z,33nm,0.9s
SMOL Smolenice 76.95 1 *e*P **P** **13 36 27.1 +0.8**
SMOL pmax pmax
comp=Z,9.0nm,0.7s
KECS Kecovo 76.98 359 P **P** **13 36 27.4 +0.9**
SORM Soroca 77.05 354 ⇑P **P** **13 36 26.3 -0.6**
SORM Soroca 77.05 354 P **P** **13 36 26.2 -0.6**
MODS Modra-Piesok 77.08 1 *e*P **P** **13 36 28.5 +1.4**
MODS pmax pmax
comp=Z,85nm,0.9s
MODS Modra-Piesok 77.08 1 P **P** **13 36 28.1 +1.0**
MODS Modra-Piesok 77.08 1 *e*P **P** **13 36 28.5 +1.4**
FUR Furstenfeldbru 77.09 5 *e*P **P** **13 36 27.8 +0.7**
comp=Z,74nm,1.2s,baz=356,slow=5.8
FUR *e*PcP **sP** **13 36 45.4 +0.7**
HINF Hinteralfeld 77.12 9 *e*P **P** **13 36 26.7 -0.7**
HINF pmax pmax
comp=Z,26nm,1.1s
BAL3X Bal3x, Balta 77.16 353 P **P** **13 36 27.2 -0.3**
TRPA Tarpa 77.30 358 P **P** **13 36 28.9 +0.6**
SLE Schleitheim 77.31 7 P **P** **13 36 28.4 0.0**
SLE Schleitheim 77.31 7 P **P** **13 36 28.4 0.0**
WINA Alland / Wiene 77.33 2 *i*P **P** **13 36 29.1 +0.6**
SNR=17
LOR Lormes 77.38 11 *e*P **P** **13 36 28.2 -0.6**
LOR pmax pmax
comp=Z,39nm,1.1s
PMG Port Moresby 77.42 233 LR LR 14 07 23.7
comp=Z,46nm,19.5s,baz=10,slow=33
CHGR Chuyangaron 77.48 322 *c i*P **P** **13 36 29.3 -0.3**
CHGR Chuyangaron 77.48 322 P **P** **13 36 29.5 -0.1**
CONA Conrad Observa 77.50 2 *i*P **P** **13 36 30.1 +0.6**
comp=Z,42nm,0.8s
MOA Molln 77.54 3 *i*P **P** **13 36 29.8 +0.1**
comp=Z,22nm,1.4s,SNR=13
MOA Molln 77.54 3 P **P** **13 36 30.0 +0.3**
MFF Saint Martin d 77.55 14 *e*P **P** **13 36 29.5 -0.2**
MFF pmax pmax
comp=Z,265nm,1.0s
PSZ Piszkesteto 77.55 360 ⇓P **P** **13 36 31.0 +1.1**
PSZ Piszkesteto 77.55 360 P **P** **13 36 30.9 +1.1**
PSZ Piszkesteto 77.55 360 P **P** **13 36 30.7 +0.9**
BOURR Bourrignon 77.58 8 P **P** **13 36 30.2 +0.3**
RJOB Jochberg 77.59 4 P **P** **13 36 30.6 +0.5**
SRO Srobarova 77.66 1 *e*P **P** **13 36 31.2 +0.9**
SRO pmax pmax
comp=Z,11nm,0.7s
SRO Srobarova 77.66 1 *e*P **P** **13 36 31.2 +0.9**
BIOA Bad Ischl, Aus 77.67 4 *i*P **P** **13 36 30.6 +0.2**
comp=Z,20nm,1.0s,SNR=8.0
BUR08 Bucovina Ar. S 77.70 356 IAmb IAmb 13 36 31.8
comp=Z,24nm,0.8s
BURAR Bucovina Array 77.73 356 ⇑P **P** **13 36 30.7 -0.1**
BURAR Bucovina Array 77.73 356 P **P** **13 36 30.7 -0.1**
BURAR Bucovina Array 77.73 356 P **P** **13 36 30.8 -0.1**
BURAR IAmb IAmb 13 36 31.9
comp=Z,35nm,0.7s
BMR Baia Mare 77.73 357 ⇑P **P** **13 36 31.1 +0.3**
BMR Baia Mare 77.73 357 P **P** **13 36 31.0 +0.3**
BMR Baia Mare 77.73 357 P **P** **13 36 31.3 +0.6**
RETA Reutte 77.73 6 *i*P **P** **13 36 31.0 +0.2**
comp=Z,30nm,1.3s,SNR=5.3
RONA Rosalia, Austr 77.74 2 *i*P **P** **13 36 31.4 +0.5**
comp=Z,25nm,0.9s,SNR=13
SOP Sopron 77.76 2 P **P** **13 36 31.6 +0.7**
SOP Sopron 77.76 2 P **P** **13 36 31.8 +0.9**
AVF Avril sur Loir 77.80 11 *e*P **P** **13 36 30.4 -0.7**
AVF pmax pmax
comp=Z,27nm,0.9s
DAVA Damuels 77.88 6 *i*P **P** **13 36 31.9 +0.1**
comp=Z,11nm,0.9s
DAVA Damuels 77.88 6 P **P** **13 36 32.1 +0.3**
MOTA Moosalm 77.90 6 *i*P **P** **13 36 32.1 +0.3**
comp=Z,63nm,1.0s,SNR=18
LESA Schwarzleotal 77.90 5 *i*P **P** **13 36 32.0 +0.2**
comp=Z,16nm,0.8s,SNR=13
WATA Walderalm 77.93 5 *i*P **P** **13 36 32.4 +0.3**
comp=Z,56nm,0.9s,SNR=17
BGF Bois d'Agland 77.97 11 *e*P **P** **13 36 31.5 -0.6**
BGF pmax pmax
comp=Z,38nm,1.1s
SMF Signal de Mont 77.99 11 *e*P **P** **13 36 31.6 -0.6**
SMF pmax pmax
comp=Z,45nm,1.0s
WTTA Wattenberg 78.01 5 P **P** **13 36 32.9 +0.4**
WTTA Wattenberg 78.01 5 *i*P **P** **13 36 32.9 +0.4**
comp=Z,53nm,0.8s,SNR=22
WTTA Wattenberg 78.01 5 P **P** **13 36 32.9 +0.4**
SQTA Sankt Quirin 78.03 6 *i*P **P** **13 36 32.9 +0.4**
comp=Z,83nm,1.0s,SNR=27
ERBR Yeremizino-Bor 78.15 345 *e*P **P** **13 36 33.5 +0.4**
ERBR *e**PP **PcP** **13 36 44.1 +1.6**
ERBR pmax pmax
comp=Z,145nm,0.9s
ARSA Arzberg 78.17 3 IAmb IAmb 13 36 35.0
comp=Z,34nm,0.9s
ARSA Arzberg 78.17 3 *i*P **P** **13 36 33.8 +0.6**
comp=Z,30nm,0.8s,SNR=21
ARSA Arzberg 78.17 3 P **P** **13 36 34.1 +0.8**
BNALP Bannalp 78.19 8 P **P** **13 36 34.2 +0.8**
FETA Feichten 78.20 6 *i*P **P** **13 36 34.0 +0.5**
comp=Z,56nm,1.0s,SNR=25
SWI Sorong 78.20 251 P **P** **13 36 34.3 +0.6**
comp=Z,930nmcomp=Z,80nm,0.9s
SIJI Sorong 78.20 251 LR LR 14 07 24.1
comp=Z,44nm,19.8s,baz=86,slow=33
SIJI Sorong 78.20 251 P **P** **13 36 33.8 0.0**
comp=Z,65nm,0.9s
CABF La Chapelle 78.25 9 *e*P **P** **13 36 33.6 -0.2**
CABF pmax pmax
comp=Z,37nm,1.0s
KBA Koelnbreinsper 78.27 4 P **P** **13 36 34.0 0.0**
KBA Koelnbreinsper 78.27 4 *i*P **P** **13 36 34.7 +0.7**
comp=Z,55nm,0.9s,SNR=20
KBA Koelnbreinsper 78.27 4 P **P** **13 36 35.0 +1.0**
SESA Seetaler Alpe, 78.28 3 *i*P **P** **13 36 34.8 +0.7**
SNR=21
MPLH Magyarpolny 78.29 1 P **P** **13 36 34.8 +1.0**
ARCR ARCALIA 78.29 356 ⇑P **P** **13 36 33.9 +0.1**
GIMEL St. Georges / 78.34 9 P **P** **13 36 34.9 +0.7**
BIZ Bicaz 78.37 355 ⇓P **P** **13 36 34.6 +0.3**
GOF Gofitskoye 78.38 343 *c i*P **P** **13 36 34.5 +0.1**
DAVOX Davos/Dischmat 78.38 7 LR LR 14 12 13.7
comp=Z,53nm,21.4s,baz=20,slow=36
ABTA Abfaltersbach 78.57 5 *i*P **P** **13 36 35.5 0.0**
comp=Z,44nm,1.0s,SNR=15
FUORN Ofenpass-Fuorn 78.57 6 IAmb IAmb 13 36 37.6
comp=Z,42nm,1.1s
FUORN Ofenpass-Fuorn 78.57 6 P **P** **13 36 36.7 +1.0**
VASR Vaslui 78.57 354 ⇓P **P** **13 36 35.5 +0.1**
DRGR 78.64 358 ⇑P **P** **13 36 35.5 -0.4**
DRGR 78.64 358 P **P** **13 36 35.4 -0.4**
DRGR 78.64 358 P **P** **13 36 36.0 +0.1**
TUE Stuetta 78.66 7 IAmb IAmb 13 36 38.0
comp=Z,17nm,0.9s
TUE Stuetta 78.66 7 P **P** **13 36 36.9 +0.7**
CJR Cluj-Napoca 78.69 357 ⇓P **P** **13 36 36.5 +0.4**
CJR Cluj-Napoca 78.69 357 P **P** **13 36 36.5 +0.4**
MYKA Terra Mystica 78.73 4 *i*P **P** **13 36 36.4 0.0**
comp=Z,16nm,0.7s,SNR=8.1
SOKA Soboth 78.73 3 *i*P **P** **13 36 36.7 +0.3**
comp=Z,79nm,1.2s,SNR=46
MARR Marisel-Cluj 78.74 357 ⇑P **P** **13 36 37.2 +0.8**
TESR Tescani 78.77 355 ⇑P **P** **13 36 36.3 -0.2**
TESR Tescani 78.77 355 P **P** **13 36 36.2 -0.2**
PERS Pernice 78.78 3 *i*P **P** **13 36 37.0 +0.4**
SHAA Shahritus 78.82 322 IAmb IAmb 13 36 38.3
comp=Z,148nm,1.2s
OBKA Obir 78.89 3 *i*P **P** **13 36 37.6 +0.4**
comp=Z,113nm,0.7s,SNR=41
OBKA Obir 78.89 3 P **P** **13 36 37.9 +0.6**
PRED Cave del Predi 78.92 4 IAmb IAmb 13 36 38.8
comp=Z,26nm,1.1s
ONER Baraj Valea Uz 78.95 355 ⇓P **P** **13 36 37.8 +0.3**
GROS Grobnik 78.96 3 *i*P **P** **13 36 37.8 +0.2**
CIMO Cimolais 79.00 5 P **P** **13 36 37.3 -0.5**
RJF Les Rejaudoux 79.04 13 *e*P **P** **13 36 38.4 +0.4**
RJF pmax pmax
comp=Z,151nm,1.2s
CADS Cadrg 79.14 4 *i*P **P** **13 36 38.1 -0.5**
LABN Labinsk 79.16 345 *e*P **P** **13 36 38.8 +0.1**
LABN pmax pmax
comp=Z,40nm,0.7s
GHRR 79.17 354 ⇑P **P** **13 36 39.3 +0.6**
GHRR 79.17 354 P **P** **13 36 39.6 +0.9**
SIRR Siria 79.18 358 ⇓P **P** **13 36 39.5 +0.7**
MDB Medias 79.24 356 ⇓P **P** **13 36 40.2 +1.2**
MDB Medias 79.24 356 P **P** **13 36 40.2 +1.2**
BOSR Bodos 79.25 355 ⇓P **P** **13 36 40.4 +1.2**
TURR Turia 79.25 355 ⇓P **P** **13 36 40.2 +1.1**
MORH Mrgy, Hungar 79.26 0 ⇑P **P** **13 36 39.5 +0.4**
MORH Mrgy, Hungar 79.26 0 *e*P **P** **13 36 38.8 -0.3**
MORH Mrgy, Hungar 79.26 0 P **P** **13 36 39.3 +0.2**
EVN Everest 79.28 304 P **P** **13 36 40.9 +0.5**
LFF La Frestale 79.30 13 P **P** **13 36 39.2 -0.2**
LFF pmax pmax
comp=Z,319nm,1.2s

CRNS Crni Vrh 79.30 4 *e*P P 13 36 38.9 -0.6
VOJS Vojsko 79.34 4 *e*P P 13 36 38.8 -1.0
VLDR Vladesti 79.35 354 ⇓P P 13 36 39.5 -0.1
DOPR Dopca 79.37 356 ⇑P P 13 36 40.7 +0.9
SABO M.te Sabotino 79.38 4 IAmb IAmb 13 36 40.5
comp=Z,34nm,0.9s
LPL La Plagne 79.40 9 *e*P P 13 36 40.6 +0.4
LPL pmax pmax
comp=Z,15nm,0.9s
VRI Vrincioaia 79.41 355 ⇓P P 13 36 39.7 -0.4
VRI Vrincioaia 79.41 355 P P 13 36 39.6 -0.4
VRI Vrincioaia 79.41 355 P P 13 36 40.2 +0.2
LPG La Plagne 79.42 9 *e*P P 13 36 40.8 +0.4
LPG pmax pmax
comp=Z,26nm,1.2s
SSB Saint Sauveur 79.42 10 P P 13 36 41.0 +0.9
SSB Saint Sauveur 79.42 10 P P 13 36 41.0 +0.9
PLOR Plostina 79.42 355 ⇓P P 13 36 40.1 -0.1
PLOR Plostina 79.42 355 P P 13 36 40.0 -0.1
COVR Voineasa-Covas 79.45 355 ⇑P P 13 36 40.9 +0.7
ANN Anapa 79.47 347 *e*P P 13 36 41.9 +1.6
ANN *e**PP pP 13 36 50.8 -2.3
ANN pmax pmax
comp=Z,50nm,0.9s
CAF Calviac 79.48 12 *e*P P 13 36 40.0 -0.5
CAF pmax pmax
comp=Z,25nm,1.2s
ODBI Odobesti 79.49 354 ⇓P P 13 36 41.8 +1.3
KVAR Kislovodsk Arr 79.51 343 LR LR 14 15 59.0
comp=Z,142nm,20.5s,slow=39
KIV Kislovodsk 79.51 343 ⇑P P 13 36 41.4 +0.6
KIV Kislovodsk 79.51 343 *e*P P 13 36 41.0 +0.3
KIV pmax pmax
comp=Z,107nm,1.1s
KIV MLR MLR
comp=Z,98nm,19.0s
KIV Kislovodsk 79.51 343 P P 13 36 41.2 +0.5
KIV Kislovodsk 79.51 343 P P 13 36 41.3 +0.5
KIV Kislovodsk 79.51 343 P P 13 36 41.3 +0.6
SCTR Scanteiesti 79.52 354 ⇓P P 13 36 41.4 +0.8
SAHR Sahastru 79.55 355 ⇓P P 13 36 41.9 +1.1
MAK Makhachkala 79.57 339 *e*P P 13 36 41.2 +0.3
MAK *e* 13 39 41.4
MAK *e*S S 13 46 41.3 +2.1
MAK *e* 13 51 56.5
MAK pmax pmax
comp=Z,206nm,1.0s
MAK MLR MLR
comp=Z,495nm,20.0s
NEGRR Negrea 79.67 354 ⇑P P 13 36 41.6 +0.2
IZVR Izvoarele 79.67 354 ⇓P P 13 36 41.6 +0.2
GIUM Giurgiulesti 79.70 354 ⇑P P 13 36 41.6 +0.1
KBZ Khabaz 79.70 343 P P 13 36 42.2 +0.7
comp=Z,71nm,0.9s,baz=334,slow=3.4,SNR=117
KBZ LR LR 14 18 37.9
comp=Z,79nm,18.5s,baz=7.5,slow=41
comp=Z,71nm,0.9s
KBZ Khabaz 79.70 343 *ce*P P 13 36 42.1 +0.6
SIM Simferopol' 79.72 349 *e*P P 13 36 41.1 -0.6
SIM pmax pmax
comp=Z,42nm,0.9s
SHA1 Shidzhatmaz 79.73 343 *ce*P P 13 36 42.3 +0.2
TNR Turnu Rosu 79.73 356 ⇑P P 13 36 41.8 0.0
TNR Turnu Rosu 79.73 356 P P 13 36 41.7 0.0
SCHLR Schela 79.74 354 ⇑P P 13 36 42.7 +1.0
NCK Nalchik 79.80 342 *c i*P P 13 36 43.0 +0.8
MLR Muntele Rosu 79.82 355 ⇓P P 13 36 43.3 +0.8
MLR Muntele Rosu 79.82 355 P P 13 36 43.2 +0.8
MLR Muntele Rosu 79.82 355 IAmb IAmb 13 36 44.3
comp=Z,62nm,1.5s
MLR Muntele Rosu 79.82 355 P P 13 36 43.2 +0.8
BZS Buzias 79.83 358 ⇑P P 13 36 42.3 0.0
BZS Buzias 79.83 358 P P 13 36 42.3 0.0
BZS Buzias 79.83 358 P P 13 36 42.5 +0.2
VIVF Saint-Julien-l 79.85 10 *e*P P 13 36 42.2 -0.3
VIVF pmax pmax
comp=Z,21nm,1.1s
NEHR Nehoiu 79.86 355 ⇓P P 13 36 43.0 +0.4
GRER 79.88 354 ⇓P P 13 36 44.0 +1.4
ORIF Oris-en-Rattie 79.91 10 *e*P P 13 36 42.8 -0.1
ORIF pmax pmax
comp=Z,8.0nm,0.8s
VOIR 79.91 356 ⇑P P 13 36 43.3 +0.4
VOIR 79.91 356 P P 13 36 43.2 +0.4
VOIR 79.91 356 P P 13 36 43.2 +0.4
LOT Lotru 79.95 357 ⇓P P 13 36 42.9 -0.2
LOT Lotru 79.95 357 P P 13 36 42.7 -0.4
ARR Arges 80.00 356 ⇓P P 13 36 43.9 +0.6
ARR Arges 80.00 356 P P 13 36 44.0 +0.7
CFR Carcaliu 80.01 354 ⇑P P 13 36 43.1 -0.2
CFR Carcaliu 80.01 354 P P 13 36 43.0 -0.2
GZR Gura Zlata 80.03 357 ⇓P P 13 36 44.2 +0.7
GZR Gura Zlata 80.03 357 P P 13 36 44.2 +0.7
MTUR Matau 80.12 356 ⇑P P 13 36 45.5 +1.5
MTUR Matau 80.12 356 P P 13 36 45.5 +1.5
MBDF Montbardon 80.18 9 *e*P P 13 36 45.8 +1.4
MBDF pmax pmax
comp=Z,28nm,0.9s
TPGR Topolog 80.31 353 ⇓P P 13 36 44.8 -0.1
FRGS Fruska Gora 80.31 360 ⇑*i*P P 13 36 44.9 0.0
SOC Sochi 80.35 345 *e*P P 13 36 44.5 -0.6
SOC *e* 13 39 47.9
SOC *e*PPP PPP 13 41 37.4
SOC *e*S S 13 46 46.6 -0.7
SOC *e*SS SS 13 52 01.8 +4.0
SOC pmax pmax
comp=Z,64nm,0.8s
SOC MLR MLR
comp=Z,163nm,23.0s
JURR Jurilovca 80.37 353 ⇓P P 13 36 45.3 +0.2
NIL Nilore 80.37 317 P P 13 36 46.0 +0.6
NIL pmax pmax
comp=Z,121nm,0.9s
NIL Nilore 80.37 317 P P 13 36 46.0 +0.6
NIL Nilore 80.37 317 P P 13 36 46.0 +0.6
VSLR Vesyoloye 80.42 345 *i*P P 13 36 46.0 +0.5
MYLDM Lahad Datu 80.45 265 IAmb IAmb 13 37 09.5
comp=Z,26nm,0.9s
MYLDM Lahad Datu 80.45 265 P P 13 36 47.2 +1.2
comp=Z,32nm,0.9s
MYLDM Lahad Datu 80.45 265 P P 13 36 47.5 +1.5
HERR Herculane 80.55 358 ⇑P P 13 36 46.9 +0.7
CHTO Chiang Mai 80.56 289 P P 13 36 46.1 -0.5
CHTO pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 80.56 289 P P 13 36 46.1 -0.5
CHTO IAmb IAmb 13 36 47.2
comp=Z,25nm,0.8s
CHTO Chiang Mai 80.56 289 P P 13 36 46.1 -0.5
comp=Z,37nm,0.9s
CHTO Chiang Mai 80.56 289 P P 13 36 46.3 -0.3
CHTO Chiang Mai 80.56 289 P P 13 36 46.3 -0.3
CHTO pP pP 13 36 59.0 -0.4
TLBR Topalu 80.64 354 ⇑P P 13 36 46.9 +0.2
PGAV Gavieira, Arco 80.69 20 *e*P P 13 36 47.5 +0.4
PGAV *i* IAmb IAmb 13 37 07.0
comp=Z,53nm,1.4s
TIRR Tirgusor 80.71 353 ⇓P P 13 36 47.4 +0.4
TIRR Tirgusor 80.71 353 P P 13 36 47.4 +0.4
TIRR Tirgusor 80.71 353 P P 13 36 47.1 +0.2
BLY Banja Luka 80.71 1 ⇓P P 13 36 47.1 +0.2
BLY Banja Luka 80.71 1 ⇑P P 13 36 46.9 -0.1
BLY Banja Luka 80.71 1 P P 13 36 47.2 +0.2
ISO Isola 80.75 9 P P 13 36 48.4 +1.1
ISO Isola 80.75 9 P P 13 36 48.4 +1.1
SRE Strehaia 80.75 357 ⇓P P 13 36 47.2 0.0
SRE Strehaia 80.75 357 P P 13 36 47.2 0.0
DLV Lat 80.76 278 IAmb IAmb 13 36 49.5
comp=Z,50nm,1.3s
DLV Lat 80.76 278 P P 13 36 48.6 +0.6
SJPF Ste Jean 80.81 15 *e*P P 13 36 47.8 +0.2
SJPF pmax pmax
comp=Z,6.0nm,0.8s
HUMR Humele 80.82 356 ⇑P P 13 36 47.0 -0.6
HUMR Humele 80.82 356 P P 13 36 47.4 -0.2
CMAR Chiang Mai Arr 80.85 289 P P 13 36 48.2 +0.1
comp=Z,57nm,0.8s,baz=17,slow=5.4,SNR=308
CMAR LR LR 14 16 10.1
comp=Z,69nm,19.4s,baz=35,slow=38
comp=Z,57nm,0.8s
CMAR Chiang Mai Arr 80.85 289 *ce*P P 13 36 48.2 +0.1
CMAR pmax pmax
comp=Z,60nm,0.8s

ATE Arette 80.92 15 P P 13 36 48.5 +0.3
TEKS Tekeris 80.92 360 ⇑*i*P P 13 36 48.1 -0.1
AKT Akhty 80.95 339 *e*P P 13 36 48.9 +0.4
AKT *e* 13 36 55.1
AKT *e* 13 39 53.5
AKT pmax pmax
comp=Z,152nm,0.8s
MTLF Montolieu 81.06 12 *e*P P 13 36 49.7 +0.7
MTLF pmax pmax
comp=Z,32nm,1.1s
ICOR Ion Corvin 81.09 354 ⇓P P 13 36 49.9 +0.9
SBF Sospel 81.10 9 *e*P P 13 36 48.7 -0.5
SBF pmax pmax
comp=Z,43nm,1.0s
EPF Esparros 81.12 14 *e*P P 13 36 48.2 -1.1
EPF pmax pmax
comp=Z,3.0nm,0.6s
ETSF Etsaut 81.12 15 *e*P P 13 36 49.4 0.0
ETSF pmax pmax
comp=Z,17nm,0.9s
PUNG Punghina 81.14 357 ⇑P P 13 36 48.9 -0.4
PBRG Braganca 81.15 19 *e*P P 13 36 50.4 +0.9
PBRG *i* IAmb IAmb 13 37 09.8
comp=Z,21nm,1.6s
KBL Kabul 81.19 320 P P 13 36 48.6 -1.4
KBL pmax pmax
comp=Z,89nm,1.1s
KBL Kabul 81.19 320 P P 13 36 48.6 -1.4
KBL Kabul 81.19 320 P P 13 36 48.8 -1.3
NPW Naypyitaw 81.29 292 P P 13 36 50.3 -0.1
TBLG Delisi 81.30 341 P P 13 36 50.9 +0.6
POLO Lamas de Olo 81.36 20 *e*P P 13 36 51.4 +0.7
POLO *ep*P sP 13 37 06.4 -1.9
POLO *i* IAmb IAmb 13 37 11.1
comp=Z,18nm,1.4s
PTO Porto 81.42 21 *e*P P 13 36 52.6 +1.8
PVRL Vila Real 81.47 20 *e*P P 13 36 52.4 +1.2
PVRL *i* IAmb IAmb 13 36 55.2
comp=Z,35nm,1.6s
BBLS Lazi&#263i 81.61 360 ⇑*i*P P 13 36 52.5 +0.6
CEST Esterri de Car 81.67 13 IAmb IAmb 13 37 12.4
comp=Z,30nm,1.2s
EPOS Posof 81.89 342 P P 13 36 54.5 +1.0
NEF NEVSHA 81.97 354 *e*P P 13 36 53.8 +0.1
PVIS Viseu 81.97 20 *e*P P 13 36 54.7 +0.9
PVIS *ep*P pP 13 37 08.8 +2.1
PLVB Pleven 81.98 356 ⇓P P 13 36 53.5 -0.3
SZH Strazhitsa 82.04 355 *e*P P 13 36 53.3 -0.8
MPEP Malo Peshtene 82.04 357 *e*P P 13 36 53.8 -0.3
PRD Provadia 82.06 354 *e*P P 13 36 54.0 -0.2
SJES Sjenica 82.21 359 ⇑*i*P P 13 36 55.7 +0.6
UPM Unac-Piva 82.27 0 *e*P P 13 36 55.5 0.0
FDMO Fiordimonte 82.30 5 IAmb IAmb 13 36 56.8
comp=Z,29nm,1.0s
MTE Manteigas 82.35 20 *e*P P 13 36 56.7 +0.9
MTE *i* IAmb IAmb 13 36 59.7
comp=Z,50nm,1.5s
MTE *ep*P pP 13 37 11.0 +2.3
MTE Manteigas 82.35 20 IAmb IAmb 13 36 57.9
comp=Z,40nm,1.0s
MTE Manteigas 82.35 20 P P 13 36 57.3 +1.4
PCAS Casmilo, Conde 82.48 21 *e*P P 13 36 56.7 +0.2
PCAS *i* IAmb IAmb 13 37 17.2
comp=Z,84nm,1.3s
NRCA Norcia 82.50 5 IAmb IAmb 13 36 58.4
comp=Z,28nm,1.0s
PGF Pioggiola 82.53 8 *e*P P 13 36 54.4 -2.4
PGF pmax pmax
comp=Z,34nm,0.9s
BLSH Balsha 82.55 357 *e*P P 13 36 58.9 +2.0
BRY Bratogost 82.57 1 ⇑*i*P P 13 36 56.8 -0.3
CESX Cesi 82.70 5 IAmb IAmb 13 37 17.3
comp=Z,18nm,1.0s
TREB Trebinje 82.75 1 *e*P P 13 36 57.2 -0.6
JMB Yambol 82.78 355 *e*P P 13 36 57.9 -0.1
DIGO Kars 82.83 342 P P 13 36 59.9 +1.3
GNI Garni 82.83 341 LR LR 14 21 20.5
comp=Z,109nm,18.2s,baz=9.5,slow=41
GNI Garni 82.83 341 *ce*P P 13 36 58.7 +0.2
GNI pmax pmax
comp=Z,47nm,0.8s
GNI Garni 82.83 341 P P 13 36 59.6 +1.1
GNI Garni 82.83 341 P P 13 36 59.1 +0.6
GNI Garni 82.83 341 P P 13 36 58.8 +0.3
KTUT Trabzon 82.88 344 ⇑P P 13 37 01.6 +3.1
SDV Santo Domingo 82.89 85 LR LR 14 15 25.8
comp=Z,77nm,20.2s,baz=290,slow=37
SDV Santo Domingo 82.89 85 P P 13 36 59.1 0.0
SDV IAmb IAmb 13 37 12.3
comp=Z,17nm,0.9s
SDV Santo Domingo 82.89 85 *e*P P 13 36 58.9 -0.3
PCBR Castelo Branco 82.90 20 *e*P P 13 36 59.3 +0.7
PCBR *ep*P pP 13 37 12.4 +1.0
PCBR *i* IAmb IAmb 13 37 18.3
comp=Z,48nm,1.3s
PLNA Plana 82.93 357 *e*P P 13 36 58.9 0.0
PSBE So Bento 82.94 21 *e*P P 13 36 59.8 +0.9
PSBE *i* IAmb IAmb 13 37 01.1
comp=Z,65nm,1.5s
AQU L'Aquila 82.99 4 P P 13 37 00.7 +1.6
AQU L'Aquila 82.99 4 IAmb IAmb 13 37 18.4
comp=Z,31nm,0.9s
AQU L'Aquila 82.99 4 P P 13 37 00.7 +1.6
PSARD Sardoal 82.99 21 *e*P P 13 37 00.0 +0.9
PSARD *ep*P pP 13 37 14.1 +2.1
PSARD *i* IAmb IAmb 13 37 19.5
comp=Z,77nm,1.3s
HCY Herceg Novi 83.02 1 *e*P P 13 36 58.5 -0.7
PDG Podgorica 83.04 360 *e*P P 13 36 58.7 -0.6
PDG Podgorica 83.04 360 P P 13 36 59.3 0.0
PLD Plovdiv 83.21 356 *e*P P 13 37 00.2 0.0
DRME Dracevica, Mon 83.28 0 *e*P P 13 37 00.6 0.0
PMRV Marv??o 83.31 20 *e*P P 13 37 01.4 +0.6
PMRV *ep*P pP 13 37 14.7 +1.1
PMRV *i* IAmb IAmb 13 37 21.8
comp=Z,52nm,1.7s
INTR Introdacqua 83.35 4 IAmb IAmb 13 37 02.6
comp=Z,18nm,0.8s
PMTG Montargil 83.49 21 *e*P P 13 37 01.9 +0.2
PMTG *ep*P pP 13 37 15.6 +1.1
PMTG *i* IAmb IAmb 13 37 19.1
comp=Z,31nm,1.3s
RZN Rozhen 83.66 356 *e*P P 13 37 02.9 +0.1
HRA Herat 83.70 325 IAmb IAmb 13 37 04.2
comp=Z,33nm,0.8s
KOPT Kop Dagi 83.71 344 IAmb IAmb 13 37 08.0
comp=Z,31nm,0.9s
ESBB Sonseca Array 83.72 18 IAmb IAmb 13 37 04.6
comp=Z,28nm,0.8s
ESDC Sonseca Array 83.72 18 P P 13 37 03.5 +0.6
comp=Z,25nm,0.8s,baz=343,slow=4.8,SNR=168
ESDC pP pP 13 37 14.7 -1.1
comp=Z,13nm,0.8s,baz=348,slow=4.2,SNR=12
ESDC PP PP 13 40 13.9 -1.4
comp=Z,2.7nm,1.0s,baz=349,slow=8.1,SNR=4.3
ESDC LR LR 14 15 49.2
comp=Z,80nm,20.2s,baz=332,slow=37
comp=Z,25nm,0.8s
ESDC Sonseca Array 83.72 18 P P 13 37 03.5 +0.6
PARRA Arraiolos 83.77 21 *e*P P 13 37 03.3 +0.2
PARRA *i* IAmb IAmb 13 37 04.7
comp=Z,42nm,1.3s
PARRA *ep*P pP 13 37 17.4 +1.4
KELT Kelkit 83.78 345 P P 13 37 04.5 +1.1
PAB San Pablo 83.78 18 P P 13 37 03.8 +0.5
PAB pmax pmax
comp=Z,15nm,0.9s
PAB San Pablo 83.78 18 P P 13 37 03.8 +0.5
PAB IAmb IAmb 13 37 04.8
comp=Z,15nm,0.8s
PESTR Estremoz 83.81 21 *e*P P 13 37 04.0 +0.6
PESTR *i* IAmb IAmb 13 37 22.3
comp=Z,36nm,1.3s
PESTR Estremoz 83.81 21 IAmb IAmb 13 37 04.9
comp=Z,26nm,1.0s
PESTR Estremoz 83.81 21 P P 13 37 04.1 +0.7
MMB Musomishta 83.85 357 *e*P P 13 37 04.2 +0.7
MOE Montemor 83.99 21 *e*P P 13 37 05.1 +0.8
MOE *i* IAmb IAmb 13 37 07.8
comp=Z,55nm,1.6s
ROSC El Rosal 84.03 90 LR LR 14 17 27.9
comp=Z,29nm,18.7s,baz=208,slow=38
EVO Evora 84.05 21 *e*P P 13 37 04.9 +0.4
EVO *ep*P pP 13 37 18.3 +0.9

EVO *i* IAmb IAmb 13 37 22.9
comp=Z,40nm,1.5s
SAHE Sakarya_HENDEK 84.10 351 ⇓P P 13 37 04.4 -0.4
VAY Valandovo 84.11 357 ⇑*i*P P 13 37 05.4 +0.6
RDO Rodhopi 84.17 355 P P 13 37 05.9 +0.8
KNT Kendrikon 84.26 357 P P 13 37 07.7 +2.1
KNT Kendrikon 84.26 357 P P 13 37 07.7 +2.1
OHR Ohrid 84.35 359 ⇑*i*P P 13 37 06.7 +0.6
PAOL Paolisi 84.36 4 IAmb IAmb 13 37 07.3
comp=Z,38nm,1.3s
ALN Alexandroupoli 84.39 355 P P 13 37 06.7 +0.4
ALN Alexandroupoli 84.39 355 P P 13 37 06.7 +0.4
PLOUS Minas do Lousa 84.44 22 *e*P P 13 37 07.1 +0.6
PLOUS *ep*P pP 13 37 20.8 +1.4
GRG Griva 84.47 358 P P 13 37 07.6 +0.9
PBEJ Beja 84.57 21 *e*P P 13 37 07.8 +0.6
PBEJ *i* IAmb IAmb 13 37 09.1
comp=Z,24nm,1.3s
SOH Sokhos 84.58 357 P P 13 37 07.6 +0.3
SOH Sokhos 84.58 357 P P 13 37 07.6 +0.3
PBAR Barrancos 84.59 21 *e*P P 13 37 07.9 +0.6
PBAR *ep*P pP 13 37 21.5 +1.3
PBAR *i* IAmb IAmb 13 37 27.1
comp=Z,57nm,1.1s
MATE Matera 84.80 2 ⇓P P 13 37 09.4 +1.1
MATE Matera 84.80 2 P P 13 37 08.7 +0.4
BAND Balkesir-Ban 84.81 353 ⇑P P 13 37 08.6 +0.2
PTEO Sao Teotonio 84.85 22 *e*P P 13 37 09.3 +0.7
PCVE Castro Verde 84.91 21 *e*P P 13 37 10.1 +1.1
BR131 Keskin Array S 84.94 349 *i*P P 13 37 09.3 +0.1
BRTR Keskin Array B 84.94 349 P P 13 37 09.5 +0.3
comp=Z,25nm,0.9s,baz=29,slow=2.8,SNR=87
BRTR PKKPbc PKKPbc 13 55 13.1 -1.1
comp=Z,0.8nm,0.6s,baz=193,slow=7.3,SNR=4.2
comp=Z,25nm,0.9s
BRTR Keskin Array B 84.94 349 P P 13 37 09.3 +0.1
ARPR Arapgir-MALATY 84.95 345 P P 13 37 10.8 +1.4
MORF Marmelete 85.09 22 *e*P P 13 37 10.4 +0.5
MORF IAmb IAmb 13 37 11.5
comp=Z,37nm,0.9s
MORF Marmelete 85.09 22 *e*P P 13 37 10.4 +0.5
MARCO Tramutola 85.13 3 P P 13 37 10.6 +0.5
PVAQ Vaqueiros 85.20 21 *e*P P 13 37 11.1 +0.7
PVAQ *i* IAmb IAmb 13 37 32.6
comp=Z,52nm,1.6s
LIT Litokhoron 85.33 357 P P 13 37 11.1 +0.1
LIT Litokhoron 85.33 357 P P 13 37 11.1 +0.1
OTAV Otavalo 85.39 96 P P 13 37 13.2 +1.1
OTAV pmax pmax
comp=Z,14nm,0.8s
OTAV Otavalo 85.39 96 P P 13 37 13.2 +1.1
OTAV IAmb IAmb 13 37 26.2
comp=Z,14nm,0.8s
BALY Balya 85.45 354 P P 13 37 11.9 +0.2
KIRS Kirsehir-Merke 85.49 349 ⇑P P 13 37 12.9 +1.0
HAKT HAKKARI 85.54 341 P P 13 37 13.2 +0.8
KKUL Konya-Kulu 85.56 349 P P 13 37 13.3 +1.0
SRN Sarande 85.59 359 P P 13 37 12.5 +0.2
VSL Villasalto 85.59 8 IAmb IAmb 13 37 13.8
comp=Z,23nm,0.9s
VSL Villasalto 85.59 8 P P 13 37 12.8 +0.5
KEK Kerkira 85.75 360 P P 13 37 12.6 -0.5
XOR Xorichti 86.04 357 P P 13 37 14.2 -0.4
TIP Timpagrande 86.27 2 ⇓P P 13 37 16.3 +0.6
TIP Timpagrande 86.27 2 P P 13 37 16.1 +0.3
MTSU Mount Surprise 86.37 231 P P 13 37 16.2 -0.1
comp=Z,11nm,0.8s,comp=Z,0.0nm,0.1s
AGG Agios Georgios 86.41 358 P P 13 37 15.0 -1.4
AGG Agios Georgios 86.41 358 P P 13 37 15.0 -1.4
LKD2 Lefkada island 86.67 359 P P 13 37 17.8 +0.2
ANDN Andirin 86.72 346 P P 13 37 19.0 +1.0
GAZ Gaziantep 87.00 346 IAmb IAmb 13 37 21.4
comp=Z,28nm,1.0s
CEL Celeste 87.16 3 IAmb IAmb 13 37 20.7
comp=Z,27nm,1.0s
CEL Celeste 87.16 3 P P 13 37 18.5 -1.7
CTA Charters Tower 87.24 229 P P 13 37 20.7 +0.3
CTA Charters Tower 87.24 229 P P 13 37 20.8 +0.4
comp=Z,12nm,0.8s,baz=50,slow=6.7,SNR=11
CTA LR LR 14 09 36.4
comp=Z,48nm,20.0s,baz=55,slow=31
comp=Z,12nm,0.8s
CTAO Charters Tower 87.24 229 P P 13 37 20.8 +0.4
CTAO pmax pmax
comp=Z,17nm,0.9s
CTAO Charters Tower 87.24 229 P P 13 37 20.8 +0.4
CTAO IAmb IAmb 13 37 21.6
comp=Z,17nm,0.9s
KDU Kakadu 87.46 244 P P 13 37 21.2 -0.4
comp=Z,6.9nm,1.1s,comp=Z,0.0nm,0.6s
AYDN Tasoluk 87.51 353 P P 13 37 22.0 +0.2
CLTB Caltabellotta 87.74 5 P P 13 37 22.9 0.0
VAE Valguarnera 87.89 4 LR LR 14 17 48.1
comp=Z,60nm,21.2s,baz=302,slow=36
KAPI Kappang 88.03 259 LR LR 14 11 41.3
comp=Z,37nm,21.7s,baz=22,slow=32
ITM Ithomi 88.26 358 P P 13 37 25.1 -0.2
KEST Kesra 89.33 8 P P 13 37 31.1 +0.6
KEST LR LR 14 21 33.7
comp=Z,10nm,0.9s,baz=1.1,slow=4.0,SNR=9.1
comp=Z,36nm,18.4s,baz=25,slow=38
comp=Z,10nm,0.9s
KEST Kesra 89.33 8 IAmb IAmb 13 37 33.2
comp=Z,12nm,0.9s
IMMV Iera Moni Meta 89.91 356 P P 13 37 33.0 0.0
BATI Baumata 90.11 252 LR LR 14 13 01.0
comp=Z,45nm,20.7s,baz=180,slow=32
CY604 RAF Akrotiri, 90.15 347 P P 13 37 33.8 -0.1
CY604 IAmb IAmb 13 37 38.0
comp=Z,25nm,1.0s
MD01 Midelt array s 90.18 20 P P 13 37 34.4 -0.2
MD31 MD31 90.18 20 IAmb IAmb 13 37 35.6
comp=Z,11nm,1.2s
MDT Midelt 90.27 20 LR LR 14 23 00.3
comp=Z,23nm,18.1s,baz=28,slow=39
QIS Mount Isa 90.64 234 P P 13 37 35.8 -0.7
comp=Z,12nm,1.1s,comp=Z,0.0nm,0.9s
KNRA Kununurra 91.90 245 P P 13 37 42.0 -0.4
comp=Z,18nm,2.1s,comp=Z,0.0nm,4.5s
ASF Jabal al Asfar 91.95 345 LR LR 14 25 24.0
comp=Z,42nm,18.3s,baz=26,slow=40
HYB Hyderabad 92.20 305 *e*P P 13 37 44.2 +0.2
HYB *e*PKiKP PKiKP 13 42 33.6 +0.1
WB0 Warramunga Arr 92.47 239 IAmb IAmb 13 37 45.1
comp=Z,6.6nm,1.0s
WR8 Warramunga Arr 92.58 238 IAmb IAmb 13 37 45.6
comp=Z,8.2nm,0.8s
WRAB Tennant Creek 92.63 239 *ce*P P 13 37 44.9 -0.8
WRAB pmax pmax
comp=Z,18nm,2.5s
WRAB Tennant Creek 92.63 239 P P 13 37 45.4 -0.3
WRAB IAmb IAmb 13 38 05.0
comp=Z,23nm,1.5s
WRA Warramunga Arr 92.64 239 P P 13 37 45.0 -0.8
comp=Z,6.0nm,0.9s,baz=39,slow=5.3,SNR=38
WRA pP pP 13 37 57.2 -1.6
comp=Z,2.7nm,0.7s,baz=35,slow=5.7,SNR=8.5
comp=Z,6.0nm,0.9s
WRA Warramunga Arr 92.64 239 ⇑*e*P P 13 37 45.0 -0.8
WRA pmax pmax
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 92.64 239 P P 13 37 45.5 -0.3
RPN Rapa Nui 92.83 136 LR LR 14 09 07.6
comp=Z,57nm,18.8s,baz=230,slow=29
PSI Prapat 93.64 280 P P 13 37 50.5 -0.2
PSI Prapat 93.64 280 P P 13 37 50.6 -0.2
comp=Z,15nm,1.2s
QLP Quilpie 93.82 227 P P 13 37 51.1 +0.2
comp=Z,35nm,1.4s,comp=Z,0.0nm,5.2s
QLP pP pP 13 38 04.9 +1.0
QLP Quilpie 93.82 227 P P 13 37 51.2 +0.2
EIL Elat 94.69 346 LR LR 14 25 57.5
comp=Z,59nm,19.9s,baz=84,slow=39
URZ Urewera 94.71 197 LR LR 14 14 39.3
comp=Z,120nm,19.9s,baz=28,slow=32
CZSB Cruzeiro do Su 95.16 96 *e*P P 13 37 58.0 +0.5
FITZ Fitzroy Crossi 95.55 246 LR LR 14 15 26.6
comp=Z,54nm,21.3s,baz=7.5,slow=32
ASAR Alice Springs 96.01 237 P P 13 38 00.7 -0.5
comp=Z,3.3nm,0.8s,baz=37,slow=5.0,SNR=19
comp=Z,3.3nm,0.8s
MDP Montagnes des 96.14 72 LR LR 14 20 31.0
comp=Z,65nm,21.4s,baz=313,slow=35
LEM Lembang 96.46 267 LR LR 14 21 40.3
comp=Z,43nm,18.5s,baz=345,slow=36

RAYN Ar Rayn 98.71 336 P P 13 38 13.6 0.0
RAYN pmax pmax
comp=Z,19nm,0.8s
RAYN Ar Rayn 98.71 336 P Pdif 13 38 13.6 0.0
STKA Stephens Creek 99.55 227 LR LR 14 19 26.9
comp=Z,82nm,19.9s,baz=26,slow=33
PALK Pallekele 99.84 298 LR LR 14 28 07.1
comp=Z,63nm,21.9s,baz=5.5,slow=38
TORD Torodi Ar. Bea 110.61 18 PKiKP **PKiKP 13 43 05.7 -1.0**
comp=Z,0.7nm,0.8s,baz=352,slow=2.9,SNR=2.7
TORD PP PP 13 43 33.9 -8.4
comp=Z,1.7nm,1.0s,baz=6.4,slow=4.7,SNR=4.4
TORD PKKPbc **PKKPbc 13 54 02.4 -1.0**
comp=Z,5.3nm,1.2s,baz=168,slow=2.1,SNR=8.1
H03N2 Juan Fernandez 112.29 117 T T 15 44 43.1
baz=321
H03N1 Juan Fernandez 112.30 117 T T 15 44 42.6
baz=321,slow=74
H03N3 Juan Fernandez 112.31 117 T T 15 44 44.2
baz=321,slow=74
COIM Forte Coimbra 113.48 91 *eP* **Pdif 13 39 20.9 +1.8**
PLCA Paso Flores 122.17 116 PKP **PKPdf 13 43 27.5 -0.6**
comp=Z,3.9nm,0.9s,baz=215,slow=6.6,SNR=6.9
KMBO Kilima Mbogo 124.41 338 PKP **PKPdf 13 43 33.1 -0.3**
VNDA Vanda 134.18 191 PKP **PKPdf 13 43 50.3 +0.5**
comp=Z,0.7nm,0.6s,baz=31,slow=8.7,SNR=3.7
TSUM Tsumeb 144.34 3 P **PKPab 13 44 08.1 -0.1**
TSUM Tsumeb 144.34 3 P **PKPab 13 44 08.2 -0.1**
QSPA South Pole Qui 144.68 180 PKP **PKPab 13 44 08.1 0.0**
comp=Z,63nm,0.7s,baz=35,slow=0.6,SNR=375
QSPA pPKP **pPKPdf 13 44 20.6 -2.0**
comp=Z,34nm,0.7s,baz=238,slow=0.8,SNR=12
QSPA SKPbc **SKPbc 13 47 42.8 -1.7**
comp=Z,8.9nm,1.0s,baz=124,slow=2.7,SNR=4.2
QSPA South Pole Qui 144.68 180 PKPab 13 44 07.9 -0.1
SOOWA Sowa 145.31 348 P **PKPdf 13 44 12.3 +0.5**
BROLN Tlhalogang 145.70 346 P **PKPbc 13 44 12.7 -0.2**
GRTLG Ghanzi 146.48 357 PKPdf **PKPdf 13 44 14.3 +0.5**
GRTLG Ghanzi 146.48 357 P **PKPab 13 44 15.8 -0.4**
KHWEE KHWEE 146.76 349 PKPbc **PKPbc 13 44 15.7 -0.3**
KHWEE KHWEE 146.76 349 P **PKPbc 13 44 16.2 +0.3**
WIN Windhoek 147.67 4 P **PKPbc 13 44 19.0 +0.4**
KOOLE Kule 148.13 358 P **PKPbc 13 44 20.4 +0.7**
LKGWB Lokgwabe 149.21 356 P **PKPbc 13 44 22.9 +0.4**
SKOMA Sekoma 149.45 352 P **PKPbc 13 44 23.2 +0.2**
LBTB Lobatse 149.78 348 P **PKPbc 13 44 24.2 +0.4**
POGA Pongola 151.00 337 P **PKiKP 13 44 27.0 -0.2**
BOSA Boshof 153.37 348 PKP **PKPdf 13 44 24.5 +0.1**
comp=Z,5.4nm,0.9s,baz=58,slow=3.4,SNR=7.6
BOSA PKPbc **PKPbc 13 44 31.8 -0.2**
comp=Z,18nm,0.7s,baz=24,slow=1.0,SNR=23
BOSA pPKPbc **PKPab 13 44 44.2 0.0**
comp=Z,12nm,0.7s,baz=0.8,slow=2.4,SNR=6.6
BOSA Boshof 153.37 348 PKPbc 13 44 32.0 0.0
BOSA Boshof 153.37 348 P **PKPbc 13 44 31.8 -0.2**
MAW Mawson 156.09 221 PKP **PKPdf 13 44 27.5 +0.8**
comp=Z,2.9nm,0.9s,baz=69,slow=2.7,SNR=5.3
MAW PKPab **PKPab 13 44 54.3 -0.3**
comp=Z,13nm,0.9s,baz=108,slow=5.4,SNR=13
VNA2 Neumayer--Watz 160.17 154 ⇑PKPab **PKPab 13 45 11.6 -0.7**
comp=Z,6.6nm,0.6s,baz=254,slow=1.7
VNA2 ⇑pPKPab **pPKPab 13 45 23.7 -1.5**
comp=Z,9.6nm,0.6s,baz=236,slow=2.7
SNAA Sanae 160.69 159 ⇑PKPab **PKPab 13 45 13.8 -0.8**
comp=Z,111nm,0.7s
SNAA ⇑pPKPab **pPKPab 13 45 25.9 -1.7**
comp=Z,106nm,0.7s
SNAA Sanae 160.69 159 PKPab **PKPab 13 45 13.5 -1.1**
comp=Z,5.0nm,0.8s,baz=231,slow=3.6,SNR=7.9
SNAA Sanae 160.69 159 PKP2 **PKPab 13 45 13.8 -0.8**
SNAA Sanae 160.69 159 PKPab 13 45 13.8 -0.8

*IDC **24** 13:29:38.6±2.9, 19°.05S×169°.10E, h151km±25km, mb3.9/10, mbtmp4.3/11, Error ellipse: s-maj=23.2km s-min=20.6km az=34.0*
*NEIC **24** 13:29:39.7±1.5, 19°.2S±0°.1×169°.2E±0°.1, h156km±8km, mb4.4/13, Error ellipse: s-maj=17.5km s-min=15.0km az=117.0*
ISC 24 13:29:38.8±0.6, **19°.10S**±0°.08×**169°.1E**±0°.1, **h147**km, **n38, σ1§33/36, mb4.3**/16, **1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.58**	**203**		**Pn**	**13 30 20.3**	**-0.4**
MARNC				Sn	**Sn**	**13 30 50.5**	**-2.6**
DZM	**Mont Dzumac**	**3.88**	**220**	P	**Pn**	**13 30 38.0**	**+0.6**
	10nm,0.3s,baz=118,slow=20,SNR=146						
DZM				S	**Sn**	**13 31 23.4**	**+0.4**
	72nm,0.5s,baz=317,slow=21,SNR=11						
OUENC	**Ouen Island, N**	**3.93**	**212**	Pn	**Pn**	**13 30 39.9**	**+1.8**
ONTNC	**Ouen Toro**	**4.05**	**218**	Pn	**Pn**	**13 30 40.6**	**+1.0**
KOUNC	**Koumac, New Ca**	**4.78**	**252**	Pn	**Pn**	**13 30 50.3**	**+1.1**
URZ	**Urewera**	**20.32**	**162**	P	**P**	**13 34 04.0**	**+0.7**
	5.9nm,0.8s,baz=144,slow=7.3,SNR=1.9						
	5.9nm,0.8s						
CTA	**Charters Tower**	**21.57**	**264**	P	**P**	**13 34 18.0**	**+1.1**
	4.5nm,0.4s,baz=85,slow=9.6,SNR=13						
	4.5nm,0.4s						
TCW	**Tory Channel**	**22.47**	**170**	P	**P**	**13 34 24.9**	**-0.8**
STKA	**Stephens Creek**	**27.82**	**237**	P	**P**	**13 35 14.7**	**+0.3**
	2.1nm,0.6s,baz=102,slow=11,SNR=6.6						
	2.1nm,0.6s						
WR8	**Warramunga Arr**	**32.61**	**263**	P	**P**	**13 35 55.2**	**-1.5**
WR8				IAmb	IAmb	13 36 23.5	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**32.76**	**263**	P	**P**	**13 35 56.5**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=90,slow=8.4,SNR=48						
	comp=Z,1.1nm,0.5s						
WRA	**Warramunga Arr**	**32.76**	**263**	IAmb	IAmb	13 35 59.4	
	comp=Z,0.2nm,0.8s						
AS31	**Alice Springs**	**33.05**	**256**	P	**P**	**13 35 59.8**	**-0.7**
ASAR	**Alice Springs**	**33.05**	**256**	P	**P**	**13 35 59.9**	**-0.7**
	comp=Z,11nm,0.5s,baz=82,slow=8.6,SNR=340						
	comp=Z,11nm,0.5s						
ASAR	**Alice Springs**	**33.05**	**256**	P	**P**	**13 35 59.6**	**-1.0**
SRPI	**Serui, Papua**	**36.46**	**294**	P	**P**	13 36 37.5	+7.6
MTN	**Manton Dam**	**36.99**	**274**	P	**P**	**13 36 33.9**	**-0.5**
MTN				IAmb	IAmb	13 37 14.2	
	comp=Z,10nm,1.3s						
FITZ	**Fitzroy Crossi**	**41.15**	**264**	P	**P**	**13 37 09.0**	**+0.2**
MBWA	**Marble Bar**	**46.27**	**259**	P	**P**	**13 37 49.0**	**-0.8**
MBWA				IAmb	IAmb	13 37 50.8	
	comp=Z,10nm,1.1s						
QSPA	**South Pole Qui**	**70.95**	**180**	P	**P**	**13 40 39.7**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=243,slow=0.2,SNR=26						
	comp=Z,4.5nm,0.8s						
QSPA	**South Pole Qui**	**70.95**	**180**	P	**P**	**13 40 39.8**	**-0.3**
QSPA				IAmb	IAmb	13 40 40.6	
	comp=Z,7.2nm,0.9s						
PEA0B	**Petropavlovsk-**	**72.58**	**353**	P	**P**	**13 40 49.8**	**+0.2**
PEA0B				IAmb	IAmb	13 41 17.3	
	comp=Z,7.4nm,1.2s						
PETK	**Petropavlovsk-**	**72.58**	**353**	P	**P**	**13 40 49.0**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=130,slow=5.5,SNR=4.3						
	comp=Z,1.0nm,0.6s						
PETK	**Petropavlovsk-**	**72.58**	**353**	P	**P**	**13 40 50.1**	**+0.5**
BELA	**Belgrano 2**	**82.24**	**175**	P	**P**	**13 41 41.9**	**-1.3**
O18K	**Koktuh Hills**	**83.86**	**17**	P	**P**	**13 41 51.6**	**0.0**
O18K				IAmb	IAmb	13 41 51.8	
	comp=Z,5.2nm,1.0s						
J16K	**Anvik River**	**85.47**	**13**	P	**P**	**13 42 00.5**	**+1.0**
J16K				IAmb	IAmb	13 42 40.9	
	comp=Z,7.4nm,1.2s						
K17K	**Iditarod**	**85.50**	**14**	P	**P**	**13 42 00.9**	**+1.2**
ILAR	**Eielson Array**	**90.13**	**17**	P	**P**	**13 42 19.9**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=234,slow=5.2,SNR=5.9						
	comp=Z,0.3nm,0.5s						
VNA2	**Neumayer--Watz**	**90.18**	**181**	⇑P	P	13 42 30.6	+8.5
	comp=Z,5.4nm,0.6s,baz=319						
VNA1	**Neumayer--Stat**	**90.47**	**181**	P	**P**	**13 42 27.7**	**+4.4**
TIXI	**Tiksi**	**94.59**	**348**	P	**P**	**13 42 41.3**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=246,slow=5.6,SNR=2.9						
	comp=Z,2.4nm,0.5s						
TIXI	**Tiksi**	**94.59**	**348**	pmax	pmax		
	comp=Z,14nm,1.5s						
TIXI	**Tiksi**	**94.59**	**348**	P	**P**	**13 42 42.1**	**0.0**
TIXI	**Tiksi**	**94.59**	**348**	*i* P	**P**	**13 42 41.4**	**-0.7**
TXAR	**Lajitas Array**	**96.80**	**61**	P	**P**	**13 42 54.1**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=248,slow=3.6,SNR=2.5						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B 124.91 345**			PKP	**PKPdf**	**13 48 18.1**	**-2.6**
	comp=Z,3.3nm,1.0s,baz=70,slow=3.9,SNR=5.7						
GERES	**GERESS Array B 144.32 332**			PKP	**PKPab**	**13 48 55.7**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=8.5,slow=2.7,SNR=8.0						

*IDC **24** 13:24:21.8±0.6, 30°.28N×94°.81E, h0km, mb4.4/25, mbtmp4.4/28, ML4.0/3, Error ellipse: s-maj=18.4km s-min=12.7km az=43.0*
*MOS **24** 13:24:22.8±1.1, 30°.35N×94°.90E, h10km, mb5.0/40, Error ellipse: s-maj=8.9km s-min=4.1km az=124.3*
*NDI **24** 13:24:23.3±1.8, 30°.53N×95°.02E, h10km, ML3.9, MW4.5, Presumed earthquake*
*BJI **24** 13:24:23.7, 30°.39N×94°.83E, h10km, mB4.7/6, mb4.5/35, ML4.1/6, Ms4.1/24, Ms7 4.0/24*
*NEIC **24** 13:24:24.9±1.2, 30°.39N±0°.07×94°.83E±0°.09, h10km±1km, mb4.9/134, Error ellipse: s-maj=15.8km s-min=6.0km az=131.0*
*GFZ **24** 13:24:25.4±0.3, 30°.3N×9°.5E±°, h10km, M4.5/24, mb4.8/24*
ISC 24 13:24:24.4±0.7, **30°.33N**±0°.04×**94°.87E**±0°.04, **h10**km±3km, **n607, σ1§02/583, mb4.8**/150, **MS4.2**/5, **6C-5D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**3.10**	**164**	*eS*	**Sn**	**13 35 52.7**	**+2.1**
LKP				IAML		13 36 05.8	
	comp=N,549nm,0.8s						
LKP				IAML		13 36 10.4	
	comp=E,589nm,0.8s						
LKP				IAML		13 36 36.3	
	comp=E,805nm,0.8s						
LKP				IAML		13 36 38.0	
	comp=N,530nm,1.6s						
TAWA	**Tawang**	**3.79**	**225**	*eP*	**Pn**	**13 35 26.6**	**+3.4**
TAWA				*eS*	**Sn**	**13 36 10.2**	**+2.1**
TAWA				IAML		13 36 37.5	
	comp=E,428nm,1.7s						
MOKO	**MOKOCHONG**	**4.00**	**185**	*eP*	**Pn**	**13 35 27.8**	**+1.8**
TEZP	**TEZPUR**	**4.12**	**207**	*eP*	**Pn**	**13 35 29.4**	**+1.9**
GUWA	**GUWAHATI**	**4.98**	**215**	*eP*	**Pn**	13 35 39.5	+0.2
GUWA				*i* x	x	13 37 03.3	
SHL	**Shillong**	**5.43**	**210**	P	**Pn**	**13 35 46.4**	**+0.8**
SHL	**Shillong**	**5.43**	**210**		**Pn**	**13 35 46.4**	**+0.8**
SHL	**Shillong**	**5.43**	**210**	*eP*	**Pn**	**13 35 47.1**	**+1.5**
IMP	**Imphal**	**5.54**	**189**	*eP*	**Pn**	**13 35 48.6**	**+1.7**
DHUB	**DHUBRI**	**6.08**	**226**	*eP*	**Pn**	**13 35 56.4**	**+2.1**
MORE	**Moreh**	**6.09**	**185**		**Pn**	**13 35 56.0**	**+1.5**
TNCH	**TengChong**	**6.19**	**148**	Pn	**Pn**	**13 35 57.3**	**+1.2**
TNCH				Sn	**Sn**	**13 37 07.5**	**+0.5**
TNCH				Sg	**Sg**	**13 37 41.1**	**-2.0**
TNCH				SMN			
	comp=E,320nm,2.2s						
TNCH				SME			
	comp=E,290nm,2.8s						
TNCH				L	L		
	comp=E,520nm,5.3s						
PZH	**PanZhiHua**	**7.15**	**121**	Pn	**Pn**	**13 36 12.8**	**+3.6**
EVN	**Everest**	**7.43**	**253**	Pn	**Pn**	**13 36 12.2**	**-1.3**
EVN	**Everest**	**7.43**	**253**	P	**Pn**	**13 36 14.5**	**+1.0**
CD2	**Chengdu**	**7.68**	**83**	Pn	**Pn**	**13 36 17.0**	**+0.6**
CD2				Sn	**Sn**	**13 37 44.4**	**+0.9**
CD2				L	L		
	comp=E,2μm,8.2s						
CD2				L	L		
	comp=E,2μm,7.1s						
CD2				L	L		
	comp=E,2μm,6.7s						
KMI2	**Kunming**	**8.68**	**125**	P	**Pn**	**13 36 34.8**	**+4.6**
KMI2				SMN			
	comp=E,68nm,1.4s						
KMI2				SME			
	comp=E,63nm,2.8s						
KMI2				L	L		
	comp=E,1μm,4.9s						
KMI2				L	L		
	comp=E,880nm,5.0s						
KMI2				L	L		
	comp=E,450nm,10.6s						
LZDM	**Lanzhou Array**	**9.28**	**50**	Pn	**Pn**	**13 36 39.5**	**+0.8**
	baz=215,slow=7.0						
	comp=E,3.5nm,0.4s						
GTA2	**Gaotai**	**9.98**	**22**	*eP*	**Pn**	**13 36 48.3**	**+0.3**
GTA2				pmax	pmax		
	comp=E,4.0nm,0.9s						
GTA2				L	L		
	comp=E,560nm,8.9s						
GTA2				L	L		
	comp=E,500nm,7.9s						
GTA2				L	L		
	comp=E,630nm,9.2s						
GYA	**Guiyang**	**11.07**	**107**	⇓P	**Pn**	**13 37 04.5**	**+1.5**
GYA				pmax	pmax		
	comp=E,29nm,0.9s						
WMQ	**Urumqi**	**14.63**	**339**	*eP*	**Pn**	**13 37 51.4**	**-0.1**
WMQ				pP	P	13 37 58.3	+0.4
WMQ				PP	**PnPn**	**13 38 07.9**	**+8.4**
WMQ				pmax	pmax		
	comp=E,12nm,0.9s						
WMQ				L	L		
	comp=E,390nm,9.1s						
WMQ				L	L		
	comp=E,240nm,8.1s						
WMQ				L	L		
	comp=E,90nm,13.9s						
LYN	**LuoYang**	**15.44**	**70**	P	**P**	**13 38 07.5**	**+0.6**
LYN				pmax	pmax		
	comp=E,19nm,0.6s						
BTO2	**Baotou**	**16.02**	**45**	*eP*	**Pn**	**13 38 09.3**	**-0.6**
BTO2				pP	**P**	**13 38 13.0**	**-0.4**
BTO2				sP	**pP**	**13 38 16.5**	**-0.8**
BTO2				PP	**sP**	**13 38 22.4**	**+3.2**
BTO2				S	**Sn**	**13 41 06.9**	**-0.7**
BTO2				pmax	pmax		
	comp=E,23nm,1.1s						
BTO2				pmax	pmax		
	comp=E,380nm,5.2s						
BTO2				L	L		
	comp=E,570nm,10.3s						
BTO2				L	L		
	comp=E,360nm,10.2s						
BTO2				L	L		
	comp=E,590nm,12.2s						
WHN	**Wuhan**	**16.80**	**84**	P	**P**	**13 38 21.8**	**-0.2**
WHN				sP	**sP**	**13 38 26.8**	**-0.8**
WHN				L	L		
	comp=E,2μm,12.5s						
WHN				L	L		
	comp=E,880nm,9.1s						
HHC	**Hu-ho-hao-te**	**17.13**	**48**	*eP*	**P**	**13 38 25.3**	**-0.5**
HHC				pmax	pmax		
	comp=E,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=E,94nm,3.8s						
HHC				L	L		
	comp=E,230nm,7.6s						
HHC				L	L		
	comp=E,190nm,7.6s						
HHC				L	L		
	comp=E,200nm,7.6s						
QIZ	**Qiongzhong**	**17.63**	**126**	P	**Pn**	**13 38 30.4**	**+0.1**
QIZ				S	**Sn**	**13 41 48.9**	**+2.1**
QIZ				pmax	pmax		
	comp=E,7.0nm,0.8s						
QIZ				L	L		
	comp=E,230nm,7.7s						
QIZ				L	L		
	comp=E,230nm,7.7s						
QIZ				L	L		
	comp=E,310nm,8.2s						
SHLS	**Shalkode**	**17.75**	**320**	*eP*	**Pn**	**13 38 30.0**	**-1.8**
SHLS	**Shalkode**	**17.75**	**320**	*eP*	**Pn**	**13 38 30.0**	**-1.8**
PDGK	**Podgornoye**	**17.85**	**321**	P	**Pn**	**13 38 32.0**	**-1.0**
PDGK	**Podgornoye**	**17.85**	**321**		**Pn**	**13 38 32.0**	**-1.0**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**13 38 33.3**	**-0.1**
TARG				pmax	pmax		
	comp=E,38nm,1.0s						
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**13 38 33.3**	**-0.1**
HNS	**HongShan**	**17.90**	**62**	⇑P	**P**	**13 38 34.6**	**+0.5**
HNS				pmax	pmax		
	comp=E,12nm,0.9s						
HNS				L	L		
	comp=E,240nm,9.8s						
HNS				L	L		
	comp=E,190nm,10.9s						
HNS				L	L		
	comp=Z,310nm,12.1s						
PRZ	**Przheval'sk**	**17.93**	**317**	P	**Pn**	**13 38 34.4**	**+0.3**
PRZ				pmax	pmax		
	comp=Z,168nm,1.2s						
PRZ	**Przheval'sk**	**17.93**	**317**	P	**Pn**	**13 38 34.4**	**+0.3**
PRZ	**Przheval'sk**	**17.93**	**317**	P	**P**	**13 38 36.8**	**+2.1**
UZB	**Uzunbulak**	**17.99**	**320**	*eP*	**P**	**13 38 35.7**	**+0.4**
UZB	**Uzunbulak**	**17.99**	**320**	*eP*	**P**	**13 38 35.7**	**+0.4**
KSH2	**Kashi**	**18.12**	**304**	P	**Pn**	**13 38 36.1**	**-0.2**
KSH2				sP	sP	13 38 46.5	+4.1
KSH2				pmax	pmax		
	comp=Z,14nm,1.5s						
SATY	**Saty**	**18.28**	**319**	*eP*	**P**	**13 38 38.8**	**+0.3**
SATY	**Saty**	**18.28**	**319**	*eP*	**P**	**13 38 38.9**	**+0.3**
KPKS	**Kokpek**	**18.39**	**320**	*eP*	**P**	**13 38 40.2**	**+0.7**
KPKS	**Kokpek**	**18.39**	**320**	*eP*	**P**	**13 38 40.2**	**+0.7**
KDJ	**Kajisay**	**18.46**	**314**	P	**P**	**13 38 39.7**	**-0.8**
KDJ				pmax	pmax		
	comp=Z,94nm,1.6s						
KDJ	**Kajisay**	**18.46**	**314**	P	**P**	**13 38 39.7**	**-0.8**
NIL	**Nilore**	**18.63**	**286**	P	**P**	**13 38 41.2**	**-1.1**
NIL				pmax	pmax		
	comp=Z,86nm,1.2s						
NIL	**Nilore**	**18.63**	**286**	P	**P**	**13 38 41.2**	**-1.1**
NIL				IAmb	IAmb	13 38 46.0	
	comp=Z,86nm,1.1s						
NIL	**Nilore**	**18.63**	**286**	P	**Pn**	**13 38 42.9**	**+0.4**
ZSN	**Zaisan**	**18.76**	**338**	*eP*	**Pn**	**13 38 44.8**	**+0.8**
ZSN	**Zaisan**	**18.76**	**338**	*eP*	**Pn**	**13 38 44.8**	**+0.8**
MK31	**Makanchi Array**	**19.12**	**333**	*i* P	**P**	**13 38 46.6**	**-0.9**
MKAR	**Makanchi Array**	**19.12**	**333**	P	**P**	**13 38 46.3**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=135,slow=13,SNR=13						
MKAR				PcP	**PcP**	**13 43 10.1**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=288,slow=0.4,SNR=3.6						
	comp=Z,3.7nm,0.7s						
MKAR	**Makanchi Array**	**19.12**	**333**	P	**P**	**13 38 46.5**	**-1.0**
MKAR	**Makanchi Array**	**19.12**	**333**	P	**P**	**13 38 46.5**	**-1.0**
TNSS	**Tian-Shan**	**19.12**	**316**	*eP*	**Pn**	**13 38 48.5**	**-0.3**
TNSS	**Tian-Shan**	**19.12**	**316**	*eP*	**Pn**	**13 38 48.6**	**-0.3**
MDOK	**Medeo**	**19.14**	**317**	*eP*	**Pn**	**13 38 49.0**	**+0.3**
MDOK	**Medeo**	**19.14**	**317**	*eP*	**Pn**	**13 38 49.1**	**+0.3**
AAA	**Alma-Ata**	**19.24**	**317**	*eP*	**Pn**	**13 38 50.2**	**+0.3**
AAA	**Alma-Ata**	**19.24**	**317**	*eP*	**Pn**	**13 38 50.2**	**+0.3**
MAKZ	**Makanchi**	**19.26**	**332**	P	**P**	**13 38 48.7**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.1s						
MAKZ	**Makanchi**	**19.26**	**332**		**P**	**13 38 48.7**	**-0.3**
MAKZ	**Makanchi**	**19.26**	**332**	P	**P**	**13 38 48.8**	**-0.2**
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**Pn**	**13 38 52.3**	**0.0**
BOOM				pmax	pmax		
	comp=Z,67nm,1.5s						
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**Pn**	**13 38 52.3**	**0.0**
BOOM	**Boomskoye usch**	**19.43**	**314**	P	**Pn**	**13 38 52.4**	**+0.2**
TDK	**Taldyqorghan**	**19.55**	**323**	*eP*	**Pn**	**13 38 53.4**	**-0.1**
TDK	**Taldyqorghan**	**19.55**	**323**	*eP*	**Pn**	**13 38 53.5**	**-0.1**
SONM	**Songino Array**	**19.60**	**24**	P	**P**	**13 38 53.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=212,slow=11,SNR=18						
	comp=Z,10nm,1.0s						
SONM	**Songino Array**	**19.60**	**24**	*eP*	**Pn**	**13 38 54.5**	**+0.3**
SONM	**Songino Array**	**19.60**	**24**	P	**P**	**13 38 53.4**	**+0.6**
HYB	**Hyderabad**	**19.66**	**233**	*eP*	**P**	**13 38 53.8**	**+0.1**
HYB				*eS*	**Sn**	**13 42 36.6**	**+0.6**
ULN	**Ulaanbaatar**	**19.86**	**25**	*i* P	**P**	**13 38 55.1**	**-0.6**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**19.86**	**25**	P	**P**	**13 38 56.1**	**+0.4**
ULN	**Ulaanbaatar**	**19.86**	**25**	P	**P**	**13 38 56.1**	**+0.4**
DGZ	**Jazzator, Alta**	**20.15**	**346**	*i* P	**P**	**13 38 58.7**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,32nm,1.3s						
KNGR	**Kungurtug, Tuv**	**20.35**	**5**	*i* P	**P**	**13 39 01.6**	**+0.6**
KNGR				pmax	pmax		
	comp=Z,23nm,1.6s						
AAK	**Ala-Archa**	**20.42**	**313**	P	**P**	**13 38 59.4**	**-2.5**
	comp=Z,11nm,0.8s,baz=132,slow=9.7,SNR=21						
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**20.42**	**313**	*i* P	**P**	**13 39 01.4**	**-0.5**
AAK				pmax	pmax		
	comp=Z,93nm,1.3s						
AAK	**Ala-Archa**	**20.42**	**313**	P	**P**	**13 39 01.7**	**-0.2**
AAK				IAmb	IAmb	13 39 08.2	
	comp=Z,94nm,1.3s						
AAK	**Ala-Archa**	**20.42**	**313**	P	Pn	13 39 03.5	-0.5
MANEM	**Manem**	**20.52**	**297**	P	**P**	**13 39 02.3**	**-0.8**
MANEM				IAmb	IAmb	13 39 08.0	
	comp=Z,131nm,1.2s						
NJ2	**Nanjing**	**20.58**	**79**	*eP*	**P**	**13 39 03.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
SGDS	**Sogindy**	**20.76**	**315**	*eP*	**P**	**13 39 06.6**	**+1.1**
ARSB	**Arslanbob**	**20.81**	**308**	IAmb	IAmb	13 39 09.4	
	comp=Z,61nm,1.3s						
XLT	**XiLinHaoTe**	**21.59**	**45**	*eP*	**P**	**13 39 15.8**	**+1.4**
XLT				pmax	pmax		
	comp=Z,16nm,1.0s						
ARK	**Arkit**	**21.70**	**308**	P	**P**	**13 39 17.1**	**+1.4**
ARK	**Arkit**	**21.70**	**308**	P	**P**	**13 39 17.1**	**+1.4**
MOY	**Mondy**	**21.80**	**10**	*eP*	**P**	**13 39 17.1**	**+0.5**
MOY				pmax	pmax		
	comp=Z,43nm,1.9s						
BTK	**Batken**	**21.87**	**303**	P	**P**	**13 39 16.9**	**-0.5**
BTK				pmax	pmax		
	comp=Z,58nm,1.0s						
BTK	**Batken**	**21.87**	**303**	P	**P**	**13 39 16.9**	**-0.5**
BTK				IAmb	IAmb	13 39 20.9	
	comp=Z,58nm,1.0s						
BTK	**Batken**	**21.87**	**303**	P	**P**	**13 39 18.1**	**+0.7**
BTLS	**Baital**	**21.99**	**318**	*eP*	**P**	**13 39 19.9**	**+1.3**
BTLS	**Baital**	**21.99**	**318**	*eP*	**P**	**13 39 19.9**	**+1.3**
KBL	**Kabul**	**22.18**	**288**	P	**P**	**13 39 19.8**	**-1.2**
KBL				pmax	pmax		
	comp=Z,89nm,1.1s						
KBL	**Kabul**	**22.18**	**288**	P	**P**	**13 39 19.8**	**-1.2**
KBL	**Kabul**	**22.18**	**288**	P	**P**	**13 39 20.9**	**-0.1**
TLY	**Talaya**	**22.30**	**14**	*i* P	**P**	**13 39 23.8**	**+1.9**
TLY				pmax	pmax		
	comp=Z,33nm,2.3s						
DZA	**Taraz**	**22.59**	**310**	*eP*	**P**	**13 39 26.1**	**+1.0**
DZA				pmax	pmax		
	comp=Z,19nm,1.3s						
DZA	**Taraz**	**22.59**	**310**	*eP*	**P**	**13 39 26.1**	**+1.0**
	comp=Z,19nm,1.3s						
CHGR	**Chuyangaron**	**22.71**	**298**	*i* P	**P**	**13 39 25.3**	**-1.2**
CHGR				pmax	pmax		
	comp=Z,234nm,1.1s						
CHGR	**Chuyangaron**	**22.71**	**298**		**P**	**13 39 25.8**	**-0.7**
IRK	**Irkutsk**	**22

comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 24.70 346 P P 13 39 44.9 -0.7
HIA Hailar 26.69 38 *i* P P 13 40 03.2 -0.4
HIA pmax pmax
comp=Z,19nm,1.5s
HILR Hailar Array B 26.86 37 P P 13 40 05.1 -0.1
comp=Z,1.7nm,0.5s,baz=200,slow=13,SNR=5.2
comp=Z,1.7nm,0.5s
CN2 Changchun 27.68 52 *e*P P 13 40 13.3 +0.7
CN2 pmax pmax
comp=Z,10.0nm,0.5s
BVAR Borovoye Array 28.87 329 P P 13 40 22.8 -0.3
comp=Z,6.2nm,0.8s,baz=125,slow=9.8,SNR=14
BVAR PcP **PcP 13 43 31.9 -0.4**
comp=Z,1.0nm,0.5s,baz=134,slow=4.3,SNR=5.1
comp=Z,6.2nm,0.8s
BNX BinXian 29.64 50 ⇓P P 13 40 30.4 +0.4
BNX pmax pmax
comp=Z,10.0nm,1.7s
ABKAR Akbulak array 32.44 316 P P 13 40 54.5 -0.1
ZEA Zeya 33.08 36 *e*P P 13 41 02.2 +2.1
ZEA pmax pmax
comp=Z,20nm,1.1s
SVE Sverdlovsk 35.65 328 *e*P P 13 41 23.0 +0.7
SVE pmax pmax
comp=Z,34nm,1.3s
ARTI Arti 36.47 326*c i*P P 13 41 29.5 +0.1
ARTI 13 42 49.5
ARTI 13 43 52.9
ARTI S S 13 47 11.3 +0.1
ARTI SS **SnSn 13 49 32.8 -6.6**
ARTI pmax pmax
comp=Z,23nm,1.4s
ARTI Arti 36.47 326 P P 13 41 28.3 -1.1
ARTI IAmb IAmb 13 41 30.9
comp=Z,27nm,1.3s
LKRN Lenkeran, Azer 38.55 295 P P 13 41 49.5 +2.2
YAK Yakutsk 38.94 25 P P 13 41 48.9 -1.3
comp=Z,9.1nm,0.4s,baz=254,slow=1.2,SNR=2.6
comp=Z,9.1nm,0.4s
YAK Yakutsk 38.94 25 *e*P P 13 41 49.0 -1.3
YAK pmax pmax
comp=Z,19nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK Yakutsk 38.94 25 P P 13 41 49.4 -0.8
YAK Yakutsk 38.94 25 P P 13 41 49.7 -0.6
NRIK Noril'sk 39.28 356 P P 13 41 51.0 -1.9
comp=E,5.9nm,0.7s,baz=139,slow=3.7,SNR=7.7
comp=E,5.9nm,0.7s
NRIK Noril'sk 39.28 356 *i*P P 13 41 52.5 -0.5
NRIK pmax pmax
comp=Z,18nm,1.5s
AKT Akhty 39.34 300 *e*P P 13 41 53.7 -0.3
AKT *e* 13 43 23.8
AKT *e* 13 43 59.4
AKT *e*S **S 13 47 58.8 +3.5**
AKT pmax pmax
comp=Z,22nm,1.3s
SEKA Sheki 39.74 299 P P 13 41 58.9 +1.6
MNGR Mingechevir, A 39.82 299 P P 13 42 00.1 +2.2
YSS Yuzhno-Sakhali 40.25 52 *e*P P 13 42 01.5 +0.2
YSS pmax pmax
comp=Z,20nm,1.1s
YSS Yuzhno-Sakhali 40.25 52 P P 13 42 01.0 -0.3
YSS IAmb IAmb 13 42 03.7
comp=Z,31nm,1.1s
YSS Yuzhno-Sakhali 40.25 52 P P 13 42 02.0 +0.7
GANJ Ganja 40.40 298 P P 13 42 04.9 +2.1
BELG Belogornoye 40.83 317 *i*P P 13 42 05.1 -0.9
BELG pmax pmax
comp=Z,4.0nm,1.1s
NAX Nakhchivan 41.09 296 P P 13 42 10.7 +2.2
GNI Garni 41.62 298 *i*P P 13 42 13.4 +0.4
GNI pmax pmax
comp=Z,28nm,1.2s
GNI Garni 41.62 298 P P 13 42 12.9 -0.1
GNI IAmb IAmb 13 42 17.3
comp=Z,28nm,1.2s
GNI Garni 41.62 298 P P 13 42 12.7 -0.3
comp=Z,11nm,0.6s
KIRV Kirov 41.78 326 *e*P P 13 42 13.3 -0.5
GOF Gofitskoye 42.85 305*ce*P P 13 42 23.5 +0.8
KBZ Khabaz 42.93 303 P P 13 42 21.9 -1.5
comp=Z,3.6nm,1.0s,baz=39,slow=1.8,SNR=3.8
comp=Z,3.6nm,1.0s
KBZ Khabaz 42.93 303 *i*P P 13 42 23.1 -0.2
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 43.09 303 *e*P P 13 42 25.2 +0.4
KIV pmax pmax
comp=Z,20nm,0.9s
KIV Kislovodsk 43.09 303 P P 13 42 25.1 +0.3
comp=Z,14nm,1.1s
KIV Kislovodsk 43.09 303 P P 13 42 26.3 +1.6
SHA1 Shidzhatmaz 43.10 303*c i*P P 13 42 25.2 +0.1
VRH Novokhopyorsk 44.21 314 *e*P P 13 42 34.1 +0.5
VRH pmax pmax
comp=Z,26nm,1.1s
RAYN Ar Rayn 44.26 274 P P 13 42 33.6 -0.8
RAYN pmax pmax
comp=Z,8.0nm,1.1s
RAYN Ar Rayn 44.26 274 P P 13 42 33.6 -0.8
RAYN Ar Rayn 44.26 274 P P 13 42 35.0 +0.6
LABN Labinsk 44.49 304 *e*P P 13 42 34.8 -1.2
LABN pmax pmax
comp=Z,38nm,0.6s
ERBR Yeremizino-Bor 44.67 306 *e*P P 13 42 35.6 -1.7
ERBR pmax pmax
comp=Z,18nm,0.6s
VSLR Vesyoloye 45.02 303 *i*P P 13 42 39.6 -0.6
VSLR pmax pmax
comp=Z,42nm,1.1s
SOC Sochi 45.24 303 *e*P P 13 42 42.6 +0.7
SOC *e* 13 44 28.3
SOC *e*PPP PPP 13 45 06.8
SOC *e*S **S 13 49 23.9 +1.9**
SOC *e*S S 13 49 30.0 +8.0
SOC *e*SSS SSS 13 53 33.3
SOC pmax pmax
comp=Z,22nm,0.8s
SOC MLR MLR
comp=Z,48nm,16.0s
VORD Divnogorie 45.71 313 *e*P P 13 42 44.2 -1.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 45.81 314 *e*P P 13 42 45.6 -0.7
VSR pmax pmax
comp=Z,22nm,1.1s
VORR Voronezh 45.83 314 *e*P P 13 42 46.7 +0.3
VORR pmax pmax
comp=Z,52nm,0.4s
LPSR Galich'ya Gora 46.10 315 *e*P P 13 42 48.3 -0.2
LPSR pmax pmax
comp=Z,40nm,1.2s
ARPR Arapgir-MALATY 46.64 297 P P 13 42 54.6 +1.4
ANN Anapa 46.84 305 *e*P P 13 42 54.5 +0.1
ANN pmax pmax
comp=Z,95nm,1.2s
MOS Moscow 47.24 320 *e*P P 13 42 57.4 -0.1
MOS pmax pmax
comp=Z,41nm,0.7s
KLMR Klimovskoe 47.26 327 *e*P P 13 42 55.6 -1.9
KLMR *e* 13 44 45.2
KLMR pmax pmax
comp=Z,53nm,1.4s
KLMR MLR MLR
comp=Z,189nm,15.0s
OBN Obninsk 47.76 319*ce*P P 13 43 01.4 -0.1
OBN *e* 13 44 51.7
OBN *e*S S 13 49 47.6 -10
OBN *e*SS **ScS 13 52 57.2 +2.2**
OBN pmax pmax
comp=Z,47nm,1.8s
OBN MLR MLR
comp=Z,269nm,24.0s
OBN Obninsk 47.76 319 P P 13 43 01.1 -0.4
comp=Z,22nm,0.4s
BNN Bunyan 48.60 297 P P 13 43 08.2 -0.2
SEY Seymchan 48.76 31 *i*P P 13 43 08.8 -0.3
SEY pmax pmax
comp=Z,3.0nm,1.1s
BZK Bozkurt 49.56 301 P P 13 43 15.1 -0.5
comp=Z,43nm,1.2s
BR131 Keskin Array S 50.16 298 *i*P P 13 43 19.4 -0.9
BRTR Keskin Array B 50.16 298 P P 13 43 19.5 -0.9
comp=Z,3.7nm,0.8s,baz=110,slow=6.7,SNR=14
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 50.16 298 *e*P P 13 43 20.4 +0.1
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BR104 Keskin Array S 50.16 298 P P 13 43 19.6 -0.7
comp=Z,5.0nm,1.1s
BR106 Keskin Array S 50.17 298 P P 13 43 19.8 -0.6
comp=Z,6.0nm,0.9s
BR105 Keskin Array S 50.17 298 P P 13 43 20.2 -0.3
comp=Z,6.6nm,1.1s
PEA0B Petropavlovsk- 50.29 44 *i*P P 13 43 21.1 +0.1
PETK Petropavlovsk- 50.29 44 P P 13 43 20.5 -0.5
comp=Z,3.5nm,0.9s,baz=251,slow=4.5,SNR=8.2
comp=Z,3.5nm,0.9s
PETK Petropavlovsk- 50.29 44 P P 13 43 21.6 +0.6
PETK Petropavlovsk- 50.29 44 P P 13 43 21.6 +0.6
PET Petropavlovsk 50.87 44 *i*P P 13 43 25.4 +0.1
PET pmax pmax
comp=Z,9.0nm,1.1s
APA Apatity 51.51 334 *e*P P 13 43 30.0 +0.1
APA pmax pmax
comp=Z,5.0nm,1.2s
APA MLR MLR
comp=Z,245nm,20.4s
AK09 Malin Array Si 52.05 313 P P 13 43 33.4 -0.8
AK08 Malin Array Si 52.07 313 P P 13 43 33.6 -0.7
AK10 Malin Array Si 52.08 313 P P 13 43 33.6 -0.8
AK03 Malin Array Si 52.09 313 P P 13 43 33.7 -0.8
AKASG Malin Array Be 52.09 313 P P 13 43 33.2 -1.3
comp=Z,12nm,1.0s,baz=80,slow=6.6,SNR=26
comp=Z,12nm,1.0s
AKASG Malin Array Be 52.09 313 *e*P P 13 43 33.7 -0.8
AKASG pmax pmax
comp=Z,12nm,0.9s
AKASG Malin Array Be 52.09 313 P P 13 43 34.1 -0.4
AKBB Malin Array Si 52.09 313*c i*P P 13 43 33.7 -0.8
AKBB pmax pmax
comp=Z,27nm,1.2s
AKBB Malin Array Si 52.09 313 P P 13 43 33.7 -0.8
AK01 Malin Array Si 52.10 313 P P 13 43 33.8 -0.7
KIEV Kiev 52.10 313 P P 13 43 34.7 +0.2
KIEV Kiev 52.10 313 P P 13 43 33.7 -0.8
comp=Z,68nm,1.2s
KIEV Kiev 52.10 313 P P 13 43 33.6 -1.0
AK02 Malin Array Si 52.10 313 P P 13 43 33.8 -0.8
AK05 Malin Array Si 52.11 313 P P 13 43 33.8 -0.8
AK07 Malin Array Si 52.11 313 P P 13 43 33.9 -0.7
AK06 Malin Array Si 52.11 313 P P 13 43 33.9 -0.7
AK04 Malin Array Si 52.12 313 P P 13 43 34.0 -0.7
AK11 Malin Array Si 52.12 313 P P 13 43 34.0 -0.7
AK12 Malin Array Si 52.13 313 P P 13 43 34.1 -0.7
AK23 Malin Array Si 52.15 313 P P 13 43 34.2 -0.7
AK15 Malin Array Si 52.15 313 P P 13 43 34.2 -0.7
AK16 Malin Array Si 52.16 313 P P 13 43 34.3 -0.7
AK14 Malin Array Si 52.17 313 P P 13 43 34.3 -0.8
AK22 Malin Array Si 52.18 313 P P 13 43 34.4 -0.8
AK18 Malin Array Si 52.19 313 P P 13 43 34.4 -0.8
AK17 Malin Array Si 52.20 313 P P 13 43 34.5 -0.8
AK13 Malin Array Si 52.20 313 P P 13 43 34.5 -0.8
AK21 Malin Array Si 52.20 313 P P 13 43 34.5 -0.8
AK19 Malin Array Si 52.22 313 P P 13 43 34.7 -0.8
AK20 Malin Array Si 52.22 313 P P 13 43 34.7 -0.8
MNK Minsk 52.76 318 *i*P P 13 43 39.8 +0.4
comp=E,12nm,0.7s
MNK *i*P P 13 43 39.8 +0.4
comp=N,15nm,0.8s
MNK *i*P P 13 43 39.8 +0.4
comp=Z,14nm,0.6s,baz=88
MNK *i*PcP **PcP 13 44 49.0 +0.1**
MNK *i*PP **PP 13 45 39.2 +0.8**
MNK *i*PPP PPP 13 46 40.4
MNK *i*S **S 13 51 08.9 +1.6**
MNK *i*ScS **ScS 13 53 29.6 +0.5**
MNK *i*SS **SS 13 54 49.1 +3.5**
MNK *i*SSS SSS 13 56 35.7
MNK Minsk 52.76 318 *i*P P 13 43 39.7 +0.4
MNK *i* 13 44 48.9
MNK *i* 13 45 39.2
MNK *i*PPP PPP 13 46 40.3
MNK *i*S **S 13 51 08.9 +1.6**
MNK *i* 13 53 29.6
MNK *i*SS **SS 13 54 49.1 +3.5**
MNK *i*SSS SSS 13 56 35.6
MNK pmax pmax
comp=Z,14nm,0.6s
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=E,12nm,0.7s
MNK MLR MLR
comp=E,371nm,22.0s
MNK MLR MLR
comp=Z,224nm,23.0s
MNK MLR MLR
comp=N,229nm,22.0s
MI28 Mi28,Pidlybu 53.06 313 P P 13 43 41.2 -0.5
LUBAR Lubar, Ukraine 53.08 312 P P 13 43 41.1 -0.8
NACGM Naroch 53.38 318 *e*P P 13 43 45.5 +1.5
FINES FINESS Array B 53.78 326 P P 13 43 45.9 -0.9
comp=N,2.2nm,0.5s,baz=89,slow=8.3,SNR=16
comp=N,2.2nm,0.5s
FINES FINESS Array B 53.78 326 *e*P P 13 43 45.2 -1.6
FINES pmax pmax
comp=Z,2.0nm,0.5s
KMPD K-Podol'skiy 54.07 310 P P 13 43 48.4 -0.7
RNPP9 Sopachiv 54.13 314 P P 13 43 48.6 -0.9
RNPP5 Staryi Chortor 54.15 314 P P 13 43 49.1 -0.6
RNPP8 Varash 54.16 314 P P 13 43 49.4 -0.4
TESR Tescani 54.21 308 P P 13 43 49.5 -0.7
TESR Tescani 54.21 308 P P 13 43 49.9 -0.3
VRI Vrincioaia 54.25 307 P P 13 43 51.2 +0.7
VRI Vrincioaia 54.25 307 P P 13 43 51.2 +0.7
ARCES ARCESS Array B 54.73 336 P P 13 43 54.0 +0.3
comp=Z,3.8nm,1.0s,baz=100,slow=6.7,SNR=3.6
ARCES PcP **PcP 13 44 53.7 -2.4**
comp=Z,0.9nm,0.6s,baz=68,slow=3.3,SNR=3.6
comp=Z,3.8nm,1.0s
MLR Muntele Rosu 54.85 307 P P 13 43 55.7 +0.7
MLR Muntele Rosu 54.85 307 P P 13 43 55.7 +0.7
BURAR Bucovina Array 55.02 309 P P 13 43 55.0 -1.2
BURAR pmax pmax
comp=Z,4.0nm,1.2s
BURAR Bucovina Array 55.02 309 P P 13 43 55.0 -1.2
BILL Bilibino 55.30 26*d i*P P 13 43 58.3 +0.5
BILL pmax pmax
comp=Z,16nm,1.6s
ALN Alexandroupoli 55.64 301 P P 13 44 00.5 -0.1
RDO Rodhopi 55.96 301 IAmb IAmb 13 44 04.9
comp=Z,14nm,1.2s
LOT Lotru 56.36 307 P P 13 44 06.0 +0.1
KWP Kalwaria Pacla 56.37 312 *e*P P 13 44 05.2 -0.5
KWP Kalwaria Pacla 56.37 312 P P 13 44 06.7 +1.0
TRPA Tarpa 56.72 310 P P 13 44 07.9 -0.3
KNT Kendrikon 57.90 302 P P 13 44 16.4 -0.3
NIE Niedzica 57.95 312 *e*P P 13 44 17.6 +0.7
OJC Ojcow 58.12 313 *e*P P 13 44 18.3 +0.1
OJC Ojcow 58.12 313 P P 13 44 17.6 -0.5
OJC Ojcow 58.12 313 P P 13 44 17.6 -0.5
GRG Griva 58.31 302 P P 13 44 18.6 -1.0
LIT Litokhoron 58.46 301 P P 13 44 19.5 -1.9
AGG Agios Georgios 58.86 300 P P 13 44 21.6 -1.9
MORC Moravsky Berou 59.64 313 P P 13 44 29.9 +1.2
MORC Moravsky Berou 59.64 313 IAmb IAmb 13 44 30.6
comp=Z,11nm,1.2s
MORC Moravsky Berou 59.64 313 *e*P P 13 44 28.7 0.0
MORH Mrgy, Hungar 59.70 309 P P 13 44 28.3 -0.9
JAVC Velka Javorina 59.75 312 *e*P P 13 44 30.5 +1.0
JAVC Velka Javorina 59.75 312 P P 13 44 30.9 +1.4
HFS Hagfors 59.91 325 P P 13 44 28.4 -2.0
comp=Z,4.4nm,0.9s,baz=85,slow=6.8,SNR=3.2
comp=Z,4.4nm,0.9s
KSP Ksiaz 60.19 314 *e*P P 13 44 34.0 +1.6
VRAC Vranov 60.34 312 P P 13 44 33.9 +0.4
VRAC Vranov 60.34 312 *e*P P 13 44 33.5 0.0
VRAC Vranov 60.34 312 P P 13 44 33.9 +0.4
KRUC Moravsky 60.53 312 P P 13 44 35.4 +0.7
KRUC Moravsky 60.53 312 *e*P P 13 44 34.9 +0.2
KRUC Moravsky 60.53 312 P P 13 44 35.4 +0.7
RONA Rosalia, Austr 60.91 311 *e*P P 13 44 37.1 -0.3
comp=Z,8.1nm,1.3s
NB2 NORSAR Subarra 60.96 326 P P 13 44 36.8 -0.8
comp=Z,6.9nm,0.9s,baz=80,slow=7.4
NB2 NORSAR Subarra 60.96 326 P P 13 44 37.7 +0.1
NOA NORSAR Array B 60.96 326 P P 13 44 36.2 -1.4
comp=Z,4.9nm,0.9s,baz=79,slow=6.5,SNR=8.7
comp=Z,4.9nm,0.9s
NOA NORSAR Array B 60.96 326 *e*P P 13 44 37.7 +0.1
NOA pmax pmax
comp=Z,5.0nm,0.9s
NC204 NORSAR Array S 61.13 327 P P 13 44 38.0 -0.7
CONA Conrad Observa 61.14 311 *i*P P 13 44 38.9 -0.1
comp=Z,21nm,1.6s
PRU Pruhonice 61.48 314 P P 13 44 42.7 +1.5
ARSA Arzberg 61.53 310 *i*P P 13 44 41.3 -0.4
comp=Z,9.5nm,1.4s
BRG Berggiesshubel 61.64 315 *e*P P 13 44 42.3 0.0
BRG Amp 13 44 44.7
comp=Z,7.6nm,1.2s
SOKA Soboth 62.01 310 *i*P P 13 44 45.0 +0.1
comp=Z,10nm,1.2s
CLL Collm 62.10 315 *i*P P 13 44 45.9 +0.5
CLL pmax pmax
comp=Z,6.0nm,1.2s
CLL Collm 62.10 315 *i*P P 13 44 45.9 +0.5
comp=Z,6.0nm,1.2s
MOA Molln 62.20 311 *i*P P 13 44 45.9 -0.2
comp=Z,5.1nm,0.8s
GEC2 GERESS Array S 62.30 313 IAmb IAmb 13 44 48.7
comp=Z,12nm,1.3s
GERES GERESS Array B 62.30 313 P P 13 44 45.3 -1.6
comp=Z,2.0nm,0.7s,baz=72,slow=5.7,SNR=15
comp=Z,2.0nm,0.7s
GERES GERESS Array B 62.30 313 *e*P P 13 44 46.4 -0.5
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 62.30 313 P P 13 44 46.1 -0.8
OBKA Obir 62.37 310 *e*P P 13 44 46.8 -0.6
comp=Z,8.4nm,0.5s
BIOA Bad Ischl, Aus 62.65 311 *e*P P 13 44 48.2 -0.9
comp=Z,1.1nm,0.3s
WB0 Warramunga Arr 62.66 138 P P 13 44 48.8 -0.7
WB0 IAmb IAmb 13 44 51.8
comp=Z,6.2nm,0.9s
WRA Warramunga Arr 62.77 138 P P 13 44 48.8 -1.4
comp=Z,1.9nm,0.8s,baz=329,slow=7.3,SNR=12
comp=Z,1.9nm,0.8s
WRA Warramunga Arr 62.77 138 *e*P P 13 44 48.6 -1.6
WRA pmax pmax
comp=Z,3.0nm,0.9s
MYKA Terra Mystica 62.94 310 *e*P P 13 44 49.5 -1.6
comp=Z,1.6nm,0.5s
TIP Timpagrande 62.97 301 P P 13 44 50.4 -1.0
TIP IAmb IAmb 13 44 53.4
comp=Z,7.8nm,1.1s
KBA Koelnbreinsper 63.01 311 *e*P P 13 44 51.6 -0.1
comp=Z,2.5nm,0.6s
LESA Schwarzleotal 63.35 311 *e*P P 13 44 53.6 -0.3
comp=Z,18nm,1.4s
ABTA Abfaltersbach 63.65 310 *i*P P 13 44 55.1 -0.8
comp=Z,5.5nm,1.2s
CEL Celeste 63.90 301 P P 13 44 56.5 -1.1
WTTA Wattenberg 64.07 311 *e*P P 13 44 58.1 -0.7
comp=Z,8.5nm,1.3s
WATA Walderalm 64.09 311 *e*P P 13 44 58.3 -0.6
comp=Z,3.8nm,1.0s
SQTA Sankt Quirin 64.36 311 *e*P P 13 44 59.6 -1.0
comp=Z,3.2nm,0.7s
MOTA Moosalm 64.39 311 *e*P P 13 45 00.4 -0.4
comp=Z,11nm,1.1s
RETA Reutte 64.57 312 *e*P P 13 45 01.3 -0.6
comp=Z,3.6nm,0.6s
GAMB Gambell 64.71 29 P P 13 45 01.2 -1.2
baz=287
FETA Feichten 64.74 311 *e*P P 13 45 02.5 -0.6
comp=Z,12nm,1.3s
DAVA Damuels 65.20 312 *e*P P 13 45 05.4 -0.8
comp=Z,4.4nm,0.7s
AS31 Alice Springs 65.46 141 P P 13 45 07.7 -0.2
ASAR Alice Springs 65.46 141 P P 13 45 07.2 -0.6
comp=Z,2.7nm,0.8s,baz=324,slow=6.0,SNR=30
comp=Z,2.7nm,0.8s
ASAR Alice Springs 65.46 141 P P 13 45 08.2 +0.3
ASAR Alice Springs 65.46 141 P P 13 45 08.2 +0.3
TNA Tin City 65.69 27 P P 13 45 07.1 -1.6
baz=290
C16K Lisburne Hills 65.69 24 P P 13 45 07.4 -1.3
baz=291
BFO Black Forest 65.86 313 P P 13 45 09.3 -0.9
BFO pmax pmax
comp=Z,13nm,1.4s
BFO Black Forest 65.86 313 P P 13 45 09.2 -0.9
BFO IAmb IAmb 13 45 11.5
comp=Z,13nm,1.4s
F14K Arctic Creek 66.34 27 P P 13 45 11.0 -1.9
baz=291
C17K DeLong Mountai 66.37 23 P P 13 45 11.1 -2.0
baz=293
RDOG Red Dog Mine 66.62 24 P P 13 45 13.7 -1.1
baz=293
D17K Noatak River 66.70 24 P P 13 45 14.3 -0.9
baz=293
WLF Walferdange 66.77 315 *d*P P 13 45 17.8 +1.9
comp=Z,11nm,1.2s
F15K North Star Dit 66.90 26 P P 13 45 15.5 -1.1
baz=292
C18K Utukok River 66.97 23 P P 13 45 15.5 -1.5
baz=294
SENIN Lac Senin/Sane 67.18 311 IAmb IAmb 13 45 20.2
comp=Z,8.3nm,0.9s
A21K Barrow 67.22 19 P P 13 45 17.2 -1.2
baz=297
C19K Lookout Ridge 67.30 22 P P 13 45 17.8 -1.3
baz=296
BMRD Maredsous 67.39 316 *d*P P 13 45 21.1 +1.2
E17K Hotham Inlet 67.39 24 P P 13 45 18.6 -1.0
baz=294
G15K Niukluk 67.41 27 P P 13 45 18.8 -0.9
baz=293
SPIA Saint Paul Isl 67.58 36 P P 13 45 20.5 -0.5
baz=291
B20K Meade River 67.66 21 P P 13 45 20.4 -0.8
baz=297
E18K Tukpahlearik C 67.69 24 P P 13 45 21.2 -0.3
baz=295
A22K Sinclair Lake 67.84 19 P P 13 45 21.5 -0.8
baz=299
F17K Baldwin Pennin 67.87 25 P P 13 45 21.6 -1.0
baz=295
G16K Koyuk River 67.90 26 P P 13 45 22.0 -0.8
baz=295
D19K Kuna River 68.05 22 P P 13 45 23.6 -0.2
baz=297
H16K Elim 68.26 27 P P 13 45 24.5 -0.6
baz=295
M11K Mekoryuk 68.32 32 P P 13 45 24.8 -0.7
baz=293
F18K Selawik 68.38 24 P P 13 45 25.1 -0.7
baz=296
K13K Kusilvak Mount 68.39 30 P P 13 45 25.7 -0.3
baz=294
D20K Etivluk River 68.44 22 P P 13 45 25.7 -0.5
baz=298
G17K Kiwalik Mounta 68.50 26 P P 13 45 26.4 -0.2
baz=296
J14K Nanvaranak Lak 68.52 29 P P 13 45 26.2 -0.6
baz=295
B22K Teshekpuk Lake 68.62 20 P P 13 45 26.6 -0.7
baz=300
B21K Ikpikpuk River 68.63 21 P P 13 45 27.3 0.0
baz=300
E20K Nigu River 68.80 22 P P 13 45 27.3 -1.2
baz=299
C21K Knifeblade Rid 68.81 21 P P 13 45 28.2 -0.3
baz=300
E19K Redstone River 68.83 23 P P 13 45 27.9 -0.8
baz=298
F19K Shaleruckik Mo 68.94 24 P P 13 45 29.1 -0.1
baz=298
H17K Granite Mounta 69.03 26 P P 13 45 29.1 -0.9
baz=297
G18K Tagagawik 69.06 25 P P 13 45 29.0 -1.1
baz=298
I17K Unalakleet 69.20 27 P P 13 45 30.3 -0.6
baz=296
E21K Killik River 69.42 22 P P 13 45 31.9 -0.5
baz=301
L14K Kuka Creek 69.49 30 P P 13 45 32.4 -0.4

	baz=296							
J16K	**Anvik River**	69.50	28	P	P	13 45 32.0	-0.9	
	baz=297,SNR=6.7							
G19K	**Purcell Mounta**	69.51	24	P	P	13 45 31.5	-1.3	
	baz=299							
H18K	**Honhosa River**	69.51	26	P	P	13 45 32.3	-0.7	
	baz=298							
F20K	**Avaraart Lake**	69.54	23	P	P	13 45 32.2	-0.8	
	baz=300							
K15K	**Wolf Creek Mou**	69.56	29	P	P	13 45 32.6	-0.7	
	baz=296							
M13K	**Dall Lake**	69.60	31	P	P	13 45 32.6	-0.9	
	baz=296							
KEST	**Kesra**	69.70	300	P	P	13 45 33.8	-0.9	
	comp=Z,14nm,1.1s,baz=53,slow=3.1,SNR=8.5							
	comp=Z,14nm,1.1s							
C23K	**Itkillik River**	69.71	20	P	P	13 45 33.3	-0.7	
	baz=303							
L15K	**Ungalak Mounta**	69.86	30	P	P	13 45 34.3	-0.7	
	baz=297							
EKA	**Eskdalemuir Ar**	69.92	323	P	P	13 45 35.2	-0.3	
	comp=Z,2.0nm,0.8s,baz=82,slow=6.3,SNR=9.1							
	comp=Z,2.0nm,0.8s							
H19K	**Roundabout Mou**	70.04	25	P	P	13 45 35.5	-0.6	
	baz=300							
J17K	**VABM Dome**	70.06	27	P	P	13 45 35.3	-1.0	
	baz=298							
M14K	**Bethel**	70.07	31	P	P	13 45 35.6	-0.7	
	baz=296							
D23K	**Nanushuk River**	70.16	20	P	P	13 45 35.2	-1.7	
	baz=303							
F21K	**Alatna River**	70.21	23	IAmb	IAmb	13 45 55.8		
	comp=Z,15nm,1.6s							
F21K	**Alatna River**	70.21	23	P	P	13 45 36.2	-1.0	
	baz=301							
GCSA	**Galena City Sc**	70.26	26	P	P	13 45 36.5	-0.9	
	baz=299							
F22K	**John River**	70.49	22	P	P	13 45 38.3	-0.6	
	baz=302							
N14K	**Kuskokwak Cree**	70.56	31	P	P	13 45 38.4	-0.9	
	baz=297							
G21K	**Allakaket**	70.57	23	P	P	13 45 38.2	-1.2	
	baz=302							
D24K	**Happy Valley**	70.61	20	P	P	13 45 39.1	-0.5	
	baz=305							
H20K	**Anotleneega Mo**	70.62	25	P	P	13 45 39.1	-0.7	
	baz=301							
M15K	**Kasigluk River**	70.65	30	P	P	13 45 39.0	-1.0	
	baz=298							
TOLK	**Toolik Lake Re**	70.68	21	P	P	13 45 39.1	-0.9	
	baz=304							
L16K	**Owhat River**	70.69	29	P	P	13 45 39.3	-0.9	
	baz=298							
K17K	**Iditarod**	70.70	28	P	P	13 45 39.3	-0.9	
	baz=299							
UNV	**Unalaska Valle**	70.86	38	P	P	13 45 40.6	-0.7	
	baz=295							
J18K	**Innoko River**	70.96	27	IAmb	IAmb	13 45 44.2		
	comp=Z,11nm,1.1s							
J18K	**Innoko River**	70.96	27	P	P	13 45 41.3	-0.6	
	baz=300,SNR=8.0							
L17K	**Donlin**	70.98	28	P	P	13 45 41.3	-0.7	
	baz=299							
E23K	**Chandalar**	71.00	21	P	P	13 45 41.5	-0.5	
	baz=304							
G22K	**Bettles**	71.03	22	P	P	13 45 41.7	-0.4	
	baz=303							
O14K	**Tigyukauivet M**	71.06	32	P	P	13 45 42.0	-0.4	
	baz=298							
J19K	**Poorman**	71.11	26	IAmb	IAmb	13 45 46.6		
	comp=Z,9.6nm,1.0s							
J19K	**Poorman**	71.11	26	P	P	13 45 42.3	-0.4	
	baz=301,SNR=11							
I20K	**Naaghedeneel**	71.13	25	P	P	13 45 41.8	-0.9	
	baz=301							
N15K	**Kwethluk River**	71.16	31	P	P	13 45 42.1	-1.0	
	baz=298							
D25K	**Kavik River**	71.22	19	IAmb	IAmb	13 45 45.8		
	comp=Z,9.2nm,1.1s							
D25K	**Kavik River**	71.22	19	P	P	13 45 43.1	-0.3	
	baz=307							
M16K	**Timber Creek**	71.24	30	P	P	13 45 42.7	-0.9	
	baz=299							
C26K	**Camden Bay**	71.27	18	P	P	13 45 43.2	-0.3	
	baz=308							
H21K	**Melozitna Rive**	71.27	24	IAmb	IAmb	13 45 46.2		
	comp=Z,15nm,1.4s							
H21K	**Melozitna Rive**	71.27	24	P	P	13 45 43.7	0.0	
	baz=302,SNR=7.9							
COLD	**Coldfoot**	71.28	22	IAmb	IAmb	13 45 48.1		
	comp=Z,8.8nm,1.3s							
COLD	**Coldfoot**	71.28	22	P	P	13 45 43.1	-0.6	
	baz=304							
E24K	**Your Creek**	71.33	21	IAmb	IAmb	13 45 46.7		
	comp=Z,13nm,1.1s							
E24K	**Your Creek**	71.33	21	P	P	13 45 43.6	-0.5	
	baz=305							
J20K	**Nowinta River**	71.57	26	IAmb	IAmb	13 45 48.3		
	comp=Z,11nm,1.2s							
J20K	**Nowinta River**	71.57	26	P	P	13 45 44.9	-0.5	
	baz=302,SNR=5.7							
N16K	**Nishlik Lake**	71.59	30	P	P	13 45 45.1	-0.6	
	baz=299							
L18K	**Granite Mounta**	71.60	28	P	P	13 45 44.5	-1.1	
	baz=300							
G23K	**Bananza Creek**	71.63	22	IAmb	IAmb	13 45 47.7		
	comp=Z,9.7nm,1.4s							
G23K	**Bananza Creek**	71.63	22	P	P	13 45 44.8	-1.1	
	baz=304							
H22K	**Ishtalitna Cre**	71.64	23	P	P	13 45 45.0	-0.9	
	baz=304							
M17K	**Holitna River**	71.70	29	P	P	13 45 45.6	-0.7	
	baz=300							
O15K	**Ungalikthiuk R**	71.75	32	P	P	13 45 46.1	-0.5	
	baz=299							
C27K	**Jago River**	71.77	18	IAmb	IAmb	13 45 49.5		
	comp=Z,14nm,1.1s							
C27K	**Jago River**	71.77	18	P	P	13 45 45.8	-0.8	
	baz=309							
I21K	**Tanana**	71.82	24	IAmb	IAmb	13 45 51.1		
	comp=Z,9.5nm,1.2s							
I21K	**Tanana**	71.82	24	P	P	13 45 46.3	-0.7	
	baz=303							
F24K	**Squaw Lake**	71.85	21	P	P	13 45 46.4	-0.7	
	baz=306							
K20K	**Telida**	72.04	26	P	P	13 45 48.0	-0.4	
	baz=302							
E25K	**Arctic Village**	72.19	20	IAmb	IAmb	13 45 51.7		
	comp=Z,9.0nm,1.3s							
E25K	**Arctic Village**	72.19	20	P	P	13 45 49.2	+0.1	
	baz=308							
N17K	**Nushagak Hills**	72.24	30	P	P	13 45 49.6	0.0	
	baz=300							
H23K	**Yukon River**	72.30	23	P	P	13 45 49.0	-0.8	
	baz=305							
O16K	**Kokwok River B**	72.32	31	IAmb	IAmb	13 45 52.0		
	comp=Z,13nm,1.1s							
O16K	**Kokwok River B**	72.32	31	P	P	13 45 49.7	-0.3	
	baz=300							
M18K	**Stony River**	72.32	28	P	P	13 45 50.0	0.0	
	baz=301							
MLY	**Manley**	72.34	24	IAmb	IAmb	13 45 52.6		
	comp=Z,8.4nm,1.2s							
MLY	**Manley**	72.34	24	P	P	13 45 49.7	-0.4	
	baz=304,SNR=5.6							
L19K	**White Mountain**	72.35	28	IAmb	IAmb	13 45 53.7		
	comp=Z,11nm,1.1s							
L19K	**White Mountain**	72.35	28	P	P	13 45 49.9	-0.4	
	baz=302,SNR=6.3							
CHUM	**Lake Minchumin**	72.41	25	P	P	13 45 50.8	+0.3	
	baz=303							
G24K	**Hadweenzic Riv**	72.46	22	P	P	13 45 50.9	+0.1	
	baz=307							
F25K	**Christian Rive**	72.49	20	IAmb	IAmb	13 45 54.1		
	comp=Z,8.0nm,1.1s							
F25K	**Christian Rive**	72.49	20	P	P	13 45 50.9	-0.1	
	baz=308							
CEST	**Esterri de Car**	72.63	309	IAmb	IAmb	13 45 55.6		
	comp=Z,15nm,1.2s							
N18K	**Kilae Creek**	72.72	29	IAmb	IAmb	13 45 55.2		
	comp=Z,10nm,1.2s							
N18K	**Kilae Creek**	72.72	29	P	P	13 45 52.3	-0.1	
	baz=301							
I23K	**Minto, Yukon-K**	72.75	23	P	P	13 45 52.3	-0.2	
	baz=306							
CAST	**Castle Rocks**	72.76	26	IAmb	IAmb	13 45 55.9		
	comp=Z,11nm,1.2s							
CAST	**Castle Rocks**	72.76	26	P	P	13 45 52.1	-0.5	
	baz=304,SNR=9.2							
D27M	**Malcolm River**	72.76	18	P	P	13 45 52.2	-0.4	
	baz=312							
H24K	**Noodor Dome**	72.85	23	P	P	13 45 53.1	-0.1	
	baz=306							
G25K	**Bearman Lake**	72.86	21	P	P	13 45 53.1	0.0	
	baz=308							
F26K	**Sheenjek River**	72.88	20	P	P	13 45 53.7	+0.4	
	baz=309							
PPLA	**Purkeypile**	73.01	26	P	P	13 45 54.2	-0.1	
	baz=304,SNR=5.9							
NEA2	**Nenana**	73.18	24	IAmb	IAmb	13 45 57.2		
	comp=Z,8.8nm,1.1s							
NEA2	**Nenana**	73.18	24	P	P	13 45 55.0	-0.1	
	baz=306,SNR=8.4							
M20K	**Styx River**	73.20	27	IAmb	IAmb	13 46 02.1		
	comp=Z,19nm,1.4s							
M20K	**Styx River**	73.20	27	P	P	13 45 55.5	+0.1	
	baz=303							
N19K	**Bonanza Creek**	73.23	29	P	P	13 45 56.1	+0.5	
	baz=302							
P17K	**Kvichak River**	73.25	31	P	P	13 45 55.7	+0.1	
	baz=301							
E27K	**Coleen River**	73.29	19	IAmb	IAmb	13 45 58.4		
	comp=Z,11nm,1.1s							
E27K	**Coleen River**	73.29	19	P	P	13 45 55.2	-0.5	
	baz=311,SNR=6.4							
TRF	**Thorofare Moun**	73.41	25	P	P	13 45 56.4	-0.2	
	baz=305							
POKR	**Poker Plat Res**	73.43	23	P	P	13 45 56.4	-0.1	
	baz=307							
COLA	**College**	73.43	23	P	P	13 45 56.4	-0.1	
COLA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
COLA	**College**	73.43	23	P	P	13 45 56.4	-0.1	
COLA				IAmb	IAmb	13 45 58.5		
	comp=Z,9.7nm,0.8s							
COLA	**College**	73.43	23	P	P	13 45 57.4	+0.9	
	baz=307							
O18K	**Koktuh Hills**	73.44	30	IAmb	IAmb	13 45 59.4		
	comp=Z,7.0nm,1.0s							
O18K	**Koktuh Hills**	73.44	30	P	P	13 45 56.7	0.0	
	baz=302							
G26K	**Porcupine Rive**	73.46	21	IAmb	IAmb	13 45 59.9		
	comp=Z,20nm,1.4s							
G26K	**Porcupine Rive**	73.46	21	P	P	13 45 56.8	+0.1	
	baz=310,SNR=9.1							
E28M	**Babbage River**	73.58	18	IAmb	IAmb	13 46 00.5		
	comp=Z,13nm,1.2s							
E28M	**Babbage River**	73.58	18	P	P	13 45 57.3	0.0	
	baz=313,SNR=6.3							
P18K	**Big Mountain,**	73.68	30	P	P	13 45 57.8	-0.3	
	baz=302							
MCK	**McKinley**	73.73	25	P	P	13 45 58.2	-0.2	
	baz=306							
L22K	**Petersville**	73.76	26	IAmb	IAmb	13 46 01.0		
	comp=Z,11nm,1.0s							
L22K	**Petersville**	73.76	26	P	P	13 45 58.7	+0.1	
	baz=305,SNR=7.0							
SKT	**Skwentna**	73.77	27	IAmb	IAmb	13 46 00.9		
	comp=Z,7.7nm,1.0s							
SKT	**Skwentna**	73.77	27	P	P	13 45 58.6	-0.1	
	baz=304							
PRP	**Porcupine Dome**	73.82	22	P	P	13 45 58.2	-0.8	
	baz=309							
ILAR	**Eielson Array**	73.82	23	P	P	13 45 57.4	-1.5	
	comp=Z,3.7nm,1.0s,baz=296,slow=4.9,SNR=25							
	comp=Z,3.7nm,1.0s							
ILAR	**Eielson Array**	73.82	23	eP	P	13 45 58.0	-0.9	
ILAR				pmax	pmax			
	comp=Z,4.0nm,1.0s							
ILAR	**Eielson Array**	73.82	23	P	P	13 45 58.2	-0.7	
RND	**Reindeer**	73.95	25	IAmb	IAmb	13 46 01.2		
	comp=Z,12nm,1.4s							
CUT	**Chulitna**	74.02	26	P	P	13 45 59.1	-0.9	
	baz=305							
HDA	**Harding Lake**	74.03	23	P	P	13 45 59.6	-0.5	
	baz=308							
R17L	**Mt. Peulik Vol**	74.10	32	P	P	13 46 00.9	+0.2	
	baz=302							
F28M	**Old Crow**	74.16	19	IAmb	IAmb	13 46 04.4		
	comp=Z,9.8nm,1.1s							
F28M	**Old Crow**	74.16	19	P	P	13 46 00.3	-0.5	
	baz=313,SNR=12							
E29M	**Blow River**	74.16	18	IAmb	IAmb	13 46 03.3		
	comp=Z,11nm,1.1s							
E29M	**Blow River**	74.16	18	P	P	13 45 60.0	-0.8	
	baz=314							
Q18K	**Katmai Hardscr**	74.17	31	P	P	13 46 00.2	-1.0	
	baz=303							
G27K	**Doyon Strip**	74.19	20	P	P	13 46 00.1	-0.9	
	baz=312,SNR=6.3							
A36M	**Sachs Harbour**	74.23	12	P	P	13 46 01.0	-0.1	
	baz=325,SNR=10							
P19K	**Oil Pt**	74.39	29	P	P	13 46 02.0	-0.3	
	baz=304							
WAT1	**Susitna Watana**	74.41	25	P	P	13 46 02.1	-0.3	
	baz=307							
J25K	**Salcha River,**	74.44	23	P	P	13 46 01.4	-1.1	
	baz=309							
M22K	**Willow**	74.45	27	P	P	13 46 01.8	-0.8	
	baz=306							
H27K	**Steamboat Moun**	74.61	20	IAmb	IAmb	13 46 06.4		
	comp=Z,15nm,1.1s							
H27K	**Steamboat Moun**	74.61	20	P	P	13 46 03.4	-0.1	
	baz=312,SNR=16							
DHY	**Denali Highway**	74.69	25	P	P	13 46 03.3	-0.8	
	baz=308							
I26K	**Coal Creek Min**	74.72	22	P	P	13 46 03.7	-0.4	
	baz=311							
K24K	**Donnelly Dome**	74.80	24	P	P	13 46 04.8	+0.1	
	baz=309							
WAT6	**Susitna Watana**	74.86	25	P	P	13 46 04.9	-0.2	
	baz=307							
PMR	**Palmer**	74.93	26	P	P	13 46 05.4	+0.1	
	baz=306							
RC01	**Rabbit Creek A**	74.99	27	P	P	13 46 05.7	0.0	
	baz=306							
I27K	**Kandik River**	75.00	21	IAmb	IAmb	13 46 08.8		
	comp=Z,16nm,1.1s							
I27K	**Kandik River**	75.00	21	P	P	13 46 06.1	+0.3	
	baz=312,SNR=14							
HOM	**Homer**	75.05	29	P	P	13 46 05.9	-0.1	
	baz=305							
SML	**Sawmill**	75.11	26	IAmb	IAmb	13 46 08.5		
	comp=Z,17nm,1.1s							
SML	**Sawmill**	75.11	26	P	P	13 46 06.5	0.0	
	baz=307,SNR=7.1							
RIDG	**Independent Ri**	75.17	23	IAmb	IAmb	13 46 08.2		
	comp=Z,24nm,1.6s							
RIDG	**Independent Ri**	75.17	23	P	P	13 46 06.5	-0.2	
	baz=310							
G29M	**Pine Creek**	75.17	19	IAmb	IAmb	13 46 09.2		
	comp=Z,19nm,1.4s							
G29M	**Pine Creek**	75.17	19	P	P	13 46 06.5	-0.2	
	baz=315							
F30M	**Barrier River**	75.28	18	IAmb	IAmb	13 46 09.8		
	comp=Z,16nm,1.1s							
F30M	**Barrier River**	75.28	18	P	P	13 46 06.9	-0.4	
	baz=316							
KNK	**Knik Glacier**	75.30	26	P	P	13 46 07.0	-0.5	
	baz=307							
M23K	**Glacier View**	75.34	26	P	P	13 46 06.7	-1.1	
	baz=308							
INK	**Inuvik**	75.35	17	IAmb	IAmb	13 46 09.7		
	comp=Z,15nm,1.2s							
INK	**Inuvik**	75.35	17	P	P	13 46 06.9	-0.7	
	baz=318,SNR=8.5							
BRSE	**Bradley Lake S**	75.38	28	P	P	13 46 07.7	-0.3	
	baz=306							
CHIR	**Chirikof Islan**	75.41	33	P	P	13 46 07.8	-0.5	
	baz=303							
PAX	**Paxson**	75.44	24	P	P	13 46 08.4	+0.1	
	baz=309							
SCM	**Sheep Creek Mo**	75.47	26	P	P	13 46 08.4	-0.1	
	baz=308							
H29M	**Whitestone**	75.56	20	IAmb	IAmb	13 46 12.3		
	comp=Z,12nm,1.2s							
H29M	**Whitestone**	75.56	20	P	P	13 46 08.8	-0.1	
	baz=314							
G30M	**tAoh Zrai Nji**	75.62	18	P	P	13 46 08.7	-0.6	
	baz=316,SNR=16							
I28M	**Miner Creek**	75.63	21	IAmb	IAmb	13 46 11.7		
	comp=Z,13nm,1.3s							
I28M	**Miner Creek**	75.63	21	P	P	13 46 08.5	-1.0	
	baz=313,SNR=6.8							
PWL	**Port Wells**	75.68	27	P	P	13 46 09.5	-0.2	
	baz=307							
SEW	**Seward**	75.69	28	P	P	13 46 09.5	-0.2	
	baz=307							
KDAK	**Kodiak Island**	75.72	31	P	P	13 46 09.2	-0.7	
	baz=305							
M24K	**Tolsona, Glenn**	75.73	25	P	P	13 46 09.8	-0.2	
	baz=309							
HARP	**HAARP**	75.91	25	P	P	13 46 10.5	-0.5	
	baz=310							
EPYK	**Eagle Plains**	75.92	19	IAmb	IAmb	13 46 14.8		
	comp=Z,10.0nm,1.1s							
EPYK	**Eagle Plains**	75.92	19	P	P	13 46 10.8	-0.2	
	baz=316							
F31M	**Tsiigehtchic**	75.94	17	IAmb	IAmb	13 46 13.0		
	comp=Z,12nm,1.2s							
F31M	**Tsiigehtchic**	75.94	17	P	P	13 46 11.0	0.0	
	baz=318							
STKA	**Stephens Creek**	76.10	140	P	P	13 46 11.1	-1.3	
	comp=Z,4.7nm,0.9s,baz=318,slow=9.3,SNR=4.6							
	comp=Z,4.7nm,0.9s							
STKA	**Stephens Creek**	76.10	140	eP	P	13 46 12.5	+0.1	
STKA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
G31M	**Satah River**	76.19	18	IAmb	IAmb	13 46 14.2		
	comp=Z,11nm,1.0s							
G31M	**Satah River**	76.19	18	P	P	13 46 12.5	+0.1	
	baz=318,SNR=6.6							
KLU	**Klutina**	76.21	26	IAmb	IAmb	13 46 15.8		
	comp=Z,10nm,1.0s							
KLU	**Klutina**	76.21	26	P	P	13 46 12.4	-0.4	
	baz=309							
P23K	**Montague Islan**	76.57	27	P	P	13 46 15.0	+0.2	
	baz=308							
N25K	**Chitina, Valde**	76.62	25	P	P	13 46 15.1	-0.1	
	baz=310							
C36M	**Paulatuk**	76.64	13	P	P	13 46 14.8	-0.1	
	baz=326							
L27K	**Beaver Creek,**	76.64	23	IAmb	IAmb	13 46 18.2		
	comp=Z,11nm,1.2s							
L27K	**Beaver Creek,**	76.64	23	P	P	13 46 15.3	+0.1	
	baz=312,SNR=11							
BCAR	**Beaver Creek A**	76.65	23	P	P	13 46 14.8	-0.4	
M26K	**Nabesna, AK**	76.68	24	P	P	13 46 15.7	+0.3	
	baz=311							
DAWY	**Dawson**	76.75	22	P	P	13 46 16.0	+0.2	
	baz=314							
I30M	**Mount Dempster**	76.85	20	IAmb	IAmb	13 46 20.4		
	comp=Z,8.6nm,1.0s							
I30M	**Mount Dempster**	76.85	20	P	P	13 46 16.4	0.0	
	baz=316,SNR=15							
H31M	**Peel River**	77.00	19	P	P	13 46 17.4	+0.2	
	baz=318,SNR=13							
BMRM	**Bremner River**	77.03	26	IAmb	IAmb	13 46 20.8		
	comp=Z,10nm,1.0s							
BMRM	**Bremner River**	77.03	26	P	P	13 46 17.5	+0.1	
	baz=310							
M27K	**Edge Creek, AK**	77.10	24	P	P	13 46 18.1	+0.2	
	baz=312,SNR=5.6							
J30M	**Hart River**	77.33	20	P	P	13 46 19.4	+0.2	
	baz=316							
MCARA	**McCarthy VSAT**	77.34	25	P	P	13 46 19.8	+0.7	
	baz=312							
Q23K	**Middleton Isla**	77.35	27	P	P	13 46 19.8	+0.7	
	baz=309							
BVCY	**Beaver Creek**	77.41	23	P	P	13 46 20.0	+0.5	
	baz=313							
ESDC	**Sonseca Array**	77.47	309	P	P	13 46 19.4	-0.9	
	comp=Z,5.7nm,1.2s,baz=48,slow=5.7,SNR=15							
	comp=Z,5.7nm,1.2s							
ESDC	**Sonseca Array**	77.47	309	P	P	13 46 20.6	+0.3	
K29M	**Barlow Dome**	77.50	21	P	P	13 46 20.5	+0.4	
	baz=316							
KAIM	**Kayak Island**	77.78	26	P	P	13 46 22.0	+0.5	
	baz=311							
L29M	**L29M**	77.83	22	P	P	13 46 22.1	+0.3	
	baz=315							
YUK3	**Moose Creek**	77.98	24	P	P	13 46 22.8	-0.1	
	baz=314							
M29M	**Somme Creek**	78.19	22	P	P	13 46 23.6	-0.3	
	baz=315							
LSZ	**Lusaka**	78.54	245	P	P	13 46 25.9	-0.6	
LSZ				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LSZ	**Lusaka**	78.54	245	P	P	13 46 25.9	-0.6	
LSZ				IAmb	IAmb	13 46 27.9		
	comp=Z,6.3nm,0.8s							
YUK8	**Steele Glacier**	78.56	24	P	P	13 46 25.9	-0.3	
	baz=314							
M30M	**Minto, Yukon**	78.64	22	P	P	13 46 26.3	0.0	
	baz=316							
BRWY	**Burwash Landin**	78.76	23	P	P	13 46 26.6	-0.4	
	baz=315							
O28M	**Mount Upton**	78.77	24	P	P	13 46 27.1	-0.3	
	baz=314							
YUK4	**Talbot Arm**	78.91	23	P	P	13 46 27.6	-0.4	
	baz=315							
PINM	**Pinnacle**	79.22	25	P	P	13 46 29.3	-0.3	
	baz=314							
YUK6	**Outpost Mounta**	79.29	23	P	P	13 46 30.5	+0.3	
	baz=315							
N30M	**Aishikik Lake**	79.35	23	P	P	13 46 30.6	+0.3	
	baz=316							
HYT	**Haines Junctio**	79.67	23	P	P	13 46 32.2	+0.1	
	baz=316							
O29M	**Mount Kennedy**	79.67	24	P	P	13 46 32.2	+0.1	
	baz=315							
M31M	**Drury Creek, Y**	79.67	21	P	P	13 46 32.5	+0.5	
	baz=318							
N31M	**Braeburn, Yuko**	79.76	22	IAmb	IAmb	13 46 35.2		
	comp=Z,18nm,1.4s							
N31M	**Braeburn, Yuko**	79.76	22	P	P	13 46 32.7	+0.2	
	baz=317							
O30N	**Mendenhall**	80.19	23	P	P	13 46 34.9	0.0	
	baz=317							
MMPY	**Sheldon Lake,**	80.30	20	IAmb	IAmb	13 46 38.4		
	comp=Z,14nm,1.3s							
MMPY	**Sheldon Lake,**	80.30	20	P	P	13 46 35.5	+0.1	
	baz=321							
P30M	**Million Dollar**	80.36	24	P	P	13 46 36.1	+0.3	
	baz=316							
P29M	**Windy Craggy**	80.45	24	P	P	13 46 36.3	+0.1	
	baz=316							
N32M	**Quiet Lake**	80.88	21	P	P	13 46 38.3	-0.2	
	baz=320							
PLBC	**Pleasant Camp**	81.06	24	P	P	13 46 39.3	-0.1	
	baz=317							
MD01	**Midelt array s**	81.39	303	P	P	13 46 41.5	-0.4	
SKAG	**Skagway**	81.41	23	P	P	13 46 41.4	+0.1	
	baz=318							
P33M	**Teslin, Yukon**	81.68	22	P	P	13 46 42.8	0.0	
	baz=320							
P32M	**Atlin**	81.86	23	P	P	13 46 43.8	0.0	
	baz=319							
S31K	**Pelican**	82.20	25	P	P	13 46 45.9	+0.5	
	baz=317							
R32K	**Eaglecrest**	82.58	24	P	P	13 46 47.7	+0.2	
	baz=319							
Q32M	**Nakina River**	82.82	23	P	P	13 46 49.1	+0.1	
	baz=320							
R33M	**Jennings River**	82.91	22	IAmb	IAmb	13 46 52.9		
	comp=Z,9.1nm,1.3s							
R33M	**Jennings River**	82.91	22	P	P	13 46 49.2	-0.1	
	baz=321							
WTLY	**Watson Lake, Y**	83.01	20	P	P	13 46 50.2	+0.4	
	baz=323							

TORD	**Torodi Ar. Bea**	**86.17**	**283**	P	**P**	**13 47 05.7**	**-0.7**
TORD				IAmb	IAmb	13 47 09.3	
	comp=Z,8.7nm,1.3s						
LBTB	**Lobatse**	**86.20**	**238**	P	**P**	**13 47 05.7**	**-0.7**
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LBTB	**Lobatse**	**86.20**	**238**	P	**P**	**13 47 05.7**	**-0.7**
LBTB				IAmb	IAmb	13 47 08.9	
	comp=Z,9.6nm,0.9s						
TXAR	**Lajitas Array**	**118.09**	**18**	PKP	**PKPdf**	**13 53 11.5**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=342,slow=0.4,SNR=5.0						
ROSC	**El Rosal**	**143.53**	**342**	PKP	**PKPdf**	**13 54 00.2**	**-0.5**
	comp=Z,4.3nm,0.4s,baz=326,slow=12,SNR=4.7						

IDC 24 13:35:23.3±12.0, **24°32'S×177°28'W, h364**km±152km, **mb3.1**/4, **mbtmp3.9**/5, **Error ellipse: s-maj=237.8km s-min=50.4km az=77.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.70**	**198**	P	P	13 38 33.8	0.0
	2.9nm,0.4s,baz=269,slow=2.7,SNR=7.6						
URZ				S	S	13 41 09.9	-1.8
	11nm,1.1s,baz=28,slow=12,SNR=1.9						
CTA	**Charters Tower**	**33.97**	**270**	P	P	13 41 34.0	-0.1
	1.9nm,0.3s,baz=90,slow=11,SNR=10						
	1.9nm,0.3s						
STKA	**Stephens Creek**	**36.88**	**249**	P	P	13 41 58.8	+0.2
	1.0nm,0.5s,baz=107,slow=11,SNR=3.7						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**44.42**	**260**	P	P	13 42 60.0	+0.2
	0.7nm,0.8s,baz=86,slow=7.9,SNR=13						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**44.86**	**266**	P	P	13 43 02.6	-0.6
	0.2nm,0.3s,baz=105,slow=7.9,SNR=20						
	0.2nm,0.3s						

*IDC **24** 13:42:30.4±4.5, 31°75'S×179°82'E, h335km±37km, mb3.3/4, mbtmp4.1/5, Error ellipse: s-maj=44.3km s-min=20.0km az=44.0*

*WEL **24** 13:42:38.1±0.9, 32°S±6'×17°8E±1°2, h12km, M4.4/13, mB4.7/6, ML4.6/11, MLv4.7/13, Mw(mB)4.0/6, Error ellipse: s-maj=17.3km s-min=4.5km az=113.8*

ISC 24 13:42:34.8±1.1, 31°67'S±0°08×178°8E±0°1, h300km**, n56,** σ1**°70/62, mb3.6/4, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.74**	**51**	P	**Pn**	**13 43 38.4**	**+0.2**
GLKZ				S	**S**	**13 44 29.9**	**+0.8**
MXZ	**Matakaoa Point**	**5.89**	**183**	P	**Pn**	**13 44 03.7**	**+1.0**
MXZ				S	**S**	**13 45 13.7**	**+0.1**
HAZ	**Te Kaha**	**6.13**	**187**	P	**Pn**	**13 44 07.5**	**+2.0**
HAZ				S	**S**	**13 45 19.3**	**+0.6**
WMGZ	**Waiomatatini S**	**6.14**	**182**	P	**Pn**	**13 44 08.0**	**+2.3**
WMGZ				S	**S**	**13 45 18.7**	**-0.3**
RUGZ	**Raukumara Rang**	**6.35**	**188**	P	**Pn**	**13 44 10.2**	**+2.0**
RUGZ				S	**S**	**13 45 22.3**	**-1.3**
PUZ	**Puketiti**	**6.40**	**183**	P	**Pn**	**13 44 09.7**	**+0.8**
PUZ				S	**S**	**13 45 23.0**	**-1.8**
TWGZ	**Tauwhareparae**	**6.53**	**185**	P	**Pn**	**13 44 10.7**	**+0.4**
TWGZ				S	**S**	**13 45 28.5**	**+1.0**
TOZ	**Tahuroa Road**	**6.62**	**203**	P	Pn	13 44 19.4	+8.0
URZ	**Urewera**	**6.71**	**191**	P	**Pn**	**13 44 11.9**	**-0.7**
	23nm,0.4s,baz=8.4,slow=2.4,SNR=66						
URZ				S	**S**	**13 45 31.1**	**-0.5**
	16nm,0.4s,baz=46,slow=19,SNR=20						
URZ	**Urewera**	**6.71**	**191**	P	**Pn**	**13 44 14.3**	**+1.7**
URZ				S	**S**	**13 45 32.4**	**+0.8**
MWZ	**Matawai**	**6.73**	**188**	P	**Pn**	**13 44 14.3**	**+1.5**
MWZ				S	**S**	**13 45 31.7**	**-0.3**
TKGZ	**Te Karaka**	**6.80**	**186**	P	**Pn**	**13 44 14.7**	**+1.1**
TKGZ				S	**S**	**13 45 32.2**	**-1.2**
CNGZ	**Carnagh Statio**	**6.82**	**184**	P	**Pn**	**13 44 14.9**	**+1.1**
RAGZ	**Rawiri**	**6.90**	**189**	P	**Pn**	**13 44 16.6**	**+1.7**
RAGZ				S	**S**	**13 45 37.3**	**+1.5**
MUGZ	**Murupara**	**6.99**	**193**	P	**Pn**	**13 44 18.0**	**+2.1**
HRRZ	**Handcock Road**	**7.01**	**196**	P	Pn	13 44 21.2	+5.0
RIGZ	**Rimuhau**	**7.07**	**186**	P	**Pn**	**13 44 17.6**	**+0.6**
RTZ	**Ruatahuna**	**7.08**	**191**	P	**Pn**	**13 44 19.0**	**+1.8**
PRRZ	**Plateau Road**	**7.09**	**195**	P	**Pn**	**13 44 21.5**	**+4.4**
TLZ	**Tolley Road**	**7.15**	**201**	P	Pn	13 44 24.0	+6.0
ALRZ	**Allen Road**	**7.16**	**195**	P	**Pn**	**13 44 21.0**	**+3.0**
PRGZ	**Paritu Road**	**7.28**	**185**	P	**Pn**	**13 44 20.5**	**+1.1**
MTHZ	**Maungataniwha**	**7.34**	**192**	P	**Pn**	**13 44 23.0**	**+2.8**
RAHZ	**Arahi**	**7.36**	**190**	P	**Pn**	**13 44 21.4**	**+0.9**
MRHZ	**Matea Rd**	**7.40**	**194**	P	**Pn**	**13 44 23.1**	**+2.1**
HIZ	**Hauiti**	**7.54**	**204**	P	Pn	13 44 29.5	+6.9
NMHZ	**Naumai**	**7.58**	**192**	P	**Pn**	**13 44 25.4**	**+2.2**
ARHZ	**Aropaoanui**	**7.71**	**190**	P	**Pn**	**13 44 26.6**	**+1.8**
ETVZ	**East Tongariro**	**7.86**	**198**	P	**Pn**	**13 44 30.0**	**+3.4**
OTVZ	**Oturere**	**7.89**	**198**	P	**Pn**	**13 44 29.0**	**+1.9**
TUVZ	**Tukino**	**7.99**	**198**	P	**Pn**	**13 44 30.8**	**+2.5**
FWVZ	**Far West T-bar**	**8.01**	**198**	P	**Pn**	**13 44 30.7**	**+2.1**
WHVZ	**Whangaehu Hut**	**8.03**	**198**	P	**Pn**	**13 44 30.3**	**+1.5**
WNVZ	**Wahianoa**	**8.06**	**198**	P	**Pn**	**13 44 29.4**	**+0.2**
BHHZ	**Black Hill Sta**	**8.11**	**195**	P	**Pn**	**13 44 29.8**	**+0.2**
VRZ	**Vera Road**	**8.12**	**203**	P	**Pn**	**13 44 34.3**	**+4.6**
KRHZ	**Kereru**	**8.19**	**193**	P	**Pn**	**13 44 30.9**	**+0.2**
KAHZ	**Kahuranaki**	**8.25**	**190**	P	**Pn**	**13 44 32.9**	**+1.5**
PNHZ	**Pukenui**	**8.49**	**193**	P	**Pn**	**13 44 31.6**	**-2.6**
PXZ	**Pawanui**	**8.49**	**190**	P	**Pn**	**13 44 33.6**	**-0.6**
TSZ	**Takapari Road**	**8.68**	**194**	P	**Pn**	**13 44 36.5**	**0.0**
PRHZ	**Porangahau**	**8.75**	**191**	P	**Pn**	**13 44 37.6**	**+0.2**
ANWZ	**Angora Road**	**8.97**	**191**	P	**Pn**	**13 44 40.2**	**+0.2**
BFZ	**Birch Farm**	**9.22**	**192**	P	**Pn**	**13 44 42.5**	**-0.7**
MRZ	**Mangatainoka R**	**9.34**	**195**	P	**Pn**	**13 44 43.3**	**-1.3**
HOWZ	**Holdsworth Sta**	**9.57**	**195**	P	**Pn**	**13 44 47.0**	**-0.6**
OGWZ	**Otaki Gorge**	**9.58**	**197**	P	**Pn**	**13 44 46.0**	**-1.6**
CAW	**Cannon Point**	**9.88**	**196**	P	**Pn**	**13 44 49.6**	**-1.7**
TCW	**Tory Channel**	**10.18**	**199**	P	**Pn**	**13 44 54.2**	**-0.8**
TUWZ	**Tuamarina**	**10.48**	**200**	P	**Pn**	**13 44 57.8**	**-0.8**
KHZ	**Kahutara**	**11.51**	**200**	P	**Pn**	**13 45 09.3**	**-1.8**
STKA	**Stephens Creek**	**31.49**	**260**	P	**P**	**13 48 28.2**	**-1.1**
	1.0nm,0.6s,baz=91,slow=9.5,SNR=1.4						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**40.29**	**270**	P	**P**	**13 49 43.8**	**+0.2**
	0.5nm,0.5s,baz=107,slow=7.6,SNR=20						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**41.40**	**275**	P	**P**	**13 49 52.5**	**-0.1**
	1.4nm,0.3s,baz=112,slow=7.9,SNR=38						
	1.4nm,0.3s						
QSPA	**South Pole Qui**	**58.45**	**180**	P	P	13 51 51.2	-8.3
	2.4nm,0.5s,baz=37,slow=0.9,SNR=29						
	2.4nm,0.5s						
FINES	**FINESS Array B**	**145.30**	**337**	PKPbc	PKPdf	14 01 28.6	-7.5
	1.9nm,0.4s,baz=38,slow=4.3,SNR=20						

*IDC **24** 13:42:33.5±0.5, 53°39N×108°74E, h0km, mb4.0/21, mbtmp4.0/28, ML3.9/6, MS3.6/11, Error ellipse: s-maj=13.0km s-min=11.3km az=151.0*

*MOS **24** 13:42:34.9±1.2, 53°38N×108°73E, h15km, mb4.5/15, MS3.6/7, Error ellipse: s-maj=7.2km s-min=5.5km az=63.1*

MOS Felt (V) at Maksimikha; (IV) at Barguzin, Suvo, Uro, Ust'-Barguzin; (II-III) at Onguryen.

*NEIC **24** 13:42:35.3±1.5, 53°32N±0°06×108°7E±0°1, h10km±1km, mb4.5/52, Error ellipse: s-maj=11.9km s-min=11.0km az=269.0*

*BYKL **24** 13:42:36.2±0.1, 53°38N×108°63E, h18km±2km, FELT I=V MSK at Maksimikha; IV at Suvo, Uro, Barguzin, Ust-Barguzin; II-III at Onguren.*

ISC 24 13:42:36.1±0.7, 53°33N±0°02×108°72E±0°02, h16km±4km**, n202,** σ1**°88/255, mb4.3/53, MS3.6/15, 13C-18D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXMB	**Maximikha**	**0.07**	**165**	⇓*i*Pg	**Pg**	**13 42 39.8**	**+0.6**
MXMB				*e*Sg	**Sg**	**13 42 42.6**	**+1.4**
GORB	**Goryachinsk**	**0.43**	**217**	⇑*i*Pg	**Pb**	**13 42 44.7**	**-0.6**
GORB				*e*Sg	**Sb**	**13 42 51.2**	**-0.3**
UZR	**Uzur**	**0.58**	**270**	⇓*i*Pg	**Pg**	**13 42 46.8**	**-0.8**
	221nm,0.3s						
UZR				⇓*i*Pg	**Pg**	**13 42 46.8**	**-0.8**
	458nm,0.3s						
UZR				⇑*i*Pg	**Pg**	**13 42 46.8**	**-0.8**
	284nm,0.3s						
UZR				Pmax		13 42 47.3	
	2μm,0.1s						
UZR				*e*Sg	**Sg**	**13 42 54.9**	**-0.5**
UZR				Smax		13 42 56.1	
	11μm,0.2s						
KELR	**Kotokel**	**0.69**	**214**	⇓*i*Pg	**Pb**	**13 42 49.0**	**-0.7**
KELR				*e*Sg	**Sb**	**13 42 58.6**	**-0.3**
OGRR	**Ongureny**	**0.74**	**296**	⇑*i*PG	**Pg**	**13 42 49.2**	**-1.3**
OGRR				*e*		13 42 58.4	
OGRR				pmax	pmax		
	comp=Z,6μm,0.3s						
OGRR				smax	smax		
	comp=N,19μm,0.3s						
OGRR	**Ongureny**	**0.74**	**296**	⇑*i*Pg	**Pg**	**13 42 49.1**	**-1.4**
	comp=N,5μm,0.7s						
OGRR				⇓*i*Pg	**Pg**	**13 42 49.1**	**-1.4**
	comp=N,6μm,0.7s						
OGRR				⇑*i*Pg	**Pg**	**13 42 49.1**	**-1.4**
	comp=N,10μm,0.7s						
OGRR				Pmax		13 42 49.4	
	comp=N,6μm,0.2s						
OGRR				*e*Sg	**Sg**	**13 42 58.5**	**-1.8**
OGRR				Smax		13 42 59.0	
	comp=N,19μm,0.2s						
SYVR	**Suvo**	**0.83**	**66**	⇑*i*PG	**Pg**	**13 42 51.8**	**-0.5**
SYVR				*e*		13 43 03.5	
SYVR				pmax	pmax		
	comp=Z,2μm,0.3s						
SYVR				smax	smax		
	comp=N,15μm,0.4s						
SYVR	**Suvo**	**0.83**	**66**	⇑*i*Pg	**Pb**	**13 42 51.9**	**-0.3**
	comp=N,700nm,0.6s						
SYVR				⇑*i*Pg	**Pb**	**13 42 51.9**	**-0.3**
	comp=N,1μm,0.6s						
SYVR				⇑*i*Pg	**Pb**	**13 42 51.9**	**-0.3**
	comp=N,2μm,0.6s						
SYVR				Pmax		13 42 52.1	
	comp=N,2μm,0.2s						
SYVR				*e*Sg	**Sb**	**13 43 03.6**	**+0.4**
SYVR				Smax		13 43 04.8	
	comp=N,15μm,0.4s						
ZRHB	**Zarechye**	**1.22**	**231**	*e*Pg	**Pg**	**13 42 58.5**	**-1.1**
ZRHB				Pmax		13 42 59.5	
	comp=N,939nm,0.3s						
ZRHB				*e*Sg	**Sn**	**13 43 15.9**	**+1.1**
ZRHB				Smax		13 43 20.1	
	comp=N,11μm,0.4s						
TRG	**Tyrgan**	**1.54**	**249**	⇓*i*PN	**Pn**	**13 43 02.6**	**-0.3**
TRG				*e*		13 43 23.1	
TRG				pmax	pmax		
	comp=Z,1μm,0.4s						
TRG				smax	smax		
	comp=N,5μm,0.1s						
TRG	**Tyrgan**	**1.54**	**249**	⇓*i*Pg	**Pn**	**13 43 02.6**	**-0.3**
TRG				*e*Pb	**Pb**	**13 43 03.8**	**-0.4**
TRG				*e*		13 43 08.5	
TRG				max		13 43 09.4	
	comp=N,1μm,0.4s						
TRG				*e*Sg	**Sb**	**13 43 23.1**	**-0.4**
TRG				Smax		13 43 25.9	
	comp=N,4μm,0.1s						
FFNB	**Fofonovo**	**1.75**	**224**	*e*Pn	**Pb**	**13 43 07.1**	**-0.7**
FFNB				*e*Pg	**Pg**	**13 43 07.9**	**-1.7**
FFNB				*e*		13 43 08.9	
FFNB				*e*Sg	**Sg**	**13 43 31.8**	**-0.5**
KAB	**Kabansk**	**1.79**	**225**	*e*Pg	**Pg**	**13 43 08.9**	**-1.6**
KAB				*e*		13 43 11.1	
KAB				max		13 43 14.2	
	comp=N,792nm,0.2s						
KAB				*e*Sg	**Sg**	**13 43 32.9**	**-0.8**
KAB				*e*SgSg	**SnSn**	**13 43 44.7**	**+5.2**
KAB				max		13 43 45.1	
	comp=N,10μm,0.9s						
STDB	**Stepnoy Dvoret**	**1.84**	**232**	*e*Pn	**Pn**	**13 43 07.8**	**+0.8**
STDB				*e*Pg	**Pg**	**13 43 10.1**	**-1.3**
STDB				*e*Sg	**Sg**	**13 43 34.1**	**-1.2**
HRMR	**Khuramsha**	**2.01**	**213**	*e*Pn	**Pb**	**13 43 10.6**	**-1.7**
HRMR				*e*Pg	**Pg**	**13 43 12.4**	**-2.3**
HRMR				*e*		13 43 14.7	
HRMR				max		13 43 15.6	
	comp=N,1μm,0.3s						
HRMR				*e*Sg	**Sg**	**13 43 39.7**	**-1.1**
HRMR				Smax		13 43 40.8	
	comp=N,10μm,0.5s						
HRMR				*e*		13 43 44.7	
YLYR	**Ulyunkhan**	**2.12**	**42**	*e*Pn	**Pn**	**13 43 11.4**	**+0.6**
YLYR				*e*		13 43 13.3	
YLYR				*e*S	**Sn**	**13 43 37.3**	**+0.5**
YLYR				*e*		13 43 39.6	
YLYR				pmax	pmax		
	comp=Z,871nm,0.8s						
YLYR				smax	smax		
	comp=N,6μm,0.3s						
YLYR	**Ulyunkhan**	**2.12**	**42**	⇓*i*Pn	**Pn**	**13 43 11.4**	**+0.6**
	comp=N,214nm,0.6s						
YLYR				⇓*i*Pn	**Pn**	**13 43 11.4**	**+0.6**
	comp=N,258nm,0.6s						
YLYR				⇓*i*Pn	**Pn**	**13 43 11.4**	**+0.6**
	comp=N,496nm,0.6s						
YLYR				*e*Pg	**Pb**	**13 43 13.3**	**-0.8**
YLYR				*e*		13 43 18.3	
YLYR				max		13 43 18.7	
	comp=N,861nm,0.5s						
YLYR				*e*Sg	**Sb**	**13 43 42.0**	**+1.9**
YLYR				Smax		13 43 43.2	
	comp=N,6μm,0.4s						
BGT	**Bolshoye Golou**	**2.39**	**239**	*e*PN	**Pb**	**13 43 18.4**	**-0.3**
BGT				*e*		13 43 48.3	
BGT				pmax	pmax		
	comp=Z,166nm,0.3s						
BGT				smax	smax		
	comp=N,2μm,0.6s						
BGT	**Bolshoye Golou**	**2.39**	**239**	*e*Pn	**Pn**	**13 43 14.4**	**-0.2**
BGT				*e*Pg	**Pb**	**13 43 18.4**	**-0.3**
BGT				*e*		13 43 27.6	
BGT				max		13 43 30.4	
	comp=N,268nm,0.3s						
BGT				*e*Sn	**Sn**	**13 43 44.4**	**+0.9**
BGT				*e*Sg	**Sg**	**13 43 49.9**	**-2.9**
BGT				*e*SgSg	**SnSn**	**13 43 59.0**	**+4.8**
BGT				max		13 44 00.2	
	comp=N,2μm,0.6s						
NIZB	**Nizh Angarsk**	**2.50**	**11**	⇓*i*PN	**Pn**	**13 43 16.6**	**+0.5**
NIZB				*e*		13 43 20.2	
NIZB				*e*		13 43 52.0	
NIZB				pmax	pmax		
	comp=Z,538nm,0.3s						
NIZB				smax	smax		
	comp=N,6μm,0.5s						
NIZB	**Nizh Angarsk**	**2.50**	**11**	⇓*i*Pn	**Pn**	**13 43 16.5**	**+0.5**
NIZB				*e*Pg	**Pb**	**13 43 20.2**	**-0.3**
NIZB				*e*		13 43 22.2	
NIZB				max		13 43 26.9	
	comp=N,566nm,0.4s						
NIZB				*e*Sg	**Sb**	**13 43 52.4**	**+1.4**
NIZB				Smax		13 43 53.4	
	comp=N,6μm,0.5s						
LSTR	**Listvyanka**	**2.78**	**240**	*e*PN	**Pn**	**13 43 19.9**	**0.0**
LSTR				*e*		13 43 25.6	
LSTR				*e*		13 44 02.2	
LSTR				pmax	pmax		
	comp=Z,90nm,0.2s						
LSTR				smax	smax		
	comp=N,1μm,1.4s						
LSTR	**Listvyanka**	**2.78**	**240**	⇓*i*Pn	**Pn**	**13 43 20.0**	**0.0**
LSTR				*e*Pg	**Pb**	**13 43 25.7**	**+0.3**
LSTR				Pmax		13 43 37.7	
	comp=N,181nm,0.6s						
LSTR				*e*Sn	**Sn**	**13 43 52.9**	**-0.3**
LSTR				*e*Sg	**Sg**	**13 44 02.2**	**-3.2**
LSTR				Smax		13 44 03.9	
	comp=N,1μm,0.5s						
IRK	**Irkutsk**	**2.91**	**250**	*e*PN	**Pb**	**13 43 27.9**	**+0.3**
IRK				*e*		13 44 04.1	
IRK				pmax	pmax		
	comp=Z,222nm,0.3s						
IRK				smax	smax		
	comp=N,4μm,0.5s						
IRK	**Irkutsk**	**2.91**	**250**	*e*Pn	**Pn**	**13 43 21.9**	**+0.2**
IRK				*e*Pg	**Pb**	**13 43 27.3**	**-0.3**
IRK				Pmax		13 43 35.1	
	comp=N,444nm,0.5s						
IRK				*e*Sn	**Sn**	**13 43 56.2**	**-0.1**
IRK				*e*Sg	**Sb**	**13 44 04.0**	**+1.1**
IRK				Smax		13 44 10.6	
	comp=N,4μm,0.5s						
KMO	**Kumora**	**2.94**	**28**	⇓*i*Pn	**Pn**	**13 43 22.8**	**+0.6**
KMO				*e*Pg	**Pb**	**13 43 28.3**	**+0.1**
KMO				*e*		13 43 33.0	
KMO				max		13 43 36.7	
	comp=N,2μm,0.5s						
KMO				*e*Sg	**Sb**	**13 44 06.2**	**+2.3**
KMO				Smax		13 44 16.9	
	comp=N,11μm,1.1s						
IVK	**Ivanovka**	**3.04**	**242**	*e*PN	**Pn**	**13 43 23.6**	**+0.1**
IVK				*e*		13 43 29.7	
IVK				*e*		13 44 08.9	
IVK				pmax	pmax		
	comp=Z,310nm,0.5s						
IVK				smax	smax		
	comp=N,2μm,0.4s						
IVK	**Ivanovka**	**3.04**	**242**	*e*Pn	**Pn**	**13 43 23.7**	**+0.2**
IVK				*e*Pg	**Pb**	**13 43 30.2**	**+0.4**
IVK				Pmax		13 43 32.4	
	comp=N,311nm,0.5s						
IVK				*e*		13 43 35.3	
IVK				*e*Sn	**Sn**	**13 44 00.2**	**+0.7**
IVK				*e*Sg	**Sg**	**13 44 09.5**	**-4.1**
IVK				Smax		13 44 11.0	
	comp=N,3μm,0.5s						
CIT	**Chita**	**3.22**	**112**	*e*PN	**Pn**	**13 43 26.5**	**+0.5**
CIT				*e*		13 43 35.8	
CIT				*e*		13 44 17.9	
CIT				pmax	pmax		
	comp=Z,1μm,0.7s						
CIT				smax	smax		
	comp=E,8μm,1.2s						
CIT	**Chita**	**3.22**	**112**	*e*Pn	**Pn**	**13 43 27.3**	**+1.3**
CIT				*e*Pg	**Pb**	**13 43 34.8**	**+1.9**
CIT				Pmax		13 43 36.8	
	comp=E,1μm,0.5s						
CIT				*e*Sn	**Sn**	**13 44 05.0**	**+0.9**
CIT				*e*Sg	**Sg**	**13 44 17.4**	**-2.1**
CIT				Smax		13 44 25.2	
	comp=E,6μm,0.4s						
YOAB	**Uoyan, Buryati**	**3.31**	**31**	*e*PN	**Pb**	**13 43 35.8**	**+1.3**
YOAB				*e*		13 44 19.2	
YOAB				pmax	pmax		
	comp=Z,552nm,0.7s						
YOAB				smax	smax		
	comp=N,7μm,0.8s						
YOAB	**Uoyan, Buryati**	**3.31**	**31**	*e*Pn	**Pn**	**13 43 28.3**	**+1.0**
YOAB				*e*Pg	**Pb**	**13 43 35.9**	**+1.4**
YOAB				Pmax		13 43 47.3	
	comp=N,1μm,1.5s						
YOAB				*e*Sg	**Sg**	**13 44 19.3**	**-3.1**
YOAB				Smax		13 44 47.2	
	comp=N,10μm,1.5s						
TLY	**Talaya**	**3.51**	**244**	Pn	**Pn**	**13 43 29.8**	**-0.2**
	comp=N,5.1nm,0.3s,baz=35,slow=9.5,SNR=12						
TLY				Lg	Lg	13 44 21.9	
	comp=N,148nm,0.3s,baz=151,slow=20,SNR=24						
	comp=N,11nm,0.3s						
TLY	**Talaya**	**3.51**	**244**	*e*PN	**Pn**	**13 43 29.7**	**-0.3**
TLY				*e*		13 43 38.5	
TLY				*e*		13 44 22.8	
TLY				pmax	pmax		
	comp=Z,58nm,0.3s						
TLY				smax	smax		
	comp=N,1μm,0.4s						
TLY	**Talaya**	**3.51**	**244**	*e*Pn	**Pn**	**13 43 30.0**	**0.0**
TLY				*e*Pg	**Pb**	**13 43 38.5**	**+0.7**
TLY				*e*		13 43 42.2	
TLY				max		13 43 44.2	
	comp=N,73nm,0.3s						
TLY				*e*Sn	**Sn**	**13 44 08.5**	**-2.7**
TLY				*e*Sg	**Sg**	**13 44 24.1**	**-4.6**
TLY				Smax		13 44 26.8	
	comp=N,1μm,0.5s						
TLY	**Talaya**	**3.51**	**244**		**Pn**	**13 43 29.6**	**-0.4**
UKT	**Uakit**	**3.59**	**51**	⇓*i*PN	**Pn**	**13 43 31.8**	**+0.6**
UKT				*e*		13 43 40.8	
UKT				*e*		13 44 27.2	
UKT				pmax	pmax		
	comp=Z,198nm,0.8s						
UKT				smax	smax		
	comp=E,2μm,0.8s						
UKT	**Uakit**	**3.59**	**51**	⇓*i*Pn	**Pn**	**13 43 31.9**	**+0.7**
UKT				*e*		13 43 38.8	
UKT				*e*Pg	**Pb**	**13 43 40.6**	**+1.3**
UKT				Pmax		13 43 53.5	
	comp=E,426nm,0.9s						
UKT				*e*Sg	**Sg**	**13 44 27.4**	**-4.0**
UKT				Smax		13 44 31.9	
	comp=E,2μm,0.8s						
SVKR	**Severomuysk**	**3.96**	**43**	*e*Pn	**Pn**	**13 43 37.0**	**+0.8**
SVKR				*e*Pg	**Pb**	**13 43 47.4**	**+1.9**
SVKR				Pmax		13 43 55.5	
	comp=E,771nm,0.5s						
SVKR				*e*Sg	**Sg**	**13 44 39.6**	**-3.6**
SVKR				Smax		13 44 48.6	
	comp=E,9μm,0.7s						
ARS	**Arshan**	**4.08**	**252**	*e*PN	**Pn**	**13 43 38.8**	**+0.9**
ARS				*e*		13 43 48.3	
ARS				*e*		13 44 40.2	
ARS				pmax	pmax		
	comp=Z,267nm,0.6s						
ARS				smax	smax		
	comp=E,3μm,0.8s						
ARS	**Arshan**	**4.08**	**252**	*e*Pn	**Pn**	**13 43 38.4**	**+0.5**
ARS				*e*Pg	**Pb**	**13 43 48.4**	**+0.8**
ARS				Pmax		13 44 02.5	
	comp=E,303nm,0.6s						
ARS				*e*Sg	**Sb**	**13 44 40.7**	**+3.9**
ARS				Smax		13 44 52.3	
	comp=E,3μm,1.0s						
KPC	**Khapcheranga**	**4.29**	**146**	*e*Pn	**Pn**	**13 43 41.1**	**+0.4**
KPC				*e*Pg	**Pg**	**13 43 54.1**	**-4.1**
KPC				*e*		13 43 58.8	
KPC				max		13 44 00.9	
	comp=E,452nm,1.1s						
KPC				*e*Sn	**Sn**	**13 44 30.7**	**+0.3**
KPC				*e*Sg	**Sg**	**13 44 51.8**	**-1.9**
KPC				Smax		13 45 00.3	
	comp=E,2μm,1.0s						
MOY	**Mondy**	**5.00**	**254**	*e*PN	**Pn**	**13 43 52.8**	**+2.2**
MOY				*i*		13 44 04.4	
MOY				*e*S	**Sn**	**13 44 50.5**	**+2.4**
MOY				*i*		13 45 12.1	
MOY	**Mondy**	**5.00**	**254**	*e*Pn	**Pn**	**13 43 52.4**	**+1.8**
MOY				*e*		13 44 01.3	
MOY				*e*Pg	**Pb**	**13 44 04.8**	**+1.5**
MOY				Pmax		13 44 09.0	
	comp=E,175nm,0.7s						
MOY				*e*		13 44 49.3	
MOY				*e*Sg	**Sg**	**13 45 09.3**	**-7.3**
MOY				Smax		13 45 12.1	
	comp=E,2μm,1.1s						
NLYR	**Nelyaty**	**5.13**	**49**	*e*PN	**Pn**	**13 43 52.3**	**+0.1**
NLYR				*e*		13 44 08.0	
NLYR				*e*		13 45 14.9	
NLYR

ORL				*e*				13 45 23.4	
ORL					pmax	pmax			
	comp=Z,171nm,0.9s								
ORL					smax	smax			
	comp=N,2μm,1.5s								
ORL	**Orlik**	**5.45**	**265**	⇑ *i* Pn		**Pn**		**13 43 58.0**	**+1.4**
ORL				*e*				13 44 04.3	
ORL					max			13 44 12.2	
	comp=N,172nm,0.9s								
ORL				*e*Sn		**Sn**		**13 44 57.1**	**-1.9**
ORL				*e*Sg		**Sg**		**13 45 23.4**	**-7.3**
ORL					Smax			13 45 27.7	
	comp=N,1μm,1.6s								
ULN	**Ulaanbaatar**	**5.57**	**192**	*d i* PN		**Pn**		**13 44 00.4**	**+2.0**
ULN	**Ulaanbaatar**	**5.57**	**192**	*e* Pn		**Pn**		**13 43 59.4**	**+1.0**
ULN				*e*Pg		Pg		13 44 17.6	-5.1
ULN					Pmax			13 44 25.2	
	comp=N,87nm,0.8s								
ULN				*e*Sg		**Sg**		**13 45 31.1**	**-3.7**
ULN					Smax			13 45 46.7	
	comp=N,2μm,1.8s								
ULN				*e*				13 45 52.5	
ULN	**Ulaanbaatar**	**5.57**	**192**	Pn		**Pn**		**13 43 57.0**	**-1.4**
SONM	**Songino Array**	**5.69**	**196**	Pn		**Pn**		**13 44 01.9**	**+1.8**
	comp=N,3.3nm,0.3s,baz=9.7,slow=13,SNR=46								
SONM					Pg		**Pb**	**13 44 18.3**	**+3.2**
	comp=N,10nm,0.3s,baz=11,slow=15,SNR=9.0								
SONM					Lg	Lg		13 45 33.6	
	comp=N,10nm,0.3s,baz=16,slow=22,SNR=5.7								
	comp=N,24nm,0.6s								
SONM	**Songino Array**	**5.69**	**196**	*e*PN		**Pn**		**13 44 04.2**	**+4.1**
SONM					pmax	pmax			
	comp=Z,3.0nm,0.3s								
SONM	**Songino Array**	**5.69**	**196**	Pn		**Pn**		**13 44 00.6**	**+0.5**
TUP	**Tupik**	**6.74**	**76**	*e*PN		**Pn**		**13 44 14.5**	**+0.2**
TUP				*e*				13 44 36.6	
TUP				*e*				13 46 04.4	
TUP					pmax	pmax			
	comp=Z,116nm,0.9s								
TUP					smax	smax			
	comp=N,4μm,0.9s								
TUP	**Tupik**	**6.74**	**76**	⇓ *i* Pn		**Pn**		**13 44 14.7**	**+0.4**
TUP				*e*Pg		Pb		13 44 38.2	+5.5
TUP				*e*				13 44 42.7	
TUP					max			13 44 44.1	
	comp=N,115nm,1.2s								
TUP				*e*Sg		**Sg**		**13 46 06.2**	**-5.9**
TUP					Smax			13 46 13.7	
	comp=N,4μm,1.0s								
KHNR	**Khani**	**7.39**	**56**	*e*Sg		**Sg**		**13 46 26.9**	**-6.1**
KNGR	**Kungurtug, Tuv**	**7.44**	**253**	*i* PN		**Pn**		**13 44 27.2**	**+3.2**
KNGR					MLR	MLR			
	comp=Z,220nm,9.0s								
KNGR	**Kungurtug, Tuv**	**7.44**	**253**	*e*Pn		**Pn**		**13 44 23.6**	**-0.4**
KNGR				*e*Pg		Pb		13 44 49.5	+4.8
KNGR				*e*Sn		**Sn**		**13 45 43.3**	**-4.7**
KNGR				*e*Sg		Sg		13 46 25.1	-9.4
TDJR	**Todzha**	**7.70**	**268**	*e*		**Pn**		**13 44 31.6**	**+4.1**
TDJR				*e*				13 46 10.6	
TDJR				*e*Sg				13 46 32.5	
HILR	**Hailar Array B**	**7.86**	**114**	Pn		**Pn**		**13 44 29.1**	**-0.6**
	baz=311,slow=14								
HILR					Pg	Pb		13 44 57.2	+5.3
	baz=309,slow=17								
HILR					Lg	Lg		13 46 40.8	
	baz=305,slow=16								
	comp=Z,5.1nm,0.4s								
HIA	**Hailar**	**8.02**	**116**	*c i* PN		**Pn**		**13 44 33.5**	**+1.7**
HIA					pmax	pmax			
	comp=Z,11nm,0.8s								
HIA	**Hailar**	**8.02**	**116**	*e*Pn		**Pn**		**13 44 33.6**	**+1.7**
HIA				*e*Pg				13 45 02.7	
HIA					Pmax			13 45 09.2	
	comp=Z,54nm,0.9s								
HIA				*e*Sg				13 46 46.8	
HIA					Smax			13 47 09.2	
	comp=Z,2μm,3.2s								
HIA				*e*				13 47 22.4	
HIA	**Hailar**	**8.02**	**116**			**Pn**		**13 44 30.8**	**-1.0**
YKLR	**Yuktali**	**8.13**	**61**	*e*Sg				13 46 48.5	
MINR	**Mina**	**8.67**	**286**	*e*Pn		**Pn**		**13 44 41.4**	**+0.6**
MINR				*e*Pg				13 45 11.7	
MINR				*e*Sn		**Sn**		**13 46 14.6**	**-3.6**
MINR				*e*Sg				13 47 03.7	
KZLR	**Kyzyl**	**8.85**	**265**	*e*Sg				13 47 07.6	
HEH	**HeiHe**	**11.97**	**97**	*e*P		**Pn**		**13 45 29.6**	**+3.6**
HEH				S		**Sn**		**13 47 36.1**	**-3.0**
HEH					smax	smax			
	comp=N,880nm,1.0s								
HEH					smax	smax			
	comp=E,520nm,0.9s								
DGZ	**Jazzator, Alta**	**13.73**	**263**	*i* P		**Pn**		**13 45 54.1**	**+4.0**
DGZ					pmax	pmax			
	comp=Z,3.0nm,1.0s								
DGZ					MLR	MLR			
	comp=Z,435nm,11.0s								
YAK	**Yakutsk**	**14.14**	**44**	Lg		Lg		13 49 52.3	
	comp=Z,2.4nm,0.3s,baz=324,slow=20,SNR=9.4								
YAK	**Yakutsk**	**14.14**	**44**	*e*P		**Pn**		**13 45 53.1**	**-2.3**
YAK				*e*S		**Sn**		**13 48 31.3**	**-0.5**
YAK					pmax	pmax			
	comp=Z,21nm,1.0s								
YAK					pmax	pmax			
	comp=N,5.0nm,1.1s								
YAK					pmax	pmax			
	comp=E,13nm,1.4s								
YAK					smax	smax			
	comp=E,64nm,3.8s								
YAK					smax	smax			
	comp=N,28nm,2.7s								
YAK					MLR	MLR			
	comp=Z,473nm,23.0s								
YAK					MLR	MLR			
	comp=N,91nm,16.0s								
YAK					MLR	MLR			
	comp=E,102nm,26.0s								
ZALV	**Zalesovo Beam**	**14.18**	**282**	Pn		**Pn**		**13 45 56.7**	**+0.7**
	comp=E,2.0nm,0.8s,baz=80,slow=9.5,SNR=10								
ZALV					Lg	Lg		13 49 55.6	
	comp=E,0.3nm,0.3s,baz=99,slow=20,SNR=8.1								
ZALV	**Zalesovo Beam**	**14.18**	**282**	*e*P		**P**		**13 46 01.2**	**-2.2**
ZALV	**Zalesovo Beam**	**14.18**	**282**	Pn		**Pn**		**13 45 54.7**	**-1.3**
BJT	**Baijiatuau**	**14.25**	**156**	P		**Pn**		**13 45 56.5**	**-0.6**
BJT	**Baijiatuau**	**14.25**	**156**	Pn		**Pn**		**13 45 56.5**	**-0.6**
GTA2	**Gaotai**	**15.14**	**207**	*e*P		**P**		**13 46 13.4**	**-1.0**
GTA2					LR	LR			
	comp=N,860nm,11.1s								
GTA2					LR	LR			
	comp=E,290nm,11.7s								
GTA2					LR	LR			
	comp=Z,950nm,9.5s								
LZDM	**Lanzhou Array**	**17.72**	**193**	Lg		Lg		13 51 53.9	
	baz=13,slow=30								
USA0B	**Ussuriysk Arra**	**17.78**	**111**	*i* P		**P**		**13 46 44.9**	**+1.4**
USA0B	**Ussuriysk Arra**	**17.78**	**111**	P		**P**		**13 46 44.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**17.78**	**111**	Lg		Lg		13 51 54.1	
	comp=Z,0.1nm,0.3s,baz=315,slow=21,SNR=9.0								
MK31	**Makanchi Array**	**18.12**	**260**	*i* P		**P**		**13 46 48.1**	**+0.9**
MKAR	**Makanchi Array**	**18.12**	**260**	P		**Pn**		**13 46 46.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=66,slow=10,SNR=9.2								
MKAR					Lg	Lg		13 52 01.1	
	baz=68,slow=16,SNR=5.3								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**18.12**	**260**	*e*P		**P**		**13 46 51.8**	**+4.6**
MKAR	**Makanchi Array**	**18.12**	**260**	P		**Pn**		**13 46 45.8**	**-1.1**
KURK	**Kurchatov**	**18.64**	**274**	*i* P		**Pn**		**13 46 55.1**	**+1.9**
KURK					pmax	pmax			
	comp=Z,6.0nm,1.3s								
KURK	**Kurchatov**	**18.64**	**274**	P		**P**		**13 46 50.5**	**-2.4**
KURBB	**Kurchatov Arra**	**18.73**	**274**	P		**P**		**13 46 52.5**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=71,slow=13,SNR=4.2								
KURBB					Lg	Lg		13 52 20.4	
	baz=78,slow=32								
	comp=Z,3.1nm,0.2s								
NRIK	**Noril'sk**	**18.81**	**337**	P		**P**		**13 46 51.8**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=129,slow=9.5,SNR=8.1								
NRIK				S		Sn		13 50 08.0	-17
	comp=Z,15nm,0.8s,baz=132,slow=15,SNR=5.9								
NRIK					Lg	Lg		13 52 20.0	
	comp=Z,0.2nm,0.3s,baz=268,slow=9.3,SNR=4.9								
	comp=Z,4.8nm,0.6s								
NRIK	**Noril'sk**	**18.81**	**337**	*i* P		**Pn**		**13 46 55.4**	**+0.2**
NRIK					pmax	pmax			
	comp=Z,17nm,1.0s								
NRIK					MLR	MLR			
	comp=Z,320nm,13.0s								
NRIK	**Noril'sk**	**18.81**	**337**			**P**		**13 46 54.2**	**-0.4**
NRIK					IAmb	IAmb		13 47 12.4	
	comp=Z,12nm,0.7s								
TIXI	**Tiksi**	**20.40**	**18**	P		**P**		**13 47 10.9**	**-1.0**
	comp=Z,7.6nm,0.4s,baz=237,slow=7.9,SNR=15								
TIXI					Lg	Lg		13 53 06.1	
	comp=Z,0.1nm,0.3s,baz=353,slow=4.2,SNR=4.7								
TIXI					LR	LR		13 55 27.9	
	comp=Z,173nm,18.7s,baz=211,slow=38								
	comp=Z,7.6nm,0.4s								
TIXI	**Tiksi**	**20.40**	**18**	*i* P		**P**		**13 47 11.2**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,18nm,1.0s								
TIXI					MLR	MLR			
	comp=Z,199nm,15.0s								
TIXI	**Tiksi**	**20.40**	**18**			**P**		**13 47 10.9**	**-1.0**
TIXI					IAmb	IAmb		13 47 24.7	
	comp=Z,18nm,0.7s								
TYV	**Tymovskoe**	**20.88**	**83**	*e*P		Pn		13 47 24.9	+5.1
TYV				*e*S		Sn		13 51 21.8	+6.7
TYV					pmax	pmax			
	comp=Z,4.0nm,1.1s								
TYV					pmax	pmax			
	comp=Z,100nm,3.4s								
PDGK	**Podgornoye**	**21.71**	**254**	P		**P**		**13 47 25.9**	**-0.5**
PDGK	**Podgornoye**	**21.71**	**254**			**P**		**13 47 25.9**	**-0.5**
YSS	**Yuzhno-Sakhali**	**22.57**	**93**	*e*P		**P**		**13 47 38.2**	**+2.8**
YSS					pmax	pmax			
	comp=Z,10.0nm,1.0s								
YSS	**Yuzhno-Sakhali**	**22.57**	**93**	P		**P**		**13 47 35.8**	**+0.4**
BVAR	**Borovoye Array**	**22.80**	**285**	P		**P**		**13 47 36.7**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=66,slow=15,SNR=10								
	comp=Z,2.3nm,0.5s								
MA2	**Magadan**	**23.73**	**58**	LR		LR		13 56 46.3	
	comp=Z,84nm,18.5s,baz=282,slow=36								
ASAJ	**Asahikawa**	**23.97**	**99**	LR		LR		13 58 16.9	
	comp=Z,208nm,18.9s,baz=294,slow=39								
SEY	**Seymchan**	**24.50**	**50**	*i* P		**P**		**13 47 56.3**	**+2.1**
SEY					pmax	pmax			
	comp=Z,4.0nm,1.1s								
AAK	**Ala-Archa**	**25.04**	**259**	P		**P**		**13 47 58.0**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=197,slow=19,SNR=5.1								
AAK					Lg	Lg		13 55 43.1	
	comp=Z,0.4nm,0.3s,baz=169,slow=23,SNR=3.6								
	comp=Z,1.6nm,0.3s								
AAK	**Ala-Archa**	**25.04**	**259**	*i* P		**P**		**13 47 58.4**	**-1.1**
AAK					pmax	pmax			
	comp=Z,4.0nm,1.1s								
AAK	**Ala-Archa**	**25.04**	**259**	P		**P**		**13 47 57.2**	**-2.3**
MJAR	**Matsushiro Arr**	**26.52**	**117**	LR		LR		13 59 16.2	
	comp=Z,145nm,18.6s,baz=11,slow=38								
KSH2	**Kashi**	**26.67**	**251**	P		**P**		**13 48 18.3**	**+4.0**
KSH2					pmax	pmax			
	comp=Z,3.0nm,0.8s								
KK31	**Karatay Array**	**27.13**	**263**	P		**P**		**13 48 17.8**	**-0.4**
KK31					pmax	pmax			
	comp=Z,3.0nm,0.9s								
KK31	**Karatay Array**	**27.13**	**263**	P		**P**		**13 48 17.8**	**-0.4**
KKAR	**Karatay Array**	**27.13**	**263**	P		**P**		**13 48 17.3**	**-0.9**
KKAR	**Karatay Array**	**27.13**	**263**	P		**P**		**13 48 17.3**	**-0.9**
SVE	**Sverdlovsk**	**27.29**	**297**	*e*P		P		13 48 29.1	+10
ARTI	**Arti**	**28.61**	**297**	P		**P**		**13 48 32.3**	**+1.0**
ARTI								13 49 19.7	
ARTI								13 51 42.1	
ARTI					S		**S**	**13 53 20.5**	**+1.7**
ARTI					SS		**SnSn**	**13 54 40.1**	**+1.7**
PETK	**Petropavlovsk-**	**28.87**	**70**	P		**P**		**13 48 33.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=320,slow=4.4,SNR=5.2								
	comp=Z,1.1nm,0.8s								
PETK	**Petropavlovsk-**	**28.87**	**70**	P		**P**		**13 48 32.5**	**-1.2**
PET	**Petropavlovsk**	**29.44**	**70**	*i* P		**P**		**13 48 39.7**	**+1.0**
PET					pmax	pmax			
	comp=Z,7.0nm,1.1s								
AB31	**Akbulak array**	**30.29**	**282**	P		**P**		**13 48 46.1**	**-0.2**
ABKAR	**Akbulak array**	**30.29**	**282**	P		**P**		**13 48 45.1**	**-1.1**
BILL	**Bilibino**	**30.41**	**39**	*i* P		**P**		**13 48 48.2**	**+1.1**
BILL					pmax	pmax			
	comp=Z,3.0nm,1.0s								
BILL					MLR	MLR			
	comp=Z,88nm,15.0s								
CHGR	**Chuyangaron**	**30.70**	**258**	*c i* P		**P**		**13 48 50.9**	**+0.8**
CHGR					pmax	pmax			
	comp=Z,13nm,1.0s								
CHGR					MLR	MLR			
	comp=Z,292nm,16.0s								
CHGR	**Chuyangaron**	**30.70**	**258**	P		**P**		**13 48 49.2**	**-0.9**
KIRV	**Kirov**	**32.65**	**303**	*i* P		**P**		**13 49 09.4**	**+2.6**
CMAR	**Chiang Mai Arr**	**35.62**	**196**	P		**P**		**13 49 32.6**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=357,slow=8.7,SNR=7.2								
	comp=Z,0.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**35.62**	**196**	P		**P**		**13 49 31.6**	**-1.4**
BELG	**Belogornoye**	**35.91**	**294**	*i* P		**P**		**13 49 36.0**	**+0.9**
BELG					pmax	pmax			
	comp=Z,1.0nm,1.0s								
BELG					MLR	MLR			
	comp=Z,73nm,19.0s								
OBN	**Obninsk**	**40.49**	**303**	⇑ *e*P		**P**		**13 50 15.1**	**+1.4**
OBN				*e*				13 51 50.9	
OBN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
OBN					MLR	MLR			
	comp=Z,537nm,16.0s								
FINES	**FINESS Array B**	**42.38**	**315**	P		**P**		**13 50 28.3**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=91,slow=9.7,SNR=4.1								
	comp=Z,2.3nm,0.8s								
FINES	**FINESS Array B**	**42.38**	**315**	P		**P**		**13 50 29.8**	**+0.7**
FINES	**FINESS Array B**	**42.38**	**315**	P		**P**		**13 50 29.8**	**+0.7**
KIV	**Kislovodsk**	**43.16**	**285**	*e*P		**P**		**13 50 36.9**	**+1.1**
KIV					pmax	pmax			
	comp=Z,6.0nm,0.9s								
SHA1	**Shidzhatmaz**	**43.31**	**285**	*i* P		**P**		**13 50 37.8**	**+0.6**
E19K	**Redstone River**	**43.79**	**34**	P		**P**		**13 50 40.5**	**+0.1**
E19K					IAmb	IAmb		13 50 42.5	
	comp=Z,8.3nm,1.1s								
H19K	**Roundabout Mou**	**45.06**	**36**			**P**		**13 50 51.0**	**+0.4**
H19K					IAmb	IAmb		13 50 52.8	
	comp=Z,7.0nm,1.1s								
F21K	**Alatna River**	**45.15**	**33**			**P**		**13 50 51.7**	**+0.3**
F21K					IAmb	IAmb		13 50 53.2	
	comp=Z,7.5nm,1.1s								
H21K	**Melozitna River**	**46.25**	**35**	P		**P**		**13 51 00.9**	**+0.9**
H21K					IAmb	IAmb		13 51 02.5	
	comp=Z,6.5nm,1.1s								
AKASG	**Malin Array Be**	**46.60**	**301**	P		**P**		**13 51 03.1**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=56,slow=7.5,SNR=6.0								
	comp=Z,1.7nm,0.6s								
J20K	**Nowinta River**	**46.63**	**37**	P		**P**		**13 51 04.3**	**+1.2**
J20K					IAmb	IAmb		13 51 04.8	
	comp=Z,2.9nm,0.9s								
F24K	**Squaw Lake**	**46.75**	**31**	P		**P**		**13 51 04.9**	**+0.8**
F24K					IAmb	IAmb		13 51 21.4	
	comp=Z,7.6nm,1.5s								
H23K	**Yukon River**	**47.24**	**33**		IAmb	IAmb		13 51 10.2	
	comp=Z,7.2nm,1.2s								
I23K	**Minto, Yukon-K**	**47.72**	**34**	P		**P**		**13 51 12.1**	**+0.6**
HFS	**Hagfors**	**48.21**	**318**	P		**P**		**13 51 14.8**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=69,slow=8.1,SNR=5.0								
	comp=Z,1.5nm,0.6s								
CCB	**Clear Creek Bu**	**48.55**	**34**	P		**P**		**13 51 18.8**	**+0.9**
CCB					IAmb	IAmb		13 51 20.7	
	comp=Z,5.2nm,1.3s								
WRH	**Wood River Hil**	**48.56**	**34**	P		**P**		**13 51 18.9**	**+0.9**
WRH					IAmb	IAmb		13 51 19.7	
	comp=Z,6.0nm,1.1s								
NOA	**NORSAR Array B**	**48.63**	**320**	P		**P**		**13 51 19.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=50,slow=7.0,SNR=2.9								
	comp=Z,0.7nm,0.6s								
PRP	**Porcupine Dome**	**48.74**	**32**	P		**P**		**13 51 20.3**	**+0.7**
PRP					IAmb	IAmb		13 51 31.6	
	comp=Z,3.6nm,0.6s								
IL31		**48.78**	**33**	P		**P**		**13 51 20.6**	**+1.0**
IL31					IAmb	IAmb		13 51 21.8	
	comp=Z,5.8nm,0.9s								
ILAR	**Eielson Array**	**48.78**	**33**	P		**P**		**13 51 19.9**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=301,slow=6.5,SNR=37								
	comp=Z,4.0nm,0.9s								
ILAR	**Eielson Array**	**48.78**	**33**	*e*P		**P**		**13 51 20.5**	**+0.8**
ILAR					pmax	pmax			
	comp=Z,4.0nm,0.9s								
ILAR	**Eielson Array**	**48.78**	**33**			**P**		**13 51 20.4**	**+0.8**
I26K	**Coal Creek Min**	**49.63**	**32**	IAmb		IAmb		13 51 28.2	
	comp=Z,9.1nm,1.4s								
DHY	**Denali Highway**	**49.70**	**35**	IAmb		IAmb		13 51 27.8	
	comp=Z,2.9nm,0.7s								
BUR08	**Bucovina Ar. S**	**50.56**	**300**			**P**		**13 51 33.7**	**0.0**
BURAR	**Bucovina Array**	**50.57**	**300**	P		**P**		**13 51 33.6**	**-0.1**
BURAR					pmax	pmax			
	comp=Z,2.0nm,1.1s								
BURAR	**Bucovina Array**	**50.57**	**300**			**P**		**13 51 33.6**	**-0.1**
K27K	**Chicken**	**50.84**	**32**	IAmb		IAmb		13 51 37.2	
	comp=Z,8.2nm,1.4s								
BRTR	**Keskin Array B**	**51.06**	**287**	P		**P**		**13 51 38.2**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=78,slow=5.4,SNR=6.8								
	comp=Z,1.3nm,0.7s								
BRTR	**Keskin Array B**	**51.06**	**287**	*e*P		**P**		**13 51 38.7**	**+1.1**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**51.06**	**287**	P		**P**		**13 51 38.0**	**+0.4**
KDAK	**Kodiak Island**	**51.17**	**43**	LR		LR		14 15 01.6	
	comp=Z,74nm,18.4s,baz=306,slow=38								
L27K	**Beaver Creek,**	**51.59**	**33**			**P**		**13 51 41.8**	**+0.7**
L27K					IAmb	IAmb		13 51 42.9	
	comp=Z,9.7nm,1.5s								
M27K	**Edge Creek, AK**	**52.06**	**34**	IAmb		IAmb		13 51 47.1	
	comp=Z,6.3nm,1.1s								
L29M	**L29M**	**52.74**	**32**	IAmb		IAmb		13 51 51.8	
	comp=Z,11nm,1.4s								
GERES	**GERESS Array B**	**55.52**	**307**	P		**P**		**13 52 10.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=46,slow=3.9,SNR=3.7								
	comp=Z,0.2nm,0.3s								
GERES	**GERESS Array B**	**55.52**	**307**	*e*P		**P**		**13 52 12.0**	**+1.8**
EKA	**Eskdalemuir Ar**	**58.07**	**321**	P		**P**		**13 52 27.9**	**0.0**
	comp=Z,1.4nm,0.8s,baz=42,slow=9.5,SNR=2.6								
	comp=Z,1.4nm,0.8s								
DLBC	**Dease Lake**	**58.88**	**32**	LR		LR		14 20 32.9	
	comp=Z,50nm,19.8s,baz=322,slow=39								
YKA	**Yellowknife Ar**	**59.60**	**22**	P		**P**		**13 52 37.5**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=335,slow=7.4,SNR=4.3								
	comp=Z,2.1nm,0.8s								
YKA	**Yellowknife Ar**	**59.60**	**22**	*i* P		**P**		**13 52 38.0**	**-0.5**
YKA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
KEST	**Kesra**	**67.31**	**300**	P		**P**		**13 53 29.7**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=229,slow=17,SNR=2.7								
	comp=Z,2.2nm,0.6s								
KEST	**Kesra**	**67.31**	**300**	P		**P**		**13 53 29.2**	**-0.8**
KEST					IAmb	IAmb		13 54 13.0	
	comp=Z,5.2nm,1.1s								
ESDC	**Sonseca Array**	**70.71**	**311**	P		**P**		**13 53 51.1**	**0.0**
	comp=Z,3.0nm,0.9s,baz=35,slow=6.4,SNR=18								
	comp=Z,3.0nm,0.9s								
ESDC	**Sonseca Array**	**70.71**	**311**	P		**P**		**13 53 51.8**	**+0.7**
B08A	**Colville Reser**	**70.81**	**32**	IAmb		IAmb		13 53 53.1	
	comp=Z,4.3nm,0.8s								
EPH	**Ephrata**	**71.61**	**32**			**P**		**13 53 56.3**	**-0.1**
SCHQ	**Schefferville**	**72.14**	**357**	LR		LR		14 27 04.0	
	comp=Z,24nm,18.7s,baz=277,slow=37								
F10A	**Beach Ranch, E**	**73.59**	**31**			**P**		**13 54 08.2**	**-0.1**
MSO	**Missoula**	**73.81**	**29**	IAmb		IAmb		13 54 12.7	
	comp=Z,5.7nm,0.8s								
ULM	**Lac du Bonnet**	**74.73**	**16**	LR		LR		14 30 12.9	
	comp=Z,37nm,18.2s,baz=32,slow=38								
J08A	**Circle Bar Ran**	**75.52**	**34**			**P**		**13 54 19.5**	**0.0**
J08A					IAmb	IAmb		13 54 22.0	
	comp=Z,5.0nm,1.1s								
WRA	**Warramunga Arr**	**76.26**	**155**	P		**P**		**13 54 23.8**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=349,slow=5.8,SNR=10								
	comp=Z,1.8nm,0.8s								
WRA	**Warramunga Arr**	**76.26**	**155**	*e*P		**P**		**13 54 24.0**	**+0.3**
WRA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
WRA	**Warramunga Arr**	**76.26**	**155**	P		**P**		**13 54 23.2**	**-0.5**
WR8	**Warramunga Arr**	**76.31**	**155**	P		**P**		**13 54 23.5**	**-0.5**
YHL	**Hebgen Lake**	**76.40**	**28**	IAmb		IAmb		13 54 26.6	
	comp=Z,4.3nm,1.0s								
HLID	**Hailey**	**76.63**	**31**	IAmb		IAmb		13 54 27.9	
	comp=Z,2.1nm,0.8s								
RLMT	**Red Lodge**	**76.68**	**27**			**P**		**13 54 26.4**	**+0.1**
RLMT					IAmb	IAmb		13 54 27.8	
	comp=Z,2.8nm,0.8s								
PDAR	**Pinedale Array**	**78.78**	**28**	P		**P**		**13 54 37.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=34,slow=2.8,SNR=7.5								
	comp=Z,0.7nm,0.7s								
PDAR	**Pinedale Array**	**78.78**	**28**	P		**P**		**13 54 37.9**	**-0.1**
ASAR	**Alice Springs**	**79.73**	**157**	P		**P**		**13 54 43.3**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=353,slow=5.2,SNR=29								
	comp=Z,1.9nm,0.8s								
ASAR	**Alice Springs**	**79.73**	**157**	P		**P**		**13 54 43.1**	**+0.2**
NVAR	**Mina Array Bea**	**79.97**	**36**	P		**P**		**13 54 44.7**	**+0.1**
	comp=Z,1.

0.6nm,0.9s

*FCIAR **24** 14:00:40.0, 77°.97N × 8°.22E, h10km, station OMEGA has station magnitude of 3.70*
*NAO **24** 14:00:43.1±0.6, 78°.39N × 6°.80E, h10km, ML2.7*
*DNK **24** 14:00:43.5±3.0, 78°.37N × 7°.03E, h20km±61km, ML1.5, Presumed earthquake*
*BER **24** 14:00:46.0±1.9, 78°.45N × 6°.88E, h21km±14km, Mw4.0, ML2.7(NAO), Confirmed Earthquake*
*KOLA **24** 14:00:49.2, 78°.30N × 9°.18E, h0km, ML2.4, Error ellipse: s-maj=16.4km s-min=8.0km az=80.0, Greenland sea*

ISC 24 14:00:43.1±1.4, 78°.41N±0°.05 × 6°.80E±0°.04, h29km±14km, n30, σ2°05/55, 1C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.14**	**61**	Pb	**Pb**	**14 01 04.7**	**+0.5**
KBS				Sb	**Sn**	**14 01 17.4**	**-0.3**
KBS	**Kingsbay**	**1.14**	**61**	*i*P	**Pb**	**14 01 04.7**	**+0.5**
KBS				*i*S	**Sn**	**14 01 17.5**	**-0.1**
BRBB	**Barentsburg B**	**1.55**	**98**	Pb	**Pb**	**14 01 10.8**	**-0.2**
BRBB				Sb	**Sn**	**14 01 28.6**	**+1.0**
BRBB	**Barentsburg B**	**1.55**	**98**	*i*P	**Pb**	**14 01 10.6**	**-0.5**
BRBB				*e*S	**Sn**	**14 01 28.1**	**+0.5**
BRBB	**Barentsburg B**	**1.55**	**98**	P	**Pn**	**14 01 10.4**	**+1.7**
BRBB				S	**Sn**	**14 01 23.4**	**-4.3**
BRBA	**Barentsburg A**	**1.56**	**99**	Pb	**Pb**	**14 01 10.8**	**-0.4**
BRBA				Sb	**Sn**	**14 01 29.0**	**+1.0**
BRBA	**Barentsburg A**	**1.56**	**99**	*e*P	**Pb**	**14 01 10.7**	**-0.6**
BRBA				*e*S	**Sn**	**14 01 28.6**	**+0.6**
BRBA				IAMLHF		14 01 32.3	
	comp=Z,43nm,0.1s						
SPA0	**Spitsbergen Ar**	**1.97**	**92**	Pn	**Pb**	**14 01 17.5**	**-0.6**
	baz=276,slow=11						
SPA0				Sn	**Sb**	**14 01 40.5**	**-1.6**
	baz=283,slow=28						
SPA0	**Spitsbergen Ar**	**1.97**	**92**	Pn	**Pb**	**14 01 17.5**	**-0.6**
SPA0				Sn	**Sb**	**14 01 40.5**	**-1.6**
SPA0	**Spitsbergen Ar**	**1.97**	**92**	*e*P	**Pb**	**14 01 17.6**	**-0.6**
SPA0				*e*S	**Sn**	**14 01 40.0**	**+2.0**
SPITS	**Spitsbergen Ar**	**1.97**	**92**	P	**Pb**	**14 01 17.3**	**-0.8**
SPITS				S	**Sn**	**14 01 37.2**	**-0.8**
HSPB	**Hornsund (broa**	**2.34**	**123**	*e*P	**Pn**	**14 01 21.2**	**+1.7**
HSPB				*e*S	**Sn**	**14 01 48.1**	**+0.9**
HSPB				IAMLHF		14 01 50.4	
	comp=Z,4.8nm,0.2s						
HSPB	**Hornsund (broa**	**2.34**	**123**	*e*P	**Pn**	**14 01 20.0**	**+0.4**
HSPB				*e*S	**Sn**	**14 01 44.7**	**-2.5**
HSPB	**Hornsund (broa**	**2.34**	**123**	S	**Sn**	**14 01 47.1**	**-0.2**
HOPEN	**Hopen**	**4.39**	**107**	Pn	**Pn**	**14 01 49.7**	**+2.1**
HOPEN				Sn	**Sn**	**14 02 37.0**	**-0.7**
HOPEN	**Hopen**	**4.39**	**107**	*e*P	**Pn**	**14 01 49.7**	**+2.1**
HOPEN				*e*S	**Sn**	**14 02 37.1**	**-0.5**
HOPEN				IAMLHF		14 02 38.8	
	comp=Z,12nm,0.2s						
HOPEN	**Hopen**	**4.39**	**107**	*e*P	**Pn**	**14 01 47.6**	**0.0**
HOPEN				*e*S	**Sn**	**14 02 35.2**	**-2.5**
NOR	**Nord**	**5.15**	**319**	Pn	**Pn**	**14 01 59.2**	**+1.3**
NOR	**Nord**	**5.15**	**319**	*e*P	**Pn**	**14 01 59.4**	**+1.5**
NOR	**Nord**	**5.15**	**319**	*i*P	**Pn**	**14 01 59.2**	**+1.3**
NOR				*i*S	**Sn**	**14 02 56.8**	**+0.5**
NOR				IAML		14 03 06.7	
	comp=Z,1.3nm,0.5s						
DAG	**Danmarks Havn**	**5.70**	**266**	*e*P	**Pn**	**14 02 06.8**	**+1.3**
DAG				*e*S	**Sn**	**14 03 08.3**	**-1.5**
DAG				IAMLHF		14 03 08.9	
	comp=Z,1.9nm,0.1s						
DAG	**Danmarks Havn**	**5.70**	**266**	*i*P	**Pn**	**14 02 06.5**	**+1.0**
DAG				*i*S	**Sn**	**14 03 05.8**	**-3.9**
DAG				IAML		14 03 09.1	
	comp=Z,1.9nm,0.2s						
DBG	**Daneborg**	**7.52**	**251**	Pn	**Pn**	**14 02 32.1**	**+1.5**
DBG				Sn	**Sn**	**14 03 48.0**	**-6.6**
DBG	**Daneborg**	**7.52**	**251**	*e*P	**Pn**	**14 02 32.0**	**+1.5**
DBG				*e*S	**Sn**	**14 03 49.6**	**-5.1**
DBG				IAMLHF		14 03 53.7	
	comp=Z,0.4nm,0.2s						
DBG	**Daneborg**	**7.52**	**251**	*i*P	**Pn**	**14 02 31.5**	**+1.0**
DBG				*i*S	**Sn**	**14 03 50.6**	**-4.0**
DBG				IAML		14 03 52.4	
	comp=Z,1.7nm,0.3s						
OMEGA	**Omega**	**7.62**	**53**	*e*P	**Pn**	**14 02 29.5**	**-2.4**
	comp=Z,21nm,1.3s						
OMEGA				*e*S	**Sn**	**14 03 55.2**	**-1.9**
JNW	**Jan Mayen West**	**8.39**	**216**	*e*P	**Pn**	**14 02 46.1**	**+3.6**
JMIC	**Jan Mayen**	**8.44**	**216**	*e*P	**Pn**	**14 02 46.6**	**+3.4**

*AFAD **24** 14:14:41.9, 39°.52N × 38°.62E, h7km±1km, ML2.7*
*ISK **24** 14:14:42.4, 39°.51N × 38°.65E, h6km, ML2.7/12*

ISC 24 14:14:42.3±0.9, 39°.53N±0°.03 × 38°.63E±0°.03, h10km±7km, n19, σ0°58/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILIC	**ilic-Erzincan**	**0.09**	**211**	Pg	**Pg**	**14 14 44.8**	**-0.1**
ILIC				Sg	**Sg**	**14 14 46.9**	**+0.1**
ARPR	**Arapgir-MALATY**	**0.49**	**207**	Pg	**Pg**	**14 14 52.0**	**+0.1**
ARPR				Sg	**Sb**	**14 14 59.4**	**-0.9**
MDIV		**0.49**	**246**	P	**Pg**	**14 14 51.7**	**-0.3**
MDIV				IAML		14 14 59.0	
	comp=N,316nm,0.9s						
MDIV				IAML		14 14 59.0	
	comp=E,208nm,0.3s						
MDIV				S	**Sg**	**14 14 59.2**	**+0.7**
SUSE	**Susehri**	**0.75**	**335**	P	**Pg**	**14 14 56.4**	**-0.5**
KELT	**Kelkit**	**0.79**	**38**	P	**Pg**	**14 14 56.6**	**-1.0**
ALUC	**Giresun/Alucra**	**0.82**	**8**	P	**Pg**	**14 14 57.7**	**-0.5**
TNCL	**Tunceli-Merkez**	**0.82**	**120**	P	**Pg**	**14 14 57.8**	**-0.4**
HEKM	**Malatya_Hekimh**	**0.83**	**219**	P	**Pg**	**14 14 58.1**	**-0.2**
EUZM	**Uzumlu**	**0.85**	**77**	P	**Pg**	**14 14 58.2**	**-0.4**
ERZN	**Erzincan**	**0.85**	**86**	Pg	**Pg**	**14 14 58.8**	**+0.1**
ERZN				Sg	**Sb**	**14 15 10.9**	**+0.2**
ESGZ	**Sivrice-Elazig**	**1.15**	**163**	Pn	**Pb**	**14 15 04.2**	**-0.1**
ESGZ				Sn	**Sn**	**14 15 20.4**	**0.0**
ESIJ	**Sivrice-Elazig**	**1.20**	**153**	Pn	**Pn**	**14 15 05.4**	**+0.1**
MDYL	**Doganyol-Malat**	**1.25**	**165**	Pn	**Pn**	**14 15 06.3**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.27**	**155**	Pn	**Pg**	**14 15 05.9**	**-0.7**
SVSK	**Karacayir**	**1.31**	**288**	Pn	**Pn**	**14 15 06.8**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.49**	**93**	Pn	**Pb**	**14 15 09.9**	**-0.2**
BNGB	**Bingl**	**1.68**	**108**	Pn	**Pb**	**14 15 12.9**	**-0.5**
KTUT	**Trabzon**	**1.70**	**31**	Pn	**Pb**	**14 15 13.4**	**-0.2**
CHOM	**Cayeli-Rize**	**2.26**	**45**	Pn	**Pn**	**14 15 21.3**	**+1.6**

*IDC **24** 14:18:43.1±0.9, 33°.20N × 86°.76E, h0km, mb3.7/10, mbtmp3.7/14, ML3.5/4, MS3.5/31, Error ellipse: s-maj=37.1km s-min=15.7km az=54.0*

ISC 24 14:18:48.2±0.9, 33°.3N±0°.1 × 86°.9E±0°.2, h35km, n36, σ1°28/14, mb3.8/8, MS3.6/27, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.50**	**317**	Pn	**Pn**	**14 21 56.8**	**-0.4**
	0.4nm,0.3s,baz=128,slow=18,SNR=3.9						
AAK				LR	LR	14 28 37.0	
	comp=Z,80nm,19.1s,baz=132,slow=44 1.4nm,0.4s						
MKAR	**Makanchi Array**	**13.93**	**347**	Pn	**Pn**	**14 22 00.8**	**-2.2**
	baz=155,slow=12,SNR=7.2						
MKAR				LR	LR	14 28 37.9	
	comp=Z,113nm,19.2s,baz=158,slow=42 1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.31**	**141**	P	**P**	**14 22 57.2**	**-2.1**
	0.2nm,0.3s,baz=325,slow=13,SNR=7.0						
CMAR				LR	LR	14 31 01.0	
	comp=Z,77nm,19.0s,baz=320,slow=40 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**18.37**	**343**	P	**P**	**14 22 59.3**	**-0.4**
	0.1nm,0.3s,baz=160,slow=12,SNR=15						
KURBB				LR	LR	14 31 08.1	
	comp=Z,113nm,19.3s,baz=164,slow=40 1.0nm,0.2s						
SONM	**Songino Array**	**20.67**	**40**	P	**P**	**14 23 26.8**	**+1.8**
	1.2nm,0.9s,baz=229,slow=13,SNR=7.0						
SONM				LR	LR	14 32 01.8	
	comp=Z,66nm,19.1s,baz=220,slow=38 1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**20.70**	**357**	P	**P**	**14 23 25.3**	**+0.2**
	2.2nm,0.5s,baz=180,slow=10,SNR=19						
ZALV				LR	LR	14 31 59.1	
	comp=Z,63nm,19.6s,baz=217,slow=38 2.2nm,0.5s						
BVAR	**Borovoye Array**	**23.00**	**334**	P	**P**	**14 23 48.8**	**-0.9**
	0.6nm,0.4s,baz=134,slow=11,SNR=5.1 0.6nm,0.4s						
AKTO	**Aktyubinsk**	**27.24**	**318**	LR	LR	14 36 24.6	
	comp=Z,83nm,20.8s,baz=58,slow=39						
ARTI	**Arti**	**30.30**	**328**	LR	LR	14 38 33.3	
	comp=Z,126nm,19.2s,baz=128,slow=39						
KSRS	**Korea Array**	**33.53**	**71**	LR	LR	14 39 26.8	
	comp=Z,28nm,20.6s,baz=210,slow=37						
KBZ	**Khabaz**	**35.59**	**300**	LR	LR	14 43 52.4	
	comp=Z,76nm,18.8s,baz=76,slow=42						
NRIK	**Noril'sk**	**36.09**	**0**	LR	LR	14 41 57.4	
	comp=Z,57nm,19.9s,baz=86,slow=38						
TGY	**Tagaytay City**	**36.34**	**114**	LR	LR	14 39 46.8	
	comp=Z,134nm,20.3s,baz=178,slow=35						
ASF	**Jabal al Asfar**	**41.74**	**283**	LR	LR	14 46 45.1	
	comp=Z,71nm,18.5s,baz=26,slow=40						
MMAI	**Mount Meron Ar**	**42.73**	**284**	LR	LR	14 47 29.0	
	comp=Z,70nm,18.9s,baz=74,slow=40						
BRTR	**Keskin Array B**	**42.75**	**294**	LR	LR	14 47 19.3	
	comp=Z,47nm,21.5s,baz=102,slow=40						
ASAJ	**Asahikawa**	**44.04**	**59**	LR	LR	14 46 30.0	
	comp=Z,56nm,18.5s,baz=310,slow=38						
EIL	**Elat**	**44.07**	**280**	LR	LR	14 48 21.8	
	comp=Z,72nm,19.3s,baz=88,slow=40						
DAV	**Davao City (W)**	**44.31**	**117**	LR	LR	14 46 24.6	
	comp=Z,58nm,18.3s,baz=352,slow=38						
AKASG	**Malin Array Be**	**45.04**	**311**	P	**P**	**14 26 60.0**	**-0.3**
	0.5nm,0.4s,baz=88,slow=6.3,SNR=4.9						
AKASG				LR	LR	14 49 45.2	
	comp=Z,60nm,18.4s,baz=59,slow=41 0.5nm,0.4s						
MLR	**Muntele Rosu**	**47.58**	**304**	LR	LR	14 51 32.0	
	comp=Z,89nm,18.4s,baz=53,slow=41						
JCJ	**Chichijima**	**47.73**	**82**	LR	LR	14 49 11.6	
	comp=Z,34nm,18.3s,baz=116,slow=38						
KAPI	**Kappang**	**49.20**	**134**	LR	LR	14 53 03.7	
	comp=Z,15nm,20.5s,baz=304,slow=42						
ARCES	**ARCESS Array B**	**49.26**	**336**	P	**P**	**14 27 34.1**	**+1.1**
	1.9nm,0.9s,baz=123,slow=8.8,SNR=2.4						
ARCES				LR	LR	14 50 16.7	
	comp=Z,60nm,18.1s,baz=108,slow=38 1.9nm,0.9s						
VRAC	**Vranov**	**53.27**	**310**	LR	LR	14 54 51.0	
	comp=Z,78nm,19.1s,baz=86,slow=41						
HFS	**Hagfors**	**53.54**	**323**	P	**P**	**14 28 05.3**	**+0.3**
	2.1nm,0.8s,baz=110,slow=6.9,SNR=4.2 2.1nm,0.8s						
NOA	**NORSAR Array B**	**54.68**	**325**	P	**P**	**14 28 13.8**	**+0.4**
	2.3nm,1.1s,baz=85,slow=8.0,SNR=2.7						
NOA				LR	LR	14 53 14.5	
	comp=Z,52nm,18.9s,baz=90,slow=38 2.3nm,1.1s						
GERES	**GERESS Array B**	**55.23**	**310**	P	**P**	**14 28 18.2**	**+0.5**
	0.8nm,0.6s,baz=52,slow=6.9,SNR=5.5 0.8nm,0.6s						
DAVOX	**Davos/Dischmat**	**58.24**	**308**	LR	LR	14 56 58.1	
	comp=Z,54nm,19.6s,baz=82,slow=39						
EKA	**Eskdalemuir Ar**	**63.38**	**320**	LR	LR	14 58 33.8	
	comp=Z,61nm,19.4s,baz=76,slow=38						
BORG	**Borgarnes**	**67.59**	**334**	LR	LR	14 58 37.8	
	comp=Z,24nm,18.8s,baz=316,slow=35						
WRA	**Warramunga Arr**	**69.67**	**132**	P	**P**	**14 29 53.9**	**-0.4**
	0.3nm,0.5s,baz=326,slow=6.6,SNR=7.9 0.3nm,0.5s						
ESDC	**Sonseca Array**	**70.25**	**305**	LR	LR	15 05 53.1	
	comp=Z,21nm,20.2s,baz=162,slow=40						
ASAR	**Alice Springs**	**72.22**	**135**	P	**P**	**14 30 11.3**	**+1.6**
	0.3nm,0.5s,baz=328,slow=6.5,SNR=5.7 0.3nm,0.5s						
FRB	**Frobisher Bay**	**81.34**	**349**	LR	LR	15 12 36.7	
	comp=Z,33nm,18.1s,baz=60,slow=40						
SCHQ	**Schefferville**	**89.36**	**345**	LR	LR	15 17 05.4	
	comp=Z,20nm,18.8s,baz=75,slow=39						

IDC 24 14:22:23.0±328.0, 57°.66N × 29°.35E, h0km, Error ellipse: s-maj=129.4km s-min=87.2km az=99.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.38**	**99**	I	I	14 51 20.0	
	baz=282,slow=320,SNR=1.5						
I37NO	**I37NO**	**12.40**	**342**	I	I	15 30 52.6	
	baz=146,slow=316,SNR=0.8						
I26DE	**FREYUNG INFRAS**	**12.83**	**233**	I	I	15 42 10.0	
	baz=38,slow=325,SNR=0.7						

*IDC **24** 14:41:14.8±3.9, 8°.00S × 111°.75E, h88km±43km, mb3.7/8, mbtmp4.0/10, Error ellipse: s-maj=60.1km s-min=14.1km az=46.0*
*DJA **24** 14:41:19.1±0.4, 8°S ± 7° × 111°2E ± °, h105km±4km, M4.0/24, MLv4.0/24*

ISC 24 14:41:15.8±0.8, 8°.59S±0°.10 × 111°.51E±0°.05, h100km, n27, σ3°13/26, mb3.9/8, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJI	**Sawahan-Nganju**	**0.84**	**17**	P	**Pn**	**14 41 38.2**	**+3.4**
SNJI				S	**Sn**	**14 41 52.7**	**+3.7**
SJI	**Sawahan**	**0.89**	**17**	P	**Pn**	**14 41 37.6**	**+2.5**
WOJI	**Wonogiri, Jawa**	**0.94**	**322**	P	**Pn**	**14 41 39.1**	**+3.5**
WOJI				S	**Sn**	**14 41 54.5**	**+4.0**
UGM	**Wanagama**	**1.18**	**304**	P	**Pn**	**14 41 42.0**	**+3.7**
NGJI	**Ngawi**	**1.21**	**358**	P	**Pn**	**14 41 42.2**	**+3.5**
YOGI	**Yogyakarta**	**1.42**	**302**	P	**Pn**	**14 41 44.5**	**+3.4**
SMRI	**Semarang**	**1.86**	**325**	P	**Pn**	**14 41 50.0**	**+3.4**
BLJI	**Banyuglugur**	**2.23**	**68**	P	**Pn**	**14 41 53.4**	**+2.0**
JAGI	**Jajag, Banyuwa**	**2.62**	**88**	P	**Pn**	**14 41 59.0**	**+2.5**
CTJI	**Waduk Cacaban**	**2.79**	**304**	P	**Pn**	**14 42 02.3**	**+3.6**
ABJI	**Asem Bagus**	**2.81**	**74**	P	**Pn**	**14 42 01.2**	**+2.1**
KPJI	**Karang Pucung**	**2.84**	**296**	P	**Pn**	**14 42 03.6**	**+4.2**
RTBI	**Rangdo, Negare**	**3.40**	**88**	P	**Pn**	**14 42 10.4**	**+3.4**
SRBI	**Singaraja**	**3.70**	**83**	P	**Pn**	**14 42 13.1**	**+2.1**
LEM	**Lembang**	**4.23**	**294**	P	**Pn**	**14 42 17.6**	**-0.8**
	7.7nm,0.4s,baz=167,slow=20,SNR=3.6						
FITZ	**Fitz Crossi**	**16.68**	**126**	P	**P**	**14 45 05.2**	**+1.0**
	0.9nm,0.3s,baz=301,slow=13,SNR=26						
FITZ				S	Sn	14 47 56.8	-12
	2.5nm,0.4s,baz=5.9,slow=22,SNR=8.4						
WRA	**Warramunga Arr**	**24.80**	**120**	P	**P**	**14 46 29.6**	**+0.9**
	2.2nm,0.9s,baz=294,slow=11,SNR=23 2.2nm,0.9s						
ASAR	**Alice Springs**	**26.16**	**128**	P	**P**	**14 46 42.8**	**+1.7**
	1.3nm,0.3s,baz=302,slow=8.9,SNR=25 1.3nm,0.3s						
STKA	**Stephens Creek**	**36.30**	**134**	P	**P**	**14 48 12.1**	**+2.2**
	3.5nm,0.7s,baz=314,slow=8.5,SNR=7.6 3.5nm,0.7s						
H08S2	**Diego Garcia H**	**38.62**	**268**	T	T	15 29 56.1	
	baz=94						
H08S3	**Diego Garcia H**	**38.63**	**269**	T	T	15 29 52.4	
	baz=94						
H08S1	**Diego Carcia H**	**38.64**	**268**	T	T	15 29 58.2	
	baz=94						
SONM	**Songino Array**	**56.36**	**356**	P	**P**	**14 50 42.5**	**-4.1**
	0.9nm,0.5s,baz=174,slow=8.6,SNR=4.2 0.9nm,0.5s						
MKAR	**Makanchi Array**	**60.97**	**337**	P	**P**	**14 51 16.1**	**-2.4**
	0.9nm,0.5s,baz=151,slow=7.3,SNR=17 0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**66.26**	**343**	P	**P**	**14 51 49.7**	**-3.3**
	0.8nm,0.5s,baz=157,slow=7.0,SNR=4.5 0.8nm,0.5s						
PETK	**Petropavlovsk-**	**72.88**	**27**	P	**P**	**14 52 30.6**	**-3.2**
	1.0nm,1.0s,baz=327,slow=2.3,SNR=4.4 1.0nm,1.0s						
KBZ	**Khabaz**	**80.83**	**317**	P	**P**	**14 53 17.7**	**-1.0**
	1.6nm,0.8s,baz=57,slow=1.6,SNR=3.8 1.6nm,0.8s						

*IDC **24** 15:02:52.5±6.7, 59°.41S × 25°.60W, h169km±62km, mb3.8/5, mbtmp4.4/6, MS3.2/1, Error ellipse: s-maj=35.7km s-min=22.3km az=115.0*

ISC 24 15:02:41.6±1.2, 60°.4S±0°.2 × 24°.2W±0°.2, h35km, n10, σ0°52/7, mb4.0/4, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TROLL	**Troll, Antarti**	**15.63**	**149**	⇑P	**P**	**15 06 23.0**	**+0.2**
	comp=Z,654nm,0.4s						
PMSA	**Palmer Station**	**18.60**	**239**	P	**P**	**15 06 55.0**	**-0.4**
	comp=Z,22nm,0.4s,baz=93,slow=22,SNR=5.3						
QSPA	**South Pole Qui**	**29.80**	**180**	P	**P**	15 08 52.9	+8.1
	comp=Z,1.7nm,0.7s,baz=209,slow=2.2,SNR=14 comp=Z,1.7nm,0.7s						
PLCA	**Paso Flores**	**34.45**	**284**	LR	LR	15 21 02.5	
	comp=Z,41nm,20.1s,baz=166,slow=32						
BOSA	**Boshof**	**45.80**	**69**	P	**P**	**15 10 59.5**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=210,slow=5.7,SNR=3.7 comp=Z,2.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.22**	**26**	P	**P**	15 14 18.5	-7.5
	comp=Z,5.6nm,0.7s,baz=193,slow=6.3,SNR=26 comp=Z,5.6nm,0.7s						
STKA	**Stephens Creek**	**87.28**	**168**	P	**P**	**15 15 24.4**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=207,slow=6.8,SNR=2.9 comp=Z,2.4nm,0.8s						
ASAR	**Alice Springs**	**94.31**	**160**	P	**P**	**15 15 57.1**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=194,slow=4.8,SNR=3.3 comp=Z,0.6nm,0.9s						
SONM	**Songino Array**	**149.22**	**92**	PKPbc	**PKPdf**	**15 22 21.1**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=233,slow=1.9,SNR=8.8						
ILAR	**Eielson Array**	**154.07**	**304**	PKPbc	**PKPdf**	**15 22 28.6**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=90,slow=3.1,SNR=6.0						

*MEX **24** 15:11:04.4±0.5, 14°.51N × 92°.33W, h77km±7km, MD3.8*
*GCG **24** 15:11:06.9±0.8, 14°.65N × 92°.26W, h51km±10km, MD4.2, Presumed earthquake*

ISC 24 15:10:59.7±2.3, 14°.21N±0°.09 × 92°.48W±0°.07, h31km±15km, n14, σ2°04/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.73**	**16**	*e*P	**Pn**	**15 11 15.7**	**+1.9**
THIG				*e*S	**Sn**	**15 11 23.9**	**+0.1**
THIG		**0.73**	**16**	*e*P	**Pn**	**15 11 15.6**	**+1.9**
RTAL	**Retalhuleu**	**0.82**	**67**	*e*P	**Pn**	**15 11 19.4**	**+4.3**
RTAL				*i*S	**Sn**	**15 11 29.6**	**+3.4**
PATR	**El Naranjo**	**0.94**	**15**	*i*P	**Pn**	**15 11 17.6**	**+0.7**
PATR				*e*S	**Sn**	**15 11 27.6**	**-1.7**
CHUJ	**Union Juarez**	**0.95**	**22**	*e*P	**Pn**	**15 11 18.0**	**+0.9**
CHUJ				*e*S	**Sn**	**15 11 28.3**	**-1.5**
PAVE	**Pavencul**	**1.02**	**17**	*e*P	**Pb**	**15 11 18.9**	**-0.2**
PAVE				*e*S	**Sn**	**15 11 30.0**	**-1.5**
STG5	**El Palmar, Qui**	**1.11**	**80**	*e*P	**Pn**	**15 11 20.3**	**+1.1**
STG5				*e*S	**Sn**	**15 11 31.4**	**-2.1**
STG8	**El Palmar, Qui**	**1.12**	**77**	*i*P	**Pn**	**15 11 20.4**	**+1.0**
STG8				*e*S	**Sn**	**15 11 31.9**	**-1.9**
HUEH	**Huehuetenango**	**1.45**	**40**	*e*P	**Pb**	**15 11 27.0**	**+0.7**
HUEH				*e*S	**Sb**	**15 11 43.5**	**-1.1**
FG8	**Yepocapa, Chim**	**1.86**	**88**	*e*P	**Pn**	**15 11 29.1**	**-0.4**
FG16	**Alotenango, Sa**	**1.91**	**88**	*e*P	**Pn**	**15 11 30.1**	**-0.1**
APG	**El Apazote**	**2.10**	**68**	*e*P	**Pb**	**15 11 36.5**	**-0.8**
TGIG		**2.63**	**346**	*e*P	**Pn**	**15 11 42.3**	**+2.3**
TGIG				*e*S	**Sn**	**15 12 07.4**	**-3.6**
CMIG	**Matias Romero**	**3.69**	**321**	*e*P	**Pn**	**15 11 56.6**	**+2.0**
CMIG				*e*S	**Sn**	**15 12 35.4**	**-1.6**

*NEIC **24** 15:27:21.0±1.6, 47°.50N × 92°.66W±0°.04, h0km±2km, mb_Lg2.8/23, ML3.0/12, Error ellipse: s-maj=4.3km s-min=3.4km az=253.0*
*IDC **24** 15:27:25.0±3.6, 47°.59N × 93°.06W, h0km, mbtmp2.7/2, ML0.7/1, Error ellipse: s-maj=39.6km s-min=17.4km az=88.0*

ISC 24 15:27:19.7±1.1, 47°.50N±0°.05 × 92°.65W±0°.05, h0km, n22, σ1°14/12, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.90**	**60**		**Pb**	**15 27 37.5**	**-0.6**
EYMN				IAML		15 27 54.4	
	334nm,1.4s						
E38A	**The Farm, Brul**	**1.16**	**140**		**Pn**	**15 27 43.9**	**+0.7**
E38A				IAML		15 28 04.7	
	275nm,0.5s						
E38A				IAML		15 28 04.8	
	255nm,0.5s						
SPMN	**Marine on St.**	**2.28**	**183**		**Pb**	**15 28 01.0**	**-0.6**
EPLO	**Experimental L**	**2.29**	**342**		**Pb**	**15 28 00.4**	**-1.5**
AGMN	**Agassiz Nation**	**2.31**	**292**		**Pn**	**15 27 59.0**	**+0.1**
AGMN				IAML		15 28 41.4	
	128nm,0.7s						
TBO	**Thunder Bay**	**2.46**	**61**	Pn	**Pn**	**15 28 01.5**	**+0.5**
TBO				IAmb_Lg		15 28 43.7	
	comp=Z,25nm,1.0s						
TBO				IAML		15 28 44.3	
	comp=N,89nm,1.4s						
TBO				IAML		15 28 50.6	
	comp=E,76nm,1.2s						
G40A	**Rib Lake**	**2.80**	**142**	IAmb_Lg		15 28 56.7	
	comp=Z,20nm,0.9s						
F33A	**5 Mile Ranch,**	**3.01**	**238**	Pn	**Pn**	**15 28 08.8**	**+0.3**
F33A				IAmb_Lg		15 28 59.2	
	comp=Z,23nm,0.8s						
ULM	**Lac du Bonnet**	**3.48**	**324**	Pn	**Pn**	**15 28 17.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=138,slow=14,SNR=1.2						
ULM				Pg	**Pb**	**15 28 21.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=140,slow=16,SNR=9.2						
ULM				Lg	Lg	15 29 05.9	
	comp=Z,5.3nm,0.3s,baz=212,slow=14,SNR=22 comp=Z,1.6nm,0.8s						
ULM	**Lac du Bonnet**	**3.48**	**324**	Pn	**Pn**	**15 28 16.6**	**+1.6**
I10CA	**LAC DU BONNET**	**3.51**	**322**	I	I	15 47 30.0	
	baz=144,slow=315,SNR=3.8						
I37A	**Lemond,

PS4A	**Pavlof South-4**	**1.16**	**293**			**Pn**	**15 40 06.9 +0.2**
PS4A						**Sn**	**15 40 21.5 +0.2**
VNKR	**Veniaminof 5**	**1.19**	**17**			**Pn**	**15 40 07.7 +0.6**
VNKR						**Sn**	**15 40 22.6 +0.5**
VNSW	**Veniaminof 7**	**1.20**	**12**			**Pn**	**15 40 07.8 +0.5**
PN7A	**Pavlof North-7**	**1.26**	**296**			**Pn**	**15 40 08.7 +0.5**
DTNA	**Dutton South F**	**1.32**	**282**			**Sn**	**15 40 26.1 +0.8**
DT1	**Dutton Round H**	**1.33**	**280**			**Sn**	**15 40 25.8 +0.2**
VNSS	**Veniaminof 8**	**1.36**	**13**			**Pn**	**15 40 10.8 +1.1**
VNFG	**Fog Glacier, M**	**1.41**	**10**			**Pn**	**15 40 11.3 +1.1**
CHGN	**Chignik**	**1.67**	**32**			**Pn**	**15 40 14.7 +1.1**
CHGN					Sn	**Sn**	**15 40 35.7 +2.0**
CHGN					IAML		15 40 38.1
	comp=N,798nm,0.2s						
ANPB	**Aniakchak Plen**	**2.13**	**26**			**Pn**	**15 40 21.5 +1.4**
ISNN	**Isanotski Nort**	**2.19**	**270**			**Pn**	**15 40 22.8 +2.0**
ANNE	**Aniakchak Nort**	**2.29**	**28**			**Pn**	**15 40 23.9 +1.7**
CHIR	**Chirikof Islan**	**2.66**	**68**	Pn		**Pn**	**15 40 28.6 +1.4**
CHIR					IAML		15 41 12.8
	comp=E,197nm,1.1s						
CHIR					IAML		15 41 14.5
	comp=N,246nm,0.8s						
PLK5	**Peulik 5**	**3.55**	**28**			**Pn**	**15 40 41.0 +1.5**
UNV	**Unalaska Valle**	**3.95**	**257**	Pn		**Pn**	**15 40 46.3 +1.4**
UNV					IAML		15 42 03.1
	comp=N,40nm,1.2s						
ANCK	**Angle Creek**	**4.14**	**35**			**Pn**	**15 40 49.0 +1.4**
ACHA	**Angle Creek He**	**4.20**	**36**			**Pn**	**15 40 50.4 +1.9**
MGLS	**Mageik Landsli**	**4.20**	**38**			**Pn**	**15 40 49.8 +1.4**
KABU	**Katmai Buttres**	**4.26**	**36**			**Pn**	**15 40 50.5 +1.2**
P16K	**Nushagak River**	**4.28**	**14**	Pn		**Pn**	**15 40 51.1 +1.7**
P16K					IAML		15 42 15.5
	comp=N,88nm,0.8s						
P16K					IAML		15 42 32.0
	comp=E,76nm,1.3s						
O15K	**Ungalikthiuk R**	**4.29**	**1**			**Pn**	**15 40 49.8 +0.3**
O15K					IAML		15 42 17.0
	comp=E,32nm,0.9s						
KAKN	**Katmai Knife C**	**4.36**	**37**			**Pn**	**15 40 52.0 +1.4**
O14K	**Tigyukauivet M**	**4.42**	**352**			**Pn**	**15 40 51.9 +0.6**
OHAK	**Old Harbor**	**4.42**	**56**			**Pn**	**15 40 51.8 +0.4**
OHAK					IAML		15 42 06.2
	comp=E,39nm,0.9s						
OHAK					IAML		15 42 08.7
	comp=N,52nm,1.0s						
KAWH	**Katmai**	**4.52**	**37**			**Pn**	**15 40 53.9 +1.2**
KARR	**Katmai Rainbow**	**4.64**	**37**			**Pn**	**15 40 55.8 +1.4**
Q18K	**Katmai Hardscr**	**4.65**	**34**			**Pn**	**15 40 55.9 +1.3**
KAHG	**Katmai Hook Gl**	**4.69**	**38**			**Pn**	**15 40 56.5 +1.4**
P17K	**Kvichak River**	**4.72**	**23**			**Pn**	**15 40 57.7 +2.3**
O16K	**Kokwok River B**	**4.81**	**12**			**Pn**	**15 40 57.8 +1.0**
KDAK	**Kodiak Island**	**5.03**	**52**	Pn		**Pn**	**15 41 00.2 +0.5**
	comp=N,1.6nm,0.3s,baz=203,slow=5.2,SNR=33						
KDAK					Sn	**Sn**	**15 41 52.8 -3.8**
	comp=N,1.0nm,0.3s,baz=304,slow=17,SNR=1.6						
KDAK					Lg	Lg	15 42 16.7
	comp=N,2.7nm,0.3s,baz=38,slow=14,SNR=10						
KDAK					LR	LR	15 43 23.4
	comp=N,40nm,19.4s,baz=228,slow=42						
	comp=N,3.5nm,0.3s						
KDAK	**Kodiak Island**	**5.03**	**52**			**Pn**	**15 41 00.2 +0.5**
KDAK					IAML		15 42 22.4
	comp=N,37nm,0.6s						
KDAK					IAML		15 42 25.0
	comp=N,43nm,0.9s						
N14K	**Kuskokwak Cree**	**5.12**	**350**			**Pn**	**15 41 01.5 +0.6**
O17K	**Koliganek Bris**	**5.13**	**17**			**Pn**	**15 41 02.1 +1.1**
P18K	**Big Mountain,**	**5.19**	**28**			**Pn**	**15 41 03.2 +1.2**
N15K	**Kwethluk River**	**5.28**	**359**			**Pn**	**15 41 04.0 +0.8**
N15K					IAML		15 42 40.2
	comp=E,28nm,0.7s						
N15K					IAML		15 42 50.4
	comp=N,28nm,1.4s						
O18K	**Koktuh Hills**	**5.60**	**26**			**Pn**	**15 41 08.6 +1.1**
N16K	**Nishlik Lake**	**5.62**	**6**			**Pn**	**15 41 08.8 +0.9**
M13K	**Dall Lake**	**5.81**	**343**			**Pn**	**15 41 11.4 +1.1**
N17K	**Nushagak Hills**	**5.84**	**14**			**Pn**	**15 41 11.3 +0.5**
M16K	**Timber Creek**	**6.16**	**5**			**Pn**	**15 41 16.0 +0.8**
N18K	**Kilae Creek**	**6.19**	**19**			**Pn**	**15 41 16.6 +1.0**
M11K	**Mekoryuk**	**6.42**	**331**	Pn		**Pn**	**15 41 19.3 +0.5**
L14K	**Kuka Creek**	**6.61**	**349**			**Pn**	**15 41 21.6 +0.3**
N19K	**Bonanza Creek**	**6.61**	**24**			**Pn**	**15 41 22.9 +1.4**
L16K	**Owhat River**	**6.83**	**2**			**Pn**	**15 41 24.4 0.0**
M18K	**Stony River**	**6.96**	**17**			**Pn**	**15 41 27.0 +0.8**
L17K	**Donlin**	**7.31**	**6**			**Pn**	**15 41 31.0 +0.1**
K15K	**Wolf Creek Mou**	**7.46**	**354**	Pn		**Pn**	**15 41 33.6 +0.6**
K13K	**Kusilvak Mount**	**7.46**	**343**			**Pn**	**15 41 33.7 +0.8**
L18K	**Granite Mounta**	**7.54**	**12**			**Pn**	**15 41 34.0 -0.1**
SLKM	**Skilak Lake**	**7.67**	**39**			**Pn**	**15 41 37.5 +1.5**
L19K	**White Mountain**	**7.78**	**18**			**Pn**	**15 41 38.8 +1.5**
J14K	**Nanvaranak Lak**	**8.08**	**348**			**Pn**	**15 41 41.8 +0.4**
J16K	**Anvik River**	**8.41**	**358**			**Pn**	**15 41 46.2 +0.2**
J17K	**VABM Dome**	**8.53**	**3**	Pn		**Pn**	**15 41 47.1 -0.6**
PWL	**Port Wells**	**8.61**	**41**	Pn		**Pn**	**15 41 50.0 +1.3**
J18K	**Innoko River**	**8.75**	**10**	Pn		**Pn**	**15 41 51.3 +0.7**
HIN	**Hinchinbrook I**	**9.08**	**47**			**Pn**	**15 41 56.0 +0.8**
FID	**Port Fidalgo**	**9.28**	**45**	Pn		**Pn**	**15 41 57.1 -0.8**
J19K	**Poorman**	**9.38**	**12**			**Pn**	**15 41 59.9 +0.5**
SCM	**Sheep Creek Mo**	**9.61**	**39**			**Pn**	**15 42 02.6 +0.2**
J20K	**Nowinta River**	**9.76**	**15**			**Pn**	**15 42 04.7 +0.3**
KLU	**Klutina**	**9.92**	**43**			**Pn**	**15 42 07.4 +0.7**
H17K	**Granite Mounta**	**10.07**	**0**			**Pn**	**15 42 08.1 -0.5**
N25K	**Chitina, Valde**	**10.51**	**44**			**Pn**	**15 42 15.5 +0.7**
ILAR	**Eielson Array**	**11.86**	**28**	Pn		**Pn**	**15 42 29.2 -3.9**
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=8.0						
	comp=N,0.2nm,0.5s						
BCAR	**Beaver Creek A**	**12.41**	**41**	Pn		**Pn**	**15 42 41.3 +0.6**
M29M	**Somme Creek**	**13.46**	**47**	Pn		**Pn**	**15 42 55.0 -0.1**
I28M	**Miner Creek**	**14.45**	**35**	Pn		**Pn**	**15 43 09.7 +1.2**
G29M	**Pine Creek**	**15.97**	**32**	Pn		**Pn**	**15 43 28.5 +0.5**
G29M				IAmb	IAmb	IAmb	15 43 31.9
	comp=Z,2.8nm,0.7s						
H31M	**Peel River**	**16.59**	**39**	IAmb	IAmb	IAmb	15 43 55.5
	comp=Z,4.4nm,1.0s						
DLBC	**Dease Lake**	**16.77**	**66**	Pn		**Pn**	**15 43 36.9 -1.3**
	comp=Z,0.3nm,0.3s,baz=285,slow=10,SNR=2.3						
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**18.18**	**32**	P		**Pn**	**15 43 56.3 +0.9**
	comp=Z,0.3nm,0.3s,baz=246,slow=8.9,SNR=4.2						
	comp=Z,0.9nm,0.4s						
PEA0B	**Petropavlovsk-**	**24.66**	**283**	P		**P**	**15 45 01.7 -1.1**
PEA0B				IAmb		IAmb	15 45 03.7
	comp=Z,9.2nm,1.1s						
PETK	**Petropavlovsk-**	**24.66**	**283**	P		**P**	**15 45 01.8 -1.0**
	comp=Z,2.5nm,0.5s,baz=74,slow=13,SNR=42						
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**24.66**	**283**	P		**P**	**15 45 02.9 +0.1**
H11N2	**WAKE ISLAND Hy**	**43.14**	**229**	T		T	16 33 42.1
	baz=28,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**43.15**	**229**	T		T	16 33 42.1
	baz=28,slow=76,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**43.16**	**229**	T		T	16 33 42.1
	baz=28,slow=76,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	**44.30**	**228**	T		T	16 35 10.7
	baz=28,slow=76,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**44.32**	**228**	T		T	16 35 12.4
	baz=28,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**44.32**	**228**	T		T	16 35 13.6
	baz=28,slow=76,SNR=5.3						
SONM	**Songino Array**	**54.63**	**304**	P		**P**	**15 49 11.2 +0.6**
	comp=Z,0.8nm,0.5s,baz=45,slow=8.4,SNR=2.7						
	comp=Z,0.8nm,0.5s						
BVAR	**Borovoye Array**	**64.65**	**329**	P		**P**	**15 50 18.6 -0.6**
	comp=Z,1.1nm,0.7s,baz=46,slow=8.5,SNR=4.7						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**65.88**	**318**	P		**P**	**15 50 27.0 -0.3**
	comp=Z,0.2nm,0.5s,baz=36,slow=7.3,SNR=2.0						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**68.50**	**14**	P		**P**	**15 50 44.6 +0.9**
	comp=Z,0.4nm,0.5s,baz=331,slow=5.0,SNR=3.6						
	comp=Z,0.4nm,0.5s						
JTS	**Las Juntas de**	**73.05**	**96**	LR		LR	16 23 23.4
	comp=Z,18nm,21.2s,baz=331,slow=36						
AKASG	**Malin Array Be**	**74.48**	**354**	P		**P**	**15 51 19.8 0.0**
	comp=Z,0.6nm,0.4s,baz=3.3,slow=5.0,SNR=2.3						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**81.27**	**290**	P		**P**	**15 51 57.8 -0.3**
	comp=Z,0.6nm,0.4s,baz=7.1,slow=6.3,SNR=6.2						
	comp=Z,0.6nm,0.4s						

*IDC **24** 15:42:31.2±0.8,22°.70S×112°.12W,h0km,mb3.8/6, mbtmp3.8/6,MS3.4/3,Error ellipse: s-maj=32.9km s-min=25.7km az=73.0*

ISC 24 15:42:32.4±1.0,22°.7S±0°.2×112°.1W±0°.3,h10km,n28, σ0°78/13,mb4.0/6,MS3.3/3,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**31.09**	**117**	T	T	16 21 29.0	
	baz=285,slow=75,SNR=625						
H03N3	**Juan Fernandez**	**31.10**	**118**	T	T	16 21 30.1	
	baz=285,slow=75,SNR=586						
H03N1	**Juan Fernandez**	**31.10**	**117**	T	T	16 21 30.1	
	baz=285,slow=75,SNR=676						
H03S2	**Juan Fernandez**	**31.17**	**118**	T	T	16 21 39.7	
	baz=276,slow=72,SNR=6.3						
H03S3	**Juan Fernandez**	**31.18**	**118**	T	T	16 21 36.9	
	baz=276,slow=72						
H03S1	**Juan Fernandez**	**31.19**	**118**	T	T	16 21 40.1	
	baz=276,slow=72,SNR=5.2						
ATAH	**Atahualpa**	**35.97**	**70**	LR	LR	16 00 24.4	
	comp=Z,46nm,19.1s,baz=195,slow=30						
LPAZ	**La Paz**	**41.86**	**89**	P	**P**	**15 50 24.6**	**+0.8**
	1.4nm,0.8s,baz=279,slow=6.9,SNR=4.0						
	1.4nm,0.8s						
JTS	**Las Juntas de**	**42.23**	**42**	LR	LR	16 03 22.7	
	comp=Z,44nm,20.7s,baz=199,slow=30						
ROSC	**El Rosal**	**45.98**	**58**	LR	LR	16 05 49.9	
	comp=Z,54nm,18.5s,baz=157,slow=30						
SIV	**San Ignacio**	**48.46**	**92**	P	**P**	**15 51 15.0**	**-0.6**
	1.6nm,0.8s,baz=238,slow=4.6,SNR=6.2						
	1.6nm,0.8s						
TXAR	**Lajitas Array**	**52.35**	**9**	P	**P**	**15 51 43.6**	**-1.2**
	0.1nm,0.3s,baz=193,slow=9.9,SNR=2.1						
	0.1nm,0.3s						
NVAR	**Mina Array Bea**	**61.06**	**354**	P	**P**	**15 52 47.9**	**+1.2**
	1.0nm,0.7s,baz=177,slow=7.4,SNR=4.5						
	1.0nm,0.7s						
PDAR	**Pinedale Array**	**65.16**	**2**	P	**P**	**15 53 14.4**	**+0.5**
	0.4nm,0.6s,baz=164,slow=7.2,SNR=5.0						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**15 53 28.3**	**-0.1**
	2.5nm,1.0s,baz=150,slow=2.6,SNR=6.9						
	2.5nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**89.20**	**290**	T	T	17 34 11.1	
	baz=114,slow=75,SNR=62						
H11S1	**WAKE ISLAND Hy**	**89.21**	**290**	T	T	17 34 11.1	
	baz=114,slow=75,SNR=30						
H11S3	**WAKE ISLAND Hy**	**89.22**	**290**	T	T	17 34 09.4	
	baz=114,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	**89.52**	**292**	T	T	17 34 35.0	
	baz=116						
H11N1	**WAKE ISLAND Hy**	**89.54**	**291**	T	T	17 34 36.1	
	baz=116						
H11N2	**WAKE ISLAND Hy**	**89.54**	**292**	T	T	17 34 35.8	
	baz=116						
ARTI	**Arti**	**145.62**	**9**	PKPbc	**PKPab**	**16 02 11.2**	**+0.1**
	1.2nm,0.4s,baz=282,slow=22,SNR=3.7						
ZALV	**Zalesovo Beam**	**146.24**	**342**	PKPbc	**PKPbc**	**16 02 12.8**	**-0.2**
	0.6nm,0.5s,baz=47,slow=3.7,SNR=4.2						
BRTR	**Keskin Array B**	**146.41**	**52**	PKPbc	**PKPbc**	**16 02 14.2**	**0.0**
	1.3nm,0.8s,baz=279,slow=2.4,SNR=5.3						
KBZ	**Khabaz**	**150.59**	**39**	PKPbc	**PKiKP**	**16 02 26.1**	**+0.7**
	4.0nm,0.8s,baz=298,slow=0.9,SNR=11						
CMAR	**Chiang Mai Arr**	**150.62**	**268**	PKPbc	**PKiKP**	**16 02 26.4**	**+0.2**
	1.6nm,0.8s,baz=116,slow=0.5,SNR=9.3						
KURBB	**Kurchatov Arra**	**150.89**	**346**	PKPbc	**PKPbc**	**16 02 24.7**	**-0.4**
	0.9nm,0.9s,baz=20,slow=2.2,SNR=4.2						
MKAR	**Makanchi Array**	**153.26**	**338**	PKPbc	**PKPbc**	**16 02 29.8**	**-0.9**
	0.4nm,0.7s,baz=34,slow=2.0,SNR=3.1						

*UPP **24** 15:47:20.9±0.1,64°.81N×20°.34E,h4km±3km,ML2.8, Confirmed Earthquake*
*IDC **24** 15:47:21.2±0.9,64°.75N×20°.46E,h0km,mbtmp3.0/4, ML2.2/4,Error ellipse: s-maj=10.4km s-min=9.3km az=138.0*
*DNK **24** 15:47:21.1±2.6,64°.80N×20°.29E,h0km±12km,ML2.8(UPP), Confirmed Earthquake*
*BER **24** 15:47:22.5±2.4,64°.77N×20°.42E,h0km±7km,ML2.3, ML2.8(UPP)*
*HEL **24** 15:47:22.1,64°.78N×20°.37E,h10km,ML2.5,ML2.8(UPP), Confirmed Earthquake*

ISC 24 15:47:20.4±1.0,64°.81N±0°.02×20°.34E±0°.02,h6km±9km, n108,σ1°12/180,13C-7D,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODEU	**Stanfors**	**0.43**	**158**	↑P	**Pg**	**15 47 29.1**	**+0.3**
ODEU				S	**Sg**	**15 47 34.6**	**+0.2**
ODEU	**Stanfors**	**0.43**	**158**	↑P	**Pg**	**15 47 29.1**	**+0.3**
	baz=326						
ODEU				S	**Sg**	**15 47 34.6**	**+0.2**
ODEU	**Stanfors**	**0.43**	**158**	↑*i*P	**Pg**	**15 47 29.1**	**+0.3**
ODEU				*i* S	**Sg**	**15 47 34.6**	**+0.2**
ODEU	**Stanfors**	**0.43**	**158**	↑P	**Pg**	**15 47 29.1**	**+0.3**
	baz=326						
ODEU				S	**Sg**	**15 47 34.6**	**+0.2**
SVAU	**Svanoeiden**	**0.46**	**227**	↑P	**Pg**	**15 47 29.5**	**+0.2**
SVAU				S	**Sg**	**15 47 35.5**	**+0.3**
SVAU	**Svanoeiden**	**0.46**	**227**	↑P	**Pg**	**15 47 29.5**	**+0.2**
SVAU				S	**Sg**	**15 47 35.5**	**+0.3**
SVAU	**Svanoeiden**	**0.46**	**227**	↑*i*P	**Pg**	**15 47 29.5**	**+0.2**
SVAU				*i* S	**Sg**	**15 47 35.5**	**+0.3**
SVAU	**Svanoeiden**	**0.46**	**227**	↑P	**Pg**	**15 47 29.5**	**+0.2**
SVAU				S	**Sg**	**15 47 35.5**	**+0.3**
BURU	**Burvik**	**0.50**	**116**	↓P	**Pg**	**15 47 30.2**	**+0.2**
BURU				S	**Sg**	**15 47 36.5**	**0.0**
BURU	**Burvik**	**0.50**	**116**	↓P	**Pg**	**15 47 30.2**	**+0.2**
BURU				S	**Sg**	**15 47 36.5**	**0.0**
BURU	**Burvik**	**0.50**	**116**	*e*P	**Pg**	**15 47 30.2**	**+0.2**
BURU				*e*S	**Sg**	**15 47 36.5**	**0.0**
BURU	**Burvik**	**0.50**	**116**	↓P	**Pg**	**15 47 30.2**	**+0.2**
BURU				S	**Sg**	**15 47 36.5**	**0.0**
UMAU	**Umeaa**	**0.94**	**171**	↑P	**Pg**	**15 47 38.3**	**-0.1**
UMAU				S	**Sg**	**15 47 50.1**	**-0.5**
UMAU	**Umeaa**	**0.94**	**171**	↑P	**Pg**	**15 47 38.3**	**-0.1**
	baz=339						
UMAU				S	**Sg**	**15 47 50.1**	**-0.5**
UMAU	**Umeaa**	**0.94**	**171**	*e*P	**Pg**	**15 47 38.3**	**-0.1**
UMAU				*e*S	**Sg**	**15 47 50.1**	**-0.5**
UMAU	**Umeaa**	**0.94**	**171**	↑P	**Pg**	**15 47 38.3**	**-0.1**
	baz=339						
UMAU				S	**Sg**	**15 47 50.1**	**-0.5**
BREU	**Bredtraesk**	**1.20**	**221**	↓P	**Pg**	**15 47 42.9**	**-0.5**
BREU				S	**Sg**	**15 47 58.4**	**-0.5**
BREU	**Bredtraesk**	**1.20**	**221**	↓P	**Pg**	**15 47 42.9**	**-0.5**
	baz=26						
BREU				S	**Sg**	**15 47 58.4**	**-0.5**
BREU	**Bredtraesk**	**1.20**	**221**	↓*e*P	**Pg**	**15 47 42.9**	**-0.5**
BREU				*e*S	**Sg**	**15 47 58.4**	**-0.5**
BREU	**Bredtraesk**	**1.20**	**221**	↓P	**Pg**	**15 47 42.9**	**-0.5**
	baz=26						
BREU				S	**Sg**	**15 47 58.4**	**-0.5**
HARU	**Harads**	**1.39**	**11**	P	**Pn**	**15 47 46.2**	**0.0**
HARU				S	**Sn**	**15 48 05.1**	**+0.3**
HARU	**Harads**	**1.39**	**11**	P	**Pn**	**15 47 46.2**	**0.0**
	baz=185						
HARU				S	**Sn**	**15 48 05.1**	**+0.3**
HARU	**Harads**	**1.39**	**11**	*e*P	**Pn**	**15 47 46.2**	**0.0**
HARU				*e*S	**Sn**	**15 48 05.1**	**+0.3**
HARU	**Harads**	**1.39**	**11**	P	**Pn**	**15 47 46.2**	**0.0**
	baz=185						
HARU				S	**Sn**	**15 48 05.1**	**+0.3**
OBF8	**Ulkokalla**	**1.42**	**108**	*e*P	**Pn**	**15 47 46.9**	**+0.3**
OBF8				*e*SG	**Sb**	**15 48 05.6**	**0.0**
OBF8	**Ulkokalla**	**1.42**	**108**	*e*P	**Pn**	**15 47 46.9**	**+0.3**
OBF8				*e*SG	**Sb**	**15 48 05.6**	**0.0**
OBF0	**Syolatti, Pyha**	**1.70**	**99**	*e*PN	**Pb**	**15 47 51.9**	**-0.2**
OBF0				*e*SN	**Sb**	**15 48 13.7**	**0.0**
OBF0				smax	smax	15 48 15.2	
OBF0	**Syolatti, Pyha**	**1.70**	**99**	*e*PN	**Pb**	**15 47 51.9**	**-0.2**
OBF0				*e*S	**Sb**	**15 48 13.7**	**0.0**
OBF0				smax	smax	15 48 15.2	
	comp=Z,47nm,0.1s						
ERTU	**Ertsjaerv**	**1.91**	**23**	*e*P	**Pb**	**15 47 54.6**	**-1.0**
ERTU				S	**Sb**	**15 48 20.0**	**+0.3**
ERTU				smax	smax	15 48 22.0	
ERTU	**Ertsjaerv**	**1.91**	**23**	↑P	**Pb**	**15 47 54.6**	**-1.0**
ERTU				S	**Sb**	**15 48 20.0**	**+0.3**
ERTU	**Ertsjaerv**	**1.91**	**23**	*e*P	**Pb**	**15 47 54.6**	**-1.0**
ERTU				*e*SG	**Sb**	**15 48 20.0**	**+0.3**
ERTU				smax	smax	15 48 22.0	
	comp=Z,37nm,0.1s						
ERTU	**Ertsjaerv**	**1.91**	**23**	↑P	**Pn**	**15 47 54.6**	**+1.2**
ERTU				S	**Sb**	**15 48 20.0**	**+0.3**
OUF	**Merijarvi**	**1.94**	**101**	*e*PB	**Pb**	**15 47 55.8**	**-0.3**
OUF				*e*SB	**Sb**	**15 48 20.3**	**-0.3**
OUF				smax	smax	15 48 22.1	
OUF	**Merijarvi**	**1.94**	**101**	*e*PG	**Pb**	**15 47 55.8**	**-0.3**
OUF				*e*SB	**Sb**	**15 48 20.3**	**-0.3**
OUF				smax	smax	15 48 22.1	
	comp=Z,34nm,0.1s						
OBF4	**Vikkela, Lumij**	**2.04**	**88**	*e*PB	**Pb**	**15 47 57.2**	**-0.5**
OBF4				*e*SG	**Sg**	**15 48 24.4**	**-1.4**
OBF4				smax	smax	15 48 27.2	
OBF4	**Vikkela, Lumij**	**2.04**	**88**	*e*PB	**Pb**	**15 47 57.2**	**-0.5**
OBF4				*e*SG	**Sg**	**15 48 24.4**	**-1.4**
OBF4				smax	smax	15 48 27.2	
	comp=Z,21nm,0.1s						
VAF	**Ylistaro**	**2.05**	**149**	*e*PB	**Pb**	**15 47 57.2**	**-0.8**
VAF				*e*SG	**Sb**	**15 48 23.9**	**+0.4**
VAF				smax	smax	15 48 27.3	
VAF	**Ylistaro**	**2.05**	**149**	*e*P	**Pb**	**15 47 57.8**	**-0.2**
VAF	**Ylistaro**	**2.05**	**149**	*e*PB	**Pb**	**15 47 57.2**	**-0.8**
VAF				*e*SG	**Sb**	**15 48 23.9**	**+0.4**
VAF				smax	smax	15 48 27.3	
	comp=Z,28nm,0.1s						
SOLU	**Sollefteaa**	**2.07**	**222**	P	**Pn**	**15 47 57.0**	**+1.4**
SOLU				S	**Sb**	**15 48 23.6**	**-0.7**
SOLU	**Sollefteaa**	**2.07**	**222**	P	**Pn**	**15 47 57.0**	**+1.4**
SOLU				S	**Sb**	**15 48 23.6**	**-0.7**
SOLU	**Sollefteaa**	**2.07**	**222**	*e*P	**Pn**	**15 47 57.0**	**+1.4**
SOLU				*e*SB	**Sb**	**15 48 23.6**	**-0.7**
SOLU	**Sollefteaa**	**2.07**	**222**	P	**Pn**	**15 47 57.0**	**+1.4**
SOLU				S	**Sb**	**15 48 23.6**	**-0.7**
TOF	**Tornio**	**2.10**	**51**	*e*P	**Pb**	**15 47 57.7**	**-1.1**
TOF				*e*SB	**Sb**	**15 48 25.3**	**+0.3**
TOF				smax	smax	15 48 28.2	
TOF	**Tornio**	**2.10**	**51**	*e*P	**Pb**	**15 47 57.7**	**-1.1**
TOF				*e*SG	**Sb**	**15 48 25.3**	**+0.3**
TOF				smax	smax	15 48 28.2	
	comp=Z,31nm,0.1s						
HEMU	**Hemsoen**	**2.37**	**207**	*e*PB	**Pb**	**15 48 02.2**	**-1.2**
HEMU				*e*SB	**Sb**	**15 48 32.5**	**-0.4**
HEMU				smax	smax	15 48 36.1	
HEMU	**Hemsoen**	**2.37**	**207**	*e*PB	**Pb**	**15 48 02.2**	**-1.2**
HEMU				*e*SB	**Sb**	**15 48 32.5**	**-0.4**
HEMU				smax	smax	15 48 36.1	
	comp=Z,26nm,0.1s						
OUL	**Oulu**	**2.38**	**81**	*e*PB	**Pb**	**15 48 02.5**	**-1.0**
OUL				*e*SB	**Sb**	**15 48 33.0**	**-0.2**
OUL				smax	smax	15 48 36.4	
OUL	**Oulu**	**2.38**	**81**	*e*PB	**Pb**	**15 48 02.5**	**-1.0**
OUL				*e*SB	**Sb**	**15 48 33.0**	**-0.2**
OUL				smax	smax	15 48 36.4	
	comp=Z,20nm,0.1s						
SALU	**Saltoluokta**	**2.69**	**345**	*e*P	**Pn**	**15 48 05.7**	**+1.5**
SALU				*e*S	**Sn**	**15 48 39.5**	**+2.6**
SALU	**Saltoluokta**	**2.69**	**345**	*e*P	**Pn**	**15 48 05.7**	**+1.5**
SALU				*e*S	**Sn**	**15 48 39.5**	**+2.6**
MOR8	**Moi Rana**	**2.82**	**302**	*e*P	**Pn**	**15 48 08.3**	**+2.4**
MOR8				*e*S	**Sn**	**15 48 39.6**	**-0.5**
MOR8				IAML		15 48 50.5	
	comp=Z,24nm,0.2s						
MOR8	**Moi Rana**	**2.82**	**302**	*e*PB	**Pn**	**15 48 08.3**	**+2.4**
MOR8				*e*S	**Sn**	**15 48 39.6**	**-0.5**
MOR8				IAML		15 48 50.5	
	comp=Z,24nm,0.2s						
RAUS	**Rausandaksla**	**3.08**	**305**	*e*P	**Pn**	**15 48 11.5**	**+1.9**
RAUS				*e*S	**Sn**	**15 48 47.9**	**+1.3**
RAUS				IAML		15 49 02.1	
	comp=Z,38nm,0.4s						
RAUS	**Rausandaksla**	**3.08**	**305**	*e*P	**Pn**	**15 48 11.5**	**+1.9**
RAUS				*e*S	**Sn**	**15 48 47.9**	**+1.3**
RAUS				IAML		15 49 02.1	
	comp=Z,38nm,0.4s						
LEIR	**Leir

HFS Sn **Sn** **15 49 46.9 -2.0**
comp=Z,0.7nm,0.3s,baz=34,slow=23,SNR=5.6
HFS Lg Lg 15 50 11.4
comp=Z,3.0nm,0.3s,baz=39,slow=27,SNR=12
comp=Z,0.8nm,0.2s
NOA NORSAR Array B 5.63 232 Pn **Pn** **15 48 45.4 +0.9**
baz=45,slow=14,SNR=10
NOA Sn **Sn** **15 49 46.6 -2.8**
comp=Z,0.1nm,0.3s,baz=44,slow=24,SNR=7.0
NOA Lg Lg 15 50 11.9
comp=Z,0.2nm,0.3s,baz=46,slow=24,SNR=7.5
comp=Z,0.3nm,0.3s
DOMB Dombas 5.77 246 *e*P **Pn** **15 48 47.0 +0.5**
DOMB Dombas 5.77 246 *e*P **Pn** **15 48 47.0 +0.5**
NBO00 NORSAR Array S 5.78 233 *e*P **Pn** **15 48 47.5 +0.9**
MOL Molde 6.12 254 *e*P **Pn** **15 48 51.3 +0.1**
MOL Molde 6.12 254 *e*P **Pn** **15 48 51.3 +0.1**
VADS Vadso 6.36 29 *e*P **Pn** **15 48 54.2 -0.2**
VADS Vadso 6.36 29 *e*P **Pn** **15 48 54.2 -0.2**
AKN Aaknes 6.53 252 *e*P **Pn** **15 48 57.0 +0.2**
AKN Aaknes 6.53 252 *e*P **Pn** **15 48 57.0 +0.2**
SKAR Skarslia 6.90 239 *e*P **Pn** **15 49 02.0 0.0**
STRU Stroemstad 7.22 221 *e*P **Pn** **15 49 06.4 +0.1**
STRU Stroemstad 7.22 221 *e*P **Pn** **15 49 06.4 +0.1**
STRU Stroemstad 7.22 221 *e*P **Pn** **15 49 06.4 +0.1**
ASK Askoy 8.20 245 *e*P **Pn** **15 49 18.6 -1.1**
ASK Askoy 8.20 245 *e*P **Pn** **15 49 18.6 -1.1**

*SJA **24** 15:51:01.7±0.8,20.02S×69.18W,h104km±3km, ML3.9, MW3.9*
*GUC **24** 15:51:03.6±0.7,20.03S×69.15W,h94km±3km, ML3.9*
*IDC **24** 15:51:06.6±2.0, 19.92S×68.69W,h134km± 18km, mb3.7/5, mbtmp4.1/8, MS3.3/2, Error ellipse: s-maj=30.5km s-min=15.5km az=84.0*
ISC 24 15:51:02.4±0.7, 20.01S±0.03×69.18W±0.06, h97km±5km, n50, σ1s 70/57, mb4.0/3, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.13**	**170**	*e*P	**Pn**	**15 51 17.1**	**+0.6**
PB08				*e*S	**Sn**	**15 51 28.9**	**+1.9**
PB08				IAML		15 51 29.7	
	comp=Z,2μm,0.3s						
PB08	**IPOC Station P**	**0.13**	**170**	*e*P	**Pn**	**15 51 17.1**	**+0.6**
PB08				*e*S	**Sn**	**15 51 27.9**	**+0.9**
GO01	**Chusmiza**	**0.34**	**357**	*e*P	**Pn**	**15 51 18.1**	**+0.6**
GO01				*e*S	**Sn**	**15 51 30.9**	**+2.3**
GO01				IAML		15 51 31.4	
	comp=Z,2μm,0.5s						
GO01	**Chusmiza**	**0.34**	**357**	*i* P	**Pn**	**15 51 18.0**	**+0.6**
GO01				IAML		15 51 30.0	
	comp=N,6μm,0.3s						
PB11	**IPOC Station P**	**0.52**	**299**	*e*P	**Pn**	**15 51 18.6**	**+0.4**
PB11				*e*S	**Sn**	**15 51 31.4**	**+1.5**
PB11				IAML		15 51 33.5	
	comp=Z,2μm,0.2s						
PB11	**IPOC Station P**	**0.52**	**299**	||*i* P	**Pn**	**15 51 18.5**	**+0.4**
PB11				*e*S	**Sn**	**15 51 30.5**	**+0.6**
PB11				IAML		15 51 31.4	
	comp=E,5μm,0.2s						
TA02	**Huaiquique**	**0.93**	**254**	*e*P	**Pn**	**15 51 22.6**	**+0.8**
TA02				*e*S	**Sn**	**15 51 37.8**	**+1.4**
TA02				IAML		15 51 42.0	
	comp=Z,3μm,0.1s						
TA02	**Huaiquique**	**0.93**	**254**	*e*P	**Pn**	**15 51 22.4**	**+0.6**
TA02				IAML		15 51 38.5	
	comp=N,7μm,0.2s						
PSGCX	**Pisagua**	**0.98**	**295**	*e*P	**Pn**	**15 51 22.8**	**+0.3**
PSGCX				*e*S	**Sn**	**15 51 38.0**	**+0.5**
PB02	**IPOC Station P**	**1.46**	**207**	*e*P	**Pn**	**15 51 28.8**	**+0.6**
PB02				*e*S	**Sn**	**15 51 49.8**	**+2.2**
PB02				IAML		15 51 56.4	
	comp=Z,2μm,0.4s						
PB02	**IPOC Station P**	**1.46**	**207**	*e*P	**Pn**	**15 51 28.7**	**+0.6**
PB02				IAML		15 51 55.8	
	comp=E,4μm,0.4s						
PB16	**IPOC Station P**	**1.70**	**349**	*e*P	**Pn**	**15 51 33.2**	**+1.6**
PB16				*e*S	**Sn**	**15 51 56.4**	**+2.8**
PB16				IAML		15 51 58.1	
	comp=Z,532nm,0.5s						
PB16	**IPOC Station P**	**1.70**	**349**	*e*P	**Pn**	**15 51 33.3**	**+1.7**
PB16				*e*S	**Sn**	**15 51 56.5**	**+2.8**
PB16				IAML		15 51 58.8	
	comp=E,888nm,0.4s						
PB12	**IPOC Station P**	**1.77**	**322**	*e*P	**Pn**	**15 51 32.6**	**+0.7**
PB12				*e*S	**Sn**	**15 51 56.9**	**+2.5**
PB12				IAML		15 51 59.0	
	comp=Z,1μm,0.3s						
PB12	**IPOC Station P**	**1.77**	**322**	*e*P	**Pn**	**15 51 32.3**	**+0.3**
PB12				IAML		15 51 59.9	
	comp=E,3μm,0.2s						
PB09	**IPOC Station P**	**1.77**	**182**	*e*P	**Pn**	**15 51 33.2**	**+1.1**
PB09				*e*S	**Sn**	**15 51 57.6**	**+2.9**
PB09				IAML		15 52 00.5	
	comp=Z,842nm,0.7s						
PB09	**IPOC Station P**	**1.77**	**182**	*e*P	**Pn**	**15 51 33.3**	**+1.1**
PB07	**IPOC Station P**	**1.83**	**201**	*e*P	**Pn**	**15 51 33.2**	**+0.3**
PB07				*e*P		15 51 33.2	
PB07				*e*S	**Sn**	**15 51 58.8**	**+2.9**
PB07				IAML		15 52 03.0	
	comp=Z,912nm,0.3s						
PB07	**IPOC Station P**	**1.83**	**201**	*e*P	**Pn**	**15 51 33.4**	**+0.5**
PB07				IAML		15 52 03.5	
	comp=E,2μm,0.8s						
AP01	**Chacalluta**	**1.97**	**326**	*e*P	**Pn**	**15 51 35.4**	**+0.9**
AP01				*e*S	**Sn**	**15 51 57.4**	**-1.5**
AP01				IAML		15 52 09.5	
	comp=Z,3μm,0.4s						
AP01	**Chacalluta**	**1.97**	**326**	*e*P	**Pn**	**15 51 35.2**	**+0.7**
AP01				*e*S	**Sn**	**15 51 60.0**	**+1.1**
PB03	**IPOC Station P**	**2.09**	**195**	*e*P	Pn	15 51 31.4	-4.8
PB03				*e*P		15 51 36.7	
PB03				*e*S	**Sn**	**15 52 06.6**	**+4.5**
PB03				IAML		15 52 11.1	
	comp=Z,689nm,0.4s						
PB03	**IPOC Station P**	**2.09**	**195**	*e*P	**Pn**	**15 51 36.6**	**+0.4**
PB03				IAML		15 52 09.4	
	comp=N,570nm,0.3s						
PB18	**Visviri**	**2.43**	**353**	*e*P	**Pn**	**15 51 44.7**	**+3.7**
PB18				IAML		15 52 34.2	
	comp=N,386nm,0.8s						
PB06	**IPOC Station P**	**2.70**	**188**	*e*P	**Pn**	**15 51 44.8**	**+0.5**
PB06				*e*S	Sn	15 52 06.9	-10
PB06				IAML		15 52 25.9	
	comp=Z,383nm,0.4s						
PB06	**IPOC Station P**	**2.70**	**188**	*e*P	**Pn**	**15 51 45.0**	**+0.8**
PB06				IAML		15 52 25.2	
	comp=E,462nm,0.3s						
PB05	**IPOC Station P**	**2.98**	**198**	*e*P	**Pn**	**15 51 48.8**	**+0.8**
PB05				*e*S	Sn	15 52 34.4	+11
PB05	**IPOC Station P**	**2.98**	**198**	*e*P	**Pn**	**15 51 48.3**	**+0.3**
PB05				IAML		15 52 37.3	
	comp=N,377nm,0.2s						
LPAZ	**La Paz**	**3.84**	**15**	P	**Pn**	**15 52 03.1**	**+3.1**
	comp=N,17nm,0.5s,baz=185,slow=7.4,SNR=48						
LPAZ				S	**Sn**	**15 52 45.9**	**+1.5**
	comp=N,10nm,0.6s,baz=173,slow=6.0,SNR=4.1						
LPAZ	**La Paz**	**3.84**	**15**	*e*P	**Pn**	**15 52 03.4**	**+3.5**
SIV	**San Ignacio**	**8.69**	**64**	P	**Pn**	**15 53 03.1**	**-2.2**
	comp=N,12nm,0.6s,baz=251,slow=11,SNR=53						
SIV				S	Sn	15 54 31.9	-10
	comp=N,0.4nm,0.3s,baz=236,slow=15,SNR=1.2						
CPUP	**Villa Florida**	**12.58**	**122**	P	**Pn**	**15 53 55.9**	**-1.9**
	comp=N,4.7nm,0.8s,baz=300,slow=12,SNR=11						
PLCA	**Paso Flores**	**20.68**	**183**	P	Pn	15 55 37.5	-0.4
	comp=N,3.1nm,0.7s,baz=0.7,slow=11,SNR=10						
	comp=N,3.1nm,0.7s						
SDV	**Santo Domingo**	**28.75**	**357**	LR	LR	16 10 10.4	
	comp=N,44nm,18.3s,baz=294,slow=40						
SADO	**Sadowa**	**65.11**	**352**	LR	LR	16 30 19.4	
	comp=N,37nm,21.6s,baz=213,slow=36						
QSPA	**South Pole Qui**	**70.17**	**180**	P	**P**	**16 02 05.3**	**+0.8**
	comp=N,1.1nm,0.7s,baz=160,slow=5.9,SNR=7.1						
	comp=N,1.1nm,0.7s						
ULM	**Lac du Bonnet**	**73.83**	**343**	P	**P**	**16 02 25.7**	**-0.5**
	comp=N,1.2nm,0.5s,baz=153,slow=2.3,SNR=1.6						
	comp=N,1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.10**	**71**	P	**P**	**16 02 43.2**	**-2.6**
	comp=N,0.8nm,0.4s,baz=253,slow=5.6,SNR=11						
	comp=N,0.8nm,0.4s						
YKA	**Yellowknife Ar**	**89.71**	**341**	P	**P**	**16 03 49.2**	**0.0**
	comp=N,1.6nm,0.6s,baz=135,slow=4.5,SNR=7.8						
	comp=N,1.6nm,0.6s						

H11S2 WAKE ISLAND Hy 27.43 278 T T 18 29 39.3
baz=101,slow=74,SNR=25
H11S1 WAKE ISLAND Hy 27.44 278 T T 18 29 37.2
baz=101,slow=74,SNR=14
H11S3 WAKE ISLAND Hy 27.45 278 T T 18 29 37.9
baz=101,slow=74,SNR=18
H11N3 WAKE ISLAND Hy 27.47 280 T T 18 29 41.3
baz=100,slow=74,SNR=10.0
H11N2 WAKE ISLAND Hy 27.48 280 T T 18 29 42.2
baz=100,slow=74,SNR=12
H11N1 WAKE ISLAND Hy 27.49 280 T T 18 29 42.3
baz=100,slow=74,SNR=7.0
ASAR Alice Springs 131.10 208 PKP **PKPdf** **16 10 03.2 -0.5**
comp=N,0.2nm,0.5s,baz=130,slow=1.8,SNR=5.6
WRA Warramunga Arr 134.09 212 PKP **PKPdf** **16 10 08.8 -0.6**
comp=N,0.6nm,0.8s,baz=136,slow=1.9,SNR=1.7
ZALV Zalesovo Beam 140.71 24 PKP **PKPdf** **16 10 20.2 -0.3**
comp=N,0.4nm,0.4s,baz=315,slow=0.8,SNR=2.2
MKAR Makanchi Array 144.57 34 PKP **PKPab** **16 10 26.1 -0.3**
comp=N,0.3nm,0.3s,baz=342,slow=3.1,SNR=5.3
SONM Songino Array 152.02 6 PKPbc **PKPbc** **16 10 46.5 0.0**
comp=N,0.8nm,0.3s,baz=331,slow=0.5,SNR=4.5

*IDC **24** 15:54:32.0±1.6,55.16N×159.41W,h0km,mb3.9/12, mbtmp3.9/15, ML3.8/3, MS2.9/4, Error ellipse: s-maj=42.5km s-min=17.1km az=148.0*
*AEIC **24** 15:54:39.7±1.5,55.22N±0.03×159.23W±0.05,h28km±5km, Error ellipse: s-maj=5.3km s-min=2.5km az=129.0*
*NEIC **24** 15:54:39.1±1.8,55.20N±0.05×159.21W±0.09,h47km±7km, mb3.9/12, ML3.7/36, ML3.5(AEIC), Error ellipse: s-maj=8.6km s-min=5.0km az=133.0*
ISC 24 15:54:38.6±1.0,55.21N±0.06×159.15W±0.04,h47km±9km, n132, σ1s 97/124, mb4.0/13, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.46**	**213**		**Pn**	**15 54 48.4**	**-0.8**
CNBA					**Sn**	**15 54 56.4**	**-0.2**
CNBA				IAML		15 54 58.2	
	comp=E,4μm,0.3s						
CNBA				IAML		15 54 59.7	
	comp=N,3μm,0.2s						
SDPT	**Sand Point**	**0.77**	**281**		**Pn**	**15 54 52.4**	**-0.7**
SDPT					**Sn**	**15 55 02.7**	**-1.0**
SDPT				IAML		15 55 02.9	
	comp=N,4μm,0.8s						
SDPT				IAML		15 55 03.2	
	comp=E,2μm,0.2s						
VNKR	**Veniaminof 5**	**0.84**	**352**		**Pn**	**15 54 53.9**	**-0.1**
VNKR					**Sn**	**15 55 04.9**	**-0.4**
VNHG	**Veniaminof 1**	**1.02**	**360**		**Pn**	**15 54 57.2**	**+0.6**
VNSS	**Veniaminof 8**	**1.04**	**351**		**Pn**	**15 54 57.5**	**+0.7**
VNFG	**Fog Glacier, M**	**1.11**	**348**		**Pn**	**15 54 58.6**	**+0.9**
VNFG	**Fog Glacier, M**	**1.11**	**348**		**Pn**	**15 54 58.8**	**+1.1**
CHGN	**Chignik**	**1.18**	**20**		**Pn**	**15 54 58.6**	**+0.1**
CHGN				IAML		15 55 16.8	
	comp=N,2μm,0.3s						
CHGN	**Chignik**	**1.18**	**20**		**Sn**	**15 55 14.4**	**+1.0**
PS1A	**Pavlof South-1**	**1.50**	**279**		**Pn**	**15 55 02.7**	**-0.3**
PS1A					**Sn**	**15 55 21.7**	**+0.4**
PVV	**Pavlof Volcano**	**1.52**	**277**		**Pn**	**15 55 03.2**	**-0.1**
PS4A	**Pavlof South-4**	**1.56**	**276**		**Pn**	**15 55 03.5**	**-0.3**
PS4A					**Sn**	**15 55 23.7**	**+1.0**
DOL	**Dolgoi Island**	**1.56**	**269**		**Pn**	**15 55 03.5**	**-0.3**
DOL					**Sn**	**15 55 23.1**	**+0.3**
PN7A	**Pavlof North-7**	**1.64**	**279**		**Pn**	**15 55 05.0**	**0.0**
ANPB	**Aniakchak Plen**	**1.67**	**17**		**Pn**	**15 55 06.1**	**+0.6**
DTNA	**Dutton South F**	**1.78**	**269**		**Pn**	**15 55 06.6**	**-0.2**
DTNA					**Sn**	**15 55 29.3**	**+1.0**
DT1	**Dutton Round H**	**1.80**	**268**		**Sn**	**15 55 29.5**	**+0.8**
ANNW	**Aniakchak Nort**	**1.84**	**16**		**Pn**	**15 55 08.1**	**+0.4**
CHIR	**Chirikof Islan**	**2.10**	**71**		**Pn**	**15 55 12.4**	**+1.3**
CHIR				IAML		15 55 48.9	
	comp=E,705nm,0.7s						
CHIR				IAML		15 55 50.2	
	comp=N,676nm,0.7s						
CHIR	**Chirikof Islan**	**2.10**	**71**		**Sn**	**15 55 35.8**	**-0.3**
ISNN	**Isanotski Nort**	**2.69**	**264**		**Pn**	**15 55 20.0**	**+0.7**
SSLS	**Shishaldin Sou**	**2.84**	**262**		**Pn**	**15 55 22.3**	**+0.9**
PLK1	**Peulik 1**	**2.96**	**27**		**Pn**	**15 55 24.4**	**+1.4**
PLK5	**Peulik 5**	**3.07**	**23**		**Pn**	**15 55 25.5**	**+1.1**
SII	**Sitkinak Islan**	**3.11**	**62**		**Pn**	**15 55 26.6**	**+1.5**
ANCK	**Angle Creek**	**3.62**	**32**		**Pn**	**15 55 33.5**	**+1.5**
MGLS	**Mageik Landsli**	**3.67**	**35**		**Pn**	**15 55 34.5**	**+1.7**
ACHA	**Angle Creek He**	**3.68**	**33**		**Pn**	**15 55 34.6**	**+1.7**
KABU	**Katmai Buttres**	**3.74**	**33**		**Pn**	**15 55 35.3**	**+1.6**
Q16K	**King Salmon**	**3.74**	**20**		**Pn**	**15 55 35.2**	**+1.6**
KAKN	**Katmai Knife C**	**3.83**	**34**		**Pn**	**15 55 36.5**	**+1.5**
OHAK	**Old Harbor**	**3.85**	**56**		**Pn**	**15 55 35.4**	**+0.3**
OHAK				IAML		15 56 50.4	
	comp=N,63nm,1.3s						
P16K	**Nushagak River**	**3.89**	**9**		**Pn**	**15 55 37.0**	**+1.3**
P16K				IAML		15 56 50.7	
	comp=N,177nm,0.7s						
KAWH	**Katmai**	**3.98**	**35**		**Pn**	**15 55 38.5**	**+1.5**
O15K	**Ungalikthiuk R**	**4.00**	**355**		**Pn**	**15 55 37.7**	**+0.5**
O15K				IAML		15 56 26.0	
	comp=N,50nm,0.7s						
Q18K	**Katmai Hardscr**	**4.13**	**32**		**Pn**	**15 55 40.5**	**+1.3**
KAHG	**Katmai Hook Gl**	**4.15**	**36**		**Pn**	**15 55 40.8**	**+1.3**
O14K	**Tigyukauivet M**	**4.22**	**345**		**Pn**	**15 55 40.9**	**+0.7**
O14K				IAML		15 57 07.3	
	comp=N,51nm,0.9s						
P17K	**Kvichak River**	**4.26**	**19**		**Pn**	**15 55 42.5**	**+1.6**
O16K	**Kokwok River B**	**4.44**	**7**		**Pn**	**15 55 44.0**	**+0.8**
KDAK	**Kodiak Island**	**4.46**	**52**	Pn	**Pn**	**15 55 43.7**	**+0.2**
	comp=N,1.8nm,0.3s,baz=240,slow=0.7,SNR=59						
KDAK				Sn	**Sn**	**15 56 31.6**	**-2.5**
	comp=N,3.3nm,0.3s,baz=28,slow=21,SNR=7.4						
KDAK				Lg	Lg	15 56 48.7	
	comp=N,5.2nm,0.3s,baz=226,slow=23,SNR=6.0						
KDAK				LR	LR	15 57 30.8	
	comp=N,31nm,19.2s,baz=225,slow=39						
	comp=N,6.0nm,0.4s						
KDAK	**Kodiak Island**	**4.46**	**52**		**Pn**	**15 55 43.8**	**+0.2**
KDAK				IAML		15 56 58.7	
	comp=N,56nm,0.5s						
KDAK				IAML		15 57 08.3	
	comp=N,61nm,1.2s						
UNV	**Unalaska Valle**	**4.50**	**255**		**Pn**	**15 55 44.6**	**+0.6**
UNV				IAML		15 56 47.8	
	comp=N,60nm,0.4s						
UNV				IAML		15 56 50.4	
	comp=E,56nm,0.5s						
P18K	**Big Mountain,**	**4.71**	**25**		**Pn**	**15 55 48.2**	**+1.2**
N14K	**Kuskokwak Cree**	**4.92**	**345**		**Pn**	**15 55 50.9**	**+1.0**
N14K				IAML		15 57 38.9	
	comp=E,73nm,1.4s						
N15K	**Kwethluk River**	**5.00**	**355**		**Pn**	**15 55 52.5**	**+1.5**
N15K				IAML		15 56 51.6	
	comp=N,37nm,0.9s						
N15K				IAML		15 57 36.6	
	comp=E,40nm,1.2s						
O18K	**Koktuh Hills**	**5.12**	**23**		**Pn**	**15 55 54.1**	**+1.5**
M13K	**Dall Lake**	**5.68**	**338**		**Pn**	**15 56 01.5**	**+1.2**
N18K	**Kilae Creek**	**5.76**	**16**		**Pn**	**15 56 02.5**	**+1.1**
M14K	**Bethel**	**5.76**	**346**		**Pn**	**15 56 01.9**	**+0.6**
ILSW	**Iliamna Southw**	**5.78**	**32**		**Pn**	**15 56 03.2**	**+1.5**
IVE	**Iliamna Volcan**	**5.84**	**32**		**Pn**	**15 56 03.9**	**+1.3**
CNPM	**China Poot**	**6.09**	**41**		**Pn**	**15 56 06.5**	**+0.6**
N19K	**Bonanza Creek**	**6.14**	**22**		**Pn**	**15 56 07.7**	**+1.0**
RDSO	**Redoubt South**	**6.28**	**30**		**Pn**	**15 56 10.3**	**+1.7**
M17K	**Holitna River**	**6.28**	**8**		**Pn**	**15 56 09.3**	**+0.8**
NCT	**North Crescent**	**6.31**	**29**		**Pn**	**15 56 10.5**	**+1.5**
L16K	**Owhat River**	**6.53**	**359**		**Pn**	**15 56 12.6**	**+0.7**
M18K	**Stony River**	**6.54**	**14**		**Pn**	**15 56 13.1**	**+1.1**
L17K	**Donlin**	**6.96**	**3**		**Pn**	**15 56 18.3**	**+0.5**
SPNN	**North Nagishla**	**7.05**	**26**		**Pn**	**15 56 18.9**	**-0.3**
SLKM	**Skilak Lake**	**7.13**	**38**		**Pn**	**15 56 21.0**	**+0.8**
L19K	**Granite Mounta**	**7.15**	**9**		**Pn**	**15 56 20.5**	**+0.1**
K15K	**Wolf Creek Mou**	**7.22**	**351**		**Pn**	**15 56 21.3**	**-0.1**
L19K	**White Mountain**	**7.34**	**16**		**Pn**	**15 56 23.8**	**+0.7**
STLK	**Strandline Lak**	**7.39**	**28**		**Pn**	**15 56 25.0**	**+1.3**
M20K	**Styx River**	**7.40**	**23**		**Pn**	**15 56 25.1**	**+1.3**
J14K	**Nanvaranak Lak**	**7.90**	**345**		**Pn**	**15 56 30.6**	**0.0**
PWL	**Port Wells**	**8.06**	**41**		**Pn**	**15 56 33.0**	**+0.1**
J16K	**Anvik River**	**8.14**	**355**		**Pn**	**15 56 34.0**	**+0.1**
J17K	**VABM Dome**	**8.22**	**0**		**Pn**	**15 56 34.8**	**-0.2**
J18K	**Innoko River**	**8.38**	**8**		**Pn**	**15 56 38.0**	**+0.7**
KNK	**Knik Glacier**	**8.38**	**38**		**Pn**	**15 56 38.0**	**+0.7**
GHO	**Glory Hole Cre**	**8.48**	**35**		**Pn**	**15 56 39.9**	**+1.2**
PPLA	**Purkeypile**	**8.50**	**22**		**Pn**	**15 56 40.3**	**+1.3**

HIN Hinchinbrook I 8.52 47 **Pn** **15 56 40.5 +1.3**
K20K Telida 8.58 16 **Pn** **15 56 41.1 +1.2**
SML Sawmill 8.70 36 **Pn** **15 56 42.1 +0.4**
FID Port Fidalgo 8.72 45 **Pn** **15 56 41.7 -0.2**
I17K Unalakleet 8.74 355 **Pn** **15 56 42.6 +0.5**
CAST Castle Rocks 8.99 21 **Pn** **15 56 46.5 +0.9**
J19K Poorman 8.99 10 **Pn** **15 56 46.2 +0.6**
SCM Sheep Creek Mo 9.07 38 **Pn** **15 56 47.6 +0.9**
J20K Nowinta River 9.35 14 **Pn** **15 56 51.2 +0.8**
KLU Klutina 9.37 42 **Pn** **15 56 51.6 +0.7**
WAT6 Susitna Watana 9.45 34 **Pn** **15 56 52.2 +0.2**
M24K Tolsona, Glenn 9.66 39 **Pn** **15 56 55.5 +0.7**
H17K Granite Mounta 9.77 358 **Pn** **15 56 56.9 +0.7**
I20K Naaghedeneel 9.90 12 **Pn** **15 56 58.8 +0.9**
DHY Denali Highway 9.93 33 **Pn** **15 56 59.2 +0.7**
N25K Chitina, Valde 9.96 44 **Pn** **15 57 00.2 +1.3**
GLB Gilahina Butte 10.19 46 **Pn** **15 57 03.0 +1.0**
VRDI Verde Repeater 10.23 47 **Pn** **15 57 04.0 +1.3**
H19K Roundabout Mou 10.44 6 **Pn** **15 57 06.2 +0.8**
IMAR Indian Mountai 11.13 12 Pn **Pn** **15 57 15.7 +0.9**
ILAR Eielson Array 11.36 28 Pn Pn 15 57 12.1 -6.0
comp=E,0.3nm,0.3s,baz=216,slow=14,SNR=8.2
ILAR Sn Sn 15 59 14.8 -8.5
baz=220,slow=23,SNR=1.7
ILAR LR LR 16 02 05.3
comp=E,41nm,18.7s,baz=244,slow=40
comp=E,0.3nm,0.6s
L27K Beaver Creek, 11.84 41 Pn **Pn** **15 57 25.1 +0.5**
M29M Somme Creek 12.89 47 Pn **Pn** **15 57 40.3 +1.3**
I30M Mount Dempster 15.02 39 IAmb IAmb 15 58 23.3
comp=Z,6.0nm,0.6s
C23K Itkillik River 15.18 11 IAmb IAmb 15 58 15.4
comp=Z,8.1nm,0.9s
G29M Pine Creek 15.45 32 Pn **Pn** **15 58 13.4 +0.3**
G29M IAmb IAmb 15 58 19.0
comp=Z,6.4nm,1.0s
H31M Peel River 16.05 39 IAmb IAmb 15 58 42.0
comp=Z,8.8nm,0.7s
G30M tAoh Zraii Nji 16.06 34 IAmb IAmb 15 58 26.4
comp=Z,8.1nm,0.5s
G31M Satah River 16.66 35 IAmb IAmb 15 58 43.5
comp=Z,5.5nm,0.6s
INK Inuvik 17.67 32 P **Pn** **15 58 40.0 -0.9**
comp=Z,0.7nm,0.3s,baz=230,slow=14,SNR=9.1
comp=Z,2.0nm,0.4s
C36M Paulatuk 21.17 34 P **P** **15 59 19.6 +0.2**
C36M IAmb IAmb 15 59 46.8
comp=Z,10nm,1.1s
YKA Yellowknife Ar 23.74 54 P **P** **15 59 46.8 +0.8**
comp=Z,1.0nm,0.7s,baz=276,slow=8.6,SNR=3.1
comp=Z,1.0nm,0.7s
PETK Petropavlovsk- 25.06 283 P **P** **15 59 57.3 -0.9**
comp=Z,2.1nm,0.6s,baz=74,slow=12,SNR=11
comp=Z,2.1nm,0.6s
PETK Petropavlovsk- 25.06 283 P **P** **15 59 56.8 -1.4**
H11N2 WAKE ISLAND Hy 43.70 230 T T 16 48 49.4
baz=28,slow=74,SNR=4.6
H11N3 WAKE ISLAND Hy 43.71 230 T T 16 48 55.4
baz=28,slow=74,SNR=3.8
H11N1 WAKE ISLAND Hy 43.72 230 T T 16 48 59.4
baz=28
H11S1 WAKE ISLAND Hy 44.87 229 T T 16 50 22.8
baz=28,slow=74,SNR=3.6
H11S2 WAKE ISLAND Hy 44.88 229 T T 16 50 22.0
baz=28,slow=74,SNR=4.2
H11S3 WAKE ISLAND Hy 44.89 229 T T 16 50 23.8
baz=28
H06N1 SOCORRO T-PHAS 51.29 115 T T 16 59 54.3
SNR=10
ARCES ARCESS Array B 55.52 358 P **P** **16 04 07.6 -0.5**
comp=Z,1.6nm,0.7s,baz=23,slow=6.6,SNR=3.9
comp=Z,1.6nm,0.7s
ARCES ARCESS Array B 55.52 358 P **P** **16 04 07.7 -0.5**
ZALV Zalesovo Beam 59.19 322 LR LR 16 32 23.6
comp=Z,26nm,18.5s,baz=86,slow=38
FINES FINESS Array B 63.62 357 P **P** **16 05 03.6 -0.4**
comp=Z,1.4nm,0.9s,baz=0.0,slow=7.6,SNR=7.0
comp=Z,1.4nm,0.9s
KURBB Kurchatov Arra 64.12 323 P **P** **16 05 07.9 +0.5**
comp=Z,0.4nm,0.8s,baz=29,slow=6.6,SNR=3.8
comp=Z,0.4nm,0.8s
BVAR Borovoye Array 64.64 329 P **P** **16 05 11.3 +0.4**
comp=Z,1.8nm,0.6s,baz=42,slow=6.6,SNR=6.4
comp=Z,1.8nm,0.6s
HFS Hagfors 64.87 4 P **P** **16 05 11.0 -1.2**
comp=Z,2.4nm,0.9s,baz=49,slow=4.5,SNR=5.2
comp=Z,2.4nm,0.9s
MKAR Makanchi Array 65.98 319 P **P** **16 05 18.8 -0.8**
comp=Z,0.2nm,0.5s,baz=53,slow=6.8,SNR=4.4
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 65.98 319 P **P** **16 05 18.0 -1.7**
EKA Eskdalemuir Ar 68.08 15 P **P** **16 05 33.4 +0.6**
comp=Z,1.0nm,0.5s,baz=340,slow=4.7,SNR=8.0
comp=Z,1.0nm,0.5s
KRVT Keravat (AS076 71.63 232 LR LR 16 31 30.1
comp=Z,10nm,20.4s,baz=78,slow=31
AKASG Malin Array Be 74.23 354 P **P** **16 06 09.7 -0.3**
comp=Z,0.7nm,0.4s,baz=6.7,slow=5.6,SNR=4.7
comp=Z,0.7nm,0.4s
CMAR Chiang Mai Arr 81.63 290 P **P** **16 06 51.8 +0.2**
comp=Z,0.8nm,0.6s,baz=13,slow=4.7,SNR=6.1
comp=Z,0.8nm,0.6s
ESDC Sonseca Array 83.14 19 P **P** **16 07 00.8 +1.6**
comp=Z,0.8nm,0.8s,baz=352,slow=6.0,SNR=5.5
comp=Z,0.8nm,0.8s
QSPA South Pole Qui 144.98 180 PKP PKPbc 16 14 08.5 +0.1
comp=Z,0.7nm,0.8s,baz=26,slow=6.9,SNR=1.8
QSPA South Pole Qui 144.98 180 PKPbc **PKPdf** **16 14 09.5 +0.6**

IDC 24 16:06:41.8±13.0, 15.16S×164.16E, h0km, mb3.7/3, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=245.6km s-min=42.3km az=42.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.21**	**163**	Pn	Pn	16

NVAR	**Mina Array Bea**	**20.73**	**338**	P		**P**	**16 13 43.6**		**+0.1**
	1.0nm,0.7s,baz=160,slow=13,SNR=6.7								
NVAR				LR		LR	16 20 49.8		
	comp=Z,78nm,20.9s,baz=174,slow=33								
	1.0nm,0.7s								
ELK	**Elko**	**21.99**	**346**	P		**P**	**16 13 58.5**		**+1.4**
	1.5nm,0.8s,baz=188,slow=7.5,SNR=6.8								
ELK				LR		LR	16 21 24.8		
	comp=Z,43nm,19.0s,baz=137,slow=33								
	1.5nm,0.8s								
PDAR	**Pinedale Array**	**23.27**	**358**	P		**P**	**16 14 09.5**		**-1.0**
	0.3nm,0.5s,baz=174,slow=9.3,SNR=4.5								
PDAR				LR		LR	16 23 03.7		
	comp=Z,36nm,18.2s,baz=163,slow=35								
	0.3nm,0.5s								
NEW	**Newport**	**29.58**	**348**	LR		LR	16 27 00.2		
	comp=Z,38nm,19.6s,baz=171,slow=36								
ATAH	**Atahualpa**	**39.73**	**129**	LR		LR	16 30 18.4		
	comp=Z,27nm,18.7s,baz=12,slow=33								
SJG	**San Juan**	**40.07**	**85**	LR		LR	16 34 26.1		
	comp=Z,23nm,18.0s,baz=299,slow=38								
DLBC	**Dease Lake**	**41.99**	**343**	LR		LR	16 35 16.0		
	comp=Z,55nm,18.3s,baz=104,slow=37								
SCHQ	**Schefferville**	**47.34**	**32**	LR		LR	16 39 40.6		
	comp=Z,14nm,20.8s,baz=3.5,slow=39								
INK	**Inuvik**	**51.30**	**348**	LR		LR	16 40 20.4		
	comp=Z,26nm,19.3s,baz=94,slow=36								
ILAR	**Eielson Array**	**51.97**	**340**	P		**P**	**16 18 10.1**		**-1.3**
	0.5nm,0.5s,baz=144,slow=6.1,SNR=7.5								
	0.5nm,0.5s								
MDP	**Montagnes des**	**56.19**	**97**	LR		LR	16 45 22.8		
	comp=Z,26nm,18.8s,baz=56,slow=39								
H03N2	**Juan Fernandez**	**59.70**	**151**	T		T	17 24 11.1		
	baz=329,slow=77,SNR=129								
H03N1	**Juan Fernandez**	**59.71**	**151**	T		T	17 24 12.3		
	baz=329,slow=77,SNR=217								
H03N3	**Juan Fernandez**	**59.71**	**151**	T		T	17 24 11.4		
	baz=329,slow=77,SNR=184								

IDC 24 16:10:35.5±999.0, 58.79N×55.07E, h0km, Error ellipse: s-maj=497.7km s-min=173.5km az=97.0, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**9.76**	**265**	I	I	17 06 40.0	
	baz=70,slow=326,SNR=2.6						
I37NO	**I37NO**	**18.70**	**318**	I	I	18 01 54.5	
	baz=106,slow=318						
I26DE	**FREYUNG INFRAS**	**25.95**	**266**	I	I	18 50 50.0	
	baz=53,slow=326,SNR=0.6						

*IDC **24** 16:14:35.2±1.3,21.30S×174.10E,h0km,mb4.0/5, mbtmp4.0/7, ML5.1/1, MS3.5/29, Error ellipse: s-maj=39.7km s-min=26.1km az=155.0*

ISC 24 16:14:38.5±1.0, 21.20S±0.2×174.1E±0.2, h24km, n36, σ1§12/8, mb4.1/5, MS3.6/27, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.06**	**48**	Pn	**Pn**	**16 15 52.4**	**-0.7**
	2.7nm,0.3s,baz=221,slow=20,SNR=12						
MSVF				LR	LR	16 17 22.5	
	comp=Z,518nm,20.8s,baz=222,slow=33						
	5.5nm,0.5s						
DZM	**Mont Dzumac**	**7.18**	**261**	Pn	**Pn**	**16 16 21.6**	**-0.5**
	4.0nm,0.7s,baz=237,slow=23,SNR=6.2						
URZ	**Urewera**	**17.22**	**172**	LR	LR	16 23 39.7	
	comp=Z,201nm,19.5s,baz=354,slow=32						
HNR	**Honiara**	**17.95**	**308**	LR	LR	16 24 27.2	
	comp=Z,5.3nm,19.1s,baz=300,slow=33						
RPZ	**Rata Peaks**	**22.62**	**186**	LR	LR	16 27 10.5	
	comp=Z,51nm,21.0s,baz=272,slow=34						
RAR	**Rarotonga**	**24.35**	**95**	LR	LR	16 27 19.9	
	comp=Z,71nm,21.9s,baz=276,slow=31						
STKA	**Stephens Creek**	**30.87**	**243**	P	**P**	**16 20 53.2**	**+0.1**
	2.4nm,0.7s,baz=79,slow=9.2,SNR=4.1						
	2.4nm,0.7s						
PPT2	**Papeete2**	**34.40**	**90**	eLR	LR	16 30 27.8	
	179nm,28.5s						
PPT2				eLR	LR	16 30 39.1	
	325nm,29.0s						
PPT	**Papeete**	**34.41**	**90**	LR	LR	16 31 48.1	
	comp=Z,58nm,21.8s,baz=272,slow=30						
ASAR	**Alice Springs**	**37.16**	**258**	P	**P**	**16 21 47.4**	**-0.5**
	2.5nm,0.8s,baz=87,slow=9.1,SNR=22						
ASAR				LR	LR	16 36 03.4	
	comp=Z,68nm,21.9s,baz=108,slow=35						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**37.18**	**265**	P	**P**	**16 21 46.9**	**-1.2**
	1.0nm,0.5s,baz=101,slow=8.2,SNR=1.8						
	1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**45.61**	**265**	LR	LR	16 41 44.9	
	comp=Z,336nm,19.4s,baz=162,slow=36						
SIJI	**Sorong**	**46.39**	**290**	LR	LR	16 42 21.6	
	comp=Z,55nm,19.6s,baz=76,slow=36						
NWAO	**Narrogin (SRO)**	**51.44**	**244**	LR	LR	16 44 31.2	
	comp=Z,140nm,19.2s,baz=70,slow=35						
KAPI	**Kappang**	**55.03**	**279**	LR	LR	16 48 05.7	
	comp=Z,32nm,18.2s,baz=94,slow=36						
VNDA	**Vanda**	**56.70**	**183**	LR	LR	16 45 00.4	
	comp=Z,27nm,19.2s,baz=14,slow=32						
LEM	**Lembang**	**65.66**	**272**	LR	LR	16 57 21.8	
	comp=Z,55nm,18.5s,baz=195,slow=39						
QSPA	**South Pole Qui**	**68.89**	**180**	P	**P**	**16 25 41.2**	**0.0**
	1.4nm,1.0s,baz=29,slow=6.4,SNR=5.1						
	1.4nm,1.0s						
KSRS	**Korea Array**	**72.73**	**323**	LR	LR	16 56 33.3	
	comp=Z,18nm,19.3s,baz=155,slow=35						
SHEM	**Shemya Is, Ala**	**73.59**	**360**	LR	LR	16 54 25.0	
	comp=Z,18nm,21.2s,baz=334,slow=32						
PETK	**Petropavlovsk-**	**75.33**	**350**	LR	LR	16 56 02.7	
	comp=Z,35nm,18.5s,baz=164,slow=33						
MA2	**Magadan**	**82.70**	**348**	LR	LR	16 58 17.5	
	comp=Z,33nm,20.0s,baz=116,slow=32						
CMAR	**Chiang Mai Arr**	**83.46**	**293**	P	**P**	**16 27 06.5**	**+1.9**
	0.5nm,0.3s,baz=107,slow=3.5,SNR=6.8						
CMAR				LR	LR	17 07 22.3	
	comp=Z,6.4nm,19.1s,baz=265,slow=38						
	0.5nm,0.3s						
YBH	**Yreka Blue Hor**	**85.59**	**42**	LR	LR	16 57 16.6	
	comp=Z,24nm,21.7s,baz=277,slow=30						
PFO	**Pinyon Flats O**	**85.86**	**52**	LR	LR	16 58 22.1	
	comp=Z,31nm,18.5s,baz=343,slow=31						
LPIG	**La Paz**	**86.19**	**63**	LR	LR	16 56 46.7	
	comp=Z,29nm,20.9s,baz=255,slow=29						
NVAR	**Mina Array Bea**	**86.73**	**47**	LR	LR	16 58 28.0	
	comp=Z,45nm,18.9s,baz=234,slow=30						
YAK	**Yakutsk**	**90.14**	**341**	LR	LR	17 01 47.5	
	comp=Z,30nm,21.7s,baz=108,slow=31						
ILAR	**Eielson Array**	**90.78**	**16**	LR	LR	17 02 15.1	
	comp=Z,15nm,19.5s,baz=250,slow=32						
NEW	**Newport**	**92.38**	**39**	LR	LR	17 04 24.2	
	comp=Z,22nm,18.6s,baz=358,slow=32						
ANMO	**Albuquerque**	**93.69**	**54**	LR	LR	17 01 35.2	
	comp=Z,38nm,20.9s,baz=248,slow=30						
PDAR	**Pinedale Array**	**94.63**	**46**	LR	LR	17 04 27.7	
	comp=Z,23nm,19.7s,baz=262,slow=32						
PALK	**Pallekele**	**95.74**	**276**	LR	LR	17 13 40.8	
	comp=Z,29nm,18.1s,baz=188,slow=37						
CMIG	**Matias Romero**	**96.93**	**74**	LR	LR	17 04 04.5	
	comp=Z,27nm,18.9s,baz=254,slow=31						
TIXI	**Tiksi**	**97.61**	**347**	LR	LR	17 12 01.0	
	comp=Z,23nm,18.1s,baz=196,slow=35						
GERES	**GERESS Array B**	**148.26**	**335**	PKPbc	**PKPbc**	**16 34 23.3**	**+0.6**
	0.5nm,0.7s,baz=24,slow=2.8,SNR=4.0						

IDC 24 16:26:57.8±2.4, 6.23S×130.13E, h0km, mb3.3/1, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=90.7km s-min=30.3km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.58**	**200**	Pn	Pn	16 29 57.5	-0.7
	0.2nm,0.3s,baz=18,slow=9.7,SNR=7.9						
FITZ				Sn	Sn	16 32 03.1	-16
	0.4nm,0.3s,baz=204,slow=15,SNR=6.3						
	3.7nm,1.1s						
WRA	**Warramunga Arr**	**14.23**	**164**	Pn	Pn	16 30 21.8	+1.1
	0.2nm,0.3s,baz=348,slow=14,SNR=13						
WRA				Sn	Sn	16 32 46.8	-13
	0.4nm,0.3s,baz=60,slow=30,SNR=7.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**17.71**	**169**	P	Pn	16 31 05.9	-0.2
	baz=347,slow=13,SNR=6.7						
ASAR				S	Sn	16 34 12.0	-12
	0.2nm,0.4s,baz=214,slow=7.2,SNR=6.2						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	16 37 56.8	0.0
	0.1nm,0.3s,baz=121,slow=7.8,SNR=1.8						
	0.1nm,0.3s						

TAP 24 16:41:27.9,24.43N×121.68E,h17km,ML1.5,7C-1D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.05**	**95**	*i* P	Pg	16 41 30.1	-0.8
ENA				eS	Sg	16 41 31.9	-1.1
EWUT	**Wuta**	**0.09**	**82**	⇑ *i* P	Pg	16 41 32.2	+0.9
EWUT				S	Sg	16 41 34.2	+0.8
EAHA	**Aohua**	**0.12**	**154**	P	Pb	16 41 32.6	+1.0
EAHA				S	Sb	16 41 34.5	+0.3
LATG	**Datong**	**0.18**	**305**	⇑ P	Pb	16 41 33.7	+0.9
LATG				*i* S	Sb	16 41 36.5	+0.4
NDS	**Dongshan**	**0.20**	**8**	P	Pb	16 41 34.4	+1.2
NDS				S	Sb	16 41 37.0	+0.3
NDT	**Datong Townshi**	**0.23**	**317**	P	Pb	16 41 33.7	0.0
NDT				eS	Sg	16 41 36.2	-0.5
TWC	**Suao**	**0.23**	**41**	eP	Pb	16 41 36.9	+3.2
TWC				eS	Sb	16 41 40.0	+2.4
NACB	**Ninganchiao**	**0.27**	**198**	P	Pb	16 41 34.9	+0.5
NACB				S	Sb	16 41 39.4	+0.7
NNSH	**Datong**	**0.27**	**269**	⇑ P	Pb	16 41 35.4	+0.9
NNSH				S	Sb	16 41 39.0	+0.1
NNSB	**Datong**	**0.28**	**269**	⇑ P	Pb	16 41 35.4	+0.9
NNSB				S	Sb	16 41 39.2	+0.3
ETL	**Fush Village**	**0.28**	**192**	S	Sb	16 41 40.0	+1.1
NNS	**Nan Shan**	**0.28**	**271**	⇓ eP	Pb	16 41 35.7	+1.1
NNS				S	Sb	16 41 39.4	+0.2
TWE	**Neicheng**	**0.29**	**357**	P	Pb	16 41 34.5	-0.1
TWE				eS	Sg	16 41 38.2	-0.1
ETLH	**Xiulin Townshi**	**0.29**	**219**	P	Pb	16 41 35.8	+1.0
ETLH				S	Sb	16 41 39.4	0.0
ILA	**Ilan**	**0.34**	**10**	*i* P	Pb	16 41 35.7	+0.3
ILA				S	Sb	16 41 40.9	+0.3
FUSB	**Fushanzhiwuyua**	**0.34**	**345**	P	Pg	16 41 34.9	-0.1
FUSB				S	Sb	16 41 41.6	+0.9
YHNB	**Yeheng**	**0.37**	**310**	eP	Pn	16 41 37.7	-0.9
YHNB				S	Sb	16 41 42.3	+0.8
NWLT	**Wulai**	**0.38**	**334**	⇑ eP	Pn	16 41 38.0	-0.7
NWLT				S	Sb	16 41 42.6	+0.7
NSK	**Sanguang**	**0.38**	**309**	⇑ eP	Pn	16 41 37.8	-1.0
NSK				S	Sb	16 41 42.8	+0.7
NTC	**Toucheng**	**0.44**	**18**	P	Pg	16 41 36.7	-0.1
NTC				S	Sb	16 41 43.6	0.0
FUSS	**Fushou**	**0.44**	**245**	P	Pb	16 41 37.2	-0.2
FUSS				S	Sg	16 41 43.3	+0.2
WHF	**Hehuan Shan**	**0.48**	**233**	P	Pg	16 41 37.4	-0.2
WHF				eS	Sg	16 41 43.7	-0.5
LXIB	**Xiulin Townshi**	**0.48**	**211**	P	Pg	16 41 37.1	-0.5
LXIB				S	Sg	16 41 44.3	+0.2
TWT	**Tachien**	**0.50**	**249**	P	Pb	16 41 38.4	+0.1
TWT				S	Sb	16 41 45.3	-0.1
TDCB	**Techi**	**0.51**	**250**	P	Pb	16 41 38.5	-0.1
TDCB				eS	Sg	16 41 44.8	-0.3
TATO	**Taipei**	**0.57**	**342**	P	Pg	16 41 39.1	-0.1
TATO				S	Sb	16 41 47.6	+0.3
OWD	**Renai**	**0.67**	**224**	P	Pg	16 41 40.1	-0.9
OWD				S	Sb	16 41 51.0	+0.8
WUSB	**Renai**	**0.68**	**230**	P	Pb	16 41 41.6	+0.2
WUSB				S	Sb	16 41 51.6	+1.1
WHP	**Taichung City**	**0.69**	**257**	eP	Pn	16 41 43.8	+0.7
ZUZH	**Zhuzihu**	**0.74**	**350**	P	Pn	16 41 43.0	-0.6
HSN	**Hsinchu**	**0.75**	**300**	P	Pb	16 41 42.0	-0.4
HSN				S	Sb	16 41 51.7	-0.7
WARBT	**Fenglin Townsh**	**0.76**	**201**	P	Pg	16 41 43.0	+0.2
WARBT				S	Sn	16 41 54.0	-1.1
DPDB	**Guoxing**	**0.80**	**240**	P	Pg	16 41 44.0	+0.5
DPDB				S	Sg	16 41 54.5	+0.5
VWDT	**VWDT**	**0.84**	**216**	eP	Pb	16 41 41.8	-2.2
VWDT				eS	Sb	16 41 53.3	-1.7

*KRSC **24** 17:11:55.6±0.8, 55.76N×161.39E, h150km±7km, Ml4.1*
*MOS **24** 17:11:56.1±0.8, 55.82N×161.28E, h151km, mb4.2/10, Error ellipse: s-maj=10.1km s-min=4.4km az=77.2*
*NEIC **24** 17:11:58.2±1.5, 55.83N±0.08×161.71E±0.1, h155km±7km, mb4.1/67, Error ellipse: s-maj=13.1km s-min=10.9km az=141.0*
*IDC **24** 17:11:58.3±1.5, 55.86N×161.01E, h154km±14km, mb3.4/12, mbtmp3.9/16, Error ellipse: s-maj=15.1km s-min=11.9km az=140.0*

ISC 24 17:11:57.3±0.5, 55.79N±0.03×161.30E±0.03, h151km±4km, n209, σ1§12/250, mb4.1/44, 2C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.36**	**310**	PN	**Pn**	**17 12 17.8**	**-0.4**
ZLN				S	Sn	17 12 33.9	-0.3
ZLN	**Zelenaya**	**0.36**	**310**	eP	**Pn**	**17 12 17.9**	**-0.4**
ZLN				eS	Sn	17 12 34.0	-0.3
BZGR	**Bezymyannyi-Gr**	**0.37**	**294**	PN	**Pn**	**17 12 17.9**	**-0.4**
BZGR				S	Sn	17 12 33.5	-0.8
BZGR	**Bezymyannyi-Gr**	**0.37**	**294**	eP	**Pn**	**17 12 17.9**	**-0.4**
BZGR				eS	Sn	17 12 33.5	-0.8
BZP	**Bezymyannyi-Pe**	**0.45**	**287**	PN	**Pn**	**17 12 17.6**	**-1.1**
BZP	**Bezymyannyi-Pe**	**0.45**	**287**	eP	**Pn**	**17 12 17.6**	**-1.1**
CIRR	**Tsirk**	**0.45**	**317**	PN	**Pn**	**17 12 18.2**	**-0.5**
CIRR				S	Sn	17 12 34.2	-0.8
CIRR	**Tsirk**	**0.45**	**317**	eP	**Pn**	**17 12 18.2**	**-0.5**
CIRR				eS	Sn	17 12 34.3	-0.8
BZMR	**Bezymyannaya**	**0.48**	**288**	PN	**Pn**	**17 12 18.2**	**-0.6**
BZMR				S	Sn	17 12 34.2	-1.0
BZMR	**Bezymyannaya**	**0.48**	**288**	eP	**Pn**	**17 12 18.2**	**-0.6**
BZMR				eS	Sn	17 12 34.2	-1.0
BZWT	**Bezymyannyi-We**	**0.49**	**292**	PN	**Pn**	**17 12 18.3**	**-0.5**
BZWR				S	Sn	17 12 34.4	-0.9
BZWR	**Bezymyannyi-We**	**0.49**	**292**	eP	**Pn**	**17 12 18.4**	**-0.5**
BZWR				eS	Sn	17 12 34.4	-0.9
KIRR	**Kirishev**	**0.56**	**287**	PN	**Pn**	**17 12 18.4**	**-0.9**
KIRR				S	Sn	17 12 34.4	-1.5
KIRR	**Kirishev**	**0.56**	**287**	eP	**Pn**	**17 12 18.4**	**-0.9**
KIRR				eS	Sn	17 12 34.5	-1.5
KMNR	**Kamenistaya**	**0.60**	**267**	PN	**Pn**	**17 12 19.0**	**-0.4**
KMNR				S	Sn	17 12 36.8	+0.6
KMNR	**Kamenistaya**	**0.60**	**267**	eP	**Pn**	**17 12 19.0**	**-0.4**
KMNR				eS	Sn	17 12 36.8	+0.6
KPT	**Kopyto**	**0.63**	**287**	PN	**Pn**	**17 12 19.0**	**-0.6**
KPT				S	Sn	17 12 35.6	-0.9
KPT	**Kopyto**	**0.63**	**287**	eP	**Pn**	**17 12 19.0**	**-0.6**
KPT				eS	Sn	17 12 35.6	-0.9
KLY	**Klyuchi**	**0.64**	**326**	PN	**Pn**	**17 12 18.1**	**-1.4**
KLY				S	Sn	17 12 34.4	-2.0
KLY	**Klyuchi**	**0.64**	**326**	eP	**Pn**	**17 12 18.1**	**-1.4**
KLY				eS	Sn	17 12 34.4	-2.0
TUMD	**Tumrok D**	**0.78**	**222**	PN	**Pn**	**17 12 19.9**	**-0.6**
TUMD				S	Sn	17 12 37.2	-0.8
TUMD	**Tumrok D**	**0.78**	**222**	eP	**Pn**	**17 12 19.9**	**-0.6**
TUMD				eS	Sn	17 12 37.3	-0.8
SMKR	**Semkarok**	**0.80**	**7**	PN	**Pn**	**17 12 19.8**	**-0.9**
SMKR				S	Sn	17 12 37.5	-1.0
SMKR	**Semkarok**	**0.80**	**7**	eP	**Pn**	**17 12 19.8**	**-0.9**
SMKR				eS	Sn	17 12 37.6	-1.0
TUMR	**Tumrok**	**0.83**	**233**	PN	**Pn**	**17 12 20.8**	**-0.1**
TUMR	**Tumrok**	**0.83**	**233**	*i* P	**Pn**	**17 12 20.9**	**-0.1**
KOZ	**Kozyrevsk**	**0.85**	**289**	PN	**Pn**	**17 12 20.3**	**-0.6**
KOZ	**Kozyrevsk**	**0.85**	**289**	eP	**Pn**	**17 12 20.4**	**-0.6**
KBTR	**Krutoberegovo**	**0.95**	**63**	PN	**Pn**	**17 12 20.4**	**-1.3**
KBTR				S	Sn	17 12 38.1	-2.3
KBTR	**Krutoberegovo**	**0.95**	**63**	*i* P	**Pn**	**17 12 20.4**	**-1.3**
KBTR				eS	Sn	17 12 38.1	-2.3
SRDR	**Sredinnyy**	**1.03**	**302**	PN	**Pn**	**17 12 21.8**	**-0.7**
SRDR				S	Sn	17 12 40.5	-1.2
SRDR	**Sredinnyy**	**1.03**	**302**	eP	**Pn**	**17 12 21.8**	**-0.7**
SRDR				eS	Sn	17 12 40.5	-1.2
MKZ	**Mys Kozlova**	**1.26**	**169**	PN	**Pn**	**17 12 23.2**	**-1.3**
MKZ				S	Sn	17 12 43.5	-1.6
MKZ	**Mys Kozlova**	**1.26**	**169**	eP	**Pn**	**17 12 23.2**	**-1.3**
MKZ				eS	Sn	17 12 43.6	-1.6
ESO	**Esso**	**1.47**	**276**	PN	**Pn**	**17 12 26.4**	**-0.2**
ESO	**Esso**	**1.47**	**276**	eP	**Pn**	**17 12 26.4**	**-0.2**
KII	**Karymskiy**	**2.06**	**212**	PN	**Pn**	**17 12 33.4**	**+0.2**
KII	**Karymskiy**	**2.06**	**212**	eP	**Pn**	**17 12 33.4**	**+0.2**
BKI	**Bering**	**2.72**	**100**	PN	**Pn**	**17 12 40.6**	**-0.5**
BKI				S	**Sn**	**17 13 13.2**	**-1.7**
BKI	**Bering**	**2.72**	**100**	*i* P	**Pn**	**17 12 40.7**	**-0.5**
BKI				*e*S	**Sn**	**17 13 13.3**	**-1.7**
SPN	**Mys Shipunski**	**2.80**	**196**	PN	**Pn**	**17 12 41.0**	**-1.1**
SPN				S	**Sn**	**17 13 14.1**	**-2.5**
SPN	**Mys Shipunski**	**2.80**	**196**	*e*P	**Pn**	**17 12 41.1**	**-1.1**
SPN				*e*S	**Sn**	**17 13 14.2**	**-2.5**
NLC	**Nalytchevo**	**2.86**	**204**	PN	**Pn**	**17 12 42.1**	**-0.8**
NLC				S	**Sn**	**17 13 16.7**	**-1.3**
NLC	**Nalytchevo**	**2.86**	**204**	*e*P	**Pn**	**17 12 42.1**	**-0.8**
NLC				*e*S	**Sn**	**17 13 16.8**	**-1.3**
GNL	**Ganaly**	**2.86**	**224**	PN	**Pn**	**17 12 43.3**	**+0.3**
GNL	**Ganaly**	**2.86**	**224**	*e*P	**Pn**	**17 12 43.4**	**+0.3**
KRX	**Arik**	**2.88**	**213**	PN	**Pn**	**17 12 43.9**	**+0.6**
KRX	**Arik**	**2.88**	**213**	*e*P	**Pn**	**17 12 43.9**	**+0.6**
SDLR	**Sedlovina**	**2.88**	**210**	PN	**Pn**	**17 12 43.4**	**+0.1**
SDLR	**Sedlovina**	**2.88**	**210**	*e*P	**Pn**	**17 12 43.4**	**+0.1**
KRER	**Koryakskii**	**2.90**	**212**	PN	**Pn**	**17 12 44.3**	**+0.7**
KRER	**Koryakskii**	**2.90**	**212**	*e*P	**Pn**	**17 12 44.3**	**+0.7**
SMAR	**Somma**	**2.92**	**211**	PN	**Pn**	**17 12 44.2**	**+0.3**
SMAR	**Somma**	**2.92**	**211**	*e*P	**Pn**	**17 12 44.2**	**+0.3**
AVH	**Avacha**	**2.94**	**212**	PN	**Pn**	**17 12 44.6**	**+0.7**
AVH	**Avacha**	**2.94**	**212**	*e*P	**Pn**	**17 12 44.6**	**+0.7**
KOK	**Koryaka**	**2.94**	**213**	PN	**Pn**	**17 12 44.8**	**+0.8**
KOK	**Koryaka**	**2.94**	**213**	*e*P	**Pn**	**17 12 44.9**	**+0.8**
DALK	**Dalny**	**3.14**	**209**	PN	**Pn**	**17 12 46.0**	**-0.4**
DALK				S	**Sn**	**17 13 23.7**	**-0.6**
DALK	**Dalny**	**3.14**	**209**	*e*P	**Pn**	**17 12 46.1**	**-0.4**
DALK				eS	**Sn**	**17 13 23.7**	**-0.6**
PET	**Petropavlovsk**	**3.17**	**210**	*e*PN	**Pn**	**17 12 46.6**	**-0.3**
PET				*e*S	**Sn**	**17 13 23.9**	**-1.2**
PET				pmax	pmax		
	comp=Z,162nm,0.5s						
PET				smax	smax		
	comp=N,140nm,0.6s						
PET				smax	smax		
	comp=E,120nm,0.4s						
PET	**Petropavlovsk**	**3.17**	**210**		**Pn**	**17 12 46.6**	**-0.3**
PET				Sn	**Sn**	**17 13 24.0**	**-1.2**
PET	**Petropavlovsk**	**3.17**	**210**	*e*P	**Pn**	**17 12 46.8**	**0.0**
PET				*e*S	**Sn**	**17 13 24.4**	**-0.8**
PEA0B	**Petropavlovsk-**	**3.41**	**220**	*d i*PN	**Pn**	**17 12 50.1**	**+0.2**
PEA0B	**Petropavlovsk-**	**3.41**	**220**		**Pn**	**17 12 50.1**	**+0.2**
PETK	**Petropavlovsk-**	**3.41**	**220**	P	**Pn**	**17 12 49.9**	**0.0**
	comp=E,28nm,0.6s,baz=62,slow=16,SNR=441						
PETK				S	**Sn**	**17 13 31.3**	**+0.6**
	comp=E,5.8nm,0.5s,baz=80,slow=19,SNR=1.0						
PETK	**Petropavlovsk-**	**3.41**	**220**		**Pn**	**17 12 50.1**	**+0.2**
KRMR	**Karymshinskiy**	**3.50**	**213**	PN	**Pn**	**17 12 51.0**	**0.0**
KRMR	**Karymshinskiy**	**3.50**	**213**	*e*P	**Pn**	**17 12 51.1**	**0.0**
OSSR	**Ossora**	**3.60**	**15**	PN	**Pn**	**17 12 51.7**	**-0.5**
OSSR				S	**Sn**	**17 13 34.0**	**-0.9**
OSSR	**Ossora**	**3.60**	**15**	*e*P	**Pn**	**17 12 51.7**	**-0.5**
OSSR				*e*S	**Sn**	**17 13 34.0**	**-0.9**
RUS	**Russkaya**	**3.74**	**207**	PN	**Pn**	**17 12 52.9**	**-1.2**
RUS	**Russkaya**	**3.74**	**207**	*e*P	**Pn**	**17 12 52.9**	**-1.2**
APC	**Apacha**	**3.75**	**222**	PN	**Pn**	**17 12 55.4**	**+1.1**
APC	**Apacha**	**3.75**	**222**	*e*P	**Pn**	**17 12 55.4**	**+1.1**
GRL	**Gorelyy**	**3.75**	**212**	PN	**Pn**	**17 12 54.7**	**+0.2**
GRL	**Gorelyy**	**3.75**	**212**	*e*P	**Pn**	**17 12 54.7**	**+0.2**
MTVR	**Mutnovka**	**3.78**	**210**	PN	**Pn**	**17 12 55.1**	**+0.2**
MTVR	**Mutnovka**	**3.78**	**210**	*e*P	**Pn**	**17 12 55.2**	**+0.2**
ASAK	**Asacha**	**3.96**	**212**	PN	**Pn**	**17 12 57.1**	**+0.1**
ASAK	**Asacha**	**3.96**	**212**	*e*P	**Pn**	**17 12 57.1**	**+0.1**
KDTR	**Khodutka, Kamc**	**4.42**	**207**	PN	**Pn**	**17 13 01.4**	**-1.6**
KDTR				S	**Sn**	**17 13 50.7**	**-3.4**
KDTR	**Khodutka, Kamc**	**4.42**	**207**	*e*P	**Pn**	**17 13 01.4**	**-1.6**
KDTR				*e*S	**Sn**	**17 13 50.7**	**-3.4**
PAU	**Pauzhetka**	**5.08**	**214**	PN	**Pn**	**17 13 12.0**	**+0.2**
PAU	**Pauzhetka**	**5.08**	**214**	*e*P	**Pn**	**17 13 12.1**	**+0.2**
SKR	**Severo-Kuril's**	**5.98**	**213**	*e*PN	**Pn**	**17 13 23.9**	**+0.2**
SKR	**Severo-Kuril's**	**5.98**	**213**	*e*P	**Pn**	**17 13 22.7**	**-1.0**
MA2	**Magadan**	**6.80**	**308**	P	**P

K20K					IAmb	IAmb	17 16 55.3		
	comp=Z,9.2nm,1.2s								
IMAR	**Indian Mountai**	**23.58**	**46**			**P**	**17 16 54.2**	**+0.4**	
B21K	**Ikpikpuk River**	**23.79**	**37**			**P**	**17 16 56.5**	**+0.8**	
H21K	**Melozitna Rive**	**23.95**	**47**	P		**P**	**17 16 57.7**	**+0.5**	
I21K	**Tanana**	**24.28**	**48**	P		**P**	**17 17 01.2**	**+1.0**	
I21K				IAmb	IAmb	17 17 03.5			
	comp=Z,3.1nm,0.6s								
H22K	**Ishtalitna Cre**	**24.54**	**47**			**P**	**17 17 03.6**	**+1.0**	
MJA0	**Matsu Arr-Jizo**	**24.80**	**229**	*eP*		**P**	**17 17 05.6**	**+0.4**	
MJA0				pmax	pmax				
	comp=Z,2.0nm,0.8s								
MJB9	**Matsu-Tunnel**	**24.82**	**229**	P		**P**	**17 17 06.3**	**+1.0**	
MJB9				IAmb	IAmb	17 17 07.8			
	comp=Z,4.6nm,0.8s								
MAJO	**Matsushiro**	**24.82**	**229**	*i* P		**P**	**17 17 05.6**	**+0.3**	
MAJO				pmax	pmax				
	comp=Z,6.0nm,0.9s								
MAJO	**Matsushiro**	**24.82**	**229**	P		**P**	**17 17 05.5**	**+0.1**	
MAJO				IAmb	IAmb	17 17 06.8			
	comp=Z,4.8nm,0.8s								
MJAR	**Matsushiro Arr**	**24.82**	**229**	P		**P**	**17 17 05.4**	**0.0**	
	comp=Z,2.1nm,0.8s,baz=25,slow=8.1,SNR=9.9								
	comp=Z,2.1nm,0.8s								
MJAR	**Matsushiro Arr**	**24.82**	**229**	P		**P**	**17 17 05.3**	**0.0**	
MJAR				pmax	pmax				
	comp=Z,2.0nm,1.2s								
MJAR	**Matsushiro Arr**	**24.82**	**229**	P		**P**	**17 17 05.3**	**0.0**	
KDAK	**Kodiak Island**	**24.97**	**66**	P		**P**	**17 17 07.2**	**+0.8**	
KDAK				pmax	pmax				
	comp=Z,15nm,1.3s								
KDAK	**Kodiak Island**	**24.97**	**66**	P		**P**	**17 17 07.2**	**+0.8**	
H23K	**Yukon River**	**25.30**	**47**	IAmb	IAmb	17 17 13.4			
	comp=Z,7.5nm,1.4s								
E23K	**Chandalar**	**25.35**	**42**	P		**P**	**17 17 10.8**	**+0.9**	
E23K				IAmb	IAmb	17 17 11.3			
	comp=Z,2.8nm,0.6s								
JGF	**Kuroka**	**25.98**	**229**	P		**P**	**17 17 17.2**	**+1.3**	
JGF				IAmb	IAmb	17 17 42.0			
	comp=Z,6.5nm,1.1s								
ILAR	**Eielson Array**	**26.46**	**49**	P		**P**	**17 17 20.4**	**+0.5**	
	comp=Z,1.0nm,0.6s,baz=269,slow=7.8,SNR=14								
	comp=Z,1.0nm,0.6s								
D25K	**Kavik River**	**26.62**	**39**	P		**P**	**17 17 21.9**	**+0.6**	
C27K	**Jago River**	**27.57**	**38**	P		**P**	**17 17 30.8**	**+1.1**	
C27K				IAmb	IAmb	17 17 32.1			
	comp=Z,3.4nm,0.8s								
G26K	**Porcupine Rive**	**27.58**	**44**	IAmb	IAmb	17 17 32.4			
	comp=Z,7.0nm,1.4s								
KSAR	**Wonju Array Be**	**28.98**	**245**	P		**P**	**17 17 43.3**	**+0.9**	
KSAR	**Wonju Array Be**	**28.98**	**245**	P		**P**	**17 17 43.3**	**+0.9**	
M27K	**Edge Creek, AK**	**29.06**	**53**	IAmb	IAmb	17 17 46.4			
	comp=Z,5.5nm,1.2s								
H29M	**Whitestone**	**29.81**	**45**	P		**P**	**17 17 51.0**	**+1.4**	
H29M				IAmb	IAmb	17 17 51.5			
	comp=Z,3.1nm,0.8s								
G29M	**Pine Creek**	**29.84**	**44**	IAmb	IAmb	17 17 52.1			
	comp=Z,3.1nm,0.7s								
F30M	**Barrier River**	**30.60**	**42**	IAmb	IAmb	17 17 59.3			
	comp=Z,3.9nm,0.8s								
I30M	**Mount Dempster**	**30.81**	**47**	IAmb	IAmb	17 18 00.2			
	comp=Z,3.0nm,0.8s								
TLY	**Talaya**	**33.50**	**288**	*i* P		**P**	**17 18 22.4**	**+0.4**	
TLY				pmax	pmax				
	comp=Z,4.0nm,0.8s								
NRIK	**Noril'sk**	**34.15**	**323**	*i* P		**P**	**17 18 28.2**	**+0.9**	
NRIK				pmax	pmax				
	comp=Z,1.0nm,0.9s								
R33M	**Jennings River**	**35.06**	**56**	P		**P**	**17 18 36.8**	**+1.3**	
R33M				IAmb	IAmb	17 18 39.0			
	comp=Z,2.5nm,0.7s								
HHC	**Hu-ho-hao-te**	**35.45**	**266**	*eP*		**P**	**17 18 37.8**	**-1.2**	
HHC				pmax	pmax				
	comp=Z,13nm,0.5s								
HHC				pmax	pmax				
	comp=Z,75nm,5.7s								
H11N2	**WAKE ISLAND Hy**	**36.25**	**171**	T		T	17 56 30.0		
	baz=355,slow=76,SNR=21								
H11N3	**WAKE ISLAND Hy**	**36.26**	**171**	T		T	17 56 30.6		
	baz=355,slow=76,SNR=20								
H11N1	**WAKE ISLAND Hy**	**36.26**	**171**	T		T	17 56 31.0		
	baz=355,slow=76,SNR=22								
YKA	**Yellowknife Ar**	**40.73**	**45**	P		**P**	**17 19 23.9**	**+1.2**	
	comp=Z,1.3nm,0.6s,baz=304,slow=8.0,SNR=4.9								
	comp=Z,1.3nm,0.6s								
DGZ	**Jazzator, Alta**	**43.16**	**294**	*i* P		**P**	**17 19 42.7**	**-0.1**	
DGZ				pmax	pmax				
	comp=Z,3.0nm,0.6s								
BLKN	**Baker Lake**	**46.48**	**36**	P		**P**	**17 20 09.2**	**+0.7**	
LTY	**Liberty**	**46.85**	**66**	P		**P**	**17 20 12.2**	**+0.4**	
KURK	**Kurchatov**	**46.94**	**300**	*i* P		**P**	**17 20 11.7**	**-0.7**	
KURK				pmax	pmax				
	comp=Z,2.0nm,0.5s								
KURK	**Kurchatov**	**46.94**	**300**			**PcP**	**17 21 41.9**	**-0.4**	
KURK	**Kurchatov**	**46.94**	**300**	P		**P**	**17 20 11.3**	**-1.1**	
KURBB	**Kurchatov Arra**	**47.05**	**300**	P		**P**	**17 20 12.0**	**-1.2**	
	comp=Z,2.0nm,0.5s,baz=56,slow=7.9,SNR=29								
KURBB				PcP		**PcP**	**17 21 41.9**	**-0.8**	
	comp=Z,0.4nm,0.6s,baz=45,slow=3.2,SNR=4.3								
	comp=Z,2.0nm,0.5s								
MK31	**Makanchi Array**	**47.66**	**294**	*i* P		**P**	**17 20 16.8**	**-1.3**	
MK31	**Makanchi Array**	**47.66**	**294**	P		**P**	**17 20 16.7**	**-1.3**	
MKAR	**Makanchi Array**	**47.66**	**294**	P		**P**	**17 20 17.0**	**-1.0**	
	comp=Z,0.7nm,0.4s,baz=55,slow=6.8,SNR=23								
	comp=Z,0.7nm,0.4s								
MAKZ	**Makanchi**	**47.81**	**294**	P		**P**	**17 20 18.1**	**-1.1**	
MAKZ				pmax	pmax				
	comp=Z,4.0nm,1.4s								
MAKZ	**Makanchi**	**47.81**	**294**	P		**P**	**17 20 18.1**	**-1.1**	
BVAR	**Borovoye Array**	**49.29**	**307**	P		**P**	**17 20 29.3**	**-1.1**	
	comp=Z,0.7nm,0.4s,baz=39,slow=10,SNR=4.3								
BVAR				PcP		**PcP**	**17 21 49.6**	**-1.2**	
	comp=Z,1.3nm,0.6s,baz=31,slow=3.4,SNR=4.9								
	comp=Z,0.7nm,0.4s								
LVZ	**Lovozero**	**50.49**	**337**	*i* P		**P**	**17 20 40.3**	**+1.0**	
LVZ				pmax	pmax				
	comp=Z,11nm,1.1s								
PZH	**PanZhiHua**	**51.48**	**261**	P		**P**	**17 20 48.4**	**+1.1**	
ARTI	**Arti**	**52.01**	**317**	*c iP*		**P**	**17 20 50.4**	**-0.2**	
ARTI				*PP		**pP**	**17 21 22.7**	**-2.4**	
ARTI							17 21 59.0		
ARTI				S		**S**	**17 28 01.5**	**-0.5**	
ARTI				SS		**SS**	**17 31 37.5**	**-2.6**	
ARTI				pmax	pmax				
	comp=Z,2.0nm,0.7s								
ARTI	**Arti**	**52.01**	**317**	P		**P**	**17 20 50.1**	**-0.6**	
NVAR	**Mina Array Bea**	**54.21**	**73**	P		**P**	**17 21 09.9**	**+2.5**	
	comp=Z,0.4nm,0.5s,baz=320,slow=7.0,SNR=2.8								
	comp=Z,0.4nm,0.5s								
PDAR	**Pinedale Array**	**55.63**	**63**	P		**P**	**17 21 19.1**	**+1.6**	
	comp=Z,0.3nm,0.5s,baz=319,slow=7.1,SNR=4.7								
	comp=Z,0.3nm,0.5s								
KKAR	**Karatay Array**	**56.21**	**298**	P		**P**	**17 21 20.3**	**-1.0**	
KKAR	**Karatay Array**	**56.21**	**298**	P		**P**	**17 21 20.3**	**-1.0**	
AB31	**Akbulak array**	**56.60**	**310**	P		**P**	**17 21 22.9**	**-1.1**	
ABKAR	**Akbulak array**	**56.60**	**310**	P		**P**	**17 21 23.2**	**-0.7**	
FIA1	**FINESS Array S**	**57.92**	**336**	P		**P**	**17 21 32.1**	**-0.9**	
FINES	**FINESS Array B**	**57.92**	**336**	P		**P**	**17 21 34.1**	**+1.0**	
	comp=Z,2.3nm,0.9s,baz=24,slow=7.9,SNR=5.1								
	comp=Z,2.3nm,0.9s								
FINES	**FINESS Array B**	**57.92**	**336**	P		**P**	**17 21 33.1**	**+0.1**	
FINES	**FINESS Array B**	**57.92**	**336**	P		**P**	**17 21 33.0**	**+0.1**	
HMU	**Henry Mountain**	**58.59**	**68**	P		**P**	**17 21 38.7**	**+0.3**	
HMU				IAmb	IAmb	17 21 41.4			
	comp=Z,2.2nm,0.6s								
OBN	**Obninsk**	**60.62**	**327**	*i eP*		**P**	**17 21 52.7**	**+1.1**	
OBN				*e*PP		**pP**	**17 22 28.7**	**+1.6**	
OBN				*e*			17 24 07.9		
OBN				*eS*		**S**	**17 29 47.8**	**-7.7**	
OBN				pmax	pmax				
	comp=Z,3.0nm,0.6s								
MYLDM	**Lahad Datu**	**60.87**	**231**	P		**P**	**17 21 52.0**	**-1.8**	
ANMO	**Albuquerque**	**63.10**	**67**	*i* P		**P**	**17 22 09.8**	**+1.0**	
ANMO				pmax	pmax				
	comp=Z,1.0nm,0.9s								
ANMO	**Albuquerque**	**63.10**	**67**	P		**P**	**17 22 08.8**	**0.0**	
KIV	**Kislovodsk**	**67.95**	**317**	*eP*		**P**	**17 22 39.7**	**+0.1**	
KIV				pmax	pmax				
	comp=Z,4.0nm,1.1s								
TX31	**Lajitas Ar. Si**	**68.97**	**69**	P		**P**	**17 22 46.4**	**+0.2**	
TXAR	**Lajitas Array**	**68.97**	**69**	P		**P**	**17 22 47.8**	**+1.6**	
	comp=Z,0.3nm,0.5s,baz=304,slow=4.0,SNR=7.0								
	comp=Z,0.3nm,0.5s								
TXAR	**Lajitas Array**	**68.97**	**69**	P		**P**	**17 22 46.2**	**+0.1**	
TXAR	**Lajitas Array**	**68.97**	**69**	P		**P**	**17 22 46.2**	**+0.1**	
146A	**Union**	**73.58**	**56**	P		**P**	**17 23 14.8**	**+1.2**	
WRA	**Warramunga Arr**	**78.82**	**206**	P		**P**	**17 23 43.4**	**+0.1**	
	comp=Z,0.6nm,0.8s,baz=16,slow=5.7,SNR=6.1								
	comp=Z,0.6nm,0.8s								
WRA	**Warramunga Arr**	**78.82**	**206**	*eP*		**P**	**17 23 45.0**	**+1.8**	
AS31	**Alice Springs**	**82.50**	**205**	P		**P**	**17 24 04.3**	**+1.6**	
ASAR	**Alice Springs**	**82.50**	**205**	P		**P**	**17 24 03.9**	**+1.1**	
	comp=Z,0.6nm,0.7s,baz=16,slow=4.7,SNR=20								
	comp=Z,0.6nm,0.7s								
INKA	**Innaminka**	**85.03**	**198**	P		**P**	**17 24 16.4**	**+1.0**	
INKA				IAmb	IAmb	17 24 33.6			
	comp=Z,5.2nm,1.3s								
QSPA	**South Pole Qui**	**145.54**	**180**	PKPbc		**PKPdf**	**17 31 16.0**	**+0.1**	
	comp=Z,1.4nm,0.8s,baz=0.0,slow=3.0,SNR=9.4								

RSNC 24 17:27:24.1±0.0, 9°.59N×73°.47W, h200km, ML3.5, Northern Colombia

*IDC **24** 18:02:43.1±2.5, 6°.28S×147°.92E, h57km±19km, mb3.6/6, mbtmp3.9/9, ML3.6/2, MS2.7/3, Error ellipse: s-maj=27.8km s-min=12.7km az=88.0*
*NEIC **24** 18:02:44.3±1.8, 6°.27S±0°.07×147°.9E±0°.1, h66km±5km, mb4.0/16, Error ellipse: s-maj=17.4km s-min=10.3km az=76.0*

ISC 24 18:02:42.4±0.8, 6°.24S±0°.06×148°.0E±0°.1, h50km, n34, σ1°.20/35, mb3.9/9, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.24**	**194**	P		**Pn**	**18 03 32.6**	**+1.8**
	259nm,0.7s,baz=4.8,slow=5.5,SNR=53							
PMG				S		**Sn**	**18 04 08.0**	**-0.2**
	61nm,0.7s,baz=31,slow=23,SNR=5.9							
PMG	**Port Moresby**	**3.24**	**194**			**Pn**	**18 03 32.4**	**+1.6**
PMG				Sn		**Sn**	**18 04 07.8**	**-0.4**
JAY	**Jayapura**	**8.11**	**297**	P		**Pn**	**18 04 39.8**	**+2.1**
	0.6nm,0.3s,baz=111,slow=6.3,SNR=4.6							
JAY				S		**Sn**	**18 06 09.1**	**+0.9**
	7.6nm,1.1s,baz=300,slow=22,SNR=1.1							
	6.1nm,0.7s							
COEN	**Coen**	**8.99**	**211**	Pn		**Pn**	**18 04 49.8**	**0.0**
CTA	**Charters Tower**	**13.86**	**187**	LR		LR	18 11 23.8	
	comp=Z,29nm,21.3s,baz=61,slow=38							
SIJI	**Sorong**	**17.48**	**287**	LR		LR	18 15 45.9	
	comp=Z,40nm,18.9s,baz=156,slow=45							
MTN	**Manton Dam**	**17.82**	**247**	P		**Pn**	**18 06 47.4**	**+0.4**
MTN				IAmb	IAmb	18 07 20.9		
	comp=Z,11nm,1.4s							
WR8	**Warramunga Arr**	**18.88**	**223**	P		**P**	**18 06 57.7**	**-1.2**
WR8				IAmb	IAmb	18 07 28.4		
	comp=Z,15nm,1.4s							
WRA	**Warramunga Arr**	**18.98**	**223**	P		**P**	**18 06 58.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=53,slow=10,SNR=17							
	comp=Z,1.3nm,0.6s							
WRA	**Warramunga Arr**	**18.98**	**223**	P		**P**	**18 06 56.8**	**-3.1**
EIDS	**Eidsvold**	**19.26**	**171**	P		**P**	**18 07 03.2**	**+0.4**
EIDS				IAmb	IAmb	18 07 31.0		
	comp=Z,22nm,1.2s							
GUMO	**Guam**	**19.94**	**351**	LR		LR	18 14 18.3	
	comp=Z,15nm,18.9s,baz=104,slow=35							
KNRA	**Kununurra**	**21.02**	**242**	P		**P**	**18 07 21.2**	**-0.8**
KNRA				IAmb	IAmb	18 07 43.6		
	comp=Z,21nm,1.4s							
AS31	**Alice Springs**	**21.97**	**216**			**P**	**18 07 32.2**	**0.0**
ASAR	**Alice Springs**	**21.97**	**216**	P		**P**	**18 07 31.7**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=51,slow=9.0,SNR=114							
ASAR				S		**S**	**18 11 32.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=28,slow=23,SNR=4.6							
	comp=Z,2.8nm,0.5s							
ASAR	**Alice Springs**	**21.97**	**216**	P		**P**	**18 07 31.3**	**-1.0**
ASAR						**S**	**18 11 31.3**	**-0.8**
INKA	**Innaminka**	**22.45**	**197**	P		**P**	**18 07 37.8**	**+0.5**
INKA				IAmb	IAmb	18 07 38.9		
	comp=Z,3.3nm,0.8s							
ARMA	**Armidale**	**24.30**	**172**	P		**P**	**18 07 57.2**	**+1.8**
FITZ	**Fitzroy Crossi**	**24.75**	**240**	P		**P**	**18 07 58.7**	**-0.8**
STKA	**Stephens Creek**	**26.19**	**192**	P		**P**	**18 08 11.1**	**-1.3**
	comp=Z,2.1nm,0.6s,baz=18,slow=12,SNR=3.6							
	comp=Z,2.1nm,0.6s							
BBJI	**Bungbulang**	**40.02**	**266**	P		**P**	**18 10 12.3**	**-0.7**
GSI	**Gunungsitoli**	**50.84**	**277**	P		**P**	**18 11 37.3**	**-1.4**
SONM	**Songino Array**	**65.07**	**330**	P		**P**	**18 13 18.9**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=150,slow=3.3,SNR=1.9							
	comp=Z,0.4nm,0.5s							
SONM	**Songino Array**	**65.07**	**330**	IAmb		IAmb	18 14 00.7	
	comp=Z,1.4nm,1.2s							
TLY	**Talaya**	**69.00**	**332**	P		**P**	**18 13 42.6**	**+0.1**
MKAR	**Makanchi Array**	**78.28**	**320**	P		**P**	**18 14 36.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=110,slow=5.7,SNR=2.6							
	comp=Z,2.2nm,0.4s							
MKAR	**Makanchi Array**	**78.28**	**320**	P		**P**	**18 14 36.2**	**-1.0**
MAKZ	**Makanchi**	**78.49**	**320**	P		**P**	**18 14 36.5**	**-1.8**
MAKZ				IAmb	IAmb	18 15 17.2		
	comp=Z,4.0nm,1.4s							
ZALV	**Zalesovo Beam**	**79.72**	**328**	P		**P**	**18 14 43.1**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=108,slow=7.7,SNR=2.3							
	comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**79.72**	**328**	P		**P**	**18 14 43.7**	**-1.1**
CNPM	**China Poot**	**81.13**	**27**	P		**P**	**18 14 52.1**	**-0.3**
QSPA	**South Pole Qui**	**83.73**	**180**	P		**P**	**18 15 07.0**	**+1.1**
	comp=Z,2.2nm,1.2s,baz=3.2,slow=5.1,SNR=5.3							
	comp=Z,2.2nm,1.2s							
QSPA	**South Pole Qui**	**83.73**	**180**	P		**P**	**18 15 06.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**146.06**	**284**	PKPbc		**PKPdf**	**18 22 17.4**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=96,slow=2.6,SNR=11							

*STR **24** 18:31:54.7±0.0, 43°.06N±0°.08×0°.55W±0°.05, h1km, MLv2.5/18, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **24** 18:31:55.4±0.2, 43°.07N×0°.52W, h1km±1km, mb_Lg2.7/57, Error ellipse: s-maj=1.6km s-min=0.9km az=8.0*
*LDG **24** 18:31:55.4±0.1, 43°.11N×0°.50W, h2km, Md2.8/1, Ml3.2/13, Error ellipse: s-maj=1.6km s-min=1.3km az=135.0*
*INMG **24** 18:31:58.5±1.8, 43°.13N×0°.70W, h19km±5km, ML2.4, Error ellipse: s-maj=5.6km s-min=4.1km az=115.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pireneus (ESP)*

ISC 24 18:31:53.7±0.8, 43°.11N±0°.02×0°.51W±0°.01, h13km±5km, n80, σ1°.27/164, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
REYF	**Montagne du Re**	**0.10**	**116**	Pg		**Pg**	**18 31 56.9**	**0.0**
REYF				Sg		**Sg**	**18 31 58.8**	**-0.2**
ATE	**Arette**	**0.14**	**259**	Pg		**Pg**	**18 31 57.3**	**0.0**
ATE				Sg		**Sg**	**18 31 59.6**	**-0.2**
ETSF	**Etsaut**	**0.22**	**189**	*e*Pg		**Pg**	**18 31 58.5**	**0.0**
ETSF				*e*Sg		**Sg**	**18 32 01.3**	**-0.5**
	385nm,0.2s							
ORDF	**Ordiarp**	**0.33**	**288**	Pg		**Pg**	**18 32 00.8**	**+0.4**
ORDF				Sg		**Sb**	**18 32 06.4**	**-0.1**
URDF	**Urds**	**0.33**	**350**	Pg		**Pb**	**18 32 02.2**	**+0.8**
PYLO	**Lourdes**	**0.34**	**92**	Pg		**Pb**	**18 32 01.1**	**-0.6**
PYLO				Sg		**Sb**	**18 32 06.7**	**-0.3**
CANF	**Canfranc**	**0.35**	**181**	Pg		**Pg**	**18 32 01.0**	**+0.1**
CANF				Sg		**Sg**	**18 32 05.7**	**0.0**
IRAF	**Chalets d'Irat**	**0.39**	**258**	Pg		**Pg**	**18 32 02.0**	**+0.3**
IRAF				Sg		**Sb**	**18 32 08.5**	**-0.1**
LABF	**Labassere**	**0.43**	**99**	Pg		**Pg**	**18 32 02.4**	**0.0**
LABF				Sg		**Sb**	**18 32 09.4**	**-0.3**
VIEF	**Viey**	**0.46**	**120**	Pg		**Pg**	**18 32 03.1**	**+0.3**
VIEF				Sg		**Sb**	**18 32 09.8**	**-0.6**
SJPF	**Ste Jean**	**0.52**	**270**	*e*Pg		**Pg**	**18 32 04.0**	**0.0**
SJPF				*e*Sg		**Sg**	**18 32 10.7**	**-0.3**
	95nm,0.2s							
OSSF	**Osses**	**0.57**	**285**	Pg		**Pg**	**18 32 04.5**	**-0.4**
EPF	**Esparros**	**0.63**	**97**	*e*Pg		**Pb**	**18 32 06.4**	**-0.2**
EPF				*e*Sg		**Sb**	**18 32 15.2**	**-0.1**
	91nm,0.2s							
ECHI	**Chisagues Biel**	**0.69**	**131**	Pg		**Pb**	**18 32 07.4**	**-0.2**
ECHI				Sg		**Sg**	**18 32 16.4**	**+0.2**
ECHI				*i* IVmb_Lg			18 32 17.9	
ECHI	**Chisagues Biel**	**0.69**	**131**	Pg		**Pb**	**18 32 07.4**	**-0.2**
ECHI				Sg		**Sb**	**18 32 16.7**	**-0.4**
TERF	**Tercis-les-Bai**	**0.71**	**322**	Pg		**Pn**	**18 32 09.3**	**-0.2**
EALK	**Alkurruntz**	**0.74**	**279**	Pg		**Pg**	**18 32 08.1**	**+0.1**
EALK				Sg		**Sg**	**18 32 18.1**	**+0.4**
EALK				*i* IVmb_Lg			18 32 27.2	
EALK	**Alkurruntz**	**0.74**	**279**	Pg		**Pg**	**18 32 07.8**	**-0.2**
EALK				Sg		**Sb**	**18 32 18.7**	**+0.3**
MLZA	**Monlezun-d-Arm**	**0.77**	**21**	Pg		**Pn**	**18 32 10.2**	**-0.1**
EARA	**Aranguren**	**0.85**	**247**	Pg		**Pb**	**18 32 10.8**	**+0.4**
EARA				Sg		**Sg**	**18 32 22.0**	**+0.5**
EARA				*i* IVmb_Lg			18 32 28.9	
MELF	**Melles**	**0.96**	**104**	Pg		**Pb**	**18 32 12.4**	**+0.1**
CRAS	**Crastes**	**1.09**	**56**	Pg		**Pn**	**18 32 16.0**	**+1.4**
CRAS				Sg		**Sn**	**18 32 32.1**	**+2.5**
MLS	**Moulis**	**1.19**	**97**	Pg		**Pg**	**18 32 17.2**	**+0.5**
SALF	**Salau**	**1.30**	**105**	Pg		**Pg**	**18 32 18.7**	**0.0**
SALF				Sg		**Sg**	**18 32 36.9**	**+1.2**
ESAC	**San Caprasio**	**1.39**	**179**	Pg		**Pg**	**18 32 21.3**	**+0.9**
ESAC				Sg		**Sg**	**18 32 39.3**	**+0.8**
ESAC				*i* IVmb_Lg			18 32 42.1	
GENF	**Genat**	**1.56**	**100**	Pn		**Pb**	**18 32 22.2**	**-0.2**
GENF				Pg		**Pg**	**18 32 24.2**	**+0.6**
GENF				Sg		**Sg**	**18 32 45.8**	**+1.9**
E1202	**Enciso (La Rio**	**1.60**	**234**	Pn		**Pb**	**18 32 23.2**	**0.0**
E1202				Sn		**Sb**	**18 32 43.4**	**0.0**
E1202				Sg		**Sg**	**18 32 46.3**	**+0.9**
PAND	**Andorre**	**1.63**	**111**	Pg		**Pg**	**18 32 25.3**	**+0.4**
PAND				Sg		**Sg**	**18 32 47.8**	**+1.7**
DUNF	**Dun**	**1.71**	**92**	Pg		**Pg**	**18 32 27.6**	**+1.1**
EMIR	**Miracle**	**1.93**	**128**	Pn		**Pb**	**18 32 28.4**	**-0.3**
EMIR				Pg		**Pg**	**18 32 30.3**	**-0.4**
EMIR				Sn		**Sb**	**18 32 52.0**	**-0.6**
EMIR				Sg		**Sg**	**18 32 56.1**	**+0.5**
CARF	**Carcanieres**	**1.96**	**101**	Pg		**Pg**	**18 32 31.6**	**+0.2**
CARF				Sg		**Sg**	**18 32 58.3**	**+1.4**
MTLF	**Montolieu**	**2.01**	**83**	*e*Pg		**Pg**	**18 32 32.1**	**-0.1**
MTLF				*e*Sg		**Sg**	**18 32 58.1**	**-0.2**
	44nm,0.3s							
LFF	**La Frestale**	**2.04**	**26**	*e*Pn		**Pn**	**18 32 28.4**	**+0.7**
LFF				*e*Pg		**Pg**	**18 32 33.7**	**+0.9**
LFF				*e*Sg		**Sg**	**18 32 59.4**	**+0.2**
	49nm,0.2s							
EPOB	**Poblet**	**2.12**	**146**	Pn		**Pb**	**18 32 30.6**	**-1.4**
EPOB				Pg		**Pg**	**18 32 33.8**	**-0.5**
EPOB				Sn		**Sn**	**18 32 56.6**	**+1.5**
EPOB				Sg		**Sg**	**18 33 02.1**	**+0.2**
EPOB				*i* IVmb_Lg			18 33 03.7	
ELAN	**Lanestosa**	**2.14**	**274**	Pn		**Pn**	**18 32 30.6**	**+1.4**
ELAN				Pg		**Pb**	**18 32 33.6**	**+1.2**
ELAN				Sn		**Sn**	**18 32 57.4**	**+1.8**
ELAN				*i* IVmb_Lg			18 33 07.1	
ERTA	**Horta de San J**	**2.25**	**163**	Pn		**Pb**	**18 32 32.6**	**-1.6**
ERTA				Pg		**Pg**	**18 32 35.9**	**-0.9**
ERTA				Sn		**Sn**	**18 32 58.8**	**+0.6**
ERTA				Sg		**Sg**	**18 33 05.7**	**-0.2**
ERTA				*i* IVmb_Lg			18 33 09.8	
FILF	**Fillols**	**2.33**	**103**	Pg		**Pb**	**18 32 35.9**	**+0.4**
FILF				Sg		**Sg**	**18 33 06.5**	**-2.0**
ETOR	**Torete**	**2.56**	**207**	Pn		**Pn**	**18 32 37.1**	**+2.1**
ETOR				Sn		**Sn**	**18 33 07.1**	**+0.9**
ETOR				*i* IVmb_Lg			18 33 19.7	
EJON	**La Jonquera**	**2.59**	**104**	Pn		**Pn**	**18 32 37.0**	**+1.7**
EJON				Sn		**Sn**	**18 33 08.1**	**+1.4**
EJON				Sg		**Sg**	**18 33 17.6**	**+0.7**
EJON				*i* IVmb_Lg			18 33 20.8	
CAF	**Calviac**	**2.60**	**45**	*e*Pn		**Pn**	**18 32 35.9**	**+0.5**
CAF				*e*Pg		**Pg**	**18 32 43.4**	**-0.1**
CAF				*e*Sg		**Sg**	**18 33 17.0**	**-0.1**
	17nm,0.2s							
RJF	**Les Rejaudoux**	**2.63**	**33**	*e*Pg		**Pg**	**18 32 44.1**	**-0.1**
RJF				*e*Sg		**Sg**

ECAB				*i* IVmb_Lg			18 35 12.1	
PMRV	**Marv??o**	**6.36**	**237**	*e*Pn		**Pn**	**18 33 28.8**	**+1.7**
PMRV				*e*Sn		**Sn**	**18 34 36.6**	**-2.9**
PCAS	**Casmilo, Conde**	**6.72**	**246**	*e*Sn		**Sn**	**18 34 46.0**	**-2.5**
PSARD	**Sardoal**	**6.74**	**241**	*e*Pn		**Pn**	**18 33 33.3**	**+1.0**
PSARD				*e*Sn		**Sn**	**18 34 46.3**	**-2.6**

IDC 24 18:32:46.6±6.8, 44°48S×94°30E, h0km, mb3.9/4, mbtmp3.9/4, MS3.6/22, Error ellipse: s-maj=197.4km s-min=30.3km az=127.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.97**	**65**	T	T	18 55 18.2	
	baz=231,slow=74,SNR=78						
H01W3	**Cape Leeuwin H**	**17.98**	**65**	T	T	18 55 19.6	
	baz=231,slow=74,SNR=104						
H01W1	**Cape Leeuwin H**	**17.99**	**65**	T	T	18 55 20.0	
	baz=231,slow=74,SNR=139						
NWAO	**Narrogin (SRO)**	**21.21**	**65**	LR	LR	18 44 09.0	
	comp=Z,214nm,18.9s,baz=220,slow=32						
FITZ	**Fitzroy Crossi**	**37.14**	**55**	LR	LR	18 54 14.0	
	comp=Z,111nm,18.2s,baz=188,slow=35						
ASAR	**Alice Springs**	**38.33**	**70**	P	P	18 40 09.0	-0.2
	2.4nm,0.8s,baz=222,slow=7.8,SNR=17						
ASAR				LR	LR	18 53 47.7	
	comp=Z,151nm,21.0s,baz=232,slow=33 2.4nm,0.8s						
STKA	**Stephens Creek**	**38.74**	**88**	P	P	18 40 12.3	-0.1
	2.3nm,0.8s,baz=233,slow=10,SNR=3.7						
STKA				LR	LR	18 53 08.6	
	comp=Z,94nm,21.7s,baz=205,slow=32 2.3nm,0.8s						
LEM	**Lembang**	**39.27**	**21**	LR	LR	18 54 55.0	
	comp=Z,66nm,18.6s,baz=356,slow=34						
WRA	**Warramunga Arr**	**41.20**	**67**	P	P	18 40 33.1	0.0
	1.8nm,0.9s,baz=224,slow=7.7,SNR=8.2 1.8nm,0.9s						
H08S2	**Diego Garcia H**	**41.31**	**326**	T	T	19 24 18.1	
	baz=156,slow=76,SNR=8.2						
H08S1	**Diego Garcia H**	**41.32**	**326**	T	T	19 24 18.9	
	baz=156,slow=76,SNR=4.7						
H08S3	**Diego Garcia H**	**41.33**	**326**	T	T	19 24 18.0	
	baz=156,slow=76,SNR=9.1						
VNDA	**Vanda**	**42.19**	**163**	LR	LR	18 56 25.9	
	comp=Z,47nm,18.9s,baz=198,slow=34						
BATI	**Baumata**	**42.51**	**46**	LR	LR	18 59 28.1	
	comp=Z,90nm,18.1s,baz=209,slow=38						
KAPI	**Kappang**	**45.20**	**37**	LR	LR	18 57 51.4	
	comp=Z,40nm,18.1s,baz=213,slow=33						
QSPA	**South Pole Qui**	**45.67**	**180**	P	P	18 41 08.7	-0.1
	0.8nm,1.0s,baz=318,slow=1.7,SNR=7.1 0.8nm,1.0s						
CTA	**Charters Tower**	**49.22**	**78**	LR	LR	19 00 01.6	
	comp=Z,58nm,18.2s,baz=237,slow=33						
SNAA	**Sanae**	**50.64**	**204**	LR	LR	19 01 41.5	
	comp=Z,106nm,18.3s,baz=37,slow=34						
PALK	**Pallekele**	**52.95**	**343**	LR	LR	19 00 41.2	
	comp=Z,38nm,18.1s,baz=190,slow=32						
SIJI	**Sorong**	**54.38**	**48**	LR	LR	19 04 24.9	
	comp=Z,14nm,21.1s,baz=154,slow=35						
BOSA	**Boshof**	**56.10**	**262**	LR	LR	19 01 17.5	
	comp=Z,55nm,18.4s,baz=166,slow=30						
SUR	**Sutherland**	**57.03**	**255**	LR	LR	19 01 37.1	
	comp=Z,63nm,19.3s,baz=96,slow=30						
LBTB	**Lobatse**	**58.03**	**265**	LR	LR	19 01 45.1	
	comp=Z,80nm,21.2s,baz=104,slow=30						
JAY	**Jayapura**	**58.42**	**58**	LR	LR	19 09 06.2	
	comp=Z,92nm,19.1s,baz=284,slow=37						
DAV	**Davao City (W)**	**58.54**	**37**	LR	LR	19 05 04.6	
	comp=Z,14nm,22.0s,baz=201,slow=33						
MATP	**Matopo**	**58.84**	**271**	LR	LR	19 03 10.0	
	comp=Z,69nm,21.0s,baz=102,slow=31						
LSZ	**Lusaka**	**62.45**	**276**	LR	LR	19 05 09.6	
	comp=Z,41nm,20.0s,baz=148,slow=31						
KRVT	**Keravat (AS076**	**64.32**	**69**	LR	LR	19 11 30.5	
	comp=Z,19nm,18.5s,baz=153,slow=36						
TSUM	**Tsumeb**	**67.44**	**265**	LR	LR	19 08 11.6	
	comp=Z,74nm,19.8s,baz=150,slow=32						
MBAR	**Mbarara**	**70.97**	**289**	LR	LR	19 09 32.6	
	comp=Z,46nm,19.8s,baz=124,slow=31						

CATAC 24 18:36:06.1±0.6, 13°N±4°×91°W±°, h31km±5km, M3.3/15, MLv3.3/15, Error ellipse: s-maj=9.1km s-min=4.4km az=9.9, confirmed
GCG 24 18:36:07.5±1.0, 13°76N×90°40W, h69km±10km, MD4.0, ML4.0, Presumed earthquake
SNET 24 18:36:07.0±1.0, 13°69N×90°38W, h80km±7km, ML3.2, Presumed earthquake

ISC 24 18:36:09.0±1.6, 13°7N±0°1×90°31W±0°05, h78km±11km, n37, σ1°56/59, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.32**	**61**	P	**Pn**	**18 36 18.8**	**-2.4**
PCG5	**San Vicente Pa**	**0.53**	**353**	*e*P	**Pn**	**18 36 22.7**	**-0.4**
PCG5				*e*S	**Sn**	**18 36 34.4**	**+1.1**
NUBE	**Las Nubes**	**0.55**	**67**	P	**Pn**	**18 36 22.2**	**-1.0**
NUBE				S	**Sn**	**18 36 34.6**	**+0.9**
NUBE	**Las Nubes**	**0.55**	**67**	*i* P	**Pn**	**18 36 22.0**	**-1.2**
NUBE				*i* S	**Sn**	**18 36 33.1**	**-0.6**
NUBE	**Las Nubes**	**0.55**	**67**	*e*P	**Pn**	**18 36 22.2**	**-1.0**
NUBE				*e*S	**Sn**	**18 36 33.9**	**+0.1**
LOAL	**Lomas de Alarc**	**0.60**	**59**	P	**Pn**	**18 36 22.6**	**-0.9**
LOAL				S	**Sn**	**18 36 35.0**	**+0.7**
LOAL	**Lomas de Alarc**	**0.60**	**59**	*e*P	**Pn**	**18 36 22.5**	**-1.1**
SLOZ	**Alcaldia de Sa**	**0.61**	**56**	P	**Pn**	**18 36 22.2**	**-1.4**
SLOZ				S	**Sn**	**18 36 35.0**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.61**	**56**	*e*P	**Pn**	**18 36 22.6**	**-1.0**
SLOZ				*e*S	**Sn**	**18 36 34.7**	**+0.3**
FG16	**Alotenango, Sa**	**0.61**	**341**	*e*P	**Pn**	**18 36 24.6**	**+0.7**
FG16				*i* S	**Sn**	**18 36 37.5**	**+2.6**
FG8	**Yepocapa, Chim**	**0.62**	**337**	*e*P	**Pn**	**18 36 24.9**	**+1.0**
CEVE	**Cerro Verde**	**0.68**	**78**	P	**Pn**	**18 36 23.4**	**-1.2**
CEVE				S	**Sn**	**18 36 36.6**	**+0.5**
CEVE	**Cerro Verde**	**0.68**	**78**	*e*P	**Pn**	**18 36 23.8**	**-0.7**
SBLS	**San Blas**	**0.68**	**77**	*e*P	**Pn**	**18 36 23.5**	**-1.0**
SNJE	**San Jose**	**0.70**	**75**	*e*P	**Pn**	**18 36 23.8**	**-1.0**
RBDL	**Robledal**	**0.74**	**55**	*e*P	**Pn**	**18 36 23.9**	**-1.2**
UNIC	**Universidad Ca**	**0.79**	**68**	P	**Pn**	**18 36 24.0**	**-1.6**
UNIC				S	**Sn**	**18 36 38.3**	**+0.4**
JAYA	**Jayaque - finc**	**0.83**	**92**	P	**Pn**	**18 36 24.7**	**-1.4**
JAYA				S	**Sn**	**18 36 39.5**	**+0.6**
JAYA	**Jayaque - finc**	**0.83**	**92**	*e*P	**Pn**	**18 36 25.1**	**-1.1**
JAYA				*e*S	**Sn**	**18 36 38.5**	**-0.4**
JAYA				IAML		18 36 41.5	
	comp=E,4μm,0.2s						
JAYA	**Jayaque - finc**	**0.83**	**92**	*e*P	**Pn**	**18 36 25.1**	**-1.1**
PMON	**Piamonte**	**0.96**	**88**	P	**Pn**	**18 36 26.1**	**-1.5**
PMON				S	**Sn**	**18 36 43.0**	**+1.5**
PMON	**Piamonte**	**0.96**	**88**	*e*P	**Pn**	**18 36 26.6**	**-1.1**
LALI	**Alcalda de L**	**0.98**	**102**	P	**Pn**	**18 36 26.5**	**-1.2**
LALI				S	**Sn**	**18 36 43.2**	**+1.6**
BOQS	**Boqueron**	**1.00**	**87**	*e*P	**Pn**	**18 36 27.3**	**-0.9**
UEES	**Universidad Ev**	**1.04**	**88**	S	**Sn**	**18 36 44.4**	**+1.3**
PANCS	**Alcalda de**	**1.10**	**94**	P	**Pn**	**18 36 29.0**	**-0.2**
PANCS				S	**Sn**	**18 36 45.5**	**+1.2**
LOMA	**Loma Larga**	**1.10**	**92**	P	**Pn**	**18 36 28.0**	**-1.3**
LOMA				S	**Sn**	**18 36 46.1**	**+1.5**
MTO3	**Montecristo**	**1.16**	**52**	*i* P	**Pn**	**18 36 28.6**	**-1.5**
MTO3	**Montecristo**	**1.16**	**52**	*e*P	**Pn**	**18 36 28.6**	**-1.5**
LFRS	**El Faro**	**1.21**	**93**	*e*P	**Pn**	**18 36 30.5**	**-0.1**
STG8	**El Palmar, Qui**	**1.27**	**307**	*i* P	**Pn**	**18 36 33.2**	**+1.7**
STG8				*i* S	**Sn**	**18 36 52.7**	**+4.4**
APG	**El Apazote**	**1.32**	**353**	*i* P	**Pn**	**18 36 30.4**	**-1.7**
PAVA	**Las Pavas**	**1.33**	**89**	P	**Pn**	**18 36 32.9**	**+0.7**
PAVA				S	**Sn**	**18 36 51.7**	**+2.1**
COEG	**Centro de Oper**	**1.39**	**93**	P	**Pn**	**18 36 32.1**	**-0.8**
COEG				S	**Sn**	**18 36 52.1**	**+1.3**
TECO	**Alcaldia de Te**	**1.49**	**96**	P	**Pn**	**18 36 32.9**	**-1.3**
TECO				S	**Sn**	**18 36 54.5**	**+1.3**
RTAL	**Retalhuleu**	**1.58**	**302**	P	**Pn**	**18 36 32.1**	**-3.2**
RTAL				S	**Sn**	**18 36 51.3**	**-3.9**
CNCH	**Conchagua**	**2.44**	**99**	P	**Pn**	**18 36 45.7**	**-1.2**
CNCH				S	**Sn**	**18 37 19.1**	**+3.2**

SJA 24 18:48:56.6±0.7, 20°92S×68°91W, h128km±6km, ML3.8, MW3.9
NEIC 24 18:48:58.2±0.9, 20°93S±0°04×68°84W±0°06, h108km±6km, mb4.4/15, Mwr4.1(GUC), Error ellipse: s-maj=8.4km s-min=5.2km az=109.0
GUC 24 18:48:58.8±0.6, 20°94S×68°78W, h101km±4km, ML3.9
IDC 24 18:48:59.3±3.6, 21°03S×68°35W, h107km±34km, mb3.6/2, mbtmp4.0/4, MS4.5/1, Error ellipse: s-maj=55.2km s-min=33.6km az=121.0

ISC 24 18:48:57.6±0.7, 20°94S±0°03×68°79W±0°07, h110km±6km, n75, σ1°05/100, mb4.4/6, 5C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.86**	**336**	*e*P	**Pn**	**18 49 18.4**	**+0.5**
PB08				*e*S	**Sn**	**18 49 33.6**	**+0.6**
PB08				IAML		18 49 36.9	
	comp=Z,1μm,0.7s						
PB08	**IPOC Station P**	**0.86**	**336**	*i* P	**Pn**	**18 49 18.2**	**+0.4**
PB08				*i* S	**Sn**	**18 49 33.0**	**-0.1**
PB08	**IPOC Station P**	**0.86**	**336**		**Pn**	**18 49 18.1**	**+0.3**
PB08				Sn	**Sn**	**18 49 32.6**	**-0.5**
PB09	**IPOC Station P**	**0.95**	**206**	*e*P	**Pn**	**18 49 19.4**	**+0.9**
PB09				*e*S	Sn	18 49 24.2	-10
PB09				IAML		18 49 39.2	
	comp=Z,694nm,0.5s						
PB09	**IPOC Station P**	**0.95**	**206**	*i* P	**Pn**	**18 49 19.0**	**+0.5**
PB09				*i* S	**Sn**	**18 49 34.7**	**+0.4**
PB09	**IPOC Station P**	**0.95**	**206**		**Pn**	**18 49 18.9**	**+0.5**
PB09				Sn	**Sn**	**18 49 34.3**	**0.0**
PB02	**IPOC Station P**	**1.10**	**250**	*e*P	**Pn**	**18 49 20.1**	**+0.1**
PB02				*e*S	**Sn**	**18 49 37.2**	**+0.3**
PB02				IAML		18 49 40.2	
	comp=Z,2μm,0.2s						
PB02	**IPOC Station P**	**1.10**	**250**	*i* P	**Pn**	**18 49 19.9**	**0.0**
PB02				*i* S	**Sn**	**18 49 36.2**	**-0.7**
PB02				IAML		18 49 39.6	
	comp=N,3μm,0.6s						
PB02	**IPOC Station P**	**1.10**	**250**		**Pn**	**18 49 20.0**	**0.0**
PB02				Sn	**Sn**	**18 49 36.0**	**-0.9**
PB07	**IPOC Station P**	**1.29**	**232**	*e*P	**Pn**	**18 49 22.3**	**+0.1**
PB07				*e*S	**Sn**	**18 49 41.6**	**+0.9**
PB07				IAML		18 49 42.4	
	comp=Z,1μm,0.3s						
PB07	**IPOC Station P**	**1.29**	**232**	*i* P	**Pn**	**18 49 22.0**	**-0.1**
PB07				*i* S	**Sn**	**18 49 40.4**	**-0.3**
PB07				IAML		18 49 41.9	
	comp=N,2μm,0.5s						
PB07	**IPOC Station P**	**1.29**	**232**		**Pn**	**18 49 22.1**	**-0.1**
PB07				Sn	**Sn**	**18 49 40.4**	**-0.3**
GO01	**Chusmiza**	**1.32**	**343**	*e*P	**Pn**	**18 49 23.5**	**+0.7**
GO01				*e*S	**Sn**	**18 49 43.9**	**+2.1**
GO01				IAML		18 49 44.3	
	comp=Z,431nm,0.2s						
GO01	**Chusmiza**	**1.32**	**343**	*i* P	**Pn**	**18 49 23.3**	**+0.5**
GO01	**Chusmiza**	**1.32**	**343**		**Pn**	**18 49 23.1**	**+0.3**
GO01				Sn	**Sn**	**18 49 41.7**	**-0.1**
TA02	**Huaiquique**	**1.43**	**298**	*e*P	**Pn**	**18 49 23.5**	**+0.1**
TA02				*e*S	**Sn**	**18 49 46.8**	**+3.7**
TA02				IAML		18 49 48.2	
	comp=Z,962nm,0.3s						
TA02	**Huaiquique**	**1.43**	**298**	*i* P	**Pn**	**18 49 23.3**	**-0.1**
TA02				*i* S	**Sn**	**18 49 42.6**	**-0.5**
TA02				IAML		18 49 48.0	
	comp=N,4μm,0.1s						
PB03	**IPOC Station P**	**1.43**	**219**	*e*P	**Pn**	**18 49 23.9**	**+0.2**
PB03				*e*S	**Sn**	**18 49 44.8**	**+1.4**
PB03				IAML		18 49 45.5	
	comp=Z,866nm,0.4s						
PB03	**IPOC Station P**	**1.43**	**219**	*i* P	**Pn**	**18 49 23.9**	**+0.2**
PB03				*i* S	**Sn**	**18 49 43.5**	**0.0**
PB03				IAML		18 49 45.8	
	comp=E,1μm,0.7s						
PB03	**IPOC Station P**	**1.43**	**219**		**Pn**	**18 49 23.8**	**+0.1**
PB11	**IPOC Station P**	**1.43**	**325**	*e*P	**Pn**	**18 49 23.8**	**0.0**
PB11				*e*S	**Sn**	**18 49 44.0**	**+0.5**
PB11				IAML		18 49 47.6	
	comp=Z,654nm,0.4s						
PB11	**IPOC Station P**	**1.43**	**325**	*i* P	**Pn**	**18 49 23.7**	**0.0**
PB11				*i* S	**Sn**	**18 49 43.3**	**-0.2**
PB11				IAML		18 49 45.0	
	comp=E,2μm,0.2s						
PB11	**IPOC Station P**	**1.43**	**325**		**Pn**	**18 49 23.4**	**-0.3**
PSGCX	**Pisagua**	**1.83**	**316**	*e*P	**Pn**	**18 49 28.4**	**-0.2**
PSGCX				*e*S	**Sn**	**18 49 52.7**	**+0.5**
PSGCX				IAML		18 49 53.3	
	comp=Z,643nm,0.6s						
PSGCX	**Pisagua**	**1.83**	**316**	*i* P	**Pn**	**18 49 28.4**	**-0.2**
PSGCX				*i* S	**Sn**	**18 49 51.5**	**-0.6**
PSGCX	**Pisagua**	**1.83**	**316**		**Pn**	**18 49 28.1**	**-0.5**
PB06	**IPOC Station P**	**1.91**	**202**	*e*P	**Pn**	**18 49 30.4**	**+0.8**
PB06				*e*S	**Sn**	**18 49 55.1**	**+1.2**
PB06				IAML		18 50 01.0	
	comp=Z,718nm,0.6s						
PB06	**IPOC Station P**	**1.91**	**202**	*e*P	**Pn**	**18 49 29.8**	**+0.3**
PB06				*e*S	**Sn**	**18 49 53.6**	**-0.3**
PB06				IAML		18 50 01.7	
	comp=E,825nm,0.5s						
PB06	**IPOC Station P**	**1.91**	**202**		**Pn**	**18 49 29.9**	**+0.4**
AF01	**San Pedro de A**	**2.08**	**164**	*e*P	Pn	18 49 38.0	+6.1
AF01				IAML		18 50 41.5	
	comp=Z,234nm,0.8s						
PB05	**IPOC Station P**	**2.32**	**214**	*e*P	**Pn**	**18 49 34.7**	**0.0**
PB05				*e*S	**Sn**	**18 49 58.7**	**-4.5**
PB05				IAML		18 50 15.1	
	comp=Z,397nm,0.6s						
PB05	**IPOC Station P**	**2.32**	**214**	*i* P	**Pn**	**18 49 35.4**	**+0.6**
PB05				*i* S	**Sn**	**18 50 03.3**	**+0.1**
PB05				IAML		18 50 11.2	
	comp=E,632nm,0.5s						
PB05	**IPOC Station P**	**2.32**	**214**		**Pn**	**18 49 35.2**	**+0.5**
PX02	**IPOC Station P**	**2.37**	**326**	*e*P	**Pn**	**18 49 33.9**	**-1.5**
PB16	**IPOC Station P**	**2.68**	**345**	*e*P	**Pn**	**18 49 41.7**	**+1.8**
PB16				*e*S	**Sn**	**18 50 12.7**	**+0.4**
PB16	**IPOC Station P**	**2.68**	**345**	*i* P	**Pn**	**18 49 40.9**	**+1.0**
PB16	**IPOC Station P**	**2.68**	**345**		**Pn**	**18 49 41.1**	**+1.2**
PB12	**IPOC Station P**	**2.73**	**328**	*e*P	**Pn**	**18 49 39.7**	**-0.4**
PB12				*e*S	**Sn**	**18 50 11.8**	**-1.0**
PB12				IAML		18 50 23.3	
	comp=Z,216nm,0.4s						
PB12	**IPOC Station P**	**2.73**	**328**	*i* P	**Pn**	**18 49 39.3**	**-0.8**
PB12				*i* S	**Sn**	**18 50 11.7**	**-1.1**
PB12				IAML		18 50 22.6	
	comp=N,489nm,0.6s						
PB12	**IPOC Station P**	**2.73**	**328**		**Pn**	**18 49 39.5**	**-0.7**
AP01	**Chacalluta**	**2.94**	**330**	*e*P	**Pn**	**18 49 43.6**	**+0.8**
AP01				*e*S	**Sn**	**18 50 15.8**	**-1.9**
AP01				IAML		18 50 27.2	
	comp=Z,400nm,1.1s						
AP01	**Chacalluta**	**2.94**	**330**	*e*P	**Pn**	**18 49 43.0**	**+0.1**
AP01	**Chacalluta**	**2.94**	**330**	Pn	**Pn**	**18 49 42.5**	**-0.4**
PB18	**Visviri**	**3.39**	**349**	Pn	**Pn**	**18 49 48.2**	**-1.2**
PB14	**IPOC Station P**	**3.96**	**202**	*e*P	**Pn**	**18 49 56.4**	**-0.4**
PB14				*e*S	Sn	18 50 53.6	+11
PB14				IAML		18 50 53.7	
	comp=Z,190nm,0.5s						
PB14	**IPOC Station P**	**3.96**	**202**		**Pn**	**18 49 56.9**	**+0.2**
LPAZ	**La Paz**	**4.67**	**8**	P	**Pn**	**18 50 08.8**	**+2.3**
	comp=Z,7.0nm,0.3s,baz=167,slow=5.6,SNR=22						
LPAZ				S	Sn	18 50 50.4	-10
	comp=Z,4.8nm,0.7s,baz=268,slow=7.3,SNR=3.9						
LPAZ				LR	LR	18 52 31.6	
	comp=Z,36nm,19.7s,baz=103,slow=45						
LPAZ	**La Paz**	**4.67**	**8**		**Pn**	**18 50 06.3**	**-0.2**
AC01	**Pan de Azucar**	**5.45**	**197**	Pn	**Pn**	**18 50 15.3**	**-1.1**
AC02	**Maricunga**	**5.88**	**183**	Pn	**Pn**	**18 50 19.7**	**-3.0**
LCO	**Las Campanas**	**8.22**	**192**	Pn	**Pn**	**18 50 53.0**	**-1.4**
SIV	**San Ignacio**	**8.82**	**57**	P	**Pn**	**18 51 00.3**	**-2.0**
	comp=Z,9.7nm,0.6s,baz=241,slow=11,SNR=24						
PTLB	**Pontes e Lacer**	**10.67**	**61**		**Pn**	**18 51 26.1**	**-1.2**
VILB	**Vilhena**	**11.42**	**47**		**Pn**	**18 51 36.6**	**-0.8**
ITAB	**Concordia**	**16.44**	**116**		**Pn**	**18 52 42.0**	**+0.2**
ITAB				IAmb	IAmb	18 52 58.4	
	comp=Z,22nm,1.3s						
ATAH	**Atahualpa**	**16.57**	**325**	LR	LR	19 00 44.7	
	comp=Z,20nm,20.4s,baz=359,slow=42						
PLCA	**Paso Flores**	**19.79**	**184**	P	**P**	**18 53 20.4**	**+1.1**
PLCA				IAmb	IAmb	18 53 22.4	
	comp=Z,18nm,1.5s						
BOAV	**Boa Vista**	**24.56**	**20**	P	**P**	**18 54 07.1**	**-0.2**
PDPR	**Patillas Dam,**	**38.81**	**4**	P	**P**	**18 56 10.4**	**-1.4**
CELP	**Cerrillos**	**38.83**	**3**	P	**P**	**18 56 12.4**	**+0.4**
KVTX	**Kingsville**	**55.82**	**329**	P	**P**	**18 58 23.1**	**-0.5**
MIAR	**Mount Ida**	**60.00**	**336**	P	**P**	**18 58 53.7**	**+1.0**
MIAR				IAmb	IAmb	18 59 06.2	
	comp=Z,6.2nm,1.4s						
S39A	**Bolivar**	**62.72**	**338**	P	**P**	**18 59 11.4**	**+0.5**
S39A				IAmb	IAmb	18 59 12.3	
	comp=Z,3.1nm,0.6s						
J57A	**Williamstown**	**64.37**	**354**	P	**P**	**18 59 22.6**	**+1.0**
J57A				IAmb	IAmb	18 59 38.2	
	comp=Z,7.5nm,1.2s						
H43A	**Windswept, Lux**	**67.37**	**345**	P	**P**	**18 59 41.1**	**+0.3**
D62A	**Allapoint, All**	**67.70**	**360**	P	**P**	**18 59 43.7**	**+0.8**
LDAQ	**Lac Daran**	**68.62**	**358**	P	**P**	**18 59 49.0**	**+0.3**
LDAQ				IAmb	IAmb	18 59 59.1	
	comp=Z,7.5nm,1.4s						
QSPA	**South Pole Qui**	**69.25**	**180**	P	**P**	**18 59 54.1**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=144,slow=6.3,SNR=8.5 comp=Z,0.7nm,0.5s						
QSPA	**South Pole Qui**	**69.25**	**180**	P	**P**	**18 59 53.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**77.06**	**70**	P	**P**	**19 00 39.3**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=251,slow=5.6,SNR=11 comp=Z,0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.06**	**70**	IAmb	IAmb	19 00 43.3	
	comp=Z,3.4nm,0.6s						
YKA	**Yellowknife AR**	**90.70**	**341**	LR	LR	19 45 08.9	
	comp=Z,238nm,20.4s,baz=130,slow=37						
ZALV	**Zalesovo Beam**	**141.40**	**25**	PKP	**PKiKP**	**19 08 16.9**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=333,slow=1.9,SNR=2.3						
MKAR	**Makanchi Array**	**145.11**	**36**	PKP	**PKPdf**	**19 08 23.6**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=319,slow=3.5,SNR=15						
MKAR	**Makanchi Array**	**145.11**	**36**		**PKPdf**	**19 08 23.1**	**+0.9**

KOLA 24 18:55:24.1, 67°68N×34°25E, h0km, ML1.8, Error ellipse: s-maj=3.9km s-min=1.6km az=130.0, Murmansk region, Kirovsk district
IDC 24 18:55:27.7±2.9, 67°72N×33°52E, h0km, mbtmp2.9/2, ML1.8/2, Error ellipse: s-maj=37.3km s-min=13.7km az=63.0

ISC 24 18:55:23.4±1.1, 67°69N±0°05×34°20E±0°05, h0km, n11, σ0°85/16, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.27**	**39**	P	**Pg**	**18 55 29.0**	**+0.4**
LVZ				S	**Sg**	**18 55 32.7**	**+0.6**
APA	**Apatity**	**0.33**	**249**	P	**Pg**	**18 55 29.8**	**+0.3**
APA				S	**Sg**	**18 55 34.5**	**+0.7**
APA0	**Apatity Array**	**0.47**	**261**	P	**Pg**	**18 55 32.1**	**-0.2**
KVDA	**Kovda**	**1.12**	**208**	P	**Pg**	**18 55 44.1**	**-0.7**
KVDA				S	**Sg**	**18 55 59.6**	**+0.2**
TERR	**Teriberka**	**1.56**	**12**	P	**Pn**	**18 55 51.8**	**-0.5**
TERR				S	**Sn**	**18 56 12.0**	**-1.1**
VADS	**Vadso**	**3.01**	**327**	S	**Sn**	**18 56 49.6**	**+0.8**
ARCES	**ARCESS Array B**	**3.69**	**304**	Pn	**Pn**	**18 56 21.9**	**+0.4**
	0.1nm,0.3s,baz=120,slow=14,SNR=11						
ARCES				Pg	**Pb**	**18 56 29.1**	**-0.2**
	0.1nm,0.3s,baz=119,slow=15,SNR=6.7						
ARCES				Sn	**Sn**	**18 57 03.6**	**-2.0**
	0.2nm,0.3s,baz=118,slow=23,SNR=6.7						
ARCES				Lg	Lg	18 57 15.5	
	0.4nm,0.3s,baz=117,slow=26,SNR=11 0.7nm,0.5s						
ARCES	**ARCESS Array B**	**3.69**	**304**	P	**Pn**	**18 56 22.1**	**+0.6**
ARCES				S	**Sn**	**18 57 05.2**	**-0.4**
I37NO	**I37NO**	**5.93**	**291**	I	I	19 28 50.0	
	baz=97,slow=318,SNR=7.3						
FINES	**FINESS Array B**	**7.17**	**213**	Pn	**Pn**	**18 57 10.1**	**+0.9**
	0.1nm,0.3s,baz=30,slow=14,SNR=1.9 2.7nm,1.0s						
I43RU	**DUBNA INFRASONI**	**11.09**	**171**	I	I	20 04 25.0	
	baz=353,slow=325,SNR=4.4						

IDC 24 19:04:44.8±1.1, 33°03N×87°01E, h0km, mb3.7/7, mbtmp3.6/9, ML2.9/2, MS3.0/2, Error ellipse: s-maj=47.0km s-min=21.4km az=55.0

ISC 24 19:04:50.1±1.1, 33°2N±0°2×87°1E±0°3, h35km, n10, σ0°96/9, mb3.8/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.09**	**346**	Pn	**Pn**	**19 08 06.7**	**-0.5**
	0.1nm,0.3s,baz=166,slow=13,SNR=4.0 0.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**18.10**	**141**	LR	LR	19 17 13.0	
	comp=Z,17nm,20.0s,baz=190,slow=42						
KURBB	**Kurchatov Arra**	**18.55**	**343**	P	**Pn**	**19 09 03.7**	**-0.4**
	baz=162,slow=12,SNR=6.8 0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**20.84**	**356**	P	**P**	**19 09 29.8**	**+1.2**
	1.0nm,0.4s,baz=185,slow=10,SNR=10 1.0nm,0.4s						
AKASG	**Malin Array Be**	**45.26**	**311**	P	**P**	**19 13 04.0**	**0.0

*JSN **24** 19:11:52.0±0.7, 19°.45N×77°.96W, h4km±6km, MD5.1, Presumed earthquake*

*GCMT **24** 19:11:53.5±0.1, 19°.59N±0°.01×78°.22W±0°.01, h12km, MW5.1/128, Moment Tensor Solution. s63,c94; s128,c223; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.08±.11; $M_{\theta\theta}$-2.87±.09; $M_{\phi\phi}$4.94±.11; $M_{r\theta}$1.47±.25; $M_{\theta\phi}$2.93±.08; $M_{\phi r}$-1.81±.26; Best double couple: M_o5.64000×10^{16} NP1:ϕ_s239.00000°,δ60.00000°, λ-19.00000°. NP2:ϕ_s339.00000°,δ74.00000°, λ-148.00000°. Principal axes: T 6.1180, Plg9.0000°, Azm107.0000°; N -0.9650, Plg55.0000°, Azm4.0000°; P -5.1630, Plg34.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **24** 19:11:53.8±2.8, 19°.39N×78°.28W, h40km±26km, mb4.0/19, mbtmp4.3/24, ML4.2/5, MS4.3/59 Error ellipse: s-maj=16.1km s-min=13.1km az=54.0*

ISC 24 19:11:48.5±0.7, 19°.47N±0°.03×78°.11W±0°.03, h13km±4km, n487, σ2s09/409, mb4.7/104, MS4.4/65, 12C-5D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.20**	**60**	*i* P		**Pn**	**19 12 10.9**	**0.0**
CVJ	**Coleyville**	**1.35**	**156**	⇑*i* P		**Pg**	**19 12 14.7**	**+0.3**
CVJ				*i* S		**Sg**	**19 12 31.5**	**-0.5**
MTDJ	**Mount Denham**	**1.35**	**156**	⇑⇑P		**Pg**	**19 12 14.6**	**+0.2**
MTDJ				S		**Sg**	**19 12 31.1**	**-0.9**
MTDJ	**Mount Denham**	**1.35**	**156**			**Pg**	**19 12 14.5**	**0.0**
MTDJ				Sn		**Sn**	**19 12 30.9**	**+0.1**
MTDJ	**Mount Denham**	**1.35**	**156**	*eP*		**Pg**	**19 12 14.7**	**+0.2**
MTDJ				*eS*		**Sb**	**19 12 29.9**	**-0.9**
MTDJ				IAML			19 12 31.5	
	18μm,0.7s							
MTDJ				IAML			19 12 32.9	
	comp=Z,20μm,0.5s							
MTDJ	**Mount Denham**	**1.35**	**156**	P		**Pg**	**19 12 14.8**	**+0.4**
BNJ	**Bonny Gate**	**1.58**	**136**	⇑*i* P		**Pg**	**19 12 17.6**	**-1.2**
MCJ	**Malvern**	**1.58**	**165**	⇑*i* P		**Pg**	**19 12 18.5**	**-0.4**
MCJ				*i* S		**Sb**	**19 12 38.3**	**+0.7**
CHIV	**Chivirico**	**1.68**	**72**	⇑⇑P		**Pn**	**19 12 17.3**	**-0.2**
CHIV				S		**Sn**	**19 12 36.7**	**-2.1**
CHIV	**Chivirico**	**1.68**	**72**			**Pn**	**19 12 17.3**	**-0.2**
CHIV				Sn		**Sn**	**19 12 36.6**	**-2.2**
CCCC	**Cccc**	**1.76**	**11**	*eP*		**Pb**	**19 12 19.8**	**-0.7**
CCCC				*eS*		**Sb**	**19 12 41.2**	**-1.3**
CCCC				IAML			19 12 51.3	
	comp=E,5μm,0.9s							
CCCC				IAML			19 12 55.5	
	comp=N,5μm,0.7s							
STH	**Stony Hill**	**1.85**	**138**	⇓*i* P		**Pb**	**19 12 21.4**	**-0.8**
STH				⇓*i* P		**Pb**	**19 12 21.4**	**-0.8**
LCCY	**Blossom Villag**	**1.87**	**277**	*i* P		**Pn**	**19 12 18.0**	**-2.2**
LCCY				*eS*		**Sn**	**19 12 38.2**	**-5.4**
LCCY				IAML			19 12 43.1	
	comp=N,11μm,0.8s							
LCCY				IAML			19 12 51.0	
	comp=E,10μm,0.7s							
YAR	**Yar**	**1.88**	**61**	*eP*		**Pb**	**19 12 21.0**	**-1.6**
YAR				*eS*		**Sn**	**19 12 41.2**	**-2.6**
YAR				IAML			19 12 44.9	
	comp=N,2μm,0.6s							
YAR				IAML			19 12 45.8	
	comp=E,6μm,0.8s							
GWJ	**Greenwich**	**1.91**	**136**	⇑*i* P		**Pb**	**19 12 22.0**	**-1.1**
GWJ				⇑*i* P		**Pb**	**19 12 22.1**	**-1.1**
PCJ	**Portland Cotta**	**1.94**	**152**	⇑*i* P		**Pb**	**19 12 23.5**	**-0.1**
PCJ				*i* S		**Sb**	**19 12 46.9**	**-0.8**
HOJ	**Hope**	**1.94**	**138**	⇓*i* P		**Pb**	**19 12 22.9**	**-0.9**
HOJ				⇓*i* P		**Pb**	**19 12 22.9**	**-0.9**
RCC	**Rio Carpintero**	**2.33**	**77**	*eP*		**Pn**	**19 12 26.7**	**+0.2**
RCC				*eS*		**Sn**	**19 12 53.4**	**-1.7**
GTBY	**Guantanamo Bay**	**2.86**	**80**	P	Pn	**Pn**	**19 12 33.0**	**-0.9**
GTBY	**Guantanamo Bay**	**2.86**	**80**	*i* P		**Pn**	**19 12 35.1**	**+1.3**
GTBY				*i* S		**Sn**	**19 13 07.7**	**-0.4**
FSCY	**Frank Sound, G**	**2.91**	**268**	P		**Pn**	**19 12 33.2**	**-1.2**
FSCY	**Frank Sound, G**	**2.91**	**268**	*eP*		**Pn**	**19 12 32.8**	**-1.6**
NMDO	**Nuevo Mundo**	**3.14**	**69**	⇑P		**Pn**	**19 12 37.8**	**+0.2**
NMDO				S		**Sn**	**19 13 13.2**	**-1.7**
NMDO	**Nuevo Mundo**	**3.14**	**69**			**Pn**	**19 12 37.0**	**-0.6**
NMDO	**Nuevo Mundo**	**3.14**	**69**	*eP*		**Pn**	**19 12 38.0**	**+0.4**
MGV	**Manicaragua**	**3.16**	**327**	*eP*		**Pn**	**19 12 36.4**	**-1.4**
MGV				*eS*		**Sn**	**19 13 14.6**	**-0.8**
QMBU	**Quimbuelo**	**3.19**	**76**	⇑P		**Pn**	**19 12 38.4**	**+0.1**
QMBU				S		**Sn**	**19 13 14.9**	**-1.3**
QMBU	**Quimbuelo**	**3.19**	**76**	*eP*		**Pn**	**19 12 38.5**	**+0.1**
QMBU				*eS*		**Sn**	**19 13 12.5**	**-3.7**
MOAC	**Moa**	**3.19**	**68**	*eP*		**Pn**	**19 12 39.4**	**+1.1**
CAIB	**Caibarien**	**3.27**	**337**	P		**Pn**	**19 12 41.3**	**+1.9**
CAIB				S		**Sn**	**19 13 07.1**	**+1.8**
CAIB	**Caibarien**	**3.27**	**337**			**Pn**	**19 12 39.6**	**+0.2**
CAIB	**Caibarien**	**3.27**	**337**	*eP*		**Pn**	**19 12 38.9**	**-0.5**
CAIB				*eS*		**Sn**	**19 13 18.3**	**+0.2**
MASC	**Masc**	**3.72**	**78**	⇑P		**Pn**	**19 12 45.8**	**+0.2**
MASC				S		**Sn**	**19 13 29.7**	**+0.4**
MASC	**Masc**	**3.72**	**78**	*eP*		**Pn**	**19 12 46.1**	**+0.5**
MASC				*eS*		**Sn**	**19 13 30.6**	**+1.3**
CAMR	**Camarioca**	**4.69**	**320**			**Pn**	**19 12 59.1**	**+0.1**
CAMR	**Camarioca**	**4.69**	**320**	*eP*		**Pn**	**19 12 58.6**	**-0.4**
SERC	**Banco Serrana,**	**5.58**	**203**	P		**Pn**	**19 13 13.7**	**+2.5**
	comp=E,17μmcomp=E,2μm,0.9s							
SOR	**Soroa**	**5.64**	**307**			**Pn**	**19 13 12.2**	**+0.1**
SOR	**Soroa**	**5.64**	**307**	*eP*		**Pn**	**19 13 11.1**	**-1.0**
SOR	**Soroa**	**5.64**	**307**	P		**Pn**	**19 13 13.8**	**+1.8**
SDDR	**Presa de Saban**	**6.46**	**93**	S		**Sn**	**19 14 37.7**	**+0.6**
SDDR	**Presa de Saban**	**6.46**	**93**			**Pn**	**19 13 23.0**	**-0.4**
SDDR	**Presa de Saban**	**6.46**	**93**	*i* P		**Pn**	**19 13 25.2**	**+1.8**
SDDR	**Presa de Saban**	**6.46**	**93**	P		**Pn**	**19 13 25.8**	**+2.4**
PRVC	**Isla de Provid**	**6.81**	**208**	⇓P		**Pn**	**19 13 30.6**	**+2.5**
GRTK	**Grand Turk**	**6.85**	**72**	P		**Pn**	**19 13 29.6**	**+1.0**
GRTK				S		**Sn**	**19 14 44.0**	**-2.5**
GRTK	**Grand Turk**	**6.85**	**72**	*eP*		**Pn**	**19 13 29.6**	**+1.0**
SC01	**Santiago de lo**	**6.97**	**89**	P		**Pn**	**19 13 32.0**	**+1.7**
SC01	**Santiago de lo**	**6.97**	**89**			**Pn**	**19 13 30.2**	**-0.1**
BILN	**Bilwi Airport**	**7.38**	**224**	⇑P		**Pn**	**19 13 36.9**	**+1.0**
BILN	**Bilwi Airport**	**7.38**	**224**	Pn		**Pn**	**19 13 36.6**	**+0.8**
BANI	**BANI**	**7.42**	**97**			**Pn**	**19 13 36.4**	**-0.1**
060A	**Indiantown**	**7.81**	**345**	Pn		**Pn**	**19 13 42.1**	**+0.3**
SDD	**Santo Domingo**	**7.82**	**96**	Pn		**Pn**	**19 13 41.8**	**-0.1**
DR12	**Loma Pena Alta**	**8.28**	**93**			**Pn**	**19 13 48.7**	**+0.4**
SIUN	**Universidad Ur**	**8.57**	**229**			**Pn**	**19 13 53.0**	**+0.7**
DWPF	**Disney Wildern**	**9.13**	**341**	Pn		**Pn**	**19 14 00.3**	**+0.4**
BLUN	**Bluefields**	**9.20**	**217**	P		**Pn**	**19 14 04.6**	**+3.6**
PCDR	**Punta Cana, DR**	**9.25**	**94**	Pn		**Pn**	**19 14 01.9**	**+0.3**
SJCC	**San Jacinto, C**	**9.93**	**163**	P		**Pn**	**19 14 14.9**	**+4.0**
	comp=E,1μmcomp=E,122nm,0.7s							
BOAB	**BOACO BROADBAN**	**10.07**	**227**			**Pn**	**19 14 14.8**	**+2.0**
BOAB	**BOACO BROADBAN**	**10.07**	**227**	P		**Pn**	**19 14 16.1**	**+3.3**
ARGC	**Ariguani, Magd**	**10.26**	**158**	P		Pn	19 14 21.0	+5.6
	comp=E,2μmcomp=E,66nm,1.0s							
BCIP	**Isla Barro Col**	**10.37**	**190**	P		**Pn**	**19 14 17.5**	**+0.5**
	comp=E,72nm,1.1s							
BCIP	**Isla Barro Col**	**10.37**	**190**	P		**Pn**	**19 14 18.0**	**+1.0**
AGPR	**Aguadilla, PR**	**10.46**	**94**	Pn		**Pn**	**19 14 19.3**	**+1.2**
PRSN	**Puerto Rico Se**	**10.46**	**95**	Pn		**Pn**	**19 14 17.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**10.52**	**96**			**Pn**	**19 14 18.5**	**-0.6**
MLPR	**Magueyes Islan**	**10.59**	**96**	Pn		**Pn**	**19 14 18.4**	**-1.6**
656A	**Willston**	**10.65**	**339**	Pn		**Pn**	**19 14 20.8**	**+0.1**
CNGN	**Cerro Negro**	**10.77**	**231**	P		Pn	19 14 30.2	+7.6
AOPR	**Arecibo Observ**	**10.81**	**94**			**Pn**	**19 14 22.8**	**-0.2**
UUPR	**Utuado, UPR, P**	**10.85**	**95**			**Pn**	**19 14 23.0**	**-0.5**
OBIP	**Obispado Ponce**	**10.99**	**96**			**Pn**	**19 14 24.4**	**-1.1**
CELP	**Cerrillos**	**11.01**	**95**			**Pn**	**19 14 24.2**	**-1.5**
ECPR	**Experimental S**	**11.18**	**94**			**Pn**	**19 14 26.1**	**-1.9**
JTS	**Las Juntas de**	**11.26**	**217**	Pn		**Pn**	**19 14 31.2**	**+2.0**
	comp=E,3.7nm,0.3s,baz=349,slow=7.7,SNR=8.0							
JTS				LR		LR	19 18 39.1	
	comp=E,1μm,18.5s,baz=33,slow=36 comp=E,11nm,0.5s							
JTS	**Las Juntas de**	**11.26**	**217**			**Pn**	**19 14 29.5**	**+0.2**
JTS	**Las Juntas de**	**11.26**	**217**	P		**Pn**	**19 14 33.0**	**+3.7**
SJG	**San Juan**	**11.41**	**95**	Pn		Pn	19 14 35.5	+4.4
	comp=E,4.0nm,0.3s,baz=248,slow=4.7,SNR=7.3							
SJG				Sn		**Sn**	**19 16 34.4**	**-4.2**
	comp=E,1.1nm,0.3s,baz=1.9,slow=21,SNR=1.2							
SJG				LR		LR	19 19 33.6	
	comp=E,3μm,18.7s,baz=258,slow=40 comp=E,6.3nm,0.3s							
SJG	**San Juan**	**11.41**	**95**			**Pn**	**19 14 28.6**	**-2.6**
SJG	**San Juan**	**11.41**	**95**	P		Pn	19 14 35.7	+4.5
PETF	**Flores**	**11.46**	**259**			**Pn**	**19 14 32.2**	**+0.3**
BRU2	**Volcan**	**11.50**	**203**			**Pn**	**19 14 31.7**	**-0.9**
BRU2	**Volcan**	**11.50**	**203**	P		**Pn**	**19 14 36.3**	**+3.8**
PDPR	**Patillas Dam,**	**11.54**	**95**			**Pn**	**19 14 31.1**	**-1.9**
APAC	**Apartado, Choc**	**11.59**	**172**	P		**Pn**	**19 14 36.9**	**+3.2**
	comp=E,998nmcomp=E,85nm,0.5s							
HUMP	**Col San Antoni**	**11.69**	**94**	Pn		**Pn**	**19 14 34.0**	**-1.0**
JUD3	**Juan Diaz 3**	**11.70**	**219**			**Pn**	**19 14 34.8**	**-0.5**
456A	**Hilliard**	**11.76**	**343**	Pn		**Pn**	**19 14 35.7**	**-0.2**
AZU	**Azuero**	**11.79**	**191**	P		**Pn**	**19 14 36.6**	**+0.2**
	comp=E,816nmcomp=E,36nm,1.3s							
ESQI	**Esquipulas**	**11.80**	**247**			**Pn**	**19 14 36.3**	**-0.3**
MTO3	**Montecristo**	**11.88**	**247**			**Pn**	**19 14 36.7**	**-1.2**
UREC	**San Jos de Ur**	**11.91**	**168**	P		**Pn**	**19 14 39.4**	**+1.3**
	comp=E,360nmcomp=E,21nm,0.6s							
OCAC	**Ocana**	**12.09**	**157**	P		**Pn**	**19 14 43.9**	**+3.3**
	comp=E,894nmcomp=E,90nm,0.6s							
553A	**Crawfordville**	**12.12**	**333**	Pn		**Pn**	**19 14 38.6**	**-2.2**
CACAO	**El Cacao, Vera**	**12.34**	**193**	P		**Pn**	**19 14 43.9**	**0.0**
	comp=E,2μmcomp=E,108nm,2.3s							
DBBC	**Dabeiba**	**12.51**	**171**	P		**Pn**	**19 14 49.9**	**+3.5**
APG	**El Apazote**	**12.61**	**251**	Pn		**Pn**	**19 14 51.2**	**+3.5**
	comp=E,0.1nm,0.3s,baz=75,slow=19,SNR=11							
SDV	**Santo Domingo**	**12.77**	**144**	Pn		**Pn**	**19 14 52.4**	**+2.4**
	comp=E,5.0nm,0.3s,baz=339,slow=4.1,SNR=25							
SDV				LR		LR	19 20 47.9	
	comp=E,860nm,18.1s,baz=332,slow=42 comp=E,22nm,0.5s							
TIGA	**Tifton**	**12.90**	**339**	Pn		**Pn**	**19 14 51.0**	**-0.6**
451A	**Vernon**	**13.08**	**330**	Pn		**Pn**	**19 14 53.7**	**-0.2**
BRJC	**Barrancabermej**	**13.12**	**161**	P		**Pn**	**19 14 58.8**	**+4.2**
	comp=E,59nm,0.5s							
PAMC	**Pamplona, Colo**	**13.15**	**156**	P		**Pn**	**19 14 58.5**	**+3.1**
PTBC	**PUERTO BERRIO,**	**13.33**	**164**	P		**Pn**	**19 15 01.3**	**+3.8**
	comp=E,551nmcomp=E,31nm,0.9s							
HELC	**Santa Helena**	**13.43**	**169**	P		**P**	**19 15 04.1**	**-4.5**
	comp=E,14nm,1.7s							
352A	**Blakely**	**13.45**	**334**			**Pn**	**19 14 57.5**	**-1.5**
BARC	**Barichara**	**13.66**	**159**	P		**P**	**19 15 08.6**	**-2.5**
	comp=E,840nmcomp=E,56nm,1.1s							
154A	**Montrose**	**13.84**	**342**	Pn		**Pn**	**19 15 02.9**	**-1.4**
RTAL	**Retalhuleu**	**13.89**	**251**	Pn		**Pn**	**19 15 04.9**	**-0.2**
NORC	**Norcasia**	**14.17**	**167**	P		**P**	**19 15 12.9**	**-3.7**
	comp=E,25nm,1.0s							
SPBC	**San Pablo de B**	**14.28**	**163**	P		**Pn**	**19 15 12.9**	**+2.3**
	comp=E,12μmcomp=E,19nm,1.1s							
SMRT	**St. Maarten**	**14.31**	**93**			**Pn**	**19 15 08.0**	**-2.9**
RUSC	**La Rusia**	**14.35**	**159**	P		**P**	**19 15 15.7**	**-3.3**
	comp=E,624nmcomp=E,31nm,0.9s							
GUY2C	**Guyana, Caldas**	**14.41**	**169**	P		**P**	**19 15 18.5**	**-1.1**
	comp=E,548nmcomp=E,33nm,0.6s							
152A	**Waverly Hall**	**14.42**	**337**			**Pn**	**19 15 09.1**	**-3.2**
250A	**Grady**	**14.46**	**331**			**Pn**	**19 15 10.1**	**-2.7**
GOGA	**Godfrey**	**14.69**	**342**	Pn		**Pn**	**19 15 13.7**	**-2.2**
ROSC	**El Rosal**	**15.00**	**165**	LR		LR	19 21 39.8	
	comp=E,777nm,21.2s,baz=341,slow=39							
ROSC	**El Rosal**	**15.00**	**165**			**Pn**	**19 15 19.0**	**-1.6**
JSC	**Jenkinsville**	**15.02**	**350**			**Pn**	**19 15 17.9**	**-2.5**
HODGE	**Hodges**	**15.16**	**347**			**Pn**	**19 15 19.4**	**-2.9**
BIRD	**Birdtown, Kers**	**15.26**	**353**	P		**Pn**	**19 15 20.4**	**-3.2**
CHIC	**Chingaza**	**15.35**	**163**	P		**P**	**19 15 30.3**	**+0.3**
	comp=E,1μmcomp=E,39nm,0.6s							
LRAL	**Lakeview Retre**	**15.68**	**331**			**Pn**	**19 15 26.0**	**-3.1**
ORTC	**Ortega, Tolima**	**15.71**	**169**	P		**P**	**19 15 35.1**	**+1.4**
	comp=E,1μmcomp=E,62nm,1.5s							
W57A	**Gilead**	**15.72**	**354**			**Pn**	**19 15 27.0**	**-2.6**
KMSC	**Kings Mountain**	**15.88**	**350**	Pn		**Pn**	**19 15 29.4**	**-2.3**
GDHS	**Morne Mazeau,**	**15.88**	**99**			**Pn**	**19 15 28.6**	**-3.3**
PRAC	**Prado**	**15.97**	**168**	P		**P**	**19 15 37.4**	**+0.9**
	comp=E,952nmcomp=E,50nm,0.9s							
BG3	**Lake Jocassee**	**16.05**	**346**	P		**Pn**	**19 15 32.1**	**-1.7**
CMIG	**Matias Romero**	**16.11**	**264**	Pn		**Pn**	**19 15 34.5**	**-0.2**
	comp=E,1.7nm,0.3s,baz=76,slow=12,SNR=22							
CMIG				LR		LR	19 21 37.6	
	comp=E,778nm,20.0s,baz=81,slow=37 comp=E,5.5nm,0.6s							
Y49A	**Blount Mountai**	**16.13**	**334**			**Pn**	**19 15 31.3**	**-3.6**
JAMC	**Jamundi, Valle**	**16.21**	**175**	P		**P**	**19 15 42.4**	**+3.0**
	comp=E,5μmcomp=E,26nm,1.9s							
V58A	**Windy Hill, Pi**	**16.29**	**357**			**Pn**	**19 15 34.2**	**-2.8**
Z47A	**Carrollton**	**16.32**	**329**			**Pn**	**19 15 33.3**	**-4.0**
W52A	**Murphy**	**16.40**	**343**			**Pn**	**19 15 36.1**	**-2.3**
FPAL	**Fort Paine**	**16.43**	**338**			**Pn**	**19 15 36.6**	**-2.1**
V53A	**Saluda**	**16.67**	**347**			**Pn**	**19 15 39.5**	**-2.3**
POPC	**Popayan, Colom**	**16.88**	**175**	P		**P**	**19 15 50.0**	**+3.2**
	comp=E,912nmcomp=E,49nm,1.8s							
TKL	**Tuckaleechee C**	**16.89**	**344**	Pn		**Pn**	**19 15 44.3**	**-0.3**
	comp=E,0.2nm,0.3s,baz=161,slow=10,SNR=5.1							
TKL				LR		LR	19 22 31.5	
	comp=E,2μm,19.6s,baz=166,slow=38 comp=E,6.3nm,1.0s							
TKL	**Tuckaleechee C**	**16.89**	**344**			**Pn**	**19 15 42.3**	**-2.2**
CPCT	**Cooper Cave**	**16.90**	**342**			**Pn**	**19 15 42.4**	**-2.3**
X48A	**Hartselle**	**16.91**	**334**	Pn		**Pn**	**19 15 42.1**	**-2.6**
W50A	**Signal Mountai**	**16.92**	**339**			**Pn**	**19 15 41.7**	**-3.3**
U56A	**King**	**16.94**	**354**			**Pn**	**19 15 42.3**	**-2.9**
U56A				IAmb		IAmb	19 15 52.2	
	comp=Z,75nm,1.6s							
SWET	**Sewanee**	**17.15**	**338**			**Pn**	**19 15 44.8**	**-3.1**
U54A	**Nelsons Funny**	**17.30**	**350**			**Pn**	**19 15 45.3**	**-4.5**
U54A				IAmb		IAmb	19 15 57.5	
	comp=Z,78nm,1.4s							
BBAC	**Balboa, Cauca**	**17.36**	**177**	P		**P**	**19 15 57.6**	**+5.5**
T59A	**Double "B" Far**	**17.45**	**1**			**Pn**	**19 15 46.9**	**-4.6**
BBSR	**BB Station**	**17.61**	**40**			**Pn**	**19 15 48.8**	**-4.7**
BBSR	**BB Station**	**17.61**	**40**	P		**P**	**19 15 58.0**	**+3.5**
TZTN	**Tazewell**	**17.67**	**345**	P		**Pn**	**19 15 53.2**	**-1.1**
TZTN	**Tazewell**	**17.67**	**345**	P		**P**	**19 15 54.9**	**-0.4**
MACC	**Macarena, Meta**	**17.71**	**166**	P		**P**	**19 16 00.2**	**+4.4**
	comp=Z,754nmcomp=Z,38nm,0.7s							
BLA	**Blacksburg**	**17.80**	**354**			**Pn**	**19 15 53.5**	**-2.4**
BLA				IAmb		IAmb	19 16 04.3	
	comp=Z,180nm,1.7s							
FLOC	**Florencia**	**17.93**	**172**	P		**P**	**19 16 04.8**	**+6.5**
	comp=Z,1μmcomp=Z,73nm,1.6s							
V48A	**Smith Brothers**	**17.94**	**336**	P		**Pn**	**19 15 54.7**	**-3.0**
S57A	**Dark Hollow, R**	**18.25**	**358**			**Pn**	**19 15 58.4**	**-3.0**
U49A	**Red Boiling Sp**	**18.27**	**340**	P		**Pn**	**19 15 58.4**	**-3.3**
R58B	**Mineral**	**18.43**	**1**	P		**P**	**19 15 59.5**	**-4.1**
T50A	**Nancy**	**18.46**	**343**	P		**P**	**19 16 00.6**	**-3.3**
S51A	**Beattyville**	**18.73**	**346**	P		**P**	**19 16 03.1**	**-3.7**
R55A	**Marlinton**	**18.83**	**355**	P		**P**	**19 16 04.9**	**-3.2**
Z41A	**Richland Creek**	**19.00**	**319**	P		**P**	**19 16 08.6**	**-1.2**
Z41A				IAmb		IAmb	19 16 16.3	
	comp=Z,58nm,1.2s							
HALT	**Halls**	**19.14**	**331**	P		**P**	**19 16 10.7**	**-0.7**
HALT				IAmb		IAmb	19 16 12.5	
	comp=Z,61nm,1.1s							
HKT	**Hockley**	**19.16**	**306**	P		**P**	**19 16 09.8**	**-1.9**
HKT				IAmb		IAmb	19 16 15.5	
	comp=Z,42nm,1.1s							
HKT	**Hockley**	**19.16**	**306**	P		**Pn**	**19 16 11.9**	**-0.6**
CASC	**Dorado de Casc**	**19.22**	**178**	P		**Pn**	**19 16 17.4**	**+3.9**
	comp=Z,1μmcomp=Z,28nm,1.4s							
TLIG	**Tlapa**	**19.49**	**268**	P		**P**	**19 16 13.7**	**-1.8**
TLIG				IAmb		IAmb	19 16 25.5	
	comp=Z,56nm,1.5s							
R50A	**Paris**	**19.51**	**345**	P		**P**	**19 16 13.2**	**-2.2**
R50A				IAmb		IAmb	19 16 23.8	
	comp=Z,56nm,1.8s							
Q56A	**Snyder Ridge,**	**19.53**	**357**	P		**P**	**19 16 12.8**	**-2.9**
Q54A	**Coxs Mills**	**19.59**	**354**			**P**	**19 16 13.6**	**-2.7**
R49A	**Shelbyville**	**19.74**	**343**	P		**P**	**19 16 15.3**	**-2.6**
R49A				IAmb		IAmb	19 16 28.8	
	comp=Z,51nm,1.7s							
Q52A	**Bidwell**	**19.76**	**350**	P		**P**	**19 16 15.8**	**-2.4**
Q52A				IAmb		IAmb	19 16 23.5	
	comp=Z,59nm,1.6s							
X40A	**Basin Creek Fa**	**19.86**	**322**	P		**P**	**19 16 18.1**	**-1.2**
SDMD	**Soldier's Deli**	**19.91**	**3**	P		**P**	**19 16 18.4**	**-1.4**
P57A	**Homestead Farm**	**19.95**	**0**	P		**P**	**19 16 18.6**	**-1.6**
WCI	**Wyandotte Cave**	**20.01**	**341**	P		**P**	**19 16 19.2**	**-1.6**
WCI	**Wyandotte Cave**	**20.01**	**341**	P		**Pn**	**19 16 27.0**	**+4.4**
Q51A	**Peebles**	**20.01**	**348**	P		**P**	**19 16 19.0**	**-1.9**
Q51A				IAmb		IAmb	19 16 27.2	
	comp=Z,65nm,1.6s							
MLDN	**Muldoon**	**20.04**	**304**	P		**P**	**19 16 20.0**	**-1.2**
LCAR	**Lake Charles**	**20.13**	**328**			**P**	**19 16 20.9**	**-1.3**
WHAR	**Wooly Hollow**	**20.14**	**324**	P		**P**	**19 16 20.8**	**-1.5**
WHAR				IAmb		IAmb	19 16 35.5	
	comp=Z,29nm,1.0s							
P53A	**Whipple**	**20.15**	**353**			**P**	**19 16 20.2**	**-2.3**
P53A				IAmb		IAmb	19 16 30.4	
	comp=Z,57nm,1.2s							
MCWV	**Mont Chateau**	**20.18**	**356**	P		**P**	**19 16 21.4**	**-1.3**
HBVL	**Hebbronville**	**20.33**	**296**	P		**P**	**19 16 23.2**	**-1.2**
PIAT	**Ana Tenorio**	**20.34**	**180**	P		Pn	19 16 31.0	+4.0
	comp=Z,1μmcomp=Z,17nm,1.1s							
MIAR	**Mount Ida**	**20.34**	**321**			**P**	**19 16 22.9**	**-1.6**
MIAR				IAmb		IAmb	19 16 30.5	
	comp=Z,68nm,1.4s							
MIAR	**Mount Ida**	**20.34**	**321**	P		Pn	19 16 26.4	-0.2
PBMO	**Poplar Bluff**	**20.35**	**330**	IAmb		IAmb	19 16 40.6	
	comp=Z,25nm,0.8s							
FCAR	**Ozark Folk Cen**	**20.50**	**326**	P		**P**	**19 16 24.4**	**-1.8**
FCAR				IAmb		IAmb	19 16 39.5	
	comp=Z,27nm,0.8s							
WUPA	**West Chester U**	**20.51**	**6**	P		**P**	**19 16 22.6**	**-3.7**
S44A	**Carbondale**	**20.60**	**334**	IAmb		IAmb	19 16 39.8	
	comp=Z,26nm,0.6s							
PAGS	**Pennsylvania G**	**20.73**	**3**	P		**P**	**19 16 26.6**	**-2.0**
O52A	**Adamsville**	**20.83**	**352**	IAmb		IAmb	19 16 37.0	
	comp=Z,70nm,1.3s							
T42A	**Van Buren**	**20.87**	**330**	IAmb		IAmb	19 16 44.1	
	comp=Z,35nm,1.0s							
O53A	**New Philadelph**	**20.89**	**353**	IAmb		IAmb	19 16 43.7	
	comp=Z,37nm,1.1s							
P48A	**Milroy**	**20.90**	**344**	P		**P**	**19 16 28.4**	**-2.2**
P48A				IAmb		IAmb	19 16 44.9	
	comp=Z,65nm,1.3s							
ACSO	**Alum Creek Sta**	**21.12**	**350**	IAmb		IAmb	19 16 43.8	
	comp=Z,34nm,1.0s							
O49A	**Covington**	**21.34**	**347**	P		**P**	**19 16 33.1**	**-2.0**
O49A				IAmb		IAmb	19 16 49.7	
	comp=Z,24nm,1.0s							
833A	**Chaparral WMA,**	**21.34**	**298**	P		**P**	**19 16 35.1**	**-0.3**
833A				IAmb		IAmb	19 16 43.3	
	comp=Z,48nm,1.0s							
FVM	**French Village**	**21.34**	**332**	IAmb		IAmb	19 16 51.7	
	comp=Z,30nm,0.9s							
WHTX	**Lake Whitney,**	**21.39**	**309**	P		**P**	**19 16 35.2**	**-0.7**
WHTX				IAmb		IAmb	19 16 42.6	
	comp=Z,45nm,0.9s							
PAMR	**

ITTB	Itaituba	32.33	135	*e*P		P		19 18 16.9	-0.7
RSSD	Black Hills	32.76	324	P		P		19 18 25.5	+4.2
WUAZ	Wupatki	33.36	306	P		P		19 18 25.6	-1.1
WUAZ				IAmb		IAmb		19 18 50.2	
	comp=Z,15nm,0.9s								
ULM	Lac du Bonnet	33.82	339	P		P		19 18 32.0	+1.9
	comp=Z,6.6nm,1.1s,baz=158,slow=3.1,SNR=4.9								
ULM				LR		LR		19 32 36.2	
	comp=Z,2µm,18.8s,baz=144,slow=37								
	comp=Z,6.6nm,1.1s								
ULM	Lac du Bonnet	33.82	339	IAmb		IAmb		19 18 45.1	
	comp=Z,13nm,1.1s								
NPGB	Novo Progresso	34.59	137	*e*P		P		19 18 36.8	-0.5
BSUT	Blindstream Ca	34.92	314	P		P		19 18 39.9	-0.5
KNB	Kanab	34.98	307	IAmb		IAmb		19 19 04.8	
	comp=Z,13nm,1.0s								
PDAR	Pinedale Array	35.23	318	P		P		19 18 44.1	+1.2
	comp=Z,0.6nm,0.6s,baz=128,slow=9.7,SNR=7.5								
	comp=Z,0.6nm,0.6s								
PDAR	Pinedale Array	35.23	318	P		P		19 18 43.1	+0.3
DUG	Dugway, Tooele	36.18	312	P		P		19 18 54.5	+3.5
YUH	Yuha Desert	36.22	299	P		P		19 18 50.0	-1.2
YUH				IAmb		IAmb		19 19 00.6	
	comp=Z,23nm,1.4s								
PSUT	Pine Spring	36.28	309	P		P		19 18 52.1	+0.2
PSUT				IAmb		IAmb		19 19 05.6	
	comp=Z,16nm,0.8s								
SCHQ	Schefferville	36.34	11	P		P		19 18 55.7	+3.8
	comp=Z,4.6nm,0.9s,baz=218,slow=7.8,SNR=7.3								
SCHQ				LR		LR		19 33 14.4	
	comp=Z,647nm,20.8s,baz=194,slow=35								
	comp=Z,4.6nm,0.9s								
SCHQ	Schefferville	36.34	11	IAmb		IAmb		19 19 12.9	
	comp=Z,26nm,1.6s								
VILB	Vilhena	36.73	150	P		P		19 18 54.3	-1.3
VILB	Vilhena	36.73	150	*e*P		P		19 18 55.1	-0.5
LPAZ	La Paz	36.86	164	P		P		19 18 59.3	+1.9
	comp=Z,0.9nm,0.5s,baz=344,slow=8.4,SNR=3.5								
LPAZ				LR		LR		19 34 44.2	
	comp=Z,559nm,22.0s,baz=335,slow=37								
	comp=Z,0.9nm,0.5s								
LPAZ	La Paz	36.86	164	P		P		19 18 56.5	-0.9
LPAZ				IAmb		IAmb		19 19 15.1	
	comp=Z,18nm,1.7s								
LPAZ	La Paz	36.86	164	*e*P		P		19 18 56.1	-1.3
LPAZ	La Paz	36.86	164	P		P		19 19 00.1	+2.8
CLDB	Colider	37.31	142	*e*P		P		19 18 59.8	-0.9
CLDB	Colider	37.31	142	P		P		19 19 02.4	+1.7
PRPB	Parauapebas	37.75	130	*e*P		P		19 19 03.9	-0.5
HLJD	Hailey	38.72	317	P		P		19 19 14.3	+1.9
SIV	San Ignacio	39.02	153	LR		LR		19 37 07.6	
	comp=Z,483nm,18.7s,baz=342,slow=39								
PTLB	Pontes e Lacer	39.40	150	P		P		19 19 16.6	-1.5
PTLB				IAmb		IAmb		19 19 35.7	
	comp=Z,18nm,1.4s								
PTLB	Pontes e Lacer	39.40	150	*e*P		P		19 19 17.9	-0.2
NVAR	Mina Array Bea	39.55	307	P		P		19 19 20.1	+0.7
	comp=Z,1.1nm,0.6s,baz=121,slow=7.1,SNR=9.1								
NVAR				LR		LR		19 38 25.9	
	comp=Z,702nm,18.0s,baz=113,slow=40								
	comp=Z,1.1nm,0.6s								
NVAR	Mina Array Bea	39.55	307	P		P		19 19 18.0	-1.5
FFC	Flin Flon	39.62	338	P		P		19 19 18.6	-1.0
FFC	Flin Flon	39.62	338	P		P		19 19 24.1	+4.6
PB11	IPOC Station P	39.85	168	P		P		19 19 22.8	+0.7
PB11				IAmb		IAmb		19 19 57.0	
	comp=Z,16nm,1.0s								
BBSD	Serra de San D	40.28	154	*e*P		P		19 19 25.2	-0.2
WAKR	Walker	40.42	307	P		P		19 19 27.6	+0.8
SNDB	Serra Nova Dou	40.91	138	*e*P		P		19 19 30.1	-0.7
WVOR	Wild Horse Val	41.09	313	P		P		19 19 31.2	-0.9
WVOR				IAmb		IAmb		19 20 04.9	
	comp=Z,15nm,1.2s								
SMTB	Santa Maria do	41.19	130	*e*P		P		19 19 32.5	-0.5
J08A	Circle Bar Ran	41.32	314	P		P		19 19 33.4	-0.6
PB07	IPOC Station P	41.72	168	P		P		19 19 37.1	-0.4
NEW	Newport	42.58	322	LR		LR		19 39 17.7	
	comp=Z,621nm,19.5s,baz=111,slow=39								
PB06	IPOC Station P	42.73	168	P		P		19 19 44.0	-1.8
PB06				IAmb		IAmb		19 19 59.4	
	comp=Z,19nm,1.0s								
PP1B	Ponte de Pedra	43.33	147	*e*P		P		19 19 50.5	+0.1
ARAG	Araguaiana, MT	43.48	142	*e*P		P		19 19 51.8	+0.1
YBH	Yreka Blue Hor	43.74	311	LR		LR		19 39 36.8	
	comp=Z,208nm,19.6s,baz=98,slow=38								
AQDB	Aquidauana	45.36	150	P		P		19 20 06.1	-0.5
AQDB	Aquidauana	45.36	150	*e*P		P		19 20 06.7	+0.1
BDFB	Brasilia	45.75	138	P		P		19 20 12.2	+2.2
	comp=Z,2.0nm,0.4s,baz=346,slow=5.7,SNR=3.9								
	comp=Z,2.0nm,0.4s								
BDFB	Brasilia	45.75	138	P		P		19 20 08.2	-1.8
BDFB				IAmb		IAmb		19 20 23.0	
	comp=Z,9.0nm,0.9s								
AC01	Pan de Azucar	45.92	171	P		P		19 20 09.8	-1.2
AC02	Maricunga	46.84	169	P		P		19 20 18.9	+0.1
AC02				IAmb		IAmb		19 20 42.3	
	comp=Z,13nm,1.1s								
IPMB	Ipameri, GO	47.40	140	*e*P		P		19 20 22.0	-0.8
JANB	Januaria	47.78	133	*e*P		P		19 20 25.3	-0.5
RCBR	Riachuelo	48.55	117	LR		LR		19 43 18.9	
	comp=Z,106nm,18.1s,baz=289,slow=39								
AC05	El Transito	48.61	171	P		P		19 20 32.2	+0.1
YKA	Yellowknife Ar	49.79	339	P		P		19 20 41.9	+1.3
	comp=Z,1.4nm,0.8s,baz=135,slow=9.0,SNR=6.8								
	comp=Z,1.4nm,0.8s								
CPUP	Villa Florida	49.79	155	LR		LR		19 42 40.4	
	comp=Z,165nm,20.3s,baz=345,slow=37								
ILON	Igloolik, Nuna	49.95	358	P		P		19 20 41.6	-0.1
ILON				IAmb		IAmb		19 20 45.8	
	comp=Z,19nm,1.4s								
CANS	Sao Roque de M	50.27	140	*e*P		P		19 20 44.1	-0.7
CO03	El Pedregal	50.52	172	P		P		19 20 45.7	-0.9
BBB	Bella Bella	50.62	322	LR		LR		19 43 40.3	
	comp=Z,606nm,18.9s,baz=115,slow=38								
BSCB	Bom Sucesso	51.79	139	*e*P		P		19 20 55.9	-0.4
VAO	Valinhos	52.02	143	P		P		19 20 56.8	-1.1
SPB	Sao Paulo	52.22	144	P		P		19 20 57.9	-1.5
ITAB	Concordia	52.81	151	P		P		19 21 01.7	-1.9
BO02	Sierra Bellavi	54.41	173	P		P		19 21 14.1	-1.2
R33M	Jennings River	54.82	330	IAmb		IAmb		19 21 33.2	
	comp=Z,9.9nm,0.9s								
RPN	Rapa Nui	55.33	214	LR		LR		19 40 58.9	
	comp=Z,238nm,18.5s,baz=10,slow=32								
PMOZ	Porto Moniz, M	55.60	63	*e*LR		LR		19 37 37.5	
PMOZ				*i* IAMs_20		IAMs_20		19 39 57.6	
	comp=Z,167nm,18.0s								
RES	Resolute Bay	55.99	355	LR		LR		19 45 42.6	
	comp=Z,708nm,19.4s,baz=166,slow=36								
TULEG	Thule	57.30	3	*i* P		P		19 21 38.7	+3.2
TULEG				IAmb		IAmb		19 21 40.8	
	comp=Z,24nm,1.1s								
SUMG	Summit	57.68	13			P		19 21 36.7	-2.0
SUMG	Summit	57.68	13	*i* P		P		19 21 43.0	+4.4
SUMG				IAmb		IAmb		19 21 43.7	
	comp=Z,22nm,1.3s								
BORG	Borgarnes	58.60	25	LR		LR		19 44 23.6	
	comp=Z,176nm,20.2s,baz=251,slow=33								
O29M	Mount Kennedy	58.74	330	IAmb		IAmb		19 21 52.3	
	comp=Z,7.2nm,0.8s								
NEEM	North Greenlan	59.53	7	*i* P		P		19 21 55.1	+3.7
NEEM				IAmb		IAmb		19 21 56.4	
	comp=Z,30nm,1.3s								
LR05	Currie	59.66	175	P		P		19 21 52.0	-0.3
PLCA	Paso Flores	60.30	173	P		P		19 21 58.0	+1.2
	comp=Z,4.2nm,0.7s,baz=338,slow=8.1,SNR=13								
	comp=Z,4.2nm,0.7s								
PLCA	Paso Flores	60.30	173	P		P		19 21 57.6	+0.8
BCAR	Beaver Creek A	60.96	332	P		P		19 22 00.4	-0.7
F28M	Old Crow	61.51	337	IAmb		IAmb		19 22 17.9	
	comp=Z,7.2nm,0.9s								
E28M	Babbage River	61.72	339	IAmb		IAmb		19 22 26.2	
	comp=Z,4.1nm,0.8s								
PGAV	Gavieira, Arco	62.41	52	*e*P		P		19 22 14.6	+3.3
PGAV				*i* IAmb		IAmb		19 22 24.8	
	comp=Z,35nm,1.5s								
PGAV				*e*LQ		LQ		19 38 14.4	
PGAV				*e*LR		LR		19 41 26.4	
PGAV				*i* IAMs_20		IAMs_20		19 49 33.6	
	comp=Z,163nm,18.0s								
MOE	Montemor	62.52	56	*e*pP		pP		19 22 23.9	+9.4
PMTG	Montargil	62.58	55	*e*P		P		19 22 15.6	+3.2
PMTG				*e*pP		pwP		19 22 23.9	+1.8
LL02	Futaleuf	62.61	175	P		P		19 22 12.3	0.0
MESJ	Messejana	62.66	57	*e*P		P		19 22 17.4	+4.4
MESJ				*e*pP		pwP		19 22 25.2	+2.5
EVO	Evora	62.78	56	*e*pP		pP		19 22 24.8	+8.6
POLO	Lamas de Olo	62.79	53	*e*pP		pP		19 22 25.6	+9.2
PVRL	Vila Real	62.85	53	*e*P		P		19 22 17.5	+3.3
PVRL				*e*pP		pwP		19 22 25.3	+1.3
DBG	Daneborg	62.92	15	*i* P		P		19 22 19.5	+5.5
DBG				IAmb		IAmb		19 22 21.0	
	comp=Z,5.6nm,0.9s								
PBEJ	Beja	62.93	57	*e*pP		pP		19 22 23.6	+6.3
PBDV	Barranco-do-Ve	62.94	57	*e*P		P		19 22 19.0	+4.2
PBDV				*e*pP		pwP		19 22 26.8	+2.2
MTE	Manteigas	63.02	54	*e*pP		pP		19 22 18.6	+0.6
MTE				*e*LQ		LQ		19 38 58.0	
MTE				*e*LR		LR		19 40 56.5	
MTE				*i* IAMs_20		IAMs_20		19 43 33.6	
	comp=Z,139nm,20.0s								
PVAQ	Vaqueiros	63.10	57	*e*pP		pP		19 22 28.0	+10
PVAQ				*e*LQ		LQ		19 38 25.2	
PVAQ				*e*LR		LR		19 40 35.2	
PVAQ				*i* IAMs_20		IAMs_20		19 42 14.7	
	comp=Z,163nm,18.0s								
PCBR	Castelo Branco	63.11	55	*e*pP		pP		19 22 19.1	+0.7
PMRV	Marv??o	63.20	55	*e*pP		pP		19 22 27.2	+8.1
PMRV				*e*LR		LR		19 40 30.8	
PMRV				*i* IAMs_20		IAMs_20		19 43 41.2	
	comp=Z,174nm,20.0s								
ILAR	Eielson Array	63.53	333	P		P		19 22 19.9	+1.6
	comp=Z,0.6nm,1.0s,baz=100,slow=4.1,SNR=6.2								
ILAR				LR		LR		19 50 08.8	
	comp=Z,765nm,20.9s,baz=86,slow=36								
	comp=Z,0.6nm,1.0s								
ILAR	Eielson Array	63.53	333	P		P		19 22 18.4	+0.1
PBAR	Barrancos	63.57	56	*e*P		P		19 22 19.6	+0.6
PBAR				*e*pP		pwP		19 22 30.4	+1.7
RND	Reindeer	64.16	332	P		P		19 22 23.1	+0.6
DAG	Danmarks Havn	64.36	13	*i* P		P		19 22 26.0	+2.5
DAG				IAmb		IAmb		19 22 27.6	
	comp=Z,14nm,1.5s								
I23K	Minto, Yukon-K	64.64	334	P		P		19 22 25.6	+0.1
JMIC	Jan Mayen	65.12	20	LR		LR		19 50 08.6	
	comp=Z,116nm,18.2s,baz=232,slow=35								
KDAK	Kodiak Island	65.48	325	LR		LR		19 52 33.0	
	comp=Z,513nm,18.1s,baz=69,slow=37								
PAB	San Pablo	65.54	55	P		P		19 22 30.9	-1.1
ESK	Eskdalemuir	65.65	37	P		P		19 22 31.1	-1.2
EKA	Eskdalemuir Ar	65.68	37	P		P		19 22 34.9	+2.5
	comp=Z,1.2nm,0.5s,baz=272,slow=6.1,SNR=11								
EKA				LR		LR		19 48 19.3	
	comp=Z,126nm,19.0s,baz=264,slow=33								
	comp=Z,1.2nm,0.5s								
I21K	Tanana	65.74	334	P		P		19 22 32.7	+0.1
I21K				IAmb		IAmb		19 22 45.7	
	comp=Z,7.4nm,0.9s								
ESDC	Sonseca Array	65.82	54	P		P		19 22 36.3	+2.6
	comp=Z,8.3nm,1.2s,baz=286,slow=6.3,SNR=16								
ESDC				LR		LR		19 45 32.1	
	comp=Z,135nm,21.2s,baz=281,slow=31								
	comp=Z,8.3nm,1.2s								
ESDC	Sonseca Array	65.82	54	P		P		19 22 33.9	+0.2
ESBB	Sonseca Array	65.82	54	P		P		19 22 32.5	-1.2
MDT	Midelt	66.16	62	LR		LR		19 45 35.1	
	comp=Z,225nm,20.9s,baz=270,slow=30								
NOR	Nord	66.80	8	*i* P		P		19 22 43.6	+4.5
NOR				IAmb		IAmb		19 22 44.8	
	comp=Z,17nm,1.5s								
CEST	Esterri de Car	69.39	51	P		P		19 22 55.3	-1.0
CLF	Chambon-Foret	69.42	45	P		P		19 22 55.4	-0.8
SSB	Saint Sauveur	71.35	48	P		P		19 23 06.8	-1.4
SPITS	Spitsbergen Ar	72.00	12	P		P		19 23 13.4	+2.0
	comp=Z,4.5nm,0.9s,baz=285,slow=5.6,SNR=2.0								
SPITS				LR		LR		19 54 14.2	
	comp=Z,198nm,20.9s,baz=284,slow=35								
	comp=Z,4.5nm,0.9s								
DBIC	Dimbokro	72.05	89	LR		LR		19 50 16.4	
	comp=Z,106nm,21.9s,baz=291,slow=32								
DAH	Dandelion	72.48	285	P		P		19 23 13.2	-2.6
ECH	Echery	72.64	44	P		P		19 23 15.5	-0.3
ECH				IAmb		IAmb		19 23 27.8	
	comp=Z,11nm,1.3s								
NOA	NORSAR Array B	72.86	31	LR		LR		19 54 02.5	
	comp=Z,87nm,18.5s,baz=280,slow=35								
SENIN	Lac Senin/Sane	73.07	46	P		P		19 23 17.9	-0.7
HFS	Hagfors	74.22	31	LR		LR		19 54 47.6	
	comp=Z,157nm,18.7s,baz=276,slow=35								
TUE	Stuetta	74.44	46	P		P		19 23 26.4	-0.3
DAVA	Damuels	74.62	45	*e*P		P		19 23 28.2	+0.5
	comp=Z,8.9nm,1.0s								
DAVOX	Davos/Dischmat	74.73	45	LR		LR		19 50 20.3	
	comp=Z,204nm,21.9s,baz=261,slow=31								
FUORN	Ofenpass-Fuorn	75.02	45	P		P		19 23 29.4	-0.7
RETA	Reutte	75.17	45	*e*P		P		19 23 30.9	+0.2
	comp=Z,3.4nm,0.6s								
FETA	Feichten	75.25	45	*i* P		P		19 23 32.6	+1.4
	comp=Z,9.9nm,1.1s								
MOTA	Moosalm	75.42	45	*e*P		P		19 23 33.9	+1.7
	comp=Z,7.9nm,1.0s								
SQTA	Sankt Quirin	75.52	45	*i* P		P		19 23 34.9	+2.1
	comp=Z,4.1nm,0.7s								
NKC	Novy Kostel	75.64	42	AMS		AMS		19 51 50.0	
	comp=Z,200nm,18.9s								
CLL	Collm	75.74	40	*e*S		S		19 33 20.0	+4.8
CLL				*e*(SS)		SS		19 38 30.0	+24
CLL				AMS		AMS		19 51 00.0	
	comp=Z,200nm,20.5s								
WATA	Walderalm	75.74	45	*i* P		P		19 23 36.8	+2.7
	comp=Z,3.8nm,0.8s								
WTTA	Wattenberg	75.80	45	*i* P		P		19 23 34.3	-0.1
	comp=Z,9.3nm,1.7s								
TORD	Torodi Ar. Bea	76.26	81	P		P		19 23 40.1	+2.7
	comp=Z,0.9nm,0.8s,baz=297,slow=4.1,SNR=3.9								
TORD				LR		LR		19 53 35.9	
	comp=Z,593nm,20.8s,baz=294,slow=33								
	comp=Z,0.9nm,0.8s								
TORD	Torodi Ar. Bea	76.26	81	P		P		19 23 36.3	-1.1
TORD				IAmb		IAmb		19 25 49.7	
	comp=Z,3.6nm,0.8s								
TEOL	Teolo	76.26	47	P		P		19 23 36.2	-0.8
BRG	Berggiesshubel	76.42	41	*e*P		P		19 23 42.3	+4.6
BRG				Amp				19 23 43.4	
	comp=Z,4.0nm,1.0s								
BRG	Berggiesshubel	76.42	41	S		S		19 33 30.0	+7.3
LESA	Schwarzleotal	76.45	44	*i* P		P		19 23 39.8	+1.7
	comp=Z,5.4nm,1.2s								
ABTA	Abfaltersbach	76.50	45	*i* P		P		19 23 40.4	+2.0
	comp=Z,4.5nm,0.7s								
CIMO	Cimolais	76.56	45	P		P		19 23 38.0	-0.6
ARCES	ARCESS Array B	76.59	21	P		P		19 23 40.3	+2.0
	comp=Z,3.4nm,0.8s,baz=300,slow=5.6,SNR=8.9								
ARCES				LR		LR		19 55 37.1	
	comp=Z,82nm,19.6s,baz=288,slow=34								
	comp=Z,3.4nm,0.8s								
ARCES	ARCESS Array B	76.59	21	P		P		19 23 38.5	+0.2
KHC	Kasperske Hory	76.61	42	*e*P		P		19 23 43.0	+4.1
KHC				*e*S		S		19 33 29.8	+4.8
KHC				AMS		AMS		19 52 00.0	
	comp=Z,300nm,21.4s								
GEC2	GERESS Array S	76.76	43	P		P		19 23 37.9	-1.9
GEC2				IAmb		IAmb		19 23 45.3	
	comp=Z,5.2nm,1.0s								
GERES	GERESS Array B	76.76	43	P		P		19 23 42.9	+3.1
	comp=Z,1.5nm,0.8s,baz=283,slow=5.2,SNR=15								
	comp=Z,1.5nm,0.8s								
GERES	GERESS Array B	76.76	43	P		P		19 23 37.9	-1.9
PVCC	Panska Ves	76.89	41	AMS		AMS		19 52 20.0	
	comp=Z,200nm,17.4s								
KEST	Kesra	76.90	57	P		P		19 23 44.0	+3.2
	comp=Z,5.9nm,0.9s,baz=287,slow=3.9,SNR=7.0								
KEST				LR		LR		19 53 39.1	
	comp=Z,84nm,19.3s,baz=328,slow=32								
	comp=Z,5.9nm,0.9s								
KEST	Kesra	76.90	57	P		P		19 23 39.2	-1.6
ZVC	Zvikov	76.93	42	*e*P		P		19 23 45.8	+5.2
ZVC				AMS		AMS		19 52 20.0	
	comp=Z,300nm,17.6s								
KBA	Koelnbreinsper	76.97	45	*i* P		P		19 23 43.8	+2.7
	comp=Z,8.1nm,1.0s								
PRU	Pruhonice	77.01	41	AMS		AMS		19 52 50.0	
	comp=Z,200nm,19.4s								
BIOA	Bad Ischl, Aus	77.01	44	*i* P		P		19 23 43.0	+1.8
	comp=Z,14nm,1.6s								
CKRC	Cesky Krumlov	77.16	43	AMS		AMS		19 50 50.0	
	comp=Z,300nm,19.0s								
MYKA	Terra Mystica	77.28	45	*i* P		P		19 23 45.6	+2.9
	comp=Z,6.2nm,0.9s								
MOA	Molln	77.38	44	*i* P		P		19 23 46.2	+3.0
	comp=Z,5.0nm,0.8s								
UPC	Upice	77.78	41	AMS		AMS		19 51 40.0	
	comp=Z,200nm,21.5s								
CHVC	Chvalec	77.79	41	AMS		AMS		20 02 20.0	
	comp=Z,200nm,13.0s								
OSTC	Ostas	77.89	41	AMS		AMS		20 02 20.0	
	comp=Z,200nm,13.4s								
OBKA	Obir	77.92	45	*e*P		P		19 23 49.4	+3.1
	comp=Z,7.6nm,1.8s								
DPC	Dobruska-Polom	78.02	41	AMS		AMS		19 53 50.0	
	comp=Z,200nm,17.9s								
SOKA	Soboth	78.19	45	*e*P		P		19 23 50.1	+2.3
	comp=Z,7.0nm,1.5s								
ARSA	Arzberg	78.36	44	*i* P		P		19 23 51.2	+2.6
	comp=Z,2.1nm,0.8s								
CONA	Conrad Observa	78.39	43	*e*P		P		19 23 50.0	+1.1
	comp=Z,3.4nm,1.2s								
KRUC	Moravsky	78.42	42	*e*P		P		19 23 52.5	+3.6
VRAC	Vranov	78.47	42	LR		LR		19 53 45.0	
	comp=Z,179nm,20.3s,baz=272,slow=32								
VRAC	Vranov	78.47	42	*e*P		P		19 23 53.9	+4.7
RONA	Rosalia, Austr	78.74	43	*i* P		P		19 23 52.8	+2.1
	comp=Z,5.8nm,0.8s								
MORC	Moravsky Berou	78.93	41	P		P		19 23 49.9	-1.9
MORC	Moravsky Berou	78.93	41	*e*P		P		19 23 55.9	+4.1
MODS	Modra-Piesok	79.18	43	*e*P		P		19 23 53.6	+0.5
MAUC	Maruska	79.23	41	*e*P		P		19 23 58.0	+4.6
MAUC				*ex*		x		19 24 06.4	
PPT	Papeete	79.24	247	LR		LR		19 52 18.9	
	comp=Z,28nm,21.4s,baz=74,slow=31								
FINES	FINESS Array B	79.67	28	P		P		19 23 57.8	+2.4
	comp=Z,1.8nm,0.6s,baz=282,slow=6.4,SNR=12								
FINES				LR		LR		19 54 04.9	
	comp=Z,207nm,21.9s,baz=284,slow=32								
	comp=Z,1.8nm,0.6s								
FINES	FINESS Array B	79.67	28	P		P		19 23 53.7	-1.8
FIA1	FINESS Array S	79.67	28	P		P		19 23 53.4	-2.1
PSZ	Piszkesteto	80.98	42	P		P		19 24 02.1	-0.9
PSZ				IAmb		IAmb		19 24 10.1	
	comp=Z,8.7nm,1.1s								
PDG	Podgorica	82.35	48	P		P		19 24 09.8	-0.4
BURAR	Bucovina Array	84.45	41	P		P		19 24 21.4	+0.4
PMSA	Palmer Station	84.67	174	LR		LR		20 01 43.4	
	comp=Z,117nm,18.1s,baz=288,slow=35								
SHEM	Shemya Is, Ala	84.97	324	LR		LR		20 02 45.7	
	comp=Z,164nm,20.0s,baz=78,slow=36								
AKASG	Malin Array Be	85.59	38	P		P		19 24 27.1	+0.5
	comp=Z,0.2nm,0.3s,baz=284,slow=4.4,SNR=5.5								
AKASG				LR		LR		20 00 45.9	
	comp=Z,125nm,19.9s,baz=288,slow=34								
	comp=Z,0.2nm,0.3s								
AKASG	Malin Array Be	85.59	38	IAmb		IAmb		19 24 32.5	
	comp=Z,4.7nm,1.4s								
MLR	Muntele Rosu	85.74	43	LR		LR		19 58 07.2	
	comp=Z,202nm,21.6s,baz=290,slow=32								
MLR	Muntele Rosu	85.74	43	P		P		19 24 26.9	-0.7
TIXI	Tiksi	87.26	352	LR		LR		20 06 19.8	
	comp=Z,342nm,19.1s,baz=37,slow=37								
OBN	Obninsk	87.43	32	LR		LR		19 59 49.5	
	comp=Z,168nm,21.7s,baz=268,slow=33								
SEY	Seymchan	88.86	339	LR		LR		20 05 12.3	
	comp=Z,317nm,22.0s,baz=92,slow=36								
IDI	Anoyia	89.03	53	P		P		19 24 43.6	0.0
RAR	Rarotonga	89.51	247	LR		LR		19 57 12.5	
	comp=Z,59nm,19.4s,baz=28,slow=30								
NRIK	Noril'sk	90.85	5	LR		LR		20 09 00.8	
	comp=Z,164nm,18.7s,baz=37,slow=38								
KIRV	Kirov	91.08	25	LR		LR		20 01 40.5	
	comp=Z,204nm,21.9s,baz=317,slow=33								
MA2	Magadan	91.76	337	LR		LR		20 10 38.3	
	comp=Z,242nm,18.1s,baz=44,slow=38								
PETK	Petropavlovsk-	93.17	330	LR		LR		20 09 38.6	
	comp=Z,262nm,19.6s,baz=49,slow=37								
BRTR	Keskin Array B

TNCH pmax pmax
comp=E,63nm,2.7s
TNCH L L
comp=E,300nm,7.5s
TNCH L L
comp=E,210nm,5.9s
TNCH L L
comp=E,270nm,14.1s
BHPL Bhopal 11.42 234 *ex* **Pn** 19 48 48.1 **+0.8**
BHPL *eS* **Sn** 19 50 53.7 **-1.3**
NIL Nilore 12.46 289 **Pn** 19 49 00.4 **-0.9**
NIL Nilore 12.46 289 P **Pn** 19 48 58.8 **-2.5**
WUS Wushi 12.66 331 Pn **Pn** 19 49 04.4 **+0.2**
WUS Wushi 12.66 331 P **Pn** 19 49 05.6 **+1.4**
KSH2 Kashi 13.07 315 P **Pn** 19 49 14.0 **+4.1**
KSH2 pP P 19 49 19.0 -1.3
KSH2 pmax pmax
comp=E,10.0nm,0.8s
PZH PanZhiHua 13.18 104 P **Pn** 19 49 14.3 **+3.0**
WMQ Urumqi 13.40 1 *eP* **Pn** 19 49 16.5 **+2.3**
GTA2 Gaotai 13.57 45 *eP* **P** 19 49 26.8 **+1.0**
GTA2 pmax pmax
comp=Z,8.0nm,1.1s
GTA2 LR LR
comp=N,250nm,10.8s
GTA2 LR LR
comp=E,220nm,12.4s
GTA2 LR LR
comp=Z,260nm,12.4s
TARG Taragay, Kyrgy 13.71 328 **Pn** 19 49 18.3 **-0.5**
TARG Taragay, Kyrgy 13.71 328 P **Pn** 19 49 19.9 **+1.1**
CD2 Chengdu 14.07 84 P **Pn** 19 49 23.8 **+0.4**
CD2 S **Sn** 19 51 59.8 **+0.1**
CD2 L L
comp=Z,310nm,10.8s
CD2 L L
comp=Z,590nm,9.9s
CD2 L L
comp=Z,680nm,9.6s
NRN Naryn 14.37 323 Pn **Pn** 19 49 24.2 **-3.6**
PDGK Podgornoye 14.37 336 Pn **Pn** 19 49 23.7 **-3.9**
KMI2 Kunming 14.53 107 P **Pn** 19 49 30.5 **+0.6**
KMI2 pmax pmax
comp=Z,15nm,0.9s
KMI2 L L
comp=Z,190nm,13.0s
KMI2 L L
comp=Z,180nm,12.7s
KMI2 L L
comp=Z,200nm,17.0s
MANEM Manem 14.87 303 Pn 19 49 29.5 -5.0
BOOM Boomskoye usch 15.18 326 Pn **Pn** 19 49 35.0 **-3.6**
BOOM Boomskoye usch 15.18 326 P **Pn** 19 49 38.3 **-0.2**
CHTO Chiang Mai 15.56 135 **Pn** 19 49 39.8 **-3.8**
CHTO IAmb IAmb 19 49 48.3
comp=Z,6.1nm,0.7s
CHTO Chiang Mai 15.56 135 P **Pn** 19 49 44.9 **+1.4**
DRK Karamyk 15.68 310 Pn **Pn** 19 49 40.4 **-4.8**
DRK IAmb IAmb 19 49 60.0
comp=Z,11nm,0.6s
DRK Karamyk 15.68 310 P **Pn** 19 49 43.6 **-1.6**
CM31 Chiang Mai Arr 15.84 136 Pn **Pn** 19 49 43.8 **-3.3**
CMAR Chiang Mai Arr 15.84 136 Pn **Pn** 19 49 46.3 **-0.7**
comp=Z,0.2nm,0.3s,baz=324,slow=11,SNR=18
CMAR LR LR 19 56 22.3
comp=Z,43nm,21.1s,baz=335,slow=40
comp=Z,1.3nm,0.8s
CMAR Chiang Mai Arr 15.84 136 **Pn** 19 49 42.5 **-4.6**
ARSB Arslanbob 15.98 317 **Pn** 19 49 45.5 **-3.4**
AAK Ala-Archa 16.02 323 Pn **P** 19 49 58.6 **+5.7**
comp=Z,0.5nm,0.3s,baz=140,slow=16,SNR=5.0
AAK LR LR 19 56 30.8
comp=Z,40nm,18.5s,baz=149,slow=39
KBL Kabul 16.05 290 **Pn** 19 49 45.0 **-5.0**
KBL IAmb IAmb 19 49 57.7
comp=Z,23nm,0.6s
KBL Kabul 16.05 290 P **Pn** 19 49 48.3 **-1.7**
GAR Garm 16.46 306 **Pn** 19 49 51.1 **-4.1**
GAR IAmb IAmb 19 49 55.9
comp=Z,26nm,1.1s
GAR Garm 16.46 306 P **Pn** 19 49 52.5 **-2.6**
BTK Batken 16.62 310 **Pn** 19 49 53.0 **-4.1**
BTK Batken 16.62 310 P **Pn** 19 49 56.6 **-0.5**
MKAR Makanchi Array 16.85 348 Pn **Pn** 19 49 59.2 **-0.7**
comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=7.1
comp=Z,0.5nm,0.7s
ARK Arkit 16.87 317 P **Pn** 19 50 00.8 **+0.5**
CHGR Chuyangaron 17.14 304 **Pn** 19 49 59.8 **-3.9**
CHGR IAmb IAmb 19 50 11.1
comp=Z,24nm,0.7s
CHGR Chuyangaron 17.14 304 P **Pn** 19 50 02.1 **-1.6**
SLVN Son La 17.34 117 **Pn** 19 50 04.0 **-2.3**
SHAA Shahritus 17.52 299 **Pn** 19 50 04.2 **-4.1**
SHAA IAmb IAmb 19 50 10.8
comp=Z,27nm,0.6s
KK31 Karatay Array 18.52 318 **P** 19 50 17.6 **-2.8**
KKAR Karatay Array 18.52 318 P **P** 19 50 18.6 **-1.8**
ENH Enshi 19.04 85 P **P** 19 50 25.6 **-0.7**
ENH IAmb IAmb 19 50 33.2
comp=Z,7.3nm,0.7s
ENH Enshi 19.04 85 P **Pn** 19 50 28.7 **+1.6**
KURBB Kurchatov Arra 21.27 344 P **P** 19 50 51.2 **+0.8**
comp=Z,3.1nm,0.2s,baz=157,slow=10,SNR=4.6
comp=Z,3.1nm,0.2s
KURK Kurchatov 21.34 344 P **P** 19 50 50.3 **-0.8**
KURK Kurchatov 21.34 344 P **P** 19 50 54.8 **+3.8**
HRA Herat 21.62 287 P **P** 19 50 52.7 **-1.8**
HHC Hu-ho-hao-te 22.15 55 *eP* **P** 19 50 58.4 **-1.6**
SONM Songino Array 22.70 35 P **P** 19 51 05.6 **-0.1**
comp=Z,3.9nm,0.8s,baz=223,slow=10,SNR=23
comp=Z,3.9nm,0.8s
SONM Songino Array 22.70 35 **P** 19 51 06.5 **+0.7**
SONM IAmb IAmb 19 51 09.2
comp=Z,5.8nm,1.0s
MALK Mahakanadarawa 22.82 198 P **P** 19 51 04.3 **-2.8**
ULN Ulaanbaatar 23.04 35 P **P** 19 51 09.1 **-0.4**
ULN IAmb IAmb 19 51 12.0
comp=Z,8.1nm,1.2s
ULN Ulaanbaatar 23.04 35 P **P** 19 51 11.0 **+1.6**
QIZ Qiongzhong 23.25 114 P **P** 19 51 12.7 **+1.0**
QIZ IAmb IAmb 19 51 41.9
comp=Z,19nm,1.3s
ZAA0 Zalesovo Array 23.61 356 P **P** 19 51 14.8 **-0.1**
ZALV Zalesovo Beam 23.61 356 P **P** 19 51 16.6 **+1.7**
comp=Z,1.5nm,0.6s,baz=187,slow=8.4,SNR=11
comp=Z,1.5nm,0.6s
ZALV Zalesovo Beam 23.61 356 **P** 19 51 15.4 **+0.5**
HNS HongShan 23.64 66 ⇓P **P** 19 51 15.5 **+0.1**
HNS pmax pmax
comp=Z,7.0nm,0.7s
BVAR Borovoye Array 25.81 336 P **P** 19 51 36.7 **+1.6**
comp=Z,0.5nm,0.5s,baz=142,slow=11,SNR=4.7
comp=Z,0.5nm,0.5s
XLT XiLinHaoTe 26.37 51 *eP* **P** 19 51 41.8 **+1.4**
XLT pmax pmax
comp=Z,12nm,1.0s
AB31 Akbulak array 28.05 320 **P** 19 51 56.7 **+1.4**
ABKAR Akbulak array 28.05 320 P **P** 19 51 56.6 **+1.3**
ARTI Arti 33.02 330 **P** 19 52 39.6 **+0.5**
ARTI IAmb IAmb 19 52 45.7
comp=Z,4.5nm,0.6s
NRIK Noril'sk 38.98 0 P **P** 19 53 32.1 **+2.1**
NRIK IAmb IAmb 19 53 42.4
comp=Z,3.7nm,0.7s
YAK Yakutsk 41.80 28 P **P** 19 53 53.3 **0.0**
YAK IAmb IAmb 19 53 54.4
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 44.43 297 P **P** 19 54 17.1 **+2.0**
comp=Z,0.8nm,0.7s,baz=82,slow=8.6,SNR=5.0
comp=Z,0.8nm,0.7s
BRTR Keskin Array B 44.43 297 P **P** 19 54 16.4 **+1.2**
KKUL Konya-Kulu 45.04 297 P **P** 19 54 20.6 **+0.6**
ATD Arta Tunnel 45.32 255 LR LR 20 15 03.9
comp=Z,5.9nm,19.4s,baz=226,slow=38
ERM Erimo 45.71 59 P P 19 54 30.6 +5.5
AK10 Malin Array Si 47.29 313 P **P** 19 54 37.7 **+0.3**
AKASG Malin Array Be 47.31 313 P **P** 19 54 38.3 **+0.8**
comp=Z,0.4nm,0.4s,baz=81,slow=7.2,SNR=4.5
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 47.31 313 IAmb IAmb 19 55 17.8
comp=Z,2.4nm,1.1s
AKBB Malin Array Si 47.31 313 P **P** 19 54 36.9 **-0.6**
AK01 Malin Array Si 47.31 313 P **P** 19 54 37.0 **-0.6**
AK07 Malin Array Si 47.31 312 P **P** 19 54 37.0 **-0.6**
AK02 Malin Array Si 47.32 313 P **P** 19 54 37.0 **-0.6**
AK05 Malin Array Si 47.32 313 P **P** 19 54 37.0 **-0.6**
AK06 Malin Array Si 47.32 313 P **P** 19 54 37.0 **-0.6**
AK19 Malin Array Si 47.44 313 P **P** 19 54 38.0 **-0.6**
AK20 Malin Array Si 47.45 313 P **P** 19 54 38.0 **-0.6**
KIS Kishinev 47.54 308 P **P** 19 54 38.8 **-0.6**
comp=Z,28nm,0.5s
ELL Elmali 47.73 294 P **P** 19 54 41.6 **+0.4**
SORM Soroca 47.84 309 P **P** 19 54 41.2 **-0.5**
MI28 Mi28,Pidlybu 48.30 313 P **P** 19 54 44.1 **-1.2**
VRI Vrincioaia 49.03 306 ⇓P **P** 19 54 53.5 **+2.5**
VRI Vrincioaia 49.03 306 P **P** 19 54 50.1 **-0.9**
comp=Z,6.0nm,0.8s
PLOR Plostina 49.09 306 ⇓P **P** 19 54 53.5 **+2.0**
KMPD K-Podol'skiy 49.09 310 P **P** 19 54 50.5 **-0.8**
ONER Baraj Valea Uz 49.23 307 ⇑P **P** 19 54 57.7 +5.1
MLR Muntele Rosu 49.61 306 ⇓P **P** 19 54 57.8 **+2.3**
MLR Muntele Rosu 49.61 306 P **P** 19 54 55.6 **0.0**
MLR Muntele Rosu 49.61 306 P **P** 19 54 54.5 **-1.1**
comp=Z,9.5nm,0.9s
MLR Muntele Rosu 49.61 306 P **P** 19 54 56.4 **+0.8**
BURAR Bucovina Array 49.96 309 P **P** 19 54 58.3 **+0.1**
FIA1 FINESS Array S 50.16 327 P **P** 19 54 58.9 **-0.4**
FINES FINESS Array B 50.16 327 P **P** 19 55 01.0 **+1.6**
comp=Z,1.2nm,0.5s,baz=106,slow=8.3,SNR=12
comp=Z,1.2nm,0.5s
FINES FINESS Array B 50.16 327 P **P** 19 54 58.8 **-0.5**
ARR Arges 50.54 306 ⇓P **P** 19 55 03.9 **+1.4**
MARR Marisel-Cluj 51.46 308 ⇑P **P** 19 55 13.7 **+4.2**
KEV Kevo 51.65 337 P **P** 19 55 09.6 **-0.8**
KEV IAmb IAmb 19 55 53.4
comp=Z,9.9nm,1.2s
IDI Anoyia 52.01 293 P **P** 19 55 13.2 **-0.5**
ARCES ARCESS Array B 52.10 337 P **P** 19 55 15.0 **+1.2**
comp=Z,1.8nm,0.7s,baz=119,slow=9.9,SNR=5.7
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 52.10 337 **P** 19 55 13.9 **+0.1**
ITM Ithomi 53.91 296 P **P** 19 55 27.0 **-0.7**
FAKI Fak Fak 54.08 120 P **P** 19 55 29.7 **+0.6**
MORH Mrgy, Hungar 54.59 307 ⇓P **P** 19 55 34.3 **+1.8**
MORH Mrgy, Hungar 54.59 307 P **P** 19 55 31.6 **-0.8**
comp=Z,3.1nm,0.7s
MORH Mrgy, Hungar 54.59 307 P **P** 19 55 32.9 **+0.4**
KEK Kerkira 54.97 299 P **P** 19 55 34.5 **-0.8**
HFS Hagfors 56.15 325 P **P** 19 55 44.5 **+1.0**
comp=Z,2.1nm,0.6s,baz=90,slow=8.9,SNR=7.4
comp=Z,2.1nm,0.6s
SAUI Saumlaki 56.81 125 P **P** 19 55 48.3 **-0.4**
NC405 NORSAR Array S 57.07 326 P **P** 19 55 49.6 **-0.4**
NC602 NORSAR Array S 57.18 325 P **P** 19 55 50.4 **-0.4**
NC303 NORSAR Array S 57.23 326 P **P** 19 55 51.0 **-0.1**
NOA NORSAR Array B 57.31 326 P **P** 19 55 52.3 **+0.5**
comp=Z,0.8nm,0.6s,baz=86,slow=7.0,SNR=3.3
comp=Z,0.8nm,0.6s
GERES GERESS Array B 57.46 311 P **P** 19 55 55.1 **+2.0**
comp=Z,0.8nm,0.8s,baz=89,slow=5.7,SNR=6.7
comp=Z,0.8nm,0.8s
GERES GERESS Array B 57.46 311 P **P** 19 55 52.9 **-0.2**
CLL Collm 57.48 314 *eP* **P** 19 55 51.0 **-2.1**
CLL *ePP* **PP** 19 57 59.0 **-1.3**
AQU L'Aquila 59.06 304 P **P** 19 56 03.5 **-0.8**
WB0 Warramunga Arr 67.29 132 P **P** 19 56 58.3 **-0.8**
WB0 IAmb IAmb 19 57 16.5
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 67.38 132 P **P** 19 56 59.0 **-0.6**
comp=Z,1.2nm,0.7s,baz=324,slow=6.4,SNR=12
comp=Z,1.2nm,0.7s
WB2 Warramunga Arr 67.39 132 P **P** 19 56 59.1 **-0.6**
C19K Lookout Ridge 69.58 21 P **P** 19 57 13.5 **+0.7**
ASAR Alice Springs 69.84 135 P **P** 19 57 14.2 **-0.8**
comp=Z,1.3nm,0.8s,baz=317,slow=5.9,SNR=12
comp=Z,1.3nm,0.8s
ASAR Alice Springs 69.84 135 P **P** 19 57 15.2 **+0.2**
D19K Kuna River 70.36 21 P **P** 19 57 17.9 **+0.3**
E19K Redstone River 71.22 22 P **P** 19 57 23.0 **+0.2**
E21K Killik River 71.64 20 P **P** 19 57 25.4 **0.0**
E21K IAmb IAmb 19 57 30.8
comp=Z,5.8nm,1.4s
F20K Avaraart Lake 71.93 22 P **P** 19 57 27.7 **+0.6**
F20K IAmb IAmb 19 57 50.8
comp=Z,4.7nm,1.3s
H18K Honhosa River 72.14 24 P **P** 19 57 28.4 **0.0**
H18K IAmb IAmb 19 57 28.6
comp=Z,5.8nm,1.1s
G21K Allakaket 72.96 21 P **P** 19 57 33.1 **-0.1**
G21K IAmb IAmb 19 58 05.3
comp=Z,6.0nm,1.4s
C27K Jago River 73.64 17 P **P** 19 57 37.6 **+0.4**
C27K IAmb IAmb 19 57 58.2
comp=Z,2.1nm,1.0s
J20K Nowinta River 74.19 24 P **P** 19 57 41.1 **+0.6**
J20K IAmb IAmb 19 58 10.0
comp=Z,5.3nm,1.5s
K20K Telida 74.72 24 P **P** 19 57 44.6 **+1.0**
K20K IAmb IAmb 19 58 26.8
comp=Z,5.8nm,1.4s
ILAR Eielson Array 76.18 21 P **P** 19 57 50.4 **-1.5**
comp=Z,0.3nm,0.6s,baz=312,slow=5.4,SNR=2.8
comp=Z,0.3nm,0.6s
ILAR Eielson Array 76.18 21 P **P** 19 57 51.4 **-0.6**
TORD Torodi Ar. Bea 79.84 279 P **P** 19 58 13.7 **+0.6**
comp=Z,2.3nm,0.7s,baz=51,slow=4.8,SNR=14
comp=Z,2.3nm,0.7s
TORD Torodi Ar. Bea 79.84 279 IAmb IAmb 19 58 25.7
comp=Z,3.6nm,0.8s
BOSA Boshof 83.41 232 P **P** 19 58 34.1 **+2.3**
comp=Z,3.8nm,1.0s,baz=52,slow=5.3,SNR=4.1
comp=Z,3.8nm,1.0s
BOSA Boshof 83.41 232 P **P** 19 58 32.5 **+0.7**
YKA Yellowknife Ar 85.75 10 P **P** 19 58 42.5 **-0.5**
comp=Z,0.5nm,0.6s,baz=345,slow=5.3,SNR=2.6
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 119.67 11 PKP **PKPdf** 20 04 54.6 **-0.1**
comp=Z,0.3nm,0.5s,baz=315,slow=1.0,SNR=5.9

*GFZ **24** 19:51:32.8±0.2,36°N±3°×13°E±°, h158km, M4.3/19, mb4.5/19*
*IDC **24** 19:51:33.0±0.5,35.64N×138.70E, h162km±4km, mb3.7/20, mbtmp4.2/24, Error ellipse: s-maj=15.4km s-min=6.5km az=70.0*
*NIED **24** 19:51:33.4,35.69N×138.81E, h163km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr1.63; Mθθ-2.76; Mφφ 1.13; Mrθ-0.65; Mrφ0.89; Mθφ-0.75; Fault plane solution: M0 2.72000×10^15 NP1:φ=46.00000°, δ51.00000°, λ37.00000°. NP2:φ=291.00000°, δ62.00000°, λ135.00000°.*
*JMA **24** 19:51:33.4±0.2,35.7N±0.8×138.8E±0.7, h163km±1km, MD4.0/35, MV4.1/35, CENTRAL YAMANASHI PREF*
JMA Felt I J1 at CENTRAL YAMANASHI PREF .
*NEIC **24** 19:51:33.4±2.3,35.69N±0.05×138.65E±0.08, h168km±4km, mb4.2/75, Error ellipse: s-maj=9.3km s-min=6.9km az=98.0*

ISC 24 19:51:32.8±0.6,35.71N±0.04×138.71E±0.04, h165km±4km, n169, σ1=$27/185, mb4.2/52, 1C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYN	**Shimob**	**0.25**	**214**	*i* P		**Pn**	**19 51 55.5**	**+0.3**
JYN				S		**Sn**	**19 52 13.0**	**+0.9**
JRY	**Ryogami san**	**0.35**	**26**	*i* P		**Pn**	**19 51 56.2**	**+0.9**
JRY				S		**Sn**	**19 52 12.8**	**+0.1**
JNT	**Takato**	**0.50**	**290**	*i* P		**Pn**	**19 51 56.8**	**+0.8**
JNT				S		**Sn**	**19 52 14.2**	**+0.4**
JOD2	**Odawara 2**	**0.54**	**145**	*i* P		**Pn**	**19 51 56.3**	**+0.2**
JOD2				S		**Sn**	**19 52 13.8**	**-0.1**
MJAR	**Matsushiro Arr**	**0.93**	**334**	P		**Pn**	**19 51 58.7**	**+0.2**
	384nm,0.3s,baz=169,slow=6.4,SNR=2850							
MJAR				S		**Sn**	**19 52 18.1**	**-0.2**
	144nm,0.5s,baz=206,slow=7.7,SNR=3.5							
MJAR	**Matsushiro Arr**	**0.93**	**334**			**Pn**	**19 51 58.8**	**+0.4**
MJAR				Sn		**Sn**	**19 52 17.3**	**-1.0**
MAJO	**Matsushiro**	**0.93**	**334**			**Pn**	**19 51 58.9**	**+0.4**
MAJO				Sn		**Sn**	**19 52 17.6**	**-0.7**
MAJO	**Matsushiro**	**0.93**	**334**	P		**Pn**	**19 51 59.2**	**+0.7**
MAT	**Matsushiro**	**0.93**	**334**	*i* P		**Pn**	**19 51 59.0**	**+0.6**
MAT				S		**Sn**	**19 52 18.1**	**-0.3**
JAG	**Ashikaga**	**0.94**	**40**	*i* P		**Pn**	**19 51 58.7**	**+0.2**
JAG				A		A	19 51 58.7	
	comp=N,8.0nm,0.4s,comp=E,7.0nm,0.4s							
JAG				S		**Sn**	**19 52 17.1**	**-1.3**
MJB9	**Matsu-Tunnel**	**0.94**	**334**			**Pn**	**19 51 60.0**	**+1.5**
MJB9				Sn		**Sn**	**19 52 18.9**	**+0.4**

JGF Kuroka 1.11 265 **Pn** 19 52 00.2 **+0.3**
JGF Sn **Sn** 19 52 21.0 **+0.2**
JGF Kuroka 1.11 265 P **Pn** 19 52 01.0 **+1.1**
JSG Sagara 1.12 203 **Pn** 19 52 00.6 **+0.6**
JSG Sn **Sn** 19 52 22.0 **+1.2**
JSG Sagara 1.12 203 P **Pn** 19 52 01.2 **+1.3**
JYT Yasato 1.31 66 P **Pn** 19 51 59.8 **-1.8**
INU Inuyama 1.43 256 **Pn** 19 52 02.8 **0.0**
INU Sn **Sn** 19 52 24.1 **-1.8**
INU Inuyama 1.43 256 P **Pn** 19 52 03.5 **+0.7**
JYTA Yamagatataniai 1.61 267 P **Pn** 19 52 05.2 **+0.6**
JYTA S **Sn** 19 52 29.5 **+0.3**
BSO1 Boso 1 2.13 119 *i* P **Pn** 19 52 09.7 **-0.1**
BSO1 S **Sn** 19 52 37.9 **-0.5**
JNS Sasagawa 2.16 13 A A 19 52 11.5
comp=N,3.0nm,3.1s,comp=E,2.0nm,2.1s
JHJ Hachijo jima 2 2.73 161 P **Pn** 19 52 17.5 **+0.1**
comp=E,255nm,0.3s,baz=342,slow=20,SNR=63
JHJ S **Sn** 19 52 51.9 **-0.1**
comp=E,401nm,0.4s,baz=212,slow=23,SNR=14
JHJ2 Mitsune 2.74 160 **Pn** 19 52 16.8 **-0.8**
JHJ2 Sn **Sn** 19 52 49.6 **-2.8**
JHJ2 Mitsune 2.74 160 P **Pn** 19 52 17.0 **-0.6**
JMN Monobe 4.44 245 Pn **Pn** 19 52 38.6 **-0.6**
JTM Tenmabayashi 5.40 19 **Pn** 19 52 51.2 **-0.4**
JTM Sn **Sn** 19 53 50.5 **-2.9**
JTM Tenmabayashi 5.40 19 P **Pn** 19 52 50.5 **-1.1**
JNU Nakatsue 6.97 251 P **Pn** 19 53 12.8 **+0.3**
comp=E,16nm,0.8s,baz=40,slow=6.5,SNR=6.2
ERM Erimo 7.19 27 **Pn** 19 53 12.3 **-2.9**
ERM Sn Sn 19 54 27.1 -8.9
ERM Erimo 7.19 27 P **Pn** 19 53 13.1 **-2.2**
KSRS Korea Array 8.85 285 P **Pn** 19 53 39.7 **+2.3**
comp=E,4.7nm,0.5s,baz=100,slow=14,SNR=17
KSAR Wonju Array Be 8.88 284 Pn Pn 19 53 32.6 -5.1
KS19 Wonju Array Si 8.90 285 Pn **Pn** 19 53 33.8 **-4.3**
ASAJ Asahikawa 8.91 18 P **Pn** 19 53 35.6 **-2.5**
comp=E,31nm,0.5s,baz=207,slow=16,SNR=66
JKA Kamikawa-asahi 8.91 18 **Pn** 19 53 34.8 **-3.3**
JKA Kamikawa-asahi 8.91 18 P **Pn** 19 53 36.0 **-2.1**
JCJ Chichijima 9.08 160 S Sn 19 55 08.2 -13
comp=E,65nm,0.5s,baz=77,slow=23,SNR=5.6
JCJ Chichijima 9.08 160 Pn Pn 19 53 33.6 -6.9
USRK Ussuriysk Ar. 9.93 331 P **Pn** 19 53 53.9 **+2.5**
comp=E,3.6nm,0.8s,baz=140,slow=8.9,SNR=4.6
USRK Ussuriysk Ar. 9.93 331 Pn **Pn** 19 53 51.1 **-0.3**
MDJ Mudanjiang 11.30 325 P **Pn** 19 54 08.7 **-0.8**
YSS Yuzhno-Sakhali 11.64 14 **Pn** 19 54 10.5 **-3.3**
YSS Yuzhno-Sakhali 11.64 14 P **Pn** 19 54 10.9 **-2.9**
JOW Kunigami 12.56 228 P **Pn** 19 54 30.3 **-0.5**
BNX BinXian 13.18 323 ⇑P **Pn** 19 54 34.8 **+1.3**
BNX pmax pmax
comp=Z,6.0nm,0.8s
DL2 Dalian 13.97 288 P **P** 19 54 46.4 **0.0**
DL2 pmax pmax
comp=Z,11nm,0.5s
HEH HeiHe 16.70 334 *eP* **P** 19 55 14.8 **-1.6**
HEH pmax pmax
comp=Z,6.0nm,0.7s
YHNB Yeheng 18.56 238 P **P** 19 55 36.6 **-0.6**
YHNB IAmb IAmb 19 55 57.8
comp=Z,22nm,1.2s
YHNB Yeheng 18.56 238 P **Pn** 19 55 39.4 **0.0**
NACB Ninganchiao 18.73 237 P **P** 19 55 37.9 **-1.1**
NACB IAmb IAmb 19 56 13.2
comp=Z,12nm,1.0s
SSLB Suanglung 19.43 237 P **P** 19 55 44.6 **-1.9**
SSLB IAmb IAmb 19 56 07.9
comp=Z,16nm,1.2s
YULB Yu-li 19.46 236 P **P** 19 55 45.1 **-1.8**
YULB IAmb IAmb 19 56 10.7
comp=Z,9.1nm,1.1s
TPUB Ta-pu 19.97 237 P **P** 19 55 49.2 **-3.2**
HHC Hu-ho-hao-te 21.88 292 *eP* **P** 19 56 11.4 **-1.2**
HHC pmax pmax
comp=Z,29nm,0.5s
HHC pmax pmax
comp=Z,66nm,4.3s
PEA0B Petropavlovsk- 21.94 32 **P** 19 56 12.2 **-0.8**
PEA0B IAmb IAmb 19 56 16.3
comp=Z,9.8nm,0.9s
PETK Petropavlovsk- 21.94 32 P **P** 19 56 14.6 **+1.6**
comp=Z,4.8nm,0.7s,baz=232,slow=7.2,SNR=8.0
comp=Z,4.8nm,0.7s
PETK Petropavlovsk- 21.94 32 **P** 19 56 12.4 **-0.5**
PET Petropavlovsk 22.30 33 P **P** 19 56 15.3 **-1.1**
PET IAmb IAmb 19 56 18.3
comp=Z,11nm,0.9s
PET Petropavlovsk 22.30 33 P **P** 19 56 16.7 **+0.3**
ENH Enshi 25.06 266 **P** 19 56 38.6 **-3.2**
ENH Enshi 25.06 266 P **P** 19 56 41.3 **-0.6**
MA2 Magadan 25.14 14 **P** 19 56 40.8 **-1.5**
MA2 Magadan 25.14 14 P **P** 19 56 43.0 **+0.7**
SONM Songino Array 26.78 307 P **P** 19 56 57.2 **-0.1**
comp=Z,1.1nm,0.4s,baz=107,slow=9.7,SNR=9.9
comp=Z,1.1nm,0.4s
SONM Songino Array 26.78 307 P **P** 19 56 55.8 **-1.5**
YAK Yakutsk 26.96 351 P **P** 19 56 57.9 **-0.6**
YAK Yakutsk 26.96 351 P **P** 19 56 59.1 **+0.6**
PZH PanZhiHua 32.80 264 P **P** 19 57 51.6 **+1.0**
KKM Kota Kinabalu 36.04 220 P **P** 19 58 19.8 **+1.3**
DLV Lat 36.13 237 P **P** 19 58 19.1 **-0.3**
TIXI Tiksi 36.38 355 P **P** 19 58 20.4 **-0.2**
TIXI IAmb IAmb 19 58 21.4
comp=Z,4.3nm,0.7s
SIJI Sorong 37.05 192 P **P** 19 58 28.8 **+2.0**
CHTO Chiang Mai 38.85 255 P **P** 19 58 40.4 **-1.6**
CMAR Chiang Mai Arr 39.05 255 P **P** 19 58 43.7 **0.0**
comp=Z,0.5nm,0.3s,baz=51,slow=8.5,SNR=4.5
comp=Z,0.5nm,0.3s
WMQ Urumqi 39.51 298 *eP* **P** 19 58 50.3 **+3.0**
WMQ pmax pmax
comp=Z,16nm,1.3s
WMQ LR LR
comp=Z,110nm,23.1s
NPW Naypyitaw 40.55 259 P **P** 19 58 55.8 **-0.2**
ZAA0 Zalesovo Array 41.22 314 **P** 19 59 00.1 **-1.1**
ZAA0 IAmb IAmb 19 59 02.8
comp=Z,4.3nm,0.6s
ZALV Zalesovo Beam 41.22 314 P **P** 19 59 02.1 **+1.0**
comp=Z,4.4nm,0.6s,baz=91,slow=6.8,SNR=21
ZALV PcP **PcP** 20 00 57.3 **+0.5**
comp=Z,2.8nm,0.5s,baz=99,slow=2.8,SNR=12
comp=Z,4.4nm,0.6s
ZALV Zalesovo Beam 41.22 314 **P** 19 59 00.2 **-0.9**
ZALV **PcP** 20 00 57.0 **+0.3**
MKAR Makanchi Array 42.99 303 P **P** 19 59 16.6 **+1.0**
comp=Z,3.2nm,0.5s,baz=83,slow=9.9,SNR=40
MKAR PcP **PcP** 20 01 02.4 **-0.5**
comp=Z,0.5nm,0.6s,baz=86,slow=3.7,SNR=3.1
MKAR ScP **ScP** 20 04 38.4 **+0.1**
comp=Z,0.6nm,0.8s,baz=92,slow=4.8,SNR=3.1
comp=Z,3.2nm,0.5s
MKAR Makanchi Array 42.99 303 **P** 19 59 15.7 **+0.1**
MAKZ Makanchi 43.21 303 P **P** 19 59 17.9 **+0.6**
MAKZ IAmb IAmb 19 59 19.7
comp=Z,5.1nm,0.8s
NRIK Noril'sk 43.58 336 P **P** 19 59 20.6 **+0.7**
comp=Z,2.6nm,0.4s,baz=99,slow=8.4,SNR=4.3
comp=Z,2.6nm,0.4s
NRIK Noril'sk 43.58 336 IAmb IAmb 19 59 21.6
comp=Z,5.0nm,1.0s
K13K Kusilvak Mount 43.64 35 P **P** 19 59 22.5 **+2.0**
K13K IAmb IAmb 19 59 55.7
comp=Z,16nm,1.4s
J14K Nanvaranak Lak 44.29 34 P **P** 19 59 27.1 **+1.5**
EVN Everest 44.34 275 P **P** 19 59 27.0 **-0.3**
EVN IAmb IAmb 19 59 28.9
comp=Z,4.5nm,0.8s
EVN Everest 44.34 275 P **P** 19 59 28.1 **+0.8**
KURK Kurchatov 45.05 309 **P** 19 59 32.1 **+0.3**
KURK Kurchatov 45.05 309 **PcP** 20 01 09.6 **-0.1**
KURK Kurchatov 45.05 309 P **P** 19 59 32.6 **+0.8**
KURBB Kurchatov Arra 45.12 309 P **P** 19 59 32.8 **+0.5**
comp=Z,3.5nm,0.3s,baz=87,slow=8.1,SNR=48
KURBB PcP **PcP** 20 01 09.6 **-0.3**
comp=Z,0.6nm,0.2s,baz=93,slow=4.0,SNR=1.6
comp=Z,3.5nm,0.3s
PDGK Podgornoye 45.48 298 P **P** 19 59 35.7 **+0.2**
WUS Wushi 46.13 296 P **P** 19 59 41.9 **+1.2**
WUS Wushi 46.13 296 P **P** 19 59 42.3 **+1.6**
J17K VABM Dome 46.40 33 P **P** 19 59 44.2 **+2.0**
K17K Iditarod 46.68 34 P **P** 19 59 47.6 **+3.1**
K17K IAmb IAmb 19 59 48.7

	comp=Z,5.8nm,0.9s							
G18K	**Tagagawik**	**46.89**	**30**	P	**P**	**19 59 47.8**	**+1.7**
G18K				IAmb	IAmb	20 00 10.1	
	comp=Z,8.4nm,1.4s							
TARG	**Taragay, Kyrgy**	**47.04**	**297**		**P**	**19 59 48.8**	**+0.8**
TARG				IAmb	IAmb	19 59 50.7	
	comp=Z,7.5nm,0.7s							
TARG	**Taragay, Kyrgy**	**47.04**	**297**	P	**P**	**19 59 48.4**	**+0.3**
SOEI	**Soe**	**47.23**	**200**	P	**P**	**19 59 48.3**	**-1.0**
KDJ	**Kajisay**	**47.40**	**297**	P	**P**	**19 59 49.6**	**-0.9**
KDJ				IAmb	IAmb	20 00 23.6	
	comp=Z,8.7nm,0.9s							
H19K	**Roundabout Mou**	**47.75**	**31**	P	**P**	**19 59 54.7**	**+2.1**
ASAI	**AK-SAY(Kyrgyzs**	**48.18**	**296**	P	**P**	**19 59 58.6**	**+1.8**
J20K	**Nowinta River**	**48.64**	**33**		**P**	**20 00 00.6**	**+1.1**
J20K				IAmb	IAmb	20 00 03.0	
	comp=Z,6.4nm,1.2s							
K20K	**Telida**	**48.64**	**34**	P	**P**	**20 00 00.4**	**+0.8**
MTN	**Manton Dam**	**48.81**	**190**		**P**	**20 00 00.4**	**-0.9**
MTN				IAmb	IAmb	20 00 43.0	
	comp=Z,8.7nm,1.2s							
E21K	**Killik River**	**49.01**	**27**	P	**P**	**20 00 04.3**	**+2.0**
E21K				IAmb	IAmb	20 00 18.8	
	comp=Z,9.5nm,1.3s							
AAK	**Ala-Archa**	**49.21**	**299**	P	**P**	**20 00 05.3**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=90,slow=5.3,SNR=5.8							
	comp=Z,2.0nm,0.4s							
AAK	**Ala-Archa**	**49.21**	**299**	IAmb	IAmb	20 00 06.4		
	comp=Z,3.4nm,0.7s							
KSH2	**Kashi**	**49.37**	**294**	P	**P**	**20 00 07.3**	**+1.7**
KSH2				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KDAK	**Kodiak Island**	**49.53**	**41**	P	**P**	**20 00 07.8**	**+1.4**
KDAK				IAmb	IAmb	20 00 14.6	
	comp=Z,16nm,1.3s							
COEN	**Coen**	**49.57**	**174**	P	**P**	**20 00 05.8**	**-1.2**
COEN				IAmb	IAmb	20 00 26.5	
	comp=Z,15nm,1.3s							
BVAR	**Borovoye Array**	**49.86**	**313**	P	**P**	**20 00 09.7**	**+0.8**
	comp=Z,2.3nm,0.4s,baz=88,slow=7.6,SNR=29							
BVAR				PcP	**PcP**	**20 01 27.8**	**+0.8**	
	comp=Z,2.0nm,0.7s,baz=74,slow=3.9,SNR=5.1							
	comp=Z,2.3nm,0.4s							
KTH	**Kantishna Hill**	**50.06**	**33**	IAmb	IAmb	20 00 49.7		
	comp=Z,6.5nm,1.2s							
MLY	**Manley**	**50.12**	**31**	P	**P**	**20 00 12.5**	**+1.7**
E23K	**Chandalar**	**50.61**	**27**		**P**	**20 00 16.3**	**+1.9**
E23K				IAmb	IAmb	20 00 18.0	
	comp=Z,8.3nm,1.2s							
ARSB	**Arslanbob**	**50.64**	**297**	P	**P**	**20 00 15.7**	**+0.5**
ARSB				IAmb	IAmb	20 00 18.4	
	comp=Z,4.0nm,0.8s							
ARK	**Arkit**	**51.24**	**298**	P	**P**	**20 00 21.6**	**+2.0**
GSI	**Gunungsitoli**	**51.25**	**237**	P	**P**	**20 00 18.9**	**-0.9**
ILAR	**Eielson Array**	**51.77**	**32**	P	**P**	**20 00 24.3**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=277,slow=7.2,SNR=9.3							
	comp=Z,1.2nm,0.9s							
D25K	**Kavik River**	**51.80**	**26**	IAmb	IAmb	20 00 26.3		
	comp=Z,4.2nm,0.7s							
KK31	**Karatay Array**	**51.91**	**300**		**P**	**20 00 24.2**	**-0.2**
KK31				IAmb	IAmb	20 00 26.4		
	comp=Z,6.5nm,1.0s							
KK31				PcP	**PcP**	**20 01 34.4**	**-0.3**	
KKAR	**Karatay Array**	**51.91**	**300**		**P**	**20 00 24.1**	**-0.3**
KKAR				PcP	**PcP**	**20 01 33.6**	**-1.2**	
C27K	**Jago River**	**52.73**	**25**	IAmb	IAmb	20 00 33.2		
	comp=Z,2.6nm,0.7s							
MANEM	**Manem**	**52.77**	**293**	P	**P**	**20 00 31.8**	**+0.7**
MANEM				IAmb	IAmb	20 00 33.6		
	comp=Z,14nm,1.0s							
NIL	**Nilore**	**52.96**	**288**	P	**P**	**20 00 32.2**	**0.0**
NIL				IAmb	IAmb	20 00 33.9		
	comp=Z,4.6nm,0.6s							
GAR	**Garm**	**53.30**	**295**		**P**	**20 00 35.1**	**+0.3**
CHGR	**Chuyangaron**	**54.27**	**295**	P	**P**	**20 00 42.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**54.93**	**195**	P	**P**	**20 00 46.3**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=16,slow=7.1,SNR=9.1							
	comp=Z,1.8nm,0.5s							
FITZ	**Fitzroy Crossi**	**54.93**	**195**	P	**P**	**20 00 45.6**	**-0.9**
SHAA	**Shahritus**	**55.41**	**294**	IAmb	IAmb	20 00 51.7		
	comp=Z,8.3nm,0.7s							
WRA	**Warramunga Arr**	**55.50**	**185**	P	**P**	**20 00 49.9**	**-0.7**
	comp=Z,8.5nm,0.4s,baz=0.6,slow=7.6,SNR=165							
WRA				PcP	**PcP**	**20 01 49.3**	**+0.8**	
	comp=Z,1.6nm,0.7s,baz=1.2,slow=3.8,SNR=4.7							
WRA	**Warramunga Arr**	**55.50**	**185**		**P**	**20 00 50.0**	**-0.6**
WR8	**Warramunga Arr**	**55.50**	**185**		**P**	**20 00 50.0**	**-0.6**
ARTI	**Arti**	**56.02**	**319**		**P**	**20 00 54.7**	**+0.8**
I30M	**Mount Dempster**	**56.13**	**30**	IAmb	IAmb	20 00 58.2		
	comp=Z,3.2nm,1.0s							
AB31	**Akbulak array**	**57.13**	**310**		**P**	**20 01 02.5**	**+0.6**
ABKAR	**Akbulak array**	**57.13**	**310**		**P**	**20 01 02.2**	**+0.4**
AS31	**Alice Springs**	**59.22**	**185**		**P**	**20 01 16.4**	**-0.2**
AS31				IAmb	IAmb	20 01 18.9		
	comp=Z,1.9nm,0.5s							
ASAR	**Alice Springs**	**59.22**	**185**	P	**P**	**20 01 16.4**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=16,slow=14,SNR=53							
ASAR				PcP	**PcP**	**20 02 04.3**	**+1.1**	
	comp=Z,0.7nm,0.9s,baz=13,slow=5.5,SNR=4.3							
	comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**59.22**	**185**	P	**P**	**20 01 16.3**	**-0.3**
PALK	**Pallekele**	**59.95**	**256**	P	**P**	**20 01 19.9**	**-2.0**
INKA	**Innaminka**	**63.13**	**178**	P	**P**	**20 01 42.5**	**-0.3**
INKA				IAmb	IAmb	20 01 44.0		
	comp=Z,2.9nm,0.7s							
RES	**Resolute Bay**	**64.42**	**14**	P	**P**	**20 01 51.0**	**+0.4**
ARCES	**ARCESS Array B**	**64.46**	**339**	P	**P**	**20 01 51.3**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=57,slow=7.4,SNR=3.7							
	comp=Z,2.7nm,1.0s							
ARCES	**ARCESS Array B**	**64.46**	**339**	P	**P**	**20 01 51.2**	**+0.2**
BBB	**Bella Bella**	**64.53**	**43**	P	**P**	**20 01 52.9**	**+1.2**
FORT	**Forrest**	**66.89**	**190**	P	**P**	**20 02 07.4**	**+0.4**
STKA	**Stephens Creek**	**67.28**	**177**	P	**P**	**20 02 09.3**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=351,slow=4.3,SNR=3.2							
	comp=Z,1.1nm,0.6s							
BBOO	**Buckleboo**	**68.20**	**182**	P	**P**	**20 02 15.5**	**+0.3**
FIA1	**FINESS Array S**	**68.96**	**332**	P	**P**	**20 02 20.2**	**+0.6**
FINES	**FINESS Array B**	**68.96**	**332**	P	**P**	**20 02 20.3**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=64,slow=5.3,SNR=15							
	comp=Z,1.4nm,0.5s							
FINES	**FINESS Array B**	**68.96**	**332**	P	**P**	**20 02 19.6**	**+0.1**
KBZ	**Khabaz**	**70.10**	**310**	P	**P**	**20 02 28.3**	**+1.4**
	comp=Z,2.1nm,1.0s,baz=60,slow=6.5,SNR=4.5							
	comp=Z,2.1nm,1.0s							
SUMG	**Summit**	**71.99**	**359**	P	**P**	**20 02 38.7**	**+0.4**
SUMG				IAmb	IAmb	20 02 58.4		
	comp=Z,7.5nm,1.3s							
AKASG	**Malin Array Be**	**73.99**	**321**	P	**P**	**20 02 50.4**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=51,slow=5.8,SNR=9.4							
	comp=Z,1.1nm,0.4s							
AKASG	**Malin Array Be**	**73.99**	**321**	IAmb	IAmb	20 02 57.4		
	comp=Z,3.0nm,1.1s							
NC204	**NORSAR Array S**	**74.52**	**337**	P	**P**	**20 02 52.4**	**-0.5**
ILULI	**Ilulissat**	**75.14**	**4**	P	**P**	**20 02 56.5**	**+0.3**
ILULI	**Ilulissat**	**75.14**	**4**	P	**P**	**20 02 58.4**	**+2.2**
BUR08	**Bucovina Ar. S**	**77.97**	**321**	P	**P**	**20 03 11.7**	**-1.0**
BURAR	**Bucovina Array**	**77.98**	**321**	P	**P**	**20 03 11.7**	**-1.0**
BRTR	**Keskin Array B**	**78.08**	**310**	P	**P**	**20 03 14.7**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=66,slow=6.0,SNR=5.1							
	comp=Z,1.1nm,0.8s							
RAYN	**Ar Rayn**	**79.12**	**291**	P	**P**	**20 03 20.0**	**+0.7**
CLL	**Collm**	**81.13**	**329**	*i* P	**P**	**20 03 30.9**	**+1.4**
	comp=Z,3.0nm,0.9s							
GERES	**GERESS Array B**	**82.66**	**327**	P	**P**	**20 03 38.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=37,slow=5.7,SNR=2.6							
	comp=Z,0.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**83.63**	**339**	P	**P**	**20 03 43.2**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=27,slow=5.6,SNR=4.9							
	comp=Z,0.3nm,0.4s							
QSPA	**South Pole Qui**	**125.45**	**180**	PKP	**PKPdf**	**20 10 13.0**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=327,slow=2.3,SNR=6.4							

IDC ***24*** *19:58:13.5±1.6,3.92N×126.32E,h0km,mb3.7/5, mbtmp3.7/6,ML3.6/1,Error ellipse: s-maj=76.7km s-min=23.6km az=63.0*

ISC 24 19:58:19.1±0.9,3.76N±0.08×126.1E±0.2,h35km,n8, σ2s27/10,mb3.7/5,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.37**	**350**	*e*P	**Pn**	**19 58 55.1**	**-0.4**
DDMP				*e*S	**Sn**	**19 59 19.5**	**-3.9**
CDOP	**Cateel, Davao**	**4.01**	**4**	*i* P	**Pn**	**19 59 21.3**	**+3.2**
CDOP				*i* S	**Sn**	**20 00 04.1**	**+0.2**
SIJI	**Sorong**	**6.89**	**132**	Pn	**Pn**	**19 59 54.8**	**-2.9**
	1.1nm,0.3s,baz=254,slow=21,SNR=6.1						
SIJI				Sn	Sn	20 01 04.0	-11
	0.2nm,0.3s,baz=322,slow=22,SNR=1.2						
	2.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**21.72**	**181**	P	**P**	**20 03 08.4**	**+1.0**
	3.1nm,1.0s,baz=6.3,slow=13,SNR=1.7						
	3.1nm,1.0s						
WRA	**Warramunga Arr**	**24.89**	**161**	P	**P**	**20 03 38.6**	**-0.4**
	1.8nm,0.6s,baz=339,slow=11,SNR=9.8						
	1.8nm,0.6s						
ASAR	**Alice Springs**	**28.29**	**165**	P	**P**	**20 04 09.5**	**0.0**
	0.3nm,0.6s,baz=353,slow=7.5,SNR=4.4						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**38.37**	**159**	P	**P**	**20 05 38.2**	**+1.1**
	1.2nm,0.6s,baz=333,slow=6.8,SNR=1.7						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**57.20**	**326**	P	**P**	**20 08 02.3**	**-0.4**
	0.4nm,0.9s,baz=116,slow=8.5,SNR=5.6						
	0.4nm,0.9s						

IDC ***24*** *20:22:58.0±1.1,3.05N×129.79E,h0km,mb3.7/5, mbtmp3.8/8,ML3.8/3,MS3.1/3,Error ellipse: s-maj=31.2km s-min=19.2km az=84.0*

NEIC ***24*** *20:23:00.5±1.1,3.08S±0.06×129.76E±0.07,h19km±2km, mb4.0/9,Error ellipse: s-maj=10.1km s-min=8.4km az=85.0*

DJA ***24*** *20:23:03.6±0.7,3°S±7°×13°0E±°,h30km±10km,M3.8/8, MLv3.8/8*

ISC 24 20:23:01.2±0.6,3.08S±0.07×129.80E±0.07,h25km,n29, σ1s16/28,mb3.9/5,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.45**	**86**	Pn	**Pn**	**20 23 41.5**	**+2.0**
FAKI				Sn	**Sn**	**20 24 08.9**	**+0.2**
SIJI	**Sorong**	**2.64**	**34**	Pn	**Pn**	**20 23 42.3**	**0.0**
	15nm,0.3s,baz=217,slow=23,SNR=89						
SIJI				Sn	**Sn**	**20 24 13.4**	**-0.2**
	16nm,0.3s,baz=39,slow=23,SNR=8.0						
SIJI				LR	LR	20 25 21.0	
	comp=Z,207nm,18.4s,baz=40,slow=55						
	42nm,0.2s						
SIJI	**Sorong**	**2.64**	**34**	P	**Pn**	**20 23 42.4**	**+0.1**
SWI	**Sorong**	**2.65**	**33**	P	**Pn**	**20 23 42.4**	**+0.1**
NLAI	**Namlea**	**2.70**	**267**	P	**Pn**	**20 23 45.5**	**+2.5**
SANI	**Sanana**	**3.94**	**285**	P	Pb	20 24 20.0	+10
MTN	**Manton Dam**	**9.79**	**172**	Pn	**Pn**	**20 25 20.0**	**-0.4**
TOLI2	**Tolitoli**	**9.93**	**295**	Pn	**Pn**	**20 25 21.8**	**-0.6**
KAPI	**Kappang**	**10.21**	**259**	LR	LR	20 30 03.4	
	comp=Z,75nm,21.5s,baz=81,slow=42						
KNRA	**Kununurra**	**12.55**	**185**	Pn	**Pn**	**20 25 57.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**15.47**	**195**	Pn	**Pn**	**20 26 37.7**	**-0.2**
	0.3nm,0.3s,baz=18,slow=13,SNR=7.6						
	6.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**15.47**	**195**		**Pn**	**20 26 36.9**	**-1.0**
COEN	**Coen**	**17.06**	**130**	Pn	**Pn**	**20 26 57.9**	**-0.3**
COEN				IAmb	IAmb	20 27 30.3	
	comp=Z,24nm,1.5s						
WRA	**Warramunga Arr**	**17.33**	**166**	P	**Pn**	**20 27 00.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=21						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**17.33**	**166**		**Pn**	**20 26 59.3**	**-2.3**
WR8	**Warramunga Arr**	**17.39**	**165**	Pn	**Pn**	**20 27 00.6**	**-1.6**
WR8				IAmb	IAmb	20 27 22.2	
	comp=Z,13nm,1.4s						
PMG	**Port Moresby**	**18.36**	**111**		**P**	**20 27 12.2**	**-1.9**
AS31	**Alice Springs**	**20.84**	**169**	P	**P**	**20 27 40.9**	**-0.4**
AS31				IAmb	IAmb	20 27 43.1	
	comp=Z,2.3nm,0.8s						
ASAR	**Alice Springs**	**20.84**	**169**	P	**P**	**20 27 42.0**	**+0.7**
	comp=Z,6.7nm,0.8s,baz=352,slow=10,SNR=44						
ASAR				PcP	**PcP**	**20 31 51.7**	**+2.1**	
	comp=Z,0.3nm,0.6s,baz=4.4,slow=1.2,SNR=1.8						
	comp=Z,6.7nm,0.8s						
ASAR	**Alice Springs**	**20.84**	**169**	P	**P**	**20 27 41.3**	**0.0**
BBJI	**Bungbulang**	**22.48**	**258**	P	**P**	**20 27 57.7**	**-1.3**
CMAR	**Chiang Mai Arr**	**37.17**	**306**	P	**P**	**20 30 11.7**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=111,slow=7.8,SNR=5.3						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**54.70**	**341**	P	**P**	**20 32 28.3**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=146,slow=7.6,SNR=3.7						
	comp=Z,0.7nm,1.0s						
SONM	**Songino Array**	**54.70**	**341**	IAmb	IAmb	20 32 31.1	
	comp=Z,3.4nm,1.4s						
MKAR	**Makanchi Array**	**64.88**	**326**	P	**P**	**20 33 38.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=116,slow=8.5,SNR=3.7						
	comp=Z,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**69.10**	**328**	P	**P**	**20 34 05.4**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=124,slow=5.4,SNR=10.0						
	comp=Z,0.8nm,0.6s						
KURK	**Kurchatov**	**69.10**	**328**	P	**P**	**20 34 05.1**	**0.0**
KURK				IAmb	IAmb	20 34 06.6	
	comp=Z,1.9nm,0.8s						
ABKAR	**Akbulak array**	**79.34**	**321**	P	**P**	**20 35 04.3**	**-0.6**
PPT	**Papeete**	**80.14**	**107**	LR	LR	21 10 58.1	
	comp=Z,19nm,18.2s,baz=204,slow=36						

SOF ***24*** *20:41:22.3,40.15N±0.02×25.09E±0.02,h2km±1km, MD4.5/6*

TIR ***24*** *20:41:23.4,39.85N×24.88E,h20km±6km,Ml4.0/3*

IDC ***24*** *20:41:23.9±0.7,40.16N×25.01E,h0km,mb3.8/14, mbtmp3.9/25,ML4.0/8,MS3.3/22,Error ellipse: s-maj=11.2km s-min=10.7km az=90.0*

NEIC ***24*** *20:41:24.3±2.6,40.20N±0.04×24.94E±0.05,h10km±1km, mb4.2/20,Error ellipse: s-maj=8.1km s-min=5.7km az=321.0*

ISK ***24*** *20:41:24.8,40.23N×24.99E,h12km,ML4.3/23*

THE ***24*** *20:41:25.0,40.2N±0.9×25.0E±0.9,h5km±1km,M3.8/62, MLh3.8/62*

CFUSG ***24*** *20:41:25.7,40.36N×25.11E,h10km,MD3.6/6,MSH3.4/7*

MCSM ***24*** *20:41:25.5±1.2,40.1N±3°×2.5E±°,h8km±10km,mb4.7, mB5.0,MLv4.5,Mw(mB)4.2*

PDG ***24*** *20:41:25.4±0.5,40.17N×24.98E,h23km,ML4.2/10,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ATH ***24*** *20:41:25.2,40.17N×24.98E,h16km±1km,ML3.9/38, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

AFAD ***24*** *20:41:26.2,40.19N×25.06E,h44km,MW4.2*

GFZ ***24*** *20:41:26.5±0.2,40.1N±2°×2.5E±°,h10km,M4.2/19, mb4.6/19*

NAO ***24*** *20:41:30.7,40.05N×21.88E,h10km,MB3.9*

ISC 24 20:41:25.2±0.8,40.19N±0.02×24.99E±0.01,h16km±6km, n554,σ1s46/604,mb4.0/21,MS3.3/18,42C-39D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.33**	**153**	P	**Pg**	**20 41 32.0**	**-0.1**
LIA				S	**Sg**	**20 41 35.0**	**-1.8**
LIA	**Limnos Island**	**0.33**	**153**	P	**Pg**	**20 41 32.2**	**+0.2**
LIA				S	**Sg**	**20 41 36.7**	**-0.1**
THAS	**Thassos island**	**0.46**	**334**	P	**Pg**	**20 41 34.7**	**+0.3**
THAS				S	**Sg**	**20 41 40.8**	**+0.1**
THAS	**Thassos island**	**0.46**	**334**	P	**Pb**	**20 41 34.9**	**0.0**
THAS				S	**Sg**	**20 41 41.2**	**+0.5**
SMTH	**Samothraki Isl**	**0.50**	**56**	P	**Pg**	**20 41 35.1**	**0.0**
SMTH				S	**Sb**	**20 41 42.3**	**-0.4**
SMTH	**Samothraki Isl**	**0.50**	**56**	P	**Pg**	**20 41 35.1**	**0.0**
SMTH				S	**Sb**	**20 41 42.5**	**-0.2**
EFSA	**Agios Efstrati**	**0.65**	**180**	P	**Pb**	**20 41 38.3**	**+0.2**
EFSA				S	**Sg**	**20 41 45.7**	**-0.9**
GADA	**Gvkgeada**	**0.70**	**90**	Pg	**Pb**	**20 41 39.4**	**+0.4**
GADA	**Gvkgeada**	**0.70**	**90**	P	**Pg**	**20 41 39.0**	**+0.1**
GADA				S	**Sb**	**20 41 48.7**	**+0.3**
OUR	**Ouranopolis**	**0.78**	**281**	Pg	**Pb**	**20 41 40.6**	**+0.2**
OUR				Sg	**Sg**	**20 41 51.4**	**+0.7**
OUR	**Ouranopolis**	**0.78**	**281**	P	**Pb**	**20 41 40.5**	**+0.2**
OUR				S	**Sb**	**20 41 50.8**	**+0.1**
OUR	**Ouranopolis**	**0.78**	**281**	P	**Pb**	**20 41 40.5**	**+0.2**
OUR				S	**Sg**	**20 41 51.2**	**+0.4**
KAVA	**Kavala**	**0.88**	**336**	P	**Pn**	**20 41 42.7**	**-0.1**
KAVA				S	**Sg**	**20 41 54.2**	**+0.3**
KAVA	**Kavala**	**0.88**	**336**	P	**Pb**	**20 41 42.3**	**+0.3**
KAVA				S	**Sg**	**20 41 54.0**	**+0.1**
BOZC	**Bozcaada**	**0.89**	**113**	Pg	**Pg**	**20 41 42.7**	**+0.2**
BOZC				Sg	**Sn**	**20 41 55.5**	**-0.1**
BOZC	**Bozcaada**	**0.89**	**113**	P	**Pg**	**20 41 42.6**	**+0.2**
BOZC				P	**Pn**	**20 41 42.9**	**-0.1**
BOZC				S	**Sg**	**20 41 54.2**	**0.0**
BOZC				S	**Sb**	**20 41 54.6**	**+0.8**
BOZC				IAML		20 41 56.0	
	comp=N,6μm,0.8s						
BOZC				IAML		20 41 57.0	
	comp=N,5μm,0.8s						
ECEA	**Canakkale, Ece**	**0.92**	**99**	P	**Pn**	**20 41 43.8**	**+0.4**
ECEA				S	**Sn**	**20 41 56.3**	**0.0**
ECEA				IAML		20 42 06.0	
	comp=N,9μm,0.6s						
ALEX	**Alexandroupoli**	**0.96**	**46**	P	**Pb**	**20 41 43.6**	**+0.1**
ALEX				S	**Sn**	**20 41 57.0**	**-0.3**
CAVK	**Edirne/Enez-Ca**	**1.03**	**61**	⇑P	**Pg**	**20 41 45.1**	**0.0**
CAVK				⇑S	**Sn**	**20 41 59.0**	**0.0**
CAVK	**Edirne/Enez-Ca**	**1.03**	**61**	P	**Pg**	**20 41 45.6**	**+0.4**
CAVK				S	**Sn**	**20 41 59.4**	**+0.4**
CAVK				IAML		20 42 06.0	
	comp=E,5μm,0.6s						
PAIG	**Paliouri**	**1.04**	**256**	P	**Pb**	**20 41 44.5**	**-0.2**
PAIG				S	**Sg**	**20 41 59.1**	**+0.3**
PAIG	**Paliouri**	**1.04**	**256**	P	**Pb**	**20 41 44.7**	**0.0**
RDO	**Rodhopi**	**1.04**	**24**	Pg	**Pb**	**20 41 44.5**	**-0.3**
RDO				Sg	**Sb**	**20 41 57.9**	**-0.3**
RDO	**Rodhopi**	**1.04**	**24**	P	**Pb**	**20 41 44.5**	**-0.3**
RDO				S	**Sn**	**20 42 00.2**	**+0.9**
RDO	**Rodhopi**	**1.04**	**24**		**Pb**	**20 41 44.4**	**-0.3**
RDO				Sg	**Sb**	**20 41 58.3**	**+0.1**
RDO	**Rodhopi**	**1.04**	**24**	P	**Pb**	**20 41 44.6**	**-0.3**
RDO	**Rodhopi**	**1.04**	**24**	P	**Pb**	**20 41 44.5**	**-0.3**
RDO				S	**Sg**	**20 41 58.8**	**-0.2**
ENEZ	**Enez**	**1.04**	**58**	Pg	**Pb**	**20 41 44.9**	**+0.1**
ENEZ	**Enez**	**1.04**	**58**	P	**Pn**	**20 41 45.2**	**+0.1**
ENEZ				S	**Sn**	**20 41 59.7**	**+0.4**
ALN	**Alexandroupoli**	**1.07**	**49**	Pg	**Pb**	**20 41 45.1**	**-0.2**
ALN	**Alexandroupoli**	**1.07**	**49**	P	**Pb**	**20 41 45.4**	**+0.1**
ALN				S	**Sg**	**20 42 01.3**	**+1.4**
ALN	**Alexandroupoli**	**1.07**	**49**		**Pb**	**20 41 45.3**	**0.0**
ALN				Sg	**Sg**	**20 42 00.4**	**+0.5**
ALN	**Alexandroupoli**	**1.07**	**49**	P	**Pb**	**20 41 45.5**	**+0.1**
ALN	**Alexandroupoli**	**1.07**	**49**	P	**Pb**	**20 41 45.3**	**0.0**
ALN				S	**Sg**	**20 42 00.3**	**+0.4**
EZN	**Ezine**	**1.09**	**109**	Pn	**Pg**	**20 41 46.2**	**-0.1**
EZN				Sn	**Sg**	**20 42 01.8**	**+1.2**
EZN	**Ezine**	**1.09**	**109**	P	**Pg**	**20 41 46.1**	**-0.1**
EZN				S	**Sn**	**20 42 00.0**	**-0.5**
EZN	**Ezine**	**1.09**	**109**	P	**Pg**	**20 41 46.2**	**-0.1**
KOCA	**Canakkale, Ayv**	**1.12**	**127**	P	**Pg**	**20 41 46.7**	**-0.2**
KOCA				S	**Sg**	**20 42 02.3**	**+0.7**
KOCA				IAML		20 42 05.0	
	comp=E,9μm,0.6s						
COMU	**Canakkale**	**1.14**	**94**	Pn	**Pg**	**20 41 47.0**	**-0.3**
EZNE	**Ezine-Canakkal**	**1.15**	**112**	Pn	**Pg**	**20 41 47.3**	**0.0**
GPNR	**Gulpinar-Canak**	**1.15**	**129**	Pn	**Pg**	**20 41 47.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.16**	**79**	Pn	**Pb**	**20 41 46.8**	**0.0**
GELI				Sn	**Sg**	**20 42 02.6**	**0.0**
PLG	**Polygyros**	**1.19**	**279**	P	**Pn**	**20 41 47.3**	**+0.1**
PLG				S	**Sg**	**20 42 03.8**	**0.0**
PLG	**Polygyros**	**1.19**	**279**	P	**Pn**	**20 41 47.3**	**+0.1**
ERIK	**Erikli-Kesan**	**1.26**	**67**	Pn	**Pn**	**20 41 47.9**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.28**	**110**	P	**Pb**	**20 41 48.0**	**0.0**
BAYC				S	**Sn**	**20 42 05.7**	**+0.5**
BAYC				IAML		20 42 13.0	
	comp=N,2μm,0.8s						
AOS	**Alonnisos**	**1.33**	**220**	P	**Pn**	**20 41 49.0**	**0.0**
GOKT	**Kean, EDRN**	**1.34**	**69**	P	**Pn**	**20 41 49.1**	**-0.1**
SKY	**Skiros Island**	**1.36**	**195**	P	**Pn**	**20 41 49.1**	**-0.3**
SKY	**Skiros Island**	**1.36**	**195**	P	**Pn**	**20 41 49.3**	**-0.1**
AOS2	**Alonissos-2**	**1.37**	**221**	P	**Pn**	**20 41 48.9**	**-0.7**
PRK	**Paraskevi**	**1.37**	**133**	P	**Pb**	**20 41 50.4**	**0.0**
PRK				S	**Sb**	**20 42 08.6**	**+0.9**
PRK	**Paraskevi**	**1.37**	**133**	P	**Pb**	**20 41 50.5**	**+0.1**
PRK				S	**Sn**	**20 42 07.5**	**+0.1**
SOH	**Sokhos**	**1.39**	**297**	P	**Pn**	**20 41 50.5**	**

TKR Tekirdag 2.10 67 Pn Pn 20 42 00.2 +0.6
BAGT Foa 2.11 136 P Pn 20 42 00.8 +1.0
GRG Griva 2.11 292 P Pn 20 42 01.3 +1.4
GRG Griva 2.11 292 P Pn 20 42 00.7 +0.9
GRG Griva 2.11 292 P Pn 20 42 00.8 +1.0
EDRB Edirne 2.12 38 Pn Pn 20 42 00.2 +0.3
MURA Murati, TEK 2.13 62 P Pn 20 42 00.2 +0.1
ATAL Atalanti 2.13 226 P Pn 20 41 59.9 -0.2
ATAL Atalanti 2.13 226 P Pn 20 41 59.9 -0.2
VAY Valandovo 2.15 302 *i* Pn Pg 20 42 06.7 +0.2
VAY *e*Sn Sb 20 42 32.6 +2.4
KKB Krupnik 2.17 320 *i* P Pg 20 42 06.5 -0.2
KKB *i* S Sg 20 42 35.8 +1.0
KKB Krupnik 2.17 320 P Pb 20 42 02.4 -1.5
TYRN Tyrnavos 2.17 258 P Pn 20 42 01.0 +0.5
TYRN Tyrnavos 2.17 258 P Pn 20 42 01.0 +0.5
LKR Lokris 2.18 226 P Pn 20 42 00.5 -0.2
LKR Lokris 2.18 226 P Pn 20 42 00.6 -0.2
KARY Karystos 2.20 191 P Pn 20 42 00.8 -0.3
KARY Karystos 2.20 191 P Pn 20 42 00.7 -0.3
EDC Edincik 2.21 85 Pn Pn 20 42 01.9 +0.8
URLA Izmir 2.22 145 Pn Pn 20 42 02.5 +1.2
URLA Izmir 2.22 145 P Pn 20 42 02.3 +1.0
SOMA Soma-Manisa 2.22 117 Pn Pn 20 42 02.7 +1.4
STEP BALIKESIR_Sava 2.26 110 P Pn 20 42 03.5 +1.7
DION Dionisos Attik 2.27 202 P Pn 20 42 01.6 -0.3
DION Dionisos Attik 2.27 202 P Pn 20 42 01.6 -0.3
CRLT Corlu 2.29 65 Pn Pn 20 42 02.9 +0.6
BALB Balikesir 2.29 103 Pn Pn 20 42 03.5 +1.2
BALB Balikesir 2.29 103 P Pn 20 42 03.0 +0.8
AXAR Agios Charalam 2.30 232 P Pn 20 42 02.5 +0.2
AXAR Agios Charalam 2.30 232 P Pn 20 42 02.5 +0.2
CMHT Manyas 2.30 94 P Pn 20 42 03.3 +1.0
STFN Stefani 2.30 210 P Pn 20 42 02.5 0.0
STFN Stefani 2.30 210 P Pn 20 42 02.7 +0.2
CAMT Merkez 2.31 128 P Pn 20 42 04.0 +1.5
BKES Balkesir-Mer 2.31 101 P Pn 20 42 03.7 +1.2
PTL Penteli 2.31 203 P Pn 20 42 02.5 -0.1
PTL Penteli 2.31 203 P Pn 20 42 02.4 -0.2
AGG Agios Georgios 2.36 241 P Pn 20 42 02.9 -0.3
AGG Agios Georgios 2.36 241 P Pn 20 42 03.1 -0.1
AGG Agios Georgios 2.36 241 P Pn 20 42 03.0 -0.3
THL Klokotos Trika 2.37 256 P Pn 20 42 03.9 +0.6
THL Sn Sn 20 42 31.5 -0.6
THL AML AML 20 42 42.6
2µm,0.9s
THL Klokotos Trika 2.37 256 P Pn 20 42 03.7 +0.3
THL Klokotos Trika 2.37 256 P Pn 20 42 03.5 +0.2
VIL2 Platees 2.39 215 P Pn 20 42 03.5 -0.1
BAND Balkesir-Ban 2.39 85 ⇑P Pn 20 42 05.5 +1.9
BAND ⇑S Sb 20 42 36.4 -0.5
BAND Balkesir-Ban 2.39 85 P Pb 20 42 06.8 -1.0
PGB Panagyurishte 2.40 345 *i* P Pg 20 42 10.5 -0.7
PGB *i* S Sg 20 42 42.9 +0.6
MAGU Magoula 2.40 209 P Pn 20 42 03.8 0.0
VILL Villia 2.41 213 P Pn 20 42 03.7 -0.2
BLCB Balcova 2.41 138 Pn Pn 20 42 05.1 +1.2
ATHU Athens Univers 2.41 203 P Pn 20 42 03.3 -0.6
ATHU Athens Univers 2.41 203 P Pn 20 42 03.5 -0.4
BOTS Marmara Eregli 2.42 70 Pn Pn 20 42 04.9 +0.9
NOAC Athens-Thissio 2.43 204 P Pn 20 42 03.9 -0.2
ATH Athens Observa 2.43 204 P Pn 20 42 04.0 -0.1
ATH Athens Observa 2.43 204 P Pn 20 42 04.2 +0.1
KZN Kozani 2.46 274 P Pn 20 42 05.5 +0.8
KZN Kozani 2.46 274 P Pn 20 42 05.5 +0.8
VLY Voula,Athens 2.52 202 P Pn 20 42 05.2 +0.1
VLY Voula,Athens 2.52 202 P Pn 20 42 05.2 -0.1
JMB Yambol 2.57 26 *i* P Pn 20 42 06.5 +0.3
JMB Yambol 2.57 26 P Pn 20 42 06.3 +0.2
TNSA Tinos 2.65 177 P Pn 20 42 07.2 0.0
LTK Loutraki 2.68 217 P Pn 20 42 07.5 0.0
LTK Loutraki 2.68 217 P Pn 20 42 07.4 -0.2
LOUT Loutraki 2.70 216 P Pn 20 42 07.8 -0.1
VTS Vitosha 2.76 332 *i* P Pg 20 42 16.7 -1.4
VTS Vitosha 2.76 332 P Pn 20 42 10.4 +1.6
EVR Evrytania 2.77 244 P Pn 20 42 09.3 +0.4
EVR Evrytania 2.77 244 P Pn 20 42 09.3 +0.4
KPRO Kipourio 2.79 266 P Pn 20 42 10.4 +1.2
THAL Thalero 2.81 221 P Pn 20 42 08.7 -0.7
CTYL Yalikoy Yolu 2.81 62 P Pn 20 42 09.9 +0.5
ACOR Acrocorinthos 2.83 216 P Pn 20 42 09.7 0.0
KALE Kalithea 2.85 232 P Pn 20 42 10.0 0.0
KALE Kalithea 2.85 232 P Pn 20 42 09.9 0.1
MET4 Agioi Theodoro 2.85 206 P Pn 20 42 09.8 -0.1
ANX Ano Chora 2.86 237 P Pn 20 42 10.5 +0.3
ANX Ano Chora 2.86 237 P Pn 20 42 10.6 +0.3
PSARO Psaromita, Dor 2.87 230 P Pn 20 42 09.7 -0.4
MET2 Kameni Chora, 2.88 207 P Pn 20 42 09.9 -0.5
SERG Sergoula 2.88 233 P Pn 20 42 10.4 -0.1
MET6 Megalochori,Me 2.89 207 P Pn 20 42 10.4 -0.1
PYRG Pyrgos, Dorida 2.91 233 P Pn 20 42 11.0 +0.2
PVL Pavlikeni 2.93 3 *i* P Pn 20 42 13.0 +1.9
PENT Pentalofos 2.95 271 P Pn 20 42 12.5 +1.1
MG00 Magoula, Dorid 2.95 234 P Pn 20 42 11.7 +0.4
MET3 Ano Fanari,Met 2.95 208 P Pn 20 42 11.1 -0.3
EFP Efpalio 2.97 235 P Pn 20 42 11.0 -0.6
AGEO AgiosGiorgios, 2.98 231 P Pn 20 42 11.4 -0.3
TETR Tetrakomo, Epi 2.98 255 P Pn 20 42 11.3 -0.6
GUR Goura 3.05 223 P Pn 20 42 12.5 -0.3
GUR Goura 3.05 223 P Pn 20 42 12.7 -0.1
PRMD Pramanda 3.07 259 P Pn 20 42 13.7 +0.7
PRMD Pramanda 3.07 259 P Pn 20 42 14.0 +1.0
KLV Kalavryta, Ach 3.08 227 P Pn 20 42 12.8 -0.3
KLV Kalavryta, Ach 3.08 227 P Pn 20 42 12.8 -0.3
AGRP Agrapidokambos 3.10 236 P Pn 20 42 13.9 +0.5
PVO Paravola 3.11 241 P Pn 20 42 14.5 +1.0
SZH Strazhitsa 3.16 13 *i* P Pn 20 42 15.5 +1.3
SZH Strazhitsa 3.16 13 P Pn 20 42 15.1 +0.9
AMPL Ampelaki 3.18 248 P Pn 20 42 16.0 +1.5
AMPL Ampelaki 3.18 248 P Pn 20 42 15.2 +0.7
PLVB Pleven 3.20 355 ⇓P Pn 20 42 16.6 +1.8
SKO Skopje 3.22 305 *e*Pn Pn 20 42 14.0 -1.0
KBN Korca 3.23 279 Pn Pn 20 42 17.2 +1.9
KBN S Sb 20 43 01.0 -0.4
KBN Korca 3.23 279 P Pn 20 42 17.0 +1.7
MANT Manisa 3.25 120 Pn Pn 20 42 16.5 +0.8
KLYT Kilyos 3.26 70 Pn Pn 20 42 17.7 +2.1
PLEV Plevrona-Mesol 3.30 239 P Pn 20 42 16.6 +0.5
OHR Ohrid 3.31 287 *e*Pn Pn 20 42 19.3 +2.9
OHR *e*Sn Sb 20 43 06.3 +2.6
AYDN Tasoluk 3.39 137 P Pn 20 42 19.1 +1.7
DRO Drossia 3.39 230 P Pn 20 42 17.8 +0.3
VLX Vlachokerasia 3.48 217 P Pn 20 42 19.1 +0.5
RAZG Razgrad 3.56 18 ⇓P Pn 20 42 21.5 +1.9
BODT Bodrum 3.62 149 P Pn 20 42 21.6 +1.1
LKD2 Lefkada island 3.63 249 P Pn 20 42 22.7 +2.0
LKD2 Lefkada island 3.63 249 P Pb 20 42 25.2 -3.7
IGT Igoumenitsa 3.64 261 P Pn 20 42 24.6 +3.8
IGT Sn Sn 20 43 05.6 +2.2
SILT Sile 3.67 73 ⇓P Pn 20 42 22.5 +1.3
EVGI Lefkada island 3.70 246 P Pn 20 42 23.7 +2.0
PHP Peshkopia 3.75 295 Pn Pb 20 42 27.1 -3.9
PHP Sn Sb 20 43 13.0 -3.2
PHP AML AML 20 43 19.3
0.5nm,1.1s
PHP Peshkopia 3.75 295 P Pb 20 42 27.1 -3.9
VLAD Vladila 3.83 354 ⇑P Pn 20 42 25.3 +1.9
SRN Sarande 3.84 267 Pn Pn 20 42 26.2 +2.6
SRN Sn Sn 20 43 12.4 +4.1
SRN Sarande 3.84 267 P Pn 20 42 26.7 +3.1
ITM Ithomi 3.84 219 Pn 20 42 24.2 +0.5
ITM Ithomi 3.84 219 P Pn 20 42 26.2 +2.5
BAIL Bailesti 4.01 343 ⇓P Pn 20 42 28.4 +2.4
KEK Kerkira 4.01 265 Pn 20 42 25.5 -0.5
KEK Kerkira 4.01 265 P Pn 20 42 29.0 +3.1
TIR Tirane 4.06 288 Pn Pn 20 42 30.0 +3.4
SGRR Singureni 4.09 10 ⇑P Pn 20 42 28.7 +1.7
BOVS Bovan 4.22 326 ⇓P Pn 20 42 31.1 +2.3
CRAR CRAIOVA 4.22 348 ⇑P Pn 20 42 30.6 +1.9
CICN Ciocanesti 4.28 20 ⇓P Pn 20 42 31.1 +1.5
HUMR Humele 4.33 360 ⇓P Pn 20 42 31.8 +1.5
HUMR Humele 4.33 360 P Pn 20 42 31.5 +1.2
INCR INCERC-Sediu C 4.33 11 ⇑P Pn 20 42 32.3 +2.0
PUNG Punghina 4.36 340 ⇑P Pn 20 42 33.0 +2.3
ICOR Ion Corvin 4.44 27 ⇓P Pn 20 42 34.0 +2.2
PVY Plav 4.48 304 *e*Pn Pn 20 42 33.8 +1.3
PVY *i* Sn Sn 20 43 24.0 -0.3
LEHL Lehliu 4.49 17 ⇓P Pn 20 42 34.2 +1.7
MANR Mangalia 4.51 35 ⇑P Pn 20 42 34.2 +1.5

SDA Shkodra 4.54 296 P Pn 20 42 37.0 +3.8
SDA Sn Sn 20 43 27.5 +1.9
SULR 4.58 11 ⇑P Pn 20 42 35.4 +1.7
SULR 4.58 11 P Pn 20 42 35.4 +1.7
IVA Berane 4.67 307 *e*Pn Pn 20 42 36.1 +1.1
ARG Arkhangelos 4.68 147 Pn 20 42 36.2 +1.1
ARG Arkhangelos 4.68 147 P Pn 20 42 38.7 +3.6
ULC Ulcinj 4.69 294 *e*Pn Pn 20 42 36.5 +1.3
ULC *i* Sn Sn 20 43 28.6 -0.6
CVDA Cernavoda 4.72 28 ⇑P Pn 20 42 37.3 +1.7
AMRR Amara 4.75 21 ⇓P Pn 20 42 38.2 +2.3
MDUB Mudurnu 4.76 85 Pn 20 42 37.0 +0.8
RMGR Halanga-Turnu 4.78 340 ⇓P Pn 20 42 39.4 +3.0
DRME Dracevica, Mon 4.81 296 *e*Pn Pn 20 42 40.2 +3.3
DRME Dracevica, Mon 4.81 296 *e*Pn Pn 20 42 38.3 +1.4
DRME *i* Sn Sn 20 43 31.9 -0.3
SJES Sjenica 4.84 311 *e*Pn Pn 20 42 36.8 -0.7
PDG Podgorica 4.86 299 ⇑P Pn 20 42 40.7 +3.1
PDG Podgorica 4.86 299 Pn 20 42 37.0 -0.6
PDG Podgorica 4.86 299 *e*Pn Pn 20 42 40.7 +3.1
PDG Podgorica 4.86 299 P Pn 20 42 41.1 +3.6
PDG Podgorica 4.86 299 *e*Pn Pn 20 42 39.9 +2.3
KOME Kolasin 4.89 305 *e*Pn Pn 20 42 39.5 +1.4
KOME *i* Sn Sn 20 43 33.8 -0.6
IDI Anoyia 4.90 181 Pn Pn 20 42 38.1 0.0
10.0nm,0.6s,baz=352,slow=16,SNR=11
IDI Sn Sn 20 43 37.7 +3.2
1.2nm,0.3s,baz=236,slow=19,SNR=3.2
IDI Lg Lg 20 44 01.7
0.4nm,0.3s,baz=104,slow=4.7,SNR=3.2
IDI LR LR 20 44 43.0
comp=Z,255nm,22.0s,baz=300,slow=41
IDI Anoyia 4.90 181 Pn 20 42 38.3 +0.1
TLBR Topalu 4.90 27 ⇑P Pn 20 42 39.5 +1.3
KARP Karpathos 4.95 159 Pn 20 42 39.4 +0.6
KARP Karpathos 4.95 159 P Pn 20 42 41.1 +2.3
0.3nm78nm,1.0s
TIRR Tirgusor 4.96 30 ⇑P Pn 20 42 41.4 +2.4
TIRR Tirgusor 4.96 30 Pn 20 42 39.6 +0.7
TIRR Tirgusor 4.96 30 P Pn 20 42 39.5 +0.6
TIRR Tirgusor 4.96 30 P Pn 20 42 40.0 +1.1
MTUR Matau 5.03 1 ⇑P Pn 20 42 42.1 +2.1
BUM Brajici-Budva 5.05 297 *e*Pn Pn 20 42 41.6 +1.3
BUM *i* Sn Sn 20 43 37.5 -0.8
HERR Herculane 5.05 339 ⇓P Pn 20 42 41.8 +1.6
ISR Istrita 5.05 13 ⇑P Pn 20 42 43.5 +3.2
CEME Cevo 5.13 299 *e*Pn Pn 20 42 42.9 +1.5
CEME *i* Sn Sn 20 43 39.5 -0.9
ELL Elmali 5.17 130 Pn 20 42 43.3 +1.3
ARR Arges 5.18 357 ⇓P Pn 20 42 43.5 +1.5
ARR Arges 5.18 357 P Pn 20 42 43.1 +1.1
MDVR Moldovita 5.18 333 ⇑P Pn 20 42 44.0 +1.9
NKME Niksic 5.21 302 *e*Pn Pn 20 42 43.8 +1.4
NKME *i* Sn Sn 20 43 41.3 -0.9
VOIR 5.24 0 ⇓P Pn 20 42 45.3 +2.4
VOIR 5.24 0 P Pn 20 42 44.3 +1.4
TPGR Topolog 5.31 27 ⇓P Pn 20 42 45.6 +1.9
NEHR Nehoiu 5.32 10 ⇓P Pn 20 42 46.8 +2.9
LOT Lotru 5.33 351 ⇓P Pn 20 42 47.0 +2.9
LOT Lotru 5.33 351 P Pn 20 42 45.5 +1.4
MLR Muntele Rosu 5.34 7 Pn Pn 20 42 46.6 +2.3
9.9nm,0.3s,baz=230,slow=4.0,SNR=269
MLR Lg Lg 20 44 18.4
4.8nm,0.3s,baz=76,slow=16,SNR=4.9
MLR LR LR 20 45 15.5
comp=Z,481nm,20.4s,baz=184,slow=43
MLR Muntele Rosu 5.34 7 ⇑P Pn 20 42 46.7 +2.3
MLR Muntele Rosu 5.34 7 Pn 20 42 46.3 +2.0
MLR Muntele Rosu 5.34 7 P Pn 20 42 46.0 +1.7
0.5nm1µm136nm,0.9s
MLR Muntele Rosu 5.34 7 P Pn 20 42 46.8 +2.5
AKAS Kas 5.37 136 20 42 44.9 +0.1
HCY Herceg Novi 5.38 297 *e*Pn Pn 20 42 44.4 -0.3
HCY Herceg Novi 5.38 297 *e*Pn Pn 20 42 46.2 +1.4
HCY *i* Sn Sn 20 43 45.3 -1.0
GRER 5.39 15 ⇓P Pn 20 42 47.7 +2.9
JURR Jurilovca 5.40 31 ⇑P Pn 20 42 46.3 +1.3
GZR Gura Zlata 5.45 343 ⇓P Pn 20 42 47.3 +1.6
UPM Unac-Piva 5.46 305 *e*Pn Pn 20 42 48.1 +2.2
UPM Unac-Piva 5.46 305 *e*Pn Pn 20 42 47.1 +1.2
UPM *i* Sn Sn 20 43 47.2 -1.2
TNR Turnu Rosu 5.48 355 ⇑P Pn 20 42 49.3 +3.2
CFR Carcaliu 5.50 24 ⇑P Pn 20 42 47.8 +1.5
BRY Bratogost 5.54 301 *e*Pn Pn 20 42 49.7 +2.6
BRY Bratogost 5.54 301 *e*Pn Pn 20 42 48.4 +1.3
BRY *i* Sn Sn 20 43 49.2 -1.3
BBLS Lazi&#263i 5.54 313 *e*Pn Pn 20 42 51.3 +4.3
TREB Trebinje 5.59 299 *e*Pn Pn 20 42 53.3 +5.7
SAHR Sahastru 5.67 12 ⇑P Pn 20 42 52.0 +3.2
COVR Voineasa-Covas 5.72 9 ⇑P Pn 20 42 52.4 +3.0
TLCR 5.73 28 ⇓P Pn 20 42 51.5 +2.0
TUDR 5.75 19 ⇓P Pn 20 42 52.4 +2.7
ODBI Odobesti 5.77 15 ⇓P Pn 20 42 53.2 +3.2
DOPR Dopca 5.78 3 ⇑P Pn 20 42 52.6 +2.4
PLOR Plostina 5.79 12 ⇓P Pn 20 42 53.0 +2.7
GIUM Giurgiulesti 5.79 23 ⇓P Pn 20 42 53.1 +2.7
VRI Vrincioaia 5.81 12 ⇓P Pn 20 42 53.5 +2.9
VRI Vrincioaia 5.81 12 P Pn 20 42 52.5 +1.8
0.4nm1µm144nm,0.7s
VRI Vrincioaia 5.81 12 P Pn 20 42 53.1 +2.4
TATR Tatarca 5.85 22 ⇑P Pn 20 42 53.7 +2.5
DEV Deva 5.89 346 ⇓P Pn 20 42 53.8 +2.1
DEV Deva 5.89 346 P Pn 20 42 53.7 +2.0
PANC Panciu 5.89 15 ⇓P Pn 20 42 54.5 +2.7
BOSR Bodos 5.90 5 ⇑P Pn 20 42 54.9 +3.0
SCTR Scanteiesti 5.91 21 ⇑P Pn 20 42 54.5 +2.5
TURR Turia 5.91 7 ⇓P Pn 20 42 54.6 +2.6
OZUR 5.93 5 ⇑P Pn 20 42 54.8 +2.5
TEKS Tekeris 5.94 319 *e*Pn Pn 20 42 52.9 +0.5
BZS Buzias 5.96 337 ⇑P Pn 20 42 54.4 +1.7
BZS Buzias 5.96 337 P Pn 20 42 53.9 +1.3
MDB Medias 5.96 356 ⇑P Pn 20 42 55.7 +3.0
VARL Varlezi 6.08 19 ⇓P Pn 20 42 56.7 +2.5
VLDR Vladesti 6.09 21 ⇑P Pn 20 42 56.6 +2.2
GHRR 6.13 16 ⇓P Pn 20 42 57.4 +2.5
GHRR 6.13 16 P Pn 20 42 55.9 +1.0
GHRR 6.13 16 P Pn 20 42 56.8 +1.8
KKUL Konya-Kulu 6.20 97 P Pn 20 42 58.6 +2.4
ONRR Baraj Valea Uz 6.22 9 ⇑P Pn 20 42 58.7 +2.3
FRGS Fruska Gora 6.26 324 *e*Pn Pn 20 43 03.9 +2.1
TGMR Targu Mures 6.34 357 ⇓P Pn 20 42 59.9 +2.0
BIR Birlad 6.37 17 ⇑P Pn 20 43 00.3 +2.0
TIP Timpagrande 6.43 264 ⇑P Pn 20 43 01.6 +2.5
TIP Timpagrande 6.43 264 Pn 20 42 58.9 -0.2
TIP Timpagrande 6.43 264 P Pn 20 43 00.9 +1.7
0.1nm19nm,0.8s
TIP Timpagrande 6.43 264 P Pn 20 43 01.5 +2.3
TESR Tescani 6.43 10 ⇓P Pn 20 43 01.8 +2.6
TESR Tescani 6.43 10 P Pn 20 43 00.6 +1.4
1.7nm5µm347nm,0.5s
TESR Tescani 6.43 10 P Pn 20 43 01.2 +2.0
CJR Cluj-Napoca 6.60 352 ⇓P Pn 20 43 03.8 +2.4
BR106 Keskin Array S 6.65 91 P Pn 20 43 03.1 +0.8
0.1nm155nm8.2nm,0.6s
BR105 Keskin Array S 6.65 91 P Pn 20 43 03.0 +0.7
0.1nm241nm11nm,0.4s
BR131 Keskin Array S 6.67 91 Pn 20 43 03.4 +0.9
BRTR Keskin Array B 6.67 91 Pn Pn 20 43 03.9 +1.3
1.8nm,0.3s,baz=267,slow=12,SNR=34
BRTR Lg Lg 20 44 54.3
0.3nm,0.3s,baz=267,slow=25,SNR=6.9
6.9nm,0.4s
BRTR Keskin Array B 6.67 91 Pn 20 43 03.4 +0.9
BR104 Keskin Array S 6.67 91 P Pn 20 43 02.8 +0.2
0.1nm234nm16nm,0.6s
VASR Vaslui 6.76 17 ⇑P Pn 20 43 05.5 +1.9
BIZ Bicaz 6.79 6 ⇓P Pn 20 43 07.0 +2.9
GIRR Girov 6.85 9 ⇓P Pn 20 43 07.3 +2.4
AMBH Ambrzfalva 6.89 335 ⇑P Pn 20 43 07.5 +2.0
AMBH Ambrzfalva 6.89 335 P Pn 20 43 09.4 +4.0
ARCR ARCALIA 6.91 356 ⇑P Pn 20 43 07.6 +1.9
KIRS Kirsehir-Merke 6.97 96 ⇑P Pn 20 43 08.5 +1.8
MARCO Tramutola 7.02 274 P Pn 20 43 09.8 +2.4
MESR Meseseni 7.11 349 ⇑P Pn 20 43 11.6 +3.1
SGRT San Giovanni R 7.17 286 Pn Pn 20 43 08.8 -0.6
PRAR RASCA 7.22 7 ⇓P Pn 20 43 12.2 +2.2
IASR Iasi 7.23 14 ⇓P Pn 20 43 11.6 +1.5
PURM Purcari 7.26 28 P Pn 20 43 10.9 +0.4
CEL Celeste 7.32 258 Pn 20 43 11.5 +0.1
CEL Celeste 7.32 258 P Pn 20 43 12.4 +1.0
0.2nm454nm46nm,1.0s

CEL Celeste 7.32 258 P Pn 20 43 12.7 +1.3
BLY Banja Luka 7.35 311 ⇓P Pn 20 43 14.5 +2.8
BLY Banja Luka 7.35 311 Pn Pn 20 43 12.7 +1.0
BLY Banja Luka 7.35 311 *e*Pn Pn 20 43 14.8 +3.1
KIS Kishinev 7.35 21 ⇓P Pn 20 43 13.3 +1.6
KIS Kishinev 7.35 21 P Pn 20 43 12.2 +0.5
0.3nm86nm,0.7s
BURAR Bucovina Array 7.42 1 ⇑P Pn 20 43 15.8 +3.0
BURAR Bucovina Array 7.42 1 Pn 20 43 13.8 +1.0
BUR08 Bucovina Ar. S 7.45 1 Pn 20 43 14.3 +1.1
BMR Baia Mare 7.55 352 P Pn 20 43 18.8 +4.2
TARU Tarkhankut 7.59 44 *e*P Pn 20 43 15.3 +0.3
TARU pmax pmax 20 43 23.1
comp=Z,12nm,0.5s
TARU *ex* x 20 44 37.3
TARU smax smax 20 44 41.7
comp=N,19nm,0.5s
TARU smax smax 20 44 41.7
comp=E,12nm,0.4s
MORH Mrgy, Hungar 7.59 325 ⇑P Pn 20 43 17.3 +2.2
MORH Mrgy, Hungar 7.59 325 *e*Pn Pn 20 43 16.6 +1.5
SEV Sevastopol' 7.76 53 *e*P Pn 20 43 18.0 +0.7
SEV pmax pmax 20 43 23.9
comp=Z,4.0nm,0.3s
SEV *ex* x 20 44 39.9
SEV smax smax 20 44 44.6
comp=N,11nm,0.4s
SEV smax smax 20 44 44.6
comp=E,14nm,0.4s
NE56 Odesa 7.78 32 P Pn 20 43 17.4 -0.2
DNZ2 Donuzlav2 7.96 47 *ex* Pn 20 43 21.8 +1.7
DNZ2 pmax pmax 20 43 29.6
comp=Z,4.0nm,0.3s
DNZ2 *ex* x 20 44 50.9
DNZ2 smax smax 20 45 00.2
comp=N,8.0nm,0.4s
DNZ2 smax smax 20 45 00.2
comp=E,4.0nm,0.5s
PAOL Paolisi 7.97 279 Pn 20 43 18.9 -1.5
YAL Yalta 8.03 55 *e*P Pn 20 43 22.1 +1.0
YAL pmax pmax 20 43 29.8
comp=Z,6.0nm,0.4s
YAL x x 20 44 51.0
YAL smax smax 20 44 53.7
comp=N,4.0nm,0.3s
YAL smax smax 20 44 53.7
comp=E,11nm,0.5s
TRPA Tarpa 8.13 348 P Pn 20 43 24.1 +1.7
SIM Simferopol' 8.24 52 *ex* Pn 20 43 24.4 +0.4
SIM pmax pmax 20 43 28.8
comp=Z,24nm,0.4s
SIM *ex* x 20 44 52.7
SIM smax smax 20 44 54.0
comp=N,22nm,0.5s
SIM smax smax 20 44 54.0
comp=E,14nm,0.5s
ALU Alushta 8.28 54 *e*P Pn 20 43 25.6 +1.1
ALU pmax pmax 20 43 30.8
comp=Z,7.0nm,0.3s
ALU *ex* x 20 44 57.2
ALU smax smax 20 45 00.4
comp=N,39nm,0.4s
ALU smax smax 20 45 00.4
comp=E,14nm,0.4s
SORM Soroca 8.30 16 P Pn 20 43 24.5 -0.2
comp=E,2µmcomp=E,78nm,0.4s
BAL3X Bal3x, Balta 8.42 22 P Pn 20 43 26.9 +0.5
CSS Mathiatis 8.43 126 Pn Pn 20 43 27.4 +0.7
KMPD K-Podol'skiy 8.44 7 P Pn 20 43 26.2 -0.4
BNN Bunyan 8.50 96 Pn Pn 20 43 27.5 -0.2
ABAH Abaujker 8.54 343 P Pn 20 43 28.9 +0.9
PSZ Piszkesteto 8.55 336 Pn Pn 20 43 27.4 -0.9
INTR Introdacqua 8.56 286 Pn Pn 20 43 27.5 -1.0
VAE Valguarnera 8.69 255 Pn Pn 20 43 33.1 +2.9
comp=E,7.2nm,0.5s,baz=149,slow=5.1,SNR=3.5
VAE Sn Sn 20 45 15.1 +7.4
comp=E,0.6nm,0.3s,baz=185,slow=21,SNR=1.1
SUDU Sudak 8.75 54 *e*P Pn 20 43 31.0 0.0
SUDU pmax pmax 20 43 39.0
comp=Z,15nm,0.4s
SUDU *ex* x 20 45 07.8
SUDU smax smax 20 45 11.8
comp=N,17nm,0.5s
SUDU smax smax 20 45 11.8
comp=E,8.0nm,0.5s
TOKA Tokat 8.79 85 Pn 20 43 31.5 -0.1
RAFF Raffo Rosso 8.82 254 Pn 20 43 31.7 -0.2
KOLS Kolonicke sedl 8.95 348 P Pn 20 43 37.5 +3.8
KOLS Kolonicke sedl 8.95 348 *e*PN Pn 20 43 40.3 +6.6
KOLS *e*PG 20 44 16.2
ANDN Andirin 9.23 103 P Pn 20 43 43.4 +5.7
NRCA Norcia 9.29 290 Pn Pn 20 43 37.8 -0.6
WDD Wied Dalam 9.33 246 Pn 20 43 37.5 -1.4
WDD Wied Dalam 9.33 246 P Pn 20 43 39.1 +0.2
FDMO Fiordimonte 9.35 292 Pn Pn 20 43 37.6 -1.7
VYHS Vyhne 9.39 334 *e*PN Pn 20 43 40.7 +0.9
VYHS *e*PG 20 44 23.5
CY603 RAF Akrotiri, 9.57 125 Pn Pn 20 43 42.0 0.0
CY604 RAF Akrotiri, 9.58 125 Pn Pn 20 43 42.6 +0.6
SOKA Soboth 9.71 315 *i* Pn Pn 20 43 48.7 +4.5
comp=E,0.9nm,0.4s
RONA Rosalia, Austr 9.77 323 *e*Pn Pn 20 43 48.9 +4.0
comp=E,0.6nm,0.4s
ARSA Arzberg 9.83 319 *e*Pn Pn 20 43 47.6 +1.9
comp=E,1.6nm,0.5s
OBKA Obir 9.88 313 *e*Pn Pn 20 43 47.8 +1.3
comp=E,1.0nm,0.4s
LUBAR Lubar, Ukraine 9.92 10 P Pn 20 43 46.4 -0.6
SABO M.te Sabotino 10.13 309 Pn Pn 20 43 50.8 +0.8
CONA Conrad Observa 10.14 323 *i* Pn Pn 20 43 51.8 +1.8
comp=E,0.9nm,0.5s
MYKA Terra Mystica 10.46 312 *e*Pn Pn 20 43 54.1 -0.4
comp=E,2.1nm,0.4s
AK07 Malin Array Si 10.77 15 P Pn 20 43 58.2 -0.4
OKC Ostrava-Krasne 10.79 336 AMS AMS 20 49 10.0
comp=E,300nm9.2s
AK13 Malin Array Si 10.80 14 P Pn 20 43 58.4 -0.6
AK06 Malin Array Si 10.80 14 P Pn 20 43 58.6 -0.5
AK10 Malin Array Si 10.83 15 P Pn 20 43 59.2 -0.2
AK14 Malin Array Si 10.83 14 P Pn 20 43 59.2 -0.2
AK05 Malin Array Si 10.84 14 P Pn 20 43 59.3 -0.2
AK09 Malin Array Si 10.85 15 P Pn 20 43 59.7 0.0
AK12 Malin Array Si 10.85 14 P Pn 20 43 59.7 0.0
AK08 Malin Array Si 10.86 15 P Pn 20 43 59.8 0.0
MOA Molln 10.86 318 *e*Pn Pn 20 44 00.2 +0.3
comp=E,0.8nm,0.5s
KBA Koelnbreinsper 10.88 313 *e*Pn Pn 20 44 00.9 +0.6
comp=E,0.5nm,0.3s
MI28 Mi28_Pidlybu 10.90 9 P Pn 20 43 59.5 -0.9
AK01 Malin Array Si 10.91 14 P Pn 20 44 00.6 +0.1
KIEV Kiev 10.91 14 P Pn 20 44 00.7 +0.2
comp=E,49nm,0.6s
KIEV Kiev 10.91 14 P Pn 20 44 00.3 -0.2
AK18 Malin Array Si 10.91 14 P Pn 20 44 00.1 -0.4
AKASG Malin Array Be 10.92 14 Pn Pn 20 44 00.4 -0.3
comp=E,1.9nm,0.4s,baz=202,slow=12,SNR=24
AKASG Malin Array Be 10.92 14 Pn 20 43 58.5 -2.2
AKBB Malin Array Si 10.92 14 Pn 20 43 59.0 -1.6
AKBB Malin Array Si 10.92 14 P Pn 20 44 00.1 -0.5
CIMO Cimolais 11.00 308 Pn Pn 20 43 58.5 -3.3
MMAI Mount Meron Ar 11.01 127 Pn Pn 20 44 02.2 +0.2
comp=E,1.9nm,0.3s,baz=319,slow=11,SNR=13
comp=E,1.9nm,0.4s
RNPP5 Staryi Chortor 11.06 3 P Pn 20 44 03.0 +0.5
BIOA Bad Ischl, Aus 11.09 316 *e*Pn Pn 20 44 02.6 -0.4
comp=E,0.8nm,0.3s
RNPP8 Varash 11.16 3 P Pn 20 44 05.0 +1.1
ABTA Abfaltersbach 11.18 310 *i* Pn Pn 20 44 04.4 +0.2
comp=E,2.1nm,0.5s
RNPP9 Sopachiv 11.24 3 P Pn 20 44 05.5 +0.5
TREC Trest 11.32 327 AMS AMS 20 49 00.0
comp=E,300nm,11.3s
LESA Schwarzleotal 11.45 313 *e*Pn Pn 20 44 09.3 +1.3
comp=E,0.9nm,0.4s
CKRC Cesky Krumlov 11.50 322 AMS AMS 20 49 10.0
comp=E,400nm,9.3s
GERES GERESS Array B 11.81 321 Pn Pn 20 44 15.9 +3.0
comp=E,0.1nm,0.4s,baz=132,slow=12,SNR=1.5
DPC Dobruska-Polom 11.84 332 AMS AMS 20 49 30.0
comp=E,200nm,11.9s
WTTA Wattenberg 11.96 311 *e*Pn Pn 20 44 15.8 +0.7
comp=E,2.7nm,0.4s
ZVC Zvikov 12.00 324 AMS AMS 20 48 50.0
comp=E,300nm,8.8s

KZIT **Kziot** 12.02 138 P **Pn** 20 44 19.0 +3.3
WATA **Walderalm** 12.03 311 *e*Pn **Pn** 20 44 18.1 +2.1
comp=E,5.9nm,0.7s
OSTC **Ostas** 12.05 332 AMS AMS 20 49 30.0
comp=E,300nm,9.9s
KHC **Kasperske Hory** 12.06 322 *e*PN P 20 44 23.5 -5.7
KHC AMS AMS 20 49 40.0
comp=E,400nm,9.6s
UPC **Upice** 12.08 332 AMS AMS 20 50 50.0
comp=E,200nm,7.9s
CHVC **Chvalec** 12.13 332 AMS AMS 20 49 30.0
comp=E,200nm,11.2s
SQTA **Sankt Quirin** 12.19 310 *e*Pn **Pn** 20 44 19.0 +0.9
comp=E,2.0nm,0.3s
PRU **Pruhonice** 12.25 327 AMS AMS 20 49 10.0
comp=E,200nm,11.7s
MOTA **Moosalm** 12.31 310 *e*Pn **Pn** 20 44 22.8 +3.0
comp=E,2.1nm,0.4s
FETA **Feichten** 12.37 308 *i* Pn **Pn** 20 44 20.9 +0.2
comp=E,3.2nm,0.6s
FUORN **Ofenpass-Fuorn** 12.48 306 Pn **Pn** 20 44 21.2 -0.9
PVCC **Panska Ves** 12.65 328 AMS AMS 20 49 40.0
comp=E,200nm,9.6s
DAVOX **Davos/Dischmat** 12.78 306 Pn **Pn** 20 44 27.6 +1.3
comp=E,0.3nm,0.3s,baz=93,slow=14,SNR=6.4
comp=E,2.6nm,0.8s
TUE **Stuetta** 12.99 304 Pn **Pn** 20 44 27.9 -1.3
DAVA **Damuels** 13.01 308 *e*Pn **Pn** 20 44 32.0 +2.6
comp=E,3.1nm,0.5s
KEST **Kesra** 13.12 255 Pn **Pn** 20 44 33.3 +2.5
comp=E,0.2nm,0.3s,baz=41,slow=8.2,SNR=4.4
comp=E,4.3nm,0.9s
KEST **Kesra** 13.12 255 Pn **Pn** 20 44 29.3 -1.6
NKC **Novy Kostel** 13.36 323 AMS AMS 20 50 30.0
comp=E,300nm,9.8s
KBZ **Khabaz** 13.79 69 Pn **Pn** 20 44 42.4 +2.6
comp=E,0.2nm,0.3s,baz=246,slow=7.2,SNR=3.8
comp=E,0.3nm,0.3s
SENIN **Lac Senin/Sane** 14.27 301 Pn **Pn** 20 44 48.0 +1.3
BFO **Black Forest** 14.42 310 Pn **Pn** 20 44 49.1 +0.5
GNI **Garni** 15.11 84 LR LR 20 50 55.6
comp=E,60nm,21.3s,baz=236,slow=38
PABE **Paberze** 15.34 358 Pn **Pn** 20 45 00.6 -0.1
OBN **Obninsk** 16.81 24 Pn **Pn** 20 45 17.8 -1.7
comp=E,2.7nm,0.3s,baz=11,slow=4.2,SNR=3.8
OBN LR LR 20 52 23.2
comp=E,96nm,18.6s,baz=330,slow=39
comp=E,12nm,0.5s
OBN **Obninsk** 16.81 24 P **Pn** 20 45 17.9 -1.7
BELG **Belogornoye** 19.74 44 P **Pn** 20 45 55.2 -0.3
comp=E,0.6nm,0.3s,baz=241,slow=11,SNR=14
comp=E,34nm,1.1s
HFS **Hagfors** 21.17 344 P **P** 20 46 09.7 +0.2
comp=E,3.4nm,1.0s,baz=170,slow=9.9,SNR=4.1
HFS LR LR 20 54 20.6
comp=E,43nm,19.6s,baz=160,slow=37
comp=E,3.4nm,1.0s
FINES **FINESS Array B** 21.29 1 P **P** 20 46 11.6 +0.9
comp=E,3.9nm,0.8s,baz=178,slow=9.5,SNR=8.8
FINES LR LR 20 55 35.5
comp=E,102nm,18.2s,baz=188,slow=40
comp=E,3.9nm,0.8s
FINES **FINESS Array B** 21.29 1 P **P** 20 46 09.0 -1.7
FIA1 **FINESS Array S** 21.29 1 P **P** 20 46 08.9 -1.7
ESBB **Sonseca Array** 22.16 278 P **P** 20 46 17.6 -2.8
ESDC **Sonseca Array** 22.17 278 P **P** 20 46 20.8 +0.4
comp=E,0.5nm,0.5s,baz=83,slow=11,SNR=6.3
ESDC LR LR 20 54 39.4
comp=E,30nm,20.3s,baz=68,slow=36
comp=E,0.5nm,0.5s
ESDC **Sonseca Array** 22.17 278 P **P** 20 46 18.2 -2.2
ESDC IAmb IAmb 20 46 33.0
comp=Z,20nm,1.4s
NC602 **NORSAR Array S** 22.19 342 P **P** 20 46 18.9 -1.4
NC602 IAmb IAmb 20 46 35.1
comp=Z,11nm,1.1s
NAO01 **NORSAR Array S** 22.44 342 P **P** 20 46 22.4 -0.6
PAB **San Pablo** 22.48 278 P **P** 20 46 23.7 -0.1
PAB IAmb IAmb 20 46 33.2
comp=Z,9.4nm,1.4s
NB201 **NORSAR Array S** 22.52 343 P **P** 20 46 23.9 -0.1
NB201 IAmb IAmb 20 46 32.9
comp=Z,12nm,1.1s
NB2 **NORSAR Subarra** 22.53 342 P **P** 20 46 24.5 +0.4
comp=Z,3.9nm,0.7s,baz=158,slow=11
NOA **NORSAR Array B** 22.53 342 P **P** 20 46 24.1 0.0
comp=Z,2.1nm,0.6s,baz=142,slow=20,SNR=8.5
NOA LR LR 20 55 32.6
comp=Z,34nm,20.5s,baz=145,slow=38
comp=Z,2.1nm,0.6s
EMAL **Malaga-Limoner** 23.23 271 P **P** 20 46 33.8 +2.3
RAYN **Ar Rayn** 23.99 128 P **P** 20 46 37.7 -1.3
RAYN IAmb IAmb 20 46 46.2
comp=Z,7.3nm,1.4s
EKA **Eskdalemuir Ar** 24.01 319 P **P** 20 46 39.4 +0.5
comp=Z,0.7nm,0.6s,baz=122,slow=6.3,SNR=5.4
comp=Z,0.7nm,0.6s
KIRV **Kirov** 24.09 32 P **P** 20 46 39.9 +0.3
comp=Z,5.1nm,0.6s,baz=229,slow=22,SNR=3.9
KIRV LR LR 20 56 25.9
comp=Z,101nm,18.5s,baz=287,slow=37
comp=Z,5.1nm,0.6s
AKTO **Aktyubinsk** 25.19 55 LR LR 20 58 56.1
comp=Z,78nm,18.8s,baz=240,slow=42
AB31 **Akbulak array** 26.24 58 P **P** 20 46 57.9 -1.3
ABKAR **Akbulak array** 26.24 58 P **P** 20 46 58.0 -1.2
ARTI **Arti** 27.14 42 P **P** 20 47 08.1 +0.8
comp=Z,3.5nm,0.9s,baz=233,slow=8.4,SNR=6.3
ARTI LR LR 20 58 20.8
comp=Z,39nm,21.9s,baz=250,slow=38
comp=Z,3.5nm,0.9s
ARTI **Arti** 27.14 42 **P** 20 47 05.9 -1.4
ARTI IAmb IAmb 20 47 11.9
comp=Z,6.3nm,1.1s
ARCES **ARCESS Array B** 29.41 0 LR LR 21 00 01.2
comp=Z,165nm,18.1s,baz=174,slow=38
BVAR **Borovoye Array** 33.16 52 P **P** 20 48 01.5 +0.9
comp=Z,0.3nm,0.5s,baz=268,slow=8.2,SNR=2.7
comp=Z,0.3nm,0.5s
KKAR **Karatay Array** 33.83 70 P **P** 20 48 05.4 -1.1
TORD **Torodi Ar. Bea** 33.83 224 P **P** 20 48 07.9 +1.1
comp=Z,3.1nm,0.7s,baz=35,slow=9.0,SNR=7.2
comp=Z,3.1nm,0.7s
GAR **Garm** 34.66 77 P **P** 20 48 12.9 -1.1
KURBB **Kurchatov Arra** 38.23 56 P **P** 20 48 45.7 +1.6
comp=Z,0.3nm,0.3s,baz=280,slow=8.8,SNR=5.6
comp=Z,0.3nm,0.3s
KURK **Kurchatov** 38.28 56 P **P** 20 48 44.4 -0.2
KURK IAmb IAmb 20 48 52.9
comp=Z,4.2nm,1.5s
MK31 **Makanchi Array** 41.29 61 P **P** 20 49 08.7 -1.0
MKAR **Makanchi Array** 41.29 61 P **P** 20 49 11.2 +1.6
comp=Z,1.6nm,0.7s,baz=278,slow=6.6,SNR=11
comp=Z,1.6nm,0.7s
MKAR **Makanchi Array** 41.29 61 P **P** 20 49 09.3 -0.4
ZAA0 **Zalesovo Array** 41.75 50 P **P** 20 49 12.9 -0.3
ZAA0 IAmb IAmb 20 49 15.5
comp=Z,2.0nm,0.7s
ZALV **Zalesovo Beam** 41.75 50 P **P** 20 49 14.8 +1.6
comp=Z,1.8nm,0.6s,baz=275,slow=9.5,SNR=10
ZALV LR LR 21 07 11.4
comp=Z,26nm,18.6s,baz=275,slow=37
comp=Z,1.8nm,0.6s
ZALV **Zalesovo Beam** 41.75 50 P **P** 20 49 12.9 -0.3
DBIC **Dimbokro** 42.76 227 LR LR 21 10 21.2
comp=Z,16nm,18.1s,baz=124,slow=41
NRIK **Noril'sk** 43.43 27 LR LR 21 08 24.4
comp=Z,50nm,19.9s,baz=118,slow=37
SFJD **Kangerlussuaq** 48.25 329 LR LR 21 12 15.0
comp=Z,25nm,18.8s,baz=80,slow=38
TLY **Talaya** 53.36 50 LR LR 21 15 24.7
comp=Z,49nm,20.1s,baz=295,slow=38
LSZ **Lusaka** 55.26 176 LR LR 21 13 25.7
comp=Z,54nm,19.8s,baz=102,slow=35
SONM **Songino Array** 56.49 53 P **P** 20 51 08.2 +1.9
comp=Z,0.3nm,0.5s,baz=290,slow=8.6,SNR=2.6
comp=Z,0.3nm,0.5s
SONM **Songino Array** 56.49 53 P **P** 20 51 05.9 -0.5
TIXI **Tiksi** 56.53 22 LR LR 21 18 23.9
comp=Z,102nm,18.2s,baz=182,slow=39
YAK **Yakutsk** 61.62 31 LR LR 21 23 15.3
comp=Z,23nm,18.6s,baz=226,slow=41
LBTB **Lobatse** 64.87 179 P **P** 20 52 02.2 -1.4
LBTB IAmb IAmb 20 52 10.5
comp=Z,1.9nm,0.8s
CMAR **Chiang Mai Arr** 66.22 85 P **P** 20 52 12.7 +0.3
comp=Z,0.5nm,0.8s,baz=307,slow=8.3,SNR=4.3
comp=Z,0.5nm,0.8s
CMAR **Chiang Mai Arr** 66.22 85 P **P** 20 52 11.2 -1.3
G18K **Tagagawik** 74.21 2 P **P** 20 52 59.0 -1.7
G18K IAmb IAmb 20 53 09.2
comp=Z,3.3nm,1.1s
PETK **Petropavlovsk-** 78.49 27 LR LR 21 30 01.1
comp=Z,36nm,18.9s,baz=202,slow=37
ASAJ **Asahikawa** 79.03 41 LR LR 21 30 07.4
comp=Z,35nm,20.6s,baz=288,slow=37

IDC 24 21:10:26.2±9.1, 5.86S×150.17E, h71km±66km, mb3.5/3, mbtmp3.8/4, ML1.5/1, MS3.0/2, Error ellipse: s-maj=76.4km s-min=54.7km az=98.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	
PMG	**Port Moresby**	**4.62**	**220**	P	P		21 11 33.7	+0.1
	1.7nm,0.3s,baz=236,slow=23,SNR=1.9							
PMG				S	Sn		21 12 26.8	+0.8
	20nm,0.6s,baz=105,slow=20,SNR=2.8							
	4.9nm,0.3s							
CTA	**Charters Tower**	**14.65**	**195**	LR	LR		21 19 22.3	
	comp=Z,70nm,18.1s,baz=180,slow=37							
WRA	**Warramunga Arr**	**20.81**	**226**	P	P		21 15 02.2	+0.2
	1.6nm,0.5s,baz=51,slow=10,SNR=14							
	1.6nm,0.5s							
DZM	**Mont Dumac**	**22.52**	**137**	LR	LR		21 22 13.9	
	comp=Z,39nm,21.4s,baz=228,slow=31							
ASAR	**Alice Springs**	**23.64**	**220**	P	P		21 15 31.2	0.0
	0.9nm,0.7s,baz=57,slow=8.8,SNR=13							
	0.9nm,0.7s							
STKA	**Stephens Creek**	**27.10**	**196**	P	P		21 16 02.1	-0.3
	2.2nm,0.8s,baz=0.0,slow=8.1,SNR=4.1							
	2.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**148.11**	**285**	PKPbc	PKPbc		21 30 04.4	-0.6
	1.8nm,0.8s,baz=71,slow=2.6,SNR=6.8							

*IDC **24** 22:04:12.1±0.6, 38.70S×78.58E, h0km, mb4.4/17, mbtmp4.4/17, MS4.1/40, Error ellipse: s-maj=19.6km s-min=15.9km az=117.0*
*NEIC **24** 22:04:13.3±2.2, 38.64S±0.07×78.49E±0.07, h10km±1km, mb4.9/58, Error ellipse: s-maj=13.2km s-min=8.3km az=200.0*
*GCMT **24** 22:04:16.3±0.2, 38.57S±0.01×78.44E±0.01, h20km±1km, MW5.0/104, Moment Tensor Solution. s43,c51; s104,c151; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.57±.13; Mθθ-3.71±.12; Mϕϕ4.29±.13; Mrθ0.31±.24; Mθϕ-0.28±.10; Mϕr-0.06±.20; Best double couple: Mo4.02600×10^16 NP1:ϕs223.00000°, δ85.00000°, λ-3.00000°. NP2:ϕs313.00000°, δ87.00000°, λ-175.00000°. Principal axes: T 4.3010, Plg1.0000°, Azm88.0000°; N -0.5460, Plg84.0000°, Azm349.0000°; P -3.7500, Plg6.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:04:13.0±0.4, 38.67S±0.06×78.53E±0.06, h11km, n134, σ1s08/92, mb4.9/47, MS4.3/41, 3C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	
AIS	**Amsterdam Isla**	**1.15**	**319**	Pn	**Pb**		**22 04 32.1**	**-2.8**
AIS				Sn	**Sg**		**22 04 49.6**	**-0.5**
H04N2	**CROZET ISLANDS**	**21.04**	**241**	T	T		22 30 48.0	
	baz=78,slow=74,SNR=1485							
CRZF	**Crozet Islands**	**21.05**	**240**	P	**P**		**22 08 58.1**	**+1.2**
H04N1	**CROZET ISLANDS**	**21.06**	**241**	T	T		22 30 48.1	
	baz=78,slow=74,SNR=2010							
H04N3	**CROZET ISLANDS**	**21.06**	**241**	T	T		22 30 46.9	
	baz=78,slow=74,SNR=2022							
H04S1	**CROZET ISLANDS**	**21.11**	**239**	T	T		22 30 52.4	
	baz=70,slow=17,SNR=13							
H04S2	**CROZET ISLANDS**	**21.13**	**239**	T	T		22 30 52.4	
	baz=70,slow=17,SNR=9.8							
H04S3	**CROZET ISLANDS**	**21.13**	**239**	T	T		22 30 52.4	
	baz=70,slow=17,SNR=13							
RER	**Riviere de l'E**	**26.24**	**305**	P	**P**		**22 09 47.7**	**-0.5**
H01W2	**Cape Leeuwin H**	**28.65**	**94**	T	T		22 40 00.8	
	baz=252,slow=75,SNR=2816							
H01W3	**Cape Leeuwin H**	**28.66**	**94**	T	T		22 40 01.3	
	baz=252,slow=75,SNR=3576							
H01W1	**Cape Leeuwin H**	**28.67**	**94**	T	T		22 40 02.1	
	baz=252,slow=75,SNR=3239							
FOMA	**Nahampoana Res**	**29.92**	**288**	P	**P**		**22 10 21.9**	**+0.9**
MAW	**Mawson**	**30.28**	**192**	P	**P**		**22 10 23.4**	**-0.3**
	3.4nm,0.9s,baz=31,slow=11,SNR=6.5							
MAW				LR	LR		22 20 27.8	
	comp=Z,594nm,18.4s,baz=19,slow=32							
	3.4nm,0.9s							
MAW	**Mawson**	**30.28**	**192**	P	**P**		**22 10 23.3**	**-0.5**
H08S2	**Diego Garcia H**	**31.36**	**348**	T	T		22 43 14.5	
	baz=171,slow=76,SNR=338							
H08S1	**Diego Carcia H**	**31.36**	**348**	T	T		22 43 14.7	
	baz=171,slow=76,SNR=240							
H08S3	**Diego Garcia H**	**31.38**	**348**	T	T		22 43 16.1	
	baz=171,slow=76,SNR=621							
NWAO	**Narrogin (SRO)**	**31.74**	**92**	LR	LR		22 20 44.0	
	comp=Z,800nm,20.8s,baz=262,slow=31							
MORW	**Morawa**	**32.39**	**84**	P	**P**		**22 10 43.0**	**+0.2**
MORW				IAmb	IAmb		22 10 54.0	
	comp=Z,52nm,1.6s							
CASY	**Casey**	**33.11**	**157**	P	**P**		**22 10 48.4**	**-0.3**
CASY				IAmb	IAmb		22 10 51.4	
	comp=Z,12nm,1.2s							
OPO	**Ambohidratompo**	**33.78**	**297**	LR	LR		22 21 35.2	
	comp=Z,115nm,20.3s,baz=344,slow=31							
FORT	**Forrest**	**41.05**	**94**	P	**P**		**22 11 55.4**	**-1.2**
LEM	**Lembang**	**41.17**	**47**	P	**P**		**22 11 59.6**	**+1.9**
	comp=Z,12nm,0.4s,baz=226,slow=8.9,SNR=4.3							
LEM				LR	LR		22 25 19.8	
	comp=Z,309nm,19.0s,baz=190,slow=31							
	comp=Z,12nm,0.4s							
UGM	**Wanagama**	**42.03**	**52**	P	**P**		**22 12 04.5**	**-0.2**
SMRI	**Semarang**	**42.66**	**51**	P	**P**		**22 12 10.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**43.90**	**56**	P	**P**		**22 12 16.3**	**-3.5**
BOSA	**Boshof**	**44.93**	**266**	P	**P**		**22 12 29.1**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=131,slow=11,SNR=4.3							
BOSA				LR	LR		22 27 49.0	
	comp=Z,342nm,18.7s,baz=122,slow=32							
	comp=Z,1.2nm,0.8s							
BOSA	**Boshof**	**44.93**	**266**	IAmb	IAmb		22 13 03.4	
	comp=Z,23nm,1.6s							
RPSI	**Rantau Prapat**	**45.26**	**29**	P	**P**		**22 12 30.6**	**0.0**
FITZ	**Fitzroy Crossi**	**45.66**	**77**	LR	LR		22 29 10.2	
	comp=Z,378nm,18.4s,baz=228,slow=33							
PALK	**Pallekele**	**45.75**	**3**	LR	LR		22 26 57.2	
	comp=Z,384nm,21.8s,baz=187,slow=30							
LBTB	**Lobatse**	**46.39**	**271**	LR	LR		22 28 33.1	
	comp=Z,338nm,19.6s,baz=118,slow=32							
MATP	**Matopo**	**46.57**	**278**	LR	LR		22 29 16.0	
	comp=Z,395nm,18.6s,baz=106,slow=32							
MAKGR	**Makgori**	**46.62**	**269**	P	**P**		**22 12 42.9**	**+1.4**
MAKGR				IAmb	IAmb		22 12 53.6	
	comp=Z,27nm,1.6s							
SUR	**Sutherland**	**46.73**	**259**	LR	LR		22 27 40.4	
	comp=Z,440nm,21.4s,baz=124,slow=30							
KULM	**Kulim**	**48.30**	**30**	P	**P**		**22 12 53.2**	**-1.2**
KULM				IAmb	IAmb		22 12 55.8	
	comp=Z,18nm,1.3s							
ASAR	**Alice Springs**	**48.99**	**89**	P	**P**		**22 12 59.7**	**-0.1**
	comp=Z,8.5nm,1.1s,baz=238,slow=6.9,SNR=27							
ASAR				PcP	**PcP**		**22 14 25.5**	**+1.7**
	comp=Z,2.7nm,1.1s,baz=235,slow=3.3,SNR=4.4							
ASAR				LR	LR		22 32 28.3	
	comp=Z,277nm,18.4s,baz=242,slow=35							
	comp=Z,8.5nm,1.1s							
AS31	**Alice Springs**	**48.99**	**89**		**P**		**22 12 59.1**	**-0.7**
BATI	**Baumata**	**49.22**	**67**	P	**P**		**22 13 01.9**	**+0.3**
	comp=Z,18nm,0.5s,baz=1.2,slow=5.0,SNR=4.4							
BATI				LR	LR		22 31 29.1	
	comp=Z,188nm,20.3s,baz=228,slow=33							
	comp=Z,18nm,0.5s							
KNRA	**Kununurra**	**49.50**	**77**	P	**P**		**22 13 03.0**	**-0.7**
LSZ	**Lusaka**	**49.83**	**283**	LR	LR		22 30 32.0	
	comp=Z,266nm,21.5s,baz=144,slow=32							
LSZ	**Lusaka**	**49.83**	**283**	P	**P**		**22 13 05.6**	**-0.7**
KAPI	**Kappang**	**50.16**	**59**	LR	LR		22 30 11.2	
	comp=Z,175nm,22.0s,baz=212,slow=31							
LKGWB	**Lokgwabe**	**50.27**	**269**	P	**P**		**22 13 07.7**	**-2.0**
LKGWB				IAmb	IAmb		22 13 21.2	
	comp=Z,35nm,1.6s							
STKA	**Stephens Creek**	**51.05**	**103**	P	**P**		**22 13 15.4**	**+0.1**
	comp=Z,6.0nm,0.7s,baz=266,slow=5.3,SNR=9.7							
STKA				LR	LR		22 30 40.2	
	comp=Z,399nm,21.3s,baz=242,slow=31							
	comp=Z,6.0nm,0.7s							
SNAA	**Sanae**	**51.14**	**204**	⇑P	**P**		**22 13 16.3**	**+0.8**
	comp=Z,61nm,0.9s							
SNAA	**Sanae**	**51.14**	**204**	P	**P**		**22 13 16.1**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=104,slow=6.1,SNR=4.3							
	comp=Z,2.8nm,0.9s							
SNAA	**Sanae**	**51.14**	**204**	P	**P**		**22 13 15.5**	**0.0**
VNDA	**Vanda**	**51.16**	**164**	P	**P**		**22 13 15.9**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=254,slow=8.5,SNR=6.1							
VNDA				LR	LR		22 33 10.6	
	comp=Z,440nm,18.8s,baz=270,slow=34							
	comp=Z,4.0nm,1.0s							
VNDA	**Vanda**	**51.16**	**164**	P	**P**		**22 13 15.3**	**-0.3**
VNDA				IAmb	IAmb		22 13 24.4	
	comp=Z,30nm,1.8s							
WRA	**Warramunga Arr**	**51.33**	**85**	P	**P**		**22 13 17.5**	**-0.1**
	comp=Z,19nm,1.0s,baz=236,slow=7.3,SNR=38							
WRA				PcP	**PcP**		**22 14 33.6**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=233,slow=2.8,SNR=1.9							
	comp=Z,19nm,1.0s							
WRA	**Warramunga Arr**	**51.33**	**85**		**P**		**22 13 17.5**	**-0.1**
WRAB	**Tennant Creek**	**51.34**	**85**	P	**P**		**22 13 17.4**	**-0.2**
WRAB				IAmb	IAmb		22 13 19.1	
	comp=Z,32nm,1.3s							
WR8	**Warramunga Arr**	**51.45**	**85**		**P**		**22 13 17.9**	**-0.5**
WR8				IAmb	IAmb		22 13 19.8	
	comp=Z,27nm,1.1s							
WB0	**Warramunga Arr**	**51.47**	**85**		**P**		**22 13 18.1**	**-0.6**
QSPA	**South Pole Qui**	**51.49**	**180**	P	**P**		**22 13 18.6**	**+0.3**
	comp=Z,15nm,1.1s,baz=292,slow=4.6,SNR=17							
QSPA				LR	LR		22 33 47.0	
	comp=Z,767nm,18.5s,baz=294,slow=34							
	comp=Z,15nm,1.1s							
QSPA	**South Pole Qui**	**51.49**	**180**	P	**P**		**22 13 18.2**	**-0.1**
QSPA				IAmb	IAmb		22 13 23.7	
	comp=Z,22nm,1.1s							
TOO	**Toolangi**	**51.59**	**111**	P	**P**		**22 13 18.6**	**-0.8**
KOOLE	**Kule**	**51.66**	**270**	P	**P**		**22 13 21.1**	**+0.9**
KOOLE				IAmb	IAmb		22 13 26.6	
	comp=Z,26nm,1.7s							
PBA	**Port Blair**	**51.79**	**18**	P	**P**		**22 13 21.9**	**+1.0**
PBA				IAmb	IAmb		22 15 13.0	
	comp=Z,41nm,1.1s							
INKA	**Innaminka**	**52.30**	**98**	P	**P**		**22 13 24.9**	**+0.3**
VNA2	**Neumayer--Watz**	**52.70**	**204**	⇑P	**P**		**22 13 28.0**	**+0.9**
	comp=Z,7.0nm,0.9s,baz=99							
VNA1	**Neumayer--Stat**	**53.04**	**205**	⇑P	**P**		**22 13 30.7**	**+1.1**
	comp=Z,9.8nm,1.1s							
WIN	**Windhoek**	**54.30**	**268**	P	**P**		**22 13 39.8**	**0.0**
WIN				IAmb	IAmb		22 15 38.5	
	comp=Z,34nm,2.0s							
CAN	**Canberra**	**55.10**	**110**	P	**P**		**22 13 45.1**	**-0.1**
CAN				IAmb	IAmb		22 13 48.9	
	comp=Z,32nm,1.6s							
TOLI2	**Tolitoli**	**55.43**	**55**	P	**P**		**22 13 47.1**	**-0.6**
TOLI2				IAmb	IAmb		22 13 56.3	
	comp=Z,14nm,1.0s							
TSUM	**Tsumeb**	**55.76**	**272**	LR	LR		22 34 09.0	
	comp=Z,624nm,20.1s,baz=150,slow=32							
BELA	**Belgrano 2**	**57.11**	**193**	P	**P**		**22 13 57.8**	**-1.1**
BELA				IAmb	IAmb		22 13 59.7	
	comp=Z,15nm,1.6s							
MBAR	**Mbarara**	**57.83**	**299**	LR	LR		22 34 57.6	
	comp=Z,292nm,19.5s,baz=137,slow=32							
CMAR	**Chiang Mai Arr**	**59.96**	**22**	P	**P**		**22 14 18.8**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=209,slow=7.5,SNR=8.4							
	comp=Z,1.2nm,0.3s							
CHTO	**Chiang Mai**	**60.30**	**22**	P	**P**		**22 14 20.0**	**-1.7**
CHTO	**Chiang Mai**	**60.30**	**22**	P	P		22 14 33.7	+12
CTA	**Charters Tower**	**60.57**	**93**	LR	LR		22 38 21.6	
	comp=Z,420nm,19.8s,baz=220,slow=34							
SIJI	**Sorong**	**61.10**	**65**	LR	LR		22 39 00.8	
	comp=Z,60nm,21.1s,baz=247,slow=34							
PYZ	**Puysegur Point**	**62.29**	**128**	P	**P**		**22 14 34.1**	**-0.9**
DAV	**Davao City (W)**	**63.04**	**55**	LR	LR		22 43 56.5	
	comp=Z,56nm,18.2s,baz=184,slow=38							
MORE	**Moreh**	**64.29**	**16**	P	**P**		**22 14 47.6**	**-0.8**
MORE				IAmb	IAmb		22 14 54.5	
	comp=Z,12nm,1.0s							
SHL	**Shillong**	**65.11**	**13**	P	**P**		**22 14 54.3**	**+0.4**
SHL				IAmb	IAmb		22 14 57.0	
	comp=Z,10nm,1.0s							
TGY	**Tagaytay City**	**65.78**	**46**	LR	LR		22 41 40.6	
	comp=Z,124nm,20.5s,baz=221,slow=34							
RPZ	**Rata Peaks**	**66.20**	**128**	LR	LR		22 38 00.3	
	comp=Z,58nm,20.0s,baz=58,slow=31							
OXZ	**Oxford**	**67.02**	**128**	P	**P**		**22 15 04.4**	**-1.5**
MQZ	**McQueen's Vall**	**67.19**	**128**	P	**P**		**22 15 06.4**	**-0.7**
PMG	**Port Moresby**	**67.51**	**84**	LR	LR		22 42 07.4	
	comp=Z,169nm,20.2s,baz=246,slow=34							
KHZ	**Kahutara**	**68.44**	**128**	P	**P**		**22 15 13.7**	**-1.2**
LSA	**Lhasa**	**69.03**	**12**	P	**P**		**22 15 20.2**	**+1.2**
LSA				IAmb	IAmb		22 15 35.8	
	comp=Z,7.3nm,1.1s							
PMSA	**Palmer Station**	**72.80**	**196**	LR	LR		22 46 28.2	
	comp=Z,196nm,19.1s,baz=180,slow=35							
KBL	**Kabul**	**73.37**	**352**		**P**		**22 15 46.2**	**+1.3**
KBL				IAmb	IAmb		22 15 49.5	
	comp=Z,15nm,1.3s							
KRVT	**Keravat (AS076**	**74.44**	**83**	LR	LR		22 49 08.0	
	comp=Z,39nm,18.3s,baz=55,slow=36							
CHGR	**Chuyangaron**	**77.43**	**352**	P	**P**		**22 16 08.3**	**+0.3**
HNR	**Honiara**	**77.49**	**92**	LR	LR		22 47 18.9	
	comp=Z,9.5nm,21.5s,baz=328,slow=33							
GAR	**Garm**	**77.66**	**353**		**P**		**22 16 08.8**	**-0.6**
GAR				IAmb	IAmb		22 16 17.4	
	comp=Z,8.8nm,0.9s							
LZDM	**Lanzhou Array**	**77.81**	**21**	P	**P**		**22 16 10.6**	**0.0**
	comp=Z,1.2nm,0.4s,baz=208,slow=5.0,SNR=3.5							
	comp=Z,1.2nm,0.4s							
LZH	**Lanzhou**	**77.97**	**21**	*e*P	**P**		**22 16 12.9**	**+1.6**
LZH				pP	pwP		22 16 17.8	+1.4
LZH				pmax	pmax			
	comp=Z,18nm,1.3s							
BTK	**Batken**	**78.66**	**354**		**P**		**22 16 16.5**	**+1.6**
BTK				IAmb	IAmb		22 16 25.5	
	comp=Z,11nm,0.8s							
WUS	**Wushi**	**79.49**	**1**	P	**P**		**22 16 20.7**	**+1.3**
WUS				IAmb	IAmb		22 16 22.7	
	comp=Z,18nm,1.7s							
NRN	**Naryn**	**79.75**	**358**	P	**P**		**22 16 21.4**	**+0.4**
NRN				IAmb	IAmb		22 16 36.0	
	comp=Z,19nm,2.0s							
ARSB	**Arslanbob**	**79.77**	**356**	P	**P**		**22 16 22.4**	**+1.4**
ARSB				IAmb	IAmb		22 16 28.4	
	comp=Z,18nm,1.2s							
GTA2	**Gaotai**	**80.18**	**17**	*e*P	**P**		**22 16 23.5**	**+0.3**
GTA2				pmax	pmax			
	comp=Z,2.0nm,1.2s							
ASF	**Jabal al Asfar**	**80.42**	**325**	LR	LR		22 47 11.6	
	comp=Z,48

comp=Z,1.5nm,1.1s,baz=195,slow=4.5,SNR=7.9
comp=Z,1.5nm,1.1s

DBIC	**Dimbokro**	**88.98**	**279**	LR	LR	22 55 02.9	
	comp=Z,120nm,18.0s,baz=136,slow=34						
DBIC	**Dimbokro**	**88.98**	**279**	P	**P**	**22 17 07.8**	**-0.4**
KURK	**Kurchatov**	**89.00**	**0**		**P**	**22 17 07.8**	**+0.5**
SONM	**Songino Array**	**89.63**	**18**	P	**P**	**22 17 12.2**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=176,slow=4.0,SNR=5.6						
SONM				LR	LR	22 56 28.1	
	comp=Z,39nm,18.1s,baz=214,slow=35						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**89.63**	**18**	P	**P**	**22 17 11.2**	**+0.7**
AKTO	**Aktyubinsk**	**90.54**	**347**	LR	LR	22 54 45.3	
	comp=Z,48nm,21.3s,baz=202,slow=34						
ZAA0	**Zalesovo Array**	**92.40**	**4**	P	**P**	**22 17 22.6**	**-0.4**
ZALV	**Zalesovo Beam**	**92.40**	**4**	LR	LR	22 55 54.4	
	comp=Z,132nm,21.9s,baz=194,slow=34						
ZALV	**Zalesovo Beam**	**92.40**	**4**	P	**P**	**22 17 23.2**	**+0.1**
TLY	**Talaya**	**92.61**	**15**	LR	LR	22 57 04.4	
	comp=Z,54nm,19.9s,baz=164,slow=34						
LL02	**Futaleuf**	**94.21**	**201**	P	**P**	**22 17 30.9**	**-1.1**
USRK	**Ussuriysk Ar.**	**95.57**	**35**	LR	LR	23 00 43.3	
	comp=Z,28nm,19.0s,baz=166,slow=36						
ARTI	**Arti**	**96.22**	**349**	LR	LR	22 59 28.3	
	comp=Z,41nm,18.6s,baz=144,slow=34						
KEST	**Kesra**	**97.78**	**310**	LR	LR	23 02 42.7	
	comp=Z,93nm,18.1s,baz=355,slow=36						
KIRV	**Kirov**	**99.89**	**345**	LR	LR	23 02 09.9	
	comp=Z,43nm,18.0s,baz=118,slow=35						
NVAR	**Mina Array Bea**	**166.82**	**86**	PKPab	**PKPab**	**22 25 23.9**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=234,slow=6.5,SNR=7.8						
NVAR	**Mina Array Bea**	**166.82**	**86**		**PKPab**	**22 25 21.2**	**-0.9**
PDAR	**Pinedale Array**	**172.62**	**54**	PKPab	**PKPab**	**22 25 49.4**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=275,slow=6.9,SNR=2.9						
PDAR	**Pinedale Array**	**172.62**	**54**		**PKPab**	**22 25 48.7**	**+1.1**

*IDC **24** 22:22:28.8±1.3,33˚.05N×86˚.83E,h0^{km},mb3.7/12, mbtmp3.6/15,ML2.9/2,MS3.2/5,Error ellipse: s-maj=29.1km s-min=22.7km az=20.0*

ISC 24 22:22:33.9±1.0,33˚.1N±0˚.1×86˚.9E±0˚.1,h35^{km},n18, σ1§08/15,mb4.0/9,MS3.5/3,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.63**	**318**	LR	LR	22 31 56.4	
	comp=Z,36nm,20.0s,baz=141,slow=42						
MKAR	**Makanchi Array**	**14.10**	**347**	Pn	**Pn**	**22 25 49.5**	**-1.5**
	0.1nm,0.3s,baz=148,slow=12,SNR=4.0						
MKAR				LR	LR	22 32 28.3	
	comp=Z,42nm,19.2s,baz=220,slow=42						
	0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**18.17**	**141**	P	**P**	**22 26 42.5**	**-1.0**
	0.5nm,0.3s,baz=320,slow=12,SNR=6.1						
KURBB	**Kurchatov Arra**	**18.54**	**343**	P	**P**	**22 26 45.8**	**-1.5**
	baz=157,slow=11,SNR=12						
	1.3nm,0.9s						
SONM	**Songino Array**	**20.79**	**39**	P	**P**	**22 27 13.5**	**+1.4**
	0.4nm,0.5s,baz=218,slow=17,SNR=3.9						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**20.87**	**357**	P	**P**	**22 27 12.0**	**-0.6**
	0.7nm,0.4s,baz=171,slow=10,SNR=7.2						
ZALV				LR	LR	22 36 06.8	
	comp=Z,26nm,21.9s,baz=194,slow=39						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**23.16**	**334**	P	**P**	**22 27 38.0**	**+1.0**
	0.7nm,0.6s,baz=181,slow=13,SNR=2.9						
	0.7nm,0.6s						
KSRS	**Korea Array**	**33.58**	**71**	P	**P**	**22 29 10.8**	**+0.3**
	1.3nm,0.7s,baz=277,slow=10.0,SNR=2.9						
	1.3nm,0.7s						
BRTR	**Keskin Array B**	**42.83**	**295**	P	**P**	**22 30 28.8**	**+0.2**
	0.6nm,0.8s,baz=78,slow=10,SNR=3.6						
	0.6nm,0.8s						
AKASG	**Malin Array Be**	**45.16**	**311**	P	**P**	**22 30 47.4**	**+0.5**
	1.2nm,0.6s,baz=79,slow=7.6,SNR=12						
	1.2nm,0.6s						
FINES	**FINESS Array B**	**47.66**	**325**	P	**P**	**22 31 07.7**	**+1.3**
	2.0nm,0.8s,baz=109,slow=8.8,SNR=4.4						
	2.0nm,0.8s						
HFS	**Hagfors**	**53.68**	**324**	P	**P**	**22 31 51.4**	**-0.4**
	1.9nm,0.6s,baz=69,slow=8.1,SNR=5.0						
	1.9nm,0.6s						
NOA	**NORSAR Array B**	**54.82**	**325**	P	**P**	**22 31 59.5**	**-0.7**
	0.8nm,0.7s,baz=83,slow=7.3,SNR=3.5						
	0.8nm,0.7s						
GERES	**GERESS Array B**	**55.35**	**310**	P	**P**	**22 32 05.2**	**+1.0**
	1.3nm,0.6s,baz=70,slow=5.9,SNR=16						
	1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**62.96**	**138**	LR	LR	23 03 03.3	
	comp=Z,116nm,19.1s,baz=182,slow=39						
ESDC	**Sonseca Array**	**70.36**	**305**	P	**P**	**22 33 44.7**	**+0.5**
	0.3nm,0.6s,baz=53,slow=8.1,SNR=4.8						
	0.3nm,0.6s						
KRVT	**Keravat (AS076**	**71.86**	**108**	LR	LR	23 03 52.7	
	comp=Z,25nm,21.1s,baz=52,slow=35						
TORD	**Torodi Ar. Bea**	**78.97**	**279**	P	**P**	**22 34 33.4**	**-1.1**
	0.3nm,0.9s,baz=78,slow=6.8,SNR=1.7						
	0.3nm,0.9s						

*BJI **24** 22:23:51.4,6˚.16S×147˚.38E,h85^{km},mB4.8/2,mb4.7/20*
*NEIC **24** 22:23:55.1±1.9,6˚.08S±0˚.05×146˚.98E±0˚.09,h83^{km}±6^{km}, mb4.7/61,Error ellipse: s-maj=12.5km s-min=7.3km az=95.0*
*DJA **24** 22:23:55.4±1.6,6˚.S±11˚×14˚.7E±1˚.9,h83^{km}±6^{km},M5.1/12, mB5.4/10,mb5.3/12,MLv5.3/3,Mw(mB)4.9/10, MwMwp4.9/1,Mwp5.2/1*
*IDC **24** 22:23:56.0±0.5,6˚.21S×147˚.06E,h98^{km}±4^{km},mb3.9/15, mbtmp4.4/21,MS3.3/11,Error ellipse: s-maj=16.3km s-min=8.1km az=82.0*
*GFZ **24** 22:23:57.3±0.4,6˚.S±3˚×14˚.7E±˚,h104^{km},M4.7/28, mb5.0/28*
*GCMT **24** 22:23:59.1±0.4,6˚.14S±0˚.02×146˚.99E±0˚.03,h109^{km}±4^{km}, MW4.9/89,Moment Tensor Solution. s15,c15; s89,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.11; $M_{\theta\theta}$1.85±.11; $M_{\phi\phi}$-1.29±.12; $M_{r\theta}$0.10±.08; $M_{\theta\phi}$-1.72±.10; $M_{\phi r}$-1.05±.08; Best double couple: M_o2.59600×10^{16} NP1:ϕ$_s$71.00000°,δ65.00000°,λ-168.00000°. NP2: ϕ$_s$336.00000°,δ79.00000°,λ-26.00000°. Principal axes: T 2.6950, Plg10.0000°, Azm26.0000°; N -0.1940, Plg62.0000°, Azm134.0000°; P -2.4970, Plg26.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:23:56.1±0.5,6˚.21S±0˚.04×147˚.00E±0˚.05,h97^{km}±4^{km}, h97^{km};pP-P,n157,σ1§30/157,mb4.5/45,2C-1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.18**	**177**	P	**Pn**	**22 24 43.5**	**-0.7**
	538nm,0.5s,baz=22,slow=5.8,SNR=247						
PMG				S	**Sn**	**22 25 20.7**	**-0.6**
	371nm,0.3s,baz=354,slow=7.2,SNR=5.7						
PMG				LR	LR	22 25 56.5	
	comp=Z,913nm,18.4s,baz=358,slow=38						
PMG	**Port Moresby**	**3.18**	**177**		**Pn**	**22 24 43.5**	**-0.7**
PMG				Sn	**Sn**	**22 25 21.2**	**-0.1**
PMG	**Port Moresby**	**3.18**	**177**	P	**Pn**	**22 24 43.4**	**-0.8**
PMG	**Port Moresby**	**3.18**	**177**	P	**Pn**	**22 24 43.7**	**-0.5**
MANU	**Manus Island**	**4.15**	**5**		Pn	22 24 50.5	-6.9
I40PG	**Keravat**	**5.34**	**69**	I	I	22 59 30.0	
	baz=250,slow=305,SNR=0.7						
KRVT	**Keravat (AS076**	**5.35**	**70**	LR	LR	22 26 49.8	
	comp=Z,204nm,19.3s,baz=168,slow=33						
RABL	**Rabaul**	**5.52**	**69**		**Pn**	**22 25 14.8**	**-1.1**
JAY	**Jayapura**	**7.27**	**300**	P	**Pn**	**22 25 40.9**	**+1.2**
	22nm,0.4s,baz=144,slow=6.1,SNR=38						
JAY				S	**Sn**	**22 27 02.5**	**+1.7**
	10nm,0.4s,baz=260,slow=23,SNR=0.8						
JAY	**Jayapura**	**7.27**	**300**	P	**Pn**	**22 25 41.3**	**+1.6**
	0.4nm61nm,1.0s						
JAY	**Jayapura**	**7.27**	**300**	P	**Pn**	**22 25 41.0**	**+1.2**
GENI	**Genyem**	**7.70**	**298**	P	**Pn**	**22 25 46.0**	**+0.5**
	1.4nm5µm139nm,0.9s						
GENI	**Genyem**	**7.70**	**298**	P	**Pn**	**22 25 46.4**	**+0.9**
COEN	**Coen**	**8.57**	**206**		**Pn**	**22 25 57.2**	**-0.2**
COEN	**Coen**	**8.57**	**206**	P	**Pn**	**22 25 58.0**	**+0.6**
BAKI	**Biak**	**11.95**	**294**	P	Pn	22 26 53.9	+11
MTSU	**Mount Surprise**	**12.14**	**192**	P	**Pn**	**22 26 46.3**	**+0.5**
HNR	**Honiara**	**13.22**	**105**	P	**Pn**	**22 26 59.8**	**-0.3**
	1.7nm,0.4s,baz=147,slow=3.4,SNR=1.8						
HNR				S	**Sn**	**22 29 24.9**	**-0.7**
	1.8nm,0.5s,baz=190,slow=19,SNR=1.1						
CTA	**Charters Tower**	**13.82**	**183**	P	**Pn**	**22 27 09.2**	**+1.4**
	6.6nm,0.5s,baz=354,slow=14,SNR=16						
CTAO	**Charters Tower**	**13.82**	**183**	Pn	**Pn**	**22 27 10.1**	**+2.2**
FAKI	**Fak Fak**	**15.06**	**282**	Pn	**Pn**	**22 27 23.8**	**-0.1**
FAKI				IAmb	IAmb	22 27 38.1	
	comp=Z,49nm,0.9s						
QIS	**Mount Isa**	**15.97**	**206**	P	**Pn**	**22 27 35.9**	**+0.6**
SIJI	**Sorong**	**16.57**	**288**	P	**Pn**	**22 27 41.6**	**-1.1**
	comp=Z,23nm,0.4s,baz=86,slow=11,SNR=10						
SIJI	**Sorong**	**16.57**	**288**	P	**Pn**	**22 27 43.4**	**+0.7**
	comp=Z,768nmcomp=Z,76nm,0.8s						
SIJI	**Sorong**	**16.57**	**288**	P	**Pn**	**22 27 42.3**	**-0.4**
SWI	**Sorong**	**16.58**	**288**	P	**Pn**	**22 27 42.4**	**-0.4**
MTN	**Manton Dam**	**16.97**	**246**	P	**Pn**	**22 27 47.9**	**+0.3**
MTN	**Manton Dam**	**16.97**	**246**	P	**Pn**	**22 27 47.1**	**-0.5**
PATS	**Pohnpei**	**17.19**	**41**		**Pn**	**22 27 47.8**	**-2.5**
PATS	**Pohnpei**	**17.19**	**41**	P	**P**	**22 27 51.2**	**+0.8**
WB0	**Warramunga Arr**	**18.21**	**221**		**P**	**22 28 02.0**	**+0.3**
WB0				IAmb	IAmb	22 28 05.0	
	comp=Z,37nm,0.8s						
WR8	**Warramunga Arr**	**18.28**	**220**		**P**	**22 28 02.1**	**-0.3**
WR8				IAmb	IAmb	22 28 41.4	
	comp=Z,22nm,0.7s						
WRAB	**Tennant Creek**	**18.36**	**221**	P	**P**	**22 28 03.3**	**0.0**
WRAB				IAmb	IAmb	22 28 07.1	
	comp=Z,34nm,0.8s						
WRAB	**Tennant Creek**	**18.36**	**221**	P	**P**	**22 28 03.8**	**+0.5**
WRA	**Warramunga Arr**	**18.38**	**221**	P	**P**	**22 28 03.4**	**0.0**
	comp=Z,30nm,0.8s,baz=43,slow=12,SNR=91						
WRA				S	**S**	**22 31 21.3**	**-7.2**
	comp=Z,9.2nm,0.9s,baz=49,slow=22,SNR=6.1						
WRA				ScP	**ScP**	**22 35 59.7**	**+1.9**
	comp=Z,3.4nm,0.9s,baz=46,slow=2.2,SNR=6.9						
WRA	**Warramunga Arr**	**18.38**	**221**	P	**P**	**22 28 02.3**	**-1.2**
EIDS	**Eidsvold**	**19.45**	**169**	P	**P**	**22 28 15.2**	**+0.1**
EIDS	**Eidsvold**	**19.45**	**169**	P	**P**	**22 28 15.7**	**+0.6**
GUMO	**Guam**	**19.78**	**354**	LR	LR	22 36 18.2	
	comp=Z,34nm,18.3s,baz=148,slow=38						
NLAI	**Namlea**	**20.05**	**278**	P	Pn	22 28 25.3	+1.0
	comp=Z,2µmcomp=Z,116nm,0.7s						
NLAI	**Namlea**	**20.05**	**278**	P	**P**	**22 28 21.9**	**+0.2**
KNRA	**Kununurra**	**20.21**	**241**		**P**	**22 28 22.6**	**-0.9**
KNRA				IAmb	IAmb	22 29 05.0	
	comp=Z,81nm,1.2s						
QLP	**Quilpie**	**20.43**	**187**	P	**P**	**22 28 27.1**	**+1.4**
TNTI	**Ternate**	**20.79**	**289**	P	**P**	**22 28 27.8**	**-2.0**
TNTI				IAmb	IAmb	22 28 42.1	
	comp=Z,48nm,1.0s						
TNTI	**Ternate**	**20.79**	**289**	P	**P**	**22 28 29.6**	**-0.1**
AS31	**Alice Springs**	**21.45**	**215**		**P**	**22 28 37.0**	**+0.3**
ASAR	**Alice Springs**	**21.45**	**215**	P	**P**	**22 28 37.0**	**+0.2**
	comp=Z,9.5nm,0.5s,baz=52,slow=8.9,SNR=91						
ASAR				S	**S**	**22 32 27.1**	**-2.3**
	comp=Z,8.0nm,1.0s,baz=33,slow=21,SNR=4.4						
ASAR				ScP	**ScP**	**22 36 07.0**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=60,slow=3.1,SNR=3.7						
	comp=Z,9.5nm,0.5s						
INKA	**Innaminka**	**22.22**	**195**		**P**	**22 28 45.4**	**+0.6**
INKA				IAmb	IAmb	22 29 10.2	
	comp=Z,20nm,0.9s						
SOEI	**Soe**	**22.78**	**260**	P	**P**	**22 28 50.6**	**-0.3**
SOEI	**Soe**	**22.78**	**260**	P	**P**	**22 28 55.6**	**+4.7**
	comp=Z,1µmcomp=Z,91nm,0.8s						
SOEI	**Soe**	**22.78**	**260**	P	**P**	**22 28 51.9**	**+1.0**
BATI	**Baumata**	**23.43**	**259**	P	**P**	**22 28 56.2**	**-0.8**
	comp=Z,1µmcomp=Z,180nm,0.9s						
BATI	**Baumata**	**23.43**	**259**	P	**P**	**22 28 54.8**	**-2.2**
FITZ	**Fitzroy Crossi**	**23.96**	**239**	P	**P**	**22 29 01.3**	**-0.4**
FITZ				IAmb	IAmb	22 29 04.4	
	comp=Z,43nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.96**	**239**	P	**P**	**22 29 02.4**	**+0.7**
ARMA	**Armidale**	**24.47**	**170**		**P**	**22 29 07.6**	**+1.3**
MMRI	**Maumere**	**24.67**	**263**		**P**	**22 29 07.1**	**-1.1**
MMRI	**Maumere**	**24.67**	**263**	P	**P**	**22 29 09.7**	**+1.5**
MMRI	**Maumere**	**24.67**	**263**	P	**P**	**22 29 07.8**	**-0.3**
LUWI	**Luwuk**	**24.71**	**281**		**P**	**22 29 08.7**	**+0.2**
LUWI	**Luwuk**	**24.71**	**281**	P	**P**	**22 29 11.9**	**+3.4**
LUWI	**Luwuk**	**24.71**	**281**	P	**P**	**22 29 09.5**	**+0.9**
OUENC	**Ouen Island, N**	**25.03**	**132**	P	**P**	**22 29 15.1**	**+3.7**
OUENC				IAmb	IAmb	22 29 46.5	
	comp=Z,36nm,1.1s						
CMSA	**Cobar Meteorol**	**25.23**	**183**	P	**P**	**22 29 14.6**	**+1.6**
APSI	**Ampana**	**25.83**	**281**	P	**P**	**22 29 18.6**	**-0.1**
STKA	**Stephens Creek**	**26.03**	**191**	P	**P**	**22 29 20.2**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=0.3,slow=7.9,SNR=15						
STKA				LR	LR	22 40 18.1	
	comp=Z,122nm,18.2s,baz=7.2,slow=38						
	comp=Z,6.3nm,0.7s						
STKA	**Stephens Creek**	**26.03**	**191**	P	**P**	**22 29 20.5**	**+0.2**
TOLI2	**Tolitoli**	**27.16**	**285**	P	**P**	**22 29 30.5**	**-0.3**
TOLI2				IAmb	IAmb	22 29 31.6	
	comp=Z,29nm,0.9s						
TOLI2	**Tolitoli**	**27.16**	**285**	P	**P**	**22 29 31.1**	**+0.3**
WBSI	**Waikabubak, Su**	**27.55**	**261**	P	**P**	**22 29 33.9**	**-0.3**
BBOO	**Buckleboo**	**28.36**	**200**	P	**P**	**22 29 41.6**	**+0.4**
BBOO				IAmb	IAmb	22 30 13.3	
	comp=Z,58nm,1.5s						
FORT	**Forrest**	**30.23**	**214**	P	**P**	**22 29 56.3**	**-1.4**
FORT				IAmb	IAmb	22 30 14.0	
	comp=Z,13nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**31.30**	**38**	T	T	23 02 36.0	
	baz=220,slow=76,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**31.31**	**38**	T	T	23 03 03.7	
	baz=220,slow=76,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**31.32**	**38**	T	T	23 02 40.4	
	baz=220,slow=76,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**32.36**	**37**	T	T	23 04 33.9	
	baz=219						
H11N3	**WAKE ISLAND Hy**	**32.37**	**37**	T	T	23 04 33.9	
	baz=219						
H11N2	**WAKE ISLAND Hy**	**32.37**	**37**	T	T	23 04 28.8	
	baz=219,SNR=4.3						
JAGI	**Jajag, Banyuwa**	**32.65**	**264**	P	**P**	**22 30 17.9**	**-1.3**
JAGI	**Jajag, Banyuwa**	**32.65**	**264**	P	**P**	**22 30 18.0**	**-1.3**
MEEK	**Meekatharra**	**33.82**	**230**	P	**P**	**22 30 30.4**	**+1.1**
GIRL	**Giralia**	**35.56**	**239**	P	**P**	**22 30 45.6**	**+1.3**
UGM	**Wanagama**	**36.23**	**265**	P	**P**	**22 30 49.8**	**-0.4**
TAU	**Tasmania Unive**	**36.55**	**180**	P	**P**	**22 30 54.2**	**+1.8**
MORW	**Morawa**	**37.03**	**228**	P	**P**	**22 30 57.0**	**+0.3**
MORW				IAmb	IAmb	22 30 59.5	
	comp=Z,17nm,0.9s						
KLBR	**Kellerberrin**	**37.22**	**224**	P	**P**	**22 30 59.0**	**+0.6**
NWAO	**Narrogin (SRO)**	**38.38**	**222**	LR	LR	22 49 01.5	
	comp=Z,68nm,19.9s,baz=85,slow=39						
YOJ	**Yonaguni jima**	**38.42**	**323**	P	**P**	**22 31 07.0**	**-1.4**
TPUB	**Ta-pu**	**39.04**	**320**	P	**P**	**22 31 12.6**	**-1.1**
TPUB				IAmb	IAmb	22 31 26.5	
	comp=Z,28nm,1.3s						
NACB	**Ninganchiao**	**39.06**	**322**	P	**P**	**22 31 12.6**	**-1.2**
NACB				IAmb	IAmb	22 31 16.1	
	comp=Z,30nm,1.2s						
BBJI	**Bungbulang**	**39.08**	**266**	P	**P**	**22 31 13.8**	**-0.5**
BBJI	**Bungbulang**	**39.08**	**266**	P	**P**	**22 31 14.3**	**0.0**
LEM	**Lembang**	**39.12**	**267**	LR	LR	22 50 57.5	
	comp=Z,40nm,19.1s,baz=146,slow=41						
SSLB	**Suanglung**	**39.18**	**320**	P	**P**	**22 31 13.7**	**-1.2**
SSLB				IAmb	IAmb	22 31 55.2	
	comp=Z,9.2nm,1.0s						
YHNB	**Yeheng**	**39.56**	**322**	P	**P**	**22 31 18.1**	**+0.1**
RPZ	**Rata Peaks**	**42.92**	**154**	LR	LR	22 49 09.9	
	comp=Z,29nm,18.6s,baz=110,slow=35						
MJAR	**Matsushiro Arr**	**43.32**	**350**	P	**P**	**22 31 47.3**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=169,slow=6.0,SNR=2.0						
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**43.32**	**350**	P	**P**	**22 31 46.8**	**-1.7**
MYKOM	**Kota Tinggi**	**43.81**	**279**	P	**P**	**22 31 53.6**	**+0.7**
MYKOM	**Kota Tinggi**	**43.81**	**279**	P	**P**	**22 31 53.2**	**+0.4**
KSRS	**Korea Array**	**46.95**	**339**	P	**P**	**22 32 17.0**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=160,slow=11,SNR=6.6						
KSRS				LR	LR	22 49 00.3	
	comp=Z,32nm,22.0s,baz=170,slow=32						
	comp=Z,2.9nm,0.7s						
KULM	**Kulim**	**47.66**	**283**	P	**P**	**22 32 23.2**	**0.0**
KULM	**Kulim**	**47.66**	**283**	P	**P**	**22 32 23.9**	**+0.7**
KULM				pP	**pP**	**22 32 47.6**	**+1.0**
WHN	**Wuhan**	**48.10**	**321**	⇓P	**P**	**22 32 27.9**	**+1.7**
RPSI	**Rantau Prapat**	**48.81**	**279**	P	**P**	**22 32 32.4**	**+0.3**
GSI	**Gunungsitoli**	**49.90**	**277**	P	**P**	**22 32 40.3**	**-0.1**
GYA	**Guiyang**	**50.82**	**312**	⇑P	**P**	**22 32 51.0**	**+3.8**
GYA				pmax	pmax		
	comp=Z,21nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.97**	**346**	P	**P**	**22 32 55.0**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=168,slow=7.0,SNR=8.5						
	comp=Z,1.7nm,0.5s						

CMAR	**Chiang Mai Arr**	**53.35**	**298**	P	**P**	**22 33 06.4**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=125,slow=6.5,SNR=6.8						
CMAR				pP	**pP**	**22 33 30.6**	**+0.4**
	comp=Z,5.2nm,0.7s,baz=120,slow=6.1,SNR=5.7						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.35**	**298**	P	**P**	**22 33 06.0**	**+0.1**
CMAR					**pP**	**22 33 31.3**	**+1.1**
CHTO	**Chiang Mai**	**53.48**	**299**	P	**P**	**22 33 06.6**	**-0.3**
CHTO				pP	**pP**	**22 33 30.3**	**-0.9**
CHTO				IAmb	IAmb	22 33 34.9	
	comp=Z,12nm,1.1s						
XAN	**Xi'an**	**53.84**	**321**	P	**P**	**22 33 09.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
PZH	**PanZhiHua**	**54.59**	**309**	P	**P**	**22 33 16.8**	**+1.8**
BNX	**BinXian**	**54.60**	**343**	⇑P	**P**	**22 33 14.3**	**-0.2**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**57.01**	**328**	*e*P	**P**	**22 33 33.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,90nm,4.6s						
PETK	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**22 33 51.5**	**+0.6**
	comp=Z,3.8nm,0.5s,baz=172,slow=6.3,SNR=16						
PETK				pP	**pP**	**22 34 15.1**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=183,slow=2.5,SNR=2.8						
	comp=Z,3.8nm,0.5s						
PETK	**Petropavlovsk-**	**59.78**	**7**		**P**	**22 33 50.6**	**-0.4**
PPT	**Papeete**	**62.84**	**106**	LR	LR	23 00 11.1	
	comp=Z,30nm,18.1s,baz=197,slow=35						
PPT2	**Papeete2**	**62.84**	**107**	*e*LR	LR	22 52 45.3	
	comp=Z,123nm,27.5s						
PPT2				*e*LR	LR	22 52 53.1	
	comp=Z,109nm,25.5s						
SONM	**Songino Array**	**64.58**	**331**	P	**P**	**22 34 23.1**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=147,slow=6.4,SNR=7.0						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**64.58**	**331**	P	**P**	**22 34 22.9**	**-0.4**
MA2	**Magadan**	**65.64**	**2**	LR	LR	22 58 19.1	
	comp=Z,8.5nm,21.0s,baz=246,slow=31						
EVN	**Everest**	**67.22**	**304**	P	**P**	**22 34 40.3**	**-0.9**
MKAR	**Makanchi Array**	**77.66**	**321**	P	**P**	**22 35 41.5**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=99,slow=7.9,SNR=16						
MKAR				pP	**pP**	**22 36 08.2**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=99,slow=7.6,SNR=3.6						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**79.19**	**328**	P	**P**	**22 35 48.5**	**-1.8**
	comp=Z,2.3nm,0.5s,baz=107,slow=4.9,SNR=10						
	comp=Z,2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**79.19**	**328**		**P**	**22 35 48.8**	**-1.5**
KURK	**Kurchatov**	**81.38**	**323**	P	**P**	**22 36 00.1**	**-2.0**
KURBB	**Kurchatov Arra**	**81.40**	**323**	P	**P**	**22 36 00.7**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=114,slow=4.1,SNR=6.9						
KURBB				pP	**pP**	**22 36 27.0**	**-0.8**
	comp=Z,1.1nm,0.9s,baz=124,slow=3.7,SNR=3.8						
	comp=Z,0.4nm,0.6s						
J19K	**Poorman**	**81.96**	**22**	P	**P**	**22 36 04.5**	**-0.4**
J19K				IAmb	IAmb	22 36 07.8	
	comp=Z,9.4nm,1.3s						
MAW	**Mawson**	**82.06**	**203**	P	**P**	**22 36 05.2**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=121,slow=4.5,SNR=9.0						
	comp=Z,2.3nm,0.5s						
E19K	**Redstone River**	**83.31**	**19**		**P**	**22 36 12.1**	**+0.3**
E19K				IAmb	IAmb	22 36 13.2	
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**83.76**	**180**	P	**P**	**22 36 14.3**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=312,slow=0.9,SNR=33						
QSPA				pP	**pP**	**22 36 38.8**	**-1.0**

	1.0nm,0.4s									
MKAR	**Makanchi Array**	**45.66**	**324**	P		**P**	**23 19 18.2**	**+1.1**		
	0.2nm,0.3s,baz=106,slow=8.2,SNR=6.9									
	0.2nm,0.3s									
KURBB	**Kurchatov Arra**	**49.81**	**326**	P		**P**	**23 19 49.8**	**+0.8**		
	1.4nm,1.0s,baz=127,slow=8.0,SNR=9.1									
	1.4nm,1.0s									
BVAR	**Borovoye Array**	**55.39**	**326**	P		**P**	**23 20 30.4**	**+0.2**		
	0.8nm,0.6s,baz=98,slow=7.6,SNR=5.4									
	0.8nm,0.6s									

*IDC **24** 23:16:30.2±1.0,32.°96N×86.°52E, h0km, mb3.5/10, mbtmp3.5/13, ML2.6/2, MS3.2/5, Error ellipse: s-maj=31.8km s-min=18.0km az=57.0*

ISC 24 23:16:35.3±0.9, 33.°1N±0.°1×86.°6E±0.°2, h35km, n16, σ1°52/13, mb3.5/8, MS3.2/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MKAR	**Makanchi Array**	**14.08**	**348**	Pn		**Pn**	**23 19 49.3**		**-2.9**
	baz=172,slow=12,SNR=4.0								
	0.8nm,1.0s								
CMAR	**Chiang Mai Arr**	**18.31**	**140**	P		**P**	**23 20 45.3**		**-1.2**
	1.0nm,0.3s,baz=330,slow=10,SNR=5.6								
KURBB	**Kurchatov Arra**	**18.50**	**344**	P		**P**	**23 20 49.6**		**+1.2**
	baz=158,slow=11,SNR=7.4								
	0.5nm,0.7s								
ZALV	**Zalesovo Beam**	**20.90**	**357**	P		**P**	**23 21 16.4**		**+2.0**
	1.2nm,0.5s,baz=177,slow=10,SNR=9.6								
ZALV				LR		LR	23 30 18.3		
	comp=Z,33nm,18.6s,baz=175,slow=39								
	1.2nm,0.5s								
SONM	**Songino Array**	**21.00**	**40**	P		**P**	**23 21 16.8**		**+1.1**
	0.9nm,0.9s,baz=235,slow=5.1,SNR=4.8								
	0.9nm,0.3s								
BVAR	**Borovoye Array**	**23.08**	**335**	P		**P**	**23 21 37.5**		**-0.1**
	0.3nm,0.6s,baz=148,slow=6.8,SNR=3.6								
	0.3nm,0.6s								
NRIK	**Noril'sk**	**36.31**	**1**	P		**P**	**23 23 35.9**		**+0.7**
	2.6nm,0.7s,baz=149,slow=7.4,SNR=3.8								
	2.6nm,0.7s								
MMAI	**Mount Meron Ar**	**42.53**	**284**	LR		LR	23 43 49.7		
	comp=Z,40nm,19.4s,baz=130,slow=39								
BRTR	**Keskin Array B**	**42.60**	**295**	LR		LR	23 44 35.5		
	comp=Z,20nm,19.1s,baz=100,slow=40								
AKASG	**Malin Array Be**	**44.98**	**311**	P		**P**	**23 24 45.7**		**-1.3**
	0.2nm,0.4s,baz=82,slow=7.2,SNR=5.3								
AKASG				LR		LR	23 45 15.1		
	comp=Z,26nm,18.5s,baz=78,slow=38								
	0.2nm,0.4s								
HFS	**Hagfors**	**53.56**	**324**	LR		LR	23 50 41.7		
	comp=Z,30nm,18.9s,baz=56,slow=38								
NOA	**NORSAR Array B**	**54.70**	**325**	P		**P**	**23 26 00.9**		**+0.2**
	1.1nm,1.0s,baz=85,slow=7.5,SNR=2.4								
	1.1nm,1.0s								
GERES	**GERESS Array B**	**55.17**	**310**	P		**P**	**23 26 06.3**		**+1.9**
	1.0nm,0.8s,baz=74,slow=4.7,SNR=7.7								
	1.0nm,0.8s								
WRA	**Warramunga Arr**	**69.72**	**132**	P		**P**	**23 27 41.2**		**-0.6**
	0.3nm,0.8s,baz=317,slow=6.4,SNR=2.2								
	0.3nm,0.8s								
ASAR	**Alice Springs**	**72.25**	**135**	P		**P**	**23 27 57.2**		**+0.1**
	0.6nm,0.9s,baz=316,slow=5.4,SNR=2.8								
	0.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**78.71**	**278**	P		**P**	**23 28 35.0**		**+0.6**
	0.2nm,0.6s,baz=56,slow=5.1,SNR=1.3								
	0.2nm,0.6s								

*UPP **24** 23:19:42.6±0.0, 67.°85N×20.°21E, h0km, ML2.3, Suspected explosion*
*IDC **24** 23:19:42.7±1.1, 67.°86N×20.°59E, h0km, mbtmp3.0/4, ML2.3/4, Error ellipse: s-maj=18.2km s-min=6.6km az=122.0*

ISC 24 23:19:42.1±0.8, 67.°82N±0.°04×20.°24E±0.°03, h0km, n15, σ0°73/22, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KUA	**Kurravaara**	**0.14**	**15**	P		**Pg**	**23 19 45.0**		**+0.2**
	baz=224								
KUA				S		**Sg**	**23 19 46.7**		**0.0**
RATU	**Laukkuluspa**	**0.24**	**273**	P		**Pg**	**23 19 47.2**		**+0.4**
RATU				S		**Sg**	**23 19 50.5**		**+0.5**
NIKU	**Nikkaluokta**	**0.46**	**277**	P		**Pg**	**23 19 51.1**		**+0.2**
NIKU				S		**Sg**	**23 19 57.2**		**+0.4**
LANU	**Lannavaara**	**0.70**	**70**	*e*P		**Pg**	**23 19 55.7**		**+0.1**
LANU	**Lannavaara**	**0.70**	**70**	P		**Pg**	**23 19 55.9**		**+0.3**
LANU				S		**Sg**	**23 20 05.3**		**+0.6**
DUNU	**Dundret**	**0.71**	**169**	P		**Pb**	**23 19 56.6**		**-0.7**
DUNU				S		**Sb**	**23 20 07.0**		**-0.6**
MASU	**Masugnsbyn**	**0.76**	**117**	P		**Pb**	**23 19 57.4**		**-0.8**
SALU	**Saltoluokta**	**0.79**	**237**	*e*P		**Pg**	**23 19 57.7**		**+0.4**
SALU	**Saltoluokta**	**0.79**	**237**	P		**Pg**	**23 19 57.7**		**+0.4**
ERTU	**Ertsjaerv**	**1.48**	**148**	P		**Pb**	**23 20 10.1**		**-0.3**
HARU	**Harads**	**1.68**	**170**	P		**Pb**	**23 20 13.7**		**-0.2**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn		**Pn**	**23 20 25.9**		**+0.7**
	0.6nm,0.3s,baz=226,slow=15,SNR=11								
ARCES				Lg		Lg	23 20 58.2		
	2.2nm,0.3s,baz=227,slow=23,SNR=13								
	1.6nm,0.2s								
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**	**23 21 25.3**		**+1.4**
	0.1nm,0.3s,baz=348,slow=14,SNR=1.2								
FINES				Sn		**Sn**	**23 22 43.5**		**+0.8**
	0.3nm,0.3s,baz=356,slow=22,SNR=4.5								
FINES				Lg		Lg	23 23 15.4		
	0.7nm,0.3s,baz=336,slow=30,SNR=6.4								
	1.3nm,0.8s								
NOA	**NORSAR Array B**	**7.83**	**214**	Pn		**Pn**	**23 21 37.5**		**+0.3**
	baz=25,slow=15,SNR=4.5								
NOA				Lg		Lg	23 23 49.1		
	0.1nm,0.3s,baz=2.1,slow=18,SNR=6.5								
	0.4nm,0.7s								
HFS	**Hagfors**	**8.22**	**203**	Pn		**Pn**	**23 21 42.2**		**-0.3**
	0.1nm,0.3s,baz=15,slow=12,SNR=1.6								
HFS				Sn		**Sn**	**23 23 14.2**		**-1.8**
	0.1nm,0.3s,baz=21,slow=20,SNR=1.5								
HFS				Lg		Lg	23 24 00.6		
	0.3nm,0.3s,baz=24,slow=22,SNR=4.1								
	1.9nm,1.0s								

*GCG **24** 23:37:42.7±1.3, 13.°56N×91.°69W, h13km±15km, MD4.8, Presumed earthquake*
*SNET **24** 23:37:43.3±1.9, 13.°60N×91.°75W, h86km, ML3.8, Presumed earthquake*
*CATAC **24** 23:37:45.0±0.6, 14.°N±4.°×9.°2W±.°, h10km, M3.8/14, MLv3.8/14, Error ellipse: s-maj=9.6km s-min=6.3km az=10.8, confirmed*

ISC 24 23:37:41.8±2.2, 13.°61N±0.°09×91.°55W±0.°07, h7km±12km, n32, σ1°10/48, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
STG5	**El Palmar, Qui**	**0.82**	**14**	*i* P		**Pn**	**23 38 02.4**		**+2.6**
STG8	**El Palmar, Qui**	**0.86**	**13**	*i* P		**Pn**	**23 38 03.5**		**+3.0**
FG8	**Yepocapa, Chim**	**1.16**	**56**	*i* P		**Pg**	**23 38 03.8**		**-0.3**
FG16	**Alotenango, Sa**	**1.21**	**57**	*i* P		**Pg**	**23 38 04.7**		**-0.3**
FG16				*i* S		**Sn**	**23 38 21.5**		**-0.6**
PCG5	**San Vicente Pa**	**1.29**	**62**	*i* P		**Pb**	**23 38 06.2**		**-0.3**
PCG5				*i* S		**Sb**	**23 38 20.8**		**-2.6**
FAME	**Alcaldia de Sa**	**1.51**	**81**	P		**Pg**	**23 38 10.6**		**-0.2**
FAME				S		**Sg**	**23 38 31.9**		**+1.4**
HUEH	**Huehuetenango**	**1.70**	**2**	P		**Pg**	**23 38 14.0**		**-0.5**
HUEH	**Huehuetenango**	**1.70**	**2**	*e*P		**Pg**	**23 38 13.9**		**-0.5**
APG	**El Apazote**	**1.74**	**37**	*i* P		**Pg**	**23 38 15.6**		**+0.3**
NUBE	**Las Nubes**	**1.75**	**80**	P		**Pb**	**23 38 14.5**		**+0.2**
NUBE				S		**Sg**	**23 38 36.3**		**-1.8**
NUBE	**Las Nubes**	**1.75**	**80**	*i* P		**Pb**	**23 38 14.3**		**0.0**
LOAL	**Lomas de Alarc**	**1.77**	**77**	P		**Pg**	**23 38 16.6**		**+0.9**
LOAL				S		**Sg**	**23 38 39.3**		**+0.7**
SLOZ	**Alcaldia de Sa**	**1.77**	**76**	P		**Pg**	**23 38 15.0**		**-0.7**
SLOZ				S		**Sg**	**23 38 40.1**		**+1.4**
CEVE	**Cerro Verde**	**1.89**	**83**	P		**Pg**	**23 38 18.2**		**+0.2**
CEVE				*S*		**Sg**	**23 38 42.7**		**+0.2**
CEVE	**Cerro Verde**	**1.89**	**83**	*e*P		**Pb**	**23 38 16.7**		**0.0**
CEVE				*e*S		**Sg**	**23 38 43.9**		**+1.4**
UNIC	**Universidad Ca**	**1.98**	**79**	P		**Pg**	**23 38 19.5**		**-0.4**
UNIC				S		**Sg**	**23 38 45.6**		**0.0**
JAYA	**Jayaque - finc**	**2.05**	**88**	P		**Pb**	**23 38 19.7**		**+0.3**
JAYA				S		**Sg**	**23 38 45.9**		**-1.8**
JAYA	**Jayaque - finc**	**2.05**	**88**	*i* P		**Pb**	**23 38 18.4**		**-1.0**
JAYA	**Jayaque - finc**	**2.05**	**88**	*e*P		**Pb**	**23 38 19.0**		**-0.4**
LALI	**Alcalda de L**	**2.17**	**93**	P		**Pb**	**23 38 21.6**		**+0.1**
LALI				S		**Sb**	**23 38 48.0**		**-0.7**
PMON	**Piamonte**	**2.18**	**87**	P		**Pb**	**23 38 21.7**		**0.0**
PMON				S		**Sb**	**23 38 49.2**		**+0.3**
BOQS	**Boqueron**	**2.21**	**86**	*e*P		**Pb**	**23 38 21.3**		**-1.0**
UEES	**Universidad Ev**	**2.25**	**87**	S		**Sg**	**23 38 55.0**		**+0.8**
MTO3	**Montecristo**	**2.27**	**69**	P		**Pb**	**23 38 22.1**		**-1.2**
MTO3				S		**Sg**	**23 38 54.7**		**-0.1**
MTO3	**Montecristo**	**2.27**	**69**	*i* P		**Pb**	**23 38 21.7**		**-1.5**
ESQI	**Esquipulas**	**2.35**	**66**	P		**Pb**	**23 38 24.4**		**0.0**
LBRS	**Las Brisas**	**2.44**	**87**	*e*P		**Pb**	**23 38 25.1**		**-1.1**
PAVA	**Las Pavas**	**2.55**	**87**	P		**Pb**	**23 38 26.8**		**-1.1**
COEG	**Centro de Oper**	**2.60**	**89**	P		**Pb**	**23 38 27.8**		**-0.9**
COEG				S		**Sb**	**23 38 59.7**		**-1.3**
COEG	**Centro de Oper**	**2.60**	**89**	*e*P		**Pb**	**23 38 27.4**		**-1.3**
COEG				*e*S		**Sb**	**23 39 01.2**		**+0.2**
TECO	**Alcaldia de Te**	**2.70**	**91**	P		**Pb**	**23 38 30.2**		**-0.2**
TECO				S		**Sb**	**23 39 02.3**		**-1.4**
TGIG		**3.50**	**335**	*i* P		**Pn**	**23 38 36.6**		**-0.1**

*IDC **24** 23:49:32.4±1.1, 17.°79S×167.°80E, h0km, mb4.1/9, mbtmp4.1/10, ML3.5/1, MS3.5/21, Error ellipse: s-maj=32.3km s-min=21.5km az=119.0*
*NEIC **24** 23:49:34.0±1.8, 17.°88S±0.°09×167.°85E±0.°07, h10km±1km, mb4.4/18, Error ellipse: s-maj=15.5km s-min=11.0km az=23.0*

ISC 24 23:49:36.3±0.6, 17.°90S±0.°06×167.°83E±0.°10, h32km, n69, σ1°34/54, mb4.2/15, MS3.5/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MARNC	**Mare, Loyalty**	**3.57**	**177**	Pn		**Pn**	**23 50 30.4**		**+0.9**
MARNC				Sn		**Sn**	**23 51 07.9**		**-2.8**
KOUNC	**Koumac, New Ca**	**4.26**	**231**	P		**Pn**	**23 50 38.7**		**-0.3**
KOUNC				Sn		**Sn**	**23 51 26.7**		**-0.9**
DZM	**Mont Dzumac**	**4.35**	**197**	Pn		**Pn**	**23 50 40.8**		**+0.5**
	2.5nm,0.3s,baz=93,slow=12,SNR=42								
DZM				Sn		**Sn**	**23 51 28.3**		**-1.8**
	14nm,0.3s,baz=136,slow=22,SNR=9.8								
DZM				LR		LR	23 52 16.9		
	comp=Z,400nm,19.4s,baz=104,slow=37								
	11nm,0.5s								
ONTNC	**Ouen Toro**	**4.57**	**196**	Pn		**Pn**	**23 50 42.7**		**-0.6**
ONTNC				Sn		**Sn**	**23 51 34.5**		**-0.9**
OUENC	**Ouen Island, N**	**4.59**	**191**	P		**Pn**	**23 50 43.2**		**-0.4**
OUENC				Sn		**Sn**	**23 51 34.9**		**-0.9**
MSVF	**Nonsavu**	**9.74**	**91**	LR		LR	23 55 01.7		
	comp=Z,617nm,20.4s,baz=198,slow=34								
HNR	**Honiara**	**11.37**	**317**	LR		LR	23 56 11.5		
	comp=Z,9.2nm,19.2s,baz=206,slow=35								
ARMA	**Armidale**	**19.30**	**227**	P		**Pn**	**23 54 01.6**		**+1.6**
ARMA				IAmb		IAmb	23 54 05.5		
	comp=Z,31nm,1.5s								
CTA	**Charters Tower**	**20.51**	**260**	P		Pn	23 54 13.8		-0.5
	comp=Z,6.9nm,0.8s,baz=92,slow=11,SNR=6.1								
CTA				LR		LR	00 01 26.4		
	comp=Z,157nm,19.3s,baz=50,slow=35								
	comp=Z,6.9nm,0.8s								
CTAO	**Charters Tower**	**20.51**	**260**	P		Pn	23 54 13.2		-1.1
CTAO				IAmb		IAmb	23 54 39.4		
	comp=Z,10nm,1.0s								
RPZ	**Rata Peaks**	**25.88**	**175**	LR		LR	00 05 08.0		
	comp=Z,44nm,18.1s,baz=205,slow=36								
STKA	**Stephens Creek**	**27.48**	**235**	P		**P**	**23 55 21.1**		**+1.4**
	comp=Z,4.3nm,0.9s,baz=33,slow=5.8,SNR=6.3								
STKA				LR		LR	00 06 15.9		
	comp=Z,114nm,18.5s,baz=32,slow=36								
	comp=Z,4.3nm,0.9s								
RAR	**Rarotonga**	**30.68**	**102**	LR		LR	00 07 37.5		
	comp=Z,41nm,18.2s,baz=180,slow=35								
WR8	**Warramunga Arr**	**31.56**	**261**	P		**P**	**23 55 56.1**		**0.0**
WB0	**Warramunga Arr**	**31.67**	**261**	P		**P**	**23 55 56.2**		**-0.8**
WRA	**Warramunga Arr**	**31.71**	**261**	P		**P**	**23 55 56.5**		**-1.0**
	comp=Z,1.4nm,0.8s,baz=92,slow=9.0,SNR=8.0								
	comp=Z,1.4nm,0.8s								
WRA	**Warramunga Arr**	**31.71**	**261**	P		**P**	**23 55 56.2**		**-1.3**
BBOO	**Buckleboo**	**32.17**	**236**	P		**P**	**23 56 01.9**		**+0.6**
AS31	**Alice Springs**	**32.18**	**254**	P		**P**	**23 56 01.5**		**0.0**
ASAR	**Alice Springs**	**32.18**	**254**	P		**P**	**23 56 01.3**		**-0.2**
	comp=Z,2.3nm,0.7s,baz=81,slow=8.6,SNR=29								
ASAR				LR		LR	00 08 59.4		
	comp=Z,129nm,18.1s,baz=112,slow=36								
	comp=Z,2.3nm,0.7s								
MTN	**Manton Dam**	**35.69**	**273**	P		**P**	**23 56 32.5**		**+0.3**
MTN				IAmb		IAmb	23 57 11.9		
	comp=Z,7.2nm,1.2s								
FORT	**Forrest**	**38.24**	**243**	P		**P**	**23 56 54.1**		**+0.5**
FORT				IAmb		IAmb	23 57 16.4		
	comp=Z,12nm,0.9s								
GUMO	**Guam**	**38.62**	**323**	LR		LR	00 12 25.9		
	comp=Z,41nm,18.7s,baz=117,slow=36								
FITZ	**Fitzroy Crossi**	**40.06**	**263**	LR		LR	00 12 53.4		
	comp=Z,151nm,19.7s,baz=153,slow=35								
FITZ	**Fitzroy Crossi**	**40.06**	**263**	P		**P**	**23 57 09.5**		**+0.6**
PPT	**Papeete**	**40.51**	**96**	LR		LR	00 10 06.9		
	comp=Z,73nm,19.6s,baz=290,slow=30								
KAPI	**Kappang**	**48.67**	**279**	LR		LR	00 18 24.0		
	comp=Z,35nm,18.0s,baz=98,slow=36								
JYT	**Yasato**	**59.84**	**334**	P		**P**	**23 59 37.9**		**-0.9**
ASAJ	**Asahikawa**	**65.89**	**340**	LR		LR	00 21 38.5		
	comp=Z,38nm,21.0s,baz=168,slow=29								
SHEM	**Shemya Is, Ala**	**70.54**	**4**	LR		LR	00 26 55.3		
	comp=Z,27nm,19.1s,baz=288,slow=32								
PETK	**Petropavlovsk-**	**71.25**	**354**	P		**P**	**00 00 53.0**		**+0.8**
	comp=Z,4.0nm,1.0s,baz=151,slow=5.4,SNR=6.9								
	comp=Z,4.0nm,1.0s								
PETK	**Petropavlovsk-**	**71.25**	**354**	P		**P**	**00 00 52.9**		**+0.7**
QSPA	**South Pole Qui**	**72.15**	**180**	P		**P**	**00 01 00.1**		**+2.4**
	comp=Z,2.4nm,0.9s,baz=23,slow=7.7,SNR=7.5								
	comp=Z,2.4nm,0.9s								
QSPA	**South Pole Qui**	**72.15**	**180**	P		**P**	**00 00 59.5**		**+1.8**
CRAI	**Chiangrai**	**76.24**	**297**	P		**P**	**00 01 20.7**		**-1.5**
CRAI				IAmb		IAmb	00 01 33.5		
	comp=Z,3.1nm,1.0s								
CMAR	**Chiang Mai Arr**	**76.73**	**295**	P		**P**	**00 01 27.1**		**+2.2**
	comp=Z,0.6nm,0.3s,baz=115,slow=5.3,SNR=4.6								
	comp=Z,0.6nm,0.3s								
CMAR	**Chiang Mai Arr**	**76.73**	**295**	P		**P**	**00 01 25.5**		**+0.5**
CHTO	**Chiang Mai**	**76.88**	**295**	P		**P**	**00 01 25.4**		**-0.4**
CHTO				IAmb		IAmb	00 01 38.8		
	comp=Z,4.4nm,1.1s								
MA2	**Magadan**	**78.44**	**351**	LR		LR	00 33 30.4		
	comp=Z,23nm,19.0s,baz=230,slow=34								
BELA	**Belgrano 2**	**83.54**	**175**	P		**P**	**00 02 01.7**		**+1.0**
BELA				IAmb		IAmb	00 02 16.5		
	comp=Z,4.0nm,1.0s								
M19K	**Big River Lodg**	**85.00**	**17**	P		**P**	**00 02 09.2**		**+1.1**
M19K				IAmb		IAmb	00 02 39.2		
	comp=Z,4.8nm,1.2s								
SONM	**Songino Array**	**85.35**	**324**	P		**P**	**00 02 12.0**		**+1.6**
	comp=Z,0.4nm,0.4s,baz=126,slow=3.8,SNR=4.0								
	comp=Z,0.4nm,0.4s								
SONM	**Songino Array**	**85.35**	**324**	P		**P**	**00 02 11.3**		**+0.9**
SONM				IAmb		IAmb	00 02 21.3		
	comp=Z,2.1nm,1.1s								
J18K	**Innoko River**	**85.67**	**15**	P		**P**	**00 02 12.7**		**+1.2**
J18K				IAmb		IAmb	00 02 33.8		
	comp=Z,5.5nm,1.3s								
PFO	**Pinyon Flats O**	**88.41**	**54**	LR		LR	00 34 07.7		
	comp=Z,35nm,20.0s,baz=210,slow=30								
NVAR	**Mina Array Bea**	**88.93**	**49**	LR		LR	00 39 18.2		
	comp=Z,13nm,18.4s,baz=284,slow=34								
BBB	**Bella Bella**	**89.10**	**34**	LR		LR	00 34 48.1		
	comp=Z,16nm,19.7s,baz=191,slow=30								
ILAR	**Eielson Array**	**89.36**	**18**	P		**P**	**00 02 28.2**		**-1.0**
	comp=Z,0.4nm,0.8s,baz=237,slow=6.0,SNR=4.8								
	comp=Z,0.4nm,0.8s								
ILAR	**Eielson Array**	**89.36**	**18**	P		**P**	**00 02 28.7**		**-0.5**
TIXI	**Tiksi**	**93.16**	**348**	LR		LR	00 39 37.6		
	comp=Z,17nm,20.2s,baz=191,slow=32								
NEW	**Newport**	**93.62**	**40**	LR		LR	00 38 17.2		
	comp=Z,15nm,19.6s,baz=28,slow=31								
ANMO	**Albuquerque**	**96.65**	**56**	LR		LR	00 41 54.4		
	comp=Z,15nm,19.2s,baz=256,slow=32								
MKAR	**Makanchi Array**	**99.85**	**316**	LR		LR	00 46 36.9		
	comp=Z,15nm,21.5s,baz=134,slow=34								
ARCES	**ARCESS Array B**	**123.43**	**345**	PKP		**PKiKP**	**00 08 30.1**		**+0.2**
	comp=Z,0.9nm,0.7s,baz=58,slow=2.3,SNR=3.7								
RONA	**Rosalia, Austr**	**142.25**	**328**	*e*PKP		**PKPdf**	**00 09 05.2**		**-0.4**
	comp=Z,2.8nm,1.3s								
CONA	**Conrad Observa**	**142.31**	**329**	*e*PKP		**PKPdf**	**00 09 04.7**		**-1.1**
	comp=Z,1.0nm,0.9s								
ARSA	**Arzberg**	**142.94**	**328**	*e*PKP		**PKPdf**	**00 09 05.8**		**-1.0**
	comp=Z,3.1nm,1.6s								
MOA	**Molln**	**143.13**	**330**	*e*PKP		**PKPdf**	**00 09 05.3**		**-1.8**
	comp=Z,3.6nm,1.1s								
SOKA	**Soboth**	**143.57**	**328**	*e*PKP		**PKPdf**	**00 09 05.9**		**-2.2**
	comp=Z,1.2nm,0.8s								
OBKA	**Obir**	**143.93**	**328**	*e*PKP		**PKPdf**	**00 09 07.5**		**-1.2**
	comp=Z,8.0nm,1.7s								
LESA	**Schwarzleotal**	**144.19**	**331**	*e*PKP		**PKPdf**	**00 09 08.1**		**-0.9**
	comp=Z,3.7nm,1.0s								
ABTA	**Abfaltersbach**	**144.76**	**330**	*e*PKP		**PKPab**	**00 09 07.5**		**-1.5**
	comp=Z,4.0nm,0.9s								
WATA	**Walderalm**	**144.76**	**332**	*e*PKP		**PKPab**	**00 09 07.8**		**-1.3**
	comp=Z,1.6nm,0.5s								
WTTA	**Wattenberg**	**144.78**	**332**	*e*PKP		**PKPab**	**00 09 07.5**		**-1.7**
	comp=Z,0.9nm,0.6s								
MOTA	**Moosalm**	**144.96**	**332**	*e*PKP		**PKPab**	**00 09 07.2**		**-2.6**
	comp=Z,0.4nm,0.6s								
RETA	**Reutte**	**145.00**	**333**	*e*PKiKP		**PKiKP**	**00 09 12.1**		**-2.2**
	comp=Z,0.6nm,0.5s								
SQTA	**Sankt Quirin**	**145.01**	**332**	*e*PKP		**PKPab**	**00 09 08.6**		**-1.3**
	comp=Z,1.7nm,0.7s								
FETA	**Feichten**	**145.37**	**332**	*e*PKiKP		**PKiKP**	**00 09 12.9**		**-2.3**
	comp=Z,0.1nm,0.4s								
DAVA	**Damuels**	**145.54**	**333**	*e*PKiKP		**PKiKP**	**00 09 13.5**		**-2.0**
	comp=Z,4.7nm,1.0s								

*NIED **25** 00:17:02.7, 38.°41N×142.°12E, h36km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.42; Mθθ-0.11; Mφφ-0.32; Mrθ0.21; Mθφ-0.33; Mφr1.05; Fault plane solution: M₀1.18000×10¹⁵ NP1: φs241.00000°, δ16.00000°, λ137.00000°. NP2: φs13.00000°, δ79.00000°, λ78.00000°.*
*NEIC **25** 00:17:02.8±1.0, 38.°40N±0.°07×142.°3E±0.°1, h35km±2km, mb4.5/13 Error ellipse: s-maj=15.7km s-min=10.8km az=114.0*
*JMA **25** 00:17:02.7±0.1, 38.°4N±0.°4×142.°1E±0.°8, h36km±1km, MD4.1/37, MV4.4/37, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*IDC **25** 00:17:03.9±1.9, 38.°39N×142.°12E, h43km±16km, mb3.8/19, mbtmp4.0/25, ML3.5/6, MS3.2/16, Error ellipse: s-maj=18.7km s-min=12.1km az=96.0*

ISC 25 00:17:03.1±0.7, 38.°40N±0.°04×142.°14E±0.°07, h37km±1km, n83, σ1°17/78, mb4.3/26, MS3.3/11, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
JIKH	**Ishinomakikobu**	**0.54**	**261**	⇓ *i* P		**Pn**	**00 17 13.3**		**-1.0**
JIKH				A		A	00 17 13.3		
	comp=N,16nm,0.3s,comp=E,11nm,0.3s								
JIKH				⇓S		**Sn**	**00 17 20.5**		**-1.6**
JIO	**Ouri**	**0.62**	**275**	⇓ *i* P		**Pn**	**00 17 14.8**		**-0.8**
JIO				A		A	00 17 14.8		
	comp=N,19nm,0.3s,comp=E,22nm,0.3s								
JIO				⇓S		**Sn**	**00 17 23.1**		**-1.2**
JKMT	**Kesennumamotoy**	**0.66**	**309**	⇓ *i* P		**Pn**	**00 17 15.4**		**-0.7**
JKMT				A		A	00 17 15.4		
	comp=N,17nm,0.5s,comp=E,13nm,0.5s								
JKMT				⇓S		**Sn**	**00 17 24.1**		**-1.2**
OFUJ	**Ofunato**	**0.77**	**332**	⇓ *i* P		**Pn**	**00 17 16.8**		**-0.7**
OFUJ				A		A	00 17 16.8		
	comp=N,5.0nm,0.6s,comp=E,5.0nm,0.4s								
OFUJ				⇓S		**Sn**	**00 17 26.6**		**-1.3**
JMK	**Ichinoseki**	**0.91**	**308**	*i* P		**Pn**	**00 17 18.9**		**-0.4**
JMK				S		**Sn**	**00 17 30.6**		**-0.6**
JOFO	**Osakifurukawao**	**0.98**	**282**	A	

	comp=E,0.7nm,0.7s,baz=91,slow=12,SNR=6.0						
	comp=E,0.7nm,0.7s						
MKAR	**Makanchi Array**	**43.90**	**301**		**P**	**00 25 06.1**	**+0.1**
H19K	**Roundabout Mou**	**44.03**	**32**	P	**P**	**00 25 05.8**	**-0.9**
KURK	**Kurchatov**	**45.56**	**307**		**P**	**00 25 19.2**	**+0.1**
KURK				IAmb	IAmb	00 25 19.9	
	comp=Z,6.5nm,0.7s						
KURBB	**Kurchatov Arra**	**45.63**	**307**	P	**P**	**00 25 19.8**	**+0.1**
	comp=Z,7.1nm,0.6s,baz=82,slow=8.1,SNR=54						
KURBB				PcP	**PcP**	**00 26 56.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=90,slow=2.8,SNR=1.4						
	comp=Z,7.1nm,0.6s						
ILAR	**Eielson Array**	**48.04**	**33**	P	**P**	**00 25 38.6**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=277,slow=9.1,SNR=1.7						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**50.09**	**312**	P	**P**	**00 25 52.8**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=83,slow=11,SNR=4.1						
BVAR				PcP	**PcP**	**00 27 13.7**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=70,slow=2.9,SNR=4.7						
	comp=Z,1.5nm,0.6s						
AAK	**Ala-Archa**	**50.36**	**298**	LR	LR	00 49 15.9	
	comp=Z,29nm,18.3s,baz=112,slow=38						
ARTI	**Arti**	**55.83**	**318**	LR	LR	00 52 51.0	
	comp=Z,35nm,18.9s,baz=91,slow=38						
AB31	**Akbulak array**	**57.51**	**310**		**P**	**00 26 48.5**	**0.0**
AB31				IAmb	IAmb	00 26 48.8	
	comp=Z,1.6nm,0.6s						
ABKAR	**Akbulak array**	**57.51**	**310**	P	**P**	**00 26 48.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**58.29**	**199**	P	**P**	**00 26 54.1**	**-0.1**
WB0	**Warramunga Arr**	**58.31**	**189**	P	**P**	**00 26 54.0**	**-0.3**
WB0				IAmb	IAmb	00 26 55.0	
	comp=Z,5.4nm,1.0s						
WR8	**Warramunga Arr**	**58.48**	**188**	P	**P**	**00 26 55.4**	**-0.1**
WRA	**Warramunga Arr**	**58.49**	**189**	P	**P**	**00 26 55.4**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=5.5,slow=6.8,SNR=22						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**58.49**	**189**	P	**P**	**00 26 54.9**	**-0.6**
ASAR	**Alice Springs**	**62.22**	**189**	P	**P**	**00 27 21.1**	**0.0**
	comp=Z,1.1nm,0.6s,baz=5.7,slow=4.5,SNR=15						
	comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**62.92**	**339**	P	**P**	**00 27 25.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=52,slow=7.9,SNR=6.2						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**67.88**	**332**	P	**P**	**00 27 57.5**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=26,slow=11,SNR=17						
	comp=Z,2.9nm,0.6s						
KBZ	**Khabaz**	**70.45**	**311**	P	**P**	**00 28 13.3**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=157,slow=0.4,SNR=6.6						
	comp=Z,2.5nm,0.9s						
HFS	**Hagfors**	**73.08**	**336**	P	**P**	**00 28 29.3**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=42,slow=4.6,SNR=16						
HFS				LR	LR	01 03 39.4	
	comp=Z,40nm,18.2s,baz=38,slow=38						
	comp=Z,1.7nm,0.4s						
NC204	**NORSAR Array S**	**73.10**	**338**	P	**P**	**00 28 29.7**	**+0.5**
NC204				IAmb	IAmb	00 28 30.6	
	comp=Z,5.4nm,0.8s						
NB201	**NORSAR Array S**	**73.12**	**337**	P	**P**	**00 28 30.0**	**+0.6**
NB201				IAmb	IAmb	00 28 42.7	
	comp=Z,5.0nm,0.9s						
NB2	**NORSAR Subarra**	**73.15**	**337**	P	**P**	**00 28 29.8**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.15**	**337**	P	**P**	**00 28 30.0**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=56,slow=5.9,SNR=12						
NOA				LR	LR	01 03 23.2	
	comp=Z,24nm,21.4s,baz=25,slow=38						
	comp=Z,1.4nm,0.6s						
NBO00	**NORSAR Array S**	**73.29**	**338**	P	**P**	**00 28 29.7**	**-0.7**
NBO00				IAmb	IAmb	00 28 44.4	
	comp=Z,8.5nm,1.1s						
AKASG	**Malin Array Be**	**73.57**	**322**	P	**P**	**00 28 31.7**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=46,slow=6.0,SNR=9.2						
	comp=Z,2.2nm,0.5s						
PDAR	**Pinedale Array**	**76.31**	**46**	P	**P**	**00 28 49.5**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=51,slow=52,SNR=2.3						
	comp=Z,0.2nm,0.5s						
BUR08	**Bucovina Ar. S**	**77.58**	**322**		**P**	**00 28 56.2**	**+0.8**
BURAR	**Bucovina Array**	**77.60**	**322**	P	**P**	**00 28 55.9**	**+0.5**
BRTR	**Keskin Array B**	**78.38**	**312**	P	**P**	**00 28 60.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=86,slow=3.2,SNR=4.4						
BRTR				LR	LR	01 07 16.8	
	comp=Z,16nm,19.9s,baz=104,slow=38						
	comp=Z,0.3nm,0.4s						
GERES	**GERESS Array B**	**81.85**	**328**	P	**P**	**00 29 18.4**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.2,SNR=6.5						
	comp=Z,0.4nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**85.03**	**329**		**P**	**00 29 35.4**	**+0.4**
SENIN	**Lac Senin/Sane**	**86.41**	**331**	P	**P**	**00 29 41.5**	**-0.3**
SENIN				IAmb	IAmb	00 29 50.0	
	comp=Z,3.3nm,1.1s						
ITM	**Ithomi**	**86.77**	**316**	P	**P**	**00 29 42.7**	**-0.8**
TXAR	**Lajitas Array**	**88.84**	**53**	P	**P**	**00 29 53.5**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=319,slow=5.0,SNR=1.7						
	comp=Z,0.1nm,0.5s						
QSPA	**South Pole Qui**	**128.14**	**180**	PKP	**PKPdf**	**00 36 03.7**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=147,slow=7.5,SNR=2.1						

*IDC **25** 00:22:21.0±4.5,23.°04N×94.°58E,h95km±40km,mb3.4/5, mbtmp3.7/6,Error ellipse: s-maj=120.9km s-min=17.7km az=58.0*
*NDI **25** 00:22:21.1±2.1,23.°12N×94.°34E,h90km,ML3.6,MW3.4, Presumed earthquake*
ISC 25 00:22:20.5±0.9,23.°09N±0.°08×94.°26E±0.°07,h105km,n19, σ2s31/28,mb3.6/5,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IMP	**Imphal**	**1.76**	**351**	*e*P		**Pn**	**00 22 50.7**	**+0.3**
IMP				*i* x		x	00 22 53.3	
IMP				*ex*		x	00 23 16.9	
MOKO	**MOKOCHONG**	**3.23**	**4**	*e*P		**Pn**	**00 23 09.7**	**+0.1**
SHL	**Shillong**	**3.28**	**319**	*e*P		**Pn**	**00 23 10.8**	**+0.4**
SHL				*e*S		**Sn**	**00 23 46.0**	**-2.8**
SHL				IAML			00 23 49.1	
	comp=E,272nm,0.1s							
SHL				IAML			00 23 49.1	
	comp=E,329nm,0.1s							
SHL				IAML			00 23 59.8	
	comp=E,424nm,0.1s							
SHL				IAML			00 23 59.8	
	comp=E,440nm,0.1s							
TEZP	**TEZPUR**	**3.76**	**340**	*e*P		**Pn**	**00 23 15.7**	**-0.8**
TEZP				*e*S		**Sn**	**00 23 55.6**	**-4.3**
TEZP				IAML			00 23 59.2	
	comp=E,249nm,0.1s							
TEZP				IAML			00 24 05.2	
	comp=E,308nm,0.2s							
GUWA	**GUWAHATI**	**3.88**	**323**	*e*P		**Pn**	**00 23 17.5**	**-0.6**
GUWA				IAML			00 24 01.7	
	comp=N,127nm,0.2s							
GUWA				IAML			00 24 01.8	
	comp=E,107nm,0.1s							
DHUB	**DHUBRI**	**4.86**	**308**	*e*P		**Pn**	**00 23 31.0**	**-0.4**
TAWA	**Tawang**	**4.98**	**335**	*e*P		**Pn**	**00 23 33.9**	**+0.5**
TAWA				*e*S		**Sn**	**00 24 27.2**	**-2.8**
CMAR	**Chiang Mai Arr**	**6.36**	**136**	P		**Pn**	**00 23 48.4**	**-3.4**
	comp=E,0.8nm,0.3s,baz=316,slow=13,SNR=4.2							
CMAR				S		**Sn**	**00 25 01.8**	**-1.1**
	comp=E,0.9nm,0.3s,baz=321,slow=25,SNR=1.4							
ODAN	**Odare**	**7.28**	**302**	Pn		**Pn**	**00 24 05.5**	**+1.1**
	baz=307,slow=0.0							
ODAN				Sn		**Sn**	**00 25 22.6**	**-3.0**
	comp=E,31nm,0.2s,baz=307,slow=0.0							
BOK	**Bokaro**	**7.72**	**277**	*e*S		**Sn**	**00 25 31.9**	**-4.1**
GUN	**Gumba**	**8.96**	**304**	Pn		**Pn**	**00 24 28.8**	**+1.4**
	baz=308,slow=0.0							
GUN				Sn		**Sn**	**00 26 04.6**	**-2.2**
	comp=E,32nm,0.3s,baz=308,slow=0.0							
PKI	**Pulchoki**	**9.16**	**301**	Pn		**Pn**	**00 24 30.4**	**+0.3**
	baz=304,slow=0.0							
PKI				Sn		**Sn**	**00 26 08.8**	**-2.9**
	comp=E,9.4nm,0.2s,baz=304,slow=0.0							
PKIN	**Phulchoki**	**9.18**	**301**	Pn		**Pn**	**00 24 30.9**	**+0.6**
	baz=304,slow=0.0							
PKIN				Sn		**Sn**	**00 26 09.1**	**-2.8**
	comp=E,17nm,0.3s,baz=304,slow=0.0							
KKN	**Kakani**	**9.37**	**302**	Pn		**Pn**	**00 24 34.2**	**+1.4**
	baz=305,slow=0.0							
KKN				Sn		**Sn**	**00 26 14.5**	**-1.9**
	comp=E,17nm,0.2s,baz=305,slow=0.0							
MKAR	**Makanchi Array**	**25.55**	**341**	P		**P**	**00 27 42.1**	**+2.7**
	comp=E,0.6nm,0.5s,baz=150,slow=11,SNR=7.6							
	comp=E,0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**30.10**	**340**	P		**P**	**00 28 24.4**	**+4.5**
	comp=E,0.2nm,0.3s,baz=144,slow=9.1,SNR=1.5							
	comp=E,0.2nm,0.3s							
WRA	**Warramunga Arr**	**57.95**	**134**	P		**P**	**00 32 01.9**	**-0.4**
	comp=E,0.2nm,0.3s,baz=321,slow=7.4,SNR=6.6							
	comp=E,0.2nm,0.3s							
ASAR	**Alice Springs**	**60.36**	**138**	P		**P**	**00 32 19.1**	**+0.3**
	comp=E,0.2nm,0.4s,baz=324,slow=7.1,SNR=6.6							
	comp=E,0.2nm,0.4s							
HFS	**Hagfors**	**65.60**	**327**	P		**P**	**00 32 54.2**	**+1.3**
	comp=E,6.7nm,1.1s,baz=77,slow=6.5,SNR=2.6							
	comp=E,6.7nm,1.1s							

*NNC **25** 00:25:49.8±8.0,37.°09N×70.°09E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=65.9km s-min=49.6km az=164.0*
ISC 25 00:25:45.0±1.7,36.°44N±0.°10×70.°5E±0.°2,h100km,n7, σ2s70/12,2C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TSSA	**Tissa**	**5.87**	**126**	*e*P		**Pn**	**00 27 12.2**	**+2.4**
TSSA				*e*S		**Sn**	**00 28 14.1**	**-1.7**
TSSA				IAML			00 28 17.2	
	comp=E,37nm,0.1s							
TSSA				IAML			00 28 32.9	
	comp=E,32nm,0.3s							
THN	**Thein Dam**	**5.89**	**131**	*e*P		**Pn**	**00 27 12.3**	**+2.5**
THN				*e*S		**Sn**	**00 28 17.0**	**+1.1**
THN				IAML			00 28 17.9	
	comp=E,51nm,0.3s							
THN				IAML			00 28 18.6	
	comp=N,38nm,0.2s							
KK31	**Karatay Array**	**6.66**	**0**	P		**Pn**	**00 27 20.8**	**+0.6**
	comp=N,1.2nm,0.3s,baz=186,slow=13,SNR=70							
KK31				⇓S		**Sn**	**00 28 31.7**	**-2.9**
	comp=N,5.8nm,0.4s,baz=186,slow=26							
AAK	**Ala-Archa**	**6.92**	**25**	⇑P		**Pn**	**00 27 26.0**	**+2.2**
	comp=N,0.5nm,0.4s,baz=186,slow=13							
AAK				⇑S		**Sn**	**00 28 41.2**	**+0.1**
	comp=N,1.6nm,0.5s,baz=186,slow=13							
SMLA	**Simla**	**7.66**	**132**	*e*P		**Pn**	**00 27 34.3**	**+0.5**
SMLA				*e*S		**Sn**	**00 28 56.1**	**-2.9**
SMLA				IAML			00 28 59.0	
	comp=E,21nm,0.2s							
SMLA				IAML			00 29 13.5	
	comp=E,29nm,0.4s							
KLP	**Kalpa**	**8.07**	**125**	*e*S		**Sn**	**00 29 04.4**	**-5.2**
AB31	**Akbulak array**	**14.95**	**332**	P		**P**	**00 29 13.1**	**-1.0**
	comp=E,0.6nm,0.6s,baz=186,slow=13,SNR=16							

*SJA **25** 00:26:02.0±0.7,22.°30S×66.°05W,h279km,ML3.5,MW3.5*
ISC 25 00:26:04.1±2.4,22.°37S±0.°05×66.°8W±0.°2,h334km±24km, n19,σ1s14/35,3C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SALTA		**1.89**	**169**	*e*P		Pn	00 26 49.6	-4.1
PB09	**IPOC Station P**	**2.38**	**283**	*e*P		**Pn**	**00 26 57.3**	**+0.2**
PB09				*e*S		**S**	**00 27 40.3**	**+0.8**
PB09				*e*S		S	00 27 44.1	+4.5
PB06	**IPOC Station P**	**2.63**	**262**	*e*P		**Pn**	**00 26 59.9**	**+0.8**
PB06				*e*S		**S**	**00 27 44.1**	**+0.8**
PB06				IAML			00 27 46.9	
	comp=Z,30nm,0.1s							
PB03	**IPOC Station P**	**2.80**	**276**	*e*P		**Pn**	**00 27 01.7**	**+1.0**
PB03				*e*S		**S**	**00 27 45.4**	**-0.6**
PB03				IAML			00 27 46.5	
	comp=Z,78nm,0.1s							
PB03	**IPOC Station P**	**2.80**	**276**	⇑*i*P		**Pn**	**00 27 01.0**	**+0.3**
PB03				*i* S		**S**	**00 27 44.5**	**-1.6**
PB03				IAML			00 27 46.9	
	comp=N,106nm,0.1s							
PB07	**IPOC Station P**	**2.98**	**282**	*e*P		**Pn**	**00 27 03.3**	**+0.9**
PB07				*e*S		**S**	**00 27 48.5**	**-0.5**
PB07				IAML			00 27 50.4	
	comp=Z,42nm,0.1s							
PB07	**IPOC Station P**	**2.98**	**282**	⇑*i*P		**Pn**	**00 27 03.1**	**+0.8**
PB07				*i* S		**S**	**00 27 47.4**	**-1.6**
PB02	**IPOC Station P**	**3.10**	**289**	*e*P		**Pn**	**00 27 04.2**	**+0.8**
PB02				*e*S		**S**	**00 27 50.5**	**-0.4**
PB02				IAML			00 27 51.7	
	comp=Z,126nm,0.2s							
PB08	**IPOC Station P**	**3.15**	**314**	*e*P		**Pn**	**00 27 04.6**	**+0.4**
PB08				*e*S		**S**	**00 27 51.5**	**-0.8**
PB08				IAML			00 27 52.5	
	comp=Z,28nm,0.2s							
PB05	**IPOC Station P**	**3.23**	**261**	*e*P		**Pn**	**00 27 05.8**	**+1.2**
PB05				*e*S		**S**	**00 27 53.6**	**+0.5**
PB05				IAML			00 27 55.0	
	comp=Z,21nm,0.2s							
GO01	**Chusmiza**	**3.52**	**319**	*e*P		**Pn**	**00 27 08.6**	**+0.7**
PB11	**IPOC Station P**	**3.75**	**313**	*e*P		**Pn**	**00 27 10.3**	**+0.5**
PB11				*e*S		**S**	**00 28 01.1**	**-1.6**
PB11	**IPOC Station P**	**3.75**	**313**	⇑*i*P		**Pn**	**00 27 09.9**	**+0.1**
PB11				*i* S		**S**	**00 28 00.5**	**-2.3**
PB14	**IPOC Station P**	**4.04**	**235**	*e*P		**Pn**	**00 27 14.2**	**+1.3**
PB14				*e*S		**S**	**00 28 07.7**	**-0.5**
PSGCX	**Pisagua**	**4.19**	**311**	*e*P		**Pn**	**00 27 15.0**	**+0.7**
PSGCX				*e*S		**S**	**00 28 09.6**	**-1.2**
PB16	**IPOC Station P**	**4.77**	**327**	*e*P		**Pn**	**00 27 22.5**	**+1.4**
PB16				*e*S		**S**	**00 28 24.0**	**+0.8**
PB16				*e*S		S	00 28 25.1	+1.9
AC02	**Maricunga**	**4.95**	**205**	*e*P		**Pn**	**00 27 23.2**	**+0.3**
AC02				*e*S		**S**	**00 28 24.6**	**-1.8**
PB12	**IPOC Station P**	**5.02**	**317**	*e*P		**Pn**	**00 27 24.3**	**+0.9**
PB12				*e*S		**S**	**00 28 25.1**	**-2.2**
AC01	**Pan de Azucar**	**5.15**	**222**	*e*P		**Pn**	**00 27 25.4**	**+0.8**
AC01				*e*S		**S**	**00 28 28.2**	**-1.5**

IDC 25 00:30:15.1±9.2,6.°09S×156.°31E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=283.6km s-min=43.8km az=110.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**25.41**	**235**	P		P	00 35 44.9	+0.4
	0.3nm,0.4s,baz=60,slow=9.0,SNR=2.3							
	0.3nm,0.4s							
H11S3	**WAKE ISLAND Hy**	**26.49**	**23**	T		T	01 04 31.0	
	baz=201,slow=75,SNR=32							
H11S2	**WAKE ISLAND Hy**	**26.49**	**23**	T		T	01 04 31.6	
	baz=201,slow=75,SNR=31							
H11S1	**WAKE ISLAND Hy**	**26.50**	**23**	T		T	01 04 31.5	
	baz=201,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**27.68**	**22**	T		T	01 06 00.8	
	baz=202,slow=76,SNR=3.5							
H11N3	**WAKE ISLAND Hy**	**27.69**	**22**	T		T	01 06 02.7	
	baz=202,slow=76,SNR=3.9							
H11N2	**WAKE ISLAND Hy**	**27.69**	**22**	T		T	01 06 03.3	
	baz=202,slow=76,SNR=2.3							
ASAR	**Alice Springs**	**27.75**	**229**	P		P	00 36 05.4	-0.3
	0.2nm,0.3s,baz=61,slow=9.6,SNR=4.2							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**83.60**	**318**	P		P	00 42 45.5	0.0
	0.7nm,0.7s,baz=92,slow=4.4,SNR=5.6							
	0.7nm,0.7s							

*IDC **25** 01:33:53.6±0.4,30.°66N×41.°78W,h0km,mb4.6/37, mbtmp4.6/37,MS4.4/78,Error ellipse: s-maj=12.7km s-min=10.0km az=148.0*
*MOS **25** 01:33:54.0±0.9,30.°78N×41.°79W,h10km,mb5.4/65,Error ellipse: s-maj=7.1km s-min=4.3km az=51.4*
*BJI **25** 01:33:54.0,30.°80N×41.°80W,h8km,mb5.0/11,Ms5.0/7, Ms7 4.7/5*
*GFZ **25** 01:33:56.1,30.°67N×41.°73W,h11km,Mw5.2/89,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-5.44; Mθθ2.04; Mϕϕ3.40; Mrθ-0.65; Mθϕ2.16; Mϕr-5.62; Fault plane solution: M0 7.69836×10¹⁶ NP1: ϕs228.72631°,δ24.42103°,λ-59.76812°. NP2:ϕs16.10624°, δ69.07112°,λ-102.87770°. Principal axes: T 7.1016, Plg23.0328°, Azm115.9664°; N 1.0795, Plg12.0149°, Azm20.7750°; P -8.1811, Plg63.6925°, Azm265.2767°;*
*NEIC **25** 01:33:56.1±1.9,30.°76N±0.°09×41.°8W±0.°1,h10km±1km, mb5.3/623,Mww5.3/32 Error ellipse: s-maj=16.0km s-min=14.4km az=155.0*
*NEIC **25** 01:33:56.5,31.°06N×41.°79W,h12km,Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10¹⁷Nm; Mrr-0.47; Mθθ0.17; Mϕϕ0.31; Mrθ-0.41; Mθϕ0.18; Mϕr-0.91; Fault plane solution: M0 1.10000×10¹⁷ NP1:*
ϕs220.45000°,δ12.41000°,λ-75.34000°. NP2:ϕs25.45000°, δ78.00000°,λ-93.19000°. Principal axes: T 1.0699, Plg33.0000°, Azm118.0000°; N 0.0567, Plg3.0000°, Azm26.0000°; P -1.1266, Plg57.0000°, Azm291.0000°;
*NEIC **25** 01:33:56,30.°76N×41.°79W,h10km*
*GFZ **25** 01:33:57.0±0.4,31.°N±8.°×42.°W±5.°,h10km,M4.9/25, mb5.0/25*
*INMG **25** 01:33:57.0±7.4,30.°56N×41.°84W,h10km,mb5.2,Ms4.3, MW5.0,#DIST_RANGE: DISTANT*
*GCMT **25** 01:33:58.1±0.1,30.°80N±0.°01×41.°70W±0.°01,h12km, MW5.1/142,Moment Tensor Solution. s51,c66; s142,c235; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-6.26±.08; Mθθ1.43±.09; Mϕϕ4.83±.07; Mrθ2.02±.34; Mθϕ2.11±.07; Mϕr-1.50±.24; Best double couple: M06.47500×10¹⁶ NP1:ϕs222.00000°,δ45.00000°, λ-64.00000°. NP2:ϕs8.00000°,δ50.00000°,λ-114.00000°. Principal axes: T 5.8610, Plg3.0000°, Azm114.0000°; N 1.2290, Plg18.0000°, Azm24.0000°; P -7.0900, Plg72.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 01:33:56.2±0.3,30.°66N±0.°05×41.°90W±0.°04,h15km, n1030,σ1s36/741,mb5.2/436,MS4.4/98,11C-17D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CALA	**Caldeira**	**13.43**	**50**	*e*P		**Pn**	**01 37 10.6**	**+4.3**
CALA				*i* IAmb		IAmb	01 37 22.5	
	260nm,1.7s							
CALA				*e*S		**S**	**01 40 00.6**	**+1.5**
HOR	**Horta**	**13.45**	**51**	*e*P		**P**	**01 37 12.4**	**-3.3**
HOR				*i* IAmb		IAmb	01 37 22.8	
	246nm,2.1s							
HOR				*e*S		S	01 40 10.6	+11
PCED	**Cedros**	**13.46**	**50**	*e*P		**Pn**	**01 37 11.0**	**+4.5**
PCED				*i* IAmb		IAmb	01 37 22.9	
	183nm,1.8s							
PCED				*e*S		**S**	**01 40 03.8**	**+4.3**
PCAN	**Candelaria**	**13.51**	**51**	*e*P		**P**	**01 37 13.3**	**-3.2**
PCAN				*i* IAmb		IAmb	01 37 27.6	
	214nm,1.9s							
PCAN				*e*S		S	01 40 11.4	+11
PICO	**Pico**	**13.57**	**51**	*e*P		**P**	**01 37 13.5**	**-3.8**
PICO				*i* IAmb		IAmb	01 37 31.0	
	200nm,1.8s							
PICO				*e*S		S	01 40 15.1	+13
PPNO	**Prainha do Nor**	**13.67**	**52**	*e*P		**Pn**	**01 37 13.3**	**+3.8**
PPNO				*i* IAmb		IAmb	01 37 30.2	
	194nm,1.6s							
PPNO				*e*S		S	01 40 21.0	+17
ROSA	**Rosais**	**13.81**	**51**	*e*P		**P**	**01 37 16.0**	**-3.7**
ROSA				*i* IAmb		IAmb	01 37 34.1	
	304nm,1.6s							
ROSA				*e*S		S	01 40 24.6	+18
PMAN	**Manadas**	**13.87**	**51**	*e*P		**P**	**01 37 20.8**	**+0.4**
PMAN				*i* IAmb		IAmb	01 37 36.7	
	246nm,1.7s							
PMAN				*e*S		S	01 40 28.7	+21
SRBC	**Serra Branca**	**14.11**	**50**	*e*P		**Pn**	**01 37 18.6**	**+3.1**
SRBC				*i* IAmb		IAmb	01 37 35.0	
	594nm,1.5s							
SRBC				*e*S		**S**	**01 40 16.2**	**+3.3**
PGRA	**Graciosa**	**14.14**	**50**	*e*P		**P**	**01 37 20.6**	**-2.9**
PGRA				*i* IAmb		IAmb	01 37 38.3	
	348nm,1.9s							
PGRA				*e*S		**S**	**01 40 17.1**	**+3.5**
PSCRZ	**Santa Cruz da**	**14.16**	**50**	*e*P		**Pn**	**01 37 18.9**	**+2.8**
PSCRZ				*i* IAmb		IAmb	01 37 37.2	
	264nm,1.9s							
PSBA	**Serra de Santa**	**14.45**	**52**	*e*P		**Pn**	**01 37 22.4**	**+2.2**
PSBA				*i* IAmb		IAmb	01 37 27.4	
	107nm,1.6s							
ADH	**Angra Heroismo**	**14.46**	**53**	*e*P		**Pn**	**01 37 21.9**	**+1.6**
ADH				*i* IAmb		IAmb	01 37 36.3	
	104nm,1.8s							
ADH				*e*S		S	01 40 34.3	+14
PAGU	**Agualva, Azore**	**14.55**	**52**	*e*P		**Pn**	**01 37 23.0**	**+1.5**
PAGU				*i* IAmb		IAmb	01 37 37.5	
	114nm,1.8s							
PAGU				*e*S		S	01 40 32.7	+11
PSCM	**Serra do Cume**	**14.56**	**53**	*e*P		**Pn**	**01 37 23.9**	**+2.3**
PSCM				*i* IAmb		IAmb	01 37 36.7	
	88nm,1.4s							
PSET	**Sete Cidades**	**15.16**	**58**	*e*P		**Pn**	**01 37 31.9**	**+2.1**
PSET				*i* IAmb		IAmb	01 37 44.1	
	124nm,1.9s							
PDA	**Ponta Delgada**	**15.17**	**58**	*e*P		**P**	**01 37 36.4**	**+1.5**
PDA				*i* IAmb		IAmb	01 37 45.1	
	220nm,1.9s							
POVGA	**Lagoa**	**15.23**	**58**	*e*P		**P**	**01 37 38.6**	**+3.1**
POVGA				*i* IAmb		IAmb	01 37 49.5	
	93nm,2.0s							
CMLA	**Cha da Macela**	**15.28**	**58**	*e*P		**P**	**01 37 39.9**	**+3.8**
CMLA				*i* IAmb		IAmb	01 37 49.5	
	202nm,1.9s							
CMLA	**Cha da Macela**	**15.28**	**58**	P		**Pn**	**01 37 29.5**	**-1.9**
CMLA				pmax		pmax		
	comp=Z,18nm,0.6s							
CMLA	**Cha da Macela**	**15.28**	**58**			**Pn**	**01 37 29.5**	**-1.9**
CMLA	**Cha da Macela**	**15.28**	**58**	P		**Pn**	**01 37 33.6**	**+2.3**
PCALD	**Caldeiras da R**	**15.32**	**58**	*e*P		**Pn**	**01 37 26.8**	**-5.1**
PSMN	**Pico do Norte,**	**15.35**	**61**	*e*P		**P**	**01 37 42.1**	**+5.2**

HRV pmax pmax
comp=Z,67nm,1.6s
HRV Adam Dziewonsk 26.45 305 P **P** **01 39 33.1 +0.6**
HRV Adam Dziewonsk 26.45 305 P **P** **01 39 35.4 +2.8**
D62A Allapoint, All 26.57 316 P **P** **01 39 32.0 -1.5**
D62A IAmb IAmb 01 39 43.2
comp=Z,82nm,1.5s
G62A West of Eustis 26.68 311 **P** **01 39 31.7 -2.9**
I62A Tamworth 26.73 308 **P** **01 39 34.3 -0.7**
L61B Northampton 27.23 304 IAmb IAmb 01 39 47.7
comp=Z,86nm,1.7s
LBNH Lisbon 27.25 308 IAmb IAmb 01 39 48.2
comp=Z,118nm,1.7s
MDP Montagnes des 27.36 204 LR LR 01 48 01.1
comp=Z,530nm,21.4s,baz=12,slow=31
PMAFR Mafra 27.92 64 *eP* **P** **01 39 47.8 +2.1**
PLOUS Minas do Lousa 28.50 66 *eP* **P** **01 39 50.6 -0.2**
PLOUS *i* IAmb IAmb 01 39 54.1
comp=Z,48nm,1.6s
MOE Montemor 28.59 65 *eP* **P** **01 39 54.2 +2.5**
MOE *i* IAmb IAmb 01 39 57.2
comp=Z,43nm,1.3s
MESJ Messejana 28.64 66 *eP* **P** **01 39 51.5 -0.7**
MESJ IAmb IAmb 01 39 58.7
comp=Z,70nm,1.6s
MESJ *eS* **S** **01 44 41.5 +1.2**
MESJ Messejana 28.64 66 *eP* **P** **01 39 51.6 -0.6**
MESJ *i* IAmb IAmb 01 40 04.3
comp=Z,58nm,1.6s
MESJ Messejana 28.64 66 *eP* **P** **01 39 51.5 -0.7**
MESJ *eS* **S** **01 44 41.5 +1.2**
PCAS Casmilo, Conde 28.67 62 *eP* **P** **01 39 50.9 -1.5**
PCAS *i* IAmb IAmb 01 40 03.8
comp=Z,54nm,2.1s
PMTG Montargil 28.75 64 *eP* **P** **01 39 57.3 +4.2**
PCVE Castro Verde 28.77 67 *eP* **P** **01 39 53.0 -0.2**
PCVE *i* IAmb IAmb 01 40 01.7
comp=Z,61nm,1.7s
MNTQ Montreal, Queb 28.81 310 IAmb IAmb 01 40 01.6
comp=Z,58nm,1.5s
PBDV Barranco-do-Ve 28.83 68 *eP* **P** **01 39 58.1 +4.3**
PBDV *i* IAmb IAmb 01 40 56.0
comp=Z,85nm,1.7s
EVO Evora 28.86 65 *eP* **P** **01 39 53.0 -1.1**
EVO *i* IAmb IAmb 01 39 56.6
comp=Z,35nm,1.8s
PSARD Sardoal 28.86 63 *eP* **P** **01 39 58.1 +4.0**
PARRA Arraiolos 28.87 64 *eP* **P** **01 39 53.0 -1.1**
PARRA *i* IAmb IAmb 01 40 02.0
comp=Z,44nm,1.5s
PBEJ Beja 28.93 66 *eP* **P** **01 39 54.1 -0.7**
PBEJ *i* IAmb IAmb 01 40 01.8
comp=Z,67nm,1.5s
PVAQ Vaqueiros 29.01 67 *eP* **P** **01 39 54.8 -0.6**
PVAQ *i* IAmb IAmb 01 40 03.2
comp=Z,66nm,1.7s
PVAQ *eS* **S** **01 44 53.4 +7.3**
PVAQ *i* IAMs_20 IAMs_20 01 48 42.3
comp=Z,2µm,20.0s
PGAV Gavieira, Arco 29.18 58 *eP* **P** **01 39 56.3 -0.8**
PGAV *i* IAmb IAmb 01 40 20.4
comp=Z,47nm,1.7s
PGAV *i* IAMs_20 IAMs_20 01 48 37.5
comp=Z,544nm,20.0s
PVIS Viseu 29.23 61 *eP* **P** **01 39 54.1 -3.4**
PCAB Cabril 29.31 58 *eP* **P** **01 39 56.6 -1.5**
PCAB *i* IAmb IAmb 01 40 06.6
comp=Z,41nm,1.6s
POLO Lamas de Olo 29.42 59 *eP* **P** **01 39 57.4 -1.7**
POLO *i* IAmb IAmb 01 40 31.9
comp=Z,23nm,1.5s
PCBR Castelo Branco 29.42 62 *eP* **P** **01 39 58.0 -1.1**
PCBR *i* IAmb IAmb 01 40 09.0
comp=Z,37nm,1.2s
PMRV Marv??o 29.43 63 *eP* **P** **01 39 57.9 -1.3**
PMRV *i* IAmb IAmb 01 40 02.1
comp=Z,46nm,1.6s
PMRV *eS* **S** **01 45 00.4 +7.5**
PMRV *i* IAMs_20 IAMs_20 01 48 47.5
comp=Z,544nm,20.0s
MTE Manteigas 29.45 61 *eP* **P** **01 39 58.5 -0.9**
MTE *i* IAmb IAmb 01 40 17.2
comp=Z,57nm,1.8s
MTE *eS* **S** **01 44 59.5 +6.4**
MTE *i* IAMs_20 IAMs_20 01 48 58.1
comp=Z,634nm,20.0s
MVL Millersville 29.46 298 IAmb IAmb 01 40 07.6
comp=Z,86nm,1.9s
BINY Binghamton 29.56 302 IAmb IAmb 01 40 08.6
comp=Z,85nm,1.5s
BINY Binghamton 29.56 302 P **P** **01 40 02.5 +2.2**
PBAR Barrancos 29.59 66 *eP* **P** **01 39 60.0 -0.6**
PBAR *i* IAmb IAmb 01 40 17.9
comp=Z,30nm,1.4s
SCHQ Schefferville 30.01 331 P **P** **01 40 04.1 -0.1**
comp=Z,13nm,0.9s,baz=131,slow=9.6,SNR=12
SCHQ LR LR 01 51 50.7
comp=Z,1µm,18.6s,baz=131,slow=36
comp=Z,13nm,0.9s
SCHQ Schefferville 30.01 331 IAmb IAmb 01 40 10.8
comp=Z,53nm,1.2s
K57A Scipio Center 30.05 303 IAmb IAmb 01 40 12.7
comp=Z,68nm,1.5s
M57A Sunshine Farm, 30.24 300 IAmb IAmb 01 40 14.4
comp=Z,62nm,1.4s
PBRG Braganca 30.27 59 *eP* **P** **01 40 04.8 -1.9**
PBRG *i* IAmb IAmb 01 40 13.9
comp=Z,41nm,1.5s
R58B Mineral 30.46 294 IAmb IAmb 01 40 16.3
comp=Z,67nm,1.8s
L56A Greenwood 30.70 302 IAmb IAmb 01 40 18.5
comp=Z,107nm,1.9s
MMNY Mt. Morris Dam 31.06 303 IAmb IAmb 01 40 21.6
comp=Z,87nm,1.8s
IFR Ifrane 31.18 75 P **P** **01 40 14.6 -0.4**
V58A Windy Hill, Pi 31.42 289 IAmb IAmb 01 40 24.8
comp=Z,70nm,1.9s
Q56A Snyder Ridge, 31.55 296 IAmb IAmb 01 40 26.6
comp=Z,74nm,1.8s
MD01 Midelt array s 31.55 76 P **P** **01 40 16.0 -2.2**
EMAL Malaga-Limoner 31.62 69 P **P** **01 40 18.6 +0.1**
MDT Midelt 31.69 76 P **P** **01 40 18.2 -1.1**
comp=Z,1.7nm,0.6s,baz=290,slow=9.4,SNR=3.8
MDT LR LR 01 50 07.7
comp=Z,1µm,21.2s,baz=289,slow=31
comp=Z,1.7nm,0.6s
PAB San Pablo 31.79 63 P **P** **01 40 18.4 -1.7**
PAB pmax pmax
comp=Z,23nm,1.0s
PAB San Pablo 31.79 63 P **P** **01 40 18.4 -1.7**
ESDC Sonseca Array 32.10 63 P **P** **01 40 21.5 -1.3**
comp=Z,2.9nm,0.7s,baz=273,slow=8.9,SNR=28
ESDC LR LR 01 50 29.1
comp=Z,350nm,21.7s,baz=259,slow=31
comp=Z,2.9nm,0.7s
ESDC Sonseca Array 32.10 63 P **P** **01 40 21.8 -1.0**
VLDQ Val d'Or 32.18 313 IAmb IAmb 01 40 32.4
comp=Z,55nm,1.5s
R55A Marlinton 32.24 294 IAmb IAmb 01 40 33.1
comp=Z,78nm,2.0s
SADO Sadowa 32.35 306 LR LR 01 51 15.1
comp=Z,1µm,21.3s,baz=126,slow=32
SADO Sadowa 32.35 306 IAmb IAmb 01 40 32.2
comp=Z,46nm,1.5s
PAMR Moraine State 32.41 299 IAmb IAmb 01 40 38.9
comp=Z,46nm,1.4s
U56A King 32.44 291 IAmb IAmb 01 40 34.5
comp=Z,96nm,1.9s
ERPA Erie 32.48 301 IAmb IAmb 01 40 34.1
comp=Z,71nm,1.9s
O54A Avella 32.55 298 IAmb IAmb 01 40 35.1
comp=Z,83nm,1.7s
BUKO Buck Lake 32.69 307 IAmb IAmb 01 40 35.2
comp=Z,78nm,1.7s
UCM Universidad Co 32.70 62 P **P** **01 40 27.5 -0.5**
WMELI Melilla 32.85 71 P **P** **01 40 29.6 +0.3**
N53A Lisbon 32.96 299 IAmb IAmb 01 40 38.5
comp=Z,58nm,1.3s
V55A Taylorsville 33.13 290 IAmb IAmb 01 40 40.5
comp=Z,60nm,1.9s
BOAV Boa Vista 33.18 216 P **P** **01 40 31.2 -1.2**
BOAV IAmb IAmb 01 40 44.7
comp=Z,43nm,1.5s
BOAV Boa Vista 33.18 216 *eP* **P** **01 40 31.9 -0.4**
P53A Whipple 33.28 296 IAmb IAmb 01 40 41.0
comp=Z,81nm,1.9s

M52A Chesterland 33.42 300 IAmb IAmb 01 40 46.7
comp=Z,60nm,1.4s
U54A Nelsons Funny 33.59 291 IAmb IAmb 01 40 44.0
comp=Z,91nm,2.0s
N51A Ashland 34.13 299 IAmb IAmb 01 40 48.5
comp=Z,77nm,1.7s
ROSF Rostrenen 34.20 48 P **P** **01 40 40.3 -0.6**
CART Cartagena 34.35 67 IAmb IAmb 01 40 48.2
comp=Z,62nm,1.0s
CART Cartagena 34.35 67 P **P** **01 40 41.6 -0.8**
SDV Santo Domingo 34.46 237 LR LR 01 52 52.1
comp=Z,410nm,21.1s,baz=54,slow=33
SDV Santo Domingo 34.46 237 P **P** **01 40 44.8 +1.0**
SDV IAmb IAmb 01 40 53.2
comp=Z,48nm,0.9s
Q51A Peebles 34.78 295 IAmb IAmb 01 40 54.0
comp=Z,92nm,1.8s
NBPS Pedro II - PI 34.85 179 *eP* **P** **01 40 47.1 +0.1**
ATE Arette 34.88 58 P **P** **01 40 47.1 +0.2**
TZTN Tazewell 34.98 291 IAmb IAmb 01 40 56.2
comp=Z,78nm,1.8s
TZTN Tazewell 34.98 291 P **P** **01 40 49.3 +1.4**
ANGG Ammassalik, Gr 35.08 3 P **P** **01 40 47.2 -1.1**
ANGG Ammassalik, Gr 35.08 3 P **P** **01 40 47.2 -1.1**
GOGA Godfrey 35.18 286 P **P** **01 40 51.4 +1.8**
GOGA Godfrey 35.18 286 P **P** **01 40 52.0 +2.4**
TKL Tuckaleechee C 35.22 289 LR LR 01 52 27.7
comp=Z,1µm,21.3s,baz=85,slow=32
TKL Tuckaleechee C 35.22 289 IAmb IAmb 01 40 58.1
comp=Z,88nm,2.0s
R50A Paris 35.55 294 IAmb IAmb 01 41 01.1
comp=Z,60nm,1.5s
EBR Ebro Roquetas 35.57 62 P **P** **01 40 52.4 -0.5**
EBR Ebro Roquetas 35.57 62 P **P** **01 40 52.4 -0.5**
O49A Covington 35.58 297 IAmb IAmb 01 41 00.6
comp=Z,107nm,1.9s
MFF Saint Martin d 35.83 52 P **P** **01 40 54.9 -0.2**
T50A Nancy 35.99 292 IAmb IAmb 01 41 05.2
comp=Z,132nm,2.0s
O48B Farmland 36.21 297 IAmb IAmb 01 41 05.7
comp=Z,67nm,1.5s
E46A Sault Ste Mari 36.23 308 IAmb IAmb 01 41 06.2
comp=Z,48nm,1.5s
CEST Esterri de Car 36.26 59 P **P** **01 40 58.2 -0.7**
P48A Milroy 36.40 296 IAmb IAmb 01 41 07.1
comp=Z,74nm,2.0s
BORG Borgarnes 36.45 15 LR LR 01 52 00.6
comp=Z,363nm,21.7s,baz=224,slow=30
N47A Urbana 36.64 298 IAmb IAmb 01 41 09.5
comp=Z,76nm,1.6s
RCBR Riachuelo 36.73 170 LR LR 01 52 37.2
comp=Z,235nm,18.9s,baz=5.5,slow=31
SFJD Kangerlussuaq 36.75 354 LR LR 01 52 40.5
comp=Z,446nm,21.5s,baz=119,slow=31
CORI Orista 36.81 60 P **P** **01 41 02.0 -1.4**
EKA Eskdalemuir Ar 36.83 37 P **P** **01 41 03.0 -0.4**
comp=Z,2.8nm,0.7s,baz=239,slow=7.9,SNR=8.4
EKA LR LR 01 53 07.2
comp=Z,311nm,18.3s,baz=218,slow=31
comp=Z,2.8nm,0.7s
WCI Wyandotte Cave 37.10 294 P **P** **01 41 06.6 +0.6**
WCI pmax pmax
comp=Z,74nm,1.7s
WCI Wyandotte Cave 37.10 294 P **P** **01 41 06.6 +0.6**
WCI IAmb IAmb 01 41 14.1
comp=Z,74nm,1.6s
FRB Frobisher Bay 37.16 341 LR LR 01 54 13.1
comp=Z,475nm,21.4s,baz=141,slow=33
CLTN Cedars of Leba 37.25 290 IAmb IAmb 01 41 15.7
comp=Z,94nm,2.0s
ITTB Itaituba 37.25 203 *eP* **P** **01 41 08.0 +0.6**
BLO Bloomington 37.26 296 IAmb IAmb 01 41 15.2
comp=Z,103nm,1.9s
PRPB Parauapebas 37.40 193 *eP* **P** **01 41 09.2 +0.6**
SJAF Saint Jean de 37.45 59 P **P** **01 41 09.0 +0.1**
EJON La Jonquera 37.46 59 P **P** **01 41 09.2 +0.2**
Y49A Blount Mountai 37.56 287 IAmb IAmb 01 41 22.8
comp=Z,65nm,1.6s
V48A Smith Brothers 37.68 290 IAmb IAmb 01 41 19.2
comp=Z,80nm,1.8s
SFIN Lafayette 37.69 298 IAmb IAmb 01 42 28.0
comp=Z,31nm,0.4s
CLF Chambon-Foret 37.72 50 IAmb IAmb 01 41 18.1
comp=Z,73nm,1.0s
CLF Chambon-Foret 37.72 50 P **P** **01 41 11.1 0.0**
T47A Sharon Grove 37.81 292 IAmb IAmb 01 41 20.1
comp=Z,106nm,2.0s
MACA Manacapuru-AM 38.11 211 P **P** **01 41 14.8 +0.1**
MACA IAmb IAmb 01 41 22.7
comp=Z,34nm,0.8s
MACA Manacapuru-AM 38.11 211 *eP* **P** **01 41 15.7 +1.0**
L44A Lake County Fo 38.35 300 IAmb IAmb 01 41 24.3
comp=Z,87nm,1.1s
WVT Waverly 38.46 291 P **P** **01 41 18.4 +0.9**
WVT pmax pmax
comp=Z,115nm,1.9s
WVT Waverly 38.46 291 P **P** **01 41 18.4 +0.9**
WVT IAmb IAmb 01 41 25.5
comp=Z,115nm,1.9s
OLIL Olney 38.50 295 IAmb IAmb 01 41 25.8
comp=Z,142nm,1.8s
LOR Lormes 38.65 51 P **P** **01 41 18.4 -0.6**
SSB Saint Sauveur 38.87 55 P **P** **01 41 20.0 -0.9**
SSB pmax pmax
comp=Z,62nm,2.0s
SSB Saint Sauveur 38.87 55 P **P** **01 41 20.0 -0.9**
ILULI Ilulissat 38.96 355 P **P** **01 41 18.8 -2.4**
ILULI pmax pmax
comp=Z,27nm,0.6s
ILULI Ilulissat 38.96 355 P **P** **01 41 18.8 -2.4**
Z47A Carrollton 39.02 286 IAmb IAmb 01 41 30.8
comp=Z,92nm,1.5s
Q44A Meyer Farm, Va 39.20 295 IAmb IAmb 01 41 31.7
comp=Z,87nm,1.7s
S44A Carbondale 39.47 293 IAmb IAmb 01 41 34.0
comp=Z,98nm,1.4s
HICK Hickman 39.54 292 IAmb IAmb 01 41 35.5
comp=Z,111nm,1.2s
UCC Uccle 39.63 46 P **P** **01 41 25.9 -1.2**
UCC Uccle 39.63 46 *dP* **P** **01 41 25.9 -1.2**
comp=Z,17nm,1.1s
UCC Uccle 39.63 46 P **P** **01 41 25.9 -1.2**
DOU Dourbes 39.63 47 *dP* **P** **01 41 25.7 -1.4**
comp=Z,9.1nm,1.0s
SMTB Santa Maria do 39.67 189 *eP* **P** **01 41 27.8 +0.1**
ROSC El Rosal 39.88 236 P **P** **01 41 30.8 +0.7**
comp=Z,3.8nm,0.4s,baz=350,slow=1.4,SNR=4.9
ROSC LR LR 01 57 03.9
comp=Z,420nm,21.5s,baz=27,slow=35
comp=Z,3.8nm,0.4s
ROSC El Rosal 39.88 236 P **P** **01 41 30.1 +0.1**
BGES Gesves 40.00 47 *dP* **P** **01 41 29.3 -0.8**
comp=Z,12nm,1.0s
TBO Thunder Bay 40.02 311 IAmb IAmb 01 41 38.2
comp=Z,95nm,1.5s
RCHB Rochefort 40.04 47 *dP* **P** **01 41 29.1 -1.4**
comp=Z,9.1nm,1.1s
RCHB Rochefort 40.04 47 P **P** **01 41 29.4 -1.2**
BCLA Clavier 40.14 47 *dP* **P** **01 41 30.1 -1.2**
comp=Z,6.7nm,1.1s
GIMEL St. Georges / 40.20 53 P **P** **01 41 31.9 -0.1**
TEFE Tefe 40.32 217 *eP* **P** **01 41 34.0 +0.9**
BSTI Sart Tilman 40.34 47 *dP* **P** **01 41 32.6 -0.3**
comp=Z,3.5nm,1.0s
FVM French Village 40.37 294 IAmb IAmb 01 41 41.2
comp=Z,94nm,1.6s
I40A Norwalk 40.40 303 IAmb IAmb 01 41 41.3
comp=Z,78nm,1.6s
WLF Walferdange 40.54 48 P **P** **01 41 33.4 -1.3**
WLF pmax pmax
comp=Z,36nm,0.8s
WLF Walferdange 40.54 48 P **P** **01 41 33.4 -1.3**
WLF Walferdange 40.54 48 *dP* **P** **01 41 33.6 -1.1**
comp=Z,27nm,0.9s
WLF Walferdange 40.54 48 P **P** **01 41 34.0 -0.6**
N41A Harden Midland 40.55 298 P **P** **01 41 35.7 +0.8**
N41A IAmb IAmb 01 41 42.5
comp=Z,189nm,1.9s
BHOU Houvegnez 40.57 47 *dP* **P** **01 41 34.5 -0.4**
ISO Isola 40.58 57 P **P** **01 41 35.7 +0.5**
ISO Isola 40.58 57 P **P** **01 41 35.7 +0.5**
HGN Heimansgroeve 40.60 46 P **P** **01 41 34.8 -0.3**
MEM Membach 40.62 47 *dP* **P** **01 41 34.9 -0.4**
comp=Z,11nm,0.8s
BTNL Ternell 40.69 47 *dP* **P** **01 41 35.7 -0.2**
L40A Anamosa 40.81 300 IAmb IAmb 01 41 44.8
comp=Z,80nm,1.4s
T42A Van Buren 40.98 293 IAmb IAmb 01 41 46.0
comp=Z,81nm,1.4s
CCM Cathedral Cave 41.01 294 P **P** **01 41 39.3 +0.6**
CCM pmax pmax
comp=Z,150nm,2.0s
CCM Cathedral Cave 41.01 294 P **P** **01 41 39.3 +0.6**
CCM IAmb IAmb 01 41 46.3
comp=Z,150nm,1.9s
LCAR Lake Charles 41.14 291 IAmb IAmb 01 41 47.3
comp=Z,105nm,1.7s
E38A The Farm, Brul 41.23 307 IAmb IAmb 01 41 47.7
comp=Z,72nm,1.5s
WTSB Winterswijk 41.37 45 P **P** **01 41 41.3 -0.1**
SCO Scoresbysund 41.40 10 P **P** **01 41 41.8 +0.3**
SCO pmax pmax
comp=Z,56nm,1.3s
SCO Scoresbysund 41.40 10 P **P** **01 41 41.8 +0.3**
SCO IAmb IAmb 01 41 53.2
comp=Z,56nm,1.3s
SCO Scoresbysund 41.40 10 P **P** **01 41 42.2 +0.8**
BFO Black Forest 41.78 50 P **P** **01 41 43.7 -1.2**
SLE Schleitheim 41.83 51 P **P** **01 41 44.3 -1.1**
FCAR Ozark Folk Cen 41.94 291 IAmb IAmb 01 41 53.6
comp=Z,86nm,1.6s
SPMN Marine on St. 42.01 305 IAmb IAmb 01 41 54.4
comp=Z,71nm,1.7s
IBBN Ibbenburen 42.02 44 P **P** **01 41 46.7 0.0**
SUMG Summit 42.02 2 P **P** **01 41 45.3 -1.7**
SUMG pmax pmax
comp=Z,41nm,1.0s
SUMG Summit 42.02 2 P **P** **01 41 45.3 -1.7**
SUMG Summit 42.02 2 *i* P **P** **01 41 46.0 -1.0**
SUMG IAmb IAmb 01 41 53.0
comp=Z,40nm,1.0s
DBIC Dimbokro 42.12 117 P **P** **01 41 46.9 -1.1**
comp=Z,17nm,0.7s,baz=311,slow=8.3,SNR=19
DBIC LR LR 01 56 36.7
comp=Z,1µm,21.3s,baz=317,slow=32
comp=Z,17nm,0.7s
WHAR Wooly Hollow 42.16 290 IAmb IAmb 01 41 55.5
comp=Z,124nm,1.8s
UALR University of 42.28 289 IAmb IAmb 01 42 01.1
comp=Z,82nm,1.2s
SCIA State Center 42.30 300 IAmb IAmb 01 41 56.5
comp=Z,52nm,0.9s
I37A Lemond, Waseca 42.41 303 IAmb IAmb 01 41 58.0
comp=Z,98nm,1.5s
DAVOX Davos/Dischmat 42.70 53 P **P** **01 41 52.5 -0.2**
comp=Z,16nm,0.8s,baz=223,slow=8.4,SNR=4.9
DAVOX LR LR 01 56 54.0
comp=Z,282nm,19.8s,baz=254,slow=32
comp=Z,16nm,0.8s
X40A Basin Creek Fa 42.73 289 IAmb IAmb 01 42 00.2
comp=Z,98nm,1.9s
KEST Kesra 42.79 69 P **P** **01 41 52.9 -0.5**
comp=Z,10nm,0.9s,baz=231,slow=4.5,SNR=8.1
KEST LR LR 01 57 00.2
comp=Z,256nm,20.6s,baz=236,slow=32
comp=Z,10nm,0.9s
KEST Kesra 42.79 69 IAmb IAmb 01 42 00.3
comp=Z,85nm,1.2s
TAM Tamanrasset 42.82 89 P **P** **01 41 54.1 +0.2**
TAM pmax pmax
comp=Z,100nm,0.2s
TAM Tamanrasset 42.82 89 P **P** **01 41 54.1 +0.2**
SDBA SAO DESIDERIO 42.91 184 *eP* **P** **01 41 54.4 -0.1**
Z41A Richland Creek 42.92 287 IAmb IAmb 01 42 07.9
comp=Z,123nm,1.5s
EPLO Experimental L 42.97 311 IAmb IAmb 01 42 01.5
comp=Z,90nm,1.7s
MIAR Mount Ida 43.32 289 IAmb IAmb 01 42 05.7
comp=Z,90nm,1.7s
SNDB Serra Nova Dou 43.34 193 *eP* **P** **01 41 58.3 +0.5**
CLDB Colider 43.40 200 *eP* **P** **01 41 58.6 +0.3**
ODD1 Odda 43.47 33 *eP* **P** **01 41 59.7 +1.2**
ODD1 IAmb IAmb 01 42 08.3
comp=Z,66nm,1.6s
U38A Gravette 43.68 292 IAmb IAmb 01 42 07.8
comp=Z,94nm,1.4s
HYA Hoyanger 43.71 31 *eP* **P** **01 41 60.0 -0.4**
HYA IAmb IAmb 01 42 00.7
comp=Z,168nm,2.2s
TORD Torodi Ar. Bea 43.73 104 P **P** **01 41 59.2 -1.9**
comp=Z,7.2nm,1.0s,baz=305,slow=6.1,SNR=28
TORD LR LR 01 58 34.2
comp=Z,788nm,20.3s,baz=311,slow=34
comp=Z,7.2nm,1.0s
TORD Torodi Ar. Bea 43.73 104 P **P** **01 41 59.7 -1.4**
BRU2 Volcan 43.79 249 P **P** **01 42 03.6 +1.8**
BRU2 IAmb IAmb 01 42 15.8
comp=Z,59nm,1.2s
AGMN Agassiz Nation 44.26 309 IAmb IAmb 01 42 12.5
comp=Z,92nm,1.7s
JMIC Jan Mayen 44.35 15 LR LR 01 55 58.2
comp=Z,111nm,18.6s,baz=244,slow=30
ULM Lac du Bonnet 44.41 312 P **P** **01 42 05.7 -0.5**
comp=Z,6.0nm,0.8s,baz=95,slow=9.0,SNR=12
ULM LR LR 02 00 35.6
comp=Z,388nm,18.1s,baz=72,slow=36
comp=Z,6.0nm,0.8s
ULM Lac du Bonnet 44.41 312 IAmb IAmb 01 42 12.4
comp=Z,51nm,1.5s
SKAR Skarslia 44.51 33 *eP* **P** **01 42 06.5 -0.4**
SKAR IAmb IAmb 01 42 07.5
comp=Z,236nm,2.4s
NKC Novy Kostel 44.65 48 AMS AMS 01 58 30.0
comp=Z,700nm,15.2s
KULLO Kullorsuaq 44.67 354 *i* P **P** **01 42 07.7 -0.2**
KULLO IAmb IAmb 01 42 13.8
comp=Z,133nm,1.3s
ECSD EROS Data Cent 44.74 303 IAmb IAmb 01 42 16.2
comp=Z,63nm,1.8s
NATX Nacogdoches 44.77 286 P **P** **01 42 07.7 -1.5**
JTS Las Juntas de 44.78 252 LR LR 02 00 39.2
comp=Z,413nm,18.5s,baz=53,slow=36
KONO Kongsberg 44.81 34 P **P** **01 42 08.2 -1.0**
KONO pmax pmax
comp=Z,26nm,1.1s
KONO Kongsberg 44.81 34 *eP* **P** **01 42 08.7 -0.4**
KONO Kongsberg 44.81 34 P **P** **01 42 08.2 -1.0**
ILON Igloolik, Nuna 44.88 341 P **P** **01 42 06.1 -3.5**
ILON IAmb IAmb 01 42 15.6
comp=Z,40nm,1.1s
FCC Fort Churchill 44.90 324 P **P** **01 42 08.9 -1.0**
FCC pmax pmax
comp=Z,77nm,1.3s
FCC Fort Churchill 44.90 324 P **P** **01 42 08.9 -1.0**
FCC IAmb IAmb 01 42 17.4
comp=Z,77nm,1.3s
DBG Daneborg 45.08 8 *i* P **P** **01 42 11.5 +0.3**
DBG IAmb IAmb 01 42 23.6
comp=Z,46nm,1.9s
KSU1 Kansas State U 45.08 296 IAmb IAmb 01 42 18.3
comp=Z,38nm,0.8s
CLL Collm 45.09 46 *i* P **P** **01 42 10.1 -1.5**
CLL *i* 01 42 16.5
CLL *eS* **S** **01 48 51.0 +0.9**
CLL pmax pmax
comp=Z,16nm,1.0s
CLL Collm 45.09 46 P **P** **01 42 10.5 -1.1**
CLL Collm 45.09 46 P **P** **01 42 09.9 -1.7**
comp=Z,369nmcomp=Z,20nm,1.6s
CLL Collm 45.09 46 *i* P **P** **01 42 10.1 -1.5**
comp=Z,16nm,1.0s
CLL *i* x x 01 42 16.5
comp=Z,22nm,1.0s
CLL *i* x x 01 42 21.5
CLL *e*PP **PcP** **01 43 54.0 +1.9**
CLL *e*PPP PPP 01 44 32.0
CLL *e*PPPP 01 44 40.0
CLL *e*S **S** **01 48 51.0 +0.9**
CLL *e*SS **SS** **01 52 17.0 +4.9**
AQU L'Aquila 45.24 59 P **P** **01 42 10.9 -2.0**
KHC Kasperske Hory 45.31 50 *eP* **P** **01 42 12.7 -0.7**
KHC MLR MLR
comp=Z,200nm,15.4s
KHC Kasperske Hory 45.31 50 *eP* **P** **01 42 12.7 -0.7**
KHC AMS AMS 02 02 40.0
comp=Z,200nm,15.4s
KHC Kasperske Hory 45.31 50 P **P** **01 42 12.3 -1.1**
comp=Z,456nmcomp=Z,29nm,1.0s
GERES GERESS Array B 45.37 50 P **P** **01 42 12.2 -1.8**
comp=Z,6.1nm,0.7s,baz=256,slow=8.9,SNR=17
comp=Z,6.1nm,0.7s
DEOK Depew 45.46 292 IAmb IAmb 01 42 21.8

comp=Z,58nm,1.4s
JANB Januaria 45.51 183 *e*P **P** **01 42 14.3 -0.9**
OK051 E0350 and S346 45.62 293 P **P** **01 42 15.9 -0.1**
BRG Berggiesshubel 45.65 47 *e*P **P** **01 42 15.6 -0.4**
BRG Amp 01 42 17.6
comp=Z,10nm,1.1s
BRG Berggiesshubel 45.65 47 P **P** **01 42 20.5 +4.5**
BRG Amp 01 42 22.6
comp=Z,11nm,1.0s
PETF Flores 45.65 264 IAmb IAmb 01 42 24.1
comp=Z,65nm,1.3s
ZVC Zvikov 45.72 49 *e*P **P** **01 42 16.0 -0.6**
ZVC AMS AMS 02 00 30.0
comp=Z,300nm,18.2s
RICC Richard 45.72 48 AMS AMS 01 59 20.0
comp=Z,800nm,18.1s
CKRC Cesky Krumlov 45.77 50 AMS AMS 01 59 50.0
comp=Z,300nm,19.7s
PRU Pruhonice 45.98 48 AMS AMS 01 59 40.0
comp=Z,500nm,16.3s
NB2 NORSAR Subarra 45.98 33 P **P** **01 42 17.9 -0.6**
comp=Z,104nm,2.5s,baz=255,slow=8.6
NB2 NORSAR Subarra 45.98 33 P **P** **01 42 17.9 -0.6**
NOA NORSAR Array B 45.98 33 P **P** **01 42 17.4 -1.1**
comp=Z,3.8nm,0.9s,baz=254,slow=8.0,SNR=6.4
NOA LR LR 01 58 07.5
comp=Z,120nm,21.3s,baz=250,slow=32
comp=Z,3.8nm,0.9s
PVCC Panska Ves 46.02 48 AMS AMS 01 59 00.0
comp=Z,800nm,18.0s
OTAV Otavalo 46.02 236 P **P** **01 42 20.9 +1.0**
OTAV pmax pmax
comp=Z,27nm,1.2s
OTAV Otavalo 46.02 236 P **P** **01 42 20.9 +1.0**
OTAV IAmb IAmb 01 42 28.1
comp=Z,27nm,1.1s
NC303 NORSAR Array S 46.10 33 IAmb IAmb 01 43 20.0
comp=Z,27nm,1.1s
POIN Pond Inlet 46.17 346 P **P** **01 42 19.8 0.0**
POIN IAmb IAmb 01 42 31.4
comp=Z,38nm,1.4s
HKT Hockley 46.19 284 P **P** **01 42 22.6 +2.2**
OKCSW OKLAHOMA CITY 46.29 291 P **P** **01 42 22.0 +0.7**
MTO3 Montecristo 46.38 261 P **P** **01 42 24.1 +1.7**
MTO3 IAmb IAmb 01 42 33.4
comp=Z,32nm,1.0s
BDFB Brasilia 46.40 188 P **P** **01 42 23.2 +0.9**
comp=Z,9.6nm,0.7s,baz=2.8,slow=8.7,SNR=15
BDFB LR LR 01 59 33.3
comp=Z,357nm,18.3s,baz=346,slow=33
comp=Z,9.6nm,0.7s
BDFB Brasilia 46.40 188 P **P** **01 42 23.0 +0.7**
BDFB IAmb IAmb 01 42 35.1
comp=Z,24nm,1.2s
H10N2 ASCENSION HYDR 46.43 141 T T 02 31 49.5
baz=326,slow=75,SNR=1598
H10N3 ASCENSION HYDR 46.43 141 T T 02 31 49.8
baz=326,slow=75,SNR=1448
H10N1 ASCENSION HYDR 46.44 141 T T 02 31 37.9
baz=326,slow=75,SNR=1642
VAE Valguarnera 46.56 66 LR LR 01 59 47.6
comp=Z,898nm,19.9s,baz=341,slow=34
TREC Trest 46.56 49 AMS AMS 02 01 20.0
comp=Z,300nm,18.6s
BSD Bornholm Skovb 46.67 41 *i* P P 01 42 17.7 -6.2
BSD IAmb IAmb 01 42 20.8
comp=Z,18nm,0.9s
VILB Vilhena 46.80 205 P **P** **01 42 25.5 +0.1**
VILB IAmb IAmb 01 42 27.2
comp=Z,35nm,0.9s
VILB Vilhena 46.80 205 *e*P **P** **01 42 26.5 +1.2**
HFS Hagfors 46.93 34 P **P** **01 42 25.3 -0.6**
comp=Z,11nm,0.8s,baz=234,slow=6.6,SNR=14
HFS LR LR 01 59 07.9
comp=Z,225nm,19.6s,baz=226,slow=32
comp=Z,11nm,0.8s
UPC Upice 46.94 48 *e*P **P** **01 42 25.7 -0.5**
UPC MLR MLR
comp=Z,700nm,15.6s
UPC Upice 46.94 48 *e*P **P** **01 42 25.7 -0.5**
UPC AMS AMS 01 59 50.0
comp=Z,700nm,15.6s
CHVC Chvalec 46.97 48 AMS AMS 02 00 00.0
comp=Z,700nm,15.8s
APG El Apazote 47.03 262 LR LR 01 59 33.0
comp=Z,32nm,21.0s,baz=72,slow=33
NEEM North Greenlan 47.06 357 *i* P **P** **01 42 27.0 -0.1**
NEEM IAmb IAmb 01 42 33.4
comp=Z,36nm,1.0s
ARAG Araguaiana, MT 47.07 193 *e*P **P** **01 42 27.9 +0.4**
OSTC Ostas 47.07 48 *e*P **P** **01 42 26.7 -0.5**
OSTC MLR MLR
comp=Z,700nm,16.3s
OSTC Ostas 47.07 48 *e*P **P** **01 42 26.7 -0.5**
OSTC AMS AMS 02 00 00.0
comp=Z,700nm,16.3s
KSP Ksiaz 47.13 47 *e*P **P** **01 42 27.1 -0.5**
DPC Dobruska-Polom 47.13 48 *e*P **P** **01 42 27.1 -0.6**
DPC MLR MLR
comp=Z,500nm,18.1s
DPC Dobruska-Polom 47.13 48 *e*P **P** **01 42 27.1 -0.6**
DPC AMS AMS 01 59 30.0
comp=Z,500nm,18.1s
DPC Dobruska-Polom 47.13 48 P **P** **01 42 26.1 -1.6**
comp=Z,393nmcomp=Z,21nm,1.6s
KRUC Moravsky 47.15 50 *e*P **P** **01 42 25.4 -2.5**
ARCA Araçuai, MG 47.23 180 *e*P **P** **01 42 29.1 +0.4**
SOP Sopron 47.27 52 P **P** **01 42 27.3 -1.4**
H10S3 ASCENSION HYDR 47.27 142 T T 02 32 39.6
baz=326,slow=74,SNR=2248
H10S2 ASCENSION HYDR 47.28 142 T T 02 32 40.7
baz=254,slow=74,SNR=1806
VRAC Vranov 47.29 49 P **P** **01 42 27.8 -1.1**
comp=Z,6.1nm,0.8s,baz=265,slow=7.3,SNR=7.8
comp=Z,6.1nm,0.8s
VRAC Vranov 47.29 49 *e*P **P** **01 42 27.7 -1.2**
BLKN Baker Lake 47.40 331 IAmb IAmb 01 42 36.6
comp=Z,24nm,1.1s
KRLC Kraliky 47.42 48 *e*P **P** **01 42 29.8 -0.2**
KRLC MLR MLR
comp=Z,400nm,19.9s
KRLC Kraliky 47.42 48 *e*P **P** **01 42 29.8 -0.2**
KRLC AMS AMS 01 59 30.0
comp=Z,400nm,19.9s
DAG Danmarks Havn 47.46 7 P **P** **01 42 30.9 +1.1**
DAG Danmarks Havn 47.46 7 *i* P **P** **01 42 29.7 -0.1**
DAG IAmb IAmb 01 42 31.3
comp=Z,23nm,1.3s
WMOK Wichita Mounta 47.50 291 P **P** **01 42 31.6 +0.8**
WMOK Wichita Mounta 47.50 291 IAmb IAmb 01 42 42.6
comp=Z,46nm,1.3s
TULEG Thule 47.68 352 *i* P **P** **01 42 31.6 +0.1**
TULEG IAmb IAmb 01 42 33.3
comp=Z,221nm,1.7s
MODS Modra-Piesok 47.74 51 *e*P P 01 42 27.2 -5.2
MODS pmax pmax
comp=Z,13nm,1.1s
MODS Modra-Piesok 47.74 51 *e*P P 01 42 27.2 -5.2
SMOL Smolenice 47.84 50 *e*P **P** **01 42 32.4 -0.8**
MORC Moravsky Berou 47.91 49 P **P** **01 42 34.4 +0.6**
MORC Moravsky Berou 47.91 49 *e*P **P** **01 42 32.1 -1.7**
MPLH Magyarpolny 47.94 52 P **P** **01 42 32.1 -1.9**
comp=Z,133nm,0.9s
JAVC Velka Javorina 47.99 50 *e*P **P** **01 42 32.5 -2.0**
STEB Steborice 48.06 49 *e*P **P** **01 42 34.4 -0.5**
SALV Santo Antonio 48.15 198 *e*P **P** **01 42 36.5 +0.6**
CZSB Cruzeiro do Su 48.26 223 IAmb IAmb 01 43 32.8
comp=Z,24nm,0.7s
OKC Ostrava-Krasne 48.30 49 AMS AMS 02 01 30.0
comp=Z,300nm,18.0s
LEIR Leirfjorden 48.35 27 *e*P **P** **01 42 36.5 -0.3**
LEIR IAmb IAmb 01 42 42.9
comp=Z,25nm,0.9s
STOK Stokkvaagen 48.39 26 *e*P **P** **01 42 36.7 -0.4**
STOK IAmb IAmb 01 42 39.4
comp=Z,34nm,1.1s
SRO Srobarova 48.45 51 *e*P **P** **01 42 37.2 -0.7**
SRO pmax pmax
comp=Z,32nm,1.7s
SRO Srobarova 48.45 51 *e*P **P** **01 42 37.2 -0.7**
BRDY Brady 48.48 286 IAmb IAmb 01 42 45.8
comp=Z,34nm,1.2s
KONS Konsvik 48.48 26 *e*P **P** **01 42 37.6 -0.2**
KONS IAmb IAmb 01 42 39.6
comp=Z,47nm,1.2s
FFC Flin Flon 48.50 318 P **P** **01 42 38.2 0.0**
FFC pmax pmax
comp=Z,51nm,1.3s
FFC Flin Flon 48.50 318 P **P** **01 42 38.2 0.0**
FFC IAmb IAmb 01 42 45.5
comp=Z,51nm,1.3s
VAGH Vaagaholmen 48.61 26 *e*P **P** **01 42 38.5 -0.3**
VAGH IAmb IAmb 01 42 45.5
comp=Z,37nm,1.0s
DIAM Diamantina, MG 48.70 182 *e*P **P** **01 42 41.1 +0.9**
IPMB Ipameri, GO 48.74 188 *e*P **P** **01 42 40.3 -0.1**
PTLB Pontes e Lacer 48.75 202 *e*P **P** **01 42 41.1 +0.7**
MORH Mrgy, Hungar 48.75 54 P **P** **01 42 38.3 -1.9**
comp=Z,491nmcomp=Z,23nm,1.0s
VYHS Vyhne 48.77 50 *e*P **P** **01 42 38.4 -2.0**
VYHS pmax pmax
comp=Z,12nm,0.6s
VYHS Vyhne 48.77 50 *e*P **P** **01 42 38.4 -2.0**
RAUS Rausandaksla 48.81 26 *e*P **P** **01 42 40.1 -0.3**
RAUS IAmb IAmb 01 42 50.8
comp=Z,156nm,2.3s
BUD Budapest 48.94 52 P **P** **01 42 40.3 -1.4**
SJMB Sao Joao De Ma 49.08 179 *e*P **P** **01 42 43.5 +0.6**
BSFB Barra de Sao F 49.21 179 *e*P **P** **01 42 44.1 +0.1**
OJC Ojcow 49.36 48 *e*P **P** **01 42 44.2 -0.7**
OJC Ojcow 49.36 48 P **P** **01 42 43.9 -1.0**
OJC Ojcow 49.36 48 P **P** **01 42 43.5 -1.4**
comp=Z,343nmcomp=Z,19nm,1.9s
FAUS Fauske 49.57 25 *e*P **P** **01 42 46.0 -0.2**
FAUS IAmb IAmb 01 42 48.1
comp=Z,36nm,1.4s
SN07 Snyder 07 49.58 289 IAmb IAmb 01 42 54.2
comp=Z,38nm,1.4s
RIB01 Linhares ES 49.70 178 *e*P **P** **01 42 48.1 +0.4**
NIE Niedzica 49.71 49 P **P** **01 42 47.7 +0.1**
comp=Z,240nmcomp=Z,10nm,1.4s
STEI Steigen 49.73 25 *e*P **P** **01 42 47.2 -0.2**
STEI IAmb IAmb 01 42 53.7
comp=Z,154nm,2.2s
CMIG Matias Romero 49.88 267 LR LR 02 05 02.1
comp=Z,291nm,18.1s,baz=54,slow=37
SIV San Ignacio 49.91 204 LR LR 02 02 08.5
comp=Z,344nm,19.6s,baz=52,slow=34
RSSD Black Hills 50.05 304 P **P** **01 42 49.8 -0.7**
RSSD pmax pmax
comp=Z,23nm,1.6s
RSSD Black Hills 50.05 304 P **P** **01 42 49.8 -0.7**
POST Post 50.08 289 IAmb IAmb 01 42 57.6
comp=Z,34nm,1.0s
RTBA Rita Blanca 50.31 294 IAmb IAmb 01 42 59.9
comp=Z,62nm,1.6s
OZNA Ozona 50.33 286 IAmb IAmb 01 43 00.2
comp=Z,60nm,1.2s
129A Stewart Farms, 50.49 289 IAmb IAmb 01 43 05.9
comp=Z,36nm,1.3s
BBSD Serra de San D 50.86 203 *e*P **P** **01 42 56.8 +0.3**
TMB01 Midkiff 50.92 288 IAmb IAmb 01 43 09.2
comp=Z,15nm,1.2s
128A Castleberry Fa 51.00 289 IAmb IAmb 01 43 10.6
comp=Z,64nm,1.6s
RES Resolute Bay 51.18 344 LR LR 02 04 40.3
comp=Z,256nm,18.1s,baz=120,slow=36
RES Resolute Bay 51.18 344 P **P** **01 42 58.6 +0.4**
RES Resolute Bay 51.18 344 IAmb IAmb 01 43 05.3
comp=Z,41nm,1.1s
ODSA Odessa 51.18 288 IAmb IAmb 01 43 11.8
comp=Z,75nm,1.5s
KWP Kalwaria Pacla 51.27 49 *e*P **P** **01 42 59.4 +0.1**
KWP Kalwaria Pacla 51.27 49 P **P** **01 42 58.6 -0.7**
comp=Z,843nmcomp=Z,28nm,1.6s
ATAH Atahualpa 51.33 229 LR LR 02 04 31.0
comp=Z,358nm,21.3s,baz=17,slow=36
SAND Sanderson 51.43 286 IAmb IAmb 01 43 07.9
comp=Z,45nm,1.4s
TRO Tromso 51.52 23 *e*P **P** **01 43 00.6 -0.2**
TRO IAmb IAmb 01 43 11.8
comp=Z,78nm,1.4s
MNHN Monahans 51.56 287 IAmb IAmb 01 43 08.9
comp=Z,42nm,1.3s
ISCO Idaho Springs 51.87 299 P **P** **01 43 05.4 +1.1**
ISCO Idaho Springs 51.87 299 IAmb IAmb 01 43 12.6
comp=Z,50nm,1.9s
NOR Nord 51.94 5 *i* P **P** **01 43 03.3 -0.6**
NOR IAmb IAmb 01 43 09.9
comp=Z,28nm,1.2s
K22A Casper 52.05 302 IAmb IAmb 01 43 12.1
comp=Z,46nm,1.5s
TPB11 China Draw 52.44 289 IAmb IAmb 01 43 16.6
comp=Z,41nm,1.4s
ALE Alert 52.48 357 P **P** **01 43 07.3 -0.6**
AQDB Aquidauana 52.54 196 P **P** **01 43 09.8 +0.8**
COIM Forte Coimbra 52.54 199 *e*P **P** **01 43 09.9 +0.9**
TLIG Tlapa 52.85 269 IAmb IAmb 01 43 22.5
comp=Z,36nm,1.2s
KTK1 Kautokeino 52.86 24 *e*P **P** **01 43 09.6 -1.2**
KTK1 IAmb IAmb 01 43 21.4
comp=Z,57nm,1.7s
TXAR Lajitas Array 52.90 285 P **P** **01 43 12.7 +0.8**
comp=Z,3.1nm,0.9s,baz=99,slow=7.7,SNR=25
TXAR LR LR 02 04 22.4
comp=Z,249nm,20.7s,baz=80,slow=34
comp=Z,3.1nm,0.9s
TXAR Lajitas Array 52.90 285 P **P** **01 43 12.4 +0.5**
TX31 Lajitas Ar. Si 52.90 285 P **P** **01 43 12.5 +0.6**
TPB28 52.90 288 IAmb IAmb 01 43 20.3
comp=Z,37nm,1.4s
LPAZ La Paz 53.06 212 P **P** **01 43 14.0 +0.3**
comp=Z,5.4nm,0.9s,baz=16,slow=5.6,SNR=14
LPAZ LR LR 02 03 44.3
comp=Z,400nm,21.8s,baz=26,slow=34
comp=Z,5.4nm,0.9s
LPAZ La Paz 53.06 212 P **P** **01 43 13.4 -0.3**
LPAZ La Paz 53.06 212 *e*P **P** **01 43 14.0 +0.3**
BURAR Bucovina Array 53.11 51 P **P** **01 43 12.7 -0.5**
BURAR pmax pmax
comp=Z,13nm,1.1s
BURAR Bucovina Array 53.11 51 P **P** **01 43 12.7 -0.5**
FINES FINESS Array B 53.12 34 P **P** **01 43 12.0 -0.8**
comp=Z,6.3nm,0.7s,baz=228,slow=4.9,SNR=16
FINES LR LR 02 03 19.3
comp=Z,142nm,18.8s,baz=248,slow=33
comp=Z,6.3nm,0.7s
FIA1 FINESS Array S 53.12 34 P **P** **01 43 12.3 -0.6**
FIA1 IAmb IAmb 01 43 18.4
comp=Z,52nm,0.9s
RNPP8 Varash 53.15 47 P **P** **01 43 12.2 -1.0**
RNPP9 Sopachiv 53.16 46 P **P** **01 43 12.2 -1.2**
RNPP5 Staryi Chortor 53.18 47 P **P** **01 43 12.3 -1.2**
VOIR 53.28 54 P **P** **01 43 13.0 -1.5**
comp=Z,957nmcomp=Z,12nm,1.3s
OUL Oulu 53.31 29 P **P** **01 43 15.1 +0.9**
OUL pmax pmax
comp=Z,32nm,1.7s
VHRN Van Horn 53.55 287 IAmb IAmb 01 43 25.0
comp=Z,32nm,1.2s
ANMO Albuquerqu 53.60 293 LR LR 02 03 49.3
comp=Z,1µm,21.2s,baz=86,slow=33
ANMO Albuquerque 53.60 293 *ce*P **P** **01 43 18.0 +0.9**
ANMO pmax pmax
comp=Z,19nm,1.7s
ANMO Albuquerque 53.60 293 P **P** **01 43 18.4 +1.3**
ANMO IAmb IAmb 01 43 25.5
comp=Z,52nm,1.8s
ALQ Albuquerque 53.60 293 IAmb IAmb 01 43 31.0
comp=Z,31nm,1.5s
TASM ASL Pad, Albuq 53.60 293 IAmb IAmb 01 43 25.7
comp=Z,49nm,1.8s
TASM ASL Pad, Albuq 53.60 293 IAmb IAmb 01 43 25.7
comp=Z,49nm,1.8s
RLMT Red Lodge 53.62 306 IAmb IAmb 01 43 25.0
comp=Z,95nm,1.9s
ARA0 ARCESS Array S 53.75 24 *e*P **P** **01 43 14.6 -2.8**
ARA0 IAmb IAmb 01 43 22.6
comp=Z,18nm,0.9s
ARCES ARCESS Array B 53.75 24 P **P** **01 43 15.7 -1.7**
comp=Z,5.8nm,0.8s,baz=262,slow=6.0,SNR=12
comp=Z,5.8nm,0.8s
ARCES ARCESS Array B 53.75 24 P **P** **01 43 15.9 -1.5**
ARCES pmax pmax
comp=Z,14nm,0.9s
ARCES ARCESS Array B 53.75 24 P **P** **01 43 15.9 -1.5**
KMPD K-Podol'skiy 53.82 50 P **P** **01 43 16.0 -2.2**
SGF Sodankyl 53.82 26 P **P** **01 43 18.5 +0.6**
SGF pmax pmax
comp=Z,16nm,1.0s
SPITS Spitsbergen Ar 53.85 13 P **P** **01 43 18.3 +0.2**
comp=Z,6.4nm,0.9s,baz=268,slow=6.9,SNR=2.5
comp=Z,6.4nm,0.9s
MLR Muntele Rosu 53.90 54 P **P** **01 43 18.0 -1.1**
comp=Z,13nm,0.9s,baz=82,slow=8.7,SNR=3.6
MLR LR LR 02 06 39.6
comp=Z,237nm,18.1s,baz=267,slow=36
comp=Z,13nm,0.9s
MLR Muntele Rosu 53.90 54 P **P** **01 43 18.0 -1.1**
TRCB Terra Rica 54.13 192 P **P** **01 43 21.4 +0.7**
TRCB IAmb IAmb 01 43 22.1
comp=Z,31nm,0.8s
TRCB Terra Rica 54.13 192 *e*P **P** **01 43 21.6 +0.9**
MNK Minsk 54.14 42 *i* P **P** **01 43 19.5 -1.0**
comp=E,15nm,0.9s
MNK *i* P **P** **01 43 19.5 -1.0**
comp=N,34nm,1.0s
MNK *i* P **P** **01 43 19.5 -1.0**
comp=Z,60nm,0.8s,baz=274
MNK *i* PP **PP** **01 45 20.7 -1.2**
MNK *i* PPP PPP 01 46 28.1
MNK *i* S **S** **01 50 55.9 -0.6**
MNK *i* SS **SS** **01 54 37.8 0.0**
MNK *i* SSS SSS 01 56 33.2
MNK *i* LQ LQ 02 01 12.9
MNK *i* LR LR 02 07 53.0
MNK Minsk 54.14 42 *i* P **P** **01 43 19.4 -1.0**
MNK *i* 01 45 20.7
MNK *i* PPP PPP 01 46 28.1
MNK *i* S **S** **01 50 55.9 -0.6**
MNK *i* SS **SS** **01 54 37.8 0.0**
MNK *i* SSS SSS 01 56 33.2
MNK pmax pmax
comp=Z,60nm,0.8s
MNK pmax pmax
comp=N,34nm,1.0s
MNK pmax pmax
comp=E,15nm,0.9s
FRTB Fartura 54.19 189 *e*P **P** **01 43 21.8 +0.7**
PDAR Pinedale Array 54.23 303 P **P** **01 43 21.9 +0.2**
comp=E,7.8nm,0.8s,baz=80,slow=8.1,SNR=68
PDAR LR LR 02 05 27.1
comp=E,1µm,19.0s,baz=104,slow=35
comp=E,7.8nm,0.8s
Y22A Socorro 54.27 292 IAmb IAmb 01 43 30.5
comp=Z,55nm,1.3s
KEV Kevo 54.30 24 P **P** **01 43 21.9 +0.5**
KEV pmax pmax
comp=Z,78nm,1.9s
KEV Kevo 54.30 24 P **P** **01 43 21.9 +0.5**
KEV IAmb IAmb 01 43 23.5
comp=Z,78nm,1.9s
MI28 Mi28,Pidlybu 54.33 47 P **P** **01 43 19.7 -2.2**
VRI Vrincioaia 54.38 53 P **P** **01 43 20.9 -1.5**
comp=Z,20nm,1.6s
LUBAR Lubar, Ukraine 54.50 48 P **P** **01 43 21.2 -2.0**
MI29 MI29, Kamyanyy 54.50 47 P **P** **01 43 21.9 -1.2**
comp=Z,152nm,1.2s
PV12 Saucer Basin, 54.61 297 IAmb IAmb 01 44 37.4
comp=Z,28nm,1.3s
MVCO Mesa Verde 54.64 296 IAmb IAmb 01 43 33.1
comp=Z,59nm,1.6s
FLWY Flagg Ranch 54.81 305 IAmb IAmb 01 43 38.1
comp=Z,49nm,1.4s
LOHW Long Hollow 54.83 304 IAmb IAmb 01 43 33.4
comp=Z,57nm,1.5s
YHL Hebgen Lake 55.01 306 IAmb IAmb 01 43 35.4
comp=Z,52nm,1.4s
FXWY Fox Creek 55.12 304 IAmb IAmb 01 43 35.5
comp=Z,31nm,1.2s
SORM Soroca 55.13 50 P **P** **01 43 24.9 -2.8**
comp=Z,19nm,1.0s
VADS Vadso 55.15 23 *e*P **P** **01 43 27.1 -0.5**
VADS IAmb IAmb 01 43 33.7
comp=Z,41nm,1.1s
BOZ Bozeman (W) 55.19 307 P **P** **01 43 29.1 +0.7**
BOZ Bozeman (W) 55.19 307 IAmb IAmb 01 43 35.9
comp=Z,36nm,1.6s
AK20 Malin Array Si 55.19 47 P **P** **01 43 26.9 -1.2**
AK19 Malin Array Si 55.20 47 P **P** **01 43 26.9 -1.3**
AK21 Malin Array Si 55.21 47 P **P** **01 43 27.0 -1.3**
AK22 Malin Array Si 55.23 47 P **P** **01 43 27.2 -1.2**
AK17 Malin Array Si 55.23 47 P **P** **01 43 26.9 -1.5**
AK18 Malin Array Si 55.23 47 P **P** **01 43 26.9 -1.5**
AK15 Malin Array Si 55.27 47 P **P** **01 43 26.9 -1.8**
IDI Anoyia 55.28 66 LR LR 02 03 00.9
comp=Z,107nm,21.6s,baz=294,slow=32
AK11 Malin Array Si 55.30 47 P **P** **01 43 27.1 -1.8**
YKAW1 Yellowknife Wh 55.31 327 IAmb IAmb 01 43 35.5
comp=Z,29nm,1.1s
KIEV Kiev 55.32 47 P **P** **01 43 28.0 -1.1**
KIEV Kiev 55.32 47 P **P** **01 43 28.0 -1.1**
121A Cookes Peak, D 55.32 290 IAmb IAmb 01 43 42.8
comp=Z,43nm,1.6s
AKASG Malin Array Be 55.33 47 P **P** **01 43 27.5 -1.7**
comp=Z,12nm,0.8s,baz=279,slow=6.5,SNR=26
AKASG LR LR 02 05 26.0
comp=Z,486nm,18.2s,baz=269,slow=34
comp=Z,12nm,0.8s
AKASG Malin Array Be 55.33 47 *ce*P **P** **01 43 27.5 -1.7**
AKASG pmax pmax
comp=Z,13nm,0.8s
AKASG Malin Array Be 55.33 47 P **P** **01 43 27.3 -1.9**
AKASG IAmb IAmb 01 43 28.6
comp=Z,42nm,1.9s
AKBB Malin Array Si 55.33 47 *de*P **P** **01 43 27.6 -1.6**
AKBB pmax pmax
comp=Z,39nm,1.8s
AKBB Malin Array Si 55.33 47 P **P** **01 43 27.4 -1.7**
AKBB IAmb IAmb 01 43 34.8
comp=Z,24nm,1.1s
AKBB Malin Array Si 55.33 47 P **P** **01 43 27.1 -2.1**
HPIG 55.34 283 IAmb IAmb 01 43 38.0
comp=Z,53nm,1.2s
AK10 Malin Array Si 55.36 47 P **P** **01 43 27.5 -1.9**
YKA Yellowknife Ar 55.37 327 P **P** **01 43 29.3 +0.1**
comp=Z,4.5nm,0.8s,baz=90,slow=7.6,SNR=13
YKA LR LR 02 06 45.8
comp=Z,1µm,19.8s,baz=90,slow=36
comp=Z,4.5nm,0.8s
YKA Yellowknife Ar 55.37 327 P **P** **01 43 29.2 0.0**
SRU San Rafael Swe 55.73 299 IAmb IAmb 01 43 40.0
comp=Z,40nm,1.1s
DLMT Dillon 55.90 307 IAmb IAmb 01 43 41.2
comp=Z,63nm,1.4s
TCUT Toone Canyon 55.92 301 IAmb IAmb 01 43 45.6
comp=Z,64nm,1.3s
HWUT Hardware Ranch 55.93 302 IAmb IAmb 01 43 41.2
comp=Z,35nm,1.1s
Q16A Castle Valley 56.26 299 IAmb IAmb 01 43 44.2
comp=Z,47nm,1.4s
DUN6 Lazy B Ranch 56.37 291 IAmb IAmb 01 43 45.0
comp=Z,47nm,1.0s
PURM Purcari 56.42 52 P **P** **01 43 35.4 -1.6**
comp=Z,80nm,1.0s
APA Apatity 56.47 26 *e*P **P** **01 43 35.2 -1.8**
APA *e* 01 45 38.9
APA pmax pmax
comp=Z,14nm,0.9s
GO01 Chusmiza 56.50 211 P **P** **01 43 37.2 -1.1**
GO01 IAmb IAmb 01 43 48.7
comp=Z,57nm,1.2s
MSO Missoula 56.54 308 IAmb IAmb 01 43 45.4
comp=Z,41nm,1.4s
BCYI Bear Canyon 56.67 305 IAmb IAmb 01 43 47.4
comp=Z,46nm,1.5s
NLU North Lily Min 56.69 300 IAmb IAmb 01 43 47.3
comp=Z,57nm,1.3s
HVU Hansel Valley 56.77 302 IAmb IAmb 01 43 47.1
comp=Z,30nm,1.4s
LDM Libby Dam 57.16 311 IAmb IAmb 01 43 49.6
comp=Z,80nm,1.7s
BGU Big Grassy Mou 57.16 301 IAmb IAmb 01 43 50.0
comp=Z,63nm,1.6s
MANT Manisa 57.27 62 IAmb IAmb 01 43 45.1
comp=Z,25nm,0.9s
WUAZ Wupatki 57.32 295 IAmb IAmb 01 43 52.4
comp=Z,45nm,1.3s
U15A North Rim 57.78 296 IAmb IAmb 01 43 55.7
comp=Z,50nm,1.6s
TUC Tucson 57.81 291 P **P** **01 43 47.5 +0.3**
TUC pmax pmax
comp=Z,15nm,1.4s
TUC Tucson 57.81 291 P **P** **01 43 47.5 +0.3**
PLID Pearl Lake 58.31 307 IAmb IAmb 01 43 58.1
comp=Z,62nm,1.4s
NEW Newport 58.38 311 LR LR 02 08 28.3
comp=Z,374nm,18.4s,baz=80,slow=36

NEW Newport 58.38 311 P P 01 43 51.2 +0.3
PSUT Pine Spring 58.39 299 IAmb IAmb 01 43 59.9
comp=Z,47nm,1.5s
CPUP Villa Florida 58.56 196 P P 01 43 51.1 -1.1
comp=Z,2.8nm,0.8s,baz=5.8,slow=8.8,SNR=6.3
CPUP LR LR 02 06 51.8
comp=Z,136nm,21.6s,baz=42,slow=34
comp=Z,2.8nm,0.8s
CPUP Villa Florida 58.56 196 IAmb IAmb 01 44 10.3
comp=Z,37nm,1.9s
ELK Elko 58.83 302 LR LR 02 07 39.2
comp=Z,1µm,20.8s,baz=88,slow=34
ELK Elko 58.83 302 P P 01 43 55.3 +0.9
PB03 IPOC Station P 58.84 210 IAmb IAmb 01 44 04.8
comp=Z,46nm,1.2s
OBN Obninsk 59.05 41 P P 01 43 53.8 -1.5
comp=Z,18nm,0.5s,baz=56,slow=1.6,SNR=8.7
OBN LR LR 02 08 01.9
comp=Z,274nm,18.1s,baz=316,slow=35
comp=Z,18nm,0.5s
OBN Obninsk 59.05 41 *de*P P 01 43 54.5 -0.9
OBN *i* 01 44 01.0
OBN *e* 01 46 07.4
OBN *e*S S 01 52 00.1 -1.4
OBN *e*SS SS 01 55 54.1 -0.9
OBN pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 59.05 41 IAmb IAmb 01 43 57.5
comp=Z,44nm,0.6s
OBN Obninsk 59.05 41 P P 01 43 54.9 -0.5
comp=Z,941nmcomp=Z,64nm,1.8s
Y14A Wickenburg 59.07 294 IAmb IAmb 01 44 04.3
comp=Z,26nm,1.3s
A36M Sachs Harbour 59.12 339 P P 01 43 56.4 +0.8
baz=86
WRGLY Wrigley 59.36 329 IAmb IAmb 01 44 04.4
comp=Z,38nm,1.1s
WRGLY Wrigley 59.36 329 P P 01 43 57.5 +0.2
baz=82
E09A Wood Farm, Sta 59.44 309 IAmb IAmb 01 44 05.3
comp=Z,23nm,1.3s
MOS Moscow 59.53 40 *e*P P 01 43 56.1 -2.6
MOS *e* 01 44 43.0
MOS *e* 01 46 06.6
MOS *e*S S 01 52 00.4 -7.3
MOS *e* 01 53 41.3
MOS pmax pmax
comp=Z,91nm,1.8s
PRN Pahroc Range 59.62 298 IAmb IAmb 01 44 08.3
comp=Z,29nm,1.1s
LNOR Lincton Mounta 59.69 308 IAmb IAmb 01 44 07.2
comp=Z,30nm,1.2s
113A Mohawk Valley, 60.05 292 IAmb IAmb 01 44 10.8
comp=Z,29nm,1.3s
E08A Dider Farm, El 60.06 309 IAmb IAmb 01 44 10.2
comp=Z,57nm,1.6s
S11A Rachel 60.08 298 IAmb IAmb 01 44 11.6
comp=Z,40nm,1.3s
KOTAN Kotaneelee Air 60.12 325 P P 01 44 03.2 +0.5
baz=80
SLBS Sierra La Lagu 60.13 281 P P 01 44 05.0 +1.5
SLBS IAmb IAmb 01 44 17.0
comp=Z,50nm,1.4s
EPH Ephrata 60.20 310 IAmb IAmb 01 44 10.4
comp=Z,44nm,1.5s
LPIG La Paz 60.28 282 LR LR 02 08 45.0
comp=Z,262nm,20.8s,baz=42,slow=35
G08A Pilot Rock 60.29 308 IAmb IAmb 01 44 11.3
comp=Z,42nm,1.4s
BLYC Blythe 60.33 294 IAmb IAmb 01 44 12.8
comp=Z,27nm,1.5s
BMN Battle Mountai 60.37 302 IAmb IAmb 01 44 12.3
comp=Z,23nm,1.2s
E07A Sunnyside 60.57 309 IAmb IAmb 01 44 13.6
comp=Z,45nm,1.2s
MTPC Mountain Pass 60.58 296 IAmb IAmb 01 44 14.8
comp=Z,25nm,1.3s
TPNV Topopah Spring 60.67 298 IAmb IAmb 01 44 15.7
comp=Z,37nm,1.2s
IRM Iron Mountain 60.69 294 IAmb IAmb 01 44 15.4
comp=Z,28nm,1.3s
BR106 Keskin Array S 60.71 59 P P 01 44 06.2 -1.1
comp=Z,96nmcomp=Z,9.5nm,0.9s
BR105 Keskin Array S 60.72 59 P P 01 44 06.3 -1.0
comp=Z,117nmcomp=Z,12nm,0.8s
BR131 Keskin Array S 60.73 59 *d*P P 01 44 06.1 -1.3
BR131 Keskin Array S 60.73 59 IAmb IAmb 01 44 18.5
comp=Z,24nm,1.3s
BRTR Keskin Array B 60.73 59 P P 01 44 06.5 -0.9
comp=Z,5.3nm,0.8s,baz=276,slow=4.9,SNR=16
BRTR LR LR 02 10 07.7
comp=Z,149nm,18.0s,baz=292,slow=36
comp=Z,5.3nm,0.8s
BRTR Keskin Array B 60.73 59 P P 01 44 06.4 -1.0
BR104 Keskin Array S 60.74 59 P P 01 44 06.4 -1.0
comp=Z,100nmcomp=Z,11nm,0.9s
WVOR Wild Horse Val 60.83 304 P P 01 44 09.2 +1.2
WVOR Wild Horse Val 60.83 304 IAmb IAmb 01 44 15.7
comp=Z,40nm,1.4s
LPSR Galich'ya Gora 60.93 44 *e*P P 01 44 07.2 -1.1
LPSR pmax pmax
comp=Z,69nm,0.9s
I07A Izee 60.98 306 IAmb IAmb 01 44 16.6
comp=Z,22nm,1.3s
WCT Wildcat Mounta 61.00 298 IAmb IAmb 01 44 17.7
comp=Z,35nm,1.3s
GWY Greenwater Val 61.22 297 IAmb IAmb 01 44 23.7
comp=Z,35nm,1.4s
LIRD Liard River Hi 61.28 325 P P 01 44 10.7 +0.1
baz=78
VORR Voronezh 61.32 45 *e*P P 01 44 10.0 -1.0
VORR pmax pmax
comp=Z,45nm,0.5s
GMN Gold Mountain 61.33 298 P P 01 44 12.6 +1.0
GMN IAmb IAmb 01 46 14.6
comp=Z,16nm,0.5s
VSR Storozhevoye 61.41 45 *e*P P 01 44 09.1 -2.5
VSR pmax pmax
comp=Z,10.0nm,0.9s
QSM Queen of Sheba 61.45 297 IAmb IAmb 01 44 25.2
comp=Z,41nm,1.5s
VORD Divnogorie 61.55 45 *e*P P 01 44 09.9 -2.6
VORD pmax pmax
comp=Z,10.0nm,0.8s
NVAR Mina Array Bea 61.76 300 P P 01 44 14.8 +0.3
comp=Z,2.7nm,0.8s,baz=88,slow=6.2,SNR=16
NVAR LR LR 02 10 04.5
comp=Z,2µm,19.8s,baz=84,slow=35
comp=Z,2.7nm,0.8s
NVAR Mina Array Bea 61.76 300 P P 01 44 13.9 -0.6
YUH Yuha Desert 61.80 293 IAmb IAmb 01 44 22.9
comp=Z,24nm,1.3s
DSP Deep Springs 61.84 299 IAmb IAmb 01 44 23.2
comp=Z,20nm,1.2s
MPMC Manual Prospec 61.89 297 IAmb IAmb 01 44 24.2
comp=Z,25nm,1.3s
PFO Pinyon Flats O 61.90 294 LR LR 02 09 07.3
comp=Z,935nm,21.0s,baz=68,slow=34
PFO Pinyon Flats O 61.90 294 P P 01 44 16.7 +1.3
PFO pmax pmax
comp=Z,13nm,1.3s
PFO Pinyon Flats O 61.90 294 P P 01 44 16.7 +1.3
PINE Pine Mountain 62.06 306 IAmb IAmb 01 44 25.0
comp=Z,22nm,1.3s
CWC Cottonwood Cre 62.22 298 IAmb IAmb 01 44 26.2
comp=Z,39nm,1.4s
LRMC Laurel Mtn Rad 62.23 297 IAmb IAmb 01 44 25.9
comp=Z,40nm,1.9s
J05D Fort Rock, OR 62.41 306 IAmb IAmb 01 44 26.7
comp=Z,36nm,1.2s
WTLY Watson Lake, Y 62.45 326 P P 01 44 18.7 +0.2
baz=76
INK Inuvik 62.49 335 LR LR 02 09 54.5
comp=Z,827nm,21.5s,baz=68,slow=35
INK Inuvik 62.49 335 P P 01 44 18.9 +0.3
baz=76,SNR=28
WIFE Three Sisters- 62.59 307 IAmb IAmb 01 44 39.3
comp=Z,29nm,1.2s
MDPB Devils Postpil 62.59 299 IAmb IAmb 01 44 28.4
comp=Z,24nm,1.2s
BNN Bunyan 62.63 59 IAmb IAmb 01 44 31.3
comp=Z,49nm,1.7s
H04A Detroit Lake 62.66 308 IAmb IAmb 01 44 27.5
comp=Z,40nm,1.2s
ISA Isabella, Lake 62.78 297 IAmb IAmb 01 44 30.1
comp=Z,41nm,1.3s
F31M Tsiigehtchic 62.78 334 P P 01 44 20.4 -0.1
baz=75
AC02 Maricunga 62.82 207 P P 01 44 22.5 +0.6
AC02 IAmb IAmb 01 44 24.9
comp=Z,23nm,1.2s
TPO Tropico Hills 62.85 296 IAmb IAmb 01 44 30.2
comp=Z,29nm,1.1s
VRH Novokhopyorsk 62.96 45 *e*P P 01 44 20.9 -1.1
VRH pmax pmax
comp=Z,32nm,0.7s
MMPY Sheldon Lake, 62.98 329 IAmb IAmb 01 44 30.0
comp=Z,39nm,1.4s
MMPY Sheldon Lake, 62.98 329 P P 01 44 22.7 +0.7
baz=75,SNR=19
I04A Tendick Farm, 63.08 307 IAmb IAmb 01 44 29.9
comp=Z,36nm,1.4s
G31M Satah River 63.11 334 P P 01 44 23.0 +0.2
baz=75,SNR=12
VES Vestal, Richgr 63.19 297 IAmb IAmb 01 44 54.8
comp=Z,54nm,1.6s
CMB Columbia Colle 63.44 300 IAmb IAmb 01 44 33.6
comp=Z,38nm,1.5s
H31M Peel River 63.44 333 IAmb IAmb 01 44 32.4
comp=Z,44nm,1.4s
H31M Peel River 63.44 333 P P 01 44 25.4 +0.4
baz=74,SNR=11
COR Corvallis 63.45 308 P P 01 44 27.3 +1.9
DLBC Dease Lake 63.49 324 LR LR 02 11 55.2
comp=Z,2µm,19.3s,baz=56,slow=36
DLBC Dease Lake 63.49 324 P P 01 44 25.9 +0.4
baz=74,SNR=5.7
F30M Barrier River 63.49 335 P P 01 44 25.8 +0.5
baz=74,SNR=26
BBOR Butler Butte 63.54 306 IAmb IAmb 01 44 32.2
comp=Z,36nm,1.3s
R33M Jennings River 63.70 325 IAmb IAmb 01 44 34.8
comp=Z,37nm,1.2s
R33M Jennings River 63.70 325 P P 01 44 27.7 +0.7
baz=74,SNR=18
ORV Oroville 63.76 302 IAmb IAmb 01 44 34.8
comp=Z,40nm,1.4s
ERBR Yeremizino-Bor 63.77 51 *e*P P 01 44 26.5 -1.0
ERBR MLR MLR
comp=Z,126nm,15.0s
G30M tAoh Zrail Nji 63.84 334 IAmb IAmb 01 44 35.0
comp=Z,28nm,1.4s
G30M tAoh Zrail Nji 63.84 334 P P 01 44 27.9 +0.3
baz=73,SNR=7.3
SOC Sochi 63.91 53 *d*P P 01 44 27.8 -0.6
SOC *e* 01 46 50.4
SOC *e*PPP PPP 01 48 20.6
SOC *e*S S 01 53 02.7 -0.8
SOC *e*SS SS 01 57 12.1 +0.6
SOC pmax pmax
comp=Z,10.0nm,0.8s
SOC MLR MLR
comp=Z,104nm,17.0s
YBH Yreka Blue Hor 63.93 305 LR LR 02 10 45.9
comp=Z,571nm,21.3s,baz=71,slow=35
T35M Bob Quinn 64.01 322 IAmb IAmb 01 44 36.8
comp=Z,20nm,1.2s
T35M Bob Quinn 64.01 322 P P 01 44 29.4 +0.4
baz=73
E29M Blow River 64.03 336 IAmb IAmb 01 44 36.2
comp=Z,24nm,1.3s
E29M Blow River 64.03 336 P P 01 44 28.8 0.0
baz=72
D28M Stokes Point 64.03 337 P P 01 44 29.8 +1.0
baz=72
S34M Telegraph Cree 64.20 324 IAmb IAmb 01 44 37.8
comp=Z,23nm,1.4s
S34M Telegraph Cree 64.20 324 P P 01 44 30.2 +0.1
baz=73
EPYK Eagle Plains 64.21 334 IAmb IAmb 01 44 37.4
comp=Z,23nm,1.2s
EPYK Eagle Plains 64.21 334 P P 01 44 30.6 +0.6
baz=72
N32M Quiet Lake 64.21 327 P P 01 44 30.6 +0.5
baz=73
BBB Bella Bella 64.22 317 LR LR 02 11 58.8
comp=Z,1µm,19.7s,baz=64,slow=36
LABN Labinsk 64.26 52 *e*P P 01 44 29.0 -1.7
LABN pmax pmax
comp=Z,21nm,0.9s
LABN MLR MLR
comp=Z,208nm,17.0s
MMAI Mount Meron Ar 64.26 65 LR LR 02 11 45.4
comp=Z,94nm,20.3s,baz=266,slow=35
P33M Teslin, Yukon 64.36 326 IAmb IAmb 01 44 38.4
comp=Z,24nm,1.4s
P33M Teslin, Yukon 64.36 326 P P 01 44 31.2 0.0
baz=73
I30M Mount Dempster 64.42 332 IAmb IAmb 01 44 38.7
comp=Z,22nm,1.2s
I30M Mount Dempster 64.42 332 P P 01 44 31.8 +0.2
baz=72,SNR=11
Q32M Nakina River 64.47 325 IAmb IAmb 01 44 39.6
comp=Z,25nm,1.2s
Q32M Nakina River 64.47 325 P P 01 44 32.5 +0.4
baz=73
M31M Drury Creek, Y 64.50 329 IAmb IAmb 01 44 39.9
comp=Z,42nm,1.2s
M31M Drury Creek, Y 64.50 329 P P 01 44 32.5 +0.5
baz=72,SNR=5.7
G29M Pine Creek 64.53 334 P P 01 44 32.4 +0.2
baz=72,SNR=15
E28M Babbage River 64.54 336 P P 01 44 32.4 +0.2
baz=71
J30M Hart River 64.60 332 IAmb IAmb 01 44 40.5
comp=Z,40nm,1.4s
J30M Hart River 64.60 332 P P 01 44 33.2 +0.5
baz=72,SNR=20
MHC Mount Hamilton 64.61 300 IAmb IAmb 01 44 41.5
comp=Z,37nm,1.2s
D27M Malcolm River 64.81 337 P P 01 44 34.5 +0.5
baz=70
H29M Whitestone 64.89 334 P P 01 44 34.6 +0.1
baz=71,SNR=15
P32M Atlin 64.98 326 P P 01 44 34.8 -0.4
baz=72
F28M Old Crow 64.98 335 P P 01 44 35.3 +0.2
baz=70,SNR=22
KIRV Kirv 65.05 35 LR LR 02 11 35.8
comp=Z,152nm,18.5s,baz=275,slow=35
KIRV Kirov 65.05 35 *d*P P 01 44 34.0 -1.6
EIL Elat 65.14 69 P P 01 44 35.8 -0.9
comp=Z,21nm,0.7s,baz=284,slow=10,SNR=7.1
comp=Z,21nm,0.7s
WHY Whitehorse 65.20 327 P P 01 44 36.5 -0.2
baz=71
V35K Ketchikan 65.24 321 P P 01 44 36.9 +0.1
baz=71
WRAK Wrangell Islan 65.29 322 IAmb IAmb 01 44 44.5
comp=Z,22nm,1.2s
WRAK Wrangell Islan 65.29 322 P P 01 44 37.1 -0.1
baz=71
K29M Barlow Dome 65.33 331 P P 01 44 37.4 -0.1
baz=70,SNR=10
N31M Braeburn, Yuko 65.34 328 P P 01 44 37.5 -0.1
baz=71,SNR=16
E27K Coleen River 65.40 336 IAmb IAmb 01 44 45.4
comp=Z,26nm,1.2s
E27K Coleen River 65.40 336 P P 01 44 37.6 -0.1
baz=69,SNR=10
J29N Klondike Camp 65.41 332 P P 01 44 38.2 +0.2
baz=70
M30M Minto, Yukon 65.44 330 IAmb IAmb 01 44 45.5
comp=Z,20nm,1.3s
M30M Minto, Yukon 65.44 330 P P 01 44 38.3 +0.1
baz=71,SNR=9.6
C27K Jago River 65.58 338 P P 01 44 39.5 +0.6
baz=68,SNR=13
O30N Mendenhall 65.72 328 IAmb IAmb 01 44 47.4
comp=Z,35nm,1.2s
O30N Mendenhall 65.72 328 P P 01 44 40.5 +0.4
baz=70,SNR=14
I28M Miner Creek 65.76 333 IAmb IAmb 01 44 59.9
comp=Z,30nm,1.4s
I28M Miner Creek 65.76 333 P P 01 44 40.8 +0.6
baz=69,SNR=16
U33K Whale Pass 65.79 322 P P 01 44 40.7 +0.3
baz=71
R32K Eaglecrest 65.80 325 P P 01 44 40.7 +0.2
baz=70
SKAG Skagway 65.80 326 P P 01 44 41.1 +0.7
baz=70
KIV Kislovodsk 65.82 52 *e*P P 01 44 41.1 +0.1
KIV pmax pmax
comp=Z,17nm,1.1s
KVAR Kislovodsk Arr 65.82 52 LR LR 02 11 19.7
comp=Z,86nm,19.2s,baz=228,slow=34
L29M L29M 65.84 330 P P 01 44 41.1 +0.4
baz=70
C26K Camden Bay 65.85 338 P P 01 44 40.6 0.0
baz=67
SHA1 Shidzhatmaz 65.87 52 *de*P P 01 44 41.8 +0.3
G27K Doyon Strip 65.92 335 P P 01 44 41.5 +0.3
baz=68,SNR=23
N30M Aishikik Lake 65.95 328 IAmb IAmb 01 44 48.9
comp=Z,30nm,1.2s
N30M Aishikik Lake 65.95 328 P P 01 44 41.6 +0.1
baz=70
CRAG Craig 66.01 321 P P 01 44 42.1 +0.3
baz=70
DAWY Dawson 66.03 332 P P 01 44 42.3 +0.3
baz=69,SNR=5.7
KBZ Khabaz 66.04 52 P P 01 44 42.8 +0.5
comp=Z,5.7nm,0.7s,baz=286,slow=7.8,SNR=7.0
KBZ LR LR 02 11 49.3
comp=Z,78nm,19.8s,baz=288,slow=34
comp=Z,5.7nm,0.7s
KBZ Khabaz 66.04 52 *de*P P 01 44 42.7 +0.5
KBZ pmax pmax
comp=Z,9.0nm,0.9s
H27K Steamboat Moun 66.08 334 P P 01 44 42.8 +0.5
baz=68,SNR=25
BELG Belogornoye 66.09 42 LR LR 02 11 19.9
comp=Z,415nm,21.8s,baz=277,slow=34
S32K Killisnoo 66.10 324 P P 01 44 42.7 +0.4
baz=70
M29M Somme Creek 66.21 330 IAmb IAmb 01 44 50.6
comp=Z,20nm,1.2s
M29M Somme Creek 66.21 330 P P 01 44 43.5 +0.2
baz=69,SNR=10
PLBC Pleasant Camp 66.30 326 P P 01 44 44.5 +0.8
baz=70
P30M Million Dollar 66.35 327 P P 01 44 44.6 +0.5
baz=69
I27K Kandik River 66.35 333 P P 01 44 44.4 +0.4
baz=68,SNR=21
HYT Haines Junctio 66.36 328 P P 01 44 44.8 +0.6
baz=69
R31K City Hall, Gus 66.36 325 P P 01 44 44.6 +0.6
baz=70
F26K Sheenjek River 66.47 336 IAmb IAmb 01 44 53.1
comp=Z,31nm,1.2s
F26K Sheenjek River 66.47 336 P P 01 44 45.5 +0.7
baz=66,SNR=21
D25K Kavik River 66.56 338 IAmb IAmb 01 44 54.4
comp=Z,27nm,1.2s
D25K Kavik River 66.56 338 P P 01 44 45.7 +0.4
baz=65,SNR=12
SIT Sitka 66.62 324 P P 01 44 46.2 +0.5
baz=69
G26K Porcupine Rive 66.64 335 P P 01 44 46.7 +0.9
baz=67,SNR=39
YUK4 Talbot Arm 66.69 329 P P 01 44 45.9 -0.5
baz=69
YUK6 Outpost Mounta 66.71 328 P P 01 44 46.8 +0.2
baz=69
S31K Pelican 66.76 325 P P 01 44 47.0 +0.4
baz=69
E25K Arctic Village 66.79 337 IAmb IAmb 01 44 55.0
comp=Z,32nm,1.2s
E25K Arctic Village 66.79 337 P P 01 44 47.8 +1.1
baz=66,SNR=26
BRWY Burwash Landin 66.85 329 P P 01 44 47.7 +0.4
baz=68
ZON Zonda 66.88 205 IAmb IAmb 01 44 49.6
comp=Z,28nm,1.5s
P29M Windy Craggy 66.89 327 IAmb IAmb 01 44 55.2
comp=Z,24nm,1.1s
P29M Windy Craggy 66.89 327 P P 01 44 47.8 +0.2
baz=69
F25K Christian Rive 67.04 336 IAmb IAmb 01 44 56.8
comp=Z,26nm,1.2s
F25K Christian Rive 67.04 336 P P 01 44 49.5 +1.2
baz=65,SNR=14
O29M Mount Kennedy 67.04 328 P P 01 44 49.2 +0.7
baz=68
YUK8 Steele Glacier 67.21 329 P P 01 44 50.0 +0.2
baz=68
BVCY Beaver Creek 67.26 330 P P 01 44 49.9 +0.1
baz=67
YUK3 Moose Creek 67.33 329 P P 01 44 50.5 0.0
baz=67
BCAR Beaver Creek A 67.40 331 P P 01 44 49.7 -1.0
L27K Beaver Creek, 67.42 331 IAmb IAmb 01 44 58.2
comp=Z,22nm,1.2s
L27K Beaver Creek, 67.42 331 P P 01 44 51.0 +0.2
baz=67,SNR=13
D24K Happy Valley 67.42 338 P P 01 44 51.2 +0.5
baz=63
CO02 Combarbal 67.44 207 IAmb IAmb 01 44 54.7
comp=Z,36nm,1.1s
G25K Bearman Lake 67.55 335 P P 01 44 52.9 +1.4
baz=64,SNR=21
O28M Mount Upton 67.60 328 P P 01 44 52.0 -0.3
baz=67
C23K Itkillik River 67.67 339 P P 01 44 52.6 +0.4
baz=62,SNR=13
M27K Edge Creek, AK 67.72 330 P P 01 44 53.1 +0.3
baz=66
E24K Your Creek 67.80 337 P P 01 44 54.2 +1.0
baz=63
F24K Squaw Lake 67.85 336 IAmb IAmb 01 45 02.1
comp=Z,25nm,1.1s
F24K Squaw Lake 67.85 336 P P 01 44 54.9 +1.4
baz=63,SNR=29
PRP Porcupine Dome 67.88 334 P P 01 44 54.8 +1.1
baz=64
TOLK Toolik Lake Re 67.90 338 P P 01 44 54.7 +0.9
baz=62
TBLG Delisi 68.02 54 P P 01 44 54.1 -0.9
L26K Log Cabin Wild 68.07 331 IAmb IAmb 01 45 02.3
comp=Z,21nm,1.3s
L26K Log Cabin Wild 68.07 331 P P 01 44 55.6 +0.8
baz=65
G24K Hadweenzic Riv 68.07 336 P P 01 44 55.8 +1.0
baz=63,SNR=21
D23K Nanushuk River 68.10 338 IAmb IAmb 01 45 03.2
comp=Z,26nm,1.2s
D23K Nanushuk River 68.10 338 P P 01 44 56.1 +1.1
baz=61,SNR=10
BARN Barnard Glacie 68.15 329 IAmb IAmb 01 45 03.1
comp=Z,35nm,1.4s
M26K Nabesna, AK 68.18 331 P P 01 44 55.7 0.0
baz=66
E23K Chandalar 68.19 337 IAmb IAmb 01 45 03.6
comp=Z,21nm,1.1s
E23K Chandalar 68.19 337 P P 01 44 56.3 +0.6
baz=62,SNR=12
J25K Salcha River, 68.21 333 IAmb IAmb 01 45 08.0
comp=Z,40nm,1.8s
J25K Salcha River, 68.21 333 P P 01 44 56.5 +0.7
baz=64,SNR=6.0
B22K Tetlekpuk Lake 68.26 340 P P 01 44 56.8 +0.9
baz=60
A22K Sinclair Lake 68.36 341 P P 01 44 57.4 +0.9
baz=58
RIDG Independent Ri 68.38 332 IAmb IAmb 01 45 04.2
comp=Z,21nm,1.1s
RIDG Independent Ri 68.38 332 P P 01 44 57.5 +0.6
baz=64
H24K Noodor Dome 68.61 335 IAmb IAmb 01 45 06.5
comp=Z,36nm,1.2s
H24K Noodor Dome 68.61 335 P P 01 44 59.0 +0.7
baz=63,SNR=19
MCARA McCarthy VSAT 68.61 330 P P 01 44 58.9 +0.6
baz=65
GNI Garni 68.62 55 P P 01 44 58.4 -0.5
comp=Z,3.8nm,0.6s,baz=210,slow=2.1,SNR=7.3
GNI LR LR 02 16 59.3
comp=Z,61nm,18.0s,baz=296,slow=38
comp=Z,3.8nm,0.6s
VA03 San Esteban 68.66 206 IAmb IAmb 01 45 13.8
comp=Z,34nm,1.3s
IL31 68.72 334 P P 01 44 59.9 +1.1
ILAR Eielson Array 68.72 334 P P 01 44 59.5 +0.6
comp=Z,9.8nm,0.9s,baz=58,slow=4.6,SNR=49
ILAR LR LR 02 15 10.2
comp=Z,1µm,19.5s,baz=69,slow=36
comp=Z,9.8nm,0.9s
ILAR Eielson Array 68.72 334 P P 01 44 59.8 +0.9
ILAR Eielson Array 68.72 334 P P 01 44 59.8 +0.9
POKR Poker Plat Res 68.77 334 P P 01 45 00.0 +0.8
baz=63

COLD Coldfoot 68.78 337 IAmb IAmb 01 45 07.4
comp=Z,25nm,1.1s
COLD Coldfoot 68.78 337 P **P** **01 44 60.0 +0.8**
baz=61
HDA Harding Lake 68.91 333 P **P** **01 45 00.8 +0.7**
baz=63,SNR=13
CRQE Cirque 68.91 329 P **P** **01 45 00.4 +0.1**
baz=65
G23K Bananza Creek 68.97 336 P **P** **01 45 01.5 +1.0**
baz=61,SNR=46
PAX Paxson 68.97 332 P **P** **01 45 00.9 +0.3**
baz=64
B21K Ikpikpuk River 68.98 340 P **P** **01 45 01.4 +1.0**
baz=58
COLA College 69.04 334 P **P** **01 45 01.5 +0.6**
COLA pmax pmax
comp=Z,35nm,0.9s
COLA College 69.04 334 P **P** **01 45 01.5 +0.6**
COLA College 69.04 334 P **P** **01 45 01.5 +0.6**
baz=62
HARP HAARP 69.09 331 P **P** **01 45 01.3 +0.1**
baz=64
N25K Chitina, Valde 69.20 330 P **P** **01 45 01.9 -0.1**
baz=64
H23K Yukon River 69.22 335 IAmb IAmb 01 45 10.4
comp=Z,32nm,1.1s
H23K Yukon River 69.22 335 P **P** **01 45 02.4 +0.4**
baz=61
MT16 CCHEN 69.24 205 IAmb IAmb 01 45 05.7
comp=Z,23nm,0.9s
C21K Knifeblade Rid 69.28 339 P **P** **01 45 03.2 +0.8**
baz=58
F22K John River 69.31 337 P **P** **01 45 02.5 0.0**
baz=60
G22K Bettles 69.37 337 P **P** **01 45 03.2 +0.3**
baz=60
E21K Killik River 69.41 339 IAmb IAmb 01 45 10.8
comp=Z,39nm,1.2s
E21K Killik River 69.41 339 P **P** **01 45 03.5 +0.3**
baz=58
MT13 San Alfonso 69.44 205 P **P** **01 45 05.0 +1.2**
MT13 IAmb IAmb 01 45 16.6
comp=Z,32nm,1.5s
I23K Minto, Yukon-K 69.48 335 P **P** **01 45 04.1 +0.5**
baz=61,SNR=17
B20K Meade River 69.52 341 P **P** **01 45 04.3 +0.5**
baz=56
NAX Nakhchivan 69.54 56 P **P** **01 45 05.1 +0.6**
GANJ Ganja 69.54 54 P **P** **01 45 06.6 +2.1**
NEA2 Nenana 69.64 334 P **P** **01 45 05.4 +0.8**
baz=61,SNR=17
M24K Tolsona, Glenn 69.65 331 P **P** **01 45 05.2 +0.5**
baz=63
DHY Denali Highway 69.69 332 P **P** **01 45 05.3 +0.1**
baz=62
KLU Klutina 69.82 330 IAmb IAmb 01 45 12.8
comp=Z,31nm,1.2s
KLU Klutina 69.82 330 P **P** **01 45 05.9 0.0**
baz=63,SNR=5.4
H22K Ishtalitna Cre 69.84 336 IAmb IAmb 01 45 14.1
comp=Z,27nm,1.2s
H22K Ishtalitna Cre 69.84 336 P **P** **01 45 06.6 +0.7**
baz=60,SNR=19
F21K Alatna River 69.89 337 IAmb IAmb 01 45 13.8
comp=Z,21nm,1.2s
F21K Alatna River 69.89 337 P **P** **01 45 06.4 +0.3**
baz=58,SNR=12
MCK McKinley 70.00 333 P **P** **01 45 07.5 +0.7**
baz=61,SNR=8.6
MNGR Mingechevir, A 70.02 54 P **P** **01 45 09.7 +2.3**
MLY Manley 70.05 335 IAmb IAmb 01 45 19.4
comp=Z,25nm,1.3s
MLY Manley 70.05 335 P **P** **01 45 07.9 +0.7**
baz=60,SNR=14
WAT6 Susitna Watana 70.07 332 P **P** **01 45 07.6 +0.1**
baz=62
D20K Etivluk River 70.08 339 P **P** **01 45 08.1 +0.8**
baz=56,SNR=15
RND Reindeer 70.12 333 IAmb IAmb 01 45 28.4
comp=Z,69nm,1.9s
EYAK Cordova Ski Ar 70.18 329 P **P** **01 45 07.9 -0.1**
baz=63
E20K Nigu River 70.20 339 P **P** **01 45 08.5 +0.4**
baz=56
SCM Sheep Creek Mo 70.26 331 P **P** **01 45 09.0 +0.5**
baz=62
G21K Allakaket 70.27 337 IAmb IAmb 01 45 16.3
comp=Z,34nm,1.1s
G21K Allakaket 70.27 337 P **P** **01 45 08.6 +0.2**
baz=58,SNR=16
WAT1 Susitna Watana 70.28 332 P **P** **01 45 09.4 +0.7**
baz=61
ARTI Arti 70.36 36 LR LR 02 15 46.9
comp=Z,160nm,18.1s,baz=293,slow=36
ARTI Arti 70.36 36*ce*P **P** **01 45 08.4 -0.8**
ARTI pmax pmax
comp=Z,69nm,2.5s
I21K Tanana 70.42 335 P **P** **01 45 10.1 +0.7**
baz=59
H21K Melozitna Rive 70.47 336 IAmb IAmb 01 45 17.8
comp=Z,26nm,1.2s
H21K Melozitna Rive 70.47 336 P **P** **01 45 09.6 -0.1**
baz=58,SNR=18
A19K Wainwright 70.49 342 P **P** **01 45 10.0 +0.3**
baz=53
GLI Glacier Island 70.61 330 P **P** **01 45 10.9 +0.3**
baz=62
IMAR Indian Mountai 70.63 336 P **P** **01 45 11.5 +0.8**
D19K Kuna River 70.66 339 P **P** **01 45 10.8 0.0**
baz=55
TRF Thorofare Moun 70.67 333 IAmb IAmb 01 45 24.3
comp=Z,37nm,1.2s
TRF Thorofare Moun 70.67 333 P **P** **01 45 10.5 -0.6**
baz=60,SNR=8.6
SML Sawmill 70.69 331 P **P** **01 45 09.9 -1.2**
baz=61
F20K Avaraart Lake 70.72 338 IAmb IAmb 01 45 19.0
comp=Z,26nm,1.1s
F20K Avaraart Lake 70.72 338 P **P** **01 45 10.2 -0.9**
baz=56
C19K Lookout Ridge 70.73 340 P **P** **01 45 10.4 -0.9**
baz=54
KNK Knik Glacier 70.93 331 P **P** **01 45 12.7 +0.1**
baz=61
E19K Redstone River 70.98 338 IAmb IAmb 01 45 20.6
comp=Z,25nm,1.1s
E19K Redstone River 70.98 338 P **P** **01 45 13.2 +0.5**
baz=55,SNR=17
PMR Palmer 71.12 331 P **P** **01 45 13.5 -0.2**
baz=60
PWL Port Wells 71.15 330 P **P** **01 45 14.2 +0.3**
baz=61
P23K Montague Islan 71.16 329 P **P** **01 45 13.9 -0.1**
baz=61
CUT Chulitna 71.18 332 P **P** **01 45 13.9 -0.1**
baz=60
CHUM Lake Minchumin 71.22 334 P **P** **01 45 14.0 -0.3**
baz=58,SNR=10.0
SVE Sverdlovsk 71.28 35 *e*P **P** **01 45 14.6 -0.1**
SVE pmax pmax
comp=Z,48nm,1.7s
H20K Anotleneega Mo 71.29 336 P **P** **01 45 14.4 -0.3**
baz=57,SNR=17
L22K Petersville 71.32 332 IAmb IAmb 01 45 23.9
comp=Z,68nm,1.8s
L22K Petersville 71.32 332 P **P** **01 45 14.9 -0.1**
baz=59
CAST Castle Rocks 71.38 334 IAmb IAmb 01 45 26.6
comp=Z,28nm,1.4s
CAST Castle Rocks 71.38 334 P **P** **01 45 15.2 -0.1**
baz=58,SNR=12
M22K Willow 71.45 332 P **P** **01 45 15.7 0.0**
baz=60
C18K Utukok River 71.48 340 IAmb IAmb 01 45 23.5
comp=Z,20nm,1.1s
C18K Utukok River 71.48 340 P **P** **01 45 16.0 +0.2**
baz=52
F19K Shaleruckik Mo 71.51 338 IAmb IAmb 01 45 23.5
comp=Z,24nm,1.1s
F19K Shaleruckik Mo 71.51 338 P **P** **01 45 16.1 +0.2**
baz=55,SNR=5.3
I20K Naaghedeneel 71.53 335 P **P** **01 45 16.6 +0.6**
baz=57
RC01 Rabbit Creek A 71.63 331 P **P** **01 45 16.5 -0.3**
baz=60
G19K Purcell Mounta 71.68 337 IAmb IAmb 01 45 25.1
comp=Z,29nm,1.1s
G19K Purcell Mounta 71.68 337 P **P** **01 45 17.2 +0.1**
baz=55,SNR=14
PPLA Purkeypile 71.69 333 P **P** **01 45 17.1 -0.2**
baz=58,SNR=7.6
J20K Nowinta River 71.75 335 IAmb IAmb 01 45 24.8
comp=Z,24nm,1.0s
J20K Nowinta River 71.75 335 P **P** **01 45 17.5 +0.1**
baz=57,SNR=12
H19K Roundabout Mou 71.81 336 IAmb IAmb 01 45 25.5
comp=Z,32nm,1.1s
H19K Roundabout Mou 71.81 336 P **P** **01 45 17.5 -0.3**
baz=55,SNR=5.7
SKT Skwentna 71.91 332 IAmb IAmb 01 45 29.1
comp=Z,19nm,1.0s
SKT Skwentna 71.91 332 P **P** **01 45 18.7 +0.1**
baz=58
SEW Seward 72.01 330 P **P** **01 45 18.5 -0.5**
baz=60
E18K Tukpahlearik C 72.05 339 IAmb IAmb 01 45 26.9
comp=Z,21nm,1.1s
E18K Tukpahlearik C 72.05 339 P **P** **01 45 18.7 -0.5**
baz=52
LKRN Lenkeran, Azer 72.06 55 P **P** **01 45 21.5 +1.7**
C17K DeLong Mountai 72.16 341 P **P** **01 45 18.6 -1.3**
baz=50
K20K Telida 72.17 334 P **P** **01 45 18.5 -1.5**
baz=57
F18K Selawik 72.25 338 P **P** **01 45 19.9 -0.5**
baz=53
G18K Tagagawik 72.35 337 P **P** **01 45 20.9 -0.1**
baz=54
RDOG Red Dog Mine 72.35 340 IAmb IAmb 01 45 28.7
comp=Z,44nm,1.2s
RDOG Red Dog Mine 72.35 340 P **P** **01 45 20.4 -0.6**
baz=51
J19K Poorman 72.39 335 IAmb IAmb 01 45 28.5
comp=Z,29nm,1.1s
J19K Poorman 72.39 335 P **P** **01 45 20.9 -0.4**
baz=56,SNR=17
BI02 San Fabin de 72.41 204 P **P** **01 45 22.2 +0.5**
BI02 IAmb IAmb 01 46 10.2
comp=Z,37nm,1.0s
GCSA Galena City Sc 72.41 336 P **P** **01 45 21.3 0.0**
baz=55
M20K Styx River 72.61 332 IAmb IAmb 01 45 38.4
comp=Z,41nm,1.2s
M20K Styx River 72.61 332 P **P** **01 45 22.4 -0.3**
baz=57
D17K Noatak River 72.62 340 P **P** **01 45 22.6 0.0**
baz=50
E17K Hotham Inlet 72.64 339 P **P** **01 45 22.0 -0.7**
baz=51
H18K Honhosa River 72.69 337 IAmb IAmb 01 45 31.0
comp=Z,32nm,1.2s
H18K Honhosa River 72.69 337 P **P** **01 45 22.3 -0.8**
baz=54
BRSE Bradley Lake S 72.75 330 P **P** **01 45 22.7 -0.9**
baz=58
AKTO Aktyubinsk 72.83 41 LR LR 02 15 58.6
comp=Z,275nm,20.4s,baz=344,slow=35
F17K Baldwin Pennin 72.86 338 P **P** **01 45 23.8 -0.2**
baz=52
C16K Lisburne Hills 72.90 341 P **P** **01 45 23.3 -0.9**
baz=49
J18K Innko River 73.09 335 IAmb IAmb 01 45 33.0
comp=Z,25nm,1.1s
J18K Innoko River 73.09 335 P **P** **01 45 25.4 -0.1**
baz=55
M19K Big River Lodg 73.09 333 IAmb IAmb 01 45 32.8
comp=Z,26nm,1.1s
M19K Big River Lodg 73.09 333 P **P** **01 45 25.3 -0.2**
baz=56
L19K White Mountain 73.12 333 IAmb IAmb 01 45 32.6
comp=Z,36nm,1.2s
L19K White Mountain 73.12 333 P **P** **01 45 25.5 -0.2**
baz=56,SNR=5.8
HOM Homer 73.18 330 P **P** **01 45 25.8 -0.2**
baz=58
G17K Kiwalik Mounta 73.24 338 P **P** **01 45 25.7 -0.7**
baz=52
RED Redoubt Volcan 73.25 331 IAmb IAmb 01 45 28.8
comp=Z,23nm,1.2s
H17K Granite Mounta 73.34 337 P **P** **01 45 26.6 -0.3**
baz=52,SNR=16
O20K Slope Mountain 73.37 331 P **P** **01 45 26.7 -0.6**
baz=57,SNR=6.7
ILSW Iliamna Southw 73.64 331 IAmb IAmb 01 45 36.0
comp=Z,37nm,1.5s
N19K Bonanza Creek 73.74 332 P **P** **01 45 28.9 -0.5**
baz=56
NRIK Noril'sk 73.74 17 P **P** **01 45 29.9 +0.7**
comp=Z,5.9nm,0.9s,baz=315,slow=6.0,SNR=13
comp=Z,5.9nm,0.9s
NRIK Noril'sk 73.74 17 *i*P **P** **01 45 29.9 +0.7**
NRIK pmax pmax
comp=Z,7.0nm,1.0s
NRIK Noril'sk 73.74 17 P **P** **01 45 29.9 +0.7**
NRIK IAmb IAmb 01 45 41.8
comp=Z,37nm,1.4s
L18K Granite Mounta 73.80 334 P **P** **01 45 29.3 -0.4**
baz=54
P19K Oil Pt 73.86 331 P **P** **01 45 29.5 -0.7**
baz=56
G16K Koyuk River 73.87 338 IAmb IAmb 01 45 38.0
comp=Z,27nm,1.1s
G16K Koyuk River 73.87 338 P **P** **01 45 29.7 -0.3**
baz=50
M18K Stony River 73.89 333 P **P** **01 45 29.6 -0.6**
baz=55,SNR=13
J17K VABM Dome 73.99 335 IAmb IAmb 01 45 39.0
comp=Z,35nm,1.2s
J17K VABM Dome 73.99 335 P **P** **01 45 30.4 -0.3**
baz=53
K17K Iditarod 74.12 335 IAmb IAmb 01 45 43.9
comp=Z,71nm,1.6s
K17K Iditarod 74.12 335 P **P** **01 45 31.0 -0.5**
baz=53
I17K Unalakleet 74.26 336 P **P** **01 45 31.7 -0.6**
baz=52
H16K Elim 74.31 337 P **P** **01 45 31.8 -0.8**
baz=50
N18K Kilae Creek 74.38 332 P **P** **01 45 31.8 -1.4**
baz=55
F15K North Star Dit 74.39 339 P **P** **01 45 31.8 -1.3**
baz=49
L17K Donlin 74.46 334 P **P** **01 45 32.2 -1.3**
baz=53,SNR=14
M17K Holitna River 74.57 333 P **P** **01 45 33.1 -1.1**
baz=54
O18K Koktuh Hills 74.58 331 IAmb IAmb 01 45 41.3
comp=Z,41nm,1.2s
O18K Koktuh Hills 74.58 331 P **P** **01 45 33.2 -1.1**
baz=55
J16K Anvik River 74.60 336 P **P** **01 45 33.0 -1.3**
baz=52
KDAK Kodiak Island 74.61 329 LR LR 02 19 30.5
comp=Z,2µm,18.8s,baz=58,slow=37
KDAK Kodiak Island 74.61 329 P **P** **01 45 33.0 -1.5**
baz=56
G15K Niukluk 74.67 338 P **P** **01 45 33.3 -1.4**
baz=49
P18K Big Mountain, 74.85 331 P **P** **01 45 34.4 -1.5**
baz=55
N17K Nushagak Hills 74.99 332 P **P** **01 45 35.5 -1.1**
baz=54
F14K Arctic Creek 75.07 339 P **P** **01 45 35.4 -1.6**
baz=47
L16K Owhat River 75.17 334 P **P** **01 45 36.2 -1.4**
baz=52
Q18K Katmai Hardscr 75.19 330 P **P** **01 45 36.3 -1.7**
baz=55
OHAK Old Harbor 75.24 328 P **P** **01 45 36.8 -1.2**
baz=56
ANM Nome 75.38 338 P **P** **01 45 37.2 -1.6**
baz=48
M16K Timber Creek 75.39 333 P **P** **01 45 37.1 -1.8**
baz=52
O17K Koliganek Bris 75.40 332 P **P** **01 45 37.6 -1.4**
baz=54
MBAR Mbarara 75.41 100 LR LR 02 18 06.2
comp=Z,781nm,19.2s,baz=305,slow=35
P17K Kvichak River 75.47 331 P **P** **01 45 38.2 -1.2**
baz=54
TNA Tin City 75.49 340 P **P** **01 45 37.5 -1.9**
baz=46
K15K Wolf Creek Mou 75.56 335 P **P** **01 45 38.7 -1.1**
baz=50
N16K Nishlik Lake 75.65 333 P **P** **01 45 39.7 -0.8**
baz=52,SNR=11
Q17K Contact Creek 75.79 330 P **P** **01 45 40.7 -0.7**
baz=54,SNR=5.7
PLCA Paso Flores 75.82 202 P **P** **01 45 41.3 -0.3**
comp=Z,3.2nm,1.0s,baz=13,slow=11,SNR=3.6
PLCA LR LR 02 19 18.2
comp=Z,184nm,18.2s,baz=10.0,slow=36
comp=Z,3.2nm,1.0s
O16K Kokwok River B 75.92 332 P **P** **01 45 41.2 -0.7**
baz=53
L15K Ungalak Mounta 75.93 335 P **P** **01 45 41.5 -0.5**
baz=50
J14K Nanvaranak Lak 75.98 336 P **P** **01 45 41.2 -1.0**
baz=49
SII Sitkinak Islan 76.02 328 P **P** **01 45 41.3 -1.3**
baz=55
P16K Nushagak River 76.22 331 P **P** **01 45 42.0 -1.6**
baz=53
M15K Kasigluk River 76.26 334 P **P** **01 45 43.0 -0.9**
baz=51
RAYN Ar Rayn 76.28 71 P **P** **01 45 42.9 -1.9**
RAYN pmax pmax
comp=Z,18nm,1.3s
RAYN Ar Rayn 76.28 71 P **P** **01 45 42.9 -1.9**
N15K Kwethluk River 76.36 333 P **P** **01 45 43.7 -0.8**
baz=51
R17L Mt. Peulik Vol 76.36 330 P **P** **01 45 44.0 -0.6**
baz=54
L14K Kuka Creek 76.59 335 P **P** **01 45 45.1 -0.6**
baz=49,SNR=5.4
M14K Bethel 76.70 334 P **P** **01 45 45.5 -0.8**
baz=50
O15K Ungalikthiuk R 76.87 332 P **P** **01 45 46.4 -1.0**
baz=51
K13K Kusilvak Mount 76.91 336 P **P** **01 45 46.8 -0.7**
baz=48
CHIR Chirikof Islan 77.10 328 P **P** **01 45 47.6 -1.2**
baz=54
N14K Kuskokwak Cree 77.13 333 P **P** **01 45 47.6 -1.2**
baz=50
LODK Lodwar 77.31 94 P **P** **01 45 51.0 +0.4**
O14K Tigyukauivet M 77.40 333 P **P** **01 45 49.0 -1.3**
baz=50
M13K Dall Lake 77.45 334 P **P** **01 45 49.6 -1.0**
baz=49
TIXI Tiksi 77.77 3*ce*P **P** **01 45 52.9 +0.7**
TIXI pmax pmax
comp=Z,47nm,2.5s
TIXI Tiksi 77.77 3 P **P** **01 45 51.6 -0.6**
TIXI IAmb IAmb 01 45 59.7
comp=Z,22nm,1.1s
GAMB Gambell 77.91 340 P **P** **01 45 52.6 -0.5**
baz=42
BVAR Borovoye Array 78.06 35 P **P** **01 45 54.5 +0.4**
comp=Z,4.9nm,0.7s,baz=308,slow=5.3,SNR=7.5
comp=Z,4.9nm,0.7s
CHGN Chignik 78.06 329 P **P** **01 45 53.7 -0.4**
baz=52
M11K Mekoryuk 78.51 335 P **P** **01 45 55.7 -0.8**
baz=46
S14K Fog Glacier 78.57 330 P **P** **01 45 55.8 -1.2**
baz=51
BILL Bilibino 79.38 350*ce*P **P** **01 46 01.4 +0.3**
BILL pmax pmax
comp=Z,16nm,1.7s
CHNA Chernabura Isl 79.51 329 P **P** **01 46 01.3 -0.7**
baz=51
SDPT Sand Point 79.57 329 P **P** **01 46 01.7 -0.6**
baz=50
ATD Arta Tunnel 79.74 83 LR LR 02 20 28.0
comp=Z,26nm,20.1s,baz=320,slow=35
KOOLE Kule 79.95 124 P **P** **01 46 04.3 -0.8**
LSZ Lusaka 81.35 113 LR LR 02 21 02.6
comp=Z,306nm,20.0s,baz=324,slow=35
LSZ Lusaka 81.35 113 P **P** **01 46 13.6 +0.9**
LSZ pmax pmax
comp=Z,23nm,1.4s
LSZ Lusaka 81.35 113 P **P** **01 46 13.6 +0.9**
SPIA Saint Paul Isl 82.28 334 P **P** **01 46 16.1 -0.7**
baz=43
KIBK Kibwezi 82.55 97 P **P** **01 46 17.5 -1.6**
KIBK IAmb IAmb 01 46 37.7
comp=Z,48nm,1.7s
UNV Unalaska Valle 83.18 331 P **P** **01 46 20.6 -0.9**
baz=45
KURK Kurchatov 83.49 33*ce*P **P** **01 46 23.1 -0.1**
KURK pmax pmax
comp=Z,49nm,1.7s
KURK Kurchatov 83.49 33 P **P** **01 46 23.1 -0.1**
KURK Kurchatov 83.49 33 IAmb IAmb 01 46 24.0
comp=Z,20nm,0.9s
KURBB Kurchatov Arra 83.51 34 P **P** **01 46 23.1 -0.2**
comp=Z,16nm,0.8s,baz=312,slow=5.7,SNR=67
KURBB LR LR 02 21 54.6
comp=Z,76nm,19.5s,baz=192,slow=34
comp=Z,16nm,0.8s
BRLS Borolday 83.63 43 *e*P **P** **01 46 24.1 0.0**
BRLS pmax pmax
comp=Z,12nm,1.6s
BRLS Borolday 83.63 43 *e*P **P** **01 46 24.2 0.0**
comp=Z,12nm,1.6s
CHM Chimkent 83.91 44 *e*P **P** **01 46 25.3 -0.3**
CHM pmax pmax
comp=Z,15nm,1.4s
CHM Chimkent 83.91 44 *e*P **P** **01 46 25.3 -0.3**
comp=Z,15nm,1.4s
ZALV Zalesovo Beam 83.99 28 LR LR 02 22 58.7
comp=Z,125nm,19.7s,baz=292,slow=35
UOSS Minazif 84.12 65 P **P** **01 46 26.1 -0.8**
UOSS IAmb IAmb 01 46 34.1
comp=Z,24nm,1.0s
IUG Iuzhnay 84.27 44 *e*P **P** **01 46 27.2 -0.3**
IUG pmax pmax
comp=Z,14nm,0.8s
IUG Iuzhnay 84.27 44 *e*P **P** **01 46 27.2 -0.3**
comp=Z,14nm,0.8s
MATP Matopo 84.54 117 LR LR 02 21 22.3
comp=Z,234nm,19.7s,baz=282,slow=34
DZA Taraz 84.59 43 *e*P **P** **01 46 28.8 -0.2**
DZA pmax pmax
comp=Z,4.0nm,0.4s
DZA Taraz 84.59 43 *e*P **P** **01 46 28.9 -0.2**
comp=Z,4.2nm,0.4s
BTLS Baital 84.81 40 *e*P **P** **01 46 29.8 -0.2**
BTLS Baital 84.81 40 *e*P **P** **01 46 29.9 -0.2**
LBTB Lobatse 85.07 123 LR LR 02 17 44.9
comp=Z,349nm,21.9s,baz=316,slow=31
SHAA Shahritus 85.78 48 IAmb IAmb 01 46 54.2
comp=Z,107nm,1.5s
CHGR Chuyangaron 85.80 47 *i*P **P** **01 46 34.7 -0.6**
CHGR pmax pmax
comp=Z,67nm,1.2s
BTK Batken 86.00 45 IAmb IAmb 01 46 38.6
comp=Z,58nm,1.9s
SEY Seymchan 86.04 354*ce*P **P** **01 46 37.0 +1.2**
SEY pmax pmax
comp=Z,20nm,1.7s
RPN Rapa Nui 86.29 236 LR LR 02 18 41.0
comp=Z,111nm,19.8s,baz=66,slow=31
SUR Sutherland 86.34 131 LR LR 02 17 20.8
comp=Z,292nm,21.4s,baz=318,slow=30
ARSB Arslanbob 86.52 43 IAmb IAmb 01 46 41.6
comp=Z,24nm,1.0s
AAK Ala-Archa 86.58 41 LR LR 02 24 54.7
comp=Z,175nm,20.0s,baz=317,slow=35
AAK Ala-Archa 86.58 41*ce*P **P** **01 46 38.9 -0.2**
AAK pmax pmax
comp=Z,25nm,2.5s
AAK Ala-Archa 86.58 41 P **P** **01 46 39.5 +0.3**
AAK IAmb IAmb 01 46 56.0
comp=Z,27nm,1.4s
KUU Kurty 86.81 40 *e*P **P** **01 46 39.8 -0.2**
KUU Kurty 86.81 40 *e*P **P** **01 46 39.9 -0.2**
BOSA Boshof 87.00 126 P **P** **01 46 41.4 +0.3**
comp=Z,1.4nm,0.7s,baz=208,slow=4.0,SNR=3.8
BOSA LR LR 02 20 12.2
comp=Z,330nm,19.7s,baz=323,slow=32
comp=Z,1.4nm,0.7s
BOSA Boshof 87.00 126 IAmb IAmb 01 47 44.6
comp=Z,33nm,1.8s
TDK Taldyqorghan 87.19 38 *e*P **P** **01 46 41.6 -0.2**
TDK pmax pmax
comp=Z,15nm,1.4s
TDK Taldyqorghan 87.19 38 *e*P **P** **01 46 41.7 -0.2**
comp=Z,15nm,1.4s
YAK Yakutsk 87.39 4 LR LR 02 21 24.8
comp=Z,138nm,21.8s,baz=2.0,slow=33
YAK Yakutsk 87.39 4 *e*P **P** **01 46 42.5 +0.1**

YAK					*e*			01 46 47.2	
YAK					*e*			01 50 04.7	
YAK					*e*PPP	PPP		01 52 03.1	
YAK					*e*S	**SKSac**		**01 57 04.0**	**-5.4**
YAK					*e*			01 57 24.6	
YAK					*e*SS	**SS**		**02 03 04.8**	**-0.6**
YAK					*e*SSS	SSS		02 06 38.5	
YAK					pmax	pmax			
	comp=Z,23nm,1.5s								
YAK					pmax	pmax			
	comp=N,15nm,2.3s								
YAK					pmax	pmax			
	comp=E,3.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,127nm,5.2s								
YAK					pmax	pmax			
	comp=E,67nm,4.8s								
YAK					pmax	pmax			
	comp=N,75nm,6.2s								
YAK					smax	smax			
	comp=E,70nm,6.4s								
YAK					smax	smax			
	comp=N,67nm,6.2s								
AAA	**Alma-Ata**	**87.57**	**40**	*e*P		**P**		**01 46 43.5**	**-0.3**
AAA					pmax	pmax			
	comp=Z,12nm,0.8s								
AAA	**Alma-Ata**	**87.57**	**40**	*e*P		**P**		**01 46 43.6**	**-0.3**
	comp=Z,12nm,0.8s								
MDOK	**Medeo**	**87.67**	**40**	*e*P		**P**		**01 46 44.0**	**-0.4**
MDOK	**Medeo**	**87.67**	**40**	*e*P		**P**		**01 46 44.1**	**-0.4**
TNSS	**Tian-Shan**	**87.70**	**40**	*e*P		**P**		**01 46 44.2**	**-0.7**
TNSS	**Tian-Shan**	**87.70**	**40**	*e*P		**P**		**01 46 44.2**	**-0.7**
MKAR	**Makanchi Array**	**87.94**	**35**	LR		LR		02 25 44.2	
	comp=Z,268nm,18.7s,baz=338,slow=35								
MKAR	**Makanchi Array**	**87.94**	**35**	*ce*P		**P**		**01 46 44.5**	**-1.0**
MKAR					pmax	pmax			
	comp=Z,4.0nm,0.7s								
NRN	**Naryn**	**88.21**	**42**	IAmb		IAmb		01 46 50.4	
	comp=Z,13nm,1.0s								
KPKS	**Kokpek**	**88.36**	**39**	*e*P		**P**		**01 46 47.4**	**-0.2**
KPKS	**Kokpek**	**88.36**	**39**	*e*P		**P**		**01 46 47.4**	**-0.2**
SATY	**Saty**	**88.49**	**39**	*e*P		**P**		**01 46 47.8**	**-0.4**
SATY					pmax	pmax			
	comp=Z,13nm,1.4s								
SATY	**Saty**	**88.49**	**39**	*e*P		**P**		**01 46 47.9**	**-0.4**
	comp=Z,13nm,1.4s								
ZSN	**Zaisan**	**88.71**	**33**	*e*P		**P**		**01 46 48.8**	**-0.2**
ZSN					pmax	pmax			
	comp=Z,7.0nm,1.0s								
ZSN	**Zaisan**	**88.71**	**33**	*e*P		**P**		**01 46 48.9**	**-0.2**
	comp=Z,6.7nm,1.0s								
UZB	**Uzynbulak**	**88.76**	**39**	*e*P		**P**		**01 46 49.1**	**-0.4**
UZB					pmax	pmax			
	comp=Z,9.0nm,1.3s								
UZB	**Uzynbulak**	**88.76**	**39**	*e*P		**P**		**01 46 49.2**	**-0.4**
	comp=Z,8.9nm,1.3s								
SHLS	**Shalkode**	**88.99**	**39**	*e*P		**P**		**01 46 51.3**	**+0.7**
SHLS					pmax	pmax			
	comp=Z,8.0nm,1.1s								
SHLS	**Shalkode**	**88.99**	**39**	*e*P		**P**		**01 46 51.4**	**+0.8**
	comp=Z,7.9nm,1.1s								
TARG	**Taragay, Kyrgy**	**89.04**	**41**	IAmb		IAmb		01 47 03.4	
	comp=Z,37nm,1.7s								
KSH2	**Kashi**	**89.43**	**44**	P		**P**		**01 46 53.4**	**+0.6**
KSH2					pmax	pmax			
	comp=Z,7.0nm,0.8s								
BOD	**Bodaibo**	**89.56**	**13**	*e*P		**P**		**01 46 51.7**	**-1.1**
BOD					pmax	pmax			
	comp=Z,25nm,1.7s								
SHEM	**Shemya Is, Ala**	**91.22**	**339**	LR		LR		02 32 08.4	
	comp=Z,166nm,18.0s,baz=66,slow=38								
KNGR	**Kungurtug, Tuv**	**91.49**	**24**	*i* P		**P**		**01 47 02.0**	**-0.1**
KNGR					pmax	pmax			
	comp=Z,18nm,1.5s								
IRK	**Irkutsk**	**92.30**	**20**	*e*P		**P**		**01 47 04.1**	**-1.6**
IRK					pmax	pmax			
	comp=Z,31nm,1.8s								
TLY	**Talaya**	**92.60**	**21**	LR		LR		02 28 50.9	
	comp=Z,77nm,19.3s,baz=338,slow=36								
WMQ	**Urumqi**	**92.72**	**34**	*e*P		**P**		**01 47 09.5**	**+1.6**
WMQ					pmax	pmax			
	comp=Z,13nm,2.3s								
WMQ					L	L			
	comp=Z,420nm,17.5s								
WMQ					L	L			
	comp=Z,300nm,22.7s								
WMQ					L	L			
	comp=Z,240nm,24.2s								
ZAK	**Zakamensk**	**93.62**	**21**	*e*P		**P**		**01 47 11.0**	**-0.9**
ZAK					pmax	pmax			
	comp=Z,9.0nm,2.0s								
PMSA	**Palmer Station**	**96.68**	**189**	LR		LR		02 29 42.8	
	comp=Z,54nm,18.7s,baz=36,slow=35								
SONM	**Songino Array**	**96.84**	**21**	P		**P**		**01 47 28.8**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=324,slow=2.0,SNR=3.9								
SONM	**Songino Array**	**96.84**	**21**	P		**P**		**01 47 28.8**	**+2.1**
SONM					pmax	pmax			
	comp=Z,4.0nm,0.8s								
ULN	**Ulaanbaatar**	**97.01**	**20**	*ce*P		Pdif		01 47 27.9	+0.3
OPO	**Ambohidratompo**	**98.49**	**106**	LR		LR		02 32 35.4	
	comp=Z,160nm,18.1s,baz=133,slow=36								
GTA2	**Gaotai**	**101.64**	**29**	*e*P		**Pdif**		**01 47 48.4**	**0.0**
GTA2					PP	**PP**		**01 51 57.3**	**-0.3**
GTA2					pmax	pmax			
	comp=Z,2.0nm,1.3s								
GTA2					L	L			
	comp=Z,100nm,14.6s								
GTA2					L	L			
	comp=Z,100nm,14.9s								
HYB	**Hyderabad**	**105.43**	**59**	*e*Pdif		**Pdif**		**01 48 04.8**	**-0.7**
XAN	**Xi'an**	**110.00**	**26**	Pdif		**Pdif**		**01 48 20.0**	**-5.6**
PZH	**PanZhiHua**	**113.37**	**35**	PKP		**PKiKP**		**01 52 33.5**	**-0.6**
PPT2	**Papeete2**	**113.70**	**263**	*e*LR		LR		02 26 37.2	
	comp=Z,186nm,25.2s								
PPT2					*e*LR	LR		02 26 42.8	
	comp=Z,152nm,34.2s								
NJ2	**Nanjing**	**115.02**	**18**	*e*PKP		**PKiKP**		**01 52 35.6**	**-1.3**
CMAR	**Chiang Mai Arr**	**118.33**	**43**	PKP		**PKPdf**		**01 52 42.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=338,slow=2.0,SNR=4.6								
CMAR					PP	**PP**		**01 53 57.9**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=309,slow=8.5,SNR=4.6								
CMAR	**Chiang Mai Arr**	**118.33**	**43**	*c i*PKIKP		**PKiKP**		**01 52 44.2**	**+0.5**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
QSPA	**South Pole Qui**	**120.56**	**180**	PKP		**PKPdf**		**01 52 45.9**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=146,slow=0.9,SNR=17								
MAW	**Mawson**	**123.56**	**154**	PKP		**PKPdf**		**01 52 51.8**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=260,slow=3.6,SNR=13								
VNDA	**Vanda**	**131.82**	**187**	PKPbc		**PKPdf**		**01 53 08.0**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=272,slow=2.1,SNR=10								
URZ	**Urewera**	**147.14**	**246**	PKPbc		**PKPdf**		**01 53 37.2**	**+0.8**
	comp=Z,12nm,0.8s,baz=93,slow=1.5,SNR=7.0								
RTZ	**Ruatahuna**	**147.23**	**245**			**PKPbc**		**01 53 38.9**	**-0.1**
WRA	**Warramunga Arr**	**168.81**	**19**	PKP		**PKPdf**		**01 54 02.0**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=303,slow=1.6,SNR=5.7								
WRA				PKPab		**PKPab**		**01 55 12.3**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=345,slow=4.6,SNR=5.0								
WRA				PP		**PP**		**01 59 01.7**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=353,slow=4.9,SNR=9.8								
ASAR	**Alice Springs**	**172.10**	**29**	PKP		**PKPdf**		**01 54 04.0**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=206,slow=0.2,SNR=15								
ASAR				PKPab		**PKPab**		**01 55 27.2**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=331,slow=4.9,SNR=14								
ASAR	**Alice Springs**	**172.10**	**29**			**PKPdf**		**01 54 03.6**	**-1.3**

IDC 25 01:36:33.9±6.0, 18°30S×178°04W, h385km±33km, mb3.4/3, mbtmp4.1/4, Error ellipse: s-maj=131.8km s-min=37.3km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.77**	**278**	P	Pn	01 37 42.8	0.0
	18nm,0.7s,baz=115,slow=10,SNR=11						
STKA	**Stephens Creek**	**38.75**	**242**	P	P	01 43 23.4	+0.4
	1.0nm,0.4s,baz=109,slow=7.8,SNR=3.8						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**44.91**	**260**	P	P	01 44 11.8	-0.7
	1.2nm,0.6s,baz=96,slow=6.8,SNR=24						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**45.03**	**255**	P	P	01 44 13.4	+0.1
	8.2nm,0.7s,baz=88,slow=8.5,SNR=85						
	8.2nm,0.7s						
GERES	**GERESS Array B**	**148.08**	**345**	PKPbc	PKPbc	01 55 34.2	-0.6
	0.3nm,0.5s,baz=20,slow=3.3,SNR=4.9						

SOF ***25*** *01:38:02.1,37.9°N±0.1°×8.2°E±0.5, h18km±1km, MD4.8/8*
BGR ***25*** *01:38:03.3±0.6, 37.9°N×20.8°E, h10km, Error ellipse: s-maj=15.6km s-min=8.9km az=65.0*
BJI ***25*** *01:38:03.2, 38.72°N×20.15°E, h7km, mB5.1/3, mb4.8/20, Ms4.5/2, Ms7.4.4/1*
NAO ***25*** *01:38:04.5, 38.10°N×20.30°E, h10km, MB4.8*
IDC ***25*** *01:38:04.0±0.5, 38.14°N×20.45°E, h0km, mb4.4/28, mbtmp4.3/42, ML4.1/12, MS3.5/9, Error ellipse: s-maj=10.7km s-min=10.2km az=176.0*
MOS ***25*** *01:38:04.1±1.1, 38.16°N×20.26°E, h11km, mb4.9/28, Error ellipse: s-maj=4.4km s-min=2.3km az=80.0*
GII ***25*** *01:38:06.3±0.0, 37.171°N±0.001°×20.372°E±0.001°, h0km, Mws4.9, confirmed*
ATH ***25*** *01:38:06.6, 38.09°N×20.33E, h9km, Mw4.1, Moment Tensor Solution. s7 Moment tensor: Mrr0.56; Mθθ-0.35; Mφφ-0.21; Mrθ1.30; Mrφ0.34; Mθφ-0.85; Fault plane solution: NP1:φs124.00000°, δ80.00000°, λ88.00000°. NP2:φs315.00000°, δ11.00000°, λ101.00000°.*
MCSM ***25*** *01:38:06.9±0.5, 38.2°N±3°×2.0°E±2°, h10km±3km, mb4.5, mB4.8, MLv4.6, Mw(mB)4.1*
BEO ***25*** *01:38:06.6±0.6, 38.23°N×20.14E, h0km, ML4.5/14*
NEIC ***25*** *01:38:06.2±2.1, 38.13°N±0.06°×20.38E±0.06, h10km±1km, mb4.7/98, Error ellipse: s-maj=9.9km s-min=7.4km az=191.0*
AFAD ***25*** *01:38:07.0, 38.07°N×20.45E, h16km±49km, MW4.3*
PDG ***25*** *01:38:07.0±0.6, 38.15°N×20.33E, h13km±1km, MD4.7/2, ML4.6/13, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
THE ***25*** *01:38:07.3, 38°N±1°×2°E±2°, h17km±1km, M4.4/11, MLh4.4/11*
GFZ ***25*** *01:38:08.6±0.4, 38°N±2°×2°E±2°, h25km±3km, M4.3/85, mb4.7/85, Error ellipse: s-maj=4.4km s-min=2.5km az=25.7, confirmed*

ISC 25 01:38:05.6±0.3, 38.12N±0.02×20.37E±0.02, h11km, n1207, σ1s80/1313, mb4.7/105, MS3.7/5, 42C-47D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.10**	**32**	P	**Pg**	**01 38 11.0**	**+2.7**
LXR1				S	**Sg**	**01 38 13.4**	**+3.1**
VLS	**Valsamata**	**0.18**	**70**	P	**Pb**	**01 38 11.5**	**+0.5**
VLS				S	**Sg**	**01 38 14.6**	**+2.2**
VLS	**Valsamata**	**0.18**	**70**	P	**Pb**	**01 38 11.5**	**+0.5**
VLS				S	**Sg**	**01 38 14.5**	**+2.2**
VLS	**Valsamata**	**0.18**	**70**	P	**Pb**	**01 38 11.4**	**+0.4**
VLS				S	**Sg**	**01 38 14.8**	**+2.4**
RTZL	**Ratzakli, Kefa**	**0.32**	**97**	P	**Pb**	**01 38 13.5**	**+0.1**
RTZL				S	**Sb**	**01 38 18.1**	**-0.4**
RTZL	**Ratzakli, Kefa**	**0.32**	**97**	P	**Pb**	**01 38 13.4**	**+0.1**
RTZL				S	**Sb**	**01 38 18.4**	**0.0**
ORTH	**Orthonies,Zaky**	**0.37**	**136**	P	**Pb**	**01 38 14.0**	**-0.2**
ORTH				S	**Sb**	**01 38 19.3**	**-0.6**
FSK	**Fiskardo**	**0.37**	**24**	P	**Pb**	**01 38 14.7**	**+0.4**
FSK				S	**Sb**	**01 38 20.5**	**+0.4**
KYPS	**Kipseli, Zakin**	**0.46**	**130**	P	**Pb**	**01 38 16.0**	**+0.2**
KYPS				S	**Sb**	**01 38 22.8**	**+0.2**
LTHK	**Lithakia**	**0.55**	**138**	P	**Pg**	**01 38 16.8**	**+0.6**
LTHK				S	**Sb**	**01 38 25.4**	**+0.4**
LTHK	**Lithakia**	**0.55**	**138**	P	**Pg**	**01 38 16.9**	**+0.6**
LTHK				S	**Sg**	**01 38 24.6**	**+1.1**
EVGI	**Lefkada island**	**0.55**	**24**	P	**Pb**	**01 38 17.7**	**+0.4**
EVGI				S	**Sb**	**01 38 26.3**	**+1.1**
EVGI	**Lefkada island**	**0.55**	**24**	P	**Pb**	**01 38 17.9**	**+0.5**
EVGI				S	**Sb**	**01 38 26.9**	**+1.6**
DRAG	**Dragano-Lefkad**	**0.59**	**16**	P	**Pb**	**01 38 18.3**	**+0.3**
DRAG				S	**Sb**	**01 38 27.0**	**+0.7**
DRAG	**Dragano-Lefkad**	**0.59**	**16**	P	**Pb**	**01 38 18.4**	**+0.5**
DRAG				S	**Sb**	**01 38 27.1**	**+0.7**
CLEM	**Kyllini,Ilia,G**	**0.64**	**110**	P	**Pb**	**01 38 19.0**	**+0.1**
CLEM				S	**Sb**	**01 38 28.1**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.65**	**23**	P	**Pb**	**01 38 19.3**	**+0.4**
NYDR				S	**Sb**	**01 38 29.3**	**+1.3**
NYDR	**Nydri-Lefkada**	**0.65**	**23**	P	**Pb**	**01 38 19.4**	**+0.4**
NYDR				S	**Sn**	**01 38 30.4**	**-0.7**
LKD2	**Lefkada island**	**0.71**	**18**	P	**Pb**	**01 38 20.3**	**+0.2**
LKD2				S	**Sb**	**01 38 30.9**	**+1.1**
LKD2	**Lefkada island**	**0.71**	**18**	P	**Pb**	**01 38 20.4**	**+0.4**
LKD2	**Lefkada island**	**0.71**	**18**	P	**Pb**	**01 38 20.4**	**+0.4**
LKD2				S	**Sb**	**01 38 30.9**	**+1.1**
LCHA	**Lechaina**	**0.73**	**104**	P	**Pb**	**01 38 21.1**	**+0.8**
LCHA				S	**Sb**	**01 38 30.9**	**+0.6**
TSLK	**Tsoukalades, L**	**0.74**	**17**	P	**Pb**	**01 38 20.9**	**+0.3**
TSLK				S	**Sn**	**01 38 32.4**	**-0.9**
TSLK	**Tsoukalades, L**	**0.74**	**17**	P	**Pb**	**01 38 21.1**	**+0.6**
TSLK				S	**Sn**	**01 38 32.5**	**-0.9**
AXS	**Araxos**	**0.80**	**84**	P	**Pb**	**01 38 21.5**	**+0.1**
AXS				S	**Sn**	**01 38 34.1**	**-0.6**
RLS	**Riolos of Patr**	**0.87**	**93**	P	**Pb**	**01 38 22.7**	**+0.1**
RLS				S	**Sb**	**01 38 35.1**	**+0.9**
RLS	**Riolos of Patr**	**0.87**	**93**	P	**Pb**	**01 38 22.8**	**+0.1**
RLS				S	**Sb**	**01 38 35.1**	**+0.9**
PLEV	**Plevrona-Mesol**	**0.87**	**70**	P	**Pb**	**01 38 23.1**	**+0.4**
PLEV				S	**Sn**	**01 38 35.3**	**-1.1**
PLEV	**Plevrona-Mesol**	**0.87**	**70**	P	**Pb**	**01 38 23.1**	**+0.4**
PLEV				S	**Sn**	**01 38 36.8**	**+0.4**
MSL1	**Messolongi**	**0.87**	**72**	P	**Pb**	**01 38 23.3**	**+0.6**
MSL1				S	**Sn**	**01 38 35.5**	**-0.9**
AMPL	**Ampelaki**	**1.04**	**39**	P	**Pb**	**01 38 26.0**	**+0.3**
AMPL	**Ampelaki**	**1.04**	**39**	P	**Pb**	**01 38 25.9**	**+0.3**
AMPL				S	**Sn**	**01 38 41.4**	**+0.6**
DRO	**Drossia**	**1.07**	**98**	P	**Pg**	**01 38 26.4**	**+0.3**
DRO	**Drossia**	**1.07**	**98**	P	**Pg**	**01 38 26.5**	**+0.3**
DRO				S	**Sn**	**01 38 42.1**	**+0.7**
PATG	**Patra B**	**1.07**	**83**	P	**Pn**	**01 38 26.9**	**+0.3**
AGRP	**Agrapidokambos**	**1.10**	**75**	P	**Pb**	**01 38 26.6**	**0.0**
AGRP				S	**Sn**	**01 38 43.1**	**+0.9**
PATC	**Patra C**	**1.10**	**82**	P	**Pn**	**01 38 28.0**	**+1.0**
PATC				S	**Sn**	**01 38 42.9**	**+0.7**
RIOA	**Rio**	**1.13**	**80**	P	**Pn**	**01 38 28.0**	**+0.6**
RIOA				S	**Sn**	**01 38 43.1**	**+0.2**
ART2	**Arta**	**1.14**	**25**	P	**Pn**	**01 38 28.8**	**+1.3**
ART2				S	**Sn**	**01 38 43.4**	**+0.3**
ARTB	**Arta**	**1.14**	**24**	P	**Pn**	**01 38 28.7**	**+1.1**
ARTB				S	**Sn**	**01 38 43.1**	**-0.1**
PRGA	**Parga**	**1.17**	**1**	P	**Pg**	**01 38 29.8**	**+1.8**
PRGA				S	**Sn**	**01 38 45.8**	**+2.0**
ZARO	**Zacharo**	**1.19**	**121**	P	**Pg**	**01 38 30.5**	**+2.0**
ZARO				S	**Sn**	**01 38 46.0**	**+1.6**
AMT	**Artemida-Makis**	**1.21**	**118**	P	**Pg**	**01 38 30.7**	**+1.8**
AMT				S	**Sn**	**01 38 45.7**	**+0.8**
EFP	**Efpalio**	**1.25**	**75**	P	**Pn**	**01 38 29.2**	**+0.2**
EFP	**Efpalio**	**1.25**	**75**	P	**Pb**	**01 38 29.4**	**+0.3**
EFP				S	**Sn**	**01 38 46.9**	**+1.1**
MG00	**Magoula, Dorid**	**1.28**	**76**	P	**Pb**	**01 38 29.9**	**+0.2**
MG00				S	**Sg**	**01 38 49.6**	**+2.9**
ANX	**Ano Chora**	**1.31**	**68**	P	**Pg**	**01 38 30.7**	**-0.1**
ANX	**Ano Chora**	**1.31**	**68**	P	**Pg**	**01 38 30.7**	**-0.1**
PYRG	**Pyrgos, Dorida**	**1.33**	**77**	P	**Pb**	**01 38 30.9**	**+0.3**
PYRG				S	**Sg**	**01 38 49.5**	**+1.1**
AGEO	**AgiosGiorgios,**	**1.34**	**83**	P	**Pg**	**01 38 31.5**	**+0.1**
SERG	**Sergoula**	**1.36**	**77**	P	**Pn**	**01 38 31.0**	**+0.4**
SERG	**Sergoula**	**1.36**	**77**	P	**Pb**	**01 38 31.3**	**+0.2**
KLV1	**Kalavrita**	**1.37**	**93**	P	**Pg**	**01 38 31.9**	**-0.1**
TEME	**Temeni, Aigial**	**1.38**	**85**	P	**Pg**	**01 38 32.0**	**-0.2**
EVR	**Evrytania**	**1.38**	**54**	P	**Pb**	**01 38 31.7**	**+0.1**
EVR	**Evrytania**	**1.38**	**54**	P	**Pb**	**01 38 31.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.41**	**92**	P	**Pb**	**01 38 32.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.41**	**92**	P	**Pb**	**01 38 31.8**	**-0.1**
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pb**	**01 38 32.3**	**+0.3**
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pb**	**01 38 32.6**	**+0.6**
TETR	**Tetrakomo, Epi**	**1.42**	**30**	P	**Pb**	**01 38 32.3**	**+0.2**
TETR	**Tetrakomo, Epi**	**1.42**	**30**	P	**Pg**	**01 38 32.9**	**0.0**
KALE	**Kalithea**	**1.42**	**78**	P	**Pn**	**01 38 31.8**	**+0.4**
KALE	**Kalithea**	**1.42**	**78**	P	**Pb**	**01 38 32.1**	**0.0**
PSARO	**Psaromita, Dor**	**1.44**	**81**	P	**Pb**	**01 38 32.4**	**0.0**
PRMD	**Pramanda**	**1.52**	**22**	P	**Pg**	**01 38 35.3**	**+0.5**
KRK1	**kERKIRA**	**1.54**	**347**	P	**Pb**	**01 38 34.7**	**+0.5**
ITM	**Ithomi**	**1.55**	**127**	*e*P	**Pb**	**01 38 34.7**	**+0.4**
ITM	**Ithomi**	**1.55**	**127**	P	**Pb**	**01 38 34.3**	**+0.1**
ITM	**Ithomi**	**1.55**	**127**		**Pb**	**01 38 34.6**	**+0.4**
ITM	**Ithomi**	**1.55**	**127**	P	**Pb**	**01 38 34.8**	**+0.4**
ITM	**Ithomi**	**1.55**	**127**	P	**Pb**	**01 38 34.4**	**+0.1**
GUR	**Goura**	**1.57**	**96**	P	**Pb**	**01 38 34.4**	**-0.3**
GUR	**Goura**	**1.57**	**96**	P	**Pb**	**01 38 34.7**	**0.0**
JAN	**Janina**	**1.58**	**14**	P	**Pg**	**01 38 35.8**	**-0.2**
JAN	**Janina**	**1.58**	**14**	P	**Pb**	**01 38 35.0**	**+0.1**
JAN	**Janina**	**1.58**	**14**	P	**Pb**	**01 38 35.8**	**-0.2**
VALY	**Valyra**	**1.59**	**126**	P	**Pb**	**01 38 35.3**	**+0.3**
PYL1	**Pylos**	**1.60**	**138**	P	**Pb**	**01 38 35.0**	**-0.1**
PYL	**PYLOS**	**1.63**	**138**	P	**Pn**	**01 38 35.1**	**+0.8**
PYL	**PYLOS**	**1.63**	**138**	P	**Pn**	**01 38 35.0**	**+0.8**
KEK	**Kerkira**	**1.66**	**345**	*e*P	**Pn**	**01 38 34.9**	**+0.3**
KEK	**Kerkira**	**1.66**	**345**		**Pn**	**01 38 35.1**	**+0.5**
KEK	**Kerkira**	**1.66**	**345**	P	**Pn**	**01 38 35.3**	**+0.7**
KEK	**Kerkira**	**1.66**	**345**	P	**Pn**	**01 38 35.1**	**+0.5**
MTHA	**Methoni**	**1.67**	**140**	P	**Pb**	**01 38 36.5**	**+0.1**
DLFA	**Delphi**	**1.71**	**77**	P	**Pb**	**01 38 37.6**	**+0.5**
MSVA	**Metsovo**	**1.77**	**21**	P	**Pb**	**01 38 38.7**	**+0.6**
AGG	**Agios Georgios**	**1.78**	**59**	P	**Pb**	**01 38 38.6**	**+0.3**
AGG	**Agios Georgios**	**1.78**	**59**	P	**Pb**	**01 38 39.0**	**+0.7**
AGG	**Agios Georgios**	**1.78**	**59**	P	**Pb**	**01 38 39.0**	**+0.7**
AGG	**Agios Georgios**	**1.78**	**59**	P	**Pg**	**01 38 39.3**	**-0.5**
AGG	**Agios Georgios**	**1.78**	**59**	P	**Pb**	**01 38 39.0**	**+0.7**
SRN	**Sarande**	**1.79**	**351**	P	**Pn**	**01 38 37.5**	**+1.2**
SRN	**Sarande**	**1.79**	**351**	P	**Pn**	**01 38 38.1**	**-0.2**
LAM2	**Lamia**	**1.80**	**63**	P	**Pg**	**01 38 39.6**	**-0.5**
TRKA	**Trikala**	**1.80**	**37**	P	**Pg**	**01 38 39.8**	**-0.4**
THAL	**Thalero**	**1.81**	**92**	P	**Pb**	**01 38 39.1**	**+0.4**
SOFA	**Sofades**	**1.82**	**47**	P	**Pg**	**01 38 40.0**	**-0.5**
KIAA	**Kiato**	**1.88**	**92**	P	**Pb**	**01 38 40.4**	**+0.5**
AXAR	**Agios Charalam**	**1.91**	**69**	P	**Pb**	**01 38 40.8**	**+0.4**
AXAR	**Agios Charalam**	**1.91**	**69**	P	**Pb**	**01 38 41.1**	**+0.6**
ARS1	**Argos**	**1.93**	**104**	P	**Pb**	**01 38 40.7**	**-0.1**
THL	**Klokotos Trika**	**1.93**	**41**	P	**Pb**	**01 38 41.1**	**+0.2**
THL	**Klokotos Trika**	**1.93**	**41**	P	**Pb**	**01 38 41.3**	**+0.5**
ACOR	**Acrocorinthos**	**1.99**	**96**	P	**Pn**	**01 38 40.1**	**+0.9**
KPRO	**Kipourio**	**1.99**	**22**	P	**Pb**	**01 38 42.1**	**+0.2**
KPRO	**Kipourio**	**1.99**	**22**	P	**Pb**	**01 38 42.5**	**+0.6**
LTK	**Loutraki**	**2.05**	**92**	P	**Pn**	**01 38 41.5**	**+1.4**
LTK	**Loutraki**	**2.05**	**92**	P	**Pb**	**01 38 41.8**	**-1.1**
LOUT	**Loutraki**	**2.06**	**93**	P	**Pb**	**01 38 42.1**	**-0.9**
LKR	**Lokris**	**2.13**	**75**	P	**Pb**	**01 38 42.9**	**-1.4**
LKR	**Lokris**	**2.13**	**75**	P	**Pb**	**01 38 43.3**	**-0.9**
TYRN	**Tyrnavos**	**2.15**	**42**	P	**Pb**	**01 38 43.8**	**-0.8**
TYRN	**Tyrnavos**	**2.15**	**42**	P	**Pb**	**01 38 44.0**	**-0.6**
ATAL	**Atalanti**	**2.16**	**74**	P	**Pb**	**01 38 43.4**	**-1.3**
ATAL	**Atalanti**	**2.16**	**74**	P	**Pb**	**01 38 43.6**	**-1.1**
PENT	**Pentalofos**	**2.16**	**16**	P	**Pb**	**01 38 44.9**	**+0.1**
GINA	**Giannouli**	**2.21**	**45**	P	**Pb**	**01 38 45.2**	**-0.4**
VIL2	**Platees**	**2.29**	**87**	P	**Pb**	**01 38 45.4**	**-1.5**
VILL	**Villia**	**2.32**	**88**	P	**Pn**	**01 38 45.5**	**+1.7**
MET3	**Ano Fanari,Met**	**2.32**	**103**	P	**Pn**	**01 38 45.7**	**+1.9**
KZN	**Kozani**	**2.44**	**26**	P	**Pb**	**01 38 48.2**	**-1.4**
KZN	**Kozani**	**2.44**	**26**	P	**Pb**	**01 38 48.0**	**-1.6**
KZN	**Kozani**	**2.44**	**26**	P	**Pb**	**01 38 48.2**	**-1.4**
VLO	**Vlora**	**2.45**	**344**	P	**Pn**	**01 38 47.0**	**+1.5**
VLO	**Vlora**	**2.45**	**344**	P	**Pn**	**01 38 47.3**	**+1.9**
VLO	**Vlora**	**2.45**	**344**	P	**Pn**	**01 38 47.4**	**+1.9**
VLI	**Veliai**	**2.47**	**124**	P	**Pb**	**01 38 48.7**	**-1.4**
VLI	**Veliai**	**2.47**	**124**	P	**Pb**	**01 38 48.7**	**-1.4**
MAGU	**Magoula**	**2.48**	**90**	P	**Pn**	**01 38 47.3**	**+1.4**
MAGU	**Magoula**	**2.48**	**90**	P	**Pn**	**01 38 47.6**	**+1.7**
STFN	**Stefani**	**2.50**	**88**	P	**Pn**	**01 38 48.1**	**+1.8

DRME *i* Sn **Sn** 01 39 56.2 -1.6
THAS Thassos island 4.19 52 P **Pn** 01 39 10.9 +1.5
NVR Nevrokopi 4.20 39 P **Pn** 01 39 11.4 +1.8
KKB Krupnik 4.28 29 *i* P **Pn** 01 39 12.6 +1.9
KKB Krupnik 4.28 29 P **Pn** 01 39 12.4 +1.7
KKB Krupnik 4.28 29 P **Pn** 01 39 12.0 +1.3
KKB S **Sn** 01 40 02.5 +1.8
MMB Musomishta 4.30 36 *i* P **Pn** 01 39 12.8 +1.8
MMB Musomishta 4.30 36 P **Pn** 01 39 13.0 +1.9
MMB Musomishta 4.30 36 P **Pn** 01 39 12.3 +1.3
KAVA Kavala 4.30 47 P **Pn** 01 39 12.3 +1.3
BUM Brajici-Budva 4.33 345 *e*Pn **Pn** 01 39 11.6 +0.2
BUM *i* Sn **Sn** 01 40 00.2 -1.7
PDG Podgorica 4.39 349 ⇓P **Pn** 01 39 11.5 -0.7
PDG ⇓S **Sn** 01 40 02.5 -0.8
PDG Podgorica 4.39 349 P **Pn** 01 39 12.6 +0.4
PDG Podgorica 4.39 349 ⇑*i* Pn **Pn** 01 39 12.7 +0.4
PDG Podgorica 4.39 349 P **Pn** 01 39 13.0 +0.7
PDG Podgorica 4.39 349 *e*Pn **Pn** 01 39 12.8 +0.6
PDG *i* Sn **Sn** 01 40 01.6 -1.8
GVD Gavdhos 4.43 136 *e*P Pn 01 39 17.7 +4.9
CHOS Chios island 4.48 85 *e*P **Pn** 01 39 14.7 +1.2
CHOS Chios island 4.48 85 P **Pn** 01 39 16.0 +2.5
PVY Plav 4.49 356 *e*Pn **Pn** 01 39 14.0 +0.4
PVY *i* Sn **Sn** 01 40 03.9 -1.9
HCY Herceg Novi 4.56 342 ⇑*i* Pn **Pn** 01 39 14.1 -0.4
HCY Herceg Novi 4.56 342 *e*Pn **Pn** 01 39 14.2 -0.3
HCY *i* Sn **Sn** 01 40 05.4 -2.1
CEME Cevo 4.56 346 *e*Pn **Pn** 01 39 14.8 +0.2
CEME *i* Sn **Sn** 01 40 05.7 -2.0
IDI Anoyia 4.60 126 Pn **Pn** 01 39 14.8 -0.3
5.8nm,0.3s,baz=241,slow=12,SNR=26
IDI Sn **Sn** 01 40 10.0 +1.4
32nm,0.3s,baz=142,slow=22,SNR=21
IDI LR LR 01 41 35.1
comp=Z,225nm,19.0s,baz=286,slow=46
IDI Anoyia 4.60 126 *e*P **Pn** 01 39 19.8 +4.7
IDI Anoyia 4.60 126 **Pn** 01 39 14.9 -0.2
SMTH Samothraki Isl 4.64 58 P **Pn** 01 39 17.2 +1.6
BOSS Bosilegrad 4.66 20 *e*Pn **Pn** 01 39 17.3 +1.3
KOCA Canakkale, Ayv 4.71 71 P **Pn** 01 39 17.0 +0.4
BOZC Bozcaada 4.75 67 *e*P **Pn** 01 39 18.5 +1.4
BOZC Bozcaada 4.75 67 P **Pn** 01 39 18.3 +1.2
VAE Valguarnera 4.76 264 Pn **Pn** 01 39 19.3 +1.9
6.3nm,0.3s,baz=155,slow=7.9,SNR=75
VAE Sn **Sn** 01 40 13.3 +0.7
4.4nm,0.3s,baz=21,slow=19,SNR=4.9
IVA Berane 4.76 356 *e*Pn **Pn** 01 39 17.9 +0.5
IVA *i* Sn **Sn** 01 40 10.5 -2.2
GADA Gvkgeada 4.77 63 *e*P **Pn** 01 39 18.6 +1.2
GADA Gvkgeada 4.77 63 P **Pn** 01 39 18.8 +1.4
NKME Niksic 4.77 347 *e*Pn **Pn** 01 39 17.5 0.0
NKME *i* Sn **Sn** 01 40 10.6 -2.2
KOME Kolasin 4.78 352 *e*Pn **Pn** 01 39 18.1 +0.5
KOME *i* Sn **Sn** 01 40 10.8 -2.1
KARB zmir-Karabur 4.78 82 P **Pn** 01 39 17.3 -0.2
BARS Barje 4.82 13 *e*Pn **Pn** 01 39 19.4 +1.2
BARS *e*Sn **Sn** 01 40 14.1 +0.1
TREB Trebinje 4.85 342 *e*Pn **Pn** 01 39 18.3 +0.2
RAFF Raffo Rosso 4.85 261 **Pn** 01 39 18.1 -0.4
RZN Rozhen 4.90 42 *i* P **Pn** 01 39 21.4 +2.0
RZN Rozhen 4.90 42 P **Pn** 01 39 21.0 +1.6
RZN Rozhen 4.90 42 P **Pn** 01 39 20.7 +1.3
URLA Izmir 4.91 85 *e*P **Pn** 01 39 21.7 +2.4
URLA Izmir 4.91 85 P **Pn** 01 39 20.7 +1.3
PLNA Plana 4.94 27 *i* P **Pn** 01 39 22.2 +2.3
EZN Ezine 4.94 68 *e*P **Pn** 01 39 21.4 +1.6
EZN Ezine 4.94 68 P **Pn** 01 39 23.7 +3.9
BRY Bratogost 4.98 344 ⇑*i* Pn **Pn** 01 39 20.1 -0.3
BRY Bratogost 4.98 344 *e*Pn **Pn** 01 39 20.2 -0.2
BRY *i* Sn **Sn** 01 40 15.5 -2.6
VTS Vitosha 5.00 25 *i* P **Pn** 01 39 22.3 +1.6
VTS Vitosha 5.00 25 P **Pn** 01 39 22.5 +1.8
VTS Vitosha 5.00 25 P **Pn** 01 39 21.8 +1.1
VTS S **Sn** 01 40 18.7 +0.1
VTS Vitosha 5.00 25 *e*Pn **Pn** 01 39 22.6 +1.8
VTS *e*Sn **Sn** 01 40 18.6 0.0
RDO Rodhopi 5.01 51 *e*P **Pn** 01 39 21.4 +0.8
RDO Rodhopi 5.01 51 P **Pn** 01 39 22.5 +1.8
RDO Rodhopi 5.01 51 **Pn** 01 39 22.7 +2.1
RDO Rodhopi 5.01 51 P **Pn** 01 39 22.9 +2.3
TRAN Tran 5.02 20 *i* P **Pn** 01 39 22.7 +1.8
BAYC CANAKKALE_Bayr 5.08 69 P **Pn** 01 39 22.0 +0.3
AYVA Ayvalik 5.08 74 P **Pn** 01 39 21.7 0.0
SGRT San Giovanni R 5.08 317 **Pn** 01 39 22.6 +0.8
SELS Selova 5.13 6 *e*Pn **Pn** 01 39 23.0 +0.6
DGB zmir 5.14 89 P **Pn** 01 39 23.0 +0.6
COMU Canakkale 5.14 65 *e*P **Pn** 01 39 24.4 +1.8
SJES Sjenica 5.15 357 *e*Pn **Pn** 01 39 24.0 +1.3
SJES *e*Sn **Sn** 01 40 21.0 -1.2
SJES Sjenica 5.15 357 ⇑*i* Pn **Pn** 01 39 24.0 +1.3
STON Ston 5.17 338 *e*Pn **Pn** 01 39 22.4 -0.5
STN *e*Sn **Sn** 01 40 17.4 -3.1
CAVK Edirne/Enez-Ca 5.17 58 ⇓P **Pn** 01 39 26.4 +3.4
CAVK Edirne/Enez-Ca 5.17 58 P **Pn** 01 39 23.0 +0.1
ENEZ Enez 5.18 58 *e*P **Pn** 01 39 24.2 +1.1
ENEZ Enez 5.18 58 P **Pn** 01 39 24.9 +1.8
KDZ Kurdzhali 5.19 46 *i* P **Pn** 01 39 25.0 +1.8
KDZ Kurdzhali 5.19 46 *e*P **Pn** 01 39 23.9 +0.7
KDZ Kurdzhali 5.19 46 P **Pn** 01 39 25.0 +1.8
KDZ Kurdzhali 5.19 46 P **Pn** 01 39 24.2 +1.0
ALN Alexandroupoli 5.19 56 *e*P **Pn** 01 39 23.9 +0.7
ALN Alexandroupoli 5.19 56 P **Pn** 01 39 24.7 +1.5
ALN Alexandroupoli 5.19 56 P **Pn** 01 39 25.3 +2.1
ALN Alexandroupoli 5.19 56 **Pn** 01 39 25.3 +2.1
ALN Alexandroupoli 5.19 56 P **Pn** 01 39 23.7 +0.5
ALN Alexandroupoli 5.19 56 P **Pn** 01 39 25.5 +2.3
UPM Unac-Piva 5.20 348 *e*Pn **Pn** 01 39 24.2 +0.7
UPM Unac-Piva 5.20 348 *e*Pn **Pn** 01 39 24.0 +0.5
UPM *i* Sn **Sn** 01 40 20.9 -2.7
WDD Wied Dalam 5.20 246 **Pn** 01 39 24.0 +0.6
WDD Wied Dalam 5.20 246 P **Pn** 01 39 24.1 +0.7
DKL Dikili 5.21 77 *e*P **Pn** 01 39 25.5 +2.1
DKL Dikili 5.21 77 P **Pn** 01 39 24.0 +0.6
PLD Plovdiv 5.24 38 *e*P **Pn** 01 39 24.2 +0.3
PLD Plovdiv 5.24 38 P **Pn** 01 39 25.8 +1.9
PLD Plovdiv 5.24 38 P **Pn** 01 39 26.7 +2.8
PLD pmax pmax
comp=Z,285nm,0.9s
PLD Plovdiv 5.24 38 *e*Pn **Pn** 01 39 25.6 +1.7
GELI Tayfur-Gelibol 5.26 62 *e*P **Pn** 01 39 25.2 +1.1
PLE Pljevlja 5.26 352 *e*Pn **Pn** 01 39 24.7 +0.4
PLE *i* Sn **Sn** 01 40 22.3 -2.7
PGB Panagyurishte 5.27 32 *i* P **Pn** 01 39 26.6 +2.3
PGB Panagyurishte 5.27 32 P **Pn** 01 39 26.1 +1.8
ZEDA zmir-Bergama 5.33 79 P **Pn** 01 39 27.7 +2.6
PAOL Paolisi 5.35 305 **Pn** 01 39 27.6 +2.2
ERIK Erikli-Kesan 5.40 60 *e*P **Pn** 01 39 27.1 +1.1
ERIK Erikli-Kesan 5.40 60 P **Pn** 01 39 26.7 +0.6
BUHA Balikesir, Bur 5.42 73 P **Pn** 01 39 29.0 +2.7
GCAM G?zelcaml? 5.44 92 *e*P **Pn** 01 39 29.7 +3.1
GOCS Kraljevo Serbi 5.46 4 *e*Pn **Pn** 01 39 27.2 +0.3
GOCS *e*Sn **Sn** 01 40 28.7 -1.0
CANM Can-anakkale 5.53 68 *e*P **Pn** 01 39 29.4 +1.5
ZKR Zakros 5.57 121 *e*P Pn 01 39 33.5 +5.0
DIM Dimitrovgrad 5.60 44 P **Pn** 01 39 30.6 +1.8
BOVS Bovan 5.61 10 ⇓P **Pn** 01 39 29.5 +0.6
BOVS ⇓S **Sn** 01 40 33.1 -0.1
BOVS Bovan 5.61 10 *e*Pn **Pn** 01 39 29.3 +0.4
BOVS *e*Sn **Sn** 01 40 31.0 -2.3
BODT Bodrum 5.61 99 *e*P **Pn** 01 39 32.4 +3.4
CLTB Caltabellotta 5.69 267 P **Pn** 01 39 31.6 +1.4
UKOP Uzunkopru-Edir 5.69 56 *e*P **Pn** 01 39 30.8 +0.7
GRUS Gruza 5.77 2 *e*Pn **Pn** 01 39 31.6 +0.4
GRUS *e*Sn **Sn** 01 40 36.5 -0.9
BBLS Lazi&#263i 5.79 353 *e*Pn **Pn** 01 39 31.6 +0.1
BBLS *e*Sn **Sn** 01 40 36.2 -1.7
BBLS Lazi&#263i 5.79 353 ⇑*i* Pn **Pn** 01 39 31.7 +0.2
KRBG Karabiga-Canak 5.84 65 *e*P **Pn** 01 39 33.8 +1.8
ZAGS Zajecar 5.86 13 *e*Pn **Pn** 01 39 33.1 +0.7
BALY Balya 5.88 72 P **Pn** 01 39 34.7 +2.0
DAT Datca 5.90 101 *e*P **Pn** 01 39 36.5 +3.4
AYDB Zeytinkoy-Aydi 5.94 89 *e*P **Pn** 01 39 36.5 +2.9
AYDN Tasoluk 5.96 92 P **Pn** 01 39 37.2 +3.4
DIVS Divibare 5.98 357 *e*Pn **Pn** 01 39 34.1 -0.1
DIVS *e*Sn **Sn** 01 40 39.8 -2.9
KARP Karpathos 6.02 113 P **Pn** 01 39 37.7 +3.1
comp=Z,0.5nmcomp=Z,2µmcomp=Z,114nm,1.0s
KARP Karpathos 6.02 113 P **Pn** 01 39 35.0 +0.4
comp=Z,0.4nmcomp=Z,0.5nmcomp=Z,2µmcomp=Z,114nm,1.0s

BALB Balikesir 6.05 73 *e*P **Pn** 01 39 37.7 +2.7
BALB Balikesir 6.05 73 **Pn** 01 39 37.0 +1.9
ODEM Odemis-Izmir 6.07 86 *e*P **Pn** 01 39 35.7 +0.4
TRUS Trudelj 6.10 0 *e*Pn **Pn** 01 39 35.8 +0.1
TRUS *e*Sn **Sn** 01 40 43.0 -2.5
EDRB Edirne 6.15 51 *e*P **Pn** 01 39 37.4 +1.0
PLVB Pleven 6.17 30 ⇑P **Pn** 01 39 39.1 +2.4
NAZL Nazilli-Aydin 6.25 89 *e*P **Pn** 01 39 40.6 +2.8
SUSR Susurluk-Balik 6.28 71 *e*P **Pn** 01 39 39.7 +1.5
INTR Introdacqua 6.30 310 **Pn** 01 39 41.1 +2.6
YER Yerkesik 6.36 96 *e*P **Pn** 01 39 42.9 +3.6
TURN Turunc 6.41 100 *e*P **Pn** 01 39 44.0 +4.1
JMB Yambol 6.42 45 P **Pn** 01 39 42.2 +2.1
MANT Manisa 6.45 84 **Pn** 01 39 40.0 -0.7
TEKS Tekeris 6.46 355 *e*Pn **Pn** 01 39 40.0 -0.7
TEKS *e*Sn **Sn** 01 40 50.0 -4.3
TEKS Tekeris 6.46 355 ⇑*i* Pn **Pn** 01 39 39.9 -0.7
ARG Arkhangelos 6.48 105 *e*P Pn 01 39 45.9 +5.0
ARG Arkhangelos 6.48 105 P **Pn** 01 39 42.6 +1.7
ARG Arkhangelos 6.48 105 P **Pn** 01 39 42.6 +1.7
AVAS Avala Beograd 6.58 1 *e*Pn **Pn** 01 39 41.2 -1.0
AVAS *e*Sn **Sn** 01 40 53.9 -3.3
VLAD Vladila 6.62 26 ⇓P **Pn** 01 39 44.9 +2.2
BEO Beograd 6.69 1 *e*Pn **Pn** 01 39 43.0 -0.7
ZIMR 6.70 33 ⇓P **Pn** 01 39 45.0 +1.0
ZIMR 6.70 33 P **Pn** 01 39 44.9 +1.0
DALY Dalyan (Mula) 6.71 99 *e*P **Pn** 01 39 47.9 +3.8
MDVR Moldovita 6.74 8 ⇓P **Pn** 01 39 45.0 +0.5
AQU L'Aquila 6.81 311 P **Pn** 01 39 47.2 +1.7
AQU L'Aquila 6.81 311 *e*Pn **Pn** 01 39 48.2 +2.8
AQU L'Aquila 6.81 311 P **Pn** 01 39 47.2 +1.7
SRE Strehaia 6.88 17 ⇓P **Pn** 01 39 47.7 +1.4
SRE Strehaia 6.88 17 P **Pn** 01 39 47.7 +1.4
HERR Herculane 6.93 12 ⇓P **Pn** 01 39 47.4 +0.3
CTYL Yalikoy Yolu 6.96 59 P **Pn** 01 39 49.0 +1.6
comp=Z,0.3nmcomp=Z,4µmcomp=Z,107nm,0.6s
CTKS Kestanelik-??a 7.00 61 *e*P **Pn** 01 39 49.5 +1.4
ARMT Armutlu 7.02 67 *e*P **Pn** 01 39 50.2 +1.9
COPA Copaceanca 7.04 30 ⇓P **Pn** 01 39 50.6 +2.1
BLY Banja Luka 7.05 341 ⇓P **Pn** 01 39 48.7 +0.1
BLY Banja Luka 7.05 341 *e*Pn **Pn** 01 39 48.8 +0.1
BLY *e*Sn **Sn** 01 41 04.2 -4.5
BLY Banja Luka 7.05 341 ⇑*i* Pn **Pn** 01 39 48.7 +0.1
BLY Banja Luka 7.05 341 P **Pn** 01 39 49.1 +0.4
FRGS Fruska Gora 7.05 357 *e*Pn **Pn** 01 39 47.9 -0.8
FRGS *e*Sn **Sn** 01 41 03.5 -5.3
FRGS Fruska Gora 7.05 357 ⇑*i* Pn **Pn** 01 39 47.9 -0.8
APMY Acipayam-Deniz 7.11 92 *e*P **Pn** 01 39 52.7 +3.2
RAZG Razgrad 7.16 39 ⇓P **Pn** 01 39 52.4 +2.2
CAME Cameli-Denizli 7.19 97 *e*P **Pn** 01 39 54.3 +3.5
TVSB Tavsanli 7.22 77 *e*P **Pn** 01 39 53.6 +2.4
HUMR Humele 7.28 27 ⇓P **Pn** 01 39 52.8 +0.9
HUMR Humele 7.28 27 P **Pn** 01 39 54.0 +2.0
SGRR Singureni 7.42 33 ⇓P **Pn** 01 39 56.1 +2.3
GZR Gura Zlata 7.49 13 ⇑P **Pn** 01 39 55.5 +0.7
GZR Gura Zlata 7.49 13 P **Pn** 01 39 55.5 +0.7
BZS Buzias 7.55 7 ⇑P **Pn** 01 39 55.7 0.0
BZS Buzias 7.55 7 P **Pn** 01 39 55.6 0.0
BZS Buzias 7.55 7 *e*Pn **Pn** 01 39 54.8 -0.8
BZS Buzias 7.55 7 P **Pn** 01 39 55.5 -0.1
AKAS Kas 7.61 101 *e*P **Pn** 01 40 00.3 +3.8
ADVT Abdulvahap 7.62 69 *e*P **Pn** 01 39 58.9 +2.3
ELL Elmali 7.71 97 *e*P **Pn** 01 40 01.2 +3.3
ELL Elmali 7.71 97 P Pn 01 40 04.5 +6.6
ELL Elmali 7.71 97 Pn 01 40 04.5 +6.6
LOT Lotru 7.75 18 ⇓P **Pn** 01 39 59.6 +1.1
LOT Lotru 7.75 18 P **Pn** 01 39 59.2 +0.7
CICN Ciocanesti 7.88 37 ⇓P **Pn** 01 40 02.2 +2.2
SULR 7.91 32 ⇓P **Pn** 01 40 02.1 +1.7
SULR 7.91 32 P **Pn** 01 40 01.6 +1.2
ARR Arges 7.91 22 ⇓P **Pn** 01 40 02.7 +2.1
ARR Arges 7.91 22 P **Pn** 01 40 01.2 +0.6
DEV Deva 7.99 13 ⇓P **Pn** 01 40 03.8 +2.2
DEV Deva 7.99 13 P **Pn** 01 40 03.8 +2.2
DEV Deva 7.99 13 P **Pn** 01 40 02.7 +1.1
KORT Korkueli 8.00 95 *e*P **Pn** 01 40 05.3 +3.3
VOIR 8.11 24 ⇓P **Pn** 01 40 05.2 +1.9
VOIR 8.11 24 P **Pn** 01 40 05.2 +1.9
VOIR 8.11 24 P **Pn** 01 40 04.7 +1.4
comp=Z,389nmcomp=Z,33nm,0.9s
VOIR 8.11 24 P **Pn** 01 40 05.3 +1.9
MORH Mrgy, Hungar 8.19 352 ⇓P **Pn** 01 40 03.5 -0.9
MORH Mrgy, Hungar 8.19 352 ⇑*i* Pn **Pn** 01 40 02.9 -1.5
MORH Mrgy, Hungar 8.19 352 P **Pn** 01 40 03.8 -0.6
ICOR Ion Corvin 8.21 41 ⇓P **Pn** 01 40 07.6 +3.0
AMBH Ambrzfalva 8.23 2 P **Pn** 01 40 05.4 +0.5
BOJS Bojanci 8.31 334 *i* Pn **Pn** 01 40 06.5 +0.5
ZAG Zagreb 8.37 338 P **Pn** 01 40 07.4 +0.6
ISR Istrita 8.38 31 ⇓P **Pn** 01 40 09.7 +2.6
ISR Istrita 8.38 31 P **Pn** 01 40 09.7 +2.6
ISR Istrita 8.38 31 P **Pn** 01 40 09.7 +2.6
comp=Z,1µmcomp=Z,115nm,1.0s
PTJ Puntijarka 8.45 339 P **Pn** 01 40 07.0 -0.9
MLR Muntele Rosu 8.46 28 Pn **Pn** 01 40 10.3 +2.1
comp=Z,1.8nm,0.3s,baz=230,slow=4.8,SNR=26
MLR LR LR 01 44 11.7
comp=Z,774nm,20.0s,baz=174,slow=44
comp=Z,39nm,0.7s
MLR Muntele Rosu 8.46 28 ⇑P **Pn** 01 40 11.4 +3.1
MLR Muntele Rosu 8.46 28 P **Pn** 01 40 11.3 +3.1
MLR Muntele Rosu 8.46 28 **Pn** 01 40 10.5 +2.3
MLR Muntele Rosu 8.46 28 P **Pn** 01 40 10.8 +2.6
comp=Z,631nmcomp=Z,74nm,0.4s
MLR Muntele Rosu 8.46 28 P **Pn** 01 40 11.3 +3.1
GBRS Gornja Briga 8.49 333 *i* Pn **Pn** 01 40 09.4 +0.9
CRES Cresnjevec Ost 8.53 336 *i* Pn **Pn** 01 40 08.9 -0.1
CRES *e*Sn **Sn** 01 41 39.9 -5.3
CRES IAML 01 41 42.1
comp=Z,108nm,0.7s
NEHR Nehoiu 8.54 29 ⇓P **Pn** 01 40 11.9 +2.7
TLBR Topalu 8.63 40 ⇓P **Pn** 01 40 12.7 +2.3
DOPR Dopca 8.69 24 ⇓P **Pn** 01 40 12.2 +1.0
TIRR Tirgusor 8.76 41 ⇓P **Pn** 01 40 14.2 +2.0
TIRR Tirgusor 8.76 41 P **Pn** 01 40 14.1 +2.0
TIRR Tirgusor 8.76 41 P **Pn** 01 40 14.5 +2.4
BEHE Becsehely 8.76 343 ⇑*i* Pn **Pn** 01 40 11.7 -0.5
BEHE Becsehely 8.76 343 P **Pn** 01 40 12.0 -0.2
GRER 8.77 32 ⇓P **Pn** 01 40 15.6 +3.2
MARR Marisel-Cluj 8.79 12 ⇑P **Pn** 01 40 13.9 +1.2
DRGR 8.84 11 ⇓P **Pn** 01 40 13.8 +0.4
DRGR 8.84 11 P **Pn** 01 40 13.7 +0.4
DRGR 8.84 11 *e*Pn **Pn** 01 40 12.8 -0.5
DRGR 8.84 11 P **Pn** 01 40 15.1 +1.7
COVR Voineasa-Covas 8.86 27 ⇓P **Pn** 01 40 15.5 +2.9
BOSR Bodos 8.87 25 ⇓P **Pn** 01 40 15.9 +2.2
CJR Cluj-Napoca 8.92 14 ⇓P **Pn** 01 40 16.1 +1.7
CJR Cluj-Napoca 8.92 14 P **Pn** 01 40 16.0 +1.7
OZUR 8.93 25 ⇓P **Pn** 01 40 16.6 +2.1
SAHR Sahastru 8.94 30 ⇑P **Pn** 01 40 16.9 +2.2
TURR Turia 8.97 26 ⇓P **Pn** 01 40 15.9 +0.8
PLOR Plostina 9.03 29 ⇑P **Pn** 01 40 18.2 +2.3
PLOR Plostina 9.03 29 P **Pn** 01 40 18.2 +2.3
LJU Ljubljana 9.03 333 P **Pn** 01 40 16.1 +0.2
LJU pmax pmax
comp=Z,416nm,0.8s
TPGR Topolog 9.04 39 ⇑P **Pn** 01 40 17.8 +1.8
TRI Trieste 9.04 329 P **Pn** 01 40 15.6 -0.4
TRI Trieste 9.04 329 **Pn** 01 40 15.6 -0.4
VRI Vrincioaia 9.07 29 ⇓P **Pn** 01 40 18.7 +2.2
VRI Vrincioaia 9.07 29 P **Pn** 01 40 18.6 +2.2
VRI Vrincioaia 9.07 29 P **Pn** 01 40 18.6 +2.2
comp=Z,586nmcomp=Z,63nm,1.2s
VRI Vrincioaia 9.07 29 P **Pn** 01 40 18.4 +1.9
ODBI Odobesti 9.12 31 ⇑P **Pn** 01 40 20.0 +2.9
CFR Carcaliu 9.14 37 ⇑P **Pn** 01 40 18.7 +1.3
CFR Carcaliu 9.14 37 P **Pn** 01 40 18.6 +1.3
I48TN KESRA INFRASON 9.14 259 I I 02 34 38.6
baz=71,slow=316,SNR=1.1
KEST Kesra 9.14 258 Pn **Pn** 01 40 19.9 +2.4
comp=Z,1.2nm,0.3s,baz=91,slow=8.6,SNR=21
KEST Sn **Sn** 01 41 59.2 -1.3
comp=Z,0.7nm,0.3s,baz=311,slow=23,SNR=9.6
comp=Z,5.0nm,0.6s
MPLH Magyarpolny 9.29 348 P **Pn** 01 40 18.4 -1.0
comp=Z,886nmcomp=Z,86nm,0.8s
MPLH Magyarpolny 9.29 348 P **Pn** 01 40 19.1 -0.3
LTVH Ltavrtes, Hu 9.33 6 ⇓P **Pn** 01 40 22.0 +2.0
LTVH Ltavrtes, Hu 9.33 6 P **Pn** 01 40 21.4 +1.4
ONER Baraj Valea Uz 9.35 27 ⇑P **Pn** 01 40 22.5 +2.3
BUD Budapest 9.41 354 P **Pn** 01 40 20.9 -0.2
BUD pmax pmax
comp=Z,17nm,0.7s
BUD Budapest 9.41 354 P **Pn** 01 40 20.9 -0.2
SOKA Soboth 9.42 337 *i* Pn **Pn** 01 40 20.7 -0.6
comp=Z,11nm,0.3s,SNR=30
SOKA *i* Sn **Sn** 01 42 00.8 -6.5
comp=Z,0.6nm,0.3s
OBKA Obir 9.43 335 *e*Pn **Pn** 01 40 22.1 +0.7
OBKA *e*Sn **Sn** 01 42 01.4 -6.1
OBKA Obir 9.43 335 *e*Pn **Pn** 01 40 21.4 0.0
comp=Z,12nm,0.5s,SNR=11
OBKA *e*Sn **Sn** 01 42 04.7 -2.8
comp=Z,2.3nm,0.2s
OBKA Obir 9.43 335 P **Pn** 01 40 22.2 +0.7
ARCR ARCALIA 9.43 17 ⇓P **Pn** 01 40 22.9 +1.5
TLCR 9.47 39 ⇑P **Pn** 01 40 24.3 +2.4
TLCR 9.47 39 P **Pn** 01 40 24.3 +2.4
GHRR 9.50 31 P **Pn** 01 40 23.8 +1.5
TESR Tescani 9.59 27 ⇓P **Pn** 01 40 25.4 +1.8
TESR Tescani 9.59 27 P **Pn** 01 40 24.9 +1.3
VLDR Vladesti 9.62 34 ⇓P **Pn** 01 40 25.7 +1.8
BIR Birlad 9.76 31 ⇑P **Pn** 01 40 28.0 +2.2
BIR Birlad 9.76 31 P **Pn** 01 40 28.0 +2.2
BIZ Bicaz 9.78 24 ⇓P **Pn** 01 40 28.7 +2.6
ARSA Arzberg 9.80 340 *e*Pn **Pn** 01 40 26.0 -0.5
ARSA *e*Sn **Sn** 01 42 10.9 -5.5
ARSA Arzberg 9.80 340 *e*Pn **Pn** 01 40 25.4 -1.0
comp=Z,5.3nm,0.5s,SNR=15
ARSA *e*Sn **Sn** 01 42 14.2 -2.2
comp=Z,9.7nm,0.5s
ARSA Arzberg 9.80 340 P **Pn** 01 40 25.3 -1.2
PSZ Piszkesteto 9.80 358 ⇓P **Pn** 01 40 26.5 0.0
PSZ Piszkesteto 9.80 358 P **Pn** 01 40 26.5 0.0
PSZ Piszkesteto 9.80 358 **Pn** 01 40 26.5 0.0
PSZ Piszkesteto 9.80 358 P **Pn** 01 40 26.8 +0.2
SRO Srobarova 9.81 352 *e*P **Pn** 01 40 25.9 -0.6
SRO Srobarova 9.81 352 P **Pn** 01 40 27.8 +1.3
SRO Srobarova 9.81 352 *e*PN **Pn** 01 40 25.9 -0.6
BMR Baia Mare 9.82 12 ⇑P **Pn** 01 40 28.7 +2.0
BMR Baia Mare 9.82 12 P **Pn** 01 40 28.7 +2.0
BMR Baia Mare 9.82 12 P **Pn** 01 40 28.5 +1.8
MYKA Terra Mystica 9.85 332 *e*Pn **Pn** 01 40 27.4 +0.1
comp=Z,2.9nm,0.3s
MYKA *e*Sn **Sn** 01 42 12.7 -5.1
comp=Z,3.1nm,0.3s
KKUL Konya-Kulu 9.87 80 P **Pn** 01 40 29.9 +2.4
GIRR Girov 9.92 25 ⇓P **Pn** 01 40 30.9 +2.8
FUSE Fusea 9.93 329 P **Pn** 01 40 28.5 +0.3
SESA Seetaler Alpe, 9.95 336 *i* Pn **Pn** 01 40 28.1 -0.6
comp=Z,17nm,0.4s,SNR=32
SESA *e*Sn **Sn** 01 42 15.1 -5.4
comp=Z,15nm,0.4s
SOP Sopron 9.96 345 P **Pn** 01 40 29.2 +0.6
SOP pmax pmax
comp=Z,7.0nm,1.2s
SOP Sopron 9.96 345 P **Pn** 01 40 27.8 -0.8
RONA Rosalia, Austr 10.03 344 *i* Pn **Pn** 01 40 28.3 -1.3
comp=Z,3.0nm,0.5s
RONA *i* Sn **Sn** 01 42 16.9 -5.2
comp=Z,0.5nm,0.3s
CIMO Cimolais 10.08 327 P **Pn** 01 40 30.2 0.0
TRPA Tarpa 10.13 8 P **Pn** 01 40 31.7 +0.8
BURAR Bucovina Array 10.13 19 ⇑P **Pn** 01 40 33.1 +1.9
BURAR Bucovina Array 10.13 19 P **Pn** 01 40 33.0 +1.9
BURAR Bucovina Array 10.13 19 **Pn** 01 40 32.5 +1.4
BUR08 Bucovina Ar. S 10.16 19 **Pn** 01 40 33.5 +2.1
PRAR RASCA 10.19 23 ⇑P **Pn** 01 40 34.8 +3.1
ABAH Abaujker 10.20 3 P **Pn** 01 40 32.5 +0.7
KBA Koelnbreinsper 10.34 332 P **Pn** 01 40 34.5 +0.5
KBA Koelnbreinsper 10.34 332 *e*Pn **Pn** 01 40 34.6 +0.5
KBA *e*Sn **Sn** 01 42 26.1 -3.9
KBA Koelnbreinsper 10.34 332 *i* Pn **Pn** 01 40 34.3 +0.3
comp=Z,9.5nm,0.5s,SNR=8.4
KBA *i* Sn **Sn** 01 42 26.1 -3.9
comp=Z,3.4nm,0.3s
KBA Koelnbreinsper 10.34 332 P **Pn** 01 40 34.5 +0.5
CONA Conrad Observa 10.35 343 *e*Pn **Pn** 01 40 33.4 -0.5
comp=Z,0.1nm,0.2s
CONA *e*Sn **Sn** 01 42 24.2 -5.7
comp=Z,11nm,0.7s
ABTA Abfaltersbach 10.39 329 *i* Pn **Pn** 01 40 34.9 +0.3
comp=Z,0.4nm,0.1s
ABTA *i* Sn **Sn** 01 42 26.4 -4.7
comp=Z,14nm,0.6s
VYHS Vyhne 10.43 354 *e*P **Pn** 01 40 35.5 +0.4
VYHS Vyhne 10.43 354 P **Pn** 01 40 35.8 +0.7
VYHS Vyhne 10.43 354 *e*PN **Pn** 01 40 35.5 +0.4
BR105 Keskin Array S 10.45 77 P **Pn** 01 40 39.3 +3.9
comp=Z,63nmcomp=Z,7.5nm,0.7s
BR106 Keskin Array S 10.45 77 P **Pn** 01 40 39.0 +3.5
comp=Z,53nmcomp=Z,6.8nm,0.8s
BR104 Keskin Array S 10.46 77 P **Pn** 01 40 39.4 +3.7
comp=Z,68nmcomp=Z,7.7nm,0.7s
BR131 Keskin Array S 10.46 77 *i* P **Pn** 01 40 39.2 +3.5
BR131 Keskin Array S 10.46 77 **Pn** 01 40 39.6 +3.9
BRTR Keskin Array B 10.46 77 Pn **Pn** 01 40 39.2 +3.5
comp=Z,0.3nm,0.3s,baz=260,slow=12,SNR=16
BRTR LR LR 01 45 38.5
comp=Z,262nm,19.0s,baz=262,slow=44
comp=Z,2.3nm,0.6s
BRTR Keskin Array B 10.46 77 Pn 01 40 40.5 +4.8
SALO Salr 10.49 319 **Pn** 01 40 36.0 +0.1
MODS Modra-Piesok 10.50 349 *e*P **Pn** 01 40 37.2 +1.2
MODS Modra-Piesok 10.50 349 P **Pn** 01 40 36.8 +0.8
MODS Modra-Piesok 10.50 349 *e*PN **Pn** 01 40 37.2 +1.2
MOA Molln 10.70 337 *e*Pn **Pn** 01 40 38.2 -0.6
MOA Molln 10.70 337 *e*Pn **Pn** 01 40 39.1 +0.3
MOA *e*Sn **Sn** 01 42 32.7 -5.8
MOA Molln 10.70 337 *i* Pn **Pn** 01 40 38.7 -0.1
comp=Z,10.0nm,0.3s,SNR=21
MOA *e*Sn **Sn** 01 42 33.0 -5.6
comp=Z,3.3nm,0.3s
MOA Molln 10.70 337 P **Pn** 01 40 39.3 +0.5
BIOA Bad Ischl, Aus 10.76 335 *i* Pn **Pn** 01 40 39.6 -0.1
comp=Z,9.3nm,0.4s,SNR=24
BIOA *e*Sn **Sn** 01 42 36.5 -3.6
comp=Z,12nm,0.3s
LESA Schwarzleotal 10.88 331 *i* Pn **Pn** 01 40 41.1 -0.2
comp=Z,18nm,0.6s,SNR=30
LESA *i* Sn **Sn** 01 42 40.2

FETA eSn Sn 01 42 51.7 -3.7
comp=Z,8.4nm,0.6s
MAUC Maruska 11.39 352 ePN Pn 01 40 49.0 +0.7
MOTA Moosalm 11.46 327 ePn Pn 01 40 51.2 +1.9
MOTA eSn Sn 01 42 54.0 -3.2
MOTA Moosalm 11.46 327 iPn Pn 01 40 50.8 +1.5
comp=Z,12nm,0.8s,SNR=9.9
MOTA iSn Sn 01 42 51.5 -5.8
comp=Z,0.1nm,0.2s
VRAC Vranov 11.52 348 Pn Pn 01 40 50.1 +0.2
comp=Z,0.4nm,0.3s,baz=162,slow=14,SNR=5.6
VRAC Sn Sn 01 42 49.5 -9.0
comp=Z,0.5nm,0.3s,baz=287,slow=12,SNR=1.8
comp=Z,3.1nm,0.5s
VRAC Vranov 11.52 348 ePN Pn 01 40 50.0 +0.1
VRAC Vranov 11.52 348 eSn Sn 01 42 48.2 -10
CKRC Cesky Krumlov 11.56 340 eP Pn 01 40 50.5 -0.1
CKRC e 01 42 53.9
CKRC Cesky Krumlov 11.56 340 ePN Pn 01 40 50.5 -0.1
CKRC eSN Sn 01 42 53.9 -5.8
CKRC Cesky Krumlov 11.56 340 ePn Pn 01 40 50.6 -0.1
CKRC eSn Sn 01 42 53.0 -6.6
ZUGS Zugspitze, Sch 11.57 326 ePn Pn 01 40 52.5 +1.6
ZUGS eSn Sn 01 42 57.8 -2.4
SORM Soroca 11.58 28 ⇑P Pn 01 40 51.4 +0.6
SORM Soroca 11.58 28 P Pn 01 40 51.3 +0.6
SORM Soroca 11.58 28 P Pn 01 40 52.9 +2.2
comp=Z,5.2nm,0.7s
DAVOX Davos/Dischmat 11.61 322 Pn Pn 01 40 52.8 +1.4
comp=Z,1.2nm,0.3s,baz=127,slow=16,SNR=17
DAVOX Sn Sn 01 42 58.3 -2.8
comp=Z,2.0nm,0.3s,baz=187,slow=20,SNR=2.5
comp=Z,2.7nm,0.3s
KWP Kalwaria Pacla 11.63 8 P Pn 01 40 54.5 +3.0
KWP Kalwaria Pacla 11.63 8 P Pn 01 40 53.7 +2.2
comp=Z,16nm,1.2s
TUE Stuetta 11.67 319 Pn 01 40 52.5 +0.3
TUE Stuetta 11.67 319 P Pn 01 40 52.9 +0.7
comp=Z,2µmcomp=Z,80nm,0.7s
TUE Stuetta 11.67 319 P Pn 01 40 52.4 +0.2
RETA Reutte 11.72 326 ePn Pn 01 40 55.0 +2.2
RETA eSn Sn 01 43 00.1 -3.4
RETA Reutte 11.72 326 ePn Pn 01 40 53.5 +0.8
comp=Z,0.1nm,0.1s
RETA iSn Sn 01 42 58.6 -4.9
comp=Z,0.4nm,0.2s
TREC Trest 11.72 344 P Pn 01 40 53.7 +1.0
TREC Trest 11.72 344 AMS AMS 01 46 10.0
comp=Z,300nm,10.3s
GEC2 GERESS Array S 11.76 338 P Pn 01 40 52.1 -1.2
GEC2 GERESS Array S 11.76 338 ePn Pn 01 40 52.8 -0.5
GEC2 eSn Sn 01 42 59.3 -5.3
GERES GERESS Array B 11.76 338 Pn Pn 01 40 52.8 -0.5
comp=Z,0.2nm,0.3s,baz=161,slow=14,SNR=44
GERES Sn Sn 01 42 59.3 -5.3
comp=Z,0.3nm,0.3s,baz=152,slow=23,SNR=6.9
comp=Z,2.8nm,0.4s
OKC Ostrava-Krasne 11.83 353 eP Pn 01 40 55.2 +1.1
OKC Ostrava-Krasne 11.83 353 ePN Pn 01 40 55.2 +1.1
OKC Ostrava-Krasne 11.83 353 P Pn 01 40 53.8 -0.3
MORC Moravsky Berou 11.83 351 P Pn 01 40 54.1 -0.2
MORC Moravsky Berou 11.83 351 Pn 01 40 54.1 -0.2
MORC Moravsky Berou 11.83 351 ePN Pn 01 40 54.4 +0.1
MORC Moravsky Berou 11.83 351 ePn Pn 01 40 54.9 +0.6
MORC eSn Sn 01 43 01.2 -5.1
MORC Moravsky Berou 11.83 351 P Pn 01 40 54.9 +0.6
BE1 Monatshausen 11.85 329 eSn Sn 01 43 02.2 -4.5
STEB Steborice 11.96 352 ePN Pn 01 40 56.0 0.0
DAVA Damuels 11.97 323 ePn Pn 01 40 57.6 +1.4
DAVA eSn Sn 01 43 03.2 -6.6
DAVA Damuels 11.97 323 ePn Pn 01 40 57.3 +1.1
comp=Z,0.8nm,0.2s
DAVA eSn Sn 01 43 04.2 -5.6
comp=Z,1.3nm,0.3s
DAVA Damuels 11.97 323 P Pn 01 40 56.4 +0.1
FUR Furstenfeldbru 12.03 329 eSn Sn 01 43 03.5 -7.7
PLONS Plons/SG 12.04 321 eSn Sn 01 43 06.9 -4.6
KHC Kasperske Hory 12.05 338 eP Pn 01 40 57.1 -0.2
KHC e 01 43 05.7
KHC MLR MLR
comp=Z,400nm,11.7s
KHC Kasperske Hory 12.05 338 ePN Pn 01 40 57.1 -0.2
KHC eSN Sn 01 43 05.7 -6.0
KHC AMS AMS 01 46 40.0
comp=Z,400nm,11.7s
KHC Kasperske Hory 12.05 338 ePn Pn 01 40 57.1 -0.2
KHC eSn Sn 01 43 06.2 -5.5
KHC Kasperske Hory 12.05 338 P Pn 01 40 56.6 -0.7
comp=Z,11nm,0.6s
ZVC Zvikov 12.16 341 ePN Pn 01 40 58.6 -0.1
ZVC eSN Sn 01 43 09.0 -5.3
KRLC Kraliky 12.23 349 eP Pn 01 41 00.5 +0.8
KRLC e 01 43 11.9
KRLC MLR MLR
comp=Z,400nm,15.0s
KRLC Kraliky 12.23 349 ePN Pn 01 41 00.5 +0.8
KRLC eSN Sn 01 43 11.9 -4.1
KRLC AMS AMS 01 47 00.0
comp=Z,400nm,15.0s
WET Wettzell 12.28 336 P Pn 01 40 59.3 -1.0
WET Wettzell 12.28 336 ePn Pn 01 41 00.6 +0.3
WET eSn Sn 01 43 09.4 -7.7
WET Wettzell 12.28 336 P Pn 01 40 59.3 -1.0
BNALP Bannalp 12.41 319 P Pn 01 41 02.9 +0.6
GRC3 Grafenberg Arr 12.51 332 P Pn 01 41 02.7 -0.7
DPC Dobruska-Polom 12.57 348 eP Pn 01 41 05.9 +1.6
DPC MLR MLR
comp=Z,600nm,15.4s
DPC Dobruska-Polom 12.57 348 ePN Pn 01 41 05.9 +1.6
DPC AMS AMS 01 47 00.0
comp=Z,600nm,15.4s
DPC Dobruska-Polom 12.57 348 ePn Pn 01 41 05.9 +1.6
DPC Dobruska-Polom 12.57 348 P Pn 01 41 06.0 +1.6
comp=Z,4.5nm,1.0s
PRU Pruhonice 12.58 342 eP Pn 01 41 04.2 -0.2
PRU MLR MLR
comp=Z,300nm,9.9s
PRU Pruhonice 12.58 342 ePN Pn 01 41 04.2 -0.2
PRU AMS AMS 01 46 50.0
comp=Z,300nm,9.9s
PRU Pruhonice 12.58 342 P Pn 01 41 04.3 -0.2
GRC1 Grafenberg Arr 12.62 332 P Pn 01 41 04.6 -0.4
GRC1 Grafenberg Arr 12.62 332 P Pn 01 41 04.6 -0.4
GRB5 Grafenberg Arr 12.66 333 P Pn 01 41 05.5 0.0
GRC4 Grafenberg Arr 12.69 333 P Pn 01 41 05.6 -0.3
SENIN Lac Senin/Sane 12.71 315 Pn 01 41 07.2 +0.8
UPC Upice 12.77 347 AMS AMS 01 47 10.0
comp=Z,500nm,12.0s
GRB2 Grafenberg Arr 12.79 333 P Pn 01 41 06.7 -0.6
ORIF Oris-en-Rattie 12.80 307 P Pn 01 41 07.5 -0.1
GRB3 Grafenberg Arr 12.81 334 P Pn 01 41 07.0 -0.6
CHVC Chvalec 12.84 348 eP Pn 01 41 09.5 +1.4
CHVC Chvalec 12.84 348 ePN Pn 01 41 09.5 +1.4
GRB1 Grafenberg Arr 12.90 334 P Pn 01 41 09.6 +0.7
GRB1 Grafenberg Arr 12.90 334 P Pn 01 41 09.6 +0.7
LUBAR Lubar, Ukraine 12.93 22 P Pn 01 41 10.4 +1.2
SLE Schleitheim 12.97 322 ePn Pn 01 41 11.1 +1.2
GRB4 Grafenberg Arr 13.00 334 P Pn 01 41 10.2 0.0
KSP Ksiaz 13.05 348 P Pn 01 41 11.2 +0.4
comp=Z,3.7nm,0.8s
PVCC Panska Ves 13.08 343 AMS AMS 01 47 20.0
comp=Z,200nm,8.5s
BALST Balsthal 13.09 319 ePn Pn 01 41 12.3 +0.9
OFRI `Ofer 13.12 110 P Pn 01 41 08.7 -3.2
OFRI S Sn 01 43 31.4 -6.5
GRA2 Grafenberg Arr 13.23 334 P Pn 01 41 11.7 +1.6
MMA0B Mount Meron ar 13.25 108 P Pn 01 41 11.0 -2.7
MMA0B S Sn 01 43 35.9 -5.2
MMAI Mount Meron Ar 13.25 108 Pn Pn 01 41 11.5 -2.2
comp=Z,1.6nm,0.3s,baz=315,slow=9.4,SNR=9.8
MMAI Sn Sn 01 43 32.2 -8.9
comp=Z,1.9nm,0.3s,baz=238,slow=17,SNR=4.7
comp=Z,1.4nm,0.4s
GRFO Grafenberg 13.31 333 P Pn 01 41 17.6 +3.3
GRFO Grafenberg 13.31 333 Pn 01 41 17.6 +3.3
GRFO Grafenberg 13.31 333 P Pn 01 41 13.8 -0.5
GRA1 Grafenberg Arr 13.31 333 P Pn 01 41 14.2 -0.1
GRF Grafenberg Arr 13.31 333 P Pn 01 41 14.2 -0.1
GRA3 Grafenberg Arr 13.33 334 P Pn 01 41 14.0 -0.7
SLTI Sal'it 13.35 112 P Pn 01 41 11.5 -3.5
SLTI S Sn 01 43 36.7 -6.7
GEM Giv'at Ha'Em 13.36 107 P Pn 01 41 12.8 -2.4
GEM S Sn 01 43 38.5 -5.1
BOURR Bourrignon 13.37 318 P Pn 01 41 15.8 +0.5
NKC Novy Kostel 13.37 337 AMS AMS 01 47 30.0
comp=Z,600nm,11.4s
STU Stuttgart 13.38 326 P Pn 01 41 15.3 0.0
STU Stuttgart 13.38 326 P Pn 01 41 15.3 0.0
BFO Black Forest 13.45 323 P Pn 01 41 14.0 -2.3
BFO Black Forest 13.45 323 Pn 01 41 14.0 -2.3
BFO Black Forest 13.45 323 ePn Pn 01 41 16.8 +0.5
TANN Tannenbergstha 13.53 338 P Pn 01 41 18.3 +0.9
MMLI Mount Malkishu 13.53 110 P Pn 01 41 14.3 -3.3
MMLI S Sn 01 43 41.7 -6.3
SALP Salfit 13.54 112 P Pn 01 41 18.0 +0.3
comp=Z,452µmcomp=Z,4µmcomp=Z,28nm,0.7s
BRG Berggiesshubel 13.55 342 P Pn 01 41 16.7 -0.9
BRG Berggiesshubel 13.55 342 P Pn 01 41 16.7 -0.9
BRG Berggiesshubel 13.55 342 eP Pn 01 41 16.6 -0.9
BRG Amp 01 41 17.6
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 13.55 342 P P 01 41 29.7 +3.0
BRG Amp 01 41 31.3
comp=Z,3.2nm,0.6s
KZIT Kziot 13.61 118 P Pn 01 41 15.9 -2.7
comp=Z,35nm,0.7s
KZIT Kziot 13.61 118 P Pn 01 41 13.8 -4.8
KZIT S Sn 01 43 40.8 -9.0
AMAZ Amatzia 13.63 114 P Pn 01 41 19.1 +0.3
comp=Z,41nm,0.9s
AMAZ Amatzia 13.63 114 P Pn 01 41 14.7 -4.1
AMAZ S Sn 01 43 42.3 -7.9
RNPP5 Staryi Chortor 13.68 15 P Pn 01 41 21.6 +2.2
QRNJ Al-Qirein 13.70 110 P Pn 01 41 19.9 +0.2
comp=Z,14µmcomp=Z,2µm,0.8s
JER Jerusalem 13.70 113 P Pn 01 41 16.1 -3.8
JER S Sn 01 43 44.7 -7.5
RNPP8 Varash 13.78 15 P Pn 01 41 23.1 +2.4
YITV Yitav 13.78 112 P Pn 01 41 17.2 -3.6
YITV S Sn 01 43 46.9 -6.9
UJAP Al Uja 13.80 112 P Pn 01 41 23.5 +2.3
SSB Saint Sauveur 13.81 306 P Pn 01 41 20.8 -0.5
RNPP9 Sopachiv 13.85 15 P Pn 01 41 24.0 +2.2
YTIR Yattir 13.86 115 P Pn 01 41 21.4 -0.7
comp=Z,20nm,1.1s
ALMO Almog 13.88 113 P Pn 01 41 18.6 -3.7
AK07 Malin Array Si 13.93 24 P Pn 01 41 23.3 +0.4
ECH Echery 13.94 321 P Pn 01 41 23.8 +0.8
ECH Echery 13.94 321 P Pn 01 41 23.8 +0.8
MZS Mizpe Shalem 13.96 113 P Pn 01 41 19.4 -3.8
MZS S Sn 01 43 50.6 -7.6
AK06 Malin Array Si 13.96 24 P Pn 01 41 23.0 -0.2
AK14 Malin Array Si 13.97 24 P Pn 01 41 23.6 +0.2
AK10 Malin Array Si 13.99 24 P Pn 01 41 23.5 -0.1
MOX Moxa 13.99 336 P Pn 01 41 23.3 -0.4
MOX Moxa 13.99 336 ePn Pn 01 41 23.1 -0.6
MOX Moxa 13.99 336 P Pn 01 41 23.3 -0.4
AK05 Malin Array Si 13.99 24 P Pn 01 41 23.3 -0.4
AK12 Malin Array Si 14.00 24 P Pn 01 41 23.9 +0.2
AK17 Malin Array Si 14.00 23 P Pn 01 41 23.7 -0.1
AK11 Malin Array Si 14.03 24 P Pn 01 41 24.4 +0.2
RMNI Mount Ramon 14.04 118 P Pn 01 41 19.8 -4.9
RMNI S Sn 01 43 51.7 -8.9
KIEV Kiev 14.06 24 ⇑P Pn 01 41 23.9 -0.6
KIEV Kiev 14.06 24 P Pn 01 41 24.7 +0.1
KIEV Kiev 14.06 24 Pn 01 41 24.7 +0.1
KIEV Kiev 14.06 24 P Pn 01 41 24.0 -0.6
MSBI Mazada 14.06 114 P Pn 01 41 22.4 -2.3
comp=Z,5.4nm,1.5s
MSBI Mazada 14.06 114 P Pn 01 41 20.5 -4.2
MSBI S Sn 01 43 52.9 -7.9
AKASG Malin Array Be 14.07 24 Pn Pn 01 41 23.3 -1.4
comp=Z,0.8nm,0.3s,baz=215,slow=12,SNR=18
AKASG PcP PcP 01 46 44.7 +0.3
comp=Z,1.5nm,0.5s,baz=227,slow=1.0,SNR=5.2
AKASG LR LR 01 47 41.0
comp=Z,300nm,21.9s,baz=188,slow=41
comp=Z,2.6nm,0.7s
AKASG Malin Array Be 14.07 24 iP Pn 01 41 24.5 -0.2
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 14.07 24 Pn 01 41 23.8 -1.0
AKBB Malin Array Si 14.07 24 deP Pn 01 41 24.4 -0.3
AKBB Malin Array Si 14.07 24 Pn 01 41 23.8 -0.9
ARPR Arapgir-MALATY 14.09 80 Pn 01 41 29.1 +3.9
ARPR Arapgir-MALATY 14.09 80 P Pn 01 41 26.8 +1.6
CLL Collm 14.18 341 P Pn 01 41 27.6 +1.3
CLL Collm 14.18 341 Pn 01 41 27.6 +1.3
CLL Collm 14.18 341 eP Pn 01 41 25.0 -1.3
CLL iSP P 01 41 29.0 -4.8
CLL ePP PnPn 01 41 35.0 +0.8
CLL esPP 01 41 40.0
CLL e(SS) S 01 44 30.0 +5.6
GHAJ Ghor Haditha 14.22 114 Pn 01 41 26.2 -0.6
GHAJ Ghor Haditha 14.22 114 P Pn 01 41 27.8 +0.9
comp=Z,25nm,0.8s
GHAJ Ghor Haditha 14.22 114 P Pn 01 41 22.8 -4.0
GHAJ S Sn 01 43 56.9 -7.7
ZFRI Zfri 14.36 117 P Pn 01 41 24.0 -4.8
ZFRI S Sn 01 43 58.9 -9.2
NEUB Neuenburg 14.43 338 P Pn 01 41 30.5 +0.8
HRFI Mount Harif 14.57 119 P Pn 01 41 29.4 -2.4
comp=Z,21nm,1.0s
HRFI Mount Harif 14.57 119 P Pn 01 41 26.5 -5.2
HRFI S Sn 01 44 03.5 -10
EIL Elat 14.74 121 Pn Pn 01 41 32.5 -1.5
comp=Z,0.9nm,0.3s,baz=4.4,slow=5.1,SNR=11
EIL Sn Sn 01 44 08.0 -9.3
comp=Z,1.1nm,0.3s,baz=116,slow=2.8,SNR=5.9
EIL LR LR 01 49 49.5
comp=Z,73nm,19.2s,baz=272,slow=48
comp=Z,3.9nm,0.5s
EIL Elat 14.74 121 P Pn 01 41 32.2 -1.8
EIL Elat 14.74 121 P Pn 01 41 36.5 +2.5
EIL Elat 14.74 121 P Pn 01 41 28.6 -5.4
ASF Jabal al Asfar 14.76 109 Pn Pn 01 41 32.3 -2.0
comp=Z,0.7nm,0.3s,baz=273,slow=9.7,SNR=12
comp=Z,1.1nm,0.5s
TNS Taunus Mts 14.80 329 P P 01 41 38.9 -1.8
TNS Taunus Mts 14.80 329 P Pn 01 41 35.1 +0.4
KELT Kelkit 14.80 76 P Pn 01 41 36.5 +1.5
SOC Sochi 15.61 63 eP P 01 41 48.6 -1.2
SOC e 01 44 45.2
SOC pmax pmax
comp=Z,28nm,0.8s
SOC MLR MLR
comp=Z,72nm,18.0s
VSLR Vesyoloye 15.81 64 iP Pn 01 41 50.1 +2.0
SUW Suwalki 16.02 6 eP Pn 01 41 50.5 -0.2
SUW Suwalki 16.02 6 eP Pn 01 41 50.9 +0.2
GURO Guroymak-BITLI 17.00 82 P P 01 42 06.0 +0.6
MNK Minsk 17.17 15 iP Pn 01 42 02.6 -2.8
comp=E,33nm,0.9s
MNK iP Pn 01 42 02.6 -2.8
comp=N,5.0nm,0.8s
MNK iP Pn 01 42 02.6 -2.8
comp=Z,31nm,0.9s,baz=201
MNK iPP sP 01 42 12.4 +1.1
MNK iPPP PPP 01 42 20.2
MNK iS Sn 01 45 16.2 0.0
MNK iSS SnSn 01 45 29.4 -0.1
MNK iSSS SSS 01 45 42.2
MNK iLQ LQ 01 47 08.3
MNK iLR LR 01 48 01.6
MNK iLRM MLR 01 49 23.9
comp=N,77nm,14.1s
MNK iLRM MLR 01 49 28.8
comp=Z,176nm,16.9s
MNK iLRM MLR 01 49 40.3
comp=E,109nm,14.6s
MNK Minsk 17.17 15 iP Pn 01 42 02.5 -2.8
MNK iS Sn 01 45 16.2 0.0
MNK pmax pmax
comp=E,33nm,0.9s
MNK pmax pmax
comp=Z,31nm,0.9s
MNK pmax pmax
comp=N,5.0nm,0.8s
MNK MLR MLR
comp=N,77nm,14.0s
MNK MLR MLR
comp=Z,176nm,17.0s
MNK MLR MLR
comp=E,109nm,15.0s
NACGM Naroch 17.35 12 ⇓iP Pn 01 42 06.5 -1.1
comp=Z,27nm,0.7s,baz=197
BSD Bornholm Skovb 17.40 349 iP P 01 42 14.1 +4.7
EPOS Posof 17.50 72 P P 01 42 10.5 -0.3
PABE Paberze 17.57 7 Pn 01 42 09.2 -1.0
PABE Paberze 17.57 7 eP Pn 01 42 09.4 -0.8
PABE Paberze 17.57 7 P Pn 01 42 09.7 -0.5
SHA1 Shidzhatmaz 17.73 64 ceP Pn 01 42 13.0 +0.4
KIV Kislovodsk 17.79 64 ⇓P P 01 42 14.6 +0.6
KIV Kislovodsk 17.79 64 eP Pn 01 42 13.4 +0.1
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,33nm,14.0s
KIV Kislovodsk 17.79 64 P P 01 42 14.1 +0.1
comp=Z,13nm,0.8s
KIV Kislovodsk 17.79 64 P P 01 42 14.8 +0.8
GEVA Gevas 17.83 82 P P 01 42 16.6 +2.1
ISAL Salakas 17.89 11 eP P 01 42 14.9 +0.1
KBZ Khabaz 17.90 65 P P 01 42 16.1 +1.0
comp=Z,8.0nm,0.7s,baz=262,slow=8.6,SNR=18
KBZ Khabaz 17.90 65 ceP P 01 42 16.0 +1.0
KBZ pmax pmax
comp=Z,11nm,1.0s
DIGO Kars 17.95 75 P P 01 42 16.9 +0.9
VSVD Vaisvydziai 18.03 6 eP Pn 01 42 14.5 -1.4
NCK Nalchik 18.36 66 iP P 01 42 20.5 +0.3
NCK pmax pmax
comp=Z,14nm,0.9s
HAKT HAKKARI 18.44 85 P Pn 01 42 21.5 +0.2
BLEU Blekinge 18.45 352 iP P 01 42 20.1 -0.9
VORD Divnogorie 18.56 40 eP P 01 42 22.0 -0.2
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 18.64 39 eP P 01 42 21.9 -1.3
VSR pmax pmax
comp=Z,11nm,0.6s
DEL Delary 18.87 349 iP Pn 01 42 27.8 +1.6
VORR Voronezh 18.94 38 eP P 01 42 26.9 +0.4
VORR pmax pmax
comp=Z,10.0nm,0.8s
ESDC Sonseca Array 19.00 282 P P 01 42 27.9 +0.6
comp=Z,0.2nm,0.3s,baz=75,slow=11,SNR=23
comp=Z,2.2nm,0.7s
GNI Garni 19.00 76 P Pn 01 42 28.5 +0.4
comp=Z,1.5nm,0.3s,baz=286,slow=3.2,SNR=20
GNI LR LR 01 50 22.1
comp=Z,86nm,21.1s,baz=281,slow=39
comp=Z,27nm,0.8s
LPSR Galich'ya Gora 19.41 36 eP P 01 42 31.2 -0.3
LPSR pmax pmax
comp=Z,36nm,0.8s
NAX Nakhchivan 19.64 79 P Pn 01 42 36.3 +0.6
VRH Novokhopyorsk 19.95 42 eP P 01 42 37.4 -0.1
VRH pmax pmax
comp=Z,35nm,0.7s
GANJ Ganja 20.20 75 P Pn 01 42 41.7 -0.5
OBN Obninsk 20.23 28 P P 01 42 39.8 -0.7
comp=Z,25nm,0.8s,baz=196,slow=0.2,SNR=11
comp=Z,25nm,0.8s
OBN Obninsk 20.23 28 ⇓eP P 01 42 40.0 -0.5
OBN e 01 42 55.3
OBN pmax pmax
comp=Z,48nm,1.3s
OBN MLR MLR
comp=Z,275nm,17.0s
OBN Obninsk 20.23 28 P P 01 42 38.5 -2.0
OBN Obninsk 20.23 28 P P 01 42 40.6 +0.1
comp=Z,39nm,1.1s
OBN Obninsk 20.23 28 P P 01 42 40.4 -0.1
MTSE Matsula 20.73 5 eP P 01 42 46.3 +0.4
MTSE Matsula 20.73 5 P P 01 42 46.1 +0.2
TJOU Tjoern 20.73 347 iP P 01 42 46.8 +0.9
MNGR Mingechevir, A 20.77 74 P P 01 42 47.8 +1.3
VSU Vasula 20.78 9 ceP P 01 42 45.8 -0.6
VSU pmax pmax
comp=Z,465nm,1.7s
VSU Vasula 20.78 9 eP P 01 42 46.2 -0.2
VSU Vasula 20.78 9 P P 01 42 45.8 -0.6
SEKA Sheki 20.85 73 P Pn 01 42 49.3 -0.7
MDT Midelt 21.00 263 P P 01 42 49.9 +0.8
comp=Z,3.2nm,0.8s,baz=89,slow=9.2,SNR=4.2
comp=Z,3.2nm,0.8s
MOS Moscow 21.10 28 eP P 01 42 49.3 -0.6
MOS e 01 43 08.9
MOS pmax pmax
comp=Z,20nm,0.6s
MAK Makhachkala 21.14 68 eP P 01 42 48.2 -2.2
MAK eS S 01 46 45.1 -0.3
MAK pmax pmax
comp=Z,138nm,0.9s
MAK MLR MLR
comp=Z,30nm,8.0s
ARBE Arbavere 21.64 8 eP P 01 42 56.2 +0.5
ARBE Arbavere 21.64 8 P P 01 42 56.0 +0.3
STRU Stroemstad 21.76 347 iP P 01 42 57.2 +0.3
UPP Uppsala 21.83 356 eP P 01 42 58.2 +0.5
AAL Aland 22.08 359 eP P 01 43 00.1 -0.3
LKRN Lenkeran, Azer 22.23 80 P P 01 43 05.0 +2.7
MEF Metsahovi 22.27 5 eP P 01 43 02.9 +0.5
HFS Hagfors 22.44 351 P P 01 43 03.9 -0.4
comp=Z,24nm,0.5s,baz=161,slow=9.4,SNR=103
comp=Z,24nm,0.5s
PUL Pulkovo 22.59 13 iP P 01 43 06.2 +0.4
PUL pmax pmax
comp=Z,30nm,0.8s
KONO Kongsberg 22.63 346 eP P 01 43 05.2 -1.0
OSL Oslo 22.69 347 eP P 01 43 07.0 +0.1
BLS5 Blasjo 23.12 342 eP P 01 43 12.3 +0.9
KMY Karmoy 23.25 340 eP P 01 43 13.8 +1.2
NC602 NORSAR Array S 23.32 349 eP P 01 43 13.0 -0.4
NC602 NORSAR Array S 23.32 349 P 01 43 13.3 0.0
NC602 IAmb IAmb 01 43 19.5
comp=Z,17nm,0.8s
NORES NORESS Array B 23.32 349 P P 01 43 13.5 +0.1
NORES pmax pmax
comp=Z,3.0nm,0.4s
EKA Eskdalemuir Ar 23.41 325 P P 01 43 14.8 +0.4
comp=Z,14nm,0.8s,baz=130,slow=10,SNR=22
comp=Z,14nm,0.8s
ESK Eskdalemuir 23.42 325 P P 01 43 15.1 +0.6
ESK pmax pmax
comp=Z,55nm,1.4s
ESK Eskdalemuir 23.42 325 P P 01 43 15.1 +0.6
ODD1 Odda 23.51 343 eP P 01 43 17.9 +2.6
NAO01 NORSAR Array S 23.52 348 P P 01 43 15.3 -0.1
FINES FINESS Array B 23.62 7 P P 01 43 16.1 -0.3
comp=Z,16nm,0.6s,baz=176,slow=7.8,SNR=14
FINES PcP PcP 01 47 00.7 0.0
comp=Z,1.4nm,0.5s,baz=170,slow=2.4,SNR=7.2
comp=Z,16nm,0.6s
FINES FINESS Array B 23.62 7 P P 01 43 16.1 -0.3
NB2 NORSAR Subarra 23.66 349 P P 01 43 16.1 -0.7
comp=Z,14nm,0.8s,baz=162,slow=9.3
NB2 NORSAR Subarra 23.66 349 P P 01 43 16.1 -0.7
NOA NORSAR Array B 23.66 349 P P 01 43 16.3 -0.5
comp=Z,4.0nm,0.5s,baz=149,slow=8.7,SNR=52
comp=Z,4.0nm,0.5s
BELG Belogornoye 23.73 44 iP P 01 43 17.2 -0.3
BELG pmax pmax
comp=Z,10.0nm,0.6s
SKAR Skarslia 23.83 345 eP P 01 43 19.3 +0.7
KEF Keuruu 24.24 5 eP P 01 43 22.9 +0.7
SUF Sumiainen 24.89 6 eP P 01 43 28.1 0.0
VAF Ylistaro 25.00 2 eP P 01 43 29.7 +0.6
JOF Joensuu 25.71 12 eP P 01 43 36.4 +0.8
KLMR Klimovskoe 25.74 22 eP P 01 43 34.5 -1.3
KLMR pmax pmax
comp=Z,27nm,1.3s
RAYN Ar Rayn 25.92 117 P P 01 43 38.5 +0.6
RAYN Ar Rayn 25.92 117 P P 01 43 38.5 +0.6
NSS Namsos 26.92 352 eP P 01 43 46.2 -0.3
KIRV Kirov 27.77 33 ceP P 01 43 53.2 -0.9
STOK Stokkvaagen 28.58 354 eP P 01 44 01.5 +0.3
STOK IAmb IAmb 01 44 02.1
comp=Z,7.6nm,0.8s
RAUS Rausandaksla 28.60 355 eP P 01 44 04.2 +2.7
KONS Konsvik 28.73 354 eP P 01 44 03.1 +0.5
KONS IAmb IAmb 01 44 05.0
comp=Z,13nm,1.1s
VAGH Vaagaholmen 28.95 354 eP P 01 44 04.8 +0.3
VAGH IAmb IAmb 01 44 07.7
comp=Z,15nm,1.0s
AKTO Aktyubinsk 29.31 53 LR LR 01 58 15.5
comp=Z,92nm,18.9s,baz=278,slow=41

FAUS Fauske 29.46 356 *e*P **P** **01 44 09.3 +0.2**
TORD Torodi Ar. Bea 29.91 219 P **P** **01 44 13.6 0.0**
comp=Z,2.7nm,0.8s,baz=33,slow=9.2,SNR=12
comp=Z,2.7nm,0.8s
TORD Torodi Ar. Bea 29.91 219 IAmb IAmb 01 44 19.0
comp=Z,15nm,1.4s
STEI Steigen 30.00 356 *e*P **P** **01 44 11.8 -2.1**
STEI IAmb IAmb 01 44 19.6
comp=Z,66nm,2.0s
AB31 Akbulak array 30.38 56 P **P** **01 44 16.4 -1.0**
ABKAR Akbulak array 30.38 56 P **P** **01 44 16.6 -0.8**
KTK1 Kautokeino 30.99 2 *e*P **P** **01 44 23.5 +0.8**
ARTI Arti 31.08 42 LR LR 01 58 24.1
comp=Z,112nm,20.7s,baz=282,slow=39
ARTI Arti 31.08 42*c i*P **P** **01 44 22.4 -1.1**
ARTI 01 45 22.7
ARTI 01 47 15.6
ARTI S **S** **01 49 28.6 +0.1**
ARTI SS **SnSn** **01 51 06.6 -2.8**
ARTI pmax pmax
comp=Z,11nm,0.6s
ARTI Arti 31.08 42 P **P** **01 44 22.6 -1.0**
TRO Tromso 31.59 359 *e*P **P** **01 44 27.8 0.0**
TRO IAmb IAmb 01 44 27.9
comp=Z,7.8nm,0.8s
ARA0 ARCESS Array S 31.60 3 *e*P **P** **01 44 26.9 -1.1**
ARCES ARCESS Array B 31.60 3 P **P** **01 44 27.3 -0.7**
comp=Z,1.1nm,0.5s,baz=187,slow=10,SNR=8.3
ARCES PcP **PcP** **01 47 19.8 -0.1**
comp=Z,0.6nm,0.3s,baz=196,slow=2.9,SNR=9.3
comp=Z,1.1nm,0.5s
ARCES ARCESS Array B 31.60 3 P **P** **01 44 27.3 -0.7**
ARCES 01 47 19.8
ARCES pmax pmax
comp=Z,17nm,1.5s
ARCES ARCESS Array B 31.60 3 IAmb IAmb 01 45 05.2
comp=Z,17nm,1.5s
SVE Sverdlovsk 32.40 42 *e*P **P** **01 44 34.8 -0.3**
SVE pmax pmax
comp=Z,22nm,0.7s
VADS Vadso 32.42 6 *e*P **P** **01 44 36.1 +0.9**
VADS IAmb IAmb 01 44 36.6
comp=Z,14nm,0.7s
LODK Lodwar 37.15 155 P **P** **01 45 17.4 +0.7**
LODK IAmb IAmb 01 45 59.2
comp=Z,14nm,1.1s
BVAR Borovoye Array 37.25 50 P **P** **01 45 16.9 -0.1**
comp=Z,4.3nm,0.7s,baz=267,slow=5.9,SNR=20
comp=Z,4.3nm,0.7s
BVAR Borovoye Array 37.25 50 P **P** **01 45 17.0 -0.1**
CHGR Chuyangaron 37.88 74 *i* P **P** **01 45 22.7 0.0**
CHGR pmax pmax
comp=Z,14nm,0.6s
CHGR Chuyangaron 37.88 74 **P** **01 45 23.2 +0.5**
CHGR Chuyangaron 37.88 74 P **P** **01 45 23.1 +0.3**
KK31 Karatay Array 37.93 66 P **P** **01 45 23.0 0.0**
KK31 pmax pmax
comp=Z,9.0nm,0.6s
KK31 Karatay Array 37.93 66 P **P** **01 45 23.0 0.0**
KK31 IAmb IAmb 01 45 24.6
comp=Z,9.2nm,0.6s
KKAR Karatay Array 37.93 66 P **P** **01 45 22.6 -0.4**
KKAR Karatay Array 37.93 66 **P** **01 45 22.6 -0.4**
GAR Garm 38.67 73 P **P** **01 45 29.8 +0.4**
GAR IAmb IAmb 01 45 35.2
comp=Z,9.6nm,0.6s
GAR Garm 38.67 73 P **P** **01 45 29.7 +0.4**
DBIC Dimbokro 38.77 223 P **P** **01 45 31.1 +0.9**
comp=Z,4.6nm,0.8s,baz=29,slow=9.5,SNR=4.0
comp=Z,4.6nm,0.8s
DBIC Dimbokro 38.77 223 P **P** **01 45 31.1 +0.9**
DBIC pmax pmax
comp=Z,17nm,1.3s
DBIC Dimbokro 38.77 223 IAmb IAmb 01 45 34.2
comp=Z,17nm,1.3s
BTK Batken 38.78 71 P **P** **01 45 30.1 -0.2**
BTK pmax pmax
comp=Z,5.0nm,0.8s
BTK Batken 38.78 71 P **P** **01 45 30.1 -0.2**
BTK Batken 38.78 71 P **P** **01 45 31.9 +1.6**
ARK Arkit 39.23 68 P **P** **01 45 36.0 +1.9**
ARK Arkit 39.23 68 P **P** **01 45 36.0 +1.9**
MBAR Mbarara 39.70 164*ce*P **P** **01 45 41.2 +3.1**
MBAR pmax pmax
comp=Z,9.0nm,1.7s
SPA0 Spitsbergen Ar 40.21 359 *e*P **P** **01 45 43.6 +2.0**
SPITS Spitsbergen Ar 40.21 359 P **P** **01 45 42.3 +0.7**
comp=Z,5.5nm,0.8s,baz=155,slow=10,SNR=4.2
SPITS PcP **PcP** **01 47 45.7 +0.4**
comp=Z,2.1nm,0.5s,baz=168,slow=4.3,SNR=7.4
comp=Z,5.5nm,0.8s
BOOM Boomskoye usch 41.97 66 P **P** **01 45 57.5 +0.8**
BOOM pmax pmax
comp=Z,7.0nm,0.6s
BOOM Boomskoye usch 41.97 66 P **P** **01 45 57.5 +0.8**
BOOM IAmb IAmb 01 45 59.2
comp=Z,6.8nm,0.6s
BOOM Boomskoye usch 41.97 66 P **P** **01 45 57.9 +1.1**
NRN Naryn 42.26 67 P **P** **01 45 59.1 -0.2**
NRN pmax pmax
comp=Z,4.0nm,0.8s
NRN Naryn 42.26 67 P **P** **01 45 59.1 -0.2**
KURBB Kurchatov Arra 42.36 53 P **P** **01 45 58.6 -0.9**
comp=Z,5.3nm,0.6s,baz=281,slow=8.7,SNR=57
comp=Z,5.3nm,0.6s
KURK Kurchatov 42.41 53 *i* P **P** **01 45 59.0 -1.0**
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 42.41 53 **P** **01 45 58.9 -1.0**
KURK Kurchatov 42.41 53 P **P** **01 45 59.1 -1.0**
TARG Taragay, Kyrgy 43.50 66 P **P** **01 46 09.2 -0.2**
TARG pmax pmax
comp=Z,6.0nm,0.8s
TARG Taragay, Kyrgy 43.50 66 **P** **01 46 09.2 -0.2**
TARG Taragay, Kyrgy 43.50 66 P **P** **01 46 09.6 +0.2**
PDGK Podgornoye 44.30 64 P **P** **01 46 14.9 -0.6**
PDGK Podgornoye 44.30 64 P **P** **01 46 14.9 -0.6**
MK31 Makanchi Array 45.43 58*c i*P **P** **01 46 23.3 -1.1**
MKAR Makanchi Array 45.43 58 P **P** **01 46 23.4 -0.9**
comp=Z,8.9nm,0.5s,baz=274,slow=7.4,SNR=142
MKAR PcP **PcP** **01 48 03.8 +0.4**
comp=Z,0.7nm,0.5s,baz=267,slow=2.9,SNR=1.3
comp=Z,8.9nm,0.5s
MKAR Makanchi Array 45.43 58 P **P** **01 46 23.6 -0.8**
ZAA0 Zalesovo Array 45.82 48 P **P** **01 46 25.6 -1.7**
ZALV Zalesovo Beam 45.82 48 P **P** **01 46 26.6 -0.7**
comp=Z,40nm,0.6s,baz=274,slow=8.6,SNR=172
ZALV Zalesovo Beam 45.82 48 *i* P **P** **01 46 25.7 -1.6**
ZALV pmax pmax
comp=Z,40nm,0.6s
ZALV Zalesovo Beam 45.82 48 P **P** **01 46 25.6 -1.6**
NRIK Noril'sk 46.90 27 P **P** **01 46 36.1 +0.6**
comp=Z,1.8nm,0.4s,baz=297,slow=8.4,SNR=1.2
comp=Z,1.8nm,0.4s
NRIK Noril'sk 46.90 27 P **P** **01 46 36.2 +0.6**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
DGZ Jazzator, Alta 48.16 53 *e*P **P** **01 46 45.2 -0.6**
DGZ pmax pmax
comp=Z,21nm,1.8s
WMQ Urumqi 49.89 61 *e*P **P** **01 46 59.0 -0.1**
WMQ PcP **PcP** **01 48 17.4 -2.0**
WMQ pmax pmax
comp=Z,12nm,0.7s
KNGR Kungurtug, Tuv 54.16 50 *i* P **P** **01 47 31.5 +0.7**
KNGR pmax pmax
comp=Z,4.0nm,1.0s
EVN Everest 55.56 79 P **P** **01 47 40.6 -1.3**
SCHQ Schefferville 58.42 317 P **P** **01 48 01.5 +0.4**
comp=Z,2.0nm,0.4s,baz=71,slow=6.8,SNR=10
comp=Z,2.0nm,0.4s
SCHQ Schefferville 58.42 317 P **P** **01 48 01.5 +0.4**
SCHQ IAmb IAmb 01 48 19.6
comp=Z,4.5nm,0.8s
ILON Igloolik, Nuna 58.95 336 P **P** **01 48 04.9 +0.5**
ILON IAmb IAmb 01 48 16.3
comp=Z,5.8nm,0.9s
GBN Guysborough 59.02 306 P **P** **01 48 06.2 +0.9**
GRTLG Ghanzi 59.17 179 P **P** **01 48 08.2 +1.6**
GRTLG IAmb IAmb 01 48 09.7
comp=Z,6.4nm,1.4s
GTA2 Gaotai 59.89 62 *e*P **P** **01 48 11.0 -0.6**
GTA2 pmax pmax
comp=Z,10.0nm,0.6s
SONM Songino Array 60.59 50 P **P** **01 48 15.9 -0.4**
comp=Z,5.1nm,0.7s,baz=282,slow=7.8,SNR=21
comp=Z,5.1nm,0.7s
SONM Songino Array 60.59 50 P **P** **01 48 16.3 0.0**
SONM pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 60.59 50 P **P** **01 48 16.3 0.0**
SONM IAmb IAmb 01 48 16.7
comp=Z,3.6nm,0.8s
HAL Halifax 60.68 305 P **P** **01 48 18.1 +1.3**
HAL pmax pmax
comp=Z,10.0nm,0.6s
HAL Halifax 60.68 305 P **P** **01 48 18.1 +1.3**
ULN Ulaanbaatar 60.98 50 P **P** **01 48 18.0 -1.0**
ULN pmax pmax
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 60.98 50 P **P** **01 48 18.0 -1.0**
ULN IAmb IAmb 01 48 19.3
comp=Z,5.7nm,0.7s
ULN Ulaanbaatar 60.98 50 P **P** **01 48 18.8 -0.2**
LZDM Lanzhou Array 64.30 63 P **P** **01 48 40.9 -0.6**
comp=Z,1.1nm,0.3s,baz=327,slow=41,SNR=1.9
comp=Z,1.1nm,0.3s
YAK Yakutsk 65.22 29 *e*P **P** **01 48 46.5 -0.2**
YAK *e**PP **sP** **01 48 52.8 +1.4**
YAK *e* 01 49 16.4
YAK *e* 01 51 09.4
YAK *e*PPP PPP 01 52 41.2
YAK *e*S **S** **01 57 28.2 -1.2**
YAK *e**SS sS 01 57 43.8 +8.6
YAK *e* 01 58 37.7
YAK *e*SS **SS** **02 01 42.8 +1.6**
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,88nm,3.2s
YAK pmax pmax
comp=N,69nm,5.1s
YAK pmax pmax
comp=E,31nm,3.6s
YAK smax smax
comp=E,68nm,4.5s
YAK smax smax
comp=N,62nm,4.8s
YAK MLR MLR
comp=Z,144nm,20.0s
YAK Yakutsk 65.22 29 P **P** **01 48 45.9 -0.7**
YAK Yakutsk 65.22 29 P **P** **01 48 46.5 -0.2**
BOSA Boshof 66.54 175 P **P** **01 48 56.4 +0.8**
comp=Z,0.9nm,0.4s,baz=11,slow=6.4,SNR=7.3
comp=Z,0.9nm,0.4s
BOSA Boshof 66.54 175 P **P** **01 48 56.4 +0.8**
BOSA pmax pmax
comp=Z,15nm,1.5s
BOSA Boshof 66.54 175 IAmb IAmb 01 49 04.3
comp=Z,15nm,1.4s
HHC Hu-ho-hao-te 67.17 55 *e*P **P** **01 49 00.6 +0.9**
HHC pmax pmax
comp=Z,10.0nm,0.7s
PZH PanZhiHua 67.74 73 P **P** **01 49 04.8 +1.3**
XLT XiLinHaoTe 68.41 51 *e*P **P** **01 49 04.0 -3.4**
XLT PcP **PcP** **01 49 27.6 -5.2**
XLT pmax pmax
comp=Z,11nm,0.6s
XAN Xi'an 68.96 63 P **P** **01 49 11.3 +0.3**
XAN pmax pmax
comp=Z,6.0nm,0.4s
CMAR Chiang Mai Arr 70.01 82 P **P** **01 49 17.0 -0.6**
comp=Z,2.7nm,0.3s,baz=304,slow=7.3,SNR=14
comp=Z,2.7nm,0.3s
BILL Bilibino 71.10 13 *i* P **P** **01 49 24.6 +1.1**
BILL pmax pmax
comp=Z,3.0nm,1.0s
A22K Sinclair Lake 71.14 358 P **P** **01 49 22.7 -0.8**
baz=3.9
HEH HeiHe 71.16 40 *e*P **P** **01 49 24.1 0.0**
HEH pmax pmax
comp=Z,19nm,0.7s
C26K Camden Bay 71.74 355 P **P** **01 49 27.0 -0.3**
baz=12
B22K Teshekpuk Lake 71.76 358 P **P** **01 49 26.8 -0.5**
baz=5.1
C27K Jago River 71.93 354 P **P** **01 49 27.9 -0.6**
baz=13
A19K Wainwright 71.98 1 P **P** **01 49 27.7 -1.0**
baz=359
D27M Malcolm River 72.07 353 P **P** **01 49 28.6 -0.8**
baz=15
INK Inuvik 72.11 350 P **P** **01 49 28.3 -1.2**
baz=21
C23K Itkillik River 72.16 357 P **P** **01 49 28.7 -1.1**
baz=7.5
B20K Meade River 72.17 359 P **P** **01 49 28.9 -1.0**
baz=2.0
SEY Seymchan 72.24 21 *i* P **P** **01 49 30.6 +0.2**
SEY pmax pmax
comp=Z,5.0nm,1.3s
D25K Kavik River 72.43 355 IAmb IAmb 01 49 33.9
comp=Z,4.6nm,0.9s
D25K Kavik River 72.43 355 P **P** **01 49 30.6 -0.9**
baz=11
B21K Ikpikpuk River 72.51 358 P **P** **01 49 31.5 -0.4**
baz=4.1
E28M Babbage River 72.54 352 P **P** **01 49 31.5 -0.6**
baz=16
E29M Blow River 72.57 352 P **P** **01 49 32.6 +0.3**
baz=18,SNR=16
D24K Happy Valley 72.75 356 P **P** **01 49 33.7 +0.3**
baz=8.9
F31M Tsiigehtchic 72.94 350 P **P** **01 49 34.6 +0.1**
baz=21
C21K Knifeblade Rid 72.98 358 P **P** **01 49 35.3 +0.5**
baz=4.0
D23K Nanushuk River 73.03 357 P **P** **01 49 35.3 +0.3**
baz=7.3,SNR=6.0
F30M Barrier River 73.06 351 P **P** **01 49 35.0 -0.3**
baz=19
C19K Lookout Ridge 73.09 360 P **P** **01 49 35.4 -0.1**
baz=0.0
E27K Coleen River 73.15 353 P **P** **01 49 36.1 +0.3**
baz=15
TOLK Toolik Lake Re 73.30 356 P **P** **01 49 36.9 +0.2**
baz=8.2
YKA Yellowknife Ar 73.41 340 P **P** **01 49 38.0 +0.7**
comp=Z,1.0nm,0.4s,baz=35,slow=5.2,SNR=8.3
comp=Z,1.0nm,0.4s
D20K Etivluk River 73.47 359 IAmb IAmb 01 49 40.0
comp=Z,6.2nm,0.7s
D20K Etivluk River 73.47 359 P **P** **01 49 37.8 +0.2**
baz=2.5
G31M Satah River 73.50 350 P **P** **01 49 37.9 +0.1**
baz=21
F28M Old Crow 73.53 352 IAmb IAmb 01 49 39.8
comp=Z,3.8nm,0.7s
F28M Old Crow 73.53 352 P **P** **01 49 38.2 +0.2**
baz=16
C18K Utukok River 73.55 1 P **P** **01 49 38.6 +0.5**
baz=359
E25K Arctic Village 73.56 355 P **P** **01 49 38.3 +0.1**
baz=12
E21K Killik River 73.68 358 P **P** **01 49 38.9 0.0**
baz=4.6
C17K DeLong Mountai 73.69 1 P **P** **01 49 39.2 +0.3**
baz=357
D19K Kuna River 73.70 359 P **P** **01 49 39.1 0.0**
baz=1.2
G30M tAoh Zraii Nji 73.71 351 P **P** **01 49 39.4 +0.3**
baz=19
E24K Your Creek 73.80 356 P **P** **01 49 39.4 -0.2**
baz=9.1
C16K Lisburne Hills 73.84 2 P **P** **01 49 40.3 +0.6**
baz=355
F26K Sheenjek River 73.86 354 P **P** **01 49 40.2 +0.3**
baz=13
E23K Chandalar 73.88 356 IAmb IAmb 01 49 42.6
comp=Z,3.9nm,0.6s
E23K Chandalar 73.88 356 P **P** **01 49 39.8 -0.4**
baz=8.2
E20K Nigu River 73.92 359 P **P** **01 49 39.6 -0.7**
baz=2.8
G29M Pine Creek 74.00 351 IAmb IAmb 01 49 42.6
comp=Z,8.2nm,0.9s
G29M Pine Creek 74.00 351 P **P** **01 49 39.9 -0.9**
baz=18,SNR=6.5
F25K Christian Rive 74.08 354 P **P** **01 49 41.1 -0.2**
baz=11
RDOG Red Dog Mine 74.12 1 P **P** **01 49 41.3 -0.2**
baz=357
F24K Squaw Lake 74.31 355 IAmb IAmb 01 49 45.5
comp=Z,6.1nm,0.9s
F24K Squaw Lake 74.31 355 P **P** **01 49 42.5 -0.1**
baz=9.6,SNR=5.0
EPYK Eagle Plains 74.36 351 IAmb IAmb 01 49 44.3
comp=Z,4.5nm,0.6s
EPYK Eagle Plains 74.36 351 P **P** **01 49 43.7 +0.8**
baz=19
MA2 Magadan 74.40 24 LR LR 02 25 27.6
comp=Z,132nm,20.7s,baz=72,slow=38
D17K Noatak River 74.47 1 P **P** **01 49 44.3 +0.8**
baz=357
G27K Doyon Strip 74.50 353 P **P** **01 49 44.2 +0.5**
baz=15,SNR=5.6
F22K John River 74.55 357 P **P** **01 49 44.5 +0.5**
baz=6.1
G26K Porcupine Rive 74.56 354 P **P** **01 49 46.0 +2.0**
G26K IAmb IAmb 01 49 46.9
comp=Z,7.1nm,0.8s
G26K Porcupine Rive 74.56 354 P **P** **01 49 44.5 +0.6**
baz=13,SNR=5.3
H31M Peel River 74.57 349 P **P** **01 49 44.6 +0.5**
baz=20
H29M Whitestone 74.70 351 IAmb IAmb 01 49 46.2
comp=Z,6.0nm,0.6s
H29M Whitestone 74.70 351 P **P** **01 49 45.2 +0.3**
baz=17,SNR=5.6
COLD Coldfoot 74.73 356 IAmb IAmb 01 49 47.3
comp=Z,6.3nm,1.1s
COLD Coldfoot 74.73 356 P **P** **01 49 45.3 +0.3**
baz=7.7
E19K Redstone River 74.73 359 P **P** **01 49 45.9 +0.9**
baz=1.9,SNR=9.5
E18K Tukpahlearik C 74.78 0 P **P** **01 49 46.7 +1.4**
E18K IAmb IAmb 01 49 47.1
comp=Z,6.4nm,0.7s
E18K Tukpahlearik C 74.78 0 P **P** **01 49 45.4 +0.1**
baz=359
F21K Alatna River 74.88 358 IAmb IAmb 01 49 48.5
comp=Z,6.5nm,0.9s
F21K Alatna River 74.88 358 P **P** **01 49 46.5 +0.6**
baz=5.0,SNR=7.3
G25K Bearman Lake 74.93 354 P **P** **01 49 46.5 +0.3**
baz=11
H27K Steamboat Moun 75.05 353 IAmb IAmb 01 49 49.5
comp=Z,5.7nm,0.8s
H27K Steamboat Moun 75.05 353 P **P** **01 49 47.5 +0.6**
baz=15,SNR=8.1
G24K Hadweenzic Riv 75.09 355 P **P** **01 49 47.1 -0.1**
baz=9.9
G22K Bettles 75.10 357 P **P** **01 49 47.3 +0.2**
baz=6.6
E17K Hotham Inlet 75.11 1 P **P** **01 49 47.1 -0.1**
baz=358
F20K Avaraart Lake 75.12 358 P **P** **01 49 47.3 +0.1**
baz=3.2
G23K Bananza Creek 75.24 356 P **P** **01 49 47.6 -0.5**
baz=7.8
F19K Shaleruckik Mo 75.37 359 IAmb IAmb 01 49 50.7
comp=Z,6.8nm,0.9s
F19K Shaleruckik Mo 75.37 359 P **P** **01 49 48.7 +0.1**
baz=1.5,SNR=6.1
I30M Mount Dempster 75.40 350 IAmb IAmb 01 49 50.5
comp=Z,5.0nm,0.6s
I30M Mount Dempster 75.40 350 P **P** **01 49 49.3 +0.2**
baz=19,SNR=10
G21K Allakaket 75.59 357 P **P** **01 49 49.8 -0.2**
baz=5.0
F18K Selawik 75.61 0 P **P** **01 49 50.3 +0.2**
baz=360
I28M Miner Creek 75.63 352 P **P** **01 49 50.1 -0.3**
baz=16
I27K Kandik River 75.67 352 P **P** **01 49 51.0 +0.5**
baz=15,SNR=5.2
ULM Lac du Bonnet 75.68 324 P **P** **01 49 51.3 +0.5**
comp=Z,6.0nm,0.6s,baz=43,slow=6.1,SNR=15
comp=Z,6.0nm,0.6s
ULM Lac du Bonnet 75.68 324 IAmb IAmb 01 49 52.3
comp=Z,6.2nm,0.7s
F17K Baldwin Pennin 75.76 1 P **P** **01 49 51.8 +0.9**
baz=359
H24K Noodor Dome 75.98 355 P **P** **01 49 52.2 0.0**
baz=9.5,SNR=5.2
J30M Hart River 76.01 350 IAmb IAmb 01 49 54.5
comp=Z,5.2nm,0.6s
J30M Hart River 76.01 350 P **P** **01 49 52.6 0.0**
baz=19,SNR=8.7
G19K Purcell Mounta 76.05 359 IAmb IAmb 01 49 54.6
comp=Z,3.6nm,0.7s
G19K Purcell Mounta 76.05 359 P **P** **01 49 52.9 +0.3**
baz=2.1
H23K Yukon River 76.09 356 P **P** **01 49 53.1 +0.2**
baz=8.2
PRP Porcupine Dome 76.11 354 P **P** **01 49 53.0 -0.1**
baz=11
H22K Ishtalitna Cre 76.12 357 IAmb IAmb 01 49 55.6
comp=Z,4.7nm,1.0s
H22K Ishtalitna Cre 76.12 357 P **P** **01 49 53.3 +0.2**
baz=6.7,SNR=5.3
IMAR Indian Mountai 76.13 358 P **P** **01 49 54.6 +1.6**
G18K Tagagawik 76.32 360 P **P** **01 49 54.3 +0.1**
baz=0.8
H21K Melozitna Rive 76.42 357 IAmb IAmb 01 49 57.7
comp=Z,7.9nm,0.8s
H21K Melozitna Rive 76.42 357 P **P** **01 49 54.9 +0.1**
baz=5.5,SNR=10
F15K North Star Dit 76.43 2 P **P** **01 49 54.1 -0.6**
baz=356
TNA Tin City 76.45 4 P **P** **01 49 54.8 0.0**
baz=353
F14K Arctic Creek 76.61 3 P **P** **01 49 56.2 +0.4**
baz=355
H20K Anotleneega Mo 76.66 358 P **P** **01 49 56.1 0.0**
baz=3.8
POKR Poker Plat Res 76.66 355 P **P** **01 49 57.1 +1.1**
baz=9.8
H19K Roundabout Mou 76.66 359 IAmb IAmb 01 49 58.4
comp=Z,7.8nm,0.9s
H19K Roundabout Mou 76.66 359 P **P** **01 49 56.4 +0.4**
baz=2.6,SNR=5.2
G17K Kiwalik Mounta 76.71 0 P **P** **01 49 56.7 +0.4**
baz=359
I23K Minto, Yukon-K 76.76 356 P **P** **01 49 56.9 +0.3**
baz=8.3
G16K Koyuk River 76.80 1 P **P** **01 49 57.0 +0.2**
baz=358
I21K Tanana 76.86 357 P **P** **01 49 57.8 +0.6**
baz=6.2
K29M Barlow Dome 76.87 350 P **P** **01 49 57.8 +0.3**
baz=18
DAWY Dawson 76.90 351 P **P** **01 49 58.0 +0.4**
baz=16
NJ2 Nanjing 76.95 60 *e*P **P** **01 49 56.9 -1.4**
NJ2 pmax pmax
comp=Z,26nm,0.8s
MLY Manley 76.95 356 P **P** **01 49 57.9 +0.1**
baz=7.2,SNR=5.6
ILAR Eielson Array 76.96 354 P **P** **01 49 58.9 +1.1**
comp=Z,0.9nm,0.6s,baz=350,slow=2.9,SNR=10
comp=Z,0.9nm,0.6s
J25K Salcha River, 76.99 354 P **P** **01 49 58.3 +0.3**
baz=12
MMPY Sheldon Lake, 77.05 347 IAmb IAmb 01 50 01.8
comp=Z,6.7nm,1.2s
MMPY Sheldon Lake, 77.05 347 P **P** **01 49 59.0 +0.6**
baz=23
H18K Honhosa River 77.06 359 P **P** **01 49 59.1 +0.7**
baz=1.0
G15K Niukluk 77.17 2 P **P** **01 49 59.3 +0.4**
baz=356
K27K Chicken 77.25 352 IAmb IAmb 01 50 02.0
comp=Z,7.2nm,1.1s
H17K Granite Mounta 77.28 0 P **P** **01 50 00.1 +0.5**
baz=360
NEA2 Nenana 77.29 355 P **P** **01 50 00.1 +0.5**
baz=8.5
HDA Harding Lake 77.32 354 IAmb IAmb 01 50 01.3
comp=Z,6.3nm,0.8s
HDA Harding Lake 77.32 354 P **P** **01 49 60.0 +0.1**
baz=10
I20K Naaghedeneel 77.34 358 P **P** **01 50 00.5 +0.7**
baz=4.2
WRH Wood River Hil 77.34 355 IAmb IAmb 01 50 01.5
comp=Z,6.3nm,0.8s

USRK	Ussuriysk Ar.	77.41	43	P		P	01 50 00.5	-0.2	
	comp=Z,3.4nm,0.6s,baz=295,slow=4.6,SNR=9.5								
	comp=Z,3.4nm,0.6s								
ANM	Nome	77.56	3	P		P	01 50 01.5	+0.4	
	baz=355								
H16K	Elim	77.56	1	P		P	01 50 01.6	+0.5	
	baz=358								
L29M	L29M	77.66	350	P		P	01 50 02.4	+0.6	
	baz=17								
RIDG	Independent Ri	77.80	353	P		P	01 50 03.2	+0.6	
	baz=12								
K24K	Donnelly Dome	77.82	354	P		P	01 50 02.9	+0.2	
	baz=11								
J20K	Nowinta River	77.95	358	P		P	01 50 03.6	+0.3	
	baz=4.4								
M31M	Drury Creek, Y	77.97	348	P		P	01 50 03.9	+0.4	
	baz=20								
M30M	Minto, Yukon	77.98	349	P		P	01 50 04.0	+0.4	
	baz=18								
GAMB	Gambell	77.99	5	P		P	01 50 03.8	+0.3	
	baz=350								
MCK	McKinley	78.14	355	P		P	01 50 04.8	+0.4	
	baz=8.6								
BCAR	Beaver Creek A	78.15	352	P		P	01 50 06.4	+1.8	
L27K	Beaver Creek,	78.16	352	P		P	01 50 04.8	+0.2	
	baz=14								
CHUM	Lake Minchumin	78.17	357	P		P	01 50 05.4	+0.8	
	baz=5.9								
J19K	Poorman	78.18	358	IAmb		IAmb	01 50 07.2		
	comp=Z,8.6nm,1.2s								
J19K	Poorman	78.18	358	P		P	01 50 04.8	+0.2	
	baz=3.2								
M29M	Somme Creek	78.34	350	P		P	01 50 06.0	+0.3	
	baz=17								
TRF	Thorofare Moun	78.50	356	P		P	01 50 06.2	-0.4	
	baz=7.5								
PAX	Paxson	78.62	353	P		P	01 50 06.9	-0.2	
	baz=11								
CAST	Castle Rocks	78.63	357	P		P	01 50 07.2	+0.1	
	baz=6.0								
DHY	Denali Highway	78.67	354	IAmb		IAmb	01 50 09.2		
	comp=Z,6.5nm,0.7s								
DHY	Denali Highway	78.67	354	P		P	01 50 07.0	-0.5	
	baz=9.8								
BVCY	Beaver Creek	78.68	351	P		P	01 50 07.5	+0.1	
	baz=15								
J18K	Innoko River	78.73	359	P		P	01 50 07.7	0.0	
	baz=2.3								
K20K	Telida	78.77	357	P		P	01 50 08.2	+0.3	
	baz=4.5								
J17K	VABM Dome	78.83	360	P		P	01 50 08.2	0.0	
	baz=0.4								
M27K	Edge Creek, AK	78.85	352	P		P	01 50 08.3	-0.2	
	baz=14								
M26K	Nabesna, AK	78.93	352	P		P	01 50 09.2	+0.4	
	baz=13								
J16K	Anvik River	78.94	0	P		P	01 50 08.5	-0.3	
	baz=359								
WAT1	Susitna Watana	79.00	355	P		P	01 50 08.6	-0.6	
	baz=8.9								
N30M	Aishikik Lake	79.09	349	P		P	01 50 09.6	-0.2	
	baz=18								
HARP	HAARP	79.15	353	P		P	01 50 09.6	-0.4	
	baz=12								
PPLA	Purkeypile	79.15	357	P		P	01 50 09.2	-1.0	
	baz=6.0								
WAT6	Susitna Watana	79.19	354	P		P	01 50 10.1	-0.3	
	baz=9.5								
YUK3	Moose Creek	79.25	351	P		P	01 50 10.4	-0.4	
	baz=15								
PSI	Prapat	79.27	95	P		P	01 50 11.0	-0.5	
PSI				pmax		pmax			
	comp=Z,5.0nm,0.8s								
RPSI	Rantau Prapat	79.33	95	P		P	01 50 11.0	-0.7	
RPSI				IAmb		IAmb	01 50 23.4		
	comp=Z,4.8nm,0.8s								
J14K	Nanvaranak Lak	79.43	2	P		P	01 50 10.9	-0.5	
	baz=357								
L22K	Petersville	79.45	356	P		P	01 50 11.2	-0.5	
	baz=7.1								
KSRS	Korea Array	79.46	51	P		P	01 50 12.2	+0.1	
	comp=Z,5.3nm,0.5s,baz=310,slow=4.8,SNR=16								
	comp=Z,5.3nm,0.5s								
WHY	Whitehorse	79.50	348	P		P	01 50 11.4	-0.7	
	baz=20								
K17K	Iditarod	79.51	359	P		P	01 50 11.9	0.0	
	baz=1.1								
M24K	Tolsona, Glenn	79.53	354	P		P	01 50 11.8	-0.3	
	baz=11								
P33M	Teslin, Yukon	79.57	347	P		P	01 50 12.2	-0.2	
	baz=21								
O30N	Mendenhall	79.59	349	P		P	01 50 12.0	-0.5	
	baz=19								
YUK8	Steele Glacier	79.63	350	P		P	01 50 12.6	-0.3	
	baz=16								
T47A	Sharon Grove	79.71	309	IAmb		IAmb	01 50 27.7		
	comp=Z,5.8nm,0.8s								
HYT	Haines Junctio	79.76	349	P		P	01 50 13.1	-0.4	
	baz=18								
YUK6	Outpost Mounta	79.77	350	P		P	01 50 13.3	-0.4	
	baz=17								
N25K	Chitina, Valde	79.88	353	P		P	01 50 13.1	-0.9	
	baz=12								
SCM	Sheep Creek Mo	79.90	354	P		P	01 50 13.9	-0.2	
	baz=9.8								
K15K	Wolf Creek Mou	79.92	1	P		P	01 50 14.3	+0.1	
	baz=358								
MCARA	McCarthy VSAT	79.93	352	P		P	01 50 14.7	+0.4	
	baz=13								
M23K	Glacier View	79.97	354	P		P	01 50 14.4	0.0	
	baz=9.5								
L19K	White Mountain	79.97	358	IAmb		IAmb	01 50 16.8		
	comp=Z,5.7nm,0.8s								
L19K	White Mountain	79.97	358	P		P	01 50 14.9	+0.4	
	baz=3.8								
R33M	Jennings River	79.98	346	IAmb		IAmb	01 50 18.1		
	comp=Z,8.1nm,1.0s								
R33M	Jennings River	79.98	346	P		P	01 50 14.9	+0.2	
	baz=23								
L18K	Granite Mounta	79.98	359	P		P	01 50 14.9	+0.5	
	baz=2.3								
SML	Sawmill	80.00	355	P		P	01 50 14.7	0.0	
	baz=9.0								
SKT	Skwentna	80.03	356	P		P	01 50 14.8	0.0	
	baz=6.5								
L17K	Donlin	80.09	359	P		P	01 50 15.3	+0.2	
	baz=1.1								
KLU	Klutina	80.11	353	P		P	01 50 15.2	-0.1	
	baz=11								
O28M	Mount Upton	80.18	350	P		P	01 50 15.6	-0.4	
	baz=15								
M20K	Styx River	80.21	357	P		P	01 50 15.4	-0.5	
	baz=5.2								
K13K	Kusilvak Mount	80.22	2	P		P	01 50 14.9	-0.8	
	baz=356								
M19K	Big River Lodg	80.24	357	P		P	01 50 14.7	-1.2	
	baz=4.2								
PMR	Palmer	80.27	355	P		P	01 50 15.8	-0.2	
	baz=8.4								
P32M	Atlin	80.31	347	P		P	01 50 15.2	-1.2	
	baz=20								
P30M	Million Dollar	80.35	349	P		P	01 50 16.1	-0.5	
	baz=18								
O29M	Mount Kennedy	80.41	350	P		P	01 50 16.0	-1.1	
	baz=17								
BMRM	Bremner River	80.50	353	P		P	01 50 16.3	-1.1	
	baz=12								
L16K	Owhat River	80.52	360	P		P	01 50 17.3	-0.1	
	baz=0.1								
L15K	Ungalak Mounta	80.54	1	P		P	01 50 16.9	-0.6	
	baz=358								
CRQE	Cirque	80.55	352	P		P	01 50 17.7	-0.1	
	baz=13								
ECSD	EROS Data Cent	80.56	319	IAmb		IAmb	01 50 19.8		
	comp=Z,4.8nm,0.8s								
ECSD	EROS Data Cent	80.56	319	P		P	01 50 19.0	+1.0	
Q32M	Nakina River	80.64	346	IAmb		IAmb	01 50 23.5		
	comp=Z,4.0nm,0.7s								
Q32M	Nakina River	80.64	346	P		P	01 50 17.7	-0.6	
	baz=22								
DLBC	Dease Lake	80.67	345	P		P	01 50 18.3	-0.1	
	baz=23								
M18K	Stony River	80.69	358	P		P	01 50 18.2	-0.1	
	baz=3.0								
RC01	Rabbit Creek A	80.81	355	P		P	01 50 18.9	-0.1	
	baz=7.9								
M17K	Holitna River	80.82	359	P		P	01 50 18.9	-0.1	
	baz=1.7								
GLI	Glacier Island	80.82	354	P		P	01 50 18.6	-0.5	
	baz=10.0								
PINM	Pinnacle	80.84	350	P		P	01 50 19.3	0.0	
	baz=15								
YSS	Yuzhno-Sakhali	80.89	36	P		P	01 50 20.6	+0.9	
YSS				pP		PcP	01 50 28.3	+2.2	
PLBC	Pleasant Camp	80.89	348	P		P	01 50 19.3	-0.1	
	baz=18								
P29M	Windy Craggy	80.94	349	P		P	01 50 19.3	-0.4	
	baz=17								
PWL	Port Wells	80.94	354	P		P	01 50 19.1	-0.6	
	baz=9.0								
EYAK	Cordova Ski Ar	81.03	353	P		P	01 50 19.8	-0.3	
	baz=11								
M16K	Timber Creek	81.21	360	P		P	01 50 21.0	-0.1	
	baz=0.5								
N19K	Bonanza Creek	81.33	357	P		P	01 50 22.0	+0.1	
	baz=4.1								
O22K	Cooper Landing	81.42	355	P		P	01 50 21.9	-0.3	
	baz=7.9								
M14K	Bethel	81.47	1	P		P	01 50 22.2	-0.2	
	baz=358								
CCM	Cathedral Cave	81.49	312	P		P	01 50 24.0	+0.9	
CCM				pmax		pmax			
	comp=Z,5.0nm,0.5s								
CCM	Cathedral Cave	81.49	312	P		P	01 50 23.9	+0.9	
CCM				IAmb		IAmb	01 50 24.5		
	comp=Z,4.8nm,0.5s								
KAIM	Kayak Island	81.51	352	P		P	01 50 21.9	-0.8	
	baz=12								
N18K	Kilae Creek	81.51	358	P		P	01 50 22.2	-0.5	
	baz=3.0								
M15K	Kasigluk River	81.54	1	P		P	01 50 21.8	-1.0	
	baz=359								
N17K	Nushagak Hills	81.69	359	P		P	01 50 22.7	-0.9	
	baz=1.9								
R32K	Eaglecrest	81.69	347	P		P	01 50 22.6	-1.2	
	baz=20								
M11K	Mekoryuk	81.70	3	P		P	01 50 22.1	-1.6	
	baz=355								
P23K	Montague Islan	81.72	354	P		P	01 50 22.9	-0.9	
	baz=9.7								
P38A	Dawn	81.74	314	IAmb		IAmb	01 50 26.1		
	comp=Z,4.5nm,0.6s								
N16K	Nishlik Lake	81.76	360	P		P	01 50 23.4	-0.6	
	baz=0.7								
SEW	Seward	81.77	355	P		P	01 50 23.2	-0.9	
	baz=8.1								
M13K	Dall Lake	81.78	2	P		P	01 50 22.9	-1.1	
	baz=357								
PETK	Petropavlovsk-	81.91	24	P		P	01 50 24.1	-0.8	
	comp=Z,1.4nm,0.7s,baz=302,slow=2.7,SNR=5.2								
	comp=Z,1.4nm,0.7s								
O20K	Slope Mountain	81.98	356	P		P	01 50 23.8	-1.5	
	baz=5.6								
T35M	Bob Quinn	82.06	344	P		P	01 50 25.3	-0.4	
	baz=23								
N15K	Kwethluk River	82.07	0	P		P	01 50 24.5	-1.2	
	baz=360								
Q23K	Middleton Isla	82.19	353	P		P	01 50 25.5	-0.8	
	baz=10								
BRSE	Bradley Lake S	82.22	355	P		P	01 50 26.0	-0.5	
	baz=7.0								
PET	Petropavlovsk	82.29	24	eP		P	01 50 31.3	+4.4	
PET				eS		S	02 00 42.5	+0.3	
S31K	Pelican	82.29	348	P		P	01 50 26.4	-0.4	
	baz=18								
N14K	Kuskokwak Cree	82.30	1	P		P	01 50 26.1	-0.7	
	baz=358								
HOM	Homer	82.36	356	P		P	01 50 26.5	-0.7	
	baz=6.3								
O17K	Koliganek Bris	82.44	359	P		P	01 50 26.9	-0.7	
	baz=2.0								
P19K	Oil Pt	82.44	357	P		P	01 50 26.8	-0.9	
	baz=5.1								
S32K	Killisnoo	82.47	347	P		P	01 50 26.7	-1.0	
	baz=20								
O16K	Kokwok River B	82.64	359	P		P	01 50 27.7	-0.9	
	baz=1.2								
WRAK	Wrangell Islan	83.02	345	P		P	01 50 29.8	-0.9	
	baz=21								
O15K	Ungalikthiuk R	83.06	0	P		P	01 50 30.1	-0.7	
	baz=360								
U33K	Whale Pass	83.46	345	P		P	01 50 32.4	-0.5	
	baz=21								
Q18K	Katmai Hardscr	83.52	358	P		P	01 50 32.2	-1.1	
	baz=3.6								
V35K	Ketchikan	83.89	344	P		P	01 50 35.0	-0.1	
	baz=22								
Q17K	Contact Creek	83.93	358	P		P	01 50 34.5	-1.0	
	baz=3.0								
CRAG	Craig	84.07	345	P		P	01 50 35.2	-0.8	
	baz=21								
KDAK	Kodiak Island	84.28	356	P		P	01 50 36.4	-0.7	
	baz=5.6								
R17L	Mt. Peulik Vol	84.57	358	P		P	01 50 38.0	-0.7	
	baz=2.6								
SPIA	Saint Paul Isl	84.65	6	P		P	01 50 37.8	-1.2	
	baz=352								
OHAK	Old Harbor	84.87	357	P		P	01 50 39.3	-0.8	
	baz=5.0								
SII	Sitkinak Islan	85.58	357	P		P	01 50 42.8	-0.9	
	baz=4.3								
S14K	Fog Glacier	85.96	360	P		P	01 50 44.6	-1.1	
	baz=0.1								
MJAR	Matsushiro Arr	86.11	46	P		P	01 50 46.1	-0.6	
	comp=Z,3.1nm,0.8s,baz=341,slow=3.8,SNR=9.2								
	comp=Z,3.1nm,0.8s								
MJAR	Matsushiro Arr	86.11	46	P		P	01 50 47.2	+0.5	
MJAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
MJAR	Matsushiro Arr	86.11	46	P		P	01 50 47.2	+0.5	
CHIR	Chirikof Islan	86.37	358	P		P	01 50 46.8	-0.8	
	baz=3.1								
SDPT	Sand Point	86.90	0	P		P	01 50 49.5	-0.6	
	baz=359								
CHNA	Chernabura Isl	87.42	360	P		P	01 50 51.8	-0.9	
	baz=0.0								
PDAR	Pinedale Array	87.53	326	P		P	01 50 53.0	-0.9	
	comp=Z,0.5nm,0.6s,baz=46,slow=4.3,SNR=3.6								
	comp=Z,0.5nm,0.6s								
UNV	Unalaska Valle	88.22	4	P		P	01 50 55.8	-0.8	
	baz=355								
BMO	Blue Mountains	89.01	331	IAmb		IAmb	01 51 01.3		
	comp=Z,2.9nm,0.8s								
TXAR	Lajitas Array	94.93	313	P		P	01 51 29.0	+0.7	
	comp=Z,0.3nm,0.6s,baz=46,slow=4.4,SNR=1.6								
	comp=Z,0.3nm,0.6s								
TXAR	Lajitas Array	94.93	313	P		P	01 51 29.0	+0.7	
WRA	Warranunga Arr	120.65	92	PKP		PKPdf	01 56 57.0	-0.9	
	comp=Z,0.5nm,0.5s,baz=324,slow=1.9,SNR=6.1								
ASAR	Alice Springs	122.28	96	PKP		PKPdf	01 57 00.6	-0.4	
	comp=Z,0.9nm,0.6s,baz=302,slow=1.6,SNR=8.3								
QSPA	South Pole Qui	127.97	180	PKP		PKPdf	01 57 10.7	+0.2	
	comp=Z,0.8nm,0.8s,baz=90,slow=1.1,SNR=5.2								

*ANF **25** 01:41:36.0±0.3, 59.86N×153.34W, h128km±3km, Error ellipse: s-maj=2.7km s-min=2.3km az=144.0*
*AEIC **25** 01:41:37.2±1.0, 59.86N±0.04×153.4W±0.1, h128km±5km, Error ellipse: s-maj=7.4km s-min=6.1km az=100.0*
NEIC 25 01:41:35.8±0.9, 59.86N±0.04×153.4W±0.1, h135km±5km, ML2.6/102, MLˍ2.5(AEIC), Error ellipse: s-maj=7.7km s-min=6.3km az=108.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
ILSW	Iliamna Southw	0.17	44			Pn	01	41	54.0	-0.4
ILSW				IAML			01	42	09.3	
	comp=E,74nm,0.5s									
ILSW				IAML			01	42	09.9	
	comp=N,46nm,0.4s									
ILSW	Iliamna Southw	0.17	44			Sn	01	42	07.7	-0.8
ILS	Iliamna Low So	0.18	58			Pn	01	41	54.3	0.0
ILS						Sn	01	42	08.1	-0.4
P19K	Oil Pt	0.22	161			Pn	01	41	54.5	+0.1
P19K						Sn	01	42	08.1	-0.3
P19K	Oil Pt	0.22	161	P		Pn	01	41	54.5	+0.1
	baz=342									
P19K				S		Sn	01	42	08.4	-0.1
	baz=342									
IVE	Iliamna Volcan	0.24	49			Pn	01	41	54.3	-0.2
O20K	Slope Mountain	0.44	59			Pn	01	41	55.4	+0.2
O20K						Sn	01	42	10.2	+0.2
O20K	Slope Mountain	0.44	59	P		Pn	01	41	55.4	+0.2
	baz=239									
O20K				S		Sn	01	42	10.2	+0.3
	baz=239									
AUJK	Augustine Jueg	0.51	182			Pn	01	41	55.7	+0.2
AUJK						Sn	01	42	10.2	-0.3
RED	Redoubt Volcan	0.64	28			Pn	01	41	56.5	+0.2
RED	Redoubt Volcan	0.64	28			Sn	01	42	11.4	-0.6
RED	Redoubt Volcan	0.64	28	IAML			01	42	11.9	
	comp=E,59nm,0.9s									
RED				IAML			01	42	11.9	
	comp=N,69nm,0.8s									
RDSO	Redoubt South	0.67	28			Pn	01	41	56.6	-0.1
RDSO						Sn	01	42	11.9	-0.7
NCT	North Crescent	0.74	17			Sn	01	42	12.4	-0.9
RDJH	Redoubt Jeurge	0.79	21			Pn	01	41	57.5	0.0
DFR	Drift River	0.81	25			Sn	01	42	13.5	-0.8
HOM	Homer	0.90	102			Pn	01	41	58.4	+0.1
HOM	Homer	0.90	102	P		Pn	01	41	58.6	+0.3
	baz=284									
O18K	Koktuh Hills	0.93	270			Pn	01	41	58.2	-0.3
O18K						Sn	01	42	14.6	-1.1
O18K	Koktuh Hills	0.93	270	P		Pn	01	41	58.1	-0.4
	baz=89									
O18K				S		Sn	01	42	14.7	-1.1
	baz=89									
P18K	Big Mountain,	1.05	244			Pn	01	41	59.2	-0.5
P18K	Big Mountain,	1.05	244	P		Pn	01	41	59.1	-0.6
	baz=63									
N19K	Bonanza Creek	1.10	330			Pn	01	42	00.1	-0.1
N19K				IAML			01	42	18.5	
	comp=E,37nm,0.9s									
N19K				IAML			01	42	18.6	
	comp=N,30nm,0.7s									
N19K	Bonanza Creek	1.10	330			Sn	01	42	17.6	-1.3
N19K	Bonanza Creek	1.10	330	P		Pn	01	42	00.0	-0.2
	baz=149									
N19K				S		Sn	01	42	17.7	-1.2
	baz=149									
CNPM	China Poot	1.14	106			Pn	01	42	00.6	+0.1
CNPM				IAML			01	42	20.3	
	comp=N,86nm,0.4s									
CNPM				IAML			01	42	20.5	
	comp=E,78nm,0.3s									
CNPM	China Poot	1.14	106			Sn	01	42	18.3	-0.9
BRLK	Bradley Lake	1.26	93			Pn	01	42	01.8	+0.1
BRLK				IAML			01	42	23.4	
	comp=E,107nm,0.1s									
BRLK				IAML			01	42	26.7	
	comp=N,145nm,0.1s									
BRSE	Bradley Lake S	1.34	94	P		Pn	01	42	02.6	+0.1
	baz=276									
SPU	Mount Spurr	1.48	26			Pn	01	42	04.3	+0.3
Q18K	Katmai Hardscr	1.48	215	P		Pn	01	42	04.0	-0.1
	baz=34									
N18K	Kilae Creek	1.50	304			Pn	01	42	04.2	-0.1
N18K						Sn	01	42	24.9	-1.0
SPCG	Spurr Capps Gl	1.58	24			Sn	01	42	27.9	+0.1
KAWH	Katmai	1.66	207			Pn	01	42	06.0	0.0
P17K	Kvichak River	1.70	248			Pn	01	42	07.1	+0.7
P17K				IAML			01	42	31.3	
	comp=E,68nm,1.0s									
P17K				IAML			01	42	34.3	
	comp=N,51nm,1.1s									
P17K	Kvichak River	1.70	248	P		Pn	01	42	07.0	+0.6
	baz=66									
P17K				S		Sn	01	42	30.6	+0.8
	baz=66									
SLKM	Skilak Lake	1.70	66			Pn	01	42	07.2	+0.6
SLKM	Skilak Lake	1.70	66			Sn	01	42	28.6	-1.4
STLK	Strandline Lak	1.81	24			Pn	01	42	08.3	+0.5
STLK	Strandline Lak	1.81	24	IAML			01	42	35.7	
	comp=N,24nm,0.4s									
STLK				IAML			01	42	36.7	
	comp=E,16nm,0.4s									
KABU	Katmai Buttres	1.88	213			Pn	01	42	09.1	+0.4
O17K	Koliganek Bris	1.88	269			Pn	01	42	08.9	+0.3
O17K	Koliganek Bris	1.88	269	P		Pn	01	42	09.0	+0.4
	baz=86									
O22K	Cooper Landing	1.93	70	S		Sn	01	42	33.6	-1.0
	baz=253									
ACHA	Angle Creek He	1.94	212			Pn	01	42	09.0	-0.4
SEW	Seward	1.99	81	IAML			01	42	35.8	
	comp=E,37nm,0.2s									
SEW				IAML			01	42	36.6	
	comp=N,41nm,0.6s									
SEW	Seward	1.99	81	P		Pn	01	42	10.0	+0.2
	baz=264									
ANCK	Angle Creek	2.00	214			Pn	01	42	10.4	+0.3
N17K	Nushagak Hills	2.02	291	P		Pn	01	42	10.5	+0.3
	baz=108									
N17K				S		Sn	01	42	36.6	0.0
	baz=108									
M20K	Styx River	2.03	3			Pn	01	42	10.8	+0.3
M20K	Styx River	2.03	3	P		Pn	01	42	10.7	+0.2
	baz=183									
M18K	Stony River	2.03	325	P		Pn	01	42	10.1	-0.3
	baz=142									
M18K				S		Sn	01	42	36.4	-0.5
	baz=142									
Q17K	Contact Creek	2.06	220			Pn	01	42	11.0	+0.1
Q17K	Contact Creek	2.06	220	P		Pn	01	42	11.0	+0.1
	baz=38									
CAHL	Cahill	2.07	210			Pn	01	42	11.4	+0.4
M19K	Big River Lodg	2.11	347			Pn	01	42	11.2	-0.1
M19K	Big River Lodg	2.11	347	P		Pn	01	42	11.2	-0.1
	baz=166									
KDAK	Kodiak Island	2.12	169			Pn	01	42	10.6	-0.9
KDAK				IAML			01	42	38.4	
	comp=N,57nm,0.3s									
KDAK				IAML			01	42	38.8	
	comp=N,65nm,0.3s									
KDAK	Kodiak Island	2.12	169	P		Pn	01	42	10.5	-1.0
	baz=349									
KDAK				S		Sn	01	42	36.9	-2.0
	baz=349									
RC01	Rabbit Creek A	2.18	54			Pn	01	42	12.1	-0.1
RC01	Rabbit Creek A	2.18	54	P		Pn	01	42	12.3	+0.1
	baz=237									
RC01				S		Sn	01	42	39.0	-1.2
	baz=237									
SKT	Skwentna	2.31	22			Pn	01	42	13.3	-0.5
SKT				IAML			01	42	47.1	
	comp=E,20nm,0.3s									
SKT				IAML			01	42	47.4	
	comp=N,20nm,0.4s									
SKT	Skwentna	2.31	22	P		Pn	01	42	14.1	+0.3
	baz=204									
L19K	White Mountain	2.44	343			Pn	01	42	15.2	-0.2
L19K	White Mountain	2.44	343	P		Pn	01	42	15.2	-0.2
	baz=162									
M22K	Willow	2.48	39	S	

L22K	**Petersville**	**2.96**	**24**	IAML			01 42 59.8	
	comp=N,21nm,0.3s							
L22K				IAML			01 43 00.7	
	comp=E,19nm,0.3s							
L22K	**Petersville**	**2.96**	**24**	P		Pn	01 42 22.3	+0.4
	baz=206							
L22K				S		Sn	01 42 56.9	-0.8
	baz=206							
CUT	**Chulitna**	**2.96**	**29**	S		Sn	01 42 57.1	-0.6
	baz=212							
M16K	**Timber Creek**	**3.00**	**295**	P		Pn	01 42 23.4	+0.9
	baz=110							
P23K	**Montague Islan**	**3.01**	**85**			Pn	01 42 23.1	+0.5
P23K	**Montague Islan**	**3.01**	**85**	P		Pn	01 42 23.2	+0.6
	baz=270							
P23K				S		Sn	01 42 57.6	-1.2
	baz=270							
PPLA	**Purkeypile**	**3.10**	**10**			Pn	01 42 24.4	+0.5
PPLA	**Purkeypile**	**3.10**	**10**	IAML			01 43 05.0	
	comp=E,6.4nm,0.9s							
PPLA				IAML			01 43 06.1	
	comp=N,6.1nm,0.5s							
SML	**Sawmill**	**3.15**	**49**			Pn	01 42 23.6	-0.9
SML	**Sawmill**	**3.15**	**49**	IAML			01 43 02.4	
	comp=N,20nm,0.5s							
SML				IAML			01 43 09.1	
	comp=E,25nm,0.8s							
SML	**Sawmill**	**3.15**	**49**	S		Sn	01 42 59.3	-2.8
	baz=234							
GLI	**Glacier Island**	**3.28**	**69**			Pn	01 42 25.3	-0.9
GLI	**Glacier Island**	**3.28**	**69**	IAML			01 43 08.3	
	comp=N,28nm,0.8s							
GLI	**Glacier Island**	**3.28**	**69**	P		Pn	01 42 26.4	+0.2
	baz=254							
L17K	**Donlin**	**3.31**	**316**			Pn	01 42 26.7	+0.2
SII	**Sitkinak Islan**	**3.34**	**188**			Pn	01 42 25.6	-1.3
M23K	**Glacier View**	**3.38**	**53**	S		Sn	01 43 04.8	-2.5
	baz=237							
HIN	**Hinchinbrook I**	**3.48**	**78**			Pn	01 42 28.5	-0.2
L16K	**Owhat River**	**3.52**	**304**			Pn	01 42 29.6	+0.4
K20K	**Telida**	**3.52**	**355**			Pn	01 42 27.8	-1.5
K20K	**Telida**	**3.52**	**355**	P		Pn	01 42 29.6	+0.3
	baz=174							
FID	**Port Fidalgo**	**3.54**	**72**			Pn	01 42 28.1	-1.5
SCM	**Sheep Creek Mo**	**3.56**	**54**			Pn	01 42 29.3	-0.5
SCM	**Sheep Creek Mo**	**3.56**	**54**	IAML			01 43 11.9	
	comp=N,22nm,0.4s							
CAST	**Castle Rocks**	**3.62**	**9**			Pn	01 42 30.8	+0.2
CAST	**Castle Rocks**	**3.62**	**9**	P		Pn	01 42 31.1	+0.5
	baz=190							
WAT7	**Susitna Watana**	**3.69**	**34**			Pn	01 42 31.4	-0.2
K17K	**Iditarod**	**3.72**	**322**			Pn	01 42 32.1	+0.2
K17K	**Iditarod**	**3.72**	**322**	IAML			01 43 32.6	
	comp=E,3.6nm,1.2s							
K17K				IAML			01 44 06.2	
	comp=N,3.3nm,1.2s							
K17K	**Iditarod**	**3.72**	**322**	P		Pn	01 42 32.1	+0.2
	baz=138							
WAT1	**Susitna Watana**	**3.78**	**36**	P		Pn	01 42 32.4	-0.3
	baz=220							
WAT6	**Susitna Watana**	**3.85**	**43**			Pn	01 42 33.2	-0.6
WAT6	**Susitna Watana**	**3.85**	**43**	P		Pn	01 42 33.3	-0.5
	baz=227							
KTH	**Kantishna Hill**	**3.88**	**16**			Pn	01 42 34.2	+0.1
KTH				IAML			01 43 21.8	
	comp=N,5.3nm,0.8s							
KTH				IAML			01 45 20.8	
	comp=E,6.3nm,1.2s							
TRF	**Thorofare Moun**	**3.89**	**21**			Pn	01 42 34.3	0.0
TRF				IAML			01 43 20.8	
	comp=E,7.4nm,0.5s							
TRF				IAML			01 43 21.7	
	comp=N,11nm,0.5s							
TRF	**Thorofare Moun**	**3.89**	**21**	P		Pn	01 42 34.3	+0.1
	baz=204							
J18K	**Innoko River**	**3.95**	**338**			Pn	01 42 34.7	-0.2
J18K	**Innoko River**	**3.95**	**338**	P		Pn	01 42 34.8	-0.1
	baz=155							
KLU	**Klutina**	**4.01**	**63**			Pn	01 42 35.1	-0.7
KLU	**Klutina**	**4.01**	**63**	P		Pn	01 42 35.2	-0.6
	baz=249							
RND	**Reindeer**	**4.16**	**29**			Pn	01 42 37.5	-0.2
RND	**Reindeer**	**4.16**	**29**	IAML			01 43 28.8	
	comp=E,5.8nm,0.3s							
RND				IAML			01 45 16.2	
	comp=N,7.1nm,1.1s							
M24K	**Tolsona, Glenn**	**4.17**	**54**	P		Pn	01 42 38.0	+0.1
	baz=240							
M24K				S		Sn	01 43 25.6	-0.4
	baz=240							
J19K	**Poorman**	**4.28**	**347**			Pn	01 42 39.0	-0.2
J19K	**Poorman**	**4.28**	**347**	IAML			01 45 39.0	
	comp=N,3.8nm,1.1s							
DHY	**Denali Highway**	**4.32**	**39**			Pn	01 42 39.5	-0.5
DHY	**Denali Highway**	**4.32**	**39**	IAML			01 43 29.4	
	comp=E,11nm,0.4s							
DHY				IAML			01 43 32.4	
	comp=N,10nm,0.3s							
DHY	**Denali Highway**	**4.32**	**39**	P		Pn	01 42 39.5	-0.5
	baz=224							
J20K	**Nowinta River**	**4.35**	**356**			Pn	01 42 40.2	+0.1
J20K	**Nowinta River**	**4.35**	**356**	IAML			01 45 28.9	
	comp=N,5.7nm,1.0s							
J20K	**Nowinta River**	**4.35**	**356**	P		Pn	01 42 40.4	+0.3
	baz=175							
MCK	**McKinley**	**4.42**	**27**	P		Pn	01 42 41.5	+0.4
	baz=210							
J17K	**VABM Dome**	**4.47**	**325**			Pn	01 42 41.5	-0.2
J17K	**VABM Dome**	**4.47**	**325**	IAML			01 45 40.4	
	comp=N,5.0nm,1.0s							
J17K				IAML			01 45 44.6	
	comp=E,3.8nm,1.0s							
BMRM	**Bremner River**	**4.49**	**72**			Pn	01 42 41.8	-0.3
BMRM	**Bremner River**	**4.49**	**72**	P		Pn	01 42 42.4	+0.3
	baz=259							
KAIM	**Kayak Island**	**4.51**	**85**	P		Pn	01 42 43.3	+0.9
	baz=273							
N25K	**Chitina, Valde**	**4.65**	**64**			Pn	01 42 44.6	+0.3
N25K	**Chitina, Valde**	**4.65**	**64**	P		Pn	01 42 45.2	+0.9
	baz=252							
NEA2	**Nenana**	**5.16**	**21**	P		Pn	01 42 50.4	-0.5
	baz=205							
WRH	**Wood River Hil**	**5.25**	**26**			Pn	01 42 51.5	-0.6
WRH	**Wood River Hil**	**5.25**	**26**	IAML			01 45 13.2	
	comp=E,9.8nm,1.2s							
WRH				IAML			01 45 18.6	
	comp=N,7.2nm,1.2s							
MLY	**Manley**	**5.33**	**12**			Pn	01 42 53.0	-0.3
MLY	**Manley**	**5.33**	**12**	IAML			01 45 39.7	
	comp=E,2.7nm,1.1s							
CCB	**Clear Creek Bu**	**5.46**	**26**			Pn	01 42 54.2	-0.7
I23K	**Minto, Yukon-K**	**5.62**	**18**			Pn	01 42 56.8	-0.3
I23K	**Minto, Yukon-K**	**5.62**	**18**	P		Pn	01 42 57.0	-0.1
	baz=201							
IL31		**5.78**	**29**			Pn	01 42 58.7	-0.4
ILAR	**Eielson Array**	**5.78**	**29**			Pn	01 42 58.2	-1.0
H18K	**Honhosa River**	**5.79**	**339**			Pn	01 42 59.4	0.0
H21K	**Melozitna River**	**5.82**	**2**			Pn	01 42 60.0	+0.2
H21K	**Melozitna River**	**5.82**	**2**	P		Pn	01 42 59.9	+0.1
	baz=183							
POKR	**Poker Plat Res**	**5.95**	**25**			Pn	01 43 01.2	-0.3
J25K	**Salcha River,**	**6.06**	**35**			Pn	01 43 02.5	-0.5
J25K	**Salcha River,**	**6.06**	**35**	P		Pn	01 43 02.7	-0.3
	baz=222							
IM01	**Indian Mountai**	**6.16**	**359**			Pn	01 43 04.4	0.0
H23K	**Yukon River**	**6.24**	**15**			Pn	01 43 05.7	+0.3
H23K	**Yukon River**	**6.24**	**15**	P		Pn	01 43 05.7	+0.4
	baz=198							
H24K	**Noodor Dome**	**6.50**	**20**	P		Pn	01 43 08.7	-0.3
	baz=205							
G23K	**Bananza Creek**	**7.04**	**11**			Pn	01 43 16.2	+0.1
G23K	**Bananza Creek**	**7.04**	**11**	P		Pn	01 43 16.2	+0.1
	baz=194							
G24K	**Hadweenzic Riv**	**7.36**	**19**			Pn	01 43 19.9	-0.6
G24K	**Hadweenzic Riv**	**7.36**	**19**	P		Pn	01 43 20.1	-0.3
	baz=204							

*SCB **25** 01:44:34.1±1.4,21°.56S×66°.65W,h235km±22km,ML3.5/1, Error ellipse: s-maj=19.1km s-min=12.5km az=0.0*
*GUC **25** 01:44:38.2±0.6,21°.33S×67°.09W,h269km±8km,ML2.9*
ISC 25 01:44:36.5±2.5,21°.38S±0°.07×66°.70W±0°.07, h22km±19km,n23,σ1§26/35,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.99**	**83**	P	**Pn**	**01 45 09.1**	**0.0**
MOCB				S	**S**	**01 45 33.6**	**-0.8**
MOCB				IAML		01 45 34.1	
	248nm,0.6s						
PB09	**IPOC Station P**	**2.41**	**260**	*eP*	**Pn**	**01 45 23.5**	**+2.5**
PB09				*i* S	**S**	**01 45 56.9**	**+1.3**
PB09				IAML		01 46 02.3	
	comp=N,7.3nm,0.2s						
PB08	**IPOC Station P**	**2.61**	**298**	*eP*	**Pn**	**01 45 24.5**	**+1.1**
PB08				*i* S	**S**	**01 46 00.5**	**+0.5**
PB08				IAML		01 46 03.8	
	comp=E,26nm,0.2s						
PB08	**IPOC Station P**	**2.61**	**298**	P	**Pn**	**01 45 23.9**	**+0.4**
GO01	**Chusmiza**	**2.90**	**306**	*eP*	**Pn**	**01 45 27.7**	**+1.0**
GO01				*i* S	**S**	**01 46 05.9**	**+0.1**
GO01	**Chusmiza**	**2.90**	**306**	P	**Pn**	**01 45 27.4**	**+0.7**
PB03	**IPOC Station P**	**2.92**	**256**	*eP*	**Pn**	**01 45 27.3**	**+0.7**
PB03				*i* S	**S**	**01 46 04.8**	**-0.9**
PB03				IAML		01 46 06.0	
	comp=E,22nm,0.1s						
PB06	**IPOC Station P**	**2.98**	**243**	*eP*	**Pn**	**01 45 28.8**	**+1.6**
PB06				*i* S	**S**	**01 46 07.0**	**+0.2**
PB02	**IPOC Station P**	**2.98**	**271**	*eP*	**Pn**	**01 45 27.7**	**+0.4**
PB02				*i* S	**S**	**01 46 05.2**	**-1.7**
PB02	**IPOC Station P**	**2.98**	**271**	P	**Pn**	**01 45 26.6**	**-0.7**
PB07	**IPOC Station P**	**2.99**	**263**	*eP*	**Pn**	**01 45 28.0**	**+0.6**
PB07				*i* S	**S**	**01 46 05.8**	**-1.3**
PB07				IAML		01 46 06.4	
	comp=E,35nm,0.3s						
SOEO	**Opoqueri**	**3.02**	**338**	P	**Pn**	**01 45 29.4**	**+1.3**
PB11	**IPOC Station P**	**3.21**	**300**	*eP*	**Pn**	**01 45 30.0**	**0.0**
PB11				*i* S	**S**	**01 46 09.9**	**-1.7**
PB11	**IPOC Station P**	**3.21**	**300**	P	**Pn**	**01 45 29.5**	**-0.4**
AOEA	**Aiquile**	**3.47**	**24**	P	**Pn**	**01 45 32.9**	**-0.3**
PB05	**IPOC Station P**	**3.56**	**245**	*eP*	**Pn**	**01 45 34.4**	**+0.4**
PB05				*i* S	**S**	**01 46 17.1**	**-1.9**
PSGCX	**Pisagua**	**3.67**	**298**	*eP*	**Pn**	**01 45 34.3**	**-1.0**
PSGCX				*i* S	**S**	**01 46 18.1**	**-3.2**
PB16	**IPOC Station P**	**4.03**	**318**	*eP*	**Pn**	**01 45 41.2**	**+1.1**
PB16				*i* S	**S**	**01 46 30.5**	**+0.6**
PB16	**IPOC Station P**	**4.03**	**318**	P	**Pn**	**01 45 41.1**	**+1.1**
BBOJ	**La Paz, Jacaqu**	**4.61**	**342**	P	**Pn**	**01 45 48.5**	**+1.3**
SOEJ	**Jacaque**	**4.61**	**342**	P	**Pn**	**01 45 48.8**	**+1.6**
LPAZ	**La Paz**	**5.25**	**345**	P	**Pn**	**01 45 55.9**	**+0.6**
BBOB	**La Paz, Bander**	**5.39**	**345**	P	**Pn**	**01 45 57.4**	**+0.5**

*IDC **25** 02:12:21.3±1.7,30°.96N×41°.82W,h0km,mb3.8/7, mbtmp3.8/7,MS3.7/38,Error ellipse: s-maj=59.6km s-min=24.3km az=8.0*
*GCMT **25** 02:12:24.4±0.3,30°.95N±0°.04×41°.65W±0°.03,h13km±1km, MW4.7/73,Moment Tensor Solution. s14,c15; s73,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.96±.10; $M_{\theta\theta}$0.25±.06; $M_{\phi\phi}$0.71±.06; $M_{r\theta}$1.05±.22; $M_{\theta\phi}$0.36±.04; $M_{\phi r}$-0.34±.12; Best double couple: $M_0$1.31800×10^{16} NP1:ϕ_s15.00000°,δ37.00000°,λ-139.00000°. NP2: ϕ_s250.00000°,δ67.00000°,λ-60.00000°. Principal axes: T 0.9750, Plg16.0000°, Azm319.0000°; N 0.6880, Plg27.0000°, Azm58.0000°; P -1.6620, Plg58.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **25** 02:12:25.3±2.3,31°.6N±0°.2×41°.7W±0°.1,h10km±2km, mb4.5/16 Error ellipse: s-maj=35.8km s-min=8.7km az=209.0*
ISC 25 02:12:23.7±1.4,31°.2N±0°.3×41°.7W±0°.1,h13km,n68, σ1§13/26,mb4.4/13,MS3.7/38,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.65**	**245**	LR	LR	02 25 41.6	
	comp=Z,51nm,21.4s,baz=89,slow=31						
MDP	**Montagnes des**	**27.88**	**204**	LR	LR	02 26 03.5	
	comp=Z,128nm,21.3s,baz=107,slow=30						
SCHQ	**Schefferville**	**29.64**	**330**	LR	LR	02 29 48.0	
	comp=Z,196nm,19.7s,baz=132,slow=35						
MDT	**Midelt**	**31.43**	**77**	LR	LR	02 28 24.0	
	comp=Z,123nm,21.6s,baz=277,slow=30						
SADO	**Sadowa**	**32.17**	**306**	LR	LR	02 31 16.0	
	comp=Z,111nm,18.2s,baz=110,slow=35						
SDV	**Santo Domingo**	**34.86**	**237**	LR	LR	02 31 18.4	
	comp=Z,58nm,21.1s,baz=63,slow=33						
TKL	**Tuckaleechee C**	**35.18**	**289**	LR	LR	02 30 43.5	
	comp=Z,182nm,22.0s,baz=90,slow=31						
FRB	**Frobisher Bay**	**36.73**	**340**	LR	LR	02 33 10.1	
	comp=Z,61nm,19.3s,baz=110,slow=34						
ROSC	**El Rosal**	**40.28**	**236**	LR	LR	02 36 47.3	
	comp=Z,51nm,19.0s,baz=64,slow=37						
T42A	**Van Buren**	**40.92**	**292**	P	**P**	**02 20 06.7**	**+0.8**
DBIC	**Dimbokro**	**42.22**	**118**	LR	LR	02 35 04.4	
	comp=Z,155nm,21.6s,baz=349,slow=32						
U38A	**Gravette**	**43.62**	**292**	P	**P**	**02 20 28.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**43.71**	**104**	P	**P**	**02 20 28.9**	**+0.1**
	1.7nm,1.1s,baz=316,slow=9.4,SNR=3.6 1.7nm,1.1s						
ULM	**Lac du Bonnet**	**44.17**	**312**	LR	LR	02 37 01.6	
	comp=Z,65nm,21.4s,baz=28,slow=33						
TUL3	**Leonard**	**44.83**	**291**	P	**P**	**02 20 38.9**	**+1.3**
TUL3				IAmb	IAmb	02 20 41.7	
	comp=Z,6.2nm,0.5s						
GERES	**GERESS Array B**	**44.94**	**50**	P	**P**	**02 20 38.8**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=262,slow=9.0,SNR=4.1 comp=Z,0.3nm,0.6s						
JTS	**Las Juntas de**	**45.08**	**252**	LR	LR	02 38 47.6	
	comp=Z,72nm,18.1s,baz=43,slow=35						
NOA	**NORSAR Array B**	**45.47**	**33**	LR	LR	02 35 58.5	
	comp=Z,22nm,21.6s,baz=225,slow=31						
OK048	**Pawnee Station**	**45.66**	**292**	P	**P**	**02 20 45.4**	**+1.2**
VAE	**Valguarnera**	**46.22**	**66**	LR	LR	02 38 14.3	
	comp=Z,156nm,18.4s,baz=136,slow=34						
H10N2	**ASCENSION HYDR**	**46.73**	**141**	T	T	03 09 59.3	
	baz=326,slow=75,SNR=109						
H10N3	**ASCENSION HYDR**	**46.74**	**141**	T	T	03 09 59.5	
	baz=326,slow=75,SNR=102						
H10N1	**ASCENSION HYDR**	**46.75**	**141**	T	T	03 10 00.7	
	baz=326,slow=75,SNR=131						
PLPT	**Palo Pinto**	**47.52**	**288**	P	**P**	**02 20 58.9**	**+0.1**
PLPT				IAmb	IAmb	02 21 05.7	
	comp=Z,4.5nm,0.6s						
H10S3	**ASCENSION HYDR**	**47.59**	**142**	T	T	03 11 07.0	
	baz=326,slow=74,SNR=188						
H10S2	**ASCENSION HYDR**	**47.60**	**142**	T	T	03 11 08.1	
	baz=254,slow=74,SNR=203						
CMIG	**Matias Romero**	**50.05**	**267**	LR	LR	02 43 01.4	
	comp=Z,41nm,18.1s,baz=62,slow=37						
RES	**Resolute Bay**	**50.72**	**344**	LR	LR	02 40 14.2	
	comp=Z,40nm,20.2s,baz=46,slow=33						
ATAH	**Atahualpa**	**51.77**	**229**	LR	LR	02 43 43.2	
	comp=Z,33nm,20.7s,baz=22,slow=36						
ALPN	**Alpine**	**52.56**	**286**	P	**P**	**02 21 38.0**	**+0.8**
FINES	**FINESS Array B**	**52.61**	**34**	LR	LR	02 40 12.5	
	comp=Z,68nm,20.3s,baz=266,slow=32						
BURAR	**Bucovina Array**	**52.68**	**52**	P	**P**	**02 21 37.6**	**-0.2**
TXAR	**Lajitas Array**	**52.90**	**285**	P	**P**	**02 21 39.0**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=103,slow=5.4,SNR=5.0						
TXAR				LR	LR	02 43 09.9	
	comp=Z,27nm,20.1s,baz=72,slow=35 comp=Z,0.6nm,0.9s						
TXAR	**Lajitas Array**	**52.90**	**285**	P	**P**	**02 21 38.3**	**-1.5**
ANMO	**Albuquerque**	**53.53**	**293**	LR	LR	02 42 15.4	
	comp=Z,150nm,21.1s,baz=79,slow=34						
LPAZ	**La Paz**	**53.57**	**212**	LR	LR	02 42 12.3	
	comp=Z,75nm,19.2s,baz=38,slow=34						
PD31	**Pinedale Array**	**54.08**	**303**		**P**	**02 21 47.4**	**-1.0**
PD31				IAmb	IAmb	02 21 55.0	
	comp=Z,7.7nm,1.2s						
PDAR	**Pinedale Array**	**54.08**	**303**	P	**P**	**02 21 48.0**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=79,slow=7.7,SNR=8.4						
PDAR				LR	LR	02 43 34.0	
	comp=Z,146nm,19.3s,baz=104,slow=35 comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**54.08**	**303**		**P**	**02 21 47.2**	**-1.2**
BW06	**Boulder Array**	**54.08**	**303**	P	**P**	**02 21 47.8**	**-0.6**
BW06				IAmb	IAmb	02 21 55.0	
	comp=Z,7.8nm,1.2s						
FLWY	**Flagg Ranch**	**54.63**	**304**	P	**P**	**02 21 54.1**	**+1.7**
FLWY				IAmb	IAmb	02 22 03.9	
	comp=Z,5.4nm,1.1s						
AKASG	**Malin Array Be**	**54.88**	**47**	LR	LR	02 43 34.3	
	comp=Z,52nm,18.1s,baz=236,slow=34						
EDM	**Edmonton**	**54.97**	**316**	P	**P**	**02 21 54.0**	**-0.4**
EDM				IAmb	IAmb	02 22 01.5	
	comp=Z,6.0nm,1.2s						
YKA	**Yellowknife Ar**	**55.02**	**327**	LR	LR	02 45 01.7	
	comp=Z,168nm,20.0s,baz=79,slow=36						
NEW	**Newport**	**58.15**	**310**	LR	LR	02 47 48.2	
	comp=Z,66nm,18.2s,baz=68,slow=36						
LNOR	**Lincton Mounta**	**59.49**	**308**	P	**P**	**02 22 26.4**	**-0.1**
LNOR				IAmb	IAmb	02 22 33.4	
	comp=Z,3.1nm,1.0s						
LPIG	**La Paz**	**60.31**	**282**	LR	LR	02 47 30.9	
	comp=Z,33nm,19.6s,baz=28,slow=35						
NVAR	**Mina Array Bea**	**61.63**	**300**	LR	LR	02 48 49.8	
	comp=Z,190nm,19.0s,baz=80,slow=36						
PFO	**Pinyon Flats O**	**61.82**	**294**	LR	LR	02 47 23.1	
	comp=Z,112nm,21.2s,baz=66,slow=34						
INK	**Inuvik**	**62.09**	**335**	LR	LR	02 47 46.2	
	comp=Z,96nm,21.7s,baz=72,slow=34						
INK	**Inuvik**	**62.09**	**335**	P	**P**	**02 22 42.2**	**-1.5**
YBH	**Yreka Blue Hor**	**63.76**	**304**	LR	LR	02 49 01.4	
	comp=Z,72nm,22.0s,baz=58,slow=34						
ILAR	**Eielson Array**	**68.33**	**334**	P	**P**	**02 23 25.8**	**+1.5**
	comp=Z,1.7nm,1.1s,baz=59,slow=4.2,SNR=10 comp=Z,1.7nm,1.1s						
ILAR	**Eielson Array**	**68.33**	**334**	P	**P**	**02 23 24.7**	**+0.4**
CCB	**Clear Creek Bu**	**68.74**	**334**	P	**P**	**02 23 27.6**	**+0.8**
WRH	**Wood River Hil**	**68.93**	**334**	P	**P**	**02 23 29.2**	**+1.2**
MBAR	**Mbarara**	**75.36**	**100**	LR	LR	02 56 32.0	
	comp=Z,82nm,18.6s,baz=312,slow=35						
TSUM	**Tsumeb**	**75.82**	**123**	LR	LR	02 52 46.4	
	comp=Z,37nm,18.2s,baz=332,slow=32						
LSZ	**Lusaka**	**81.42**	**114**	LR	LR	02 57 46.8	
	comp=Z,73nm,21.2s,baz=120,slow=34						
KURK	**Kurchatov**	**82.98**	**34**	P	**P**	**02 24 45.8**	**-2.7**
KURK				IAmb	IAmb	02 24 52.1	
	comp=Z,3.2nm,1.2s						
KURBB	**Kurchatov Arra**	**83.00**	**34**	P	**P**	**02 24 49.2**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=314,slow=5.4,SNR=9.1 comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**83.47**	**29**	P	**P**	**02 24 52.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=299,slow=10.0,SNR=3.6 comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**83.47**	**29**	P	P	02 24 42.5	-8.5
LBTB	**Lobatse**	**85.23**	**123**	LR	LR	02 56 02.0	
	comp=Z,42nm,21.9s,baz=300,slow=31						
AAK	**Ala-Archa**	**86.10**	**42**	LR	LR	03 04 11.6	
	comp=Z,38nm,18.6s,baz=348,slow=36						
SUR	**Sutherland**	**86.57**	**131**	LR	LR	02 59 45.3	
	comp=Z,46nm,18.5s,baz=346,slow=33						
RPN	**Rapa Nui**	**86.70**	**236**	LR	LR	03 01 50.3	
	comp=Z,18nm,21.3s,baz=132,slow=34						
BOSA	**Boshof**	**87.18**	**126**	LR	LR	02 57 09.8	
	comp=Z,48nm,20.6s,baz=0.5,slow=31						

*IDC **25** 02:15:37.5±1.9,31°.59N×41°.36W,h0km,mb3.6/9, mbtmp3.6/9,Error ellipse: s-maj=62.1km s-min=22.2km az=7.0*
ISC 25 02:15:38.9±1.7,31°.6N±0°.4×41°.4W±0°.2,h10km,n12, σ0§47/9,mb3.8/8,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**31.29**	**65**	P	**P**	**02 21 59.7**	**+0.5**
	0.4nm,0.7s,baz=270,slow=10,SNR=2.7 0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**43.51**	**105**	P	**P**	**02 23 42.7**	**-0.2**
	1.0nm,0.9s,baz=330,slow=5.8,SNR=3.7 1.0nm,0.9s						
GERES	**GERESS Array B**	**44.45**	**51**	P	**P**	**02 23 50.2**	**+0.1**
	0.4nm,0.7s,baz=251,slow=4.1,SNR=4.2 0.4nm,0.7s						
H10N2	**ASCENSION HYDR**	**46.85**	**142**	T	T	03 13 27.4	
	baz=326						
H10N3	**ASCENSION HYDR**	**46.85**	**142**	T	T	03 13 27.4	
	baz=326						
H10N1	**ASCENSION HYDR**	**46.87**	**142**	T	T	03 13 26.8	
	baz=326						
PDAR	**Pinedale Array**	**54.13**	**302**	P	**P**	**02 25 04.7**	**+0.2**
	0.8nm,0.8s,baz=88,slow=8.2,SNR=5.0 0.8nm,0.8s						
AKASG	**Malin Array Be**	**54.38**	**48**	P	**P**	**02 25 05.1**	**-0.8**
	0.8nm,0.7s,baz=284,slow=6.3,SNR=4.2 0.8nm,0.7s						
BRTR	**Keskin Array B**	**59.88**	**59**	P	**P**	**02 25 45.6**	**+0.5**
	0.6nm,0.8s,baz=308,slow=5.3,SNR=2.4 0.6nm,0.8s						
NVAR	**Mina Array Bea**	**61.71**	**300**	P	**P**	**02 25 57.9**	**+0.1**
	0.7nm,0.9s,baz=62,slow=5.0,SNR=3.9 0.7nm,0.9s						
ILAR	**Eielson Array**	**68.12**	**334**	P	**P**	**02 26 38.6**	**-0.1**
	0.5nm,0.9s,baz=55,slow=6.3,SNR=4.2 0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**82.50**	**34**	P	**P**	**02 28 01.3**	**-0.4**
	0.3nm,0.3s,baz=311,slow=5.0,SNR=7.2 0.3nm,0.3s						

IDC 25 02:18:16.2±28.0,23°.54S×179°.28W,h373km±256km, mb3.3/5,mbtmp4.0/5,Error ellipse: s-maj=145.0km s-min=30.4km az=55.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.47**	**248**	P	P	02 24 38.8	-0.1
	1.3nm,0.5s,baz=73,slow=8.0,SNR=3.9 1.3nm,0.5s						
ASAR	**Alice Springs**	**42.74**	**260**	P	P	02 25 38.5	-0.1
	1.1nm,0.5s,baz=92,slow=7.3,SNR=26 1.1nm,0.5s						
WRA	**Warramunga Ar

2.2nm,0.7s,baz=316,slow=22,SNR=8.4
4.4nm,0.6s

ASAR	**Alice Springs**	**17.05**	**144**	P	**Pn**	**02 45 34.8**	**+0.4**
COEN	**Coen**	**20.08**	**103**		**Pn**	**02 46 09.9**	**-1.3**
COEN				IAmb	IAmb	02 46 14.5	
	comp=Z,17nm,1.4s						
BBOO	**Buckleboo**	**25.63**	**154**	P	**P**	**02 47 05.0**	**+0.1**
MJAR	**Matsushiro Arr**	**48.51**	**16**	P	**P**	**02 50 14.8**	**-3.3**
	comp=Z,1.1nm,0.5s,baz=188,slow=9.4,SNR=4.9						
	comp=Z,1.1nm,0.5s						
HILR	**Hailar Array B**	**59.44**	**358**	P	**P**	**02 51 36.8**	**-0.9**
	comp=Z,3.4nm,0.5s,baz=182,slow=5.2,SNR=4.5						
	comp=Z,3.4nm,0.5s						
SONM	**Songino Array**	**59.51**	**347**	P	**P**	**02 51 37.4**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=163,slow=9.2,SNR=4.3						
	comp=Z,0.7nm,0.5s						
MK31	**Makanchi Array**	**67.26**	**331**	P	**P**	**02 52 30.1**	**+0.5**
MK31				IAmb	IAmb	02 52 31.4	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**67.26**	**331**	P	**P**	**02 52 29.5**	**0.0**
	comp=Z,1.9nm,0.5s,baz=144,slow=5.7,SNR=15						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**67.26**	**331**	P	**P**	**02 52 29.3**	**-0.2**
BOOM	**Boomskoye usch**	**67.72**	**324**	P	**P**	**02 52 33.3**	**+0.6**
BOOM				IAmb	IAmb	02 52 36.7	
	comp=Z,1.3nm,0.7s						
PEA0B	**Petropavlovsk-**	**69.53**	**21**	P	**P**	**02 52 43.2**	**-0.4**
PEA0B				IAmb	IAmb	02 53 25.8	
	comp=Z,9.1nm,1.3s						
PETK	**Petropavlovsk-**	**69.53**	**21**	P	**P**	**02 52 42.9**	**-0.6**
ZALV	**Zalesovo Beam**	**71.50**	**337**	P	**P**	**02 52 54.4**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=134,slow=6.2,SNR=4.1						
	comp=Z,1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**71.50**	**337**	P	**P**	**02 52 53.7**	**-1.8**
QSPA	**South Pole Qui**	**79.93**	**180**	P	**P**	**02 53 46.7**	**+2.9**
	comp=Z,1.5nm,0.9s,baz=288,slow=1.7,SNR=8.1						
	comp=Z,1.5nm,0.9s						
QSPA	**South Pole Qui**	**79.93**	**180**	P	**P**	**02 53 47.1**	**+3.3**
QSPA				IAmb	IAmb	02 54 31.0	
	comp=Z,9.2nm,1.5s						

MAN ***25*** *03:03:00.0,4˚.87N×124˚.84E,h504km,MS3.9*
IDC ***25*** *03:03:03.6±3.3,5˚.04N×123˚.94E,h484km±43km,mb3.1/10, mbtmp3.9/10,Error ellipse: s-maj=88.2km s-min=11.9km az=67.0*
NEIC ***25*** *03:03:04.2±0.8,5˚.1N±0˚.1×123˚.9E±0˚.2,h486km±12km, mb4.2/10,Error ellipse: s-maj=23.4km s-min=17.0km az=57.0*

ISC 25 03:03:03.8±0.5,5˚.17N±0˚.07×124˚.12E±0˚.10,h500km,n33, σ2≥09/38,mb3.8/16,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.83**	**60**	*eP*	**P**	03 04 04.8	-3.3
DDMP				*eS*	**S**	**03 04 54.0**	**-6.3**
KCP	**Kidapawan**	**2.06**	**28**	*eP*	**P**	**03 04 07.2**	**-2.1**
KCP				*i* S	**S**	**03 05 00.6**	**-1.9**
CDOP	**Cateel, Davao**	**3.47**	**41**	*i* P	**P**	**03 04 15.4**	**-2.6**
CDOP				*i* S	**S**	**03 05 14.3**	**-4.2**
BIPH	**Bislig**	**3.73**	**36**	*eP*	P	03 04 17.1	-3.0
BIPH				*eS*	**S**	**03 05 17.1**	**-5.1**
TOLI2	**Tolitoli**	**5.23**	**220**	P	**P**	**03 04 29.1**	**-3.9**
TNTI	**Ternate**	**5.44**	**143**	P	**P**	**03 04 34.4**	**-0.5**
MYLDM	**Lahad Datu**	**5.60**	**270**	P	**P**	**03 04 33.8**	**-2.5**
KKM	**Kota Kinabalu**	**7.92**	**277**	P	**P**	**03 04 56.9**	**-2.6**
FAKI	**Fak Fak**	**11.42**	**135**	P	**P**	**03 05 36.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**23.17**	**176**	P	**P**	**03 07 30.8**	**-0.3**
FITZ				IAmb	IAmb	03 07 32.4	
	comp=Z,4.5nm,1.5s						
DPSS	**Saipan**	**23.53**	**63**	P	**P**	**03 07 37.1**	**+2.8**
WRA	**Warramunga Arr**	**26.90**	**158**	P	**P**	**03 08 03.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=337,slow=8.5,SNR=8.7						
WRA				PcP	**PcP**	**03 11 11.5**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=308,slow=4.1,SNR=1.8						
	comp=Z,0.2nm,0.3s						
WR8	**Warramunga Arr**	**26.98**	**158**	P	**P**	**03 08 04.8**	**-0.1**
WR8				IAmb	IAmb	03 08 38.2	
	comp=Z,8.3nm,1.3s						
AS31	**Alice Springs**	**30.21**	**162**	P	**P**	**03 08 33.2**	**+0.1**
ASAR	**Alice Springs**	**30.21**	**162**	P	**P**	**03 08 33.3**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=341,slow=7.4,SNR=31						
ASAR				PcP	**PcP**	**03 11 19.9**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=343,slow=3.1,SNR=4.2						
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**30.21**	**162**	P	**P**	**03 08 33.1**	**0.0**
MORW	**Morawa**	**34.92**	**192**	P	**P**	**03 09 12.4**	**-0.7**
MORW				IAmb	IAmb	03 09 17.6	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**35.95**	**174**	P	**P**	**03 09 21.9**	**+0.3**
FORT				IAmb	IAmb	03 09 45.7	
	comp=Z,14nm,1.1s						
BBOO	**Buckleboo**	**39.44**	**164**	P	**P**	**03 09 50.6**	**+0.4**
STKA	**Stephens Creek**	**40.43**	**157**	P	**P**	**03 09 59.4**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=355,slow=8.8,SNR=3.9						
	comp=Z,1.1nm,0.3s						
SONM	**Songino Array**	**45.14**	**343**	P	**P**	**03 10 36.5**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=162,slow=10,SNR=1.9						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**54.90**	**326**	P	**P**	**03 11 48.0**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=121,slow=8.2,SNR=12						
MKAR				PcP	**PcP**	**03 12 42.1**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=156,slow=3.7,SNR=6.4						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**54.90**	**326**	P	**P**	**03 11 47.7**	**+1.0**
ZALV	**Zalesovo Beam**	**58.14**	**334**	P	**P**	**03 12 09.5**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=116,slow=6.6,SNR=5.5						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**59.14**	**328**	P	**P**	**03 12 17.1**	**+1.4**
	comp=Z,2.7nm,0.5s,baz=127,slow=6.3,SNR=11						
	comp=Z,2.7nm,0.5s						
KURK	**Kurchatov**	**59.14**	**328**		**P**	**03 12 17.2**	**+1.5**
KURK				IAmb	IAmb	03 12 17.6	
	comp=Z,6.9nm,0.5s						
BVAR	**Borovoye Array**	**64.71**	**327**	P	**P**	**03 12 53.2**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=134,slow=6.4,SNR=6.0						
	comp=Z,1.4nm,0.8s						
AB31	**Akbulak array**	**69.40**	**321**	P	**P**	**03 13 21.5**	**+0.5**
ABKAR	**Akbulak array**	**69.40**	**321**	P	**P**	**03 13 21.6**	**+0.6**
ARTI	**Arti**	**72.42**	**328**	P	**P**	**03 13 39.1**	**+0.4**
ARTI				IAmb	IAmb	03 13 39.5	
	comp=Z,4.7nm,0.6s						
MAW	**Mawson**	**84.21**	**200**	P	**P**	**03 14 42.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=72,slow=9.6,SNR=1.8						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**87.10**	**309**	P	**P**	**03 14 56.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=124,slow=6.7,SNR=4.0						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**120.00**	**288**	PKP	**PKiKP**	**03 20 58.7**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=80,slow=1.8,SNR=9.5						

BJI ***25*** *03:05:19.9,61˚.67N×124˚.61W,h10km,mB4.9/3,mb4.7/24*
IDC ***25*** *03:05:24.7±0.3,6˚.22N×124˚.42W,h0km,mb4.5/32, mbtmp4.5/40,ML4.4/8,MS3.6/53,Error ellipse: s-maj=6.9km s-min=6.5km az=103.0*
NEIC ***25*** *03:05:25.6±2.0,6˚.23N±0˚.05×124˚.49W±0˚.08,h10km±1km, mb4.7/463,Mwr4.5/13,Mwr4.6(OTT),Error ellipse: s-maj=9.7km s-min=2.8km az=143.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr4.76; Mθθ-1.30; Mφφ-3.46; Mrθ-1.14; Mθφ1.70; Mrφ3.85; Fault plane solution: M₀6.10000×10¹⁵ NP1:φs338.99000°, δ65.69000°,λ,95.92000°. NP2:φs144.85000°,δ24.98000°, λ,77.14000°. Principal axes: T 6.3075, Plg69.0000°, Azm261.0000°; N -0.4435, Plg5.0000°, Azm157.0000°; P -5.8640, Plg20.0000°, Azm65.0000°;*
NEIC ***25*** *03:05:25.5,6˚.25N×124˚.46W,h10km*
GCMT ***25*** *03:05:25.6±0.4,61˚.92N±0˚.04×124˚.32W±0˚.07,h22km±1km, MW4.8/72,Moment Tensor Solution. s15,c17; s72,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.69±.14; Mθθ-0.37±.08; Mφφ-1.32±.10; Mrθ0.52±.12; Mθφ0.59±.07; Mφr0.45±.13; Best double couple: M₀1.76700×10¹⁶ NP1:φs137.00000°,δ45.00000°,λ,64.00000°. NP2: φs352.00000°,δ51.00000°,λ,114.00000°. Principal axes: T 1.9170, Plg72.0000°, Azm326.0000°; N -0.2990, Plg18.0000°, Azm157.0000°; P -1.6170, Plg3.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***25*** *03:05:25.4,62˚.22N×124˚.50W,h4km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.34; Mθθ-0.02; Mφφ-0.56; Mrθ-0.11; Mθφ0.13; Mφr0.92; Fault plane solution: M₀1.00000×10¹⁶ NP1:φs159.00000°, δ14.00000°,λ,77.00000°. NP2:φs352.00000°,δ77.00000°, λ,93.00000°. Principal axes: T 0.9905, Plg58.0000°, Azm267.0000°; N 0.0857, Plg3.0000°, Azm172.0000°; P -1.0762, Plg32.0000°, Azm80.0000°;*
PGC ***25*** *03:05:25.2,62˚.22N×124˚.50W,h5km,ML5.3/16,Mw4.6, mb4.7(NEIC),Md2.8(NEIC),ML2.2(NEIC),126km south of Wrigley, Nt Nw Territories - Nunavut, Canada*
GFZ ***25*** *03:05:26.6±0.2,62˚.N±4˚×12˚4W±˚,h10km,M4.4/24, mb4.7/24*

ISC 25 03:05:25.2±0.3,62˚.22N±0˚.02×124˚.21W±0˚.03,h10km, n839,σ2≥36/679,mb4.7/202,MS3.6/53,Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRGLY	**Wrigley**	**1.07**	**19**		**Pn**	**03 05 45.8**	**-0.4**
WRGLY	**Wrigley**	**1.07**	**19**	P	**Pn**	**03 05 46.2**	**-0.1**
	baz=206						
NAHA	**Nahanni Butte**	**1.26**	**161**	P	**Pg**	**03 05 49.2**	**-0.2**
NAHA				S	**Sn**	**03 06 05.7**	**-0.1**
KOTAN	**Kotaneelee Air**	**2.10**	**178**	Pn	**Pn**	**03 06 00.6**	**+0.1**
KOTAN				Sn	**Sb**	**03 06 28.1**	**-1.4**
KOTAN	**Kotaneelee Air**	**2.10**	**178**	P	**Pn**	**03 06 00.8**	**+0.3**
	baz=355						
NBC1	**NorthernBC 1**	**2.58**	**176**	Pn	**Pn**	**03 06 07.3**	**+0.3**
LIRD	**Liard River Hi**	**2.97**	**199**	Pn	**Pn**	**03 06 11.9**	**-0.5**
LIRD	**Liard River Hi**	**2.97**	**199**	P	**Pn**	**03 06 12.0**	**-0.4**
	baz=15						
WTLY	**Watson Lake, Y**	**3.07**	**228**	Pn	**Pn**	**03 06 12.4**	**-1.3**
WTLY				Sg	**Sb**	**03 06 56.4**	**-1.0**
WTLY	**Watson Lake, Y**	**3.07**	**228**		**Pn**	**03 06 12.4**	**-1.3**
WTLY	**Watson Lake, Y**	**3.07**	**228**	P	**Pn**	**03 06 12.4**	**-1.3**
	baz=42,SNR=16						
MMPY	**Sheldon Lake,**	**3.30**	**280**	Pn	**Pn**	**03 06 14.9**	**-2.1**
MMPY				Sg	**Sb**	**03 07 03.3**	**-0.8**
MMPY	**Sheldon Lake,**	**3.30**	**280**		**Pn**	**03 06 15.2**	**-1.8**
MMPY	**Sheldon Lake,**	**3.30**	**280**	P	**Pn**	**03 06 15.0**	**-2.0**
	baz=94						
FNSB	**Fort Nelson**	**3.51**	**167**	Pn	**Pn**	**03 06 19.8**	**+0.1**
FNSB				Sn	**Sn**	**03 06 59.8**	**-1.4**
R33M	**Jennings River**	**4.36**	**232**	Pn	**Pn**	**03 06 30.6**	**-1.0**
R33M				Sn	**Sn**	**03 07 19.1**	**-3.2**
R33M				Sg	**Sb**	**03 07 37.1**	**+2.6**
R33M	**Jennings River**	**4.36**	**232**		**Pn**	**03 06 30.6**	**-1.0**
R33M	**Jennings River**	**4.36**	**232**	P	**Pn**	**03 06 30.5**	**-1.0**
	baz=45,SNR=191						
N32M	**Quiet Lake**	**4.36**	**260**	Pn	**Pn**	**03 06 29.9**	**-1.6**
N32M				Sg	**Sb**	**03 07 37.2**	**+2.7**
N32M	**Quiet Lake**	**4.36**	**260**		**Pn**	**03 06 29.7**	**-1.8**
N32M	**Quiet Lake**	**4.36**	**260**	P	**Pn**	**03 06 29.8**	**-1.8**
	baz=71						
YKAW3	**Yellowknife Wh**	**4.48**	**81**	Pn	**Pn**	**03 06 34.6**	**+1.4**
YKAW3				Sg	**Sg**	**03 07 47.0**	**-2.0**
YKAW3	**Yellowknife Wh**	**4.48**	**81**		**Pn**	**03 06 34.5**	**+1.4**
YKA	**Yellowknife Ar**	**4.49**	**82**	Pn	**Pn**	**03 06 34.1**	**+0.9**
	17nm,0.3s,baz=271,slow=13,SNR=214						
YKA				Pg	**Pg**	**03 06 49.6**	**-1.4**
	97nm,0.3s,baz=270,slow=17,SNR=56						
YKA				Sn	**Sn**	**03 07 26.7**	**+1.4**
	66nm,0.3s,baz=273,slow=22,SNR=6.3						
YKA				Lg	Lg	03 07 45.5	
	152nm,0.3s,baz=275,slow=29,SNR=10						
YKA				LR	LR	03 08 44.0	
	comp=Z,1μm,18.6s,baz=276,slow=43						
	56nm,0.5s						
YKA	**Yellowknife Ar**	**4.49**	**82**		**Pn**	**03 06 34.6**	**+1.5**
YKAW1	**Yellowknife Wh**	**4.54**	**82**	Pn	**Pn**	**03 06 35.3**	**+1.4**
YKAW1				Sg	**Sg**	**03 07 48.8**	**-1.0**
YKAW1	**Yellowknife Wh**	**4.54**	**82**		**Pn**	**03 06 35.3**	**+1.4**
P33M	**Teslin, Yukon**	**4.62**	**248**	Pn	**Pn**	**03 06 33.4**	**-1.7**
P33M				Sn	**Sn**	**03 07 23.5**	**-5.4**
P33M				Sg	**Sb**	**03 07 45.1**	**+3.0**
P33M	**Teslin, Yukon**	**4.62**	**248**		**Pn**	**03 06 33.5**	**-1.7**
P33M	**Teslin, Yukon**	**4.62**	**248**	P	**Pn**	**03 06 33.5**	**-1.6**
	baz=60,SNR=672						
M31M	**Drury Creek, Y**	**4.76**	**274**	Pn	**Pn**	**03 06 34.8**	**-2.3**
M31M				Sg	**Sb**	**03 07 48.3**	**+2.2**
M31M	**Drury Creek, Y**	**4.76**	**274**		**Pn**	**03 06 34.7**	**-2.3**
M31M	**Drury Creek, Y**	**4.76**	**274**	P	**Pn**	**03 06 35.0**	**-2.1**
	baz=85,SNR=20						
DLBC	**Dease Lake**	**4.77**	**220**	Pn	**Pn**	**03 06 36.5**	**-0.7**
	54nm,0.3s,baz=18,slow=12,SNR=274						
DLBC				Sn	**Sn**	**03 07 29.1**	**-3.4**
	57nm,0.3s,baz=33,slow=5.9,SNR=4.3						
DLBC				Lg	Lg	03 07 51.2	
	102nm,0.3s,baz=300,slow=25,SNR=5.2						
DLBC				LR	LR	03 08 39.8	
	comp=Z,923nm,19.9s,baz=345,slow=41						
	163nm,0.4s						
DLBC	**Dease Lake**	**4.77**	**220**	Pn	**Pn**	**03 06 35.9**	**-1.3**
DLBC				Sn	**Sn**	**03 07 28.8**	**-3.7**
DLBC				Sg	**Sb**	**03 07 50.6**	**+4.2**
DLBC	**Dease Lake**	**4.77**	**220**	P	**Pn**	**03 06 36.2**	**-0.9**
	baz=34,SNR=164						
NBC5	**NorthernBC 5**	**4.78**	**170**	Pn	**Pn**	**03 06 36.0**	**-1.3**
NBC5				Sn	**Sn**	**03 07 31.7**	**-1.0**
Q32M	**Nakina River**	**5.14**	**234**	Pn	**Pn**	**03 06 41.2**	**-1.2**
Q32M				Sg	**Sb**	**03 07 59.7**	**+2.5**
Q32M	**Nakina River**	**5.14**	**234**		**Pn**	**03 06 41.3**	**-1.2**
Q32M	**Nakina River**	**5.14**	**234**	P	**Pn**	**03 06 41.2**	**-1.2**
	baz=46,SNR=318						
P32M	**Atlin**	**5.34**	**245**	Pn	**Pn**	**03 06 43.5**	**-1.4**
P32M				Sn	**Sn**	**03 07 42.4**	**-3.9**
P32M				Sg	**Sb**	**03 08 05.2**	**+2.7**
P32M	**Atlin**	**5.34**	**245**		**Pn**	**03 06 43.5**	**-1.4**
P32M	**Atlin**	**5.34**	**245**	P	**Pn**	**03 06 43.5**	**-1.4**
	baz=55,SNR=754						
WHY	**Whitehorse**	**5.35**	**258**	Pn	**Pn**	**03 06 43.1**	**-2.1**
WHY				Sn	**Sn**	**03 07 41.6**	**-5.3**
WHY				Sg	**Sb**	**03 08 06.7**	**+3.6**
WHY	**Whitehorse**	**5.35**	**258**		**Pn**	**03 06 43.2**	**-2.1**
WHY	**Whitehorse**	**5.35**	**258**	P	**Pn**	**03 06 43.0**	**-2.1**
	baz=68						
N31M	**Braeburn, Yuko**	**5.53**	**267**	Pn	**Pn**	**03 06 45.5**	**-2.0**
N31M				Sg	**Sb**	**03 08 11.4**	**+3.4**
N31M	**Braeburn, Yuko**	**5.53**	**267**		**Pn**	**03 06 45.7**	**-1.8**
N31M	**Braeburn, Yuko**	**5.53**	**267**	P	**Pn**	**03 06 45.5**	**-2.0**
	baz=77,SNR=55						
S34M	**Telegraph Cree**	**5.54**	**222**	Pn	**Pn**	**03 06 46.7**	**-0.9**
S34M	**Telegraph Cree**	**5.54**	**222**		**Pn**	**03 06 46.9**	**-0.8**
S34M	**Telegraph Cree**	**5.54**	**222**	P	**Pn**	**03 06 46.8**	**-0.8**
	baz=35,SNR=52						
H31M	**Peel River**	**5.72**	**313**	Pn	**Pn**	**03 06 48.8**	**-1.3**
H31M				Sn	**Sn**	**03 07 52.0**	**-3.7**
H31M	**Peel River**	**5.72**	**313**		**Pn**	**03 06 49.1**	**-1.0**
H31M	**Peel River**	**5.72**	**313**	P	**Pn**	**03 06 48.7**	**-1.5**
	baz=125,SNR=540						
NBC8	**Simpson Ranch**	**5.74**	**170**	Pn	**Pn**	**03 06 49.1**	**-1.3**
M30M	**Minto, Yukon**	**5.86**	**279**	Pn	**Pn**	**03 06 49.6**	**-2.5**
M30M				Sg	**Sb**	**03 08 21.2**	**+3.6**
M30M	**Minto, Yukon**	**5.86**	**279**	P	**Pn**	**03 06 49.6**	**-2.5**
	baz=88,SNR=340						
O30N	**Mendenhall**	**5.87**	**261**	Pn	**Pn**	**03 06 50.0**	**-2.2**
O30N				Sg	**Sb**	**03 08 22.0**	**+4.0**
O30N	**Mendenhall**	**5.87**	**261**		**Pn**	**03 06 50.0**	**-2.2**
O30N	**Mendenhall**	**5.87**	**261**	P	**Pn**	**03 06 50.1**	**-2.2**
	baz=70						
J30M	**Hart River**	**5.93**	**299**	Pn	**Pn**	**03 06 51.7**	**-1.5**
J30M				Sg	**Sb**	**03 08 24.9**	**+5.2**
J30M	**Hart River**	**5.93**	**299**		**Pn**	**03 06 51.3**	**-1.9**
J30M	**Hart River**	**5.93**	**299**	P	**Pn**	**03 06 50.9**	**-2.2**
	baz=108						
T35M	**Bob Quinn**	**6.08**	**213**	Pn	**Pn**	**03 06 54.9**	**-0.2**
T35M				Sn	**Sn**	**03 08 01.2**	**-3.5**
T35M	**Bob Quinn**	**6.08**	**213**	P	**Pn**	**03 06 55.1**	**0.0**
	baz=27						
SKAG	**Skagway**	**6.10**	**248**		**Pn**	**03 06 53.7**	**-1.6**
SKAG	**Skagway**	**6.10**	**248**	P	**Pn**	**03 06 53.5**	**-1.7**
	baz=58,SNR=36						
N30M	**Aishikik Lake**	**6.15**	**269**	Pn	**Pn**	**03 06 54.3**	**-1.8**
N30M				Sg	**Sb**	**03 08 31.2**	**+5.4**
N30M	**Aishikik Lake**	**6.15**	**269**		**Pn**	**03 06 54.2**	**-1.8**
N30M	**Aishikik Lake**	**6.15**	**269**	P	**Pn**	**03 06 54.2**	**-1.8**
	baz=77,SNR=443						
I30M	**Mount Dempster**	**6.18**	**304**	Pn	**Pn**	**03 06 55.0**	**-1.6**
I30M				Sn	**Sn**	**03 08 03.6**	**-3.7**
I30M	**Mount Dempster**	**6.18**	**304**	P	**Pn**	**03 06 54.8**	**-1.8**
	baz=114						
NBC7	**Fort St John**	**6.22**	**162**	Pn	**Pn**	**03 06 56.1**	**-0.9**
NBC7				Sn	**Sn**	**03 08 07.0**	**-1.1**
K29M	**Barlow Dome**	**6.27**	**291**	Pn	**Pn**	**03 06 56.2**	**-1.6**
K29M				Sn	**Sn**	**03 08 02.4**	**-7.0**
K29M				Sg	**Sb**	**03 08 33.0**	**+3.6**
K29M	**Barlow Dome**	**6.27**	**291**	P	**Pn**	**03 06 55.7**	**-2.0**
	baz=99						
BMTB	**Bullhead Mount**	**6.29**	**169**	Pn	**Pn**	**03 06 58.7**	**+0.7**
BMTB				Sn	**Sn**	**03 08 08.7**	**-1.2**
BMTB				Sg	**Sg**	**03 08 41.1**	**-5.8**
G31M	**Satah River**	**6.40**	**322**	Pn	**Pn**	**03 06 57.3**	**-2.0**
G31M				Sn	**Sn**	**03 08 06.5**	**-5.8**
G31M	**Satah River**	**6.40**	**322**		**Pn**	**03 06 57.4**	**-2.0**
G31M	**Satah River**	**6.40**	**322**	P	**Pn**	**03 06 57.4**	**-2.0**
	baz=134,SNR=557						
BESE	**Bessie Mountai**	**6.41**	**240**	Pn	**Pn**	**03 06 58.2**	**-1.5**
BESE				Sn	**Sn**	**03 08 07.8**	**-5.1**
BESE				Sg	**Sb**	**03 08 37.9**	**+4.4**
BESE	**Bessie Mountai**	**6.41**	**240**		**Pn**	**03 06 58.3**	**-1.3**
L29M	**L29M**	**6.47**	**284**	Pn	**Pn**	**03 06 58.1**	**-2.3**
L29M	**L29M**	**6.47**	**284**	P	**Pn**	**03 06 58.2**	**-2.3**
	baz=92,SNR=90						
R32K	**Eaglecrest**	**6.48**	**237**	P	**Pn**	**03 06 59.3**	**-1.2**
	baz=47,SNR=6.3						
HYT	**Haines Junctio**	**6.51**	**263**	Pn	**Pn**	**03 06 59.5**	**-1.6**
HYT				Sn	**Sn**	**03 08 10.3**	**-5.1**
HYT				Sg	**Sb**	**03 08 40.8**	**+4.4**
HYT	**Haines Junctio**	**6.51**	**263**		**Pn**	**03 06 59.6**	**-1.5**
HYT	**Haines Junctio**	**6.51**	**263**	P	**Pn**	**03 06 59.3**	**-1.8**
	baz=72,SNR=229						
P30M	**Million Dollar**	**6.51**	**257**	Pn	**Pn**	**03 06 59.5**	**-1.6**
P30M				Sg	**Sb**	**03 08 40.5**	**+4.1**
P30M	**Million Dollar**	**6.51**	**257**	P	**Pn**	**03 06 59.3**	**-1.8**
	baz=65						
PLBC	**Pleasant Camp**	**6.55**	**250**	Pn	**Pn**	**03 07 00.3**	**-1.2**
PLBC				Sn	**Sn**	**03 08 11.1**	**-5.2**
PLBC				Sg	**Sb**	**03 08 42.5**	**+5.1**
PLBC	**Pleasant Camp**	**6.55**	**250**	P	**Pn**	**03 06 59.5**	**-2.0**
	baz=59,SNR=10						
YUK5	**Granite Creek**	**6.59**	**266**	Pn	**Pn**	**03 07 00.8**	**-1.3**
YUK5				Sg	**Sb**	**03 08 44.2**	**+5.7**
F31M	**Tsiigehtchic**	**6.62**	**326**	Pn	**Pn**	**03 07 00.9**	**-1.6**
F31M				Sn	**Sn**	**03 08 12.8**	**-5.0**
F31M	**Tsiigehtchic**	**6.62**	**326**	P	**Pn**	**03 07 00.9**	**-1.6**
	baz=138,SNR=346						
M29M	**Somme Creek**	**6.64**	**278**	Pn	**Pn**	**03 07 00.4**	**-2.4**
M29M				Sg	**Sb**	**03 08 45.7**	**+5.6**
M29M	**Somme Creek**	**6.64**	**278**	P	**Pn**	**03 07 00.4**	**-2.4**
	baz=86,SNR=99						
J29N	**Klondike Camp**	**6.69**	**296**	P	**Pn**	**03 07 01.9**	**-1.5**
	baz=104						
KUKN	**Kugluktuk,NWT**	**6.81**	**30**	Pn	**Pn**	**03 07 05.7**	**+0.6**
KUKN				Sn	**Sn**	**03 08 20.1**	**-2.5**
KUKN				Sg	**Sg**	**03 08 57.0**	**-6.6**
EPYK	**Eagle Plains**	**6.84**	**313**	Pn	**Pn**	**03 07 04.3**	**-1.2**
EPYK				Sn	**Sn**	**03 08 18.4**	**-4.9**
EPYK	**Eagle Plains**	**6.84**	**313**	P	**Pn**	**03 07 04.2**	**-1.3**
	baz=122,SNR=64						
YUK6	**Outpost Mounta**	**6.88**	**266**	Sg	**Sb**	**03 08 53.0**	**+6.1**
YUK6	**Outpost Mounta**	**6.88**	**266**	P	**Pn**	**03 07 04.5**	**-1.7**
	baz=73,SNR=85						
R31K	**City Hall, Gus**	**6.88**	**241**	Sn	**Sn**	**03 08 19.0**	**-5.2**
R31K				Sg	**Sb**	**03 08 52.6**	**+5.9**
R31K	**City Hall, Gus**	**6.88**	**241**	P	**Pn**	**03 07 04.7**	**-1.3**
	baz=51						
YUK4	**Talbot Arm**	**6.90**	**269**	Pn	**Pn**	**03 07 04.0**	**-2.5**
YUK4				Sg	**Sb**	**03 08 51.0**	**+3.3**
YUK4	**Talbot Arm**	**6.90**	**269**	P	**Pn**	**03 07 03.8**	**-2.7**
	baz=77,SNR=36						
T33K	**Petersburg**	**7.01**	**223**	Sn	**Sn**	**03 08 23.1**	**-4.3**
T33K	**Petersburg**	**7.01**	**223**	P	**Pn**	**03 07 06.8**	**-0.9**
	baz=35						
G30M	**tAoh Zraii Nji**	**7.03**	**318**	Pn	**Pn**	**03 07 05.9**	**-2.1**
G30M				Sn	**Sn**	**03 08 22.8**	**-5.0**
G30M	**tAoh Zraii Nji**	**7.03**	**318**	P	**Pn**	**03 07 06.1**	**-2.0**
	baz=128,

baz=83,SNR=9.8
SWHSA **Sweathouse Loo** 8.31 149 Pn Pn 03 07 25.4 -0.3
SWHSA Sn Sn 03 08 56.1 -3.4
SWHSA Sg Sg 03 09 46.5 -5.1
I27K Kandik River 8.37 301 P Pn 03 07 24.5 -2.1
baz=106
E29M Blow River 8.41 323 Pn Pn 03 07 24.7 -2.3
E29M Sn Sn 03 08 55.1 -6.8
E29M Blow River 8.41 323 P Pn 03 07 24.7 -2.3
baz=131,SNR=525
KITB Kitimat 8.49 198 Pn Pn 03 07 27.8 -0.4
GRNC Granite Creek 8.52 268 Pn Pn 03 07 26.3 -2.5
GRNC Sg Sg 03 09 46.5 -12
RUBB Prince Rupert 8.53 205 Pn Pn 03 07 29.0 +0.4
H27K Steamboat Moun 8.53 306 Pn Pn 03 07 27.1 -1.6
H27K Steamboat Moun 8.53 306 P Pn 03 07 26.8 -1.9
baz=110,SNR=146
F28M Old Crow 8.55 316 Pn Pn 03 07 27.0 -2.0
F28M Sn Sn 03 08 58.4 -7.0
F28M Old Crow 8.55 316 P Pn 03 07 26.6 -2.4
baz=122,SNR=116
BALM Baldy 8.71 270 Sg Sg 03 09 50.1 -14
PTPK Patty Peak 8.73 271 Sg Sg 03 09 51.2 -14
M26K Nabesna, AK 8.74 279 P Pn 03 07 29.1 -2.6
baz=83
KIAG Kiagna River 8.75 270 Sg Sg 03 09 50.7 -15
G27K Doyon Strip 8.79 309 Pn Pn 03 07 30.1 -2.2
G27K Sn Sn 03 09 04.2 -7.2
G27K Doyon Strip 8.79 309 P Pn 03 07 30.8 -1.5
baz=114,SNR=189
L26K Log Cabin Wild 8.85 284 P Pn 03 07 31.1 -2.0
baz=87
GRNB Grenville Isla 8.93 202 Pn Pn 03 07 34.4 +0.2
MCARA McCarthy VSAT 8.94 273 Sg Sg 03 09 59.1 -13
MCARA McCarthy VSAT 8.94 273 P Pn 03 07 31.4 -2.9
baz=76
E28M Babbage River 9.02 322 Pn Pn 03 07 32.3 -3.0
E28M Sn Sn 03 09 09.1 -7.7
E28M Babbage River 9.02 322 Pn 03 07 32.7 -2.6
E28M Babbage River 9.02 322 P Pn 03 07 32.8 -2.6
baz=128,SNR=158
CRQE Cirque 9.14 269 P Pn 03 07 35.1 -2.1
baz=72
D28M Stokes Point 9.27 326 Sn Sn 03 09 15.9 -7.0
D28M Stokes Point 9.27 326 P Pn 03 07 36.9 -1.8
baz=134
GRIB Gribbell Islan 9.29 199 Pn Pn 03 07 38.7 -0.3
BNAB Bonilla 9.39 204 Pn Pn 03 07 40.5 +0.1
E27K Coleen River 9.41 317 Pn Pn 03 07 38.1 -2.5
E27K Sn Sn 03 09 19.3 -7.0
E27K Coleen River 9.41 317 P Pn 03 07 38.1 -2.5
baz=122,SNR=81
RIDG Independent Ri 9.50 288 P Pn 03 07 39.8 -2.2
baz=90
N25K Chitina, Valde 9.63 275 P Pn 03 07 41.7 -2.1
baz=77
G26K Porcupine Rive 9.63 308 Pn Pn 03 07 41.9 -1.8
G26K Sn Sn 03 09 24.2 -7.5
G26K Porcupine Rive 9.63 308 P Pn 03 07 42.3 -1.4
baz=111,SNR=135
HARP HAARP 9.74 280 P Pn 03 07 43.7 -1.5
baz=82
J25K Salcha River, 9.77 293 P Pn 03 07 43.9 -1.7
baz=95
BMRM Bremner River 9.79 272 P Pn 03 07 44.6 -1.4
baz=74
A36M Sachs Harbour 9.82 358 Pn Pn 03 07 45.7 -0.5
A36M Sn Sn 03 09 30.9 -5.4
A36M Sachs Harbour 9.82 358 P Pn 03 07 46.2 0.0
baz=178
PAX Paxson 9.82 284 Pn Pn 03 07 45.1 -1.2
PAX Paxson 9.82 284 P Pn 03 07 44.9 -1.5
baz=85
D27M Malcolm River 9.82 323 Pn Pn 03 07 44.4 -1.8
D27M Sn Sn 03 09 29.0 -7.5
D27M Malcolm River 9.82 323 P Pn 03 07 44.5 -1.8
baz=128
K24K Donnelly Dome 9.92 289 P Pn 03 07 46.5 -1.1
baz=90
PRP Porcupine Dome 9.94 299 P Pn 03 07 47.3 -0.8
baz=100
MOBC Moresby Island 10.00 208 Pn Pn 03 07 49.4 +0.6
MOBC Moresby Island 10.00 208 Pn 03 07 47.5 -1.3
F26K Sheenjek River 10.04 312 Pn Pn 03 07 47.2 -2.1
F26K Sn Sn 03 09 33.5 -8.4
F26K Sheenjek River 10.04 312 P Pn 03 07 47.2 -2.1
baz=114,SNR=134
KAIM Kayak Island 10.04 266 P Pn 03 07 49.1 -0.3
baz=68
DIB Dawson Inlet, 10.06 210 Pn Pn 03 07 50.5 +0.9
DIB Dawson Inlet, 10.06 210 P Pn 03 07 50.2 +0.7
KLU Klutina 10.27 276 P Pn 03 07 50.5 -2.0
baz=76
BBB Bella Bella 10.28 194 Pn Pn 03 07 52.0 -0.6
0.8nm,0.3s,baz=360,slow=16,SNR=5.9
BBB Sn Sn 03 09 40.1 -7.7
0.7nm,0.3s,baz=221,slow=2.0,SNR=3.1
BBB Lg Lg 03 10 43.2
1.3nm,0.3s,baz=287,slow=21,SNR=7.5
6.4nm,0.6s
ILAR Eielson Array 10.43 294 Pn Pn 03 07 52.9 -1.7
1.5nm,0.3s,baz=95,slow=13,SNR=94
ILAR Lg Lg 03 10 43.0
1.6nm,0.3s,baz=104,slow=28,SNR=4.9
ILAR LR LR 03 12 15.6
comp=Z,289nm,18.4s,baz=84,slow=40
17nm,0.8s
ILAR Eielson Array 10.43 294 Pn 03 07 52.5 -2.0
HDA Harding Lake 10.44 292 P Pn 03 07 53.0 -1.7
baz=92
G25K Bearman Lake 10.44 305 P Pn 03 07 53.0 -1.8
G25K Bearman Lake 10.44 305 P Pn 03 07 52.9 -1.8
baz=106
F25K Christian Rive 10.53 310 P Pn 03 07 54.3 -1.8
F25K Sn Sn 03 09 47.1 -6.8
F25K Christian Rive 10.53 310 P Pn 03 07 54.4 -1.7
baz=111,SNR=94
HG4B Hotspring 10.64 204 Pn 03 07 57.5 -0.1
DHY Denali Highway 10.67 285 P Pn 03 07 56.2 -1.9
baz=84
POKR Poker Plat Res 10.69 296 P Pn 03 07 56.4 -1.7
baz=95
E25K Arctic Village 10.70 313 P Pn 03 07 56.3 -2.1
E25K Arctic Village 10.70 313 P Pn 03 07 56.4 -2.0
baz=114,SNR=65
EDM Edmonton 10.71 142 P Pn 03 07 58.6 0.0
EDM Sn Sn 03 09 54.1 -4.4
EDM Edmonton 10.71 142 Pn 03 07 58.5 0.0
C27K Jago River 10.83 322 P Pn 03 07 57.6 -2.5
C27K Sn Sn 03 09 53.5 -7.7
C27K Jago River 10.83 322 Pn Pn 03 07 58.2 -1.9
C27K Jago River 10.83 322 P Pn 03 07 58.0 -2.1
baz=124,SNR=152
COLA College 10.85 295 Pn 03 07 59.8 -0.5
COLA College 10.85 295 P Pn 03 07 58.8 -1.5
baz=94
COLA College 10.85 295 P Pn 03 08 01.3 +1.0
SCM Sheep Creek Mo 10.85 278 P Pn 03 07 59.0 -1.4
baz=78
WAT6 Susitna Watana 10.90 282 P Pn 03 07 59.5 -1.8
baz=81
H24K Noodor Dome 10.96 300 P Pn 03 08 00.1 -1.8
baz=98
G24K Hadweenzic Riv 10.96 304 P Pn 03 08 00.2 -1.7
baz=104
M23K Glacier View 11.04 278 P Pn 03 08 01.2 -1.8
baz=77
WAT1 Susitna Watana 11.24 284 P Pn 03 08 04.5 -1.2
baz=82
SML Sawmill 11.32 279 P Pn 03 08 05.4 -1.4
baz=77
MCK McKinley 11.32 289 P Pn 03 08 05.2 -1.6
baz=87
F24K Squaw Lake 11.32 308 P Pn 03 08 05.4 -1.5
baz=107
C26K Camden Bay 11.34 322 P Pn 03 08 05.1 -1.9
C26K Sn Sn 03 10 05.0 -8.7
C26K Camden Bay 11.34 322 P Pn 03 08 05.8 -1.2
baz=123,SNR=116
NEA2 Nenana 11.36 293 P Pn 03 08 05.9 -1.4
baz=91
KNK Knik Glacier 11.47 277 P Pn 03 08 06.0 -2.9
baz=75
D25K Kavik River 11.49 318 P Pn 03 08 06.9 -2.2
D25K Sn Sn 03 10 08.2 -9.1
baz=118
I23K Minto, Yukon-K 11.50 296 P Pn 03 08 06.7 -2.5
baz=93
PWL Port Wells 11.57 274 P Pn 03 08 08.4 -1.8
baz=73
H23K Yukon River 11.63 299 P Pn 03 08 09.8 -1.3
baz=96
E24K Your Creek 11.71 310 P Pn 03 08 10.5 -1.6
baz=109
LLLB Lillooet 11.71 173 P Pn 03 08 11.6 -0.7
PMR Palmer 11.74 278 P Pn 03 08 10.7 -1.8
baz=76
HOLB Holberg 11.81 192 P Pn 03 08 13.7 +0.2
NCSB Newcastle Ridg 11.89 186 P Pn 03 08 15.4 +0.7
TRF Thorofare Moun 11.95 287 P Pn 03 08 14.0 -1.6
baz=84
G23K Bananza Creek 11.95 303 P Pn 03 08 13.9 -1.5
baz=100
PACB Port Alice, BC 11.95 190 P Pn 03 08 15.7 +0.2
MLY Manley 12.08 295 P Pn 03 08 14.9 -2.3
baz=91
E23K Chandalar 12.11 310 P Pn 03 08 15.7 -1.9
baz=107
COLD Coldfoot 12.12 306 P Pn 03 08 15.9 -1.8
COLD Coldfoot 12.12 306 P Pn 03 08 15.5 -2.2
baz=102
WSLR Whistler 12.15 176 P Pn 03 08 18.3 0.0
RC01 Rabbit Creek A 12.15 276 P Pn 03 08 15.7 -2.5
baz=73
M22K Willow 12.16 279 P Pn 03 08 15.7 -2.5
baz=76
WOSB Woss 12.16 187 P Pn 03 08 18.5 +0.1
D24K Happy Valley 12.21 315 P Pn 03 08 17.0 -1.9
baz=113
CBB Campbell River 12.24 184 P Pn 03 08 21.2 +1.8
BPEB Brooks Peninsu 12.26 191 P Pn 03 08 21.5 +1.9
TOLK Toolik Lake Re 12.28 312 P Pn 03 08 18.2 -1.6
baz=110
L22K Petersville 12.30 283 P Pn 03 08 19.0 -1.1
baz=80
FHBB Fair Harbour 12.30 189 P Pn 03 08 21.2 +1.1
O22K Cooper Landing 12.34 273 P Pn 03 08 19.3 -1.4
baz=71
SEW Seward 12.34 271 P Pn 03 08 20.4 -0.2
baz=69
H22K Ishtalitna Cre 12.39 299 P Pn 03 08 19.7 -1.7
baz=95
TAHB Tahsis 12.44 187 P Pn 03 08 23.6 +1.5
GDR Gold River 12.51 185 P Pn 03 08 23.6 +0.5
TXDB Texada 12.56 181 P Pn 03 08 24.7 +0.9
G22K Bettles 12.56 304 P Pn 03 08 22.6 -1.2
baz=99
I21K Tanana 12.61 296 P Pn 03 08 23.9 -0.4
baz=91
WPB Watts Point 12.61 177 P Pn 03 08 24.3 -0.2
SHB Sechelt 12.66 179 P Pn 03 08 25.1 -0.1
CAST Castle Rocks 12.75 288 P Pn 03 08 24.9 -1.5
baz=83
SKT Skwentna 12.76 281 P Pn 03 08 25.2 -1.2
baz=77
D23K Nanushuk River 12.76 313 P Pn 03 08 25.4 -1.0
baz=109
CHUM Lake Minchumin 12.80 290 P Pn 03 08 26.5 -0.5
baz=85
BLKN Baker Lake 12.82 68 P Pn 03 08 24.9 -2.3
BLKN Baker Lake 12.82 68 Pn 03 08 25.0 -2.2
PPLA Purkeypile 12.88 285 P Pn 03 08 27.3 -0.9
baz=80
CAPN Captain Cook N 12.91 276 P Pn 03 08 26.7 -1.7
baz=72
F22K John River 12.93 306 P Pn 03 08 27.5 -1.2
baz=101
H21K Melozitna Rive 12.96 298 P Pn 03 08 27.9 -1.4
baz=92
B927 Port Alberni 13.04 182 P Pn 03 08 31.5 +1.2
PABB Port Alberni 13.04 182 P Pn 03 08 30.6 +0.3
C23K Itkillik River 13.05 317 P Pn 03 08 28.3 -2.1
baz=113
BRSE Bradley Lake S 13.07 271 P Pn 03 08 29.2 -1.6
baz=68
PNT Pennington 13.19 167 P Pn 03 08 31.3 -1.1
MGRB Mount Grey 13.26 181 P Pn 03 08 35.2 +1.8
G21K Allakaket 13.30 302 P Pn 03 08 32.5 -1.4
baz=95
A05A Maple Falls 13.31 174 P Pn 03 08 35.4 +1.4
IMAR Indian Mountai 13.37 299 Pn 03 08 33.3 -1.4
F21K Alatna River 13.38 305 P Pn 03 08 33.7 -1.1
baz=98
CLRS Cowichan Lake 13.44 180 P Pn 03 08 37.0 +1.3
CLRS Cowichan Lake 13.44 180 Pn 03 08 36.2 +0.5
SNB Saturna Island 13.49 177 P Pn 03 08 36.7 +0.2
M20K Styx River 13.52 281 P Pn 03 08 35.8 -1.0
baz=76
HOM Homer 13.53 271 P Pn 03 08 35.7 -1.2
baz=67
J20K Nowinta River 13.58 291 P Pn 03 08 37.3 -0.3
baz=85
B011 North Saanich 13.61 178 P Pn 03 08 39.5 +1.4
PGC Sidney 13.61 178 P Pn 03 08 38.3 +0.2
B009 North Saanich 13.61 178 P Pn 03 08 39.8 +1.7
K20K Telida 13.65 288 P Pn 03 08 38.0 -0.6
baz=81
I20K Naaghedeneel 13.68 294 P Pn 03 08 38.4 -0.5
baz=87
SYMB Survey Mountai 13.70 179 P Pn 03 08 37.5 -1.9
E21K Killik River 13.78 310 P Pn 03 08 38.9 -1.4
baz=103
FFC Flin Flon 13.79 113 P Pn 03 08 37.3 -3.2
FFC Flin Flon 13.79 113 Pn 03 08 37.2 -3.2
FFC Flin Flon 13.79 113 P Pn 03 08 37.7 -2.8
H20K Anotleneega Mo 13.83 297 P Pn 03 08 39.7 -1.3
baz=90
O20K Slope Mountain 13.83 274 P Pn 03 08 40.3 -0.9
baz=69
VGZ Gonzales 13.85 178 P Pn 03 08 41.0 -0.3
M19K Big River Lodg 14.09 282 P Pn 03 08 44.1 -0.5
baz=75
JCW Jim Creek 14.12 174 P Pn 03 08 45.5 +0.4
B22K Teshekpuk Lake 14.13 317 P Pn 03 08 44.0 -1.1
baz=111
B08A Colville Reser 14.16 167 P Pn 03 08 45.5 -0.3
HSPGA Hill Springs, 14.17 151 P Pn 03 08 44.6 -1.1
HSPGA Sn Sn 03 11 15.5 -7.4
F20K Avaraart Lake 14.23 303 P Pn 03 08 44.8 -1.6
baz=95
C21K Knifeblade Rid 14.23 312 P Pn 03 08 45.0 -1.5
baz=104
L19K White Mountain 14.23 283 P Pn 03 08 44.7 -1.9
baz=76
J19K Poorman 14.24 291 P Pn 03 08 45.5 -1.2
baz=83
P19K Oil Pt 14.28 273 P Pn 03 08 45.3 -1.9
baz=67
B21K Ikpikpuk River 14.29 314 P Pn 03 08 46.2 -1.1
baz=106
N19K Bonanza Creek 14.45 278 P Pn 03 08 48.3 -1.3
baz=71
H19K Roundabout Mou 14.48 297 P Pn 03 08 48.9 -1.0
baz=88
NEW Newport 14.55 161 Pn Pn 03 08 48.0 -3.0
0.7nm,0.3s,baz=352,slow=13,SNR=8.8
NEW Lg Lg 03 12 56.1
1.0nm,0.3s,baz=132,slow=14,SNR=1.7
4.8nm,0.9s
NEW Newport 14.55 161 P Pn 03 08 50.4 -0.6
E20K Nigu River 14.55 308 P Pn 03 08 49.7 -1.2
baz=99
O19K Port Alsworth 14.58 275 P Pn 03 08 49.9 -1.4
baz=69
HDW Hoodsport 14.62 177 P Pn 03 08 52.7 +0.7
LDM Libby Dam 14.68 156 Pn 03 08 50.8 -1.9
GCSA Galena City Sc 14.71 294 P Pn 03 08 51.7 -1.3
baz=85
GNW Green Mountain 14.71 176 P Pn 03 08 53.5 +0.3
G19K Purcell Mounta 14.73 300 P Pn 03 08 52.5 -0.8
baz=90
D20K Etivluk River 14.78 310 P Pn 03 08 53.6 -0.5
baz=100
KDAK Kodiak Island 14.80 265 Pn Pn 03 08 52.0 -2.3
0.7nm,0.3s,baz=63,slow=7.6,SNR=10
KDAK LR LR 03 14 17.6
comp=Z,375nm,20.7s,baz=59,slow=36
7.2nm,0.8s
KDAK Kodiak Island 14.80 265 P Pn 03 08 53.9 -0.3
baz=60
J18K Innoko River 14.80 289 P Pn 03 08 53.7 -0.7
baz=80
MKRVA Milk River, Al 14.82 146 P Pn 03 08 51.7 -3.1
E19K Redstone River 14.85 305 P Pn 03 08 53.9 -1.0
baz=95
M18K Stony River 14.86 281 P Pn 03 08 54.2 -0.9
baz=73
F19K Shaleruckik Mo 15.02 302 P Pn 03 08 56.3 -0.8
baz=92
L18K Granite Mounta 15.06 284 P Pn 03 08 56.9 -0.8
baz=76
D05A Enumclaw 15.12 174 IAmb IAmb 03 09 08.2
comp=Z,26nm,1.0s
O18K Koktuh Hills 15.12 275 P Pn 03 08 57.7 -1.0
baz=68
LTY Liberty 15.13 171 IAmb IAmb 03 09 08.3
comp=Z,20nm,0.8s
N18K Kilae Creek 15.14 278 P Pn 03 08 58.3 -0.6
baz=70
FCC Fort Churchill 15.16 90 P Pn 03 08 55.5 -3.6
FCC Sn Sn 03 11 32.9 -14
FCC Fort Churchill 15.16 90 Pn 03 08 56.5 -2.7
B20K Meade River 15.25 315 IAmb IAmb 03 09 13.4
comp=Z,34nm,0.7s
B20K Meade River 15.25 315 P Pn 03 08 59.6 -0.6
baz=105
D19K Kuna River 15.29 309 IAmb IAmb 03 09 09.8
comp=Z,32nm,0.9s
D19K Kuna River 15.29 309 P Pn 03 08 59.8 -1.1
baz=98
H18K Honhosa River 15.30 296 P Pn 03 08 60.0 -1.0
baz=85
P18K Big Mountain, 15.31 273 P Pn 03 08 59.8 -1.4
baz=66
G18K Tagagawik 15.38 299 P Pn 03 09 00.7 -1.3
baz=88
OHAK Old Harbor 15.41 264 IAmb IAmb 03 09 11.0
comp=Z,62nm,1.3s
OHAK Old Harbor 15.41 264 P Pn 03 09 01.7 -0.6
baz=59
A21K Barrow 15.46 320 P Pn 03 09 01.0 -2.0
baz=110
D08A Wollman Farm, 15.49 166 IAmb IAmb 03 09 25.6
comp=Z,25nm,0.8s
Q18K Katmai Hardscr 15.53 271 P Pn 03 09 03.1 -1.0
baz=64
M17K Holitna River 15.62 282 P Pn 03 09 04.1 -1.1
baz=72
K17K Iditarod 15.66 287 P Pn 03 09 05.0 -0.7
baz=77
F18K Selawik 15.76 302 P Pn 03 09 06.4 -0.5
baz=90
N17K Nushagak Hills 15.79 279 IAmb IAmb 03 09 15.4
comp=Z,41nm,0.8s
N17K Nushagak Hills 15.79 279 P Pn 03 09 06.9 -0.6
baz=70
L17K Donlin 15.81 285 P Pn 03 09 07.4 -0.2
baz=75
J17K VABM Dome 15.86 290 P Pn 03 09 07.8 -0.4
baz=78
C19K Lookout Ridge 15.91 311 IAmb IAmb 03 09 17.0
comp=Z,64nm,1.1s
C19K Lookout Ridge 15.91 311 P Pn 03 09 09.1 +0.2
baz=98
P17K Kvichak River 15.96 274 Pn 03 09 08.0 -1.6
P17K Kvichak River 15.96 274 P Pn 03 09 09.4 -0.2
baz=65
H17K Granite Mounta 15.98 295 IAmb IAmb 03 09 16.7
comp=Z,52nm,0.9s
H17K Granite Mounta 15.98 295 P Pn 03 09 09.6 -0.2
baz=83
O17K Koliganek Bris 16.03 276 P Pn 03 09 10.3 -0.2
baz=67
Q17K Contact Creek 16.11 270 P Pn 03 09 11.7 +0.1
baz=62
E18K Tukpahlearik C 16.14 305 P Pn 03 09 11.8 -0.1
baz=92
SII Sitkinak Islan 16.18 263 P Pn 03 09 12.6 +0.2
baz=57
RES Resolute Bay 16.21 28 Pn Pn 03 09 09.9 -2.6
comp=Z,3.5nm,0.3s,baz=227,slow=14,SNR=53
RES Sn Sn 03 11 58.1 -14
comp=Z,9.7nm,0.3s,baz=266,slow=4.5,SNR=12
RES Lg Lg 03 13 48.3
comp=Z,4.6nm,0.3s,baz=145,slow=21,SNR=7.9
RES Resolute Bay 16.21 28 P Pn 03 09 09.4 -3.2
RES Sn Sn 03 11 58.2 -14
RES Resolute Bay 16.21 28 Pn 03 09 09.6 -3.0
RES IAmb IAmb 03 09 39.3
comp=Z,44nm,0.7s
RES Resolute Bay 16.21 28 P Pn 03 09 10.1 -2.6
G17K Kiwalik Mounta 16.23 298 P Pn 03 09 12.8 -0.1
baz=85
Q16K King Salmon 16.29 272 P Pn 03 09 12.3 -1.4
baz=84
F03A Seaside 16.33 178 IAmb IAmb 03 09 53.1
comp=Z,49nm,1.1s
F17K Baldwin Pennin 16.41 301 IAmb IAmb 03 09 23.1
comp=Z,71nm,0.8s
F17K Baldwin Pennin 16.41 301 P Pn 03 09 15.0 -0.2
baz=88
C18K Utukok River 16.43 309 IAmb IAmb 03 09 23.3
comp=Z,77nm,0.9s
C18K Utukok River 16.43 309 P Pn 03 09 15.0 -0.6
baz=95
M16K Timber Creek 16.44 281 IAmb IAmb 03 09 23.0
comp=Z,33nm,0.8s
M16K Timber Creek 16.44 281 P Pn 03 09 15.5 -0.2
baz=71
L16K Owhat River 16.46 284 P Pn 03 09 16.3 +0.4
baz=73
I17K Unalakleet 16.47 292 P Pn 03 09 16.1 +0.1
baz=79
MSO Missoula 16.50 154 P Pn 03 09 14.4 -2.2
N16K Nishlik Lake 16.55 279 P Pn 03 09 17.4 +0.3
baz=69
J16K Anvik River 16.56 290 P Pn 03 09 17.1 -0.1
baz=77
O16K Kokwok River B 16.57 276 P Pn 03 09 17.6 +0.3
O16K IAmb IAmb 03 09 22.7
comp=Z,68nm,0.9s
O16K Kokwok River B 16.57 276 P Pn 03 09 17.3 -0.1
baz=66
A19K Wainwright 16.60 314 P Pn 03 09 17.2 -0.4
baz=101
E17K Hotham Inlet 16.62 303 P Pn 03 09 17.7 -0.2
baz=89
R17L Mt. Peulik Vol 16.64 269 P Pn 03 09 18.3 +0.1
baz=60
P16K Nushagak River 16.75 274 P Pn 03 09 20.0 +0.3
baz=64
G16K Koyuk River 16.95 297 P P 03 09 22.6 -1.4
baz=83
HOOD Mount Hood Mea 17.00 174 IAmb IAmb 03 09 49.8
comp=Z,46nm,0.8s
H16K Elim 17.01 295 P Pn 03 09 22.6 -0.2
baz=81
RDOG Red Dog Mine 17.04 307 IAmb IAmb 03 09 30.4
comp=Z,46nm,1.0s
RDOG Red Dog Mine 17.04 307 P P 03 09 23.6 -1.4
baz=92
G03D McMinnville, O 17.05 178 IAmb IAmb 03 09 45.3
comp=Z,66nm,1.0s
G04A Mulino 17.08 176 IAmb IAmb 03 09 30.4
comp=Z,73nm,0.8s
G05A Wamic 17.10 173 IAmb IAmb 03 09 36.9
comp=Z,107nm,1.2s
D17K Noatak River 17.10 305 P Pn 03 09 23.4 -0.5
baz=90
C17K DeLong Mountai 17.15 308 P Pn 03 09 24.1 -0.5
baz=93
K15K Wolf Creek Mou 17.22 287 P P 03 09 25.8 -1.3
baz=74
CHIR Chirikof Islan 17.26 262 P P 03 09 26.5 -1.0
baz=55
N15K Kwethluk River 17.27 279 P P 03 09 27.2 -0.5
baz=68
M15K Kasigluk River 17.35 281 P P 03 09 27.9 -0.6
baz=69
L15K Ungalak Mounta 17.39 285 P Pn 03 09 27.5 -0.1
baz=72
O15K Ungalikthiuk R 17.55 276 P Pn 03 09 28.8 -0.8
O15K IAmb IAmb 03 09 35.9
comp=Z,36nm,0.8s
O15K Ungalikthiuk R 17.55 276 P Pn 03 09 29.2 -0.4
baz=65
BUT Butte 17.57 152 IAmb IAmb 03 09 52.1
comp=Z,30nm,0.7s

SV1S **Aquistore NE01** 17.63 128 P Pn **03 09 30.1 -0.7**
SV2S **Aquistore NE01** 17.63 129 P Pn **03 09 29.7 -1.1**
COR **Corvallis** 17.68 178 P Pn **03 09 27.9 -3.4**
COR IAmb IAmb 03 09 39.4
comp=Z,56nm,0.9s
COR **Corvallis** 17.68 178 P **P** **03 09 32.4 +0.2**
G15K **Niukluk** 17.71 296 P **P** **03 09 31.9 -0.5**
baz=81
H04D **Lebanon** 17.75 177 IAmb IAmb 03 09 36.8
comp=Z,80nm,1.1s
F15K **North Star Dit** 17.85 299 P **P** **03 09 33.5 -0.6**
baz=82
M14K **Bethel** 17.91 282 P **P** **03 09 34.6 -0.1**
baz=69
C16K **Lisburne Hills** 17.95 307 IAmb IAmb 03 09 40.4
comp=Z,53nm,1.0s
C16K **Lisburne Hills** 17.95 307 P **P** **03 09 34.8 -0.2**
baz=90
J14K **Nanvaranak Lak** 17.99 289 IAmb IAmb 03 09 41.1
comp=Z,75nm,1.1s
J14K **Nanvaranak Lak** 17.99 289 P **P** **03 09 35.5 -0.1**
baz=74
L14K **Kuka Creek** 18.04 284 IAmb IAmb 03 09 57.6
comp=Z,43nm,0.9s
L14K **Kuka Creek** 18.04 284 P **P** **03 09 36.1 +0.1**
baz=70
BUCK **Buck Mountain** 18.07 177 IAmb IAmb 03 09 40.6
comp=Z,56nm,1.1s
N14K **Kuskokwak Cree** 18.10 280 IAmb IAmb 03 09 55.4
comp=Z,70nm,1.0s
N14K **Kuskokwak Cree** 18.10 280 P **P** **03 09 37.0 +0.3**
baz=66
BOZ **Bozeman (W)** 18.17 151 P Pn **03 09 35.7 -1.8**
BOZ IAmb IAmb 03 09 41.7
comp=Z,31nm,0.7s
O14K **Tigyukauivet M** 18.19 277 P **P** **03 09 37.7 0.0**
baz=65
CHGN **Chignik** 18.29 267 P **P** **03 09 39.0 +0.2**
baz=57
ANM **Nome** 18.35 295 P **P** **03 09 40.2 +0.7**
baz=78
ILON **Igloolik, Nuna** 18.42 49 P **P** **03 09 39.4 -0.8**
ILON **Igloolik, Nuna** 18.42 49 P **P** **03 09 37.0 -3.2**
I04A **Tendick Farm,** 18.49 176 P Pn **03 09 41.4 0.0**
I03D **Drain, OR** 18.57 178 P Pn **03 09 43.2 +1.0**
I03D IAmb IAmb 03 09 44.4
comp=Z,29nm,0.8s
F14K **Arctic Creek** 18.58 299 P Pn **03 09 42.8 +0.5**
baz=80
LAO **LASA Array** 18.64 138 IAmb IAmb 03 10 07.7
comp=Z,84nm,1.1s
M13K **Dall Lake** 18.68 282 IAmb IAmb 03 09 47.6
comp=Z,56nm,0.9s
M13K **Dall Lake** 18.68 282 P Pn **03 09 43.5 +0.1**
baz=67
K13K **Kusilvak Mount** 18.73 287 IAmb IAmb 03 09 48.1
comp=Z,45nm,1.1s
K13K **Kusilvak Mount** 18.73 287 P Pn **03 09 43.9 -0.2**
baz=71
S14K **Fog Glacier** 18.83 268 P Pn **03 09 45.8 +0.3**
baz=57
VNFG **Fog Glacier, M** 18.83 268 IAmb IAmb 03 10 07.1
comp=Z,45nm,0.8s
YHL **Hebgen Lake** 18.98 150 IAmb IAmb 03 09 52.0
comp=Z,61nm,0.8s
J05D **Fort Rock, OR** 19.05 173 IAmb IAmb 03 10 07.2
comp=Z,39nm,1.2s
J04A **Umpqua Nationa** 19.06 175 IAmb IAmb 03 09 57.3
comp=Z,45nm,0.6s
YHB **Horse Butte** 19.07 151 IAmb IAmb 03 10 07.2
comp=Z,34nm,0.9s
YNE **Yellowstone No** 19.11 148 IAmb IAmb 03 10 11.4
comp=Z,45nm,1.3s
RLMT **Red Lodge** 19.20 146 IAmb IAmb 03 10 16.8
comp=Z,38nm,0.9s
TNA **Tin City** 19.22 299 IAmb IAmb 03 09 51.4
comp=Z,38nm,0.9s
TNA **Tin City** 19.22 299 P Pn **03 09 49.5 -0.4**
baz=80
YMP **Mirror Lake Pl** 19.33 148 IAmb IAmb 03 09 59.8
comp=Z,28nm,0.8s
HLID **Hailey** 19.56 158 P Pn **03 09 55.0 +0.6**
ULM **Lac du Bonnet** 19.59 115 Pn **P** **03 09 52.8 -0.4**
comp=Z,3.0nm,0.3s,baz=321,slow=12,SNR=54
ULM Sn S 03 13 17.7 -16
comp=Z,4.3nm,0.3s,baz=55,slow=12,SNR=5.6
ULM Lg Lg 03 15 30.0
baz=40,slow=22
ULM LR LR 03 18 01.5
comp=Z,132nm,18.3s,baz=6.0,slow=38
comp=Z,21nm,0.6s
ULM **Lac du Bonnet** 19.59 115 P **P** **03 09 52.8 -0.4**
ULM **Lac du Bonnet** 19.59 115 P **P** **03 09 52.8 -0.4**
ULM IAmb IAmb 03 10 01.0
comp=Z,39nm,0.7s
K05A **Summer Lake** 19.63 173 IAmb IAmb 03 10 04.9
comp=Z,33nm,0.9s
CHNA **Chernabura Isl** 19.68 264 P Pn **03 09 54.4 -1.1**
baz=54
SDPT **Sand Point** 19.79 266 P **P** **03 09 55.5 +0.2**
baz=55
FLWY **Flagg Ranch** 19.82 150 P Pn **03 09 59.0 +1.5**
FLWY IAmb IAmb 03 10 21.0
comp=Z,25nm,0.9s
POIN **Pond Inlet** 19.96 39 P Pn **03 09 57.7 -0.9**
POIN **Pond Inlet** 19.96 39 P Pn **03 09 57.8 -0.9**
M11K **Mekoryuk** 19.99 284 P Pn **03 09 58.2 -1.0**
baz=66
L04D **Klamath Falls** 20.07 176 IAmb IAmb 03 10 07.0
comp=Z,33nm,1.0s
WVOR **Wild Horse Val** 20.10 168 IAmb IAmb 03 10 18.8
comp=Z,27nm,0.9s
WVOR **Wild Horse Val** 20.10 168 P Pn 03 10 01.6 +0.8
YBH **Yreka Blue Hor** 20.54 177 P Pn 03 10 05.3 -0.6
comp=Z,6.4nm,0.9s,baz=38,slow=12,SNR=8.5
YBH LR LR 03 17 48.9
comp=Z,157nm,18.5s,baz=348,slow=36
comp=Z,6.4nm,0.9s
M02C **Callahan** 20.88 177 IAmb IAmb 03 10 16.3
comp=Z,30nm,1.1s
EPLO **Experimental L** 20.95 113 P **P** **03 10 08.6 +0.7**
EPLO IAmb IAmb 03 10 16.0
comp=Z,36nm,0.7s
AHID **Auburn Hatcher** 20.98 152 P Pn 03 10 11.2 +0.1
M03C **McCloud** 21.02 176 IAmb IAmb 03 10 17.7
comp=Z,41nm,1.0s
AGMN **Agassiz Nation** 21.10 118 IAmb IAmb 03 10 25.9
comp=Z,28nm,0.6s
AGMN **Agassiz Nation** 21.10 118 P **P** **03 10 12.5 +2.9**
BW06 **Boulder Array** 21.33 149 IAmb IAmb 03 10 26.8
comp=Z,22nm,0.9s
PD31 **Pinedale Array** 21.33 149 IAmb IAmb 03 10 26.8
comp=Z,22nm,0.9s
PDAR **Pinedale Array** 21.33 149 P **P** **03 10 14.6 +2.2**
comp=Z,4.8nm,0.7s,baz=335,slow=6.6,SNR=23
PDAR LR LR 03 19 56.7
comp=Z,35nm,18.3s,baz=336,slow=41
comp=Z,4.8nm,0.7s
PDAR **Pinedale Array** 21.33 149 P **P** **03 10 12.9 +0.5**
KHMM **Horse Mountain** 21.38 179 IAmb IAmb 03 10 19.4
comp=Z,63nm,1.2s
HVU **Hansel Valley** 21.59 156 IAmb IAmb 03 10 21.0
comp=Z,30nm,0.8s
KHBM **Hayfork Bally** 21.60 178 IAmb IAmb 03 10 21.6
comp=Z,34nm,0.9s
RSSD **Black Hills** 21.62 138 P **P** **03 10 16.1 +0.7**
RSSD IAmb IAmb 03 10 22.8
comp=Z,34nm,0.8s
RSSD **Black Hills** 21.62 138 P **P** **03 10 17.8 +2.3**
HWUT **Hardware Ranch** 21.99 154 IAmb IAmb 03 10 36.6
comp=Z,40nm,1.2s
HWUT **Hardware Ranch** 21.99 154 P **P** **03 10 21.7 +2.3**
O03E **Paynes Creek** 22.01 175 IAmb IAmb 03 10 26.5
comp=Z,48nm,1.1s
O02D **Mt. Diablo Mer** 22.09 177 IAmb IAmb 03 10 23.8
comp=Z,44nm,1.2s
ELK **Elko** 22.18 162 P **P** **03 10 23.2 +1.7**
comp=Z,3.5nm,0.8s,baz=334,slow=9.1,SNR=9.2
ELK LR LR 03 19 59.7
comp=Z,122nm,20.7s,baz=344,slow=39
comp=Z,3.5nm,0.8s
PAHR **Pah Rah Range** 22.74 170 IAmb IAmb 03 10 31.2
comp=Z,23nm,1.1s
F33A **5 Mile Ranch,** 22.91 123 IAmb IAmb 03 10 39.7
comp=Z,27nm,0.9s
DUG **Dugway, Tooele** 23.11 157 P **P** **03 10 32.5 +1.2**
SAKN **Sanikiluaq** 23.21 84 P **P** **03 10 33.7 +1.9**

EYMN **Ely** 23.22 113 IAmb IAmb 03 10 51.9
comp=Z,34nm,0.9s
EYMN **Ely** 23.22 113 P **P** **03 10 34.7 +2.6**
PNTR **Pine Nut** 23.34 171 IAmb IAmb 03 11 00.0
comp=Z,15nm,0.9s
SPIA **Saint Paul Isl** 23.35 279 P **P** **03 10 33.5 +0.2**
baz=58
UNV **Unalaska Valle** 23.51 269 P **P** **03 10 35.8 +0.9**
baz=52
WAKR **Walker** 23.93 171 IAmb IAmb 03 10 44.1
comp=Z,17nm,0.8s
HAYD **Hayden** 24.02 147 IAmb IAmb 03 10 59.5
comp=Z,38nm,1.3s
NVAR **Mina Array Bea** 24.10 169 P **P** **03 10 43.1 +2.1**
comp=Z,15nm,0.7s,baz=347,slow=7.7,SNR=95
NVAR PcP **PcP** **03 14 22.9 +1.0**
comp=Z,2.4nm,0.7s,baz=323,slow=1.3,SNR=6.4
NVAR S **S** **03 14 53.5 -5.0**
comp=Z,0.7nm,0.5s,baz=322,slow=19,SNR=4.2
NVAR LR LR 03 20 11.1
comp=Z,58nm,21.4s,baz=29,slow=37
comp=Z,15nm,0.7s
NVAR **Mina Array Bea** 24.10 169 P **P** **03 10 42.5 +1.5**
O20A **White River Ci** 24.14 149 IAmb IAmb 03 11 18.2
comp=Z,23nm,0.8s
E38A **The Farm, Brul** 24.24 115 IAmb IAmb 03 11 02.5
comp=Z,27nm,1.1s
ECSD **EROS Data Cent** 24.56 126 IAmb IAmb 03 11 23.9
comp=Z,23nm,0.8s
ECSD **EROS Data Cent** 24.56 126 P **P** **03 10 47.1 +2.2**
PSUT **Pine Spring** 24.56 160 IAmb IAmb 03 10 50.0
comp=Z,19nm,0.9s
FRB **Frobisher Bay** 24.66 62 LR LR 03 20 33.3
comp=Z,510nm,18.0s,baz=288,slow=37
FRB **Frobisher Bay** 24.66 62 P **P** **03 10 47.5 +1.9**
Q16A **Castle Valley** 24.66 155 IAmb IAmb 03 10 52.0
comp=Z,13nm,0.8s
ISCO **Idaho Springs** 25.13 145 IAmb IAmb 03 11 10.7
comp=Z,12nm,0.8s
ISCO **Idaho Springs** 25.13 145 P **P** **03 10 53.2 +2.8**
PRN **Pahroc Range** 25.48 163 IAmb IAmb 03 10 58.7
comp=Z,14nm,1.0s
PV22 **Blue Mesa, Par** 25.54 151 IAmb IAmb 03 11 00.3
comp=Z,23nm,1.1s
PV04 **Paradox Valley** 25.64 151 IAmb IAmb 03 11 28.6
comp=Z,16nm,0.9s
PV07 **Paradox Valley** 25.66 151 IAmb IAmb 03 11 34.1
comp=Z,14nm,1.0s
HMU **Henry Mountain** 25.69 155 IAmb IAmb 03 11 21.3
comp=Z,16nm,0.9s
PV16 **Nyswonger Mesa** 25.72 151 IAmb IAmb 03 11 05.6
comp=Z,34nm,1.2s
PV17 **East Wray Mesa** 25.74 152 IAmb IAmb 03 11 36.9
comp=Z,16nm,1.0s
PV03 **Paradox Valley** 25.79 151 IAmb IAmb 03 11 38.0
comp=Z,20nm,1.1s
PV15 **Paradox Valley** 25.79 151 IAmb IAmb 03 11 23.6
comp=Z,17nm,0.8s
G40A **Rib Lake** 25.87 115 IAmb IAmb 03 11 35.0
comp=Z,17nm,0.9s
PKCU **Pink Cliffs** 25.88 158 IAmb IAmb 03 11 18.1
comp=Z,20nm,1.1s
PV13 **Radium Mtn., P** 25.89 151 IAmb IAmb 03 11 03.3
comp=Z,27nm,1.1s
WCT **Wildcat Mounta** 25.89 166 IAmb IAmb 03 11 04.4
comp=Z,11nm,1.0s
PV05 **Paradox Valley** 25.90 152 IAmb IAmb 03 11 26.6
comp=Z,14nm,0.9s
PV01 **Paradox Valley** 25.97 151 IAmb IAmb 03 11 33.2
comp=Z,14nm,0.9s
KNB **Kanab** 26.21 159 IAmb IAmb 03 11 05.2
comp=Z,12nm,1.0s
MPMC **Manual Prospec** 26.53 168 IAmb IAmb 03 11 06.2
comp=Z,11nm,0.9s
I40A **Norwalk** 26.81 118 IAmb IAmb 03 11 30.9
comp=Z,16nm,0.7s
MVCO **Mesa Verde** 26.87 151 IAmb IAmb 03 11 50.4
comp=Z,11nm,0.9s
MVCO **Mesa Verde** 26.87 151 P **P** **03 11 08.8 +2.7**
LRMC **Laurel Mtn Rad** 27.08 168 IAmb IAmb 03 11 11.1
comp=Z,12nm,0.8s
MTPC **Mountain Pass** 27.31 164 IAmb IAmb 03 11 29.1
comp=Z,17nm,1.4s
I42A **Dreger Farm,** 27.53 115 IAmb IAmb 03 11 35.0
comp=Z,16nm,1.0s
L40A **Anamosa** 28.08 121 IAmb IAmb 03 11 20.8
comp=Z,17nm,1.0s
BFSC **Mount Baldy Ra** 28.31 168 IAmb IAmb 03 11 22.4
comp=Z,14nm,0.9s
N38A **Joes South For** 28.37 125 IAmb IAmb 03 12 02.3
comp=Z,14nm,0.8s
ELS **Elsinore Mount** 28.92 168 IAmb IAmb 03 11 26.8
comp=Z,7.8nm,0.7s
PFO **Pinon Flats O** 29.05 167 LR LR 03 24 21.3
comp=Z,50nm,18.1s,baz=250,slow=39
RTBA **Rita Blanca** 29.07 143 IAmb IAmb 03 11 53.5
comp=Z,13nm,1.4s
BC3 **Big Chuckawall** 29.13 165 IAmb IAmb 03 11 29.6
comp=Z,14nm,0.9s
P38A **Dawn** 29.26 126 IAmb IAmb 03 12 14.6
comp=Z,7.0nm,0.7s
VLDQ **Val d'Or** 29.45 97 IAmb IAmb 03 12 06.0
comp=Z,15nm,1.0s
ANMO **Albuquerque** 29.51 149 LR LR 03 25 16.3
comp=Z,42nm,21.7s,baz=346,slow=40
ANMO **Albuquerque** 29.51 149 P **P** **03 11 30.3 +0.7**
ANMO IAmb IAmb 03 11 35.2
comp=Z,11nm,1.0s
ANMO **Albuquerque** 29.51 149 P **P** **03 11 32.7 +3.1**
TASM **ASL Pad, Albuq** 29.51 149 IAmb IAmb 03 11 38.9
comp=Z,11nm,1.0s
TASM **ASL Pad, Albuq** 29.51 149 IAmb IAmb 03 11 38.9
comp=Z,22nm,1.0s
ALQ **Albuquerque** 29.51 149 IAmb IAmb 03 11 38.9
comp=Z,12nm,1.0s
ALQ **Albuquerque** 29.51 149 IAmb IAmb 03 11 38.9
comp=Z,12nm,1.0s
DPP **Dos Picos Cty** 29.61 168 IAmb IAmb 03 11 33.5
comp=Z,9.1nm,0.8s
P40A **Paris** 29.91 124 IAmb IAmb 03 11 37.1
comp=Z,18nm,1.3s
SCHQ **Schefferville** 29.92 78 P **P** **03 11 36.1 +3.2**
comp=Z,10nm,1.1s,baz=319,slow=6.1,SNR=5.4
SCHQ LR LR 03 23 54.6
comp=Z,257nm,18.4s,baz=300,slow=37
comp=Z,10nm,1.1s
SCHQ **Schefferville** 29.92 78 IAmb IAmb 03 12 17.1
comp=Z,9.9nm,0.8s
BAR **Barrett** 29.95 167 P **P** **03 11 34.7 +1.3**
BAR IAmb IAmb 03 11 36.6
comp=Z,12nm,0.9s
HDIL **Hopedale** 30.13 120 IAmb IAmb 03 12 14.1
comp=Z,12nm,0.7s
SFJD **Kangerlussuaq** 30.19 49 LR LR 03 24 00.7
comp=Z,210nm,19.7s,baz=302,slow=37
CBX **Cerro Bola** 30.32 167 P **P** **03 11 37.2 +0.5**
OK048 **Pawnee Station** 30.90 134 IAmb IAmb 03 11 45.4
comp=Z,8.9nm,0.9s
R40A **Maddies Statio** 30.91 126 IAmb IAmb 03 11 45.4
comp=Z,8.8nm,1.0s
S39A **Bolivar** 31.04 128 IAmb IAmb 03 11 46.4
comp=Z,11nm,0.9s
TUC **Tucson** 31.15 158 P **P** **03 11 45.7 +1.7**
TUC **Tucson** 31.15 158 P **P** **03 11 47.3 +3.2**
SADO **Sadowa** 31.16 103 LR LR 03 24 45.9
comp=Z,88nm,19.8s,baz=340,slow=37
SFIN **Lafayette** 31.18 117 IAmb IAmb 03 11 48.8
comp=Z,14nm,1.0s
OK052 **Battle Ridge R** 31.33 134 IAmb IAmb 03 11 54.5
comp=Z,6.5nm,0.8s
MSTX **Muleshoe** 31.38 144 IAmb IAmb 03 11 53.8
comp=Z,11nm,0.9s
NOR **Nord** 31.45 16 P **P** **03 11 46.4 +0.3**
CCM **Cathedral Cave** 31.50 125 P **P** **03 11 48.4 +1.4**
CCM IAmb IAmb 03 11 50.6
comp=Z,10nm,1.4s
CCM **Cathedral Cave** 31.50 125 P **P** **03 11 49.4 +2.4**
121A **Cookes Peak, D** 31.52 153 IAmb IAmb 03 11 56.6
comp=Z,13nm,0.9s
TUL3 **Leonard** 31.75 133 IAmb IAmb 03 11 55.4
comp=Z,10nm,0.8s
U38A **Gravette** 31.77 130 IAmb IAmb 03 11 52.4
comp=Z,14nm,0.8s
RLO **Rose Lookout** 31.79 131 IAmb IAmb 03 11 52.8
comp=Z,8.0nm,0.8s
WMOK **Wichita Mounta** 31.84 138 IAmb IAmb 03 11 57.5
comp=Z,6.4nm,0.8s
WMOK **Wichita Mounta** 31.84 138 P **P** **03 11 52.3 +2.4**

FVM **French Village** 31.88 124 IAmb IAmb 03 11 54.3
comp=Z,17nm,1.4s
HHAR **Hobbs** 32.07 130 IAmb IAmb 03 11 54.4
comp=Z,5.8nm,0.7s
O48B **Farmland** 32.10 115 IAmb IAmb 03 11 56.1
comp=Z,13nm,0.9s
DKNS **Dickens** 32.18 142 IAmb IAmb 03 11 59.0
comp=Z,9.3nm,0.7s
O49A **Covington** 32.51 114 IAmb IAmb 03 12 00.0
comp=Z,19nm,1.3s
POST **Post** 32.58 143 IAmb IAmb 03 12 08.7
comp=Z,12nm,0.9s
P48A **Milroy** 32.66 116 IAmb IAmb 03 12 00.8
comp=Z,16nm,1.1s
SN07 **Snyder 07** 32.73 142 IAmb IAmb 03 12 01.6
comp=Z,9.2nm,0.8s
WBO **Williamsburg** 32.76 99 IAmb IAmb 03 12 17.5
comp=Z,5.9nm,0.7s
MNTX **Cornudas Mount** 32.87 150 IAmb IAmb 03 12 04.4
comp=Z,12nm,1.1s
MNTX **Cornudas Mount** 32.87 150 P **P** **03 12 01.9 +2.9**
PBMO **Poplar Bluff** 32.93 125 IAmb IAmb 03 12 06.1
comp=Z,11nm,0.8s
TPB11 **China Draw** 32.97 147 IAmb IAmb 03 12 03.9
comp=Z,15nm,1.3s
FCAR **Ozark Folk Cen** 33.08 128 IAmb IAmb 03 12 06.8
comp=Z,7.2nm,0.8s
MNTQ **Montreal, Queb** 33.15 96 IAmb IAmb 03 12 05.1
comp=Z,12nm,1.0s
ODSA **Odessa** 33.18 145 IAmb IAmb 03 12 13.7
comp=Z,11nm,0.8s
SHEM **Shemya Is, Ala** 33.23 282 LR LR 03 26 48.2
comp=Z,104nm,18.1s,baz=275,slow=39
LCAR **Lake Charles** 33.28 126 IAmb IAmb 03 12 06.0
comp=Z,11nm,0.9s
WCI **Wyandotte Cave** 33.33 118 P **P** **03 12 01.5 -1.5**
WCI IAmb IAmb 03 12 06.6
comp=Z,13nm,1.0s
WCI **Wyandotte Cave** 33.33 118 P **P** **03 12 05.5 +2.5**
229A **Bryant Ranch,** 33.53 144 IAmb IAmb 03 12 09.3
comp=Z,5.6nm,0.7s
PAMR **Moraine State** 33.75 108 IAmb IAmb 03 12 11.2
comp=Z,12nm,0.8s
MIAR **Mount Ida** 33.75 131 IAmb IAmb 03 12 13.9
comp=Z,10nm,0.8s
MIAR **Mount Ida** 33.75 131 P **P** **03 12 08.2 +1.5**
PLPT **Palo Pinto** 33.76 139 IAmb IAmb 03 12 12.1
comp=Z,14nm,1.2s
SGCY **Sterling City** 33.77 143 IAmb IAmb 03 12 13.9
comp=Z,13nm,1.0s
VHRN **Van Horn** 33.84 149 IAmb IAmb 03 12 17.1
comp=Z,13nm,1.2s
MNHN **Monahans** 33.87 146 IAmb IAmb 03 12 14.7
comp=Z,11nm,1.0s
T47A **Sharon Grove** 34.06 120 IAmb IAmb 03 12 12.9
comp=Z,11nm,0.9s
X40A **Basin Creek Fa** 34.07 130 IAmb IAmb 03 12 15.5
comp=Z,6.3nm,0.8s
D62A **Allapoint, All** 34.12 90 IAmb IAmb 03 12 14.7
comp=Z,13nm,1.1s
WVT **Waverly** 34.52 122 P **P** **03 12 14.5 +1.2**
WVT IAmb IAmb 03 12 17.1
comp=Z,12nm,0.8s
WVT **Waverly** 34.52 122 P **P** **03 12 14.9 +1.6**
ALPN **Alpine** 34.56 148 IAmb IAmb 03 12 17.5
comp=Z,5.9nm,0.8s
OZNA **Ozona** 34.70 144 IAmb IAmb 03 12 20.2
comp=Z,8.4nm,1.1s
M57A **Sunshine Farm,** 34.76 105 IAmb IAmb 03 12 19.7
comp=Z,9.8nm,1.1s
G62A **West of Eustis** 34.80 94 IAmb IAmb 03 12 20.4
comp=Z,11nm,1.1s
T50A **Nancy** 34.96 118 P **P** **03 12 18.1 +0.9**
T50A IAmb IAmb 03 12 20.8
comp=Z,11nm,0.8s
BRDY **Brady** 34.97 140 IAmb IAmb 03 12 21.5
comp=Z,17nm,1.1s
V48A **Smith Brothers** 35.26 121 IAmb IAmb 03 12 23.6
comp=Z,19nm,1.1s
F64A **Sherman** 35.34 91 IAmb IAmb 03 12 24.6
comp=Z,9.9nm,1.1s
N58A **Sunbury** 35.35 105 IAmb IAmb 03 12 24.6
comp=Z,12nm,1.2s
TX31 **Lajitas Ar. Si** 35.55 148 P **P** **03 12 24.4 +2.1**
TX31 IAmb IAmb 03 12 26.2
comp=Z,9.9nm,1.1s
TXAR **Lajitas Array** 35.55 148 P **P** **03 12 24.3 +1.9**
comp=Z,8.6nm,1.1s,baz=352,slow=7.7,SNR=24
TXAR S **S** **03 18 01.8 +4.0**
comp=Z,0.2nm,0.7s,baz=334,slow=22,SNR=2.0
TXAR LR LR 03 28 36.5
comp=Z,41nm,18.7s,baz=329,slow=39
comp=Z,8.6nm,1.1s
TZTN **Tazewell** 35.91 117 P **P** **03 12 25.6 +0.3**
R55A **Marlinton** 35.92 111 IAmb IAmb 03 12 29.8
comp=Z,12nm,1.0s
SWET **Sewanee** 36.07 121 IAmb IAmb 03 12 31.8
comp=Z,9.2nm,0.9s
X48A **Hartselle** 36.29 122 IAmb IAmb 03 12 32.1
comp=Z,10nm,0.9s
W50A **Signal Mountai** 36.34 120 IAmb IAmb 03 12 34.5
comp=Z,9.1nm,0.9s
TKL **Tuckaleechee C** 36.57 118 LR LR 03 27 45.8
comp=Z,179nm,18.6s,baz=330,slow=37
TKL **Tuckaleechee C** 36.57 118 IAmb IAmb 03 12 36.7
comp=Z,10nm,0.7s
GGN **Saint George** 36.61 91 IAmb IAmb 03 12 35.8
comp=Z,16nm,1.1s
U54A **Nelsons Funny** 36.66 115 IAmb IAmb 03 12 36.1
comp=Z,11nm,0.7s
BLA **Blacksburg** 36.68 112 IAmb IAmb 03 12 36.1
comp=Z,17nm,0.9s
FPAL **Fort Paine** 36.79 121 IAmb IAmb 03 12 38.6
comp=Z,17nm,1.5s
S57A **Dark Hollow, R** 36.86 110 IAmb IAmb 03 12 39.9
comp=Z,12nm,1.3s
V53A **Saluda** 36.96 116 IAmb IAmb 03 12 38.6
comp=Z,9.3nm,0.9s
W52A **Murphy** 36.99 118 IAmb IAmb 03 12 38.6
comp=Z,15nm,1.0s
Y49A **Blount Mountai** 37.06 122 IAmb IAmb 03 12 39.3
comp=Z,15nm,1.0s
R58B **Mineral** 37.17 109 IAmb IAmb 03 12 40.5
comp=Z,12nm,1.0s
U56A **King** 37.42 113 IAmb IAmb 03 12 42.5
comp=Z,17nm,0.9s
V55A **Taylorsville** 37.48 114 IAmb IAmb 03 12 43.1
comp=Z,8.1nm,0.8s
BG3 **Lake Jocassee** 37.49 117 IAmb IAmb 03 12 45.4
comp=Z,12nm,1.2s
LRAL **Lakeview Retre** 37.56 124 IAmb IAmb 03 12 43.1
comp=Z,10.0nm,1.0s
833A **Chaparral WMA,** 37.64 143 IAmb IAmb 03 12 44.9
comp=Z,14nm,1.1s
Y52A **Lilburn** 38.00 119 IAmb IAmb 03 12 47.5
comp=Z,12nm,1.1s
HODGE **Hodges** 38.43 117 IAmb IAmb 03 12 50.6
comp=Z,8.1nm,0.7s
W57A **Gilead** 38.60 114 IAmb IAmb 03 12 51.9
comp=Z,10nm,0.8s
MA2 **Magadan** 38.63 306 P **P** **03 12 49.0 +0.8**
comp=Z,7.9nm,0.5s,baz=94,slow=9.0,SNR=3.6
MA2 LR LR 03 30 41.5
comp=Z,56nm,18.1s,baz=104,slow=39
comp=Z,7.9nm,0.5s
MA2 **Magadan** 38.63 306 IAmb IAmb 03 12 54.8
comp=Z,32nm,1.4s
GOGA **Godfrey** 38.64 119 IAmb IAmb 03 12 52.7
comp=Z,15nm,0.9s
GOGA **Godfrey** 38.64 119 P **P** **03 12 48.7 +0.2**
250A **Grady** 38.78 123 IAmb IAmb 03 12 56.9
comp=Z,22nm,0.9s
152A **Waverly Hall** 38.78 121 IAmb IAmb 03 12 53.6
comp=Z,14nm,0.8s
JSC **Jenkinsville** 38.81 116 IAmb IAmb 03 12 53.7
comp=Z,11nm,0.7s
BIRD **Birdtown, Kers** 38.83 115 IAmb IAmb 03 12 54.1
comp=Z,14nm,0.9s
HBVL **Hebbronville** 39.03 142 IAmb IAmb 03 12 56.6
comp=Z,26nm,1.3s
LPIG **La Paz** 39.26 160 LR LR 03 30 10.5
comp=Z,60nm,18.4s,baz=162,slow=38
PEA0B **Petropavlovsk-** 40.26 294 P **P** **03 13 02.5 +0.7**
PETK **Petropavlovsk-** 40.26 294 P **P** **03 13 02.5 +0.7**
comp=Z,19nm,0.6s,baz=60,slow=11,SNR=63
PETK LR LR 03 30 58.7
comp=Z,74nm,18.3s,baz=42,slow=38
comp=Z,19nm,0.6s

BORG Borgarnes 41.13 39 LR LR 03 29 50.4
comp=Z,72nm,18.8s,baz=324,slow=36
ARCES ARCESS Array B 46.78 14 P **P 03 13 55.0 +0.9**
comp=Z,2.3nm,0.6s,baz=346,slow=7.7,SNR=9.9
ARCES LR LR 03 33 43.9
comp=Z,72nm,21.7s,baz=341,slow=36
comp=Z,2.3nm,0.6s
ARCES ARCESS Array B 46.78 14 IAmb IAmb 03 14 26.0
comp=Z,14nm,1.4s
NRIK Noril'sk 46.80 345 P **P 03 13 55.1 +0.9**
comp=Z,6.6nm,0.8s,baz=33,slow=2.2,SNR=5.8
comp=Z,6.6nm,0.8s
NRIK Noril'sk 46.80 345 P **P 03 13 52.5 -1.7**
NRIK IAmb IAmb 03 13 59.4
comp=Z,7.4nm,0.8s
YSS Yuzhno-Sakhali 51.20 299 P **P 03 14 29.1 +0.9**
PETF Flores 51.26 136 P **P 03 14 30.1 +1.1**
NC204 NORSAR Array S 52.15 26 P **P 03 14 34.7 -0.5**
NC204 IAmb IAmb 03 14 39.3
comp=Z,20nm,1.4s
NB2 NORSAR Subarra 52.46 26 P **P 03 14 38.8 +1.3**
comp=Z,4.2nm,1.1s,baz=296,slow=6.9
NOA NORSAR Array B 52.46 26 P **P 03 14 38.5 +1.0**
comp=Z,4.5nm,0.9s,baz=334,slow=7.7,SNR=3.4
NOA LR LR 03 37 47.3
comp=Z,58nm,19.3s,baz=350,slow=37
comp=Z,4.5nm,0.9s
LSH Leshukonskoye 52.99 5 *eP* **P 03 14 42.3 +1.1**
ASAJ Asahikawa 53.55 297 LR LR 03 39 02.5
comp=Z,63nm,18.0s,baz=110,slow=38
HFS Hagfors 53.78 25 P **P 03 14 48.2 +1.0**
comp=Z,4.0nm,0.5s,baz=350,slow=4.5,SNR=19
HFS LR LR 03 38 27.3
comp=Z,79nm,18.3s,baz=335,slow=37
comp=Z,4.0nm,0.5s
MTO3 Montecristo 53.78 137 P **P 03 14 48.0 0.0**
EKA Eskdalemuir Ar 54.06 37 P **P 03 14 50.5 +1.2**
comp=Z,3.1nm,0.8s,baz=312,slow=6.7,SNR=6.5
EKA LR LR 03 37 00.5
comp=Z,90nm,19.4s,baz=4.0,slow=35
comp=Z,3.1nm,0.8s
FINES FINESS Array B 54.60 17 P **P 03 14 54.2 +1.0**
comp=Z,3.9nm,0.6s,baz=355,slow=7.3,SNR=31
FINES LR LR 03 38 24.4
comp=Z,67nm,19.6s,baz=342,slow=36
comp=Z,3.9nm,0.6s
KLMR Klimovskoe 56.62 9 *eP* **P 03 15 06.6 -1.0**
USRK Ussuriysk Ar. 57.76 304 P **P 03 15 15.9 0.0**
comp=Z,9.3nm,1.0s,baz=35,slow=7.0,SNR=7.8
comp=Z,9.3nm,1.0s
USRK Ussuriysk Ar. 57.76 304 P **P 03 15 15.8 -0.2**
JTS Las Juntas de 59.08 133 LR LR 03 42 45.2
comp=Z,44nm,20.5s,baz=340,slow=38
KIRV Kirov 59.42 4 LR LR 03 45 43.7
comp=Z,28nm,18.3s,baz=340,slow=41
SJG San Juan 59.42 110 LR LR 03 41 26.1
comp=Z,53nm,20.2s,baz=118,slow=36
SUW Suwalki 61.30 21 *eP* **P 03 15 42.8 +2.6**
MJB9 Matsu-Tunnel 61.70 295 P **P 03 15 44.3 +1.0**
MAJO Matsushiro 61.71 295 P **P 03 15 43.4 +0.2**
MJAR Matsushiro Arr 61.71 295 P **P 03 15 43.8 +0.6**
comp=Z,5.9nm,0.8s,baz=26,slow=5.9,SNR=16
MJAR LR LR 03 44 33.7
comp=Z,34nm,18.3s,baz=151,slow=38
comp=Z,5.9nm,0.8s
MJAR Matsushiro Arr 61.71 295 P **P 03 15 43.0 -0.2**
MJAR IAmb IAmb 03 15 44.8
comp=Z,4.7nm,1.0s
ARTI Arti 61.71 358 LR LR 03 46 11.4
comp=Z,35nm,18.3s,baz=40,slow=40
ARTI Arti 61.71 358 P **P 03 15 44.3 +1.4**
CLL Collm 61.84 29 IAmb IAmb 03 15 48.3
comp=Z,6.0nm,0.9s
CLL Collm 61.84 29 *i* P **P 03 15 45.7 +1.8**
comp=Z,8.0nm,1.1s
CLL AMS AMS 03 45 00.0
comp=Z,100nm,18.0s
ZAA0 Zalesovo Array 61.94 341 P **P 03 15 44.8 +0.4**
ZAA0 IAmb IAmb 03 15 45.9
comp=Z,8.1nm,1.1s
ZALV Zalesovo Beam 61.94 341 P **P 03 15 45.2 +0.7**
comp=Z,2.8nm,0.6s,baz=4.6,slow=7.4,SNR=13
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 61.94 341 P **P 03 15 44.5 0.0**
BRG Berggiesshubel 62.46 28 *eP* **P 03 15 50.8 +2.8**
BRG Amp 03 15 52.9
comp=Z,6.0nm,1.0s
NKC Novy Kostel 62.72 30 AMS AMS 03 45 30.0
comp=Z,100nm,17.4s
GRFO Grafenberg 62.93 31 P **P 03 15 54.1 +2.9**
KSP Ksiaz 63.00 27 *eP* **P 03 15 54.4 +2.7**
SONM Songino Array 63.09 324 P **P 03 15 53.2 +0.7**
comp=Z,1.2nm,0.7s,baz=17,slow=6.2,SNR=7.2
comp=Z,1.2nm,0.7s
SONM Songino Array 63.09 324 IAmb IAmb 03 15 54.1
comp=Z,1.8nm,0.9s
CHVC Chvalec 63.19 27 *eP* **P 03 15 55.1 +2.1**
OSTC Ostas 63.25 27 AMS AMS 03 45 10.0
comp=Z,100nm,20.9s
PRU Pruhonice 63.42 28 AMS AMS 03 46 50.0
comp=Z,100nm,15.1s
DPC Dobruska-Polom 63.47 27 *eP* **P 03 15 57.4 +2.5**
DPC AMS AMS 03 45 10.0
comp=Z,100nm,17.7s
KRLC Kraliky 63.83 27 *eP* **P 03 15 59.6 +2.4**
ZVC Zvikov 63.86 29 *eP* **P 03 16 01.0 +3.6**
KHC Kasperske Hory 64.01 29 *eP* **P 03 16 00.6 +2.2**
KHC AMS AMS 03 45 40.0
comp=Z,100nm,18.6s
STEB Steborice 64.17 26 *eP* **P 03 16 01.1 +1.7**
MORC Moravsky Berou 64.27 26 *eP* **P 03 16 01.4 +1.3**
TREC Trest 64.28 28 *eP* **P 03 16 02.1 +1.9**
GEC2 GERESS Array S 64.31 29 IAmb IAmb 03 16 05.2
comp=Z,9.9nm,1.4s
GERES GERESS Array B 64.31 29 P **P 03 16 02.5 +2.0**
comp=Z,1.8nm,0.6s,baz=354,slow=4.2,SNR=17
comp=Z,1.8nm,0.6s
GERES GERESS Array B 64.31 29 P **P 03 16 01.7 +1.3**
OJC Ojcow 64.31 25 *eP* **P 03 16 03.0 +2.7**
VRAC Vranov 64.51 27 LR LR 03 42 33.5
comp=Z,39nm,21.6s,baz=342,slow=34
VRAC Vranov 64.51 27 *eP* **P 03 16 02.6 +0.9**
BVAR Borovoye Array 64.52 350 P **P 03 16 02.8 +1.1**
comp=Z,4.5nm,0.6s,baz=14,slow=6.6,SNR=20
comp=Z,4.5nm,0.6s
KRUC Moravsky 64.70 27 *eP* **P 03 16 04.3 +1.4**
DAVA Damuels 64.84 33 *ep*P pP 03 16 07.6 0.0
comp=Z,2.2nm,0.6s
RETA Reutte 64.87 32 *ep*P pP 03 16 06.7 -1.0
comp=Z,5.5nm,1.0s
MOTA Moosalm 65.09 32 *ep*P pP 03 16 09.3 +0.1
comp=Z,3.8nm,0.9s
KSRS Korea Array 65.13 303 P **P 03 16 06.8 +1.0**
comp=Z,3.6nm,0.9s,baz=25,slow=7.0,SNR=5.0
KSRS LR LR 03 45 01.2
comp=Z,18nm,19.0s,baz=80,slow=36
comp=Z,3.6nm,0.9s
JAVC Velka Javorina 65.17 27 *eP* **P 03 16 07.1 +1.1**
NIE Niedzica 65.17 25 *eP* **P 03 16 09.3 +3.3**
WATA Walderalm 65.21 31 *ep*P pP 03 16 09.1 -0.9
comp=Z,1.9nm,0.8s
SQTA Sankt Quirin 65.23 32 *ep*P pP 03 16 09.7 -0.3
comp=Z,4.4nm,1.1s
LANS Liptovska Anna 65.26 25 *eP* **P 03 16 09.6 +3.0**
WTTA Wattenberg 65.30 31 *ep*P pP 03 16 10.0 -0.6
comp=Z,5.4nm,0.8s
FETA Feichten 65.30 32 *ep*P pP 03 16 09.7 -0.9
comp=Z,6.6nm,0.9s
DAVOX Davos/Dischmat 65.31 33 LR LR 03 45 51.8
comp=Z,52nm,18.5s,baz=308,slow=37
MOA Molln 65.37 29 *ep*P pP 03 16 08.6 -2.2
comp=Z,0.2nm,0.3s
BIOA Bad Ischl, Aus 65.37 30 *ep*P pP 03 16 09.5 -1.4
comp=Z,0.1nm,0.3s
LESA Schwarzleotal 65.40 31 *ep*P pP 03 16 09.8 -1.3
comp=Z,0.6nm,0.4s
AKASG Malin Array Be 65.46 18 P **P 03 16 08.8 +1.0**
comp=Z,4.9nm,0.6s,baz=345,slow=6.3,SNR=17
AKASG LR LR 03 44 34.0
comp=Z,68nm,18.3s,baz=350,slow=36
comp=Z,4.9nm,0.6s
AKASG Malin Array Be 65.46 18 IAmb IAmb 03 16 11.9
comp=Z,5.5nm,1.4s
KIEV Kiev 65.46 18 P **P 03 16 09.2 +1.4**
MODS Modra-Piesok 65.54 27 *eP* **P 03 16 11.3 +2.9**
CONA Conrad Observa 65.66 28 *ep*P pP 03 16 11.6 -1.2
comp=Z,5.5nm,1.5s

SDV Santo Domingo 65.77 119 LR LR 03 47 20.4
comp=Z,37nm,18.0s,baz=270,slow=38
KBA Koelnbreinsper 65.88 30 *ep*P pP 03 16 13.4 -0.9
comp=Z,3.5nm,0.6s
KURK Kurchatov 65.95 344 P **P 03 16 11.8 +0.8**
KURK IAmb IAmb 03 16 12.3
comp=Z,4.0nm,0.8s
RONA Rosalia, Austr 65.97 28 *ep*P pP 03 16 12.7 -2.0
ABTA Abfaltersbach 65.99 31 *ep*P pP 03 16 12.8 -2.1
comp=Z,0.2nm,0.4s
KURBB Kurchatov Arra 66.06 344 P **P 03 16 12.2 +0.5**
comp=Z,4.9nm,0.7s,baz=11,slow=5.9,SNR=22
comp=Z,4.9nm,0.7s
SESA Seetaler Alpe, 66.13 29 *ep*P pP 03 16 14.7 -1.3
comp=Z,5.6nm,0.7s
ARSA Arzberg 66.22 29 IAmb IAmb 03 16 17.9
comp=Z,5.3nm,1.1s
ARSA Arzberg 66.22 29 *ep*P pP 03 16 14.5 -1.8
comp=Z,4.0nm,0.9s
MYKA Terra Mystica 66.37 30 *ep*P pP 03 16 15.3 -2.1
comp=Z,0.2nm,0.3s
PSZ Piszkesteto 66.52 25 P **P 03 16 16.8 +2.0**
SOKA Soboth 66.65 29 *ep*P pP 03 16 17.4 -1.8
comp=Z,0.8nm,0.4s
OBKA Obir 66.70 30 *ep*P pP 03 16 17.8 -1.7
comp=Z,3.2nm,0.5s
AKTO Aktyubinsk 67.68 358 LR LR 03 50 22.7
comp=Z,34nm,19.2s,baz=279,slow=40
ESDC Sonseca Array 67.69 46 P **P 03 16 23.7 +1.4**
comp=Z,2.2nm,0.9s,baz=332,slow=7.1,SNR=14
ESDC LR LR 03 43 56.2
comp=Z,15nm,18.4s,baz=343,slow=34
comp=Z,2.2nm,0.9s
ESDC Sonseca Array 67.69 46 P **P 03 16 25.2 +2.9**
BUR08 Bucovina Ar. S 67.78 22 IAmb IAmb 03 16 32.6
comp=Z,5.4nm,1.1s
BURAR Bucovina Array 67.81 22 P **P 03 16 24.4 +1.4**
HHC Hu-ho-hao-te 67.93 317 *eP* **P 03 16 23.3 -0.6**
HHC pmax pmax 03 16 23.4
comp=Z,17nm,0.6s
ROSC El Rosal 67.99 125 P **P 03 16 26.6 +1.8**
comp=Z,4.9nm,0.5s,baz=26,slow=6.8,SNR=5.6
comp=Z,4.9nm,0.5s
ZSN Zaisan 68.22 339 *eP* **P 03 16 26.5 +1.0**
AB31 Akbulak array 68.82 357 P **P 03 16 30.0 +0.8**
AB31 IAmb IAmb 03 16 31.1
comp=Z,6.0nm,0.9s
ABKAR Akbulak array 68.82 357 P **P 03 16 29.9 +0.8**
MK31 Makanchi Array 69.28 341 P **P 03 16 32.3 +0.2**
MKAR Makanchi Array 69.28 341 P **P 03 16 32.3 +0.2**
comp=Z,0.9nm,0.6s,baz=359,slow=6.1,SNR=7.2
MKAR PKP2bc **P'P'bc 03 44 41.2 -7.0**
comp=Z,0.6nm,0.7s,baz=183,slow=2.9,SNR=4.2
comp=Z,0.9nm,0.6s
MKAR Makanchi Array 69.28 341 P **P 03 16 32.6 +0.5**
MAKZ Makanchi 69.31 341 P **P 03 16 32.2 -0.1**
MAKZ IAmb IAmb 03 16 33.5
comp=Z,6.5nm,1.1s
MLR Muntele Rosu 69.99 22 LR LR 03 48 06.3
comp=Z,73nm,18.1s,baz=10,slow=37
MLR Muntele Rosu 69.99 22 P **P 03 16 38.2 +1.6**
MLR IAmb IAmb 03 16 42.3
comp=Z,6.2nm,1.1s
WMQ Urumqi 71.23 336 *eP* **P 03 16 45.6 +1.5**
WMQ pmax pmax 03 16 46.0
comp=Z,9.0nm,1.3s
TDK Taldyqorghan 71.59 343 *eP* **P 03 16 47.2 +1.0**
BTLS Baital 72.08 346 *eP* **P 03 16 50.1 +0.9**
GTA2 Gaotai 72.62 326 *eP* **P 03 16 53.8 +1.2**
GTA2 pmax pmax 03 16 54.2
comp=Z,6.0nm,1.0s
KUU Kurty 72.95 345 *eP* **P 03 16 55.2 +0.9**
KPKS Kokpek 73.06 343 *eP* **P 03 16 56.1 +0.9**
SHLS Shalkode 73.25 342 *eP* **P 03 16 56.9 +0.6**
UZB Uzynbulak 73.33 342 *eP* **P 03 16 57.6 +0.9**
NJ2 Nanjing 73.36 308 *eP* **P 03 16 54.8 -2.1**
NJ2 pmax pmax 03 16 55.2
comp=Z,27nm,0.8s
SATY Saty 73.50 343 *eP* **P 03 16 58.7 +1.0**
comp=Z,5.5nm,1.3s
AAA Alma-Ata 73.55 344 *eP* **P 03 16 59.0 +1.0**
MDOK Medeo 73.58 344 *eP* **P 03 16 59.2 +0.9**
SGDS Sogindy 73.59 346 *eP* **P 03 16 59.2 +1.0**
MDT Midelt 73.64 50 LR LR 03 48 35.0
comp=Z,41nm,19.1s,baz=322,slow=35
TNSS Tian-Shan 73.71 344 *eP* **P 03 16 59.1 -0.3**
KBZ Khabaz 73.89 10 P **P 03 17 01.9 +2.0**
comp=Z,4.1nm,0.8s,baz=343,slow=7.1,SNR=12
KBZ LR LR 03 51 17.9
comp=Z,41nm,18.3s,baz=342,slow=37
comp=Z,4.1nm,0.8s
KK31 Karatay Array 74.36 349 P **P 03 17 03.1 +0.4**
KKAR Karatay Array 74.36 349 P **P 03 17 03.6 +1.0**
BRLS Boroldoy 74.49 349 *eP* **P 03 17 06.0 +2.6**
DZA Taraz 74.49 348 *eP* **P 03 17 04.5 +1.1**
comp=Z,6.9nm,0.5s
XAN Xi'an 75.00 317 P **P 03 17 01.9 -4.6**
XAN pmax pmax 03 17 02.4
comp=Z,4.0nm,0.4s
VAE Valguarnera 75.19 33 LR LR 03 51 14.5
comp=Z,57nm,18.6s,baz=320,slow=36
CHM Chimkent 75.21 349 *eP* **P 03 17 08.6 +1.0**
IUG Iuzhnay 75.35 349 *eP* **P 03 17 09.4 +0.9**
KEST Kesra 75.46 38 P **P 03 17 10.6 +1.4**
comp=Z,2.6nm,0.6s,baz=338,slow=8.5,SNR=4.4
comp=Z,2.6nm,0.6s
KEST Kesra 75.46 38 IAmb IAmb 03 17 12.2
comp=Z,9.1nm,1.1s
BOAV Boa Vista 75.87 113 P **P 03 17 13.3 +1.7**
BOAV IAmb IAmb 03 17 16.0
comp=Z,8.0nm,1.0s
WHN Wuhan 76.35 311 P **P 03 17 13.8 -0.4**
BR131 Keskin Array S 76.84 17 IAmb IAmb 03 17 21.7
comp=Z,5.7nm,0.9s
BRTR Keskin Array B 76.84 17 P **P 03 17 18.8 +1.7**
comp=Z,3.7nm,0.8s,baz=336,slow=2.3,SNR=13
BRTR LR LR 03 54 04.6
comp=Z,29nm,18.7s,baz=83,slow=38
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 76.84 17 P **P 03 17 18.5 +1.5**
MDP Montagnes des 76.96 104 LR LR 03 48 53.7
comp=Z,33nm,21.8s,baz=199,slow=34
GNI Garni 77.59 9 LR LR 03 53 28.8
comp=Z,21nm,20.7s,baz=353,slow=37
CZSB Cruzeiro do Su 80.16 128 P **P 03 17 36.7 +1.3**
PPT Papeete 82.02 204 LR LR 03 45 02.9
comp=Z,68nm,19.5s,baz=319,slow=29
PPT2 Papeete2 82.04 204 *e*LR LR 03 43 30.6
comp=Z,64nm,24.2s
PZH PanZhiHua 84.25 320 P **P 03 17 56.4 -0.6**
EIL Elat 86.90 18 LR LR 03 58 24.0
comp=Z,22nm,19.3s,baz=279,slow=37
RAR Rarotonga 87.83 213 LR LR 03 49 13.6
comp=Z,40nm,19.4s,baz=264,slow=30
LPAZ La Paz 89.72 127 P **P 03 18 24.6 +0.5**
comp=Z,1.7nm,0.6s,baz=310,slow=1.3,SNR=12
comp=Z,1.7nm,0.6s
LPAZ La Paz 89.72 127 P **P 03 18 24.4 +0.3**
LPAZ IAmb IAmb 03 18 30.3
comp=Z,7.1nm,1.4s
VILB Vilhena 89.81 119 P **P 03 18 24.5 +0.7**
CMAR Chiang Mai Arr 92.66 319 P **P 03 18 38.0 +0.8**
comp=Z,1.0nm,0.3s,baz=360,slow=5.5,SNR=13
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 92.66 319 P **P 03 18 38.2 +1.0**
TORD Torodi Ar. Bea 93.90 52 P **P 03 18 43.8 +0.9**
comp=Z,2.3nm,0.6s,baz=328,slow=4.4,SNR=27
comp=Z,2.3nm,0.6s
DBIC Dimbokro 97.25 61 LR LR 03 58 40.5
comp=Z,28nm,18.9s,baz=53,slow=33
BDFB Brasilia 97.41 109 LR LR 04 06 37.4
comp=Z,19nm,18.6s,baz=298,slow=38
ASAR Alice Springs 116.17 269 PKP **PKiKP 03 24 07.8 -0.5**
comp=Z,0.7nm,0.9s,baz=5.8,slow=3.4,SNR=5.3
STKA Stephens Creek 119.57 257 PKP **PKiKP 03 24 14.2 -0.3**
comp=Z,2.2nm,0.6s,baz=8.8,slow=2.6,SNR=6.2
BOSA Boshof 140.87 45 PKhKP PKPpre 03 24 51.1
comp=Z,1.6nm,0.8s,baz=318,slow=3.6,SNR=4.2
VNDA Vanda 146.52 202 PKPbc **PKPab 03 25 05.1 -0.6**
comp=Z,4.1nm,0.7s,baz=346,slow=3.4,SNR=16
VNDA Vanda 146.52 202 PKPab 03 25 05.4 -0.3
QSPA South Pole Qui 152.06 180 PKPbc **PKiKP 03 25 19.8 +0.5**
comp=Z,12nm,0.6s,baz=297,slow=0.4,SNR=84
QSPA PKPab **PKPab 03 25 30.0 +1.3**
comp=Z,4.4nm,0.6s,baz=304,slow=3.5,SNR=5.6

IDC 25 03:17:17.8±4.1, 5°47S×148°91E, h0km, mb3.3/2, mbtmp3.5/2, Error ellipse: s-maj=131.9km s-min=50.9km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.19**	**223**	P	P	03 21 53.6	-0.7
	0.7nm,0.4s,baz=49,slow=12,SNR=10						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**23.15**	**217**	P	P	03 22 26.1	+0.1
	0.6nm,0.5s,baz=50,slow=8.4,SNR=19						
	0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.79**	**286**	PKPbc	PKPbc	03 37 02.6	-0.4
	0.3nm,0.8s,baz=61,slow=4.2,SNR=1.7						

SGS 25 03:24:26.9, 27°66N×37°46E, h9km, Ml1.6, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URD14	**Abu Rakah**	**0.33**	**131**	P	Pg	03 24 33.5	0.0
URD14				S	Sg	03 24 38.2	+0.3
URD14	**Abu Rakah**	**0.33**	**131**	P	Pg	03 24 33.5	0.0
URD14				S	Sg	03 24 38.2	+0.3
URD12	**Shuwaq**	**0.37**	**286**	P	Pg	03 24 34.9	+0.6
URD12	**Shuwaq**	**0.37**	**286**	P	Pg	03 24 34.8	+0.5
URD12				S	Sg	03 24 40.5	+1.2
URD15	**Abu Rakah**	**0.41**	**181**	P	Pg	03 24 35.0	+0.1
URD15	**Abu Rakah**	**0.41**	**181**	P	Pg	03 24 34.9	0.0
QLABS	**Al Qalibar**	**0.46**	**64**	P	Pg	03 24 35.8	-0.1
QLABS				S	Sg	03 24 42.1	+0.1
QLABS	**Al Qalibar**	**0.46**	**64**	P	Pg	03 24 35.8	-0.1
URD04	**Abu Rakah**	**0.60**	**197**	P	Pg	03 24 38.3	-0.3
URD04				S	Sg	03 24 45.9	-0.6
URD05	**Al Faraah**	**0.62**	**226**	P	Pg	03 24 38.6	-0.3
URD06	**Shuwaq**	**0.66**	**252**	P	Pg	03 24 39.2	-0.4
URD06				S	Sg	03 24 48.4	+0.1
URD06	**Shuwaq**	**0.66**	**252**	P	Pg	03 24 39.2	-0.4
URD01	**URD01**	**0.73**	**166**	P	Pg	03 24 40.4	-0.6
URD01	**URD01**	**0.73**	**166**	P	Pg	03 24 40.4	-0.6
URD01				S	Sg	03 24 49.9	-0.6
BIDS	**Bi'r al Bayda'**	**0.91**	**210**	P	Pg	03 24 43.5	-0.8
URD03	**Al Ula**	**0.98**	**181**	P	Pg	03 24 44.5	-1.4
TBKS	**Tabuk**	**0.99**	**305**	P	Pg	03 24 45.6	-0.4
TBKS				S	Sg	03 24 58.4	-0.4
DESA	**DESA**	**1.16**	**263**	P	Pb	03 24 48.0	-1.2
DESA	**DESA**	**1.16**	**263**	P	Pb	03 24 47.9	-1.3
SHQRE	**Shigry**	**1.17**	**282**	P	Pb	03 24 48.5	-0.8
STAIM	**STAIM**	**1.31**	**112**	P	Pn	03 24 49.8	-1.6
STAIM	**STAIM**	**1.31**	**112**	P	Pn	03 24 50.2	-1.3

SGS 25 03:42:06.9, 27°63N×37°46E, h10km, Ml2.2, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URD14	**Abu Rakah**	**0.31**	**126**	P	Pg	03 42 13.2	0.0
URD14				S	Sg	03 42 17.7	+0.4
URD14	**Abu Rakah**	**0.31**	**126**	P	Pg	03 42 13.1	0.0
URD14				S	Sg	03 42 17.7	+0.4
URD15	**Abu Rakah**	**0.38**	**181**	P	Pg	03 42 14.6	+0.2
URD12	**Shuwaq**	**0.38**	**291**	P	Pg	03 42 14.6	+0.1
URD12	**Shuwaq**	**0.38**	**291**	P	Pg	03 42 14.5	+0.1
QLABS	**Al Qalibar**	**0.47**	**61**	P	Pg	03 42 15.5	-0.7
QLABS	**Al Qalibar**	**0.47**	**61**	P	Pg	03 42 15.4	-0.7
URD04	**Abu Rakah**	**0.57**	**198**	P	Pg	03 42 17.9	-0.2
URD04				S	Sg	03 42 25.9	+0.3
URD04	**Abu Rakah**	**0.57**	**198**	P	Pg	03 42 17.8	-0.3
URD04				S	Sg	03 42 26.0	+0.3
URD05	**Al Faraah**	**0.59**	**228**	P	Pg	03 42 18.2	-0.3
URD05				S	Sg	03 42 26.2	-0.2
URD05	**Al Faraah**	**0.59**	**228**	P	Pg	03 42 18.2	-0.3
URD06	**Shuwaq**	**0.65**	**254**	P	Pg	03 42 19.0	-0.5
URD06				S	Sg	03 42 28.1	+0.1
URD06	**Shuwaq**	**0.65**	**254**	P	Pg	03 42 19.0	-0.5
URD06				S	Sg	03 42 28.0	+0.1
URD01	**URD01**	**0.70**	**165**	P	Pg	03 42 20.0	-0.4
URD01				S	Sg	03 42 29.9	+0.3
URD01	**URD01**	**0.70**	**165**	P	Pg	03 42 20.0	-0.5
BIDS	**Bi'r al Bayda'**	**0.88**	**211**	P	Pg	03 42 23.0	-0.8
URD03	**Al Ula**	**0.95**	**181**	P	Pg	03 42 24.1	-1.2
URD03				S	Sg	03 42 37.5	-0.1
URD03	**Al Ula**	**0.95**	**181**	P	Pg	03 42 24.1	-1.2
TBKS	**Tabuk**	**1.01**	**306**	P	Pg	03 42 25.2	-1.0
TBKS				S	Sg	03 42 38.4	-1.0
TBKS	**Tabuk**	**1.01**	**306**	P	Pg	03 42 25.2	-1.0
URD02	**Al Ula**	**1.06**	**160**	P	Pg	03 42 26.0	-1.4
URD02				S	Sg	03 42 40.0	-1.2
DESA	**DESA**	**1.16**	**264**	P	Pb	03 42 27.7	-1.4
DESA				S	Sb	03 42 43.3	-0.9
DESA	**DESA**	**1.16**	**264**	P	Pb	03 42 27.6	-1.4
SHQRE	**Shigry**	**1.17**	**284**	P	Pb	03 42 28.2	-1.2
SHQRE	**Shigry**	**1.17**	**284**	P	Pb	03 42 28.2	-1.2
STAIM	**STAIM**	**1.30**	**110**	P	Pn	03 42 29.5	-1.7
STAIM				S	Sb	03 42 47.5	-0.7
STAIM	**STAIM**	**1.30**	**110**	P	Pn	03 42 29.5	-1.7
NTAIM	**NTAIM**	**1.36**	**66**	P	Pn	03 42 30.3	-1.8
NTAIM				S	Sb	03 42 48.7	-1.6
WTBKS	**WTBKS**	**1.44**	**289**	P	Pn	03 42 32.7	-0.6
WTBKS				S	Sn	03 42 52.0	-0.4
EWJHS	**Al Wajh**	**1.63**	**206**	P	Pn	03 42 34.5	-1.2
MWLHS	**Almuwaylih**	**1.73**	**274**	P	Pn	03 42 37.6	+0.5
BDAS	**Al Bad`**	**2.23**	**292**	P	Pn	03 42 42.9	-1.1

TRN 25 03:44:00.0, 10°25N×62°30W, h12km, MD3.5, Gulf of Paria., Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.86**	**59**	*eP*	Pn	03 44 26.6	+8.7
DMDM				*eS*	Sn	03 44 38.3	+8.0
PSMG	**Mucurapo Girls**	**0.86**	**61**	*eP*	Pn	03 44 27.1	+9.2
PSMG				*eS*	Sn	03 44 39.7	+9.3
PSKH	**Kent House, Po**	**0.87**	**61**	*eP*	Pn	03 44 26.6	+8.5
PSKH				*eS*	Sn	03 44 40.3	+10
TRN	**Trinidad (W)**	**0.96**	**66**	*eP*	Pn	03 44 28.6	+9.2
TRN				*eS*	Sn	03 44 42.6	+10
GRGR	**Grenville**	**1.98**	**19**	*eP*	Pg	03 44 44.1	+6.2
GRGR				*eS*	Sg	03 45 08.2	+4.6
GCMP	**Grenada, Carri**	**2.38**	**21**	*eP*	Pg	03 44 49.5	+3.8
GCMP				*eS*	Sg	03 45 17.9	+1.3

*IDC **25** 03:58:51.2±2.1, 15°90N×145°02E, h0km, mb4.0/10, mbtmp4.0/10, MS3.1/2, Error ellipse: s-maj=70.2km s-min=26.3km az=85.0*
*NEIC **25** 03:58:52.4±1.4, 15°6N±0°1×144°9E±0°1, h10km±1km, mb4.5/5, Error ellipse: s-maj=27.8km s-min=6.9km az=221.0*

ISC 25 03:58:53.3±0.6, 15°8N±0°1×144°9E±0°1, h17km, n26, σ1§16/20, mb4.2/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**1.00**	**122**		**Pg**	**03 59 13.2**	**+0.5**
DPSS				Sn	**Sg**	**03 59 26.4**	**+0.4**
H11S3	**WAKE ISLAND Hy**	**20.98**	**79**	T	T	04 25 30.0	
	baz=264						
H11S1	**WAKE ISLAND Hy**	**20.99**	**79**	T	T	04 25 32.4	
	baz=264						
H11S2	**WAKE ISLAND Hy**	**21.00**	**79**	T	T	04 25 29.4	
	baz=264						
H11N1	**WAKE ISLAND Hy**	**21.29**	**76**	T	T	04 25 48.3	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**21.30**	**76**	T	T	04 25 48.8	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**21.31**	**76**	T	T	04 25 50.1	
	baz=265						
KSRS	**Korea Array**	**26.31**	**328**	P	**P**	**04 04 27.8**	**-0.3**
	2.3nm,0.9s,baz=147,slow=12,SNR=5.2						
	2.3nm,0.9s						
WRA	**Warramunga Arr**	**36.99**	**197**	P	**P**	**04 06 03.9**	**+1.8**
	1.3nm,0.9s,baz=20,slow=8.7,SNR=6.3						
	1.3nm,0.9s						
INKA	**Innaminka**	**43.45**	**185**	P	**P**	**04 06 54.1**	**-1.5**
INKA				IAmb	IAmb	04 07 07.6	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.93**	**280**	P	**P**	**04 07 00.0**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=78,slow=7.3,SNR=4.1						

CMAR LR LR 04 26 57.7
comp=Z,30nm,18.3s,baz=85,slow=38
comp=Z,1.1nm,0.3s
SONM Songino Array 44.99 324 P **P 04 07 08.3 +0.4**
comp=Z,6.0nm,0.8s,baz=116,slow=6.6,SNR=4.8
comp=Z,0.6nm,0.8s
SONM Songino Array 44.99 324 P **P 04 07 10.8 +2.9**
SONM IAmb IAmb 04 07 18.6
comp=Z,4.3nm,1.5s
TIXI Tiksi 56.67 354 LR LR 04 39 30.1
comp=Z,12nm,18.4s,baz=188,slow=43
ZALV Zalesovo Beam 59.88 324 P **P 04 08 58.5 +0.4**
comp=Z,0.4nm,0.3s,baz=122,slow=5.2,SNR=4.0
comp=Z,0.4nm,0.3s
MKAR Makanchi Array 59.96 315 P **P 04 08 59.7 +0.8**
comp=Z,0.4nm,0.6s,baz=101,slow=7.5,SNR=4.9
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 59.96 315 P **P 04 08 57.8 -1.1**
KURK Kurchatov 62.95 319 P **P 04 09 19.3 +0.3**
KURK IAmb IAmb 04 09 26.0
comp=Z,4.9nm,1.1s
KURBB Kurchatov Arra 63.00 319 P **P 04 09 19.9 +0.7**
comp=Z,3.0nm,0.9s,baz=98,slow=6.4,SNR=14
comp=Z,3.0nm,0.9s
BSWZ Blackbird Sta 63.16 156 P **P 04 09 18.9 -1.4**
NRIK Noril'sk 64.09 341 P **P 04 09 24.8 -1.3**
BVAR Borovoye Array 68.25 321 P **P 04 09 54.2 +1.0**
comp=Z,2.0nm,0.8s,baz=95,slow=6.4,SNR=6.0
comp=Z,2.0nm,0.8s
AB31 Akbulak array 74.96 317 P **P 04 10 33.5 -0.1**
ABKAR Akbulak array 74.96 317 P **P 04 10 33.2 -0.4**
ARCES ARCESS Array B 85.02 342 P **P 04 11 27.8 +0.1**
comp=Z,4.1nm,1.0s,baz=43,slow=11,SNR=3.9
comp=Z,4.1nm,1.0s
FINES FINESS Array B 89.20 335 P **P 04 11 47.1 -0.9**
comp=Z,1.8nm,0.9s,baz=71,slow=6.4,SNR=1.8
comp=Z,1.8nm,0.9s

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*IDC **25** 04:00:05.0±2.3, 15°.76N×145°.43E, h0km, mb4.2/10, mbtmp4.3/11, ML4.1/1, MS3.4/16, Error ellipse: s-maj=61.6km s-min=30.2km az=96.0*
*NEIC **25** 04:00:09.2±2.2, 15°.7N±0°.1×144°.9E±0°.1, h10km±1km, mb4.6/10, Error ellipse: s-maj=28.4km s-min=10.9km az=211.0*
*GCMT **25** 04:00:13.2±0.3, 15°.90N±0°.04×144°.85E±0°.02, h18km±1km, MW4.8/100, Moment Tensor Solution. s20,c21; s100,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.36±.15; $M_{\theta\theta}$0.35±.08; $M_{\phi\phi}$2.01±.10; $M_{r\theta}$0.07±.29; $M_{\theta\phi}$-0.04±.05; $M_{r\phi}$0.02±.17; Best double couple: M_o2.18600×10^{16} NP1:ϕ_s357.00000°, δ45.00000°, λ-92.00000°. NP2:ϕ_s180.00000°, δ45.00000°, λ-88.00000°. Principal axes: T 2.0110, Plg0.0000°, Azm269.0000°; N 0.3490, Plg1.0000°, Azm359.0000°; P -2.3620, Plg89.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 04:00:09.9±0.6, 15°.8N±0°.1×144°.9E±0°.1, h17km, n49, σ1§27/29, mb4.5/14, MS3.4/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**0.99**	**122**	Pn	**Pg**	**04 00 29.7**	**+0.4**
DPSS				Sn	**Sn**	**04 00 43.0**	**+0.2**
GUMO	**Guam**	**2.17**	**181**	LR	LR	04 01 12.4	
	comp=Z,184nm,21.8s,baz=26,slow=30						
JCJ	**Chichijima**	**11.55**	**348**	LR	LR	04 06 27.9	
	comp=Z,189nm,21.1s,baz=146,slow=33						
JAY	**Jayapura**	**18.64**	**193**	P	**P**	**04 04 25.5**	**-1.6**
JAY	0.5nm,0.3s,baz=142,slow=1.0,SNR=3.7			LR	LR	04 11 11.0	
	comp=Z,108nm,18.8s,baz=344,slow=36 17nm,0.9s						
JAY	**Jayapura**	**18.64**	**193**	P	**P**	**04 04 25.7**	**-1.4**
JOW	**Kunigami**	**18.99**	**308**	LR	LR	04 10 13.0	
	comp=Z,414nm,20.9s,baz=120,slow=31						
H11S3	**WAKE ISLAND Hy**	**20.98**	**79**	T	T	04 26 44.8	
	baz=267,slow=75,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**20.99**	**79**	T	T	04 26 44.7	
	baz=267,slow=75,SNR=10						
H11S2	**WAKE ISLAND Hy**	**21.00**	**79**	T	T	04 26 39.1	
	baz=267,slow=75,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**21.29**	**76**	T	T	04 27 06.5	
	baz=264,slow=75,SNR=102						
H11N2	**WAKE ISLAND Hy**	**21.30**	**76**	T	T	04 27 07.0	
	baz=264,slow=75,SNR=74						
H11N3	**WAKE ISLAND Hy**	**21.31**	**76**	T	T	04 27 02.4	
	baz=264,slow=75,SNR=95						
SIJI	**Sorong**	**21.34**	**220**	LR	LR	04 11 28.5	
	comp=Z,261nm,22.0s,baz=288,slow=32						
MJAR	**Matsushiro Arr**	**21.53**	**345**	P	**P**	**04 04 56.5**	**-1.8**
MJAR	5.0nm,1.1s,baz=164,slow=9.4,SNR=4.8			LR	LR	04 12 15.9	
	comp=Z,161nm,21.6s,baz=170,slow=34 5.0nm,1.1s						
MJAR	**Matsushiro Arr**	**21.53**	**345**	P	**P**	**04 04 55.0**	**-3.3**
FAKI	**Fak Fak**	**22.41**	**215**	P	P	04 05 00.1	-7.7
TGY	**Tagaytay City**	**23.23**	**269**	LR	LR	04 12 14.9	
	comp=Z,634nm,21.6s,baz=72,slow=31						
KSRS	**Korea Array**	**26.32**	**328**	P	**P**	**04 05 45.2**	**+0.4**
	6.3nm,1.1s,baz=144,slow=11,SNR=7.4 6.3nm,1.1s						
KSAR	**Wonju Array Be**	**26.33**	**328**	P	**P**	**04 05 45.7**	**+0.8**
ASAJ	**Asahikawa**	**28.32**	**356**	LR	LR	04 19 45.4	
	comp=Z,24nm,18.1s,baz=178,slow=42						
HNR	**Honiara**	**29.14**	**148**	LR	LR	04 16 44.6	
	comp=Z,5.0nm,20.8s,baz=56,slow=35						
USRK	**Ussuriysk Ar.**	**30.38**	**341**	LR	LR	04 18 38.0	
	comp=Z,47nm,18.4s,baz=167,slow=36						
PETK	**Petropavlovsk-**	**38.59**	**12**	LR	LR	04 20 34.5	
	comp=Z,46nm,21.6s,baz=182,slow=32						
PETK	**Petropavlovsk-**	**38.59**	**12**	P	**P**	**04 07 34.0**	**+2.1**
LZDM	**Lanzhou Array**	**41.80**	**307**	P	**P**	**04 07 59.7**	**+0.5**
	2.3nm,0.5s,baz=120,slow=8.8,SNR=4.2 2.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.93**	**280**	P	**P**	**04 08 17.9**	**+1.6**
	1.1nm,0.3s,baz=71,slow=6.5,SNR=6.8 1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.93**	**280**		**P**	**04 08 17.4**	**+1.1**
SONM	**Songino Array**	**44.99**	**324**	P	**P**	**04 08 25.0**	**+0.4**
	0.4nm,0.6s,baz=150,slow=10,SNR=3.7 0.4nm,0.6s						
SONM	**Songino Array**	**44.99**	**324**	P	**P**	**04 08 25.4**	**+0.8**
SONM				IAmb	IAmb	04 08 33.5	
	comp=Z,2.5nm,1.1s						
TLY	**Talaya**	**48.55**	**327**	LR	LR	04 30 23.9	
	comp=Z,34nm,18.5s,baz=119,slow=37						
ZAA0	**Zalesovo Array**	**59.89**	**324**	P	**P**	**04 10 13.5**	**-1.3**
ZAA0				IAmb	IAmb	04 10 19.7	
	comp=Z,4.6nm,1.2s						
ZALV	**Zalesovo Beam**	**59.89**	**324**	P	**P**	**04 10 14.1**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=102,slow=4.9,SNR=5.6						
ZALV				LR	LR	04 35 47.0	
	comp=Z,14nm,20.7s,baz=72,slow=36 comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**59.89**	**324**	P	**P**	**04 10 14.3**	**-0.5**
URZ	**Urewera**	**61.65**	**152**	LR	LR	04 34 25.9	
	comp=Z,36nm,21.0s,baz=333,slow=34						
KURK	**Kurchatov**	**62.96**	**319**		**P**	**04 10 35.7**	**+0.1**
KURK				IAmb	IAmb	04 10 42.8	
	comp=Z,11nm,1.2s						
KURBB	**Kurchatov Arra**	**63.00**	**319**	P	**P**	**04 10 36.1**	**+0.2**
	comp=Z,6.5nm,1.1s,baz=99,slow=6.5,SNR=9.8 comp=Z,6.5nm,1.1s						
RPZ	**Rata Peaks**	**63.85**	**159**	LR	LR	04 37 14.6	
	comp=Z,7.7nm,19.8s,baz=346,slow=35						
NRIK	**Noril'sk**	**64.09**	**341**	P	**P**	**04 10 42.2**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=87,slow=3.0,SNR=6.2 comp=Z,4.0nm,0.7s						
NRIK	**Noril'sk**	**64.09**	**341**	P	**P**	**04 10 42.3**	**-0.4**
MANEM	**Manem**	**67.38**	**304**	P	**P**	**04 11 06.2**	**+1.3**
MANEM				IAmb	IAmb	04 11 15.8	
	comp=Z,30nm,1.4s						
KK31	**Karatay Array**	**68.07**	**310**	P	**P**	**04 11 06.9**	**-1.9**
KK31				IAmb	IAmb	04 11 10.6	
	comp=Z,6.8nm,1.4s						
KKAR	**Karatay Array**	**68.07**	**310**	P	**P**	**04 11 08.1**	**-0.7**
BVAR	**Borovoye Array**	**68.26**	**321**	P	**P**	**04 11 09.5**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=78,slow=6.8,SNR=6.6 comp=Z,2.5nm,0.8s						
SHAA	**Shahritus**	**70.19**	**305**	P	**P**	**04 11 23.6**	**+1.4**
SHAA				IAmb	IAmb	04 11 31.5	
	comp=Z,23nm,1.5s						
AB31	**Akbulak array**	**74.97**	**317**		**P**	**04 11 50.0**	**-0.3**
AB31				IAmb	IAmb	04 11 51.7	
	comp=Z,9.5nm,1.5s						
ABKAR	**Akbulak array**	**74.97**	**317**		**P**	**04 11 50.2**	**-0.1**
ARCES	**ARCESS Array B**	**85.03**	**342**	P	**P**	**04 12 42.8**	**-1.5**
	comp=Z,9.3nm,1.2s,baz=50,slow=4.9,SNR=5.0 comp=Z,9.3nm,1.2s						
FINES	**FINESS Array B**	**89.21**	**335**	LR	LR	04 57 06.6	
	comp=Z,31nm,18.1s,baz=72,slow=38						
MMAI	**Mount Meron Ar**	**97.11**	**307**	LR	LR	05 02 19.8	
	comp=Z,20nm,20.2s,baz=20,slow=38						

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*DJA **25** 04:00:56.4±6.0, 5°.5S±15°.1×15°.6E±4°.6, h104km±28km, M5.2/12, mB5.6/9, mb5.3/12, Mw(mB)5.1/9*
*BJI **25** 04:01:10.7, 5°.66S×154°.99E, h183km, mB4.8/3, mb4.7/42*
*NEIC **25** 04:01:12.1±1.8, 5°.79S±0°.08×154°.65E±0°.05, h165km±5km, mb4.6/179, Error ellipse: s-maj=14.1km s-min=1.8km az=210.0*
*GFZ **25** 04:01:13.7±0.3, 6°S±3°×15°.4E±°, h189km, M4.9/25, mb4.8/25*
*IDC **25** 04:01:15.7±1.6, 5°.86S×154°.58E, h206km±14km, mb4.2/28, mbtmp4.7/31, Error ellipse: s-maj=11.1km s-min=7.5km az=104.0*
ISC 25 04:01:14.6±0.3, 5°.83S±0°.05×154°.62E±0°.06, h200km, n463, σ1§17/392, mb4.6/121, 2C-2D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.94**	**304**		**Pn**	**04 01 59.7**	**-3.8**
PMG	**Port Moresby**	**8.20**	**244**	P	**Pn**	**04 03 10.8**	**+0.4**
	123nm,0.9s,baz=58,slow=8.2,SNR=12						
PMG				S	**Sn**	**04 04 44.4**	**+1.6**
	42nm,0.9s,baz=45,slow=10.0,SNR=3.1						
PMG	**Port Moresby**	**8.20**	**244**		**Pn**	**04 03 10.1**	**-0.4**
PMG	**Port Moresby**	**8.20**	**244**	P	**Pn**	**04 03 09.4**	**-1.1**
	1µm146nm,1.1s						
PMG	**Port Moresby**	**8.20**	**244**	P	**Pn**	**04 03 07.8**	**-2.7**
PATS	**Pohnpei**	**13.12**	**16**	P	**P**	**04 04 12.9**	**-3.7**
COEN	**Coen**	**13.86**	**234**		**P**	**04 04 24.6**	**-0.3**
CTA	**Charters Tower**	**16.34**	**209**	P	**Pn**	**04 04 53.4**	**+0.4**
	21nm,0.8s,baz=26,slow=13,SNR=24						
CTAO	**Charters Tower**	**16.34**	**209**	P	**Pn**	**04 04 52.9**	**-0.2**
CTAO				IAmb	IAmb	04 04 55.6	
	comp=Z,34nm,0.9s						
KOUNC	**Koumac, New Ca**	**17.38**	**148**	P	**Pn**	**04 05 03.5**	**-2.0**
KOUNC				IAmb	IAmb	04 05 13.1	
	comp=Z,56nm,1.4s						
TARA	**Tarawa**	**19.63**	**69**	P	**Pn**	**04 05 30.3**	**-1.7**
EIDS	**Eidsvold**	**19.72**	**190**	P	**P**	**04 05 28.0**	**-1.0**
EIDS	**Eidsvold**	**19.72**	**190**	P	**P**	**04 05 28.7**	**-0.3**
DZM	**Mont Dzumac**	**19.78**	**146**	P	**Pn**	**04 05 30.2**	**-3.7**
	comp=Z,42nm,0.5s,baz=264,slow=7.7,SNR=93						
ONTNC	**Ouen Toro**	**19.98**	**146**	P	**P**	**04 05 31.6**	**-0.2**
OUENC	**Ouen Island, N**	**20.28**	**146**	P	Pn	04 05 35.3	-4.6
QIS	**Mount Isa**	**20.65**	**223**	P	**P**	**04 05 37.5**	**-1.5**
RMQ	**Roma**	**21.29**	**195**	P	**P**	**04 05 45.8**	**+0.1**
FAKI	**Fak Fak**	**22.49**	**276**	P	**P**	**04 05 57.3**	**-0.2**
FAKI	**Fak Fak**	**22.49**	**276**	P	**P**	**04 05 56.4**	**-1.1**
QLP	**Quilpie**	**22.89**	**205**	P	**P**	**04 06 01.0**	**+0.1**
SIJI	**Sorong**	**23.82**	**281**	P	**P**	**04 06 10.6**	**+0.9**
	comp=Z,26nm,0.5s,baz=80,slow=12,SNR=4.4 comp=Z,26nm,0.5s						
SIJI	**Sorong**	**23.82**	**281**	P	**P**	**04 06 10.9**	**+1.3**
	comp=Z,798nmcomp=Z,38nm,0.7s						
SIJI	**Sorong**	**23.82**	**281**	P	**P**	**04 06 08.6**	**-1.0**
SWI	**Sorong**	**23.82**	**281**	P	**P**	**04 06 10.7**	**+1.1**
	comp=Z,48nm,0.6s						
SWI	**Sorong**	**23.82**	**281**	P	**P**	**04 06 09.1**	**-0.6**
WR8	**Warramunga Arr**	**24.07**	**232**		**P**	**04 06 12.5**	**+0.6**
WR8				IAmb	IAmb	04 06 13.7	
	comp=Z,15nm,0.8s						
WRAB	**Tennant Creek**	**24.18**	**233**	P	**P**	**04 06 11.4**	**-1.4**
MTN	**Manton Dam**	**24.18**	**252**	P	**P**	**04 06 13.5**	**+0.7**
MTN				IAmb	IAmb	04 06 43.9	
	comp=Z,18nm,1.4s						
MTN	**Manton Dam**	**24.18**	**252**	P	**P**	**04 06 11.9**	**-1.0**
WRA	**Warramunga Arr**	**24.19**	**233**	P	**P**	**04 06 13.3**	**+0.4**
	comp=Z,8.3nm,0.5s,baz=60,slow=9.7,SNR=126						
WRA				PcP	**PcP**	**04 09 48.7**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=58,slow=2.4,SNR=8.0						
WRA				S	**S**	**04 10 17.0**	**+0.4**
	comp=Z,5.2nm,1.1s,baz=53,slow=15,SNR=7.5 comp=Z,8.3nm,0.5s						
WRA	**Warramunga Arr**	**24.19**	**233**	P	**P**	**04 06 12.2**	**-0.8**
ARMA	**Armidale**	**24.62**	**186**	P	**P**	**04 06 18.2**	**+1.4**
ARMA				IAmb	IAmb	04 06 18.6	
	comp=Z,16nm,0.7s						
ARMA	**Armidale**	**24.62**	**186**	P	**P**	**04 06 17.0**	**+0.2**
INKA	**Innaminka**	**25.46**	**210**		**P**	**04 06 24.6**	**+0.3**
INKA				IAmb	IAmb	04 06 25.0	
	comp=Z,13nm,0.5s						
MSVF	**Nonsavu**	**25.77**	**119**	P	**P**	**04 06 28.1**	**+0.9**
AS31	**Alice Springs**	**26.68**	**226**		**P**	**04 06 35.3**	**-0.1**
ASAR	**Alice Springs**	**26.68**	**226**	P	**P**	**04 06 35.2**	**-0.1**
	comp=Z,3.3nm,0.3s,baz=57,slow=9.3,SNR=90						
ASAR				PcP	**PcP**	**04 09 54.6**	**+0.8**
	comp=Z,4.2nm,0.5s,baz=64,slow=2.5,SNR=15						
ASAR				S	**S**	**04 10 55.2**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=56,slow=14,SNR=7.3 comp=Z,3.3nm,0.3s						
ASAR	**Alice Springs**	**26.68**	**226**	P	**P**	**04 06 34.6**	**-0.7**
CMSA	**Cobar Meteorol**	**26.90**	**197**	P	**P**	**04 06 37.0**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**26.95**	**26**	T	T	04 34 50.9	
	baz=207,slow=73,SNR=16						
H11S2	**WAKE ISLAND Hy**	**26.95**	**26**	T	T	04 34 48.6	
	baz=207,slow=73,SNR=21						
H11S1	**WAKE ISLAND Hy**	**26.96**	**26**	T	T	04 34 50.7	
	baz=207,slow=73,SNR=21						
NLAI	**Namlea**	**27.55**	**274**	P	**P**	**04 06 41.2**	**-1.9**
STKA	**Stephens Creek**	**28.63**	**204**	P	**P**	**04 06 52.3**	**-0.2**
	comp=Z,3.7nm,0.4s,baz=29,slow=11,SNR=14						
STKA				PcP	**PcP**	**04 09 59.4**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=67,slow=4.9,SNR=3.5 comp=Z,3.7nm,0.4s						
STKA	**Stephens Creek**	**28.63**	**204**	P	**P**	**04 06 52.0**	**-0.5**
CAN	**Canberra**	**29.80**	**189**	P	**P**	**04 07 02.9**	**+0.1**
SGSI	**Sangihe**	**30.55**	**287**	P	**P**	**04 07 08.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**30.80**	**244**	P	**P**	**04 07 11.3**	**-0.4**
	comp=Z,13nm,0.6s,baz=66,slow=8.7,SNR=10 comp=Z,13nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.80**	**244**	P	**P**	**04 07 11.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.80**	**244**	P	**P**	**04 07 10.0**	**-1.8**
BBOO	**Buckleboo**	**31.93**	**210**	P	**P**	**04 07 21.4**	**-0.2**
BBOO	**Buckleboo**	**31.93**	**210**	P	**P**	**04 07 21.0**	**-0.6**
LUWI	**Luwuk**	**32.13**	**277**	P	**P**	**04 07 23.5**	**-0.1**
LUWI	**Luwuk**	**32.13**	**277**	P	**P**	**04 07 22.1**	**-1.4**
MMRI	**Maumere**	**32.23**	**263**	P	**P**	**04 07 22.3**	**-2.1**
TOO	**Toolangi**	**32.67**	**193**	P	**P**	**04 07 27.5**	**-0.4**
APSI	**Ampana**	**33.26**	**277**	P	**P**	**04 07 31.6**	**-1.7**
MGBR	**Mount Gambier**	**34.23**	**200**	P	**P**	**04 07 42.5**	**+1.1**
TOLI2	**Tolitoli**	**34.48**	**280**	P	**P**	**04 07 43.4**	**-0.5**
TOLI2	**Tolitoli**	**34.48**	**280**	P	**P**	**04 07 42.6**	**-1.3**
PCI	**Palu**	**35.05**	**277**	P	**P**	**04 07 50.3**	**+1.5**
FORT	**Forrest**	**35.18**	**222**	P	**P**	**04 07 49.5**	**-0.2**
FORT				IAmb	IAmb	04 07 55.2	
	comp=Z,14nm,0.6s						
MPSI	**Mapaga**	**35.20**	**279**	P	**P**	**04 07 48.4**	**-1.6**
TOZ	**Tahuroa Road**	**37.01**	**152**	P	**P**	**04 08 06.8**	**+1.8**
URZ	**Urewera**	**38.20**	**151**	P	**P**	**04 08 16.0**	**+1.0**
THZ	**Tophouse**	**39.31**	**158**		**P**	**04 08 24.7**	**+0.4**
INZ	**Inchbonnie**	**39.65**	**160**	P	**P**	**04 08 27.3**	**+0.3**
LTZ	**Lake Taylor**	**39.98**	**160**	P	**P**	**04 08 30.5**	**+0.8**
MEEK	**Meekatharra**	**40.05**	**235**	P	**P**	**04 08 29.6**	**-1.0**
PLWZ	**Palliser**	**40.06**	**156**	P	**P**	**04 08 30.1**	**-0.3**
KHZ	**Kahutara**	**40.11**	**158**	P	**P**	**04 08 30.3**	**-0.5**
OXZ	**Oxford**	**40.38**	**160**	P	**P**	**04 08 32.7**	**-0.3**
RPZ	**Rata Peaks**	**40.41**	**162**	P	**P**	**04 08 33.8**	**+0.6**
GVZ	**Greta Valley S**	**40.41**	**159**	P	**P**	**04 08 33.5**	**+0.3**
YULB	**Yu-li**	**43.62**	**313**	IAmb	IAmb	04 09 01.7	
	comp=Z,15nm,0.7s						
YULB	**Yu-li**	**43.62**	**313**	P	**P**	**04 08 58.8**	**-0.7**
NACB	**Ninganchiao**	**43.88**	**314**	P	**P**	**04 09 02.5**	**+1.0**
NACB	**Ninganchiao**	**43.88**	**314**	P	**P**	**04 09 01.1**	**-0.4**
TPUB	**Ta-pu**	**44.05**	**312**	P	**P**	**04 09 03.1**	**+0.2**
TPUB				IAmb	IAmb	04 09 03.6	
	comp=Z,20nm,0.7s						
SSLB	**Suanglung**	**44.11**	**313**	P	**P**	**04 09 04.0**	**+0.7**
SSLB				IAmb	IAmb	04 09 05.1	
	comp=Z,16nm,0.6s						
JNU	**Nakatsue**	**44.82**	**331**	P	**P**	**04 09 08.8**	**0.0**
	comp=Z,8.9nm,0.7s,baz=90,slow=5.1,SNR=3.4 comp=Z,8.9nm,0.7s						
JNU	**Nakatsue**	**44.82**	**331**	IAmb	IAmb	04 09 11.7	
	comp=Z,14nm,0.7s						
MJAR	**Matsushiro Arr**	**44.87**	**341**	P	**P**	**04 09 08.7**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=165,slow=9.6,SNR=2.2						
MJAR				PcP	**PcP**	**04 10 47.6**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=164,slow=3.7,SNR=5.6 comp=Z,0.8nm,0.5s						
BBJI	**Bungbulang**	**46.66**	**265**	P	**P**	**04 09 23.1**	**-0.6**
BBJI	**Bungbulang**	**46.66**	**265**	P	**P**	**04 09 21.8**	**-1.9**
KSRS	**Korea Array**	**49.74**	**332**	P	**P**	**04 09 46.7**	**0.0**
	comp=Z,3.7nm,0.8s,baz=147,slow=7.6,SNR=8.8 comp=Z,3.7nm,0.8s						
QIZ	**Qiongzhong**	**50.55**	**300**	IAmb	IAmb	04 09 55.6	
	comp=Z,15nm,0.9s						
NJ2	**Nanjing**	**50.79**	**320**	*eP*	P	04 09 57.4	+2.8
NJ2				pmax	pmax		
	comp=Z,23nm,0.6s						
WHN	**Wuhan**	**52.85**	**316**	P	**P**	**04 10 10.9**	**+1.0**
USRK	**Ussuriysk Ar.**	**53.82**	**340**	P	**P**	**04 10 17.1**	**+0.5**
	comp=Z,4.3nm,1.0s,baz=160,slow=12,SNR=5.8 comp=Z,4.3nm,1.0s						
BNX	**BinXian**	**56.80**	**337**	⇓P	**P**	**04 10 38.3**	**+0.4**
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	**HongShan**	**56.86**	**322**	⇑P	**P**	**04 10 39.1**	**+0.6**
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN	**Xi'an**	**58.61**	**316**	P	**P**	**04 10 50.6**	**-0.3**
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
PEA0B	**Petropavlovsk-**	**58.78**	**2**	P	**P**	**04 10 52.3**	**+0.7**
PEA0B				IAmb	IAmb	04 10 56.9	
	comp=Z,6.5nm,0.8s						
PETK	**Petropavlovsk-**	**58.78**	**2**	P	**P**	**04 10 52.8**	**+1.2**
	comp=Z,6.2nm,0.6s,baz=172,slow=6.0,SNR=22 comp=Z,6.2nm,0.6s						
KMI2	**Kunming**	**59.06**	**304**	P	**P**	**04 10 56.3**	**+1.9**
KMI2				S	S	04 18 54.8	+9.0
KMI2				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI2				L	L		
	comp=Z,110nm,14.7s						
KMI2				L	L		
	comp=Z,210nm,21.1s						
KMI2				L	L		
	comp=Z,240nm,18.3s						
CMAR	**Chiang Mai Arr**	**59.95**	**295**	P	**P**	**04 11 01.7**	**+1.5**
	comp=Z,15nm,0.8s,baz=115,slow=5.1,SNR=49 comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**59.95**	**295**	P	**P**	**04 11 01.1**	**+0.9**
CHTO	**Chiang Mai**	**60.06**	**295**	P	**P**	**04 11 01.9**	**+0.8**
PZH	**PanZhiHua**	**60.44**	**305**	P	P	04 11 06.6	+3.0
XLT	**XiLinHaoTe**	**60.48**	**329**	*eP*	**P**	**04 11 03.4**	**-0.1**
XLT				pmax	pmax		
	comp=Z,14nm,0.5s						
CD2	**Chengdu**	**60.78**	**310**	P	**P**	**04 11 06.4**	**+0.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
HHC	**Hu-ho-hao-te**	**60.94**	**324**	*eP*	P	04 11 10.3	+3.6
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HILR	**Hailar Array B**	**62.94**	**335**	P	**P**	**04 11 20.6**	**+0.9**
	comp=Z,6.8nm,0.7s,baz=151,slow=9.4,SNR=4.7 comp=Z,6.8nm,0.7s						
LZH	**Lanzhou**	**63.23**	**315**	*eP*	**P**	**04 11 23.8**	**+1.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZDM	**Lanzhou Array**	**63.27**	**315**	P	**P**	**04 11 23.0**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=150,slow=6.7,SNR=6.3 comp=Z,1.2nm,0.3s						
CASY	**Casey**	**67.58**	**198**	P	**P**	**04 11 49.7**	**+0.6**
CASY				IAmb	IAmb	04 11 50.1	
	comp=Z,6.7nm,0.6s						
GTA2	**Gaotai**	**67.71**	**317**	*eP*	**P**	**04 11 52.0**	**+1.3**
GTA2				pmax	pmax		
	comp=Z,13nm,1.0s						
UNV	**Unalaska Valle**	**67.82**	**24**	P	**P**	**04 11 51.4**	**+0.6**
UNV	**Unalaska Valle**	**67.82**	**24**	P	**P**	**04 11 51.5**	**+0.7**
	baz=222						
SONM	**Songino Array**	**68.16**	**327**	P	**P**	**04 11 54.5**	**+1.2**
	comp=Z,3.5nm,0.5s,baz=141,slow=5.4,SNR=23 comp=Z,3.5nm,0.5s						
SONM	**Songino Array**	**68.16**	**327**	P	**P**	**04 11 54.8**	**+1.4**
SONM				IAmb	IAmb	04 11 55.6	
	comp=Z,10nm,1.1s						
SHL	**Shillong**	**68.39**	**300**	P	**P**	**04 11 55.6**	**+0.3**
SEY	**Seymchan**	**68.59**	**359**	P	**P**	**04 11 56.3**	**+0.8**
	comp=Z,2.7nm,0.2s,baz=160,slow=4.6,SNR=6.0 comp=Z,2.7nm,0.2s						
SPIA	**Saint Paul Isl**	**69.00**	**20**	P	**P**	**04 11 59.1**	**+1.0**
	baz=218						
SDPT	**Sand Point**	**71.36**	**25**	P	**P**	**04 12 13.2**	**+0.7**
	baz=228						
CHNA	**Chernabura Isl**	**71.40**	**26**	P	**P**	**04 12 14.0**	**+1.3**
	baz=229						
VNDA	**Vanda**	**71.75**	**178**	P	**P**	**04 12 15.5**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=334,slow=6.4,SNR=9.9 comp=Z,4.7nm,0.8s						
VNDA	**Vanda**	**71.75**	**178**	P	**P**

	baz=228					
Q18K	Katmai Hardscr	75.78	25	P	P	04 12 39.0 +0.7
	baz=232					
L16K	Owhat River	76.05	21	IAmb	IAmb	04 12 41.6
	comp=Z,6.3nm,0.7s					
L16K	Owhat River	76.05	21	P	P	04 12 41.0 +1.3
	baz=227					
N17K	Nushagak Hills	76.10	22	P	P	04 12 41.3 +1.4
	baz=230					
P18K	Big Mountain,	76.15	24	P	P	04 12 41.1 +0.8
	baz=232					
ANM	Nome	76.23	17	P	P	04 12 41.7 +1.1
	baz=221					
KDAK	Kodiak Island	76.29	26	P	P	04 12 41.9 +0.9
	baz=235					
TNA	Tin City	76.31	15	P	P	04 12 42.2 +1.3
	baz=218					
O18K	Koktuh Hills	76.44	24	P	P	04 12 43.2 +1.2
	baz=232					
M17K	Holitna River	76.58	22	P	P	04 12 44.3 +1.7
	baz=229					
F14K	Arctic Creek	76.66	16	P	P	04 12 44.6 +1.6
	baz=220					
N18K	Kilae Creek	76.69	23	IAmb	IAmb	04 12 46.2
	comp=Z,17nm,0.9s					
N18K	Kilae Creek	76.69	23	P	P	04 12 44.9 +1.6
	baz=231,SNR=8.9					
L17K	Donlin	76.75	21	P	P	04 12 44.9 +1.3
	baz=228					
J16K	Anvik River	76.76	19	IAmb	IAmb	04 12 46.2
	comp=Z,6.7nm,0.6s					
J16K	Anvik River	76.76	19	P	P	04 12 44.8 +1.2
	baz=226					
G15K	Niukluk	76.93	17	P	P	04 12 45.6 +1.0
	baz=222					
P19K	Oil Pt	77.12	24	P	P	04 12 46.6 +0.9
	baz=234,SNR=5.8					
K17K	Iditarod	77.14	20	P	P	04 12 47.2 +1.5
	baz=228					
I17K	Unalakleet	77.15	19	P	P	04 12 47.1 +1.4
	baz=226					
H16K	Elim	77.20	18	P	P	04 12 47.2 +1.2
	baz=224					
M18K	Stony River	77.23	22	P	P	04 12 47.3 +1.1
	baz=231					
F15K	North Star Dit	77.30	16	P	P	04 12 47.8 +1.3
	baz=222					
N19K	Bonanza Creek	77.32	23	P	P	04 12 47.7 +0.8
	baz=232					
J17K	VABM Dome	77.33	19	IAmb	IAmb	04 12 49.8
	comp=Z,9.7nm,0.7s					
J17K	VABM Dome	77.33	19	P	P	04 12 48.8 +2.1
	baz=227,SNR=5.7					
L18K	Granite Mounta	77.38	21	IAmb	IAmb	04 12 50.1
	comp=Z,12nm,1.0s					
L18K	Granite Mounta	77.38	21	P	P	04 12 48.8 +1.8
	baz=230,SNR=6.4					
O20K	Slope Mountain	77.62	24	P	P	04 12 49.2 +0.7
	baz=234					
G16K	Koyuk River	77.71	17	IAmb	IAmb	04 12 51.5
	comp=Z,18nm,0.9s					
G16K	Koyuk River	77.71	17	P	P	04 12 50.2 +1.4
	baz=224					
WMQ	Urumqi	77.72	317	eP	P	04 12 49.1 -0.4
WMQ				pmax	pmax	
	comp=Z,8.0nm,0.9s					
WMQ				L	L	
	comp=Z,92nm,22.3s					
HOM	Homer	77.78	25	P	P	04 12 50.3 +1.0
	baz=235					
L19K	White Mountain	78.02	22	IAmb	IAmb	04 12 53.3
	comp=Z,13nm,0.8s					
L19K	White Mountain	78.02	22	P	P	04 12 52.0 +1.4
	baz=232					
M19K	Big River Lodg	78.02	22	IAmb	IAmb	04 12 53.5
	comp=Z,17nm,1.4s					
M19K	Big River Lodg	78.02	22	P	P	04 12 52.1 +1.5
	baz=232					
H17K	Granite Mounta	78.12	18	IAmb	IAmb	04 12 53.3
	comp=Z,6.2nm,0.6s					
H17K	Granite Mounta	78.12	18	P	P	04 12 52.6 +1.5
	baz=226					
J18K	Innoko River	78.18	20	IAmb	IAmb	04 12 53.7
	comp=Z,7.7nm,0.8s					
J18K	Innoko River	78.18	20	P	P	04 12 52.6 +1.2
	baz=230,SNR=7.1					
BRSE	Bradley Lake S	78.20	25	P	P	04 12 52.9 +1.2
	baz=236					
G17K	Kiwalik Mounta	78.29	17	P	P	04 12 53.5 +1.5
	baz=226					
M20K	Styx River	78.48	22	P	P	04 12 54.5 +1.2
	baz=233					
CAPN	Captain Cook N	78.61	24	P	P	04 12 55.2 +1.4
	baz=235					
H18K	Honhosa River	78.75	18	P	P	04 12 55.8 +1.2
	baz=228					
F17K	Baldwin Pennin	78.78	17	P	P	04 12 56.1 +1.4
	baz=225					
J19K	Poorman	78.89	20	P	P	04 12 56.8 +1.4
	baz=231					
SEW	Seward	78.94	25	P	P	04 12 56.8 +1.1
	baz=237					
GCSA	Galena City Sc	78.96	19	P	P	04 12 57.1 +1.5
	baz=229					
K20K	Telida	79.03	21	P	P	04 12 57.7 +1.6
	baz=232,SNR=6.3					
C16K	Lisburne Hills	79.06	14	P	P	04 12 57.5 +1.3
	baz=221					
E17K	Hotham Inlet	79.08	16	P	P	04 12 57.6 +1.3
	baz=224					
SKT	Skwentna	79.16	23	P	P	04 12 57.9 +1.1
	baz=235					
G18K	Tagagawik	79.16	18	P	P	04 12 58.1 +1.3
	baz=228					
D17K	Noatak River	79.19	15	P	P	04 12 58.2 +1.3
	baz=223					
F18K	Selawik	79.35	17	P	P	04 12 58.8 +1.0
	baz=226					
RC01	Rabbit Creek A	79.36	24	P	P	04 12 58.8 +0.8
	baz=237					
PPLA	Purkeypile	79.44	22	P	P	04 12 59.4 +0.8
	baz=234					
RDOG	Red Dog Mine	79.50	15	P	P	04 12 59.8 +1.3
	baz=223					
J20K	Nowinta River	79.51	20	IAmb	IAmb	04 13 01.3
	comp=Z,8.6nm,0.8s					
J20K	Nowinta River	79.51	20	P	P	04 12 59.9 +1.2
	baz=232,SNR=10.0					
M22K	Willow	79.58	23	P	P	04 13 00.2 +1.1
	baz=236					
H19K	Roundabout Mou	79.60	19	IAmb	IAmb	04 13 01.6
	comp=Z,12nm,0.9s					
H19K	Roundabout Mou	79.60	19	P	P	04 13 00.3 +1.2
	baz=230,SNR=8.2					
E18K	Tukpahlearik C	79.66	16	P	P	04 12 59.9 +0.5
	baz=225					
C17K	DeLong Mountai	79.74	15	P	P	04 13 00.7 +0.8
	baz=223					
P23K	Montague Islan	79.76	26	P	P	04 13 00.6 +0.5
	baz=239					
L22K	Petersville	79.76	23	P	P	04 13 00.5 +0.4
	baz=236					
I20K	Naaghedeneel	79.78	20	P	P	04 13 00.8 +0.7
	baz=232					
CAST	Castle Rocks	79.79	22	IAmb	IAmb	04 13 01.6
	comp=Z,6.8nm,0.8s					
CAST	Castle Rocks	79.79	22	P	P	04 13 00.6 +0.3
	baz=234,SNR=8.4					
G19K	Purcell Mounta	79.81	18	IAmb	IAmb	04 13 02.8
	comp=Z,7.7nm,0.9s					
G19K	Purcell Mounta	79.81	18	P	P	04 13 01.1 +0.8
	baz=229					
PWL	Port Wells	79.82	25	P	P	04 13 00.9 +0.5
	baz=238					
PMR	Palmer	79.89	24	P	P	04 13 01.3 +0.6
	baz=237					
CUT	Chulitna	79.89	23	P	P	04 13 01.4 +0.7
	baz=236					
Q23K	Middleton Isla	79.93	26	P	P	04 13 01.5 +0.5
	baz=240					
CHUM	Lake Minchumin	79.98	21	P	P	04 13 01.9 +0.7
	baz=234					
F19K	Shaleruckik Mo	80.06	17	P	P	04 13 02.2 +0.7
	baz=228					
KNK	Knik Glacier	80.06	24	P	P	04 13 02.2 +0.5
	baz=238					
H20K	Anotleneega Mo	80.08	19	P	P	04 13 02.8 +1.0
	baz=231,SNR=6.1					
SML	Sawmill	80.32	24	IAmb	IAmb	04 13 05.2
	comp=Z,17nm,1.0s					
SML	Sawmill	80.32	24	P	P	04 13 03.7 +0.5
	baz=238					
GLI	Glacier Island	80.34	25	P	P	04 13 03.8 +0.6
	baz=239					
C18K	Utukok River	80.37	15	P	P	04 13 04.3 +1.0
	baz=225					
TRF	Thorofare Moun	80.47	22	P	P	04 13 04.9 +0.9
	baz=236					
M23K	Glacier View	80.56	24	P	P	04 13 05.4 +1.0
	baz=238					
E19K	Redstone River	80.63	17	IAmb	IAmb	04 13 07.2
	comp=Z,9.5nm,0.7s					
E19K	Redstone River	80.63	17	P	P	04 13 05.9 +1.2
	baz=229					
SCM	Sheep Creek Mo	80.74	24	P	P	04 13 06.2 +0.8
	baz=239					
EYAK	Cordova Ski Ar	80.75	26	P	P	04 13 06.3 +1.0
	baz=240					
IMAR	Indian Mountai	80.76	19	P	P	04 13 06.5 +1.1
WAT1	Susitna Watana	80.78	23	P	P	04 13 06.5 +0.9
	baz=238					
F20K	Avaraart Lake	80.81	18	P	P	04 13 06.6 +1.0
	baz=230					
I21K	Tanana	80.86	20	P	P	04 13 06.8 +0.9
	baz=234					
H21K	Melozitna Rive	80.87	19	P	P	04 13 07.0 +1.0
	baz=233,SNR=5.4					
WAT6	Susitna Watana	80.97	23	P	P	04 13 07.1 +0.4
	baz=238					
RND	Reindeer	80.98	22	IAmb	IAmb	04 13 07.7
	comp=Z,7.5nm,0.8s					
KAIM	Kayak Island	81.03	26	P	P	04 13 07.5 +0.6
	baz=242					
D19K	Kuna River	81.08	16	IAmb	IAmb	04 13 09.1
	comp=Z,15nm,1.3s					
D19K	Kuna River	81.08	16	P	P	04 13 07.9 +0.8
	baz=228					
C19K	Lookout Ridge	81.11	15	P	P	04 13 08.0 +0.8
	baz=226					
MCK	McKinley	81.13	22	IAmb	IAmb	04 13 08.4
	comp=Z,14nm,0.9s					
MCK	McKinley	81.13	22	P	P	04 13 07.9 +0.6
	baz=237,SNR=6.2					
KLU	Klutina	81.14	25	IAmb	IAmb	04 13 13.6
	comp=Z,7.7nm,1.0s					
KLU	Klutina	81.14	25	P	P	04 13 08.3 +0.8
	baz=240					
G21K	Allakaket	81.16	19	P	P	04 13 08.5 +1.0
	baz=232,SNR=6.1					
MLY	Manley	81.20	21	P	P	04 13 08.3 +0.6
	baz=235,SNR=5.8					
M24K	Tolsona, Glenn	81.35	24	P	P	04 13 09.1 +0.5
	baz=240					
DHY	Denali Highway	81.37	23	P	P	04 13 09.1 +0.3
	baz=238					
BMRM	Bremner River	81.44	26	P	P	04 13 09.5 +0.3
	baz=241					
E20K	Nigu River	81.46	17	P	P	04 13 09.3 +0.3
	baz=230					
H22K	Ishtalitna Cre	81.48	20	P	P	04 13 09.5 +0.3
	baz=234					
A19K	Wainwright	81.51	14	P	P	04 13 09.6 +0.4
	baz=225					
NEA2	Nenana	81.55	21	P	P	04 13 09.9 +0.4
	baz=237,SNR=5.2					
F21K	Alatna River	81.60	18	P	P	04 13 10.6 +0.8
	baz=232,SNR=5.5					
D20K	Etivluk River	81.64	16	P	P	04 13 10.4 +0.5
	baz=229					
I23K	Minto, Yukon-K	81.75	21	P	P	04 13 11.1 +0.5
	baz=236					
N25K	Chitina, Valde	81.75	25	P	P	04 13 11.3 +0.5
	baz=241					
WRH	Wood River Hil	81.84	22	IAmb	IAmb	04 13 12.0
	comp=Z,12nm,1.3s					
HARP	HAARP	81.91	24	P	P	04 13 11.9 +0.4
	baz=241					
CRQE	Cirque	82.00	26	P	P	04 13 12.4 +0.3
	baz=243					
G22K	Bettles	82.04	19	P	P	04 13 12.6 +0.6
	baz=234					
PAX	Paxson	82.06	24	P	P	04 13 12.8 +0.4
	baz=240					
H23K	Yukon River	82.07	20	P	P	04 13 12.8 +0.5
	baz=236					
COLA	College	82.14	21	P	P	04 13 13.2 +0.6
	baz=238					
F22K	John River	82.18	18	P	P	04 13 13.4 +0.7
	baz=234					
E21K	Killik River	82.21	17	IAmb	IAmb	04 13 15.2
	comp=Z,10nm,1.1s					
E21K	Killik River	82.21	17	P	P	04 13 13.6 +0.7
	baz=232					
HDA	Harding Lake	82.23	22	P	P	04 13 13.7 +0.6
	baz=239					
MKAR	Makanchi Array	82.29	319	P	P	04 13 14.5 +0.7
	comp=Z,4.2nm,0.6s,baz=102,slow=5.6,SNR=28					
	comp=Z,4.2nm,0.6s					
MKAR	Makanchi Array	82.29	319	P	P	04 13 14.3 +0.4
MCARA	McCarthy VSAT	82.32	25	P	P	04 13 14.2 +0.6
	baz=243					
B20K	Meade River	82.35	15	P	P	04 13 14.4 +0.9
	baz=228					
K24K	Donnelly Dome	82.36	23	P	P	04 13 14.7 +0.8
	baz=240					
G23K	Bananza Creek	82.40	19	P	P	04 13 14.8 +0.8
	baz=236,SNR=6.7					
POKR	Poker Flat Res	82.42	21	P	P	04 13 15.2 +1.2
	baz=238					
C21K	Knifeblade Rid	82.43	16	P	P	04 13 15.2 +1.1
	baz=231					
ILAR	Eielson Array	82.44	22	P	P	04 13 13.7 -0.5
	comp=Z,2.8nm,0.8s,baz=253,slow=5.2,SNR=24					
	comp=Z,2.8nm,0.8s					
ILAR	Eielson Array	82.44	22	P	P	04 13 14.0 -0.2
MAKZ	Makanchi	82.50	319	P	P	04 13 15.3 +0.5
MAKZ				IAmb	IAmb	04 13 16.4
	comp=Z,9.9nm,0.8s					
COLD	Coldfoot	82.64	19	P	P	04 13 16.1 +1.0
	baz=235					
H24K	Noodor Dome	82.65	20	P	P	04 13 16.0 +0.7
	baz=238					
RIDG	Independent Ri	82.69	23	IAmb	IAmb	04 13 19.9
	comp=Z,10nm,1.3s					
RIDG	Independent Ri	82.69	23	P	P	04 13 16.3 +0.7
	baz=231					
B21K	Ikpikpuk River	82.77	16	P	P	04 13 16.9 +1.2
	baz=231					
M26K	Nabesna, AK	82.80	25	P	P	04 13 17.3 +1.1
	baz=243					
J25K	Salcha River,	82.92	22	IAmb	IAmb	04 13 17.8
	comp=Z,6.3nm,0.7s					
J25K	Salcha River,	82.92	22	P	P	04 13 17.3 +0.5
	baz=240,SNR=10					
PINM	Pinnacle	82.98	27	P	P	04 13 17.8 +0.7
	baz=245					
ZAA0	Zalesovo Array	83.01	326	P	P	04 13 17.0 -0.3
ZAA0				IAmb	IAmb	04 13 17.8
	comp=Z,7.0nm,0.8s					
ZALV	Zalesovo Beam	83.01	326	P	P	04 13 16.9 -0.5
	comp=Z,7.2nm,0.8s,baz=114,slow=4.8,SNR=24					
	comp=Z,7.2nm,0.8s					
M27K	Edge Creek, AK	83.24	25	IAmb	IAmb	04 13 21.3
	comp=Z,14nm,1.1s					
M27K	Edge Creek, AK	83.24	25	P	P	04 13 19.4 +0.9
	baz=244					
G24K	Hadweenzic Riv	83.25	20	P	P	04 13 19.3 +1.1
	baz=238					
O28M	Mount Upton	83.29	27	P	P	04 13 19.1 +0.1
	baz=245					
E23K	Chandalar	83.29	18	IAmb	IAmb	04 13 21.0
	comp=Z,11nm,1.2s					
E23K	Chandalar	83.29	18	P	P	04 13 20.0 +1.4
	baz=236,SNR=6.3					
PRP	Porcupine Dome	83.32	21	P	P	04 13 19.9 +1.1
	baz=240					
A21K	Barrow	83.36	14	P	P	04 13 20.0 +1.3
	baz=229					
D23K	Nanushuk River	83.49	17	P	P	04 13 20.5 +1.0
	baz=235					
B22K	Teshekpuk Lake	83.54	16	P	P	04 13 20.8 +1.2
	baz=232					
F24K	Squaw Lake	83.55	19	IAmb	IAmb	04 13 22.5
	comp=Z,5.8nm,0.7s					
F24K	Squaw Lake	83.55	19	P	P	04 13 21.0 +1.1
	baz=238,SNR=9.5					
A22K	Sinclair Lake	83.56	15	P	P	04 13 20.8 +1.1
	baz=230					
L27K	Beaver Creek,	83.58	24	P	P	04 13 20.7 +0.6
	baz=244					
YUK3	Moose Creek	83.59	26	P	P	04 13 21.2 +0.8
	baz=245					
BCAR	Beaver Creek A	83.59	24	P	P	04 13 21.6 +1.5
TOLK	Toolik Lake Re	83.64	18	P	P	04 13 21.1 +0.8
	baz=236,SNR=5.1					
E24K	Your Creek	83.66	18	P	P	04 13 21.1 +0.7
	baz=237					
YUK8	Steele Glacier	83.69	26	P	P	04 13 21.4 +0.4
	baz=246					
BVCY	Beaver Creek	83.69	25	P	P	04 13 21.7 +1.0
	baz=245					
G25K	Bearman Lake	83.75	20	P	P	04 13 21.6 +0.9
	baz=239					
O29M	Mount Kennedy	83.83	27	P	P	04 13 21.8 +0.3
	baz=247					
P29M	Windy Craggy	83.96	28	P	P	04 13 22.8 +0.7
	baz=248					
C23K	Itkillik River	84.01	17	P	P	04 13 23.1 +1.0
	baz=235					
S31K	Pelican	84.07	30	P	P	04 13 23.4 +0.8
	baz=249					
QSPA	South Pole Qui	84.13	180	P	P	04 13 23.7 +0.7
	comp=Z,13nm,0.6s,baz=292,slow=0.3,SNR=132					
	comp=Z,13nm,0.6s					
QSPA	South Pole Qui	84.13	180	P	P	04 13 23.8 +0.8
D24K	Happy Valley	84.15	17	IAmb	IAmb	04 13 25.3
	comp=Z,5.2nm,0.8s					
D24K	Happy Valley	84.15	17	P	P	04 13 23.7 +0.9
	baz=236					
YUK6	Outpost Mounta	84.18	27	P	P	04 13 24.0 +0.6
	baz=247					
YUK4	Talbot Arm	84.21	26	P	P	04 13 24.9 +1.4
	baz=247					
SIT	Sitka	84.21	31	P	P	04 13 24.1 +0.8
	baz=250					
F25K	Christian Rive	84.32	19	P	P	04 13 24.6 +0.8
	baz=240					
P30M	Million Dollar	84.50	28	P	P	04 13 25.5 +0.7
	baz=248					
HYT	Haines Junctio	84.52	27	P	P	04 13 25.7 +0.7
	baz=248					
PLBC	Pleasant Camp	84.54	29	P	P	04 13 26.2 +1.3
	baz=249					
E25K	Arctic Village	84.61	19	P	P	04 13 26.2 +1.0
	baz=240					
G26K	Porcupine Rive	84.63	20	IAmb	IAmb	04 13 28.1
	comp=Z,15nm,1.1s					
G26K	Porcupine Rive	84.63	20	P	P	04 13 26.5 +1.3
	baz=242					
KDJ	Kajisay	84.63	313	IAmb	IAmb	04 13 28.0
	comp=Z,17nm,1.2s					
M29M	Somme Creek	84.72	25	P	P	04 13 26.7 +0.7
	baz=247					
S32K	Killisnoo	84.74	31	P	P	04 13 26.7 +0.7
	baz=251					
I27K	Kandik River	84.79	22	P	P	04 13 27.4 +1.2
	baz=244,SNR=7.3					
CRAG	Craig	84.86	33	P	P	04 13 27.5 +0.9
	baz=252					
F26K	Sheenjek River	84.87	20	IAmb	IAmb	04 13 29.4
	comp=Z,10nm,1.3s					
F26K	Sheenjek River	84.87	20	P	P	04 13 27.8 +1.3
	baz=241,SNR=5.9					
N30M	Aishikik Lake	84.94	27	P	P	04 13 28.0 +1.0
	baz=248					
D25K	Kavik River	84.98	18	IAmb	IAmb	04 13 29.5
	comp=Z,7.8nm,1.1s					
D25K	Kavik River	84.98	18	P	P	04 13 27.9 +0.9
	baz=239					
DAWY	Dawson	84.99	24	P	P	04 13 28.3 +1.1
	baz=246					
R32K	Eaglecrest	85.03	30	P	P	04 13 28.6 +1.2
	baz=251					
SKAG	Skagway	85.04	29	P	P	04 13 28.7 +1.3
	baz=250					
U33K	Whale Pass	85.06	32	P	P	04 13 28.4 +0.9
	baz=252					
H27K	Steamboat Moun	85.10	21	IAmb	IAmb	04 13 30.3
	comp=Z,9.3nm,1.2s					
H27K	Steamboat Moun	85.10	21	P	P	04 13 29.0 +1.3
	baz=244,SNR=6.3					
L29M	L29M	85.12	25	P	P	04 13 29.3 +1.4
	baz=247					
O30N	Mendenhall	85.14	27	P	P	04 13 29.2 +1.2
	baz=249					
KSH2	Kashi	85.21	310	P	P	04 13 30.4 +1.4
KSH2				pmax	pmax	
	comp=Z,5.0nm,0.7s					
G27K	Doyon Strip	85.31	21	P	P	04 13 30.1 +1.4
	baz=244					
MAW	Mawson	85.32	203	P	P	04 13 29.2 +0.6
	comp=Z,13nm,0.6s,baz=98,slow=5.6,SNR=69					
	comp=Z,13nm,0.6s					
MAW	Mawson	85.32	203	P	P	04 13 29.5 +0.8
I28M	Miner Creek	85.36	22	P	P	04 13 30.2 +1.2
	baz=245					
M30M	Minto, Yukon	85.49	26	IAmb	IAmb	04 13 32.5
	comp=Z,10nm,1.4s					
M30M	Minto, Yukon	85.49	26	P	P	04 13 31.2 +1.5
	baz=248					
N31M	Braeburn, Yuko	85.54	27	P	P	04 13 31.5 +1.5
	baz=249					
WRAK	Wrangell Islan	85.56	32	P	P	04 13 31.0 +1.0
	baz=253					
V35K	Ketchikan	85.64	33	P	P	04 13 31.4 +1.0
	baz=253					
WHY	Whitehorse	85.66	28	P	P	04 13 31.5 +0.9
	baz=250					
K29M	Barlow Dome	85.66	24	IAmb	IAmb	04 13 33.5
	comp=Z,8.2nm,1.1s					
K29M	Barlow Dome	85.66	24	P	P	04 13 31.8 +1.2
	baz=248,SNR=9.2					
KURK	Kurchatov	85.69	322	P	P	04 13 30.8 -0.1
KURK				IAmb	IAmb	04 13 31.4
	comp=Z,14nm,1.4s					
C26K	Camden Bay	85.72	18	P	P	04 13 32.3 +1.7
	baz=240					
KURBB	Kurchatov Arra	85.72	322	P	P	04 13 31.0 0.0
	comp=Z,1.5nm,0.5s,baz=99,slow=4.7,SNR=18					
	comp=Z,1.5nm,0.5s					
P32M	Atlin	85.86	29	P	P	04 13 32.9 +1.3
	baz=251					
C27K	Jago River	85.94	18	P	P	04 13 33.0 +1.3
	baz=241					
E27K	Coleen River	85.95	20	IAmb	IAmb	04 13 34.5
	comp=Z,13nm,1.0s					
E27K	Coleen River	85.95	20	P	P	04 13 33.4 +1.6
	baz=243,SNR=6.0					
H29M	Whitestone	86.26	22	P	P	04 13 34.6 +1.3
	baz=247					
F28M	Old Crow	86.29	20	IAmb	IAmb	04 13 36.4
	comp=Z,7.2nm,1.0s					
F28M	Old Crow	86.29	20	P	P	04 13 34.7 +1.2
	baz=245,SNR=7.9					
Q32M	Nakina River	86.37	30	P	P	04 13 35.1 +0.8
	baz=252					
M31M	Drury Creek, Y	86.41	26	P	P	04 13 35.4 +1.2
	baz=250					
J30M	Hart River	86.42	24	IAmb	IAmb	04 13 37.1
	comp=Z,6.8nm,0.9s					
J30M	Hart River	86.42	24	P	P	04 13 35.3 +1.0
	baz=249,SNR=9.5					
P33M	Teslin, Yukon	86.48	29	P	P	04 13 35.6 +1.0
	baz=252					
D27M	Malcolm River	86.63	19	P	P	04 13 36.4 +1.2
	baz=244					
S34M	Telegraph Cree	86.63	31	P	P	04 13 36.6 +1.3
	baz=254					
I30M	Mount Dempster	86.64	23	P	P	04 13 36.1 +0.8
	baz=248,SNR=8.0					
N32M	Quiet Lake	86.65	28	P	P	04 13 36.2 +0.8
	baz=252					
G29M	Pine Creek	86.66	21	IAmb	IAmb	04 13 37.7
	comp=Z,9.8nm,1.0s					
G29M	Pine Creek	86.66	21	P	P	04 13 36.2 +0.9
	baz=247,SNR=8.5					
E28M	Babbage River	86.82	20	P	P	04 13 37.0 +0.9
	baz=245					
T35M	Bob Quinn	86.83	32	P	P	04 13 37.3 +0.9
	baz=254					
EPYK	Eagle Plains	86.93	22	P	P	04 13 37.8 +1.2
	baz=248,SNR=11					
R33M	Jennings River	87.13	30	P	P	04 13 38.5 +0.7
	baz=254					

E29M	**Blow River**	**87.29**	**20**	P	**P**	**04 13 39.1**	**+0.9**
	baz=247						
DLBC	**Dease Lake**	**87.34**	**31**	P	**P**	**04 13 39.3**	**+0.5**
	baz=254						
G30M	**tAoh Zraii Nji**	**87.34**	**22**	P	**P**	**04 13 39.4**	**+0.8**
	baz=248						
NRIK	**Noril'sk**	**87.52**	**341**	P	**P**	**04 13 39.3**	**0.0**
	comp=Z,8.0nm,0.7s,baz=102,slow=4.4,SNR=6.0						
	comp=Z,8.0nm,0.7s						
NRIK	**Noril'sk**	**87.52**	**341**	IAmb	IAmb	04 13 39.8	
	comp=Z,7.7nm,0.7s						
H31M	**Peel River**	**87.64**	**23**	IAmb	IAmb	04 14 23.7	
	comp=Z,7.3nm,1.1s						
H31M	**Peel River**	**87.64**	**23**	P	**P**	**04 13 40.9**	**+0.9**
	baz=250						
F30M	**Barrier River**	**87.73**	**21**	IAmb	IAmb	04 13 42.6	
	comp=Z,10nm,1.1s						
F30M	**Barrier River**	**87.73**	**21**	P	**P**	**04 13 41.3**	**+0.9**
	baz=249						
MMPY	**Sheldon Lake,**	**87.92**	**26**	P	**P**	**04 13 42.4**	**+1.0**
	baz=253						
G31M	**Satah River**	**88.04**	**22**	IAmb	IAmb	04 13 43.8	
	comp=Z,6.0nm,0.9s						
G31M	**Satah River**	**88.04**	**22**	P	**P**	**04 13 42.8**	**+1.0**
	baz=250						
F31M	**Tsiigehtchic**	**88.41**	**21**	P	**P**	**04 13 44.8**	**+1.3**
	baz=251						
INK	**Inuvik**	**88.77**	**21**	P	**P**	**04 13 46.2**	**+1.0**
	baz=251						
BEKR	**Beckworth**	**89.89**	**50**	IAmb	IAmb	04 13 53.9	
	comp=Z,3.0nm,0.7s						
MDPB	**Devils Postpil**	**90.60**	**52**	IAmb	IAmb	04 13 57.5	
	comp=Z,7.2nm,1.2s						
KOTAN	**Kotaneelee Air**	**90.71**	**30**	P	**P**	**04 13 55.4**	**+1.0**
	baz=260						
BVAR	**Borovoye Array**	**91.15**	**323**	P	**P**	**04 13 56.4**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=103,slow=5.3,SNR=13						
	comp=Z,6.6nm,0.8s						
NVAR	**Mina Array Bea**	**91.30**	**52**	P	**P**	**04 13 59.4**	**+1.4**
	comp=Z,5.5nm,0.9s,baz=252,slow=6.3,SNR=23						
	comp=Z,5.5nm,0.9s						
NVAR	**Mina Array Bea**	**91.30**	**52**	P	**P**	**04 13 59.6**	**+1.6**
BFSC	**Mount Baldy Ra**	**91.37**	**56**	IAmb	IAmb	04 14 01.8	
	comp=Z,8.3nm,1.2s						
NV11	**Mina Array Sit**	**91.42**	**52**	IAmb	IAmb	04 14 01.3	
	comp=Z,6.8nm,1.0s						
DSP	**Deep Springs**	**91.45**	**53**	IAmb	IAmb	04 14 01.7	
	comp=Z,6.3nm,1.0s						
LRMC	**Laurel Mtn Rad**	**91.48**	**55**	IAmb	IAmb	04 14 02.0	
	comp=Z,13nm,1.5s						
WRGLY	**Wrigley**	**91.53**	**27**	P	**P**	**04 13 59.0**	**+0.8**
	baz=260						
MPMC	**Manual Prospec**	**91.69**	**54**	IAmb	IAmb	04 14 02.9	
	comp=Z,3.5nm,1.0s						
J08A	**Circle Bar Ran**	**91.72**	**47**	IAmb	IAmb	04 14 01.6	
	comp=Z,2.5nm,0.7s						
BAR	**Barrett**	**92.03**	**58**	IAmb	IAmb	04 14 04.6	
	comp=Z,5.8nm,1.0s						
TPH	**Tonopah**	**92.11**	**52**	IAmb	IAmb	04 14 04.4	
	comp=Z,6.4nm,1.0s						
PFO	**Pinyon Flats O**	**92.30**	**57**	P	P	04 14 05.0	+2.4
BORC	**Borrego Spring**	**92.30**	**57**	IAmb	IAmb	04 14 05.8	
	comp=Z,7.0nm,1.0s						
BMN	**Battle Mountai**	**92.34**	**50**	IAmb	IAmb	04 14 05.2	
	comp=Z,3.4nm,0.7s						
WCT	**Wildcat Mounta**	**92.46**	**53**	IAmb	IAmb	04 14 06.8	
	comp=Z,9.8nm,1.3s						
A36M	**Sachs Harbour**	**92.46**	**18**	P	**P**	**04 14 03.6**	**+1.3**
	baz=259						
TPNV	**Topopah Spring**	**92.77**	**53**	IAmb	IAmb	04 14 07.8	
	comp=Z,6.5nm,1.1s						
PRN	**Pahroc Range**	**93.77**	**53**	IAmb	IAmb	04 14 12.5	
	comp=Z,5.0nm,1.1s						
W13A	**Hualapai Mount**	**94.54**	**55**	IAmb	IAmb	04 14 16.2	
	comp=Z,3.6nm,0.9s						
YKA	**Yellowknife Ar**	**95.49**	**28**	P	**P**	**04 14 17.1**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=264,slow=4.3,SNR=3.6						
	comp=Z,1.2nm,0.8s						
KNB	**Kanab**	**95.52**	**53**	IAmb	IAmb	04 14 21.8	
	comp=Z,5.9nm,1.3s						
ELIB	**Princess Elisa**	**96.24**	**194**	*d*P	**P**	**04 14 19.9**	**+0.1**
	comp=Z,3.1nm,0.8s						
BOZ	**Bozeman (W)**	**96.76**	**45**	P	**P**	**04 14 23.7**	**+1.0**
BOZ				IAmb	IAmb	04 14 25.0	
	comp=Z,2.0nm,0.8s						
PDAR	**Pinedale Array**	**98.20**	**48**	P	Pdif	04 14 29.9	+0.4
	comp=Z,0.9nm,0.6s,baz=239,slow=2.3,SNR=11						
	comp=Z,0.9nm,0.6s						
ARTI	**Arti**	**98.28**	**326**	P	Pdif	04 14 27.4	-1.7
	comp=Z,2.4nm,0.7s,baz=56,slow=3.6,SNR=4.0						
	comp=Z,2.4nm,0.7s						
ARTI	**Arti**	**98.28**	**326**	IAmb	IAmb	04 14 27.6	
	comp=Z,3.0nm,0.6s						
TROLL	**Troll, Antarti**	**100.21**	**189**	⇑Pdiff	**Pdif**	**04 14 37.7**	**+0.1**
	comp=Z,80nm,0.6s						
BOSA	**Boshof**	**120.44**	**232**	PKP	**PKiKP**	**04 19 42.9**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=114,slow=2.1,SNR=6.4						
CLL	**Collm**	**124.62**	**332**	*i* PKPdf	**PKiKP**	**04 19 50.5**	**0.0**
	comp=Z,2.0nm,0.9s						
CLL				*ex*	x	04 20 39.0	
GERES	**GERESS Array B**	**125.87**	**329**	PKP	**PKiKP**	**04 19 52.9**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=90,slow=1.3,SNR=8.0						
LPAZ	**La Paz**	**132.34**	**118**	PKP	**PKiKP**	**04 20 06.2**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=8.4,slow=1.7,SNR=12						
LPAZ	**La Paz**	**132.34**	**118**		**PKiKP**	**04 20 06.4**	**-1.4**
EVO	**Evora**	**143.84**	**337**	*e*PKPdf	**PKPdf**	**04 20 25.2**	**-1.1**
PBEJ	**Beja**	**144.21**	**336**	*e*PKPdf	**PKiKP**	**04 20 26.5**	**-4.2**
PLOUS	**Minas do Lousa**	**144.43**	**337**	*e*PKPdf	**PKiKP**	**04 20 27.1**	**-3.9**
MESJ	**Messejana**	**144.51**	**336**	*e*PKPdf	**PKiKP**	**04 20 27.4**	**-3.9**
PCVE	**Castro Verde**	**144.62**	**336**	*e*PKPdf	**PKiKP**	**04 20 28.0**	**-3.6**
PVAQ	**Vaqueiros**	**144.68**	**335**	*e*PKPdf	**PKiKP**	**04 20 27.8**	**-3.9**
PTEO	**Sao Teotonio**	**144.97**	**337**	*e*PKPdf	**PKiKP**	**04 20 29.3**	**-3.0**
BDFB	**Brasilia**	**149.06**	**134**	PKPbc	**PKiKP**	**04 20 40.2**	**-1.2**
	comp=Z,4.3nm,0.5s,baz=253,slow=1.0,SNR=13						
TORD	**Torodi Ar. Bea**	**152.34**	**287**	PKPbc	**PKiKP**	**04 20 47.4**	**-0.7**
	comp=Z,2.0nm,0.3s,baz=85,slow=2.4,SNR=98						
TORD				PKPab	**PKPab**	**04 20 59.0**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=80,slow=3.7,SNR=7.6						
DBIC	**Dimbokro**	**159.58**	**273**	PKPab	**PKPab**	**04 21 29.9**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=106,slow=5.8,SNR=3.7						

CFUSG ***25*** *05:02:37.8, 39°.26N×40°.90E, h10km, Mb3.2/1, MD3.4/1, MSH3.5/2*
ISK ***25*** *05:02:38.3, 39°.34N×40°.33E, h5km, ML3.9/18*
AFAD ***25*** *05:02:38.8, 39°.36N×40°.28E, h14km±1km, MW4.0*
TIF ***25*** *05:02:38.3, 39°.37N×40°.29E, h13km±1km*
IDC ***25*** *05:02:39.0±0.9, 39°.32N×40°.39E, h0km, mb3.4/5, mbtmp3.5/13, ML3.3/8, MS3.0/11, Error ellipse: s-maj=14.7km s-min=8.8km az=161.0*
ISC 25 05:02:40.1±0.6, **39°.36N**±0°.02×**40°.34E**±0°.02, **h10**km, **n87,** σ1**§43**/92, **mb3.2**/3, **MS2.9**/6, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YEDI	**Yedisu-Bingol**	**0.17**	**65**	Pg	**Pg**	**05 02 43.4**	**-0.6**
YEDI				Sg	**Sg**	**05 02 46.6**	**-0.1**
BNGB	**Bingl**	**0.46**	**145**	Pg	**Pg**	**05 02 47.8**	**-1.2**
BNGB				Sg	**Sb**	**05 02 55.6**	**-1.6**
ERZN	**Erzincan**	**0.53**	**295**	Pg	**Pg**	**05 02 49.3**	**-1.2**
ERZN				Sg	**Sb**	**05 02 58.1**	**-1.2**
ECAT	**Cat-ERZURUM**	**0.55**	**63**	P	**Pg**	**05 02 49.8**	**-1.0**
KARO	**Karliova-Bingo**	**0.55**	**95**	Pg	**Pg**	**05 02 50.4**	**-0.5**
KARO				Sg	**Sb**	**05 02 59.3**	**-0.7**
EUZM	**Uzumlu**	**0.60**	**305**	P	**Pg**	**05 02 50.5**	**-1.4**
MAYK		**0.63**	**179**	P	**Pg**	**05 02 51.2**	**-1.1**
KOPT	**Kop Dagi**	**0.66**	**10**	P	**Pg**	**05 02 52.3**	**-0.7**
SLHN	**Bingol, Solhan**	**0.67**	**127**	P	**Pg**	**05 02 52.7**	**-0.4**
SLHN				IAML		05 03 03.0	
	comp=N,1μm,0.5s						
SLHN				S	**Sb**	**05 03 03.1**	**-0.2**
SLHN				IAML		05 03 09.0	
	comp=E,1μm,0.6s						
TNCL	**Tunceli-Merkez**	**0.67**	**248**	P	**Pg**	**05 02 51.1**	**-2.0**
ETEKE	**Tekederesi - E**	**0.75**	**55**	P	**Pg**	**05 02 53.8**	**-0.8**
ETEKE				S	**Sb**	**05 03 05.5**	**-0.3**
ETEKE				IAML		05 03 06.0	
	comp=E,6μm,0.5s						
ETEKE				IAML		05 03 07.0	
	comp=N,4μm,0.6s						
KOVA	**Elazig, Kovanc**	**0.78**	**212**	P	**Pg**	**05 02 54.0**	**-1.1**
KOVA				S	**Sg**	**05 03 04.4**	**-0.8**
KOVA				IAML		05 03 09.0	
	comp=E,3μm,0.6s						
EMRE	**Erzurum,Aziziy**	**0.83**	**36**	P	**Pb**	**05 02 55.7**	**-1.0**
VRTB	**Varto-Mus**	**0.89**	**103**	Pg	**Pg**	**05 02 56.8**	**-0.5**
VRTB	**Varto-Mus**	**0.89**	**103**	P	**Pg**	**05 02 56.6**	**-0.7**
BAYB	**BAYBURT**	**0.90**	**356**	P	**Pg**	**05 02 55.7**	**-1.7**
ERZM	**Erzurum**	**0.96**	**55**	P	**Pg**	**05 02 58.0**	**-0.7**
KRIK	**Erzurum-spir**	**1.07**	**25**	P	**Pg**	**05 02 59.2**	**-1.6**
AKDA	**Akdag**	**1.08**	**47**	P	**Pg**	**05 03 00.1**	**-0.8**
MDNT	**Maden**	**1.10**	**208**	P	**Pn**	**05 03 01.0**	**-0.7**
ELZ	**Elazig**	**1.11**	**233**	P	**Pg**	**05 02 59.6**	**-1.9**
ELZ				S	**Sb**	**05 03 15.2**	**-0.9**
ELZ				IAML		05 03 17.0	
	comp=E,3μm,0.7s						
MUSM	**Mu-Merkez**	**1.11**	**125**	P	**Pg**	**05 03 00.3**	**-1.2**
MUSM				S	**Sg**	**05 03 15.3**	**-0.6**
MUSM				IAML		05 03 16.0	
	comp=N,4μm,0.6s						
MUSM				IAML		05 03 16.0	
	comp=E,3μm,0.7s						
ESIJ	**Sivrice-Elazig**	**1.22**	**222**	Pn	**Pn**	**05 03 02.4**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.27**	**220**	Pn	**Pb**	**05 03 03.5**	**-0.8**
SVRC				Sn	**Sn**	**05 03 22.0**	**+0.6**
GUMT	**Gumushane**	**1.28**	**329**	Pn	**Pg**	**05 03 04.5**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**1.32**	**61**	Pn	**Pb**	**05 03 04.4**	**-0.8**
ESGZ	**Sivrice-Elazig**	**1.37**	**227**	Pn	**Pb**	**05 03 05.0**	**-0.9**
ELZG	**Elazig**	**1.37**	**231**	P	**Pn**	**05 03 04.2**	**-1.2**
ILIC	**ilic-Erzincan**	**1.38**	**274**	Pn	**Pb**	**05 03 05.3**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.38**	**151**	Pn	**Pb**	**05 03 05.5**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.38**	**151**	P	**Pg**	**05 03 06.2**	**-0.5**
HOMI	**Horasan**	**1.39**	**60**	P	**Pn**	**05 03 04.9**	**-0.8**
CNGT	**ngn**	**1.41**	**216**	P	**Pg**	**05 03 06.0**	**-1.1**
DYBB	**Diyarbakir**	**1.42**	**186**	Pn	**Pb**	**05 03 05.8**	**-0.9**
DIYA	**Diyarbakir**	**1.45**	**187**	P	**Pg**	**05 03 10.1**	**+2.2**
MDYL	**Doganyol-Malat**	**1.46**	**225**	Pn	**Pb**	**05 03 06.6**	**-0.8**
GURO	**Guroymak-BITLI**	**1.55**	**121**	Pn	**Pb**	**05 03 08.5**	**-0.5**
ARPR	**Arapgir-MALATY**	**1.58**	**261**	Pn	**Pb**	**05 03 08.5**	**-1.0**
BTMN	**Batman**	**1.64**	**153**	P	**Pb**	**05 03 10.1**	**-0.4**
BLIS	**Bitlis-Merkez**	**1.68**	**124**	P	**Pb**	**05 03 09.8**	**-1.4**
KTUT	**Trabzon**	**1.68**	**345**	Pn	**Pg**	**05 03 10.9**	**-1.5**
MLAZ	**Malazgirt-MUS**	**1.73**	**97**	Pn	**Pb**	**05 03 10.9**	**-1.2**
CHOM	**Cayeli-Rize**	**1.76**	**10**	Pn	**Pb**	**05 03 11.7**	**-0.8**
SRTM	**Siirt_Merkez**	**1.85**	**137**	P	**Pb**	**05 03 13.8**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.94**	**106**	P	**Pb**	**05 03 14.7**	**-0.9**
SENK	**Senkaya-Erzuru**	**1.95**	**52**	Pn	**Pb**	**05 03 14.6**	**-1.3**
AGRB	**Hanur-Agry**	**2.06**	**83**	Pn	**Pb**	**05 03 16.1**	**-1.7**
MIDY	**Mardin/Midyat-**	**2.12**	**157**	P	**Pb**	**05 03 17.1**	**-1.6**
HOPA	**Hopa-Artvin**	**2.19**	**22**	Pn	**Pb**	**05 03 17.7**	**-2.1**
PERV	**Siirt/Pervari-**	**2.23**	**129**	P	**Pb**	**05 03 20.0**	**-0.6**
URFA	**Urfa**	**2.26**	**212**	Pn	**Pn**	**05 03 18.0**	**+0.4**
AKDM	**Akdamar-Van**	**2.31**	**116**	Pn	**Pn**	**05 03 19.2**	**+0.9**
BATM	**Batumi**	**2.46**	**24**	Pn	**Pn**	**05 03 21.6**	**+1.2**
BATM	**Batumi**	**2.46**	**24**	P	**Pn**	**05 03 21.4**	**+1.1**
BATM				S	**Sg**	**05 03 57.3**	**-2.0**
SVSK	**Karacayir**	**2.64**	**283**	Pn	**Pn**	**05 03 24.1**	**+1.4**
TASB	**TASBURUN-IGDIR**	**3.07**	**77**	Pn	**Pn**	**05 03 30.0**	**+1.2**
BGD	**Bogdanovka**	**3.13**	**52**	P	**Pg**	**05 03 37.8**	**-2.3**
AKH	**Akhalkalaki**	**3.16**	**49**	P	**Pn**	**05 03 32.2**	**+2.2**
GNI	**Garni**	**3.48**	**76**	Pn	**Pn**	**05 03 35.9**	**+1.5**
	1.8nm,0.3s,baz=197,slow=12,SNR=4.9						
GNI				Pg	**Pb**	**05 03 43.1**	**+1.1**
	7.7nm,0.3s,baz=304,slow=3.2,SNR=28						
	10nm,0.5s						
TKB	**Tkibuli**	**3.60**	**33**	P	**Pn**	**05 03 38.3**	**+2.3**
GARIG	**Gari**	**4.01**	**35**	P	**Pb**	**05 03 48.9**	**-2.0**
TBLG	**Delisi**	**4.10**	**53**	P	**Pg**	**05 03 56.2**	**-2.5**
DGRG	**David-gareji**	**4.37**	**60**	P	**Pn**	**05 03 49.9**	**+3.3**
CHRG	**Chargali**	**4.57**	**48**	P	**Pn**	**05 03 50.6**	**+1.3**
KBZ	**Khabaz**	**4.76**	**23**	Pn	**Pn**	**05 03 54.4**	**+2.5**
	0.6nm,0.3s,baz=181,slow=19,SNR=7.7						
KBZ				Pg	**Pb**	**05 04 04.4**	**+0.8**
	0.7nm,0.3s,baz=172,slow=7.1,SNR=8.2						
KBZ				LR	LR	05 05 55.5	
	comp=Z,173nm,19.7s,baz=192,slow=41						
	1.7nm,0.5s						
KVAR	**Kislovodsk Arr**	**4.92**	**20**	Pn	**Pn**	**05 03 56.9**	**+2.8**
	baz=207,slow=14						
	3.4nm,0.4s						
VSHL	**Vashlovani**	**4.99**	**66**	P	Pb	05 04 02.5	-5.2
BRTR	**Keskin Array B**	**5.19**	**276**	Pn	**Pn**	**05 04 00.1**	**+2.1**
	1.1nm,0.3s,baz=106,slow=15,SNR=18						
BRTR				LR	LR	05 06 01.6	
	comp=Z,125nm,18.3s,baz=96,slow=39						
	3.2nm,0.4s						
SUDU	**Sudak**	**6.80**	**326**	*e*P	**Pn**	**05 04 22.8**	**+2.9**
SUDU				pmax	pmax	05 04 28.2	
	comp=Z,6.0nm,0.4s						
SUDU				*ex*	**Sn**	**05 05 39.1**	**+1.8**
SUDU				smax	smax	05 05 39.5	
	comp=N,10.0nm,0.4s						
SUDU				smax	smax	05 05 39.5	
	comp=E,4.0nm,0.4s						
ALU	**Alushta**	**6.91**	**322**	*ex*	**Pn**	**05 04 23.9**	**+2.5**
ALU				pmax	pmax	05 04 26.0	
	comp=Z,6.0nm,0.2s						
ALU				*ex*	**Sn**	**05 05 44.0**	**+3.9**
ALU				smax	smax	05 05 51.0	
	comp=N,53nm,0.3s						
ALU				smax	smax	05 05 51.0	
	comp=E,15nm,0.4s						
SEV	**Sevastopol'**	**7.18**	**318**	*ex*	Pn	05 04 29.0	+3.9
SEV				pmax	pmax	05 04 32.5	
	comp=Z,2.0nm,0.5s						
MMAI	**Mount Meron Ar**	**7.49**	**214**	Pn	**Pn**	**05 04 29.7**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=40,slow=11,SNR=2.0						
	comp=Z,4.7nm,1.0s						
ASF	**Jabal al Asfar**	**7.70**	**202**	Pn	**Pn**	**05 04 32.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=294,slow=19,SNR=4.1						
ASF				Lg	Lg	05 06 42.6	
	comp=Z,0.3nm,0.3s,baz=129,slow=15,SNR=2.6						
	comp=Z,2.2nm,0.7s						
EIL	**Elat**	**10.64**	**206**	Lg	Lg	05 08 16.9	
	comp=Z,0.2nm,0.3s,baz=20,slow=16,SNR=1.6						
MLR	**Muntele Rosu**	**12.27**	**305**	LR	LR	05 11 39.4	
	comp=Z,32nm,18.6s,baz=164,slow=44						
AKASG	**Malin Array Be**	**13.78**	**329**	Pn	**Pn**	**05 05 55.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=138,slow=13,SNR=6.3						
AKASG				LR	LR	05 12 18.7	
	comp=Z,38nm,19.4s,baz=166,slow=42						
	comp=Z,1.3nm,0.7s						
AKTO	**Aktyubinsk**	**16.67**	**43**	Pn	**Pn**	**05 06 31.3**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=245,slow=8.7,SNR=6.1						
AKTO				LR	LR	05 14 40.7	
	comp=Z,53nm,19.1s,baz=222,slow=43						
	comp=Z,0.9nm,0.6s						
ARTI	**Arti**	**20.78**	**29**	P	Pn	05 07 21.7	-1.9
	comp=Z,1.6nm,0.5s,baz=232,slow=8.4,SNR=3.3						
ARTI				LR	LR	05 17 09.9	
	comp=Z,40nm,19.3s,baz=228,slow=42						
	comp=Z,1.6nm,0.5s						
GERES	**GERESS Array B**	**21.25**	**305**	P	**P**	**05 07 27.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=128,slow=11,SNR=5.3						
	comp=Z,0.4nm,0.7s						
DAVOX	**Davos/Dischmat**	**23.35**	**298**	LR	LR	05 18 56.0	
	comp=Z,43nm,20.4s,baz=70,slow=42						
FINES	**FINESS Array B**	**23.79**	**343**	P	**P**	**05 07 53.6**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=160,slow=8.2,SNR=7.1						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**31.23**	**62**	P	**P**	**05 09 00.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=303,slow=8.0,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**31.25**	**350**	LR	LR	05 22 15.6	
	comp=Z,21nm,18.1s,baz=222,slow=38						
ZALV	**Zalesovo Beam**	**33.23**	**49**	LR	LR	05 24 44.8	
	comp=Z,23nm,19.5s,baz=308,slow=40						
ESDC	**Sonseca Array**	**33.92**	**285**	LR	LR	05 24 12.2	
	comp=Z,40nm,18.0s,baz=56,slow=38						
TORD	**Torodi Ar. Bea**	**42.90**	**243**	P	**P**	**05 10 39.8**	**+0.8**
	comp=Z,1.0nm,0.9s,baz=43,slow=6.3,SNR=3.7						
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**47.25**	**57**	LR	LR	05 33 30.9	
	comp=Z,91nm,18.2s,baz=274,slow=39						

IDC ***25*** *05:06:04.0±0.9, 14°.91S×173°.89W, h0km, mb3.9/6, mbtmp3.9/6, MS3.6/43, Error ellipse: s-maj=44.9km s-min=23.9km az=143.0*
ISC 25 05:06:14.2±0.8, **15°.0S**±0°.3×**173°.9W**±0°.3, **h73**km, **n63,** σ1**§26/17, mb3.8/6, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.19**	**250**	LR	LR	05 11 10.0	
	comp=Z,306nm,19.3s,baz=21,slow=37						
RAR	**Rarotonga**	**14.76**	**117**	LR	LR	05 13 47.0	
	comp=Z,152nm,21.1s,baz=290,slow=31						
PPT	**Papeete**	**23.47**	**100**	LR	LR	05 19 29.9	
	comp=Z,54nm,18.1s,baz=280,slow=34						
HNR	**Honiara**	**26.15**	**279**	LR	LR	05 20 14.5	

	comp=Z,6.2nm,19.2s,baz=202,slow=32						
RPZ	**Rata Peaks**	**31.35**	**201**	LR	LR	05 25 29.9	
	comp=Z,41nm,18.1s,baz=111,slow=37						
CTA	**Charters Tower**	**38.27**	**257**	LR	LR	05 28 00.8	
	comp=Z,47nm,18.2s,baz=83,slow=34						
H11S2	**WAKE ISLAND Hy**	**38.40**	**330**	T	T	05 54 24.0	
	baz=149,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**38.42**	**329**	T	T	05 54 34.3	
	baz=149,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**38.42**	**330**	T	T	05 54 21.2	
	baz=149,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**39.36**	**331**	T	T	05 55 31.2	
	baz=150,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**39.36**	**331**	T	T	05 55 37.9	
	baz=150,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**39.37**	**331**	T	T	05 55 31.1	
	baz=150,slow=76,SNR=17						
STKA	**Stephens Creek**	**43.81**	**239**	LR	LR	05 32 05.8	
	comp=Z,47nm,18.6s,baz=68,slow=36						
JAY	**Jayapura**	**46.45**	**281**	LR	LR	05 32 32.9	
	comp=Z,99nm,20.0s,baz=353,slow=34						
WRA	**Warramunga Arr**	**49.47**	**256**	P	**P**	**05 14 56.4**	**-1.1**
	0.9nm,0.8s,baz=89,slow=7.4,SNR=10						
	0.9nm,0.8s						
GUMO	**Guam**	**49.74**	**303**	LR	LR	05 33 47.8	
	comp=Z,45nm,19.1s,baz=80,slow=34						
ASAR	**Alice Springs**	**49.78**	**252**	P	**P**	**05 14 58.9**	**-1.0**
	5.8nm,0.7s,baz=86,slow=8.3,SNR=50						
ASAR				LR	LR	05 36 04.3	
	comp=Z,70nm,18.1s,baz=104,slow=36						
	5.8nm,0.7s						
SIJI	**Sorong**	**55.93**	**279**	LR	LR	05 37 39.5	
	comp=Z,66nm,21.5s,baz=154,slow=34						
JCJ	**Chichijima**	**59.76**	**314**	LR	LR	05 39 32.4	
	comp=Z,49nm,18.2s,baz=142,slow=34						
RPN	**Rapa Nui**	**60.87**	**113**	LR	LR	05 35 25.2	
	comp=Z,35nm,21.8s,baz=48,slow=29						
VNDA	**Vanda**	**63.70**	**186**	LR	LR	05 39 09.6	
	comp=Z,25nm,21.6s,baz=11,slow=31						
DAV	**Davao City (W)**	**63.88**	**286**	LR	LR	05 42 59.5	
	comp=Z,56nm,18.2s,baz=352,slow=35						
SHEM	**Shemya Is, Ala**	**68.27**	**352**	LR	LR	05 41 03.3	
	comp=Z,50nm,19.9s,baz=168,slow=31						
MJAR	**Matsushiro Arr**	**68.35**	**320**	LR	LR	05 41 31.4	
	comp=Z,78nm,21.6s,baz=166,slow=31						
ASAJ	**Asahikawa**	**70.98**	**328**	LR	LR	05 42 30.6	
	comp=Z,29nm,21.9s,baz=160,slow=31						
PETK	**Petropavlovsk-**	**72.13**	**342**	LR	LR	05 41 52.1	
	comp=Z,22nm,21.5s,baz=171,slow=30						
PFO	**Pinyon Flats O**	**73.02**	**47**	LR	LR	05 42 44.4	
	comp=Z,69nm,19.7s,baz=245,slow=30						
LPIG	**La Paz**	**73.25**	**59**	LR	LR	05 41 26.5	
	comp=Z,45nm,19.8s,baz=205,slow=29						
YBH	**Yreka Blue Hor**	**73.59**	**37**	LR	LR	05 42 08.7	
	comp=Z,33nm,21.1s,baz=242,slow=30						
NVAR	**Mina Array Bea**	**74.37**	**42**	LR	LR	05 46 14.5	
	comp=Z,30nm,18.1s,baz=206,slow=32						
QSPA	**South Pole Qui**	**75.01**	**180**	P	**P**	**05 17 48.4**	**+0.7**
	2.7nm,1.1s,baz=45,slow=2.7,SNR=5.4						
QSPA				LR	LR	05 49 08.1	
	comp=Z,41nm,18.1s,baz=45,slow=34						
	2.7nm,1.1s						
KSRS	**Korea Array**	**75.56**	**316**	LR	LR	05 45 37.2	
	comp=Z,26nm,21.4s,ba

ARMA Armidale 29.87 240 P P 05 23 28.4 +0.7
AUPHS Peel High Scho 30.69 239 P P 05 23 35.5 +0.9
AULRC Lightning Ridg 32.66 243 P P 05 23 52.8 +1.4
AUDCS Dubbo College 32.87 238 P P 05 23 54.3 +1.2
CTA Charters Tower 33.36 260 P P 05 23 57.0 -0.4
AUDAR Daramalan Coll 33.51 232 P P 05 23 59.3 +0.8
AUMHS Melrose High S 33.59 232 P P 05 23 59.6 +0.4
AUMTS Mt Stromlo 33.64 232 P P 05 24 00.3 +0.7
CAN Canberra 33.65 232 P P 05 24 00.1 +0.5
CAN Canberra 33.65 232 P P 05 23 59.9 +0.2
AUSMG Snowy Mountain 34.37 231 P P 05 24 06.5 +0.8
CMSA Cobar Meteorol 35.08 240 P P 05 24 12.2 +0.6
QLP Quilpie 35.45 249 P P 05 24 15.4 +0.6
GLAD Gladstone 36.80 224 P P 05 24 26.7 +1.1
COEN Coen 37.01 270 P P 05 24 28.1 +0.4
COEN Coen 37.01 270 P P 05 24 27.8 +0.1
COEN IAmb IAmb 05 24 28.6
comp=Z,12nm,0.7s
TOO Toolangi 37.11 231 P P 05 24 28.8 +0.5
TOO IAmb IAmb 05 24 29.7
comp=Z,13nm,0.7s
BRAT Ballarat 38.26 231 P P 05 24 38.5 +1.0
STKA Stephens Creek 38.56 241 P P 05 24 40.7 +0.7
comp=Z,24nm,0.5s,baz=92,slow=9.8,SNR=70
comp=Z,24nm,0.5s
INKA Innaminka 38.67 248 P P 05 24 41.7 +0.7
INKA IAmb IAmb 05 24 42.6
comp=Z,12nm,0.9s
MGBR Mount Gambier 40.84 233 P P 05 24 58.5 +0.3
HTT Hallett 41.08 239 P P 05 25 01.0 +0.8
AUMBR Murray Bridge 41.15 237 P P 05 25 01.6 +0.9
AUJCS Jamestown Cent 41.29 240 P P 05 25 02.7 +0.8
AUMAR Marden Senior 41.61 237 P P 05 25 05.3 +1.0
WOH Wood Valley 43.27 33 P P 05 25 16.1 -1.4
BBOO Buckleboo 43.34 241 P P 05 25 17.9 0.0
BBOO Buckleboo 43.34 241 P 05 25 17.9 0.0
AUCAS Cummins Area S 43.85 239 P P 05 25 22.6 +0.8
WRAB Tennant Creek 44.53 260 P P 05 25 26.6 -0.7
WRAB Tennant Creek 44.53 260 P P 05 25 26.1 -1.2
WRAB IAmb IAmb 05 25 27.1
comp=Z,10nm,0.7s
WRA Warramunga Arr 44.54 260 P P 05 25 26.3 -1.1
comp=Z,7.8nm,0.5s,baz=92,slow=7.0,SNR=133
comp=Z,7.8nm,0.5s
WRA Warramunga Arr 44.54 260 P 05 25 26.3 -1.1
AS01 Alice Springs 44.66 254 P P 05 25 28.7 +0.4
AS31 Alice Springs 44.71 254 P 05 25 28.3 -0.3
ASAR Alice Springs 44.71 254 P P 05 25 28.4 -0.2
comp=Z,107nm,0.6s,baz=88,slow=8.3,SNR=165
ASAR PcP PcP 05 26 58.3 -0.1
comp=Z,0.7nm,0.4s,baz=96,slow=3.6,SNR=2.0
ASAR ScP ScP 05 29 58.1 +2.1
comp=Z,0.9nm,0.9s,baz=104,slow=4.0,SNR=4.3
AUALC St Philip's Co 44.73 254 P P 05 25 29.2 +0.5
MJAR Matsushiro Arr 67.83 323 P P 05 28 07.0 -0.1
comp=Z,1.0nm,0.5s,baz=140,slow=5.4,SNR=4.4
comp=Z,1.0nm,0.5s
QSPA South Pole Qui 72.17 180 P P 05 28 33.5 +0.9
comp=Z,4.0nm,0.9s,baz=343,slow=0.4,SNR=15
comp=Z,4.0nm,0.9s
QSPA South Pole Qui 72.17 180 P P 05 28 33.3 +0.8
PETK Petropavlovsk- 73.63 345 P P 05 28 41.2 +0.4
comp=Z,5.6nm,0.7s,baz=110,slow=7.1,SNR=13
comp=Z,5.6nm,0.7s
CHNA Chernabura Isl 74.20 11 P P 05 28 43.6 -0.3
baz=199
SDPT Sand Point 74.53 11 P P 05 28 45.9 +0.2
baz=198
S14K Fog Glacier 75.58 11 P P 05 28 51.4 -0.3
baz=198
CHGN Chignik 75.81 11 P P 05 28 52.5 -0.3
baz=200
CHIR Chirikof Islan 75.92 13 P P 05 28 53.0 -0.5
baz=202
SII Sitkinak Islan 76.92 14 P P 05 28 58.5 -0.5
baz=204
R17L Mt. Peulik Vol 77.45 12 P P 05 29 01.4 -0.5
baz=202
VES Vestal, Richgr 77.54 46 P P 05 29 03.5 +0.7
VES IAmb IAmb 05 29 04.7
comp=Z,10nm,0.9s
OHAK Old Harbor 77.73 14 P P 05 29 03.2 0.0
baz=204
CMB Columbia Colle 77.88 43 P 05 29 05.1 +0.4
Q17K Contact Creek 78.14 12 P P 05 29 05.2 -0.5
baz=202
PFO Pinyon Flats O 78.21 49 P P 05 29 07.5 +0.8
comp=Z,1.8nm,0.8s,baz=274,slow=7.7,SNR=3.8
comp=Z,1.8nm,0.8s
KDAK Kodiak Island 78.40 14 P P 05 29 06.6 -0.3
baz=205
P16K Nushagak River 78.46 11 P P 05 29 06.5 -0.6
baz=200
MDPB Devils Postpil 78.52 44 P P 05 29 09.6 +1.2
YBH Yreka Blue Hor 78.56 39 P P 05 29 10.0 +1.7
comp=Z,3.9nm,0.6s,baz=193,slow=3.9,SNR=13
comp=Z,3.9nm,0.6s
M11K Mekoryuk 78.62 6 P P 05 29 07.7 -0.3
baz=192
Q18K Katmai Hardscr 78.67 12 P P 05 29 08.3 -0.2
baz=203
N14K Kuskokwak Cree 78.73 9 P P 05 29 08.6 +0.1
baz=196
WAKR Walker 78.77 43 P P 05 29 11.0 +1.4
P17K Kvichak River 78.90 11 P P 05 29 08.9 -0.5
baz=201
BEKR Beckworth 78.93 42 P P 05 29 11.5 +1.1
BEKR IAmb IAmb 05 29 12.1
comp=Z,4.5nm,0.5s
O16K Kokwok River B 78.97 10 P P 05 29 09.0 -0.9
baz=200
M13K Dall Lake 78.98 8 P P 05 29 09.4 -0.5
baz=195
PNTR Pine Nut 78.98 43 P P 05 29 11.9 +1.2
PNTR IAmb IAmb 05 29 13.2
comp=Z,12nm,0.8s
N15K Kwethluk River 79.20 9 P P 05 29 10.6 -0.5
baz=198
P18K Big Mountain, 79.31 12 P P 05 29 10.4 -1.3
baz=202
O17K Koliganek Bris 79.32 11 P P 05 29 10.9 -0.7
baz=201
NVAR Mina Array Bea 79.47 44 P P 05 29 14.7 +1.3
comp=Z,3.6nm,0.8s,baz=226,slow=9.0,SNR=30
comp=Z,3.6nm,0.8s
M14K Bethel 79.49 8 P P 05 29 12.4 -0.1
baz=196
M15K Kasigluk River 79.61 9 P P 05 29 12.9 -0.3
baz=197
N16K Nishlik Lake 79.69 10 P P 05 29 13.1 -0.6
baz=199
O18K Koktuh Hills 79.75 12 P 05 29 14.0 0.0
O18K IAmb IAmb 05 29 14.8
comp=Z,20nm,0.9s
O18K Koktuh Hills 79.75 12 P P 05 29 13.4 -0.6
baz=202
KVN Kaiserville 79.94 43 P 05 29 16.4 +0.7
P19K Oil Pt 79.96 13 P P 05 29 14.7 -0.4
baz=204
L14K Kuka Creek 79.96 8 P P 05 29 14.7 -0.3
baz=195
N17K Nushagak Hills 80.01 11 P P 05 29 15.0 -0.3
baz=200
M16K Timber Creek 80.19 10 P 05 29 17.4 +1.2
M16K IAmb IAmb 05 29 18.1
comp=Z,10nm,0.9s
M16K Timber Creek 80.19 10 P P 05 29 15.8 -0.4
baz=199
O19K Port Alsworth 80.23 12 P P 05 29 15.9 -0.5
baz=203
K05A Summer Lake 80.24 39 P 05 29 18.4 +1.2
K05A IAmb IAmb 05 29 19.3
comp=Z,6.8nm,0.6s
ILSW Iliamna Southw 80.28 13 P P 05 29 16.9 0.0
ILSW IAmb IAmb 05 29 17.4
comp=Z,12nm,0.7s
K13K Kusilvak Mount 80.30 7 P P 05 29 16.5 -0.2
baz=193
HOM Homer 80.31 13 P P 05 29 16.5 -0.4
baz=206
N18K Kilae Creek 80.39 11 P P 05 29 16.9 -0.5
baz=202
L15K Ungalak Mounta 80.44 8 P P 05 29 17.2 -0.3
baz=196
O20K Slope Mountain 80.48 13 P P 05 29 17.6 -0.3
baz=205

BRSE Bradley Lake S 80.58 14 P P 05 29 18.2 -0.2
baz=207
L16K Owhat River 80.76 9 P P 05 29 19.2 0.0
baz=198
N19K Bonanza Creek 80.77 12 P P 05 29 19.0 -0.4
baz=203
M17K Holitna River 80.79 10 P P 05 29 19.2 -0.2
baz=200
K15K Wolf Creek Mou 81.03 8 P P 05 29 20.8 +0.2
baz=196,SNR=5.9
M18K Stony River 81.15 11 P P 05 29 21.8 +0.6
baz=202
L17K Donlin 81.34 9 P P 05 29 22.6 +0.4
baz=199
CAPN Captain Cook N 81.41 13 P P 05 29 23.0 +0.5
baz=206
GAMB Gambell 81.56 3 P P 05 29 23.7 +0.5
baz=186
L18K Granite Mounta 81.68 10 P P 05 29 24.3 +0.4
baz=201
K17K Iditarod 81.89 9 P P 05 29 25.2 +0.2
baz=199
L19K White Mountain 81.97 11 P P 05 29 25.5 +0.1
baz=203
RC01 Rabbit Creek A 82.02 14 P P 05 29 25.7 +0.1
baz=207
M20K Styx River 82.02 12 P P 05 29 25.6 -0.1
baz=204
J08A Circle Bar Ran 82.06 40 P 05 29 27.0 +0.6
J08A IAmb IAmb 05 29 28.6
comp=Z,8.8nm,1.1s
J16K Anvik River 82.11 8 P P 05 29 26.3 +0.3
baz=197
PWL Port Wells 82.14 14 P P 05 29 26.5 +0.3
baz=209
BELA Belgrano 2 82.20 173 P P 05 29 26.7 +0.2
KAIM Kayak Island 82.33 17 P P 05 29 27.5 +0.3
baz=212
BBB Bella Bella 82.34 29 P P 05 29 27.2 -0.2
comp=Z,1.8nm,0.6s,baz=201,slow=8.6,SNR=1.2
comp=Z,1.8nm,0.6s
J17K VABM Dome 82.42 9 P P 05 29 27.7 +0.1
baz=198
SKT Skwentna 82.43 12 P P 05 29 27.2 -0.5
baz=206
GLI Glacier Island 82.45 15 P P 05 29 28.0 +0.2
baz=210
KNB Kanab 82.48 47 P 05 29 29.8 +1.0
EYAK Cordova Ski Ar 82.50 16 P P 05 29 28.2 +0.2
baz=211
M22K Willow 82.52 13 P P 05 29 28.5 +0.4
baz=207
CRAG Craig 82.53 24 P P 05 29 28.5 +0.2
baz=223
U15A North Rim 82.57 48 P P 05 29 31.0 +1.6
U15A IAmb IAmb 05 29 32.2
comp=Z,8.1nm,0.8s
KNK Knik Glacier 82.59 14 P P 05 29 28.7 +0.1
baz=209
PMR Palmer 82.60 14 P P 05 29 28.6 +0.2
baz=208
I17K Unalakleet 82.67 8 P P 05 29 29.0 +0.2
baz=197
ELK Elko 82.70 43 P P 05 29 30.5 +0.6
comp=Z,2.9nm,0.8s,baz=272,slow=5.1,SNR=17
comp=Z,2.9nm,0.8s
ANM Nome 82.81 6 P P 05 29 29.7 +0.2
baz=192
G08A Pilot Rock 82.85 38 P 05 29 31.3 +1.0
G08A IAmb IAmb 05 29 32.4
comp=Z,11nm,1.4s
J18K Innoko River 82.85 10 P P 05 29 29.9 +0.1
baz=201,SNR=7.4
SIT Sitka 82.89 22 P P 05 29 29.8 -0.2
baz=221
SML Sawmill 82.97 14 P P 05 29 30.3 -0.1
baz=209
U33K Whale Pass 83.00 24 P P 05 29 30.6 -0.1
baz=223
V35K Ketchikan 83.02 25 P P 05 29 30.4 -0.4
baz=224
CUT Chulitna 83.07 13 P P 05 29 30.6 -0.3
baz=207
L22K Petersville 83.08 13 P P 05 29 30.8 -0.2
baz=206
M23K Glacier View 83.10 14 P P 05 29 30.9 -0.2
baz=209
PPLA Purkeypile 83.12 12 P P 05 29 31.1 -0.3
baz=205
BMRM Bremner River 83.16 16 P P 05 29 31.3 -0.2
baz=212
K20K Telida 83.20 11 P P 05 29 31.7 +0.2
baz=203,SNR=8.0
H16K Elim 83.20 7 P P 05 29 31.5 0.0
baz=196
SCM Sheep Creek Mo 83.22 14 P P 05 29 32.0 +0.2
SCM Sheep Creek Mo 83.22 14 P P 05 29 31.3 -0.5
baz=210
S31K Pelican 83.26 21 P P 05 29 31.3 -0.5
baz=220
KLU Klutina 83.27 15 P P 05 29 31.7 -0.3
baz=211
G15K Niukluk 83.36 6 P P 05 29 32.0 -0.3
baz=194
S32K Killisnoo 83.47 22 P P 05 29 32.4 -0.6
baz=222
J19K Poorman 83.52 10 P P 05 29 32.7 -0.4
baz=202
WRAK Wrangell Islan 83.52 24 P P 05 29 32.6 -0.6
baz=224
TNA Tin City 83.57 4 P P 05 29 33.0 -0.2
baz=190
F14K Arctic Creek 83.61 5 P P 05 29 33.6 +0.1
baz=192
CAST Castle Rocks 83.62 12 P P 05 29 32.5 -1.1
baz=205,SNR=12
PINM Pinnacle 83.65 18 P P 05 29 33.3 -0.7
baz=216
N25K Chitina, Valde 83.70 16 P P 05 29 33.9 -0.2
baz=212
M24K Tolsona, Glenn 83.74 15 P P 05 29 34.0 -0.3
baz=211
H17K Granite Mounta 83.78 8 P P 05 29 34.0 -0.3
baz=198
WAT6 Susitna Watana 83.78 14 P P 05 29 34.0 -0.6
baz=209
WAT1 Susitna Watana 83.82 13 P P 05 29 34.1 -0.6
baz=208
MAW Mawson 83.85 200 P P 05 29 35.3 +0.5
comp=Z,1.2nm,0.5s,baz=135,slow=9.4,SNR=4.1
comp=Z,1.2nm,0.5s
G16K Koyuk River 83.92 7 P P 05 29 34.7 -0.3
baz=195
MCARA McCarthy VSAT 83.92 16 P P 05 29 34.6 -0.6
baz=214
J20K Nowinta River 83.94 10 P P 05 29 35.3 +0.2
baz=203,SNR=5.5
CHUM Lake Minchumin 84.00 11 P P 05 29 34.9 -0.6
baz=205
TRF Thorofare Moun 84.00 12 P P 05 29 35.3 -0.4
baz=207,SNR=13
GCSA Galena City Sc 84.03 9 P P 05 29 35.9 +0.4
baz=201
P29M Windy Craggy 84.05 19 P P 05 29 35.1 -0.7
baz=219
R32K Eaglecrest 84.09 22 P P 05 29 36.3 +0.2
baz=222
H18K Honhosa River 84.19 8 P P 05 29 36.8 +0.3
baz=199
O28M Mount Upton 84.21 18 P P 05 29 36.8 -0.2
baz=216
G17K Kiwalik Mounta 84.23 7 P P 05 29 36.6 +0.1
baz=197
HARP HAARP 84.23 15 P P 05 29 36.3 -0.4
baz=212
DHY Denali Highway 84.30 14 P P 05 29 37.0 -0.1
baz=210
O29M Mount Kennedy 84.32 19 P P 05 29 36.9 -0.4
baz=218
PLBC Pleasant Camp 84.36 20 P P 05 29 37.5 +0.2
baz=220
I20K Naaghedeneel 84.45 10 P P 05 29 37.9 +0.2
baz=203
MCK McKinley 84.53 13 P P 05 29 37.9 -0.2
baz=208
PAX Paxson 84.65 14 P P 05 29 38.5 -0.2
baz=211
P30M Million Dollar 84.68 19 P P 05 29 39.1 +0.1
baz=219
SKAG Skagway 84.71 21 P P 05 29 39.3 +0.3
baz=221
T35M Bob Quinn 84.74 24 P P 05 29 39.2 -0.1
baz=225
YUK8 Steele Glacier 84.75 18 P P 05 29 39.3 -0.3
baz=217
M26K Nabesna, AK 84.78 16 P P 05 29 39.2 -0.2
baz=214
H19K Roundabout Mou 84.82 9 P P 05 29 39.1 -0.3
baz=201
G18K Tagagawik 84.86 8 P P 05 29 39.6 -0.1
baz=199
YUK3 Moose Creek 84.95 17 P P 05 29 39.5 -0.9
baz=216
H20K Anotleneega Mo 85.03 10 P P 05 29 41.0 +0.5
baz=202
M27K Edge Creek, AK 85.04 16 P P 05 29 40.7 0.0
baz=215,SNR=5.4
S34M Telegraph Cree 85.06 23 P P 05 29 40.6 -0.1
baz=225,SNR=5.0
HYT Haines Junctio 85.06 19 P P 05 29 41.1 +0.2
baz=219
F17K Baldwin Pennin 85.06 7 P P 05 29 40.9 +0.4
baz=196
YUK4 Tal Talbot Arm 85.13 18 P P 05 29 41.9 +0.6
baz=218
L26K Log Cabin Wild 85.21 15 P P 05 29 41.6 +0.2
baz=213
I21K Tanana 85.24 11 P P 05 29 42.0 +0.6
baz=205
NEA2 Nenana 85.27 12 P P 05 29 41.9 +0.3
baz=208
K24K Donnelly Dome 85.29 14 P P 05 29 42.1 +0.3
baz=211
G19K Purcell Mounta 85.31 9 P P 05 29 42.4 +0.6
baz=200
MLY Manley 85.33 11 P P 05 29 42.5 +0.5
baz=206
P32M Atlin 85.35 21 P P 05 29 42.6 +0.4
baz=222
BVCY Beaver Creek 85.36 17 P P 05 29 42.3 +0.1
baz=216
Q32M Nakina River 85.39 22 P P 05 29 42.1 -0.5
baz=224
F18K Selawik 85.40 7 P P 05 29 42.5 +0.4
baz=198
RIDG Independent Ri 85.45 14 P P 05 29 42.5 -0.1
baz=212
O30N Mendenhall 85.46 19 P P 05 29 42.5 -0.2
baz=220
H21K Melozitna Rive 85.53 10 P P 05 29 42.7 -0.1
baz=204
NEW Newport 85.54 36 P P 05 29 43.8 +0.5
comp=Z,1.9nm,0.7s,baz=187,slow=2.9,SNR=5.2
comp=Z,1.9nm,0.7s
HDA Harding Lake 85.55 13 P P 05 29 42.9 -0.1
baz=210
CCB Clear Creek Bu 85.58 13 P P 05 29 42.8 -0.3
CCB IAmb IAmb 05 29 43.5
comp=Z,8.4nm,1.2s
E17K Hotham Inlet 85.61 6 P P 05 29 42.8 -0.4
baz=196
L27K Beaver Creek, 85.63 16 P P 05 29 43.2 -0.3
baz=215
IMAR Indian Mountai 85.67 10 P P 05 29 43.5 0.0
N30M Aishikik Lake 85.68 19 P P 05 29 43.3 -0.5
baz=219
I23K Minto, Yukon-K 85.70 12 P P 05 29 43.6 -0.1
baz=208
WHY Whitehorse 85.76 20 P P 05 29 43.9 -0.3
baz=221
COLA College 85.77 13 P P 05 29 43.9 -0.1
baz=209
DLBC Dease Lake 85.84 23 P P 05 29 45.8 +1.2
comp=Z,2.2nm,0.8s,baz=141,slow=5.6,SNR=5.5
comp=Z,2.2nm,0.8s
DLBC Dease Lake 85.84 23 P P 05 29 44.0 -0.6
baz=226
F19K Shaleruckim Mo 85.86 8 P P 05 29 44.1 -0.3
baz=200
ILAR Eielson Array 85.88 13 P P 05 29 44.0 -0.6
comp=Z,1.7nm,0.4s,baz=222,slow=5.2,SNR=45
comp=Z,1.7nm,0.4s
H22K Ishtalitna Cre 85.99 11 P P 05 29 44.8 -0.2
baz=206
M29M Somme Creek 86.05 17 P P 05 29 45.2 -0.3
baz=218
TXAR Lajitas Array 86.06 58 P P 05 29 48.7 +2.3
comp=Z,4.0nm,0.8s,baz=215,slow=5.8,SNR=55
comp=Z,4.0nm,0.8s
POKR Poker Plat Res 86.07 13 P P 05 29 45.3 -0.1
baz=209
E18K Tukpahlearik C 86.08 7 P P 05 29 45.3 -0.1
baz=197
J25K Salcha River, 86.08 14 P P 05 29 45.5 -0.1
baz=211,SNR=10
D17K Noatak River 86.08 6 P P 05 29 45.8 +0.4
baz=195
P33M Teslin, Yukon 86.11 21 P P 05 29 45.6 -0.3
baz=223
ANMO Albuquerque 86.15 52 P P 05 29 48.1 +1.3
comp=Z,1.7nm,1.0s,baz=237,slow=8.3,SNR=5.3
comp=Z,1.7nm,1.0s
R33M Jennings River 86.17 22 P P 05 29 46.3 0.0
baz=225
G21K Allakaket 86.20 10 P P 05 29 46.2 +0.2
baz=204
H23K Yukon River 86.27 12 P P 05 29 46.5 +0.1
baz=207
F20K Avaraart Lake 86.35 9 P P 05 29 47.0 +0.3
baz=202
C16K Lisburne Hills 86.44 5 P P 05 29 47.2 +0.1
baz=192
RDOG Red Dog Mine 86.45 6 P P 05 29 47.0 -0.1
baz=195
E19K Redstone River 86.53 8 P P 05 29 47.8 +0.3
baz=200
H24K Noodor Dome 86.61 12 P P 05 29 48.2 +0.2
baz=209
M30M Minto, Yukon 86.64 18 P P 05 29 48.2 -0.1
baz=219,SNR=5.6
L29M L29M 86.67 17 P P 05 29 48.3 -0.1
baz=218
PRP Porcupine Dome 86.82 13 P P 05 29 49.3 +0.1
baz=211
C17K DeLong Mountai 86.83 6 P P 05 29 49.3 +0.3
baz=194
F21K Alatna River 86.85 9 P P 05 29 49.5 +0.4
baz=204
G22K Bettles 86.90 10 P P 05 29 49.5 +0.2
baz=206
G23K Bananza Creek 86.97 11 P P 05 29 50.0 +0.2
baz=207
M31M Drury Creek, Y 87.08 19 P P 05 29 50.1 -0.2
baz=222
DAWY Dawson 87.09 16 P P 05 29 50.2 -0.1
baz=217
I26K Coal Creek Min 87.17 14 P P 05 29 50.9 +0.3
baz=213
HHC Hu-ho-hao-te 87.19 314 eP P 05 29 50.3 -1.1
HHC pmax pmax
comp=Z,8.0nm,0.6s
C18K Utukok River 87.19 6 P P 05 29 50.8 0.0
baz=196
F22K John River 87.32 10 P P 05 29 51.2 -0.1
baz=205
D19K Kuna River 87.39 7 P P 05 29 51.7 0.0
baz=199
BW06 Boulder Array 87.40 43 P P 05 29 53.1 +0.5
BW06 IAmb IAmb 05 29 54.2
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 87.40 43 P P 05 29 53.5 +1.0
comp=Z,2.1nm,0.5s,baz=220,slow=3.5,SNR=36
comp=Z,2.1nm,0.5s
COLD Coldfoot 87.40 11 P P 05 29 52.0 +0.3
baz=207
K29M Barlow Dome 87.42 17 P P 05 29 51.7 -0.2
baz=219
E20K Nigu River 87.42 8 P P 05 29 51.8 0.0
baz=201
G24K Hadweenzic Riv 87.44 12 P P 05 29 51.7 -0.2
baz=209
G25K Bearman Lake 87.77 12 P P 05 29 53.6 +0.2
baz=211
I27K Kandik River 87.78 14 P P 05 29 53.5 0.0
baz=215
D20K Etivluk River 87.79 8 P P 05 29 53.7 +0.2
baz=201

C19K	Lookout Ridge baz=198	87.80	7	P		P	05 29 53.6	+0.1
E21K	Killik River baz=203	87.90	9	P		P	05 29 53.9	-0.1
I28M	Miner Creek baz=216	88.06	15	P		P	05 29 54.8	-0.1
F24K	Squaw Lake baz=209	88.08	11	P		P	05 29 54.8	-0.1
E23K	Chandalar baz=207	88.25	10	P		P	05 29 55.7	-0.1
H27K	Steamboat Moun baz=215	88.32	14	P		P	05 29 56.1	+0.1
J30M	Hart River baz=220	88.32	17	P		P	05 29 56.2	+0.1
MMPY	Sheldon Lake, baz=224	88.38	20	P		P	05 29 56.5	+0.1
G26K	Porcupine Rive baz=213	88.41	13	P		P	05 29 56.6	+0.2
C21K	Knifeblade Rid baz=202	88.45	8	P		P	05 29 56.6	+0.1
E24K	Your Creek baz=208	88.46	11	P		P	05 29 56.7	0.0
F25K	Christian Rive baz=211	88.58	12	P		P	05 29 57.1	-0.1
A19K	Wainwright baz=196	88.70	6	P		P	05 29 57.6	0.0
G27K	Doyon Strip baz=215	88.76	14	P		P	05 29 58.3	+0.3
TOLK	Toolik Lake Re baz=207	88.78	10	P		P	05 29 58.2	+0.1
CMAR	Chiang Mai Arr comp=Z,0.6nm,0.3s,baz=112,slow=3.3,SNR=4.5 comp=Z,0.6nm,0.3s	88.79	290	P		P	05 30 00.1	+0.9
I30M	Mount Dempster baz=220	88.80	16	P		P	05 29 58.5	+0.1
D23K	Nanushuk River baz=206	88.88	10	P		P	05 29 58.9	+0.4
B21K	Ikpikpuk River baz=203	88.90	8	P		P	05 29 59.2	+0.7
B20K	Meade River baz=200	88.94	7	P		P	05 29 59.2	+0.5
F26K	Sheenjek River baz=212	88.97	12	P		P	05 29 59.8	+0.8
E25K	Arctic Village baz=211	89.05	12	P		P	05 29 59.7	+0.4
PZH	PanZhiHua	89.06	298	P		P	05 30 01.4	+0.9
H29M	Whitestone baz=218	89.07	15	P		P	05 29 59.8	+0.4
ELIB	Princess Elisa comp=Z,3.1nm,0.8s	89.18	187	*d*P		P	05 30 00.4	+0.1
KOTAN	Kotaneelee Air baz=231	89.26	24	P		P	05 30 00.6	+0.1
D24K	Happy Valley baz=208	89.36	10	P		P	05 30 01.1	+0.3
EPYK	Eagle Plains baz=219	89.60	16	P		P	05 30 02.2	+0.3
C23K	Itkillik River baz=206	89.68	9	P		P	05 30 02.5	+0.4
G29M	Pine Creek baz=218	89.70	15	P		P	05 30 02.3	-0.1
H31M	Peel River baz=221	89.80	17	P		P	05 30 02.7	-0.1
F28M	Old Crow baz=216	89.83	14	P		P	05 30 03.0	+0.1
E27K	Coleen River baz=215	89.91	13	P		P	05 30 03.5	+0.2
D25K	Kavik River baz=210	89.93	11	P		P	05 30 03.9	+0.4
A22K	Sinclair Lake baz=202	90.14	8	P		P	05 30 04.5	+0.3
G30M	tAoh Zraii Nji baz=220	90.20	15	P		P	05 30 04.9	+0.1
TROLL	Troll, Antarti comp=Z,90nm,0.5s	90.33	180	⇓P		P	05 30 05.9	+0.3
G31M	Satah River	90.66	16			P	05 30 07.0	+0.2
G31M				IAmb		IAmb	05 30 08.2	
	comp=Z,5.0nm,0.8s							
G31M	Satah River baz=222	90.66	16	P		P	05 30 06.9	+0.2
C27K	Jago River baz=213	90.69	12	P		P	05 30 07.1	+0.2
E28M	Babbage River baz=217	90.70	13	P		P	05 30 07.3	+0.3
C26K	Camden Bay baz=212	90.71	11	P		P	05 30 07.4	+0.4
F30M	Barrier River baz=220	90.80	15	P		P	05 30 07.6	+0.2
E29M	Blow River baz=218	90.90	14	P		P	05 30 08.1	+0.3
D27M	Malcolm River baz=215	90.91	13	P		P	05 30 07.9	-0.1
F31M	Tsiigehtchic baz=222	91.18	16	P		P	05 30 09.0	-0.1
INK	Inuvik baz=222	91.88	15	P		P	05 30 12.4	0.0
YKA	Yellowknife Ar comp=Z,1.3nm,0.8s,baz=251,slow=3.5,SNR=3.8 comp=Z,1.3nm,0.8s	94.35	25	P		P	05 30 23.9	+0.1
A36M	Sachs Harbour baz=230	96.48	15	P		P	05 30 32.8	-0.4
ARCES	ARCESS Array B comp=Z,1.4nm,0.6s,baz=5.7,slow=1.2,SNR=5.8	126.27	350	PKP		PKiKP	05 36 03.2	+0.1
FINES	FINESS Array B comp=Z,2.2nm,0.8s,baz=62,slow=3.3,SNR=4.0	133.14	344	PKP		PKPdf	05 36 15.7	-0.1
MI28	Mi28,Pidlybu	141.00	334	PKP		PKiKP	05 36 34.0	+0.5
EKA	Eskdalemuir Ar comp=Z,0.7nm,0.5s,baz=338,slow=2.6,SNR=3.7	142.45	4	PKhKP		PKPpre	05 36 29.7	
CLL	Collm comp=Z,9.0nm,1.0s	145.41	347	*i* PKPbc		PKPbc	05 36 40.0	+0.4
KRUC	Moravsky	146.63	342	*e*PKP		PKPbc	05 36 43.5	+0.4
GERES	GERESS Array B comp=Z,2.0nm,0.5s,baz=22,slow=2.7,SNR=23	147.56	345	PKPbc		PKiKP	05 36 46.2	-1.0
CONA	Conrad Observa comp=Z,1.0nm,0.4s	147.81	342	*e*PKiKP		PKiKP	05 36 47.5	-0.2
RONA	Rosalia, Austr comp=Z,2.3nm,0.7s	147.88	341	*e*PKiKP		PKiKP	05 36 47.4	-0.4
MOA	Molln comp=Z,0.6nm,0.4s	148.33	344	*e*PKP		PKiKP	05 36 48.1	-0.6
SESA	Seetaler Alpe, comp=Z,5.4nm,0.5s	148.92	343	*e*PKP		PKPbc	05 36 49.5	+0.2
LESA	Schwarzleotal comp=Z,1.3nm,0.4s	149.13	345	*e*PKP		PKiKP	05 36 50.3	-0.2
SOKA	Soboth comp=Z,1.5nm,1.1s	149.18	342	*e*PKP		PKPbc	05 36 49.7	-0.1
KBA	Koelnbreinsper comp=Z,0.5nm,0.4s	149.29	344	*e*PKP		PKPbc	05 36 50.0	-0.1
WTTA	Wattenberg comp=Z,6.6nm,0.6s	149.53	346	*e*PKP		PKPbc	05 36 50.7	0.0
MOTA	Moosalm comp=Z,1.4nm,0.7s	149.57	347	*e*PKP		PKiKP	05 36 51.1	-0.4
SQTA	Sankt Quirin comp=Z,3.0nm,0.5s	149.67	347	*e*PKP		PKiKP	05 36 51.1	-0.6
ABTA	Abfaltersbach comp=Z,2.6nm,0.5s	149.81	345	*e*PKP		PKPbc	05 36 51.3	0.0
FETA	Feichten comp=Z,0.4nm,0.5s	149.96	347	*e*PKiKP		PKiKP	05 36 52.3	0.0
ESDC	Sonseca Array comp=Z,0.7nm,1.0s,baz=339,slow=3.7,SNR=4.5	157.77	11	PKPab		PKPab	05 37 33.7	+0.3

*GCG **25** 05:53:34.8±1.4, 14°.26N×92°.97W, h9km±24km, MD4.4, Presumed earthquake*
*MEX **25** 05:53:36.6±1.0, 14°.45N×93°.10W, h71km±36km, MD3.8*
ISC 25 05:53:32.4±2.1, 14°.25N±0°.10×93°.08W±0°.06, h27km±15km, n19, σ1s16/29, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
THIG		1.02	50	*e*P		Pb	05 53 52.9	+1.4
THIG				*e*S		Sn	05 54 05.3	+0.8
THIG		1.02	50	*i* P		Pb	05 53 52.2	+0.7
THIG				*i* S		Sn	05 54 04.2	-0.2
PATR	El Naranjo	1.19	43	*e*P		Pb	05 53 54.9	+0.5
PATR				*e*S		Sn	05 54 08.6	-0.3
CHUJ	Union Juarez	1.26	48	*e*P		Pb	05 53 55.7	+0.1
CHUJ				*e*S		Sb	05 54 10.8	-0.7
PAVE	Pavencul	1.28	43	*e*P		Pb	05 53 56.2	+0.2
PAVE				*e*S		Sb	05 54 11.3	-0.8
RTAL	Retalhuleu	1.37	78	*e*P		Pb	05 53 57.8	+0.5
RTAL				*e*S		Sb	05 54 14.3	-0.1
STG5	El Palmar, Qui	1.68	85	*i* P		Pn	05 53 59.7	-0.4
STG8	El Palmar, Qui	1.68	83	*i* P		Pn	05 53 59.9	-0.5
HUEH	Huehuetenango	1.86	55	*e*P		Pb	05 54 06.6	+0.8
HUEH				*e*S		Sb	05 54 29.9	+1.1
HUEH	Huehuetenango	1.86	55	*i* P		Pb	05 54 05.6	-0.3
CARR	Arriaga	2.14	338	*e*P		Pb	05 54 10.4	-0.1
CARR				*e*S		Sn	05 54 33.5	+1.4
FG8	Yepocapa, Chim	2.44	89	*i* P		Pn	05 54 08.6	-2.1
FG16	Alotenango, Sa	2.49	89	*i* P		Pn	05 54 09.9	-1.4
TGIG		2.51	359	*e*P		Pb	05 54 15.1	-1.8
TGIG				*e*S		Sn	05 54 42.8	+1.4
TGIG		2.51	359	*i* P		Pb	05 54 15.5	-1.4
APG	El Apazote	2.64	73	*i* P		Pb	05 54 17.5	-1.6
CMIG	Matias Romero	3.32	329	*e*P		Pn	05 54 23.9	+1.3
CMIG				*e*S		Sn	05 55 00.3	-0.8
JAYA	Jayaque - finc	3.57	99	*i* P		Pn	05 54 28.6	+2.3
NEUV	Arroyo Zacate	4.33	323	*e*S		Sn	05 55 25.6	-0.5

JMA 25 05:53:46.8±0.4, 28°N±2°×13°9E±°, h472km, MV3.6/19, SHIKOKU BASIN, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CBIJ	Chichi jima	3.45	111	*e*S		S	05 55 56.5	-1.0
JHH2	Haha-jima-NKT2	3.65	118	S		S	05 55 59.8	-0.6
BSO1	Boso 1	6.57	18	*e*P		P	05 55 30.4	+3.5
BSO1				*e*S		S	05 56 50.3	+1.1
BSO3	Boso 3	6.60	14	*e*S		S	05 56 51.0	+0.7
JAG	Ashikaga	8.05	5	P		P	05 55 43.9	+1.0
JAG				*e*S		S	05 57 15.3	-3.0
JHO	Hitachi	8.37	11	P		P	05 55 48.0	+1.7
JHO				*e*S		S	05 57 21.9	-2.6
JFK	Kawauchi	9.16	12	P		P	05 55 57.1	+2.3
JFK				*e*S		S	05 57 39.8	-0.2

*IDC **25** 06:01:42.1±1.3, 14°.49N×147°.03E, h0km, mb3.8/8, mbtmp3.8/9, ML3.9/1, MS3.3/1, Error ellipse: s-maj=33.5km s-min=20.4km az=109.0*
*NEIC **25** 06:01:56.4±1.7, 14°.65N±0°.06×145°.9E±0°.1, h70km±7km, mb3.9/4, Error ellipse: s-maj=19.2km s-min=3.1km az=114.0*
ISC 25 06:01:50.2±1.0, 14°.55N±0°.08×146°.7E±0°.1, h49km, n20, σ2s17/22, mb3.9/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DPSS	Saipan	1.09	309			Pn	06 02 11.4	+2.3
DPSS					Sn	Sn	06 02 19.9	-3.3
GUMO	Guam	1.99	242	Pn		Pn	06 02 21.0	-0.4
	30nm,0.3s,baz=149,slow=8.1,SNR=12							
GUMO					Sn	Sn	06 02 50.7	+5.5
	48nm,0.3s,baz=13,slow=23,SNR=6.8 61nm,0.3s							
GUMO	Guam	1.99	242			Pn	06 02 21.0	-0.4
GUMO					Sn	Sn	06 02 40.4	-4.8
JNU	Nakatsue	23.41	325	LR		LR	06 15 16.8	
	comp=Z,66nm,19.2s,baz=142,slow=34							
WRA	Warramunga Arr	36.36	200	P		P	06 08 49.1	-0.8
	0.5nm,0.9s,baz=20,slow=7.7,SNR=0.4 0.5nm,0.9s							
AS31	Alice Springs	39.98	198	P		P	06 09 23.3	+3.1
ASAR	Alice Springs	39.98	198	P		P	06 09 18.6	-1.7
	0.2nm,0.6s,baz=20,slow=8.2,SNR=4.1 0.2nm,0.6s							
ASAR	Alice Springs	39.98	198	P		P	06 09 21.8	+1.5
SONM	Songino Array	46.98	323	P		P	06 10 17.0	+0.5
	0.6nm,0.5s,baz=99,slow=5.5,SNR=3.4 0.6nm,0.5s							
SONM	Songino Array	46.98	323	P		P	06 10 16.5	-0.1
SONM					IAmb	IAmb	06 10 47.6	
	comp=Z,2.4nm,1.5s							
ZALV	Zalesovo Beam	61.87	324	P		P	06 12 05.0	+0.6
	comp=Z,0.8nm,0.5s,baz=103,slow=6.4,SNR=1.7 comp=Z,0.8nm,0.5s							
MKAR	Makanchi Array	62.02	315	P		P	06 12 06.6	+1.0
	comp=Z,1.3nm,0.4s,baz=92,slow=8.0,SNR=25 comp=Z,1.3nm,0.4s							
MKAR	Makanchi Array	62.02	315	P		P	06 12 05.8	+0.2
KURK	Kurchatov	64.99	319	P		P	06 12 25.1	+0.1
KURBB	Kurchatov Arra	65.03	319	P		P	06 12 25.8	+0.5
	comp=Z,4.4nm,0.6s,baz=98,slow=6.9,SNR=24 comp=Z,4.4nm,0.6s							
ILAR	Eielson Array	66.96	25	P		P	06 12 35.8	-1.7
	comp=Z,0.3nm,0.6s,baz=240,slow=5.4,SNR=5.1 comp=Z,0.3nm,0.6s							
BVAR	Borovoye Array	70.26	321	P		P	06 12 58.4	+0.1
	comp=Z,1.7nm,0.5s,baz=92,slow=5.6,SNR=7.4 comp=Z,1.7nm,0.5s							
AB31	Akbulak array	77.01	318	P		P	06 13 37.4	-0.5
AB31					IAmb	IAmb	06 14 20.1	
	comp=Z,1.4nm,1.1s							
ABKAR	Akbulak array	77.01	318	P		P	06 13 37.7	-0.2
FINES	FINESS Array B	91.02	336	P		P	06 14 49.6	+0.5

*IDC **25** 06:14:32.5±2.0, 37°.22N×75°.70E, h0km, mb3.7/5, mbtmp3.7/11, ML3.2/6, MS2.9/1, Error ellipse: s-maj=36.6km s-min=24.1km az=142.0*
*NNC **25** 06:14:56.6±8.7, 38°.18N×75°.17E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=67.5km s-min=50.8km az=154.0*
ISC 25 06:14:45.7±0.7, 37°.54N±0°.05×75°.9E±0°.1, h100km, n23, σ2s89/30, mb3.6/4, 5C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TSSA	Tissa	4.70	177	*e*P		Pn	06 15 56.9	+2.3
TSSA				*e*S		Sn	06 16 47.4	-0.7
TSSA					IAML		06 16 52.5	
	comp=E,204nm,0.4s							
TSSA					IAML		06 16 52.5	
	comp=N,477nm,0.4s							
JMU	Jammu	4.82	190	*ex*		Sn	06 16 52.3	+1.5
THN	Thein Dam	5.09	181	*e*P		Pn	06 16 02.7	+3.0
THN				*e*S		Sn	06 16 57.6	+0.3
THN					IAML		06 17 01.8	
	comp=E,99nm,0.3s							
THN					IAML		06 17 01.9	
	comp=N,86nm,0.3s							
AAK	Ala-Archa	5.20	349	Pn		Pn	06 15 59.2	-2.0
	comp=N,1.3nm,0.3s,baz=127,slow=8.3,SNR=5.7							
AAK					Sn	Sn	06 16 59.1	-0.8
	comp=N,0.9nm,0.3s,baz=159,slow=7.0,SNR=3.6 comp=N,3.4nm,0.4s							
AAK	Ala-Archa	5.20	349	⇑Pn		Pn	06 16 04.5	+3.3
	comp=N,2.7nm,0.7s							
AAK				⇑Sn		Sn	06 17 00.4	+0.5
	comp=N,7.7nm,0.7s							
DHRM	DHARAMSHALA	5.29	176	*e*P		Pn	06 16 04.4	+1.7
DHRM				*e*S		Sn	06 17 01.4	-1.0
DHRM					IAML		06 17 06.1	
	comp=N,151nm,0.3s							
DHRM					IAML		06 17 06.3	
	comp=E,271nm,0.3s							
HNLY	HANLEY	5.39	151	*ex*		Pn	06 16 06.6	+2.3
TLWR	Talawar	5.57	179	*e*S		Sn	06 17 09.3	+0.3
MDOK	Medeo	5.69	9	Pn		Pn	06 16 16.2	+8.3
	comp=E,2.0nm,0.4s							
MDOK				⇑Sn		Sn	06 17 18.7	+6.8
	comp=E,4.9nm,0.5s							
BHK	Bhakra	6.15	176	*e*S		Sn	06 17 20.3	-2.7
BHK					IAML		06 17 25.9	
	comp=E,126nm,0.7s							
BHK					IAML		06 17 26.2	
	comp=N,141nm,0.6s							
SMLA	Simla	6.49	170	*e*P		Pn	06 16 19.4	+0.7
SMLA				*e*S		Sn	06 17 26.3	-4.9
SMLA					IAML		06 17 31.9	
	comp=N,114nm,0.5s							
SMLA					IAML		06 17 32.2	
	comp=E,54nm,0.1s							
KK31	Karatay Array	6.89	325	⇑P		Pn	06 16 26.7	+2.6
	comp=E,0.6nm,0.2s,baz=130,slow=12,SNR=17							
KK31				⇑S		Sn	06 17 37.8	-3.2
	comp=E,2.7nm,0.3s,baz=132,slow=21							
MKAR	Makanchi Array	10.40	25	Pn		Pn	06 17 09.5	-2.3
	comp=E,0.1nm,0.3s,baz=206,slow=15,SNR=4.1 comp=E,0.3nm,0.5s							
KURBB	Kurchatov Arra	13.22	7	Pn		Pn	06 17 46.8	-2.5
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=5.3 comp=E,0.5nm,0.2s							
BVAR	Borovoye Array	15.95	348	Pn		Pn	06 18 19.2	-4.9
	baz=133,slow=12,SNR=4.3 comp=E,0.6nm,0.4s							
AB31	Akbulak array	16.42	321	P		P	06 18 37.9	+7.0
	comp=E,0.5nm,0.5s,baz=127,slow=12,SNR=5.7							
ZALV	Zalesovo Beam	17.53	18	P		P	06 18 42.1	-1.1
	comp=E,1.1nm,0.3s,baz=215,slow=9.7,SNR=14 comp=E,2.4nm,0.4s							
AKTO	Aktyubinsk	18.13	321	P		P	06 18 48.7	-1.1
	comp=E,0.7nm,0.3s,baz=149,slow=17,SNR=5.4							
	comp=E,1.7nm,0.3s							
SONM	Songino Array	24.55	56	P		P	06 19 56.2	+0.2
	comp=E,0.4nm,0.4s,baz=266,slow=8.7,SNR=4.3							
SONM				LR		LR	06 29 16.0	
	comp=E,28nm,19.9s,baz=344,slow=36 comp=E,0.4nm,0.4s							
FINES	FINESS Array B	38.85	324	P		P	06 22 00.3	-0.5
	comp=E,1.0nm,0.4s,baz=117,slow=11,SNR=14 comp=E,1.0nm,0.4s							
HFS	Hagfors	44.68	321	P		P	06 22 47.6	-0.6
	comp=E,1.1nm,0.5s,baz=115,slow=10.0,SNR=6.6 comp=E,1.1nm,0.5s							
NOA	NORSAR Array B	45.91	322	P		P	06 22 56.9	-1.1
	comp=E,0.3nm,0.6s,baz=90,slow=8.0,SNR=2.6 comp=E,0.3nm,0.6s							
TORD	Torodi Ar. Bea	69.61	271	P		P	06 25 43.7	-0.7
	comp=E,0.5nm,0.5s,baz=46,slow=6.4,SNR=5.5 comp=E,0.5nm,0.5s							

*JSN **25** 06:16:58.9±1.2, 19°.55N×77°.96W, h30km±416km, MD4.2, Presumed earthquake*
*SSNC **25** 06:16:58.5±1.2, 19°.42N×77°.92W, h4km±13km, MD3.0, ML2.3, Presumed earthquake*
ISC 25 06:16:57.6±2.3, 19°.47N±0°.03×77°.86W±0°.07, h14km±15km, n14, σ0s77/27, 2C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LMGC	Las Mercedes	1.00	53	*e*P		Pb	06 17 16.9	+0.2
LMGC				*e*S		Sg	06 17 30.1	+0.1
LMGC					IAML		06 17 32.2	
	comp=N,150nm,0.1s							
LMGC					IAML		06 17 35.2	
	comp=E,157nm,0.1s							
CVJ	Coleyville	1.27	166	⇑*i* P		Pn	06 17 21.1	0.0
CVJ				⇓*i* S		Sb	06 17 37.6	-0.1
BNJ	Bonny Gate	1.43	143	⇑*i* P		Pb	06 17 23.9	-0.1
BNJ				*i* S		Sb	06 17 42.4	+0.3
CHIV	Chivirico	1.45	69	*e*P		Pn	06 17 23.5	0.0
CHIV				*e*S		Sn	06 17 42.0	-0.3
CHIV					IAML		06 17 43.6	
	comp=N,24nm,0.1s							
CHIV					IAML		06 17 44.8	
	comp=E,20nm,0.1s							
MCJ	Malvern	1.54	174	*i* P		Pn	06 17 25.2	+0.4
MCJ				*i* S		Sn	06 17 44.3	-0.4
YAR	Yar	1.67	57	*e*P		Pn	06 17 27.3	+0.8
YAR				*e*S		Sn	06 17 48.5	+0.7
YAR					IAML		06 17 49.9	
	comp=E,37nm,0.4s							
YAR					IAML		06 17 50.0	
	comp=N,22nm,0.2s							
STH	Stony Hill	1.70	144	⇓*i* P		Pn	06 17 27.6	+0.7
STH				⇓*i* P		Pn	06 17 27.6	+0.7
STH				*i* S		Sn	06 17 49.4	+0.8
CCCC	Cccc	1.73	3	*e*P		Pn	06 17 27.2	-0.1
CCCC				*e*S		Sn	06 17 49.7	+0.6
CCCC					IAML		06 17 51.4	
	comp=E,35nm,0.7s							
CCCC					IAML		06 17 56.2	
	comp=N,21nm,0.4s							
GWJ	Greenwich	1.75	142	*i* P		Pn	06 17 27.2	-0.5
GWJ				⇓*i* P		Pb	06 17 28.3	-1.3
PCJ	Portland Cotta	1.84	159	*i* P		Pn	06 17 30.0	+1.2
RCC	Rio Carpintero	2.10	75	*e*P		Pn	06 17 32.8	+0.3
RCC				*e*S		Sn	06 17 58.5	0.0
HLGC	Holguin	2.21	50	*e*P		Pn	06 17 33.8	-0.1
HLGC				*e*S		Sn	06 17 59.0	-2.0
QMBU	Quimbuelo	2.96	75	*e*P		Pn	06 17 44.7	+0.4
QMBU				*e*S		Sn	06 18 18.8	-0.8
QMBU					IAML		06 18 26.0	
	comp=E,11nm,0.3s							
QMBU					IAML		06 18 26.3	
	comp=N,9.4nm,0.3s							
MASC	Masc	3.49	78	*e*P		Pn	06 17 52.7	+1.2

IDC 25 06:34:11.3±2.8, 20°.37S×178°.34W, h553km±31km, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=72.7km s-min=38.2km az=23.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	Nonsavu	4.30	307	P		P	06 35 35.8	-0.1
	14nm,0.4s,baz=221,slow=18,SNR=22							
STKA	Stephens Creek	37.55	244	P		P	06 40 38.7	-0.3
	1.2nm,0.5s,baz=41,slow=14,SNR=2.8 1.2nm,0.5s							
ASAR	Alice Springs	44.23	257	P		P	06 41 32.3	+0.1
	2.8nm,0.6s,baz=96,slow=7.7,SNR=42							
ASAR					PcP	PcP	06 43 04.3	-0.4
	0.3nm,0.9s,baz=108,slow=3.5,SNR=4.9 2.8nm,0.6s							
WRA	Warramunga Arr	44.30	262	P		P	06 41 32.4	-0.4
	1.1nm,0.5s,baz=98,slow=8.4,SNR=22 1.1nm,0.5s							
QSPA	South Pole Qui	69.70	180	P		P	06 44 25.6	0.0
	1.3nm,0.9s,baz=133,slow=2.4,SNR=2.8 1.3nm,0.9s							

*IDC **25** 07:02:29.4±2.4, 55°.96N×159°.16W, h0km, mb3.7/3, mbtmp3.7/5, ML3.8/2, MS2.7/2, Error ellipse: s-maj=51.1km s-min=34.8km az=13.0*
*AEIC **25** 07:02:29.1±1.1, 55°.10N±0°.04×158°.43W±0°.06, h27km±7km, Error ellipse: s-maj=6.2km s-min=4.2km az=148.0*
*NEIC **25** 07:02:30.3±0.9, 55°.10N±0°.04×158°.42W±0°.06, h35km±2km, ML3.5/38, ML3.4(AEIC), Error ellipse: s-maj=7.4km s-min=5.0km az=149.0*
ISC 25 07:02:28.6±1.5, 55°.10N±0°.08×158°.38W±0°.04, h30km±14km, n102, σ1s30/103, mb4.0/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNBA	Chernabura Isl	0.75	249	Pn		Pb	07 02 43.4	+0.3
CNBA					Sn	Sb	07 02 51.8	-1.3
CNBA					IAML		07 02 56.0	
	comp=E,1μm,0.6s							
VNKR	Veniaminof 5	1.09	329			Pn	07 02 47.9	0.0
VNKR						Sn	07 03 01.3	-0.7
CHGN	Chignik	1.21	359			Pn	07 02 49.4	0.0
CHGN					Sn	Sn	07 03 03.2	-1.6
CHGN					IAML		07 03 09.0	
	comp=N,1μm,0.4s							
SDPT	Sand Point	1.23	283			Pn	07 02 49.5	-0.2
SDPT					Sn	Sn	07 03 04.7	-0.6
SDPT					IAML		07 03 10.4	
	comp=N,555nm,0.8s							
SDPT					IAML		07 03 13.7	
	comp=E,819nm,0.6s							
VNSS	Veniaminof 8	1.29	332			Pn	07 02 51.4	+0.7
VNFG	Fog Glacier, M	1.36	331			Pn	07 02 52.5	+0.8
VNFG	Fog Glacier, M	1.36	331			Pn	07 02 52.9	+1.2
BPBCA	Veniaminof	1.50	358			Pn	07 02 54.3	+0.8
ANPB	Aniakchak Plen	1.71	2			Pn	07 02 57.8	+1.4
CHIR	Chirikof Islan	1.73	64			Pn	07 02 58.2	+1.6
CHIR						Sn	07 03 18.9	+1.2
CHIR	Chirikof Islan	1.73	64		IAML		07 03 32.5	
	comp=N,700nm,1.0s							
AZAC	Aniakchak	1.81	3			Pn	07 02 59.2	+1.5
ANNE	Aniakchak Nort	1.83	6			Pn	07 02 59.4	+1.3
PS1A	Pavlof South-1	1.95	281			Pn	07 03 00.5	+0.8
DOL	Dolgoi Island	2.00	273			Pn	07 03 01.1	+0.7
PS4A	Pavlof South-4	2.01	279			Pn	07 03 01.3	+0.8
PN7A	Pavlof North-7	2.10	281			Pn	07 03 02.7	+0.9
DTNA	Dutton South F	2.23	273			Pn	07 03 04.4	+0.9
DT1	Dutton Round

KARR	Katmai Rainbow	3.96	29			Pn	07 03 28.5	+1.2
Q18K	Katmai Hardscr	4.01	26			Pn	07 03 29.3	+1.2
O15K	Ungalikthiuk R	4.17	350			Pn	07 03 30.7	+0.6
O15K	comp=E,44nm,1.1s				IAML		07 04 52.7	
KDAK	Kodiak Island	4.20	48	Pn		Pn	07 03 31.2	+0.7
KDAK	comp=E,3.1nm,0.3s,baz=222,slow=8.6,SNR=80			Sn		Sn	07 04 16.2	-2.2
KDAK	comp=E,2.3nm,0.3s,baz=339,slow=19,SNR=4.8			LR		LR	07 05 24.9	
KDAK	comp=E,58nm,18.4s,baz=231,slow=43							
KDAK	comp=E,7.6nm,0.4s Kodiak Island	4.20	48			Pn	07 03 31.5	+1.0
KDAK	comp=E,34nm,0.8s				IAML		07 04 45.8	
KDAK	comp=E,61nm,1.1s				IAML		07 04 54.4	
P17K	Kvichak River	4.24	14			Pn	07 03 32.0	+0.9
P17K	comp=E,89nm,0.9s				IAML		07 05 07.6	
AKSA	Akutan Strait	4.36	260			Pn	07 03 34.7	+1.9
AKUT	Akutan	4.40	260	Pn		Pn	07 03 34.4	+1.0
AKUT	comp=E,41nm,0.7s				IAML		07 04 48.4	
AKUT	comp=N,43nm,1.4s				IAML		07 04 49.5	
O14K	Tigyukauivet M	4.45	341			Pn	07 03 35.1	+1.1
O14K	comp=E,30nm,0.7s				IAML		07 04 28.6	
O14K	comp=N,30nm,0.9s				IAML		07 05 07.8	
AKBBA	Akutan Broad B	4.50	260			Pn	07 03 36.0	+1.3
O16K	Kokwok River B	4.51	2			Pn	07 03 35.7	+0.9
LVA	Lava Point	4.55	261	Pn		Pn	07 03 37.4	+2.1
LVA	comp=E,67nm,1.3s				IAML		07 05 32.5	
P18K	Big Mountain,	4.63	20			Pn	07 03 38.0	+1.4
O17K	Koliganek Bris	4.74	8			Pn	07 03 39.3	+1.4
UNV	Unalaska Valle	4.90	259	Pn		Pn	07 03 40.6	+0.4
MNAT	Makushin Natee	4.99	259			Pn	07 03 42.2	+0.7
O18K	Koktuh Hills	5.07	18			Pn	07 03 43.8	+1.3
O18K	comp=N,17nm,1.2s				IAML		07 05 38.4	
N14K	Kuskokwak Cree	5.16	341			Pn	07 03 44.5	+0.9
N14K	comp=N,40nm,1.5s				IAML		07 05 09.6	
N14K	comp=E,39nm,1.4s				IAML		07 05 50.9	
N15K	Kwethluk River	5.17	350			Pn	07 03 45.2	+1.3
N15K	comp=E,41nm,1.2s				IAML		07 05 26.2	
N15K	comp=N,27nm,0.8s				IAML		07 05 39.6	
P19K	Oil Pt	5.35	29			Pn	07 03 48.0	+1.7
N16K	Nishlik Lake	5.40	358			Pn	07 03 48.4	+1.3
N17K	Nushagak Hills	5.48	6			Pn	07 03 49.1	+0.9
M15K	Kasigluk River	5.75	349			Pn	07 03 53.0	+1.2
N18K	Kilae Creek	5.75	12			Pn	07 03 54.0	+2.0
HOM	Homer	5.85	36	Pn		Pn	07 03 55.6	+2.5
O20K	Slope Mountain	5.88	29			Pn	07 03 55.1	+1.5
CNPM	China Poot	5.89	38			Pn	07 03 54.5	+0.8
M16K	Timber Creek	5.95	357			Pn	07 03 56.2	+1.6
M13K	Dall Lake	5.96	336			Pn	07 03 56.1	+1.4
M14K	Bethel	5.98	343			Pn	07 03 55.5	+0.5
N19K	Bonanza Creek	6.10	18			Pn	07 03 58.5	+1.8
BRLK	Bradley Lake	6.18	38			Pn	07 03 57.8	0.0
BRSE	Bradley Lake S	6.22	38			Pn	07 03 58.4	+0.1
M17K	Holitna River	6.34	4			Pn	07 04 01.2	+1.2
M18K	Stony River	6.55	11			Pn	07 04 03.9	+1.1
L16K	Owhat River	6.66	355			Pn	07 04 04.9	+0.6
L14K	Kuka Creek	6.66	342			Pn	07 04 04.4	+0.1
L15K	Ungalak Mounta	6.80	347			Pn	07 04 06.7	+0.5
SEW	Seward	6.94	40			Pn	07 04 08.0	-0.2
SLKM	Skilak Lake	6.96	35	Pn		Pn	07 04 10.8	+2.4
L17K	Donlin	7.06	0			Pn	07 04 10.8	+1.0
L18K	Granite Mounta	7.20	6			Pn	07 04 12.7	+1.0
M20K	Styx River	7.34	20			Pn	07 04 15.8	+2.1
L19K	White Mountain	7.34	13			Pn	07 04 14.8	+1.1
K15K	Wolf Creek Mou	7.40	348			Pn	07 04 15.6	+1.1
K13K	Kusilvak Mount	7.60	337			Pn	07 04 18.3	+1.2
P23K	Montague Islan	7.68	46			Pn	07 04 19.2	+1.0
PWL	Port Wells	7.86	39			Pn	07 04 20.3	-0.5
J14K	Nanvaranak Lak	8.13	343	Pn		Pn	07 04 25.4	+1.1
HIN	Hinchinbrook I	8.28	45			Pn	07 04 26.7	+0.2
J16K	Anvik River	8.29	353			Pn	07 04 27.6	+1.0
GLI	Glacier Island	8.33	41			Pn	07 04 26.2	-1.0
J17K	VABM Dome	8.34	358			Pn	07 04 27.6	+0.4
J18K	Innoko River	8.44	5			Pn	07 04 29.5	+0.8
FID	Port Fidalgo	8.49	43			Pn	07 04 28.1	-1.3
I17K	Unalakleet	8.90	353			Pn	07 04 36.2	+1.3
J19K	Poorman	9.04	8			Pn	07 04 38.2	+1.3
KLU	Klutina	9.16	41			Pn	07 04 39.2	+0.6
J20K	Nowinta River	9.36	11			Pn	07 04 43.2	+2.0
H17K	Granite Mounta	9.90	356	Pn		Pn	07 04 49.9	+1.2
IL31		11.26	26			Pn	07 05 08.5	+1.2
ILAR	Eielson Array	11.26	26	Pn		Pn	07 05 04.2	-3.2
INK	comp=N,0.3nm,0.3s,baz=216,slow=13,SNR=22 Inuvik	17.53	31	P		Pn	07 06 29.8	-0.6
YAK	comp=N,0.4nm,0.3s,baz=230,slow=9.8,SNR=10 comp=N,0.9nm,0.3s Yakutsk	36.33	311	LR		LR	07 24 24.7	
H11S1	comp=N,20nm,19.7s,baz=213,slow=37 WAKE ISLAND Hy	45.14	230	T		T	07 58 48.3	
H11S2	baz=28 WAKE ISLAND Hy	45.15	230	T		T	07 58 57.7	
H11S3	baz=28 WAKE ISLAND Hy	45.15	230	T		T	07 58 59.3	
TXAR	baz=28 Lajitas Array	46.47	101	P		P	07 11 02.7	+10
FINES	comp=N,0.3nm,0.8s,baz=301,slow=7.3,SNR=3.6 comp=N,0.3nm,0.8s FINESS Array B	63.75	358	P		P	07 12 56.5	-0.4
AKASG	comp=N,0.8nm,0.7s,baz=12,slow=6.7,SNR=1.1 comp=N,0.8nm,0.7s Malin Array Be	74.38	355	P		P	07 14 02.9	-0.2
	comp=N,0.5nm,0.3s,baz=8.9,slow=5.8,SNR=4.8 comp=N,0.5nm,0.3s							

NEIC ***25*** *07:06:59.3±1.6,56°.18N±0°.09×148°.6W±0°.1,h20km±10km, ML3.5/54,ML3.2(AEIC),Error ellipse: s-maj=14.1km s-min=9.7km az=158.0*

AEIC ***25*** *07:07:03.7±1.7,56°.25N±0°.09×148°.66W±0°.07,h10km±8km, Error ellipse: s-maj=13.7km s-min=5.2km az=173.0*

ISC 25 07:06:57.3±2.0,56°.2N±0°.1×148°.52W±0°.08,h10km,n109,
σ0**95**/103**,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.75	308			Pn	07 07 41.3	-0.1
OHAK	Old Harbor	2.83	294	P		Pn	07 07 42.2	-0.3
OHAK	Old Harbor	2.83	294			Pn	07 07 42.4	-0.1
SII	Sitkinak Islan	3.17	279	P		Pn	07 07 47.5	+0.2
SII	Sitkinak Islan	3.17	279	Pn		Pn	07 07 46.5	-0.8
SII	comp=N,105nm,0.9s				IAML		07 08 24.4	
SII	comp=E,99nm,0.8s				IAML		07 08 35.5	
MID	Middleton Isla	3.47	19	Pn		Pn	07 07 50.8	-0.5
MID	comp=N,139nm,1.4s				IAML		07 09 32.1	
MID	comp=E,166nm,1.2s				IAML		07 10 10.6	
CNPM	China Poot	3.66	338			Pn	07 07 54.2	+0.2
CNPM	China Poot	3.66	338			Sn	07 08 35.0	-2.2
BRSE	Bradley Lake S	3.77	343			Pn	07 07 55.4	0.0
BRLK	Bradley Lake	3.81	342			Pn	07 07 55.9	-0.2
BRLK	comp=N,51nm,0.6s				IAML		07 08 44.6	
BRLK	comp=E,55nm,0.2s				IAML		07 08 44.8	
HOM	Homer	3.87	336			Pn	07 07 57.2	+0.4
HOM	comp=N,92nm,0.3s				IAML		07 08 47.9	
HOM	comp=E,91nm,0.7s				IAML		07 08 54.9	
P23K	Montague Islan	3.88	8	Pn		Pn	07 07 56.7	-0.3
P23K	comp=N,85nm,1.2s				IAML		07 08 41.6	
P23K	comp=E,79nm,0.9s				IAML		07 08 41.8	
SEW	Seward	3.97	353			Pn	07 07 58.3	0.0
CHIR	Chirikof Islan	4.00	268			Pn	07 07 58.4	-0.2
CHIR	Chirikof Islan	4.00	268		IAML		07 09 55.4	
	comp=E,67nm,1.3s							
CHIR	comp=N,72nm,1.5s				IAML		07 10 38.6	
KAHG	Katmai Hook Gl	4.01	308			Pn	07 08 00.2	+1.4
KAWH	Katmai	4.07	306			Pn	07 08 01.0	+1.5
KARR	Katmai Rainbow	4.08	307			Pn	07 08 01.5	+1.7
KAKN	Katmai Knife C	4.14	304			Pn	07 08 01.8	+1.1
ACHA	Angle Creek He	4.23	302	Pn		Pn	07 08 02.3	+0.5
KABU	Katmai Buttres	4.23	303			Pn	07 08 03.2	+1.3
KJL	Kejulik	4.28	299			Pn	07 08 03.7	+0.9
Q18K	Katmai Hardscr	4.30	308			Pn	07 08 03.7	+0.9
P19K	Oil Pt	4.30	326			Pn	07 08 03.4	+0.7
ANCK	Angle Creek	4.30	301			Pn	07 08 03.8	+1.0
KAIM	Kayak Island	4.35	28	Pn		Pn	07 08 03.6	+0.3
HIN	Hinchinbrook I	4.37	13	Pn		Pn	07 08 03.8	+0.1
HIN	comp=N,86nm,1.2s				IAML		07 08 54.3	
O22K	Cooper Landing	4.37	352	Pn		Pn	07 08 04.6	+1.0
SLKM	Skilak Lake	4.44	349			Pn	07 08 04.7	0.0
SLKM	Skilak Lake comp=N,70nm,0.3s	4.44	349		IAML		07 08 54.9	
SLKM	comp=E,82nm,0.3s				IAML		07 08 55.6	
O20K	Slope Mountain	4.48	333			Pn	07 08 05.6	+0.3
ILS	Iliamna Low So	4.50	329			Pn	07 08 05.7	+0.2
PLK3	Peulik 3	4.51	293			Pn	07 08 05.9	+0.3
Q17K	Contact Creek	4.52	301			Pn	07 08 06.6	+0.8
IVE	Iliamna Volcan	4.53	330			Pn	07 08 06.1	+0.1
ILSW	Iliamna Southw	4.54	329			Pn	07 08 06.4	+0.2
ILSW	comp=E,32nm,0.7s				IAML		07 09 07.0	
R17L	Mt. Peulik Vol	4.54	292			Pn	07 08 06.6	+0.5
PLK2	Peulik 2	4.56	294			Pn	07 08 06.8	+0.6
EYAK	Cordova Ski Ar	4.62	17	P		Pn	07 08 07.7	+0.6
EYAK	Cordova Ski Ar	4.62	17			Pn	07 08 07.8	+0.6
EYAK	comp=E,45nm,0.7s				IAML		07 09 02.5	
RAGM	Ragged Mountai	4.69	24	Pn		Pn	07 08 08.1	0.0
PWL	Port Wells	4.70	1			Pn	07 08 08.5	+0.3
PWL	Port Wells comp=E,29nm,0.5s	4.70	1		IAML		07 09 01.1	
PWL	comp=N,31nm,0.5s				IAML		07 09 04.8	
FID	Port Fidalgo	4.71	12	Pn		Pn	07 08 07.9	-0.5
FID	comp=E,34nm,0.4s				IAML		07 09 02.4	
FID	comp=N,29nm,0.6s				IAML		07 09 05.5	
GLI	Glacier Island	4.78	8	Pn		Pn	07 08 09.4	+0.1
GLI	comp=N,26nm,1.3s				IAML		07 09 16.5	
GLI	comp=E,31nm,1.3s				IAML		07 09 23.7	
RED	Redoubt Volcan	4.81	334			Pn	07 08 09.6	-0.3
RED	Redoubt Volcan comp=N,31nm,0.7s	4.81	334		IAML		07 09 11.2	
RED	comp=E,25nm,0.6s				IAML		07 09 11.4	
P18K	Big Mountain,	4.83	315			Pn	07 08 09.8	-0.2
RDSO	Redoubt South	4.84	334			Pn	07 08 09.7	-0.5
GOAT	Goat Mountain	4.85	23			Pn	07 08 11.2	+0.8
RDT	Redoubt	4.86	337			Pn	07 08 10.2	-0.4
BERG	Berg Lake	4.94	29			Pn	07 08 12.1	+0.7
NCT	North Crescent	4.97	334			Pn	07 08 11.9	-0.2
O19K	Port Alsworth	5.07	325			Pn	07 08 12.5	-0.7
O18K	Koktuh Hills	5.12	319			Pn	07 08 14.3	+0.3
DIV	Divide	5.17	15			Pn	07 08 15.7	+0.9
P17K	Kvichak River	5.22	309			Pn	07 08 16.2	+0.9
P17K	Kvichak River comp=N,42nm,0.6s	5.22	309		IAML		07 09 25.0	
BMRM	Bremner River	5.23	21			Pn	07 08 15.8	+0.3
BMRM	comp=N,28nm,1.2s				IAML		07 09 16.2	
BMRM	comp=E,20nm,0.4s				IAML		07 09 25.6	
CRQM	Cirque	5.39	29			Pn	07 08 18.5	+0.6
CKL	Chakachamna La	5.42	340			Pn	07 08 19.3	+1.1
PMR	Palmer	5.45	357	P		Pn	07 08 19.8	+1.4
ANPB	Aniakchak Plen	5.45	281			Pn	07 08 19.6	+1.1
SPCG	Spurr Capps Gl	5.45	342			Pn	07 08 18.9	+0.3
TGL	Tana Glacier	5.48	31	Pn		Pn	07 08 19.8	+0.8
KLU	Klutina	5.50	13			Pn	07 08 20.4	+1.1
CHGN	Chignik	5.52	275	Pn		Pn	07 08 19.9	+0.5
N19K	Bonanza Creek	5.61	329			Pn	07 08 20.2	-0.5
STLK	Strandline Lak	5.61	344			Pn	07 08 21.3	+0.5
GHO	Glory Hole Cre	5.62	358			Pn	07 08 21.7	+0.8
SPNN	North Nagishla	5.64	339			Pn	07 08 21.8	+0.5
M23K	Glacier View	5.65	4			Pn	07 08 22.8	+1.5
SML	Sawmill	5.65	1			Pn	07 08 22.7	+1.3
SCM	Sheep Creek Mo	5.71	6			Pn	07 08 23.8	+1.6
KIAG	Kiagna River	5.75	32			Pn	07 08 23.6	+0.8
GRNC	Granite Creek	5.79	35			Pn	07 08 23.9	+0.6
N25K	Chitina, Valde	5.82	19			Pn	07 08 24.5	+0.9
GLB	Gilahina Butte	5.82	23			Pn	07 08 24.3	+0.6
BALM	Baldy	5.85	31			Pn	07 08 24.9	+0.8
PCA	Pinnacle	5.88	45			Pn	07 08 25.4	+0.9
PTPK	Patty Peak	5.94	30			Pn	07 08 26.4	+1.1
N18K	Kilae Creek	5.95	322	Pn		Pn	07 08 25.1	-0.3
BARN	Barnard Glacie	6.07	33			Pn	07 08 28.2	+1.1
M24K	Tolsona, Glenn	6.07	10			Pn	07 08 28.6	+1.5
O16K	Kokwok River B	6.15	308			Pn	07 08 28.7	+0.6
M20K	Styx River	6.20	339			Pn	07 08 28.6	-0.3
N17K	Nushagak Hills	6.31	317			Pn	07 08 30.0	-0.3
O28M	Mount Upton	6.35	40			Pn	07 08 31.9	+0.8
CNBA	Chernabura Isl	6.43	262			Pn	07 08 31.6	-0.4
M18K	Stony River	6.54	328			Pn	07 08 33.2	-0.3
O29M	Mount Kennedy	6.68	48			Pn	07 08 37.0	+1.4
P29M	Windy Craggy	6.71	54			Pn	07 08 36.9	+1.1
O15K	Ungalikthiuk R	6.77	301			Pn	07 08 37.6	+1.0
SDPT	Sand Point	6.80	268			Pn	07 08 37.1	+0.1
L19K	White Mountain	6.85	334			Pn	07 08 37.1	-0.6
YUK8	Steele Glacier	6.86	38			Pn	07 08 40.1	+2.1
YUK2	White River	6.88	32			Pn	07 08 40.3	+2.0
S31K	Pelican	6.94	70			Pn	07 08 38.4	-0.5
DHY	Denali Highway	6.95	4			Pn	07 08 40.9	+1.7
YUK3	Moose Creek	6.99	33			Pn	07 08 41.7	+1.9
M17K	Holitna River	6.99	322			Pn	07 08 40.1	+0.4
M27K	Edge Creek, AK	7.07	26			Pn	07 08 42.2	+1.3
YUK6	Outpost Mounta	7.14	44			Pn	07 08 44.3	+2.3
PLBC	Pleasant Camp	7.28	58			Pn	07 08 45.2	+1.6
SIT	Sitka	7.34	78	P		Pn	07 08 42.2	-2.2
HYT	Haines Junctio	7.42	47			Pn	07 08 47.5	+1.9
DT1	Dutton Round H	7.86	268			Pn	07 08 52.6	+1.0
L16K	Owhat River	7.92	319			Pn	07 08 53.4	+1.0
N31M	Braeburn, Yuko	8.48	46			Pn	07 09 02.1	+2.1

NNC ***25*** *07:32:17.1±0.3,43°.15N×78°.40E,h2km±3km,mb4.1, mpv4.0,Error ellipse: s-maj=3.9km s-min=1.6km az=166.0*

KRNET ***25*** *07:32:17.9±0.1,43°.20N×78°.30E,h30km,mb3.7*

SOME ***25*** *07:32:18.1,43°.15N×78°.38E,h20km*

ISC 25 07:32:17.3±0.8,43°.17N±0°.02×78°.34E±0°.01,h10km±6km,
n87,σ1**35**/148**,24C-28D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SATY	Saty	0.12	156	P		Pg	07 32 20.2	-0.1
SATY	3μm,0.1s			S		Sg	07 32 21.9	-0.6
SATY	65μm,0.2s Saty	0.12	156	eP		Pg	07 32 20.2	-0.1
SATY				eS		Sg	07 32 22.0	-0.5
SATY	Saty 3μm,0.1s	0.12	156	eP		Pg	07 32 20.2	-0.1
SATY				eS		Sg	07 32 21.9	-0.6
KPKS	65μm,0.2s Kokpek	0.39	41	P		Pb	07 32 25.2	-1.1
KPKS	0.2nm,0.1s			S		Sg	07 32 30.2	0.0
KPKS	890nm,0.2s Kokpek	0.39	41	eP		Pb	07 32 25.2	-1.1
KPKS	0.2nm,0.1s			eS		Sg	07 32 30.2	0.0
UZB	890nm,0.2s Uzynbulak	0.50	93	P		Pg	07 32 26.5	-0.6
UZB	157nm,0.1s			S		Sg	07 32 32.3	-1.4
UZB	888nm,0.1s Uzynbulak	0.50	93	eP		Pg	07 32 26.4	-0.6
UZB	Uzynbulak	0.50	93	eP		Pg	07 32 26.4	-0.6
UZB				eS		Sg	07 32 32.3	-1.4
ANVS	Anan'yevo	0.63	232	⇓eP		Pb	07 32 30.3	-0.1
ANVS				⇓eS		Sb	07 32 39.3	0.0
PRZ	Przheval'sk	0.69	176	⇓eP		Pb	07 32 31.5	0.0
PRZ				⇓eS		Sb	07 32 41.4	+0.3
SHLS	Shalkode 34nm,0.1s	0.82	91	P		Pn	07 32 37.9	+2.9
SHLS	226nm,0.3s			S		Sn	07 32 52.0	+4.8
SHLS	Shalkode	0.82	91	eP		Pn	07 32 37.8	+2.7
SHLS	Shalkode 34nm,0.1s	0.82	91	eP		Pn	07 32 37.9	+2.9
SHLS	226nm,0.3s			eS		Sn	07 32 52.0	+4.8
PDGK	Podgornoye 46nm,0.3s	0.86	79	⇑P		Pg	07 32 32.8	-1.0
PDGK	182nm,0.6s			⇑S		Sg	07 32 44.1	-0.9
BLB	Baldybastay 479nm,0.2s	0.93	6	P		Pb	07 32 35.8	+0.2
BLB	238nm,0.3s			S		Sb	07 32 48.4	+0.4
MDOK	Medeo 21nm,0.5s	0.94	270	⇑P		Pb	07 32 36.0	+0.3
MDOK	89nm,0.4s			Pg		Pb	07 32 36.2	+0.4
MDOK	593nm,0.4s			Lg		Lg	07 32 49.1	
MDOK	149nm,0.5s			⇓S		Sb	07 32 50.3	+1.9
MDOK	Medeo	0.94	270	eP		Pb	07 32 36.1	+0.4
MDOK	Medeo 89nm,0.4s	0.94	270	eP		Pb	07 32 36.2	+0.4
MDOK	593nm,0.4s			eS		Sb	07 32 49.1	+0.7
KNDC	Almaty 99nm,0.2s	1.00	273	⇓P		Pb	07 32 37.3	+0.5
KNDC	212nm,0.4s			⇑S		Sb	07 32 51.3	+1.2
TNSS	Tian-Shan 13nm,0.3s	1.03	263	P		Pb	07 32 37.6	+0.3
TNSS	38nm,0.2s			S		Sb	07 32 51.6	+0.5
TNSS	Tian-Shan	1.03	263	eP		Pb	07 32 37.7	+0.3
TNSS	Tian-Shan 13nm,0.3s	1.03	263	eP		Pb	07 32 37.6	+0.3
TNSS	38nm,0.2s			eS		Sb	07 32 51.6	+0.5
AAA	Alma-Ata 318nm,0.3s	1.04	273	P		Pn	07 32 38.6	+0.7
AAA	20nm,0.3s			S		Sn	07 32 53.4	+0.8
AAA	Alma-Ata	1.04	273	eP		Pn	07 32 38.5	+0.5
AAA	Alma-Ata 318nm,0.3s	1.04	273	eP		Pn	07 32 38.6	+0.7
AAA	20nm,0.3s			eS		Sn	07 32 53.4	+0.8
ARXS	Arharly 165nm,0.2s	1.10	341	P		Pn	07 32 39.2	+0.3
ARXS	285nm,0.3s			S		Sn	07 32 54.3	+0.1
ARXS	Arharly 165nm,0.2s	1.10	341	eP		Pn	07 32 39.2	+0.3
ARXS	285nm,0.3s			eS		Sn	07 32 54.3	+0.1
IZV	Izvestkoviy 40nm,0.2s	1.27	264	P		Pn	07 32 41.9	+0.7
IZV	152nm,0.3s			S		Sg	07 32 57.9	-0.3
IZV	Izvestkoviy	1.27	264	eP		Pn	07 32 41.9	+0.7
IZV				eS		Sg	07 32 57.9	-0.3
KTBS	Karatobe 99nm,0.2s	1.32	295	P		Pn	07 32 42.7	+0.9
KTBS	1μm,0.3s			S		Sb	07 33 00.1	+0.9
KTBS	Karatobe 99nm,0.2s	1.32	295	eP		Pn	07 32 42.7	+0.9
KTBS	1μm,0.3s			eS		Sb	07 33 00.1	+0.9
KNOS	Konyrlen 57nm,0.1s	1.33	27	P		Pn	07 32 42.7	+0.6
KNOS	784nm,0.2s			S		Sb	07 33 00.1	+0.4
KDJ	Kajisay	1.35	220	⇓eP		Pg	07 32 42.3	-0.8
KDJ				⇓eS		Sg	07 33 00.1	-0.5
MTBS	Maitube 73nm,0.2s	1.40	269	P		Pb	07 32 44.7	+1.2
MTBS	238nm,0.2s			S		Sn	07 33 03.8	+2.4
MTBS	Maitube 73nm,0.2s	1.40	269	eP		Pb	07 32 44.7	+1.2
MTBS	238nm,0.2s			eS		Sn	07 33 03.8	+2.4
TARG	Taragay, Kyrgy	1.49	195	⇑eP		Pn	07 32 45.1	+0.6
TARG				⇑eS		Sg	07 33 04.9	-0.5
KTMS	Ketmen 16nm,0.2s	1.50	79	P		Pn	07 32 43.7	-0.6
KTMS	116nm,0.3s			S		Sg	07 33 01.4	-4.0
KTMS	Ketmen	1.50	79	eP		Pn	07 32 43.7	-0.6
KTMS	16nm,0.2s 116nm,0.3s			eS		Sg	07 33 01.4	-4.0
DJR	Jarkent 124nm,0.2s	1.57	42	P		Pb	07 32 46.3	-0.1
DJR	348nm,0.5s			S		Sg	07 33 06.4	-1.3
DJR	Jarkent 124nm,0.2s	1.57	42	eP		Pb	07 32 46.3	-0.1
DJR	348nm,0.5s			eS		Sg	07 33 06.3	-1.3
KUU	Kurty 47nm,0.2s	1.62	297	P		Pg	07 32 48.5	+0.1
KUU	409nm,0.3s			S		Sg	07 33 10.2	+0.8
KUU	Kurty	1.62	297	eP		Pg	07 32 48.4	0.0
KUU	Kurty 47nm,0.2s	1.62	297	eP		Pg	07 32 48.5	+0.1
KUU	409nm,0.3s			eS		Sg	07 33 10.2	+0.8
KST	Kastek 68nm,0.2s	1.74	267	P		Pg	07 32 50.5	-0.2
KST	202nm,0.3s			S		Sg	07 33 13.5	+0.1
KST	Kastek	1.74	267	eP		Pg	07 32 50.5	-0.2
KST	68nm,0.2s 202nm,0.3s			eS		Sg	07 33 13.5	+0.1
ULHL	Ulahol SNR=144	1.80	240	P		Pg	07 32 51.2	-0.6
ULHL	Ulahol	1.80	240	⇓eP		Pn	07 32 48.9	+0.4
ULHL				⇓eS		Sn	07 33 11.6	+0.1
TDK	Taldyqorghan 676nm,0.5s	1.83	2	P		Pg	07 32 52.1	-0.3
TDK	966nm,0.4s			S		Sg	07 33 16.3	+0.2
TDK	Taldyqorghan	1.83	2	eP		Pg	07 32 51.3	-1.1
TDK	Taldyqorghan 676nm,0.5s	1.83	2	eP		Pg	07 32 52.1	-0.3
TDK	966nm,0.4s			eS		Sg	07 33 16.4	+0.2
DGS	Degeres 207nm,0.4s	1.88	273	P		Pg	07 32 52.7	-0.5
DGS	256nm,0.4s			S		Sg	07 33 17.4	-0.2
DGS	Degeres 207nm,0.4s	1.88	273	eP		Pg	07 32 52.7	-0.5
DGS	256nm,0.4s			eS		Sg	07 33 17.4	-0.2
BOOM	Boomskoye usch	1.89	250	⇑eP		Pn	07 32 50.1	+0.4
BOOM				⇑eS		Sn	07 33 13.4	-0.3
KRBS	Karabastau 95nm,0.3s	2.01	286	Pg		Pg	07 32 54.9	-0.9
KRBS	124nm,0.7s			Lg		Lg	07 33 21.0	
KRBS	Karabastau	2.01	286	e

KAPS				*e*S		**Sg**	**07 33 27.4**	**-1.7**
	1μm,0.3s							
NRN	**Naryn**	**2.45**	**226**⇓	*e*P		**Pn**	**07 32 58.5**	**+0.9**
NRN				⇓*e*S		**Sn**	**07 33 28.1**	**+0.3**
KBK	**Karagaybulak**	**2.54**	**259**	P		**Pg**	**07 33 04.9**	**-1.1**
	SNR=23							
KBK	**Karagaybulak**	**2.54**	**259**⇑	*e*P		**Pn**	**07 32 59.1**	**+0.4**
KBK				⇑*e*S		**Sn**	**07 33 29.1**	**-0.7**
CHMS	**Chumysh**	**2.63**	**267**	P		**Pb**	**07 33 03.7**	**-0.8**
	SNR=22							
CHMS	**Chumysh**	**2.63**	**267**⇑	*e*P		**Pn**	**07 33 00.2**	**+0.4**
CHMS				⇑*e*S		**Sn**	**07 33 31.0**	**-0.8**
SGDS	**Sogindy**	**2.72**	**277**	Pg		**Pg**	**07 33 07.6**	**-1.7**
	17nm,0.2s							
SGDS				Lg		Lg	07 33 43.0	
	59nm,0.3s							
SGDS	**Sogindy**	**2.72**	**277**	*e*P		**Pn**	**07 33 03.3**	**+2.3**
FRU1	**Bishkek**	**2.74**	**264**⇓	*e*P		**Pn**	**07 33 01.9**	**+0.5**
FRU1				⇓*e*S		**Sn**	**07 33 33.8**	**-0.8**
USP	**Ospenovka**	**2.81**	**273**	P		**Pn**	**07 33 05.2**	**+3.0**
	SNR=17							
USP	**Ospenovka**	**2.81**	**273**⇓	*e*P		**Pn**	**07 33 02.5**	**+0.3**
USP				⇓*e*S		**Sn**	**07 33 35.0**	**-1.1**
AAK	**Ala-Archa**	**2.87**	**261**	P		**Pb**	**07 33 08.9**	**+0.2**
	SNR=16							
AAK	**Ala-Archa**	**2.87**	**261**	⇓Pg		**Pb**	**07 33 08.8**	**+0.2**
	7.8nm,0.5s							
AAK				⇑Lg		Lg	07 33 48.8	
	8.2nm,0.4s							
AAK	**Ala-Archa**	**2.87**	**261**⇓	*e*P		**Pn**	**07 33 03.7**	**+0.5**
AAK				⇓*e*S		**Sn**	**07 33 37.0**	**-0.9**
JNKS	**Jany-Kuch**	**2.92**	**225**⇓	*e*P		**Pn**	**07 33 04.5**	**+0.5**
JNKS				⇓*e*S		**Sn**	**07 33 38.4**	**-0.9**
UCH	**Uchtor**	**2.97**	**253**	P		**Pb**	**07 33 10.9**	**+0.4**
	SNR=6.3							
UCH	**Uchtor**	**2.97**	**253**⇓	*e*P		**Pn**	**07 33 05.3**	**+0.4**
UCH				⇓*e*S		**Sn**	**07 33 39.8**	**-1.0**
EKS2	**Erkin-Say**	**3.39**	**263**⇓	*e*P		**Pn**	**07 33 10.8**	**+0.5**
EKS2				⇓*e*S		**Sn**	**07 33 49.3**	**-1.3**
BTLS	**Baital**	**3.61**	**303**	Pg		**Pb**	**07 33 22.8**	**+1.7**
	14nm,0.4s							
BTLS				Lg		Lg	07 34 09.2	
	78nm,0.5s							
BTLS	**Baital**	**3.61**	**303**	*e*P		**Pb**	**07 33 23.2**	**+2.1**
	14nm,0.4s							
BTLS				*e*S		**Sg**	**07 34 09.5**	**-3.7**
	117nm,0.3s							
MRKS	**Merke**	**3.78**	**265**	Pg		**Pb**	**07 33 26.7**	**+2.6**
	26nm,0.4s							
MRKS				Lg		Lg	07 34 15.4	
	38nm,0.3s							
MRKS	**Merke**	**3.78**	**265**	*e*P		**Pb**	**07 33 26.7**	**+2.6**
	26nm,0.4s							
MRKS				*e*S		**Sg**	**07 34 15.4**	**-3.1**
	38nm,0.3s							
SALK	**Salom-Alik**	**4.07**	**237**⇑	*e*P		**Pn**	**07 33 20.4**	**+0.8**
SALK				⇑*e*S		**Sn**	**07 34 06.0**	**-1.4**
MNAS	**Manas**	**4.34**	**263**⇑	*e*P		**Pn**	**07 33 24.0**	**+0.6**
MNAS				⇑*e*S		**Sn**	**07 34 12.2**	**-2.0**
KSH2	**Kashi**	**4.53**	**208**	Pn		**Pb**	**07 33 38.3**	**+1.3**
KSH2				Sn		**Sb**	**07 34 29.5**	**-2.2**
KSH2				smax		smax		
	comp=N,25nm,0.7s							
KSH2				smax		smax		
	comp=E,23nm,0.9s							
MK31	**Makanchi Array**	**4.58**	**36**	⇑Pn		**Pn**	**07 33 28.2**	**+1.7**
	comp=E,1.4nm,0.2s,baz=212,slow=13,SNR=152							
MK31				⇓Lg		Lg	07 34 39.2	
	comp=E,9.3nm,0.5s,baz=206,slow=32							
KK31	**Karatay Array**	**5.73**	**272**	⇑Pg		**Pg**	**07 34 03.2**	**-3.7**
	comp=E,3.0nm,0.5s,baz=86,slow=15							
KK31				⇑Lg		Lg	07 35 20.2	
	comp=E,21nm,0.7s,baz=87,slow=29							
KURBB	**Kurchatov Arra**	**7.46**	**1**	⇓Pg		Pb	07 34 32.5	+5.9
	comp=E,0.2nm,0.2s							
KURBB				⇑Lg		Lg	07 36 13.2	
	comp=E,44nm,0.6s							
KURK	**Kurchatov**	**7.55**	**1**	⇑Pg		Pb	07 34 34.3	+6.1
	comp=E,0.1nm,0.4s							
KURK				⇓Lg		Lg	07 36 17.2	
	comp=E,5.6nm,0.5s							

*SNET **25** 07:59:20.0±0.8, 13°.23N×89°.58W, h49km±6km, ML3.5, Presumed earthquake*
*CATAC **25** 07:59:20.3±0.3, 13°.N±2°×9°.0W±°, h27km±1km, M3.7/31, MLv3.7/31, Error ellipse: s-maj=4.6km s-min=2.3km az=30.5, confirmed*
*GCG **25** 07:59:21.9±1.0, 13°.35N×89°.66W, h40km±12km, MD4.4, ML4.2, Presumed earthquake*

ISC 25 07:59:20.6±1.4, 13°.23N±0°.04×89°.57W±0°.03, h24km±13km, n82, σ0968/121, 2C-22D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.35**	**43**	P	**Pn**	**07 59 30.3**	**+0.1**
LALI				S	**Sn**	**07 59 37.0**	**+0.5**
LALI	**Alcalda de L**	**0.35**	**43**	*i* P	**Pn**	**07 59 30.3**	**+0.1**
LALI	**Alcalda de L**	**0.35**	**43**	⇓*i* P	**Pn**	**07 59 30.3**	**+0.1**
LALI				*e*S	**Sn**	**07 59 37.1**	**+0.6**
JAYA	**Jayaque - finc**	**0.43**	**15**	P	**Pn**	**07 59 31.2**	**-0.4**
JAYA	**Jayaque - finc**	**0.43**	**15**	*i* P	**Pn**	**07 59 31.1**	**-0.4**
JAYA				*i* S	**Sn**	**07 59 38.1**	**-0.7**
JAYA				IAML		07 59 40.6	
	comp=N,19μm,0.3s						
JAYA	**Jayaque - finc**	**0.43**	**15**⇓	*i* P	**Pn**	**07 59 31.2**	**-0.4**
JAYA				*e*S	**Sn**	**07 59 39.2**	**+0.3**
PANCS	**Alcalda de**	**0.53**	**45**	P	**Pn**	**07 59 32.3**	**-0.5**
PANCS				S	**Sn**	**07 59 40.7**	**-0.5**
PANCS	**Alcalda de**	**0.53**	**45**	*e*P	**Pn**	**07 59 32.3**	**-0.5**
PMON	**Piamonte**	**0.54**	**27**	P	**Pn**	**07 59 32.5**	**-0.5**
PMON				S	**Sn**	**07 59 41.4**	**+0.1**
PMON	**Piamonte**	**0.54**	**27**⇓	*e*P	**Pn**	**07 59 32.5**	**-0.5**
LOMA	**Loma Larga**	**0.56**	**43**	P	**Pn**	**07 59 32.8**	**-0.5**
LOMA				S	**Sn**	**07 59 42.0**	**0.0**
LOMA	**Loma Larga**	**0.56**	**43**⇓	*e*P	**Pn**	**07 59 32.8**	**-0.5**
LOMA				*e*S	**Sn**	**07 59 42.1**	**+0.2**
BOQS	**Boqueron**	**0.57**	**29**⇓	*i* P	**Pn**	**07 59 33.1**	**-0.4**
SEMO	**Seminario San**	**0.57**	**35**	P	**Pn**	**07 59 32.9**	**-0.5**
SEMO				S	**Sn**	**07 59 42.1**	**0.0**
UEES	**Universidad Ev**	**0.58**	**33**	P	**Pn**	**07 59 33.1**	**-0.5**
UEES				S	**Sn**	**07 59 42.2**	**0.0**
UEES	**Universidad Ev**	**0.58**	**33**⇓	*i* P	**Pn**	**07 59 33.0**	**-0.5**
CEDA	**San Andres**	**0.59**	**16**	P	**Pn**	**07 59 33.2**	**-0.4**
CEDA				S	**Sn**	**07 59 42.8**	**+0.3**
CEDA	**San Andres**	**0.59**	**16**⇓	*e*P	**Pn**	**07 59 33.1**	**-0.5**
PIC2	**El Picacho**	**0.59**	**31**	*e*P	**Pn**	**07 59 33.5**	**-0.3**
CEVE	**Cerro Verde**	**0.59**	**355**	P	**Pn**	**07 59 33.4**	**-0.5**
CEVE				S	**Sn**	**07 59 42.9**	**0.0**
CEVE	**Cerro Verde**	**0.59**	**355**	*e*P	**Pn**	**07 59 33.3**	**-0.5**
SBLS	**San Blas**	**0.61**	**355**⇓	*e*P	**Pn**	**07 59 33.3**	**-0.7**
SBLS				*e*S	**Sn**	**07 59 43.2**	**0.0**
LFRS	**El Faro**	**0.63**	**52**⇑	*e*P	**Pn**	**07 59 33.7**	**-0.4**
SNJE	**San Jose**	**0.63**	**356**⇓	*e*P	**Pn**	**07 59 33.6**	**-0.7**
SJTE	**Alcalda de S**	**0.66**	**55**⇓	*e*P	**Pn**	**07 59 34.1**	**-0.5**
RTR	**El Retiro**	**0.67**	**353**	*e*P	**Pn**	**07 59 34.1**	**-0.6**
LFU	**La Fuente**	**0.68**	**41**⇓	*e*P	**Pn**	**07 59 34.6**	**-0.2**
LBRS	**Las Brisas**	**0.71**	**45**⇓	*e*P	**Pn**	**07 59 35.1**	**-0.3**
UNIC	**Universidad Ca**	**0.74**	**1**	P	**Pb**	**07 59 35.1**	**+0.1**
UNIC				S	**Sn**	**07 59 46.5**	**+0.1**
UNIC	**Universidad Ca**	**0.74**	**1**⇓	*e*P	**Pn**	**07 59 35.2**	**-0.5**
FAME	**Alcaldia de Sa**	**0.75**	**324**	P	**Pb**	**07 59 34.5**	**-0.5**
FAME				S	**Sb**	**07 59 44.3**	**-0.6**
COEG	**Centro de Oper**	**0.77**	**60**	P	**Pb**	**07 59 35.4**	**0.0**
COEG				S	**Sn**	**07 59 47.1**	**+0.1**
COEG	**Centro de Oper**	**0.77**	**60**⇓	*e*P	**Pb**	**07 59 35.5**	**0.0**
PAVA	**Las Pavas**	**0.78**	**52**	P	**Pn**	**07 59 36.1**	**-0.2**
PAVA				S	**Sn**	**07 59 47.9**	**+0.7**
PAVA	**Las Pavas**	**0.78**	**52**⇓	*i* P	**Pn**	**07 59 36.0**	**-0.2**
LOAL	**Lomas de Alarc**	**0.79**	**345**	P	**Pn**	**07 59 35.9**	**-0.5**
LOAL				S	**Sn**	**07 59 47.1**	**-0.4**
LOAL	**Lomas de Alarc**	**0.79**	**345**	*e*P	**Pn**	**07 59 35.8**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.82**	**345**	P	**Pn**	**07 59 36.1**	**-0.6**
SLOZ				S	**Sn**	**07 59 48.3**	**+0.2**
SLOZ	**Alcaldia de Sa**	**0.82**	**345**⇓	*e*P	**Pb**	**07 59 36.0**	**-0.2**
TECO	**Alcaldia de Te**	**0.82**	**68**	P	**Pb**	**07 59 35.8**	**-0.5**
TECO				S	**Sb**	**07 59 47.6**	**+0.6**
TECO	**Alcaldia de Te**	**0.82**	**68**⇓	*e*P	**Pb**	**07 59 35.8**	**-0.5**
RBDL	**Robledal**	**0.88**	**352**⇓	*e*P	**Pb**	**07 59 37.0**	**-0.4**
PQSS	**Presa 15 de Se**	**1.05**	**68**	P	**Pn**	**07 59 39.6**	**-0.4**
PQSS				S	**Sn**	**07 59 54.2**	**+0.3**
TECA	**Tecapa**	**1.07**	**76**⇑	*e*P	**Pn**	**07 59 39.5**	**-0.8**
P5NO	**Presa 5 de nov**	**1.08**	**46**	P	**Pn**	**07 59 39.6**	**-0.8**
P5NO				S	**Sb**	**07 59 54.5**	**0.0**
JUAM	**Asuncion Mita**	**1.10**	**353**	*i* P	**Pn**	**07 59 39.7**	**-1.0**
MTO3	**Montecristo**	**1.18**	**10**	P	**Pn**	**07 59 40.9**	**-0.9**
MTO3				S	**Sb**	**07 59 56.7**	**-0.7**
MTO3	**Montecristo**	**1.18**	**10**	*i* P	**Pn**	**07 59 40.9**	**-0.9**
MTO3	**Montecristo**	**1.18**	**10**⇓	*i* P	**Pn**	**07 59 41.0**	**-0.9**
PACA	**Pacayal**	**1.23**	**79**	P	**Pn**	**07 59 42.3**	**-0.2**
PACA				S	**Sn**	**07 59 58.8**	**+0.3**
PACA	**Pacayal**	**1.23**	**79**	*e*P	**Pn**	**07 59 41.9**	**-0.6**
LCY	**Lacayo**	**1.25**	**81**	*e*P	**Pn**	**07 59 42.6**	**-0.2**
PCG5	**San Vicente Pa**	**1.26**	**321**	*i* P	**Pb**	**07 59 46.1**	**+2.3**
RANC	**El Ranchito**	**1.26**	**81**	P	**Pn**	**07 59 42.7**	**-0.2**
RANC				S	**Sn**	**07 59 59.4**	**+0.2**
ESQI	**Esquipulas**	**1.34**	**9**	P	**Pn**	**07 59 43.4**	**-0.6**
ESQI				S	**Sn**	**08 00 01.4**	**+0.3**
ESQI	**Esquipulas**	**1.34**	**9**⇓	*i* P	**Pn**	**07 59 43.3**	**-0.6**
ZAFR2	**Estanzuela, Za**	**1.35**	**9**	*i* P	**Pb**	**07 59 48.4**	**+3.0**
FG16	**Alotenango, Sa**	**1.38**	**319**	*i* P	**Pb**	**07 59 48.8**	**+2.9**
INTP	**Intipuca**	**1.47**	**91**	*e*P	**Pn**	**07 59 45.5**	**-0.3**
LCND	**La Caada**	**1.63**	**87**	P	**Pn**	**07 59 47.4**	**-0.5**
LCND				S	**Sn**	**08 00 09.2**	**+1.0**
LCND	**La Caada**	**1.63**	**87**⇓	*i* P	**Pn**	**07 59 47.4**	**-0.5**
CNCH	**Conchagua**	**1.69**	**88**	P	**Pn**	**07 59 48.2**	**-0.6**
CNCH				S	**Sn**	**08 00 10.1**	**+0.4**
CNCH	**Conchagua**	**1.69**	**88**⇓	*e*P	**Pn**	**07 59 48.1**	**-0.7**
SARH	**Santa Rosa de**	**1.72**	**27**	P	**Pn**	**07 59 49.0**	**-0.2**
SARH				S	**Sn**	**08 00 10.6**	**+0.1**
SARH	**Santa Rosa de**	**1.72**	**27**	*i* P	**Pn**	**07 59 49.1**	**-0.2**
MARCA	**Marcala la Paz**	**1.75**	**58**	P	**Pn**	**07 59 48.9**	**-0.8**
APG	**El Apazote**	**1.96**	**334**	*i* P	**Pn**	**07 59 51.9**	**-0.8**
CSGN	**Cosiguina Volc**	**1.97**	**97**	P	**Pn**	**07 59 52.2**	**-0.5**
CSGN				S	**Sn**	**08 00 16.5**	**-0.2**
STG5	**El Palmar, Qui**	**2.09**	**304**	*i* P	**Pb**	**07 59 57.6**	**-0.3**
STG8	**El Palmar, Qui**	**2.12**	**305**	*i* P	**Pb**	**07 59 58.5**	**0.0**
RTAL	**Retalhuleu**	**2.44**	**302**	P	**Pn**	**07 59 58.8**	**-0.1**
RTAL				S	**Sn**	**08 00 27.8**	**-0.2**
CRIN	**San Cristobal**	**2.51**	**102**	P	**Pn**	**07 59 59.9**	**-0.1**
CRIN				S	**Sn**	**08 00 31.3**	**+1.4**
ROCN	**Rota Cerro Neg**	**2.84**	**104**	P	**Pn**	**08 00 04.1**	**-0.4**
ROCN				S	**Sn**	**08 00 38.0**	**-0.1**
ILCN	**San Idelfonso**	**2.87**	**103**	P	**Pn**	**08 00 04.8**	**-0.1**
ILCN				S	**Sn**	**08 00 37.4**	**-1.3**
CNGA	**Al SSO del Vol**	**2.89**	**104**	P	**Pn**	**08 00 04.9**	**-0.3**
MACN	**El Madrono**	**2.92**	**105**	P	**Pn**	**08 00 05.7**	**0.0**
MOM3	**MOM3**	**3.06**	**103**	P	**Pn**	**08 00 07.4**	**-0.2**
MOM3				S	**Sn**	**08 00 43.8**	**+0.5**
COPN	**Copaltepe**	**3.08**	**109**	P	**Pn**	**08 00 07.8**	**-0.1**
LIMN	**Finca el Limon**	**3.12**	**93**	P	**Pn**	**08 00 07.8**	**-0.7**
LIMN				S	**Sn**	**08 00 45.5**	**+0.4**
RCVN	**Varillal2**	**3.30**	**84**	P	**Pn**	**08 00 10.2**	**-0.8**
RCVN				S	**Sn**	**08 00 49.3**	**-0.3**
RCON	**San Juan de Ri**	**3.33**	**85**	P	**Pn**	**08 00 10.5**	**-0.9**
RCON				S	**Sn**	**08 00 50.6**	**+0.3**
BOAB	**BOACO BROADBAN**	**3.88**	**101**	P	**Pn**	**08 00 17.5**	**-1.3**
BOAB				S	**Sn**	**08 01 04.2**	**+0.5**

IDC 25 08:12:39.7±54.0, 16°.43S×171°.48W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=1053.0km s-min=219.9km az=81.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.14**	**241**	P	P	08 20 58.0	-0.3
	1.4nm,0.6s,baz=70,slow=6.2,SNR=3.1 1.4nm,0.6s						
WRA	**Warramunga Arr**	**51.41**	**257**	P	P	08 21 46.2	-0.7
	0.2nm,0.9s,baz=98,slow=6.8,SNR=1.6 0.2nm,0.9s						
ASAR	**Alice Springs**	**51.56**	**253**	P	P	08 21 48.3	+0.3
	1.0nm,0.7s,baz=86,slow=8.2,SNR=16 1.0nm,0.7s						

*IDC **25** 08:16:52.4±5.7, 47°.89N×153°.19E, h128km±71km, mb3.2/4, mbtmp3.7/6, MS2.5/1, Error ellipse: s-maj=167.4km s-min=19.4km az=133.0*

ISC 25 08:16:52.5±1.0, 47°.9N±0°.2×153°.2E±0°.2, h128km, n13, σ0926/6, mb3.3/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.95**	**27**	P	**Pn**	**08 18 17.9**	**-0.2**
	3.4nm,0.8s,baz=184,slow=11,SNR=9.1						
ASAJ	**Asahikawa**	**8.30**	**247**	P	**Pn**	**08 18 50.0**	**+0.1**
	12nm,0.5s,baz=59,slow=11,SNR=19						
KSRS	**Korea Array**	**21.23**	**250**	LR	LR	08 30 28.1	
	comp=Z,14nm,19.4s,baz=155,slow=38						
H11N2	**WAKE ISLAND Hy**	**30.22**	**154**	T	T	08 54 49.4	
	baz=342,slow=76,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**30.23**	**154**	T	T	08 55 00.7	
	baz=342,slow=76,SNR=6.6						
H11N3	**WAKE ISLAND Hy**	**30.24**	**154**	T	T	08 54 52.3	
	baz=342,slow=76,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**31.32**	**155**	T	T	08 56 23.7	
	baz=343,slow=76,SNR=8.7						
H11S3	**WAKE ISLAND Hy**	**31.33**	**155**	T	T	08 56 24.2	
	baz=343,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**31.34**	**155**	T	T	08 56 25.4	
	baz=343,slow=76,SNR=7.0						
PDAR	**Pinedale Array**	**64.02**	**54**	P	**P**	**08 27 12.6**	**+0.1**
	0.3nm,0.8s,baz=312,slow=9.3,SNR=2.7 0.3nm,0.8s						
WRA	**Warramunga Arr**	**69.63**	**199**	P	**P**	**08 27 47.6**	**-0.2**
	0.9nm,1.1s,baz=11,slow=6.2,SNR=3.2 0.9nm,1.1s						
ASAR	**Alice Springs**	**73.32**	**198**	P	**P**	**08 28 09.7**	**-0.2**
	0.3nm,0.5s,baz=11,slow=5.9,SNR=5.2 0.3nm,0.5s						
TXAR	**Lajitas Array**	**76.87**	**61**	P	**P**	**08 28 30.8**	**+0.2**
	0.3nm,0.5s,baz=320,slow=6.1,SNR=6.5 0.3nm,0.5s						

*GCG **25** 08:51:38.0±0.9, 13°.22N×91°.31W, h24km±999km, MD4.3, Presumed earthquake*
*CATAC **25** 08:51:43.5±0.6, 14°N±5°×9°1W±°, h10km, M3.1/13, MLv3.1/13, Error ellipse: s-maj=10.2km s-min=7.3km az=1.9, confirmed*
*SNET **25** 08:51:44.0±0.9, 13°.29N×90°.85W, h8km±14km, ML3.1, Presumed earthquake*

ISC 25 08:51:43.6±2.3, 13°.55N±0°.09×90°.84W±0°.08, h11km±12km, n29, σ0897/39, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.85**	**70**	P	**Pb**	**08 52 00.4**	**0.0**
STG8	**El Palmar, Qui**	**1.03**	**331**	*i* P	**Pn**	**08 52 04.9**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.13**	**65**	P	**Pn**	**08 52 05.2**	**-0.3**
SLOZ				S	**Sn**	**08 52 21.5**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.13**	**65**	*e*P	**Pn**	**08 52 05.1**	**-0.3**
SBLS	**San Blas**	**1.21**	**76**	*e*P	**Pg**	**08 52 06.7**	**-0.3**
SNJE	**San Jose**	**1.24**	**75**	*e*P	**Pg**	**08 52 07.3**	**-0.1**
RBDL	**Robledal**	**1.25**	**63**	*e*P	**Pg**	**08 52 07.4**	**-0.2**
UNIC	**Universidad Ca**	**1.32**	**71**	P	**Pg**	**08 52 08.7**	**-0.4**
JAYA	**Jayaque - finc**	**1.35**	**85**	P	**Pg**	**08 52 09.2**	**-0.4**
JAYA				S	**Sg**	**08 52 29.0**	**+1.8**
JAYA	**Jayaque - finc**	**1.35**	**85**	*i* P	**Pn**	**08 52 08.1**	**-0.5**
JAYA	**Jayaque - finc**	**1.35**	**85**	*e*P	**Pb**	**08 52 08.7**	**-0.4**
SAN	**San Andres**	**1.42**	**80**	P	**Pb**	**08 52 10.2**	**0.0**
CEDA				S	**Sg**	**08 52 30.2**	**+0.7**
LALI	**Alcalda de L**	**1.48**	**92**	P	**Pb**	**08 52 10.8**	**-0.3**
LALI				S	**Sg**	**08 52 32.3**	**+1.2**
PMON	**Piamonte**	**1.49**	**84**	*e*P	**Pg**	**08 52 12.0**	**-0.2**
APG	**El Apazote**	**1.49**	**14**	*i* P	**Pb**	**08 52 10.8**	**-0.8**
LOMA	**Loma Larga**	**1.62**	**86**	P	**Pb**	**08 52 13.4**	**-0.3**
LOMA				S	**Sg**	**08 52 36.5**	**+0.7**
LOMA	**Loma Larga**	**1.62**	**86**	*e*P	**Pb**	**08 52 13.7**	**0.0**
MTO3	**Montecristo**	**1.66**	**59**	P	**Pb**	**08 52 13.5**	**-0.9**
MTO3				S	**Sg**	**08 52 37.2**	**+0.1**
MTO3	**Montecristo**	**1.66**	**59**	*i* P	**Pb**	**08 52 13.7**	**-0.7**
MTO3	**Montecristo**	**1.66**	**59**	*e*P	**Pb**	**08 52 13.6**	**-0.9**
ESQI	**Esquipulas**	**1.77**	**55**	P	**Pb**	**08 52 15.2**	**-0.9**
ESQI	**Esquipulas**	**1.77**	**55**	*e*P	**Pb**	**08 52 15.4**	**-0.7**
PAVA	**Las Pavas**	**1.85**	**85**	P	**Pb**	**08 52 17.0**	**-0.6**
PAVA				S	**Sg**	**08 52 42.8**	**-0.4**
COEG	**Centro de Oper**	**1.90**	**88**	P	**Pb**	**08 52 17.2**	**-1.2**
COEG				S	**Sb**	**08 52 43.0**	**+0.7**
COEG	**Centro de Oper**	**1.90**	**88**	*e*P	**Pb**	**08 52 17.1**	**-1.3**
TECO	**Alcaldia de Te**	**2.00**	**90**	P	**Pb**	**08 52 18.3**	**-1.7**
TECO				S	**Sb**	**08 52 45.3**	**+0.3**
SARH	**Santa Rosa de**	**2.35**	**59**	P	**Pn**	**08 52 23.6**	**+1.3**
SARH	**Santa Rosa de**	**2.35**	**59**	*i* P	**Pn**	**08 52 23.6**	**+1.3**
CNCH	**Conchagua**	**2.93**	**95**	P	**Pn**	**08 52 32.1**	**+1.7**
CNCH				S	**Sb**	**08 53 09.3**	**-2.7**

*NEIC **25** 08:56:12.5±2.8, 10°.25S±0°.09×161°.56E±0°.09, h76km±8km, mb4.2/15, Error ellipse: s-maj=13.6km s-min=13.4km az=185.0*
*IDC **25** 08:56:14.2±2.4, 10°.35S×161°.36E, h94km±20km, mb3.5/5, mbtmp3.9/6, MS2.9/4, Error ellipse: s-maj=28.9km s-min=20.9km az=70.0*

ISC 25 08:56:11.0±0.8, 10°.33S±0°.09×161°.6E±0°.1, h61km, n32, σ1930/30, mb4.1/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.82**	**299**	P	**Pn**	**08 56 41.4**	**+1.4**
	20nm,0.4s,baz=234,slow=2.6,SNR=44						
HNR				S	**Sn**	**08 57 03.7**	**+1.6**
	171nm,0.9s,baz=43,slow=23,SNR=16						
HNR	**Honiara**	**1.82**	**299**		**Pn**	**08 56 41.0**	**+1.0**
KOUNC	**Koumac, New Ca**	**10.50**	**166**	Pn	**Pn**	**08 58 40.1**	**+1.3**
KRVT	**Keravat (AS076**	**11.18**	**302**	LR	LR	09 03 00.5	
	comp=Z,19nm,19.4s,baz=110,slow=37						
DZM	**Mont Dzumac**	**12.58**	**159**	P	**Pn**	**08 59 10.4**	**+3.1**
	4.4nm,0.8s,baz=332,slow=15,SNR=1.1						
DZM				S	**Sn**	**09 01 24.7**	**-1.2**
	7.1nm,0.7s,baz=255,slow=17,SNR=5.9						
OUENC	**Ouen Island, N**	**13.04**	**158**	Pn	**Pn**	**08 59 14.5**	**+1.0**
PMG	**Port Moresby**	**14.22**	**272**	LR	LR	09 05 00.2	
	comp=Z,67nm,19.2s,baz=60,slow=38						
MSVF	**Nonsavu**	**17.61**	**117**	P	**P**	**09 00 12.9**	**+0.3**
CTA	**Charters Tower**	**17.66**	**235**	P	**P**	**09 00 14.6**	**+1.5**
	2.2nm,0.6s,baz=62,slow=14,SNR=4.2						
CTAO	**Charters Tower**	**17.66**	**235**	P	**P**	**09 00 14.0**	**+1.0**
CTAO				IAmb	IAmb	09 00 17.7	
	comp=Z,9.0nm,1.1s						
EIDS	**Eidsvold**	**17.96**	**212**	P	**P**	**09 00 15.8**	**-0.5**
EIDS				IAmb	IAmb	09 00 51.3	
	comp=Z,29nm,1.5s						
COEN	**Coen**	**18.33**	**257**	P	**P**	**09 00 19.2**	**-1.3**
COEN				IAmb	IAmb	09 00 34.5	
	comp=Z,13nm,1.2s						
ARMA	**Armidale**	**22.02**	**203**	P	**P**	**09 01 01.1**	**+0.6**
WRA	**Warramunga Arr**	**27.92**	**247**	P	**P**	**09 01 54.2**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=76,slow=9.1,SNR=22 comp=Z,1.2nm,0.5s						
WRA	**Warramunga Arr**	**27.92**	**247**	P	**P**	**09 01 54.0**	**-1.7**
STKA	**Stephens Creek**	**28.30**	**218**	LR	LR	09 13 17.8	
	comp=Z,50nm,18.5s,baz=227,slow=36						
GUMO	**Guam**	**28.96**	**325**	LR	LR	09 13 31.4	
	comp=Z,17nm,20.8s,baz=85,slow=36						
AS31	**Alice Springs**	**29.51**	**240**	P	**P**	**09 02 08.1**	**-1.7**
ASAR	**Alice Springs**	**29.51**	**240**	P	**P**	**09 02 07.7**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=61,slow=9.4,SNR=5.0 comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**29.51**	**240**	P	**P**	**09 02 08.0**	**-1.8**
TOO	**Toolangi**	**30.74**	**205**	P	**P**	**09 02 21.4**	**+0.9**
CASY	**Casey**	**65.59**	**200**	P	**P**	**09 06 47.5**	**-0.6**
CASY				IAmb	IAmb	09 07 13.7	
	comp=Z,6.5nm,1.4s						
VNDA	**Vanda**	**67.18**	**180**	P	**P**	**09 06 58.4**	**+0.3**
VNDA				IAmb	IAmb	09 07 38.7	
	comp=Z,3.4nm,1.4s						
**SON

ANPB	Aniakchak Plen	1.69	360			Pb	09 19 56.3	-1.1
ANNE	Aniakchak Nort	1.81	4			Pb	09 19 58.0	-1.3
PS1A	Pavlof South-1	2.01	280			Pn	09 19 59.3	-0.1
DOL	Dolgoi Island	2.06	272			Pn	09 20 00.3	+0.2
DOL						Sn	09 20 26.2	+1.2
PS4A	Pavlof South-4	2.06	278			Pn	09 20 00.1	0.0
PS4A						Sn	09 20 26.1	+1.0
PN7A	Pavlof North-7	2.15	280			Pn	09 20 01.7	+0.3
DTNA	Dutton South F	2.28	272			Pn	09 20 03.5	+0.4
DT1	Dutton Round H	2.30	271			Pn	09 20 03.5	+0.2
DT1						Sn	09 20 30.7	-0.2
PLBL	Peulik Blue Cr	2.71	17			Pn	09 20 11.1	+2.1
SII	Sitkinak Islan	2.72	56	P		Pn	09 20 10.9	+1.7
SII	Sitkinak Islan	2.72	56			Pn	09 20 06.6	+1.4
SII				IAML			09 21 06.7	
	comp=E,579nm,0.8s							
PLK1	Peulik 1	2.85	18			Pn	09 20 12.8	+2.0
PLK5	Peulik 5	2.99	14			Pn	09 20 14.5	+1.7
ISNN	Isanotski Nort	3.19	267			Pn	09 20 16.5	+1.0
CAHL	Cahill	3.37	28			Pn	09 20 19.5	+1.4
SSBA	Shishaldin	3.39	267			Pn	09 20 19.2	+0.8
Q17K	Contact Creek	3.42	22			Pn	09 20 20.1	+1.3
ANCK	Angle Creek	3.45	25			Pn	09 20 20.9	+1.7
OHAK	Old Harbor	3.50	51	P		Pn	09 20 21.0	+1.3
OHAK	Old Harbor	3.50	51			Pn	09 20 20.8	+1.1
OHAK				IAML			09 21 25.5	
	comp=N,119nm,0.8s							
OHAK				IAML			09 21 35.0	
	comp=E,107nm,1.1s							
ACHA	Angle Creek He	3.50	26			Pn	09 20 21.7	+1.8
KABU	Katmai Buttres	3.57	26			Pn	09 20 22.2	+1.4
KAKN	Katmai Knife C	3.65	28			Pn	09 20 23.9	+2.0
Q16K	King Salmon	3.68	13			Pn	09 20 23.2	+1.0
KAWH	Katmai	3.79	29			Pn	09 20 26.0	+2.1
KARR	Katmai Rainbow	3.92	29			Pn	09 20 27.2	+1.6
P16K	Nushagak River	3.93	2			Pn	09 20 26.7	+1.0
Q18K	Katmai Hardscr	3.97	25			Pn	09 20 27.8	+1.5
KDAK	Kodiak Island	4.14	47	Pn		Pn	09 20 29.2	+0.7
	comp=E,1.5nm,0.3s,baz=207,slow=1.9,SNR=32							
KDAK				Sn		Sn	09 21 13.7	-2.4
	comp=E,3.3nm,0.3s,baz=284,slow=8.1,SNR=3.9							
KDAK				LR		LR	09 22 00.4	
	comp=E,38nm,21.5s,baz=218,slow=37							
	comp=E,5.5nm,0.4s							
KDAK	Kodiak Island	4.14	47			Pn	09 20 29.6	+1.0
KDAK				IAML			09 21 49.8	
	comp=E,60nm,0.9s							
O15K	Ungalikthiuk R	4.16	349			Pn	09 20 29.7	+0.9
P17K	Kvichak River	4.21	13			Pn	09 20 31.2	+1.7
P17K				IAML			09 21 54.1	
	comp=N,164nm,0.9s							
AKSA	Akutan Strait	4.42	260			Pn	09 20 33.3	+0.8
O14K	Tigyukauivet M	4.46	340			Pn	09 20 33.9	+1.0
O14K				IAML			09 21 58.9	
	comp=N,65nm,1.1s							
O14K				IAML			09 22 10.5	
	comp=E,51nm,1.1s							
AKUT	Akutan	4.47	260	P		Pn	09 20 34.8	+1.7
AKUT	Akutan	4.47	260	Pn		Pn	09 20 34.7	+1.7
AKUT				IAML			09 21 41.6	
	comp=E,82nm,1.0s							
AKUT				IAML			09 21 46.5	
	comp=N,109nm,1.5s							
O16K	Kokwok River B	4.49	1			Pn	09 20 34.4	+1.0
AKBBA	Akutan Broad B	4.57	260			Pn	09 20 34.0	-0.5
P18K	Big Mountain,	4.59	20			Pn	09 20 36.3	+1.4
LVA	Lava Point	4.61	261	Pn		Pn	09 20 35.5	+0.4
LVA				IAML			09 21 46.7	
	comp=E,86nm,0.6s							
O17K	Koliganek Bris	4.71	7			Pn	09 20 37.7	+1.2
UNV	Unalaska Valle	4.96	259	P		Pn	09 20 39.8	-0.1
UNV	Unalaska Valle	4.96	259	Pn		Pn	09 20 39.9	0.0
UNV				IAML			09 22 03.9	
	comp=N,42nm,0.8s							
UNV				IAML			09 22 04.9	
	comp=E,38nm,0.7s							
O18K	Koktuh Hills	5.03	18			Pn	09 20 42.9	+2.1
O18K				IAML			09 22 26.4	
	comp=N,36nm,0.7s							
MNAT	Makushin Natee	5.05	259			Pn	09 20 41.0	-0.1
N14K	Kuskokwak Cree	5.16	341			Pn	09 20 44.0	+1.4
N14K				IAML			09 23 21.7	
	comp=N,85nm,1.8s							
N15K	Kwethluk River	5.16	350			Pn	09 20 44.3	+1.7
N15K				IAML			09 22 19.7	
	comp=E,70nm,0.7s							
N15K				IAML			09 22 28.7	
	comp=N,74nm,1.2s							
MGOD	Makushin Gods	5.19	259			Pn	09 20 43.2	+0.1
P19K	Oil Pt	5.30	29			Pn	09 20 46.9	+2.3
N16K	Nishlik Lake	5.38	357			Pn	09 20 46.6	+1.0
N17K	Nushagak Hills	5.46	6			Pn	09 20 48.0	+1.3
O19K	Port Alsworth	5.52	21			Pn	09 20 49.0	+1.5
ILSW	Iliamna Southw	5.61	27			Pn	09 20 49.9	+1.1
IVE	Iliamna Volcan	5.67	28			Pn	09 20 51.7	+2.0
N18K	Kilae Creek	5.72	12			Pn	09 20 52.5	+2.2
M15K	Kasigluk River	5.74	348			Pn	09 20 51.6	+1.1
O20K	Slope Mountain	5.83	29			Pn	09 20 54.2	+2.3
CNPM	China Poot	5.84	38	Pn		Pn	09 20 54.0	+2.0
M16K	Timber Creek	5.93	357			Pn	09 20 55.2	+2.0
M13K	Dall Lake	5.96	335			Pn	09 20 55.2	+1.6
M14K	Bethel	5.98	342			Pn	09 20 54.9	+1.1
N19K	Bonanza Creek	6.06	18			Pn	09 20 56.9	+1.9
BRLK	Bradley Lake	6.13	38	Pn		Pn	09 20 57.9	+1.9
NCT	North Crescent	6.16	25			Pn	09 20 58.2	+1.8
M17K	Holitna River	6.32	4			Pn	09 20 59.8	+1.3
M18K	Stony River	6.52	10			Pn	09 21 03.1	+1.8
L16K	Owhat River	6.64	355			Pn	09 21 04.0	+1.1
L14K	Kuka Creek	6.66	341			Pn	09 21 03.9	+0.8
M11K	Mekoryuk	6.77	324	Pn		Pn	09 21 05.1	+0.4
L15K	Ungalak Mounta	6.79	347			Pn	09 21 05.5	+0.5
SEW	Seward	6.89	40	Pn		Pn	09 21 07.6	+1.4
SLKM	Skilak Lake	6.91	35			Pn	09 21 07.6	+1.0
SPCP	Crater Peak Br	6.96	25			Pn	09 21 07.4	0.0
SPIA	Saint Paul Isl	7.00	292	P		Pn	09 21 08.9	+1.1
SPIA	Saint Paul Isl	7.00	292	S		Sn	09 22 29.7	+3.1
SPIA	Saint Paul Isl	7.00	292	Pn		Pn	09 21 08.8	+0.9
L17K	Donlin	7.04	360			Pn	09 21 09.2	+0.9
L18K	Granite Mounta	7.17	6			Pn	09 21 11.2	+1.0
M20K	Styx River	7.30	20			Pn	09 21 13.1	+1.1
L19K	White Mountain	7.31	13			Pn	09 21 13.6	+1.6
K15K	Wolf Creek Mou	7.39	348			Pn	09 21 14.8	+1.5
K13K	Kusilvak Mount	7.61	337			Pn	09 21 17.3	+1.2
P23K	Montague Islan	7.62	46	Pn		Pn	09 21 17.8	+1.5
K17K	Iditarod	7.62	360	Pn		Pn	09 21 17.7	+1.4
PWL	Port Wells	7.81	38	Pn		Pn	09 21 19.7	+0.8
PMR	Palmer	8.07	33	P		Pn	09 21 26.5	+4.0
J14K	Nanvaranak Lak	8.12	343	Pn		Pn	09 21 24.1	+0.9
HIN	Hinchinbrook I	8.22	45	Pn		Pn	09 21 26.2	+1.6
GLI	Glacier Island	8.28	41	Pn		Pn	09 21 26.2	+0.9
J16K	Anvik River	8.28	353			Pn	09 21 26.4	+1.0
J17K	VABM Dome	8.32	358	Pn		Pn	09 21 26.3	+0.4
J18K	Innoko River	8.41	5			Pn	09 21 28.6	+1.4
FID	Port Fidalgo	8.44	43	Pn		Pn	09 21 28.2	+0.7
SML	Sawmill	8.49	34			Pn	09 21 29.7	+1.4
SCM	Sheep Creek Mo	8.84	36			Pn	09 21 34.0	+0.9
I17K	Unalakleet	8.88	353			Pn	09 21 35.1	+1.5
J19K	Poorman	9.01	7			Pn	09 21 37.1	+1.8
KLU	Klutina	9.11	40			Pn	09 21 38.0	+1.2
J20K	Nowinta River	9.32	11			Pn	09 21 42.2	+2.5
ATKA	Atka Island	9.89	259	P		Pn	09 21 48.3	+0.9
H18K	Honhosa River	10.07	360			Pn	09 21 51.0	+1.1
PAX	Paxson	10.25	35			Pn	09 21 53.4	+0.9
H19K	Roundabout Mou	10.48	4			Pn	09 21 56.6	+1.1
NEA2	Nenana	10.56	22			Pn	09 21 56.4	-0.2
MLY	Manley	10.62	18			Pn	09 21 58.0	+0.5
WRH	Wood River Hil	10.68	24			Pn	09 21 57.8	-0.4
G18K	Tagagawik	10.82	359	Pn		Pn	09 22 01.2	+1.1
HDA	Harding Lake	10.91	27			Pn	09 22 01.2	-0.1
COLA	College	11.07	24	P		Pn	09 22 07.6	+4.1
ILAR	Eielson Array	11.22	26	Pn		Pn	09 22 04.0	-1.6
	comp=N,0.2nm,0.3s,baz=217,slow=14,SNR=11							
ILAR				LR		LR	09 27 03.5	
	comp=N,44nm,19.1s,baz=281,slow=41							
ADK	Adak	11.43	261	P		Pn	09 22 09.7	+1.2
ADK	Adak	11.43	261	Pn		Pn	09 22 09.3	+0.8
J25K	Salcha River,	11.49	29			Pn	09 22 09.9	+0.5
BCAR	Beaver Creek A	11.60	40	Pn		Pn	09 22 11.9	+1.0
F19K	Shaleruckik Mo	11.76	1			Pn	09 22 13.4	+0.4
G23K	Bananza Creek	12.29	16			Pn	09 22 20.6	+0.4
S31K	Pelican	12.48	68	Pn		Pn	09 22 24.5	+1.7
M29M	Somme Creek	12.59	46			Pn	09 22 25.6	+1.2
H27K	Steamboat Moun	13.78	29	Pn		Pn	09 22 42.1	+1.6
F28M	Old Crow	15.23	27	Pn		Pn	09 23 01.5	+1.3
H31M	Peel River	15.81	38	Pn		Pn	09 23 09.2	+1.5
H31M				IAmb		IAmb	09 23 22.9	
	comp=E,5.5nm,1.1s							
G30M	tAoh Zraii Nji	15.86	33	Pn		Pn	09 23 08.8	+0.5
G30M				IAmb		IAmb	09 23 14.0	
	comp=E,5.8nm,0.7s							
E29M	Blow River	16.31	27	Pn		Pn	09 23 14.6	+0.6
G31M	Satah River	16.44	35			Pn	09 23 16.3	+0.6
G31M				IAmb		IAmb	09 23 42.3	
	comp=E,4.0nm,0.9s							
F31M	Tsiigehtchic	16.91	33	Pn		Pn	09 23 22.1	+0.5
INK	Inuvik	17.48	31	P		Pn	09 23 28.4	-0.4
	comp=Z,0.5nm,0.3s,baz=243,slow=14,SNR=11							
	comp=Z,1.1nm,0.3s							
A36M	Sachs Harbour	21.91	27	P		P	09 24 17.9	-0.1
I02E	Swisshome, OR	24.62	102	P		P	09 24 42.8	-2.4
PETK	Petropavlovsk-	25.57	284	P		P	09 24 52.4	-1.4
	comp=Z,1.0nm,0.5s,baz=82,slow=14,SNR=3.9							
	comp=Z,1.0nm,0.5s							
PETK	Petropavlovsk-	25.57	284	P		P	09 24 51.7	-2.1
YBH	Yreka Blue Hor	26.80	105	LR		LR	09 33 34.8	
	comp=Z,32nm,19.5s,baz=273,slow=32							
PDAR	Pinedale Array	33.60	91	P		P	09 26 08.8	+3.4
	comp=Z,0.2nm,0.6s,baz=342,slow=9.2,SNR=1.7							
	comp=Z,0.2nm,0.6s							
PDAR	Pinedale Array	33.60	91	P		P	09 26 05.0	-0.4
TIXI	Tiksi	33.90	327	LR		LR	09 40 56.8	
	comp=Z,28nm,18.1s,baz=184,slow=38							
H11N2	WAKE ISLAND Hy	44.03	231	T		T	10 14 30.6	
	baz=28,slow=75,SNR=7.0							
H11N3	WAKE ISLAND Hy	44.04	231	T		T	10 14 26.0	
	baz=28,slow=75,SNR=5.1							
H11N1	WAKE ISLAND Hy	44.05	231	T		T	10 14 04.8	
	baz=28,slow=75,SNR=2.5							
H11S1	WAKE ISLAND Hy	45.20	230	T		T	10 15 56.8	
	baz=28,slow=75,SNR=4.6							
H11S2	WAKE ISLAND Hy	45.21	230	T		T	10 15 53.5	
	baz=28,slow=75,SNR=8.0							
H11S3	WAKE ISLAND Hy	45.21	230	T		T	10 15 58.4	
	baz=28,slow=75,SNR=2.6							
TXAR	Lajitas Array	46.41	101	P		P	09 27 54.1	+2.6
	comp=Z,0.3nm,0.8s,baz=301,slow=6.5,SNR=4.8							
	comp=Z,0.3nm,0.8s							
TXAR	Lajitas Array	46.41	101	P		P	09 27 50.9	-0.6
JMIC	Jan Mayen	52.37	12	LR		LR	09 54 44.5	
	comp=Z,7.8nm,18.0s,baz=230,slow=41							
SONM	Songino Array	55.33	305	P		P	09 28 57.9	-0.6
	comp=Z,0.9nm,0.7s,baz=61,slow=5.6,SNR=4.7							
	comp=Z,0.9nm,0.7s							
SONM	Songino Array	55.33	305	P		P	09 28 58.0	-0.5
SONM				IAmb		IAmb	09 28 59.8	
	comp=Z,0.9nm,1.0s							
ARCES	ARCESS Array B	55.62	358	P		P	09 28 59.5	-0.7
	comp=Z,1.1nm,0.7s,baz=4.6,slow=6.1,SNR=4.5							
	comp=Z,1.1nm,0.7s							
ARCES	ARCESS Array B	55.62	358	P		P	09 28 59.7	-0.5
ARCES				IAmb		IAmb	09 29 10.3	
	comp=Z,1.2nm,0.9s							
FINES	FINESS Array B	63.73	358	P		P	09 29 55.8	-0.2
	comp=Z,2.0nm,0.7s,baz=30,slow=8.8,SNR=6.3							
	comp=Z,2.0nm,0.7s							
FINES	FINESS Array B	63.73	358	P		P	09 29 55.7	-0.3
NOA	NORSAR Array B	63.89	6	P		P	09 29 57.3	+0.2
	comp=Z,0.7nm,0.8s,baz=354,slow=6.5,SNR=2.7							
	comp=Z,0.7nm,0.8s							
HFS	Hagfors	64.92	4	P		P	09 30 02.9	-0.9
	comp=Z,0.5nm,0.3s,baz=358,slow=4.5,SNR=5.8							
	comp=Z,0.5nm,0.3s							
BVAR	Borovoye Array	64.97	330	P		P	09 30 04.2	0.0
	comp=Z,1.2nm,0.6s,baz=24,slow=8.1,SNR=4.6							
	comp=Z,1.2nm,0.6s							
MKAR	Makanchi Array	66.38	319	P		P	09 30 12.7	-0.8
	comp=Z,0.3nm,0.4s,baz=49,slow=6.5,SNR=2.4							
	comp=Z,0.3nm,0.4s							
MKAR	Makanchi Array	66.38	319	P		P	09 30 12.5	-1.0
MAKZ	Makanchi	66.48	319	P		P	09 30 14.1	-0.1
MAKZ				IAmb		IAmb	09 30 28.6	
	comp=Z,0.9nm,0.9s							
ASAR	Alice Springs	97.35	239	LR		LR	10 11 04.4	
	comp=Z,22nm,21.1s,baz=206,slow=32							
QSPA	South Pole Qui	144.90	180	PKPbc		PKPab	09 38 59.6	0.0
	comp=Z,0.6nm,0.6s,baz=107,slow=2.5,SNR=1.8							
QSPA	South Pole Qui	144.90	180			PKPbc	09 38 59.9	+0.2

SGS 25 09:29:50.1, 29°.08N×34°.93E, h22km, MI0.3, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	Haql	0.03	191	P	Pb	09 29 53.8	-0.2
HAQS				S	Sb	09 29 56.5	-0.1
JMOS	Jabal al Moall	0.18	60	P	Pb	09 29 54.9	-0.7
JMOS				S	Sb	09 29 58.8	-0.5
JLOS		0.60	124	P	Pb	09 30 01.6	-0.6
JLOS				S	Sb	09 30 09.9	-0.3
BDAS	Al Bad`	0.66	167	P	Pb	09 30 02.4	-0.6
BDAS				S	Sb	09 30 11.6	-0.3

SGS 25 09:30:42.5, 25°.48N×37°.21E, h11km, MI0.4, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMJ12	UMJ12	0.08	262	P	Pg	09 30 44.9	-0.1
UMJ12				S	Sg	09 30 46.9	+0.1
UMJ13	Umluj	0.17	83	P	Pg	09 30 46.4	0.0
UMJ01	UMJ01	0.23	37	P	Pg	09 30 47.3	-0.1
UMJ01				S	Sg	09 30 50.4	-0.2
UMJS	Umm Lajj	0.26	160	P	Pg	09 30 47.8	-0.1
UMJS				S	Sg	09 30 51.4	-0.1
UMJ06	UMJ06	0.27	22	P	Pg	09 30 47.8	-0.2
UMJ06				S	Sg	09 30 52.0	+0.3
UMJ02	UMJ02	0.28	32	P	Pg	09 30 48.1	-0.2
UMJ02				S	Sg	09 30 52.5	+0.4
UMJ07	UMJ07	0.32	38	P	Pg	09 30 48.8	-0.2
UMJ04	UMJ04	0.35	27	P	Pg	09 30 49.3	-0.2
LNY09	LNY09	0.41	101	P	Pg	09 30 50.5	-0.2
LNY09				S	Sg	09 30 56.2	+0.1
LNY04	LNY04	0.44	118	P	Pg	09 30 51.0	-0.3
LNY04				S	Sb	09 30 58.3	-0.8
LNY07	LNY07	0.48	137	P	Pg	09 30 51.4	-0.4
LNY07				S	Sg	09 30 58.1	-0.1
LNY13	LNY13	0.49	129	P	Pg	09 30 51.9	-0.1
UMJ09	UMJ09	0.49	47	P	Pg	09 30 52.0	-0.2
UMJ05	UMJ05	0.51	349	P	Pg	09 30 52.4	-0.2
UMJ05				S	Sg	09 30 59.4	0.0
LNY11	LNY11	0.53	108	P	Pg	09 30 52.7	-0.2
LNY12	LNY12	0.55	112	P	Pg	09 30 53.1	-0.1
LNY14	LNY14	0.55	114	P	Pg	09 30 53.4	+0.2
LNY14				S	Sg	09 31 00.5	-0.1
LNY03	LNY03	0.59	100	P	Pg	09 30 53.4	-0.6
LNY03				S	Sg	09 31 02.2	+0.4
LNY05	LNY05	0.61	135	P	Pg	09 30 54.5	+0.1
LNY05				S	Sb	09 31 03.6	-0.5
UMJ10	UMJ10	0.62	36	P	Pg	09 30 54.4	-0.2
LNY02	LNY02	0.68	120	P	Pg	09 30 55.9	+0.2
LNY02				S	Sg	09 31 04.2	-0.5
LNY01	LNY01	0.72	111	P	Pg	09 30 56.3	-0.3
LNY01				S	Sg	09 31 06.5	+0.4
SUMJS	Umluj	0.74	167	P	Pg	09 30 56.4	-0.4
SUMJS				S	Sg	09 31 06.5	-0.1
LNYS	LNYS	0.77	121	P	Pg	09 30 56.7	-0.8
EWJHS	Al Wajh	0.84	323	P	Pg	09 30 58.4	-0.4
EWJHS				S	Sg	09 31 09.3	-0.5
EWJHS	Al Wajh	0.84	323	P	Pg	09 30 58.3	-0.4
EWJHS				S	Sg	09 31 09.2	-0.6
MURBA	Al Muraba'a	0.94	94	P	Pg	09 31 00.1	-0.6
MURBA				S	Sb	09 31 13.2	-0.2

NEIC ***25*** *10:16:07.8±1.5, 51°.35N±0°.06×168°.58W±0°.06, h10km±2km, mb3.3/11, ML3.2/16, ML2.9(AEIC), Error ellipse: s-maj=11.5km s-min=4.9km az=199.0*

IDC ***25*** *10:16:08.2±1.9, 51°.74N×168°.24W, h0km, mb3.3/4, mbtmp3.4/6, ML3.5/2, Error ellipse: s-maj=46.5km s-min=23.1km az=179.0*

AEIC ***25*** *10:16:09.6±1.5, 51°.33N±0°.10×168°.53W±0°.10, h10km±8km, Error ellipse: s-maj=14.2km s-min=8.3km az=164.0*

ISC 25 10:16:09.2±1.0, 51°.35N±0°.09×168°.53W±0°.06, h23km, n57, σ1§20/65, mb3.3/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	Concord Point,	1.61	333		Pn	10 16 36.5	+0.3
CLCO					Sn	10 16 56.1	-0.2
CLES	Cleveland East	1.70	331		Pn	10 16 37.1	-0.3
CLES					Sn	10 16 58.8	+0.5
CLES				IAML		10 17 03.1	
	comp=E,309nm,0.4s						
CLES				IAML		10 17 05.1	
	comp=N,289nm,1.0s						
OKSP	Okmok Steeple	1.91	4		Pn	10 16 40.1	-0.2
OKSP					Sn	10 17 03.6	-0.1
OKTU	Okmok Mt. Tuli	2.06	8		Pn	10 16 42.9	+0.5
OKCE	Okmok Cone E	2.09	6		Pn	10 16 43.4	+0.6
OKWR	Okmok West Rim	2.10	5		Pn	10 16 43.5	+0.6
OKNC	Okmok New Cone	2.12	7		Pn	10 16 44.1	+0.9
OKNC					Sn	10 17 09.8	+0.9
MAPS	Pakushin South	2.64	21		Pn	10 16 50.8	+0.4
MAPS					Sn	10 17 21.6	-0.1
MGOD	Makushin Gods	2.65	22		Pn	10 16 50.9	+0.4
MGOD					Sn	10 17 22.3	+0.4
MNAT	Makushin Natee	2.77	23		Pn	10 16 52.9	+0.7
MNAT					Sn	10 17 25.7	+0.7
UNV	Unalaska Valle	2.79	26		Pn	10 16 52.8	+0.5
UNV					Sn	10 17 25.1	0.0
ZRO	Akutan Zero	3.15	29		Pn	10 16 58.5	+1.1
AKRB	Akutan Reef Bi	3.16	27		Pn	10 16 58.7	+1.2
LVA	Lava Point	3.20	27	Pn	Pn	10 16 59.2	+1.2
LVA				IAML		10 17 40.0	
	comp=E,72nm,0.6s						
LVA				IAML		10 17 47.6	
	comp=N,87nm,0.6s						
AKLV	Akutan Long Va	3.22	28		Pn	10 16 59.3	+1.0
AHB	Akutan Harbor	3.22	30		Pn	10 16 59.1	+0.8
AKUT	Akutan	3.25	30	Pn	Pn	10 16 58.7	0.0
AKUT				IAML		10 17 42.1	
	comp=E,45nm,1.0s						
KOFP	Korovin Flat P	3.58	287		Pn	10 17 03.1	-0.1
ATKA	Atka Island	3.62	286		Pn	10 17 03.2	-0.6
ATKA				IAML		10 17 51.6	
	comp=N,21nm,1.2s						
KOKL	Mount Kliuchef	3.65	288		Pn	10 17 04.1	-0.2
SSBA	Shishaldin	4.33	36		Pn	10 17 15.2	+1.5
GSIG	Igitkin Island	4.65	281		Pn	10 17 17.5	-0.4
GSTR	Great Sitkin T	4.74	282	Pn	Pn	10 17 19.5	+0.3
GSTD	Great Sitkin T	4.79	281		Pn	10 17 19.7	-0.2
GSCK	Great Sitkin C	4.79	281		Pn	10 17 19.9	0.0
ADK	Adak	5.11	279	Pn	Pn	10 17 24.1	-0.2
ADK				IAML		10 18 22.7	
	comp=N,21nm,0.9s						
KIWB	Kanaga Island	5.40	279	Pn	Pn	10 17 28.1	0.0
KIWB				IAML		10 18 41.9	
	comp=E,19nm,1.0s						
SDPT	Sand Point	6.27	47	Pn	Pn	10 17 41.8	+1.7
CNBA	Chernabura Isl	6.41	54	Pn	Pn	10 17 43.0	+1.0
AMKA	Amchitka	7.62	275	Pn	Pn	10 17 58.6	-0.1
M16K	Timber Creek	11.05	25	Pn	Pn	10 18 46.4	+0.8
N17K	Nushagak Hills	11.16	30	Pn	Pn	10 18 46.6	-0.5
KDAK	Kodiak Island	11.26	49	Pn	Pn	10 18 48.3	-0.1
	comp=E,0.8nm,0.3s,baz=284,slow=4.2,SNR=28						
KDAK				Sn	Sn	10 20 46.5	-7.0
	comp=E,0.1nm,0.3s,baz=126,slow=14,SNR=1.8						
	comp=E,7.1nm,0.9s						
K17K	Iditarod	12.66	22	Pn	Pn	10 19 06.8	-0.8
J16K	Anvik River	12.69	16	Pn	Pn	10 19 08.3	+0.3
CNPM	China Poot	12.75	43	Pn	Pn	10 19 08.9	0.0
J18K	Innoko River	13.68	23	Pn	Pn	10 19 19.8	-1.7
SLKM	Skilak Lake	13.71	41	Pn	Pn	10 19 21.2	-0.8
SEW	Seward	13.82	43	Pn	Pn	10 19 22.9	-0.5
J20K	Nowinta River	14.92	25	Pn	Pn	10 19 39.0	+0.7
G18K	Tagagawik	15.43	15	Pn	Pn	10 19 45.8	+0.7
G18K				IAmb	IAmb	10 20 05.1	
	comp=Z,1.9nm,0.9s						
H19K	Roundabout Mou	15.51	19	Pn	Pn	10 19 46.2	0.0
H19K				IAmb	IAmb	10 19 53.9	
	comp=Z,1.2nm,0.8s						
KLU	Klutina	16.02	42	Pn	Pn	10 19 51.8	-1.0
ILAR	Eielson Array	17.52	32	Pn	Pn	10 20 08.7	-3.0
	comp=Z,0.1nm,0.3s,baz=234,slow=12,SNR=5.3					

s-maj=20.0km s-min=14.3km az=105.0
NIED ***25*** *10:39:33.7, 37°.70N × 140°.00E, h7km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr0.85; Mθθ4.06; Mϕϕ-4.91; Mrθ-0.17; Mrϕ-7.97; Mθϕ0.04; Fault plane solution: M0 9.14000 × 10^14 NP1: ϕs345.00000°, δ89.00000°, λ1.00000°. NP2: ϕs255.00000°, δ89.00000°, λ179.00000°.*
JMA ***25*** *10:39:33.7 ± 0.0, 37°.7N ± 0°.1 × 140°.0E ± 0°.1, h7km, MD4.2/19, MV4.1/19, MID FUKUSHIMA PREF*
JMA Felt III J1 at MID FUKUSHIMA PREF .
NEIC ***25*** *10:39:40.4 ± 1.7, 37°.74N ± 0°.05 × 139°.73E ± 0°.08, h48km ± 9km, mb4.2/18, Error ellipse: s-maj=9.1km s-min=8.0km az=106.0*

ISC 25 10:39:34.0 ± 1.1, **37°.72N** ± 0°.02 × **139°.99E** ± 0°.02, **h5**km ± 7km, **n109**, σ1 **$33/88**, **mb4.2**/20, **MS3.1**/12, **8D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYAR	**Yonezawaarcadi**	**0.22**	**33**	*i* P	**Pg**	**10 39 38.5**	**+0.1**
JYAR				A	A	10 39 38.5	
	comp=N,81nm,0.4s,comp=E,97nm,1.3s						
JYAR				S	**Sg**	**10 39 42.2**	**+0.8**
JOTO	**OTAMA OYAMA**	**0.32**	**121**	*i* P	**Pg**	**10 39 39.7**	**-0.5**
JOTO				A	A	10 39 39.7	
	comp=N,71nm,3.8s,comp=E,59nm,1.4s						
JFY	**Yanaizu**	**0.39**	**216**	*i* P	**Pg**	**10 39 41.2**	**-0.4**
JFY				A	A	10 39 41.2	
	comp=N,19nm,2.6s,comp=E,24nm,4.1s						
JFY				S	**Sg**	**10 39 46.4**	**-0.3**
JYS	**Shirataka**	**0.50**	**7**	*i* P	**Pg**	**10 39 44.0**	**+0.3**
JYS				A	A	10 39 44.0	
	comp=N,24nm,0.6s,comp=E,39nm,0.9s						
JYS				S	**Sg**	**10 39 51.3**	**+1.2**
JNS	**Sasagawa**	**0.54**	**280**	⇓ *i* P	**Pg**	**10 39 44.4**	**0.0**
JNS				A	A	10 39 44.4	
	comp=N,11nm,4.5s,comp=E,8.0nm,0.4s						
JNS				⇓S	**Sg**	**10 39 51.8**	**+0.3**
JMM	**Marumori**	**0.65**	**77**	*i* P	**Pg**	**10 39 46.2**	**-0.3**
JMM				A	A	10 39 46.2	
	comp=N,13nm,2.6s,comp=E,9.0nm,3.2s						
JMM				S	**Sg**	**10 39 54.9**	**-0.1**
JMST	**Minamisoumatoc**	**0.71**	**90**	A	A	10 39 47.2	
	comp=N,8.0nm,4.8s,comp=E,6.0nm,2.0s						
JSB	**Shiboa**	**0.76**	**184**	A	A	10 39 47.8	
	comp=N,15nm,3.5s,comp=E,19nm,3.0s						
JFFD	**Fukushimafurud**	**0.78**	**144**	A	A	10 39 48.2	
	comp=N,6.0nm,3.1s,comp=E,10.0nm,4.5s						
JFK	**Kawauchi**	**0.79**	**117**	⇓ *i* P	**Pg**	**10 39 48.2**	**-1.0**
JFK				A	A	10 39 48.2	
	comp=N,12nm,2.4s,comp=E,7.0nm,4.9s						
JFK				⇓S	**Sg**	**10 39 58.2**	**-1.2**
JOU	**Okura**	**0.83**	**40**	*i* P	**Pg**	**10 39 49.9**	**-0.1**
JOU				A	A	10 39 49.9	
	comp=N,9.0nm,3.2s,comp=E,8.0nm,1.4s						
JYA	**Atsumi**	**0.89**	**346**	⇓ *i* P	**Pg**	**10 39 51.1**	**0.0**
JYA				A	A	10 39 51.1	
	comp=N,12nm,1.3s,comp=E,15nm,0.9s						
JYA				⇓S	**Sg**	**10 40 03.5**	**+0.7**
ONAJ	**Iwakimizuishiy**	**0.89**	**134**	A	A	10 39 50.3	
	comp=N,7.0nm,2.7s,comp=E,9.0nm,0.3s						
JUON	**Uonuma**	**0.90**	**236**	*i* P	**Pg**	**10 39 50.6**	**-0.8**
JUON				S	**Sg**	**10 40 02.2**	**-0.9**
JAW	**Awa shima**	**0.94**	**322**	⇓ *i* P	**Pg**	**10 39 52.1**	**+0.1**
JAW				⇓S	**Sg**	**10 40 04.9**	**+0.8**
JIZZ	**Izumozaki**	**1.03**	**260**	A	A	10 39 53.5	
	comp=N,21nm,0.5s,comp=E,24nm,0.3s						
JKT	**Katashina**	**1.12**	**212**	A	A	10 39 54.6	
	comp=N,4.0nm,0.4s,comp=E,5.0nm,2.6s						
JOFO	**Osakifurukawao**	**1.14**	**39**	A	A	10 39 55.3	
	comp=N,20nm,2.4s,comp=E,22nm,3.2s						
JYK	**Kaneyama**	**1.23**	**14**	A	A	10 39 57.0	
	comp=N,3.0nm,3.7s,comp=E,6.0nm,5.1s						
JYYZ	**Yamagatayuza**	**1.29**	**358**	A	A	10 39 58.1	
	comp=N,24nm,6.0s,comp=E,15nm,4.0s						
JAG	**Ashikaga**	**1.37**	**198**	A	A	10 39 58.6	
	comp=N,3.0nm,4.6s,comp=E,3.0nm,5.1s						
JHYU	**Hitachinakayam**	**1.46**	**161**	A	A	10 39 60.0	
	comp=N,6.0nm,8.1s,comp=E,6.0nm,4.1s						
JYT	**Yasato**	**1.50**	**174**	Pn	**Pg**	**10 40 05.2**	**+2.4**
JYT				Sn	**Sg**	**10 40 25.4**	**+3.1**
JTB	**Tobi-shima**	**1.51**	**347**	A	A	10 40 01.6	
	comp=N,8.0nm,0.6s,comp=E,12nm,0.7s						
JJN	**Nakama**	**1.58**	**247**	A	A	10 40 02.3	
	comp=N,13nm,0.7s,comp=E,16nm,0.4s						
JGK	**Kuni**	**1.58**	**223**	A	A	10 40 02.2	
	comp=N,4.0nm,4.3s,comp=E,4.0nm,3.3s						
JRG	**Rokugo**	**1.74**	**17**	A	A	10 40 05.1	
	comp=N,9.0nm,0.7s,comp=E,7.0nm,1.2s						
JIHU	**Itakohorinouch**	**1.81**	**166**	A	A	10 40 05.3	
	comp=N,17nm,4.9s,comp=E,25nm,4.1s						
JYW	**Yuwa**	**1.82**	**5**	A	A	10 40 06.3	
	comp=N,12nm,2.1s,comp=E,9.0nm,0.9s						
MAJO	**Matsushiro**	**1.85**	**231**	P	**Pn**	**10 40 06.4**	**-0.1**
MAJO	**Matsushiro**	**1.85**	**231**	S	**Sb**	**10 40 31.9**	**0.0**
MAJO	**Matsushiro**	**1.85**	**231**		**Pn**	**10 40 06.3**	**-0.1**
MAJO				Sn	**Sn**	**10 40 28.4**	**-1.9**
MJAR	**Matsushiro Arr**	**1.85**	**231**	Pn	**Pn**	**10 40 06.1**	**-0.4**
	comp=E,34nm,0.3s,baz=63,slow=13,SNR=1375						
MJAR				Sn	**Sb**	**10 40 30.9**	**-0.9**
	comp=E,13nm,0.3s,baz=85,slow=8.9,SNR=11						
MJAR				LR	LR	10 41 08.0	
	comp=E,671nm,18.6s,baz=44,slow=52						
MJAR	**Matsushiro Arr**	**1.85**	**231**		**Pn**	**10 40 06.3**	**-0.2**
MJB9	**Matsu-Tunnel**	**1.85**	**231**		**Pb**	**10 40 07.3**	**-1.0**
JGF	**Kuroka**	**3.00**	**226**	P	**Pn**	**10 40 23.2**	**+0.9**
JGF	**Kuroka**	**3.00**	**226**	S	**Sn**	**10 40 59.9**	**+1.3**
JGF	**Kuroka**	**3.00**	**226**		**Pn**	**10 40 22.9**	**+0.7**
JTM	**Tenmabayashi**	**3.17**	**15**	P	**Pb**	**10 40 28.9**	**-2.0**
JTM	**Tenmabayashi**	**3.17**	**15**	S	**Sb**	**10 41 07.9**	**-1.9**
JTM	**Tenmabayashi**	**3.17**	**15**		**Pb**	**10 40 28.8**	**-2.1**
INU	**Inuyama**	**3.37**	**226**	P	**Pn**	**10 40 28.5**	**+1.1**
INU	**Inuyama**	**3.37**	**226**		**Pn**	**10 40 28.2**	**+0.8**
JSG	**Sagara**	**3.38**	**206**	P	**Pn**	**10 40 29.5**	**+2.1**
JSG	**Sagara**	**3.38**	**206**		**Pn**	**10 40 29.7**	**+2.3**
JHJ	**Hachijo jima 2**	**4.60**	**182**	Pn	**Pn**	**10 40 43.5**	**-0.8**
	comp=E,28nm,0.3s,baz=358,slow=5.5,SNR=10						
JHJ				Sn	**Sn**	**10 41 36.8**	**-1.2**
	baz=72,slow=20						
	comp=E,122nm,0.6s						
JHJ2	**Mitsune**	**4.61**	**182**	P	**Pn**	**10 40 44.2**	**-0.1**
JHJ2	**Mitsune**	**4.61**	**182**	S	**Sn**	**10 41 38.4**	**+0.2**
JHJ2	**Mitsune**	**4.61**	**182**	Pn	**Pn**	**10 40 44.3**	**0.0**
ERM	**Erimo**	**4.93**	**29**	P	**Pn**	**10 40 51.1**	**+2.3**
ERM	**Erimo**	**4.93**	**29**		**Pn**	**10 40 50.6**	**+1.8**
JEM	**Erimo**	**4.93**	**29**	P	**Pn**	**10 40 51.0**	**+2.2**
ASAJ	**Asahikawa**	**6.68**	**16**	Pn	**Pn**	**10 41 14.4**	**+1.6**
	comp=E,0.9nm,0.3s,baz=207,slow=15,SNR=13						
ASAJ				LR	LR	10 44 04.5	
	comp=E,166nm,18.2s,baz=160,slow=40						
	comp=E,11nm,0.7s						
JKA	**Kamikawa-asahi**	**6.68**	**16**		**Pn**	**10 41 15.2**	**+2.3**
JNU	**Nakatsue**	**8.74**	**241**	LR	LR	10 44 56.6	
	comp=E,96nm,19.9s,baz=55,slow=37						
USA0B	**Ussuriysk Arra**	**8.86**	**319**	Pn	**Pn**	**10 41 42.9**	**+0.2**
USRK	**Ussuriysk Ar.**	**8.86**	**319**	Pn	**Pn**	**10 41 43.0**	**+0.3**
	comp=E,0.4nm,0.3s,baz=124,slow=14,SNR=4.2						
USRK				LR	LR	10 44 53.5	
	comp=E,132nm,19.3s,baz=137,slow=36						
	comp=E,0.8nm,0.5s						
YSS	**Yuzhno-Sakhali**	**9.45**	**12**	Pn	**Pn**	**10 41 53.7**	**+3.0**
KSRS	**Korea Array**	**9.58**	**272**	Pn	**Pn**	**10 41 54.8**	**+2.1**
	comp=E,1.3nm,0.3s,baz=81,slow=14,SNR=13						
KSRS				LR	LR	10 45 15.6	
	comp=E,70nm,18.8s,baz=75,slow=36						
	comp=E,2.3nm,0.3s						
KSAR	**Wonju Array Be**	**9.62**	**272**	Pn	**Pn**	**10 41 54.2**	**+1.1**
KS19	**Wonju Array Si**	**9.62**	**272**	Pn	**Pn**	**10 41 53.5**	**+0.2**
PETK	**Petropavlovsk-**	**19.69**	**33**	P	**Pn**	**10 44 04.7**	**-0.7**
	comp=E,0.3nm,0.3s,baz=224,slow=10,SNR=4.6						
PETK				LR	LR	10 51 00.6	
	comp=E,45nm,21.4s,baz=240,slow=35						
	comp=E,1.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**22.18**	**287**	*e*P	**P**	**10 44 31.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
MA2	**Magadan**	**22.94**	**14**	LR	LR	10 54 02.9	
	comp=Z,38nm,18.3s,baz=162,slow=38						
YAK	**Yakutsk**	**25.16**	**349**	LR	LR	10 54 24.2	
	comp=Z,51nm,19.4s,baz=152,slow=35						
SONM	**Songino Array**	**26.46**	**303**	P	**P**	**10 45 12.6**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=99,slow=8.9,SNR=1.3						
SONM				LR	LR	10 55 59.0	
	comp=Z,42nm,18.2s,baz=112,slow=37						
	comp=Z,0.6nm,0.9s						
SHEM	**Shemya Is, Ala**	**28.00**	**47**	LR	LR	10 55 31.9	
	comp=Z,8.2nm,20.6s,baz=133,slow=34						
TLY	**Talaya**	**29.02**	**310**	LR	LR	10 57 52.5	
	comp=Z,43nm,18.5s,baz=116,slow=38						
TLY	**Talaya**	**29.02**	**310**	P	**P**	**10 45 34.4**	**-0.4**
TLY				IAmb	IAmb	10 45 46.6	
	comp=Z,3.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**29.47**	**120**	T	T	11 15 47.4	
	baz=313,slow=75,SNR=55						
H11N1	**WAKE ISLAND Hy**	**29.48**	**120**	T	T	11 15 47.9	
	baz=313,slow=75,SNR=64						
H11N3	**WAKE ISLAND Hy**	**29.49**	**120**	T	T	11 15 48.6	
	baz=313,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**30.19**	**122**	T	T	11 16 38.2	
	baz=314,slow=75,SNR=66						
H11S3	**WAKE ISLAND Hy**	**30.19**	**122**	T	T	11 16 41.1	
	baz=314,slow=75,SNR=45						
H11S2	**WAKE ISLAND Hy**	**30.20**	**122**	T	T	11 16 30.6	
	baz=314,slow=75,SNR=33						
DAV	**Davao City (W)**	**33.20**	**207**	LR	LR	10 59 14.4	
	comp=Z,20nm,20.7s,baz=323,slow=36						
SIJI	**Sorong**	**39.24**	**194**	LR	LR	11 01 54.3	
	comp=Z,22nm,20.4s,baz=146,slow=34						
ZALV	**Zalesovo Beam**	**40.61**	**312**	P	**P**	**10 47 13.5**	**-1.1**
NRIK	**Noril'sk**	**42.17**	**335**	P	**P**	**10 47 26.8**	**-0.4**
NRIK				IAmb	IAmb	10 47 27.3	
	comp=Z,3.2nm,0.8s						
M14K	**Bethel**	**42.54**	**38**	P	**P**	**10 47 31.4**	**+1.1**
MKAR	**Makanchi Array**	**42.79**	**301**	P	**P**	**10 47 31.8**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=91,slow=7.2,SNR=3.3						
MKAR				LR	LR	11 05 01.4	
	comp=Z,34nm,19.1s,baz=114,slow=36						
	comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**42.79**	**301**	P	**P**	**10 47 31.0**	**-1.6**
C18K	**Utukok River**	**44.17**	**27**	P	**P**	**10 47 44.6**	**+1.1**
C18K				IAmb	IAmb	10 47 45.5	
	comp=Z,3.4nm,0.8s						
KURK	**Kurchatov**	**44.61**	**307**	P	**P**	**10 47 47.0**	**-0.2**
G18K	**Tagagawik**	**44.63**	**31**	P	**P**	**10 47 49.9**	**+2.8**
G18K				IAmb	IAmb	10 47 50.4	
	comp=Z,4.3nm,1.1s						
H18K	**Honhosa River**	**44.66**	**32**	P	**P**	**10 47 49.7**	**+2.3**
H18K				IAmb	IAmb	10 47 52.9	
	comp=Z,3.2nm,1.0s						
KURBB	**Kurchatov Arra**	**44.68**	**307**	P	**P**	**10 47 47.1**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=82,slow=8.2,SNR=11						
	comp=Z,0.8nm,0.5s						
M17K	**Holitna River**	**44.77**	**37**	P	**P**	**10 47 50.0**	**+1.6**
M17K				IAmb	IAmb	10 47 54.3	
	comp=Z,4.2nm,1.0s						
C19K	**Lookout Ridge**	**44.83**	**26**	P	**P**	**10 47 50.3**	**+1.5**
F19K	**Shaleruckik Mo**	**45.11**	**30**	P	**P**	**10 47 52.8**	**+1.9**
F19K				IAmb	IAmb	10 47 53.2	
	comp=Z,2.9nm,1.0s						
N18K	**Kilae Creek**	**45.51**	**38**	P	**P**	**10 47 55.4**	**+1.2**
N18K				IAmb	IAmb	10 48 03.1	
	comp=Z,4.0nm,1.0s						
J19K	**Poorman**	**45.73**	**34**	P	**P**	**10 47 58.1**	**+2.2**
J19K				IAmb	IAmb	10 48 12.6	
	comp=Z,3.3nm,1.2s						
KAPI	**Kappang**	**46.51**	**208**	LR	LR	11 05 53.5	
	comp=Z,24nm,21.4s,baz=327,slow=34						
IMAR	**Indian Mountai**	**46.64**	**31**	P	**P**	**10 48 05.4**	**+2.3**
B21K	**Ikpikpuk River**	**46.66**	**26**	P	**P**	**10 48 04.8**	**+1.7**
BVAR	**Borovoye Array**	**49.27**	**312**	P	**P**	**10 48 23.6**	**0.0**
	comp=Z,0.9nm,0.6s,baz=81,slow=9.3,SNR=4.4						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**49.52**	**33**	P	**P**	**10 48 26.0**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=274,slow=7.4,SNR=9.4						
	comp=Z,0.9nm,0.9s						
I30M	**Mount Dempster**	**53.87**	**31**	P	**P**	**10 48 59.9**	**+1.9**
I30M				IAmb	IAmb	10 49 04.9	
	comp=Z,2.6nm,0.9s						
WR8	**Warramunga Arr**	**57.60**	**186**	P	**P**	**10 49 23.8**	**-1.2**
WRA	**Warramunga Arr**	**57.60**	**186**	P	**P**	**10 49 23.5**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=3.0,slow=7.6,SNR=15						
	comp=Z,1.3nm,0.7s						
AS31	**Alice Springs**	**61.33**	**186**	P	**P**	**10 49 50.9**	**+0.2**
ASAR	**Alice Springs**	**61.33**	**186**	P	**P**	**10 49 49.7**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=19,slow=5.9,SNR=6.8						
	comp=Z,0.7nm,0.8s						
FINES	**FINESS Array B**	**67.67**	**332**	P	**P**	**10 50 32.2**	**+0.4**
	comp=Z,3.1nm,1.0s,baz=60,slow=8.5,SNR=2.6						
	comp=Z,3.1nm,1.0s						
FINES	**FINESS Array B**	**67.67**	**332**	P	**P**	**10 50 32.5**	**+0.7**
AKASG	**Malin Array Be**	**73.06**	**322**	LR	LR	11 25 13.0	
	comp=Z,27nm,18.5s,baz=14,slow=38						
FRB	**Frobisher Bay**	**76.35**	**13**	LR	LR	11 27 33.3	
	comp=Z,16nm,19.1s,baz=96,slow=38						
PDAR	**Pinedale Array**	**77.98**	**45**	P	**P**	**10 51 33.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=277,slow=3.7,SNR=3.7						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**77.98**	**45**	P	**P**	**10 51 33.2**	**-0.5**
MLR	**Muntele Rosu**	**78.12**	**319**	LR	LR	11 28 14.0	
	comp=Z,33nm,18.4s,baz=138,slow=37						

IDC ***25*** *10:48:00.5 ± 0.6, 2°.92N × 79°.38W, h0km, mb4.2/18, mbtmp4.2/22, ML4.0/4, MS3.3/25, Error ellipse: s-maj=24.0km s-min=12.7km az=61.0*
GFZ ***25*** *10:48:01.5 ± 0.2, 3°N ± 3° × 8°0W ± °, h10km, M4.5/28, mb4.5/28*
NEIC ***25*** *10:48:02.4 ± 1.5, 2°.73N ± 0°.06 × 79°.52W ± 0°.09, h10km ± 1km, mb4.6/189, Error ellipse: s-maj=14.9km s-min=10.0km az=253.0*
RSNC ***25*** *10:48:02.0 ± 0.0, 3°N ± 3° × 8°0W ± °, h20km ± 6km, M4.2, mB5.0, mb4.5, ML4.2, Mw(mB)4.3*
CATAC ***25*** *10:48:06.9 ± 1.2, 3°N ± 5° × 7°9W ± °, h13km ± 12km, M4.8/6, mB5.0/3, mb5.0/2, MLv4.8/6, Mw(mB)4.3/3, Error ellipse: s-maj=20.5km s-min=6.0km az=113.4, confirmed*
VAO ***25*** *10:48:21.1 ± 6.2, 2°.06N × 78°.50W, h88km ± 23km, mb4.6, Presumed earthquake*

ISC 25 10:48:03.4 ± 2.4, **2°.76N** ± 0°.03 × **79°.64W** ± 0°.04, **h25**km ± 17km, **n523**, σ1 **$27/482**, **mb4.5**/101, **MS3.2**/22, **1C**, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GR1C	**Gorgona, Isla**	**1.49**	**81**	P	**Pn**	**10 48 25.3**	**-3.3**
GR1C				S	**Sn**	**10 48 42.2**	**-5.1**
BBAC	**Balboa, Cauca**	**2.50**	**107**	P	**Pn**	**10 48 40.4**	**-2.4**
BBAC				S	**Sn**	**10 49 08.4**	**-4.2**
CMBC	**Cumbal**	**2.56**	**135**	P	**Pn**	**10 48 41.4**	**-2.4**
PAC1	**Pacto, Paraso**	**2.62**	**161**	P	**Pn**	**10 48 41.2**	**-3.1**
PAC1				S	**Sn**	**10 49 11.1**	**-4.3**
CUSE	**Cuicocha Este**	**2.73**	**153**	P	**Pn**	**10 48 43.6**	**-2.6**
CUSE				S	**Sn**	**10 49 15.5**	**-3.2**
TULM	**Tulcn-Chalpat**	**2.75**	**138**	P	**Pn**	**10 48 44.6**	**-1.8**
TULM				S	**Sn**	**10 49 14.6**	**-4.5**
OTAV	**Otavalo**	**2.77**	**155**		**Pn**	**10 48 43.9**	**-2.8**
CRUC	**La Cruz**	**2.94**	**114**	P	**Pn**	**10 48 48.6**	**-0.3**
CRUC				S	**Sn**	**10 49 23.7**	**+0.1**
PULU	**Pululahua**	**2.95**	**157**	P	**Pn**	**10 48 48.2**	**-0.9**
POPC	**Popayan, Colom**	**2.97**	**94**	P	**Pn**	**10 48 46.7**	**-2.5**
POPC				S	**Sn**	**10 49 19.4**	**-4.8**
JAMC	**Jamundi, Valle**	**3.00**	**81**	P	**Pn**	**10 48 46.5**	**-3.1**
JAMC				S	**Sn**	**10 49 19.6**	**-5.3**
PIZC	**Pizarro, Choco**	**3.16**	**46**	P	**Pn**	**10 48 48.7**	**-2.9**
PIZC				S	**Sn**	**10 49 25.3**	**-3.2**
CASC	**Dorado de Casc**	**3.48**	**139**	P	**Pn**	**10 48 57.4**	**+1.3**
CASC				S	**Sn**	**10 49 37.7**	**+1.2**
SLOR	**San Lorenzo -**	**3.65**	**162**	P	**Pn**	**10 48 59.1**	**+0.3**
SLOR				S	**Sn**	**10 49 37.8**	**-3.5**
SLOR	**San Lorenzo -**	**3.65**	**162**		**Pn**	**10 48 58.8**	**0.0**
PIAT	**Ana Tenorio**	**3.98**	**160**	P	**Pn**	**10 49 03.7**	**+0.5**
PIAT				S	**Sn**	**10 49 47.7**	**-1.6**
SOLC	**Bahia Solano**	**4.10**	**33**	P	**Pn**	**10 49 02.8**	**-1.8**
SOLC				S	**Sn**	**10 49 50.4**	**-1.4**
FLOC	**Florencia**	**4.15**	**106**	P	**Pn**	**10 49 05.2**	**-0.2**
FLOC				S	**Sn**	**10 49 51.3**	**-1.8**
FLOC	**Florencia**	**4.15**	**106**	P	**Pn**	**10 49 05.0**	**-0.3**
FLOC				S	**Sn**	**10 49 50.9**	**-2.2**
GARC	**Garzon, Huila**	**4.18**	**98**	P	**Pn**	**10 49 06.1**	**+0.2**
GARC				S	**Sn**	**10 49 53.0**	**-1.2**
ARMEC	**Armenia, Quind**	**4.35**	**66**	P	**Pn**	**10 49 08.8**	**+0.6**
ARMEC				S	**Sn**	**10 49 59.0**	**+0.7**
PPLP	**Puerto Lpez**	**4.42**	**195**	P	**Pn**	**10 49 06.8**	**-2.3**
PPLP				S	**Sn**	**10 49 57.0**	**-2.8**
CACAO	**El Cacao, Vera**	**4.71**	**345**	P	**Pn**	**10 49 10.6**	**-2.4**
CACAO				S	**Sn**	**10 50 01.2**	**-5.8**
PTAC	**Punta Ardita,**	**4.73**	**23**	P	**Pn**	**10 49 12.5**	**-0.7**
CBOC	**Ciudad Bolivar**	**4.75**	**49**	P	**Pn**	**10 49 11.0**	**-2.7**
PRAC	**Prado**	**4.84**	**79**	P	**Pn**	**10 49 14.7**	**-0.1**
PRAC				S	**Sn**	**10 50 07.6**	**-2.5**
PRAC	**Prado**	**4.84**	**79**	P	**Pn**	**10 49 14.7**	**-0.1**
PRAC				S	**Sn**	**10 50 08.8**	**-1.3**
GUY2C	**Guyana, Caldas**	**4.92**	**60**	P	**Pn**	**10 49 15.6**	**-0.6**
GUY2C				S	**Sn**	**10 50 11.6**	**-1.0**
AZU	**Azuero**	**5.04**	**353**	P	**Pn**	**10 49 16.7**	**-0.8**
	35nm,0.9s						
AZU				S	**Sn**	**10 50 08.7**	**-6.3**
	35nm,0.9s						
GMAL	**Guarumal, Vera**	**5.22**	**342**	P	**Pn**	**10 49 18.6**	**-1.3**
	1µm30nm,1.3s						
GMAL				S	**Sn**	**10 50 15.0**	**-4.4**
	1µm30nm,1.3s						
PTLC	**Puerto Leguiza**	**5.48**	**118**	P	**Pn**	**10 49 24.5**	**+0.9**
ROSC	**El Rosal**	**5.70**	**69**	Pn	**Pn**	**10 49 28.0**	**+1.1**
	6.9nm,0.3s,baz=182,slow=6.7,SNR=7.0						
ROSC				Sn	**Sn**	**10 50 30.9**	**-0.9**
	16nm,0.3s,baz=49,slow=21,SNR=7.0						
ROSC				LR	LR	10 51 57.2	
	comp=Z,522nm,20.4s,baz=242,slow=44						
ROSC	**El Rosal**	**5.70**	**69**		**Pn**	**10 49 25.9**	**-1.0**
ROSC	**El Rosal**	**5.70**	**69**	P	**Pn**	**10 49 28.8**	**+1.9**
ROSC				S	**Sn**	**10 50 32.4**	**+0.7**
MACC	**Macarena, Meta**	**5.82**	**96**	P	**Pn**	**10 49 28.3**	**+0.1**
MACC				S	**Sn**	**10 50 32.0**	**-2.3**
CVER	**Cruz Verde, Cu**	**5.82**	**72**	P	**Pn**	**10 49 29.3**	**+0.6**
CVER				S	**Sn**	**10 50 34.5**	**-0.5**
APAC	**Apartado, Choc**	**5.95**	**31**	P	**Pn**	**10 49 34.1**	**+4.1**
CHIC	**Chingaza**	**6.18**	**72**	P	**Pn**	**10 49 34.1**	**+0.5**
CHIC				S	**Sn**	**10 50 41.9**	**-1.8**
SPBC	**San Pablo de B**	**6.25**	**62**	P	**Pn**	**10 49 34.4**	**+0.1**
	1µm28nm,0.7s						
BCIP	**Isla Barro Col**	**6.37**	**358**	P	**Pn**	**10 49 35.8**	**0.0**
	35nm,0.5s						
BCIP				S	**Sn**	**10 50 42.9**	**-4.8**
	35nm,0.5s						
BCIP	**Isla Barro Col**	**6.37**	**358**	P	**Pn**	**10 49 37.4**	**+1.7**
PTBC	**PUERTO BERRIO,**	**6.39**	**54**	P	**Pn**	**10 49 36.9**	**+0.9**
PTBC				S	**Sn**	**10 50 46.4**	**-1.8**
UREC	**San Jos de Ur**	**6.43**	**39**	P	**Pn**	**10 49 38.5**	**+1.9**
UREC				S	**Sn**	**10 50 49.7**	**+0.4**
BRU2	**Volcan**	**6.72**	**333**		**Pn**	**10 49 42.2**	**+1.4**
BRU2	**Volcan**	**6.72**	**333**	P	**Pn**	**10 49 41.8**	**+1.1**
MCRA	**Macar, Loja**	**7.09**	**183**	P	**Pn**	**10 49 45.7**	**0.0**
MCRA				S	**Sn**	**10 51 00.7**	**-4.9**
BRJC	**Barrancabermej**	**7.21**	**54**	P	**Pn**	**10 49 47.0**	**-0.4**
	3µm38nm,0.7s						
BRJC				S	**Sn**	**10 51 06.6**	**-2.0**
	3µm38nm,0.7s						
RUSC	**La Rusia**	**7.24**	**64**	P	**Pn**	**10 49 49.2**	**+1.0**
RUSC				S	**Sn**	**10 51 10.5**	**+0.5**
RUSC	**La Rusia**	**7.24**	**64**	P	**Pn**	**10 49 48.5**	**+0.3**
	412nm37nm,1.0s						
BARC	**Barichara**	**7.48**	**59**	P	**Pn**	**10 49 51.5**	**+0.3**
	29nm,0.8s						
BARC				S	**Sn**	**10 51 13.5**	**-1.9**
	29nm,0.8s						
OCAC	**Ocana**	**8.32**	**49**	P	**Pn**	**10 50 05.5**	**+2.8**
OCAC				S	**Sn**	**10 51 34.5**	**-1.5**
SJCC	**San Jacinto, C**	**8.36**	**32**	P	**Pn**	**10 50 04.1**	**+0.9**
JTS	**Las Juntas de**	**9.15**	**325**	Pn	**Pn**	**10 50 14.5**	**+0.5**
	0.5nm,0.3s,baz=223,slow=9.1,SNR=5.0						
JTS				Sn	**Sn**	**10 51 53.4**	**-3.0**
	0.8nm,0.3s,baz=312,slow=19,SNR=4.4						
	2.8nm,0.7s						
JTS	**

comp=Z,4.9nm,0.8s
PAULI Pauline 31.96 357 P **P** **10 54 28.3 +0.8**
PAULI IAmb IAmb 10 54 29.7
comp=Z,8.4nm,1.2s
BG3 Lake Jocassee 32.22 355 P **P** **10 54 31.0 +1.2**
BG3 IAmb IAmb 10 54 31.9
comp=Z,8.8nm,1.0s
W50A Signal Mountai 32.71 351 P **P** **10 54 34.9 +0.8**
W50A IAmb IAmb 10 54 35.6
comp=Z,9.3nm,1.1s
SWET Sewanee 32.82 350 P **P** **10 54 35.6 +0.6**
CPCT Cooper Cave 32.84 353 P **P** **10 54 36.5 +1.3**
CPCT IAmb IAmb 10 54 37.0
comp=Z,9.7nm,1.2s
V58A Windy Hill, Pi 32.88 1 P **P** **10 54 36.4 +0.9**
AQDB Aquidauana 32.93 136 P **P** **10 54 34.5 -1.7**
TKL Tuckaleechee C 32.96 354 LR LR 11 08 18.7
comp=Z,25nm,18.2s,baz=172,slow=37
CCAR Cane Creek 33.00 341 P **P** **10 54 37.3 +0.7**
V48A Smith Brothers 33.48 349 P **P** **10 54 41.3 +0.4**
CLTN Cedars of Leba 33.74 350 P **P** **10 54 43.5 +0.4**
UALR University of 33.98 341 P **P** **10 54 45.5 +0.4**
WVT Waverly 34.06 348 P **P** **10 54 45.5 -0.3**
WVT IAmb IAmb 10 54 45.6
comp=Z,3.5nm,0.6s
WVT Waverly 34.06 348 P **P** **10 54 45.0 -0.8**
MIAR Mount Ida 34.19 339 P **P** **10 54 47.3 +0.4**
MIAR IAmb IAmb 10 54 48.1
comp=Z,7.3nm,1.1s
WHAR Wooly Hollow 34.43 342 P **P** **10 54 49.3 +0.2**
PLPT Palo Pinto 34.65 332 P **P** **10 54 52.1 +1.1**
PLPT IAmb IAmb 10 54 52.9
comp=Z,9.3nm,0.8s
T47A Sharon Grove 34.75 349 P **P** **10 54 51.8 0.0**
T47A IAmb IAmb 10 54 52.5
comp=Z,6.0nm,0.7s
LCAR Lake Charles 34.81 344 P **P** **10 54 52.4 0.0**
LCAR IAmb IAmb 10 54 53.1
comp=Z,9.9nm,0.9s
S51A Beattyville 34.90 355 P **P** **10 54 53.9 +0.8**
S51A IAmb IAmb 10 54 54.0
comp=Z,7.2nm,0.9s
TXAR Lajitas Array 34.92 322 P **P** **10 54 55.3 +1.8**
comp=Z,0.6nm,0.8s,baz=151,slow=7.9,SNR=8.0
TXAR PcP **PcP** **10 57 27.6 +1.5**
comp=Z,1.5nm,0.8s,baz=127,slow=4.0,SNR=14
TXAR LR LR 11 09 57.0
comp=Z,28nm,18.4s,baz=108,slow=38
comp=Z,0.6nm,0.8s
FCAR Ozark Folk Cen 34.93 342 P **P** **10 54 53.6 +0.2**
FCAR IAmb IAmb 10 54 54.0
comp=Z,8.0nm,0.9s
R58B Mineral 35.07 2 P **P** **10 54 56.1 +1.5**
T45A Paducah 35.09 347 **P** **10 54 55.3 +0.6**
R50A Paris 35.61 354 P **P** **10 54 59.6 +0.4**
R50A IAmb IAmb 10 55 00.6
comp=Z,9.8nm,1.3s
ALPN Alpine 35.64 323 **P** **10 55 00.9 +1.1**
ALPN IAmb IAmb 10 55 03.0
comp=Z,5.2nm,0.9s
T42A Van Buren 35.70 344 **P** **10 54 59.8 -0.1**
T42A IAmb IAmb 10 55 00.3
comp=Z,7.5nm,0.8s
R49A Shelbyville 35.73 353 P **P** **10 54 59.7 -0.5**
R49A IAmb IAmb 10 55 00.6
comp=Z,6.0nm,0.9s
USIN University of 35.80 349 P **P** **10 55 00.7 -0.1**
WCI Wyandotte Cave 35.82 351 P **P** **10 55 01.0 0.0**
WCI IAmb IAmb 10 55 02.9
comp=Z,6.8nm,0.7s
MNHN Monahans 35.83 325 IAmb IAmb 10 55 04.1
comp=Z,5.6nm,0.8s
TPB05 Hovey Rd 35.85 324 IAmb IAmb 10 55 05.7
comp=Z,11nm,0.7s
CFA Coronel Fontan 35.85 163 P **P** **10 55 03.8 +2.4**
comp=Z,0.7nm,0.6s,baz=38,slow=18,SNR=2.0
comp=Z,0.7nm,0.6s
S44A Carbondale 35.87 347 P **P** **10 55 01.6 +0.2**
S44A IAmb IAmb 10 55 11.4
comp=Z,12nm,1.2s
HHAR Hobbs 35.88 340 IAmb IAmb 10 55 02.5
comp=Z,5.8nm,1.0s
CPUP Villa Florida 36.08 145 LR LR 11 12 13.2
comp=Z,78nm,18.8s,baz=260,slow=40
TPB01 Permian Basin 36.14 323 IAmb IAmb 10 55 08.1
comp=Z,5.7nm,0.7s
BDFB Brasilia 36.23 121 LR LR 11 10 36.7
comp=Z,113nm,19.1s,baz=283,slow=38
TPB06 Permian Basin 36.32 325 IAmb IAmb 10 55 08.3
comp=Z,8.0nm,0.6s
FVM French Village 36.42 346 IAmb IAmb 10 55 06.8
comp=Z,10nm,0.8s
LPIG La Paz 36.43 308 LR LR 11 06 46.6
comp=Z,43nm,18.9s,baz=165,slow=31
PECS Pecos 36.49 324 IAmb IAmb 10 55 10.1
comp=Z,11nm,1.4s
OK052 Battle Ridge R 36.69 336 IAmb IAmb 10 55 09.2
comp=Z,11nm,0.8s
CCM Cathedral Cave 36.70 345 P **P** **10 55 08.4 -0.1**
CCM Cathedral Cave 36.70 345 P **P** **10 55 08.2 -0.3**
TPB28 37.08 324 IAmb IAmb 10 55 15.7
comp=Z,4.2nm,0.9s
MVL Millersville 37.19 4 **P** **10 55 14.2 +1.6**
MVL IAmb IAmb 10 55 15.3
comp=Z,11nm,0.9s
MNTX Cornudas Mount 37.63 323 P **P** **10 55 16.8 +0.2**
P43A Skaggs, Pawnee 37.79 348 IAmb IAmb 10 55 18.0
comp=Z,15nm,1.1s
M57A Sunshine Farm, 38.47 3 **P** **10 55 25.1 +1.7**
KSPA Keystone Colle 38.78 5 IAmb IAmb 10 55 28.7
comp=Z,13nm,0.9s
BINY Binghamton 39.40 4 IAmb IAmb 10 55 33.8
comp=Z,12nm,0.9s
BINY Binghamton 39.40 4 P **P** **10 55 31.3 0.0**
121A Cookes Peak, D 39.68 321 IAmb IAmb 10 55 38.3
comp=Z,10nm,0.9s
RTBA Rita Blanca 39.72 330 IAmb IAmb 10 55 36.6
comp=Z,8.8nm,0.8s
K57A Scipio Center 39.90 4 P **P** **10 55 36.2 +0.8**
ALQ Albuquerque 40.57 325 IAmb IAmb 10 55 44.9
comp=Z,6.4nm,0.8s
ANMO Albuquerque 40.57 325 LR LR 11 13 41.8
comp=Z,12nm,18.1s,baz=116,slow=38
ANMO Albuquerque 40.57 325 **P** **10 55 43.8 +2.5**
ANMO Albuquerque 40.57 325 P **P** **10 55 42.8 +1.4**
J59A Piesco 40.79 6 IAmb IAmb 10 55 44.7
comp=Z,13nm,0.8s
JFWS Jewell Farm 41.09 348 IAmb IAmb 10 55 44.9
comp=Z,7.5nm,0.7s
T25A Trinidad 41.10 329 **P** **10 55 46.3 +0.6**
T25A IAmb IAmb 10 55 49.5
comp=Z,6.8nm,0.8s
KSCO Kaye Shedlock' 41.72 333 IAmb IAmb 10 55 53.2
comp=Z,9.7nm,0.6s
SADO Sadowa 41.84 1 LR LR 11 13 49.9
comp=Z,22nm,18.8s,baz=182,slow=37
LONY Lake Ozonia 41.92 5 P **P** **10 55 52.8 +0.8**
EMMW East Machias 43.14 13 P **P** **10 56 03.0 +1.1**
G40A Rib Lake 43.34 349 IAmb IAmb 10 56 04.1
comp=Z,10nm,1.3s
MVCO Mesa Verde 43.35 326 P **P** **10 56 04.5 +0.5**
CMC01 Camacan, BA 43.59 116 *eP* **P** **10 56 05.9 0.0**
WUAZ Wupatki 43.89 322 IAmb IAmb 10 56 19.9
comp=Z,9.4nm,0.9s
PV15 Paradox Valley 44.15 327 IAmb IAmb 10 56 21.9
comp=Z,7.6nm,1.2s
PV13 Radium Mtn., P 44.20 327 IAmb IAmb 10 56 13.9
comp=Z,8.0nm,0.8s
PV03 Paradox Valley 44.28 327 IAmb IAmb 10 56 14.4
comp=Z,5.5nm,0.8s
PV05 Paradox Valley 44.30 326 IAmb IAmb 10 56 14.3
comp=Z,5.3nm,0.7s
PV16 Nyswonger Mesa 44.36 327 IAmb IAmb 10 56 23.8
comp=Z,9.2nm,1.3s
PV19 Morning Glory 44.40 327 IAmb IAmb 10 56 15.2
comp=Z,5.7nm,0.8s
PV20 West Nyswonger 44.41 327 IAmb IAmb 10 56 23.3
comp=Z,15nm,1.3s
PV10 Paradox Valley 44.48 327 IAmb IAmb 10 56 15.4
comp=Z,7.0nm,0.8s
D62A Allapoint, All 45.10 10 P **P** **10 56 19.2 +1.7**
LMQ La Malbaie 45.34 9 P **P** **10 56 20.8 +1.3**
SRU San Rafael Swe 45.82 326 IAmb IAmb 10 56 26.4
comp=Z,6.0nm,0.8s
PFO Pinyon Flats O 46.08 316 LR LR 11 14 48.9
comp=Z,40nm,18.2s,baz=116,slow=35

P17A Butcher Ranch, 46.19 326 IAmb IAmb 10 56 29.3
comp=Z,3.6nm,0.7s
RSSD Black Hills 46.50 336 **P** **10 56 29.8 +0.8**
RSSD Black Hills 46.50 336 P **P** **10 56 30.7 +1.7**
BSUT Blindstream Ca 46.95 327 IAmb IAmb 10 56 44.2
comp=Z,8.4nm,1.3s
PDAR Pinedale Array 47.94 330 P **P** **10 56 41.2 +1.0**
comp=Z,0.5nm,0.7s,baz=128,slow=12,SNR=4.7
PDAR PcP **PcP** **10 58 09.3 +0.8**
comp=Z,0.3nm,0.6s,baz=162,slow=4.0,SNR=2.3
PDAR LR LR 11 18 10.8
comp=Z,14nm,22.0s,baz=118,slow=38
comp=Z,0.5nm,0.7s
HWUT Hardware Ranch 48.13 328 IAmb IAmb 10 56 52.0
comp=Z,3.8nm,0.8s
HWUT Hardware Ranch 48.13 328 P **P** **10 56 43.4 +1.6**
GMN Gold Mountain 48.72 320 P **P** **10 56 47.5 +1.2**
ULM Lac du Bonnet 49.28 346 P **P** **10 56 48.6 -1.5**
comp=Z,4.4nm,0.7s,baz=145,slow=8.7,SNR=6.2
comp=Z,4.4nm,0.7s
ULM Lac du Bonnet 49.28 346 IAmb IAmb 10 56 49.8
comp=Z,5.9nm,0.9s
NVAR Mina Array Bea 50.05 320 P **P** **10 56 58.3 +1.8**
comp=Z,1.0nm,0.7s,baz=121,slow=7.6,SNR=8.7
NVAR PcP **PcP** **10 58 16.9 +0.8**
comp=Z,2.0nm,0.7s,baz=129,slow=4.1,SNR=12
NVAR LR LR 11 17 18.3
comp=Z,22nm,20.1s,baz=168,slow=35
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 50.05 320 P **P** **10 56 58.2 +1.7**
YHL Hebgen Lake 50.27 331 IAmb IAmb 10 57 10.1
comp=Z,12nm,1.5s
BMN Battle Mountai 50.57 323 IAmb IAmb 10 57 11.1
comp=Z,7.8nm,1.0s
HLID Hailey 51.00 328 **P** **10 57 05.3 +1.7**
HLID Hailey 51.00 328 P **P** **10 57 05.5 +1.9**
MFID Camas Ranch 51.67 327 IAmb IAmb 10 57 19.4
comp=Z,9.6nm,1.5s
WVOR Wild Horse Val 52.64 324 P **P** **10 57 15.1 -0.7**
SCHQ Schefferville 52.95 9 P **P** **10 57 17.7 +0.1**
comp=Z,5.3nm,0.8s,baz=143,slow=4.2,SNR=7.1
comp=Z,5.3nm,0.8s
SCHQ Schefferville 52.95 9 IAmb IAmb 10 57 18.6
comp=Z,7.0nm,0.9s
G08A Pilot Rock 54.60 327 IAmb IAmb 10 57 48.5
comp=Z,5.0nm,1.2s
YBH Yreka Blue Hor 54.70 321 LR LR 11 21 28.6
comp=Z,17nm,20.0s,baz=137,slow=37
NEW Newport 55.58 330 LR LR 11 22 41.9
comp=Z,39nm,20.5s,baz=134,slow=38
EDM Edmonton 57.46 337 IAmb IAmb 10 57 51.3
comp=Z,8.3nm,1.0s
BBB Bella Bella 63.55 329 LR LR 11 28 57.8
comp=Z,15nm,18.0s,baz=158,slow=39
YKA Yellowknife Ar 65.01 343 P **P** **10 58 41.0 -0.2**
comp=Z,2.6nm,0.7s,baz=142,slow=6.4,SNR=11
comp=Z,2.6nm,0.7s
YKA Yellowknife Ar 65.01 343 P **P** **10 58 41.7 +0.5**
LIRD Liard River Hi 66.86 336 P **P** **10 58 54.4 +1.3**
baz=128
V35K Ketchikan 66.99 331 P **P** **10 58 54.8 +0.8**
baz=121
T35M Bob Quinn 67.23 333 P **P** **10 58 56.7 +1.2**
baz=123
CRAG Craig 67.80 330 P **P** **10 58 59.9 +0.7**
baz=120
WRAK Wrangell Islan 67.91 332 P **P** **10 59 00.9 +1.1**
baz=121
DLBC Dease Lake 67.94 334 P **P** **10 59 01.1 +1.0**
baz=124
U33K Whale Pass 68.13 331 P **P** **10 59 02.3 +1.1**
baz=120
S34M Telegraph Cree 68.14 333 P **P** **10 59 01.7 +0.4**
baz=123
WRGLY Wrigley 68.34 340 P **P** **10 59 03.2 +0.8**
baz=132
R33M Jennings River 68.87 335 P **P** **10 59 06.5 +0.5**
baz=123
Q32M Nakina River 69.20 334 P **P** **10 59 08.2 0.0**
baz=122
S32K Killisnoo 69.50 332 P **P** **10 59 10.2 +0.5**
baz=119
SIT Sitka 69.65 331 P **P** **10 59 10.6 -0.1**
baz=118
R32K Eaglecrest 69.86 333 P **P** **10 59 12.2 +0.2**
baz=120
P33M Teslin, Yukon 70.10 335 P **P** **10 59 13.9 +0.4**
baz=122
P32M Atlin 70.17 334 P **P** **10 59 14.4 +0.5**
baz=121
MMPY Sheldon Lake, 70.78 337 P **P** **10 59 18.5 +0.9**
baz=124
WHY Whitehorse 71.21 335 P **P** **10 59 21.0 +0.7**
baz=120
PLBC Pleasant Camp 71.28 333 P **P** **10 59 21.2 +0.7**
baz=118
O30N Mendenhall 71.78 334 P **P** **10 59 24.3 +0.6**
baz=119
M31M Drury Creek, Y 71.79 336 P **P** **10 59 24.7 +1.0**
baz=121
P30M Million Dollar 71.86 334 P **P** **10 59 24.9 +0.8**
baz=118
P29M Windy Craggy 71.98 333 P **P** **10 59 25.1 +0.3**
baz=117
N31M Braeburn, Yuko 72.00 335 P **P** **10 59 25.9 +1.0**
baz=119
RES Resolute Bay 72.41 356 LR LR 11 30 17.9
comp=Z,20nm,21.7s,baz=17,slow=35
HYT Haines Junctio 72.42 334 P **P** **10 59 28.6 +1.0**
baz=118
N30M Aishihik Lake 72.54 335 P **P** **10 59 29.1 +0.9**
baz=118
O29M Mount Kennedy 72.66 333 P **P** **10 59 29.8 +0.8**
baz=116
C36M Paulatuk 72.68 345 P **P** **10 59 30.1 +1.3**
baz=133
YUK6 Outpost Mounta 72.85 334 P **P** **10 59 30.9 +0.6**
baz=117
M30M Minto, Yukon 72.95 336 P **P** **10 59 31.4 +0.8**
baz=119
YUK4 Talbot Arm 73.15 334 P **P** **10 59 32.4 +0.4**
baz=117
PINM Pinnacle 73.32 333 P **P** **10 59 33.4 +0.5**
baz=115
BRWY Burwash Landin 73.33 334 P **P** **10 59 32.9 0.0**
baz=116
M29M Somme Creek 73.57 335 P **P** **10 59 34.9 +0.5**
baz=117
O28M Mount Upton 73.58 334 P **P** **10 59 34.7 0.0**
baz=115
YUK8 Steele Glacier 73.61 334 P **P** **10 59 34.4 -0.4**
baz=116
H31M Peel River 73.65 339 P **P** **10 59 34.9 +0.2**
baz=122
L29M L29M 73.74 336 IAmb IAmb 10 59 38.6
comp=Z,4.5nm,1.1s
L29M L29M 73.74 336 P **P** **10 59 35.2 -0.1**
baz=118
J30M Hart River 73.74 338 P **P** **10 59 35.1 -0.3**
baz=120
K29M Barlow Dome 73.84 337 IAmb IAmb 10 59 38.1
comp=Z,12nm,1.4s
K29M Barlow Dome 73.84 337 P **P** **10 59 36.5 +0.5**
baz=118
I30M Mount Dempster 74.08 339 IAmb IAmb 10 59 40.4
comp=Z,8.7nm,1.4s
I30M Mount Dempster 74.08 339 P **P** **10 59 37.3 0.0**
baz=120
YUK3 Moose Creek 74.12 334 P **P** **10 59 37.6 -0.1**
baz=115
SUMG Summit 74.21 12 **P** **10 59 38.8 +0.6**
SUMG Summit 74.21 12 P **P** **10 59 37.6 -0.7**
G31M Satah River 74.22 340 **P** **10 59 39.1 +1.2**
G31M Satah River 74.22 340 P **P** **10 59 38.4 +0.5**
baz=122,SNR=8.1
F31M Tsiigehtchic 74.33 341 P **P** **10 59 38.8 +0.3**
baz=123,SNR=5.2
BORG Borgarnes 74.44 22 LR LR 11 30 29.9
comp=Z,11nm,18.8s,baz=14,slow=34
DBIC Dimbokro 74.58 84 LR LR 11 29 03.4
comp=Z,25nm,19.1s,baz=202,slow=33
DAWY Dawson 74.68 337 P **P** **10 59 41.4 +0.7**
baz=116
INK Inuvik 74.74 342 IAmb IAmb 10 59 42.8
comp=Z,6.5nm,1.0s
INK Inuvik 74.74 342 P **P** **10 59 41.2 +0.3**
baz=123,SNR=6.9
INK Inuvik 74.74 342 P **P** **10 59 41.4 +0.5**

A36M Sachs Harbour 74.76 347 P **P** **10 59 40.9 -0.1**
baz=132
EPYK Eagle Plains 74.78 339 P **P** **10 59 41.8 +0.5**
baz=120
CRQE Cirque 74.88 333 P **P** **10 59 42.6 +0.5**
baz=112
G30M tAoh Zraii Nji 74.91 340 P **P** **10 59 42.3 +0.3**
baz=120
M27K Edge Creek, AK 74.97 335 P **P** **10 59 42.8 +0.2**
baz=114
MCARA McCarthy VSAT 75.09 334 P **P** **10 59 43.5 +0.5**
baz=112
F30M Barrier River 75.09 341 P **P** **10 59 43.8 +0.8**
baz=121,SNR=5.9
KAIM Kayak Island 75.19 332 P **P** **10 59 43.9 +0.2**
baz=111
BCAR Beaver Creek A 75.22 335 **P** **10 59 45.4 +1.5**
L27K Beaver Creek, 75.24 335 IAmb IAmb 10 59 46.7
comp=Z,7.8nm,1.2s
L27K Beaver Creek, 75.24 335 P **P** **10 59 44.5 +0.6**
baz=114
H29M Whitestone 75.29 339 P **P** **10 59 44.6 +0.4**
baz=118,SNR=7.3
M26K Nabesna, AK 75.47 335 P **P** **10 59 45.8 +0.5**
baz=113
G29M Pine Creek 75.50 340 P **P** **10 59 45.6 +0.3**
baz=118
I28M Miner Creek 75.51 338 IAmb IAmb 10 59 47.8
comp=Z,5.4nm,1.0s
I28M Miner Creek 75.51 338 P **P** **10 59 46.4 +0.9**
baz=116,SNR=5.9
BMRM Bremner River 75.64 333 P **P** **10 59 47.1 +0.7**
baz=111
L26K Log Cabin Wild 75.86 335 IAmb IAmb 10 59 49.9
comp=Z,5.4nm,1.0s
L26K Log Cabin Wild 75.86 335 P **P** **10 59 48.1 +0.6**
baz=112
N25K Chitina, Valde 75.87 333 P **P** **10 59 47.9 +0.2**
baz=111
Q23K Middleton Isla 75.94 331 P **P** **10 59 48.0 +0.1**
baz=109
EYAK Cordova Ski Ar 76.03 332 P **P** **10 59 48.8 +0.4**
baz=110
E29M Blow River 76.17 341 P **P** **10 59 50.2 +1.1**
baz=119
I27K Kandik River 76.21 338 IAmb IAmb 10 59 51.7
comp=Z,5.9nm,1.0s
I27K Kandik River 76.21 338 P **P** **10 59 49.9 +0.4**
baz=115,SNR=6.0
HARP HAARP 76.40 334 P **P** **10 59 50.3 -0.3**
baz=111
KLU Klutina 76.43 333 P **P** **10 59 50.8 0.0**
baz=110
H27K Steamboat Moun 76.44 338 IAmb IAmb 10 59 52.0
comp=Z,5.5nm,1.2s
H27K Steamboat Moun 76.44 338 P **P** **10 59 51.1 +0.3**
baz=115,SNR=6.1
F28M Old Crow 76.46 340 IAmb IAmb 10 59 52.3
comp=Z,4.7nm,0.8s
F28M Old Crow 76.46 340 P **P** **10 59 50.9 +0.1**
baz=117,SNR=5.4
I26K Coal Creek Min 76.67 337 P **P** **10 59 51.8 -0.2**
baz=113
G27K Doyon Strip 76.73 339 IAmb IAmb 10 59 53.7
comp=Z,3.1nm,0.8s
G27K Doyon Strip 76.73 339 P **P** **10 59 52.1 -0.3**
baz=115
PAX Paxson 76.74 335 P **P** **10 59 52.5 -0.1**
baz=110
M24K Tolsona, Glenn 76.75 334 P **P** **10 59 52.4 -0.2**
baz=110
RIDG Independent Ri 76.75 335 P **P** **10 59 52.3 -0.3**
baz=111
GLI Glacier Island 76.76 332 P **P** **10 59 52.2 -0.4**
baz=109
E28M Babbage River 76.80 341 P **P** **10 59 52.0 -0.7**
baz=117
D28M Stokes Point 76.89 342 P **P** **10 59 52.6 -0.5**
baz=118
K24K Donnelly Dome 77.16 335 P **P** **10 59 54.8 -0.1**
baz=110
SCM Sheep Creek Mo 77.17 333 P **P** **10 59 54.5 -0.5**
baz=109
ESDC Sonseca Array 77.22 50 P **P** **10 59 55.6 -0.2**
comp=Z,2.4nm,0.8s,baz=263,slow=5.5,SNR=15
comp=Z,2.4nm,0.8s
ESDC Sonseca Array 77.22 50 **P** **10 59 56.2 +0.4**
J25K Salcha River, 77.28 336 IAmb IAmb 10 59 57.6
comp=Z,4.3nm,0.9s
J25K Salcha River, 77.28 336 P **P** **10 59 55.8 +0.3**
baz=111,SNR=6.0
E27K Coleen River 77.30 340 P **P** **10 59 55.3 -0.2**
baz=115
PWL Port Wells 77.33 332 P **P** **10 59 55.8 -0.1**
baz=108
M23K Glacier View 77.34 333 P **P** **10 59 55.5 -0.4**
baz=108
KNK Knik Glacier 77.56 333 P **P** **10 59 56.8 -0.3**
baz=108
DHY Denali Highway 77.59 334 P **P** **10 59 57.3 -0.1**
baz=109
WAT6 Susitna Watana 77.59 334 P **P** **10 59 57.3 -0.1**
baz=108
SML Sawmill 77.62 333 P **P** **10 59 57.8 +0.3**
baz=108
SEW Seward 77.64 331 P **P** **10 59 57.5 0.0**
baz=106
PRP Porcupine Dome 77.67 337 P **P** **10 59 57.8 -0.1**
baz=111
HDA Harding Lake 77.85 336 P **P** **10 59 58.7 0.0**
baz=110,SNR=7.1
O22K Cooper Landing 77.88 332 P **P** **10 59 59.0 +0.2**
baz=106
PMR Palmer 77.92 333 P **P** **10 59 59.4 +0.3**
baz=107
IL31 77.95 336 IAmb IAmb 11 00 00.7
comp=Z,4.3nm,0.9s
ILAR Eielson Array 77.95 336 P **P** **10 59 59.9 +0.7**
comp=Z,2.9nm,0.8s,baz=116,slow=4.2,SNR=31
comp=Z,2.9nm,0.8s
F26K Sheenjek River 77.98 339 IAmb IAmb 11 00 01.4
comp=Z,4.2nm,0.8s
F26K Sheenjek River 77.98 339 P **P** **10 59 59.6 +0.2**
baz=113,SNR=5.1
WAT1 Susitna Watana 78.03 334 P **P** **11 00 00.1 +0.4**
baz=108
RC01 Rabbit Creek A 78.05 332 P **P** **11 00 00.1 +0.3**
baz=106
BRSE Bradley Lake S 78.17 331 P **P** **11 00 00.5 0.0**
baz=105
POKR Poker Flat Res 78.28 336 P **P** **11 00 01.4 +0.3**
baz=109
G25K Bearman Lake 78.34 338 P **P** **11 00 01.3 +0.1**
baz=111
COLA College 78.37 336 P **P** **11 00 01.7 +0.2**
baz=109
M22K Willow 78.41 333 P **P** **11 00 02.4 +0.7**
baz=106
MCK McKinley 78.47 335 IAmb IAmb 11 00 04.2
comp=Z,5.5nm,0.9s
MCK McKinley 78.47 335 P **P** **11 00 02.3 +0.2**
baz=108
F25K Christian Rive 78.47 339 P **P** **11 00 02.4 +0.3**
baz=111
HOM Homer 78.59 330 P **P** **11 00 03.1 +0.3**
baz=104
C27K Jago River 78.59 341 P **P** **11 00 03.0 +0.3**
baz=114
KDAK Kodiak Island 78.62 329 LR LR 11 36 15.8
comp=Z,19nm,18.8s,baz=29,slow=37
KDAK Kodiak Island 78.62 329 P **P** **11 00 03.2 +0.2**
baz=103
CAPN Captain Cook N 78.63 332 P **P** **11 00 03.4 +0.4**
baz=105
E25K Arctic Village 78.64 340 IAmb IAmb 11 00 05.3
comp=Z,6.5nm,0.9s
E25K Arctic Village 78.64 340 P **P** **11 00 03.5 +0.5**
baz=112,SNR=5.1
CUT Chulitna 78.66 333 P **P** **11 00 03.4 +0.3**
baz=106
H24K Noodor Dome 78.70 337 P **P** **11 00 03.5 +0.1**
baz=109
NEA2 Nenana 78.78 336 IAmb IAmb 11 00 05.4
comp=Z,6.4nm,0.9s
NEA2 Nenana 78.78 336 P **P** **11 00 03.5 -0.3**
baz=108,SNR=8.1
G24K Hadweenzic Riv 78.83 338 IAmb IAmb 11 00 06.4
comp=Z,6.3nm,1.1s

G24K	Hadweenzic Riv	78.83	338	P		P	11 00 03.9	-0.1
	baz=109							
OHAK	Old Harbor	78.87	328	P		P	11 00 04.1	-0.2
	baz=102							
L22K	Petersville	78.92	333	P		P	11 00 04.4	-0.3
	baz=106							
TRF	Thorofare Moun	78.96	334	P		P	11 00 03.8	-1.2
	baz=106							
I23K	Minto, Yukon-K	79.07	336	IAmb		IAmb	11 00 06.7	
	comp=Z,7.3nm,1.1s							
I23K	Minto, Yukon-K	79.07	336	P		P	11 00 05.1	-0.2
	baz=107,SNR=6.0							
C26K	Camden Bay	79.09	341	P		P	11 00 04.9	-0.5
	baz=112							
SKT	Skwentna	79.12	333	P		P	11 00 06.2	+0.4
	baz=105,SNR=5.5							
O20K	Slope Mountain	79.17	331	P		P	11 00 05.8	-0.3
	baz=104							
SII	Sitkinak Islan	79.21	327	P		P	11 00 06.2	-0.1
	baz=101							
F24K	Squaw Lake	79.25	339	IAmb		IAmb	11 00 08.8	
	comp=Z,6.7nm,1.2s							
F24K	Squaw Lake	79.25	339	P		P	11 00 06.1	-0.3
	baz=109							
KTH	Kantishna Hill	79.26	334	IAmb		IAmb	11 00 08.4	
	comp=Z,6.0nm,0.9s							
H23K	Yukon River	79.34	337	P		P	11 00 06.7	-0.2
	baz=107							
D25K	Kavik River	79.35	341	P		P	11 00 06.8	-0.1
	baz=111							
P19K	Oil Pt	79.37	330	P		P	11 00 07.1	-0.1
	baz=103							
MLY	Manley	79.59	336	IAmb		IAmb	11 00 10.0	
	comp=Z,6.2nm,1.0s							
MLY	Manley	79.59	336	P		P	11 00 08.4	+0.1
	baz=106,SNR=6.2							
PPLA	Purkeypile	79.65	334	P		P	11 00 08.6	-0.2
	baz=104							
E24K	Your Creek	79.65	339	P		P	11 00 08.8	+0.2
	baz=109							
CAST	Castle Rocks	79.73	334	IAmb		IAmb	11 00 10.2	
	comp=Z,5.0nm,0.8s							
CAST	Castle Rocks	79.73	334	P		P	11 00 08.9	-0.1
	baz=104,SNR=7.1							
G23K	Bananza Creek	79.79	338	P		P	11 00 09.8	+0.5
	baz=107,SNR=6.0							
M20K	Styx River	79.83	333	P		P	11 00 09.8	+0.1
	baz=103							
CHIR	Chirikof Islan	79.86	326	P		P	11 00 10.2	+0.4
	baz=100							
CHUM	Lake Minchumin	79.95	335	P		P	11 00 10.8	+0.6
	baz=104							
COLD	Coldfoot	80.01	338	IAmb		IAmb	11 00 12.9	
	comp=Z,5.5nm,1.1s							
COLD	Coldfoot	80.01	338	P		P	11 00 11.0	+0.5
	baz=107							
O19K	Port Alsworth	80.02	331	P		P	11 00 10.7	+0.1
	baz=102							
E23K	Chandalar	80.05	339	P		P	11 00 11.1	+0.3
	baz=108							
Q18K	Katmai Hardscr	80.06	329	P		P	11 00 11.0	0.0
	baz=101							
EKA	Eskdalemuir Ar	80.06	34	P		P	11 00 10.6	-0.3
	comp=Z,4.2nm,0.9s,baz=263,slow=6.6,SNR=5.1							
	comp=Z,4.2nm,0.9s							
H22K	Ishtalitna Cre	80.09	337	P		P	11 00 11.2	+0.2
	baz=106							
D24K	Happy Valley	80.11	340	P		P	11 00 11.7	+0.8
	baz=109							
I21K	Tanana	80.14	336	P		P	11 00 11.5	+0.3
	baz=105							
TOLK	Toolik Lake Re	80.21	340	P		P	11 00 11.8	+0.2
	baz=108							
N19K	Bonanza Creek	80.23	331	P		P	11 00 11.7	-0.2
	baz=102							
P18K	Big Mountain,	80.31	330	P		P	11 00 12.0	-0.2
	baz=101							
O18K	Koktuh Hills	80.39	330	P		P	11 00 12.2	-0.4
	baz=101							
G22K	Bettles	80.42	338	P		P	11 00 12.8	+0.2
	baz=106							
Q17K	Contact Creek	80.44	329	P		P	11 00 12.6	-0.5
	baz=100							
R17L	Mt. Peulik Vol	80.58	328	P		P	11 00 13.5	-0.3
	baz=100							
K20K	Telida	80.59	334	IAmb		IAmb	11 00 14.9	
	comp=Z,7.5nm,1.2s							
K20K	Telida	80.59	334	P		P	11 00 13.4	-0.3
	baz=103							
H21K	Melozitna Rive	80.59	336	P		P	11 00 13.3	-0.3
	baz=104							
L19K	White Mountain	80.69	333	P		P	11 00 14.0	-0.2
	baz=102							
D23K	Nanushuk River	80.69	340	P		P	11 00 13.2	-0.8
	baz=107							
J20K	Nowinta River	80.80	335	IAmb		IAmb	11 00 24.3	
	comp=Z,6.3nm,1.1s							
J20K	Nowinta River	80.80	335	P		P	11 00 14.8	0.0
	baz=103							
F22K	John River	80.83	338	P		P	11 00 15.1	+0.2
	baz=105							
E22K	Anaktuvuk Pass	80.86	339	P		P	11 00 14.6	-0.5
	baz=106							
N18K	Kilae Creek	80.88	331	P		P	11 00 14.7	-0.6
	baz=101							
P17K	Kvichak River	80.89	330	P		P	11 00 15.6	+0.3
	baz=100							
Q16K	King Salmon	80.91	329	P		P	11 00 15.7	+0.3
	baz=100							
C23K	Itkillik River	80.92	341	P		P	11 00 14.7	-0.6
	baz=107							
TORD	Torodi Ar. Bea	80.94	77	P		P	11 00 16.0	-0.5
	comp=Z,1.4nm,0.6s,baz=294,slow=5.6,SNR=7.7							
	comp=Z,1.4nm,0.6s							
M18K	Stony River	81.00	332	P		P	11 00 14.8	-1.1
	baz=101							
I20K	Naaghedeneel	81.08	335	P		P	11 00 15.5	-0.6
	baz=103							
G21K	Allakaket	81.08	337	P		P	11 00 16.2	0.0
	baz=104							
F21K	Alatna River	81.24	338	IAmb		IAmb	11 00 19.2	
	comp=Z,4.4nm,0.8s							
F21K	Alatna River	81.24	338	P		P	11 00 16.7	-0.4
	baz=104							
O17K	Koliganek Bris	81.31	330	P		P	11 00 17.8	+0.3
	baz=100							
H20K	Anotleneega Mo	81.40	336	P		P	11 00 17.8	-0.1
	baz=102							
J19K	Poorman	81.40	334	P		P	11 00 18.1	+0.2
	baz=101							
CHGN	Chignik	81.48	326	P		P	11 00 18.5	0.0
	baz=98							
N17K	Nushagak Hills	81.48	331	P		P	11 00 18.5	0.0
	baz=100							
L18K	Granite Mounta	81.54	333	P		P	11 00 18.8	+0.1
	baz=100							
P16K	Nushagak River	81.65	329	P		P	11 00 19.2	-0.1
	baz=99							
E21K	Killik River	81.71	339	P		P	11 00 19.3	-0.3
	baz=104							
M17K	Holitna River	81.75	332	P		P	11 00 19.8	-0.1
	baz=99							
J18K	Innoko River	81.78	334	P		P	11 00 19.9	-0.1
	baz=100							
O16K	Kokwok River B	81.79	330	P		P	11 00 20.2	+0.1
	baz=98							
CHNA	Chernabura Isl	81.96	325	P		P	11 00 21.8	+0.7
	baz=97							
B22K	Teshekpuk Lake	81.98	341	P		P	11 00 21.6	+0.8
	baz=104							
H19K	Roundabout Mou	82.04	336	P		P	11 00 21.6	+0.3
	baz=101							
F20K	Avaraart Lake	82.06	337	P		P	11 00 22.1	+0.8
	baz=102							
GCSA	Galena City Sc	82.08	335	P		P	11 00 21.6	+0.1
	baz=100							
S14K	Fog Glacier	82.11	326	P		P	11 00 22.2	+0.3
	baz=97							
C21K	Knifeblade Rid	82.17	340	P		P	11 00 22.2	+0.3
	baz=103							
B21K	Ikpikpuk River	82.21	340	P		P	11 00 22.6	+0.5
	baz=103							
N16K	Nishlik Lake	82.25	331	P		P	11 00 22.7	+0.2
	baz=98							
L17K	Donlin	82.27	332	P		P	11 00 22.8	+0.2
	baz=99							
K17K	Iditarod	82.36	333	P		P	11 00 23.1	0.0
	baz=99							
G19K	Purcell Mounta	82.42	336	P		P	11 00 23.8	+0.5
	baz=100							
M16K	Timber Creek	82.42	331	P		P	11 00 23.8	+0.4
	baz=98							
E20K	Nigu River	82.48	339	P		P	11 00 23.7	+0.1
	baz=102							
SDPT	Sand Point	82.52	325	P		P	11 00 24.3	+0.3
	baz=96							
O15K	Unalakthiuk R	82.61	329	P		P	11 00 24.8	+0.4
	baz=97							
D20K	Etivluk River	82.72	339	P		P	11 00 25.3	+0.5
	baz=101							
L16K	Owhat River	82.76	332	P		P	11 00 25.6	+0.5
	baz=98							
H18K	Honhosa River	82.77	335	P		P	11 00 25.6	+0.5
	baz=99							
F19K	Shaleruckik Mo	82.81	337	P		P	11 00 25.8	+0.6
	baz=100							
J17K	VABM Dome	82.81	334	P		P	11 00 26.0	+0.6
	baz=98							
N15K	Kwethluk River	82.86	330	P		P	11 00 25.4	-0.3
	baz=97							
G18K	Tagagawik	83.00	336	P		P	11 00 26.5	+0.1
	baz=99							
B20K	Meade River	83.16	340	P		P	11 00 27.4	+0.4
	baz=101							
M15K	Kasigluk River	83.22	331	P		P	11 00 27.7	+0.2
	baz=96							
D19K	Kuna River	83.22	339	P		P	11 00 27.6	+0.1
	baz=100							
O14K	Tigyukauivet M	83.35	329	P		P	11 00 28.3	+0.1
	baz=96							
H17K	Granite Mounta	83.39	335	P		P	11 00 28.2	-0.1
	baz=98							
J16K	Anvik River	83.48	333	P		P	11 00 29.1	+0.3
	baz=97							
F18K	Selawik	83.51	337	P		P	11 00 29.0	+0.1
	baz=98							
I17K	Unalakleet	83.59	334	P		P	11 00 29.4	0.0
	baz=97							
N14K	Kuskokwak Cree	83.63	330	P		P	11 00 29.8	+0.2
	baz=96							
L15K	Ungalak Mounta	83.71	332	P		P	11 00 30.0	0.0
	baz=96							
G17K	Kiwalik Mounta	83.77	336	P		P	11 00 30.5	+0.2
	baz=97							
K15K	Wolf Creek Mou	83.79	332	P		P	11 00 30.6	+0.2
	baz=96							
M14K	Bethel	83.85	331	P		P	11 00 30.5	-0.2
	baz=95							
C19K	Lookout Ridge	83.85	339	P		P	11 00 31.0	+0.3
	baz=98							
E18K	Tukpahlearik C	83.99	337	P		P	11 00 31.2	-0.2
	baz=97							
F17K	Baldwin Pennin	84.12	336	P		P	11 00 31.8	-0.2
	baz=96							
L14K	Kuka Creek	84.25	331	P		P	11 00 32.7	0.0
	baz=95							
H16K	Elim	84.34	335	P		P	11 00 33.2	0.0
	baz=96							
C18K	Utukok River	84.36	339	P		P	11 00 32.5	-0.8
	baz=97							
E17K	Hotham Inlet	84.42	337	P		P	11 00 33.2	-0.3
	baz=96							
G16K	Koyuk River	84.47	335	P		P	11 00 33.0	-0.8
	baz=95							
M13K	Dall Lake	84.50	330	P		P	11 00 34.0	0.0
	baz=94							
A19K	Wainwright	84.51	340	P		P	11 00 33.8	-0.1
	baz=97							
J14K	Nanvaranak Lak	84.77	333	P		P	11 00 34.9	-0.5
	baz=94							
RDOG	Red Dog Mine	84.93	338	P		P	11 00 35.9	-0.2
	baz=95							
D17K	Noatak River	84.97	338	P		P	11 00 36.3	0.0
	baz=95							
C17K	DeLong Mountai	85.07	338	P		P	11 00 36.7	-0.1
	baz=95							
K13K	Kusilvak Mount	85.23	332	P		P	11 00 37.5	-0.2
	baz=93							
F15K	North Star Dit	85.44	336	P		P	11 00 38.5	-0.2
	baz=93							
ANM	Nome	85.69	334	P		P	11 00 40.2	+0.3
	baz=93							
ECH	Echery	85.82	42			P	11 00 41.5	+0.5
ECH	Echery	85.82	42	P		P	11 00 42.0	+0.9
C16K	Lisburne Hills	85.86	338	P		P	11 00 40.9	+0.2
	baz=93							
M11K	Mekoryuk	85.91	330	P		P	11 00 40.9	-0.2
	baz=92							
UNV	Unalaska Valle	85.94	324	P		P	11 00 41.8	+0.5
	baz=95							
F14K	Arctic Creek	86.13	335	P		P	11 00 42.3	+0.2
	baz=92							
TNA	Tin City	86.79	335	P		P	11 00 45.2	-0.2
	baz=90							
TUE	Stuetta	87.32	44			P	11 00 49.3	+0.7
TUE	Stuetta	87.32	44	P		P	11 00 49.3	+0.7
NB2	NORSAR Subarra	88.02	29	P		P	11 00 51.9	+0.4
	comp=Z,4.4nm,0.8s,baz=271,slow=4.6							
NOA	NORSAR Array B	88.02	29	P		P	11 00 51.8	+0.4
	comp=Z,3.1nm,0.8s,baz=270,slow=4.6,SNR=6.1							
	comp=Z,3.1nm,0.8s							
SPIA	Saint Paul Isl	88.03	327	P		P	11 00 51.2	-0.2
	baz=88							
GAMB	Gambell	88.46	334	P		P	11 00 53.4	+0.1
	baz=87							
HFS	Hagfors	89.29	30	P		P	11 00 57.3	-0.1
	comp=Z,1.5nm,0.7s,baz=280,slow=8.9,SNR=4.1							
	comp=Z,1.5nm,0.7s							
TROLL	Troll, Antarti	90.18	162	⇑P			11 01 02.6	+1.1
	comp=Z,54nm,0.6s							
QSPA	South Pole Qui	92.79	180	P		P	11 01 14.8	+1.2
	comp=Z,1.8nm,1.0s,baz=240,slow=0.5,SNR=5.8							
	comp=Z,1.8nm,1.0s							
QSPA	South Pole Qui	92.79	180	P		P	11 01 14.6	+0.9
QSPA				IAmb		IAmb	11 01 24.5	
	comp=Z,3.0nm,0.9s							
FINES	FINESS Array B	95.05	28	P		P	11 01 23.2	-0.8
	comp=Z,2.6nm,0.8s,baz=197,slow=6.0,SNR=3.8							
	comp=Z,2.6nm,0.8s							
FINES	FINESS Array B	95.05	28	P		P	11 01 23.8	-0.2
BZS	Buzias	95.90	44	P		P	11 01 29.2	+0.9
KMPD	K-Podol'skiy	98.53	40	P		P	11 01 39.4	-0.6
LUBAR	Lubar, Ukraine	99.01	39	P		Pdif	11 01 41.5	-0.7
AK06	Malin Array Si	99.72	38	P		Pdif	11 01 44.4	-0.9
ZALV	Zalesovo Beam	122.02	11	PKP		PKPdf	11 06 55.9	+0.1
	comp=Z,1.1nm,0.7s,baz=316,slow=4.1,SNR=5.4							
ZALV	Zalesovo Beam	122.02	11			PKiKP	11 06 56.0	0.0
KURK	Kurchatov	123.57	16			PKiKP	11 06 59.1	0.0
KURBB	Kurchatov Arra	123.62	17	PKP		PKiKP	11 06 59.4	+0.2
	comp=Z,1.5nm,0.6s,baz=323,slow=2.3,SNR=7.8							
MKAR	Makanchi Array	128.15	16	PKP		PKPdf	11 07 07.8	-0.1
	comp=Z,1.2nm,0.7s,baz=354,slow=2.4,SNR=9.1							
MKAR	Makanchi Array	128.15	16			PKPdf	11 07 07.9	+0.1
SONM	Songino Array	129.34	355	PKP		PKiKP	11 07 10.8	-0.1
	comp=Z,1.6nm,1.0s,baz=322,slow=0.9,SNR=5.6							
HHC	Hu-ho-hao-te	135.41	348	*eP*		PKPdf	11 07 18.5	-3.3
NJ2	Nanjing	141.18	335	*eP*		PKPdf	11 07 33.0	+0.5
NJ2				pmax		pmax		
	comp=Z,33nm,0.7s							
ASAR	Alice Springs	141.48	234	PKhKP		PKPpre	11 07 27.2	
	comp=Z,0.5nm,0.8s,baz=116,slow=4.1,SNR=5.4							
WRA	Warramunga Arr	142.70	240	PKhKP		PKPpre	11 07 31.1	
	comp=Z,0.7nm,0.6s,baz=109,slow=2.9,SNR=9.6							
PZH	PanZhiHua	150.88	357	PKPbc		PKPdf	11 07 48.8	-0.5
KMI2	Kunming	152.16	355	PKPbc		PKPdf	11 07 49.5	-1.9
CMAR	Chiang Mai Arr	158.87	4	PKP		PKPdf	11 08 00.5	+0.2
	comp=Z,0.5nm,0.3s,baz=291,slow=2.4,SNR=6.6							
CMAR				PKPab		PKPab	11 08 35.5	-0.4
	comp=Z,1.2nm,0.8s,baz=334,slow=4.8,SNR=5.5							
CMAR	Chiang Mai Arr	158.87	4			PKPdf	11 08 00.9	+0.6
CMAR						PKPab	11 08 35.4	-0.5

IDC 25 11:10:18.2±3.4, 10°47S×119°41E, h0km, mb3.7/1, mbtmp3.3/3, ML2.8/2, MS3.4/1, Error ellipse: s-maj=264.4km s-min=30.7km az=49.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.20	125	P	Pn	11 14 20.7	+0.6
	baz=299,slow=14,SNR=1.6						
WRA				S	Sn	11 17 21.4	-11
	0.6nm,1.1s,baz=288,slow=23,SNR=2.1						
	0.4nm,0.9s						
ASAR	Alice Springs	19.06	135	P	P	11 14 42.2	-0.1
	0.1nm,0.3s,baz=318,slow=13,SNR=6.0						
	0.3nm,0.6s						

PALK	Pallekele	42.38	293	LR		LR	11 36 47.6	
	comp=Z,48nm,18.1s,baz=190,slow=38							
MKAR	Makanchi Array	65.94	333	P		P	11 21 06.1	0.0
	0.5nm,0.5s,baz=154,slow=7.5,SNR=4.1							
	0.5nm,0.5s							

*MOS **25** 11:37:58.8±0.9, 52°.84N×157°.83E, h158km, mb4.2/14, Error ellipse: s-maj=10.4km s-min=4.9km az=72.7*
*KRSC **25** 11:37:59.5±0.6, 52°.81N×157°.90E, h148km±5km, Ml4.5*
*IDC **25** 11:38:00.6±0.3, 53°.15N×157°.62E, h148km±3km, mb3.7/18, mbtmp4.2/23, MS2.8/3, Error ellipse: s-maj=15.3km s-min=10.1km az=162.0*
*NEIC **25** 11:38:00.7±1.0, 53°.0N±0°.1×157°.7E±0°.1, h152km±5km, mb4.4/239, Error ellipse: s-maj=21.7km s-min=7.9km az=150.0*

ISC 25 11:37:60.0±0.5, 52°.88N±0°.04×157°.91E±0°.04, h152km±4km, n531, σ0°.93/464, mb4.4/140, 15C-5D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRMR	Karymshinskiy	0.14	111	PN	Pn	11 38 19.7	-0.6
KRMR				S	Sn	11 38 34.9	-0.9
KRMR	Karymshinskiy	0.14	111	*e*P	Pn	11 38 19.8	-0.6
KRMR				*e*S	Sn	11 38 35.0	-0.9
PEA0B	Petropavlovsk-	0.26	331	*c i*PN	Pn	11 38 21.0	+0.3
PEA0B	Petropavlovsk-	0.26	331		Pn	11 38 20.9	+0.3
PEA0B					Sn	11 38 37.3	+0.8
PETK	Petropavlovsk-	0.26	331	P	Pn	11 38 21.1	+0.5
	1μm,0.6s,baz=158,slow=5.5,SNR=8548						
PETK				S	Sn	11 38 36.1	-0.3
	835nm,0.8s,baz=24,slow=4.0,SNR=19						
GRL	Gorelyy	0.34	163	PN	Pn	11 38 21.5	+0.5
GRL	Gorelyy	0.34	163	*e*P	Pn	11 38 21.6	+0.5
MTVR	Mutnovka	0.43	157	PN	Pn	11 38 21.4	0.0
MTVR	Mutnovka	0.43	157	*e*P	Pn	11 38 21.5	0.0
APC	Apacha	0.46	276	PN	Pn	11 38 22.1	+0.8
APC				S	Sn	11 38 38.7	+1.2
APC	Apacha	0.46	276	*i* P	Pn	11 38 22.1	+0.8
APC				*e*S	Sn	11 38 38.8	+1.2
INSR	Institute	0.46	66	PN	Pn	11 38 21.5	+0.2
INSR				S	Sn	11 38 37.9	+0.4
INSR	Institute	0.46	66	*i* P	Pn	11 38 21.6	+0.2
INSR				*e*S	Sn	11 38 37.9	+0.4
PET	Petropavlovsk	0.47	72	P	Pn	11 38 21.6	+0.2
PET	Petropavlovsk	0.47	72	*ij i*PN	Pn	11 38 21.5	+0.2
PET				*e*S	Sn	11 38 37.6	0.0
PET				pmax	pmax		
	comp=Z,6μm,0.6s						
PET				smax	smax		
	comp=N,6μm,0.9s						
PET				smax	smax		
	comp=E,2μm,0.6s						
PET	Petropavlovsk	0.47	72		Pn	11 38 21.5	+0.2
PET					Sn	11 38 37.6	0.0
PET	Petropavlovsk	0.47	72	*i* P	Pn	11 38 21.4	+0.2
PET				*e*S	Sn	11 38 37.5	-0.2
PET	Petropavlovsk	0.47	72	P	Pn	11 38 20.8	-0.5
ASAK	Asacha	0.50	181	PN	Pn	11 38 22.0	+0.4
ASAK	Asacha	0.50	181	*i* P	Pn	11 38 22.0	+0.4
DALK	Dalny	0.53	73	PN	Pn	11 38 21.6	0.0
DALK				S	Sn	11 38 38.2	+0.1
DALK	Dalny	0.53	73	*e*P	Pn	11 38 21.6	0.0
DALK				*e*S	Sn	11 38 38.2	+0.1
RUS	Russkaya	0.58	140	PN	Pn	11 38 21.4	-0.5
RUS				S	Sn	11 38 37.6	-1.0
RUS	Russkaya	0.58	140	*i* P	Pn	11 38 21.4	-0.5
RUS				*e*S	Sn	11 38 37.7	-1.0
KOK	Koryaka	0.60	47	PN	Pn	11 38 22.8	+0.6
KOK	Koryaka	0.60	47	*e*P	Pn	11 38 22.8	+0.6
AVH	Avacha	0.63	52	PN	Pn	11 38 22.8	+0.5
AVH	Avacha	0.63	52	*i* P	Pn	11 38 22.9	+0.5
UGLR	Uglovaya	0.64	59	PN	Pn	11 38 22.9	+0.5
UGLR	Uglovaya	0.64	59	*i* P	Pn	11 38 22.9	+0.5
KRX	Arik	0.65	43	PN	Pn	11 38 22.8	+0.3
KRX	Arik	0.65	43	*e*P	Pn	11 38 22.8	+0.3
KRER	Koryakskii	0.66	50	PN	Pn	11 38 23.0	+0.4
KRER	Koryakskii	0.66	50	*e*P	Pn	11 38 23.0	+0.4
SMAR	Somma	0.66	54	PN	Pn	11 38 23.1	+0.5
SMAR				S	Sn	11 38 40.8	+0.8
SMAR	Somma	0.66	54	*i* P	Pn	11 38 23.1	+0.5
SMAR				*e*S	Sn	11 38 40.8	+0.8
SDLR	Sedlovina	0.71	56	PN	Pn	11 38 23.1	+0.3
SDLR	Sedlovina	0.71	56	*e*P	Pn	11 38 23.1	+0.3
GNL	Ganaly	0.81	1	PN	Pn	11 38 24.0	+0.4
GNL	Ganaly	0.81	1	*e*P	Pn	11 38 24.0	+0.4
NLC	Nalytchevo	0.91	71	PN	Pn	11 38 23.4	-0.7
NLC				S	Sn	11 38 45.2	+2.6
NLC	Nalytchevo	0.91	71	*e*P	Pn	11 38 23.4	-0.7
NLC				*e*S	Sn	11 38 45.3	+2.6
MIPR	Malaya Ipel'ka	0.93	230	PN	Pn	11 38 24.8	+0.5
MIPR	Malaya Ipel'ka	0.93	230	*e*P	Pn	11 38 24.9	+0.5
KDTR	Khodutka, Kamc	1.08	174	PN	Pn	11 38 24.7	-0.8
KDTR				S	Sn	11 38 44.1	-0.9
KDTR	Khodutka, Kamc	1.08	174	*e*P	Pn	11 38 24.8	-0.8
KDTR				*e*S	Sn	11 38 44.2	-0.9
SPN	Mys Shipunski	1.30	80	PN	Pn	11 38 27.3	-0.2
SPN				S	Sn	11 38 47.3	-1.4
SPN	Mys Shipunski	1.30	80	*e*P	Pn	11 38 27.3	-0.2
SPN				*e*S	Sn	11 38 47.3	-1.4
KII	Karymskiy	1.48	38	PN	Pn	11 38 30.3	+0.9
KII	Karymskiy	1.48	38	*e*P	Pn	11 38 30.4	+0.9
PAU	Pauzhetka	1.57	206	PN	Pn	11 38 31.2	+0.9
PAU	Pauzhetka	1.57	206	*e*P	Pn	11 38 31.3	+0.9
SKR	Severo-Kuril's	2.47	208	PN	Pn	11 38 41.1	+0.4
SKR				*e*S	Sn	11 39 12.8	+0.7
TUMR	Tumrok	2.74	28	PN	Pn	11 38 46.0	+1.8
TUMR	Tumrok	2.74	28	*e*P	Pn	11 38 46.0	+1.8
TUMD	Tumrok D	2.75	31	PN	Pn	11 38 46.5	+2.3
TUMD				S	Sn	11 39 21.0	+2.6
TUMD	Tumrok D	2.75	31	*e*P	Pn	11 38 46.5	+2.3
TUMD				*e*S	Sn	11 39 21.1	+2.6
MKZ	Mys Kozlova	2.82	52	PN	Pn	11 38 44.5	-0.5
MKZ	Mys Kozlova	2.82	52	*e*P	Pn	11 38 44.6	-0.5
ESO	Esso	3.08	8	PN	Pn	11 38 49.7	+1.3
ESO	Esso	3.08	8	*e*P	Pn	11 38 49.8	+1.3
KMNR	Kamenistaya	3.19	24	PN	Pn	11 38 51.9	+2.1
KMNR	Kamenistaya	3.19	24	*e*P	Pn	11 38 51.9	+2.1
KOZ	Kozyrevsk	3.38	19	PN	Pn

SEY	Seymchan	10.49	346	P		Pn	11 40 23.0	-3.2	
	comp=Z,0.5nm,0.3s,baz=167,slow=13,SNR=9.3								
SEY	Seymchan	10.49	346⇑	*e*PN		Pn	11 40 26.3	+0.1	
SEY				pmax	pmax				
	comp=Z,4.0nm,0.9s								
YSS	Yuzhno-Sakhali	11.42	245⇑	*e*PN		Pn	11 40 37.5	-1.0	
YSS				pmax	pmax				
	comp=Z,7.0nm,1.3s								
AMKA	Amchitka	13.22	88	Pn		Pn	11 41 03.5	+1.7	
ASAJ	Asahikawa	13.39	235	P		Pn	11 41 06.2	+2.3	
	comp=Z,11nm,1.2s,baz=45,slow=10.0,SNR=2.6								
GRNR	Gornyy	13.45	270⇓	*i*PN		P	11 41 11.1	+2.4	
GRNR				pmax	pmax				
	comp=Z,20nm,0.9s								
JEM	Erimo	14.72	228	P		Pn	11 41 19.7	-1.0	
ERM	Erimo	14.72	228	P		Pn	11 41 21.1	+0.4	
ERM	Erimo	14.72	228⇑	*e*P		Pn	11 41 19.1	-1.6	
ERM				pmax	pmax				
	comp=Z,14nm,0.9s								
JTM	Tenmabayashi	16.66	230			P	11 41 44.7	+0.5	
ATKA	Atka Island	16.94	81	P		Pn	11 41 49.4	+1.6	
YAK	Yakutsk	17.59	312	P		P	11 41 53.5	-0.8	
	comp=Z,50nm,0.8s,baz=99,slow=7.8,SNR=21								
YAK	Yakutsk	17.59	312	*e*P		Pn	11 41 54.2	-1.3	
YAK				*e*S		Sn	11 45 09.7	-2.7	
YAK				pmax	pmax				
	comp=Z,54nm,0.9s								
YAK				pmax	pmax				
	comp=N,13nm,2.0s								
YAK				pmax	pmax				
	comp=E,19nm,1.4s								
YAK				smax	smax				
	comp=E,73nm,6.0s								
YAK				smax	smax				
	comp=N,68nm,4.7s								
YAK	Yakutsk	17.59	312	P		Pn	11 41 54.1	-1.4	
ZEA	Zeya	18.28	285	*e*P		P	11 42 02.4	+0.6	
ZEA				pmax	pmax				
	comp=Z,10.0nm,1.2s								
SPIA	Saint Paul Isl	18.65	64	P		Pn	11 42 07.7	-0.2	
SPIA	Saint Paul Isl	18.65	64	P		Pn	11 42 07.8	-0.2	
SPIA	Saint Paul Isl	18.65	64	P		P	11 42 06.5	+0.7	
	baz=271								
HEH	HeiHe	19.07	274	*e*P		Pn	11 42 11.8	-1.1	
HEH				pmax	pmax				
	comp=Z,16nm,1.0s								
GAMB	Gambell	19.11	43	P		P	11 42 12.0	+1.2	
GAMB				IAmb	IAmb		11 42 20.0		
	comp=Z,29nm,1.4s								
GAMB	Gambell	19.11	43	P		P	11 42 11.0	+0.2	
	baz=250								
USA0B	Ussuriysk Arra	19.15	253⇑	*e*P		P	11 42 11.1	-0.3	
PSTR	Posyet	20.78	251⇑	*e*P		P	11 42 27.4	-1.4	
M11K	Mekoryuk	20.89	55	P		P	11 42 28.8	-1.1	
	baz=266								
UNV	Unalaska Valle	21.13	73	P		P	11 42 32.9	+0.4	
	baz=282								
TNA	Tin City	21.26	40	P		P	11 42 33.0	-0.8	
	baz=250								
MJB9	Matsu-Tunnel	21.40	228			P	11 42 36.0	+0.4	
MJB9				IAmb	IAmb		11 42 41.7		
	comp=Z,9.8nm,0.8s								
MAJO	Matsushiro	21.40	228	*ce*P		P	11 42 34.9	-0.7	
MAJO				pmax	pmax				
	comp=Z,11nm,1.1s								
MAJO	Matsushiro	21.40	228	P		P	11 42 35.5	-0.2	
MAJO				IAmb	IAmb		11 42 40.7		
	comp=Z,10nm,0.8s								
MJAR	Matsushiro Arr	21.40	228	P		P	11 42 36.2	+0.6	
	comp=Z,6.1nm,0.9s,baz=28,slow=10.0,SNR=18								
	comp=Z,6.1nm,0.9s								
MJAR	Matsushiro Arr	21.40	228	P		P	11 42 34.7	-0.9	
MJAR				pmax	pmax				
	comp=Z,8.0nm,1.4s								
MJAR	Matsushiro Arr	21.40	228			P	11 42 34.7	-0.9	
K13K	Kusilvak Mount	21.81	51	P		P	11 42 39.9	+0.3	
K13K	Kusilvak Mount	21.81	51	P		P	11 42 38.4	-1.3	
	baz=263								
F14K	Arctic Creek	21.86	41	P		P	11 42 39.4	-0.8	
	baz=252								
ANM	Nome	21.99	44	P		P	11 42 40.7	-0.8	
	baz=256								
M13K	Dall Lake	22.31	55	P		P	11 42 44.3	-0.4	
	baz=268								
J14K	Nanvaranak Lak	22.43	49	P		P	11 42 46.5	+0.7	
J14K				IAmb	IAmb		11 42 48.4		
	comp=Z,14nm,0.8s								
J14K	Nanvaranak Lak	22.43	49	P		P	11 42 45.7	-0.1	
	baz=262,SNR=5.3								
F15K	North Star Dit	22.60	41	P		P	11 42 47.2	-0.1	
	baz=254								
G15K	Niukluk	22.65	43	P		P	11 42 47.5	-0.4	
	baz=256								
L14K	Kuka Creek	22.68	53	P		P	11 42 48.2	+0.1	
	baz=266								
M14K	Bethel	23.01	54	P		P	11 42 51.8	+0.6	
M14K				IAmb	IAmb		11 42 53.1		
	comp=Z,12nm,0.8s								
M14K	Bethel	23.01	54	P		P	11 42 51.8	+0.6	
	baz=269								
N14K	Kuskokwak Cree	23.13	56	P		P	11 42 53.1	+0.8	
	baz=271								
C16K	Lisburne Hills	23.21	34	P		P	11 42 53.9	+0.9	
	baz=247								
L15K	Ungalak Mounta	23.28	52	P		P	11 42 54.3	+0.7	
	baz=267								
K15K	Wolf Creek Mou	23.31	50			P	11 42 55.0	+1.1	
K15K				IAmb	IAmb		11 42 57.4		
	comp=Z,25nm,1.2s								
K15K	Wolf Creek Mou	23.31	50	P		P	11 42 54.9	+1.0	
	baz=265,SNR=5.8								
H16K	Elim	23.33	44	P		P	11 42 54.8	+0.8	
	baz=259								
O14K	Tigyukauivet M	23.36	58	P		P	11 42 55.3	+0.9	
	baz=273								
G16K	Koyuk River	23.44	42	P		P	11 42 55.4	+0.4	
	baz=257								
M15K	Kasigluk River	23.63	54	P		P	11 42 57.2	+0.3	
	baz=270,SNR=15								
D17K	Noatak River	23.80	37	P		P	11 42 58.5	+0.2	
	baz=251								
J16K	Anvik River	23.83	48	P		P	11 42 59.8	+1.1	
J16K				IAmb	IAmb		11 43 01.7		
	comp=Z,11nm,1.1s								
J16K	Anvik River	23.83	48	P		P	11 42 59.6	+0.9	
	baz=264								
I17K	Unalakleet	23.87	46	P		P	11 42 59.3	+0.3	
	baz=263								
N15K	Kwethluk River	23.93	56			P	11 43 00.4	+0.8	
N15K	Kwethluk River	23.93	56	P		P	11 43 00.3	+0.7	
	baz=272,SNR=8.2								
RDOG	Red Dog Mine	23.98	36	P		P	11 42 59.2	-0.8	
RDOG				IAmb	IAmb		11 43 03.2		
	comp=Z,16nm,0.9s								
RDOG	Red Dog Mine	23.98	36	P		P	11 43 00.7	+0.7	
	baz=251								
C17K	DeLong Mountai	24.03	35	P		P	11 43 01.0	+0.5	
	baz=250								
HIA	Hailar	24.06	277⇑	*e*P		P	11 43 01.5	+0.6	
HIA				pmax	pmax				
	comp=Z,5.0nm,0.6s								
E17K	Hotham Inlet	24.08	38	P		P	11 43 01.3	+0.4	
	baz=254								
O15K	Ungalikthiuk R	24.10	58	P		P	11 43 01.9	+0.7	
O15K				IAmb	IAmb		11 43 03.1		
	comp=Z,14nm,0.9s								
O15K	Ungalikthiuk R	24.10	58	P		P	11 43 01.9	+0.7	
	baz=274								
F17K	Baldwin Pennin	24.13	40	P		P	11 43 02.1	+0.8	
	baz=256								
G17K	Kiwalik Mounta	24.16	42	P		P	11 43 02.4	+0.8	
	baz=259,SNR=6.2								
L16K	Owhat River	24.24	52			P	11 43 02.5	+0.2	
L16K				IAmb	IAmb		11 43 05.1		
	comp=Z,12nm,1.1s								
L16K	Owhat River	24.24	52	P		P	11 43 03.1	+0.7	
	baz=269								
SDPT	Sand Point	24.26	67	P		P	11 43 04.7	+2.1	
	baz=282								
H17K	Granite Mounta	24.36	44			P	11 43 04.3	+0.9	
H17K				IAmb	IAmb		11 43 06.7		
	comp=Z,9.9nm,0.7s								
H17K	Granite Mounta	24.36	44	P		P	11 43 04.4	+0.9	
	baz=261,SNR=5.3								
M16K	Timber Creek	24.48	53			P	11 43 05.2	+0.6	
M16K				IAmb	IAmb		11 43 08.3		
	comp=Z,20nm,1.3s								
M16K	Timber Creek	24.48	53	P		P	11 43 05.5	+0.9	
	baz=271,SNR=7.0								
J17K	VABM Dome	24.53	48	P		P	11 43 05.8	+0.8	
	baz=265,SNR=9.9								
N16K	Nishlik Lake	24.58	55	P		P	11 43 06.2	+0.6	
	baz=272								
S14K	Fog Glacier	24.59	65	P		P	11 43 06.8	+1.0	
	baz=280								
E18K	Tukpahlearik C	24.63	38	P		P	11 43 06.2	+0.3	
	baz=255								
C18K	Utukok River	24.78	35	P		P	11 43 08.2	+0.9	
C18K				IAmb	IAmb		11 43 11.3		
	comp=Z,13nm,1.1s								
C18K	Utukok River	24.78	35	P		P	11 43 07.6	+0.3	
	baz=252								
F18K	Selawik	24.79	40	P		P	11 43 07.0	-0.2	
	baz=258								
L17K	Donlin	24.81	51	P		P	11 43 07.7	+0.1	
	baz=269,SNR=9.1								
K17K	Iditarod	24.83	49			P	11 43 08.9	+1.2	
K17K				IAmb	IAmb		11 43 11.4		
	comp=Z,16nm,0.8s								
K17K	Iditarod	24.83	49	P		P	11 43 07.9	+0.1	
	baz=268,SNR=8.9								
CHNA	Chernabura Isl	24.87	68	P		P	11 43 09.6	+1.5	
	baz=284								
O16K	Kokwok River B	24.96	57	P		P	11 43 09.3	+0.3	
	baz=274								
G18K	Tagagawik	25.04	42	P		P	11 43 09.1	-0.6	
G18K	Tagagawik	25.04	42	P		P	11 43 10.0	+0.3	
	baz=260,SNR=6.8								
H18K	Honhosa River	25.04	44	P		P	11 43 10.0	+0.3	
	baz=262								
M17K	Holitna River	25.21	53			P	11 43 12.4	+1.2	
M17K	Holitna River	25.21	53	P		P	11 43 11.6	+0.4	
	baz=271,SNR=17								
CHGN	Chignik	25.21	65	P		P	11 43 12.2	+1.0	
	baz=281								
N17K	Nushagak Hills	25.36	55	P		P	11 43 13.0	+0.4	
	baz=273								
A19K	Wainwright	25.36	31	P		P	11 43 12.8	+0.3	
	baz=249								
O17K	Koliganek Bris	25.45	56	P		P	11 43 13.6	+0.2	
	baz=275								
C19K	Lookout Ridge	25.48	34	P		P	11 43 13.7	+0.1	
	baz=253								
L18K	Granite Mounta	25.57	51	P		P	11 43 14.0	-0.4	
	baz=270								
F19K	Shaleruckik Mo	25.57	40	P		P	11 43 14.4	+0.1	
	baz=259								
J18K	Innoko River	25.59	48	P		P	11 43 14.7	+0.1	
	baz=267,SNR=6.2								
GCSA	Galena City Sc	25.62	45	P		P	11 43 14.5	-0.3	
	baz=265								
G19K	Purcell Mounta	25.72	42	P		P	11 43 15.6	-0.1	
	baz=261,SNR=5.8								
Q16K	King Salmon	25.79	59	P		P	11 43 16.7	+0.3	
	baz=277								
D19K	Kuna River	25.82	36	P		P	11 43 16.4	-0.2	
	baz=256								
P17K	Kvichak River	25.84	58	P		P	11 43 16.7	-0.2	
	baz=276								
H19K	Roundabout Mou	25.89	43	P		P	11 43 16.8	-0.4	
	baz=263,SNR=18								
E19K	Redstone River	25.90	39	P		P	11 43 16.8	-0.6	
	baz=259								
KSRS	Korea Array	25.92	245	P		P	11 43 19.4	+1.6	
	comp=Z,3.1nm,0.8s,baz=41,slow=9.6,SNR=6.7								
	comp=Z,3.1nm,0.8s								
M18K	Stony River	25.98	52	P		P	11 43 18.2	+0.1	
	baz=272,SNR=6.8								
N18K	Kilae Creek	25.99	54	IAmb	IAmb		11 43 20.6		
	comp=Z,12nm,1.0s								
N18K	Kilae Creek	25.99	54	P		P	11 43 18.2	0.0	
	baz=274,SNR=6.3								
R17L	Mt. Peulik Vol	26.09	61	P		P	11 43 19.1	-0.1	
	baz=280								
J19K	Poorman	26.11	47	IAmb	IAmb		11 43 21.2		
	comp=Z,5.9nm,0.7s								
J19K	Poorman	26.11	47	P		P	11 43 18.7	-0.6	
	baz=267,SNR=7.5								
Q17K	Contact Creek	26.24	60	P		P	11 43 20.2	-0.5	
	baz=279								
O18K	Koktuh Hills	26.39	56	P		P	11 43 21.5	-0.4	
	baz=276								
F20K	Avaraart Lake	26.40	40	P		P	11 43 21.3	-0.5	
	baz=261								
D20K	Etivluk River	26.40	36	P		P	11 43 21.0	-0.9	
	baz=257								
L19K	White Mountain	26.43	51	P		P	11 43 21.2	-0.9	
	baz=272								
P18K	Big Mountain,	26.43	57	P		P	11 43 21.8	-0.5	
	baz=277								
E20K	Nigu River	26.45	37	P		P	11 43 21.7	-0.7	
	baz=258								
H20K	Anotleneega Mo	26.54	43	P		P	11 43 22.5	-0.6	
	baz=265,SNR=5.4								
B20K	Meade River	26.56	33	P		P	11 43 23.9	+0.7	
	baz=254								
Q18K	Katmai Hardscr	26.64	59	P		P	11 43 24.6	+0.4	
	baz=279,SNR=5.4								
I20K	Naaghedeneel	26.65	45	P		P	11 43 24.6	+0.5	
	baz=267								
M19K	Big River Lodg	26.65	51	P		P	11 43 24.8	+0.6	
	baz=273								
N19K	Bonanza Creek	26.67	54	IAmb	IAmb		11 43 26.2		
	comp=Z,8.6nm,0.8s								
N19K	Bonanza Creek	26.67	54	P		P	11 43 24.8	+0.3	
	baz=275,SNR=6.0								
J20K	Nowinta River	26.76	46	IAmb	IAmb		11 43 27.1		
	comp=Z,5.8nm,0.7s								
J20K	Nowinta River	26.76	46	P		P	11 43 25.1	0.0	
	baz=268,SNR=12								
K20K	Telida	26.78	48	IAmb	IAmb		11 43 27.8		
	comp=Z,11nm,1.2s								
K20K	Telida	26.78	48	P		P	11 43 25.0	-0.2	
	baz=270,SNR=6.9								
O19K	Port Alsworth	26.80	55	P		P	11 43 25.8	+0.3	
	baz=276								
IMAR	Indian Mountai	27.05	42			P	11 43 28.0	+0.4	
A21K	Barrow	27.13	30	P		P	11 43 28.8	+0.4	
	baz=252								
C21K	Knifeblade Rid	27.15	35	P		P	11 43 28.9	+0.4	
	baz=258								
G21K	Allakaket	27.20	41	P		P	11 43 28.6	-0.4	
	baz=264								
M20K	Styx River	27.25	51	IAmb	IAmb		11 43 32.7		
	comp=Z,8.8nm,0.9s								
M20K	Styx River	27.25	51	P		P	11 43 29.1	-0.5	
	baz=274								
F21K	Alatna River	27.29	40	P		P	11 43 29.3	-0.5	
	baz=263								
E21K	Killik River	27.30	37	P		P	11 43 29.3	-0.5	
	baz=260								
B21K	Ikpikpuk River	27.31	34	IAmb	IAmb		11 43 31.6		
	comp=Z,6.4nm,0.9s								
B21K	Ikpikpuk River	27.31	34	P		P	11 43 29.5	-0.5	
	baz=257								
H21K	Melozitna Rive	27.41	43	P		P	11 43 30.9	0.0	
	baz=267								
P19K	Oil Pt	27.41	56	P		P	11 43 30.7	-0.3	
	baz=278								
SII	Sitkinak Islan	27.46	63	P		P	11 43 31.8	+0.3	
	baz=283								
CHUM	Lake Minchumin	27.56	47	P		P	11 43 31.9	-0.3	
	baz=271								
PPLA	Purkeypile	27.64	49	P		P	11 43 32.4	-0.7	
	baz=273								
O20K	Slope Mountain	27.66	55	P		P	11 43 33.8	+0.6	
	baz=278								
CAST	Castle Rocks	27.67	48	IAmb	IAmb		11 43 34.9		
	comp=Z,5.3nm,0.6s								
CAST	Castle Rocks	27.67	48	P		P	11 43 33.3	0.0	
	baz=272,SNR=5.3								
I21K	Tanana	27.73	44	P		P	11 43 33.8	+0.1	
	baz=268								
OHAK	Old Harbor	27.80	61	P		P	11 43 33.6	-0.7	
	baz=282								
SPU	Mount Spurr	27.82	53	P		P	11 43 35.9	+1.3	
SPU				IAmb	IAmb		11 43 36.9		
	comp=Z,5.0nm,0.8s								
F22K	John River	27.83	39	P		P	11 43 34.1	-0.5	
	baz=264								
B22K	Teshekpuk Lake	27.88	33	P		P	11 43 34.9	0.0	
	baz=268								
STLK	Strandline Lak	27.89	52	P		P	11 43 36.3	+1.0	
SKT	Skwentna	28.00	51	P		P	11 43 35.6	-0.5	
	baz=275								
H22K	Ishtalitna Cre	28.01	43	P		P	11 43 35.7	-0.5	
	baz=268								
G22K	Bettles	28.03	40	P		P	11 43 36.0	-0.3	
	baz=266								
E22K	Anaktuvuk Pass	28.04	38	P		P	11 43 36.0	-0.6	
	baz=263								
KDAK	Kodiak Island	28.06	60	P		P	11 43 36.2	-0.5	
	baz=282								
HOM	Homer	28.21	56	P		P	11 43 37.4	-0.6	
	baz=279								
MLY	Manley	28.25	44	P		P	11 43 37.8	-0.6	
	baz=270,SNR=5.0								
L22K	Petersville	28.31	50	IAmb	IAmb		11 43 40.3		
	comp=Z,8.2nm,0.7s								
L22K	Petersville	28.31	50	P		P	11 43 38.8	-0.2	
	baz=274,SNR=7.2								
TRF	Thorofare Moun	28.48	48	IAmb	IAmb		11 43 41.9		
	comp=Z,8.2nm,1.0s								
TRF	Thorofare Moun	28.48	48	P		P	11 43 40.4	-0.2	
	baz=273								
CUT	Chulitna	28.55	50	P		P	11 43 40.2	-0.8	
	baz=275								
COLD	Coldfoot	28.56	40	P		P	11 43 41.1	0.0	
	baz=266,SNR=5.5								
D23K	Nanushuk River	28.57	36	P		P	11 43 40.7	-0.5	
	baz=263								
G23K	Bananza Creek	28.60	41	P		P	11 43 41.6	+0.2	
	baz=267,SNR=6.4								
BRSE	Bradley Lake S	28.65	56	P		P	11 43 42.4	+0.4	
	baz=280								
M22K	Willow	28.68	51	P		P	11 43 42.5	+0.4	
	baz=276								
C23K	Itkillik River	28.72	34	P		P	11 43 42.9	+0.5	
	baz=261								
H23K	Yukon River	28.76	43	IAmb	IAmb		11 43 44.7		
	comp=Z,6.5nm,0.9s								
H23K	Yukon River	28.76	43	P		P	11 43 43.1	+0.1	
	baz=269								
I23K	Minto, Yukon-K	28.84	44	P		P	11 43 43.9	+0.4	
	baz=271								
E23K	Chandalar	28.85	38			P	11 43 44.2	+0.4	
E23K				IAmb	IAmb		11 43 45.3		
	comp=Z,4.8nm,0.8s								
E23K	Chandalar	28.85	38	P		P	11 43 43.9	+0.2	
	baz=265								
TOLK	Toolik Lake Re	28.93	37	P		P	11 43 44.5	+0.1	
	baz=264								
RC01	Rabbit Creek A	28.95	53	P		P	11 43 44.3	-0.2	
	baz=278								
NEA2	Nenana	28.97	45	IAmb	IAmb		11 43 47.5		
	comp=Z,8.3nm,0.9s								
NEA2	Nenana	28.97	45	P		P	11 43 44.5	-0.2	
	baz=272,SNR=7.4								
O22K	Cooper Landing	29.04	54	P		P	11 43 45.5	+0.2	
	baz=279								
MCK	McKinley	29.07	47	IAmb	IAmb		11 43 47.2		
	comp=Z,7.1nm,0.8s								
MCK	McKinley	29.07	47	P		P	11 43 45.2	-0.5	
	baz=274								
RND	Reindeer	29.12	48	P		P	11 43 46.3	+0.1	
RND				pmax	pmax				
	comp=Z,9.0nm,0.8s								
RND	Reindeer	29.12	48	P		P	11 43 46.3	+0.1	
RND				IAmb	IAmb		11 43 46.8		
	comp=Z,9.4nm,0.8s								
PMR	Palmer	29.17	52	P		P	11 43 46.6	+0.1	
PMR	Palmer	29.17	52	P		P	11 43 47.3	+0.8	
PMR				pmax	pmax				
	comp=Z,5.0nm,0.7s								
PMR	Palmer	29.17	52	P		P	11 43 47.3	+0.8	
PMR				IAmb	IAmb		11 43 47.3		
	comp=Z,4.8nm,0.7s								
PMR	Palmer	29.17	52	P		P	11 43 45.9	-0.5	
	baz=277								
SEW	Seward	29.23	55	P		P	11 43 46.3	-0.7	
	baz=280								
GHO	Glory Hole Cre	29.25	51	P		P	11 43 47.9	+0.6	
D24K	Happy Valley	29.25	36	P		P	11 43 47.1	-0.1	
	baz=264								
E24K	Your Creek	29.28	38	IAmb	IAmb		11 43 49.2		
	comp=Z,5.1nm,0.9s								
E24K	Your Creek	29.28	38	P		P	11 43 46.8	-0.6	
	baz=266,SNR=6.1								
WAT1	Susitna Watana	29.31	49	P		P	11 43 47.2	-0.6	
	baz=276								
WRH	Wood River Hil	29.40	46	P		P	11 43 49.3	+0.8	
H24K	Noodor Dome	29.45	43	P		P	11 43 48.8	-0.2	
	baz=271								
F24K	Squaw Lake	29.47	39	P		P	11 43 48.5	-0.7	
	baz=268								
COLA	College	29.48	45	P		P	11 43 49.4	+0.2	
COLA	College	29.48	45	*ce*P		P	11 43 48.7	-0.5	
COLA				pmax	pmax				
	comp=Z,10.0nm,0.9s								
COLA	College	29.48	45	P		P	11 43 49.9	+0.7	
COLA	College	29.48	45	P		P	11 43 49.1	-0.1	
	baz=273								
CCB	Clear Creek Bu	29.51	45	IAmb	IAmb		11 43 50.8		
	comp=Z,9.8nm,1.0s								
KNK	Knik Glacier	29.52	52	P		P	11 43 50.1	+0.5	
	baz=278,SNR=9.0								
SML	Sawmill	29.52	51	P		P	11 43 49.8	+0.1	
	baz=278,SNR=7.8								
G24K	Hadweenzic Riv	29.61	41	IAmb	IAmb		11 43 52.9		
	comp=Z,12nm,1.0s								
G24K	Hadweenzic Riv	29.61	41	P		P	11 43 50.3	-0.1	
	baz=270,SNR=12								
POKR	Poker Plat Res	29.65	44	P		P	11 43 50.1	-0.7	
	baz=273								
PWL	Port Wells	29.66	53	P		P	11 43 50.8	0.0	
	baz=279								
WAT6	Susitna Watana	29.71	49	P		P	11 43 51.5	+0.1	
	baz=277								
M23K	Glacier View	29.81	51	P		P	11 43 52.2	+0.1	
	baz=278,SNR=6.3								
DHY	Denali Highway	29.82	48	IAmb	IAmb		11 43 53.9		
	comp=Z,9.3nm,0.8s								
DHY	Denali Highway	29.82	48	P		P	11 43 52.6	+0.2	
	baz=276,SNR=8.4								
HDA	Harding Lake	29.90	46	P		P	11 43 52.9	0.0	
	baz=274,SNR=12								
ILAR	Eielson Array	29.90	45	P		P	11 43 53.2	+0.3	
	comp=Z,7.9nm,0.7s,baz=265,slow=7.9,SNR=112								
	comp=Z,7.9nm,0.7s								
ILAR	Eielson Array	29.90	45			P	11 43 53.1	+0.1	
SCM	Sheep Creek Mo	29.99	51	P		P	11 43 54.2	+0.3	
	baz=278,SNR=6.6								
D25K	Kavik River	30.14	36	IAmb	IAmb		11 43 56.7		
	comp=Z,7.8nm,0.8s								
D25K	Kavik River	30.14	36	P		P	11 43 55.0	0.0	
	baz=266,SNR=7.2								
G25K	Bearman Lake	30.16	41	P		P	11 43 55.5	+0.4	
	baz=271								
GLI	Glacier Island	30.25	53	P		P	11 43 55.8	-0.2	
	baz=280								
P23K	Montague Islan	30

EYAK	Cordova Ski Ar	30.96	53	P	P	11 44 02.5	+0.3	
	baz=282							
G26K	Porcupine Rive	31.07	40	IAmb	IAmb	11 44 10.2		
	comp=Z,7.3nm,0.6s							
G26K	Porcupine Rive	31.07	40	P	P	11 44 03.5	+0.3	
	baz=273,SNR=9.5							
C27K	Jago River	31.09	35	P	P	11 44 03.7	+0.4	
	baz=268							
N25K	Chitina, Valde	31.31	51	P	P	11 44 05.2	-0.3	
	baz=281							
BMRM	Bremner River	31.43	52	P	P	11 44 05.9	-0.6	
	baz=282							
I26K	Coal Creek Min	31.44	44	P	P	11 44 06.5	0.0	
	baz=276							
L26K	Log Cabin Wild	31.64	48	IAmb	IAmb	11 44 10.8		
	comp=Z,3.4nm,0.6s							
L26K	Log Cabin Wild	31.64	48	P	P	11 44 07.8	-0.5	
	baz=280							
KAIM	Kayak Island	31.74	54	P	P	11 44 09.0	-0.2	
	baz=284							
E27K	Coleen River	31.86	38	P	P	11 44 10.1	0.0	
	baz=273							
M26K	Nabesna, AK	31.91	49	P	P	11 44 11.1	+0.4	
	baz=281,SNR=7.6							
G27K	Doyon Strip	31.92	41	P	P	11 44 10.9	+0.2	
	baz=275							
H27K	Steamboat Moun	32.02	42	IAmb	IAmb	11 44 14.0		
	comp=Z,9.0nm,0.9s							
H27K	Steamboat Moun	32.02	42	P	P	11 44 11.8	+0.2	
	baz=276,SNR=10							
I27K	Kandik River	32.05	43	P	P	11 44 12.0	+0.2	
	baz=277							
D27M	Malcolm River	32.06	36	P	P	11 44 12.3	+0.3	
	baz=272							
MCARA	McCarthy VSAT	32.09	51	P	P	11 44 12.6	+0.4	
	baz=282							
CRQE	Cirque	32.20	52	P	P	11 44 13.2	-0.1	
	baz=283							
L27K	Beaver Creek,	32.32	48	P	P	11 44 14.2	0.0	
	baz=281,SNR=32							
BCAR	Beaver Creek A	32.34	48		P	11 44 15.6	+1.2	
M27K	Edge Creek, AK	32.43	49	P	P	11 44 16.1	+0.8	
	baz=282,SNR=7.6							
F28M	Old Crow	32.55	39	P	P	11 44 16.2	+0.1	
	baz=275							
TLY	Talaya	32.56	290	LR	LR	11 57 43.1		
	comp=Z,25nm,20.1s,baz=6.5,slow=37							
E28M	Babbage River	32.60	37	P	P	11 44 16.8	+0.3	
	baz=274							
I28M	Miner Creek	32.76	43	IAmb	IAmb	11 44 20.3		
	comp=Z,8.7nm,1.0s							
I28M	Miner Creek	32.76	43	P	P	11 44 18.8	+0.7	
	baz=278,SNR=9.3							
D28M	Stokes Point	32.85	36	P	P	11 44 18.5	-0.2	
	baz=273							
BVCY	Beaver Creek	32.88	49	P	P	11 44 20.0	+0.9	
	baz=282,SNR=10							
YUK3	Moose Creek	33.21	50	P	P	11 44 21.8	-0.3	
	baz=284							
DAWY	Dawson	33.21	46	P	P	11 44 22.6	+0.6	
	baz=281,SNR=5.8							
E29M	Blow River	33.22	37	P	P	11 44 22.4	+0.5	
	baz=276							
H29M	Whitestone	33.29	41	IAmb	IAmb	11 44 24.8		
	comp=Z,7.5nm,0.9s							
H29M	Whitestone	33.29	41	P	P	11 44 23.0	+0.4	
	baz=278,SNR=7.1							
G29M	Pine Creek	33.33	40	IAmb	IAmb	11 44 25.6		
	comp=Z,8.4nm,1.0s							
G29M	Pine Creek	33.33	40	P	P	11 44 24.0	+1.1	
	baz=278,SNR=6.2							
O28M	Mount Upton	33.58	52	P	P	11 44 25.7	+0.3	
	baz=285							
J29N	Klondike Camp	33.65	45	P	P	11 44 25.6	-0.2	
	baz=281							
YUK8	Steele Glacier	33.65	51	P	P	11 44 26.1	+0.1	
	baz=285							
PINM	Pinnacle	33.73	53	P	P	11 44 26.6	+0.1	
	baz=286							
EPYK	Eagle Plains	33.93	41	P	P	11 44 28.4	+0.2	
	baz=280							
L29M	L29M	33.96	47	P	P	11 44 27.8	-0.6	
	baz=283,SNR=21							
M29M	Somme Creek	33.97	48	IAmb	IAmb	11 44 30.8		
	comp=Z,6.7nm,0.8s							
M29M	Somme Creek	33.97	48	P	P	11 44 28.9	+0.3	
	baz=284,SNR=8.1							
BRWY	Burwash Landin	33.97	50	P	P	11 44 27.2	-1.4	
	baz=285							
G30M	tAoh Zraii Nji	34.03	40	P	P	11 44 28.8	-0.2	
	baz=279							
K29M	Barlow Dome	34.07	46	P	P	11 44 29.1	-0.4	
	baz=283							
F30M	Barrier River	34.10	39	IAmb	IAmb	11 44 32.2		
	comp=Z,6.8nm,0.9s							
F30M	Barrier River	34.10	39	P	P	11 44 28.9	-0.7	
	baz=278							
YUK4	Talbot Arm	34.16	50	P	P	11 44 30.2	-0.1	
	baz=285							
I30M	Mount Dempster	34.27	43	P	P	11 44 30.8	-0.3	
	baz=282,SNR=18							
YUK6	Outpost Mounta	34.40	51	P	P	11 44 31.5	-0.9	
	baz=286							
J30M	Hart River	34.42	44	P	P	11 44 31.6	-0.9	
	baz=282							
O29M	Mount Kennedy	34.47	52	P	P	11 44 32.0	-1.0	
	baz=287							
M30M	Minto, Yukon	34.68	48	P	P	11 44 34.3	-0.4	
	baz=285							
G31M	Satah River	34.79	40	P	P	11 44 35.2	-0.3	
	baz=281							
HYT	Haines Junctio	34.83	51	IAmb	IAmb	11 44 38.4		
	comp=Z,6.4nm,0.8s							
HYT	Haines Junctio	34.83	51	P	P	11 44 35.3	-0.8	
	baz=287							
INK	Inuvik	34.84	37	P	P	11 44 35.6	-0.2	
	baz=279							
N30M	Aishikik Lake	34.85	50	P	P	11 44 35.5	-0.6	
	baz=286							
F31M	Tsiigehtchic	34.90	39	P	P	11 44 36.1	-0.3	
	baz=280							
H31M	Peel River	34.98	42	P	P	11 44 37.1	-0.1	
	baz=282							
P29M	Windy Craggy	35.08	53	P	P	11 44 38.3	+0.2	
	baz=288							
P30M	Million Dollar	35.30	52	P	P	11 44 40.2	+0.3	
	baz=288							
N31M	Braeburn, Yuko	35.44	49	P	P	11 44 41.2	0.0	
	baz=287,SNR=5.8							
O30N	Mendenhall	35.51	51	IAmb	IAmb	11 44 44.0		
	comp=Z,7.2nm,0.7s							
O30N	Mendenhall	35.51	51	P	P	11 44 42.0	+0.2	
	baz=288,SNR=6.8							
PLBC	Pleasant Camp	35.80	53	P	P	11 44 44.3	+0.2	
	baz=290							
M31M	Drury Creek, Y	35.86	48	IAmb	IAmb	11 44 47.3		
	comp=Z,9nm,0.7s							
M31M	Drury Creek, Y	35.86	48	P	P	11 44 45.1	+0.4	
	baz=287,SNR=7.3							
WHY	Whitehorse	36.11	50	P	P	11 44 46.8	-0.2	
	baz=289							
S31K	Pelican	36.38	55	P	P	11 44 49.3	+0.3	
	baz=292							
A36M	Sachs Harbour	36.98	30	P	P	11 44 53.4	-0.6	
	baz=282							
P32M	Atlin	37.02	52	P	P	11 44 55.1	+0.5	
	baz=291							
R32K	Eaglecrest	37.11	54	P	P	11 44 56.1	+0.8	
	baz=292							
MMPY	Sheldon Lake,	37.12	46	P	P	11 44 55.8	+0.3	
	baz=289							
SIT	Sitka	37.17	56	P	P	11 44 56.4	+0.6	
	baz=293							
P33M	Teslin, Yukon	37.22	51	IAmb	IAmb	11 44 59.4		
	comp=Z,7.9nm,1.1s							
P33M	Teslin, Yukon	37.22	51	P	P	11 44 56.7	+0.4	
	baz=291,SNR=6.1							
S32K	Killisnoo	37.39	55	P	P	11 44 56.8	-0.8	
	baz=293							
Q32M	Nakina River	37.94	52	P	P	11 45 01.8	-0.7	
	baz=293							
R33M	Jennings River	38.40	51	IAmb	IAmb	11 45 09.3		
	comp=Z,7.8nm,0.9s							
R33M	Jennings River	38.40	51	P	P	11 45 06.5	+0.3	
	baz=293,SNR=7.5							
T33K	Petersburg	38.46	56	P	P	11 45 06.5	-0.1	
	baz=295							
U33K	Whale Pass	38.67	57	P	P	11 45 08.0	-0.3	
	baz=296							
S34M	Telegraph Cree	38.91	53	IAmb	IAmb	11 45 13.4		
	comp=Z,6.4nm,1.0s							
S34M	Telegraph Cree	38.91	53	P	P	11 45 10.5	+0.2	
	baz=294							
WRAK	Wrangell Islan	38.93	56	P	P	11 45 10.6	+0.1	
	baz=296							
CRAG	Crag	38.95	58	P	P	11 45 10.9	+0.3	
	baz=296							
WTLY	Watson Lake, Y	39.13	49	P	P	11 45 12.1	-0.1	
	baz=293							
DLBC	Dease Lake	39.22	52	P	P	11 45 13.8	+0.7	
	baz=295,SNR=6.7							
T35M	Bob Quinn	39.73	54	P	P	11 45 18.1	+0.8	
	baz=296,SNR=7.5							
V35K	Ketchikan	39.78	57	P	P	11 45 18.4	+0.8	
	baz=297							
WRGLY	Wrigley	40.24	43	P	P	11 45 21.6	+0.3	
	baz=293							
LIRD	Liard River Hi	40.66	50	P	P	11 45 24.3	-0.5	
	baz=296							
KOTAN	Kotaneelee Air	41.28	48	P	P	11 45 29.1	-0.7	
	baz=296							
GTA2	Gaotai	41.30	275	*e*P	P	11 45 30.5	+0.1	
GTA2				pmax	pmax			
	comp=Z,6.0nm,0.9s							
DGZ	Jazzator, Alta	42.57	295	⇑*e*P	P	11 45 39.6	-1.0	
DGZ				pmax	pmax			
	comp=Z,1.0nm,0.8s							
YKA	Yellowknife Ar	44.20	42	P	P	11 45 53.8	+0.4	
	comp=Z,1.6nm,0.8s,baz=294,slow=7.6,SNR=5.7							
	comp=Z,1.6nm,0.8s							
YKA	Yellowknife Ar	44.20	42	*ce*P	P	11 45 53.7	+0.4	
YKA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KURK	Kurchatov	46.72	301	⇑*e*P	P	11 46 12.0	-1.2	
KURK				pmax	pmax			
	comp=Z,11nm,1.7s							
KURK	Kurchatov	46.72	301		P	11 46 12.0	-1.2	
KURBB	Kurchatov Arra	46.82	301	P	P	11 46 12.5	-1.5	
	comp=Z,1.0nm,0.3s,baz=61,slow=7.7,SNR=9.9							
KURBB				LR	LR	12 08 08.0		
	comp=Z,23nm,21.6s,baz=183,slow=39							
	comp=Z,1.0nm,0.3s							
MK31	Makanchi Array	47.05	295	⇑*i*P	P	11 46 14.2	-1.7	
MKAR	Makanchi Array	47.05	295	P	P	11 46 14.5	-1.4	
	comp=Z,0.3nm,0.4s,baz=53,slow=5.1,SNR=4.5							
	comp=Z,0.3nm,0.4s							
BVAR	Borovoye Array	49.48	307	P	P	11 46 32.8	-1.6	
	comp=Z,4.2nm,0.8s,baz=55,slow=7.8,SNR=14							
	comp=Z,4.2nm,0.8s							
EDM	Edmonton	49.94	52	P	P	11 46 38.5	+0.6	
EDM				pmax	pmax			
	comp=Z,13nm,1.0s							
EDM	Edmonton	49.94	52		P	11 46 38.5	+0.6	
ARTI	Arti	52.75	316	⇓*e*P	P	11 46 57.8	-0.9	
ARTI				pmax	pmax			
	comp=Z,6.0nm,1.6s							
MSO	Missoula	53.72	58		P	11 47 07.0	+0.9	
MSO				IAmb	IAmb	11 47 08.6		
	comp=Z,5.5nm,1.1s							
PLID	Pearl Lake	53.79	61	IAmb	IAmb	11 47 08.6		
	comp=Z,5.2nm,0.7s							
AAK	Ala-Archa	53.98	295	*ce*P	P	11 47 07.2	-0.9	
AAK				pmax	pmax			
	comp=Z,4.0nm,1.7s							
WVOR	Wild Horse Val	54.13	65	IAmb	IAmb	11 47 11.8		
	comp=Z,6.3nm,0.9s							
SUMG	Summit	54.32	6	P	P	11 47 10.3	-0.1	
SUMG				pmax	pmax			
	comp=Z,9.0nm,0.9s							
SUMG	Summit	54.32	6		P	11 47 10.3	-0.1	
SUMG				IAmb	IAmb	11 47 11.5		
	comp=Z,9.1nm,0.9s							
ORV	Oroville	54.47	70	IAmb	IAmb	11 47 13.4		
	comp=Z,5.3nm,0.8s							
BEKR	Beckworth	54.90	69	IAmb	IAmb	11 47 17.2		
	comp=Z,8.6nm,0.9s							
MFID	Camas Ranch	55.00	63	IAmb	IAmb	11 47 17.6		
	comp=Z,6.8nm,1.4s							
PAHR	Pah Rah Range	55.56	68	IAmb	IAmb	11 47 22.0		
	comp=Z,10nm,1.3s							
BOZ	Bozeman (W)	55.74	58	IAmb	IAmb	11 47 22.8		
	comp=Z,3.4nm,0.8s							
PNTR	Pine Nut	55.87	69	IAmb	IAmb	11 47 24.5		
	comp=Z,6.3nm,0.9s							
CMB	Columbia Colle	56.14	70	IAmb	IAmb	11 47 26.1		
	comp=Z,4.0nm,1.1s							
WAKR	Walker	56.36	69	IAmb	IAmb	11 47 28.1		
	comp=Z,9.4nm,1.1s							
YHL	Hebgen Lake	56.48	59	IAmb	IAmb	11 47 28.5		
	comp=Z,4.5nm,1.1s							
YHB	Horse Butte	56.54	59	IAmb	IAmb	11 47 29.7		
	comp=Z,6.0nm,1.0s							
KVN	Kiserveni	56.73	68	IAmb	IAmb	11 47 30.5		
	comp=Z,5.2nm,1.3s							
CMAR	Chiang Mai Arr	56.85	256	P	P	11 47 29.2	+0.6	
	comp=Z,1.3nm,0.8s,baz=41,slow=6.2,SNR=7.2							
	comp=Z,1.3nm,0.8s							
CMAR	Chiang Mai Arr	56.85	256	*i*P	P	11 47 30.7	+2.0	
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AB31	Akbulak array	56.91	309	P	P	11 47 27.6	-1.2	
ABKAR	Akbulak array	56.91	309	P	P	11 47 26.6	-2.1	
YNE	Yellowstone No	56.97	58	IAmb	IAmb	11 47 31.8		
	comp=Z,5.2nm,1.0s							
NVAR	Mina Array Bea	57.05	69	P	P	11 47 31.8	+1.6	
	comp=Z,2.7nm,0.7s,baz=300,slow=7.4,SNR=26							
	comp=Z,2.7nm,0.7s							
NVAR	Mina Array Bea	57.05	69	P	P	11 47 30.9	+0.8	
LHV	Little Huntoon	57.06	69	IAmb	IAmb	11 47 33.2		
	comp=Z,7.7nm,1.1s							
FXWY	Fox Creek	57.40	60	IAmb	IAmb	11 47 35.4		
	comp=Z,3.9nm,1.0s							
LOHW	Long Hollow	57.63	59	IAmb	IAmb	11 47 37.2		
	comp=Z,4.5nm,1.0s							
TPH	Tonopah	57.91	68	IAmb	IAmb	11 47 38.6		
	comp=Z,7.3nm,1.0s							
AHID	Auburn Hatcher	57.97	60	IAmb	IAmb	11 47 39.0		
	comp=Z,8.0nm,1.1s							
GMN	Gold Mountain	58.43	69	IAmb	IAmb	11 47 42.5		
	comp=Z,4.5nm,1.2s							
HWUT	Hardware Ranch	58.53	62	IAmb	IAmb	11 47 43.1		
	comp=Z,4.2nm,0.8s							
BW06	Boulder Array	58.77	59	IAmb	IAmb	11 47 44.4		
	comp=Z,5.8nm,0.8s							
PD31	Pinedale Array	58.77	59	IAmb	IAmb	11 47 44.4		
	comp=Z,5.9nm,0.8s							
PDAR	Pinedale Array	58.77	59	P	P	11 47 43.7	+1.6	
	comp=Z,4.4nm,0.7s,baz=317,slow=2.5,SNR=57							
	comp=Z,4.4nm,0.7s							
PDAR	Pinedale Array	58.77	59		P	11 47 43.1	+1.0	
DUG	Dugway, Tooele	58.85	63	IAmb	IAmb	11 47 45.3		
	comp=Z,7.5nm,1.1s							
TPNV	Topopah Spring	59.25	68	IAmb	IAmb	11 47 47.9		
	comp=Z,5.4nm,0.9s							
NLU	North Lily Min	59.42	63	IAmb	IAmb	11 47 49.2		
	comp=Z,4.0nm,0.9s							
LRMC	Laurel Mtn Rad	59.48	71	IAmb	IAmb	11 48 13.7		
	comp=Z,5.1nm,0.6s							
GWY	Greenwater Val	59.55	69	IAmb	IAmb	11 47 49.8		
	comp=Z,6.6nm,1.0s							
PRN	Pahroc Range	59.60	67	IAmb	IAmb	11 47 50.4		
	comp=Z,5.6nm,1.1s							
MPU	Maple Canyon	59.62	63	IAmb	IAmb	11 47 50.5		
	comp=Z,3.2nm,0.8s							
CHGR	Chuyangaron	59.66	295	⇑*e*P	P	11 47 46.7	-1.4	
CHGR				pmax	pmax			
	comp=Z,9.0nm,0.9s							
ULM	Lac du Bonnet	59.92	45	P	P	11 47 49.8	+0.3	
	comp=Z,1.3nm,0.5s,baz=318,slow=8.0,SNR=4.0							
	comp=Z,1.3nm,0.5s							
GSC	Goldstone, Bar	60.11	70	IAmb	IAmb	11 47 53.4		
	comp=Z,5.2nm,1.1s							
MWC	Mount Wilson	60.16	72	P	P	11 47 52.1	+0.4	
MWC				pmax	pmax			
	comp=Z,8.0nm,1.0s							
MWC	Mount Wilson	60.16	72	P	P	11 47 52.1	+0.4	
MWC				IAmb	IAmb	11 47 53.8		
	comp=Z,7.7nm,0.9s							
P17A	Butcher Ranch,	60.49	63	IAmb	IAmb	11 47 57.1		
	comp=Z,3.5nm,0.8s							
RSSD	Black Hills	60.61	55	P	P	11 47 55.7	+1.1	
RSSD				pmax	pmax			
	comp=Z,10.0nm,0.8s							
RSSD	Black Hills	60.61	55		P	11 47 55.7	+1.1	
Q16A	Castle Valley	60.65	63	IAmb	IAmb	11 47 57.6		
	comp=Z,6.0nm,1.1s							
MTPC	Mountain Pass	60.69	69	IAmb	IAmb	11 47 57.6		
	comp=Z,5.8nm,1.0s							
LCMT	Little Creek M	60.89	66	IAmb	IAmb	11 47 59.3		
	comp=Z,4.8nm,1.1s							
ELS	Elsinore Mount	60.94	72	P	P	11 47 58.1	+1.3	
ELS				IAmb	IAmb	11 47 58.3		
	comp=Z,3.7nm,0.7s							
PKCU	Pink Cliffs	61.09	65	IAmb	IAmb	11 48 01.8		
	comp=Z,6.8nm,1.2s							
KNB	Kanab	61.12	66	IAmb	IAmb	11 48 01.0		
	comp=Z,6.0nm,1.1s							
PMD	Palm Desert	61.54	71	IAmb	IAmb	11 48 02.4		
	comp=Z,3.8nm,0.9s							
U15A	North Rim	61.84	66	IAmb	IAmb	11 48 05.7		
	comp=Z,6.4nm,1.4s							
IRM	Iron Mountain	61.88	70	IAmb	IAmb	11 48 05.5		
	comp=Z,7.3nm,1.2s							
W13A	Hualapai Mount	61.91	68	IAmb	IAmb	11 48 05.8		
	comp=Z,3.9nm,1.1s							
PV22	Blue Mesa, Par	62.22	62	IAmb	IAmb	11 48 08.3		
	comp=Z,3.9nm,0.7s							
PV04	Paradox Valley	62.26	62	IAmb	IAmb	11 48 07.9		
	comp=Z,5.5nm,0.9s							
PV16	Nyswonger Mesa	62.31	63	IAmb	IAmb	11 48 08.3		
	comp=Z,5.5nm,0.9s							
PV12	Saucer Basin,	62.37	62	IAmb	IAmb	11 48 11.0		
	comp=Z,5.8nm,0.9s							
PV03	Paradox Valley	62.39	63	IAmb	IAmb	11 48 08.9		
	comp=Z,6.5nm,1.1s							
YUH	Yuha Desert	62.53	72	IAmb	IAmb	11 48 09.3		
	comp=Z,4.3nm,1.1s							
ISCO	Idaho Springs	62.97	59	IAmb	IAmb	11 48 13.2		
	comp=Z,6.3nm,1.2s							
ESJX	Sierra Juarez	62.99	72	IAmb	IAmb	11 48 12.8		
	comp=Z,6.2nm,1.0s							
WUAZ	Wupatki	63.01	66	IAmb	IAmb	11 48 14.1		
	comp=Z,6.8nm,1.1s							
Y14A	Wickenburg	63.25	69	IAmb	IAmb	11 48 14.6		
	comp=Z,6.7nm,1.1s							
MVCO	Mesa Verde	63.34	63	IAmb	IAmb	11 48 15.2		
	comp=Z,4.3nm,0.9s							
NB2	NORSAR Subarra	63.36	343	P	P	11 48 11.2	-1.3	
	comp=Z,0.8nm,0.7s,baz=22,slow=6.9							
NOA	NORSAR Array B	63.36	343	P	P	11 48 11.1	-1.4	
	comp=Z,0.6nm,0.7s,baz=22,slow=5.3,SNR=3.2							
	comp=Z,0.6nm,0.7s							
HFS	Hagfors	63.73	341	P	P	11 48 13.4	-1.4	
	comp=Z,0.4nm,0.5s,baz=12,slow=7.4,SNR=1.2							
	comp=Z,0.4nm,0.5s							
X16A	Lo Mia Camp, P	63.78	67	IAmb	IAmb	11 48 18.6		
	comp=Z,5.5nm,1.1s							
ECSD	EROS Data Cent	64.49	51	IAmb	IAmb	11 48 21.4		
	comp=Z,7.7nm,1.3s							
KAPI	Kappang	66.07	222	⇓*e*P	P	11 48 37.1	+6.6	
KAPI				pmax	pmax			
	comp=Z,61nm,1.5s							
ANMO	Albuquerque	66.13	63	P	P	11 48 32.3	+1.3	
ANMO				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ANMO	Albuquerque	66.13	63		P	11 48 32.3	+1.3	
ALQ	Albuquerque	66.13	63	IAmb	IAmb	11 48 33.2		
	comp=Z,2.3nm,0.8s							
Y22A	Socorro	66.61	64	IAmb	IAmb	11 48 36.9		
	comp=Z,6.6nm,1.3s							
121A	Cookes Peak, D	67.21	66	IAmb	IAmb	11 48 40.8		
	comp=Z,8.1nm,1.4s							
AKASG	Malin Array Be	68.10	328	P	P	11 48 41.3	-1.6	
	comp=Z,1.0nm,0.3s,baz=0.2,slow=7.1,SNR=3.3							
	comp=Z,1.0nm,0.3s							
MNTX	Cornudas Mount	69.17	65	IAmb	IAmb	11 48 52.1		
	comp=Z,3.7nm,0.8s							
MNHN	Monahans	70.88	63	IAmb	IAmb	11 49 02.1		
	comp=Z,5.3nm,0.7s							
EKA	Eskdalemuir Ar	71.02	349	P	P	11 49 00.5	-0.2	
	comp=Z,1.8nm,0.7s,baz=17,slow=6.1,SNR=4.3							
	comp=Z,1.8nm,0.7s							
TXAR	Lajitas Array	71.93	65	P	P	11 49 07.9	+1.2	
	comp=Z,4.3nm,0.8s,baz=298,slow=4.6,SNR=51							
	comp=Z,4.3nm,0.8s							
TXAR	Lajitas Array	71.93	65		P	11 49 07.6	+0.9	
WRA	Warramunga Arr	75.35	203	P	P	11 49 27.1	+0.6	
	comp=Z,1.1nm,0.9s,baz=14,slow=5.6,SNR=4.0							
	comp=Z,1.1nm,0.9s							
ESDC	Sonseca Array	86.49	346	P	P	11 50 24.7	-0.7	
	comp=Z,1.6nm,0.9s,baz=6.4,slow=5.0,SNR=9.8							
	comp=Z,1.6nm,0.9s							
VNDA	Vanda	130.16	179	PKP	PKiKP	11 56 53.3	+2.4	
	comp=Z,1.3nm,0.5s,baz=142,slow=1.4,SNR=3.8							
QSPA	South Pole Qui	142.62	180	PKhKP	PKPpre	11 57 09.1		
	comp=Z,1.0nm,0.9s,baz=296,slow=1.4,SNR=2.2							

GCMT ***25*** *11:40:17.4±0.2, 12°.23S±0°.02×166°.44E±0°.02, h109km±1km, MW4.9/110, Moment Tensor Solution. s69,c79; s110,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.16±.06; $M_{\theta\theta}$-0.39±.09; $M_{\phi\phi}$-2.77±.09; $M_{r\theta}$0.19±.09; $M_{\theta\phi}$0.58±.10; $M_{\phi r}$-0.24±.08; Best double couple: M_o3.04700×10^{16} NP1φ_s349.00000°,δ42.00000°, λ93.00000°. NP2φ_s165.00000°,δ48.00000°,λ87.00000°. Principal axes: T 3.1780, Plg87.0000°, Azm37.0000°; N -0.2650, Plg2.0000°, Azm167.0000°; P -2.9170, Plg3.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***25*** *11:40:17.6, 12°.06S×166°.62E, h118km, mB5.1/51, Santa Cruz Islands*

BJI ***25*** *11:40:18.6, 11°.72S×166°.80E, h124km, mB5.0/10, mb4.8/43*

IDC ***25*** *11:40:18.0±2.3, 12°.19S×166°.56E, h115km±19km, mb4.2/20, mbtmp4.6/22, MS3.6/32, Error ellipse: s-maj=15.9km s-min=11.8km az=77.0*

NEIC ***25*** *11:40:19.4±1.8, 12°.24S±0°.10×166°.6E±0°.1, h125km±7km, mb4.9/46, Error ellipse: s-maj=16.2km s-min=13.5km az=61.0*

GFZ ***25*** *11:40:20.1±0.5, 12°S±5°×16°7E±°, h153km, M4.7/27, mb4.7/27*

ISC 25 11:40:19.0±0.7, 12°.23S±0°.05×166°.54E±0°.06, h127km±6km, n216, σ1ŝ11/204, mb4.8/57, 5C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	Huro Makira	4.87	291	P	Pn	11 41 28.9	-1.5
DVP	Devils Point	5.70	164	P	Pn	11 41 42.2	+0.

RMQ Roma 21.93 227 P P 11 45 04.0 +1.7
MTSU Mount Surprise 22.22 252 P P 11 45 06.1 +0.6
RAO Raoul Island 22.28 142 LR LR 11 52 51.8
comp=Z,35nm,18.3s,baz=138,slow=34
ARMA Armidale 22.77 215 P P 11 45 13.3 +2.5
ARMA Armidale 22.77 215 P 11 45 08.8 -2.1
ARMA Armidale 22.77 215 P P 11 45 12.2 +1.3
OUZ Omahuta 23.77 166 P P 11 45 21.2 +1.4
OUZ Omahuta 23.77 166 P P 11 45 20.6 +0.8
QLP Quilpie 25.36 232 P P 11 45 35.6 +1.1
QLP Quilpie 25.36 232 P P 11 45 35.5 +1.1
QIS Mount Isa 27.10 249 P P 11 45 50.2 0.0
CMSA Cobar Meteorol 27.17 222 P P 11 45 50.7 0.0
CMSA Cobar Meteorol 27.17 222 P P 11 45 50.7 0.0
HIZ Hauiti 27.21 166 P P 11 45 52.3 +1.4
HIZ Hauiti 27.21 166 P P 11 45 51.2 +0.3
URZ Urewera 27.59 162 LR LR 11 55 41.4
comp=Z,94nm,18.8s,baz=333,slow=33
URZ Urewera 27.59 162 P P 11 45 54.3 +0.1
URZ Urewera 27.59 162 P P 11 45 54.2 -0.1
RTZ Ruatahuna 27.88 162 P P 11 45 56.4 -0.5
RTZ IAmb IAmb 11 45 57.3
comp=Z,30nm,1.3s
CAN Canberra 27.95 212 P P 11 45 58.3 +0.7
CAN Canberra 27.95 212 P P 11 45 57.6 +0.1
BKZ Black Stump Fm 28.25 164 P P 11 46 00.8 +0.6
BKZ Black Stump Fm 28.25 164 P P 11 46 00.1 -0.1
QRZ Quartz Range 28.97 171 P P 11 46 07.6 +1.1
QRZ Quartz Range 28.97 171 P P 11 46 06.6 +0.1
MILA Mila 29.23 209 P P 11 46 10.1 +1.1
BFZ Birch Farm 29.61 165 P P 11 46 12.3 +0.2
BFZ Birch Farm 29.61 165 P P 11 46 11.0 -1.1
SNZO South Karori 29.84 168 P P 11 46 16.0 +1.8
SNZO South Karori 29.84 168 P P 11 46 13.4 -0.7
STKA Stephens Creek 30.15 226 P P 11 46 18.2 +1.1
comp=Z,7.1nm,0.6s,baz=56,slow=6.3,SNR=20
STKA PcP PcP 11 49 14.6 -0.8
comp=Z,1.8nm,0.6s,baz=45,slow=2.9,SNR=2.5
STKA LR LR 11 58 29.1
comp=Z,204nm,18.3s,baz=45,slow=36
comp=Z,7.1nm,0.6s
STKA Stephens Creek 30.15 226 P P 11 46 18.1 +1.1
STKA Stephens Creek 30.15 226 P P 11 46 17.5 +0.5
H11S2 WAKE ISLAND Hy 30.52 0 T T 12 17 21.5
baz=154,slow=74,SNR=3.0
H11S1 WAKE ISLAND Hy 30.54 0 T T 12 17 16.0
baz=176,slow=74,SNR=2.8
KHZ Kahutara 30.69 170 P P 11 46 21.4 -0.2
KHZ Kahutara 30.69 170 P P 11 46 21.4 -0.2
TOZ Toolangi 31.49 213 P P 11 46 29.6 +0.8
RPZ Rata Peaks 31.62 174 LR LR 11 58 26.5
comp=Z,13nm,19.6s,baz=284,slow=34
RPZ Rata Peaks 31.62 174 P P 11 46 30.6 +0.8
RPZ Rata Peaks 31.62 174 P P 11 46 29.6 -0.3
WR8 Warramunga Arr 31.68 252 P P 11 46 30.7 0.0
WR8 IAmb IAmb 11 46 31.6
comp=Z,18nm,1.2s
WB0 Warramunga Arr 31.75 252 P 11 46 31.5 +0.1
WB0 IAmb IAmb 11 46 32.3
comp=Z,34nm,1.3s
JCZ Jackson Bay 31.79 177 P P 11 46 32.2 +0.7
WRAB Tennant Creek 31.82 252 P P 11 46 32.7 +0.8
WRAB Tennant Creek 31.82 252 P P 11 46 30.9 -1.0
WRAB IAmb IAmb 11 46 32.9
comp=Z,18nm,1.3s
WRAB Tennant Creek 31.82 252 P P 11 46 30.9 -1.0
WRA Warramunga Arr 31.83 252 P P 11 46 31.7 -0.3
comp=Z,7.1nm,1.0s,baz=85,slow=9.1,SNR=24
WRA PcP PcP 11 49 20.0 -0.2
comp=Z,0.6nm,0.6s,baz=70,slow=3.1,SNR=4.9
comp=Z,7.1nm,1.0s
WRA Warramunga Arr 31.83 252 P 11 46 31.1 -0.9
HTT Hallett 32.88 226 P P 11 46 42.6 +1.5
ODZ Otahua Downs 32.89 175 P P 11 46 41.9 +1.0
ODZ Otahua Downs 32.89 175 P P 11 46 40.5 -0.4
AS01 Alice Springs 32.94 245 P P 11 46 41.7 0.0
AS31 Alice Springs 32.98 245 P 11 46 41.3 -0.7
ASAR Alice Springs 32.98 245 P P 11 46 41.5 -0.6
comp=Z,9.8nm,0.8s,baz=66,slow=10.0,SNR=94
ASAR PcP PcP 11 49 22.9 -0.3
comp=Z,0.3nm,0.5s,baz=93,slow=3.9,SNR=4.1
ASAR LR LR 11 58 51.7
comp=Z,176nm,20.8s,baz=76,slow=34
comp=Z,9.8nm,0.8s
ASAR Alice Springs 32.98 245 P 11 46 41.3 -0.8
ASAR PcP 11 49 21.9 -1.4
RAR Rarotonga 33.42 110 LR LR 11 59 19.3
comp=Z,32nm,18.9s,baz=302,slow=34
MOO Moorlands 34.49 206 P P 11 46 55.7 +0.9
MOO Moorlands 34.49 206 P P 11 46 55.7 +0.9
MTN Manton Dam 34.55 265 P P 11 46 54.1 -1.6
BBOO Buckleboo 34.62 229 P P 11 46 55.7 -0.3
BBOO Buckleboo 34.62 229 P P 11 46 56.7 +0.7
BBOO IAmb IAmb 11 46 58.3
comp=Z,29nm,1.3s
BBOO Buckleboo 34.62 229 P P 11 46 55.8 -0.2
TAU Tasmania Unive 34.82 205 P P 11 46 57.4 -0.2
FAKI Fak Fak 35.18 282 P P 11 46 59.0 -2.2
SIJI Sorong 36.75 285 LR LR 12 04 18.3
comp=Z,76nm,18.2s,baz=228,slow=39
SIJI Sorong 36.75 285 P P 11 47 13.8 -0.7
SWI Sorong 36.76 285 P P 11 47 13.2 -1.3
KNRA Kununurra 36.79 260 P P 11 47 15.2 +0.5
KNRA IAmb IAmb 11 47 15.7
comp=Z,17nm,1.0s
FITZ Fitzroy Crossi 39.84 256 P P 11 47 40.6 +0.3
comp=Z,26nm,1.1s,baz=94,slow=8.3,SNR=8.9
FITZ PcP PcP 11 49 44.4 +0.4
comp=Z,5.0nm,1.1s,baz=113,slow=7.7,SNR=2.2
FITZ LR LR 12 05 03.5
comp=Z,67nm,18.6s,baz=41,slow=37
comp=Z,26nm,1.1s
FITZ Fitzroy Crossi 39.84 256 P P 11 47 40.6 +0.3
FITZ Fitzroy Crossi 39.84 256 P P 11 47 40.8 +0.5
FITZ PcP PcP 11 49 44.8 +0.9
FITZ Fitzroy Crossi 39.84 256 P P 11 47 39.8 -0.6
FORT Forrest 40.02 236 P P 11 47 42.4 +0.8
SOEI Soe 41.54 269 P P 11 47 53.5 -1.0
BATI Baumata 42.07 268 LR LR 12 06 59.4
comp=Z,117nm,18.4s,baz=168,slow=38
PPT Papeete 42.67 103 LR LR 12 02 33.9
comp=Z,48nm,19.8s,baz=285,slow=31
MBWA Marble Bar 45.57 252 P P 11 48 27.4 +0.8
MBWA Marble Bar 45.57 252 P P 11 48 27.5 +1.0
MBWA pP pwP 11 49 00.8 -1.7
MEEK Meekatharra 47.14 245 P P 11 48 38.7 -0.1
MEEK Meekatharra 47.14 245 P P 11 48 38.7 -0.1
TOLI2 Tolitoli 47.32 283 P P 11 48 39.9 -0.4
TOLI2 Tolitoli 47.32 283 P P 11 48 39.2 -1.1
TOLI2 IAmb IAmb 11 48 41.1
comp=Z,16nm,0.9s
TOLI2 Tolitoli 47.32 283 P P 11 48 40.0 -0.4
PCI Palu 47.65 280 P P 11 48 45.2 +2.3
BLDU Ballidu 49.44 240 P P 11 48 57.3 +1.0
NWAO Narrogin (SRO) 49.46 237 LR LR 12 09 35.8
comp=Z,101nm,18.0s,baz=112,slow=36
NWAO Narrogin (SRO) 49.46 237 P P 11 48 57.2 +0.7
MORW Morawa 49.75 242 P P 11 48 59.3 +0.5
MORW Morawa 49.75 242 P P 11 48 59.6 +0.8
MORW Morawa 49.75 242 P P 11 48 58.3 -0.5
MYLDM Lahad Datu 50.79 287 P P 11 48 08.9 +2.2
MYLDM Lahad Datu 50.79 287 P P 11 49 09.5 +2.8
comp=Z,29nm,1.3s
MYLDM Lahad Datu 50.79 287 P P 11 49 05.3 -1.4
SNJI Sawahan-Nganju 54.05 269 P P 11 49 32.9 +1.8
comp=Z,46nm,1.7s
MJAR Matsushiro Arr 55.37 332 P P 11 49 39.0 -0.9
comp=Z,6.6nm,1.1s,baz=164,slow=7.2,SNR=8.9
comp=Z,6.6nm,1.1s
MJAR Matsushiro Arr 55.37 332 P P 11 49 39.3 -0.6
MJAR IAmb IAmb 11 49 40.4
comp=Z,11nm,1.5s
JSU Suzuyama 55.57 322 P P 11 49 42.2 +0.8
JHS Saijyo 56.65 327 P P 11 49 47.9 -1.2
JHS Saijyo 56.65 327 P P 11 49 47.1 -2.0
TPUB Ta-pu 57.13 308 P 11 49 53.1 +0.3
DRV Dumont d'Urvil 57.22 192 P P 11 49 52.4 -0.1
LEM Lembang 58.26 269 P P 11 50 01.6 +0.7
comp=Z,19nm,0.6s,baz=103,slow=7.0,SNR=4.0
comp=Z,19nm,0.6s
JKA Kamikawa-asahi 60.16 340 P P 11 50 14.1 +0.9
JKA IAmb IAmb 11 51 41.9
comp=Z,24nm,1.4s
ASAJ Asahikawa 60.16 340 P P 11 50 13.0 -0.2
comp=Z,2.1nm,0.5s,baz=209,slow=6.5,SNR=5.5
comp=Z,2.1nm,0.5s
KSRS Korea Array 61.28 326 P P 11 50 21.6 +0.7
comp=Z,2.3nm,0.9s,baz=133,slow=6.6,SNR=5.3
comp=Z,2.3nm,0.9s
NJ2 Nanjing 63.40 315 ⇑P P 11 50 36.0 +0.8
NJ2 pmax pmax
comp=Z,64nm,0.8s
USA0B Ussuriysk Arra 64.34 333 P P 11 50 42.1 +1.0
USRK Ussuriysk Ar. 64.34 333 P P 11 50 41.3 +0.2
comp=Z,6.5nm,1.0s,baz=134,slow=5.5,SNR=8.3
comp=Z,6.5nm,1.0s
USRK Ussuriysk Ar. 64.34 333 P 11 50 42.1 +1.1
SHEM Shemya Is, Ala 65.02 5 LR LR 12 14 41.8
comp=Z,26nm,19.5s,baz=244,slow=32
VNDA Vanda 65.33 181 P P 11 50 48.0 +0.9
comp=Z,4.9nm,1.0s,baz=356,slow=6.9,SNR=8.5
VNDA PKKP PKKPdf 12 11 06.1 -4.6
comp=Z,2.3nm,0.3s,baz=43,slow=4.5,SNR=9.8
VNDA LR LR 12 13 53.6
comp=Z,38nm,20.9s,baz=336,slow=31
comp=Z,4.9nm,1.0s
VNDA Vanda 65.33 181 P P 11 50 47.4 +0.3
VNDA IAmb IAmb 11 50 48.8
comp=Z,30nm,1.5s
CASY Casey 65.57 202 P P 11 50 48.8 0.0
CASY IAmb IAmb 11 50 49.8
comp=Z,10nm,0.7s
CASY Casey 65.57 202 P P 11 50 48.4 -0.4
CASY Casey 65.57 202 P P 11 50 48.5 -0.3
BNX BinXian 67.61 331 ⇓P P 11 51 02.8 +0.8
BNX pmax pmax
comp=Z,14nm,0.9s
COCO West Island 67.93 262 P P 11 51 17.8 +13
RPSI Rantau Prapat 68.77 278 P P 11 51 09.4 -0.5
RPSI IAmb IAmb 11 51 11.1
comp=Z,17nm,1.1s
LYN LuoYang 69.22 314 P P 11 51 13.5 +1.2
LYN pmax pmax
comp=Z,20nm,1.0s
HNS HongShan 69.27 318 ⇑P P 11 51 13.5 +1.0
HNS pmax pmax
comp=Z,19nm,1.5s
HNS L L
comp=Z,140nm,18.5s
HNS L L
comp=Z,140nm,14.7s
HNS L L
comp=Z,93nm,13.4s
BJI2 Beijing 69.87 321 P P 11 51 17.5 +1.4
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
SLVN Son La 69.95 298 P P 11 51 18.1 +1.0
SLVN IAmb IAmb 11 51 20.0
comp=Z,20nm,1.4s
HEH HeiHe 71.00 335 eP P 11 51 23.0 +0.2
HEH pmax pmax
comp=Z,10.0nm,1.2s
XAN Xi'an 71.48 312 ⇑P P 11 51 26.8 +0.7
XAN pmax pmax
comp=Z,20nm,1.1s
KMI2 Kunming 72.40 301 ⇑P P 11 51 34.0 +2.0
KMI2 pmax pmax
comp=Z,29nm,1.1s
HHC Hu-ho-hao-te 73.23 320 eP P 11 51 39.3 +2.9
HHC pmax pmax
comp=Z,18nm,0.6s
CM31 Chiang Mai Arr 73.29 294 P P 11 51 37.9 +0.8
CM31 IAmb IAmb 11 51 40.0
comp=Z,22nm,1.2s
CMAR Chiang Mai Arr 73.29 294 P P 11 51 38.6 +1.5
comp=Z,7.7nm,1.1s,baz=114,slow=3.9,SNR=33
comp=Z,7.7nm,1.1s
CMAR Chiang Mai Arr 73.29 294 P 11 51 38.1 +1.0
CHTO Chiang Mai 73.41 294 P 11 51 39.1 +1.4
CHTO IAmb IAmb 11 51 40.4
comp=Z,21nm,1.2s
CHTO Chiang Mai 73.41 294 P P 11 51 39.2 +1.4
comp=Z,15nm,1.5s
PZH PanZhiHua 73.76 302 P P 11 51 42.3 +2.5
CD2 Chengdu 73.93 307 P P 11 51 41.5 +0.8
CD2 pmax pmax
comp=Z,30nm,0.8s
BTO2 Baotou 74.25 319 eP P 11 51 44.3 +1.9
BTO2 sP sP 11 52 29.5 +3.0
BTO2 pmax pmax
comp=Z,24nm,1.1s
BTO2 pmax pmax
comp=Z,200nm,5.5s
LZH Lanzhou 76.12 312 eP P 11 51 55.3 +2.0
LZH pmax pmax
comp=Z,37nm,1.5s
LZDM Lanzhou Array 76.17 312 P P 11 51 55.3 +1.6
comp=Z,1.0nm,0.3s,baz=194,slow=9.9,SNR=3.9
comp=Z,1.0nm,0.3s
QSPA South Pole Qui 77.79 180 P P 11 52 02.2 +0.1
comp=Z,3.8nm,0.5s,baz=285,slow=0.5,SNR=53
QSPA LR LR 12 22 40.7
comp=Z,26nm,19.6s,baz=25,slow=33
comp=Z,3.8nm,0.5s
QSPA South Pole Qui 77.79 180 P P 11 52 02.0 0.0
QSPA IAmb IAmb 11 52 05.0
comp=Z,36nm,1.6s
M16K Timber Creek 77.96 16 P P 11 52 03.3 +0.5
M16K IAmb IAmb 11 54 05.0
comp=Z,43nm,1.9s
ULN Ulaanbaatar 79.71 324 P P 11 52 13.3 +0.5
ULN IAmb IAmb 11 52 15.1
comp=Z,40nm,1.6s
ULN Ulaanbaatar 79.71 324 P P 11 52 13.9 +1.1
comp=Z,56nm,1.4s
ULN Ulaanbaatar 79.71 324 P P 11 52 14.1 +1.2
SONM Songino Array 80.07 324 P P 11 52 15.2 +0.5
comp=Z,1.9nm,0.4s,baz=156,slow=6.2,SNR=20
comp=Z,1.9nm,0.4s
SONM Songino Array 80.07 324 P P 11 52 15.9 +1.1
GTA2 Gaotai 80.50 314 eP P 11 52 18.5 +1.2
GTA2 pmax pmax
comp=Z,16nm,1.2s
SHL Shillong 81.76 298 IAmb IAmb 11 52 26.3
comp=Z,32nm,1.3s
H19K Roundabout Mou 82.31 15 P P 11 52 26.4 +0.4
MAW Mawson 83.92 202 P P 11 52 34.7 +0.3
comp=Z,5.5nm,1.0s,baz=112,slow=4.9,SNR=8.9
MAW LR LR 12 26 34.9
comp=Z,33nm,19.7s,baz=97,slow=33
comp=Z,5.5nm,1.0s
MAW Mawson 83.92 202 P P 11 52 34.8 +0.4
HDA Harding Lake 84.11 18 P P 11 52 34.6 -0.7
ILAR Eielson Array 84.38 18 P P 11 52 35.7 -1.0
comp=Z,1.6nm,0.6s,baz=240,slow=5.3,SNR=31
ILAR LR LR 12 24 07.8
comp=Z,35nm,21.0s,baz=212,slow=31
comp=Z,1.6nm,0.6s
ILAR Eielson Array 84.38 18 P P 11 52 35.8 -0.8
BBB Bella Bella 85.11 34 LR LR 12 24 31.4
comp=Z,51nm,19.8s,baz=222,slow=31
PFO Pinyon Flats O 86.13 55 LR LR 12 23 06.7
comp=Z,52nm,21.4s,baz=258,slow=30
NVAR Mina Array Bea 86.19 50 LR LR 12 24 02.9
comp=Z,86nm,20.2s,baz=211,slow=30
EVN Everest 86.78 299 IAmb IAmb 11 52 52.9
comp=Z,24nm,1.2s
G26K Porcupine Rive 86.81 17 P P 11 52 49.7 +1.1
DLBC Dease Lake 87.08 28 LR LR 12 24 55.0
comp=Z,28nm,19.7s,baz=259,slow=31
PRN Pahroc Range 88.33 51 P 11 52 56.1 -0.6
PRN IAmb IAmb 11 53 39.1
comp=Z,10nm,1.4s
LPIG La Paz 88.80 65 LR LR 12 26 16.9
comp=Z,20nm,18.5s,baz=261,slow=31
ELK Elko 89.15 48 LR LR 12 26 12.8
comp=Z,44nm,20.1s,baz=266,slow=31
BELA Belgrano 2 89.26 176 P P 11 52 59.3 -1.0
BELA IAmb IAmb 11 53 01.4
comp=Z,17nm,1.2s
NEW Newport 90.13 40 LR LR 12 26 23.9
comp=Z,30nm,19.3s,baz=291,slow=31
WMQ Urumqi 90.47 315 eP P 11 53 05.0 -1.5
WMQ pmax pmax
comp=Z,44nm,1.1s
WMQ pmax pmax
comp=Z,62nm,3.7s
INK Inuvik 90.76 19 LR LR 12 29 08.7
comp=Z,35nm,19.5s,baz=233,slow=32
ELIB Princess Elisa 92.53 191 dP P 11 53 15.1 -0.6
comp=Z,6.0nm,1.1s
PDAR Pinedale Array 93.78 47 LR LR 12 29 42.8
comp=Z,15nm,20.0s,baz=280,slow=32
ANMO Albuquerque 94.47 55 LR LR 12 29 43.1
comp=Z,29nm,18.5s,baz=269,slow=31
MK31 Makanchi Array 94.91 317 P P 11 53 27.0 +0.2
MKAR Makanchi Array 94.91 317 P P 11 53 27.2 +0.3
comp=Z,4.3nm,0.6s,baz=91,slow=6.6,SNR=33
MKAR PP PP 11 57 16.8 -0.9
comp=Z,0.2nm,0.5s,baz=105,slow=7.6,SNR=4.3
MKAR PKKP PKKPbc 12 10 24.8 +0.6
comp=Z,0.3nm,0.6s,baz=284,slow=4.9,SNR=4.2
comp=Z,4.3nm,0.6s
MKAR Makanchi Array 94.91 317 P 11 53 27.0 +0.1
ZALV Zalesovo Beam 94.96 324 P P 11 53 26.3 -0.5
comp=Z,2.2nm,0.7s,baz=107,slow=5.0,SNR=11
comp=Z,2.2nm,0.7s
ZALV Zalesovo Beam 94.96 324 P 11 53 25.8 -1.1
MAKZ Makanchi 95.12 317 P P 11 53 28.0 +0.2
TROLL Troll, Antarti 95.28 185 ⇑P P 11 53 27.5 -0.8
comp=Z,304nm,0.6s
YKA Yellowknife Ar 95.66 27 LR LR 12 33 21.6
comp=Z,15nm,18.0s,baz=320,slow=33
TXAR Lajitas Array 95.71 61 P P 11 53 30.7 -0.3
comp=Z,0.1nm,0.7s,baz=239,slow=5.2,SNR=2.4
TXAR LR LR 12 29 41.4
comp=Z,29nm,20.6s,baz=256,slow=31
comp=Z,0.1nm,0.7s
VNA2 Neumayer--Watz 96.94 182 P P 11 53 35.8 +0.1
comp=Z,3.4nm,0.6s,baz=166,slow=4.8
VNA1 Neumayer--Stat 97.25 182 P P 11 53 37.0 -0.1
comp=Z,4.3nm,1.0s
NRIK Noril'sk 97.49 339 LR LR 12 36 20.8
comp=Z,11nm,21.1s,baz=134,slow=34
ARCES ARCESS Array B 117.66 346 PKP PKPdf 11 58 49.2 -0.3
comp=Z,0.9nm,0.4s,baz=59,slow=2.8,SNR=8.5
FINES FINESS Array B 123.15 339 PKP PKPdf 11 58 60.0 -0.3
comp=Z,2.3nm,0.9s,baz=0.0,slow=5.7,SNR=8.3
AKASG Malin Array Be 128.27 327 PKP PKiKP 11 59 11.7 +0.7
comp=Z,0.2nm,0.3s,baz=56,slow=1.3,SNR=5.3
GERES GERESS Array B 137.10 334 PKP PKiKP 11 59 28.8 -0.3
comp=Z,0.1nm,0.3s,baz=17,slow=5.7,SNR=4.4
KEST Kesra 148.82 322 PKPbc PKiKP 11 59 52.9 -0.7
comp=Z,6.6nm,0.7s,baz=292,slow=6.2,SNR=8.1
ESDC Sonseca Array 151.40 345 PKPbc PKiKP 11 59 58.2 -0.4
comp=Z,2.1nm,1.1s,baz=18,slow=2.3,SNR=9.9
ESDC PKPab PKPab 12 00 07.3 +0.5
comp=Z,0.9nm,0.6s,baz=11,slow=3.9,SNR=13
TORD Torodi Ar. Bea 165.18 275 PKP PKPdf 12 00 09.1 -0.1
comp=Z,3.0nm,1.2s,baz=98,slow=1.6,SNR=5.6
TORD PKPab PKPab 12 01 07.7 +0.6
comp=Z,4.2nm,1.1s,baz=83,slow=2.4,SNR=9.0

ECX ***25*** *12:01:47.8±0.3,31.28N×115.72W,h9km±3km, MD3.0, ML3.3*
MEX ***25*** *12:01:48.4±0.9,31.23N×115.63W,h22km±999km, MD3.6*
ISC 25 12:01:45.2±1.1,31.19N±0.03×115.68W±0.04,h15km±8km, n25,σ0.965/33,6C-14D,Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VTX	Valle De La Tr	0.22	335	⇓iP		Pg	12 01 50.6	+0.4
VTX				eS		Sg	12 01 53.0	-0.7
SV2X	San Vicente	0.50	287	⇑iP		Pb	12 01 55.9	+0.2
SV2X				eS		Sg	12 02 02.0	+0.1
SV2X				IAML			12 02 02.7	
	comp=E,4μm,0.2s							
SV2X				⇑e			12 02 02.7	
ECBX	El Chinero	0.60	62	⇑iP		Pb	12 01 58.5	+1.0
ECBX				eS		Sb	12 02 06.0	+0.2
ECBX				IAML			12 02 06.6	
	comp=N,1μm,0.3s							
ECBX				IAML			12 02 08.2	
	comp=E,1μm,0.2s							
SJX	San Joaquin	0.62	337	⇓iP		Pn	12 02 01.0	+1.6
SQX	San Quintin	0.64	195	⇓iP		Pn	12 02 00.3	+0.6
SQX				eS		Sn	12 02 09.9	+0.4
SQX				IAML			12 02 11.5	
	comp=N,3μm,0.2s							
SQX				e			12 02 11.5	
ALAMX	Rancho Alamar	0.81	358	⇓iP		Pb	12 02 00.7	-0.3
ALAMX				IAML			12 02 11.2	
	comp=E,3μm,0.2s							
ALAMX				IAML			12 02 13.2	
	comp=N,3μm,0.2s							
RHX	Rio Hardy	1.00	20	⇑eP		Pb	12 02 03.8	-0.3
PBX	Punta Banda	1.05	302	⇓iP		Pb	12 02 05.2	+0.1
PBX				IAML			12 02 19.8	
	comp=N,645nm,0.2s							
CCX	Cicese	1.08	309	⇓eP		Pb	12 02 05.2	-0.3
AGSX	Ej. Aguas Cali	1.16	22	⇓eP		Pn	12 02 06.7	-0.1
GUVIX	Guadalupe Vict	1.22	25	⇓eP		Pb	12 02 08.4	+0.4
CPBX	Cerro Prieto	1.26	15	⇓eP		Pg	12 02 09.4	-0.2
MBIG	Mexicali	1.28	19	eP		Pb	12 02 09.2	+0.3
MBIG				eS		Sb	12 02 24.7	-0.5
JARAX	Ej. Heriberto	1.34	4	⇑eP		Pn	12 02 09.7	+0.3
CBX	Cerro Bola	1.40	323	⇓eP		Pn	12 02 10.1	-0.1
CBX				IAML			12 02 28.9	
	comp=N,469nm,0.4s							
CBX				IAML			12 02 35.7	
	comp=E,383nm,0.4s							
CBX	Cerro Bola	1.40	323	eP		Pn	12 02 10.2	-0.1
CBX				eS		Sn	12 02 27.4	-1.1
RMX	La Rumorosa	1.45	346	⇓eP		Pn	12 02 10.4	-0.6
YUH2	Yuha Desert	1.46	352	⇓eP		Pn	12 02 11.1	0.0
IKP	In-Ko-Pah, Jac	1.50	346	eP		Pn	12 02 11.9	+0.3
TJIG	Tijuana	1.50	326	⇓iP		Pn	12 02 11.8	+0.2
TJIG	Tijuana	1.50	326	eP		Pn	12 02 11.6	+0.1
TJIG				eS		Sn	12 02 30.3	-0.6
WESC	Westside Schoo	1.56	358	⇑iP		Pb	12 02 14.4	+0.6
TKX	Tecate	1.58	330	eP		Pn	12 02 13.4	+0.7
BAR	Barrett	1.71	331	⇓eP		Pn	12 02 15.1	+0.7
BAHB	Baha de los	2.90	140	eP		Pb	12 02 35.0	-1.6
BAHB				eS		Sb	12 03 12.6	+0.8

IDC ***25*** *12:02:20.2±1.9,33.94S×178.42W,h0km,mb4.0/4, mbtmp3.9/6,ML3.2/2,Error ellipse: s-maj=39.7km s-min=30.4km az=89.0*
ISC 25 12:02:25.6±1.7,34.0S±0.1×178.4W±0.2,h37km,n7, σ1.852/8,mb4.0/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
URZ	Urewera	5.57	219	Pn		Pn	12 03 45.4	-0.4
	2.0nm,0.3s,baz=262,slow=3.9,SNR=11							
URZ					Sn	Sn	12 04 50.0	+1.4
	2.8nm,0.3s,baz=72,slow=23,SNR=10							
	3.7nm,0.3s							
RPZ	Rata Peaks	12.69	217	Pn		Pn	12 05 20.8	-2.5
	baz=15,slow=12,SNR=1.8							
RPZ					Sn	Sn	12 07 30.8	-12
	0.1nm,0.3s,baz=298,slow=20,SNR=0.9							
	1.2nm,0.8s							
CTA	Charters Tower	34.19	285	P		P	12 09 08.4	+0.8
	2.0nm,0.7s,baz=105,slow=12,SNR=2.2							
	2.0nm,0.7s							
ASAR	Alice Springs	42.69	271	P		P	12 10 18.9	0.0
	1.2nm,0.8s,baz=111,slow=7.5,SNR=18							
	1.2nm,0.8s							
WRA	Warramunga Arr	44.00	276	P		P	12 10 29.3	-0.3
	1.5nm,0.7s,baz=117,slow=7.9,SNR=12							
	1.5nm,0.7s							
QSPA	South Pole Qui	56.12	180	P		P	12 12 02.2	+1.2
	1.5nm,0.9s,baz=31,slow=7.1,SNR=3.0							
	1.5nm,0.9s							
FINES	FINESS Array B	148.37	338	PKPbc		PKPbc	12 22 06.2	-0.9
	1.3nm,0.7s,baz=50,slow=3.0,SNR=5.8							

NNC 25 12:04:42.1±3.6,37.25N×71.34E,h0km,mb3.6,mpv3.3, 3C,Error ellipse: s-maj=29.1km s-min=23.6km az=155.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KK31	Karatay Array	5.88	354	P		Pn	12 06 10.3	-0.2
	0.9nm,0.2s,baz=173,slow=11,SNR=47							
KK31				⇑S		Sn	12 07 19.4	+0.8
	3.5nm,0.4s,baz=171,slow=20							
AAK	Ala-Archa	5.90	23	⇑P		Pn	12 06 11.1	+0.2
	2.5nm,1.0s							
AAK				⇑S		Sn	12 07 21.0	+1.7
	2.6nm,0.7s							
AB31	Akbulak array	14.57	329	P		Pn	12 08 08.7	-0.7
	0.4nm,0.7s,baz=142,slow=11,SNR=6.7							

IDC ***25*** *12:12:58.8≈0.7,35°.48N×3°.90W,h0^{km},mb4.2/18, mbtmp4.1/24,ML3.6/6,MS3.3/18,Error ellipse: s-maj=17.4km s-min=15.2km az=130.0*

MDD ***25*** *12:13:00.2≈0.2,35°.49N×3°.79W,h0^{km},mb_Lg4.0/63, Error ellipse: s-maj=2.0km s-min=1.7km az=159.0*

GFZ ***25*** *12:13:00.6≈0.3,35°.N≈3°.×≈, h10km,M4.1/14,mb4.1/14*

CNRM ***25*** *12:13:00.3,35°.49N×3°.78W,h16^{km},ML4.6*

NEIC ***25*** *12:13:00.5≈0.8,35°.43N≈0°.06×3°.87W≈0°.09,h10km≈1km, mb4.8/175,Error ellipse: s-maj=11.9km s-min=9.8km az=95.0*

SFS ***25*** *12:13:01.8,35°.45N×3°.70W,h17km,mb4.9/5,ML4.2/34, ML4.5/34,MLv4.4/25*

INMG ***25*** *12:13:01.4≈2.1,35°.45N×3°.80W,h11km≈7km,ML3.7,Error ellipse: s-maj=3.6km s-min=3.0km az=123.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

IGIL ***25*** *12:13:02.1,35°.46N×3°.87W,h8^{km},ML3.8*

ISC 25 12:13:01.0≈0.6,35°.48N≈0°.02×3°.75W≈0°.02,h16^{km}≈4^{km}, n344,σ1^{s}72/386,mb4.8/88,MS3.4/15,3C-3D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.30**	**211**	P	**Pg**	**12 13 06.7**	**-0.7**
PALE				S	**Sg**	**12 13 11.2**	**-0.6**
WMELI	**Melilla**	**0.67**	**104**	Pg	**Pg**	**12 13 13.4**	**-0.7**
WMELI				Sg	**Sg**	**12 13 22.4**	**-0.7**
WMELI	**Melilla**	**0.67**	**104**	P	**Pg**	**12 13 13.5**	**-0.7**
EMEL	**Melilla**	**0.67**	**105**	Pg	**Pg**	**12 13 13.6**	**-0.6**
EMEL				Sg	**Sg**	**12 13 22.1**	**-1.0**
EMLI	**Melilla**	**0.68**	**105**	Pg	**Pg**	**12 13 13.4**	**-0.9**
EALB	**Alboran**	**0.74**	**51**	Pg	**Pg**	**12 13 15.2**	**-0.3**
EALB				Sg	**Sb**	**12 13 25.5**	**0.0**
EALB	**Alboran**	**0.74**	**51**	⇑Pg	**Pg**	**12 13 15.3**	**-0.3**
EALB				Sg	**Sg**	**12 13 25.1**	**-0.3**
EALB				*i* IVmb_Lg		12 13 26.3	
AKLM	**AKL**	**0.97**	**185**	P	**Pb**	**12 13 18.8**	**-0.6**
AKLM				S	**Sb**	**12 13 30.8**	**-1.2**
TAF	**Taforalt**	**1.28**	**121**	P	**Pn**	**12 13 22.7**	**-1.5**
TAF				S	**Sg**	**12 13 43.2**	**+0.8**
SMIR	**Smir Dam**	**1.34**	**279**	P	**Pn**	**12 13 24.0**	**-1.0**
SMIR				S	**Sn**	**12 13 42.0**	**-0.6**
CHEFC	**Chefchaouen**	**1.35**	**255**	P	**Pn**	**12 13 24.8**	**-0.5**
CHEFC				S	**Sn**	**12 13 41.6**	**-1.3**
EMIJ	**Mijas**	**1.36**	**323**	Sn	**Sb**	**12 13 43.5**	**+0.2**
EMIJ	**Mijas**	**1.36**	**323**	Pg	**Pn**	**12 13 23.3**	**-2.1**
EMIJ				Pn	**Pb**	**12 13 24.1**	**-2.0**
EMIJ				Sg	**Sn**	**12 13 41.3**	**-1.8**
EMIJ				*i* IVmb_Lg		12 13 50.1	
ELGU	**Los Guajares,**	**1.39**	**4**	Pn	**Pn**	**12 13 24.4**	**-1.4**
ELGU				Sn	**Sn**	**12 13 42.5**	**-1.4**
ELGU	**Los Guajares,**	**1.39**	**4**	Pg	**Pn**	**12 13 24.4**	**-1.4**
ELGU				Sg	**Sn**	**12 13 41.8**	**-2.0**
ELGU				*i* IVmb_Lg		12 13 53.2	
EMAL	**Malaga-Limoner**	**1.39**	**337**	Pn	**Pn**	**12 13 24.6**	**-1.2**
EMAL				Sn	**Sn**	**12 13 41.3**	**-2.5**
EMAL	**Malaga-Limoner**	**1.39**	**337**	P	**Pn**	**12 13 24.6**	**-1.2**
JBK	**JBK**	**1.50**	**139**	P	**Pn**	**12 13 25.6**	**-1.8**
JBK				S	**Sb**	**12 13 47.3**	**-0.1**
EBER	**Berja**	**1.58**	**26**	Pn	**Pn**	**12 13 27.4**	**-1.1**
EBER				Sn	**Sn**	**12 13 46.3**	**-2.4**
EBER	**Berja**	**1.58**	**26**	⇑Pg	**Pn**	**12 13 27.2**	**-1.3**
EBER				Sg	**Sn**	**12 13 47.2**	**-1.5**
EBER				*i* IVmb_Lg		12 13 51.7	
EGOR	**Sierra Gorda,**	**1.66**	**350**	Pn	**Pn**	**12 13 28.7**	**-0.7**
EGOR	**Sierra Gorda,**	**1.66**	**350**	Pg	**Pn**	**12 13 28.5**	**-1.0**
EGOR				Sg	**Sn**	**12 13 49.9**	**-0.6**
EGOR				*i* IVmb_Lg		12 14 03.0	
EJIF	**Jimena Fronter**	**1.70**	**305**	Pn	**Pn**	**12 13 29.0**	**-1.0**
EJIF				Pg	**Pb**	**12 13 32.0**	**+0.2**
EJIF				Sn	**Sn**	**12 13 49.2**	**-2.1**
EQUE	**Quentar**	**1.74**	**8**	Pg	**Pn**	**12 13 30.6**	**0.0**
EQUE				Sg	**Sn**	**12 13 51.7**	**-0.9**
EQUE				*i* IVmb_Lg		12 13 55.4	
EQTA	**Presa de Quent**	**1.74**	**8**	Pn	**Pn**	**12 13 30.7**	**+0.1**
EQTA				Sn	**Sn**	**12 13 51.8**	**-0.8**
CPS	**Cap Spartel**	**1.78**	**281**	P	**Pb**	**12 13 33.1**	**-0.2**
CPS				S	**Sb**	**12 13 54.4**	**-1.0**
SICH	**Sidi Chahed**	**1.88**	**224**	P	**Pb**	**12 13 33.8**	**-1.2**
SICH				S	**Sn**	**12 13 55.6**	**-0.2**
ENIJ	**Nijar**	**1.94**	**39**	Pn	**Pn**	**12 13 31.8**	**-1.5**
ENIJ				Sn	**Sn**	**12 13 55.5**	**-1.9**
ENIJ	**Nijar**	**1.94**	**39**	⇑Pn	**Pn**	**12 13 31.5**	**-1.9**
ENIJ				Sn	**Sn**	**12 13 53.8**	**-3.6**
ENIJ				*i* IVmb_Lg		12 14 05.8	
LCRM	**LCR**	**2.01**	**207**	P	**Pn**	**12 13 34.2**	**-0.1**
LCRM				S	**Sb**	**12 14 02.5**	**+0.6**
CNIL	**Conil**	**2.07**	**296**	Pn	**Pn**	**12 13 36.1**	**+1.5**
ESPR	**Espera**	**2.20**	**310**	Pn	**Pn**	**12 13 37.8**	**+1.0**
ESPR	**Espera**	**2.20**	**310**	Pn	**Pn**	**12 13 37.6**	**+0.8**
ESPR				Sn	**Sn**	**12 14 04.6**	**+1.0**
ESPR				*i* IVmb_Lg		12 14 14.1	
SFS	**San Fernando**	**2.22**	**297**	Pn	**Pn**	**12 13 36.0**	**-1.1**
IFR	**Ifrane**	**2.26**	**211**	Pn	**Pn**	**12 13 37.1**	**-0.7**
IFR				Sn	**Sn**	**12 14 03.8**	**-1.6**
IFR	**Ifrane**	**2.26**	**211**	P	**Pn**	**12 13 37.2**	**-0.6**
EQES	**Quesada**	**2.38**	**13**	Pn	**Pn**	**12 13 40.9**	**+1.4**
EQES				Pg	**Pb**	**12 13 41.9**	**-1.7**
EQES				Sn	**Sn**	**12 14 10.0**	**+1.6**
EQES				*i* IVmb_Lg		12 14 13.1	
E0802	**Ubeda,Jaen**	**2.56**	**7**	Pn	**Pn**	**12 13 41.0**	**-0.8**
E0802				Pg	**Pb**	**12 13 44.7**	**-1.9**
E0802				Sg	**Sb**	**12 14 15.3**	**-2.5**
CZD	**Col de Zad**	**2.66**	**204**	P	**Pn**	**12 13 43.2**	**-0.2**
CZD				S	**Sn**	**12 14 15.7**	**+0.2**
ELOR	**Lorca, Murcia**	**2.69**	**36**	Pn	**Pn**	**12 13 42.5**	**-1.2**
ELOR				Sn	**Sn**	**12 14 14.9**	**-1.1**
ELOR				*i* IVmb_Lg		12 14 15.6	
MD01	**Midelt array s**	**2.73**	**198**		**Pn**	**12 13 44.2**	**-0.1**
MD31	**MD31**	**2.73**	**198**	Pn	**Pn**	**12 13 43.5**	**-0.8**
MD31	**MD31**	**2.73**	**198**	P	**Pn**	**12 13 44.2**	**-0.1**
MD31				S	**Sn**	**12 14 17.8**	**+0.8**
TLOR	**Lorca, Murcia**	**2.73**	**37**	Pn	**Pn**	**12 13 45.1**	**+0.9**
TLOR				Sn	**Sn**	**12 14 16.1**	**-0.8**
MDT	**Midelt**	**2.75**	**195**	Pn	**Pn**	**12 13 44.3**	**-0.2**
	8.6nm,0.3s,baz=23,slow=12,SNR=113						
MDT				Lg	Lg	12 14 20.6	
	52nm,0.3s,baz=47,slow=15,SNR=5.6						
MDT				LR	LR	12 14 56.2	
	comp=Z,366nm,20.0s,baz=20,slow=43 22nm,0.3s						
MDT	**Midelt**	**2.75**	**195**	P	**Pn**	**12 13 44.1**	**-0.3**
EADA	**Adamuz**	**2.77**	**346**	Pn	**Pn**	**12 13 45.2**	**+0.6**
EADA				Sn	**Sn**	**12 14 17.5**	**-0.2**
EADA	**Adamuz**	**2.77**	**346**	Pn	**Pn**	**12 13 44.2**	**-0.4**
EADA				Sn	**Sn**	**12 14 17.3**	**-0.4**
EADA				*i* IVmb_Lg		12 14 27.9	
ARNO	**Arenosillo**	**2.90**	**305**	Pn	**Pn**	**12 13 47.3**	**+0.8**
ARNO				Sn	**Sn**	**12 14 21.3**	**+0.4**
ARNO	**Arenosillo**	**2.90**	**305**	P	**Pn**	**12 13 47.2**	**+0.7**
EZAR	**Zarzadilla de**	**2.91**	**34**	Pn	**Pn**	**12 13 45.7**	**-1.0**
EZAR				Sn	**Sn**	**12 14 19.7**	**-1.6**
EZAR				*i* IVmb_Lg		12 14 21.6	
ECAB	**El Cabril**	**2.92**	**333**	Pn	**Pn**	**12 13 47.0**	**+0.2**
ECAB	**El Cabril**	**2.92**	**333**	Pn	**Pn**	**12 13 46.7**	**-0.1**
ECAB				Sn	**Sn**	**12 14 21.8**	**+0.3**
ECAB				Sg	**Sb**	**12 14 28.3**	**+0.3**
ECAB				*i* IVmb_Lg		12 14 33.2	
RTC	**Rabat Centre**	**2.96**	**241**	Pn	**Pn**	**12 13 47.7**	**+0.5**
RTC				Sn	**Sn**	**12 14 20.5**	**-1.9**
CART	**Cartagena**	**3.06**	**46**	Pn	**Pn**	**12 13 46.9**	**-1.7**
CART				Sn	**Sn**	**12 14 20.6**	**-4.2**
CART	**Cartagena**	**3.06**	**46**		**Pn**	**12 13 47.0**	**-1.7**
CART	**Cartagena**	**3.06**	**46**	P	**Pn**	**12 13 46.9**	**-1.7**
CART	**Cartagena**	**3.06**	**46**	P	**Pn**	**12 13 46.9**	**-1.7**
EMUR	**La Murta**	**3.11**	**40**	Pn	**Pn**	**12 13 48.4**	**-0.9**
EMUR				Sn	**Sn**	**12 14 22.7**	**-3.4**
EMUR				*i* IVmb_Lg		12 14 26.5	
ZHG	**ZHG**	**3.13**	**231**	P	**Pn**	**12 13 49.1**	**-0.6**
EMIN	**Mina Concepcio**	**3.28**	**315**	Pn	**Pn**	**12 13 51.3**	**-0.3**
EMIN				Sn	**Sn**	**12 14 28.7**	**-1.6**
EMIN	**Mina Concepcio**	**3.28**	**315**	Pn	**Pn**	**12 13 51.2**	**-0.5**
EMIN				Sn	**Sn**	**12 14 28.7**	**-1.6**
EMIN				*i* IVmb_Lg		12 14 35.1	
PSIM	**Granatula de C**	**3.34**	**360**	Pn	**Pn**	**12 13 52.0**	**-0.6**
PSIM				Sn	**Sn**	**12 14 30.3**	**-1.6**
ETOB	**Tobarra**	**3.62**	**28**	Pn	**Pn**	**12 13 57.1**	**+0.7**
ETOB	**Tobarra**	**3.62**	**28**	Pn	**Pn**	**12 13 57.2**	**+0.8**
ETOB				Sn	**Sn**	**12 14 38.8**	**0.0**
ETOB				*i* IVmb_Lg		12 14 42.5	
EGRO	**El Granado**	**3.64**	**305**	Pn	**Pn**	**12 13 56.2**	**-0.4**
EGRO				Sn	**Sn**	**12 14 36.7**	**-2.5**
EGRO	**El Granado**	**3.64**	**305**	Pn	**Pn**	**12 13 56.3**	**-0.4**
EGRO				Sn	**Sn**	**12 14 37.3**	**-1.9**
AVE	**Averroes**	**3.73**	**235**	Pn	**Pn**	**12 13 57.0**	**-0.8**
AVE				Sn	**Sn**	**12 14 38.7**	**-2.7**
AVE	**Averroes**	**3.73**	**235**	Pn	**Pn**	**12 13 56.6**	**-1.2**
AVE	**Averroes**	**3.73**	**235**	P	**Pn**	**12 13 56.8**	**-1.0**
PVAQ	**Vaqueiros**	**3.73**	**302**	*e*P	**Pn**	**12 13 57.3**	**-0.6**
PVAQ				*e*S	**Sn**	**12 14 40.0**	**-1.5**
PVAQ				*i* IAML		12 14 41.0	
PVAQ				*i* IAML		12 14 41.0	
PVAQ				*i* IAML		12 14 42.6	
PVAQ	**Vaqueiros**	**3.73**	**302**		**Pn**	**12 13 57.3**	**-0.6**
PVAQ	**Vaqueiros**	**3.73**	**302**	P	**Pn**	**12 13 57.0**	**-0.8**
PVAQ	**Vaqueiros**	**3.73**	**302**	P	**Pn**	**12 13 57.4**	**-0.5**
PBAR	**Barrancos**	**3.77**	**317**	Pn	**Pn**	**12 13 57.9**	**-0.5**
PBAR	**Barrancos**	**3.77**	**317**	*e*P	**Pn**	**12 13 58.2**	**-0.2**
PBAR				*e*S	**Sn**	**12 14 41.4**	**-1.0**
PBAR				*i* IAML		12 14 49.5	
PBAR				*i* IAML		12 14 50.2	
PBAR				*i* IAML		12 14 50.7	
PBDV	**Barranco-do-Ve**	**3.81**	**299**	Pn	**Pn**	**12 13 58.3**	**-0.6**
PBDV				Sn	**Sn**	**12 14 41.7**	**-1.6**
PBDV	**Barranco-do-Ve**	**3.81**	**299**	*e*P	**Pn**	**12 13 58.4**	**-0.6**
PBDV				*e*S	**Sn**	**12 14 41.7**	**-1.6**
PBDV				*i* IAML		12 14 46.6	
PBDV				*i* IAML		12 14 46.9	
PBDV				*i* IAML		12 14 48.5	
GOLM	**Goulmima**	**3.90**	**195**	P	**Pn**	**12 14 01.4**	**+1.1**
GOLM				P	**Pn**	**12 14 02.0**	**+1.7**
GOLM				S	**Sn**	**12 14 49.5**	**+3.8**
FIGM	**Figuig**	**3.93**	**147**	P	**Pn**	**12 14 00.7**	**0.0**
FIGM				P	**Pn**	**12 14 01.3**	**+0.6**
ARF	**Arif**	**4.05**	**186**	P	**Pn**	**12 14 02.3**	**-0.1**
ARF				S	**Sn**	**12 14 50.9**	**+1.4**
PCVE	**Castro Verde**	**4.07**	**303**	Pn	**Pn**	**12 14 01.9**	**-0.6**
PCVE	**Castro Verde**	**4.07**	**303**	*e*P	**Pn**	**12 14 01.9**	**-0.6**
PCVE				*e*S	**Sn**	**12 14 48.2**	**-1.5**
PCVE				*i* IAML		12 14 53.6	
PCVE				*i* IAML		12 14 53.8	
PCVE				*i* IAML		12 14 54.1	
AFON	**Font Roja**	**4.09**	**38**	Pn	**Pn**	**12 14 01.9**	**-1.0**
AFON				Sn	**Sn**	**12 14 47.8**	**-2.7**
AFON				*i* IVmb_Lg		12 14 53.8	
PAB	**San Pablo**	**4.09**	**354**	Pn	**Pn**	**12 14 02.1**	**-0.8**
PAB				Sn	**Sn**	**12 14 48.9**	**-1.5**
PAB				Sg	**Sb**	**12 15 04.0**	**+2.2**
PAB				*i* IVmb_Lg		12 15 23.0	
PAB	**San Pablo**	**4.09**	**354**		**Pn**	**12 14 03.8**	**+0.9**
PBEJ	**Beja**	**4.17**	**309**	*e*P	**Pn**	**12 14 03.8**	**-0.2**
PBEJ				*e*S	**Sn**	**12 14 51.4**	**-0.9**
PBEJ				*i* IAML		12 14 55.2	
PBEJ				*i* IAML		12 14 56.0	
PBEJ				*i* IAML		12 15 01.6	
EBAD	**Badajoz**	**4.18**	**322**	Pn	**Pn**	**12 14 04.0**	**-0.1**
EBAD				Sn	**Sn**	**12 14 51.7**	**-1.0**
EBAD	**Badajoz**	**4.18**	**322**	Pn	**Pn**	**12 14 04.0**	**-0.1**
EBAD				Sn	**Sn**	**12 14 49.8**	**-2.8**
EBAD				*i* IVmb_Lg		12 14 57.1	
ESDC	**Sonseca Array**	**4.19**	**358**	Pn	**Pn**	**12 14 05.4**	**+1.1**
	2.5nm,0.3s,baz=176,slow=13,SNR=244						
ESDC				Sn	**Sn**	**12 14 52.2**	**-0.7**
	5.0nm,0.3s,baz=183,slow=23,SNR=6.2						
ESDC				Lg	Lg	12 15 07.2	
	8.9nm,0.3s,baz=174,slow=28,SNR=6.1						
ESDC				LR	LR	12 15 53.0	
	comp=Z,213nm,20.0s,baz=172,slow=42 22nm,0.6s						
ESDC	**Sonseca Array**	**4.19**	**358**	Pn	**Pn**	**12 14 04.1**	**-0.2**
ESDC				Sn	**Sn**	**12 14 49.8**	**-3.1**
ESDC				Sg	**Sb**	**12 15 07.9**	**+3.1**
ESDC				*i* IVmb_Lg		12 15 17.3	
ESDC	**Sonseca Array**	**4.19**	**358**		**Pn**	**12 14 05.1**	**+0.8**
ESBB	**Sonseca Array**	**4.19**	**358**	Pn	**Pn**	**12 14 04.4**	**+0.1**
ESBB				Sn	**Sn**	**12 14 49.3**	**-3.7**
ESBB				Sg	**Sb**	**12 15 08.9**	**+4.1**
ESBB	**Sonseca Array**	**4.19**	**358**		**Pn**	**12 14 05.3**	**+1.0**
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**12 14 05.1**	**-0.6**
MESJ				*e*S	**Sn**	**12 14 50.8**	**-4.6**
MESJ				IAML		12 15 00.9	
	comp=N,121nm,0.5s						
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**12 14 05.2**	**-0.5**
MESJ				*e*S	**Sn**	**12 14 53.6**	**-1.8**
MESJ				*i* IAML		12 14 58.0	
MESJ				*i* IAML		12 14 59.4	
MESJ				*i* IAML		12 15 00.0	
MESJ	**Messejana**	**4.30**	**305**		**Pn**	**12 14 05.2**	**-0.5**
EVIV	**Cofrentes, Val**	**4.33**	**28**	Pn	**Pn**	**12 14 06.7**	**+0.6**
EVIV				Sn	**Sn**	**12 14 50.6**	**-5.6**
EVIV				*i* IVmb_Lg		12 15 29.7	
MORF	**Marmelete**	**4.35**	**296**	*e*P	**Pn**	**12 14 05.4**	**-1.1**
MORF				*e*S	**Sn**	**12 14 52.2**	**-4.7**
MORF				IAML		12 14 58.6	
	comp=N,251nm,0.4s						
MORF	**Marmelete**	**4.35**	**296**	*e*P	**Pn**	**12 14 06.0**	**-0.4**
MORF				*e*S	**Sn**	**12 14 54.2**	**-2.7**
MORF				*i* IAML		12 14 59.1	
MORF				*i* IAML		12 15 01.7	
MORF				*i* IAML		12 15 03.0	
TISM	**Timmit**	**4.37**	**212**	P	**Pn**	**12 14 05.3**	**-1.3**
PFVI	**Vila Bisbo**	**4.42**	**293**	Sn	**Sn**	**12 14 55.3**	**-3.1**
PFVI	**Vila Bisbo**	**4.42**	**293**	*e*P	**Pn**	**12 14 06.4**	**-0.9**
PFVI				*e*S	**Sn**	**12 14 55.9**	**-2.9**
PFVI				*i* IAML		12 14 58.5	
PFVI				*i* IAML		12 15 00.1	
PFVI				*i* IAML		12 15 03.5	
PFVI	**Vila Bisbo**	**4.42**	**293**		**Pn**	**12 14 06.0**	**-1.3**
PFVI	**Vila Bisbo**	**4.42**	**293**	P	**Pn**	**12 14 06.1**	**-1.3**
PFVI	**Vila Bisbo**	**4.42**	**293**	P	**Pn**	**12 14 06.4**	**-0.9**
PTEO	**Sao Teotonio**	**4.51**	**299**	*e*P	**Pn**	**12 14 08.1**	**-0.4**
PTEO				*e*S	**Sn**	**12 14 58.4**	**-2.2**
PTEO				*i* IAML		12 15 01.1	
PTEO				*i* IAML		12 15 01.9	
PTEO				*i* IAML		12 15 09.5	
PLOUS	**Minas do Lousa**	**4.53**	**306**	*e*P	**Pn**	**12 14 08.6**	**-0.3**
PLOUS				*e*S	**Sn**	**12 14 59.4**	**-1.9**
PLOUS				*i* IAML		12 15 02.9	
PLOUS				*i* IAML		12 15 05.2	
PLOUS				*i* IAML		12 15 07.1	
PESTR	**Estremoz**	**4.56**	**319**	Pn	**Pn**	**12 14 09.7**	**+0.3**
PESTR				Sn	**Sn**	**12 15 00.1**	**-1.7**
PESTR	**Estremoz**	**4.56**	**319**	*e*P	**Pn**	**12 14 09.7**	**+0.3**
PESTR				*e*S	**Sn**	**12 15 00.1**	**-2.0**
PESTR				*i* IAML		12 15 05.1	
PESTR				*i* IAML		12 15 07.3	
PESTR				*i* IAML		12 15 24.2	
PESTR	**Estremoz**	**4.56**	**319**		**Pn**	**12 14 09.2**	**-0.2**
PESTR	**Estremoz**	**4.56**	**319**	P	**Pn**	**12 14 08.4**	**-1.0**
PESTR	**Estremoz**	**4.56**	**319**	P	**Pn**	**12 14 10.1**	**+0.7**
SRHM	**Skhour des Reh**	**4.57**	**230**	P	**Pn**	**12 14 12.1**	**+2.6**
EVO	**Evora**	**4.57**	**313**	*e*P	**Pn**	**12 14 09.7**	**+0.2**
EVO				*e*S	**Sn**	**12 15 00.3**	**-2.0**
EVO				*i* IAML		12 15 03.1	
EVO				*i* IAML		12 15 04.3	
EVO				*i* IAML		12 15 05.0	
MOE	**Montemor**	**4.77**	**311**	*e*P	**Pn**	**12 14 12.2**	**0.0**
MOE				*e*S	**Sn**	**12 15 04.9**	**-2.2**
MOE				*i* IAML		12 15 10.6	
MOE				*i* IAML		12 15 19.1	
MOE				*i* IAML		12 15 19.5	
PARRA	**Arraiolos**	**4.78**	**315**	*e*P	**Pn**	**12 14 12.4**	**+0.2**
PARRA				*e*S	**Sn**	**12 15 05.1**	**-2.2**
PARRA				*i* IAML		12 15 08.9	
PARRA				*i* IAML		12 15 10.6	
PARRA				*i* IAML		12 15 16.2	
UCM	**Universidad Co**	**4.84**	**5**	Pn	**Pn**	**12 14 14.7**	**+1.6**
UCM				Sn	**Sn**	**12 15 08.1**	**-0.8**
UCM	**Universidad Co**	**4.84**	**5**	P	**Pn**	**12 14 14.9**	**+1.7**
PMRV	**Marv??o**	**4.89**	**325**	*e*P	**Pn**	**12 14 14.2**	**+0.4**
PMRV				*e*S	**Sn**	**12 15 06.8**	**-3.4**
PMRV				*i* IAML		12 15 31.1	
PMRV				*i* IAML		12 15 32.9	
PMRV				*i* IAML		12 15 49.6	
TZRR	**Tazzarine**	**4.92**	**199**	P	**Pn**	**12 14 14.3**	**0.0**
EPLA	**Plasencia**	**4.94**	**339**	Pn	**Pn**	**12 14 14.0**	**-0.4**
EPLA				Sn	**Sn**	**12 15 09.6**	**-1.6**
PMTG	**Montargil**	**5.06**	**316**	*e*P	**Pn**	**12 14 16.0**	**-0.1**
PMTG				*e*S	**Sn**	**12 15 12.8**	**-1.3**
PMTG				*i* IAML		12 15 36.5	
PMTG				*i* IAML		12 15 52.3	
PMTG				*i* IAML		12 15 57.2	
YEBES	**Yebes (Guadala**	**5.07**	**6**	Pn	**Pn**	**12 14 17.6**	**+1.3**
YEBES				Sn	**Sn**	**12 15 14.1**	**-0.4**
YEBES				Sg	**Sb**	**12 15 34.4**	**+4.5**
YEBES				*i* IVmb_Lg		12 15 58.9	
GUD	**Guadarrama**	**5.17**	**357**	Pn	**Pn**	**12 14 17.2**	**-0.6**
GUD				Sn	**Sn**	**12 15 14.5**	**-2.6**
GUD				Sg	**Sb**	**12 15 35.1**	**+2.2**
GUD				*i* IVmb_Lg		12 15 48.2	
OUZM	**OUZ**	**5.21**	**210**	P	**Pn**	**12 14 19.1**	**+0.7**
PCBR	**Castelo Branco**	**5.26**	**327**	*e*P	**Pn**	**12 14 19.4**	**+0.5**
PCBR				*e*S	**Sn**	**12 15 17.6**	**-1.6**
PCBR				*i* IAML		12 15 20.1	
PCBR				*i* IAML		12 15 24.9	
EIBI	**Ibiza**	**5.39**	**47**	Pn	**Pn**	**12 14 20.3**	**-0.3**
EIBI				Sn	**Sn**	**12 15 18.0**	**-4.4**
EIBI	**Ibiza**	**5.39**	**47**	Pn	**Pn**	**12 14 20.2**	**-0.5**
EIBI				Sn	**Sn**	**12 15 16.7**	**-5.7**
EIBI				*i* IVmb_Lg		12 15 22.0	
PSARD	**Sardoal**	**5.41**	**321**	*e*P	**Pn**	**12 14 21.0**	**+0.1**
PSARD				*e*S	**Sn**	**12 15 18.3**	**-4.5**
PSARD				*i* IAML		12 15 44.0	
PSARD				*i* IAML		12 15 50.3	
PSARD				*i* IAML		12 15 58.2	
TIO	**Tiouine**	**5.41**	**214**	Pn	**Pn**	**12 14 20.8**	**-0.2**
TIO				Sn	**Sn**	**12 15 19.7**	**-3.3**
TIO	**Tiouine**	**5.41**	**214**	P	**Pn**	**12 14 20.7**	**-0.4**
TIO	**Tiouine**	**5.41**	**214**	P	**Pn**	**12 14 20.9**	**-0.2**
ETOR	**Torete**	**5.50**	**14**	Pn	**Pn**	**12 14 23.6**	**+1.4**
ETOR				Sn	**Sn**	**12 15 20.3**	**-4.9**
ETOR				Sg	**Sb**	**12 15 46.4**	**+4.0**
ETOR				*i* IVmb_Lg		12 16 12.9	
EMOS	**Mosqueruela**	**5.52**	**27**	Pn	**Pn**	**12 14 23.9**	**+1.2**
EMOS				Pg	**Pb**	**12 14 38.8**	**+1.7**
EMOS				Sn	**Sn**	**12 15 21.3**	**-4.6**
EMOS				*i* IVmb_Lg		12 15 39.0	
EMOS				Sg	**Sg**	**12 15 58.8**	**+0.5**
ZGR	**Zagora**	**5.57**	**197**	P	**Pn**	**12 14 23.2**	**-0.1**
PMAFR	**Mafra**	**5.62**	**310**	Pn	**Pn**	**12 14 23.6**	**-0.1**
PMAFR				Sn	**Sn**	**12 15 25.5**	**-2.5**
PMAFR	**Mafra**	**5.62**	**310**	*e*P	**Pn**	**12 14 24.0**	**+0.2**
PMAFR				*e*S	**Sn**	**12 15 25.3**	**-2.6**
PMAFR				*i* IAML		12 15 41.5	
PMAFR				*i* IAML		12 15 57.2	
ECOL	**Islas Columbre**	**5.64**	**37**	Pn	**Pn**	**12 14 24.0**	**-0.1**
ECOL				Sn	**Sn**	**12 15 27.0**	**-1.6**
PSBE	**So Bento**	**5.68**	**317**	*e*P	**Pn**	**12 14 25.2**	**+0.4**
PSBE				*e*S	**Sn**	**12 15 27.6**	**-2.1**
PSBE				*i* IAML		12 15 37.3	
PSBE				*i* IAML		12 15 37.4	
PSBE				*i* IAML		12 15 41.7	
MTE	**Manteigas**	**5.75**	**330**	*e*P	**Pn**	**12 14 26.3**	**+0.5**
MTE				*e*S	**Sn**	**12 15 29.9**	**-1.5**
MTE	**Manteigas**	**5.75**	**330**		**Pn**	**12 14 25.5**	**-0.3**
MTE	**Manteigas**	**5.75**	**330**	P	**Pn**	**12 14 26.5**	**+0.8**
EJUZ	**Juzbado, Salam**	**5.85**	**344**	Pn	**Pn**	**12 14 24.7**	**-2.4**
EJUZ				Sn	**Sn**	**12 15 30.6**	**-3.1**
EJUZ				Sg	**Sg**	**12 16 04.5**	**-4.1**
PCAS	**Casmilo, Conde**	**5.92**	**322**	*e*P	**Pn**	**12 14 28.4**	**+0.5**
PCAS				*e*S	**Sn**	**12 15 32.4**	**-3.0**
PCAS				*i* IAML		12 15 37.3	
PCAS				*i* IAML		12 15 38.3	
PCAS				*i* IAML		12 16 08.0	
PVIS	**Viseu**	**6.17**	**329**	*e*P	**Pn**	**12 14 32.5**	**+1.1**
PVIS				*e*S	**Sn**

WTTA Wattenberg 16.46 40 *e*Pn **P 12 16 53.6 -0.4**
comp=N,0.1nm,0.3s
WTTA Wattenberg 16.46 40 P **P 12 16 54.0 0.0**
WATA Walderalm 16.47 39 *e*Pn **P 12 16 53.6 -0.5**
comp=N,2.8nm,1.0s
ABTA Abfaltersbach 16.61 42 *e*Pn **P 12 16 54.3 -1.2**
comp=N,0.3nm,0.3s
LESA Schwarzleotal 17.11 41 *e*Pn **P 12 17 02.2 +1.1**
comp=N,3.8nm,0.9s
OBKA Obir 17.63 46 *e*Pn **P 12 17 08.8 +2.0**
comp=N,4.0nm,0.8s
SOKA Soboth 18.00 46 *e*Pn **P 12 17 11.6 +0.7**
comp=N,4.8nm,1.4s
GEC2 GERESS Array S 18.54 39 Pn 12 17 18.1 +1.1
GERES GERESS Array B 18.54 39 P **Pn 12 17 17.4 +0.3**
baz=224,slow=11,SNR=16
GERES LR LR 12 24 03.0
comp=N,600nm,19.8s,baz=248,slow=36
comp=N,1.9nm,0.8s
GERES GERESS Array B 18.54 39 P **Pn 12 17 18.5 +1.5**
ARSA Arzberg 18.59 45 *e*Pn **Pn 12 17 18.4 +0.8**
comp=N,2.2nm,0.9s
KHC Kasperske Hory 18.66 38 *e*P **Pn 12 17 20.7 +2.3**
KHC *e*pP **sP 12 17 25.3 +0.7**
KHC AMS AMS 12 26 00.0
comp=N,200nm,9.0s
CKRC Cesky Krumlov 18.83 39 AMS AMS 12 25 50.0
comp=N,100nm,9.9s
TANN Tannenbergstha 19.01 33 P **Pn 12 17 23.7 +1.0**
CONA Conrad Observa 19.15 43 *e*P Pn 12 17 31.9 +7.5
comp=N,3.4nm,0.8s
RONA Rosalia, Austr 19.27 45 *e*Pn **Pn 12 17 26.1 +0.2**
comp=N,0.8nm,0.7s
PRU Pruhonice 19.69 37 AMS AMS 12 26 00.0
comp=N,100nm,9.8s
MPLH Magyarpolny 19.73 47 P **Pn 12 17 32.5 +1.2**
TREC Trest 19.74 40 AMS AMS 12 26 20.0
comp=N,100nm,8.4s
EKA Eskdalemuir Ar 19.86 1 P **Pn 12 17 32.7 -0.1**
baz=174,slow=10
comp=N,2.1nm,0.6s
CLL Collm 19.89 32 *i* P **Pn 12 17 33.5 +0.4**
comp=Z,11nm,1.2s
CLL *e*sP **sP 12 17 38.0 0.0**
CLL *i* pPP 12 17 51.0
CLL *e*S **S 12 21 12.0 -2.6**
MORH Mrgy, Hungar 19.98 51 P **Pn 12 17 33.8 -0.5**
BRG Berggiesshubel 20.00 34 P Pn 12 17 34.9 +0.4
BRG Berggiesshubel 20.00 34 *e*P Pn 12 17 34.8 +0.3
BRG Amp 12 17 36.9
comp=Z,5.1nm,1.0s
BRG Berggiesshubel 20.00 34 S Sn 12 21 25.0 +6.0
PVCC Panska Ves 20.06 36 AMS AMS 12 26 00.0
comp=Z,100nm,11.3s
KRUC Moravsky 20.08 41 *e*P Pn 12 17 35.9 +0.5
KRUC Moravsky 20.08 41 P Pn 12 17 36.4 +0.9
MODS Modra-Piesok 20.19 44 P Pn 12 17 37.2 +0.5
MODS Modra-Piesok 20.19 44 *e*P Pn 12 17 36.0 -0.7
VRAC Vranov 20.33 41 P Pn 12 17 37.9 -0.5
comp=Z,2.1nm,0.4s,baz=237,slow=12,SNR=7.9
comp=Z,2.1nm,0.4s
VRAC Vranov 20.33 41 *e*P **P 12 17 37.2 +0.9**
VRAC Vranov 20.33 41 P Pn 12 17 37.6 -0.7
JAVC Velka Javorina 20.67 43 *e*P **P 12 17 41.1 +1.1**
DPC Dobruska-Polom 20.81 38 P **P 12 17 42.4 +0.8**
CHVC Chvalec 20.82 37 AMS AMS 12 26 40.0
comp=Z,100nm,9.6s
KRLC Kraliky 20.88 39 *e*P Pn 12 17 44.1 -0.7
KRLC *e*pP sP 12 17 48.4 -0.4
MAUC Maruska 21.03 42 *e*P **P 12 17 45.3 +1.4**
MORC Moravsky Berou 21.10 41 P **P 12 17 45.7 +0.9**
MORC Moravsky Berou 21.10 41 *e*P **P 12 17 45.6 +0.9**
MORC Moravsky Berou 21.10 41 P **P 12 17 43.7 -1.0**
VYHS Vyhne 21.14 45 *e*P **P 12 17 46.0 +0.9**
OKC Ostrava-Krasne 21.46 41 AMS AMS 12 27 50.0
comp=Z,200nm,10.1s
PSZ Piszkesteto 21.49 47 P **P 12 17 50.1 +1.2**
ABAH Abaujker 22.47 48 P **P 12 18 00.7 +1.3**
TORD Torodi Ar. Bea 22.77 166 P **P 12 18 03.5 +0.8**
comp=Z,5.0nm,1.0s,baz=351,slow=8.5,SNR=12
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 22.77 166 P **P 12 18 01.3 -1.5**
TRPA Tarpa 23.19 49 P **P 12 18 07.4 +0.6**
MLR Muntele Rosu 24.58 57 LR LR 12 28 56.6
comp=Z,58nm,18.1s,baz=256,slow=39
MLR Muntele Rosu 24.58 57 P 12 18 20.6 +0.3
BUR08 Bucovina Ar. S 24.69 52 P **P 12 18 21.9 +0.7**
BURAR Bucovina Array 24.69 52 P 12 18 21.9 +0.7
HFS Hagfors 27.14 19 P **P 12 18 43.6 +0.5**
comp=Z,1.6nm,0.8s,baz=211,slow=13,SNR=6.0
HFS LR LR 12 30 15.1
comp=Z,74nm,18.1s,baz=207,slow=38
comp=Z,1.6nm,0.8s
NOA NORSAR Array B 27.31 16 P **P 12 18 45.0 +0.2**
comp=Z,1.1nm,0.8s,baz=207,slow=9.3,SNR=3.3
NOA LR LR 12 29 56.5
comp=Z,66nm,21.0s,baz=205,slow=37
comp=Z,1.1nm,0.8s
AKASG Malin Array Be 28.20 47 LR LR 12 29 43.7
comp=Z,29nm,20.5s,baz=229,slow=36
NACGM Naroch 28.63 38 *e*P **P 12 19 01.0 +4.5**
DBIC Dimbokro 28.69 182 LR LR 12 31 07.2
comp=Z,77nm,18.0s,baz=22,slow=38
BRTR Keskin Array B 29.78 71 LR LR 12 30 11.3
comp=Z,28nm,21.1s,baz=218,slow=34
FINES FINESS Array B 32.12 27 P **P 12 19 27.8 +0.6**
comp=Z,3.9nm,1.1s,baz=226,slow=7.7,SNR=4.3
comp=Z,3.9nm,1.1s
EIL Elat 32.98 89 LR LR 12 36 25.6
comp=Z,31nm,18.8s,baz=273,slow=42
ARTI Arti 46.18 43 P **P 12 21 24.7 0.0**
comp=Z,5.5nm,0.8s,baz=242,slow=4.9,SNR=6.8
comp=Z,5.5nm,0.8s
ARTI Arti 46.18 43 **P 12 21 25.0 +0.3**
ARTI IAmb IAmb 12 21 36.2
comp=Z,8.2nm,0.5s
AKTO Aktyubinsk 46.28 51 P **P 12 21 26.3 +0.8**
comp=Z,1.2nm,0.3s,baz=279,slow=11,SNR=5.8
comp=Z,1.2nm,0.3s
SCHQ Schefferville 46.76 315 P **P 12 21 27.9 -1.3**
comp=Z,2.0nm,0.5s,baz=112,slow=6.1,SNR=4.3
comp=Z,2.0nm,0.5s
SCHQ Schefferville 46.76 315 P **P 12 21 29.7 +0.5**
SCHQ IAmb IAmb 12 21 52.2
comp=Z,7.7nm,1.1s
ABKAR Akbulak array 47.66 53 P 12 21 36.9 +0.6
FRB Frobisher Bay 47.77 327 LR LR 12 38 56.3
comp=Z,16nm,19.7s,baz=163,slow=33
D62A Allapoint, All 49.09 305 P **P 12 21 48.0 +0.7**
D62A IAmb IAmb 12 21 49.0
comp=Z,8.6nm,0.8s
PKME Peaks-Kenny Pk 49.63 302 P **P 12 21 52.1 +0.6**
LDAQ Lac Daran 50.37 306 P **P 12 21 58.3 +1.1**
LDAQ IAmb IAmb 12 21 58.5
comp=Z,7.3nm,0.7s
LBNH Lisbon 51.70 302 P **P 12 22 08.2 +1.0**
BVAR Borovoye Array 53.47 46 P **P 12 22 21.7 +1.5**
comp=Z,0.6nm,0.5s,baz=291,slow=4.6,SNR=4.6
comp=Z,0.6nm,0.5s
GAR Garm 57.54 63 IAmb IAmb 12 22 52.5
comp=Z,11nm,0.7s
LSZ Lusaka 58.86 143 LR LR 12 50 12.0
comp=Z,67nm,19.7s,baz=154,slow=38
KURBB Kurchatov Arra 58.99 47 P **P 12 23 00.6 +1.0**
comp=Z,5.2nm,0.6s,baz=293,slow=7.8,SNR=13
comp=Z,5.2nm,0.6s
KURK Kurchatov 59.01 47 P **P 12 23 00.4 +0.6**
KURK IAmb IAmb 12 23 05.0
comp=Z,6.9nm,0.8s
ZALV Zalesovo Beam 61.44 42 P **P 12 23 17.0 +0.7**
comp=Z,0.9nm,0.5s,baz=319,slow=6.5,SNR=5.9
ZALV LR LR 12 54 12.6
comp=Z,64nm,18.4s,baz=120,slow=40
comp=Z,0.9nm,0.5s
MKAR Makanchi Array 62.71 50 P **P 12 23 25.7 +0.7**
comp=Z,2.1nm,0.9s,baz=288,slow=5.9,SNR=9.7
comp=Z,2.1nm,0.9s
EYMN Ely 63.30 311 IAmb IAmb 12 23 29.9
comp=Z,7.2nm,0.8s
T50A Nancy 63.41 298 IAmb IAmb 12 23 31.6
comp=Z,8.0nm,1.2s
G40A Rib Lake 63.59 308 IAmb IAmb 12 23 32.1
comp=Z,7.8nm,0.9s
EPLO Experimental L 63.93 314 IAmb IAmb 12 23 33.8
comp=Z,11nm,1.3s
I40A Norwalk 64.44 307 IAmb IAmb 12 23 38.0
comp=Z,6.0nm,0.9s

ULM Lac du Bonnet 64.94 315 P **P 12 23 39.1 -0.5**
comp=Z,4.8nm,0.6s,baz=77,slow=5.9,SNR=9.5
comp=Z,4.8nm,0.6s
ULM Lac du Bonnet 64.94 315 IAmb IAmb 12 23 40.0
comp=Z,9.3nm,1.0s
T47A Sharon Grove 65.05 299 IAmb IAmb 12 23 41.6
comp=Z,8.1nm,0.7s
L40A Anamosa 65.64 305 IAmb IAmb 12 23 44.9
comp=Z,8.2nm,0.8s
AGMN Agassiz Nation 65.79 313 IAmb IAmb 12 23 46.0
comp=Z,5.8nm,0.8s
FFC Flin Flon 66.24 321 P **P 12 23 47.9 0.0**
FFC IAmb IAmb 12 23 49.5
comp=Z,5.0nm,0.8s
FVM French Village 66.95 301 IAmb IAmb 12 23 52.7
comp=Z,4.8nm,0.6s
F33A 5 Mile Ranch, 67.18 311 IAmb IAmb 12 23 55.0
comp=Z,11nm,1.2s
WMQ Urumqi 67.43 52 *e*P **P 12 23 58.5 +2.7**
WMQ LR LR
comp=Z,72nm,24.0s
CCM Cathedral Cave 67.49 301 P **P 12 23 55.8 -0.4**
CCM IAmb IAmb 12 23 56.4
comp=Z,6.0nm,0.6s
YKAW3 Yellowknife Wh 67.83 332 P **P 12 23 58.2 +0.4**
YKAW3 IAmb IAmb 12 23 59.3
comp=Z,4.7nm,0.9s
YKA Yellowknife Ar 67.86 332 P **P 12 23 58.4 +0.4**
comp=Z,9.4nm,0.8s,baz=60,slow=6.4,SNR=20
comp=Z,9.4nm,0.8s
YKA Yellowknife Ar 67.86 332 P **P 12 23 57.6 -0.5**
T42A Van Buren 67.87 300 IAmb IAmb 12 23 58.5
comp=Z,6.3nm,0.7s
R40A Maddies Statio 68.09 302 IAmb IAmb 12 24 00.3
comp=Z,8.8nm,1.1s
P38A Dawn 68.32 304 IAmb IAmb 12 24 01.9
comp=Z,5.9nm,0.7s
ECSD EROS Data Cent 68.38 309 IAmb IAmb 12 24 02.1
comp=Z,17nm,1.5s
HHAR Hobbs 70.23 301 IAmb IAmb 12 24 14.3
comp=Z,15nm,1.2s
U38A Gravette 70.46 301 IAmb IAmb 12 24 15.1
comp=Z,6.5nm,0.9s
MIAR Mount Ida 70.84 299 IAmb IAmb 12 24 17.9
comp=Z,6.0nm,0.8s
EDM Edmonton 72.72 324 P **P 12 24 28.2 +0.1**
RSSD Black Hills 72.79 312 P **P 12 24 28.4 -0.4**
RSSD IAmb IAmb 12 24 30.7
comp=Z,7.0nm,0.9s
W35A Tecumseh 72.86 301 IAmb IAmb 12 24 30.1
comp=Z,7.4nm,0.8s
EGMT Eagleton 73.91 318 IAmb IAmb 12 24 36.6
comp=Z,24nm,1.4s
WMOK Wichita Mounta 74.41 302 IAmb IAmb 12 24 39.5
comp=Z,6.8nm,0.8s
G24K Hadweenzie Riv 74.43 346 IAmb IAmb 12 25 04.8
comp=Z,6.3nm,0.8s
WTFS Witchita Falls 74.70 301 IAmb IAmb 12 24 41.1
comp=Z,12nm,0.8s
K22A Casper 75.11 312 IAmb IAmb 12 24 43.2
comp=Z,8.7nm,0.8s
PLPT Palo Pinto 75.11 300 IAmb IAmb 12 24 44.0
comp=Z,15nm,1.0s
YNE Yellowstone No 75.81 315 IAmb IAmb 12 24 48.9
comp=Z,6.1nm,0.8s
YMP Mirror Lake Pl 76.05 315 IAmb IAmb 12 24 49.5
comp=Z,7.8nm,0.8s
APMT Aspermont 76.11 301 IAmb IAmb 12 24 49.8
comp=Z,10nm,0.8s
ABTX Abilene, Hawle 76.15 300 IAmb IAmb 12 24 49.3
comp=Z,8.4nm,0.8s
ISCO Idaho Springs 76.17 309 IAmb IAmb 12 24 50.4
comp=Z,4.8nm,0.9s
SONM Songino Array 76.26 41 P **P 12 24 49.8 +1.0**
comp=Z,1.1nm,0.8s,baz=316,slow=6.2,SNR=5.9
comp=Z,1.1nm,0.8s
BOZ Bozeman (W) 76.38 317 IAmb IAmb 12 24 51.3
comp=Z,7.0nm,0.8s
DKNS Dickens 76.48 302 IAmb IAmb 12 24 51.9
comp=Z,12nm,0.8s
LDM Libby Dam 76.62 320 IAmb IAmb 12 24 55.6
comp=Z,4.0nm,0.8s
SN07 Snyder 07 76.77 301 IAmb IAmb 12 24 53.2
comp=Z,10nm,0.8s
HAYD Hayden 76.78 310 IAmb IAmb 12 24 54.0
comp=Z,4.7nm,0.9s
BW06 Boulder Array 76.87 313 IAmb IAmb 12 24 53.0
comp=Z,7.3nm,0.8s
PD31 Pinedale Array 76.87 313 IAmb IAmb 12 24 53.0
comp=Z,7.2nm,0.8s
PDAR Pinedale Array 76.87 313 P **P 12 24 52.1 -0.4**
comp=Z,5.4nm,0.7s,baz=64,slow=6.7,SNR=31
comp=Z,5.4nm,0.7s
PDAR Pinedale Array 76.87 313 P **P 12 24 52.4 -0.1**
DLMT Dillon 77.06 317 IAmb IAmb 12 24 55.8
comp=Z,10nm,0.9s
POST Post 77.21 301 IAmb IAmb 12 24 55.7
comp=Z,9.2nm,0.9s
OZNA Ozona 78.15 299 IAmb IAmb 12 25 01.7
comp=Z,8.4nm,1.0s
B08A Colville Reser 78.73 322 IAmb IAmb 12 25 24.6
comp=Z,5.8nm,0.6s
HWUT Hardware Ranch 78.76 313 IAmb IAmb 12 25 04.0
comp=Z,5.8nm,0.8s
PV22 Blue Mesa, Par 78.91 309 IAmb IAmb 12 25 05.1
comp=Z,8.7nm,0.7s
BSUT Blindstream Ca 78.92 312 IAmb IAmb 12 25 05.2
comp=Z,5.3nm,0.8s
PV21 Cone Mtn., Par 79.01 310 IAmb IAmb 12 25 13.2
comp=Z,11nm,0.8s
PV12 Saucer Basin, 79.05 309 IAmb IAmb 12 25 06.0
comp=Z,11nm,0.8s
PV04 Paradox Valley 79.06 309 IAmb IAmb 12 25 06.0
comp=Z,8.3nm,0.8s
PV02 Paradox Valley 79.07 309 IAmb IAmb 12 25 06.4
comp=Z,7.9nm,0.9s
PV11 David Mesa, Pa 79.10 309 IAmb IAmb 12 25 06.2
comp=Z,8.9nm,0.7s
PV16 Nyswonger Mesa 79.12 309 IAmb IAmb 12 25 06.4
comp=Z,8.1nm,0.7s
PV20 West Nyswonger 79.13 309 IAmb IAmb 12 25 06.9
comp=Z,13nm,0.8s
PV17 East Wray Mesa 79.17 309 IAmb IAmb 12 25 06.6
comp=Z,10nm,0.7s
PV05 Paradox Valley 79.38 309 IAmb IAmb 12 25 07.1
comp=Z,8.3nm,0.7s
P17A Butcher Ranch, 79.56 311 IAmb IAmb 12 25 08.3
comp=Z,6.3nm,0.7s
PECS Pecos 79.82 301 IAmb IAmb 12 27 16.9
comp=Z,5.3nm,0.6s
BGU Big Grassy Mou 80.05 313 IAmb IAmb 12 25 11.0
comp=Z,5.3nm,0.8s
TXAR Lajitas Array 80.86 299 P **P 12 25 15.4 +0.9**
comp=Z,1.2nm,0.9s,baz=73,slow=4.5,SNR=10
comp=Z,1.2nm,0.9s
PSUT Pine Spring 82.04 312 IAmb IAmb 12 25 23.2
comp=Z,4.6nm,0.9s
U15A North Rim 82.40 310 IAmb IAmb 12 25 24.3
comp=Z,4.5nm,0.8s
PRN Pahroc Range 83.49 312 IAmb IAmb 12 25 30.9
comp=Z,6.8nm,1.1s
HHC Hu-ho-hao-te 83.59 44 *e*P **P 12 25 28.0 -0.6**
HHC pmax pmax
comp=Z,10.0nm,0.6s
TUC Tucson 83.98 305 P **P 12 25 30.4 -0.3**
TUC IAmb IAmb 12 25 33.3
comp=Z,6.8nm,0.8s
TPH Tonopah 84.36 313 IAmb IAmb 12 25 34.1
comp=Z,4.5nm,1.0s
Y14A Wickenburg 84.41 308 IAmb IAmb 12 25 35.0
comp=Z,4.2nm,1.0s
PNTR Pine Nut 85.07 315 IAmb IAmb 12 25 43.0
comp=Z,4.5nm,0.8s
GWY Greenwater Val 85.27 312 IAmb IAmb 12 25 39.6
comp=Z,3.3nm,0.7s
PZH PanZhiHua 86.50 60 P **P 12 25 44.0 +0.5**
CMAR Chiang Mai Arr 89.34 68 P **P 12 25 57.5 +0.5**
comp=Z,0.3nm,0.3s,baz=309,slow=6.1,SNR=4.9
comp=Z,0.3nm,0.3s
NJ2 Nanjing 93.92 46 *e*P **P 12 26 17.5 -0.5**
NJ2 pmax pmax
comp=Z,21nm,0.7s
KSRS Korea Array 94.70 37 LR LR 13 13 41.6
comp=Z,18nm,18.0s,baz=145,slow=38
ASAJ Asahikawa 95.08 24 LR LR 13 12 46.4
comp=Z,42nm,19.5s,baz=310,slow=38
QSPA South Pole Qui 125.36 180 PKP **PKPdf 12 32 00.0 -0.1**
comp=Z,0.4nm,0.5s,baz=275,slow=2.1,SNR=8.9

ASAR Alice Springs 141.60 84 PKhKP PKPpre 12 32 26.6
comp=Z,0.3nm,0.9s,baz=306,slow=2.7,SNR=1.8
STKA Stephens Creek 151.03 93 PKPbc **PKiKP 12 32 54.3 +0.5**
comp=Z,1.5nm,0.7s,baz=336,slow=5.4,SNR=3.7

IDC ***25*** *12:25:50.9±0.5, 32.°30N×141.°77E, h0km, mb4.3/25, mbtmp4.3/32, ML3.5/6, MS3.6/31, Error ellipse: s-maj=15.7km s-min=11.8km az=65.0*
MOS ***25*** *12:25:52.0±0.9, 32.°30N×141.°70E, h16km, mb5.0/27, Error ellipse: s-maj=11.0km s-min=4.4km az=122.1*
JMA ***25*** *12:25:53.6±0.4, 32°N±1.″×14.″2E±.″, h22km, MV4.1/29, E OFF HACHIJOJIMA ISLAND*
NIED ***25*** *12:25:53.6, 32.°43N×141.°84E, h22km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.81; Mθθ0.37; Mϕϕ-4.18; Mrθ4.73; Mrϕ0.45; Mθϕ0.13; Fault plane solution: M₀5.70000×10¹⁵ NP1:ϕ₁±20.00000°, δ49.00000°, λ138.00000°. NP2:ϕ₂141.00000°, δ60.00000°, λ49.00000°.*
NEIC ***25*** *12:25:53.1±1.2, 32.°32N±0.″08×141.°8E±0.″1, h10km±1km, mb4.8/68 Error ellipse: s-maj=18.4km s-min=11.4km az=55.0*
BJI ***25*** *12:25:55.5, 32.°38N×141.°65E, h41km, mB4.6/17, mb4.5/44, Ms4.2/31, Ms7 4.0/32*
GFZ ***25*** *12:25:57.9±0.4, 32°N±5.″×14.″2E±.″, h40km, M4.9/24, mb4.8/24*
ISC 25 12:25:54.0±0.6, 32.°34N±0.″04×141.°74E±0.″05, h20km±2km, h21km:pP-P, n323, σ1§28/318, mb4.7/97, MS3.7/35, 14C-10D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.68**	**275**	P	**Pb**	**12 26 23.7**	**-0.6**
JHCJ	**Hachijojimakas**	**1.79**	**294**	P	**Pn**	**12 26 24.7**	**+0.8**
JHCJ				*e*S	**Sn**	**12 26 46.6**	**+0.5**
JHJ2	**Mitsune**	**1.79**	**296**	P	**Pn**	**12 26 25.2**	**+1.3**
JHJ2	**Mitsune**	**1.79**	**296**	Pn	**Pn**	**12 26 24.8**	**+0.9**
JHJ2	**Mitsune**	**1.79**	**296**	P	**Pn**	**12 26 24.9**	**+0.9**
JHJ2	**Mitsune**	**1.79**	**296**	P	**Pn**	**12 26 24.8**	**+0.9**
JHJ	**Hachijo jima 2**	**1.82**	**296**	Pn	**Pn**	**12 26 24.9**	**+0.6**
	268nm,0.3s,baz=139,slow=20,SNR=161						
JHJ				Sn	**Sn**	**12 26 47.4**	**+0.5**
	112nm,0.3s,baz=217,slow=23,SNR=4.3						
JMKN	**Mikurajimanish**	**2.38**	**311**	*e*S	**Sn**	**12 27 02.8**	**+2.3**
BSO1	**Boso 1**	**2.39**	**345**	P	**Pn**	**12 26 32.1**	**+0.4**
BSO1				*e*S	**Sn**	**12 26 59.9**	**-0.1**
BSO2	**Boso 2**	**2.54**	**341**	*e*S	**Sn**	**12 27 06.8**	**+2.7**
BSO3	**Boso 3**	**2.66**	**338**	*e*P	**Pn**	**12 26 36.3**	**+0.7**
JOD2	**Odawara 2**	**3.66**	**324**	*e*P	**Pn**	**12 26 50.5**	**+1.0**
JOD2				*e*S	**Sn**	**12 27 32.3**	**+0.2**
JSG	**Sagara**	**3.77**	**309**	P	**Pn**	**12 26 52.8**	**+1.7**
JYN	**Shimob**	**4.12**	**321**	*e*P	**Pn**	**12 26 58.3**	**+2.3**
JRY	**Ryogami san**	**4.36**	**328**	*e*P	**Pn**	**12 27 00.2**	**+1.1**
JAG	**Ashikaga**	**4.49**	**336**	P	**Pn**	**12 27 01.4**	**+0.4**
JAG				*e*S	**Sn**	**12 27 52.0**	**-0.7**
JGF	**Kuroka**	**4.88**	**313**	P	**Pn**	**12 27 09.3**	**+2.9**
JGF	**Kuroka**	**4.88**	**313**	Pn	**Pn**	**12 27 07.8**	**+1.4**
JGF	**Kuroka**	**4.88**	**313**	P	**Pn**	**12 27 09.7**	**+3.3**
INU	**Inuyama**	**4.94**	**309**	P	**Pn**	**12 27 09.9**	**+2.7**
	42nm,1.0s						
INU	**Inuyama**	**4.94**	**309**		**Pn**	**12 27 08.4**	**+1.2**
INU	**Inuyama**	**4.94**	**309**	P	**Pn**	**12 27 09.0**	**+1.8**
MJA0	**Matsu Arr-Jizo**	**5.09**	**326**	*e*P	**Pn**	**12 27 10.9**	**+1.7**
MJAR	**Matsushiro Arr**	**5.10**	**326**	Pn	**Pn**	**12 27 10.6**	**+1.2**
	0.8nm,0.3s,baz=145,slow=11,SNR=47						
MJAR				Sn	**Sn**	**12 28 05.5**	**-2.3**
	0.2nm,0.3s,baz=139,slow=12,SNR=4.6						
MJAR				LR	LR	12 29 26.5	
	comp=Z,495nm,19.1s,baz=140,slow=42						
	13nm,0.5s						
MJAR	**Matsushiro Arr**	**5.10**	**326**	P	**Pn**	**12 27 10.9**	**+1.4**
MJAR	**Matsushiro Arr**	**5.10**	**326**		**Pn**	**12 27 10.9**	**+1.4**
MAJO	**Matsushiro**	**5.11**	**326**	P	**Pn**	**12 27 11.0**	**+1.5**
	55nm,0.8s						
MAJO	**Matsushiro**	**5.11**	**326**	*c i*P	**Pn**	**12 27 10.2**	**+0.7**
MAJO	**Matsushiro**	**5.11**	**326**		**Pn**	**12 27 10.9**	**+1.4**
MAJO	**Matsushiro**	**5.11**	**326**	P	**Pn**	**12 27 11.3**	**+1.8**
MAT	**Matsushiro**	**5.11**	**326**	P	**Pn**	**12 27 10.2**	**+0.9**
MAT				*e*S	**Sn**	**12 28 08.2**	**+0.3**
MJB9	**Matsu-Tunnel**	**5.11**	**326**		**Pn**	**12 27 11.4**	**+1.9**
JCJ	**Chichijima**	**5.24**	**176**	Pn	**Pn**	**12 27 11.1**	**-0.3**
	17nm,0.3s,baz=271,slow=20,SNR=14						
JCJ				Sn	**Sn**	**12 28 05.5**	**-5.8**
	22nm,0.3s,baz=277,slow=20,SNR=3.7						
JCJ				LR	LR	12 28 55.5	
	comp=Z,394nm,18.5s,baz=107,slow=36						
	36nm,0.3s						
JCJ	**Chichijima**	**5.24**	**176**	P	**Pn**	**12 27 12.9**	**+1.5**
	142nm,1.0s						
JCJ	**Chichijima**	**5.24**	**176**		**Pn**	**12 27 11.3**	**-0.1**
JOTO	**OTAMA OYAMA**	**5.33**	**348**	*i* P	**Pn**	**12 27 12.2**	**-0.3**
JTNC	**Tanabenakahech**	**5.35**	**288**	*e*P	**Pn**	**12 27 15.2**	**+2.4**
JMK	**Ichinoseki**	**6.61**	**356**	P	**Pn**	**12 27 28.9**	**-1.2**
JMN	**Monobe**	**6.75**	**284**	P	**Pn**	**12 27 35.6**	**+3.6**
	34nm,1.7s						
JMN	**Monobe**	**6.75**	**284**	P	**Pn**	**12 27 33.9**	**+1.9**
JTM	**Tenmabayashi**	**8.44**	**357**	P	**Pn**	**12 27 54.2**	**-1.0**
	59nm,1.1s						
JTM	**Tenmabayashi**	**8.44**	**357**	Pn	**Pn**	**12 27 54.0**	**-1.3**
JTM	**Tenmabayashi**	**8.44**	**357**	P	**Pn**	**12 27 55.9**	**+0.6**
JNU	**Nakatsue**	**9.19**	**278**	Pn	**Pn**	**12 28 04.8**	**-0.7**
	0.3nm,0.3s,baz=139,slow=4.8,SNR=5.1						
JNU				LR	LR	12 31 53.5	
	comp=Z,388nm,18.6s,baz=137,slow=39						
	4.0nm,0.9s						
ERM	**Erimo**	**9.72**	**6**	P	**Pn**	**12 28 12.6**	**-0.1**
	34nm,1.7s						
ERM	**Erimo**	**9.72**	**6**	P	**Pn**	**12 28 13.0**	**+0.3**
ERM	**Erimo**	**9.72**	**6**	P	**Pn**	**12 28 14.0**	**+1.2**
JKA	**Kamikawa-asahi**	**11.77**	**3**	Pn	**Pn**	**12 28 38.5**	**-2.4**
JKA	**Kamikawa-asahi**	**11.77**	**3**	P	**Pn**	**12 28 41.6**	**+0.8**
ASAJ	**Asahikawa**	**11.77**	**3**	Pn	**Pn**	**12 28 39.0**	**-1.8**
	0.8nm,0.3s,baz=199,slow=28,SNR=8.6						
ASAJ				Sn	Sn	12 30 41.4	-10
	0.6nm,0.3s,baz=173,slow=28,SNR=2.5						
ASAJ				LR	LR	12 34 02.1	
	comp=Z,168nm,20.4s,baz=189,slow=42						
	3.7nm,0.3s						
ASAJ	**Asahikawa**	**11.77**	**3**	P	**Pn**	**12 28 41.6**	**+0.8**
KSRS	**Korea Array**	**12.43**	**298**	Pn	**Pn**	**12 28 51.1**	**+1.3**
	0.2nm,0.3s,baz=111,slow=14,SNR=9.5						
KSRS				LR	LR	12 33 47.4	
	comp=Z,311nm,18.8s,baz=110,slow=38						
	0.8nm,0.7s						
JOW	**Kunigami**	**12.94**	**248**	LR	LR	12 34 01.0	
	comp=Z,310nm,18.2s,baz=50,slow=38						
PSTR	**Posyet**	**13.45**	**323**	*e*P	**Pn**	**12 29 02.5**	**-1.2**
USA0B	**Ussuriysk Arra**	**14.09**	**330**	*e*P	**Pn**	**12 29 12.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**14.09**	**330**	Pn	**Pn**	**12 29 11.2**	**-1.2**
	baz=144,slow=12,SNR=4.7						
USRK				LR	LR	12 34 36.8	
	comp=Z,228nm,18.6s,baz=153,slow=37						
	5.0nm,0.8s						
YSS	**Yuzhno-Sakhali**	**14.61**	**3**	*e*P	**Pn**	**12 29 16.6**	**-3.0**
YSS				*e*S	**Sn**	**12 31 56.0**	**-4.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ	**Mudanjiang**	**15.49**	**326**	P	**P**	**12 29 35.3**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
CN2	**Changchun**	**17.15**	**316**	*e*P	**Pn**	**12 29 52.3**	**-0.2**
CN2				*e*S	**Sn**	**12 33 02.0**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				L	L		
	comp=Z,300nm,10.0s						
CN2				L	L		
	comp=Z,200nm,10.0s						
CN2				L	L		
	comp=Z,200nm,11.0s						
BNX	**BinXian**	**17.37**	**324**	P	**Pn**	**12 29 54.5**	**-0.7**
BNX				pmax	pmax		
	comp=Z,15nm,1.0s						
DL2	**Dalian**	**17.60**	**297**	P	**Pn**	**12 29 56.8**	**-1.3**
DL2				S	**Sn**	**12 33 09.3**	**-4.2**
DL2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DL2				L	L		
	comp=Z,660nm,15.8s						
DL2				L	L		

comp=Z,370nm,17.5s
DL2 L L
comp=Z,600nm,16.4s
GRNR Gornyy 18.83 349 *e*P **P 12 30 10.0 -2.5**
GUMO Guam 18.89 171 P **P 12 30 12.5 -0.8**
comp=Z,68nm,1.0s,baz=329,slow=14,SNR=2.4
NJ2 Nanjing 19.37 275 *e*P **Pn 12 30 20.0 +0.3**
NJ2 pmax pmax
comp=Z,20nm,0.9s
SSLB Suanglung 20.20 250 P **P 12 30 28.0 +0.3**
HEH HeiHe 20.82 333 *e*P **P 12 30 33.8 -0.3**
HEH pmax pmax
comp=Z,31nm,0.9s
HEH pmax pmax
comp=Z,130nm,4.9s
HEH L L
comp=Z,230nm,16.1s
HEH L L
comp=Z,190nm,15.1s
HEH L L
comp=Z,210nm,18.4s
BJI2 Beijing 21.97 298 P **P 12 30 45.0 -1.6**
BJI2 pmax pmax
comp=Z,3.0nm,0.6s
HNS HongShan 22.71 290 ⇑P **P 12 30 55.5 +0.9**
HNS pmax pmax
comp=Z,6.0nm,0.7s
HNS L L
comp=Z,220nm,15.7s
HNS L L
comp=Z,580nm,16.7s
HNS L L
comp=Z,510nm,17.5s
HIA Hailar 23.59 322 *de*P **P 12 31 03.0 -0.5**
PETK Petropavlovsk- 23.73 24 P **P 12 31 06.3 +1.6**
comp=Z,1.3nm,1.0s,baz=190,slow=7.4,SNR=2.7
PETK LR LR 12 41 36.9
comp=Z,77nm,19.9s,baz=196,slow=40
comp=Z,1.3nm,1.0s
HILR Hailar Array B 23.77 323 P **P 12 31 04.3 -0.9**
comp=Z,4.8nm,0.6s,baz=126,slow=10.0,SNR=5.2
comp=Z,4.8nm,0.6s
ZEA Zeya 23.77 338 *e*P **P 12 31 05.9 +0.8**
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,50nm,0.8s
HHC Hu-ho-hao-te 25.58 298 *e*P **P 12 31 23.0 +1.1**
HHC pmax pmax
comp=Z,15nm,0.6s
H11N2 WAKE ISLAND Hy 25.78 113 T T 12 58 42.6
baz=306
H11N1 WAKE ISLAND Hy 25.79 113 T T 12 58 35.8
baz=306
H11N3 WAKE ISLAND Hy 25.80 113 T T 12 58 41.3
baz=306
TGY Tagaytay City 26.28 231 LR LR 12 41 48.1
comp=Z,205nm,19.0s,baz=72,slow=36
BTO2 Baotou 26.82 297 *e*P **P 12 31 33.5 +0.3**
BTO2 pP **sP 12 31 37.8 -0.8**
BTO2 PP **PnPn 12 32 18.3 +3.4**
BTO2 S **S 12 36 08.0 -0.6**
BTO2 pmax pmax
comp=Z,23nm,0.9s
BTO2 pmax pmax
comp=Z,200nm,7.6s
BTO2 L L
comp=Z,720nm,16.1s
BTO2 L L
comp=Z,650nm,15.9s
BTO2 L L
comp=Z,800nm,15.9s
XAN Xi'an 27.46 283 P **P 12 31 37.5 -1.4**
XAN pmax pmax
comp=Z,8.0nm,0.8s
XAN L L
comp=Z,160nm,13.7s
XAN L L
comp=Z,210nm,18.5s
XAN L L
comp=Z,180nm,15.8s
MA2 Magadan 27.90 10 LR LR 12 44 47.8
comp=Z,61nm,19.1s,baz=156,slow=41
DAV Davao City (W) 29.31 214 LR LR 12 43 16.3
comp=Z,80nm,20.0s,baz=46,slow=36
ULN Ulaanbaatar 30.42 311 *ce*P **P 12 32 07.4 +2.2**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 30.42 311 P 12 32 04.4 -0.9
ULN Ulaanbaatar 30.42 311 P **P 12 32 06.7 +1.4**
YAK Yakutsk 30.70 349 LR LR 12 45 10.9
comp=Z,91nm,18.4s,baz=159,slow=38
YAK Yakutsk 30.70 349 *de*P **P 12 32 07.7 +0.4**
YAK pmax pmax
comp=Z,9.0nm,0.8s
SONM Songino Array 30.84 311 P **P 12 32 10.1 +1.3**
comp=Z,8.3nm,0.8s,baz=116,slow=8.6,SNR=34
comp=Z,8.3nm,0.8s
SONM Songino Array 30.84 311 P 12 32 09.7 +0.9
SONM IAmb IAmb 12 32 25.2
comp=Z,11nm,0.8s
SHEM Shemya Is, Ala 30.96 39 LR LR 12 43 02.5
comp=Z,51nm,20.0s,baz=297,slow=33
QIZ Qiongzhong 31.52 253 P **P 12 32 16.3 +1.3**
QIZ S **S 12 37 24.0 +1.4**
QIZ L L
comp=Z,110nm,14.2s
QIZ L L
comp=Z,100nm,8.2s
QIZ L L
comp=Z,180nm,17.8s
CD2 Chengdu 32.27 278 P **P 12 32 20.5 -1.0**
CD2 S **S 12 37 31.3 -2.8**
CD2 pmax pmax
comp=Z,140nm,7.6s
CD2 L L
comp=Z,320nm,12.7s
CD2 L L
comp=Z,430nm,15.2s
CD2 L L
comp=Z,500nm,16.5s
ZAK Zakamensk 33.55 314 *e*P **P 12 32 34.0 +1.4**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
TLY Talaya 33.76 316 LR LR 12 46 31.1
comp=Z,93nm,19.3s,baz=115,slow=37
TLY Talaya 33.76 316 *de*P **P 12 32 35.9 +1.6**
TLY pmax pmax
comp=Z,8.0nm,1.0s
TLY Talaya 33.76 316 P **P 12 32 34.5 +0.2**
TLY IAmb IAmb 12 32 49.1
comp=Z,5.5nm,0.6s
GTA2 Gaotai 34.50 294 *e*P **P 12 32 40.5 -0.5**
GTA2 pP pwP 12 32 51.3 -1.3
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 L L
comp=Z,170nm,15.6s
GTA2 L L
comp=Z,150nm,16.5s
GTA2 L L
comp=Z,190nm,15.9s
PZH PanZhiHua 35.17 271 P **P 12 32 48.0 +1.1**
MOY Mondy 35.32 315 *e*P **P 12 32 48.8 +0.9**
MOY pmax pmax
comp=Z,9.0nm,1.9s
KNGR Kungurtug, Tuv 37.17 313⇑ *e*P **P 12 33 04.5 +0.8**
KNGR pmax pmax
comp=Z,4.0nm,1.0s
GOMU GeErMu 38.68 289 P **P 12 33 15.0 -2.0**
GOMU pmax pmax
comp=Z,19nm,0.9s
CMAR Chiang Mai Arr 40.79 261 P **P 12 33 33.0 -1.2**
comp=Z,0.5nm,0.3s,baz=47,slow=8.3,SNR=4.7
CMAR LR LR 12 51 58.7
comp=Z,52nm,18.4s,baz=65,slow=38
comp=Z,0.5nm,0.3s
CMAR Chiang Mai Arr 40.79 261 *i* P **P 12 33 34.0 -0.3**
WMQ Urumqi 43.36 301 *e*P **P 12 33 57.8 +2.8**
WMQ pP pwP 12 34 08.3 +1.8
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ L L
comp=Z,72nm,22.3s
DGZ Jazzator, Alta 43.48 310⇑ *e*P **P 12 33 56.9 +0.8**
DGZ pmax pmax
comp=Z,18nm,0.9s

ZSN Zaisan 45.17 307 *e*P **P 12 34 09.9 +0.5**
ZSN Zaisan 45.17 307 *e*P **P 12 34 10.0 +0.5**
comp=Z,5.5nm,0.9s
ZAA0 Zalesovo Array 45.37 316 **P 12 34 10.8 -0.1**
ZAA0 IAmb IAmb 12 34 11.9
comp=Z,8.5nm,1.1s
ZALV Zalesovo Beam 45.37 316 P **P 12 34 11.2 +0.4**
comp=Z,3.0nm,0.6s,baz=98,slow=7.6,SNR=14
ZALV PcP **PcP 12 35 48.9 -1.1**
comp=Z,1.2nm,0.6s,baz=125,slow=4.0,SNR=2.8
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 45.37 316 **P 12 34 10.4 -0.5**
MK31 Makanchi Array 46.96 306 *ce*P **P 12 34 23.9 +0.3**
MKAR Makanchi Array 46.96 306 P **P 12 34 24.4 +0.8**
comp=Z,6.8nm,0.7s,baz=90,slow=9.6,SNR=51
MKAR LR LR 12 55 26.9
comp=Z,53nm,18.0s,baz=89,slow=38
comp=Z,6.8nm,0.7s
MKAR Makanchi Array 46.96 306 **P 12 34 23.9 +0.3**
MAKZ Makanchi 47.18 306 P **P 12 34 25.3 +0.1**
MAKZ pmax pmax
comp=Z,9.0nm,0.7s
MAKZ Makanchi 47.18 306 P **P 12 34 25.3 +0.1**
MAKZ IAmb IAmb 12 34 41.3
comp=Z,8.8nm,0.7s
NRIK Noril'sk 47.66 337 P **P 12 34 29.4 +0.8**
comp=Z,1.8nm,0.3s,baz=130,slow=9.4,SNR=4.6
NRIK LR LR 12 55 01.8
comp=Z,56nm,18.4s,baz=142,slow=37
comp=Z,1.8nm,0.3s
NRIK Noril'sk 47.66 337‖ *e*P **P 12 34 29.1 +0.5**
NRIK pmax pmax
comp=Z,8.0nm,1.1s
NRIK Noril'sk 47.66 337 P **P 12 34 28.9 +0.3**
NRIK IAmb IAmb 12 34 29.9
comp=Z,8.0nm,1.2s
KURK Kurchatov 49.13 311 P **P 12 34 40.9 +0.7**
KURK Kurchatov 49.13 311 P **P 12 34 40.1 -0.2**
KURK Kurchatov 49.13 311 P **P 12 34 40.6 +0.3**
KURBB Kurchatov Arra 49.20 311 P **P 12 34 40.9 +0.2**
comp=Z,9.4nm,0.8s,baz=87,slow=7.3,SNR=50
comp=Z,9.4nm,0.8s
PDGK Podgornoye 49.34 302 P **P 12 34 41.4 -0.7**
PDGK Podgornoye 49.34 302 P **P 12 34 41.4 -0.7**
SHLS Shalkode 49.38 301 *e*P **P 12 34 40.4 -2.0**
SHLS Shalkode 49.38 301 *e*P **P 12 34 40.4 -2.0**
UZB Uzynbulak 49.70 301 *e*P **P 12 34 44.9 0.0**
UZB Uzynbulak 49.70 301 *e*P **P 12 34 44.9 0.0**
TDK Taldyqorghan 49.85 304 *e*P **P 12 34 46.3 +0.4**
TDK Taldyqorghan 49.85 304 *e*P **P 12 34 46.3 +0.4**
comp=Z,3.8nm,0.5s
KPKS Kokpek 49.89 302 *e*P **P 12 34 46.5 +0.2**
KPKS Kokpek 49.89 302 *e*P **P 12 34 46.6 +0.2**
B20K Meade River 50.16 23 IAmb IAmb 12 34 55.2
comp=Z,8.6nm,0.8s
SATY Saty 50.16 301 *e*P **P 12 34 48.5 +0.2**
SATY Saty 50.16 301 *e*P **P 12 34 48.6 +0.2**
TARG Taragay, Kyrgy 50.84 300 P **P 12 34 54.9 +1.0**
TARG Taragay, Kyrgy 50.84 300 P **P 12 34 54.9 +1.0**
MDOK Medeo 51.12 302 *e*P **P 12 34 55.9 +0.2**
MDOK Medeo 51.12 302 *e*P **P 12 34 55.9 +0.2**
AAA Alma-Ata 51.21 302 *e*P **P 12 34 56.7 +0.5**
AAA pmax pmax
comp=Z,11nm,0.7s
AAA Alma-Ata 51.21 302 *e*P **P 12 34 56.7 +0.5**
comp=Z,11nm,0.7s
TNSS Tian-Shan 51.22 302 *e*P **P 12 34 56.6 -0.1**
TNSS Tian-Shan 51.22 302 *e*P **P 12 34 56.6 -0.1**
KUU Kurty 51.50 303 *e*P **P 12 34 58.8 +0.6**
KUU Kurty 51.50 303 *e*P **P 12 34 58.9 +0.6**
ASAI AK-SAY(Kyrgyzs 51.96 299 P **P 12 35 03.4 +1.2**
WB0 Warramunga Arr 52.29 189 **P 12 35 04.4 +0.1**
CTA Charters Tower 52.31 175 LR LR 12 56 40.7
comp=Z,43nm,20.3s,baz=282,slow=35
NEA2 Nenana 52.41 31 P **P 12 35 06.1 +1.4**
WRAB Tennant Creek 52.46 189 *de*P **P 12 35 05.6 0.0**
WRAB pmax pmax
comp=Z,15nm,1.3s
WRAB Tennant Creek 52.46 189 P **P 12 35 05.3 -0.2**
WRAB IAmb IAmb 12 35 19.2
comp=Z,17nm,0.8s
WRAB Tennant Creek 52.46 189 P **P 12 35 05.6 0.0**
WR8 Warramunga Arr 52.46 189 **P 12 35 05.4 -0.2**
WRA Warramunga Arr 52.47 189 P **P 12 35 05.3 -0.3**
comp=Z,11nm,0.9s,baz=5.8,slow=7.6,SNR=57
comp=Z,11nm,0.9s
WRA Warramunga Arr 52.47 189 **P 12 35 05.4 -0.3**
SGDS Sogindy 52.80 303 *e*P **P 12 35 08.3 +0.3**
AAK Ala-Archa 53.06 302 LR LR 13 01 12.5
comp=Z,103nm,18.0s,baz=82,slow=40
AAK Ala-Archa 53.06 302‖ *e*P **P 12 35 11.1 +1.0**
KSH2 Kashi 53.08 297 P **P 12 35 11.8 +1.5**
KSH2 pP pwP 12 35 23.3 +1.6
KSH2 pmax pmax
comp=Z,7.0nm,1.0s
KSH2 L L
comp=Z,450nm,23.7s
KSH2 L L
comp=Z,290nm,21.0s
KSH2 L L
comp=Z,210nm,15.5s
IL31 53.35 30 P **P 12 35 12.1 +0.5**
ILAR Eielson Array 53.35 30 P **P 12 35 12.5 +0.8**
comp=Z,1.7nm,0.9s,baz=263,slow=6.7,SNR=12
comp=Z,1.7nm,0.9s
ILAR Eielson Array 53.35 30 P **P 12 35 12.3 +0.6**
BVAR Borovoye Array 54.00 315 P **P 12 35 17.3 +0.7**
comp=Z,6.7nm,0.7s,baz=94,slow=8.0,SNR=18
comp=Z,6.7nm,0.7s
ARSB Arslanbob 54.46 300 IAmb IAmb 12 35 23.1
comp=Z,20nm,1.4s
ARK Arkit 55.09 301 P **P 12 35 26.4 +1.5**
ARK Arkit 55.09 301 P **P 12 35 26.4 +1.5**
DZA Taraz 55.27 303 *e*P **P 12 35 26.5 +0.4**
DZA pmax pmax
comp=Z,5.0nm,0.5s
DZA Taraz 55.27 303 *e*P **P 12 35 26.5 +0.4**
comp=Z,4.7nm,0.5s
H27K Steamboat Moun 55.56 29 **P 12 35 30.5 +2.7**
H27K IAmb IAmb 12 35 56.3
comp=Z,9.7nm,1.4s
BCAR Beaver Creek A 55.66 32 P **P 12 35 29.9 +1.3**
KK31 Karatay Array 55.81 303 P **P 12 35 30.0 +0.1**
KK31 pmax pmax
comp=Z,11nm,0.9s
KK31 Karatay Array 55.81 303 **P 12 35 30.0 +0.1**
KK31 IAmb IAmb 12 35 31.5
comp=Z,10nm,0.9s
KKAR Karatay Array 55.81 303 P **P 12 35 30.3 +0.4**
KKAR Karatay Array 55.81 303 **P 12 35 30.3 +0.4**
ASAR Alice Springs 56.20 189 P **P 12 35 33.0 +0.2**
comp=Z,4.6nm,1.1s,baz=8.6,slow=7.0,SNR=13
comp=Z,4.6nm,1.1s
ASAR Alice Springs 56.20 189 P **P 12 35 33.0 +0.2**
BRLS Boroldoy 56.30 303 *e*P **P 12 35 35.1 +1.7**
BRLS Boroldoy 56.30 303 *e*P **P 12 35 35.1 +1.7**
BTK Batken 56.38 299 P **P 12 35 33.8 -0.4**
BTK Batken 56.38 299 P **P 12 35 33.8 -0.4**
BTK IAmb IAmb 12 35 35.5
comp=Z,6.5nm,1.1s
IUG luzhnay 56.39 302 *e*P **P 12 35 34.6 +0.4**
IUG luzhnay 56.39 302 *e*P **P 12 35 34.6 +0.4**
comp=Z,4.2nm,0.6s
MANEM Manem 56.46 296 IAmb IAmb 12 35 49.9
comp=Z,24nm,1.0s
CHM Chimkent 56.65 302 *e*P **P 12 35 36.3 +0.4**
CHM Chimkent 56.65 302 *e*P **P 12 35 36.3 +0.4**
G29M Pine Creek 56.91 28 IAmb IAmb 12 35 41.6
comp=Z,6.8nm,1.0s
GAR Garm 57.06 298 P **P 12 35 39.8 +0.8**
GAR pP **pwP 12 35 52.9 +0.2**
EPYK Eagle Plains 57.49 28 IAmb IAmb 12 35 59.1
comp=Z,13nm,1.2s
G30M tAoh Zraii Nji 57.61 27 IAmb IAmb 12 36 00.4
comp=Z,5.5nm,1.0s
I30M Mount Dempster 57.78 30 IAmb IAmb 12 35 48.7
comp=Z,6.8nm,1.2s
CHGR Chuyangaron 58.02 298⇑ *i*P **P 12 35 46.2 +0.4**
CHGR Chuyangaron 58.02 298 P **P 12 35 46.4 +0.7**
CHGR pP **pwP 12 35 58.3 -1.2**
H31M Peel River 58.53 29 IAmb IAmb 12 36 07.2
comp=Z,7.7nm,1.1s
SVE Sverdlovsk 58.89 321 *e*P **P 12 35 52.5 +1.1**
SVE pmax pmax
comp=Z,8.0nm,0.9s

SHAA Shahritus 59.14 297 IAmb IAmb 12 36 08.4
comp=Z,20nm,0.8s
KBL Kabul 59.45 294 P **P 12 35 55.4 -0.5**
KBL Kabul 59.45 294 P **P 12 35 55.4 -0.5**
ARTI Arti 60.20 320 LR LR 13 04 19.9
comp=Z,47nm,18.1s,baz=194,slow=38
ARTI Arti 60.20 320 *c* P **P 12 36 00.5 +0.1**
ARTI 12 36 40.9
ARTI S **S 12 44 14.1 +1.1**
ARTI SS **SS 12 48 05.6 -4.1**
ARTI pmax pmax
comp=Z,14nm,1.2s
ARTI Arti 60.20 320 **P 12 36 00.6 +0.2**
AB31 Akbulak array 61.23 312 **P 12 36 07.7 +0.2**
AB31 IAmb IAmb 12 36 08.9
comp=Z,3.6nm,0.7s
ABKAR Akbulak array 61.23 312 **P 12 36 07.5 0.0**
STKA Stephens Creek 63.87 180 P **P 12 36 25.8 +0.6**
comp=Z,1.7nm,0.7s,baz=320,slow=8.2,SNR=3.8
comp=Z,1.7nm,0.7s
KIRV Kirov 64.18 324 *de*P **P 12 36 27.6 +0.6**
YKA Yellowknife Ar 67.74 29 P **P 12 36 50.3 +0.4**
comp=Z,0.8nm,0.7s,baz=292,slow=6.0,SNR=2.9
comp=Z,0.8nm,0.7s
YKA Yellowknife Ar 67.74 29 P **P 12 36 48.7 -1.2**
KLMR Klimovskoe 67.88 329 *e*P **P 12 36 49.1 -1.7**
KLMR pmax pmax
comp=Z,7.0nm,1.5s
OBN Obninsk 72.03 324 *ce*P **P 12 37 16.5 +0.1**
OBN *e* 12 39 56.2
OBN *e*S **S 12 46 33.9 -2.9**
OBN *e*SS **SS 12 51 16.1 +3.1**
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,96nm,17.0s
FINES FINESS Array B 73.09 333 P **P 12 37 22.8 +0.2**
comp=Z,3.4nm,0.9s,baz=72,slow=6.7,SNR=9.2
comp=Z,3.4nm,0.9s
FINES FINESS Array B 73.09 333 *i* P **P 12 37 22.7 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 73.09 333 P **P 12 37 23.1 +0.5**
PINE Pine Mountain 73.20 49 P **P 12 37 24.2 +0.4**
PINE IAmb IAmb 12 37 51.3
comp=Z,5.2nm,0.9s
KBZ Khabaz 74.19 312 P **P 12 37 28.9 -0.4**
comp=Z,6.3nm,0.9s,baz=131,slow=0.2,SNR=14
KBZ LR LR 13 12 48.6
comp=Z,50nm,18.9s,baz=84,slow=38
comp=Z,6.3nm,0.9s
KBZ Khabaz 74.19 312 *de*P **P 12 37 30.8 +1.4**
KIV Kislovodsk 74.21 312 *e*P **P 12 37 29.7 +0.1**
KIV pmax pmax
comp=Z,8.0nm,0.9s
VSU Vasula 74.64 330 *ce*P **P 12 37 31.8 +0.1**
VSU pmax pmax
comp=Z,13nm,1.2s
GNI Garni 74.76 308 LR LR 13 13 19.3
comp=Z,38nm,18.1s,baz=132,slow=38
SUMG Summit 75.36 0 P **P 12 37 37.7 +1.5**
SUMG pmax pmax
comp=Z,8.0nm,1.1s
SUMG Summit 75.36 0 P **P 12 37 37.7 +1.5**
SUMG IAmb IAmb 12 37 38.9
comp=Z,8.0nm,1.1s
SOC Sochi 76.25 313 *e*P **P 12 37 41.3 0.0**
SOC *e* 12 40 36.3
SOC *e*PPP PPP 12 42 19.7
SOC *e*S **S 12 47 23.8 -0.9**
SOC *e*SS **SS 12 52 20.5 +2.6**
MNK Minsk 76.54 327 *i* P **P 12 37 44.7 +2.1**
comp=E,8.0nm,0.6s
MNK *i* P **P 12 37 44.7 +2.1**
comp=N,11nm,0.7s
MNK *i* P **P 12 37 44.7 +2.1**
comp=Z,10.0nm,0.6s,baz=53
MNK *i* PcP **pwP 12 37 56.6 +0.5**
MNK *i* PP **PP 12 40 36.9 +2.7**
MNK *i* PPP PPP 12 42 24.7
MNK *i* S **S 12 47 27.8 +0.3**
MNK *i* SS **SS 12 52 25.7 +4.2**
MNK *i* SSS SSS 12 55 35.0
MNK *i* LR LR 13 11 44.7
MNK *i* LRM MLR 13 14 19.4
comp=Z,68nm,17.7s
MNK Minsk 76.54 327 *i* P **P 12 37 44.7 +2.1**
MNK *i* 12 37 56.5
MNK *i* 12 40 36.8
MNK *i* PPP PPP 12 42 24.6
MNK *i* S **S 12 47 27.7 +0.3**
MNK *i* SS **SS 12 52 25.7 +4.2**
MNK *i* SSS SSS 12 55 35.0
MNK pmax pmax
comp=Z,10.0nm,0.6s
MNK pmax pmax
comp=E,8.0nm,0.6s
MNK pmax pmax
comp=N,11nm,0.7s
MNK MLR MLR
comp=Z,68nm,18.0s
RAR Rarotonga 77.21 125 LR LR 13 08 41.9
comp=Z,50nm,20.5s,baz=260,slow=33
NVAR Mina Array Bea 77.61 52 P **P 12 37 48.9 -0.4**
comp=Z,0.4nm,0.7s,baz=300,slow=5.3,SNR=5.1
NVAR LR LR 13 07 43.7
comp=Z,46nm,18.9s,baz=216,slow=32
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 77.61 52 P **P 12 37 48.8 -0.5**
AK03 Malin Array Si 78.17 323 P **P 12 37 51.9 0.0**
AKASG Malin Array Be 78.18 323 P **P 12 37 52.1 +0.2**
comp=Z,1.7nm,0.5s,baz=46,slow=6.4,SNR=10
AKASG LR LR 13 15 30.8
comp=Z,84nm,19.1s,baz=36,slow=38
comp=Z,1.7nm,0.5s
AKASG Malin Array Be 78.18 323 P **P 12 37 52.2 +0.2**
AKBB Malin Array Si 78.18 323‖ *e*P **P 12 37 52.1 +0.2**
AK01 Malin Array Si 78.20 323 P **P 12 37 52.2 +0.2**
KIEV Kiev 78.20 323 P **P 12 37 52.3 +0.3**
comp=Z,2.3nm,1.0s
AK23 Malin Array Si 78.20 323 P **P 12 37 52.3 +0.3**
AK04 Malin Array Si 78.20 323 P **P 12 37 52.4 +0.4**
AK08 Malin Array Si 78.21 323 P **P 12 37 52.2 +0.1**
AK02 Malin Array Si 78.22 323 P **P 12 37 52.2 +0.1**
AK11 Malin Array Si 78.23 323 P **P 12 37 52.1 -0.1**
AK21 Malin Array Si 78.23 323 P **P 12 37 52.5 +0.3**
AK10 Malin Array Si 78.23 323 P **P 12 37 52.3 +0.1**
AK19 Malin Array Si 78.28 323 P **P 12 37 52.6 +0.1**
AK14 Malin Array Si 78.29 323 P **P 12 37 52.1 -0.4**
KELT Kelkit 78.36 310 P **P 12 37 54.2 +0.8**
ELK Elko 78.39 49 LR LR 13 08 31.4
comp=Z,29nm,19.1s,baz=275,slow=33
NC405 NORSAR Array S 78.40 338 IAmb IAmb 12 37 54.8
comp=Z,12nm,1.1s
HFS Hagfors 78.47 336 P **P 12 37 53.6 +0.3**
comp=Z,4.1nm,0.8s,baz=76,slow=6.3,SNR=6.8
HFS LR LR 13 14 45.7
comp=Z,33nm,20.5s,baz=44,slow=37
comp=Z,4.1nm,0.8s
NC204 NORSAR Array S 78.58 338 IAmb IAmb 12 37 55.9
comp=Z,13nm,1.0s
NB201 NORSAR Array S 78.58 338 IAmb IAmb 12 37 55.3
comp=Z,14nm,1.1s
NB2 NORSAR Subarra 78.61 338 P **P 12 37 54.0 -0.2**
comp=Z,2.0nm,0.7s,baz=40,slow=5.6
NOA NORSAR Array B 78.61 338 P **P 12 37 54.5 +0.3**
comp=Z,4.8nm,0.9s,baz=41,slow=5.4,SNR=11
NOA LR LR 13 16 03.8
comp=Z,35nm,19.8s,baz=35,slow=38
comp=Z,4.8nm,0.9s
RNPP9 Sopachiv 79.40 325 P **P 12 37 58.8 +0.2**
LUBAR Lubar, Ukraine 79.41 323 P **P 12 37 58.2 -0.5**
RNPP1 Kostyukhnivka 79.50 325 P **P 12 37 59.4 +0.2**
RNPP5 Staryi Chortor 79.52 325 P **P 12 37 59.8 +0.5**
TPNV Topopah Spring 79.77 53 P **P 12 38 01.6 +0.5**
TPNV pmax pmax
comp=Z,5.0nm,1.2s
TPNV Topopah Spring 79.77 53 **P 12 38 01.6 +0.5**
SORM Soroca 80.20 321 P **P 12 38 03.4 +0.4**
comp=Z,7.4nm,0.9s
PDAR Pinedale Array 80.77 45 P **P 12 38 06.7 +0.1**
comp=Z,0.3nm,0.7s,baz=263,slow=7.7,SNR=2.3
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 80.77 45 P **P 12 38 06.2 -0.3**
KMPD K-Podol'skiy 80.92 323 P **P 12 38 06.1 -0.8**

CCUT	Cedar City	81.36	51	P		P		12 38 08.8	-1.0	
PFO	Pinyon Flats O	81.44	56	LR		LR		13 09 22.7		
	comp=Z,53nm,19.5s,baz=242,slow=32									
P17A	Butcher Ranch,	81.96	48	IAmb		IAmb		12 38 19.9		
	comp=Z,11nm,1.5s									
KWP	Kalwaria Pacla	82.10	325	P		P		12 38 14.2	+1.0	
	comp=Z,21nm,1.0s									
BURAR	Bucovina Array	82.17	322	P		P		12 38 14.3	+0.7	
BURAR				pmax		pmax				
	comp=Z,4.0nm,1.0s									
BURAR	Bucovina Array	82.17	322			P		12 38 14.3	+0.7	
BRTR	Keskin Array B	82.18	312	P		P		12 38 14.9	+1.1	
	comp=Z,2.9nm,0.8s,baz=104,slow=5.2,SNR=11									
	comp=Z,2.9nm,0.8s									
BRTR	Keskin Array B	82.18	312	*i* P		P		12 38 15.0	+1.1	
BRTR				pmax		pmax				
	comp=Z,3.0nm,0.8s									
BRTR	Keskin Array B	82.18	312			P		12 38 14.4	+0.5	
SRU	San Rafael Swe	82.31	48	IAmb		IAmb		12 38 20.8		
	comp=Z,4.5nm,0.9s									
RAYN	Ar Rayn	82.71	293	P		P		12 38 16.8	-0.1	
RAYN				pmax		pmax				
	comp=Z,5.0nm,0.7s									
RAYN	Ar Rayn	82.71	293			P		12 38 16.8	-0.1	
RAYN				IAmb		IAmb		12 38 18.2		
	comp=Z,4.8nm,0.7s									
RAYN	Ar Rayn	82.71	293	P		P		12 38 16.7	-0.1	
RAYN				pP		pwP		12 38 29.8	-0.7	
HMU	Henry Mountain	82.85	49	IAmb		IAmb		12 38 25.2		
	comp=Z,3.7nm,0.9s									
OJC	Ojcow	83.09	327	*e*P		P		12 38 11.3	-7.0	
OJC	Ojcow	83.09	327	P		P		12 38 18.1	-0.2	
OJC	Ojcow	83.09	327			P		12 38 18.1	-0.2	
OJC	Ojcow	83.09	327	P		P		12 38 19.1	+0.8	
	comp=Z,8.1nm,1.4s									
OJC	Ojcow	83.09	327	P		P		12 38 18.7	+0.4	
TRPA	Tarpa	83.19	324	P		P		12 38 20.1	+1.3	
NIE	Niedzica	83.40	326	P		P		12 38 20.9	+0.9	
	comp=Z,4.4nm,1.1s									
PV05	Paradox Valley	83.81	49	IAmb		IAmb		12 38 43.6		
	comp=Z,7.5nm,1.3s									
PV18	Skein Mesa, Pa	83.83	48	IAmb		IAmb		12 38 59.2		
	comp=Z,10nm,1.1s									
PV03	Paradox Valley	83.87	48	IAmb		IAmb		12 38 29.8		
	comp=Z,12nm,1.5s									
ARR	Arges	83.93	321	P		P		12 38 24.4	+1.6	
PV13	Radium Mtn., P	83.94	48	IAmb		IAmb		12 38 59.5		
	comp=Z,6.0nm,1.2s									
PV02	Paradox Valley	83.97	48	IAmb		IAmb		12 38 52.2		
	comp=Z,8.7nm,1.1s									
DRGR		84.00	323	P		P		12 38 23.9	+0.8	
DRGR		84.00	323	P		P		12 38 23.9	+0.8	
PV01	Paradox Valley	84.11	48	IAmb		IAmb		12 38 38.7		
	comp=Z,4.6nm,1.2s									
KSP	Ksiaz	84.23	329	P		P		12 38 25.0	+0.9	
	comp=Z,11nm,1.0s									
MORC	Moravsky Berou	84.44	327	P		P		12 38 25.3	+0.1	
MORC				pmax		pmax				
	comp=Z,5.0nm,1.0s									
MORC	Moravsky Berou	84.44	327			P		12 38 25.3	+0.1	
MORC				IAmb		IAmb		12 38 26.9		
	comp=Z,5.2nm,1.0s									
MORC	Moravsky Berou	84.44	327	*e*P		P		12 38 25.5	+0.3	
MORC				*e*				12 38 38.2		
MORC	Moravsky Berou	84.44	327	P		P		12 38 26.2	+1.0	
DPC	Dobruska-Polom	84.58	328	P		P		12 38 27.2	+1.3	
DPC	Dobruska-Polom	84.58	328	P		P		12 38 27.0	+1.1	
	comp=Z,8.0nm,1.0s									
DPC	Dobruska-Polom	84.58	328	P		P		12 38 27.2	+1.3	
PSZ	Piszkesteto	84.63	325	P		P		12 38 27.7	+1.4	
PSZ	Piszkesteto	84.63	325	IAmb		IAmb		12 38 28.9		
	comp=Z,9.4nm,1.1s									
PSZ	Piszkesteto	84.63	325	P		P		12 38 27.7	+1.4	
VYHS	Vyhne	84.74	326	*e*P		P		12 38 27.5	+0.7	
VYHS				pmax		pmax				
	comp=Z,2.0nm,0.7s									
VYHS	Vyhne	84.74	326	P		P		12 38 26.8	+0.1	
VYHS	Vyhne	84.74	326	*e*P		P		12 38 27.5	+0.7	
MMAI	Mount Meron Ar	84.91	306	LR		LR		13 22 18.6		
	comp=Z,33nm,19.3s,baz=81,slow=40									
JAVC	Velka Javorina	85.03	327	*e*P		P		12 38 29.9	+1.6	
VRAC	Vranov	85.20	328	P		P		12 38 29.0	-0.1	
VRAC	Vranov	85.20	328	*e*P		P		12 38 29.7	+0.6	
VRAC	Vranov	85.20	328	P		P		12 38 30.0	+0.9	
BRG	Berggiesshubel	85.23	330	*e*P		P		12 38 29.4	+0.3	
BRG				Amp				12 38 30.6		
	comp=Z,2.8nm,0.8s									
BRG				pP		pwP		12 38 42.6	+0.2	
BRG				Amp				12 38 43.6		
	comp=Z,3.2nm,0.8s									
CLL	Collm	85.30	331	⇓ *i*P		P		12 38 30.0	+0.5	
CLL				pmax		pmax				
	comp=Z,9.0nm,0.9s									
CLL	Collm	85.30	331	P		P		12 38 29.9	+0.5	
CLL	Collm	85.30	331	⇓ *i*P		P		12 38 30.0	+0.5	
	comp=Z,9.0nm,0.9s									
CLL				*e*pP		pwP		12 38 43.0	+0.2	
	comp=Z,10.0nm,0.9s									
CLL				*e*PP		PP		12 41 44.0	-2.6	
KRUC	Moravsky	85.47	327	P		P		12 38 31.3	+0.9	
KRUC	Moravsky	85.47	327	*e*P		P		12 38 30.7	+0.3	
KRUC	Moravsky	85.47	327	P		P		12 38 31.3	+0.9	
MODS	Modra-Piesok	85.56	327	*e*P		P		12 38 32.8	+1.9	
MODS				pmax		pmax				
	comp=Z,10.0nm,1.1s									
MODS	Modra-Piesok	85.56	327	*e*P		P		12 38 32.8	+1.9	
GERES	GERESS Array B	86.84	329	P		P		12 38 36.7	-0.6	
	comp=Z,0.2nm,0.6s,baz=71,slow=3.3,SNR=4.4									
	comp=Z,0.2nm,0.6s									
ANMO	Albuquerque	87.40	50	LR		LR		13 16 52.7		
	comp=Z,52nm,18.4s,baz=294,slow=35									
EKA	Eskdalemuir Ar	87.64	341	P		P		12 38 41.0	+0.2	
	comp=Z,2.9nm,0.9s,baz=46,slow=4.8,SNR=4.5									
	comp=Z,2.9nm,0.9s									
TXAR	Lajitas Array	92.76	53	P		P		12 39 05.5	+0.1	
	comp=Z,0.7nm,0.8s,baz=288,slow=3.7,SNR=8.3									
	comp=Z,0.7nm,0.8s									
TORD	Torodi Ar. Bea	120.78	313	PKP		PKPdf		12 44 44.8	-0.6	
	comp=Z,0.4nm,0.7s,baz=12,slow=1.4,SNR=2.6									
QSPA	South Pole Qui	122.10	180	PKP		PKPdf		12 44 45.5	-0.9	
	comp=Z,1.4nm,1.0s,baz=258,slow=2.4,SNR=3.9									
BOSA	Boshof	125.84	256	PKP		PKPdf		12 44 54.0	-0.9	
	comp=Z,3.7nm,0.4s,baz=191,slow=7.0,SNR=14									
SIV	San Ignacio	153.66	57	PKPbc		PKPbc		12 45 51.2	-0.9	
	comp=Z,1.0nm,0.4s,baz=270,slow=11,SNR=4.3									

*SDD **25** 12:33:40.7±2.6, 19°.50N×71°.12W, h0km±11km, MD2.8, ML2.0, MW2.2, Presumed earthquake*
*OSPL **25** 12:33:41.0±1.2, 19°.54N×71°.11W, h0km±710km, ML2.2, Presumed earthquake*

ISC 25 12:33:38.5±0.9, 19°.54N±0°.03×71°.04W±0°.04, h14km±7km, n13, σ0$68/20, 12C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MADR	Mao Valverde	0.06	296	⇑ *i*S		Sg	12 33 42.6	-0.5
MADR				IAML			12 33 43.6	
	comp=N,1μm,0.4s							
SC01	Santiago de lo	0.32	110	⇑ *i*S		Sn	12 33 54.5	-0.7
SC01				IAML			12 34 15.0	
	comp=N,96nm,0.9s							
SC01	Santiago de lo	0.32	110	*i* P		Pn	12 33 48.0	-0.7
LOPP1	Punta Rusia, P	0.35	335	*i* P		Pg	12 33 46.0	+0.4
LOPP1				*e*S		Sb	12 33 51.5	-0.3
LOPP1				IAML			12 33 52.1	
	comp=Z,100nm,0.4s							
LUDR	Luperon	0.36	13	⇑ *i*P		Pb	12 33 46.6	-0.1
LUDR				⇑ *i*S		Sb	12 33 53.2	+0.9
REDR	Restauracion	0.50	222	⇑ *i*P		Pn	12 33 51.2	0.0
REDR				⇑ *i*S		Sn	12 33 58.7	-0.9
REDR				IAML			12 34 01.6	
	comp=N,124nm,0.1s							
SDDR	Presa de Saban	0.60	203	⇑ *i*P		Pg	12 33 49.7	-0.6
SDDR				⇑ *i*S		Sg	12 33 58.1	-0.1
SDDR				IAML			12 33 58.9	
	comp=N,22nm,0.5s							
SDDR	Presa de Saban	0.60	203	*i* P		Pb	12 33 50.8	0.0
SDDR				*e*S		Sg	12 33 58.6	+0.4
SDDR				IAML			12 34 00.3	
	comp=Z,500nm,0.1s							
LODA1	ITESIL, Dajabo	0.62	271	*i* P		Pb	12 33 51.3	+0.1
LODA1				*e*S		Sg	12 33 58.5	-0.4
MCDR	Montecristi	0.68	301	⇑ *i*S		Sb	12 34 02.0	+0.7
MCDR				IAML			12 34 05.8	
	comp=N,79nm,0.3s							
LODU1	El Espartillar	1.25	199	*i* P		Pg	12 34 03.7	+1.1
LODU1				IAML			12 34 22.5	
	comp=Z,46nm,2.3s							
HATOM	Hato Mayor del	1.74	115	⇑ *i*P		Pb	12 34 10.2	0.0
HATOM				⇑ *i*S		Sb	12 34 33.0	+1.0
HATOM				IAML			12 34 50.2	
	comp=N,28nm,4.5s							
GRTK	Grand Turk	1.96	358	⇑ *i*S		Sb	12 34 39.3	+0.9
GRTK				IAML			12 34 44.8	
	comp=N,59nm,2.2s							

IDC 25 12:33:46.7±2.2, 28°.30S×178°.43W, h0km, mb3.8/3, mbtmp3.8/3, MS3.4/5, Error ellipse: s-maj=62.1km s-min=20.2km az=43.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	Raoul Island	1.05	155	Pn		Pn	12 34 08.8	+0.1
	40nm,0.3s,baz=86,slow=22,SNR=1.5							
RAO				Sn		Sn	12 34 25.3	+1.2
	279nm,0.3s,baz=11,slow=23,SNR=8.9							
ASAR	Alice Springs	42.88	265	P		P	12 41 47.0	-0.2
	0.3nm,0.6s,baz=106,slow=7.7,SNR=4.4							
ASAR				LR		LR	12 58 20.6	
	comp=Z,77nm,18.8s,baz=352,slow=34							
	0.3nm,0.6s							
WRA	Warramunga Arr	43.67	270	P		P	12 41 53.5	0.0
	0.3nm,0.4s,baz=111,slow=8.1,SNR=9.8							
	0.3nm,0.4s							
PLCA	Paso Flores	84.22	133	P		P	12 46 20.4	+0.1
	3.7nm,1.0s,baz=241,slow=7.1,SNR=3.2							
	3.7nm,1.0s							
CMIG	Matias Romero	92.46	72	LR		LR	13 21 02.6	
	comp=Z,16nm,20.3s,baz=228,slow=31							
DLBC	Dease Lake	95.34	23	LR		LR	13 21 27.7	
	comp=Z,20nm,20.4s,baz=241,slow=30							
ILAR	Eielson Array	95.97	13	LR		LR	13 29 37.8	
	comp=Z,9.1nm,18.1s,baz=92,slow=35							
LPAZ	La Paz	99.35	114	LR		LR	13 22 60.0	
	comp=Z,22nm,20.1s,baz=277,slow=30							
FINES	FINESS Array B	143.04	341	PKP		PKPbc	12 53 20.2	+1.6
	0.6nm,0.5s,baz=45,slow=2.2,SNR=7.8							

*CNRM **25** 12:38:08.7, 35°.54N×3°.83W, h21km, ML3.0*
*MDD **25** 12:38:09.3±0.4, 35°.41N×3°.78W, h9km±3km, mb_Lg2.8/43, Error ellipse: s-maj=3.9km s-min=2.2km az=165.0*
*SFS **25** 12:38:10.4, 35°.47N×3°.70W, h20km, ML3.0/21, ML3.0/21, MLv2.9/15*
*INMG **25** 12:38:10.1±1.7, 35°.45N×3°.76W, h14km±7km, ML2.4, Error ellipse: s-maj=4.5km s-min=3.2km az=149.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*
*IGIL **25** 12:38:11.6, 35°.48N×3°.80W, h22km*

ISC 25 12:38:09.1±1.2, 35°.49N±0°.02×3°.76W±0°.02, h19km±3km, n97, σ1$26/168, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PALE	Palemas	0.30	209	P		Pg	12 38 15.4	-0.4
PALE				S		Sg	12 38 19.9	-0.5
WMELI	Melilla	0.68	104	P		Pb	12 38 21.9	-0.4
WMELI	Melilla	0.68	104	Pg		Pb	12 38 21.9	-0.4
WMELI				Sg		Sb	12 38 30.9	-0.4
EMEL	Melilla	0.68	105	Pg		Pb	12 38 22.1	-0.3
EMEL				Sg		Sb	12 38 31.4	+0.1
EMEL				*i* lVmb_Lg			12 38 36.2	
EMLI	Melilla	0.69	105	P		Pb	12 38 21.9	-0.4
EMLI	Melilla	0.69	105	Pg		Pb	12 38 22.0	-0.4
EMLI				Sg		Sb	12 38 30.8	-0.7
EALB	Alboran	0.74	52	P		Pb	12 38 23.4	-0.1
EALB	Alboran	0.74	52	Pg		Pb	12 38 23.7	+0.3
EALB				Sg		Sg	12 38 33.9	+0.2
EALB	Alboran	0.74	52	Pg		Pb	12 38 23.6	+0.1
EALB				Sg		Sg	12 38 34.1	+0.4
EALB				*i* lVmb_Lg			12 38 36.7	
AKLM	AKL	0.98	185	P		Pb	12 38 27.1	-0.4
AKLM				S		Sb	12 38 39.2	-0.7
TAF	Taforalt	1.29	121	P		Pb	12 38 33.1	+0.3
TAF				S		Sb	12 38 50.4	+1.4
SMIR	Smir Dam	1.34	279	P		Pn	12 38 30.9	-1.8
SMIR				S		Sn	12 38 48.7	-1.3
CHEFC	Chefchaouen	1.35	254	P		Pn	12 38 32.4	-0.6
CHEFC				S		Sn	12 38 48.9	-1.5
EMIJ	Mijas	1.35	323	Pn		Pn	12 38 32.5	-0.5
EMIJ				Sn		Sn	12 38 49.5	-1.0
EMIJ	Mijas	1.35	323	Pn		Pn	12 38 32.7	-0.3
EMIJ				Sn		Sn	12 38 49.1	-1.4
EMIJ				*i* lVmb_Lg			12 38 55.2	
ELGU	Los Guajares,	1.39	4	P		Pn	12 38 32.6	-0.9
ELGU	Los Guajares,	1.39	4	Pn		Pn	12 38 33.0	-0.5
ELGU				Sn		Sn	12 38 49.5	-1.9
ELGU	Los Guajares,	1.39	4	Pn		Pn	12 38 33.0	-0.5
ELGU				Sn		Sn	12 38 50.6	-0.7
ELGU				*i* lVmb_Lg			12 38 55.2	
EMAL	Malaga-Limoner	1.39	337	Pn		Pn	12 38 33.7	+0.3
EMAL				Sn		Sn	12 38 50.4	-0.8
JBK	JBK	1.51	139	P		Pn	12 38 35.5	+0.2
JBK				S		Sb	12 38 56.2	+0.8
EBER	Berja	1.58	26	P		Pn	12 38 35.6	-0.7
EBER	Berja	1.58	26	Pn		Pn	12 38 35.9	-0.4
EBER	Berja	1.58	26	Pn		Pn	12 38 35.8	-0.4
EBER				Sn		Sb	12 38 57.2	-0.2
EBER				*i* lVmb_Lg			12 39 04.8	
EGOR	Sierra Gorda,	1.65	350	Pn		Pn	12 38 37.1	0.0
EGOR	Sierra Gorda,	1.65	350	Pn		Pn	12 38 37.3	+0.1
EGOR				Sn		Sb	12 38 59.3	-0.1
EGOR				*i* lVmb_Lg			12 39 07.3	
EJIF	Jimena Fronter	1.69	305	Pn		Pn	12 38 38.5	+0.9
EJIF				Sn		Sn	12 38 59.3	+0.6
EQUE	Quentar	1.74	8	Pn		Pn	12 38 39.1	+0.8
EQUE				Sn		Sn	12 39 00.9	+0.9
EQUE				*i* lVmb_Lg			12 39 03.3	
EQTA	Presa de Quent	1.74	8	P		Pn	12 38 39.7	+1.4
EQTA	Presa de Quent	1.74	8	Pn		Pn	12 38 39.1	+0.7
EQTA				Sn		Sn	12 39 00.4	+0.3
SICH	Sidi Chahed	1.88	223	P		Pn	12 38 40.6	+0.4
SICH				S		Sn	12 39 03.7	+0.3
ENIJ	Nijar	1.94	40	P		Pn	12 38 40.8	-0.3
ENIJ	Nijar	1.94	40	Pn		Pn	12 38 40.4	-0.7
ENIJ	Nijar	1.94	40	Pn		Pn	12 38 40.5	-0.6
ENIJ				Sn		Sn	12 39 03.3	-1.8
ENIJ				*i* lVmb_Lg			12 39 06.1	
LCRM	LCR	2.01	207	P		Pb	12 38 45.1	0.0
LCRM				S		Sb	12 39 11.3	+1.5
ESPR	Espera	2.19	310	Pn		Pn	12 38 46.3	+1.8
ESPR	Espera	2.19	310	Pn		Pn	12 38 45.9	+1.5
ESPR				Sn		Sb	12 39 13.4	-1.4
ESPR				*i* lVmb_Lg			12 39 19.7	
IFR	Ifrane	2.26	210	Pg		Pb	12 38 50.9	+1.4
IFR				Sn		Sn	12 39 12.5	-0.6
EQES	Quesada	2.38	13	Pn		Pb	12 38 49.8	-1.6
EQES				Sn		Sn	12 39 18.1	+2.2
EQES				*i* lVmb_Lg			12 39 21.2	
E0802	Ubeda,Jaen	2.56	7	Pn		Pn	12 38 52.1	+2.5
E0802				Sn		Sn	12 39 21.3	+1.2
MD31	MD31	2.74	198	P		Pn	12 38 52.9	+0.8
MD31				S		Sn	12 39 25.7	+0.9
MDT	Midelt	2.75	195	P		Pn	12 38 53.2	+0.8
MDT				S		Sn	12 39 26.5	+1.4
EADA	Adamuz	2.76	346	Pn		Pn	12 38 53.6	+1.3
EADA				Sn		Sn	12 39 26.0	+0.9
EADA	Adamuz	2.76	346	Pn		Pn	12 38 53.9	+1.6
EADA				Sn		Sn	12 39 26.9	+1.8
EADA				*i* lVmb_Lg			12 39 33.4	
EZAR	Zarzadilla de	2.91	34	Pn		Pn	12 38 55.2	+0.8
EZAR				Sn		Sn	12 39 29.4	+0.5
EZAR				*i* lVmb_Lg			12 39 38.7	
ECAB	El Cabril	2.91	333	Pn		Pn	12 38 55.9	+1.5
ECAB	El Cabril	2.91	333	Pn		Pn	12 38 56.2	+1.8
ECAB				Sn		Sn	12 39 30.3	+1.5
ECAB				*i* lVmb_Lg			12 39 46.2	
CART	Cartagena	3.06	46	Pn		Pn	12 38 56.6	+0.2
CART				Sn		Sn	12 39 29.3	-3.1
CART	Cartagena	3.06	46	P		Pn	12 38 55.6	-0.7
CART				S		Sn	12 39 30.8	-1.6
EMUR	La Murta	3.10	40	Pn		Pn	12 38 58.5	+1.4
EMUR				Sn		Sn	12 39 32.7	-1.0
EMUR				*i* lVmb_Lg			12 39 38.6	
ZHG	ZHG	3.13	230	P		Pn	12 38 58.9	+1.4
ZHG				S		Sn	12 39 34.6	+0.2
EMIN	Mina Concepcio	3.27	315	Pn		Pn	12 39 00.8	+1.5
EMIN				Sn		Sn	12 39 36.9	-0.7
EMIN	Mina Concepcio	3.27	315	Pn		Pn	12 39 00.8	+1.5
EMIN				Sn		Sn	12 39 37.0	-0.7
EMIN				*i* lVmb_Lg			12 39 39.1	
PSIM	Granatula de C	3.33	0	Pn		Pn	12 39 01.9	+1.7
PSIM				Sn		Sn	12 39 39.9	+0.7
ETOB	Tobarra	3.62	29	Pn		Pn	12 39 06.4	+2.2
ETOB				Sn		Sn	12 39 46.8	+0.4
ETOB				*i* lVmb_Lg			12 39 50.5	
EGRO	El Granado	3.63	305	Pn		Pn	12 39 04.9	+0.6
EGRO	El Granado	3.63	305	Pn		Pn	12 39 04.6	+0.4
EGRO				Sn		Sn	12 39 44.5	-2.1
EGRO				*i* lVmb_Lg			12 39 50.7	
PVAQ	Vaqueiros	3.72	302	*e*P		Pn	12 39 05.8	+0.3
PVAQ				*e*S		Sn	12 39 47.7	-1.2
PVAQ				*i* IAML			12 39 49.2	
PVAQ				*i* IAML			12 39 49.8	
PVAQ				*i* IAML			12 39 52.8	
PVAQ	Vaqueiros	3.72	302	P		Pn	12 39 04.9	-0.7
PVAQ				S		Sn	12 39 46.8	-2.1
PBAR	Barrancos	3.76	317	Sn		Sn	12 39 49.1	-0.7
PBAR	Barrancos	3.76	317	⇓ *e*P		Pn	12 39 07.9	+1.8
PBAR				*e*S		Sn	12 39 49.0	-0.8
PBAR				*i* IAML			12 39 52.8	
PBAR				*i* IAML			12 39 55.0	
PBAR				*i* IAML			12 39 55.3	
PBDV	Barranco-do-Ve	3.80	299	Pn		Pn	12 39 06.9	+0.3
PBDV				Sn		Sn	12 39 49.4	-1.3
PBDV	Barranco-do-Ve	3.80	299	*e*P		Pn	12 39 07.0	+0.5
PBDV				*e*S		Sn	12 39 50.0	-0.7
PBDV				*i* IAML			12 39 52.4	
PBDV				*i* IAML			12 39 52.6	
PBDV				*i* IAML			12 39 54.0	
PCVE	Castro Verde	4.06	303	Pn		Pn	12 39 10.5	+0.3
PCVE				Sn		Sn	12 39 55.8	-1.3
PCVE	Castro Verde	4.06	303	*e*P		Pn	12 39 12.7	+2.5
PCVE				*e*S		Sn	12 39 56.4	-0.7
PCVE				*i* IAML			12 39 58.2	
PCVE				*i* IAML			12 39 58.6	
PCVE				*i* IAML			12 40 02.9	
PAB	San Pablo	4.08	354	Pn		Pn	12 39 12.4	+1.8
PAB				Sn		Sn	12 39 58.3	+0.5
PAB				*i* lVmb_Lg			12 40 02.7	
PBEJ	Beja	4.16	309	*e*P		Pn	12 39 13.4	+1.8
PBEJ				*e*S		Sn	12 39 59.0	-0.7
EBAD	Badajoz	4.17	322	Pn		Pn	12 39 12.8	+1.1
EBAD				Sn		Sn	12 39 58.5	-1.5
EBAD				*i* lVmb_Lg			12 40 02.0	
ESDC	Sonseca Array	4.18	358	Pn		Pn	12 39 14.1	+2.1
ESDC				Sn		Sn	12 40 01.0	+0.7
ESDC				*i* lVmb_Lg			12 40 02.6	
ESBB	Sonseca Array	4.19	358	Pn		Pn	12 39 13.8	+1.8
ESBB				Sn		Sn	12 40 00.1	-0.3
MESJ	Messejana	4.29	305	*e*P		Pn	12 39 13.6	+0.3
MESJ	Messejana	4.29	305	*e*P		Pn	12 39 13.9	+0.6
MESJ				*e*S		Sn	12 40 02.4	-0.4
MESJ				*i* IAML			12 40 04.5	
MESJ				*i* IAML			12 40 05.2	
MESJ				*i* IAML			12 40 05.4	
MORF	Marmelete	4.34	296	*e*P		Pn	12 39 14.3	+0.2
MORF	Marmelete	4.34	296	*e*P		Pn	12 39 14.5	+0.3
MORF				*e*S		Sn	12 40 03.8	-0.4
MORF				*i* IAML			12 40 07.1	
MORF				*i* IAML			12 40 07.6	
MORF				*i* IAML			12 40 10.2	
PFVI	Vila Bisbo	4.41	293	*e*P		Pn	12 39 16.6	+1.6
PLOUS	Minas do Lousa	4.52	306	*e*P		Pn	12 39 17.2	+0.7
PLOUS				*e*S		Sn	12 40 08.0	-0.6
PLOUS				*i* IAML			12 40 10.6	
PLOUS				*i* IAML			12 40 12.5	
PLOUS				*i* IAML			12 40 22.2	
PESTR	Estremoz	4.55	319	*e*P		Pn	12 39 19.7	+2.7
PESTR				*e*S		Sn	12 40 08.4	-1.0
PESTR				*i* IAML			12 40 12.9	
PESTR				*i* IAML			12 40 13.1	
PESTR				*i* IAML			12 40 25.4	
PESTR	Estremoz	4.55	319	P		Pn	12 39 16.5	-0.6
MOE	Montemor	4.76	311	*e*P		Pn	12 39 21.9	+2.0
MOE				*e*S		Sn	12 40 14.3	-0.2
MOE				*i* IAML			12 40 14.7	
MOE				*i* IAML			12 40 18.1	
PARRA	Arraiolos	4.77	315	*e*P		Pn	12 39 21.3	+1.4
PARRA				*e*S		Sn	12 40 12.7	-1.9
PARRA				*i* IAML			12 40 14.6	
PARRA				*i* IAML			12 40 14.6	
PARRA				*i* IAML			12 40 15.0	

DT1	Dutton Round H	1.33	307			Pn		12 39 29.9	-0.2
DT1						Sn		12 39 46.7	-0.2
PS1A	Pavlof South-1	1.33	326			Pn		12 39 30.4	+0.2
PS1A						Sb		12 39 49.2	+1.0
DTNA	Dutton South F	1.34	309			Pn		12 39 30.3	0.0
DTNA						Sb		12 39 48.3	-0.1
VNKR	Veniaminof 5	1.82	19			Pn		12 39 38.5	+1.6
ISNN	Isanotski Nort	2.01	286			Pn		12 39 40.3	+0.8
SSLS	Shishaldin Sou	2.11	282			Pn		12 39 41.6	+0.6
SSBA	Shishaldin	2.19	283			Pn		12 39 42.5	+0.5
AKSA	Akutan Strait	3.09	269			Pn		12 39 54.1	-0.3
AKUT	Akutan	3.14	269	P		Pn		12 39 54.9	0.0
AHB	Akutan Harbor	3.17	268			Pn		12 39 55.1	-0.3
AKLV	Akutan Long Va	3.24	269			Pn		12 39 56.3	-0.1
AKV	Akutan Volcano	3.25	269			Pn		12 39 56.8	+0.2
ZRO	Akutan Zero	3.26	268			Pn		12 39 56.5	-0.2
UNV	Unalaska Valle	3.61	265	P		Pn		12 40 00.6	-0.8
UNV	Unalaska Valle	3.61	265			Pn		12 40 00.9	-0.5
MNAT	Makushin Natee	3.70	266			Pn		12 40 02.3	-0.5
MGOD	Makushin Gods	3.83	265			Pn		12 40 04.1	-0.4
R17L	Mt. Peulik Vol	4.03	33			Pn		12 40 08.7	+1.5
PLK1	Peulik 1	4.09	30			Pn		12 40 09.8	+1.7
SII	Sitkinak Islan	4.21	55	P		Pn		12 40 10.2	+0.5
SII	Sitkinak Islan	4.21	55			Pn		12 40 10.0	+0.4
SII	Sitkinak Islan comp=E,149nm,1.0s	4.21	55	IAML				12 41 58.5	
OKTU	Okmok Mt. Tuli	4.60	261			Pn		12 40 15.0	-0.1
KJL	Kejulik	4.62	34			Pn		12 40 16.4	+1.1
OKNC	Okmok New Cone	4.63	262			Pn		12 40 15.2	-0.2
Q17K	Contact Creek	4.69	31			Pn		12 40 17.2	+0.8
CAHL	Cahill	4.71	35			Pn		12 40 17.6	+0.9
ANCK	Angle Creek	4.76	33			Pn		12 40 18.6	+1.3
MGLS	Mageik Landsli	4.82	35			Pn		12 40 19.2	+1.1
ACHA	Angle Creek He	4.83	34	Pn		Pn		12 40 19.2	+1.0
O15K	Ungalikthiuk R	4.88	4			Pn		12 40 20.7	+1.9
O15K	Ungalikthiuk R comp=N,53nm,1.2s	4.88	4	IAML				12 41 57.4	
O15K				IAML				12 42 20.8	
	comp=E,66nm,1.1s								
P16K	Nushagak River	4.91	15	Pn		Pn		12 40 21.0	+1.8
O14K	Tigyukauivet M	4.96	355			Pn		12 40 21.5	+1.5
O14K	Tigyukauivet M comp=N,91nm,1.4s	4.96	355	IAML				12 42 00.5	
O14K				IAML				12 42 23.9	
	comp=E,65nm,1.2s								
OHAK	Old Harbor	4.97	51	P		Pn		12 40 20.2	+0.1
OHAK	Old Harbor	4.97	51	Pn		Pn		12 40 20.0	-0.2
OHAK				IAML				12 42 03.2	
	comp=N,39nm,1.2s								
OHAK				IAML				12 42 08.3	
	comp=E,30nm,1.2s								
KAKN	Katmai Knife C	4.98	35			Pn		12 40 21.5	+1.1
P17K	Kvichak River	5.36	23	Pn		Pn		12 40 26.9	+1.5
O16K	Kokwok River B	5.44	13	Pn		Pn		12 40 28.3	+1.8
KDAK	Kodiak Island comp=E,1.6nm,0.3s,baz=151,slow=0.9,SNR=18	5.60	49	Pn		Pn		12 40 28.4	-0.4
KDAK				Sn		Sn		12 41 28.8	-3.3
	comp=E,0.3nm,0.3s,baz=308,slow=5.9,SNR=1.1 comp=E,16nm,0.8s								
N14K	Kuskokwak Cree	5.66	354			Pn		12 40 31.6	+2.1
CLCO	Concord Point,	5.75	258			Pn		12 40 30.7	-0.1
P18K	Big Mountain,	5.83	27			Pn		12 40 33.3	+1.3
N15K	Kwethluk River	5.86	2	Pn		Pn		12 40 33.0	+0.6
N16K	Nishlik Lake	6.23	8			Pn		12 40 39.1	+1.6
O18K	Koktuh Hills	6.23	25			Pn		12 40 39.3	+1.9
SPIA	Saint Paul Isl	6.23	301	P		Pn		12 40 40.3	+2.9
M13K	Dall Lake	6.30	347			Pn		12 40 40.5	+2.1
M14K	Bethel	6.50	353	Pn		Pn		12 40 41.2	+0.2
P19K	Oil Pt	6.63	33			Pn		12 40 44.2	+1.3
IVE	Iliamna Volcan	6.99	32			Pn		12 40 49.2	+1.3
L14K	Kuka Creek	7.14	351			Pn		12 40 50.7	+0.9
CNPM	China Poot	7.24	40			Pn		12 40 51.5	+0.2
N19K	Bonanza Creek	7.25	24			Pn		12 40 53.2	+1.7
M17K	Holitna River	7.27	11			Pn		12 40 53.0	+1.3
L16K	Owhat River	7.42	4			Pn		12 40 56.1	+2.3
BRSE	Bradley Lake S	7.58	40			Pn		12 40 55.5	-0.4
M18K	Stony River	7.59	17			Pn		12 40 58.0	+1.9
K13K	Kusilvak Mount	7.95	345			Pn		12 41 04.8	+3.9
SLKM	Skilak Lake	8.29	37			Pn		12 41 07.0	+1.3
KOFP	Korovin Flat P	8.44	261			Pn		12 41 08.1	+0.3
ATKA	Atka Island	8.52	261	P		Pn		12 41 07.1	-1.7
ATKA	Atka Island	8.52	261			Pn		12 41 08.6	-0.2
J14K	Nanvaranak Lak	8.61	350			Pn		12 41 13.9	+4.0
RC01	Rabbit Creek A	8.87	36			Pn		12 41 14.9	+1.3
J16K	Anvik River	8.99	360			Pn		12 41 18.5	+3.3
PWL	Port Wells	9.21	40			Pn		12 41 18.3	-0.1
PMR	Palmer	9.43	35	P		Pn		12 41 21.9	+0.7
SML	Sawmill	9.85	36	Pn		Pn		12 41 27.3	+0.2
FID	Port Fidalgo	9.87	44	Pn		Pn		12 41 26.4	-0.9
J19K	Poorman	10.01	12			Pn		12 41 30.4	+1.2
KLU	Klutina	10.53	41			Pn		12 41 36.8	+0.4
BMRM	Bremner River	10.76	45	Pn		Pn		12 41 40.1	+0.5
M24K	Tolsona, Glenn	10.81	38	Pn		Pn		12 41 40.7	+0.4
BERG	Berg Lake	10.87	49	Pn		Pn		12 41 41.2	+0.2
GLB	Gilahina Butte	11.34	44	Pn		Pn		12 41 47.9	+0.5
CCB	Clear Creek Bu	12.15	27	Pn		Pn		12 41 58.7	+0.3
ILAR	Eielson Array comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=6.9	12.49	28	Pn		Pn		12 42 00.5	-2.7
ILAR				Sn		Sn		12 44 15.7	-5.5
	comp=E,0.1nm,0.3s,baz=318,slow=32,SNR=0.8 comp=E,0.6nm,0.6s								
O28M	Mount Upton	12.61	51	Pn		Pn		12 42 05.0	0.0
L27K	Beaver Creek,	13.00	40			Pn		12 42 09.9	-0.2
BCAR	Beaver Creek A	13.02	40	Pn		Pn		12 42 09.9	-0.5
SIT	Sitka	14.39	69	P		Pn		12 42 27.7	-1.4
I28M	Miner Creek comp=Z,4.4nm,0.8s	15.07	34	IAmb	IAmb			12 42 58.6	
SHEM	Shemya Is, Ala comp=Z,3.0nm,0.3s,baz=327,slow=3.4,SNR=4.2 comp=Z,6.8nm,0.5s	15.20	274	Pn		Pn		12 42 35.1	-4.9
J30M	Hart River comp=Z,10nm,0.8s	15.87	40	IAmb	IAmb			12 43 05.2	
P33M	Teslin, Yukon comp=Z,7.2nm,0.8s	15.98	57	IAmb	IAmb			12 42 58.3	
Q32M	Nakina River comp=Z,7.0nm,0.8s	16.10	62	IAmb	IAmb			12 43 03.0	
G29M	Pine Creek comp=Z,8.0nm,0.8s	16.59	32	IAmb	IAmb			12 43 11.8	
S34M	Telegraph Cree comp=Z,11nm,1.1s	16.66	66	IAmb	IAmb			12 43 05.4	
G30M	tAoh Zraii Nji comp=Z,14nm,1.3s	17.20	33	IAmb	IAmb			12 43 15.1	
H31M	Peel River comp=Z,13nm,1.1s	17.20	38	IAmb	IAmb			12 43 11.1	
DLBC	Dease Lake comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=4.7 comp=Z,1.2nm,0.6s	17.25	64	Pn		Pn		12 43 07.3	+1.2
G31M	Satah River G31M	17.81	35	P		Pn		12 43 10.8	-2.1
				IAmb	IAmb			12 43 17.2	
	comp=Z,7.5nm,0.8s								
INK	Inuvik comp=Z,0.3nm,0.3s,baz=225,slow=14,SNR=11 comp=Z,3.7nm,1.0s	18.81	31	Pn		P		12 43 24.6	+0.2
INK	Inuvik comp=Z,12nm,1.5s	18.81	31	IAmb	IAmb			12 43 30.3	
BBB	Bella Bella comp=Z,43nm,20.9s,baz=222,slow=30	19.37	83	LR	LR			12 48 58.9	
PETK	Petropavlovsk- comp=Z,2.2nm,0.5s,baz=81,slow=12,SNR=9.6	24.55	284	P		P		12 44 23.6	-0.9
PETK				LR	LR			12 54 15.8	
	comp=Z,38nm,19.7s,baz=121,slow=37 comp=Z,2.2nm,0.5s								
YKA	Yellowknife Ar comp=Z,1.4nm,0.7s,baz=267,slow=8.6,SNR=7.0 comp=Z,1.4nm,0.7s	24.86	52	P		P		12 44 28.2	+0.9
MA2	Magadan comp=Z,54nm,18.1s,baz=32,slow=37	26.61	301	LR	LR			12 55 33.5	
NVAR	Mina Array Bea comp=Z,0.7nm,0.7s,baz=309,slow=9.0,SNR=5.4 comp=Z,0.7nm,0.7s	32.56	102	P		P		12 45 38.5	+2.2
PDAR	Pinedale Array comp=Z,0.3nm,0.6s,baz=306,slow=8.6,SNR=4.0 comp=Z,0.3nm,0.6s	34.87	88	P		P		12 45 58.2	+1.9
H11N2	WAKE ISLAND Hy baz=28,slow=76,SNR=53	42.56	229	T		T		13 32 30.5	
H11N3	WAKE ISLAND Hy baz=28,slow=76,SNR=85	42.57	229	T		T		13 32 31.0	
H11N1	WAKE ISLAND Hy baz=28,slow=76,SNR=27	42.58	229	T		T		13 32 27.1	
H11S1	WAKE ISLAND Hy baz=28,slow=76,SNR=16	43.73	228	T		T		13 34 03.0	
H11S2	WAKE ISLAND Hy baz=28,slow=76,SNR=16	43.74	228	T		T		13 34 04.0	
H11S3	WAKE ISLAND Hy baz=28,slow=76,SNR=14	43.74	228	T		T		13 34 04.2	
TXAR	Lajitas Array comp=Z,1.9nm,0.8s,baz=304,slow=5.3,SNR=27 comp=Z,1.9nm,0.8s	47.52	98	P		P		12 47 42.0	+1.8
SCHQ	Schefferville comp=Z,36nm,19.0s,baz=22,slow=37	50.23	49	LR	LR			13 10 16.8	
SONM	Songino Array comp=Z,0.8nm,0.7s,baz=47,slow=5.9,SNR=4.3 comp=Z,0.8nm,0.7s	54.75	305	P		P		12 48 33.9	-0.5
ZALV	Zalesovo Beam comp=Z,0.3nm,0.3s,baz=19,slow=4.9,SNR=1.8 comp=Z,0.3nm,0.3s	59.42	321	P		P		12 49 06.6	-0.5
FINES	FINESS Array B comp=Z,1.5nm,0.9s,baz=357,slow=8.8,SNR=4.5 comp=Z,1.5nm,0.9s	64.46	357	P		P		12 49 40.5	-0.3
BVAR	Borovoye Array comp=Z,1.0nm,0.6s,baz=48,slow=6.6,SNR=5.6 comp=Z,1.0nm,0.6s	65.02	329	P		P		12 49 44.8	+0.2
HFS	Hagfors comp=Z,2.3nm,0.8s,baz=39,slow=7.4,SNR=3.1 comp=Z,2.3nm,0.8s	65.80	3	P		P		12 49 49.4	-0.1
MKAR	Makanchi Array comp=Z,0.4nm,0.7s,baz=38,slow=5.6,SNR=3.5 comp=Z,0.4nm,0.7s	66.14	318	P		P		12 49 51.5	-0.5
EKA	Eskdalemuir Ar comp=Z,1.0nm,0.7s,baz=351,slow=5.9,SNR=2.5 comp=Z,1.0nm,0.7s	69.12	14	P		P		12 50 11.3	+0.7
PMG	Port Moresby comp=Z,34nm,20.5s,baz=182,slow=31	77.23	233	LR	LR			13 18 32.3	
CMAR	Chiang Mai Arr comp=Z,0.5nm,0.3s,baz=18,slow=4.9,SNR=5.1 comp=Z,0.5nm,0.3s	81.22	289	P		P		12 51 20.6	-0.3
SDV	Santo Domingo comp=Z,16nm,19.1s,baz=36,slow=37	82.74	85	LR	LR			13 30 19.5	
ESDC	Sonseca Array comp=Z,0.9nm,0.8s,baz=348,slow=4.6,SNR=7.0	84.21	18	P		P		12 51 37.2	+1.1
ESDC				LR	LR			13 34 03.3	
	comp=Z,45nm,18.3s,baz=323,slow=39 comp=Z,0.9nm,0.8s								
H03N2	Juan Fernandez baz=323,slow=77,SNR=5.8	111.85	117	T		T		14 59 08.8	
H03N1	Juan Fernandez baz=323,slow=77,SNR=8.1	111.86	117	T		T		14 59 09.9	
H03N3	Juan Fernandez baz=323,slow=77,SNR=5.4	111.87	117	T		T		14 59 11.9	

*IDC **25** 12:46:21.8±1.3, 12°.17S×74°.29W, h0km, mb3.6/3, mbtmp3.7/6, ML3.7/3, MS3.3/6, Error ellipse: s-maj=34.6km s-min=15.2km az=17.0*

ISC 25 12:46:26.4±0.9, 12°.1S±0°.2×74°.2W±0°.1, h35km, n13, σ1°80/8, MS3.3/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NNA	Nana	2.55	272	Pn		Pn	12 47 05.2	-0.2
	7.3nm,0.3s,baz=148,slow=14,SNR=10							
NNA				Lg		Lg	12 47 41.4	
	29nm,0.3s,baz=124,slow=7.7,SNR=7.7 31nm,0.3s							
ATAH	Atahualpa	6.42	320	Pn		Pn	12 47 57.4	-1.6
	0.4nm,0.3s,baz=132,slow=14,SNR=1.8							
ATAH				Pg			12 48 19.9	
	1.4nm,0.3s,baz=145,slow=3.9,SNR=6.6							
ATAH				Lg		Lg	12 49 46.9	
	0.2nm,0.3s,baz=144,slow=24,SNR=0.9 1.7nm,0.5s							
LPAZ	La Paz	7.23	126	Pn		Pn	12 48 09.1	-1.1
	4.0nm,0.3s,baz=314,slow=9.1,SNR=30							
LPAZ				LR		LR	12 51 20.2	
	comp=Z,214nm,21.4s,baz=282,slow=41 6.7nm,0.3s							
SIV	San Ignacio	13.34	108	LR		LR	12 54 02.4	
	comp=Z,41nm,18.4s,baz=296,slow=34							
CPUP	Villa Florida	21.29	134	LR		LR	13 00 33.2	
	comp=Z,44nm,19.4s,baz=272,slow=40							
JTS	Las Juntas de	24.67	334	LR		LR	13 01 34.5	
	comp=Z,48nm,19.6s,baz=165,slow=37							
BDFB	Brasilia	25.69	101	LR		LR	13 03 34.1	
	comp=Z,177nm,18.4s,baz=260,slow=40							
TXAR	Lajitas Array 0.4nm,0.8s,baz=156,slow=6.8,SNR=4.0 0.4nm,0.8s	50.05	326	P		P	12 55 18.1	+0.1
PDAR	Pinedale Array 0.1nm,0.4s,baz=176,slow=5.4,SNR=2.2 0.1nm,0.4s	63.47	332	P		P	12 56 54.9	+1.7
DBIC	Dimbokro comp=Z,58nm,18.4s,baz=276,slow=36	71.45	79	LR		LR	13 28 55.5	
TORD	Torodi Ar. Bea 2.3nm,0.9s,baz=276,slow=4.5,SNR=7.2 2.3nm,0.9s	79.37	74	P		P	12 58 31.8	+2.3
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=340,slow=3.8,SNR=5.1	135.08	17	PKP		PKPdf	13 05 40.5	-1.4
SONM	Songino Array 0.7nm,0.7s,baz=349,slow=1.5,SNR=4.5	144.38	359	PKP		PKPdf	13 05 57.8	-1.5

*IDC **25** 12:59:46.4±1.1, 17°.84N×66°.78W, h0km, mb3.5/8, mbtmp3.5/9, ML2.9/1, MS3.3/1, Error ellipse: s-maj=23.2km s-min=8.4km az=169.0*

*NEIC **25** 12:59:48.4±1.3, 17°.95N±0°.02×66°.744W±0°.009, h10km±1km, mb4.2/4, ML4.0/31, Md3.6/22(RSPR), Error ellipse: s-maj=3.4km s-min=2.8km az=356.0*

*OSPL **25** 12:59:48.7±0.3, 17°.87N×66°.75W, h1km±8km, ML3.9, Presumed earthquake*

*RSPR **25** 12:59:49.2, 18°.00N×66°.77W, h12km, MD3.6/22*

ISC 25 12:59:48.5±0.8, 17°.93N±0°.04×66°.75W±0°.02, h16km±4km, n78, σ1°17/87, mb3.6/9, 5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GBPR	Guanica, Bosqu	0.13	291			Pg	12 59 52.4	+0.1
GBPR	Guanica, Bosqu	0.13	291	⇑	iP	Pg	12 59 52.4	+0.1
OBIP	Obispado Ponce	0.18	51			Pg	12 59 52.7	-0.3
OBIP				Sg		Sg	12 59 55.5	-0.6
OBIP	Obispado Ponce	0.18	51	i	P	Pg	12 59 52.7	-0.3
OBIP				eS		Sg	12 59 55.6	-0.4
OBIP				IAML			12 59 56.2	
	comp=Z,116μm,0.1s							
OBIP	Obispado Ponce	0.18	51	⇓	iP	Pg	12 59 52.9	-0.1
OBIP				eS		Sg	12 59 55.7	-0.3
CELP	Cerrillos	0.22	49			Pg	12 59 53.4	-0.3
CELP				Sg		Sg	12 59 56.9	-0.2
CELP				IAML			12 59 57.3	
	comp=Z,44μm,0.2s							
CELP	Cerrillos	0.22	49	⇑	iP	Pg	12 59 53.5	-0.1
MLPR	Magueyes Islan	0.28	278			Pg	12 59 54.5	-0.1
MLPR				IAML			12 59 59.5	
	comp=Z,10μm,0.4s							
MLPR	Magueyes Islan	0.28	278	⇑	iP	Pg	12 59 54.7	+0.1
UUPR	Utuado, UPR, P	0.32	5			Pg	12 59 54.5	-0.8
UUPR	Utuado, UPR, P	0.32	5	⇑	iP	Pg	12 59 54.7	-0.7
CRPR	Cabo Rojo, PR	0.35	283			Pg	12 59 55.5	-0.3
CRPR	Cabo Rojo, PR	0.35	283	⇑	iP	Pg	12 59 55.6	-0.3
LSP	Las Mesas	0.40	308			Pg	12 59 56.2	-0.6
LSP	Las Mesas	0.40	308	⇓	iP	Pg	12 59 56.2	-0.6
AOPR	Arecibo Observ	0.42	360			Pg	12 59 56.0	-1.0
AOPR				IAML			13 00 01.5	
	comp=Z,17μm,0.2s							
AOPR	Arecibo Observ	0.42	360	⇑	iP	Pg	12 59 56.2	-0.9
PRSN	Puerto Rico Se	0.47	308			Sg	13 00 03.5	-0.9
PRSN	Puerto Rico Se	0.47	308	Pg		Pg	12 59 57.1	-0.9
PRSN	Puerto Rico Se	0.47	308	IAML			13 00 05.3	
	comp=Z,28μm,0.3s							
PRSN				IAML			13 00 05.7	
	comp=Z,22μm,0.2s							
PRSN	Puerto Rico Se	0.47	308	⇑	iP	Pg	12 59 57.2	-0.8
ECPR	Experimental S	0.54	44			Pg	12 59 58.3	-0.9
ECPR	Experimental S	0.54	44			Sg	13 00 05.4	-1.1
ECPR	Experimental S	0.54	44	⇑	iP	Pg	12 59 58.4	-0.9
EMPR	Esperanza - Ma	0.58	21			Pg	12 59 59.5	-0.6
EMPR						Sg	13 00 07.4	-0.6
EMPR	Esperanza - Ma	0.58	21	⇑	iP	Pg	12 59 59.5	-0.6
EMPR				eS		Sg	13 00 07.4	-0.6
SJG	San Juan	0.60	72	Pg		Pg	12 59 59.8	-0.7
	comp=Z,274nm,0.3s,baz=296,slow=23,SNR=67							
SJG				Lg		Lg	13 00 08.1	
	comp=Z,1μm,0.3s,baz=30,slow=21,SNR=74							
SJG	San Juan	0.60	72	Pg		Pg	12 59 59.7	-0.7
SJG				IAML			13 00 09.4	
	comp=Z,9μm,0.4s							
SJG				IAML			13 00 10.0	
	comp=Z,6μm,0.3s							
SJG	San Juan	0.60	72	i	P	Pg	12 59 59.8	-0.7
SJG				eS		Sg	13 00 08.0	-0.5
SJG	San Juan	0.60	72	⇑	iP	Pg	12 59 60.0	-0.5

IGPR	InterUniversit	0.62	86			Pg		13 00 00.5	-0.2
IGPR						Sb		13 00 09.8	+0.5
IGPR	InterUniversit	0.62	86	⇓	iP	Pg		13 00 00.5	-0.2
AGPR	Aguadilla, PR	0.64	328			Pg		12 59 59.8	-1.3
AGPR				IAML				13 00 14.6	
	comp=Z,4μm,0.6s								
AGPR	Aguadilla, PR	0.64	328			Sg		13 00 08.3	-1.2
AGPR	Aguadilla, PR	0.64	328	⇑	iP	Pg		12 59 59.9	-1.2
PDPR	Patillas Dam,	0.70	83			Sg		13 00 11.8	+0.2
PDPR	Patillas Dam,	0.70	83	Pg		Pg		13 00 01.6	-0.6
PDPR	Patillas Dam, comp=Z,5μm,0.5s	0.70	83	IAML				13 00 12.3	
PDPR				IAML				13 00 12.7	
	comp=Z,2μm,0.1s								
PDPR	Patillas Dam,	0.70	83	⇑	iP	Pg		13 00 02.0	-0.3
IDE	Isla Desecheo	0.82	304			Pg		13 00 03.3	-1.3
IDE						Sg		13 00 14.5	-1.0
IDE	Isla Desecheo	0.82	304	⇑	iP	Pg		13 00 03.3	-1.3
IDE				eS		Sg		13 00 14.5	-1.0
HUMP	Col San Antoni	0.89	76	Pg		Pg		13 00 04.4	-1.3
HUMP	Col San Antoni	0.89	76			Sg		13 00 16.3	-1.1
HUMP	Col San Antoni comp=Z,2μm,0.3s	0.89	76	IAML				13 00 17.2	
HUMP				IAML				13 00 17.6	
	comp=Z,5μm,0.3s								
HUMP	Col San Antoni	0.89	76	⇑	iP	Pg		13 00 04.5	-1.3
PCDR	Punta Cana, DR	1.65	291	Pn		Pn		13 00 16.5	-0.4
PCDR	Punta Cana, DR	1.65	291			Sn		13 00 37.5	-0.3
PCDR	Punta Cana, DR comp=E,481nm,0.6s	1.65	291	IAML				13 00 43.7	
PCDR				IAML				13 00 46.4	
	comp=N,1μm,0.7s								
PCDR	Punta Cana, DR	1.65	291	i	P	Pn		13 00 17.4	+0.5
PCDR				IAML				13 00 46.1	
	comp=Z,293nm,0.7s								
PCDR	Punta Cana, DR	1.65	291	⇓	eP	Pn		13 00 16.7	-0.2
PCDR				eS		Sn		13 00 37.5	-0.3
HIDR	Higuey Centro	1.98	290	⇓	eP	Pn		13 00 21.9	+0.5
DR12	Loma Pena Alta	2.64	289	Pn		Pn		13 00 31.3	+0.8
DR12	Loma Pena Alta	2.64	289			Sn		13 01 02.9	+0.7
SMDR	Samana, DR	2.68	301			Pb		13 00 34.7	-1.4
SMDR						Sb		13 01 10.0	+1.2
SDDR	Presa de Saban	4.43	284	Pn		Pn		13 00 58.8	+3.7
BIM	Bigot	6.43	121	Pn		Pn		13 01 22.2	-0.4
SDV	Santo Domingo comp=Z,1.1nm,0.3s,baz=351,slow=8.4,SNR=4.7	9.75	203	Pn		Pn		13 02 08.8	+0.5
SDV				Sn		Sn		13 03 51.9	-5.7
	comp=Z,0.3nm,0.3s,baz=118,slow=20,SNR=1.2 comp=Z,2.3nm,0.3s								
TKL	Tuckaleechee C comp=Z,1.6nm,0.8s,baz=126,slow=14,SNR=2.0	23.23	323	P		P		13 04 57.4	+2.3
TKL				S		S		13 09 10.4	+3.9
	comp=Z,0.8nm,0.3s,baz=192,slow=9.9,SNR=2.4 comp=Z,1.6nm,0.8s								
ATAH	Atahualpa comp=Z,55nm,18.1s,baz=206,slow=41	27.43	206	LR		LR		13 18 27.2	
LCAR	Lake Charles	28.14	315	P		P		13 05 38.7	-1.3
LCAR				IAmb		IAmb		13 05 59.7	
	comp=Z,3.6nm,0.7s								
WMOK	Wichita Mounta	33.04	307	P		P		13 06 23.0	-0.4
WMOK				IAmb		IAmb		13 06 24.6	
	comp=Z,4.3nm,1.5s								
TXAR	Lajitas Array comp=Z,0.4nm,0.5s,baz=108,slow=9.6,SNR=6.8 comp=Z,0.4nm,0.5s	35.53	296	P		P		13 06 45.8	+0.7
TXAR	Lajitas Array	35.53	296	P		P		13 06 45.1	0.0
PB07	IPOC Station P	39.53	185	P		P		13 07 19.4	+0.4
PV02	Paradox Valley	41.76	308	P		P		13 07 36.6	-0.9
PDAR	Pinedale Array comp=Z,0.1nm,0.4s,baz=24,slow=5.6,SNR=1.5 comp=Z,0.1nm,0.4s	43.83	314	P		P		13 07 54.8	+0.6
PDAR	Pinedale Array	43.83	314	P		P		13 07 54.7	+0.5
NVAR	Mina Array Bea comp=Z,0.2nm,0.5s,baz=85,slow=8.1,SNR=1.4 comp=Z,0.2nm,0.5s	49.13	306	P		P		13 08 37.7	+1.8
NVAR	Mina Array Bea	49.13	306	P		P		13 08 36.1	+0.3
YKA	Yellowknife Ar comp=Z,0.6nm,0.5s,baz=121,slow=6.6,SNR=3.0 comp=Z,0.6nm,0.5s	55.42	335	P		P		13 09 22.0	+0.2
YKA	Yellowknife Ar	55.42	335	P		P		13 09 23.3	+1.5
ESDC	Sonseca Array comp=Z,0.5nm,0.7s,baz=273,slow=7.2,SNR=5.2 comp=Z,0.5nm,0.7s	57.96	54	P		P		13 09 41.7	+1.3
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.7s,baz=302,slow=8.3,SNR=2.

1.2nm,0.6s,baz=306,slow=15,SNR=20

MK31				⇑Lg	Lg	13 31 02.5	
	10nm,0.7s,baz=306,slow=25						
MKAR	**Makanchi Array**	**4.07**	**142**	Pn	**Pn**	**13 29 55.2**	**-0.1**
	0.2nm,0.3s,baz=322,slow=15,SNR=4.0						
MKAR				Pg	**Pb**	**13 30 02.9**	**-1.4**
	0.5nm,0.3s,baz=321,slow=15,SNR=13						
MKAR				Lg	Lg	13 30 55.0	
	2.0nm,0.3s,baz=322,slow=25,SNR=20						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**5.48**	**42**	Pn	**Pn**	**13 30 15.4**	**+0.7**
	0.5nm,0.3s,baz=233,slow=15,SNR=10						
ZALV				Lg	Lg	13 31 43.3	
	0.3nm,0.3s,baz=219,slow=24,SNR=5.2						
	1.6nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.48**	**42**	I	I	13 58 00.0	
	baz=226,slow=320,SNR=4.0						
BVAR	**Borovoye Array**	**5.94**	**303**	Pn	**Pn**	**13 30 21.0**	**+0.1**
	baz=175,slow=33,SNR=1.8						
BVAR				Sn	**Sn**	**13 31 30.9**	**+1.3**
	0.1nm,0.3s,baz=114,slow=22,SNR=8.3						
BVAR				Lg	Lg	13 31 59.5	
	0.1nm,0.3s,baz=126,slow=28,SNR=5.1						
	0.3nm,0.4s						

WEL 25 14:01:14.9±4.1, 32°S±26″×17°9E±4″7, h378km±83km, M4.1/4, ML4.0/7, MLv4.1/4, Error ellipse: s-maj=66.0km s-min=24.0km az=113.2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.79**	**50**	P	Pn	14 02 23.6	0.0
MXZ	**Matakaoa Point**	**5.80**	**184**	P	Pn	14 02 44.1	-0.2
HAZ	**Te Kaha**	**6.03**	**188**	P	Pn	14 02 47.5	+0.6
WMGZ	**Waiomatatini S**	**6.05**	**183**	P	Pn	14 02 48.3	+1.3
RUGZ	**Raukumara Rang**	**6.25**	**188**	P	Pn	14 02 50.2	+0.7
PUZ	**Puketiti**	**6.31**	**184**	P	Pn	14 02 49.8	-0.2
TWGZ	**Tauwhareparae**	**6.43**	**186**	P	Pn	14 02 51.6	+0.2
TOZ	**Tahuroa Road**	**6.54**	**203**	P	Pn	14 02 51.5	-1.0
URZ	**Urewera**	**6.62**	**191**	P	Pn	14 02 53.0	-0.5
MWZ	**Matawai**	**6.63**	**189**	P	Pn	14 02 53.7	0.0
MUGZ	**Murupara**	**6.90**	**193**	P	P	14 02 58.1	+0.5
RIGZ	**Rimuhau**	**6.98**	**187**	P	Pn	14 02 52.6	-5.0
RTZ	**Ruatahuna**	**6.99**	**192**	P	P	14 02 58.7	0.0
RAHZ	**Arahi**	**7.27**	**191**	P	P	14 03 01.7	-0.1
KAHZ	**Kahuranaki**	**8.16**	**190**	P	P	14 03 12.3	-0.2

*JMA **25** 14:03:15.2±0.7, 44°N±4°×15°1E±°, h30km, MV3.5/15, SE OFF ETOROFU*

*SKHL **25** 14:03:16.9±0.9, 43°.70N×150°.40E, h34km±1km, mb4.2/4*

ISC 25 14:03:16.0±4.1, 43°.62N±0°.09×150°.5E±0°.2, h42km, n16, σ2ŝ15/22, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**2.40**	**314**	*e*P	**Pn**	**14 03 52.8**	**0.0**
REI				AMB	AMB	14 03 55.7	
	30nm,0.4s						
REI				*e*S	**Sn**	**14 04 19.0**	**-1.9**
REI				A	A	14 04 21.1	
	30nm,0.2s						
REI				A	A	14 04 21.1	
	40nm,0.2s						
KUR	**Kuril'sk**	**2.46**	**312**	*e*P	**Pn**	**14 03 53.9**	**+0.4**
KUR				AMB	AMB	14 03 56.5	
	100nm,0.5s						
KUR				*e*S	**Sn**	**14 04 21.2**	**-1.1**
KUR				A	A	14 04 24.6	
	340nm,0.5s						
KUR				A	A	14 04 24.6	
	210nm,0.5s						
SHO	**Shikotan**	**2.64**	**277**	*e*P	Pn	14 04 08.9	+13
SHO				AMB	AMB	14 04 10.2	
	20nm,0.3s						
SHO				*e*S	Sn	14 04 39.6	+13
SHO				A	A	14 04 41.6	
	40nm,0.2s						
SHO				A	A	14 04 41.6	
	30nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.35**	**279**	*e*P	**Pn**	**14 04 06.3**	**+0.5**
YUK				AMB	AMB	14 04 08.3	
	60nm,0.5s						
YUK				*e*S	**Sn**	**14 04 42.3**	**-1.9**
YUK				A	A	14 04 43.3	
	110nm,0.6s						
YUK				A	A	14 04 43.3	
	100nm,0.6s						
NEM2	**Nemuro 2**	**3.44**	**267**	*e*P	**Pn**	**14 04 07.8**	**+0.8**
NEM2				*e*S	**Sn**	**14 04 46.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**3.45**	**268**	*e*P	**Pn**	**14 04 07.8**	**+0.7**
NMR				*e*S	**Sn**	**14 04 46.6**	**-0.1**
JRA	**Rausu**	**3.87**	**277**	*e*P	**Pn**	**14 04 15.0**	**+2.0**
AKK	**Akkeshi**	**4.14**	**264**	*e*P	**Pn**	**14 04 18.1**	**+1.5**
JAK	**Akkeshi**	**4.25**	**264**	*e*P	**Pn**	**14 04 19.0**	**+1.0**
JAK				*e*S	**Sn**	**14 05 07.3**	**+1.0**
JTKR	**Abashiri--Toko**	**4.75**	**277**	*e*P	**Pn**	**14 04 26.6**	**+1.6**
JOB	**Onbets**	**4.88**	**264**	P	**Pn**	**14 04 28.6**	**+1.7**
JCH	**Churui**	**5.29**	**262**	*e*P	**Pn**	**14 04 33.7**	**+1.4**
JCH				*e*S	**Sn**	**14 05 32.4**	**+0.5**
JKK2	**Kamakawa 2**	**5.59**	**275**	*e*P	**Pn**	**14 04 39.8**	**+3.2**
JNBK	**Urakawa-nobuka**	**5.81**	**259**	P	**Pn**	**14 04 41.5**	**+2.0**
JTH	**Tanohata**	**7.39**	**243**	*e*S	**Sn**	**14 06 20.9**	**-3.0**
JANG	**Nango**	**7.40**	**247**	*e*S	**Sn**	**14 06 17.9**	**-6.2**

IDC 25 14:12:22.4±2.5, 6°.74S×154°.59E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=106.2km s-min=31.0km az=127.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.64**	**234**	P	P	14 17 36.1	+0.6
	0.4nm,0.9s,baz=60,slow=9.7,SNR=2.1						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**26.05**	**228**	P	P	14 17 56.7	-0.9
	0.1nm,0.3s,baz=57,slow=9.7,SNR=1.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**82.95**	**319**	P	P	14 24 49.9	+0.5
	0.3nm,0.7s,baz=113,slow=3.3,SNR=2.8						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**83.29**	**22**	P	P	14 24 50.5	-0.1
	0.1nm,0.3s,baz=251,slow=5.7,SNR=4.1						
	0.1nm,0.3s						

*NOU **25** 14:19:26.4, 13°.50S×166°.44E, h103km, MLv5.6/16, Vanuatu Islands*

*IDC **25** 14:19:34.6±0.5, 14°.60S×166°.75E, h0km, mb4.4/17, mbtmp4.4/19, ML4.3/3, MS4.0/51, Error ellipse: s-maj=19.2km s-min=15.3km az=106.0*

*NEIC **25** 14:19:40.2±0.9, 14°.55S±0°.06×166°.66E±0°.09, h37km±6km, mb4.8/68, Error ellipse: s-maj=13.4km s-min=8.6km az=102.0*

*GFZ **25** 14:19:42.4±1.1, 15°S±7″×16°7E±°, h54km±12km, M4.6/18, mb4.6/18, Error ellipse: s-maj=15.8km s-min=7.5km az=22.5, confirmed*

*GCMT **25** 14:19:42.3±0.3, 14°.60S±0°.03×166°.59E±0°.02, h32km±1km, MW4.9/73, Moment Tensor Solution. s44,c49; s73,c96; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.30±.15; Mθθ-0.18±.10; Mϕϕ-2.12±.09; Mrθ1.01±.14; Mrϕ-0.14±.07; Mθϕ-1.60±.10; Best double couple: Mw2.88800×10^16^ NP1:ϕs18.00000°, δ29.00000°, λ121.00000°. NP2: ϕs163.00000°, δ65.00000°, λ74.00000°. Principal axes: T 3.1240, Plg66.0000°, Azm45.0000°; N -0.4710, Plg15.0000°, Azm170.0000°; P -2.6520, Plg19.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 14:19:39.3±0.3, 14°.61S±0°.05×166°.60E±0°.06, h28km, n418, σ1ŝ09/358, mb4.8/56, MS4.1/48, 2C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.46**	**154**	P	**Pn**	**14 20 33.4**	**+2.1**
RTV	**Rentapao**	**3.62**	**151**	P	**Pn**	**14 20 35.4**	**+1.9**
KOUNC	**Koumac, New Ca**	**6.31**	**200**	P	**Pn**	**14 21 11.6**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.31**	**200**		**Pn**	**14 21 12.2**	**+1.7**
MARNC	**Mare, Loyalty**	**6.97**	**169**	P	**Pn**	**14 21 21.1**	**+1.5**
MARNC	**Mare, Loyalty**	**6.97**	**169**	Pn	**Pn**	**14 21 19.9**	**+0.3**
YATNC	**Mamie plateau,**	**7.42**	**178**	P	**Pn**	**14 21 25.8**	**0.0**
DZM	**Mont Dzumac**	**7.43**	**181**	Pn	**Pn**	**14 21 25.9**	**0.0**
	4.9nm,0.3s,baz=192,slow=18,SNR=37						
DZM				Sn	**Sn**	**14 22 48.4**	**-0.9**
	1.0nm,0.3s,baz=80,slow=22,SNR=1.2						
DZM				LR	LR	14 24 00.3	
	comp=Z,2μm,21.8s,baz=349,slow=36						
	9.3nm,0.3s						
NOUC	**Port Laguerre**	**7.46**	**182**	P	**Pn**	**14 21 27.5**	**+1.2**
ONTNC	**Ouen Toro**	**7.66**	**181**	P	**Pn**	**14 21 30.4**	**+1.3**
ONTNC	**Ouen Toro**	**7.66**	**181**	Pn	**Pn**	**14 21 29.6**	**+0.5**
ONTNC				Sn	**Sn**	**14 22 56.2**	**+1.2**
OUENC	**Ouen Island, N**	**7.77**	**178**	P	**Pn**	**14 21 32.1**	**+1.5**
OUENC	**Ouen Island, N**	**7.77**	**178**	Pn	**Pn**	**14 21 31.1**	**+0.4**
HNR	**Honiara**	**8.29**	**308**	Pn	**Pn**	**14 21 39.7**	**+1.9**
	0.4nm,0.3s,baz=237,slow=22,SNR=8.0						
HNR				Sn	**Sn**	**14 23 09.5**	**-1.1**
	baz=241,slow=4.9						
HNR				LR	LR	14 24 42.0	
	comp=Z,86nm,20.0s,baz=236,slow=37						
HNR	**Honiara**	**8.29**	**308**		**Pn**	**14 21 37.5**	**-0.4**
MSVF	**Nonsavu**	**11.43**	**107**	Pn	**Pn**	**14 22 19.2**	**-1.7**
	0.2nm,0.3s,baz=182,slow=16,SNR=3.9						
MSVF				LR	LR	14 25 54.6	
	comp=Z,3μm,18.5s,baz=277,slow=34						
	3.1nm,0.9s						
MSVF	**Nonsavu**	**11.43**	**107**	P	**Pn**	**14 22 23.9**	**+3.0**
KRVT	**Keravat (AS076**	**17.63**	**304**	LR	LR	14 31 29.6	
	comp=Z,268nm,18.3s,baz=47,slow=40						
EIDS	**Eidsvold**	**18.07**	**231**	P	**P**	**14 23 49.0**	**+0.2**
PMG	**Port Moresby**	**19.70**	**283**	LR	LR	14 30 58.1	
	comp=Z,261nm,19.4s,baz=82,slow=34						
PMG	**Port Moresby**	**19.70**	**283**	P	**P**	**14 24 06.6**	**-0.1**
CTA	**Charters Tower**	**20.17**	**251**	P	Pn	14 24 13.8	+0.1
	30nm,1.0s,baz=74,slow=12,SNR=25						
CTA				LR	LR	14 31 05.8	
	comp=Z,779nm,20.2s,baz=76,slow=34						
	30nm,1.0s						
CTAO	**Charters Tower**	**20.17**	**251**	P	**P**	**14 24 11.6**	**-0.1**
CTAO				IAmb	IAmb	14 24 15.2	
	comp=Z,44nm,1.0s						
RAO	**Raoul Island**	**20.43**	**138**	LR	LR	14 31 05.0	
	comp=Z,108nm,18.6s,baz=108,slow=34						
ARMA	**Armidale**	**20.91**	**219**	P	**P**	**14 24 19.5**	**-0.3**
AFI	**Afiamalu**	**20.97**	**91**	LR	LR	14 30 32.1	
	comp=Z,573nm,20.1s,baz=256,slow=32						
OUZ	**Omahuta**	**21.47**	**164**	P	**P**	**14 24 25.3**	**-0.3**
MTSU	**Mount Surprise**	**21.66**	**258**	P	**P**	**14 24 28.1**	**+0.1**
COEN	**Coen**	**22.71**	**269**	P	**P**	**14 24 39.0**	**-0.2**
QLP	**Quilpie**	**24.05**	**237**	P	**P**	**14 24 52.5**	**+0.2**
URZ	**Urewera**	**25.33**	**160**	P	**P**	**14 25 04.1**	**+0.3**
CMSA	**Cobar Meteorol**	**25.50**	**225**	P	**P**	**14 25 05.2**	**-0.2**
RTZ	**Ruatahuna**	**25.61**	**161**		**P**	**14 25 07.2**	**+0.8**
BKZ	**Black Stump Fm**	**25.97**	**162**	P	**P**	**14 25 09.4**	**-0.2**
QIS	**Mount Isa**	**26.39**	**253**	P	**P**	**14 25 13.6**	**0.0**
QRZ	**Quartz Range**	**26.63**	**170**	P	**P**	**14 25 16.2**	**+0.7**
BFZ	**Birch Farm**	**27.31**	**164**	P	**P**	**14 25 21.7**	**+0.1**
INKA	**Innaminka**	**27.35**	**237**		**P**	**14 25 23.0**	**+0.8**
SNZO	**South Karori**	**27.52**	**167**	P	**P**	**14 25 23.9**	**+0.4**
KHZ	**Kahutara**	**28.35**	**169**	P	**P**	**14 25 31.1**	**+0.2**
STKA	**Stephens Creek**	**28.59**	**229**	P	**P**	**14 25 34.1**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=41,slow=8.6,SNR=11						
STKA				LR	LR	14 37 04.0	
	comp=Z,765nm,18.6s,baz=53,slow=37						
	comp=Z,2.7nm,0.3s						
STKA	**Stephens Creek**	**28.59**	**229**	P	**P**	**14 25 32.4**	**-0.8**
RPZ	**Rata Peaks**	**29.26**	**173**	LR	LR	14 37 25.4	
	comp=Z,112nm,18.4s,baz=344,slow=37						
WR8	**Warramunga Arr**	**31.08**	**256**		**P**	**14 25 54.6**	**-0.8**
WB0	**Warramunga Arr**	**31.16**	**256**	P	**P**	**14 25 55.3**	**-0.9**
WB0				IAmb	IAmb	14 25 56.6	
	comp=Z,16nm,1.1s						
WRAB	**Tennant Creek**	**31.22**	**256**	P	**P**	**14 25 55.2**	**-1.4**
WRA	**Warramunga Arr**	**31.23**	**256**	P	**P**	**14 25 56.3**	**-0.4**
	comp=Z,6.0nm,1.0s,baz=85,slow=8.5,SNR=24						
WRA				PcP	**PcP**	**14 28 50.6**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=88,slow=2.3,SNR=4.4						
	comp=Z,6.0nm,1.0s						
AS31	**Alice Springs**	**32.11**	**249**	P	**P**	**14 26 04.3**	**-0.2**
ASAR	**Alice Springs**	**32.11**	**249**	P	**P**	**14 26 04.0**	**-0.6**
	comp=Z,7.5nm,1.0s,baz=76,slow=8.9,SNR=35						
ASAR				PcP	**PcP**	**14 28 53.1**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=81,slow=2.8,SNR=4.4						
ASAR				ScP	**ScP**	**14 32 35.4**	**+0.1**
	comp=Z,1.9nm,1.1s,baz=68,slow=6.1,SNR=6.6						
ASAR				LR	LR	14 38 12.6	
	comp=Z,604nm,20.4s,baz=87,slow=35						
	comp=Z,7.5nm,1.0s						
ASAR	**Alice Springs**	**32.11**	**249**		**P**	**14 26 03.6**	**-0.9**
RAR	**Rarotonga**	**32.62**	**107**	LR	LR	14 36 37.3	
	comp=Z,302nm,21.9s,baz=279,slow=32						
BBOO	**Buckleboo**	**33.15**	**232**	P	**P**	**14 26 13.1**	**-0.3**
GUMO	**Guam**	**35.32**	**321**	LR	LR	14 40 10.2	
	comp=Z,118nm,20.9s,baz=148,slow=35						
SIJI	**Sorong**	**37.49**	**288**	LR		14 42 15.1	
	comp=Z,455nm,21.4s,baz=102,slow=36						
FITZ	**Fitzroy Crossi**	**39.40**	**259**	LR	LR	14 42 59.3	
	comp=Z,601nm,18.8s,baz=60,slow=36						
FITZ	**Fitzroy Crossi**	**39.40**	**259**	P	**P**	**14 27 05.9**	**-1.1**
BATI	**Baumata**	**42.12**	**271**	LR	LR	14 45 00.7	
	comp=Z,198nm,18.1s,baz=134,slow=36						
PPT	**Papeete**	**42.14**	**100**	LR	LR	14 40 50.7	
	comp=Z,284nm,19.1s,baz=280,slow=30						
PPTF	**Pamatai, Papee**	**42.15**	**100**	P	**P**	**14 27 30.4**	**+0.6**
TBI	**Tubuai**	**42.31**	**109**	*e*LR	LR	14 39 16.3	
	comp=Z,4μm,34.8s						
TBI				*e*LR	LR	14 39 25.7	
	comp=Z,1μm,32.2s						
DAV	**Davao City (W)**	**46.03**	**295**	LR	LR	14 45 07.9	
	comp=Z,125nm,22.0s,baz=117,slow=33						
KAPI	**Kappang**	**47.05**	**277**	LR	LR	14 47 51.4	
	comp=Z,118nm,19.8s,baz=66,slow=36						
JCJ	**Chichijima**	**47.75**	**330**	LR	LR	14 47 08.3	
	comp=Z,100nm,21.2s,baz=132,slow=35						
NWAO	**Narrogin (SRO)**	**48.26**	**239**	LR	LR	14 49 20.6	
	comp=Z,531nm,18.1s,baz=82,slow=37						
TAOE	**Nuku Hiva Isla**	**52.36**	**90**	*e*LR	LR	14 43 59.5	
	comp=Z,345nm,23.1s						
TGY	**Tagaytay City**	**53.43**	**300**	LR	LR	14 51 15.0	
	comp=Z,103nm,20.2s,baz=114,slow=36						
MJAR	**Matsushiro Arr**	**57.50**	**333**	P	**P**	**14 29 25.0**	**-1.1**
	comp=Z,3.2nm,0.9s,baz=168,slow=7.5,SNR=9.5						
MJAR				LR	LR	14 54 25.0	
	comp=Z,34nm,19.3s,baz=194,slow=36						
	comp=Z,3.2nm,0.9s						
MJAR	**Matsushiro Arr**	**57.50**	**333**	P	**P**	**14 29 25.5**	**-0.6**
ASAJ	**Asahikawa**	**62.41**	**341**	LR	LR	14 53 58.6	
	comp=Z,131nm,20.8s,baz=185,slow=33						
VNDA	**Vanda**	**62.97**	**181**	P	**P**	**14 30 01.2**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=54,slow=5.7,SNR=4.5						
VNDA				LR	LR	14 54 14.4	
	comp=Z,78nm,19.5s,baz=360,slow=33						
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**62.97**	**181**	P	**P**	**14 30 01.7**	**-1.3**
VNDA				IAmb	IAmb	14 30 29.8	
	comp=Z,10nm,1.4s						
YSS	**Yuzhno-Sakhali**	**64.91**	**342**	P	**P**	**14 30 15.7**	**-0.4**
NJ2	**Nanjing**	**65.14**	**316**	*e*P	**P**	**14 30 19.0**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,22nm,0.9s						
USRK	**Ussuriysk Ar.**	**66.49**	**334**	P	**P**	**14 30 27.7**	**+1.4**
	comp=Z,6.3nm,0.9s,baz=134,slow=8.3,SNR=6.1						
	comp=Z,6.3nm,0.9s						
SHEM	**Shemya Is, Ala**	**67.37**	**5**	LR	LR	14 54 25.4	
	comp=Z,128nm,21.1s,baz=122,slow=31						
KIWB	**Kanaga Island**	**67.67**	**11**	P	**P**	**14 30 33.4**	**-0.2**
PETK	**Petropavlovsk-**	**67.87**	**354**	P	**P**	**14 30 35.1**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=132,slow=5.4,SNR=10						
PETK				LR	LR	14 55 03.4	
	comp=Z,134nm,21.9s,baz=162,slow=31						
	comp=Z,8.3nm,0.8s						
PETK	**Petropavlovsk-**	**67.87**	**354**	P	**P**	**14 30 34.9**	**0.0**
HNS	**HongShan**	**71.08**	**319**	⇓P	P	14 31 01.3	+6.2
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
UNV	**Unalaska Valle**	**71.96**	**16**	P	**P**	**14 30 59.1**	**-0.9**
	baz=207						
XAN	**Xi'an**	**73.13**	**313**	P	P	14 31 14.5	+7.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HEH	**HeiHe**	**73.17**	**335**	*e*P	**P**	**14 31 07.0**	**-0.3**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SPIA	**Saint Paul Isl**	**74.06**	**13**	P	**P**	**14 31 11.4**	**-1.0**
	baz=203						
XLT	**XiLinHaoTe**	**74.23**	**325**	*e*P	**P**	**14 31 17.3**	**+3.5**
XLT				PcP	**PcP**	**14 31 34.0**	**+5.4**
XLT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**74.31**	**294**	P	**P**	**14 31 16.1**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=134,slow=5.0,SNR=8.6						
CMAR				LR	LR	15 04 35.8	
	comp=Z,23nm,18.8s,baz=70,slow=36						
	comp=Z,1.1nm,0.7s						
CHNA	**Chernabura Isl**	**74.87**	**19**	P	**P**	**14 31 15.9**	**-1.2**
	baz=214						
SDPT	**Sand Point**	**75.02**	**19**	P	**P**	**14 31 17.8**	**-0.1**
	baz=213						
MA2	**Magadan**	**75.03**	**352**	LR	LR	15 00 08.0	
	comp=Z,94nm,20.9s,baz=188,slow=32						
HHC	**Hu-ho-hao-te**	**75.08**	**320**	*e*P	**P**	**14 31 21.5**	**+2.7**
HHC				pmax	pmax		
	comp=Z,1.1nm,0.6s						
PZH	**PanZhiHua**	**75.09**	**303**	P	**P**	**14 31 20.5**	**+1.3**
QSPA	**South Pole Qui**	**75.42**	**180**	P	**P**	**14 31 21.0**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=282,slow=0.8,SNR=10.0						
QSPA				LR	LR	15 01 36.0	
	comp=Z,99nm,19.4s,baz=38,slow=33						
	comp=Z,2.6nm,0.8s						
QSPA	**South Pole Qui**	**75.42**	**180**	P	**P**	**14 31 20.3**	**-0.1**
S14K	**Fog Glacier**	**76.09**	**19**	P	**P**	**14 31 23.6**	**-0.7**
	baz=214						
CHGN	**Chignik**	**76.46**	**19**	P	**P**	**14 31 25.8**	**-0.4**
	baz=215						
CHIR	**Chirikof Islan**	**77.00**	**21**	P	**P**	**14 31 28.3**	**-0.9**
	baz=217						
M11K	**Mekoryuk**	**77.87**	**13**	P	**P**	**14 31 33.1**	**-0.8**
	baz=207						
SII	**Sitkinak Islan**	**78.08**	**21**	P	**P**	**14 31 34.2**	**-1.1**
	baz=219						
O14K	**Tigyukauivet M**	**78.10**	**16**	P	**P**	**14 31 34.4**	**-0.9**
	baz=212						
R17L	**Mt. Peulik Vol**	**78.20**	**19**	P	**P**	**14 31 35.1**	**-0.9**
	baz=216						
O15K	**Ungalikthiuk R**	**78.43**	**17**	P	**P**	**14 31 36.4**	**-0.8**
	baz=213						
N14K	**Kuskokwak Cree**	**78.56**	**16**	P	**P**	**14 31 37.2**	**-0.6**
	baz=211						
M13K	**Dall Lake**	**78.56**	**15**	P	**P**	**14 31 37.3**	**-0.5**
	baz=210						
Q17K	**Contact Creek**	**78.86**	**19**	P	**P**	**14 31 38.4**	**-1.3**
	baz=217						
OHAK	**Old Harbor**	**78.90**	**21**	P	**P**	**14 31 38.7**	**-1.1**
	baz=219						
Q16K	**King Salmon**	**78.95**	**19**	P	**P**	**14 31 39.8**	**-0.2**
	baz=216						
N15K	**Kwethluk River**	**79.19**	**16**	P	**P**	**14 31 40.6**	**-0.7**
	baz=213						
M14K	**Bethel**	**79.20**	**15**	P	**P**	**14 31 40.4**	**-0.9**
M14K				IAmb	IAmb	14 31 41.6	
	comp=Z,17nm,0.9s						
M14K	**Bethel**	**79.20**	**15**	P	**P**	**14 31 40.6**	**-0.8**
	baz=211						
O16K	**Kokwok River B**	**79.27**	**17**	P	**P**	**14 31 40.6**	**-1.2**
	baz=215						
P17K	**Kvichak River**	**79.44**	**18**	P	**P**	**14 31 40.7**	**-2.0**
	baz=216						
Q18K	**Katmai Hardscr**	**79.45**	**19**	P	**P**	**14 31 41.4**	**-1.5**
	baz=218						
M15K	**Kasigluk River**	**79.48**	**16**	P	**P**	**14 31 42.2**	**-0.7**
	baz=212						
L14K	**Kuka Creek**	**79.53**	**15**	P	**P**	**14 31 42.4**	**-0.7**
L14K				IAmb	IAmb	14 31 43.7	
	comp=Z,13nm,0.9s						
L14K	**Kuka Creek**	**79.53**	**15**	P	**P**	**14 31 42.5**	**-0.7**
	baz=210						
KDAK	**Kodiak Island**	**79.58**	**21**	LR	LR	15 01 08.2	
	comp=Z,208nm,20.5s,baz=208,slow=31						
KDAK	**Kodiak Island**	**79.58**	**21**	P	**P**	**14 31 42.8**	**-0.7**
	baz=220						
K13K	**Kusilvak Mount**	**79.59**	**13**	P	**P**	**14 31 42.5**	**-0.9**
	baz=208						
O17K	**Koliganek Bris**	**79.71**	**18**	P	**P**	**14 31 43.8**	**-0.4**
	baz=216						
N16K	**Nishlik Lake**	**79.81**	**17**	P	**P**	**14 31 44.2**	**-0.6**
	baz=214						
GAMB	**Gambell**	**79.91**	**10**	P	**P**	**14 31 44.6**	**-0.5**
	baz=201						
P18K	**Big Mountain,**	**79.97**	**19**	P	**P**	**14 31 45.1**	**-0.5**
	baz=217						
L15K	**Ungalak Mounta**	**80.12**	**15**	P	**P**	**14 31 45.9**	**-0.4**
	baz=211						
M16K	**Timber Creek**	**80.22**	**16**	IAmb	IAmb	14 31 49.4	
	comp=Z,12nm,1.0s						
M16K	**Timber Creek**	**80.22**	**16**	P	**P**	**14 31 46.9**	**0.0**
	baz=214						
N17K	**Nushagak Hills**	**80.30**	**17**	P	**P**	**14 31 47.0**	**-0.3**
	baz=215						
O18K	**Koktuk Hills**	**80.34**	**18**	P	**P**	**14 31 47.3**	**-0.4**
	baz=217						
J14K	**Nanvaranak Lak**	**80.56**	**13**	IAmb	IAmb	14 31 50.0	
	comp=Z,13nm,1.0s						
J14K	**Nanvaranak Lak**	**80.56**	**13**	P	**P**	**14 31 48.5**	**-0.1**
	baz=209						
K15K	**Wolf Creek Mou**	**80.63**	**14**	P	**P**	**14 31 49.0**	**-0.1**
	baz=211						
L16K	**Owhat River**	**80.66**	**16**	P	**P**	**14 31 49.1**	**-0.1**
	baz=213						
N18K	**Kilae Creek**	**80.80**	**18**	P	**P**	**14 31 49.4**	**-0.7**
	baz=217						
P19K	**Oil Pt**	**80.81**	**19**	P	**P**	**14 31 49

	baz=223							
F14K	**Arctic Creek**	82.41	11	P	P	14 31 57.3	-1.1	
	baz=206							
G15K	**Niukluk**	82.43	12	P	P	14 31 57.6	-0.9	
	baz=208							
H16K	**Elim**	82.49	13	P	P	14 31 57.6	-1.3	
	baz=210							
M20K	**Styx River**	82.57	18	P	P	14 31 58.1	-1.3	
	baz=219							
O22K	**Cooper Landing**	82.58	20	P	P	14 31 58.1	-1.3	
	baz=222							
J18K	**Innoko River**	82.83	16	IAmb	IAmb	14 32 02.5		
	comp=Z,5.5nm,0.8s							
J18K	**Innoko River**	82.83	16	P	P	14 31 59.6	-1.1	
	baz=216							
F15K	**North Star Dit**	82.94	12	P	P	14 32 00.3	-0.8	
	baz=208							
Q23K	**Middleton Isla**	83.00	22	P	P	14 32 01.1	-0.5	
	baz=226							
P23K	**Montague Islan**	83.03	21	P	P	14 32 01.3	-0.5	
	baz=224							
RC01	**Rabbit Creek A**	83.03	20	P	P	14 32 01.0	-0.8	
	baz=222							
G16K	**Koyuk River**	83.12	13	P	P	14 32 02.2	+0.1	
	baz=210							
SKT	**Skwentna**	83.13	19	P	P	14 32 01.8	-0.5	
	baz=220							
H17K	**Granite Mounta**	83.27	14	P	P	14 32 02.6	-0.3	
	baz=212							
PWL	**Port Wells**	83.33	20	P	P	14 32 02.6	-0.7	
	baz=224							
M22K	**Willow**	83.40	19	P	P	14 32 03.4	-0.2	
	baz=222							
K20K	**Telida**	83.46	17	P	P	14 32 03.9	0.0	
	baz=218							
J19K	**Poorman**	83.55	16	P	P	14 32 03.9	-0.5	
J19K	**Poorman**	83.55	16	P	P	14 32 04.5	+0.1	
	baz=217,SNR=5.3							
PMR	**Palmer**	83.60	20	IAmb	IAmb	14 32 04.5		
	comp=Z,4.7nm,0.8s							
PMR	**Palmer**	83.60	20	P	P	14 32 03.9	-0.8	
	baz=223							
PPLA	**Purkeypile**	83.64	18	P	P	14 32 04.0	-1.0	
	baz=220							
KNK	**Knik Glacier**	83.69	20	P	P	14 32 04.3	-0.9	
	baz=223							
GLI	**Glacier Island**	83.77	21	P	P	14 32 05.0	-0.5	
	baz=225							
L22K	**Petersville**	83.78	18	IAmb	IAmb	14 32 06.2		
	comp=Z,6.7nm,1.0s							
L22K	**Petersville**	83.78	18	P	P	14 32 04.5	-1.1	
	baz=221							
H18K	**Honhosa River**	83.81	14	P	P	14 32 05.4	-0.3	
	baz=214							
GCSA	**Galena City Sc**	83.83	15	P	P	14 32 05.4	-0.4	
	baz=215							
CUT	**Chulitna**	83.84	19	P	P	14 32 04.8	-1.1	
	baz=222							
EYAK	**Cordova Ski Ar**	84.00	22	P	P	14 32 05.9	-0.8	
	baz=226							
SML	**Sawmill**	84.02	20	P	P	14 32 06.3	-0.6	
	baz=224							
KAIM	**Kayak Island**	84.06	22	P	P	14 32 05.9	-1.1	
	baz=227							
CAST	**Castle Rocks**	84.07	17	P	P	14 32 05.7	-1.4	
	baz=220,SNR=17							
J20K	**Nowinta River**	84.08	16	P	P	14 32 06.9	-0.2	
	baz=218,SNR=6.1							
M23K	**Glacier View**	84.21	20	P	P	14 32 07.3	-0.5	
	baz=224							
CHUM	**Lake Minchumin**	84.36	17	P	P	14 32 07.8	-0.7	
	baz=226							
G18K	**Tagagawik**	84.36	14	P	P	14 32 08.1	-0.4	
	baz=214							
SCM	**Sheep Creek Mo**	84.37	20	P	P	14 32 08.0	-0.8	
	baz=224							
I20K	**Naaghedeneel**	84.49	16	P	P	14 32 07.6	-1.4	
	baz=218,SNR=6.4							
KTH	**Kantishna Hill**	84.51	18	IAmb	IAmb	14 32 08.8		
	comp=Z,13nm,0.9s							
H19K	**Roundabout Mou**	84.58	15	P	P	14 32 08.4	-1.1	
	baz=216,SNR=7.2							
KLU	**Klutina**	84.60	21	P	P	14 32 09.0	-0.9	
	baz=226							
TRF	**Thorofare Moun**	84.62	18	IAmb	IAmb	14 32 09.7		
	comp=Z,12nm,1.0s							
TRF	**Thorofare Moun**	84.62	18	P	P	14 32 08.6	-1.5	
	baz=222,SNR=6.2							
WAT1	**Susitna Watana**	84.69	19	P	P	14 32 09.0	-1.3	
	baz=223							
E17K	**Hotham Inlet**	84.69	12	P	P	14 32 08.4	-1.7	
	baz=210,SNR=6.8							
BMRM	**Bremner River**	84.70	22	P	P	14 32 08.9	-1.4	
	baz=227							
F18K	**Selawik**	84.73	13	P	P	14 32 09.3	-1.0	
	baz=213							
WAT6	**Susitna Watana**	84.77	19	P	P	14 32 09.3	-1.5	
	baz=224							
G19K	**Purcell Mounta**	84.93	14	IAmb	IAmb	14 32 13.2		
	comp=Z,7.8nm,0.9s							
G19K	**Purcell Mounta**	84.93	14	P	P	14 32 10.2	-1.2	
	baz=215,SNR=12							
H20K	**Anotleneega Mo**	84.94	15	P	P	14 32 10.6	-0.9	
	baz=217,SNR=10							
M24K	**Tolsona, Glenn**	84.95	20	P	P	14 32 10.4	-1.2	
	baz=225							
D17K	**Noatak River**	84.99	11	P	P	14 32 10.8	-0.8	
	baz=209							
C16K	**Lisburne Hills**	85.09	10	P	P	14 32 11.7	-0.4	
	baz=207							
CRQE	**Cirque**	85.10	22	P	P	14 32 11.4	-1.1	
	baz=228							
N25K	**Chitina, Valde**	85.14	21	P	P	14 32 11.8	-0.8	
	baz=227							
E18K	**Tukpahlearik C**	85.23	12	IAmb	IAmb	14 32 13.7		
	comp=Z,9.8nm,0.9s							
E18K	**Tukpahlearik C**	85.23	12	P	P	14 32 12.1	-0.7	
	baz=212							
MCK	**McKinley**	85.24	18	P	P	14 32 11.8	-1.1	
	baz=223,SNR=8.2							
DHY	**Denali Highway**	85.24	19	P	P	14 32 12.0	-1.2	
	baz=224							
RDOG	**Red Dog Mine**	85.33	11	P	P	14 32 12.6	-0.7	
	baz=209							
F19K	**Shaleruckik Mo**	85.34	13	P	P	14 32 12.6	-0.8	
	baz=214,SNR=9.6							
I21K	**Tanana**	85.45	16	P	P	14 32 13.3	-0.6	
	baz=220,SNR=22							
HARP	**HAARP**	85.50	20	P	P	14 32 13.1	-1.2	
	baz=226							
MCARA	**McCarthy VSAT**	85.55	22	P	P	14 32 13.6	-0.9	
	baz=228							
H21K	**Melozitna Rive**	85.60	16	IAmb	IAmb	14 32 30.3		
	comp=Z,5.5nm,1.0s							
H21K	**Melozitna Rive**	85.60	16	P	P	14 32 14.7	-0.1	
	baz=219,SNR=14							
IMAR	**Indian Mountai**	85.62	15	P	P	14 32 13.9	-0.8	
C17K	**DeLong Mountai**	85.65	11	P	P	14 32 15.0	0.0	
	baz=209,SNR=6.1							
MLY	**Manley**	85.68	17	P	P	14 32 14.1	-1.1	
	baz=221,SNR=8.0							
PINM	**Pinnacle**	85.75	24	P	P	14 32 14.5	-1.2	
	baz=231							
PAX	**Paxson**	85.79	20	P	P	14 32 14.7	-1.2	
	baz=226							
YBH	**Yreka Blue Hor**	85.79	45	LR	LR	15 02 46.1		
	comp=Z,94nm,20.6s,baz=258,slow=30							
NEA2	**Nenana**	85.83	18	P	P	14 32 14.9	-1.0	
	baz=223,SNR=5.3							
E19K	**Redstone River**	85.98	13	P	P	14 32 15.8	-0.8	
	baz=215							
F20K	**Avaraart Lake**	85.99	14	IAmb	IAmb	14 32 19.9		
	comp=Z,6.0nm,1.0s							
F20K	**Avaraart Lake**	85.99	14	P	P	14 32 15.7	-0.8	
	baz=216,SNR=13							
SIT	**Sitka**	86.00	28	P	P	14 32 15.9	-0.9	
	baz=235							
WRH	**Wood River Hil**	86.03	18	IAmb	IAmb	14 32 16.2		
	comp=Z,6.5nm,0.8s							
G21K	**Allakaket**	86.10	15	P	P	14 32 16.0	-1.1	
	baz=218							
S31K	**Pelican**	86.11	27	P	P	14 32 15.9	-1.4	
	baz=234							
CRAG	**Craig**	86.14	30	P	P	14 32 16.1	-1.4	
	baz=237							
I23K	**Minto, Yukon-K**	86.16	17	P	P	14 32 16.1	-1.3	
	baz=222							
H22K	**Ishtalitna Cre**	86.16	16	P	P	14 32 16.1	-1.4	
	baz=220,SNR=17							
C18K	**Utukok River**	86.17	11	IAmb	IAmb	14 32 20.5		
	comp=Z,5.3nm,0.9s							
C18K	**Utukok River**	86.17	11	P	P	14 32 16.2	-1.4	
	baz=211,SNR=6.1							
O28M	**Mount Upton**	86.20	23	P	P	14 32 16.3	-1.8	
	baz=231							
M26K	**Nabesna, AK**	86.24	21	P	P	14 32 16.7	-1.3	
	baz=228							
CCB	**Clear Creek Bu**	86.25	18	IAmb	IAmb	14 32 17.1		
	comp=Z,4.3nm,0.8s							
K24K	**Donnelly Dome**	86.27	19	P	P	14 32 17.2	-0.9	
	baz=226							
HDA	**Harding Lake**	86.33	18	P	P	14 32 17.4	-0.9	
	baz=225,SNR=9.3							
COLA	**College**	86.40	18	P	P	14 32 17.8	-0.8	
	baz=224							
P29M	**Windy Craggy**	86.47	25	P	P	14 32 18.7	-0.5	
	baz=233							
U33K	**Whale Pass**	86.49	29	P	P	14 32 18.4	-0.8	
	baz=237							
RIDG	**Independent Ri**	86.52	20	P	P	14 32 18.5	-0.9	
	baz=227							
L26K	**Log Cabin Wild**	86.53	21	P	P	14 32 18.3	-1.1	
	baz=228							
O29M	**Mount Kennedy**	86.54	24	P	P	14 32 18.2	-1.4	
	baz=232							
S32K	**Killisnoo**	86.56	28	P	P	14 32 18.1	-1.5	
	baz=236							
M27K	**Edge Creek, AK**	86.60	21	P	P	14 32 18.5	-1.4	
	baz=229							
H23K	**Yukon River**	86.61	17	IAmb	IAmb	14 32 20.5		
	comp=Z,10nm,1.2s							
H23K	**Yukon River**	86.61	17	P	P	14 32 19.0	-0.7	
	baz=222							
IL31		86.61	18	IAmb	IAmb	14 32 19.1		
	comp=Z,7.7nm,0.9s							
ILAR	**Eielson Array**	86.61	18	P	P	14 32 17.9	-1.8	
	comp=Z,4.4nm,0.7s,baz=236,slow=5.7,SNR=52							
ILAR				LR	LR	15 06 08.5		
	comp=Z,195nm,20.2s,baz=245,slow=32							
	comp=Z,4.4nm,0.7s							
ILAR	**Eielson Array**	86.61	18	P	P	14 32 18.1	-1.6	
D19K	**Kuna River**	86.65	12	P	P	14 32 19.1	-0.8	
	baz=214							
F21K	**Alatna River**	86.66	14	P	P	14 32 19.1	-0.8	
	baz=218,SNR=9.2							
YUK8	**Steele Glacier**	86.69	23	P	P	14 32 19.2	-1.3	
	baz=231							
POKR	**Poker Plat Res**	86.69	18	P	P	14 32 19.8	-0.4	
	baz=224							
YUK3	**Moose Creek**	86.74	22	P	P	14 32 19.4	-1.3	
	baz=231							
V35K	**Kehikan**	86.79	30	P	P	14 32 20.4	-0.4	
	baz=239							
E20K	**Nigu River**	86.86	13	P	P	14 32 20.1	-0.9	
	baz=216							
C19K	**Lookout Ridge**	86.87	12	P	P	14 32 20.7	-0.3	
	baz=213,SNR=8.4							
BELA	**Belgrano 2**	86.89	176	P	P	14 32 19.4	-1.7	
BELA				IAmb	IAmb	14 32 20.5		
	comp=Z,5.4nm,1.0s							
G22K	**Bettles**	86.92	15	P	P	14 32 20.6	-0.5	
	baz=220							
PLBC	**Pleasant Camp**	86.93	25	P	P	14 32 20.5	-0.8	
	baz=234							
J25K	**Salcha River,**	86.96	19	IAmb	IAmb	14 32 21.9		
	comp=Z,5.5nm,0.8s							
J25K	**Salcha River,**	86.96	19	P	P	14 32 19.9	-1.6	
	baz=226,SNR=7.6							
BVCY	**Beaver Creek**	87.00	22	P	P	14 32 20.9	-0.8	
	baz=230							
YUK6	**Outpost Mounta**	87.01	24	P	P	14 32 20.8	-1.2	
	baz=232							
WRAK	**Wrangell Islan**	87.02	29	P	P	14 32 20.4	-1.4	
	baz=238							
BRWY	**Burwash Landin**	87.02	23	P	P	14 32 20.3	-1.5	
	baz=232							
BBB	**Bella Bella**	87.03	34	LR	LR	15 03 42.7		
	comp=Z,130nm,20.7s,baz=231,slow=30							
P30M	**Million Dollar**	87.07	25	P	P	14 32 20.8	-1.4	
	baz=234							
L27K	**Beaver Creek,**	87.08	21	P	P	14 32 20.9	-1.2	
	baz=229							
H24K	**Noodor Dome**	87.09	17	P	P	14 32 20.5	-1.6	
	baz=224							
G23K	**Bananza Creek**	87.14	16	IAmb	IAmb	14 32 23.6		
	comp=Z,6.3nm,0.8s							
G23K	**Bananza Creek**	87.14	16	P	P	14 32 21.4	-0.9	
	baz=222,SNR=9.8							
D20K	**Ettuluk River**	87.14	13	P	P	14 32 20.8	-1.5	
	baz=215							
YUK4	**Talbot Arm**	87.15	23	P	P	14 32 21.7	-1.0	
	baz=232							
F22K	**John River**	87.20	15	P	P	14 32 21.7	-0.8	
	baz=220							
HYT	**Haines Junctio**	87.28	24	P	P	14 32 21.9	-1.3	
	baz=233							
PFO	**Pinyon Flats O**	87.45	54	LR	LR	15 03 17.3		
	comp=Z,66nm,20.6s,baz=244,slow=30							
COLD	**Coldfoot**	87.48	15	IAmb	IAmb	14 32 25.1		
	comp=Z,6.4nm,1.0s							
COLD	**Coldfoot**	87.48	15	P	P	14 32 23.4	-0.5	
	baz=222,SNR=7.2							
E21K	**Killik River**	87.50	14	P	P	14 32 23.8	-0.2	
	baz=218,SNR=12							
A19K	**Wainwright**	87.53	11	P	P	14 32 23.4	-0.6	
	baz=211							
PRP	**Porcupine Dome**	87.55	18	P	P	14 32 23.9	-0.5	
	baz=226							
K27K	**Chicken**	87.63	20	IAmb	IAmb	14 32 25.6		
	comp=Z,6.7nm,1.2s							
NVAR	**Mina Array Bea**	87.68	49	P	P	14 32 24.9	-0.9	
	comp=Z,1.2nm,0.9s,baz=267,slow=4.5,SNR=5.4							
NVAR				LR	LR	15 04 10.4		
	comp=Z,307nm,20.2s,baz=242,slow=30							
	comp=Z,1.2nm,0.9s							
O30N	**Mendenhall**	87.80	24	P	P	14 32 25.5	-0.1	
	baz=234							
N30M	**Aishikik Lake**	87.82	24	P	P	14 32 25.2	-0.5	
	baz=234							
G24K	**Hadweenzic Riv**	87.82	17	P	P	14 32 24.7	-0.8	
G24K				IAmb	IAmb	14 32 27.5		
	comp=Z,4.1nm,1.0s							
G24K	**Hadweenzic Riv**	87.82	17	P	P	14 32 25.1	-0.4	
	baz=224							
PALK	**Pallekele**	87.87	278	LR	LR	15 12 42.1		
	comp=Z,44nm,18.6s,baz=144,slow=36							
M29M	**Somme Creek**	87.89	22	P	P	14 32 25.3	-0.8	
	baz=232							
C21K	**Knifeblade Rid**	87.89	13	P	P	14 32 25.3	-0.5	
	baz=217,SNR=15							
B20K	**Meade River**	88.09	12	IAmb	IAmb	14 32 27.5		
	comp=Z,5.4nm,0.9s							
B20K	**Meade River**	88.09	12	P	P	14 32 26.7	0.0	
	baz=215							
P32M	**Atlin**	88.12	26	P	P	14 32 26.8	-0.4	
	baz=237							
I26K	**Coal Creek Min**	88.13	19	P	P	14 32 26.8	-0.2	
	baz=228							
WHY	**Whitehorse**	88.23	25	P	P	14 32 27.4	-0.4	
	baz=236							
E23K	**Chandalar**	88.25	15	P	P	14 32 26.9	-0.8	
	baz=222							
G25K	**Bearman Lake**	88.25	17	P	P	14 32 27.6	+0.1	
	baz=225							
T35M	**Bob Quinn**	88.30	29	P	P	14 32 27.3	-0.8	
	baz=240							
B21K	**Ikpikpuk River**	88.30	13	P	P	14 32 27.4	-0.4	
	baz=217,SNR=11							
F24K	**Squaw Lake**	88.30	16	IAmb	IAmb	14 32 29.1		
	comp=Z,3.1nm,0.7s							
F24K	**Squaw Lake**	88.30	16	P	P	14 32 27.5	-0.4	
	baz=224							
S34M	**Telegraph Cree**	88.36	28	P	P	14 32 27.4	-0.8	
	baz=239							
Q32M	**Nakina River**	88.40	27	P	P	14 32 28.1	-0.6	
	baz=238							
L29M	**L29M**	88.42	22	P	P	14 32 27.9	-0.6	
	baz=233							
E24K	**Your Creek**	88.55	15	P	P	14 32 28.9	-0.2	
	baz=223							
DAWY	**Dawson**	88.56	21	P	P	14 32 28.5	-0.7	
	baz=232							
M30M	**Minto, Yukon**	88.59	23	P	P	14 32 29.0	-0.4	
	baz=234							
D23K	**Nanushuk River**	88.68	14	P	P	14 32 29.3	-0.2	
	baz=221,SNR=9.0							
TOLK	**Toolik Lake Re**	88.70	15	P	P	14 32 29.3	-0.4	
	baz=222							
I27K	**Kandik River**	88.81	19	P	P	14 32 29.9	-0.4	
	baz=229							
P33M	**Teslin, Yukon**	88.83	26	P	P	14 32 29.7	-0.9	
	baz=237							
F25K	**Christian River**	88.96	16	P	P	14 32 30.6	-0.4	
	baz=226							
G26K	**Porcupine Rive**	89.05	17	IAmb	IAmb	14 32 33.5		
	comp=Z,4.5nm,0.9s							
G26K	**Porcupine Rive**	89.05	17	P	P	14 32 30.6	-0.7	
	baz=227							
K29M	**Barlow Dome**	89.08	22	P	P	14 32 31.1	-0.6	
	baz=233							
B22K	**Teshekpuk Lake**	89.12	13	P	P	14 32 31.0	-0.6	
	baz=218							
DLBC	**Dease Lake**	89.13	28	LR	LR	15 04 30.3		
	comp=Z,84nm,21.8s,baz=202,slow=30							
DLBC	**Dease Lake**	89.13	28	P	P	14 32 31.2	-0.9	
	baz=240							
R33M	**Jennings River**	89.20	27	P	P	14 32 31.9	-0.4	
	baz=239							
J29N	**Klondike Camp**	89.20	21	P	P	14 32 31.7	-0.5	
	baz=233							
N32M	**Quiet Lake**	89.23	25	P	P	14 32 32.0	-0.4	
	baz=237							
H27K	**Steamboat Moun**	89.24	19	P	P	14 32 31.7	-0.7	
	baz=230							
I28M	**Miner Creek**	89.25	20	P	P	14 32 32.1	-0.3	
	baz=231							
D24K	**Happy Valley**	89.26	15	P	P	14 32 31.7	-0.5	
	baz=223							
A21K	**Barrow**	89.28	11	P	P	14 32 32.1	-0.1	
	baz=215							
A22K	**Sinclair Lake**	89.33	12	P	P	14 32 32.1	-0.5	
	baz=217							
C23K	**Itkillik River**	89.35	14	IAmb	IAmb	14 32 47.1		
	comp=Z,6.2nm,0.9s							
C23K	**Itkillik River**	89.35	14	P	P	14 32 32.5	-0.2	
	baz=221							
E25K	**Arctic Village**	89.35	16	P	P	14 32 32.5	-0.3	
	baz=226							
F26K	**Sheenjek River**	89.45	17	P	P	14 32 32.5	-0.7	
	baz=227							
G27K	**Doyon Strip**	89.58	18	P	P	14 32 33.3	-0.5	
	baz=229							
TIXI	**Tiksi**	89.72	349	LR	LR	15 09 03.1		
	comp=Z,57nm,21.5s,baz=187,slow=33							
LPIG	**La Paz**	89.73	65	LR	LR	15 05 44.7		
	comp=Z,63nm,18.7s,baz=213,slow=31							
J30M	**Hart River**	89.93	21	P	P	14 32 35.0	-0.7	
	baz=234							
D25K	**Kavik River**	89.99	15	P	P	14 32 34.9	-0.9	
	baz=225							
ELIB	**Princess Elisa**	90.22	191	*d*P	P	14 32 36.1	-0.9	
	comp=Z,3.3nm,1.2s							
H29M	**Whitestone**	90.23	19	P	P	14 32 36.5	-0.4	
	baz=232							
I30M	**Mount Dempster**	90.30	21	P	P	14 32 36.3	-1.1	
	baz=234							
E27K	**Coleen River**	90.50	17	P	P	14 32 36.8	-1.3	
	baz=230							
F28M	**Old Crow**	90.63	18	P	P	14 32 37.6	-1.1	
	baz=231							
ELK	**Elko**	90.69	48	LR	LR	15 04 48.3		
	comp=Z,179nm,21.9s,baz=270,slow=30							
MMPY	**Sheldon Lake,**	90.75	24	P	P	14 32 39.1	-0.3	
	baz=239							
G29M	**Pine Creek**	90.76	19	P	P	14 32 38.8	-0.6	
	baz=233							
C26K	**Camden Bay**	90.78	15	P	P	14 32 38.7	-0.6	
	baz=230							
EPYK	**Eagle Plains**	90.86	20	P	P	14 32 39.4	-0.5	
	baz=234							
C27K	**Jago River**	90.88	15	P	P	14 32 38.9	-1.0	
	baz=228							
H31M	**Peel River**	91.33	21	P	P	14 32 41.2	-0.8	
	baz=236							
E28M	**Babbage River**	91.35	17	P	P	14 32 41.4	-0.7	
	baz=231							
D27M	**Malcolm River**	91.36	16	P	P	14 32 41.7	-0.5	
	baz=230							
G30M	**tAoh Zraii Nji**	91.38	19	P	P	14 32 41.4	-0.8	
	baz=234							
E29M	**Blow River**	91.70	18	P	P	14 32 42.8	-0.9	
	baz=233							
F30M	**Barrier River**	91.88	19	P	P	14 32 43.6	-0.9	
	baz=235							
NEW	**Newport**	91.89	41	LR	LR	15 09 19.2		
	comp=Z,76nm,18.1s,baz=242,slow=32							
G31M	**Satah River**	91.97	20	P	P	14 32 43.7	-1.2	
	baz=236							
D28M	**Stokes Point**	92.03	17	P	P	14 32 45.0	-0.1	
	baz=232							
F31M	**Tsiigehtchic**	92.44	19	P	P	14 32 46.3	-0.8	
	baz=237							
TROLL	**Troll, Antarti**	92.93	185	⇑P	P	14 32 48.7	-0.9	
	comp=Z,179nm,0.8s							
INK	**Inuvik**	92.98	19	LR	LR	15 09 56.3		
	comp=Z,120nm,20.1s,baz=240,slow=32							
INK	**Inuvik**	92.98	19	P	P	14 32 49.3	-0.2	
	baz=237							
SNAA	**Sanae**	93.63	183	⇑P	P	14 32 52.2	-0.6	
SNAA	**Sanae**	93.63	183	LR	LR	15 13 02.3		
	comp=Z,68nm,19.4s,baz=204,slow=34							
WRGLY	**Wrigley**	94.19	25	P	P	14 32 54.5	-0.7	
	baz=246							
PDAR	**Pinedale Array**	95.34	47	LR	LR	15 08 10.8		
	comp=Z,64nm,21.2s,baz=272,slow=31							
ANMO	**Albuquerque**	95.77	56	LR	LR	15 08 08.0		
	comp=Z,128nm,20.8s,baz=272,slow=30							
MKAR	**Makanchi Array**	96.67	317	P	P	14 33 06.9	-0.1	
	comp=Z,1.6nm,1.0s,baz=99,slow=7.5,SNR=8.1							
	comp=Z,1.6nm,1.0s							
MKAR	**Makanchi Array**	96.67	317	P	P	14 33 06.2	-0.8	
TXAR	**Lajitas Array**	96.79	62	P	P	14 33 07.8	-0.2	
	comp=Z,0.4nm,0.9s,baz=224,slow=5.2,SNR=4.0							
TXAR				LR	LR	15 11 45.1		
	comp=Z,65nm,18.2s,baz=254,slow=32							
	comp=Z,0.4nm,0.9s							
ZALV	**Zalesovo Beam**	96.91	324	P	P	14 33 07.2	-0.7	
	comp=Z,0.6nm,0.5s,baz=131,slow=5.9,SNR=3.7							
ZALV				LR	LR	15 16 12.4		
	comp=Z,38nm,21.4s,baz=84,slow=35							
	comp=Z,0.6nm,0.5s							
A36M	**Sachs Harbour**	97.24	17	P	P	14 33 08.0	-1.0	
	baz=245							
YKA	**Yellowknife Ar**	97.73	27	LR	LR	15 10 10.9		
	comp=Z,51nm,21.5s,baz=296,slow=31							
NRIK	**Noril'sk**	99.73	339	LR	LR	15 19 46.7		
	comp=Z,44nm,18.8s,baz=63,slow=36							
ARCES	**ARCESS Array B**	119.97	345	PKP	PKPdf	14 38 26.1	-0.6	
	comp=Z,1.2nm,0.3s,baz=77,slow=2.6,SNR=19							
FINES	**FINESS Array B**	125.37	338	PKP	PKPdf	14 38 37.0	-0.1	
	comp=Z,6.9nm,0.9s,baz=108,slow=3.5,SNR=9.4							
AKASG	**Malin Array Be**	130.27	326	PKP	PKiKP	14 38 48.6	+0.9	
	comp=Z,0.3nm,0.3s,baz=49,slow=1.8,SNR=9.2							
NB2	**NORSAR Subarra**	130.34	345	PKPd

OBKA	**Obir**	**140.52**	**329**	*e*PKP		**PKPdf**	**14 39 05.5**	**-0.8**
	comp=Z,0.1nm,0.4s							
LESA	**Schwarzleotal**	**140.75**	**332**	*e*PKP		**PKPdf**	**14 39 05.7**	**-0.9**
	comp=Z,3.4nm,0.8s							
MYKA	**Terra Mystica**	**140.88**	**330**	*e*PKP		**PKPdf**	**14 39 06.2**	**-0.7**
	comp=Z,1.4nm,0.6s							
ABTA	**Abfaltersbach**	**141.33**	**331**	*e*PKP		**PKPdf**	**14 39 06.2**	**-1.5**
	comp=Z,5.6nm,1.1s							
WTTA	**Wattenberg**	**141.34**	**333**	*e*PKP		**PKPdf**	**14 39 06.5**	**-1.3**
	comp=Z,3.0nm,1.0s							
BMRD	**Maredsous**	**141.46**	**341**	*d*PKPdf		**PKPdf**	**14 39 08.5**	**+0.8**
MOTA	**Moosalm**	**141.52**	**333**	*e*PKP		**PKPdf**	**14 39 07.2**	**-0.9**
	comp=Z,0.1nm,0.3s							
FETA	**Feichten**	**141.93**	**333**	*e*PKP		**PKPdf**	**14 39 08.1**	**-0.7**
	comp=Z,6.0nm,1.2s							
KEST	**Kesra**	**150.70**	**320**	PKPbc		**PKPbc**	**14 39 29.0**	**-0.4**
	comp=Z,6.3nm,0.9s,baz=344,slow=2.2,SNR=4.0							
ESDC	**Sonseca Array**	**153.69**	**343**	PKPbc		**PKPbc**	**14 39 36.0**	**0.0**
	comp=Z,1.9nm,0.9s,baz=17,slow=2.5,SNR=13							

IDC 25 15:05:55.7±10.0,**4°.55S**×**153°.37E,h131**km±64km,**mb3.2**/3, **mbtmp3.8**/4,**Error ellipse: s-maj=102.6km s-min=77.9km az=164.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PMG	**Port Moresby**	**7.82**	**232**	P			Pn	15 07 46.8	0.0
	11nm,0.5s,baz=38,slow=8.2,SNR=12								
PMG				S			Sn	15 09 14.5	+0.7
	7.1nm,0.4s,baz=216,slow=4.8,SNR=5.6								
WRA	**Warramunga Arr**	**24.03**	**229**	P			P	15 10 59.5	+0.7
	1.1nm,0.5s,baz=54,slow=10.0,SNR=8.4								
	1.1nm,0.5s								
ASAR	**Alice Springs**	**26.71**	**223**	P			P	15 11 22.3	-0.7
	0.2nm,0.5s,baz=56,slow=9.2,SNR=8.5								
	0.2nm,0.5s								
STKA	**Stephens Creek**	**29.34**	**201**	P			P	15 11 46.2	0.0
	1.1nm,0.7s,baz=20,slow=12,SNR=2.9								
	1.1nm,0.7s								

*IDC **25** 15:33:15.1±2.9, 17°.83S×178°.47W,h549km±22km,mb2.9/6, mbtmp3.8/7,Error ellipse: s-maj=120.2km s-min=20.4km az=152.0*

ISC 25 15:33:15.1±2.0,**17°.8S**±0°.7×**178°.5W**±0°.4,**h550**km,**n7, σ0§13/7,mb3.3**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSVF	**Nonsavu**	**3.30**	**271**	P			**P**	**15 34 32.2**	**0.0**
	46nm,0.7s,baz=124,slow=7.0,SNR=25								
WRA	**Warramunga Arr**	**44.57**	**259**	P			**P**	**15 40 38.7**	**-0.1**
	1.0nm,0.9s,baz=98,slow=6.7,SNR=2.3								
	1.0nm,0.9s								
ASAR	**Alice Springs**	**44.74**	**254**	P			**P**	**15 40 40.2**	**+0.1**
	1.0nm,0.5s,baz=89,slow=8.4,SNR=37								
	1.0nm,0.5s								
NVAR	**Mina Array Bea**	**79.42**	**44**	P			**P**	**15 44 24.9**	**0.0**
	0.7nm,0.6s,baz=234,slow=8.3,SNR=3.8								
	0.7nm,0.6s								
ILAR	**Eielson Array**	**85.83**	**13**	P			**P**	**15 44 56.3**	**+0.1**
	0.2nm,0.4s,baz=217,slow=5.0,SNR=6.2								
	0.2nm,0.4s								
TXAR	**Lajitas Array**	**86.02**	**58**	P			**P**	**15 44 58.1**	**0.0**
	0.8nm,0.8s,baz=208,slow=5.1,SNR=5.0								
	0.8nm,0.8s								
PDAR	**Pinedale Array**	**87.35**	**43**	P			**P**	**15 45 04.0**	**-0.2**
	0.4nm,0.7s,baz=211,slow=1.7,SNR=5.0								
	0.4nm,0.7s								

*IDC **25** 15:47:54.9±1.8,35°.44N×82°.11E,h0km,mb3.3/3, mbtmp3.5/8,ML3.0/5,MS2.1/1,Error ellipse: s-maj=48.2km s-min=18.0km az=60.0*

ISC 25 15:48:00.4±1.3,**35°.6N**±0°.1×**82°.3E**±0°.2,**h35**km,**n8,σ1§19/9, mb3.2**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AAK	**Ala-Archa**	**9.26**	**321**	Pn			**Pn**	**15 50 11.6**	**0.0**
	0.3nm,0.3s,baz=242,slow=16,SNR=1.3								
AAK				Lg			Lg	15 52 49.7	
	0.4nm,0.3s,baz=9.8,slow=16,SNR=3.6								
AAK				LR			LR	15 53 45.7	
	comp=Z,11nm,19.7s,baz=138,slow=38								
	0.9nm,0.3s								
MKAR	**Makanchi Array**	**11.15**	**360**	Pn			**Pn**	**15 50 37.4**	**0.0**
	0.4nm,0.3s,baz=187,slow=15,SNR=10								
MKAR				Sn			**Sn**	**15 52 39.4**	**-1.4**
	baz=183,slow=24,SNR=6.1								
	2.6nm,0.7s								
KURBB	**Kurchatov Arra**	**15.24**	**351**	Pn			**Pn**	**15 51 32.7**	**0.0**
	0.1nm,0.3s,baz=175,slow=12,SNR=3.0								
	2.8nm,0.2s								
ZALV	**Zalesovo Beam**	**18.40**	**5**	P			**Pn**	**15 52 14.2**	**+1.6**
	0.1nm,0.3s,baz=190,slow=13,SNR=4.5								
	0.4nm,0.6s								
BVAR	**Borovoye Array**	**19.32**	**338**	P			**Pn**	**15 52 23.7**	**0.0**
	baz=148,slow=11,SNR=5.0								
	0.3nm,0.4s								
SONM	**Songino Array**	**21.62**	**48**	P			**P**	**15 52 48.7**	**+1.3**
	0.7nm,0.8s,baz=256,slow=12,SNR=4.1								
	0.7nm,0.8s								
CMAR	**Chiang Mai Arr**	**22.57**	**135**	P			**P**	**15 52 56.2**	**-1.5**
	0.3nm,0.3s,baz=314,slow=9.2,SNR=6.9								
	0.3nm,0.3s								
ASAR	**Alice Springs**	**76.55**	**132**	P			**P**	**15 59 47.5**	**+0.3**
	0.2nm,0.5s,baz=312,slow=6.6,SNR=4.4								
	0.2nm,0.5s								

*NDI **25** 15:58:30.8±2.8,30°.97N×95°.14E,h10km,mb4.7,ML4.2, MW4.6,Presumed earthquake*
*IDC **25** 15:58:35.0±0.6,30°.32N×94°.90E,h0km,mb4.4/24, mbtmp4.4/26,ML3.7/2,MS3.4/10,Error ellipse: s-maj=18.7km s-min=11.1km az=48.0*
*BJI **25** 15:58:35.8,30°.38N×94°.85E,h8km,mB4.7/14,mb4.4/44, ML4.0/5,Ms4.1/45,Ms7 4.0/44*
*MOS **25** 15:58:36.0±0.9,30°.41N×94°.93E,h11km,mb4.9/39,Error ellipse: s-maj=7.1km s-min=3.3km az=123.6*
*NEIC **25** 15:58:37.4±1.6,30°.38N±0°.08×94°.84E±0°.04,h10km±1km, mb4.8/149,Error ellipse: s-maj=13.6km s-min=5.3km az=347.0*
*GFZ **25** 15:58:38.6±0.3,30°N±3°×9°5E±°,h10km,M4.5/28, mb4.7/28*

ISC 25 15:58:39.2±0.3,**30°.29N**±0°.03×**94°.86E**±0°.03,**h23**km,**n666, σ1§31/640,mb4.8**/152,**MS3.5**/16,**34C-25D,Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
LSA	**Lhasa**	**3.27**	**260**	P			**Pn**	**15 59 31.8**	**+2.3**
LSA	**Lhasa**	**3.27**	**260**				**Pn**	**15 59 31.8**	**+2.3**
TAWA	**Tawang**	**3.76**	**225**	*e*P			**Pn**	**15 59 40.0**	**+4.0**
TAWA				*e*S			**Sb**	**16 00 26.0**	**-4.3**
TAWA				IAML				16 00 43.5	
	comp=N,5μm,0.7s								
TAWA				IAML				16 00 44.5	
	comp=E,2μm,0.0s								
MOKO	**MOKOCHONG**	**3.97**	**184**	*e*P			**Pn**	**15 59 34.7**	**-4.1**
MOKO				*e*S			**Sn**	**16 00 28.4**	**+3.6**
TEZP	**TEZPUR**	**4.09**	**207**	*e*P			**Pn**	**15 59 42.3**	**+2.1**
TEZP				*e*S			**Sb**	**16 00 35.0**	**-4.5**
TEZP				IAML				16 01 01.9	
	comp=E,215nm,0.8s								
TEZP				IAML				16 01 02.3	
	comp=N,76nm,0.9s								
KOHI	**KOHIMA**	**4.61**	**188**	*e*P			**Pn**	**15 59 49.6**	**+2.0**
KOHI				*e*S			**Sn**	**16 00 46.6**	**+6.2**
SHL	**Shillong**	**5.39**	**210**	P			**Pn**	**15 59 59.3**	**+0.9**
SHL	**Shillong**	**5.39**	**210**				**Pn**	**15 59 59.3**	**+0.9**
SHL	**Shillong**	**5.39**	**210**	*e*P			**Pn**	**15 59 59.9**	**+1.5**
SHL				*e*S			**Sn**	**16 01 06.1**	**+6.2**
IMP	**Imphal**	**5.50**	**189**	*ex*			x	16 00 01.7	
IMP				*ex*			x	16 01 05.5	
GOMU	**GeErMu**	**5.89**	**360**	Pn			**Pn**	**16 00 03.3**	**-2.0**
GOMU				Sn			**Sn**	**16 01 11.5**	**-0.8**
GOMU				SMN					
	comp=N,34nm,1.6s								
GOMU				SME					
	comp=N,17nm,1.1s								
GOMU				L		L			
	comp=N,2μm,7.6s								
GOMU				L		L			
	comp=N,970nm,6.0s								
MORE	**Moreh**	**6.05**	**185**				**Pn**	**16 00 09.5**	**+2.1**
TNCH	**TengChong**	**6.17**	**147**	Pn			**Pn**	**16 00 08.0**	**-1.0**
TNCH				Sn			**Sn**	**16 01 22.8**	**+3.8**
TNCH				Sg			Sb	16 01 54.0	+15
TNCH				SMN					
	comp=N,280nm,2.2s								
TNCH				SME					
	comp=N,270nm,1.9s								
TNCH				L		L			
	comp=N,1μm,4.9s								
TNCH				L		L			
	comp=N,660nm,8.3s								
PZH	**PanZhiHua**	**7.14**	**120**	P			**Pn**	**16 00 26.8**	**+4.4**
PZH				PP			**Pb**	**16 00 37.8**	**-4.8**
PZH				S			**Sn**	**16 01 48.3**	**+5.4**
PZH				pmax		pmax			
	comp=Z,20nm,1.0s								
PZH				pmax		pmax			
	comp=Z,190nm,5.3s								
PZH				LR		LR			
	comp=N,1μm,8.9s								
PZH				LR		LR			
	comp=E,1μm,8.0s								
PZH				LR		LR			
	comp=Z,870nm,8.1s								
EVN	**Everest**	**7.41**	**254**				**Pn**	**16 00 26.9**	**+0.4**
EVN	**Everest**	**7.41**	**254**	P			**Pn**	**16 00 27.6**	**+1.1**
CD2	**Chengdu**	**7.70**	**83**	Pn			**Pn**	**16 00 30.0**	**+0.1**
CD2				Sn			**Sn**	**16 01 57.5**	**+1.1**
CD2				L		L			
	comp=Z,2μm,8.1s								
CD2				L		L			
	comp=Z,2μm,7.6s								
CD2				L		L			
	comp=Z,2μm,8.3s								
KMI2	**Kunming**	**8.67**	**124**	P			**Pn**	**16 00 45.3**	**+1.9**
KMI2				L		L			
	comp=Z,1μm,6.1s								
KMI2				L		L			
	comp=Z,1μm,4.5s								
KMI2				L		L			
	comp=Z,530nm,8.5s								
LZDM	**Lanzhou Array**	**9.31**	**50**	Pn			**Pn**	**16 00 54.1**	**+1.8**
	baz=189,slow=8.6								
LZH	**Lanzhou**	**9.49**	**50**	*e*P			**Pn**	**16 00 58.3**	**+3.8**
LZH				pP				16 01 02.8	
LZH				pmax		pmax			
	comp=Z,12nm,1.7s								
LZH				L		L			
	comp=Z,820nm,12.7s								
LZH				L		L			
	comp=Z,960nm,13.6s								
LZH				L		L			
	comp=Z,820nm,14.0s								
GTA2	**Gaotai**	**10.01**	**22**	*e*P			**Pn**	**16 01 02.8**	**+1.1**
GTA2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
GTA2				L		L			
	comp=Z,580nm,9.5s								
GTA2				L		L			
	comp=Z,530nm,7.9s								
GTA2				L		L			
	comp=Z,670nm,8.6s								
GYA	**Guiyang**	**11.07**	**107**	⇑P			**Pn**	**16 01 17.0**	**+0.7**
GYA				pmax		pmax			
	comp=Z,34nm,0.8s								
CHTO	**Chiang Mai**	**12.02**	**161**	P			**Pn**	**16 01 32.4**	**+3.3**
CHTO				pmax		pmax			
	comp=Z,1.0nm,1.4s								
CHTO	**Chiang Mai**	**12.02**	**161**				**Pn**	**16 01 28.5**	**-0.6**
CHTO	**Chiang Mai**	**12.02**	**161**	P			**Pn**	**16 01 30.6**	**+1.5**
CHTO	**Chiang Mai**	**12.02**	**161**	P			**Pn**	**16 01 31.4**	**+2.3**
CMAR	**Chiang Mai Arr**	**12.36**	**162**	Pn			**Pn**	**16 01 36.0**	**+2.3**
	baz=333,slow=12								
CMAR	**Chiang Mai Arr**	**12.36**	**162**	*i* P			**Pn**	**16 01 37.0**	**+3.3**
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
XAN	**Xi'an**	**12.48**	**69**	⇓P			**Pn**	**16 01 35.3**	**-0.2**
XAN				pmax		pmax			
	comp=Z,8.0nm,0.6s								
XAN				pmax		pmax			
	comp=Z,120nm,4.4s								
XAN				L		L			
	comp=Z,480nm,7.9s								
XAN				L		L			
	comp=Z,290nm,5.5s								
XAN				L		L			
	comp=Z,390nm,6.9s								
BLSP	**Bilaspur**	**14.00**	**237**	*ex*			**P**	**16 02 04.8**	**+0.9**
BLSP				IAmb			IAmb	16 02 06.5	
	comp=Z,32nm,1.1s								
WMQ	**Urumqi**	**14.65**	**339**	*e*P			**Pn**	**16 02 04.5**	**-0.6**
WMQ				sP			P	16 02 11.8	+0.6
WMQ				pmax		pmax			
	comp=Z,12nm,1.3s								
WMQ				L		L			
	comp=Z,340nm,12.1s								
WMQ				L		L			
	comp=Z,240nm,12.1s								
WMQ				L		L			
	comp=Z,75nm,13.1s								
SMLA	**Simla**	**15.24**	**278**	*e*P			**Pn**	**16 02 07.6**	**-5.3**
DHRM	**DHARAMSHALA**	**15.99**	**282**	*e*P			**Pn**	**16 02 17.3**	**-5.6**
BTO2	**Baotou**	**16.05**	**45**	*e*P			**Pn**	**16 02 21.3**	**-2.1**
BTO2				pP			**P**	**16 02 25.0**	**-1.7**
BTO2				sP			**pP**	**16 02 28.0**	**-6.2**
BTO2				PP			**PnPn**	**16 02 34.3**	**+2.1**
BTO2				S			**Sn**	**16 05 18.8**	**-1.9**
BTO2				pmax		pmax			
	comp=Z,28nm,1.6s								
BTO2				pmax		pmax			
	comp=Z,310nm,7.7s								
BTO2				L		L			
	comp=Z,570nm,11.8s								
BTO2				L		L			
	comp=Z,460nm,13.2s								
BTO2				L		L			
	comp=Z,690nm,11.4s								
WUS	**Wushi**	**16.69**	**315**				**Pn**	**16 02 30.1**	**-1.7**
WHN	**Wuhan**	**16.82**	**84**	P			**Pn**	**16 02 33.0**	**-0.2**
WHN				L		L			
	comp=Z,1μm,8.3s								
WHN				L		L			
	comp=Z,550nm,9.0s								
WHN				L		L			
	comp=Z,2μm,9.1s								
BHPL	**Bhopal**	**17.07**	**250**	*e*P			**Pn**	**16 02 36.1**	**-0.3**
HHC	**Hu-ho-hao-te**	**17.16**	**48**	⇑*i*P			**P**	**16 02 40.5**	**+1.4**
HHC				sP			pP	16 02 48.3	+1.7
HHC				S			**Sn**	**16 05 47.5**	**-0.3**
HHC				sS			S	16 05 57.8	+1.0
HHC				pmax		pmax			
	comp=Z,16nm,0.9s								
HHC				pmax		pmax			
	comp=Z,71nm,5.9s								
HHC				L		L			
	comp=Z,270nm,10.6s								
HHC				L		L			
	comp=Z,250nm,11.8s								
HHC				L		L			
	comp=Z,300nm,10.8s								
QIZ	**Qiongzhong**	**17.62**	**126**	P			**Pn**	**16 02 40.0**	**-3.3**
QIZ				S			**Sn**	**16 06 02.0**	**+3.0**
QIZ				pmax		pmax			
	comp=Z,100nm,5.4s								
QIZ				L		L			
	comp=Z,300nm,10.8s								
QIZ				L		L			
	comp=Z,260nm,10.6s								
QIZ				L		L			
	comp=Z,320nm,10.6s								
SHLS	**Shalkode**	**17.77**	**320**	*e*P			**Pn**	**16 02 42.1**	**-3.0**
SHLS	**Shalkode**	**17.77**	**320**	*e*P			**Pn**	**16 02 42.2**	**-3.0**
TARG	**Taragay, Kyrgy**	**17.87**	**314**	P			**Pn**	**16 02 45.9**	**-0.7**
TARG				pmax		pmax			
	comp=Z,37nm,1.1s								
TARG	**Taragay, Kyrgy**	**17.87**	**314**				**Pn**	**16 02 45.9**	**-0.7**
TARG	**Taragay, Kyrgy**	**17.87**	**314**	P			**P**	**16 02 46.9**	**-0.3**
PDGK	**Podgornoye**	**17.87**	**321**	P			**Pn**	**16 02 44.5**	**-1.8**
PDGK	**Podgornoye**	**17.87**	**321**	P			**Pn**	**16 02 44.5**	**-1.8**
HNS	**HongShan**	**17.93**	**61**	⇑P			**Pn**	**16 02 46.8**	**-0.1**
HNS				pmax		pmax			
	comp=Z,16nm,1.0s								
HNS				L		L			
	comp=Z,270nm,8.7s								
HNS				L		L			
	comp=Z,150nm,10.4s								
HNS				L		L			
	comp=Z,300nm,11.4s								
PRZ	**Przheval'sk**	**17.95**	**317**	P			**P**	**16 02 48.2**	**+0.4**
PRZ				pmax		pmax			
	comp=Z,114nm,1.1s								
PRZ	**Przheval'sk**	**17.95**	**317**	P			**P**	**16 02 48.2**	**+0.4**
PRZ				lAmb		lAmb		16 02 52.7	
	comp=Z,114nm,1.1s								
PRZ	**Przheval'sk**	**17.95**	**317**	P			**P**	**16 02 50.3**	**+2.5**
UZB	**Uzynbulak**	**18.01**	**320**	*e*P			**Pn**	**16 02 47.9**	**-0.1**
UZB				*e*S			**Sn**	**16 06 07.9**	**-0.4**
UZB	**Uzynbulak**	**18.01**	**320**	*e*P			**Pn**	**16 02 48.0**	**-0.1**
UZB				*e*S			**Sn**	**16 06 07.9**	**-0.4**
KSH2	**Kashi**	**18.13**	**304**	P			**Pn**	**16 02 48.0**	**-1.5**
KSH2				pmax		pmax			
	comp=Z,13nm,1.7s								
AJM	**Ajmer**	**18.21**	**263**	*e*P			**Pn**	**16 02 47.7**	**-2.9**
AJM				lAmb		lAmb		16 02 52.0	
	comp=Z,47nm,1.4s								
SATY	**Saty**	**18.30**	**319**	*e*P			**P**	**16 02 51.8**	**+0.2**
SATY				*e*S			**Sn**	**16 06 15.3**	**-0.1**
SATY	**Saty**	**18.30**	**319**	*e*P			**P**	**16 02 51.8**	**+0.2**
SATY				*e*S			**Sn**	**16 06 15.4**	**+0.1**
KPKS	**Kokpek**	**18.40**	**320**	*e*P			**P**	**16 02 52.5**	**-0.2**
KPKS				*e*S			**Sn**	**16 06 17.4**	**-0.3**
KPKS	**Kokpek**	**18.40**	**320**	*e*P			**P**	**16 02 52.6**	**-0.2**
KPKS				*e*S			**Sn**	**16 06 17.4**	**-0.3**
KDJ	**Kajisay**	**18.48**	**315**	P			**P**	**16 02 52.5**	**-1.1**
KDJ				pmax		pmax			
	comp=Z,100nm,1.7s								
KDJ	**Kajisay**	**18.48**	**315**	P			**P**	**16 02 52.5**	**-1.1**
KDJ				lAmb		lAmb		16 02 59.3	
	comp=Z,100nm,1.7s								
KDJ	**Kajisay**	**18.48**	**315**	P			**P**	**16 02 53.5**	**-0.2**
ZSN	**Zaisan**	**18.79**	**339**	*e*P			**Pn**	**16 02 57.3**	**-0.1**
ZSN				*e*S			**Sn**	**16 06 26.7**	**-0.1**
ZSN	**Zaisan**	**18.79**	**339**	*e*P			**Pn**	**16 02 57.4**	**0.0**
ZSN				*e*S			**Sn**	**16 06 26.7**	**-0.1**
NRN	**Naryn**	**18.86**	**311**	P			**P**	**16 02 54.9**	**-3.1**
NRN				pmax		pmax			
	comp=Z,19nm,1.3s								
NRN	**Naryn**	**18.86**	**311**	P			**P**	**16 02 54.9**	**-3.1**
TNSS	**Tian-Shan**	**19.14**	**317**	*e*P			**P**	**16 03 01.3**	**+0.2**
TNSS	**Tian-Shan**	**19.14**	**317**	*e*P			**P**	**16 03 01.4**	**+0.2**
MK31	**Makanchi Array**	**19.14**	**333**	*ce*P			**P**	**16 02 59.3**	**-1.4**
MKAR	**Makanchi Array**	**19.14**	**333**	P			**P**	**16 02 59.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=44								
MKAR				S			**S**	**16 06 38.5**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=354,slow=11,SNR=1.5								
	comp=Z,5.0nm,0.8s								
MKAR	**Makanchi Array**	**19.14**	**333**	P			**P**	**16 02 57.8**	**-2.9**
MDOK	**Medeo**	**19.15**	**317**	*e*P			**Pn**	**16 03 01.5**	**-0.5**
MDOK				*e*S			**Sn**	**16 06 35.9**	**0.0**
MDOK	**Medeo**	**19.15**	**317**	*e*P			**Pn**	**16 03 01.5**	**-0.5**
MDOK				*e*S			**Sn**	**16 06 36.0**	**0.0**
AAA	**Alma-Ata**	**19.26**	**317**	*e*P			**P**	**16 03 02.3**	**+0.3**
AAA	**Alma-Ata**	**19.26**	**317**	*e*P			**P**	**16 03 02.4**	**+0.3**
MAKZ	**Makanchi**	**19.28**	**332**	P			**P**	**16 03 01.2**	**-1.0**
MAKZ				pmax		pmax			
	comp=Z,24nm,1.2s								
MAKZ	**Makanchi**	**19.28**	**332**	P			**P**	**16 03 01.2**	**-1.0**
BOOM	**Boomskoye usch**	**19.45**	**314**	P			**Pn**	**16 03 04.9**	**-0.6**
BOOM	**Boomskoye usch**	**19.45**	**314**	P			**Pn**	**16 03 04.9**	**-0.6**
TIA	**Tai'an**	**19.52**	**67**	P			**Pn**	**16 03 06.5**	**+0.3**
TIA				pmax		pmax			
	comp=Z,15nm,1.0s								
TIA				pmax		pmax			
	comp=Z,83nm,3.8s								
TIA				L		L			
	comp=Z,190nm,10.3s								
TIA				L		L			
	comp=Z,170nm,6.2s								
TIA				L		L			
	comp=Z,260nm,12.3s								
TDK	**Taldyqorghan**	**19.57**	**323**	*e*P			**P**	**16 03 05.8**	**+0.4**
TDK	**Taldyqorghan**	**19.57**	**323**	*e*P			**P**	**16 03 05.9**	**+0.4**
UDPR	**Udaipur**	**19.60**	**258**	*e*P			**P**	**16 03 03.1**	**-2.9**
HYB	**Hyderabad**	**19.63**	**233**	*e*P			**P**	**16 03 06.4**	**+0.1**
HYB				*e*S			**Sn**	**16 06 50.1**	**+2.4**
HYB				*e*PcP			**PcP**	**16 07 25.2**	**-0.3**
SONM	**Songino Array**	**19.63**	**24**	P			**P**	**16 03 06.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=210,slow=11,SNR=28								
SONM				LR		LR	LR	16 11 14.8	
	comp=Z,122nm,21.4s,baz=224,slow=39								
	comp=Z,14nm,1.0s								
SONM	**Songino Array**	**19.63**	**24**	P			**P**	**16 03 05.0**	**-1.2**
ULN	**Ulaanbaatar**	**19.89**	**25**	*de*P			**P**	**16 03 08.8**	**-0.3**
ULN				pmax		pmax			
	comp=Z,11nm,0.8s								
ULN	**Ulaanbaatar**	**19.89**	**25**	P			**P**	**16 03 08.2**	**-0.8**
ULN	**Ulaanbaatar**	**19.89**	**25**	P			**P**	**16 03 08.1**	**-1.0**
	comp=Z,57nm,1.1s								
KUU	**Kurty**	**20.00**	**318**	*e*P			**P**	**16 03 10.5**	**+0.4**
KUU	**Kurty**	**20.00**	**318**	*e*P			**P**	**16 03 10.5**	**+0.4**
DGZ	**Jazzator, Alta**	**20.18**	**346**	⇑*e*P			**P**	**16 03 11.8**	**-0.4**
DGZ				pmax		pmax			
	comp=Z,21nm,1.7s								
KNGR	**Kungurtug, Tuv**	**20.39**	**5**	⇓*e*P			**P**	**16 03 14.8**	**+0.5**
KNGR				pmax		pmax			
	comp=Z,16nm,1.4s								
AAK	**Ala-Archa**	**20.43**	**313**	P			**P**	**16 03 15.1**	**+0.2**
	comp=Z,34nm,1.1s,baz=129,slow=9.9,SNR=37								
	comp=Z,34nm,1.1s								
AAK	**Ala-Archa**	**20.43**	**313**	*c i*P			Pn	16 03 16.2	-1.0
AAK				pmax		pmax			
	comp=Z,77nm,1.3s								
AAK	**Ala-Archa**	**20.43**	**313**	P			**P**	**16 03 13.9**	**-1.1**
AAK				lAmb		lAmb		16 03 21.2	
	comp=Z,80nm,1.3s								
AAK	**Ala-Archa**	**20.43**	**313**	P			Pn	16 03 16.5	-0.7
MANEM	**Manem**	**20.52**	**297**	P			**P**	**16 03 14.3**	**-1.8**
MANEM				lAmb		lAmb		16 03 21.0	
	comp=Z,98nm,1.2s								
NJ2	**Nanjing**	**20.60**	**79**	*e*P			**P**	**16 03 17.5**	**+0.8**
NJ2				pmax		pmax			
	comp=Z,29nm,0.6s								
SGDS	**Sogindy**	**20.77**	**315**	*e*P			**P**	**16 03 19.0**	**+0.5**
ARSB	**

CHGR Chuyangaron 22.72 298 P **P** **16 03 38.4 -1.1**
IRK Irkutsk 23.00 15 *e*P **P** **16 03 42.4 +0.2**
IRK pmax pmax
comp=Z,356nm,1.4s
IUG luzhnay 23.17 307 *e*P **P** **16 03 44.7 +0.5**
IUG pmax pmax
comp=Z,32nm,1.3s
IUG luzhnay 23.17 307 *e*P **P** **16 03 44.8 +0.5**
comp=Z,32nm,1.3s
KKAR Karatay Array 23.24 310 P **P** **16 03 43.7 -1.1**
KKAR Karatay Array 23.24 310 P **P** **16 03 43.7 -1.1**
SHAA Shahritus 23.29 295 IAmb IAmb 16 03 48.7
comp=Z,113nm,1.4s
CHM Chimkent 23.53 308 *e*P **P** **16 03 48.4 +0.8**
CHM pmax pmax
comp=Z,17nm,1.2s
CHM Chimkent 23.53 308 *e*P **P** **16 03 48.4 +0.8**
comp=Z,17nm,1.2s
BRLS Boroldaу 23.66 309 *e*P **P** **16 03 49.6 +0.7**
BRLS Boroldaу 23.66 309 *e*P **P** **16 03 49.6 +0.7**
KURBB Kurchatov Arra 23.70 334 P **P** **16 03 48.0 -1.2**
comp=Z,14nm,1.1s,baz=144,slow=10,SNR=54
KURBB PcP **PcP** **16 07 33.1 +0.3**
comp=Z,1.9nm,0.9s,baz=153,slow=1.7,SNR=7.1
comp=Z,14nm,1.1s
KURK Kurchatov 23.75 334 *de*P **P** **16 03 48.1 -1.5**
KURK pmax pmax
comp=Z,41nm,1.7s
KURK Kurchatov 23.75 334 P **P** **16 03 47.8 -1.7**
KURK Kurchatov 23.75 334 P **P** **16 03 48.6 -0.9**
ZAA0 Zalesovo Array 24.73 346 P **P** **16 03 57.2 -1.5**
ZAA0 IAmb IAmb 16 04 00.4
comp=Z,28nm,1.4s
ZALV Zalesovo Beam 24.73 346 P **P** **16 03 58.1 -0.6**
comp=Z,5.0nm,0.6s,baz=166,slow=8.6,SNR=26
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 24.73 346 P **P** **16 03 56.8 -1.9**
HIA Hailar 26.72 38 P **P** **16 04 15.2 -1.6**
HIA pmax pmax
comp=Z,10.0nm,0.9s
HIA Hailar 26.72 38 P **P** **16 04 15.2 -1.6**
HILR Hailar Array B 26.90 37 P **P** **16 04 18.0 -0.3**
comp=Z,2.7nm,0.6s,baz=218,slow=9.4,SNR=6.4
comp=Z,2.7nm,0.6s
CN2 Changchun 27.71 52 *e*P **P** **16 04 25.0 -0.7**
CN2 *es*P pP 16 04 32.0 -1.9
CN2 *e*S **S** **16 09 04.5 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,200nm,10.0s
CN2 L L
comp=Z,300nm,10.0s
CN2 L L
comp=Z,300nm,11.0s
HRA Herat 27.79 287 P **P** **16 04 24.6 -2.2**
KSRS Korea Array 28.26 66 LR LR 16 15 38.3
comp=Z,42nm,18.9s,baz=155,slow=36
BVAR Borovoye Array 28.89 329 P **P** **16 04 36.1 +0.1**
comp=Z,7.6nm,0.9s,baz=130,slow=8.0,SNR=29
BVAR PcP **PcP** **16 07 45.2 +0.3**
comp=Z,1.2nm,0.7s,baz=131,slow=4.5,SNR=5.0
comp=Z,7.6nm,0.9s
BNX BinXian 29.67 50 ⇑P **P** **16 04 44.3 +1.2**
BNX pmax pmax
comp=Z,10.0nm,1.3s
HEH HeiHe 31.48 41 *e*P **P** **16 05 00.0 +1.0**
HEH pmax pmax
comp=Z,4.0nm,1.1s
ABKAR Akbulak array 32.45 316 P **P** **16 05 07.5 0.0**
ZEA Zeya 33.11 36 *e*P **P** **16 05 13.7 +0.5**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=E,200nm,13.0s
ZEA MLR MLR
comp=Z,200nm,10.0s
AKTO Aktyubinsk 34.05 317 LR LR 16 20 50.8
comp=Z,52nm,18.6s,baz=304,slow=39
MAJO Matsushiro 36.48 68 *e*P **P** **16 05 43.0 +0.4**
MAJO pmax pmax
comp=Z,3.0nm,1.1s
MJAR Matsushiro Arr 36.48 68 P **P** **16 05 40.0 -2.6**
comp=Z,0.8nm,0.8s,baz=271,slow=9.4,SNR=4.0
MJAR LR LR 16 19 50.5
comp=Z,41nm,20.7s,baz=192,slow=35
comp=Z,0.8nm,0.8s
MJAR Matsushiro Arr 36.48 68 P **P** **16 05 40.0 -2.6**
ARTI Arti 36.49 326 *c i*P **P** **16 05 42.5 +0.1**
ARTI 16 07 01.9
ARTI 16 08 02.4
ARTI S **S** **16 11 25.4 +2.4**
ARTI SS **SnSn** **16 13 50.1 -2.2**
ARTI pmax pmax
comp=Z,16nm,1.2s
ARTI Arti 36.49 326 P **P** **16 05 41.1 -1.3**
LKRN Lenkeran, Azer 38.56 295 P **P** **16 06 01.9 +1.8**
YAK Yakutsk 38.98 25 LR LR 16 23 07.8
comp=Z,115nm,19.5s,baz=221,slow=38
YAK Yakutsk 38.98 25 *ce*P **P** **16 06 02.5 -0.8**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK Yakutsk 38.98 25 P **P** **16 06 02.8 -0.5**
NRIK Noril'sk 39.31 356 P **P** **16 06 04.2 -1.9**
comp=Z,2.7nm,0.4s,baz=170,slow=5.3,SNR=8.1
comp=Z,2.7nm,0.4s
NRIK Noril'sk 39.31 356 *de*P **P** **16 06 06.0 0.0**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
AKT Akhty 39.34 300 *e*P **P** **16 06 07.0 +0.2**
AKT *e* 16 07 38.3
AKT pmax pmax
comp=Z,16nm,1.0s
AKT MLR MLR
comp=Z,63nm,16.0s
SEKA Sheki 39.74 299 P **P** **16 06 11.3 +1.2**
MNGR Mingechevir, A 39.83 299 P **P** **16 06 12.4 +1.7**
ASAJ Asahikawa 39.90 56 LR LR 16 23 44.0
comp=Z,78nm,18.3s,baz=236,slow=38
YSS Yuzhno-Sakhali 40.28 52 *e*P **P** **16 06 15.0 +0.7**
YSS *e* 16 08 16.5
YSS *e*S **S** **16 12 23.5 +3.1**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS MLR MLR
comp=E,100nm,13.0s
YSS Yuzhno-Sakhali 40.28 52 P **P** **16 06 13.8 -0.5**
YSS IAmb IAmb 16 06 16.6
comp=Z,25nm,1.1s
YSS Yuzhno-Sakhali 40.28 52 P **P** **16 06 15.1 +0.7**
GANJ Ganja 40.41 298 P **P** **16 06 17.3 +1.7**
NAX Nakhchivan 41.10 296 P **P** **16 06 23.0 +1.7**
KIRV Kirov 41.81 326 *de*P **P** **16 06 26.4 -0.3**
GOF Gofitskoye 42.86 305 *ce*P **P** **16 06 36.5 +1.0**
KBZ Khabaz 42.94 303 P **P** **16 06 34.7 -1.5**
comp=Z,2.6nm,0.8s,baz=102,slow=6.7,SNR=5.0
comp=Z,2.6nm,0.8s
KBZ Khabaz 42.94 303 ⇓*e*P **P** **16 06 37.4 +1.2**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 43.09 303 *e*P **P** **16 06 38.0 +0.4**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV Kislovodsk 43.09 303 P **P** **16 06 36.3 -1.3**
KIV IAmb IAmb 16 06 42.1
comp=Z,23nm,1.1s
KIV Kislovodsk 43.09 303 P **P** **16 06 37.9 +0.4**
comp=Z,16nm,1.3s
KIV Kislovodsk 43.09 303 P **P** **16 06 38.6 +1.0**
VRH Novokhopyorsk 44.23 314 *e*P **P** **16 06 46.0 -0.5**
VRH pmax pmax
comp=Z,12nm,0.4s
RAYN Ar Rayn 44.25 274 P **P** **16 06 48.5 +1.4**
RAYN Ar Rayn 44.25 274 P **P** **16 06 48.1 +1.0**
LABN Labinsk 44.50 304 *e*P **P** **16 06 48.2 -0.6**
LABN pmax pmax
comp=Z,19nm,0.6s
ERBR Yeremizino-Bor 44.68 306 *e*P **P** **16 06 49.8 -0.3**
ERBR pmax pmax
comp=Z,19nm,1.0s
SOC Sochi 45.25 303 *e*P **P** **16 06 55.1 +0.4**
SOC *e* 16 08 41.1
SOC *e*PPP PPP 16 09 20.3
SOC *e*S **S** **16 13 34.4 +0.8**
SOC pmax pmax
comp=Z,29nm,1.2s
SOC MLR MLR
comp=Z,70nm,21.0s
VSR Storozhevoye 45.83 314 *e*P **P** **16 06 58.2 -1.0**
VSR pmax pmax
comp=Z,25nm,1.4s
VORR Voronezh 45.84 314 *e*P **P** **16 06 59.5 +0.2**
VORR pmax pmax
comp=Z,39nm,0.4s
LPSR Galich'ya Gora 46.11 315 *e*P **P** **16 07 00.6 -0.8**
LPSR pmax pmax
comp=Z,31nm,0.9s
ANN Anapa 46.84 305 *e*P **P** **16 07 06.9 -0.4**
ANN pmax pmax
comp=Z,60nm,1.0s
MA2 Magadan 47.25 35 ⇑*e*P **P** **16 07 11.2 +1.0**
MA2 pmax pmax
comp=Z,10.0nm,1.3s
MA2 Magadan 47.25 35 P **P** **16 07 10.2 0.0**
comp=Z,9.2nm,1.6s
MOS Moscow 47.26 320 *e*P **P** **16 07 10.7 +0.4**
MOS pmax pmax
comp=Z,42nm,0.8s
KLMR Klimovskoe 47.28 327 *e*P **P** **16 07 09.2 -1.2**
KLMR *e* 16 08 39.8
KLMR pmax pmax
comp=Z,47nm,1.3s
OBN Obninsk 47.78 319 ⇓*i*P **P** **16 07 15.1 +0.7**
OBN *e* 16 09 06.6
OBN *e*S **S** **16 14 11.5 +2.1**
OBN pmax pmax
comp=Z,30nm,1.3s
OBN MLR MLR
comp=Z,37nm,17.0s
SOEI Soe 48.84 140 P **P** **16 07 22.0 -1.1**
GUMO Guam 48.88 99 LR LR 16 30 10.2
comp=Z,9.3nm,18.2s,baz=22,slow=39
KIRS Kirsehir-Merke 50.04 298 ⇑P **P** **16 07 32.5 +0.4**
BR131 Keskin Array S 50.16 298 ⇓*e*P **P** **16 07 32.5 -0.6**
BRTR Keskin Array B 50.16 298 P **P** **16 07 31.7 -1.4**
comp=Z,3.4nm,0.8s,baz=117,slow=7.1,SNR=17
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 50.16 298 *i* P **P** **16 07 32.7 -0.4**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 50.16 298 **P** **16 07 32.6 -0.6**
BR104 Keskin Array S 50.16 298 P **P** **16 07 32.5 -0.6**
comp=Z,41nmcomp=Z,4.9nm,1.1s
BR106 Keskin Array S 50.17 298 P **P** **16 07 33.2 0.0**
comp=Z,5.0nm,0.9s
PETK Petropavlovsk- 50.32 44 P **P** **16 07 32.5 -1.4**
comp=Z,4.5nm,0.9s,baz=262,slow=3.0,SNR=8.4
comp=Z,4.5nm,0.9s
BAL3X Bal3x, Balta 52.05 309 P **P** **16 07 47.3 +0.3**
SAHE Sakarya_HENDEK 52.08 300 ⇓P **P** **16 07 47.6 +0.2**
AKASG Malin Array Be 52.10 313 P **P** **16 07 45.8 -1.5**
comp=Z,8.0nm,0.8s,baz=79,slow=6.8,SNR=22
comp=Z,8.0nm,0.8s
AKASG Malin Array Be 52.10 313 *i* P **P** **16 07 46.7 -0.6**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 52.10 313 P **P** **16 07 46.4 -0.9**
AKBB Malin Array Si 52.10 313 *ce*P **P** **16 07 46.7 -0.6**
AKBB Malin Array Si 52.10 313 IAmb IAmb 16 07 49.5
comp=Z,20nm,1.1s
AKBB Malin Array Si 52.10 313 P **P** **16 07 46.5 -0.8**
KIEV Kiev 52.11 313 ⇓P **P** **16 07 47.3 0.0**
KIEV Kiev 52.11 313 P **P** **16 07 47.3 0.0**
KIEV Kiev 52.11 313 **P** **16 07 46.7 -0.7**
KIEV Kiev 52.11 313 P **P** **16 07 46.4 -1.0**
comp=Z,66nm,1.1s
KIEV Kiev 52.11 313 P **P** **16 07 47.0 -0.4**
MNK Minsk 52.77 318 *i* P **P** **16 07 53.1 +0.9**
comp=E,9.0nm,0.8s
MNK *i* P **P** **16 07 53.1 +0.9**
comp=N,16nm,1.0s
MNK *i* P **P** **16 07 53.1 +0.9**
comp=Z,15nm,0.8s,baz=89
MNK *i* PP **PP** **16 09 52.4 +1.0**
MNK *i* PPP PPP 16 10 55.8
MNK *i* S **S** **16 15 20.8 +1.8**
MNK *i* SS **SS** **16 19 01.4 +4.1**
MNK *i* SSS SSS 16 20 47.0
MNK *i* LQ LQ 16 26 32.2
MNK *i* LR LR 16 30 32.9
MNK *i* LRM MLR 16 32 51.7
comp=Z,15nm,16.0s
MNK *i* LRM MLR 16 33 19.8
comp=N,21nm,17.9s
MNK *i* LRM MLR 16 33 33.3
comp=E,32nm,18.5s
MNK Minsk 52.77 318 *i* P **P** **16 07 53.1 +0.9**
MNK *i* 16 09 52.3
MNK *i* P **P** **16 07 53.1 -1.4**
MNK *i* SS **SS** **16 19 01.4 +4.1**
MNK *i* SSS SSS 16 20 46.9
MNK pmax pmax
comp=E,9.0nm,0.8s
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK MLR MLR
comp=Z,15nm,16.0s
MNK MLR MLR
comp=N,21nm,18.0s
MNK MLR MLR
comp=E,32nm,18.0s
SORM Soroca 52.87 310 ⇑P **P** **16 07 53.1 +0.1**
SORM Soroca 52.87 310 P **P** **16 07 53.1 +0.1**
SORM Soroca 52.87 310 P **P** **16 07 52.0 -1.0**
comp=E,9.7nm,1.6s
MI28 Mi28,Pidlybu 53.07 313 P **P** **16 07 53.6 -0.9**
LUBAR Lubar, Ukraine 53.09 312 P **P** **16 07 53.3 -1.4**
CFR Carcaliu 53.38 306 ⇑P **P** **16 07 57.6 +0.8**
CFR Carcaliu 53.38 306 P **P** **16 07 57.5 +0.8**
VSU Vasula 53.39 323 *de*P **P** **16 07 56.8 +0.1**
VSU pmax pmax
comp=Z,16nm,1.2s
ELL Elmali 53.62 295 P **P** **16 08 00.0 +1.1**
ELL pmax pmax
comp=Z,106nm,1.2s
ICOR Ion Corvin 53.77 305 ⇓P **P** **16 08 00.0 +0.3**
FINES FINESS Array B 53.80 326 P **P** **16 07 59.0 -0.7**
comp=Z,1.5nm,0.5s,baz=85,slow=7.6,SNR=11
comp=Z,1.5nm,0.5s
FINES FINESS Array B 53.80 326 *i* P **P** **16 08 00.0 +0.3**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 53.80 326 P **P** **16 07 59.8 +0.1**
KMPD K-Podol'skiy 54.08 310 P **P** **16 08 00.5 -1.4**
SGF Sodankyl 54.11 334 P **P** **16 08 03.4 +1.6**
SGF pmax pmax
comp=Z,11nm,1.1s
SGF Sodankyl 54.11 334 P **P** **16 08 01.8 0.0**
RNPP9 Sopachiv 54.15 314 P **P** **16 08 01.6 -0.8**
RNPP5 Staryi Chortor 54.17 314 P **P** **16 08 01.9 -0.6**
RNPP8 Varash 54.18 314 P **P** **16 08 01.9 -0.7**
TESR Tescani 54.22 308 P **P** **16 08 02.9 -0.1**
VRI Vrincioaia 54.26 307 ⇓P **P** **16 08 04.2 +0.8**
VRI Vrincioaia 54.26 307 P **P** **16 08 04.1 +0.8**
VRI Vrincioaia 54.26 307 P **P** **16 08 03.0 -0.3**
comp=Z,284nmcomp=Z,19nm,1.4s
VRI Vrincioaia 54.26 307 P **P** **16 08 04.1 +0.8**
SAHR Sahastru 54.31 307 ⇑P **P** **16 08 04.3 +0.6**
PLOR Plostina 54.31 307 ⇑P **P** **16 08 04.5 +0.7**
PLOR Plostina 54.31 307 P **P** **16 08 04.4 +0.7**
ONER Baraj Valea Uz 54.42 308 ⇓P **P** **16 08 05.4 +0.9**
ISR Istrita 54.50 306 ⇑P **P** **16 08 06.1 +1.0**
ISR Istrita 54.50 306 P **P** **16 08 06.1 +1.0**
BIZ Bicaz 54.53 308 ⇑P **P** **16 08 06.5 +1.3**
COVR Voineasa-Covas 54.62 307 ⇑P **P** **16 08 07.1 +1.1**
MLR Muntele Rosu 54.86 307 ⇑P **P** **16 08 07.7 +0.8**
MLR Muntele Rosu 54.86 307 P **P** **16 08 08.6 +0.8**
MLR Muntele Rosu 54.86 307 P **P** **16 08 08.0 +0.2**
comp=Z,30nm,1.2s
MLR Muntele Rosu 54.86 307 P **P** **16 08 08.8 +1.0**
OZUR 54.87 307 ⇑P **P** **16 08 08.1 +0.3**
PABE Paberze 54.98 319 P **P** **16 08 07.8 -0.5**
BURAR Bucovina Array 55.03 309 ⇓P **P** **16 08 10.7 +1.7**
BURAR Bucovina Array 55.03 309 P **P** **16 08 10.6 +1.7**
BURAR Bucovina Array 55.03 309 P **P** **16 08 07.8 -1.2**
KSV Kosov 55.03 310 P **P** **16 08 06.9 -2.0**
DOPR Dopca 55.16 307 ⇑P **P** **16 08 11.2 +1.3**
BILL Bilibino 55.34 26 ⇑*e*P **P** **16 08 11.6 +0.9**
BILL pmax pmax
comp=Z,7.0nm,1.0s
VAF Ylistaro 55.44 328 P **P** **16 08 14.3 +2.8**
VAF pmax pmax
comp=Z,16nm,1.8s
VOIR 55.49 307 ⇑P **P** **16 08 12.9 +0.6**
VOIR 55.49 307 P **P** **16 08 12.9 +0.6**
VOIR 55.49 307 P **P** **16 08 11.6 -0.7**
LVV L'vov 55.50 312 P **P** **16 08 11.2 -1.0**
ARCR ARCALIA 55.69 309 ⇑P **P** **16 08 15.2 +1.6**
ARR Arges 55.79 307 ⇑P **P** **16 08 15.4 +1.0**
ARR Arges 55.79 307 P **P** **16 08 15.9 +1.4**
LANU Lannavaara 55.88 334 *e*S **S** **16 16 08.2 +7.6**
RDO Rodhopi 55.97 302 IAmb IAmb 16 08 18.5
comp=Z,13nm,1.2s
BMR Baia Mare 56.17 310 ⇓P **P** **16 08 18.7 +1.6**
BMR Baia Mare 56.17 310 P **P** **16 08 18.6 +1.6**
BMR Baia Mare 56.17 310 P **P** **16 08 18.5 +1.4**
KWP Kalwaria Pacla 56.38 312 *e*P **P** **16 08 18.3 -0.2**
KWP Kalwaria Pacla 56.38 312 P **P** **16 08 19.1 +0.6**
KWP Kalwaria Pacla 56.38 312 P **P** **16 08 18.2 -0.3**
comp=Z,30nm,1.4s
TRSU Trosnyk 56.46 310 P **P** **16 08 19.6 +0.6**
KOVU Salmi 56.58 334 *e*P PKiKP 16 15 52.3 +8.3
MARR Marisel-Cluj 56.59 308 ⇑P **P** **16 08 20.6 +0.4**
DRGR 56.85 309 ⇑P **P** **16 08 22.3 +0.3**
DRGR 56.85 309 P **P** **16 08 22.3 +0.3**
DRGR 56.85 309 P **P** **16 08 20.1 -1.9**
DEV Deva 56.89 308 P **P** **16 08 23.6 +1.5**
DEV Deva 56.89 308 P **P** **16 08 23.6 +1.5**
GZR Gura Zlata 57.07 307 ⇑P **P** **16 08 23.9 +0.3**
GZR Gura Zlata 57.07 307 P **P** **16 08 23.8 +0.3**
ABAH Abaujker 57.55 311 P **P** **16 08 27.2 +0.4**
BZS Buzias 57.82 307 ⇑P **P** **16 08 29.9 +1.1**
BZS Buzias 57.82 307 P **P** **16 08 29.8 +1.1**
MDVR Moldovita 57.93 306 ⇓P **P** **16 08 30.1 +0.5**
NIE Niedzica 57.96 312 *e*P **P** **16 08 30.7 +1.0**
NIE Niedzica 57.96 312 P **P** **16 08 30.0 +0.3**
comp=Z,3.4nm,1.5s
OJC Ojcow 58.14 313 *e*P **P** **16 08 32.2 +1.3**
OJC Ojcow 58.14 313 P **P** **16 08 31.2 +0.3**
comp=Z,8.5nm,1.3s
GRG Griva 58.32 302 P **P** **16 08 31.7 -0.7**
PSZ Piszkesteto 58.51 310 ⇑P **P** **16 08 34.6 +0.9**
PSZ Piszkesteto 58.51 310 P **P** **16 08 34.5 +0.9**
PSZ Piszkesteto 58.51 310 P **P** **16 08 34.0 +0.3**
VYHS Vyhne 59.09 311 *e*P **P** **16 08 40.0 +2.4**
VYHS pmax pmax
comp=Z,9.0nm,1.5s
VYHS Vyhne 59.09 311 P **P** **16 08 38.9 +1.3**
VYHS Vyhne 59.09 311 *e*P **P** **16 08 40.0 +2.4**
STEB Steborice 59.47 313 *e*P **P** **16 08 42.1 +1.9**
MORC Moravsky Berou 59.65 313 ⇑P **P** **16 08 41.5 -0.1**
MORC Moravsky Berou 59.65 313 P **P** **16 08 41.4 -0.1**
MORC Moravsky Berou 59.65 313 *e*P **P** **16 08 40.6 -0.9**
MORC Moravsky Berou 59.65 313 P **P** **16 08 38.6 -2.9**
MORH Mrgy, Hungar 59.72 309 ⇓P **P** **16 08 42.1 +0.1**
MORH Mrgy, Hungar 59.72 309 P **P** **16 08 41.0 -0.9**
JAVC Velka Javorina 59.77 312 *e*P **P** **16 08 42.9 +0.6**
JAVC Velka Javorina 59.77 312 P **P** **16 08 44.7 +2.4**
HFS Hagfors 59.93 325 P **P** **16 08 42.8 -0.4**
comp=Z,8.6nm,1.1s,baz=81,slow=9.5,SNR=6.4
comp=Z,8.6nm,1.1s
KRLC Kraliky 60.07 313 *e*P **P** **16 08 44.3 -0.1**
KRLC Kraliky 60.07 313 *e*P **P** **16 08 44.3 -0.1**
KSP Ksiaz 60.21 314 *e*P **P** **16 08 45.8 +0.6**
DPC Dobruska-Polom 60.30 314 *e*P **P** **16 08 46.8 +0.9**
DPC Dobruska-Polom 60.30 314 *e*P **P** **16 08 46.8 +0.9**
VRAC Vranov 60.36 312 ⇓P **P** **16 08 47.5 +1.2**
VRAC Vranov 60.36 312 P **P** **16 08 47.5 +1.2**
VRAC Vranov 60.36 312 *e*P **P** **16 08 46.7 +0.4**
KRUC Moravsky 60.54 312 P **P** **16 08 49.6 +2.1**
KRUC Moravsky 60.54 312 *e*P **P** **16 08 47.4 -0.1**
NC405 NORSAR Array S 60.73 326 P **P** **16 08 48.3 -0.3**
SOP Sopron 60.76 311 P **P** **16 08 51.6 +2.6**
NC602 NORSAR Array S 60.88 326 P **P** **16 08 51.0 +1.3**
NC602 IAmb IAmb 16 08 51.4
comp=Z,11nm,1.1s
NORES NORESS Array B 60.88 326 P **P** **16 08 51.7 +2.0**
RONA Rosalia, Austr 60.92 311 *e*P **P** **16 08 50.1 -0.1**
comp=Z,9.7nm,1.4s
NB2 NORSAR Subarra 60.98 326 P **P** **16 08 49.4 -1.0**
comp=Z,8.7nm,1.0s,baz=79,slow=6.9
NB2 NORSAR Subarra 60.98 326 P **P** **16 08 49.5 -0.9**
NOA NORSAR Array B 60.98 326 P **P** **16 08 49.5 -0.9**
comp=Z,4.3nm,0.9s,baz=79,slow=6.7,SNR=9.5
NOA LR LR 16 37 12.5
comp=Z,20nm,18.4s,baz=5.0,slow=38
comp=Z,4.3nm,0.9s
CONA Conrad Observa 61.15 311 *e*P **P** **16 08 51.1 -0.8**
comp=Z,4.1nm,0.8s
NC204 NORSAR Array S 61.16 327 P **P** **16 08 51.0 -0.6**
PRU Pruhonice 61.49 314 P **P** **16 08 56.1 +2.1**
ARSA Arzberg 61.55 310 P **P** **16 08 53.3 -1.1**
ARSA Arzberg 61.55 310 *e*P **P** **16 08 54.2 -0.2**
comp=Z,0.1nm,0.3s
BRG Berggiesshubel 61.65 315 *e*P **P** **16 08 55.5 +0.4**
BRG Amp 16 08 57.7
comp=Z,4.4nm,1.1s
ZVC Zvikov 61.85 313 *e*P **P** **16 08 57.8 +1.4**
CKRC Cesky Krumlov 61.93 312 *e*P **P** **16 08 57.4 +0.4**
CKRC Cesky Krumlov 61.93 312 *e*P **P** **16 08 57.4 +0.4**
SOKA Soboth 62.02 310 *e*P **P** **16 08 56.9 -0.8**
comp=Z,0.3nm,0.4s
CLL Collm 62.12 315 *i* P **P** **16 08 57.9 -0.3**
CLL pmax pmax
comp=Z,17nm,1.8s
CLL Collm 62.12 315 *i* P **P** **16 08 57.9 -0.3**
comp=Z,17nm,1.8s
CLL *e*PP **PP** **16 11 16.0 +1.3**
SESA Seetaler Alpe, 62.21 310 *e*P **P** **16 08 58.7 -0.4**
comp=Z,1.8nm,0.7s
MOA Molln 62.21 311 *e*P **P** **16 08 58.8 -0.1**
comp=Z,5.5nm,1.1s
GEC2 GERESS Array S 62.31 313 IAmb IAmb 16 09 01.7
comp=Z,8.0nm,1.1s
GERES GERESS Array B 62.31 313 P **P** **16 08 59.3 -0.4**
comp=Z,2.4nm,0.9s,baz=66,slow=4.7,SNR=21
comp=Z,2.4nm,0.9s
GERES GERESS Array B 62.31 313 P **P** **16 08 58.8 -0.8**
KHC Kasperske Hory 62.32 313 *e*P **P** **16 09 00.5 +0.9**
KHC Kasperske Hory 62.32 313 *e*P **P** **16 09 00.5 +0.9**
BIOA Bad Ischl, Aus 62.66 311 *e*P **P** **16 09 01.6 -0.3**
comp=Z,0.9nm,0.4s
WRA Warramunga Arr 62.75 138 P **P** **16 09 02.9 +0.1**
comp=Z,2.7nm,0.9s,baz=331,slow=7.1,SNR=4.5
comp=Z,2.7nm,0.9s
WRA Warramunga Arr 62.75 138 *i* P **P** **16 09 05.0 +2.3**
WRA pmax pmax
comp=Z,2.0nm,0.9s
LESA Schwarzleotal 63.36 311 *e*P **P** **16 09 05.4 -1.3**
comp=Z,16nm,1.5s
ABTA Abfaltersbach 63.66 310 *e*P **P** **16 09 07.6 -1.1**
comp=Z,1.5nm,0.7s
STAL STALIGIAL 63.68 310 P **P** **16 09 07.7 -1.0**
STAL IAmb IAmb 16 09 09.9
comp=Z,13nm,1.2s
CIMO Cimolais 63.84 310 IAmb IAmb 16 09 11.7
comp=Z,14nm,1.4s
CEL Celeste 63.91 301 P **P** **16 09 09.0 -1.3**
WTTA Wattenberg 64.09 311 *e*P **P** **16 09 10.9 -0.6**
comp=Z,4.9nm,1.2s
SQTA Sankt Quirin 64.38 311 *e*P **P** **16 09 12.0 -1.3**
comp=Z,8.9nm,1.4s
MOTA Moosalm 64.41 311 *e*P **P** **16 09 12.1 -1.5**
comp=Z,6.8nm,0.9s
GAMB Gambell 64.75 29 P **P** **16 09 15.0 -0.2**
baz=287
FETA Feichten 64.75 311 *e*P **P** **16 09 14.2 -1.6**
comp=Z,8.1nm,1.9s
ASAR Alice Springs 65.44 141 P **P** **16 09 20.6 +0.2**
comp=Z,3.4nm,0.9s,baz=325,slow=6.3,SNR=29
comp=Z,3.4nm,0.9s
ASAR Alice Springs 65.44 141 P **P** **16 09 20.8 +0.4**
ASAR Alice Springs 65.44 141 P **P** **16 09 20.8 +0.4**
TNA Tin City 65.72 27 P **P** **16 09 21.2 -0.3**
baz=290
C16K Lisburne Hills 65.73 24 P **P** **16 09 21.5 -0.1**

baz=291
F14K **Arctic Creek** 66.37 27 P P 16 09 25.4 -0.4
baz=291
C17K **DeLong Mountai** 66.40 23 P P 16 09 25.7 -0.3
baz=293
A19K **Wainwright** 66.41 21 P P 16 09 25.8 -0.1
baz=294
D17K **Noatak River** 66.74 24 P P 16 09 27.9 -0.2
baz=293
WLF **Walferdange** 66.78 315 dP P 16 09 29.7 +1.0
F15K **North Star Dit** 66.93 26 P P 16 09 29.1 -0.3
baz=292
C18K **Utukok River** 67.00 23 P P 16 09 29.5 -0.4
baz=294
ANM **Nome** 67.09 28 P P 16 09 30.4 0.0
baz=292
SENIN **Lac Senin/Sane** 67.19 311 P P 16 09 32.3 +0.6
SENIN IAmb IAmb 16 09 33.7
comp=Z,6.2nm,0.8s
A21K **Barrow** 67.25 19 P P 16 09 31.4 +0.1
baz=297
C19K **Lookout Ridge** 67.34 22 P P 16 09 31.6 -0.4
baz=296
BMRD **Maredsous** 67.40 316 dP P 16 09 31.9 -0.8
E17K **Hotham Inlet** 67.43 24 P P 16 09 32.3 -0.2
baz=294
G15K **Niuluk** 67.45 27 P P 16 09 32.7 0.0
baz=293
DOU **Dourbes** 67.58 316 dP P 16 09 33.6 -0.2
SPIA **Saint Paul Isl** 67.62 36 P P 16 09 34.0 +0.2
baz=291
B20K **Meade River** 67.70 21 P P 16 09 34.5 +0.3
baz=297
E18K **Tukpahlearik C** 67.72 24 P P 16 09 34.6 +0.2
baz=295
A22K **Sinclair Lake** 67.88 19 P P 16 09 35.6 +0.4
baz=299
G16K **Koyuk River** 67.94 26 P P 16 09 36.1 +0.4
baz=295
D19K **Kuna River** 68.09 22 IAmb IAmb 16 09 39.8
comp=Z,5.4nm,1.0s
D19K **Kuna River** 68.09 22 P P 16 09 36.5 -0.2
baz=297
H16K **Elim** 68.30 27 P P 16 09 37.9 0.0
baz=295
M11K **Mekoryuk** 68.35 32 P P 16 09 38.6 +0.2
baz=293
F18K **Selawik** 68.41 24 P P 16 09 38.9 +0.3
baz=296
K13K **Kusilvak Mount** 68.42 30 P P 16 09 39.0 +0.2
baz=294
D20K **Etivluk River** 68.48 22 P P 16 09 38.7 -0.4
baz=298
G17K **Kiwalik Mounta** 68.53 26 P P 16 09 39.6 +0.1
baz=296
J14K **Nanvaranak Lak** 68.56 29 P P 16 09 40.0 +0.4
baz=295
B22K **Teshekpuk Lake** 68.66 20 P P 16 09 40.2 +0.1
baz=300
B21K **Ikpikpuk River** 68.66 21 IAmb IAmb 16 09 43.1
comp=Z,6.8nm,1.1s
B21K **Ikpikpuk River** 68.66 21 P P 16 09 40.6 +0.4
baz=300
E20K **Nigu River** 68.83 22 P P 16 09 41.1 -0.3
baz=299
C21K **Knifeblade Rid** 68.84 21 P P 16 09 41.3 0.0
baz=300
E19K **Redstone River** 68.87 23 P P 16 09 41.2 -0.4
baz=298
F19K **Shaleruckik Mo** 68.97 24 IAmb IAmb 16 09 44.7
comp=Z,7.6nm,1.1s
F19K **Shaleruckik Mo** 68.97 24 P P 16 09 42.2 0.0
baz=298
H17K **Granite Mounta** 69.06 26 P P 16 09 42.7 -0.1
baz=297
G18K **Tagagawik** 69.09 25 IAmb IAmb 16 09 45.0
comp=Z,15nm,1.5s
G18K **Tagagawik** 69.09 25 P P 16 09 43.1 +0.1
baz=298
I17K **Unalakleet** 69.23 27 P P 16 09 43.6 -0.2
baz=296
E21K **Killik River** 69.45 22 P P 16 09 45.1 -0.1
baz=301
L14K **Kuka Creek** 69.53 30 IAmb IAmb 16 09 48.8
comp=Z,12nm,1.1s
L14K **Kuka Creek** 69.53 30 P P 16 09 45.4 -0.3
baz=296
J16K **Anvik River** 69.54 28 P P 16 09 45.7 -0.1
baz=297
G19K **Purcell Mounta** 69.54 24 P P 16 09 45.3 -0.4
baz=299
H18K **Honhosa River** 69.55 26 P P 16 09 45.6 -0.2
baz=298
F20K **Avaraart Lake** 69.58 23 P P 16 09 45.8 -0.1
baz=300
K15K **Wolf Creek Mou** 69.60 29 P P 16 09 46.1 0.0
baz=296
M13K **Dall Lake** 69.63 31 P P 16 09 46.4 0.0
baz=296
KEST **Kesra** 69.70 300 P P 16 09 46.8 -0.6
comp=Z,5.9nm,0.9s,baz=322,slow=4.1,SNR=6.0
comp=Z,5.9nm,0.9s
KEST **Kesra** 69.70 300 IAmb IAmb 16 09 50.5
comp=Z,9.5nm,1.0s
C23K **Itkillik River** 69.74 20 P P 16 09 46.5 -0.4
baz=303
L15K **Ungalak Mounta** 69.89 30 P P 16 09 47.9 0.0
baz=297
EKA **Eskdalemuir Ar** 69.94 323 P P 16 09 47.5 -0.9
comp=Z,5.9nm,1.1s,baz=47,slow=4.9,SNR=5.0
comp=Z,5.9nm,1.1s
H19K **Roundabout Mou** 70.07 25 IAmb IAmb 16 09 54.7
comp=Z,12nm,1.1s
H19K **Roundabout Mou** 70.07 25 P P 16 09 49.2 +0.2
baz=300,SNR=6.8
J17K **VABM Dome** 70.10 27 IAmb IAmb 16 09 51.9
comp=Z,12nm,1.1s
J17K **VABM Dome** 70.10 27 P P 16 09 49.4 +0.2
baz=298
M14K **Bethel** 70.10 31 P P 16 09 49.4 +0.2
baz=296
D23K **Nanushuk River** 70.20 20 P P 16 09 49.7 0.0
baz=303
F21K **Alatna River** 70.24 23 P P 16 09 49.9 -0.2
baz=301
GCSA **Galena City Sc** 70.30 26 P P 16 09 50.0 -0.4
baz=299
F22K **John River** 70.52 22 P P 16 09 51.3 -0.5
baz=302
N14K **Kuskokwak Cree** 70.60 31 P P 16 09 51.9 -0.3
baz=297
G21K **Allakaket** 70.61 23 P P 16 09 51.9 -0.4
baz=302
D24K **Happy Valley** 70.65 20 IAmb IAmb 16 09 56.5
comp=Z,12nm,1.3s
D24K **Happy Valley** 70.65 20 P P 16 09 52.4 0.0
baz=305
H20K **Anotleneega Mo** 70.66 25 P P 16 09 52.6 0.0
baz=301,SNR=6.8
M15K **Kasigluk River** 70.68 30 P P 16 09 52.8 0.0
baz=298
TOLK **Toolik Lake Re** 70.72 20 P P 16 09 52.9 -0.1
baz=304
L16K **Owhat River** 70.73 29 IAmb IAmb 16 09 55.6
comp=Z,8.9nm,1.2s
L16K **Owhat River** 70.73 29 P P 16 09 53.4 +0.3
baz=298
K17K **Iditarod** 70.73 28 P P 16 09 53.4 +0.3
baz=299
IMAR **Indian Mountai** 70.80 24 P P 16 09 54.9 +1.4
J18K **Innoko River** 71.00 27 IAmb IAmb 16 09 57.1
comp=Z,12nm,1.1s
J18K **Innoko River** 71.00 27 P P 16 09 55.1 +0.4
baz=300,SNR=10
L17K **Donlin** 71.02 28 P P 16 09 54.7 -0.1
baz=299
E23K **Chandalar** 71.03 21 IAmb IAmb 16 10 00.9
comp=Z,10nm,1.2s
G22K **Bettles** 71.06 22 P P 16 09 54.8 -0.2
baz=303
O14K **Tigyukauivet M** 71.09 32 P P 16 09 55.5 +0.2
baz=298
J19K **Poorman** 71.15 26 IAmb IAmb 16 09 59.1
comp=Z,13nm,1.1s
J19K **Poorman** 71.15 26 P P 16 09 55.8 +0.2
baz=301,SNR=9.5
I20K **Naaghedeneel** 71.16 25 P P 16 09 56.0 +0.4
baz=301

N15K **Kwethluk River** 71.19 31 IAmb IAmb 16 09 59.1
comp=Z,14nm,1.1s
N15K **Kwethluk River** 71.19 31 P P 16 09 56.2 +0.3
baz=298
D25K **Kavik River** 71.26 19 IAmb IAmb 16 10 00.3
comp=Z,8.7nm,1.1s
D25K **Kavik River** 71.26 19 P P 16 09 56.8 +0.6
baz=307
M16K **Timber Creek** 71.28 30 P P 16 09 56.3 -0.1
baz=299
C26K **Camden Bay** 71.30 18 P P 16 09 56.2 -0.2
baz=308
H21K **Melozitna Rive** 71.31 24 IAmb IAmb 16 09 59.8
comp=Z,8.6nm,1.2s
H21K **Melozitna Rive** 71.31 24 P P 16 09 56.8 +0.2
baz=302,SNR=7.2
E24K **Your Creek** 71.37 21 IAmb IAmb 16 09 59.7
comp=Z,11nm,1.1s
E24K **Your Creek** 71.37 21 P P 16 09 56.6 -0.3
baz=305,SNR=11
J20K **Nowinta River** 71.61 26 IAmb IAmb 16 10 02.0
comp=Z,11nm,1.2s
J20K **Nowinta River** 71.61 26 P P 16 09 58.3 0.0
baz=302,SNR=7.2
N16K **Nishlik Lake** 71.62 30 P P 16 09 58.3 -0.3
baz=299
L18K **Granite Mounta** 71.63 28 IAmb IAmb 16 10 00.7
comp=Z,14nm,1.5s
L18K **Granite Mounta** 71.63 28 P P 16 09 58.2 -0.4
baz=300
G23K **Bananza Creek** 71.67 22 P P 16 09 58.2 -0.5
baz=304
H22K **Ishtalitna Cre** 71.67 23 P P 16 09 58.2 -0.5
baz=304
M17K **Holitna River** 71.73 29 IAmb IAmb 16 10 02.5
comp=Z,12nm,1.2s
M17K **Holitna River** 71.73 29 P P 16 09 58.6 -0.6
baz=300
O15K **Ungalikthiuk R** 71.78 32 P P 16 09 58.8 -0.7
baz=299
C27K **Jago River** 71.81 18 P P 16 09 59.2 -0.3
baz=309
I21K **Tanana** 71.85 24 IAmb IAmb 16 10 02.7
comp=Z,8.9nm,1.2s
I21K **Tanana** 71.85 24 P P 16 09 58.9 -0.9
baz=303
F24K **Squaw Lake** 71.88 21 P P 16 09 59.2 -0.8
baz=306
K20K **Telida** 72.07 26 IAmb IAmb 16 10 04.3
comp=Z,12nm,1.2s
K20K **Telida** 72.07 26 P P 16 10 00.6 -0.5
baz=302,SNR=7.1
E25K **Arctic Village** 72.22 20 IAmb IAmb 16 10 04.8
comp=Z,11nm,1.3s
E25K **Arctic Village** 72.22 20 P P 16 10 01.9 -0.1
baz=308
N17K **Nushagak Hills** 72.28 30 P P 16 10 02.1 -0.4
baz=300
H23K **Yukon River** 72.33 23 P P 16 10 02.6 -0.1
baz=305
O16K **Kokwok River B** 72.35 31 P P 16 10 02.9 +0.1
baz=300
M18K **Stony River** 72.36 28 P P 16 10 02.9 0.0
baz=301
MLY **Manley** 72.38 24 IAmb IAmb 16 10 05.6
comp=Z,11nm,1.2s
MLY **Manley** 72.38 24 P P 16 10 03.3 +0.3
baz=304,SNR=7.8
L19K **White Mountain** 72.39 27 IAmb IAmb 16 10 06.7
comp=Z,9.6nm,1.0s
L19K **White Mountain** 72.39 27 P P 16 10 03.1 0.0
baz=302,SNR=6.1
CHUM **Lake Minchumin** 72.45 25 P P 16 10 03.0 -0.4
baz=303
G24K **Hadweenzic Riv** 72.50 22 P P 16 10 03.3 -0.3
baz=307
F25K **Christian Rive** 72.52 20 P P 16 10 04.2 +0.3
baz=308,SNR=5.0
SUMG **Summit** 72.55 347 P P 16 10 05.8 +1.4
SUMG pmax pmax
comp=Z,5.0nm,1.0s
O17K **Koliganek Bris** 72.70 30 P P 16 10 04.9 0.0
baz=301
M19K **Big River Lodg** 72.72 28 P P 16 10 05.3 +0.2
baz=302
N18K **Kilae Creek** 72.75 29 IAmb IAmb 16 10 08.7
comp=Z,8.8nm,1.1s
N18K **Kilae Creek** 72.75 29 P P 16 10 05.5 +0.2
baz=301
I23K **Minto, Yukon-K** 72.79 23 IAmb IAmb 16 10 08.1
comp=Z,11nm,1.4s
I23K **Minto, Yukon-K** 72.79 23 P P 16 10 05.4 +0.1
baz=306
CAST **Castle Rocks** 72.79 26 IAmb IAmb 16 10 08.9
comp=Z,12nm,1.1s
CAST **Castle Rocks** 72.79 26 P P 16 10 05.3 -0.2
baz=304,SNR=9.1
D27M **Malcolm River** 72.80 18 P P 16 10 05.6 +0.1
baz=312
H24K **Noodle Dome** 72.88 23 P P 16 10 05.8 -0.2
baz=306
G25K **Bearman Lake** 72.89 21 P P 16 10 05.7 -0.2
baz=308
F26K **Sheenjek River** 72.91 20 P P 16 10 06.0 -0.2
baz=309
PPLA **Purkeypile** 73.04 26 P P 16 10 06.7 -0.4
baz=304
KTH **Kantishna Hill** 73.15 25 IAmb IAmb 16 10 14.1
comp=Z,13nm,1.2s
NEA2 **Nenana** 73.21 24 IAmb IAmb 16 10 10.3
comp=Z,9.9nm,1.1s
NEA2 **Nenana** 73.21 24 P P 16 10 07.6 -0.3
baz=306,SNR=8.9
M20K **Styx River** 73.23 27 IAmb IAmb 16 10 14.5
comp=Z,13nm,1.2s
M20K **Styx River** 73.23 27 P P 16 10 07.6 -0.6
baz=303
N19K **Bonanza Creek** 73.27 29 P P 16 10 08.1 -0.3
baz=302
P17K **Kvichak River** 73.28 31 P P 16 10 08.3 -0.1
baz=301
S14K **Fog Glacier** 73.32 34 P P 16 10 07.5 -1.3
baz=300
D28M **Stokes Point** 73.33 17 P P 16 10 07.3 -1.2
baz=314
SDPT **Sand Point** 73.33 35 P P 16 10 08.6 -0.1
baz=299
E27K **Coleen River** 73.33 19 IAmb IAmb 16 10 13.6
comp=Z,8.2nm,1.1s
E27K **Coleen River** 73.33 19 P P 16 10 08.4 -0.2
baz=311
TRF **Thorofare Moun** 73.44 25 P P 16 10 09.4 -0.1
baz=305
Q16K **King Salmon** 73.46 31 P P 16 10 09.0 -0.4
baz=301
POKR **Poker Plat Res** 73.46 23 P P 16 10 09.5 +0.1
baz=307
COLA **College** 73.47 23 P P 16 10 09.1 -0.3
COLA pmax pmax
comp=Z,10.0nm,0.3s
COLA **College** 73.47 23 P P 16 10 09.1 -0.3
COLA **College** 73.47 23 P P 16 10 09.8 +0.4
baz=307
O18K **Koktuh Hills** 73.47 30 P P 16 10 08.9 -0.6
baz=302
G26K **Porcupine Rive** 73.49 21 P P 16 10 09.8 +0.3
baz=310,SNR=5.9
E28M **Babbage River** 73.61 18 IAmb IAmb 16 10 12.9
comp=Z,17nm,1.2s
E28M **Babbage River** 73.61 18 P P 16 10 10.4 +0.1
baz=313,SNR=5.5
O19K **Port Alsworth** 73.67 29 P P 16 10 09.9 -0.8
baz=303
P18K **Big Mountain,** 73.71 30 P P 16 10 10.5 -0.4
baz=302
MCK **McKinley** 73.77 25 P P 16 10 10.8 -0.4
baz=306
L22K **Petersville** 73.79 26 IAmb IAmb 16 10 14.0
comp=Z,14nm,1.0s
L22K **Petersville** 73.79 26 P P 16 10 10.9 -0.5
baz=305,SNR=8.0
SKT **Skwentna** 73.81 27 IAmb IAmb 16 10 13.9
comp=Z,8.8nm,1.0s
SKT **Skwentna** 73.81 27 P P 16 10 11.0 -0.5
baz=304
PRP **Porcupine Dome** 73.85 22 IAmb IAmb 16 10 14.5
comp=Z,10nm,1.2s
PRP **Porcupine Dome** 73.85 22 P P 16 10 11.1 -0.7

baz=309
ILAR **Eielson Array** 73.86 23 P P 16 10 10.4 -1.3
comp=Z,4.0nm,1.0s,baz=303,slow=4.9,SNR=26
ILAR PP PP 16 12 58.2 +2.2
comp=Z,0.4nm,0.8s,baz=315,slow=8.8,SNR=4.1
comp=Z,4.0nm,1.0s
STLK **Strandline Lak** 73.96 27 IAmb IAmb 16 10 22.5
comp=Z,18nm,1.7s
Q17K **Contact Creek** 74.02 31 P P 16 10 11.8 -1.1
baz=302
CHNA **Chernabura Isl** 74.03 35 P P 16 10 11.5 -1.4
baz=300
CUT **Chulitna** 74.05 26 P P 16 10 12.1 -0.8
baz=305
HDA **Harding Lake** 74.06 23 P P 16 10 12.2 -0.7
baz=308
R17L **Mt. Spulik Vol** 74.14 32 P P 16 10 12.7 -0.8
baz=302
F28M **Old Crow** 74.20 19 IAmb IAmb 16 10 18.4
comp=Z,12nm,1.1s
F28M **Old Crow** 74.20 19 P P 16 10 13.2 -0.5
baz=313,SNR=6.9
E29M **Blow River** 74.20 18 IAmb IAmb 16 10 17.0
comp=Z,9.1nm,1.1s
E29M **Blow River** 74.20 18 P P 16 10 13.2 -0.5
baz=314
Q18K **Katmai Hardscr** 74.20 31 P P 16 10 12.6 -1.4
baz=303
G27K **Doyon Strip** 74.22 20 P P 16 10 13.3 -0.5
baz=312,SNR=6.2
A36M **Sachs Harbour** 74.27 12 P P 16 10 13.3 -0.6
baz=325,SNR=6.3
P19K **Oil Pt** 74.42 29 P P 16 10 14.8 -0.4
baz=304
O20K **Slope Mountain** 74.44 29 P P 16 10 14.9 -0.4
baz=304
WAT1 **Susitna Watana** 74.44 25 P P 16 10 14.8 -0.5
baz=307
J25K **Salcha River,** 74.47 23 P P 16 10 14.8 -0.6
baz=309
H27K **Steamboat Moun** 74.65 20 IAmb IAmb 16 10 19.4
comp=Z,14nm,1.1s
H27K **Steamboat Moun** 74.65 20 P P 16 10 16.0 -0.4
baz=312,SNR=17
DHY **Denali Highway** 74.72 25 P P 16 10 16.3 -0.7
baz=308
I26K **Coal Creek Min** 74.75 22 P P 16 10 16.8 -0.1
baz=311
K24K **Donnelly Dome** 74.84 24 P P 16 10 17.2 -0.3
baz=309
WAT6 **Susitna Watana** 74.89 25 P P 16 10 17.7 -0.3
baz=307
PMR **Palmer** 74.96 26 IAmb IAmb 16 10 21.7
comp=Z,14nm,1.2s
PMR **Palmer** 74.96 26 P P 16 10 18.2 +0.1
baz=306
RC01 **Rabbit Creek A** 75.03 27 P P 16 10 18.1 -0.5
baz=306
I27K **Kandik River** 75.04 21 IAmb IAmb 16 10 21.9
comp=Z,16nm,1.1s
I27K **Kandik River** 75.04 21 P P 16 10 18.6 -0.1
baz=312,SNR=14
SML **Sawmill** 75.14 26 P P 16 10 18.9 -0.3
baz=307
RIDG **Independent Ri** 75.20 23 IAmb IAmb 16 10 21.2
comp=Z,17nm,1.3s
RIDG **Independent Ri** 75.20 23 P P 16 10 19.5 -0.1
baz=310
G29M **Pine Creek** 75.20 19 IAmb IAmb 16 10 21.5
comp=Z,16nm,1.3s
G29M **Pine Creek** 75.20 19 P P 16 10 19.0 -0.5
baz=315
F30M **Barrier River** 75.31 18 IAmb IAmb 16 10 23.4
comp=Z,16nm,1.1s
F30M **Barrier River** 75.31 18 P P 16 10 20.2 +0.1
baz=316
KNK **Knik Glacier** 75.33 26 P P 16 10 20.2 -0.2
baz=307
INK **Inuvik** 75.38 17 IAmb IAmb 16 10 24.9
comp=Z,8.0nm,1.0s
INK **Inuvik** 75.38 17 P P 16 10 20.0 -0.4
baz=318,SNR=8.4
BRSE **Bradley Lake S** 75.41 28 P P 16 10 20.8 -0.1
baz=306
PAX **Paxson** 75.47 24 P P 16 10 20.9 -0.3
baz=309
SCM **Sheep Creek Mo** 75.50 26 P P 16 10 20.9 -0.5
baz=308
H29M **Whitestone** 75.59 20 IAmb IAmb 16 10 25.8
comp=Z,14nm,1.1s
H29M **Whitestone** 75.59 20 P P 16 10 20.8 -0.9
baz=314,SNR=7.3
G30M **tAoh Zraii Nji** 75.65 18 P P 16 10 21.4 -0.7
baz=316,SNR=15
I28M **Miner Creek** 75.66 21 IAmb IAmb 16 10 24.6
comp=Z,8.4nm,1.1s
I28M **Miner Creek** 75.66 21 P P 16 10 21.8 -0.5
baz=313,SNR=9.1
PWL **Port Wells** 75.71 27 P P 16 10 21.6 -0.9
baz=307
SII **Sitkinak Islan** 75.72 32 P P 16 10 21.5 -1.2
baz=304
SEW **Seward** 75.72 28 P P 16 10 21.8 -0.7
baz=307
KDAK **Kodiak Island** 75.75 31 LR LR 16 46 25.2
comp=Z,47nm,19.7s,baz=250,slow=38
KDAK **Kodiak Island** 75.75 31 P P 16 10 22.6 -0.1
baz=305
OHAK **Old Harbor** 75.76 31 P P 16 10 22.8 0.0
baz=304
M24K **Tolsona, Glenn** 75.76 25 P P 16 10 22.2 -0.6
baz=309
K27K **Chicken** 75.94 22 IAmb IAmb 16 10 26.7
comp=Z,9.6nm,1.3s
HARP **HAARP** 75.95 25 P P 16 10 23.6 -0.2
baz=310
EPYK **Eagle Plains** 75.96 19 IAmb IAmb 16 10 25.6
comp=Z,14nm,1.2s
EPYK **Eagle Plains** 75.96 19 P P 16 10 23.4 -0.5
baz=316,SNR=5.3
F31M **Tsiigehtchic** 75.97 17 IAmb IAmb 16 10 25.9
comp=Z,10nm,1.2s
F31M **Tsiigehtchic** 75.97 17 P P 16 10 23.2 -0.6
baz=318
STKA **Stephens Creek** 76.08 140 P P 16 10 25.1 +0.1
comp=Z,3.7nm,0.9s,baz=338,slow=9.8,SNR=7.2
comp=Z,3.7nm,0.9s
G31M **Satah River** 76.22 18 IAmb IAmb 16 10 27.1
comp=Z,9.9nm,0.9s
G31M **Satah River** 76.22 18 P P 16 10 24.5 -0.8
baz=318,SNR=7.0
KLU **Klutina** 76.24 26 P P 16 10 25.2 -0.5
baz=309
P23K **Montague Islan** 76.61 27 P P 16 10 26.6 -1.0
baz=308
N25K **Chitina, Valde** 76.66 25 P P 16 10 27.4 -0.6
baz=310
C36M **Paulatuk** 76.67 13 P P 16 10 27.5 -0.2
baz=326
L27K **Beaver Creek,** 76.67 23 IAmb IAmb 16 10 31.1
comp=Z,10nm,1.1s
L27K **Beaver Creek,** 76.67 23 P P 16 10 27.9 -0.1
baz=312
BCAR **Beaver Creek A** 76.69 23 P P 16 10 28.9 +0.8
M26K **Nabesna, AK** 76.71 24 P P 16 10 27.8 -0.5
baz=311
DAWY **Dawson** 76.79 22 P P 16 10 28.0 -0.6
baz=314
I30M **Mount Dempster** 76.88 20 IAmb IAmb 16 10 33.4
comp=Z,9.9nm,1.0s
I30M **Mount Dempster** 76.88 20 P P 16 10 29.1 -0.2
baz=316,SNR=14
EYAK **Cordova Ski Ar** 76.91 26 P P 16 10 29.1 -0.2
baz=309
H31M **Peel River** 77.03 19 P P 16 10 29.8 -0.1
baz=318,SNR=14
BMRM **Bremner River** 77.07 26 P P 16 10 29.9 -0.4
baz=310
M27K **Edge Creek, AK** 77.13 24 IAmb IAmb 16 10 36.0
comp=Z,13nm,1.2s
M27K **Edge Creek, AK** 77.13 24 P P 16 10 30.7 0.0
baz=312
J30M **Hart River** 77.36 20 P P 16 10 31.6 -0.4
baz=316
MCARA **McCarthy VSAT** 77.38 25 P P 16 10 31.8 -0.2
baz=311
Q23K **Middleton Isla** 77.38 27 P P 16 10 31.4 -0.5
baz=309
BVCY **Beaver Creek** 77.44 23 P P 16 10 31.3 -1.0

baz=313
ESDC Sonseca Array 77.48 309 P P 16 10 31.9 -1.1
comp=Z,3.9nm,1.2s,baz=50,slow=6.3,SNR=13
comp=Z,3.9nm,1.2s
ESDC Sonseca Array 77.48 309 P 16 10 32.5 -0.5
K29M Barlow Dome 77.53 21 IAmb IAmb 16 10 35.5
comp=Z,7.8nm,1.1s
K29M Barlow Dome 77.53 21 P P 16 10 32.1 -0.8
baz=316,SNR=9.1
CRQE Cirque 77.77 25 P P 16 10 33.6 -0.7
baz=312
KAIM Kayak Island 77.81 26 P P 16 10 34.1 -0.3
baz=311
L29M L29M 77.86 22 P P 16 10 34.0 -0.6
baz=315
YUK3 Moose Creek 78.02 24 P P 16 10 35.1 -0.6
baz=314
M29M Somme Creek 78.22 22 IAmb IAmb 16 12 04.3
comp=Z,20nm,1.8s
M29M Somme Creek 78.22 22 P P 16 10 36.6 -0.2
baz=315
LSZ Lusaka 78.51 245 P P
LSZ pmax pmax 16 10 36.4 -2.6
comp=Z,7.0nm,0.8s
LSZ Lusaka 78.51 245 P P 16 10 36.4 -2.6
LSZ IAmb IAmb 16 10 40.9
comp=Z,6.5nm,0.8s
YUK8 Steele Glacier 78.60 24 P P 16 10 38.4 -0.6
baz=314
M30M Minto, Yukon 78.67 22 P P 16 10 38.7 -0.5
baz=316
O28M Mount Upton 78.81 24 P P 16 10 39.3 -0.9
baz=314
YUK4 Talbot Arm 78.94 23 P P 16 10 40.3 -0.5
baz=315
YUK6 Outpost Mounta 79.32 23 P P 16 10 41.8 -1.2
baz=315
N30M Aishikik Lake 79.39 23 P P 16 10 42.4 -0.7
baz=316
HYT Haines Junctio 79.70 23 P P 16 10 44.2 -0.7
baz=316
O29M Mount Kennedy 79.71 24 P P 16 10 44.9 -0.1
baz=315
M31M Drury Creek, Y 79.71 21 P P 16 10 44.6 -0.2
baz=318
O30N Mendenhall 80.22 23 IAmb IAmb 16 10 53.0
comp=Z,10nm,1.1s
O30N Mendenhall 80.22 23 P P 16 10 46.7 -0.9
baz=317
MMPY Sheldon Lake, 80.34 20 P P 16 10 47.5 -0.7
baz=321
P30M Million Dollar 80.40 24 P P 16 10 47.5 -1.1
baz=316
P29M Windy Craggy 80.48 24 P P 16 10 48.7 -0.3
baz=316
WHY Whitehorse 80.70 22 P P 16 10 49.5 -0.8
baz=318
N32M Quiet Lake 80.91 21 P P 16 10 51.0 -0.3
baz=320
PLBC Pleasant Camp 81.09 24 P P 16 10 51.5 -0.7
baz=317
SKAG Skagway 81.45 23 P P 16 10 53.6 -0.5
baz=318
P33M Teslin, Yukon 81.72 22 P P 16 10 55.3 -0.3
baz=320
P32M Atlin 81.89 23 P P 16 10 55.9 -0.6
baz=319
WRGLY Wrigley 81.94 16 P P 16 10 56.2 -0.4
baz=327
S31K Pelican 82.24 25 P P 16 10 57.9 -0.4
baz=317
Q32M Nakina River 82.86 23 P P 16 11 00.8 -1.0
baz=320
R33M Jennings River 82.94 22 P P 16 11 01.4 -0.7
baz=321
S32K Killisnoo 83.20 24 P P 16 11 02.7 -0.6
baz=319
DLBC Dease Lake 84.00 22 P P 16 11 07.0 -0.6
baz=322
KOTAN Kotaneelee Air 84.40 18 P P 16 11 09.3 -0.1
baz=327
YKA Yellowknife Ar 84.56 13 P P 16 11 09.1 -1.1
comp=Z,1.8nm,1.0s,baz=331,slow=5.3,SNR=5.3
comp=Z,1.8nm,1.0s
U33K Whale Pass 84.75 25 P P 16 11 10.9 -0.3
baz=320
WRAK Wrangell Islan 84.79 24 P P 16 11 11.3 -0.1
baz=320
T35M Bob Quinn 85.08 23 P P 16 11 12.7 -0.2
baz=322
CRAG Craig 85.24 25 P P 16 11 13.8 +0.1
baz=320
TORD Torodi Ar. Bea 86.16 283 P P 16 11 19.2 +0.2
comp=Z,4.9nm,1.0s,baz=62,slow=4.2,SNR=14
TORD PP PP 16 14 38.7 -0.9
comp=Z,2.2nm,1.2s,baz=51,slow=6.1,SNR=5.8
comp=Z,4.9nm,1.0s
TORD Torodi Ar. Bea 86.16 283 P P 16 11 18.6 -0.4
LBTB Lobatse 86.17 238 P P 16 11 18.8 -0.1
LBTB pmax pmax
comp=Z,10.0nm,1.0s
LBTB Lobatse 86.17 238 P P 16 11 18.8 -0.1
LBTB IAmb IAmb 16 11 19.7
comp=Z,10nm,1.0s

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*NEIC **25** 16:09:55.2±1.0, 44.05°N±0.06×105.38°W±0.06, h0km±1km, ML2.9/18, Error ellipse: s-maj=11.4km s-min=6.2km az=27.0*
*IDC **25** 16:09:55.7±1.8, 44.18°N×105.62°W, h0km, mbtmp3.2/2, ML2.0/1, Error ellipse: s-maj=57.6km s-min=9.8km az=147.0*

ISC 25 16:09:55.8±1.2, 44.07°N±0.07°×105.32°W±0.08, h0km, n16, σ0.74/15, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.92**	**87**		**Pb**	**16 10 14.8**	**0.0**
K22A	**Casper**	**1.67**	**212**		**Pn**	**16 10 25.5**	**-1.0**
K22A				IAML		16 10 49.6	
	117nm,0.3s						
K22A				IAML		16 10 49.8	
	134nm,0.3s						
LAO	**LASA Array**	**2.69**	**347**	Pn	**Pn**	**16 10 40.9**	**+0.4**
RLMT	**Red Lodge**	**3.01**	**292**		**Pn**	**16 10 45.7**	**+0.7**
RLMT				IAML		16 11 46.0	
	32nm,2.1s						
RLMT				IAML		16 12 04.2	
	32nm,1.6s						
BW06	**Boulder Array**	**3.36**	**249**		**Pn**	**16 10 50.0**	**+0.2**
BW06				IAML		16 11 43.3	
	20nm,1.1s						
PD31	**Pinedale Array**	**3.36**	**249**		**Pn**	**16 10 49.7**	**-0.1**
PDAR	**Pinedale Array**	**3.36**	**249**	Pn	**Pn**	**16 10 49.9**	**+0.2**
	1.6nm,0.3s,baz=61,slow=13,SNR=35						
PDAR				Lg	Lg	16 11 36.3	
	4.3nm,0.3s,baz=63,slow=35,SNR=18						
PDAR	**Pinedale Array**	**3.36**	**249**		**Pn**	**16 10 50.0**	**+0.2**
YNE	**Yellowstone No**	**3.48**	**287**		**Pn**	**16 10 50.6**	**-0.9**
YNE				IAML		16 11 50.7	
	comp=E,18nm,1.2s						
YNE				IAML		16 11 53.2	
	comp=N,27nm,0.9s						
YMP	**Mirror Lake Pl**	**3.53**	**283**	Pn	**Pn**	**16 10 53.3**	**+1.0**
YMP				IAML		16 11 59.2	
	comp=E,35nm,1.0s						
YMP				IAML		16 12 15.3	
	comp=N,26nm,1.6s						
GCMT	**Greycliff**	**3.54**	**301**		**Pn**	**16 10 52.7**	**+0.5**
OGNE	**Ogallala**	**3.96**	**141**	Pn	**Pn**	**16 10 58.6**	**+0.7**
ISCO	**Idaho Springs**	**4.28**	**183**	Pn	**Pn**	**16 11 03.5**	**+1.0**
ISCO				IAML		16 12 12.3	
	comp=N,17nm,1.6s						
LYMT	**Lyon Mountain**	**5.69**	**303**	Pn	**Pn**	**16 11 22.3**	**+0.5**
ULM	**Lac du Bonnet**	**8.91**	**43**	Pn	**Pn**	**16 12 04.8**	**-1.0**
	comp=N,0.3nm,0.3s,baz=231,slow=15,SNR=2.3						
ULM				Lg	Lg	16 14 35.1	
	comp=N,0.1nm,0.3s,baz=119,slow=10,SNR=3.0						
	comp=N,0.7nm,0.3s						
I56US	**NEWPORT INFRAS**	**9.20**	**301**	I	I	17 06 10.0	
	baz=115,slow=316,SNR=6.2						

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*IDC **25** 16:15:56.5±1.2, 30.51°N×95.13°E, h0km, mb3.5/6, mbtmp3.4/8, ML3.1/2, Error ellipse: s-maj=56.4km s-min=19.4km az=58.0*

ISC 25 16:15:60.0±1.3, 30.6°N±0.2×95.2°E±0.2, h23km, n8, σ1§24/8, mb3.3/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.00**	**332**	P	**P**	**16 20 18.4**	**-1.6**
	baz=145,slow=15,SNR=2.7						
	0.2nm,0.8s						
SONM	**Songino Array**	**19.21**	**23**	P	**Pn**	**16 20 23.1**	**-0.4**
	0.1nm,0.3s,baz=215,slow=12,SNR=4.5						
	0.3nm,0.5s						
AAK	**Ala-Archa**	**20.45**	**312**	P	**P**	**16 20 35.5**	**-0.5**
	1.4nm,0.8s,baz=121,slow=11,SNR=5.9						
	1.4nm,0.3s						
KURBB	**Kurchatov Arra**	**23.56**	**333**	P	**P**	**16 21 09.3**	**+0.7**
	0.7nm,0.8s,baz=148,slow=11,SNR=6.4						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**24.50**	**345**	P	**P**	**16 21 19.0**	**+1.7**
	0.6nm,0.7s,baz=145,slow=8.1,SNR=2.2						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**28.78**	**328**	P	**P**	**16 21 57.0**	**+1.1**
	0.4nm,0.7s,baz=129,slow=13,SNR=2.0						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**62.78**	**138**	P	**P**	**16 26 23.3**	**-0.4**
	1.2nm,1.0s,baz=341,slow=5.3,SNR=2.0						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**65.50**	**141**	P	**P**	**16 26 41.7**	**+0.1**
	0.2nm,0.6s,baz=318,slow=6.1,SNR=5.3						
	0.2nm,0.6s						

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*GUC **25** 16:31:12.2±0.9, 17.34°S×69.93°W, h6km±6km, ML4.5*
*SJA **25** 16:31:13.1±1.6, 17.30°S×70.30°W, h8km±22km, ML4.5, MW4.1*
*NEIC **25** 16:31:15.8±2.7, 17.48°S±0.04×69.89°W±0.02, h10km±1km, mb4.9/71, Error ellipse: s-maj=7.7km s-min=3.2km az=354.0*
*GFZ **25** 16:31:16.9±0.2, 17.5°S±2.7°×70.1°W±.7°, h10km, M4.6/24, mb4.6/24*
*VAO **25** 16:31:19.8±1.1, 17.28°S×69.90°W, h53km±8km, mb4.7, Presumed earthquake*
*GCMT **25** 16:31:20.8±0.3, 17.44°S±0.03×69.82°W±0.02, h17km±1km, MW5.0/70, Moment Tensor Solution. s24,c28; s70,c91; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.01±.14; Mθθ=0.35±.09; Mϕϕ=2.35±.10; Mrθ=-3.29±.41; Mθϕ=0.05±.06; Mϕr=0.50±.21; Best double couple: M=3.58600×10^16 NP1: ϕs=13.00000°, δ=32.00000°, λ=-30.00000°. NP2: ϕs=129.00000°, δ=74.00000°, λ=-119.00000°. Principal axes: T 2.5740, Plg=24.0000°, Azm=241.0000°; N 2.0170, Plg=28.0000°, Azm=138.0000°; P -4.5980, Plg=52.0000°, Azm=6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **25** 16:31:22.6±1.6, 17.31°S×69.83°W, h63km±14km, mb4.1/14, mbtmp4.4/19, MS4.1/53 Error ellipse: s-maj=13.3km s-min=11.5km az=32.0*

ISC 25 16:31:14.7±0.3, 17.37°S±0.03×69.98°W±0.04, h10km, n233, σ1§96/175, mb4.8/48, MS4.1/52, 8C-3D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**0.52**	**115**	⇑*e*P	**Pg**	**16 31 22.9**	**-2.1**
PB18				IAML		16 31 35.8	
	comp=N,20μm,0.6s						
PB18	**Visviri**	**0.52**	**115**		**Pg**	**16 31 22.6**	**-2.4**
AP01	**Chacalluta**	**1.05**	**199**	*i* P	**Pb**	**16 31 34.3**	**-0.8**
AP01				IAML		16 31 58.5	
	comp=Z,5μm,0.6s						
AP01	**Chacalluta**	**1.05**	**199**	*e*P	**Pb**	**16 31 32.9**	**-2.2**
AP01				*e*S	**Sg**	**16 31 47.9**	**-0.9**
AP01	**Chacalluta**	**1.05**	**199**	*e*P	**Pb**	**16 31 33.6**	**-1.5**
AP01				*e*S	**Sg**	**16 31 47.9**	**-0.9**
AP01				IAML		16 31 50.0	
	comp=N,13μm,0.4s						
AP01	**Chacalluta**	**1.05**	**199**		**Pb**	**16 31 34.0**	**-1.1**
AP01				Sn	**Sg**	**16 31 49.4**	**+0.7**
AP01	**Chacalluta**	**1.05**	**199**	P	**Pb**	**16 31 34.1**	**-1.0**
PB16	**IPOC Station P**	**1.06**	**155**	*e*P	**Pg**	**16 31 33.0**	**-2.2**
PB16				*e*S	**Sg**	**16 31 48.0**	**-1.0**
PB16	**IPOC Station P**	**1.06**	**155**	⇓*e*P	**Pg**	**16 31 33.0**	**-2.2**
PB16				*e*S	**Sg**	**16 31 47.1**	**-1.9**
PB16	**IPOC Station P**	**1.06**	**155**		**Pg**	**16 31 32.7**	**-2.5**
PB12	**IPOC Station P**	**1.28**	**195**	*i* P	**Pn**	**16 31 37.8**	**-1.1**
PB12				IAML		16 31 56.5	
	comp=Z,2μm,0.4s						
PB12	**IPOC Station P**	**1.28**	**195**	⇑*e*P	**Pn**	**16 31 37.5**	**-1.3**
PB12				*e*S	**Sb**	**16 31 54.1**	**-1.5**
PB12	**IPOC Station P**	**1.28**	**195**	⇑*e*P	**Pn**	**16 31 37.5**	**-1.3**
PB12				*e*S	**Sb**	**16 31 55.4**	**-0.2**
PB12				IAML		16 31 56.8	
	comp=N,4μm,0.2s						
PB12	**IPOC Station P**	**1.28**	**195**		**Pn**	**16 31 37.7**	**-1.1**
PB12				Sn	**Sb**	**16 31 56.2**	**+0.6**
PB12	**IPOC Station P**	**1.28**	**195**	P	**Pn**	**16 31 37.8**	**-1.1**
PX02	**IPOC Station P**	**1.60**	**188**	*e*P	**Pn**	**16 31 41.7**	**-1.5**
PX02				*e*S	**Sn**	**16 32 03.6**	**-0.4**
PX02				IAML		16 32 04.6	
	comp=N,2μm,0.4s						
I08BO	**LAS PEÑAS INFR**	**1.86**	**52**	I	I	16 42 10.0	
	baz=229,slow=327,SNR=1.8						
LPAZ	**La Paz**	**2.07**	**59**	P	**Pb**	**16 31 51.9**	**-0.9**
	comp=N,208nm,0.5s,baz=236,slow=11,SNR=354						
LPAZ				S	**Sb**	**16 32 18.3**	**-0.5**
	comp=N,295nm,0.6s,baz=110,slow=20,SNR=4.0						
LPAZ				LR	LR	16 32 58.3	
	comp=N,16μm,19.6s,baz=252,slow=50						
LPAZ	**La Paz**	**2.07**	**59**	Pn	**Pb**	**16 31 51.4**	**-1.4**
LPAZ	**La Paz**	**2.07**	**59**	P	**Pb**	**16 31 52.1**	**-0.7**
PSGCX	**Pisagua**	**2.22**	**184**	*i* P	**Pn**	**16 31 52.9**	**+1.2**
PSGCX				*e*S	**Sb**	**16 32 24.2**	**+1.5**
PSGCX				IAML		16 32 32.8	
	comp=Z,1μm,0.6s						
PSGCX	**Pisagua**	**2.22**	**184**	⇓*e*P	**Pn**	**16 31 52.4**	**+0.7**
PSGCX				*e*S	**Sn**	**16 32 21.4**	**+2.1**
PSGCX	**Pisagua**	**2.22**	**184**		**Pn**	**16 31 52.2**	**+0.5**
PSGCX	**Pisagua**	**2.22**	**184**	P	**Pn**	**16 31 52.8**	**+1.0**
PB11	**IPOC Station P**	**2.40**	**173**	*i* P	**Pb**	**16 31 56.5**	**-1.6**
PB11				*e*S	**Sb**	**16 32 29.4**	**+1.6**
PB11				IAML		16 32 38.6	
	comp=Z,1μm,1.3s						
PB11	**IPOC Station P**	**2.40**	**173**	*e*P	**Pn**	**16 31 55.2**	**+1.0**
PB11				IAML		16 32 31.1	
	comp=E,2μm,0.4s						
PB11	**IPOC Station P**	**2.40**	**173**	⇓*e*P	**Pn**	**16 31 55.3**	**+1.0**
PB11				IAML		16 32 31.1	
	comp=E,2μm,0.4s						
PB11	**IPOC Station P**	**2.40**	**173**		**Pn**	**16 31 55.8**	**+1.6**
PB11	**IPOC Station P**	**2.40**	**173**	P	**Pn**	**16 31 56.0**	**+1.8**
GO01	**Chusmiza**	**2.40**	**162**	*i* P	**Pb**	**16 31 58.5**	**+0.1**
GO01				IAML		16 32 35.1	
	comp=Z,106μm,0.4s						
GO01	**Chusmiza**	**2.40**	**162**	⇑*e*P	**Pb**	**16 31 57.5**	**-0.9**
GO01				*e*S	**Sn**	**16 32 27.1**	**+2.8**
GO01				IAML		16 32 36.7	
	comp=N,1μm,0.5s						
GO01	**Chusmiza**	**2.40**	**162**		**Pb**	**16 31 57.6**	**-0.9**
GO01	**Chusmiza**	**2.40**	**162**	P	**Pb**	**16 31 57.7**	**-0.7**
PB08	**IPOC Station P**	**2.86**	**164**	*i* P	**Pb**	**16 32 05.3**	**-0.9**
PB08				IAML		16 32 50.4	
	comp=Z,896nm,0.5s						
PB08	**IPOC Station P**	**2.86**	**164**	⇑*e*P	**Pb**	**16 32 04.7**	**-1.6**
PB08				*e*S	**Sn**	**16 32 38.4**	**+2.8**
PB08				IAML		16 32 46.9	
	comp=N,1μm,0.5s						
PB08	**IPOC Station P**	**2.86**	**164**		**Pb**	**16 32 04.3**	**-1.9**
PB08	**IPOC Station P**	**2.86**	**164**	P	**Pb**	**16 32 04.9**	**-1.3**
TA02	**Huaiquique**	**2.89**	**183**	*e*P	**Pb**	**16 32 04.1**	**-2.2**
TA02				*e*S	**Sb**	**16 32 41.9**	**+0.1**
TA02				IAML		16 32 42.9	
	comp=Z,1μm,0.3s						
TA02	**Huaiquique**	**2.89**	**183**	*e*P	**Pn**	**16 32 02.1**	**+1.3**
TA02				*e*S	**Sn**	**16 32 36.7**	**+1.0**
TA02				IAML		16 32 43.3	
	comp=N,3μm,0.4s						
TA02	**Huaiquique**	**2.89**	**183**	*e*P	**Pn**	**16 32 02.1**	**+1.3**
TA02				*e*S	**Sb**	**16 32 40.6**	**-1.2**
TA02				IAML		16 32 43.3	
	comp=N,3μm,0.4s						
TA02	**Huaiquique**	**2.89**	**183**	P	**Pb**	**16 32 03.8**	**-2.6**
PB02	**IPOC Station P**	**3.93**	**179**	*i* P	**Pn**	**16 32 17.5**	**+2.2**
PB02				IAML		16 33 23.4	
	comp=Z,1μm,0.5s						
PB02	**IPOC Station P**	**3.93**	**179**		**Pn**	**16 32 17.7**	**+2.4**
PB02	**IPOC Station P**	**3.93**	**179**	P	**Pn**	**16 32 19.6**	**+4.3**
PB07	**IPOC Station P**	**4.33**	**179**		**Pn**	**16 32 23.9**	**+3.0**
PB07	**IPOC Station P**	**4.33**	**179**	P	**Pn**	**16 32 25.3**	**+4.4**
PB09	**IPOC Station P**	**4.46**	**171**	*i* P	**Pn**	**16 32 28.0**	**+5.4**
PB09				IAML		16 33 45.0	
	comp=Z,611nm,0.9s						
PB09	**IPOC Station P**	**4.46**	**171**		**Pn**	**16 32 27.9**	**+5.4**
PB09	**IPOC Station P**	**4.46**	**171**	P	**Pb**	**16 32 28.8**	**-4.5**
PB03	**IPOC Station P**	**4.66**	**177**	*i* P	**Pn**	**16 32 28.5**	**+3.1**
PB03				IAML		16 33 45.1	
	comp=Z,243nm,0.5s						
PB03	**IPOC Station P**	**4.66**	**177**		**Pn**	**16 32 27.8**	**+2.4**
PB03	**IPOC Station P**	**4.66**	**177**	P	**Pn**	**16 32 29.2**	**+3.9**
PB06	**IPOC Station P**	**5.32**	**176**	*i* P	**Pn**	**16 32 39.1**	**+4.6**
PB06				IAML		16 34 09.6	
	comp=Z,384nm,0.9s						
PB06	**IPOC Station P**	**5.32**	**176**		**Pn**	**16 32 38.4**	**+3.9**
PB06	**IPOC Station P**	**5.32**	**176**	P	**Pn**	**16 32 39.3**	**+4.9**
PB05	**IPOC Station P**	**5.46**	**182**	*i* P	**Pn**	**16 32 38.5**	**+2.2**
PB05				IAML		16 34 05.3	
	comp=Z,228nm,1.5s						
PB05	**IPOC Station P**	**5.46**	**182**		**Pn**	**16 32 37.9**	**+1.6**
PB05	**IPOC Station P**	**5.46**	**182**	P	**Pn**	**16 32 39.4**	**+3.1**
PB14	**IPOC Station P**	**7.23**	**183**		**Pn**	**16 33 02.5**	**+1.7**
PB14	**IPOC Station P**	**7.23**	**183**	P	**Pn**	**16 33 04.8**	**+4.0**
SALTA		**7.62**	**154**	P	Pn	16 33 13.3	+6.9
NNA	**Nana**	**8.53**	**308**	P	Pn	16 33 23.7	+5.2
	comp=Z,9.3nm,0.4s,baz=171,slow=9.8,SNR=7.1						
NNA				S	Sn	16 35 05.6	+11
	comp=Z,11nm,0.7s,baz=226,slow=19,SNR=1.1						
SIV	**San Ignacio**	**8.64**	**82**	P	**Pn**	**16 33 21.3**	**+1.3**
	comp=Z,52nm,0.9s,baz=262,slow=13,SNR=36						
SIV				S	**Sn**	**16 35 00.8**	**+3.2**
	comp=Z,7.6nm,0.7s,baz=188,slow=22,SNR=0.9						
SIV				LR	LR	16 37 15.5	
	comp=Z,6μm,19.1s,baz=285,slow=42						
BBSD	**Serra de San D**	**8.95**	**90**	*e*P	**Pn**	**16 33 24.2**	**+0.1**
BBSD				*e*S	**Sn**	**16 35 05.5**	**+0.3**
AC02	**Maricunga**	**9.45**	**175**		**Pn**	**16 33 34.0**	**+2.6**
CZSB	**Cruzeiro do Su**	**9.95**	**344**	*e*P	**Pn**	**16 33 39.8**	**+1.9**
VILB	**Vilhena**	**10.41**	**66**	Pn	**Pn**	**16 33 45.2**	**+1.0**
VILB	**Vilhena**	**10.41**	**66**	*e*P	**Pn**	**16 33 45.2**	**+1.0**
PTLB	**Pontes e Lacer**	**10.57**	**81**	Pn	**Pn**	**16 33 48.0**	**+1.6**
PTLB	**Pontes e Lacer**	**10.57**	**81**	*e*P	**Pn**	**16 33 47.0**	**+0.5**
ATAH	**Atahualpa**	**13.08**	**320**	P	Pn	16 34 24.7	+3.6
	comp=Z,2.6nm,0.5s,baz=100,slow=21,SNR=1.7						
SALV	**Santo Antonio**	**13.77**	**86**	*e*P	**Pn**	**16 34 31.9**	**+1.8**
CFA	**Coronel Fontan**	**14.26**	**174**	P	**P**	**16 34 41.4**	**-2.8**
	comp=Z,3.1nm,0.8s,baz=352,slow=15,SNR=3.9						
CFA				LR	LR	16 41 45.3	
	comp=Z,362nm,18.5s,baz=344,slow=44						
CPUP	**Villa Florida**	**14.73**	**129**	P	**P**	**16 34 46.6**	**-2.8**
	comp=Z,5.2nm,1.1s,baz=273,slow=8.4,SNR=3.9						
CPUP				LR	LR	16 41 34.5	
	comp=Z,1μm,19.9s,baz=308,slow=42						
TEFE	**Tefe**	**14.74**	**21**	*e*P	**Pn**	**16 34 44.1**	**+0.7**
CLDB	**Colider**	**15.19**	**67**	*e*P	**Pn**	**16 34 48.9**	**-0.6**
VA03	**San Esteban**	**15.34**	**182**	Pn	**Pn**	**16 34 45.2**	**-6.2**
VA03	**San Esteban**	**15.34**	**182**	P	**P**	**16 34 56.3**	**+0.1**
PEL	**Peldehue**	**15.72**	**182**	P	**Pn**	**16 34 57.2**	**+0.9**
MACA	**Manacapuru-AM**	**16.81**	**34**	*e*P	**Pn**	**16 35 09.2**	**-1.2**
BO03	**Pichilemu**	**17.15**	**186**	P	**P**	**16 35 17.9**	**+1.7**
SGC2	**Sao Gabriel da**	**17.36**	**10**	*e*P	**P**	**16 35 17.1**	**-1.6**
BO02	**Sierra Bellavi**	**17.37**	**182**	P	**P**	**16 35 22.2**	**+3.5**
ARAG	**Araguaiana, MT**	**17.49**	**87**	*e*P	**P**	**16 35 19.4**	**-0.7**
NPGB	**Novo Progresso**	**17.58**	**56**	*e*P	**P**	**16 35 20.8**	**-0.3**
GO05	**Hualane**	**17.65**	**185**	P	**P**	**16 35 23.4**	**+1.5**
ML02	**Panimavida**	**18.36**	**184**	P	**Pn**	**16 35 33.1**	**+3.6**
LDASE	**Londrina, Braz**	**18.66**	**112**	*e*P	**Pn**	**16 35 33.9**	**+0.6**
SNDB	**Serra Nova Dou**	**18.85**	**76**	*e*P	**Pn**	**16 35 35.3**	**-0.3**
ITTB	**Itaituba**	**19.02**	**49**	*e*P	**P**	**16 35 36.3**	**-0.7**
BI02	**San Fabin de**	**19.25**	**183**	P	**Pn**	**16 35 43.0**	**+2.6**
BB19B	**Bebedouro**	**20.58**	**104**	*e*P	**P**	**16 35 54.7**	**+0.6**
IPMB	**Ipameri, GO**	**20.75**	**95**	*e*P	**P**	**16 35 55.3**	**-0.6**
BDFB	**Brasilia**	**21.13**	**89**	P	**P**	**16 36 01.1**	**+1.1**
	comp=Z,1.8nm,0.4s,baz=261,slow=11,SNR=4.0						
BDFB				LR	LR	16 44 36.7	
	comp=Z,778nm,20.3s,baz=292,slow=38						
	comp=Z,1.8nm,0.4s						
BOAV	**Boa Vista**	**21.74**	**26**	P	**P**	**16 36 01.9**	**-4.6**
BOAV	**Boa Vista**	**21.74**	**26**	*e*P	**P**	**16 36 05.8**	**-0.7**
GO06	**Curarrehue**	**22.17**	**183**	P	**P**	**16 36 14.7**	**+3.6**
PLCA	**Paso Flores**	**23.29**	**181**	P	**P**	**16 36 25.6**	**+2.8**
	comp=Z,17nm,1.0s,baz=357,slow=12,SNR=12						
	comp=Z,17nm,1.0s						
PLCA	**Paso Flores**	**23.29**	**181**	P	**P**	**16 36 22.5**	**-0.3**
SMTB	**Santa Maria do**	**23.36**	**72**	*e*P	**P**	**16 36 23.8**	**0.0**
JANB	**Januaria**	**24.75**	**88**	*e*P	**P**	**16 36 33.2**	**-3.6**
LL02	**Futaleuf**	**25.79**	**183**	P	**P**	**16 36 45.5**	**-0.4**
SDV	**Santo Domingo**	**26.10**	**359**	LR	LR	16 48 01.7	
	comp=Z,956nm,18.5s,baz=190,slow=38						
MDP	**Montagnes des**	**28.14**	**39**	LR	LR	16 49 55.8	
	comp=Z,409nm,18.0s,baz=248,slow=40						
JTS	**Las Juntas de**	**31.22**	**331**	LR	LR	16 50 39.4	
	comp=Z,154nm,21.8s,baz=164,slow=37						
RCBR	**Riachuelo**	**35.23**	**75**	LR	LR	16 53 05.3	
	comp=Z,391nm,21.7s,baz=250,slow=37						
SJG	**San Juan**	**35.46**	**6**	LR	LR	16 53 38.2	
	comp=Z,315nm,20.8s,baz=210,slow=38						
USHA	**Ushuaia**	**37.41**	**179**	LR	LR	16 54 52.2	
	comp=Z,1μm,20.4s,baz=179,slow=38						
RPN	**Rapa Nui**	**37.57**	**248**	LR		16 50 04.2	
	comp=Z,509nm,21.6s,baz=106,slow=30						
APG	**El Apazote**	**37.99**	**327**	LR	LR	16 53 28.0	
	comp=Z,304nm,21.5s,baz=144,slow=35						
CMIG	**Matias Romero**	**42.12**	**323**	LR	LR	16 56 48.7	
	comp=Z,136nm,20.6s,baz=172,slow=36						
PMSA	**Palmer Station**	**47.53**	**177**	LR	LR	16 59 59.5	
	comp=Z,277nm,19.1s,baz=342,slow=36						
TKL	**Tuckaleechee C**	**54.34**	**346**	LR	LR	17 05 18.5	
	comp=Z,200nm,21.9s,baz=182,slow=38						
WVT	**Waverly**	**55.83**	**343**	P	**P**	**16 40 52.5**	**+0.2**
MIAR	**Mount Ida**	**56.30**	**337**	P	**P**	**16 40 55.8**	**+0.1**
SAND	**Sanderson**	**56.34**	**326**	IAmb	IAmb	16 41 00.1	
	comp=Z,17nm,1.4s						
TXAR	**Lajitas Array**	**56.69**	**325**	P	**P**	**16 40 59.1**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=151,slow=8.1,SNR=11						
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	**56.69**	**325**	P	**P**	**16 40 59.6**	**+0.9**
LCAR	**Lake Charles**	**56.80**	**340**	IAmb	IAmb	16 41 01.8	
	comp=Z,24nm,1.4s						
LPIG	**La Paz**	**56.99**	**315**	LR	LR	17 02 24.9	
	comp=Z,78nm,19.7s,baz=109,slow=33						
SGCY	**Sterling City**	**57.39**	**329**	IAmb	IAmb	16 41 08.7	
	comp=Z,12nm,0.9s						
**W

SNAA	**Sanae**	**66.49**	**161**	P	**P**	**16 42 06.2**	**+1.9**
	comp=Z,5.2nm,1.0s,baz=291,slow=5.2,SNR=6.2						
SNAA				LR	LR	17 10 55.2	
	comp=Z,89nm,19.8s,baz=298,slow=36						
	comp=Z,5.2nm,1.0s						
SNAA	**Sanae**	**66.49**	**161**	P	**P**	**16 42 03.7**	**-0.6**
SNAA				IAmb	IAmb	16 42 10.2	
	comp=Z,9.2nm,1.1s						
SNAA	**Sanae**	**66.49**	**161**	P	**P**	**16 42 06.1**	**+1.8**
PFO	**Pinyon Flats O**	**67.34**	**319**	LR	LR	17 12 18.6	
	comp=Z,68nm,18.0s,baz=139,slow=36						
Q16A	**Castle Valley**	**67.98**	**326**	IAmb	IAmb	16 42 25.4	
	comp=Z,10nm,1.5s						
CCUT	**Cedar City**	**68.19**	**324**	IAmb	IAmb	16 42 21.3	
	comp=Z,7.1nm,1.1s						
TROLL	**Troll, Antarti**	**68.21**	**161**	⇑P	**P**	**16 42 18.9**	**+3.6**
	comp=Z,185nm,0.8s						
K22A	**Casper**	**68.55**	**332**	IAmb	IAmb	16 42 21.6	
	comp=Z,14nm,1.2s						
DBIC	**Dimbokro**	**68.60**	**75**	P	**P**	**16 42 18.7**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=232,slow=6.8,SNR=4.7						
DBIC				LR	LR	17 10 29.1	
	comp=Z,574nm,20.1s,baz=242,slow=34						
	comp=Z,4.0nm,0.8s						
RSSD	**Black Hills**	**68.66**	**334**		**P**	**16 42 19.9**	**+1.3**
RSSD				IAmb	IAmb	16 42 22.6	
	comp=Z,19nm,1.5s						
RSSD	**Black Hills**	**68.66**	**334**	P	**P**	**16 42 19.7**	**+1.2**
MPU	**Maple Canyon**	**69.03**	**327**	IAmb	IAmb	16 42 25.9	
	comp=Z,6.8nm,0.9s						
GWY	**Greenwater Val**	**69.18**	**321**	IAmb	IAmb	16 42 24.9	
	comp=Z,14nm,1.4s						
AGMN	**Agassiz Nation**	**69.34**	**342**	P	**P**	**16 42 22.4**	**0.0**
TPNV	**Topopah Spring**	**69.44**	**322**	IAmb	IAmb	16 42 29.4	
	comp=Z,5.8nm,0.8s						
DUG	**Dugway, Tooele**	**69.78**	**326**	IAmb	IAmb	16 42 30.8	
	comp=Z,9.6nm,1.1s						
DUG	**Dugway, Tooele**	**69.78**	**326**	P	**P**	**16 42 27.8**	**+2.4**
PDAR	**Pinedale Array**	**70.05**	**330**	P	**P**	**16 42 27.6**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=160,slow=4.7,SNR=11						
PDAR				LR	LR	17 16 40.7	
	comp=Z,63nm,20.8s,baz=126,slow=39						
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**70.05**	**330**	P	**P**	**16 42 27.7**	**+0.6**
HWUT	**Hardware Ranch**	**70.16**	**328**	P	**P**	**16 42 30.0**	**+2.1**
BGU	**Big Grassy Mou**	**70.42**	**327**	IAmb	IAmb	16 42 41.8	
	comp=Z,10nm,1.4s						
AHID	**Auburn Hatcher**	**70.79**	**329**	P	**P**	**16 42 32.9**	**+1.2**
ULM	**Lac du Bonnet**	**71.10**	**343**	P	**P**	**16 42 33.3**	**+0.2**
	comp=Z,6.1nm,1.0s,baz=156,slow=6.2,SNR=8.9						
ULM				LR	LR	17 16 49.5	
	comp=Z,56nm,18.4s,baz=153,slow=38						
	comp=Z,6.1nm,1.0s						
NVAR	**Mina Array Bea**	**71.64**	**322**	P	**P**	**16 42 38.4**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=137,slow=7.2,SNR=10						
NVAR				LR	LR	17 14 50.4	
	comp=Z,58nm,19.2s,baz=133,slow=36						
	comp=Z,2.6nm,0.9s						
NVAR	**Mina Array Bea**	**71.64**	**322**	P	**P**	**16 42 38.9**	**+2.0**
RLMT	**Red Lodge**	**71.72**	**332**	IAmb	IAmb	16 42 47.2	
	comp=Z,14nm,1.4s						
SCHQ	**Schefferville**	**71.96**	**2**	LR	LR	17 16 02.3	
	comp=Z,59nm,19.0s,baz=136,slow=37						
QSPA	**South Pole Qui**	**72.80**	**180**	P	**P**	**16 42 43.6**	**+0.2**
	comp=Z,3.6nm,0.9s,baz=170,slow=2.1,SNR=17						
QSPA				LR	LR	17 18 33.4	
	comp=Z,129nm,19.6s,baz=180,slow=39						
	comp=Z,3.6nm,0.9s						
QSPA	**South Pole Qui**	**72.80**	**180**	P	**P**	**16 42 46.6**	**+3.2**
QSPA				IAmb	IAmb	16 42 49.8	
	comp=Z,12nm,1.1s						
QSPA	**South Pole Qui**	**72.80**	**180**	P	**P**	**16 42 40.4**	**-3.0**
HLID	**Hailey**	**73.03**	**328**	P	**P**	**16 42 47.5**	**+2.4**
PAHR	**Pah Rah Range**	**73.11**	**322**	IAmb	IAmb	16 42 51.4	
	comp=Z,14nm,1.0s						
MFID	**Camas Ranch**	**73.65**	**327**	IAmb	IAmb	16 42 54.2	
	comp=Z,23nm,1.2s						
EGMT	**Eagleton**	**74.17**	**333**	IAmb	IAmb	16 42 56.0	
	comp=Z,11nm,1.1s						
ORV	**Oroville**	**74.27**	**321**	IAmb	IAmb	16 42 58.1	
	comp=Z,16nm,1.1s						
PLID	**Pearl Lake**	**74.91**	**328**	IAmb	IAmb	16 43 00.9	
	comp=Z,10nm,1.1s						
K05A	**Summer Lake**	**75.93**	**324**	IAmb	IAmb	16 43 08.5	
	comp=Z,11nm,1.0s						
YBH	**Yreka Blue Hor**	**76.35**	**322**	LR	LR	17 17 46.3	
	comp=Z,47nm,19.3s,baz=132,slow=36						
PINE	**Pine Mountain**	**76.65**	**325**	IAmb	IAmb	16 43 11.9	
	comp=Z,13nm,1.0s						
FFC	**Flin Flon**	**76.82**	**342**	P	**P**	**16 43 06.5**	**0.0**
TORD	**Torodi Ar. Bea**	**76.97**	**72**	P	**P**	**16 43 06.6**	**-1.6**
	comp=Z,8.7nm,0.9s,baz=256,slow=5.3,SNR=15						
	comp=Z,8.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.97**	**72**	P	**P**	**16 43 06.6**	**-1.6**
TORD				IAmb	IAmb	16 43 13.2	
	comp=Z,11nm,1.1s						
LDM	**Libby Dam**	**76.97**	**331**	IAmb	IAmb	16 43 12.6	
	comp=Z,13nm,1.1s						
NEW	**Newport**	**77.69**	**330**	LR	LR	17 22 07.9	
	comp=Z,84nm,19.7s,baz=142,slow=39						
EDM	**Edmonton**	**79.61**	**335**	IAmb	IAmb	16 43 25.7	
	comp=Z,29nm,1.3s						
MDT	**Midelt**	**79.92**	**51**	LR	LR	17 17 24.1	
	comp=Z,112nm,20.9s,baz=232,slow=35						
VNDA	**Vanda**	**80.72**	**190**	P	**P**	**16 43 29.1**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=162,slow=3.0,SNR=3.9						
	comp=Z,2.1nm,0.9s						
FRB	**Frobisher Bay**	**80.86**	**1**	LR	LR	17 22 08.6	
	comp=Z,103nm,19.4s,baz=160,slow=38						
SUR	**Sutherland**	**81.54**	**121**	LR	LR	17 16 41.3	
	comp=Z,328nm,19.5s,baz=286,slow=33						
TSUM	**Tsumeb**	**82.22**	**108**	LR	LR	17 16 57.1	
	comp=Z,252nm,21.5s,baz=253,slow=33						
ESDC	**Sonseca Array**	**83.63**	**45**	P	**P**	**16 43 43.6**	**0.0**
	comp=Z,3.3nm,1.1s,baz=256,slow=5.2,SNR=8.6						
ESDC				LR	LR	17 19 05.1	
	comp=Z,115nm,20.1s,baz=248,slow=34						
	comp=Z,3.3nm,1.1s						
ESDC	**Sonseca Array**	**83.63**	**45**	P	**P**	**16 43 44.0**	**+0.3**
ESDC				IAmb	IAmb	16 43 49.5	
	comp=Z,13nm,1.2s						
RAR	**Rarotonga**	**83.69**	**250**	LR	LR	17 12 40.9	
	comp=Z,66nm,20.7s,baz=112,slow=30						
SFJD	**Kangerlussuaq**	**85.34**	**8**	LR	LR	17 23 37.9	
	comp=Z,61nm,18.8s,baz=192,slow=37						
BBB	**Bella Bella**	**85.61**	**328**	LR	LR	17 25 15.3	
	comp=Z,71nm,21.3s,baz=94,slow=38						
BOSA	**Boshof**	**86.28**	**119**	LR	LR	17 20 25.4	
	comp=Z,212nm,18.4s,baz=231,slow=34						
YKA	**Yellowknife Ar**	**86.98**	**341**	P	**P**	**16 43 59.6**	**-0.1**
	comp=Z,12nm,1.1s,baz=136,slow=4.5,SNR=18						
YKA				LR	LR	17 25 12.0	
	comp=Z,91nm,21.1s,baz=42,slow=37						
	comp=Z,12nm,1.1s						
LBTB	**Lobatse**	**87.67**	**115**	LR	LR	17 20 27.6	
	comp=Z,261nm,20.5s,baz=249,slow=34						
MAW	**Mawson**	**88.55**	**164**	P	**P**	**16 44 09.2**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=226,slow=9.0,SNR=6.8						
MAW				LR	LR	17 22 51.6	
	comp=Z,125nm,21.3s,baz=245,slow=35						
	comp=Z,2.3nm,0.8s						
BORG	**Borgarnes**	**89.85**	**19**	LR	LR	17 21 04.2	
	comp=Z,38nm,20.4s,baz=238,slow=33						
DLBC	**Dease Lake**	**90.09**	**333**	LR	LR	17 28 38.6	
	comp=Z,63nm,20.5s,baz=139,slow=38						
KEST	**Kesra**	**91.64**	**53**	LR	LR	17 26 04.7	
	comp=Z,118nm,19.8s,baz=232,slow=36						
EKA	**Eskdalemuir Ar**	**91.64**	**32**	LR	LR	17 22 26.7	
	comp=Z,90nm,18.3s,baz=208,slow=34						
MATP	**Matopo**	**91.67**	**112**	LR	LR	17 24 05.8	
	comp=Z,366nm,18.1s,baz=272,slow=35						
LSZ	**Lusaka**	**93.05**	**107**	LR	LR	17 24 38.1	
	comp=Z,486nm,19.8s,baz=250,slow=34						
RES	**Resolute Bay**	**93.20**	**354**	LR	LR	17 29 23.8	
	comp=Z,102nm,20.4s,baz=212,slow=37						
DAVOX	**Davos/Dischmat**	**95.74**	**43**	LR	LR	17 27 03.3	
	comp=Z,185nm,19.0s,baz=257,slow=35						
VAE	**Valguarnera**	**96.06**	**53**	LR	LR	17 29 34.1	
	comp=Z,148nm,19.4s,baz=285,slow=36						
URZ	**Urewera**	**96.30**	**227**	LR	LR	17 21 05.4	
	comp=Z,64nm,18.9s,baz=140,slow=31						
INK	**Inuvik**	**96.74**	**340**	LR	LR	17 31 17.6	
	comp=Z,71nm,21.9s,baz=84,slow=37						
JMIC	**Jan Mayen**	**97.52**	**17**	LR	LR	17 26 35.3	
	comp=Z,60nm,20.7s,baz=18,slow=34						
RPZ	**Rata Peaks**	**97.53**	**220**	LR	LR	17 18 45.2	
	comp=Z,27nm,21.7s,baz=231,slow=29						
MBAR	**Mbarara**	**100.05**	**94**	LR	LR	17 27 51.1	
	comp=Z,237nm,21.1s,baz=260,slow=34						
ASAR	**Alice Springs**	**133.01**	**211**	PKP	**PKiKP**	**16 50 33.7**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=153,slow=2.3,SNR=6.4						
WRA	**Warramunga Arr**	**135.90**	**214**	PKP	**PKiKP**	**16 50 39.1**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=151,slow=1.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**138.60**	**22**	PKP	**PKiKP**	**16 50 41.6**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=310,slow=3.5,SNR=5.6						
MKAR	**Makanchi Array**	**142.78**	**32**	PKP	**PKPdf**	**16 50 49.0**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=299,slow=1.2,SNR=4.7						
HEH	**HeiHe**	**144.34**	**341**	*e*P	**PKPdf**	**16 50 50.0**	**-1.1**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HILR	**Hailar Array B**	**146.94**	**348**	PKPbc	**PKPab**	**16 50 58.4**	**-0.6**
	comp=Z,7.7nm,0.8s,baz=7.4,slow=3.4,SNR=5.6						
USRK	**Ussuriysk Ar.**	**147.47**	**330**	PKPbc	**PKiKP**	**16 51 00.7**	**-0.7**
	comp=Z,4.2nm,1.0s,baz=57,slow=7.0,SNR=5.9						
USRK	**Ussuriysk Ar.**	**147.47**	**330**		**PKiKP**	**16 51 00.4**	**-1.0**
WMQ	**Urumqi**	**147.58**	**31**	*e*PKPbc	**PKPbc**	**16 50 58.8**	**-0.8**
WMQ				LR	LR		
	comp=Z,150nm,20.9s						
MJAR	**Matsushiro Arr**	**148.62**	**313**	PKPbc	**PKiKP**	**16 51 03.8**	**-0.2**
	comp=Z,7.5nm,0.9s,baz=94,slow=3.7,SNR=19						
MJAR	**Matsushiro Arr**	**148.62**	**313**		**PKPab**	**16 51 04.2**	**-1.9**
SONM	**Songino Array**	**149.47**	**5**	PKPbc	**PKiKP**	**16 51 04.3**	**-1.2**
	comp=Z,3.0nm,0.8s,baz=313,slow=1.2,SNR=8.9						
SONM	**Songino Array**	**149.47**	**5**		**PKPbc**	**16 51 01.6**	**-2.9**
HHC	**Hu-ho-hao-te**	**156.56**	**357**	*e*P	**PKPdf**	**16 51 06.0**	**-4.5**
PZH	**PanZhiHua**	**168.10**	**39**	PKP	**PKPdf**	**16 51 21.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**169.40**	**82**	PKP	**PKPdf**	**16 51 23.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=185,slow=1.1,SNR=4.4						
CMAR				PKPab	**PKPab**	**16 52 34.5**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=268,slow=6.4,SNR=4.6						

*KRSC **25** 16:37:37.6±1.6,58˚.92N×158˚.59E, h28km±13km, Ml4.2*
*NERS **25** 16:37:42.5,59˚.03N×158˚.73E, h0km*
*IDC **25** 16:37:47.3±1.6,55˚.61N×165˚.49E, h0km, mb3.4/2, mbtmp3.3/3, ML2.1/1, MS2.5/1, Error ellipse: s-maj=129.1km s-min=28.3km az=142.0*

ISC 25 16:37:42.3±0.8,**58.78N**±0˚.04×**158.98E**±0˚.04,**h10**km,**n27,** σ2°**71**/37,**Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALN	**Palana**	**0.60**	**58**	*e*P	**Pg**	**16 37 51.7**	**-2.2**
PALN				*e*S	**Sg**	**16 38 01.6**	**-0.2**
TIGL	**Tigil**	**1.03**	**189**	*e*P	Pg	16 37 59.7	-2.4
TIGL				*e*S	**Sg**	**16 38 15.1**	**-0.3**
OSSR	**Ossora**	**2.16**	**76**	*e*P	**Pn**	**16 38 17.5**	**-0.8**
OSSR				*e*S	**Sn**	**16 38 45.4**	**+0.3**
SRDR	**Sredinnyy**	**2.50**	**171**	*e*P	**Pn**	**16 38 21.3**	**-1.8**
SMKR	**Semkarok**	**2.57**	**148**	*e*P	**Pn**	**16 38 23.4**	**-0.6**
KOZ	**Kozyrevsk**	**2.77**	**170**	*e*P	**Pn**	**16 38 25.3**	**-1.4**
ESO	**Esso**	**2.86**	**183**	*e*P	**Pn**	**16 38 26.0**	**-2.0**
KPT	**Kopyto**	**2.90**	**166**	*e*P	**Pn**	**16 38 27.5**	**-1.1**
KMNR	**Kamenistaya**	**3.10**	**167**	*e*P	**Pn**	**16 38 30.6**	**-0.8**
TUMR	**Tumrok**	**3.56**	**169**	*e*P	**Pn**	**16 38 36.4**	**-1.3**
GADL	**Gadlja**	**4.04**	**286**	*e*Pg	**Pb**	**16 38 56.0**	**+2.5**
GADL				Pgmax		16 39 07.5	
	110nm,0.6s						
GADL				*e*Sg	**Sb**	**16 39 44.9**	**+2.6**
GADL				Sgmax		16 39 58.3	
	550nm,0.7s						
TLAR	**Talaya**	**4.07**	**308**	*e*P	**Pn**	**16 38 43.0**	**-1.6**
TLAR				Pmax		16 38 44.9	
	10.0nm,0.4s						
TLAR				*e*Pg	**Pb**	**16 38 51.7**	**-2.3**
TLAR				Pgmax		16 39 04.4	
	60nm,0.5s						
TLAR				*e*S	**Sn**	**16 39 29.7**	**-2.5**
TLAR				*e*Sg	**Sb**	**16 39 44.3**	**+1.1**
TLAR				Sgmax		16 40 07.6	
	230nm,0.6s						
OMS	**Omsukchan**	**4.07**	**339**	*e*Sg	**Sb**	**16 39 45.2**	**+2.0**
MA2	**Magadan**	**4.30**	**284**	*e*P	**Pn**	**16 38 48.0**	**+0.2**
MA2				*e*Pg	**Pb**	**16 38 57.8**	**-0.2**
MA2				Pgmax		16 39 05.0	
	30nm,0.6s						
MA2				*e*Sg	**Sb**	**16 39 52.1**	**+2.2**
MA2				Sgmax		16 40 05.7	
	140nm,0.7s						
MKZ	**Mys Kozlova**	**4.49**	**159**	*e*P	**Pn**	**16 38 51.5**	**+1.1**
GNL	**Ganaly**	**5.13**	**187**	*e*P	**Pn**	**16 38 58.2**	**-1.0**
SEY	**Seymchan**	**5.27**	**325**	*e*P	**Pn**	**16 39 01.6**	**+0.6**
SEY				*e*Pg	**Pb**	**16 39 18.2**	**+3.7**
SEY				Pgmax		16 39 34.9	
	10.0nm,0.8s						
SEY				*e*Sg	**Sb**	**16 40 24.4**	**+6.7**
SEY				Sgmax		16 40 46.5	
	40nm,0.6s						
SEY				Sgmax		16 40 46.5	
	40nm,1.0s						
TLON	**Talon**	**5.39**	**285**	*e*Sg	**Sb**	**16 40 28.4**	**+7.3**
TLON				Sgmax		16 40 36.5	
	140nm,0.5s						
KRX	**Arik**	**5.43**	**182**	*e*P	**Pn**	**16 39 03.4**	**0.0**
KOK	**Koryaka**	**5.50**	**182**	*e*P	**Pn**	**16 39 04.4**	**+0.1**
SDLR	**Sedlovina**	**5.51**	**181**	*e*P	**Pn**	**16 39 05.7**	**+1.3**
SMAR	**Somma**	**5.53**	**181**	*e*P	**Pn**	**16 39 04.9**	**+0.2**
PETK	**Petropavlovsk-**	**5.73**	**188**	Pn	**Pn**	**16 39 06.5**	**-0.9**
	0.4nm,0.3s,baz=40,slow=15,SNR=19						
PETK				LR	LR	16 41 19.7	
	comp=Z,48nm,21.8s,baz=350,slow=41						
	0.9nm,0.5s						
SUUS	**Susuman**	**6.64**	**312**	*e*Pg	**Pb**	**16 39 41.9**	**+4.1**
SUUS				*e*Sg	**Sg**	**16 41 07.6**	**-7.7**
SUUS				Sgmax		16 41 44.9	
	70nm,1.0s						
BILL	**Bilibino**	**9.85**	**16**	*e*Sg	Sn	16 42 49.4	+55
BILL				Sgmax		16 43 09.4	
ILAR	**Eielson Array**	**25.57**	**54**	P	**P**	**16 43 10.4**	**-0.6**
	0.6nm,0.7s,baz=273,slow=9.2,SNR=7.9						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**84.73**	**203**	P	**P**	**16 50 16.1**	**-0.1**
	0.3nm,0.7s,baz=14,slow=5.5,SNR=4.8						
	0.3nm,0.7s						

*GUC **25** 16:54:00.8±0.7,17˚.28S×69˚.87W, h15km±999km, ML3.6*
*IDC **25** 16:54:14.1±2.9,17˚.11S×69˚.48W, h101km±24km, mb3.4/4, mbtmp3.8/5, MS3.3/3, Error ellipse: s-maj=32.5km s-min=26.3km az=58.0*

ISC 25 16:54:01.8±0.8,**17.37S**±0˚.06×**69.84W**±0˚.07,**h10**km,**n16,** σ1°**43**/17,**mb3.9/3,Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**0.41**	**123**	*e*P	**Pb**	**16 54 11.4**	**-0.1**
PB16	**IPOC Station P**	**1.01**	**162**	*e*P	**Pg**	**16 54 21.2**	**-0.2**
AP01	**Chacalluta**	**1.11**	**206**	*e*P	**Pb**	**16 54 21.6**	**-1.5**
AP01				*e*S	**Sb**	**16 54 37.1**	**-0.5**
AP01				IAML		16 54 38.0	
	comp=E,3µm,0.4s						
PB12	**IPOC Station P**	**1.32**	**200**	*e*P	**Pn**	**16 54 25.4**	**-1.1**
PB12				*e*S	**Sb**	**16 54 43.4**	**-0.6**
PB12				IAML		16 54 44.0	
	comp=N,1µm,0.2s						
LPAZ	**La Paz**	**1.96**	**57**	P	**Pg**	**16 54 40.0**	**+0.6**
	comp=N,50nm,0.5s,baz=233,slow=11,SNR=150						
LPAZ				S	**Sg**	**16 55 02.6**	**-2.3**
	comp=N,75nm,0.6s,baz=236,slow=5.1,SNR=4.0						
PSGCX	**Pisagua**	**2.23**	**187**	*e*P	**Pn**	**16 54 40.6**	**+1.6**
GO01	**Chusmiza**	**2.37**	**165**	*e*P	**Pb**	**16 54 45.8**	**+0.9**
GO01				IAML		16 55 23.9	
	comp=N,226nm,0.1s						
PB11	**IPOC Station P**	**2.39**	**176**	*e*P	**Pb**	**16 54 44.0**	**-1.1**
PB11				IAML		16 55 19.5	
	comp=E,327nm,0.4s						
PB08	**IPOC Station P**	**2.84**	**167**	*e*P	**Pb**	**16 54 53.0**	**+0.2**
SIV	**San Ignacio**	**8.51**	**82**	P	Pn	16 56 09.9	+4.6
	comp=E,4.6nm,0.4s,baz=258,slow=16,SNR=30						
SIV				S	**Sn**	**16 57 39.9**	**-1.7**
	comp=E,2.8nm,0.6s,baz=315,slow=21,SNR=1.4						
SIV				LR	LR	16 59 53.4	
	comp=E,363nm,19.7s,baz=300,slow=42						
CPUP	**Villa Florida**	**14.63**	**130**	LR	LR	17 04 31.1	
	comp=E,94nm,18.1s,baz=330,slow=42						
MDP	**Montagnes des**	**28.05**	**39**	LR	LR	17 10 50.3	
	comp=E,35nm,20.2s,baz=144,slow=36						
PDAR	**Pinedale Array**	**70.11**	**330**	P	**P**	**17 05 15.9**	**+1.3**
	comp=E,0.1nm,0.3s,baz=119,slow=2.5,SNR=3.6						
	comp=E,0.1nm,0.3s						
QSPA	**South Pole Qui**	**72.80**	**180**	P	**P**	**17 05 33.4**	**+2.9**
	comp=E,0.6nm,0.6s,baz=191,slow=2.4,SNR=8.3						
	comp=E,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.84**	**72**	P	**P**	**17 05 53.5**	**-1.1**
	comp=E,0.8nm,0.7s,baz=257,slow=5.8,SNR=4.6						
	comp=E,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**87.02**	**341**	P	**P**	**17 06 46.3**	**-0.7**
	comp=E,1.3nm,0.9s,baz=133,slow=4.9,SNR=5.2						
	comp=E,1.3nm,0.9s						

*IDC **25** 17:02:24.0±1.1,35˚.56N×31˚.49E, h48km±20km, mb3.4/2, mbtmp3.8/7, ML3.4/3, MS3.5/3, Error ellipse: s-maj=14.1km s-min=9.8km az=39.0*
*ISK **25** 17:02:24.3,35˚.59N×31˚.65E, h87km, ML3.5/31*
*NIC **25** 17:02:25.2,35˚.74N×31˚.66E, h47km±8km, Ml3.0/14*
*GII **25** 17:02:26.6±0.0,35˚.375N±0˚.002×31˚.741E±0˚.001, h0km, Mws3.2, confirmed*
*AFAD **25** 17:02:28.4,35˚.90N×31˚.65E, h25km, ML3.4*

ISC 25 17:02:25.9±1.0,**35˚.61N**±0˚.02×**31˚.63E**±0˚.03,**h54**km±12km, **n137,** σ1°**36**/186,**MS3.5**/3,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.82**	**136**	P	**Pn**	**17 02 42.1**	**+0.7**
AKMS				S	**Sn**	**17 02 54.8**	**+2.0**
AKMS				AML	AML	17 02 58.7	
	2.9nm,0.3s						
AKMS				AML	AML	17 03 01.5	
	2.6nm,0.3s						
GAZI	**Gazipasa**	**0.83**	**41**	Pg	**Pn**	**17 02 40.9**	**-0.6**
GAZI	**Gazipasa**	**0.83**	**41**	P	**Pn**	**17 02 41.0**	**-0.5**
GAZI				S	**Sn**	**17 02 50.4**	**-2.6**
GAZI				IAML		17 02 52.0	
	comp=E,2µm,0.3s						
GAZI				IAML		17 02 52.0	
	comp=N,1µm,0.8s						
ALFC	**Alefka**	**0.91**	**120**	P	**Pn**	**17 02 42.4**	**-0.1**
ALFC				S	**Sn**	**17 02 55.7**	**+0.9**
ALFC				AML	AML	17 03 04.0	
	2.1nm,0.3s						
ALFC				AML	AML	17 03 04.8	
	1.8nm,0.4s						
ALAN	**Alanya-ANTALYA**	**1.00**	**19**	Pg	**Pn**	**17 02 43.2**	**-0.5**
NATA	**Nata**	**1.13**	**137**	P	**Pn**	**17 02 46.3**	**+0.8**
NATA				S	**Sn**	**17 03 02.7**	**+2.7**
NATA				AML	AML	17 03 15.7	
	4.4nm,0.7s						
NATA				AML	AML	17 03 15.7	
	4.4nm,0.8s						
MNVG	**Manavgat-Antal**	**1.19**	**352**	Pn	**Pn**	**17 02 47.3**	**+1.0**
BOZY	**Bozyazi-Mersin**	**1.20**	**65**	Pn	**Pn**	**17 02 46.3**	**0.0**
TROD	**Troodos**	**1.21**	**123**	P	**Pn**	**17 02 46.8**	**+0.1**
TROD				S	**Sn**	**17 03 03.1**	**+1.0**
TROD				AML	AML	17 03 13.3	
	0.5nm,0.3s						
TROD				AML	AML	17 03 16.9	
	0.7nm,0.6s						
AKUM	**Antalya-Kumluc**	**1.27**	**305**	P	**Pn**	**17 02 49.8**	**+2.5**
KEPZ	**Antalya-Kepez**	**1.29**	**359**	P	**Pn**	**17 02 47.7**	**+0.1**
KEPZ				S	**Sn**	**17 03 01.0**	**-2.8**
XYLS	**Xyliatos**	**1.30**	**117**	P	**Pn**	**17 02 47.6**	**-0.2**
XYLS				S	**Sn**	**17 03 04.8**	**+0.6**
XYLS				AML	AML	17 03 07.4	
	0.7nm,0.3s						
XYLS				AML	AML	17 03 08.0	
	0.8nm,0.3s						
TEKE	**Tekeli-Mersin**	**1.31**	**66**	Pn	**Pn**	**17 02 48.2**	**+0.3**
KEMT	**Kemer-ANTALYA**	**1.32**	**319**	Pn	**Pn**	**17 02 49.0**	**+1.0**
APOL	**The Sanctuary**	**1.38**	**133**	P	**Pn**	**17 02 49.1**	**+0.4**
APOL				S	**Sn**	**17 03 08.5**	**+2.6**
APOL				AML	AML	17 03 22.9	
	0.7nm,0.5s						
APOL				AML	AML	17 03 27.1	
	0.6nm,0.7s						
ERMK	**Ermenek**	**1.46**	**45**	P	**Pn**	**17 02 54.3**	**+4.2**
ERMK				S	**Sn**	**17 03 09.6**	**+1.4**
BERE	**Bereket-Mersin**	**1.48**	**60**	Pn	**Pn**	**17 02 50.7**	**+0.3**
BERE				Sn	**Sn**	**17 03 09.7**	**+0.9**
ANTB	**Antalya**	**1.51**	**329**	Pn	**Pn**	**17 02 51.5**	**+0.9**
ATHAL	**Athalassa**	**1.52**	**107**	P	**Pn**	**17 02 50.7**	**+0.1**
ATHAL				S	**Sn**	**17 03 10.1**	**+0.8**
ATHAL				AML	AML	17 03 19.9	
	0.8nm,0.8s						
ATHAL				AML	AML	17 03 21.0	
	1.2nm,0.5s		

OSC2				AML	AML	17 03 43.3		
	0.3nm,0.6s							
OSC2				AML	AML	17 03 46.3		
	0.3nm,0.4s							
APMY	**Acipayam-Deniz**	**2.64**	**315**	Pn	**Pn**	**17 03 06.9**	**+0.8**
YVAC	**Isparta, Yalva**	**2.67**	**353**	P	**Pn**	**17 03 08.9**	**+2.3**
KERG	**Konya-Eregli**	**2.70**	**47**	P	**Pn**	**17 03 08.6**	**+1.7**
ALIN	**Konya, Altinte**	**2.86**	**20**	P	**Pn**	**17 03 10.5**	**+1.3**
TAVA	**DENİZLİ_Tavas**	**2.87**	**311**	P	**Pn**	**17 03 10.3**	**+1.1**
DNIZ	**Denizli-Tavas-**	**2.90**	**315**	P	**Pn**	**17 03 11.5**	**+1.9**
KZIL	**AFYON_Kizioren**	**2.90**	**336**	P	**Pn**	**17 03 12.0**	**+2.4**
ARG	**Arkhangelos**	**2.91**	**283**	Pn	**Pn**	**17 03 09.9**	**+0.2**
KDHN	**Kadinhani**	**2.93**	**7**	P	**Pn**	**17 03 11.4**	**+1.3**
TURN	**Turunc**	**2.98**	**294**	Pn	**Pn**	**17 03 11.0**	**+0.4**
TURN	**Turunc**	**2.98**	**294**	P	**Pn**	**17 03 11.1**	**+0.6**
UCKU	**Afyonkarahisar**	**3.02**	**357**	P	**Pn**	**17 03 15.0**	**+3.7**
GULE	**Gulek**	**3.04**	**56**	P	**Pn**	**17 03 14.4**	**+2.8**
YER	**Yerkesik**	**3.10**	**300**	Pn	**Pn**	**17 03 13.1**	**+0.7**
CBEY	**Konya-Cihanbey**	**3.21**	**16**	P	**Pn**	**17 03 16.3**	**+2.5**
PASA	**Karahalli, USA**	**3.23**	**328**	P	**Pn**	**17 03 15.1**	**+1.0**
SULTU	**Buldan**	**3.35**	**318**	P	**Pn**	**17 03 16.5**	**+0.7**
BYAT	**Afyon-Bayat**	**3.37**	**351**	P	**Pn**	**17 03 18.7**	**+2.6**
KARP	**Karpathos**	**3.65**	**270**	P	**Pn**	**17 03 20.5**	**+0.7**
KARP				S	**Sn**	**17 04 01.3**	**-0.3**
YAYL	**Yayladag**	**3.66**	**82**	P	**Pn**	**17 03 21.5**	**+1.4**
USAK	**Uak-Merkez**	**3.74**	**327**	P	**Pn**	**17 03 21.8**	**+0.7**
HNTI	**Hanita**	**3.87**	**130**	P	**Pn**	**17 03 23.0**	**+0.3**
HNTI				S	**Sn**	**17 04 06.4**	**-0.6**
KIRS	**Kirsehir-Merke**	**3.96**	**27**	P	**Pn**	**17 03 25.3**	**+1.2**
KIRY	**Kiryat Shemona**	**4.04**	**125**	P	**Pn**	**17 03 25.7**	**+0.5**
KIRY				S	**Sn**	**17 04 10.9**	**-0.3**
MMA0B	**Mount Meron ar**	**4.05**	**129**	P	**Pn**	**17 03 25.8**	**+0.4**
MMA0B				S	**Sn**	**17 04 11.6**	**-0.1**
MMAI	**Mount Meron Ar**	**4.05**	**129**	P	**Pn**	**17 03 25.8**	**+0.3**
	24nm,0.3s,baz=316,slow=12,SNR=204							
MMAI				S	**Sn**	**17 04 11.0**	**-0.7**
	6.0nm,0.2s,baz=92,slow=29,SNR=9.5							
OFRI	**`Ofer**	**4.08**	**136**	P	**Pn**	**17 03 26.0**	**+0.3**
OFRI				S	**Sn**	**17 04 11.8**	**-0.4**
GEM	**Giv'at Ha'Em**	**4.10**	**125**	P	**Pn**	**17 03 26.4**	**+0.4**
GEM				S	**Sn**	**17 04 12.3**	**-0.4**
GEM	**Giv'at Ha'Em**	**4.10**	**125**	P	**Pn**	**17 03 26.7**	**+0.6**
GEM				S	**Sn**	**17 04 12.3**	**-0.4**
BLGI	**Bet Lehem HaGe**	**4.12**	**133**	P	**Pn**	**17 03 26.6**	**+0.4**
BLGI				S	**Sn**	**17 04 12.5**	**-0.5**
NATI	**Neve Ativ**	**4.12**	**123**	P	**Pn**	**17 03 26.7**	**+0.5**
NATI				S	**Sn**	**17 04 13.4**	**+0.2**
ZEFT	**Zefat**	**4.14**	**128**	P	**Pn**	**17 03 27.2**	**+0.6**
ZEFT				S	**Sn**	**17 04 13.6**	**-0.3**
KNHM	**Kefar Nahum**	**4.25**	**129**	P	**Pn**	**17 03 28.5**	**+0.5**
KNHM				S	**Sn**	**17 04 15.9**	**-0.5**
ANDN	**Andirin**	**4.27**	**61**	P	**Pn**	**17 03 30.2**	**+1.7**
KSHT	**Keshet**	**4.34**	**126**	P	**Pn**	**17 03 30.2**	**+0.9**
KSHT				S	**Sn**	**17 04 18.7**	**0.0**
SLTI	**Sal'it**	**4.39**	**139**	P	**Pn**	**17 03 28.8**	**-1.3**
SLTI				S	**Sn**	**17 04 16.8**	**-3.1**
BRTR	**Keskin Array B**	**4.41**	**21**	P	**Pn**	**17 03 31.1**	**+0.8**
	0.7nm,0.3s,baz=194,slow=16,SNR=12							
BRTR				S	**Sn**	**17 04 20.3**	**-0.1**
	2.2nm,0.7s,baz=206,slow=29,SNR=2.9							
	2.4nm,0.5s							
MMLI	**Mount Malkishu**	**4.46**	**134**	P	**Pn**	**17 03 31.4**	**+0.4**
MMLI				S	**Sn**	**17 04 20.9**	**-0.8**
SALP	**Salfit**	**4.61**	**139**	P	**Pn**	**17 03 33.6**	**+0.6**
SALP				S	**Sn**	**17 04 26.1**	**+0.8**
QRNJ	**Al-Qirein**	**4.63**	**134**	P	**Pn**	**17 03 34.5**	**+1.3**
ROII	**Roi**	**4.64**	**135**	P	**Pn**	**17 03 33.7**	**+0.3**
ROII				S	**Sn**	**17 04 25.3**	**-0.6**
RGMN	**Argaman**	**4.72**	**136**	P	**Pn**	**17 03 35.0**	**+0.6**
RGMN				S	**Sn**	**17 04 26.9**	**-0.9**
YITV	**Yitav**	**4.83**	**138**	P	**Pn**	**17 03 36.1**	**+0.2**
YITV				S	**Sn**	**17 04 29.8**	**-0.8**
JER	**Jerusalem**	**4.84**	**141**	P	**Pn**	**17 03 36.7**	**+0.4**
JER				S	**Sn**	**17 04 30.3**	**-0.9**
AMAZ	**Amatzia**	**4.90**	**145**	P	**Pn**	**17 03 37.4**	**+0.4**
AMAZ				S	**Sn**	**17 04 31.4**	**-1.1**
ALMO	**Almog**	**4.97**	**139**	P	**Pn**	**17 03 38.0**	**+0.1**
ALMO				S	**Sn**	**17 04 33.4**	**-0.7**
MZS	**Mizpe Shalem**	**5.11**	**141**	P	**Pn**	**17 03 40.4**	**+0.5**
MZS				S	**Sn**	**17 04 36.8**	**-0.7**
KZIT	**Kziot**	**5.23**	**153**	P	**Pn**	**17 03 42.6**	**+1.1**
	0.1nm577nm13nm,1.2s							
KZIT	**Kziot**	**5.23**	**153**	P	**Pn**	**17 03 41.6**	**0.0**
KZIT				S	**Sn**	**17 04 37.9**	**-2.6**
MSBI	**Mazada**	**5.30**	**143**	P	**Pn**	**17 03 43.3**	**+0.9**
	0.0nm6.6nm,0.6s							
MSBI	**Mazada**	**5.30**	**143**	P	**Pn**	**17 03 42.7**	**+0.3**
MSBI				S	**Sn**	**17 04 41.0**	**-1.0**
GHAJ	**Ghor Haditha**	**5.41**	**141**	P	**Pn**	**17 03 45.2**	**+1.3**
	0.1nm708nm16nm,0.5s							
GHAJ	**Ghor Haditha**	**5.41**	**141**	P	**Pn**	**17 03 44.1**	**+0.2**
GHAJ				S	**Sn**	**17 04 44.1**	**-0.7**
LISJ	**El Lisan**	**5.42**	**142**	P	**Pn**	**17 03 45.3**	**+1.3**
	0.1nm17nm,0.7s							
IDI	**Anoyia**	**5.51**	**269**	P	**Pn**	**17 03 43.8**	**-1.6**
	5.3nm,0.3s,baz=289,slow=18,SNR=16							
IDI				S	**Sn**	**17 04 42.5**	**-5.0**
	18nm,0.2s,baz=320,slow=16,SNR=9.7							
ASF	**Jabal al Asfar**	**5.56**	**127**	P	**Pn**	**17 03 46.7**	**+0.6**
	1.3nm,0.3s,baz=307,slow=4.6,SNR=9.2							
ASF				S	**Sn**	**17 04 48.8**	**+0.1**
	1.3nm,0.3s,baz=108,slow=17,SNR=1.0							
	2.7nm,0.3s							
ASF	**Jabal al Asfar**	**5.56**	**127**	P	**Pn**	**17 03 47.7**	**+1.6**
	0.4nm69nm,0.8s							
RMNI	**Mount Ramon**	**5.65**	**151**	P	**Pn**	**17 03 47.5**	**+0.2**
RMNI				S	**Sn**	**17 04 49.5**	**-1.4**
ZFRI	**Zfri**	**5.85**	**148**	P	**Pn**	**17 03 50.4**	**+0.4**
ZFRI				S	**Sn**	**17 04 54.6**	**-1.1**
HRFI	**Mount Harif**	**6.25**	**152**	P	**Pn**	**17 03 56.2**	**+0.6**
	0.1nm19nm,0.8s							
HRFI	**Mount Harif**	**6.25**	**152**	P	**Pn**	**17 03 55.9**	**+0.4**
HRFI				S	**Sn**	**17 05 04.5**	**-1.2**
YTVT	**Yotvata**	**6.39**	**152**	P	**Pn**	**17 03 57.8**	**+0.4**
YTVT				S	**Sn**	**17 05 08.2**	**-0.8**
EIL	**Elat**	**6.55**	**154**	P	**Pn**	**17 03 59.6**	**0.0**
	1.6nm,0.3s,baz=292,slow=2.5,SNR=21							
EIL				S	**Sn**	**17 05 10.4**	**-2.6**
	14nm,0.4s,baz=128,slow=8.8,SNR=11							
	4.9nm,0.4s							
EIL	**Elat**	**6.55**	**154**	P	**Pn**	**17 04 00.1**	**+0.5**
EIL	**Elat**	**6.55**	**154**	P	**Pn**	**17 04 00.2**	**+0.5**
EIL				S	**Sn**	**17 05 12.2**	**-0.8**
FINES	**FINESS Array B**	**26.09**	**354**	P	**P**	**17 07 52.6**	**-1.6**
	1.2nm,0.7s,baz=165,slow=10.0,SNR=14							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**39.09**	**57**	P	**P**	**17 09 48.0**	**+0.3**
	0.5nm,0.6s,baz=265,slow=9.2,SNR=6.5							
	0.5nm,0.6s							
SPITS	**Spitsbergen Ar**	**43.17**	**355**	LR	LR	17 30 21.1		
	comp=Z,52nm,20.5s,baz=275,slow=39							
TIXI	**Tiksi**	**58.85**	**22**	LR	LR	17 43 08.1		
	comp=Z,48nm,21.3s,baz=16,slow=42							
MA2	**Magadan**	**72.72**	**28**	LR	LR	17 52 57.0		
	comp=Z,22nm,18.3s,baz=64,slow=42							

*IPEC **25** 17:07:02.0±0.2,51°.45N×16°.18E,h1km,ML2.4/8,Error ellipse: s-maj=1.5km s-min=0.9km az=33.0*
*DNK **25** 17:07:02.1±1.6,51°.63N×15°.94E,h0km,ML2.7,Presumed earthquake*
*PRU **25** 17:07:04.8,51°.35N×16°.09E,h0km*

ISC 25 17:07:00.1±0.8,51°.55N±0°.03×16°.13E±0°.03,h0km,n40, σ1§33/70,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**17 07 14.4**	**+0.5**
KSP				*e*Sg	**Sg**	**17 07 23.0**	**-0.2**
CHVC	**Chvalec**	**0.97**	**183**	*e*PG	**Pg**	**17 07 19.2**	**+0.6**
CHVC				*e*SG	**Sg**	**17 07 30.1**	**-1.0**
	comp=Z,38nm,0.4s						
OSTC	**Ostas**	**1.00**	**177**	*e*PG	**Pg**	**17 07 19.9**	**+0.7**
OSTC				*e*SG	**Sg**	**17 07 31.2**	**-0.9**
	comp=Z,36nm,0.3s						
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**17 07 22.9**	**-0.4**
DPC				*e*SG	**Sg**	**17 07 37.7**	**-1.2**
	comp=Z,26nm,0.4s						
PIVO	**Bartosovice**	**1.39**	**169**	*e*Pg	**Pg**	**17 07 26.6**	**-0.2**
	baz=350						
PIVO				*e*Sg	**Sg**	**17 07 42.3**	**-2.5**
	41nm,0.3s,baz=350						
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG	**Pb**	**17 07 27.8**	**+0.3**
PVCC				*e*SG	**Sg**	**17 07 44.9**	**-0.9**
	comp=Z,96nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**245**	Pg	**Pn**	**17 07 30.0**	**+1.3**
BRG				Sg	**Sn**	**17 07 50.0**	**+0.7**
BRG				Amp		17 07 50.7	
	comp=Z,34nm,0.5s						
KRLC	**Kraliky**	**1.54**	**164**	*e*PG	**Pn**	**17 07 29.3**	**+0.5**
KRLC				*e*SG	**Sg**	**17 07 48.1**	**-1.3**
	comp=Z,33nm,0.5s						
RICC	**Richard**	**1.63**	**233**	*e*SG	**Sn**	**17 07 51.3**	**-0.5**
ANAC	**Anensky vrch**	**1.68**	**151**	*e*Sg	**Sn**	**17 07 51.4**	**-1.6**
	comp=Z,37nm,0.4s,baz=332						
RYBC	**Ceska Rybna**	**1.75**	**181**	*e*Pn	**Pn**	**17 07 32.0**	**+0.4**
	baz=2.4						
RYBC				*e*Sg	**Sn**	**17 07 53.5**	**-1.1**
	comp=Z,34nm,0.2s,baz=2.4						
PRU	**Pruhonice**	**1.86**	**213**	*e*SG	**Sg**	**17 07 58.6**	**-1.3**
	comp=Z,32nm,0.4s						
STEB	**Steborice**	**1.93**	**147**	*e*PG	**Pn**	**17 07 36.0**	**+1.9**
STEB				*e*SG	**Sb**	**17 08 00.1**	**-0.6**
	comp=Z,28nm,0.3s						
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**17 07 35.0**	**+0.3**
CLL				*e*Pg	**Pg**	**17 07 39.0**	**+1.1**
CLL				*i* x	x	17 07 42.1	
CLL				*e*Sg	**Sg**	**17 08 04.0**	**+0.6**
	comp=Z,18nm,0.5s						
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn	**Pn**	**17 07 35.2**	**+0.2**
	baz=333						
MORC				*e*Sg	**Sn**	**17 08 01.0**	**+0.3**
	comp=Z,20nm,0.6s,baz=333						
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*SG	**Sb**	**17 08 06.7**	**-0.2**
	comp=Z,17nm,0.5s						
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**17 07 39.2**	**+0.4**
	baz=353						
VRAC				*e*Sg	**Sb**	**17 08 09.7**	**-0.7**
	comp=Z,18nm,0.5s,baz=353						
TREC	**Trest**	**2.30**	**191**	*e*SG	**Sb**	**17 08 11.1**	**-0.3**
MAUC	**Maruska**	**2.44**	**153**	*e*SG	**Sg**	**17 08 17.3**	**-1.2**
ZVC	**Zvikov**	**2.45**	**211**	*e*PN	**Pn**	**17 07 41.7**	**+0.4**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**17 07 42.4**	**+0.4**
	baz=357						
KRUC				*e*Sg	**Sb**	**17 08 17.0**	**-0.1**
	comp=Z,15nm,0.5s,baz=357						
STAC	**Stalkov**	**2.58**	**192**	*e*Pn	**Pn**	**17 07 43.5**	**+0.4**
	baz=13						
STAC				*e*Sg	**Sg**	**17 08 20.1**	**-2.9**
	comp=Z,16nm,0.3s,baz=13						
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**17 07 52.6**	**+1.2**
OJC				*e*Sg	**Sg**	**17 08 28.1**	**+2.0**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	**17 07 45.4**	**+0.9**
NKC				*e*PG	**Pg**	**17 07 51.9**	**+0.5**
NKC				*e*SG	**Sg**	**17 08 25.8**	**-0.3**
	comp=Z,23nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**17 07 48.7**	**+0.8**
KHC				*e*PG	**Pb**	**17 07 54.0**	**+0.9**
KHC				*e*SN	**Sn**	**17 08 21.7**	**-2.0**
KHC				*e*SG	**Sg**	**17 08 32.0**	**-2.0**
	comp=Z,9.6nm,0.4s						
CKRC	**Cesky Krumlov**	**2.98**	**204**	*e*SG	**Sg**	**17 08 32.1**	**-3.5**
CONA	**Conrad Observa**	**3.63**	**183**	*e*Pn	**Pn**	**17 07 57.6**	**0.0**
	comp=Z,0.1nm,0.2s						
CONA				*e*Sg	**Sb**	**17 08 50.1**	**+0.3**
	comp=Z,1.8nm,0.2s						
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**17 07 58.4**	**+0.8**
BSD				*i* S	**Sn**	**17 08 39.4**	**-1.8**
BSD				IAML		17 08 41.8	
	comp=Z,8.7nm,0.8s						
RONA	**Rosalia, Austr**	**3.86**	**178**	*e*Sg	**Sb**	**17 08 58.1**	**+1.8**
	comp=Z,0.1nm,0.0s						
MOA	**Molln**	**3.90**	**199**	*e*Pn	**Pn**	**17 08 01.7**	**+0.5**
	comp=Z,0.7nm,0.2s						
MOA				*e*Sg	**Sb**	**17 08 58.0**	**+0.6**
	comp=Z,0.6nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.19**	**204**	*e*Sg	**Sb**	**17 09 06.8**	**+1.0**
	comp=Z,1.4nm,0.3s						
ARSA	**Arzberg**	**4.33**	**186**	*e*Pn	**Pn**	**17 08 07.7**	**+0.6**
	comp=Z,0.2nm,0.3s						
ARSA				*e*Sg	**Sb**	**17 09 11.6**	**+1.9**
	comp=Z,0.3nm,0.3s						
LUNU	**Lund**	**4.39**	**340**	*i* P	**Pn**	**17 08 07.9**	**0.0**
LUNU				P	Pb	17 08 08.8	-9.2
LUNU				*i* S	**Sn**	**17 08 59.1**	**-0.6**
BLEU	**Blekinge**	**4.76**	**358**	*i* P	**Pn**	**17 08 14.1**	**+1.0**
BLEU				P	Pb	17 08 14.7	-10
	baz=173						
BLEU				*i* S	**Sn**	**17 09 06.3**	**-2.5**
BLEU				S	Sb	17 09 07.6	-15
KBA	**Koelnbreinsper**	**4.84**	**203**	*e*Sg	**Sb**	**17 09 26.4**	**+2.0**
	comp=Z,0.1nm,0.2s						
BJUU	**Bjuv**	**4.89**	**339**	*i* P	**Pn**	**17 08 15.1**	**+0.4**
BJUU				P	Pb	17 08 15.3	-11
BJUU				S	**Sn**	**17 09 08.4**	**-3.6**
BJUU				*i* S	Sb	17 09 09.8	-16
SOKA	**Soboth**	**4.93**	**189**	Sg	**Sb**	**17 09 28.2**	**+1.0**
	comp=Z,0.1nm,0.1s						
DEL	**Delary**	**5.10**	**346**	*i* P	**Pn**	**17 08 18.4**	**+0.7**
DEL				*i* S	**Sn**	**17 09 14.4**	**-2.8**
OBKA	**Obir**	**5.16**	**192**	*e*Sg	**Sb**	**17 09 34.5**	**+0.9**
	comp=Z,1.0nm,0.4s						
VXJU	**Vaexsjoe**	**5.42**	**353**	P	**Pn**	**17 08 23.9**	**+1.8**

*NNC **25** 17:19:12.6±4.4,36°.57N×78°.58E,h0km,mb4.0,mpv3.9, Error ellipse: s-maj=36.7km s-min=32.5km az=110.0*
*IDC **25** 17:19:25.3±2.5,38°.03N×77°.90E,h0km,mb3.7/3, mbtmp3.7/7,ML3.2/4,MS3.8/1,Error ellipse: s-maj=32.8km s-min=27.5km az=11.0*

ISC 25 17:19:25.1±1.6,37°.6N±0°.1×78°.2E±0°.1,h17km,n15, σ2§56/18,mb3.7/3,6C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDOK	**Medeo**	**5.63**	**352**	P	**Pn**	**17 20 52.5**	**+4.4**
MDOK				S	**Sb**	**17 22 11.0**	**+0.7**
KNDC	**Almaty**	**5.70**	**351**	⇑P	**Pn**	**17 20 52.9**	**+3.9**
	59nm,0.9s						
KNDC				⇑S	**Sb**	**17 22 12.2**	**+0.1**
	98nm,0.8s						
AAK	**Ala-Archa**	**5.78**	**332**	Pn	**Pn**	**17 20 48.4**	**-1.7**
	0.8nm,0.3s,baz=156,slow=7.9,SNR=4.1						
AAK				Lg	Lg	17 22 12.8	
	1.7nm,0.3s,baz=44,slow=19,SNR=3.6						
	2.3nm,0.4s						
AAK	**Ala-Archa**	**5.78**	**332**	⇑P	**Pn**	**17 20 54.3**	**+4.2**
	5.8nm,0.7s						
AAK				⇑S	**Sb**	**17 22 13.9**	**-0.4**
	7.3nm,0.5s						
PDGK	**Podgornoye**	**5.83**	**10**	⇑P	**Pn**	**17 20 54.1**	**+3.4**
	5.0nm,0.5s						
PDGK				⇓S	**Sb**	**17 22 13.8**	**-1.9**
	52nm,1.1s						
KK31	**Karatay Array**	**8.03**	**316**	⇓P	**Pn**	**17 21 23.6**	**+2.7**
	0.2nm,0.2s,baz=124,slow=12,SNR=12						
KK31				⇑S	Sn	17 23 05.5	+14
	5.2nm,0.8s,baz=125,slow=20						
MK31	**Makanchi Array**	**9.70**	**17**	P	**Pn**	**17 21 44.9**	**+1.2**
	0.7nm,0.5s,baz=202,slow=12,SNR=41						
MKAR	**Makanchi Array**	**9.70**	**17**	Pn	**Pn**	**17 21 42.1**	**-1.7**
	0.8nm,0.3s,baz=195,slow=12,SNR=34						
MKAR				Sn	Sn	17 23 24.3	-7.9
	0.5nm,0.3s,baz=198,slow=22,SNR=3.0						
	1.3nm,0.3s						
KURBB	**Kurchatov Arra**	**13.04**	**1**	Pn	**Pn**	**17 22 26.7**	**-2.6**
	0.1nm,0.3s,baz=189,slow=11,SNR=3.4						
	0.3nm,0.2s						
ZALV	**Zalesovo Beam**	**17.00**	**14**	Pn	**P**	**17 23 21.6**	**-2.0**
	0.2nm,0.3s,baz=203,slow=12,SNR=7.8						
	0.9nm,0.4s						
AB31	**Akbulak array**	**17.59**	**317**	P	**P**	**17 23 29.4**	**-0.8**
	0.8nm,1.0s,baz=126,slow=13,SNR=4.3						
SONM	**Songino Array**	**23.02**	**55**	P	**P**	**17 24 30.8**	**+1.6**
	1.1nm,0.7s,baz=253,slow=8.9,SNR=5.7						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**42.43**	**336**	P	**P**	**17 27 17.1**	**-1.4**
	2.6nm,0.9s,baz=112,slow=9.3,SNR=4.2						
	2.6nm,0.9s						
GERES	**GERESS Array B**	**46.98**	**305**	P	**P**	**17 27 54.6**	**-0.5**
	0.4nm,0.5s,baz=76,slow=5.6,SNR=4.4						
	0.4nm,0.5s						
LEM	**Lembang**	**52.04**	**142**	LR	LR	17 54 00.8	
	comp=Z,90nm,20.5s,baz=176,slow=40						

*IDC **25** 17:21:55.9±2.2,17°.28S×178°.74W,h612km±21km,mb3.2/4, mbtmp4.1/5,Error ellipse: s-maj=112.3km s-min=27.3km az=155.0*
*NEIC **25** 17:21:57.2±1.4,17°.60S±0°.09×178°.9W±0°.1,h599km±11km, mb4.3/22,Error ellipse: s-maj=18.1km s-min=13.0km az=81.0*

ISC 25 17:21:56.3±0.8,17°.7S±0°.1×178°.8W±0°.1,h600km,n29, σ1§68/30,mb4.2/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.99**	**268**	P	**P**	**17 23 16.8**	**+1.3**
	27nm,0.6s,baz=90,slow=20,SNR=21						
MSVF	**Nonsavu**	**2.99**	**268**	P	**P**	**17 23 15.7**	**+0.2**
KOUNC	**Koumac, New Ca**	**16.23**	**257**	P	**P**	**17 25 16.1**	**+0.3**
RAR	**Rarotonga**	**18.30**	**104**	P	**P**	**17 25 39.1**	**+4.5**
HNR	**Honiara**	**22.20**	**289**	P	**P**	**17 26 09.3**	**-0.6**
LHI	**Lord Howe Isla**	**24.32**	**231**	P	**P**	**17 26 28.3**	**-0.2**
GVZ	**Greta Valley S**	**26.15**	**194**	P	**P**	**17 26 40.3**	**-4.1**
FOZ	**Fox Glacier**	**27.52**	**198**	P	**P**	**17 26 53.1**	**-3.3**
CTAO	**Charters Tower**	**33.11**	**260**	P	**P**	**17 27 44.5**	**-0.1**
CTAO				IAmb	IAmb	17 27 50.7	
	comp=Z,17nm,1.5s						
PMG	**Port Moresby**	**34.04**	**279**	P	**P**	**17 27 54.9**	**+2.4**
COEN	**Coen**	**36.72**	**270**	P	**P**	**17 28 16.2**	**+1.7**
COEN				IAmb	IAmb	17 28 17.6	
	comp=Z,9.2nm,1.1s						
TOO	**Toolangi**	**37.02**	**230**	P	**P**	**17 28 17.1**	**+0.3**
TOO				IAmb	IAmb	17 28 51.1	
	comp=Z,9.7nm,1.5s						
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**17 28 28.5**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=74,slow=8.1,SNR=6.4						
	comp=Z,2.4nm,0.5s						
INKA	**Innaminka**	**38.48**	**248**	P	**P**	**17 28 29.9**	**+1.2**
BBOO	**Buckleboo**	**43.18**	**241**	P	**P**	**17 29 05.7**	**-0.2**
BBOO				IAmb	IAmb	17 29 19.9	
	comp=Z,22nm,1.4s						
WR8	**Warramunga Arr**	**44.15**	**259**	P	**P**	**17 29 12.9**	**-0.6**
WR8				IAmb	IAmb	17 29 20.6	
	comp=Z,9.6nm,1.4s						
WB0	**Warramunga Arr**	**44.26**	**260**	P	**P**	**17 29 14.0**	**-0.3**
WB0				IAmb	IAmb	17 29 26.1	
	comp=Z,8.9nm,1.3s						
WB0				PcP	**PcP**	**17 30 44.4**	**-1.0**
WRA	**Warramunga Arr**	**44.30**	**259**	P	**P**	**17 29 14.3**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=92,slow=7.7,SNR=12						
	comp=Z,1.5nm,0.5s						
AS31	**Alice Springs**	**44.48**	**254**	P	**P**	**17 29 16.3**	**+0.2**
ASAR	**Alice Springs**	**44.48**	**254**	P	**P**	**17 29 16.5**	**+0.5**
	comp=Z,10nm,0.7s,baz=87,slow=8.6,SNR=255						
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**44.48**	**254**	P	**P**	**17 29 16.2**	**+0.1**
MIDW	**Midway**	**45.64**	**2**	P	**P**	**17 29 23.3**	**-1.2**
MTN	**Manton Dam**	**48.42**	**268**	P	**P**	**17 29 45.9**	**+0.2**
MTN				IAmb	IAmb	17 29 47.6	
	comp=Z,10nm,1.4s						
FORT	**Forrest**	**49.76**	**244**	P	**P**	**17 29 54.6**	**-0.7**
FORT				IAmb	IAmb	17 30 13.7	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**50.13**	**264**	P	**P**	**17 29 58.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**52.69**	**260**	P	**P**	**17 30 16.8**	**+0.2**
MBWA	**Marble Bar**	**57.76**	**256**	P	**P**	**17 30 51.0**	**-0.7**
MBWA				IAmb	IAmb	17 31 35.0	
	comp=Z,41nm,1.5s						
QSPA	**South Pole Qui**	**72.38**	**180**	P	**P**	**17 32 24.4**	**+1.9**
TXAR	**Lajitas Array**	**86.20**	**58**	P	**P**	**17 33 32.8**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=249,slow=4.4,SNR=4.1						
	comp=Z,0.3nm,0.7s						

*MDD **25** 17:28:28.0±0.6,35°.40N×3°.77W,h12km±6km,mb_Lg2.3/21, Error ellipse: s-maj=4.7km s-min=3.1km az=155.0*
*SFS **25** 17:28:28.3,35°.46N×3°.78W,h14km,ML2.4/12,ML2.5/12, MLv2.5/10*
*IGIL **25** 17:28:28.9,35°.45N×3°.70W,h18km*
*INMG **25** 17:28:29.5±1.5,35°.43N×3°.67W,h18km±9km,ML2.0,Error ellipse: s-maj=6.9km s-min=4.5km az=147.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*
*CNRM **25** 17:28:29.6,35°.33N×3°.96W,h32km,ML2.0*

**ISC 25 17:28:27.6±0.9,35°.43N±0

ETOB	**Tobarra**	**3.67**	**28**	Pn	**Pn**	**17 29 25.2**	**+2.5**
ETOB	**Tobarra**	**3.67**	**28**	Pn	**Pn**	**17 29 25.1**	**+2.5**
ETOB				*i* IVmb_Lg		17 30 27.9	
PVAQ	**Vaqueiros**	**3.74**	**303**	*eS*	**Sn**	**17 30 06.8**	**+0.2**
PVAQ				*i* IAML		17 30 08.6	
PVAQ				*i* IAML		17 30 10.1	
PVAQ	**Vaqueiros**	**3.74**	**303**	P	**Pn**	**17 29 25.2**	**+1.6**
PVAQ				S	**Sn**	**17 30 05.7**	**-0.9**
PBAR	**Barrancos**	**3.79**	**317**	*eP*	**Pn**	**17 29 27.4**	**+3.2**
PBAR				*eS*	**Sn**	**17 30 07.8**	**-0.1**
PBAR				*i* IAML		17 30 15.2	
PBDV	**Barranco-do-Ve**	**3.81**	**300**	*eP*	**Pn**	**17 29 25.8**	**+1.3**
PBDV				*eS*	**Sn**	**17 30 10.0**	**+1.5**
PCVE	**Castro Verde**	**4.08**	**304**	*eP*	**Pn**	**17 29 31.8**	**+3.7**
PCVE				*eS*	**Sn**	**17 30 14.6**	**-0.4**
PAB	**San Pablo**	**4.13**	**354**	Pn	**Pn**	**17 29 30.9**	**+1.9**
PAB				Sn	**Sn**	**17 30 17.0**	**+0.6**
PAB				*i* IVmb_Lg		17 30 33.0	
EBAD	**Badajoz**	**4.21**	**323**	Pn	**Pn**	**17 29 30.3**	**+0.3**
EBAD				Sn	**Sn**	**17 30 18.0**	**-0.2**
EBAD				*i* IVmb_Lg		17 30 41.0	
ESDC	**Sonseca Array**	**4.24**	**358**	Pn	**Pn**	**17 29 31.0**	**+0.5**
ESDC				Sn	**Sn**	**17 30 19.4**	**+0.3**
ESDC				*i* IVmb_Lg		17 30 39.3	
ESBB	**Sonseca Array**	**4.24**	**358**	Pn	**Pn**	**17 29 31.5**	**+1.1**
ESBB				Sn	**Sn**	**17 30 18.8**	**-0.2**
MESJ	**Messejana**	**4.31**	**305**	*eP*	**Pn**	**17 29 34.5**	**+3.2**
MORF	**Marmelete**	**4.36**	**297**	*eP*	**Pn**	**17 29 33.2**	**+1.2**
MORF	**Marmelete**	**4.36**	**297**	*eP*	**Pn**	**17 29 33.7**	**+1.6**
PTEO	**Sao Teotonio**	**4.51**	**299**	*eP*	**Pn**	**17 29 36.6**	**+2.5**
PLOUS	**Minas do Lousa**	**4.54**	**306**	*eP*	**Pn**	**17 29 37.5**	**+2.9**
PARRA	**Arraiolos**	**4.80**	**316**	*eP*	**Pn**	**17 29 40.7**	**+2.6**
PARRA				*eS*	**Sn**	**17 30 31.6**	**-1.1**
PARRA				*i* IAML		17 30 33.3	
PMRV	**Marv??o**	**4.92**	**325**	*eP*	**Pn**	**17 29 43.4**	**+3.7**
PMTG	**Montargil**	**5.08**	**317**	*eP*	**Pn**	**17 29 44.7**	**+2.8**
PSARD	**Sardoal**	**5.43**	**321**	*eP*	**Pn**	**17 29 50.1**	**+3.4**

DSN ***25*** *17:47:08.5±1.8,26°.98N×56°.19E,h3km±7km,ML3.4/11, Error ellipse: s-maj=14.4km s-min=8.3km az=57.0*
TEH ***25*** *17:47:08.8,26°.89N×56°.15E,h14km±32km,ML3.9, Presumed earthquake*
IDC ***25*** *17:47:13.6±1.1,26°.78N×56°.20E,h0km,mb3.7/15, mbtmp3.8/18,ML3.6/3,MS3.1/2,Error ellipse: s-maj=25.4km s-min=17.2km az=0.0*
OMAN ***25*** *17:47:13.3±0.1,26°.96N×56°.18E,h36km±21km,ml3.7/19, Error ellipse: s-maj=2.2km s-min=1.9km az=355.0*
NEIC ***25*** *17:47:13.2±2.8,26°.78N±0°.08×56°.3E±0°.1,h10km±1km, mb4.0/30,Error ellipse: s-maj=15.6km s-min=12.9km az=259.0*

ISC 25 17:47:11.2±0.5,**26°.85N**±0°.03×**56°.20E**±0°.06,**h10**km,**n100,**
σ1§**98**/74,**mb3.9**/22,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.55**	**358**	Pg	**Pg**	**17 47 18.7**	**-3.2**
IBND	**Bandar-abas**	**0.67**	**27**	Pg	**Pb**	**17 47 22.0**	**-3.0**
SHME	**Shamm**	**0.80**	**183**	*eP*	**Pn**	**17 47 26.6**	**-1.9**
	SNR=19						
SHME	**Shamm**	**0.80**	**183**	P	**Pn**	**17 47 27.3**	**-1.2**
	SNR=19						
SHME				S	**Sn**	**17 47 41.5**	**+1.0**
BANOM	**Banah**	**0.93**	**174**	*eP*	**Pn**	**17 47 28.9**	**-1.4**
	SNR=21						
BANOM				S	**Sn**	**17 47 43.7**	**0.0**
BANOM	**Banah**	**0.93**	**174**	P	**Pn**	**17 47 29.3**	**-1.0**
BANOM				S	**Sn**	**17 47 44.8**	**+1.0**
MASF	**Masafi**	**1.47**	**181**	P	**Pg**	**17 47 38.5**	**-1.0**
	SNR=17						
MSFE	**Esma-Masafi**	**1.48**	**181**	*eP*	**Pg**	**17 47 38.4**	**-1.3**
	SNR=17						
MDH	**Madha**	**1.55**	**177**	*eP*	**Pb**	**17 47 38.0**	**-1.9**
	SNR=6.9						
MDH	**Madha**	**1.55**	**177**	P	**Pg**	**17 47 39.2**	**-1.7**
	SNR=7.1						
MDH				S	**Sg**	**17 48 01.2**	**+0.1**
KHNJ	**Kahnooj**	**1.73**	**51**	Pg	**Pn**	**17 47 39.9**	**-1.5**
JASK	**Jask - Hormozg**	**1.79**	**123**	Pn	**Pn**	**17 47 41.6**	**-0.6**
UOSS	**Minazif**	**1.90**	**180**	*eP*	**Pb**	**17 47 44.1**	**-1.8**
	SNR=12						
UOSS	**Minazif**	**1.90**	**180**	P	**Pb**	**17 47 44.3**	**-1.7**
UOSS				S	**Sg**	**17 48 09.9**	**-2.3**
UOSS	**Minazif**	**1.90**	**180**		**Pb**	**17 47 43.8**	**-2.2**
UOSS	**Minazif**	**1.90**	**180**	Pn	**Pb**	**17 47 43.1**	**-2.9**
NAZ	**Nazwa, Dubai**	**1.92**	**195**	P	**Pb**	**17 47 44.7**	**-1.6**
NAZ	**Nazwa, Dubai**	**1.92**	**195**	P	**Pg**	**17 47 45.3**	**-2.7**
HATD	**Hatta, Dubai**	**2.02**	**182**	*eP*	**Pb**	**17 47 45.2**	**-2.8**
	SNR=22						
HATD	**Hatta, Dubai**	**2.02**	**182**	P	**Pb**	**17 47 46.4**	**-1.6**
	SNR=22						
ASHO	**Ashiyiah**	**2.16**	**183**	*eP*	**Pb**	**17 47 47.4**	**-3.1**
	SNR=11						
ASHO	**Ashiyiah**	**2.16**	**183**	P	**Pb**	**17 47 48.3**	**-2.2**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**2.17**	**195**	P	**Pb**	**17 47 48.1**	**-2.4**
ASUD	**Al Ashush, Dub**	**2.35**	**200**	P	**Pb**	**17 47 51.1**	**-2.5**
AJN	**Ajban**	**2.53**	**206**	P	**Pb**	**17 47 53.6**	**-3.1**
AJN				S	**Sb**	**17 48 24.5**	**-3.3**
ALNE	**Al Ain**	**2.81**	**188**	*eP*	**Pb**	**17 47 57.0**	**-4.5**
	SNR=5.8						
ALNE	**Al Ain**	**2.81**	**188**	P	**Pb**	**17 47 57.0**	**-4.5**
NGRK	**Negar Kerman**	**2.82**	**9**	Pn	**Pn**	**17 47 55.4**	**-1.4**
KBAM	**BAM**	**3.03**	**41**	Pn	**Pn**	**17 47 58.2**	**-1.1**
HOQ	**Hoqain**	**3.41**	**163**	P	**Pn**	**17 48 03.2**	**-1.2**
ARQ	**Araqi**	**3.51**	**175**	P	**Pn**	**17 48 06.2**	**+0.3**
	SNR=9.1						
BIDO	**Bidbid**	**3.75**	**152**	P	**Pn**	**17 48 08.9**	**-0.2**
CHBR	**Chabahar**	**4.05**	**107**	Pn	**Pn**	**17 48 13.2**	**-0.1**
SMDO	**Samad**	**4.13**	**156**	P	**Pn**	**17 48 16.1**	**+1.6**
BSY	**Bisya**	**4.19**	**167**	P	**Pn**	**17 48 18.0**	**+2.8**
WSAR	**Wadi Sarin**	**4.22**	**148**	P	**Pn**	**17 48 16.5**	**+0.9**
JMDO	**Jabal Madar**	**4.79**	**158**	P	Pb	17 48 28.3	-6.9
WBK	**Wadi Bani Khal**	**4.92**	**149**	P	**Pn**	**17 48 26.1**	**+0.8**
WBK	**Wadi Bani Khal**	**4.92**	**149**	Pn	**Pn**	**17 48 24.9**	**-0.3**
JLN	**Jalan Bani Buh**	**5.52**	**147**	P	Pn	17 48 37.5	+4.0
KLNJ	**Kolanjah**	**5.78**	**317**	Pn	**Pn**	**17 48 35.1**	**-2.3**
RAYN	**Ar Rayn**	**10.23**	**253**		**Pn**	**17 49 39.5**	**+1.3**
SHAA	**Shahritus**	**14.68**	**40**	P	**P**	**17 50 44.5**	**-0.8**
GEVA	**Gevas**	**15.89**	**319**	Pn	**P**	**17 50 57.9**	**-1.0**
GEVA				IAmb	IAmb	17 51 04.2	
	comp=Z,16nm,1.9s						
GNI	**Garni**	**16.32**	**327**	Pn	**P**	**17 51 06.9**	**+3.2**
	comp=Z,0.6nm,0.3s,baz=172,slow=13,SNR=3.2						
	comp=Z,4.4nm,0.5s						
GAR	**Garm**	**16.92**	**41**	Pn	**P**	**17 51 07.7**	**-2.5**
GAR				IAmb	IAmb	17 51 15.8	
	comp=Z,10nm,1.2s						
ASF	**Jabal al Asfar**	**17.61**	**292**	P	P	17 51 22.5	+4.6
	comp=Z,0.2nm,0.3s,baz=100,slow=11,SNR=1.7						
	comp=Z,0.7nm,0.4s						
BTK	**Batken**	**17.92**	**39**		**P**	**17 51 21.7**	**+0.4**
EIL	**Elat**	**18.92**	**283**	P	**Pn**	**17 51 37.0**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=90,slow=16,SNR=1.6						
	comp=Z,1.9nm,0.7s						
ARPR	**Arapgir-MALATY**	**19.29**	**314**	P	**Pn**	**17 51 36.9**	**-0.5**
ARPR				IAmb	IAmb	17 51 51.0	
	comp=Z,6.0nm,1.0s						
KK31	**Karatay Array**	**19.97**	**32**		**Pn**	**17 51 43.5**	**-1.7**
KKAR	**Karatay Array**	**19.97**	**32**	P	**Pn**	**17 51 42.8**	**-2.4**
ARSB	**Arslanbob**	**19.99**	**40**	P	**Pn**	**17 51 43.1**	**-2.6**
KBZ	**Khabaz**	**19.99**	**331**	P	Pn	17 51 49.9	+4.4
	comp=Z,2.8nm,0.9s,baz=146,slow=6.8,SNR=4.1						
	comp=Z,2.8nm,0.9s						
KIV	**Kislovodsk**	**20.26**	**331**	P	Pn	17 51 47.6	-1.2
KIV				IAmb	IAmb	17 52 06.3	
	comp=Z,8.9nm,0.8s						
AAK	**Ala-Archa**	**21.70**	**39**	P	P	17 52 08.3	+5.8
	comp=Z,1.3nm,0.4s,baz=208,slow=4.2,SNR=4.3						
	comp=Z,1.3nm,0.4s						
AAK	**Ala-Archa**	**21.70**	**39**	P	**P**	**17 52 02.9**	**+0.3**
AAK				IAmb	IAmb	17 52 13.0	
	comp=Z,4.5nm,1.1s						
NRN	**Naryn**	**21.84**	**43**	P	**P**	**17 52 04.0**	**-0.2**
BOOM	**Boomskoye usch**	**22.44**	**41**		**P**	**17 52 10.2**	**-0.2**
AB31	**Akbulak array**	**22.56**	**6**		**P**	**17 52 12.0**	**+0.6**
ABKAR	**Akbulak array**	**22.56**	**6**		**P**	**17 52 13.2**	**+1.8**
BR131	**Keskin Array S**	**22.74**	**310**	P	**P**	**17 52 15.0**	**+1.4**
BR131				IAmb	IAmb	17 52 29.6	
	comp=Z,12nm,1.6s						
BRTR	**Keskin Array B**	**22.74**	**310**	P	P	17 52 18.6	+5.1
	comp=Z,1.3nm,0.9s,baz=110,slow=11,SNR=6.0						
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	**22.74**	**310**	P	**P**	**17 52 15.6**	**+2.0**
KDJ	**Kajisay**	**22.96**	**43**		**P**	**17 52 15.7**	**-0.3**
KDJ				IAmb	IAmb	17 52 24.1	
	comp=Z,5.7nm,0.8s						
TARG	**Taragay, Kyrgy**	**23.13**	**45**		**P**	**17 52 17.7**	**-0.3**
TARG				IAmb	IAmb	17 52 42.2	
	comp=Z,5.7nm,1.4s						
PDGK	**Podgornoye**	**25.05**	**43**	P	**P**	**17 52 36.2**	**+0.5**
BVAR	**Borovoye Array**	**28.21**	**18**	P	P	17 53 09.1	+5.1
	comp=Z,1.3nm,0.7s,baz=190,slow=4.5,SNR=9.5						
	comp=Z,1.3nm,0.7s						
MAKZ	**Makanchi**	**28.47**	**39**	P	**P**	**17 53 08.0**	**+1.6**
MAKZ				IAmb	IAmb	17 53 12.7	
	comp=Z,3.5nm,1.2s						
MKAR	**Makanchi Array**	**28.64**	**39**	P	P	17 53 13.3	+5.4
	comp=Z,0.8nm,0.7s,baz=224,slow=8.3,SNR=9.3						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**28.64**	**39**	P	**P**	**17 53 10.1**	**+2.2**
KURBB	**Kurchatov Arra**	**29.23**	**30**	P	P	17 53 18.0	+5.0
	comp=Z,0.9nm,0.3s,baz=230,slow=8.4,SNR=2.0						
KAAM	**Kaadhehdhoo**	**30.79**	**146**	P	**P**	**17 53 27.3**	**+0.2**
PDG	**Podgorica**	**33.83**	**307**	P	P	17 53 56.5	+2.8
ZAA0	**Zalesovo Array**	**34.32**	**30**	P	P	17 54 00.7	+3.0
ZAA0				IAmb	IAmb	17 54 11.3	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**34.32**	**30**	P	P	17 54 01.9	+4.2
	comp=Z,0.5nm,0.4s,baz=243,slow=9.8,SNR=4.3						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**34.32**	**30**	P	**P**	**17 53 59.6**	**+1.9**
MORE	**Moreh**	**34.40**	**86**	P	**P**	**17 54 00.0**	**+1.3**
MORE				IAmb	IAmb	17 54 41.1	
	comp=Z,3.0nm,1.3s						
TIP	**Timpagrande**	**35.02**	**301**	P	P	17 54 06.7	+2.6
MBAR	**Mbarara**	**36.69**	**226**	LR	LR	18 08 40.0	
	comp=Z,26nm,21.8s,baz=104,slow=35						
NRCA	**Norcia**	**38.34**	**306**	P	P	17 54 35.2	+2.9
PRED	**Cave del Predi**	**38.83**	**312**	P	P	17 54 39.1	+2.7
PRED				IAmb	IAmb	17 54 41.9	
	comp=Z,2.9nm,0.7s						
GERES	**GERESS Array B**	**39.43**	**315**	P	P	17 54 44.8	+3.4
	comp=Z,0.1nm,0.5s,baz=126,slow=6.3,SNR=2.1						
	comp=Z,0.1nm,0.5s						
GERES	**GERESS Array B**	**39.43**	**315**	P	P	17 54 44.2	+2.8
FINES	**FINESS Array B**	**40.06**	**338**	P	P	17 54 50.0	+3.6
	comp=Z,1.1nm,0.6s,baz=147,slow=11,SNR=7.4						
	comp=Z,1.1nm,0.6s						
SENIN	**Lac Senin/Sane**	**43.04**	**310**	P	P	17 55 13.3	+2.0
SENIN				IAmb	IAmb	17 55 17.9	
	comp=Z,3.5nm,1.1s						
ECH	**Echery**	**43.47**	**313**	P	P	17 55 17.3	+2.8
ECH				IAmb	IAmb	17 55 59.4	
	comp=Z,6.8nm,1.4s						
HFS	**Hagfors**	**44.06**	**331**	P	P	17 55 21.8	+2.7
	comp=Z,0.4nm,0.4s,baz=115,slow=7.0,SNR=4.6						
HFS				LR	LR	18 13 39.0	
	comp=Z,29nm,19.1s,baz=117,slow=36						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**44.17**	**48**	P	P	17 55 24.0	+3.8
	comp=Z,0.4nm,0.7s,baz=262,slow=8.6,SNR=2.4						
	comp=Z,0.4nm,0.7s						
SONM	**Songino Array**	**44.17**	**48**	P	**P**	**17 55 22.1**	**+1.9**
SONM				IAmb	IAmb	17 55 41.6	
	comp=Z,2.4nm,1.4s						
NOA	**NORSAR Array B**	**45.57**	**331**	P	P	17 55 33.6	+2.5
	comp=Z,1.3nm,1.0s,baz=120,slow=7.7,SNR=2.4						
	comp=Z,1.3nm,1.0s						
ARCES	**ARCESS Array B**	**46.31**	**346**	P	P	17 55 40.8	+4.0
TORD	**Torodi Ar. Bea**	**52.63**	**266**	P	P	17 56 30.9	+5.0
	comp=Z,1.0nm,0.5s,baz=66,slow=7.6,SNR=7.4						
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**52.63**	**266**	P	P	17 56 30.1	+4.2
YSS	**Yuzhno-Sakhali**	**68.65**	**47**	P	P	17 58 17.9	+3.2
ILAR	**Eielson Array**	**86.92**	**10**	P	P	17 59 59.4	+3.3
	comp=Z,0.2nm,0.7s,baz=316,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**86.92**	**10**	P	**P**	**17 59 58.2**	**+2.1**
WRA	**Warramunga Arr**	**88.83**	**113**	P	P	18 00 09.5	+3.6
	comp=Z,0.9nm,1.0s,baz=324,slow=3.9,SNR=4.7						
	comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**88.83**	**113**	P	**P**	**18 00 06.3**	**+0.3**
ASAR	**Alice Springs**	**90.28**	**116**	P	P	18 00 16.1	+3.5
	comp=Z,0.6nm,0.9s,baz=308,slow=4.5,SNR=4.9						
	comp=Z,0.6nm,0.9s						

NEIC ***25*** *17:48:01.5±2.3,26°.36N±0°.08×56°.5E±0°.1,h10km±1km, mb4.0/27,Error ellipse: s-maj=16.1km s-min=12.5km az=101.0*
IDC ***25*** *17:48:07.8±1.3,26°.91N×56°.02E,h0km,mb4.0/11, mbtmp4.0/14,ML3.8/3,Error ellipse: s-maj=30.3km s-min=19.8km az=170.0*
DSN ***25*** *17:48:11.2±1.8,26°.86N×56°.61E,h4km±9km,ML3.5/5, Error ellipse: s-maj=32.0km s-min=7.4km az=93.0*

ISC 25 17:48:07.7±0.5,**27°.00N**±0°.05×**56°.05E**±0°.08,**h10**km,**n55,**
σ2§**78**/50,**mb3.9**/15,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHME	**Shamm**	**0.95**	**175**	P	**Pn**	**17 48 28.2**	**+1.2**
BANOM	**Banah**	**1.09**	**168**	P	**Pn**	**17 48 30.5**	**+1.4**
BANOM				S	**Sn**	**17 48 44.2**	**0.0**
MSFE	**Esma-Masafi**	**1.63**	**176**	P	**Pg**	**17 48 39.6**	**+0.6**
MDH	**Madha**	**1.71**	**172**	P	**Pg**	**17 48 40.1**	**-0.3**
UOSS	**Minazif**	**2.05**	**176**		Pn	17 48 27.4	-15
RAYN	**Ar Rayn**	**10.15**	**252**	Pn	**Pn**	**17 50 29.8**	**-3.8**
SHAA	**Shahritus**	**14.66**	**41**		**Pn**	**17 51 36.2**	**+1.0**
GEVA	**Gevas**	**15.70**	**319**	Pn	**P**	**17 51 52.2**	**-1.0**
CHGR	**Chuyangaron**	**16.00**	**40**	Pn	**Pn**	**17 51 50.4**	**-2.5**
CHGR				IAmb	IAmb	17 51 59.5	
	comp=Z,19nm,1.5s						
GNI	**Garni**	**16.13**	**327**	Pn	**Pn**	**17 51 56.8**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=113,slow=7.7,SNR=1.5						
	comp=Z,3.9nm,0.5s						
GURO	**Guroymak-BITLI**	**16.46**	**318**		**P**	**17 52 02.0**	**+0.4**
MANEM	**Manem**	**16.87**	**48**	Pn	**Pn**	**17 51 58.5**	**-5.7**
MANEM				IAmb	IAmb	17 52 10.2	
	comp=Z,16nm,1.0s						
GAR	**Garm**	**16.90**	**41**	Pn	**Pn**	**17 52 00.9**	**-3.5**
GAR				IAmb	IAmb	17 52 09.6	
	comp=Z,16nm,1.0s						
ASF	**Jabal al Asfar**	**17.43**	**292**	P	**Pn**	**17 52 11.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=109,slow=13,SNR=3.5						
	comp=Z,1.1nm,0.5s						
BTK	**Batken**	**17.89**	**40**	P	**Pn**	**17 52 12.2**	**-4.5**
KOPT	**Kop Dagi**	**18.32**	**319**	P	**Pn**	**17 52 21.8**	**-0.3**
GHAJ	**Ghor Haditha**	**18.39**	**288**	P	P	**17 52 21.4**	**-1.4**
GHAJ				IAmb	IAmb	17 52 59.5	
	comp=Z,16nm,1.2s						
GAZ	**Gaziantep**	**18.88**	**307**	P	**Pn**	**17 52 29.2**	**+0.3**
GAZ				IAmb	IAmb	17 52 42.1	
	comp=Z,8.8nm,1.0s						
ARPR	**Arapgir-MALATY**	**19.09**	**314**	P	**Pn**	**17 52 31.9**	**+0.5**
ARPR				IAmb	IAmb	17 52 40.6	
	comp=Z,9.1nm,1.1s						
KBZ	**Khabaz**	**19.80**	**331**	P	**Pn**	**17 52 41.5**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=172,slow=13,SNR=4.0						
	comp=Z,2.3nm,0.8s						
KK31	**Karatay Array**	**19.91**	**32**		**P**	**17 52 35.2**	**-4.2**
KKAR	**Karatay Array**	**19.91**	**32**		**P**	**17 52 34.5**	**-5.0**
ARSB	**Arslanbob**	**19.96**	**40**	P	**P**	**17 52 34.9**	**-5.3**
ARSB				IAmb	IAmb	17 52 49.3	
	comp=Z,11nm,1.2s						
KIV	**Kislovodsk**	**20.07**	**331**	P	**P**	**17 52 42.2**	**+0.9**
BNN	**Bunyan**	**20.62**	**310**	P	**P**	**17 52 47.5**	**+0.2**
BNN				IAmb	IAmb	17 53 12.1	
	comp=Z,8.8nm,1.1s						
AAK	**Ala-Archa**	**21.67**	**39**	P	**P**	**17 53 01.0**	**+2.4**
	comp=Z,1.5nm,0.5s,baz=215,slow=7.9,SNR=4.8						
	comp=Z,1.5nm,0.5s						
AAK	**Ala-Archa**	**21.67**	**39**	P	**P**	**17 52 53.5**	**-5.1**
AAK				IAmb	IAmb	17 53 13.9	
	comp=Z,4.0nm,0.8s						
NRN	**Naryn**	**21.83**	**44**		**P**	**17 52 55.9**	**-4.6**
BOOM	**Boomskoye usch**	**22.41**	**41**		**P**	**17 53 03.3**	**-3.4**
BOOM				IAmb	IAmb	17 53 12.1	
	comp=Z,4.2nm,0.9s						
AB31	**Akbulak array**	**22.43**	**7**	P	**P**	**17 53 07.5**	**+1.0**
AB31				IAmb	IAmb	17 53 26.4	
	comp=Z,5.6nm,1.1s						
ABKAR	**Akbulak array**	**22.43**	**7**	P	**P**	**17 53 07.5**	**+1.0**
BR131	**Keskin Array S**	**22.54**	**310**	P	**P**	**17 53 08.9**	**+0.9**
BRTR	**Keskin Array B**	**22.54**	**310**	P	**P**	**17 53 10.9**	**+2.9**
	comp=Z,3.4nm,1.0s,baz=130,slow=12,SNR=5.8						
	comp=Z,3.4nm,1.0s						
BRTR	**Keskin Array B**	**22.54**	**310**	P	**P**	**17 53 09.7**	**+1.7**
KDJ	**Kajisay**	**22.95**	**43**		**P**	**17 53 08.3**	**-4.0**
TARG	**Taragay, Kyrgy**	**23.12**	**45**	P	**P**	**17 53 10.7**	**-3.6**
TARG				IAmb	IAmb	17 53 36.0	
	comp=Z,5.0nm,1.0s						
PDGK	**Podgornoye**	**25.03**	**43**	P	**P**	**17 53 27.5**	**-4.5**
BVAR	**Borovoye Array**	**28.11**	**19**	P	**P**	**17 54 02.0**	**+2.4**
	comp=Z,2.7nm,0.8s,baz=202,slow=7.5,SNR=8.3						
	comp=Z,2.7nm,0.8s						
MAKZ	**Makanchi**	**28.44**	**39**	P	P	17 53 58.1	-4.5
MAKZ				IAmb	IAmb	17 54 06.5	
	comp=Z,4.0nm,1.1s						
MKAR	**Makanchi Array**	**28.61**	**39**	P	**P**	**17 54 06.4**	**+2.3**
	comp=Z,2.1nm,0.9s,baz=228,slow=8.4,SNR=7.6						
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**28.61**	**39**	P	P	17 53 59.5	-4.6
KURBB	**Kurchatov Arra**	**29.17**	**30**	P	**P**	**17 54 12.2**	**+3.3**
	comp=Z,1.5nm,0.2s,baz=226,slow=8.8,SNR=2.0						
	comp=Z,1.5nm,0.2s						
ZAA0	**Zalesovo Array**	**34.26**	**30**	P	P	17 54 49.7	-4.0
ZALV	**Zalesovo Beam**	**34.26**	**30**	P	**P**	**17 54 55.3**	**+1.6**
	comp=Z,1.4nm,0.6s,baz=246,slow=9.6,SNR=5.7						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**34.26**	**30**	P	P	17 54 49.2	-4.5
FINES	**FINESS Array B**	**39.88**	**338**	P	**P**	**17 55 43.6**	**+2.3**
	comp=Z,0.8nm,0.6s,baz=133,slow=11,SNR=5.0						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**39.88**	**338**	P	**P**	**17 55 42.4**	**+1.0**
SONM	**Songino Array**	**44.17**	**48**	P	**P**	**17 56 20.1**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=252,slow=7.6,SNR=4.5						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**44.17**	**48**	P	P	17 56 11.6	-5.2
ARCES	**ARCESS Array B**	**46.14**	**346**	P	**P**	**17 56 33.6**	**+1.7**
TORD	**Torodi Ar. Bea**	**52.51**	**266**	P	**P**	**17 57 22.9**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=62,slow=7.6,SNR=7.5						
	comp=Z,1.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**52.51**	**266**	P	**P**	**17 57 19.2**	**-2.2**
TORD				IAmb	IAmb	17 57 23.8	
	comp=Z,1.6nm,0.8s						
YSS	**Yuzhno-Sakhali**	**68.65**	**47**	P	**P**	**17 59 09.3**	**-1.8**
ILAR	**Eielson Array**	**86.80**	**10**	P	**P**	**18 00 52.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=326,slow=4.5,SNR=5.0						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**90.47**	**116**	P	**P**	**18 01 11.8**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=310,slow=5.0,SNR=6.4						
	comp=Z,0.6nm,0.8s						

MOS ***25*** *18:23:06.7±1.4,34°.23N×25°.97E,h9km,mb4.5/29,Error ellipse: s-maj=5.8km s-min=3.4km az=93.7*
IDC ***25*** *18:23:07.5±0.7,34°.27N×25°.89E,h0km,mb4.1/19, mbtmp4.0/32,ML3.6/11,MS3.6/40,Error ellipse: s-maj=15.0km s-min=10.7km az=15.0*
NEIC ***25*** *18:23:08.8±1.8,34°.31N±0°.06×25°.95E±0°.04,h10km±1km, mb4.3/68,Error ellipse: s-maj=11.0km s-min=5.5km az=188.0*
ISK ***25*** *18:23:08.8,34°.30N×25°.92E,h8km,ML3.8/8*
GII ***25*** *18:23:08.7±0.0,34°.388N±0°.001×25°.943E±0°.001,h0km, Mws4.3,confirmed*
GFZ ***25*** *18:23:11.0±0.2,34°.N±3°.×2°.6E±°,h10km,M4.1/29, mb4.3/29*
ATH ***25*** *18:23:11.4,34°.47N×25°.96E,h6km±2km,ML3.9/13, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
THE ***25*** *18:23:12.2,35°.N±3°.×2°.6E±°,h5km±3km,M3.6/8,MLh3.6/8*
AFAD ***25*** *18:23:18.2,35°.02N×26°.36E,h7km±4km,ML3.6*

ISC 25 18:23:07.8±1.2,**34°.32N**±0°.03×**25°.97E**±0°.02,**h4**km±7km,
n470,σ1§**53**/493,**mb4.3**/

AKAS Sn **Sn** **18 24 46.5 +0.6**
AKAS Kas 3.54 56 P **Pn** **18 24 06.3 +2.7**
AKAS S **Sn** **18 24 44.9 -1.0**
AKAS Kas 3.54 56 P **Pb** **18 24 09.9 -1.1**
AYDN Tasoluk 3.68 24 P **Pn** **18 24 08.2 +2.7**
AYDN Tasoluk 3.68 24 P **Pn** **18 24 07.2 +1.7**
KNIK Mula-Seydike 3.88 48 P **Pn** **18 24 11.5 +3.3**
KNIK S **Sn** **18 24 56.1 +1.9**
CAEL Denizli, Camel 3.91 43 P **Pn** **18 24 12.6 +3.9**
KARY Karystos 3.91 342 P **Pn** **18 24 10.0 +1.4**
MET2 Kameni Chora, 3.92 328 P **Pn** **18 24 10.3 +1.6**
TAVA DENIZLI_Tavas 3.95 36 P **Pn** **18 24 13.7 +4.5**
ESEN Aydn-Nazilli 3.98 28 P **Pn** **18 24 12.0 +2.5**
ELL Elmali 4.03 52 P **Pn** **18 24 10.1 -0.2**
ELL Elmali 4.03 52 **Pn** **18 24 10.1 -0.2**
ELL Elmali 4.03 52 P **Pn** **18 24 13.1 +2.7**
CHOS Chios island 4.07 1 P **Pn** **18 24 12.5 +1.7**
PTL Penteli 4.10 336 P **Pn** **18 24 12.6 +1.4**
DION Dionisos Attik 4.10 337 P **Pn** **18 24 12.7 +1.5**
AKUM Antalya-Kumluc 4.10 60 P **Pn** **18 24 13.7 +2.5**
GOLH Golhisar 4.13 44 P **Pn** **18 24 14.5 +2.8**
GOLH S **Sn** **18 25 06.1 +5.6**
DNIZ Denizli-Tavas- 4.14 36 P **Pb** **18 24 19.2 -2.0**
PYL PYLOS 4.30 308 P **Pn** **18 24 14.6 +0.7**
KIRA zmir-Kiraz 4.34 26 P **Pn** **18 24 17.4 +2.8**
ITM Ithomi 4.36 312 **Pn** **18 24 14.9 +0.2**
ACOR Acrocorinthos 4.36 326 P **Pn** **18 24 17.7 +2.9**
SULTU Buldan 4.37 30 P **Pn** **18 24 17.4 +2.5**
VIL2 Platees 4.46 332 P **Pn** **18 24 16.6 +0.4**
KORT Korkueli 4.46 52 P **Pb** **18 24 23.0 -3.8**
INCE Denizli-Bozkur 4.47 40 P **Pn** **18 24 18.8 +2.4**
MANT Manisa 4.66 26 **Pn** **18 24 18.9 -0.2**
KTTT Salihli 4.69 21 P **Pn** **18 24 20.7 +1.4**
PASA Karahalli, USA 4.93 34 P **Pn** **18 24 24.5 +1.9**
USAK Uak-Merkez 5.03 28 P **Pn** **18 24 26.1 +2.1**
BALB Balikesir 5.53 16 Pn **Pn** **18 24 31.2 +0.4**
AGG Agios Georgios 5.53 329 P Pn 18 24 36.7 +5.8
CSS Mathiatis 6.11 82 **Pn** **18 24 39.7 +0.9**
CSS Mathiatis 6.11 82 P **Pn** **18 24 41.1 +2.3**
CSS Mathiatis 6.11 82 P **Pn** **18 24 38.8 +0.1**
CSS S **Sn** **18 25 48.7 -0.4**
LIT Litokhoron 6.41 335 P **Pn** **18 24 42.7 -0.2**
LIT Litokhoron 6.41 335 Pn **Pn** **18 24 42.7 -0.2**
ALN Alexandroupoli 6.57 1 P **Pn** **18 24 45.6 +0.5**
ALN Alexandroupoli 6.57 1 Pn **Pn** **18 24 45.6 +0.5**
RDO Rodhopi 6.83 357 Pn **Pn** **18 24 50.1 +1.5**
SRS Serrai 7.05 345 P **Pn** **18 24 55.1 +3.4**
SRS Serrai 7.05 345 P **Pn** **18 24 55.1 +3.4**
CY604 RAF Akrotiri, 7.07 87 Pn **Pn** **18 24 52.6 +0.9**
KNT Kendrikon 7.25 341 P Pn 18 24 59.7 +5.2
KEK Kerkira 7.30 319 Pn **Pn** **18 24 55.8 +0.6**
MDUB Mudurnu 7.42 33 Pn **Pn** **18 24 58.2 +1.3**
OFRI `Ofer 7.72 100 P **Pn** **18 25 01.3 +0.4**
OFRI S **Sn** **18 26 29.1 +0.2**
SLTI Sal'it 7.87 103 P **Pn** **18 25 03.2 +0.1**
SLTI S **Sn** **18 26 33.1 +0.5**
KZIT Kziot 7.88 113 P **Pn** **18 25 03.0 -0.1**
0.4nm620nm40nm,0.7s
KZIT S **Sn** **18 26 32.1 -0.7**
0.4nm620nm40nm,0.7s
KZIT Kziot 7.88 113 P **Pn** **18 25 04.7 +1.5**
KZIT Kziot 7.88 113 P **Pn** **18 25 03.6 +0.5**
KZIT S **Sn** **18 26 33.5 +0.7**
MMA0B Mount Meron ar 7.97 97 P **Pn** **18 25 04.9 +0.4**
MMA0B S **Sn** **18 26 35.6 +0.5**
MMAI Mount Meron Ar 7.97 97 Pn **Pn** **18 25 05.0 +0.6**
3.4nm,0.3s,baz=283,slow=8.5,SNR=16
MMAI Sn **Sn** **18 26 36.9 +1.8**
2.5nm,0.3s,baz=301,slow=20,SNR=2.3
2.1nm,0.3s
AMAZ Amatzia 8.02 108 P **Pn** **18 25 05.7 +0.7**
AMAZ S **Sn** **18 26 36.4 +0.3**
SALP Salfit 8.05 104 P **Pn** **18 25 05.0 -0.5**
843nm80nm,0.8s
SALP S **Sn** **18 26 37.3 +0.3**
843nm80nm,0.8s
MMLI Mount Malkishu 8.13 101 P **Pn** **18 25 06.8 +0.2**
MMLI S **Sn** **18 26 38.9 +0.1**
KNHM Kefar Nahum 8.15 97 P **Pn** **18 25 06.8 0.0**
KNHM S **Sn** **18 26 38.9 -0.3**
GEM Giv'at Ha'Em 8.15 95 P **Pn** **18 25 07.3 +0.5**
GEM S Sb 18 26 57.6 -9.2
GEM Giv'at Ha'Em 8.15 95 P **Pn** **18 25 07.0 +0.2**
GEM S **Sn** **18 26 39.4 0.0**
JER Jerusalem 8.15 106 P **Pn** **18 25 07.6 +0.7**
JER S **Sn** **18 26 40.2 +0.6**
BRTR Keskin Array B 8.17 46 Pn **Pn** **18 25 09.8 +2.6**
0.1nm,0.3s,baz=216,slow=14,SNR=6.4
BRTR LR LR 18 29 11.5
comp=Z,845nm,18.9s,baz=236,slow=44
1.7nm,0.9s
BRTR Keskin Array B 8.17 46 *i* P **Pn** **18 25 09.8 +2.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 8.17 46 **Pn** **18 25 08.8 +1.6**
BR131 Keskin Array S 8.17 46 *de* P **Pn** **18 25 06.6 -0.6**
BR131 Keskin Array S 8.17 46 **Pn** **18 25 07.7 +0.5**
NATI Neve Ativ 8.20 95 P **Pn** **18 25 08.2 +0.7**
NATI S **Sn** **18 26 41.2 +0.7**
ROII Roi 8.23 102 P **Pn** **18 25 08.4 +0.5**
ROII S **Sn** **18 26 41.6 +0.2**
YTIR Yattir 8.24 108 P **Pn** **18 25 08.9 +0.7**
comp=Z,22nm,1.1s
YTIR S **Sn** **18 26 41.2 -0.6**
comp=Z,22nm,1.1s
YITV Yitav 8.28 104 P **Pn** **18 25 09.1 +0.6**
YITV S **Sn** **18 26 42.3 -0.1**
QRNJ Al-Qirein 8.28 101 P **Pn** **18 25 09.5 +0.9**
comp=Z,41µmcomp=Z,3µm,0.7s
QRNJ S **Sn** **18 26 44.6 +2.1**
comp=Z,41µmcomp=Z,3µm,0.7s
RGMN Argaman 8.29 102 P **Pn** **18 25 09.3 +0.6**
RGMN S **Sn** **18 26 42.5 -0.1**
RMNI Mount Ramon 8.30 114 P **Pn** **18 25 09.7 +0.7**
RMNI S **Sn** **18 26 43.9 +0.6**
UJAP Al Uja 8.31 104 P **Pn** **18 25 09.8 +0.9**
comp=Z,831nmcomp=Z,41nm,1.0s
UJAP S **Sn** **18 26 42.5 -0.7**
comp=Z,831nmcomp=Z,41nm,1.0s
UJAP Al Uja 8.31 104 P **Pn** **18 25 09.8 +0.9**
ALMO Almog 8.36 105 P **Pn** **18 25 10.1 +0.5**
ALMO S **Sn** **18 26 44.6 +0.1**
MZS Mizpe Shalem 8.39 106 P **Pn** **18 25 10.3 +0.3**
MZS S **Sn** **18 26 45.6 +0.4**
MSBI Mazada 8.45 108 P **Pn** **18 25 11.8 +0.9**
comp=Z,6.9nm,1.1s
MSBI Mazada 8.45 108 P **Pn** **18 25 11.8 +0.9**
MSBI Mazada 8.45 108 P **Pn** **18 25 11.6 +0.7**
MSBI S **Sn** **18 26 47.3 +0.6**
LISJ El Lisan 8.58 108 P **Pn** **18 25 15.7 +3.1**
comp=Z,26nm,0.9s
GHAJ Ghor Haditha 8.62 108 **Pn** **18 25 13.8 +0.6**
GHAJ Ghor Haditha 8.62 108 P **Pn** **18 25 15.3 +2.1**
comp=Z,1µmcomp=Z,65nm,0.7s
GHAJ Ghor Haditha 8.62 108 P **Pn** **18 25 15.1 +1.9**
GHAJ Ghor Haditha 8.62 108 P **Pn** **18 25 13.7 +0.4**
GHAJ S **Sn** **18 26 51.0 +0.2**
ZFRI Zfri 8.64 113 P **Pn** **18 25 13.9 +0.3**
ZFRI S **Sn** **18 26 51.7 +0.3**
HRFI Mount Harif 8.79 117 P **Pn** **18 25 17.0 +1.4**
comp=Z,522nmcomp=Z,60nm,1.0s
HRFI Mount Harif 8.79 117 P **Pn** **18 25 17.4 +1.8**
HRFI Mount Harif 8.79 117 P **Pn** **18 25 16.2 +0.5**
HRFI S **Sn** **18 26 56.0 +0.9**
TIP Timpagrande 8.84 306 ⇑P **Pn** **18 25 18.6 +2.3**
TIP Timpagrande 8.84 306 **Pn** **18 25 16.3 -0.1**
TIP Timpagrande 8.84 306 P **Pn** **18 25 19.9 +3.6**
YTVT Yotvata 8.88 117 P **Pn** **18 25 17.4 +0.5**
YTVT S **Sn** **18 26 58.1 +0.7**
EIL Elat 8.92 119 Pn **Pn** **18 25 18.9 +1.5**
comp=Z,3.8nm,0.3s,baz=270,slow=6.4,SNR=24
EIL Sn **Sn** **18 27 01.9 +3.4**
comp=Z,1.9nm,0.3s,baz=78,slow=23,SNR=3.0
comp=Z,16nm,0.5s
EIL Elat 8.92 119 P **Pn** **18 25 18.5 +1.1**
comp=Z,29nm,0.6s
EIL Elat 8.92 119 P **Pn** **18 25 18.9 +1.5**
EIL Elat 8.92 119 P **Pn** **18 25 18.2 +0.8**
EIL S **Sn** **18 26 59.0 +0.5**
CEL Celeste 9.03 299 **Pn** **18 25 18.7 -0.3**
CEL Celeste 9.03 299 P **Pn** **18 25 19.5 +0.5**
BNN Bunyan 9.14 57 **Pn** **18 25 20.9 +0.4**

ASF Jabal al Asfar 9.40 100 Pn **Pn** **18 25 24.6 +0.5**
comp=Z,0.8nm,0.3s,baz=276,slow=9.8,SNR=6.3
ASF Sn **Sn** **18 27 14.8 +4.6**
comp=Z,0.2nm,0.3s,baz=322,slow=21,SNR=1.7
comp=Z,2.7nm,0.5s
ASF Jabal al Asfar 9.40 100 P **Pn** **18 25 24.8 +0.7**
comp=Z,111nm,2.0s
PDG Podgorica 9.66 329 ⇓P Pn 18 25 33.2 +5.7
PDG Podgorica 9.66 329 Pn **Pn** **18 25 27.5 0.0**
RAFF Raffo Rosso 9.87 290 **Pn** **18 25 30.5 +0.2**
VAE Valguarnera 9.89 292 Pn **Pn** **18 25 31.8 +1.0**
comp=Z,10.0nm,0.6s,baz=180,slow=10,SNR=4.9
VAE Sn **Sn** **18 27 27.3 +5.1**
comp=Z,1.5nm,0.3s,baz=3.8,slow=14,SNR=1.6
MARCO Tramutola 10.05 309 P **Pn** **18 25 35.4 +2.4**
ISR Istrita 10.80 2 ⇑P Pn 18 25 56.5 +13
HERR Herculane 10.90 347 ⇓P Pn 18 25 54.9 +10
MDVR Moldovita 10.95 344 ⇓P Pn 18 25 55.3 +10
SGRT San Giovanni R 10.96 316 Pn **Pn** **18 25 45.2 -0.1**
ARR Arges 11.09 355 ⇑P Pn 18 25 59.6 +12
VOIR Voir 11.13 357 ⇓P Pn 18 26 00.9 +13
MLR Muntele Rosu 11.16 360 Pn **Pn** **18 25 51.1 +2.9**
comp=Z,0.1nm,0.3s,baz=159,slow=13,SNR=2.0
MLR LR LR 18 30 44.4
comp=Z,187nm,19.3s,baz=184,slow=41
comp=Z,1.3nm,0.7s
MLR Muntele Rosu 11.16 360 Pn **Pn** **18 25 49.0 +0.8**
PAOL Paolisi 11.24 310 Pn **Pn** **18 25 49.9 +0.7**
DOPR Dopca 11.65 358 ⇑P Pn 18 26 08.0 +13
BZS Buzias 11.77 345 ⇓P Pn 18 26 03.6 +7.2
BZS Buzias 11.77 345 ⇓P Pn 18 26 03.6 +7.3
KELT Kelkit 12.08 57 P **Pn** **18 26 05.6 +4.8**
INTR Introdacqua 12.20 313 Pn **Pn** **18 26 03.5 +1.1**
MARR Marisel-Cluj 12.54 351 ⇑P Pn 18 26 15.0 +8.1
BIZ Bicaz 12.61 0 ⇓P Pn 18 26 20.9 +13
DRGR 12.71 350 ⇓P Pn 18 26 16.3 +7.1
DRGR 12.71 350 ⇓P Pn 18 26 16.3 +7.1
NRCA Norcia 13.16 314 Pn **Pn** **18 26 16.0 +0.6**
FDMO Fiordimonte 13.29 315 Pn **Pn** **18 26 18.3 +1.1**
BURAR Bucovina Array 13.30 358 P **Pn** **18 26 17.9 +0.6**
BURAR Bucovina Array 13.30 358 Pn **Pn** **18 26 17.9 +0.6**
BUR08 Bucovina Ar. S 13.33 358 Pn **Pn** **18 26 19.0 +1.2**
CESX Cesi 13.35 312 Pn **Pn** **18 26 16.8 -1.2**
KEST Kesra 13.70 281 Pn **Pn** **18 26 25.4 +2.5**
comp=Z,0.1nm,0.3s,baz=188,slow=2.9,SNR=4.2
KEST LR LR 18 32 17.1
comp=Z,204nm,21.4s,baz=76,slow=40
KEST Kesra 13.70 281 Pn **Pn** **18 26 22.2 -0.6**
SOC Sochi 14.13 45 *eP* **Pn** **18 26 29.6 +1.0**
SOC *e* 18 29 07.4
SOC MLR MLR
comp=Z,194nm,14.0s
GEVA Gevas 14.35 69 Pn **Pn** **18 26 30.2 -1.5**
HAKT HAKKARI 14.73 72 P **P** **18 26 42.1 -1.3**
KOLS Kolonicke sedl 14.86 350 *eP* **P** **18 26 45.3 +0.8**
KOLS pmax pmax
comp=Z,2.0nm,0.8s
KOLS Kolonicke sedl 14.86 350 P **P** **18 26 44.5 -0.1**
KOLS Kolonicke sedl 14.86 350 *eP* **P** **18 26 45.3 +0.8**
SOKA Soboth 14.87 329 *eP* **P** **18 26 46.1 +1.4**
comp=Z,2.1nm,0.8s
OBKA Obir 14.95 328 *eP* **P** **18 26 46.9 +1.3**
comp=Z,1.8nm,0.6s
SABO M.te Sabotino 14.98 325 Pn **Pn** **18 26 39.5 -0.8**
EPOS Posof 15.04 57 P **P** **18 26 45.2 -1.4**
ARSA Arzberg 15.13 332 Pn **Pn** **18 26 41.1 -1.1**
ARSA Arzberg 15.13 332 *eP* **P** **18 26 48.6 +1.1**
comp=Z,0.5nm,0.6s
RONA Rosalia, Austr 15.22 334 *eP* **P** **18 26 49.1 +0.6**
comp=Z,2.0nm,0.7s
ZCCA Zocca 15.31 315 Pn **Pn** **18 26 44.4 -0.2**
MODS Modra-Piesok 15.47 338 *eP* **P** **18 26 51.1 -0.2**
MODS pmax pmax
comp=Z,8.0nm,1.4s
MODS Modra-Piesok 15.47 338 *eP* **P** **18 26 51.1 -0.2**
STHS Stebnicka Huta 15.49 348 *eP* **P** **18 26 52.3 +0.8**
STHS pmax pmax
comp=Z,6.0nm,0.6s
STHS Stebnicka Huta 15.49 348 *eP* **P** **18 26 52.3 +0.8**
CONA Conrad Observa 15.57 334 *eP* **P** **18 26 54.1 +1.7**
comp=Z,0.7nm,0.6s
STAL STALIGIAL 15.62 324 **Pn** **18 26 47.7 -0.9**
STAL IAmb IAmb 18 27 11.0
comp=Z,14nm,1.2s
CIMO Cimolais 15.78 323 **P** **18 26 53.2 -1.6**
KBA Koelnbreinsper 15.91 327 *eP* **P** **18 26 57.9 +1.5**
comp=Z,1.6nm,0.7s
SHA1 Shidzhatmaz 16.00 49 ⇑ *eP* **Pn** **18 26 55.1 +1.3**
GNI Garni 16.04 63 Pn **P** **18 26 58.0 +0.2**
comp=Z,0.4nm,0.3s,baz=166,slow=6.7,SNR=3.8
GNI LR LR 18 34 32.1
comp=Z,598nm,18.1s,baz=275,slow=42
comp=Z,1.8nm,0.3s
ABTA Abfaltersbach 16.06 325 *ePn* **Pn** **18 26 56.3 +1.9**
comp=Z,0.1nm,0.3s
MOA Molln 16.12 331 *eP* **P** **18 26 59.7 +1.2**
comp=Z,2.3nm,0.9s
KIV Kislovodsk 16.13 48 ⇓P **P** **18 27 02.2 +3.5**
KIV Kislovodsk 16.13 48 *eP* **Pn** **18 26 55.2 -0.1**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV Kislovodsk 16.13 48 **Pn** **18 26 56.2 +0.9**
KIV IAmb IAmb 18 27 23.0
comp=Z,31nm,0.8s
KIV Kislovodsk 16.13 48 P **P** **18 27 01.5 +2.8**
KVAR Kislovodsk Arr 16.13 48 Pn **P** **18 27 00.2 +1.4**
baz=271,slow=22
KVAR LR LR 18 34 59.7
comp=Z,138nm,19.3s,baz=83,slow=44
comp=Z,5.1nm,0.9s
KBZ Khabaz 16.14 49 Pn **P** **18 26 58.9 +0.2**
comp=Z,0.1nm,0.3s,baz=260,slow=8.0,SNR=16
comp=Z,12nm,1.0s
KBZ Khabaz 16.14 49 ⇓ *eP* **P** **18 26 58.9 +0.2**
KBZ pmax pmax
comp=Z,27nm,1.1s
MAUC Maruska 16.20 341 *eP* **P** **18 26 58.2 -1.2**
BIOA Bad Ischl, Aus 16.25 329 *ePn* **P** **18 26 59.1 -0.9**
comp=Z,1.0nm,0.5s
SALO Salr 16.33 318 **Pn** **18 26 58.4 +0.6**
SALO IAmb IAmb 18 27 24.1
comp=Z,26nm,0.9s
KRUC Moravsky 16.36 337 P **P** **18 27 01.5 +0.4**
KRUC Moravsky 16.36 337 *ePN* **Pn** **18 26 59.0 +0.9**
KRUC Moravsky 16.36 337 P **P** **18 27 01.5 +0.4**
LESA Schwarzleotal 16.48 327 *eP* **P** **18 27 03.8 +1.2**
comp=Z,2.3nm,0.5s
VRAC Vranov 16.51 338 Pn **P** **18 27 02.4 -0.4**
comp=Z,1.8nm,0.3s,baz=162,slow=7.4,SNR=5.3
VRAC Vranov 16.51 338 P **P** **18 27 03.4 +0.6**
OJC Ojcow 16.53 346 P **Pn** **18 27 01.2 +0.9**
OJC Ojcow 16.53 346 Pn **Pn** **18 27 01.2 +0.9**
KIEV Kiev 16.54 7 ⇑P **P** **18 27 05.0 +2.0**
KIEV Kiev 16.54 7 P **P** **18 27 04.4 +1.3**
KIEV Kiev 16.54 7 **P** **18 27 04.4 +1.3**
KIEV Kiev 16.54 7 P **P** **18 27 04.2 +1.1**
OKC Ostrava-Krasne 16.55 342 AMS AMS 18 35 00.0
comp=Z,200nm,14.2s
AKASG Malin Array Be 16.55 7 Pn **P** **18 27 02.5 -0.7**
comp=Z,1.2nm,0.3s,baz=197,slow=11,SNR=13
AKASG LR LR 18 33 07.4
comp=Z,198nm,21.6s,baz=184,slow=36
comp=Z,1.5nm,0.7s
AKASG Malin Array Be 16.55 7 P **P** **18 27 02.5 -0.7**
AKASG pmax pmax
comp=Z,3.0nm,1.0s
AKBB Malin Array Si 16.55 7 *eP* **Pn** **18 27 00.3 -0.2**
AKBB Malin Array Si 16.55 7 **Pn** **18 27 01.0 +0.4**
MORC Moravsky Berou 16.65 341 ⇑P **Pn** **18 27 02.7 +0.8**
MORC Moravsky Berou 16.65 341 ⇑P **Pn** **18 27 02.7 +0.8**
MORC Moravsky Berou 16.65 341 Pn **Pn** **18 27 02.1 +0.2**
MORC Moravsky Berou 16.65 341 P **Pn** **18 26 59.5 -2.4**
WTTA Wattenberg 16.85 324 P **P** **18 27 07.7 +1.0**
WTTA Wattenberg 16.85 324 *ePn* **P** **18 27 06.9 +0.2**
comp=Z,4.5nm,1.4s
WTTA Wattenberg 16.85 324 P **P** **18 27 07.7 +1.0**
TREC Trest 16.86 336 *eP* **P** **18 27 07.8 +1.1**
TREC Trest 16.86 336 *eP* **P** **18 27 07.8 +1.1**
CKRC Cesky Krumlov 16.88 333 *eP* **P** **18 27 06.9 -0.1**
CKRC MLR MLR
comp=Z,300nm,10.9s
CKRC Cesky Krumlov 16.88 333 *eP* **P** **18 27 06.9 -0.1**
CKRC AMS AMS 18 35 00.0
comp=Z,300nm,10.9s

WATA Walderalm 16.93 325 *ePn* **P** **18 27 07.7 +0.1**
comp=Z,1.1nm,0.5s
SQTA Sankt Quirin 17.02 324 *ePn* **P** **18 27 08.1 -0.5**
comp=Z,1.2nm,0.6s
FUORN Ofenpass-Fuorn 17.10 321 **Pn** **18 27 08.4 +0.5**
FUORN IAmb IAmb 18 27 23.4
comp=Z,24nm,1.2s
FUORN Ofenpass-Fuorn 17.10 321 P **P** **18 27 11.5 +1.9**
FETA Feichten 17.13 322 *ePn* **P** **18 27 09.4 -0.4**
comp=Z,3.7nm,1.0s
KRLC Kraliky 17.13 340 *eP* **P** **18 27 10.4 +0.6**
KRLC MLR MLR
comp=Z,200nm,10.9s
KRLC Kraliky 17.13 340 *eP* **P** **18 27 10.4 +0.6**
KRLC AMS AMS 18 35 10.0
comp=Z,200nm,10.9s
GEC2 GERESS Array S 17.14 332 **Pn** **18 27 08.9 +0.8**
GERES GERESS Array B 17.14 332 P **P** **18 27 09.8 0.0**
baz=150,slow=11,SNR=13
comp=Z,1.9nm,0.9s
GERES GERESS Array B 17.14 332 **P** **18 27 09.3 -0.6**
MOTA Moosalm 17.16 324 *ePn* **P** **18 27 09.9 -0.3**
comp=Z,0.1nm,0.1s
SBF Sospel 17.23 309 *eP* **P** **18 27 15.1 +4.3**
SBF pmax pmax
comp=Z,16nm,1.1s
DAVOX Davos/Dischmat 17.41 320 P **P** **18 27 13.6 +0.7**
comp=Z,0.2nm,0.3s,baz=133,slow=11,SNR=6.2
DAVOX LR LR 18 35 52.7
comp=Z,151nm,21.1s,baz=120,slow=44
comp=Z,2.1nm,0.9s
KHC Kasperske Hory 17.42 332 *eP* **P** **18 27 15.6 +2.7**
KHC MLR MLR
comp=Z,300nm,14.1s
KHC Kasperske Hory 17.42 332 *eP* **P** **18 27 15.6 +2.7**
KHC AMS AMS 18 35 20.0
comp=Z,300nm,14.1s
RETA Reutte 17.43 324 *ePn* **P** **18 27 13.2 +0.1**
comp=Z,3.6nm,1.4s
TUE Stuetta 17.50 319 **P** **18 27 13.7 -0.2**
TUE Stuetta 17.50 319 P **P** **18 27 16.3 +2.3**
DPC Dobruska-Polom 17.51 339 *eP* **P** **18 27 15.1 +1.2**
DPC MLR MLR
comp=Z,200nm,10.5s
DPC Dobruska-Polom 17.51 339 *eP* **P** **18 27 15.1 +1.2**
DPC AMS AMS 18 35 30.0
comp=Z,200nm,10.5s
DPC Dobruska-Polom 17.51 339 P **P** **18 27 14.5 +0.6**
ISO Isola 17.62 310 P **P** **18 27 16.2 +1.0**
ISO Isola 17.62 310 P **P** **18 27 16.2 +1.0**
WET Wettzell 17.71 331 P **P** **18 27 17.3 +1.2**
WET Wettzell 17.71 331 P **P** **18 27 17.3 +1.2**
OSTC Ostas 17.73 339 AMS AMS 18 35 30.0
comp=Z,200nm,18.3s
DAVA Damuels 17.74 322 *ePn* **P** **18 27 17.2 +0.7**
comp=Z,5.3nm,0.8s
DAVA Damuels 17.74 322 P **P** **18 27 18.2 +1.7**
PRU Pruhonice 17.77 335 AMS AMS 18 37 30.0
comp=Z,300nm,10.5s
BNALP Bannalp 18.25 319 P **P** **18 27 26.5 +4.3**
LPG La Plagne 18.45 313 *eP* **Pn** **18 27 29.1 +4.6**
LPG pmax pmax
comp=Z,6.0nm,1.1s
LPL La Plagne 18.47 313 *eP* **Pn** **18 27 29.1 +4.4**
LPL pmax pmax
comp=Z,17nm,1.7s
GRB4 Grafenberg Arr 18.50 329 P **Pn** **18 27 26.1 +1.2**
AKT Akhty 18.58 61 *eP* **P** **18 27 25.9 +0.1**
AKT *eS* **Sn** **18 30 55.8 +1.8**
AKT pmax pmax
comp=Z,2.0nm,0.4s
AKT MLR MLR
comp=Z,393nm,19.0s
SENIN Lac Senin/Sane 18.58 316 **P** **18 27 25.2 -0.8**
NKC Novy Kostel 18.74 332 AMS AMS 18 36 10.0
comp=Z,300nm,13.2s
GRA1 Grafenberg Arr 18.82 329 P **P** **18 27 28.2 -0.1**
GRF Grafenberg Arr 18.82 329 P **P** **18 27 28.2 -0.1**
GRF pmax pmax
comp=Z,9.0nm,0.9s
MAK Makhachkala 18.87 56 *c i* P **P** **18 27 25.9 -3.0**
MAK *eS* **Sn** **18 30 56.5 -4.4**
MAK pmax pmax
comp=Z,51nm,0.4s
MAK MLR MLR
comp=Z,124nm,18.0s
TANN Tannenbergstha 18.88 333 P **Pn** **18 27 31.2 +1.7**
STU Stuttgart 19.07 324 P **P** **18 27 30.8 -0.3**
STU pmax pmax
comp=Z,11nm,0.9s
STU Stuttgart 19.07 324 P **P** **18 27 30.8 -0.3**
STU IAmb IAmb 18 27 33.7
comp=Z,11nm,0.9s
BFO Black Forest 19.21 322 P **P** **18 27 32.6 0.0**
BFO pmax pmax
comp=Z,12nm,1.2s
BFO Black Forest 19.21 322 P **P** **18 27 32.6 0.0**
BFO IAmb IAmb 18 27 57.9
comp=Z,12nm,1.2s
VORD Divnogorie 19.26 26 *eP* **Pn** **18 27 35.7 +1.7**
VORD pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 19.41 335 *eP* **Pn** **18 27 36.0 +0.1**
CLL Collm 19.41 335 P **P** **18 27 34.6 -0.2**
CLL Collm 19.41 335 *eP* **Pn** **18 27 36.0 +0.1**
CLL *i* x x 18 27 43.2
comp=Z,4.0nm,0.9s
CLL *e* PPP PPP 18 27 57.0
CABF La Chapelle 19.42 315 *eP* **Pn** **18 27 38.6 +2.5**
CABF pmax pmax
comp=Z,16nm,1.2s
VSR Storozhevoye 19.42 26 *eP* **Pn** **18 27 38.9 +2.9**
VSR pmax pmax
comp=Z,6.0nm,0.5s
HINF Hinteralfeld 19.67 319 *eP* **P** **18 27 37.4 -0.2**
HINF pmax pmax
comp=Z,15nm,1.6s
SSB Saint Sauveur 19.71 310 P **P** **18 27 38.7 +0.6**
SSB pmax pmax
comp=Z,8.0nm,1.4s
SSB Saint Sauveur 19.71 310 P **P** **18 27 38.7 +0.6**
ECH Echery 19.75 320 P **P** **18 27 37.9 -0.6**
ECH pmax pmax
comp=Z,6.0nm,1.0s
ECH Echery 19.75 320 P **P** **18 27 37.9 -0.6**
SUW Suwalki 19.79 355 P **P** **18 27 38.1 -0.8**
SUW Suwalki 19.79 355 P **P** **18 27 38.1 -0.8**
CDF Champ du Feu 19.80 321 *eP* **P** **18 27 40.0 +0.8**
CDF pmax pmax
comp=Z,7.0nm,0.9s
VORR Voronezh 19.81 25 *eP* **P** **18 27 39.9 +0.8**
VORR pmax pmax
comp=Z,27nm,0.4s
RAYN Ar Rayn 20.17 117 P **P** **18 27 44.0 +0.8**
RAYN pmax pmax
comp=Z,18nm,1.4s
RAYN Ar Rayn 20.17 117 **P** **18 27 44.0 +0.8**
RAYN IAmb IAmb 18 27 50.3
comp=Z,18nm,1.4s
RAYN Ar Rayn 20.17 117 P Pn 18 27 48.5 +3.4
MNK Minsk 20.23 3 *i* P **P** **18 27 42.6 -1.0**
comp=Z,5.0nm,0.7s,baz=185
MNK *i* PP **PnPn** **18 27 58.3 -1.7**
MNK *i* PPP PPP 18 28 05.8
MNK *i* S **S** **18 31 28.2 -2.7**
MNK *i* SS **SnSn** **18 31 46.9 -1.1**
MNK *i* SSS SSS 18 31 58.7
MNK *i* LQ LQ 18 33 46.1
MNK *i* LR LR 18 35 17.6
MNK *i* LRM MLR 18 36 28.6
comp=N,126nm,15.4s
MNK *i* LRM MLR 18 36 34.4
comp=E,81nm,14.7s
MNK *i* LRM MLR 18 36 34.9
comp=Z,75nm,12.6s
MNK Minsk 20.23 3 *i* P **P** **18 27 42.6 -1.0**
MNK *i* PPP PPP 18 28 05.8
MNK *i* S **S** **18 31 28.2 -2.7**
MNK *i* SSS SSS 18 31 58.7
MNK pmax pmax
comp=Z,5.0nm,0.7s
MNK MLR MLR
comp=N,126nm,15.0s
MNK MLR MLR
comp=E,81nm,15.0s

MNK MLR MLR
comp=Z,75nm,13.0s
CORI Orista 20.26 299 P P 18 27 43.7 -0.4
CORI IAmb IAmb 18 28 13.6
comp=Z,17nm,1.2s
VRH Novokhopyorsk 20.39 29 *eP* Pn 18 27 49.9 +2.5
VRH pmax pmax
comp=Z,25nm,0.8s
TNS Taunus Mts 20.43 326 P Pn 18 27 47.7 -0.3
TNS Taunus Mts 20.43 326 P Pn 18 27 47.7 -0.3
LPSR Galich'ya Gora 20.50 23 *eP* Pn 18 27 48.7 0.0
LPSR pmax pmax
comp=Z,10.0nm,0.6s
NACGM Naroch 20.59 1 *eP* **P 18 27 48.8 +1.2**
comp=Z,5.0nm,0.9s,baz=182
GTTG Gottingen 20.75 331 P P 18 27 49.6 +0.2
CEST Esterri de Car 20.99 300 P P 18 27 52.5 +0.3
CEST IAmb IAmb 18 28 06.0
comp=Z,16nm,1.1s
WLF Walferdange 21.17 322 P P 18 27 54.1 +0.3
WLF pmax pmax
comp=Z,16nm,0.9s
WLF Walferdange 21.17 322 P P 18 27 54.1 +0.3
WLF IAmb IAmb 18 28 13.5
comp=Z,16nm,0.9s
WLF Walferdange 21.17 322 *dP* **P 18 27 54.9 +1.1**
comp=Z,12nm,0.9s
WLF *d*PP **PnPn 18 28 12.6 -0.3**
PABE Paberze 21.23 357 P P 18 27 54.5 0.0
PABE IAmb IAmb 18 28 29.1
comp=Z,11nm,0.7s
TAM Tamanrasset 21.27 243 P P 18 27 55.5 +0.2
TAM pmax pmax
comp=Z,32nm,1.1s
TAM Tamanrasset 21.27 243 P 18 27 55.5 +0.2
TAM Tamanrasset 21.27 243 P P 18 27 59.6 +4.3
BTNL Ternell 21.77 324 *dP* **P 18 28 00.2 -0.1**
comp=Z,8.9nm,0.9s
MEM Membach 21.84 324 P P 18 28 02.0 +0.9
MEM Membach 21.84 324 *dP* **P 18 28 01.4 +0.3**
comp=Z,15nm,1.0s
MEM Membach 21.84 324 P P 18 28 02.0 +0.9
OBN Obninsk 22.07 16 LR LR 18 38 25.6
comp=Z,118nm,18.3s,baz=318,slow=42
OBN Obninsk 22.07 16 *ce*P **P 18 28 05.0 +1.6**
OBN *e* 18 28 23.4
OBN *e*S **S 18 32 07.4 +0.3**
OBN *e*SS **SnSn 18 32 38.4 +5.4**
OBN pmax pmax
comp=Z,20nm,1.2s
OBN MLR MLR
comp=Z,130nm,15.0s
GIVF Givet 22.11 322 *eP* **P 18 28 05.0 +1.0**
GIVF pmax pmax
comp=Z,18nm,1.2s
CLF Chambon-Foret 22.38 315 P P 18 28 07.1 +0.2
BAIF Baives 22.40 321 *eP* **P 18 28 07.4 +0.3**
BAIF pmax pmax
comp=Z,11nm,1.0s
UCC Uccle 22.77 323 P P 18 28 10.9 -0.1
UCC pmax pmax
comp=Z,17nm,1.1s
UCC Uccle 22.77 323 P P 18 28 10.9 -0.1
UCC IAmb IAmb 18 28 31.0
comp=Z,17nm,1.1s
MOS Moscow 22.89 17 *eP* **P 18 28 11.6 -0.6**
MOS *e* 18 28 36.3
BELG Belogornoye 23.81 34 *de*P **P 18 28 22.1 +0.6**
BELG pmax pmax
comp=Z,2.0nm,0.9s
ESBB Sonseca Array 24.43 291 P P 18 28 28.4 +0.8
ESBB IAmb IAmb 18 28 36.3
comp=Z,7.0nm,1.1s
ESDC Sonseca Array 24.43 291 P P 18 28 28.5 +1.0
comp=Z,2.3nm,0.9s,baz=82,slow=9.5,SNR=17
ESDC LR LR 18 39 43.6
comp=Z,59nm,19.9s,baz=94,slow=41
comp=Z,2.3nm,0.9s
ESDC Sonseca Array 24.43 291 P P 18 28 26.4 -1.1
PAB San Pablo 24.72 291 P P 18 28 30.1 -0.1
PAB pmax pmax
comp=Z,8.0nm,1.2s
PAB San Pablo 24.72 291 P P 18 28 30.1 -0.1
PAB IAmb IAmb 18 28 52.0
comp=Z,7.8nm,1.1s
MD01 Midelt array s 25.59 275 P P 18 28 38.1 -0.1
HFS Hagfors 27.05 346 P P 18 28 50.3 -0.6
comp=Z,2.5nm,0.8s,baz=120,slow=8.7,SNR=3.3
comp=Z,2.5nm,0.8s
FINES FINESS Array B 27.15 0 P P 18 28 51.0 -0.7
comp=Z,1.1nm,0.5s,baz=168,slow=9.8,SNR=9.1
comp=Z,1.1nm,0.5s
FINES FINESS Array B 27.15 0 *i* P **P 18 28 52.2 +0.5**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 27.15 0 P P 18 28 49.6 -2.2
FIA1 FINESS Array S 27.15 0 P P 18 28 49.3 -2.4
KLMR Klimovskoe 27.96 14 *eP* **P 18 28 58.9 -0.2**
KLMR pmax pmax
comp=Z,15nm,1.1s
NAO01 NORSAR Array S 28.28 344 P P 18 29 00.7 -1.3
AKTO Aktyubinsk 28.35 46 LR LR 18 43 54.6
comp=Z,83nm,20.8s,baz=256,slow=44
NB201 NORSAR Array S 28.38 345 P P 18 29 01.4 -1.4
NB201 IAmb IAmb 18 29 37.9
comp=Z,12nm,1.4s
NOA NORSAR Array B 28.39 345 P P 18 29 03.6 +0.7
comp=Z,0.3nm,0.6s,baz=151,slow=8.6,SNR=4.0
comp=Z,0.3nm,0.6s
NC204 NORSAR Array S 28.70 345 P P 18 29 04.0 -1.6
NC204 IAmb IAmb 18 29 13.1
comp=Z,13nm,1.4s
KIRV Kirov 28.86 26 *ieP* **P 18 29 05.8 -1.3**
EKA Eskdalemuir Ar 29.11 325 P P 18 29 09.1 -0.3
comp=Z,1.9nm,0.9s,baz=122,slow=11,SNR=3.8
EKA LR LR 18 43 01.3
comp=Z,80nm,18.8s,baz=126,slow=41
comp=Z,1.9nm,0.9s
AB31 Akbulak array 29.11 49 P P 18 29 07.2 -2.2
AB31 IAmb IAmb 18 29 39.5
comp=Z,4.0nm,1.3s
ABKAR Akbulak array 29.11 49 P P 18 29 07.1 -2.4
ESK Eskdalemuir 29.12 325 P P 18 29 07.6 -1.9
ESK pmax pmax
comp=Z,26nm,1.4s
ESK Eskdalemuir 29.12 325 P P 18 29 07.6 -1.9
HRA Herat 29.85 79 P P 18 29 15.6 -0.9
HRA IAmb IAmb 18 29 22.4
comp=Z,5.7nm,1.1s
TORD Torodi Ar. Bea 30.48 232 P P 18 29 20.6 -1.2
comp=Z,4.4nm,0.8s,baz=33,slow=9.3,SNR=18
comp=Z,4.4nm,0.8s
TORD Torodi Ar. Bea 30.48 232 P P 18 29 21.2 -0.6
TORD IAmb IAmb 18 29 29.3
comp=Z,2.7nm,0.8s
ARTI Arti 31.25 35 LR LR 18 43 43.9
comp=Z,95nm,19.9s,baz=238,slow=40
ARTI Arti 31.25 35 *d* iP **P 18 29 28.6 +0.4**
ARTI 18 30 31.7
ARTI S **S 18 34 39.6 +4.6**
ARTI SS **SnSn 18 36 23.1 +6.1**
ARTI pmax pmax
comp=Z,1.0nm,0.9s
ARTI Arti 31.25 35 P P 18 29 27.2 -1.0
ARTI IAmb IAmb 18 29 37.8
comp=Z,3.6nm,0.8s
CHGR Chuyangaron 34.76 70 *ieP* **P 18 29 59.6 +0.3**
CHGR pmax pmax
comp=Z,7.0nm,1.0s
CHGR Chuyangaron 34.76 70 P P 18 29 58.0 -1.2
ARCES ARCESS Array B 35.27 360 P P 18 30 03.4 +0.2
comp=Z,1.2nm,0.5s,baz=179,slow=9.0,SNR=8.3
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 35.27 360 P P 18 30 02.5 -0.8
KK31 Karatay Array 35.50 62 P P 18 30 05.1 -0.4
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KK31 Karatay Array 35.50 62 P 18 30 05.1 -0.4
KK31 IAmb IAmb 18 30 08.3
comp=Z,3.4nm,0.7s
KKAR Karatay Array 35.50 62 P P 18 30 05.1 -0.4
KKAR Karatay Array 35.50 62 P P 18 30 05.1 -0.4
GAR Garm 35.62 69 P P 18 30 06.5 -0.2
BVAR Borovoye Array 36.46 45 P P 18 30 14.4 +0.9
comp=Z,3.0nm,0.9s,baz=260,slow=5.9,SNR=14
comp=Z,3.0nm,0.9s
AAK Ala-Archa 38.44 63 LR LR 18 49 39.5
comp=Z,93nm,19.9s,baz=290,slow=41
AAK Ala-Archa 38.44 63 *ieP* **P 18 30 32.7 +2.0**
AAK pmax pmax
comp=Z,2.0nm,0.9s
DBIC Dimbokro 39.57 233 P P 18 30 40.9 +0.7
comp=Z,2.6nm,0.7s,baz=79,slow=6.3,SNR=2.1
DBIC LR LR 18 49 03.4
comp=Z,357nm,19.0s,baz=44,slow=39
comp=Z,2.6nm,0.7s
DBIC Dimbokro 39.57 233 P P 18 30 39.7 -0.5
KSH2 Kashi 39.65 68 P P 18 30 42.8 +2.0
KSH2 pmax pmax
comp=Z,3.0nm,1.1s
NRN Naryn 39.67 65 P P 18 30 39.8 -1.4
NRN pmax pmax
comp=Z,8.0nm,1.2s
NRN Naryn 39.67 65 P P 18 30 39.8 -1.4
NRN IAmb IAmb 18 30 53.5
comp=Z,7.5nm,1.2s
KDJ Kajisay 40.47 63 P P 18 30 45.6 -2.1
KDJ pmax pmax
comp=Z,2.0nm,0.8s
KDJ Kajisay 40.47 63 P P 18 30 45.6 -2.1
TARG Taragay, Kyrgy 40.98 64 P P 18 30 49.7 -2.5
TARG pmax pmax
comp=Z,3.0nm,1.2s
TARG Taragay, Kyrgy 40.98 64 P P 18 30 49.7 -2.5
KURBB Kurchatov Arra 41.14 50 P P 18 30 54.7 +1.8
comp=Z,3.6nm,0.8s,baz=278,slow=8.9,SNR=38
comp=Z,3.6nm,0.8s
KURK Kurchatov 41.20 50 *ce*P **P 18 30 54.5 +1.1**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 41.20 50 P P 18 30 50.9 -2.5
KURK IAmb IAmb 18 31 21.0
comp=Z,6.2nm,1.0s
PDGK Podgornoye 42.03 61 P P 18 31 00.6 +0.1
PDGK Podgornoye 42.03 61 P P 18 31 00.6 +0.1
MK31 Makanchi Array 43.69 56 *ce*P **P 18 31 15.2 +1.5**
MKAR Makanchi Array 43.69 56 P P 18 31 15.6 +1.9
comp=Z,3.5nm,0.6s,baz=276,slow=6.9,SNR=27
comp=Z,3.5nm,0.6s
MKAR Makanchi Array 43.69 56 P P 18 31 14.9 +1.1
SCO Scoresbysund 44.36 339 P P 18 31 18.1 -0.6
SCO pmax pmax
comp=Z,8.0nm,1.0s
SCO Scoresbysund 44.36 339 P P 18 31 18.1 -0.6
SCO IAmb IAmb 18 31 29.5
comp=Z,7.8nm,1.0s
ZAA0 Zalesovo Array 45.11 46 P P 18 31 23.2 -1.7
ZAA0 IAmb IAmb 18 31 33.9
comp=Z,2.9nm,0.6s
ZALV Zalesovo Beam 45.11 46 P P 18 31 25.6 +0.6
comp=Z,1.8nm,0.5s,baz=265,slow=10.0,SNR=12
ZALV LR LR 18 53 24.9
comp=Z,64nm,20.5s,baz=270,slow=40
comp=Z,1.8nm,0.5s
ZALV Zalesovo Beam 45.11 46 *i* P **P 18 31 25.7 +0.8**
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 45.11 46 P P 18 31 23.2 -1.7
DGZ Jazzator, Alta 46.88 51 *ieP* **P 18 31 38.1 -1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
WMQ Urumqi 47.86 59 *eP* **P 18 31 46.8 +0.1**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ LR LR
comp=Z,85nm,23.9s
NRIK Noril'sk 48.36 25 LR LR 18 54 35.9
comp=Z,54nm,20.5s,baz=250,slow=39
SUMG Summit 50.00 339 P P 18 32 02.0 -1.2
SUMG pmax pmax
comp=Z,6.0nm,1.1s
SUMG Summit 50.00 339 P P 18 32 02.0 -1.2
SUMG IAmb IAmb 18 32 19.8
comp=Z,5.8nm,1.1s
EVN Everest 51.80 79 P P 18 32 14.6 -3.1
SFJD Kangerlussuaq 53.74 332 LR LR 18 57 34.5
comp=Z,53nm,18.1s,baz=84,slow=38
TSUM Tsumeb 53.81 190 LR LR 18 56 12.4
comp=Z,77nm,19.2s,baz=357,slow=37
KHWEE KHWEE 55.95 181 P P 18 32 45.7 -1.5
TLY Talaya 56.69 47 LR LR 18 59 45.5
comp=Z,104nm,21.2s,baz=298,slow=39
ASCN Ascension 56.76 230 P P 18 32 51.6 -1.4
ZAK Zakamensk 56.81 48 *eP* **P 18 32 54.3 +1.1**
ZAK pmax pmax
comp=Z,5.0nm,1.5s
LBTB Lobatse 59.00 180 LR LR 19 00 02.1
comp=Z,123nm,18.1s,baz=8.0,slow=38
SONM Songino Array 59.51 50 P P 18 33 13.6 +1.4
comp=Z,1.8nm,0.9s,baz=278,slow=7.9,SNR=8.0
SONM LR LR 19 02 05.7
comp=Z,80nm,19.2s,baz=275,slow=39
comp=Z,1.8nm,0.9s
SONM Songino Array 59.51 50 P P 18 33 11.2 -1.0
SONM IAmb IAmb 18 33 28.8
comp=Z,4.3nm,1.3s
ULN Ulaanbaatar 59.92 50 *ieP* **P 18 33 16.4 +1.4**
ULN pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 59.92 50 P P 18 33 15.0 0.0
ULN IAmb IAmb 18 33 32.3
comp=Z,4.5nm,1.1s
TIXI Tiksi 61.72 21 LR LR 19 04 08.8
comp=Z,53nm,19.2s,baz=356,slow=40
FRB Frobisher Bay 61.73 330 LR LR 19 01 50.9
comp=Z,38nm,18.2s,baz=78,slow=38
BOSA Boshof 62.59 181 LR LR 19 01 52.2
comp=Z,121nm,19.2s,baz=12,slow=37
PZH PanZhiHua 64.45 74 P P 18 33 46.5 +0.8
GBN Guysborough 64.92 309 P P 18 33 47.6 -0.7
HHC Hu-ho-hao-te 65.56 56 *eP* **P 18 33 52.3 -0.4**
HHC pmax pmax
comp=Z,5.0nm,0.6s
CHTO Chiang Mai 65.83 83 P P 18 33 53.1 -1.5
CHTO pmax pmax
comp=Z,2.0nm,0.9s
CHTO Chiang Mai 65.83 83 P P 18 33 53.1 -1.5
CHTO IAmb IAmb 18 34 02.7
comp=Z,1.9nm,0.8s
CMAR Chiang Mai Arr 66.01 83 P P 18 33 55.9 +0.1
comp=Z,1.1nm,0.8s,baz=298,slow=8.9,SNR=12
CMAR LR LR 19 10 16.3
comp=Z,20nm,18.5s,baz=285,slow=43
comp=Z,1.1nm,0.8s
CMAR Chiang Mai Arr 66.01 83 *i* P **P 18 33 56.9 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 66.01 83 P P 18 33 54.5 -1.2
YAK Yakutsk 66.27 30 *ieP* **P 18 33 56.9 +0.2**
YAK pmax pmax
comp=Z,3.0nm,0.9s
SUR Sutherland 66.52 185 LR LR 19 04 39.1
comp=Z,112nm,20.7s,baz=360,slow=38
KULM Kulim 74.39 94 P P 18 34 47.0 -0.2
B20K Meade River 75.95 1 P P 18 34 55.4 +0.2
MA2 Magadan 75.96 26 LR LR 19 11 37.1
comp=Z,36nm,19.1s,baz=286,slow=38
B21K Ikpikpuk River 76.37 0 P P 18 34 56.8 -0.8
B21K IAmb IAmb 18 35 11.1
comp=Z,3.0nm,0.9s
INK Inuvik 76.54 352 LR LR 19 12 16.3
comp=Z,16nm,18.5s,baz=65,slow=38
M57A Sunshine Farm, 76.82 311 P P 18 34 59.5 -1.2
E29M Blow River 76.90 354 P P 18 34 60.0 -0.7
E29M IAmb IAmb 18 35 19.5
comp=Z,5.5nm,1.2s
USRK Ussuriysk Ar. 76.97 45 P P 18 35 01.8 +0.3
comp=Z,3.7nm,0.8s,baz=306,slow=5.4,SNR=4.2
comp=Z,3.7nm,0.8s
C18K Utukok River 77.21 3 P P 18 35 00.7 -1.8
MDP Montagnes des 77.74 268 LR LR 19 07 44.9
comp=Z,25nm,21.8s,baz=358,slow=34
G31M Satah River 77.96 352 P P 18 35 06.7 +0.1
G31M IAmb IAmb 18 35 47.0
comp=Z,2.9nm,1.1s
KSRS Korea Array 78.27 53 P P 18 35 10.4 +1.5
comp=Z,1.6nm,0.8s,baz=293,slow=4.5,SNR=3.2
KSRS LR LR 19 15 08.1
comp=Z,51nm,19.6s,baz=160,slow=40
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 78.45 342 P P 18 35 09.9 +0.5
comp=Z,0.5nm,0.7s,baz=38,slow=6.3,SNR=3.6
YKA LR LR 19 10 27.2
comp=Z,44nm,18.2s,baz=6.5,slow=36
comp=Z,0.5nm,0.7s
ILAR Eielson Array 81.08 357 P P 18 35 25.1 +1.4
comp=Z,0.2nm,0.8s,baz=2.7,slow=5.7,SNR=2.0
comp=Z,0.2nm,0.8s
ULM Lac du Bonnet 81.38 327 LR LR 19 12 51.6
comp=Z,23nm,18.3s,baz=336,slow=37
ASAJ Asahikawa 82.99 40 LR LR 19 16 45.8
comp=Z,52nm,19.6s,baz=2.5,slow=39
PETK Petropavlovsk- 83.36 27 LR LR 19 15 04.7
comp=Z,38nm,19.1s,baz=295,slow=37
MJAR Matsushiro Arr 85.39 48 P P 18 35 47.1 +0.6
comp=Z,2.2nm,0.8s,baz=314,slow=4.3,SNR=8.1
comp=Z,2.2nm,0.8s
MJAR Matsushiro Arr 85.39 48 P P 18 35 48.3 +1.8
MJAR IAmb IAmb 18 36 02.4
comp=Z,3.6nm,1.2s
DLBC Dease Lake 85.44 348 LR LR 19 15 54.8
comp=Z,23nm,19.7s,baz=22,slow=37
BDFB Brasilia 86.00 248 LR LR 19 15 11.3
comp=Z,51nm,19.0s,baz=135,slow=36
NEW Newport 91.42 336 LR LR 19 20 06.6
comp=Z,36nm,18.0s,baz=8.0,slow=37
PDAR Pinedale Array 93.17 329 LR LR 19 21 13.9
comp=Z,20nm,18.7s,baz=22,slow=37
ANMO Albuquerque 97.97 322 LR LR 19 23 43.1
comp=Z,27nm,18.6s,baz=40,slow=37
YBH Yreka Blue Hor 99.04 337 LR LR 19 22 06.8
comp=Z,17nm,22.0s,baz=13,slow=36
QSPA South Pole Qui 124.17 180 PKP PKiKP 18 42 06.9 -0.1
comp=Z,1.7nm,1.0s,baz=226,slow=1.0,SNR=6.0

VIE 25 18:23:37.1±0.4, **47.30N**×11.02E, **h4**km±5km, **mlD.2**/4,
Error ellipse: s-maj=2.0km s-min=1.5km az=47.0 4 km
WSW of Telfs, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOTA	**Moosalm**	**0.07**	**52**	*i* Pg	Pg	18 23 38.9	+0.2
	0.3nm,0.1s						
MOTA				*i* Sg	Sg	18 23 40.3	+0.5
	1.1nm,0.1s						
SQTA	**Sankt Quirin**	**0.15**	**122**	*i* Pg	Pg	18 23 40.3	+0.2
	1.4nm,0.1s						
SQTA				*i* Sg	Sg	18 23 42.4	+0.3
	1.8nm,0.1s						
RETA	**Reutte**	**0.26**	**317**	*i* Pg	Pg	18 23 42.2	+0.1
	0.1nm,0.1s						
RETA				Sg	Sg	18 23 45.7	+0.3
	0.2nm,0.1s						
FETA	**Feichten**	**0.34**	**216**	*i* Pg	Pg	18 23 43.6	-0.1
	0.1nm,0.1s						
FETA				*i* Sg	Sg	18 23 48.9	+0.7
	0.1nm,0.1s						

TAP ***25*** *18:32:38.3,25.11N×121.83E,h213km,ML3.6,C*
JMA ***25*** *18:32:40.2±0.2,25.2N±1.0×121.9E±0.5,h192km±1km,*
MV2.6/17,TAIWAN REGION
ISC 25 18:32:38.8±1.6, **25.20N**±0.05×**121.79E**±0.03, **h201**km±8km,
n123,σ076/206, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNOU	**National Taiwa**	**0.05**	**199**	P	Pn	**18 33 05.2**	**+0.1**
TNOU				*i* S	S	**18 33 25.7**	**+0.1**
NWRT	**Kuosheng**	**0.12**	**272**	P	Pn	**18 33 05.8**	**+0.7**
NWRT				S	S	**18 33 25.6**	**0.0**
WFSB	**Wu-fen Shan**	**0.13**	**184**	P	Pn	**18 33 05.9**	**+0.7**
WFSB				*e*S	S	**18 33 26.6**	**+0.8**
SXI1	**Grass Mountain**	**0.13**	**144**	*i* P	Pn	**18 33 05.2**	**-0.1**
SXI1				*i* S	S	**18 33 26.4**	**+0.5**
TWY	**Chenhua**	**0.19**	**294**	*i* P	Pn	**18 33 05.7**	**+0.5**
TWY				*i* S	S	**18 33 26.1**	**+0.4**
ZUZH	**Zhuzihu**	**0.23**	**261**	P	Pn	**18 33 05.6**	**+0.3**
ZUZH				S	S	**18 33 25.6**	**-0.3**
TIPB	**Shuangxi**	**0.23**	**172**	P	Pn	**18 33 05.3**	**0.0**
TIPB				S	S	**18 33 25.4**	**-0.7**
ANP	**Anpu**	**0.25**	**267**	P	Pn	**18 33 05.9**	**+0.5**
NHY	**Taipei**	**0.26**	**232**	P	Pn	**18 33 05.9**	**+0.6**
NHY				S	S	**18 33 25.6**	**-0.4**
TWB1	**Santiao Chiao**	**0.26**	**137**	*i* P	Pn	**18 33 05.5**	**+0.2**
TWB1				S	S	**18 33 25.9**	**-0.1**
TAP	**Taipei**	**0.30**	**239**	*i* P	Pn	**18 33 05.7**	**+0.3**
TAP				*i* S	S	**18 33 25.8**	**-0.2**
NTST	**Danshui**	**0.31**	**264**	*e*P	Pn	**18 33 05.9**	**+0.5**
NTST				S	S	**18 33 26.3**	**+0.2**
NHDH	**Xindian Distri**	**0.34**	**226**	*i* P	Pn	**18 33 05.7**	**+0.1**
NHDH				*i* S	S	**18 33 25.4**	**-0.8**
TWS1	**Kuangyinshan**	**0.35**	**254**	*i* P	Pn	**18 33 06.0**	**+0.5**
TWS1				*i* S	S	**18 33 26.4**	**+0.1**
TATO	**Taipei**	**0.35**	**231**	P	Pn	**18 33 05.4**	**-0.1**
TATO	**Taipei**	**0.35**	**231**	S	S	**18 33 25.1**	**-1.6**
TATO	**Taipei**	**0.35**	**231**	P	Pn	**18 33 05.8**	**+0.3**
TATO				S	S	**18 33 25.1**	**-1.3**
BACT	**New Taipei Cit**	**0.38**	**238**	S	S	**18 33 26.3**	**0.0**
ILA	**Ilan**	**0.43**	**185**	*i* P	Pn	**18 33 06.2**	**+0.4**
ILA				S	S	**18 33 26.9**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.47**	**203**	*i* P	Pn	**18 33 06.0**	**-0.1**
FUSB				*i* S	S	**18 33 25.8**	**-1.4**
TWE	**Neicheng**	**0.49**	**193**	P	Pn	**18 33 06.3**	**+0.3**
TWE				S	S	**18 33 26.3**	**-0.8**
NTY	**Taoyuan**	**0.49**	**246**	P	Pn	**18 33 09.0**	**+3.0**
NTY				S	S	**18 33 26.6**	**-0.4**
NWLT	**Wulai**	**0.49**	**212**	P	Pn	**18 33 05.9**	**-0.2**
NWLT				S	S	**18 33 25.6**	**-1.6**
PCYT	**Pengchaiyu**	**0.50**	**30**	*i* P	Pn	**18 33 06.8**	**+0.8**
NDS	**Dongshan**	**0.57**	**187**	P	Pn	**18 33 07.0**	**+0.7**
NDS				S	S	**18 33 27.4**	**-0.3**
TWC	**Suao**	**0.59**	**175**	P	Pn	**18 33 06.7**	**+0.3**
TWC				*e*S	S	**18 33 26.5**	**-1.4**
NCUH	**Zhongli**	**0.60**	**247**	S	S	**18 33 27.1**	**-0.7**
NDT	**Datong Townshi**	**0.65**	**203**	P	Pn	**18 33 07.0**	**+0.3**
NDT				S	S	**18 33 27.2**	**-1.1**
YHNB	**Yeheng**	**0.65**	**216**	P	Pn	**18 33 06.2**	**-0.6**
YHNB	**Yeheng**	**0.65**	**216**	*i* P	Pn	**18 33 06.6**	**-0.1**
YHNB				*i* S	S	**18 33 26.9**	**-1.5**
NSK	**Sanguang**	**0.65**	**217**	*i* P	Pn	**18 33 06.7**	**-0.1**
NSK				S	S	**18 33 26.9**	**-1.5**
KSHI	**Guanxi Townshi**	**0.70**	**233**	*i* P	Pn	**18 33 07.2**	**+0.3**
KSHI				S	S	**18 33 28.8**	**+0.2**
LATG	**Datong**	**0.70**	**200**	P	Pn	**18 33 07.5**	**+0.4**
LATG				S	S	**18 33 28.2**	**-0.8**
EWUT	**Wuta**	**0.75**	**181**	P	Pn	**18 33 07.8**	**+0.6**
EWUT				S	S	**18 33 29.3**	**+0.2**
ENA	**Nanau**	**0.77**	**183**	*e*P	Pn	**18 33 06.3**	**-1.0**
ENA				*e*S	S	**18 33 28.1**	**-1.2**
NFF	**Wufeng Townshi**	**0.83**	**227**	P	Pn	**18 33 07.6**	**-0.1**
NFF				S	S	**18 33 28.9**	**-1.1**
SBCB	**Hsinchu**	**0.84**	**241**	P	Pn	**18 33 08.2**	**+0.6**
NNS	**Nan Shan**	**0.85**	**207**	P	Pn	**18 33 08.2**	**+0.3**
NNS				S	S	**18 33 29.8**	**-0.5**
NNSB	**Datong**	**0.85**	**206**	P	Pn	**18 33 08.1**	**+0.2**
NNSB				*i* S	S	**18 33 29.6**	**-0.8**
EOS2	**EOS2**	**0.87**	**153**	P	Pn	**18 33 08.8**	**+1.1**
EOS2				*i* S	S	**18 33 30.7**	**+0.7**
LIOB	**Emei**	**0.89**	**232**	P	Pn	**18 33 08.4**	**+0.4**
LIOB				S	S	**18 33 30.6**	**+0.1**
NSTT	**Nanjuang**	**0.91**	**232**	P	Pn	**18 33 08.4**	**+0.3**
NSTT				S	S	**18 33 30.8**	**+0.1**
EOS3	**EOS3**	**1.03**	**152**	P	Pn	**18 33 09.7**	**+1.0**
EOS3				S	S	**18 33 32.8**	**+1.2**
ETLH	**Xiulin Townshi**	**1.03**	**196**	P	Pn	**18 33 09.1**	**+0.1**
ETLH				S	S	**18 33 31.1**	**-1.1**
NACB	**Ninganchiao**	**1.04**	**190**	P	Pn	**18 33 08.4**	**-0.5**
NACB	**Ninganchiao**	**1.04**	**190**	P	Pn	**18 33 08.6**	**-0.4**
NACB				S	S	**18 33 30.0**	**-2.1**
ETL	**Fush Village**	**1.05**	**188**	*e*P	Pn	**18 33 09.4**	**+0.4**
ETL				*e*S	S	**18 33 32.1**	**-0.2**
TWT	**Tachien**	**1.09**	**211**	P	Pn	**18 33 10.2**	**+0.6**
TWT				*e*S	S	**18 33 34.0**	**+0.8**
TDCB	**Techi**	**1.10**	**212**	*e*P	Pn	**18 33 10.4**	**+0.8**
TDCB				*e*S	S	**18 33 34.1**	**+0.9**
NMLH	**Miaoli**	**1.12**	**234**	*e*P	Pn	**18 33 11.2**	**+1.6**
WHF	**Hehuan Shan**	**1.15**	**205**	*e*P	Pn	**18 33 11.0**	**+0.7**
WHF				*e*S	S	**18 33 35.0**	**+0.6**
EOS4	**EOS4**	**1.18**	**156**	*e*P	Pn	**18 33 09.3**	**-0.2**
EOS4				*e*S	S	**18 33 32.7**	**-0.4**
WHP	**Taichung City**	**1.20**	**220**	P	Pn	**18 33 10.6**	**+0.4**
WHP				S	S	**18 33 35.4**	**+1.1**

LXIB	**Xiulin Townshi**	**1.22 196**	P		**Pn**	**18 33 10.0**	**-0.5**
LXIB			*e*S		**S**	**18 33 32.9**	**-1.9**
ETM	**Tongmen**	**1.26 193**	*e*P		**Pn**	**18 33 11.4**	**+0.9**
ETM			*e*S		**S**	**18 33 34.2**	**-0.7**
JYNG	**Yonagunijimaku**	**1.28 125**	*e*P		**Pn**	**18 33 10.9**	**+0.1**
JYNG			*e*S		**S**	**18 33 34.8**	**-0.4**
YOJ	**Yonaguni jima**	**1.33 123**	P		**Pn**	**18 33 11.2**	**+0.1**
YOJ	**Yonaguni jima**	**1.33 123**	S		**S**	**18 33 36.1**	**+0.3**
YOJ	**Yonaguni jima**	**1.33 123**	P		**Pn**	**18 33 11.2**	**+0.1**
YOJ			S		**S**	**18 33 35.3**	**-0.5**
TEYL	**Yanliau Villag**	**1.34 188**	*e*P		**Pn**	**18 33 10.8**	**-0.4**
TEYL			*e*S		**S**	**18 33 35.9**	**-0.1**
WUSB	**Renai**	**1.35 207**	*i* P		**Pn**	**18 33 12.0**	**+0.5**
WUSB			S		**S**	**18 33 37.0**	**+0.5**
OWD	**Renai**	**1.36 204**	P		**Pn**	**18 33 12.0**	**+0.4**
OWD			*e*S		**S**	**18 33 36.8**	**+0.2**
WCS	**Beigang Elemen**	**1.39 215**	*i* P		**Pn**	**18 33 12.1**	**+0.4**
WCS			S		**S**	**18 33 36.4**	**-0.4**
ESL	**Shilin**	**1.42 193**	*e*P		**Pn**	**18 33 11.0**	**-0.9**
ESL			*e*S		**S**	**18 33 35.2**	**-2.0**
SHUL	**Shoufeng**	**1.42 188**	P		**Pn**	**18 33 11.6**	**-0.3**
SHUL			*e*S		**S**	**18 33 37.7**	**+0.4**
TCU	**Taichung**	**1.46 224**	P		**Pn**	**18 33 12.8**	**+0.6**
TCU			*e*S		**S**	**18 33 38.5**	**+0.8**
WARBT	**Fenglin Townsh**	**1.52 194**	P		**Pn**	**18 33 11.7**	**-1.1**
WARBT			S		**S**	**18 33 36.9**	**-2.0**
SMLT	**Sun Moon Lake**	**1.54 212**	P		**Pn**	**18 33 13.5**	**+0.4**
SMLT			*e*S		**S**	**18 33 39.6**	**+0.3**
TYC	**Yuchr**	**1.54 214**	P		**Pn**	**18 33 14.4**	**+1.4**
TYC			S		**S**	**18 33 40.0**	**+0.9**
VWDT	**VWDT**	**1.56 203**	P		**Pn**	**18 33 14.1**	**+1.0**
VWDT			S		**S**	**18 33 40.1**	**+0.8**
SSLB	**Suanglung**	**1.60 209**	P		**Pn**	**18 33 13.6**	**+0.1**
SSLB	**Suanglung**	**1.60 209**	P		**Pn**	**18 33 13.8**	**+0.2**
SSLB			S		**S**	**18 33 39.4**	**-0.7**
WNT	**Mingjian**	**1.66 218**	P		**Pn**	**18 33 14.7**	**+0.7**
WNT			*i* S		**S**	**18 33 41.4**	**+0.5**
WJS	**Zhushan**	**1.68 215**	P		**Pn**	**18 33 14.8**	**+0.6**
WJS			*i* S		**S**	**18 33 41.6**	**+0.3**
WHYT	**Xinyi Township**	**1.72 210**	P		**Pn**	**18 33 15.0**	**+0.2**
WHYT			S		**S**	**18 33 42.0**	**-0.2**
HGSD	**Ruisui**	**1.73 191**	P		**Pn**	**18 33 15.4**	**+0.7**
HGSD			*e*S		**S**	**18 33 40.8**	**-1.4**
EHYH	**Wanrong**	**1.75 194**	P		**Pn**	**18 33 15.5**	**+0.6**
EHYH			*e*S		**S**	**18 33 40.1**	**-2.3**
RLNB	**Erlin**	**1.84 225**	*e*P		**Pn**	**18 33 16.0**	**+0.2**
YULB	**Yu-li**	**1.85 194**	P		**Pn**	**18 33 15.9**	**-0.1**
YULB	**Yu-li**	**1.85 194**	S		**S**	**18 33 44.4**	**+0.1**
YULB	**Yu-li**	**1.85 194**	P		**Pn**	**18 33 14.9**	**-1.1**
YULB			*e*S		**S**	**18 33 41.6**	**-2.8**
WDLH	**Douliu**	**1.89 217**	*e*P		**Pn**	**18 33 16.4**	**+0.1**
WDLH			S		**S**	**18 33 44.9**	**+0.1**
CHN5	**Tsauling**	**1.89 213**	P		**Pn**	**18 33 17.0**	**+0.6**
CHN5			*i* S		**S**	**18 33 45.4**	**+0.4**
ALS	**Alishan**	**1.91 208**	P		**Pn**	**18 33 17.2**	**+0.4**
ALS			S		**S**	**18 33 45.7**	**0.0**
MATB	**Ma-tsu**	**1.92 300**	P		**Pn**	**18 33 16.3**	**-0.2**
IRIF	**Iriomote-Funau**	**1.96 116**	P		**Pn**	**18 33 17.1**	**+0.1**
IRIF			*e*S		**S**	**18 33 46.5**	**+0.5**
CHKH	**Chenggong**	**2.03 190**	*e*S		**S**	**18 33 47.7**	**+0.3**
FULB	**Fuli**	**2.04 193**	P		**Pn**	**18 33 18.4**	**+0.6**
FULB			*e*S		**S**	**18 33 46.3**	**-1.4**
WCKO	**Fanlu**	**2.06 212**	P		**Pn**	**18 33 18.5**	**+0.4**
WCKO			S		**S**	**18 33 48.2**	**+0.2**
ELDTW	**Lidau**	**2.12 200**	*e*P		**Pn**	**18 33 19.3**	**+0.5**
VWUC	**VWUC**	**2.13 265**	P		**Pn**	**18 33 18.3**	**-0.4**
CHN4	**Tsaushan**	**2.14 211**	P		**Pn**	**18 33 19.2**	**+0.3**
CHN4			*e*S		**S**	**18 33 50.0**	**+0.6**
HATJ	**Hateruma jima**	**2.16 121**	*e*S		**S**	**18 33 49.5**	**-0.1**
TPUB	**Ta-pu**	**2.17 210**	P		**Pn**	**18 33 19.3**	**+0.1**
TPUB	**Ta-pu**	**2.17 210**	S		**S**	**18 33 50.1**	**+0.1**
TPUB	**Ta-pu**	**2.17 210**	P		**Pn**	**18 33 19.2**	**+0.1**
TPUB			*i* S		**S**	**18 33 49.8**	**-0.2**
WSL	**Shuilin Townsh**	**2.19 221**	P		**Pn**	**18 33 19.7**	**+0.3**
WTP	**Ta-pu**	**2.22 209**	P		**Pn**	**18 33 20.0**	**+0.2**
WTP			*i* S		**S**	**18 33 50.7**	**-0.4**
STYH	**Taoyuan**	**2.22 205**	*i* P		**Pn**	**18 33 20.1**	**+0.3**
STYH			S		**S**	**18 33 50.4**	**-0.6**
JKRS	**Kuro-shima**	**2.23 115**	*e*P		**Pn**	**18 33 20.4**	**+0.6**
JKRS			S		**S**	**18 33 51.0**	**-0.1**
XPSS	**Dashiqiu**	**2.25 320**	*i* P		**Pn**	**18 33 19.7**	**-0.2**
TWK	**Hsinying**	**2.26 212**	P		**Pn**	**18 33 20.6**	**+0.4**
TWK			S		**S**	**18 33 53.0**	**+1.2**
LYJJ	**Jianjiangzhen**	**2.27 307**	*i* P		**Pn**	**18 33 20.1**	**-0.1**
JIJ	**Ishigaki jima**	**2.29 111**	P		**Pn**	**18 33 23.7**	**+1.4**
JIJ			S		**S**	**18 33 51.4**	**-0.8**
CHN1	**Nanshi**	**2.31 210**	*i* P		**Pn**	**18 33 21.0**	**+0.3**
CHN1			*i* S		**S**	**18 33 52.8**	**0.0**
JISG	**Ishigakijimahi**	**2.37 104**	*e*P		**Pn**	**18 33 21.4**	**+0.1**
JISG			*e*S		**S**	**18 33 53.2**	**-0.4**
SGST	**Jiashian**	**2.38 208**	P		**Pn**	**18 33 21.2**	**-0.3**
SGST			S		**S**	**18 33 53.2**	**-0.8**
PTMZ	**Houxiangcun**	**2.43 267**	*i* P		**Pn**	**18 33 21.6**	**-0.3**
TWGBT	**Beinan**	**2.46 196**	P		**Pn**	**18 33 23.7**	**+1.4**
PNG	**Penghu**	**2.61 232**	P		**Pn**	**18 33 24.0**	**+0.1**
MHZQ	**Yeshan**	**2.65 290**	P		**Pn**	**18 33 24.2**	**-0.2**
SSD	**Sandimen**	**2.66 204**	P		**Pn**	**18 33 25.3**	**+0.7**
JTJ	**Tarama**	**2.70 101**	*e*S		**S**	**18 33 59.9**	**-0.4**
ECL	**Taimali**	**2.70 197**	P		**Pn**	**18 33 26.4**	**+1.4**
WDGT	**Dungji**	**2.74 226**	P		**Pn**	**18 33 25.8**	**+0.3**
MASBT	**Mashibuluo**	**2.79 203**	*i* P		**Pn**	**18 33 26.4**	**+0.4**
MASBT			S		**S**	**18 34 02.2**	**0.0**
EAST	**Anshuo**	**2.93 197**	P		**Pn**	**18 33 28.2**	**+0.4**
SCZT	**Fangliau**	**3.01 201**	P		**Pn**	**18 33 28.8**	**+0.2**
JIRJ	**Irabujima**	**3.11 96**	*e*P		**Pn**	**18 33 30.4**	**+0.6**
JIRJ			*e*S		**S**	**18 34 08.2**	**-0.7**
LYUB	**Lan-yu**	**3.19 183**	*e*P		**Pn**	**18 33 31.3**	**+0.5**
JMJ2	**Miyako jima3**	**3.24 97**	*e*S		**S**	**18 34 11.4**	**-0.3**
SMST	**Manzhou Townsh**	**3.28 196**	P		**Pn**	**18 33 31.8**	**0.0**
JOGS	**Gusukube**	**3.31 97**	*e*S		**S**	**18 34 13.2**	**0.0**

*NOU **25** 18:39:31.3,39°.19S×174°.41E, h575km, ML3.6/17, North Island, New Zealand*
*WEL **25** 18:39:33.2±0.7,39°.S±.7°×17°.4E±°, h555km±5km, M2.9/17, ML2.1/4, MLv2.9/17, Error ellipse: s-maj=11.5km s-min=8.3km az=125.3*

ISC 25 18:39:29.4±2.8, 39°.06S±0°.09×174°.35E±0°.10, h586km±20km, n85, σ1§35/132, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DREZ	**Durham Road**	**0.17**	**221**	P	**P**	**18 40 39.7**	**+1.7**
NEZ	**North Egmont**	**0.29**	**223**	P	**P**	**18 40 40.0**	**+1.8**
NEZ				S	**S**	**18 41 34.3**	**-0.3**
VRZ	**Vera Road**	**0.33**	**102**	P	**P**	**18 40 39.2**	**+1.0**
VRZ				S	**S**	**18 41 35.5**	**+1.2**
LREZ	**Lake Rotokare**	**0.41**	**174**	P	**P**	**18 40 39.8**	**+1.6**
LREZ				S	**S**	**18 41 33.5**	**-1.0**
HIZ	**Hauiti**	**0.67**	**36**	P	**P**	**18 40 39.9**	**+1.2**
HIZ	**Hauiti**	**0.67**	**36**	P	**P**	**18 40 39.9**	**+1.2**
PKVZ	**Pokaka**	**0.81**	**107**	P	**P**	**18 40 39.7**	**+0.8**
PKVZ				S	**S**	**18 41 33.8**	**-1.8**
TWVZ	**Taurewa**	**0.85**	**91**	P	**P**	**18 40 39.8**	**+0.8**
WAZ	**Wanganui**	**0.85**	**145**	P	**P**	**18 40 40.5**	**+1.7**
WAZ				S	**S**	**18 41 35.0**	**-0.7**
MTVZ	**Mangateitei**	**0.93**	**111**	P	**P**	**18 40 40.1**	**+1.0**
MTVZ				S	**S**	**18 41 34.1**	**-1.9**
COVZ	**Chateau Observ**	**0.94**	**99**	P	**P**	**18 40 40.0**	**+0.8**
COVZ				S	**S**	**18 41 34.0**	**-2.1**
FWVZ	**Far West T-bar**	**0.96**	**102**	P	**P**	**18 40 40.3**	**+0.9**
FWVZ				S	**S**	**18 41 33.1**	**-3.4**
TRVZ	**Turoa**	**0.96**	**105**	P	**P**	**18 40 40.4**	**+1.0**
TRVZ				S	**S**	**18 41 33.9**	**-2.6**
MAVZ	**Matarangi**	**0.97**	**103**	P	**P**	**18 40 40.0**	**+0.5**
WTVZ	**West Tongariro**	**0.97**	**94**	P	**P**	**18 40 39.8**	**+0.5**
NGZ	**Ngauruhoe**	**0.98**	**97**	P	**P**	**18 40 40.3**	**+1.0**
WHVZ	**Whangaehu Hut**	**0.99**	**104**	P	**P**	**18 40 39.9**	**+0.4**
WHVZ				S	**S**	**18 41 35.0**	**-1.6**
WNVZ	**Wahianoa**	**1.01**	**106**	P	**P**	**18 40 40.5**	**+1.1**
WNVZ				S	**S**	**18 41 33.6**	**-3.0**
OTVZ	**Oturere**	**1.03**	**96**	P	**P**	**18 40 40.9**	**+1.4**
NTVZ	**North Tongarir**	**1.03**	**93**	P	**P**	**18 40 40.6**	**+1.2**
TUVZ	**Tukino**	**1.04**	**102**	P	**P**	**18 40 40.6**	**+1.2**
TUVZ				S	**S**	**18 41 35.8**	**-0.9**
TMVZ	**Te Maari**	**1.06**	**94**	P	**P**	**18 40 40.7**	**+1.2**
TMVZ				S	**S**	**18 41 34.6**	**-2.0**
ETVZ	**East Tongariro**	**1.06**	**95**	P	**P**	**18 40 40.6**	**+1.1**
ETVZ				S	**S**	**18 41 36.3**	**-0.3**

MOVZ	**Moawhango**	**1.15 108**	P		**P**	**18 40 40.4**	**+0.8**
MOVZ			S		**S**	**18 41 33.8**	**-3.1**
RITZ	**Rihia Road**	**1.18 87**	P		**P**	**18 40 40.9**	**+1.2**
RITZ			S		**S**	**18 41 36.2**	**-0.8**
TLZ	**Tolley Road**	**1.18 52**	P		**P**	**18 40 41.3**	**+1.5**
OHWZ	**Ohakea**	**1.37 147**	P		**P**	**18 40 41.8**	**+1.8**
OHWZ			S		**S**	**18 41 37.8**	**0.0**
BHHZ	**Black Hill Sta**	**1.40 109**	P		**P**	**18 40 41.2**	**+1.0**
BHHZ			S		**S**	**18 41 36.1**	**-2.1**
TSZ	**Takapari Road**	**1.60 129**	P		**P**	**18 40 41.9**	**+1.1**
TSZ			S		**S**	**18 41 38.5**	**-0.7**
MRHZ	**Matea Rd**	**1.63 83**	P		**P**	**18 40 41.5**	**+0.5**
MRHZ			S		**S**	**18 41 35.8**	**-3.6**
KWHZ	**Kaweka Forest**	**1.65 103**	P		**P**	**18 40 42.3**	**+1.2**
KWHZ			S		**S**	**18 41 38.0**	**-1.6**
PNHZ	**Pukenui**	**1.67 121**	P		**P**	**18 40 42.3**	**+1.2**
PNHZ			S		**S**	**18 41 40.0**	**+0.3**
BKZ	**Black Stump Fm**	**1.67 94**	P		**P**	**18 40 42.1**	**+0.9**
BKZ	**Black Stump Fm**	**1.67 94**	S		**S**	**18 41 38.8**	**-0.9**
KRHZ	**Kereru**	**1.67 111**	P		**P**	**18 40 42.2**	**+1.1**
KRHZ			S		**S**	**18 41 38.5**	**-1.2**
POWZ	**Post Office Ro**	**1.73 141**	P		**P**	**18 40 42.4**	**+1.1**
POWZ			S		**S**	**18 41 39.2**	**-0.7**
DUWZ	**D'Urville Isla**	**1.77 191**	P		**P**	**18 40 42.1**	**+0.8**
DUWZ			S		**S**	**18 41 39.6**	**-0.8**
KIW	**Kapiti Island**	**1.85 167**	P		**P**	**18 40 42.8**	**+1.1**
KIW			S		**S**	**18 41 39.7**	**-1.2**
MRZ	**Mangatainoka R**	**1.86 150**	P		**P**	**18 40 42.7**	**+1.0**
MRZ			S		**S**	**18 41 39.3**	**-1.6**
MCHZ	**McNeill Hill**	**1.86 103**	P		**P**	**18 40 43.6**	**+1.8**
MCHZ			S		**S**	**18 41 41.4**	**+0.5**
OGWZ	**Otaki Gorge**	**1.87 160**	P		**P**	**18 40 42.9**	**+1.2**
OGWZ			S		**S**	**18 41 40.9**	**0.0**
DVHZ	**Dannevirke**	**1.87 132**	P		**P**	**18 40 42.8**	**+1.0**
DVHZ			S		**S**	**18 41 39.4**	**-1.6**
WPHZ	**Waipukurau**	**1.90 123**	P		**P**	**18 40 43.3**	**+1.4**
WPHZ			S		**S**	**18 41 42.5**	**+1.3**
NMHZ	**Naumai**	**1.91 92**	P		**P**	**18 40 43.6**	**+1.5**
NMHZ			S		**S**	**18 41 40.8**	**-0.6**
PRWZ	**Pori Road**	**1.95 141**	P		**P**	**18 40 43.5**	**+1.5**
PRWZ			S		**S**	**18 41 42.5**	**+0.9**
MUGZ	**Murupara**	**1.98 74**	P		**P**	**18 40 42.7**	**+0.4**
MUGZ			S		**S**	**18 41 39.3**	**-2.4**
HOWZ	**Holdsworth Sta**	**2.04 154**	P		**P**	**18 40 43.4**	**+0.9**
HOWZ			S		**S**	**18 41 41.2**	**-1.2**
ARHZ	**Aropaoanui**	**2.07 97**	P		**P**	**18 40 44.0**	**+1.4**
ARHZ			S		**S**	**18 41 42.6**	**+0.3**
TIWZ	**Tintock**	**2.08 146**	P		**P**	**18 40 43.8**	**+1.1**
TIWZ			S		**S**	**18 41 40.7**	**-2.0**
KAHZ	**Kahuranaki**	**2.09 111**	P		**P**	**18 40 44.5**	**+1.7**
KAHZ			S		**S**	**18 41 44.0**	**+1.3**
CAW	**Cannon Point**	**2.12 165**	P		**P**	**18 40 43.8**	**+1.0**
CAW			S		**S**	**18 41 43.9**	**+1.0**
PRHZ	**Porangahau**	**2.14 125**	P		**P**	**18 40 44.1**	**+1.2**
RAHZ	**Arahi**	**2.14 87**	P		**P**	**18 40 44.1**	**+1.1**
RAHZ			S		**S**	**18 41 43.0**	**0.0**
TCW	**Tory Channel**	**2.15 181**	P		**P**	**18 40 43.8**	**+1.0**
TCW			S		**S**	**18 41 42.5**	**-0.6**
ANWZ	**Angora Road**	**2.16 131**	P		**P**	**18 40 44.2**	**+1.3**
ANWZ			S		**S**	**18 41 43.4**	**+0.3**
PXZ	**Pawanui**	**2.17 117**	P		**P**	**18 40 44.4**	**+1.3**
PXZ			S		**S**	**18 41 43.9**	**+0.7**
BFZ	**Birch Farm**	**2.18 139**	P		**P**	**18 40 44.1**	**+1.0**
BFZ	**Birch Farm**	**2.18 139**	P		**P**	**18 40 44.1**	**+1.0**
BFZ			S		**S**	**18 41 43.9**	**+0.6**
CKHZ	**Cape Kidnapper**	**2.20 107**	P		**P**	**18 40 44.3**	**+1.1**
TKNZ	**Takaka Hill**	**2.24 208**	P		**P**	**18 40 46.6**	**+0.3**
QRZ	**Quartz Range**	**2.25 218**	P		**P**	**18 40 44.1**	**+0.8**
QRZ	**Quartz Range**	**2.25 218**	S		**S**	**18 41 42.6**	**-1.3**
QRZ	**Quartz Range**	**2.25 218**	P		**P**	**18 40 44.1**	**+0.8**
MTW	**Mount Morrison**	**2.28 158**	P		**P**	**18 40 44.4**	**+0.9**
MTW			S		**S**	**18 41 43.3**	**-0.8**
NNZ	**Nelson**	**2.28 199**	P		**P**	**18 40 43.9**	**+0.5**
URZ	**Urewera**	**2.30 71**	P		**P**	**18 40 43.8**	**+0.1**
URZ	**Urewera**	**2.30 71**	P		**P**	**18 40 43.8**	**+0.1**
URZ			S		**S**	**18 41 41.3**	**-3.0**
TUWZ	**Tuamarina**	**2.39 187**	P		**P**	**18 40 45.3**	**+1.4**
MSWZ	**Moikau Station**	**2.46 164**	P		**P**	**18 40 45.2**	**+0.9**
PAWZ	**Paruwai Farm**	**2.46 161**	P		**P**	**18 40 45.3**	**+0.9**
TRWZ	**Traveller**	**2.55 157**	P		**P**	**18 40 45.9**	**+1.0**
MWZ	**Matawai**	**2.59 75**	P		**P**	**18 40 45.7**	**+0.5**
MWZ			S		**S**	**18 41 44.9**	**-2.1**
MRNZ	**Matariki Terra**	**2.64 207**	P		**P**	**18 40 45.5**	**+0.3**
RIGZ	**Rimuhau**	**2.69 84**	P		**P**	**18 40 46.7**	**+1.0**
CMWZ	**Cape Campbell**	**2.69 182**	P		**P**	**18 40 46.9**	**+1.4**
RUGZ	**Raukumara Rang**	**2.83 68**	P		**P**	**18 40 46.2**	**+0.5**
KHZ	**Kahutara**	**3.41 190**	P		**P**	**18 40 50.2**	**+0.5**
KHZ	**Kahutara**	**3.41 190**	S		**S**	**18 41 54.8**	**-0.6**
MXZ	**Matakaoa Point**	**3.45 66**	P		**P**	**18 40 51.6**	**+1.4**
MXZ	**Matakaoa Point**	**3.45 66**	S		**S**	**18 41 56.0**	**0.0**
OUZ	**Omahuta**	**3.88 351**	P		**P**	**18 40 56.7**	**+3.6**
RPZ	**Rata Peaks**	**5.27 207**	P		**P**	**18 41 02.8**	**-0.6**
JCZ	**Jackson Bay**	**6.52 218**	P		**P**	**18 41 13.2**	**-1.2**
ODZ	**Otahua Downs**	**6.59 204**	P		**P**	**18 41 14.9**	**+0.1**
ODZ	**Otahua Downs**	**6.59 204**	S		**S**	**18 42 42.3**	**+1.0**

IDC 25 19:03:25.7±4.2, 22°.89S×178°.30W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=107.3km s-min=38.8km az=30.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.55**	**247**	P	P	19 10 33.1	-0.2
	1.1nm,0.4s,baz=99,slow=9.4,SNR=5.7 1.1nm,0.4s						
ASAR	**Alice Springs**	**43.75**	**259**	P	P	19 11 32.6	-0.6
	0.5nm,0.5s,baz=91,slow=6.6,SNR=21 0.5nm,0.5s						
WRA	**Warramunga Arr**	**44.05**	**265**	P	P	19 11 36.0	+0.4
	1.8nm,0.6s,baz=99,slow=8.2,SNR=20 1.8nm,0.6s						
QSPA	**South Pole Qui**	**67.19**	**180**	P	P	19 14 21.3	-0.1
	0.7nm,0.6s,baz=9.3,slow=1.1,SNR=6.2 0.7nm,0.6s						
HFS	**Hagfors**	**141.84**	**350**	PKP	PKPdf	19 22 60.0	+1.0
	1.1nm,0.4s,baz=48,slow=2.2,SNR=11						

*GUC **25** 19:11:34.0±0.9, 17°.30S×69°.83W, h15km±5km, ML3.5*
*NEIC **25** 19:11:37.0±1.2, 17°.51S±0°.03×69°.89W±0°.05, h10km±1km, mb4.1/3, Error ellipse: s-maj=8.5km s-min=3.6km az=117.0*
*IDC **25** 19:11:43.7±4.5, 17°.44S×69°.80W, h48km±39km, mb3.5/4, mbtmp3.8/5, ML3.7/1, MS3.1/6, Error ellipse: s-maj=36.5km s-min=30.3km az=80.0*

ISC 25 19:11:37.3±0.7, 17°.52S±0°.04×69°.89W±0°.04, h10km, n40, σ1§00/45, mb4.0/4, MS3.0/5, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.39**	**100**	*i* P	**Pg**	**19 11 44.1**	**-1.1**
PB18				*i* S	**Sg**	**19 11 51.0**	**+0.5**
PB18				IAML		19 11 54.1	
	comp=N,11μm,0.3s						
PB18	**Visviri**	**0.39**	**100**	Pg	**Pg**	**19 11 44.2**	**-1.0**
PB18				Sg	**Sg**	**19 11 50.2**	**-0.3**
PB16	**IPOC Station P**	**0.89**	**156**	*e*P	**Pg**	**19 11 54.3**	**-0.2**
PB16				*e*S	**Sb**	**19 12 07.2**	**-0.1**
PB16	**IPOC Station P**	**0.89**	**156**		**Pg**	**19 11 54.1**	**-0.4**
PB16					**Sb**	**19 12 07.0**	**-0.3**
AP01	**Chacalluta**	**0.95**	**207**	*e*P	**Pg**	**19 11 54.7**	**-1.0**
AP01				*i* S	**Sn**	**19 12 10.3**	**0.0**
AP01				IAML		19 12 10.9	
	comp=N,5μm,0.3s						
AP01	**Chacalluta**	**0.95**	**207**		**Pg**	**19 11 54.6**	**-1.0**
AP01				Sn	**Sn**	**19 12 10.1**	**-0.3**
PB12	**IPOC Station P**	**1.17**	**201**	*e*P	**Pb**	**19 11 58.4**	**-1.2**
PB12				*i* S	**Sn**	**19 12 16.4**	**+0.5**
PB12				IAML		19 12 17.7	
	comp=E,794nm,0.3s						
PB12	**IPOC Station P**	**1.17**	**201**	Pn	**Pb**	**19 11 58.8**	**-0.8**
PB12				Sn	**Sn**	**19 12 15.7**	**-0.2**
PX02	**IPOC Station P**	**1.47**	**192**	*e*P	**Pn**	**19 12 03.2**	**-0.7**
PX02				*e*S	**Sg**	**19 12 24.9**	**+0.4**
PX02				IAML		19 12 25.7	
	comp=N,371nm,0.6s						
LPAZ	**La Paz**	**2.08**	**54**	P	**Pb**	**19 12 14.5**	**-1.0**
	comp=N,33nm,0.4s,baz=244,slow=12,SNR=42			S	**Sn**	**19 12 39.5**	**+0.5**
LPAZ							
	comp=N,28nm,0.5s,baz=289,slow=8.4,SNR=3.6						
LPAZ				LR	LR	19 13 20.4	
	comp=N,609nm,20.3s,baz=245,slow=49						
LPAZ	**La Paz**	**2.08**	**54**		**Pn**	**19 12 13.1**	**+0.4**
PSGCX	**Pisagua**	**2.08**	**186**	*e*P	**Pb**	**19 12 13.8**	**-1.4**
PSGCX				*e*S	**Sb**	**19 12 42.3**	**+1.2**
PSGCX	**Pisagua**	**2.08**	**186**		**Pn**	**19 12 09.8**	**-2.5**
GO01	**Chusmiza**	**2.24**	**163**	*e*P	**Pg**	**19 12 19.3**	**-0.9**
GO01				*i* S	**Sg**	**19 12 50.9**	**+1.6**
GO01				IAML		19 12 54.1	
	comp=E,412nm,0.3s						
GO01	**Chusmiza**	**2.24**	**163**		**Pn**	**19 12 14.7**	**-0.1**
PB11	**IPOC Station P**	**2.24**	**174**	*e*P	**Pn**	**19 12 15.5**	**+0.9**
PB11				IAML		19 12 50.5	
	comp=E,423nm,0.1s						
PB11	**IPOC Station P**	**2.24**	**174**		**Pn**	**19 12 14.7**	**+0.1**
PB08	**IPOC Station P**	**2.70**	**165**		**Pn**	**19 12 21.2**	**+0.1**
PB02	**IPOC Station P**	**3.78**	**180**		**Pn**	**19 12 36.4**	**+0.6**
PB09	**IPOC Station P**	**4.30**	**172**		**Pn**	**19 12 41.6**	**-1.4**
PB03	**IPOC Station P**	**4.51**	**178**		**Pn**	**19 12 46.2**	**+0.4**
SIV	**San Ignacio**	**8.58**	**81**	P	**Pn**	**19 13 43.9**	**+2.2**
	comp=E,0.1nm,0.3s,baz=254,slow=14,SNR=14						
SIV				S	**Sn**	**19 15 19.1**	**+0.5**
	comp=E,2.2nm,0.5s,baz=293,slow=17,SNR=1.9						
SIV				LR	LR	19 17 37.2	
	comp=E,241nm,19.9s,baz=304,slow=42 comp=E,5.1nm,0.7s						
VILB	**Vilhena**	**10.39**	**65**	Pn	**Pn**	**19 14 05.7**	**-0.8**
PTLB	**Pontes e Lacer**	**10.51**	**80**	Pn	**Pn**	**19 14 07.7**	**-0.4**
MT09	**Talagante**	**16.22**	**183**	Pn	**Pn**	**19 15 25.3**	**-0.2**
MT09				IAmb	IAmb	19 15 48.3	
	comp=Z,15nm,1.4s						
H03N1	**Juan Fernandez**	**17.81**	**205**	T	T	19 33 17.2	
	baz=27,slow=73,SNR=3.2						
H03N2	**Juan Fernandez**	**17.82**	**205**	T	T	19 33 21.5	
	baz=27,slow=73,SNR=4.2						
H03N3	**Juan Fernandez**	**17.83**	**205**	T	T	19 33 24.2	
	baz=27,slow=73,SNR=3.8						
TRQA	**Tornquist**	**21.61**	**163**	P	**P**	**19 16 26.6**	**-0.8**
TRQA				IAmb	IAmb	19 16 53.6	
	comp=Z,17nm,1.3s						
SDV	**Santo Domingo**	**26.25**	**358**	LR	LR	19 28 25.3	
	comp=Z,39nm,19.6s,baz=254,slow=38						
MDP	**Montagnes des**	**28.20**	**39**	LR	LR	19 29 38.0	
	comp=Z,25nm,19.4s,baz=326,slow=38						
JTS	**Las Juntas de**	**31.39**	**331**	LR	LR	19 30 10.0	
	comp=Z,29nm,18.8s,baz=220,slow=35						
TKL	**Tuckaleechee C**	**54.50**	**346**	LR	LR	19 46 25.1	
	comp=Z,22nm,18.1s,baz=58,slow=38						
SADO	**Sadowa**	**62.56**	**353**	LR	LR	19 51 27.2	
	comp=Z,6.6nm,19.2s,baz=172,slow=38						
PDAR	**Pinedale Array**	**70.22**	**330**	P	**P**	**19 22 52.9**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=131,slow=4.5,SNR=2.4 comp=Z,0.1nm,0.3s						
QSPA	**South Pole Qui**	**72.65**	**180**	P	**P**	**19 23 06.9**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=149,slow=7.7,SNR=2.0 comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**72.65**	**180**	P	**P**	**19 23 05.6**	**+0.6**
QSPA				IAmb	IAmb	19 23 24.9	
	comp=Z,2.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**76.93**	**72**	P	**P**	**19 23 30.4**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=264,slow=4

TSUM Sn Sn 19 49 19.3 -5.1
comp=E,3.1nm,0.3s,baz=304,slow=12,SNR=4.8
TSUM Lg Lg 19 51 05.5
baz=150,slow=20
TSUM LR LR 19 52 53.8
comp=E,319nm,18.5s,baz=16,slow=40
TSUM Tsumeb 14.27 226 Pn Pn 19 46 46.4 +0.5
TSUM Tsumeb 14.27 226 *i* P Pn 19 46 47.1 +1.3
TSUM *i* S Sn 19 49 19.1 -5.2
TSUM Tsumeb 14.27 226 P Pn 19 46 47.2 +1.3
LODK Lodwar 14.57 29 Pn 19 46 47.4 -2.7
LODK Lodwar 14.57 29 P Pn 19 46 48.7 -1.3
SKOMA Sekoma 15.54 196 *i* P Pn 19 47 00.6 -2.3
SKOMA *i* S Sn 19 49 37.6 -18
SKOMA IAML 19 51 59.3
comp=N,38nm,0.8s
KOOLE Kule 15.57 210 Pn 19 47 03.8 +0.4
KOOLE IAmb IAmb 19 47 18.3
comp=Z,27nm,0.6s
KOOLE Kule 15.57 210 *i* P Pn 19 47 01.8 -1.5
KOOLE *i* S Sn 19 49 44.3 -12
KOOLE IAML 19 52 16.3
comp=N,86nm,0.9s
LBTB Lobatse 15.66 190 Pn Pn 19 47 05.3 +0.8
comp=N,2.0nm,0.3s,baz=2.3,slow=13,SNR=25
LBTB Sn Sn 19 49 53.8 -4.5
comp=N,1.5nm,0.3s,baz=88,slow=22,SNR=3.1
LBTB Lg Lg 19 51 36.8
comp=N,1.5nm,0.3s,baz=274,slow=22,SNR=3.6
LBTB LR LR 19 53 18.2
comp=N,399nm,18.5s,baz=15,slow=38
comp=N,10nm,0.4s
LBTB Lobatse 15.66 190 Pn 19 47 04.4 -0.1
LBTB IAmb IAmb 19 47 20.1
comp=Z,45nm,0.8s
LBTB Lobatse 15.66 190 *i* P Pn 19 47 04.9 +0.4
LBTB *i* S Sn 19 49 53.6 -4.6
LBTB Lobatse 15.66 190 P Pn 19 47 04.4 -0.1
LKGWB Lokgwabe 16.08 205 Pn 19 47 08.0 -2.0
MAKGR Makgori 16.58 192 Pn 19 47 16.1 -0.2
MAKGR IAmb IAmb 19 47 22.3
comp=Z,53nm,0.7s
MAKGR Makgori 16.58 192 *i* P Pn 19 47 15.7 -0.7
MAKGR *i* S Sn 19 50 05.9 -15
MAKGR IAML 19 52 39.4
comp=E,103nm,0.6s
PHPEN Phepeng 16.75 198 *i* P Pn 19 47 18.6 +0.1
WIN Windhoek 16.94 219 Pn 19 47 20.3 -0.8
WIN IAmb IAmb 19 47 27.0
comp=Z,19nm,0.7s
POGA Pongola 18.01 171 Pn 19 47 33.2 -0.9
POGA IAmb IAmb 19 48 01.4
comp=Z,28nm,0.5s
POGA Pongola 18.01 171 P P 19 47 36.8 +2.2
BOSA Boshof 19.24 189 Pn Pn 19 47 49.9 +0.7
comp=Z,4.0nm,0.3s,baz=15,slow=14,SNR=108
BOSA Sn Sn 19 51 19.8 -5.4
comp=Z,0.9nm,0.3s,baz=124,slow=9.5,SNR=2.8
BOSA Lg Lg 19 53 27.6
comp=Z,1.0nm,0.3s,baz=111,slow=20,SNR=2.3
BOSA LR LR 19 55 48.3
comp=Z,140nm,20.9s,baz=14,slow=39
comp=Z,27nm,0.5s
BOSA Boshof 19.24 189 P 19 47 48.8 +0.5
BOSA Boshof 19.24 189 *i* P Pn 19 47 50.0 +0.8
BOSA Boshof 19.24 189 P Pn 19 47 49.7 +0.5
OPO Ambohidratompo 20.27 118 P P 19 47 59.8 +0.2
comp=Z,3.6nm,0.8s,baz=300,slow=14,SNR=1.4
comp=Z,3.6nm,0.8s
ABPO Ambohimpanom 20.49 120 P P 19 48 00.4 -1.6
ABPO IAmb IAmb 19 48 19.1
comp=Z,24nm,1.2s
ABPO Ambohimpanom 20.49 120 P P 19 48 01.4 -0.5
VOI Vohitsoka 21.50 127 P P 19 48 13.0 +0.2
VOI IAmb IAmb 19 48 14.6
comp=Z,53nm,1.5s
VOI Vohitsoka 21.50 127 P P 19 48 13.6 +0.7
EDA Edea 22.51 305 P P 19 48 21.8 -1.8
CVNA Calvinia 23.31 199 P P 19 48 32.2 +0.4
GRHM Grahamstown, E 23.73 184 P P 19 48 36.6 +0.6
SUR Sutherland 23.84 196 LR LR 19 58 06.9
comp=Z,325nm,19.1s,baz=18,slow=37
SUR Sutherland 23.84 196 P P 19 48 38.2 +1.1
SUR Sutherland 23.84 196 P P 19 48 39.2 +2.0
CER Ceres 25.20 198 P P 19 48 49.8 +0.4
ATD Arta Tunnel 25.33 35 P P 19 48 48.6 -2.2
TORD Torodi Ar. Bea 34.82 310 P P 19 50 15.7 +0.8
comp=Z,13nm,0.7s,baz=120,slow=8.4,SNR=77
DBIC Dimbokro 36.87 295 P P 19 50 33.5 +0.9
comp=Z,1.8nm,0.5s,baz=140,slow=8.8,SNR=1.8
DBIC LR LR 20 05 19.7
comp=Z,57nm,19.6s,baz=177,slow=36
comp=Z,1.8nm,0.5s
DBIC Dimbokro 36.87 295 P P 19 50 31.8 -0.7
DBIC IAmb IAmb 19 50 58.7
comp=Z,8.9nm,1.2s
EIL Elat 39.45 9 LR LR 20 07 20.4
comp=Z,77nm,19.6s,baz=273,slow=36
ASF Jabal al Asfar 42.22 11 LR LR 20 07 35.7
comp=Z,36nm,18.3s,baz=206,slow=34
MMAI Mount Meron Ar 42.80 9 LR LR 20 08 22.2
comp=Z,37nm,19.7s,baz=205,slow=35
RAFF Raffo Rosso 48.32 345 P P 19 52 05.2 0.0
KEST Kesra 48.47 339 P P 19 52 05.8 -0.8
comp=Z,1.9nm,0.8s,baz=124,slow=11,SNR=1.8
KEST LR LR 20 13 37.0
comp=Z,69nm,18.3s,baz=318,slow=37
comp=Z,1.9nm,0.8s
KEST Kesra 48.47 339 P P 19 52 06.3 -0.2
VAE Valguarnera 48.55 345 LR LR 20 14 57.5
comp=Z,92nm,18.1s,baz=136,slow=39
BR131 Keskin Array S 49.22 5 P 19 52 11.1 -1.2
BR131 IAmb IAmb 19 52 24.6
comp=Z,8.7nm,1.4s
BRTR Keskin Array B 49.22 5 P P 19 52 11.9 -0.4
comp=Z,1.0nm,0.7s,baz=184,slow=11,SNR=7.1
BRTR LR LR 20 13 51.0
comp=Z,23nm,19.3s,baz=158,slow=37
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 49.22 5 P P 19 52 11.2 -1.0
GNI Garni 51.66 16 LR LR 20 14 50.7
comp=Z,43nm,19.4s,baz=214,slow=37
MDT Midelt 52.58 325 LR LR 20 15 34.5
comp=Z,88nm,20.1s,baz=134,slow=37
MLR Muntele Rosu 54.79 358 LR LR 20 19 27.7
comp=Z,25nm,19.0s,baz=228,slow=40
CIMO Cimolais 57.38 347 P P 19 53 11.2 -0.9
ESBB Sonseca Array 57.43 331 P P 19 53 11.9 -0.6
ESBB IAmb IAmb 19 53 32.2
comp=Z,8.6nm,1.4s
ESDC Sonseca Array 57.43 331 P P 19 53 13.1 +0.5
comp=Z,1.5nm,0.7s,baz=146,slow=6.9,SNR=16
ESDC LR LR 20 20 43.0
comp=Z,62nm,18.4s,baz=140,slow=39
comp=Z,1.5nm,0.7s
ESDC Sonseca Array 57.43 331 P P 19 53 11.8 -0.8
ESDC IAmb IAmb 19 53 14.2
comp=Z,3.5nm,1.0s
PAB San Pablo 57.52 330 P P 19 53 13.3 +0.1
PAB IAmb IAmb 19 53 27.8
comp=Z,7.3nm,1.4s
PVAQ Vaqueiros 57.66 326 P P 19 53 13.6 -0.6
FUORN Ofenpass-Fuorn 58.19 345 P P 19 53 18.4 +0.4
FUORN IAmb IAmb 19 53 32.2
comp=Z,5.8nm,1.2s
TUE Stuetta 58.29 345 P P 19 53 18.4 -0.3
TUE IAmb IAmb 19 53 30.3
comp=Z,5.8nm,1.2s
DAVOX Davos/Dischmat 58.44 345 LR LR 20 21 48.1
comp=Z,24nm,18.3s,baz=96,slow=40
PESTR Estremoz 58.66 327 P P 19 53 20.7 -0.5
PESTR IAmb IAmb 19 53 30.4
comp=Z,5.6nm,1.0s
GERES GERESS Array B 59.54 349 P P 19 53 27.4 +0.3
comp=Z,0.3nm,0.6s,baz=165,slow=5.5,SNR=6.3
comp=Z,0.3nm,0.6s
GERES GERESS Array B 59.54 349 P P 19 53 26.6 -0.6
AKASG Malin Array Be 59.96 1 P P 19 53 29.3 -0.6
comp=Z,0.1nm,0.3s,baz=188,slow=6.4,SNR=5.0
comp=Z,0.1nm,0.3s
CLL Collm 62.02 349 *e*P P 19 53 46.0 +2.1
MAW Mawson 62.40 166 P P 19 53 47.0 +0.8
comp=Z,1.2nm,0.7s,baz=307,slow=8.9,SNR=4.4
MAW LR LR 20 17 14.0
comp=Z,59nm,19.9s,baz=343,slow=32
comp=Z,1.2nm,0.7s

MAW Mawson 62.40 166 P P 19 53 47.2 +1.0
SUW Suwalki 63.43 357 P P 19 53 53.1 -0.1
TROLL Troll, Antarti 64.43 189 P P 19 54 03.4 +3.5
comp=Z,97nm,0.9s
AB31 Akbulak array 64.71 22 P P 19 54 02.6 +0.8
ABKAR Akbulak array 64.71 22 P P 19 54 02.5 +0.8
KK31 Karatay Array 64.87 33 P P 19 54 04.1 +1.1
KK31 IAmb IAmb 19 54 14.7
comp=Z,2.8nm,0.9s
KKAR Karatay Array 64.87 33 P P 19 54 03.5 +0.5
SNAA Sanae 65.02 190 P P 19 54 04.4 +0.9
comp=Z,2.1nm,0.9s,baz=35,slow=9.4,SNR=2.8
SNAA LR LR 20 18 35.8
comp=Z,54nm,21.2s,baz=22,slow=32
comp=Z,2.1nm,0.9s
SNAA Sanae 65.02 190 P P 19 54 04.3 +0.7
SNAA IAmb IAmb 19 54 07.6
comp=Z,4.5nm,1.1s
VNA1 Neumayer--Stat 65.27 193 P P 19 54 09.5 +4.4
comp=Z,6.3nm,1.1s
AAK Ala-Archa 66.76 35 LR LR 20 25 50.4
comp=Z,67nm,19.2s,baz=227,slow=38
TARG Taragay, Kyrgy 68.15 38 P P 19 54 25.5 +0.9
TARG IAmb IAmb 19 54 36.2
comp=Z,4.5nm,0.8s
EKA Eskdalemuir Ar 69.80 341 P P 19 54 35.3 +1.4
comp=Z,3.3nm,1.1s,baz=163,slow=6.9,SNR=3.0
EKA LR LR 20 27 20.6
comp=Z,30nm,18.2s,baz=111,slow=38
comp=Z,3.3nm,1.1s
ARTI Arti 70.18 17 LR LR 20 27 20.5
comp=Z,32nm,20.1s,baz=208,slow=38
FINES FINESS Array B 70.75 359 P P 19 54 41.4 +1.8
comp=Z,1.2nm,0.8s,baz=165,slow=5.8,SNR=11
comp=Z,1.2nm,0.8s
FINES FINESS Array B 70.75 359 P P 19 54 40.2 +0.6
FIA1 FINESS Array S 70.75 359 P P 19 54 39.5 -0.1
NOA NORSAR Array B 71.63 351 P P 19 54 47.2 +2.2
comp=Z,0.3nm,0.5s,baz=141,slow=9.1,SNR=2.5
NOA LR LR 20 29 58.0
comp=Z,13nm,18.3s,baz=350,slow=39
comp=Z,0.3nm,0.5s
BVAR Borovoye Array 71.79 25 P P 19 54 47.1 +1.0
comp=Z,0.2nm,0.5s,baz=229,slow=6.8,SNR=7.7
comp=Z,0.2nm,0.5s
MORE Moreh 72.46 61 P P 19 54 50.7 0.0
MORE IAmb IAmb 19 55 04.0
comp=Z,7.9nm,0.9s
MK31 Makanchi Array 73.70 35 P P 19 54 57.8 +0.2
MKAR Makanchi Array 73.70 35 P P 19 54 58.6 +0.9
comp=Z,0.4nm,0.9s,baz=232,slow=7.0,SNR=17
comp=Z,0.4nm,0.9s
MKAR Makanchi Array 73.70 35 P P 19 54 58.2 +0.6
KURBB Kurchatov Arra 73.94 31 P P 19 55 00.1 +1.2
comp=Z,0.1nm,0.3s,baz=198,slow=5.8,SNR=4.2
comp=Z,0.1nm,0.3s
KURK Kurchatov 74.04 31 P P 19 54 58.8 -0.7
CHTO Chiang Mai 74.97 68 P P 19 55 05.5 -0.1
ARCES ARCESS Array B 78.88 359 P P 19 55 28.0 +1.4
comp=Z,2.6nm,1.0s,baz=178,slow=8.0,SNR=18
comp=Z,2.6nm,1.0s
ARCES ARCESS Array B 78.88 359 P P 19 55 26.8 +0.3
ZALV Zalesovo Beam 79.01 30 LR LR 20 33 21.1
comp=Z,31nm,18.9s,baz=220,slow=38
PZH PanZhiHua 79.55 61 P P 19 55 33.3 +1.9
QSPA South Pole Qui 80.59 180 P P 19 55 38.6 +2.4
comp=Z,0.3nm,0.5s,baz=309,slow=6.5,SNR=1.3
comp=Z,0.3nm,0.5s
QSPA South Pole Qui 80.59 180 P P 19 55 36.3 +0.1
PMSA Palmer Station 82.54 206 LR LR 20 29 33.9
comp=Z,42nm,18.2s,baz=88,slow=34
XAN Xi'an 87.47 55 P P 19 56 11.8 0.0
XAN pmax pmax
comp=Z,5.0nm,0.8s
VNDA Vanda 89.27 171 LR LR 20 33 07.5
comp=Z,36nm,20.4s,baz=200,slow=33
HHC Hu-ho-hao-te 90.98 49 *e*P P 19 56 29.0 +0.7
HHC pmax pmax
comp=Z,5.0nm,0.6s
NJ2 Nanjing 95.31 59 *e*P P 19 56 49.3 +1.0
NJ2 pmax pmax
comp=Z,29nm,0.8s
ASAR Alice Springs 100.11 116 P Pdif 19 57 11.0 +0.8
comp=Z,0.3nm,1.0s,baz=273,slow=4.1,SNR=4.6

IDC 25 20:22:49.8±50.0, 22°43S×173°85W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=950.7km s-min=177.5km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.51**	**247**	P	P	20 30 29.9	-0.9
	1.0nm,0.5s,baz=109,slow=11,SNR=4.4						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**47.87**	**258**	P	P	20 31 29.9	0.0
	0.7nm,0.5s,baz=96,slow=7.0,SNR=21						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**48.18**	**263**	P	P	20 31 32.6	+0.3
	1.3nm,0.4s,baz=100,slow=8.1,SNR=17						
	1.3nm,0.4s						

MDD ***25*** *20:36:35.7±0.5, 35°14N×5°87W, h4km±3km, mb_Lg2.3/8, Error ellipse: s-maj=4.5km s-min=2.4km az=101.0*
CNRM ***25*** *20:36:36.1, 35°09N×6°05W, h25km, ML2.5*
INMG ***25*** *20:36:38.3±1.3, 35°07N×5°95W, h31km±9km, ML1.9, Error ellipse: s-maj=4.6km s-min=3.0km az=71.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Tanger (MARR)*
SFS ***25*** *20:36:38.3, 35°17N×5°87W, h23km, ML2.4/6, ML2.6/6, MLv2.7/4*
IGIL ***25*** *20:36:38.5, 35°09N×5°90W, h30km, ML1.9*
ISC 25 20:36:37.2±1.2, 35°15N±0°02×5°90W±0°03, h28km±12km, n45, σ1§26/78, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHEFC	**Chefchaouen**	**0.46**	**95**	P	**Pn**	**20 36 48.2**	**+0.3**
CHEFC				S	**Sb**	**20 36 54.1**	**+0.6**
SMIR	**Smir Dam**	**0.68**	**38**	P	**Pn**	**20 36 52.2**	**+1.3**
SMIR				S	**Sb**	**20 37 00.2**	**+0.6**
SICH	**Sidi Chahed**	**1.14**	**155**	P	**Pn**	**20 36 57.6**	**+0.3**
SICH				S	**Sb**	**20 37 11.7**	**-1.1**
EJIF	**Jimena Fronter**	**1.35**	**15**	Pg	**Pb**	**20 37 01.6**	**-0.2**
EJIF				Sg	**Sn**	**20 37 17.9**	**+0.8**
EMIJ	**Mijas**	**1.68**	**32**	Pg	**Pb**	**20 37 06.5**	**-1.0**
EMIJ				Sg	**Sb**	**20 37 28.4**	**+0.1**
LCRM	**LCR**	**1.69**	**149**	P	**Pn**	**20 37 06.1**	**+1.1**
LCRM				S	**Sn**	**20 37 26.5**	**+0.8**
ESPR	**Espera**	**1.72**	**1**	Sn	**Sb**	**20 37 28.7**	**-0.6**
ESPR				*i* IVmb_Lg		20 37 31.0	
IFR	**Ifrane**	**1.75**	**158**	Pn	**Pn**	**20 37 06.1**	**+0.4**
IFR				Sn	**Sn**	**20 37 27.1**	**0.0**
AKLM	**AKL**	**1.79**	**110**	P	**Pb**	**20 37 08.3**	**-1.0**
AKLM				S	**Sn**	**20 37 28.7**	**+0.6**
ZHG	**ZHG**	**1.81**	**200**	P	**Pn**	**20 37 07.7**	**+1.3**
ZHG				S	**Sn**	**20 37 27.9**	**-0.5**
AVE	**Averroes**	**2.23**	**215**	Sg	**Sb**	**20 37 46.3**	**+2.3**
MD31	**MD31**	**2.46**	**157**	P	**Pn**	**20 37 15.1**	**-0.4**
MD31				S	**Sn**	**20 37 45.3**	**+0.7**
MDT	**Midelt**	**2.56**	**155**	P	**Pn**	**20 37 15.5**	**-1.3**
MDT				S	**Sn**	**20 37 46.1**	**-1.0**
PBDV	**Barranco-do-Ve**	**2.66**	**322**	Sn	**Sn**	**20 37 49.0**	**-0.5**
PBDV	**Barranco-do-Ve**	**2.66**	**322**	*e*S	**Sn**	**20 37 49.3**	**-0.2**
PBDV				*i* IAML		20 37 50.3	
PBDV				*i* IAML		20 37 50.5	
EMIN	**Mina Concepcio**	**2.69**	**347**	Sn	**Sn**	**20 37 50.4**	**+0.2**
EMIN				*i* IVmb_Lg		20 37 56.0	
PVAQ	**Vaqueiros**	**2.69**	**327**	*e*P	**Pn**	**20 37 19.3**	**+0.8**
PVAQ				*e*S	**Sn**	**20 37 49.5**	**-0.7**
PVAQ				*i* IAML		20 37 50.9	
PVAQ				*i* IAML		20 37 51.0	
PVAQ				*i* IAML		20 37 51.2	
PVAQ	**Vaqueiros**	**2.69**	**327**	P	**Pn**	**20 37 19.2**	**+0.7**
PVAQ				S	**Sn**	**20 37 48.0**	**-2.3**
EGRO	**El Granado**	**2.71**	**332**	Pn	**Pn**	**20 37 19.6**	**+0.8**
EGRO				Sn	**Sn**	**20 37 48.7**	**-1.9**
EGRO	**El Granado**	**2.71**	**332**	Pn	**Pn**	**20 37 19.6**	**+0.8**
EGRO				Sn	**Sn**	**20 37 50.4**	**-0.2**
EGRO				*i* IVmb_Lg		20 37 51.5	
ECAB	**El Cabril**	**2.95**	**7**	Pn	**Pn**	**20 37 22.8**	**+0.6**
ECAB	**El Cabril**	**2.95**	**7**	Pn	**Pn**	**20 37 24.0**	**+1.9**
ECAB				Sn	**Sn**	**20 37 54.9**	**-1.7**
ECAB				*i* IVmb_Lg		20 37 56.8	
PCVE	**Castro Verde**	**3.02**	**326**	*e*P	**Pn**	**20 37 24.6**	**+1.5**
PCVE				*e*S	**Sn**	**20 37 57.8**	**-0.6**
PCVE				*i* IAML		20 37 59.1	
PCVE				*i* IAML		20 37 59.1	
PCVE				*i* IAML		20 38 00.5	
MORF	**Marmelete**	**3.10**	**315**	*e*P	**Pn**	**20 37 24.7**	**+0.5**
MORF				*e*S	**Sn**	**20 37 58.4**	**-1.9**
MORF				IAML		20 37 59.5	
comp=E,5.5nm,0.3s							
MORF	**Marmelete**	**3.10**	**315**	*e*S	**Sn**	**20 38 00.2**	**-0.2**
PBAR	**Barrancos**	**3.16**	**343**	Pn	**Pn**	**20 37 25.7**	**+0.7**
PBAR	**Barrancos**	**3.16**	**343**	*e*P	**Pn**	**20 37 25.9**	**+0.9**
PBAR				*e*S	**Sn**	**20 38 00.9**	**-0.8**
PBAR				*i* IAML		20 38 02.1	
PBAR				*i* IAML		20 38 02.9	
PBAR				*i* IAML		20 38 03.0	
EADA	**Adamuz**	**3.20**	**19**	Pn	**Pn**	**20 37 26.8**	**+1.2**
EADA				Sn	**Sn**	**20 38 01.7**	**-1.0**
EADA				*i* IVmb_Lg		20 38 04.5	
MESJ	**Messejana**	**3.28**	**326**	*e*P	**Pn**	**20 37 27.2**	**+0.7**
MESJ				*e*S	**Sn**	**20 38 02.7**	**-1.9**
MESJ				IAML		20 38 05.5	
comp=E,2.7nm,0.4s							
MESJ	**Messejana**	**3.28**	**326**	*e*P	**Pn**	**20 37 27.3**	**+0.7**
MESJ				*e*S	**Sn**	**20 38 04.2**	**-0.4**
MESJ				*i* IAML		20 38 05.9	
MESJ				*i* IAML		20 38 06.1	
PBEJ	**Beja**	**3.28**	**332**	*e*S	**Sn**	**20 38 04.1**	**-0.7**
PTEO	**Sao Teotonio**	**3.31**	**317**	*e*P	**Pn**	**20 37 27.8**	**+0.8**
PTEO				*e*S	**Sn**	**20 38 04.8**	**-0.6**
EQES	**Quesada**	**3.50**	**40**	Pn	**Pn**	**20 37 32.9**	**+3.2**
EQES				Sn	**Sn**	**20 38 10.7**	**+0.5**
EQES				*i* IVmb_Lg		20 38 13.0	
PLOUS	**Minas do Lousa**	**3.52**	**326**	*e*P	**Pn**	**20 37 30.7**	**+0.7**
PLOUS				*e*S	**Sn**	**20 38 10.0**	**-0.8**
PLOUS				*i* IAML		20 38 12.2	
EBAD	**Badajoz**	**3.71**	**346**	Pn	**Pn**	**20 37 34.0**	**+1.4**
EBAD				Sn	**Sn**	**20 38 14.5**	**-0.9**
EBAD				*i* IVmb_Lg		20 38 16.1	
EVO	**Evora**	**3.78**	**334**	*e*P	**Pn**	**20 37 34.5**	**+0.9**
EVO				*e*S	**Sn**	**20 38 16.6**	**-0.5**
EVO				*i* IAML		20 38 17.4	
EVO				*i* IAML		20 38 17.6	
MOE	**Montemor**	**3.90**	**330**	*e*P	**Pn**	**20 37 39.5**	**+4.3**
MOE				*e*S	**Sn**	**20 38 20.2**	**+0.1**
MOE				*i* IAML		20 38 20.7	
MOE				*i* IAML		20 38 20.9	
PESTR	**Estremoz**	**3.95**	**340**	*e*P	**Pn**	**20 37 37.9**	**+2.0**
PESTR				*e*S	**Sn**	**20 38 20.9**	**-0.5**
PESTR				*i* IAML		20 38 21.9	
PESTR				*i* IAML		20 38 22.0	
PESTR				*i* IAML		20 38 23.9	
PARRA	**Arraiolos**	**4.04**	**336**	*e*P	**Pn**	**20 37 38.0**	**+0.9**
PARRA				*e*S	**Sn**	**20 38 22.8**	**-0.8**
PARRA				*i* IAML		20 38 24.9	
PSIM	**Granatula de C**	**4.05**	**24**	Sn	**Sn**	**20 38 21.4**	**-2.3**
PMTG	**Montargil**	**4.34**	**335**	*e*P	**Pn**	**20 37 42.2**	**+1.0**
PMTG				*e*S	**Sn**	**20 38 30.1**	**-0.6**
PMTG				*i* IAML		20 38 31.8	
PMTG				*i* IAML		20 38 31.9	
PMRV	**Marv??o**	**4.44**	**345**	*e*P	**Pn**	**20 37 44.2**	**+1.6**
PMRV				*e*S	**Sn**	**20 38 32.0**	**-0.4**
PMRV				*i* IAML		20 38 33.7	
PMRV				*i* IAML		20 38 33.9	
PAB	**San Pablo**	**4.56**	**15**	Sn	**Sn**	**20 38 33.5**	**-2.9**
PAB				*i* IVmb_Lg		20 38 35.3	
PSARD	**Sardoal**	**4.80**	**339**	*e*P	**Pn**	**20 37 46.7**	**-0.8**
PSARD				*e*S	**Sn**	**20 38 41.4**	**-0.8**
PSARD				*i* IAML		20 38 41.8	
PSARD				*i* IAML		20 38 42.5	
PSARD				*i* IAML		20 38 42.5	
EPLA	**Plasencia**	**4.91**	**358**	Pn	**Pn**	**20 37 50.7**	**+1.6**

IDC 25 20:41:39.9±22.0, 19°03S×179°73W, h564km±88km, mb3.0/3, mbtmp3.8/4, Error ellipse: s-maj=480.9km s-min=103.7km az=86.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.47**	**301**	P	P	20 42 53.3	0.0
	4.8nm,0.4s,baz=120,slow=20,SNR=8.2						
STKA	**Stephens Creek**	**37.00**	**242**	P	P	20 48 02.2	-0.1
	1.1nm,0.5s,baz=90,slow=8.9,SNR=7.2						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**43.21**	**261**	P	P	20 48 51.8	-0.3
	0.6nm,0.4s,baz=97,slow=8.3,SNR=8.7						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**43.29**	**255**	P	P	20 48 52.6	-0.1
	2.4nm,0.7s,baz=86,slow=8.0,SNR=13						
	2.4nm,0.7s						

IDC ***25*** *20:42:27.6±2.7, 5°46S×147°51E, h174km±21km, mb3.2/5, mbtmp3.8/8, Error ellipse: s-maj=42.4km s-min=18.6km az=75.0*
NEIC ***25*** *20:42:31.1±1.9, 5°53S±0°07×147°28E±0°09, h198km±9km, mb4.2/14, Error ellipse: s-maj=13.3km s-min=8.6km az=113.0*
ISC 25 20:42:30.5±0.7, 5°55S±0°07×147°3E±0°1, h200km, n29, σ1§03/32, mb4.0/9, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.49**	**1**	Pn	**Pn**	**20 43 26.2**	**+0.2**
PMG	**Port Moresby**	**3.83**	**182**	P	**Pn**	**20 43 29.7**	**-0.6**
	39nm,0.3s,baz=330,slow=6.8,SNR=55						
PMG				S	**Sn**	**20 44 14.6**	**-2.6**
	55nm,0.3s,baz=11,slow=20,SNR=10						
PMG	**Port Moresby**	**3.83**	**182**		**Pn**	**20 43 29.9**	**-0.3**
PMG				Sn	**Sn**	**20 44 14.2**	**-3.0**
RABL	**Rabaul**	**5.04**	**75**	Pn	**Pn**	**20 43 45.8**	**+0.2**
JAY	**Jayapura**	**7.23**	**294**	P	**Pn**	**20 44 12.7**	**-1.2**
	3.1nm,0.3s,baz=195,slow=7.0,SNR=8.5						
COEN	**Coen**	**9.28**	**206**	Pn	**Pn**	**20 44 41.9**	**+1.4**
COEN				Sn	**Sn**	**20 46 24.7**	**+0.2**
MTN	**Manton Dam**	**17.51**	**244**	P	**P**	**20 46 21.6**	**+0.5**
MTN				IAmb	IAmb	20 46 30.8	
comp=Z,18nm,1.4s							
WB0	**Warramunga Arr**	**18.90**	**220**	P	**P**	**20 46 36.5**	**+0.3**
WB0				IAmb	IAmb	20 46 52.9	
comp=Z,7.8nm,1.3s							
WRA	**Warramunga Arr**	**19.06**	**220**	P	**P**	**20 46 38.8**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=47,slow=12,SNR=21						
WRA	**Warramunga Arr**	**19.06**	**220**	P	**P**	**20 46 37.5**	**-0.4**
EIDS	**Eidsvold**	**20.04**	**170**	P	**P**	**20 46 48.3**	**-0.1**
EIDS				IAmb	IAmb	20 47 12.6	
comp=Z,18nm,1.4s							
KNRA	**Kununurra**	**20.78**	**240**	P	**P**	**20 46 56.4**	**0.0**
KNRA				IAmb	IAmb	20 47 02.7	
comp=Z,18nm,1.2s							
AS31	**Alice Springs**	**22.14**	**214**	P	**P**	**20 47 11.6**	**+1.3**
ASAR	**Alice Springs**	**22.15**	**214**	P	**P**	**20 47 11.8**	**+1.5**
	comp=Z,4.9nm,0.9s,baz=49,slow=8.7,SNR=25						
	comp=Z,4.9nm,0.9s						
ASAR	**Alice Springs**	**22.15**	**214**	P	**P**	**20 47 10.9**	**+0.6**
INKA	**Innaminka**	**22.93**	**195**	P	**P**	**20 47 18.6**	**+1.3**
INKA				IAmb	IAmb	20 47 29.9	
comp=Z,3.6nm,0.9s							
SOEI	**Soe**	**23.19**	**258**	P	**P**	**20 47 19.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**24.54**	**238**	P	**P**	**20 47 32.7**	**+0.6**
FITZ				IAmb	IAmb	20 47 35.2	
comp=Z,1.9nm,0.5s							
ARMA	**Armidale**	**25.07**	**171**	P	**P**	**20 47 37.6**	**+0.8**
YULB	**Yu-li**	**38.37**	**320**	P	**P**	**20 49 33.0**	**+0.4**
YULB				IAmb	IAmb	20 50 01.9	
comp=Z,10nm,1.2s							
NACB	**Ninganchiao**	**38.73**	**321**	P	**P**	**20 49 35.2**	**-0.4**
LSA	**Lhasa**	**64.20**	**307**	P	**P**	**20 52 44.0**	**-0.9**
LSA				IAmb	IAmb	20 52 45.4	
comp=Z,5.8nm,1.1s							
MKAR	**Makanchi Array**	**77.34**	**320**	P	**P**	**20 54 03.4**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=98,slow=8.9,SNR=4.8						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**77.34**	**320**	P	**P**	**20 54 02.8**	**-0.4**
ZALV	**Zalesovo Beam**	**78.79**	**328**	P	**P**	**20 54 10.3**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=116,slow=6.8,SNR=3.9						
	comp=Z,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**81.05**	**323**	P	**P**	**20 54 23.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=98,slow=4.5,SNR=3.1						
	comp=Z,0.2nm,0.5s						

comp=Z,0.3nm,0.5s,baz=166,slow=5.3,SNR=1.2
comp=Z,0.3nm,0.5s

QSPA	**South Pole Qui**	**84.41**	**180**	P	**P**	**20**	**54** **40.5** **+0.1**
TORD	**Torodi Ar. Bea**	**145.26**	**285**	PKPbc	**PKPdf**	**21**	**01** **45.7** **+0.3**

comp=Z,1.1nm,0.5s,baz=62,slow=4.0,SNR=18

*IDC **25** 20:43:59.9±4.2, 55.°03N×111.°72E, h0km, mb2.7/1, mbtmp3.4/5, ML3.6/3, MS2.6/1, Error ellipse: s-maj=61.7km s-min=28.8km az=23.0*

*BYKL **25** 20:44:02.7±0.1, 54.°86N×111.°74E, h5km±3km*

ISC 25 20:44:01.8±0.7, 54.°88N±0.°02×111.°80E±0.°02, h10km, n33, σ2§31/90, 2C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.37**	**269**	⇑*i*Pg	**Pg**	**20 44 08.7**	**-0.5**
YLYR				*e*Sg	**Sg**	**20 44 13.4**	**-0.7**
YLYR				Pmax			
	832nm,0.2s						
YLYR				Smax			
	19μm,0.3s						
KMO	**Kumora**	**1.06**	**341**	⇑*i*Pg	**Pg**	**20 44 21.7**	**-0.5**
KMO				*e*Sg	**Sg**	**20 44 35.4**	**-0.7**
KMO				Pmax			
	336nm,0.4s						
KMO				Smax			
	712nm,0.7s						
UKT	**Uakit**	**1.21**	**59**	⇓*i*Pg	**Pg**	**20 44 25.1**	**0.0**
UKT				*e*		20 44 27.8	
UKT				*e*Sg	**Sn**	**20 44 41.8**	**+0.4**
UKT				*e*		20 44 47.3	
UKT				max			
	98nm,0.3s						
UKT				max			
	439nm,0.5s						
YOAB	**Uoyan, Buryati**	**1.26**	**358**	*e*Pg	**Pg**	**20 44 25.8**	**-0.2**
YOAB				*e*		20 44 28.6	
YOAB				*e*Sg	**Sn**	**20 44 43.2**	**+0.7**
YOAB				max			
	181nm,0.2s						
YOAB				Smax			
	1μm,0.3s						
NIZB	**Nizh Angarsk**	**1.57**	**305**	*e*Pg	**Pb**	**20 44 30.8**	**-0.1**
NIZB				*e*Pb	**Pg**	**20 44 32.1**	**+0.2**
NIZB				*e*Sg	**Sg**	**20 44 51.8**	**-0.4**
NIZB				*e*		20 44 57.7	
NIZB				max			
	142nm,0.2s						
NIZB				max			
	668nm,0.4s						
SVKR	**Severomuysk**	**1.59**	**38**	*e*Pg	**Pg**	**20 44 32.8**	**+0.5**
SVKR				*e*Sg	**Sg**	**20 44 55.0**	**+2.1**
SVKR				Pmax			
	276nm,0.3s						
SVKR				Smax			
	1μm,0.4s						
SYVR	**Suvo**	**1.62**	**221**	⇓*i*Pg	**Pb**	**20 44 31.5**	**-0.3**
SYVR				*e*Sg	**Sg**	**20 44 53.0**	**-0.9**
SYVR				Pmax			
	372nm,0.6s						
SYVR				Smax			
	376nm,0.2s						
MXMB	**Maximikha**	**2.42**	**229**	*e*Pn	**Pb**	**20 44 43.0**	**-2.5**
MXMB				*e*Pg	**Pg**	**20 44 45.2**	**-3.1**
MXMB				*e*Sg	**Sb**	**20 45 15.7**	**+0.2**
MXMB				*e*		20 45 18.6	
NLYR	**Nelyaty**	**2.73**	**52**	*e*Pn	**Pb**	**20 44 48.5**	**-2.3**
NLYR				*e*Pg	**Pg**	**20 44 52.0**	**-2.2**
NLYR				*e*Sn	**Sb**	**20 45 22.4**	**-1.9**
NLYR				*e*Sg	**Sg**	**20 45 28.6**	**-1.0**
NLYR				Pmax			
	52nm,0.8s						
NLYR				Smax			
	478nm,1.4s						
OGRR	**Ongureny**	**2.76**	**245**	⇓*i*Pn	**Pn**	**20 44 47.6**	**+1.4**
OGRR				*e*Pg	**Pb**	**20 44 50.8**	**-0.5**
OGRR				*e*Sn	**Sn**	**20 45 20.1**	**+0.5**
OGRR				*e*Sg	**Sb**	**20 45 26.7**	**+1.5**
OGRR				Pmax			
	54nm,0.2s						
OGRR				Smax			
	329nm,0.3s						
GORB	**Goryachinsk**	**2.82**	**229**	*e*Pn	**Pn**	**20 44 47.7**	**+0.8**
GORB				*e*Pg	**Pb**	**20 44 51.6**	**-0.6**
GORB				*e*PgPg	**Pg**	**20 44 56.7**	**+0.9**
GORB				*e*Sn	**Sn**	**20 45 22.4**	**+1.5**
GORB				*e*Sg	**Sb**	**20 45 28.6**	**+1.9**
UZR	**Uzur**	**2.86**	**238**	*e*Pn	**Pn**	**20 44 48.4**	**+1.0**
UZR				*e*Pg	**Pb**	**20 44 52.3**	**-0.6**
UZR				*e*Sn	**Sn**	**20 45 22.4**	**+0.5**
UZR				*e*Sg	**Sb**	**20 45 29.5**	**+1.6**
UZR				Pmax			
	11nm,0.1s						
UZR				Smax			
	271nm,0.4s						
CIT	**Chita**	**3.05**	**159**	*e*Pn	**Pn**	**20 44 52.5**	**+2.3**
CIT				*e*Pg	**Pb**	**20 44 57.3**	**+1.0**
CIT				*e*Sn	**Sn**	**20 45 27.4**	**+0.6**
CIT				*e*Sg	**Sg**	**20 45 36.9**	**-2.9**
CIT				Pmax			
	39nm,0.3s						
CIT				Smax			
	733nm,0.4s						
KELR	**Kotokel**	**3.06**	**228**	*e*Pn	**Pn**	**20 44 51.7**	**+1.4**
KELR				*e*		20 44 55.7	
KELR				*e*Pg	**Pb**	**20 44 57.4**	**+1.0**
KELR				*e*PgPg	**Pg**	**20 45 00.0**	**-0.5**
KELR				*e*Sn	**Sn**	**20 45 28.2**	**+1.2**
KELR				*e*Sg	**Sg**	**20 45 37.2**	**-3.0**
BOD	**Bodaibo**	**3.19**	**22**	*e*Pn	**Pb**	**20 44 55.1**	**-3.4**
BOD				*e*Pg	**Pg**	**20 45 00.2**	**-2.7**
BOD				*e*Sn	**Sn**	**20 45 32.5**	**+2.5**
BOD				*e*Sg	**Sg**	**20 45 41.6**	**-2.5**
BOD				Pmax			
	43nm,1.0s						
BOD				Smax			
	188nm,0.7s						
ZRHB	**Zarechye**	**3.62**	**232**	*e*Pn	**Pn**	**20 44 58.9**	**+1.0**
ZRHB				*e*Pg	**Pb**	**20 45 06.9**	**+1.1**
ZRHB				*e*Sg	**Sg**	**20 45 53.5**	**-4.4**
ZRHB				Pmax			
	48nm,0.6s						
ZRHB				Smax			
	344nm,1.0s						
TRG	**Tyrgan**	**3.87**	**239**	*e*Pn	**Pn**	**20 45 02.4**	**+1.0**
TRG				*e*Pg	**Pb**	**20 45 10.9**	**+0.8**
TRG				*e*Sn	**Sn**	**20 45 45.4**	**-1.5**
TRG				*e*Sg	**Sb**	**20 46 00.0**	**+3.0**
TRG				Pmax			
	11nm,0.3s						
TRG				Smax			
	94nm,0.3s						
FFNB	**Fofonovo**	**4.14**	**229**	*e*Pn	**Pn**	**20 45 06.4**	**+1.3**
FFNB				*e*Pg	**Pb**	**20 45 16.2**	**+1.5**
FFNB				*e*Sg	**Sg**	**20 46 10.4**	**-4.3**
FFNB				*e*SgSg	**SbSb**	**20 46 13.6**	**+3.7**
KAB	**Kabansk**	**4.18**	**229**	*e*Pg	**Pb**	**20 45 17.1**	**+1.6**
KAB				*e*Sg	**Sg**	**20 46 11.1**	**-5.0**
KAB				Pmax			
	66nm,0.8s						
KAB				Smax			
	308nm,0.8s						
STDB	**Stepnoy Dvoret**	**4.23**	**232**	*e*Pn	**Pn**	**20 45 07.9**	**+1.6**
STDB				*e*Pg	**Pb**	**20 45 18.5**	**+2.2**
STDB				*e*		20 45 53.4	
STDB				*e*Sg	**Sg**	**20 46 13.2**	**-4.4**
HRMR	**Khuramsha**	**4.37**	**224**	*e*Pn	**Pn**	**20 45 09.7**	**+1.4**
HRMR				*e*Pg	**Pb**	**20 45 19.9**	**+1.2**
HRMR				*e*		20 46 01.7	
HRMR				*e*Sg	**Sg**	**20 46 17.9**	**-4.2**
HRMR				Pmax			
	54nm,0.4s						
HRMR				Smax			
	218nm,0.7s						
TUP	**Tupik**	**4.76**	**92**	*e*Pn	**Pn**	**20 45 16.1**	**+2.5**
TUP				*e*Pg	**Pb**	**20 45 28.7**	**+3.4**
TUP				*e*Sn	**Sn**	**20 46 09.8**	**+1.1**
TUP				*e*Sg	**Sg**	**20 46 31.0**	**-3.4**
TUP				Pmax			
	12nm,0.6s						
TUP				Smax			
	213nm,0.8s						

BGT	**Bolshoye Golou**	**4.76**	**236**	*e*Pn	**Pn**	**20 45 14.6**	**+1.0**
BGT				*e*Pg	**Pb**	**20 45 26.7**	**+1.4**
BGT				*e*Sg	**Sg**	**20 46 28.5**	**-6.1**
BGT				Pmax			
	8.0nm,0.3s						
BGT				Smax			
	65nm,0.8s						
LSTR	**Listvyanka**	**5.15**	**237**	*e*Pn	**Pn**	**20 45 19.9**	**+0.9**
LSTR				*e*Pg	**Pb**	**20 45 33.7**	**+1.8**
LSTR				*e*Sn	**Sn**	**20 46 17.7**	**-0.7**
LSTR				*e*Sg	**Sb**	**20 46 39.5**	**+5.7**
LSTR				Pmax			
	8.0nm,0.9s						
LSTR				Smax			
	53nm,1.6s						
KPC	**Khapcheranga**	**5.20**	**176**	*e*Pn	**Pn**	**20 45 20.8**	**+1.1**
KPC				*e*Pg	**Pb**	**20 45 36.2**	**+3.3**
KPC				*e*Sn	**Sn**	**20 46 18.9**	**-0.8**
KPC				*e*Sg	**Sg**	**20 46 43.2**	**-5.5**
KPC				Pmax			
	10.0nm,0.5s						
KPC				Smax			
	258nm,1.2s						
IVK	**Ivanovka**	**5.40**	**238**	*e*Pg	**Pb**	**20 45 38.6**	**+2.5**
IVK				*e*Sn	**Sn**	**20 46 23.4**	**-1.0**
IVK				*e*Sg	**Sg**	**20 46 48.4**	**-6.5**
IVK				Pmax			
	11nm,0.6s						
IVK				Smax			
	108nm,0.6s						
TLY	**Talaya**	**5.85**	**240**	Pn	**Pn**	**20 45 28.0**	**-0.5**
	0.5nm,0.3s,baz=87,slow=18,SNR=0.9						
TLY				Lg	Lg	20 47 01.5	
	3.3nm,0.3s,baz=135,slow=9.9,SNR=5.5 2.7nm,0.5s						
HILR	**Hailar Array B**	**7.23**	**134**	Pn	**Pn**	**20 45 47.8**	**+0.3**
	baz=26,slow=14						
HILR				Lg	Lg	20 47 48.7	
	baz=329,slow=31 1.9nm,0.5s						
SONM	**Songino Array**	**7.83**	**208**	Pn	**Pn**	**20 45 57.6**	**+1.9**
	1.2nm,0.3s,baz=20,slow=13,SNR=28						
SONM				Lg	Lg	20 48 04.9	
	1.1nm,0.3s,baz=24,slow=25,SNR=8.3 1.7nm,0.3s						
YAK	**Yakutsk**	**11.76**	**45**	Lg	Lg	20 50 06.6	
	0.3nm,0.3s,baz=352,slow=22,SNR=7.1						
ZALV	**Zalesovo Beam**	**15.70**	**278**	Pn	**Pn**	**20 47 42.2**	**-0.7**
	0.7nm,0.7s,baz=81,slow=9.2,SNR=4.2						
ZALV				Lg	Lg	20 52 13.7	
	baz=71,slow=26,SNR=2.0						
KURBB	**Kurchatov Arra**	**20.46**	**272**	P	**P**	**20 48 38.8**	**-0.5**
	0.3nm,0.7s,baz=68,slow=11,SNR=4.3 0.3nm,0.7s						
KSRS	**Korea Array**	**20.61**	**141**	LR	LR	20 57 20.9	
	comp=Z,18nm,18.9s,baz=165,slow=39						

*CRAAG **25** 20:46:52.2, 36.°87N×2.°87E, Ml3.2, Algrie 10km NW Ain-Benian*

*MDD **25** 20:46:54.0±0.7, 36.°90N×2.°90E, h21km±7km, Mb3.7/29, M_mdb2.9/23, Error ellipse: s-maj=7.0km s-min=2.7km az=155.0*

ISC 25 20:46:51.8±1.4, 36.°97N±0.°08×2.°86E±0.°04, h16km±13km, n23, σ1§37/36, 11C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABA	**Alger-Bouzarea**	**0.22**	**141**	P	**Pg**	**20 46 56.3**	**-0.6**
ABMS	**Boumerdes**	**0.54**	**114**	P	**Pb**	**20 47 03.0**	**+0.1**
ABKD	**Sidi Amar**	**0.62**	**226**	P	**Pb**	**20 47 04.1**	**-0.2**
EARB	**Arib**	**0.96**	**226**	P	**Pg**	**20 47 10.2**	**-0.3**
EHRZ	**Djelida**	**0.98**	**218**	P	**Pg**	**20 47 10.6**	**-0.3**
EDDR	**Deurdeur**	**1.10**	**209**	P	**Pb**	**20 47 11.6**	**-0.9**
EBNH	**Beni Haoua**	**1.14**	**247**	P	**Pg**	**20 47 14.2**	**+0.3**
ATKJ	**Tikjda**	**1.14**	**117**	P	**Pg**	**20 47 14.6**	**+0.7**
AKET	**Djebel Ketaf**	**1.24**	**138**	P	**Pg**	**20 47 15.7**	**0.0**
EIBI	**Ibiza**	**2.38**	**330**	P	**Pn**	**20 47 31.6**	**+1.5**
EIBI				⇑*i*Vmb_VC		20 47 32.7	
	357nm,SNR=2.4						
EIBI				S	**Sn**	**20 47 58.9**	**0.0**
ETOS	**Mallorca**	**2.79**	**359**	P	**Pn**	**20 47 37.1**	**+1.2**
ETOS				⇑*i*Vmb_VC		20 47 38.6	
	187nm,SNR=1.5						
ETOS				S	**Sn**	**20 48 08.6**	**-0.6**
EBEN2	**Beniarda presa**	**2.96**	**306**	P	**Pn**	**20 47 39.5**	**+1.4**
EBEN2				⇑*i*Vmb_VC		20 47 40.1	
	281nm,SNR=1.3						
EBEN2				S	**Sn**	**20 48 12.5**	**-0.8**
EMUR	**La Murta**	**3.38**	**286**	P	**Pn**	**20 47 45.3**	**+1.3**
EMUR				⇑*i*Vmb_VC		20 47 45.7	
	44nm,SNR=0.5						
EMUR				S	**Sn**	**20 48 23.8**	**+0.1**
ECOL	**Islas Columbre**	**3.38**	**330**	P	**Pn**	**20 47 45.0**	**+1.1**
ECOL				S	**Sn**	**20 48 23.4**	**-0.3**
EZAR	**Zarzadilla de**	**3.74**	**285**	P	**Pn**	**20 47 49.6**	**+0.7**
EZAR				⇑*i*Vmb_VC		20 47 51.5	
	109nm,SNR=1.2						
EZAR				S	**Sn**	**20 48 31.7**	**-1.0**
ETOB	**Tobarra**	**3.87**	**297**	P	**Pn**	**20 47 52.7**	**+2.0**
ETOB				⇑*i*Vmb_VC		20 47 54.3	
	89nm,SNR=1.3						
ETOB				S	**Sn**	**20 48 35.4**	**-0.5**
EVIV	**Cofrentes, Val**	**3.89**	**307**	P	**Pn**	**20 47 52.6**	**+1.7**
EVIV				⇑*i*Vmb_VC		20 47 54.4	
	158nm,SNR=2.2						
EVIV				S	**Sn**	**20 48 35.3**	**-0.9**
EMOS	**Mosqueruela**	**4.28**	**323**	P	**Pn**	**20 47 58.0**	**+1.6**
EMOS				⇑*i*Vmb_VC		20 47 59.0	
	119nm,SNR=2.4						
EMOS				S	**Sn**	**20 48 43.8**	**-2.2**
ERTA	**Horta de San J**	**4.44**	**334**	P	**Pn**	**20 48 00.2**	**+1.7**
ERTA				⇑*i*Vmb_VC		20 48 02.6	
	60nm,SNR=1.2						
ERTA				S	**Sn**	**20 48 46.7**	**-3.2**
EQES	**Quesada**	**4.80**	**282**	P	**Pn**	**20 48 05.3**	**+1.8**
EQES				⇑*i*Vmb_VC		20 48 07.9	
	59nm,SNR=1.3						
EQES				S	**Sn**	**20 48 59.0**	**+0.2**
PSIM	**Granatula de C**	**5.55**	**291**	P	**Pn**	**20 48 14.8**	**+1.0**
PSIM				S	**Sn**	**20 49 15.0**	**-2.3**
VSL	**Villasalto**	**5.71**	**62**	P	**Pn**	**20 48 16.3**	**+0.3**
VSL				S	**Sn**	**20 49 18.3**	**-2.9**
PAB	**San Pablo**	**6.23**	**297**	P	**Pn**	**20 48 23.7**	**+0.5**
PAB				⇑*i*Vmb_VC		20 48 24.9	
	40nm,SNR=1.0						

IDC 25 21:00:55.7±18.0, 21.°47S×178.°37W, h0km, mb3.8/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=333.3km s-min=58.3km az=67.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.18**	**192**	P	Pn	21 04 56.7	-0.4
	0.5nm,0.3s,baz=25,slow=17,SNR=7.6 3.6nm,0.7s						
STKA	**Stephens Creek**	**37.06**	**245**	P	P	21 08 07.2	-0.5
	1.1nm,0.4s,baz=98,slow=11,SNR=6.1 1.1nm,0.4s						
ASAR	**Alice Springs**	**43.97**	**258**	P	P	21 09 04.7	-0.3
	0.2nm,0.3s,baz=86,slow=8.8,SNR=8.4 0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.13**	**263**	P	P	21 09 06.4	+0.1
	0.2nm,0.4s,baz=96,slow=8.3,SNR=5.5 0.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**52.56**	**263**	P	P	21 10 11.8	+0.4
	2.9nm,0.9s,baz=100,slow=5.8,SNR=2.3 2.9nm,0.9s						

*IGQ **25** 21:16:13.5±0.3, 3.°S±2.°×8.°1W±.°, h10km, M4.9/23, Mjma5.0/23, ML5.2/23, MLv4.6/7, Ms(BB)4.8/17*

*VAO **25** 21:16:14.7±0.6, 3.°44S×80.°90W, h25km±4km, mb4.8, Presumed earthquake*

*NEIC **25** 21:16:19.1±1.6, 3.°29S±0.°06×80.°60W±0.°09, h49km±6km, mb4.6/58, Error ellipse: s-maj=12.7km s-min=7.9km az=75.0*

*IDC **25** 21:16:20.3±2.2, 3.°33S×80.°73W, h65km±20km, mb3.9/13, mbtmp4.3/18, MS4.0/46, Error ellipse: s-maj=27.2km s-min=11.9km az=66.0*

*GCMT **25** 21:16:21.1±0.3, 3.°26S±0.°02×81.°02W±0.°03, h37km±1km, MW4.8/68, Moment Tensor Solution. s29,c31; s68,c88; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr 1.56±.14; Mθθ 0.23±.09; Mθφ -1.80±.11; Mrθ -0.33±.08; Mφφ -0.56±.07; Mφr -1.60±.13; Best double couple: Mo 2.39600×10^16^ NP1: φs 18.00000°, δ24.00000°, λ95.00000°. NP2: φs 192.00000°, δ67.00000°, λ88.00000°. Principal axes: T 2.2050, Plg68.0000°, Azm98.0000°; N 0.3760, Plg2.0000°, Azm193.0000°; P -2.5860, Plg21.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 21:16:17.0±0.4, 3.°35S±0.°04×80.°85W±0.°05, h38km, n224, σ1§41/208, mb4.6/38, MS3.9/42, 2C-1D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISPG	**Isla Puna-Puer**	**0.78**	**61**	P	**Pn**	**21 16 31.9**	**+0.3**
ISPG				S	**Sn**	**21 16 45.2**	**+3.0**
MORR	**Playas El Morr**	**0.87**	**36**	P	**Pn**	**21 16 31.7**	**-1.1**
MORR				S	**Sn**	**21 16 44.9**	**+0.6**
ACH2	**Ecuador-Machal**	**1.04**	**85**	P	**Pn**	**21 16 33.1**	**-2.1**
SALI	**Salinas**	**1.17**	**353**	P	**Pn**	**21 16 35.7**	**-1.1**
AMCR	**Ecuador-Macara**	**1.35**	**138**	P	**Pn**	**21 16 37.8**	**-1.6**
MCRA	**Macar, Loja**	**1.35**	**138**	P	**Pn**	**21 16 37.5**	**-2.0**
MCRA	**Macar, Loja**	**1.35**	**138**	P	**Pn**	**21 16 37.3**	**-2.1**
MCRA				S	**Sn**	**21 16 54.6**	**-1.6**
AC07	**Ecuador-Guayaq**	**1.47**	**36**	P	**Pn**	**21 16 40.6**	**-0.5**
GYE3	**Ecuador-Guayaq**	**1.52**	**39**	P	**Pn**	**21 16 40.6**	**-1.1**
AGUAY	**Guayaquil**	**1.57**	**35**	P	**Pn**	**21 16 41.3**	**-1.1**
PPLP	**Puerto Lpez**	**1.80**	**2**	P	**Pn**	**21 16 44.4**	**-1.1**
PPLP	**Puerto Lpez**	**1.80**	**2**	P	**Pn**	**21 16 44.4**	**-1.1**
PPLP				S	**Sn**	**21 17 04.9**	**-2.2**
ACUE	**Ecuador-Cuenca**	**1.94**	**77**	P	**Pn**	**21 16 48.9**	**+1.1**
JIPI	**JIPIJAPA**	**2.00**	**8**	P	**Pn**	**21 16 48.3**	**-0.1**
AZAM	**Ecuador-Zamora**	**2.02**	**111**	P	**Pn**	**21 16 50.3**	**+1.5**
ABAB	**Ecuador-Univer**	**2.04**	**41**	P	**Pn**	**21 16 47.7**	**-1.1**
ISPT	**Isla de la Pla**	**2.09**	**354**	P	**Pn**	**21 16 48.2**	**-1.4**
ZUMB	**Zumba**	**2.27**	**131**	P	**Pn**	**21 16 52.5**	**+0.3**
BOSC	**San Juan Bosco**	**2.36**	**85**	P	**Pn**	**21 16 54.1**	**+0.7**
PECV	**Mancha de Ca P**	**2.68**	**17**	P	**Pn**	**21 16 55.9**	**-1.8**
CHSH	**Refugio Sur-Vo**	**2.71**	**47**	P	**Pn**	**21 16 58.4**	**-0.2**
TAMH	**Tambohuasha Ch**	**2.74**	**49**	P	**Pn**	**21 16 58.1**	**-0.9**
IGUA	**Igualata**	**2.88**	**50**	P	**Pn**	**21 17 00.7**	**-0.3**
ARRY	**Arrayan**	**3.02**	**53**	P	**Pn**	**21 17 02.9**	**+0.3**
BBIL	**Ulba Tungurahu**	**3.02**	**51**	P	**Pn**	**21 17 04.5**	**+1.8**
BPAT	**Tungurahua Vol**	**3.04**	**53**	P	**Pn**	**21 17 04.0**	**+1.0**
JUI6	**Juive**	**3.06**	**51**	P	**Pn**	**21 17 04.4**	**+1.3**
PIS1	**Pisayambo**	**3.36**	**47**	P	**Pn**	**21 17 08.6**	**+1.2**
ILLI	**Illinizas Sur**	**3.37**	**39**	P	**Pn**	**21 17 08.1**	**+0.5**
BRRN	**Barrancas-Volc**	**3.49**	**43**	P	**Pn**	**21 17 11.0**	**+1.8**
PIAT	**Ana Tenorio**	**3.49**	**48**	P	**Pn**	**21 17 10.0**	**+0.8**
SLOR	**San Lorenzo -**	**3.51**	**42**		**Pn**	**21 17 10.4**	**+0.8**
SLOR				Sn	**Sn**	**21 17 46.8**	**-3.3**
SLOR	**San Lorenzo -**	**3.51**	**42**	P	**Pn**	**21 17 10.9**	**+1.3**
VCES	**Cotopaxi**	**3.53**	**44**	P	**Pn**	**21 17 10.9**	**+1.1**
BMOR	**Cotopaxi Volca**	**3.54**	**43**	P	**Pn**	**21 17 11.2**	**+1.3**
BNAS	**Cotopaxi Volca**	**3.56**	**42**	P	**Pn**	**21 17 11.2**	**+0.9**
SUCR	**Mariscal Sucre**	**3.58**	**41**	P	**Pn**	**21 17 12.1**	**+1.7**
NAS2	**Nasa**	**3.59**	**42**	P	**Pn**	**21 17 12.6**	**+1.9**
BREF	**Cotopaxi Volca**	**3.59**	**42**	P	**Pn**	**21 17 12.5**	**+1.7**
BTAM	**Cotopaxi Volca**	**3.62**	**43**	P	**Pn**	**21 17 12.5**	**+1.4**
BVC2	**Cotopaxi Volca**	**3.62**	**42**	P	**Pn**	**21 17 12.5**	**+1.4**
TAMB	**Tambo**	**3.62**	**43**	P	**Pn**	**21 17 12.9**	**+1.7**
VC1	**Cotopaxi 1**	**3.64**	**42**	P	**Pn**	**21 17 13.1**	**+1.7**
PITA	**Cotopaxi Volc**	**3.68**	**41**	P	**Pn**	**21 17 13.9**	**+2.1**
TOMA	**Boca Toma-Volc**	**3.72**	**41**	P	**Pn**	**21 17 14.4**	**+1.9**
ANTM	**Antisana-La Mi**	**3.84**	**43**	P	**Pn**	**21 17 16.3**	**+2.3**
TERV	**Terraza Guagua**	**3.87**	**36**	P	**Pn**	**21 17 15.4**	**+0.8**
ANTS	**Antisana-Sarah**	**3.90**	**43**	P	**Pn**	**21 17 16.1**	**+1.1**
YANA	**Yana**	**3.94**	**35**	P	**Pn**	**21 17 16.1**	**+0.7**
PAC1	**Pacto, Paraso**	**4.14**	**30**	P	**Pn**	**21 17 16.8**	**-1.1**
OTAV	**Otavalo**	**4.30**	**34**		**Pn**	**21 17 20.1**	**-0.2**
CUSE	**Cuicocha Este**	**4.38**	**34**	P	**Pn**	**21 17 22.3**	**+0.8**
ATAH	**Atahualpa**	**4.49**	**147**	P	**Pn**	**21 17 24.8**	**+1.9**
	118nm,0.8s,baz=331,slow=7.4,SNR=80						
ATAH				S	**Sn**	**21 18 17.8**	**+3.8**
	308nm,0.7s,baz=7.1,slow=8.1,SNR=6.4						
ATAH				LR	LR	21 19 14.0	
	comp=Z,4μm,18.3s,baz=307,slow=39						
TULM	**Tulcn-Chalpat**	**5.07**	**37**	P	**Pn**	**21 17 27.2**	**-3.8**
	4μm297nm,1.1s						
BBAC	**Balboa, Cauca**	**6.44**	**34**	P	**Pn**	**21 17 50.2**	**+0.6**
	944nm88nm,1.1s						
PTLC	**Puerto Leguiza**	**6.99**	**60**	P	**Pn**	**21 17 54.3**	**-2.7**
	2μm99nm,1.2s						
FLOC	**Florencia**	**7.14**	**47**	P	**Pn**	**21 17 56.5**	**-2.6**
	1μm51nm,1.0s						
POPC	**Popayan, Colom**	**7.19**	**36**	P	**Pn**	**21 18 00.2**	**+0.3**
	455nm25nm,1.0s						
JAMC	**Jamundi, Valle**	**7.75**	**33**	P	**Pn**	**21 18 11.4**	**+3.9**
BETC	**Betania**	**8.07**	**42**	P	**Pn**	**21 18 13.3**	**+1.4**
CZSB	**Cruzeiro do Su**	**9.20**	**119**		**Pn**	**21 18 25.6**	**-1.7**
CZSB	**Cruzeiro do Su**	**9.20**	**119**	P	**Pn**	**21 18 25.1**	**-2.2**
	3μm192nm,1.0s						
CZSB	**Cruzeiro do Su**	**9.20**	**119**	*e*P	**Pn**	**21 18 25.7**	**-1.7**
CZSB				*e*S	**Sn**	**21 20 09.7**	**+0.1**
NNA	**Nana**	**9.46**	**155**	P	**Pn**	**21 18 33.1**	**+2.3**
	7.9nm,0.4s,baz=346,slow=11,SNR=6.3						
NNA				S	**Sn**	**21 20 20.4**	**+4.5**
	19nm,0.6s,baz=238,slow=24,SNR=1.9						
NNA	**Nana**	**9.46**	**155**		**Pn**	**21 18 31.0**	**+0.2**
NNA					**Sn**	**21 20 17.3**	**+1.4**
ROSC	**El Rosal**	**10.43**	**39**	LR	LR	21 23 54.4	
	comp=Z,1μm,18.3s,baz=212,slow=44						
ROSC	**El Rosal**	**10.43**	**39**	Pn	**Pn**	**21 18 43.1**	**-1.4**
AZU	**Azuero**	**11.08**	**3**	P	**Pn**	**21 18 57.1**	**+4.0**
BRU2	**Volcan**	**12.20**	**351**	Pn	**Pn**	**21 19 09.8**	**+1.2**
JTS	**Las Juntas de**	**14.15**	**343**	P	**Pn**	**21 19 37.2**	**+2.1**
	10nm,1.0s,baz=163,slow=11,SNR=3.8						
JTS				LR	LR	21 24 16.6	
	comp=Z,747nm,19.8s,baz=165,slow=34						
JTS	**Las Juntas de**	**14.15**	**343**	Pn	**Pn**	**21 19 34.7**	**-0.4**
SGC2	**Sao Gabriel da**	**14.23**	**77**	P	**Pn**	**21 19 35.6**	**-0.5**
SGC2	**Sao Gabriel da**	**14.

PTLB	**Pontes e Lacer**	**24.53**	**121**	*e*P		**P**	**21 21 33.2**	**-0.1**
CMIG	**Matias Romero**	**24.59**	**326**	LR		LR	21 29 32.6	
	comp=Z,353nm,21.9s,baz=168,slow=32							
ITTB	**Itaituba**	**25.08**	**93**	*e*P		**P**	**21 21 37.5**	**-0.9**
ITTB				*e*S		**S**	**21 26 02.6**	**+2.0**
NPGB	**Novo Progresso**	**25.65**	**99**	*e*P		**P**	**21 21 42.4**	**-1.1**
NPGB				*e*S		**S**	**21 26 11.2**	**+1.6**
PDPR	**Patillas Dam,**	**25.78**	**34**	P		**P**	**21 21 42.7**	**-1.9**
SJG	**San Juan**	**25.79**	**34**	LR		LR	21 34 26.8	
	comp=Z,268nm,19.4s,baz=228,slow=42							
SJG	**San Juan**	**25.79**	**34**	P		**P**	**21 21 42.3**	**-2.3**
CLDB	**Colider**	**25.94**	**108**	*e*P		**P**	**21 21 45.3**	**-0.9**
CLDB				*e*S		**S**	**21 26 15.6**	**+1.3**
COIM	**Forte Coimbra**	**27.88**	**128**	*e*P		**P**	**21 22 02.5**	**-1.0**
COIM				*e*S		**S**	**21 26 45.4**	**+0.8**
MDP	**Montagnes des**	**29.41**	**74**	LR		LR	21 35 13.2	
	comp=Z,1μm,18.2s,baz=253,slow=39							
SNDB	**Serra Nova Dou**	**30.49**	**108**	*e*P		**P**	**21 22 26.3**	**-0.5**
SNDB				*e*S		**S**	**21 27 27.1**	**+1.3**
MT02	**Curacav**	**31.11**	**164**	P		**P**	**21 22 32.3**	**+0.3**
MT02				IAmb		IAmb	21 22 35.7	
	comp=Z,18nm,1.2s							
MT08	**Bocatoma Ro**	**31.61**	**163**	P		**P**	**21 22 35.3**	**-1.3**
MT09	**Talagante**	**31.64**	**164**	P		**P**	**21 22 36.5**	**-0.3**
MT09				IAmb		IAmb	21 22 38.0	
	comp=Z,8.8nm,0.9s							
MT13	**San Alfonso**	**31.81**	**163**	P		**P**	**21 22 38.4**	**+0.1**
MT13				IAmb		IAmb	21 22 42.8	
	comp=Z,11nm,0.8s							
CPUP	**Villa Florida**	**32.10**	**138**	LR		LR	21 38 35.8	
	comp=Z,244nm,19.5s,baz=332,slow=42							
SJPY	**San Joaquin**	**32.10**	**134**	*e*P		**P**	**21 22 40.5**	**-0.4**
GO05	**Hualane**	**32.57**	**166**	P		**P**	**21 22 44.4**	**-0.5**
GO05				IAmb		IAmb	21 22 45.9	
	comp=Z,8.1nm,0.8s							
BDFB	**Brasilia**	**34.55**	**113**	P		**P**	**21 23 01.0**	**-1.4**
	comp=Z,3.3nm,0.6s,baz=265,slow=5.4,SNR=5.4							
BDFB				LR		LR	21 38 55.1	
	comp=Z,895nm,18.4s,baz=300,slow=39							
	comp=Z,3.3nm,0.6s							
IPMB	**Ipameri, GO**	**35.12**	**117**	*e*P		**P**	**21 23 05.9**	**-1.4**
RPN	**Rapa Nui**	**36.06**	**226**	LR		LR	21 34 19.0	
	comp=Z,213nm,18.5s,baz=42,slow=30							
SDBA	**SAO DESIDERIO**	**36.69**	**106**	*e*P		**P**	**21 23 19.6**	**-1.1**
SDBA				*e*S		**S**	**21 29 03.5**	**+1.6**
Y45A	**Yeager Farm, C**	**37.91**	**348**	P		**P**	**21 23 31.2**	**+0.4**
PLCA	**Paso Flores**	**38.36**	**167**	P		**P**	**21 23 35.3**	**+0.8**
	comp=Z,3.8nm,1.0s,baz=337,slow=12,SNR=3.5							
PLCA				LR		LR	21 36 31.0	
	comp=Z,210nm,21.2s,baz=358,slow=32							
	comp=Z,3.8nm,1.0s							
SWET	**Sewanee**	**38.66**	**353**	P		**P**	**21 23 37.7**	**+0.7**
SWET				IAmb		IAmb	21 23 46.2	
	comp=Z,12nm,1.5s							
TKL	**Tuckaleechee C**	**38.90**	**356**	LR		LR	21 39 17.6	
	comp=Z,356nm,21.4s,baz=179,slow=35							
TXAR	**Lajitas Array**	**39.18**	**328**	P		**P**	**21 23 43.2**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=148,slow=10,SNR=6.5							
	comp=Z,0.8nm,0.8s							
DIAM	**Diamantina, MG**	**39.30**	**115**	*e*P		**P**	**21 23 42.1**	**-0.8**
NBPS	**Pedro II - PI**	**39.33**	**93**	*e*P		**P**	**21 23 42.7**	**-0.4**
NBPS				*e*S		**S**	**21 29 43.9**	**+1.8**
LPIG	**La Paz**	**39.58**	**315**	LR		LR	21 36 34.6	
	comp=Z,80nm,19.9s,baz=98,slow=31							
WVT	**Waverly**	**39.81**	**351**	P		**P**	**21 23 45.5**	**-1.2**
VHRN	**Van Horn**	**41.02**	**328**			**P**	**21 23 57.8**	**+0.9**
VHRN				IAmb		IAmb	21 24 00.3	
	comp=Z,12nm,1.3s							
TUL3	**Leonard**	**41.48**	**342**	P		**P**	**21 24 01.7**	**+1.3**
TUL3				IAmb		IAmb	21 24 12.0	
	comp=Z,11nm,0.7s							
U38A	**Gravette**	**41.55**	**343**	P		**P**	**21 24 01.4**	**+0.3**
U38A				IAmb		IAmb	21 24 12.5	
	comp=Z,11nm,1.2s							
WCI	**Wyandotte Cave**	**41.68**	**354**	P		**P**	**21 24 01.9**	**-0.1**
SJMB	**Sao Joao De Ma**	**41.68**	**115**	*e*P		**P**	**21 24 01.0**	**-1.3**
SJMB				*e*S		**S**	**21 30 17.8**	**+1.0**
MNTX	**Cornudas Mount**	**41.94**	**328**			**P**	**21 24 05.8**	**+1.4**
NBIT	**Itapeh - BA**	**42.39**	**108**	*e*P		**P**	**21 24 08.0**	**-0.2**
NBIT				*e*S		**S**	**21 30 28.3**	**+0.9**
CMC01	**Camacan, BA**	**42.40**	**109**	*e*P		**P**	**21 24 07.7**	**-0.5**
S39A	**Bolivar**	**42.45**	**345**	P		**P**	**21 24 08.4**	**+0.1**
MSTX	**Muleshoe**	**42.49**	**333**			**P**	**21 24 10.0**	**+1.1**
MSTX				IAmb		IAmb	21 24 12.5	
	comp=Z,14nm,1.1s							
RIB01	**Linhares ES**	**42.57**	**115**	*e*P		**P**	**21 24 08.6**	**-1.0**
T35A	**Sooner Cattle**	**42.64**	**341**	P		**P**	**21 24 10.9**	**+1.0**
T35A				IAmb		IAmb	21 24 35.8	
	comp=Z,10nm,1.0s							
RCBR	**Riachuelo**	**44.87**	**95**	LR		LR	21 45 28.8	
	comp=Z,330nm,18.6s,baz=276,slow=39							
ALQ	**Albuquerque**	**45.05**	**330**	P		**P**	**21 24 31.6**	**+2.0**
ANMO	**Albuquerque**	**45.05**	**330**	LR		LR	21 44 04.7	
	comp=Z,59nm,19.3s,baz=144,slow=37							
ANMO	**Albuquerque**	**45.05**	**330**	P		**P**	**21 24 31.8**	**+2.3**
T25A	**Trinidad**	**45.86**	**334**			**P**	**21 24 38.1**	**+2.1**
T25A				IAmb		IAmb	21 24 48.2	
	comp=Z,10nm,1.3s							
J57A	**Williamstown**	**46.75**	**5**	P		**P**	**21 24 43.0**	**+0.4**
J57A				IAmb		IAmb	21 24 49.7	
	comp=Z,8.1nm,0.9s							
SDCO	**Great Sand Dun**	**46.85**	**333**	P		**P**	**21 24 46.0**	**+2.2**
SADO	**Sadowa**	**47.93**	**2**	LR		LR	21 44 46.6	
	comp=Z,190nm,21.3s,baz=184,slow=36							
WUAZ	**Wupatki**	**48.09**	**326**	P		**P**	**21 24 54.4**	**+1.1**
WUAZ				IAmb		IAmb	21 25 05.5	
	comp=Z,5.5nm,1.1s							
ISCO	**Idaho Springs**	**48.60**	**335**			**P**	**21 24 59.2**	**+1.9**
PV15	**Paradox Valley**	**48.73**	**331**	P		**P**	**21 25 00.2**	**+1.9**
PV15				IAmb		IAmb	21 25 03.1	
	comp=Z,8.0nm,0.9s							
PFO	**Pinyon Flats O**	**49.81**	**321**	LR		LR	21 44 00.5	
	comp=Z,105nm,20.4s,baz=112,slow=33							
PDAR	**Pinedale Array**	**52.73**	**334**	LR		LR	21 48 10.6	
	comp=Z,84nm,18.8s,baz=136,slow=36							
AGMN	**Agassiz Nation**	**53.08**	**348**			**P**	**21 25 31.6**	**+1.0**
ELK	**Elko**	**53.97**	**328**	LR		LR	21 48 12.0	
	comp=Z,166nm,19.2s,baz=220,slow=35							
ELK	**Elko**	**53.97**	**328**	P		**P**	**21 25 39.1**	**+1.6**
NVAR	**Mina Array Bea**	**54.09**	**324**	LR		LR	21 48 30.4	
	comp=Z,89nm,18.5s,baz=98,slow=36							
ULM	**Lac du Bonnet**	**54.94**	**348**	P		**P**	**21 25 44.6**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=144,slow=6.4,SNR=7.7							
	comp=Z,7.1nm,0.8s							
ULM	**Lac du Bonnet**	**54.94**	**348**			**P**	**21 25 44.4**	**+0.4**
HLID	**Hailey**	**55.61**	**331**			**P**	**21 25 50.3**	**+1.0**
HLID				IAmb		IAmb	21 26 05.4	
	comp=Z,4.5nm,0.9s							
BOZ	**Bozeman (W)**	**55.88**	**334**	P		**P**	**21 25 52.0**	**+0.8**
BOZ				IAmb		IAmb	21 26 06.8	
	comp=Z,4.8nm,1.1s							
F10A	**Beach Ranch, E**	**58.74**	**331**			**P**	**21 26 12.5**	**+1.3**
YBH	**Yreka Blue Hor**	**58.80**	**324**	LR		LR	21 51 06.7	
	comp=Z,98nm,21.9s,baz=143,slow=36							
G08A	**Pilot Rock**	**59.11**	**329**	P		**P**	**21 26 14.3**	**+0.4**
G08A				IAmb		IAmb	21 26 29.9	
	comp=Z,6.3nm,1.0s							
SCHQ	**Schefferville**	**59.13**	**9**	P		**P**	**21 26 13.8**	**+0.1**
	comp=Z,4.6nm,1.0s,baz=204,slow=10,SNR=3.3							
SCHQ				LR		LR	21 54 43.1	
	comp=Z,47nm,18.1s,baz=204,slow=39							
	comp=Z,4.6nm,1.0s							
NEW	**Newport**	**60.36**	**333**	LR		LR	21 54 14.4	
	comp=Z,70nm,18.2s,baz=142,slow=38							
PMSA	**Palmer Station**	**62.48**	**172**	LR		LR	21 50 20.2	
	comp=Z,142nm,18.7s,baz=1.0,slow=33							
BBB	**Bella Bella**	**68.20**	**331**	LR		LR	21 58 57.8	
	comp=Z,65nm,18.7s,baz=177,slow=38							
PPT	**Papeete**	**68.72**	**253**	LR		LR	21 48 04.6	
	comp=Z,32nm,18.2s,baz=62,slow=28							
YKA	**Yellowknife Ar**	**70.49**	**344**	P		**P**	**21 27 27.5**	**0.0**
	comp=Z,0.9nm,0.8s,baz=134,slow=5.8,SNR=4.4							
YKA				LR		LR	22 01 07.0	
	comp=Z,63nm,18.3s,baz=105,slow=38							
	comp=Z,0.9nm,0.8s							
DLBC	**Dease Lake**	**72.91**	**335**	LR		LR	22 01 26.0	
	comp=Z,50nm,19.4s,baz=152,slow=37							
DBIC	**Dimbokro**	**76.51**	**82**	P		**P**	**21 28 03.4**	**-0.5**
	comp=Z,5.2nm,0.9s,baz=247,slow=7.5,SNR=3.5							
DBIC				LR		LR	22 00 43.8	
	comp=Z,193nm,20.8s,baz=257,slow=35							
	comp=Z,5.2nm,0.9s							
DBIC	**Dimbokro**	**76.51**	**82**	P		**P**	**21 28 02.0**	**-1.9**
BELA	**Belgrano 2**	**78.30**	**171**	P		**P**	**21 28 13.2**	**+0.5**
BELA				IAmb		IAmb	21 28 14.3	

	comp=Z,111nm,1.4s								
RES	**Resolute Bay**	**78.38**	**356**	LR		LR	22 02 19.4		
	comp=Z,93nm,21.9s,baz=30,slow=35								
RAR	**Rarotonga**	**78.47**	**249**	LR		LR	21 55 33.0		
	comp=Z,86nm,19.1s,baz=113,slow=30								
BCAR	**Beaver Creek A**	**80.26**	**336**	P		**P**	**21 28 24.5**	**+0.8**	
MDT	**Midelt**	**80.30**	**56**	LR		LR	22 04 09.9		
	comp=Z,62nm,18.1s,baz=236,slow=36								
A36M	**Sachs Harbour**	**80.40**	**347**			**P**	**21 28 24.0**	**-0.2**	
SUMG	**Summit**	**80.40**	**12**			**P**	**21 28 24.5**	**-0.2**	
SUMG	**Summit**	**80.40**	**12**	*i* P		**P**	**21 28 25.0**	**+0.3**	
SUMG				IAmb		IAmb	21 28 26.5		
	comp=Z,16nm,1.1s								
I28M	**Miner Creek**	**80.70**	**339**			**P**	**21 28 26.5**	**+0.4**	
I28M				IAmb		IAmb	21 28 50.8		
	comp=Z,12nm,1.5s								
G29M	**Pine Creek**	**80.79**	**340**	P		**P**	**21 28 27.3**	**+0.9**	
G29M				IAmb		IAmb	21 28 28.3		
	comp=Z,5.5nm,1.0s								
ESDC	**Sonseca Array**	**82.08**	**49**	P		**P**	**21 28 33.8**	**0.0**	
	comp=Z,1.8nm,1.0s,baz=259,slow=4.9,SNR=6.7								
ESDC				LR		LR	22 04 31.2		
	comp=Z,56nm,18.3s,baz=258,slow=35								
	comp=Z,1.8nm,1.0s								
ESDC	**Sonseca Array**	**82.08**	**49**	P		**P**	**21 28 33.0**	**-0.9**	
NEEM	**North Greenlan**	**82.36**	**6**	*i* P		**P**	**21 28 35.9**	**+1.0**	
NEEM				IAmb		IAmb	21 28 37.0		
	comp=Z,13nm,1.0s								
ILAR	**Eielson Array**	**83.03**	**337**	P		**P**	**21 28 38.6**	**+0.4**	
	comp=Z,0.8nm,0.8s,baz=133,slow=4.0,SNR=5.7								
ILAR				LR		LR	22 07 07.5		
	comp=Z,85nm,20.2s,baz=108,slow=37								
	comp=Z,0.8nm,0.8s								
ILAR	**Eielson Array**	**83.03**	**337**	P		**P**	**21 28 38.2**	**0.0**	
SNAA	**Sanae**	**83.07**	**162**	⇑P		**P**	**21 28 38.6**	**+0.2**	
	comp=Z,93nm,0.9s								
SNAA	**Sanae**	**83.07**	**162**	P		**P**	**21 28 37.3**	**-1.1**	
	comp=Z,3.1nm,0.9s,baz=306,slow=3.8,SNR=6.3								
	comp=Z,3.1nm,0.9s								
SNAA	**Sanae**	**83.07**	**162**	P		**P**	**21 28 38.7**	**+0.3**	
SNAA				IAmb		IAmb	21 28 39.6		
	comp=Z,6.2nm,1.0s								
TORD	**Torodi Ar. Bea**	**83.51**	**76**	P		**P**	**21 28 41.4**	**-0.4**	
	comp=Z,2.8nm,1.0s,baz=248,slow=4.2,SNR=8.4								
	comp=Z,2.8nm,1.0s								
H24K	**Noodor Dome**	**83.83**	**338**	P		**P**	**21 28 43.2**	**+0.9**	
H24K				IAmb		IAmb	21 28 56.4		
	comp=Z,6.0nm,1.1s								
TROLL	**Troll, Antarti**	**84.78**	**162**	⇑P		**P**	**21 28 47.5**	**+0.2**	
	comp=Z,138nm,0.9s								
DBG	**Daneborg**	**85.56**	**14**	*i* P		P	21 28 45.5	-5.4	
DBG				IAmb		IAmb	21 28 47.1		
	comp=Z,8.0nm,1.1s								
EKA	**Eskdalemuir Ar**	**85.76**	**34**	P		**P**	**21 28 52.0**	**-0.2**	
	comp=Z,1.5nm,0.9s,baz=246,slow=6.0,SNR=2.5								
	comp=Z,1.5nm,0.9s								
QSPA	**South Pole Qui**	**86.72**	**180**	P		**P**	**21 28 57.3**	**+0.4**	
	comp=Z,4.0nm,1.0s,baz=185,slow=2.2,SNR=12								
QSPA				LR		LR	22 01 03.8		
	comp=Z,63nm,20.3s,baz=178,slow=31								
	comp=Z,4.0nm,1.0s								
QSPA	**South Pole Qui**	**86.72**	**180**			**P**	**21 28 57.6**	**+0.7**	
DAG	**Danmarks Havn**	**87.09**	**12**	*i* P		**P**	**21 28 56.8**	**-1.5**	
DAG				IAmb		IAmb	21 28 58.6		
	comp=Z,5.0nm,1.0s								
B22K	**Teshekpuk Lake**	**87.33**	**341**			**P**	**21 29 00.5**	**+1.0**	
BMRD	**Maredsous**	**89.75**	**40**	*d*P		**P**	**21 29 13.9**	**+2.4**	
KEST	**Kesra**	**92.10**	**55**	LR		LR	22 10 00.9		
	comp=Z,42nm,18.3s,baz=260,slow=35								
VNDA	**Vanda**	**92.46**	**191**	LR		LR	22 05 14.4		
	comp=Z,44nm,18.4s,baz=94,slow=32								
DAVOX	**Davos/Dischmat**	**92.92**	**43**	LR		LR	22 11 06.9		
	comp=Z,23nm,18.4s,baz=266,slow=35								
NOA	**NORSAR Array B**	**93.91**	**29**	LR		LR	22 08 41.8		
	comp=Z,22nm,21.5s,baz=270,slow=34								
SPITS	**Spitsbergen Ar**	**94.74**	**12**	LR		LR	22 11 49.9		
	comp=Z,19nm,20.5s,baz=278,slow=35								
HFS	**Hagfors**	**95.16**	**30**	LR		LR	22 13 28.3		
	comp=Z,41nm,18.6s,baz=288,slow=36								
VAE	**Valguarnera**	**96.20**	**53**	LR		LR	22 15 28.0		
	comp=Z,54nm,18.5s,baz=310,slow=37								
TSUM	**Tsumeb**	**96.86**	**110**	LR		LR	22 10 40.5		
	comp=Z,225nm,20.7s,baz=268,slow=34								
SUR	**Sutherland**	**98.04**	**123**	LR		LR	22 13 10.6		
	comp=Z,116nm,18.1s,baz=311,slow=35								
ARCES	**ARCESS Array B**	**98.81**	**20**	LR		LR	22 16 10.0		
	comp=Z,15nm,18.4s,baz=358,slow=36								
ZALV	**Zalesovo Beam**	**128.21**	**11**	PKP		**PKPdf**	**21 35 19.5**	**+0.2**	
	comp=Z,1.0nm,0.6s,baz=354,slow=1.5,SNR=7.9								
ZALV	**Zalesovo Beam**	**128.21**	**11**			**PKPdf**	**21 35 18.7**	**-0.6**	
KURBB	**Kurchatov Arra**	**129.79**	**17**	PKP		**PKPdf**	**21 35 22.5**	**+0.1**	
	comp=Z,2.6nm,0.3s,baz=319,slow=3.0,SNR=4.3								
SONM	**Songino Array**	**135.25**	**353**	PKP		**PKPdf**	**21 35 31.5**	**-1.5**	
	comp=Z,0.1nm,0.4s,baz=315,slow=0.8,SNR=3.6								
ASAR	**Alice Springs**	**136.79**	**230**	PKiKP		PKPpre	21 35 30.8		
	comp=Z,0.4nm,0.8s,baz=121,slow=3.6,SNR=2.7								
ASAR				PKP		**PKPdf**	**21 35 36.4**	**-0.1**	
	comp=Z,0.9nm,0.9s,baz=109,slow=2.7,SNR=5.7								
ASAR	**Alice Springs**	**136.79**	**230**			**PKPdf**	**21 35 35.4**	**-1.1**	
WRA	**Warramunga Arr**	**138.40**	**235**	PKP		**PKPdf**	**21 35 39.4**	**-0.1**	
	comp=Z,0.9nm,0.8s,baz=113,slow=2.2,SNR=5.1								
WRA	**Warramunga Arr**	**138.40**	**235**			**PKPdf**	**21 35 38.3**	**-1.2**	
HHC	**Hu-ho-hao-te**	**141.03**	**345**	*e*P		**PKiKP**	**21 35 46.0**	**-0.5**	
GTA2	**Gaotai**	**144.03**	**359**	*e*PKP		PKPbc	21 35 47.0	-0.1	
XAN	**Xi'an**	**148.14**	**345**	P		**PKPdf**	**21 35 56.5**	**+0.3**	
XAN				pmax		pmax			
	comp=Z,4.0nm,0.9s								
PZH	**PanZhiHua**	**156.84**	**354**	PKP		**PKPdf**	**21 36 08.8**	**-0.6**	
CMAR	**Chiang Mai Arr**	**164.99**	**1**	PKP		**PKPdf**	**21 36 18.2**	**+0.1**	
	comp=Z,0.7nm,0.5s,baz=305,slow=1.3,SNR=5.8								
CMAR	**Chiang Mai Arr**	**164.99**	**1**			**PKPdf**	**21 36 17.1**	**-1.1**	

TAP ***25*** *21:33:58.9,24.02N×120.75E,h26km,ML4.2,B*
JMA ***25*** *21:33:59.2±0.4,24.0N±0.4×12.1E±, h15km±4km,*
MV3.8/15,TAIWAN REGION
ASIES ***25*** *21:33:59.5,24.02N×120.75E,h26km,Mw3.4,Fault plane solution: NP1:ϕ=160.00000°,δ=33.00000°,λ=62.00000°.*
NP2:ϕ=13.00000°,δ=61.00000°,λ=107.00000°.
ISC 25 21:33:59.2±0.8,24.04N±0.1×120.73E±0.1,h31km±3km,
n185,s0673/318,40C-31D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WWF	**Wufeng**	**0.03**	**285**	⇑*i*P		**Pb**	**21 34 03.8**	**-0.5**
WWF				*i* S		**Sb**	**21 34 07.7**	**-0.2**
TCU	**Taichung**	**0.12**	**336**	⇑*i*P		**Pb**	**21 34 04.5**	**-0.4**
TCU				*i* S		**Sb**	**21 34 08.2**	**-0.4**
WNT1	**Nantou City**	**0.14**	**200**	⇑*i*P		**Pb**	**21 34 04.5**	**-0.4**
WNT1				*i* S		**Sb**	**21 34 08.4**	**-0.4**
WYL	**Yuanlin Townsh**	**0.16**	**242**	⇑*i*P		**Pb**	**21 34 04.7**	**-0.3**
WYL				S		**Sb**	**21 34 09.3**	**+0.3**
WNT	**Mingjian**	**0.16**	**196**	⇑*i*P		**Pb**	**21 34 04.8**	**-0.3**
WNT				*i* S		**Sb**	**21 34 09.2**	**+0.1**
WCHH	**Zhanghua**	**0.17**	**286**	⇓*i*P		**Pb**	**21 34 04.9**	**-0.3**
WCHH				S		**Sb**	**21 34 09.6**	**+0.4**
WCS	**Beigang Elemen**	**0.17**	**82**	⇑*i*P		**Pb**	**21 34 04.5**	**-0.7**
WCS				S		**Sb**	**21 34 08.4**	**-0.9**
TYC	**Yuchr**	**0.17**	**139**	⇑*i*P		**Pb**	**21 34 04.7**	**-0.5**
TYC				*i* S		**Sb**	**21 34 09.1**	**-0.2**
WCH1	**Changhua City**	**0.17**	**282**	⇓*i*P		**Pb**	**21 34 05.0**	**-0.2**
WCH1				*i* S		**Sb**	**21 34 09.7**	**+0.4**
DPDB	**Guoxing**	**0.18**	**90**	⇑*i*P		**Pb**	**21 34 04.7**	**-0.7**
DPDB				S		**Sb**	**21 34 08.7**	**-0.8**
WPL	**Puli Township**	**0.21**	**96**	⇑*i*P		**Pb**	**21 34 04.9**	**-0.7**
WPL				*e*S		**Sb**	**21 34 09.0**	**-0.9**
WJS	**Zhushan**	**0.21**	**181**	⇑*i*P		**Pb**	**21 34 05.3**	**-0.4**
WJS				S		**Sb**	**21 34 09.9**	**-0.1**
SMLT	**Sun Moon Lake**	**0.22**	**134**	⇑*i*P		**Pb**	**21 34 05.3**	**-0.5**
SMLT				*i* S		**Sb**	**21 34 09.8**	**-0.4**
WWCA	**Taichung City**	**0.29**	**319**	⇓*i*P		**Pb**	**21 34 06.8**	**+0.2**
WWCA				S		**Sn**	**21 34 12.9**	**+0.2**
TWQ1	**Liyutan**	**0.31**	**7**	⇑*i*P		**Pb**	**21 34 06.9**	**-0.1**
TWQ1				*e*S		**Sb**	**21 34 12.6**	**+0.4**
SSLB	**Suanglung**	**0.32**	**140**	P		**Pb**	**21 34 06.0**	**-1.0**
SSLB	**Suanglung**	**0.32**	**140**	S		**Sb**	**21 34 10.5**	**-1.8**
SSLB	**Suanglung**	**0.32**	**140**	⇑*i*P		**Pb**	**21 34 06.3**	**-0.8**
SSLB				*i* S		**Sb**	**21 34 11.2**	**-1.1**
WDJ	**Dajia District**	**0.32**	**345**	⇓P		**Pb**	**21 34 07.2**	**+0.1**
WDJ				S		**Sb**	**21 34 13.3**	**+1.0**
WRL	**Guolierlin Hig**	**0.35**	**248**	⇓*i*P		**Pb**	**21 34 07.2**	**-0.2**
WRL				*e*S		**Sn**	**21 34 13.9**	**-0.3**
WHYT	**Xinyi Township**	**0.35**	**162**	⇑*i*P		**Pb**	**21 34 07.2**	**-0.4**
WHYT				*i* S		**Sb**	**21 34 13.2**	**0.0**

WUSB	**Renai**	**0.35**	**97**	⇓*i*P		**Pb**	**21 34 07.3**	**-0.3**	
WUSB				*i* S		**Sb**	**21 34 13.0**	**-0.3**	
WDL	**Douliou City**	**0.36**	**209**	⇑*i*P		**Pb**	**21 34 07.5**	**0.0**	
WDL				S		**Sn**	**21 34 14.1**	**-0.3**	
RLNB	**Erlin**	**0.37**	**247**	⇓*i*P		**Pb**	**21 34 07.5**	**-0.2**	
RLNB				*i* S		**Sb**	**21 34 14.1**	**+0.7**	
WGK	**Gukeng**	**0.38**	**204**	⇑*i*P		**Pb**	**21 34 07.8**	**-0.1**	
WGK				*e*S		**Sn**	**21 34 14.3**	**-0.6**	
NSY	**Sanyi**	**0.38**	**4**	⇑*e*P		**Pb**	**21 34 08.2**	**+0.3**	
WDLH	**Douliu**	**0.39**	**207**	*e*P		**Pb**	**21 34 07.8**	**-0.1**	
WDLH				*e*S		**Sn**	**21 34 14.6**	**-0.4**	
OWD	**Renai**	**0.41**	**101**	⇓*e*P		**Pb**	**21 34 08.2**	**-0.2**	
OWD				*e*S		**Sb**	**21 34 14.8**	**0.0**	
CHN5	**Tsauling**	**0.44**	**186**	⇑*i*P		**Pb**	**21 34 08.4**	**-0.4**	
CHN5				*i* S		**Sb**	**21 34 15.3**	**0.0**	
TDCB	**Techi**	**0.45**	**61**	⇓*i*P		**Pb**	**21 34 08.6**	**-0.4**	
TDCB				*i* S		**Sb**	**21 34 14.8**	**-0.8**	
WTCT	**Ta-ch'eng**	**0.45**	**248**	⇓*i*P		**Pb**	**21 34 08.4**	**-0.4**	
WTCT				*i* S		**Sb**	**21 34 16.1**	**+0.7**	
TWT	**Tachien**	**0.46**	**62**	⇓*i*P		**Pb**	**21 34 08.7**	**-0.5**	
TWT				*i* S		**Sb**	**21 34 15.2**	**-0.9**	
WTK	**Tuku**	**0.47**	**222**	⇓*i*P		**Pb**	**21 34 08.9**	**-0.2**	
WTK				*e*S		**Sn**	**21 34 16.9**	**-0.1**	
VWDT	**VWDT**	**0.47**	**127**	⇑*i*P		**Pb**	**21 34 09.1**	**-0.1**	
VWDT				*e*S		**Sb**	**21 34 15.6**	**-0.3**	
WHF	**Hehuan Shan**	**0.50**	**77**	⇓P		**Pb**	**21 34 10.2**	**+0.2**	
WHF				S		**Sb**	**21 34 17.6**	**+0.2**	
NMLH	**Miaoli**	**0.50**	**6**	P		**Pb**	**21 34 10.0**	**+0.3**	
NMLH				S		**Sn**	**21 34 18.3**	**+0.3**	
FUSS	**Fushou**	**0.51**	**66**	⇓*i*P		**Pb**	**21 34 09.7**	**-0.4**	
FUSS				S		**Sb**	**21 34 17.7**	**+0.2**	
WMLT	**Mailiao**	**0.52**	**244**	P		**Pb**	**21 34 09.5**	**-0.4**	
WMLT				S		**Sb**	**21 34 18.1**	**+0.7**	
ALS	**Alishan**	**0.53**	**173**	⇑*i*P		**Pb**	**21 34 10.0**	**-0.3**	
ALS				*i* S		**Sb**	**21 34 17.9**	**0.0**	
CHN2	**Minshiung**	**0.55**	**205**	P		**Pb**	**21 34 10.4**	**-0.1**	
CHN2				S		**Sn**	**21 34 19.2**	**0.0**	
CHY	**Chiayi**	**0.60**	**208**	P		**Pb**	**21 34 11.0**

FUSB	**Fushanzhiwuyua**	**1.06**	**47**	⇑P	**Pn**	**21 34 18.2**	**+0.1**
FUSB				S	**Sb**	**21 34 31.8**	**-0.9**
TSCK	**Chigu Township**	**1.06**	**214**	*eP*	**Pn**	**21 34 18.4**	**+0.4**
TSCK				*eS*	**Sb**	**21 34 33.4**	**+0.8**
SHHT	**Tainan City**	**1.07**	**199**	*eP*	**Pb**	**21 34 18.8**	**-0.3**
NDS	**Dongshan**	**1.08**	**56**	*eP*	**Pn**	**21 34 18.8**	**+0.5**
NDS				*eS*	**Sb**	**21 34 32.9**	**-0.2**
NTY	**Taoyuan**	**1.09**	**28**	*eP*	**Pn**	**21 34 18.7**	**+0.4**
TAI1	**Yung-k'ang**	**1.09**	**205**	*eP*	**Pb**	**21 34 19.4**	**-0.1**
TWE	**Neicheng**	**1.09**	**51**	*eP*	**Pb**	**21 34 19.1**	**-0.4**
TWE				*eS*	**Sb**	**21 34 33.3**	**-0.2**
CHKT	**Chengkung**	**1.10**	**148**	*eP*	**Pb**	**21 34 19.4**	**-0.2**
CHKT				*eS*	**Sb**	**21 34 34.8**	**+1.2**
TATO	**Taipei**	**1.16**	**36**	P	**Pb**	**21 34 21.2**	**+0.5**
TATO	**Taipei**	**1.16**	**36**	*eP*	**Pb**	**21 34 20.3**	**-0.4**
TATO				*eS*	**Sb**	**21 34 35.2**	**-0.3**
SCST	**Cishan**	**1.16**	**191**	*eP*	**Pn**	**21 34 19.9**	**+0.5**
SCST				*eS*	**Sb**	**21 34 36.7**	**+1.2**
TWC	**Suao**	**1.17**	**60**	*eP*	**Pb**	**21 34 20.4**	**-0.4**
TWC				*eS*	**Sb**	**21 34 35.4**	**-0.2**
NHDH	**Xindian Distri**	**1.17**	**38**	*eP*	**Pb**	**21 34 20.5**	**-0.4**
NHDH				*eS*	**Sn**	**21 34 34.4**	**-0.1**
PNG	**Penghu**	**1.17**	**247**	*eP*	**Pn**	**21 34 18.8**	**-0.7**
PNG				S	**Sb**	**21 34 35.8**	**0.0**
LONT	**Longtian**	**1.18**	**162**	*eP*	**Pb**	**21 34 20.3**	**-0.8**
PHUB	**P'eng-hu**	**1.18**	**244**⇓	*eP*	**Pn**	**21 34 18.8**	**-0.8**
PHUB				*eS*	**Sn**	**21 34 34.6**	**-0.1**
TAP	**Taipei**	**1.22**	**35**	*eP*	**Pn**	**21 34 20.8**	**+0.5**
TAP				*eS*	**Sn**	**21 34 35.8**	**0.0**
TWS1	**Kuangyinshan**	**1.23**	**30**	*eP*	**Pn**	**21 34 20.4**	**+0.1**
TWS1				*eS*	**Sn**	**21 34 36.3**	**+0.4**
TWM1	**Shoushan**	**1.24**	**193**	*eP*	**Pb**	**21 34 22.8**	**+0.7**
TWG	**Pinlang**	**1.25**	**165**	*eP*	**Pb**	**21 34 21.8**	**-0.4**
TWG				*eS*	**Sb**	**21 34 37.9**	**0.0**
WDGT	**Dungji**	**1.25**	**232**	*eP*	**Pn**	**21 34 20.7**	**+0.1**
WDGT				*eS*	**Sn**	**21 34 37.0**	**+0.7**
TWGBT	**Beinan**	**1.25**	**165**	P	**Pb**	**21 34 22.0**	**-0.3**
TWGBT	**Beinan**	**1.25**	**165**	*eP*	**Pb**	**21 34 21.3**	**-0.9**
TWGBT				*eS*	**Sb**	**21 34 38.1**	**0.0**
NHY	**Taipei**	**1.26**	**37**	*eP*	**Pb**	**21 34 22.1**	**-0.2**
SSD	**Sandimen**	**1.29**	**184**	*eP*	**Pn**	**21 34 21.8**	**+0.7**
SSD				*eS*	**Sb**	**21 34 38.0**	**-0.9**
SGLT	**Jiouru**	**1.32**	**190**	*eP*	**Pb**	**21 34 23.5**	**+0.1**
TSMG	**Majia**	**1.32**	**183**	*eP*	**Pn**	**21 34 22.1**	**+0.5**
ZUZH	**Zhuzihu**	**1.34**	**33**⇑	*eP*	**Pn**	**21 34 21.6**	**-0.4**
ZUZH				*eS*	**Sn**	**21 34 38.6**	**-0.1**
ANP	**Anpu**	**1.35**	**32**	*eP*	**Pn**	**21 34 21.8**	**-0.3**
TIPB	**Shuangxi**	**1.36**	**47**	*eP*	**Pn**	**21 34 22.6**	**+0.4**
TIPB				*eS*	**Sn**	**21 34 39.3**	**0.0**
WFSB	**Wu-fen Shan**	**1.41**	**43**	*eP*	**Pn**	**21 34 23.7**	**+0.9**
MASBT	**Mashibuluo**	**1.42**	**184**⇑	*eP*	**Pn**	**21 34 23.4**	**+0.4**
MASBT				*eS*	**Sn**	**21 34 41.2**	**+0.7**
EOS2	**EOS2**	**1.42**	**74**	*eP*	**Pb**	**21 34 24.9**	**-0.1**
ECL	**Taimali**	**1.45**	**172**	*eP*	**Pb**	**21 34 24.8**	**-0.7**
ECL				*eS*	**Sb**	**21 34 42.8**	**-0.7**
VCHM	**Qimei**	**1.45**	**236**	*eP*	**Pn**	**21 34 23.0**	**-0.4**
VCHM				*eS*	**Sn**	**21 34 41.5**	**+0.2**
EOS4	**EOS4**	**1.45**	**86**	*eP*	**Pb**	**21 34 24.5**	**-0.9**
EOS4				*eS*	**Sb**	**21 34 43.9**	**+0.5**
WSSB	**Gushan**	**1.45**	**197**	*eP*	**Pn**	**21 34 24.2**	**+0.8**
WSSB				*eS*	**Sb**	**21 34 42.9**	**-0.9**
TNOU	**National Taiwa**	**1.46**	**40**	*eP*	**Pn**	**21 34 24.2**	**+0.8**
TNOU				*eS*	**Sn**	**21 34 41.8**	**+0.2**
TWY	**Chenhua**	**1.47**	**32**	*eP*	**Pn**	**21 34 24.0**	**+0.4**
TWY				*eS*	**Sn**	**21 34 41.9**	**+0.1**
EOS3	**EOS3**	**1.47**	**80**	*eP*	**Pb**	**21 34 25.2**	**-0.6**
SXI1	**Grass Mountain**	**1.48**	**44**	*eP*	**Pn**	**21 34 24.5**	**+0.6**
SXI1				*eS*	**Sb**	**21 34 43.9**	**-0.8**
TWB1	**Santiao Chiao**	**1.50**	**49**	*eP*	**Pn**	**21 34 24.6**	**+0.6**
TWB1				*eS*	**Sn**	**21 34 43.3**	**+0.8**
VWUC	**VWUC**	**1.51**	**309**	*eP*	**Pn**	**21 34 23.1**	**-1.0**
LDUT	**Ludao**	**1.52**	**153**	*eP*	**Pn**	**21 34 24.9**	**+0.7**
SSPT	**Xinbi**	**1.55**	**186**	*eP*	**Pn**	**21 34 25.6**	**+0.9**
EAST	**Anshuo**	**1.65**	**176**	*eP*	**Pn**	**21 34 27.2**	**+1.1**
SCZT	**Fangliau**	**1.66**	**184**	*eP*	**Pn**	**21 34 26.9**	**+0.7**
TAW	**Tawu**	**1.68**	**175**	*eP*	**Pn**	**21 34 27.5**	**+1.0**
TAWH	**Dawu Township**	**1.69**	**175**	*eP*	**Pn**	**21 34 27.7**	**+1.0**
TWP	**Hsiaoliuchiu**	**1.71**	**191**	*eP*	**Pb**	**21 34 29.5**	**-0.6**
TWP				*eS*	**Sb**	**21 34 49.7**	**-1.6**
PTMZ	**Houxiangcun**	**1.78**	**305**	*eP*	**Pn**	**21 34 26.8**	**-1.0**
SLIU	**Shizi**	**1.81**	**178**	*eP*	**Pn**	**21 34 29.1**	**+0.8**
PCYT	**Pengchaiyu**	**2.00**	**37**	*eP*	**Pn**	**21 34 30.9**	**0.0**
PCYT				*eS*	**Sn**	**21 34 55.2**	**+0.3**
SMST	**Manzhou Townsh**	**2.01**	**177**	*eP*	**Pn**	**21 34 31.6**	**+0.7**
SMST				*eS*	**Sn**	**21 34 59.0**	**+0.8**
HEN	**Hengchun**	**2.02**	**180**	*eP*	**Pn**	**21 34 32.2**	**+1.0**
JYNG	**Yonagunijimaku**	**2.06**	**78**	*eP*	**Pn**	**21 34 33.2**	**+1.5**
JYNG				*eS*	**Sb**	**21 34 58.9**	**-2.3**
TWK1	**Hengchun**	**2.08**	**178**	*eP*	**Pn**	**21 34 33.0**	**+1.0**
TWKBT	**Hengchun**	**2.09**	**178**	*eP*	**Pn**	**21 34 32.8**	**+0.8**
YOJ	**Yonaguni jima**	**2.12**	**78**	P	**Pn**	**21 34 34.2**	**+1.6**
YOJ	**Yonaguni jima**	**2.12**	**78**	P	**Pn**	**21 34 34.3**	**+1.6**
YOJ				*eS*	**Sn**	**21 34 59.0**	**+1.1**
YOJ	**Yonaguni jima**	**2.12**	**78**	*eP*	**Pn**	**21 34 34.1**	**+1.5**
YOJ				*eS*	**Sb**	**21 35 00.6**	**-2.3**
LAY	**Lan-yu**	**2.12**	**159**	*eP*	**Pn**	**21 34 33.2**	**+0.5**
TSEB	**Hengchuen, Pin**	**2.13**	**176**	*eP*	**Pn**	**21 34 34.1**	**+1.5**
TSEB				*eS*	**Sb**	**21 35 01.1**	**-2.1**
LYUB	**Lan-yu**	**2.17**	**159**	*eP*	**Pn**	**21 34 33.5**	**+0.2**
LYUB				*eS*	**Sn**	**21 34 58.4**	**-0.7**
KNMB	**Chin-men Tao**	**2.18**	**282**	*eP*	**Pn**	**21 34 32.5**	**-0.9**
MHZQ	**Yeshan**	**2.57**	**323**	*eP*	**Pn**	**21 34 37.9**	**-0.8**
AXDP	**Jialang**	**2.66**	**289**	*eP*	**Pn**	**21 34 37.4**	**-0.6**
ZPLA	**Ao Xicun**	**2.73**	**268**	*eP*	**Pn**	**21 34 40.3**	**-0.6**
HATJ	**Hateruma jima**	**2.81**	**89**	*eP*	**Pn**	**21 34 43.6**	**+1.6**
JKRS	**Kuro-shima**	**3.00**	**85**	*eP*	**Pn**	**21 34 46.7**	**+2.1**
JKRS				*eS*	**Sn**	**21 35 21.8**	**+2.2**
DSXP	**Dongshan**	**3.04**	**265**	*eP*	**Pn**	**21 34 44.7**	**-0.6**
JIJ	**Ishigaki jima**	**3.13**	**83**	*eP*	**Pn**	**21 34 47.3**	**+0.8**
JIJ				*eS*	**Sn**	**21 35 23.9**	**+1.0**
JISG	**Ishigakijimahi**	**3.31**	**80**	*eP*	**Pn**	**21 34 49.5**	**+0.6**
JISG				*eS*	**Sn**	**21 35 28.0**	**+0.7**
SXFK	**Yanhouchang**	**3.66**	**311**	*eP*	**Pn**	**21 34 53.4**	**-0.3**
JTJ	**Tarama**	**3.67**	**80**	*eP*	**Pn**	**21 34 55.6**	**+1.7**
JIRJ	**Irabujima**	**4.14**	**78**	*eS*	**Sn**	**21 35 49.0**	**+1.2**
JMJ	**Miyako jima 2**	**4.23**	**78**	*eP*	**Pn**	**21 35 04.1**	**+2.6**
JOW	**Kunigami**	**7.37**	**66**	P	**Pn**	**21 35 45.3**	**+0.6**
JOW	**Kunigami**	**7.37**	**66**	*eP*	**Pn**	**21 35 45.4**	**+0.7**
NJ2	**Nanjing**	**8.16**	**349**	*eP*	**Pn**	**21 35 53.5**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						

*IDC **25** 21:38:04.5±0.9, 40°.54N×138°.17E, h262km±11km, mb3.2/13, mbtmp3.9/18, Error ellipse: s-maj=18.3km s-min=11.1km az=110.0*
*JMA **25** 21:38:04.2±0.2, 40°.5N±0°.5×138°.8E±°, h279km±2km, MV3.5/34, EASTERN SEA OF JAPAN*
ISC 25 21:38:05.3±0.7, 40°.41N±0°.05×138°.46E±0°.07, h300km, n42, σ2§06/48, mb3.6/13, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOG3	**Oga3**	**0.68**	**136**	P	**Pn**	**21 38 44.4**	**-0.1**
JIW	**Iwasaki**	**1.19**	**81**	P	**Pn**	**21 38 44.5**	**-2.2**
JNTW	**Noshirotokiwa**	**1.31**	**96**	*eP*	**Pn**	**21 38 45.5**	**-1.7**
JOMM	**Oshimamatsumae**	**1.61**	**46**	*eP*	**Pn**	**21 38 46.8**	**-2.4**
JOSM	**Okushiri--Mats**	**1.84**	**24**	*eP*	**Pn**	**21 38 47.7**	**-3.0**
JRG	**Rokugo**	**1.95**	**121**	P	**Pn**	**21 38 50.6**	**-1.1**
JRG				S	**S**	**21 39 26.6**	**-2.1**
JTM	**Tenmabayashi**	**2.02**	**78**	P	**Pn**	**21 38 50.8**	**-1.4**
JAW	**Awa shima**	**2.04**	**162**	*eP*	**Pn**	**21 38 50.4**	**-2.1**
JYK	**Kaneyama**	**2.09**	**135**	P	**Pn**	**21 38 51.8**	**-1.0**
JYK				S	**S**	**21 39 29.0**	**-1.7**
JOT	**Ohata**	**2.19**	**63**	P	**Pn**	**21 38 52.2**	**-1.3**
JANG	**Nango**	**2.33**	**90**	P	**Pn**	**21 38 53.7**	**-1.1**
JOM	**Ohasama**	**2.37**	**112**	P	**Pn**	**21 38 54.2**	**-1.0**
JMK	**Ichinoseki**	**2.58**	**123**	P	**Pn**	**21 38 56.1**	**-0.9**
JNS	**Sasagawa**	**2.67**	**165**	*eP*	**Pn**	**21 38 56.4**	**-1.6**
JSZ	**Suzu**	**3.08**	**196**	P	**Pn**	**21 39 00.1**	**-1.8**
JMM	**Marumori**	**3.12**	**144**	P	**Pn**	**21 39 01.1**	**-1.2**
JMM				*eS*	**S**	**21 39 46.0**	**-1.9**
JOTO	**OTAMA OYAMA**	**3.20**	**152**	P	**Pn**	**21 39 02.2**	**-0.9**
JSK	**Shakotan**	**3.30**	**26**	*eP*	**Pn**	**21 39 02.5**	**-1.5**
MAJO	**Matsushiro**	**3.87**	**183**	P	**Pn**	**21 39 09.2**	**-1.0**
MJAR	**Matsushiro Arr**	**3.87**	**183**	P	**Pn**	**21 39 09.3**	**-0.9**
	17nm,0.7s,baz=0.3,slow=12,SNR=68						
MJAR				S	**S**	**21 40 01.4**	**-0.8**
	0.6nm,0.4s,baz=292,slow=29,SNR=0.5						

ERM	**Erimo**	**3.89**	**64**	P	**Pn**	**21 39 09.7**	**-0.5**
JEM	**Erimo**	**3.89**	**64**	P	**Pn**	**21 39 09.7**	**-0.5**
ASAJ	**Asahikawa**	**4.81**	**38**	P	**Pn**	**21 39 20.1**	**-0.4**
	18nm,0.4s,baz=231,slow=11,SNR=90						
ASAJ				S	**S**	**21 40 17.0**	**-3.9**
	8.8nm,0.5s,baz=150,slow=20,SNR=16						
JGF	**Kuroka**	**4.88**	**191**	P	**Pn**	**21 39 20.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**6.11**	**310**	P	**Pn**	**21 39 31.9**	**-4.0**
	2.9nm,0.6s,baz=113,slow=11,SNR=4.7						
JHJ	**Hachijo jima 2**	**7.35**	**171**	P	**Pn**	**21 39 49.2**	**-1.8**
	34nm,0.3s,baz=87,slow=21,SNR=7.4						
JHJ				S	**S**	**21 41 10.0**	**-6.7**
	115nm,1.1s,baz=255,slow=20,SNR=1.9						
JHJ2	**Mitsune**	**7.37**	**171**	P	**Pn**	**21 39 49.8**	**-1.4**
KSRS	**Korea Array**	**8.73**	**254**	P	**Pn**	**21 40 05.0**	**-2.8**
	2.1nm,0.7s,baz=65,slow=13,SNR=8.0						
HILR	**Hailar Array B**	**16.05**	**311**	P	**P**	**21 41 31.2**	**-2.5**
	6.5nm,0.5s,baz=110,slow=12,SNR=8.8						
SONM	**Songino Array**	**24.06**	**299**	P	**P**	**21 42 53.7**	**-0.2**
	0.6nm,0.4s,baz=100,slow=8.6,SNR=6.9						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**37.96**	**309**	P	**P**	**21 44 54.5**	**0.0**
	1.3nm,0.6s,baz=80,slow=7.6,SNR=6.3						
	1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.33**	**249**	P	**P**	**21 45 14.5**	**+0.1**
	0.3nm,0.3s,baz=82,slow=10,SNR=1.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**40.43**	**298**	P	**P**	**21 45 14.8**	**-0.1**
	0.3nm,0.4s,baz=84,slow=12,SNR=14						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**42.14**	**305**	P	**P**	**21 45 28.7**	**+0.1**
	2.7nm,0.4s,baz=81,slow=8.6,SNR=13						
	2.7nm,0.4s						
BVAR	**Borovoye Array**	**46.62**	**310**	P	**P**	**21 46 05.0**	**+1.2**
	2.0nm,0.5s,baz=74,slow=8.2,SNR=16						
	2.0nm,0.5s						
ARCES	**ARCESS Array B**	**60.02**	**338**	P	**P**	**21 47 42.0**	**+1.6**
	1.5nm,0.8s,baz=51,slow=9.6,SNR=4.3						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**60.16**	**184**	P	**P**	**21 47 45.1**	**+3.2**
	0.9nm,1.2s,baz=3.2,slow=7.6,SNR=2.1						
	0.9nm,1.2s						
FINES	**FINESS Array B**	**64.75**	**331**	P	**P**	**21 48 13.4**	**+1.8**
	0.8nm,0.4s,baz=45,slow=7.8,SNR=15						
	0.8nm,0.4s						
HFS	**Hagfors**	**70.06**	**334**	P	**P**	**21 48 46.5**	**+1.8**
	0.6nm,0.4s,baz=123,slow=5.5,SNR=5.0						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**70.17**	**336**	P	**P**	**21 48 47.6**	**+2.2**
	0.2nm,0.4s,baz=37,slow=2.9,SNR=1.1						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**70.22**	**320**	P	**P**	**21 48 47.1**	**+1.2**
	0.5nm,0.4s,baz=45,slow=7.0,SNR=6.3						
	0.5nm,0.4s						
GERES	**GERESS Array B**	**78.63**	**326**	P	**P**	**21 49 36.9**	**+2.7**
	0.2nm,0.3s,baz=21,slow=5.7,SNR=3.9						
	0.2nm,0.3s						

*CATAC **25** 21:56:56.6±0.5, 13°.N±3°.×8°.9W±°, h36km±5km, MS3.7/19, MLv3.7/19, Error ellipse: s-maj=7.5km s-min=2.3km az=31.0, confirmed*
*SNET **25** 21:56:57.4±2.1, 12°.86N×88°.63W, h30km, ML3.5, Presumed earthquake*
ISC 25 21:56:55.9±1.6, 12°.77N±0°.07×88°.65W±0°.04, h31km±13km, n34, σ0§54/55, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RANC	**El Ranchito**	**0.75**	**28**	P	**Pb**	**21 57 10.6**	**0.0**
RANC				S	**Sn**	**21 57 21.9**	**+1.0**
PACA	**Pacayal**	**0.77**	**24**	P	**Pn**	**21 57 10.4**	**-0.4**
PACA				S	**Sb**	**21 57 21.8**	**+0.7**
TECO	**Alcaldia de Te**	**0.78**	**350**	P	**Pn**	**21 57 10.8**	**0.0**
TECO				S	**Sb**	**21 57 21.1**	**-0.2**
BLLM	**Bellamira**	**0.78**	**31**	*i* P	**Pn**	**21 57 10.9**	**0.0**
POSS	**Presa 15 de Se**	**0.86**	**6**	P	**Pn**	**21 57 11.9**	**+0.1**
POSS				S	**Sb**	**21 57 23.5**	**0.0**
COEG	**Centro de Oper**	**0.88**	**345**	P	**Pn**	**21 57 12.2**	**0.0**
COEG	**Centro de Oper**	**0.88**	**345**	*eP*	**Pn**	**21 57 12.1**	**-0.2**
COEG				*eS*	**Sb**	**21 57 24.1**	**-0.2**
LCND	**La Caada**	**0.91**	**54**	P	**Pb**	**21 57 13.1**	**-0.2**
SCLA	**Alcaldia de Sa**	**0.93**	**355**	S	**Sb**	**21 57 25.5**	**-0.3**
CNCH	**Conchagua**	**0.94**	**57**	P	**Pn**	**21 57 13.2**	**+0.1**
CNCH				S	**Sb**	**21 57 25.8**	**-0.2**
CNCH	**Conchagua**	**0.94**	**57**	*eP*	**Pn**	**21 57 13.5**	**+0.4**
CNCH				*eS*	**Sb**	**21 57 26.5**	**+0.4**
PAVA	**Las Pavas**	**0.98**	**343**	P	**Pn**	**21 57 13.9**	**+0.2**
PAVA				S	**Sb**	**21 57 27.1**	**-0.2**
LOMA	**Loma Larga**	**1.01**	**330**	P	**Pn**	**21 57 14.4**	**+0.2**
LOMA				S	**Sn**	**21 57 27.4**	**0.0**
CSGN	**Cosiguina Volc**	**1.08**	**79**	P	**Pn**	**21 57 15.4**	**+0.4**
CSGN				S	**Sn**	**21 57 28.5**	**-0.5**
UEES	**Universidad Ev**	**1.11**	**329**	S	**Sb**	**21 57 30.7**	**-0.1**
PMON	**Piamonte**	**1.14**	**325**	P	**Pn**	**21 57 15.8**	**-0.1**
PMON				S	**Sn**	**21 57 30.5**	**-0.1**
BOQS	**Boqueron**	**1.14**	**327**	*i* P	**Pn**	**21 57 16.3**	**+0.2**
JAYA	**Jayaque - finc**	**1.18**	**319**	P	**Pn**	**21 57 16.2**	**-0.2**
JAYA				S	**Sn**	**21 57 30.7**	**-0.9**
P5NO	**Presa 5 de nov**	**1.22**	**355**	P	**Pn**	**21 57 17.4**	**+0.5**
P5NO				S	**Sb**	**21 57 33.7**	**-0.1**
CEVE	**Cerro Verde**	**1.42**	**318**	P	**Pn**	**21 57 20.9**	**+1.1**
CEVE				S	**Sn**	**21 57 38.4**	**+0.7**
CEVE	**Cerro Verde**	**1.42**	**318**	*eP*	**Pn**	**21 57 20.7**	**+0.8**
CEVE				*eS*	**Sb**	**21 57 40.2**	**+0.3**
UNIC	**Universidad Ca**	**1.49**	**324**	S	**Sn**	**21 57 39.4**	**+0.2**
MARCA	**Marcala la Paz**	**1.51**	**23**	P	**Pn**	**21 57 21.4**	**+0.4**
CRIN	**San Cristobal**	**1.56**	**92**	P	**Pn**	**21 57 22.1**	**+0.5**
CRIN				S	**Sn**	**21 57 41.4**	**+0.6**
FAME	**Alcaldia de Sa**	**1.71**	**309**	S	**Sn**	**21 57 43.1**	**-1.3**
QUEN	**Al S del Volca**	**1.76**	**95**	P	**Pn**	**21 57 24.4**	**0.0**
QUEN				S	**Sn**	**21 57 45.0**	**-0.8**
MTO3	**Montecristo**	**1.77**	**337**	P	**Pn**	**21 57 24.8**	**+0.2**
ESQI	**Esquipulas**	**1.91**	**339**	*eP*	**Pn**	**21 57 27.1**	**+0.7**
ESQI				*eS*	**Sb**	**21 57 53.0**	**-0.7**
CNGA	**Al SSO del Vol**	**1.92**	**98**	P	**Pn**	**21 57 26.9**	**+0.5**
CNGN	**Cerro Negro**	**1.92**	**98**	P	**Pn**	**21 57 27.8**	**+1.3**
CNGN				S	**Sn**	**21 57 49.4**	**-0.3**
MACN	**El Madrono**	**1.95**	**99**	P	**Pn**	**21 57 27.1**	**+0.2**
MACN				S	**Sn**	**21 57 49.3**	**-1.1**
SARH	**Santa Rosa de**	**2.00**	**357**	P	**Pn**	**21 57 28.2**	**+0.6**
COPN	**Copaltepe**	**2.09**	**106**	P	**Pn**	**21 57 29.4**	**+0.6**
LIMN	**Finca el Limon**	**2.24**	**82**	P	**Pn**	**21 57 30.5**	**-0.5**
LIMN				S	**Sn**	**21 57 57.3**	**-0.5**

*IDC **25** 22:02:16.7±1.1, 23°.13N×93°.53E, h0km, mb3.5/4, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=29.0km s-min=19.4km az=34.0*
ISC 25 22:02:23.2±1.1, 23°.0N±0°.2×93°.45E±0°.08, h53km, n6, σ1§40/7, mb3.4/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**1.71**	**258**	Pn	**Pn**	**22 02 49.1**	**-1.5**
	55nm,0.3s,baz=72,slow=19,SNR=4.6						
BRDH				Sn	**Sn**	**22 03 12.7**	**+1.4**
	66nm,0.3s,baz=235,slow=18,SNR=8.3						
CMAR	**Chiang Mai Arr**	**6.87**	**131**	Pn	**Pn**	**22 04 00.6**	**-0.8**
	0.5nm,0.3s,baz=312,slow=14,SNR=1.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**25.35**	**342**	P	**P**	**22 07 43.9**	**-1.3**
	0.5nm,0.8s,baz=160,slow=7.4,SNR=3.6						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**29.89**	**341**	P	**P**	**22 08 26.7**	**+1.0**
	0.1nm,0.3s,baz=164,slow=7.0,SNR=1.0						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**58.45**	**134**	P	**P**	**22 12 14.3**	**+0.3**
	0.3nm,0.5s,baz=321,slow=7.4,SNR=9.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**60.83**	**137**	P	**P**	**22 12 31.0**	**+0.6**
	0.6nm,0.5s,baz=318,slow=6.8,SNR=28						
	0.6nm,0.5s						

*CRAAG **25** 22:16:25.9, 36°.57N×2°.19E, Ml2.9, Algrie 05km SW Cherchell*
*MDD **25** 22:16:26.1±0.7, 36°.56N×2°.16E, h7km±10km, Mb3.7/34, M_mb3.0/24, Error ellipse: s-maj=12.8km s-min=3.5km az=146.0*
ISC 25 22:16:24.9±0.9, 36°.64N±0°.04×2°.17E±0°.04, h10km, n32, σ1§78/46, 17C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABKD	**Sidi Amar**	**0.15**	**132**	P	**Pg**	**22 16 29.4**	**+1.2**
EARB	**Arib**	**0.36**	**202**	P	**Pb**	**22 16 32.8**	**-0.6**
EHRZ	**Djelida**	**0.44**	**187**	P	**Pb**	**22 16 34.2**	**-0.6**
EBNH	**Beni Haoua**	**0.51**	**257**	P	**Pb**	**22 16 36.7**	**+0.9**
EBNR	**Beni Rached**	**0.62**	**236**	P	**Pb**	**22 16 39.0**	**+1.2**
EDDR	**Deurdeur**	**0.63**	**177**	P	**Pb**	**22 16 38.0**	**-0.1**
ABA	**Alger-Bouzarea**	**0.71**	**76**	P	**Pg**	**22 16 40.4**	**+1.8**
EZEK	**Zmalet El Emir**	**1.77**	**176**	P	**Pg**	**22 16 59.9**	**+1.1**
EIBI	**Ibiza**	**2.47**	**345**	Pn	**Pn**	**22 17 06.0**	**+0.8**
EIBI				Sn	**Sn**	**22 17 32.8**	**-2.7**
EIBI	**Ibiza**	**2.47**	**345**	Pn	**Pn**	**22 17 06.0**	**+0.8**
EIBI				⇑*i*Vmb_VC		22 17 06.8	
	255nm,SNR=1.5						
EIBI				Sn	**Sn**	**22 17 32.9**	**-2.7**
CART	**Cartagena**	**2.71**	**291**	Pn	**Pn**	**22 17 07.7**	**-0.7**
CART				Sn	**Sn**	**22 17 37.0**	**-4.2**
EBEN2	**Beniarda presa**	**2.77**	**318**	Pn	**Pn**	**22 17 09.2**	**0.0**
EBEN2				⇑*i*Vmb_VC		22 17 10.5	
	350nm,SNR=1.7						
EBEN2				Sn	**Sn**	**22 17 39.9**	**-2.9**
AFON	**Font Roja**	**2.96**	**314**	Pn	**Pn**	**22 17 13.4**	**+1.4**
AFON				⇑*i*Vmb_VC		22 17 15.0	
	152nm,SNR=1.3						
AFON				Sn	**Sn**	**22 17 46.1**	**-1.4**
EMUR	**La Murta**	**2.98**	**295**	Pn	**Pn**	**22 17 12.9**	**+0.7**
EMUR				⇑*i*Vmb_VC		22 17 14.5	
	109nm,SNR=1.0						
EMUR				Sn	**Sn**	**22 17 45.8**	**-2.1**
ETOS	**Mallorca**	**3.17**	**9**	Pn	**Pn**	**22 17 15.0**	**+0.3**
ETOS				Sn	**Sn**	**22 17 48.7**	**-3.9**
ETOS	**Mallorca**	**3.17**	**9**	Pn	**Pn**	**22 17 15.0**	**+0.3**
ETOS				⇑*i*Vmb_VC		22 17 16.2	
	154nm,SNR=1.2						
ETOS				Sn	**Sn**	**22 17 49.3**	**-3.4**
ELOR	**Lorca, Murcia**	**3.29**	**289**⇑	*i*Vmb_VC		22 17 19.0	
	230nm,SNR=0.5						
ELOR				Sn	**Sn**	**22 17 52.7**	**-2.9**
EZAR	**Zarzadilla de**	**3.32**	**293**	Pn	**Pn**	**22 17 16.7**	**-0.2**
EZAR				⇑*i*Vmb_VC		22 17 17.2	
	129nm,SNR=1.4						
EZAR				Sn	**Sn**	**22 17 54.1**	**-2.5**
ECOL	**Islas Columbre**	**3.46**	**341**	Pn	**Pn**	**22 17 19.2**	**+0.4**
ETOB	**Tobarra**	**3.57**	**305**	Sn	**Sn**	**22 18 02.1**	**-0.5**
EVIV	**Cofrentes, Val**	**3.69**	**316**	Pn	**Pn**	**22 17 22.4**	**+0.4**
EVIV				⇑

comp=Z,3.2nm,1.1s

MOS ***25*** *22:35:47.9±0.8, 20˚.46S×178˚.45W, h557km, mb5.5/30, Error ellipse: s-maj=7.5km s-min=7.1km az=120.6*
BJI ***25*** *22:35:47.4, 20˚.14S×178˚.10W, h555km, mB5.2/38, mb5.1/65*
IDC ***25*** *22:35:48.8±0.4, 20˚.49S×178˚.44W, h555km±3km, mb4.7/34, mbtmp5.6/38, Error ellipse: s-maj=7.6km s-min=6.9km az=10.0*
GFZ ***25*** *22:35:49.5, 20˚.52S×178˚.49W, h579km, Mw5.4/25, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.34; $M_{\theta\theta}$0.73; $M_{\phi\phi}$-0.39; $M_{r\theta}$-1.04; $M_{\theta\phi}$-0.36; $M_{\phi r}$-1.27; Fault plane solution: $M_0$1.79319×10^{17} NP1: ϕ_s49.95811°, δ86.79651°, λ-111.24637°. NP2: ϕ_s311.77911°, δ21.47546°, λ-8.78001°. Principal axes: T 1.4661, Plg38.2067°, Azm158.9901°; N 0.5332, Plg21.2116°, Azm51.2028°; P -1.9993, Plg44.2292°, Azm299.0052°;*
NEIC ***25*** *22:35:49.0±1.5, 20˚.46S±0˚.08×178˚.42W±0˚.09, h554km±5km, mb5.2/192, Mww5.4/10 Error ellipse: s-maj=12.4km s-min=11.8km az=137.0*
NOU ***25*** *22:35:49.6, 20˚.49S×178˚.44W, h562km, ML5.1/168, Fiji Islands Region*
GFZ ***25*** *22:35:49.2±0.3, 21˚S±4˚×17˚8W±˚, h566km±6km, M5.2/23, mb5.5/23*
GCMT ***25*** *22:35:52.0±0.2, 20˚.43S±0˚.02×178˚.52W±0˚.02, h568km±1km, MW5.5/121, Moment Tensor Solution. s121,c206; Duration: 1ś3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.42±.02; $M_{\theta\theta}$0.66±.04; $M_{\phi\phi}$-0.24±.04; $M_{r\theta}$-1.22±.04; $M_{\theta\phi}$-0.28±.03; $M_{\phi r}$-1.61±.04; Best double couple: $M_0$2.06200×10^{17} NP1:ϕ_s301.00000°, ẟ12.00000°, λ-12.00000°. NP2:ϕ_s43.00000°, ẟ88.00000°, λ-102.00000°. Principal axes: T 1.7820, Plg41.0000°, Azm144.0000°; N 0.5610, Plg12.0000°, Azm43.0000°; P -2.3430, Plg46.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 25 22:35:48.7±0.2, 20˚.52S±0˚.03×178˚.43W±0˚.03, h561km±2km, h562km; pP-P, n1420, σ1ś11/1577, mb5.2/236, 76C-106D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.31**	**351**	P		**P**		**22 37 02.3**	**+1.4**
LKBA	**Tubou, Lakemba**	**2.31**	**351**	S		**S**		**22 38 01.4**	**+1.9**
MSVF	**Nonsavu**	**4.33**	**309**	P		**P**		**22 37 15.4**	**+1.4**
	2µm,0.5s,baz=137,slow=4.4,SNR=930								
MSVF	**Nonsavu**	**4.33**	**309**	P		**P**		**22 37 15.6**	**+1.6**
MSVF	**Nonsavu**	**4.33**	**309**	S		**S**		**22 38 24.6**	**+1.1**
MSVF	**Nonsavu**	**4.33**	**309**			**P**		**22 37 15.7**	**+1.7**
MSVF	**Nonsavu**	**4.33**	**309**	P		**P**		**22 37 15.9**	**+1.9**
DGTI	**Dogotuki**	**4.55**	**337**	P		**P**		**22 37 16.8**	**+1.2**
FUTU	**Fugatoga**	**6.19**	**3**	P		**P**		**22 37 30.8**	**+1.2**
FUTU	**Fugatoga**	**6.19**	**3**			**P**		**22 37 30.2**	**+0.6**
FUTU	**Fugatoga**	**6.19**	**3**	P		**P**		**22 37 30.6**	**+1.0**
NIUE	**Niue**	**8.13**	**81**	P		**P**		**22 37 47.9**	**-0.1**
NIUE	**Niue**	**8.13**	**81**	S		**S**		**22 39 27.2**	**+1.3**
NIUE	**Niue**	**8.13**	**81**	P		**P**		**22 37 48.0**	**-0.1**
	comp=Z,1µm,0.7s								
NIUE	**Niue**	**8.13**	**81**			**P**		**22 37 47.8**	**-0.1**
NIUE	**Niue**	**8.13**	**81**	P		**P**		**22 37 47.7**	**-0.3**
NIUE	**Niue**	**8.13**	**81**	P		**P**		**22 37 48.0**	**0.0**
RAO	**Raoul Island**	**8.71**	**177**	P		**P**		**22 37 52.2**	**-1.4**
	comp=Z,521nm,0.3s,baz=79,slow=11,SNR=11								
RAO				S		**S**		**22 39 29.4**	**-6.8**
	comp=Z,858nm,0.6s,baz=100,slow=22,SNR=9.1								
RAO	**Raoul Island**	**8.71**	**177**	P		**P**		**22 37 52.5**	**-1.1**
RAO	**Raoul Island**	**8.71**	**177**	P		**P**		**22 37 52.5**	**-1.1**
GLKZ	**Green Lake**	**8.71**	**177**	P		**P**		**22 37 52.5**	**-1.2**
GLKZ				S		**S**		**22 39 28.2**	**-8.1**
AFI	**Afiamalu**	**9.14**	**45**	P		**P**		**22 37 55.9**	**-2.4**
	comp=Z,278nm,0.7s,baz=36,slow=1.5,SNR=29								
AFI				S		S		22 39 34.7	-10
	comp=Z,359nm,0.8s,baz=13,slow=23,SNR=12								
MARNC	**Mare, Loyalty**	**12.69**	**263**	P		**P**		**22 38 34.7**	**+0.4**
MARNC	**Mare, Loyalty**	**12.69**	**263**	S		**S**		**22 40 51.1**	**+0.4**
MARNC	**Mare, Loyalty**	**12.69**	**263**			**P**		**22 38 34.7**	**+0.4**
RTV	**Rentapao**	**12.72**	**280**	P		**P**		**22 38 35.6**	**+0.9**
RTV	**Rentapao**	**12.72**	**280**	S		**S**		**22 40 51.7**	**+0.3**
DVP	**Devils Point**	**12.96**	**280**	P		**P**		**22 38 38.3**	**+1.2**
DVP	**Devils Point**	**12.96**	**280**	S		**S**		**22 40 56.7**	**+0.9**
YATNC	**Mamie plateau,**	**13.77**	**261**	P		**P**		**22 38 45.8**	**+0.2**
OUENC	**Ouen Island, N**	**13.85**	**260**	P		**P**		**22 38 47.4**	**+1.1**
OUENC	**Ouen Island, N**	**13.85**	**260**			**P**		**22 38 46.6**	**+0.4**
DZM	**Mont Dzumac**	**14.19**	**261**	P		**P**		**22 38 50.0**	**+0.1**
	comp=Z,96nm,0.5s,baz=89,slow=13,SNR=71								
DZM				S		**S**		**22 41 19.5**	**+0.6**
	comp=Z,50nm,1.1s,baz=327,slow=15,SNR=4.6								
DZM				ScP		**ScP**		**22 46 07.3**	**+1.6**
	comp=Z,12nm,0.8s,baz=69,slow=14,SNR=6.5								
ONTNC	**Ouen Toro**	**14.20**	**260**	P		**P**		**22 38 50.3**	**+0.5**
ONTNC	**Ouen Toro**	**14.20**	**260**	S		**S**		**22 41 20.0**	**+1.2**
ONTNC	**Ouen Toro**	**14.20**	**260**			**P**		**22 38 50.0**	**+0.2**
NOUC	**Port Laguerre**	**14.32**	**261**	P		**P**		**22 38 51.4**	**+0.3**
NOUC	**Port Laguerre**	**14.32**	**261**	S		**S**		**22 41 22.9**	**+1.7**
KOUNC	**Koumac, New Ca**	**16.20**	**267**	P		**P**		**22 39 11.0**	**+1.3**
KOUNC	**Koumac, New Ca**	**16.20**	**267**	S		**S**		**22 41 55.9**	**+2.3**
KOUNC	**Koumac, New Ca**	**16.20**	**267**			**P**		**22 39 10.0**	**+0.3**
OUZ	**Omahuta**	**16.24**	**204**	P		**P**		**22 39 11.6**	**+1.7**
GRZ	**Great Barrier**	**16.56**	**198**	P		**P**		**22 39 14.2**	**+1.5**
WCZ	**Waipu Caves**	**16.62**	**201**	P		**P**		**22 39 15.0**	**+1.7**
ABAZ	**Army Bay**	**17.07**	**199**	P		**P**		**22 39 19.5**	**+2.2**
MBAZ	**Motutapu North**	**17.21**	**198**	P		**P**		**22 39 20.7**	**+2.2**
MXZ	**Matakaoa Point**	**17.22**	**199**	P		**P**		**22 39 17.6**	**-1.1**
MYRZ	**Mayor Island**	**17.33**	**194**	P		**P**		**22 39 22.1**	**+2.3**
EPAZ	**Eden Park BICE**	**17.35**	**199**	P		**P**		**22 39 21.2**	**+1.3**
ETAZ	**East Tamaki Re**	**17.37**	**198**	P		**P**		**22 39 21.8**	**+1.8**
RAR	**Rarotonga**	**17.45**	**96**	P		**P**		**22 39 21.1**	**+0.1**
	comp=Z,67nm,0.9s,baz=258,slow=8.5,SNR=11								
RAR	**Rarotonga**	**17.45**	**96**	P		**P**		**22 39 21.2**	**+0.2**
WMGZ	**Waiomatatini S**	**17.45**	**188**	P		**P**		**22 39 20.4**	**-0.4**
HAZ	**Te Kaha**	**17.49**	**190**	P		**P**		**22 39 20.1**	**-1.1**
PKGZ	**Pakihiroa**	**17.55**	**189**	P		**P**		**22 39 21.4**	**-0.3**
RUGZ	**Raukumara Rang**	**17.71**	**190**	P		**P**		**22 39 21.7**	**-1.6**
PUZ	**Puketiti**	**17.73**	**189**	P		**P**		**22 39 23.2**	**-0.1**
WHRZ	**Whale Island**	**17.73**	**192**	P		**P**		**22 39 24.7**	**+1.4**
TGRZ	**Tauranga**	**17.76**	**194**	P		**P**		**22 39 25.6**	**+2.0**
TOZ	**Tahuroa Road**	**17.94**	**196**			**P**		**22 39 26.9**	**+1.6**
MWZ	**Matawai**	**18.09**	**190**	P		**P**		**22 39 25.2**	**-1.5**
URZ	**Urewera**	**18.09**	**191**	P		**P**		**22 39 24.4**	**-2.2**
	comp=Z,118nm,0.6s,baz=266,slow=2.3,SNR=68								
URZ				S		**S**		**22 42 18.2**	**-5.8**
	comp=Z,24nm,0.6s,baz=153,slow=20,SNR=5.8								
URZ	**Urewera**	**18.09**	**191**	P		**P**		**22 39 26.1**	**-0.6**
URZ	**Urewera**	**18.09**	**191**	P		**P**		**22 39 24.1**	**-2.5**
URZ	**Urewera**	**18.09**	**191**	P		**P**		**22 39 25.2**	**-1.5**
OMRZ	**Omania**	**18.10**	**193**	P		**P**		**22 39 27.6**	**+0.8**
CNGZ	**Carnagh Statio**	**18.14**	**189**	P		**P**		**22 39 28.0**	**+1.0**
RTZ	**Ruatahuna**	**18.46**	**191**	P		**P**		**22 39 28.1**	**-2.0**
HIZ	**Hauiti**	**18.85**	**197**	P		**P**		**22 39 36.3**	**+2.7**
HIZ	**Hauiti**	**18.85**	**197**	P		**P**		**22 39 35.5**	**+1.9**
BKZ	**Black Stump Fm**	**19.09**	**192**	P		**P**		**22 39 35.3**	**-0.5**
BKZ	**Black Stump Fm**	**19.09**	**192**	P		**P**		**22 39 34.3**	**-1.5**
BFZ	**Birch Farm**	**20.60**	**192**	P		**P**		**22 39 49.3**	**-0.2**
BFZ	**Birch Farm**	**20.60**	**192**	P		**P**		**22 39 49.1**	**-0.3**
SNZO	**South Karori**	**21.53**	**194**	P		**P**		**22 39 57.8**	**+0.1**
SNZO	**South Karori**	**21.53**	**194**	P		**P**		**22 39 56.6**	**-1.2**
QRZ	**Quartz Range**	**21.66**	**199**	P		**P**		**22 39 59.2**	**+0.3**
QRZ	**Quartz Range**	**21.66**	**199**	P		**P**		**22 39 59.6**	**+0.6**
TUWZ	**Tuamarina**	**21.83**	**196**	P		**P**		**22 39 59.3**	**-1.1**
THZ	**Tophouse**	**22.41**	**197**	P		**P**		**22 40 04.9**	**-0.9**
KHZ	**Kahutara**	**22.86**	**195**	P		**P**		**22 40 08.4**	**-1.2**
CTZ	**Chatham Island**	**23.20**	**177**	P		**P**		**22 40 15.1**	**+2.5**
CTZ	**Chatham Island**	**23.20**	**177**	P		**P**		**22 40 13.6**	**+1.0**
TARA	**Tarawa**	**23.34**	**338**	P		**P**		**22 40 14.1**	**-0.1**
TARA	**Tarawa**	**23.34**	**338**	P		**P**		**22 40 14.3**	**+0.1**
HNR	**Honiara**	**23.59**	**295**	P		**P**		**22 40 15.5**	**-1.0**
	comp=Z,4.7nm,0.6s,baz=359,slow=4.7,SNR=1.8								
HNR	**Honiara**	**23.59**	**295**	P		**P**		**22 40 14.9**	**-1.7**
TATA	**Tatamba Isabel**	**24.25**	**297**	P		**P**		**22 40 22.1**	**-0.3**
JCZ	**Jackson Bay**	**25.79**	**202**	P		**P**		**22 40 36.0**	**+0.3**
GC1S	**Gold Coast 1 S**	**26.63**	**248**	P		**P**		**22 40 45.1**	**+1.9**
AUBSH	**Beerwah State**	**26.93**	**251**	P		**P**		**22 40 46.8**	**+1.0**
PPT	**Papeete**	**27.41**	**89**	P		**P**		**22 40 50.4**	**+0.2**
	comp=Z,96nm,0.8s,baz=65,slow=4.1,SNR=13								
PPT				ScP		**ScP**		**22 46 40.9**	**+2.7**
	comp=Z,104nm,1.2s,baz=207,slow=3.6,SNR=4.6								
	comp=Z,96nm,0.8s								
PPTF	**Pamatai, Papee**	**27.42**	**89**	P		**P**		**22 40 51.0**	**+0.7**
PPTF	**Pamatai, Papee**	**27.42**	**89**	P		**P**		**22 40 50.5**	**+0.2**
PPTF	**Pamatai, Papee**	**27.42**	**89**	P		**P**		**22 40 51.1**	**+0.7**
WHZ	**Wether Hill Ro**	**27.67**	**201**	P		**P**		**22 40 52.8**	**+0.8**
TW1H	**Toowoomba 1 Ha**	**27.88**	**250**	P		**P**		**22 40 55.7**	**+1.4**
AUTOO	**Toowoomba Stat**	**27.88**	**250**	P		**P**		**22 40 55.7**	**+1.4**
GD1S	**Gladstone Soft**	**28.32**	**258**	P		**P**		**22 40 58.7**	**+0.6**
EIDS	**Eidsvold**	**28.46**	**254**	P		**P**		**22 41 00.2**	**+1.0**
EIDS	**Eidsvold**	**28.46**	**254**	P		**P**		**22 40 59.9**	**+0.6**
	comp=Z,177nm,0.8s,comp=Z,0.0nm								
EIDS	**Eidsvold**	**28.46**	**254**	P		**P**		**22 40 59.8**	**+0.6**
EIDS	**Eidsvold**	**28.46**	**254**	P		**P**		**22 41 00.0**	**+0.8**
ARMA	**Armidale**	**28.70**	**244**	P		**P**		**22 41 02.2**	**+0.8**
ARMA	**Armidale**	**28.70**	**244**	P		**P**		**22 41 03.0**	**+1.6**
	comp=Z,133nm,1.0s								
ARMA	**Armidale**	**28.70**	**244**	P		**P**		**22 41 02.3**	**+0.9**
ARMA	**Armidale**	**28.70**	**244**	P		**P**		**22 41 03.3**	**+1.9**
AUNRC	**North Rockhamp**	**28.91**	**259**	P		**P**		**22 41 04.1**	**+1.0**
AUPHS	**Peel High Scho**	**29.48**	**243**	P		**P**		**22 41 09.3**	**+1.3**
MGCD	**Mangrove Creek**	**29.86**	**239**	P		**P**		**22 41 12.8**	**+1.5**
	comp=Z,64nm,0.8s								
SYDH	**Sydney Hard Ro**	**30.32**	**238**	P		**P**		**22 41 16.6**	**+1.4**
XMAS	**Kiritimati**	**30.43**	**45**	P		**P**		**22 41 15.9**	**-0.5**
XMAS						IAmb	IAmb	22 41 18.2	
	comp=Z,75nm,0.9s								
RMQ	**Roma**	**30.62**	**252**	P		**P**		**22 41 19.7**	**+1.8**
RMQ	**Roma**	**30.62**	**252**	P		**P**		**22 41 19.3**	**+1.4**
	comp=Z,70nm,0.9s								
RMQ	**Roma**	**30.62**	**252**	P		**P**		**22 41 19.9**	**+2.0**
AUDCS	**Dubbo College**	**31.61**	**242**	P		**P**		**22 41 27.3**	**+1.0**
AULRC	**Lightning Ridg**	**31.63**	**247**	P		**P**		**22 41 26.9**	**+0.4**
CNB	**Canberra Magne**	**31.89**	**236**	P		**P**		**22 41 30.0**	**+1.3**
	comp=Z,2.3nm,1.0s								
AUDAR	**Daramalan Coll**	**32.04**	**236**	P		**P**		**22 41 31.5**	**+1.6**
AUAYR	**Ayr State High**	**32.08**	**266**	P		**P**		**22 41 31.3**	**+0.9**
AUMHS	**Melrose High S**	**32.11**	**236**	P		**P**		**22 41 32.1**	**+1.6**
AUMTS	**Mt Stromlo**	**32.17**	**236**	P		**P**		**22 41 32.5**	**+1.5**
CAN	**Canberra**	**32.17**	**236**	P		**P**		**22 41 32.3**	**+1.2**
CAN	**Canberra**	**32.17**	**236**	P		**P**		**22 41 31.7**	**+0.7**
	comp=Z,47nm,1.5s								
CAN	**Canberra**	**32.17**	**236**	P		**P**		**22 41 31.5**	**+0.4**
CAN				pmax		pmax			
	comp=Z,36nm,0.9s								
CAN	**Canberra**	**32.17**	**236**	P		**P**		**22 41 31.5**	**+0.4**
CAN				IAmb		IAmb		22 41 33.2	
	comp=Z,36nm,0.9s								
AUSMG	**Snowy Mountain**	**32.83**	**234**	P		**P**		**22 41 38.0**	**+1.3**
RABL	**Rabaul**	**32.90**	**296**	P		**P**		**22 41 38.0**	**+0.6**
CTA	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.9**	**+0.9**
	comp=Z,412nm,0.7s,baz=90,slow=8,SNR=567								
CTA				S		**S**		**22 46 18.5**	**-0.6**
	comp=Z,6.0nm,0.7s,baz=344,slow=21,SNR=7.1								
CTA				ScP		**ScP**		**22 46 59.4**	**+2.3**
	comp=Z,31nm,0.9s,baz=130,slow=3.3,SNR=9.8								
	comp=Z,412nm,0.7s								
CTA	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.5**	**+0.5**
CTA	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.8**	**+0.9**
	comp=Z,243nm,0.8s,comp=Z,0.0nm								
CTAO	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.6**	**+0.5**
CTAO	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.9**	**+0.9**
CTAO				pmax		pmax			
	comp=Z,377nm,0.8s								
CTAO	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 39.9**	**+0.9**
CTAO	**Charters Tower**	**33.09**	**264**	P		**P**		**22 41 40.0**	**+0.9**
CTAO				ScP		**ScP**		**22 47 00.1**	**+3.1**
CMSA	**Cobar Meteorol**	**33.92**	**244**	P		**P**		**22 41 46.6**	**+0.8**
CMSA	**Cobar Meteorol**	**33.92**	**244**	P		**P**		**22 41 46.6**	**+0.8**
	comp=Z,140nm,0.9s								
CMSA	**Cobar Meteorol**	**33.92**	**244**	P		**P**		**22 41 46.5**	**+0.7**
QLP	**Quilpie**	**34.67**	**253**	P		**P**		**22 41 52.5**	**+0.3**
QLP	**Quilpie**	**34.67**	**253**	P		**P**		**22 41 52.8**	**+0.7**
	comp=Z,787nm,0.7s,comp=Z,0.0nm								
QLP	**Quilpie**	**34.67**	**254**	P		**P**		**22 41 53.0**	**+0.8**
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.3**	**+0.6**
	comp=Z,321nm,0.8s,baz=75,slow=6.8,SNR=70								
PMG				ScP		**ScP**		**22 47 05.5**	**+1.7**
	comp=Z,8.2nm,0.4s,baz=170,slow=6.1,SNR=3.5								
	comp=Z,321nm,0.8s								
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.2**	**+0.6**
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.2**	**+0.5**
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.2**	**+0.5**
	comp=Z,5µmcomp=Z,476nm,1.2s								
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.5**	**+0.8**
PMG	**Port Moresby**	**34.96**	**283**	P		**P**		**22 41 55.3**	**+0.5**
MTSU	**Mount Surprise**	**35.19**	**267**	P		**P**		**22 41 57.2**	**+0.6**
MTSU	**Mount Surprise**	**35.19**	**267**	P		**P**		**22 41 57.3**	**+0.7**
	comp=Z,269nm,0.8s								
MTSU	**Mount Surprise**	**35.19**	**267**	P		**P**		**22 41 57.5**	**+0.8**
PATS	**Pohnpei**	**35.52**	**318**	P		**P**		**22 42 00.2**	**+0.9**
PATS	**Pohnpei**	**35.52**	**318**	P		**P**		**22 42 00.2**	**+0.9**
	comp=Z,377nm,1.3s								
PATS	**Pohnpei**	**35.52**	**318**	P		**P**		**22 41 59.7**	**+0.3**
PATS	**Pohnpei**	**35.52**	**318**	P		**P**		**22 42 00.4**	**+1.1**
TOO	**Toolangi**	**35.56**	**234**	P		**P**		**22 42 00.3**	**+0.9**
	comp=Z,20nm,1.1s								
TOO	**Toolangi**	**35.56**	**234**	P		**P**		**22 42 00.1**	**+0.6**
TOO	**Toolangi**	**35.56**	**234**	P		**P**		**22 42 00.1**	**+0.6**
TAU	**Tasmania Unive**	**36.33**	**224**	P		**P**		**22 42 06.1**	**+0.5**
TAU				pmax		pmax			
	comp=Z,87nm,1.9s								
TAU	**Tasmania Unive**	**36.33**	**224**	P		**P**		**22 42 06.1**	**+0.5**
TAU				IAmb		IAmb		22 43 24.3	
	comp=Z,87nm,1.9s								
BRAT	**Ballarat**	**36.74**	**234**	P		**P**		**22 42 10.5**	**+1.5**
COEN	**Coen**	**37.19**	**274**	P		**P**		**22 42 13.6**	**+0.5**
COEN	**Coen**	**37.19**	**274**	P		**P**		**22 42 13.9**	**+0.9**
	comp=Z,191nm,1.0s,comp=Z,0.0nm								
COEN	**Coen**	**37.19**	**274**	P		**P**		**22 42 13.5**	**+0.5**
COEN	**Coen**	**37.19**	**274**	P		**P**		**22 42 14.1**	**+1.0**
STKA	**Stephens Creek**	**37.42**	**244**	P		**P**		**22 42 15.8**	**+1.0**
	comp=Z,62nm,0.7s,baz=91,slow=9.0,SNR=151								
STKA				ScP		**ScP**		**22 47 15.1**	**+2.3**
	comp=Z,7.6nm,0.9s,baz=71,slow=4.0,SNR=3.7								
	comp=Z,62nm,0.7s								
STKA	**Stephens Creek**	**37.42**	**244**	P		**P**		**22 42 15.4**	**+0.6**
STKA	**Stephens Creek**	**37.42**	**244**	P		**P**		**22 42 15.8**	**+1.0**
	comp=Z,476nm,0.9s,comp=Z,0.0nm								
STKA	**Stephens Creek**	**37.42**	**244**	*d*	P			**22 42 15.4**	**+0.6**
STKA	**Stephens Creek**	**37.42**	**244**	P		**P**		**22 42 16.0**	**+1.2**
INKA	**Innaminka**	**37.82**	**251**	P		**P**		**22 42 19.4**	**+1.4**
INKA				IAmb		IAmb		22 42 20.7	
	comp=Z,63nm,0.7s								
MCQ	**Macquarie Isla**	**38.02**	**201**	P		**P**		**22 42 20.8**	**+1.6**
MCQ				pmax		pmax			
	comp=Z,247nm,1.7s								
MCQ	**Macquarie Isla**	**38.02**	**201**	P		**P**		**22 42 20.8**	**+1.6**
MANU	**Manus Island**	**38.09**	**294**	P		**P**		**22 42 21.0**	**+0.5**
ARPS	**Mount Arapiles**	**38.14**	**236**	P		**P**		**22 42 21.1**	**+0.6**
	comp=Z,33nm,1.2s								
TAOE	**Nuku Hiva Isla**	**38.70**	**78**	P		**P**		**22 42 24.9**	**-0.6**
QIS	**Mount Isa**	**39.22**	**262**	P		**P**		**22 42 29.2**	**-0.3**
QIS	**Mount Isa**	**39.22**	**262**	P		**P**		**22 42 29.6**	**+0.1**
	comp=Z,54nm,1.1s,comp=Z,0.0nm								
QIS	**Mount Isa**	**39.22**	**262**	P		**P**		**22 42 29.7**	**+0.1**
AUMBR	**Murray Bridge**	**39.83**	**239**	P		**P**		**22 42 34.5**	**+0.4**
HTT	**Hallett**	**39.86**	**242**	P		**P**		**22 42 35.0**	**+0.5**
HTT	**Hallett**	**39.86**	**242**	P		**P**		**22 42 35.3**	**+0.8**
	comp=Z,47nm,0.9s								
HTT	**Hallett**	**39.86**	**242**	P		**P**		**22 42 35.3**	**+0.8**
AUJCS	**Jamestown Cent**	**40.09**	**243**	P		**P**		**22 42 37.1**	**+0.8**
AUMAR	**Marden Senior**	**40.31**	**240**	P		**P**		**22 42 38.4**	**+0.4**
GHSS	**Government Hou**	**40.35**	**240**	P		**P**		**22 42 39.5**	**+1.2**
WAKE	**Wake Island**	**42.17**	**339**	P		**P**		**22 42 53.0**	**+0.1**
WAKE	**Wake Island**	**42.17**	**339**	P		**P**		**22 42 52.9**	**+0.1**
WAKE	**Wake Island**	**42.17**	**339**	P		**P**		**22 42 53.4**	**+0.6**
WAKE	**Wake Island**	**42.17**	**339**	P		**P**		**22 42 53.1**	**+0.3**
BBOO	**Buckleboo**	**42.18**	**243**	P		**P**		**22 42 52.8**	**-0.1**
BBOO	**Buckleboo**	**42.18**	**243**	P		**P**		**22 42 53.3**	**+0.4**
	comp=Z,165nm,0.8s,comp=Z,0.0nm								
BBOO	**Buckleboo**	**42.18**	**243**	P		**P**		**22 42 53.2**	**+0.4**
BBOO				IAmb		IAmb		22 42 54.2	
	comp=Z,103nm,0.8s								
BBOO	**Buckleboo**	**42.18**	**243**	P		**P**		**22 42 53.4**	**+0.5**
H11N3	**WAKE ISLAND Hy**	**42.49**	**339**	P		**P**		**22 42 54.8**	**-0.3**
	baz=168,slow=9.8,SNR=4.1								
H11N1	**WAKE ISLAND Hy**	**42.49**	**339**	P		**P**		**22 42 50.7**	**-4.4**
	baz=168,slow=9.8,SNR=6.6								
H11N2	**WAKE ISLAND Hy**	**42.51**	**339**	P		**P**		**22 42 55.4**	**+0.2**
	baz=168,slow=9.8,SNR=3.3								
AUCAS	**Cummins Area S**	**42.61**	**241**	P		**P**		**22 42 56.3**	**+0.1**
JAY	**Jayapura**	**43.67**	**289**	P		**P**		**22 43 05.6**	**+0.8**
	comp=Z,482nm,0.7s,baz=148,slow=4.6,SNR=378								
	comp=Z,482nm,0.7s								
JAY	**Jayapura**	**43.67**	**289**	P		**P**		**22 43 05.5**	**+0.8**
	comp=Z,7µmcomp=Z,656nm,0.9s								
AS17	**Alice Springs**	**44.05**	**257**	P		**P**		**22 43 08.1**	**+0.5**
	comp=Z,847nm,0.7s								
AS01	**Alice Springs**	**44.08**	**257**	P		**P**		**22 43 08.3**	**+0.5**
GENI	**Genyem**	**44.11**	**288**	P		**P**		**22 43 08.7**	**+0.6**
GENI	**Genyem**	**44.11**	**288**	P		**P**		**22 43 08.6**	**+0.5**
	comp=Z,2µmcomp=Z,6µmcomp=Z,709nm,0.8s								
GENI	**Genyem**	**44.11**	**288**	P		**P**		**22 43 09.1**	**+0.9**
AS31	**Alice Springs**	**44.12**	**257**	P		**P**		**22 43 08.6**	**+0.4**
	comp=Z,158nm,0.8s,comp=Z,0.0nm								
AS31	**Alice Springs**	**44.12**	**257**	P		**P**		**22 43 08.6**	**+0.4**
ASAR	**Alice Springs**	**44.13**	**257**	P		**P**		**22 43 08.6**	**+0.4**
	comp=Z,443nm,0.7s,baz=96,slow=7.6,SNR=5186								
ASAR				PcP		**PcP**		**22 44 41.2**	**+0.4**
	comp=Z,15nm,0.5s,baz=103,slow=2.3,SNR=4.7								
ASAR				ScP		**ScP**		**22 47 41.3**	**+1.7**
	comp=Z,9.1nm,0.8s,baz=90,slow=4.2,SNR=5.6								
ASAR				S		**S**		**22 48 58.8**	**-2.1**
	comp=Z,40nm,0.8s,baz=93,slow=16,SNR=42								
ASAR				ScS		**ScS**		**22 52 06.1**	**+1.4**
	comp=Z,5.9nm,0.9s,baz=82,slow=7.0,SNR=7.7								
	comp=Z,443nm,0.7s								
ASAR	**Alice Springs**	**44.13**	**257**	P		**P**		**22 43 08.8**	**+0.6**
ASAR								22 44 40.8	
ASAR	**Alice Springs**	**44.13**	**257**	P		**P**		**22 43 08.8**	**+0.6**
ASAR						**PcP**		**22 44 40.8**	**-0.1**
ASAR						**ScP**		**22 47 41.8**	**+2.2**
AUALC	**St Philip's Co**	**44.14**	**257**	P		**P**

BBSI Bau Bau 59.10 276 P P 22 44 56.2 +0.1
comp=Z,2µmcomp=Z,120nm,1.2s
MORW Morawa 59.45 248 P P 22 44 58.4 +0.2
MORW Morawa 59.45 248 P P 22 44 58.2 0.0
comp=Z,75nm,1.1s
MORW Morawa 59.45 248 P P 22 44 58.2 0.0
MORW IAmb IAmb 22 44 59.4
comp=Z,49nm,0.8s
KDI Kendari 59.59 278 P P 22 44 59.3 -0.1
comp=Z,3µmcomp=Z,136nm,1.1s
MNI Manado 59.65 284 P P 22 44 59.9 +0.1
comp=Z,328nm,0.8s
WSI Waingapu 59.85 271 P P 22 45 01.7 +0.6
SGSI Sangihe 59.99 287 P P 22 45 01.8 -0.2
H01W1 Cape Leeuwin H 60.38 241 P P 22 45 04.9 +0.9
SNR=1.6
H01W3 Cape Leeuwin H 60.39 241 P P 22 45 02.1 -1.9
H01W2 Cape Leeuwin H 60.39 241 P P 22 45 02.1 -2.0
KKSI Kolaka, Sulawe 60.42 277 P P 22 45 05.3 +0.5
comp=Z,3µmcomp=Z,155nm,0.7s
LUWI Luwuk 60.55 281 P P 22 45 06.3 +0.6
LUWI Luwuk 60.55 281 P P 22 45 06.1 +0.4
LUWI Luwuk 60.55 281 P P 22 45 06.5 +0.8
comp=Z,5µmcomp=Z,565nm,0.9s
WBSI Waikabubak, Su 60.71 270 P P 22 45 06.8 0.0
comp=Z,2µmcomp=Z,194nm,0.7s
JCJ Chichijima 60.80 320 P P 22 45 05.6 -1.4
comp=Z,38nm,0.4s,baz=75,slow=14,SNR=3.1
comp=Z,38nm,0.4s
JCJ Chichijima 60.80 320 P P 22 45 06.6 -0.4
JCJ IAmb IAmb 22 45 08.0
comp=Z,125nm,1.0s
BSSI Bau Bau, Buton 60.81 274 P P 22 45 08.7 +1.3
comp=Z,135nm,0.9s
DAV Davao City (W) 61.47 291 P P 22 45 12.7 +1.0
comp=Z,414nm,0.8s,baz=76,slow=2.7,SNR=17
comp=Z,414nm,0.8s
DAV Davao City (W) 61.47 291 P P 22 45 11.3 -0.4
APSI Ampana 61.63 280 P P 22 45 14.0 +1.2
comp=Z,3µmcomp=Z,349nm,0.8s
KAPI Kappang 61.89 275 P P 22 45 14.8 +0.3
KAPI Kappang 61.89 275 *d* iP P 22 45 14.6 +0.1
KAPI pmax pmax
comp=Z,44nm,0.8s
KAPI Kappang 61.89 275 P P 22 45 13.9 -0.6
KAPI Kappang 61.89 275 P P 22 45 14.6 +0.1
KAPI Kappang 61.89 275 P P 22 45 14.6 +0.1
DBNI Kabupaten Domp 62.08 271 P P 22 45 15.5 -0.2
GIRL Giralia 62.16 255 P P 22 45 16.7 +0.6
comp=Z,89nm,0.9s
GIRL Giralia 62.16 255 P P 22 45 16.9 +0.7
GIRL IAmb IAmb 22 46 15.6
comp=Z,308nm,1.7s
SPSI Sidrap Palu 62.24 276 P P 22 45 16.0 -0.8
comp=Z,2µmcomp=Z,132nm,0.8s
CCD Concordia, Ant 62.35 194 P P 22 45 18.0 +1.2
PLAI Plampang 62.48 271 P P 22 45 18.0 -0.3
PLAI Plampang 62.48 271 P P 22 45 18.2 -0.1
comp=Z,3µmcomp=Z,452nm,0.9s
RPN Rapa Nui 62.86 111 P P 22 45 21.3 +0.7
RPN pmax pmax
comp=Z,489nm,1.4s
RPN Rapa Nui 62.86 111 P P 22 45 21.3 +0.7
TOLI2 Tolitoli 63.22 282 P P 22 45 22.7 -0.4
TOLI2 Tolitoli 63.22 282 P P 22 45 23.2 +0.1
TOLI2 IAmb IAmb 22 45 24.2
comp=Z,135nm,0.9s
PCI Palu 63.31 280 P P 22 45 25.3 +1.7
comp=Z,5µmcomp=Z,598nm,0.9s
TWSI Taliwang, Sumb 63.34 270 P P 22 45 23.7 -0.1
comp=Z,3µmcomp=Z,370nm,0.9s
CASY Casey 63.77 205 P P 22 45 26.6 +1.0
CASY Casey 63.77 205 P P 22 45 26.3 +0.7
KHKI Kahang-Kahang 64.65 270 P P 22 45 32.7 +0.5
comp=Z,1µmcomp=Z,129nm,1.2s
SRBI Singaraja 65.11 270 P P 22 45 35.1 0.0
comp=Z,3µmcomp=Z,277nm,0.9s
RTBI Rangdo, Negare 65.25 270 P P 22 45 35.8 -0.1
comp=Z,220nm,0.8s
JAGI Jajag, Banyuwa 65.98 270 P P 22 45 39.6 -1.0
JAGI Jajag, Banyuwa 65.98 270 P P 22 45 39.6 -1.0
JAGI Jajag, Banyuwa 65.98 270 P P 22 45 39.5 -1.0
comp=Z,222nm,1.1s
JHJ2 Mitsune 66.59 322 P P 22 45 44.8 +1.0
JHJ2 Mitsune 66.59 322 P P 22 45 44.2 +0.4
JHJ Hachijo jima 2 66.61 322 P P 22 45 44.2 +0.3
comp=Z,195nm,0.4s,baz=55,slow=22,SNR=29
comp=Z,195nm,0.4s
BLJI Banyuglugur 66.74 270 P P 22 45 45.4 +0.2
MYLDM Lahad Datu 66.95 285 P P 22 45 48.5 +2.1
MYLDM Lahad Datu 66.95 285 P P 22 45 48.0 +1.5
MYLDM IAmb IAmb 22 46 07.1
comp=Z,126nm,0.9s
MYLDM Lahad Datu 66.95 285 P P 22 45 48.6 +2.1
comp=Z,2µmcomp=Z,153nm,1.2s
SNJI Sawahan-Nganju 68.45 270 P P 22 45 57.1 +1.3
comp=Z,164nm,1.1s
SJI Sawahan 68.46 270 P P 22 45 56.2 +0.4
comp=Z,279nm,1.2s
WOJI Wonogiri, Jawa 69.21 269 P P 22 46 01.0 +0.8
comp=Z,218nm,1.3s
QSPA South Pole Qui 69.55 180 P P 22 46 02.3 +0.9
comp=Z,89nm,0.7s,baz=232,slow=0.8,SNR=628
QSPA S S 22 54 26.5 +1.6
comp=Z,2.3nm,1.1s,baz=250,slow=21,SNR=9.8
comp=Z,89nm,0.7s
QSPA South Pole Qui 69.55 180 P P 22 46 02.7 +1.3
QSPA IAmb IAmb 22 46 03.9
comp=Z,136nm,0.9s
QSPA South Pole Qui 69.55 180 P P 22 46 02.9 +1.4
UGM Wanagama 69.56 269 P P 22 46 02.4 0.0
JGF Kuroka 69.79 323 P P 22 46 03.7 +0.5
JGF Kuroka 69.79 323 P P 22 46 03.2 0.0
INU Inuyama 69.80 322 P P 22 46 04.0 +0.8
INU Inuyama 69.80 322 P P 22 46 03.5 +0.2
YOGI Yogyakarta 69.81 269 P P 22 46 04.3 +0.5
comp=Z,412nm,1.5s
JOW Kunigami 69.88 310 P P 22 46 05.0 +1.1
JOW Kunigami 69.88 310 P P 22 46 04.4 +0.5
JOW IAmb IAmb 22 46 06.1
comp=Z,122nm,1.0s
SMRI Semarang 69.92 270 P P 22 46 04.2 -0.3
SMRI IAmb IAmb 22 46 05.7
comp=Z,90nm,0.7s
MJAR Matsushiro Arr 69.99 324 P P 22 46 04.2 -0.1
comp=Z,12nm,0.5s,baz=160,slow=5.9,SNR=65
MJAR ScS ScS 22 55 12.4 -0.8
comp=Z,0.5nm,0.8s,baz=180,slow=11,SNR=4.1
comp=Z,12nm,0.5s
MJAR Matsushiro Arr 69.99 324 P P 22 46 04.3 -0.1
MJAR pmax pmax
comp=Z,23nm,0.8s
MJAR Matsushiro Arr 69.99 324 P P 22 46 04.3 -0.1
MAJO Matsushiro 69.99 324 P P 22 46 04.1 -0.3
MAJO Matsushiro 69.99 324 *d* iP P 22 46 04.2 -0.2
MAJO pmax pmax
comp=Z,81nm,1.8s
MAJO Matsushiro 69.99 324 P P 22 46 04.4 0.0
MAJO IAmb IAmb 22 46 05.1
comp=Z,56nm,1.2s
MAJO Matsushiro 69.99 324 P P 22 46 04.4 0.0
MJB9 Matsu-Tunnel 70.00 324 P P 22 46 05.3 +0.9
MJB9 IAmb IAmb 22 46 06.0
comp=Z,52nm,1.2s
JMN Monobe 70.54 319 P P 22 46 08.9 +1.2
JMN Monobe 70.54 319 P P 22 46 07.8 +0.1
JMN IAmb IAmb 22 46 09.4
comp=Z,112nm,1.3s
SZP Santa 70.89 298 P P 22 46 11.0 +1.0
CTJI Waduk Cacaban 71.11 269 P P 22 46 12.4 +0.9
comp=Z,127nm,1.2s
KPJI Karang Pucung 71.24 269 P P 22 46 12.7 +0.5
comp=Z,74nm,0.9s
JSU Suzuyama 71.26 315 P P 22 46 12.7 +0.8
AMKA Amchitka 71.61 358 P P 22 46 12.9 -0.5
AMKA IAmb IAmb 22 46 14.0
comp=Z,60nm,0.7s
ERM Erimo 71.65 331 *d* iP P 22 46 15.1 +1.2
ERM pmax pmax
comp=Z,45nm,1.4s
JTM Tenmabayashi 71.68 329 P P 22 46 13.9 -0.2
JTM IAmb IAmb 22 46 50.8
comp=Z,187nm,1.5s
JNU Nakatsue 72.02 317 P P 22 46 16.6 +0.2
comp=Z,63nm,0.9s,baz=112,slow=5.6,SNR=25
comp=Z,63nm,0.9s

KIWB Kanaga Island 72.07 1 P P 22 46 16.0 -0.1
KIWB IAmb IAmb 22 46 17.1
comp=Z,101nm,0.6s
ADK Adak 72.11 1 P P 22 46 16.1 -0.2
ADK Adak 72.11 1 P P 22 46 15.8 -0.5
ADK pmax pmax
comp=Z,152nm,0.6s
ADK Adak 72.11 1 P P 22 46 15.8 -0.5
ADK Adak 72.11 1 P P 22 46 15.8 -0.5
ADK pP pP 22 48 09.7 -2.1
GSTR Great Sitkin T 72.33 2 P P 22 46 17.3 -0.4
GSTR IAmb IAmb 22 46 22.3
comp=Z,63nm,0.6s
BBJI Bungbulang 72.40 268 P P 22 46 18.9 -0.1
BBJI Bungbulang 72.40 268 P P 22 46 18.0 -1.0
BBJI IAmb IAmb 22 46 19.4
comp=Z,63nm,0.9s
BBJI Bungbulang 72.40 268 P P 22 46 19.0 -0.1
comp=Z,83nm,0.8s
YOJ Yonaguni jima 72.42 305 P P 22 46 18.7 -0.1
YOJ pmax pmax
comp=Z,135nm,0.8s
YOJ Yonaguni jima 72.42 305 P P 22 46 18.7 -0.1
YOJ IAmb IAmb 22 46 20.1
comp=Z,134nm,0.8s
ATKA Atka Island 72.50 3 P P 22 46 18.2 -0.4
ATKA Atka Island 72.50 3 P P 22 46 17.9 -0.7
ATKA IAmb IAmb 22 46 19.1
comp=Z,156nm,1.1s
TWGBT Beinan 73.05 303 P P 22 46 21.5 -0.9
TWG Pinlang 73.06 303 P P 22 46 21.1 -1.4
TWG IAmb IAmb 22 46 24.7
comp=Z,57nm,0.7s
YULB Yu-li 73.18 304 P P 22 46 22.6 -0.6
YULB Yu-li 73.18 304 P P 22 46 22.0 -1.2
YULB IAmb IAmb 22 46 27.6
comp=Z,36nm,0.9s
SMY Shemya 73.23 355 P P 22 46 22.5 -0.2
SMY Shemya 73.23 355 P P 22 46 22.3 -0.4
SMY pmax pmax
comp=Z,112nm,1.0s
SMY Shemya 73.23 355 P P 22 46 22.3 -0.4
SMY IAmb IAmb 22 46 22.9
comp=Z,112nm,1.0s
NACB Ninganchiao 73.36 304 P P 22 46 24.0 -0.2
NACB Ninganchiao 73.36 304 P P 22 46 23.7 -0.5
NACB IAmb IAmb 22 46 24.9
comp=Z,104nm,0.9s
DBJI Dramaga 73.54 269 P P 22 46 25.7 +0.2
comp=Z,5µmcomp=Z,221nm,1.2s
JKA Kamikawa-asahi 73.56 332 P P 22 46 26.3 +1.5
JKA IAmb IAmb 22 46 27.3
comp=Z,68nm,0.7s
ASAJ Asahikawa 73.56 332 P P 22 46 27.0 +2.1
comp=Z,55nm,0.7s,baz=218,slow=6.1,SNR=69
comp=Z,55nm,0.7s
SKJI Sukabumi 73.58 269 P P 22 46 26.8 +1.1
comp=Z,280nm,1.1s
SSLB Suanglung 73.65 304 P P 22 46 25.1 -0.8
SSLB Suanglung 73.65 304 P P 22 46 24.8 -1.1
SSLB IAmb IAmb 22 46 26.2
comp=Z,101nm,1.0s
TPUB Ta-pu 73.65 303 P P 22 46 24.9 -1.0
TPUB Ta-pu 73.65 303 P P 22 46 24.9 -1.0
YHNB Yeheng 73.79 305 P P 22 46 27.0 +0.3
YHNB Yeheng 73.79 305 P P 22 46 26.4 -0.3
YHNB IAmb IAmb 22 46 27.8
comp=Z,92nm,1.0s
TATO Taipei 73.87 305 P P 22 46 27.3 +0.3
TATO Taipei 73.87 305 P P 22 46 26.8 -0.3
TATO IAmb IAmb 22 46 28.0
comp=Z,120nm,0.9s
TPI Tanjungpandan 73.98 273 P P 22 46 29.1 +1.1
comp=Z,97nm,1.1s
CGJI Cibinong 74.52 269 P P 22 46 30.8 -0.2
comp=Z,3µmcomp=Z,248nm,1.0s
UNV Unalaska Valle 74.77 7 P P 22 46 31.0 -0.4
UNV Unalaska Valle 74.77 7 P P 22 46 30.7 -0.8
UNV IAmb IAmb 22 46 31.6
comp=Z,93nm,0.5s
UNV Unalaska Valle 74.77 7 P P 22 46 30.8 -0.6
baz=192
AKUT Akutan 75.14 8 P P 22 46 32.6 -0.9
AKUT IAmb IAmb 22 46 33.2
comp=Z,50nm,0.5s
YSS Yuzhno-Sakhali 75.74 334 P P 22 46 38.2 +1.2
YSS Yuzhno-Sakhali 75.74 334 *ke*P P 22 46 38.0 +1.0
YSS *e**PP **pwP** 22 48 38.3 +1.5
YSS *e**SP **PP** 22 49 35.5 -2.0
YSS *eS* **S** 22 55 37.1 +3.6
YSS pmax pmax
comp=Z,40nm,0.7s
YSS pmax pmax
comp=Z,500nm,4.4s
YSS pmax pmax
comp=N,200nm,3.3s
YSS pmax pmax
comp=E,100nm,2.9s
YSS smax smax
comp=N,200nm,6.7s
YSS smax smax
comp=E,200nm,6.7s
YSS Yuzhno-Sakhali 75.74 334 P P 22 46 37.3 +0.3
YSS IAmb IAmb 22 46 38.9
comp=Z,56nm,0.7s
PET Petropavlovsk 75.89 346 *eP* P 22 46 37.4 -0.3
PET *e**PP **pP** 22 48 35.4 +0.5
PET *e* 22 49 34.6
PET *eS* **S** 22 55 36.3 +1.4
PET *e*SS **SS** 23 00 50.0 +6.1
PET pmax pmax
comp=Z,37nm,0.7s
PET pmax pmax
comp=Z,100nm,6.2s
PET pmax pmax
comp=Z,200nm,11.8s
PET Petropavlovsk 75.89 346 P P 22 46 37.2 -0.5
PET Petropavlovsk 75.89 346 P P 22 46 36.8 -0.9
KASI Kota Agung 76.00 269 P P 22 46 39.0 -0.2
comp=Z,150nm,1.8s
KNMB Chin-men Tao 76.01 303 P P 22 46 38.8 -0.2
KNMB IAmb IAmb 22 46 40.9
comp=Z,74nm,0.9s
QZH2 Quanzhou 76.09 304 ⇓*i*P P 22 46 40.3 +0.8
QZH2 sP **PP** 22 49 38.5 -2.3
QZH2 S **S** 22 55 37.0 -1.2
QZH2 pmax pmax
comp=Z,110nm,1.1s
QZH2 pmax pmax
comp=Z,270nm,3.8s
PEA0B Petropavlovsk- 76.19 345 P P 22 46 39.3 -0.1
PEA0B pmax pmax
comp=Z,238nm,1.6s
PEA0B Petropavlovsk- 76.19 345 P P 22 46 39.2 -0.1
PEA0B IAmb IAmb 22 46 40.7
comp=Z,238nm,1.6s
PETK Petropavlovsk- 76.19 345 P P 22 46 39.5 +0.2
comp=Z,43nm,0.7s,baz=126,slow=6.4,SNR=96
comp=Z,43nm,0.7s
PETK Petropavlovsk- 76.19 345 P P 22 46 39.4 0.0
TJN Taejon 76.32 318 P P 22 46 41.7 +1.3
TJN Taejon 76.32 318 *d* iP P 22 46 40.6 +0.2
PMBI Palembang 76.62 272 P P 22 46 42.9 +0.2
KSRS Korea Array 76.64 319 P P 22 46 43.0 +0.9
comp=Z,8.3nm,0.6s,baz=127,slow=5.7,SNR=28
KSRS PP PP 22 49 43.1 -2.0
comp=Z,2.6nm,0.9s,baz=131,slow=9.0,SNR=4.2
comp=Z,8.3nm,0.6s
MDSI Maura Dua 76.64 270 P P 22 46 41.7 -1.1
comp=Z,1µmcomp=Z,111nm,0.9s
CHNA Chernabura Isl 76.76 11 P P 22 46 42.1 -0.3
baz=198
SDPT Sand Point 77.10 10 P P 22 46 43.9 -0.4
SDPT Sand Point 77.10 10 P P 22 46 43.9 -0.4
SDPT IAmb IAmb 22 46 44.7
comp=Z,126nm,0.6s
SDPT Sand Point 77.10 10 P P 22 46 43.9 -0.4
baz=197
INCN Inchon 77.46 318 P P 22 46 47.9 +1.2
INCN Inchon 77.46 318 P P 22 46 47.2 +0.5
INCN pmax pmax
comp=Z,94nm,1.4s
INCN Inchon 77.46 318 P P 22 46 47.2 +0.5
INCN IAmb IAmb 22 46 49.0
comp=Z,94nm,1.4s

LHSI Lahat 77.48 271 P P 22 46 47.6 +0.2
comp=Z,94nm,1.1s
SPIA Saint Paul Isl 77.70 5 P P 22 46 47.8 +0.3
baz=188
MNAI Manna 77.83 270 P P 22 46 49.2 -0.1
HULI Fort Hunter Li 78.01 44 P P 22 46 51.0 +1.3
S14K Fog Glacier 78.15 11 P P 22 46 50.4 +0.4
baz=198
VNFG Fog Glacier, M 78.15 11 P P 22 46 50.1 +0.1
VNFG IAmb IAmb 22 46 51.2
comp=Z,230nm,1.1s
TPRI Tanjung Pinang 78.20 275 P P 22 46 52.6 +1.4
comp=Z,89nm,1.3s
PSTR Posyet 78.34 324 ⇑*eP* P 22 46 50.0 -1.3
HKPS Hong Kong Po S 78.36 299 P P 22 46 53.6 +1.8
HKPS Hong Kong Po S 78.36 299 P P 22 46 52.5 +0.6
HKPS IAmb IAmb 22 46 54.6
comp=Z,114nm,1.0s
CHGN Chignik 78.37 11 P P 22 46 50.7 -0.3
CHGN IAmb IAmb 22 46 54.5
comp=Z,56nm,0.7s
CHGN Chignik 78.37 11 P P 22 46 50.9 -0.2
baz=199
PMPB Monarch Peak 78.41 44 P P 22 46 52.8 +0.9
KSI Kapahiang 78.42 270 P P 22 46 52.4 -0.1
comp=Z,227nm,0.9s
SMAI San Martin Ant 78.73 159 P P 22 46 54.1 +1.1
DLV Lat 78.75 287 P P 22 46 54.8 +0.5
DLV Lat 78.75 287 P P 22 46 54.7 +0.5
DLV IAmb IAmb 22 46 56.9
comp=Z,70nm,1.2s
USA0B Ussuriysk Arra 78.76 326 *ce*P P 22 46 53.6 +0.1
USA0B Ussuriysk Arra 78.76 326 P P 22 46 54.5 +1.1
USA0B IAmb IAmb 22 46 56.0
comp=Z,243nm,2.0s
USRK Ussuriysk Ar. 78.76 326 P P 22 46 54.8 +1.3
comp=Z,28nm,0.8s,baz=121,slow=3.3,SNR=32
USRK pP pP 22 48 51.7 +0.2
comp=Z,3.4nm,0.8s,baz=195,slow=5.9,SNR=3.7
comp=Z,28nm,0.8s
USRK Ussuriysk Ar. 78.76 326 P P 22 46 54.7 +1.2
TYV Tymovskoe 78.90 336 *e*P P 22 46 54.8 +0.8
TYV *eS* S 22 56 02.2 -4.4
TYV pmax pmax
comp=Z,66nm,0.8s
TYV pmax pmax
comp=Z,400nm,3.0s
TYV smax smax
comp=N,300nm,6.0s
TYV smax smax
comp=E,300nm,6.0s
MASI Maura Aman, Be 78.92 271 P P 22 46 55.7 +0.6
comp=E,256nm,1.2s
PASC Pasadena Art C 78.99 47 P P 22 46 55.6 +0.6
KMRM Mail Ridge 79.02 40 P P 22 46 56.9 +1.8
KMRM IAmb IAmb 22 46 58.5
comp=Z,97nm,0.8s
BTDF Bukit Timah Da 79.06 276 P P 22 46 56.8 +0.9
BTDF Bukit Timah Da 79.06 276 P P 22 46 56.7 +0.9
MYKOM Kota Tinggi 79.14 276 P P 22 46 56.9 +0.7
MYKOM Kota Tinggi 79.14 276 P P 22 46 56.4 +0.1
MYKOM IAmb IAmb 22 46 58.4
comp=Z,65nm,1.0s
MYKOM Kota Tinggi 79.14 276 P P 22 46 57.0 +0.7
comp=Z,1µmcomp=Z,76nm,1.3s
TPO Tropico Hills 79.36 47 P P 22 46 57.7 +0.7
SII Sitkinak Islan 79.46 13 P P 22 46 57.6 +0.7
SII Sitkinak Islan 79.46 13 P P 22 46 57.2 +0.3
SII IAmb IAmb 22 46 58.4
comp=Z,110nm,0.8s
SII Sitkinak Islan 79.46 13 P P 22 46 57.4 +0.5
baz=203
NJ2 Nanjing 79.59 310 ⇓P P 22 46 59.5 +1.4
NJ2 pmax pmax
comp=Z,100nm,0.6s
BELA Belgrano 2 79.59 173 P P 22 46 57.5 +0.1
BELA IAmb IAmb 22 46 58.8
comp=Z,79nm,0.9s
SLBS Sierra La Lagu 79.86 60 P P 22 47 00.6 +0.7
PFO Pinyon Flats O 79.89 48 *de*P P 22 47 00.0 +0.2
PFO Pinyon Flats O 79.89 48 P P 22 47 00.6 +0.7
R17L Mt. Peulik Vol 80.01 12 P P 22 47 00.0 +0.3
baz=201
OHAK Old Harbor 80.26 14 P P 22 47 01.4 +0.3
OHAK Old Harbor 80.26 14 P P 22 47 01.3 +0.3
baz=204
MDJ Mudanjiang 80.31 325 P P 22 47 02.9 +1.3
MDJ Mudanjiang 80.31 325 P P 22 47 02.0 +0.4
MDJ Mudanjiang 80.31 325 P P 22 47 03.0 +1.3
MDJ S **SKSac** 22 56 26.8 +0.9
MDJ pmax pmax
comp=Z,53nm,0.8s
MDJ pmax pmax
comp=Z,530nm,3.6s
SDSI Sungai Dareh 80.44 273 P P 22 47 02.1 -0.9
QIZ Qiongzhong 80.50 294 P P 22 47 05.0 +1.8
QIZ sP **sP** 22 50 00.5 +2.1
QIZ S **S** 22 56 25.5 +1.1
QIZ pmax pmax
comp=Z,150nm,7.3s
Q17K Contact Creek 80.69 12 P P 22 47 03.5 +0.1
baz=201
O14K Tigyukauivet M 80.73 9 P P 22 47 03.5 +0.1
baz=196
PNTR Pine Nut 80.86 42 P P 22 47 06.3 +1.3
PNTR IAmb IAmb 22 47 07.9
comp=Z,70nm,0.8s
O15K Ungalikthiuk R 80.87 10 P P 22 47 04.1 -0.1
baz=198
KDAK Kodiak Island 80.93 14 *d* iP P 22 47 03.3 -1.2
KDAK pmax pmax
comp=Z,68nm,1.5s
KDAK Kodiak Island 80.93 14 P P 22 47 04.8 +0.3
KDAK Kodiak Island 80.93 14 P P 22 47 05.1 +0.6
baz=204
KDAK Kodiak Island 80.93 14 P P 22 47 05.2 +0.6
PIX Pinacate 80.96 52 P P 22 47 06.1 +0.8
P16K Nushagak River 81.03 11 P P 22 47 05.2 +0.3
baz=199
L04D Klamath Falls 81.09 39 P P 22 47 06.9 +1.0
L04D IAmb IAmb 22 47 08.8
comp=Z,56nm,0.9s
Q18K Katmai Hardscr 81.22 12 P P 22 47 06.5 +0.3
baz=202
M11K Mekoryuk 81.23 6 P P 22 47 06.2 +0.3
baz=192
BKNI Bangkinang 81.25 274 P P 22 47 07.3 +0.1
N14K Kuskokwak Cree 81.31 8 P P 22 47 07.3 +0.9
baz=196,SNR=18
NVAR Mina Array Bea 81.31 44 P P 22 47 08.6 +1.3
comp=Z,19nm,0.8s,baz=224,slow=9.2,SNR=87
NVAR pP pP 22 49 07.2 +1.0
comp=Z,0.4nm,0.7s,baz=226,slow=9.0,SNR=1.2
comp=Z,19nm,0.8s
NVAR Mina Array Bea 81.31 44 P P 22 47 08.2 +1.0
GRNR Gornyy 81.34 333 ⇓*i*P P 22 47 08.0 +1.2
GRNR pmax pmax
comp=Z,30nm,1.0s
PDSI Padang 81.36 272 P P 22 47 07.0 -0.8
MAW Mawson 81.41 200 P P 22 47 07.4 +0.5
comp=Z,7.9nm,0.5s,baz=129,slow=4.6,SNR=26
MAW pP **pwP** 22 49 08.1 -0.5
comp=Z,3.3nm,0.8s,baz=116,slow=12,SNR=3.2
comp=Z,7.9nm,0.5s
MAW Mawson 81.41 200 P P 22 47 07.8 +0.9
comp=Z,2.4nm,0.8s
MAW Mawson 81.41 200 P P 22 47 07.6 +0.7
NV11 Mina Array Sit 81.41 44 P P 22 47 08.5 +0.9
PMSA Palmer Station 81.43 157 P P 22 47 08.0 +0.9
PMSA IAmb IAmb 22 47 09.4
comp=Z,68nm,0.8s
PMSA Palmer Station 81.43 157 *e*P P 22 47 08.2 +1.1
PMSA Palmer Station 81.43 157 P P 22 47 08.4 +1.3
P17K Kvichak River 81.46 11 P P 22 47 07.4 +0.2
baz=201
O16K Kokwok River B 81.55 10 P P 22 47 07.1 -0.5
baz=199,SNR=25
M13K Dall Lake 81.57 7 P P 22 47 08.4 +0.7
baz=194
HSIG 81.59 55 P P 22 47 09.3 +0.7
N15K Kwethluk River 81.78 9 P P 22 47 09.8 +0.9
baz=197,SNR=27
TPH Tonopah 81.82 44 P P 22 47 10.5 +0.7
TPH pmax pmax
comp=Z,31nm,0.8s

TPH **Tonopah** 81.82 44 P **P** 22 47 10.5 +0.7
TPNV **Topopah Spring** 81.84 46 P **P** 22 47 10.6 +0.7
TPNV pmax pmax
comp=Z,32nm,0.9s
TPNV **Topopah Spring** 81.84 46 P **P** 22 47 10.6 +0.7
P18K **Big Mountain,** 81.87 12 P **P** 22 47 09.2 -0.1
baz=202,SNR=38
O17K **Koliganek Bris** 81.89 11 P **P** 22 47 09.2 -0.2
baz=200,SNR=19
CN2 **Changchun** 82.07 323 ⇓P **P** 22 47 11.3 +0.6
CN2 *e*pP pP 22 49 11.0 +1.2
CN2 *e*S **S** 22 56 42.0 +2.8
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,300nm,3.0s
M14K **Bethel** 82.08 8 P **P** 22 47 11.2 +1.0
baz=196,SNR=19
CNSH **ChangSha** 82.09 304 P **P** 22 47 11.5 +0.4
CNSH pmax pmax
comp=Z,30nm,1.4s
WHN **Wuhan** 82.14 307 ⇓P **P** 22 47 12.3 +1.0
WHN pP **pwP** 22 49 17.0 +2.5
WHN S **SKSac** 22 56 39.0 +0.3
WHN pmax pmax
comp=Z,160nm,1.3s
WHN pmax pmax
comp=Z,890nm,4.0s
M15K **Kasigluk River** 82.19 9 P **P** 22 47 11.9 +1.1
baz=197,SNR=38
BNX **BinXian** 82.21 325 ⇓P **P** 22 47 11.5 +0.2
BNX S **S** 22 56 44.3 +3.8
BNX pmax pmax
comp=Z,46nm,0.8s
BNX pmax pmax
comp=Z,370nm,3.8s
K05A **Summer Lake** 82.23 39 P **P** 22 47 13.4 +1.6
K05A IAmb IAmb 22 47 14.9
comp=Z,71nm,0.9s
N16K **Nishlik Lake** 82.27 10 P **P** 22 47 12.5 +1.2
baz=198,SNR=42
O18K **Koktuh Hills** 82.30 12 P **P** 22 47 11.6 +0.1
baz=202,SNR=48
P19K **Oil Pt** 82.50 13 P **P** 22 47 12.7 +0.2
baz=204,SNR=8.6
L14K **Kuka Creek** 82.56 8 P **P** 22 47 13.8 +1.1
baz=195,SNR=17
N17K **Nushagak Hills** 82.58 10 P **P** 22 47 13.1 +0.3
baz=200,SNR=13
M16K **Timber Creek** 82.76 9 P **P** 22 47 15.2 +1.5
baz=198,SNR=52
MNSI **Mandailing Nat** 82.78 274 P **P** 22 47 14.4 -0.6
comp=Z,40nm,0.8s
O19K **Port Alsworth** 82.79 12 P **P** 22 47 14.0 +0.1
baz=203,SNR=14
CNPM **China Poot** 82.81 14 P **P** 22 47 14.4 +0.4
CNPM IAmb IAmb 22 47 15.0
comp=Z,49nm,0.6s
HOM **Homer** 82.84 13 P **P** 22 47 14.8 +0.6
baz=205,SNR=5.0
K13K **Kusilvak Mount** 82.90 7 P **P** 22 47 15.5 +1.1
baz=193
N18K **Kilae Creek** 82.95 11 P **P** 22 47 14.8 +0.1
baz=201,SNR=13
TIA **Tai'an** 83.00 313 P **P** 22 47 16.0 +0.5
TIA pmax pmax
comp=Z,37nm,1.1s
TIA pmax pmax
comp=Z,390nm,4.4s
O20K **Slope Mountain** 83.02 13 P **P** 22 47 15.1 -0.1
baz=204,SNR=14
L15K **Ungalak Mounta** 83.03 8 P **P** 22 47 15.8 +0.7
baz=196,SNR=28
BRSE **Bradley Lake S** 83.12 14 P **P** 22 47 16.0 +0.4
baz=206,SNR=11
TUC **Tucson** 83.31 52 P **P** 22 47 18.6 +1.3
TUC pmax pmax
comp=Z,27nm,0.9s
TUC **Tucson** 83.31 52 P **P** 22 47 18.6 +1.3
TUC **Tucson** 83.31 52 P **P** 22 47 19.4 +2.1
N19K **Bonanza Creek** 83.33 12 P **P** 22 47 16.3 -0.4
baz=202,SNR=19
L16K **Owhat River** 83.34 9 P **P** 22 47 17.6 +1.0
baz=198,SNR=16
M17K **Holitna River** 83.36 10 P **P** 22 47 18.2 +1.4
baz=200,SNR=19
KULM **Kulim** 83.38 278 P **P** 22 47 18.8 +0.8
KULM **Kulim** 83.38 278 P **P** 22 47 18.6 +0.6
KULM IAmb IAmb 22 47 19.6
comp=Z,22nm,0.6s
WVOR **Wild Horse Val** 83.40 40 P **P** 22 47 19.0 +1.4
NLWA **Neilton Lookou** 83.48 34 P **P** 22 47 19.1 +1.4
MG05 **Puerto Natales** 83.53 143 P **P** 22 47 19.2 +1.2
MG05 IAmb IAmb 22 47 20.0
comp=Z,58nm,0.9s
K15K **Wolf Creek Mou** 83.62 8 P **P** 22 47 19.3 +1.3
baz=196,SNR=22
MA2 **Magadan** 83.70 345 P **P** 22 47 18.0 -0.4
comp=Z,22nm,0.8s,baz=128,slow=5.0,SNR=13
comp=Z,22nm,0.8s
MA2 **Magadan** 83.70 345 P **P** 22 47 19.0 +0.5
MA2 **Magadan** 83.70 345 *d i* P **P** 22 47 18.0 -0.4
MA2 pmax pmax
comp=Z,41nm,0.9s
MA2 **Magadan** 83.70 345 P **P** 22 47 17.8 -0.7
MA2 IAmb IAmb 22 47 18.8
comp=Z,35nm,0.9s
GO10 **Punta Arenas** 83.71 145 P **P** 22 47 20.9 +1.9
MG03 **Isla Dawson** 83.72 145 P **P** 22 47 19.5 +0.7
MG03 IAmb IAmb 22 47 20.9
comp=Z,47nm,0.8s
M18K **Stony River** 83.72 11 P **P** 22 47 19.3 +0.8
baz=201,SNR=13
SEW **Seward** 83.73 14 P **P** 22 47 18.5 -0.1
baz=207
J14K **Nanvaranak Lak** 83.82 7 P **P** 22 47 19.7 +0.8
baz=194
Q23K **Middleton Isla** 83.89 16 P **P** 22 47 19.8 +0.4
baz=210
L17K **Donlin** 83.92 9 P **P** 22 47 20.8 +1.3
baz=199,SNR=14
CAPN **Captain Cook N** 83.95 13 P **P** 22 47 20.7 +1.0
baz=206
RPSI **Rantau Prapat** 84.06 275 P **P** 22 47 20.5 -0.8
RPSI IAmb IAmb 22 47 22.6
comp=Z,69nm,1.4s
PSI **Prapat** 84.10 275 P **P** 22 47 21.9 +0.2
PSI **Prapat** 84.10 275 P **P** 22 47 20.5 -1.2
PSI pmax pmax
comp=Z,69nm,1.4s
PSI **Prapat** 84.10 275 P **P** 22 47 21.2 -0.5
SPCR **Spurr Chakacha** 84.13 12 P **P** 22 47 20.1 -0.6
baz=205,SNR=5.8
GAMB **Gambell** 84.18 3 P **P** 22 47 21.7 +1.0
baz=186
L18K **Granite Mounta** 84.26 10 P **P** 22 47 22.2 +1.1
baz=200,SNR=26
CBB **Campbell River** 84.44 31 P **P** 22 47 23.3 +0.9
WUAZ **Wupatki** 84.46 49 P **P** 22 47 24.0 +1.0
K17K **Iditarod** 84.47 9 P **P** 22 47 23.1 +0.9
baz=199,SNR=7.5
L19K **White Mountain** 84.53 11 P **P** 22 47 23.2 +0.7
baz=202,SNR=28
RC01 **Rabbit Creek A** 84.55 14 P **P** 22 47 22.6 0.0
baz=207
ELK **Elko** 84.57 43 P **P** 22 47 23.7 +0.2
ELK **Elko** 84.57 43 P **P** 22 47 23.7 +0.2
M20K **Styx River** 84.57 12 P **P** 22 47 22.2 -0.6
baz=204,SNR=7.3
BBB **Bella Bella** 84.61 28 P **P** 22 47 24.0 +1.0
PWL **Port Wells** 84.66 14 P **P** 22 47 23.3 +0.1
PWL **Port Wells** 84.66 14 P **P** 22 47 23.3 +0.1
baz=208
J16K **Anvik River** 84.69 8 P **P** 22 47 24.0 +0.7
baz=197
ESPZ **Base Esperanza** 84.77 157 P **P** 22 47 24.4 +0.6
ESPZ IAmb IAmb 22 47 25.3
comp=Z,64nm,1.1s
HPIG 84.78 59 P **P** 22 47 25.1 +0.3
KAIM **Kayak Island** 84.82 16 P **P** 22 47 25.3 +1.3
baz=212
GSI **Gunungsitoli** 84.83 273 P **P** 22 47 26.2 +1.1
GSI **Gunungsitoli** 84.83 273 P **P** 22 47 26.1 +0.9
GSI **Gunungsitoli** 84.83 273 P **P** 22 47 26.3 +1.1
comp=Z,2µmcomp=Z,112nm,1.2s
MG02 **Cerro Sombrero** 84.86 145 P **P** 22 47 25.4 +1.0

GO08 **Villa O'Higgin** 84.86 140 P **P** 22 47 26.0 +1.3
GO08 IAmb IAmb 22 47 27.5
comp=Z,38nm,0.9s
CRAG **Craig** 84.90 24 P **P** 22 47 25.7 +1.3
baz=222
GLI **Glacier Island** 84.97 15 P **P** 22 47 24.3 -0.4
baz=209
SKT **Skwentna** 84.97 12 P **P** 22 47 23.5 -1.1
baz=205,SNR=5.5
J17K **VABM Dome** 85.01 9 P **P** 22 47 25.4 +0.6
baz=198,SNR=9.8
EYAK **Cordova Ski Ar** 85.01 16 P **P** 22 47 24.6 -0.2
baz=210
M22K **Willow** 85.06 13 P **P** 22 47 25.1 +0.1
baz=206,SNR=8.2
HEH **HeiHe** 85.12 329 *e*P **P** 22 47 25.8 +0.2
HEH pP **pP** 22 49 26.0 +0.2
HEH SKS **SKSac** 22 56 57.0 +0.3
HEH S **ScS** 22 57 12.5 -3.2
HEH pmax pmax
comp=Z,33nm,0.5s
KNK **Knik Glacier** 85.12 14 P **P** 22 47 25.7 +0.3
baz=208,SNR=7.3
PMR **Palmer** 85.13 14 P **P** 22 47 25.8 +0.4
PMR **Palmer** 85.13 14 P **P** 22 47 25.6 +0.2
baz=207,SNR=11
I17K **Unalakleet** 85.26 8 P **P** 22 47 26.5 +0.6
baz=197
HNS **HongShan** 85.27 313 ⇓P **P** 22 47 27.8 +1.2
HNS pP **pP** 22 49 28.5 +1.7
HNS sP **sP** 22 50 23.3 +0.3
HNS SKS **SKSac** 22 56 57.8 -0.4
HNS S **S** 22 57 08.8 -1.9
HNS pmax pmax
comp=Z,40nm,1.1s
HNS pmax pmax
comp=Z,270nm,5.4s
SIT **Sitka** 85.29 22 P **P** 22 47 26.8 +0.6
baz=220
AY03 **Cochrane** 85.36 139 P **P** 22 47 28.2 +1.2
V35K **Ketchikan** 85.38 25 P **P** 22 47 28.1 +1.4
baz=223
U33K **Whale Pass** 85.38 24 P **P** 22 47 28.0 +1.3
baz=222
ANM **Nome** 85.41 6 P **P** 22 47 27.3 +0.6
baz=192
J18K **Innoko River** 85.42 10 P **P** 22 47 27.2 +0.4
baz=200,SNR=27
LYN **LuoYang** 85.46 309 ⇓P **P** 22 47 29.0 +1.4
LYN SKS **SKSac** 22 56 58.5 -1.1
LYN S **ScS** 22 57 18.0 -1.3
LYN pmax pmax
comp=Z,80nm,0.8s
LYN pmax pmax
comp=Z,420nm,3.6s
MOIG **Morelia** 85.50 67 P **P** 22 47 27.8 -0.7
MOIG IAmb IAmb 22 47 30.3
comp=Z,40nm,0.7s
SML **Sawmill** 85.50 14 P **P** 22 47 27.1 -0.2
baz=208
ZAIG **Zacatecas** 85.57 64 P **P** 22 47 29.2 +0.4
CUT **Chulitna** 85.62 13 P **P** 22 47 27.8 +0.1
baz=206,SNR=8.4
BJI2 **Beijing** 85.62 316 P **P** 22 47 29.0 +0.7
BJI2 S **S** 22 57 16.8 +2.9
BJI2 pmax pmax
comp=Z,13nm,0.6s
BJT **Baijiatuau** 85.62 316 P **P** 22 47 30.1 +1.8
BJT **Baijiatuau** 85.62 316 P **P** 22 47 28.3 0.0
BJT pmax pmax
comp=Z,107nm,1.7s
BJT **Baijiatuau** 85.62 316 P **P** 22 47 28.3 0.0
BJT IAmb IAmb 22 47 30.6
comp=Z,107nm,1.7s
L22K **Petersville** 85.62 12 P **P** 22 47 27.3 -0.6
baz=206,SNR=22
M23K **Glacier View** 85.62 14 P **P** 22 47 27.8 -0.1
baz=209,SNR=6.5
121A **Cookes Peak, D** 85.64 53 P **P** 22 47 29.9 +1.1
BMRM **Bremner River** 85.66 16 P **P** 22 47 28.4 +0.3
baz=212,SNR=8.5
S31K **Pelican** 85.68 21 P **P** 22 47 29.0 +0.9
baz=219
PPLA **Purkeypile** 85.68 12 P **P** 22 47 28.3 +0.1
baz=204
ENH **Enshi** 85.72 304 P **P** 22 47 29.7 +0.6
ENH **Enshi** 85.72 304 P **P** 22 47 29.4 +0.3
SCM **Sheep Creek Mo** 85.75 14 P **P** 22 47 28.7 +0.3
baz=209,SNR=18
K20K **Telida** 85.76 11 P **P** 22 47 28.7 +0.2
baz=203,SNR=26
KLU **Klutina** 85.79 15 P **P** 22 47 29.0 +0.3
baz=210,SNR=5.5
H16K **Elim** 85.80 7 P **P** 22 47 28.5 0.0
baz=195
S32K **Killisnoo** 85.87 22 P **P** 22 47 28.4 -0.6
baz=221
CRQE **Cirque** 85.87 17 P **P** 22 47 29.5 +0.3
baz=213
WRAK **Wrangell Islan** 85.89 24 P **P** 22 47 29.3 +0.2
baz=223
G15K **Niukluk** 85.96 6 P **P** 22 47 29.5 +0.2
baz=194
J19K **Poorman** 86.09 10 P **P** 22 47 30.5 +0.6
baz=201,SNR=13
PINM **Pinnacle** 86.12 18 P **P** 22 47 30.3 0.0
baz=215
CAST **Castle Rocks** 86.18 12 P **P** 22 47 29.3 -1.2
baz=205,SNR=36
TNA **Tin City** 86.19 4 P **P** 22 47 30.4 +0.1
baz=190
N25K **Chitina, Valde** 86.21 15 P **P** 22 47 31.3 +0.6
baz=212,SNR=18
GRNC **Granite Creek** 86.22 17 P **P** 22 47 31.2 +0.2
GRNC IAmb IAmb 22 47 32.1
comp=Z,36nm,1.1s
F14K **Arctic Creek** 86.22 5 P **P** 22 47 31.0 +0.4
baz=191
M24K **Tolsona, Glenn** 86.26 15 P **P** 22 47 31.4 +0.5
baz=210
SEY **Seymchan** 86.31 347 *d i* P **P** 22 47 31.2 +0.2
SEY pmax pmax
comp=Z,54nm,0.7s
WAT6 **Susitna Watana** 86.31 14 P **P** 22 47 31.3 0.0
baz=209,SNR=18
WAT1 **Susitna Watana** 86.36 13 P **P** 22 47 31.2 -0.1
baz=208
H17K **Granite Mounta** 86.37 8 P **P** 22 47 31.3 0.0
baz=197
GO07 **Milladeo Hill,** 86.42 135 P **P** 22 47 32.8 +0.6
MCARA **McCarthy VSAT** 86.42 16 P **P** 22 47 31.9 +0.3
baz=213
PLID **Pearl Lake** 86.48 39 P **P** 22 47 33.0 +0.4
P29M **Windy Craggy** 86.50 19 P **P** 22 47 33.3 +1.2
baz=218,SNR=6.3
R32K **Eaglecrest** 86.50 22 P **P** 22 47 32.9 +0.8
baz=221
J20K **Nowinta River** 86.51 10 P **P** 22 47 32.2 +0.3
baz=203,SNR=17
G16K **Koyuk River** 86.52 7 P **P** 22 47 32.3 +0.3
baz=195
SLVN **Son La** 86.53 294 P **P** 22 47 34.9 +1.8
SLVN **Son La** 86.53 294 P **P** 22 47 32.9 -0.2
TRF **Thorofare Moun** 86.55 12 P **P** 22 47 31.9 -0.4
baz=206,SNR=41
CHUM **Lake Minchumin** 86.56 11 P **P** 22 47 31.5 -0.6
baz=204,SNR=20
ELIB **Princess Elisa** 86.58 187 *d*P **P** 22 47 32.7 +0.2
comp=Z,67nm,0.7s
ELIB *d*pP **pP** 22 49 35.7 +1.8
F15K **North Star Dit** 86.60 6 P **P** 22 47 32.4 +0.1
baz=193
HLID **Hailey** 86.60 41 P **P** 22 47 33.9 +0.8
HLID IAmb IAmb 22 47 36.0
comp=Z,22nm,0.8s
GCSA **Galena City Sc** 86.61 9 P **P** 22 47 32.8 +0.5
baz=200,SNR=7.1
SYO **Syowa Base** 86.62 193 ⇑ *i* P **P** 22 47 32.4 -0.1
O28M **Mount Upton** 86.69 18 P **P** 22 47 34.0 +0.7
baz=216,SNR=6.8
HARP **HAARP** 86.75 15 P **P** 22 47 33.7 +0.6
baz=211
H18K **Honhosa River** 86.78 8 P **P** 22 47 32.9 -0.3
baz=199
O29M **Mount Kennedy** 86.78 19 P **P** 22 47 34.4 +0.9
baz=217,SNR=5.2

LHMI **Lhok Sumawe** 86.80 277 P **P** 22 47 34.2 -0.3
PLBC **Pleasant Camp** 86.80 20 P **P** 22 47 34.6 +1.2
baz=219,SNR=7.4
RND **Reindeer** 86.81 13 P **P** 22 47 33.3 -0.1
RND pmax pmax
comp=Z,84nm,0.7s
RND **Reindeer** 86.81 13 P **P** 22 47 33.3 -0.1
G17K **Kiwalik Mounta** 86.82 7 P **P** 22 47 33.7 +0.3
baz=197,SNR=5.1
DHY **Denali Highway** 86.83 14 P **P** 22 47 33.6 0.0
baz=209,SNR=9.3
MLSI **Meulaboh, Aceh** 86.97 276 P **P** 22 47 36.9 +1.6
TLIG **Tlapa** 86.97 70 P **P** 22 47 35.9 +0.6
TLIG IAmb IAmb 22 47 38.1
comp=Z,22nm,0.9s
VHRN **Van Horn** 87.00 56 P **P** 22 47 36.4 +1.2
VHRN IAmb IAmb 22 47 37.9
comp=Z,37nm,0.9s
TIY **Taiyuan** 87.00 312 P **P** 22 47 36.8 +1.8
TIY SKS **SKSac** 22 57 08.0 -1.0
TIY S **S** 22 57 29.3 +2.1
TIY pmax pmax
comp=Z,130nm,11.0s
I20K **Naaghedeneel** 87.03 10 P **P** 22 47 35.0 +0.7
baz=202,SNR=9.5
MCK **McKinley** 87.08 13 P **P** 22 47 34.3 -0.4
baz=208,SNR=23
MNTX **Cornudas Mount** 87.09 55 P **P** 22 47 36.4 +0.9
MNTX IAmb IAmb 22 47 38.6
comp=Z,33nm,1.1s
T35M **Bob Quinn** 87.10 24 P **P** 22 47 36.1 +1.2
baz=224
P30M **Million Dollar** 87.13 19 P **P** 22 47 36.4 +1.4
baz=218,SNR=12
SKAG **Skagway** 87.14 20 P **P** 22 47 36.3 +1.3
baz=220
PAX **Paxson** 87.17 14 P **P** 22 47 34.9 -0.3
baz=211
YUK8 **Steele Glacier** 87.23 18 P **P** 22 47 36.7 +1.0
baz=216,SNR=16
M26K **Nabesna, AK** 87.29 16 P **P** 22 47 36.3 +0.6
baz=213,SNR=15
YUK6 **Outpost Mounta** 87.36 18 P **P** 22 47 37.2 +0.9
baz=217
HWUT **Hardware Ranch** 87.38 44 P **P** 22 47 36.8 0.0
TXAR **Lajitas Array** 87.40 57 P **P** 22 47 38.9 +1.8
comp=Z,27nm,0.8s,baz=218,slow=6.4,SNR=242
TXAR pP **pwP** 22 49 40.1 -1.5
comp=Z,1.6nm,1.1s,baz=215,slow=6.1,SNR=3.2
TXAR PKKPbc **PKKPbc** 23 05 24.2 +0.5
comp=Z,0.5nm,0.8s,baz=104,slow=4.0,SNR=4.4
comp=Z,27nm,0.8s
TXAR **Lajitas Array** 87.40 57 P **P** 22 47 38.4 +1.3
H19K **Roundabout Mou** 87.41 9 P **P** 22 47 36.7 +0.6
baz=200,SNR=21
YUK3 **Moose Creek** 87.44 17 P **P** 22 47 37.6 +1.0
baz=215,SNR=19
S34M **Telegraph Cree** 87.44 23 P **P** 22 47 38.3 +1.9
baz=224,SNR=12
G18K **Tagagawik** 87.45 8 P **P** 22 47 36.3 0.0
baz=198,SNR=9.5
ZEA **Zeya** 87.45 331 *e*P **P** 22 47 37.9 +1.3
ZEA pmax pmax
comp=Z,20nm,0.7s
BRWY **Burwash Landin** 87.51 18 P **P** 22 47 38.0 +1.3
baz=216,SNR=5.2
HYT **Haines Junctio** 87.52 19 P **P** 22 47 37.5 +0.6
HYT **Haines Junctio** 87.52 19 P **P** 22 47 37.9 +1.0
baz=218,SNR=9.7
M27K **Edge Creek, AK** 87.54 16 P **P** 22 47 37.9 +0.9
baz=214,SNR=29
MENT **Mentasta** 87.56 15 P **P** 22 47 38.1 +1.1
LL02 **Futaleuf** 87.59 135 P **P** 22 47 38.8 +1.1
LL02 IAmb IAmb 22 47 40.5
comp=Z,118nm,1.4s
YUK4 **Talbot Arm** 87.60 18 P **P** 22 47 38.3 +1.0
baz=217
H20K **Anotleneega Mo** 87.61 10 P **P** 22 47 37.7 +0.6
baz=202,SNR=30
NEW **Newport** 87.62 36 P **P** 22 47 38.5 +0.9
F17K **Baldwin Pennin** 87.66 7 P **P** 22 47 37.3 +0.1
baz=196
XLT **XiLinHaoTe** 87.69 319 *e*P **P** 22 47 38.5 +0.4
XLT PP **PP** 22 51 11.3 -3.2
XLT SKS **SKSac** 22 57 11.0 -1.9
XLT S **ScS** 22 57 35.8 -1.8
XLT pmax pmax
comp=Z,25nm,0.8s
XLT pmax pmax
comp=Z,160nm,3.8s
TROLL **Troll, Antarti** 87.71 180 ⇑P **P** 22 47 37.8 -0.1
comp=Z,1µm,0.6s
TROLL ⇓pP **pwP** 22 49 41.1 -0.6
comp=Z,796nm,0.8s
TROLL ⇑SKSac **SKSac** 22 57 11.2 -1.2
comp=E,233nm,0.9s
L26K **Log Cabin Wild** 87.73 15 P **P** 22 47 38.2 +0.5
baz=213,SNR=11
ANMO **Albuquerque** 87.73 51 *ce*P **P** 22 47 38.9 +0.2
ANMO pmax pmax
comp=Z,18nm,1.0s
ANMO **Albuquerque** 87.73 51 P **P** 22 47 38.8 +0.2
ANMO **Albuquerque** 87.73 51 P **P** 22 47 39.9 +1.2
P32M **Atlin** 87.77 21 P **P** 22 47 38.9 +0.9
baz=221
Q32M **Nakina River** 87.80 22 P **P** 22 47 39.7 +1.3
baz=222,SNR=7.8
I21K **Tanana** 87.80 11 P **P** 22 47 38.0 0.0
baz=205,SNR=48
NEA2 **Nenana** 87.82 12 P **P** 22 47 37.1 -1.0
baz=207,SNR=23
K24K **Donnelly Dome** 87.82 14 P **P** 22 47 38.8 +0.6
baz=210,SNR=18
XAN **Xi'an** 87.83 308 ⇑P **P** 22 47 39.0 +0.1
XAN SKS **SKSac** 22 57 11.3 -2.7
XAN S **ScS** 22 57 38.5 -0.6
XAN pmax pmax
comp=Z,58nm,1.4s
XAN pmax pmax
comp=Z,130nm,4.1s
BVCY **Beaver Creek** 87.85 16 P **P** 22 47 39.0 +0.7
baz=215,SNR=8.0
MLY **Manley** 87.89 11 P **P** 22 47 37.9 -0.6
baz=206,SNR=74
G19K **Purcell Mounta** 87.89 9 P **P** 22 47 38.8 +0.4
baz=200,SNR=24
O30N **Mendenhall** 87.91 19 P **P** 22 47 39.7 +1.1
baz=219,SNR=15
RIDG **Independent Ri** 87.98 14 P **P** 22 47 39.2 +0.3
baz=211,SNR=13
F18K **Selawik** 88.00 7 P **P** 22 47 38.6 -0.2
baz=198,SNR=5.3
SNAA **Sanae** 88.00 179 ⇑P **P** 22 47 38.6 -0.5
comp=Z,134nm,0.5s
SNAA ⇓pP **pwP** 22 49 42.2 -0.7
comp=Z,95nm,0.7s
SNAA **Sanae** 88.00 179 P **P** 22 47 38.7 -0.4
comp=Z,4.3nm,0.4s,baz=204,slow=6.0,SNR=17
SNAA pP **pP** 22 49 40.3 -0.4
comp=Z,6.1nm,1.0s,baz=196,slow=4.7,SNR=4.6
comp=Z,4.3nm,0.4s
SNAA **Sanae** 88.00 179 *c i* P **P** 22 47 38.5 -0.6
SNAA pmax pmax
comp=Z,12nm,0.9s
SNAA **Sanae** 88.00 179 P **P** 22 47 38.8 -0.4
HDA **Harding Lake** 88.09 13 P **P** 22 47 39.2 -0.1
HDA IAmb IAmb 22 47 40.1
comp=Z,52nm,0.6s
HDA **Harding Lake** 88.09 13 P **P** 22 47 39.3 -0.1
baz=205,SNR=51
H21K **Melozitna Rive** 88.10 10 P **P** 22 47 39.7 +0.3
baz=204,SNR=38
L27K **Beaver Creek,** 88.14 16 P **P** 22 47 40.2 +0.5
baz=214,SNR=15
N30M **Aishikik Lake** 88.15 19 P **P** 22 47 40.4 +0.6
baz=218,SNR=6.9
BCAR **Beaver Creek A** 88.15 16 P **P** 22 47 40.2 +0.5
WHY **Whitehorse** 88.21 20 P **P** 22 47 40.8 +0.6
WHY IAmb IAmb 22 47 42.2
comp=Z,31nm,0.8s
WHY **Whitehorse** 88.21 20 P **P** 22 47 41.1 +1.0
baz=220,SNR=10
E17K **Hotham Inlet** 88.22 6 P **P** 22 47 40.3 +0.5
baz=196,SNR=9.2
DLBC **Dease Lake** 88.23 23 P **P** 22 47 41.3 +1.1
baz=224,SNR=6.7
I23K **Minto, Yukon-K** 88.26 12 P **P** 22 47 39.5 -0.6

baz=207,SNR=37
AHID Auburn Hatcher 88.26 43 P P 22 47 40.8 -0.2
AHID IAmb IAmb 22 47 43.7
comp=Z,16nm,0.8s
COLA College 88.31 13 P P 22 47 40.3 0.0
COLA College 88.31 13 *d* iP **P 22 47 39.7 -0.6**
COLA pmax pmax
comp=Z,61nm,0.7s
COLA College 88.31 13 P P 22 47 39.8 -0.6
COLA College 88.31 13 P P 22 47 39.8 -0.5
baz=208
COLA College 88.31 13 P P 22 47 39.8 -0.5
COLA pP **pwP 22 49 43.8 -1.4**
ILAR Eielson Array 88.42 13 P P 22 47 40.5 -0.4
comp=Z,17nm,0.6s,baz=217,slow=5.3,SNR=180
ILAR pP **pP 22 49 43.4 +1.0**
comp=Z,1.5nm,0.9s,baz=228,slow=5.9,SNR=4.1
ILAR PKKP **PKKPdf 23 05 18.5 +1.1**
comp=Z,0.2nm,0.5s,baz=16,slow=2.4,SNR=4.3
comp=Z,17nm,0.6s
F19K Shaleruckik Mo 88.45 8 P P 22 47 41.1 +0.2
baz=199,SNR=20
HIA Hailar 88.48 325 P P 22 47 41.9 +0.3
HIA Hailar 88.48 325 *d* iP **P 22 47 41.6 0.0**
HIA pmax pmax
comp=Z,14nm,0.7s
HIA Hailar 88.48 325 P P 22 47 41.1 -0.4
HIA IAmb IAmb 22 47 42.4
comp=Z,13nm,0.7s
M29M Somme Creek 88.53 17 P P 22 47 42.5 +0.9
baz=217,SNR=34
P33M Teslin, Yukon 88.54 21 P P 22 47 42.4 +0.8
baz=222,SNR=5.5
H22K Ishtalitna Cre 88.56 11 P P 22 47 41.8 +0.3
baz=205,SNR=75
N31M Braeburn, Yuko 88.56 19 P P 22 47 42.8 +1.1
baz=219,SNR=8.1
R33M Jennings River 88.58 22 P P 22 47 43.2 +1.4
baz=224,SNR=11
VNA2 Neumayer--Watz 88.58 177 ⇑P **P 22 47 41.9 +0.1**
comp=Z,88nm,0.7s,baz=175,slow=4.0
VNA2 ⇓pP **pwP 22 49 45.2 -0.8**
comp=Z,12nm,0.9s,baz=163,slow=4.8
VNA2 ⇑SKSac **SKSac 22 57 16.1 -1.1**
comp=E,3.4nm,0.8s
J25K Salcha River, 88.61 14 P P 22 47 41.9 0.0
baz=211,SNR=37
POKR Poker Plat Res 88.61 13 P P 22 47 41.1 -0.7
baz=209
HILR Hailar Array B 88.64 325 P P 22 47 42.9 +0.6
comp=E,24nm,0.7s,baz=128,slow=6.5,SNR=19
comp=E,24nm,0.7s
NVL N'lazarevskaya 88.67 183 ⇓ *i* P **P 22 47 42.0 -0.1**
NVL *e**PP **pwP 22 49 46.7 +0.4**
NVL *eS **SKSac 22 57 16.5 -1.2**
NVL pmax pmax
comp=Z,58nm,0.8s
E18K Tukpahlearik C 88.67 7 P P 22 47 42.4 +0.4
baz=197,SNR=10
D17K Noatak River 88.69 6 P P 22 47 42.5 +0.5
baz=194,SNR=7.3
G21K Allakaket 88.78 10 P P 22 47 43.0 +0.5
baz=203,SNR=42
VNA1 Neumayer--Stat 88.81 177 ⇑P **P 22 47 43.1 +0.4**
comp=Z,86nm,0.8s
VNA1 ⇓pP **pwP 22 49 46.5 -0.3**
comp=Z,15nm,1.0s
H23K Yukon River 88.83 11 P P 22 47 41.8 -1.0
baz=207
F20K Avaraart Lake 88.94 9 P P 22 47 43.7 +0.5
baz=201,SNR=25
KMI2 Kunming 89.01 297 ⇓P **P 22 47 46.5 +1.7**
KMI2 SKS **SKSac 22 57 22.3 +0.6**
KMI2 pmax pmax
comp=Z,35nm,1.3s
KMI2 pmax pmax
comp=Z,170nm,5.4s
BILL Bilibino 89.02 354 *de* P **P 22 47 43.6 0.0**
BILL pmax pmax
comp=Z,14nm,0.6s
BILL Bilibino 89.02 354 P P 22 47 42.9 -0.7
BILL IAmb IAmb 22 47 45.7
comp=Z,15nm,0.6s
RDOG Red Dog Mine 89.05 6 P P 22 47 44.3 +0.6
baz=194
C16K Lisburne Hills 89.06 5 P P 22 47 44.0 +0.2
baz=192
HHC Hu-ho-hao-te 89.08 315 ⇑ *i* P **P 22 47 46.3 +1.6**
HHC pP pP 22 49 48.3 +2.2
HHC sP sP 22 50 46.5 +4.3
HHC SKS **SKSac 22 57 20.5 -0.7**
HHC S **ScS 22 57 51.8 +2.4**
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.6s
M30M Minto, Yukon 89.11 18 P P 22 47 44.8 +0.6
baz=218
E19K Redstone River 89.12 8 P P 22 47 44.6 +0.5
baz=200,SNR=46
N32M Quiet Lake 89.16 20 P P 22 47 45.3 +0.8
baz=222
L29M L29M 89.16 17 P P 22 47 45.5 +1.1
baz=217,SNR=58
H24K Noodor Dome 89.16 12 P P 22 47 42.9 -1.4
baz=208,SNR=7.5
PDAR Pinedale Array 89.25 43 P P 22 47 46.1 +0.6
comp=Z,16nm,0.7s,baz=213,slow=3.2,SNR=150
PDAR pP **pP 22 49 48.3 +0.8**
comp=Z,0.5nm,0.8s,baz=287,slow=13,SNR=2.1
comp=Z,16nm,0.7s
PDAR Pinedale Array 89.25 43 P P 22 47 45.6 +0.1
PRP Porcupine Dome 89.36 13 P P 22 47 45.2 -0.2
baz=211,SNR=23
GO06 Curarrehue 89.43 132 P P 22 47 47.1 +0.7
GO06 IAmb IAmb 22 47 49.4
comp=Z,29nm,1.1s
F21K Alatna River 89.43 9 P P 22 47 45.7 +0.2
baz=203,SNR=18
C17K DeLong Mountai 89.44 6 P P 22 47 45.5 0.0
baz=194
G22K Bettles 89.47 10 P P 22 47 46.0 +0.3
baz=205
G23K Bananza Creek 89.54 11 P P 22 47 46.4 +0.3
baz=206,SNR=20
M31M Drury Creek, Y 89.54 19 P P 22 47 46.5 +0.4
baz=221,SNR=6.0
PLCA Paso Flores 89.55 134 P P 22 47 48.7 +1.7
comp=Z,14nm,0.8s,baz=217,slow=4.7,SNR=22
comp=Z,14nm,0.8s
PLCA Paso Flores 89.55 134 P P 22 47 48.1 +1.2
PLCA IAmb IAmb 22 47 49.4
comp=Z,16nm,0.8s
PLCA Paso Flores 89.55 134 *eP* **P 22 47 48.5 +1.5**
PLCA Paso Flores 89.55 134 P **P 22 47 48.6 +1.6**
DAWY Dawson 89.59 16 P **P 22 47 46.5 +0.1**
DAWY IAmb IAmb 22 47 48.1
comp=Z,37nm,1.0s
DAWY Dawson 89.59 16 P P 22 47 47.1 +0.7
baz=216,SNR=15
SDCO Great Sand Dun 89.67 49 P P 22 47 48.5 +0.8
CMAR Chiang Mai Arr 89.75 290 P P 22 47 50.0 +1.9
comp=Z,14nm,0.8s,baz=121,slow=3.0,SNR=83
CMAR pP **pP 22 49 49.9 +0.1**
comp=Z,1.5nm,0.9s,baz=119,slow=4.1,SNR=2.7
CMAR PP **PP 22 51 25.2 -5.7**
comp=Z,2.6nm,1.0s,baz=126,slow=6.0,SNR=4.3
CMAR PKKPbc **PKKPbc 23 05 18.1 +0.7**
comp=Z,2.5nm,0.6s,baz=292,slow=4.4,SNR=13
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 89.75 290 *i* P **P 22 47 50.0 +1.9**
CMAR pmax pmax
comp=Z,15nm,0.7s
CMAR Chiang Mai Arr 89.75 290 P P 22 47 49.3 +1.1
CM31 Chiang Mai Arr 89.75 290 P P 22 47 49.2 +1.1
C18K Utukok River 89.80 6 P P 22 47 47.2 -0.1
baz=196,SNR=7.3
CHTO Chiang Mai 89.88 290 P P 22 47 49.3 +0.6
CHTO Chiang Mai 89.88 290 P P 22 47 49.9 +1.2
CHTO pmax pmax
comp=Z,29nm,0.6s
CHTO Chiang Mai 89.88 290 P P 22 47 49.9 +1.2
CHTO IAmb IAmb 22 47 51.1
comp=Z,29nm,0.6s
CHTO Chiang Mai 89.88 290 P P 22 47 50.3 +1.6
F22K John River 89.90 10 P P 22 47 48.2 +0.5
baz=204,SNR=13

K29M Barlow Dome 89.91 17 P P 22 47 48.8 +0.8
baz=218,SNR=30
COLD Coldfoot 89.97 11 P P 22 47 48.8 +0.8
baz=206,SNR=18
D19K Kuna River 89.99 7 P P 22 47 48.3 +0.2
baz=199,SNR=28
G24K Hadweenzic Riv 90.00 12 P P 22 47 48.2 0.0
baz=209,SNR=7.8
E20K Nigu River 90.01 8 P P 22 47 48.8 +0.5
baz=201,SNR=65
BTO2 Baotou 90.17 314 *eP* **P 22 47 50.8 +1.1**
BTO2 pP **pP 22 49 50.3 -1.2**
BTO2 S **S 22 57 58.0 +1.8**
BTO2 sS **sS 23 01 29.5 -4.4**
BTO2 pmax pmax
comp=Z,34nm,1.1s
BTO2 pmax pmax
comp=Z,440nm,8.4s
J29N Klondike Camp 90.21 16 P P 22 47 50.1 +0.9
baz=217
I27K Kandik River 90.30 14 P P 22 47 50.0 +0.3
baz=214,SNR=16
G25K Bearman Lake 90.32 12 P P 22 47 50.0 +0.4
baz=210,SNR=6.3
PZH PanZhiHua 90.37 298 P P 22 47 51.8 +0.8
PZH pmax pmax
comp=Z,10.0nm,0.9s
D20K Etivluk River 90.38 8 P P 22 47 50.5 +0.5
baz=200,SNR=37
C19K Lookout Ridge 90.40 7 P P 22 47 50.6 +0.6
baz=198,SNR=24
E21K Killik River 90.48 9 P P 22 47 50.7 +0.2
baz=203
ISCO Idaho Springs 90.50 47 P P 22 47 51.8 +0.3
ISCO Idaho Springs 90.50 47 P P 22 47 51.8 +0.3
E22K Anaktuvuk Pass 90.53 10 P P 22 47 51.1 +0.4
baz=205
I28M Miner Creek 90.58 15 P P 22 47 51.3 +0.3
baz=216,SNR=23
F24K Squaw Lake 90.64 11 P P 22 47 51.9 +0.8
baz=208,SNR=14
J30M Hart River 90.81 17 P P 22 47 52.7 +0.6
baz=219,SNR=9.7
E23K Chandalar 90.82 10 P P 22 47 52.6 +0.6
baz=207,SNR=14
MMPY Sheldon Lake, 90.82 20 P P 22 47 53.1 +1.0
baz=223,SNR=10
ORCD Orcadas 90.83 159 P P 22 47 52.6 +0.3
H27K Steamboat Moun 90.84 14 P P 22 47 52.6 +0.5
baz=214,SNR=15
BI02 San Fabin de 90.86 130 P P 22 47 54.1 +0.9
BI02 IAmb IAmb 22 47 55.0
comp=Z,41nm,0.8s
JCT Junction City 90.93 58 P P 22 47 53.2 -0.2
JCT pmax pmax
comp=Z,19nm,0.8s
JCT Junction City 90.93 58 P P 22 47 53.2 -0.2
JCT IAmb IAmb 22 47 55.0
comp=Z,19nm,0.8s
G26K Porcupine Rive 90.95 13 P P 22 47 53.4 +0.8
baz=212,SNR=22
E24K Your Creek 91.03 11 P P 22 47 53.3 +0.4
baz=208,SNR=9.0
C21K Knifeblade Rid 91.04 8 P P 22 47 53.8 +0.8
baz=202,SNR=26
GO05 Hualane 91.11 128 P P 22 47 54.0 -0.3
GO05 IAmb IAmb 22 47 55.9
comp=Z,24nm,0.9s
F25K Christian Rive 91.13 12 P P 22 47 54.2 +0.7
baz=210,SNR=12
ML02 Panimavida 91.16 129 P P 22 47 54.8 +0.4
ML02 IAmb IAmb 22 47 56.1
comp=Z,38nm,0.9s
EFI East Falkland 91.28 147 P P 22 47 54.1 -0.5
EFI pmax pmax
comp=Z,248nm,1.9s
EFI East Falkland 91.28 147 P P 22 47 54.1 -0.5
G27K Doyon Strip 91.30 14 P P 22 47 54.6 +0.4
baz=214,SNR=7.4
I30M Mount Dempster 91.30 16 P P 22 47 54.6 +0.2
baz=219,SNR=30
A19K Wainwright 91.31 6 P P 22 47 54.5 +0.4
baz=196
TOLK Toolik Lake Re 91.35 10 P P 22 47 54.7 +0.3
baz=207,SNR=5.7
D23K Nanushuk River 91.46 10 P P 22 47 55.5 +0.6
baz=206,SNR=15
B21K Ikpikpuk River 91.49 8 P P 22 47 55.4 +0.4
baz=202,SNR=14
F26K Sheenjek River 91.52 12 P P 22 47 56.0 +0.8
baz=212,SNR=7.1
B20K Meade River 91.54 7 P P 22 47 55.7 +0.6
baz=200,SNR=20
H29M Whitestone 91.58 15 P P 22 47 55.8 +0.3
baz=217,SNR=26
E25K Arctic Village 91.60 12 P P 22 47 56.0 +0.5
baz=211,SNR=8.0
KOTAN Kotaelee Air 91.63 24 P P 22 47 56.7 +0.9
baz=230
D24K Happy Valley 91.93 10 P P 22 47 57.7 +0.7
baz=208
YAK Yakutsk 91.98 338 P P 22 47 57.0 -0.4
comp=Z,38nm,0.6s,baz=92,slow=2.5,SNR=21
comp=Z,38nm,0.6s
YAK Yakutsk 91.98 338 *d* iP **P 22 47 56.7 -0.7**
YAK pmax pmax
comp=Z,45nm,0.7s
YAK Yakutsk 91.98 338 P P 22 47 56.5 -0.8
BO02 Sierra Bellavi 92.06 128 P P 22 47 58.9 +0.3
BO02 IAmb IAmb 22 47 60.0
comp=Z,14nm,0.8s
EPYK Eagle Plains 92.11 16 P P 22 47 58.2 +0.2
baz=219,SNR=17
MT01 Popeta 92.12 127 P P 22 47 59.1 +0.2
MT01 IAmb IAmb 22 48 00.5
comp=Z,36nm,0.8s
G29M Pine Creek 92.22 15 P P 22 47 58.6 +0.2
baz=217,SNR=8.1
C23K Itkillik River 92.26 9 P P 22 47 59.2 +0.7
baz=206,SNR=10
H31M Peel River 92.29 17 P P 22 47 58.9 -0.1
baz=221,SNR=5.1
B22K Teshekpuk Lake 92.32 8 P P 22 47 59.1 +0.4
baz=203
EDM Edmonton 92.35 33 P P 22 47 59.2 -0.1
EDM pmax pmax
comp=Z,23nm,1.3s
EDM Edmonton 92.35 33 P P 22 47 59.2 -0.1
EDM IAmb IAmb 22 48 00.7
comp=Z,23nm,1.3s
MT09 Talagante 92.36 127 P P 22 47 59.9 -0.2
MT09 IAmb IAmb 22 48 01.6
comp=Z,13nm,1.1s
F28M Old Crow 92.36 14 P P 22 47 59.5 +0.4
baz=216,SNR=6.4
E27K Coleen River 92.45 13 P P 22 48 00.1 +0.6
baz=214
LZH Lanzhou 92.47 308 *eP* **P 22 48 01.5 +1.0**
LZH SKS **SKSac 22 57 39.5 -1.0**
LZH S **ScS 22 58 23.5 +5.6**
LZH pmax pmax
comp=Z,34nm,1.3s
D25K Kavik River 92.50 11 P P 22 47 59.6 -0.1
baz=210
TNCH TengChong 92.51 296 ⇓P **P 22 48 01.8 +0.8**
TNCH pP pP 22 50 00.5 -2.4
TNCH PP **PP 22 51 50.5 -2.0**
TNCH SKS **SKSac 22 57 42.3 +1.0**
TNCH S **S 22 58 11.5 -6.1**
TNCH pmax pmax
comp=Z,23nm,1.0s
TNCH pmax pmax
comp=Z,150nm,4.7s
LZDM Lanzhou Array 92.52 307 P P 22 48 01.4 +0.5
comp=Z,2.9nm,0.5s,baz=129,slow=12,SNR=4.9
comp=Z,2.9nm,0.5s
G30M tAoh Zraii Nji 92.71 15 P P 22 48 00.9 +0.2
baz=219,SNR=27
A22K Sinclair Lake 92.73 7 P P 22 48 00.9 +0.3
baz=202
A21K Barrow 92.84 7 P P 22 48 01.2 +0.1
baz=200
MT13 San Alfonso 92.89 128 P P 22 48 02.9 +0.3
MT13 IAmb IAmb 22 48 04.7
comp=Z,17nm,0.8s
G31M Satah River 93.16 16 P P 22 48 02.8 +0.2
baz=221,SNR=16

E28M Babbage River 93.24 13 P P 22 48 03.4 +0.4
baz=216,SNR=9.6
C27K Jago River 93.24 12 P P 22 48 03.5 +0.5
baz=212
C26K Camden Bay 93.27 11 P P 22 48 03.1 -0.1
baz=211
F30M Barrier River 93.31 15 P P 22 48 03.4 0.0
baz=220,SNR=7.4
E29M Blow River 93.43 14 P P 22 48 03.7 -0.2
baz=218
RSSD Black Hills 93.45 44 P P 22 48 04.3 -0.5
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 93.45 44 P P 22 48 04.3 -0.5
D27M Malcolm River 93.46 13 P P 22 48 04.5 +0.4
baz=215
CO02 Combarbal 93.49 125 P P 22 48 05.9 +0.6
CO02 IAmb IAmb 22 48 09.1
comp=Z,28nm,0.9s
F31M Tsiigehtchic 93.69 16 P P 22 48 05.3 +0.2
baz=221
D28M Stokes Point 93.99 13 P P 22 48 06.7 +0.3
baz=217
INK Inuvik 94.40 15 P P 22 48 08.0 -0.3
INK pmax pmax
comp=Z,17nm,1.3s
INK Inuvik 94.40 15 P P 22 48 08.0 -0.3
INK IAmb IAmb 22 48 09.1
comp=Z,17nm,1.2s
INK Inuvik 94.40 15 P P 22 48 07.9 -0.3
baz=222
ULN Ulaanbaatar 95.12 319 *d* iP **P 22 48 11.9 -0.3**
ULN pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 95.12 319 P P 22 48 12.0 -0.3
SONM Songino Array 95.51 319 P P 22 48 13.7 -0.3
comp=Z,1.6nm,0.6s,baz=116,slow=4.7,SNR=8.7
SONM pP **pP 22 50 15.6 -1.5**
comp=Z,0.2nm,0.3s,baz=102,slow=4.1,SNR=1.6
SONM PP PP 22 52 05.0 -10
comp=Z,1.5nm,0.7s,baz=131,slow=5.9,SNR=6.5
SONM PKKPbc **PKKPbc 23 05 03.1 -1.0**
comp=Z,1.3nm,1.0s,baz=243,slow=1.7,SNR=5.0
comp=Z,1.6nm,0.6s
SONM Songino Array 95.51 319 P P 22 48 13.0 -1.0
SONM IAmb IAmb 22 52 14.0
comp=Z,18nm,1.9s
MORE Moreh 95.83 294 P P 22 48 14.3 -1.5
MORE IAmb IAmb 22 48 16.1
comp=Z,5.9nm,0.5s
IMP Imphal 96.33 294 *eP* **P 22 48 17.2 -0.9**
MOKO MOKOCHONG 96.35 296 *eP* **P 22 48 18.9 +0.6**
KOHI KOHIMA 96.49 295 *eP* **P 22 48 18.6 -0.3**
YKA Yellowknife Ar 96.70 25 P P 22 48 18.9 +0.1
comp=Z,1.8nm,0.7s,baz=243,slow=4.5,SNR=7.5
comp=Z,1.8nm,0.7s
YKA Yellowknife Ar 96.70 25 P P 22 48 18.2 -0.5
GTA2 Gaotai 96.75 310 *eP* **P 22 48 20.5 +0.7**
GTA2 SKS **SKSac 22 58 01.3 -1.6**
GTA2 pmax pmax
comp=Z,9.0nm,1.3s
TEZP TEZPUR 97.90 295 *eP* **P 22 48 25.4 +0.4**
A36M Sachs Harbour 99.00 15 Pdiff **P 22 48 29.1 +0.2**
baz=229
LPAZ La Paz 102.42 113 P **Pdif 22 48 48.6 +2.4**
comp=Z,4.6nm,0.7s,baz=222,slow=3.0,SNR=22
LPAZ PKiKP **PKiKP 22 53 03.4 -0.8**
comp=Z,0.8nm,0.5s,baz=316,slow=3.1,SNR=2.8
LPAZ PKKPbc **PKKPbc 23 04 43.5 -1.0**
comp=Z,1.1nm,0.7s,baz=236,slow=1.7,SNR=3.6
LPAZ La Paz 102.42 113 *i* P **Pdif 22 48 47.0 +0.9**
LPAZ La Paz 102.42 113 Pdif 22 48 47.0 +0.9
LPAZ La Paz 102.42 113 *eP* **Pdif 22 48 43.9 -2.2**
WMQ Urumqi 106.64 311 Pdif **Pdif 22 49 05.0 +1.4**
HYB Hyderabad 107.78 282 *e*Pdif **Pdif 22 49 09.1 -0.1**
ZSN Zaisan 109.28 314 *e*PKiKP **PKiKP 22 53 14.8 -0.5**
ZALV Zalesovo Beam 110.26 321 PKiKP PKiKP 22 53 16.0 -0.8
comp=Z,5.5nm,0.6s,baz=148,slow=1.3,SNR=35
ZALV PP **PP 22 53 58.0 -5.0**
comp=Z,2.9nm,0.9s,baz=122,slow=7.5,SNR=3.7
ZALV SKP **SKPdf 22 55 59.7 +0.4**
comp=Z,2.7nm,0.7s,baz=145,slow=1.6,SNR=6.0
ZALV PKKPbc **PKKPbc 23 04 19.7 -1.1**
comp=Z,1.0nm,0.6s,baz=264,slow=1.5,SNR=4.8
ZALV PKKPab **PKKPab 23 04 32.1 +0.6**
comp=Z,1.2nm,0.6s,baz=274,slow=4.0,SNR=5.4
ZALV Zalesovo Beam 110.26 321 PKiKP 22 53 15.6 -1.2
NRIK Noril'sk 110.43 338 PP **PP 22 53 59.9 -3.8**
comp=Z,3.6nm,0.9s,baz=92,slow=7.7,SNR=7.5
MK31 Makanchi Array 110.92 313 *d* iPKiKP **PKiKP 22 53 17.3 -1.1**
MKAR Makanchi Array 110.92 313 Pdiff **Pdif 22 49 22.5 0.0**
comp=Z,0.7nm,0.6s,baz=83,slow=5.9,SNR=7.7
MKAR PKiKP **PKiKP 22 53 17.6 -0.9**
comp=Z,4.5nm,0.5s,baz=50,slow=1.4,SNR=52
MKAR PP **PP 22 54 01.5 -6.4**
comp=Z,2.5nm,1.0s,baz=97,slow=9.9,SNR=5.1
MKAR SKP **SKPdf 22 56 01.3 +0.3**
comp=Z,1.9nm,0.8s,baz=72,slow=4.0,SNR=3.8
MKAR PKKPbc **PKKPbc 23 04 17.9 -0.6**
comp=Z,3.4nm,0.7s,baz=276,slow=3.9,SNR=22
MKAR PKPab **PKKPab 23 04 29.8 +0.9**
comp=Z,1.5nm,0.7s,baz=287,slow=4.4,SNR=6.8
MKAR Makanchi Array 110.92 313 Pdif **Pdif 22 49 22.0 -0.5**
MKAR PKiKP **PKiKP 22 53 17.6 -0.9**
SMLA Simla 112.29 296 *e*P **PKiKP 22 53 19.7 -1.8**
SMLA *i* x x 22 54 12.8
SHLS Shalkode 112.42 309 *i* PKiKP **PKiKP 22 53 20.1 -1.4**
SHLS Shalkode 112.42 309 *e*PKiKP **PKiKP 22 53 20.2 -1.4**
UZB Uzynbulak 112.74 309 *i* PKiKP **PKiKP 22 53 21.4 -0.8**
UZB Uzynbulak 112.74 309 *e*PKiKP **PKiKP 22 53 21.4 -0.8**
SATY Saty 113.18 309 *i* PKiKP **PKiKP 22 53 22.1 -0.9**
SATY Saty 113.18 309 *e*PKiKP **PKiKP 22 53 22.1 -0.9**
TDK Taldyqorghan 113.40 311 *i* PKiKP **PKiKP 22 53 22.5 -0.7**
TDK Taldyqorghan 113.40 311 *e*PKiKP **PKiKP 22 53 22.6 -0.7**
KURK Kurchatov 113.74 317 *d* iPKiKP **PKiKP 22 53 22.5 -1.1**
KURK pmax pmax
comp=Z,11nm,0.8s
KURK Kurchatov 113.74 317 PKiKP 22 53 22.6 -1.0
KURBB Kurchatov Arra 113.79 317 PKiKP **PKiKP 22 53 22.8 -0.9**
comp=Z,7.9nm,0.7s,baz=93,slow=1.9,SNR=73
KURBB PP **PP 22 54 22.9 -5.0**
comp=Z,4.7nm,0.8s,baz=95,slow=6.4,SNR=15
KURBB SKP **SKPdf 22 56 06.6 +0.3**
comp=Z,4.1nm,0.7s,baz=93,slow=1.9,SNR=12
KURBB PKKPbc **PKKPbc 23 04 09.1 -0.1**
comp=Z,1.6nm,0.6s,baz=277,slow=4.3,SNR=14
MDOK Medeo 114.18 309 *e*PKiKP PKPdf 22 53 24.1 -0.8
MDOK Medeo 114.18 309 *e*PKP PKPdf 22 53 24.1 -0.8
TNSS Tian-Shan 114.24 309 *e*PKiKP PKPdf 22 53 24.3 -1.1
TNSS Tian-Shan 114.24 309 *e*PKP PKPdf 22 53 24.4 -1.0
AAA Alma-Ata 114.28 309 *e*PKiKP PKPdf 22 53 24.3 -0.7
AAA Alma-Ata 114.28 309 *e*PKP PKPdf 22 53 24.4 -0.6
ULHL Ulahol 114.67 308 P PKPdf 22 53 25.9 -0.1
SNR=7.8
NRN Naryn 114.77 307 PKiKP PKPdf 22 53 25.6 -0.8
NRN Naryn 114.77 307 PKPdf 22 53 25.6 -0.8
KSH2 Kashi 114.84 305 PKP **PKiKP 22 53 26.5 +0.2**
BOOM Boomskoye usch 114.92 308 PKiKP PKPdf 22 53 25.7 -0.7
BOOM Boomskoye usch 114.92 308 PKPdf 22 53 25.7 -0.7
TKM2 Tokmak 2 115.21 309 P **PKPdf 22 53 26.2 -0.9**
SNR=9.7
KBK Karagaybulak 115.67 308 P **PKPdf 22 53 27.1 -0.7**
SNR=5.3
CHMS Chumysh 115.84 309 P **PKPdf 22 53 27.4 -0.5**
SNR=7.9
SGDS Sogindy 115.96 309 *e*PKP **PKPdf 22 53 27.5 -0.7**
AAK Ala-Archa 116.00 308 *d* iPKiKP **PKPdf 22 53 27.9 -0.6**
AAK pmax pmax
comp=Z,8.0nm,2.5s
USP Ospenovka 116.04 309 P **PKPdf 22 53 28.2 -0.2**
SNR=8.9
BTLS Baital 116.48 311 *e*PKiKP **PKPdf 22 53 28.5 -0.6**
BTLS Baital 116.48 311 *e*PKP **PKPdf 22 53 28.6 -0.6**
EKS2 Erkin-Say 116.53 308 P **PKiKP 22 53 29.6 +0.1**
SNR=5.7
DZA Taraz 118.34 308 *e*PKiKP **PKPdf 22 53 32.0 -0.8**
DZA Taraz 118.34 308 *e*PKP **PKPdf 22 53 32.1 -0.8**
BTK Batken 118.58 305 PKiKP **PKPdf 22 53 32.7 -0.7**
BTK Batken 118.58 305 PKPdf 22 53 32.7 -0.7
SNDB Serra Nova Dou 118.80 117 *eP* **PKPdf 22 53 34.1 -0.4**
BVAR Borovoye Array 118.84 320 PKP **PKPdf 22 53 32.8 -0.6**
comp=Z,24nm,0.4s,baz=116,slow=1.7,SNR=124
BVAR SKP **SKPdf 22 56 16.9 +1.0**
comp=Z,6.4nm,0.8s,baz=90,slow=3.0,SNR=7.8
GAR Garm 118.90 304 PKPdf 22 53 34.0 -0.1

VOI Vohitsoka 118.94 229 PKPdf **PKPdf** **22 53 34.1 -0.6**
KK31 Karatay Array 118.95 309 PKIKP **PKPdf** **22 53 33.3 -0.6**
KK31 Karatay Array 118.95 309 **PKPdf** **22 53 33.3 -0.6**
KKAR Karatay Array 118.95 309 PKIKP **PKPdf** **22 53 33.3 -0.6**
KKAR Karatay Array 118.95 309 **PKPdf** **22 53 33.3 -0.6**
IUG luzhnay 119.27 308 *e*PKIKP **PKPdf** **22 53 34.1 -0.6**
IUG luzhnay 119.27 308 *e*PKP **PKPdf** **22 53 34.1 -0.6**
BRLS Borolday 119.44 309 *e*PKIKP **PKPdf** **22 53 34.4 -0.5**
BRLS Borolday 119.44 309 *e*PKP **PKPdf** **22 53 34.5 -0.5**
BDFB Brasilia 119.47 123 PKP **PKPdf** **22 53 35.0 -0.9**
comp=Z,2.2nm,0.6s,baz=220,slow=1.8,SNR=7.6
BDFB PKKPbc **PKKPbc** **23 03 49.3 0.0**
comp=Z,3.3nm,0.6s,baz=167,slow=3.8,SNR=6.4
BDFB Brasilia 119.47 123 **PKPdf** **22 53 35.0 -0.9**
KBL Kabul 119.55 299 PKIKP **PKPdf** **22 53 35.2 -0.4**
KBL Kabul 119.55 299 **PKPdf** **22 53 35.2 -0.4**
CHGR Chuyangaron 119.78 304 PKIKP **PKPdf** **22 53 35.2 -0.6**
CHGR Chuyangaron 119.78 304 **PKPdf** **22 53 35.2 -0.6**
SHAA Shahritus 120.53 302 **PKiKP** **22 53 37.6 +0.2**
KBS Kingsbay 121.34 358 *e*P **PKiKP** **22 53 38.1 +0.4**
KBS IAmb IAmb 22 53 39.5
comp=Z,21nm,1.4s
SPA0 Spitsbergen Ar 121.86 356 *e*P **PKPdf** **22 53 38.2 -0.3**
SPA0 IAmb IAmb 22 53 39.0
comp=Z,21nm,1.0s
SPITS Spitsbergen Ar 121.86 356 PKP **PKPdf** **22 53 38.5 -0.1**
comp=Z,13nm,0.8s,baz=97,slow=4.3,SNR=7.9
JANB Januaria 122.71 124 *e*P **PKPdf** **22 53 41.2 -0.8**
SJMB Sao Joao De Ma 122.77 130 *e*P **PKPdf** **22 53 41.4 -0.6**
BSFB Barra de Sao F 122.92 130 *e*P **PKPdf** **22 53 41.4 -0.9**
RIB01 Linhares ES 122.93 131 *e*P **PKPdf** **22 53 41.8 -0.5**
PRPB Paraupebas 122.98 112 *e*P **PKPdf** **22 53 42.5 -0.1**
GBN Guysborough 123.11 49 **PKPdf** **22 53 41.5 -0.3**
SUMG Summit 123.27 13 PKIKP **PKPdf** **22 53 41.2 -0.6**
SUMG Summit 123.27 13 **PKPdf** **22 53 41.2 -0.6**
SMTB Santa Maria do 123.53 116 *e*P **PKPdf** **22 53 43.6 0.0**
SVE Sverdlovsk 123.78 325 *e*PKIKP **PKPdf** **22 53 42.3 -0.4**
SVE pmax pmax
comp=Z,21nm,0.8s
SDBA SAO DESIDERIO 123.79 122 *e*P **PKPdf** **22 53 43.6 -0.5**
POGA Pongola 124.18 213 PKPdf **PKPdf** **22 53 44.0 -0.6**
SUR Sutherland 124.27 200 PKPdf **PKPdf** **22 53 44.7 -0.1**
ARTI Arti 125.10 325 *i* PKIKP **PKPdf** **22 53 44.8 -0.5**
ARTI 22 55 46.6
ARTI 23 00 01.0
ARTI SS SS 23 12 04.4 +7.0
ARTI Arti 125.10 325 **PKPdf** **22 53 45.1 -0.2**
GUA01 Guaratinga, BA 125.14 129 *e*P **PKPdf** **22 53 46.0 -0.6**
HRA Herat 125.14 298 **PKPdf** **22 53 45.4 -1.0**
AB31 Akbulak array 125.83 317 **PKPdf** **22 53 46.5 -0.4**
ABKAR Akbulak array 125.83 317 **PKPdf** **22 53 46.6 -0.3**
BOSA Boshof 126.06 206 PKP **PKiKP** **22 53 49.2 +0.5**
comp=Z,4.3nm,0.7s,baz=179,slow=4.9,SNR=8.5
BOSA PP **PP** **22 55 51.4 +1.6**
comp=Z,4.1nm,1.1s,baz=139,slow=9.3,SNR=2.3
BOSA Boshof 126.06 206 **PKiKP** **22 53 48.5 -0.2**
CMC01 Camacan, BA 126.14 128 *e*P **PKPdf** **22 53 48.0 -0.5**
NBIT Itapeh - BA 126.48 128 *e*P **PKPdf** **22 53 49.2 0.0**
LVZ Lovozero 128.30 345 *c i* PKIKP **PKPdf** **22 53 50.8 -0.3**
LVZ pmax pmax
comp=Z,10.0nm,1.7s
NBPN Ponto Novo - B 128.43 123 *e*P **PKPdf** **22 53 52.4 -0.6**
MAKGR Makgori 128.72 207 **PKPdf** **22 53 52.6 -0.8**
KIRV Kirov 128.78 330 *d i* PKIKP **PKPdf** **22 53 51.8 -0.4**
ARA0 ARCESS Array S 128.87 349 *e*P **PKPdf** **22 53 52.0 -0.2**
ARCES ARCESS Array B 128.87 349 PKhKP PKPpre 22 53 38.8
comp=Z,0.7nm,0.4s,baz=180,slow=0.5,SNR=4.0
ARCES PKP **PKPdf** **22 53 51.7 -0.4**
comp=Z,0.9nm,0.4s,baz=90,slow=1.2,SNR=5.3
ARCES SKPbc SKiKP 22 56 21.9 -14
comp=Z,8.9nm,0.9s,baz=34,slow=5.0,SNR=10
JMI Jan Mayen 129.22 4 *e*P **PKiKP** **22 53 55.0 +1.5**
SOHO SOHO 129.30 285 *i* PKPdf **PKPdf** **22 53 53.0 -1.2**
SNR=7.7
KTK1 Kautokeino 129.71 350 *e*P **PKPdf** **22 53 54.1 +0.4**
HATD Hatta, Dubai 129.75 286 *i* PKPdf **PKPdf** **22 53 53.9 -1.3**
SNR=8.8
TRO Tromso 129.77 352 *e*P **PKPdf** **22 53 54.0 +0.2**
MSFE Esma-Masafi 129.78 286 *i* PKPdf **PKPdf** **22 53 54.6 -0.6**
SNR=16
ASHO Ashiyiah 129.80 285 *i* PKPdf **PKPdf** **22 53 54.9 -0.4**
SNR=8.4
SHME Shamm 129.87 287 *i* PKPdf **PKPdf** **22 53 55.2 -0.1**
SNR=7.4
ALNE Al Ain 130.00 285 *i* PKPdf **PKPdf** **22 53 55.2 -0.4**
SNR=10
NAZ Nazwa, Dubai 130.19 286 *i* PKPdf **PKPdf** **22 53 55.6 -0.3**
SNR=12
ASUD Al Ashush, Dub 130.45 285 *i* PKPdf **PKPdf** **22 53 56.1 -0.4**
SNR=11
AJN Ajban 130.75 285 *i* PKPdf **PKPdf** **22 53 57.0 0.0**
SNR=6.6
NBPS Pedro II - PI 131.05 116 *e*P **PKPdf** **22 53 57.7 -0.3**
NBTA Tacaratu-PE 131.14 123 *e*P **PKPdf** **22 53 58.0 -0.1**
NBMA Muriti-CE 131.62 121 *e*P **PKPdf** **22 53 59.3 +0.2**
KLMR Klimovskoe 131.74 336 *e*PKIKP **PKPdf** **22 53 56.5 -1.3**
KLMR *e* 22 56 26.0
KLMR pmax pmax
comp=Z,24nm,1.5s
STEI Steigen 131.82 353 *e*P **PKiKP** **22 53 58.4 -0.4**
STEI Steigen 131.82 353 *e*P **SKPbc** **22 56 33.6 +2.0**
STEI IAmb IAmb 22 56 34.5
comp=Z,38nm,0.9s
MZR Muzera 131.93 283 *i* PKPdf **PKPdf** **22 53 57.6 -1.8**
SNR=14
FAUS Fauske 132.34 353 *e*P **PKPdf** **22 53 58.2 -0.5**
FAUS Fauske 132.34 353 *e*P **SKPbc** **22 56 35.0 +1.6**
FAUS IAmb IAmb 22 56 35.5
comp=Z,24nm,0.9s
NBMO Morrinhos-CE 132.81 115 *e*P **PKPdf** **22 54 01.2 -0.1**
KOOLE Kule 133.09 204 **PKPdf** **22 54 01.8 0.0**
VAGH Vaagaholmen 133.19 354 *e*P PKPpre 22 53 50.0
KONS Konsvik 133.43 354 *e*P **SKPbc** **22 56 38.6 +1.6**
STOK Stokkvaagen 133.61 354 *e*P **SKPbc** **22 56 39.1 +1.5**
STOK IAmb IAmb 22 56 39.3
comp=Z,36nm,1.1s
LEIR Leirfjorden 133.81 354 *e*P **PKiKP** **22 54 02.6 -0.4**
LEIR IAmb IAmb 22 54 02.8
comp=Z,17nm,1.2s
LEIR Leirfjorden 133.81 354 *e*P **SKPbc** **22 56 39.6 +1.3**
LEIR IAmb IAmb 22 56 39.9
comp=Z,38nm,1.3s
GRTLG Ghanzi 134.16 206 **PKPdf** **22 54 03.1 -0.6**
NSS Namsos 135.47 354 *e*P PKPpre 22 53 52.1
NSS IAmb IAmb 22 53 53.1
comp=Z,32nm,1.4s
NSS Namsos 135.47 354 *e*P **SKPbc** **22 56 44.7 +1.1**
NSS IAmb IAmb 22 56 45.5
comp=Z,44nm,1.3s
MAK Makhachkala 135.66 311 *e*P **Pdif** **22 51 08.6 -3.9**
MAK *i* 22 54 02.9
MAK *e* 22 56 46.8
MAK *e*PPP PPP 22 59 51.7
MAK *e* 23 00 22.2
MAK pmax pmax
comp=Z,136nm,1.2s
FINES FINESS Array B 135.68 343 PKhKP PKPpre 22 53 50.9
comp=Z,1.7nm,0.3s,baz=37,slow=2.9,SNR=33
FINES PKP **PKPdf** **22 54 05.3 +0.2**
comp=Z,4.9nm,0.4s,baz=72,slow=1.7,SNR=8.2
FINES SKPbc **SKPbc** **22 56 45.4 +1.1**
comp=Z,19nm,0.9s,baz=58,slow=5.0,SNR=24
MOS Moscow 135.72 332 *i* PKIKP **PKPdf** **22 54 05.2 -0.2**
MOS *e*SS SS 23 14 13.8 +8.6
LSZ Lusaka 135.85 218 PKIKP **PKPdf** **22 54 05.5 -1.6**
LSZ Lusaka 135.85 218 **PKPdf** **22 54 05.5 -1.6**
AKT Akhty 135.88 309 *e*PKIKP **PKPdf** **22 54 04.5 -1.8**
AKT *e* 22 56 54.5
AKT *e* 23 00 23.0
AKT pmax pmax
comp=Z,11nm,0.7s
VRH Novokhopyorsk 136.19 324 *e*PKIKP **PKPdf** **22 54 05.7 -0.7**
VRH pmax pmax
comp=Z,19nm,0.6s
OBN Obninsk 136.59 331 *c i* PKIKP **PKPdf** **22 54 07.1 +0.1**
OBN *e*SS SS 23 14 10.2 -5.1
OBN pmax pmax
comp=Z,13nm,0.8s
LPSR Galich'ya Gora 136.94 327 *e*PKIKP **PKPdf** **22 54 07.9 +0.2**
LPSR pmax pmax
comp=Z,22nm,0.9s
VORR Voronezh 137.30 326 *e*PKIKP **PKPdf** **22 54 08.4 0.0**
VORR pmax pmax
comp=Z,82nm,0.5s
VSR Storozhevoye 137.57 325 *e*PKIKP **PKPdf** **22 54 08.7 -0.2**
VSR pmax pmax
comp=Z,11nm,0.4s
VORD Divnogorie 137.63 325 *e*PKIKP **PKPdf** **22 54 06.9 -2.1**
VORD pmax pmax
comp=Z,8.0nm,0.9s
MOL Molde 137.78 356 *e*P PKPpre 22 53 59.3
MOL IAmb IAmb 22 54 03.1
comp=Z,7.9nm,0.8s
MOL Molde 137.78 356 *e*P **SKPbc** **22 56 52.0 +1.6**
MOL IAmb IAmb 22 56 52.4
comp=Z,24nm,0.9s
DOMB Dombas 138.19 355 *e*P PKPpre 22 53 59.8
DOMB IAmb IAmb 22 54 03.0
comp=Z,11nm,0.7s
DOMB Dombas 138.19 355 *e*P **SKPbc** **22 56 53.1 +1.5**
DOMB IAmb IAmb 22 56 53.3
comp=Z,13nm,0.9s
AKN Aaknes 138.21 356 *e*P PKPpre 22 54 00.8
AKN Aaknes 138.21 356 *e*P **SKPbc** **22 56 53.5 +1.9**
AKN IAmb IAmb 22 56 54.3
comp=Z,29nm,0.8s
GNI Garni 138.40 308 PKPdf **PKPdf** **22 54 06.1 -5.0**
KBZ Khabaz 138.62 314 PKhKP PKPpre 22 54 02.6
comp=Z,1.7nm,0.7s,baz=348,slow=5.8,SNR=4.2
KBZ PKP **PKPdf** **22 54 12.2 +1.1**
comp=Z,2.6nm,0.7s,baz=205,slow=4.8,SNR=6.9
KBZ SKPbc **SKPbc** **22 56 54.6 +1.3**
comp=Z,6.8nm,0.8s,baz=74,slow=1.4,SNR=12
KIV Kislovodsk 138.68 314 *i* PKPdf **PKPdf** **22 54 04.6 -6.7**
SNR=5.9
KIV Kislovodsk 138.68 314 *i* PKIKP **PKiKP** **22 54 13.0 -0.7**
KIV *e* 22 57 09.3
KIV *e*SS SS 23 14 40.1 -1.1
KIV pmax pmax
comp=Z,7.0nm,1.1s
FOO Floro 138.89 357 *e*P PKPpre 22 54 03.1
FOO Floro 138.89 357 *e*P **SKPbc** **22 56 55.1 +1.7**
FOO IAmb IAmb 22 56 55.4
comp=Z,22nm,0.9s
NB2 NORSAR Subarra 138.95 353 PKP PKPdf 22 54 01.9 -9.4
comp=Z,1.2nm,0.5s,baz=16,slow=3.2
NB2 SKP **SKPbc** **22 56 54.9 +1.2**
comp=Z,31nm,0.9s,baz=12,slow=2.9
NOA NORSAR Array B 138.95 353 PKhKP PKPpre 22 54 01.7
comp=Z,0.7nm,0.4s,baz=316,slow=26,SNR=31
NOA PKP **PKPdf** **22 54 12.3 +1.0**
comp=Z,0.4nm,0.5s,baz=13,slow=2.4,SNR=4.9
NOA SKPbc **SKPbc** **22 56 55.0 +1.2**
comp=Z,15nm,0.8s,baz=15,slow=4.4,SNR=24
NC602 NORSAR Array S 139.21 353 *e*P **SKPbc** **22 56 55.6 +1.2**
NC602 IAmb IAmb 22 56 56.4
comp=Z,22nm,0.9s
HYA Hoyanger 139.26 357 *e*P PKPpre 22 54 04.0
HYA Hoyanger 139.26 357 *e*P **SKPbc** **22 56 56.4 +1.9**
ERBR Yeremizino-Bor 139.44 317 *i* PKIKP **PKPdf** **22 54 12.8 +0.3**
ERBR pmax pmax
comp=Z,24nm,0.7s
SUE Sulen 139.44 358 *e*P PKPpre 22 54 03.6
SUE Sulen 139.44 358 *e*P **SKPbc** **22 56 55.4 +0.4**
SUE IAmb IAmb 22 56 57.0
comp=Z,31nm,1.0s
HFS Hagfors 139.50 351 PKhKP PKPpre 22 54 03.8
comp=Z,19nm,0.4s,baz=82,slow=2.1,SNR=73
HFS SKPbc **SKPbc** **22 56 56.4 +1.2**
comp=Z,24nm,0.8s,baz=53,slow=0.7,SNR=26
SKAR Skarslia 139.60 355 *e*P PKPpre 22 54 05.3
SKAR Skarslia 139.60 355 *e*P **SKPbc** **22 56 57.8 +2.3**
SKAR IAmb IAmb 22 56 57.9
comp=Z,21nm,0.8s
LABN Labinsk 139.72 316 *i* PKIKP **PKPdf** **22 54 11.6 -1.5**
LABN pmax pmax
comp=Z,11nm,0.6s
ASK Askoy 139.99 357 *e*P PKPpre 22 54 07.0
ASK Askoy 139.99 357 *e*P **SKiKP** **22 56 58.1 -0.7**
OSL Oslo 140.09 353 *e*P PKPpre 22 54 06.2
OSL Oslo 140.09 353 *e*P **SKiKP** **22 56 58.6 -0.5**
BER Bergen 140.09 357 *e*P PKPpre 22 54 05.5
ODD1 Odda 140.48 356 *e*P PKPpre 22 54 07.6
ODD1 Odda 140.48 356 *e*P **SKiKP** **22 56 58.9 -1.0**
ODD1 IAmb IAmb 22 57 00.1
comp=Z,23nm,0.8s
KONO Kongsberg 140.49 354 *e*P PKPpre 22 54 07.5
KONO Kongsberg 140.49 354 *e*P **SKiKP** **22 56 59.3 -0.6**
MNK Minsk 140.64 336 *i* PKP PKPpre 22 54 09.3
comp=Z,10.0nm,0.6s,baz=41
MNK *i* pPKP pPKPdf 22 56 24.0 -0.9
MNK *i* sPKP sPKPdf 22 57 20.1 +1.1
MNK *i* PP **PP** **22 57 21.6 +0.3**
MNK *i* SKS **SKSdf** **23 00 24.5 -6.9**
MNK *i* PPP PPP 23 00 30.4
MNK *i* SKKS **SKKSdf** **23 09 48.5 -10**
MNK *i* SS **SS** **23 15 00.2 -2.0**
MNK *i* SSS SSS 23 20 27.2
MNK *i* LR LR 23 52 38.5
MNK Minsk 140.64 336 *i* PKHKP PKPpre 22 54 09.2
MNK *i* 22 57 21.6
MNK *i* PPP PPP 23 00 30.3
MNK *i* SS SS 23 15 00.2 -2.0
MNK *i* SSS SSS 23 20 27.2
MNK pmax pmax
comp=Z,10.0nm,0.6s
STRU Stroemstad 140.91 352 *i* P PKPpre 22 54 08.7
BLS5 Blasjo 140.98 356 *e*P PKPpre 22 54 10.0
KMY Karmoy 141.26 357 *e*P PKPpre 22 54 10.4
ANN Anapa 141.77 318 *e*PKHKP PKPpre 22 54 13.1
ANN *e* 23 00 28.1
ANN pmax pmax
comp=Z,90nm,1.2s
TJOU Tjoern 141.82 351 *i* P PKPpre 22 54 11.5
HOMB Homborsund 141.96 354 *e*P PKPpre 22 54 12.7
HOMB Homborsund 141.96 354 *i* P PKPpre 22 54 12.8
SNART Snartemo 142.00 355 *e*P PKPpre 22 54 12.7
SNART Snartemo 142.00 355 *i* P PKPpre 22 54 12.9
ONAU Onsala 142.39 351 *i* P PKPpre 22 54 13.6
FURI Furi 142.39 258 PKPdf **PKPdf** **22 54 18.3 -0.9**
FABU Falkenberg 142.65 350 *i* P PKPpre 22 54 14.4
SUW Suwalki 142.72 339 *e*PKP **PKPdf** **22 54 16.2 -1.9**
BLEU Blekinge 142.72 347 *i* P PKPpre 22 54 14.4
MCD Coleburn Disti 142.82 4 *e*P PKPpre 22 54 14.8
AKASG Malin Array Be 142.84 331 PKhKP PKPpre 22 54 15.3
comp=Z,66nm,0.4s,baz=44,slow=4.1,SNR=463
AKASG SKPbc **SKiKP** **22 57 05.2 +0.2**
comp=Z,7.9nm,0.8s,baz=44,slow=2.5,SNR=13
KPL Plockton 142.85 6 *e*P PKPpre 22 54 15.0
KIEV Kiev 142.85 331 ⇑P PKPpre 22 54 15.3
DEL Delary 142.95 349 *i* P **PKPdf** **22 54 15.8 -2.6**
LODK Lodwar 142.97 247 **PKPdf** **22 54 18.3 -1.7**
SHEL Horse Pasture 143.04 168 PKIKP PKPbc 22 54 18.8 +0.8
SHEL Horse Pasture 143.04 168 PKPbc 22 54 18.8 +0.8
BJUU Bjuv 143.48 349 *i* P PKPab 22 54 17.8 -0.1
DRUM Mains of Drumt 143.53 4 *e*P PKPab 22 54 17.1 -1.0
MUD Monsted U'grnd 143.67 353 *i* P PKPbc 22 54 18.8 +0.1
SIM Simferopol' 143.75 320 *e*PKIKP **PKPdf** **22 54 20.0 -0.2**
SIM pmax pmax
comp=Z,212nm,0.5s
RNPP9 Sopachiv 143.77 334 PKP PKPbc 22 54 18.8 -0.3
LUNU Lund 143.82 349 *i* P PKPbc 22 54 18.7 -0.4
RNPP2 Kostyukhnivka 143.83 334 PKP PKPbc 22 54 19.4 0.0
RNPP8 Varash 143.84 334 PKP PKPbc 22 54 19.1 -0.3
INVG Invergeldie, C 143.90 5 *e*P PKPbc 22 54 18.9 -0.5
RNPP5 Staryi Chortor 143.91 334 PKP PKPbc 22 54 19.1 -0.5
LAWE Loch Awe, Argy 143.93 7 *e*P PKPbc 22 54 18.9 -0.6
COP Copenhagen 143.95 350 *i* P PKPab 22 54 19.7 -0.1
BSD Bornholm Skovb 144.02 347 *i* P PKPbc 22 54 19.6 -0.2
LUBAR Lubar, Ukraine 144.06 331 PKP PKPbc 22 54 19.6 -0.5
EAB Aberfoyle 144.11 6 *e*P PKPbc 22 54 19.0 -1.1
TOKA Tokat 144.32 311 PKPbc 22 54 21.2 -0.1
BAL3X Bal3x, Balta 144.52 327 PKP **PKPdf** **22 54 21.5 0.0**
MBAR Mbarara 144.57 237 *d i* PKIKP **PKPab** **22 54 23.7 +0.1**
MBAR Mbarara 144.57 237 PKPdf **PKPdf** **22 54 22.7 -0.1**
NE56 Odesa 144.63 324 PKP **PKPdf** **22 54 20.7 -1.0**
R9F13 Warsaw-Wawer 144.89 339 *e*PKPdf **PKPab** **22 54 23.0 -0.4**
R9F13 *i* PP sPKPdf 22 57 10.9 -16
GAZ Gaziantep 144.90 306 **PKPdf** **22 54 22.8 +0.2**
CLGH Cloghs, Cushen 145.01 8 *e*P **PKPbc** **22 54 23.2 +0.3**
SORM Soroca 145.01 328 ⇑P **PKPbc** **22 54 22.7 -0.4**
SORM Soroca 145.01 328 PKP **PKPdf** **22 54 22.6 +0.3**
EKA Eskdalemuir Ar 145.06 5 PKPbc **PKPbc** **22 54 22.6 -0.4**
comp=Z,11nm,0.5s,baz=337,slow=2.5,SNR=58
EKA SKPbc **SKiKP** **22 57 10.5 +1.1**
comp=Z,1.2nm,0.6s,baz=328,slow=1.9,SNR=3.6
ESK Eskdalemuir 145.07 5 PKIKP **PKPdf** **22 54 21.9 -0.3**
ESK Eskdalemuir 145.07 5 **PKPdf** **22 54 21.9 -0.3**
ESK Eskdalemuir 145.07 5 *e*P **PKPdf** **22 54 22.2 0.0**
GKP Gorka Klasztor 145.16 344 *e*PKP **PKPbc** **22 54 23.6 +0.2**
PURM Purcari 145.28 325 ⇑P **PKPbc** **22 54 23.6 -0.3**
PURM Purcari 145.28 325 PKP **PKPdf** **22 54 22.8 0.0**
BZK Bozkurt 145.31 315 ⇑P **PKPab** **22 54 25.3 -0.2**
BZK Bozkurt 145.31 315 **PKPdf** **22 54 23.3 +0.3**
BEL Belsk 145.33 339 *e*PKP **PKPab** **22 54 25.1 -0.1**
GAL1 Galloway 145.38 6 *e*P **PKPdf** **22 54 23.1 +0.5**
KIS Kishinev 145.53 326 ⇓P **PKPbc** **22 54 24.4 -0.3**
KIS Kishinev 145.53 326 PKP **PKPbc** **22 54 24.4 -0.3**
KMPD K-Podol'skiy 145.62 330 PKP **PKPdf** **22 54 22.8 -0.5**
EDMD Edmundbyers 145.64 4 *e*P **PKPbc** **22 54 24.0 -0.7**
KESW Keswick, Cumbr 145.80 5 *e*P **PKPdf** **22 54 24.3 +0.8**
DRBR Darabani 145.81 330 ⇑P **PKPbc** **22 54 25.4 0.0**
ILTH Belurgan, Co L 146.01 8 *e*P **PKPbc** **22 54 24.9 -0.9**
VASR Vaslui 146.30 327 ⇑P **PKPbc** **22 54 27.8 +1.0**
KWP Kalwaria Pacla 146.43 335 *e*PKP **PKPbc** **22 54 27.8 +0.7**
HPK Haverah Park 146.53 3 *e*P **PKPbc** **22 54 26.6 -0.6**
BRTR Keskin Array B 146.56 312 PKP **PKPdf** **22 54 24.8 -0.6**
comp=Z,25nm,0.6s,baz=103,slow=3.0,SNR=94
BRTR PKPbc **PKPbc** **22 54 27.8 -0.2**
comp=Z,25nm,0.6s,baz=137,slow=3.7,SNR=138
BRTR pPKPbc **pPKPdf** **22 56 36.1 -0.1**
comp=Z,1.7nm,1.0s,baz=111,slow=2.8,SNR=2.7
BRTR SKPbc **SKiKP** **22 57 14.0 +0.7**
comp=Z,3.1nm,0.8s,baz=48,slow=1.8,SNR=4.1
BRTR Keskin Array B 146.56 312 **PKPdf** **22 54 24.5 -0.9**
BRTR PKPbc **PKPbc** **22 54 27.9 -0.2**
PRAR RASCA 146.59 329 ⇓P **PKPbc** **22 54 27.6 0.0**
KIRS Kirsehir-Merke 146.61 311 ⇓P **PKPbc** **22 54 27.8 -0.3**
BIR Birlad 146.63 326 ⇑P **PKPbc** **22 54 28.3 +0.6**
VLDR Vladesti 146.67 325 ⇓P **PKiKP** **22 54 29.1 -0.7**
TLCR 146.69 324 ⇓P **PKiKP** **22 54 29.3 -0.6**
GIRR Girov 146.74 328 ⇓P **PKPbc** **22 54 28.1 +0.1**
VARL Varlezi 146.76 326 ⇓P **PKPbc** **22 54 28.8 +0.7**
DSB Dublin 146.76 9 **PKPbc** **22 54 27.5 -0.4**
SCTR Scanteiesti 146.83 325 ⇑P **PKPbc** **22 54 28.8 +0.5**
TATR Tatarca 146.85 325 ⇓P **PKPbc** **22 54 28.5 +0.1**
BUR08 Bucovina Ar. S 146.87 330 **PKPdf** **22 54 25.5 -0.1**
BURAR Bucovina Array 146.88 330 ⇓P **PKiKP** **22 54 30.2 -0.4**
BURAR Bucovina Array 146.88 330 **PKPdf** **22 54 25.5 -0.2**
GHRR 146.88 326 ⇑P **PKPbc** **22 54 29.0 +0.6**
JURR Jurilovca 146.92 323 ⇑P **PKiKP** **22 54 29.8 -0.6**
BIZ Bicaz 146.94 329 ⇑P **PKiKP** **22 54 30.0 -0.5**
TESR Tescani 146.97 328 ⇓P **PKPbc** **22 54 29.0 +0.3**
WLF1 Llynfaes 146.97 7 *e*P **PKPbc** **22 54 27.8 -0.6**
IZVR Izvoarele 147.03 325 ⇓P **PKiKP** **22 54 30.2 -0.5**
OJC Ojcow 147.03 338 *e*PKP **PKPbc** **22 54 28.7 0.0**
OJC Ojcow 147.03 338 PKIKP **PKPdf** **22 54 25.5 -0.2**
OJC Ojcow 147.03 338 **PKPdf** **22 54 25.4 -0.2**
OJC PKPbc **PKPbc** **22 54 28.6 0.0**
SCHLR Schela 147.05 325 ⇑P **PKPbc** **22 54 29.5 +0.6**
TUDR 147.05 325 ⇓P **PKPbc** **22 54 29.3 +0.4**
CFR Carcaliu 147.07 324 ⇓P **PKiKP** **22 54 30.0 -0.7**
COSR Cosmesti PH 147.07 326 ⇓P **PKiKP** **22 54 29.9 -0.8**
TPGR Topolog 147.12 324 ⇓P **PKiKP** **22 54 31.0 +0.1**
PANC Panciu 147.15 326 ⇓P **PKPbc** **22 54 29.9 +0.8**
KOLS Kolonicke sedl 147.16 335 *e*PKP2 **PKiKP** **22 54 30.0 -0.8**
KOLS Kolonicke sedl 147.16 335 *e*PKP **PKiKP** **22 54 30.0 -0.8**
KOLS *e* 22 54 33.5
STHS Stebnicka Huta 147.18 336 *e*PKP2 **PKPbc** **22 54 29.1 0.0**
STHS Stebnicka Huta 147.18 336 *e*PKP **PKPbc** **22 54 29.1 0.0**
STHS *e* 22 54 33.7
ONER Baraj Valea Uz 147.22 328 ⇓P **PKPbc** **22 54 29.5 +0.1**
ODBI Odobesti 147.26 326 ⇓P **PKPbc** **22 54 29.5 +0.1**
VRI Vrincioaia 147.37 327 ⇑P **PKPbc** **22 54 30.3 +0.6**
PLOR Plostina 147.42 327 ⇓P **PKPbc** **22 54 29.8 -0.1**
MMAI Mount Meron Ar 147.48 300 PKPbc **PKPbc** **22 54 31.2 +0.7**
comp=Z,54nm,0.5s,baz=74,slow=7.0,SNR=154
MMAI pPKPbc **pPKPbc** **22 56 38.4 -0.3**
comp=Z,13nm,0.9s,baz=64,slow=8.4,SNR=6.0
FOEL Foel Wylfa 147.48 5 *e*P **PKPbc** **22 54 28.4 -1.4**
SAHR Sahastru 147.48 326 ⇓P **PKPbc** **22 54 30.3 +0.2**
TLBR Topalu 147.52 324 ⇑P **PKiKP** **22 54 31.2 -0.5**
NIE Niedzica 147.53 337 *e*PKP **PKPdf** **22 54 27.3 +0.8**
GRER 147.56 326 ⇓P **PKiKP** **22 54 31.5 -0.2**
KSP Ksiaz 147.59 343 *e*PKP **PKPbc** **22 54 30.8 +0.7**
TURR Turia 147.60 327 ⇓P **PKiKP** **22 54 31.1 -0.7**
COVR Voineasa-Covas 147.65 327 ⇑P **PKPbc** **22 54 30.0 -0.5**
CVDA Cernavoda 147.66 323 ⇑P **PKPbc** **22 54 30.7 +0.2**
MANR Mangalia 147.66 322 ⇑P **PKPbc** **22 54 31.0 +0.5**
ARCR ARCALIA 147.67 330 ⇑P **PKPbc** **22 54 31.0 +0.6**
OZUR 147.69 328 ⇑P **PKPbc** **22 54 30.3 -0.3**
GHAJ Ghor Haditha 147.71 296 **PKPbc** **22 54 30.5 -0.5**
BOSR Bodos 147.76 328 ⇑P **PKPbc** **22 54 31.2 +0.4**
CWF Charnwood Fore 147.76 3 *e*P **PKPbc** **22 54 29.7 -0.7**
PGOR Pogoanele 147.87 325 ⇑P **PKPbc** **22 54 31.5 +0.5**
OSTC Ostas 147.87 342 *e*PKHKP PKPpre 22 54 28.1
OSTC Ostas 147.87 342 *e*PKPDF **PKPdf** **22 54 28.1 +1.0**
OSTC ⇑*e*PKP **PKiKP** **22 54 31.7 -0.6**
HLM1 Long Mynd 147.88 5 *e*P **PKPbc** **22 54 29.3 -1.5**
MDUB Mudurnu 147.88 315 **PKPbc** **22 54 30.8 -0.6**
NEHR Nehoiu 147.89 326 ⇑P **PKPbc** **22 54 31.1 0.0**
CHVC Chvalec 147.89 343 *e*PKHKP PKPpre 22 54 27.6
CHVC Chvalec 147.89 343 *e*PKPDF **PKPdf** **22 54 27.6 +0.5**
CHVC ⇑*e*PKP **PKPbc** **22 54 31.4 +0.5**
OKC Ostrava-Krasne 147.91 340 *e*PKP2 **PKPbc** **22 54 31.4 +0.4**
OKC Ostrava-Krasne 147.91 340 ⇑*e*PKP **PKPbc** **22 54 31.4 +0.4**
ICOR Ion Corvin 147.93 323 ⇓P **PKPbc** **22 54 31.8 +0.6**
STEB Steborice 147.95 340 *e*PKPDF **PKPdf** **22 54 27.9 +0.7**
STEB ⇑*e*PKP **PKPbc** **22 54 31.6 +0.5**
STEB *e*PKPAB **PKPab** **22 54 36.9 +1.1**
STEB *e*pPKP **pPKPab** **22 56 43.9 +2.7**
ISR Istrita 147.96 326 ⇑P **PKPbc** **22 54 31.8 +0.4**
ISR Istrita 147.96 326 ⇑PKP2 **PKPbc** **22 54 31.8 +0.4**
DOPR Dopca 147.98 328 ⇑P **PKiKP** **22 54 32.1 -0.5**
CLL Collm 147.99 346 ⇓*e*PKHKP PKPpre 22 54 27.0
CLL *i* 22 54 36.1
CLL pmax pmax
comp=Z,112nm,0.6s
CLL pmax pmax
comp=Z,55nm,0.6s
CLL Collm 147.99 346 **PKPdf** **22 54 26.7 -0.5**
CLL Collm 147.99 346 *e*PKPdf **PKPdf** **22 54 27.0 -0.2**
CLL ⇓*i*PKPbc **PKPbc** **22 54 31.6 +0.5**
comp=Z,112nm,0.6s
CLL ⇑*i*PKPab **PKPab** **22 54 36.1 +0.2**
comp=Z,55nm,0.6s
CLL *e*pPKPab **pPKPbc** **22 56 40.0 +0.1**
CLL *ex* x 22 56 49.0
CLL *i* x x 22 57 03.7
CLL *e*SKPbc **SKPbc** **22 57 15.0 -0.6**
CLL *es*PKPbc **sPKPdf** **22 57 31.0 -1.2**
CLL *e*PP **PP** **22 58 02.0 -2.2**
CLL *es*PP 23 00 54.0
CLL *es*SKKSac 23 07 52.0
CLL *e*PSKS 23 08 20.0
CLL *ep*PSKS 23 10 13.0
CLL *e*PPS PPS 23 11 10.0
CLL *ex* x 23 13 48.0
CLL *e*SS **SS** **23 16 22.0 -2.8**
CLL *ex* x 23 17 42.0
CLL *ex* x 23 19 11.0
CLL *e*SSS 23 19 54.0
CLL *e*SSS SSS 23 22 03.0
CLL *e*SSSS 23 26 17.0
CLL *e*PSSrev 23 29 24.0
MLR Muntele Rosu 148.02 327 ⇑P **PKPbc** **22 54 32.0 +0.4**
MLR Muntele Rosu 148.02 327 ⇑PKP2 **PKPbc** **22 54 32.0 +0.4**
DPC Dobruska-Polom 148.03 342 *e*PKHKP PKPpre 22 54 27.7
DPC *e* 22 54 37.3
DPC Dobruska-Polom 148.03 342 *e*PKPDF **PKPdf** **22 54 27.7 +0.4**
DPC ⇑*e*PKP **PKiKP** **22 54 32.2 -0.4**
DPC *e*PKPab **PKPab** **22 54 37.3 +1.2**
PSN Preselentsi 148.03 322 P **PKiKP** **22 54 32.1 -0.7**
LANS Liptovska Anna 148.05 338 *e*PKP2 **PKiKP** **22 54 32.8 +0.1**
**LANS Liptovska

MORC	Moravsky Berou	148.16	340		*e*	PKPab	22 54 37.4 +0.7
KECS	Kecovo	148.23	336		*e*PKP2	PKiKP	22 54 32.5 -0.5
KECS	Kecovo	148.23	336		*e*PKP	PKiKP	22 54 32.5 -0.5
KECS					*e*		22 54 37.6
LEHL	Lehliu	148.24	325	⇑	P	PKPbc	22 54 31.9 -0.1
PCED	Cedros	148.28	49		*e*PKPdf	PKiKP	22 54 33.2 -0.3
CJR	Cluj-Napoca	148.29	331	⇓	P	PKPbc	22 54 32.5 +0.4
CJR	Cluj-Napoca	148.29	331	⇓	PKP2	PKPbc	22 54 32.5 +0.4
CALA	Caldeira	148.31	49		*e*PKPdf	PKiKP	22 54 33.3 -0.3
MDB	Medias	148.35	329	⇓	P	PKPbc	22 54 32.7 +0.5
MDB	Medias	148.35	329	⇓	PKP2	PKPbc	22 54 32.7 +0.5
HOR	Horta	148.38	49		*e*PKPdf	PKiKP	22 54 34.2 +0.6
MCH1	Michaelchurch	148.38	5		*e*P	PKPbc	22 54 31.5 -0.5
MAUC	Maruska	148.43	340		*e*PKPDF	PKPdf	22 54 28.7 +0.7
MAUC				⇑	*e*PKP	PKiKP	22 54 33.4 -0.1
PCAN	Candelaria	148.51	49		*e*PKPdf	PKiKP	22 54 33.9 0.0
VOIR		148.52	328	⇑	P	PKPbc	22 54 32.6 -0.1
VOIR		148.52	328	⇑	PKHKP	PKPpre	22 54 32.6
LTVH	Ltavrtes, Hu	148.53	333	⇑	P	PKiKP	22 54 33.3 -0.4
PICO	Pico	148.53	49		*e*PKPdf	PKiKP	22 54 34.0 -0.1
MARR	Marisel-Cluj	148.54	331	⇓	P	PKPbc	22 54 33.0 +0.2
MONM	Monmouth	148.56	5		*e*P	PKPbc	22 54 31.7 -0.8
ROSA	Rosais	148.57	48		*e*PKPdf	PKiKP	22 54 34.0 0.0
CSS	Mathiatis	148.58	304			PKPbc	22 54 32.0 -1.2
PGRA	Graciosa	148.61	48		*e*PKPdf	PKiKP	22 54 34.1 0.0
DRGR		148.64	332	⇓	P	PKPbc	22 54 32.7 -0.2
DRGR		148.64	332	⇓	PKHKP	PKPpre	22 54 32.7
PPNO	Prainha do Nor	148.66	49		*e*PKPdf	PKiKP	22 54 34.5 +0.2
PMAN	Manadas	148.71	48		*e*PKPdf	PKiKP	22 54 34.3 0.0
PRD	Provadia	148.74	322		P	PKiKP	22 54 34.0 -0.2
NEF	NEVSHA	148.75	322		P	PKiKP	22 54 33.9 -0.4
ARR	Arges	148.77	328	⇑	P	PKPbc	22 54 33.2 -0.1
BORR	Bors	148.81	333	⇑	P	PKiKP	22 54 34.7 +0.5
VYHS	Vyhne	148.83	338		*e*PKP2	PKiKP	22 54 34.1 -0.2
VYHS	Vyhne	148.83	338		*e*PKP	PKiKP	22 54 34.1 -0.2
VYHS					*e*		22 54 40.4
PRU	Pruhonice	148.84	344		*e*PKP2	PKiKP	22 54 33.9 -0.3
PRU	Pruhonice	148.84	344	⇑	*e*PKP	PKiKP	22 54 33.9 -0.3
PRU					*e*PKPAB	PKPab	22 54 40.0 +0.6
VRAC	Vranov	148.87	341		PKP	PKPdf	22 54 28.6 -0.1
	comp=Z,17nm,0.9s,baz=156,slow=2.2,SNR=3.3						
VRAC					PKPbc	PKPbc	22 54 33.7 +0.3
	comp=Z,17nm,0.9s,baz=30,slow=1.8,SNR=25						
VRAC					PKPab	PKPab	22 54 40.2 +0.6
	comp=Z,11nm,0.6s,baz=327,slow=1.5,SNR=16						
VRAC	Vranov	148.87	341	⇑	P	PKPbc	22 54 33.4 0.0
VRAC	Vranov	148.87	341		*e*PKP	PKPdf	22 54 29.0 +0.3
VRAC					*e*		22 54 33.8
VRAC					*e*		22 54 40.0
VRAC					*e*		22 56 46.3
PSZ	Piszkesteto	148.91	336	⇓	P	PKPbc	22 54 33.9 +0.2
PSZ	Piszkesteto	148.91	336		PKIKP	PKPdf	22 54 28.3 -0.6
PSZ	Piszkesteto	148.91	336			PKPdf	22 54 28.3 -0.6
JAVC	Velka Javorina	148.92	339		*e*PKP	PKPdf	22 54 30.2 +1.4
JAVC					*e*		22 54 34.8
SWN1	Swindon	148.96	4		*e*P	PKPbc	22 54 33.1 -0.3
RAZG	Razgrad	149.00	323	⇓	P	PKPbc	22 54 33.4 -0.5
NKC	Novy Kostel	149.12	346		*e*PKHKP	PKPpre	22 54 34.5
NKC					*e*		22 54 41.2
NKC	Novy Kostel	149.12	346	⇑	*e*PKP	PKiKP	22 54 34.5 -0.4
NKC					*e*PKPAB	PKPab	22 54 41.2 +0.6
LOT	Lotru	149.14	329	⇑	P	PKPbc	22 54 34.2 -0.1
KRUC	Moravsky	149.15	341		*e*PKP	PKPdf	22 54 29.1 0.0
KRUC					*e*		22 54 34.3
KRUC					*e*		22 54 41.1
KRUC					*e*		22 56 47.6
HUMR	Humele	149.18	326	⇓	P	PKPbc	22 54 34.1 -0.2
PSBA	Serra de Santa	149.18	48		*e*PKPdf	PKiKP	22 54 35.1 -0.3
TREC	Trest	149.21	342		*e*PKHKP	PKPpre	22 54 34.7
TREC					*e*		22 54 41.5
TREC	Trest	149.21	342	⇑	*e*PKP	PKiKP	22 54 34.7 -0.4
TREC					*e*PKPAB	PKPab	22 54 41.5 +0.5
DEV	Deva	149.24	330	⇑	P	PKiKP	22 54 35.7 +0.5
DEV	Deva	149.24	330	⇑	PKP2	PKiKP	22 54 35.7 +0.5
BSZH	Besenyszg	149.27	335	⇑	P	PKiKP	22 54 35.5 +0.3
ADH	Angra Heroismo	149.30	48		*e*PKPdf	PKiKP	22 54 35.8 +0.3
SMOL	Smolenice	149.30	339		*e*PKHKP	PKPpre	22 54 35.3
SMOL					*e*		22 54 42.2
COPA	Copaceanca	149.33	326	⇑	P	PKPbc	22 54 34.2 -0.4
PSCM	Serra do Cume	149.36	47		*e*PKPdf	PKiKP	22 54 36.0 +0.3
ZVC	Zvikov	149.44	344		*e*PKPAB	PKPab	22 54 42.7 +0.8
MODS	Modra-Piesok	149.47	339		*e*PKHKP	PKPpre	22 54 35.9
MODS					*e*		22 54 43.5
MODS	Modra-Piesok	149.47	339		*e*PKP	PKiKP	22 54 35.9 +0.3
MODS					*e*		22 54 43.5
SZH	Strazhitsa	149.49	324		P	PKPbc	22 54 35.3 +0.2
SIRR	Siria	149.51	332	⇑	P	PKiKP	22 54 35.4 -0.4
SRO	Srobarova	149.59	337		*e*PKHKP	PKPpre	22 54 35.7
SRO					*e*		22 54 43.4
SRO	Srobarova	149.59	337		*e*PKP	PKiKP	22 54 35.7 -0.1
SRO					*e*		22 54 43.4
UCC	Uccle	149.71	356		*d*PKP	PKPbc	22 54 35.5 +0.2
UCC					*d*PKPab	PKPab	22 54 42.8 -0.1
MEM	Membach	149.77	354		*d*PKPdf	PKPdf	22 54 30.4 +0.3
MEM					*d*PKP	PKPbc	22 54 35.5 0.0
MEM					*d*PKPab	PKPab	22 54 43.7 +0.4
BTNL	Ternell	149.78	354		*d*PKP	PKPbc	22 54 35.6 0.0
BTNL					*d*PKPab	PKPab	22 54 42.2 -1.1
BSTI	Sart Tilman	149.84	355		*d*PKP	PKiKP	22 54 36.0 -0.2
AMBH	Ambrzfalva	149.84	333	⇓	P	PKiKP	22 54 36.6 +0.2
KHC	Kasperske Hory	149.88	344		*e*PKHKP	PKPpre	22 54 30.9
KHC					*e*		22 54 44.6
KHC	Kasperske Hory	149.88	344		*e*PKPDF	PKPdf	22 54 30.9 +0.6
KHC				⇑	*e*PKP	PKiKP	22 54 36.3 -0.2
KHC					*e*PKPAB	PKPab	22 54 44.6 +0.8
KHC					*ep*PKP	pPKPab	22 56 53.5 +4.6
BAND	Balkesir-Ban	149.96	317	⇓	P	PKPbc	22 54 35.8 -0.5
CKRC	Cesky Krumlov	149.97	343		*e*PKHKP	PKPpre	22 54 30.9
CKRC	Cesky Krumlov	149.97	343		*e*PKPDF	PKPdf	22 54 30.9 +0.4
CKRC				⇑	*e*PKP	PKiKP	22 54 36.6 -0.1
SRE	Strehaia	149.99	328	⇑	P	PKiKP	22 54 37.3 +0.5
SRE	Strehaia	149.99	328	⇑	PKHKP	PKPpre	22 54 37.3
BCLA	Clavier	150.02	355		*d*PKP	PKPbc	22 54 35.8 -0.2
BCLA					*d*PKPab	PKPab	22 54 44.1 -0.1
BHOU	Houvegnez	150.02	354		*d*PKP	PKPbc	22 54 36.6 0.0
BHOU					*d*PKPab	PKPab	22 54 44.6 +0.3
BZS	Buzias	150.03	331	⇓	P	PKPbc	22 54 35.1 -1.1
BZS	Buzias	150.03	331	⇓	PKHKP	PKPpre	22 54 35.1
BGES	Gesves	150.07	355		*d*PKP	PKiKP	22 54 36.5 -0.3
BGES					*d*PKPab	PKPab	22 54 44.3 -0.2
WINA	Alland / Wiene	150.09	340		*i* PKiKP	PKiKP	22 54 36.9 0.0
	SNR=14						
GEC2	GERESS Array S	150.11	344			PKPdf	22 54 30.1 -0.7
GEC2					PKPbc	PKPbc	22 54 36.2 -0.3
GERES	GERESS Array B	150.11	344		PKP	PKPdf	22 54 30.9 +0.1
	comp=Z,1.8nm,0.9s,baz=90,slow=0.3,SNR=20						
GERES					PKPbc	PKPbc	22 54 36.7 +0.2
	comp=Z,16nm,0.7s,baz=16,slow=2.1,SNR=108						
GERES					PKPab	PKPab	22 54 45.2 +0.3
	comp=Z,5.3nm,0.5s,baz=26,slow=4.9,SNR=12						
GERES					pPKPbc	pPKPdf	22 56 43.5 +1.6
	comp=Z,0.6nm,0.7s,baz=45,slow=0.4,SNR=1.6						
GERES	GERESS Array B	150.11	344			PKPdf	22 54 29.8 -0.9
GERES						PKPbc	22 54 36.1 -0.3
GERES						PKPab	22 54 44.5 -0.4
PLVB	Pleven	150.15	325	⇑	P	PKiKP	22 54 36.9 -0.2
BMRD	Maredsous	150.17	356		*d*PKPdf	PKPdf	22 54 31.0 +0.3
BMRD					*d*PKP	PKiKP	22 54 36.8 -0.2
BMRD					*d*PKPab	PKPab	22 54 44.8 -0.1
HERR	Herculane	150.21	329	⇓	P	PKPbc	22 54 36.4 -0.3
RCHB	Rochefort	150.29	355		*d*PKP	PKPbc	22 54 36.9 +0.2
CONA	Conrad Observa	150.32	340		*i* PKiKP	PKiKP	22 54 37.4 -0.1
	comp=Z,39nm,1.2s,SNR=22						
CONA					*e*PKP	PKPab	22 54 46.4 +0.7
	comp=Z,92nm,1.9s						
BAIL	Bailesti	150.38	327	⇑	P	PKiKP	22 54 37.8 +0.2
RONA	Rosalia, Austr	150.38	340		*i* PKiKP	PKiKP	22 54 37.5 -0.1
	comp=Z,30nm,1.0s,SNR=33						
RONA					*e*PKP	PKPab	22 54 46.6 +0.6
	comp=Z,78nm,1.7s						
DOU	Dourbes	150.39	356		*d*PKP	PKiKP	22 54 37.3 -0.2
DOU					*d*PKPab	PKPab	22 54 45.8 0.0
BANR	Banloc	150.42	331	⇑	P	PKiKP	22 54 37.7 +0.1
BALB	Balikesir	150.49	316			PKPbc	22 54 36.4 -1.1
DIM	Dimitrovgrad	150.49	322		P	PKiKP	22 54 37.9 0.0
VALD	Valchedram	150.56	327		P	PKiKP	22 54 37.9 -0.1
MDVR	Moldovita	150.62	330	⇓	P	PKPbc	22 54 37.3 -0.4
MANT	Manisa	150.63	313			PKPbc	22 54 37.5 -0.6
MPEP	Malo Peshtene	150.64	326		P	PKiKP	22 54 38.2 0.0
WLF	Walferdange	150.69	354		PKIKP	PKPbc	22 54 37.4 -0.3
WLF	Walferdange	150.69	354			PKPdf	22 54 31.6 +0.1
WLF					PKPbc	PKPbc	22 54 37.4 -0.3
WLF	Walferdange	150.69	354		*d*PKP	PKiKP	22 54 38.4 +0.3
WLF					*d*PKPab	PKPab	22 54 47.0 -0.1
MORH	Mrgy, Hungar	150.80	335	⇓	*i*P	PKPbc	22 54 37.8 -0.2
MOA	Molln	150.87	342		*i* PKP	PKPbc	22 54 38.0 -0.1
	comp=Z,38nm,2.0s,SNR=11						
MOA					*e*PKP	PKPab	22 54 48.6 +0.6
	comp=Z,86nm,1.8s						
KDZ	Kurdzhali	150.89	322		P	PKPbc	22 54 38.3 -0.1
ALN	Alexandroupoli	150.93	320		PKIKP	PKPbc	22 54 36.8 -1.6
ALN	Alexandroupoli	150.93	320			PKPbc	22 54 36.8 -1.6
PGB	Panagyurishte	150.98	324		P	PKPbc	22 54 38.6 0.0
ARSA	Arzberg	151.03	340		*i* PKP	PKPbc	22 54 38.2 -0.3
	comp=Z,55nm,2.3s,SNR=6.0						
ARSA					*e*PKP	PKPab	22 54 49.0 +0.3
	comp=Z,34nm,2.0s						
FRGS	Fruska Gora	151.18	333	⇓	*i*P	PKPbc	22 54 38.7 -0.2
BIOA	Bad Ischl, Aus	151.19	343		*i* PKP	PKPbc	22 54 38.5 -0.4
	comp=Z,14nm,1.0s,SNR=10						
BIOA					*e*PKP	PKPab	22 54 49.9 +0.5
	comp=Z,70nm,1.4s						
RZN	Rozhen	151.20	322		P	PKPbc	22 54 39.2 -0.1
BLSH	Balsha	151.23	326		P	PKiKP	22 54 39.8 +0.3
BEHE	Becsehely	151.28	338		*e*P	PKiKP	22 54 39.3 -0.1
PLNA	Plana	151.41	325		P	PKiKP	22 54 40.1 +0.1
VTS	Vitosha	151.42	325		P	PKPbc	22 54 39.8 +0.1
SESA	Seetaler Alpe,	151.44	341		*i* PKP	PKPdf	22 54 32.2 -0.8
	comp=Z,7.4nm,1.0s,SNR=18						
SESA					*e*PKP	PKPbc	22 54 39.4 -0.3
	comp=Z,98nm,1.0s						
SESA					*e*PKP	PKPab	22 54 50.9 +0.2
	comp=Z,103nm,1.1s						
BOVS	Bovan	151.47	328	⇓	P	PKPbc	22 54 39.3 -0.3
LESA	Schwarzleotal	151.69	344		*i* PKP	PKPdf	22 54 32.7 -0.5
	comp=Z,11nm,1.4s						
LESA					*i* PKP	PKPbc	22 54 39.7 -0.4
	comp=Z,12nm,1.0s,SNR=9.8						
LESA					*e*PKP	PKPab	22 54 51.8 +0.3
	comp=Z,80nm,1.5s						
SOKA	Soboth	151.69	340		*e*PKP	PKPdf	22 54 32.0 -1.2
	comp=Z,34nm,2.3s						
SOKA					*i* PKP	PKPbc	22 54 39.5 -0.6
	comp=Z,29nm,1.3s,SNR=11						
SOKA					*e*PKP	PKPab	22 54 51.1 -0.5
	comp=Z,73nm,2.0s						
PERS	Pernice	151.70	340		*i* PKPdf	PKPdf	22 54 32.3 -0.9
PERS					*i* PKPbc	PKPbc	22 54 39.5 -0.6
TEKS	Tekeris	151.78	332	⇓	*i*P	PKPbc	22 54 39.9 -0.4
KBA	Koelnbreinsper	151.83	343		*i* PKP	PKPbc	22 54 39.7 -0.8
	comp=Z,16nm,1.0s,SNR=14						
KBA					*e*PKP	PKPab	22 54 52.4 +0.1
	comp=Z,42nm,1.8s						
OBKA	Obir	151.99	341		*i* PKP	PKPdf	22 54 32.8 -0.9
	comp=Z,25nm,2.4s						
OBKA					*i* PKP	PKPbc	22 54 39.8 -1.0
	comp=Z,76nm,2.4s,SNR=5.1						
WATA	Walderalm	152.04	345		*i* PKP	PKPdf	22 54 33.1 -0.7
	comp=Z,68nm,3.2s,SNR=13						
WATA					*i* PKP	PKPbc	22 54 40.5 -0.4
	comp=Z,16nm,1.0s						
WATA					*e*PKP	PKPab	22 54 53.1 0.0
	comp=Z,69nm,1.4s						
GOLS	Golise	152.08	339		*e*PKPbc	PKPbc	22 54 40.8 -0.2
GOLS					*i* PKPab	PKPab	22 54 53.0 -0.1
RETA	Reutte	152.08	347		*e*PKP	PKPdf	22 54 33.3 -0.4
	comp=Z,18nm,2.2s						
RETA					*i* PKP	PKPbc	22 54 40.8 -0.1
	comp=Z,104nm,2.9s,SNR=6.8						
RETA					*e*PKP	PKPab	22 54 52.8 -0.4
	comp=Z,45nm,1.4s						
WTTA	Wattenberg	152.10	345		*e*PKP	PKPdf	22 54 33.5 -0.5
	comp=Z,8.4nm,1.2s						
WTTA					*i* PKP	PKPbc	22 54 41.1 0.0
	comp=Z,35nm,1.2s,SNR=14						
WTTA					*e*PKP	PKPab	22 54 53.8 +0.4
	comp=Z,45nm,1.1s						
MOTA	Moosalm	152.14	346		*i* PKP	PKPdf	22 54 33.4 -0.6
	comp=Z,8.6nm,1.2s,SNR=5.4						
MOTA					*e*PKP	PKPbc	22 54 40.8 -0.4
	comp=Z,14nm,1.0s						
MOTA					*e*PKP	PKPab	22 54 53.4 -0.1
	comp=Z,10.0nm,1.0s						
MYKA	Terra Mystica	152.15	342		*e*PKP	PKPdf	22 54 32.6 -1.3
	comp=Z,16nm,2.0s						
MYKA					*i* PKP	PKPbc	22 54 40.3 -0.9
	comp=Z,41nm,1.9s,SNR=11						
MYKA					*e*PKP	PKPab	22 54 52.8 -0.7
	comp=Z,52nm,1.6s						
SQTA	Sankt Quirin	152.24	346		*e*PKP	PKPdf	22 54 33.6 -0.4
	comp=Z,97nm,4.1s						
SQTA					*i* PKP	PKPbc	22 54 41.2 -0.2
	comp=Z,21nm,1.1s,SNR=8.3						
SQTA					*e*PKP	PKPab	22 54 54.1 +0.2
	comp=Z,69nm,1.9s						
PRED	Cave del Predi	152.34	342		PKPdf	PKPdf	22 54 33.1 -1.0
PRED					PKPbc	PKPbc	22 54 41.4 -0.2
PRED					PKPab	PKPab	22 54 53.2 -1.1
ABTA	Abfaltersbach	152.36	344		*i* PKP	PKPdf	22 54 33.2 -1.0
	comp=Z,29nm,1.5s,SNR=8.1						
ABTA					*i* PKP	PKPbc	22 54 40.9 -0.6
	comp=Z,29nm,1.0s						
ABTA					*e*PKP	PKPab	22 54 53.4 -1.0
	comp=Z,40nm,1.2s						
BBLS	Lazi&#263i	152.38	331		*e*P	PKPbc	22 54 41.2 -0.5
LJU	Ljubljana	152.41	340		*e*PKPdf	PKPdf	22 54 33.7 -0.5
LJU					*i* PKPbc	PKPbc	22 54 41.6 0.0
LJU					*e*PKPab	PKPab	22 54 53.8 -0.8
DAVA	Damuels	152.46	348		*e*PKP	PKPdf	22 54 33.1 -1.3
	comp=Z,5.2nm,1.5s						
DAVA					*e*PKP	PKPbc	22 54 41.8 -0.1
	comp=Z,24nm,1.5s,SNR=6.7						
DAVA					*e*PKP	PKPab	22 54 54.7 -0.2
	comp=Z,46nm,1.5s						
FETA	Feichten	152.53	346		*e*PKP	PKPdf	22 54 34.4 -0.2
	comp=Z,15nm,1.4s,SNR=8.4						
FETA					*i* PKP	PKPbc	22 54 42.1 0.0
	comp=Z,90nm,3.1s						
FETA					*e*PKP	PKPab	22 54 55.2 -0.1
	comp=Z,39nm,1.4s						
SJES	Sjenica	152.59	330		*e*P	PKPbc	22 54 41.6 -0.6
BLY	Banja Luka	152.59	335	⇑	P	PKiKP	22 54 42.5 +0.4
BLY	Banja Luka	152.59	335			PKPbc	22 54 41.0 -1.0
BLY	Banja Luka	152.59	335		*e*P	PKiKP	22 54 42.1 -0.1
CEY	Cerknica	152.72	340		*i* PKPbc	PKPbc	22 54 42.1 -0.3
STAL	STALIGIAL	152.75	343			PKPdf	22 54 33.6 -1.1
SABO	M.te Sabotino	152.75	341			PKPdf	22 54 34.1 -0.6
CIMO	Cimolais	152.78	343			PKPdf	22 54 33.7 -1.0
DAVOX	Davos/Dischmat	152.94	347		PKP	PKPdf	22 54 35.6 +0.4
	comp=Z,3.6nm,0.7s,baz=25,slow=1.8,SNR=10.0						
DAVOX					PKPbc	PKiKP	22 54 43.3 +0.2
	comp=Z,28nm,0.5s,baz=324,slow=2.8,SNR=14						
DAVOX					PKPab	PKPab	22 54 57.2 +0.2
	comp=Z,10nm,0.5s,baz=336,slow=15,SNR=3.6						
TRI	Trieste	152.95	341		PKIKP	PKPbc	22 54 41.9 -0.8
TRI							22 54 55.9
TRI	Trieste	152.95	341			PKPbc	22 54 41.9 -0.8
TRI						PKPab	22 54 55.9 -1.0
FUORN	Ofenpass-Fuorn	153.01	347			PKPdf	22 54 34.4 -1.0
FUORN					PKPbc	PKPbc	22 54 42.9 -0.3
UPM	Unac-Piva	153.12	331		*e*P	PKPbc	22 54 42.3 -1.2
TUE	Stuetta	153.34	348			PKPdf	22 54 34.8 -1.0
BRY	Bratogost	153.53	331		*e*P	PKPbc	22 54 43.6 -0.7
LIT	Litokhoron	153.53	322		PKIKP	PKPbc	22 54 42.9 -1.4
LIT	Litokhoron	153.53	322			PKPbc	22 54 42.9 -1.4
PDG	Podgorica	153.56	330		*e*P	PKPbc	22 54 43.5 -0.7
DRME	Dracevica, Mon	153.78	329		*e*P	PKPbc	22 54 44.2 -0.5
TEOL	Teolo	153.86	344		PKPdf	PKPdf	22 54 36.2 -0.1
TEOL					PKPbc	PKPbc	22 54 44.6 -0.2
TEOL						PKPab	22 55 00.3 -0.5
IDI	Anoyia	154.77	311		PKP	PKPdf	22 54 37.2 -0.7
	comp=Z,8.7nm,1.0s,baz=25,slow=0.8,SNR=4.0						
IDI					PKPab	PKPab	22 55 04.0 -1.2
	comp=Z,10nm,0.4s,baz=335,slow=5.4,SNR=7.9						
PVRL	Vila Real	157.85	19		*e*PKPab	PKPab	22 55 19.3 +1.1
PVIS	Viseu	158.31	20		*e*PKPab	PKPab	22 55 20.4 +0.3
PCAS	Casmilo, Conde	158.71	22		*e*PKPab	PKPab	22 55 22.1 +0.2
MTE	Manteigas	158.71	19		*e*PKPdf	PKPdf	22 54 42.5 -0.2
PSBE	So Bento	159.08	23		*e*PKPab	PKPab	22 55 23.9 +0.4
PSARD	Sardoal	159.23	22		*e*PKPab	PKPab	22 55 24.2 0.0
PCBR	Castelo Branco	159.24	20		*e*PKPdf	PKPdf	22 54 44.4 +1.1
PCBR					*e*PKPab	PKPab	22 55 23.2 -1.0
PARRA	Arraiolos	159.97	22		*e*PKPab	PKPab	22 55 27.4 0.0
PESTR	Estremoz	160.08	21		*e*PKPab	PKPab	22 55 28.1 +0.2
MOE	Montemor	160.11	23		*e*PKPab	PKPab	22 55 28.5 +0.4
ESBB	Sonseca Array	160.33	13			PKPab	22 55 28.5 -0.5
ESDC	Sonseca Array	160.33	13		PKP	PKPdf	22 54 44.3 -0.3
	comp=Z,1.6nm,1.1s,baz=19,slow=3.1,SNR=7.1						
ESDC					PKPab	PKPab	22 55 29.3 +0.3
	comp=Z,8.3nm,1.0s,baz=343,slow=4.3,SNR=24						
ESDC					PP	PP	22 59 12.9 +0.4
	comp=Z,0.8nm,0.9s,baz=335,slow=6.7,SNR=2.7						
ESDC	Sonseca Array	160.33	13			PKPdf	22 54 44.4 -0.2
ESDC						PKPab	22 55 28.2 -0.7
PBAR	Barrancos	160.89	21		*e*PKPdf	PKPdf	22 54 46.3 +1.2
PBAR					*e*PKPab	PKPab	22 55 31.7 +0.3
KEST	Kesra	163.38	337		PKPab	PKPab	22 55 42.5 -0.1
	comp=Z,8.0nm,0.6s,baz=20,slow=0.7,SNR=20						
DBIC	Dimbokro	164.88	155		PKP	PKPdf	22 54 49.1 -0.5
	comp=Z,8.1nm,0.8s,baz=166,slow=1.8,SNR=7.9						
DBIC					PKPab	PKPab	22 55 50.3 +0.8
	comp=Z,30nm,0.8s,baz=209,slow=5.0,SNR=22						
DBIC					PP	PP	22 59 38.5 +2.2
	comp=Z,2.0nm,0.7s,baz=211,slow=6.9,SNR=3.2						
DBIC	Dimbokro	164.88	155			PKPdf	22 54 48.4 -1.2
DBIC						PKPab	22 55 50.0 +0.4
MD01	Midelt array s	166.47	23			PKPdf	22 54 50.2 -0.3
MD01						PKPab	22 55 56.1 -0.3
MDT	Midelt	166.57	23		PKP	PKPdf	22 54 50.9 +0.3
	comp=Z,6.7nm,1.0s,baz=343,slow=3.8,SNR=6.6						
MDT					PKPab	PKPab	22 55 57.1 +0.4
	comp=Z,3.8nm,0.8s,baz=280,slow=3.3,SNR=4.6						
TORD	Torodi Ar. Bea	172.67	181		PKP	PKPdf	22 54 53.9 -0.6
	comp=Z,5.7nm,0.8s,baz=164,slow=12,SNR=29						
TORD					PKPab	PKPab	22 56 23.7 -0.2
	comp=Z,7.2nm,0.8s,baz=173,slow=3.8,SNR=21						
TORD					PP	PP	23 00 14.3 -0.3
	comp=Z,2.6nm,0.8s,baz=165,slow=4.1,SNR=6.1						

IDC ***25*** *22:39:51.8±2.2,20.˚26S×178.˚48W,h544*^{km}*,23*^{km}*, mb3.5/12, mbtmp4.5/14, Error ellipse: s-maj=28.4km s-min=14.6km az=151.0*

NEIC ***25*** *22:39:51.8±2.2,20.˚5S±0.˚1×178.˚3W±0.˚1, h548*^{km}*±7*^{km}*, mb4.4/40, Error ellipse: s-maj=22.0km s-min=15.6km az=146.0*

ISC 25 22:39:51.5±0.5,20.˚3S±0.˚1×178.˚34W±0.˚08, h550^{km}**, n107,**
σ1§11/106, mb4.3/29, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op ID	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.29	307	P	P	P	22 41 17.9	+2.2
	27nm,0.4s,baz=152,slow=12,SNR=5.2							
NIUE	Niue	8.02	82	P	P	P	22 41 50.0	+0.6
AFI	Afiamalu	8.96	45	P	P	P	22 41 57.8	-1.2
	33nm,0.3s,baz=141,slow=7.6,SNR=3.3							
AFI				S	S	S	22 43 38.2	-5.4

MLY	**Manley**	**87.70**	**11**	P	**P**	**22 51 41.2**	**-0.3**
MLY				IAmb	IAmb	22 51 43.2	
	comp=Z,7.8nm,1.4s						
CCB	**Clear Creek Bu**	**87.93**	**13**	P	**P**	**22 51 42.3**	**-0.1**
MCMT	**McKenzie Canyo**	**88.04**	**40**	P	**P**	**22 51 44.8**	**+1.1**
ILAR	**Eielson Array**	**88.23**	**13**	P	**P**	**22 51 43.9**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=218,slow=5.5,SNR=16						
	comp=Z,1.7nm,0.5s						
ILAR	**Eielson Array**	**88.23**	**13**	P	**P**	**22 51 43.6**	**-0.2**
M30M	**Minto, Yukon**	**88.92**	**18**	P	**P**	**22 51 48.0**	**+0.9**
M30M				IAmb	IAmb	22 51 49.2	
	comp=Z,5.0nm,0.9s						
PD31	**Pinedale Array**	**89.07**	**43**	P	**P**	**22 51 49.2**	**+0.7**
PD31				IAmb	IAmb	22 51 50.4	
	comp=Z,1.9nm,0.7s						
PDAR	**Pinedale Array**	**89.07**	**43**	P	**P**	**22 51 49.8**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=209,slow=4.4,SNR=9.5						
	comp=Z,1.3nm,0.6s						
PDAR	**Pinedale Array**	**89.07**	**43**	P	**P**	**22 51 49.3**	**+0.8**
ZALV	**Zalesovo Beam**	**110.17**	**321**	PKiKP	**PKiKP**	**22 57 19.6**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=100,slow=1.1,SNR=2.8						
MKAR	**Makanchi Array**	**110.86**	**313**	PKiKP	**PKiKP**	**22 57 20.9**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=86,slow=2.2,SNR=3.8						
MKAR	**Makanchi Array**	**110.86**	**313**		**PKiKP**	**22 57 21.2**	**-1.0**
KURBB	**Kurchatov Arra**	**113.72**	**317**	PKiKP	**PKiKP**	**22 57 25.8**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=103,slow=1.9,SNR=4.4						
BVAR	**Borovoye Array**	**118.75**	**320**	PKP	**PKPdf**	**22 57 36.6**	**-0.6**
	comp=Z,2.7nm,0.4s,baz=153,slow=1.8,SNR=5.9						
ARCES	**ARCESS Array B**	**128.71**	**350**	PKP	**PKPdf**	**22 57 55.5**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=94,slow=0.8,SNR=5.2						
FINES	**FINESS Array B**	**135.53**	**344**	PKP	**PKPdf**	**22 58 09.9**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=64,slow=3.2,SNR=1.5						
HFS	**Hagfors**	**139.34**	**351**	PKhKP	PKPpre	22 58 07.7	
	comp=Z,1.8nm,0.3s,baz=56,slow=2.7,SNR=11						
AKASG	**Malin Array Be**	**142.72**	**331**	PKhKP	PKPpre	22 58 18.9	
	comp=Z,5.6nm,0.6s,baz=44,slow=4.2,SNR=10						
LODK	**Lodwar**	**143.11**	**247**	PKPdf	PKPab	22 58 22.2	+0.4
EKA	**Eskdalemuir Ar**	**144.88**	**5**	PKP	**PKPdf**	**22 58 25.9**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=333,slow=2.4,SNR=6.1						
BRTR	**Keskin Array B**	**146.50**	**312**	PKP	**PKPdf**	**22 58 29.1**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=128,slow=2.4,SNR=6.7						
BRTR				PKPbc	**PKPbc**	**22 58 31.4**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=127,slow=2.5,SNR=2.8						
BUR08	**Bucovina Ar. S**	**146.76**	**330**	PKPbc	**PKPbc**	**22 58 32.3**	**+0.2**
BURAR	**Bucovina Array**	**146.77**	**330**	PKPbc	**PKPbc**	**22 58 32.6**	**+0.4**
MMAI	**Mount Meron Ar**	**147.46**	**300**	PKPbc	**PKPbc**	**22 58 35.1**	**+0.7**
	comp=Z,3.4nm,0.5s,baz=82,slow=6.8,SNR=9.8						
OSTC	**Ostas**	**147.73**	**343**	*e*PKP	**PKPbc**	**22 58 35.6**	**+1.2**
STEB	**Steborice**	**147.81**	**340**	*e*PKP	**PKPbc**	**22 58 35.4**	**+0.7**
CLL	**Collm**	**147.84**	**347**		**PKPbc**	**22 58 34.2**	**-0.5**
CLL	**Collm**	**147.84**	**347**	*i* PKPbc	**PKPbc**	**22 58 35.1**	**+0.5**
	comp=Z,15nm,1.0s						
DPC	**Dobruska-Polom**	**147.88**	**342**	*e*PKP	**PKPbc**	**22 58 35.7**	**+0.8**
MLR	**Muntele Rosu**	**147.92**	**327**	PKPbc	**PKPbc**	**22 58 34.8**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=222,slow=14,SNR=3.6						
MLR	**Muntele Rosu**	**147.92**	**327**		**PKPbc**	**22 58 34.1**	**-1.1**
KRLC	**Kraliky**	**147.99**	**342**	*e*PKP	**PKPbc**	**22 58 35.9**	**+0.7**
BRG	**Berggiesshubel**	**148.03**	**345**	P	**PKPab**	**22 58 40.1**	**+0.2**
BRG				Amp		22 58 41.2	
	comp=Z,3.6nm,0.7s						
PVCC	**Panska Ves**	**148.19**	**344**	*e*PKP	**PKPbc**	**22 58 36.5**	**+0.9**
MAUC	**Maruska**	**148.29**	**340**	*e*PKP	**PKPbc**	**22 58 36.9**	**+1.0**
CSS	**Mathiatis**	**148.55**	**304**	PKPbc	**PKPbc**	**22 58 36.4**	**-0.6**
PRU	**Pruhonice**	**148.69**	**344**	*e*PKP	**PKPbc**	**22 58 37.4**	**+0.6**
VRAC	**Vranov**	**148.73**	**341**	*e*PKP	**PKPbc**	**22 58 36.2**	**-0.8**
JAVC	**Velka Javorina**	**148.78**	**339**	*e*PKP	**PKiKP**	**22 58 38.3**	**+0.1**
KRUC	**Moravsky**	**149.01**	**341**	*e*PKP	**PKPbc**	**22 58 37.9**	**+0.3**
TREC	**Trest**	**149.07**	**342**	*e*PKP	**PKPbc**	**22 58 38.2**	**+0.4**
ZVC	**Zvikov**	**149.29**	**344**	*e*PKP	**PKPbc**	**22 58 39.2**	**+0.9**
KHC	**Kasperske Hory**	**149.73**	**344**	*e*PKP	**PKPbc**	**22 58 40.0**	**+0.6**
CKRC	**Cesky Krumlov**	**149.83**	**343**	*e*PKP	**PKPbc**	**22 58 40.2**	**+0.6**
GERES	**GERESS Array B**	**149.96**	**344**	PKPbc	**PKPbc**	**22 58 40.2**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=20,slow=2.6,SNR=9.0						
GERES	**GERESS Array B**	**149.96**	**344**		**PKPbc**	**22 58 39.6**	**-0.4**
MANT	**Manisa**	**150.57**	**314**	PKPbc	**PKPbc**	**22 58 41.1**	**-0.9**
ALN	**Alexandroupoli**	**150.84**	**320**	PKPbc	**PKPbc**	**22 58 40.8**	**-1.4**
SABO	**M.te Sabotino**	**152.61**	**342**	PKPbc	**PKPbc**	**22 58 44.7**	**-1.4**
DAVOX	**Davos/Dischmat**	**152.79**	**348**	PKPbc	**PKPbc**	**22 58 47.0**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=112,slow=19,SNR=9.0						

*NEIC **25** 22:45:19.9±1.2,20.°4S±0.°1×178.°3W±0.°1,h549km±6km, mb4.4/36,Error ellipse: s-maj=18.1km s-min=15.5km az=133.0*
*IDC **25** 22:45:21.3±1.8,20.°46S×178.°40W,h564km±18km, mb3.7/17,mbtmp4.6/19,Error ellipse: s-maj=17.2km s-min=13.2km az=145.0*
*NOU **25** 22:45:22.5,20.°86S×178.°43W,h541km,mb4.2/14,Fiji Islands Region*

ISC 25 22:45:19.5±0.4,20.°46S±0.°07×178.°28W±0.°07,h550km, n146,σ1°$46/141,mb4.4/34,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**2.27**	**347**	P	**P**	**22 46 35.1**	**+4.5**
MSVF	**Nonsavu**	**4.41**	**307**	P	**P**	**22 46 47.1**	**+2.5**
	19nm,0.4s,baz=125,slow=2.4,SNR=24						
MSVF	**Nonsavu**	**4.41**	**307**	P	**P**	**22 46 47.8**	**+3.2**
MSVF	**Nonsavu**	**4.41**	**307**		**P**	**22 46 47.4**	**+2.7**
GLKZ	**Green Lake**	**8.77**	**178**	P	**P**	**22 47 25.0**	**+0.2**
AFI	**Afiamalu**	**9.00**	**45**	P	**P**	**22 47 27.5**	**+0.1**
	32nm,0.5s,baz=9.7,slow=3.4,SNR=6.2						
AFI				S	**S**	**22 49 06.2**	**-6.2**
	78nm,0.8s,baz=48,slow=24,SNR=5.5						
AFI	**Afiamalu**	**9.00**	**45**	P	**P**	**22 47 27.3**	**-0.1**
MARNC	**Mare, Loyalty**	**12.83**	**263**	P	**P**	**22 48 07.8**	**+1.2**
DZM	**Mont Dzumac**	**14.34**	**261**	P	**P**	**22 48 22.3**	**0.0**
	2.8nm,0.4s,baz=121,slow=23,SNR=11						
KOUNC	**Koumac, New Ca**	**16.34**	**267**	P	**P**	**22 48 43.6**	**+1.3**
KOUNC	**Koumac, New Ca**	**16.34**	**267**	P	**P**	**22 48 41.9**	**-0.4**
OUZ	**Omahuta**	**16.36**	**204**	P	**P**	**22 48 43.9**	**+1.7**
GRZ	**Great Barrier**	**16.66**	**198**	P	**P**	**22 48 47.4**	**+2.4**
WCZ	**Waipu Caves**	**16.73**	**201**	P	**P**	**22 48 48.0**	**+2.4**
WIAZ	**Waiheke Island**	**17.26**	**198**	P	**P**	**22 48 52.6**	**+2.2**
MXZ	**Matakaoa Point**	**17.30**	**189**	P	**P**	**22 48 51.1**	**+0.4**
MXZ	**Matakaoa Point**	**17.30**	**189**	P	**P**	**22 48 51.1**	**+0.4**
MXZ	**Matakaoa Point**	**17.30**	**189**	P	**P**	**22 48 51.4**	**+0.7**
MBAZ	**Motutapu North**	**17.31**	**199**	P	**P**	**22 48 53.3**	**+2.5**
ETAZ	**East Tamaki Re**	**17.47**	**198**	P	**P**	**22 48 54.5**	**+2.2**
WMGZ	**Waiomatatini S**	**17.54**	**189**	P	**P**	**22 48 54.0**	**+1.1**
MKAZ	**Moumakai**	**17.54**	**198**	P	**P**	**22 48 54.9**	**+1.9**
HAZ	**Te Kaha**	**17.57**	**190**	P	**P**	**22 48 53.6**	**+0.3**
AWAZ	**Awhitu Peninsu**	**17.66**	**199**	P	**P**	**22 48 56.0**	**+1.9**
RUGZ	**Raukumara Rang**	**17.79**	**191**	P	**P**	**22 48 55.4**	**0.0**
PUZ	**Puketiti**	**17.81**	**189**	P	**P**	**22 48 56.2**	**+0.8**
TGRZ	**Tauranga**	**17.85**	**194**	P	**P**	**22 48 58.1**	**+2.3**
TWGZ	**Tauwhareparae**	**17.95**	**190**	P	**P**	**22 48 57.9**	**+1.1**
TOZ	**Tahuroa Road**	**18.04**	**196**	P	**P**	**22 48 59.0**	**+1.5**
TOZ	**Tahuroa Road**	**18.04**	**196**	P	**P**	**22 48 59.6**	**+2.0**
MWZ	**Matawai**	**18.18**	**191**	P	**P**	**22 48 58.7**	**-0.2**
URZ	**Urewera**	**18.18**	**192**	P	**P**	**22 48 56.6**	**-2.2**
	7.7nm,0.4s,baz=253,slow=3.0,SNR=12						
URZ				S	**S**	**22 51 51.3**	**-6.0**
	4.0nm,0.8s,baz=331,slow=23,SNR=1.7						
URZ	**Urewera**	**18.18**	**192**	P	**P**	**22 48 58.0**	**-0.8**
URZ	**Urewera**	**18.18**	**192**	P	**P**	**22 48 57.0**	**-1.9**
RAGZ	**Rawiri**	**18.36**	**191**	P	**P**	**22 49 00.2**	**-0.3**
BKZ	**Black Stump Fm**	**19.18**	**192**	P	**P**	**22 49 06.5**	**-1.5**
BFZ	**Birch Farm**	**20.69**	**192**	P	**P**	**22 49 21.1**	**-0.5**
QRZ	**Quartz Range**	**21.76**	**199**	P	**P**	**22 49 31.8**	**+0.6**
KHZ	**Kahutara**	**22.95**	**196**	P	**P**	**22 49 40.9**	**-0.9**
JCZ	**Jackson Bay**	**25.90**	**202**	P	**P**	**22 50 08.2**	**+0.2**
EIDS	**Eidsvold**	**28.61**	**254**	P	**P**	**22 50 32.8**	**+0.8**
EIDS	**Eidsvold**	**28.61**	**254**	P	**P**	**22 50 32.3**	**+0.3**
EIDS				IAmb	IAmb	22 51 15.1	
	comp=Z,18nm,1.4s						
ARMA	**Armidale**	**28.85**	**244**	P	**P**	**22 50 35.5**	**+1.3**
ARMA	**Armidale**	**28.85**	**244**	P	**P**	**22 50 34.4**	**+0.3**
ARMA				IAmb	IAmb	22 50 47.0	
	comp=Z,16nm,1.2s						
CTA	**Charters Tower**	**33.24**	**264**	P	**P**	**22 51 12.0**	**+0.3**
	comp=Z,14nm,0.5s,baz=87,slow=10,SNR=24						
	comp=Z,14nm,0.5s						
CTAO	**Charters Tower**	**33.24**	**264**	P	**P**	**22 51 11.5**	**-0.2**
PMG	**Port Moresby**	**35.08**	**283**	P	**P**	**22 51 27.3**	**+0.1**
	comp=Z,7.8nm,0.4s,baz=338,slow=8.8,SNR=1.6						
	comp=Z,7.8nm,0.4s						
PMG	**Port Moresby**	**35.08**	**283**	P	**P**	**22 51 27.0**	**-0.2**
COEN	**Coen**	**37.32**	**274**	P	**P**	**22 51 44.2**	**-1.4**
COEN				IAmb	IAmb	22 51 50.8	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**37.57**	**244**	P	**P**	**22 51 47.4**	**-0.1**
	comp=Z,2.5nm,0.4s,baz=87,slow=12,SNR=8.0						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**37.57**	**244**	P	**P**	**22 51 48.5**	**+1.0**
BBOO	**Buckleboo**	**42.33**	**243**	P	**P**	**22 52 25.4**	**-0.3**
BBOO				IAmb	IAmb	22 52 56.6	
	comp=Z,26nm,1.4s						
JAY	**Jayapura**	**43.78**	**289**	P	**P**	**22 52 37.5**	**+0.3**
	comp=Z,15nm,0.5s,baz=163,slow=5.8,SNR=22						
	comp=Z,15nm,0.5s						
AS31	**Alice Springs**	**44.27**	**257**		**P**	**22 52 40.7**	**-0.2**
AS31				IAmb	IAmb	22 52 42.0	
	comp=Z,8.1nm,0.5s						
ASAR	**Alice Springs**	**44.28**	**257**	P	**P**	**22 52 40.8**	**-0.1**
	comp=Z,17nm,0.5s,baz=89,slow=8.0,SNR=112						
ASAR				PcP	**PcP**	**22 54 13.4**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=104,slow=3.8,SNR=4.2						
ASAR				S	**S**	**22 58 31.4**	**-3.8**
	comp=Z,0.8nm,0.7s,baz=94,slow=15,SNR=5.7						
	comp=Z,17nm,0.5s						
ASAR	**Alice Springs**	**44.28**	**257**	P	**P**	**22 52 39.6**	**-1.3**
ASAR					**PcP**	**22 54 13.4**	**+0.1**
WB0	**Warramunga Arr**	**44.33**	**262**	P	**P**	**22 52 40.8**	**-0.5**
WRA	**Warramunga Arr**	**44.35**	**262**	P	**P**	**22 52 40.7**	**-0.8**
	comp=Z,7.0nm,0.3s,baz=97,slow=7.6,SNR=94						
WRA				S	**S**	**22 58 31.9**	**-4.4**
	comp=Z,0.4nm,0.8s,baz=98,slow=14,SNR=1.9						
	comp=Z,7.0nm,0.3s						
WRA	**Warramunga Arr**	**44.35**	**262**	P	**P**	**22 52 40.6**	**-0.9**
MTN	**Manton Dam**	**48.90**	**271**	P	**P**	**22 53 15.3**	**-0.5**
MTN				IAmb	IAmb	22 53 22.7	
	comp=Z,18nm,1.4s						
FORT	**Forrest**	**49.07**	**247**	P	**P**	**22 53 16.6**	**-0.4**
FORT				IAmb	IAmb	22 53 50.4	
	comp=Z,10nm,1.1s						
KNRA	**Kununurra**	**50.40**	**266**	P	**P**	**22 53 26.3**	**-0.6**
KNRA				IAmb	IAmb	22 53 28.5	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.78**	**262**	P	**P**	**22 53 43.9**	**-0.1**
	comp=Z,4.7nm,0.4s,baz=26,slow=4.1,SNR=9.3						
	comp=Z,4.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**52.78**	**262**	P	**P**	**22 53 43.6**	**-0.3**
SIJI	**Sorong**	**52.98**	**285**	P	**P**	**22 53 45.2**	**-0.2**
	comp=Z,29nm,0.6s,baz=98,slow=9.3,SNR=15						
	comp=Z,29nm,0.6s						
SOEI	**Soe**	**56.24**	**272**		**P**	**22 54 08.3**	**-0.2**
BATI	**Baumata**	**56.67**	**271**	P	**P**	**22 54 09.3**	**-2.0**
	comp=Z,30nm,0.7s,baz=102,slow=8.6,SNR=4.0						
	comp=Z,30nm,0.7s						
CASY	**Casey**	**63.89**	**205**	P	**P**	**22 54 58.4**	**+0.3**
QSPA	**South Pole Qui**	**69.61**	**180**	P	**P**	**22 55 34.6**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=337,slow=0.8,SNR=9.6						
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**69.61**	**180**	P	**P**	**22 55 35.0**	**+1.4**
UGM	**Wanagama**	**69.70**	**269**	P	**P**	**22 55 34.3**	**-0.6**
MJAR	**Matsushiro Arr**	**70.02**	**324**	P	**P**	**22 55 36.8**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=155,slow=5.6,SNR=3.6						
	comp=Z,0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**70.02**	**324**	P	**P**	**22 55 36.2**	**-0.1**
ADK	**Adak**	**72.04**	**1**	P	**P**	**22 55 47.6**	**-0.1**
ADK				IAmb	IAmb	22 55 47.7	
	comp=Z,21nm,1.2s						
JKA	**Kamikawa-asahi**	**73.57**	**332**	P	**P**	**22 55 57.7**	**+1.0**
JKA				IAmb	IAmb	22 56 13.4	
	comp=Z,26nm,1.4s						
SSLB	**Suanglung**	**73.74**	**304**	P	**P**	**22 55 57.0**	**-1.1**
SSLB				IAmb	IAmb	22 56 00.3	
	comp=Z,16nm,1.4s						
UNV	**Unalaska Valle**	**74.69**	**7**	P	**P**	**22 56 02.2**	**-0.6**
PETK	**Petropavlovsk-**	**76.17**	**345**	P	**P**	**22 56 11.2**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=144,slow=5.5,SNR=4.9						
	comp=Z,2.1nm,0.7s						
PETK	**Petropavlovsk-**	**76.17**	**345**	P	**P**	**22 56 11.1**	**+0.1**
SMAI	**San Martin Ant**	**78.74**	**159**	P	**P**	**22 56 25.9**	**+1.1**
NVAR	**Mina Array Bea**	**81.17**	**43**	P	**P**	**22 56 38.2**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=231,slow=8.2,SNR=7.5						
	comp=Z,1.9nm,0.8s						
O16K	**Kokwok River B**	**81.46**	**10**	P	**P**	**22 56 38.0**	**-0.9**
N15K	**Kwethluk River**	**81.69**	**9**	P	**P**	**22 56 41.0**	**+0.8**
N15K				IAmb	IAmb	22 56 56.7	
	comp=Z,14nm,1.2s						
O18K	**Koktuh Hills**	**82.22**	**12**	P	**P**	**22 56 43.0**	**+0.1**
O18K				IAmb	IAmb	22 56 44.4	
	comp=Z,13nm,1.0s						
J05D	**Fort Rock, OR**	**82.23**	**38**	P	**P**	**22 56 45.5**	**+1.9**
J05D				IAmb	IAmb	22 56 47.0	
	comp=Z,9.6nm,0.7s						
M17K	**Holitna River**	**83.28**	**10**	P	**P**	**22 56 49.3**	**+1.1**
M17K				IAmb	IAmb	22 56 51.8	
	comp=Z,16nm,1.4s						
L19K	**White Mountain**	**84.45**	**11**	P	**P**	**22 56 54.5**	**+0.5**
TXAR	**Lajitas Array**	**87.25**	**57**	P	**P**	**22 57 10.9**	**+2.7**
	comp=Z,1.9nm,0.9s,baz=216,slow=6.9,SNR=14						
	comp=Z,1.9nm,0.9s						
TXAR	**Lajitas Array**	**87.25**	**57**	P	**P**	**22 57 08.0**	**-0.2**
MLY	**Manley**	**87.81**	**11**	P	**P**	**22 57 09.5**	**-0.4**
WRH	**Wood River Hil**	**87.82**	**13**	P	**P**	**22 57 09.7**	**-0.2**
WRH				IAmb	IAmb	22 57 11.1	
	comp=Z,4.5nm,0.8s						
CCB	**Clear Creek Bu**	**88.03**	**13**	P	**P**	**22 57 10.8**	**-0.1**
CCB				IAmb	IAmb	22 57 36.6	
	comp=Z,11nm,1.4s						
SNAA	**Sanae**	**88.06**	**179**	P	**P**	**22 57 12.9**	**+1.7**
	comp=Z,2.2nm,0.9s,baz=180,slow=1.0,SNR=8.8						
	comp=Z,2.2nm,0.9s						
ILAR	**Eielson Array**	**88.33**	**13**	P	**P**	**22 57 12.2**	**0.0**
	comp=Z,1.0nm,0.4s,baz=214,slow=5.1,SNR=15						
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**88.33**	**13**	P	**P**	**22 57 11.9**	**-0.3**
PDAR	**Pinedale Array**	**89.11**	**43**	P	**P**	**22 57 17.8**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=218,slow=3.4,SNR=12						
	comp=Z,0.9nm,0.5s						
PDAR	**Pinedale Array**	**89.11**	**43**	P	**P**	**22 57 17.0**	**+0.2**
ZALV	**Zalesovo Beam**	**110.30**	**321**	PKiKP	**PKiKP**	**23 02 47.5**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=66,slow=3.1,SNR=2.4						
MKAR	**Makanchi Array**	**110.98**	**313**	PKiKP	**PKiKP**	**23 02 49.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=170,slow=1.1,SNR=8.8						
KURBB	**Kurchatov Arra**	**113.84**	**317**	PKiKP	**PKiKP**	**23 02 54.4**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=98,slow=2.1,SNR=8.3						
BVAR	**Borovoye Array**	**118.88**	**320**	PKP	**PKPdf**	**23 03 04.9**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=123,slow=1.8,SNR=9.9						
ARCES	**ARCESS Array B**	**128.84**	**350**	PKhKP	PKPpre	23 03 10.4	
	comp=Z,0.6nm,0.5s,baz=345,slow=6.5,SNR=7.2						
ARCES				PKP	**PKPdf**	**23 03 23.7**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=45,slow=0.6,SNR=9.4						
FINES	**FINESS Array B**	**135.66**	**344**	PKhKP	PKPpre	23 03 25.3	
	comp=Z,1.7nm,0.9s,baz=189,slow=22,SNR=3.6						
FINES				PKP	**PKPdf**	**23 03 35.9**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=5.7,slow=3.8,SNR=5.1						
NB2	**NORSAR Subarra**	**138.91**	**353**	PKP	PKPpre	23 03 36.6	
	comp=Z,0.4nm,0.5s,baz=26,slow=2.4						
HFS	**Hagfors**	**139.46**	**351**	PKhKP	PKPpre	23 03 36.1	
	comp=Z,1.4nm,0.3s,baz=66,slow=3.4,SNR=27						
STRU	**Stroemstad**	**140.87**	**352**	*i* P	PKPpre	23 03 41.5	
ONAU	**Onsala**	**142.35**	**351**	*i* P	PKPpre	23 03 45.3	
FABU	**Falkenberg**	**142.61**	**350**	*i* P	PKPpre	23 03 46.4	
BLEU	**Blekinge**	**142.69**	**347**	*i* P	PKPpre	23 03 46.3	
AKASG	**Malin Array Be**	**142.85**	**331**	PKhKP	PKPpre	23 03 47.2	
	comp=Z,2.7nm,0.4s,baz=44,slow=4.2,SNR=20						
DEL	**Delary**	**142.92**	**349**	*i* P	**PKPdf**	**23 03 47.5**	**-2.8**
LODK	**Lodwar**	**143.12**	**247**		PKPab	23 03 50.5	+0.7
BJUU	**Bjuv**	**143.45**	**349**	*i* P	PKPab	23 03 49.4	-0.3
LUNU	**Lund**	**143.79**	**349**	*i* P	PKPbc	23 03 50.9	0.0
BSD	**Bornholm Skovb**	**143.99**	**347**	*i* P	PKPbc	23 03 51.5	-0.1
EKA	**Eskdalemuir Ar**	**144.99**	**5**	PKPbc	**PKPdf**	**23 03 54.7**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=343,slow=2.5,SNR=8.5						
BNN	**Bunyan**	**145.41**	**310**		**PKPdf**	**23 03 56.3**	**+0.8**
BR131	**Keskin Array S**	**146.62**	**312**		**PKPdf**	**23 03 58.7**	**+1.3**
BRTR	**Keskin Array B**	**146.62**	**312**	PKPbc	**PKPbc**	**23 03 60.0**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=124,slow=3.4,SNR=12						
BRTR	**Keskin Array B**	**146.62**	**312**		**PKPdf**	**23 03 58.9**	**+1.5**
BURAR	**Bucovina Array**	**146.90**	**330**		**PKPbc**	**23 03 59.9**	**-0.6**
MMAI	**Mount Meron Ar**	**147.57**	**300**	PKPbc	**PKPbc**	**23 04 02.9**	**+0.2**
	comp=Z,3.6nm,0.4s,baz=82,slow=7.7,SNR=19						
OSTC	**Ostas**	**147.85**	**343**	*e*PKP	**PKPbc**	**23 04 03.6**	**+0.8**
STEB	**Steborice**	**147.94**	**340**	*e*PKP	**PKPbc**	**23 04 03.3**	**+0.3**
CLL	**Collm**	**147.97**	**347**		**PKPbc**	**23 04 02.4**	**-0.5**
CLL	**Collm**	**147.97**	**347**	⇓ *i* PKPbc	**PKPbc**	**23 04 03.4**	**+0.4**
	comp=Z,8.0nm,0.9s						
DPC	**Dobruska-Polom**	**148.01**	**342**	*e*PKP	**PKPbc**	**23 04 04.0**	**+0.8**
MLR	**Muntele Rosu**	**148.05**	**327**	PKPbc	**PKPbc**	**23 04 03.4**	**-0.1**
	baz=31,slow=17						
MLR	**Muntele Rosu**	**148.05**	**327**		**PKPbc**	**23 04 02.9**	**-0.7**
KRLC	**Kraliky**	**148.12**	**342**	*e*PKP	**PKPbc**	**23 04 04.1**	**+0.6**
MORC	**Moravsky Berou**	**148.15**	**340**	*e*PKP	**PKPbc**	**23 04 02.3**	**-1.3**
BRG	**Berggiesshubel**	**148.16**	**345**	*e*P	**PKPbc**	**23 04 04.0**	**+0.5**
BRG				Amp		23 04 05.1	
	comp=Z,3.2nm,0.5s						
MAUC	**Maruska**	**148.42**	**340**	*e*PKP	**PKPbc**	**23 04 05.1**	**+0.9**
PRU	**Pruhonice**	**148.82**	**344**	*e*PKP	**PKPbc**	**23 04 05.4**	**+0.3**
VRAC	**Vranov**	**148.86**	**341**	*e*PKP	**PKPbc**	**23 04 03.8**	**-1.5**
KRUC	**Moravsky**	**149.14**	**341**	*e*PKP	**PKPbc**	**23 04 05.9**	**0.0**
TREC	**Trest**	**149.20**	**342**	*e*PKP	**PKPbc**	**23 04 06.3**	**+0.2**
ZVC	**Zvikov**	**149.42**	**344**	*e*PKP	**PKPbc**	**23 04 07.1**	**+0.5**
KHC	**Kasperske Hory**	**149.86**	**344**	*e*PKP	**PKPbc**	**23 04 08.4**	**+0.7**
KHC				*ex*	x	23 04 16.1	
CKRC	**Cesky Krumlov**	**149.96**	**343**	*e*PKP	**PKPbc**	**23 04 08.4**	**+0.5**
GERES	**GERESS Array B**	**150.09**	**344**	PKPbc	**PKPbc**	**23 04 08.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=21,slow=1.9,SNR=13						
GERES	**GERESS Array B**	**150.09**	**344**		**PKPbc**	**23 04 07.4**	**-1.0**
RDO	**Rodhopi**	**151.12**	**321**	PKPbc	**PKPbc**	**23 04 10.0**	**-0.8**
CIMO	**Cimolais**	**152.76**	**344**		**PKPbc**	**23 04 13.0**	**-1.3**
DAVOX	**Davos/Dischmat**	**152.91**	**348**	PKPbc	**PKPbc**	**23 04 15.2**	**+0.3**
	comp=Z,2.5nm,0.4s,baz=243,slow=6.2,SNR=12						
TORD	**Torodi Ar. Bea**	**172.73**	**180**	PKPab	**PKPab**	**23 05 55.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=166,slow=4.6,SNR=3.5						

ROM 25 22:52:13.9±0.1,42.°953N±0.°004×13.°104E±0.°006, h9km,ML0.9/6,3C-1D,Error ellipse: s-maj=0.4km s-min=0.4km az=111.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

AS31				IAmb	IAmb	23 01 17.5		
	comp=Z,5.3nm,0.5s							
ASAR	**Alice Springs**	**44.08**	**257**	P	**P**	**23 01 16.9**	**+0.6**	
	comp=Z,17nm,0.5s,baz=96,slow=7.6,SNR=149							
ASAR				PcP	**PcP**	**23 02 49.6**	**+1.2**	
	comp=Z,1.6nm,0.7s,baz=103,slow=3.9,SNR=5.3							
ASAR				S	**S**	**23 07 06.4**	**-0.9**	
	comp=Z,1.0nm,0.9s,baz=92,slow=16,SNR=6.4							
	comp=Z,17nm,0.5s							
ASAR	**Alice Springs**	**44.08**	**257**		**P**	**23 01 16.3**	**0.0**	
ASAR				PcP	**PcP**	**23 02 49.3**	**+0.9**	
WB0	**Warramunga Arr**	**44.15**	**263**		**P**	**23 01 16.9**	**+0.1**	
WRA	**Warramunga Arr**	**44.17**	**262**	P	**P**	**23 01 17.1**	**+0.1**	
	comp=Z,6.7nm,0.4s,baz=97,slow=7.5,SNR=109							
	comp=Z,6.7nm,0.4s							
WRA	**Warramunga Arr**	**44.17**	**262**		**P**	**23 01 16.8**	**-0.2**	
MTN	**Manton Dam**	**48.75**	**271**	P	**P**	**23 01 51.5**	**0.0**	
MTN				IAmb	IAmb	23 02 09.4		
	comp=Z,20nm,1.5s							
FORT	**Forrest**	**48.86**	**247**	P	**P**	**23 01 52.4**	**+0.3**	
FORT				IAmb	IAmb	23 01 53.2		
	comp=Z,8.4nm,0.7s							
KNRA	**Kununurra**	**50.23**	**266**	P	**P**	**23 02 02.3**	**-0.1**	
FITZ	**Fitzroy Crossi**	**52.60**	**263**	P	**P**	**23 02 19.9**	**+0.6**	
SOEI	**Soe**	**56.09**	**272**	P	**P**	**23 02 44.9**	**+0.8**	
TNTI	**Ternate**	**57.09**	**285**	P	**P**	**23 02 50.6**	**-0.1**	
TNTI				IAmb	IAmb	23 02 52.1		
	comp=Z,26nm,1.0s							
MBWA	**Marble Bar**	**57.42**	**258**	P	**P**	**23 02 53.0**	**+0.1**	
MBWA				IAmb	IAmb	23 03 15.6		
	comp=Z,26nm,1.2s							
TOLI2	**Tolitoli**	**63.23**	**282**	P	**P**	**23 03 31.6**	**+0.3**	
CASY	**Casey**	**63.66**	**205**	P	**P**	**23 03 34.6**	**+1.5**	
JAGI	**Jajag, Banyuwa**	**65.97**	**270**	P	**P**	**23 03 47.8**	**-0.7**	
QSPA	**South Pole Qui**	**69.43**	**180**	P	**P**	**23 04 11.6**	**+2.8**	
	comp=Z,0.5nm,0.6s,baz=281,slow=2.9,SNR=1.6							
	comp=Z,0.5nm,0.6s							
QSPA	**South Pole Qui**	**69.43**	**180**	P	**P**	**23 04 09.9**	**+1.1**	
UGM	**Wanagama**	**69.55**	**269**	P	**P**	**23 04 10.2**	**-0.1**	
ADK	**Adak**	**72.22**	**1**	P	**P**	**23 04 24.7**	**-0.3**	
ADK				IAmb	IAmb	23 04 37.0		
	comp=Z,20nm,1.3s							
JKA	**Kamikawa-asahi**	**73.65**	**332**	P	**P**	**23 04 34.1**	**+0.8**	
JKA				IAmb	IAmb	23 04 36.3		
	comp=Z,22nm,1.4s							
ASAJ	**Asahikawa**	**73.65**	**332**	P	**P**	**23 04 35.5**	**+2.1**	
	comp=Z,2.1nm,0.6s,baz=111,slow=14,SNR=2.0							
	comp=Z,2.1nm,0.6s							
PETK	**Petropavlovsk-**	**76.30**	**345**	P	**P**	**23 04 47.9**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=97,slow=7.6,SNR=4.1							
	comp=Z,1.3nm,0.7s							
CHGN	**Chignik**	**78.48**	**11**	P	**P**	**23 04 59.6**	**0.0**	
CHGN				IAmb	IAmb	23 05 02.0		
	comp=Z,11nm,1.1s							
BELA	**Belgrano 2**	**79.48**	**173**	P	**P**	**23 05 05.9**	**+1.1**	
GWY	**Greenwater Val**	**81.23**	**46**	P	**P**	**23 05 15.2**	**+0.4**	
MAW	**Mawson**	**81.30**	**200**	P	**P**	**23 05 15.6**	**+1.3**	
	comp=Z,0.9nm,0.5s,baz=327,slow=10,SNR=2.2							
	comp=Z,0.9nm,0.5s							
NVAR	**Mina Array Bea**	**81.41**	**44**	P	**P**	**23 05 16.6**	**+1.0**	
	comp=Z,1.1nm,0.7s,baz=220,slow=9.5,SNR=6.7							
	comp=Z,1.1nm,0.7s							
NVAR	**Mina Array Bea**	**81.41**	**44**	P	**P**	**23 05 16.0**	**+0.3**	
N14K	**Kuskokwak Cree**	**81.43**	**8**	P	**P**	**23 05 15.3**	**+0.4**	
O16K	**Kokwok River B**	**81.66**	**10**	P	**P**	**23 05 15.7**	**-0.4**	
N15K	**Kwethluk River**	**81.89**	**9**	P	**P**	**23 05 18.3**	**+1.0**	
N15K				IAmb	IAmb	23 05 19.9		
	comp=Z,7.8nm,0.9s							
K05A	**Summer Lake**	**82.33**	**39**	P	**P**	**23 05 21.5**	**+1.3**	
K05A				IAmb	IAmb	23 05 23.6		
	comp=Z,9.2nm,1.2s							
J05D	**Fort Rock, OR**	**82.47**	**38**	P	**P**	**23 05 22.1**	**+1.2**	
J05D				IAmb	IAmb	23 05 23.8		
	comp=Z,7.2nm,0.8s							
GHO	**Glory Hole Cre**	**85.45**	**14**	P	**P**	**23 05 34.9**	**-0.1**	
GHO				IAmb	IAmb	23 06 10.9		
	comp=Z,13nm,1.2s							
SCM	**Sheep Creek Mo**	**85.86**	**14**	P	**P**	**23 05 37.2**	**+0.3**	
SCM				IAmb	IAmb	23 05 44.0		
	comp=Z,13nm,1.2s							
GLB	**Gilahina Butte**	**86.38**	**16**	P	**P**	**23 05 39.7**	**+0.4**	
GLB				IAmb	IAmb	23 05 50.5		
	comp=Z,14nm,1.4s							
SEY	**Seymchan**	**86.41**	**347**	P	**P**	**23 05 39.3**	**-0.1**	
	comp=Z,1.7nm,0.6s,baz=160,slow=11,SNR=4.3							
	comp=Z,1.7nm,0.6s							
TXAR	**Lajitas Array**	**87.48**	**57**	P	**P**	**23 05 47.8**	**+2.4**	
	comp=Z,1.4nm,0.8s,baz=217,slow=6.9,SNR=10							
	comp=Z,1.4nm,0.8s							
TXAR	**Lajitas Array**	**87.48**	**57**	P	**P**	**23 05 46.2**	**+0.9**	
WRH	**Wood River Hil**	**88.02**	**13**	P	**P**	**23 05 46.7**	**-0.2**	
WRH				IAmb	IAmb	23 05 47.7		
	comp=Z,4.5nm,0.8s							
HDA	**Harding Lake**	**88.21**	**13**	P	**P**	**23 05 48.0**	**+0.2**	
HDA				IAmb	IAmb	23 05 48.6		
	comp=Z,4.0nm,0.7s							
CCB	**Clear Creek Bu**	**88.24**	**13**	P	**P**	**23 05 47.4**	**-0.5**	
CCB				IAmb	IAmb	23 05 48.5		
	comp=Z,4.7nm,0.6s							
ILAR	**Eielson Array**	**88.54**	**13**	P	**P**	**23 05 49.1**	**-0.2**	
	comp=Z,1.4nm,0.5s,baz=218,slow=5.2,SNR=17							
	comp=Z,1.4nm,0.5s							
H22K	**Ishtalitna Cre**	**88.67**	**11**		**P**	**23 05 49.9**	**0.0**	
H22K				IAmb	IAmb	23 05 51.2		
	comp=Z,2.7nm,0.7s							
PDAR	**Pinedale Array**	**89.34**	**43**	P	**P**	**23 05 55.1**	**+1.3**	
	comp=Z,1.0nm,0.6s,baz=213,slow=4.0,SNR=12							
	comp=Z,1.0nm,0.6s							
PDAR	**Pinedale Array**	**89.34**	**43**	P	**P**	**23 05 54.8**	**+0.9**	
CMAR	**Chiang Mai Arr**	**89.77**	**290**	P	**P**	**23 05 58.7**	**+2.6**	
	comp=Z,1.0nm,0.3s,baz=122,slow=3.0,SNR=5.0							
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**89.77**	**290**	P	**P**	**23 05 56.4**	**+0.3**	
ZALV	**Zalesovo Beam**	**110.34**	**321**	PKiKP	**PKiKP**	**23 11 24.4**	**-0.3**	
	comp=Z,0.6nm,0.5s,baz=191,slow=2.2,SNR=5.0							
MKAR	**Makanchi Array**	**110.99**	**313**	PKiKP	**PKiKP**	**23 11 26.1**	**-0.1**	
	comp=Z,0.6nm,0.6s,baz=124,slow=0.6,SNR=6.8							
KURBB	**Kurchatov Arra**	**113.86**	**317**	PKiKP	**PKiKP**	**23 11 31.1**	**-0.4**	
	comp=Z,0.7nm,0.6s,baz=104,slow=1.7,SNR=8.8							
BVAR	**Borovoye Array**	**118.91**	**320**	PKP	**PKiKP**	**23 11 41.4**	**+0.2**	
	comp=Z,2.7nm,0.3s,baz=114,slow=1.7,SNR=16							
GAR	**Garm**	**118.95**	**304**	PKPdf	**PKiKP**	**23 11 42.3**	**+0.4**	
KKAR	**Karatay Array**	**119.00**	**309**	PKPdf	**PKiKP**	**23 11 41.9**	**+0.2**	
BATG	**Bathurst New B**	**119.96**	**47**	PKPdf	**PKiKP**	**23 11 43.4**	**-0.1**	
ARTI	**Arti**	**125.18**	**325**	PKPdf	**PKiKP**	**23 11 53.5**	**0.0**	
ABKAR	**Akbulak array**	**125.90**	**316**	PKPdf	**PKiKP**	**23 11 55.1**	**0.0**	
ARCES	**ARCESS Array B**	**128.98**	**349**	PKP	**PKPdf**	**23 12 00.2**	**+0.2**	
	comp=Z,1.0nm,0.4s,baz=25,slow=1.1,SNR=15							
FINES	**FINESS Array B**	**135.78**	**343**	PKhKP	PKPpre	23 12 01.7		
	comp=Z,1.2nm,0.8s,baz=25,slow=3.7,SNR=4.0							
FINES				PKP	**PKiKP**	**23 12 14.5**	**-0.2**	
	comp=Z,0.4nm,0.4s,baz=86,slow=2.5,SNR=6.9							
FINES	**FINESS Array B**	**135.78**	**343**		**PKPdf**	**23 12 13.4**	**+0.4**	
NB2	**NORSAR Subarra**	**139.06**	**353**	PKP	PKPpre	23 12 13.2		
	comp=Z,0.5nm,0.5s,baz=13,slow=3.3							
HFS	**Hagfors**	**139.61**	**351**	PKhKP	PKPpre	23 12 13.2		
	comp=Z,1.4nm,0.4s,baz=72,slow=1.9,SNR=15							
STRU	**Stroemstad**	**141.02**	**352**	*i* P	PKPpre	23 12 18.0		
ONAU	**Onsala**	**142.50**	**351**	*i* P	PKPpre	23 12 22.2		
FABU	**Falkenberg**	**142.75**	**350**	*i* P	PKPpre	23 12 23.0		
BLEU	**Blekinge**	**142.83**	**347**	*i* P	PKPpre	23 12 23.0		
LODK	**Lodwar**	**142.91**	**247**		**PKPdf**	**23 12 26.6**	**-0.8**	
AKASG	**Malin Array Be**	**142.93**	**331**	PKhKP	PKPpre	23 12 23.9		
	comp=Z,2.8nm,0.4s,baz=43,slow=4.3,SNR=24							
DEL	**Delary**	**143.06**	**349**	*i* P	PKPbc	23 12 24.4	-0.1	
BJUU	**Bjuv**	**143.59**	**349**	*i* P	PKPbc	23 12 26.2	0.0	
BSD	**Bornholm Skovb**	**144.13**	**347**	*i* P	**PKPab**	**23 12 28.3**	**+0.1**	
EKA	**Eskdalemuir Ar**	**145.17**	**5**	PKPbc	**PKPab**	**23 12 31.6**	**-0.7**	
	comp=Z,1.5nm,0.6s,baz=340,slow=2.3,SNR=7.3							
BR131	**Keskin Array S**	**146.62**	**312**		**PKPbc**	**23 12 35.9**	**+0.2**	
BRTR	**Keskin Array B**	**146.62**	**312**	PKPbc	**PKPbc**	**23 12 36.3**	**+0.5**	
	comp=Z,1.7nm,0.6s,baz=137,slow=3.7,SNR=11							
BRTR	**Keskin Array B**	**146.62**	**312**		**PKPbc**	**23 12 36.0**	**+0.2**	
BUR08	**Bucovina Ar. S**	**146.96**	**330**		**PKPbc**	**23 12 37.1**	**+0.7**	
BURAR	**Bucovina Array**	**146.97**	**330**		**PKPbc**	**23 12 37.1**	**+0.6**	
MMAI	**Mount Meron Ar**	**147.52**	**299**	PKPbc	**PKiKP**	**23 12 40.0**	**+0.2**	
	comp=Z,3.2nm,0.4s,baz=76,slow=7.1,SNR=22							
OSTC	**Ostas**	**147.97**	**342**	*e*PKP	**PKiKP**	**23 12 40.4**	**+0.3**	
CHVC	**Chvalec**	**147.99**	**342**	*e*PKP	**PKiKP**	**23 12 40.1**	**0.0**	
STEB	**Steborice**	**148.05**	**340**	*e*PKP	**PKiKP**	**23 12 40.1**	**-0.2**	
CLL	**Collm**	**148.10**	**346**		**PKPbc**	**23 12 39.3**	**+0.2**	
CLL	**Collm**	**148.10**	**346**	⇓*i*PKPbc	**PKiKP**	**23 12 40.0**	**-0.3**	
	comp=Z,9.0nm,0.6s							
CLL				⇑*i*PKPab	**PKPab**	**23 12 44.6**	**+0.5**	
DPC	**Dobruska-Polom**	**148.13**	**342**	*e*PKP	**PKiKP**	**23 12 40.4**	**-0.1**	
KRLC	**Kraliky**	**148.24**	**341**	*e*PKP	**PKiKP**	**23 12 40.7**	**0.0**	
BRG	**Berggiesshubel**	**148.28**	**345**	*e*P	**PKiKP**	**23 12 40.8**	**+0.1**	
BRG				Amp		23 12 41.2		
	comp=Z,4.7nm,0.9s							
MAUC	**Maruska**	**148.53**	**339**	*e*PKP	**PKiKP**	**23 12 42.1**	**+0.8**	
CSS	**Mathiatis**	**148.63**	**304**	PKPbc	**PKPbc**	**23 12 40.2**	**-0.7**	
PRU	**Pruhonice**	**148.95**	**344**	*e*PKP	**PKiKP**	**23 12 42.2**	**+0.1**	
VRAC	**Vranov**	**148.97**	**341**	*e*PKP	**PKiKP**	**23 12 42.8**	**+0.6**	
JAVC	**Velka Javorina**	**149.02**	**339**	*e*PKP	**PKiKP**	**23 12 43.8**	**+1.4**	
KRUC	**Moravsky**	**149.25**	**341**	*e*PKP	**PKiKP**	**23 12 43.2**	**+0.5**	
ZVC	**Zvikov**	**149.54**	**344**	*e*PKP	**PKiKP**	**23 12 43.8**	**+0.5**	
KHC	**Kasperske Hory**	**149.98**	**344**	*e*PKP	PKPdf	23 12 29.0	-9.1	
KHC				*ex*	x	23 12 44.7		
GEC2	**GERESS Array S**	**150.22**	**344**		**PKPbc**	**23 12 44.3**	**-0.1**	
GERES	**GERESS Array B**	**150.22**	**344**	PKPbc	**PKiKP**	**23 12 45.2**	**+0.3**	
	comp=Z,1.5nm,0.6s,baz=14,slow=2.2,SNR=18							
GERES	**GERESS Array B**	**150.22**	**344**		**PKPbc**	**23 12 44.4**	**+0.1**	
CONA	**Conrad Observa**	**150.42**	**340**	*i* PKP	**PKiKP**	**23 12 46.0**	**+0.7**	
	comp=Z,1.1nm,0.5s							
RONA	**Rosalia, Austr**	**150.48**	**340**	*i* PKP	**PKiKP**	**23 12 46.2**	**+0.8**	
	comp=Z,2.3nm,0.5s							
MOA	**Molln**	**150.97**	**342**	*e*PKP	**PKiKP**	**23 12 46.7**	**+0.4**	
	comp=Z,0.6nm,0.4s							
ARSA	**Arzberg**	**151.12**	**340**	*i* PKP	**PKiKP**	**23 12 47.4**	**+0.7**	
	comp=Z,0.2nm,0.2s							
SESA	**Seetaler Alpe,**	**151.54**	**341**	*e*PKP	**PKiKP**	**23 12 47.9**	**+0.1**	
	comp=Z,5.1nm,0.5s							
LESA	**Schwarzleotal**	**151.79**	**344**	*i* PKP	**PKiKP**	**23 12 48.6**	**+0.5**	
	comp=Z,2.3nm,0.5s,SNR=5.3							
KBA	**Koelnbreinsper**	**151.93**	**343**	*e*PKP	**PKiKP**	**23 12 49.0**	**+0.4**	
	comp=Z,1.3nm,0.4s							
WATA	**Walderalm**	**152.15**	**345**	*i* PKP	**PKiKP**	**23 12 49.4**	**+0.4**	
	comp=Z,1.1nm,0.4s,SNR=4.5							
RETA	**Reutte**	**152.19**	**347**	*i* PKP	**PKiKP**	**23 12 49.6**	**+0.6**	
	comp=Z,1.7nm,0.6s							
WTTA	**Wattenberg**	**152.20**	**345**	*i* PKP	**PKiKP**	**23 12 49.8**	**+0.6**	
	comp=Z,2.6nm,0.4s,SNR=8.4							
SQTA	**Sankt Quirin**	**152.34**	**346**	*e*PKP	**PKiKP**	**23 12 50.3**	**+1.0**	
	comp=Z,3.8nm,0.9s							
ABTA	**Abfaltersbach**	**152.46**	**344**	*i* PKP	**PKiKP**	**23 12 49.8**	**+0.2**	
	comp=Z,3.9nm,0.6s							
DAVA	**Damuels**	**152.57**	**348**	*i* PKP	**PKiKP**	**23 12 51.3**	**+1.4**	
	comp=Z,1.4nm,0.5s							
FETA	**Feichten**	**152.64**	**346**	*i* PKP	**PKiKP**	**23 12 50.5**	**+0.4**	
	comp=Z,1.5nm,0.6s							
CIMO	**Cimolais**	**152.88**	**343**		**PKPbc**	**23 12 49.9**	**-0.4**	
FUORN	**Ofenpass-Fuorn**	**153.12**	**347**		**PKiKP**	**23 12 51.3**	**+0.2**	

*SJA **25** 23:12:10.2±0.6, 19.96S×69.20W, h99km±3km, ML3.9, MW3.8*
*GUC **25** 23:12:11.5±0.7, 20.00S×69.28W, h104km±4km, ML3.7*
*IDC **25** 23:12:14.0±3.3, 19.85S×68.77W, h132km±26km, mb3.6/3, mbtmp4.0/6, Error ellipse: s-maj=41.6km s-min=22.2km az=68.0*

ISC 25 23:12:10.1±0.8, 19.98S±0.03×69.18W±0.06, h99km±6km, n42, σ1.33/57, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.17**	**170**	*e*P	**Pn**	**23 12 25.4**	**+0.7**
PB08				*e*S	**Sn**	**23 12 36.6**	**+1.2**
PB08				IAML		23 12 38.4	
	comp=Z,3μm,0.1s						
PB08	**IPOC Station P**	**0.17**	**170**	⇓*i*P	**Pn**	**23 12 25.1**	**+0.4**
PB08				*i* S	**Sn**	**23 12 35.6**	**+0.1**
PB08				IAML		23 12 38.0	
	comp=E,5μm,0.2s						
GO01	**Chusmiza**	**0.30**	**358**	*e*P	**Pn**	**23 12 25.9**	**+0.6**
GO01	**Chusmiza**	**0.30**	**358**	⇓*i*P	**Pn**	**23 12 25.9**	**+0.6**
GO01				*i* S	**Sn**	**23 12 37.7**	**+1.1**
PB11	**IPOC Station P**	**0.49**	**296**	*e*P	**Pn**	**23 12 26.5**	**+0.5**
PB11				*e*S	**Sn**	**23 12 37.0**	**-0.9**
PB11				IAML		23 12 39.5	
	comp=Z,4μm,0.2s						
PB11	**IPOC Station P**	**0.49**	**296**	⇑*i*P	**Pn**	**23 12 26.5**	**+0.5**
PB11				*i* S	**Sn**	**23 12 38.4**	**+0.6**
TA02	**Huaiquique**	**0.94**	**252**	*e*P	**Pn**	**23 12 30.3**	**+0.5**
TA02				*e*S	**Sn**	**23 12 46.5**	**+1.9**
TA02				IAML		23 12 47.7	
	comp=Z,2μm,0.2s						
TA02	**Huaiquique**	**0.94**	**252**	*i* P	**Pn**	**23 12 30.1**	**+0.2**
TA02				*i* S	**Sn**	**23 12 45.5**	**+0.8**
PSGCX	**Pisagua**	**0.96**	**293**	*e*P	**Pn**	**23 12 26.5**	**-3.7**
PSGCX				*e*P	**Pn**	**23 12 30.8**	**+0.5**
PSGCX				*e*S	**Sn**	**23 12 46.1**	**+0.8**
PSGCX				IAML		23 12 47.3	
	comp=Z,3μm,0.3s						
PSGCX	**Pisagua**	**0.96**	**293**	⇑*i*P	**Pn**	**23 12 30.6**	**+0.3**
PSGCX				*i* S	**Sn**	**23 12 45.7**	**+0.3**
PX02	**IPOC Station P**	**1.39**	**316**	*i* P	**Pn**	**23 12 34.9**	**-0.2**
PX02				*i* S	**Sn**	**23 12 54.0**	**0.0**
PB02	**IPOC Station P**	**1.50**	**206**	*e*P	**Pn**	**23 12 37.7**	**+1.2**
PB02				*e*S	**Sn**	**23 12 57.8**	**+1.5**
PB02				IAML		23 13 06.5	
	comp=Z,2μm,0.3s						
PB02	**IPOC Station P**	**1.50**	**206**	*i* P	**Pn**	**23 12 36.6**	**+0.1**
PB02				*i* S	**Sn**	**23 12 56.5**	**+0.2**
PB02				IAML		23 13 02.5	
	comp=N,2μm,0.4s						
PB16	**IPOC Station P**	**1.66**	**349**	*e*P	**Pn**	**23 12 41.1**	**+2.1**
PB16				*e*S	**Sn**	**23 13 03.6**	**+2.9**
PB16	**IPOC Station P**	**1.66**	**349**	*i* P	**Pn**	**23 12 41.0**	**+2.1**
PB16				*i* S	**Sn**	**23 13 03.6**	**+2.9**
PB12	**IPOC Station P**	**1.73**	**321**	*e*P	**Pn**	**23 12 40.2**	**+0.8**
PB12				*e*S	**Sn**	**23 13 03.0**	**+1.4**
PB12				IAML		23 13 08.0	
	comp=Z,786nm,0.2s						
PB12	**IPOC Station P**	**1.73**	**321**	⇑*i*P	**Pn**	**23 12 39.8**	**+0.4**
PB12				*i* S	**Sn**	**23 13 02.0**	**+0.4**
PB12				IAML		23 13 08.0	
	comp=E,2μm,0.3s						
PB09	**IPOC Station P**	**1.81**	**182**	*e*P	**Pn**	**23 12 41.9**	**+1.3**
PB09				*e*S	**Sn**	**23 13 06.0**	**+2.5**
PB09				IAML		23 13 10.2	
	comp=Z,510nm,0.5s						
PB09	**IPOC Station P**	**1.81**	**182**	⇓*i*P	**Pn**	**23 12 41.7**	**+1.2**
PB09				*i* S	**Sn**	**23 13 04.8**	**+1.2**
PB07	**IPOC Station P**	**1.86**	**201**	*e*P	**Pn**	**23 12 41.4**	**+0.2**
PB07				*e*S	**Sn**	**23 13 03.7**	**-1.0**
PB07				IAML		23 13 11.0	
	comp=E,744nm,0.6s						
AP01	**Chacalluta**	**1.94**	**325**	*e*P	**Pn**	**23 12 42.7**	**+0.8**
AP01				*e*S	**Sn**	**23 13 07.0**	**+1.0**
AP01				IAML		23 13 12.6	
	comp=Z,1μm,0.1s						
AP01	**Chacalluta**	**1.94**	**325**	*i* P	**Pn**	**23 12 42.6**	**+0.8**
AP01				*i* S	**Sn**	**23 13 06.5**	**+0.4**
PB03	**IPOC Station P**	**2.13**	**194**	⇑*i*P	**Pn**	**23 12 44.8**	**+0.2**
PB03				IAML		23 13 17.5	
	comp=N,343nm,0.3s						
PB06	**IPOC Station P**	**2.74**	**188**	*e*P	**Pn**	**23 12 53.4**	**+0.7**
PB06				IAML		23 13 35.0	
	comp=E,187nm,0.4s						
PB05	**IPOC Station P**	**3.02**	**198**	*e*P	**Pn**	**23 12 55.9**	**-0.4**
PB05				IAML		23 13 52.6	
	comp=N,178nm,0.4s						
LPAZ	**La Paz**	**3.80**	**15**	P	**Pn**	**23 13 10.6**	**+3.3**
	comp=N,13nm,0.5s,baz=184,slow=7.6,SNR=10						
LPAZ				S	**Sn**	**23 13 51.7**	**+0.4**
	comp=N,9.7nm,0.8s,baz=180,slow=4.0,SNR=3.6						
LPAZ	**La Paz**	**3.80**	**15**	*e*P	**Pn**	**23 13 06.0**	**-1.2**
LPAZ				*e*S	**Sn**	**23 13 50.6**	**-0.7**
SIV	**San Ignacio**	**8.68**	**64**	P	**Pn**	**23 14 10.9**	**-2.0**
	comp=N,14nm,0.6s,baz=255,slow=11,SNR=55						
CPUP	**Villa Florida**	**12.60**	**122**	P	**Pn**	**23 15 05.0**	**-0.9**
	comp=N,1.7nm,0.6s,baz=304,slow=12,SNR=3.9						
H03N1	**Juan Fernandez**	**15.97**	**211**	T	T	23 32 35.2	
	baz=32,slow=72,SNR=10						
H03N2	**Juan Fernandez**	**15.98**	**211**	T	T	23 32 35.0	
	baz=32,slow=72,SNR=21						
H03N3	**Juan Fernandez**	**15.99**	**211**	T	T	23 32 34.0	
	baz=32,slow=72,SNR=5.5						
QSPA	**South Pole Qui**	**70.21**	**180**	P	**P**	**23 23 12.9**	**+0.8**
	comp=N,0.4nm,0.5s,baz=115,slow=1.4,SNR=1.9						
	comp=N,0.4nm,0.5s						
TORD	**Tondi Ar. Bea**	**77.09**	**71**	P	**P**	**23 23 51.3**	**-1.8**
	comp=N,0.6nm,0.6s,baz=254,slow=5.1,SNR=8.1						
	comp=N,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**89.67**	**341**	P	**P**	**23 24 56.2**	**-0.3**
	comp=N,1.2nm,0.7s,baz=140,slow=5.2,SNR=6.1						
	comp=N,1.2nm,0.7s						
H11S2	**WAKE ISLAND Hyl**	**27.42**	**278**	T	T	01 50 48.4	
	baz=102,slow=74,SNR=38						
H11S1	**WAKE ISLAND Hyl**	**27.43**	**278**	T	T	01 50 50.4	
	baz=102,slow=74,SNR=30						
H11S3	**WAKE ISLAND Hyl**	**27.44**	**278**	T	T	01 50 51.8	
	baz=102,slow=74,SNR=27						
H11N3	**WAKE ISLAND Hyl**	**27.46**	**280**	T	T	01 50 54.8	
	baz=101						
H11N2	**WAKE ISLAND Hyl**	**27.47**	**280**	T	T	01 50 54.8	
	baz=101						
H11N1	**WAKE ISLAND Hyl**	**27.48**	**280**	T	T	01 50 57.1	
	baz=101						
SONM	**Songino Array**	**151.98**	**6**	PKPbc	**PKPbc**	**23 31 53.6**	**-0.2**
	comp=N,0.5nm,0.4s,baz=29,slow=3.3,SNR=2.5						

IDC 25 23:21:48.5±7.9, 20.95S×177.92W, h545km±53km, mb2.8/3, mbtmp3.7/4, Error ellipse: s-maj=164.3km s-min=32.5km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.97**	**309**	P	P	23 23 17.9	-0.1
	3.1nm,0.4s,baz=74,slow=23,SNR=1.7						
STKA	**Stephens Creek**	**37.66**	**245**	P	P	23 28 17.4	-0.2
	0.9nm,0.4s,baz=91,slow=14,SNR=1.9						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**44.49**	**257**	P	P	23 29 12.3	+0.4
	0.7nm,0.5s,baz=96,slow=7.5,SNR=9.6						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**44.61**	**262**	P	P	23 29 12.0	-0.9
	0.4nm,0.5s,baz=97,slow=7.6,SNR=5.8						
	0.4nm,0.5s						
AKASG	**Malin Array Be**	**143.44**	**331**	PKP	PKPab	23 40 18.3	-1.0
	0.4nm,0.4s,baz=42,slow=4.2,SNR=4.4						
BRTR	**Keskin Array B**	**147.19**	**312**	PKPbc	PKPbc	23 40 30.5	-0.6
	0.3nm,0.5s,baz=70,slow=4.7,SNR=2.1						
GERES	**GERESS Array B**	**150.65**	**344**	PKPbc	PKiKP	23 40 39.9	+0.3
	0.2nm,0.3s,baz=29,slow=2.4,SNR=3.6						

*RSNC **26** 00:13:53.6±0.0, 13.7N×102.7W±10.2, h40km, ML2.5*

FUNV 26 00:13:42.1, 11.00N×70.37W, h30km, MW3.4, Presumed earthquake, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URIC	**Uribia, Colomb**	**1.74**	**294**	P	Pn	00 14 09.8	-0.5
URIC				S	Sn	00 14 32.4	+0.9
URIC	**Uribia, Colomb**	**1.74**	**294**	*e*P	Pn	00 14 09.6	-0.7
URIC				*e*S	Sn	00 14 30.3	-1.2
SDV	**Santo Domingo**	**2.11**	**187**	*e*P	Pn	00 14 15.1	-0.5
SDV				*e*S	Sn	00 14 39.4	-1.6
FUNV	**FUNVISIS**	**3.54**	**98**	*e*P	Pn	00 14 34.2	-1

WHP				S	Sn	00 33 31.8	-0.1		
SHUL	**Shoufeng**	**1.16**	**202**	P	Pb	00 33 15.8	+0.1		

IDC ***26*** *00:45:58.4±2.9, 37.87N×70.18E, h0km, mb3.6/3, mbtmp3.4/6, ML2.7/3, Error ellipse: s-maj=59.0km s-min=25.0km az=144.0*

NNC ***26*** *00:46:06.3±3.0, 38.59N×69.54E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=22.1km s-min=18.4km az=50.0*

ISC 26 00:46:03.7±1.6,38.4N±0.1×69.6E±0.1,h12km,n11,
σ2ᵉ34/15,2C-6D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.74**	**5**	Pg	**Pb**		**00 47 11.9**		**+2.2**
	26nm,0.5s								
IUG				Lg	Lg		00 47 59.9		
	51nm,0.7s								
BRLS	**Boroldaу**	**4.61**	**2**	Pg	**Pb**		**00 47 24.6**		**+0.1**
	2.0nm,0.2s								
BRLS				Lg	Lg		00 48 21.6		
	18nm,0.5s								
KK31	**Karatay Array**	**4.73**	**8**	⇑Pn	**Pn**		**00 47 15.9**		**+1.1**
	0.9nm,0.5s,baz=189,slow=14,SNR=11								
KK31				⇓Pg	**Pg**		**00 47 31.4**		**-2.8**
	4.5nm,0.8s,baz=184,slow=16,SNR=6.5								
KK31				⇓Sn	**Sn**		**00 48 11.0**		**+1.4**
	2.5nm,0.5s								
KK31				⇓Lg	Lg		00 48 28.9		
	6.7nm,0.7s,baz=191,slow=28,SNR=8.3								
MRKS	**Merke**	**5.12**	**31**	Pg	**Pn**		**00 47 23.3**		**+3.0**
	5.6nm,0.4s								
MRKS				Lg	Lg		00 48 19.3		
	6.2nm,0.8s								
AAK	**Ala-Archa**	**5.62**	**40**	⇓Pn	**Pn**		**00 47 28.7**		**+1.5**
	1.0nm,0.4s								
AAK				⇑Pg	**Pg**		**00 47 48.9**		**-2.5**
	1.6nm,0.6s								
AAK				⇓Sn	**Sn**		**00 48 36.2**		**+4.3**
	2.2nm,0.7s								
AAK				⇓Lg	Lg		00 48 59.9		
MKAR	**Makanchi Array**	**12.53**	**44**	Pn	**Pn**		**00 48 59.3**		**-2.5**
	baz=225,slow=14,SNR=1.9								
	0.2nm,0.5s								
BVAR	**Borovoye Array**	**14.62**	**2**	Pn	**Pn**		**00 49 30.2**		**0.0**
	baz=175,slow=9.9,SNR=5.9								
	0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**18.70**	**29**	P	**P**		**00 50 20.0**		**-1.7**
	0.1nm,0.3s,baz=226,slow=12,SNR=4.0								
	0.3nm,0.3s								
HFS	**Hagfors**	**40.88**	**321**	P	**P**		**00 53 46.9**		**+1.7**
	0.9nm,0.6s,baz=98,slow=10,SNR=2.2								
	0.9nm,0.6s								
NOA	**NORSAR Array B**	**42.18**	**322**	P	**P**		**00 53 57.3**		**+1.3**
	0.3nm,0.5s,baz=95,slow=8.1,SNR=1.7								
	0.3nm,0.5s								
TORD	**Torodi Ar. Bea**	**64.68**	**267**	P	**P**		**00 56 41.9**		**+0.1**
	0.4nm,0.7s,baz=57,slow=7.5,SNR=2.2								
	0.4nm,0.7s								

PRE ***26*** *00:53:39.4±1.8, 62.86S×28.93W, h5km, Presumed earthquake*

BJI ***26*** *00:53:56.6, 60.86S×25.37W, h10km, mB6.2/53, Ms6.3/88, Ms7 6.3/84*

IDC ***26*** *00:53:57.7±0.2, 60.69S×25.84W, h0km, mb5.7/22, mbtmp5.6/22, MS6.0/43, Error ellipse: s-maj=10.3km s-min=7.3km az=44.0*

MOS ***26*** *00:53:57.5±0.9, 60.70S×25.53W, h16km, mb6.1/35, MS6.0/30, Error ellipse: s-maj=17.1km s-min=8.4km az=98.8*

NEIC ***26*** *00:53:59.1, 60.78S×25.41W, h10km*

ISC-PP ***26*** *00:53:59, 60.78S×25.41W, h26km, Mwppsm6.6, Moment Tensor Solution. s30 Moment tensor: Scale 10¹⁸Nm; Mrr-0.54±.09; Mθθ0.50±.23; Mϕϕ0.05±.18; Mrθ0.14±.15; Mθϕ0.33±.21; Mϕr-0.31±.24; Fault plane solution: M₀8.91000×10¹⁸ NP1:φs270.70000°, δ51.00000°, λ230.40000°. NP2:φs143.50000°, δ53.20000°, λ-51.80000°.*

NEIC ***26*** *00:53:59.1±1.1, 60.78S±0.08×25.4W±0.2, h10km±1km, mb6.1/149, Ms_20 6.2/719, Mwb6.3/106, Mww6.4/45 Error ellipse: s-maj=14.6km s-min=12.0km az=228.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-2.27; Mθθ1.76; Mϕϕ0.51; Mrθ2.77; Mθϕ1.54; Mϕr0.65; Fault plane solution: M₀3.84000×10¹⁸ NP1: φs252.42000°, δ69.98000°, λ-76.15000°. NP2:φs36.66000°, δ24.18000°, λ-123.30000°. Principal axes: T 3.9781, Plg24.0000°, Azm332.0000°; N -0.2913, Plg13.0000°, Azm68.0000°; P -3.6868, Plg63.0000°, Azm184.0000°;*

NEIC ***26*** *00:53:59, 60.76S×25.40W, h10km*

IPGP ***26*** *00:53:59.0, 60.78S×25.32W, h6km, Mw6.4, Fault plane solution: NP1:φs32.00000°, δ40.00000°, λ-118.00000°. NP2:φs246.00000°, δ55.00000°, λ-69.00000°.*

GFZ ***26*** *00:54:00.5, 60.84S×25.61W, h24km, Mw6.4/59, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-4.29; Mθθ2.03; Mϕϕ2.27; Mrθ2.39; Mθϕ2.12; Mϕr1.13; Fault plane solution: M₀5.02776×10¹⁸ NP1: φs234.04558°, δ60.80500°, λ-79.55245°. NP2:φs33.33793°, δ30.85231°, λ-107.97970°. Principal axes: T 4.9368, Plg15.1965°, Azm316.4101°; N 0.1773, Plg9.1082°, Azm48.9060°; P -5.1141, Plg72.1684°, Azm168.8000°;*

GFZ ***26*** *00:54:00.1±0.2, 61°S±4°×2°6W±°, h10km, M6.3/44, mb6.4/44*

PMR ***26*** *00:54:01.0, 60.94S×25.31W, h33km*

PTWC ***26*** *00:54:01, 60.90S×25.30W, Mwp6.5/15, SOUTH SANDWICH ISLANDS REGION*

GCMT ***26*** *00:54:07.1±0.0, 60.97S×25.01W, h12km, MW6.3/171, Moment Tensor Solution. s163,c355; s171,c725; Duration: 3ᵢ6 Moment tensor: Scale 10¹⁸Nm; Mrr-3.44±.02; Mθθ2.00±.02; Mϕϕ1.44±.02; Mrθ1.01±.04; Mθϕ2.85±.01; Mϕr0.40±.04; Best double couple: M₀4.16800×10¹⁸ NP1:φs38.00000°, δ39.00000°, λ-104.00000°. NP2:φs236.00000°, δ53.00000°, λ-79.00000°. Principal axes: T 4.7110, Plg7.0000°, Azm318.0000°; N -1.0860, Plg9.0000°, Azm49.0000°; P -3.6250, Plg79.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *00:54:08.2, 60.88S×25.00W, h12km, Moment Tensor Solution. Duration: 7ᵢ5 Moment tensor: Scale 10¹⁸Nm; Mrr-3.30; Mθθ2.22; Mϕϕ1.08; Mrθ2.00; Mθϕ2.49; Mϕr0.00; Fault plane solution: M₀4.32000×10¹⁸ NP1:φs30.28000°, δ37.61000°, λ-124.14000°. NP2:φs250.85000°, δ59.66000°, λ-66.62000°. Principal axes: T 4.5282, Plg12.0000°, Azm324.0000°; N -0.4440, Plg20.0000°, Azm59.0000°; P -4.0842, Plg67.0000°, Azm206.0000°;*

ISC 26 00:53:59.4±0.1,60.75S±0.03×25.74W±0.03,h10km,
h10km:pP-P,n1931,σ2ᵉ33/1858,mb6.1/129,MS6.2/442,
68C-74D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.68**	**314**	P	**Pn**		**00 56 07.1**		**+2.3**
HOPE	**Hope Point**	**8.68**	**314**	Pn	**Pn**		**00 56 07.1**		**+2.3**
HOPE	**Hope Point**	**8.68**	**314**	P	Pn		00 56 10.8		+6.0
HOPE	**Hope Point**	**8.68**	**314**	⇑P	Pn		00 56 10.5		+5.7
HOPE	**Hope Point**	**8.68**	**314**	P	Pn		00 56 12.3		+7.5
ORCD	**Orcadas**	**9.30**	**262**	P	**Pn**		**00 56 17.7**		**+4.4**
VNA1	**Neumayer--Stat**	**12.20**	**152**	⇑P	**Pn**		**00 56 49.6**		**-3.3**
	comp=Z,4μm,0.7s								
VNA2	**Neumayer--Watz**	**12.60**	**152**	⇑P	**Pn**		**00 56 54.2**		**-4.2**
	comp=Z,253nm,0.4s,baz=312,slow=14								
VNA2				⇑S	Sn		00 59 30.9		+12
	comp=N,217nm,0.6s								
VNA2	**Neumayer--Watz**	**12.60**	**152**	P	**Pn**		**00 56 54.2**		**-4.2**
SNAA	**Sanae**	**14.20**	**150**	⇑P	**Pn**		**00 57 16.1**		**-4.1**
	comp=Z,31μm,0.6s								
SNAA				⇓S	**S**		**01 00 22.4**		**+3.9**
	comp=N,3μm,0.7s								
SNAA	**Sanae**	**14.20**	**150**	Pn	**Pn**		**00 57 16.6**		**-3.7**
	comp=N,74nm,0.3s,baz=310,slow=14,SNR=561								
SNAA				Sn	Sn		00 59 44.1		-13
	comp=N,38nm,0.3s,baz=308,slow=19,SNR=5.1								
SNAA				LR	LR		01 01 53.8		
	comp=N,64μm,18.1s,baz=267,slow=33								
SNAA	**Sanae**	**14.20**	**150**	P	**Pn**		**00 57 15.9**		**-4.3**
SNAA				pmax	pmax				
	comp=Z,2μm,0.9s								
SNAA	**Sanae**	**14.20**	**150**		**Pn**		00 57 15.3		-5.0
SNAA	**Sanae**	**14.20**	**150**	P	**Pn**		**00 57 16.3**		**-3.9**
SNAA	**Sanae**	**14.20**	**150**	⇑P	**Pn**		**00 57 16.0**		**-4.2**
SNAA	**Sanae**	**14.20**	**150**	P	**Pn**		**00 57 16.4**		**-3.9**
ESPZ	**Base Esperanza**	**14.80**	**246**	Pn	**Pn**		**00 57 29.5**		**+1.1**
JUBA	**Jubany**	**15.69**	**250**	P	**P**		**00 57 45.1**		**+0.8**
TROLL	**Troll, Antarti**	**15.77**	**147**	⇑P	**Pn**		**00 57 36.8**		**-4.6**
	comp=Z,44μm,0.8s								
BELA	**Belgrano 2**	**17.45**	**186**	P	**Pn**		**00 58 02.1**		**-0.4**
PMSA	**Palmer Station**	**17.79**	**240**	P	**P**		**00 58 10.8**		**+3.4**
	comp=Z,141nm,1.1s,baz=95,slow=13,SNR=6.1								
PMSA				S	**Sn**		**01 01 24.6**		**0.0**
	comp=Z,20nm,0.8s,baz=103,slow=19,SNR=1.4								
PMSA				LR	LR		01 03 55.6		
	comp=Z,40μm,21.3s,baz=86,slow=34								
PMSA	**Palmer Station**	**17.79**	**240**	P	**Pn**		**00 58 07.0**		**+0.3**
PMSA	**Palmer Station**	**17.79**	**240**	*e*P	**P**		**00 58 08.8**		**+1.4**
NVL	**N'lazarevskaya**	**18.04**	**139**	*e*P	**Pn**		**00 58 05.6**		**-4.1**
NVL				*e*S	**Sn**		**01 01 32.0**		**+1.3**
NVL				pmax	pmax				
	comp=Z,655nm,0.9s								
NVL				MLR	MLR				
	comp=Z,23μm,11.0s								
SMAI	**San Martin Ant**	**18.96**	**230**	P	**Pn**		**00 58 22.3**		**+1.3**
EFI	**East Falkland**	**19.94**	**283**	*de*P	**Pn**		**00 58 33.2**		**+0.4**
EFI				pmax	pmax				
	comp=Z,899nm,0.9s								
EFI				MLR	MLR				
	comp=Z,31μm,15.0s								
EFI	**East Falkland**	**19.94**	**283**		**Pn**		**00 58 32.1**		**-0.7**
EFI				IAmb	IAmb		00 58 44.6		
	comp=Z,730nm,0.9s								
EFI	**East Falkland**	**19.94**	**283**	P	**Pn**		**00 58 32.9**		**+0.1**
EFI	**East Falkland**	**19.94**	**283**	⇑P	**Pn**		**00 58 33.5**		**+0.6**
EFI	**East Falkland**	**19.94**	**283**	P	**Pn**		**00 58 34.4**		**+1.6**
ELIB	**Princess Elisa**	**21.89**	**141**	*d*P	**P**		**00 58 52.3**		**+0.2**
	comp=Z,403nm,1.1s								
ELIB				*d*S	**S**		**01 02 57.2**		**+3.5**
MG03	**Isla Dawson**	**24.70**	**266**		**P**		**00 59 22.2**		**+1.9**
MG02	**Cerro Sombrero**	**24.71**	**269**	P	**P**		**00 59 21.9**		**+1.5**
MG02	**Cerro Sombrero**	**24.71**	**269**	⇑P	**P**		**00 59 21.9**		**+1.5**
MG02	**Cerro Sombrero**	**24.71**	**269**	P	**P**		**00 59 24.8**		**+4.4**
H09N1	**TRISTAN DA CUN**	**25.18**	**26**	P	**P**		**00 59 25.1**		**+0.4**
	SNR=23								
TRIS	**Tristan da Cun**	**25.18**	**26**	P	**P**		**00 59 25.1**		**+0.3**
TRIS	**Tristan da Cun**	**25.18**	**26**	P	**P**		**00 59 27.5**		**+2.8**
TRIS	**Tristan da Cun**	**25.18**	**26**	⇑P	**P**		**00 59 28.2**		**+3.5**
TRIS	**Tristan da Cun**	**25.18**	**26**	P	**P**		**00 59 27.7**		**+3.0**
GO10	**Punta Arenas**	**25.39**	**267**		**P**		**00 59 28.2**		**+1.7**
GO10	**Punta Arenas**	**25.39**	**267**	⇓P	**P**		**00 59 31.9**		**+5.4**
MG05	**Puerto Natales**	**26.99**	**268**		**P**		**00 59 42.6**		**+1.7**
MG05				IAmb	IAmb		00 59 49.0		
	comp=Z,878nm,1.8s								
MG05	**Puerto Natales**	**26.99**	**268**	P	**P**		**00 59 41.6**		**+0.7**
MG05	**Puerto Natales**	**26.99**	**268**	P	**P**		**00 59 43.8**		**+2.8**
SYO	**Syowa Base**	**27.57**	**135**	⇑*e*P	**P**		**00 59 45.4**		**-0.6**
SYO	**Syowa Base**	**27.57**	**135**	⇓*i*P	**P**		**00 59 47.4**		**+1.4**
GO08	**Villa O'Higgin**	**29.09**	**274**		**P**		**01 00 00.4**		**+0.6**
GO08	**Villa O'Higgin**	**29.09**	**274**	P	**P**		**01 00 00.9**		**+1.1**
GO08	**Villa O'Higgin**	**29.09**	**274**	P	**P**		**01 00 01.5**		**+1.7**
QSPA	**South Pole Qui**	**29.49**	**180**	P	**P**		**01 00 00.5**		**+1.2**
	comp=Z,435nm,1.0s,baz=197,slow=4.9,SNR=138								
QSPA				S	**S**		**01 04 59.4**		**+1.9**
	comp=Z,44nm,1.1s,baz=144,slow=12,SNR=1.6								
QSPA				LR	LR		01 11 49.5		
	comp=Z,47μm,18.2s,baz=190,slow=36								
	comp=Z,435nm,1.0s								
QSPA	**South Pole Qui**	**29.49**	**180**		**P**		**01 00 04.1**		**+0.7**
QSPA	**South Pole Qui**	**29.49**	**180**	IAMs_20	IAMs_20		01 11 38.5		
	comp=Z,50μm,18.0s								
QSPA	**South Pole Qui**	**29.49**	**180**	⇓P	**P**		**01 00 05.2**		**+1.8**
QSPA	**South Pole Qui**	**29.49**	**180**	P	**P**		**01 00 05.5**		**+2.1**
AY03	**Cochrane**	**29.94**	**275**	P	**P**		**01 00 08.0**		**+0.7**
TRQA	**Tornquist**	**32.06**	**298**	P	**P**		**01 00 26.2**		**0.0**
TRQA				pmax	pmax				
	comp=Z,784nm,1.0s								
TRQA				MLR	MLR				
	comp=Z,26μm,20.0s								
TRQA	**Tornquist**	**32.06**	**298**	P	**P**		**01 00 26.1**		**0.0**
TRQA	**Tornquist**	**32.06**	**298**	P	**P**		**01 00 26.6**		**+0.5**
LL02	**Futaleuf**	**32.53**	**281**	P	**P**		**01 00 30.8**		**+0.6**
LL02				IAMs_20	IAMs_20		01 11 14.8		
	comp=Z,38μm,22.0s								
LL02	**Futaleuf**	**32.53**	**281**	⇑P	**P**		**01 00 32.0**		**+1.9**
LL02	**Futaleuf**	**32.53**	**281**	P	**P**		**01 00 31.7**		**+1.6**
ANCO	**Parque Anchore**	**33.65**	**307**	*e*P	**P**		**01 00 40.1**		**+0.1**
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 41.2**		**-0.2**
	comp=Z,20nm,0.7s,baz=141,slow=9.7,SNR=26								
PLCA				S	**S**		**01 06 02.4**		**-2.6**
	comp=Z,2.7nm,0.9s,baz=119,slow=19,SNR=0.7								
PLCA				LR	LR		01 13 49.6		
	comp=Z,21μm,18.9s,baz=132,slow=35								
	comp=Z,20nm,0.7s								
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 41.7**		**+0.4**
PLCA				pmax	pmax				
	comp=Z,169nm,1.0s								
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 41.7**		**+0.4**
PLCA				IAmb	IAmb		01 00 51.1		
	comp=Z,169nm,1.0s								
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 41.3**		**0.0**
PLCA	**Paso Flores**	**33.80**	**286**	⇓P	**P**		**01 00 42.1**		**+0.8**
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 41.4**		**0.0**
PLCA	**Paso Flores**	**33.80**	**286**	*e*P	**P**		**01 00 42.2**		**+0.9**
PLCA	**Paso Flores**	**33.80**	**286**	P	**P**		**01 00 43.4**		**+2.0**
LL03	**Petrohue**	**34.36**	**283**	P	**P**		**01 00 47.3**		**+1.2**
LL03				IAmb	IAmb		01 01 10.6		
	comp=Z,339nm,0.8s								
LL03	**Petrohue**	**34.36**	**283**	P	**P**		**01 00 50.0**		**+3.8**
LR05	**Currie**	**34.88**	**285**	P	**P**		**01 00 51.5**		**+0.9**
LR05				IAmb	IAmb		01 01 15.3		
	comp=Z,351nm,0.9s								
GO06	**Curarrehue**	**35.14**	**286**	P	**P**		**01 00 53.3**		**+0.3**
GO06				IAmb	IAmb		01 01 04.6		
	comp=Z,193nm,1.0s								
CPSB	**Cacapava Do Su**	**35.47**	**316**	P	**P**		**01 00 56.1**		**+0.3**
CPSB				IAmb	IAmb		01 01 19.5		
	comp=Z,322nm,1.0s								
CPSB	**Cacapava Do Su**	**35.47**	**316**	P	**P**		**01 00 55.3**		**-0.4**
CPSB	**Cacapava Do Su**	**35.47**	**316**	*e*P	**P**		**01 00 55.4**		**-0.4**
CPSB				*e*pP	**sP**		**01 00 58.9**		**+1.0**
LR04	**Corral**	**35.83**	**284**	IAMs_20	IAMs_20		01 13 21.0		
	comp=Z,38μm,22.0s								
LR04	**Corral**	**35.83**	**284**	P	**P**		**01 00 57.2**		**-1.6**
MAW	**Mawson**	**35.99**	**139**	P	**P**		**01 01 00.2**		**+0.4**
	comp=Z,237nm,1.0s,baz=237,slow=9.5,SNR=55								
MAW				PcP	**PcP**		**01 03 25.9**		**0.0**
	comp=Z,50nm,0.9s,baz=256,slow=4.2,SNR=3.5								
MAW				S	**S**		**01 06 38.1**		**+0.2**
	comp=Z,10nm,1.1s,baz=248,slow=5.4,SNR=1.9								
MAW				LR	LR		01 13 24.6		
	comp=Z,29μm,21.4s,baz=256,slow=32								
	comp=Z,237nm,1.0s								
MAW	**Mawson**	**35.99**	**139**	P	**P**		**01 00 57.8**		**-2.0**
MAW	**Mawson**	**35.99**	**139**	⇑P	**P**		01 00 54.5		-5.3
MAW	**Mawson**	**35.99**	**139**	P	**P**		**01 01 00.7**		**+0.9**
PSAL	**Palomas, Salto**	**36.35**	**310**	*e*P	**P**		**01 01 01.9**		**-1.4**
BI02	**San Fabin de**	**37.39**	**289**	P	**P**		**01 01 12.5**		**+0.3**
BI02	**San Fabin de**	**37.39**	**289**	P	**P**		**01 01 13.3**		**+1.1**
ITAB	**Concordia**	**37.98**	**320**	P	**P**		**01 01 17.5**		**+0.4**
ITAB	**Concordia**	**37.98**	**320**	P	**P**		**01 01 17.6**		**+0.5**
ITAB				S	**S**		**01 07 09.4**		**+0.5**
ITAB	**Concordia**	**37.98**	**320**	*e*P	**P**		**01 01 16.8**		**-0.3**
ML02	**Panimavida**	**38.19**	**290**	P	**P**		**01 01 18.8**		**-0.1**
ML02	**Panimavida**	**38.19**	**290**	P	**P**		**01 01 19.6**		**+0.7**
BI05	**Punta Hualpn**	**38.22**	**287**	P	**P**		**01 01 19.3**		**+0.2**
BI05	**Punta Hualpn**	**38.22**	**287**	P	**P**		**01 01 19.8**		**+0.7**
BO02	**Sierra Bellavi**	**38.70**	**291**		**P**		**01 01 22.6**		**-0.6**
BO02				IAmb	IAmb		01 01 36.9		
	comp=Z,436nm,0.7s								
BO02	**Sierra Bellavi**	**38.70**	**291**	⇑P	**P**		**01 01 23.4**		**+0.2**
BO02	**Sierra Bellavi**	**38.70**	**291**	P	**P**		**01 01 23.6**		**+0.4**
GO05	**Hualane**	**39.05**	**290**	P	**P**		**01 01 26.0**		**-0.1**
GO05	**Hualane**	**39.05**	**290**	P	**P**		**01 01 25.9**		**-0.1**
GO05	**Hualane**	**39.05**	**290**	⇑P	**P**		**01 01 25.8**		**-0.3**
GO05	**Hualane**	**39.05**	**290**	P	**P**		**01 01 26.0**		**-0.1**
BO01	**Tunca**	**39.17**	**291**	P	**P**		**01 01 27.7**		**+0.6**
MT13	**San Alfonso**	**39.35**	**293**	P	**P**		**01 01 29.1**		**+0.4**
MT13				IAmb	IAmb		01 01 52.2		
	comp=Z,356nm,0.8s								
PET01	**Itanhaem-SP**	**39.35**	**328**	P	**P**		**01 01 30.5**		**+1.8**
PET01	**Itanhaem-SP**	**39.35**	**328**	*e*P	**P**		**01 01 27.2**		**-1.5**
MT08	**Bocatoma Ro**	**39.48**	**293**	IAMs_20	IAMs_20		01 18 44.8		
	comp=Z,22μm,18.0s								
BO03	**Pichilemu**	**39.49**	**290**	P	**P**		**01 01 30.0**		**+0.3**
MT16	**CCHEN**	**39.72**	**293**	P	**P**		**01 01 32.8**		**+1.0**
MT05	**Renca**	**39.85**	**293**	P	**P**		**01 01 33.3**		**+0.5**
CER	**Ceres**	**39.89**	**67**	P	**P**		**01 01 33.7**		**+0.5**
VA05	**Santo Domingo**	**40.02**	**291**	P	**P**		**01 01 34.8**		**+0.6**
VA05	**Santo Domingo**	**40.02**	**291**	P	**P**		**01 01 35.7**		**+1.5**
PEL	**Peldehue**	**40.03**	**293**	P	**P**		**01 01 34.8**		**+0.4**
PEL				S	**S**		**01 07 42.0**		**+2.1**
PEL	**Peldehue**	**40.03**	**293**	P	**P**		**01 01 34.0**		**-0.4**
PEL	**Peldehue**	**40.03**	**293**	P	**P**		**01 01 35.0**		**+0.7**
PRTV	**Porterville,We**	**40.05**	**67**	*e*P	**P**		**01 01 36.3**		**+1.8**
SPB	**Sao Paulo**	**40.06**	**328**	P	**P**		**01 01 34.0**		**-0.6**
SPB	**Sao Paulo**	**40.06**	**328**	P	**P**		**01 01 34.8**		**+0.2**
SPB	**Sao Paulo**	**40.06**	**328**	⇑P	**P**		**01 01 34.9**		**+0.2**
SPB	**Sao Paulo**	**40.06**	**328**	*e*P	**P**		**01 01 34.4**		**-0.2**
SPB	**Sao Paulo**	**40.06**	**328**	P	**P**		**01 01 35.9**		**+1.3**
VA03	**San Esteban**	**40.29**	**293**	P	**P**		**01 01 37.5**		**+0.9**
PTGB	**Pitanga**	**40.31**	**321**	P	**P**		**01 01 35.8**		**-0.9**
PTGB				S	**S**		**01 07 41.8**		**-2.4**
CAM01	**Campos-RJ**	**40.46**	**337**	P	**P**		**01 01 37.3**		**-0.6**
CAM01	**Campos-RJ**	**40.46**	**337**	*e*P	**P**		**01 01 37.7**		**-0.2**
ZON	**Zonda**	**40.49**	**296**	P	**P**		**01 01 38.4**		**+0.2**
ZON				pmax	pmax				
	comp=Z,1μm,1.2s								
ZON	**Zonda**	**40.49**	**296**	P	**P**		**01 01 38.4**		**+0.2**
ZON	**Zonda**	**40.49**	**296**	⇑P	**P**		**01 01 38.0**		**-0.2**
ZON	**Zonda**	**40.49**	**296**	P	**P**		**01 01 39.4**		**+1.3**
VAO	**Valinhos**	**40.51**	**329**	P	**P**		**01 01 37.9**		**-0.5**
VAO	**Valinhos**	**40.51**	**329**	*e*P	**P**		**01 01 38.0**		**-0.4**
VABB	**Valinhos**	**40.51**	**329**	P	**P**		**01 01 38.0**		**-0.4**
CPUP	**Villa Florida**	**40.56**	**314**	P	**P**		**01 01 37.4**		**-1.3**
	comp=Z,60nm,0.5s,baz=156,slow=12,SNR=125								
CPUP				S	S		01 07 35.9		-12
	comp=Z,5.9nm,0.9s,baz=153,slow=4.5,SNR=1.9								
CPUP				LR	LR		01 17 09.2		
	comp=Z,17μm,22.0s,baz=156,slow=34								
	comp=Z,60nm,0.5s								
CPUP	**Villa Florida**	**40.56**	**314**	P	**P**		**01 01 37.9**		**-0.8**
CPUP				pmax	pmax				
	comp=Z,239nm,1.0s								
CPUP	**Villa Florida**	**40.56**	**314**	P	**P**		**01 01 37.9**		**-0.8**
CPUP				IAmb	IAmb		01 01 59.8		
	comp=Z,239nm,1.0s								
CPUP	**Villa Florida**	**40.56**	**314**	⇑P	**P**		**01 01 37.9**		**-0.8**
CPUP	**Villa Florida**	**40.56**	**314**	P	**P**		**01 01 38.0**		**-0.6**
CPUP				S	**S**		**01 07 47.8**		**+0.1**
CPUP	**Villa Florida**	**40.56**	**314**	P	**P**		**01 01 38.2**		**-0.5**
MATJ	**Matjiesfontein**	**40.56**	**69**	*e*P	**P**		**01 01 37.9**		**-0.9**
VA01	**Torpederas**	**40.57**	**292**	P	**P**		**01 01 41.1**		**+2.3**
SIM2	**UHE Simplicio**	**40.60**	**335**	P	**P**		**01 01 38.8**		**-0.3**
CO04	**Los Peladeros**	**41.09**	**293**	P	**P**		**01 01 43.9**		**+0.5**
CO04				IAMs_20	IAMs_20		01 18 56.0		
	comp=Z,23μm,18.0s								
CO04	**Los Peladeros**	**41.09**	**293**	P	**P**		**01 01 45.0**		**+1.6**
RCLB	**Rio Claro- Sao**	**41.21**	**329**	P	**P**		**01 01 44.7**		**+0.6**
RCLB	**Rio Claro- Sao**	**41.21**	**329**	*e*P	**P**		**01 01 44.1**		**-0.1**
LDASE	**Londrina, Braz**	**41.27**	**323**	*e*P	**P**		**01 01 44.2**		**-0.4**
SJPY	**San Joaquin**	**41.35**	**316**	*e*P	**P**		**01 01 44.6**		**-0.7**
SUR	**Sutherland**	**41.41**	**68**	LR	LR		01 14 41.5		
	comp=Z,26μm,20.2s,baz=206,slow=30								
SUR	**Sutherland**	**41.41**	**68**	P	**P**		**01 01 43.9**		**-2.0**
SUR	**Sutherland**	**41.41**	**68**	IAMs_20	IAMs_20		01 14 22.8		
	comp=Z,29μm,20.0s								
SUR	**Sutherland**	**41.41**	**68**	⇓P	**P**		**01 01 48.1**		**+2.2**
SUR	**Sutherland**	**41.41**	**68**	P	**P**		**01 01 46.9**		**+1.0**
SBA	**Scott Base**	**41.44**	**184**	P	**P**		**01 01

PMNB Patos De Minas 44.67 332 eP P **01 02 11.2 -1.0**
AC02 Maricunga 44.76 299 P P **01 02 14.4 +1.0**
H04S2 CROZET ISLANDS 45.11 109 T T 01 50 57.4
baz=223,slow=75,SNR=2175
H04S3 CROZET ISLANDS 45.12 109 T T 01 51 05.2
baz=223,slow=75,SNR=2204
H04S1 CROZET ISLANDS 45.13 109 T T 01 51 00.9
baz=223,slow=75,SNR=1987
GUA01 Guaratinga, BA 45.25 341 P P **01 02 15.8 -1.0**
GUA01 Guaratinga, BA 45.25 341 eP P **01 02 15.9 -0.9**
ARCA Araçuai, MG 45.37 338 P P **01 02 16.3 -1.4**
ARCA Araçuai, MG 45.37 338 eP P **01 02 16.2 -1.5**
JQT1 Jequitai-MG 45.46 335 P P **01 02 17.2 -1.3**
H04N3 CROZET ISLANDS 45.56 108 P P **01 02 20.7 +2.0**
baz=207,slow=7.2,SNR=7.3
H04N3 T T 01 51 52.4
baz=222,slow=75,SNR=12
H04N1 CROZET ISLANDS 45.57 108 P P **01 02 20.6 +1.8**
baz=207,slow=7.2,SNR=3.8
H04N1 T T 01 51 42.8
baz=222,slow=75,SNR=13
H04N2 CROZET ISLANDS 45.58 108 P P **01 02 20.4 +1.5**
baz=207,slow=7.2,SNR=5.1
H04N2 T T 01 51 46.5
baz=222,slow=75,SNR=11
IPMB Ipameri, GO 45.63 329 P P **01 02 19.1 -0.8**
IPMB S S **01 09 03.1 +0.7**
IPMB Ipameri, GO 45.63 329 eP P **01 02 19.1 -0.8**
MC01 Montes Claros 45.89 335 P P **01 02 20.5 -1.4**
SALTA 45.90 304 P P **01 02 22.5 0.0**
AC01 Pan de Azucar 45.99 298 P P **01 02 24.3 +1.7**
C2SB Chapadao do Su 46.14 323 eP P **01 02 23.7 -0.1**
CMC01 Camacan, BA 46.41 342 P P **01 02 25.7 -0.2**
CMC01 Camacan, BA 46.41 342 eP P **01 02 25.4 -0.5**
BOSA Boshof 46.62 70 P P **01 02 27.2 -0.6**
comp=Z,89nm,0.8s,baz=208,slow=8.8,SNR=84
BOSA S **S 01 09 19.1 +2.5**
comp=Z,2.9nm,0.9s,baz=198,slow=20,SNR=1.4
BOSA LR LR 01 17 57.2
comp=Z,15µm,18.5s,baz=206,slow=31
comp=Z,89nm,0.8s
BOSA Boshof 46.62 70 P P **01 02 25.9 -1.8**
BOSA IAmb IAmb 01 02 36.1
comp=Z,132nm,0.8s
BOSA Boshof 46.62 70 *i*P P **01 02 27.1 -0.6**
BOSA Boshof 46.62 70 ⇓P P **01 02 26.6 -1.1**
BOSA Boshof 46.62 70 eP P **01 02 26.4 -1.3**
BOSA Boshof 46.62 70 P P **01 02 26.9 -0.8**
COIM Forte Coimbra 46.64 317 eP P **01 02 27.2 -0.5**
NBIT Itapeh - BA 46.82 342 P P **01 02 29.1 0.0**
NBIT Itapeh - BA 46.82 342 eP P **01 02 27.7 -1.4**
SHEL Horse Pasture 47.00 27 P P **01 02 30.0 -0.6**
SHEL pmax pmax
comp=Z,2µm,1.1s
SHEL Horse Pasture 47.00 27 P P **01 02 29.9 -0.6**
SHEL Horse Pasture 47.00 27 ⇑P P **01 02 32.1 +1.5**
SHEL Horse Pasture 47.00 27 eP P **01 02 32.4 +1.8**
PB14 IPOC Station P 47.24 299 P P **01 02 33.3 +0.5**
PB14 IPOC Station P 47.24 299 P P **01 02 32.9 +0.1**
PB14 IAmb IAmb 01 02 40.7
comp=Z,266nm,1.0s
PB14 IPOC Station P 47.24 299 P P **01 02 33.3 +0.5**
JANB Januaria 47.57 335 P P **01 02 34.5 -0.5**
JANB S S **01 09 27.7 -2.4**
JANB Januaria 47.57 335 eP P **01 02 32.8 -2.2**
AF01 San Pedro de A 47.79 303 P P **01 02 38.0 +1.0**
BDFB Brasilia 47.83 330 P P **01 02 35.2 -2.0**
comp=Z,64nm,0.8s,baz=153,slow=5.1,SNR=43
BDFB S **S 01 09 32.5 -1.5**
comp=Z,5.5nm,0.9s,baz=90,slow=11,SNR=1.6
BDFB LR LR 01 22 38.3
comp=Z,15µm,18.9s,baz=159,slow=36
comp=Z,64nm,0.8s
BDFB Brasilia 47.83 330 P P **01 02 36.7 -0.5**
BDFB pmax pmax
comp=Z,116nm,0.7s
BDFB Brasilia 47.83 330 P P **01 02 36.7 -0.5**
BDFB IAmb IAmb 01 02 45.0
comp=Z,116nm,0.7s
SNKL Senekal, Frees 48.08 72 eP P **01 02 37.5 -1.7**
WIN Windhoek 48.30 57 P P **01 02 39.3 -1.5**
WIN pmax pmax
comp=Z,95nm,1.0s
WIN Windhoek 48.30 57 P P **01 02 39.3 -1.5**
WIN IAMs_20 IAMs_20 01 18 12.9
comp=Z,26µm,20.0s
WIN Windhoek 48.30 57 P P **01 02 44.1 +3.3**
PMBG Pietermaritzbu 48.34 76 eP P **01 02 39.9 -1.1**
PB06 IPOC Station P 48.59 301 P P **01 02 44.4 +1.3**
LKGWB Lokgwabe 48.68 63 P P **01 02 43.8 +0.1**
LKGWB IAmb IAmb 01 02 54.8
comp=Z,195nm,0.9s
LKGWB Lokgwabe 48.68 63 P P **01 02 44.7 +1.0**
PB05 IPOC Station P 48.72 301 P P **01 02 44.3 +0.3**
PB05 IPOC Station P 48.72 301 P P **01 02 45.2 +1.2**
ARAG Araguaiana, MT 48.76 326 eP P **01 02 42.7 -1.5**
MAKGR Makgori 48.81 68 P P **01 02 42.5 -2.2**
MAKGR IAmb IAmb 01 02 55.2
comp=Z,156nm,1.1s
MAKGR Makgori 48.81 68 P P **01 02 43.3 -1.4**
KOOLE Kule 49.23 61 P P **01 02 46.3 -1.6**
KOOLE IAmb IAmb 01 03 04.8
comp=Z,145nm,0.8s
KOOLE Kule 49.23 61 P P **01 02 47.1 -0.8**
CASY Casey 49.23 158 P P **01 02 47.0 -0.2**
CASY IAmb IAmb 01 02 52.9
comp=Z,365nm,1.1s
CASY Casey 49.23 158 ⇓P P **01 02 48.3 +1.1**
PB03 IPOC Station P 49.24 302 P P **01 02 49.2 +1.1**
PB09 IPOC Station P 49.26 302 P P **01 02 50.4 +2.2**
WDLM Western Deep L 49.49 71 eP P **01 02 48.0 -2.0**
SKOMA Sekoma 49.54 66 P P **01 02 49.7 -0.6**
PB07 IPOC Station P 49.59 302 P P **01 02 50.9 +0.2**
PB07 IPOC Station P 49.59 302 P P **01 02 52.0 +1.3**
SALV Santo Antonio 49.71 321 P P **01 02 49.6 -1.8**
SALV Santo Antonio 49.71 321 eP P **01 02 50.6 -0.9**
LBTB Lobatse 49.86 68 LR LR 01 19 59.1
comp=Z,24µm,19.9s,baz=208,slow=31
LBTB Lobatse 49.86 68 P P **01 02 50.9 -1.8**
LBTB pmax pmax
comp=Z,223nm,1.2s
LBTB Lobatse 49.86 68 P P **01 02 50.9 -1.8**
LBTB IAmb IAmb 01 03 11.9
comp=Z,223nm,1.1s
LBTB Lobatse 49.86 68 *i*P P **01 02 52.8 +0.1**
LBTB Lobatse 49.86 68 ⇓P P **01 02 51.6 -1.1**
LBTB Lobatse 49.86 68 eP P **01 02 51.4 -1.3**
LBTB Lobatse 49.86 68 P P **01 02 52.0 -0.7**
PB02 IPOC Station P 49.95 302 P P **01 02 54.4 +0.9**
HRAO HartRAO 50.07 71 eP P **01 02 53.8 -0.6**
BBSD Serra de San D 50.13 315 eP P **01 02 53.1 -1.6**
SDBA SAO DESIDERIO 50.26 335 P P **01 02 54.9 -0.8**
SDBA S S **01 10 05.1 -3.0**
SDBA SAO DESIDERIO 50.26 335 eP P **01 02 54.2 -1.5**
NBLA Lagarto - SE 50.45 345 eP P **01 02 55.8 -1.3**
NBLA S S **01 10 08.1 -2.5**
PB08 IPOC Station P 50.70 303 P P **01 03 00.0 +0.6**
PB08 IPOC Station P 50.70 303 P P **01 03 00.1 +0.7**
POGA Pongola 50.72 76 P P **01 02 57.5 -1.6**
POGA IAmb IAmb 01 03 07.7
comp=Z,170nm,0.8s
POGA Pongola 50.72 76 ⇓P P **01 02 58.2 -0.9**
POGA Pongola 50.72 76 P P **01 02 58.4 -0.6**
POGA Pongola 50.72 76 P P **01 02 58.5 -0.6**
NBPN Ponto Novo - B 50.94 342 P P **01 02 59.3 -1.6**
NBPN Ponto Novo - B 50.94 342 eP P **01 02 59.2 -1.6**
TA02 Huaiquique 50.98 302 P P **01 03 02.1 +1.0**
GRTLG Ghanzi 51.10 61 P P **01 03 00.8 -1.4**
GRTLG Ghanzi 51.10 61 P P **01 03 01.7 -1.0**
GO01 Chusmiza 51.14 304 P P **01 03 03.3 +0.5**
PTLB Pontes e Lacer 51.24 317 P P **01 03 02.7 -0.3**
PTLB IAmb IAmb 01 03 27.4
comp=Z,323nm,1.0s
PTLB Pontes e Lacer 51.24 317 P P **01 03 02.2 -0.8**
PTLB Pontes e Lacer 51.24 317 eP P **01 03 01.9 -1.1**
PB11 IPOC Station P 51.24 303 P P **01 03 04.3 +1.1**
PAF Port-aux-Franc 51.27 124 IAMs_20 IAMs_20 01 28 34.1
comp=Z,21µm,18.0s
SIV San Ignacio 51.40 315 LR LR 01 24 10.9
comp=Z,7µm,22.0s,baz=175,slow=35
TSUM Tsumeb 51.50 56 LR LR 01 20 53.7
comp=Z,22µm,19.7s,baz=210,slow=31
TSUM Tsumeb 51.50 56 P P **01 03 03.5 -1.7**
comp=Z,22µm,20.0s
TSUM Tsumeb 51.50 56 *i*P P **01 03 05.5 +0.3**
TSUM Tsumeb 51.50 56 ⇑P P **01 03 04.6 -0.5**
TSUM Tsumeb 51.50 56 eP P **01 03 03.3 -1.8**
TSUM Tsumeb 51.50 56 P P **01 03 04.7 -0.4**
NTVB Natividade 51.54 332 P P **01 03 05.1 -0.2**
NTVB S S **01 10 25.2 -0.5**
NBAN Anadia - AL 51.58 347 P P **01 03 04.9 -0.7**
NBAN S S **01 10 23.3 -2.9**
PSGCX Pisagua 51.58 303 P P **01 03 05.8 +0.1**
PSGCX IAmb IAmb 01 03 15.4
comp=Z,270nm,1.1s
PSGCX IAMs_20 IAMs_20 01 24 03.9
comp=Z,19µm,22.0s
LEPH Lephalale, Lim 51.86 69 eP P **01 03 04.6 -3.2**
CKGRV CKGRV 52.18 64 P P **01 03 09.3 -0.9**
SNDB Serra Nova Dou 52.18 328 P P **01 03 10.0 -0.1**
SNDB Serra Nova Dou 52.18 328 eP P **01 03 09.0 -1.1**
PILG Pilgrimsrest, 52.29 73 eP P **01 03 09.6 -1.6**
NBTA Tacaratu-PE 52.33 345 P P **01 03 09.9 -1.3**
NBTA Tacaratu-PE 52.33 345 eP P **01 03 09.8 -1.5**
H10S2 ASCENSION HYDR 52.34 14 T T 01 59 52.2
baz=187,slow=74,SNR=917
H10S3 ASCENSION HYDR 52.34 14 T T 02 00 16.3
baz=33,slow=74,SNR=819
DRV Dumont d'Urvil 52.46 173 P P **01 03 12.1 +0.6**
PB12 IPOC Station P 52.55 303 IAMs_20 IAMs_20 01 24 53.4
comp=Z,16µm,21.0s
GMARE Gumare 53.25 61 P P **01 03 16.6 -1.5**
GMARE IAmb IAmb 01 03 28.5
comp=Z,338nm,1.0s
GMARE Gumare 53.25 61 P P **01 03 17.9 -0.2**
LAJE UHE Lajeado 53.36 332 P P **01 03 18.1 -0.8**
H10N1 ASCENSION HYDR 53.46 14 P P **01 03 20.7 +1.6**
baz=190,slow=8.5,SNR=7.6
H10N1 T T 02 01 08.4
baz=192,slow=80,SNR=412
H10N3 ASCENSION HYDR 53.46 14 P P **01 03 20.7 +1.6**
baz=190,slow=8.5,SNR=6.8
H10N3 T T 02 01 14.5
baz=192,slow=80,SNR=759
H10N2 ASCENSION HYDR 53.48 14 P P **01 03 20.8 +1.6**
baz=190,slow=8.5,SNR=9.6
H10N2 T T 02 01 14.7
baz=192,slow=80,SNR=255
LPAZ La Paz 53.76 307 P P **01 03 22.6 +0.1**
comp=Z,103nm,0.9s,baz=152,slow=6.0,SNR=247
LPAZ S S **01 10 55.1 -2.0**
comp=Z,14nm,1.1s,baz=143,slow=20,SNR=6.7
LPAZ LR LR 01 28 33.1
comp=Z,5µm,19.1s,baz=162,slow=39
LPAZ PKP2bc **P'P'bc 01 33 55.1 +1.8**
comp=Z,4.7nm,1.0s,baz=316,slow=1.4,SNR=4.5
comp=Z,103nm,0.9s
LPAZ La Paz 53.76 307 P P **01 03 22.2 -0.2**
LPAZ IAmb IAmb 01 03 32.0
comp=Z,308nm,0.9s
LPAZ La Paz 53.76 307 ⇑P P **01 03 22.6 +0.1**
LPAZ La Paz 53.76 307 P P **01 03 22.7 +0.3**
LPAZ La Paz 53.76 307 eP P **01 03 22.3 -0.2**
VILB Vilhena 53.93 317 P P **01 03 22.1 -0.9**
VILB Vilhena 53.93 317 P P **01 03 21.9 -1.0**
VILB Vilhena 53.93 317 eP P **01 03 22.1 -0.9**
BROLN Tlhalogang 54.04 67 P P **01 03 22.8 -1.0**
NBMA Muriti-CE 54.16 344 P P **01 03 24.4 -0.2**
NBMA Muriti-CE 54.16 344 eP P **01 03 23.0 -1.7**
SMTB Santa Maria do 54.28 333 P P **01 03 24.8 -0.8**
SMTB Santa Maria do 54.28 333 eP P **01 03 24.4 -1.2**
CLDB Colider 54.49 323 P P **01 03 25.2 -1.9**
CLDB Colider 54.49 323 eP P **01 03 25.1 -1.9**
NBPV Pedro Velho 54.68 348 P P **01 03 28.1 -0.3**
NBPV Pedro Velho 54.68 348 eP P **01 03 28.3 -0.1**
MATP Matopo 55.15 68 LR LR 01 23 09.1
comp=Z,19µm,19.3s,baz=200,slow=32
MATP Matopo 55.15 68 *i*P P **01 03 34.9 +2.9**
PFBR Pau dos Ferros 55.31 345 P P **01 03 32.3 -0.8**
RCBR Riachuelo 55.33 348 LR LR 01 22 19.5
comp=Z,7µm,21.6s,baz=168,slow=31
RCBR Riachuelo 55.33 348 P P **01 03 33.1 -0.1**
RCBR pmax pmax
comp=Z,102nm,1.0s
RCBR Riachuelo 55.33 348 P P **01 03 33.1 -0.1**
RCBR IAmb IAmb 01 04 45.5
comp=Z,102nm,0.9s
RCBR Riachuelo 55.33 348 IAMs_20 IAMs_20 01 22 08.9
comp=Z,16µm,21.0s
RCBR Riachuelo 55.33 348 P P **01 03 34.3 +1.2**
RCBR Riachuelo 55.33 348 eP P **01 03 33.0 -0.1**
BLWY Bulawayo 55.45 68 *i*P P **01 03 34.3 +0.1**
NBPA Parau_RN 55.54 346 P P **01 03 34.8 +0.2**
NBPA Parau_RN 55.54 346 eP P **01 03 34.4 -0.2**
KSANE Kasane 55.96 63 P P **01 03 36.0 -1.8**
KSANE IAmb IAmb 01 04 07.3
comp=Z,258nm,1.4s
KSANE Kasane 55.96 63 P P **01 03 37.0 -0.8**
NBPB Pedra_Branca-C 56.06 343 P P **01 03 37.7 -0.7**
PAL01 Palmeiras do T 56.42 334 P P **01 03 41.8 +0.8**
PAL01 S S **01 11 32.6 +0.9**
PRPB Parauapebas 57.39 331 P P **01 03 47.1 -0.7**
PRPB Parauapebas 57.39 331 eP P **01 03 47.3 -0.5**
NBPS Pedro II - PI 57.47 341 P P **01 03 47.4 -1.0**
NBPS Pedro II - PI 57.47 341 eP P **01 03 48.3 -0.1**
SBBR Sobral 57.93 343 P P **01 03 51.7 +0.1**
NBMO Morrinhos-CE 58.32 343 P P **01 03 53.6 -0.7**
NBMO Morrinhos-CE 58.32 343 eP P **01 03 54.1 -0.2**
LSZ Lusaka 59.52 65 LR LR 01 26 22.1
comp=Z,14µm,18.2s,baz=202,slow=33
LSZ Lusaka 59.52 65 P P **01 04 01.5 -1.4**
LSZ pmax pmax
comp=Z,124nm,0.9s
LSZ Lusaka 59.52 65 P P **01 04 01.5 -1.4**
LSZ IAmb IAmb 01 04 12.2
comp=Z,124nm,0.9s
LSZ Lusaka 59.52 65 IAMs_20 IAMs_20 01 26 55.5
comp=Z,18µm,18.0s
LSZ Lusaka 59.52 65 *i*P P **01 04 04.3 +1.4**
LSZ Lusaka 59.52 65 eP P **01 03 59.1 -3.8**
LSZ Lusaka 59.52 65 P P **01 04 01.7 -1.2**
FOMA Nahampoana Res 60.12 88 P P **01 04 04.8 -1.9**
FOMA IAmb IAmb 01 04 13.0
comp=Z,192nm,1.4s
FOMA IAMs_20 IAMs_20 01 26 00.9
comp=Z,17µm,18.0s
ITTB Itaituba 60.65 325 P P **01 04 08.2 -2.2**
ITTB Itaituba 60.65 325 eP P **01 04 08.9 -1.6**
ATM1 UHE Belo Monte 60.75 329 P P **01 04 10.6 -0.6**
BMO1 UHE Belo Monte 60.77 330 P P **01 04 10.3 -0.9**
NNA Nana 61.21 300 P P **01 04 15.0 +0.7**
comp=Z,40nm,0.9s,baz=154,slow=7.3,SNR=6.5
NNA S S **01 12 36.7 +2.6**
comp=Z,3.5nm,0.3s,baz=197,slow=14,SNR=1.4
NNA LR LR 01 28 32.1
comp=Z,9µm,21.6s,baz=150,slow=34
comp=Z,40nm,0.9s
NNA Nana 61.21 300 *d*P P **01 04 15.5 +1.2**
NNA pmax pmax
comp=Z,105nm,1.1s
NNA MLR MLR
comp=Z,22µm,22.0s
NNA Nana 61.21 300 P P **01 04 14.4 +0.1**
NNA Nana 61.21 300 IAMs_20 IAMs_20 01 30 01.5
comp=Z,13µm,22.0s
NNA Nana 61.21 300 ⇓P P **01 04 15.6 +1.2**
VOI Vohitsoka 62.61 86 P P **01 04 21.3 -2.5**
VOI IAMs_20 IAMs_20 01 25 10.3
comp=Z,15µm,21.0s
VOI Vohitsoka 62.61 86 ⇑P P **01 04 27.1 +3.3**
VOI Vohitsoka 62.61 86 P P **01 04 27.4 +3.5**
MACA Manacapuru-AM 63.27 320 P P **01 04 26.3 -1.7**
MACA IAmb IAmb 01 04 37.1
comp=Z,139nm,0.8s
MACA Manacapuru-AM 63.27 320 P P **01 04 26.7 -1.3**
MACA Manacapuru-AM 63.27 320 eP P **01 04 25.6 -2.5**
CZSB Cruzeiro do Su 63.35 306 P P **01 04 27.2 -1.4**
comp=Z,11µmcomp=Z,5µmcomp=Z,445nm,1.2s
CZSB Cruzeiro do Su 63.35 306 P P **01 04 27.8 -0.7**
CZSB Cruzeiro do Su 63.35 306 eP P **01 04 28.3 -0.3**
RPN Rapa Nui 63.65 261 LR LR 01 27 05.2
comp=Z,4µm,19.6s,baz=120,slow=31
ABPO Ambohimpanom 65.28 85 P P **01 04 39.5 -1.9**
ABPO pmax pmax
comp=Z,371nm,2.0s
ABPO Ambohimpanom 65.28 85 P P **01 04 39.5 -1.9**
ABPO IAmb IAmb 01 04 48.0
comp=Z,371nm,1.9s
ABPO Ambohimpanom 65.28 85 IAMs_20 IAMs_20 01 27 55.9
comp=Z,17µm,18.0s
ABPO Ambohimpanom 65.28 85 ⇑P P **01 04 45.4 +4.0**
ABPO Ambohimpanom 65.28 85 P P **01 04 45.8 +4.4**
ATAH Atahualpa 66.22 300 P P **01 04 48.8 +1.0**
comp=Z,26nm,1.1s,baz=161,slow=6.5,SNR=20
ATAH S S **01 13 41.3 +4.2**
comp=Z,2.3nm,0.8s,baz=161,slow=18,SNR=1.6
ATAH LR LR 01 34 02.4
comp=Z,3µm,21.1s,baz=152,slow=36
comp=Z,26nm,1.1s
RER Riviere de l'E 67.64 93 IAMs_20 IAMs_20 01 27 56.2
comp=Z,11µm,19.0s
BOAV Boa Vista 68.47 322 P P **01 05 00.2 -1.3**
BOAV IAmb IAmb 01 05 08.3
comp=Z,140nm,0.8s
BOAV Boa Vista 68.47 322 P P **01 04 59.0 -2.5**
comp=Z,11µmcomp=Z,3µmcomp=Z,202nm,0.8s
BOAV Boa Vista 68.47 322 P P **01 04 59.9 -1.7**
BOAV Boa Vista 68.47 322 eP P **01 04 59.8 -1.7**
MDP Montagnes des 68.94 331 LR LR 01 33 23.6
comp=Z,12µm,20.3s,baz=152,slow=34
MPGF Montagnes des 68.95 331 ⇓P P **01 05 03.5 -1.0**
ACRG Accra 69.14 27 P P **01 05 05.1 -0.6**
ACRG IAmb IAmb 01 05 16.3
comp=Z,266nm,1.2s
DBIC Dimbokro 69.19 22 P P **01 05 06.3 +0.4**
comp=Z,133nm,0.8s,baz=190,slow=9.3,SNR=60
DBIC S S **01 14 10.5 -1.1**
comp=Z,5.3nm,1.1s,baz=162,slow=6.4,SNR=8.0
DBIC LR LR 01 29 12.7
comp=Z,5µm,19.8s,baz=202,slow=31
comp=Z,133nm,0.8s
DBIC Dimbokro 69.19 22 P P **01 05 05.0 -0.9**
DBIC Dimbokro 69.19 22 ⇓P P **01 05 06.0 +0.1**
DBIC Dimbokro 69.19 22 P P **01 05 06.2 +0.3**
MCRA Macar, Loja 69.37 300 P P **01 05 07.5 +0.3**
comp=Z,11µmcomp=Z,3µmcomp=Z,194nm,1.0s
EDA Edea 70.12 38 P P **01 05 10.4 -1.3**
EDA IAmb IAmb 01 05 21.1
comp=Z,162nm,0.9s
PTLC Puerto Leguiza 71.38 307 P P **01 05 16.7 -2.7**
comp=Z,10µmcomp=Z,6µmcomp=Z,715nm,1.1s
PIAT Ana Tenorio 71.71 303 P P **01 05 23.4 +1.5**
comp=Z,11µmcomp=Z,4µmcomp=Z,306nm,1.2s
SLOR San Lorenzo - 72.05 303 P P **01 05 24.9 +0.9**
SLOR IAmb IAmb 01 05 34.2
comp=Z,123nm,1.2s
SYZ Scrubby Hill 72.39 191 P P **01 05 29.7 +4.6**
ROCAM Rodrigues Isla 72.55 99 IAMs_20 IAMs_20 01 29 08.4
comp=Z,11µm,20.0s
MACC Macarena, Meta 72.82 309 P P **01 05 27.9 -0.2**
comp=Z,3µmcomp=Z,141nm,1.3s
OTAV Otavalo 72.90 304 P P **01 05 29.4 +0.3**
OTAV pmax pmax
comp=Z,387nm,1.2s
OTAV MLR MLR
comp=Z,5µm,20.0s
OTAV Otavalo 72.90 304 P P **01 05 29.4 +0.3**
OTAV IAmb IAmb 01 05 40.9
comp=Z,387nm,1.2s
OTAV Otavalo 72.90 304 P P **01 05 29.6 +0.5**
CUSE Cuicocha Este 72.94 304 P P **01 05 28.0 -1.3**
comp=Z,3µmcomp=Z,133nm,1.2s
PYZ Puysegur Point 72.97 189 IAMs_20 IAMs_20 01 35 47.4
comp=Z,12µm,19.0s
FLOC Florencia 73.00 307 P P **01 05 28.4 -0.8**
comp=Z,10µmcomp=Z,4µmcomp=Z,220nm,1.3s
TULM Tulcn-Chalpat 73.07 304 P P **01 05 32.2 +2.1**
comp=Z,6µmcomp=Z,615nm,1.2s
PAC1 Pacto, Paraso 73.07 303 P P **01 05 31.3 +1.6**
comp=Z,12µmcomp=Z,5µmcomp=Z,214nm,1.4s
WHZ Wether Hill Ro 73.14 190 P P **01 05 28.9 -0.7**
WHZ IAmb IAmb 01 05 35.2
comp=Z,341nm,1.1s
CTZ Chatham Island 73.20 202 P P **01 05 31.9 +1.9**
CTZ Chatham Island 73.20 202 P P **01 05 29.8 -0.2**
CTZ IAMs_20 IAMs_20 01 32 56.7
comp=Z,15µm,20.0s
CMBC Cumbal 73.29 305 P P **01 05 32.3 +0.9**
GARC Garzon, Huila 73.49 307 P P **01 05 29.8 -2.5**
comp=Z,9µmcomp=Z,3µmcomp=Z,258nm,0.8s
DCZ Deep Cove 73.63 189 IAMs_20 IAMs_20 01 37 08.9
comp=Z,11µm,18.0s
MLZ Mavora Lakes 73.64 190 P P **01 05 32.1 -0.5**
MLZ IAmb IAmb 01 05 38.3
comp=Z,325nm,1.1s
MLZ IAMs_20 IAMs_20 01 37 03.4
comp=Z,11µm,19.0s
MBAR Mbarara 73.72 60 LR LR 01 34 00.9
comp=Z,16µm,21.2s,baz=188,slow=33
MBAR Mbarara 73.72 60 ⇑eP P **01 05 32.0 -1.6**
MBAR pmax pmax
comp=Z,96nm,1.5s
MBAR MLR MLR
comp=Z,12µm,15.0s
MBAR Mbarara 73.72 60 P P **01 05 32.1 -1.6**
ODZ Otahua Downs 73.72 192 IAMs_20 IAMs_20 01 38 11.7
comp=Z,14µm,18.0s
ODZ Otahua Downs 73.72 192 ⇑P P **01 05 34.6 +1.6**
BBAC Balboa, Cauca 74.04 306 P P **01 05 35.8 +0.3**
comp=Z,12µmcomp=Z,2µmcomp=Z,71nm,0.9s
POPC Popayan, Colom 74.28 306 P P **01 05 37.1 +0.2**
comp=Z,11µmcomp=Z,4µmcomp=Z,269nm,1.2s
LBZ Lake Benmore 74.42 192 IAMs_20 IAMs_20 01 39 34.2
comp=Z,14µm,18.0s
PRAC Prado 74.66 308 P P **01 05 38.4 -0.5**
comp=Z,11µmcomp=Z,5µmcomp=Z,322nm,1.6s
ARCZ Arundel 74.75 193 P P **01 05 43.5 +4.4**
MQZ McQueen's Vall 74.83 194 P P **01 05 40.8 +1.4**
JCZ Jackson Bay 74.87 191 S S **01 15 17.5 +0.9**
JAMC Jamundi, Valle 74.90 307 P P **01 05 40.0 -0.5**
comp=Z,10µmcomp=Z,3µmcomp=Z,153nm,0.8s
RPZ Rata Peaks 75.00 193 LR LR 01 36 39.8
comp=Z,2µm,19.1s,baz=163,slow=34
RPZ Rata Peaks 75.00 193 P P **01 05 43.3 +2.8**
CHIC Chingaza 75.06 310 P P **01 05 40.5 -1.1**
comp=Z,11µmcomp=Z,5µmcomp=Z,106nm,1.1s
OXZ Oxford 75.27 193 IAMs_20 IAMs_20 01 38 11.8
comp=Z,8µm,19.0s
GR1C Gorgona, Isla 75.30 305 P P **01 05 43.7 +1.2**
FOZ Fox Glacier 75.31 192 IAMs_20 IAMs_20 01 36 47.5
comp=Z,14µm,19.0s
AMCZ Amberley 75.35 194 P P **01 05 47.2 +4.7**
KIBK Kibwezi 75.40 68 P P **01 05 46.0 +2.8**
KIBK Kibwezi 75.40 68 P P **01 05 42.6 -0.7**
KIBK IAmb IAmb 01 06 06.7
comp=Z,206nm,1.4s
KIBK IAMs_20 IAMs_20 01 36 39.6
comp=Z,13µm,19.0s
ROSC El Rosal 75.47 309 P P **01 05 44.7 +0.7**
comp=Z,22nm,0.8s,baz=117,slow=4.5,SNR=18
ROSC S S **01 15 22.9 -1.6**
comp=Z,2.8nm,0.2s,baz=165,slow=20,SNR=0.7
ROSC LR LR 01 43 38.3
comp=Z,4µm,18.1s,baz=143,slow=40
comp=Z,22nm,0.8s
ROSC El Rosal 75.47 309 P P **01 05 44.0 0.0**
ROSC IAmb IAmb 01 06 06.1
comp=Z,116nm,0.9s
ROSC El Rosal 75.47 309 P P **01 05 45.1 +1.1**
comp=Z,12µmcomp=Z,3µmcomp=Z,163nm,0.9s
SACV Santiago Islan 75.47 2 P P **01 05 43.5 +0.1**
SACV IAmb IAmb 01 05 48.9
comp=Z,322nm,1.4s
SACV Santiago Islan 75.47 2 ⇑P P **01 05 46.6 +3.2**
GVZ Greta Valley S 75.51 194 P P **01 05 43.4 -0.1**
GVZ IAMs_20 IAMs_20 01 35 47.2
comp=Z,14µm,19.0s
GVZ Greta Valley S 75.51 194 P P **01 05 45.1 +1.6**
WVZ Waitaha Valley 75.66 192 P P **01 05 48.0 +3.7**
LTZ Lake Taylor 75.78 194 IAMs_20 IAMs_20 01 35 59.4
comp=Z,9µm,20.0s
LTZ Lake Taylor 75.78 194 P P **01 05 46.8 +1.7**
INZ Inchbonnie 75.93 193 P P **01 05 46.0 +0.1**
INZ IAmb IAmb 01 05 51.2
comp=Z,314nm,1.1s
INZ IAMs_20 IAMs_20 01 36 57.3
comp=Z,10µm,19.0s
INZ Inchbonnie 75.93 193 P P **01 05 47.1 +1.2**
RUSC La Rusia 75.98 311 P P **01 05 44.5 -2.5**
comp=Z,11µmcomp=Z,3µmcomp=Z,222nm,1.3s
KHZ Kahutara 75.99 195 P P **01 05 47.2 +1.0**
KMBO Kilima Mbogo 76.11 67 P P **01 05 47.7 +0.2**

baz=210,slow=16
KMBO S S 01 15 37.2 +5.8
baz=209,slow=17
KMBO LR LR 01 36 08.6
comp=Z,12µm,19.5s,baz=192,slow=33
SPBC San Pablo de B 76.13 310 P P **01 05 47.8 +0.4**
comp=Z,10µmcomp=Z,2µmcomp=Z,142nm,1.1s
GUY2C Guyana, Caldas 76.22 309 P P **01 05 47.1 -1.3**
comp=Z,10µmcomp=Z,3µmcomp=Z,144nm,1.2s
AUTAR Taroona High S 76.52 175 P P **01 05 50.2 +1.0**
TAU Tasmania Unive 76.55 175 P P **01 05 49.7 +0.3**
TAU Tasmania Unive 76.55 175 S S **01 15 35.3 +0.4**
TAU Tasmania Unive 76.55 175 P P **01 05 49.0 -0.3**
TAU pmax pmax
comp=Z,305nm,1.0s
TAU Tasmania Unive 76.55 175 P P **01 05 49.0 -0.3**
TAU Tasmania Unive 76.55 175 ⇓P P **01 05 49.6 +0.3**
CMWZ Cape Campbell 76.56 195 P P 01 05 54.9 +5.4
PLWZ Palliser 76.60 196 P P **01 05 53.8 +4.1**
BSWZ Blackbirch Sta 76.64 195 P P **01 05 50.4 +0.5**
THZ Tophouse 76.71 194 P P **01 05 48.6 -1.8**
MSWZ Moikau Station 76.75 196 P P **01 05 54.9 +4.3**
PAWZ Paruwai Farm 76.76 196 P P **01 05 52.3 +1.7**
TORD Torodi Ar. Bea 76.83 27 P P **01 05 51.6 +0.5**
comp=Z,189nm,0.9s,baz=194,slow=6.3,SNR=154
TORD S S **01 15 38.5 0.0**
comp=Z,1.1nm,0.9s,baz=223,slow=3.4,SNR=4.1
TORD PKP2bc 01 32 52.9
comp=Z,0.3nm,0.8s,baz=27,slow=1.1,SNR=3.6
TORD LR LR 01 34 23.6
comp=Z,5µm,18.6s,baz=190,slow=32
comp=Z,189nm,0.9s
TORD Torodi Ar. Bea 76.83 27 P P **01 05 51.0 -0.1**
DSZ Denniston Nort 76.86 193 IAMs_20 IAMs_20 01 37 41.9
comp=Z,11µm,19.0s
DSZ Denniston Nort 76.86 193 P P **01 05 51.3 +0.1**
TUWZ Tuamarina 76.91 195 P P 01 05 57.1 +5.6
SNZO South Karori 76.93 196 P P **01 05 53.1 +1.6**
SNZO South Karori 76.93 196 P P **01 05 51.4 -0.1**
SNZO South Karori 76.93 196 IAMs_20 IAMs_20 01 35 45.0
comp=Z,14µm,20.0s
SNZO South Karori 76.93 196 ⇓P P **01 05 52.7 +1.2**
TMWZ Te Maipa 76.97 197 P P **01 05 53.9 +2.1**
MTW Mount Morrison 76.97 196 P P **01 05 56.1 +4.3**
MOO Moorlands 77.01 175 P P **01 05 52.6 +0.6**
CBOC Ciudad Bolivar 77.06 308 P P **01 05 52.3 -0.4**
comp=Z,10µmcomp=Z,3µmcomp=Z,90nm,1.1s
TCW Tory Channel 77.09 195 P P **01 05 54.0 +1.6**
MRNZ Matariki Terra 77.09 194 P P **01 05 54.0 +1.5**
HELC Santa Helena 77.17 309 P P **01 05 51.3 -2.3**
comp=Z,10µmcomp=Z,2µmcomp=Z,87nm,0.9s
PAMC Pamplona, Colo 77.17 312 P P **01 05 56.8 +3.1**
NNZ Nelson 77.19 195 P P **01 05 54.4 +1.4**
PAYG Puerto Ayora 77.22 292 IAMs_20 IAMs_20 01 35 01.6
comp=Z,13µm,21.0s
HOWZ Holdsworth Sta 77.23 196 P P **01 05 55.3 +2.0**
TIWZ Tintock 77.30 197 P P **01 05 56.6 +3.0**
BFZ Birch Farm 77.34 197 P P **01 05 55.3 +1.4**
BFZ Birch Farm 77.34 197 P P **01 05 53.0 -0.9**
KIW Kapiti Island 77.35 196 P P **01 05 58.0 +4.1**
OGWZ Otaki Gorge 77.35 196 P P **01 05 55.7 +1.8**
TKNZ Takaka Hill 77.43 194 P P **01 05 53.6 -0.8**
MRZ Mangatainoka R 77.45 196 IAMs_20 IAMs_20 01 35 56.8
comp=Z,11µm,20.0s
MRZ Mangatainoka R 77.45 196 P P **01 05 56.0 +1.5**
PRWZ Pori Road 77.50 197 P P 01 05 59.6 +4.8
ANWZ Angora Road 77.52 197 P P **01 05 58.2 +3.4**
DUWZ D'Urville Isla 77.53 195 P P **01 05 56.5 +1.5**
QRZ Quartz Range 77.68 194 IAMs_20 IAMs_20 01 36 58.7
comp=Z,13µm,19.0s
QRZ Quartz Range 77.68 194 P P **01 05 55.3 -0.5**
PRHZ Porangahau 77.69 197 P P **01 05 57.9 +2.1**
POWZ Post Office Ro 77.69 197 P P **01 06 00.5 +4.6**
DVHZ Dannevirke 77.72 197 P P **01 05 57.9 +1.9**
SDV Santo Domingo 77.87 314 P P **01 05 57.1 -0.1**
comp=Z,36nm,0.6s,baz=158,slow=5.4,SNR=31
SDV PP **PP 01 08 50.1 -3.0**
comp=Z,31nm,0.9s,baz=154,slow=8.6,SNR=3.4
SDV S S **01 15 51.1 +0.9**
comp=Z,5.2nm,0.3s,baz=180,slow=20,SNR=1.3
SDV LR LR 01 41 00.2
comp=Z,26µm,20.6s,baz=154,slow=36
comp=Z,36nm,0.6s
SDV Santo Domingo 77.87 314 P P **01 05 57.1 -0.1**
SDV IAmb IAmb 01 06 08.4
comp=Z,140nm,0.8s
SDV Santo Domingo 77.87 314 P P **01 05 57.8 +0.6**
SDV Santo Domingo 77.87 314 *e*P P **01 05 56.9 -0.3**
WPHZ Waipukurau 77.91 197 P P 01 06 01.9 +4.8
CORO Coronation Par 77.99 175 P P **01 05 58.9 +1.5**
DBBC Dabeiba 78.19 309 P P **01 06 00.0 +1.1**
OCAC Ocana 78.23 312 P P **01 05 59.2 0.0**
comp=Z,10µmcomp=Z,2µmcomp=Z,130nm,0.9s
KRHZ Kereru 78.34 197 P P **01 06 04.2 +4.7**
BBGH Gun Hill 78.42 326 IAMs_20 IAMs_20 01 47 28.6
comp=Z,11µm,20.0s
WAZ Wanganui 78.42 196 IAMs_20 IAMs_20 01 35 49.2
comp=Z,9µm,21.0s
GLAD Gladstone 78.50 175 P P **01 06 01.2 +0.9**
BHHZ Black Hill Sta 78.53 197 P P **01 06 02.5 +1.9**
KWHZ Kaweka Forest 78.54 197 P P **01 06 02.9 +2.2**
UREC San Jos de Ur 78.61 309 P P **01 06 00.7 -0.4**
comp=Z,11µmcomp=Z,3µmcomp=Z,110nm,1.3s
WNVZ Wahianoa 78.76 197 P P **01 06 03.1 +1.1**
BKZ Black Stump Fm 78.79 197 P P **01 06 03.4 +1.4**
WHVZ Whangaehu Hut 78.80 197 P P **01 06 04.3 +2.0**
MAVZ Matarangi 78.82 197 P P **01 06 07.0 +4.5**
PKVZ Pokaka 78.83 197 P P **01 06 04.1 +1.9**
FWVZ Far West T-bar 78.83 197 P P **01 06 07.0 +4.5**
SNVZ South Ngauruho 78.89 197 P P **01 06 05.3 +2.6**
COVZ Chateau Observ 78.89 197 P P **01 06 04.7 +2.0**
NGZ Ngauruhoe 78.91 197 P P **01 06 05.2 +2.4**
OTVZ Oturere 78.91 197 P P **01 06 04.4 +1.6**
TMVZ Te Maari 78.95 197 P P **01 06 04.8 +1.8**
WTVZ West Tongariro 78.97 197 P P 01 06 08.1 +5.0
NTVZ North Tongarir 78.97 197 P P **01 06 03.8 +0.7**
TWVZ Taurewa 79.03 197 P P **01 06 05.3 +1.9**
RIGZ Rimuhau 79.05 199 P P **01 06 07.1 +3.7**
APAC Apartado, Choc 79.14 309 P P **01 06 05.1 +1.0**
comp=Z,13µmcomp=Z,4µmcomp=Z,166nm,1.1s
H01W2 Cape Leeuwin H 79.20 147 P P **01 06 02.6 -1.3**
baz=197,slow=8.0,SNR=10
H01W1 Cape Leeuwin H 79.21 147 P P **01 06 02.7 -1.3**
baz=197,slow=8.0,SNR=17
H01W3 Cape Leeuwin H 79.22 147 P P **01 06 02.7 -1.3**
baz=197,slow=8.0,SNR=21
RTZ Ruatahuna 79.25 198 P P **01 06 07.6 +3.0**
LODK Lodwar 79.32 63 P P **01 06 04.6 -0.6**
URZ Urewera 79.58 198 LR LR 01 40 23.8
comp=Z,8µm,18.1s,baz=164,slow=35
URZ Urewera 79.58 198 P P **01 06 07.8 +1.5**
URZ Urewera 79.58 198 ⇓P P **01 06 07.3 +1.1**
HIZ Hauiti 79.66 196 IAMs_20 IAMs_20 01 37 00.3
comp=Z,10µm,20.0s
HIZ Hauiti 79.66 196 P P **01 06 07.6 +0.9**
RUGZ Raukumara Rang 79.78 199 P P **01 06 11.9 +4.3**
H05S1 Guadeloupe/Mar 79.99 326 P P **01 06 08.1 -0.5**
AUALB St Joseph's Co 80.06 150 P P **01 06 09.7 +0.8**
ARGC Ariguani, Magd 80.06 311 P P **01 06 09.5 +0.4**
comp=Z,14µmcomp=Z,9µmcomp=Z,390nm,1.5s
MXZ Matakaoa Point 80.08 199 IAMs_20 IAMs_20 01 39 12.5
comp=Z,9µm,20.0s
CACAO El Cacao, Vera 80.33 304 P P **01 06 14.3 +3.8**
comp=Z,10µmcomp=Z,2µmcomp=Z,79nm,0.9s
TOZ Tahuroa Road 80.34 197 IAMs_20 IAMs_20 01 37 18.3
comp=Z,10µm,21.0s
FDFM Morne la Roset 80.38 325 P P **01 06 11.2 +0.5**
FDFM IAmb IAmb 01 06 31.4
comp=Z,178nm,1.1s
SJCC San Jacinto, C 80.45 311 P P **01 06 12.1 +0.9**
comp=Z,13µmcomp=Z,4µmcomp=Z,246nm,1.2s
SVN Savane Anatole 80.48 325 P P **01 06 12.5 +1.2**
SVN IAmb IAmb 01 06 36.3
comp=Z,330nm,1.1s
AZU Azuero 80.50 305 P P **01 06 13.4 +2.0**
comp=Z,9µmcomp=Z,3µmcomp=Z,38nm,1.2s
GMAL Guarumal, Vera 80.86 304 P P **01 06 17.9 +4.6**
comp=Z,3µmcomp=Z,88nm,1.0s
MGBR Mount Gambier 81.24 169 P P **01 06 15.1 -0.1**
AUSSC Sale College, 81.33 174 P P **01 06 19.1 +3.5**
MLBS Spotswood, Mel 81.48 173 P P **01 06 20.3 +3.9**
MAGL Barre de l'ile 81.57 326 P P **01 06 17.6 +0.6**
BCIP Isla Barro Col 81.57 306 P P **01 06 15.9 -1.2**
comp=Z,11µmcomp=Z,3µmcomp=Z,83nm,1.5s
BCIP Isla Barro Col 81.57 306 ⇑P P **01 06 17.8 +0.7**
TDBA Terre de Bas, 81.57 325 P P **01 06 17.8 +0.8**
TDBA IAmb IAmb 01 06 36.9
comp=Z,369nm,1.2s
MSEY Mahe Island 81.65 85 IAMs_20 IAMs_20 01 34 45.4
comp=Z,11µm,19.0s
BRAT Ballarat 81.69 172 P P **01 06 17.9 +0.4**
TOO Toolangi 81.77 173 P P **01 06 17.5 -0.6**
TOO pmax pmax
comp=Z,60nm,1.0s
TOO Toolangi 81.77 173 P P **01 06 17.5 -0.6**
TOO Toolangi 81.77 173 ⇑P P **01 06 18.2 +0.1**
H05N1 Guadeloupe/Mar 81.86 326 P P **01 06 18.0 -0.5**
NWAO Narrogin (SRO) 81.87 149 LR LR 01 40 04.0
comp=Z,4µm,18.9s,baz=194,slow=34
NWAO Narrogin (SRO) 81.87 149 P P **01 06 19.3 +0.7**
NWAO Narrogin (SRO) 81.87 149 P P **01 06 17.9 -0.7**
NWAO pmax pmax
comp=Z,103nm,1.1s
NWAO Narrogin (SRO) 81.87 149 P P **01 06 17.9 -0.7**
NWAO Narrogin (SRO) 81.87 149 IAMs_20 IAMs_20 01 41 10.0
comp=Z,9µm,19.0s
GDHS Morne Mazeau, 82.01 325 P P **01 06 19.8 +0.4**
PIRO Carate, Puerto 82.30 303 P P **01 06 21.6 +0.6**
PIRO IAmb IAmb 01 06 31.2
comp=Z,145nm,0.9s
BRU2 Volcan 82.39 303 P P **01 06 21.9 +0.3**
BRU2 IAmb IAmb 01 06 40.1
comp=Z,137nm,1.2s
MILA Mila 82.46 176 ⇑P P **01 06 22.4 +0.7**
MUN Mundaring 82.51 148 P P **01 06 21.8 -0.2**
MUN Mundaring 82.51 148 P P **01 06 22.2 +0.2**
AUSMG Snowy Mountain 83.07 175 P P **01 06 26.5 +1.5**
OUZ Omahuta 83.07 196 IAMs_20 IAMs_20 01 38 37.5
comp=Z,11µm,21.0s
OUZ Omahuta 83.07 196 ⇑P P **01 06 25.3 +0.5**
AUMAG Moama Anglican 83.19 172 P P **01 06 26.7 +1.3**
SEUS St. Eustatius 83.52 324 IAMs_20 IAMs_20 01 45 37.7
comp=Z,10µm,22.0s
AUMBR Murray Bridge 83.68 168 P P **01 06 28.2 +0.2**
SABA Saba 83.71 324 P P **01 06 28.6 +0.5**
SABA IAmb IAmb 01 06 38.1
comp=Z,270nm,1.1s
AUMAR Marden Senior 83.85 167 P P **01 06 29.3 +0.4**
BLDU Ballidu 83.94 148 P P **01 06 29.6 +0.2**
HDC Heredia 84.06 303 P P **01 06 30.6 +0.4**
HDC IAmb IAmb 01 06 40.2
comp=Z,265nm,1.2s
HDC Heredia 84.06 303 *e*P P **01 06 31.4 +1.2**
SMRT St. Maarten 84.07 325 P P **01 06 29.5 -0.5**
SMRT IAmb IAmb 01 06 48.5
comp=Z,262nm,1.6s
AUCAS Cummins Area S 84.12 165 P P **01 06 31.0 +0.8**
AUMHS Melrose High S 84.15 176 P P **01 06 31.5 +1.1**
CAN Canberra 84.18 176 P P **01 06 31.3 +0.7**
CAN Canberra 84.18 176 P P **01 06 29.4 -1.2**
CAN pmax pmax
comp=Z,214nm,1.0s
CAN MLR MLR
comp=Z,14µm,18.0s
CAN Canberra 84.18 176 P P **01 06 29.4 -1.2**
CAN IAmb IAmb 01 06 35.7
comp=Z,214nm,1.0s
CAN Canberra 84.18 176 ⇑P P **01 06 31.5 +0.9**
AUMTS Mt Stromlo 84.18 176 P P **01 06 31.3 +0.7**
AUUHS Ulladulla High 84.19 177 P P **01 06 33.3 +2.7**
AUDAR Daramalan Coll 84.26 176 P P **01 06 31.4 +0.4**
JTS Las Juntas de 84.67 302 P P **01 06 34.0 +0.8**
comp=Z,52nm,1.1s,baz=108,slow=20,SNR=13
JTS LR LR 01 44 01.3
comp=Z,4µm,21.8s,baz=143,slow=36
comp=Z,52nm,1.1s
JTS Las Juntas de 84.67 302 *de*P P **01 06 34.6 +1.4**
JTS pmax pmax
comp=Z,161nm,1.1s
JTS MLR MLR
comp=Z,6µm,23.0s
JTS Las Juntas de 84.67 302 P P **01 06 33.6 +0.4**
JTS IAmb IAmb 01 06 43.2
comp=Z,82nm,0.9s
TBI Tubuai 84.68 230 *e*P P **01 06 36.3 +3.1**
comp=Z,932nm,1.2s
TBI *e*PP PP **01 09 42.2 -6.2**
comp=Z,2µm,27.5s
TBI *e*S S **01 17 00.1 -0.5**
comp=Z,7µm,26.0s
TBI *e*SS SS **01 22 37.0 +6.1**
comp=Z,14µm,30.8s
TBI *e*LQ LQ 01 29 41.2
comp=Z,29µm,34.8s
TBI *e*LR LR 01 33 08.9
comp=Z,14µm,24.2s
TBI *e*LR LR 01 33 12.0
comp=Z,4µm,24.0s
JUD3 Juan Diaz 3 84.81 301 P P **01 06 34.5 +0.6**
HUMP Col San Antoni 84.97 322 P P **01 06 33.3 -1.2**
SJG San Juan 85.03 322 P P **01 06 34.6 -0.2**
comp=Z,21nm,0.8s,baz=188,slow=5.3,SNR=4.8
SJG S **SKSac 01 16 59.2 +0.1**
comp=Z,1.6nm,0.3s,baz=143,slow=5.1,SNR=1.0
SJG LR LR 01 45 51.3
comp=Z,6µm,19.9s,baz=152,slow=37
comp=Z,21nm,0.8s
SJG San Juan 85.03 322 P P **01 06 34.4 -0.4**
SJG San Juan 85.03 322 IAMs_20 IAMs_20 01 45 31.0
comp=Z,9µm,20.0s
WOLH Wollongong Har 85.15 177 P P **01 06 37.6 +2.2**
MORW Morawa 85.23 147 P P **01 06 37.6 +1.7**
MORW Morawa 85.23 147 P P **01 06 34.2 -1.7**
MORW Morawa 85.23 147 ⇑P P **01 06 37.2 +1.3**
HTT Hallett 85.32 167 P P **01 06 36.5 +0.1**
HTT Hallett 85.32 167 P P **01 06 36.9 +0.5**
HTT Hallett 85.32 167 ⇓P P **01 06 36.5 +0.1**
AUJCS Jamestown Cent 85.52 167 P P **01 06 37.4 +0.1**
BBOO Buckleboo 85.59 165 P P **01 06 38.1 +0.4**
BBOO Buckleboo 85.59 165 P P **01 06 36.5 -1.2**
BBOO IAmb IAmb 01 06 41.3
comp=Z,84nm,0.9s
FURI Furi 85.66 63 P P **01 06 36.8 -1.7**
SYDH Sydney Hard Ro 85.79 177 P P **01 06 39.2 +0.6**
AUKHS Kincumber High 86.11 178 P P **01 06 43.7 +3.5**
FORT Forrest 86.32 158 P P **01 06 40.0 -1.3**
FORT IAmb IAmb 01 06 45.9
comp=Z,167nm,1.1s
BANI BANI 86.63 318 P P **01 06 43.4 +0.5**
MGAN Managua 86.88 302 P P **01 06 44.7 +0.6**
MGAN IAmb IAmb 01 09 11.6
comp=Z,127nm,0.8s
BOAB BOACO BROADBAND 86.91 302 P P **01 06 44.5 +0.3**
BOAB IAMs_20 IAMs_20 01 44 13.0
comp=Z,11µm,20.0s
BOAB BOACO BROADBAND 86.91 302 ⇓P P **01 06 44.9 +0.6**
TAM Tamanrasset 87.02 29 P P **01 06 44.2 -0.5**
TAM pmax pmax
comp=Z,95nm,0.9s
TAM Tamanrasset 87.02 29 P P **01 06 44.2 -0.5**
TAM IAmb IAmb 01 06 56.7
comp=Z,95nm,0.9s
TAM IAMs_20 IAMs_20 01 39 40.4
comp=Z,9µm,19.0s
STKA Stephens Creek 87.13 169 P P **01 06 44.9 -0.3**
comp=Z,99nm,0.9s,baz=171,slow=6.6,SNR=30
STKA S S **01 17 17.1 -7.3**
comp=Z,1.1nm,0.6s,baz=156,slow=20,SNR=1.1
STKA PKKPbc **PKKPbc 01 24 33.0 -0.8**
comp=Z,1.7nm,0.8s,baz=4.4,slow=13,SNR=1.9
STKA LR LR 01 44 22.4
comp=Z,16µm,18.0s,baz=179,slow=35
comp=Z,99nm,0.9s
STKA Stephens Creek 87.13 169 *c*P P **01 06 44.4 -0.9**
AUDCS Dubbo College 87.25 175 P P **01 06 45.8 0.0**
H08S1 Diego Garcia H 87.39 101 T T 02 43 53.0
baz=205,SNR=6.2
H08S2 Diego Garcia H 87.40 101 T T 02 43 57.0
baz=205
H08S3 Diego Garcia H 87.41 101 T T 02 44 01.5
baz=205
SDDR Presa de Saban 87.48 317 P P **01 06 47.1 +0.1**
SDDR IAmb IAmb 01 07 30.3
comp=Z,176nm,1.9s
SDDR IAMs_20 IAMs_20 01 43 41.1
comp=Z,11µm,22.0s
RAO Raoul Island 87.49 204 LR LR 01 43 07.3
comp=Z,3µm,19.0s,baz=166,slow=34
RAO Raoul Island 87.49 204 IAMs_20 IAMs_20 01 47 34.8
comp=Z,7µm,19.0s
SIUN Universidad Ur 87.69 303 P P **01 06 48.1 +0.1**
SC01 Santiago de lo 87.72 318 P P **01 06 47.9 -0.1**
CMSA Cobar Meteorol 87.78 173 P P **01 06 49.3 +0.9**
LHI Lord Howe Isla 87.98 184 P P **01 06 48.6 -0.8**
MEEK Meekatharra 88.21 149 P P **01 06 50.3 -0.3**
AUPHS Peel High Scho 88.45 177 P P **01 06 52.5 +0.9**
EOSO Osorio 88.89 9 P P **01 06 55.9 +2.5**
MTDJ Mount Denham 88.97 312 P P **01 06 54.0 0.0**
MTDJ IAmb IAmb 01 07 15.4
comp=Z,87nm,1.1s
MACI Morro de la Ar 88.99 8 P P **01 06 54.1 +0.1**
ARMA Armidale 89.14 178 P P **01 06 55.9 +0.9**
ARMA Armidale 89.14 178 P P **01 06 54.6 -0.4**
ARMA IAmb IAmb 01 06 59.6
comp=Z,132nm,1.1s
TVO Taravao 89.66 233 *e*P P 01 07 02.6 +5.1
comp=Z,381nm,1.2s
TVO *e*LR LR 01 35 40.7
comp=Z,6µm,23.7s
GTBY Guantanamo Bay 89.67 314 IAMs_20 IAMs_20 01 47 33.9
comp=Z,10µm,21.0s
ATD Arta Tunnel 89.84 66 LR LR 01 44 02.3
comp=Z,477nm,19.4s,baz=188,slow=33
ATD Arta Tunnel 89.84 66 P P **01 06 56.9 -1.3**
ATD IAmb IAmb 01 07 27.3
comp=Z,98nm,1.1s
ATD IAMs_20 IAMs_20 01 43 41.0
comp=Z,10µm,19.0s
ATD Arta Tunnel 89.84 66 ⇓P P **01 07 01.2 +3.0**
PAE Paea 89.89 232 *e*LR LR 01 35 45.0
comp=Z,4µm,20.7s
TIAR Tiarei 89.89 233 *e*P P 01 07 10.7 +12
comp=Z,219nm,0.8s
TIAR *e*LR LR 01 35 51.1
comp=Z,12µm,23.1s
PPTF Pamatai, Papee 89.95 232 IAMs_20 IAMs_20 01 41 48.7
comp=Z,10µm,19.0s
PPT2 Papeete2 89.96 232 *e*P P 01 07 14.1 +15
comp=Z,107nm,1.3s
PPT2 *e*SS SS 01 23 53.4 +5.1
comp=Z,2µm,27.8s
PPT2 *e*LQ LQ 01 31 43.8
comp=Z,3µm,27.8s
PPT2 *e*LR LR 01 35 42.6
comp=Z,7µm,24.2s
PPT Papeete 89.97 232 LR LR 01 40 58.2
comp=Z,7µm,18.1s,baz=170,slow=31
AULRC Lightning Ridg 90.01 175 P P **01 06 59.5 +0.6**
CHIV Chivirico 90.17 313 P P **01 07 00.1 +0.6**
NMDO Nuevo Mundo 90.21 315 P P **01 07 00.6 +1.0**
MTOS Montecristo 90.22 300 P P **01 07 00.4 +0.3**
RAR Rarotonga 90.30 222 LR LR 01 42 35.2
comp=Z,3µm,18.4s,baz=201,slow=32
RAR Rarotonga 90.30 222 P P **01 07 00.4 +0.1**
RAR pmax pmax
comp=Z,301nm,1.6s
RAR Rarotonga 90.30 222 P P **01 07 00.4 +0.1**
RAR IAmb IAmb 01 07 06.6
comp=Z,301nm,1.6s
ESQI Esquipulas 90.35 300 P P **01 07 01.6 +1.0**
ESQI IAmb IAmb 01 07 07.8
comp=Z,128nm,1.1s
INKA Innaminka 91.14 168 P P **01 07 04.2 0.0**
INKA IAmb IAmb 01 07 09.3
comp=Z,139nm,1.1s
APG El Apazote 91.23 299 P P **01 07 04.2 -0.7**
comp=Z,3.3nm,1.0s,baz=160,slow=12,SNR=11
APG S **SKSac 01 17 38.6 +1.5**
comp=Z,0.1nm,0.4s,baz=102,slow=14,SNR=1.1
VAH Vaihoa 91.32 235 *e*P P **01 07 06.5 +1.4**
comp=Z,565nm,1.2s
VAH *e*LR LR 01 36 22.8
comp=Z,10µm,21.5s
PMOR Pomariorio Ree 91.64 235 *e*P P **01 07 10.5 +3.9**
comp=Z,359nm,1.2s
PMOR *e*LR LR 01 36 35.1
comp=Z,9µm,21.6s
AUTOO Toowoomba Stat 92.01 178 P P **01 07 11.1 +2.8**
TW1H Toowoomba 1 Ha 92.01 178 P P **01 07 11.5 +3.2**
TIO Tiouine 92.59 16 P P **01 07 13.6 +3.0**
QLP Quilpie 92.61 171 P P **01 07 11.1 +0.1**
AUBSH Beerwah State 92.71 179 P P **01 07 14.1 +2.7**
FUL Funchal 93.34 7 *e*P P 01 07 29.1 +15
PMOZ Porto Moniz, M 93.49 7 *e*P P **01 07 11.9 -2.9**
PMOZ *e*SKS S 01 18 02.4 -20
PMOZ *e*LR LR 01 36 59.2
PMOZ *e*LQ LQ 01 37 04.9
PMOZ *i* IAMs_20 IAMs_20 01 43 54.1
comp=Z,7µm,18.0s
MBWA Marble Bar 93.73 148 P P **01 07 18.5 +2.2**
MBWA Marble Bar 93.73 148 P P **01 07 14.7 -1.6**
MBWA IAmb IAmb 01 07 20.0
comp=Z,71nm,0.9s
MBWA Marble Bar 93.73 148 IAMs_20 IAMs_20 01 48 34.2
comp=Z,8µm,18.0s
MBWA Marble Bar 93.73 148 ⇑P P **01 07 18.8 +2.5**
MBWA Marble Bar 93.73 148 P P **01 07 18.5 +2.2**
PMPST Porto Santo, M 93.80 8 *e*P P **01 07 13.8 -2.3**
TAOE Nuku Hiva Isla 93.86 244 *e*P P **01 07 16.0 -1.0**
comp=Z,680nm,24.8s
TAOE *e*PP PP **01 10 57.0 -5.2**
comp=Z,542nm,24.6s
TAOE *e*S S **01 18 28.8 +1.9**
comp=Z,1µm,25.5s
TAOE *e*SS SS **01 24 42.6 -2.4**
comp=Z,3µm,25.9s
TAOE *e*LQ LQ 01 33 43.8
comp=Z,7µm,34.0s
TAOE *e*LR LR 01 37 32.5
comp=Z,7µm,24.5s
AUALC St Philip's Co 94.25 161 P P **01 07 18.4 -0.3**
ASAR Alice Springs 94.28 161 P P **01 07 18.5 -0.3**
comp=Z,45nm,0.9s,baz=190,slow=4.0,SNR=68
ASAR PP PP **01 11 03.0 -1.8**
comp=Z,13nm,0.9s,baz=190,slow=7.8,SNR=6.0
ASAR PKKPbc **PKKPdf 01 24 13.2 -0.5**
comp=Z,1.6nm,0.7s,baz=11,slow=2.0,SNR=8.7
ASAR PKPPKP P'P'df 01 32 23.5 -13
comp=Z,1.4nm,0.9s,baz=19,slow=2.6,SNR=4.9
ASAR LR LR 01 46 02.8
comp=Z,27µm,21.7s,baz=181,slow=33
comp=Z,45nm,0.9s
ASAR Alice Springs 94.28 161 P P **01 07 17.6 -1.3**
AS31 Alice Springs 94.28 161 P P **01 07 17.6 -1.2**
AS01 Alice Springs 94.28 161 P P **01 07 18.3 -0.5**
COCO West Island 94.35 124 IAMs_20 IAMs_20 01 47 14.8
comp=Z,6µm,19.0s
MDT Midelt 94.82 18 LR LR 01 44 10.3
comp=Z,11µm,21.3s,baz=200,slow=32
MD31 MD31 94.85 18 P P **01 07 21.0 0.0**
MD01 Midelt array s 94.85 18 P P **01 07 20.6 -0.5**
AVE Averroes 94.90 15 P P **01 07 24.2 +3.1**
AVE Averroes 94.90 15 IAMs_20 IAMs_20 01 46 48.2
comp=Z,8µm,18.0s
TEIG Tepich 94.97 303 P P **01 07 21.9 +0.2**
TEIG IAmb IAmb 01 07 31.4
comp=Z,129nm,1.0s
CMIG Matias Romero 95.00 296 P P **01 07 20.1 -1.9**
comp=Z,5.2nm,0.9s,baz=147,slow=5.2,SNR=9.6
CMIG S **SKSac 01 18 01.4 +4.1**
comp=Z,0.4nm,0.3s,baz=149,slow=12,SNR=5.9
comp=Z,5.2nm,0.9s
IFR Ifrane 95.43 17 P P **01 07 26.2 +2.5**
OUENC Ouen Island, N 96.51 192 P P **01 07 30.2 +1.3**
OUENC Ouen Island, N 96.51 192 P P **01 07 28.2 -0.7**
OUENC IAmb IAmb 01 07 33.6
comp=Z,67nm,1.0s
ONTNC Ouen Toro 96.65 191 P P **01 07 31.3 +1.7**
ONTNC Ouen Toro 96.65 191 P P **01 07 28.9 -0.6**
ONTNC IAMs_20 IAMs_20 01 47 52.8
comp=Z,7µm,20.0s
ONTNC Ouen Toro 96.65 191 ⇓P P **01 07 33.5 +4.0**
YATNC Mamie plateau, 96.86 192 P P **01 07 31.7 +1.2**
NOUC Port Laguerre 96.87 191 P P **01 07 31.6 +1.0**
DZM Mont Dzumac 96.89 191 P P **01 07 30.1 -0.7**
comp=Z,23nm,1.0s,baz=170,slow=14,SNR=4.5
DZM LR LR 01 46 29.1
comp=Z,9µm,21.4s,baz=169,slow=32
comp=Z,23nm,1.0s
TLIG Tlapa 97.06 293 P Pdif 01 07 31.8 +0.3
TLIG IAmb IAmb 01 10 05.6
comp=Z,115nm,1.5s
PSMN Pico do Norte, 97.40 1 *e*pP pP 01 07 38.1 +3.9
WRA Warramunga Arr 98.00 161 P P **01 07 35.3 -0.4**
comp=Z,22nm,0.9s,baz=190,slow=3.7,SNR=28

WRA PP **PP** **01 11 33.8 +0.2**
comp=Z,9.2nm,1.0s,baz=187,slow=7.0,SNR=5.7
WRA S **SKSac** **01 18 13.1 -0.4**
comp=Z,0.3nm,0.7s,baz=203,slow=8.1,SNR=1.3
WRA PKKPbc **PKKPbc** **01 24 06.6 +0.5**
comp=Z,4.6nm,0.8s,baz=356,slow=2.5,SNR=9.5
WRA LR LR 01 49 10.4
comp=Z,22µm,20.7s,baz=189,slow=34
comp=Z,22nm,0.9s
WRA Warramunga Arr 98.00 161 P **P** **01 07 33.6 -2.1**
WRAB Tennant Creek 98.01 161 P **P** **01 07 34.8 -1.0**
WRAB Tennant Creek 98.01 161 *ce*P **P** **01 07 35.0 -0.8**
WRAB pmax pmax
comp=Z,34nm,1.0s
WR8 Warramunga Arr 98.01 161 P **P** **01 07 33.8 -2.0**
WR8 IAmb IAmb 01 07 39.3
comp=Z,58nm,1.1s
060A Indiantown 98.06 313 IAMs_20 IAMs_20 01 55 39.3
comp=Z,6µm,20.0s
FITZ Fitzroy Crossi 98.11 153 LR LR 01 47 52.1
comp=Z,5µm,21.5s,baz=195,slow=33
FITZ Fitzroy Crossi 98.11 153 P Pdif 01 07 38.2 +1.9
FITZ Fitzroy Crossi 98.11 153 P **P** **01 07 34.9 -1.3**
QIS Mount Isa 98.12 166 P **P** **01 07 36.2 -0.1**
PDA Ponta Delgada 98.14 0 *ep*P pP 01 07 46.1 +8.6
CMLA Cha da Macela 98.16 0 *ep*P pP 01 07 44.7 +7.1
PGRON Lagoa das Cont 98.17 0 *ep*P pP 01 07 41.9 +4.2
BART Pico Bartolome 98.17 0 *ep*P pP 01 07 42.6 +4.9
WB0 Warramunga Arr 98.18 161 P **P** **01 07 34.0 -2.5**
WB0 IAmb IAmb 01 07 39.9
comp=Z,34nm,1.0s
PSET Sete Cidades 98.22 0 *ep*P pP 01 07 43.8 +6.0
PFVI Vila Bisbo 98.51 14 *e*P **P** **01 07 34.1 -3.2**
PFVI *e*PP **PP** **01 11 39.0 +0.5**
KOUNC Koumac, New Ca 98.59 189 P Pdif 01 07 40.1 +1.8
KOUNC Koumac, New Ca 98.59 189 P **P** **01 07 36.8 -1.5**
KOUNC IAmb IAmb 01 07 42.9
comp=Z,105nm,1.2s
MORF Marmelete 98.70 14 *e*Pdif Pdif 01 07 38.6 +0.4
MORF *e*SKSac **SKSac** **01 18 17.7 +2.0**
MORF IAMs_20 IAMs_20 01 42 10.9
comp=Z,10µm,26.7s
PBDV Barranco-do-Ve 98.73 14 *e*P **P** **01 07 36.8 -1.5**
PBDV *e*PP **PP** **01 11 34.0 -6.1**
UNM Universidad Na 98.88 294 IAMs_20 IAMs_20 01 50 06.4
comp=Z,8µm,18.0s
PPNO Prainha do Nor 98.89 358 *ep*P pP 01 07 45.9 +5.0
PVAQ Vaqueiros 98.91 14 *e*P **P** **01 07 36.5 -2.7**
PVAQ *e*PP **PP** **01 11 36.3 -5.2**
PVAQ *e*S **SKSac** **01 18 21.6 +4.9**
PVAQ *e*LQ LQ 01 35 22.4
PVAQ *e*LR LR 01 37 50.5
PVAQ *i* IAMs_20 IAMs_20 01 43 12.6
comp=Z,4µm,24.0s
PICO Pico 98.92 358 *ep*P pP 01 07 47.2 +6.2
PTEO Sao Teotonio 98.93 14 *e*P Pdif 01 07 37.2 -2.0
PTEO *e*PP **PP** **01 11 45.9 +4.2**
HOR Horta 98.95 358 *ep*P pP 01 07 45.1 +4.1
CALA Caldeira 99.00 358 *ep*P pP 01 07 49.2 +7.7
PMAN Manadas 99.05 358 *ep*P pP 01 07 52.0 +10
ADH Angra Heroismo 99.06 359 *ep*P pP 01 07 45.0 +3.5
PCVE Castro Verde 99.10 14 *e*P **Pdif** **01 07 38.2 -1.7**
ROSA Rosais 99.14 358 *ep*P pP 01 07 50.5 +8.6
PAGU Agualva, Azore 99.17 359 *ep*P pP 01 07 46.7 +4.7
CTA Charters Tower 99.19 172 P **Pdif** **01 07 40.4 -0.7**
comp=Z,32nm,1.1s,baz=176,slow=6.1,SNR=14
CTA LR LR 01 51 54.3
comp=Z,18µm,19.1s,baz=180,slow=35
comp=Z,32nm,1.1s
CTAO Charters Tower 99.19 172 P **Pdif** **01 07 41.1 0.0**
CTAO Charters Tower 99.19 172 P **Pdif** **01 07 39.3 -1.8**
CTAO pmax pmax
comp=Z,42nm,1.1s
CTAO MLR MLR
comp=Z,18µm,19.0s
CTAO Charters Tower 99.19 172 P **Pdif** **01 07 39.3 -1.8**
CTAO IAmb IAmb 01 07 45.4
comp=Z,42nm,1.1s
CTAO Charters Tower 99.19 172 ⇓P **Pdif** **01 07 44.5 +3.4**
MESJ Messejana 99.28 14 *e*Pdif **Pdif** **01 07 41.0 +0.3**
MESJ *e*SKSac **SKSac** **01 18 24.0 +2.0**
MESJ IAMs_20 IAMs_20 01 42 13.9
comp=Z,11µm,32.7s
MESJ Messejana 99.28 14 *e*P **Pdif** **01 07 38.4 -2.4**
DWPF Disney Wildern 99.42 312 IAMs_20 IAMs_20 01 52 52.4
comp=Z,9µm,21.0s
PGRA Graciosa 99.44 358 *ep*P pP 01 07 47.7 +4.5
PLOUS Minas do Lousa 99.45 14 *e*P **Pdif** **01 07 39.4 -2.1**
PLOUS *e*PP **PP** **01 11 48.2 +2.7**
SRBC Serra Branca 99.45 358 *ep*P pP 01 07 44.7 +1.4
MSVF Nonsavu 99.48 203 LR LR 01 47 00.9
comp=Z,7µm,21.9s,baz=184,slow=32
MSVF Nonsavu 99.48 203 IAMs_20 IAMs_20 01 49 48.4
comp=Z,7µm,20.0s
PBEJ Beja 99.51 14 *e*P **Pdif** **01 07 45.9 +4.1**
PBAR Barrancos 99.76 15 *e*P **Pdif** **01 07 41.7 -1.2**
PBAR *e*PP **PP** **01 11 49.9 +1.9**
MOE Montemor 99.94 14 *e*P **Pdif** **01 07 42.8 -0.9**
MOE *e*PP **PP** **01 11 56.0 +6.7**
EVO Evora 99.99 14 *e*P **Pdif** **01 07 52.1 +8.2**
LIS Lisbon 100.04 13 *e*Pdif **Pdif** **01 07 44.5 +0.4**
LIS IAMs_20 IAMs_20 01 46 29.0
comp=Z,9µm,25.8s
LIS Lisbon 100.04 13 *e*P **Pdif** **01 07 49.7 +5.6**
LIS *e*PP **PP** **01 11 57.4 +7.4**
CART Cartagena 100.06 20 IAMs_20 IAMs_20 01 47 49.4
comp=Z,6µm,20.0s
PMAFR Mafra 100.26 13 *e*P **Pdif** **01 07 42.6 -2.5**
PMAFR *e*PP **PP** **01 11 55.8 +4.0**
PARRA Arraiolos 100.27 14 *e*P **Pdif** **01 07 43.5 -1.7**
PARRA *e*PP **PP** **01 11 55.9 +4.1**
KEST Kesra 100.34 28 P **Pdif** **01 07 46.9 +1.2**
comp=Z,8.7nm,1.1s,baz=223,slow=6.0,SNR=7.0
KEST PP **PP** **01 11 51.6 -0.9**
comp=Z,9.7nm,1.0s,baz=192,slow=6.6,SNR=5.4
KEST S **SKSac** **01 18 28.9 +4.9**
comp=Z,0.8nm,0.8s,baz=208,slow=18,SNR=1.1
KEST Kesra 100.34 28 **Pdif** **01 07 44.9 -0.8**
PESTR Estremoz 100.37 14 *e*P **Pdif** **01 07 46.2 +0.6**
PMTG Montargil 100.49 14 *e*P **Pdif** **01 07 45.6 -0.5**
PMTG *e*PP **PP** **01 11 55.0 +1.5**
PSBE So Bento 100.87 13 *e*P **Pdif** **01 07 46.0 -1.8**
PSBE *e*PP **PP** **01 11 59.5 +3.2**
PMRV Marv??o 100.95 14 *e*P **Pdif** **01 07 47.8 -0.4**
PMRV *e*PP **PP** **01 12 00.1 +3.1**
PMRV *e*SKS **SKSac** **01 18 29.5 +2.8**
PMRV *e*LQ LQ 01 35 33.8
PMRV *e*LR LR 01 41 26.9
PMRV *i* IAMs_20 IAMs_20 01 50 38.6
comp=Z,5µm,18.0s
MTSU Mount Surprise 100.99 170 P **Pdif** **01 07 51.2 +2.1**
PSARD Sardoal 101.03 14 *e*P **Pdif** **01 07 47.1 -1.4**
PSARD *e*PP **PP** **01 12 00.6 +3.1**
PCAS Casmilo, Conde 101.43 13 *e*P **Pdif** **01 07 55.3 +5.0**
PCAS *e*PP **PP** **01 12 05.3 +4.7**
PAB San Pablo 101.46 17 IAMs_20 IAMs_20 01 50 23.7
comp=Z,6µm,19.0s
ESDC Sonseca Array 101.64 17 P **Pdif** **01 07 52.6 +1.3**
comp=Z,8.9nm,1.0s,baz=190,slow=4.4,SNR=15
ESDC PKiKP **PKiKP** **01 12 11.7 -3.0**
comp=Z,2.3nm,1.1s,baz=221,slow=3.1,SNR=2.0
ESDC S **SKSac** **01 18 33.5 +3.4**
comp=Z,0.2nm,0.3s,baz=231,slow=0.9,SNR=5.1
ESDC PKKPbc **PKKPbc** **01 23 58.6 +1.6**
comp=Z,2.3nm,1.1s,baz=8.4,slow=5.2,SNR=5.2
WDD Wied Dalam 101.72 32 IAMs_20 IAMs_20 02 01 51.4
comp=Z,6µm,18.0s
MTE Manteigas 101.89 14 *e*P **Pdif** **01 07 53.1 +0.7**
MTE *e*PP **PP** **01 12 05.9 +1.8**
MTE *e*SKS **SKSac** **01 18 32.5 +1.3**
MTE *e*LQ LQ 01 36 19.4
MTE *e*LR LR 01 36 45.6
MTE *i* IAMs_20 IAMs_20 01 49 04.8
comp=Z,6µm,20.0s
MTE Manteigas 101.89 14 IAMs_20 IAMs_20 01 48 27.2
comp=Z,7µm,21.0s
456A Hilliard 102.01 313 IAMs_20 IAMs_20 01 54 30.8
comp=Z,8µm,21.0s
PVIS Viseu 102.16 14 *e*P **Pdif** **01 07 53.6 0.0**
PVIS *e*PP **PP** **01 12 07.2 +1.1**
553A Crawfordville 102.40 311 IAMs_20 IAMs_20 01 55 23.4
comp=Z,7µm,20.0s
PTO Porto 102.50 13 *e*P **Pdif** **01 08 00.0 +5.1**
EIL Elat 102.69 51 S **SKSac** **01 18 37.9 +2.4**
comp=Z,1.0nm,0.5s,baz=159,slow=8.6,SNR=1.0
257A Skidaway Islan 102.78 314 IAMs_20 IAMs_20 01 54 52.4
comp=Z,5µm,22.0s
POLO Lamas de Olo 102.82 14 *e*P **Pdif** **01 07 55.4 -1.1**
POLO *e*PP **PP** **01 12 13.3 +2.1**
VAE Valguarnera 103.24 32 PKiKP **PKiKP** **01 12 15.0 -2.7**
comp=Z,9.4nm,1.0s,baz=326,slow=3.6,SNR=2.6
451A Vernon 103.28 310 IAMs_20 IAMs_20 01 56 47.6
comp=Z,6µm,21.0s
PGAV Gavieira, Arco 103.35 13 *e*P **Pdif** **01 07 57.4 -1.5**
PGAV *e*SKS **SKSac** **01 18 43.1 +5.1**
PGAV *e*LQ LQ 01 36 53.5
PGAV *e*LR LR 01 42 46.6
PGAV *i* IAMs_20 IAMs_20 01 50 20.8
comp=Z,11µm,18.0s
PBRG Braganca 103.37 14 *e*P **Pdif** **01 08 01.2 +2.3**
PBRG *e*PP **PP** **01 12 15.1 -0.1**
154A Montrose 104.10 313 IAMs_20 IAMs_20 01 54 36.4
comp=Z,8µm,21.0s
IMMV Iera Moni Meta 104.11 40 P **Pdif** **01 08 08.8 +6.4**
IDI Anoyia 104.25 41 PKiKP **PKiKP** **01 12 18.2 -1.4**
comp=Z,14nm,1.0s,baz=211,slow=1.6,SNR=3.3
BRAL Brewton 104.27 309 IAMs_20 IAMs_20 01 58 08.8
comp=Z,5µm,20.0s
ANKY Antikythira Is 104.28 39 P **Pdif** **01 08 10.7 +7.6**
PALK Pallekele 104.33 101 IAMs_20 IAMs_20 01 48 06.5
comp=Z,5µm,18.0s
GHAJ Ghor Haditha 104.39 51 IAMs_20 IAMs_20 01 51 26.6
comp=Z,8µm,19.0s
250A Grady 104.70 310 IAMs_20 IAMs_20 01 57 08.1
comp=Z,9µm,20.0s
W59A Clinton 104.81 318 IAMs_20 IAMs_20 01 55 28.9
comp=Z,5µm,21.0s
VLI Velíai 104.95 39 P **Pdif** **01 08 14.5 +8.5**
GOGA Godfrey 104.95 313 IAMs_20 IAMs_20 01 55 20.8
comp=Z,8µm,21.0s
KARP Karpathos 105.22 42 IAMs_20 IAMs_20 01 57 45.3
comp=Z,6µm,20.0s
VLX Vlachokerasia 105.38 38 P **Pdif** **01 08 16.5 +8.5**
THERA Ancient Thera, 105.42 41 P **Pdif** **01 08 12.8 +4.7**
TIP Timpagrande 105.46 33 IAMs_20 IAMs_20 01 51 37.3
comp=Z,8µm,20.0s
Y52A Lilburn 105.57 313 IAMs_20 IAMs_20 01 55 51.3
comp=Z,8µm,21.0s
V58A Windy Hill, Pi 105.60 317 IAMs_20 IAMs_20 01 59 23.9
comp=Z,5µm,19.0s
KMSC Kings Mountain 105.76 315 IAMs_20 IAMs_20 01 56 16.5
comp=Z,5µm,20.0s
AXS Araxos 105.84 37 P **Pdif** **01 08 19.6 +10**
GUR Goura 105.89 38 P **Pdif** **01 08 19.5 +9.2**
PMBI Palembang 105.93 128 IAMs_20 IAMs_20 01 57 31.5
comp=Z,4µm,18.0s
KLV Kalavryta, Ach 105.93 38 P **Pdif** **01 08 18.2 +7.8**
LTK Loutraki 106.16 38 P **Pdif** **01 08 19.8 +8.4**
PDO Prodromos 106.16 37 P **Pdif** **01 08 20.4 +9.0**
T59A Double "B" Far 106.17 319 IAMs_20 IAMs_20 01 53 55.8
comp=Z,5µm,22.0s
SERG Sergoula 106.25 37 P **Pdif** **01 08 19.2 +7.5**
VLY Voula,Athens 106.26 39 P **Pdif** **01 08 20.0 +8.2**
PVO Paravola 106.28 37 P **Pdif** **01 08 20.4 +8.5**
441A DeRidder 106.32 304 IAMs_20 IAMs_20 01 57 49.1
comp=Z,5µm,22.0s
146A Union 106.34 308 IAMs_20 IAMs_20 01 59 28.8
comp=Z,7µm,20.0s
ANX Ano Chora 106.37 37 P **Pdif** **01 08 21.0 +8.6**
PTL Penteli 106.46 39 P **Pdif** **01 08 19.8 +7.1**
X51A Calhoun 106.49 312 IAMs_20 IAMs_20 01 55 39.6
comp=Z,5µm,21.0s
DION Dionisos Attik 106.51 39 P **Pdif** **01 08 18.8 +5.9**
HKT Hockley 106.71 302 IAMs_20 IAMs_20 02 00 12.9
comp=Z,5µm,22.0s
R61A Willards 106.72 321 IAMs_20 IAMs_20 01 51 12.2
comp=Z,7µm,22.0s
V53A Saluda 106.75 314 IAMs_20 IAMs_20 01 56 28.5
comp=Z,6µm,20.0s
IGT Igoumenitsa 106.78 36 P **Pdif** **01 08 23.6 +9.5**
GSI Gunungsitoli 106.82 119 IAMs_20 IAMs_20 01 45 01.6
comp=Z,6µm,22.0s
CSS Mathiatis 106.83 47 IAMs_20 IAMs_20 01 56 14.5
comp=Z,5µm,19.0s
TETR Tetrakomo, Epi 106.88 36 P **Pdif** **01 08 23.6 +8.9**
PRMD Pramanda 107.00 36 P **Pdif** **01 08 23.5 +8.3**
JAN Janina 107.04 36 P **Pdif** **01 08 24.1 +8.8**
KYMI Kymi, Euboea I 107.07 39 P **Pdif** **01 08 20.3 +4.9**
R58B Mineral 107.18 319 IAMs_20 IAMs_20 01 56 16.5
comp=Z,6µm,22.0s
U54A Nelsons Funny 107.18 316 IAMs_20 IAMs_20 01 56 24.1
comp=Z,5µm,22.0s
W50A Signal Mountai 107.22 312 IAMs_20 IAMs_20 01 56 13.0
comp=Z,5µm,21.0s
THL Klokotos Trika 107.30 37 P **Pdif** **01 08 23.5 +7.2**
BKNI Bangkinang 107.40 123 IAMs_20 IAMs_20 01 50 19.7
comp=Z,9µm,19.0s
NEO Neokhori 107.42 38 P **Pdif** **01 08 23.2 +6.2**
XOR Xorichti 107.47 38 P **Pdif** **01 08 23.5 +6.3**
AOS Alonnisos 107.49 38 P **Pdif** **01 08 22.5 +5.2**
TYRN Tyrnavos 107.50 37 P **Pdif** **01 08 22.0 +4.7**
SLBS Sierra La Lagu 107.61 287 IAMs_20 IAMs_20 01 54 47.1
comp=Z,6µm,18.0s
Y45A Yeager Farm, C 107.62 308 IAMs_20 IAMs_20 01 58 46.6
comp=Z,7µm,20.0s
P61A Hammonton 107.78 322 IAMs_20 IAMs_20 01 56 06.5
comp=Z,7µm,21.0s
TZTN Tazewell 107.80 314 IAMs_20 IAMs_20 01 56 41.2
comp=Z,5µm,20.0s
LIT Litokhoron 107.93 37 P **Pdif** **01 08 24.5 +5.3**
M65A Busby, Falmout 108.34 326 IAMs_20 IAMs_20 01 56 29.4
comp=Z,7µm,20.0s
M65A Busby, Falmout 108.34 326 PKPdf **PKiKP** **01 12 23.1 -3.8**
baz=159
PLG Polygyros 108.47 38 P **Pdif** **01 08 25.6 +4.0**
SSB Saint Sauveur 108.50 22 IAMs_20 IAMs_20 01 53 10.7
comp=Z,7µm,20.0s
N62A Caumsett State 108.55 324 IAMs_20 IAMs_20 01 50 49.7
comp=Z,6µm,22.0s
U49A Red Boiling Sp 108.57 313 IAMs_20 IAMs_20 02 00 37.0
comp=Z,5µm,20.0s
M63A Gales Ferry 108.58 325 IAMs_20 IAMs_20 01 58 14.5
comp=Z,6µm,19.0s
P57A Homestead Farm 108.61 320 IAMs_20 IAMs_20 02 00 16.3
comp=Z,6µm,19.0s
T50A Nancy 108.68 314 IAMs_20 IAMs_20 01 58 12.6
comp=Z,6µm,21.0s
L64A Middleborough 108.74 326 IAMs_20 IAMs_20 01 56 49.6
comp=Z,7µm,19.0s
PAL Palisades 108.75 323 IAMs_20 IAMs_20 01 50 59.0
comp=Z,6µm,22.0s
S51A Beattyville 108.80 315 IAMs_20 IAMs_20 02 00 39.6
comp=Z,5µm,19.0s
WVT Waverly 108.98 311 IAMs_20 IAMs_20 01 57 41.5
comp=Z,6µm,22.0s
KNT Kendrikon 109.03 37 P **Pdif** **01 08 29.1 +5.0**
PDG Podgorica 109.17 34 IAMs_20 IAMs_20 01 56 20.5
comp=Z,6µm,20.0s
SRS Serrai 109.19 37 P **Pdif** **01 08 28.8 +4.0**
BCX Boston College 109.20 326 IAMs_20 IAMs_20 01 57 13.8
comp=Z,7µm,20.0s
WES Weston 109.29 326 IAMs_20 IAMs_20 01 51 34.2
comp=Z,8µm,22.0s
N58A Sunbury 109.44 321 IAMs_20 IAMs_20 01 52 29.3
comp=Z,8µm,22.0s
HRV Adam Dziewonsk 109.47 326 IAMs_20 IAMs_20 01 51 50.9
comp=Z,8µm,22.0s
T47A Sharon Grove 109.47 312 IAMs_20 IAMs_20 01 56 40.5
comp=Z,5µm,21.0s
NVR Nevrokopi 109.49 37 P **Pdif** **01 08 29.8 +3.7**
TXAR Lajitas Array 109.56 295 Pdiff **Pdif** **01 08 28.0 +1.1**
comp=Z,0.1nm,0.4s,baz=143,slow=7.2,SNR=1.2
TXAR PKiKP **PKiKP** **01 12 29.0 -0.7**
comp=Z,0.5nm,0.8s,baz=154,slow=5.7,SNR=3.6
TXAR PKKPbc **PKKPbc** **01 23 33.5 +1.2**
comp=Z,2.2nm,0.8s,baz=324,slow=3.7,SNR=9.4
KKB Krupnik 109.72 37 P **Pdif** **01 08 32.1 +4.9**
L61B Northampton 109.73 325 IAMs_20 IAMs_20 01 58 03.8
comp=Z,6µm,20.0s
ALN Alexandroupoli 109.74 39 P **Pdif** **01 08 27.8 +0.6**
K62A Royalston 109.80 325 IAMs_20 IAMs_20 01 57 44.8
comp=Z,7µm,19.0s
RDO Rodhopi 109.81 39 P **Pdif** **01 08 28.9 +1.4**
PMG Port Moresby 109.85 173 PKKPab PKKPab 01 23 44.9 -2.1
comp=Z,11nm,0.6s,baz=40,slow=7.9,SNR=3.0
HNR Honiara 109.90 186 IAMs_20 IAMs_20 01 56 56.2
comp=Z,8µm,20.0s
R49A Shelbyville 109.94 314 IAMs_20 IAMs_20 02 04 11.7
comp=Z,5µm,19.0s
M57A Sunshine Farm, 110.02 321 IAMs_20 IAMs_20 01 52 57.7
comp=Z,7µm,22.0s
TRY Troy 110.27 324 IAMs_20 IAMs_20 01 58 52.2
comp=Z,5µm,19.0s
WCI Wyandotte Cave 110.28 313 IAMs_20 IAMs_20 01 59 34.9
comp=Z,7µm,22.0s
EMMW East Machias 110.44 330 IAMs_20 IAMs_20 01 55 32.5
comp=Z,6µm,20.0s
J61A Chester 110.52 325 IAMs_20 IAMs_20 01 58 05.8
comp=Z,7µm,19.0s
TUE Stuetta 110.59 25 IAMs_20 IAMs_20 01 54 33.8
comp=Z,6µm,19.0s
I63A Otisfield 110.63 327 IAMs_20 IAMs_20 01 51 54.7
comp=Z,7µm,21.0s
POO Poona 110.66 89 *e*P **PKiKP** **01 12 32.7 +0.7**
I62A Tamworth 110.67 326 IAMs_20 IAMs_20 01 52 21.8
comp=Z,7µm,21.0s
N53A Lisbon 110.71 318 IAMs_20 IAMs_20 02 03 37.2
comp=Z,5µm,19.0s
CLF Chambon-Foret 110.76 20 IAMs_20 IAMs_20 01 53 12.8
comp=Z,5µm,21.0s
KIRS Kirsehir-Merke 110.77 46 ⇓P PKiKP 01 12 40.8 +9.2
HNH Hanover 110.78 326 IAMs_20 IAMs_20 01 52 29.0
comp=Z,8µm,22.0s
BLY Banja Luka 110.78 31 ⇓P **PKiKP** **01 12 33.0 +1.6**
BLY Banja Luka 110.78 31 IAMs_20 IAMs_20 01 56 17.3
comp=Z,5µm,21.0s
WVL Waterville 110.87 328 IAMs_20 IAMs_20 01 56 42.3
comp=Z,7µm,20.0s
L56A Greenwood 110.88 321 IAMs_20 IAMs_20 01 53 23.5
comp=Z,6µm,22.0s
S44A Carbondale 110.89 311 IAMs_20 IAMs_20 01 58 50.5
comp=Z,5µm,22.0s
ACSO Alum Creek Sta 110.91 316 IAMs_20 IAMs_20 01 57 04.9
comp=Z,5µm,22.0s
G65A Princeton 110.93 330 IAMs_20 IAMs_20 01 55 46.8
comp=Z,6µm,20.0s
BOVS Bovan 110.96 35 ⇑P **PKiKP** **01 12 35.1 +3.3**
DAVOX Davos/Dischmat 111.00 25 PKiKP **PKiKP** **01 12 30.5 -1.5**
comp=Z,5.8nm,0.9s,baz=248,slow=5.4,SNR=7.2
DAVOX PKKPbc **PKKPbc** **01 23 27.8 -0.5**
comp=Z,2.3nm,0.8s,baz=14,slow=12,SNR=4.3
P48A Milroy 111.07 314 IAMs_20 IAMs_20 02 03 48.0
comp=Z,5µm,19.0s
K57A Scipio Center 111.10 322 IAMs_20 IAMs_20 01 58 44.8
comp=Z,5µm,22.0s
LBNH Lisbon 111.17 326 IAMs_20 IAMs_20 01 52 38.4
comp=Z,7µm,21.0s
J59A Piesco 111.18 324 IAMs_20 IAMs_20 01 54 26.6
comp=Z,5µm,22.0s
BRTR Keskin Array B 111.19 45 Pdiff **Pdif** **01 08 38.4 +4.5**
comp=Z,0.2nm,0.6s,baz=208,slow=8.1,SNR=1.7
BRTR PKiKP **PKiKP** **01 12 30.4 -2.1**
comp=Z,1.1nm,0.7s,baz=192,slow=2.6,SNR=4.9
BRTR PKKPbc **PKKPbc** **01 23 25.1 -2.3**
comp=Z,1.5nm,0.9s,baz=30,slow=2.5,SNR=5.3
H62A Milan 111.27 327 IAMs_20 IAMs_20 01 52 26.0
comp=Z,7µm,22.0s
O49A Covington 111.33 315 IAMs_20 IAMs_20 01 58 55.1
comp=Z,6µm,21.0s
FETA Feichten 111.41 26 *ep*Pdiff **pPdif** **01 08 37.7 +1.2**
comp=Z,3.0nm,1.4s
FETA *e*PKKP **PKKPbc** **01 23 28.3 +1.4**
comp=Z,5.3nm,1.8s
PKME Peaks-Kenny Pk 111.42 328 IAMs_20 IAMs_20 01 56 47.0
comp=Z,6µm,21.0s
DAVA Damuels 111.48 25 Pdiff **Pdif** **01 08 37.1 +2.1**
comp=Z,1.6nm,1.0s
DAVA *e*PP **PP** **01 13 16.8 +2.1**
comp=Z,17nm,1.2s
DAVA *e*PKKP **PKKPbc** **01 23 28.5 +1.9**
comp=Z,3.5nm,1.1s
ABTA Abfaltersbach 111.54 27 *ep*Pdiff **pPdif** **01 08 38.7 +1.7**
comp=Z,4.2nm,0.9s
ABTA *e*PP **PP** **01 13 17.2 +2.1**
comp=Z,15nm,1.2s
ABTA *e*PKKP **PKKPab** **01 23 31.2 -2.1**
comp=Z,2.1nm,0.6s
M52A Chesterland 111.55 318 IAMs_20 IAMs_20 02 03 43.6
comp=Z,5µm,18.0s
J57A Williamstown 111.57 323 IAMs_20 IAMs_20 02 00 37.0
comp=Z,4µm,19.0s
O48B Farmland 111.68 315 IAMs_20 IAMs_20 02 00 11.3
comp=Z,5µm,20.0s
MYKA Terra Mystica 111.69 28 *ep*Pdiff **pPdif** **01 08 39.8 +2.2**
comp=Z,7.1nm,1.7s
MYKA *e*PP **PP** **01 13 17.9 +1.8**
comp=Z,28nm,1.8s
MYKA PKKP **PKKPab** **01 23 29.9 -2.8**
comp=Z,6.6nm,1.1s
SQTA Sankt Quirin 111.70 26 *e*Pdiff **Pdif** **01 08 38.0 +2.1**
comp=Z,2.0nm,1.0s
SQTA *e*PKiKP **PKiKP** **01 12 33.0 -0.2**
comp=Z,4.4nm,1.2s
SQTA *e*PP **PP** **01 13 19.1 +2.8**
comp=Z,40nm,1.3s
SQTA *e*PKKP **PKKPab** **01 23 30.2 -2.5**
comp=Z,2.7nm,1.0s
G62A West of Eustis 111.70 328 IAMs_20 IAMs_20 01 57 29.4
comp=Z,6µm,20.0s
F64A Sherman 111.75 329 IAMs_20 IAMs_20 01 56 21.4
comp=Z,5µm,21.0s
U38A Gravette 111.77 306 IAMs_20 IAMs_20 02 04 41.9
comp=Z,4µm,19.0s
OBKA Obir 111.79 29 *ep*Pdiff **pPdif** **01 08 40.5 +2.4**
comp=Z,2.2nm,0.9s
OBKA *e*PP **PP** **01 13 19.0 +2.2**
comp=Z,18nm,1.6s
OBKA *e*PKKP **PKKPab** **01 23 29.6 -2.7**
comp=Z,3.2nm,1.3s
MOTA Moosalm 111.80 26 *ep*Pdiff **pPdif** **01 08 41.4 +3.2**
comp=Z,2.6nm,1.2s
MOTA *e*PKiKP **PKiKP** **01 12 33.6 +0.2**
comp=Z,2.3nm,0.9s
MOTA *e*PP **PP** **01 13 18.3 +1.3**
comp=Z,36nm,1.5s
MOTA *e*PKKP **PKKPab** **01 23 30.6 -1.7**
comp=Z,15nm,1.4s
ECH Echery 111.82 23 IAMs_20 IAMs_20 01 55 23.6
comp=Z,6µm,19.0s
WTTA Wattenberg 111.84 26 *ep*Pdiff **pPdif** **01 08 40.0 +1.6**
comp=Z,4.7nm,1.0s
WTTA *e*PP **PP** **01 13 18.2 +0.9**
comp=Z,35nm,1.1s
WTTA *e*PKKP **PKKPab** **01 23 30.0 -2.2**
comp=Z,14nm,1.2s
P46A Rosedale 111.84 313 IAMs_20 IAMs_20 01 59 59.5
comp=Z,6µm,22.0s
RETA Reutte 111.86 26 pPdiff **pPdif** **01 08 39.9 +1.6**
comp=Z,2.6nm,1.2s
RETA *e*PP **PP** **01 13 18.4 +1.1**
comp=Z,26nm,1.2s
RETA *e*PKKP **PKKPab** **01 23 30.5 -1.4**
comp=Z,6.2nm,1.8s
WATA Walderalm 111.89 26 Pdiff **Pdif** **01 08 39.2 +2.4**
comp=Z,6.2nm,1.5s
WATA *e*PKiKP **PKiKP** **01 12 34.5 +0.9**
comp=Z,2.9nm,1.1s
WATA PP **PP** **01 13 19.3 +1.7**
comp=Z,49nm,1.7s
WATA *e*PKKP **PKKPab** **01 23 30.8 -1.1**
comp=Z,20nm,1.4s
M50A Fremont 111.98 317 IAMs_20 IAMs_20 02 03 06.2
comp=Z,4µm,19.0s
HYB Hyderabad 112.02 94 *e*P **PKiKP** **01 12 35.8 +1.2**
HYB Hyderabad 112.02 94 *e*Pdif **Pdif** **01 08 36.6 -1.4**
HYB *e*PKiKP **PKiKP** **01 12 34.0 -0.6**
HYB *e*SKSac **SKSac** **01 19 15.6 -1.1**
MDVR Moldovita 112.02 34 ⇓P **PKiKP** **01 12 35.2 +1.4**
KBA Koelnbreinsper 112.04 28 *e*PP **PP** **01 13 19.2 +0.4**
comp=Z,33nm,1.1s
KBA *e*PKKP **PKKPab** **01 23 29.7 -1.6**
comp=Z,9.2nm,1.5s
SOKA Soboth 112.06 29 *ep*Pdiff **pPdif** **01 08 41.8 +2.6**
comp=Z,5.1nm,1.3s
SOKA *e*PKiKP **PKiKP** **01 12 33.9 0.0**
comp=Z,4.5nm,1.5s
SOKA *e*PP **PP** **01 13 20.1 +1.3**
comp=Z,20nm,1.2s
SOKA PKKP **PKKPab** **01 23 29.1 -2.0**
comp=Z,5.4nm,1.4s
BFO Black Forest 112.16 24 *e*PP **PP** **01 13 18.8 -0.6**
baz=196,slow=7.5
LESA Schwarzleotal 112.22 27 *e*Pdiff **Pdif** **01 08 39.0 +0.8**
comp=Z,3.4nm,0.9s
LESA PKKP **PKKPab** **01 23 29.7 -0.7**
comp=Z,9.2nm,1.3s
LONY Lake Ozonia 112.26 324 IAMs_20 IAMs_20 01 53 52.4
comp=Z,8µm,22.0s

HERR	Herculane	112.31	35	⇑P	PKiKP	01 12 34.2	0.0		
ARPR	Arapgir-MALATY	112.33	49	IAMs_20	IAMs_20	02 00 39.7			
	comp=Z,5μm,19.0s								
MNTX	Cornudas Mount	112.34	295	IAMs_20	IAMs_20	01 59 20.1			
	comp=Z,7μm,22.0s								
SESA	Seetaler Alpe,	112.36	29	*e*Pdiff	Pdif	01 08 41.2	+2.2		
	comp=Z,7.3nm,1.2s								
SESA				*e*PP	PP	01 13 21.7	+0.6		
	comp=Z,66nm,1.2s								
SESA				*e*PKKP	PKKPab	01 23 28.7	-1.3		
	comp=Z,12nm,1.0s								
N47A	Urbana	112.42	315	IAMs_20	IAMs_20	01 59 07.9			
	comp=Z,5μm,21.0s								
S39A	Bolivar	112.44	307	IAMs_20	IAMs_20	02 01 29.6			
	comp=Z,6μm,21.0s								
SFIN	Lafayette	112.47	313	IAMs_20	IAMs_20	02 02 48.3			
	comp=Z,5μm,20.0s								
MORH	Mrgy, Hungar	112.53	32	⇓P	PKiKP	01 12 35.6	+1.0		
FUR	Furstenfeldbru	112.61	26	*e*PP	PP	01 13 23.8	+1.1		
	baz=196,slow=7.5								
BIOA	Bad Ischl, Aus	112.69	28	*e*PP	PP	01 13 23.5	+0.3		
	comp=Z,20nm,1.8s								
BIOA				*e*PKKP	PKKPab	01 23 27.4	-0.8		
	comp=Z,22nm,1.6s								
ARSA	Arzberg	112.71	29	*e*pPdiff	pPdif	01 08 45.2	+3.1		
	comp=Z,2.3nm,1.0s								
ARSA				*e*PKiKP	PKiKP	01 12 34.5	-0.5		
	comp=Z,4.1nm,1.2s								
ARSA				*e*PP	PP	01 13 24.9	+1.6		
	comp=Z,14nm,1.3s								
ARSA				*e*PKKP	PKKPab	01 23 27.3	-0.9		
	comp=Z,6.3nm,1.2s								
BZS	Buzias	112.76	34	⇓P	PKiKP	01 12 38.2	+3.1		
BZS	Buzias	112.76	34	⇓PKiKP	PKiKP	01 12 38.2	+3.1		
GZR	Gura Zlata	112.88	35	⇑P	PKiKP	01 12 44.2	+8.8		
MOA	Molln	112.98	28	*e*Pdiff	Pdif	01 08 44.4	+2.9		
	comp=Z,3.5nm,1.0s								
MOA				*e*PKiKP	PKiKP	01 12 35.1	-0.3		
	comp=Z,2.7nm,0.9s								
MOA				*e*PP	PP	01 13 25.5	+0.2		
	comp=Z,15nm,1.0s								
MOA				*e*PKKP	PKKPab	01 23 27.6	+0.6		
	comp=Z,11nm,1.3s								
AAM	Ann Arbor	112.99	317	IAMs_20	IAMs_20	02 03 32.8			
	comp=Z,4μm,19.0s								
WLF	Walferdange	113.03	22	IAMs_20	IAMs_20	01 54 31.4			
	comp=Z,7μm,21.0s								
WLF	Walferdange	113.03	22	*e*PP	PP	01 13 19.7	-5.8		
	baz=196,slow=7.5								
D62A	Allapoint, All	113.06	329	IAMs_20	IAMs_20	01 57 11.1			
	comp=Z,5μm,21.0s								
K50A	Casco	113.07	318	IAMs_20	IAMs_20	02 02 26.9			
	comp=Z,4μm,19.0s								
LOT	Lotru	113.21	36	⇑P	PKiKP	01 12 40.9	+4.8		
RONA	Rosalia, Austr	113.32	30	*e*Pdiff	Pdif	01 08 46.0	+3.0		
	comp=Z,2.0nm,0.9s								
RONA				*e*PKiKP	PKiKP	01 12 36.1	-0.1		
	comp=Z,3.4nm,1.3s								
RONA				*e*PP	PP	01 13 27.6	-0.1		
	comp=Z,29nm,1.3s								
RONA				*e*PKKP	PKKPab	01 23 26.9	+1.3		
	comp=Z,3.3nm,1.4s								
DEV	Deva	113.37	35	⇓P	PKiKP	01 12 39.9	+3.7		
DEV	Deva	113.37	35	⇓PKiKP	PKiKP	01 12 39.9	+3.7		
SIRR	Siria	113.38	34	⇓P	PKiKP	01 12 39.5	+3.2		
ARR	Arges	113.39	36	⇓P	PKiKP	01 12 41.5	+5.1		
BMRD	Maredsous	113.39	21	*d*PP	PP	01 13 30.7	+2.6		
HDIL	Hopedale	113.42	312	IAMs_20	IAMs_20	01 59 26.4			
	comp=Z,7μm,22.0s								
CONA	Conrad Observa	113.43	29	*e*Pdiff	Pdif	01 08 46.4	+2.8		
	comp=Z,2.2nm,1.1s								
CONA				*e*PP	PP	01 13 27.6	-1.0		
	comp=Z,32nm,1.4s								
CONA				*e*PKKP	PKKPab	01 23 25.7	+0.6		
	comp=Z,5.9nm,1.3s								
VOIR		113.57	37	⇑P	PKiKP	01 12 41.2	+4.4		
VOIR		113.57	37	PKiKP	PKiKP	01 12 41.2	+4.4		
WINA	Alland / Wiene	113.65	29	*e*Pdiff	Pdif	01 08 46.5	+2.1		
	comp=Z,1.8nm,1.1s								
WINA				*e*PKKP	PKKPbc	01 23 21.7	+2.5		
	comp=Z,5.3nm,1.6s								
M44A	Midewin, Midew	113.70	313	IAMs_20	IAMs_20	02 01 17.8			
	comp=Z,7μm,22.0s								
ISR	Istrita	113.73	38	⇓P	PKiKP	01 12 42.2	+5.1		
SADO	Sadowa	113.75	321	PKiKP	PKiKP	01 12 34.1	-2.9		
	comp=Z,5.7nm,0.9s,baz=175,slow=3.8,SNR=4.1								
GEC2	GERESS Array S	113.79	27	*e*PP	PP	01 13 27.4	-3.7		
	baz=196,slow=7.5								
GERES	GERESS Array B	113.79	27	Pdiff	Pdif	01 08 52.0	+6.9		
	comp=Z,0.1nm,0.3s,baz=200,slow=8.3,SNR=1.1								
GERES				PKiKP	PKiKP	01 12 35.1	-2.0		
	comp=Z,1.7nm,0.8s,baz=211,slow=1.1,SNR=7.7								
GERES				PP	PP	01 13 28.3	-2.8		
	comp=Z,20nm,1.1s,baz=212,slow=7.1,SNR=11								
GERES				PKKPbc	PKKPbc	01 23 16.1	-2.8		
	comp=Z,1.3nm,0.9s,baz=0.0,slow=1.3,SNR=4.7								
UCC	Uccle	113.80	20	*d*PKiKP	PKiKP	01 12 37.3	+0.4		
WET	Wettzell	113.89	27	*e*PP	PP	01 13 28.4	-3.3		
	baz=196,slow=7.5								
MLR	Muntele Rosu	113.89	37	PKiKP	PKiKP	01 12 35.4	-2.0		
	comp=Z,2.8nm,0.7s,baz=225,slow=2.9,SNR=3.0								
MLR	Muntele Rosu	113.89	37	⇓P	PKiKP	01 12 43.5	+6.0		
MLR	Muntele Rosu	113.89	37	IAMs_20	IAMs_20	01 59 41.0			
	comp=Z,6μm,21.0s								
CKRC	Cesky Krumlov	113.90	28	*e*PP	PP	01 13 22.1	-10		
CKRC				*ex*	x	01 23 17.4			
CKRC				AMS	AMS	01 54 50.0			
	comp=Z,4μm,20.4s								
NEHR	Nehoiu	113.93	37	⇓P	PKiKP	01 12 42.4	+5.0		
TNS	Taunus Mts	113.99	23	*e*PP	PP	01 13 33.0	+0.5		
	baz=196,slow=7.5								
MDB	Medias	114.02	36	⇑P	PKiKP	01 12 42.2	+4.7		
MDB	Medias	114.02	36	PKiKP	PKiKP	01 12 42.2	+4.7		
KHC	Kasperske Hory	114.03	27	*e*PDIF	Pdif	01 09 11.0	+25		
KHC				*e*PP	PP	01 13 30.2	-2.5		
KHC				*ex*	x	01 20 38.4			
KHC				*e*PKKP	PKKPbc	01 23 16.4	-1.5		
KHC				*ex*	x	01 29 22.1			
KHC				AMS	AMS	01 54 10.0			
	comp=Z,5μm,24.3s								
GRFO	Grafenberg	114.05	25	IAMs_20	IAMs_20	01 56 37.2			
	comp=Z,6μm,20.0s								
GRA1	Grafenberg Arr	114.05	25	IAMs_20	IAMs_20	01 56 37.2			
	comp=Z,6μm,20.0s								
GRF	Grafenberg Arr	114.05	25	*e*L	L	01 56 37.7			
	comp=Z,6μm,20.6s								
N41A	Harden Midland	114.13	311	IAMs_20	IAMs_20	01 59 58.2			
	comp=Z,8μm,22.0s								
DRGR		114.14	34	⇑P	PKiKP	01 12 39.9	+2.1		
DRGR		114.14	34	⇑PKiKP	PKiKP	01 12 39.9	+2.1		
MARR	Marisel-Cluj	114.15	35	⇓P	PKiKP	01 12 39.0	+0.1		
DOPR	Dopca	114.16	37	⇓P	PKiKP	01 12 41.5	+3.7		
I49A	Point Hope	114.17	318	IAMs_20	IAMs_20	02 00 12.2			
	comp=Z,5μm,22.0s								
MODS	Modra-Piesok	114.19	30	*e*PP	PP	01 13 34.6	+0.8		
MODS				*e*		01 23 28.6			
J47A	Sunmer	114.21	317	IAMs_20	IAMs_20	02 01 06.3			
	comp=Z,5μm,21.0s								
FAKI	Fak Fak	114.25	156	IAMs_20	IAMs_20	02 05 37.6			
	comp=Z,6μm,20.0s								
CFR	Carcaliu	114.27	39	⇓P	PKiKP	01 12 44.5	+6.6		
COVR	Voineasa-Covas	114.28	37	⇑P	PKiKP	01 12 43.6	+5.5		
CJR	Cluj-Napoca	114.32	35	⇓P	PKiKP	01 12 42.4	+4.2		
CJR	Cluj-Napoca	114.32	35	PKiKP	PKiKP	01 12 42.4	+4.2		
SAHR	Sahastru	114.32	38	⇑P	PKiKP	01 12 43.6	+5.4		
BOSR	Bodos	114.33	37	⇑P	PKiKP	01 12 44.1	+5.9		
OZUR		114.39	37	⇑P	PKiKP	01 12 42.9	+4.6		
TURR	Turia	114.42	37	⇑P	PKiKP	01 12 43.3	+4.9		
PLOR	Plostina	114.42	37	⇑P	PKiKP	01 12 40.4	+2.1		
PLOR	Plostina	114.42	37	⇑PKiKP	PKiKP	01 12 40.4	+2.1		
PSZ	Piszkesteto	114.43	32	⇑P	PKiKP	01 12 41.0	+2.7		
PSZ	Piszkesteto	114.43	32	⇑PKiKP	PKiKP	01 12 41.0	+2.7		
PSZ	Piszkesteto	114.43	32	IAMs_20	IAMs_20	01 58 04.7			
	comp=Z,4μm,20.0s								
ZVC	Zvikov	114.46	27	*e*PP	PP	01 13 34.8	-0.9		
ZVC				*ex*	x	01 23 19.5			
ZVC				AMS	AMS	01 57 00.0			
	comp=Z,4μm,19.7s								
VRI	Vrincioaia	114.46	38	⇓P	PKiKP	01 12 40.2	+1.8		
VRI	Vrincioaia	114.46	38	⇓PKiKP	PKiKP	01 12 40.2	+1.8		
MESR	Meseseni	114.54	34	⇓P	PKiKP	01 12 43.1	+4.6		
VIS	Vishakhapatnam	114.61	98	*e*P	PKiKP	01 12 42.1	+2.6		
KRUC	Moravsky	114.62	29	*e*PKP	PKPdf	01 12 38.2	-0.3		
KRUC				*e*PKKP	PKKPab	01 23 20.9	+1.1		
SCTR	Scanteiesti	114.67	38	⇓P	PKiKP	01 12 42.4	+3.7		
VYHS	Vyhne	114.69	31	*e*PP	PP	01 13 38.3	+0.9		
VYHS				*e*		01 23 26.0			
DSB	Dublin	114.69	13	IAMs_20	IAMs_20	01 58 12.2			
	comp=Z,4μm,19.0s								
JAVC	Velka Javorina	114.74	30	*e*PKP	PKPdf	01 12 37.6	-1.3		
JAVC				*e*PKKP	PKKPab	01 23 21.6	+2.2		
ONER	Baraj Valea Uz	114.78	37	⇓P	PKiKP	01 12 44.7	+5.7		
NKC	Novy Kostel	114.82	26	AMS	AMS	01 56 30.0			
	comp=Z,5μm,20.4s								
UBBA	Unterbreizbach	114.87	24	*e*PP	PP	01 13 39.4	+1.0		
	baz=196,slow=7.5								
VRAC	Vranov	114.89	29	PKP	PKPdf	01 12 39.1	0.0		
	comp=Z,5.3nm,0.9s,baz=184,slow=2.7,SNR=9.9								
VRAC				PP	PP	01 13 36.1	-2.7		
	comp=Z,6.3nm,0.9s,baz=203,slow=9.2,SNR=5.4								
VRAC	Vranov	114.89	29	⇑P	PKiKP	01 12 40.2	+1.1		
VRAC	Vranov	114.89	29	*e*PKP	PKiKP	01 12 40.9	+1.8		
VRAC				*e*PKKP	PKKPab	01 23 20.3	+1.7		
KASTN	Kahler Asten	114.92	23	*e*PP	PP	01 13 39.6	+0.7		
	baz=196,slow=7.5								
K43A	Burlington	114.96	314	IAMs_20	IAMs_20	02 08 00.1			
	comp=Z,4μm,19.0s								
TANN	Tannenbergstha	114.99	26	*e*PP	PP	01 13 31.4	-8.1		
	baz=196,slow=7.5								
PLN	Plauen	115.00	26	*e*PP	PP	01 13 36.3	-3.2		
	baz=196,slow=7.5								
TESR	Tescani	115.02	37	⇑P	PKiKP	01 12 42.3	+2.9		
MOX	Moxa	115.03	25	*e*PP	PP	01 13 38.3	-1.5		
	baz=196,slow=7.5								
MOX				*e*L	L	01 57 04.3			
	comp=Z,6μm,20.2s								
PRU	Pruhonice	115.05	27	*e*PP	PP	01 13 32.3	-7.6		
PRU				*ex*	x	01 20 31.9			
PRU				*ex*	x	01 23 28.7			
PRU				AMS	AMS	01 55 40.0			
	comp=Z,3μm,22.6s								
BMR	Baia Mare	115.17	34	⇑P	PKiKP	01 12 42.8	+3.1		
BMR	Baia Mare	115.17	34	PKiKP	PKiKP	01 12 42.8	+3.1		
TOLI2	Tolitoli	115.24	142	P	PKiKP	01 12 41.8	+0.9		
MAUC	Maruska	115.24	30	*e*PP	PP	01 13 37.9	-3.4		
MAUC				*ex*	x	01 23 30.8			
BIZ	Bicaz	115.25	37	⇓P	PKiKP	01 12 42.8	+3.0		
TUC	Tucson	115.30	291	PKiKP	PKPdf	01 12 40.4	-0.2		
TUC	Tucson	115.30	291		PKPdf	01 12 40.4	-0.2		
TUC	Tucson	115.30	291	IAMs_20	IAMs_20	02 02 25.4			
	comp=Z,6μm,20.0s								
I45A	Fountain	115.40	316	IAMs_20	IAMs_20	02 03 59.6			
	comp=Z,5μm,20.0s								
LANS	Liptovska Anna	115.45	31	*e*PP	PP	01 13 44.9	+2.1		
LANS				*e*		01 23 24.3			
GTTG	Gottingen	115.55	24	*e*PP	PP	01 13 42.0	-1.3		
	baz=196,slow=7.5								
MORC	Moravsky Berou	115.56	30	⇑P	PKiKP	01 12 41.6	+1.2		
MORC	Moravsky Berou	115.56	30	PKiKP	PKiKP	01 12 41.2	+0.8		
MORC	Moravsky Berou	115.56	30	PKPdf	PKiKP	01 12 41.2	+0.8		
MORC	Moravsky Berou	115.56	30	*e*PKP	PKiKP	01 12 41.6	+1.2		
MORC				*e*PKKP	PKKPab	01 23 17.7	+2.0		
ALQ	Albuquerque	115.57	296	IAMs_20	IAMs_20	02 03 46.4			
	comp=Z,6μm,18.0s								
ALQ	Albuquerque	115.57	296	IAMs_20	IAMs_20	02 03 46.4			
	comp=Z,6μm,18.0s								
ANMO	Albuquerque	115.57	296	PKiKP	PKPdf	01 12 40.6	-0.5		
ANMO				MLR	MLR				
	comp=Z,6μm,18.0s								
ANMO	Albuquerque	115.57	296		PKPdf	01 12 40.6	-0.5		
ANMO	Albuquerque	115.57	296	IAMs_20	IAMs_20	02 03 47.5			
	comp=Z,6μm,18.0s								
NEUB	Neuenburg	115.60	25	*e*PP	PP	01 13 43.4	-0.3		
	baz=196,slow=7.5								
BURAR	Bucovina Array	115.60	36	⇑P	PKiKP	01 12 41.0	+0.4		
BURAR	Bucovina Array	115.60	36	⇑PKiKP	PKiKP	01 12 41.0	+0.4		
BURAR	Bucovina Array	115.60	36		PKPdf	01 12 40.0	-0.6		
KRLC	Kraliky	115.65	29	*e*PP	PP	01 13 43.5	-0.7		
KRLC				*e*PKKP	PKKPdf	01 23 35.5	-2.2		
GNI	Garni	115.70	53	PKP	PKiKP	01 12 42.4	+1.3		
	comp=Z,4.6nm,0.8s,baz=187,slow=19,SNR=2.1								
GNI	Garni	115.70	53	PKiKP	PKPdf	01 12 39.9	-1.3		
GNI				MLR	MLR				
	comp=Z,6μm,19.0s								
GNI	Garni	115.70	53		PKPdf	01 12 39.9	-1.3		
GNI	Garni	115.70	53	IAMs_20	IAMs_20	02 00 31.7			
	comp=Z,6μm,19.0s								
BRG	Berggiesshubel	115.75	27	*e*PP	PP	01 13 44.4	-0.4		
	baz=196,slow=7.5								
BRG	Berggiesshubel	115.75	27⇓	*e*Pif		01 08 57.5			
BRG				Amp		01 08 57.9			
	comp=Z,1.8nm,1.0s								
BRG				⇓PKPf		01 12 39.8			
BRG				Amp		01 12 44.4			
	comp=Z,4.4nm,1.0s								
BRG	Berggiesshubel	115.75	27	P	PKiKP	01 12 50.1	+9.5		
BRG				Amp		01 12 51.2			
	comp=Z,6.1nm,1.0s								
BRG	Berggiesshubel	115.75	27	⇓SKPf		01 16 25.0			
BRG	Berggiesshubel	115.75	27	SS	SS	01 29 53.0	+8.0		
STEB	Steborice	115.76	30	*e*PP	PP	01 13 41.4	-3.5		
STEB				*e*PP	PP	01 13 44.5	-0.4		
OKC	Ostrava-Krasne	115.76	30	*e*PP	PP	01 13 41.4	-3.5		
OKC				*e*PKKP	PKKPdf	01 23 36.0	-1.4		
OKC				AMS	AMS	01 57 10.0			
	comp=Z,2μm,20.6s								
DPC	Dobruska-Polom	115.80	28	*e*PP	PP	01 13 42.5	-2.7		
DPC				*e*SKKS		01 20 42.2			
DPC				*e*PKKP	PKKPab	01 23 21.6	+7.0		
DPC				*ex*	x	01 23 33.5			
DPC				*ex*	x	01 29 47.2			
DPC				AMS	AMS	01 57 00.0			
	comp=Z,3μm,20.0s								
JFWS	Jewell Farm	115.83	313	IAMs_20	IAMs_20	02 00 49.1			
	comp=Z,6μm,22.0s								
IBBN	Ibbenburen	115.85	22	*e*PP	PP	01 13 46.7	+1.3		
	baz=196,slow=7.5								
CLZ	Clausthal	115.91	24	*e*PP	PP	01 13 45.9	0.0		
	baz=196,slow=7.5								
NIE	Niedzica	115.91	32	*e*PKP	PKiKP	01 12 41.3	+0.2		
CLL	Collm	115.95	26		PKPdf	01 12 40.6	-0.4		
CLL				IAMs_20	IAMs_20	01 57 45.5			
	comp=Z,6μm,21.0s								
CLL	Collm	115.95	26	*i* (Pdif)		01 08 58.7			
	comp=Z,18nm,2.0s								
CLL				*i* PKiKP	PKPdf	01 12 40.7	-0.3		
	comp=Z,11nm,1.4s								
CLL				*ex*	x	01 13 33.0			
CLL				*i* PP	PP	01 13 46.4	+0.2		
	comp=Z,90nm,2.1s								
CLL				*e*PPP	PPP	01 16 11.0			
CLL				*e*SKSac	SKSac	01 19 32.0	+1.7		
CLL				*e*SKKSac	SKKSac	01 20 48.0	+2.2		
CLL				*e*(Sdif)		01 21 42.0			
CLL				*ep*PKKPbc		01 23 16.0			
CLL				*i* PKKPab	PKKPab	01 23 19.3	+5.5		
	comp=Z,15nm,1.1s								
CLL				*e*PS	PKKPdf	01 23 28.0	-9.1		
CLL				*e*PKKPdf	PKKPbc	01 23 39.0	+28		
CLL				*e*PPS	PPS	01 24 37.0			
CLL				*ex*	x	01 26 48.0			
CLL				*i* sSKKPbc		01 27 07.5			
CLL				*e*SKKPdf	SKKPdf	01 27 15.0	+2.5		
CLL				*e*SS	SS	01 29 50.0	+2.4		
CLL				*e*SSS	SSS	01 34 06.0			
CLL				*e*SSSS		01 37 12.0			
CLL				AMS	AMS	01 57 00.0			
CLL				AMS	AMS	01 57 00.0			
	comp=Z,6μm,20.8s								
CLL				R2		02 37 00.0			
CLL				R2		02 48 00.0			
CLL				R2		03 13 00.0			
	comp=Z,900nm,20.9s								
OSTC	Ostas	115.97	28	*e*PP	PP	01 13 42.5	-3.8		
OSTC				*ex*	x	01 23 36.0			
OSTC				AMS	AMS	01 57 10.0			
	comp=Z,4μm,19.8s								
CBKS	Cedar Bluff	115.97	303	IAMs_20	IAMs_20	02 07 17.1			
	comp=Z,4μm,19.0s								
RAGD	RAYAGADA	115.98	97	*e*P	PKiKP	01 12 44.3	+2.2		
KOLS	Kolonicke sedl	115.99	33	*e*PP	PP	01 13 49.0	+2.5		
SIM	Simferopol'	115.99	43	*e*PKiKP	PKiKP	01 12 42.7	+1.4		
SIJI	Sorong	116.04	154	PKP	PKiKP	01 12 43.3	+0.7		
	comp=Z,16nm,0.7s,baz=229,slow=19,SNR=6.9								
SCIA	State Center	116.05	310	IAMs_20	IAMs_20	02 03 56.1			
	comp=Z,6μm,20.0s								
I42A	Draeger Farm,	116.20	314	IAMs_20	IAMs_20	02 00 38.9			
	comp=Z,7μm,22.0s								
ASSE	Asse, Remlinge	116.25	24	*e*PP	PP	01 13 47.3	-0.8		
	baz=196,slow=7.5								
KSP	Ksiaz	116.25	28	*e*PKP	PKiKP	01 12 42.5	+0.8		
H43A	Windswept, Lux	116.31	315	IAMs_20	IAMs_20	01 57 43.7			
	comp=Z,4μm,21.0s								
BHPL	Bhopal	116.40	89	*e*P	PKiKP	01 12 44.9	+2.0		
T25A	Trinidad	116.52	299	IAMs_20	IAMs_20	02 01 23.7			
	comp=Z,7μm,22.0s								
OJC	Ojcow	116.52	31	*e*PKP	PKiKP	01 12 43.4	+1.3		
OJC	Ojcow	116.52	31	PKiKP	PKPdf	01 12 40.8	-1.4		
OJC	Ojcow	116.52	31		PKPdf	01 12 40.8	-1.4		
FLTG	Flechtingen	116.55	24	*e*PP	PP	01 13 49.9	-0.4		
	baz=196,slow=7.5								
KWP	Kalwaria Pacla	116.74	33	*e*PKP	PKPdf	01 12 39.9	-2.7		
SOC	Sochi	116.75	48	*i* PKiKP	PKPdf	01 12 41.6	-1.2		
SOC				*e*		01 13 54.6			
SOC				*e*SSS	SSS	01 34 12.4			
VSLR	Vesyoloye	116.76	48	*c i* PKiKP	PKPdf	01 12 42.7	-0.2		
I40A	Norwalk	116.81	313	IAMs_20	IAMs_20	02 02 40.1			
	comp=Z,6μm,21.0s								
E46A	Sault Ste Mari	116.81	319	IAMs_20	IAMs_20	02 01 42.9			
	comp=Z,5μm,20.0s								
KMPD	K-Podol'skiy	116.81	36	PKP	PKPdf	01 12 41.1	-1.7		
SORM	Soroca	116.99	38	⇑P	PKPdf	01 12 42.9	-0.2		
SORM	Soroca	116.99	38	⇑PKiKP	PKPdf	01 12 42.9	-0.2		
ANN	Anapa	116.99	45	*i* PKiKP	PKiKP	01 12 46.9	+3.7		
ANN				*e*		01 19 37.6			
ANN				pmax	pmax				
	comp=Z,56nm,0.9s								
ESK	Eskdalemuir	117.09	14	IAMs_20	IAMs_20	01 55 02.6			
	comp=Z,4μm,20.0s								
EKA	Eskdalemuir Ar	117.11	14	PKP	PKiKP	01 12 44.3	+1.1		
	comp=Z,6.3nm,0.9s,baz=222,slow=1.9,SNR=6.1								
EKA				PKKPbc	PKKPbc	01 23 05.3	-2.0		
	comp=Z,2.9nm,0.8s,baz=29,slow=1.6,SNR=4.5								
BAL3X	Bal3x, Balta	117.19	38	PKP	PKPdf	01 12 41.6	-1.9		
SDCO	Great Sand Dun	117.50	298		PKPdf	01 12 44.5	-0.4		
BGNE	Belgrade	117.53	306	IAMs_20	IAMs_20	02 01 54.5			
	comp=Z,6μm,22.0s								
GUNA	GUNA	117.54	88	*e*P	PKPdf	01 12 44.9	-0.1		
F42A	Maple Grove Fa	117.56	316	IAMs_20	IAMs_20	01 57 43.8			
	comp=Z,7μm,22.0s								
AJM	Ajmer	117.70	85	*e*P	PKiKP	01 12 48.2	+2.9		
BLSP	Bilaspur	117.77	94	*e*P	PKPdf	01 12 44.9	-0.6		
G40A	Rib Lake	117.85	314	IAMs_20	IAMs_20	02 06 19.7			
	comp=Z,5μm,19.0s								
SHA1	Shidzhatmaz	117.97	50	*i* PKiKP	PKiKP	01 12 47.0	+1.5		
AKT	Akhty	118.02	55	*i* PKiKP	PKPdf	01 12 45.3	-0.2		
AKT				*e*		01 14 00.0			
AKT				*e*		01 19 56.6			
AKT				*e*PS	PKKPdf	01 23 46.8	+14		
AKT				*e*SS	SS	01 30 09.1	-6.0		
AKT				pmax	pmax				
	comp=Z,40nm,0.9s								
LABN	Labinsk	118.03	48	*i* PKiKP	PKiKP	01 12 46.7	+1.4		
LABN				*e*		01 19 40.9			
LABN				pmax	pmax				
	comp=Z,22nm,1.0s								
KBZ	Khabaz	118.05	50	PKP	PKPdf	01 12 45.0	-0.3		
	comp=Z,6.7nm,0.8s,baz=180,slow=2.0,SNR=12								
KBZ				PP	PP	01 14 00.6	-0.3		
	comp=Z,12nm,1.0s,baz=234,slow=5.2,SNR=4.5								
KBZ				PKKPbc

OSI **Osito Audit: C** 120.91 286 IAMs_20 IAMs_20 02 00 47.6
comp=Z,4µm,22.0s
BOK **Bokaro** 121.02 96 *e*P **PKiKP** **01 12 53.7 +1.9**
QSM **Queen of Sheba** 121.14 289 **PKiKP** **01 12 52.2 +0.6**
MPMC **Manual Prospec** 121.51 288 IAMs_20 IAMs_20 02 05 05.6
comp=Z,4µm,20.0s
GAYA **Gaya** 121.55 95 *e*P **PKPdf** **01 12 51.8 -0.8**
ISA **Isabella, Lake** 121.64 287 IAMs_20 IAMs_20 02 04 25.2
comp=Z,4µm,19.0s
TPNV **Topopah Spring** 121.66 290 PKiKP **PKiKP** **01 12 53.5 +0.6**
TPNV MLR MLR
comp=Z,4µm,20.0s
TPNV **Topopah Spring** 121.66 290 **PKiKP** **01 12 53.5 +0.6**
TPNV IAMs_20 IAMs_20 02 05 59.6
comp=Z,4µm,20.0s
HOMB **Homborsund** 121.66 20 *e*P **PKiKP** **01 12 52.4 +0.5**
HOMB *e*PP **PP** **01 14 25.1 -0.4**
HOMB *e*SKSac **SKSac** **01 19 49.5 -0.8**
HOMB *e*PS **PS** **01 24 18.3 +0.8**
HOMB *e*SS **SS** **01 31 01.6 +0.3**
HOMB IVMs_BB IVMs_BB 01 59 29.4
comp=Z,2µm,19.6s
KBL **Kabul** 121.70 75 PKiKP **PKPdf** **01 12 51.7 -1.2**
KBL **Kabul** 121.70 75 **PKPdf** **01 12 51.7 -1.2**
K22A **Casper** 122.00 301 IAMs_20 IAMs_20 02 09 22.8
comp=Z,6µm,20.0s
KMY **Karmoy** 122.03 18 *e*P **PKiKP** **01 12 56.7 +4.2**
KMY *e*PP **PP** **01 14 27.8 -0.2**
KMY *e*SKSac **SKSac** **01 19 51.5 +0.1**
KMY *e*SP SP 01 24 20.4 +0.8
KMY *e*SS **SS** **01 31 05.7 -0.2**
KMY IVMs_BB IVMs_BB 02 05 14.0
comp=Z,2µm,21.3s
RSSD **Black Hills** 122.18 304 PKiKP **PKPdf** **01 12 53.1 -0.5**
RSSD MLR MLR
comp=Z,7µm,20.0s
RSSD **Black Hills** 122.18 304 **PKPdf** **01 12 53.1 -0.5**
PABE **Paberze** 122.39 31 **PKPdf** **01 12 51.5 -1.8**
PABE IAMs_20 IAMs_20 02 02 51.4
comp=Z,5µm,20.0s
BLS5 **Blasjo** 122.42 19 *e*P **PKiKP** **01 12 57.4 +4.0**
BLS5 *e*PP **PP** **01 14 30.1 -0.6**
BLS5 *e*SKSac **SKSac** **01 19 53.0 +0.2**
BLS5 *e*SS **SS** **01 31 12.8 +1.8**
BLS5 IVMs_BB IVMs_BB 02 02 19.6
comp=Z,2µm,17.0s
AGMN **Agassiz Nation** 122.47 312 IAMs_20 IAMs_20 02 09 08.9
comp=Z,6µm,18.0s
NRS **Narsarsuaq** 122.52 349 IAMs_20 IAMs_20 02 01 28.7
comp=Z,6µm,20.0s
MNK **Minsk** 122.52 34 *i* PKP **PKPdf** **01 12 53.1 -0.4**
comp=E,11nm,0.8s
MNK *i* PKP **PKPdf** **01 12 53.1 -0.4**
comp=N,8.0nm,0.7s
MNK *i* PKP **PKPdf** **01 12 53.1 -0.4**
comp=Z,43nm,1.0s,baz=208
MNK *i* PP **PP** **01 14 29.4 -2.0**
MNK *i* PPP PPP 01 17 04.5
MNK *i* SKS **SKSac** **01 19 58.7 +5.4**
MNK *i* PS PKKPdf 01 24 24.0 +60
MNK *i* SS **SS** **01 31 13.7 +1.4**
MNK *i* SSS SSS 01 35 43.0
MNK *i* LRM MLR 02 04 40.4
comp=N,2µm,19.5s
MNK *i* LRM MLR 02 04 56.7
comp=Z,5µm,18.6s
MNK *i* LRM MLR 02 05 07.3
comp=E,4µm,19.2s
MNK **Minsk** 122.52 34 *i* PKiKP **PKPdf** **01 12 53.1 -0.4**
MNK *i* 01 14 29.4
MNK *i* PPP PPP 01 17 04.4
MNK *i* 01 19 58.7
MNK *i* PS PKKPdf 01 24 24.0 +60
MNK *i* SS SS 01 31 13.7 +1.3
MNK *i* SSS SSS 01 35 43.0
MNK pmax pmax
comp=E,11nm,0.8s
MNK pmax pmax
comp=Z,43nm,1.0s
MNK pmax pmax
comp=N,8.0nm,0.7s
MNK MLR MLR
comp=N,2µm,20.0s
MNK MLR MLR
comp=Z,5µm,19.0s
MNK MLR MLR
comp=E,4µm,19.0s
CM31 **Chiang Mai Arr** 122.64 112 PKPdf **PKPdf** **01 12 54.8 -0.2**
CMAR **Chiang Mai Arr** 122.64 112 PKP **PKPdf** **01 12 54.8 -0.1**
comp=E,34nm,0.8s,baz=225,slow=1.2,SNR=42
CMAR PKKPbc **PKKPbc** **01 22 45.5 -0.6**
comp=E,3.8nm,0.7s,baz=21,slow=3.3,SNR=12
CMAR **Chiang Mai Arr** 122.64 112 **PKPdf** **01 12 54.2 -0.8**
TIN **Tinemaha, Big** 122.66 288 IAMs_20 IAMs_20 02 07 16.2
comp=Z,4µm,19.0s
SMLA **Simla** 122.83 84 *e*P **PKPdf** **01 12 54.8 -0.1**
IVI **Ivigtut** 122.84 347 IAMs_20 IAMs_20 02 03 26.8
comp=Z,4µm,20.0s
PKD **Bear Valley Ra** 122.85 286 **PKiKP** **01 12 55.3 +0.2**
BRDH **Bariadhala** 122.86 102 PKP **PKPdf** **01 12 54.5 -0.8**
comp=Z,96nm,0.4s,baz=248,slow=19,SNR=4.2
E28A **Huff** 122.86 308 IAMs_20 IAMs_20 02 06 56.4
comp=Z,6µm,22.0s
ODD1 **Odda** 122.91 19 *e*P **PKiKP** **01 12 55.1 +0.7**
ODD1 *e*PP **PP** **01 14 33.4 -0.6**
ODD1 *e*SKSac **SKSac** **01 19 53.0 -1.5**
ODD1 *e*SP SP 01 24 27.1 -0.3
ODD1 *e*SS **SS** **01 31 16.4 -0.9**
ODD1 IVMs_BB IVMs_BB 02 01 35.6
comp=Z,2µm,16.4s
VORD **Divnogorie** 122.94 43 *e*PKiKP **PKPdf** **01 12 53.2 -1.2**
VORD *e* 01 14 32.8
VORD pmax pmax
comp=Z,20nm,0.9s
CHTO **Chiang Mai** 122.96 112 P **PKPdf** **01 12 55.5 -0.1**
CHTO **Chiang Mai** 122.96 112 P **PKPdf** **01 12 55.3 -0.3**
CHTO **Chiang Mai** 122.96 112 PKiKP **PKPdf** **01 12 54.7 -0.9**
CHTO **Chiang Mai** 122.96 112 **PKPdf** **01 12 54.7 -0.9**
CHTO **Chiang Mai** 122.96 112 PKP **PKPdf** **01 12 55.0 -0.5**
TPH **Tonopah** 123.02 290 PKiKP **PKPdf** **01 12 55.2 -0.2**
TPH **Tonopah** 123.02 290 **PKPdf** **01 12 55.2 -0.2**
PTH **Pithoragarh** 123.05 88 *e*P **PKPdf** **01 12 54.5 -1.1**
VSR **Storozhevoye** 123.11 43 *e*PKiKP **PKPdf** **01 12 53.4 -1.4**
VSR *e* 01 14 33.2
VSR *e*SP SP 01 24 31.4 +1.9
VSR pmax pmax
comp=Z,10.0nm,0.9s
UTK **UTTARKASHI** 123.13 85 *e*P **PKiKP** **01 12 58.7 +2.8**
KONO **Kongsberg** 123.16 21 !!PKiKP PKPdf 01 12 45.3 -9.3
KONO **Kongsberg** 123.16 21 *e*P **PKiKP** **01 12 55.5 +0.7**
KONO *e*PP **PP** **01 14 35.4 -0.2**
KONO *e*SS SS 01 31 20.1 -0.2
KONO IVMs_BB IVMs_BB 02 05 01.2
comp=Z,1µm,17.7s
BER **Bergen** 123.17 18 *e*P **PKiKP** **01 12 59.1 +4.3**
BER *e*PP **PP** **01 14 35.4 -0.2**
BER *e*SKSdf **SKSdf** **01 20 04.0 -1.7**
BER *e*SP SP 01 24 30.8 +1.2
BER *e*SS **SS** **01 31 20.1 -0.2**
BER IVMs_BB IVMs_BB 02 02 27.4
comp=Z,2µm,17.8s
THN **Thein Dam** 123.22 82 *e*P **PKPdf** **01 12 55.7 -0.1**
ASK **Askoy** 123.24 18 *e*P **PKiKP** **01 12 55.0 +0.1**
ASK *e*PP **PP** **01 14 35.8 -0.4**
ASK *e*SKSdf **SKSdf** **01 20 07.6 +1.8**
ASK *e*SP SP 01 24 30.8 +0.6
ASK *e*SS **SS** **01 31 20.1 -1.2**
ASK IVMs_BB IVMs_BB 02 02 37.2
comp=Z,2µm,10.7s
HWUT **Hardware Ranch** 123.33 296 **PKPdf** **01 12 55.9 +0.1**
HWUT IAMs_20 IAMs_20 02 03 23.8
comp=Z,5µm,22.0s
BW06 **Boulder Array** 123.39 299 IAMs_20 IAMs_20 02 05 30.5
comp=Z,6µm,19.0s
PDAR **Pinedale Array** 123.39 299 PKP **PKPdf** **01 12 53.8 -2.2**
comp=Z,2.5nm,0.7s,baz=131,slow=1.7,SNR=16
PDAR PKKPbc **PKKPbc** **01 22 43.7 -0.1**
comp=Z,1.9nm,0.8s,baz=332,slow=2.7,SNR=8.9
MDND **Maddock** 123.49 309 IAMs_20 IAMs_20 02 08 25.1
comp=Z,5µm,20.0s
VORR **Voronezh** 123.51 43 *e*PKiKP **PKPdf** **01 12 55.1 -0.4**
VORR pmax pmax
comp=Z,57nm,0.4s
OSL **Oslo** 123.62 21 *e*P **PKiKP** **01 12 55.8 0.0**
OSL *e*PP **PP** **01 14 38.4 -0.3**
OSL *e*SKPdf **SKiKP** **01 16 32.0 +0.9**
OSL *e*SKSac **SKSac** **01 19 56.7 0.0**
OSL *e*SS **SS** **01 31 23.7 -2.4**
OSL IVMs_BB IVMs_BB 02 00 39.5
comp=Z,2µm,23.3s
KLP **Kalpa** 123.69 85 *e*P **PKiKP** **01 13 00.2 +2.9**
SHAA **Shahritus** 123.72 72 **PKPdf** **01 12 56.6 0.0**
SUE **Sulen** 123.72 17 *e*P **PKiKP** **01 12 59.9 +4.1**
SUE *e*PP **PP** **01 14 39.4 0.0**
SUE *e*SKPdf **SKPdf** **01 16 28.4 -2.2**
SUE *e*SKSdf **SKSdf** **01 20 04.0 -2.7**
SUE *e*SP **SP** **01 24 34.4 0.0**
SUE *e*SS **SS** **01 31 27.4 0.0**
SUE IVMs_BB IVMs_BB 02 04 13.4
comp=Z,3µm,16.8s
TSSA **Tissa** 123.73 82 *e*P **PKPdf** **01 12 56.5 -0.4**
NVAR **Mina Array Bea** 123.81 289 PKP **PKiKP** **01 12 57.3 +0.1**
comp=Z,12nm,0.8s,baz=127,slow=1.4,SNR=27
NVAR PKKPbc **PKKPab** **01 22 45.4 +3.3**
comp=Z,1.8nm,0.8s,baz=331,slow=5.0,SNR=9.6
SKAR **Skarslia** 123.91 19 *e*P **PKiKP** **01 12 57.0 +0.6**
SKAR *e*PP **PP** **01 14 40.4 -0.4**
SKAR *e*SKSdf **SKSdf** **01 20 07.6 +0.3**
SKAR *e*SP SP 01 24 34.4 -1.9
SKAR *e*SS **SS** **01 31 27.4 -2.6**
SKAR IVMs_BB IVMs_BB 02 02 47.5
comp=Z,2µm,19.7s
VRH **Novokhopyorsk** 123.96 44 *e*PKiKP **PKPdf** **01 12 55.3 -1.1**
VRH pmax pmax
comp=Z,37nm,0.8s
HYA **Hoyanger** 124.04 18 *e*P **PKiKP** **01 12 57.2 +0.7**
HYA IVmB_BB 01 13 06.3
comp=Z,518nm,0.9s
HYA *e*PP **PP** **01 14 41.1 -0.5**
HYA *e*SKPdf **SKiKP** **01 16 32.0 +0.1**
HYA *e*SKSdf **SKSdf** **01 20 07.6 +0.4**
HYA *e*SP SP 01 24 34.4 -2.8
HYA *e*SS **SS** **01 31 31.0 -0.3**
HYA IVMs_BB IVMs_BB 02 03 10.5
comp=Z,3µm,19.5s
AHID **Auburn Hatcher** 124.06 298 **PKPdf** **01 12 57.2 0.0**
ULM **Lac du Bonnet** 124.10 313 PKP **PKPdf** **01 12 56.4 -0.3**
comp=Z,21nm,0.7s,baz=126,slow=1.2,SNR=15
ULM PP **PP** **01 14 37.7 -4.5**
comp=Z,7.8nm,0.8s,baz=148,slow=8.3,SNR=1.7
ULM PKKPbc **PKKPbc** **01 22 45.7 +5.0**
comp=Z,5.3nm,0.7s,baz=298,slow=8.0,SNR=3.8
LPSR **Galich'ya Gora** 124.20 42 *e*PKiKP **PKPdf** **01 12 55.1 -1.7**
LPSR *e* 01 14 40.3
LPSR *e*SP SP 01 24 42.9 +3.8
LPSR pmax pmax
comp=Z,10.0nm,0.9s
ELK **Elko** 124.27 293 IAMs_20 IAMs_20 02 07 14.7
comp=Z,6µm,19.0s
FOO **Floro** 124.28 17 *e*P **PKPdf** **01 12 56.9 +0.2**
FOO IVmB_BB 01 13 03.2
comp=Z,801nm,7.0s
FOO *e*PP **PP** **01 14 42.7 -0.4**
FOO *e*SKPdf **SKPdf** **01 16 32.0 +0.4**
FOO *e*SKSdf **SKSdf** **01 20 11.3 +3.6**
FOO *e*SP SP 01 24 38.1 -1.3
FOO *e*SS **SS** **01 31 34.7 +0.3**
FOO IVMs_BB IVMs_BB 02 04 09.9
comp=Z,2µm,17.9s
HFS **Hagfors** 124.35 23 PKP **PKPdf** **01 12 55.0 -1.9**
comp=Z,10nm,0.8s,baz=192,slow=2.8,SNR=14
HFS PP **PP** **01 14 39.5 -4.2**
comp=Z,20nm,1.0s,baz=211,slow=8.2,SNR=4.5
SNOW **Snow King Moun** 124.47 298 IAMs_20 IAMs_20 02 11 18.0
comp=Z,6µm,20.0s
MHC **Mount Hamilton** 124.50 286 PKiKP **PKiKP** **01 12 59.6 +1.2**
MHC MLR MLR
comp=Z,3µm,18.0s
MHC **Mount Hamilton** 124.50 286 **PKiKP** **01 12 59.5 +1.2**
NAO01 **NORSAR Array S** 124.50 21 **PKPdf** **01 12 56.8 -0.3**
NC602 **NORSAR Array S** 124.52 21 *e*P **PKiKP** **01 12 58.2 +0.7**
NC602 IVmB_BB 01 13 17.5
comp=Z,502nm,3.9s
NC602 *e*PP **PP** **01 14 44.4 -0.4**
NC602 *e*SKPdf **SKPdf** **01 16 32.0 -0.1**
NC602 *e*SKSac **SKSac** **01 20 00.3 +0.8**
NC602 *e*PS PS 01 24 45.4 +2.6
NC602 *e*SS **SS** **01 31 38.4 +0.9**
NC602 IVMs_BB IVMs_BB 02 04 34.5
comp=Z,2µm,21.9s
LOHW **Long Hollow** 124.53 299 IAMs_20 IAMs_20 02 07 40.5
comp=Z,5µm,18.0s
FXWY **Fox Creek** 124.73 298 IAMs_20 IAMs_20 02 06 08.9
comp=Z,5µm,21.0s
NB2 **NORSAR Subarra** 124.74 21 PKPdf **PKPdf** **01 12 57.3 -0.4**
comp=Z,32nm,1.2s,baz=202,slow=1.9
NB2 **NORSAR Subarra** 124.74 21 PKiKP **PKPdf** **01 12 57.3 -0.4**
NOA **NORSAR Array B** 124.74 21 PKP **PKPdf** **01 12 56.9 -0.7**
comp=Z,10nm,0.8s,baz=199,slow=2.0,SNR=23
NOA PKKPbc **PKKPbc** **01 22 38.1 -0.4**
comp=Z,4.7nm,1.2s,baz=20,slow=2.7,SNR=3.3
NC204 **NORSAR Array S** 124.89 21 **PKPdf** **01 12 57.8 -0.2**
BMN **Battle Mountai** 124.92 291 PKiKP **PKiKP** **01 12 59.3 +0.1**
BMN **Battle Mountai** 124.92 291 **PKiKP** **01 12 59.3 +0.1**
WELL **Weller Preserv** 124.94 287 IAMs_20 IAMs_20 02 09 33.6
comp=Z,3µm,18.0s
EVN **Everest** 124.95 95 **PKPdf** **01 12 59.0 -0.9**
CHGR **Chuyangaron** 125.08 72 *d* PKiKP **PKPdf** **01 12 58.7 -0.5**
CHGR MLR MLR
comp=Z,14µm,18.0s
AKN **Aaknes** 125.13 18 *e*P **PKiKP** **01 12 59.3 +0.6**
AKN IVmB_BB 01 13 09.8
comp=Z,1µm,2.9s
AKN *e*PP **PP** **01 14 48.4 -0.5**
AKN *e*SKSdf **SKSdf** **01 20 11.3 +1.9**
AKN *e*PS PS 01 24 49.0 +0.8
AKN *e*SS **SS** **01 31 45.6 +0.5**
BORG **Borgarnes** 125.22 2 IAMs_20 IAMs_20 02 00 35.2
comp=Z,6µm,18.0s
DOMB **Dombas** 125.32 19 *e*P **PKiKP** **01 12 59.9 +0.7**
DOMB IVmB_BB 01 13 04.3
comp=Z,820nm,6.5s
DOMB *e*PP **PP** **01 14 50.0 -0.2**
DOMB *e*SKSdf **SKSdf** **01 20 11.3 +1.5**
DOMB *e*SP SP 01 24 49.0 +0.4
DOMB *e*SS **SS** **01 31 49.3 +1.6**
SHL **Shillong** 125.42 101 PKiKP **PKPdf** **01 12 59.0 -1.3**
SHL **Shillong** 125.42 101 **PKPdf** **01 12 59.0 -1.3**
SHL **Shillong** 125.42 101 *e*P **PKPdf** **01 13 00.5 +0.2**
AFDM **Forest Hills D** 125.47 288 **PKiKP** **01 13 00.6 +0.4**
OBN **Obninsk** 125.58 39 PKP **PKPdf** **01 12 59.0 -0.4**
comp=Z,19nm,0.5s,baz=233,slow=1.6,SNR=14
OBN **Obninsk** 125.58 39 *d* PKiKP **PKPdf** **01 12 58.8 -0.5**
OBN *i* 01 13 03.5
OBN *i* 01 14 56.8
OBN *i* PPP PPP 01 17 29.9
OBN *e* 01 20 15.6
OBN *e*SS SS 01 31 53.6 +2.7
OBN *e*SSS SSS 01 36 33.4
OBN pmax pmax
comp=Z,65nm,1.4s
OBN MLR MLR
comp=Z,3µm,18.0s
OBN **Obninsk** 125.58 39 **PKPdf** **01 12 58.2 -1.2**
MOL **Molde** 125.58 18 *e*P **PKiKP** **01 13 00.1 +0.6**
MOL IVmB_BB 01 13 05.3
comp=Z,868nm,5.6s
MOL *e*PP **PP** **01 14 51.4 -0.5**
MOL *e*SKSac **SKSac** **01 20 00.3 -2.4**
MOL *e*SP SP 01 24 49.0 -1.8
MOL *e*SS **SS** **01 31 53.0 +2.2**
DGMT **Dagmar** 125.78 307 IAMs_20 IAMs_20 02 09 37.0
comp=Z,6µm,20.0s
POHA **Pohakuloa** 126.07 244 IAMs_20 IAMs_20 02 13 09.3
comp=Z,5µm,18.0s
PATS **Pohnpei** 126.12 185 IAMs_20 IAMs_20 02 07 04.9
comp=Z,6µm,20.0s
NUUK **Nuuk** 126.14 346 *i* P **PKiKP** **01 13 00.8 +0.2**
ORV **Oroville** 126.20 288 IAMs_20 IAMs_20 02 08 35.8
comp=Z,5µm,21.0s
ANGG **Ammassalik, Gr** 126.36 354 IAMs_20 IAMs_20 02 03 31.0
comp=Z,5µm,18.0s
ANGG **Ammassalik, Gr** 126.36 354 *e*P **PKiKP** **01 13 00.9 -0.1**
ISOG **Isortoq, Green** 126.37 353 *e*P **PKPdf** **01 13 00.1 -0.4**
MOS **Moscow** 126.43 39 *i* PKiKP **PKPdf** **01 13 00.7 -0.3**
MOS *e* 01 15 00.9
MOS *e*PPP PPP 01 17 46.4
MOS *e* 01 20 09.0
MOS pmax pmax
comp=Z,88nm,1.6s
BOZ **Bozeman (W)** 126.55 299 PKiKP **PKiKP** **01 13 02.4 +0.1**
BOZ MLR MLR
comp=Z,8µm,19.0s
BOZ **Bozeman (W)** 126.55 299 **PKiKP** **01 13 02.4 +0.1**
MFID **Camas Ranch** 126.66 295 IAMs_20 IAMs_20 02 09 51.0
comp=Z,5µm,22.0s
O03E **Paynes Creek** 126.93 288 IAMs_20 IAMs_20 02 05 19.0
comp=Z,4µm,21.0s
BELG **Belogornoye** 127.03 47 PKP **PKPdf** **01 13 02.1 -0.1**
comp=Z,90nm,0.8s,baz=173,slow=0.1,SNR=31
BELG PP **PP** **01 14 59.5 -2.0**
comp=Z,78nm,1.1s,baz=192,slow=6.3,SNR=4.2
BELG **Belogornoye** 127.03 47 *d* PKiKP **PKPdf** **01 13 01.5 -0.7**
WVOR **Wild Horse Val** 127.15 292 IAMs_20 IAMs_20 02 08 43.1
comp=Z,4µm,19.0s
HATC **Hat Creek Radi** 127.18 289 IAMs_20 IAMs_20 02 09 11.7
comp=Z,5µm,22.0s
KCPM **Cahto Peak** 127.28 286 IAMs_20 IAMs_20 02 07 29.4
comp=Z,4µm,22.0s
SLVN **Son La** 127.39 115 P **PKiKP** **01 13 04.8 +0.2**
SLVN **Son La** 127.39 115 P **PKiKP** **01 13 04.5 -0.1**
SLVN **Son La** 127.39 115 PKPdf **PKPdf** **01 13 03.6 -0.4**
SLVN IAMs_20 IAMs_20 02 07 29.2
comp=Z,5µm,18.0s
TGY **Tagaytay City** 127.53 138 PKP **PKPdf** **01 13 04.5 0.0**
comp=Z,168nm,0.3s,baz=207,slow=4.5,SNR=5.3
QIZ **Qiongzhong** 127.89 123 P **PKiKP** **01 13 06.0 +0.4**
QIZ **Qiongzhong** 127.89 123 PKP **PKiKP** **01 13 05.5 -0.1**
QIZ sPKP **sPKPdf** **01 13 09.5 +1.9**
QIZ PP **PP** **01 15 07.3 +0.1**
QIZ SS SS 01 32 21.0 +1.3
QIZ PPMZ
comp=Z,830nm,9.2s
QIZ L L
comp=Z,2µm,14.5s
QIZ L L
comp=Z,1µm,16.3s
QIZ L L
comp=Z,3µm,17.2s
TNCH **TengChong** 128.12 108 PKP **PKPdf** **01 13 05.0 -0.5**
TNCH sPKP sPKPdf 01 13 09.5 +1.4
TNCH PP **PP** **01 15 08.0 -1.1**
TNCH SS SS 01 32 21.8 -1.4
TNCH PPMZ
comp=Z,1µm,7.8s
TNCH L L
comp=Z,1µm,15.9s
TNCH L L
comp=Z,2µm,16.2s
TNCH L L
comp=Z,5µm,16.8s
NSS **Namsos** 128.13 20 *e*P **PKPdf** **01 13 03.5 -0.4**
NSS IVmB_BB 01 13 07.6
comp=Z,957nm,3.7s
NSS *e*PP **PP** **01 15 08.3 -0.3**
NSS *e*SS SS 01 32 22.2 -0.2
FINES **FINESS Array B** 128.17 29 PKP **PKPdf** **01 13 03.5 -0.7**
comp=Z,36nm,1.0s,baz=198,slow=4.1,SNR=29
FINES PP **PP** **01 15 06.4 -2.6**
comp=Z,8.1nm,0.9s,baz=193,slow=5.7,SNR=1.6
FIA1 **FINESS Array S** 128.17 29 **PKPdf** **01 13 03.5 -0.6**
CHM **Chimkent** 128.19 70 *e*PKiKP **PKPdf** **01 13 03.5 -1.4**
CHM MLR MLR
comp=Z,1µm,17.0s
CHM **Chimkent** 128.19 70 *e*PKP **PKPdf** **01 13 03.5 -1.4**
CHM LR LR 02 11 29.6
comp=Z,1µm,17.2s
IUG **luzhnay** 128.25 70 *e*PKiKP **PKPdf** **01 13 03.6 -1.5**
IUG **luzhnay** 128.25 70 *e*PKP **PKPdf** **01 13 03.6 -1.5**
FRB **Frobisher Bay** 128.31 337 PKP **PKPdf** **01 13 04.5 +0.2**
comp=Z,43nm,0.7s,baz=159,slow=3.3,SNR=19
JCC **Jacoby Creek,** 128.38 287 IAMs_20 IAMs_20 02 09 12.5
comp=Z,4µm,19.0s
BMO **Blue Mountains** 128.45 295 PKiKP **PKPdf** **01 13 05.5 +0.1**
BMO MLR MLR
comp=Z,6µm,21.0s
BMO **Blue Mountains** 128.45 295 **PKPdf** **01 13 05.5 +0.1**
BMO IAMs_20 IAMs_20 02 10 10.3
comp=Z,6µm,21.0s
KSH2 **Kashi** 128.50 77 PKP **PKPdf** **01 13 05.8 0.0**
KSH2 PPMZ
comp=Z,890nm,12.4s
KSH2 L L
comp=Z,2µm,17.5s
KSH2 L L
comp=Z,3µm,17.5s
KSH2 L L
comp=Z,3µm,18.2s
LSA **Lhasa** 128.51 97 PKiKP **PKPdf** **01 13 05.8 -0.7**
LSA **Lhasa** 128.51 97 PKPdf **PKPdf** **01 13 05.8 -0.7**
MSO **Missoula** 128.51 299 **PKPdf** **01 13 05.8 +0.3**
KIP **Kipapa** 128.62 242 IAMs_20 IAMs_20 01 59 44.6
comp=Z,4µm,19.0s
SOEG **Soedalen** 128.72 357 *i* P **PKPdf** **01 13 05.0 0.0**
SFJD **Kangerlussuaq** 128.74 348 PKP **PKPdf** **01 13 05.1 0.0**
comp=Z,23nm,0.9s,baz=152,slow=2.0,SNR=4.5
BRLS **Borolday** 128.85 70 *e*PKiKP **PKPdf** **01 13 04.3 -1.8**
BRLS **Borolday** 128.85 70 *e*PKP **PKPdf** **01 13 04.4 -1.8**
JOHN **Johnston Islan** 128.97 227 IAMs_20 IAMs_20 02 08 00.2
comp=Z,5µm,18.0s
ARSB **Arslanbob** 128.98 73 PKiKP **PKPdf** **01 13 05.4 -1.2**
ARSB **Arslanbob** 128.98 73 PKPdf **PKPdf** **01 13 05.4 -1.2**
KK31 **Karatay Array** 129.22 70 PKiKP **PKPdf** **01 13 05.4 -1.4**
KK31 **Karatay Array** 129.22 70 **PKPdf** **01 13 05.4 -1.4**
KKAR **Karatay Array** 129.22 70 PKiKP **PKPdf** **01 13 05.4 -1.4**
KKAR **Karatay Array** 129.22 70 PKPdf **PKPdf** **01 13 05.3 -1.4**
AB31 **Akbulak array** 129.33 58 **PKPdf** **01 13 06.0 -0.8**
ABKAR **Akbulak array** 129.33 58 **PKPdf** **01 13 05.9 -0.9**
DZA **Taraz** 129.43 71 *e*PKiKP **PKPdf** **01 13 05.8 -1.4**
DZA **Taraz** 129.43 71 *e*PKP **PKPdf** **01 13 05.8 -1.4**
AKTO **Aktyubinsk** 129.46 55 PKP **PKPdf** **01 13 06.1 -0.9**
comp=Z,28nm,0.9s,baz=220,slow=2.0,SNR=67
LEIR **Leirfjorden** 129.78 19 *e*P **PKPdf** **01 13 07.3 +0.2**
LEIR *e*PP **PP** **01 15 18.9 -0.5**
LEIR *e*SKPdf **SKPdf** **01 16 39.3 -2.6**
LEIR *e*SS **SS** **01 32 44.1 +1.3**
FFC **Flin Flon** 129.92 313 PKiKP **PKPdf** **01 13 07.7 0.0**
FFC MLR MLR
comp=Z,4µm,19.0s
FFC **Flin Flon** 129.92 313 **PKPdf** **01 13 07.7 0.0**
FFC **Flin Flon** 129.92 313 IAMs_20 IAMs_20 02 12 02.0
comp=Z,4µm,19.0s
STOK **Stokkvaagen** 129.96 19 *e*P **PKiKP** **01 13 11.1 +2.9**
STOK *e*PP **PP** **01 15 20.3 -0.3**
STOK *e*SKPdf **SKiKP** **01 16 43.0 -0.8**
STOK *e*SKSac **SKSdf** **01 20 18.6 +0.5**
STOK *e*SP SKKPbc 01 25 29.2 -43
STOK *e*SS **SS** **01 32 44.1 -0.9**
MOR8 **Moi Rana** 130.05 20 *e*P **PKPdf** **01 13 06.4 -1.2**
MOR8 *e*PP **PP** **01 15 21.9 +0.7**
MOR8 *e*SKPdf **SKiKP** **01 16 43.0 -1.0**
MOR8 *e*PS PS 01 25 32.9 +1.7
MOR8 *e*SS **SS** **01 32 51.4 +5.2**
KONS **Konsvik** 130.13 19 *e*P **PKiKP** **01 13 08.7 +0.2**
KONS *e*PP **PP** **01 15 21.3 -0.4**
KONS *e*SKPdf **SKiKP** **01 16 43.0 -1.1**
KONS *e*SP **SP** **01 25 29.2 -1.1**
KONS *e*SS **SS** **01 32 47.8 +0.6**
KMI2 **Kunming** 130.18 112 PKP **PKPdf** **01 13 09.3 -0.2**
KMI2 PP **PP** **01 15 22.8 +0.2**
KMI2 SKKS 01 22 18.3
KMI2 PPMZ
comp=Z,820nm,7.6s
KMI2 L L
comp=Z,4µm,18.5s
KMI2 L L
comp=Z,1µm,18.4s
KMI2 L L
comp=Z,3µm,19.9s
RAUS **Rausandaksla** 130.23 20 *e*P **PKiKP** **01 13 08.6 -0.2**
RAUS *e*PP **PP** **01 15 22.3 -0.1**
RAUS *e*SKPdf **SKiKP** **01 16 43.0 -1.4**
RAUS *e*SS **SS** **01 32 51.4 +3.1**
VAGH **Vaagaholmen** 130.37 19 *e*P **PKiKP** **01 13 09.2 +0.2**
VAGH *e*PP **PP** **01 15 22.9 -0.3**
VAGH *e*PKSdf PKSdf 01 16 46.6 +2.5
VAGH *e*SP SP 01 25 32.9 +0.5
VAGH *e*SS **SS** **01 32 51.4 +1.4**
EKS2 **Erkin-Say** 130.40 73 P **PKPdf** **01 13 09.1 -0.1**
SNR=26
UCH **Uchtor** 130.41 74 P **PKiKP** **01 13 13.5 +3.0**
SNR=5.8

HAWA Hanford 130.63 294 IAMs_20 IAMs_20 02 12 23.1
comp=Z,5µm,20.0s
AAK Ala-Archa 130.71 73 PKP **PKPdf 01 13 09.2 -0.6**
comp=Z,36nm,0.8s,baz=217,slow=3.8,SNR=19
AAK Ala-Archa 130.71 73 P **PKPdf 01 13 09.3 -0.6**
SNR=20
AAK Ala-Archa 130.71 73 *d i* PKIKP **PKPdf 01 13 09.4 -0.5**
AAK Ala-Archa 130.71 73 **PKPdf 01 13 08.8 -1.0**
AAK Ala-Archa 130.71 73 IAMs_20 IAMs_20 02 14 15.8
comp=Z,4µm,18.0s
AAK Ala-Archa 130.71 73 PKP **PKPdf 01 13 09.7 -0.1**
PZH PanZhiHua 130.88 110 PKP **PKPdf 01 13 08.5 -2.1**
PZH PP **PP 01 15 26.8 -0.2**
PZH SKKS 01 22 21.3
PZH PPMZ
comp=Z,560nm,9.7s
PZH L L
comp=Z,3µm,17.7s
PZH L L
comp=Z,1µm,18.4s
PZH L L
comp=Z,4µm,17.1s
ILULI Ilulissat 130.94 348 *i* P **PKPdf 01 13 09.1 -0.1**
KBK Karagaybulak 130.94 74 P **PKPdf 01 13 09.7 -0.6**
SNR=15
COR Corvallis 130.96 290 IAMs_20 IAMs_20 02 12 55.9
comp=Z,4µm,21.0s
SCO Scoresbysund 130.97 2 *e*P **PKPdf 01 13 08.7 -0.6**
CHMS Chumysh 131.11 73 P **PKPdf 01 13 09.6 -0.8**
SNR=15
USP Ospenovka 131.20 73 P **PKPdf 01 13 10.1 -0.5**
SNR=16
KLMR Klimovskoe 131.22 36 *e*PKIKP **PKPdf 01 13 08.6 -1.3**
KLMR *e* 01 15 25.9
KLMR SP SP 01 25 38.3 -1.7
KLMR PS PS 01 25 40.0 -1.3
KLMR pmax pmax
comp=Z,115nm,1.5s
KLMR MLR MLR
comp=Z,4µm,20.0s
GDH Godhavn 131.22 347 *e*P **PKiKP 01 13 11.4 +0.7**
ULHL Ulahol 131.24 75 P **PKPdf 01 13 10.3 -0.6**
SNR=9.5
BOOM Boomskoye usch 131.28 75 PKIKP **PKPdf 01 13 09.5 -1.5**
BOOM Boomskoye usch 131.28 75 **PKPdf 01 13 09.4 -1.5**
FAUS Fauske 131.29 20 *e*P **PKPdf 01 13 09.2 -0.7**
FAUS *e*P **PP 01 15 29.2 0.0**
FAUS *e*SKPdf **SKiKP 01 16 46.6 +0.2**
FAUS *e*SP SKKPbc 01 25 36.5 -31
FAUS *e*SS **SS 01 33 02.4 +1.0**
SGDS Sogindy 131.40 73 *e*PKP **PKPdf 01 13 09.6 -1.4**
SGDS *e*PP **PP 01 15 27.1 -3.4**
TKM2 Tokmak 2 131.45 74 P **PKPdf 01 13 10.2 -1.1**
SNR=16
LOF Lofoten 131.70 19 *e*P **PKiKP 01 13 11.4 -0.3**
LOF *e*PP **PP 01 15 31.6 -0.2**
LOF *e*SKPdf **SKiKP 01 16 46.6 -0.6**
LOF *e*SP SKKPbc 01 25 43.9 -22
LOF *e*SS **SS 01 33 06.0 -0.2**
STEI Steigen 131.78 19 *e*P **PKiKP 01 13 11.9 +0.1**
STEI *e*PP **PP 01 15 31.9 -0.5**
STEI *e*SKPdf **SKiKP 01 16 46.6 -0.8**
STEI *e*SKSac **SKSac 01 20 18.6 -2.0**
STEI *e*SP SKKPbc 01 25 40.2 -26
STEI *e*SS **SS 01 33 06.0 -1.3**
SAQQ Saqqaq 131.79 348 *i* P **PKiKP 01 13 11.9 +0.1**
WUS Wushi 131.85 78 **PKPdf 01 13 10.9 -1.1**
WUS IAMs_20 IAMs_20 02 10 26.9
comp=Z,4µm,21.0s
JMI Jan Mayen 131.93 7 *e*P **PKiKP 01 13 15.3 +3.3**
JMI *e*PP **PP 01 15 33.2 0.0**
JMIC Jan Mayen 132.00 8 *e*P **PKiKP 01 13 15.5 +3.3**
JMIC *e*PP **PP 01 15 33.8 0.0**
JMIC *e*SKPdf **SKPdf 01 16 46.6 +0.7**
JMIC *e*SS **SS 01 33 13.4 +3.4**
JNE Jan Mayen East 132.02 8 *e*P **PKiKP 01 13 15.8 +3.6**
JNE *e*PP **PP 01 15 34.1 +0.2**
JNE *e*SKPdf **SKPdf 01 16 46.6 +0.7**
JNW Jan Mayen West 132.05 8 *e*P **PKiKP 01 13 15.5 +3.2**
JNW *e*PP **PP 01 15 34.1 0.0**
JNW *e*SKPdf **SKiKP 01 16 46.6 -1.3**
JNW *e*SKSac **SKSac 01 20 18.6 -2.6**
JNW *e*SS **SS 01 33 13.4 +2.9**
TNSS Tian-Shan 132.18 75 *e*PKIKP **PKPdf 01 13 11.0 -1.9**
TNSS Tian-Shan 132.18 75 *e*PKP **PKPdf 01 13 11.1 -1.9**
AAA Alma-Ata 132.29 75 *e*PKIKP **PKPdf 01 13 11.2 -1.5**
AAA Alma-Ata 132.29 75 *e*PKP **PKPdf 01 13 11.2 -1.5**
AAA LR LR 02 13 59.6
comp=Z,2µm,18.0s
MDOK Medeo 132.32 75 *e*PKIKP **PKPdf 01 13 11.3 -1.6**
MDOK *e* 01 15 33.2
MDOK Medeo 132.32 75 *e*PKP **PKPdf 01 13 11.3 -1.6**
MDOK *e*PP **PP 01 15 33.2 -3.3**
MDOK *e*SKP **SKPdf 01 16 46.5 -1.2**
MDOK LR LR 02 14 03.4
BTLS Baital 132.34 71 *e*PKIKP **PKPdf 01 13 11.3 -1.3**
BTLS Baital 132.34 71 *e*PKP **PKPdf 01 13 11.4 -1.3**
GUMO Guam 132.42 168 PKP **PKiKP 01 13 15.1 +0.3**
comp=Z,43nm,0.8s,baz=180,slow=20,SNR=2.3
GUMO Guam 132.42 168 IAMs_20 IAMs_20 02 11 00.6
comp=Z,4µm,20.0s
PRZ Przheval'sk 132.45 76 PKIKP **PKPdf 01 13 12.0 -1.2**
PRZ Przheval'sk 132.45 76 **PKPdf 01 13 12.0 -1.2**
SAATT Saattut 132.53 349 *e*P **PKiKP 01 13 13.6 +0.3**
KIRV Kirov 132.54 43 PKP **PKPdf 01 13 11.5 -1.0**
comp=Z,14nm,0.7s,baz=248,slow=3.7,SNR=1.9
KIRV PP **PP 01 15 34.9 -2.5**
comp=Z,21nm,0.8s,baz=223,slow=8.2,SNR=4.3
KUU Kurty 132.54 74 *e*PKIKP **PKPdf 01 13 11.7 -1.4**
KUU Kurty 132.54 74 *e*PKP **PKPdf 01 13 11.7 -1.4**
KUU LR LR 02 14 09.1
comp=Z,1µm,16.8s
HKPS Hong Kong Po S 132.55 126 IAMs_20 IAMs_20 02 10 34.7
comp=Z,5µm,20.0s
SATY Saty 132.89 76 *e*PKIKP **PKPdf 01 13 12.3 -1.6**
SATY *e* 01 15 36.8
SATY Saty 132.89 76 *e*PKP **PKPdf 01 13 12.3 -1.6**
SATY *e*PP **PP 01 15 36.8 -3.3**
SATY *e*SKP **SKPdf 01 16 47.6 -1.1**
UZB Uzynbulak 133.25 76 *e*PKIKP **PKPdf 01 13 12.9 -1.7**
UZB *e* 01 15 39.1
UZB Uzynbulak 133.25 76 *e*PKP **PKPdf 01 13 13.0 -1.7**
UZB *e*PP **PP 01 15 39.2 -3.2**
UZB *e*SKP **SKPdf 01 16 48.2 -1.3**
SUMG Summit 133.33 355 PKP **PKiKP 01 13 15.9 +0.5**
SUMG Summit 133.33 355 PKIKP **PKPdf 01 13 14.7 +0.5**
SUMG Summit 133.33 355 **PKPdf 01 13 14.7 +0.5**
SUMG Summit 133.33 355 *e*P **PKiKP 01 13 15.1 -0.3**
NLWA Neilton Lookou 133.34 292 IAMs_20 IAMs_20 02 15 41.7
comp=Z,4µm,20.0s
ADZR Andozero 133.34 33 *d i* PKIKP **PKPdf 01 13 12.8 -1.0**
ADZR 01 15 46.6
ADZR SS SS 01 33 28.2 +1.8
ADZR pmax pmax
comp=Z,48nm,0.9s
ADZR MLR MLR
comp=Z,5µm,19.0s
NUUG Nuugaatsiaq 133.38 348 *e*P **PKiKP 01 13 15.2 +0.2**
SHLS Shalkode 133.47 77 *e*PKIKP **PKPdf 01 13 13.7 -1.3**
SHLS Shalkode 133.47 77 *e*PKP **PKPdf 01 13 13.7 -1.3**
GZH2 Guangzhou 133.59 125 PKP **PKiKP 01 13 17.8 +0.9**
GZH2 PP **PP 01 15 46.0 +1.9**
GZH2 L L
comp=Z,5µm,17.4s
GZH2 L L
comp=Z,2µm,17.6s
GZH2 L L
comp=Z,7µm,17.1s
GULI GuiLin 133.67 120 PKP **PKPdf 01 13 13.5 -2.3**
GULI PP **PP 01 15 46.5 +1.8**
GULI L L
comp=Z,2µm,18.4s
GULI L L
comp=Z,1µm,17.4s
GULI L L
comp=Z,3µm,22.8s
A05A Maple Falls 133.73 295 **PKPdf 01 13 15.6 +0.5**
TRO Tromso 133.92 20 *e*P **PKPdf 01 13 15.5 +0.7**
TRO *e*PP **PP 01 15 45.8 -0.2**
TRO *e*SKPdf **SKPdf 01 16 50.3 +0.8**
TRO *e*SP **SKKPbc 01 26 02.1 +4.1**
TRO *e*SS **SS 01 33 35.3 +2.1**
ARTI Arti 134.10 50 PKhKP PKPpre 01 12 57.5
comp=Z,3.7nm,0.8s,baz=216,slow=2.3,SNR=6.6
ARTI PKP **PKPdf 01 13 15.6 0.0**
comp=Z,1.4nm,0.5s,baz=243,slow=4.5,SNR=3.2
ARTI PP **PP 01 15 44.9 -2.6**
comp=Z,12nm,0.8s,baz=236,slow=6.8,SNR=3.4
ARTI Arti 134.10 50 *i* PKIKP **PKPdf 01 13 14.7 -0.9**
ARTI MLR MLR
comp=Z,5µm,20.0s
ARTI Arti 134.10 50 **PKPdf 01 13 14.2 -1.3**
ARTI IAMs_20 IAMs_20 02 13 24.9
comp=Z,5µm,21.0s
JETT Jettan, Norway 134.10 21 *e*P **PKiKP 01 13 16.1 -0.5**
JETT *e*PP **PP 01 15 47.3 0.0**
KTK1 Kautokeino 134.14 22 *e*P **PKPdf 01 13 16.0 +0.7**
KTK1 *e*PP **PP 01 15 47.2 -0.3**
KTK1 *e*SKPdf **SKPdf 01 16 50.3 +0.3**
KTK1 *e*SS **SS 01 33 35.3 -0.7**
TDK Taldyqorghan 134.35 74 *e*PKIKP **PKPdf 01 13 15.0 -1.4**
TDK Taldyqorghan 134.35 74 *e*PKP **PKPdf 01 13 15.0 -1.4**
TDK LR LR 02 15 17.4
comp=Z,2µm,16.7s
DBG Daneborg 134.84 2 *e*P **PKPdf 01 13 16.6 +0.2**
ARA0 ARCESS Array S 135.01 23 *e*P **PKPdf 01 13 17.7 +0.8**
ARA0 *e*PP **PP 01 15 52.8 -0.2**
ARA0 *e*SKPdf **SKPab 01 16 50.3 -0.8**
ARA0 *e*SS SS 01 34 00.9 +14
ARCES ARCESS Array B 135.01 23 PKhKP PKPpre 01 13 07.4
comp=Z,5.3nm,0.8s,baz=208,slow=1.7,SNR=11
ARCES PKP **PKPdf 01 13 15.4 -1.5**
comp=Z,18nm,0.9s,baz=212,slow=2.9,SNR=11
ARCES PP **PP 01 15 47.0 -6.0**
comp=Z,24nm,1.1s,baz=214,slow=4.2,SNR=6.9
ARCES SKP **SKPab 01 16 52.1 +1.0**
comp=Z,13nm,0.9s,baz=202,slow=1.9,SNR=12
APA Apatity 135.05 28 *i* PKIKP **PKPdf 01 13 16.1 -0.9**
APA *e* 01 15 52.3
APA pmax pmax
comp=Z,21nm,0.9s
SVE Sverdlovsk 135.28 51 *d i* PKIKP **PKPdf 01 13 17.8 +0.1**
SVE *e* 01 16 00.6
SVE *e* 01 33 46.7
SVE pmax pmax
comp=Z,43nm,1.0s
SVE MLR MLR
comp=Z,5µm,20.0s
KEV Kevo 135.49 23 PKIKP **PKPdf 01 13 17.3 -0.4**
KEV Kevo 135.49 23 **PKPdf 01 13 17.3 -0.4**
KEV IAMs_20 IAMs_20 02 08 33.3
comp=Z,4µm,20.0s
KEV Kevo 135.49 23 PKP **PKiKP 01 13 19.4 +0.1**
CD2 Chengdu 135.54 109 PKP **PKPdf 01 13 19.0 -0.2**
CD2 sPKP sPKPdf 01 13 23.5 +1.8
CD2 PP **PP 01 15 55.8 -0.9**
CD2 SKS **SKSdf 01 20 29.8 -0.2**
CD2 SKKS **SKKSac 01 22 50.0 -1.4**
CD2 PPMZ
comp=Z,1µm,9.2s
CD2 L L
comp=Z,4µm,17.8s
CD2 L L
comp=Z,3µm,17.8s
CD2 L L
comp=Z,2µm,17.7s
GOMU GeErMu 135.57 96 PKP **PKPdf 01 13 20.3 +0.8**
GOMU PP **PP 01 15 56.3 -1.1**
GOMU SS SS 01 33 54.5 -0.1
GOMU PPMZ
comp=Z,1µm,7.3s
GOMU L L
comp=Z,2µm,18.6s
GOMU L L
comp=Z,2µm,18.3s
GOMU L L
comp=Z,4µm,18.2s
LVZ Lovozero 135.60 28 *e*PKIKP **PKPdf 01 13 17.5 -0.6**
LVZ pmax pmax
comp=Z,26nm,1.0s
LVZ Lovozero 135.60 28 **PKPdf 01 13 17.1 -0.9**
LVZ IAMs_20 IAMs_20 02 08 20.8
comp=Z,5µm,21.0s
TPUB Ta-pu 135.94 133 P **PKiKP 01 13 21.2 -0.5**
KNMB Chin-men Tao 136.17 130 IAMs_20 IAMs_20 02 09 48.6
comp=Z,3µm,21.0s
VADS Vadso 136.25 24 *e*P **PKiKP 01 13 20.3 -0.5**
VADS *e*PP **PP 01 16 00.5 -0.3**
VADS *e*SKPdf **SKPdf 01 16 54.0 +0.2**
VADS *e*SS **SS 01 34 00.9 -0.3**
YULB Yu-li 136.26 134 P **PKiKP 01 13 21.8 -0.6**
SSLB Suanglung 136.50 133 P **PKPdf 01 13 21.9 +0.7**
SSLB Suanglung 136.50 133 P **PKPdf 01 13 21.2 0.0**
SSLB Suanglung 136.50 133 **PKPdf 01 13 19.1 -2.0**
BVAR Borovoye Array 136.54 61 PKhKP PKPpre 01 13 07.4
comp=Z,10.0nm,0.8s,baz=225,slow=3.3,SNR=15
BVAR PKP **PKiKP 01 13 22.0 0.0**
comp=Z,37nm,0.8s,baz=225,slow=1.8,SNR=24
BVAR SKPab **SKPab 01 17 03.0 +4.7**
comp=Z,9.5nm,0.9s,baz=222,slow=5.8,SNR=4.1
KULLO Kullorsuaq 136.65 348 *i* P **PKPdf 01 13 20.1 +0.3**
QZH2 Quanzhou 136.69 130 PKP **PKPdf 01 13 21.5 +0.1**
QZH2 PP **PP 01 16 05.5 +1.9**
QZH2 SS SS 01 34 07.8 +1.2
QZH2 L L
comp=Z,3µm,18.9s
QZH2 L L
comp=Z,2µm,17.2s
QZH2 L L
comp=Z,4µm,16.5s
CNSH ChangSha 137.29 121 PKP **PKPdf 01 13 18.5 -3.9**
CNSH PPMZ
comp=Z,850nm,7.2s
CNSH L L
comp=Z,2µm,18.1s
CNSH L L
comp=Z,2µm,17.6s
CNSH L L
comp=Z,3µm,41.2s
DAG Danmarks Havn 137.34 2 *e*P **PKPdf 01 13 18.5 -2.5**
MAKZ Makanchi 137.37 75 PKIKP **PKPdf 01 13 21.2 -0.8**
MAKZ Makanchi 137.37 75 PKPdf **PKPdf 01 13 21.2 -0.8**
MKAR Makanchi Array 137.51 75 PKhKP PKPpre 01 13 13.1
comp=Z,6.9nm,0.7s,baz=221,slow=1.7,SNR=18
MKAR SKPab **SKPab 01 17 06.7 +3.7**
comp=Z,2.7nm,0.7s,baz=237,slow=3.3,SNR=3.9
ENH Enshi 137.61 115 PKPdf **PKPdf 01 13 22.6 -0.4**
ENH IAMs_20 IAMs_20 02 14 10.2
comp=Z,3µm,19.0s
WMQ Urumqi 137.94 82 PKP **PKPdf 01 13 22.8 -0.4**
WMQ PP **PP 01 16 13.0 +1.1**
WMQ PKS 01 16 58.0
WMQ PPMZ
comp=Z,440nm,5.1s
WMQ L L
comp=Z,2µm,20.9s
WMQ L L
comp=Z,2µm,18.7s
WMQ L L
comp=Z,3µm,24.2s
BJO1 Bjornoya 138.17 16 *e*P **PKPdf 01 13 23.4 +0.9**
BJO1 *e*PP **PP 01 16 12.8 +0.1**
BJO1 *e*SS SS 01 34 26.4 +2.6
KURBB Kurchatov Arra 138.47 69 PKhKP PKPpre 01 13 14.3
comp=Z,4.2nm,0.7s,baz=234,slow=3.6,SNR=20
KURBB PP **PP 01 16 14.1 -0.9**
comp=Z,3.1nm,0.9s,baz=235,slow=5.8,SNR=4.2
KURBB SKPab **SKPab 01 17 09.1 +2.1**
comp=Z,4.2nm,1.0s,baz=225,slow=3.2,SNR=4.2
KURK Kurchatov 138.58 69 IAMs_20 IAMs_20 02 11 22.1
comp=Z,3µm,21.0s
ZSN Zaisan 139.21 76 *e*PKIKP **PKPdf 01 13 23.9 -1.4**
ZSN Zaisan 139.21 76 *e*PKP **PKPdf 01 13 23.9 -1.4**
ZSN *e*SKP **SKPdf 01 16 58.7 -1.1**
LZDM Lanzhou Array 139.67 104 PKP **PKPdf 01 13 25.9 -1.1**
comp=Z,5.9nm,0.5s,baz=232,slow=5.1,SNR=5.0
LZH Lanzhou 139.85 105 *e*PKP **PKPdf 01 13 19.5 -7.6**
LZH PP **PP 01 16 24.5 +0.8**
LZH PPMZ
comp=Z,1µm,11.7s
LZH L L
comp=Z,3µm,17.1s
LZH L L
comp=Z,3µm,17.8s
LZH L L
comp=Z,4µm,16.5s
WHN Wuhan 139.95 121 PKP **PKPdf 01 13 22.0 -5.2**
WHN sPKP **sPKPdf 01 13 32.5 +2.7**
WHN PP **PP 01 16 22.8 -1.2**
WHN SKKS 01 23 09.5
WHN L L
comp=Z,6µm,20.7s
WHN L L
comp=Z,6µm,17.7s
WHN L L
comp=Z,8µm,23.4s
YKA Yellowknife Ar 140.08 314 PKhKP PKPpre 01 13 19.9
comp=Z,16nm,1.0s,baz=131,slow=3.9,SNR=13
YKA PKP **PKPdf 01 13 24.2 -2.2**
comp=Z,19nm,1.1s,baz=132,slow=2.4,SNR=18
YKA PP **PP 01 16 18.5 -6.2**
comp=Z,9.6nm,1.0s,baz=130,slow=6.0,SNR=6.9
YKA SKPbc **SKiKP 01 17 03.9 -0.8**
comp=Z,14nm,1.0s,baz=128,slow=2.4,SNR=4.7
YKA Yellowknife Ar 140.08 314 PKIKP **PKPdf 01 13 26.3 -0.1**
YKA Yellowknife Ar 140.08 314 **PKPdf 01 13 26.3 -0.1**
XAN Xi'an 140.54 112 PKP PKPdf 01 13 20.0 -8.3
XAN PP **PP 01 16 31.5 +3.8**
XAN PPMZ
comp=Z,2µm,14.4s
XAN L L
comp=Z,3µm,20.2s
XAN L L
comp=Z,2µm,17.5s
XAN L L
comp=Z,4µm,16.1s
GTA2 Gaotai 140.57 97 PKP PKPdf 01 13 18.0 -10
GTA2 PP **PP 01 16 27.5 -0.6**
GTA2 PKS 01 17 07.8
GTA2 Gaotai 140.57 97 SS SS 01 34 49.3 -4.0
GTA2 Gaotai 140.57 97 LR LR
comp=Z,3µm,23.2s
GTA2 Gaotai 140.57 97 LR LR
comp=E,2µm,21.3s
GTA2 Gaotai 140.57 97 LR LR
comp=N,1µm,23.5s
GTA2 Gaotai 140.57 97 AMB AMB
comp=Z,1µm,7.9s
HOPEN Hopen 140.69 17 *e*P **PKPdf 01 13 24.6 -2.5**
HOPEN *e*PP **PP 01 16 24.7 -3.5**
HOPEN *e*SS SS 01 34 52.0 -1.4
SPA0 Spitsbergen Ar 141.00 13 *e*P **PKPdf 01 13 25.3 -2.4**
SPA0 *e*PKSdf PP 01 17 04.9 +35
SPITS Spitsbergen Ar 141.00 13 PKhKP PKPpre 01 13 22.2
comp=Z,18nm,0.8s,baz=165,slow=6.0,SNR=9.9
SPITS PKP **PKPdf 01 13 26.0 -1.7**
comp=Z,33nm,0.7s,baz=184,slow=4.3,SNR=14
SPITS PP **PP 01 16 26.6 -3.6**
comp=Z,15nm,1.0s,baz=216,slow=21,SNR=5.2
SPITS Spitsbergen Ar 141.00 13 PKIKP **PKPdf 01 13 26.0 -1.7**
KBS Kingsbay 141.21 11 *e*P **PKPdf 01 13 26.6 -1.4**
KBS *e*SS SS 01 35 03.0 +3.5
KBS Kingsbay 141.21 11 IAMs_20 IAMs_20 02 13 03.8
comp=Z,4µm,19.0s
H02S1 DAWSON INLET TI 141.34 293 PKP **PKPdf 01 13 26.1 -2.9**
SNR=18
H02S2 DAWSON INLET TI 141.34 293 PKP **PKPdf 01 13 26.1 -2.9**
SNR=18
JOW Kunigami 141.78 141 P **PKiKP 01 13 32.2 -1.3**
KOTAN Kotaneelee Air 142.15 306 PKPdf **PKPdf 01 13 26.5 -3.7**
baz=128
NOR Nord 142.21 2 *e*P **PKPdf 01 13 24.9 -4.9**
MIDW Midway 142.29 223 IAMs_20 IAMs_20 02 12 07.4
comp=Z,4µm,20.0s
V35K Ketchikan 142.33 296 **PKPdf 01 13 30.4 -0.2**
V35K Ketchikan 142.33 296 PKPdf **PKPdf 01 13 26.7 -4.0**
baz=130
LIRD Liard River Hi 142.53 304 PKPdf **PKPdf 01 13 27.4 -3.5**
baz=128
LYN LuoYang 142.56 115 PKP **PKPdf 01 13 27.5 -4.3**
LYN PP **PP 01 16 40.5 +0.5**
LYN SS SS 01 35 14.5 -1.4
LYN PPMZ
comp=Z,2µm,7.6s
LYN L L
comp=Z,5µm,17.5s
LYN L L
comp=Z,4µm,17.2s
LYN L L
comp=Z,8µm,17.7s
T35M Bob Quinn 142.78 299 PKPdf **PKPdf 01 13 28.0 -3.4**
baz=128
CRAG Craig 143.09 295 P **PKPdf 01 13 33.4 +1.4**
CRAG Craig 143.09 295 PKPdf PKPbc 01 13 29.1 +0.2
baz=129
NJ2 Nanjing 143.13 125 *e*PKP PKPbc 01 13 30.0 +0.2
NJ2 pPKP **PKPdf 01 13 33.0 +0.1**
NJ2 sPKP sPKPdf 01 13 38.5 +3.1
NJ2 PPMZ
comp=Z,5µm,9.6s
NJ2 L L
comp=Z,6µm,17.1s
NJ2 L L
comp=Z,6µm,16.1s
NJ2 L L
comp=Z,14µm,18.6s
SSE Sheshan 143.20 129 PKP PKPbc 01 13 31.5 +1.5
SSE PP **PP 01 16 44.8 +1.2**
SSE PPMZ
comp=Z,720nm,8.3s
SSE L L
comp=Z,1µm,18.0s
SSE L L
comp=Z,410nm,17.6s
WRAK Wrangell Islan 143.34 297 IAMs_20 IAMs_20 02 16 58.2
comp=Z,5µm,21.0s
WRAK Wrangell Islan 143.34 297 PKPdf PKPbc 01 13 29.2 -0.4
baz=128
U33K Whale Pass 143.49 296 IAMs_20 IAMs_20 02 25 59.3
comp=Z,4µm,19.0s
U33K Whale Pass 143.49 296 PKPdf PKPab 01 13 29.3 +0.2
baz=128
ZALV Zalesovo Beam 143.57 69 PKhKP PKPpre 01 13 28.6
comp=Z,21nm,0.8s,baz=232,slow=3.1,SNR=18
ZALV PKP **PKPdf 01 13 32.5 -0.4**
comp=Z,25nm,0.8s,baz=231,slow=3.8,SNR=27
DLBC Dease Lake 143.57 301 PKPdf PKPbc 01 13 30.3 0.0
baz=127
S34M Telegraph Cree 143.72 300 PKPdf PKPbc 01 13 31.1 +0.4
baz=127
WRGLY Wrigley 143.75 311 PKPdf PKPbc 01 13 31.1 +0.5
baz=125
T33K Petersburg 143.85 297 PKPdf PKPbc 01 13 31.4 +0.3
baz=128
WTLY Watson Lake, Y 144.05 304 PKPdf PKPbc 01 13 32.6 +0.9
baz=126
R33M Jennings River 144.53 302 IAMs_20 IAMs_20 02 21 53.6
comp=Z,4µm,20.0s
R33M Jennings River 144.53 302 PKPdf **PKPab 01 13 32.4 -0.7**
baz=125
Q32M Nakina River 144.82 300 IAMs_20 IAMs_20 02 16 31.4
comp=Z,5µm,22.0s
Q32M Nakina River 144.82 300 PKPdf **PKPab 01 13 33.9 -0.5**
baz=125
S32K Killisnoo 144.95 297 IAMs_20 IAMs_20 02 21 54.8
comp=Z,4µm,20.0s
S32K Killisnoo 144.95 297 PKPdf **PKPab 01 13 32.8 -1.7**
baz=126
SIT Sitka 145.03 296 P **PKPdf 01 13 37.0 +1.7**
SIT Sitka 145.03 296 P **PKPdf 01 13 36.0 +0.7**
SIT Sitka 145.03 296 PKPdf **PKPbc 01 13 33.8 -1.0**
baz=126
TIY Taiyuan 145.17 112 PKPbc **PKPbc 01 13 35.5 -0.5**
TIY PPMZ
comp=Z,2µm,11.7s
TIY L L
comp=Z,3µm,18.5s
TIY L L
comp=Z,1µm,19.9s
TIY L L
comp=Z,3µm,17.9s
JIS Juneau Island 145.34 298 P **PKPab 01 13 37.7 +1.8**
JIS Juneau Island 145.34 298 P **PKPab 01 13 36.9 +1.0**
JCJ Chichijima 145.37 161 PKPbc **PKPbc 01 13 34.7 -2.2**
comp=Z,620nm,0.9s,baz=242,slow=0.9,SNR=21
JCJ Chichijima 145.37 161 P **PKPbc 01 13 36.6 -0.2**
JCJ Chichijima 145.37 161 P **PKPbc 01 13 36.3 -0.5**
JCJ Chichijima 145.37 161 **PKPbc 01 13 35.2 -1.6**
R32K Eaglecrest 145.39 298 PKPdf **PKPdf 01 13 34.4 -1.5**
baz=125
P33M Teslin, Yukon 145.76 302 IAMs_20 IAMs_20 02 17 50.2
comp=Z,4µm,21.0s
P33M Teslin, Yukon 145.76 302 PKPdf **PKPdf 01 13 35.0 -1.7**
baz=124

P32M	**Atlin**	**145.79**	**301**	PKPdf	**PKPdf**	**01 13 34.7**	**-2.0**
	baz=124						
HNS	**HongShan**	**145.94**	**115**	⇓PKPbc	**PKPdf**	**01 13 37.3**	**-0.3**
HNS				PP	**PP**	**01 17 03.8**	**+3.7**
HNS				SS	SS	01 35 53.0	-1.5
HNS				L	L		
	comp=Z,1μm,17.2s						
HNS				L	L		
	comp=Z,3μm,17.7s						
HNS				L	L		
	comp=Z,3μm,17.3s						
S31K	**Pelican**	**145.96**	**297**	PKPdf	**PKPdf**	**01 13 33.1**	**-3.8**
	baz=125						
TIA	**Tai'an**	**146.00**	**119**	PKPbc	**PKPbc**	**01 13 38.5**	**-0.1**
TIA				SKS	**SKSdf**	**01 20 40.0**	**-6.4**
TIA				PPMZ			
	comp=Z,3μm,11.3s						
TIA				L	L		
	comp=Z,970nm,15.5s						
TIA				L	L		
	comp=Z,2μm,16.5s						
TIA				L	L		
	comp=Z,2μm,15.8s						
R31K	**City Hall, Gus**	**146.00**	**298**	PKPdf	**PKPdf**	**01 13 34.1**	**-2.8**
	baz=124						
N32M	**Quiet Lake**	**146.38**	**303**	IAMs_20	IAMs_20	02 21 07.7	
	comp=Z,4μm,20.0s						
N32M	**Quiet Lake**	**146.38**	**303**	PKPdf	**PKPdf**	**01 13 36.1**	**-1.5**
	baz=122						
SKAG	**Skagway**	**146.41**	**300**	P	**PKPab**	**01 13 39.6**	**-0.3**
SKAG	**Skagway**	**146.41**	**300**	PKPdf	**PKPdf**	**01 13 35.9**	**-1.7**
	baz=123						
BTO2	**Baotou**	**146.41**	**106**	*e*PKPbc	**PKPdf**	**01 13 38.3**	**-0.2**
BTO2				PP	**PP**	**01 17 05.0**	**+1.8**
BTO2				L	L		
	comp=Z,4μm,16.7s						
BTO2				L	L		
	comp=Z,3μm,17.9s						
BTO2				L	L		
	comp=Z,5μm,20.9s						
MMPY	**Sheldon Lake,**	**146.42**	**306**	PKPdf	**PKPdf**	**01 13 36.2**	**-1.5**
	baz=121						
JSU	**Suzuyama**	**146.81**	**141**	P	**PKPab**	**01 13 42.2**	**-0.2**
JSU	**Suzuyama**	**146.81**	**141**	P	**PKPbc**	**01 13 41.1**	**0.0**
JSU	**Suzuyama**	**146.81**	**141**		**PKPdf**	**01 13 40.1**	**+0.8**
PLBC	**Pleasant Camp**	**146.85**	**299**	PKPdf	**PKPdf**	**01 13 36.9**	**-1.5**
	baz=123						
WHY	**Whitehorse**	**146.87**	**302**	PKPdf	**PKPdf**	**01 13 37.0**	**-1.5**
	baz=122						
C36M	**Paulatuk**	**147.10**	**320**	IAMs_20	IAMs_20	02 19 36.8	
	comp=Z,4μm,20.0s						
C36M	**Paulatuk**	**147.10**	**320**	PKPdf	**PKPdf**	**01 13 36.2**	**-2.3**
	baz=116						
HHC	**Hu-ho-hao-te**	**147.29**	**108**	*e*PKPbc	**PKPbc**	**01 13 41.8**	**-0.5**
HHC				PP	**PP**	**01 17 11.8**	**+3.5**
HHC				PPMZ			
	comp=Z,950nm,7.7s						
HHC				L	L		
	comp=Z,2μm,16.8s						
HHC				L	L		
	comp=Z,1μm,18.0s						
HHC				L	L		
	comp=Z,3μm,18.5s						
O30N	**Mendenhall**	**147.43**	**301**	IAMs_20	IAMs_20	02 21 00.3	
	comp=Z,5μm,20.0s						
O30N	**Mendenhall**	**147.43**	**301**	PKPdf	**PKPdf**	**01 13 37.4**	**-2.1**
	baz=121						
P30M	**Million Dollar**	**147.46**	**300**	PKPdf	**PKPdf**	**01 13 37.6**	**-1.9**
	baz=122						
M31M	**Drury Creek, Y**	**147.46**	**304**	PKPdf	**PKPdf**	**01 13 37.4**	**-2.0**
	baz=120						
P29M	**Windy Craggy**	**147.53**	**299**	PKPdf	**PKPdf**	**01 13 37.9**	**-1.7**
	baz=122						
N31M	**Braeburn, Yuko**	**147.67**	**303**		**PKPdf**	**01 13 38.5**	**-1.3**
N31M				IAMs_20	IAMs_20	02 16 31.6	
	comp=Z,5μm,22.0s						
N31M	**Braeburn, Yuko**	**147.67**	**303**	PKPdf	**PKPdf**	**01 13 38.1**	**-1.7**
	baz=120						
HYT	**Haines Junctio**	**148.06**	**301**	PKPdf	**PKPdf**	**01 13 38.6**	**-2.0**
	baz=121						
N30M	**Aishikik Lake**	**148.20**	**302**	PKPdf	**PKPdf**	**01 13 38.8**	**-1.9**
	baz=120						
O29M	**Mount Kennedy**	**148.25**	**299**	IAMs_20	IAMs_20	02 22 26.5	
	comp=Z,3μm,20.0s						
O29M	**Mount Kennedy**	**148.25**	**299**	PKPdf	**PKPdf**	**01 13 38.8**	**-2.1**
	baz=121						
JNU	**Nakatsue**	**148.44**	**140**	PKPbc	**PKPbc**	**01 13 45.1**	**-0.4**
	comp=Z,32nm,0.8s,baz=166,slow=4.1,SNR=11						
YUK6	**Outpost Mounta**	**148.48**	**300**	PKPdf	**PKPdf**	**01 13 39.4**	**-2.0**
	baz=120						
A36M	**Sachs Harbour**	**148.55**	**324**	PKPdf	**PKPdf**	**01 13 39.2**	**-1.7**
	baz=112						
M30M	**Minto, Yukon**	**148.62**	**304**	PKPdf	**PKPdf**	**01 13 39.3**	**-2.0**
	baz=118						
BJT	**Baijiatuan**	**148.74**	**114**	PKIKP	**PKPdf**	**01 13 40.9**	**-1.3**
BJT	**Baijiatuan**	**148.74**	**114**		**PKPdf**	**01 13 40.9**	**-1.3**
BJT	**Baijiatuan**	**148.74**	**114**	IAMs_20	IAMs_20	02 27 37.7	
	comp=Z,3μm,19.0s						
BJI2	**Beijing**	**148.74**	**114**	⇓PKPbc	**PKPdf**	**01 13 42.0**	**-0.2**
BJI2				PP	**PP**	**01 17 14.5**	**-2.1**
BJI2				SS	SS	01 36 27.5	+1.3
BJI2				PPMZ			
	comp=Z,980nm,11.4s						
BJI2				L	L		
	comp=Z,1μm,17.3s						
BJI2				L	L		
	comp=Z,580nm,18.6s						
BJI2				L	L		
	comp=Z,2μm,18.4s						
YUK4	**Talbot Arm**	**148.80**	**301**	PKPdf	**PKPdf**	**01 13 39.8**	**-2.1**
	baz=119						
PINM	**Pinnacle**	**148.86**	**298**	PKPdf	**PKPdf**	**01 13 39.2**	**-2.6**
	baz=120						
PCA	**Pinnacle**	**148.86**	**298**	IAMs_20	IAMs_20	02 19 55.2	
	comp=Z,5μm,22.0s						
BRWY	**Burwash Landin**	**148.97**	**301**	PKPdf	**PKPdf**	**01 13 39.9**	**-2.0**
	baz=119						
H31M	**Peel River**	**149.12**	**310**	IAMs_20	IAMs_20	02 18 43.5	
	comp=Z,4μm,21.0s						
H31M	**Peel River**	**149.12**	**310**	PKPdf	**PKPdf**	**01 13 40.2**	**-1.8**
	baz=115						
O28M	**Mount Upton**	**149.17**	**299**	PKPdf	**PKPdf**	**01 13 40.2**	**-2.3**
	baz=119						
YUK8	**Steele Glacier**	**149.24**	**300**	PKPdf	**PKPdf**	**01 13 40.2**	**-2.4**
	baz=119						
M29M	**Somme Creek**	**149.24**	**303**	IAMs_20	IAMs_20	02 25 44.2	
	comp=Z,4μm,19.0s						
M29M	**Somme Creek**	**149.24**	**303**	PKPdf	**PKPdf**	**01 13 40.4**	**-2.0**
	baz=118						
J30M	**Hart River**	**149.35**	**308**	PKPdf	**PKPdf**	**01 13 39.9**	**-2.7**
	baz=116						
L29M	**L29M**	**149.41**	**304**	PKPdf	**PKPdf**	**01 13 40.6**	**-1.9**
	baz=117						
K29M	**Barlow Dome**	**149.50**	**306**	PKPdf	**PKPdf**	**01 13 40.1**	**-2.7**
	baz=116						
LOGN	**Logan Glacier**	**149.54**	**299**	IAMs_20	IAMs_20	02 18 36.3	
	comp=Z,5μm,22.0s						
G31M	**Satah River**	**149.55**	**312**	PKPdf	**PKPdf**	**01 13 40.2**	**-2.4**
	baz=113						
F31M	**Tsiigehtchic**	**149.56**	**314**	PKPdf	**PKPdf**	**01 13 40.3**	**-2.3**
	baz=113						
I30M	**Mount Dempster**	**149.64**	**309**	IAMs_20	IAMs_20	02 22 27.5	
	comp=Z,4μm,20.0s						
I30M	**Mount Dempster**	**149.64**	**309**	PKPdf	**PKPdf**	**01 13 40.1**	**-2.9**
	baz=115						
YUK3	**Moose Creek**	**149.76**	**301**	PKPdf	**PKPdf**	**01 13 40.5**	**-2.9**
	baz=118						
INK	**Inuvik**	**149.81**	**315**	PKPdf	**PKPdf**	**01 13 40.1**	**-2.9**
	baz=112						
MOY	**Mondy**	**149.82**	**83**	*e*PKP2	**PKPbc**	**01 13 48.5**	**0.0**
MOY				pmax	pmax		
	comp=Z,422nm,1.6s						
GRNC	**Granite Creek**	**149.82**	**299**	IAMs_20	IAMs_20	02 18 58.7	
	comp=Z,4μm,21.0s						
SONM	**Songino Array**	**149.96**	**94**	PKPbc	**PKPbc**	**01 13 47.7**	**-1.3**
	comp=Z,62nm,1.0s,baz=214,slow=2.7,SNR=42						
SONM	**Songino Array**	**149.96**	**94**	PKIKP	**PKPdf**	**01 13 42.8**	**-1.3**
SONM						01 13 48.7	
SONM	**Songino Array**	**149.96**	**94**		**PKPdf**	**01 13 42.8**	**-1.3**
SONM				PKPbc	**PKPbc**	**01 13 48.7**	**-0.2**
J29N	**Klondike Camp**	**150.03**	**307**	PKPdf	**PKPdf**	**01 13 41.3**	**-2.3**
	baz=115						
ZAK	**Zakamensk**	**150.13**	**87**	*e*PKIKP	**PKPdf**	**01 13 43.5**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,219nm,1.7s						
DL2	**Dalian**	**150.18**	**122**	PKPbc	**PKPdf**	**01 13 47.0**	**+2.5**
DL2				PKPab	**sPKPbc**	**01 13 52.0**	**+0.3**
DL2				PP	**PP**	**01 17 23.5**	**-1.4**
DL2				SS	SS	01 36 40.0	-2.1
DL2				PPMZ			
	comp=Z,2μm,5.7s						
DL2				L	L		
	comp=Z,3μm,18.5s						
DL2				L	L		
	comp=Z,1μm,17.5s						
DL2				L	L		
	comp=Z,4μm,18.8s						
TJN	**Taejon**	**150.22**	**133**	P	**PKPbc**	**01 13 47.4**	**-2.3**
TJN	**Taejon**	**150.22**	**133**	PKIKP	**PKPbc**	**01 13 48.3**	**-1.4**
TJN	**Taejon**	**150.22**	**133**		**PKPbc**	**01 13 48.3**	**-1.4**
BVCY	**Beaver Creek**	**150.22**	**302**	PKPdf	**PKPdf**	**01 13 41.4**	**-2.4**
	baz=117						
EPYK	**Eagle Plains**	**150.23**	**311**	PKPdf	**PKPdf**	**01 13 41.3**	**-2.4**
	baz=113						
G30M	**tAoh Zraii Nji**	**150.28**	**312**	IAMs_20	IAMs_20	02 22 03.2	
	comp=Z,4μm,21.0s						
G30M	**tAoh Zraii Nji**	**150.28**	**312**	PKPdf	**PKPdf**	**01 13 40.5**	**-3.3**
	baz=112						
TGL	**Tana Glacier**	**150.30**	**298**	IAMs_20	IAMs_20	02 20 38.2	
	comp=Z,5μm,22.0s						
ULN	**Ulaanbaatar**	**150.31**	**94**	*de*PKIKP	**PKPdf**	**01 13 43.4**	**-1.2**
ULN	**Ulaanbaatar**	**150.31**	**94**		**PKPdf**	**01 13 43.2**	**-1.4**
ULN				PKPbc	**PKPbc**	**01 13 49.2**	**-0.6**
ULN	**Ulaanbaatar**	**150.31**	**94**	IAMs_20	IAMs_20	02 33 37.1	
	comp=Z,4μm,19.0s						
DAWY	**Dawson**	**150.34**	**306**	PKPdf	**PKPdf**	**01 13 40.9**	**-3.1**
	baz=115						
F30M	**Barrier River**	**150.35**	**313**	PKPdf	**PKPdf**	**01 13 40.6**	**-3.2**
	baz=111						
CRQE	**Cirque**	**150.41**	**298**	PKPdf	**PKPdf**	**01 13 40.7**	**-3.6**
	baz=118						
CRQM	**Cirque**	**150.44**	**298**	IAMs_20	IAMs_20	02 27 23.2	
	comp=Z,3μm,20.0s						
KAIM	**Kayak Island**	**150.60**	**296**	PKPdf	**PKPdf**	**01 13 41.1**	**-3.4**
	baz=119						
M27K	**Edge Creek, AK**	**150.62**	**301**	IAMs_20	IAMs_20	02 23 06.8	
	comp=Z,5μm,20.0s						
M27K	**Edge Creek, AK**	**150.62**	**301**	PKPdf	**PKPdf**	**01 13 42.3**	**-2.4**
	baz=116						
MCARA	**McCarthy VSAT**	**150.68**	**299**	IAMs_20	IAMs_20	02 24 23.2	
	comp=Z,4μm,19.0s						
MCARA	**McCarthy VSAT**	**150.68**	**299**	PKPdf	**PKPdf**	**01 13 42.0**	**-2.6**
	baz=117						
JHJ	**Hachijo jima 2**	**150.79**	**155**	PKPbc	**PKPbc**	**01 13 49.3**	**-1.9**
	comp=Z,525nm,0.9s,baz=194,slow=12,SNR=4.1						
JHJ2	**Mitsune**	**150.79**	**155**	P	**PKPbc**	**01 13 49.0**	**-2.2**
VRDI	**Verde Repeater**	**150.79**	**299**	IAMs_20	IAMs_20	02 19 33.2	
	comp=Z,4μm,20.0s						
H29M	**Whitestone**	**150.79**	**310**	PKPdf	**PKPdf**	**01 13 42.0**	**-2.6**
	baz=112						
L27K	**Beaver Creek,**	**150.91**	**303**	PKPdf	**PKPdf**	**01 13 42.4**	**-2.6**
	baz=115						
G29M	**Pine Creek**	**150.91**	**311**	PKPdf	**PKPdf**	**01 13 42.5**	**-2.3**
	baz=111						
INCN	**Inchon**	**150.93**	**131**	P	**PKPdf**	**01 13 48.5**	**+2.7**
INCN	**Inchon**	**150.93**	**131**	PKIKP	**PKPbc**	**01 13 49.5**	**-1.9**
INCN	**Inchon**	**150.93**	**131**		**PKPbc**	**01 13 49.5**	**-1.9**
INCN	**Inchon**	**150.93**	**131**	IAMs_20	IAMs_20	02 22 22.1	
	comp=Z,4μm,20.0s						
GLB	**Gilahina Butte**	**151.04**	**299**	IAMs_20	IAMs_20	02 22 24.8	
	comp=Z,4μm,20.0s						
HJU	**Haeju**	**151.08**	**129**	PKPbc	**PKPdf**	**01 13 48.0**	**+2.1**
I28M	**Miner Creek**	**151.10**	**308**	PKPdf	**PKPdf**	**01 13 42.3**	**-2.9**
	baz=112						
M26K	**Nabesna, AK**	**151.11**	**301**	PKPdf	**PKPdf**	**01 13 42.3**	**-3.0**
	baz=116						
TLY	**Talaya**	**151.13**	**85**		**PKPdf**	**01 13 44.6**	**-0.9**
TLY				PKPbc	**PKPbc**	**01 13 51.6**	**+0.1**
BMRM	**Bremner River**	**151.17**	**298**	PKPdf	**PKPdf**	**01 13 42.4**	**-3.0**
	baz=117						
MID	**Middleton Isla**	**151.22**	**294**	IAMs_20	IAMs_20	02 24 30.2	
	comp=Z,4μm,20.0s						
Q23K	**Middleton Isla**	**151.22**	**294**	PKPdf	**PKPdf**	**01 13 42.6**	**-2.8**
	baz=119						
KSAR	**Wonju Array Be**	**151.35**	**132**	PKIKP	**PKPdf**	**01 13 45.2**	**-1.2**
KSAR						01 13 51.4	
KSAR	**Wonju Array Be**	**151.35**	**132**		**PKPdf**	**01 13 45.1**	**-1.2**
KSAR				PKPbc	**PKPbc**	**01 13 51.4**	**-1.0**
E29M	**Blow River**	**151.37**	**314**	PKPdf	**PKPdf**	**01 13 42.9**	**-2.5**
	baz=108						
KSRS	**Korea Array**	**151.38**	**133**	PKP	**PKPdf**	**01 13 46.0**	**-0.3**
	comp=Z,8.2nm,1.0s,baz=214,slow=2.6,SNR=10						
KSRS				PKPbc	**PKPbc**	**01 13 52.4**	**0.0**
	comp=Z,30nm,0.8s,baz=208,slow=2.5,SNR=30						
N25K	**Chitina, Valde**	**151.45**	**299**	PKPdf	**PKPdf**	**01 13 43.3**	**-2.6**
	baz=116						
EYAK	**Cordova Ski Ar**	**151.48**	**296**	PKPdf	**PKPdf**	**01 13 43.2**	**-2.6**
	baz=117						
L26K	**Log Cabin Wild**	**151.52**	**302**	PKPdf	**PKPdf**	**01 13 43.3**	**-2.6**
	baz=114						
DIV	**Divide**	**151.75**	**297**	IAMs_20	IAMs_20	02 24 46.6	
	comp=Z,4μm,19.0s						
XLT	**XiLinHaoTe**	**151.76**	**109**	*e*PKPbc	**PKPdf**	**01 13 47.0**	**+0.1**
XLT				L	L		
	comp=Z,2μm,16.4s						
XLT				L	L		
	comp=Z,4μm,17.9s						
I27K	**Kandik River**	**151.81**	**308**	PKPdf	**PKPdf**	**01 13 43.5**	**-2.8**
	baz=111						
F28M	**Old Crow**	**151.83**	**312**	IAMs_20	IAMs_20	02 23 33.1	
	comp=Z,4μm,20.0s						
F28M	**Old Crow**	**151.83**	**312**	PKPdf	**PKPdf**	**01 13 43.6**	**-2.5**
	baz=108						
D28M	**Stokes Point**	**151.94**	**316**	PKPdf	**PKPdf**	**01 13 43.7**	**-2.5**
	baz=106						
P23K	**Montague Islan**	**151.96**	**294**	PKPdf	**PKPdf**	**01 13 43.5**	**-3.1**
	baz=117						
PYAG	**Pyongyang**	**151.97**	**128**	PKPbc	**PKPdf**	**01 13 48.8**	**+1.6**
PYAG				PP	**PP**	**01 17 39.4**	**+4.3**
PYAG				AMS	AMS		
	comp=Z,357nm,6.2s						
KLU	**Klutina**	**151.97**	**298**	PKPdf	**PKPdf**	**01 13 43.9**	**-2.7**
	baz=116						
H27K	**Steamboat Moun**	**151.99**	**309**	PKPdf	**PKPdf**	**01 13 43.8**	**-2.7**
	baz=110						
E28M	**Babbage River**	**152.01**	**314**	PKPdf	**PKPdf**	**01 13 42.9**	**-3.5**
	baz=107						
HARP	**HAARP**	**152.03**	**300**	IAMs_20	IAMs_20	02 23 15.4	
	comp=Z,4μm,20.0s						
HARP	**HAARP**	**152.03**	**300**	PKPdf	**PKPdf**	**01 13 43.5**	**-3.2**
	baz=114						
NRIK	**Noril'sk**	**152.04**	**44**	PKP	**PKPdf**	**01 13 45.4**	**-1.0**
	comp=Z,3.8nm,0.9s,baz=276,slow=1.1,SNR=6.3						
NRIK				PKPbc	**PKPbc**	**01 13 52.8**	**-0.2**
	comp=Z,23nm,1.2s,baz=259,slow=0.7,SNR=4.5						
NRIK	**Noril'sk**	**152.04**	**44**	*ce*PKIKP	**PKPdf**	**01 13 43.6**	**-2.8**
NRIK	**Noril'sk**	**152.04**	**44**		**PKPdf**	**01 13 44.7**	**-1.6**
GLI	**Glacier Island**	**152.22**	**296**	PKPdf	**PKPdf**	**01 13 43.6**	**-3.3**
	baz=116						
G27K	**Doyon Strip**	**152.23**	**310**	IAMs_20	IAMs_20	02 20 14.5	
	comp=Z,5μm,21.0s						
G27K	**Doyon Strip**	**152.23**	**310**	PKPdf	**PKPdf**	**01 13 44.0**	**-2.8**
	baz=108						
INU	**Inuyama**	**152.28**	**149**	PKPdf	**PKPdf**	**01 13 46.2**	**-1.6**
INU				IAMs_20	IAMs_20	02 21 43.0	
	comp=Z,3μm,22.0s						
I26K	**Coal Creek Min**	**152.31**	**307**	PKPdf	**PKPdf**	**01 13 43.8**	**-3.1**
	baz=110						
M24K	**Tolsona, Glenn**	**152.34**	**299**	IAMs_20	IAMs_20	02 20 06.8	
	comp=Z,5μm,22.0s						
M24K	**Tolsona, Glenn**	**152.34**	**299**	PKPdf	**PKPdf**	**01 13 44.3**	**-2.9**
	baz=114						
SUJ	**Sinuiju**	**152.37**	**125**	PKPbc	**PKPdf**	**01 13 49.0**	**+1.2**
PAX	**Paxson**	**152.39**	**301**	IAMs_20	IAMs_20	02 23 59.0	
	comp=Z,5μm,21.0s						
PAX	**Paxson**	**152.39**	**301**	PKPdf	**PKPdf**	**01 13 44.0**	**-3.2**
	baz=113						
RIDG	**Independent Ri**	**152.43**	**303**	IAMs_20	IAMs_20	02 20 02.9	
	comp=Z,5μm,22.0s						
RIDG	**Independent Ri**	**152.43**	**303**	PKPdf	**PKPdf**	**01 13 44.5**	**-2.7**
	baz=112						
JGF	**Kuroka**	**152.60**	**149**		**PKPdf**	**01 13 47.2**	**-1.2**
E27K	**Coleen River**	**152.62**	**313**	IAMs_20	IAMs_20	02 23 21.6	
	comp=Z,4μm,20.0s						
E27K	**Coleen River**	**152.62**	**313**	PKPdf	**PKPdf**	**01 13 44.4**	**-2.9**
	baz=106						
D27M	**Malcolm River**	**152.68**	**315**	PKPdf	**PKPdf**	**01 13 44.8**	**-2.7**
	baz=104						
SCM	**Sheep Creek Mo**	**152.73**	**298**	IAMs_20	IAMs_20	02 25 56.4	
	comp=Z,4μm,20.0s						
SCM	**Sheep Creek Mo**	**152.73**	**298**	PKPdf	**PKPdf**	**01 13 44.9**	**-2.8**
	baz=114						
PWL	**Port Wells**	**152.76**	**296**	IAMs_20	IAMs_20	02 28 08.3	
	comp=Z,4μm,20.0s						
PWL	**Port Wells**	**152.76**	**296**	PKPdf	**PKPdf**	**01 13 45.0**	**-2.8**
	baz=116						
K24K	**Donnelly Dome**	**152.83**	**303**	PKPdf	**PKPdf**	**01 13 45.1**	**-2.7**
	baz=112						
M23K	**Glacier View**	**152.88**	**298**	PKPdf	**PKPdf**	**01 13 45.3**	**-2.6**
	baz=114						
SEW	**Seward**	**152.93**	**294**	PKPdf	**PKPdf**	**01 13 44.9**	**-3.1**
	baz=116						
J25K	**Salcha River,**	**152.95**	**305**	IAMs_20	IAMs_20	02 24 53.8	
	comp=Z,4μm,21.0s						
J25K	**Salcha River,**	**152.95**	**305**	PKPdf	**PKPdf**	**01 13 44.7**	**-3.3**
	baz=110						
KNK	**Knik Glacier**	**153.05**	**297**	IAMs_20	IAMs_20	02 34 15.5	
	comp=Z,5μm,20.0s						
KNK	**Knik Glacier**	**153.05**	**297**	PKPdf	**PKPdf**	**01 13 44.9**	**-3.2**
	baz=114						
G26K	**Porcupine Rive**	**153.08**	**310**	IAMs_20	IAMs_20	02 23 14.8	
	comp=Z,3μm,20.0s						
G26K	**Porcupine Rive**	**153.08**	**310**	PKPdf	**PKPdf**	**01 13 45.4**	**-2.5**
	baz=107						
SML	**Sawmill**	**153.15**	**298**	IAMs_20	IAMs_20	02 21 24.2	
	comp=Z,4μm,22.0s						
SML	**Sawmill**	**153.15**	**298**	PKPdf	**PKPdf**	**01 13 44.6**	**-3.7**
	baz=114						
WAT6	**Susitna Watana**	**153.20**	**299**	PKPdf	**PKPdf**	**01 13 45.4**	**-3.1**
	baz=113						
O22K	**Cooper Landing**	**153.22**	**294**	PKPdf	**PKPdf**	**01 13 45.0**	**-3.3**
	baz=116						
DHY	**Denali Highway**	**153.23**	**301**	IAMs_20	IAMs_20	02 25 37.3	
	comp=Z,4μm,20.0s						
DHY	**Denali Highway**	**153.23**	**301**	PKPdf	**PKPdf**	**01 13 45.1**	**-3.5**
	baz=112						
KDAK	**Kodiak Island**	**153.29**	**287**	PKPdf	**PKPdf**	**01 13 45.5**	**-3.1**
	baz=119						
PRP	**Porcupine Dome**	**153.31**	**306**	PKPdf	**PKPdf**	**01 13 45.4**	**-3.1**
	baz=108						
OHAK	**Old Harbor**	**153.35**	**286**	PKPdf	**PKPdf**	**01 13 45.5**	**-3.1**
	baz=120						
BRSE	**Bradley Lake S**	**153.35**	**292**	PKPdf	**PKPdf**	**01 13 45.0**	**-3.6**
	baz=116						
GHO	**Glory Hole Cre**	**153.40**	**297**	IAMs_20	IAMs_20	02 34 54.1	
	comp=Z,4μm,19.0s						
HHU	**Hamhung**	**153.41**	**129**	PKPbc	**PKPdf**	**01 13 49.7**	**+0.4**
PMR	**Palmer**	**153.41**	**297**	PKPdf	**PKPdf**	**01 13 45.3**	**-3.3**
	baz=114						
F26K	**Sheenjek River**	**153.42**	**311**	PKPdf	**PKPdf**	**01 13 45.6**	**-2.9**
	baz=105						
BRLK	**Bradley Lake**	**153.43**	**292**	IAMs_20	IAMs_20	02 24 54.1	
	comp=Z,4μm,21.0s						
SII	**Sitkinak Islan**	**153.44**	**284**	P	**PKPdf**	**01 13 51.1**	**+2.3**
SII	**Sitkinak Islan**	**153.44**	**284**	IAMs_20	IAMs_20	02 31 25.3	
	comp=Z,4μm,20.0s						
SII	**Sitkinak Islan**	**153.44**	**284**	PKPdf	**PKPdf**	**01 13 44.6**	**-4.2**
	baz=121						
SNY	**Shenyang**	**153.44**	**121**	⇓PKPbc	**PKPdf**	**01 13 51.0**	**+1.7**
SNY				PP	**PP**	**01 17 38.8**	**-4.6**
SNY				PPMZ			
	comp=Z,1μm,13.0s						
SNY				L	L		
	comp=Z,1μm,19.4s						
SNY				L	L		
	comp=Z,2μm,16.6s						
SNY				L	L		
	comp=Z,3μm,19.0s						
RC01	**Rabbit Creek A**	**153.48**	**296**	IAMs_20	IAMs_20	02 33 38.9	
	comp=Z,5μm,21.0s						
RC01	**Rabbit Creek A**	**153.48**	**296**	PKPdf	**PKPdf**	**01 13 45.3**	**-3.4**
	baz=114						
CNPM	**China Poot**	**153.48**	**292**	IAMs_20	IAMs_20	02 26 17.4	
	comp=Z,4μm,21.0s						
FYU	**Fort Yukon**	**153.52**	**309**	IAMs_20	IAMs_20	02 28 19.9	
	comp=Z,3μm,21.0s						
HDA	**Harding Lake**	**153.53**	**304**	PKPdf	**PKPdf**	**01 13 45.3**	**-3.4**
	baz=110						
ILAR	**Eielson Array**	**153.62**	**304**	PKPbc	**PKiKP**	**01 13 57.0**	**+0.3**
	comp=Z,24nm,1.0s,baz=115,slow=2.8,SNR=35						
WAT1	**Susitna Watana**	**153.64**	**300**	PKPdf	**PKPdf**	**01 13 45.4**	**-3.5**
	baz=112						
MAJO	**Matsushiro**	**153.71**	**150**	P	**PKPdf**	**01 13 52.8**	**+2.9**
MAJO	**Matsushiro**	**153.71**	**150**	P	**PKPdf**	**01 13 51.5**	**+1.6**
MAJO	**Matsushiro**	**153.71**	**150**	⇓PKIKP	**PKPdf**	**01 13 52.5**	**+2.6**
MAJO	**Matsushiro**	**153.71**	**150**	IAMs_20	IAMs_20	02 29 26.9	
	comp=Z,3μm,19.0s						
MAJO	**Matsushiro**	**153.71**	**150**	PKP	**PKPdf**	**01 13 49.4**	**-0.6**
MJAR	**Matsushiro Arr**	**153.71**	**150**	PKP	**PKPdf**	**01 13 49.7**	**-0.2**
	comp=Z,10nm,1.1s,baz=198,slow=1.7,SNR=12						
MJAR				PKPbc	**PKiKP**	**01 13 58.0**	**+0.1**
	comp=Z,33nm,0.9s,baz=202,slow=2.0,SNR=21						
C27K	**Jago River**	**153.71**	**316**	PKPdf	**PKPdf**	**01 13 45.8**	**-3.1**
	baz=102						
HOM	**Homer**	**153.72**	**292**	IAMs_20	IAMs_20	02 26 13.6	
	comp=Z,

CHNA	Chernabura Isl	155.14 277	PKPdf	PKPdf	01 13 47.1	-4.1	
	baz=123						
O19K	Port Alsworth	155.17 292	PKPdf	PKPdf	01 13 47.1	-4.0	
	baz=114						
PPLA	Purkeypile	155.23 298	PKPdf	PKPdf	01 13 47.1	-4.2	
	baz=110						
P18K	Big Mountain,	155.26 289	PKPdf	PKPdf	01 13 47.1	-4.3	
	baz=115						
MLY	Manley	155.27 304	PKPdf	PKPdf	01 13 47.2	-4.0	
	baz=106						
M20K	Styx River	155.29 296	IAMs_20	IAMs_20	02 22 17.4		
	comp=Z,3μm,20.0s						
M20K	Styx River	155.29 296	PKPdf	PKPdf	01 13 47.2	-4.1	
	baz=111						
CHGN	Chignik	155.34 281	PKPdf	PKPdf	01 13 46.7	-4.8	
	baz=120						
CAST	Castle Rocks	155.35 300	IAMs_20	IAMs_20	02 38 10.3		
	comp=Z,4μm,21.0s						
CAST	Castle Rocks	155.35 300	PKPdf	PKPdf	01 13 47.4	-3.9	
	baz=109						
G23K	Bananza Creek	155.40 308	PKPdf	PKPdf	01 13 47.3	-4.0	
	baz=103						
D24K	Happy Valley	155.41 314	PKPdf	PKPdf	01 13 47.1	-4.1	
	baz=98						
O18K	Koktuh Hills	155.44 290	PKPdf	PKPdf	01 13 47.0	-4.6	
	baz=114						
N19K	Bonanza Creek	155.49 293	IAMs_20	IAMs_20	02 34 24.3		
	comp=Z,4μm,20.0s						
N19K	Bonanza Creek	155.49 293	PKPdf	PKPdf	01 13 47.1	-4.5	
	baz=113						
E23K	Chandalar	155.52 311	PKPdf	PKPdf	01 13 47.6	-4.0	
	baz=100						
COLD	Coldfoot	155.58 309	PKPdf	PKPdf	01 13 47.6	-3.9	
	baz=102						
CHUM	Lake Minchumin	155.59 301	PKPdf	PKPdf	01 13 48.0	-3.6	
	baz=108						
TOLK	Toolik Lake Re	155.60 313	PKPdf	PKPdf	01 13 47.7	-3.9	
	baz=99						
Q16K	King Salmon	155.62 287	PKPdf	PKPdf	01 13 47.7	-4.0	
	baz=116						
P17K	Kvichak River	155.74 288	IAMs_20	IAMs_20	02 26 50.8		
	comp=Z,4μm,20.0s						
P17K	Kvichak River	155.74 288	PKPdf	PKPdf	01 13 48.1	-3.7	
	baz=115						
H22K	Ishtalitna Cre	155.75 306	PKPdf	PKPdf	01 13 48.5	-3.2	
	baz=104						
I21K	Tanana	155.81 304	IAMs_20	IAMs_20	02 26 05.4		
	comp=Z,5μm,20.0s						
I21K	Tanana	155.81 304	PKPdf	PKPdf	01 13 49.0	-2.9	
	baz=105						
CN2	Changchun	155.84 122	PKP	PKPdf	01 13 51.3	-1.3	
CN2			PKPab	sPKPab	01 14 21.5	-0.1	
CN2			PPMZ				
	comp=Z,1μm,7.5s						
CN2			L	L			
	comp=Z,2μm,19.0s						
CN2			L	L			
	comp=Z,2μm,19.0s						
CN2			L	L			
	comp=Z,2μm,17.0s						
SDPT	Sand Point	155.85 277	PKPdf	PKPdf	01 13 48.8	-3.3	
	baz=122						
S14K	Fog Glacier	155.88 280	PKPdf	PKPdf	01 13 49.0	-3.4	
	baz=120						
G22K	Bettles	156.02 308	PKPdf	PKPdf	01 13 48.7	-3.4	
	baz=101						
D23K	Nanushuk River	156.04 313	PKPdf	PKPdf	01 13 49.4	-2.7	
	baz=97						
N18K	Kilae Creek	156.08 292	IAMs_20	IAMs_20	02 25 53.8		
	comp=Z,3μm,21.0s						
N18K	Kilae Creek	156.08 292	PKPdf	PKPdf	01 13 48.7	-3.6	
	baz=112						
C23K	Ikillik River	156.12 315	PKPdf	PKPdf	01 13 49.5	-2.6	
	baz=96						
L19K	White Mountain	156.15 296	PKPdf	PKPdf	01 13 50.0	-2.5	
	baz=110						
K20K	Telida	156.18 299	IAMs_20	IAMs_20	02 37 47.4		
	comp=Z,4μm,20.0s						
K20K	Telida	156.18 299	PKPdf	PKPdf	01 13 50.0	-2.4	
	baz=108						
H21K	Melozitna Rive	156.26 305	IAMs_20	IAMs_20	02 30 00.3		
	comp=Z,4μm,20.0s						
H21K	Melozitna Rive	156.26 305	PKPdf	PKPdf	01 13 48.8	-3.7	
	baz=103						
O17K	Koliganek Bris	156.28 289	PKPdf	PKPdf	01 13 49.9	-2.7	
	baz=114						
E22K	Anaktuvuk Pass	156.34 311	IAMs_20	IAMs_20	02 19 01.6		
	comp=Z,4μm,22.0s						
E22K	Anaktuvuk Pass	156.34 311	PKPdf	PKPdf	01 13 48.7	-3.8	
	baz=98						
M18K	Stony River	156.35 294	PKPdf	PKPdf	01 13 48.4	-4.3	
	baz=111						
F22K	John River	156.38 309	PKPdf	PKPdf	01 13 48.9	-3.7	
	baz=100						
P16K	Nushagak River	156.40 287	PKPdf	PKPdf	01 13 48.8	-4.0	
	baz=115						
J20K	Nowinta River	156.45 301	PKPdf	PKPdf	01 13 49.1	-3.6	
	baz=106						
N17K	Nushagak Hills	156.62 291	IAMs_20	IAMs_20	02 28 14.0		
	comp=Z,5μm,21.0s						
N17K	Nushagak Hills	156.62 291	PKPdf	PKPdf	01 13 49.4	-3.6	
	baz=112						
O16K	Kokwok River B	156.67 288	IAMs_20	IAMs_20	02 25 34.5		
	comp=Z,4μm,21.0s						
O16K	Kokwok River B	156.67 288	PKPdf	PKPdf	01 13 49.1	-4.0	
	baz=114						
G21K	Allakaket	156.72 307	PKPdf	PKPdf	01 13 49.2	-3.8	
	baz=101						
I20K	Naaghedeneel	156.75 302	IAMs_20	IAMs_20	02 23 47.1		
	comp=Z,5μm,21.0s						
I20K	Naaghedeneel	156.75 302	PKPdf	PKPdf	01 13 49.4	-3.7	
	baz=104						
F21K	Alatna River	156.84 308	IAMs_20	IAMs_20	02 27 50.2		
	comp=Z,4μm,19.0s						
F21K	Alatna River	156.84 308	PKPdf	PKPdf	01 13 49.5	-3.7	
	baz=99						
L18K	Granite Mounta	156.98 295	PKPdf	PKPdf	01 13 49.8	-3.7	
	baz=109						
J19K	Poorman	157.03 300	PKPdf	PKPdf	01 13 49.6	-3.9	
	baz=105						
M17K	Holitna River	157.04 293	PKPdf	PKPdf	01 13 50.1	-3.5	
	baz=110						
H20K	Anotleneega Mo	157.07 304	PKPdf	PKPdf	01 13 50.0	-3.5	
	baz=102						
B22K	Teshekpuk Lake	157.11 316	IAMs_20	IAMs_20	02 20 21.1		
	comp=Z,5μm,22.0s						
B22K	Teshekpuk Lake	157.11 316	PKPdf	PKPdf	01 13 49.5	-3.9	
	baz=92						
E21K	Killik River	157.18 312	IAMs_20	IAMs_20	02 40 08.6		
	comp=Z,4μm,22.0s						
E21K	Killik River	157.18 312	PKPdf	PKPdf	01 13 49.9	-3.7	
	baz=96						
O15K	Ungalikthiuk R	157.32 286	PKPdf	PKPdf	01 13 50.3	-3.7	
	baz=114						
N16K	Nishlik Lake	157.32 290	PKPdf	PKPdf	01 13 50.6	-3.4	
	baz=112						
J18K	Innoko River	157.35 298	PKPdf	PKPdf	01 13 50.2	-3.7	
	baz=106						
HIA	Hailar	157.41 105	PKP2	PKPab	01 14 25.2	-0.9	
HIA					02 13 52.9		
HIA	Hailar	157.41 105	PKPdf	PKPdf	01 13 52.9	-1.5	
HIA				PKPab	01 14 25.2	-0.9	
B21K	Ikpikpuk River	157.50 315	IAMs_20	IAMs_20	02 32 28.3		
	comp=Z,4μm,22.0s						
B21K	Ikpikpuk River	157.50 315	PKPdf	PKPdf	01 13 50.3	-3.6	
	baz=92						
C21K	Knifeblade Rid	157.53 313	PKPdf	PKPdf	01 13 50.6	-3.4	
	baz=93						
M16K	Timber Creek	157.61 291	IAMs_20	IAMs_20	02 30 26.1		
	comp=Z,4μm,21.0s						
M16K	Timber Creek	157.61 291	PKPdf	PKPdf	01 13 51.1	-3.2	
	baz=110						
HILR	Hailar Array B	157.61 104	PKP	PKPdf	01 13 54.2	-0.5	
	comp=Z,8.6nm,0.8s,baz=145,slow=5.3,SNR=6.9						
HILR			PKPab	PKPab	01 14 27.2	+0.2	
	comp=Z,91nm,0.8s,baz=222,slow=3.0,SNR=25						
A22K	Sinclair Lake	157.63 318	PKPdf	PKPdf	01 13 50.5	-3.5	
	baz=89						
L17K	Donlin	157.67 294	PKPdf	PKPdf	01 13 50.6	-3.7	
	baz=108						
F20K	Avaraart Lake	157.68 308	IAMs_20	IAMs_20	02 38 26.0		
	comp=Z,5μm,22.0s						
F20K	Avaraart Lake	157.68 308	PKPdf	PKPdf	01 13 50.3	-3.9	
	baz=98						
H19K	Roundabout Mou	157.72 304	PKPdf	PKPdf	01 13 50.4	-3.9	
	baz=101						
GCSA	Galena City Sc	157.74 301	PKPdf	PKPdf	01 13 50.9	-3.3	
	baz=103						
AKUT	Akutan	157.79 271		PKPab	01 14 27.7	+0.1	
N15K	Kwethluk River	157.83 289	IAMs_20	IAMs_20	02 28 59.0		
	comp=Z,4μm,22.0s						
N15K	Kwethluk River	157.83 289	PKPdf	PKPdf	01 13 51.2	-3.3	
	baz=112						
K17K	Iditarod	157.84 296	PKPdf	PKPdf	01 13 51.1	-3.5	
	baz=107						
E20K	Nigu River	157.98 311	PKPdf	PKPdf	01 13 50.9	-3.7	
	baz=94						
UNV	Unalaska Valle	157.99 269	PKPdf	PKPdf	01 13 51.0	-3.9	
	baz=125						
O14K	Tigyukauivet M	158.03 286	PKPdf	PKPdf	01 13 51.0	-3.8	
	baz=114						
L16K	Owhat River	158.07 293	IAMs_20	IAMs_20	02 30 36.3		
	comp=Z,4μm,21.0s						
L16K	Owhat River	158.07 293	PKPdf	PKPdf	01 13 51.1	-3.7	
	baz=108						
G19K	Purcell Mounta	158.08 305	PKPdf	PKPdf	01 13 50.8	-3.9	
	baz=99						
A21K	Barrow	158.15 319	PKPdf	PKPdf	01 13 50.5	-4.1	
	baz=86						
D20K	Etivluk River	158.17 312	PKPdf	PKPdf	01 13 51.0	-3.8	
	baz=93						
MDJ	Mudanjiang	158.20 127		PKPdf	01 13 54.0	-1.6	
MDJ	Mudanjiang	158.20 127	IAMs_20	IAMs_20	02 29 06.0		
	comp=Z,4μm,20.0s						
MDJ	Mudanjiang	158.20 127	PKP	PKPdf	01 13 55.3	-0.2	
MDJ			pPKP	sPKPdf	01 13 58.5	+0.4	
MDJ			PP	PP	01 18 11.0	+1.1	
MDJ			SS	SS	01 38 07.5	-1.9	
MDJ			PPMZ				
	comp=Z,2μm,7.6s						
MDJ			L	L			
	comp=Z,2μm,22.0s						
MDJ			L	L			
	comp=Z,2μm,23.9s						
MDJ			L	L			
	comp=Z,6μm,23.3s						
BNX	BinXian	158.23 121	⇓PKP	PKPdf	01 13 53.5	-2.0	
BNX			PP	PP	01 18 10.0	-0.1	
BNX			SS	SS	01 38 11.0	+1.2	
BNX			PPMZ				
	comp=Z,2μm,7.3s						
BNX			L	L			
	comp=Z,3μm,17.8s						
BNX			L	L			
	comp=Z,2μm,16.5s						
BNX			L	L			
	comp=Z,3μm,18.1s						
M15K	Kasigluk River	158.29 290	PKPdf	PKPdf	01 13 51.1	-4.0	
	baz=110						
E19K	Redstone River	158.31 309	PKPdf	PKPdf	01 13 51.0	-4.0	
	baz=96						
J17K	VABM Dome	158.36 297	PKPdf	PKPdf	01 13 51.1	-4.0	
	baz=104						
B20K	Meade River	158.38 316	IAMs_20	IAMs_20	02 21 54.2		
	comp=Z,4μm,21.0s						
B20K	Meade River	158.38 316	PKPdf	PKPdf	01 13 50.8	-4.1	
	baz=89						
H18K	Honhosa River	158.44 302	IAMs_20	IAMs_20	02 37 27.8		
	comp=Z,3μm,21.0s						
H18K	Honhosa River	158.44 302	PKPdf	PKPdf	01 13 51.2	-4.0	
	baz=101						
F19K	Shaleruckik Mo	158.45 307	IAMs_20	IAMs_20	02 41 12.9		
	comp=Z,4μm,20.0s						
F19K	Shaleruckik Mo	158.45 307	PKPdf	PKPdf	01 13 51.2	-3.9	
	baz=97						
N14K	Kuskakwak Cree	158.48 287	PKPdf	PKPdf	01 13 51.4	-4.0	
	baz=112						
G18K	Tagagawik	158.68 304	PKPdf	PKPdf	01 13 51.6	-3.9	
	baz=98						
D19K	Kuna River	158.71 311	PKPdf	PKPdf	01 13 51.5	-3.9	
	baz=92						
USRK	Ussuriysk Ar.	158.76 131	PKP	PKPdf	01 13 56.3	+0.1	
	comp=Z,8.3nm,1.1s,baz=255,slow=2.8,SNR=5.0						
USRK			PKPab	PKPab	01 14 31.5	-0.6	
	comp=Z,23nm,0.8s,baz=213,slow=5.0,SNR=11						
USRK	Ussuriysk Ar.	158.76 131	PKIKP	PKPdf	01 13 55.1	-1.1	
USRK	Ussuriysk Ar.	158.76 131		PKPdf	01 13 55.1	-1.1	
M14K	Bethel	158.90 289	PKPdf	PKPdf	01 13 51.7	-4.1	
	baz=110						
L15K	Ungalak Mounta	158.97 292	PKPdf	PKPdf	01 13 51.9	-4.0	
	baz=108						
J16K	Anvik River	159.00 297	PKPdf	PKPdf	01 13 52.1	-3.8	
	baz=104						
H17K	Granite Mounta	159.05 301	PKPdf	PKPdf	01 13 52.0	-3.9	
	baz=100						
K15K	Wolf Creek Mou	159.16 294	IAMs_20	IAMs_20	02 31 47.3		
	comp=Z,4μm,21.0s						
K15K	Wolf Creek Mou	159.16 294	PKPdf	PKPdf	01 13 52.2	-4.0	
	baz=106						
F18K	Selawik	159.17 306	PKPdf	PKPdf	01 13 52.3	-3.6	
	baz=96						
I17K	Unalakleet	159.18 298	IAMs_20	IAMs_20	02 30 45.6		
	comp=Z,5μm,21.0s						
I17K	Unalakleet	159.18 298	PKPdf	PKPdf	01 13 52.2	-3.9	
	baz=102						
C19K	Lookout Ridge	159.25 313	PKPdf	PKPdf	01 13 52.4	-3.7	
	baz=89						
L14K	Kuka Creek	159.42 291	IAMs_20	IAMs_20	02 32 15.0		
	comp=Z,3μm,21.0s						
L14K	Kuka Creek	159.42 291	PKPdf	PKPdf	01 13 52.5	-3.9	
	baz=108						
M13K	Dall Lake	159.43 288	IAMs_20	IAMs_20	02 32 51.4		
	comp=Z,4μm,22.0s						
M13K	Dall Lake	159.43 288	PKPdf	PKPdf	01 13 52.0	-4.4	
	baz=110						
G17K	Kiwalik Mounta	159.44 303	PKPdf	PKPdf	01 13 52.0	-4.3	
	baz=98						
BOD	Bodaibo	159.46 80	ePKIKP	PKPdf	01 13 54.7	-1.9	
BOD			pmax	pmax			
	comp=Z,40nm,2.0s						
E18K	Tukpahlearik C	159.60 308	PKPdf	PKPdf	01 13 52.3	-4.1	
	baz=93						
A19K	Wainwright	159.71 316	PKPdf	PKPdf	01 13 52.6	-3.9	
	baz=85						
F17K	Baldwin Pennin	159.79 305	PKPdf	PKPdf	01 13 52.6	-4.1	
	baz=95						
C18K	Utukok River	159.84 312	PKPdf	PKPdf	01 13 52.4	-4.4	
	baz=89						
H16K	Elim	159.98 300	PKPdf	PKPdf	01 13 52.5	-4.4	
	baz=99						
ERM	Erimo	160.06 155	IAMs_20	IAMs_20	02 39 49.5		
	comp=Z,4μm,20.0s						
ERM	Erimo	160.06 155	PKP	PKPdf	01 14 01.8	+4.0	
E17K	Hotham Inlet	160.06 307	PKPdf	PKPdf	01 13 52.6	-4.4	
	baz=93						
G16K	Koyuk River	160.13 302		PKPdf	01 13 55.4	-1.7	
G16K	Koyuk River	160.13 302	PKPdf	PKPdf	01 13 53.1	-4.1	
	baz=97						
J14K	Nanvaranak Lak	160.19 294	PKPdf	PKPdf	01 13 52.6	-4.6	
	baz=104						
K13K	Kusilvak Mount	160.49 291	PKPdf	PKPdf	01 13 53.2	-4.4	
	baz=105						
RDOG	Red Dog Mine	160.49 310	PKPdf	PKPdf	01 13 52.7	-4.8	
	baz=89						
D17K	Noatak River	160.56 309	PKPdf	PKPdf	01 13 52.8	-4.7	
	baz=90						
C17K	DeLong Mountai	160.57 311	PKPdf	PKPdf	01 13 53.2	-4.4	
	baz=88						
M11K	Mekoryuk	160.76 286	PKPdf	PKPdf	01 13 52.7	-5.2	
	baz=109						
ATKA	Atka Island	160.76 258	P	PKPdf	01 13 59.4	+1.2	
ATKA	Atka Island	160.76 258		PKPdf	01 13 57.0	-1.2	
G15K	Niukluk	160.79 301	PKPdf	PKPdf	01 13 53.1	-4.8	
	baz=97						
F15K	North Star Dit	161.11 303	PKPdf	PKPdf	01 13 53.9	-4.3	
	baz=94						
ANM	Nome	161.31 299	PKPdf	PKPdf	01 13 54.0	-4.5	
	baz=97						
C16K	Lisburne Hills	161.39 311	PKPdf	PKPdf	01 13 53.6	-4.8	
	baz=86						
SPIA	Saint Paul Isl	161.50 275	PKPdf	PKPdf	01 13 53.8	-5.1	
	baz=117						
GSTR	Great Sitkin T	161.59 255	PKPab	PKPab	01 14 44.4	+0.2	
HEH	HeiHe	161.66 113	PKP	PKPdf	01 13 57.8	-1.4	
HEH			SS	SS	01 38 36.5	-10	
HEH			PPMZ				
	comp=Z,2μm,8.3s						
HEH			L	L			
	comp=Z,3μm,19.3s						
HEH			L	L			
	comp=Z,3μm,19.0s						
HEH			L	L			
	comp=Z,5μm,18.0s						
F14K	Arctic Creek	161.79 302	PKPdf	PKPdf	01 13 54.0	-4.9	
	baz=94						
ASAJ	Asahikawa	161.94 152	PKP	PKPdf	01 14 00.3	+0.6	
	comp=Z,9.9nm,1.0s,baz=244,slow=3.2,SNR=5.9						
ASAJ			PKPab	pPKPab	01 14 47.1	-0.4	
	comp=Z,40nm,1.1s,baz=230,slow=2.8,SNR=7.4						
ASAJ	Asahikawa	161.94 152	PKIKP	PKPdf	01 13 58.6	-1.2	
JKA	Kamikawa-asahi	161.94 152	PKPdf	PKPdf	01 13 58.6	-1.2	
TNA	Tin City	162.46 302	PKPdf	PKPdf	01 13 54.7	-4.9	
	baz=92						
YUK	Yuzh-Kuril'sk	162.52 159	*i* PKP2	PKPab	01 14 49.8	+1.4	
YUK					01 18 34.1		
YUK			SS	SS	01 38 55.3	+1.1	
ZEA	Zeya	163.88 104	*i* PKIKP	PKPdf	01 14 00.2	-1.1	
ZEA			*e*		01 14 53.5		
ZEA			*e*		01 18 43.9		
ZEA			pmax	pmax			
	comp=E,100nm,5.5s						
ZEA			pmax	pmax			
	comp=N,100nm,4.4s						
ZEA			pmax	pmax			
	comp=Z,1μm,7.4s						
ZEA			pmax	pmax			
	comp=Z,10.0nm,1.2s						
ZEA			pmax	pmax			
	comp=E,300nm,9.9s						
ZEA			pmax	pmax			
	comp=N,200nm,7.2s						
ZEA			pmax	pmax			
	comp=Z,900nm,10.9s						
GAMB	Gambell	163.99 296	PKPdf	PKPdf	01 13 56.5	-4.6	
	baz=95						
KUR	Kuril'sk	164.00 163	*e*PKIKP	PKPdf	01 14 03.9	+2.2	
KUR					01 18 40.6		
KUR			PPP	PPP	01 22 29.1		
KUR			SSS	SSS	01 45 28.0		
KUR			pmax	pmax			
	comp=Z,2μm,12.3s						
YSS	Yuzhno-Sakhali	164.64 149	P	PKPdf	01 14 03.3	+1.1	
YSS	Yuzhno-Sakhali	164.64 149	*i* PKIKP	PKPdf	01 14 00.6	-1.6	
YSS			*e*		01 14 56.7		
YSS			*e*		01 18 41.8		
YSS			pmax	pmax			
	comp=Z,30nm,1.3s						
YSS			pmax	pmax			
	comp=Z,2μm,8.8s						
YSS			pmax	pmax			
	comp=Z,40nm,1.1s						
YSS			pmax	pmax			
	comp=Z,1μm,8.7s						
YSS			pmax	pmax			
	comp=Z,2μm,7.5s						
YSS			pmax	pmax			
	comp=N,800nm,10.0s						
YSS	Yuzhno-Sakhali	164.64 149		PKPdf	01 14 01.5	-0.7	
TIXI	Tiksi	165.19 32	PP	PP	01 18 49.4	+2.5	
	comp=N,44nm,1.1s,baz=315,slow=1.4,SNR=4.9						
GRNR	Gornyy	165.89 127	⇓*i* PKIKP	PKPdf	01 14 02.3	-0.9	
GRNR			pmax	pmax			
	comp=Z,8.0nm,1.2s						
UGL	Uglegorsk	166.40 144	*e*PKIKP	PKPdf	01 14 02.8	-0.8	
UGL			*e*		01 18 55.6		
SHEM	Shemya Is, Ala	166.52 242	PKPab	PKPab	01 15 05.6	-0.2	
	comp=Z,181nm,1.1s,baz=153,slow=2.3,SNR=7.2						
TYV	Tymovskoe	168.16 142	*e*PKIKP	PKPdf	01 14 04.9	+0.1	
TYV			pmax	pmax			
	comp=Z,21nm,1.3s						
TYV			pmax	pmax			
	comp=Z,2μm,5.0s						
YAK	Yakutsk	168.17 73	PP	PP	01 19 02.8	+0.1	
	comp=Z,11nm,0.4s,baz=278,slow=4.7,SNR=4.9						
YAK	Yakutsk	168.17 73	*e*PKIKP	PKPdf	01 14 02.6	-1.8	
YAK			*e*		01 18 59.8		
YAK			pmax	pmax			
	comp=Z,24nm,1.2s						
YAK			pmax	pmax			
	comp=N,3.0nm,1.1s						
YAK			pmax	pmax			
	comp=E,6.0nm,1.2s						
YAK			pmax	pmax			
	comp=Z,514nm,4.2s						
YAK			pmax	pmax			
	comp=N,244nm,6.1s						
YAK			pmax	pmax			
	comp=E,327nm,6.9s						
YAK	Yakutsk	168.17 73	PKPdf	PKPdf	01 14 02.9	-1.6	
NKL	Nikolayevsk	169.39 130	*e*PKIKP	PKPdf	01 14 05.1	-0.4	
NKL			*e*		01 14 05.1		
NKL			*e*		01 19 06.9		
NKL			*e*SSS	SSS	01 46 41.5		
PET	Petropavlovsk	171.90 199		PKPdf	01 14 05.2	-1.7	
PET				PKPab	01 15 30.0	+0.5	
PETK	Petropavlovsk-	172.12 195	PKP	PKPdf	01 14 05.8	-1.2	
	comp=E,35nm,1.1s,baz=159,slow=6.0,SNR=20						
PETK			PKPab	PKPab	01 15 30.2	-0.3	
	comp=E,19nm,0.9s,baz=171,slow=6.4,SNR=8.3						
PETK			PP	PP	01 19 24.9	+2.9	
	comp=E,12nm,0.9s,baz=144,slow=2.7,SNR=6.5						
PETK	Petropavlovsk-	172.12 195		PKPdf	01 14 05.5	-1.5	
PETK			PKPab	PKPab	01 15 29.3	-1.3	
MA2	Magadan	177.90 122	PKP	PKPdf	01 14 06.6	-1.9	
	comp=E,4.0nm,0.5s,baz=230,slow=16,SNR=1.5						
MA2			PKPab	PKPab	01 15 54.9	-1.3	
	comp=E,22nm,0.9s,baz=206,slow=6.9,SNR=7.2						
MA2			PP	PP	01 19 48.1	-2.2	
	comp=E,20nm,1.1s,baz=251,slow=4.6,SNR=7.1						
MA2	Magadan	177.90 122	PKIKP	PKPdf	01 14 06.7	-1.7	
MA2					01 15 54.6		
MA2	Magadan	177.90 122		PKPdf	01 14 06.7	-1.7	
MA2			PKPab	PKPab	01 15 54.6	-1.5	

JMA 26 01:12:14.7±0.0, 33°.3N±0°.1×131°.4E±0°.2, h5km, MV1.7/20, NORTHERN OITA PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OIT2	Oita 2	0.02	150	*i* P	Pg	01 12 15.7	-0.1
OIT2				S	Sg	01 12 16.2	-0.3
JBEP	Beppuamama	0.05	326	*i* P	Pg	01 12 16.2	+0.1
JBEP				S	Sg	01 12 17.1	-0.1
JUS	Usuki	0.34	131	*i* P	Pg	01 12 21.4	0.0
JUS				S	Sg	01 12 26.1	+0.1
JKI	Kunimi	0.35	18	P	Pg	01 12 22.0	+0.4
JKI				*e*S	Sg	01 12 27.0	+0.7

*IDC **26** 01:14:25.6±2.7, 46°.28N×152°.22E, h0km, mb3.9/4, mbtmp3.9/5, ML2.1/1, MS4.3/2, Error ellipse: s-maj=71.5km s-min=36.9km az=1.0*

*SKHL **26** 01:14:41.5±0.0, 45°.30N×153°.40E, h33km±7km*

ISC 26 01:14:41.6±1.4, 47°.2N±0°.2×152°.5E±0°.2, h100km, n22, σ3°27/15, mb3.9/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REI	Reidovoe	3.66	241	*e*P	Pn	01 15 38.4	+2.2
REI				AMB	AMB	01 15 40.5	
	50nm,0.5s						
REI				*e*S	Sn	01 16 21.1	+2.7
REI				A	A	01 16 34.9	
	30nm,0.2s						
REI				A	A	01 16 34.9	
	30nm,0.2s						
KUR	Kuril'sk	3.77	241	*e*P	Pn	01 15 40.1	+2.5
KUR				AMB	AMB	01 15 45.8	
	50nm,0.4s						
KUR				*e*S	Sn	01 16 22.9	+1.9
KUR				A	A	01 16 36.0	
	90nm,0.4s						
KUR				A	A	01 16 36.0	
	50nm,0.4s						
SHO	Shikotan	5.18	233	*e*P	Pn	01 16 08.5	+12
SHO				AMB	AMB	01 16 12.0	
	20nm,0.3s						
SHO				*e*S	Sn

	70nm,0.4s									
NMR	**Nemuro--Hokkai**	**6.12**	**234**	*eP*		**Pn**	**01 16 07.7**	**-1.7**
NMR				*eS*		**Sn**	**01 17 12.1**	**-5.8**
PETK	**Petropavlovsk-**	**6.82**	**27**	Pn		**Pn**	**01 16 19.1**	**+0.1**
	0.2nm,0.3s,baz=209,slow=13,SNR=1.3							
	12nm,1.1s							
AKK	**Akkeshi**	**6.84**	**236**	*eP*		**Pn**	**01 16 17.2**	**-2.0**
ASAJ	**Asahikawa**	**7.60**	**250**	LR		LR	01 18 59.2	
	comp=Z,2µm,20.6s,baz=357,slow=38							
H11N2	**WAKE ISLAND Hy**	**29.76**	**152**	T		T	01 52 16.2	
	baz=340,slow=76,SNR=57							
H11N1	**WAKE ISLAND Hy**	**29.77**	**152**	T		T	01 52 17.3	
	baz=340,slow=76,SNR=51							
H11N3	**WAKE ISLAND Hy**	**29.78**	**152**	T		T	01 52 18.4	
	baz=340,slow=76,SNR=44							
H11S1	**WAKE ISLAND Hy**	**30.84**	**153**	T		T	01 53 38.5	
	baz=341,slow=76,SNR=122							
H11S3	**WAKE ISLAND Hy**	**30.85**	**153**	T		T	01 53 46.2	
	baz=341,slow=76,SNR=67							
H11S2	**WAKE ISLAND Hy**	**30.86**	**153**	T		T	01 53 49.5	
	baz=341,slow=76,SNR=69							
LZDM	**Lanzhou Array**	**37.66**	**271**	LR		LR	01 37 14.9	
	comp=Z,772nm,21.0s,baz=260,slow=37							
MKAR	**Makanchi Array**	**46.41**	**297**	P		**P**	**01 22 55.2**	**-2.7**
	1.0nm,0.8s,baz=64,slow=6.6,SNR=2.1							
	1.0nm,0.8s							
FINES	**FINESS Array B**	**63.51**	**334**	P		**P**	**01 25 01.4**	**+0.8**
	2.7nm,1.1s,baz=27,slow=7.6,SNR=4.0							
	2.7nm,1.1s							
HFS	**Hagfors**	**67.94**	**339**	P		**P**	**01 25 30.4**	**+1.3**
	1.6nm,0.7s,baz=14,slow=6.5,SNR=2.4							
	1.6nm,0.7s							
TXAR	**Lajitas Array**	**77.63**	**60**	P		**P**	**01 26 27.5**	**+0.4**
	0.3nm,0.4s,baz=326,slow=8.1,SNR=7.6							
	0.3nm,0.4s							
H03N2	**Juan Fernandez**	**139.14**	**89**	T		T	04 08 57.4	
	baz=309,slow=77,SNR=7.2							
H03N1	**Juan Fernandez**	**139.16**	**89**	T		T	04 08 58.7	
	baz=309,slow=77,SNR=9.8							
H03N3	**Juan Fernandez**	**139.16**	**89**	T		T	04 09 04.6	
	baz=309,slow=77,SNR=8.4							

*IDC **26** 01:15:26.3±1.1, 4°.61S×126°.20E, h399km±12km, mb3.4/9, mbtmp4.3/13, Error ellipse: s-maj=18.2km s-min=8.6km az=83.0*
*NEIC **26** 01:15:28.5±2.2, 4°.59S±0°.10×126°.2E±0°.1, h414km±10km, mb4.1/11, Error ellipse: s-maj=21.6km s-min=14.3km az=86.0*
ISC 26 01:15:26.7±0.5, 4°.58S±0°.05×126°.23E±0°.08, h400km, n35, σ1§32/40, mb3.8/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**5.44**	**12**			**Pn**	**01 16 55.4**	**+2.0**
SOEI	**Soe**	**5.50**	**201**	P		**Pn**	**01 16 56.5**	**+2.4**
BATI	**Baumata**	**6.14**	**204**	P		**Pn**	**01 16 59.5**	**-1.5**
	56nm,0.3s,baz=27,slow=2.3,SNR=7.0							
BATI				S		**S**	**01 18 14.1**	**-3.5**
	45nm,0.4s,baz=24,slow=20,SNR=3.8							
FAKI	**Fak Fak**	**6.23**	**75**			**Pn**	**01 17 02.6**	**+0.6**
SIJI	**Sorong**	**6.24**	**54**	P		**Pn**	**01 17 02.6**	**+0.6**
	18nm,0.6s,baz=232,slow=18,SNR=6.3							
SIJI				S		**S**	**01 18 18.1**	**-1.6**
	5.2nm,0.3s,baz=240,slow=20,SNR=1.6							
TOLI2	**Tolitoli**	**7.85**	**316**			**P**	**01 17 21.0**	**+0.5**
MTN	**Manton Dam**	**9.53**	**150**			**Pn**	**01 17 40.3**	**+0.9**
KNRA	**Kununurra**	**11.30**	**167**			**Pn**	**01 18 00.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**13.45**	**182**	P		**P**	**01 18 23.6**	**+1.2**
	1.8nm,0.4s,baz=0.0,slow=12,SNR=12							
FITZ	**Fitzroy Crossi**	**13.45**	**182**	P		**P**	**01 18 23.8**	**+1.5**
WRA	**Warramunga Arr**	**17.19**	**153**	P		**P**	**01 19 02.6**	**-0.2**
	8.5nm,0.5s,baz=333,slow=9.2,SNR=46							
WRA				S		**S**	**01 21 59.3**	**-2.4**
	1.9nm,0.7s,baz=331,slow=19,SNR=7.4							
WRA	**Warramunga Arr**	**17.19**	**153**	P		**P**	**01 19 02.4**	**-0.4**
WR8	**Warramunga Arr**	**17.28**	**153**	P		**P**	**01 19 04.3**	**+0.6**
WR8				IAmb		IAmb	01 19 07.3	
	comp=Z,7.0nm,0.8s							
COEN	**Coen**	**19.13**	**120**	P		**P**	**01 19 23.0**	**-0.2**
COEN				IAmb		IAmb	01 19 24.5	
	comp=Z,16nm,1.2s							
AS31	**Alice Springs**	**20.37**	**159**	P		**P**	**01 19 36.3**	**+1.7**
AS31				IAmb		IAmb	01 19 37.1	
	comp=Z,3.6nm,0.9s							
ASAR	**Alice Springs**	**20.37**	**159**	P		**P**	**01 19 35.6**	**+1.0**
	comp=Z,6.6nm,0.5s,baz=333,slow=8.7,SNR=127							
ASAR				S		**S**	**01 22 54.4**	**-2.6**
	comp=Z,1.4nm,0.9s,baz=337,slow=21,SNR=8.4							
ASAR				PcP		**PcP**	**01 23 29.3**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=346,slow=1.8,SNR=1.1							
	comp=Z,6.6nm,0.5s							
ASAR	**Alice Springs**	**20.37**	**159**	P		**P**	**01 19 36.4**	**+1.8**
FORT	**Forrest**	**26.12**	**176**	P		**P**	**01 20 27.5**	**+1.2**
FORT				IAmb		IAmb	01 20 29.7	
	comp=Z,13nm,1.1s							
BBOO	**Buckleboo**	**29.55**	**163**	P		**P**	**01 20 57.6**	**+1.1**
BBOO				IAmb		IAmb	01 21 09.5	
	comp=Z,7.7nm,1.0s							
STKA	**Stephens Creek**	**30.74**	**154**	P		**P**	**01 21 08.0**	**+1.0**
	comp=Z,3.0nm,0.3s,baz=330,slow=11,SNR=8.4							
	comp=Z,3.0nm,0.3s							
MJAR	**Matsushiro Arr**	**42.42**	**14**	P		**P**	**01 22 43.2**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=187,slow=9.3,SNR=4.0							
	comp=Z,0.8nm,0.5s							
USRK	**Ussuriysk Ar.**	**48.84**	**6**	P		**P**	**01 23 32.4**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=192,slow=8.5,SNR=4.6							
	comp=Z,1.6nm,0.5s							
HILR	**Hailar Array B**	**54.21**	**355**	P		**P**	**01 24 13.1**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=179,slow=10,SNR=2.0							
	comp=Z,1.3nm,0.3s							
SONM	**Songino Array**	**55.03**	**344**	P		**P**	**01 24 18.0**	**-0.7**
	comp=Z,2.9nm,1.1s,baz=151,slow=9.1,SNR=2.1							
	comp=Z,2.9nm,1.1s							
KHZ	**Kahutara**	**56.37**	**139**	P		**P**	**01 24 28.7**	**+0.6**
CASY	**Casey**	**62.56**	**187**	P		**P**	**01 25 10.4**	**+1.0**
CASY				IAmb		IAmb	01 25 41.2	
	comp=Z,5.7nm,1.4s							
PEA0B	**Petropavlovsk-**	**63.30**	**21**	P		**P**	**01 25 14.9**	**+0.4**
PETK	**Petropavlovsk-**	**63.30**	**21**	P		**P**	**01 25 14.7**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=222,slow=7.7,SNR=6.6							
	comp=Z,1.6nm,0.6s							
PETK	**Petropavlovsk-**	**63.30**	**21**	P		**P**	**01 25 15.0**	**+0.6**
MKAR	**Makanchi Array**	**64.18**	**328**	P		**P**	**01 25 19.8**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=123,slow=7.1,SNR=13							
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**64.18**	**328**	P		**P**	**01 25 19.7**	**-0.6**
KURBB	**Kurchatov Arra**	**68.52**	**330**	P		**P**	**01 25 47.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=128,slow=5.3,SNR=6.2							
	comp=Z,0.8nm,0.8s							
AB31	**Akbulak array**	**78.30**	**322**	P		**P**	**01 26 43.0**	**-0.8**
AB31				IAmb		IAmb	01 26 44.8	
	comp=Z,9.0nm,1.4s							
ABKAR	**Akbulak array**	**78.30**	**322**	P		**P**	**01 26 43.0**	**-0.7**
QSPA	**South Pole Qui**	**85.38**	**180**	P		**P**	**01 27 19.0**	**-1.0**

*ISK **26** 01:20:59.4, 36°.01N×33°.32E, h4km, ML2.6/22*
*AFAD **26** 01:20:59.5, 35°.97N×33°.36E, h6km±1km, ML1.9*
*NIC **26** 01:21:00.5, 35°.85N×33°.31E, h17km±1km, Ml1.7/7*
ISC 26 01:20:59.3±0.9, 35°.95N±0°.02×33°.31E±0°.02, h10km±8km, n44, σ0§69/67, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YORU	**Yoruktepe-Mers**	**0.22**	**22**	Pg		**Pg**	**01 21 03.5**	**-0.4**
YORU				Sg		**Sg**	**01 21 06.6**	**-0.4**
TEKE	**Tekeli-Mersin**	**0.25**	**321**	Pg		**Pg**	**01 21 04.5**	**+0.1**
TEKE				Sg		**Sg**	**01 21 08.5**	**+0.7**
AKK1	**Akkuyu-Mersin**	**0.27**	**45**	Pg		**Pg**	**01 21 04.8**	**0.0**
AKK2	**Akkuyu-Mersin**	**0.27**	**46**	Pg		**Pg**	**01 21 04.8**	**0.0**
AKK2				Sg		**Sg**	**01 21 08.3**	**-0.2**
OREN	**Orenkoy-Mersin**	**0.28**	**26**	Pg		**Pg**	**01 21 04.2**	**-0.9**
BECE	**Buyukeceli-Mer**	**0.29**	**45**	Pg		**Pg**	**01 21 04.9**	**-0.3**
BECE				Sg		**Sg**	**01 21 09.4**	**+0.3**
BECE				Sg		**Sg**	**01 21 09.4**	**+0.3**
GULN	**MERSIN_Gulnar**	**0.30**	**40**	P		**P**	**01 21 05.0**	**-0.4**
GULN				S		**Sg**	**01 21 08.9**	**-0.6**
TEPK	**Tepekoy-MERSIN**	**0.33**	**35**	Pg		**Pg**	**01 21 05.3**	**-0.7**
TEPK				Sg		**Sg**	**01 21 09.9**	**-0.6**
YESI	**Yesilovacik-Me**	**0.37**	**48**	Pg		**Pg**	**01 21 06.2**	**-0.4**
YESI				Sg		**Sg**	**01 21 11.5**	**+0.1**
TISA	**Tisan-Mersin**	**0.37**	**55**	Pg		**Pg**	**01 21 06.5**	**-0.1**
TISA				Sg		**Sg**	**01 21 11.5**	**0.0**
BERE	**Bereket-Mersin**	**0.40**	**350**	Pg		**Pg**	**01 21 06.9**	**-0.4**
BERE				Sg		**Sg**	**01 21 12.1**	**-0.6**
KARG	**Kargicak-Mersi**	**0.41**	**52**	Pg		**Pg**	**01 21 07.5**	**+0.1**
IKL	**Isikli**	**0.42**	**47**	Pg		**Pg**	**01 21 07.4**	**-0.2**
TEVE	**Tevekalti-Mers**	**0.50**	**13**	Pg		**Pg**	**01 21 08.3**	**-0.7**
TEVE				Sg		**Sg**	**01 21 15.2**	**-0.4**
KEBE	**Keben-Mersin**	**0.59**	**33**	Pg		**Pg**	**01 21 10.5**	**-0.4**
KEBE				Sg		**Sb**	**01 21 19.2**	**-1.2**
SILI	**Silifke-Mersin**	**0.65**	**50**	Pg		**Pg**	**01 21 11.6**	**-0.3**
SILI				Sg		**Sb**	**01 21 20.9**	**-1.0**
SLFK	**Silifke-Mersin**	**0.68**	**49**	Pg		**Pg**	**01 21 12.5**	**0.0**
LFK	**Lefkose**	**0.69**	**165**	Pg		**Pb**	**01 21 14.6**	**+1.0**
ERMK	**Ermenek**	**0.76**	**335**	P		**Pn**	**01 21 17.2**	**+0.8**
ERMK				S		**Sn**	**01 21 27.5**	**-0.5**
ERMK				IAML			01 21 30.0	
	comp=N,98nm,0.5s							
ERMK				IAML			01 21 30.0	
	comp=E,81nm,0.5s							
ATHAL	**Athalassa**	**0.81**	**175**	P		**Pg**	**01 21 14.0**	**-1.0**
ATHAL				S		**Sg**	**01 21 24.5**	**-1.0**
ATHAL				AML	AML		01 21 29.1	
	0.2nm,0.4s							
ATHAL				AML	AML		01 21 39.9	
	0.3nm,0.5s							
EREN	**Erenkoy**	**0.82**	**121**	Pg		**Pb**	**01 21 16.4**	**+0.7**
EREN	**Erenkoy**	**0.82**	**121**	P		**Pn**	**01 21 18.3**	**+1.3**
GAZI	**Gazipasa**	**0.85**	**290**	Pg		**Pb**	**01 21 16.4**	**+0.2**
GAZI	**Gazipasa**	**0.85**	**290**	P		**Pb**	**01 21 16.8**	**+0.6**
GAZI				S		**Sg**	**01 21 27.0**	**+0.2**
GAZI				IAML			01 21 32.0	
	comp=E,33nm,0.5s							
XYLS	**Xyliatos**	**0.96**	**193**	P		**Pg**	**01 21 17.0**	**-0.8**
XYLS				S		**Sg**	**01 21 29.9**	**-0.4**
XYLS				AML	AML		01 21 31.7	
	0.1nm,0.2s							
XYLS				AML	AML		01 21 34.8	
	0.1nm,0.2s							
MVOU	**Mavrovouni**	**0.97**	**164**	P		**Pg**	**01 21 17.3**	**-0.7**
MVOU				S		**Sg**	**01 21 30.1**	**-0.5**
MVOU				AML	AML		01 21 31.1	
	0.1nm,0.2s							
MVOU				AML	AML		01 21 31.4	
	0.1nm,0.1s							
ALFC	**Alefka**	**0.98**	**216**	P		**Pg**	**01 21 17.4**	**-0.8**
ALFC				S		**Sg**	**01 21 31.1**	**+0.2**
ALFC				AML	AML		01 21 31.8	
	0.1nm,0.3s							
ALFC				AML	AML		01 21 36.7	
	0.1nm,0.3s							
CSS	**Mathiatis**	**0.99**	**179**	P		**Pg**	**01 21 17.4**	**-0.9**
CSS				S		**Sg**	**01 21 30.9**	**-0.3**
CSS				AML	AML		01 21 33.3	
CSS				AML	AML		01 21 33.5	
TROD	**Troodos**	**1.06**	**200**	P		**Pg**	**01 21 19.3**	**-0.6**
TROD				S		**Sg**	**01 21 34.1**	**+0.4**
TROD				AML	AML		01 21 38.4	
TROD				AML	AML		01 21 39.2	
HDMB	**Hadim**	**1.21**	**327**	Pn		**Pg**	**01 21 22.2**	**-0.4**
KRMN	**Karaman**	**1.22**	**358**	Pn		**Pg**	**01 21 22.0**	**-0.8**
AKMS	**Akamas**	**1.22**	**221**	P		**Pg**	**01 21 21.9**	**-1.0**
AKMS				S		**Sg**	**01 21 38.0**	**-0.7**
AKMS				AML	AML		01 21 39.8	
	0.1nm,1.0s							
AKMS				AML	AML		01 21 40.9	
	0.1nm,0.4s							
KKBE	**Karaman, Kazim**	**1.30**	**347**	P		**Pn**	**01 21 23.8**	**+0.1**
KKBE				S		**Sg**	**01 21 39.5**	**-1.7**
KKBE				IAML			01 21 44.0	
	comp=N,16nm,0.5s							
KERG	**Konya-Eregli**	**1.60**	**24**	P		**Pn**	**01 21 28.6**	**+0.8**
KERG				S		**Sg**	**01 21 50.2**	**-0.7**
KERG				IAML			01 21 53.0	
	comp=N,20nm,0.4s							
KEPZ	**Antalya-Kepez**	**1.67**	**305**	P		**Pg**	**01 21 31.6**	**+0.2**
GULE	**Gulek**	**1.78**	**41**	P		**Pb**	**01 21 31.8**	**-0.3**
SEYD	**Seydisehir-KON**	**1.87**	**321**	Pn		**Pn**	**01 21 32.7**	**+1.1**
SEDI	**Konya, Seydise**	**1.95**	**321**	P		**Pg**	**01 21 36.8**	**+0.1**
KMER	**Konya-Meram**	**1.96**	**338**	P		**Pg**	**01 21 37.3**	**+0.2**
CAYT	**Sariam**	**2.03**	**52**	P		**Pb**	**01 21 36.1**	**-0.2**
KONT	**Konya--Tatoy**	**2.13**	**339**	P		**Pg**	**01 21 39.7**	**-0.5**
ALIN	**Konya, Altinte**	**2.37**	**352**	P		**Pb**	**01 21 43.0**	**+0.9**
DOGA	**KONYA_Doganhis**	**2.52**	**329**	P		Pn	01 21 27.1	-13
HASA	**Hatay-Hassa-Ha**	**2.69**	**72**	P		**Pn**	**01 21 44.5**	**+1.8**

*IDC **26** 01:35:36.2±2.4, 22°.03S×68°.11W, h100km±23km, mb3.0/2, mbtmp3.5/5, Error ellipse: s-maj=30.1km s-min=20.0km az=91.0*
*GUC **26** 01:35:38.4±0.8, 21°.89S×68°.64W, h119km±5km, ML3.3*
ISC 26 01:35:36.6±1.0, 21°.90S±0°.05×68°.46W±0°.09, h112km±11km, n17, σ1§79/30, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB09	**IPOC Station P**	**0.74**	**278**	*eP*		**Pn**	**01 35 56.5**	**+0.8**
PB09				*i* S		**Sn**	**01 36 10.5**	**+0.5**
PB09				IAML			01 36 12.8	
	comp=N,844nm,0.2s							
PB03	**IPOC Station P**	**1.21**	**263**	*eP*		**Pn**	**01 36 00.3**	**-0.1**
PB03				*i* S		**Sn**	**01 36 17.7**	**-0.8**
PB03				IAML			01 36 18.6	
	comp=N,674nm,0.2s							
PB06	**IPOC Station P**	**1.31**	**232**	*eP*		**Pn**	**01 36 02.0**	**+0.4**
PB06				*i* S		**Sn**	**01 36 20.8**	**+0.4**
PB06				IAML			01 36 21.6	
	comp=E,654nm,0.2s							
PB07	**IPOC Station P**	**1.34**	**277**	*eP*		**Pn**	**01 36 01.7**	**-0.1**
PB07				*i* S		**Sn**	**01 36 19.9**	**-1.1**
PB07				IAML			01 36 22.6	
	comp=E,1µm,0.1s							
PB02	**IPOC Station P**	**1.46**	**293**	*eP*		**Pn**	**01 36 02.9**	**-0.3**
PB02				*i* S		**Sn**	**01 36 21.8**	**-1.4**
PB02				IAML			01 36 22.5	
	comp=E,679nm,0.4s							
PB08	**IPOC Station P**	**1.86**	**339**	*eP*		**Pn**	**01 36 09.7**	**+1.3**
PB08				*i* S		**Sn**	**01 36 33.7**	**+1.2**
PB08				IAML			01 36 36.4	
	comp=E,300nm,0.6s							
PB05	**IPOC Station P**	**1.88**	**239**	*eP*		**Pn**	**01 36 07.8**	**-0.5**
PB05				*i* S		**Sn**	**01 36 30.4**	**-2.0**
PB05				IAML			01 36 32.6	
	comp=N,238nm,0.4s							
TA02	**Huaiquique**	**2.25**	**316**	*eP*		**Pn**	**01 36 12.5**	**-0.4**
TA02				*i* S		**Sn**	**01 36 38.7**	**-1.9**
GO01	**Chusmiza**	**2.32**	**343**	*eP*		**Pn**	**01 36 15.1**	**+0.8**
GO01				*i* S		**Sn**	**01 36 44.0**	**+0.9**
PB11	**IPOC Station P**	**2.40**	**332**	*eP*		**Pn**	**01 36 14.6**	**-0.4**
PB11				*i* S		**Sn**	**01 36 43.3**	**-1.1**
PSGCX	**Pisagua**	**2.77**	**325**	*eP*		**Pn**	**01 36 17.6**	**-2.1**
PSGCX				*i* S		**Sn**	**01 36 51.4**	**-1.5**
PB14	**IPOC Station P**	**3.25**	**213**	*eP*		**Pn**	**01 36 25.7**	**-0.7**
PB14				IAML			01 37 03.5	
	comp=E,45nm,0.3s							
LPAZ	**La Paz**	**5.59**	**3**	P		**Pn**	**01 37 00.2**	**+2.2**
	comp=E,5.8nm,0.4s,baz=192,slow=2.2,SNR=79							
LPAZ				S		**Sn**	**01 38 03.9**	**+2.6**
	comp=E,1.5nm,0.7s,baz=180,slow=19,SNR=1.7							
SIV	**San Ignacio**	**9.12**	**51**	P		**Pn**	**01 37 43.7**	**-1.7**
	comp=E,1.3nm,0.5s,baz=237,slow=12,SNR=7.1							
SIV				S		**Sn**	**01 39 21.3**	**-5.1**
	comp=E,0.8nm,0.6s,baz=157,slow=22,SNR=2.2							
CFA	**Coronel Fontan**	**9.67**	**179**	P		**Pn**	**01 37 49.9**	**-2.9**
	comp=E,0.7nm,0.3s,baz=8.7,slow=13,SNR=9.2							
TXAR	**Lajitas Array**	**61.19**	**325**	P		**P**	**01 45 42.5**	**+2.7**
	comp=E,0.1nm,0.4s,baz=142,slow=8.2,SNR=1.4							
	comp=E,0.1nm,0.4s							
TORD	**Torodi Ar. Bea**	**77.09**	**70**	P		**P**	**01 47 17.9**	**-0.3**
	comp=E,0.2nm,0.3s,baz=250,slow=5.0,SNR=5.9							
	comp=E,0.2nm,0.3s							

*FUNV **26** 01:48:34.1, 10°.86N×62°.09W, h91km, MW3.4, Presumed earthquake*
*TRN **26** 01:48:34.5, 10°.87N×62°.12W, h86km, MD3.5, North of the Paria peninsula.*
ISC 26 01:48:35.2±4.6, 10°.9N±0°.1×62°.0W±0°.4, h86km±35km, n10, σ0§57/19, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.52**	**113**	*eP*		**Pn**	**01 48 50.0**	**+0.4**
DMDM				*eS*		**Sn**	**01 49 00.7**	**+0.3**
PSMG	**Mucurapo Girls**	**0.55**	**115**	*eP*		**Pn**	**01 48 49.9**	**0.0**
PSMG				*eS*		**Sn**	**01 49 01.1**	**+0.2**
PSKH	**Kent House, Po**	**0.55**	**114**	*eP*		**Pn**	**01 48 50.0**	**0.0**
PSKH				*eS*		**Sn**	**01 49 01.2**	**+0.3**
TRN	**Trinidad (W)**	**0.67**	**112**	*eP*		**Pn**	**01 48 50.6**	**-0.5**
TRN				*eS*		**Sn**	**01 49 02.4**	**-0.6**
TRN	**Trinidad (W)**	**0.67**	**112**	*eP*		**Pn**	**01 48 51.0**	**-0.1**
TRN				*eS*		**Sn**	**01 49 03.1**	**+0.2**
GRGR	**Grenville**	**1.28**	**17**	*eP*		**Pn**	**01 48 57.3**	**-0.7**
GRGR				*eS*		**Sn**	**01 49 14.8**	**-0.3**
GRGR	**Grenville**	**1.28**	**17**	*eP*		**Pn**	**01 48 57.4**	**-0.6**
GRGR				*eS*		**Sn**	**01 49 15.5**	**+0.3**
GRSS	**Sisters**	**1.45**	**17**	*eP*		**Pn**	**01 48 60.0**	**-0.1**
GRSS				*eS*		**Sn**	**01 49 19.8**	**+0.9**
GCMP	**Grenada, Carri**	**1.68**	**21**	*eS*		**Sn**	**01 49 23.5**	**-0.8**
GCMP	**Grenada, Carri**	**1.68**	**21**	*eP*		**Pn**	**01 49 04.2**	**+1.1**
GCMP				*eS*		**Sn**	**01 49 24.4**	**+0.1**

*IDC **26** 01:53:43.2±1.4, 14°.59S×166°.85E, h32km±8km, mb4.6/31, mbtmp4.8/33, ML3.2/2, MS4.9/4, Error ellipse: s-maj=14.4km s-min=11.6km az=108.0*
*NOU **26** 01:53:44.8, 14°.40S×166°.87E, h53km, mb4.9/37, Vanuatu Islands*
*MOS **26** 01:53:44.2±1.3, 14°.52S×166°.62E, h42km, mb5.4/37, MS5.5/4, Error ellipse: s-maj=8.4km s-min=6.9km az=112.5*
*NEIC **26** 01:53:45.7±1.7, 14°.60S±0°.07×166°.74E±0°.09, h42km±5km, mb5.2/157, Error ellipse: s-maj=12.5km s-min=9.9km az=63.0*
*GFZ **26** 01:53:46.3±0.2, 15°.5S±3°×16°.7E±°, h52km, M5.0/31, mb5.0/31*
ISC 26 01:53:45.7±0.5, 14°.57S±0°.04×166°.68E±0°.05, h47km±4km, h47km:pP-P,n704, σ1§14/673, mb5.1/150, MS5.3/8, 30C-32D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVP	**Devils Point**	**3.45**	**155**	P		**Pn**	**01 54 38.0**	**+1.1**
RTV	**Rentapao**	**3.61**	**153**	P		**Pn**	**01 54 39.9**	**+0.7**
KOUNC	**Koumac, New Ca**	**6.37**	**201**			**Pn**	**01 55 16.4**	**-0.6**
MARNC	**Mare, Loyalty**	**6.99**	**170**	Pn		**Pn**	**01 55 25.3**	**-0.2**
NGOA	**Tingoa Renbel**	**7.11**	**294**	P		**Pn**	**01 55 26.1**	**-1.1**
DZM	**Mont Dzumac**	**7.46**	**182**	Pn		**Pn**	**01 55 30.6**	**-1.5**
	29nm,0.4s,baz=18,slow=20,SNR=50							
DZM				Sn		**Sn**	**01 56 52.2**	**-3.2**
	baz=322,slow=19							
ONTNC	**Ouen Toro**	**7.70**	**182**			**Pn**	**01 55 34.3**	**-0.9**
OUENC	**Ouen Island, N**	**7.80**	**179**			**Pn**	**01 55 36.0**	**-0.7**
HNR	**Honiara**	**8.34**	**307**	Pn		**Pn**	**01 55 44.3**	**+0.3**
	1.3nm,0.3s,baz=162,slow=3.2,SNR=4.3							
HNR				Sn		**Sn**	**01 57 14.3**	**-2.5**
	0.4nm,0.3s,baz=90,slow=2.0,SNR=1.1							
HNR	**Honiara**	**8.34**	**307**	P		**Pn**	**01 55 44.5**	**+0.5**
HNR	**Honiara**	**8.34**	**307**	P		**Pn**	**01 55 46.3**	**+2.2**
SAVO	**Savo Central**	**8.62**	**308**	P		**Pn**	**01 55 48.1**	**+0.2**
TATA	**Tatamba Isabel**	**9.12**	**312**	P		**Pn**	**01 55 54.8**	**0.0**
MSVF	**Nonsavu**	**11.37**	**108**	Pn		**Pn**	**01 56 27.9**	**+2.3**
	0.6nm,0.3s,baz=291,slow=18,SNR=7.7							
MSVF	**Nonsavu**	**11.37**	**108**	*dP*		**Pn**	**01 56 27.0**	**+1.4**
MSVF	**Nonsavu**	**11.37**	**108**			**Pn**	**01 56 28.6**	**+3.0**
EIDS	**Eidsvold**	**18.15**	**231**	P		**Pn**	**01 57 56.4**	**+2.0**
EIDS	**Eidsvold**	**18.15**	**231**	P		**Pn**	**01 57 56.4**	**+2.0**
	comp=Z,34nm,1.7s							
EIDS	**Eidsvold**	**18.15**	**231**			**Pn**	**01 57 54.5**	**+0.1**
EIDS	**Eidsvold**	**18.15**	**231**	P		**P**	**01 57 54.2**	**-0.1**
PMG	**Port Moresby**	**19.77**	**283**	P		**Pn**	**01 58 13.5**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=89,slow=15,SNR=7.3							
	comp=Z,50nm,1.0s							
PMG	**Port Moresby**	**19.77**	**283**	*dP*		**Pn**	**01 58 13.6**	**-0.3**
PMG					pmax	pmax		
	comp=Z,94nm,1.7s							
PMG	**Port Moresby**	**19.77**	**283**			**Pn**	**01 58 13.8**	**0.0**
PMG					IAmb	IAmb	01 58 24.9	
	comp=Z,127nm,1.1s							
PMG	**Port Moresby**	**19.77**	**283**	P		**Pn**	**01 58 14.2**	**+0.3**

TOO **Toolangi** 29.64 216 P P 01 59 47.1 +0.2
WR0 **Warramunga Arr** 31.12 256 P P 01 59 59.2 -0.9
comp=Z,17nm,1.0s
WR8 **Warramunga Arr** 31.16 256 P P 01 59 57.9 -2.6
WB0 **Warramunga Arr** 31.25 256 IAmb IAmb 02 00 01.0
comp=Z,24nm,0.9s
WB9 **Warramunga Arr** 31.26 256 P P 01 59 60.0 -1.3
comp=Z,28nm,1.1s
WB2 **Warramunga Arr** 31.30 256 P P 02 00 00.5 -1.2
comp=Z,22nm,1.0s
WRAB **Tennant Creek** 31.30 256 P P 02 00 00.6 -1.1
WRAB **Tennant Creek** 31.30 256 ||eP P 02 00 00.0 -1.7
WRAB pmax pmax
comp=Z,29nm,1.7s
WRAB **Tennant Creek** 31.30 256 P P 02 00 00.4 -1.3
WR1 **Warramunga Arr** 31.31 256 P P 02 00 00.6 -1.2
comp=Z,23nm,1.2s
WRA **Warramunga Arr** 31.31 256 P P 02 00 00.2 -1.5
comp=Z,15nm,1.0s,baz=84,slow=8.6,SNR=44
WRA PcP PcP 02 02 54.9 -0.3
comp=Z,1.6nm,0.8s,baz=84,slow=2.9,SNR=4.2
comp=Z,15nm,1.0s
WRA **Warramunga Arr** 31.31 256 *i* P P 02 00 00.4 -1.4
WRA pmax pmax
comp=Z,15nm,1.0s
WRA **Warramunga Arr** 31.31 256 P P 02 00 00.3 -1.5
HTT **Hallett** 31.39 228 P P 02 00 02.7 +0.3
HTT **Hallett** 31.39 228 P P 02 00 02.5 +0.1
comp=Z,12nm,1.0s
HTT **Hallett** 31.39 228 P P 02 00 02.4 +0.1
AS17 **Alice Springs** 32.12 249 P P 02 00 08.2 -0.7
comp=Z,20nm,0.9s
AS01 **Alice Springs** 32.15 249 P P 02 00 08.3 -0.9
AS09 **Alice Springs** 32.17 249 P P 02 00 08.3 -1.0
comp=Z,32nm,1.1s
AS15 **Alice Springs** 32.18 249 P P 02 00 08.5 -0.9
comp=Z,21nm,1.1s
AS31 **Alice Springs** 32.20 249 P P 02 00 08.3 -1.2
comp=Z,4.8nm,0.6s
AS31 **Alice Springs** 32.20 249 P P 02 00 08.1 -1.5
ASAR **Alice Springs** 32.20 249 P P 02 00 08.2 -1.4
comp=Z,21nm,1.0s,baz=83,slow=8.8,SNR=90
ASAR PcP PcP 02 02 57.1 -0.5
comp=Z,1.4nm,0.9s,baz=80,slow=3.2,SNR=2.4
ASAR ScP ScP 02 06 40.2 +2.7
comp=Z,2.0nm,1.1s,baz=90,slow=2.6,SNR=6.1
comp=Z,21nm,1.0s
MOO **Moorlands** 32.46 207 P P 02 00 12.6 +1.0
comp=Z,35nm,1.6s
RAR **Rarotonga** 32.55 107 LR LR 02 11 59.0
comp=Z,681nm,18.5s,baz=263,slow=34
H11S2 **WAKE ISLAND Hy** 32.85 0 T T 02 34 46.2
baz=184,SNR=2.4
H11S3 **WAKE ISLAND Hy** 32.86 0 T T 02 34 34.8
baz=184
H11S1 **WAKE ISLAND Hy** 32.87 0 T T 02 34 44.3
baz=184
BBOO **Buckleboo** 33.23 232 P P 02 00 18.4 0.0
BBOO **Buckleboo** 33.23 232 P P 02 00 18.5 0.0
comp=Z,63nm,1.0s
BBOO **Buckleboo** 33.23 232 P P 02 00 18.7 +0.3
BBOO IAmb IAmb 02 00 19.5
comp=Z,38nm,0.7s
BBOO **Buckleboo** 33.23 232 P P 02 00 18.7 +0.3
H11N1 **WAKE ISLAND Hy** 34.07 0 T T 02 36 21.1
baz=183,slow=74,SNR=3.3
H11N3 **WAKE ISLAND Hy** 34.08 0 T T 02 36 19.9
baz=183
H11N2 **WAKE ISLAND Hy** 34.09 0 T T 02 36 19.0
baz=183,slow=74,SNR=3.0
KNRA **Kununurra** 36.59 263 P P 02 00 46.6 -1.0
comp=Z,42nm,0.9s
KNRA **Kununurra** 36.59 263 IAmb IAmb 02 00 48.2
comp=Z,34nm,0.9s
WRKA **Warakurna** 37.47 248 P P 02 00 52.7 -2.3
comp=Z,17nm,1.0s
SIJI **Sorong** 37.55 288 P P 02 00 56.6 +0.8
comp=Z,28nm,1.1s
SWI **Sorong** 37.56 288 P P 02 00 56.4 +0.5
comp=Z,24nm,0.7s
FORT **Forrest** 38.89 239 P P 02 01 06.2 -0.6
comp=Z,39nm,0.8s
FORT **Forrest** 38.89 239 IAmb IAmb 02 01 07.8
comp=Z,28nm,0.8s
KRAI **Karang Ratu** 39.37 283 P P 02 01 10.8 -0.2
comp=Z,15nm,1.1s
FITZ **Fitzroy Crossi** 39.48 259 P P 02 01 11.1 -0.8
FITZ **Fitzroy Crossi** 39.48 259 P P 02 01 11.3 -0.6
NLAI **Namlea** 40.62 282 P P 02 01 22.1 +0.7
comp=Z,65nm,1.2s
KMBL **Kambalda** 44.17 240 P P 02 01 49.6 -0.6
comp=Z,15nm,1.0s
MBWA **Marble Bar** 45.04 255 P P 02 01 57.0 -0.1
MBWA IAmb IAmb 02 01 57.8
comp=Z,22nm,0.8s
MBWA **Marble Bar** 45.04 255 P P 02 01 57.3 +0.2
MEEK **Meekatharra** 46.32 247 P P 02 02 07.2 -0.1
MEEK **Meekatharra** 46.32 247 P P 02 02 07.4 +0.1
comp=Z,85nm,0.9s
MEEK **Meekatharra** 46.32 247 P P 02 02 07.4 +0.1
DBNI **Kabupaten Domp** 47.70 272 P P 02 02 18.4 +0.2
comp=Z,60nm,0.8s
PLAI **Plampang** 48.16 271 P P 02 02 22.2 +0.5
comp=Z,35nm,0.9s
NWAO **Narrogin (SRO)** 48.34 239 P P 02 02 22.8 -0.1
NWAO **Narrogin (SRO)** 48.34 239 P P 02 02 22.9 0.0
NWAO **Narrogin (SRO)** 48.34 239 P P 02 02 17.7 -5.1
comp=Z,44nm,2.3s
NWAO **Narrogin (SRO)** 48.34 239 P P 02 02 17.7 -5.1
comp=Z,72nm,2.3s
NWAO **Narrogin (SRO)** 48.34 239 P P 02 02 17.7 -5.2
MORW **Morawa** 48.82 244 P P 02 02 26.6 0.0
MORW **Morawa** 48.82 244 P P 02 02 26.3 -0.3
comp=Z,46nm,0.8s
MORW **Morawa** 48.82 244 P P 02 02 26.4 -0.2
MORW IAmb IAmb 02 02 27.4
comp=Z,31nm,0.8s
MORW **Morawa** 48.82 244 P P 02 02 26.1 -0.5
TWSI **Taliwang, Sumb** 49.04 271 P P 02 02 28.7 +0.2
comp=Z,54nm,1.2s
MYLDM **Lahad Datu** 51.64 289 P P 02 02 51.6 +3.5
MYLDM **Lahad Datu** 51.64 289 P P 02 02 50.5 +2.4
DRV **Dumont d'Urvil** 54.97 193 P P 02 03 12.4 +0.7
DRV **Dumont d'Urvil** 54.97 193 P P 02 03 12.1 +0.4
UGM **Wanagama** 55.37 270 P P 02 03 14.8 -0.8
JMN **Monobe** 57.31 328 P P 02 03 29.9 +0.9
MJAR **Matsushiro Arr** 57.51 333 P P 02 03 29.5 -0.8
comp=Z,8.4nm,0.9s,baz=165,slow=7.7,SNR=19
comp=Z,8.4nm,0.9s
MJAR **Matsushiro Arr** 57.51 333 P P 02 03 29.8 -0.5
MJAR pmax pmax
comp=Z,9.0nm,1.0s
MJAR **Matsushiro Arr** 57.51 333 P P 02 03 29.8 -0.5
MAJO **Matsushiro** 57.51 333 P P 02 03 29.9 -0.4
MAJO **Matsushiro** 57.51 333 *ce*P P 02 03 29.7 -0.6
MAJO pmax pmax
comp=Z,10.0nm,0.9s
MAJO **Matsushiro** 57.51 333 P P 02 03 30.0 -0.3
MAJO IAmb IAmb 02 03 37.5
comp=Z,12nm,0.8s
MAJO **Matsushiro** 57.51 333 P P 02 03 30.1 -0.3
MAJO **Matsushiro** 57.51 333 P P 02 03 30.0 -0.3
MJB9 **Matsu-Tunnel** 57.51 333 P P 02 03 31.0 +0.7
MJB9 IAmb IAmb 02 03 38.5
comp=Z,11nm,0.8s
YHNB **Yeheng** 58.95 311 P P 02 03 40.9 +0.2
JTM **Tenmabayashi** 59.98 338 P P 02 03 47.8 +0.5
JKA **Kamikawa-asahi** 62.40 341 P P 02 04 04.7 +1.0
JKA IAmb IAmb 02 04 06.0
comp=Z,27nm,1.0s
JKA **Kamikawa-asahi** 62.40 341 P P 02 04 03.4 -0.3
ASAJ **Asahikawa** 62.41 341 P P 02 04 04.2 +0.5
comp=Z,18nm,0.9s,baz=192,slow=9.3,SNR=11
comp=Z,18nm,0.9s
ASAJ **Asahikawa** 62.41 341 P P 02 04 04.7 +1.0
ASAJ pmax pmax
comp=Z,27nm,1.0s
TJN **Taejon** 62.81 325 ||eP P 02 04 06.4 -0.2
VNDA **Vanda** 63.00 181 P P 02 04 07.1 -0.2
comp=Z,3.9nm,0.6s,baz=4.1,slow=7.1,SNR=11
comp=Z,3.9nm,0.6s
VNDA **Vanda** 63.00 181 P P 02 04 07.5 +0.2
VNDA pmax pmax
comp=Z,29nm,1.8s
VNDA **Vanda** 63.00 181 P P 02 04 07.5 +0.2
VNDA IAmb IAmb 02 04 17.6
comp=Z,29nm,1.8s
VNDA **Vanda** 63.00 181 P P 02 04 07.6 +0.2
SBA **Scott Base** 63.29 180 P P 02 04 10.8 +1.6
SBA pmax pmax
comp=Z,16nm,1.0s
SBA **Scott Base** 63.29 180 P P 02 04 10.8 +1.6
SBA IAmb IAmb 02 04 11.0
comp=Z,16nm,0.9s
SBA **Scott Base** 63.29 180 P P 02 04 10.7 +1.5
KSRS **Korea Array** 63.29 326 P P 02 04 09.4 -0.3
comp=Z,3.0nm,1.0s,baz=144,slow=7.0,SNR=6.3
comp=Z,3.0nm,1.0s
CASY **Casey** 63.46 202 P P 02 04 10.8 +0.4
CASY **Casey** 63.46 202 P P 02 04 11.0 +0.6
YSS **Yuzhno-Sakhali** 64.91 342 *e*P P 02 04 21.2 +1.1
YSS pmax pmax
comp=Z,50nm,1.1s
YSS **Yuzhno-Sakhali** 64.91 342 P P 02 04 21.1 +1.1
YSS **Yuzhno-Sakhali** 64.91 342 P P 02 04 21.4 +1.4
CCD **Concordia, Ant** 64.94 191 P P 02 04 21.1 +0.6
PSTR **Posyet** 65.80 332 *ce*P P 02 04 26.3 +0.3
USA0B **Ussuriysk Arra** 66.49 333 *ce*P P 02 04 31.1 +0.7
USA0B **Ussuriysk Arra** 66.49 333 IAmb IAmb 02 04 38.2
comp=Z,40nm,1.3s
USRK **Ussuriysk Ar.** 66.49 333 P P 02 04 30.9 +0.5
comp=Z,14nm,1.0s,baz=122,slow=5.2,SNR=15
comp=Z,14nm,1.0s
USRK **Ussuriysk Ar.** 66.49 333 P P 02 04 31.1 +0.7
USRK **Ussuriysk Ar.** 66.49 333 P P 02 04 31.1 +0.7
SHEM **Shemya Is, Ala** 67.33 5 P P 02 04 35.9 +0.4
comp=Z,22nm,0.5s,baz=206,slow=18,SNR=2.3
comp=Z,22nm,0.5s
KIWB **Kanaga Island** 67.63 11 P P 02 04 37.7 +0.3
KIWB IAmb IAmb 02 04 38.9
comp=Z,32nm,0.8s
PET **Petropavlovsk** 67.67 355 ||eP P 02 04 37.9 +0.2
PET pmax pmax
comp=Z,26nm,1.0s
PET **Petropavlovsk** 67.67 355 P P 02 04 37.1 -0.6
PET IAmb IAmb 02 04 43.1
comp=Z,24nm,1.0s
PET **Petropavlovsk** 67.67 355 P P 02 04 38.2 +0.5
ADK **Adak** 67.74 11 P P 02 04 33.9 -4.2
ADK **Adak** 67.74 11 P P 02 04 38.8 +0.6
ADK pmax pmax
comp=Z,31nm,1.2s
ADK **Adak** 67.74 11 P P 02 04 38.8 +0.6
ADK IAmb IAmb 02 04 39.4
comp=Z,31nm,1.2s
PEA0B **Petropavlovsk-** 67.85 354 *ce*P P 02 04 38.6 -0.2
PEA0B **Petropavlovsk-** 67.85 354 P P 02 04 39.1 +0.3
PETK **Petropavlovsk-** 67.85 354 P P 02 04 38.8 0.0
comp=Z,8.3nm,0.7s,baz=176,slow=6.4,SNR=17
comp=Z,8.3nm,0.7s
PETK **Petropavlovsk-** 67.85 354 P P 02 04 39.2 +0.4
PETK **Petropavlovsk-** 67.85 354 P P 02 04 39.2 +0.4
MDJ **Mudanjiang** 67.88 332 P P 02 04 39.7 +0.5
TYV **Tymovskoe** 68.47 344 *e*P P 02 04 43.6 +0.9
TYV pmax pmax
comp=Z,10.0nm,1.1s
TYV pmax pmax
comp=Z,300nm,4.2s
ATKA **Atka Island** 68.54 13 P P 02 04 39.4 -3.7
GRNR **Gornyy** 70.25 340 ||*i*P P 02 04 55.0 +1.2
GRNR pmax pmax
comp=Z,20nm,1.1s
BJT **Baijiatuau** 71.78 321 P P 02 05 04.0 +0.7
BJT **Baijiatuau** 71.78 321 P P 02 05 04.0 +0.7
UNV **Unalaska Valle** 71.90 16 P P 02 05 04.5 +0.8
baz=207
SPIA **Saint Paul Isl** 74.01 13 P P 02 05 16.5 +0.4
baz=203
CMAR **Chiang Mai Arr** 74.37 294 P P 02 05 20.0 +0.9
comp=Z,1.3nm,0.4s,baz=113,slow=5.9,SNR=12
comp=Z,1.3nm,0.4s
CMAR **Chiang Mai Arr** 74.37 294 *ce*P P 02 05 21.0 +1.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR **Chiang Mai Arr** 74.37 294 P P 02 05 20.2 +1.2
CHTO **Chiang Mai** 74.50 295 P P 02 05 21.5 +1.7
comp=Z,13nm,1.1s
MA2 **Magadan** 75.01 352 P P 02 05 20.3 -1.6
comp=Z,3.5nm,0.4s,baz=151,slow=19,SNR=3.8
comp=Z,3.5nm,0.4s
MA2 **Magadan** 75.01 352 *de*P P 02 05 21.7 -0.2
MA2 pmax pmax
comp=Z,20nm,1.6s
MA2 **Magadan** 75.01 352 IAmb IAmb 02 05 26.9
comp=Z,10nm,0.7s
QSPA **South Pole Qui** 75.45 180 P P 02 05 24.0 -0.7
comp=Z,5.9nm,0.7s,baz=20,slow=1.8,SNR=29
comp=Z,5.9nm,0.7s
QSPA **South Pole Qui** 75.45 180 P P 02 05 24.6 0.0
QSPA **South Pole Qui** 75.45 180 P P 02 05 24.2 -0.5
QSPA **South Pole Qui** 75.45 180 P P 02 05 24.4 -0.2
ZEA **Zeya** 75.93 337 *e*P P 02 05 28.1 +0.8
ZEA pmax pmax
comp=Z,20nm,0.7s
HILR **Hailar Array B** 76.06 331 P P 02 05 28.0 -0.2
comp=Z,3.4nm,0.7s,baz=139,slow=9.5,SNR=4.2
comp=Z,3.4nm,0.7s
CHGN **Chignik** 76.41 19 P P 02 05 29.2 -0.7
baz=215
LZDM **Lazhoi Array** 77.84 312 P P 02 05 40.4 +1.5
comp=Z,1.1nm,0.3s,baz=98,slow=4.4,SNR=1.2
comp=Z,1.1nm,0.3s
SII **Sitkinak Islan** 78.02 21 P P 02 05 38.1 -0.9
SII **Sitkinak Islan** 78.02 21 P P 02 05 38.4 -0.6
baz=219
O14K **Tigyukauivet M** 78.05 16 P P 02 05 38.7 -0.3
baz=212
SEY **Seymchan** 78.06 353 P P 02 05 38.6 -0.5
comp=Z,18nm,1.1s,baz=156,slow=8.8,SNR=11
comp=Z,18nm,1.1s
SEY **Seymchan** 78.06 353 ||eP P 02 05 38.5 -0.5
SEY pmax pmax
comp=Z,46nm,1.7s
R17L **Mt. Peulik Vol** 78.15 19 P P 02 05 39.5 -0.2
baz=216
O15K **Ungalikthiuk R** 78.38 17 P P 02 05 40.5 -0.4
baz=213
N14K **Kuskokwak Cree** 78.51 16 IAmb IAmb 02 05 42.2
comp=Z,23nm,0.8s
N14K **Kuskokwak Cree** 78.51 16 P P 02 05 41.5 -0.1
baz=211
M13K **Dall Lake** 78.51 15 P P 02 05 42.0 +0.4
baz=210
P16K **Nushagak River** 78.79 18 P P 02 05 43.3 +0.2
baz=215
Q17K **Contact Creek** 78.81 19 P P 02 05 42.8 -0.6
baz=217
OHAK **Old Harbor** 78.85 21 P P 02 05 39.1 -4.4
OHAK **Old Harbor** 78.85 21 P P 02 05 43.4 -0.1
baz=219
Q16K **King Salmon** 78.90 19 P P 02 05 43.8 +0.1
baz=216
N15K **Kwethluk River** 79.14 16 IAmb IAmb 02 05 46.2
comp=Z,29nm,1.0s
N15K **Kwethluk River** 79.14 16 P P 02 05 45.6 +0.5
baz=213,SNR=9.3
M14K **Bethel** 79.15 15 IAmb IAmb 02 05 45.9
comp=Z,40nm,0.8s
M14K **Bethel** 79.15 15 P P 02 05 45.4 +0.4
baz=211,SNR=12
O16K **Kokwok River B** 79.22 17 P P 02 05 44.6 -0.8
baz=215
P17K **Kvichak River** 79.39 18 P P 02 05 45.5 -0.8
baz=216
Q18K **Katmai Hardscr** 79.39 19 P P 02 05 45.6 -1.0
baz=218,SNR=10.0
M15K **Kasiluk River** 79.43 16 P P 02 05 46.5 -0.1
baz=212,SNR=12
L14K **Kuka Creek** 79.48 14 IAmb IAmb 02 05 47.9
comp=Z,41nm,1.1s
L14K **Kuka Creek** 79.48 14 P P 02 05 46.9 0.0
baz=210,SNR=16
KDAK **Kodiak Island** 79.52 21 ||eP P 02 05 46.5 -0.7
KDAK pmax pmax
comp=Z,13nm,1.0s
KDAK **Kodiak Island** 79.52 21 P P 02 05 47.0 -0.1
baz=220
K13K **Kusilvak Mount** 79.54 13 IAmb IAmb 02 05 48.4
comp=Z,29nm,0.9s
K13K **Kusilvak Mount** 79.54 13 P P 02 05 47.7 +0.5
baz=208,SNR=10
O17K **Koliganek Bris** 79.66 18 P P 02 05 47.2 -0.6
baz=216
N16K **Nishlik Lake** 79.76 17 P P 02 05 49.3 +0.8
baz=214,SNR=8.8
GAMB **Gambell** 79.87 10 P P 02 05 49.5 +0.6
baz=201
P18K **Big Mountain,** 79.92 19 P P 02 05 48.5 -0.8
baz=217,SNR=9.5
L15K **Ungalak Mounta** 80.07 15 P P 02 05 49.9 -0.2
baz=211,SNR=11
M16K **Timber Creek** 80.16 16 IAmb IAmb 02 05 51.9
comp=Z,31nm,0.8s
M16K **Timber Creek** 80.16 16 P P 02 05 51.1 +0.5
baz=214,SNR=20
N17K **Nushagak Hills** 80.25 17 P P 02 05 51.5 +0.5
baz=215
O18K **Koktuh Hills** 80.29 18 P P 02 05 51.1 -0.3
baz=217
J14K **Nanvaranak Lak** 80.51 13 IAmb IAmb 02 05 53.7
comp=Z,36nm,0.9s
J14K **Nanvaranak Lak** 80.51 13 P P 02 05 53.1 +0.7
baz=209,SNR=11
K15K **Wolf Creek Mou** 80.58 14 P P 02 05 53.4 +0.6
baz=211,SNR=39
L16K **Owhat River** 80.60 16 P P 02 05 53.2 +0.3
baz=213,SNR=7.7
N18K **Kilae Creek** 80.75 18 P P 02 05 53.9 +0.1
baz=216
P19K **Oil Pt** 80.75 19 P P 02 05 53.5 -0.3
baz=219
O19K **Port Alsworth** 80.83 19 P P 02 05 54.9 +0.7
baz=218
M17K **Holitna River** 80.89 17 P P 02 05 55.3 +0.8
baz=215
ILSW **Iliamna Southw** 81.04 19 IAmb IAmb 02 08 02.0
comp=Z,14nm,0.6s
L17K **Donlin** 81.27 16 P P 02 05 57.2 +0.7
baz=214,SNR=11
N19K **Bonanza Creek** 81.27 18 P P 02 05 57.2 +0.5
baz=218
CNPM **China Poot** 81.31 20 IAmb IAmb 02 05 58.6
comp=Z,17nm,0.8s
M18K **Stony River** 81.42 17 P P 02 05 57.4 +0.1
baz=216,SNR=9.1
RED **Redoubt Volcan** 81.49 19 IAmb IAmb 02 05 58.6
comp=Z,20nm,1.0s
BRLK **Bradley Lake** 81.61 20 IAmb IAmb 02 05 59.7
comp=Z,21nm,0.9s
BRSE **Bradley Lake S** 81.64 20 P P 02 05 58.3 -0.2
baz=221
J16K **Anvik River** 81.66 14 IAmb IAmb 02 06 00.0
comp=Z,23nm,0.9s
J16K **Anvik River** 81.66 14 P P 02 05 59.4 +0.9
baz=212,SNR=15
ULN **Ulaanbaatar** 81.68 324 ||eP P 02 05 59.5 +0.4
ULN pmax pmax
comp=Z,12nm,1.0s
ULN **Ulaanbaatar** 81.68 324 P P 02 05 59.6 +0.4
ULN **Ulaanbaatar** 81.68 324 P P 02 05 59.7 +0.5
comp=Z,14nm,1.0s
ULN **Ulaanbaatar** 81.68 324 P P 02 05 59.2 0.0
ULN **Ulaanbaatar** 81.68 324 P P 02 05 59.8 +0.5
YAK **Yakutsk** 81.72 343 P P 02 05 57.5 -1.3
comp=Z,16nm,0.4s,baz=176,slow=3.1,SNR=13
comp=Z,16nm,0.4s
YAK **Yakutsk** 81.72 343 *e*P P 02 05 57.9 -0.9
YAK *e**PP **pP** 02 06 10.1 -1.9
YAK *e* 02 09 04.3
YAK *e*S **S** 02 16 08.3 +0.5
YAK *e*SS **SS** 02 21 25.4 -1.2
YAK *e*SSS SSS 02 24 55.4
YAK pmax pmax
comp=Z,19nm,0.7s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=N,4.0nm,0.8s
YAK pmax pmax
comp=Z,648nm,15.6s
YAK pmax pmax
comp=E,343nm,12.6s
YAK smax smax
comp=E,29nm,2.7s
YAK smax smax
comp=N,31nm,2.8s
YAK **Yakutsk** 81.72 343 P P 02 05 58.8 -0.1
ANM **Nome** 81.73 12 P P 02 05 59.5 +0.6
baz=207
K17K **Iditarod** 81.75 15 IAmb IAmb 02 06 00.9
comp=Z,19nm,0.9s
K17K **Iditarod** 81.75 15 P P 02 05 59.7 +0.7
baz=214,SNR=10
L18K **Granite Mounta** 81.77 16 IAmb IAmb 02 06 00.6
comp=Z,22nm,1.2s
L18K **Granite Mounta** 81.77 16 P P 02 05 59.6 +0.4
baz=216,SNR=14
MAW **Mawson** 81.81 202 P P 02 06 01.2 +1.8
comp=Z,2.1nm,0.5s
MAW **Mawson** 81.81 202 P P 02 06 01.2 +1.8
MAW **Mawson** 81.81 202 P P 02 05 59.5 +0.1
SONM **Songino Array** 82.03 324 P P 02 06 00.3 -0.8
comp=Z,4.1nm,1.0s,baz=146,slow=5.7,SNR=18
comp=Z,4.1nm,1.0s
SONM **Songino Array** 82.03 324 P P 02 06 01.3 +0.3
SONM pmax pmax
comp=Z,17nm,1.5s
SONM **Songino Array** 82.03 324 P P 02 06 01.3 +0.3
J17K **VABM Dome** 82.12 15 IAmb IAmb 02 06 02.3
comp=Z,16nm,1.0s
J17K **VABM Dome** 82.12 15 P P 02 06 01.1 +0.1
baz=213,SNR=7.8
I17K **Unalakleet** 82.15 14 IAmb IAmb 02 06 02.7
comp=Z,21nm,1.4s
I17K **Unalakleet** 82.15 14 P P 02 06 01.8 +0.7
baz=212
TNA **Tin City** 82.15 10 IAmb IAmb 02 06 02.1
comp=Z,22nm,1.0s
TNA **Tin City** 82.15 10 P P 02 06 01.0 0.0
baz=205
L19K **White Mountain** 82.25 17 P P 02 06 01.8 +0.1
baz=217,SNR=7.1
SEW **Seward** 82.34 21 P P 02 06 02.4 +0.3
baz=222
F14K **Arctic Creek** 82.36 11 P P 02 06 02.9 +0.7
baz=206,SNR=13
SLKM **Skilak Lake** 82.38 20 IAmb IAmb 02 06 02.8
comp=Z,28nm,0.8s
BILL **Bilibino** 82.39 360 *de*P P 02 06 02.6 +0.4
BILL pmax pmax
comp=Z,58nm,1.0s
BILL **Bilibino** 82.39 360 P P 02 06 02.1 -0.2
H16K **Elim** 82.44 13 P P 02 06 03.5 +0.9
baz=210
M20K **Styx River** 82.52 18 P P 02 06 03.4 +0.3
baz=219
J18K **Innoko River** 82.78 16 IAmb IAmb 02 06 06.3
comp=Z,14nm,0.8s
J18K **Innoko River** 82.78 16 P P 02 06 04.4 0.0
baz=216,SNR=26
F15K **North Star Dit** 82.89 12 IAmb IAmb 02 06 06.1
comp=Z,31nm,1.4s
F15K **North Star Dit** 82.89 12 P P 02 06 05.5 +0.5
baz=208,SNR=5.9
P23K **Montague Islan** 82.97 21 P P 02 06 05.5 +0.1
baz=224
RC01 **Rabbit Creek A** 82.98 20 P P 02 06 05.0 -0.5
baz=222,SNR=5.2
G16K **Koyuk River** 83.08 13 P P 02 06 06.1 +0.3
baz=210,SNR=7.0
SKT **Skwentna** 83.08 18 P P 02 06 06.0 0.0
baz=220
H17K **Granite Mounta** 83.22 14 P P 02 06 06.9 +0.3
baz=212,SNR=12
PWL **Port Wells** 83.27 20 P P 02 06 06.9 -0.1
baz=224,SNR=5.8
M22K **Willow** 83.35 19 P P 02 06 07.8 +0.5
baz=222,SNR=6.7
K20K **Telida** 83.41 17 IAmb IAmb 02 06 08.8
comp=Z,33nm,1.6s
K20K **Telida** 83.41 17 P P 02 06 08.2 +0.5
baz=218,SNR=9.8
J19K **Poorman** 83.49 16 IAmb IAmb 02 06 09.4
comp=Z,12nm,0.9s
J19K **Poorman** 83.49 16 P P 02 06 09.2 +1.1
baz=216,SNR=18
G17K **Kiwalik Mounta** 83.53 13 P P 02 06 08.8 +0.6
baz=212,SNR=7.6
PMR **Palmer** 83.55 20 IAmb IAmb 02 06 08.7
comp=Z,23nm,0.9s
PMR **Palmer** 83.55 20 P P 02 06 08.2 -0.1

baz=223,SNR=10
PPLA **Purkeypile** 83.58 18 P P 02 06 08.9 +0.2
baz=220
KNK **Knik Glacier** 83.64 20 IAmb IAmb 02 06 09.5
comp=Z,22nm,0.8s
KNK **Knik Glacier** 83.64 20 P P 02 06 09.0 +0.1
baz=223
GLI **Glacier Island** 83.71 21 P P 02 06 09.0 -0.2
baz=225
L22K **Petersville** 83.73 18 IAmb IAmb 02 06 09.0
comp=Z,28nm,1.4s
L22K **Petersville** 83.73 18 P P 02 06 08.2 -1.2
baz=221,SNR=9.6
GHO **Glory Hole Cre** 83.75 20 IAmb IAmb 02 06 10.7
comp=Z,39nm,1.0s
H18K **Honhosa River** 83.76 14 P P 02 06 09.0 -0.4
baz=214
GCSA **Galena City Sc** 83.78 15 P P 02 06 10.0 +0.5
baz=215,SNR=5.2
CUT **Chulitna** 83.79 19 P P 02 06 09.3 -0.3
baz=222
SML **Sawmill** 83.96 20 IAmb IAmb 02 06 11.9
comp=Z,32nm,1.2s
SML **Sawmill** 83.96 20 P P 02 06 10.4 -0.2
baz=223,SNR=8.1
CAST **Castle Rocks** 84.02 17 P P 02 06 09.9 -0.8
baz=220,SNR=61
J20K **Nowinta River** 84.03 16 IAmb IAmb 02 06 11.9
comp=Z,34nm,1.4s
J20K **Nowinta River** 84.03 16 P P 02 06 11.3 +0.5
baz=218,SNR=19
M23K **Glacier View** 84.15 20 P P 02 06 11.7 +0.2
baz=224
F17K **Baldwin Pennin** 84.21 12 P P 02 06 12.4 +0.8
baz=211,SNR=6.9
CHUM **Lake Minchumin** 84.31 17 P P 02 06 12.0 -0.2
baz=220,SNR=23
SCM **Sheep Creek Mo** 84.31 20 IAmb IAmb 02 06 13.0
comp=Z,33nm,1.1s
SCM **Sheep Creek Mo** 84.31 20 P P 02 06 12.6 +0.2
baz=224,SNR=6.0
G18K **Tagagawik** 84.31 14 IAmb IAmb 02 06 13.0
comp=Z,12nm,0.9s
G18K **Tagagawik** 84.31 14 P P 02 06 12.4 +0.1
baz=214,SNR=14
I20K **Naaghedeneel** 84.44 16 P P 02 06 13.8 +1.0
baz=218,SNR=16
H19K **Roundabout Mou** 84.53 15 IAmb IAmb 02 06 15.3
comp=Z,22nm,1.1s
H19K **Roundabout Mou** 84.53 15 P P 02 06 13.8 +0.6
baz=216,SNR=19
KLU **Klutina** 84.55 21 P P 02 06 13.7 +0.1
baz=226
TRF **Thorofare Moun** 84.57 18 IAmb IAmb 02 06 13.9
comp=Z,27nm,0.8s
TRF **Thorofare Moun** 84.57 18 P P 02 06 12.9 -0.8
baz=222,SNR=29
WAT1 **Susitna Watana** 84.64 19 P P 02 06 14.3 +0.3
baz=223
BMRM **Bremner River** 84.64 22 P P 02 06 13.5 -0.6
baz=227
E17K **Hotham Inlet** 84.65 12 P P 02 06 14.8 +1.0
baz=210,SNR=9.2
F18K **Selawik** 84.69 13 P P 02 06 14.3 +0.3
baz=213,SNR=7.3
WAT6 **Susitna Watana** 84.72 19 P P 02 06 14.8 +0.3
baz=224,SNR=11
G19K **Purcell Mounta** 84.88 14 IAmb IAmb 02 06 17.0
comp=Z,30nm,1.0s
G19K **Purcell Mounta** 84.88 14 P P 02 06 15.2 +0.1
baz=215,SNR=29
H20K **Anotleneega Mo** 84.89 15 P P 02 06 15.8 +0.7
baz=217,SNR=38
M24K **Tolsona, Glenn** 84.89 20 P P 02 06 15.4 +0.1
baz=225
D17K **Noatak River** 84.94 11 P P 02 06 15.7 +0.3
baz=209,SNR=12
CRQE **Cirque** 85.05 22 P P 02 06 15.7 -0.4
baz=228
C16K **Lisburne Hills** 85.05 10 IAmb IAmb 02 06 16.9
comp=Z,22nm,1.1s
C16K **Lisburne Hills** 85.05 10 P P 02 06 15.9 0.0
baz=207
N25K **Chitina, Valde** 85.08 21 P P 02 06 16.0 -0.6
baz=227
ZAK **Zakamensk** 85.10 325 *e*P P 02 06 16.0 -0.6
ZAK pmax pmax
comp=Z,14nm,1.4s
MCK **McKinley** 85.18 18 P P 02 06 16.3 -0.3
baz=223,SNR=17
E18K **Tukpahlearik C** 85.19 12 IAmb IAmb 02 06 18.0
comp=Z,30nm,1.1s
E18K **Tukpahlearik C** 85.19 12 P P 02 06 17.1 +0.5
baz=212,SNR=13
DHY **Denali Highway** 85.19 19 P P 02 06 16.6 -0.3
baz=224,SNR=6.6
RDOG **Red Dog Mine** 85.29 11 P P 02 06 17.5 +0.4
baz=209,SNR=8.3
F19K **Shaleruckik Mo** 85.29 13 P P 02 06 16.9 -0.2
baz=214,SNR=38
I21K **Tanana** 85.40 16 P P 02 06 18.2 +0.5
baz=220,SNR=76
HARP **HAARP** 85.44 20 P P 02 06 18.3 +0.3
baz=226
TLY **Talaya** 85.55 326 LR LR 02 44 10.6
comp=Z,1µm,18.7s,baz=20,slow=35
TLY **Talaya** 85.55 326 *ce*P P 02 06 18.6 -0.1
TLY pmax pmax
comp=Z,3.0nm,0.7s
H21K **Melozitna Rive** 85.55 16 P P 02 06 19.2 +0.7
baz=219,SNR=30
C17K **DeLong Mountai** 85.61 11 P P 02 06 19.5 +0.9
baz=209,SNR=12
MLY **Manley** 85.63 17 IAmb IAmb 02 06 19.8
comp=Z,29nm,1.3s
MLY **Manley** 85.63 17 P P 02 06 18.4 -0.5
baz=221,SNR=22
PINM **Pinnacle** 85.69 24 P P 02 06 18.9 -0.4
baz=231
YBH **Yreka Blue Hor** 85.71 45 P P 02 06 18.7 -1.2
comp=Z,5.2nm,0.9s,baz=244,slow=6.8,SNR=6.3
comp=Z,5.2nm,0.9s
PAX **Paxson** 85.73 20 P P 02 06 19.6 +0.1
baz=226
NEA2 **Nenana** 85.78 18 IAmb IAmb 02 06 19.4
comp=Z,28nm,1.3s
NEA2 **Nenana** 85.78 18 P P 02 06 18.8 -0.8
baz=223,SNR=12
CMB **Columbia Colle** 85.93 49 P P 02 06 19.2 -1.8
E19K **Redstone River** 85.93 13 P P 02 06 20.7 +0.4
baz=215,SNR=47
F20K **Avaraart Lake** 85.94 14 IAmb IAmb 02 06 21.7
comp=Z,26nm,1.0s
F20K **Avaraart Lake** 85.94 14 P P 02 06 20.8 +0.5
baz=216
WRH **Wood River Hil** 85.98 18 IAmb IAmb 02 06 21.0
comp=Z,19nm,0.8s
G21K **Allakaket** 86.05 15 P P 02 06 21.3 +0.5
baz=218,SNR=37
S31K **Pelican** 86.05 27 P P 02 06 21.3 +0.3
baz=234
I23K **Minto, Yukon-K** 86.11 17 P P 02 06 20.2 -0.9
baz=222,SNR=8.3
H22K **Ishtalitna Cre** 86.11 16 P P 02 06 21.3 +0.1
baz=220,SNR=48
C18K **Utukok River** 86.12 11 P P 02 06 21.6 +0.3
baz=211,SNR=18
O28M **Mount Upton** 86.14 23 P P 02 06 20.8 -1.1
baz=231
M26K **Nabesna, AK** 86.18 21 IAmb IAmb 02 06 22.7
comp=Z,9.8nm,1.0s
M26K **Nabesna, AK** 86.18 21 P P 02 06 21.7 0.0
baz=228,SNR=6.4
CCB **Clear Creek Bu** 86.19 18 IAmb IAmb 02 06 21.3
comp=Z,12nm,0.6s
K24K **Donnelly Dome** 86.21 19 P P 02 06 21.4 -0.4
baz=226
HDA **Harding Lake** 86.28 18 P P 02 06 21.3 -0.8
baz=225,SNR=29
COLA **College** 86.34 18 *d i*P P 02 06 21.4 -0.9
COLA pmax pmax
comp=Z,27nm,1.0s
COLA **College** 86.34 18 P P 02 06 21.1 -1.3
COLA **College** 86.34 18 P P 02 06 21.9 -0.4
baz=224
COLA **College** 86.34 18 P P 02 06 21.0 -1.3
COLA pP pwP 02 06 37.3 -0.9
COLA **College** 86.34 18 P P 02 06 21.4 -0.9

P29M **Windy Craggy** 86.41 25 P P 02 06 22.5 -0.3
baz=233
RIDG **Independent Ri** 86.47 19 IAmb IAmb 02 06 28.5
comp=Z,15nm,0.8s
RIDG **Independent Ri** 86.47 19 P P 02 06 22.9 -0.2
baz=226,SNR=8.6
L26K **Log Cabin Wild** 86.48 20 P P 02 06 23.6 +0.5
baz=228
O29M **Mount Kennedy** 86.48 24 P P 02 06 23.4 +0.1
baz=232
M27K **Edge Creek, AK** 86.54 21 P P 02 06 23.4 -0.2
baz=229
ILAR **Eielson Array** 86.56 18 P P 02 06 21.1 -2.3
comp=Z,16nm,0.7s,baz=236,slow=5.6,SNR=116
comp=Z,16nm,0.7s
ILAR **Eielson Array** 86.56 18 P P 02 06 21.3 -2.1
ILAR **Eielson Array** 86.56 18 P P 02 06 21.3 -2.1
H23K **Yukon River** 86.56 17 IAmb IAmb 02 06 24.8
comp=Z,16nm,0.9s
H23K **Yukon River** 86.56 17 P P 02 06 24.3 +0.9
baz=222
D19K **Kuna River** 86.60 12 P P 02 06 23.7 +0.1
baz=214,SNR=25
F21K **Alatna River** 86.61 14 IAmb IAmb 02 06 24.6
comp=Z,20nm,0.8s
F21K **Alatna River** 86.61 14 P P 02 06 24.1 +0.4
baz=213,SNR=33
YUK8 **Steele Glacier** 86.63 23 P P 02 06 24.3 +0.1
baz=231
POKR **Poker Plat Res** 86.64 18 P P 02 06 23.0 -0.8
baz=224
YUK3 **Moose Creek** 86.68 22 P P 02 06 24.4 +0.1
baz=231
V35K **Ketchikan** 86.73 30 P P 02 06 24.7 +0.3
baz=239
E20K **Nigu River** 86.81 13 P P 02 06 25.1 +0.4
baz=216,SNR=60
C19K **Lookout Ridge** 86.82 12 P P 02 06 25.5 +0.8
baz=212,SNR=21
G22K **Bettles** 86.86 15 P P 02 06 25.3 +0.4
baz=220
J25K **Salcha River,** 86.91 19 IAmb IAmb 02 06 26.2
comp=Z,20nm,0.8s
J25K **Salcha River,** 86.91 19 P P 02 06 25.2 0.0
baz=226,SNR=27
BELA **Belgrano 2** 86.92 176 P P 02 06 24.1 -1.1
BELA IAmb IAmb 02 06 24.9
comp=Z,12nm,0.9s
BVCY **Beaver Creek** 86.94 22 P P 02 06 25.5 +0.1
baz=230
WRAK **Wrangell Islan** 86.95 29 P P 02 06 26.0 +0.5
baz=238
R32K **Eaglecrest** 86.98 27 P P 02 06 26.0 +0.4
baz=236,SNR=6.3
P30M **Million Dollar** 87.01 25 P P 02 06 26.0 +0.2
baz=234
L27K **Beaver Creek,** 87.02 21 P P 02 06 26.1 +0.3
baz=229
H24K **Noodor Dome** 87.03 17 P P 02 06 26.1 +0.3
baz=224
YUK4 **Talbot Arm** 87.09 23 P P 02 06 27.3 +0.9
baz=232
G23K **Bananza Creek** 87.09 16 IAmb IAmb 02 06 27.4
comp=Z,19nm,0.8s
G23K **Bananza Creek** 87.09 16 P P 02 06 26.3 +0.2
baz=222,SNR=35
D20K **Etivluk River** 87.10 13 P P 02 06 26.4 +0.3
baz=215,SNR=50
F22K **John River** 87.15 15 P P 02 06 27.2 +0.9
baz=220
HYT **Haines Junctio** 87.22 24 P P 02 06 27.6 +0.7
baz=233
PFO **Pinyon Flats O** 87.37 54 P P 02 06 26.9 -1.3
comp=Z,3.8nm,0.7s,baz=257,slow=5.0,SNR=7.3
comp=Z,3.8nm,0.7s
PFO **Pinyon Flats O** 87.37 54 *i*P P 02 06 27.3 -1.0
PFO pmax pmax
comp=Z,7.0nm,0.9s
COLD **Coldfoot** 87.43 15 IAmb IAmb 02 06 29.8
comp=Z,19nm,1.0s
COLD **Coldfoot** 87.43 15 P P 02 06 28.8 +1.2
baz=221,SNR=18
E21K **Killik River** 87.46 14 P P 02 06 28.4 +0.7
baz=218
A19K **Wainwright** 87.48 10 P P 02 06 28.3 +0.6
baz=211,SNR=8.0
PRP **Porcupine Dome** 87.49 18 P P 02 06 28.2 +0.1
baz=226
NVAR **Mina Array Bea** 87.60 49 P P 02 06 26.4 -3.0
comp=Z,0.8nm,0.8s,baz=254,slow=7.5,SNR=13
comp=Z,0.8nm,0.8s
E22K **Anaktuvuk Pass** 87.72 14 IAmb IAmb 02 06 30.4
comp=Z,14nm,0.8s
E22K **Anaktuvuk Pass** 87.72 14 P P 02 06 29.6 +0.5
baz=220
G24K **Hadweenzic Riv** 87.77 17 IAmb IAmb 02 06 31.6
comp=Z,8.7nm,0.8s
G24K **Hadweenzic Riv** 87.77 17 P P 02 06 29.5 +0.2
baz=224,SNR=15
M29M **Somme Creek** 87.83 22 P P 02 06 30.9 +1.2
baz=232
C21K **Knifeblade Rid** 87.85 13 P P 02 06 30.2 +0.6
baz=217,SNR=65
EVN **Everest** 88.05 299 P 02 06 32.6 +0.3
EVN **Everest** 88.05 299 P P 02 06 31.8 -0.4
B20K **Meade River** 88.05 12 IAmb IAmb 02 06 31.8
comp=Z,21nm,1.0s
B20K **Meade River** 88.05 12 P P 02 06 31.1 +0.7
baz=215
I26K **Coal Creek Min** 88.07 19 IAmb IAmb 02 06 32.5
comp=Z,13nm,1.1s
I26K **Coal Creek Min** 88.07 19 P P 02 06 31.1 +0.4
baz=228
WHY **Whitehorse** 88.17 25 P P 02 06 31.9 +0.5
baz=236
G25K **Bearman Lake** 88.20 17 P P 02 06 32.3 +1.0
baz=225
E23K **Chandalar** 88.20 15 IAmb IAmb 02 06 33.0
comp=Z,12nm,0.9s
E23K **Chandalar** 88.20 15 P P 02 06 31.8 +0.4
baz=222,SNR=14
T35M **Bob Quinn** 88.23 29 P P 02 06 30.8 -0.9
baz=240
F24K **Squaw Lake** 88.25 16 IAmb IAmb 02 06 33.5
comp=Z,11nm,1.0s
F24K **Squaw Lake** 88.25 16 P P 02 06 32.1 +0.5
baz=224,SNR=13
B21K **Ikpikpuk River** 88.25 13 P P 02 06 31.9 +0.5
baz=211,SNR=32
KNGR **Kungurtug, Tuv** 88.47 323 *e*P P 02 06 33.2 +0.1
KNGR pmax pmax
comp=Z,3.0nm,0.9s
E24K **Your Creek** 88.50 15 P P 02 06 32.9 +0.1
baz=223
M30M **Minto, Yukon** 88.53 23 P P 02 06 31.3 -1.7
baz=234
D23K **Nanushuk River** 88.63 14 P P 02 06 34.4 +1.1
baz=221
TOLK **Toolik Lake Re** 88.65 15 P P 02 06 34.2 +0.8
baz=222,SNR=14
SYO **Syowa Base** 88.69 197 *e*P P 02 06 28.2 -5.5
SYO **Syowa Base** 88.69 197 *e*P P 02 06 35.2 +1.5
I27K **Kandik River** 88.75 19 IAmb IAmb 02 07 27.5
comp=Z,13nm,1.6s
I27K **Kandik River** 88.75 19 P P 02 06 33.5 -0.5
baz=229
WVOR **Wild Horse Val** 88.78 46 P P 02 06 34.2 -0.6
WVOR **Wild Horse Val** 88.78 46 P P 02 06 34.2 -0.6
F25K **Christian Rive** 88.91 16 P P 02 06 35.0 +0.3
baz=226,SNR=8.6
G26K **Porcupine Rive** 88.99 17 IAmb IAmb 02 06 37.8
comp=Z,13nm,0.8s
G26K **Porcupine Rive** 88.99 17 P P 02 06 35.0 0.0
baz=227,SNR=28
DLBC **Dease Lake** 89.07 28 P P 02 06 35.0 -0.7
baz=240
B22K **Teshekpuk Lake** 89.08 13 P P 02 06 36.0 +0.7
baz=218,SNR=12
R33M **Jennings River** 89.14 27 P P 02 06 36.0 -0.1
baz=239
H27K **Steamboat Moun** 89.19 19 P P 02 06 35.8 -0.2
baz=230
I28M **Miner Creek** 89.19 20 P P 02 06 35.6 -0.5
baz=231
D24K **Happy Valley** 89.21 15 P P 02 06 36.9 +0.9
baz=223
C23K **Itkillik River** 89.30 14 P P 02 06 37.2 +0.9
baz=221,SNR=38

E25K **Arctic Village** 89.30 16 P P 02 06 36.7 +0.2
baz=226,SNR=5.7
F26K **Sheenjek River** 89.40 17 P P 02 06 36.9 0.0
baz=227
G27K **Doyon Strip** 89.53 18 P P 02 06 36.8 -0.7
baz=229
J30M **Hart River** 89.88 21 P P 02 06 39.2 -0.1
baz=234
D25K **Kavik River** 89.94 15 P P 02 06 39.3 -0.1
baz=225,SNR=6.9
I30M **Mount Dempster** 90.24 21 P P 02 06 40.5 -0.6
baz=234
ELIB **Princess Elisa** 90.26 191 *d*P P 02 06 40.7 -0.5
comp=Z,6.3nm,1.1s
E27K **Coleen River** 90.44 17 P P 02 06 41.6 -0.3
baz=229
F28M **Old Crow** 90.58 18 IAmb IAmb 02 07 26.1
comp=Z,14nm,1.9s
F28M **Old Crow** 90.58 18 P P 02 06 42.2 -0.3
baz=231
MMPY **Sheldon Lake,** 90.69 24 P P 02 06 42.8 -0.3
baz=239
G29M **Pine Creek** 90.71 19 P P 02 06 43.3 +0.3
baz=233
EPYK **Eagle Plains** 90.80 20 P P 02 06 43.5 0.0
baz=234
C27K **Jago River** 90.83 15 P P 02 06 43.8 +0.2
baz=228
H31M **Peel River** 91.27 21 P P 02 06 45.9 +0.2
baz=236
E28M **Babbage River** 91.30 17 P P 02 06 45.8 +0.1
baz=231
D27M **Malcolm River** 91.31 16 P P 02 06 45.9 0.0
baz=230
G30M **tAoh Zraii Nji** 91.32 19 P P 02 06 45.4 -0.6
baz=234
TUC **Tucson** 91.52 57 P P 02 06 46.5 -1.2
TUC **Tucson** 91.52 57 P P 02 06 46.5 -1.2
E29M **Blow River** 91.64 18 P P 02 06 47.0 -0.4
baz=233
NEW **Newport** 91.81 40 P P 02 06 46.3 -2.3
comp=Z,1.2nm,0.6s,baz=260,slow=8.2,SNR=4.1
comp=Z,1.2nm,0.6s
HYB **Hyderabad** 92.53 287 *e*P P 02 06 51.9 -0.8
HYB *e*PP PP 02 10 33.3 -1.3
HYB *e*PKiKP PKiKP 02 11 40.7 -0.7
HYB *e*SKSac SKSac 02 17 22.3 -0.6
TROLL **Troll, Antarti** 92.97 185 ⇑P P 02 06 53.2 -0.6
comp=Z,464nm,0.9s
NVL **N'lazarevskaya** 93.12 188 *e*P P 02 06 50.1 -4.2
NVL pmax pmax
comp=Z,5.0nm,0.9s
SNAA **Sanae** 93.67 183 ⇑P P 02 06 55.9 -1.0
comp=Z,89nm,0.7s
SNAA **Sanae** 93.67 183 P P 02 06 54.9 -2.1
comp=Z,4.9nm,1.0s,baz=178,slow=4.6,SNR=8.0
comp=Z,4.9nm,1.0s
SNAA **Sanae** 93.67 183 ⇑*e*P P 02 06 55.3 -1.6
SNAA pmax pmax
comp=Z,11nm,1.3s
SNAA **Sanae** 93.67 183 P P 02 06 56.5 -0.5
DGZ **Jazzator, Alta** 94.18 320 ⇑*i*P P 02 06 59.2 -0.5
DGZ pmax pmax
comp=Z,4.0nm,1.3s
PDAR **Pinedale Array** 95.26 47 P P 02 07 05.7 +0.7
comp=Z,0.2nm,0.3s,baz=276,slow=6.0,SNR=4.1
comp=Z,0.2nm,0.3s
MK31 **Makanchi Array** 96.70 316 ⇑*e*P P 02 07 10.8 -0.3
MKAR **Makanchi Array** 96.70 316 P P 02 07 10.9 -0.2
comp=Z,4.5nm,0.9s,baz=95,slow=6.6,SNR=9.1
MKAR LR LR 02 49 28.3
comp=Z,917nm,20.7s,baz=3.5,slow=34
comp=Z,4.5nm,0.9s
MKAR **Makanchi Array** 96.70 316 P P 02 07 11.2 +0.1
MKAR **Makanchi Array** 96.70 316 P P 02 07 11.2 +0.1
TXAR **Lajitas Array** 96.70 62 P P 02 07 09.5 -2.1
comp=Z,0.5nm,0.8s,baz=238,slow=3.9,SNR=5.2
comp=Z,0.5nm,0.8s
ZALV **Zalesovo Beam** 96.93 324 P P 02 07 10.8 -1.1
comp=Z,3.1nm,0.8s,baz=105,slow=3.3,SNR=8.6
ZALV PKiKP PKiKP 02 11 51.2 +3.2
comp=Z,0.4nm,0.3s,baz=101,slow=3.4,SNR=2.6
comp=Z,3.1nm,0.8s
ZALV **Zalesovo Beam** 96.93 324 *i*P P 02 07 10.9 -1.0
ZALV pmax pmax
comp=Z,2.0nm,0.6s
A36M **Sachs Harbour** 97.19 17 P P 02 07 12.3 -0.4
baz=245
YKA **Yellowknife Ar** 97.67 27 P P 02 07 12.8 -2.2
comp=Z,2.5nm,0.8s,baz=245,slow=4.5,SNR=8.2
comp=Z,2.5nm,0.8s
NRIK **Noril'sk** 99.73 339 ⇓*e*P Pdif 02 07 23.6 -0.5
NRIK pmax pmax
comp=Z,4.0nm,0.8s
KURBB **Kurchatov Arra** 99.95 320 PKiKP PKiKP 02 11 54.4 +0.9
comp=Z,0.5nm,0.7s,baz=112,slow=1.7,SNR=4.8
BVAR **Borovoye Array** 105.27 322 PKiKP PKiKP 02 12 02.7 -0.4
comp=Z,1.4nm,0.7s,baz=92,slow=4.3,SNR=8.1
BVAR PP PP 02 12 08.2 -2.7
comp=Z,1.9nm,0.8s,baz=92,slow=4.3,SNR=6.5
ARTI **Arti** 112.14 325 *i* PKIKP PKiKP 02 12 14.5 -1.3
ARTI 02 13 01.7
ARTI 02 19 22.3
ARTI SS SS 02 28 36.7 +1.0
NEEM **North Greenlan** 114.30 8 *i* P PKPdf 02 12 19.0 -0.8
SPITS **Spitsbergen Ar** 114.72 354 PKP PKiKP 02 12 19.8 -0.4
comp=Z,9.1nm,0.9s,baz=24,slow=7.9,SNR=4.7
LVZ **Lovozero** 118.47 341 ⇓*i* PKIKP PKPdf 02 12 26.7 -1.0
LVZ pmax pmax
comp=Z,19nm,1.7s
APA **Apatity** 119.05 341 *i* PKIKP PKPdf 02 12 28.6 -0.1
APA *e*PS PKKPdf 02 23 24.2 +8.5
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,1µm,18.5s
BELG **Belogornoye** 119.06 322 PKP PKiKP 02 12 29.3 +0.1
comp=Z,15nm,0.7s,baz=117,slow=2.4,SNR=4.2
ARCES **ARCESS Array B** 119.96 345 PKP PKPdf 02 12 29.4 -1.1
comp=Z,7.8nm,0.6s,baz=51,slow=1.9,SNR=42
ARCES **ARCESS Array B** 119.96 345 PKIKP PKPdf 02 12 29.8 -0.7
ARCES **ARCESS Array B** 119.96 345 PKPdf 02 12 29.8 -0.7
SUMG **Summit** 120.17 9 PKIKP PKiKP 02 12 31.5 +0.1
SUMG **Summit** 120.17 9 PKiKP 02 12 31.5 +0.1
SUMG **Summit** 120.17 9 *i* P PKPdf 02 12 31.0 -0.3
KLMR **Klimovskoe** 120.29 333 *e*PKIKP PKPdf 02 12 29.4 -1.9
KLMR pmax pmax
comp=Z,15nm,0.9s
MSF **Maaselka** 121.44 341 PKIKP PKPdf 02 12 32.2 -1.2
SCHQ **Schefferville** 122.48 33 PKP PKPdf 02 12 34.9 -0.8
comp=Z,3.6nm,0.8s,baz=270,slow=1.0,SNR=4.3
VRH **Novokhopyorsk** 122.92 322 *e*PKIKP PKPdf 02 12 36.3 -0.3
VRH pmax pmax
comp=Z,21nm,0.8s
OUL **Oulu** 122.97 341 PKIKP PKPdf 02 12 36.0 -0.3
BOSA **Boshof** 123.12 221 PKP PKiKP 02 12 38.3 +0.1
comp=Z,4.1nm,0.9s,baz=117,slow=6.8,SNR=4.0
MOS **Moscow** 123.45 328 *i* PKIKP PKiKP 02 12 42.2 +4.4
NUUK **Nuuk** 123.85 19 *i* P PKPdf 02 12 37.9 -0.2
SCO **Scoresbysund** 123.86 3 PKIKP PKiKP 02 12 38.1 -0.1
SCO **Scoresbysund** 123.86 3 *i* P PKPdf 02 12 37.9 -0.1
LPSR **Galich'ya Gora** 124.04 324 *e*PKIKP PKPdf 02 12 38.6 -0.1
LPSR pmax pmax
comp=Z,38nm,1.1s
VORR **Voronezh** 124.23 323 *e*PKIKP PKPdf 02 12 38.7 -0.4
VORR pmax pmax
comp=Z,33nm,0.6s
KBZ **Khabaz** 124.23 313 PKP PKiKP 02 12 39.9 +0.2
comp=Z,2.2nm,0.9s,baz=112,slow=5.4,SNR=3.6
OBN **Obninsk** 124.27 328 PKP PKPdf 02 12 39.1 0.0
comp=Z,5.8nm,0.4s,baz=53,slow=5.1,SNR=6.7
OBN **Obninsk** 124.27 328 ⇑*i* PKIKP PKiKP 02 12 39.4 0.0
OBN PS PS 02 24 18.0 -5.9
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,1µm,20.0s
KIV **Kislovodsk** 124.33 314 *i* PKIKP PKiKP 02 12 42.2 +2.2
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,814nm,23.0s
SHA1 **Shidzhatmaz** 124.40 313 ⇑*i* PKIKP PKiKP 02 12 40.5 +0.1
VSR **Storozhevoye** 124.42 323 *e*PKIKP PKPdf 02 12 38.5 -1.0
VSR pmax pmax
comp=Z,20nm,1.0s

VORD	**Divnogorie**	**124.44**	**322**	*e*PKIKP	**PKPdf**	**02 12 38.7**	**-0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FINES	**FINESS Array B**	**125.37**	**338**	PKP	**PKPdf**	**02 12 40.3**	**-0.8**
	comp=Z,4.8nm,0.9s,baz=54,slow=3.6,SNR=14						
IVI	**Ivigtut**	**127.12**	**20**	*i* P	**PKPdf**	**02 12 43.4**	**-1.0**
NRS	**Narsarsuaq**	**128.05**	**19**	*i* P	**PKPdf**	**02 12 44.7**	**-1.5**
MNK	**Minsk**	**128.90**	**330**	*i* PKP	**PKiKP**	**02 12 48.9**	**+0.2**
	comp=E,7.0nm,1.2s						
MNK				*i* PKP	**PKiKP**	**02 12 48.9**	**+0.2**
	comp=N,8.0nm,1.0s						
MNK				*i* PKP	**PKiKP**	**02 12 48.9**	**+0.2**
	comp=Z,19nm,0.9s,baz=55						
MNK				*i* pPKP	**pPKPdf**	**02 13 03.2**	**+1.2**
MNK				*i* sPKP	**sPKPdf**	**02 13 11.2**	**+4.2**
MNK				*i* PP	**PP**	**02 14 57.2**	**+2.0**
MNK				*i* PPP	PPP	02 17 40.9	
MNK				*i* SKS	**SKSdf**	**02 19 55.2**	**-0.6**
MNK				*i* PS	**PS**	**02 25 06.0**	**+1.4**
MNK				*i* SS	**SS**	**02 32 13.9**	**+3.8**
MNK				*i* SSS	SSS	02 37 01.4	
MNK				*i* LQ	LQ	03 00 40.5	
MNK				*i* LRM	MLR	03 09 18.3	
	comp=N,853nm,19.2s						
MNK				*i* LRM	MLR	03 09 25.1	
	comp=Z,1μm,18.4s						
MNK				*i* LRM	MLR	03 10 09.3	
	comp=E,694nm,17.8s						
MNK	**Minsk**	**128.90**	**330**	*i* PKIKP	**PKiKP**	**02 12 48.8**	**+0.2**
MNK				*i*		02 13 03.2	
MNK				*i*		02 14 57.2	
MNK				*i* PPP	PPP	02 17 40.9	
MNK				*i*		02 19 55.1	
MNK				*i* PS	**PS**	**02 25 05.9**	**+1.4**
MNK				*i* SS	SS	02 32 13.9	+3.7
MNK				*i* SSS	SSS	02 37 01.3	
MNK				pmax	pmax		
	comp=E,7.0nm,1.2s						
MNK				pmax	pmax		
	comp=N,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,19nm,0.9s						
MNK				MLR	MLR		
	comp=N,853nm,19.0s						
MNK				MLR	MLR		
	comp=Z,1μm,18.0s						
MNK				MLR	MLR		
	comp=E,694nm,18.0s						
NACGM	**Naroch**	**129.19**	**331**	*e*PKP	**PKiKP**	**02 12 49.0**	**-0.2**
	comp=Z,31nm,1.0s,baz=54						
AKASG	**Malin Array Be**	**130.29**	**326**	PKP	**PKPdf**	**02 12 50.0**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=50,slow=2.2,SNR=5.5						
AKASG				SKP	**SKPdf**	**02 16 22.0**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=49,slow=4.3,SNR=7.2						
AKASG	**Malin Array Be**	**130.29**	**326**	↑PKIKP	**PKPdf**	**02 12 50.0**	**-0.8**
AKBB	**Malin Array Si**	**130.29**	**326**	↑*i*PKIKP	**PKPdf**	**02 12 50.7**	**0.0**
KIEV	**Kiev**	**130.30**	**326**	↑P	**PKiKP**	**02 12 54.9**	**+3.3**
KIEV	**Kiev**	**130.30**	**326**	PKIKP	**PKPdf**	**02 12 51.2**	**+0.4**
KIEV	**Kiev**	**130.30**	**326**		**PKPdf**	**02 12 51.2**	**+0.4**
NB2	**NORSAR Subarra**	**130.32**	**345**	PKPdf	**PKPdf**	**02 12 50.8**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=31,slow=1.9						
NB2				SKP	**SKPbc**	**02 16 10.4**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=40,slow=4.8						
NOA	**NORSAR Array B**	**130.32**	**345**	PKP	**PKPdf**	**02 12 50.5**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=31,slow=2.0,SNR=11						
NOA				SKP	**SKPdf**	**02 16 21.8**	**-0.4**
	comp=Z,15nm,1.1s,baz=34,slow=2.9,SNR=11						
HFS	**Hagfors**	**130.41**	**343**	PKP	**PKPdf**	**02 12 49.9**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=57,slow=5.3,SNR=6.0						
HFS				SKP	**SKPdf**	**02 16 23.0**	**+0.8**
	comp=Z,11nm,0.9s,baz=56,slow=5.4,SNR=10						
ASF	**Jabal al Asfar**	**131.14**	**300**	PKP	**PKiKP**	**02 12 53.8**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=34,slow=3.6,SNR=4.5						
BRTR	**Keskin Array B**	**131.98**	**311**	PKP	**PKPdf**	**02 12 53.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=105,slow=3.0,SNR=4.8						
BRTR				SKP	**SKPdf**	**02 16 27.4**	**+1.4**
	comp=Z,3.1nm,1.1s,baz=90,slow=5.8,SNR=7.0						
SORM	**Soroca**	**132.08**	**323**	⇓P	**PKPdf**	**02 12 53.5**	**-0.7**
BEL	**Belsk**	**133.91**	**331**	PKIKP	**PKiKP**	**02 12 58.7**	**-0.2**
BIZ	**Bicaz**	**134.00**	**323**	⇑P	**PKPdf**	**02 12 57.6**	**-0.3**
BURAR	**Bucovina Array**	**134.15**	**324**	⇑P	PKPdf	02 12 50.0	-8.3
VRI	**Vrincioaia**	**134.17**	**321**	⇑P	**PKiKP**	**02 13 01.9**	**+2.2**
VRI	**Vrincioaia**	**134.17**	**321**	⇑PKIKP	**PKiKP**	**02 13 01.9**	**+2.2**
MLR	**Muntele Rosu**	**134.83**	**321**	PKP	**PKPdf**	**02 12 59.2**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=90,slow=1.0,SNR=4.9						
MLR	**Muntele Rosu**	**134.83**	**321**	⇓P	**PKPdf**	**02 12 59.1**	**-0.6**
DOPR	**Dopca**	**134.92**	**322**	⇓P	**PKiKP**	**02 13 03.7**	**+2.5**
KOLS	**Kolonicke sedl**	**135.01**	**327**	*e*PKIKP	**PKiKP**	**02 13 01.4**	**+0.2**
KOLS	**Kolonicke sedl**	**135.01**	**327**	*e*PKP	**PKiKP**	**02 13 01.4**	**+0.2**
VOIR		**135.40**	**322**	⇓P	**PKiKP**	**02 13 04.6**	**+2.4**
VOIR		**135.40**	**322**	⇓PKIKP	**PKiKP**	**02 13 04.6**	**+2.4**
OJC	**Ojcow**	**135.44**	**330**	PKIKP	**PKPdf**	**02 13 00.0**	**-0.5**
ARR	**Arges**	**135.69**	**322**	⇓P	**PKPdf**	**02 13 01.5**	**+0.3**
MARR	**Marisel-Cluj**	**135.86**	**324**	⇓P	**PKPdf**	**02 12 58.3**	**-3.3**
DRGR		**136.03**	**324**	⇓P	**PKPdf**	**02 12 58.6**	**-3.2**
DRGR		**136.03**	**324**	PKIKP	**PKPdf**	**02 13 02.1**	**+0.3**
LOT	**Lotru**	**136.16**	**322**	⇓P	**PKPdf**	**02 13 00.1**	**-2.0**
DEV	**Deva**	**136.43**	**323**	⇑P	**PKiKP**	**02 13 04.2**	**0.0**
DEV	**Deva**	**136.43**	**323**	⇑PKIKP	**PKiKP**	**02 13 04.2**	**0.0**
BSEG	**Bad Segeberg**	**136.56**	**340**	PKIKP	**PKiKP**	**02 13 07.0**	**+2.8**
STEB	**Steborice**	**136.60**	**331**	*e*PKPDF	**PKPdf**	**02 13 02.6**	**-0.1**
GZR	**Gura Zlata**	**136.78**	**323**	⇑P	**PKPdf**	**02 13 03.0**	**-0.2**
GZR	**Gura Zlata**	**136.78**	**323**	⇑PKIKP	**PKPdf**	**02 13 03.0**	**-0.2**
MORC	**Moravsky Berou**	**136.82**	**331**	⇓P	**PKPdf**	**02 13 03.7**	**+0.5**
MORC	**Moravsky Berou**	**136.82**	**331**	⇓PKIKP	**PKPdf**	**02 13 03.7**	**+0.5**
MORC	**Moravsky Berou**	**136.82**	**331**	*e*PKP	**PKPdf**	**02 13 02.9**	**-0.2**
OSTC	**Ostas**	**136.88**	**333**	*e*PKIKP	**PKPdf**	**02 12 59.6**	**-3.6**
OSTC	**Ostas**	**136.88**	**333**	*e*PKPDF	**PKPdf**	**02 12 59.6**	**-3.6**
PSZ	**Piszkesteto**	**136.88**	**327**	⇓P	**PKPdf**	**02 13 03.9**	**+0.5**
PSZ	**Piszkesteto**	**136.88**	**327**	⇓PKIKP	**PKPdf**	**02 13 03.9**	**+0.5**
SIRR	**Siria**	**136.92**	**324**	⇑P	**PKPdf**	**02 13 03.1**	**-0.3**
CHVC	**Chvalec**	**136.93**	**333**	*e*PKPDF	**PKiKP**	**02 13 08.7**	**+3.6**
KRLC	**Kraliky**	**136.97**	**332**	*e*PKIKP	**PKPdf**	**02 13 03.7**	**+0.3**
KRLC	**Kraliky**	**136.97**	**332**	*e*PKPDF	**PKPdf**	**02 13 03.7**	**+0.3**
MAUC	**Maruska**	**136.97**	**330**	*e*PKPDF	**PKPdf**	**02 13 04.2**	**+0.8**
DPC	**Dobruska-Polom**	**136.98**	**332**	*e*PKIKP	**PKPdf**	**02 12 59.5**	**-3.9**
DPC	**Dobruska-Polom**	**136.98**	**332**	*e*PKPDF	**PKPdf**	**02 12 59.5**	**-3.9**
VYHS	**Vyhne**	**137.05**	**329**	*e*PKIKP	**PKiKP**	**02 13 04.6**	**-0.8**
VYHS	**Vyhne**	**137.05**	**329**	*e*PKP	**PKiKP**	**02 13 04.6**	**-0.8**
BZS	**Buzias**	**137.32**	**324**	⇓P	**PKPdf**	**02 13 03.1**	**-1.1**
BZS	**Buzias**	**137.32**	**324**	⇓PKIKP	**PKPdf**	**02 13 03.1**	**-1.1**
JAVC	**Velka Javorina**	**137.38**	**330**	*e*PKP	**PKiKP**	**02 13 05.5**	**-0.6**
VRAC	**Vranov**	**137.59**	**331**	PKP	**PKPdf**	**02 13 04.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=26,slow=1.2,SNR=3.7						
VRAC				SKPab	**SKPab**	**02 16 43.3**	**+1.5**
	comp=Z,2.9nm,1.0s,baz=54,slow=5.1,SNR=4.2						
VRAC	**Vranov**	**137.59**	**331**	⇓P	**PKPdf**	**02 13 04.4**	**-0.1**
VRAC	**Vranov**	**137.59**	**331**	*e*PKP	**PKPdf**	**02 13 04.6**	**+0.1**
PVCC	**Panska Ves**	**137.62**	**334**	*e*PKIKP	**PKiKP**	**02 13 05.8**	**-0.7**
PVCC	**Panska Ves**	**137.62**	**334**	*e*PKPDF	**PKiKP**	**02 13 05.8**	**-0.7**
BRG	**Berggiesshubel**	**137.63**	**334**	PKIKP	**PKPdf**	**02 13 05.2**	**+0.7**
BRG	**Berggiesshubel**	**137.63**	**334**	*e*P	**PKPdf**	**02 13 05.3**	**+0.8**
BRG				Amp		02 13 05.7	
	comp=Z,3.0nm,0.9s						
BRG	**Berggiesshubel**	**137.63**	**334**	P	**PKiKP**	**02 13 11.6**	**+5.1**
BRG				Amp		02 13 12.3	
	comp=Z,6.3nm,0.8s						
CLL	**Collm**	**137.68**	**336**	*e*PKIKP	**PKiKP**	**02 13 06.0**	**-0.6**
CLL	**Collm**	**137.68**	**336**	*e*PKPdf	**PKiKP**	**02 13 06.0**	**-0.6**
	comp=Z,3.0nm,0.8s						
CLL				*i* PKPmax		02 13 11.6	
	comp=Z,10.0nm,0.8s						
CLL				*e*SKPbc	**SKPbc**	**02 16 35.0**	**+0.4**
CLL				*e*PKSbc	**PKSbc**	**02 16 41.0**	**+1.6**
CLL				*i* (PKSab)		02 16 47.7	
	comp=Z,7.0nm,1.0s						
CLL				*es*SKPbc		02 16 59.0	
KRUC	**Moravsky**	**137.86**	**331**	PKIKP	**PKPdf**	**02 13 05.5**	**+0.5**
KRUC	**Moravsky**	**137.86**	**331**	*e*PKP	**PKPdf**	**02 13 04.4**	**-0.6**
MODS	**Modra-Piesok**	**137.91**	**330**	*e*PKIKP	**PKiKP**	**02 13 06.3**	**-0.9**
MODS	**Modra-Piesok**	**137.91**	**330**	*e*PKP	**PKiKP**	**02 13 06.3**	**-0.9**
PRU	**Pruhonice**	**138.03**	**333**	*e*PKIKP	**PKPdf**	**02 13 05.7**	**+0.4**
PRU	**Pruhonice**	**138.03**	**333**	*e*PKPDF	**PKPdf**	**02 13 05.7**	**+0.4**
EKA	**Eskdalemuir Ar**	**138.57**	**351**	PKP	**PKPdf**	**02 13 06.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=14,slow=2.1,SNR=5.4						
EKA				SKPab	**SKPab**	**02 16 47.9**	**+2.1**
	comp=Z,4.4nm,0.9s,baz=13,slow=1.8,SNR=5.6						
ZVC	**Zvikov**	**138.59**	**333**	*e*PKPDF	**PKPdf**	**02 13 03.3**	**-3.1**
MORH	**Mrgy, Hungar**	**138.62**	**326**	⇑P	**PKPdf**	**02 13 05.9**	**-0.6**
WINA	**Alland / Wiene**	**138.68**	**330**	*e*PKiKP	**PKiKP**	**02 13 09.0**	**+0.3**
	comp=Z,4.5nm,0.9s						
SOP	**Sopron**	**138.73**	**329**	PKIKP	**PKPdf**	**02 13 06.9**	**+0.2**
RONA	**Rosalia, Austr**	**138.85**	**330**	*e*PKiKP	**PKiKP**	**02 13 09.0**	**-0.2**
	comp=Z,3.5nm,0.9s						
CONA	**Conrad Observa**	**138.90**	**330**	*e*PKiKP	**PKiKP**	**02 13 09.1**	**-0.2**
	comp=Z,2.6nm,0.7s						
CKRC	**Cesky Krumlov**	**138.99**	**332**	*e*PKIKP	**PKPdf**	**02 13 06.6**	**-0.5**
CKRC	**Cesky Krumlov**	**138.99**	**332**	*e*PKPDF	**PKPdf**	**02 13 06.6**	**-0.5**
KHC	**Kasperske Hory**	**139.09**	**333**	*e*PKIKP	**PKPdf**	**02 13 07.1**	**-0.2**
KHC	**Kasperske Hory**	**139.09**	**333**	*e*PKPDF	**PKPdf**	**02 13 07.1**	**-0.2**
GERES	**GERESS Array B**	**139.25**	**333**	PKP	**PKPdf**	**02 13 05.8**	**-1.9**
	comp=Z,1.9nm,0.8s,baz=17,slow=1.3,SNR=15						
GERES				SKPab	**SKPab**	**02 16 51.9**	**+2.7**
	comp=Z,3.3nm,0.9s,baz=32,slow=3.9,SNR=15						
WET	**Wettzell**	**139.38**	**334**	PKIKP	**PKPdf**	**02 13 08.8**	**+0.9**
ARSA	**Arzberg**	**139.54**	**330**	*e*PKiKP	**PKiKP**	**02 13 09.7**	**-0.9**
	comp=Z,2.4nm,1.0s						
MOA	**Molln**	**139.72**	**331**	*e*PKP	**PKPdf**	**02 13 08.2**	**-0.3**
	comp=Z,1.7nm,1.0s						
SESA	**Seetaler Alpe,**	**140.10**	**330**	*i* PKP	**PKPdf**	**02 13 08.5**	**-1.0**
	comp=Z,7.5nm,1.1s						
SESA				*e*SKP	**SKPab**	**02 16 54.8**	**+1.6**
	comp=Z,9.2nm,1.2s						
BIOA	**Bad Ischl, Aus**	**140.12**	**331**	*e*PKP	**PKPdf**	**02 13 08.0**	**-1.3**
	comp=Z,2.6nm,1.2s						
SOKA	**Soboth**	**140.18**	**329**	*e*PKP	**PKPdf**	**02 13 08.5**	**-1.0**
	comp=Z,3.0nm,1.1s						
SOKA				*e*SKP	**SKPab**	**02 16 55.0**	**+1.6**
	comp=Z,4.8nm,1.3s						
PHP	**Peshkopia**	**140.23**	**319**	PKIKP	**PKPdf**	**02 13 09.5**	**-0.2**
TNS	**Taunus Mts**	**140.28**	**338**	PKIKP	**PKiKP**	**02 13 11.8**	**-0.2**
OBKA	**Obir**	**140.53**	**329**	*e*SKP	**SKPab**	**02 16 55.9**	**+0.9**
	comp=Z,1.3nm,0.9s						
KBA	**Koelnbreinsper**	**140.71**	**331**	PKIKP	**PKiKP**	**02 13 12.6**	**-0.5**
KBA	**Koelnbreinsper**	**140.71**	**331**	*e*PKP	**PKPdf**	**02 13 09.1**	**-1.4**
	comp=Z,5.3nm,1.1s						
LESA	**Schwarzleotal**	**140.76**	**332**	*e*PKP	**PKPdf**	**02 13 09.4**	**-1.1**
	comp=Z,5.5nm,0.6s						
LESA				*e*SKP	**SKPab**	**02 16 56.4**	**+0.4**
	comp=Z,4.1nm,1.1s						
MYKA	**Terra Mystica**	**140.89**	**330**	*e*PKP	**PKPdf**	**02 13 10.5**	**-0.2**
	comp=Z,1.3nm,0.5s						
MYKA				*e*SKP	**SKPab**	**02 16 56.8**	**+0.2**
	comp=Z,1.1nm,0.6s						
STU	**Stuttgart**	**141.19**	**336**	PKIKP	**PKPdf**	**02 13 11.5**	**+0.4**
WATA	**Walderalm**	**141.32**	**333**	*e*PKP	**PKPdf**	**02 13 11.2**	**-0.3**
	comp=Z,2.0nm,0.7s						
WATA				*e*SKP	**SKPab**	**02 16 57.4**	**-1.1**
	comp=Z,4.6nm,1.2s						
ABTA	**Abfaltersbach**	**141.34**	**331**	*e*PKP	**PKPdf**	**02 13 10.5**	**-1.1**
	comp=Z,3.3nm,1.0s						
ABTA				*e*SKP	**SKPab**	**02 16 57.3**	**-1.3**
	comp=Z,4.8nm,1.0s						
WTTA	**Wattenberg**	**141.35**	**333**	PKIKP	**PKPdf**	**02 13 11.7**	**0.0**
WTTA	**Wattenberg**	**141.35**	**333**	*e*PKP	**PKPdf**	**02 13 11.5**	**-0.2**
	comp=Z,3.5nm,0.7s						
WTTA				*e*SKP	**SKPab**	**02 16 57.2**	**-1.5**
	comp=Z,5.0nm,1.2s						
MOTA	**Moosalm**	**141.52**	**333**	*e*PKP	**PKPdf**	**02 13 11.3**	**-0.6**
	comp=Z,3.6nm,0.9s						
MOTA				*e*SKP	**SKPab**	**02 16 58.1**	**-1.3**
	comp=Z,4.0nm,1.0s						
RETA	**Reutte**	**141.56**	**334**	*e*SKP	**SKPab**	**02 16 58.2**	**-1.3**
	comp=Z,3.5nm,1.2s						
SQTA	**Sankt Quirin**	**141.57**	**333**	*e*PKP	**PKPdf**	**02 13 11.1**	**-0.9**
	comp=Z,1.1nm,0.5s,SNR=4.2						
SQTA				*e*SKP	**SKPab**	**02 16 58.7**	**-0.9**
	comp=Z,2.6nm,0.7s						
FETA	**Feichten**	**141.94**	**333**	*e*PKP	**PKPdf**	**02 13 11.0**	**-1.7**
	comp=Z,1.9nm,0.8s						
FETA				*e*SKP	**SKPab**	**02 16 59.9**	**-1.4**
	comp=Z,5.2nm,1.0s						
DAVA	**Damuels**	**142.09**	**334**	*e*PKP	**PKPdf**	**02 13 09.5**	**-3.5**
	comp=Z,4.7nm,1.1s						
DAVA				*e*SKP		02 16 59.5	
	comp=Z,3.1nm,1.1s						
DAVOX	**Davos/Dischmat**	**142.49**	**334**	PKP	**PKPdf**	**02 13 14.2**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=48,slow=2.8,SNR=7.9						
TIP	**Timpagrande**	**143.96**	**319**	⇓P	**PKiKP**	**02 13 18.2**	**-1.7**
AQU	**L'Aquila**	**143.99**	**325**	PKIKP	**PKiKP**	**02 13 20.4**	**+0.5**
CESX	**Cesi**	**144.26**	**326**		**PKPab**	**02 13 14.4**	**-0.2**
LOR	**Lormes**	**144.40**	**340**	PKIKP	**PKiKP**	**02 13 20.2**	**-0.3**
ROSF	**Rostrenen**	**145.32**	**348**	PKIKP	**PKPdf**	**02 13 18.5**	**+0.1**
ORIF	**Oris-en-Rattie**	**145.65**	**336**	PKP2	**PKPab**	**02 13 20.0**	**+0.2**
SSB	**Saint Sauveur**	**145.87**	**337**	PKP2	**PKPab**	**02 13 20.4**	**-0.2**
SSB	**Saint Sauveur**	**145.87**	**337**		**PKPab**	**02 13 20.4**	**-0.2**
PGF	**Pioggiola**	**146.14**	**330**	PKP2	**PKPbc**	**02 13 21.1**	**0.0**
MFF	**Saint Martin d**	**146.22**	**344**	PKP2	**PKPbc**	**02 13 21.3**	**+0.3**
VAE	**Valguarnera**	**146.44**	**318**	PKPbc	**PKPdf**	**02 13 20.6**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=62,slow=17,SNR=2.0						
RAFF	**Raffo Rosso**	**146.62**	**318**		**PKPab**	**02 13 23.2**	**-0.4**
VSL	**Villasalto**	**148.16**	**326**		**PKPbc**	**02 13 26.6**	**-0.1**
MTLF	**Montolieu**	**148.39**	**338**	PKP2	**PKPbc**	**02 13 27.7**	**+0.5**
KEST	**Kesra**	**150.73**	**320**	PKPbc	**PKiKP**	**02 13 33.9**	**-0.1**
	comp=Z,14nm,0.9s,baz=19,slow=0.8,SNR=27						
PGAV	**Gavieira, Arco**	**152.36**	**352**	*e*PKPbc	**PKPbc**	**02 13 34.5**	**-2.4**
PGAV				*i* tx	tx	02 13 41.5	
PCAB	**Cabril**	**152.57**	**351**	*e*PKPbc	**PKPbc**	**02 13 37.1**	**-0.2**
PCAB				*i* tx	tx	02 13 42.0	
POLO	**Lamas de Olo**	**152.87**	**351**	*e*PKPbc	**PKPbc**	**02 13 37.1**	**-1.0**
POLO				*i* tx	tx	02 13 43.0	
PVRL	**Vila Real**	**152.95**	**351**	*e*PKPbc	**PKPbc**	**02 13 38.3**	**+0.1**
PVRL				*i* tx	tx	02 13 43.1	
PTO	**Porto**	**153.22**	**352**	*e*PKPbc	**PKPbc**	**02 13 38.4**	**-0.3**
PTO				*i* tx	tx	02 13 43.3	
PVIS	**Viseu**	**153.53**	**351**	*e*PKPbc	**PKPbc**	**02 13 37.3**	**-2.2**
PVIS				*i* tx	tx	02 13 44.2	
ESDC	**Sonseca Array**	**153.68**	**344**	PKPbc	**PKPbc**	**02 13 37.1**	**-2.7**
	comp=Z,1.9nm,0.8s,baz=23,slow=2.4,SNR=12						
MTE	**Manteigas**	**153.78**	**350**	*e*PKPbc	**PKiKP**	**02 13 40.4**	**+0.3**
MTE				*i* tx	tx	02 13 44.8	
PCAS	**Casmilo, Conde**	**154.27**	**351**	*e*PKPbc	**PKiKP**	**02 13 41.4**	**+0.4**
PCAS				*i* tx	tx	02 13 45.5	
PCBR	**Castelo Branco**	**154.31**	**350**	*e*PKPbc	**PKiKP**	**02 13 45.1**	**+3.9**
PSARD	**Sardoal**	**154.66**	**351**	*e*PKPbc	**PKiKP**	**02 13 46.0**	**+4.1**
PMRV	**Marv??o**	**154.70**	**349**	*e*PKPbc	**PKPbc**	**02 13 42.0**	**0.0**
PMRV				*i* tx	tx	02 13 47.0	
TORD	**Torodi Ar. Bea**	**165.35**	**266**	PKP	**PKPdf**	**02 13 45.4**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=90,slow=2.0,SNR=4.4						
TORD				PKPab	**PKPab**	**02 14 44.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=88,slow=2.4,SNR=3.0						

*NNC **26** 01:59:14.1±2.7, 38°.24N×69°.38E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=22.3km s-min=17.9km az=62.0*
*IDC **26** 01:59:16.1±1.0, 38°.29N×69°.89E, h0km, mb3.6/11, mbtmp3.6/18, ML3.3/7, Error ellipse: s-maj=17.6km s-min=14.5km az=161.0*
ISC 26 01:59:18.9±0.9, 38°.45N±0°.08×69°.62E±0°.08, h12km, n26, σ2s84/33, mb3.5/10, 3C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**3.71**	**5**	Pg	**Pb**	**02 00 26.9**	**+2.5**
	58nm,0.3s						
IUG				Lg	Lg	02 01 06.3	
	137nm,0.6s						
BRLS	**Borolday**	**4.58**	**2**	Pg	**Pb**	**02 00 36.7**	**-2.5**
	7.7nm,0.2s						
BRLS				Lg	Lg	02 01 24.1	
	55nm,0.8s						
KK31	**Karatay Array**	**4.70**	**8**	⇓Pn	**Pn**	**02 00 29.9**	**+0.3**
	1.1nm,0.3s,baz=176,slow=12,SNR=18						
KK31				⇑Pg	**Pb**	**02 00 44.8**	**+3.6**
	3.3nm,0.3s,baz=185,slow=14,SNR=10						
KK31				⇓Sn	**Sn**	**02 01 28.3**	**+4.3**
	11nm,0.5s						
KK31				⇑Lg	Lg	02 01 47.0	
	11nm,0.4s,baz=196,slow=32,SNR=7.7						
MRKS	**Merke**	**5.09**	**31**	Pg	**Pn**	**02 00 37.7**	**+2.6**
	8.5nm,0.6s						
MRKS				Lg	Lg	02 01 26.4	
	13nm,0.5s						
AAK	**Ala-Archa**	**5.59**	**40**	Pn	**Pn**	**02 00 41.4**	**-0.6**
	4.3nm,0.3s,baz=222,slow=12,SNR=12						
AAK				Sn	**Sn**	**02 01 50.7**	**+4.4**
	1.0nm,0.3s,baz=209,slow=19,SNR=4.3						
AAK				Lg	Lg	02 02 09.7	
	1.3nm,0.3s,baz=174,slow=16,SNR=5.1						
	9.8nm,0.4s						
AAK	**Ala-Archa**	**5.59**	**40**	⇓Pn	**Pn**	**02 00 42.6**	**+0.6**
	2.0nm,0.4s						
AAK				⇑Sn	**Sn**	**02 01 52.6**	**+6.3**
	16nm,1.4s						
SGDS	**Sogindy**	**6.28**	**36**	Pg	**Pn**	**02 00 52.8**	**+1.5**
	4.2nm,0.4s						
SGDS				Lg	Lg	02 01 53.2	
	10nm,0.7s						
DGS	**Degeres**	**6.68**	**42**	P	**Pn**	**02 00 55.8**	**-1.1**
	3.5nm,0.3s						
KRBS	**Karabastau**	**6.96**	**39**	P	**Pn**	**02 01 00.6**	**0.0**
	2.0nm,0.7s						
MKAR	**Makanchi Array**	**12.50**	**44**	Pn	**Pn**	**02 02 16.2**	**-0.4**
	0.3nm,0.3s,baz=219,slow=11,SNR=2.8						
MKAR				Sn	**Sn**	**02 04 28.5**	**-7.3**
	0.3nm,0.3s,baz=242,slow=26,SNR=2.1						
MKAR				Lg	Lg	02 05 37.7	
	0.2nm,0.3s,baz=222,slow=27,SNR=1.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**13.72**	**25**	Pn	**Pn**	**02 02 30.8**	**-2.2**
	baz=210,slow=11,SNR=2.0						
KURBB				Lg	Lg	02 06 26.7	
	baz=314,slow=13,SNR=2.0						
	0.1nm,0.2s						
AKTO	**Aktyubinsk**	**14.55**	**329**	Pn	**Pn**	**02 02 45.4**	**+0.9**
	0.5nm,0.3s,baz=137,slow=14,SNR=5.6						
AKTO				Sn	**Sn**	**02 05 19.4**	**-6.1**
	0.1nm,0.3s,baz=163,slow=20,SNR=1.4						
	1.3nm,0.4s						
BVAR	**Borovoye Array**	**14.59**	**2**	Pn	**Pn**	**02 02 42.7**	**-2.3**
	baz=177,slow=13,SNR=4.1						
BVAR				Sn	**Sn**	**02 05 24.4**	**-2.1**
	baz=182,slow=22,SNR=2.4						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**18.67**	**29**	P	**P**	**02 03 34.3**	**-2.3**
	0.3nm,0.3s,baz=218,slow=12,SNR=4.2						
	0.8nm,0.4s						
ARTI	**Arti**	**19.45**	**341**	P	**Pn**	**02 03 48.1**	**+1.9**
	0.1nm,0.3s,baz=156,slow=18,SNR=1.8						
	1.0nm,0.6s						
AKASG	**Malin Array Be**	**30.89**	**307**	P	**P**	**02 05 34.4**	**-0.6**
	0.1nm,0.2s,baz=106,slow=8.9,SNR=1.7						
	0.1nm,0.2s						
FINES	**FINESS Array B**	**35.26**	**325**	P	**P**	**02 06 14.1**	**+1.1**
	0.4nm,0.5s,baz=102,slow=8.1,SNR=1.1						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**38.93**	**337**	P	**P**	**02 06 44.5**	**+

KURILE ISLANDS REGION

ISC 26 02:05:16.1±0.5,47°02N±0°07×154°03E±0°06,h50km,n203,
σ1996/186,mb4.4/59,8C-6D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.92**	**20**	*e*PN	**Pn**	**02 06 14.9**	**+1.3**
SKR				*e*S	**Sn**	**02 06 55.6**	**-2.7**
SKR				pmax	pmax		
	comp=Z,194nm,0.5s						
SKR				smax	smax		
	comp=N,191nm,0.2s						
SKR	**Severo-Kuril's**	**3.92**	**20**	*e*P	**Pn**	**02 06 15.0**	**+1.3**
SKR				AMB	AMB	02 06 18.2	
	comp=N,170nm,0.3s						
SKR				*e*S	**Sn**	**02 06 56.3**	**-2.0**
SKR				A	A	02 06 57.1	
	comp=N,140nm,0.2s						
SKR				A	A	02 06 57.1	
	comp=N,120nm,0.2s						
REI	**Reidovoe**	**4.53**	**249**	*e*P	Pn	02 06 26.5	+4.4
REI				AMB	AMB	02 06 29.4	
	comp=N,100nm,0.4s						
REI				*e*S	**Sn**	**02 07 16.3**	**+2.8**
REI				A	A	02 07 18.3	
	comp=N,110nm,0.2s						
REI				A	A	02 07 18.3	
	comp=N,120nm,0.2s						
KUR	**Kuril'sk**	**4.64**	**250**	*c i*PN	Pn	02 06 27.9	+4.3
KUR				*i* S	**Sn**	**02 07 20.0**	**+3.8**
KUR				pmax	pmax		
	comp=Z,310nm,0.8s						
KUR				pmax	pmax		
	comp=N,114nm,0.3s						
KUR				pmax	pmax		
	comp=E,65nm,0.2s						
KUR				smax	smax		
	comp=E,327nm,0.6s						
KUR				smax	smax		
	comp=N,184nm,0.5s						
KUR	**Kuril'sk**	**4.64**	**250**	*e*P	Pn	02 06 27.8	+4.2
KUR				AMB	AMB	02 06 28.9	
	comp=N,410nm,0.7s						
KUR				*i* S	**Sn**	**02 07 20.2**	**+4.0**
KUR				A	A	02 07 26.1	
	comp=N,370nm,0.3s						
KUR				A	A	02 07 26.1	
	comp=N,340nm,0.3s						
PAU	**Pauzhetka**	**4.81**	**21**	*e*P	**Pn**	**02 06 26.9**	**+1.0**
PAU				AMB	AMB	02 06 29.7	
	comp=N,50nm,0.2s						
PAU				*e*S	**Sn**	**02 07 18.9**	**-1.4**
PAU				A	A	02 07 23.2	
	comp=N,310nm,0.3s						
PAU				A	A	02 07 23.2	
	comp=N,210nm,0.3s						
SHO	**Shikotan**	**5.96**	**241**	*e*P	Pn	02 06 56.6	+15
SHO				AMB	AMB	02 06 57.5	
	comp=N,80nm,0.3s						
SHO				*e*S	Sn	02 08 01.7	+13
SHO				A	A	02 08 07.9	
	comp=N,80nm,0.3s						
SHO				A	A	02 08 07.9	
	comp=N,160nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.47**	**245**	*e*PN	Pn	02 06 51.9	+3.2
YUK				*i* S	**Sn**	**02 08 02.2**	**+1.2**
YUK				pmax	pmax		
	comp=N,97nm,0.2s						
YUK				pmax	pmax		
	comp=Z,392nm,0.2s						
YUK				pmax	pmax		
	comp=E,62nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**6.47**	**245**	*e*P	Pn	02 06 52.1	+3.4
YUK				AMB	AMB	02 06 53.6	
	comp=E,270nm,0.4s						
YUK				*i* S	**Sn**	**02 08 03.5**	**+2.5**
YUK				A	A	02 08 06.5	
	comp=E,240nm,0.5s						
YUK				A	A	02 08 06.5	
	comp=E,360nm,0.5s						
PEA0B	**Petropavlovsk-**	**6.54**	**20**	*e*PN	**Pn**	**02 06 50.4**	**+0.8**
PEA0B	**Petropavlovsk-**	**6.54**	**20**		**Pn**	**02 06 51.3**	**+1.7**
PETK	**Petropavlovsk-**	**6.54**	**20**	P	**Pn**	**02 06 51.1**	**+1.5**
	comp=E,3.9nm,0.3s,baz=204,slow=14,SNR=31						
PETK				S	**Sn**	**02 08 08.8**	**+6.0**
	comp=E,1.6nm,0.5s,baz=202,slow=15,SNR=0.6						
	comp=E,22nm,0.6s						
PETK	**Petropavlovsk-**	**6.54**	**20**		**Pn**	**02 06 51.4**	**+1.7**
PET	**Petropavlovsk**	**6.71**	**25**	*e*PN	**Pn**	**02 06 53.7**	**+1.8**
PET	**Petropavlovsk**	**6.71**	**25**	*e*P	**Pn**	**02 06 52.8**	**+0.9**
PET				*e*S	**Sn**	**02 08 04.0**	**-2.9**
RUSJ	**Misakicho**	**6.82**	**248**	*e*PN	Pn	02 06 57.1	+3.6
RUSJ				*i* S	**Sn**	**02 08 14.4**	**+4.7**
NEM2	**Nemuro 2**	**6.90**	**241**	P	**Pn**	**02 06 55.9**	**+1.3**
NEM2				S	**Sn**	**02 08 08.3**	**-3.4**
NMR	**Nemuro--Hokkai**	**6.91**	**241**	*e*PN	**Pn**	**02 06 55.6**	**+0.9**
NMR	**Nemuro--Hokkai**	**6.91**	**241**	*e*P	**Pn**	**02 06 55.8**	**+1.1**
JRA	**Rausu**	**6.98**	**247**	P	Pn	02 06 59.2	+3.6
JRA				*e*S	**Sn**	**02 08 16.6**	**+3.0**
JNK	**Nakash**	**7.41**	**246**	P	**Pn**	**02 07 04.4**	**+2.9**
JNK				*e*S	**Sn**	**02 08 25.8**	**+1.6**
AKK	**Akkeshi**	**7.64**	**242**	*e*P	**Pn**	**02 07 05.9**	**+1.2**
YSS	**Yuzhno-Sakhali**	**7.71**	**274**	*de*PN	Pn	02 07 10.9	+5.2
YSS				*e*S	**Sn**	**02 08 32.7**	**+1.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				pmax	pmax		
	comp=N,30nm,0.7s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,6.5s						
YSS				smax	smax		
	comp=N,30nm,0.5s						
YSS				smax	smax		
	comp=E,60nm,0.6s						
YSS	**Yuzhno-Sakhali**	**7.71**	**274**		Pn	02 07 10.4	+4.7
YSS	**Yuzhno-Sakhali**	**7.71**	**274**	*e*P	Pn	02 07 10.3	+4.6
YSS				*e*S	**Sn**	**02 08 32.7**	**+1.1**
JTKR	**Abashiri--Toko**	**7.74**	**250**	P	Pn	02 07 09.6	+3.5
JAK	**Akkeshi**	**7.74**	**242**	P	**Pn**	**02 07 07.1**	**+1.0**
JAK				*e*S	**Sn**	**02 08 29.0**	**-3.3**
JAR	**Ashorobuto**	**8.15**	**247**	*e*P	Pn	02 07 14.7	+3.0
JAR				*e*S	**Sn**	**02 08 42.2**	**-0.1**
JOB	**Onbets**	**8.32**	**244**	P	**Pn**	**02 07 16.3**	**+2.3**
JOB				S	**Sn**	**02 08 43.6**	**-2.9**
TYV	**Tymovskoe**	**8.41**	**301**	*e*PN	Pn	02 07 19.6	+4.3
TYV				*e*S	Sn	02 08 55.4	+6.6
TYV				pmax	pmax		
	comp=Z,39nm,0.9s						
TYV				pmax	pmax		
	comp=Z,100nm,4.0s						
TYV				smax	smax		
	comp=N,18nm,1.2s						
TYV				smax	smax		
	comp=N,200nm,4.7s						
TYV				smax	smax		
	comp=E,200nm,4.7s						
TYV	**Tymovskoe**	**8.41**	**301**	*e*P	Pn	02 07 19.6	+4.3
JKA	**Kamikawa-asahi**	**8.53**	**254**		Pn	02 07 21.6	+4.7
JKA	**Kamikawa-asahi**	**8.53**	**254**	*e*P	Pn	02 07 21.6	+4.7
ASAJ	**Asahikawa**	**8.53**	**254**	P	Pn	02 07 22.1	+5.1
	comp=E,25nm,0.7s,baz=59,slow=5.9,SNR=20						
ASAJ	**Asahikawa**	**8.53**	**254**	PN	Pn	02 07 21.6	+4.7
JKK2	**Kamakawa 2**	**8.53**	**252**	P	Pn	02 07 20.9	+4.0
JCH	**Churui**	**8.77**	**244**	P	**Pn**	**02 07 21.4**	**+1.3**
JCH				*e*S	**Sn**	**02 08 53.0**	**-4.5**
JRBN	**Rebuntou**	**9.13**	**265**	*e*P	Pn	02 07 30.5	+5.4
ERM	**Erimo**	**9.23**	**241**	*d i*PN	**Pn**	**02 07 28.8**	**+2.2**
ERM	**Erimo**	**9.23**	**241**		**Pn**	**02 07 28.7**	**+2.2**
JNBK	**Urakawa-nobuka**	**9.33**	**244**	P	**Pn**	**02 07 28.3**	**+0.5**
NKL	**Nikolayevsk**	**10.54**	**311**	*e*P	**Pn**	**02 07 46.4**	**+2.1**
JANG	**Nango**	**11.22**	**238**	P	**Pn**	**02 07 52.5**	**-1.3**
JANG				*e*S	Sn	02 09 48.4	-9.4
JTM	**Tenmabayashi**	**11.23**	**241**	Pn	**Pn**	**02 07 52.7**	**-1.1**
MA2	**Magadan**	**12.73**	**352**	P	**Pn**	**02 08 13.4**	**-0.8**
	comp=E,6.1nm,0.6s,baz=173,slow=17,SNR=1.8						
SHEM	**Shemya Is, Ala**	**14.13**	**59**	P	**P**	**02 08 35.8**	**-3.7**
	comp=E,2.9nm,0.3s,baz=260,slow=18,SNR=2.3						
	comp=E,26nm,0.7s						
SMY	**Shemya**	**14.13**	**59**	P	**P**	**02 08 35.8**	**-3.7**
SMY	**Shemya**	**14.13**	**59**	Pn	**P**	**02 08 35.8**	**-3.7**
USA0B	**Ussuriysk Arra**	**15.67**	**268**	*e*P	**P**	**02 08 55.5**	**-1.2**
USRK	**Ussuriysk Ar.**	**15.67**	**268**	P	**Pn**	**02 08 50.0**	**-3.5**
	comp=E,0.9nm,0.3s,baz=68,slow=12,SNR=11						
	comp=E,3.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**15.67**	**268**	P	**P**	**02 08 54.0**	**-2.7**
USRK	**Ussuriysk Ar.**	**15.67**	**268**	Pn	**P**	**02 08 54.0**	**-2.7**
USRK	**Ussuriysk Ar.**	**15.67**	**268**	*e*P	**P**	**02 08 54.0**	**-2.7**
MAJO	**Matsushiro**	**15.74**	**234**	P	**P**	**02 08 55.4**	**-2.2**
MAJO				pmax	pmax		
	comp=E,9.0nm,0.8s						
MAJO	**Matsushiro**	**15.74**	**234**	Pn	**P**	**02 08 55.4**	**-2.2**
MJAR	**Matsushiro Arr**	**15.74**	**234**	P	**P**	**02 08 54.8**	**-2.8**
	comp=Z,1.1nm,0.3s,baz=29,slow=12,SNR=20						
	comp=Z,6.0nm,0.8s						
MJB9	**Matsu-Tunnel**	**15.74**	**234**	Pn	**P**	**02 08 56.5**	**-1.2**
SEY	**Seymchan**	**15.98**	**357**	P	**Pn**	**02 08 54.3**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=177,slow=17,SNR=1.2						
	comp=Z,0.4nm,0.3s						
MDJ	**Mudanjiang**	**17.19**	**271**	P	**P**	**02 09 13.8**	**+0.3**
MDJ				pmax	pmax		
	comp=E,22nm,1.6s						
HEH	**HeiHe**	**17.85**	**290**	*e*P	**P**	**02 09 21.0**	**+0.2**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	**Zeya**	**18.28**	**301**	*e*P	Pn	02 09 33.5	+7.6
BNX	**BinXian**	**18.39**	**276**	||P	**Pn**	**02 09 28.8**	**+1.6**
BNX				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK	**Yakutsk**	**20.44**	**326**	*ce*P	Pn	02 09 49.6	-1.9
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YAK	**Yakutsk**	**20.44**	**326**	*e*P	Pn	02 09 49.6	-1.9
KSRS	**Korea Array**	**21.48**	**253**	P	**P**	**02 09 59.5**	**-0.8**
	comp=Z,6.1nm,1.0s,baz=61,slow=9.5,SNR=12						
	comp=Z,6.1nm,1.0s						
JNU	**Nakatsue**	**22.40**	**240**	P	**P**	**02 10 10.2**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=36,slow=8.7,SNR=3.6						
	comp=Z,6.1nm,0.8s						
JNU	**Nakatsue**	**22.40**	**240**	IAmb	IAmb	02 10 11.8	
	comp=Z,12nm,0.7s						
HILR	**Hailar Array B**	**22.83**	**289**	P	**P**	**02 10 11.9**	**-2.9**
	comp=Z,2.0nm,0.4s,baz=78,slow=9.0,SNR=3.7						
	comp=Z,2.0nm,0.4s						
DL2	**Dalian**	**24.92**	**263**	P	**P**	**02 10 35.5**	**+1.1**
DL2				pmax	pmax		
	comp=E,28nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.18**	**155**	T	T	02 43 21.8	
	baz=341,slow=76,SNR=549						
H11N1	**WAKE ISLAND Hy**	**29.20**	**155**	T	T	02 43 23.6	
	baz=341,slow=76,SNR=804						
H11N3	**WAKE ISLAND Hy**	**29.20**	**154**	T	T	02 43 23.4	
	baz=341,slow=76,SNR=651						
H11S1	**WAKE ISLAND Hy**	**30.28**	**156**	T	T	02 44 52.3	
	baz=342,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.29**	**156**	T	T	02 44 43.7	
	baz=342,slow=76,SNR=1879						
H11S2	**WAKE ISLAND Hy**	**30.30**	**156**	T	T	02 44 44.3	
	baz=342,slow=76,SNR=1539						
NJ2	**Nanjing**	**30.68**	**254**	*e*P	**P**	**02 11 27.8**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**30.90**	**274**	*e*P	**P**	**02 11 28.5**	**+0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,4.5s						
G18K	**Tagagawik**	**31.19**	**36**	P	**P**	**02 11 32.3**	**+2.2**
ULN	**Ulaanbaatar**	**31.40**	**289**	||*e*P	**P**	**02 11 31.5**	**-0.9**
ULN				pmax	pmax		
	comp=E,5.0nm,1.7s						
ULN	**Ulaanbaatar**	**31.40**	**289**	*e*P	**P**	**02 11 31.5**	**-0.9**
SONM	**Songino Array**	**31.84**	**289**	P	**P**	**02 11 34.6**	**-1.5**
	comp=Z,1.9nm,0.6s,baz=70,slow=7.8,SNR=11						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**31.84**	**289**	IAmb	IAmb	02 11 35.7	
	comp=Z,1.7nm,0.7s						
H19K	**Roundabout Mou**	**32.00**	**37**	P	**P**	**02 11 39.8**	**+2.6**
H19K				IAmb	IAmb	02 11 40.1	
	comp=Z,3.4nm,0.8s						
BTO2	**Baotou**	**32.10**	**275**	*e*P	**P**	**02 11 39.0**	**+0.5**
BTO2				pmax	pmax		
	comp=Z,23nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,650nm,10.5s						
E19K	**Redstone River**	**32.13**	**33**	P	**P**	**02 11 40.9**	**+2.6**
E22K	**Anaktuvuk Pass**	**34.28**	**33**	IAmb	IAmb	02 11 60.0	
	comp=Z,4.2nm,0.5s						
E23K	**Chandalar**	**35.09**	**33**	P	**P**	**02 12 06.7**	**+2.6**
E23K				IAmb	IAmb	02 12 17.3	
	comp=Z,2.5nm,0.8s						
SML	**Sawmill**	**35.34**	**44**	P	**P**	**02 12 07.4**	**+1.1**
SML				pmax	pmax		
	comp=Z,11nm,1.1s						
SML	**Sawmill**	**35.34**	**44**	P	**P**	**02 12 07.4**	**+1.1**
SML				IAmb	IAmb	02 12 28.2	
	comp=Z,11nm,1.1s						
E24K	**Your Creek**	**35.51**	**33**	IAmb	IAmb	02 12 10.8	
	comp=Z,2.2nm,0.6s						
G24K	**Hadweenzic Riv**	**35.77**	**35**	P	**P**	**02 12 12.9**	**+2.9**
G24K				IAmb	IAmb	02 12 13.4	
	comp=Z,4.5nm,0.7s						
ILAR	**Eielson Array**	**35.95**	**39**	P	**P**	**02 12 12.6**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=271,slow=8.4,SNR=8.0						
ILAR				PcP	**PcP**	**02 14 39.8**	**+2.7**
	comp=Z,0.2nm,0.7s,baz=269,slow=5.4,SNR=2.0						
	comp=Z,0.9nm,1.0s						
D25K	**Kavik River**	**36.42**	**31**	P	**P**	**02 12 17.6**	**+2.2**
D25K				IAmb	IAmb	02 12 24.8	
	comp=Z,5.3nm,1.1s						
LZDM	**Lanzhou Array**	**38.68**	**272**	P	**P**	**02 12 35.7**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=49,slow=16,SNR=1.6						
	comp=Z,2.3nm,0.3s						
GTA2	**Gaotai**	**39.55**	**279**	*e*P	**P**	**02 12 43.0**	**+0.7**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZAA0	**Zalesovo Array**	**42.96**	**306**	P	**P**	**02 13 08.3**	**-1.6**
ZAA0				IAmb	IAmb	02 13 08.7	
	comp=Z,3.1nm,0.6s						
ZALV	**Zalesovo Beam**	**42.96**	**306**	P	**P**	**02 13 08.0**	**-1.9**
	comp=Z,3.3nm,0.5s,baz=66,slow=7.5,SNR=13						
	comp=Z,3.3nm,0.5s						
ZALV	**Zalesovo Beam**	**42.96**	**306**	*i* P	**P**	**02 13 08.3**	**-1.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DGZ	**Jazzator, Alta**	**43.02**	**299**	*c i*P	**P**	**02 13 10.0**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PZH	**PanZhiHua**	**45.67**	**262**	P	**P**	**02 13 33.0**	**+0.9**
MK31	**Makanchi Array**	**47.37**	**298**	*c i*P	**P**	**02 13 43.4**	**-1.6**
MKAR	**Makanchi Array**	**47.37**	**298**	P	**P**	**02 13 43.6**	**-1.5**
	comp=Z,2.0nm,0.5s,baz=69,slow=9.3,SNR=13						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**47.37**	**298**	*i* P	**P**	**02 13 44.0**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**47.37**	**298**		**P**	**02 13 44.0**	**-1.0**
MKAR	**Makanchi Array**	**47.37**	**298**	*e*P	**P**	**02 13 44.0**	**-1.0**
KURK	**Kurchatov**	**47.74**	**304**	*de*P	**P**	**02 13 46.3**	**-1.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURK	**Kurchatov**	**47.74**	**304**		**P**	**02 13 46.5**	**-1.2**
KURK				IAmb	IAmb	02 13 47.0	
	comp=Z,8.8nm,0.7s						
KURK	**Kurchatov**	**47.74**	**304**		**PcP**	**02 15 14.6**	**-1.6**
KURK	**Kurchatov**	**47.74**	**304**	*e*P	**P**	**02 13 46.3**	**-1.4**
KURBB	**Kurchatov Arra**	**47.83**	**304**	P	**P**	**02 13 47.0**	**-1.4**
	comp=Z,8.0nm,0.8s,baz=66,slow=8.3,SNR=46						
KURBB				PcP	**PcP**	**02 15 14.6**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=72,slow=4.0,SNR=1.7						
	comp=Z,8.0nm,0.8s						
YKA	**Yellowknife Ar**	**50.33**	**37**	P	**P**	**02 14 09.1**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=298,slow=7.3,SNR=5.1						
	comp=Z,1.4nm,0.7s						
BVAR	**Borovoye Array**	**51.17**	**310**	P	**P**	**02 14 12.6**	**-1.3**
	comp=Z,4.3nm,0.4s,baz=53,slow=8.1,SNR=34						
	comp=Z,4.3nm,0.4s						
KDJ	**Kajisay**	**52.90**	**295**	P	**P**	**02 14 26.7**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KDJ	**Kajisay**	**52.90**	**295**	P	**P**	**02 14 26.7**	**-0.4**
KDJ				IAmb	IAmb	02 14 27.0	
	comp=Z,2.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**53.04**	**257**	P	**P**	**02 14 29.3**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=44,slow=7.9,SNR=5.0						
	comp=Z,0.8nm,0.3s						
BOOM	**Boomskoye usch**	**53.47**	**296**	P	**P**	**02 14 31.0**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BOOM	**Boomskoye usch**	**53.47**	**296**	P	**P**	**02 14 31.0**	**-0.3**
BOOM				IAmb	IAmb	02 14 31.9	
	comp=Z,3.9nm,0.5s						
ARTI	**Arti**	**55.34**	**318**	P	**P**	**02 14 42.9**	**-1.5**
	comp=Z,4.6nm,0.5s,baz=57,slow=5.9,SNR=11						
	comp=Z,4.6nm,0.5s						
ARTI	**Arti**	**55.34**	**318**	*c i*P	**P**	**02 14 43.2**	**-1.2**
ARTI				S	**S**	**02 22 19.0**	**-5.7**
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARTI	**Arti**	**55.34**	**318**	P	**P**	**02 14 43.1**	**-1.3**
KKAR	**Karatay Array**	**56.42**	**299**	P	**P**	**02 14 51.9**	**-0.5**
KKAR	**Karatay Array**	**56.42**	**299**	P	**P**	**02 14 51.9**	**-0.5**
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**02 15 00.7**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=41,slow=5.7,SNR=6.9						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**02 15 00.9**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**02 15 00.8**	**-0.9**
ARCES				IAmb	IAmb	02 15 12.9	
	comp=Z,8.2nm,1.4s						
KIRV	**Kirov**	**57.94**	**323**	P	**P**	**02 15 02.3**	**-0.5**
	comp=Z,8.7nm,0.6s,baz=90,slow=1.0,SNR=2.7						
	comp=Z,8.7nm,0.6s						
KTK1	**Kautokeino**	**58.72**	**341**	*e*P	**P**	**02 15 07.5**	**-0.6**
AB31	**Akbulak array**	**58.73**	**310**		**P**	**02 15 07.8**	**-0.7**
AB31				IAmb	IAmb	02 15 09.0	
	comp=Z,3.0nm,0.7s						
ABKAR	**Akbulak array**	**58.73**	**310**	P	**P**	**02 15 07.8**	**-0.7**
GAR	**Garm**	**58.97**	**295**	P	**P**	**02 15 10.3**	**-0.2**
AKTO	**Aktyubinsk**	**59.01**	**312**	P	**P**	**02 15 09.6**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=58,slow=8.4,SNR=5.9						
	comp=Z,1.7nm,0.5s						
SUMG	**Summit**	**60.39**	**4**	P	**P**	**02 15 21.3**	**+1.3**
SUMG				pmax	pmax		
	comp=Z,17nm,1.4s						
SUMG	**Summit**	**60.39**	**4**	P	**P**	**02 15 21.3**	**+1.3**
FAUS	**Fauske**	**61.73**	**343**	*e*P	**P**	**02 15 28.8**	**+0.1**
RAUS	**Rausandaksla**	**62.80**	**343**	*e*P	**P**	**02 15 35.4**	**-0.5**
MOR8	**Moi Rana**	**62.95**	**343**	*e*P	**P**	**02 15 35.4**	**-1.5**
MOR8				IAmb	IAmb	02 15 35.9	
	comp=Z,31nm,1.4s						
LEIR	**Leirfjorden**	**63.27**	**343**	*e*P	**P**	**02 15 38.5**	**-0.4**
FIA1	**FINESS Array S**	**64.06**	**335**	P	**P**	**02 15 43.9**	**-0.4**
FINES	**FINESS Array B**	**64.06**	**335**	P	**P**	**02 15 43.6**	**-0.7**
	comp=Z,7.5nm,0.6s,baz=34,slow=5.6,SNR=51						
	comp=Z,7.5nm,0.6s						
FINES	**FINESS Array B**	**64.06**	**335**	*i* P	**P**	**02 15 43.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
FINES	**FINESS Array B**	**64.06**	**335**	P	**P**	**02 15 43.8**	**-0.4**
PDAR	**Pinedale Array**	**64.08**	**54**	P	**P**	**02 15 47.2**	**+2.2**
	comp=Z,2.2nm,0.5s,baz=305,slow=7.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
NSS	**Namsos**	**64.90**	**343**	*e*P	**P**	**02 15 49.2**	**-0.4**
NB201	**NORSAR Array S**	**68.15**	**341**	P	**P**	**02 16 10.4**	**-0.2**
NB2	**NORSAR Subarra**	**68.17**	**342**	P	**P**	**02 16 11.5**	**+0.8**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**68.17**	**342**	P	**P**	**02 16 10.4**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=25,slow=6.3,SNR=11						
	comp=Z,2.9nm,0.7s						
NC602	**NORSAR Array S**	**68.38**	**341**	*e*P	**P**	**02 16 11.8**	**-0.1**
NORES	**NORESS Array B**	**68.38**	**341**	P	**P**	**02 16 12.0**	**+0.1**
HFS	**Hagfors**	**68.42**	**340**	P	**P**	**02 16 11.9**	**-0.3**
	comp=Z,5.2nm,0.4s,baz=41,slow=4.6,SNR=61						
	comp=Z,5.2nm,0.4s						
KONO	**Kongsberg**	**69.78**	**342**	P	**P**	**02 16 21.3**	**+0.7**
KONO				pmax	pmax		
	comp=Z,31nm,1.2s						
KONO	**Kongsberg**	**69.78**	**342**	P	**P**	**02 16 21.3**	**+0.7**
KBZ	**Khabaz**	**71.12**	**314**	P	**P**	**02 16 29.0**	**-0.1**
	comp=Z,5.5nm,0.9s,baz=95,slow=4.6,SNR=9.3						
	comp=Z,5.5nm,0.9s						
KBZ	**Khabaz**	**71.12**	**314**	P	**P**	**02 16 29.0**	**-0.1**
KBZ	**Khabaz**	**71.12**	**314**	*e*P	**P**	**02 16 29.0**	**-0.1**
SNART	**Snartemo**	**71.48**	**342**	*e*P	**P**	**02 16 32.7**	**+1.7**
AK03	**Malin Array Si**	**71.65**	**327**	P	**P**	**02 16 31.2**	**-0.9**
AKASG	**Malin Array Be**	**71.67**	**327**	P	**P**	**02 16 30.9**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=35,slow=6.0,SNR=6.1						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**71.67**	**327**	P	**P**	**02 16 30.9**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKASG	**Malin Array Be**	**71.67**	**327**	IAmb	IAmb	02 16 38.5	
	comp=Z,2.7nm,1.1s						
AK21	**Malin Array Si**	**71.68**	**327**	P	**P**	**02 16 31.3**	**-1.0**
AK22	**Malin Array Si**	**71.68**	**327**	P	**P**	**02 16 31.2**	**-1.1**
KIEV	**Kiev**	**71.68**	**327**	P	**P**	**02 16 30.8**	**-1.5**
	comp=Z,15nm,1.4s						
AK01	**Malin Array Si**	**71.68**	**327**	P	**P**	**02 16 31.4**	**-0.9**
AK11	**Malin Array Si**	**71.71**	**327**	P	**P**	**02 16 31.5**	**-1.0**
AK02	**Malin Array Si**	**71.71**	**327**	P	**P**	**02 16 31.4**	**-1.1**
AK08	**Malin Array Si**	**71.71**	**327**	P	**P**	**02 16 31.6**	**-0.9**
ASAR	**Alice Springs**	**72.67**	**199**	P	**P**	**02 16 41.4**	**+3.0**
	com

comp=Z,1.7nm,0.8s
H03N2 Juan Fernandez 138.13 91 T T 04 59 36.4
baz=309,slow=77,SNR=21
H03N1 Juan Fernandez 138.14 91 T T 04 59 35.3
baz=309,slow=77,SNR=17
H03N3 Juan Fernandez 138.14 91 T T 04 59 34.5
baz=309,slow=77,SNR=20
AY03 Cochrane 148.65 108 PKPbc **PKPab 02 24 59.1 -1.6**
SMAI San Martin Ant 150.37 150 PKPdf **PKPbc 02 24 57.5 -2.9**

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*IDC **26** 02:06:27.6±0.5,38˚.16N×117˚.74W,h0km,mb3.8/11, mbtmp3.7/19,ML3.4/7,Error ellipse: s-maj=7.6km s-min=4.6km az=29.0*
*NEIC **26** 02:06:28.0±1.0,38˚.20N±0˚.02×117˚.74W±0˚.03,h15km±6km, mb4.3/13,ML4.2/222,Mwr4.4/28,ML4.4/9(REN),Error ellipse: s-maj=3.6km s-min=1.9km az=57.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-4.30; Mθθ1.99; Mϕϕ2.31; Mrθ1.32; Mθϕ2.83; Mϕr-1.02; Fault plane solution: M₀4.97000×10¹⁵ NP1:ϕs23.42000°, δ47.79000°,λ-119.31000°. NP2:ϕs243.30000°, δ49.77000°,λ-61.65000°. Principal axes: T 4.9912, Plg1.0000°, Azm314.0000°; N -0.0385, Plg21.0000°, Azm44.0000°; P -4.9527, Plg69.0000°, Azm221.0000°;*
*NEIC **26** 02:06:27.9,38˚.21N×117˚.74W,h15km*
*REN **26** 02:06:28.5±1.5,38˚.18N±0˚.02×117˚.76W±0˚.03,h13km±5km, Error ellipse: s-maj=3.2km s-min=2.5km az=50.0*

ISC 26 02:06:28.5±0.5,38˚20N±0˚02×117˚71W±0˚03,h10km, n124,σ1s09/101,mb4.1/14,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLR	**Columbus**	**0.28**	**258**		**Pg**	**02 06 34.0**	**-0.2**
COLR					**Sg**	**02 06 38.1**	**+0.1**
TPH	**Tonopah**	**0.41**	**108**		**Pb**	**02 06 37.4**	**-0.5**
TPH				IAML		02 06 44.3	
	comp=N,32μm,0.3s						
TPH				IAML		02 06 51.6	
	comp=E,19μm,0.7s						
TPH	**Tonopah**	**0.41**	**108**		**Sb**	**02 06 43.9**	**-0.4**
NV11	**Mina Array Sit**	**0.42**	**303**	Pg	**Pg**	**02 06 36.6**	**-0.2**
NV06	**Mina Array Sit**	**0.49**	**297**		**Pg**	**02 06 37.5**	**-0.7**
NV07	**Mina Array Sit**	**0.50**	**295**		**Sg**	**02 06 45.6**	**+0.5**
NV05	**Mina Array Sit**	**0.52**	**298**		**Sg**	**02 06 37.8**	**-0.8**
NV05					**Sg**	**02 06 46.0**	**+0.4**
NVAR	**Mina Array Bea**	**0.52**	**296**	Pg	**Pg**	**02 06 37.8**	**-0.9**
	comp=E,5μm,0.3s,baz=105,slow=19						
NVAR				Lg	Lg	02 06 43.5	
	comp=E,4μm,0.3s,baz=118,slow=12,SNR=16						
NV08	**Mina Array Sit**	**0.52**	**293**		**Pg**	**02 06 38.1**	**-0.5**
NV02	**Mina Array Sit**	**0.52**	**297**		**Sb**	**02 06 46.4**	**-1.3**
NV09	**Mina Array Sit**	**0.54**	**296**		**Pg**	**02 06 38.9**	**-0.3**
LHV	**Little Huntoon**	**0.63**	**275**		**Sg**	**02 06 49.0**	**+0.1**
LHV	**Little Huntoon**	**0.63**	**275**	Pg	**Pg**	**02 06 40.4**	**-0.2**
LHV				IAML		02 06 49.4	
	comp=N,16μm,0.7s						
LHV				IAML		02 06 51.2	
	comp=E,17μm,0.5s						
Q09A	**Carvers**	**0.76**	**33**		**Pn**	**02 06 43.9**	**-1.6**
Q09A				IAML		02 07 04.2	
	comp=E,14μm,0.9s						
Q09A	**Carvers**	**0.76**	**33**		**Sn**	**02 06 55.2**	**-1.8**
DSP	**Deep Springs**	**0.86**	**194**		**Sg**	**02 06 56.2**	**0.0**
DSP	**Deep Springs**	**0.86**	**194**	Pg	**Pg**	**02 06 44.7**	**-0.3**
KVN	**Kaiserville**	**0.90**	**340**		**Pb**	**02 06 45.5**	**-0.9**
KVN				IAML		02 07 02.1	
	comp=N,9μm,0.4s						
GMN	**Gold Mountain**	**0.97**	**158**		**Pb**	**02 06 47.2**	**-0.4**
GMN				IAML		02 07 03.7	
	comp=E,6μm,0.8s						
GMN				IAML		02 07 05.6	
	comp=N,10μm,0.4s						
LCH	**Last Change Ra**	**0.97**	**177**		**Pb**	**02 06 47.2**	**-0.3**
LCH					**Sb**	**02 07 00.4**	**0.0**
MLAC	**Mammoth, Mammo**	**1.06**	**238**		**Pg**	**02 06 48.4**	**-0.5**
MCBM	**Casa Benchmark**	**1.09**	**240**		**Pg**	**02 06 48.9**	**-0.6**
MDYM	**Dry Creek**	**1.16**	**243**		**Pb**	**02 06 50.4**	**-0.5**
TIN	**Tinemaha, Big**	**1.22**	**200**		**Pg**	**02 06 51.5**	**-0.4**
MDPB	**Devils Postpil**	**1.22**	**243**	Pg	**Pn**	**02 06 51.0**	**-0.9**
MDPB				IAML		02 07 07.7	
	comp=N,3μm,0.5s						
WAKR	**Walker**	**1.39**	**283**		**Pn**	**02 06 53.5**	**-0.7**
WAKR				IAML		02 07 17.1	
	comp=E,2μm,0.9s						
KCC	**Kaiser Creek**	**1.55**	**236**		**Pn**	**02 06 55.9**	**-0.3**
S11A	**Rachel**	**1.65**	**109**		**Pb**	**02 06 58.0**	**-1.1**
WCT	**Wildcat Mounta**	**1.65**	**148**	Pn	**Pb**	**02 06 57.7**	**-1.4**
WCT				IAML		02 07 28.9	
	comp=N,3μm,0.6s						
WCT				IAML		02 07 29.1	
	comp=E,3μm,0.9s						
TPNV	**Topopah Spring**	**1.71**	**137**		**Pb**	**02 06 58.5**	**-1.6**
TPNV				IAML		02 07 30.3	
	comp=E,4μm,1.8s						
TPNV				IAML		02 07 38.2	
	comp=E,3μm,0.8s						
PNTR	**Pine Nut**	**1.72**	**301**		**Pn**	**02 06 58.0**	**-0.8**
CWC	**Cottonwood Cre**	**1.78**	**190**		**Pn**	**02 06 59.6**	**0.0**
CPY	**CP-1**	**1.83**	**133**		**Pn**	**02 07 00.2**	**+0.1**
FURC	**Furnace Creek,**	**1.86**	**158**		**Pb**	**02 07 01.0**	**-1.6**
SDH	**Striped Hills**	**1.90**	**144**		**Pn**	**02 07 01.4**	**+0.3**
PAHR	**Pah Rah Range**	**1.99**	**320**		**Pn**	**02 07 02.0**	**-0.4**
PAHR				IAML		02 07 34.5	
	comp=E,2μm,0.6s						
PAHR				IAML		02 07 39.2	
	comp=N,1μm,1.2s						
AMDNV	**Amargosa**	**2.09**	**146**		**Pb**	**02 07 04.2**	**-2.2**
CMB	**Columbia Colle**	**2.12**	**266**		**Pn**	**02 07 03.2**	**-0.8**
MPK	**Martis Peak**	**2.12**	**302**		**Pn**	**02 07 03.6**	**-0.6**
MPK				IAML		02 07 39.6	
	comp=E,2μm,0.8s						
MPK				IAML		02 07 39.7	
	comp=N,2μm,0.5s						
MPMC	**Manual Prospec**	**2.15**	**175**		**Pn**	**02 07 04.7**	**+0.1**
MPMC				IAML		02 07 38.4	
	comp=E,1μm,0.4s						
GWY	**Greenwater Val**	**2.18**	**157**		**Pn**	**02 07 05.1**	**+0.2**
GWY				IAML		02 07 42.6	
	comp=N,2μm,0.8s						
GWY				IAML		02 07 56.4	
	comp=E,2μm,1.0s						
PEAR	**Peavine Mounta**	**2.25**	**309**		**Pn**	**02 07 05.8**	**-0.2**
BMN	**Battle Mountai**	**2.26**	**10**		**Pn**	**02 07 06.1**	**0.0**
BMN				IAML		02 07 41.5	
	comp=E,2μm,0.6s						
QSM	**Queen of Sheba**	**2.33**	**163**		**Pn**	**02 07 07.0**	**0.0**
QSM	**Queen of Sheba**	**2.33**	**163**	IAML		02 07 45.9	
	comp=N,1μm,0.7s						
QSM				IAML		02 07 46.7	
	comp=E,988nm,0.8s						
TOW	**Tower One**	**2.39**	**181**		**Pn**	**02 07 09.0**	**+1.2**
SRTC	**Snort**	**2.51**	**181**		**Pn**	**02 07 10.1**	**+0.7**
VES	**Vestal, Richgr**	**2.60**	**205**	IAML		02 07 51.2	
	comp=N,2μm,0.4s						
VES				IAML		02 07 53.7	
	comp=E,2μm,0.7s						
ISA	**Isabella, Lake**	**2.61**	**194**		**Pn**	**02 07 11.6**	**+0.7**
BEKR	**Beckworth**	**2.65**	**310**		**Pn**	**02 07 11.5**	**+0.1**
AFDM	**Forest Hills D**	**2.66**	**287**		**Pn**	**02 07 11.3**	**-0.2**
AFDM				IAML		02 07 56.4	
	comp=E,543nm,0.5s						
CCCA	**Chr Cany lake**	**2.69**	**174**		**Pn**	**02 07 12.4**	**+0.5**
CCCA	**Chr Cany lake**	**2.69**	**174**	IAML		02 07 58.9	
	comp=E,1μm,1.1s						
CCCA				IAML		02 08 02.1	
	comp=N,1μm,0.9s						
LVN	**Las Vegas**	**2.93**	**135**		**Pn**	**02 07 16.4**	**+1.2**
GSC	**Goldstone, Bar**	**2.98**	**166**	IAML		02 08 11.1	
	comp=N,510nm,0.8s						
GSC				IAML		02 08 14.2	
	comp=E,562nm,1.1s						
PSUT	**Pine Spring**	**3.05**	**83**		**Pn**	**02 07 17.6**	**+0.6**
TUQ	**Turquoise Moun**	**3.11**	**152**		**Pn**	**02 07 18.0**	**+0.2**
PMPB	**Monarch Peak**	**3.17**	**232**		**Pn**	**02 07 20.1**	**+1.6**
PMPB				IAML		02 08 22.9	
	comp=N,830nm,0.8s						
PMPB				IAML		02 08 23.7	
	comp=E,951nm,1.0s						
ELK	**Elko**	**3.18**	**36**	Pn	**Pn**	**02 07 19.0**	**+0.1**
	comp=E,38nm,0.3s,baz=250,slow=12						
ELK				Lg	Lg	02 08 08.7	
	comp=E,164nm,0.3s,baz=149,slow=12,SNR=12						
ELK	**Elko**	**3.18**	**36**		**Pn**	**02 07 19.3**	**+0.5**
ELK				IAML		02 08 13.9	
	comp=E,383nm,0.3s						
ELK				IAML		02 08 16.1	
	comp=E,431nm,0.4s						
ICU	**Indian Springs**	**3.18**	**108**		**Pn**	**02 07 18.5**	**-0.3**
PKD	**Bear Valley Ra**	**3.19**	**226**		**Pn**	**02 07 19.4**	**+0.5**
PKD				IAML		02 08 13.2	
	comp=N,499nm,0.8s						
PKD				IAML		02 08 18.4	
	comp=E,536nm,1.1s						
MTPC	**Mountain Pass**	**3.22**	**147**		**Pn**	**02 07 19.7**	**+0.5**
MTPC				IAML		02 08 18.3	
	comp=E,476nm,1.6s						
MHC	**Mount Hamilton**	**3.23**	**256**		**Pn**	**02 07 20.0**	**+0.6**
MHC				IAML		02 08 13.0	
	comp=E,434nm,1.0s						
MHC				IAML		02 08 15.1	
	comp=N,758nm,1.2s						
ORV	**Oroville**	**3.25**	**296**		**Pn**	**02 07 19.4**	**-0.2**
SAO	**San Andreas Ge**	**3.30**	**245**		**Pn**	**02 07 20.7**	**+0.5**
TPO	**Tropico Hills**	**3.34**	**187**	IAML		02 08 29.4	
	comp=E,343nm,1.1s						
SUTB	**Sutter Butte**	**3.35**	**289**	IAML		02 08 19.7	
	comp=N,809nm,0.4s						
SUTB				IAML		02 08 23.5	
	comp=E,710nm,0.5s						
CCUT	**Cedar City**	**3.50**	**99**	IAML		02 08 24.5	
	comp=E,426nm,1.1s						
CCUT				IAML		02 08 25.3	
	comp=N,460nm,0.7s						
HULI	**Fort Hunter Li**	**3.56**	**233**		**Pn**	**02 07 26.9**	**+3.1**
HULI				IAML		02 08 23.5	
	comp=E,291nm,0.8s						
HULI				IAML		02 08 30.1	
	comp=N,496nm,1.4s						
OSI	**Osito Audit: C**	**3.67**	**193**	IAML		02 08 29.4	
	comp=N,257nm,1.5s						
SZCU	**Shurtz Canyon**	**3.71**	**98**		**Pn**	**02 07 26.8**	**+0.7**
CVS	**Carmenet Viney**	**3.74**	**274**		**Pn**	**02 07 26.1**	**-0.1**
CVS				IAML		02 08 24.9	
	comp=E,252nm,0.6s						
LCMT	**Little Creek M**	**3.74**	**107**		**Pn**	**02 07 26.9**	**+0.4**
LCMT				IAML		02 08 32.9	
	comp=N,368nm,0.8s						
LCMT				IAML		02 08 35.5	
	comp=E,390nm,1.0s						
O03E	**Paynes Creek**	**3.80**	**305**		**Pn**	**02 07 28.1**	**+0.9**
O03E				IAML		02 08 33.2	
	comp=N,234nm,1.5s						
O03E				IAML		02 08 39.4	
	comp=E,373nm,1.2s						
HATC	**Hat Creek Radi**	**3.90**	**313**	IAML		02 08 45.3	
	comp=N,440nm,2.4s						
HATC				IAML		02 08 53.5	
	comp=E,483nm,2.7s						
BFSC	**Mount Baldy Ra**	**3.96**	**179**		**Pn**	**02 07 29.9**	**+0.5**
KNB	**Kanab**	**4.06**	**105**		**Pn**	**02 07 31.9**	**+1.0**
KNB	**Kanab**	**4.06**	**105**	IAML		02 08 49.7	
	comp=E,413nm,1.7s						
MCCM	**Marconi Confer**	**4.07**	**271**	IAML		02 08 34.8	
	comp=N,210nm,1.1s						
MCCM				IAML		02 08 38.0	
	comp=E,294nm,1.6s						
DUG	**Dugway, Tooele**	**4.29**	**61**		**Pn**	**02 07 35.4**	**+1.4**
W13A	**Hualapai Mount**	**4.37**	**134**	IAML		02 09 07.5	
	comp=N,148nm,1.0s						
W13A				IAML		02 09 09.2	
	comp=E,170nm,1.2s						
BELC	**Belle Mtn, Jos**	**4.42**	**161**	IAML		02 08 54.2	
	comp=E,158nm,0.7s						
BGU	**Big Grassy Mou**	**4.53**	**52**	IAML		02 08 52.6	
	comp=N,278nm,0.9s						
IRM	**Iron Mountain**	**4.54**	**152**	IAML		02 08 58.0	
	comp=N,185nm,2.2s						
IRM				IAML		02 09 01.9	
	comp=E,261nm,1.2s						
M03C	**McCloud**	**4.58**	**313**	IAML		02 09 09.2	
	comp=N,181nm,1.4s						
M03C				IAML		02 09 10.3	
	comp=E,196nm,2.1s						
PFO	**Pinyon Flats O**	**4.69**	**167**	Pn	**Pn**	**02 07 39.2**	**-0.3**
	comp=E,2.0nm,0.3s,baz=359,slow=12,SNR=23						
PFO				Sn	**Sn**	**02 08 33.2**	**-0.9**
	comp=E,4.4nm,0.3s,baz=15,slow=20,SNR=8.5						
PFO				Lg	Lg	02 08 57.8	
	comp=E,6.4nm,0.3s,baz=252,slow=20,SNR=6.4						
	comp=E,5.4nm,0.2s						
PFO	**Pinyon Flats O**	**4.69**	**167**		**Pn**	**02 07 40.2**	**+0.7**
PFO				IAML		02 09 00.3	
	comp=E,119nm,2.2s						
DNR	**Dunn Ranch,Anz**	**4.71**	**169**	IAML		02 09 05.3	
	comp=N,268nm,1.4s						
DNR				IAML		02 09 15.8	
	comp=E,287nm,1.0s						
NLU	**North Lily Min**	**4.72**	**66**		**Pn**	**02 07 42.4**	**+2.4**
NLU				IAML		02 09 01.7	
	comp=N,313nm,1.3s						
NLU				IAML		02 09 06.5	
	comp=E,307nm,1.1s						
BC3	**Big Chuckawall**	**4.89**	**157**	IAML		02 09 22.2	
BC3	comp=E,132nm,1.6s			IAML		02 09 23.6	
	comp=N,123nm,2.0s						
NOQ	**North Oquirrh**	**4.97**	**59**	IAML		02 09 13.0	
	comp=E,152nm,1.1s						
NOQ				IAML		02 09 20.3	
	comp=N,204nm,2.3s						
BORC	**Borrego Spring**	**5.04**	**168**	IAML		02 09 12.0	
	comp=E,98nm,0.8s						
MPU	**Maple Canyon**	**5.06**	**67**	IAML		02 09 13.6	
	comp=N,122nm,1.5s						
MPU				IAML		02 09 19.5	
	comp=E,104nm,2.2s						
KMRM	**Mail Ridge**	**5.08**	**295**	IAML		02 09 28.6	
	comp=E,109nm,2.8s						
KMRM				IAML		02 09 41.4	
	comp=N,99nm,3.0s						
BLYC	**Blythe**	**5.14**	**149**	IAML		02 09 18.3	
	comp=N,193nm,2.0s						
BLYC				IAML		02 09 30.9	
	comp=E,223nm,1.3s						
YBH	**Yreka Blue Hor**	**5.21**	**314**	Pn	**Pn**	**02 07 48.5**	**+1.9**
	comp=E,1.2nm,0.3s,baz=151,slow=6.8,SNR=14						
YBH				Lg	Lg	02 09 13.5	
	comp=E,1.0nm,0.3s,baz=189,slow=16,SNR=4.0						
	comp=E,4.0nm,0.5s						
KHMM	**Horse Mountain**	**5.36**	**302**	IAML		02 09 32.8	
	comp=N,76nm,4.2s						
PDAR	**Pinedale Array**	**7.71**	**51**	Pn	**Pn**	**02 08 24.4**	**+3.4**
	comp=N,0.5nm,0.3s,baz=240,slow=13,SNR=19						
PDAR				Lg	Lg	02 10 29.5	
	comp=N,1.6nm,0.3s,baz=240,slow=30,SNR=6.4						
	comp=N,2.2nm,0.6s						
ANMO	**Albuquerque**	**9.62**	**106**	Pn	**Pn**	**02 08 48.4**	**+1.2**
	comp=N,0.1nm,0.3s,baz=301,slow=16,SNR=1.8						
ANMO				Lg	Lg	02 11 31.6	
	comp=N,0.2nm,0.3s,baz=210,slow=18,SNR=5.4						
	comp=N,0.6nm,0.7s						
NEW	**Newport**	**10.07**	**2**	Pn	**Pn**	**02 08 56.8**	**+3.7**
	comp=N,0.1nm,0.3s,baz=188,slow=17,SNR=6.3						
NEW				Lg	Lg	02 11 46.9	
	comp=N,0.2nm,0.3s,baz=117,slow=9.0,SNR=4.6						
	comp=N,1.5nm,0.7s						
TXAR	**Lajitas Array**	**14.64**	**123**	Pn	**P**	**02 10 01.0**	**-1.2**
	baz=315,slow=11,SNR=4.7						
TXAR				Lg	Lg	02 14 09.7	
	baz=316,slow=36,SNR=5.6						
	comp=N,0.4nm,0.8s						
E28A	**Huff**	**15.08**	**51**		**Pn**	**02 09 59.5**	**-2.1**
E28A				IAmb	IAmb	02 10 09.4	
	comp=Z,14nm,0.7s						
SAND	**Sanderson**	**15.30**	**118**		**P**	**02 10 07.8**	**-1.7**
EDM	**Edmonton**	**15.32**	**10**		**Pn**	**02 10 05.1**	**+0.3**
EDM				IAmb	IAmb	02 10 13.2	
	comp=Z,11nm,1.0s						
AGMN	**Agassiz Nation**	**18.78**	**51**	P	**Pn**	**02 10 48.9**	**+0.6**
ULM	**Lac du Bonnet**	**19.66**	**45**	P	**P**	**02 10 56.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=229,slow=9.3,SNR=4.9						
	comp=Z,0.8nm,0.4s						
E38A	**The Farm, Brul**	**20.99**	**58**	P	**P**	**02 11 11.7**	**-0.1**
E38A				IAmb	IAmb	02 11 14.4	
	comp=Z,10nm,0.7s						
I40A	**Norwalk**	**21.16**	**66**	P	**P**	**02 11 13.8**	**0.0**
I40A				IAmb	IAmb	02 11 19.0	
	comp=Z,14nm,1.3s						
YKA	**Yellowknife Ar**	**24.39**	**3**	P	**P**	**02 11 47.3**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=186,slow=8.0,SNR=5.0						
	comp=Z,0.4nm,0.6s						
K27K	**Chicken**	**29.66**	**338**	IAmb	IAmb	02 12 32.5	
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	**31.65**	**337**	P	**P**	**02 12 52.7**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=134,slow=7.2,SNR=6.1						
	comp=Z,0.4nm,0.8s						
SCHQ	**Schefferville**	**37.82**	**47**	P	**P**	**02 13 44.9**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=266,slow=15,SNR=2.2						
	comp=Z,3.0nm,0.9s						
PETK	**Petropavlovsk-**	**57.58**	**315**	P	**P**	**02 16 20.0**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=68,slow=8.0,SNR=3.9						
	comp=Z,1.5nm,0.7s						
ESDC	**Sonseca Array**	**81.56**	**46**	P	**P**	**02 18 45.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=325,slow=5.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
ARTI	**Arti**	**85.72**	**2**	P	**P**	**02 19 07.7**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=17,slow=14,SNR=3.1						
	comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**85.76**	**332**	P	**P**	**02 19 09.5**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=42,slow=4.5,SNR=6.0						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**85.76**	**332**	IAmb	IAmb	02 19 14.9	
	comp=Z,4.0nm,1.3s						
ZALV	**Zalesovo Beam**	**86.18**	**347**	P	**P**	**02 19 11.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=15,slow=6.0,SNR=1.3						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**86.82**	**20**	P	**P**	**02 19 14.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=336,slow=4.3,SNR=4.6						
	comp=Z,0.1nm,0.3s						
AKASG	**Malin Array Be**	**86.82**	**20**	IAmb	IAmb	02 19 17.9	
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**88.87**	**355**	P	**P**	**02 19 22.5**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=4.6,slow=3.6,SNR=6.0						
	comp=Z,1.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.35**	**325**	*e*P	**P**	**02 19 23.3**	**-2.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
KURBB	**Kurchatov Arra**	**90.40**	**350**	P	**P**	**02 19 29.1**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=12,slow=4.2,SNR=7.2						
	comp=Z,0.3nm,0.5s						

IDC 26 03:00:06.0±2.5,4˚60S×128˚70E,h0km,mb3.8/1, mbtmp3.5/3,ML3.8/1,Error ellipse: s-maj=203.6km s-min=29.7km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.20**	**161**	Pn	Pn	03 03 56.3	+1.1
	0.2nm,0.4s,baz=343,slow=13,SNR=0.5						
WRA				Sn	Sn	03 06 43.5	-12
	0.3nm,0.3s,baz=327,slow=24,SNR=7.9						
ASAR	**Alice Springs**	**19.61**	**166**	P	P	03 04 35.6	-0.4
	0.3nm,0.3s,baz=351,slow=11,SNR=25						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**65.53**	**327**	P	P	03 10 51.4	0.0
	0.5nm,0.5s,baz=134,slow=8.2,SNR=5.1						
	0.5nm,0.5s						

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*MOS **26** 03:12:23.5±0.9,6˚40N×126˚88E,h77km,mb5.8/52,Error ellipse: s-maj=7.1km s-min=3.5km az=116.9*
*BJI **26** 03:12:24.7,6˚30N×127˚05E,h103km,mB5.5/29,mb5.4/81*
*MAN **26** 03:12:25.0,6˚35N×126˚93E,h63km,MS5.6*
MAN INTENSITY III - MANAY BOSTON LUPON AND CITY OF MATI DAVAO ORIENTAL; PANTUKAN DAVAO DE ORO; . INTENSITY II - CITY OF DAVAO; ALABEL KIAMBA MALAPATAN AND GLAN SARANGANI.
*DJA **26** 03:12:26.9±0.3,6˚N±2˚×12˚7E±˚,h89km±2km,M5.5/147, mb5.7/147,mB5.9/102,MLv6.0/16,Mw(mB)5.5/102, MwMwp5.4/1,Mwp5.6/1*
*GCMT **26** 03:12:26.6±0.2,6˚37N±0˚01×126˚78E±0˚02,h92km±2km, MW5.4/114,Moment Tensor Solution. s51,c60; s114,c179; Duration: 1s2 Moment tensor: Scale 10¹⁷ Nm; Mrr1.05±.05; Mθθ-0.26±.05; Mϕϕ-0.79±.04; Mrθ0.72±.03; Mθϕ1.09±.04; Mϕr0.29±.03; Best double couple: M₀1.63900×10¹⁷ NP1:ϕs353.00000°,δ51.00000°, λ139.00000°. NP2:ϕs111.00000°,δ59.00000°,λ47.00000°. Principal axes: T 1.6110, Plg54.0000°, Azm327.0000°; N 0.0540, Plg36.0000°, Azm137.0000°; P -1.6680, Plg5.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **26** 03:12:26.9±0.8,6˚41N×126˚94E,h93km±6km,mb5.1/38, mbtmp5.4/42,MS4.1/42 Error ellipse: s-maj=11.1km s-min=7.2km az=64.0*
*NEIC **26** 03:12:27.6±1.7,6˚36N±0˚06×126˚89E±0˚07,h93km±4km, mb5.3/324,Mww5.3/13,Error ellipse: s-maj=9.9km s-min=7.8km az=55.0*
*GFZ **26** 03:12:27.7±0.1,6˚N±1˚×12˚7E±˚,h100km,M5.7/163, mB6.0/78,mb5.7/163,Mw(mB)5.7/78,confirmed*
*GFZ **26** 03:12:27.7,6˚33N×126˚85E,h97km,Mw5.2/29,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr4.97; Mθθ-0.63; Mϕϕ-4.34; Mrθ2.82; Mθϕ5.81; Mϕr3.92; Fault plane solution: M₀8.89110×10¹⁶ NP1: ϕs110.86440°,δ51.32534°,λ35.17523°. NP2: ϕs357.09512°,δ63.27243°,λ135.60094°. Principal axes: T 9.0075, Plg49.4545°, Azm318.0995°; N -0.2376, Plg39.6536°, Azm152.4266°; P -8.7699, Plg7.1143°, Azm56.4888°;*

ISC 26 03:12:27.3±0.3,6˚33N±0˚03×126˚92E±0˚03,h100km±2km, h100km:pP-P,n1650,σ1s29/1595,mb5.4/363,112C-58D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.22**	**260**	*i* P	**Pn**	**03 12 47.3**	**-2.9**
DDMP				*e*S	**Sn**	**03 13 04.0**	**-3.5**
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 53.3**	**-0.5**
	8μm,0.4s,baz=133,slow=0.7,SNR=466						
DAV				S	**Sn**	**03 13 13.0**	**-0.9**
	21μm,0.6s,baz=264,slow=20,SNR=8.7						
DAV				LR	LR	03 13 18.2	
	comp=Z,5μm,19.4s,baz=113,slow=34						
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 53.6**	**-0.2**
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 53.7**	**-0.2**
DAV				S	**Sn**	**03 13 15.5**	**+1.6**
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 53.0**	**-0.8**
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 53.5**	**-0.3**
DAV	**Davao City (W)**	**1.52**	**299**	P	**Pn**	**03 12 52.0**	**-1.8**
CDOP	**Cateel, Davao**	**1.52**	**342**	*i* P	**Pn**	**03 12 52.6**	**-1.3**
CDOP				*i* S	**Sn**	**03 13 10.6**	**-3.4**
DMPH	**Davao City--Mi**	**1.59**	**298**	*e*P

PLP Palo 5.18 338 *e*P Pn **03 13 40.8 -1.6**
PLP *e*S Sn **03 14 35.3 -5.6**
TNTI Ternate 5.54 175 P Pn **03 13 48.8 +1.5**
TNTI Ternate 5.54 175 Pn **03 13 47.1 -0.2**
TNTI Ternate 5.54 175 P Pn **03 13 47.9 +0.6**
8µm715nm,1.0s
TNTI Ternate 5.54 175 P Pn **03 13 47.7 +0.4**
GUIM Jordan 6.05 315 *i* P Pn **03 13 53.8 -0.4**
GUIM *i* S Sn **03 14 57.1 -5.0**
JAP San Jose, Anti 6.59 312 *e*P Pn **03 14 03.2 +1.6**
PVCP Virac 7.72 340 *i* P Pn **03 14 18.9 +1.9**
PVCP *e*S Sn **03 15 35.1 -7.7**
TOLI2 Tolitoli 8.02 230 P Pn **03 14 18.7 -2.4**
TOLI2 Tolitoli 8.02 230 Pn **03 14 17.9 -3.1**
TOLI2 Tolitoli 8.02 230 P Pn **03 14 18.1 -3.0**
SWI Sorong 8.35 149 P Pn **03 14 24.6 -1.0**
SIJI Sorong 8.36 149 P Pn **03 14 26.1 +0.4**
41nm,0.2s,baz=136,slow=14,SNR=54
SIJI S Sn **03 15 51.8 -6.8**
49nm,0.2s,baz=342,slow=23,SNR=9.4
SIJI LR LR 03 18 01.1
comp=Z,2µm,19.7s,baz=335,slow=40
SIJI Sorong 8.36 149 P Pn **03 14 25.1 -0.7**
SANI Sanana 8.37 186 P Pn **03 14 22.3 -3.6**
LUWI Luwuk 8.41 210 P Pn **03 14 28.7 +2.3**
LUWI Luwuk 8.41 210 Pn **03 14 27.2 +0.9**
LUWI Luwuk 8.41 210 P Pn **03 14 27.4 +1.0**
LUWI Luwuk 8.41 210 P Pn **03 14 28.0 +1.6**
MYLDM Lahad Datu 8.45 263 P Pn **03 14 27.3 +0.3**
MYLDM Lahad Datu 8.45 263 Pn **03 14 27.8 +0.8**
MYLDM Lahad Datu 8.45 263 P Pn **03 14 27.4 +0.4**
15µm5µm453nm,0.9s
MYLDM Lahad Datu 8.45 263 P Pn **03 14 28.1 +1.1**
GQP Guinayangan 8.72 330 *i* P Pn **03 14 34.0 +3.3**
APSI Ampana 8.91 216 P Pn **03 14 34.4 +1.2**
MPSI Mapaga 9.19 230 P Pn **03 14 34.0 -3.0**
4µm235nm,0.8s
LQP Lukban 9.37 326 *e*P Pn **03 14 43.0 +3.3**
NLAI Namlea 9.50 179 P Pn **03 14 39.7 -1.6**
7µm510nm,0.7s
TGY Tagaytay City 9.71 323 P Pn **03 14 43.6 -0.5**
256nm,0.3s,baz=326,slow=1.9,SNR=9.7
MSAI Masohi 9.81 168 P Pn **03 14 45.4 -0.1**
AAI Ambon 10.03 173 P Pn **03 14 47.7 -0.7**
3µm183nm,0.8s
PCI Palu 10.08 225 P Pn **03 14 47.4 -1.7**
6µm393nm,0.8s
FAKI Fak Fak 10.61 150 P Pn **03 14 57.6 +1.2**
FAKI Fak Fak 10.61 150 Pn **03 14 56.8 +0.4**
FAKI Fak Fak 10.61 150 P Pn **03 14 56.1 -0.3**
FAKI Fak Fak 10.61 150 P Pn **03 14 56.3 -0.1**
KKSI Kolaka, Sulawe 11.68 207 P Pn **03 15 08.0 -2.8**
228nm,1.1s
BOLP Bolinao 12.12 326 *e*P Pn **03 15 20.6 +4.0**
SRPI Serui, Papua 12.37 131 P Pn **03 15 21.8 +1.9**
472nm,1.0s
BBSI Bau Bau 12.51 200 P Pn **03 15 19.4 -2.4**
2µm189nm,0.8s
BKB Balikpapan 12.53 233 P Pn **03 15 21.8 -0.2**
BKB Balikpapan 12.53 233 Pn **03 15 21.4 -0.6**
BKB Balikpapan 12.53 233 P Pn **03 15 19.6 -2.4**
709nm,1.2s
BKB Balikpapan 12.53 233 P Pn **03 15 22.8 +0.8**
PMSI Majene 12.62 220 P Pn **03 15 23.9 +0.7**
6µm506nm,1.3s
KAPI Kappang 13.35 213 P Pn **03 15 32.0 -0.8**
297nm,1.0s,baz=20,slow=8.5,SNR=70
KAPI LR LR 03 21 23.6
comp=Z,1µm,19.0s,baz=22,slow=40
KAPI Kappang 13.35 213 P Pn **03 15 30.9 -1.9**
KAPI Kappang 13.35 213 *d* P Pn **03 15 31.5 -1.2**
KAPI pmax pmax
comp=Z,350nm,1.1s
KAPI Kappang 13.35 213 P Pn **03 15 32.0 -0.8**
KAPI S Sn **03 18 01.4 +1.7**
KAPI Kappang 13.35 213 Pn **03 15 29.5 -3.3**
KAPI Kappang 13.35 213 P Pn **03 15 31.6 -1.2**
comp=Z,194nm,1.1s
KAPI Kappang 13.35 213 P Pn **03 15 31.8 -1.0**
MKS Makassar 13.67 213 P Pn **03 15 36.6 -0.4**
comp=Z,4µmcomp=Z,350nm,1.2s
BSSI Bau Bau, Buton 13.95 208 P Pn **03 15 41.5 +0.8**
comp=Z,3µmcomp=Z,265nm,0.8s
MMRI Maumere 15.58 197 P Pn **03 16 01.5 +0.1**
MMRI Maumere 15.58 197 Pn **03 15 59.6 -1.8**
MMRI Maumere 15.58 197 P Pn **03 16 00.1 -1.3**
comp=Z,4µmcomp=Z,214nm,0.7s
MMRI Maumere 15.58 197 P Pn **03 16 00.6 -0.8**
GENI Genyem 15.92 123 P P **03 16 08.4 +1.0**
comp=Z,6µmcomp=Z,263nm,1.0s
GENI Genyem 15.92 123 P P **03 16 09.0 +1.6**
SOEI Soe 16.19 189 P Pn **03 16 09.6 +0.4**
SOEI Soe 16.19 189 Pn **03 16 09.6 +0.4**
SOEI Soe 16.19 189 P P **03 16 10.8 +0.3**
comp=Z,5µmcomp=Z,383nm,0.8s
SOEI Soe 16.19 189 P P **03 16 10.4 -0.1**
JAY Jayapura 16.33 122 LR LR 03 22 05.8
comp=Z,782nm,20.9s,baz=324,slow=35
BATI Baumata 16.74 191 P Pn **03 16 13.8 -2.1**
comp=Z,379nm,0.8s,baz=271,slow=0.5,SNR=15
BATI S Sn **03 19 22.4 +0.5**
comp=Z,250nm,0.9s,baz=53,slow=18,SNR=6.3
DBNI Kabupaten Domp 17.05 210 P Pn **03 16 18.0 -1.6**
WSI Waingapu 17.20 203 P Pn **03 16 19.2 -2.3**
comp=Z,6µmcomp=Z,370nm,1.1s
TWGBT Beinan 17.34 342 P P **03 16 22.0 -1.0**
TWG Pinlang 17.34 342 P Pn **03 16 23.6 +0.4**
TWG Pinlang 17.34 342 P Pn **03 16 24.4 +1.2**
WBSI Waikabubak, Su 17.55 205 P P **03 16 24.9 -0.5**
comp=Z,192nm,0.9s
PLAI Plampang 17.60 211 P P **03 16 25.3 -0.6**
comp=Z,276nm,0.8s
PLAI Plampang 17.60 211 P P **03 16 25.6 -0.3**
YULB Yu-li 17.81 343 P Pn **03 16 29.0 +0.2**
YULB Yu-li 17.81 343 P Pn **03 16 29.2 +0.4**
YULB Yu-li 17.81 343 P Pn **03 16 29.3 +0.4**
TPUB Ta-pu 17.93 341 P P **03 16 25.5 -4.0**
TPUB Ta-pu 17.93 341 P P **03 16 25.6 -4.0**
TWSI Taliwang, Sumb 18.00 214 P P **03 16 29.4 -0.9**
comp=Z,223nm,0.9s
SSLB Suanglung 18.29 342 P P **03 16 33.1 -0.3**
SSLB Suanglung 18.29 342 P P **03 16 32.4 -1.0**
SSLB Suanglung 18.29 342 P Pn **03 16 35.2 +0.6**
NACB Ninganchiao 18.47 344 P P **03 16 35.3 -0.1**
NACB Ninganchiao 18.47 344 P Pn **03 16 37.5 +0.8**
YHNB Yeheng 19.00 344 P P **03 16 41.3 0.0**
YHNB Yeheng 19.00 344 P P **03 16 41.3 0.0**
YHNB Yeheng 19.00 344 P Pn **03 16 43.7 +0.7**
DLV Lat 19.03 288 P P **03 16 42.2 +0.4**
DLV Lat 19.03 288 P Pn **03 16 43.0 -0.6**
GUMO Guam 19.09 66 P P **03 16 40.7 -1.5**
comp=Z,25nm,0.8s,baz=201,slow=0.6,SNR=5.8
GUMO LR LR 03 23 22.6
comp=Z,615nm,20.4s,baz=244,slow=34
GUMO Guam 19.09 66 P Pn **03 16 46.3 +2.2**
GUMO Guam 19.09 66 Pn **03 16 46.3 +2.2**
TATO Taipei 19.26 345 P P **03 16 44.4 +0.4**
TATO S Sn **03 20 20.1 -2.1**
BLJI Banyuglugur 19.29 224 P Pn **03 16 46.7 +0.3**
JAGI Jajag, Banyuwa 19.44 221 P **03 16 43.8 -2.3**
JAGI Jajag, Banyuwa 19.44 221 P P **03 16 46.7 +0.6**
JAGI Jajag, Banyuwa 19.44 221 P P **03 16 45.2 -0.9**
MTN Manton Dam 19.50 168 P Pn **03 16 48.0 -0.9**
comp=Z,44nm,1.1s,comp=Z,0.0nm
MTN Manton Dam 19.50 168 P Pn **03 16 48.2 -0.7**
KDU Kakadu 19.68 164 P P **03 16 49.8 +1.1**
comp=Z,72nm,0.9s
JMZ Minamidaito 2 19.82 12 P P **03 16 51.1 +1.1**
JMZ Minamidaito 2 19.82 12 P Pn **03 16 51.8 -0.7**
HKPS Hong Kong Po S 20.09 323 P P **03 16 52.7 -0.4**
HKPS Hong Kong Po S 20.09 323 P P **03 16 52.6 -0.4**
HKPS Hong Kong Po S 20.09 323 P P **03 16 53.4 +0.3**
QZH2 Quanzhou 20.16 338 ⇓ *i* P Pn 03 16 56.0 -0.5
QZH2 S S **03 20 34.3 -0.4**
QZH2 pmax pmax
comp=Z,100nm,0.7s
JOW Kunigami 20.43 3 LR LR 03 24 42.1
comp=Z,366nm,21.2s,baz=189,slow=36
JOW Kunigami 20.43 3 P P **03 16 57.1 +0.3**
JOW Kunigami 20.43 3 P P **03 16 57.0 +0.3**
JOW Kunigami 20.43 3 P P **03 16 57.5 +0.7**
SJI Sawahan 20.58 227 P P **03 16 59.3 +0.8**
comp=Z,209nm,1.4s

SNJI Sawahan-Nganju 20.61 227 P Pn 03 17 01.1 -1.0
QIZ Qiongzhong 20.88 309 P P **03 17 00.6 -0.9**
QIZ Qiongzhong 20.88 309 P P **03 17 01.5 0.0**
QIZ pP pP **03 17 20.3 -0.4**
QIZ sP sP **03 17 31.0 -2.3**
QIZ S S **03 20 46.3 -2.6**
QIZ sS sS **03 21 21.3 +2.8**
QIZ pmax pmax
comp=Z,73nm,0.7s
QIZ pmax pmax
comp=Z,740nm,8.6s
TPI Tanjungpandan 21.25 245 P P **03 17 06.6 +1.0**
comp=Z,167nm,0.9s
GZH2 Guangzhou 21.44 325 P P **03 17 07.8 +0.3**
GZH2 pP pP **03 17 26.0 -0.8**
GZH2 pmax pmax
comp=Z,320nm,0.7s
GZH2 L L
comp=Z,820nm,18.4s
GZH2 L L
comp=Z,450nm,17.5s
GZH2 L L
comp=Z,980nm,19.8s
UGM Wanagama 21.62 229 P P **03 17 12.1 +2.5**
KNRA Kununurra 21.94 175 P P **03 17 13.4 +0.6**
comp=Z,276nm,0.8s,comp=Z,0.0nm
KNRA Kununurra 21.94 175 P P **03 17 13.6 +0.8**
CTJI Waduk Cacaban 22.10 233 P P **03 17 16.7 +2.0**
comp=Z,236nm,1.4s
KPJI Karang Pucung 22.50 233 P P **03 17 19.2 +0.4**
comp=Z,4µmcomp=Z,213nm,1.5s
TPRI Tanjung Pinang 22.98 257 P P **03 17 22.9 -0.7**
comp=Z,6µmcomp=Z,618nm,1.1s
LEM Lembang 23.27 236 P P **03 17 25.9 -0.7**
comp=Z,201nm,0.9s,baz=49,slow=8.3,SNR=18
comp=Z,201nm,0.9s
MYKOM Kota Tinggi 23.44 260 P P **03 17 28.1 +0.1**
MYKOM Kota Tinggi 23.44 260 P P **03 17 27.4 -0.5**
comp=Z,4µmcomp=Z,415nm,0.8s
MYKOM Kota Tinggi 23.44 260 P P **03 17 27.5 -0.5**
BBJI Bungbulang 23.60 235 P P **03 17 27.0 -2.5**
BBJI Bungbulang 23.60 235 P P **03 17 26.7 -2.7**
BBJI Bungbulang 23.60 235 P P **03 17 27.9 -1.6**
BBJI Bungbulang 23.60 235 P P **03 17 27.8 -1.6**
BTDF Bukit Timah Da 23.61 259 P P **03 17 29.2 -0.3**
comp=Z,3µmcomp=Z,453nm,0.9s
CBJI Citeko 23.69 238 P P **03 17 31.4 +1.2**
comp=Z,368nm,0.9s
DBJI Dramaga 23.85 238 P P **03 17 32.1 +0.5**
comp=Z,14µmcomp=Z,239nm,1.8s
PMBI Palembang 23.95 248 P P **03 17 33.4 +1.0**
PMBI Palembang 23.95 248 P P **03 17 34.0 +1.5**
PMBI Palembang 23.95 248 P P **03 17 33.5 +1.0**
SBJI Serang 24.15 240 P P **03 17 35.3 +1.0**
comp=Z,10µmcomp=Z,531nm,1.1s
FITZ Fitzroy Crossi 24.30 183 P P **03 17 36.3 +0.7**
KLI Kotabumi 24.67 244 P P **03 17 39.7 +0.6**
comp=Z,305nm,1.0s
CGJI Cibinong 24.78 239 P P **03 17 39.5 -0.5**
comp=Z,5µmcomp=Z,415nm,1.1s
MDSI Maura Dua 25.12 245 P P **03 17 43.2 +0.1**
comp=Z,135nm,1.0s
JCJ Chichijima 25.25 33 LR LR 03 27 25.4
comp=Z,408nm,20.1s,baz=260,slow=36
JCJ Chichijima 25.25 33 P P **03 17 43.8 -0.4**
JCJ Chichijima 25.25 33 P P **03 17 43.8 -0.4**
JCJ Chichijima 25.25 33 P P **03 17 44.4 +0.1**
JSU Suzuyama 25.27 7 P P **03 17 43.1 -1.2**
JSU Suzuyama 25.27 7 P P **03 17 43.3 -1.1**
JSU Suzuyama 25.27 7 P P **03 17 43.5 -0.8**
KASI Kota Agung 25.29 243 P P **03 17 46.4 +1.7**
comp=Z,145nm,0.9s
LHSI Lahat 25.44 247 P P **03 17 47.7 +1.6**
comp=Z,6µmcomp=Z,506nm,1.1s
CNSH ChangSha 25.46 330 P P **03 17 46.5 +0.4**
CNSH pmax pmax
comp=Z,49nm,1.0s
COEN Coen 25.82 141 P P **03 17 50.4 +1.0**
comp=Z,19nm,0.7s
COEN Coen 25.82 141 P P **03 17 50.5 +1.1**
COEN Coen 25.82 141 P P **03 17 51.5 +2.1**
KULM Kulim 26.15 269 P P **03 17 51.6 -0.9**
KULM Kulim 26.15 269 lAmb lAmb 03 17 53.0
comp=Z,397nm,1.7s
KULM Kulim 26.15 269 P P **03 17 51.8 -0.7**
comp=Z,2µmcomp=Z,121nm,1.3s
KULM Kulim 26.15 269 P P **03 17 52.0 -0.5**
KSI Kapahiang 26.23 248 P P **03 17 53.8 +0.5**
comp=Z,367nm,0.8s
MASI Maura Aman, Be 26.38 250 P P **03 17 56.2 +1.6**
SDSI Sungai Dareh 26.45 255 P P **03 17 53.8 -1.4**
comp=Z,174nm,0.6s
BKNI Bangkinang 26.50 258 P P **03 17 55.8 +0.1**
SLVN Son La 26.81 306 P P **03 17 58.7 +0.3**
SLVN Son La 26.81 306 P P **03 17 58.0 -0.4**
WHN Wuhan 26.83 335 ⇑ P P **03 17 58.0 -0.4**
WHN pP pP **03 18 18.3 -1.4**
WHN S S **03 22 30.3 +2.8**
WHN pmax pmax
comp=Z,92nm,0.9s
WHN pmax pmax
comp=Z,940nm,4.7s
WHN L L
comp=Z,640nm,13.4s
WHN L L
comp=Z,1µm,12.3s
WHN L L
comp=Z,2µm,21.0s
JNU Nakatsue 26.91 7 LR LR 03 27 25.1
comp=Z,310nm,21.9s,baz=168,slow=34
WRAB Tennant Creek 27.10 165 P P **03 18 01.3 +0.4**
WRAB Tennant Creek 27.10 165 *d* P P **03 18 00.2 -0.7**
WRAB pmax pmax
comp=Z,13nm,0.9s
WRAB Tennant Creek 27.10 165 P P **03 18 00.7 -0.2**
WRA Warramunga Arr 27.11 165 P P **03 18 00.8 -0.2**
comp=Z,12nm,0.6s,baz=344,slow=10,SNR=86
WRA PcP PcP **03 21 20.4 +0.8**
comp=Z,6.3nm,0.5s,baz=331,slow=2.5,SNR=5.5
WRA ScP ScP **03 24 52.1 +1.0**
comp=Z,9.4nm,0.9s,baz=340,slow=3.4,SNR=10
WRA LR LR 03 31 08.8
comp=Z,205nm,20.7s,baz=18,slow=41
WRA P3KPbc 03 50 31.7
comp=Z,0.6nm,0.6s,baz=165,slow=4.0,SNR=4.9
comp=Z,12nm,0.6s
WRA Warramunga Arr 27.11 165 P P **03 18 00.1 -0.8**
WR8 Warramunga Arr 27.16 164 P P **03 18 01.9 +0.4**
WR8 lAmb lAmb 03 18 53.2
comp=Z,64nm,0.8s
KRVT Keravat (AS076 27.20 112 LR LR 03 29 30.2
comp=Z,125nm,18.2s,baz=212,slow=38
PPI Padang Panjang 27.32 257 P P **03 18 01.6 -1.4**
comp=Z,2µmcomp=Z,230nm,0.9s
PDSI Padang 27.37 256 P P **03 18 01.5 -2.0**
comp=Z,283nm,0.7s
MNSI Mandailing Nat 27.82 260 P P **03 18 06.8 -0.7**
comp=Z,88nm,0.9s
JMN Monobe 28.02 12 P P **03 18 09.1 +0.1**
JMN Monobe 28.02 12 lAmb lAmb 03 18 11.2
comp=Z,81nm,0.9s
JMN Monobe 28.02 12 P P **03 18 09.2 +0.1**
PSI Prapat 28.12 264 P P **03 18 09.3 -1.0**
PSI Prapat 28.12 264 P P **03 18 09.2 -1.0**
PSI Prapat 28.12 264 P P **03 18 09.1 -1.2**
comp=Z,102nm,0.9s
RPSI Rantau Prapat 28.14 264 lAmb lAmb 03 18 11.9
comp=Z,62nm,0.7s
MBWA Marble Bar 28.21 194 P P **03 18 11.4 +0.6**
MBWA Marble Bar 28.21 194 P P **03 18 11.1 +0.4**
comp=Z,74nm,0.8s
MBWA Marble Bar 28.21 194 P P **03 18 11.3 +0.5**
MBWA Marble Bar 28.21 194 P P **03 18 10.8 0.0**
MBWA lAmb lAmb 03 18 31.6
comp=Z,66nm,0.9s
MBWA Marble Bar 28.21 194 P P **03 18 11.2 +0.4**
TSI Tuntungan 28.39 266 P P **03 18 12.9 +0.4**
comp=Z,69nm,0.9s
ENH Enshi 28.92 328 P P **03 18 16.9 -0.2**
ENH Enshi 28.92 328 P P **03 18 17.3 +0.2**
KCSI Kotacane, Aceh 29.17 266 P P **03 18 17.5 -2.0**
comp=Z,2µmcomp=Z,299nm,1.0s
JHJ Hachijo jima 2 29.22 23 LR LR 03 29 06.9
comp=Z,527nm,21.3s,baz=224,slow=34
QIS Mount Isa 29.48 155 P P **03 18 22.8 +0.6**

QIS Mount Isa 29.48 155 P P **03 18 22.7 +0.6**
comp=Z,71nm,0.7s
QIS Mount Isa 29.48 155 P P **03 18 23.2 +1.1**
GSI Gunungsitoli 29.69 262 P P **03 18 21.8 -2.3**
GSI Gunungsitoli 29.69 262 P P **03 18 21.6 -2.5**
GSI Gunungsitoli 29.69 262 P P **03 18 21.7 -2.3**
GSI Gunungsitoli 29.69 262 P P **03 18 21.8 -2.3**
KMI2 Kunming 29.76 312 ⇑ P P **03 18 25.3 +0.5**
KMI2 pP pP 03 18 48.0 +1.0
KMI2 PcP PcP **03 21 27.5 +1.0**
KMI2 pmax pmax
comp=Z,69nm,1.1s
MTSU Mount Surprise 29.76 145 P P **03 18 27.1 +2.5**
MTSU Mount Surprise 29.76 145 P P **03 18 25.0 +0.3**
comp=Z,20nm,0.8s
MTSU Mount Surprise 29.76 145 P P **03 18 27.3 +2.7**
CM31 Chiang Mai Arr 29.81 296 P P **03 18 26.2 +1.1**
SNR=11
CM31 Chiang Mai Arr 29.81 296 lAmb lAmb 03 18 26.9
comp=Z,32nm,0.7s
CMAR Chiang Mai Arr 29.81 296 P P **03 18 25.6 +0.5**
comp=Z,22nm,0.7s,baz=121,slow=7.4,SNR=85
CMAR PcP PcP **03 21 28.1 +1.7**
comp=Z,11nm,0.8s,baz=111,slow=1.1,SNR=14
CMAR ScP ScP **03 25 00.8 +1.2**
comp=Z,2.1nm,0.4s,baz=128,slow=1.6,SNR=9.8
comp=Z,22nm,0.7s
CMAR Chiang Mai Arr 29.81 296 P P **03 18 24.6 -0.4**
LHMI Lhok Sumawe 29.84 269 P P **03 18 25.5 +0.1**
LHMI Lhok Sumawe 29.84 269 P P **03 18 25.9 +0.5**
LHMI Lhok Sumawe 29.84 269 P P **03 18 25.4 0.0**
TJN Taejon 29.91 ⇓ *e*P P **03 18 25.4 -0.3**
CHTO Chiang Mai 29.93 297 P P **03 18 25.7 -0.5**
CHTO Chiang Mai 29.93 297 P P **03 18 25.7 -0.5**
CHTO pmax pmax
comp=Z,50nm,0.7s
CHTO Chiang Mai 29.93 297 P P **03 18 26.5 +0.3**
CHTO Chiang Mai 29.93 297 P P **03 18 25.7 -0.5**
CHTO lAmb lAmb 03 18 27.4
comp=Z,50nm,0.7s
CHTO Chiang Mai 29.93 297 P P **03 18 26.0 -0.2**
comp=Z,779nmcomp=Z,84nm,0.8s
CHTO Chiang Mai 29.93 297 P P **03 18 26.3 +0.2**
INU Inuyama 30.34 16 P P **03 18 28.9 -0.7**
INU Inuyama 30.34 16 lAmb lAmb 03 18 30.8
comp=Z,44nm,1.0s
INU Inuyama 30.34 16 P P **03 18 29.2 -0.3**
INU Inuyama 30.34 16 P P **03 18 29.1 -0.5**
INU pP pP **03 18 49.3 -0.3**
MLSI Meulaboh, Aceh 30.45 268 P P **03 18 28.9 -1.9**
AS15 Alice Springs 30.55 167 P P **03 18 32.1 +0.5**
comp=Z,38nm,0.7s
AS31 Alice Springs 30.58 167 P P **03 18 32.0 +0.2**
comp=Z,13nm,0.7s,comp=Z,0.0nm
ASAR Alice Springs 30.58 167 P P **03 18 32.1 +0.3**
comp=Z,7.9nm,0.5s,baz=356,slow=8.2,SNR=113
ASAR PcP PcP **03 21 29.1 +0.8**
comp=Z,16nm,0.5s,baz=349,slow=2.4,SNR=17
ASAR ScP ScP **03 25 02.9 +0.9**
comp=Z,12nm,0.9s,baz=355,slow=2.9,SNR=14
ASAR PKiKP PKiKP **03 28 57.6 -1.9**
comp=Z,0.9nm,0.9s,baz=311,slow=2.0,SNR=5.0
ASAR LR LR 03 32 21.8
comp=Z,553nm,18.1s,baz=346,slow=39
comp=Z,7.9nm,0.5s
AS01 Alice Springs 30.59 167 P P **03 18 32.3 +0.4**
AUALC St Philip's Co 30.60 167 P P **03 18 32.4 +0.4**
AS09 Alice Springs 30.62 167 P P **03 18 32.3 +0.1**
comp=Z,48nm,0.7s
JGF Kuroka 30.68 17 P P **03 18 33.4 +0.9**
JGF Kuroka 30.68 17 P P **03 18 30.2 -2.3**
SNSI Sinabang, Aceh 30.74 264 P P **03 18 31.9 -1.5**
comp=Z,226nm,1.0s
KSAR Wonju Array Be 30.98 1 P P **03 18 34.5 -0.7**
KSAR Wonju Array Be 30.98 1 P P **03 18 34.5 -0.7**
KSRS Korea Array 31.00 2 P P **03 18 34.5 -0.8**
comp=Z,5.7nm,0.6s,baz=184,slow=9.7,SNR=36
KSRS PcP PcP **03 21 29.8 +0.7**
comp=Z,3.2nm,0.7s,baz=176,slow=3.0,SNR=4.8
KSRS ScP ScP **03 25 04.5 +1.5**
comp=Z,4.9nm,0.9s,baz=191,slow=3.4,SNR=11
KSRS LR LR 03 29 52.6
comp=Z,185nm,20.2s,baz=185,slow=34
comp=Z,5.7nm,0.6s
KS19 Wonju Array Si 31.05 1 lAmb lAmb 03 19 13.5
comp=Z,133nm,2.0s
TIA Tai'an 31.07 345 P P **03 18 35.0 -1.0**
TIA pmax pmax
comp=Z,47nm,0.8s
LYN LuoYang 31.10 336 P P **03 18 36.0 -0.2**
LYN sP sP 03 19 08.3 -0.9
LYN PcP PcP **03 21 30.5 +1.0**
LYN PcS PcS **03 25 15.0 +1.3**
LYN pmax pmax
comp=Z,48nm,0.6s
WRKA Warakurna 31.20 178 P P **03 18 36.5 -0.8**
comp=Z,21nm,0.9s
PZH PanZhiHua 31.27 313 P P **03 18 40.5 +2.4**
GIRL Giralia 31.35 203 P P **03 18 40.0 +1.5**
comp=Z,70nm,0.9s
BSI Banda Aceh 31.46 270 P P **03 18 38.0 -1.7**
comp=Z,87nm,0.9s
MAJO Matsushiro 31.80 17 P P **03 18 40.5 -1.9**
MAJO Matsushiro 31.80 17 *c* P P **03 18 40.6 -1.9**
MAJO pmax pmax
comp=Z,18nm,1.2s
MAJO Matsushiro 31.80 17 P P **03 18 40.8 -1.6**
MAJO Matsushiro 31.80 17 P P **03 18 40.9 -1.5**
MAJO Matsushiro 31.80 17 P P **03 18 40.8 -1.5**
MAJO pP pP **03 19 01.6 -1.0**
MJAR Matsushiro Arr 31.80 17 P P **03 18 40.7 -1.7**
comp=Z,16nm,0.8s,baz=192,slow=9.2,SNR=39
MJAR PP PP **03 19 55.5 -0.7**
comp=Z,9.1nm,0.9s,baz=177,slow=9.7,SNR=5.8
MJAR PcP PcP **03 21 32.4 +1.0**
comp=Z,7.6nm,0.8s,baz=177,slow=2.7,SNR=6.1
MJAR ScP ScP **03 25 07.4 +1.5**
comp=Z,9.6nm,1.0s,baz=195,slow=3.5,SNR=13
MJAR LR LR 03 30 49.7
comp=Z,442nm,20.6s,baz=208,slow=35
MJAR P3KPbc 03 50 14.6
comp=Z,1.1nm,0.9s,baz=354,slow=4.4,SNR=4.1
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 31.80 17 P P **03 18 40.2 -2.2**
XAN Xi'an 32.22 331 ⇑ P P **03 18 45.5 -0.6**
XAN pmax pmax
comp=Z,170nm,0.8s
XAN Xi'an 32.22 331 P P **03 18 45.5 -0.6**
CTA Charters Tower 32.41 145 LR LR 03 33 36.8
comp=Z,415nm,19.1s,baz=333,slow=39
CTA Charters Tower 32.41 145 P P **03 18 49.8 +1.9**
CTAO Charters Tower 32.41 145 P P **03 18 50.0 +2.0**
CTAO Charters Tower 32.41 145 P P **03 18 49.8 +1.9**
CTAO pmax pmax
comp=Z,19nm,0.8s
CTAO Charters Tower 32.41 145 P P **03 18 49.8 +1.9**
CTAO Charters Tower 32.41 145 P P **03 18 49.0 +1.1**
CD2 Chengdu 32.71 321 P P **03 18 50.0 -0.5**
CD2 pP pP 03 19 13.0 +0.3
CD2 sP sP 03 19 25.8 +1.7
CD2 PP PP **03 20 07.3 +1.0**
CD2 S S **03 24 01.0 +1.2**
CD2 pmax pmax
comp=Z,100nm,0.6s
CD2 pmax pmax
comp=Z,330nm,5.3s
DL2 Dalian 32.79 352 P P **03 18 50.5 -0.4**
DL2 pP pP 03 19 13.5 +1.3
DL2 sP sP 03 19 26.3 +3.0
DL2 *e*S S **03 24 01.5 +0.9**
DL2 pmax pmax
comp=Z,120nm,0.9s
DL2 pmax pmax
comp=Z,240nm,3.6s
DL2 L L
comp=Z,460nm,17.5s
DL2 L L
comp=Z,660nm,16.5s
DL2 L L
comp=Z,510nm,18.6s
HNS HongShan 32.87 342 ⇑ P P **03 18 51.3 -0.4**
HNS pmax pmax
comp=Z,75nm,1.1s
TNCH TengChong 32.94 307 ⇑ P P **03 18 52.3 -0.4**
TNCH sP sP 03 19 28.8 +2.7

TNCH S **S** **03 24 00.3 -3.5**
TNCH pmax pmax
comp=Z,89nm,1.3s
MEEK Meekatharra 33.74 193 P **P** **03 18 59.2 -0.2**
MEEK Meekatharra 33.74 193 P **P** **03 18 59.4 -0.1**
comp=Z,103nm,0.8s
MEEK Meekatharra 33.74 193 P **P** **03 18 59.8 +0.3**
PBA Port Blair 34.15 281 P **P** **03 19 02.5 -0.7**
PBA Port Blair 34.15 281 IAmb IAmb 03 19 08.3
comp=Z,55nm,0.7s
PBA Port Blair 34.15 281 P **P** **03 19 02.7 -0.4**
BJI2 Beijing 34.91 346 P **P** **03 19 09.0 -0.3**
BJI2 pP **pP** **03 19 30.3 -0.2**
BJI2 sP **sP** **03 19 40.0 -1.4**
BJI2 S **S** **03 24 36.5 +3.0**
BJI2 pmax pmax
comp=Z,29nm,1.1s
BJI2 L L
comp=Z,130nm,15.1s
BJI2 L L
comp=Z,85nm,15.9s
BJI2 L L
comp=Z,200nm,15.7s
BJT Baijiatuau 34.91 346 P **P** **03 19 09.0 -0.3**
comp=Z,101nm,0.9s
BJT Baijiatuau 34.91 346 P **P** **03 19 08.7 -0.6**
BJT Baijiatuau 34.91 346 IAmb IAmb 03 19 15.7
comp=Z,69nm,0.8s
BJT Baijiatuau 34.91 346 P **P** **03 19 08.7 -0.6**
SNY Shenyang 35.48 356 ⇑P **P** **03 19 13.8 -0.4**
SNY pmax pmax
comp=Z,67nm,1.0s
PSTR Posyet 36.34 5⇓*e*P **P** **03 19 21.9 +0.4**
LZDM Lanzhou Array 36.38 327 P **P** **03 19 23.1 +0.7**
comp=Z,63nm,0.8s,baz=163,slow=11,SNR=33
comp=Z,63nm,0.8s
LZH Lanzhou 36.40 328 P **P** **03 19 23.3 +0.9**
LZH pP pwP 03 19 48.8 +1.6
LZH PcP **PcP** **03 21 45.5 +0.7**
LZH pmax pmax
comp=Z,200nm,1.6s
LZH pmax pmax
comp=Z,700nm,4.3s
LZH L L
comp=Z,730nm,18.4s
LZH L L
comp=Z,730nm,18.7s
LZH L L
comp=Z,2μm,18.4s
INKA Innaminka 36.41 159 P **P** **03 19 23.5 +1.2**
MORW Morawa 36.71 196 P **P** **03 19 25.5 +0.6**
comp=Z,50nm,0.8s
MORW Morawa 36.71 196 P **P** **03 19 25.0 +0.1**
comp=Z,50nm,0.8s
MORW Morawa 36.71 196 IAmb IAmb 03 19 27.8
comp=Z,42nm,0.9s
MORW Morawa 36.71 196 P **P** **03 19 25.5 +0.6**
QLP Quilpie 36.77 154 P **P** **03 19 26.0 +0.6**
QLP Quilpie 36.77 154 P **P** **03 19 25.8 +0.4**
comp=Z,88nm,0.8s
QLP Quilpie 36.77 154 P **P** **03 19 25.9 +0.5**
VLA Vladivostok 36.91 6*de*P **P** **03 19 26.7 +0.4**
VLA pmax pmax
comp=Z,74nm,0.9s
FORT Forrest 36.91 178 P **P** **03 19 27.1 +0.6**
comp=Z,59nm,0.8s
FORT Forrest 36.91 178 IAmb IAmb 03 19 28.2
comp=Z,42nm,0.7s
HHC Hu-ho-hao-te 37.02 341 *e*P **P** **03 19 27.3 -0.2**
HHC pP pP 03 19 50.8 +1.6
HHC sP sP 03 20 00.3 0.0
HHC pmax pmax
comp=Z,45nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.3s
HHC L L
comp=Z,160nm,22.7s
HHC L L
comp=Z,170nm,19.3s
HHC L L
comp=Z,330nm,20.2s
CN2 Changchun 37.35 358 *e*P P 03 19 35.0 +4.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BTO2 Baotou 37.51 339 *e*P **P** **03 19 32.5 +0.8**
BTO2 pP **pP** **03 19 55.3 +1.9**
BTO2 sP **sP** **03 20 07.3 +2.9**
BTO2 pmax pmax
comp=Z,44nm,0.8s
BTO2 pmax pmax
comp=Z,1μm,11.6s
KMBL Kambalda 37.79 187 P **P** **03 19 34.6 +0.7**
comp=Z,43nm,0.9s
USA0B Ussuriysk Arra 37.98 6*de*P **P** **03 19 35.7 +0.3**
USRK Ussuriysk Ar. 37.98 6 P **P** **03 19 35.4 0.0**
comp=Z,47nm,0.8s,baz=190,slow=6.8,SNR=42
comp=Z,47nm,0.8s
USRK Ussuriysk Ar. 37.98 6 P **P** **03 19 35.2 -0.2**
BLDU Ballidu 38.01 194 P **P** **03 19 36.2 +0.4**
BLDU Ballidu 38.01 194 P **P** **03 19 36.1 +0.3**
comp=Z,92nm,1.0s
BLDU Ballidu 38.01 194 P **P** **03 19 36.5 +0.6**
MDJ Mudanjiang 38.21 3 P **P** **03 19 37.5 +0.2**
MDJ Mudanjiang 38.21 3 IAmb IAmb 03 19 38.5
comp=Z,39nm,0.8s
MDJ Mudanjiang 38.21 3 P **P** **03 19 37.3 0.0**
MDJ pmax pmax
comp=Z,53nm,0.8s
MDJ Mudanjiang 38.21 3 P **P** **03 19 37.6 +0.3**
ERM Erimo 38.36 20⇑*e*P **P** **03 19 39.4 +0.8**
ERM pmax pmax
comp=Z,28nm,0.8s
SHL Shillong 38.55 304 P **P** **03 19 39.8 -0.9**
SHL pmax pmax
comp=Z,177nm,0.9s
SHL Shillong 38.55 304 P **P** **03 19 40.2 -0.4**
SNR=35
SHL Shillong 38.55 304 *e*P **P** **03 19 40.3 -0.4**
SHL IAmb IAmb 03 19 43.4
comp=Z,55nm,0.6s
SHL *i* x x 03 21 52.6
XLT XiLinHaoTe 38.62 347 *e*P **P** **03 19 40.3 -0.6**
XLT pmax pmax
comp=Z,33nm,0.7s
BNX BinXian 39.27 1⇓P **P** **03 19 45.3 -0.8**
BNX pmax pmax
comp=Z,20nm,0.8s
EIDS Eidsvold 39.30 144 P **P** **03 19 48.3 +1.6**
MUN Mundaring 39.44 194 P **P** **03 19 48.1 +0.4**
MUN Mundaring 39.44 194 P **P** **03 19 48.5 +0.8**
comp=Z,140nm,0.7s
MUN Mundaring 39.44 194 P **P** **03 19 48.5 +0.8**
BBOO Buckleboo 39.88 168 P **P** **03 19 52.1 +0.7**
BBOO Buckleboo 39.88 168 P **P** **03 19 51.3 -0.1**
comp=Z,77nm,1.0s
BBOO Buckleboo 39.88 168 IAmb IAmb 03 20 27.2
comp=Z,55nm,0.8s
BBOO Buckleboo 39.88 168 P **P** **03 19 52.4 +1.0**
ASAJ Asahikawa 40.07 18 LR LR 03 35 51.9
comp=Z,464nm,21.8s,baz=178,slow=35
ASAJ Asahikawa 40.07 18 P **P** **03 19 53.9 +1.1**
ASAJ pmax pmax
comp=Z,47nm,1.0s
JKA Kamikawa-asahi 40.07 18 P **P** **03 19 53.9 +1.1**
JKA IAmb IAmb 03 20 25.5
comp=Z,47nm,1.0s
JKA Kamikawa-asahi 40.07 18 P **P** **03 19 54.0 +1.1**
NWAO Narrogin (SRO) 40.11 193 P **P** **03 19 54.0 +0.8**
NWAO Narrogin (SRO) 40.11 193 P **P** **03 19 54.1 +0.8**
comp=Z,209nm,0.8s
NWAO Narrogin (SRO) 40.11 193 P **P** **03 19 54.2 +0.9**
NWAO pmax pmax
comp=Z,127nm,0.7s
NWAO Narrogin (SRO) 40.11 193 P **P** **03 19 54.4 +1.1**
NWAO Narrogin (SRO) 40.11 193 P **P** **03 19 54.2 +0.9**
STKA Stephens Creek 40.49 161 P **P** **03 19 57.7 +1.3**
comp=Z,45nm,0.9s,baz=340,slow=7.7,SNR=63
comp=Z,45nm,0.9s
STKA Stephens Creek 40.49 161*de*P **P** **03 19 56.8 +0.4**
STKA Stephens Creek 40.49 161 P **P** **03 19 57.4 +1.0**
H11S3 WAKE ISLAND Hy 40.58 69 T T 04 04 08.2
baz=258,slow=75,SNR=31
H11S1 WAKE ISLAND Hy 40.59 69 T T 04 04 10.7
baz=258,slow=75,SNR=22
H11S2 WAKE ISLAND Hy 40.59 69 T T 04 04 12.6
baz=258,slow=75,SNR=32
AUJCS Jamestown Cent 40.85 165 P **P** **03 20 00.9 +1.5**
AULRC Lightning Ridg 40.91 151 P **P** **03 20 00.9 +0.9**
LSA Lhasa 40.92 309 P **P** **03 20 01.1 +0.5**
LSA Lhasa 40.92 309 P **P** **03 20 01.8 +1.2**
LSA Lhasa 40.92 309 IAmb IAmb 03 20 02.5
comp=Z,69nm,1.0s
LSA Lhasa 40.92 309 P **P** **03 20 01.8 +1.2**
H11N1 WAKE ISLAND Hy 41.03 67 T T 04 04 55.9
baz=265,slow=75,SNR=21
H11N2 WAKE ISLAND Hy 41.04 67 T T 04 04 49.5
baz=265,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 41.05 67 T T 04 04 47.8
baz=265,slow=75,SNR=20
GTA2 Gaotai 41.09 327 P **P** **03 20 01.8 +0.4**
GTA2 PcP **PcP** **03 22 00.5 +1.1**
GTA2 ScP **ScP** **03 25 41.0 +0.7**
GTA2 ScS **ScS** **03 29 56.8 +0.7**
GTA2 pmax pmax
comp=Z,200nm,0.6s
GTA2 L L
comp=Z,460nm,22.8s
GTA2 L L
comp=Z,740nm,22.2s
GTA2 L L
comp=Z,1μm,21.6s
HTT Hallett 41.15 165 P **P** **03 20 02.9 +1.1**
HTT Hallett 41.15 165 P **P** **03 20 03.0 +1.1**
comp=Z,19nm,1.6s
HTT Hallett 41.15 165 P **P** **03 20 02.9 +1.1**
TW1H Toowoomba 1 Ha 41.48 145 P **P** **03 20 06.7 +2.0**
CMSA Cobar Meteorol 41.70 156 P **P** **03 20 06.4 0.0**
CMSA Cobar Meteorol 41.70 156 P **P** **03 20 06.9 +0.5**
comp=Z,44nm,1.0s
CMSA Cobar Meteorol 41.70 156 P **P** **03 20 07.2 +0.9**
RKGY Rocky Gully 41.78 192 P **P** **03 20 08.9 +1.9**
comp=Z,374nm,0.7s
GOMU GeErMu 41.80 320 P **P** **03 20 08.5 +0.8**
GOMU pmax pmax
comp=Z,72nm,1.1s
SHBG Sahibganj 42.00 301 *ex* **P** **03 20 09.2 +0.3**
BWNR Bhubaneshwar 42.19 293 *e*P **P** **03 20 11.3 +0.8**
AUMAR Marden Senior 42.46 166 P **P** **03 20 14.2 +1.7**
YSS Yuzhno-Sakhali 42.71 16 P **P** **03 20 14.9 +0.6**
YSS Yuzhno-Sakhali 42.71 16 *e*P **P** **03 20 14.5 +0.2**
YSS *e* 03 20 37.5
YSS pmax pmax
comp=Z,30nm,1.0s
YSS Yuzhno-Sakhali 42.71 16 P **P** **03 20 12.9 -1.4**
H01W3 Cape Leeuwin H 42.73 196 P **P** **03 20 17.0 +2.6**
baz=25,slow=11,SNR=4.8
H01W1 Cape Leeuwin H 42.73 196 P **P** **03 20 17.0 +2.6**
baz=25,slow=11,SNR=4.0
H01W2 Cape Leeuwin H 42.74 196 P **P** **03 20 17.4 +3.0**
baz=25,slow=11,SNR=3.3
AUMBR Murray Bridge 42.85 165 P **P** **03 20 17.4 +1.8**
BOK Bokaro 43.05 298 *e*P **P** **03 20 18.4 +0.8**
BOK IAmb IAmb 03 20 19.5
comp=Z,24nm,0.7s
HIA Hailar 43.22 353 P **P** **03 20 18.9 +0.4**
HIA Hailar 43.22 353⇑*e*P **P** **03 20 17.8 -0.7**
HIA pmax pmax
comp=Z,23nm,1.4s
HIA Hailar 43.22 353 P **P** **03 20 18.1 -0.4**
HILR Hailar Array B 43.51 353 P **P** **03 20 20.4 -0.4**
comp=Z,5.5nm,0.5s,baz=156,slow=13,SNR=7.3
HILR PcP **PcP** **03 22 08.0 +1.0**
comp=Z,10nm,0.5s,baz=145,slow=5.7,SNR=6.0
HILR ScP **ScP** **03 25 50.9 +1.2**
comp=Z,13nm,0.9s,baz=157,slow=4.8,SNR=6.5
comp=Z,5.5nm,0.5s
HEH HeiHe 43.78 0 *e*P **P** **03 20 22.0 -0.9**
HEH pmax pmax
comp=Z,26nm,0.8s
GAYA Gaya 43.92 299 *e*P **P** **03 20 24.6 +0.2**
VIS Vishakhapatnam 44.00 289 *e*P **P** **03 20 25.2 0.0**
VIS IAmb IAmb 03 20 29.2
comp=Z,28nm,0.7s
UGL Uglegorsk 44.49 14 *e*P **P** **03 20 29.4 +0.8**
UGL *e*S **S** **03 26 53.1 -3.2**
UGL pmax pmax
comp=Z,100nm,1.0s
ULN Ulaanbaatar 44.73 341*c i*P **P** **03 20 30.7 -0.1**
ULN pmax pmax
comp=Z,52nm,1.0s
ULN Ulaanbaatar 44.73 341 P **P** **03 20 30.7 -0.1**
ULN Ulaanbaatar 44.73 341 P **P** **03 20 30.7 -0.1**
ULN IAmb IAmb 03 20 36.0
comp=Z,44nm,0.8s
ULN Ulaanbaatar 44.73 341 P **P** **03 20 30.4 -0.4**
comp=Z,3μmcomp=Z,225nm,1.0s
ULN Ulaanbaatar 44.73 341 P **P** **03 20 30.9 +0.2**
ULN Ulaanbaatar 44.73 341 P **P** **03 20 31.0 +0.2**
SONM Songino Array 44.92 340 P **P** **03 20 32.0 -0.3**
comp=Z,8.7nm,0.5s,baz=162,slow=8.2,SNR=62
SONM PcP **PcP** **03 22 12.8 +0.7**
comp=Z,8.2nm,0.8s,baz=152,slow=4.3,SNR=3.8
SONM LR LR 03 39 45.2
comp=Z,220nm,20.9s,baz=150,slow=36
comp=Z,8.7nm,0.5s
SONM Songino Array 44.92 340 P **P** **03 20 31.9 -0.3**
SONM IAmb IAmb 03 20 33.2
comp=Z,61nm,1.5s
GRNR Gornyy 45.00 9⇓*i*P **P** **03 20 32.3 -0.4**
GRNR pmax pmax
comp=Z,10.0nm,0.7s
ARPS Mount Arapiles 45.09 163 P **P** **03 20 34.5 +0.9**
comp=Z,51nm,1.1s
PALK Pallekele 45.89 274 *i* P **P** **03 20 39.7 -0.6**
SNR=8.8
PALK Pallekele 45.89 274*ce*P **P** **03 20 39.1 -1.2**
PALK pmax pmax
comp=Z,78nm,1.2s
PALK Pallekele 45.89 274 P **P** **03 20 40.1 -0.2**
PALK Pallekele 45.89 274 P **P** **03 20 39.5 -0.8**
PALK IAmb IAmb 03 20 40.3
comp=Z,51nm,0.9s
PALK Pallekele 45.89 274 P **P** **03 20 40.0 -0.2**
PALK Pallekele 45.89 274 P **P** **03 20 39.5 -0.8**
PALK Pallekele 45.89 274 P **P** **03 20 39.9 -0.4**
PALK PcP **PcP** **03 22 17.4 +1.4**
BLSP Bilaspur 45.91 295 *i* P **P** **03 20 40.5 +0.2**
HALK Hakmana 45.96 272 P **P** **03 20 40.1 -0.6**
MALK Mahakanadarawa 46.02 276 P **P** **03 20 41.1 -0.2**
TYV Tymovskoe 46.29 14 *e*P **P** **03 20 43.5 +0.7**
TYV *e*S **S** **03 27 22.3 +0.1**
TYV pmax pmax
comp=Z,14nm,1.0s
TYV pmax pmax
comp=Z,100nm,3.3s
TYV smax smax
comp=N,200nm,6.0s
TYV smax smax
comp=E,300nm,6.0s
CAN Canberra 46.35 155 P **P** **03 20 45.3 +1.8**
CAN pmax pmax
comp=Z,42nm,1.0s
CAN Canberra 46.35 155 P **P** **03 20 45.3 +1.8**
CAN IAmb 03 21 14.1
comp=Z,42nm,1.0s
VJD Vijayawada 46.37 287 *ex* P 03 20 50.5 +6.5
MDRS Chennai 46.43 282 *e*P **P** **03 20 44.8 +0.3**
MDRS *i* x **P** **03 20 18.8**
BRAT Ballarat 46.45 161 P **P** **03 20 46.3 +2.1**
TOO Toolangi 46.98 160 P **P** **03 20 50.1 +1.7**
comp=Z,9.0nm,0.9s
TOO Toolangi 46.98 160 P **P** **03 20 50.6 +2.1**
TOO pmax pmax
comp=Z,27nm,1.5s
TOO Toolangi 46.98 160 P **P** **03 20 50.5 +2.1**
ZEA Zeya 47.27 0 *e*P **P** **03 20 49.4 -1.0**
ZEA pmax pmax
comp=Z,20nm,1.1s
DZM Mont Dzumac 47.91 127 P **P** **03 20 56.7 +0.8**
comp=Z,6.0nm,0.8s,baz=252,slow=2.8,SNR=2.3
DZM LR LR 03 41 13.9
comp=Z,270nm,19.4s,baz=275,slow=36
comp=Z,6.0nm,0.8s
ZAK Zakamensk 48.16 340 *e*P **P** **03 20 56.1 -1.4**
ZAK pmax pmax
comp=Z,12nm,1.4s
SALM Salem 48.40 280 *e*P **P** **03 20 59.7 -0.1**
HYB Hyderabad 48.47 288 *e*P **P** **03 20 59.8 -0.5**
HYB Hyderabad 48.47 288 *e*P **P** **03 21 00.1 -0.2**
HYB *e*PP **PP** **03 22 53.6 -0.3**
HYB *e*S **S** **03 27 54.2 0.0**
NGP Nagpur 48.57 293 *e*P **P** **03 21 00.8 -0.2**
KOD Kodaikanal 49.05 278 *e*P **P** **03 21 04.1 -1.0**
TLY Talaya 49.15 341 P **P** **03 21 04.9 +0.1**
comp=Z,26nm,0.8s,baz=171,slow=4.4,SNR=9.8
comp=Z,26nm,0.8s
TLY Talaya 49.15 341*c i*P **P** **03 21 05.0 +0.1**
TLY pmax pmax
comp=Z,35nm,1.0s
TLY Talaya 49.15 341 P **P** **03 21 05.2 +0.4**
TLY Talaya 49.15 341 P **P** **03 21 04.8 0.0**
TLY IAmb IAmb 03 21 06.1
comp=Z,25nm,0.8s
TLY Talaya 49.15 341 P **P** **03 21 05.3 +0.4**
TLY Talaya 49.15 341 P **P** **03 21 05.2 +0.4**
IRK Irkutsk 49.43 342 *e*P **P** **03 21 06.5 -0.5**
IRK pmax pmax
comp=Z,70nm,2.6s
PTH Pithoragarh 49.66 304 *e*P **P** **03 21 08.0 -1.3**
LGTI Lohaghat 49.69 303 *e*P **P** **03 21 08.4 -1.3**
JHNI Jhansi 49.87 298 *e*P **P** **03 21 09.7 -1.1**
JHNI IAmb IAmb 03 21 11.3
comp=Z,55nm,0.9s
MOY Mondy 50.03 339 *e*P **P** **03 21 11.9 +0.2**
MOY pmax pmax
comp=Z,61nm,3.1s
BHPL Bhopal 50.45 295 *e*P **P** **03 21 13.6 -1.7**
BHPL IAmb IAmb 03 21 17.2
comp=Z,40nm,0.5s
SKR Severo-Kuril's 50.47 24⇑*e*P **P** **03 21 17.3 +2.4**
JOSI Joshimath 50.49 305 *e*P **P** **03 21 15.6 -0.1**
KNGR Kungurtug, Tuv 50.49 336⇑*e*P **P** **03 21 15.5 +0.3**
KNGR pmax pmax
comp=Z,52nm,1.4s
WMQ Urumqi 50.74 324 ⇑P **P** **03 21 17.5 +0.4**
WMQ sP sP 03 21 53.8 +2.8
WMQ PcP **PcP** **03 22 33.8 +0.9**
WMQ ScP **ScP** **03 26 21.5 +1.3**
WMQ pmax pmax
comp=Z,61nm,1.1s
WMQ pmax pmax
comp=Z,360nm,3.9s
WMQ L L
comp=Z,680nm,17.5s
WMQ L L
comp=Z,340nm,20.7s
WMQ L L
comp=Z,730nm,24.3s
UTK UTTARKASHI 51.46 304 *e*P **P** **03 21 22.2 -0.6**
HNLY HANLEY 51.69 307 *e*P **P** **03 21 25.1 +0.1**
HNLY IAmb IAmb 03 21 26.4
comp=Z,22nm,0.5s
KLP Kalpa 51.87 305 *e*P **P** **03 21 26.1 0.0**
NDI New Delhi 51.90 302 *e*P **P** **03 21 24.5 -1.5**
NDI IAmb IAmb 03 21 25.5
comp=Z,45nm,0.5s
SONA Sohna 51.91 301 *e*P **P** **03 21 25.0 -1.0**
AYAN Aya Nagar 51.92 301 *e*P **P** **03 21 24.6 -1.5**
AYAN IAmb IAmb 03 21 25.8
comp=Z,85nm,0.8s
NPLP NPLP New Delhi 51.92 302 *e*P **P** **03 21 24.8 -1.4**
BOD Bodaibo 52.34 351 *e*P **P** **03 21 28.1 -0.6**
BOD pmax pmax
comp=Z,37nm,1.1s
KUDL Kundal 52.37 301 *e*P **P** **03 21 28.3 -1.2**
KAD Karad 52.60 287 *e*P **P** **03 21 30.0 -1.4**
KAD *i* x x 03 22 40.4
SMLA Simla 52.62 305 *e*P **P** **03 21 31.5 +0.2**
SMLA IAmb IAmb 03 21 34.2
comp=Z,135nm,0.7s
PEA0B Petropavlovsk- 52.98 23*c i*P **P** **03 21 32.0 -1.5**
PEA0B Petropavlovsk- 52.98 23 IAmb IAmb 03 22 16.4
comp=Z,75nm,1.2s
PETK Petropavlovsk- 52.98 23 P **P** **03 21 34.4 +0.9**
comp=Z,20nm,0.7s,baz=207,slow=3.8,SNR=42
PETK LR LR 03 46 43.3
comp=Z,75nm,19.1s,baz=273,slow=39
comp=Z,20nm,0.7s
PETK Petropavlovsk- 52.98 23 P **P** **03 21 34.7 +1.2**
PETK Petropavlovsk- 52.98 23 P **P** **03 21 34.7 +1.2**
POO Poona 53.04 288 *e*P **P** **03 21 34.2 -0.4**
POO *i* x x 03 22 41.9
PET Petropavlovsk 53.28 23 P **P** **03 21 36.9 +1.2**
PET Petropavlovsk 53.28 23*de*P **P** **03 21 36.9 +1.2**
PET pmax pmax
comp=Z,40nm,1.0s
PET Petropavlovsk 53.28 23 P **P** **03 21 37.0 +1.2**
PET IAmb IAmb 03 22 18.4
comp=Z,82nm,1.3s
PET Petropavlovsk 53.28 23 P **P** **03 21 36.6 +0.9**
BHK Bhakra 53.35 305 *ex* **P** **03 21 36.7 0.0**
AJM Ajmer 53.58 298 *e*P **P** **03 21 37.7 -0.8**
AJM IAmb IAmb 03 21 39.0
comp=Z,38nm,0.4s
AJM *i* x x 03 22 44.7
TSSA Tissa 53.96 306 *e*P **P** **03 21 40.4 -1.0**
TSSA IAmb IAmb 03 21 42.2
comp=Z,113nm,0.7s
TSSA *i* x x 03 22 46.1
UDPR Udaipur 54.03 296 *e*P **P** **03 21 41.5 -0.3**
UDPR *i* x x 03 22 46.3
THN Thein Dam 54.16 306 *e*P **P** **03 21 42.0 -0.6**
THN *i* x x 03 22 46.4
DGZ Jazzator, Alta 54.45 330*c i*P **P** **03 21 44.7 +0.1**
DGZ pmax pmax
comp=Z,20nm,1.0s
ZSN Zaisan 54.46 326 *e*P **P** **03 21 44.7 +0.3**
ZSN Zaisan 54.46 326 *e*P **P** **03 21 44.7 +0.3**
WUS Wushi 54.79 317 P **P** **03 21 47.5 +0.4**
JMU Jammu 55.01 306 *e*P **P** **03 21 49.0 +0.3**
SHLS Shalkode 55.50 319*c i*P **P** **03 21 50.2 -1.9**
SHLS pmax pmax
comp=Z,37nm,0.9s
SHLS Shalkode 55.50 319⇑*i*P **P** **03 21 50.3 -1.9**
comp=Z,37nm,0.9s
MK31 Makanchi Array 55.56 324*c i*P **P** **03 21 52.5 +0.1**
MKAR Makanchi Array 55.56 324 P **P** **03 21 52.6 +0.2**
comp=Z,44nm,0.4s,baz=121,slow=8.1,SNR=332
MKAR PcP **PcP** **03 22 51.2 +0.1**
comp=Z,32nm,0.8s,baz=118,slow=3.0,SNR=7.6
MKAR ScP **ScP** **03 26 41.2 +0.2**
comp=Z,4.0nm,0.9s,baz=123,slow=5.3,SNR=5.3
MKAR LR LR 03 45 40.9
comp=Z,201nm,21.2s,baz=78,slow=36
MKAR PKPPKP **P'P'df** **03 51 55.4 -0.2**
comp=Z,0.7nm,0.9s,baz=248,slow=1.3,SNR=4.1
MKAR P4KPbc 03 59 09.7
comp=Z,0.7nm,0.7s,baz=108,slow=4.0,SNR=5.9
comp=Z,44nm,0.4s
MKAR Makanchi Array 55.56 324 P **P** **03 21 52.9 +0.5**
MKAR Makanchi Array 55.56 324 P **P** **03 21 52.9 +0.5**
PDGK Podgornoye 55.56 319 P **P** **03 21 52.8 +0.2**
PDGK Podgornoye 55.56 319 P **P** **03 21 52.8 +0.2**
YAK Yakutsk 55.63 2 P **P** **03 21 52.0 -0.6**
comp=Z,65nm,0.7s,baz=161,slow=2.1,SNR=22
YAK LR LR 03 43 49.1
comp=Z,122nm,21.0s,baz=193,slow=34
comp=Z,65nm,0.7s
YAK Yakutsk 55.63 2 *e*P **P** **03 21 51.9 -0.6**
YAK *e**PP **pP** **03 22 13.1 -1.5**
YAK *e* 03 22 50.2
YAK *e* 03 23 57.1
YAK *e*PPP PPP 03 25 11.5
YAK *e*S **S** **03 29 30.3 -0.3**
YAK *e* 03 31 30.9
YAK *e*SS **SS** **03 33 18.6 +1.4**
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,68nm,3.3s
YAK pmax pmax
comp=Z,171nm,4.5s
YAK pmax pmax
comp=E,57nm,5.1s
YAK smax smax
comp=E,40nm,2.6s
YAK smax smax
comp=N,34nm,3.0s
YAK Yakutsk 55.63 2 P **P** **03 21 51.8 -0.7**
YAK Yakutsk 55.63 2 P **P** **03 21 52.1 -0.4**

MAKZ Makanchi 55.75 324 P **P** 03 21 53.9 +0.1
MAKZ pmax pmax
comp=Z,358nm,1.8s
MAKZ Makanchi 55.75 324 P **P** 03 21 53.9 +0.1
MAKZ Makanchi 55.75 324 P **P** 03 21 54.0 +0.3
UZB Uzynbulak 55.78 319*c iP* **P** 03 21 54.2 0.0
UZB pmax pmax
comp=Z,32nm,0.8s
UZB Uzynbulak 55.78 319⇑ *iP* **P** 03 21 54.3 0.0
comp=Z,32nm,0.8s
MSVF Nonsavu 55.85 116 P **P** 03 21 54.8 -0.1
comp=Z,11nm,0.9s,baz=269,slow=10,SNR=4.0
comp=Z,11nm,0.9s
MSVF Nonsavu 55.85 116 IAmb IAmb 03 22 35.8
comp=Z,112nm,1.6s
PRZ Przheval'sk 55.90 318 P **P** 03 21 56.5 +1.4
TARG Taragay, Kyrgy 55.97 317 P **P** 03 21 56.3 +0.4
TARG pmax pmax
comp=Z,88nm,1.0s
TARG Taragay, Kyrgy 55.97 317 P **P** 03 21 56.3 +0.4
TARG Taragay, Kyrgy 55.97 317 P **P** 03 21 56.5 +0.6
KPKS Kokpek 56.15 319 *eP* **P** 03 21 56.7 0.0
KPKS Kokpek 56.15 319 *eP* **P** 03 21 56.7 0.0
SATY Saty 56.15 319*c iP* **P** 03 21 56.8 0.0
SATY *eS* **S** 03 29 38.8 +0.3
SATY pmax pmax
comp=Z,56nm,0.9s
SATY Saty 56.15 319⇑ *iP* **P** 03 21 56.8 0.0
comp=Z,56nm,0.9s
SATY *eS* **S** 03 29 38.8 +0.3
MA2 Magadan 56.16 14 P **P** 03 21 56.8 +0.4
MA2 Magadan 56.16 14*ceP* **P** 03 21 56.7 +0.4
MA2 pmax pmax
comp=Z,23nm,0.6s
MA2 Magadan 56.16 14 P **P** 03 21 56.9 +0.4
MA2 IAmb IAmb 03 21 57.7
comp=Z,37nm,0.7s
MA2 Magadan 56.16 14 P **P** 03 21 55.8 -0.6
comp=Z,594nmcomp=Z,68nm,0.9s
MA2 Magadan 56.16 14 P **P** 03 21 57.1 +0.7
ASAI AK-SAY(Kyrgyzs 56.52 316 P **P** 03 22 00.2 +0.4
KSH2 Kashi 56.53 313 P **P** 03 21 59.3 -0.3
KSH2 pmax pmax
comp=Z,110nm,1.1s
KSH2 L L
comp=Z,460nm,20.3s
KSH2 L L
comp=Z,420nm,17.2s
KSH2 L L
comp=Z,400nm,19.9s
KDJ Kajisay 56.56 317 P **P** 03 22 00.4 +0.5
KDJ pmax pmax
comp=Z,146nm,0.8s
KDJ Kajisay 56.56 317 P **P** 03 22 00.4 +0.5
KDJ Kajisay 56.56 317 P **P** 03 22 00.4 +0.5
TDK Taldyqorghan 57.02 321*c iP* **P** 03 22 03.0 +0.2
TDK Taldyqorghan 57.02 321⇑ *iP* **P** 03 22 03.1 +0.2
MDOK Medeo 57.09 318 *eP* **P** 03 22 03.6 +0.1
MDOK Medeo 57.09 318 *eP* **P** 03 22 03.6 +0.1
TNSS Tian-Shan 57.10 318 *eP* **P** 03 22 03.7 -0.2
TNSS Tian-Shan 57.10 318 *eP* **P** 03 22 03.7 -0.2
ULHL Ulahol 57.25 317 P **P** 03 22 05.1 +0.3
SNR=96
BHUJ Bhuj 57.50 293 *eP* **P** 03 22 04.0 -2.5
BHUJ IAmb IAmb 03 22 08.5
comp=Z,80nm,0.7s
BHUJ *i* x x 03 23 00.5
BOOM Boomskoye usch 57.55 317 P **P** 03 22 06.8 0.0
BOOM pmax pmax
comp=Z,65nm,1.0s
BOOM Boomskoye usch 57.55 317 P **P** 03 22 06.8 0.0
BOOM IAmb IAmb 03 22 08.2
comp=Z,65nm,1.0s
BOOM Boomskoye usch 57.55 317 P **P** 03 22 06.9 +0.1
KUU Kurty 57.86 319 *eP* **P** 03 22 08.9 +0.2
KUU Kurty 57.86 319 *eP* **P** 03 22 09.0 +0.2
TKM2 Tokmak 2 57.96 317 P **P** 03 22 09.9 +0.2
SNR=112
KBK Karagaybulak 58.29 317 P **P** 03 22 12.4 +0.5
SNR=52
ZAA0 Zalesovo Array 58.38 332 P **P** 03 22 11.7 -0.5
ZALV Zalesovo Beam 58.38 332 P **P** 03 22 11.5 -0.6
comp=Z,59nm,0.5s,baz=123,slow=6.2,SNR=166
ZALV PKPPKP **P'P'df** 03 51 57.1 +6.4
comp=Z,0.6nm,0.4s,baz=263,slow=3.9,SNR=3.5
comp=Z,59nm,0.5s
UCH Uchtor 58.42 316 P **P** 03 22 14.1 +0.8
SNR=28
CHMS Chumnysh 58.56 317 P **P** 03 22 13.6 -0.1
SNR=28
AAK Ala-Archa 58.59 317 LR LR 03 49 53.0
comp=Z,170nm,18.2s,baz=92,slow=38
AAK Ala-Archa 58.59 317 P **P** 03 22 14.3 +0.3
SNR=26
AAK Ala-Archa 58.59 317 *i* P **P** 03 22 14.4 +0.3
SNR=26
AAK Ala-Archa 58.59 317*c iP* **P** 03 22 14.3 +0.3
AAK pmax pmax
comp=Z,136nm,2.0s
AAK Ala-Archa 58.59 317 P **P** 03 22 14.4 +0.3
AAK Ala-Archa 58.59 317 P **P** 03 22 14.4 +0.3
AAK Ala-Archa 58.59 317 P **P** 03 22 14.4 +0.3
AAK Ala-Archa 58.59 317 P **P** 03 22 14.5 +0.5
AAK PcP **PcP** 03 23 03.9 +0.6
SGDS Sogindy 58.82 318⇑ *iP* **P** 03 22 15.3 -0.2
USP Ospenovka 58.83 317 P **P** 03 22 15.7 +0.1
SNR=112
MANEM Manem 58.88 310 P **P** 03 22 16.5 +0.2
MANEM IAmb IAmb 03 22 17.9
comp=Z,372nm,1.1s
OHH Osh 59.02 314 P **P** 03 22 15.7 -1.3
OHH Osh 59.02 314 P **P** 03 22 15.7 -1.3
EKS2 Erkin-Say 59.09 317 P **P** 03 22 18.0 +0.5
SNR=144
SEY Seymchan 59.48 13*ceP* **P** 03 22 20.7 +1.2
SEY pmax pmax
comp=Z,22nm,1.0s
KURK Kurchatov 59.68 327*c iP* **P** 03 22 21.0 -0.1
KURK pmax pmax
comp=Z,418nm,1.7s
KURK Kurchatov 59.68 327 P **P** 03 22 21.4 +0.3
KURK Kurchatov 59.68 327 P **P** 03 22 21.1 0.0
KURK Kurchatov 59.68 327 P **P** 03 22 21.2 +0.1
KURK Kurchatov 59.68 327 P **P** 03 22 21.4 +0.3
KURBB Kurchatov Arra 59.68 327 P **P** 03 22 21.1 0.0
comp=Z,97nm,0.7s,baz=124,slow=6.2,SNR=846
KURBB PKPPKP **P'P'df** 03 51 42.7 -6.3
comp=Z,1.6nm,0.9s,baz=270,slow=4.0,SNR=8.4
comp=Z,97nm,0.7s
BTLS Baital 59.83 319 *eP* **P** 03 22 22.5 +0.2
BTLS pmax pmax
comp=Z,23nm,0.8s
BTLS Baital 59.83 319 *eP* **P** 03 22 22.5 +0.2
comp=Z,23nm,0.8s
ARK Arkit 60.04 315 P **P** 03 22 24.4 +0.4
ARK Arkit 60.04 315 P **P** 03 22 24.4 +0.4
KBL Kabul 60.12 306 P **P** 03 22 24.2 -0.6
KBL pmax pmax
comp=Z,106nm,0.8s
KBL Kabul 60.12 306 P **P** 03 22 24.3 -0.6
SNR=40
KBL Kabul 60.12 306 P **P** 03 22 24.2 -0.6
KBL Kabul 60.12 306 P **P** 03 22 24.3 -0.6
SHEM Shemya Is, Ala 60.15 31 LR LR 03 50 54.1
comp=Z,88nm,18.1s,baz=324,slow=38
BTK Batken 60.29 313 P **P** 03 22 25.7 +0.1
GAR Garm 60.34 312 P **P** 03 22 25.8 -0.2
TRKS Terek-Say 60.53 315 P **P** 03 22 27.3 -0.1
DZA Taraz 60.85 316 *eP* **P** 03 22 29.4 0.0
DZA Taraz 60.85 316 *eP* **P** 03 22 29.5 0.0
CHGR Chuyangaron 61.10 311*c iP* **P** 03 22 30.7 -0.5
CHGR pmax pmax
comp=Z,161nm,0.8s
CHGR Chuyangaron 61.10 311 P **P** 03 22 30.9 -0.4
KKAR Karatay Array 61.49 316 P **P** 03 22 33.4 -0.3
KKAR Karatay Array 61.49 316 P **P** 03 22 33.4 -0.3
IUG luzhnay 61.51 315 *eP* **P** 03 22 33.9 0.0
IUG luzhnay 61.51 315 *eP* **P** 03 22 33.9 0.0
SHAA Shahritus 61.60 309 IAmb IAmb 03 23 17.0
comp=Z,77nm,0.9s
CHM Chimkent 61.87 315 *eP* **P** 03 22 36.3 +0.1
CHM Chimkent 61.87 315 *eP* **P** 03 22 36.4 +0.1
BRLS Borolday 61.93 316 *eP* **P** 03 22 36.7 +0.1
BRLS Borolday 61.93 316 *eP* **P** 03 22 36.8 +0.1

AFI Afiamalu 64.07 109 LR LR 03 49 34.6
comp=Z,110nm,18.0s,baz=150,slow=35
URZ Urewera 64.31 138 LR LR 03 49 56.1
comp=Z,182nm,21.9s,baz=300,slow=35
RTZ Ruatahuna 64.42 138 P **P** 03 22 53.4 +0.3
RTZ IAmb IAmb 03 23 19.4
comp=Z,36nm,0.9s
KIWB Kanaga Island 64.45 35 IAmb IAmb 03 22 57.4
comp=Z,32nm,0.7s
ADK Adak 64.73 35 P **P** 03 22 55.7 +0.8
ADK Adak 64.73 35 P **P** 03 22 55.1 +0.2
ADK pmax pmax
comp=Z,34nm,0.9s
ADK Adak 64.73 35 P **P** 03 22 55.1 +0.2
ADK IAmb IAmb 03 22 59.0
comp=Z,34nm,0.8s
ADK Adak 64.73 35 P **P** 03 22 55.3 +0.4
TIXI Tiksi 65.26 1 P **P** 03 22 57.2 -0.7
comp=Z,11nm,0.4s,baz=211,slow=3.2,SNR=6.1
TIXI LR LR 03 51 53.0
comp=Z,202nm,21.7s,baz=194,slow=36
comp=Z,11nm,0.4s
TIXI Tiksi 65.26 1 IAmb IAmb 03 23 23.1
comp=Z,28nm,0.8s
BVAR Borovoye Array 65.27 326 P **P** 03 22 58.3 -0.1
comp=Z,95nm,0.7s,baz=128,slow=8.7,SNR=477
BVAR P4KPbc 03 59 50.1
comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=3.7
comp=Z,95nm,0.7s
HRA Herat 65.60 305 IAmb IAmb 03 23 33.7
comp=Z,71nm,0.9s
ATKA Atka Island 66.27 35 P **P** 03 23 04.6 -0.2
ATKA Atka Island 66.27 35 P **P** 03 23 05.3 +0.5
JLN Jalan Bani Buh 66.82 291 P **P** 03 23 07.9 -1.0
BILL Bilibino 67.01 15*ceP* **P** 03 23 09.1 -0.1
BILL pmax pmax
comp=Z,19nm,1.0s
WBK Wadi Bani Khal 67.25 292 P **P** 03 23 11.2 -0.5
SNR=5.2
WSAR Wadi Sarin 67.59 292 P **P** 03 23 13.0 -0.8
SNR=6.9
NRIK Noril'sk 67.97 346 P **P** 03 23 14.8 -0.4
comp=Z,27nm,0.6s,baz=129,slow=5.8,SNR=32
comp=Z,27nm,0.6s
NRIK Noril'sk 67.97 346*c iP* **P** 03 23 14.5 -0.7
NRIK pmax pmax
comp=Z,57nm,1.2s
NRIK Noril'sk 67.97 346 P **P** 03 23 14.6 -0.6
JMDO Jabal Madar 68.04 291 P **P** 03 23 15.6 -1.0
SNR=7.0
BIDO Bidbid 68.07 293 P **P** 03 23 16.0 -0.7
SNR=17
SMDO Samad 68.12 292 P **P** 03 23 16.2 -0.9
SNR=5.1
MHTO MHTO 68.12 290 P **P** 03 23 16.2 -0.9
SNR=9.0
DQM DQM 68.50 289 P **P** 03 23 19.1 -0.3
SNR=11
HOQ Hoqain 68.82 293 P **P** 03 23 21.1 -0.4
SNR=7.2
BSY Bisya 68.89 292 P **P** 03 23 21.2 -0.7
ARQ Araqi 69.53 292 P **P** 03 23 25.3 -0.5
SNR=5.7
SOHO SOHO 69.55 293 *i* P **P** 03 23 24.5 -1.4
SNR=7.6
SOHO SOHO 69.55 293 P **P** 03 23 25.1 -0.9
SOHO P **P** 03 23 25.2 -0.8
MDH Madha 69.81 295 P **P** 03 23 26.1 -1.4
BANOM Banah 69.84 295 P **P** 03 23 28.1 +0.4
BANOM P **P** 03 23 28.1 +0.4
UOSS Minazif 69.88 294 P **P** 03 23 26.7 -1.3
UOSS Minazif 69.88 294 P **P** 03 23 26.5 -1.5
UOSS Minazif 69.88 294 P **P** 03 23 26.7 -1.3
UOSS IAmb IAmb 03 23 29.6
comp=Z,66nm,1.4s
UOSS Minazif 69.88 294 P **P** 03 23 26.3 -1.7
MSFE Esma-Masafi 69.94 295 *i* P **P** 03 23 28.1 -0.2
SNR=6.8
MASF Masafi 69.94 295 P **P** 03 23 28.0 -0.4
HATD Hatta, Dubai 69.94 294 *i* P **P** 03 23 27.2 -1.1
SNR=8.8
HATD Hatta, Dubai 69.94 294 P **P** 03 23 27.9 -0.5
SNR=5.2
SHME Shamm 69.99 295 *i* P **P** 03 23 28.0 -0.6
SNR=5.9
SHME Shamm 69.99 295 P **P** 03 23 28.5 0.0
SHME P **P** 03 23 28.6 0.0
ASHO Ashiyiah 70.01 294 *i* P **P** 03 23 27.8 -1.0
SNR=21
ASHO Ashiyiah 70.01 294 P **P** 03 23 27.8 -1.0
SNR=6.4
SPIA Saint Paul Isl 70.19 31 P **P** 03 23 29.7 +0.6
baz=250
ALNE Al Ain 70.26 293 *i* P **P** 03 23 29.7 -0.6
SNR=14
ALNE Al Ain 70.26 293 P **P** 03 23 29.6 -0.6
SNR=18
AB31 Akbulak array 70.28 320 P **P** 03 23 29.8 -0.1
ABKAR Akbulak array 70.28 320 P **P** 03 23 29.8 0.0
SHAO Shalim 70.31 287 P **P** 03 23 30.8 +0.1
SHAO P **P** 03 23 30.8 +0.1
NAZ Nazwa, Dubai 70.38 294 P **P** 03 23 29.7 -1.3
NAZ Nazwa, Dubai 70.38 294 P **P** 03 23 30.4 -0.6
UMQ Umm Al-Quwin 70.40 295 P **P** 03 23 31.2 +0.1
UMQ Umm Al-Quwin 70.40 295 P **P** 03 23 31.6 +0.5
UMQ P **P** 03 23 31.6 +0.5
FAQ Al Faqa, Dubai 70.43 294 *i* P **P** 03 23 30.2 -1.1
SNR=5.8
FAQ Al Faqa, Dubai 70.43 294 P **P** 03 23 30.6 -0.7
FAQ P **P** 03 23 30.7 -0.7
ASUD Al Ashush, Dub 70.67 294 *i* P **P** 03 23 32.5 -0.2
SNR=6.3
ASUD Al Ashush, Dub 70.67 294 P **P** 03 23 33.0 +0.3
SNR=9.2
UMZA Um Al Zommool 70.77 292 P **P** 03 23 32.8 -0.6
UMZA P **P** 03 23 32.9 -0.4
DMTO DMTO 70.95 286 P **P** 03 23 34.4 -0.2
AJN Ajban 70.98 294 *i* P **P** 03 23 33.9 -0.7
SNR=7.4
AJN Ajban 70.98 294 P **P** 03 23 34.6 0.0
SNR=6.7
UNV Unalaska Valle 71.20 35 P **P** 03 23 36.1 +0.8
UNV Unalaska Valle 71.20 35 IAmb IAmb 03 23 36.5
comp=Z,42nm,0.8s
UNV Unalaska Valle 71.20 35 P **P** 03 23 35.3 0.0
baz=254
RBK Rabkut 71.67 286 P **P** 03 23 38.6 -0.3
AKUT Akutan 71.69 35 P **P** 03 23 38.8 +0.5
AKTO Aktyubinsk 71.76 321 LR LR 03 57 05.3
comp=Z,333nm,20.3s,baz=109,slow=37
SVE Sverdlovsk 71.87 328*deP* **P** 03 23 39.5 +0.2
SVE *eS* **S** 03 32 52.6 +0.5
SVE pmax pmax
comp=Z,126nm,0.7s
GAMB Gambell 71.97 24 P **P** 03 23 40.7 +1.0
baz=247
MZWR Madinat Zayed 71.97 293 P **P** 03 23 40.4 -0.2
MZWR P **P** 03 23 40.4 -0.2
WHFO Wadi Hawf 72.07 287 P **P** 03 23 40.5 -0.9
MZR Muzera 72.33 292 *i* P **P** 03 23 42.5 -0.3
SNR=20
MZR Muzera 72.33 292 P **P** 03 23 42.7 -0.1
SNR=30
GHWR Ruwais 72.89 293 P **P** 03 23 46.1 0.0
JRN Qarnain Island 72.93 294 P **P** 03 23 46.0 -0.3
SNR=6.6
ARTI Arti 72.95 327 P **P** 03 23 45.2 -0.5
comp=Z,68nm,0.5s,baz=114,slow=2.9,SNR=133
ARTI LR LR 03 56 57.6
comp=Z,192nm,20.1s,baz=110,slow=37
comp=Z,68nm,0.5s
ARTI Arti 72.95 327*c iP* **P** 03 23 45.2 -0.5
ARTI 03 24 00.6
ARTI *PP **pP** 03 24 11.5 +1.5
ARTI S **S** 03 33 03.7 -0.7
ARTI SS **SS** 03 37 45.3 -1.4
ARTI pmax pmax
comp=Z,181nm,1.5s
ARTI Arti 72.95 327 P **P** 03 23 45.2 -0.5
ARTI Arti 72.95 327 P **P** 03 23 45.4 -0.4
M11K Mekoryuk 73.21 28 P **P** 03 23 48.4 +1.2
baz=253
CASY Casey 73.40 187 P **P** 03 23 49.2 +1.1
CASY IAmb IAmb 03 23 50.5
comp=Z,60nm,0.8s

CASY Casey 73.40 187 P **P** 03 23 49.6 +1.5
DRV Dumont d'Urvil 73.42 175 P **P** 03 23 48.7 +0.5
SLWR Sila 73.97 293 P **P** 03 23 52.4 0.0
TNA Tin City 74.14 23 P **P** 03 23 53.8 +1.3
baz=250
K13K Kusilvak Mount 74.38 27 P **P** 03 23 55.2 +1.2
baz=254,SNR=8.4
M13K Dall Lake 74.58 29 P **P** 03 23 56.2 +1.1
baz=255
F14K Arctic Creek 74.74 23 P **P** 03 23 57.1 +1.1
baz=251
ANM Nome 74.84 24 P **P** 03 23 57.7 +1.1
baz=252
SDPT Sand Point 74.96 34 P **P** 03 23 58.9 +1.4
baz=259
SAKB Bahrain 75.03 295 P **P** 03 23 58.5 0.0
J14K Nanvaranak Lak 75.10 27 P **P** 03 23 59.6 +1.6
baz=255
L14K Kuka Creek 75.13 28 IAmb IAmb 03 24 00.8
comp=Z,39nm,1.1s
L14K Kuka Creek 75.13 28 P **P** 03 23 59.8 +1.5
baz=256,SNR=12
N14K Kuskokwak Cree 75.27 30 IAmb IAmb 03 24 03.2
comp=Z,34nm,0.7s
N14K Kuskokwak Cree 75.27 30 P **P** 03 24 00.2 +1.0
baz=257,SNR=6.5
M14K Bethel 75.33 29 IAmb IAmb 03 24 03.8
comp=Z,41nm,0.7s
M14K Bethel 75.33 29 P **P** 03 24 00.6 +1.2
baz=256,SNR=18
O14K Tigyukauivet M 75.33 30 IAmb IAmb 03 24 04.0
comp=Z,30nm,1.0s
O14K Tigyukauivet M 75.33 30 P **P** 03 24 00.1 +0.6
baz=258
CHNA Chernabura Isl 75.36 35 P **P** 03 24 00.2 +0.4
baz=260
F15K North Star Dit 75.47 23 P **P** 03 24 00.8 +0.5
baz=253
G15K Niukluk 75.51 24 P **P** 03 24 00.7 +0.3
baz=254
S14K Fog Glacier 75.64 34 P **P** 03 24 01.2 -0.3
baz=260
L15K Ungalak Mounta 75.77 28 P **P** 03 24 03.2 +1.3
baz=257
K15K Wolf Creek Mou 75.89 27 P **P** 03 24 03.6 +0.9
baz=256,SNR=7.8
M15K Kasigluk River 75.92 29 P **P** 03 24 03.7 +0.8
baz=258,SNR=10
C16K Lisburne Hills 76.01 21 P **P** 03 24 03.9 +0.7
baz=252,SNR=9.8
O15K Ungalikthiuk R 76.04 31 P **P** 03 24 04.5 +1.0
baz=259
N15K Kwethluk River 76.10 30 IAmb IAmb 03 24 08.7
comp=Z,39nm,1.0s
N15K Kwethluk River 76.10 30 P **P** 03 24 05.0 +1.1
baz=258,SNR=15
H16K Elim 76.16 25 P **P** 03 24 05.0 +0.8
baz=255
CHGN Chignik 76.27 34 IAmb IAmb 03 24 08.3
comp=Z,72nm,1.3s
CHGN Chignik 76.27 34 P **P** 03 24 05.1 +0.2
baz=261
G16K Koyuk River 76.30 24 P **P** 03 24 05.5 +0.5
baz=255
J16K Anvik River 76.53 26 P **P** 03 24 07.8 +1.4
baz=257,SNR=8.6
I17K Unalakleet 76.63 26 P **P** 03 24 08.2 +1.4
baz=257
D17K Noatak River 76.65 22 P **P** 03 24 07.7 +0.9
baz=254,SNR=22
L16K Owhat River 76.71 28 P **P** 03 24 08.5 +1.2
baz=258,SNR=14
N16K Nishlik Lake 76.81 29 P **P** 03 24 09.2 +1.3
baz=259,SNR=16
RDOG Red Dog Mine 76.81 21 P **P** 03 24 08.7 +0.9
baz=254,SNR=7.9
M16K Timber Creek 76.82 29 IAmb IAmb 03 24 12.2
comp=Z,24nm,0.7s
M16K Timber Creek 76.82 29 P **P** 03 24 09.2 +1.2
baz=259,SNR=16
LKRN Lenkeran, Azer 76.82 308 P **P** 03 24 09.7 +1.3
C17K DeLong Mountai 76.83 21 P **P** 03 24 09.0 +1.0
baz=254,SNR=7.0
P16K Nushagak River 76.94 31 P **P** 03 24 09.9 +1.2
baz=260
E17K Hotham Inlet 76.95 22 P **P** 03 24 10.1 +1.5
baz=255,SNR=7.4
O16K Kokwok River B 76.99 30 P **P** 03 24 09.9 +1.0
baz=260,SNR=8.1
F17K Baldwin Pennin 77.01 23 P **P** 03 24 09.7 +0.9
baz=256
G17K Kiwalik Mounta 77.02 24 P **P** 03 24 10.4 +1.4
baz=257,SNR=9.9
H17K Granite Mounta 77.20 25 P **P** 03 24 11.2 +1.2
baz=257,SNR=8.7
J17K VABM Dome 77.23 26 P **P** 03 24 11.6 +1.4
baz=258,SNR=14
L17K Donlin 77.34 28 P **P** 03 24 12.6 +1.8
baz=260,SNR=13
K17K Iditarod 77.44 27 IAmb IAmb 03 24 16.6
comp=Z,31nm,0.9s
K17K Iditarod 77.44 27 P **P** 03 24 12.6 +1.2
baz=259,SNR=18
E18K Tukpahlearik C 77.50 22 P **P** 03 24 13.1 +1.5
baz=256,SNR=16
O17K Koliganek Bris 77.52 30 P **P** 03 24 12.7 +0.8
baz=261,SNR=12
R17L Mt. Peulik Vol 77.58 32 P **P** 03 24 12.5 +0.2
baz=262
C18K Utukok River 77.58 21 P **P** 03 24 12.8 +0.6
baz=255,SNR=12
N17K Nushagak Hills 77.59 29 P **P** 03 24 13.8 +1.5
baz=261,SNR=13
M17K Holitna River 77.61 29 P **P** 03 24 14.0 +1.6
baz=260,SNR=10
F18K Selawik 77.67 23 P **P** 03 24 13.2 +0.6
baz=257,SNR=10
AKT Akhty 77.74 311⇑ *iP* **P** 03 24 13.9 +0.2
AKT *e* 03 24 22.3
AKT *e*PP **pP** 03 24 38.8 +0.2
AKT *e* 03 27 10.1
AKT pmax pmax
comp=Z,310nm,0.8s
CHIR Chirikof Islan 77.75 34 P **P** 03 24 14.0 +0.8
baz=263
P17K Kvichak River 77.76 31 IAmb IAmb 03 24 42.8
comp=Z,49nm,0.8s
P17K Kvichak River 77.76 31 P **P** 03 24 13.8 +0.6
baz=262,SNR=6.4
H18K Honhosa River 77.88 25 P **P** 03 24 14.5 +0.6
baz=259
G18K Tagagawik 77.91 24 P **P** 03 24 14.2 +0.2
baz=258,SNR=7.1
Q17K Contact Creek 77.92 32 P **P** 03 24 13.7 -0.6
baz=262
A19K Wainwright 78.03 19 P **P** 03 24 15.3 +0.9
baz=255
L18K Granite Mounta 78.10 28 P **P** 03 24 16.6 +1.5
baz=261,SNR=10
KIRV Kirov 78.12 328 P **P** 03 24 15.1 -0.1
comp=Z,230nm,0.6s,baz=104,slow=2.5,SNR=88
KIRV LR LR 04 00 39.7
comp=Z,174nm,18.6s,baz=104,slow=37
comp=Z,230nm,0.6s
SEKA Sheki 78.13 311 P **P** 03 24 16.3 +0.5
MNGR Mingechevir, A 78.20 310 P **P** 03 24 17.0 +0.9
N18K Kilae Creek 78.25 29 P **P** 03 24 17.4 +1.4
baz=262,SNR=9.4
C19K Lookout Ridge 78.26 21 IAmb IAmb 03 24 23.1
comp=Z,25nm,0.8s
C19K Lookout Ridge 78.26 21 P **P** 03 24 17.2 +1.3
baz=257,SNR=27
J18K Innoko River 78.29 26 P **P** 03 24 16.6 +0.5
baz=261,SNR=18
M18K Stony River 78.39 29 P **P** 03 24 17.2 +0.5
baz=262,SNR=15
P18K Big Mountain, 78.40 31 P **P** 03 24 17.1 +0.3
baz=263,SNR=6.4
Q18K Katmai Hardscr 78.42 31 P **P** 03 24 16.7 -0.4
baz=263
GCSA Galena City Sc 78.43 25 P **P** 03 24 17.7 +0.9
baz=260,SNR=17
F19K Shaleruckik Mo 78.45 23 P **P** 03 24 17.6 +0.7
baz=259,SNR=6.7
O18K Koktuh Hills 78.47 30 IAmb IAmb 03 24 21.9
comp=Z,63nm,1.1s
O18K Koktuh Hills 78.47 30 P **P** 03 24 18.1 +0.9
baz=263,SNR=20

BELG	**Belogornoye**		78.48	322	*c i*	P		**P**		03 24 16.6	-0.7
BELG						pmax		pmax			
	comp=Z,66nm,0.9s										
G19K	**Purcell Mounta**		78.59	24		P		**P**		03 24 18.5	+0.8
	baz=260,SNR=21										
SII	**Sitkinak Islan**		78.63	34		P		**P**		03 24 19.8	+1.7
SII	**Sitkinak Islan**		78.63	34		IAmb		IAmb		03 24 22.4	
	comp=Z,37nm,0.7s										
SII	**Sitkinak Islan**		78.63	34		P		**P**		03 24 19.4	+1.3
	baz=264										
D19K	**Kuna River**		78.65	21		IAmb		IAmb		03 24 25.6	
	comp=Z,24nm,0.8s										
D19K	**Kuna River**		78.65	21		P		**P**		03 24 18.9	+0.9
	baz=258,SNR=21										
H19K	**Roundabout Mou**		78.74	24		IAmb		IAmb		03 24 23.4	
	comp=Z,39nm,0.8s										
H19K	**Roundabout Mou**		78.74	24		P		**P**		03 24 19.7	+1.2
	baz=260,SNR=58										
E19K	**Redstone River**		78.77	22		IAmb		IAmb		03 24 23.6	
	comp=Z,43nm,1.1s										
E19K	**Redstone River**		78.77	22		P		**P**		03 24 19.7	+1.0
	baz=259,SNR=34										
GANJ	**Ganja**		78.78	310		P		**P**		03 24 19.9	+0.6
J19K	**Poorman**		78.85	26		P		**P**		03 24 20.2	+1.1
	baz=262,SNR=12										
L19K	**White Mountain**		78.94	28		P		**P**		03 24 21.2	+1.4
	baz=263,SNR=15										
N19K	**Bonanza Creek**		78.95	29		IAmb		IAmb		03 24 26.8	
	comp=Z,29nm,0.9s										
N19K	**Bonanza Creek**		78.95	29		P		**P**		03 24 21.5	+1.6
	baz=263,SNR=20										
OHAK	**Old Harbor**		79.19	33		P		**P**		03 24 22.1	+1.0
OHAK	**Old Harbor**		79.19	33		IAmb		IAmb		03 24 25.3	
	comp=Z,31nm,0.9s										
OHAK	**Old Harbor**		79.19	33		P		**P**		03 24 22.1	+1.0
	baz=265,SNR=12										
D20K	**Etivluk River**		79.23	21		IAmb		IAmb		03 24 26.3	
	comp=Z,32nm,0.9s										
D20K	**Etivluk River**		79.23	21		P		**P**		03 24 22.0	+0.8
	baz=260,SNR=38										
F20K	**Avaraart Lake**		79.28	23		P		**P**		03 24 22.2	+0.8
	baz=261										
B20K	**Meade River**		79.28	20		IAmb		IAmb		03 24 25.4	
	comp=Z,22nm,0.7s										
B20K	**Meade River**		79.28	20		P		**P**		03 24 22.3	+0.9
	baz=259										
E20K	**Nigu River**		79.31	22		P		**P**		03 24 22.6	+1.0
	baz=260,SNR=46										
H20K	**Anotleneega Mo**		79.38	25		P		**P**		03 24 23.2	+1.2
	baz=262,SNR=27										
NAX	**Nakhchivan**		79.39	309		P		**P**		03 24 23.0	+0.2
P19K	**Oil Pt**		79.44	31		P		**P**		03 24 22.2	-0.3
	baz=264										
K20K	**Telida**		79.45	27		IAmb		IAmb		03 24 28.6	
	comp=Z,107nm,2.0s										
K20K	**Telida**		79.45	27		P		**P**		03 24 23.7	+1.2
	baz=263,SNR=17										
I20K	**Naaghedeneel**		79.45	25		IAmb		IAmb		03 24 27.4	
	comp=Z,32nm,0.8s										
I20K	**Naaghedeneel**		79.45	25		P		**P**		03 24 23.3	+0.9
	baz=262,SNR=14										
J20K	**Nowinta River**		79.52	26		P		**P**		03 24 24.3	+1.5
	baz=263,SNR=18										
KDAK	**Kodiak Island**		79.61	32		LR		LR		03 55 12.1	
	comp=Z,157nm,20.5s,baz=234,slow=32										
KDAK	**Kodiak Island**		79.61	32	*de*	P		**P**		03 24 24.6	+1.2
KDAK						pmax		pmax			
	comp=Z,40nm,0.9s										
KDAK	**Kodiak Island**		79.61	32		P		**P**		03 24 24.3	+0.9
KDAK						IAmb		IAmb		03 24 27.2	
	comp=Z,43nm,0.6s										
KDAK	**Kodiak Island**		79.61	32		P		**P**		03 24 24.3	+0.9
	baz=265										
KDAK	**Kodiak Island**		79.61	32		P		**P**		03 24 24.7	+1.2
KDAK	**Kodiak Island**		79.61	32		P		**P**		03 24 24.1	+0.7
RAYN	**Ar Rayn**		79.65	293	*i*	P		**P**		03 24 23.8	-0.6
	SNR=93										
RAYN	**Ar Rayn**		79.65	293		P		**P**		03 24 24.0	-0.4
RAYN						pmax		pmax			
	comp=Z,86nm,0.8s										
RAYN	**Ar Rayn**		79.65	293		P		**P**		03 24 24.1	-0.3
RAYN	**Ar Rayn**		79.65	293		P		**P**		03 24 24.0	-0.4
RAYN						IAmb		IAmb		03 24 26.2	
	comp=Z,86nm,0.8s										
RAYN	**Ar Rayn**		79.65	293		P		**P**		03 24 23.9	-0.6
RAYN	**Ar Rayn**		79.65	293		P		**P**		03 24 24.1	-0.4
A21K	**Barrow**		79.71	19		P		**P**		03 24 24.4	+0.7
	baz=259										
M20K	**Styx River**		79.71	28		IAmb		IAmb		03 24 28.4	
	comp=Z,27nm,0.8s										
M20K	**Styx River**		79.71	28		P		**P**		03 24 24.9	+0.9
	baz=264										
RED	**Redoubt Volcan**		79.74	30		IAmb		IAmb		03 26 37.9	
	comp=Z,28nm,0.9s										
O20K	**Slope Mountain**		79.79	30		P		**P**		03 24 24.6	+0.2
	baz=265										
IMAR	**Indian Mountai**		79.91	24		P		**P**		03 24 26.1	+1.2
C21K	**Knifeblade Rid**		79.96	21		P		**P**		03 24 26.1	+1.0
	baz=261,SNR=16										
GNI	**Garni**		79.98	310		P		**P**		03 24 26.7	+0.7
GNI	**Garni**		79.98	310	*c i*	P		**P**		03 24 27.0	+1.0
GNI						pmax		pmax			
	comp=Z,121nm,1.0s										
GNI	**Garni**		79.98	310		P		**P**		03 24 27.4	+1.3
GNI	**Garni**		79.98	310		P		**P**		03 24 27.1	+1.1
GNI	**Garni**		79.98	310		P		**P**		03 24 26.1	+0.1
	comp=Z,2µmcomp=Z,199nm,1.0s										
GNI	**Garni**		79.98	310		P		**P**		03 24 27.1	+1.0
GNI	**Garni**		79.98	310		P		**P**		03 24 27.3	+1.3
G21K	**Allakaket**		80.08	24		P		**P**		03 24 26.9	+1.1
	baz=263,SNR=29										
B21K	**Ikpikpuk River**		80.09	20		IAmb		IAmb		03 24 29.9	
	comp=Z,46nm,0.7s										
B21K	**Ikpikpuk River**		80.09	20		P		**P**		03 24 26.5	+0.8
	baz=261										
SPCR	**Spurr Chakacha**		80.09	29		P		**P**		03 24 26.1	+0.1
	baz=265										
E21K	**Killik River**		80.15	22		P		**P**		03 24 26.9	+0.7
	baz=262										
F21K	**Alatna River**		80.17	23		P		**P**		03 24 27.3	+1.0
	baz=263,SNR=12										
A22K	**Sinclair Lake**		80.18	19		P		**P**		03 24 26.9	+0.7
	baz=261										
PPLA	**Purkeypile**		80.25	27		IAmb		IAmb		03 24 32.0	
	comp=Z,26nm,0.6s										
PPLA	**Purkeypile**		80.25	27		P		**P**		03 24 27.2	+0.2
	baz=265,SNR=10										
H21K	**Melozitna Rive**		80.26	24		P		**P**		03 24 28.2	+1.4
	baz=264,SNR=35										
CHUM	**Lake Minchumin**		80.28	26		P		**P**		03 24 28.2	+1.3
	baz=265,SNR=20										
CAST	**Castle Rocks**		80.34	27		IAmb		IAmb		03 24 31.1	
	comp=Z,19nm,0.6s										
CAST	**Castle Rocks**		80.34	27		P		**P**		03 24 28.0	+0.7
	baz=265,SNR=23										
CNPM	**China Poot**		80.44	31		IAmb		IAmb		03 24 32.4	
	comp=Z,29nm,0.7s										
SKT	**Skwentna**		80.48	28		IAmb		IAmb		03 24 31.4	
	comp=Z,35nm,1.0s										
SKT	**Skwentna**		80.48	28		P		**P**		03 24 28.2	+0.1
	baz=266,SNR=18										
I21K	**Tanana**		80.55	25		P		**P**		03 24 29.5	+1.2
	baz=265,SNR=31										
B22K	**Teshekpuk Lake**		80.60	20		IAmb		IAmb		03 24 32.3	
	comp=Z,37nm,0.7s										
B22K	**Teshekpuk Lake**		80.60	20		P		**P**		03 24 29.4	+0.9
	baz=262,SNR=19										
BRLK	**Bradley Lake**		80.64	31		IAmb		IAmb		03 24 31.7	
	comp=Z,36nm,0.7s										
F22K	**John River**		80.71	23		P		**P**		03 24 30.1	+0.9
	baz=264										
BRSE	**Bradley Lake S**		80.71	31		P		**P**		03 24 29.4	+0.1
	baz=267										
HAKT	**HAKKARI**		80.80	307		P		**P**		03 24 31.0	+0.4
NCK	**Nalchik**		80.84	313	*c i*	P		**P**		03 24 30.2	-0.2
NCK						pmax		pmax			
	comp=Z,123nm,1.0s										
H22K	**Ishtalitna Cre**		80.87	24		IAmb		IAmb		03 24 36.3	
	comp=Z,32nm,1.0s										
H22K	**Ishtalitna Cre**		80.87	24		P		**P**		03 24 31.5	+1.4
	baz=265,SNR=46										
L22K	**Petersville**		80.87	28		IAmb		IAmb		03 24 33.5	
	comp=Z,63nm,0.7s										
L22K	**Petersville**		80.87	28		P		**P**		03 24 30.2	0.0
	baz=266,SNR=52										
E22K	**Anaktuvuk Pass**		80.91	22		P		**P**		03 24 31.7	+1.4
	baz=264										
G22K	**Bettles**		80.91	23		P		**P**		03 24 31.1	+0.9
	baz=265,SNR=44										
SLKM	**Skilak Lake**		81.01	30		IAmb		IAmb		03 24 35.3	
	comp=Z,79nm,1.2s										
DIGO	**Kars**		81.02	310		P		**P**		03 24 32.7	+1.0
MLY	**Manley**		81.06	25		IAmb		IAmb		03 24 35.6	
	comp=Z,52nm,1.0s										
MLY	**Manley**		81.06	25		P		**P**		03 24 32.1	+0.9
	baz=266,SNR=63										
CUT	**Chulitna**		81.10	28		IAmb		IAmb		03 25 02.6	
	comp=Z,27nm,0.8s										
CUT	**Chulitna**		81.10	28		P		**P**		03 24 31.3	0.0
	baz=267										
M22K	**Willow**		81.13	29		P		**P**		03 24 31.5	+0.1
	baz=267										
TRF	**Thorofare Moun**		81.15	27		P		**P**		03 24 32.1	+0.3
	baz=266,SNR=14										
GOF	**Gofitskoye**		81.23	315	*ce*	P		**P**		03 24 32.6	+0.2
O22K	**Cooper Landing**		81.26	30		P		**P**		03 24 32.7	+0.5
	baz=267										
RC01	**Rabbit Creek A**		81.28	29		IAmb		IAmb		03 24 36.2	
	comp=Z,80nm,1.3s										
RC01	**Rabbit Creek A**		81.28	29		P		**P**		03 24 32.6	+0.3
	baz=267,SNR=7.3										
CCD	**Concordia, Ant**		81.32	181		P		**P**		03 24 33.9	+1.2
KBZ	**Khabaz**		81.35	313		P		**P**		03 24 33.1	+0.1
	comp=Z,90nm,1.1s,baz=101,slow=3.0,SNR=108										
KBZ						LR		LR		04 04 57.1	
	comp=Z,158nm,20.9s,baz=72,slow=39										
	comp=Z,90nm,1.1s										
KBZ	**Khabaz**		81.35	313	*i*	P		**P**		03 24 33.1	+0.1
KBZ						pmax		pmax			
	comp=Z,125nm,1.1s										
SEW	**Seward**		81.37	30		IAmb		IAmb		03 24 37.0	
	comp=Z,43nm,0.7s										
SEW	**Seward**		81.37	30		P		**P**		03 24 33.4	+0.6
	baz=266,SNR=6.2										
D23K	**Nanushuk River**		81.40	21		IAmb		IAmb		03 24 37.4	
	comp=Z,29nm,0.7s										
D23K	**Nanushuk River**		81.40	21		P		**P**		03 24 33.9	+1.1
	baz=265,SNR=44										
COLD	**Coldfoot**		81.44	23		IAmb		IAmb		03 24 38.9	
	comp=Z,50nm,1.1s										
COLD	**Coldfoot**		81.44	23		P		**P**		03 24 34.4	+1.3
	baz=266,SNR=40										
G23K	**Bananza Creek**		81.48	24		IAmb		IAmb		03 24 39.3	
	comp=Z,44nm,0.9s										
G23K	**Bananza Creek**		81.48	24		P		**P**		03 24 34.7	+1.4
	baz=266,SNR=56										
KIV	**Kislovodsk**		81.50	313	⇓	P		**P**		03 24 35.3	+1.4
KIV	**Kislovodsk**		81.50	313	*i*	P		**P**		03 24 33.8	-0.2
	SNR=47										
KIV	**Kislovodsk**		81.50	313	*e*	P		**P**		03 24 33.6	-0.3
KIV						pmax		pmax			
	comp=Z,200nm,1.1s										
KIV						MLR		MLR			
	comp=Z,153nm,19.0s										
KIV	**Kislovodsk**		81.50	313		P		**P**		03 24 34.0	0.0
KIV	**Kislovodsk**		81.50	313		P		**P**		03 24 34.0	0.0
KIV	**Kislovodsk**		81.50	313		P		**P**		03 24 33.6	-0.3
	comp=Z,2µmcomp=Z,202nm,1.1s										
KIV	**Kislovodsk**		81.50	313		P		**P**		03 24 34.1	+0.2
KIV	**Kislovodsk**		81.50	313		P		**P**		03 24 34.2	+0.3
C23K	**Itkillik River**		81.50	20		IAmb		IAmb		03 24 37.3	
	comp=Z,38nm,0.6s										
C23K	**Itkillik River**		81.50	20		P		**P**		03 24 34.3	+1.0
	baz=265,SNR=42										
EPOS	**Posof**		81.50	311		P		**P**		03 24 35.1	+1.1
SHA1	**Shidzhatmaz**		81.52	313	*ce*	P		**P**		03 24 34.1	-0.2
BWN	**Browne**		81.56	26		IAmb		IAmb		03 25 03.2	
	comp=Z,34nm,0.9s										
PMR	**Palmer**		81.59	29		P		**P**		03 24 34.1	+0.2
PMR	**Palmer**		81.59	29		IAmb		IAmb		03 24 37.3	
	comp=Z,34nm,0.8s										
PMR	**Palmer**		81.59	29		P		**P**		03 24 33.9	0.0
	baz=268,SNR=14										
H23K	**Yukon River**		81.62	24		IAmb		IAmb		03 24 38.8	
	comp=Z,42nm,0.7s										
H23K	**Yukon River**		81.62	24		P		**P**		03 24 35.1	+1.1
	baz=267										
I23K	**Minto, Yukon-K**		81.66	25		IAmb		IAmb		03 24 39.5	
	comp=Z,35nm,0.6s										
I23K	**Minto, Yukon-K**		81.66	25		P		**P**		03 24 35.2	+1.1
	baz=267,SNR=62										
GHO	**Glory Hole Cre**		81.70	29		IAmb		IAmb		03 25 22.6	
	comp=Z,34nm,1.1s										
E23K	**Chandalar**		81.72	22		IAmb		IAmb		03 25 04.0	
	comp=Z,39nm,1.0s										
E23K	**Chandalar**		81.72	22		P		**P**		03 24 36.0	+1.4
	baz=266,SNR=39										
NEA2	**Nenana**		81.75	26		P		**P**		03 24 35.0	+0.3
	baz=267,SNR=27										
MCK	**McKinley**		81.77	27		IAmb		IAmb		03 24 38.5	
	comp=Z,49nm,0.7s										
MCK	**McKinley**		81.77	27		P		**P**		03 24 35.1	+0.2
	baz=268,SNR=26										
TOLK	**Toolik Lake Re**		81.78	22		P		**P**		03 24 36.2	+1.4
	baz=266,SNR=27										
RND	**Reindeer**		81.79	27		IAmb		IAmb		03 24 37.9	
	comp=Z,26nm,0.7s										
KNK	**Knik Glacier**		81.91	29		IAmb		IAmb		03 24 39.7	
	comp=Z,42nm,0.7s										
KNK	**Knik Glacier**		81.91	29		P		**P**		03 24 36.2	+0.5
	baz=268,SNR=13										
WAT1	**Susitna Watana**		81.91	27		P		**P**		03 24 35.8	+0.2
	baz=268										
PWL	**Port Wells**		81.95	29		IAmb		IAmb		03 24 40.1	
	comp=Z,76nm,1.1s										
PWL	**Port Wells**		81.95	29		P		**P**		03 24 36.0	+0.1
	baz=269										
SML	**Sawmill**		81.98	29		IAmb		IAmb		03 24 39.5	
	comp=Z,39nm,0.8s										
SML	**Sawmill**		81.98	29		P		**P**		03 24 36.2	+0.2
	baz=268,SNR=16										
D24K	**Happy Valley**		82.08	21		IAmb		IAmb		03 24 40.7	
	comp=Z,59nm,0.7s										
D24K	**Happy Valley**		82.08	21		P		**P**		03 24 37.6	+1.2
	baz=267										
VRH	**Novokhopyorsk**		82.10	321	*e*	P		**P**		03 24 36.1	-0.7
VRH						pmax		pmax			
	comp=Z,259nm,0.8s										
E24K	**Your Creek**		82.15	22		P		**P**		03 24 37.6	+0.8
	baz=267										
M23K	**Glacier View**		82.27	29		P		**P**		03 24 37.7	+0.2
	baz=269,SNR=8.4										
BATM	**Batumi**		82.27	311		P		**P**		03 24 33.2	-4.7
WAT6	**Susitna Watana**		82.28	28		P		**P**		03 24 38.5	+0.8
	baz=269,SNR=19										
COLA	**College**		82.28	25		P		**P**		03 24 37.5	0.0
COLA	**College**		82.28	25	*ce*	P		**P**		03 24 37.1	-0.4
COLA						pmax		pmax			
	comp=Z,8.0nm,0.6s										
COLA	**College**		82.28	25		P		**P**		03 24 35.7	-1.7
COLA	**College**		82.28	25		P		**P**		03 24 37.7	+0.3
	baz=268										
COLA	**College**		82.28	25		P		**P**		03 24 37.2	-0.2
COLA	**College**		82.28	25		P		**P**		03 24 37.4	0.0
CCB	**Clear Creek Bu**		82.30	26		IAmb		IAmb		03 24 41.0	
	comp=Z,68nm,1.4s										
H24K	**Noodor Dome**		82.30	24		IAmb		IAmb		03 24 42.5	
	comp=Z,28nm,0.8s										
H24K	**Noodor Dome**		82.30	24		P		**P**		03 24 39.2	+1.6
	baz=268,SNR=61										
F24K	**Squaw Lake**		82.35	23		P		**P**		03 24 39.3	+1.4
	baz=268,SNR=32										
ABPO	**Ambohimpanom**		82.37	250		P		**P**		03 24 38.2	-0.8
ABPO						pmax		pmax			
	comp=Z,26nm,1.0s										
ABPO	**Ambohimpanom**		82.37	250		P		**P**		03 24 38.2	-0.8
ABPO						IAmb		IAmb		03 24 44.2	
	comp=Z,26nm,0.9s										
ABPO	**Ambohimpanom**		82.37	250		P		**P**		03 24 38.0	-1.0
P23K	**Montague Islan**		82.40	30		P		**P**		03 24 38.5	+0.3
	baz=270										
DHY	**Denali Highway**		82.45	27		P		**P**		03 24 39.1	+0.5
	baz=269,SNR=11										
SCM	**Sheep Creek Mo**		82.46	29		IAmb		IAmb		03 24 42.9	
	comp=Z,73nm,1.1s										
SCM	**Sheep Creek Mo**		82.46	29		P		**P**		03 24 39.5	+0.9
	baz=269,SNR=14										
POKR	**Poker Plat Res**		82.47	25		P		**P**		03 24 39.1	+0.6
	baz=269										
G24K	**Hadweenzic Riv**		82.49	24		IAmb		IAmb		03 24 43.0	
	comp=Z,103nm,1.7s										
G24K	**Hadweenzic Riv**		82.49	24		P		**P**		03 24 39.9	+1.3
	baz=269,SNR=36										
GLI	**Glacier Island**		82.56	29		P		**P**		03 24 39.8	+0.8
	baz=270										
HDA	**Harding Lake**		82.66	26		IAmb		IAmb		03 24 41.9	
	comp=Z,32nm,0.6s										
HDA	**Harding Lake**		82.66	26		P		**P**		03 24 39.0	-0.5
	baz=269,SNR=31										
ILAR	**Eielson Array**		82.69	26		P		**P**		03 24 38.5	-1.1
	comp=Z,9.3nm,0.5s,baz=252,slow=5.0,SNR=62										
ILAR						PKKPbo		**PKKPbc**		03 43 04.0	-2.4
	comp=Z,0.8nm,0.9s,baz=35,slow=3.0,SNR=5.1										
	comp=Z,9.3nm,0.5s										
ILAR	**Eielson Array**		82.69	26		P		**P**		03 24 38.4	-1.3
FID	**Port Fidalgo**		82.86	30		IAmb		IAmb		03 24 44.7	
	comp=Z,28nm,0.8s										
LABN	**Labinsk**		82.89	314	*e*	P		**P**		03 24 40.6	-0.5
LABN						pmax		pmax			
	comp=Z,158nm,1.0s										
D25K	**Kavik River**		82.96	21		P		**P**		03 24 42.0	+1.0
	baz=269										
ATD	**Arta Tunnel**		82.97	281		P		**P**		03 24 43.6	+1.5
ATD	**Arta Tunnel**		82.97	281		IAmb		IAmb		03 24 45.3	
	comp=Z,61nm,1.1s										
M24K	**Tolsona, Glenn**		83.00	28		IAmb		IAmb		03 24 45.6	
	comp=Z,74nm,0.9s										
M24K	**Tolsona, Glenn**		83.00	28		P		**P**		03 24 42.6	+1.2
	baz=270,SNR=9.6										
ERBR	**Yeremizino-Bor**		83.03	315	*e*	P		**P**		03 24 40.3	-1.5
ERBR						pmax		pmax			
	comp=Z,313nm,0.9s										
G25K	**Bearman Lake**		83.04	24		P		**P**		03 24 43.0	+1.6
	baz=270,SNR=31										
KLU	**Klutina**		83.13	29		IAmb		IAmb		03 24 45.9	
	comp=Z,29nm,0.7s										
KLU	**Klutina**		83.13	29		P		**P**		03 24 43.1	+1.1
	baz=271,SNR=14										
K24K	**Donnelly Dome**		83.17	27		IAmb		IAmb		03 24 45.8	
	comp=Z,27nm,0.7s										
K24K	**Donnelly Dome**		83.17	27		P		**P**		03 24 42.7	+0.5
	baz=270,SNR=12										
F25K	**Christian Rive**		83.22	23		IAmb		IAmb		03 24 47.7	
	comp=Z,33nm,1.0s										
F25K	**Christian Rive**		83.22	23		P		**P**		03 24 43.9	+1.6
	baz=270,SNR=49										
EYAK	**Cordova Ski Ar**		83.22	30		P		**P**		03 24 43.0	+0.6
	baz=271										
VOI	**Vohitsoka**		83.24	247		P		**P**		03 24 43.2	-0.3
	SNR=5.0										
VOI	**Vohitsoka**		83.24	247		P		**P**		03 24 42.2	-1.3
VOI	**Vohitsoka**		83.24	247		P		**P**		03 24 42.9	-0.6
E25K	**Arctic Village**		83.24	22		P		**P**		03 24 44.0	+1.5
	baz=270,SNR=26										
KLMR	**Klimovskoe**		83.25	330	*e*	P		**P**		03 24 41.4	-1.2
KLMR						pmax		pmax			
	comp=Z,186nm,1.1s										
PRP	**Porcupine Dome**		83.27	25		P		**P**		03 24 42.0	-0.8
	baz=270,SNR=18										
PAX	**Paxson**		83.32	27		IAmb		IAmb		03 24 46.8	
	comp=Z,41nm,1.1s										
PAX	**Paxson**		83.32	27		P		**P**		03 24 43.3	+0.3
	baz=271,SNR=18										
J25K	**Salcha River,**		83.35	26		IAmb		IAmb		03 24 45.5	
	comp=Z,23nm,0.8s										
J25K	**Salcha River,**		83.35	26		P		**P**		03 24 43.2	+0.1
	baz=271,SNR=37										
VSLR	**Vesyoloye**		83.44	313	*c i*	P		**P**		03 24 43.8	-0.1
VSLR						pmax		pmax			
	comp=Z,188nm,0.8s										
C26K	**Camden Bay**		83.47	20		P		**P**		03 24 45.2	+1.7
	baz=270										
HARP	**HAARP**		83.48	28		IAmb		IAmb		03 24 47.8	
	comp=Z,68nm,1.1s										
HARP	**HAARP**		83.48	28		P		**P**		03 24 44.4	+0.6
	baz=271,SNR=5.8										
RIDG	**Independent Ri**		83.59	27		IAmb		IAmb

baz=274
H27K **Steamboat Moun** 84.89 24 IAmb IAmb 03 24 56.0
comp=Z,36nm,1.1s
H27K **Steamboat Moun** 84.89 24 P **P** **03 24 52.2 +1.4**
baz=274,SNR=41
I27K **Kandik River** 84.89 25 P **P** **03 24 52.5 +1.6**
baz=274,SNR=89
L27K **Beaver Creek,** 84.98 27 IAmb IAmb 03 24 55.6
comp=Z,26nm,1.1s
L27K **Beaver Creek,** 84.98 27 P **P** **03 24 52.9 +1.6**
baz=274,SNR=28
BCAR **Beaver Creek A** 85.00 27 P **P** **03 24 52.3 +0.9**
M27K **Edge Creek, AK** 85.00 28 P **P** **03 24 52.4 +0.7**
baz=274,SNR=12
LVZ **Lovozero** 85.04 338 *de*P **P** **03 24 51.2 -0.4**
LVZ pmax pmax
comp=Z,76nm,2.5s
LVZ **Lovozero** 85.04 338 P **P** **03 24 50.9 -0.7**
LVZ IAmb IAmb 03 24 55.7
comp=Z,19nm,0.7s
LVZ **Lovozero** 85.04 338 P **P** **03 24 50.1 -1.5**
comp=Z,703nmcomp=Z,35nm,0.9s
LVZ **Lovozero** 85.04 338 P **P** **03 24 51.3 -0.3**
LVZ **Lovozero** 85.04 338 P **P** **03 24 51.0 -0.7**
OBN **Obninsk** 85.06 325 LR LR 04 06 26.6
comp=Z,125nm,18.4s,baz=161,slow=38
OBN **Obninsk** 85.06 325 ⇓P **P** **03 24 51.7 -0.1**
OBN **Obninsk** 85.06 325 *c* *i*P **P** **03 24 51.4 -0.4**
OBN *i* 03 25 11.5
OBN *i* *PP **pP** **03 25 16.6 -0.2**
OBN *e*S **SKSac** **03 35 08.1 +0.8**
OBN *e* 03 36 34.4
OBN pmax pmax
comp=Z,388nm,1.3s
OBN MLR MLR
comp=Z,136nm,20.0s
OBN **Obninsk** 85.06 325 P **P** **03 24 51.6 -0.1**
OBN **Obninsk** 85.06 325 P **P** **03 24 50.9 -0.9**
comp=Z,4μmcomp=Z,365nm,1.1s
OBN **Obninsk** 85.06 325 P **P** **03 24 51.8 -0.1**
OBN **Obninsk** 85.06 325 P **P** **03 24 52.0 +0.1**
OBN x x 03 25 12.0
GRNC **Granite Creek** 85.18 30 IAmb IAmb 03 24 57.0
comp=Z,53nm,0.9s
BARN **Barnard Glacie** 85.20 29 IAmb IAmb 03 24 57.6
comp=Z,76nm,1.0s
ANN **Anapa** 85.23 314 *d* *i*P **P** **03 24 52.5 -0.4**
F28M **Old Crow** 85.42 23 IAmb IAmb 03 24 57.1
comp=Z,37nm,0.7s
F28M **Old Crow** 85.42 23 P **P** **03 24 54.3 +0.9**
baz=275,SNR=66
E28M **Babbage River** 85.45 22 IAmb IAmb 03 24 58.4
comp=Z,16nm,0.6s
E28M **Babbage River** 85.45 22 P **P** **03 24 54.6 +1.0**
baz=276,SNR=30
BVCY **Beaver Creek** 85.47 28 P **P** **03 24 54.8 +1.0**
baz=275,SNR=5.6
LOGN **Logan Glacier** 85.54 29 IAmb IAmb 03 24 58.8
comp=Z,32nm,0.9s
APA **Apatity** 85.54 337 *e*P **P** **03 24 51.9 -2.1**
APA *e*PP **pP** **03 25 16.9 -1.7**
APA *e*SS SS 03 40 53.9 -0.7
APA pmax pmax
comp=Z,29nm,0.9s
APA MLR MLR
comp=Z,237nm,19.5s
I28M **Miner Creek** 85.60 25 IAmb IAmb 03 24 59.3
comp=Z,52nm,0.8s
I28M **Miner Creek** 85.60 25 P **P** **03 24 55.6 +1.1**
baz=276,SNR=80
KHAM **Kharkiv** 85.64 320 P **P** **03 24 54.4 -0.5**
D28M **Stokes Point** 85.67 21 P **P** **03 24 55.9 +1.4**
baz=276
YUK3 **Moose Creek** 85.72 28 P **P** **03 24 56.4 +1.1**
baz=275
O28M **Mount Upton** 85.94 29 IAmb IAmb 03 25 01.5
comp=Z,24nm,0.9s
O28M **Mount Upton** 85.94 29 P **P** **03 24 57.4 +0.8**
baz=276
VNDA **Vanda** 85.96 173 P **P** **03 24 56.6 +0.8**
comp=Z,18nm,1.0s,baz=312,slow=5.9,SNR=42
comp=Z,18nm,1.0s
VNDA **Vanda** 85.96 173 P **P** **03 24 55.7 -0.2**
VNDA IAmb IAmb 03 24 57.8
comp=Z,22nm,1.1s
VNDA **Vanda** 85.96 173 P **P** **03 24 56.9 +1.1**
DAWY **Dawson** 85.98 26 IAmb IAmb 03 25 00.3
comp=Z,14nm,0.7s
DAWY **Dawson** 85.98 26 P **P** **03 24 57.3 +1.0**
baz=276,SNR=20
PINM **Pinnacle** 85.98 30 P **P** **03 24 57.2 +0.8**
baz=276
E29M **Blow River** 86.08 22 P **P** **03 24 57.7 +1.1**
baz=277,SNR=11
YUK8 **Steele Glacier** 86.10 29 P **P** **03 24 58.7 +1.4**
baz=276,SNR=8.1
H29M **Whitestone** 86.16 24 P **P** **03 24 58.0 +0.9**
baz=277,SNR=19
G29M **Pine Creek** 86.22 23 IAmb IAmb 03 25 02.7
comp=Z,36nm,0.8s
G29M **Pine Creek** 86.22 23 P **P** **03 24 58.0 +0.7**
baz=277,SNR=40
MAW **Mawson** 86.24 200 P **P** **03 24 57.4 +0.1**
comp=Z,19nm,1.0s,baz=37,slow=6.2,SNR=25
comp=Z,19nm,1.0s
MAW **Mawson** 86.24 200 P **P** **03 24 57.7 +0.4**
comp=Z,5.8nm,1.2s
MAW **Mawson** 86.24 200 P **P** **03 24 57.9 +0.6**
MAW pmax pmax
comp=Z,5.0nm,1.1s
MAW **Mawson** 86.24 200 P **P** **03 24 57.9 +0.6**
MAW **Mawson** 86.24 200 P **P** **03 24 58.3 +1.0**
BRWY **Burwash Landin** 86.44 29 P **P** **03 24 60.0 +1.4**
baz=277
J29N **Klondike Camp** 86.44 26 P **P** **03 24 59.8 +1.1**
baz=277
M29M **Somme Creek** 86.58 28 IAmb IAmb 03 25 03.9
comp=Z,14nm,0.7s
M29M **Somme Creek** 86.58 28 P **P** **03 25 00.4 +1.0**
baz=277,SNR=21
YUK4 **Talbot Arm** 86.63 29 P **P** **03 25 00.3 +0.5**
baz=277
ANDN **Andirin** 86.64 307 P **P** **03 25 00.9 +0.7**
L29M **L29M** 86.65 27 IAmb IAmb 03 25 04.4
comp=Z,19nm,0.8s
L29M **L29M** 86.65 27 P **P** **03 25 00.4 +0.8**
baz=277,SNR=24
VADS **Vadso** 86.67 340 *e*P **P** **03 24 58.6 -0.8**
VADS IAmb IAmb 03 25 02.0
comp=Z,39nm,1.2s
ASF **Jabal al Asfar** 86.69 302 LR LR 04 10 26.6
comp=Z,74nm,18.5s,baz=26,slow=40
O29M **Mount Kennedy** 86.79 30 P **P** **03 25 01.4 +0.9**
baz=277
EPYK **Eagle Plains** 86.80 24 IAmb IAmb 03 25 04.1
comp=Z,27nm,0.9s
EPYK **Eagle Plains** 86.80 24 P **P** **03 25 00.2 -0.1**
baz=278,SNR=26
YUK6 **Outpost Mounta** 86.81 29 P **P** **03 25 01.9 +1.2**
baz=277
K29M **Barlow Dome** 86.82 26 P **P** **03 25 01.6 +1.1**
baz=278,SNR=9.7
G30M **tAoh Zraii Nji** 86.91 23 IAmb IAmb 03 25 03.7
comp=Z,18nm,0.8s
G30M **tAoh Zraii Nji** 86.91 23 P **P** **03 25 01.3 +0.5**
baz=279,SNR=13
F30M **Barrier River** 86.98 22 IAmb IAmb 03 25 04.6
comp=Z,29nm,0.8s
F30M **Barrier River** 86.98 22 P **P** **03 25 01.7 +0.6**
baz=279,SNR=22
I30M **Mount Dempster** 87.11 25 P **P** **03 25 02.9 +0.9**
baz=279,SNR=10
J30M **Hart River** 87.23 25 P **P** **03 25 03.3 +0.8**
baz=279,SNR=9.1
HYT **Haines Junctio** 87.24 29 P **P** **03 25 03.3 +0.6**
baz=278,SNR=8.1
P29M **Windy Craggy** 87.29 30 P **P** **03 25 04.0 +1.2**
baz=278
M30M **Minto, Yukon** 87.33 27 P **P** **03 25 04.1 +1.2**
baz=279,SNR=5.6
N30M **Aishikik Lake** 87.35 29 P **P** **03 25 03.5 +0.4**
baz=278,SNR=5.5
MSF **Maaselka** 87.48 336 P **P** **03 25 02.7 -0.8**
MSF **Maaselka** 87.48 336 P **P** **03 25 02.7 -0.8**
KEV **Kevo** 87.53 340 P **P** **03 25 02.4 -1.3**
KEV pmax pmax
comp=Z,39nm,1.5s
KEV **Kevo** 87.53 340 P **P** **03 25 02.4 -1.3**
KEV IAmb IAmb 03 25 06.5
comp=Z,39nm,1.5s
KEV **Kevo** 87.53 340 P **P** **03 25 03.1 -0.5**
P30M **Million Dollar** 87.61 30 P **P** **03 25 05.3 +0.9**
baz=278
G31M **Satah River** 87.67 23 IAmb IAmb 03 25 07.4
comp=Z,25nm,0.8s
G31M **Satah River** 87.67 23 P **P** **03 25 05.1 +0.7**
baz=281,SNR=22
INK **Inuvik** 87.69 22 P **P** **03 25 04.3 -0.1**
INK **Inuvik** 87.69 22 IAmb IAmb 03 25 07.6
comp=Z,26nm,1.1s
INK **Inuvik** 87.69 22 P **P** **03 25 04.3 -0.1**
baz=281,SNR=18
INK **Inuvik** 87.69 22 P **P** **03 25 04.3 -0.1**
H31M **Peel River** 87.85 24 P **P** **03 25 06.0 +0.7**
baz=281
MMAI **Mount Meron Ar** 87.86 303 P **P** **03 25 07.0 +0.8**
comp=Z,104nm,0.9s,baz=86,slow=12,SNR=61
comp=Z,104nm,0.9s
PUL **Pulkovo** 87.90 330 *d* *i*P **P** **03 25 05.5 -0.1**
PUL pmax pmax
comp=Z,198nm,0.7s
GHAJ **Ghor Haditha** 87.91 301 P **P** **03 25 06.9 +0.6**
MMLI **Mount Malkishu** 87.91 302 P **P** **03 25 07.3 +1.0**
UJAP **Al Uja** 87.92 302 P **P** **03 25 07.0 +0.7**
O30N **Mendenhall** 87.94 29 P **P** **03 25 06.5 +0.6**
baz=279
N31M **Braeburn, Yuko** 87.97 28 IAmb IAmb 03 25 10.7
comp=Z,43nm,1.3s
N31M **Braeburn, Yuko** 87.97 28 P **P** **03 25 06.9 +0.9**
baz=280,SNR=6.7
BZK **Bozkurt** 87.98 312 ⇓P **P** **03 25 06.8 +0.4**
BZK **Bozkurt** 87.98 312 P **P** **03 25 05.2 -1.2**
comp=Z,1μmcomp=Z,160nm,0.7s
SPB2 **Spitsbergen Ar** 87.98 349 IAmb IAmb 03 25 07.0
comp=Z,31nm,0.7s
SPA0 **Spitsbergen Ar** 87.98 349 *e*P **P** **03 25 05.8 0.0**
SPA0 IAmb IAmb 03 25 14.1
comp=Z,39nm,1.1s
SPITS **Spitsbergen Ar** 87.98 349 P **P** **03 25 05.1 -0.7**
comp=Z,22nm,0.7s,baz=114,slow=15,SNR=18
SPITS LR LR 04 08 25.0
comp=Z,113nm,22.0s,baz=39,slow=38
comp=Z,22nm,0.7s
PLBC **Pleasant Camp** 88.01 30 P **P** **03 25 06.9 +0.8**
baz=279
MSBI **Mazada** 88.08 301 P **P** **03 25 07.6 +0.6**
ARA0 **ARCESS Array S** 88.09 340 *e*P **P** **03 25 05.7 -0.7**
ARA0 IAmb IAmb 03 25 06.5
comp=Z,25nm,0.6s
ARCES **ARCESS Array B** 88.09 340 P **P** **03 25 05.4 -0.9**
comp=Z,18nm,0.4s,baz=86,slow=6.2,SNR=260
ARCES PKKPbc **PKKPbc** **03 42 52.6 -1.1**
comp=Z,0.2nm,0.4s,baz=318,slow=1.6,SNR=4.4
comp=Z,18nm,0.4s
ARCES **ARCESS Array B** 88.09 340 P **P** **03 25 05.5 -0.9**
ARCES pmax pmax
comp=Z,29nm,0.7s
ARCES **ARCESS Array B** 88.09 340 P **P** **03 25 05.5 -0.9**
ARCES IAmb IAmb 03 25 06.5
comp=Z,29nm,0.7s
SGF **Sodankyl** 88.18 338 P **P** **03 25 05.6 -1.2**
SGF pmax pmax
comp=Z,46nm,0.9s
SGF **Sodankyl** 88.18 338 P **P** **03 25 05.9 -0.9**
S31K **Pelican** 88.31 32 P **P** **03 25 08.4 +0.8**
baz=279
KIRS **Kirshir-Merke** 88.38 309 ⇑P **P** **03 25 07.8 -0.7**
M31M **Drury Creek, Y** 88.50 28 P **P** **03 25 09.1 +0.6**
baz=281,SNR=6.4
KBS **Kingsbay** 88.50 350 *de*P **P** **03 25 08.3 +0.2**
KBS pmax pmax
comp=Z,10.0nm,0.9s
KBS **Kingsbay** 88.50 350 *e*P **P** **03 25 08.2 +0.1**
KBS IAmb IAmb 03 25 11.1
comp=Z,60nm,1.8s
KBS **Kingsbay** 88.50 350 *i*P **P** **03 25 07.2 -0.9**
HRFI **Mount Harif** 88.50 300 P **P** **03 25 09.8 +0.6**
R31K **City Hall, Gus** 88.50 31 P **P** **03 25 09.7 +1.3**
baz=280
BR131 **Keskin Array S** 88.52 310 *c* *i*P **P** **03 25 08.3 -0.9**
BR131 **Keskin Array S** 88.52 310 P **P** **03 25 08.6 -0.6**
SNR=63
BRTR **Keskin Array B** 88.52 310 P **P** **03 25 08.4 -0.8**
comp=Z,42nm,0.8s,baz=107,slow=4.3,SNR=199
comp=Z,42nm,0.8s
BRTR **Keskin Array B** 88.52 310 P **P** **03 25 08.2 -1.0**
BR104 **Keskin Array S** 88.52 310 P **P** **03 25 07.8 -1.4**
comp=Z,458nmcomp=Z,69nm,0.9s
WHY **Whitehorse** 88.54 29 IAmb IAmb 03 25 12.4
comp=Z,28nm,0.9s
WHY **Whitehorse** 88.54 29 P **P** **03 25 09.8 +1.0**
baz=280,SNR=8.2
EIL **Elat** 88.61 300 P **P** **03 25 10.2 +0.5**
CIDE **Kastamonu/Cide** 88.77 312 ⇓P **P** **03 25 09.4 -0.7**
OUL **Oulu** 88.93 335 P **P** **03 25 09.2 -1.1**
OUL pmax pmax
comp=Z,54nm,0.9s
OUL **Oulu** 88.93 335 P **P** **03 25 09.3 -1.0**
KZIT **Kziot** 88.95 301 P **P** **03 25 11.5 +0.3**
SIT **Sitka** 88.95 33 P **P** **03 25 11.1 +0.6**
baz=280
KTK1 **Kautokeino** 89.00 340 *e*P **P** **03 25 09.2 -1.5**
KTK1 IAmb IAmb 03 25 10.2
comp=Z,26nm,0.6s
KIBK **Kibwezi** 89.13 268 P **P** **03 25 12.8 +0.3**
KIBK **Kibwezi** 89.13 268 IAmb IAmb 03 25 15.2
comp=Z,34nm,1.0s
KIBK **Kibwezi** 89.13 268 P **P** **03 25 14.6 +2.1**
KKUL **Konya-Kulu** 89.14 309 P **P** **03 25 12.1 0.0**
R32K **Eaglecrest** 89.16 32 P **P** **03 25 12.4 +0.8**
baz=281
S32K **Killisnoo** 89.27 32 P **P** **03 25 12.8 +0.7**
baz=281
N32M **Quiet Lake** 89.31 29 P **P** **03 25 13.7 +1.4**
baz=282
P32M **Atlin** 89.32 30 P **P** **03 25 13.8 +1.5**
baz=281
CSS **Mathiatis** 89.35 305 P **P** **03 25 12.1 -0.9**
comp=Z,1μmcomp=Z,206nm,0.9s
CSS **Mathiatis** 89.35 305 P **P** **03 25 12.9 -0.1**
A36M **Sachs Harbour** 89.47 17 IAmb IAmb 03 25 15.4
comp=Z,14nm,0.8s
A36M **Sachs Harbour** 89.47 17 P **P** **03 25 13.8 +1.0**
baz=289,SNR=5.7
NE56 **Odesa** 89.56 317 P **P** **03 25 11.9 -1.8**
P33M **Teslin, Yukon** 89.63 29 P **P** **03 25 14.4 +0.5**
baz=282
FINES **FINESS Array B** 89.65 332 P **P** **03 25 12.9 -0.8**
comp=Z,16nm,0.5s,baz=68,slow=4.2,SNR=210
comp=Z,16nm,0.5s
FINES **FINESS Array B** 89.65 332 P **P** **03 25 13.0 -0.8**
JETT **Jettan, Norway** 89.81 340 *e*P **P** **03 25 13.8 -0.7**
JETT IAmb IAmb 03 25 15.3
comp=Z,124nm,0.6s
MMPY **Sheldon Lake,** 89.83 27 P **P** **03 25 15.1 +0.3**
baz=283,SNR=9.5
VSU **Vasula** 89.96 329 *c* *i*P **P** **03 25 13.5 -1.8**
VSU pmax pmax
comp=Z,78nm,1.2s
VSU **Vasula** 89.96 329 P **P** **03 25 13.6 -1.6**
AKASG **Malin Array Be** 90.01 321 P **P** **03 25 14.0 -1.7**
comp=Z,34nm,0.7s,baz=69,slow=4.6,SNR=95
AKASG PP **PP** **03 28 50.8 +1.0**
comp=Z,8.7nm,1.1s,baz=72,slow=7.5,SNR=6.8
AKASG LR LR 04 08 26.2
comp=Z,166nm,20.7s,baz=77,slow=37
comp=Z,34nm,0.7s
AKASG **Malin Array Be** 90.01 321 P **P** **03 25 14.9 -0.8**
AKASG **Malin Array Be** 90.01 321 P **P** **03 25 14.9 -0.8**
AKBB **Malin Array Si** 90.01 321 *c* *i*P **P** **03 25 14.5 -1.2**
AKBB **Malin Array Si** 90.01 321 P **P** **03 25 15.1 -0.6**
AKBB **Malin Array Si** 90.01 321 P **P** **03 25 14.2 -1.5**
KIEV **Kiev** 90.02 321 ⇑P **P** **03 25 15.2 -0.6**
KIEV **Kiev** 90.02 321 *i*P **P** **03 25 14.7 -1.1**
SNR=8.8
KIEV **Kiev** 90.02 321 P **P** **03 25 15.0 -0.8**
KIEV **Kiev** 90.02 321 P **P** **03 25 15.0 -0.8**
KIEV **Kiev** 90.02 321 P **P** **03 25 14.4 -1.4**
comp=Z,3μmcomp=Z,318nm,1.2s
KIEV **Kiev** 90.02 321 P **P** **03 25 15.0 -0.8**
KIEV **Kiev** 90.02 321 P **P** **03 25 14.9 -0.8**
MNK **Minsk** 90.12 325 *i*P **P** **03 25 15.7 -0.4**
comp=E,20nm,1.0s
MNK *i*P **P** **03 25 15.7 -0.4**
comp=N,35nm,1.0s
MNK *i*P **P** **03 25 15.7 -0.4**
comp=Z,98nm,0.9s,baz=79
MNK *i*pP **pP** **03 25 41.1 -0.3**
MNK *i*sP **sP** **03 25 53.0 +1.4**
MNK *i*PP **PP** **03 28 49.0 -1.6**
MNK *i*PPP PPP 03 30 48.7
MNK *i*SKS SKiKP 03 34 20.1 +43
MNK *i*S **SKSac** **03 35 36.9 -1.2**
MNK *i*sS pS 03 36 24.6 -10
MNK *i*PS **PnS** **03 37 21.5 +0.6**
MNK *i*SS **SS** **03 42 05.2 +3.4**
MNK *i*SSS SSS 03 45 44.6
MNK pmax pmax
comp=N,35nm,1.0s
MNK pmax pmax
comp=E,20nm,1.0s
MNK pmax pmax
comp=Z,98nm,0.9s
ARBE **Arbavere** 90.13 330 P **P** **03 25 15.5 -0.6**
Q32M **Nakina River** 90.17 31 P **P** **03 25 17.7 +1.1**
baz=283
BAL3X **Bal3x, Balta** 90.24 318 P **P** **03 25 15.6 -1.2**
T33K **Petersburg** 90.27 33 P **P** **03 25 18.2 +1.4**
baz=282
TRO **Tromso** 90.28 341 *e*P **P** **03 25 15.3 -1.2**
TRO IAmb IAmb 03 25 15.9
comp=Z,22nm,0.8s
PURM **Purcari** 90.29 317 ⇓P **P** **03 25 16.8 -0.3**
PURM **Purcari** 90.29 317 P **P** **03 25 16.5 -0.6**
comp=Z,3μmcomp=Z,378nm,0.8s
U33K **Whale Pass** 90.32 33 P **P** **03 25 18.4 +1.4**
baz=282
CRAG **Craig** 90.45 34 P **P** **03 25 19.0 +1.4**
baz=282
SAHE **Sakarya_HENDEK** 90.48 311 ⇓P **P** **03 25 17.3 -0.9**
NOR **Nord** 90.54 355 P **P** **03 25 16.8 -0.8**
NOR **Nord** 90.54 355 P **P** **03 25 16.9 -0.8**
NOR **Nord** 90.54 355 *i*P **P** **03 25 16.7 -0.9**
NOR IAmb IAmb 03 25 18.9
comp=Z,4.4nm,0.8s
WRAK **Wrangell Islan** 90.68 33 P **P** **03 25 19.2 +0.5**
baz=282
R33M **Jennings River** 90.73 30 P **P** **03 25 19.6 +0.5**
baz=284
MI28 **Mi28,Pidlybu** 90.94 321 P **P** **03 25 18.1 -1.9**
S34M **Telegraph Cree** 90.99 31 P **P** **03 25 21.3 +1.1**
baz=284
SORM **Soroca** 91.03 319 ⇓P **P** **03 25 19.8 -0.7**
SORM **Soroca** 91.03 319 P **P** **03 25 19.0 -1.5**
comp=Z,536nmcomp=Z,30nm,1.4s
LUBAR **Lubar, Ukraine** 91.08 320 P **P** **03 25 19.7 -1.0**
LODK **Lodwar** 91.17 274 P **P** **03 25 22.2 +0.2**
BCK **Bucak** 91.20 308 P **P** **03 25 19.5 -2.2**
TLCR 91.24 316 ⇓P **P** **03 25 21.9 +0.3**
JURR **Jurilovca** 91.27 315 ⇑P **P** **03 25 21.5 -0.2**
V35K **Ketchikan** 91.32 34 P **P** **03 25 22.4 +0.7**
baz=283
MTSE **Matsula** 91.39 329 P **P** **03 25 21.1 -0.8**
DLBC **Dease Lake** 91.43 31 LR LR 04 01 41.8
comp=Z,106nm,21.9s,baz=244,slow=32
DLBC **Dease Lake** 91.43 31 P **P** **03 25 22.8 +0.6**
baz=284
TPGR **Topolog** 91.58 315 ⇑P **P** **03 25 23.0 -0.2**
WTLY **Watson Lake, Y** 91.61 29 IAmb IAmb 03 25 26.7
comp=Z,26nm,1.1s
WTLY **Watson Lake, Y** 91.61 29 P **P** **03 25 23.6 +0.6**
baz=286
VLDR **Vladesti** 91.63 316 ⇓P **P** **03 25 24.1 +0.8**
YLV **Yalova** 91.64 311 P **P** **03 25 22.4 -1.2**
comp=Z,808nmcomp=Z,92nm,0.8s
TIRR **Tirgusor** 91.66 315 P **P** **03 25 23.3 -0.2**
T35M **Bob Quinn** 91.68 32 P **P** **03 25 24.7 +1.3**
baz=284
VASR **Vaslui** 91.68 317 ⇓P **P** **03 25 23.4 -0.1**
SHAB **Shabla** 91.68 314 ⇑P P 03 25 18.0 -5.6
CFR **Carcaliu** 91.72 316 ⇓P **P** **03 25 23.7 0.0**
SCTR **Scanteiesti** 91.72 316 ⇑P **P** **03 25 23.9 +0.1**
VARL **Varlezi** 91.78 316 ⇑P **P** **03 25 24.5 +0.4**
ISK **Istanbul-Kandi** 91.78 311 P **P** **03 25 26.1 +1.9**
ELL **Elmali** 91.85 307 P **P** **03 25 23.8 -1.0**
BIR **Birlad** 91.86 317 ⇓P **P** **03 25 24.9 +0.5**
TLBR **Topalu** 91.90 315 ⇑P **P** **03 25 24.7 +0.1**
RNPP9 **Sopachiv** 91.93 322 P **P** **03 25 24.0 -0.6**
CVDA **Cernavoda** 91.94 315 ⇓P **P** **03 25 25.1 +0.3**
RNPP2 **Kostyukhnivka** 91.95 322 P **P** **03 25 23.8 -0.9**
TUDR 91.96 316 ⇑P **P** **03 25 26.0 +1.1**
RNPP8 **Varash** 91.97 322 P **P** **03 25 23.9 -0.9**
RNPP5 **Staryi Chortor** 91.98 322 P **P** **03 25 24.0 -0.8**
PSN **Preselentsi** 92.00 314 P **P** **03 25 24.8 -0.3**
GHRR 92.05 317 ⇑P **P** **03 25 25.9 +0.6**
GHRR 92.05 317 P **P** **03 25 25.2 -0.1**
GHRR 92.05 317 P **P** **03 25 25.9 +0.6**
PABE **Paberze** 92.10 326 P **P** **03 25 24.8 -0.5**
STEI **Steigen** 92.14 339 *e*P **P** **03 25 23.8 -1.4**
STEI IAmb IAmb 03 25 24.7
comp=Z,32nm,0.7s
ICOR **Ion Corvin** 92.15 315 ⇑P **P** **03 25 26.6 +0.8**
COSR **Cosmesti PH** 92.16 316 ⇑P **P** **03 25 26.7 +1.0**
KMPD **K-Podol'skiy** 92.18 319 P **P** **03 25 24.0 -1.8**
CTYL **Yalikoy Yolu** 92.28 312 P **P** **03 25 25.8 -0.7**
comp=Z,4μmcomp=Z,119nm,0.9s
FAUS **Fauske** 92.34 339 *e*P **P** **03 25 24.8 -1.3**
FAUS IAmb IAmb 03 25 25.5
comp=Z,270nm,2.2s
ODBI **Odobesti** 92.35 316 ⇓P **P** **03 25 27.9 +1.2**
TESR **Tescani** 92.48 317 ⇑P **P** **03 25 27.9 +0.7**
TESR **Tescani** 92.48 317 P **P** **03 25 26.7 -0.6**
comp=Z,1μmcomp=Z,106nm,1.0s
TESR **Tescani** 92.48 317 P **P** **03 25 27.1 -0.2**
GRER 92.48 316 ⇓P **P** **03 25 28.7 +1.4**
GIRR **Girov** 92.49 318 ⇑P **P** **03 25 27.8 +0.5**
VRI **Vrincioaia** 92.56 316 ⇓P **P** **03 25 28.2 +0.5**
VRI **Vrincioaia** 92.56 316 ⇓P **P** **03 25 28.2 +0.5**
VRI **Vrincioaia** 92.56 316 P **P** **03 25 27.4 -0.3**
comp=Z,776nmcomp=Z,74nm,1.2s
VRI **Vrincioaia** 92.56 316 P **P** **03 25 27.9 +0.2**
PRD **Provadia** 92.61 314 P **P** **03 25 27.7 -0.2**
PLOR **Plostina** 92.61 316 ⇓P **P** **03 25 28.5 +0.5**
PLOR **Plostina** 92.61 316 ⇓P **P** **03 25 28.5 +0.5**
SAHR **Sahastru** 92.61 316 ⇑P **P** **03 25 28.5 +0.5**
BAND **Balkesir-Ban** 92.63 311 ⇓P **P** **03 25 27.2 -0.9**
LOF **Lofoten** 92.65 340 *e*P **P** **03 25 27.1 -0.5**
LOF IAmb IAmb 03 25 31.5
comp=Z,268nm,2.4s
ONER **Baraj Valea Uz** 92.69 317 ⇑P **P** **03 25 28.3 0.0**
BIZ **Bicaz** 92.76 318 ⇑P **P** **03 25 29.1 +0.6**
ISR **Istrita** 92.83 316 ⇓P **P** **03 25 29.4 +0.4**
ISR **Istrita** 92.83 316 ⇓P **P** **03 25 29.4 +0.4**
ISR **Istrita** 92.83 316 P **P** **03 25 29.0 0.0**
comp=Z,63nm,1.0s
COVR **Voineasa-Covas** 92.92 317 ⇑P **P** **03 25 29.1 -0.3**
SUW **Suwalki** 92.92 325 *e*P **P** **03 25 28.4 -0.8**
NEHR **Nehoiu** 92.94 316 ⇓P **P** **03 25 29.4 -0.1**
TURR **Turia** 93.00 317 ⇓P **P** **03 25 30.4 +0.6**
YER **Yerkesik** 93.07 308 P **P** **03 25 29.7 -0.6**
WRGLY **Wrigley** 93.07 25 IAmb IAmb 03 25 32.6
comp=Z,17nm,1.2s
WRGLY **Wrigley** 93.07 25 P **P** **03 25 30.8 +1.1**
baz=290
BALY **Balya** 93.10 310 P **P** **03 25 29.5 -0.8**
MOR8 **Moi Rana** 93.12 338 *e*P **P** **03 25 27.4 -2.4**
MOR8 IAmb IAmb 03 25 28.1
comp=Z,16nm,0.6s
SULR 93.12 315 P **P** **03 25 30.8 +0.5**
RAUS **Rausandaksla** 93.16 338 *e*P **P** **03 25 28.5 -1.4**
RAUS IAmb IAmb 03 25 31.8
comp=Z,52nm,1.2s
MLR **Muntele Rosu** 93.17 316 LR LR 04 12 00.0
comp=Z,249nm,21.6s,baz=69,slow=38
MLR **Muntele Rosu** 93.17 316 ⇓P **P** **03 25 30.8 +0.1**
MLR **Muntele Rosu** 93.17 316 ⇓P **P** **03 25 30.8 +0.1**
MLR **Muntele Rosu** 93.17 316 P **P** **03 25 29.5 -1.2**
comp=Z,74nm,1.1s

MLR Muntele Rosu 93.17 316 P **P** **03 25 30.4 -0.3**
RAZG Razgrad 93.17 314 ⇑P **P** **03 25 30.5 -0.1**
BURAR Bucovina Array 93.20 318 ⇑P **P** **03 25 31.0 +0.3**
BURAR Bucovina Array 93.20 318 ⇑P **P** **03 25 31.0 +0.3**
BURAR Bucovina Array 93.20 318 P **P** **03 25 30.9 +0.2**
BUR08 Bucovina Ar. S 93.20 318 P **P** **03 25 30.8 0.0**
AYDN Tasoluk 93.29 308 P **P** **03 25 31.0 -0.3**
VAGH Vaagaholmen 93.32 339 *e*P **P** **03 25 29.1 -1.6**
VAGH IAmb IAmb 03 25 29.9
comp=Z,53nm,1.4s
ARG Arkhangelos 93.35 307 P **P** **03 25 31.0 -0.5**
ARG Arkhangelos 93.35 307 P **P** **03 25 31.0 -0.5**
SGRR Singureni 93.42 315 ⇑P **P** **03 25 31.3 -0.3**
DOPR Dopca 93.45 317 ⇑P **P** **03 25 31.7 -0.1**
STOK Stokkvaagen 93.58 338 *e*P **P** **03 25 30.4 -1.5**
SZH Strazhitsa 93.62 314 P **P** **03 25 32.0 -0.6**
VOIR 93.80 316 ⇓P **P** **03 25 33.1 -0.4**
VOIR 93.80 316 ⇓P **P** **03 25 33.1 -0.4**
VOIR 93.80 316 P **P** **03 25 32.1 -1.4**
KOTAN Kotaneelee Air 93.87 28 P **P** **03 25 34.3 +0.9**
baz=290
ARCR ARCALIA 93.89 318 ⇑P **P** **03 25 34.1 +0.3**
COPA Copaceanca 93.97 315 ⇑P **P** **03 25 33.8 -0.3**
HUMR Humele 94.05 315 ⇑P **P** **03 25 33.9 -0.7**
HUMR Humele 94.05 315 P **P** **03 25 33.8 -0.7**
ALN Alexandroupoli 94.06 312 P **P** **03 25 33.3 -1.3**
ALN Alexandroupoli 94.06 312 P **P** **03 25 33.3 -1.3**
EZN Ezine 94.07 311 P **P** **03 25 33.7 -1.0**
MDB Medias 94.09 317 ⇑P **P** **03 25 35.4 +0.7**
MDB Medias 94.09 317 ⇑P **P** **03 25 35.4 +0.7**
ARR Arges 94.10 316 ⇓P **P** **03 25 34.5 -0.4**
ARR Arges 94.10 316 P **P** **03 25 34.7 -0.2**
BBB Bella Bella 94.12 37 LR LR 04 00 42.9
comp=Z,50nm,20.4s,baz=263,slow=31
KARP Karpathos 94.25 306 P **P** **03 25 35.1 -0.6**
comp=Z,3µmcomp=Z,336nm,1.0s
KARP Karpathos 94.25 306 P **P** **03 25 35.3 -0.4**
TNR Turnu Rosu 94.28 317 ⇑P **P** **03 25 35.8 +0.2**
TNR Turnu Rosu 94.28 317 ⇑P **P** **03 25 35.8 +0.2**
BMR Baia Mare 94.32 319 ⇓P **P** **03 25 35.9 +0.2**
BMR Baia Mare 94.32 319 ⇓P **P** **03 25 35.9 +0.2**
BMR Baia Mare 94.32 319 P **P** **03 25 36.0 +0.3**
KWP Kalwaria Pacla 94.33 321 *e*P **P** **03 25 35.6 -0.2**
KWP Kalwaria Pacla 94.33 321 P **P** **03 25 35.5 -0.2**
comp=Z,793nmcomp=Z,95nm,1.1s
RDO Rodhopi 94.38 312 P **P** **03 25 35.1 -1.0**
KDZ Kurdzhali 94.42 313 P **P** **03 25 35.3 -1.1**
CJR Cluj-Napoca 94.48 318 ⇑P **P** **03 25 37.1 +0.5**
CJR Cluj-Napoca 94.48 318 ⇑P **P** **03 25 37.1 +0.5**
PLVB Pleven 94.56 314 ⇑P **P** **03 25 36.5 -0.4**
VLAD Vladila 94.57 315 ⇑P **P** **03 25 37.1 +0.2**
R9F13 Warsaw-Wawer 94.59 324 *e*P **P** **03 25 36.3 -0.5**
R9F13 *e*SKS **SKSac** **03 36 05.3 +2.2**
R9F13 *e*S **ScS** **03 36 42.1 -0.2**
R9F13 *e*sS **pS** **03 37 16.8 +2.6**
R9F13 *e*SS **SS** **03 43 08.5 +2.6**
LOT Lotru 94.67 317 ⇓P **P** **03 25 37.9 +0.4**
LOT Lotru 94.67 317 P **P** **03 25 37.4 -0.1**
DAG Danmarks Havn 94.72 352 P **P** **03 25 36.2 -0.8**
DAG pmax pmax
comp=Z,33nm,0.9s
DAG Danmarks Havn 94.72 352 P **P** **03 25 35.8 -1.1**
DAG Danmarks Havn 94.72 352 *i* P **P** **03 25 35.0 -2.0**
DAG IAmb IAmb 03 25 38.0
comp=Z,26nm,0.9s
KOLS Kolonicke sedl 94.79 320 *e*P **P** **03 25 38.9 +1.0**
KOLS pmax pmax
comp=Z,5.0nm,0.7s
KOLS Kolonicke sedl 94.79 320 P **P** **03 25 38.4 +0.6**
KOLS Kolonicke sedl 94.79 320 *e*P **P** **03 25 38.9 +1.0**
MARR Marisel-Cluj 94.81 318 ⇑P **P** **03 25 38.3 +0.1**
TRPA Tarpa 94.83 319 P **P** **03 25 37.8 -0.2**
RZN Rozhen 94.85 313 P **P** **03 25 37.7 -0.8**
UZHM Uzhgorod 94.86 320 P **P** **03 25 37.9 -0.2**
SYO Syowa Base 94.90 201⇑ *i*P **P** **03 25 38.7 +0.9**
SYO Syowa Base 94.90 201⇑ *e*P P 03 25 45.6 +7.8
BEL Belsk 94.91 323 *e*P **P** **03 25 38.6 +0.4**
BEL Belsk 94.91 323 P **P** **03 25 38.9 +0.6**
BEL Belsk 94.91 323 P **P** **03 25 38.9 +0.6**
CRAR CRAIOVA 94.92 315 ⇑P **P** **03 25 38.9 +0.4**
CRAR CRAIOVA 94.92 315 ⇑P **P** **03 25 38.9 +0.4**
DRGR 95.05 318 ⇓P **P** **03 25 38.9 -0.3**
DRGR 95.05 318 ⇓P **P** **03 25 38.9 -0.3**
DRGR 95.05 318 P **P** **03 25 39.0 -0.3**
PGB Panagyurishte 95.07 314 P **P** **03 25 38.7 -0.7**
DEV Deva 95.15 317 ⇓P **P** **03 25 39.7 +0.1**
DEV Deva 95.15 317 ⇓P **P** **03 25 39.7 +0.1**
DEV Deva 95.15 317 P **P** **03 25 39.5 -0.1**
MPEP Malo Peshtene 95.19 315 P **P** **03 25 39.7 -0.1**
RES Resolute Bay 95.24 10 LR LR 04 10 19.2
comp=Z,49nm,21.7s,baz=20,slow=36
SRE Strehaia 95.25 316 ⇓P **P** **03 25 40.7 +0.7**
SRE Strehaia 95.25 316 ⇓P **P** **03 25 40.7 +0.7**
STHS Stebnicka Huta 95.31 321 *e*P **P** **03 25 41.1 +0.9**
STHS Stebnicka Huta 95.31 321 *e*PDIFF **P** **03 25 41.1 +0.9**
VALD Valchedram 95.32 315 P **P** **03 25 40.2 -0.2**
GZR Gura Zlata 95.36 317 ⇑P **P** **03 25 40.3 -0.4**
GZR Gura Zlata 95.36 317 ⇑P **P** **03 25 40.3 -0.4**
ABAH Abaujker 95.62 320 P **P** **03 25 41.7 0.0**
PLNA Plana 95.62 314 P **P** **03 25 41.3 -0.7**
BLSH Balsha 95.63 314 P **P** **03 25 42.1 +0.2**
VTS Vitosha 95.72 314 P **P** **03 25 42.1 -0.4**
HERR Herculane 95.74 316 ⇑P **P** **03 25 42.2 -0.1**
SRS Serrai 95.82 312 P **P** **03 25 41.2 -1.6**
SRS Serrai 95.82 312 P **P** **03 25 41.2 -1.6**
HFS Hagfors 95.82 332 P **P** **03 25 40.6 -1.7**
comp=Z,18nm,0.7s,baz=106,slow=3.2,SNR=62
HFS LR LR 04 11 32.9
comp=Z,175nm,18.8s,baz=69,slow=37
comp=Z,18nm,0.7s
SIRR Siria 95.89 318 ⇑P **P** **03 25 43.5 +0.5**
NIE Niedzica 95.90 321 *e*P **P** **03 25 43.3 +0.3**
OJC Ojcow 95.97 322 *e*P **P** **03 25 43.0 -0.3**
OJC Ojcow 95.97 322 P **P** **03 25 43.2 0.0**
OJC Ojcow 95.97 322 P **P** **03 25 43.2 0.0**
KKB Krupnik 95.99 321 P **P** **03 25 42.2 -1.1**
PAIG Paliouri 96.03 311 P **P** **03 25 42.4 -1.3**
PAIG Paliouri 96.03 311 P **P** **03 25 42.4 -1.3**
SOH Sokhos 96.06 312 P **P** **03 25 42.4 -1.5**
SOH Sokhos 96.06 312 P **P** **03 25 42.4 -1.5**
BZS Buzias 96.09 317 ⇑P **P** **03 25 43.2 -0.7**
BZS Buzias 96.09 317 ⇑P **P** **03 25 43.2 -0.7**
BZS Buzias 96.09 317 P **P** **03 25 43.1 -0.7**
QSPA South Pole Qui 96.22 180 P **P** **03 25 44.6 +0.5**
comp=Z,20nm,1.0s,baz=327,slow=2.8,SNR=38
comp=Z,20nm,1.0s
QSPA South Pole Qui 96.22 180 P **P** **03 25 44.9 +0.9**
QSPA South Pole Qui 96.22 180 P **P** **03 25 45.5 +1.4**
MDVR Moldovita 96.25 316 ⇑P **P** **03 25 45.4 +0.7**
KNT Kendrikon 96.32 313 P **P** **03 25 44.0 -1.0**
KNT Kendrikon 96.32 313 P **P** **03 25 43.9 -0.1**
NEEM North Greenlan 96.34 360 *i* P **P** **03 25 44.5 -0.3**
NEEM IAmb IAmb 03 25 46.7
comp=Z,16nm,0.8s
THE Thessaloniki 96.40 312 P **P** **03 25 43.3 -2.0**
THE Thessaloniki 96.40 312 P **P** **03 25 43.3 -2.0**
BANR Banloc 96.48 317 ⇓P **P** **03 25 46.2 +0.6**
AMBH Ambrzfalva 96.49 318 P **P** **03 25 46.1 +0.4**
LANS Liptovska Anna 96.50 321 *e*P **P** **03 25 46.4 +0.7**
LANS pmax pmax
comp=Z,4.0nm,0.9s
LANS Liptovska Anna 96.50 321 *e*P **P** **03 25 46.4 +0.7**
VAY Valandovo 96.52 313⇑ *i*P **P** **03 25 44.5 -1.4**
KOR Xorichti 96.53 311 P **P** **03 25 43.9 -2.1**
NC602 NORSAR Array S 96.55 333 *e*P **P** **03 25 43.9 -1.7**
NC602 NORSAR Array S 96.55 333 IAmb IAmb 03 25 47.3
comp=Z,27nm,1.4s
NORES NORESS Array B 96.55 333 P **P** **03 25 46.4 +0.8**
NORES pmax pmax
comp=Z,1.0nm,0.5s
BOVS Bovan 96.55 315 ⇑P **P** **03 25 45.5 -0.5**
NB2 NORSAR Subarra 96.56 334 P **P** **03 25 44.0 -1.7**
comp=Z,7.5nm,0.8s,baz=65,slow=4.4
NB2 NORSAR Subarra 96.56 334 P **P** **03 25 42.0 -3.7**
NB2 pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 96.56 334 P **P** **03 25 44.0 -1.7**
NOA NORSAR Array B 96.56 334 P **P** **03 25 44.1 -1.7**
comp=Z,9.7nm,0.8s,baz=65,slow=4.5,SNR=28
NOA LR LR 04 12 59.9
comp=Z,86nm,19.5s,baz=65,slow=38
comp=Z,9.7nm,0.8s

PSZ Piszkesteto 96.59 320 ⇑P **P** **03 25 46.0 -0.1**
PSZ Piszkesteto 96.59 320 ⇑P **P** **03 25 46.0 -0.1**
PSZ Piszkesteto 96.59 320 IAmb IAmb 03 25 47.0
comp=Z,19nm,1.0s
PSZ Piszkesteto 96.59 320 P **P** **03 25 46.0 -0.1**
GRG Griva 96.73 312 P **P** **03 25 45.4 -1.5**
GRG Griva 96.73 312 P **P** **03 25 45.4 -1.5**
IMMV Iera Moni Meta 96.80 307 P **P** **03 25 47.3 0.0**
LIT Litokhoron 96.88 312 P **P** **03 25 46.0 -1.6**
LIT Litokhoron 96.88 312 P **P** **03 25 46.0 -1.6**
DBG Daneborg 97.00 351 P **P** **03 25 46.5 -0.9**
DBG Daneborg 97.00 351 *i* P **P** **03 25 46.5 -0.9**
DBG IAmb IAmb 03 25 48.8
comp=Z,15nm,1.0s
DOMB Dombas 97.03 335 *e*P Pdif 03 25 48.2 +0.3
YKA Yellowknife Ar 97.07 24 P **P** **03 25 47.2 -0.7**
comp=Z,7.9nm,0.9s,baz=305,slow=4.4,SNR=14
YKA PKKPbc **PKKPbc** **03 42 27.1 -3.1**
comp=Z,1.6nm,0.7s,baz=124,slow=3.3,SNR=11
YKA LR LR 04 09 06.6
comp=Z,59nm,21.9s,baz=298,slow=35
comp=Z,7.9nm,0.9s
VYHS Vyhne 97.09 320 *e*P Pdif 03 25 48.6 +0.2
VYHS pmax pmax
comp=Z,14nm,1.3s
VYHS Vyhne 97.09 320 *e*P Pdif 03 25 48.6 +0.2
OKC Ostrava-Krasne 97.11 322 *e*P Pdif 03 25 48.7 +0.3
OKC Ostrava-Krasne 97.11 322 *e*P Pdif 03 25 48.7 +0.3
OKC Ostrava-Krasne 97.11 322 P Pdif 03 25 48.7 +0.3
BSD Bornholm Skovb 97.14 328 *i* P **P** **03 25 47.5 -0.9**
BSD IAmb IAmb 03 25 48.2
comp=Z,22nm,0.9s
OSL Oslo 97.26 333 *e*P **P** **03 25 48.1 -0.7**
OSL IAmb IAmb 03 25 48.8
comp=Z,26nm,0.6s
AGG Agios Georgios 97.26 311 P **P** **03 25 46.9 -2.5**
AGG Agios Georgios 97.26 311 P **P** **03 25 46.9 -2.5**
BUD Budapest 97.28 319 P **P** **03 25 48.3 -0.9**
BUD Budapest 97.28 319 P **P** **03 25 48.3 -0.9**
STEB Steborice 97.30 322 *e*P Pdif 03 25 49.7 +0.4
KTHA Kythira Island 97.35 308 P **P** **03 25 48.4 -1.4**
MOL Molde 97.40 336 *e*P **P** **03 25 48.6 -0.8**
MOL IAmb IAmb 03 25 48.7
comp=Z,20nm,0.9s
FRGS Fruska Gora 97.44 317⇑ *i*P **P** **03 25 49.4 -0.6**
MAUC Maruska 97.45 321 *e*P Pdif 03 25 50.7 +0.7
POGA Pongola 97.49 243 P **P** **03 25 50.0 -0.6**
MORC Moravsky Berou 97.50 322 IAmb IAmb 03 25 51.5
comp=Z,17nm,1.0s
MORC Moravsky Berou 97.50 322 *e*PDIFF **P** **03 25 50.1 -0.1**
MORC Moravsky Berou 97.50 322 P Pdif 03 25 50.5 +0.2
SRO Srobarova 97.64 320 P Pdif 03 25 51.1 +0.3
SRO Srobarova 97.64 320 P Pdif 03 25 51.1 +0.3
JAVC Velka Javorina 97.71 321 *e*PDIFF Pdif 03 25 52.4 +1.2
JAVC Velka Javorina 97.71 321 P Pdif 03 25 52.6 +1.4
TEKS Tekeris 97.81 316⇑ *i*P **P** **03 25 50.5 -1.2**
AKN Aaknes 97.81 336 *e*P **P** **03 25 50.8 -0.5**
AKN IAmb IAmb 03 25 51.3
comp=Z,22nm,0.7s
KRLC Kraliky 97.86 322 *e*P Pdif 03 25 52.1 +0.2
KRLC Kraliky 97.86 322 *e*P Pdif 03 25 52.1 +0.2
OHR Ohrid 97.86 313⇑ *i*P **P** **03 25 50.8 -1.3**
SJES Sjenica 97.87 315⇑ *i*P **P** **03 25 51.8 -0.3**
KSP Ksiaz 97.89 323 *e*P **P** **03 25 51.7 -0.2**
KONO Kongsberg 97.90 333 *e*P **P** **03 25 51.4 -0.3**
MORH Mrgy, Hungar 97.91 318 ⇓P **P** **03 25 51.1 -0.9**
MORH Mrgy, Hungar 97.91 318⇑ *i*P **P** **03 25 51.1 -0.9**
MORH Mrgy, Hungar 97.91 318 P **P** **03 25 51.7 -0.4**
PHP Peshkopia 97.97 314 P **P** **03 25 51.1 -1.4**
PHP Peshkopia 97.97 314 P **P** **03 25 51.1 -1.4**
KBN Korca 98.00 312 P **P** **03 25 51.0 -1.7**
KBN Korca 98.00 312 P **P** **03 25 51.0 -1.7**
ITM Ithomi 98.02 309 P **P** **03 25 51.5 -1.3**
OSTC Ostas 98.04 323 *e*P Pdif 03 25 53.2 +0.6
OSTC Ostas 98.04 323 *e*P Pdif 03 25 53.2 +0.6
DPC Dobruska-Polom 98.05 323 *e*P Pdif 03 25 53.2 +0.5
DPC Dobruska-Polom 98.05 323 *e*P Pdif 03 25 53.2 +0.5
DPC Dobruska-Polom 98.05 323 P Pdif 03 25 53.1 +0.4
BBLS Lazi&#263i 98.09 316⇑ *i*P Pdif 03 25 53.1 0.0
MODS Modra-Piesok 98.12 321 *e*P Pdif 03 25 53.0 0.0
MODS pmax pmax
comp=Z,10.0nm,1.3s
MODS Modra-Piesok 98.12 321 P Pdif 03 25 53.1 +0.1
MODS Modra-Piesok 98.12 321 *e*P Pdif 03 25 53.0 0.0
CHVC Chvalec 98.12 323 *e*P Pdif 03 25 53.2 +0.2
CHVC Chvalec 98.12 323 *e*P Pdif 03 25 53.2 +0.2
VRAC Vranov 98.23 322 LR LR 04 13 32.1
comp=Z,110nm,20.2s,baz=66,slow=37
VRAC Vranov 98.23 322 ⇑P Pdif 03 25 53.7 +0.2
VRAC Vranov 98.23 322 ⇑P Pdif 03 25 53.7 +0.2
VRAC Vranov 98.23 322 *e*PDIFF Pdif 03 25 53.8 +0.3
VRAC Vranov 98.23 322 P Pdif 03 25 54.1 +0.6
MPLH Magyarpolny 98.34 319 P **P** **03 25 54.0 0.0**
KRUC Moravsky 98.44 321 *e*PDIFF Pdif 03 25 54.6 +0.2
KRUC *e* 03 29 48.0
KRUC Moravsky 98.44 321 P Pdif 03 25 54.8 +0.4
LKD2 Lefkada Island 98.58 311 P **P** **03 25 54.0 -1.3**
PDG Podgorica 98.61 314⇑ *i*P **P** **03 25 54.3 -1.0**
PDG Podgorica 98.61 314 P **P** **03 25 54.8 -0.5**
UPM Unac-Piva 98.63 315 *e*P **P** **03 25 54.6 -1.0**
DRME Dracevica, Mon 98.73 314 *e*P **P** **03 25 55.4 -0.4**
RUE Ruedersdorf 98.76 325 P Pdif 03 25 55.8 +0.2
SOP Sopron 98.80 320 P **P** **03 25 55.8 -0.2**
SOP Sopron 98.80 320 P **P** **03 25 55.8 -0.2**
TREC Trest 98.92 322 *e*P Pdif 03 25 56.9 +0.3
TREC Trest 98.92 322 *e*P Pdif 03 25 56.9 +0.3
RONA Rosalia, Austr 98.96 320 *e*Pdiff **P** **03 25 56.3 -0.5**
comp=Z,2.6nm,0.8s,SNR=6.4
WINA Alland / Wiene 98.97 321 *e*Pdiff Pdif 03 25 56.9 +0.1
comp=Z,5.0nm,0.8s,SNR=5.8
BRY Bratgost 98.98 315⇑ *i*P **P** **03 25 56.1 -1.0**
PVCC Panska Ves 99.03 323 *e*P **Pdif** **03 25 57.8 +0.8**
PVCC Panska Ves 99.03 323 *e*P **Pdif** **03 25 57.8 +0.8**
BEHE Becsehely 99.06 319 IAmb IAmb 03 26 00.8
comp=Z,7.6nm,1.1s
BEHE Becsehely 99.06 319⇑ *i*P **Pdif** **03 25 57.1 -0.1**
BEHE Becsehely 99.06 319 P **Pdif** **03 25 57.5 +0.3**
HCY Herceg Novi 99.14 315 *e*P **Pdif** **03 25 56.5 -1.2**
CONA Conrad Observa 99.16 321 *i* Pdiff **Pdif** **03 25 57.5 -0.3**
comp=Z,3.7nm,0.9s,SNR=7.8
PRU Pruhonice 99.25 323 *e*P **Pdif** **03 25 58.1 +0.1**
PRU Pruhonice 99.25 323 *e*P **Pdif** **03 25 58.1 +0.1**
PRU Pruhonice 99.25 323 P **Pdif** **03 25 58.0 +0.1**
BRG Berggiesshubel 99.27 324 P **Pdif** **03 25 58.1 0.0**
BRG Berggiesshubel 99.27 324 P **Pdif** **03 25 58.1 0.0**
BRG Berggiesshubel 99.27 324⇓ *e*Pif 03 25 57.7
BRG Amp 03 25 59.5
comp=Z,21nm,0.9s
BLY Banja Luka 99.34 317 IAmb IAmb 03 25 59.5
comp=Z,8.9nm,0.9s
BLY Banja Luka 99.34 317⇑ *i*P **Pdif** **03 25 58.0 -0.5**
BLY Banja Luka 99.34 317 P **Pdif** **03 25 58.4 -0.1**
BLS5 Blasjo 99.41 333 *e*P **Pdif** **03 25 58.5 0.0**
BLS5 IAmb IAmb 03 26 00.6
comp=Z,18nm,0.7s
ARSA Arzberg 99.61 320 *e*Pdiff **Pdif** **03 25 59.5 -0.2**
comp=Z,4.6nm,0.9s,SNR=6.6
ARSA Arzberg 99.61 320 P **Pdif** **03 25 59.9 +0.2**
CLL Collm 99.66 324 *i* P **Pdif** **03 25 59.3 -0.4**
CLL *e* 03 26 21.0
CLL pmax pmax
comp=Z,32nm,1.5s
CLL Collm 99.66 324 *i* Pdif **Pdif** **03 25 59.3 -0.4**
comp=Z,32nm,1.5s
CLL *ex* x 03 26 21.0
CLL *e*PPdif **pP** **03 26 26.0 +1.3**
CLL *e*PP **PP** **03 30 07.0 +2.4**
ZVC Zvikov 99.66 322 *e*P **Pdif** **03 26 00.3 +0.5**
CKRC Cesky Krumlov 99.81 322 *e*P **Pdif** **03 26 01.1 +0.6**
CKRC Cesky Krumlov 99.81 322 *e*P **Pdif** **03 26 01.1 +0.6**
LSZ Lusaka 100.04 256 P **Pdif** **03 26 01.7 -0.6**
LSZ Lusaka 100.04 256 P **Pdif** **03 26 01.7 -0.6**
BSEG Bad Segeberg 100.07 328 P **Pdif** **03 26 01.9 +0.4**
BSEG Bad Segeberg 100.07 328 P **Pdif** **03 26 01.9 +0.4**
SOKA Soboth 100.12 320 *e*Pdiff **Pdif** **03 26 01.4 -0.6**
SOKA *e*PP **PP** **03 30 09.4 +1.0**
comp=Z,13nm,1.3s
KHC Kasperske Hory 100.14 322 *e*P **Pdif** **03 26 02.0 0.0**
KHC Kasperske Hory 100.14 322 *e*PDIFF **Pdif** **03 26 02.0 0.0**
GERES GERESS Array B 100.18 322 P **Pdif** **03 26 02.3 0.0**
comp=Z,8.9nm,0.8s,baz=69,slow=4.4,SNR=70

GERES PP **PP** **03 30 14.5 +5.8**
comp=Z,1.4nm,1.0s,baz=60,slow=5.3,SNR=4.5
GERES GERESS Array B 100.18 322 *i* P **Pdif** **03 26 02.6 +0.3**
GERES GERESS Array B 100.18 322 **Pdif** **03 26 02.5 +0.3**
MOA Molln 100.19 321 *i* Pdiff **Pdif** **03 26 02.4 +0.1**
comp=Z,9.5nm,0.7s,SNR=13
MOA *e*PP **PP** **03 30 08.3 -0.5**
comp=Z,8.4nm,1.9s
MOA Molln 100.19 321 P **Pdif** **03 26 02.7 +0.4**
SESA Seetaler Alpe, 100.27 320 *e*Pdiff **Pdif** **03 26 02.5 -0.4**
comp=Z,12nm,0.9s,SNR=12
TANN Tannenbergstha 100.32 324 P **Pdif** **03 26 03.0 +0.2**
NEUB Neuenburg 100.40 325 P **Pdif** **03 26 03.2 +0.2**
WIMM Wimmelburg 100.43 325 P **Pdif** **03 26 03.3 +0.1**
OBKA Obir 100.49 319 *i* Pdiff **Pdif** **03 26 03.2 -0.6**
comp=Z,6.7nm,1.0s,SNR=5.7
OBKA PP **PP** **03 30 13.4 +2.1**
comp=Z,9.1nm,1.6s
OBKA Obir 100.49 319 P **Pdif** **03 26 03.8 +0.1**
WET Wettzell 100.57 322 P **Pdif** **03 26 04.2 +0.3**
WET Wettzell 100.57 322 P **Pdif** **03 26 04.2 +0.3**
BIOA Bad Ischl, Aus 100.64 321 *i* Pdiff **Pdif** **03 26 04.1 -0.2**
comp=Z,8.9nm,1.0s,SNR=9.1
MOX Moxa 100.72 324 P **Pdif** **03 26 04.4 -0.2**
MOX Moxa 100.72 324 P **Pdif** **03 26 04.4 -0.2**
CLZ Clausthal 100.94 326 P **Pdif** **03 26 06.4 +0.9**
KBA Koelnbreinsper 101.06 320 P **Pdif** **03 26 05.6 -0.7**
KBA Koelnbreinsper 101.06 320 *e*Pdiff **Pdif** **03 26 05.4 -0.9**
comp=Z,8.8nm,1.2s,SNR=8.5
KBA Koelnbreinsper 101.06 320 P **Pdif** **03 26 05.6 -0.7**
GRB3 Grafenberg Arr 101.13 323 P **Pdif** **03 26 07.1 +0.7**
RJOB Jochberg 101.16 321 P **Pdif** **03 26 06.6 0.0**
GRB1 Grafenberg Arr 101.21 323 P **Pdif** **03 26 07.7 +1.0**
GRB1 Grafenberg Arr 101.21 323 P **Pdif** **03 26 07.7 +1.0**
GRB4 Grafenberg Arr 101.23 323 P **Pdif** **03 26 05.5 -1.3**
GRB2 Grafenberg Arr 101.25 323 P **Pdif** **03 26 07.6 +0.7**
GRA3 Grafenberg Arr 101.26 323 P **Pdif** **03 26 07.5 +0.6**
GRB5 Grafenberg Arr 101.30 323 P **Pdif** **03 26 07.4 +0.2**
LESA Schwarzleotal 101.35 321 *i* Pdiff **Pdif** **03 26 06.8 -0.7**
comp=Z,4.4nm,0.7s,SNR=9.7
LESA PP **PP** **03 30 15.9 -1.7**
comp=Z,5.3nm,1.2s
TIP Timpagrande 101.39 312 P **Pdif** **03 26 07.8 0.0**
GRC4 Grafenberg Arr 101.41 323 P **Pdif** **03 26 08.2 +0.6**
GRC1 Grafenberg Arr 101.44 323 P **Pdif** **03 26 04.1 -3.7**
GRC3 Grafenberg Arr 101.45 323 P **Pdif** **03 26 08.1 +0.3**
GRC2 Grafenberg Arr 101.58 323 P **Pdif** **03 26 08.6 +0.2**
UBBA Unterbreizbach 101.58 325 P **Pdif** **03 26 08.0 -0.2**
ABTA Abfaltersbach 101.71 320 *i* Pdiff **Pdif** **03 26 07.7 -1.4**
comp=Z,7.4nm,0.9s,SNR=7.4
CIMO Cimolais 101.92 320 P **Pdif** **03 26 09.2 -0.9**
WTTA Wattenberg 102.06 321 P **Pdif** **03 26 10.5 -0.3**
WTTA Wattenberg 102.06 321 *i* Pdiff **Pdif** **03 26 10.3 -0.5**
comp=Z,7.5nm,0.6s,SNR=11
WTTA Wattenberg 102.06 321 P **Pdif** **03 26 10.5 -0.3**
WATA Walderalm 102.07 321 *i* Pdiff **Pdif** **03 26 10.1 -0.7**
comp=Z,5.0nm,0.7s,SNR=9.0
NEW Newport 102.08 38 P **Pdif** **03 26 10.9 +0.2**
comp=Z,4.1nm,0.8s,baz=289,slow=1.9,SNR=6.8
NEW Newport 102.08 38 P **Pdif** **03 26 11.1 +0.4**
CEL Celeste 102.31 311 **Pdif** **03 26 11.8 -0.1**
CEL Celeste 102.31 311 P **Pdif** **03 26 11.8 -0.1**
SQTA Sankt Quirin 102.35 321 *i* Pdiff **Pdif** **03 26 11.5 -0.5**
comp=Z,6.9nm,0.7s,SNR=12
MOTA Moosalm 102.36 321 *i* Pdiff **Pdif** **03 26 11.4 -0.7**
comp=Z,12nm,0.9s,SNR=9.0
RETA Reutte 102.52 321 *i* Pdiff **Pdif** **03 26 12.0 -0.6**
comp=Z,3.0nm,1.0s
RETA PP **PP** **03 30 26.2 -0.2**
comp=Z,4.2nm,1.2s
FETA Feichten 102.73 321 *i* Pdiff **Pdif** **03 26 13.3 -0.4**
comp=Z,5.4nm,0.8s,SNR=12
TNS Taunus Mts 102.74 325 P **Pdif** **03 26 14.1 +0.6**
TNS Taunus Mts 102.74 325 P **Pdif** **03 26 14.1 +0.6**
AQU L'Aquila 102.74 316 P **Pdif** **03 26 14.6 +0.8**
AQU pmax pmax
comp=Z,20nm,0.9s
AQU L'Aquila 102.74 316 *e*P **Pdif** **03 26 13.4 -0.4**
AQU L'Aquila 102.74 316 P **Pdif** **03 26 11.3 -2.5**
DAVA Damuels 103.15 321 *i* Pdiff **Pdif** **03 26 15.4 -0.2**
comp=Z,9.5nm,1.2s
DAVA Damuels 103.15 321 P **Pdif** **03 26 15.4 -0.2**
FUORN Ofenpass-Fuorn 103.18 321 P **Pdif** **03 26 16.3 +0.4**
BOSA Boshof 103.23 242 Pdiff **Pdif** **03 26 18.1 +1.8**
comp=Z,3.6nm,0.9s,baz=106,slow=4.1,SNR=4.0
TUE Stuetta 103.82 321 P **Pdif** **03 26 19.2 +0.5**
BNALP Bannalp 104.22 322 P **Pdif** **03 26 19.6 -0.7**
NVAR Mina Array Bea 105.04 48 PKKPbc PKKPbc **03 42 07.3 +0.4**
comp=Z,1.3nm,0.7s,baz=126,slow=5.1,SNR=7.1
EKA Eskdalemuir Ar 106.01 333 **Pdif** **03 26 27.6 -0.3**
comp=Z,0.6nm,0.6s,baz=64,slow=1.9,SNR=4.7
EKA PP **PP** **03 30 52.8 +1.0**
comp=Z,1.9nm,0.9s,baz=89,slow=10,SNR=3.5
ELK Elko 106.35 44 Pdiff **Pdif** **03 26 32.1 +2.0**
comp=Z,0.5nm,0.3s,baz=266,slow=8.8,SNR=3.7
ELK PP **PP** **03 30 56.0 +0.7**
comp=Z,0.4nm,0.3s,baz=278,slow=7.3,SNR=4.2
SNAA Sanae 107.75 195 PP **PP** **03 31 04.4 -0.2**
comp=Z,5.1nm,1.0s,baz=52,slow=9.9,SNR=5.7
SNAA PKKPbc **PKKPab** **03 42 06.7 -4.2**
comp=Z,1.1nm,0.5s,baz=314,slow=3.9,SNR=4.9
KEST Kesra 108.10 311 PP **PP** **03 31 09.3 +1.3**
comp=Z,8.3nm,0.9s,baz=59,slow=5.2,SNR=7.5
PDAR Pinedale Array 109.28 41 PKiKP **PKiKP** **03 30 45.1 -1.3**
comp=Z,0.6nm,0.9s,baz=299,slow=3.1,SNR=3.7
PDAR PP **PP** **03 31 17.4 +1.0**
comp=Z,0.9nm,0.9s,baz=308,slow=7.9,SNR=3.4
PDAR PKKPbc **PKKPab** **03 42 04.1 -2.0**
comp=Z,7.4nm,0.8s,baz=122,slow=6.0,SNR=44
VNA1 Neumayer--Stat 109.77 194 ⇓P **Pdif** **03 26 43.4 -0.8**
comp=Z,6.3nm,1.1s
ANMO Albuquerque 115.13 47 PKP **PKPdf** **03 30 58.3 +0.6**
comp=Z,2.0nm,1.0s,baz=221,slow=4.7,SNR=6.6
ESDC Sonseca Array 115.63 320 PKP **PKPdf** **03 30 58.7 +0.4**
comp=Z,1.9nm,0.8s,baz=40,slow=2.1,SNR=10
ESDC PP **PP** **03 32 03.3 +1.8**
comp=Z,2.0nm,0.9s,baz=48,slow=7.3,SNR=5.3
ESDC PKKPbc **PKKPbc** **03 41 33.2 +0.8**
comp=Z,0.5nm,0.7s,baz=270,slow=4.2,SNR=5.0
PGAV Gavieira, Arco 116.94 324 *e*PKPdf **PKiKP** **03 31 00.5 -0.3**
PCAB Cabril 116.95 324 *e*PKPdf **PKiKP** **03 31 00.9 +0.1**
POLO Lamas de Olo 117.02 323 *e*PKPdf **PKiKP** **03 31 01.6 +0.5**
PVRL Vila Real 117.03 323 *e*PKPdf **PKiKP** **03 31 02.0 +1.0**
MTE Manteigas 117.45 322 *e*PKPdf **PKiKP** **03 31 02.5 +0.6**
PVIS Viseu 117.48 323 *e*PKPdf **PKiKP** **03 31 02.3 +0.4**
PTO Porto 117.64 323 *e*PKPdf **PKiKP** **03 31 02.9 +0.8**
PCBR Castelo Branco 117.75 322 *e*PKPdf **PKiKP** **03 31 03.0 +0.6**
PMRV Marv??o 117.94 321 *e*PKPdf **PKiKP** **03 31 03.9 +1.1**
SCHQ Schefferville 117.99 9 PKP **PKPdf** **03 31 02.1 -0.3**
comp=Z,4.0nm,0.9s,baz=55,slow=5.3,SNR=5.8
PCAS Casmilo, Conde 118.25 322 *e*PKPdf **PKiKP** **03 31 03.6 +0.3**
PSARD Sardoal 118.31 322 *e*PKPdf **PKiKP** **03 31 04.6 +1.1**
PESTR Estremoz 118.40 321 *e*PKPdf **PKiKP** **03 31 03.1 -0.5**
PBAR Barrancos 118.45 320 *e*PKPdf **PKiKP** **03 31 04.2 +0.4**
PARRA Arraiolos 118.71 321 *e*PKPdf **P

PLCA	Paso Flores	142.34	158	PKhKP	PKPpre	03 31 46.1		
	comp=Z,7.7nm,0.9s,baz=228,slow=3.3,SNR=8.9							
PLCA	Paso Flores	142.34	158	*eP*	**PKPdf**	03 31 46.5	-2.3	
JTS	Las Juntas de	144.22	63	PKIKP	**PKPab**	03 31 49.8	-0.9	
JTS	Las Juntas de	144.22	63		**PKPdf**	03 31 53.2	+0.6	
HDC	Heredia	145.09	63	*eP*	**PKPbc**	03 31 51.3	-2.6	
TRQA	Tornquist	147.40	167	PKP2	**PKPbc**	03 32 00.8	+0.8	
TRQA	Tornquist	147.40	167		**PKPbc**	03 32 00.8	+0.8	
DR12	Loma Pena Alta	150.32	32		**PKiKP**	03 32 08.4	-0.3	
CFA	Coronel Fontan	151.13	152	PKPbc	**PKiKP**	03 32 10.3	+0.2	
	comp=Z,12nm,0.7s,baz=237,slow=2.7,SNR=39							
ANCO	Parque Anchore	151.82	171	*eP*	**PKPdf**	03 32 01.1	-3.5	
OTAV	Otavalo	153.85	76	*eP*	**PKPdf**	03 32 02.4	-6.3	
ATAH	Atahualpa	154.85	93	PKP	**PKPdf**	03 32 10.4	+0.4	
	comp=Z,5.3nm,0.8s,baz=99,slow=15,SNR=3.6							
PSAL	Palomas, Salto	155.01	171	*eP*	**PKPdf**	03 32 06.4	-2.8	
ROSC	El Rosal	156.07	63	PKP	**PKPdf**	03 32 12.5	+0.9	
	comp=Z,3.9nm,0.4s,baz=267,slow=6.3,SNR=5.1							
ROSC	El Rosal	156.07	63		**PKPdf**	03 32 13.2	+1.6	
SDV	Santo Domingo	156.88	49	PKP	**PKPdf**	03 32 12.8	+0.4	
	comp=Z,14nm,0.7s,baz=48,slow=1.9,SNR=5.1							
SDV				PKPab	**PKPab**	03 32 43.8	+1.3	
	comp=Z,6.3nm,0.3s,baz=6.8,slow=6.4,SNR=4.1							
SDV	Santo Domingo	156.88	49	*eP*	**PKPdf**	03 32 08.1	-4.3	
ITAB	Concordia	159.19	182	*eP*	**PKPdf**	03 32 10.6	-4.0	
CPUP	Villa Florida	159.70	169	PKP	**PKPdf**	03 32 15.8	+0.6	
	comp=Z,3.0nm,0.9s,baz=354,slow=3.3,SNR=5.4							
CPUP				PKPab	**PKPab**	03 32 55.9	+1.9	
	comp=Z,5.3nm,1.1s,baz=219,slow=5.6,SNR=3.9							
CZSB	Cruzeiro do Su	160.47	95	*eP*	**PKPdf**	03 32 13.0	-3.4	
LPAZ	La Paz	162.25	125	PKP	**PKPdf**	03 32 20.9	+1.9	
	comp=Z,4.5nm,1.0s,baz=312,slow=3.5,SNR=10							
LPAZ				PKPab	**PKPab**	03 33 08.7	+2.4	
	comp=Z,6.8nm,0.8s,baz=188,slow=1.0,SNR=8.7							
LPAZ	La Paz	162.25	125	PKIKP	**PKPdf**	03 32 17.1	-1.9	
LPAZ	La Paz	162.25	125		**PKPdf**	03 32 17.1	-1.9	
LPAZ	La Paz	162.25	125	*eP*	**PKPdf**	03 32 13.5	-5.5	
SJMB	Sao Joao De Ma	163.10	222	*eP*	**PKPdf**	03 32 13.8	-5.1	
SIV	San Ignacio	167.61	141	PKP	**PKPdf**	03 32 23.9	+1.1	
	comp=Z,4.3nm,0.7s,baz=176,slow=1.7,SNR=28							
JANB	Januaria	167.78	224	*eP*	**PKPdf**	03 32 20.3	-2.7	
TEFE	Tefe	168.16	77	*eP*	**PKPdf**	03 32 19.7	-3.6	
NBPS	Pedro II - PI	168.26	279	*eP*	**PKPdf**	03 32 19.1	-4.4	
BOAV	Boa Vista	168.59	41	*eP*	**PKPdf**	03 32 20.7	-2.9	
MDP	Montagnes des	168.64	358	PKPab	**PKPab**	03 33 33.9	+0.4	
	comp=Z,7.0nm,0.9s,baz=352,slow=1.3,SNR=4.3							
PP1B	Ponte de Pedra	168.66	171	*eP*	**PKPdf**	03 32 20.5	-3.0	
PTLB	Pontes e Lacer	169.16	147	*eP*	**PKPdf**	03 32 20.9	-2.9	
BDFB	Brasilia	169.49	208	PKP	**PKPdf**	03 32 24.5	+0.4	
	comp=Z,2.1nm,0.8s,baz=168,slow=2.6,SNR=3.8							
BDFB				PKPab	**PKPab**	03 33 38.6	+1.1	
	comp=Z,25nm,0.9s,baz=120,slow=3.6,SNR=22							
SALV	Santo Antonio	170.15	165	*eP*	**PKPdf**	03 32 20.0	-4.4	
VILB	Vilhena	170.38	134	*eP*	**PKPdf**	03 32 20.7	-4.0	
ARAG	Araguaiana, MT	170.59	188	*eP*	**PKPdf**	03 32 21.7	-3.0	
MACA	Manacapuru-AM	171.80	68	*eP*	**PKPdf**	03 32 21.9	-3.5	
SMTB	Santa Maria do	174.00	245	*eP*	**PKPdf**	03 32 21.3	-5.0	
SNDB	Serra Nova Dou	174.12	197	*eP*	**PKPdf**	03 32 21.8	-4.4	
CLDB	Colider	174.74	149	*eP*	**PKPdf**	03 32 21.9	-4.6	
ITTB	Itatuba	176.72	54	*eP*	**PKPdf**	03 32 22.0	-5.0	
PRPB	Parauapebas	176.75	273	*eP*	**PKPdf**	03 32 22.2	-4.8	

*NOU **26** 03:20:06.7,44.64S×168.30E,h76km,MLv3.5/12,South Island, New Zealand*
*WEL **26** 03:20:07.4±0.7,45.2°S±4.4°×167.8°E±5.6°,h69km±7km,M3.2/11, ML3.1/13,MLv3.2/11,Error ellipse: s-maj=5.7km s-min=3.8km az=131.5*
ISC 26 03:20:05.9±1.3,44.63S±0.04°×168.26E±0.04,h93km±8km, n53,σ1§15/78,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.24**	**259**	P	**Pn**	**03 20 19.0**	**-0.4**
MSZ				S	**Sn**	**03 20 29.1**	**-0.3**
WKZ	**Wanaka**	**0.57**	**111**	P	**Pn**	**03 20 22.9**	**+1.3**
WKZ				S	**Sn**	**03 20 33.3**	**0.0**
JCZ	**Jackson Bay**	**0.67**	**34**	P	**Pn**	**03 20 23.2**	**+0.7**
JCZ	**Jackson Bay**	**0.67**	**34**	S	**Sn**	**03 20 35.1**	**+0.2**
JCZ	**Jackson Bay**	**0.67**	**34**	P	**Pn**	**03 20 23.3**	**+0.7**
JCZ				S	**Sn**	**03 20 34.8**	**-0.1**
MLZ	**Mavora Lakes**	**0.75**	**188**	P	**Pn**	**03 20 23.4**	**+0.3**
MLZ				S	**Sn**	**03 20 35.5**	**-0.5**
MECS	**Makarora Emerg**	**0.80**	**61**	P	**Pn**	**03 20 24.9**	**+1.2**
EAZ	**Earnscleugh**	**0.96**	**129**	P	**Pn**	**03 20 26.8**	**+1.4**
EAZ				S	**Sn**	**03 20 39.7**	**-0.2**
MOSS	**Mossburn Schoo**	**1.04**	**181**	P	**Pn**	**03 20 27.0**	**+0.8**
MOSS				S	**Sn**	**03 20 41.1**	**-0.4**
DCZ	**Deep Cove**	**1.15**	**223**	P	**Pn**	**03 20 26.8**	**-0.7**
DCZ				S	**Sn**	**03 20 42.1**	**-1.6**
WHZ	**Wether Hill Ro**	**1.28**	**190**	P	**Pn**	**03 20 29.7**	**+0.6**
WHZ				S	**Sn**	**03 20 46.7**	**+0.1**
LBZ	**Lake Benmore**	**1.40**	**81**	P	**Pn**	**03 20 31.5**	**+1.0**
LBZ				S	**Sn**	**03 20 47.2**	**-0.4**
FOZ	**Fox Glacier**	**1.57**	**46**	P	**Pn**	**03 20 33.0**	**+0.5**
FOZ				S	**Sn**	**03 20 52.5**	**-0.4**
TUZ	**Tuapeka**	**1.64**	**144**	P	**Pn**	**03 20 34.9**	**+1.4**
TUZ				S	**Sn**	**03 20 53.7**	**-0.8**
ODZ	**Otahua Downs**	**1.75**	**105**	P	**Pn**	**03 20 36.0**	**+1.1**
ODZ	**Otahua Downs**	**1.75**	**105**	P	**Pn**	**03 20 36.1**	**+1.1**
ODZ				S	**Sn**	**03 20 55.6**	**-1.3**
PYZ	**Puysegur Point**	**1.90**	**215**	P	**Pn**	**03 20 38.0**	**+1.1**
PYZ	**Puysegur Point**	**1.90**	**215**	S	**Sn**	**03 20 59.9**	**-0.6**
PYZ	**Puysegur Point**	**1.90**	**215**	P	**Pn**	**03 20 37.8**	**+1.0**
TMZ	**Timaru**	**1.98**	**84**	P	**Pn**	**03 20 38.6**	**+0.7**
TMZ				S	**Sn**	**03 21 01.5**	**-0.8**
GCSZ	**Gaunt Creek Bo**	**1.99**	**49**	P	**Pn**	**03 20 38.0**	**0.0**
GCSZ				S	**Sn**	**03 21 01.5**	**-0.9**
SYZ	**Scrubby Hill**	**2.01**	**162**	P	**Pn**	**03 20 39.3**	**+1.1**
SYZ	**Scrubby Hill**	**2.01**	**162**	P	**Pn**	**03 20 39.5**	**+1.3**
SYZ				S	**Sn**	**03 21 01.5**	**-1.4**
HHSZ	**Highcliff Hill**	**2.07**	**128**	P	**Pn**	**03 20 41.1**	**+1.9**
HHSZ				S	**Sn**	**03 21 03.9**	**-0.6**
ARCZ	**Arundel**	**2.20**	**73**	P	**Pn**	**03 20 41.0**	**+0.1**
ARCZ				S	**Sn**	**03 21 06.8**	**-0.7**
RPZ	**Rata Peaks**	**2.21**	**67**	P	**Pn**	**03 20 41.0**	**+0.1**
RPZ	**Rata Peaks**	**2.21**	**67**	P	**Pn**	**03 20 41.2**	**+0.3**
RPZ				S	**Sn**	**03 21 07.1**	**-0.6**
APZ	**The Paps**	**2.21**	**185**	P	**Pn**	**03 20 41.6**	**+0.6**
APZ				S	**Sn**	**03 21 08.3**	**+0.5**
WVZ	**Waitaha Valley**	**2.37**	**50**	P	**Pn**	**03 20 43.1**	**+0.1**
MHCZ	**Mount Hutt**	**2.62**	**66**	P	**Pn**	**03 20 46.4**	**-0.1**
MHCZ				S	**Sn**	**03 21 17.0**	**-0.6**
WACZ	**Wakanui South**	**2.66**	**76**	P	**Pn**	**03 20 47.1**	**+0.2**
WACZ				S	**Sn**	**03 21 16.5**	**-1.8**
INZ	**Inchbonnie**	**2.99**	**52**	P	**Pn**	**03 20 51.4**	**+0.1**
OXZ	**Oxford**	**3.02**	**66**	P	**Pn**	**03 20 49.1**	**-2.7**
OXZ				S	**Sn**	**03 21 25.1**	**-2.0**
MQZ	**McQueen's Vall**	**3.29**	**75**	P	**Pn**	**03 20 52.2**	**-0.2**
MQZ				S	**Sn**	**03 21 30.6**	**-2.9**
AKCZ	**Akaroa Harbour**	**3.42**	**79**	P	**Pn**	**03 20 57.1**	**-0.1**
AKCZ				S	**Sn**	**03 21 33.8**	**-3.0**
LTZ	**Lake Taylor**	**3.44**	**59**	P	**Pn**	**03 20 56.9**	**-0.6**
AMCZ	**Amberley**	**3.49**	**67**	P	**Pn**	**03 20 58.0**	**0.0**
GVZ	**Greta Valley S**	**3.83**	**66**	P	**Pn**	**03 21 02.3**	**-0.4**
DSZ	**Denniston Nort**	**3.88**	**43**	P	**Pn**	**03 21 03.2**	**-0.1**
KHZ	**Kahutara**	**4.43**	**62**	P	**Pn**	**03 21 10.4**	**-0.3**
THZ	**Tophouse**	**4.44**	**51**	P	**Pn**	**03 21 10.5**	**-0.5**
MRNZ	**Matariki Terra**	**4.61**	**47**	P	**Pn**	**03 21 13.8**	**+0.5**
QRZ	**Quartz Range**	**4.93**	**41**	P	**Pn**	**03 21 17.6**	**0.0**
QRZ	**Quartz Range**	**4.93**	**41**	S	**Sn**	**03 22 13.2**	**-0.2**
QRZ	**Quartz Range**	**4.93**	**41**	P	**Pn**	**03 21 17.7**	**0.0**
TKNZ	**Takaka Hill**	**4.98**	**46**	P	**Pn**	**03 21 19.2**	**+0.9**
NNZ	**Nelson**	**5.07**	**50**	P	**Pn**	**03 21 21.6**	**+2.1**
TUWZ	**Tuamarina**	**5.25**	**54**	P	**Pn**	**03 21 24.3**	**+2.4**
TUWZ				S	**Sn**	**03 22 21.6**	**+0.5**
TCW	**Tory Channel**	**5.58**	**54**	P	**Pn**	**03 21 27.4**	**+1.0**
DUWZ	**D'Urville Isla**	**5.66**	**49**	P	**Pn**	**03 21 29.2**	**+1.7**
CAW	**Cannon Point**	**6.11**	**57**	P	**Pn**	**03 21 32.2**	**-1.4**
PKE	**Pukeiti**	**6.91**	**40**	P	**Pn**	**03 21 46.7**	**+2.2**
OUZ	**Omahuta**	**10.25**	**25**	P	**Pn**	**03 22 32.6**	**+2.7**

*AEIC **26** 03:20:30.8±0.9,59.70N±0.05°×152.78W±0.08,h82km±5km, Error ellipse: s-maj=7.2km s-min=5.0km az=209.0*
NEIC 26 03:20:30.0±0.7,59.69N±0.04°×152.78W±0.07,h86km±5km, ML2.6/102,**ML2.3**(AEIC),**Error ellipse: s-maj=6.6km s-min=5.0km az=213.0,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
P19K	**Oil Pt**	**0.23**	**261**		**Pn**	03 20 42.7	+0.1
P19K					Sn	03 20 52.4	+0.4
ILS	**Iliamna Low So**	**0.30**	**332**		**Pn**	03 20 42.9	-0.2
ILS					Sn	03 20 52.5	-0.2
ILSW	**Iliamna Southw**	**0.35**	**328**		**Pn**	03 20 43.1	-0.2
ILSW					Sn	03 20 52.1	-1.1
IVE	**Iliamna Volcan**	**0.35**	**340**		**Pn**	03 20 43.1	-0.2
IVE					Sn	03 20 53.1	-0.1
O20K	**Slope Mountain**	**0.40**	**11**		**Pn**	03 20 43.7	+0.1
O20K					Sn	03 20 54.6	+0.9
AUCH	**Augustine Cone**	**0.47**	**226**		**Pn**	03 20 44.3	+0.2
HOM	**Homer**	**0.58**	**93**		**Pn**	03 20 45.1	+0.2
HOM				Sn	**Sn**	03 20 56.7	+0.7
HOM				IAML		03 20 58.6	
	comp=N,290nm,0.4s						
HOM				IAML		03 20 59.2	
	comp=E,258nm,0.4s						
RED	**Redoubt Volcan**	**0.73**	**0**		**Sn**	03 20 58.5	-0.3
RDSO	**Redoubt South**	**0.77**	**1**		**Pn**	03 20 46.7	-0.2
RDSO					Sn	03 20 59.8	+0.2
RDWB	**Redoubt West**	**0.80**	**358**		**Pn**	03 20 47.1	-0.2
RDWB					Sn	03 21 00.1	-0.1
CNPM	**China Poot**	**0.80**	**101**		**Pn**	03 20 47.0	-0.2
CNPM	**China Poot**	**0.80**	**101**		Sn	03 20 59.4	-0.6
CNPM				IAML		03 20 59.8	
	comp=N,146nm,0.5s						
CNPM				IAML		03 21 01.5	
	comp=E,105nm,0.3s						
REF	**Redoubt East F**	**0.80**	**3**		**Pn**	03 20 47.1	-0.2
REF					Sn	03 21 00.6	+0.3
BRLK	**Bradley Lake**	**0.96**	**85**		**Pn**	03 20 48.4	-0.6
BRLK				IAML		03 21 04.0	
	comp=N,95nm,0.2s						
BRLK				IAML		03 21 05.7	
	comp=E,82nm,0.2s						
O18K	**Koktuh Hills**	**1.24**	**279**		**Pn**	03 20 52.1	-0.1
O18K				IAML		03 21 09.1	
	comp=N,59nm,0.5s						
O18K				IAML		03 21 09.2	
	comp=E,56nm,0.7s						
O18K	**Koktuh Hills**	**1.24**	**279**		Sn	03 21 08.3	-0.6
P18K	**Big Mountain,**	**1.28**	**258**		Sn	03 21 09.3	-0.7
N19K	**Bonanza Creek**	**1.41**	**324**		**Pn**	03 20 54.5	0.0
N19K	**Bonanza Creek**	**1.41**	**324**		Sn	03 21 12.7	-0.2
SLKM	**Skilak Lake**	**1.52**	**56**		**Pn**	03 20 56.1	+0.3
SLKM	**Skilak Lake**	**1.52**	**56**	IAML		03 21 16.2	
	comp=N,79nm,0.3s						
SLKM				IAML		03 21 17.0	
	comp=E,56nm,0.2s						
SPU	**Mount Spurr**	**1.54**	**13**		**Pn**	03 20 56.0	-0.1
SPWE	**Spurr West**	**1.59**	**4**		**Pn**	03 20 57.1	+0.3
SPCG	**Spurr Capps Gl**	**1.65**	**13**		**Pn**	03 20 57.7	+0.1
O22K	**Cooper Landing**	**1.73**	**61**		**Pn**	03 20 57.8	-0.6
O22K	**Cooper Landing**	**1.73**	**61**	IAML		03 21 27.9	
	comp=E,112nm,0.8s						
SEW	**Seward**	**1.73**	**75**		**Pn**	03 20 58.3	0.0
SEW	**Seward**	**1.73**	**75**	IAML		03 21 19.3	
	comp=N,34nm,0.5s						
SEW				IAML		03 21 19.9	
	comp=E,27nm,0.4s						
KAKN	**Katmai Knife C**	**1.83**	**221**		**Pn**	03 20 59.9	+0.1
N18K	**Kilae Creek**	**1.84**	**304**		**Pn**	03 21 00.0	+0.1
N18K				IAML		03 21 22.6	
	comp=N,32nm,0.7s						
STLK	**Strandline Lak**	**1.88**	**14**		**Pn**	03 20 59.6	-0.8
KDAK	**Kodiak Island**	**1.92**	**177**		**Pn**	03 21 00.1	-0.8
KDAK				IAML		03 21 33.0	
	comp=N,18nm,0.3s						
KDAK				IAML		03 21 34.2	
	comp=N,19nm,1.1s						
P17K	**Kvichak River**	**1.93**	**257**		**Pn**	03 21 01.4	+0.4
P17K				IAML		03 21 34.6	
	comp=E,49nm,1.2s						
P17K				IAML		03 21 44.4	
	comp=N,51nm,0.9s						
ACHA	**Angle Creek He**	**1.98**	**223**		**Pn**	03 21 02.1	+0.3
MGLS	**Mageik Landsli**	**1.99**	**219**		**Pn**	03 21 02.3	+0.5
ANCK	**Angle Creek**	**2.05**	**224**		**Pn**	03 21 03.1	+0.4
Q17K	**Contact Creek**	**2.15**	**230**		**Pn**	03 21 04.2	+0.1
O17K	**Koliganek Bris**	**2.19**	**274**		**Pn**	03 21 04.5	+0.1
M20K	**Styx River**	**2.21**	**356**		**Pn**	03 21 05.1	+0.3
N17K	**Nushagak Hills**	**2.36**	**293**		**Pn**	03 21 06.9	+0.1
SKT	**Skwentna**	**2.38**	**14**		**Pn**	03 21 06.8	-0.2
SKT	**Skwentna**	**2.38**	**14**	IAML		03 21 39.5	
	comp=E,11nm,0.3s						
OHAK	**Old Harbor**	**2.49**	**186**		**Pn**	03 21 07.4	-1.1
PWL	**Port Wells**	**2.51**	**60**		**Pn**	03 21 07.6	-1.1
L19K	**White Mountain**	**2.70**	**339**		**Pn**	03 21 11.6	+0.3
L19K				IAML		03 21 43.3	
	comp=E,11nm,0.6s						
O16K	**Kokwok River B**	**2.70**	**270**		**Pn**	03 21 11.4	+0.1
P23K	**Montague Islan**	**2.73**	**81**		**Pn**	03 21 11.7	0.0
P23K	**Montague Islan**	**2.73**	**81**	IAML		03 21 42.9	
	comp=N,44nm,0.8s						
KNK	**Knik Glacier**	**2.75**	**49**		**Pn**	03 21 11.7	-0.3
KNK	**Knik Glacier**	**2.75**	**49**	IAML		03 21 43.9	
	comp=N,44nm,0.5s						
KNK				IAML		03 21 45.3	
	comp=E,42nm,0.5s						
P16K	**Nushagak River**	**2.75**	**258**		**Pn**	03 21 12.7	+0.8
P16K	**Nushagak River**	**2.75**	**258**	IAML		03 21 47.6	
	comp=N,43nm,1.1s						
P16K				IAML		03 22 49.1	
	comp=E,27nm,1.1s						
R17L	**Mt. Peulik Vol**	**2.79**	**224**		**Pn**	03 21 13.1	+0.6
M17K	**Holitna River**	**2.87**	**309**		**Pn**	03 21 13.8	+0.2
M17K				IAML		03 21 47.1	
	comp=N,18nm,0.9s						
M17K				IAML		03 21 47.6	
	comp=E,15nm,0.8s						
L22K	**Petersville**	**3.01**	**18**		**Pn**	03 21 16.2	+0.7
L22K	**Petersville**	**3.01**	**18**	IAML		03 21 53.4	
	comp=E,11nm,0.5s						
L22K				IAML		03 21 56.5	
	comp=N,9.0nm,1.2s						
SML	**Sawmill**	**3.05**	**44**		**Pn**	03 21 15.6	-0.4
SML	**Sawmill**	**3.05**	**44**	IAML		03 21 51.2	
	comp=N,17nm,0.5s						
SML				IAML		03 21 55.7	
	comp=E,17nm,0.6s						
GLI	**Glacier Island**	**3.07**	**65**		**Pn**	03 21 14.5	-1.8
N16K	**Nishlik Lake**	**3.10**	**287**		**Pn**	03 21 16.6	-0.1
L18K	**Granite Mounta**	**3.17**	**325**		**Pn**	03 21 17.4	-0.3
SII	**Sitkinak Islan**	**3.23**	**194**		**Pn**	03 21 17.4	-1.0
SII	**Sitkinak Islan**	**3.23**	**194**	IAML		03 21 55.2	
	comp=E,17nm,0.3s						
SII				IAML		03 22 11.3	
	comp=N,20nm,1.1s						
HIN	**Hinchinbrook I**	**3.23**	**75**		**Pn**	03 21 17.2	-1.2
FID	**Port Fidalgo**	**3.32**	**69**		**Pn**	03 21 17.6	-2.1
L17K	**Donlin**	**3.64**	**315**		**Pn**	03 21 23.7	-0.3
WAT7	**Susitna Watana**	**3.68**	**29**		**Pn**	03 21 24.5	-0.1
N15K	**Kwethluk River**	**3.71**	**281**		**Pn**	03 21 25.7	+0.8
N15K	**Kwethluk River**	**3.71**	**281**	IAML		03 22 25.9	
	comp=N,5.6nm,1.0s						
N15K				IAML		03 22 39.7	
	comp=E,6.9nm,0.9s						
K20K	**Telida**	**3.73**	**351**		**Pn**	03 21 25.4	+0.1
CAST	**Castle Rocks**	**3.76**	**5**		**Pn**	03 21 26.0	+0.4
DIV	**Divide**	**3.77**	**64**		**Pn**	03 21 24.7	-1.0
DIV	**Divide**	**3.77**	**64**	IAML		03 22 10.4	
	comp=E,10nm,0.5s						
KLU	**Klutina**	**3.84**	**59**		**Pn**	03 21 25.3	-1.4
TRF	**Thorofare Moun**	**3.96**	**16**		**Pn**	03 21 28.9	+0.5
TRF	**Thorofare Moun**	**3.96**	**16**	IAML		03 22 20.0	
	comp=N,5.3nm,0.4s						
TRF				IAML		03 22 23.4	
	comp=E,4.1nm,0.9s						
K17K	**Iditarod**	**4.04**	**321**		**Pn**	03 21 29.6	+0.2
GOAT	**Goat Mountain**	**4.13**	**74**		**Pn**	03 21 30.2	-0.4
RND	**Reindeer**	**4.18**	**25**		**Pn**	03 21 31.3	0.0
RND	**Reindeer**	**4.18**	**25**	IAML		03 22 20.2	
	comp=E,5.9nm,1.2s						
RND				IAML		03 22 24.4	
	comp=N,4.6nm,0.8s						
CHUM	**Lake Minchumin**	**4.21**	**3**		**Pn**	03 21 32.2	+0.4
J18K	**Innoko River**	**4.23**	**335**		**Pn**	03 21 32.0	+0.1
J18K	**Innoko River**	**4.23**	**335**	IAML		03 24 22.7	
	comp=N,3.3nm,0.7s						
J18K				IAML		03 24 28.1	
	comp=E,3.4nm,0.7s						
KAIM	**Kayak Island**	**4.23**	**83**		**Pn**	03 21 32.0	0.0
BMRM	**Bremner River**	**4.26**	**69**		**Pn**	03 21 32.1	-0.4
BMRM	**Bremner River**	**4.26**	**69**	IAML		03 22 24.9	
	comp=E,8.1nm,1.0s						
MCK	**McKinley**	**4.45**	**23**		**Pn**	03 21 35.2	+0.2
MCK	**McKinley**	**4.45**	**23**	IAML		03 24 39.3	
	comp=N,24nm,0.7s						
MCK				IAML		03 24 39.8	
	comp=E,15nm,0.6s						
N25K	**Chitina, Valde**	**4.46**	**61**		**Pn**	03 21 34.2	-1.0
J19K	**Poorman**	**4.52**	**344**		**Pn**	03 21 36.0	+0.1
J19K	**Poorman**	**4.52**	**344**	IAML		03 24 25.3	
	comp=E,3.4nm,1.1s						
J19K				IAML		03 24 41.2	
	comp=N,3.9nm,1.0s						
J20K	**Nowinta River**	**4.55**	**352**		**Pn**	03 21 36.3	0.0
J20K	**Nowinta River**	**4.55**	**352**	IAML		03 24 27.3	
	comp=E,6.0nm,0.8s						
J20K				IAML		03 24 27.6	
	comp=N,4.4nm,0.7s						
GLB	**Gilahina Butte**	**4.76**	**64**		**Pn**	03 21 38.3	-1.0
GLB	**Gilahina Butte**	**4.76**	**64**	IAML		03 24 54.2	
	comp=N,16nm,1.0s						
GLB				IAML		03 24 56.3	
	comp=E,23nm,0.9s						
BARK	**Barkley Ridge**	**5.21**	**78**		**Pn**	03 21 45.0	-0.4
NEA2	**Nenana**	**5.22**	**18**	IAML		03 25 11.2	
	comp=N,5.2nm,1.1s						
WRH	**Wood River Hil**	**5.28**	**23**	IAML		03 24 42.2	
	comp=E,5.7nm,0.8s						
WRH				IAML		03 24 52.8	
	comp=N,5.6nm,1.0s						
PTPK	**Patty Peak**	**5.33**	**69**		**Pn**	03 21 47.1	+0.1
MLY	**Manley**	**5.45**	**9**		**Pn**	03 21 48.8	+0.3
HDA	**Harding Lake**	**5.47**	**28**		**Pn**	03 21 48.3	-0.5
CCB	**Clear Creek Bu**	**5.49**	**23**		**Pn**	03 21 48.5	-0.5
I21K	**Tanana**	**5.52**	**4**		**Pn**	03 21 50.0	+0.5
MDM	**Murphy Dome**	**5.70**	**20**		**Pn**	03 21 51.2	-0.7
I23K	**Minto, Yukon-K**	**5.70**	**15**		**Pn**	03 21 51.6	-0.4
IL31		**5.79**	**26**		**Pn**	03 21 52.5	-0.6
LOGN	**Logan Glacier**	**5.97**	**74**		**Pn**	03 21 55.5	-0.4
H21K	**Melozitna Rive**	**5.99**	**360**		**Pn**	03 21 55.8	-0.1
J25K	**Salcha River,**	**6.04**	**32**		**Pn**	03 21 56.5	-0.1
PCA	**Pinnacle**	**6.32**	**81**		**Pn**	03 22 00.4	0.0
IM01	**Indian Mountai**	**6.35**	**357**		**Pn**	03 22 00.6	-0.1
G23K	**Bananza Creek**	**7.16**	**9**		**Pn**	03 22 11.9	+0.1

*IDC **26** 03:39:21.4±1.2,31.65N×138.36E,h352km±14km,mb3.1/8, mbtmp3.8/12,Error ellipse: s-maj=37.9km s-min=19.1km az=65.0*
*JMA **26** 03:39:23.0±0.3,32°N±3°×13°8E±°,h359km,MV3.2/29, FAR S OFF TOKAI DISTRICT*
ISC 26 03:39:23.1±1.4,31.9N±0.1×138.6E±0.1,h368km,n21, σ1§14/24,mb3.4/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.13**	**61**	*eP*	**Pn**	**03 40 10.8**	**-0.5**
JHJ	**Hachijo jima 2**	**1.56**	**40**	P	**Pn**	**03 40 12.7**	**-0.6**
	33nm,0.3s,baz=313,slow=24,SNR=25						
JHJ				S	**S**	**03 40 53.7**	**0.0**
	62nm,0.3s,baz=64,slow=23,SNR=5.6						
JHJ2	**Mitsune**	**1.58**	**41**	*eP*	**Pn**	**03 40 13.8**	**+0.5**
TTO1	**TONANKAI O.B.S**	**2.28**	**319**	*eP*	**Pn**	**03 40 16.4**	**-1.2**
JIE	**Ise**	**2.93**	**328**	*eP*	**Pn**	**03 40 22.1**	**-1.0**
JTNC	**Tanabenakah

WDLM				*e*S	**Sn**	**03 44 02.1**	**+0.9**	
WDLM				IAML		03 44 54.5		
	comp=Z,254nm,0.8s							
KHWEE	**KHWEE**	**7.24**	**266**	*i* P	**Pn**	**03 42 42.9**	**+2.2**	
KHWEE				*i* S	**Sn**	**03 44 03.8**	**+1.1**	
KHWEE				IAML		03 44 56.9		
	comp=E,3µm,0.6s							
LBTB	**Lobatse**	**7.80**	**242**	Pn	**Pn**	**03 42 50.8**	**+2.4**	
	comp=E,22nm,0.3s,baz=52,slow=14,SNR=312							
LBTB				Sn	**Sn**	**03 44 17.8**	**+1.2**	
	comp=E,26nm,0.3s,baz=182,slow=18,SNR=6.8							
LBTB				Lg	Lg	03 45 02.6		
	comp=E,31nm,0.3s,baz=143,slow=18,SNR=8.9							
LBTB				LR	LR	03 46 04.6		
	comp=E,3µm,19.1s,baz=51,slow=40							
LBTB	**Lobatse**	**7.80**	**242**	*i* P	**Pn**	**03 42 51.3**	**+2.9**	
LBTB	**Lobatse**	**7.80**	**242**	*e*P	**Pn**	**03 42 50.4**	**+2.0**	
LBTB				*e*S	**Sn**	**03 44 16.7**	**+0.1**	
LBTB				IAML		03 45 38.9		
	comp=Z,145nm,0.6s							
LBTB	**Lobatse**	**7.80**	**242**	P	**Pn**	**03 42 50.9**	**+2.5**	
LBTB	**Lobatse**	**7.80**	**242**	P	**Pn**	**03 42 50.9**	**+2.5**	
LSZ	**Lusaka**	**7.88**	**322**	Pn	**Pn**	**03 42 48.8**	**-0.7**	
	comp=Z,10.0nm,0.3s,baz=147,slow=14,SNR=55							
LSZ				Sn	**Sn**	**03 44 16.1**	**-2.3**	
	comp=Z,16nm,0.3s,baz=188,slow=11,SNR=5.0							
LSZ				Lg	Lg	03 45 00.3		
	comp=Z,51nm,0.3s,baz=55,slow=15,SNR=10							
	comp=Z,37nm,0.4s							
LSZ	**Lusaka**	**7.88**	**322**	P	**Pn**	**03 42 49.1**	**-0.3**	
LSZ	**Lusaka**	**7.88**	**322**	*i* P	**Pn**	**03 42 51.5**	**+2.1**	
LSZ				*i* S	**Sn**	**03 44 13.8**	**-4.7**	
LSZ	**Lusaka**	**7.88**	**322**	*e*P	**Pn**	**03 42 48.8**	**-0.7**	
LSZ				*e*S	**Sn**	**03 44 13.8**	**-4.7**	
LSZ				IAML		03 44 25.2		
	comp=Z,80nm,0.5s							
LSZ	**Lusaka**	**7.88**	**322**	P	**Pn**	**03 42 49.2**	**-0.2**	
LSZ	**Lusaka**	**7.88**	**322**	P	**Pn**	**03 42 49.3**	**-0.2**	
KDWAN	**Kaudwane**	**8.12**	**256**	*i* P	**Pn**	**03 42 53.9**	**+1.1**	
KDWAN				*i* S	**Sn**	**03 44 23.8**	**-0.6**	
KDWAN				IAML		03 45 31.7		
	comp=N,929nm,0.7s							
PMBG	**Pietermaritzbu**	**8.28**	**197**	*e*P	**Pn**	**03 42 55.6**	**+0.8**	
PMBG				*e*S	**Sn**	**03 44 26.0**	**-2.1**	
PMBG				IAML		03 44 50.6		
	comp=Z,102nm,0.5s							
SNKL	**Senekal, Frees**	**8.31**	**215**	*e*P	**Pn**	**03 42 56.0**	**+0.6**	
SNKL				*e*S	**Sn**	**03 44 28.1**	**-1.0**	
SNKL				IAML		03 45 28.3		
	comp=Z,204nm,0.7s							
KSANE	**Kasane**	**8.47**	**295**		**Pn**	**03 42 59.6**	**+2.0**	
KSANE	**Kasane**	**8.47**	**295**	*i* P	**Pn**	**03 42 57.9**	**+0.3**	
KSANE				*i* S	**Sn**	**03 44 32.5**	**-0.5**	
KSANE				IAML		03 45 41.7		
	comp=E,409nm,0.6s							
KSANE	**Kasane**	**8.47**	**295**	P	**Pn**	**03 42 59.2**	**+1.6**	
MAKGR	**Makgori**	**8.80**	**240**		**Pn**	**03 43 04.0**	**+2.0**	
MAKGR	**Makgori**	**8.80**	**240**	*i* P	**Pn**	**03 43 00.9**	**-1.1**	
MAKGR				*i* S	**Sn**	**03 44 36.8**	**-4.3**	
MAKGR				IAML		03 45 42.6		
	comp=Z,234nm,0.5s							
MAKGR	**Makgori**	**8.80**	**240**	P	**Pn**	**03 43 04.2**	**+2.2**	
CKGRV	**CKGRV**	**8.80**	**269**	P	**Pn**	**03 43 05.2**	**+3.1**	
SKOMA	**Sekoma**	**9.04**	**249**	*i* P	**Pn**	**03 43 06.1**	**+0.7**	
SKOMA				*i* S	**Sn**	**03 44 44.5**	**-2.6**	
SKOMA				IAML		03 46 01.9		
	comp=E,248nm,0.6s							
SKOMA	**Sekoma**	**9.04**	**249**	P	**Pn**	**03 43 06.9**	**+1.5**	
BOSA	**Boshof**	**10.06**	**224**	Pn	**Pn**	**03 43 18.9**	**-0.5**	
	comp=E,8.1nm,0.3s,baz=50,slow=13,SNR=272							
BOSA				Sn	**Sn**	**03 45 09.6**	**-2.5**	
	comp=E,5.7nm,0.3s,baz=61,slow=20,SNR=4.5							
BOSA				Lg	Lg	03 46 11.4		
	comp=E,12nm,0.3s,baz=141,slow=16,SNR=3.9							
BOSA				LR	LR	03 47 33.8		
	comp=E,2µm,18.5s,baz=64,slow=40							
	comp=E,49nm,0.6s							
BOSA	**Boshof**	**10.06**	**224**		**Pn**	**03 43 19.6**	**+0.3**	
BOSA	**Boshof**	**10.06**	**224**	*i* P	**Pn**	**03 43 20.3**	**+0.9**	
BOSA	**Boshof**	**10.06**	**224**	*e*P	**Pn**	**03 43 21.2**	**+1.8**	
BOSA				*e*S	**Sn**	**03 45 10.0**	**-2.1**	
BOSA				IAML		03 45 28.8		
	comp=Z,40nm,0.5s							
BOSA	**Boshof**	**10.06**	**224**	P	**Pn**	**03 43 19.8**	**+0.4**	
BOSA	**Boshof**	**10.06**	**224**	P	**Pn**	**03 43 20.1**	**+0.7**	
PHPEN	**Phepeng**	**10.28**	**246**	*i* P	**Pn**	**03 43 21.6**	**-0.6**	
PHPEN				*i* S	**Sn**	**03 45 10.8**	**-6.5**	
PHPEN				IAML		03 46 40.9		
	comp=E,741nm,0.6s							
GMARE	**Gumare**	**10.59**	**280**		**Pn**	**03 43 28.6**	**+1.9**	
GMARE	**Gumare**	**10.59**	**280**	*i* P	**Pn**	**03 43 26.3**	**-0.4**	
GMARE				*i* S	**Sn**	**03 45 21.0**	**-4.2**	
GMARE				IAML		03 46 55.5		
	comp=E,1µm,1.1s							
GMARE	**Gumare**	**10.59**	**280**	P	**Pn**	**03 43 28.2**	**+1.6**	
GRTLG	**Ghanzi**	**11.19**	**269**		**Pn**	**03 43 35.8**	**+1.0**	
GRTLG	**Ghanzi**	**11.19**	**269**	*i* P	**Pn**	**03 43 35.1**	**+0.3**	
GRTLG				*i* S	**Sn**	**03 45 34.0**	**-5.7**	
GRTLG				IAML		03 47 06.1		
	comp=N,377nm,0.6s							
GRTLG	**Ghanzi**	**11.19**	**269**	P	**Pn**	**03 43 35.8**	**+1.0**	
LKGWB	**Lokgwabe**	**11.36**	**255**	P	Pn	03 43 32.3	-4.8	
QNGWA	**Qangwa**	**11.47**	**278**	*i* P	**Pn**	**03 43 36.2**	**-2.5**	
QNGWA				*i* S	**Sn**	**03 45 42.7**	**-4.0**	
QNGWA				IAML		03 47 15.5		
	comp=E,124nm,0.8s							
XAUDM	**Khaudum**	**11.57**	**283**	*i* P	**Pn**	**03 43 40.6**	**+0.6**	
XAUDM				*i* S	**Sn**	**03 45 41.4**	**-7.8**	
XAUDM				IAML		03 47 17.0		
	comp=N,651nm,0.5s							
KOOLE	**Kule**	**12.15**	**261**		**Pn**	**03 43 48.8**	**+0.8**	
KOOLE	**Kule**	**12.15**	**261**	*i* P	**Pn**	**03 43 46.1**	**-1.8**	
KOOLE				*i* S	**Sn**	**03 45 57.7**	**-5.6**	
KOOLE				IAML		03 47 42.9		
	comp=E,433nm,1.0s							
KOOLE	**Kule**	**12.15**	**261**	P	**Pn**	**03 43 49.1**	**+1.1**	
VOI	**Vohitsoka**	**12.62**	**94**	Pn	Pn	03 43 49.3	-5.0	
VOI	**Vohitsoka**	**12.62**	**94**	P	Pn	**03 43 52.7**	**-1.6**	
FOMA	**Nahampoana Res**	**13.09**	**108**		**Pn**	**03 43 58.0**	**-2.6**	
GRHM	**Grahamstown, E**	**13.14**	**206**	Pn	**Pn**	**03 43 59.3**	**-2.1**	
GRHM	**Grahamstown, E**	**13.14**	**206**	*e*P	**Pn**	**03 44 03.0**	**+1.6**	
BFON	**Badsfontein, M**	**13.27**	**218**	*e*P	**Pn**	**03 44 05.5**	**+2.2**	
BFON				*e*S	**Sn**	**03 46 26.3**	**-4.5**	
BFON				IAML		03 46 36.3		
	comp=Z,34nm,0.5s							
ABPO	**Ambohimpanom**	**13.38**	**82**		**Pn**	**03 44 00.6**	**-4.3**	
OPO	**Ambohidratompo**	**13.45**	**80**	Pn	**Pn**	**03 44 03.4**	**-2.4**	
	comp=Z,0.4nm,0.3s,baz=266,slow=15,SNR=17							
OPO				Sn	Sn	03 46 20.3	-15	
	comp=Z,0.1nm,0.3s,baz=129,slow=19,SNR=3.6							
	comp=Z,8.7nm,0.4s							
BRAK	**Brakfontein**	**13.73**	**220**	*e*P	**Pn**	**03 44 11.0**	**+1.6**	
BRAK				*e*S	**Sn**	**03 46 37.9**	**-3.8**	
BRAK				IAML		03 46 50.2		
	comp=Z,24nm,0.6s							
ROOI	**Rooidraai Farm**	**13.87**	**216**	*e*P	**Pn**	**03 44 13.2**	**+1.8**	
GRAN	**Grantham**	**14.53**	**220**	*e*P	**Pn**	**03 44 22.7**	**+2.3**	
FRAZ	**Fraserburg**	**14.75**	**223**	*e*P	**Pn**	**03 44 25.5**	**+2.0**	
TSUM	**Tsumeb**	**14.86**	**276**	Pn	**Pn**	**03 44 24.3**	**-0.7**	
	comp=Z,30nm,0.7s,baz=102,slow=11,SNR=37							
TSUM				Sn	**Sn**	**03 47 06.4**	**-3.1**	
	comp=Z,1.2nm,0.3s,baz=185,slow=23,SNR=3.1							
TSUM				Lg	Lg	03 48 46.6		
	comp=Z,3.7nm,0.3s,baz=32,slow=7.1,SNR=4.1							
TSUM				LR	LR	03 50 23.9		
	comp=Z,825nm,18.5s,baz=60,slow=38							
TSUM	**Tsumeb**	**14.86**	**276**		**Pn**	**03 44 23.8**	**-1.2**	
TSUM	**Tsumeb**	**14.86**	**276**	*i* P	**Pn**	**03 44 26.0**	**+1.0**	
TSUM				*i* S	**Sn**	**03 47 12.9**	**+3.5**	
TSUM	**Tsumeb**	**14.86**	**276**	P	**Pn**	**03 44 23.5**	**-1.5**	
TSUM	**Tsumeb**	**14.86**	**276**	P	**Pn**	**03 44 24.1**	**-0.9**	
TSUM	**Tsumeb**	**14.86**	**276**	*e*P	**Sn**	**03 47 06.2**	**-3.2**	
WIN	**Windhoek**	**14.98**	**263**		**Pn**	**03 44 26.1**	**-0.6**	
WIN	**Windhoek**	**14.98**	**263**	P	**Pn**	**03 44 25.5**	**-1.2**	
MERW	**Merweville**	**15.18**	**221**	*e*P	**Pn**	**03 44 31.3**	**+2.1**	
SUR	**Sutherland**	**15.42**	**223**	Pn	**Pn**	**03 44 31.7**	**-0.8**	
	comp=Z,5.8nm,0.3s,baz=50,slow=15,SNR=71							
SUR				Sn	**Sn**	**03 47 18.0**	**-5.3**	
	comp=Z,4.0nm,0.3s,baz=337,slow=20,SNR=3.7							
SUR				Lg	Lg	03 48 58.3		
	comp=Z,3.0nm,0.3s,baz=110,slow=9.7,SNR=5.0							
SUR				LR	LR	03 51 02.0		
	comp=E,659nm,18.6s,baz=40,slow=39							
	comp=Z,27nm,0.5s							

SUR	**Sutherland**	**15.42**	**223**		**Pn**	**03 44 31.5**	**-1.0**	
SUR				IAmb	IAmb	03 44 37.7		
	comp=Z,49nm,0.9s							
SUR	**Sutherland**	**15.42**	**223**	*e*P	**Pn**	**03 44 34.7**	**+2.2**	
SUR	**Sutherland**	**15.42**	**223**	P	**Pn**	**03 44 31.7**	**-0.8**	
SUR	**Sutherland**	**15.42**	**223**	P	**Pn**	**03 44 33.2**	**+0.7**	
CVNA	**Calvinia**	**15.56**	**228**	P	**Pn**	**03 44 33.9**	**-0.3**	
MATJ	**Matjiesfontein**	**16.16**	**221**	*e*P	**P**	**03 44 45.3**	**+0.2**	
PRTV	**Porterville,We**	**16.97**	**225**	*e*P	**P**	**03 44 56.4**	**+2.3**	
CER	**Ceres**	**17.03**	**223**	*e*P	**P**	**03 44 56.8**	**+2.2**	
CER	**Ceres**	**17.03**	**223**	P	**P**	**03 44 53.9**	**-0.8**	
KIBK	**Kilbwezi**	**19.68**	**14**	P	**Pn**	**03 45 25.8**	**+0.3**	
MBAR	**Mbarara**	**20.98**	**353**	P	**P**	**03 45 39.0**	**+0.7**	
	comp=Z,8.7nm,0.9s,baz=170,slow=12,SNR=7.7							
	comp=Z,8.7nm,0.9s							
MBAR	**Mbarara**	**20.98**	**353**	P	**P**	**03 45 36.7**	**-1.5**	
MBAR				IAmb	IAmb	03 45 46.6		
	comp=Z,57nm,1.6s							
MBAR	**Mbarara**	**20.98**	**353**	P	Pn	03 45 40.9	0.0	
LODK	**Lodwar**	**24.93**	**5**		**P**	**03 46 17.7**	**-0.4**	
LODK				IAmb	IAmb	03 46 25.2		
	comp=Z,28nm,1.5s							
LODK	**Lodwar**	**24.93**	**5**	P	**P**	**03 46 20.3**	**+2.3**	
TORD	**Torodi Ar. Bea**	**46.35**	**315**	P	**P**	**03 49 21.3**	**+0.2**	
	comp=Z,6.1nm,0.8s,baz=130,slow=6.7,SNR=36							
TORD				PP	**PP**	**03 51 11.0**	**+0.9**	
	comp=Z,3.2nm,0.8s,baz=134,slow=7.8,SNR=4.1							
	comp=Z,6.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**46.35**	**315**	P	**P**	**03 49 22.2**	**+1.2**	
TORD				IAmb	IAmb	03 49 26.8		
	comp=Z,14nm,1.2s							
DBIC	**Dimbokro**	**46.72**	**303**	P	**P**	**03 49 23.9**	**-0.1**	
	comp=Z,6.8nm,0.7s,baz=134,slow=9.5,SNR=9.6							
	comp=Z,6.8nm,0.7s							
DBIC	**Dimbokro**	**46.72**	**303**	P	**P**	**03 49 25.6**	**+1.6**	
MAW	**Mawson**	**49.64**	**166**	P	**P**	**03 49 45.5**	**-0.2**	
	comp=Z,5.2nm,0.9s,baz=344,slow=8.6,SNR=8.7							
	comp=Z,5.2nm,0.9s							
MAW	**Mawson**	**49.64**	**166**	P	**P**	**03 49 46.1**	**+0.4**	
MAW	**Mawson**	**49.64**	**166**	P	**P**	**03 49 45.2**	**-0.6**	
ELIB	**Princess Elisa**	**50.71**	**184**	*d*P	**P**	**03 49 55.0**	**+1.0**	
	comp=Z,3.8nm,1.2s							
TROLL	**Troll, Antarti**	**53.40**	**191**	⇓P	**P**	**03 50 15.5**	**+1.4**	
	comp=Z,291nm,1.0s							
SNAA	**Sanae**	**54.21**	**193**	P	**P**	**03 50 21.1**	**+1.2**	
	comp=Z,2.2nm,0.8s,baz=60,slow=6.0,SNR=4.5							
	comp=Z,2.2nm,0.8s							
SNAA	**Sanae**	**54.21**	**193**	P	**P**	**03 50 22.5**	**+2.6**	
SNAA				IAmb	IAmb	03 50 25.2		
	comp=Z,13nm,1.4s							
PALK	**Pallekele**	**54.68**	**64**	LR	LR	04 10 53.6		
	comp=Z,125nm,19.1s,baz=252,slow=33							
VNA2	**Neumayer--Watz**	**54.73**	**195**	P	**P**	**03 50 23.3**	**-0.3**	
VNA1	**Neumayer--Stat**	**54.76**	**196**	⇓P	**P**	**03 50 25.5**	**+1.7**	
	comp=Z,13nm,1.2s							
GEVA	**Gevas**	**60.28**	**9**	P	**P**	**03 51 02.9**	**-0.4**	
GEVA				IAmb	IAmb	03 51 10.0		
	comp=Z,18nm,1.7s							
GURO	**Guroymak-BITLI**	**60.37**	**8**	P	**P**	**03 51 04.1**	**+0.2**	
BRTR	**Keskin Array B**	**60.98**	**0**	P	**P**	**03 51 09.1**	**+1.1**	
	comp=Z,1.0nm,0.7s,baz=173,slow=9.3,SNR=6.2							
	comp=Z,1.0nm,0.7s							
KEST	**Kesra**	**61.32**	**338**	LR	LR	04 18 42.7		
	comp=Z,181nm,19.3s,baz=97,slow=37							
GRG	**Griva**	**63.02**	**351**	P	**P**	**03 51 24.0**	**+2.5**	
MLR	**Muntele Rosu**	**67.07**	**354**	⇓P	**P**	**03 51 49.2**	**+1.3**	
ARR	**Arges**	**67.08**	**353**	⇑P	**P**	**03 51 48.8**	**+0.9**	
ARR	**Arges**	**67.08**	**353**	P	**P**	**03 51 49.7**	**+1.8**	
LOT	**Lotru**	**67.25**	**353**	P	**P**	**03 51 51.2**	**+2.2**	
PLOR	**Plostina**	**67.37**	**355**	⇑P	**P**	**03 51 50.7**	**+1.1**	
VRI	**Vrincioaia**	**67.37**	**355**	⇑P	**P**	**03 51 52.2**	**+2.5**	
VRI	**Vrincioaia**	**67.37**	**355**	P	**P**	**03 51 51.7**	**+2.0**	
BZS	**Buzias**	**67.69**	**351**	⇑P	**P**	**03 51 53.7**	**+2.0**	
BZS	**Buzias**	**67.69**	**351**	P	**P**	**03 51 53.5**	**+1.8**	
BIZ	**Bicaz**	**68.49**	**355**	⇑P	P	03 51 48.6	-8.1	
QSPA	**South Pole Qui**	**68.59**	**180**	P	**P**	**03 51 57.8**	**+0.5**	
	comp=Z,2.8nm,1.0s,baz=306,slow=2.2,SNR=6.3							
	comp=Z,2.8nm,1.0s							
QSPA	**South Pole Qui**	**68.59**	**180**	P	**P**	**03 51 57.0**	**-0.3**	
DRGR		**68.70**	**352**	⇑P	P	03 52 03.9	+5.8	
DRGR		**68.70**	**352**	P	**P**	**03 51 60.0**	**+1.9**	
MORH	**Mrgy, Hungar**	**68.75**	**349**	⇑P	**P**	**03 51 59.2**	**+0.9**	
MORH	**Mrgy, Hungar**	**68.75**	**349**	P	**P**	**03 52 00.2**	**+1.9**	
BURAR	**Bucovina Array**	**69.24**	**354**	P	**P**	**03 52 03.3**	**+1.8**	
BUR08	**Bucovina Ar. S**	**69.27**	**354**	P	**P**	**03 52 04.7**	**+3.0**	
BUR08				IAmb	IAmb	03 52 09.0		
	comp=Z,12nm,1.6s							
SORM	**Soroca**	**69.52**	**357**	⇓P	**P**	**03 52 02.5**	**-0.6**	
ISO	**Isola**	**69.69**	**340**	P	**P**	**03 52 05.7**	**+1.4**	
ESDC	**Sonseca Array**	**70.13**	**330**	P	**P**	**03 52 08.6**	**+1.5**	
	comp=Z,4.7nm,1.1s,baz=148,slow=5.2,SNR=11							
	comp=Z,4.7nm,1.1s							
ESDC	**Sonseca Array**	**70.13**	**330**		**P**	**03 52 08.5**	**+1.5**	
CIMO	**Cimolais**	**70.14**	**345**	P	**P**	**03 52 09.0**	**+2.1**	
CIMO				IAmb	IAmb	03 52 13.5		
	comp=Z,7.8nm,1.2s							
CIMO	**Cimolais**	**70.14**	**345**	P	**P**	**03 52 09.8**	**+2.8**	
PSZ	**Piszkesteto**	**70.20**	**351**	⇑P	**P**	**03 52 09.7**	**+2.4**	
PSZ	**Piszkesteto**	**70.20**	**351**	P	**P**	**03 52 08.8**	**+1.5**	
KBA	**Koelnbreinsper**	**70.65**	**346**	P	**P**	**03 52 12.7**	**+2.4**	
TUE	**Stuetta**	**71.09**	**343**	P	**P**	**03 52 11.7**	**-1.3**	
TUE				IAmb	IAmb	03 52 18.9		
	comp=Z,7.3nm,1.1s							
TUE	**Stuetta**	**71.09**	**343**	P	**P**	**03 52 14.6**	**+1.7**	
MOA	**Molln**	**71.17**	**347**	P	**P**	**03 52 15.6**	**+2.4**	
KULM	**Kulim**	**71.19**	**76**	P	**P**	**03 52 13.2**	**-0.9**	
DAVOX	**Davos/Dischmat**	**71.23**	**343**	P	**P**	**03 52 14.9**	**+1.1**	
	comp=Z,3.4nm,1.1s,baz=169,slow=9.3,SNR=5.4							
	comp=Z,3.4nm,1.1s							
EVN	**Everest**	**71.44**	**49**	P	**P**	**03 52 14.6**	**-1.5**	
EVN	**Everest**	**71.44**	**49**	P	**P**	**03 52 14.8**	**-1.2**	
AKASG	**Malin Array Be**	**72.04**	**357**	P	**P**	**03 52 19.5**	**+1.2**	
	comp=Z,0.3nm,0.3s,baz=186,slow=5.5,SNR=8.6							
	comp=Z,0.3nm,0.3s							
GERES	**GERESS Array B**	**72.24**	**347**	P	**P**	**03 52 20.6**	**+1.0**	
	comp=Z,0.5nm,0.7s,baz=160,slow=4.3,SNR=7.0							
	comp=Z,0.5nm,0.7s							
KK31	**Karatay Array**	**72.93**	**28**	P	**P**	**03 52 22.2**	**-1.7**	
KK31				IAmb	IAmb	03 52 27.5		
	comp=Z,6.6nm,1.1s							
KKAR	**Karatay Array**	**72.93**	**28**	P	**P**	**03 52 21.7**	**-2.2**	
SHL	**Shillong**	**73.72**	**53**	P	**P**	**03 52 28.3**	**-0.8**	
SHL				IAmb	IAmb	03 52 31.5		
	comp=Z,17nm,1.3s							
TANN	**Tannenbergstha**	**73.99**	**346**	P	**P**	**03 52 31.9**	**+2.0**	
ASAI	**AK-SAY(Kyrgyzs**	**74.04**	**33**	P	**P**	**03 52 31.3**	**+0.5**	
AAK	**Ala-Archa**	**74.36**	**30**	LR	LR	04 24 36.4		
	comp=Z,141nm,21.2s,baz=192,slow=35							
AB31	**Akbulak array**	**74.42**	**18**		**P**	**03 52 32.1**	**-0.3**	
ABKAR	**Akbulak array**	**74.42**	**18**		**P**	**03 52 32.6**	**+0.2**	
CLL	**Collm**	**74.71**	**347**	*e*P	**P**	**03 52 34.0**	**0.0**	
	comp=Z,9.0nm,1.5s							
TARG	**Taragay, Kyrgy**	**75.29**	**33**	P	**P**	**03 52 38.7**	**+0.5**	
CMAR	**Chiang Mai Arr**	**75.62**	**63**	P	**P**	**03 52 39.5**	**-0.6**	
	comp=Z,1.2nm,0.4s,baz=243,slow=7.4,SNR=9.8							
	comp=Z,1.2nm,0.4s							
SUW	**Suwalki**	**75.77**	**354**	P	**P**	**03 52 40.9**	**+0.8**	
CHTO	**Chiang Mai**	**75.80**	**63**	P	**P**	**03 52 40.6**	**-0.4**	
CHTO				IAmb	IAmb	03 52 43.9		
	comp=Z,14nm,1.2s							
CHTO	**Chiang Mai**	**75.80**	**63**	P	**P**	**03 52 43.2**	**+2.1**	
	comp=Z,8.1nm,1.0s							
CHTO	**Chiang Mai**	**75.80**	**63**	P	**P**	**03 52 41.4**	**+0.4**	
BDFB	**Brasilia**	**76.44**	**258**	P	**P**	**03 52 45.6**	**+0.6**	
	comp=Z,3.7nm,0.7s,baz=87,slow=2.4,SNR=8.2							
	comp=Z,3.7nm,0.7s							
BDFB	**Brasilia**	**76.44**	**258**	IAmb	IAmb	03 52 51.8		
	comp=Z,10nm,1.1s							
VNDA	**Vanda**	**76.68**	**170**	P	**P**	**03 52 45.0**	**-0.1**	
	comp=Z,1.5nm,0.7s,baz=257,slow=5.8,SNR=6.3							
	comp=Z,1.5nm,0.7s							
VNDA	**Vanda**	**76.68**	**170**	IAmb	IAmb	03 52 50.7		
	comp=Z,7.5nm,1.3s							
RGN	**Rugen**	**77.71**	**348**	P	**P**	**03 52 52.3**	**+1.3**	
ARTI	**Arti**	**80.52**	**14**	LR	LR	04 31 49.8		
	comp=Z,110nm,18.8s,baz=188,slow=38							
ARTI	**Arti**	**80.52**	**14**	P	**P**	**03 53 04.0**	**-2.4**	
BVAR	**Borovoye Array**	**80.98**	**22**	P	**P**	**03 53 08.9**	**-0.1**	
	comp=Z,2.3nm,0.8s,baz=207,slow=6.3,SNR=8.8							
	comp=Z,2.3nm,0.8s							
MKAR	**Makanchi Array**	**81.17**	**32**	P	**P**	**03 53 09.4**	**-0.8**	
	comp=Z,0.4nm,0.6s,baz=203,slow=6.3,SNR=4.1							
	comp=Z,0.4nm,0.6s							
PZH	**PanZhiHua**	**81.77**	**57**	P	**P**	**03 53 14.5**	**+0.6**	
WMQ	**Urumqi**	**81.99**	**37**	*e*P	**P**	**03 53 17.3**	**+2.7**	

WMQ				pmax	pmax			
	comp=Z,14nm,0.7s							
WMQ				LR	LR			
	comp=Z,96nm,24.3s							
KURBB	**Kurchatov Arra**	**82.23**	**27**	P	**P**	**03 53 15.3**	**-0.2**	
	comp=Z,2.9nm,0.9s,baz=224,slow=5.8,SNR=11							
KURBB				LR	LR	04 32 21.8		
	comp=Z,60nm,18.5s,baz=164,slow=38							
	comp=Z,2.9nm,0.9s							
KURK	**Kurchatov**	**82.34**	**27**	P	**P**	**03 53 15.3**	**-0.8**	
KURK	**Kurchatov**	**82.34**	**27**	IAmb	IAmb	03 53 20.2		
	comp=Z,5.5nm,1.1s							
KURK	**Kurchatov**	**82.34**	**27**	P	**P**	**03 53 16.3**	**+0.1**	
CD2	**Chengdu**	**85.42**	**54**	P	**P**	**03 53 31.0**	**-1.5**	
CD2				pmax	pmax			
	comp=Z,30nm,0.7s							
CD2				pmax	pmax			
	comp=Z,210nm,5.7s							
GTA2	**Gaotai**	**86.83**	**45**	*e*P	**P**	**03 53 42.3**	**+3.0**	
GTA2				pmax	pmax			
	comp=Z,5.0nm,1.0s							
LZH	**Lanzhou**	**87.95**	**50**	*e*P	**P**	**03 53 47.5**	**+2.6**	
LZH				pP	sP	03 53 55.3	+3.6	
LZH				pmax	pmax			
	comp=Z,19nm,1.4s							
ASAR	**Alice Springs**	**90.70**	**116**	P	**P**	**03 53 57.5**	**-0.6**	
	comp=Z,2.8nm,1.0s,baz=240,slow=3.6,SNR=10							
	comp=Z,2.8nm,1.0s							
HHC	**Hu-ho-hao-te**	**95.48**	**48**	*e*P	**P**	**03 54 17.3**	**-2.3**	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,65nm,4.0s							
NJ2	**Nanjing**	**97.63**	**59**	*e*P	Pdif	03 54 29.5	0.0	
NJ2				pmax	pmax			
	comp=Z,19nm,0.6s							
NRIK	**Noril'sk**	**98.58**	**17**	LR	LR	04 43 22.2		
	comp=Z,62nm,18.7s,baz=203,slow=38							
YKA	**Yellowknife Ar**	**133.60**	**340**	PKP	**PKiKP**	**04 00 11.3**	**-0.6**	
	comp=Z,0.6nm,0.6s,baz=32,slow=1.8,SNR=5.0							
TXAR	**Lajitas Array**	**140.49**	**290**	PKP	**PKPdf**	**04 00 22.5**	**-2.1**	
	comp=Z,0.4nm,0.8s,baz=88,slow=4.4,SNR=4.4							
PDAR	**Pinedale Array**	**142.48**	**313**	PKP	**PKPdf**	**04 00 29.2**	**+1.3**	
	comp=Z,0.7nm,0.9s,baz=108,slow=4.8,SNR=5.1							
ELK	**Elko**	**147.19**	**313**	PKPbc	**PKPab**	**04 00 39.8**	**-0.2**	
	comp=Z,0.4nm,0.4s,baz=103,slow=5.9,SNR=4.7							
NVAR	**Mina Array Bea**	**150.33**	**311**	P

ASAR Alice Springs 46.19 260 P P 03 57 31.6 -1.2
WR8 Warramunga Arr 46.52 265 P P 03 57 34.2 -1.2
WRA Warramunga Arr 46.67 265 P P 03 57 35.2 -1.4
comp=Z,8.4nm,0.6s,baz=104,slow=7.9,SNR=35
WRA PcP **PcP 03 59 11.3 +1.1**
comp=Z,2.7nm,0.9s,baz=102,slow=3.6,SNR=5.9
comp=Z,8.4nm,0.6s
WRA Warramunga Arr 46.67 265 P 03 57 35.2 -1.4
FORT Forrest 50.12 250 P P 03 58 02.0 -1.1
FORT IAmb IAmb 03 59 46.0
comp=Z,11nm,1.0s
KNRA Kununurra 53.01 268 P P 03 58 23.5 -1.3
SBA Scott Base 53.98 185 P P 03 58 34.5 +3.5
VNDA Vanda 54.08 186 P P 03 58 32.1 +0.3
comp=Z,1.7nm,0.9s,baz=22,slow=6.5,SNR=7.0
comp=Z,1.7nm,0.9s
VNDA Vanda 54.08 186 IAmb IAmb 03 58 40.3
comp=Z,5.7nm,1.4s
FITZ Fitzroy Crossi 55.08 264 P P 03 58 40.6 +0.6
MORW Morawa 60.69 249 P P 03 59 19.4 +0.2
CASY Casey 61.38 206 P P 03 59 27.2 +3.9
QSPA South Pole Qui 65.48 180 P P 03 59 51.2 +0.6
comp=Z,4.9nm,0.9s,baz=340,slow=0.7,SNR=18
comp=Z,4.9nm,0.9s
QSPA South Pole Qui 65.48 180 P P 03 59 51.8 +1.3
QSPA IAmb IAmb 03 59 54.3
comp=Z,7.0nm,1.1s
SMAI San Martin Ant 73.87 158 P P 04 00 40.9 -1.1
MJAR Matsushiro Arr 75.01 323 P P 04 00 48.9 -0.2
comp=Z,2.7nm,0.8s,baz=153,slow=5.6,SNR=8.2
comp=Z,2.7nm,0.8s
MJAR Matsushiro Arr 75.01 323 IAmb IAmb 04 00 52.7
comp=Z,2.6nm,1.0s
MAW Mawson 78.56 199 P P 04 01 09.8 +1.1
comp=Z,1.5nm,0.7s,baz=140,slow=10,SNR=4.1
comp=Z,1.5nm,0.7s
MAW Mawson 78.56 199 P P 04 01 09.1 +0.5
PETK Petropavlovsk- 80.89 344 P P 04 01 20.7 -0.7
comp=Z,2.2nm,0.8s,baz=142,slow=8.5,SNR=4.8
comp=Z,2.2nm,0.8s
MTPC Mountain Pass 82.22 45 P P 04 01 29.2 +0.2
NVAR Mina Array Bea 82.33 42 P P 04 01 28.7 -0.9
comp=Z,1.6nm,0.6s,baz=224,slow=10.0,SNR=9.9
comp=Z,1.6nm,0.6s
LL02 Futaleuf 82.64 134 P 04 01 31.5 +0.4
ELIB Princess Elisa 82.84 186 *d*P **P 04 01 32.2 +0.5**
ELIB *dx* x 04 04 12.1
Y14A Wickenburg 82.98 48 P 04 01 32.2 -0.7
Y14A IAmb IAmb 04 01 33.3
comp=Z,6.5nm,1.0s
TROLL Troll, Antarti 83.63 179 ⇓P **P 04 01 36.1 +0.3**
comp=Z,498nm,0.8s
USRK Ussuriysk Ar. 83.77 325 P P 04 01 37.3 +0.7
comp=Z,4.6nm,0.9s,baz=151,slow=2.9,SNR=4.4
comp=Z,4.6nm,0.9s
SNAA Sanae 83.83 178 ⇓P **P 04 01 36.6 -0.2**
comp=Z,70nm,0.8s
SNAA Sanae 83.83 178 P P 04 01 36.9 +0.1
X16A Lo Mia Camp, P 84.32 48 P 04 01 39.4 -0.5
X16A IAmb IAmb 04 01 40.8
comp=Z,5.2nm,0.9s
VNA2 Neumayer--Watz 84.34 176 P P 04 01 39.4 +0.1
comp=Z,9.1nm,0.6s,baz=181,slow=4.6
NJ2 Nanjing 84.44 309 *e*P **P 04 01 42.5 +2.2**
NJ2 pmax pmax
comp=Z,34nm,0.6s
VNA1 Neumayer--Stat 84.56 176 P P 04 01 40.3 0.0
comp=Z,12nm,1.0s
LCMT Little Creek M 84.62 45 IAmb IAmb 04 01 42.1
comp=Z,5.5nm,0.9s
PLCA Paso Flores 84.63 132 P P 04 01 41.0 -0.5
comp=Z,3.2nm,1.0s,baz=235,slow=10,SNR=3.2
comp=Z,3.2nm,1.0s
CCUT Cedar City 84.87 45 P 04 01 42.9 +0.2
KNB Kanab 84.90 45 P P 04 01 42.9 +0.1
KNB IAmb IAmb 04 01 43.7
comp=Z,7.8nm,0.9s
U15A North Rim 84.90 46 P 04 01 43.3 +0.4
U15A IAmb IAmb 04 01 43.9
comp=Z,7.6nm,0.8s
SZCU Shurtz Canyon 85.07 45 IAmb IAmb 04 01 44.6
comp=Z,8.8nm,1.1s
PKCU Pink Cliffs 85.48 45 IAmb IAmb 04 01 47.4
comp=Z,11nm,1.1s
VHRN Van Horn 86.93 54 IAmb IAmb 04 01 53.2
comp=Z,14nm,1.6s
MNTX Cornudas Mount 87.11 53 IAmb IAmb 04 01 53.7
comp=Z,11nm,1.5s
TX31 Lajitas Ar. Si 87.18 56 IAmb IAmb 04 01 54.3
comp=Z,18nm,1.8s
TXAR Lajitas Array 87.18 56 P P 04 01 53.1 -1.0
comp=Z,1.4nm,0.8s,baz=211,slow=8.8,SNR=12
comp=Z,1.4nm,0.8s
BNX BinXian 87.23 324 ⇑P **P 04 01 54.3 +0.5**
BNX pmax pmax
comp=Z,8.0nm,0.7s
TASM ASL Pad, Albuq 88.03 50 IAmb IAmb 04 01 58.6
comp=Z,5.1nm,1.1s
TASM ASL Pad, Albuq 88.03 50 IAmb IAmb 04 01 58.6
comp=Z,4.2nm,1.0s
ALQ Albuquerque 88.03 50 IAmb IAmb 04 01 58.6
comp=Z,4.5nm,1.0s
ALQ Albuquerque 88.03 50 IAmb IAmb 04 01 58.5
comp=Z,4.3nm,1.0s
ANMO Albuquerque 88.04 50 P 04 01 58.1 -0.1
J18K Innoko River 88.99 8 P 04 02 01.6 -0.2
CAST Castle Rocks 89.62 10 IAmb IAmb 04 02 03.8
comp=Z,4.7nm,1.0s
J20K Nowinta River 90.03 9 IAmb IAmb 04 02 10.3
comp=Z,17nm,1.7s
PDAR Pinedale Array 90.25 42 P P 04 02 07.1 -1.4
comp=Z,0.6nm,0.8s,baz=199,slow=3.1,SNR=5.3
comp=Z,0.6nm,0.8s
BOZ Bozeman (W) 90.63 39 IAmb IAmb 04 02 10.6
comp=Z,9.6nm,1.4s
DLBC Dease Lake 90.86 22 P P 04 02 10.0 -0.7
comp=Z,3.6nm,0.8s,baz=188,slow=9.5,SNR=6.2
comp=Z,3.6nm,0.8s
L26K Log Cabin Wild 90.93 14 IAmb IAmb 04 02 11.7
comp=Z,6.3nm,1.1s
RIDG Independent Ri 91.25 13 IAmb IAmb 04 02 12.9
comp=Z,9.0nm,1.2s
WRH Wood River Hil 91.28 11 IAmb IAmb 04 02 12.6
comp=Z,7.8nm,1.0s
L27K Beaver Creek, 91.30 15 IAmb IAmb 04 02 12.9
comp=Z,4.3nm,1.1s
HDA Harding Lake 91.43 12 IAmb IAmb 04 02 13.2
comp=Z,5.3nm,0.8s
CCB Clear Creek Bu 91.49 11 IAmb IAmb 04 02 13.3
comp=Z,5.5nm,1.1s
M29M Somme Creek 91.58 16 IAmb IAmb 04 02 14.9
comp=Z,4.2nm,0.8s
IL31 91.77 12 IAmb IAmb 04 02 15.8
comp=Z,6.4nm,1.3s
ILAR Eielson Array 91.77 12 P P 04 02 13.8 -0.9
comp=Z,2.3nm,1.0s,baz=217,slow=5.9,SNR=16
comp=Z,2.3nm,1.0s
ILAR Eielson Array 91.77 12 P 04 02 12.2 -2.6
J25K Salcha River, 91.92 12 IAmb IAmb 04 02 15.9
comp=Z,4.8nm,0.9s
PRP Porcupine Dome 92.70 12 IAmb IAmb 04 02 22.6
comp=Z,4.6nm,1.1s
K29M Barlow Dome 92.99 16 P 04 02 20.8 +0.3
K29M IAmb IAmb 04 02 21.5
comp=Z,5.3nm,0.9s
CMAR Chiang Mai Arr 93.85 288 P P 04 02 26.4 +1.0
comp=Z,2.0nm,0.7s,baz=135,slow=3.3,SNR=9.1
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 93.85 288 P P 04 02 28.1 +2.7
HHC Hu-ho-hao-te 94.02 313 *e*P **P 04 02 25.3 -0.5**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,71nm,4.6s
PZH PanZhiHua 94.85 297 P P 04 02 31.5 +1.5
G30M tAoh Zraii Nji 95.90 14 P 04 02 33.2 -0.5
G30M IAmb IAmb 04 02 33.8
comp=Z,3.2nm,0.9s
WMQ Urumqi 111.51 309 *e*PKP **PKiKP 04 07 39.3 -2.6**
WMQ sPKP 04 07 55.3
MKAR Makanchi Array 115.84 312 PKP **PKPdf 04 07 48.8 -1.3**
comp=Z,0.5nm,0.5s,baz=236,slow=1.7,SNR=5.6
KURK Kurchatov 118.71 316 PKPdf 04 07 54.4 -1.0
KURBB Kurchatov Arra 118.76 316 PKP **PKPdf 04 07 54.4 -1.1**
comp=Z,1.0nm,0.8s,baz=95,slow=2.1,SNR=10
BVAR Borovoye Array 123.84 319 PKP **PKPdf 04 08 03.6 -1.6**
comp=Z,1.6nm,0.8s,baz=93,slow=3.0,SNR=6.4

ARCES ARCESS Array B 133.40 350 PKP **PKPdf 04 08 22.9 0.0**
comp=Z,1.1nm,0.7s,baz=0.0,slow=3.8,SNR=4.2
HFS Hagfors 143.96 352 PKP PKPab 04 08 39.6 -0.2
comp=Z,1.1nm,0.5s,baz=346,slow=3.1,SNR=10
SUW Suwalki 147.56 340 *e*PKP **PKPab 04 08 53.7 +0.1**
AKASG Malin Array Be 147.82 330 PKPbc **PKPbc 04 08 51.1 -1.1**
comp=Z,2.0nm,0.5s,baz=41,slow=3.8,SNR=14
EKA Eskdalemuir Ar 148.76 9 PKPbc **PKPbc 04 08 53.8 -0.8**
comp=Z,4.6nm,0.8s,baz=325,slow=2.5,SNR=7.6
KWP Kalwaria Pacla 151.36 335 *e*PKP **PKPbc 04 09 01.0 -0.1**
BRTR Keskin Array B 151.43 309 PKPbc **PKPbc 04 09 01.3 -0.5**
comp=Z,2.0nm,0.8s,baz=151,slow=3.0,SNR=11
BRTR Keskin Array B 151.43 309 PKPbc 04 08 59.9 -1.9
OJC Ojcow 151.89 339 *e*PKP **PKiKP 04 09 02.6 0.0**
MMAI Mount Meron Ar 151.94 294 PKPbc **PKiKP 04 09 03.4 0.0**
comp=Z,1.9nm,0.4s,baz=85,slow=3.0,SNR=2.4
MMAI PKPab **PKPab 04 09 13.4 +1.1**
comp=Z,2.0nm,0.5s,baz=127,slow=5.3,SNR=4.0
KSP Ksiaz 152.34 344 *e*PKP **PKPbc 04 09 03.3 0.0**
NIE Niedzica 152.41 338 *e*PKP **PKiKP 04 09 03.8 0.0**
CLL Collm 152.60 349 *i* PKPdf **PKPdf 04 08 56.5 -0.3**
comp=Z,10.0nm,1.6s
CLL ⇓*i*PKPbc **PKPbc 04 09 03.5 -0.3**
comp=Z,5.0nm,0.9s
CLL *e*PKPab **PKPab 04 09 14.0 -0.3**
comp=Z,5.0nm,1.2s
CLL *ex* x 04 09 17.0
DPC Dobruska-Polom 152.78 344 *e*PKPAB **PKPab 04 09 15.5 +0.3**
BRG Berggiesshubel 152.84 347 P **PKPab 04 09 21.3 +6.0**
BRG Amp 04 09 21.8
comp=Z,2.1nm,0.7s
KHC Kasperske Hory 154.56 346 *e*PKPAB **PKPab 04 09 23.3 +0.6**
CKRC Cesky Krumlov 154.69 345 *e*PKPAB **PKPab 04 09 22.7 -0.6**
GERES GERESS Array B 154.81 346 PKP **PKPdf 04 09 00.6 +0.4**
comp=Z,0.4nm,0.7s,baz=292,slow=4.2,SNR=4.4
GERES PKPab **PKPab 04 09 23.2 -0.7**
comp=Z,0.7nm,1.0s,baz=204,slow=2.9,SNR=3.9
CONA Conrad Observa 155.12 342 *i* PKP **PKPab 04 09 25.9 +0.7**
comp=Z,2.7nm,0.8s
RONA Rosalia, Austr 155.20 341 *i* PKP **PKPab 04 09 26.1 +0.6**
comp=Z,1.6nm,0.6s
ARSA Arzberg 155.83 342 *e*PKP **PKPab 04 09 28.2 +0.1**
comp=Z,1.1nm,0.9s
BIOA Bad Ischl, Aus 155.91 345 *i* PKP **PKPab 04 09 28.6 +0.1**
comp=Z,1.5nm,0.5s
SESA Seetaler Alpe, 156.22 343 *e*PKP **PKPab 04 09 29.6 -0.5**
comp=Z,7.2nm,0.8s
LESA Schwarzleotal 156.37 346 *e*PKP **PKPab 04 09 29.4 -1.2**
comp=Z,4.0nm,1.5s
SOKA Soboth 156.49 342 *e*PKP **PKPab 04 09 30.6 -0.5**
comp=Z,2.8nm,0.9s
WTTA Wattenberg 156.74 348 *e*PKP **PKPab 04 09 31.5 -0.8**
comp=Z,4.8nm,1.5s
FETA Feichten 157.13 349 *e*PKP **PKPab 04 09 33.0 -1.0**
comp=Z,2.1nm,1.3s
ESDC Sonseca Array 163.28 24 PKPab **PKPab 04 10 00.2 -0.6**
comp=Z,0.8nm,0.8s,baz=318,slow=4.2,SNR=7.7
TORD Torodi Ar. Bea 168.24 165 PKPab **PKPab 04 10 22.4 -0.6**
comp=Z,1.2nm,0.8s,baz=190,slow=3.4,SNR=6.2

*IDC **26** 03:59:17.7±0.3,60.6°61S×25.5°54W,h0km,mb5.0/15, mbtmp5.0/15,MS4.2/21,Error ellipse: s-maj=17.6km s-min=12.7km az=57.0*
*GFZ **26** 03:59:19.0±0.2,61.2°S±4.4°×2.2°6W±1.1°,h10km,M5.3/30, mb5.3/30*
*NEIC **26** 03:59:19.5±2.1,60.7°58S±0.7°09×25.4°4W±0.2°,h10km±1km, mb5.2/83,Error ellipse: s-maj=15.6km s-min=14.0km az=222.0*
*GCMT **26** 03:59:23.5±0.3,60.7°91S±0.0°04×24.7°94W±0.0°08,h23km, MW5.2/89,Moment Tensor Solution. s25,c28; s89,c104; Duration: 1s0 Moment tensor: Scale 10^17^Nm; Mrr-1.11±.07; Mθθ0.63±.05; Mϕϕ0.47±.04; Mrθ0.06±.07; Mθϕ0.23±.02; Mϕr0.06±.07; Best double couple: Mo0.95700×10^17 NP1:ϕs55.00000°,δ42.00000°, λ-89.00000°. NP2:ϕs234.00000°,δ48.00000°, λ-91.00000°. Principal axes: T 0.8010, Plg3.0000°, Azm324.0000°; N 0.3110, Plg0.0000°, Azm234.0000°; P -1.1140, Plg87.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 03:59:20.7±0.2,60.6°63S±0.0°06×25.8°48W±0.0°06,h19km,n470, σ1s20/445,mb5.2/58,MS4.2/19,7C-1D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.69**	**312**			**Pn**		**04 01 25.6**	**+0.3**
ORCD	**Orcadas**	**9.44**	**261**	Pn		**Pn**		**04 01 37.7**	**+2.2**
VNA1	**Neumayer--Stat**	**12.24**	**152**	⇑P		**Pn**		**04 02 09.5**	**-4.1**
	comp=Z,178nm,0.3s								
VNA2	**Neumayer--Watz**	**12.64**	**152**	P		Pn		04 02 14.3	-4.9
	comp=Z,37nm,0.3s,baz=312,slow=14								
VNA2	**Neumayer--Watz**	**12.64**	**152**	P		**Pn**		**04 02 14.4**	**-4.7**
SNAA	**Sanae**	**14.23**	**150**	⇑P		**Pn**		**04 02 36.2**	**-4.6**
	comp=Z,2μm,0.6s								
SNAA				⇓S		Sn		04 05 01.8	-16
	comp=N,3μm,0.8s								
SNAA	**Sanae**	**14.23**	**150**	Pn		**Pn**		**04 02 36.4**	**-4.5**
	comp=N,9.8nm,0.3s,baz=305,slow=14,SNR=146								
SNAA						Sn	Sn	04 05 01.6	-16
	comp=N,5.5nm,0.3s,baz=342,slow=22,SNR=7.4								
SNAA					LR	LR		04 07 29.6	
	comp=N,1μm,20.3s,baz=350,slow=34								
SNAA	**Sanae**	**14.23**	**150**	P		**Pn**		**04 02 36.4**	**-4.5**
ESPZ	**Base Esperanza**	**14.96**	**246**			**Pn**		**04 02 52.5**	**+1.7**
TROLL	**Troll, Antarti**	**15.79**	**148**	⇑P		**Pn**		**04 02 58.6**	**-3.2**
	comp=Z,6μm,1.1s								
BELA	**Belgo 2**	**17.58**	**186**	P		**Pn**		**04 03 24.1**	**0.0**
PMSA	**Palmer Station**	**17.96**	**240**	LR		LR		04 09 13.6	
	comp=Z,423nm,18.2s,baz=90,slow=33								
SMAI	**San Martin Ant**	**19.14**	**229**	P		**Pn**		**04 03 43.5**	**+0.4**
EFI	**East Falkland**	**20.05**	**282**	P		**P**		**04 03 52.8**	**+0.5**
EFI						IAmb	IAmb	04 03 58.7	
	comp=Z,66nm,0.7s								
MG03	**Isla Dawson**	**24.84**	**266**				**P**	**04 04 42.4**	**+1.0**
MG03						IAmb	IAmb	04 04 46.8	
	comp=Z,39nm,0.8s								
SYO	**Syowa Base**	**27.56**	**135**	⇑*i*P			**P**	**04 05 05.3**	**-0.5**
SYO	**Syowa Base**	**27.56**	**135**	⇑*i*P			**P**	**04 05 11.0**	**+5.2**
GO08	**Villa O'Higgin**	**29.22**	**273**	P			**P**	**04 05 21.2**	**+0.5**
QSPA	**South Pole Qui**	**29.60**	**180**	P			**P**	**04 05 25.3**	**+1.1**
	comp=Z,43nm,1.0s,baz=210,slow=2.3,SNR=167								
QSPA					LR	LR		04 16 59.7	
	comp=Z,350nm,20.4s,baz=192,slow=36								
	comp=Z,43nm,1.0s								
QSPA	**South Pole Qui**	**29.60**	**180**	P			**P**	**04 05 25.5**	**+1.2**
QSPA					IAmb	IAmb		04 05 29.4	
	comp=Z,43nm,0.9s								
TRQA	**Tornquist**	**32.12**	**298**	P			**P**	**04 05 46.3**	**-0.2**
TRQA					IAmb	IAmb		04 05 47.1	
	comp=Z,32nm,0.7s								
ANCO	**Parque Anchore**	**33.69**	**307**	*e*P			**P**	**04 05 59.4**	**-0.8**
PLCA	**Paso Flores**	**33.89**	**285**	P			**P**	**04 06 01.2**	**-0.8**
	comp=Z,7.7nm,0.7s,baz=148,slow=7.5,SNR=19								
PLCA					LR	LR		04 19 39.9	
	comp=Z,353nm,19.1s,baz=139,slow=36								
	comp=Z,7.7nm,0.7s								
PLCA	**Paso Flores**	**33.89**	**285**				**P**	**04 06 01.2**	**-0.8**
CPSB	**Cacapava Do Su**	**35.48**	**316**	P			**P**	**04 06 15.1**	**-0.7**
CPSB					IAmb	IAmb		04 06 19.0	
	comp=Z,20nm,0.9s								
CPSB	**Cacapava Do Su**	**35.48**	**316**	*e*P			**P**	**04 06 15.0**	**-0.8**
CPSB	**Cacapava Do Su**	**35.48**	**316**	P			**P**	**04 06 16.0**	**+0.3**
MAW	**Mawson**	**35.99**	**139**	P			**P**	**04 06 18.8**	**-0.9**
	comp=Z,24nm,0.9s,baz=237,slow=9.0,SNR=31								
MAW					PcP		**PcP**	**04 08 46.6**	**+0.9**
	comp=Z,6.2nm,0.8s,baz=251,slow=4.0,SNR=5.1								
MAW					LR	LR		04 19 33.7	
	comp=Z,536nm,19.5s,baz=240,slow=34								
	comp=Z,24nm,0.9s								
MAW	**Mawson**	**35.99**	**139**	P			**P**	**04 06 19.8**	**+0.1**
MAW	**Mawson**	**35.99**	**139**				**P**	**04 06 20.1**	**+0.4**
MAW	**Mawson**	**35.99**	**139**	P			**P**	**04 06 20.0**	**+0.4**
PSAL	**Palomas, Salto**	**36.38**	**310**	*e*P			**P**	**04 06 22.6**	**-0.8**
ML02	**Panimavida**	**38.28**	**289**	P			**P**	**04 06 38.2**	**-1.2**
ML02					IAmb	IAmb		04 06 43.4	
	comp=Z,26nm,0.7s								
BO02	**Sierra Bellavi**	**38.78**	**291**				**P**	**04 06 42.1**	**-1.7**
BO02	**Sierra Bellavi**	**38.78**	**291**	P			**P**	**04 06 41.0**	**-2.8**
GO05	**Hualane**	**39.13**	**289**	P			**P**	**04 06 46.1**	**-0.6**
GO05					IAmb	IAmb		04 06 51.1	
	comp=Z,42nm,0.8s								
GO05	**Hualane**	**39.13**	**289**	P			**P**	**04 06 46.1**	**-0.6**
BO01	**Tunca**	**39.25**	**291**	P			**P**	**04 06 46.6**	**-1.1**
BO01					IAmb	IAmb		04 06 51.1	
	comp=Z,36nm,0.9s								
BO01	**Tunca**	**39.25**	**291**	P			**P**	**04 06 47.1**	**-0.5**
BO04	**La Punta**	**39.37**	**292**	P			**P**	**04 06 47.5**	**-1.2**
BO04					IAmb	IAmb		04 06 52.4	
	comp=Z,51nm,1.0s								
MT13	**San Alfonso**	**39.43**	**292**	P			**P**	**04 06 48.0**	**-1.3**
MT08	**Bocatoma Ro**	**39.55**	**293**	P			**P**	**04 06 50.0**	**-0.5**
BO03	**Pichilemu**	**39.57**	**290**	P			**P**	**04 06 49.6**	**-0.7**
MT09	**Talagante**	**39.72**	**292**	P			**P**	**04 06 51.2**	**-0.5**
MT01	**Popeta**	**39.77**	**291**	P			**P**	**04 06 51.2**	**-0.8**
MT16	**CCHEN**	**39.80**	**292**				**P**	**04 06 51.6**	**-0.7**
VA05	**Santo Domingo**	**40.11**	**291**	P			**P**	**04 06 54.5**	**-0.2**
PEL	**Peldehue**	**40.11**	**292**	P			**P**	**04 06 55.0**	**+0.2**
MT02	**Curacav**	**40.22**	**292**	IAmb	IAmb			04 07 09.3	
	comp=Z,41nm,0.9s								
VA03	**San Esteban**	**40.37**	**293**	P			**P**	**04 06 57.5**	**+0.4**
ZON	**Zonda**	**40.56**	**296**	P			**P**	**04 06 57.6**	**-1.1**
ZON					IAmb	IAmb		04 07 02.3	
	comp=Z,91nm,1.7s								
ZON	**Zonda**	**40.56**	**296**	P			**P**	**04 06 57.5**	**-1.1**
CPUP	**Villa Florida**	**40.57**	**313**	P			**P**	**04 06 58.0**	**-0.7**
	comp=Z,9.8nm,0.8s,baz=159,slow=7.5,SNR=22								
	comp=Z,9.8nm,0.8s								
CPUP	**Villa Florida**	**40.57**	**313**				**P**	**04 06 57.8**	**-0.9**
CPUP	**Villa Florida**	**40.57**	**313**	P			**P**	**04 06 58.1**	**-0.5**
CO04	**Los Peladeros**	**41.17**	**293**	IAmb	IAmb			04 07 08.4	
	comp=Z,43nm,1.1s								
CO04	**Los Peladeros**	**41.17**	**293**	P			**P**	**04 07 05.1**	**+1.2**
SUR	**Sutherland**	**41.24**	**68**	P			**P**	**04 07 04.5**	**+0.1**
	comp=Z,12nm,0.8s,baz=195,slow=12,SNR=6.9								
SUR					LR	LR		04 21 52.6	
	comp=Z,154nm,18.1s,baz=199,slow=33								
	comp=Z,12nm,0.8s								
SJPY	**San Joaquin**	**41.37**	**316**	*e*P			**P**	**04 07 03.2**	**-2.0**
SBA	**Scott Base**	**41.56**	**184**	P			**P**	**04 07 08.2**	**+1.9**
CO02	**Combarbal**	**41.89**	**294**	IAmb	IAmb			04 07 13.7	
	comp=Z,85nm,1.3s								
VNDA	**Vanda**	**42.02**	**182**	P			**P**	**04 07 11.7**	**+1.6**
	comp=Z,13nm,0.9s,baz=190,slow=7.1,SNR=47								
	comp=Z,13nm,0.9s								
VNDA	**Vanda**	**42.02**	**182**				**P**	**04 07 11.6**	**+1.6**
CO03	**El Pedregal**	**42.06**	**294**	IAmb	IAmb			04 07 13.9	
	comp=Z,61nm,1.6s								
CO01	**Juntas del Tor**	**42.53**	**296**	IAmb	IAmb			04 07 20.1	
	comp=Z,29nm,0.8s								
CO01	**Juntas del Tor**	**42.53**	**296**	P			**P**	**04 07 16.1**	**+1.1**
RIB01	**Linhares ES**	**42.62**	**339**	*e*P			**P**	**04 07 13.7**	**-1.8**
GO04	**Tololo Observa**	**42.67**	**295**	IAmb	IAmb			04 07 20.0	
	comp=Z,57nm,1.2s								
AC05	**El Transito**	**43.59**	**296**				**P**	**04 07 23.5**	**+0.1**
AC05					IAmb	IAmb		04 07 24.1	
	comp=Z,46nm,0.8s								
AC05	**El Transito**	**43.59**	**296**	P			**P**	**04 07 23.5**	**+0.1**
PMNB	**Patos De Minas**	**44.63**	**331**	*e*P			**P**	**04 07 30.7**	**-1.1**
AC02	**Maricunga**	**44.82**	**299**	P			**P**	**04 07 33.9**	**+0.1**
AC02					IAmb	IAmb		04 07 50.3	
	comp=Z,23nm,1.1s								
AC02	**Maricunga**	**44.82**	**299**	P			**P**	**04 07 33.5**	**-0.3**
H04S2	**CROZET ISLANDS**	**45.02**	**109**	T			T	04 56 14.5	
	baz=223,slow=74,SNR=56								
H04S3	**CROZET ISLANDS**	**45.04**	**109**	T			T	04 56 14.7	
	baz=223,slow=74,SNR=60								
H04S1	**CROZET ISLANDS**	**45.04**	**109**	T			T	04 56 10.8	
	baz=223,slow=74,SNR=63								
GUA01	**Guaratinga, BA**	**45.19**	**340**	*e*P			**P**	**04 07 35.5**	**-0.6**
BOSA	**Boshof**	**46.46**	**70**	P			**P**	**04 07 46.0**	**-0.3**
	comp=Z,29nm,0.9s,baz=210,slow=7.4,SNR=36								
BOSA					LR	LR		04 23 22.0	
	comp=Z,173nm,19.4s,baz=206,slow=31								
	comp=Z,29nm,0.9s								
BOSA	**Boshof**	**46.46**	**70**				**P**	**04 07 46.2**	**-0.1**
BOSA					IAmb	IAmb		04 07 46.6	
	comp=Z,27nm,0.8s								
BOSA	**Boshof**	**46.46**	**70**	P			**P**	**04 07 46.3**	**0.0**
COIM	**Forte Coimbra**	**46.65**	**316**	*e*P			**P**	**04 07 46.1**	**-1.5**
JANB	**Januaria**	**47.52**	**335**	*e*P			**P**	**04 07 53.2**	**-1.3**
BDFB	**Brasilia**	**47.80**	**330**	P			**P**	**04 07 56.1**	**-0.6**
	comp=Z,6.8nm,0.7s,baz=149,slow=7.3,SNR=18								
BDFB				PcP			**PcP**	**04 09 26.7**	**+1.2**
	comp=Z,4.6nm,0.7s,baz=99,slow=3.2,SNR=4.9								
	comp=Z,6.8nm,0.7s								
BDFB	**Brasilia**	**47.80**	**330**	P			**P**	**04 07 56.1**	**-0.6**
LKGWB	**Lokgwabe**	**48.52**	**63**	IAmb	IAmb			04 08 04.8	
	comp=Z,44nm,1.3s								
MAKGR	**Makgori**	**48.65**	**67**	IAmb	IAmb			04 08 03.9	
	comp=Z,26nm,1.1s								
ARAG	**Araguaiana, MT**	**48.74**	**325**	*e*P			**P**	**04 08 02.9**	**-0.9**
KOOLE	**Kule**	**49.06**	**61**	IAmb	IAmb			04 08 06.8	
	comp=Z,17nm,0.7s								
CASY	**Casey**	**49.29**	**158**	P			**P**	**04 08 08.6**	**+1.1**
CASY					IAmb	IAmb		04 08 09.4	
	comp=Z,25nm,0.8s								
CASY	**Casey**	**49.29**	**158**	P			**P**	**04 08 08.6**	**+1.1**
PB03	**IPOC Station P**	**49.30**	**301**	IAmb	IAmb			04 08 12.8	
	comp=Z,33nm,1.2s								
PB03	**IPOC Station P**	**49.30**	**301**	P			**P**	**04 08 06.8**	**-1.6**
PB09	**IPOC Station P**	**49.31**	**302**	P			**P**	**04 08 09.2**	**+0.8**
PB07	**IPOC Station P**	**49.64**	**301**	IAmb	IAmb			04 08 26.3	
	comp=Z,29nm,0.9s								
LBTB	**Lobatse**	**49.69**	**68**	LR	LR			04 24 21.4	
	comp=Z,214nm,19.7s,baz=212,slow=30								
LBTB	**Lobatse**	**49.69**	**68**	IAmb	IAmb			04 08 12.0	
	comp=Z,23nm,0.9s								
LBTB	**Lobatse**	**49.69**	**68**	P			**P**	**04 08 11.1**	**-0.1**
PB02	**IPOC Station P**	**50.00**	**302**	IAmb	IAmb			04 08 14.3	
	comp=Z,29nm,0.9s								
PB02	**IPOC Station P**	**50.00**	**302**	P			**P**	**04 08 13.8**	**+0.2**
BBSD	**Serra de San D**	**50.14**	**314**	*e*P			**P**	**04 08 12.9**	**-1.7**
POGA	**Pongola**	**50.57**	**75**	P			**P**	**04 08 17.8**	**0.0**
PB08	**IPOC Station P**	**50.74**	**303**	IAmb	IAmb			04 08 26.4	
	comp=Z,20nm,1.1s								
PB08	**IPOC Station P**	**50.74**	**303**	P			**P**	**04 08 19.7**	**+0.1**
NBPN	**Ponto Novo - B**	**50.88**	**341**	*e*P			**P**	**04 08 18.6**	**-1.5**
GO01	**Chusmiza**	**51.18**	**303**	IAmb	IAmb			04 08 29.4	
	comp=Z,16nm,0.7s								
GO01	**Chusmiza**	**51.18**	**303**	P			**P**	**04 08 22.9**	**-0.

BOAV Boa Vista 68.47 322 P 04 10 19.7 -1.6
BOAV IAmb IAmb 04 10 20.3
comp=Z,16nm,0.9s
BOAV Boa Vista 68.47 322 *e*P P 04 10 19.4 -1.8
BOAV *ep*P pP 04 10 21.9 -4.3
MDP Montagnes des 68.90 331 LR LR 04 38 26.4
comp=Z,125nm,19.9s,baz=138,slow=34
DBIC Dimbokro 69.03 22 P P 04 10 25.6 +0.9
comp=Z,25nm,0.8s,baz=192,slow=6.6,SNR=32
DBIC LR LR 04 33 37.0
comp=Z,204nm,21.4s,baz=166,slow=30
comp=Z,25nm,0.8s
DBIC Dimbokro 69.03 22 P P 04 10 25.7 +0.9
DBIC Dimbokro 69.03 22 P P 04 10 25.9 +1.1
OTAV Otavalo 72.95 303 P P 04 10 49.8 +0.6
OTAV IAmb IAmb 04 10 54.3
comp=Z,33nm,1.4s
MQZ McQueen's Vall 74.97 194 P P 04 11 00.8 +0.8
ROSC El Rosal 75.50 309 P P 04 11 04.1 +0.2
comp=Z,6.1nm,0.7s,baz=268,slow=23,SNR=4.3
comp=Z,6.1nm,0.7s
LTZ Lake Taylor 75.92 193 P P 04 11 06.8 +1.1
LTZ IAmb IAmb 04 11 08.2
comp=Z,28nm,1.0s
INZ Inchbonnie 76.07 193 P P 04 11 06.2 -0.2
TAU Tasmania Unive 76.64 175 P P 04 11 09.7 0.0
TORD Torodi Ar. Bea 76.67 27 P P 04 11 11.1 +1.1
comp=Z,33nm,0.6s,baz=200,slow=6.6,SNR=208
comp=Z,33nm,0.6s
TORD Torodi Ar. Bea 76.67 27 P P 04 11 11.2 +1.2
TORD IAmb IAmb 04 11 12.1
comp=Z,23nm,0.8s
BFZ Birch Farm 77.48 197 P P 04 11 15.6 +1.2
SDV Santo Domingo 77.88 314 LR LR 04 46 24.0
comp=Z,341nm,20.2s,baz=153,slow=36
RTZ Ruatahuna 79.40 198 IAmb IAmb 04 11 27.3
comp=Z,26nm,1.1s
TOZ Tahuroa Road 80.48 197 IAmb IAmb 04 11 31.8
comp=Z,13nm,0.7s
TOO Toolangi 81.86 173 P P 04 11 38.8 +0.5
comp=Z,11nm,1.1s,comp=Z,0.0nm,5.7s
NWAO Narrogin (SRO) 81.90 149 LR LR 04 43 33.0
comp=Z,83nm,20.4s,baz=231,slow=32
MUN Mundaring 82.53 148 P P 04 11 41.6 -0.3
comp=Z,54nm,1.6s,comp=Z,0.0nm,7.7s
JTS Las Juntas de 84.72 302 LR LR 04 49 04.3
comp=Z,97nm,21.9s,baz=116,slow=35
SJG San Juan 85.03 322 LR LR 04 49 09.1
comp=Z,94nm,21.9s,baz=120,slow=35
HTT Hallett 85.41 167 P P 04 11 56.4 -0.2
comp=Z,9.6nm,0.9s,comp=Z,0.0nm,789s
FORT Forrest 86.37 157 P P 04 12 01.4 +0.1
comp=Z,24nm,1.2s,comp=Z,0.0nm,7.4s
TAM Tamanrasset 86.86 28 P P 04 12 06.8 +3.1
STKA Stephens Creek 87.22 169 P P 04 12 05.8 +0.3
comp=Z,8.8nm,0.9s,baz=171,slow=6.8,SNR=17
STKA LR LR 04 49 22.6
comp=Z,107nm,18.9s,baz=205,slow=34
comp=Z,8.8nm,0.9s
STKA Stephens Creek 87.22 169 P P 04 12 06.1 +0.6
comp=Z,87nm,1.5s
STKA Stephens Creek 87.22 169 P P 04 12 06.0 +0.6
CMSA Cobar Meteorol 87.88 172 P P 04 12 09.4 +0.8
comp=Z,23nm,1.4s,comp=Z,0.0nm,4.6s
CMSA Cobar Meteorol 87.88 172 P P 04 12 07.8 -0.9
MEEK Meekatharra 88.24 148 P P 04 12 10.1 -0.4
comp=Z,36nm,1.5s,comp=Z,0.0nm,0.8s
MEEK Meekatharra 88.24 148 P P 04 12 06.7 -3.8
INKA Innaminka 91.23 168 P P 04 12 24.8 +0.5
INKA IAmb IAmb 04 12 25.9
comp=Z,13nm,1.0s
QLP Quilpie 92.69 171 P P 04 12 31.8 +0.6
ASAR Alice Springs 94.34 161 P P 04 12 38.2 -0.6
comp=Z,6.0nm,0.7s,baz=182,slow=4.1,SNR=48
ASAR PP PP 04 16 24.8 -0.3
comp=Z,1.1nm,0.8s,baz=191,slow=7.1,SNR=6.8
ASAR PKKPbc PKKPbc 04 29 37.1 +1.5
comp=Z,0.2nm,0.6s,baz=348,slow=2.1,SNR=5.1
ASAR LR LR 04 52 02.9
comp=Z,410nm,21.2s,baz=206,slow=34
comp=Z,6.0nm,0.7s
ASAR Alice Springs 94.34 161 P P 04 12 38.4 -0.4
AS31 Alice Springs 94.34 161 P P 04 12 38.4 -0.5
MDT Midelt 94.67 18 LR LR 04 50 12.8
comp=Z,91nm,19.6s,baz=183,slow=32
WRA Warramunga Arr 98.06 161 P P 04 12 54.5 -1.2
comp=Z,2.4nm,0.9s,baz=198,slow=4.5,SNR=7.6
WRA PKKPbc PKKPdf 04 29 26.4 -0.3
comp=Z,0.7nm,0.7s,baz=359,slow=2.8,SNR=5.5
comp=Z,2.4nm,0.9s
WRA Warramunga Arr 98.06 161 P P 04 12 55.6 -0.1
FITZ Fitzroy Crossi 98.15 152 LR LR 04 54 17.9
comp=Z,135nm,19.1s,baz=187,slow=34
CTA Charters Tower 99.29 172 LR LR 04 57 31.1
comp=Z,149nm,18.8s,baz=222,slow=35
ESDC Sonseca Array 101.50 17 P Pdif 04 13 11.9 +1.5
comp=Z,0.7nm,0.9s,baz=158,slow=4.3,SNR=4.5
TXAR Lajitas Array 103.29 295 PKiKP PKiKP 04 17 48.7 -0.9
comp=Z,0.7nm,1.1s,baz=105,slow=2.3,SNR=4.0
TXAR PP PP 04 18 20.5 -0.8
comp=Z,0.3nm,0.8s,baz=200,slow=9.3,SNR=3.7
TXAR PKKPbc PKKPbc 04 28 53.9 +2.1
comp=Z,0.2nm,0.5s,baz=24,slow=2.9,SNR=3.9
HYB Hyderabad 111.90 93 *e*Pdif Pdif 04 13 57.0 -0.1
HYB *e*PKiKP PKiKP 04 17 54.6 +0.5
GERES GERESS Array B 113.63 27 PP PP 04 18 49.4 -0.4
comp=Z,1.2nm,0.9s,baz=209,slow=7.5,SNR=6.7
KBZ Khabaz 117.88 50 PKP PKPdf 04 18 04.6 -0.1
comp=Z,1.6nm,0.7s,baz=68,slow=6.5,SNR=4.2
KIEV Kiev 119.36 37 PKPdf 04 18 06.8 -0.5
AKASG Malin Array Be 119.37 37 PKP PKPdf 04 18 06.2 -1.1
comp=Z,1.6nm,0.8s,baz=246,slow=1.3,SNR=4.2
AKASG PP PP 04 19 34.1 +4.4
comp=Z,0.7nm,0.6s,baz=213,slow=6.8,SNR=5.5
AKASG Malin Array Be 119.37 37 PKPdf 04 18 06.4 -0.9
PV18 Skein Mesa, Pa 119.47 296 PKiKP 04 18 08.8 +0.5
SCHQ Schefferville 119.71 334 PKP PKPdf 04 18 07.7 -0.2
comp=Z,5.5nm,0.8s,baz=64,slow=0.9,SNR=8.5
NACGM Naroch 122.62 33 *e*PKP PKiKP 04 18 13.2 0.0
comp=Z,11nm,1.0s,baz=208
CMAR Chiang Mai Arr 122.56 112 PKP PKiKP 04 18 14.8 0.0
comp=Z,4.9nm,0.8s,baz=229,slow=3.9,SNR=11
PDAR Pinedale Array 123.45 299 PKP PKPdf 04 18 15.6 -0.2
comp=Z,0.9nm,0.6s,baz=131,slow=6.1,SNR=12
ULM Lac du Bonnet 124.12 313 PKP PKPdf 04 18 15.0 -1.5
comp=Z,3.2nm,0.6s,baz=96,slow=1.1,SNR=6.8
HFS Hagfors 124.19 22 PKP PKPdf 04 18 15.0 -1.3
comp=Z,3.0nm,0.9s,baz=145,slow=3.5,SNR=4.5
NB2 NORSAR Subarra 124.59 21 PKPdf PKPdf 04 18 16.8 -0.3
comp=Z,4.4nm,1.1s,baz=202,slow=1.9
NOA NORSAR Array B 124.59 21 PKP PKiKP 04 18 17.3 -0.2
comp=Z,1.6nm,0.7s,baz=181,slow=1.5,SNR=5.5
YHH Holmes Hill 125.63 299 PKiKP 04 18 21.3 +1.0
GAR Garm 125.74 73 PKiKP 04 18 21.4 +0.8
FINES FINESS Array B 128.01 29 PKP PKPdf 04 18 23.1 -0.4
comp=Z,7.1nm,0.6s,baz=163,slow=1.5,SNR=45
KSH2 Kashi 128.35 77 PKP PKiKP 04 18 25.5 -0.3
PZH PanZhiHua 130.79 110 PKP PKiKP 04 18 31.3 +0.2
ARCES ARCESS Array B 134.86 23 PKP PKPdf 04 18 36.5 +0.2
comp=Z,3.3nm,0.8s,baz=225,slow=2.1,SNR=10.0
ILON Igloolik, Nuna 135.79 335 PKPdf 04 18 38.5 +0.4
BVAR Borovoye Array 136.37 61 PKhKP PKPpre 04 18 27.9
comp=Z,0.9nm,0.5s,baz=277,slow=1.2,SNR=5.8
BVAR PKP PKPdf 04 18 38.3 -1.3
comp=Z,6.2nm,0.7s,baz=249,slow=1.1,SNR=13
MKAR Makanchi Array 137.35 75 PKhKP PKPpre 04 18 31.9
comp=Z,1.0nm,0.7s,baz=233,slow=3.0,SNR=7.3
MKAR PKP PKPdf 04 18 41.0 -0.7
comp=Z,2.5nm,0.7s,baz=243,slow=1.4,SNR=11
WMQ Urumqi 137.79 82 *e*PKP PKiKP 04 18 45.0 +0.4
KURBB Kurchatov Arra 138.31 68 PKhKP PKPpre 04 18 35.1
comp=Z,1.1nm,0.6s,baz=233,slow=3.7,SNR=10
KURBB PKP PKPdf 04 18 41.9 -1.3
comp=Z,1.8nm,0.7s,baz=230,slow=2.7,SNR=9.6
YKA Yellowknife Ar 140.10 314 PKhKP PKPpre 04 18 39.6
comp=Z,0.6nm,0.7s,baz=139,slow=4.4,SNR=2.5
YKA PKP PKiKP 04 18 48.0 -0.6
comp=Z,2.7nm,0.9s,baz=128,slow=2.7,SNR=6.0
GTA2 Gaotai 140.46 97 PKP PKPdf 04 18 44.8 -3.0
SPITS Spitsbergen Ar 140.87 13 PKhKP PKPpre 04 18 41.6
comp=Z,1.8nm,0.6s,baz=304,slow=3.5,SNR=4.7
NJ2 Nanjing 143.09 124 *e*P PKPdf 04 18 52.5 0.0
NJ2 pmax pmax
comp=Z,25nm,0.5s
ZALV Zalesovo Beam 143.41 68 PKhKP PKPpre 04 18 48.3
comp=Z,1.7nm,0.5s,baz=267,slow=3.0,SNR=9.3
DLBC Dease Lake 143.62 301 P PKPdf 04 18 53.0 +0.3
baz=126,SNR=7.6
WRGLY Wrigley 143.78 311 P PKPdf 04 18 53.9 +1.2
baz=124
S34M Telegraph Cree 143.78 300 P PKPdf 04 18 53.4 +0.5
baz=126
T33K Petersburg 143.91 297 P PKiKP 04 18 54.8 -1.7
baz=127
WTLY Watson Lake, Y 144.09 304 P PKiKP 04 18 55.4 -1.6
baz=125
R33M Jennings River 144.58 302 P PKPdf 04 18 54.5 0.0
baz=125,SNR=11
Q32M Nakina River 144.88 300 P PKPdf 04 18 55.7 +0.6
baz=125,SNR=11
S32K Killisnoo 145.01 297 P PKPdf 04 18 56.0 +1.0
baz=126
SIT Sitka 145.10 296 P PKPdf 04 18 56.4 +1.3
baz=126
R32K Eaglecrest 145.45 298 P PKPab 04 18 57.6 +1.4
baz=125
P33M Teslin, Yukon 145.81 302 PKPab 04 18 58.2 +0.7
P33M Teslin, Yukon 145.81 302 P PKPab 04 18 58.5 +1.0
baz=123,SNR=30
P32M Atlin 145.85 301 P PKPab 04 18 58.7 +1.0
baz=124,SNR=22
HNS HongShan 145.87 115 ⇑PKPbc PKPbc 04 18 57.5 -0.3
TIA Tai'an 145.94 119 PKPbc PKPbc 04 18 58.3 +0.2
S31K Pelican 146.03 297 P PKPab 04 18 59.0 +0.8
baz=124
R31K City Hall, Gus 146.06 298 P PKPab 04 18 59.3 +1.0
baz=124
BTO2 Baotou 146.32 106 *e*PKPbc PKPdf 04 18 58.0 0.0
BTO2 PP PP 04 22 27.3 +4.9
N32M Quiet Lake 146.43 303 P PKPab 04 19 00.1 +0.3
baz=122
MMPY Sheldon Lake, 146.46 306 P PKPab 04 19 00.1 +0.2
baz=121
PLBC Pleasant Camp 146.91 299 P PKPab 04 19 01.5 -0.1
baz=122
WHY Whitehorse 146.92 302 P PKPab 04 19 01.2 -0.6
baz=122
HHC Hu-ho-hao-te 147.20 107 *e*PKPbc PKPbc 04 19 02.0 +0.2
O30N Mendenhall 147.49 301 P PKPbc 04 19 02.5 +0.7
baz=121,SNR=14
M31M Drury Creek, Y 147.51 304 P PKPbc 04 19 02.7 +0.8
baz=120,SNR=17
P30M Million Dollar 147.52 300 P PKiKP 04 19 03.1 -1.0
baz=121
P29M Windy Craggy 147.59 299 P PKiKP 04 19 03.2 -1.0
baz=122
N31M Braeburn, Yuko 147.72 303 P PKPbc 04 19 03.2 +0.8
baz=120
HYT Haines Junctio 148.11 301 P PKiKP 04 19 04.9 -0.4
baz=120,SNR=5.6
N30M Aishikik Lake 148.25 302 P PKiKP 04 19 05.0 -0.5
baz=119,SNR=6.6
O29M Mount Kennedy 148.30 299 P PKPbc 04 19 04.9 +0.8
baz=120
A36M Sachs Harbour 148.53 324 PKPbc 04 19 04.8 +0.6
A36M Sachs Harbour 148.53 324 P PKiKP 04 19 05.0 -0.7
baz=112,SNR=26
YUK6 Outpost Mounta 148.53 301 P PKiKP 04 19 05.7 -0.7
baz=120
M30M Minto, Yukon 148.67 304 P PKiKP 04 19 05.6 -0.7
baz=118,SNR=10
PINM Pinnacle 148.92 298 P PKPbc 04 19 06.3 +0.6
baz=120,SNR=6.4
H31M Peel River 149.14 311 P PKPbc 04 19 06.5 +0.5
baz=114,SNR=25
O28M Mount Upton 149.23 299 P PKiKP 04 19 08.0 +0.1
baz=119,SNR=6.8
M29M Somme Creek 149.29 303 P PKiKP 04 19 07.8 +0.1
baz=117,SNR=23
YUK8 Steele Glacier 149.29 300 P PKiKP 04 19 08.1 +0.1
baz=118,SNR=12
J30M Hart River 149.38 308 P PKiKP 04 19 07.6 -0.3
baz=115,SNR=10
L29M L29M 149.46 304 P PKiKP 04 19 08.0 +0.1
baz=116,SNR=30
K29M Barlow Dome 149.54 306 P PKiKP 04 19 07.9 -0.3
baz=116,SNR=7.8
G31M Satah River 149.57 313 P PKiKP 04 19 07.5 -0.4
baz=113,SNR=13
I30M Mount Dempster 149.67 309 P PKiKP 04 19 07.9 -0.5
baz=114,SNR=26
YUK3 Moose Creek 149.82 301 P PKiKP 04 19 08.8 -0.2
baz=117,SNR=6.6
INK Inuvik 149.82 315 PKPbc PKiKP 04 19 08.0 -0.5
comp=Z,16nm,0.6s,baz=85,slow=3.0,SNR=44
INK Inuvik 149.82 315 P PKiKP 04 19 08.0 -0.5
baz=111,SNR=25
SONM Songino Array 149.84 93 PKP PKPdf 04 19 03.5 -0.1
comp=Z,5.5nm,0.9s,baz=235,slow=1.8,SNR=8.3
SONM PKPbc PKPbc 04 19 08.2 -0.2
comp=Z,17nm,0.8s,baz=226,slow=2.7,SNR=49
SONM Songino Array 149.84 93 PKPbc 04 19 08.3 0.0
DL2 Dalian 150.13 122 PKPbc PKPbc 04 19 08.5 -0.7
ULN Ulaanbaatar 150.18 94 PKPbc 04 19 08.8 -0.5
ULN Ulaanbaatar 150.18 94 PKP PKPbc 04 19 08.7 -0.5
ULN PKP PKiKP 04 19 10.2 +0.1
TJN Taejon 150.19 132 PKPbc 04 19 09.5 0.0
EPYK Eagle Plains 150.26 311 P PKPbc 04 19 09.0 +0.3
baz=112,SNR=14
BVCY Beaver Creek 150.28 302 P PKiKP 04 19 09.6 -0.1
baz=116,SNR=9.3
G30M tAoh Zrail Nji 150.30 312 P PKiKP 04 19 09.3 -0.3
baz=112,SNR=18
F30M Barrier River 150.37 313 P PKiKP 04 19 09.5 -0.1
baz=111,SNR=21
DAWY Dawson 150.38 306 P PKPbc 04 19 09.4 +0.3
baz=114,SNR=16
CRQE Cirque 150.48 298 P PKiKP 04 19 10.1 -0.1
baz=118
KAIM Kayak Island 150.67 296 P PKiKP 04 19 11.2 +0.7
baz=118
M27K Edge Creek, AK 150.68 301 P PKiKP 04 19 10.8 +0.2
baz=116
MCARA McCarthy VSAT 150.74 299 P PKiKP 04 19 11.0 +0.4
baz=117
H29M Whitestone 150.82 310 P PKiKP 04 19 10.7 +0.1
baz=111,SNR=9.4
G29M Pine Creek 150.94 311 P PKiKP 04 19 10.9 0.0
baz=110,SNR=28
BCAR Beaver Creek A 150.94 303 PKiKP 04 19 11.3 +0.3
L27K Beaver Creek, 150.96 303 P PKiKP 04 19 11.4 +0.4
baz=114,SNR=28
TLY Talaya 150.99 85 PKPbc 04 19 10.8 0.0
I28M Miner Creek 151.14 308 P PKiKP 04 19 11.3 -0.1
baz=112,SNR=17
M26K Nabesna, AK 151.17 301 P PKiKP 04 19 11.8 +0.3
baz=115
BMRM Bremner River 151.23 298 P PKiKP 04 19 12.2 +0.5
baz=116
Q23K Middleton Isla 151.30 294 P PKiKP 04 19 12.9 +1.2
baz=118
KSAR Wonju Array Be 151.33 132 PKiKP 04 19 12.3 -0.2
KSRS Korea Array 151.36 132 PKP PKPdf 04 19 06.0 -0.1
comp=Z,1.3nm,0.9s,baz=236,slow=0.4,SNR=3.0
KSRS PKPbc PKiKP 04 19 12.4 -0.2
comp=Z,5.6nm,0.7s,baz=197,slow=1.8,SNR=21
KSRS PKPab PKPab 04 19 21.1 +0.7
comp=Z,12nm,0.8s,baz=223,slow=4.4,SNR=18
E29M Blow River 151.38 314 P PKiKP 04 19 11.6 -0.1
baz=108,SNR=31
N25K Chitina, Valde 151.51 299 P PKiKP 04 19 13.2 +0.9
baz=115
EYAK Cordova Ski Ar 151.55 296 P PKiKP 04 19 13.2 +0.9
baz=117
L26K Log Cabin Wild 151.57 302 P PKiKP 04 19 13.0 +0.7
baz=114
I27K Kandik River 151.84 308 P PKiKP 04 19 13.4 +0.6
baz=110,SNR=27
F28M Old Crow 151.85 312 P PKiKP 04 19 13.0 +0.3
baz=108,SNR=35
NRIK Noril'sk 151.87 44 PKPbc PKPbc 04 19 11.3 -1.0
comp=Z,2.4nm,0.3s,baz=183,slow=3.3,SNR=6.7
D28M Stokes Point 151.95 316 P PKiKP 04 19 13.4 +0.6
baz=106
E28M Babbage River 152.02 314 P PKPbc 04 19 12.6 -0.1
baz=106
H27K Steamboat Moun 152.02 309 P PKiKP 04 19 13.6 +0.5
baz=109,SNR=33
P23K Montague Islan 152.03 295 P PKiKP 04 19 13.7 +0.4
baz=117
KLU Klutina 152.04 298 P PKiKP 04 19 14.2 +0.8
baz=115
HARP HAARP 152.08 300 P PKiKP 04 19 13.6 +0.3
baz=114
G27K Doyon Strip 152.26 310 P PKiKP 04 19 14.1 +0.5
baz=108,SNR=9.5
GLI Glacier Island 152.29 296 P PKiKP 04 19 14.0 +0.2
baz=116
I26K Coal Creek Min 152.35 307 P PKiKP 04 19 14.3 +0.5
baz=110
M24K Tolsona, Glenn 152.40 299 P PKiKP 04 19 15.3 +1.3
baz=114
PAX Paxson 152.44 301 P PKiKP 04 19 15.3 +1.1
baz=113
RIDG Independent Ri 152.47 303 P PKiKP 04 19 15.2 +1.0
baz=112
E27K Coleen River 152.64 313 P PKiKP 04 19 14.9 +0.5
baz=106,SNR=10
D27M Malcolm River 152.69 315 P PKiKP 04 19 15.4 +0.9
baz=104
SCM Sheep Creek Mo 152.79 298 P PKiKP 04 19 15.7 +0.8
baz=114
PWL Port Wells 152.83 296 P PKiKP 04 19 14.9 0.0
baz=115
K24K Donnelly Dome 152.88 303 P PKiKP 04 19 15.6 +0.7
baz=111
M23K Glacier View 152.94 298 P PKiKP 04 19 15.7 +0.5
baz=114
J25K Salcha River, 153.00 305 P PKiKP 04 19 15.8 +0.5
baz=110
SEW Seward 153.00 294 P PKiKP 04 19 15.7 +0.5
baz=116
G26K Porcupine Rive 153.10 310 P PKiKP 04 19 15.8 +0.6
baz=106,SNR=10
KNK Knik Glacier 153.11 297 P PKiKP 04 19 15.8 +0.3
baz=114
SML Sawmill 153.22 298 P PKiKP 04 19 16.4 +0.6
baz=113
WAT6 Susitna Watana 153.26 300 P PKiKP 04 19 16.7 +0.7
baz=112
DHY Denali Highway 153.29 301 P PKiKP 04 19 16.9 +0.9
baz=111
O22K Cooper Landing 153.29 294 P PKiKP 04 19 16.7 +0.9
baz=115
PRP Porcupine Dome 153.35 306 P PKiKP 04 19 16.8 +0.8
baz=108
KDAK Kodiak Island 153.38 288 PKPbc PKiKP 04 19 16.5 +0.4
comp=Z,8.0nm,0.7s,baz=220,slow=4.7,SNR=9.2
KDAK Kodiak Island 153.38 288 PKiKP 04 19 16.4 +0.3
KDAK Kodiak Island 153.38 288 P PKiKP 04 19 16.9 +0.8
baz=119
BRSE Bradley Lake S 153.43 292 P PKiKP 04 19 17.2 +1.0
baz=116
F26K Sheenjek River 153.44 311 P PKiKP 04 19 17.2 +1.2
baz=105,SNR=13
OHAK Old Harbor 153.44 286 P PKiKP 04 19 17.3 +1.1
baz=119
PMR Palmer 153.48 297 P PKiKP 04 19 17.7 +1.5
baz=113
SII Sitkinak Islan 153.54 284 P PKiKP 04 19 17.7 +1.2
baz=120
RC01 Rabbit Creek A 153.55 296 P PKiKP 04 19 18.0 +1.6
baz=114
HDA Harding Lake 153.57 304 P PKiKP 04 19 18.1 +1.7
baz=109
ILAR Eielson Array 153.67 304 PKP PKPdf 04 19 08.2 -0.4
comp=Z,0.5nm,0.9s,baz=249,slow=1.6,SNR=4.2
ILAR PKPbc PKiKP 04 19 16.8 +0.3
comp=Z,7.0nm,0.9s,baz=104,slow=1.1,SNR=25
WAT1 Susitna Watana 153.70 300 P PKiKP 04 19 18.1 +1.4
baz=111
C27K Jago River 153.72 316 P PKiKP 04 19 18.0 +1.5
baz=101
MJAR Matsushiro Arr 153.74 149 PKP PKPdf 04 19 08.4 -1.3
comp=Z,1.0nm,0.9s,baz=180,slow=5.3,SNR=2.8
MJAR PKPbc PKPbc 04 19 17.5 0.0
comp=Z,4.4nm,0.9s,baz=161,slow=3.0,SNR=12
MJAR PKPab PKPab 04 19 30.5 0.0
comp=Z,7.8nm,0.8s,baz=190,slow=5.1,SNR=12
MJAR Matsushiro Arr 153.74 149 PKPbc 04 19 16.8 -0.7
HOM Homer 153.80 292 P PKiKP 04 19 18.4 +1.5
baz=116
CHIR Chirikof Islan 153.85 282 P PKiKP 04 19 18.6 +1.5
baz=121
G25K Bearman Lake 153.94 309 P PKiKP 04 19 18.4 +1.4
baz=105
F25K Christian Rive 153.97 311 P PKiKP 04 19 18.4 +1.3
baz=104
M22K Willow 153.98 297 P PKiKP 04 19 18.9 +1.7
baz=112
POKR Poker Plat Res 154.00 305 P PKiKP 04 19 18.9 +1.7
baz=107
CAPN Captain Cook N 154.05 294 P PKiKP 04 19 18.7 +1.4
baz=114
E25K Arctic Village 154.06 312 P PKiKP 04 19 18.3 +1.0
baz=103,SNR=13
COLA College 154.09 304 P PKiKP 04 19 18.7 +1.4
baz=108
MCK McKinley 154.18 302 P PKiKP 04 19 18.5 +0.9
baz=109
C26K Camden Bay 154.19 316 P PKiKP 04 19 19.0 +1.6
baz=100
CUT Chulitna 154.28 298 P PKiKP 04 19 19.3 +1.4
baz=111
H24K Noodor Dome 154.38 307 P PKiKP 04 19 19.6 +1.6
baz=106
O20K Slope Mountain 154.43 292 P PKiKP 04 19 19.4 +1.1
baz=114
G24K Hadweenzic Riv 154.45 309 P PKiKP 04 19 19.1 +1.0
baz=104
NEA2 Nenana 154.50 303 P PKiKP 04 19 19.7 +1.4
baz=107
P19K Oil Pt 154.53 291 P PKiKP 04 19 19.9 +1.4
baz=115
L22K Petersville 154.55 298 P PKiKP 04 19 19.3 +0.8
baz=110
D25K Kavik River 154.59 315 P PKiKP 04 19 18.9 +0.5
baz=100
TRF Thorofare Moun 154.65 300 P PKiKP 04 19 19.3 +0.4
baz=109
SKT Skwentna 154.68 297 P PKiKP 04 19 19.4 +0.7
baz=111
SPCR Spurr Chakacha 154.69 295 P PKiKP 04 19 20.3 +1.4
baz=112
I23K Minto, Yukon-K 154.78 305 P PKiKP 04 19 20.5 +1.7
baz=106
F24K Squaw Lake 154.79 310 P PKiKP 04 19 20.8 +1.9
baz=102
Q18K Katmai Hardscr 154.92 288 P PKPab 04 19 36.3 +1.3
baz=116
H23K Yukon River 155.04 306 P PKPab 04 19 36.1 +0.9
baz=105
R17L Mt. Peulik Vol 155.10 285 P PKPab 04 19 36.7 +1.0
baz=118
E24K Your Creek 155.13 312 P PKPab 04 19 36.5 +0.9
baz=101
Q17K Contact Creek 155.16 287 P PKPab 04 19 36.7 +0.7
baz=117
CHNA Chernabura Isl 155.25 277 P PKPab 04 19 37.0 +0.6
baz=122
O19K Port Alsworth 155.25 292 P PKPab 04 19 36.8 +0.6
baz=113
PPLA Purkeypile 155.29 299 P PKPab 04 19 36.8 +0.2
baz=109
MLY Manley 155.31 304 P PKPab 04 19 37.1 +0.6
baz=105
P18K Big Mountain, 155.34 289 P PKPab 04 19 37.1 +0.3
baz=115
M20K Styx River 155.35 296 P PKPab 04 19 37.3 +0.5
baz=111
CAST Castle Rocks 155.41 300 P PKPab 04 19 37.1 +0.3
baz=108
D24K Happy Valley 155.43 314 P PKPab 04 19 37.6 +0.8
baz=98
G23K Bananza Creek 155.44 308 P PKPab 04 19 37.9 +1.0
baz=102
CHGN Chignik 155.44 281 P PKPab 04 19 38.1 +1.0
baz=120
O18K Koktuh Hills 155.53 290 P PKPab 04 19 37.8 +0.4
baz=114
E23K Chandalar 155.54 311 P PKPab 04 19 38.2 +0.8
baz=100
N19K Bonanza Creek 155.57 293 P PKPab 04 19 38.3 +0.6
baz=112
COLD Coldfoot 155.61 309 P PKPab 04 19 38.6 +1.0
baz=101
TOLK Toolik Lake Re 155.62 313 P PKPab 04 19 38.7 +1.0
baz=98
CHUM Lake Minchumin 155.65 301 P PKPab 04 19 38.8 +1.0
baz=107
Q16K King Salmon 155.71 287 P PKPab 04 19 39.0 +0.8
baz=116
H22K Ishtalitna Cre 155.79 306 P PKPab 04 19 38.9 +0.5

	baz=103						
P17K	**Kvichak River**	**155.83 288**	P		**PKPab**	**04 19 39.6**	**+0.9**
	baz=115						
I21K	**Tanana**	**155.86 304**	P		**PKPab**	**04 19 39.8**	**+1.0**
	baz=104						
SDPT	**Sand Point**	**155.96 278**	P		**PKPab**	**04 19 40.8**	**+1.4**
	baz=121						
S14K	**Fog Glacier**	**155.99 280**	P		**PKPab**	**04 19 40.4**	**+0.7**
	baz=120						
G22K	**Bettles**	**156.05 308**	P		**PKPab**	**04 19 40.5**	**+1.0**
	baz=101						
D23K	**Nanushuk River**	**156.06 313**	P		**PKPab**	**04 19 40.4**	**+0.9**
	baz=97						
C23K	**Itkillik River**	**156.13 316**	P		**PKPab**	**04 19 40.6**	**+0.8**
	baz=95						
N18K	**Kilae Creek**	**156.16 292**	P		**PKPab**	**04 19 40.5**	**+0.3**
	baz=112						
L19K	**White Mountain**	**156.22 296**	P		**PKPab**	**04 19 41.7**	**+1.3**
	baz=109						
K20K	**Telida**	**156.24 299**	P		**PKPab**	**04 19 42.1**	**+1.6**
	baz=107						
H21K	**Melozitna Rive**	**156.31 305**	P		**PKPab**	**04 19 42.2**	**+1.6**
	baz=103						
O17K	**Koliganek Bris**	**156.37 289**	P		**PKPab**	**04 19 42.2**	**+1.2**
	baz=113						
F22K	**John River**	**156.41 310**	P		**PKPab**	**04 19 42.2**	**+1.1**
	baz=99						
M18K	**Stony River**	**156.42 294**	P		**PKPab**	**04 19 42.4**	**+1.2**
	baz=110						
P16K	**Nushagak River**	**156.49 287**	P		**PKPab**	**04 19 43.1**	**+1.5**
	baz=114						
J20K	**Nowinta River**	**156.50 301**	P		**PKPab**	**04 19 43.3**	**+1.8**
	baz=105						
N17K	**Nushagak Hills**	**156.70 291**	P		**PKPab**	**04 19 43.3**	**+0.9**
	baz=112						
G21K	**Allakaket**	**156.76 307**	P		**PKPab**	**04 19 43.8**	**+1.2**
	baz=100						
O16K	**Kokwok River B**	**156.76 288**	P		**PKPab**	**04 19 43.8**	**+1.0**
	baz=113						
I20K	**Naaghedeneel**	**156.80 302**	P		**PKPab**	**04 19 44.0**	**+1.3**
	baz=104						
F21K	**Alatna River**	**156.87 309**	P		**PKPab**	**04 19 44.3**	**+1.3**
	baz=99						
L18K	**Granite Mounta**	**157.05 295**	P		**PKPab**	**04 19 44.4**	**+0.5**
	baz=108						
J19K	**Poorman**	**157.08 300**	P		**PKPab**	**04 19 44.6**	**+0.6**
	baz=104						
H20K	**Anotleneega Mo**	**157.12 304**	P		**PKPab**	**04 19 44.8**	**+0.6**
	baz=102						
B22K	**Teshekpuk Lake**	**157.12 317**	P		**PKPab**	**04 19 44.9**	**+0.9**
	baz=91						
M17K	**Holitna River**	**157.12 293**	P		**PKPab**	**04 19 45.0**	**+0.7**
	baz=109						
E21K	**Killik River**	**157.20 312**	P		**PKPab**	**04 19 45.4**	**+0.9**
	baz=95						
N16K	**Nishlik Lake**	**157.41 290**	P		**PKPab**	**04 19 46.0**	**+0.4**
	baz=111						
O15K	**Ungalikthiuk R**	**157.41 287**	P		**PKPab**	**04 19 45.9**	**+0.3**
	baz=113						
J18K	**Innoko River**	**157.42 298**	P		**PKPab**	**04 19 46.2**	**+0.7**
	baz=105						
B21K	**Ikpikpuk River**	**157.51 315**	P		**PKPab**	**04 19 46.3**	**+0.7**
	baz=92						
HILR	**Hailar Array B**	**157.51 104**	PKPab		**PKPab**	**04 19 46.6**	**+0.3**
	comp=Z,7.1nm,0.5s,baz=193,slow=4.6,SNR=14						
C21K	**Knifeblade Rid**	**157.55 314**	P		**PKPab**	**04 19 46.9**	**+1.0**
	baz=93						
M16K	**Timber Creek**	**157.69 291**	P		**PKPab**	**04 19 47.3**	**+0.5**
	baz=110						
F20K	**Avaraart Lake**	**157.71 308**	P		**PKPab**	**04 19 47.3**	**+0.6**
	baz=97						
L17K	**Donlin**	**157.74 295**	P		**PKPab**	**04 19 47.6**	**+0.7**
	baz=107						
H19K	**Roundabout Mou**	**157.76 304**	P		**PKPab**	**04 19 47.6**	**+0.7**
	baz=100						
GCSA	**Galena City Sc**	**157.79 302**	P		**PKPab**	**04 19 48.0**	**+1.0**
	baz=102						
K17K	**Iditarod**	**157.91 296**	P		**PKPab**	**04 19 48.3**	**+0.7**
	baz=106						
N15K	**Kwethluk River**	**157.91 289**	P		**PKPab**	**04 19 48.4**	**+0.7**
	baz=111						
E20K	**Nigu River**	**158.01 311**	P		**PKPab**	**04 19 48.7**	**+0.7**
	baz=94,SNR=6.7						
UNV	**Unalaska Valle**	**158.12 269**	P		**PKPab**	**04 19 48.8**	**0.0**
	baz=124						
O14K	**Tigyukauivet M**	**158.12 286**	P		**PKPab**	**04 19 48.4**	**-0.2**
	baz=113						
G19K	**Purcell Mounta**	**158.12 305**	P		**PKPab**	**04 19 48.9**	**+0.4**
	baz=98						
L16K	**Owhat River**	**158.14 293**	P		**PKPab**	**04 19 48.8**	**+0.1**
	baz=108						
BNX	**BinXian**	**158.18 121**	⇑P		**PKPab**	**04 19 48.3**	**-0.9**
BNX			pmax		pmax		
	comp=Z,9.0nm,0.9s						
D20K	**Etivluk River**	**158.19 312**	P		**PKPab**	**04 19 49.3**	**+0.6**
	baz=92,SNR=5.1						
E19K	**Redstone River**	**158.34 309**	P		**PKPab**	**04 19 48.5**	**-0.9**
	baz=95						
M15K	**Kasigluk River**	**158.37 290**	P		**PKPab**	**04 19 49.1**	**-0.6**
	baz=110						
B20K	**Meade River**	**158.40 316**	P		**PKPab**	**04 19 51.0**	**+1.5**
	baz=89						
J17K	**VABM Dome**	**158.43 298**	P		**PKPab**	**04 19 51.1**	**+1.2**
	baz=104						
F19K	**Shaleruckik Mo**	**158.49 307**	P		**PKPab**	**04 19 51.7**	**+1.7**
	baz=96						
H18K	**Honhosa River**	**158.49 302**	P		**PKPab**	**04 19 51.7**	**+1.6**
	baz=100						
N14K	**Kuskokwak Cree**	**158.57 287**	P		**PKPab**	**04 19 52.6**	**+2.1**
	baz=111						
G18K	**Tagagawik**	**158.72 304**	P		**PKPab**	**04 19 52.9**	**+1.8**
	baz=98						
D19K	**Kuna River**	**158.73 312**	P		**PKPab**	**04 19 53.4**	**+2.3**
	baz=92,SNR=5.7						
USRK	**Ussuriysk Ar.**	**158.74 131**	PKPab		**PKPab**	**04 19 51.3**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=66,slow=4.6,SNR=4.2						
M14K	**Bethel**	**158.98 289**	P		**PKPab**	**04 19 54.1**	**+1.8**
	baz=109						
L15K	**Ungalak Mounta**	**159.05 292**	P		**PKPab**	**04 19 54.2**	**+1.6**
	baz=107						
J16K	**Anvik River**	**159.07 297**	P		**PKPab**	**04 19 54.2**	**+1.5**
	baz=103						
H17K	**Granite Mounta**	**159.10 302**	P		**PKPab**	**04 19 54.4**	**+1.6**
	baz=99						
F18K	**Selawik**	**159.21 306**	P		**PKPab**	**04 19 55.0**	**+1.8**
	baz=95						
K15K	**Wolf Creek Mou**	**159.24 294**	P		**PKPab**	**04 19 55.5**	**+2.0**
	baz=105						
I17K	**Unalakleet**	**159.24 298**	P		**PKPab**	**04 19 55.1**	**+1.7**
	baz=102						
C19K	**Lookout Ridge**	**159.27 313**	P		**PKPab**	**04 19 55.8**	**+2.3**
	baz=89						
G17K	**Kiwalik Mounta**	**159.49 303**	P		**PKPab**	**04 19 56.1**	**+1.6**
	baz=97						
L14K	**Kuka Creek**	**159.50 291**	P		**PKPab**	**04 19 56.3**	**+1.8**
	baz=107						
M13K	**Dall Lake**	**159.52 288**	P		**PKPab**	**04 19 56.5**	**+1.8**
	baz=109						
E18K	**Tukpahlearik C**	**159.63 308**	P		**PKPab**	**04 19 56.7**	**+1.7**
	baz=92						
A19K	**Wainwright**	**159.72 317**	P		**PKPab**	**04 19 57.3**	**+2.1**
	baz=84						
F17K	**Baldwin Pennin**	**159.83 306**	P		**PKPab**	**04 19 57.6**	**+1.7**
	baz=94						
C18K	**Utukok River**	**159.86 312**	P		**PKPab**	**04 19 57.8**	**+1.8**
	baz=88						
H16K	**Elim**	**160.04 300**	P		**PKPab**	**04 19 58.4**	**+1.6**
	baz=98						
E17K	**Hotham Inlet**	**160.09 307**	P		**PKPab**	**04 19 58.3**	**+1.3**
	baz=92						
G16K	**Koyuk River**	**160.18 302**	P		**PKPab**	**04 19 58.1**	**+0.7**
	baz=96						
J14K	**Nanvaranak Lak**	**160.26 294**	P		**PKPab**	**04 19 59.2**	**+1.4**
	baz=103						
RDOG	**Red Dog Mine**	**160.51 310**	P		**PKPab**	**04 19 59.6**	**+0.7**
	baz=88						
K13K	**Kusilvak Mount**	**160.57 292**	P		**PKPab**	**04 20 00.2**	**+1.0**
	baz=104						
D17K	**Noatak River**	**160.59 309**	P		**PKPab**	**04 20 00.6**	**+1.4**
	baz=89						
C17K	**DeLong Mountai**	**160.60 312**	P		**PKPab**	**04 20 00.6**	**+1.4**
	baz=87						
G15K	**Niukluk**	**160.85 301**	P		**PKPab**	**04 20 01.1**	**+0.8**
	baz=96						
M11K	**Mekoryuk**	**160.85 287**	P		**PKPab**	**04 20 01.1**	**+0.6**
	baz=108						
F15K	**North Star Dit**	**161.16 303**	P		**PKPab**	**04 20 02.0**	**+0.3**
	baz=94						
ANM	**Nome**	**161.37 299**	P		**PKPab**	**04 20 02.9**	**+0.3**
	baz=96						
C16K	**Lisburne Hills**	**161.41 311**	P		**PKPab**	**04 20 04.2**	**+1.5**
	baz=85						
HEH	**HeiHe**	**161.59 112**	*e*P		**PKPab**	**04 20 02.8**	**-1.2**
HEH			pmax		pmax		
	comp=Z,18nm,1.0s						
ADK	**Adak**	**161.90 254**			**PKPab**	**04 20 05.7**	**+0.4**
TNA	**Tin City**	**162.51 302**	P		**PKPab**	**04 20 08.8**	**+1.1**
	baz=91						
PETK	**Petropavlovsk-**	**172.26 194**	PKP		**PKPdf**	**04 19 26.2**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=129,slow=2.1,SNR=4.3						
PETK			PKPab		**PKPab**	**04 20 50.3**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=179,slow=5.9,SNR=3.6						

*SJA **26** 04:14:58.3±0.7,31°.76S×72°.68W,h20km±12km, ML3.1, MW3.5*
*GUC **26** 04:15:04.3±0.9,31°.79S×72°.20W,h50km±9km, ML3.1*
ISC 26 04:14:58.0±1.6,31°.75S±0°.03×72°.50W±0°.06,h16km±10km, n39,σ1§43/64,2C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CO04	**Los Peladeros**	**1.33**	**103**	*i*P	**Pg**	**04 15 23.7**	**-0.1**
CO04				*e*S	**Sb**	**04 15 38.1**	**-1.6**
CO04				IAML		04 15 39.8	
	comp=N,472nm,0.2s						
CO02	**Combarbal**	**1.40**	**67**	*e*P	**Pg**	**04 15 24.9**	**0.0**
CO02				*e*S	**Sg**	**04 15 42.3**	**-0.7**
CO02				IAML		04 15 43.6	
	comp=Z,702nm,0.3s						
CO02	**Combarbal**	**1.40**	**67**	*e*P	**Pg**	**04 15 24.9**	**0.0**
CO02				*e*S	**Sb**	**04 15 41.4**	**0.0**
CO02				IAML		04 15 44.0	
	comp=N,1μm,0.3s						
VA01	**Torpederas**	**1.46**	**151**	*e*P	**Pg**	**04 15 26.9**	**+0.8**
VA01	**Torpederas**	**1.46**	**151**	*e*P	**Pg**	**04 15 26.7**	**+0.6**
ROCH	**El Roble**	**1.75**	**134**	*e*P	**Pb**	**04 15 30.7**	**+0.8**
ROCH				*e*S	**Sn**	**04 15 50.5**	**+0.4**
ROCH				IAML		04 15 57.6	
	comp=N,396nm,0.4s						
CO03	**El Pedregal**	**1.80**	**60**	*e*P	**Pg**	**04 15 31.8**	**-0.8**
CO03				*e*S	**Sg**	**04 15 54.1**	**-1.8**
CO03				IAML		04 15 56.5	
	comp=Z,125nm,0.8s						
CO03	**El Pedregal**	**1.80**	**60**	*e*P	**Pb**	**04 15 31.1**	**+0.5**
CO03				*e*S	**Sb**	**04 15 51.4**	**-1.6**
CO03				IAML		04 15 57.6	
	comp=E,164nm,0.4s						
MT02	**Curacav**	**1.90**	**143**	*e*P	**Pb**	**04 15 32.8**	**+0.6**
MT02				*e*S	**Sb**	**04 15 57.2**	**+1.5**
MT02				IAML		04 16 02.7	
	comp=Z,66nm,0.8s						
MT02	**Curacav**	**1.90**	**143**	⇑*i*P	**Pb**	**04 15 32.6**	**+0.4**
MT02				*e*S	**Sn**	**04 15 53.9**	**+0.6**
VA03	**San Esteban**	**1.94**	**122**	*e*P	**Pb**	**04 15 33.1**	**+0.1**
VA03				*e*S	**Sn**	**04 15 53.4**	**-1.1**
VA03				IAML		04 16 06.9	
	comp=Z,169nm,0.5s						
VA03	**San Esteban**	**1.94**	**122**	*e*P	**Pb**	**04 15 32.8**	**-0.2**
VA03				*e*S	**Sn**	**04 15 53.8**	**-0.7**
VA03				IAML		04 16 01.9	
	comp=N,299nm,0.2s						
VA05	**Santo Domingo**	**2.04**	**159**	*e*P	**Pb**	**04 15 35.0**	**+0.3**
VA05				IAML		04 16 18.4	
	comp=N,169nm,0.1s						
PEL	**Peldehue**	**2.07**	**133**	*e*P	**Pb**	**04 15 35.4**	**+0.1**
PEL				IAML		04 16 10.8	
	comp=Z,76nm,0.4s						
GO04	**Tololo Observa**	**2.15**	**43**	*e*P	**Pb**	**04 15 36.9**	**+0.2**
GO04				IAML		04 16 11.4	
	comp=Z,186nm,0.3s						
GO04				*e*S	**Sg**	**04 16 11.6**	**+4.4**
GO04	**Tololo Observa**	**2.15**	**43**	*e*P	**Pb**	**04 15 36.6**	**0.0**
MT05	**Renca**	**2.21**	**138**	*e*P	**Pb**	**04 15 37.6**	**-0.1**
MT05				*e*S	**Sg**	**04 16 07.8**	**-1.4**
MT05				IAML		04 16 22.1	
	comp=Z,78nm,0.6s						
MT05	**Renca**	**2.21**	**138**	*e*P	**Pb**	**04 15 37.0**	**-0.7**
MT05				IAML		04 16 14.8	
	comp=E,222nm,0.6s						
MT10	**Hacienda Santa**	**2.25**	**133**	*e*P	**Pb**	**04 15 37.7**	**-0.7**
MT10				IAML		04 16 15.8	
	comp=E,310nm,0.4s						
MT14	**Cerro Cal¡n**	**2.33**	**135**	*e*P	**Pb**	**04 15 39.2**	**-0.5**
MT14				IAML		04 16 16.5	
	comp=N,176nm,0.4s						
MT01	**Popeta**	**2.36**	**154**	*e*P	**Pb**	**04 15 39.1**	**-0.9**
MT01				*e*S	**Sg**	**04 16 12.7**	**-1.1**
MT01				IAML		04 16 26.6	
	comp=Z,33nm,0.3s						
MT04	**Ro Olivares**	**2.59**	**130**	*e*P	**Pb**	**04 15 43.5**	**-0.7**
MT04				*e*S	**Sb**	**04 16 14.5**	**-1.4**
MT04				IAML		04 16 21.0	
	comp=Z,36nm,0.8s						
MT08	**Bocatoma Ro**	**2.69**	**129**	*e*P	**Pb**	**04 15 45.3**	**-0.7**
MT08				*e*S	**Sb**	**04 16 20.4**	**+1.5**
MT08				IAML		04 16 34.1	
	comp=Z,41nm,0.5s						
CO01	**Juntas del Tor**	**2.72**	**50**	*e*P	**Pb**	**04 15 45.8**	**-0.7**
CO01				*e*S	**Sb**	**04 16 19.0**	**-0.8**
CO01				IAML		04 16 27.8	
	comp=Z,49nm,1.1s						
MT13	**San Alfonso**	**2.73**	**137**	*e*P	**Pb**	**04 15 45.1**	**-1.4**
MT13				*e*S	**Sb**	**04 16 19.5**	**-0.3**
MT13				IAML		04 16 31.5	
	comp=Z,37nm,0.7s						
RTLS	**Leoncito**	**2.73**	**92**	*e*P	**Pb**	**04 15 46.7**	**0.0**
RTLS				*e*S	**Sb**	**04 16 18.6**	**-1.5**
RTLS				IAML		04 16 25.4	
	comp=Z,174nm,0.6s						
AROD	**Rodeo**	**3.04**	**60**	*e*P	**Pb**	**04 15 51.6**	**-0.4**
AROD				*e*S	**Sb**	**04 16 29.7**	**+0.7**
LCO	**Las Campanas**	**3.14**	**30**	*e*P	**Pb**	**04 15 51.1**	**-2.6**
LCO				*e*S	**Sb**	**04 16 34.0**	**+2.2**
LCO				IAML		04 16 48.0	
	comp=Z,77nm,0.4s						
ACCO	**Cerro Coronel**	**3.17**	**69**	*e*P	**Pb**	**04 15 54.4**	**+0.3**
ACCO				*e*S	**Sb**	**04 16 33.0**	**+0.4**
ACCO				IAML		04 16 41.2	
	comp=Z,52nm,0.5s						
ARCO	**CERRO ARCO**	**3.21**	**111**	*e*P	**Pb**	**04 15 51.9**	**-2.9**
ARCO				*e*S	**Sb**	**04 16 35.4**	**+1.6**
ARCO				IAML		04 16 41.1	
	comp=Z,39nm,0.8s						
ZON	**Zonda**	**3.27**	**87**	*e*P	**Pb**	**04 15 57.2**	**+1.5**
ZON				*e*S	**Sb**	**04 16 34.6**	**-0.6**
ZON				IAML		04 16 47.1	
	comp=Z,27nm,0.8s						
GO05	**Hualane**	**3.29**	**172**	*e*P	**Pg**	**04 16 01.9**	**+0.9**
GO05				*e*S	**Sn**	**04 16 29.1**	**+1.4**
ACDV	**Cuesta del Vie**	**3.31**	**62**	*e*P	**Pb**	**04 15 58.7**	**+2.3**
ACDV				*e*S	**Sb**	**04 16 38.7**	**+2.2**
ACDV				IAML		04 16 46.3	
	comp=Z,44nm,0.6s						
BO02	**Sierra Bellavi**	**3.36**	**155**	*e*P	**Pb**	**04 15 54.4**	**-2.8**
BO02				IAML		04 16 53.2	
	comp=Z,29nm,0.5s						
SJA	**San Juan**	**3.37**	**87**	*e*P	**Pg**	**04 16 03.7**	**+1.2**
SJA				IAML		04 17 17.7	
	comp=Z,32nm,0.5s						
AAGR	**Agrelo**	**3.38**	**114**	*e*P	**Pb**	**04 15 55.2**	**-2.4**
AAGR				*e*S	**Sg**	**04 16 48.7**	**+2.1**
AAGR				IAML		04 16 56.6	
	comp=Z,61nm,4.7s						
RTLL	**Cerro Villicun**	**3.46**	**84**	*e*S	**Sb**	**04 16 39.2**	**-1.7**
RTLL				IAML		04 17 00.4	
	comp=Z,34nm,0.4s						
AC05	**El Transito**	**3.49**	**34**	*e*P	**Pb**	**04 15 56.2**	**-3.2**
AC05				IAML		04 16 55.7	
	comp=Z,31nm,0.8s						
AC04	**Llanos de Chal**	**3.75**	**20**	IAML		04 17 26.1	
	comp=Z,25nm,1.9s						

*KOLA **26** 04:29:25.8,77°.00N×18°.40E,h0km,ML1.8,Error ellipse: s-maj=6.3km s-min=3.5km az=130.0,Storfjorden zone*
BER 26 04:29:24.4±1.4,76°.97N×18°.92E,h0km±6km,ML1.6, Confirmed Earthquake,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**0.77**	**274**	*e*P		Pg	04 29 38.4	-0.7
HSPB				*e*S		Sg	04 29 47.7	-1.3
HSPB				*e*Sg		Sb	04 29 51.4	-0.2
HSPB				IAML			04 29 51.9	
	comp=Z,15nm,0.5s							
HSPB	**Hornsund (broa**	**0.77**	**274**	P		Pg	04 29 38.4	-0.7
HSPB				S		Sg	04 29 48.0	-1.0
HSPB	**Hornsund (broa**	**0.77**	**274**	P		Pg	04 29 39.0	-0.1
HSPB				S		Sg	04 29 48.0	-1.0
SPA0	**Spitsbergen Ar**	**1.34**	**337**	*e*P		Pg	04 29 47.9	-2.1
SPA0				*e*S		Sg	04 30 05.7	-1.7
SPA0				IAML			04 30 08.2	
	comp=Z,6.9nm,0.2s							
SPITS	**Spitsbergen Ar**	**1.34**	**337**	P		Pg	04 29 48.0	-2.0
SPITS				S		Sg	04 30 06.0	-1.3
SPITS	**Spitsbergen Ar**	**1.34**	**337**	P		Pg	04 29 47.7	-2.3
SPITS				S		Sg	04 30 06.0	-1.3
HOPEN	**Hopen**	**1.48**	**105**	*e*P		Pn	04 29 50.4	-1.8
HOPEN				*e*S		Sg	04 30 08.9	-2.9
HOPEN				IAML			04 30 13.7	
	comp=Z,21nm,0.4s							
BRBA	**Barentsburg A**	**1.50**	**319**	*e*P		Pn	04 29 51.4	-1.1
BRBA				*e*S		Sg	04 30 10.8	-1.8
BRBA				IAML			04 30 15.0	
	comp=Z,18nm,0.4s							
BRBB	**Barentsburg B**	**1.53**	**320**	*e*P		Pn	04 29 50.5	-2.3
BRBB				*e*Pg		Pb	04 29 52.0	-1.5
BRBB				*e*S		Sb	04 30 10.9	-2.5
BRBB	**Barentsburg B**	**1.53**	**320**	P		Pn	04 29 51.7	-1.2
BRBB				S		Sb	04 30 11.2	-2.2
BRBB	**Barentsburg B**	**1.53**	**320**	P		Pn	04 29 51.5	-1.3
BRBB				S		Sb	04 30 11.2	-2.2
KBS	**Kingsbay**	**2.46**	**327**	*e*P		Pn	04 30 03.5	-2.1
KBS				*e*Pg		Pb	04 30 08.2	-1.1
KBS				*e*Sg		Sb	04 30 39.4	-0.6
KBS				IAML			04 30 45.0	
	comp=Z,7.4nm,0.5s							
KBS	**Kingsbay**	**2.46**	**327**	P		Pb	04 30 07.8	-1.5
KBS				S		Sb	04 30 38.8	-1.2
KBS	**Kingsbay**	**2.46**	**327**	P		Pn	04 30 06.3	+0.7
KBS				S		Sn	04 30 31.0	-5.2
BJO1	**Bjornoya**	**2.48**	**179**	*e*Sg		Sb	04 30 41.4	+0.7

*IDC **26** 04:44:11.0±0.5,26°.99S×65°.90W,h0km,mb4.3/12, mbtmp4.2/17,ML3.9/5,MS3.4/2,Error ellipse: s-maj=19.0km s-min=14.0km az=92.0*
*SJA **26** 04:44:13.6±0.7,27°.22S×65°.84W,h16km±6km,ML4.5, MW4.4*
*VAO **26** 04:44:13.4±0.5,27°.11S×65°.94W,h10km,mb4.5, Presumed earthquake*
*GFZ **26** 04:44:13.3±0.4,27°.S±2°.×6°.6W±°.,h10km,M4.8/19, mb4.8/19*
*NEIC **26** 04:44:17.1±1.7,27°.03S±0°.06×65°.85W±0°.01,h38km±5km, mb4.5/92,Error ellipse: s-maj=9.2km s-min=1.5km az=180.0*
ISC 26 04:44:13.5±0.4,27°.03S±0°.03×65°.90W±0°.05,h10km,n189, σ1§72/149,mb4.6/49,3C-1D,Tucuman Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
AHML	**Horco Molle**	**0.56**	**64**	⇓*i*P		**Pg**	**04 44 26.2**	**+2.0**
AHML				*i* S		**Sb**	**04 44 35.2**	**+1.8**
AHML				IAML			04 44 37.0	
	comp=Z,9μm,0.2s							
FSA	**Cafayete**	**0.91**	**355**	*i* P		Pg	04 44 29.1	-2.0
FSA				*e*S		**Sg**	**04 44 41.2**	**-1.8**
TINO	**Tinogasta**	**1.81**	**235**	*e*P		**Pn**	**04 44 45.6**	**+0.8**
TINO				*e*S		**Sn**	**04 44 45 09.0**	**+1.0**
TINO				IAML			04 45 11.4	
	comp=Z,8μm,0.6s							
SLA	**San Lorenzo**	**2.32**	**9**	*e*P		**Pn**	**04 44 54.5**	**+2.6**
SLA				*e*S		**Sb**	**04 45 26.4**	**+2.1**
ACLC	**CERRO LA CRUZ**	**2.57**	**201**	*e*P		**Pn**	**04 44 55.6**	**+0.3**
ACLC				IAML			04 45 48.0	
	comp=Z,1μm,0.6s							
VCA	**Vinchina**	**2.66**	**230**	*e*P		**Pn**	**04 44 57.8**	**+1.2**
VCA				*e*S		**Sn**	**04 45 31.5**	**+2.4**
SALTA		**2.82**	**352**	P		**Pn**	**04 45 02.1**	**+3.1**
AC02	**Maricunga**	**2.89**	**273**	*i* P		**Pn**	**04 45 04.9**	**+4.8**
AC02	**Maricunga**	**2.89**	**273**			**Pn**	**04 45 01.6**	**+1.5**
AC02	**Maricunga**	**2.89**	**273**	P		Pn	04 45 05.0	+4.9
AVFE	**Valle Fertil**	**3.87**	**200**	*i* P		**Pn**	**04 45 13.8**	**+0.6**
GO03	**Copiapo**	**3.90**	**261**	Pn		**Pn**	**04 45 13.9**	**+0.4**
GO03	**Copiapo**	**3.90**	**261**	P		**Pn**	**04 45 18.0**	**+4.5**
ACDV	**Cuesta del Vie**	**4.23**	**221**	*i* P		**Pn**	**04 45 19.7**	**+1.6**
ACDV				IAML			04 46 34.9	
	comp=Z,374nm,0.7s							
AC05	**El Transito**	**4.27**	**244**			Pn	04 45 16.2	-2.5
AC05	**El Transito**	**4.27**	**244**	P		**Pn**	**04 45 20.5**	**+1.7**
AC01	**Pan de Azucar**	**4.30**	**281**			**Pn**	**04 45 19.6**	**+0.6**
AC01	**Pan de Azucar**	**4.30**	**281**	P		**Pn**	**04 45 23.7**	**+4.7**
AROD	**Rodeo**	**4.44**	**224**	*e*P		**Pn**	**04 45 23.3**	**+2.1**
TCA	**Tanti**	**4.44**	**165**	*i* P		**Pn**	**04 45 21.1**	**0.0**
TCA				*i* S		**Sb**	**04 46 29.7**	**+4.3**
TCA				IAML			04 46 37.6	
	comp=Z,1μm,1.1s							
ACCO	**Cerro Coronel**	**4.51**	**217**	*i* P		**Pn**	**04 45 23.4**	**+1.3**
ACCO				IAML			04 46 39.6	
	comp=Z,258nm,0.7s							
LCO	**Las Campanas**	**4.69**	**244**			**Pn**	**04 45 25.5**	**+0.9**
PB14	**IPOC Station P**	**4.71**	**299**			**Pn**	**04 45 26.1**	**+1.1**
CO01	**Juntas del Tor**	**4.72**	**231**			**Pn**	**04 45 27.7**	**+2.7**
CO01	**Juntas del Tor**	**4.72**	**231**	P		**Pn**	**04 45 27.8**	**+2.7**
AC04	**Llanos de Chal**	**4.74**	**254**			**Pn**	**04 45 25.5**	**+0.5**
CFA	**Coronel Fontan**	**5.00**	**204**	Pn		**Pn**	**04 45 29.6**	**+0.9**
	comp=Z,7.8nm,0.3s,baz=22,slow=13,SNR=18							
CFA				Sn		**Sn**	**04 46 26.4**	**-0.2**
	comp=Z,13nm,0.3s,baz=351,slow=12,SNR=3.6							
CFA				Lg		Lg	04 46 47.6	
	comp=Z,29nm,0.3s,baz=67,slow=8.3,SNR=9.7							
	comp=Z,38nm,0.5s							
ZON	**Zonda**	**5.12**	**208**	*e*P		**Pn**	**04 45 31.

PSAL	Palomas, Salto	8.30	121	*eP*	Pn	04 46 14.0	+0.1	
BO02	Sierra Bellavi	8.80	207	P	Pn	04 46 22.0	+1.1	
SJPY	San Joaquin	9.04	79	*eP*	Pn	04 46 26.0	+2.0	
BO03	Pichilemu	9.09	214	P	Pn	04 46 27.1	+2.3	
MURT	Porto Murtinho	9.25	56	*eP*	Pn	04 46 27.9	+0.9	
PB16	IPOC Station P	9.27	338	P	Pn	04 46 31.6	+3.8	
GO05	Hualane	9.49	212	P	Pn	04 46 33.0	+2.7	
MGBA	MARTIN GARCIA	9.71	139	*eP*	Pn	04 46 33.1	-0.1	
ML02	Panimavida	9.90	207		Pn	04 46 33.0	-2.9	
ANCO	Parque Anchore	9.94	139	*eP*	Pn	04 46 36.1	-0.3	
COIM	Forte Coimbra	10.27	48	*eP*	Pn	04 46 41.4	+0.4	
BI02	San Fabin de	10.64	204		Pn	04 46 43.4	-2.7	
AMBA	Amambai (Brazi	10.70	70	*eP*	Pn	04 46 46.0	-0.9	
LPAZ	La Paz	10.88	349	Pn	Pn	04 46 49.5	-0.5	
	comp=Z,0.3nm,0.3s,baz=128,slow=7.7,SNR=4.1							
	comp=Z,1.3nm,0.5s							
BBSD	Serra de San D	10.95	28	*eP*	Pn	04 46 51.7	+1.5	
AQDB	Aquidauana	11.38	57		Pn	04 46 55.8	-0.4	
AQDB	Aquidauana	11.38	57	*eP*	Pn	04 46 55.9	-0.4	
CPSB	Cacapava Do Su	11.44	110		Pn	04 46 55.4	-1.5	
CPSB	Cacapava Do Su	11.44	110	*eP*	Pn	04 46 56.2	-0.8	
SIV	San Ignacio	11.86	23	Pn	Pn	04 47 02.5	-0.2	
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=16							
	comp=Z,1.4nm,0.3s							
ITAB	Concordia	12.26	94	Pn	Pn	04 47 06.9	-1.3	
PTLB	Pontes e Lacer	13.12	30	*eP*	Pn	04 47 22.6	+2.5	
LDASE	Londrina, Braz	13.86	78	*eP*	Pn	04 47 31.0	+0.9	
PLCA	Paso Flores	14.20	195	Pn	Pn	04 47 34.4	-0.4	
	comp=Z,0.1nm,0.3s,baz=24,slow=10,SNR=3.6							
PLCA				Lg	Lg	04 51 41.5		
	comp=Z,0.2nm,0.3s,baz=40,slow=7.2,SNR=3.1							
PLCA				LR	LR	04 53 17.2		
	comp=Z,135nm,19.4s,baz=20,slow=38							
	comp=Z,1.3nm,0.8s							
PLCA	Paso Flores	14.20	195	Pn	Pn	04 47 32.5	-2.3	
SALV	Santo Antonio	14.57	43	*eP*	Pn	04 47 41.0	+1.1	
VILB	Vilhena	14.98	22		Pn	04 47 46.4	+0.9	
VILB	Vilhena	14.98	22	*eP*	Pn	04 47 47.0	+1.5	
CLDB	Colider	18.67	33	*eP*	P	04 48 33.5	+1.6	
CANS	Sao Roque de M	19.07	74	*eP*	P	04 48 36.5	+0.2	
PMNB	Patos De Minas	19.81	69	*eP*	P	04 48 46.4	+2.0	
BDFB	Brasilia	20.11	59	P	P	04 48 47.5	-0.2	
	comp=Z,8.2nm,0.9s,baz=232,slow=10,SNR=7.9							
	comp=Z,8.2nm,0.9s							
BDFB	Brasilia	20.11	59		P	04 48 48.8	+1.0	
CZSB	Cruzeiro do Su	20.25	340	P	P	04 48 47.8	-1.3	
CZSB				IAmb	IAmb	04 48 48.5		
	comp=Z,14nm,0.6s							
CZSB	Cruzeiro do Su	20.25	340	*eP*	P	04 48 48.1	-1.0	
SNDB	Serra Nova Dou	20.31	45	*eP*	P	04 48 50.6	+0.9	
GO08	Villa O'Higgin	22.02	192		P	04 49 08.4	+0.4	
GO08				IAmb	IAmb	04 49 14.8		
	comp=Z,21nm,0.9s							
GO08	Villa O'Higgin	22.02	192	P	P	04 49 10.6	+2.7	
ALF01	Guarapari-ES	23.87	80	*eP*	P	04 49 28.6	+1.4	
BSFB	Barra de Sao F	24.44	76	*eP*	P	04 49 32.6	+0.1	
SDBA	SAO DESIDERIO	24.48	58	*eP*	P	04 49 32.8	-0.2	
ITTB	Itaituba	24.53	25	*eP*	P	04 49 33.6	+0.2	
RIB01	Linhares ES	24.64	77	*eP*	P	04 49 36.1	+1.7	
SMTB	Santa Maria do	25.03	47	*eP*	P	04 49 38.2	+0.3	
EFI	East Falkland	25.32	169	P	P	04 49 40.0	-0.2	
NBPN	Ponto Novo - B	29.06	61	*eP*	P	04 50 13.7	-0.5	
ESPZ	Base Esperanza	36.84	173	P	P	04 51 20.1	-1.4	
VNA1	Neumayer--Stat	54.18	160	⇑P	P	04 53 38.8	+0.2	
	comp=Z,15nm,0.9s							
VNA2	Neumayer--Watz	54.54	160	P	P	04 53 41.3	0.0	
	comp=Z,21nm,0.7s,baz=288,slow=7.7							
SNAA	Sanae	56.18	160	⇑P	P	04 53 52.8	-0.4	
	comp=Z,249nm,0.6s							
SNAA	Sanae	56.18	160	P	P	04 53 52.8	-0.4	
	comp=Z,17nm,0.9s,baz=286,slow=6.3,SNR=32							
	comp=Z,17nm,0.9s							
SNAA	Sanae	56.18	160		P	04 53 53.0	-0.2	
SNAA	Sanae	56.18	160	P	P	04 53 52.8	-0.4	
TROLL	Troll, Antarti	57.89	160	⇑P	P	04 54 05.3	0.0	
	comp=Z,1μm,0.8s							
QSPA	South Pole Qui	63.19	180	P	P	04 54 41.0	-0.6	
	comp=Z,2.3nm,0.7s,baz=173,slow=1.5,SNR=16							
	comp=Z,2.3nm,0.7s							
QSPA	South Pole Qui	63.19	180	P	P	04 54 41.6	-0.1	
QSPA				IAmb	IAmb	04 54 42.0		
	comp=Z,3.9nm,0.9s							
WVT	Waverly	66.14	341		P	04 54 59.0	-2.0	
WVT	Waverly	66.14	341	P	P	04 54 58.7	-2.2	
TXAR	Lajitas Array	66.71	324	P	P	04 55 03.3	-1.6	
	comp=Z,0.2nm,0.6s,baz=166,slow=9.7,SNR=4.4							
	comp=Z,0.2nm,0.6s							
DBIC	Dimbokro	67.86	70	LR	LR	05 23 52.1		
	comp=Z,31nm,19.2s,baz=286,slow=35							
TPB01	Permian Basin	68.06	325	IAmb	IAmb	04 55 19.4		
	comp=Z,4.3nm,0.9s							
CCM	Cathedral Cave	68.97	339	P	P	04 55 16.9	-1.9	
CCM	Cathedral Cave	68.97	339	P	P	04 55 17.3	-1.5	
TPB28		69.01	325	IAmb	IAmb	04 55 20.1		
	comp=Z,7.0nm,1.2s							
R40A	Maddies Statio	69.52	338	IAmb	IAmb	04 55 25.8		
	comp=Z,4.3nm,0.9s							
121A	Cookes Peak, D	71.39	323	IAmb	IAmb	04 55 35.1		
	comp=Z,6.8nm,1.1s							
VNDA	Vanda	71.90	190	P	P	04 55 36.3	0.0	
	comp=Z,2.7nm,0.9s,baz=139,slow=4.2,SNR=8.9							
	comp=Z,2.7nm,0.9s							
VNDA	Vanda	71.90	190	IAmb	IAmb	04 55 38.1		
	comp=Z,4.0nm,1.1s							
ANMO	Albuquerque	72.60	326		P	04 55 40.8	-0.5	
ANMO	Albuquerque	72.60	326	P	P	04 55 41.1	-0.2	
TASM	ASL Pad, Albuq	72.60	326	IAmb	IAmb	04 55 42.0		
	comp=Z,3.2nm,0.9s							
MVCO	Mesa Verde	75.40	326	IAmb	IAmb	04 55 58.4		
	comp=Z,8.2nm,1.1s							
WUAZ	Wupatki	75.59	323	IAmb	IAmb	04 55 59.8		
	comp=Z,6.0nm,0.8s							
ECSD	EROS Data Cent	75.85	338	IAmb	IAmb	04 55 59.6		
	comp=Z,4.3nm,0.9s							
ECSD	EROS Data Cent	75.85	338	P	P	04 55 58.1	-1.6	
PV02	Paradox Valley	76.30	327	IAmb	IAmb	04 56 08.0		
	comp=Z,7.0nm,1.1s							
PV13	Radium Mtn., P	76.30	326	IAmb	IAmb	04 56 03.4		
	comp=Z,4.9nm,1.0s							
PV05	Paradox Valley	76.38	326	IAmb	IAmb	04 56 03.6		
	comp=Z,4.2nm,1.0s							
PV18	Skein Mesa, Pa	76.41	326	IAmb	IAmb	04 56 07.6		
	comp=Z,7.5nm,1.1s							
BC3	Big Chuckawall	76.51	319		P	04 56 03.2	-0.7	
BC3				IAmb	IAmb	04 56 04.6		
	comp=Z,4.2nm,0.8s							
BAR	Barrett	76.54	318	IAmb	IAmb	04 56 04.5		
	comp=Z,5.3nm,0.9s							
TORD	Torodi Ar. Bea	76.75	68	P	P	04 56 03.3	-2.3	
	comp=Z,1.2nm,0.7s,baz=255,slow=5.2,SNR=6.6							
	comp=Z,1.2nm,0.7s							
U15A	North Rim	76.77	323	IAmb	IAmb	04 56 06.8		
	comp=Z,5.5nm,0.8s							
HMU	Henry Mountain	77.09	325	IAmb	IAmb	04 56 08.4		
	comp=Z,6.9nm,1.0s							
PKCU	Pink Cliffs	77.53	324	IAmb	IAmb	04 56 10.7		
	comp=Z,3.5nm,0.8s							
ELS	Elsinore Mount	77.67	318		P	04 56 10.0	-0.4	
ELS				IAmb	IAmb	04 56 11.0		
	comp=Z,5.5nm,0.8s							
LCMT	Little Creek M	77.71	323	IAmb	IAmb	04 56 11.5		
	comp=Z,3.1nm,0.8s							
MTPU	Mount Pierson	77.92	324	IAmb	IAmb	04 56 12.6		
	comp=Z,4.3nm,0.7s							
MAW	Mawson	78.26	162	P	P	04 56 12.8	-0.4	
	comp=Z,5.5nm,1.0s,baz=206,slow=6.4,SNR=8.3							
	comp=Z,5.5nm,1.0s							
MAW	Mawson	78.26	162		P	04 56 13.2	+0.1	
BOSA	Boshof	78.49	116	P	P	04 56 12.8	-2.5	
	comp=Z,2.5nm,0.8s,baz=248,slow=4.3,SNR=3.4							
	comp=Z,2.5nm,0.8s							
BOSA	Boshof	78.49	116	P	P	04 56 13.6	-1.7	
PRN	Pahroc Range	78.98	322	IAmb	IAmb	04 56 18.9		
	comp=Z,6.8nm,1.1s							
GWY	Greenwater Val	79.01	320	IAmb	IAmb	04 56 18.2		
	comp=Z,3.8nm,0.9s							
BSUT	Blindstream Ca	79.09	327	IAmb	IAmb	04 56 19.3		
	comp=Z,5.2nm,0.7s							
LRMC	Laurel Mtn Rad	79.09	319	IAmb	IAmb	04 56 18.5		
	comp=Z,4.7nm,0.8s							
PSUT	Pine Spring	79.16	324	IAmb	IAmb	04 56 19.6		
	comp=Z,5.8nm,0.8s							
TPNV	Topopah Spring	79.31	321	IAmb	IAmb	04 56 20.5		
	comp=Z,8.0nm,1.2s							
WCT	Wildcat Mounta	79.41	321	IAmb	IAmb	04 56 21.0		
	comp=Z,4.2nm,0.9s							
ISA	Isabella, Lake	79.69	319	P	P	04 56 20.9	-0.6	
ISA				IAmb	IAmb	04 56 22.2		
	comp=Z,4.8nm,0.8s							
DUG	Dugway, Tooele	79.85	325	IAmb	IAmb	04 56 26.9		
	comp=Z,5.2nm,1.1s							
PD31	Pinedale Array	80.25	329	P	P	04 56 23.3	-1.2	
PDAR	Pinedale Array	80.25	329	P	P	04 56 23.4	-1.1	
	comp=Z,2.3nm,0.8s,baz=124,slow=7.4,SNR=22							
	comp=Z,2.3nm,0.8s							
PDAR	Pinedale Array	80.25	329		P	04 56 23.6	-0.9	
HWUT	Hardware Ranch	80.30	327	IAmb	IAmb	04 56 25.1		
	comp=Z,6.7nm,1.0s							
BGU	Big Grassy Mou	80.51	326	IAmb	IAmb	04 56 30.8		
	comp=Z,7.1nm,1.3s							
HVU	Hansel Valley	81.02	326	IAmb	IAmb	04 56 28.7		
	comp=Z,4.5nm,0.6s							
LOHW	Long Hollow	81.39	329	IAmb	IAmb	04 56 30.9		
	comp=Z,4.0nm,0.7s							
ULM	Lac du Bonnet	81.40	341	P	P	04 56 28.3	-1.9	
	comp=Z,2.7nm,0.7s,baz=137,slow=7.8,SNR=4.9							
	comp=Z,2.7nm,0.7s							
ELK	Elko	81.51	324	IAmb	IAmb	04 56 31.5		
	comp=Z,4.5nm,1.0s							
NVAR	Mina Array Bea	81.51	321	P	P	04 56 30.8	-0.6	
	comp=Z,1.2nm,0.7s,baz=164,slow=6.8,SNR=5.3							
	comp=Z,1.2nm,0.7s							
YNE	Yellowstone No	82.20	330	IAmb	IAmb	04 56 41.7		
	comp=Z,5.8nm,0.9s							
PAHR	Pah Rah Range	83.00	321	IAmb	IAmb	04 56 39.6		
	comp=Z,6.8nm,1.1s							
BEKR	Beckworth	83.66	321	IAmb	IAmb	04 56 42.3		
	comp=Z,4.2nm,0.9s							
YKA	Yellowknife Ar	97.30	339	P	P	04 57 44.8	-1.4	
	comp=Z,0.9nm,0.7s,baz=136,slow=4.2,SNR=5.5							
	comp=Z,0.9nm,0.7s							
ASAR	Alice Springs	126.10	203	PKP	PKPdf	05 03 14.9	-1.8	
	comp=Z,1.1nm,0.6s,baz=144,slow=1.4,SNR=18							
WRA	Warramunga Arr	129.36	205	PKP	PKPdf	05 03 21.8	-1.3	
	comp=Z,1.4nm,0.7s,baz=159,slow=1.5,SNR=12							
KURBB	Kurchatov Arra	144.15	39	PKP	PKPab	05 03 47.6	+0.7	
	comp=Z,3.1nm,0.2s,baz=297,slow=3.9,SNR=5.9							
ZALV	Zalesovo Beam	145.53	31	PKPbc	PKPdf	05 03 51.4	-0.1	
	comp=Z,26nm,0.8s,baz=299,slow=4.2,SNR=114							
ZALV	Zalesovo Beam	145.53	31	P	PKPdf	05 03 51.5	0.0	
KSH2	Kashi	145.76	59	PKPbc	PKPdf	05 03 52.8	+0.2	
MKAR	Makanchi Array	148.12	43	PKPbc	PKPdf	05 03 58.9	+2.7	
	comp=Z,11nm,0.8s,baz=306,slow=2.9,SNR=51							
MKAR	Makanchi Array	148.12	43		PKPdf	05 03 59.2	+3.1	
SONM	Songino Array	158.37	14	PKP	PKPdf	05 04 07.7	-3.3	
	comp=Z,0.6nm,0.6s,baz=151,slow=3.4,SNR=4.1							
SONM				PKPab	PKPab	05 04 45.1	-0.2	
	comp=Z,0.7nm,0.9s,baz=302,slow=3.3,SNR=4.5							
HHC	Hu-ho-hao-te	166.05	8	*eP*	PKPdf	05 04 18.5	-0.5	
PZH	PanZhiHua	168.94	90	PKP	PKPdf	05 04 18.3	-3.2	
NJ2	Nanjing	173.50	322	*eP*	PKPdf	05 04 21.8	-1.6	
NJ2				pmax	pmax			
	comp=Z,18nm,0.5s							

*THE **26** 04:44:57.8, 38˚N-3˚-2˚6E±˚, h8km±6km, M2.2/8, MLh2.2/8*
*ATH **26** 04:44:57.4, 38˚.44N×25˚.70E, h11km±3km, ML2.7/5,*
Latitude uncertainty: 1 km; Longitude uncertainty: 0 km
*ISK **26** 04:44:58.8, 38˚.50N×25˚.83E, h4km, ML2.3/19*
*AFAD **26** 04:45:01.2, 38˚.43N×25˚.95E, h7km±3km, ML2.5*

ISC 26 04:44:57.8±0.9, 38˚.44N±0˚.03×25˚.73E±0˚.02, h13km±7km, n54, σ0°75/76, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	Chios island	0.26	101	Pg	Pg	04 45 03.4	+0.1
CHOS				Sg	Sg	04 45 06.9	-0.1
CHOS	Chios island	0.26	101	P	Pg	04 45 03.2	0.0
CHOS				S	Sg	04 45 07.2	+0.3
CHOS	Chios island	0.26	101	P	Pg	04 45 03.2	0.0
CHOS				S	Sg	04 45 07.3	+0.3
EAG2	Marmaro, Chios	0.31	70	P	Pg	04 45 04.3	+0.1
EAG2				S	Sg	04 45 08.4	-0.1
CESE	eme	0.46	103	Pg	Pb	04 45 07.2	-0.5
CESE				Sg	Sb	04 45 13.3	-1.2
KARB	zmir-Karabur	0.58	67	P	Pb	04 45 09.5	-0.3
KARB				S	Sg	04 45 15.8	-1.0
KARB				IAML		04 45 16.0	
	comp=E,1μm,0.2s						
KARB				IAML		04 45 17.0	
	comp=N,583nm,0.3s						
ZEYE	Izmir, Urla-Ze	0.64	108	P	Pg	04 45 10.2	0.0
KRBN	Karaburun	0.66	76	Pg	Pg	04 45 10.4	-0.3
KRBN				Sg	Sb	04 45 19.4	-1.0
URLA	Izmir	0.68	96	Pg	Pb	04 45 11.6	0.0
URLA				Sg	Sb	04 45 20.8	-0.2
URLA	Izmir	0.68	96	P	Pb	04 45 11.4	-0.2
URLA				S	Sg	04 45 19.0	-1.1
URLA				IAML		04 45 25.0	
	comp=E,333nm,0.3s						
FOCM	Foa	0.83	70	Pg	Pg	04 45 13.5	-0.3
FOCM				Sg	Sb	04 45 24.3	-0.8
BAGT	Foa	0.91	76	P	Pn	04 45 16.3	+0.1
BAGT				S	Sg	04 45 26.1	-1.0
BAGT				IAML		04 45 30.0	
	comp=E,255nm,0.8s						
PRK	Paraskevi	0.91	27	P	Pg	04 45 15.2	-0.2
PRK				S	Sb	04 45 28.6	+1.2
PRK	Paraskevi	0.91	27	P	Pg	04 45 15.0	-0.3
PRK				S	Sb	04 45 28.4	+0.9
DGB	zmir	0.99	113	P	Pb	04 45 16.7	0.0
GMLD	Gumuldur	1.00	111	Pg	Pb	04 45 17.3	+0.4
TNSA	Tinos	1.00	207	P	Pg	04 45 16.6	-0.5
TNSA				S	Sg	04 45 30.3	+0.2
BLCB	Balcova	1.03	93	Pg	Pb	04 45 17.8	+0.3
BLCB	Balcova	1.03	93	P	Pb	04 45 17.8	+0.3
BLCB				S	Sn	04 45 31.5	-0.8
GPNR	Gulpinar-Canak	1.06	17	Pg	Pg	04 45 18.3	0.0
KARY	Karystos	1.10	249	P	Pg	04 45 18.2	-0.7
KARY				S	Sg	04 45 32.4	-0.8
KARY	Karystos	1.10	249	P	Pg	04 45 20.2	+1.3
KARY				S	Sg	04 45 32.1	-1.1
KOCA	Canakkale, Ayv	1.11	17	P	Pg	04 45 17.9	-1.2
DKL	Dikili	1.11	55	Pg	Pg	04 45 18.4	-0.8
DKL	Dikili	1.11	55	P	Pg	04 45 19.0	-0.2
DKL				S	Sb	04 45 33.8	+0.4
AYVA	Ayvalik	1.15	40	P	Pg	04 45 18.8	-1.1
ZEDA	zmir-Bergama	1.18	63	P	Pn	04 45 21.1	+1.2
ZEDA				S	Sg	04 45 34.6	-1.2
ZEDA				IAML		04 45 38.0	
	comp=N,129nm,0.4s						
ZEDA				IAML		04 45 38.0	
	comp=E,120nm,0.7s						
CAMT	Merkez	1.28	75	P	Pn	04 45 22.5	+1.1
KYMI	Kymi, Euboea I	1.29	279	P	Pn	04 45 21.4	-0.2
KUSD	Kusadasi-Aydin	1.36	115	Pn	Pg	04 45 24.9	+1.1
DUVT	Torbali	1.37	99	P	Pn	04 45 21.9	-0.7
GCAM	G?zelcaml?	1.40	121	Pn	Pg	04 45 25.4	+0.8
GCAM	G?zelcaml?	1.40	121	P	Pn	04 45 23.6	+0.7
EZNE	Ezine-Canakkal	1.41	20	Pn	Pn	04 45 24.2	+1.1
BOZC	Bozcaada	1.42	10	Pn	Pb	04 45 25.1	+0.9
BOZC	Bozcaada	1.42	10	P	Pn	04 45 22.8	-0.5
BAYC	CANAKKALE_Bayr	1.45	26	P	Pn	04 45 22.6	-1.1
DION	Dionisos Attik	1.46	256	P	Pn	04 45 23.0	-0.8
DION				S	Sn	04 45 43.0	+0.1
EZN	Ezine	1.46	18	Pn	Pn	04 45 25.4	+1.6
EZN	Ezine	1.46	18	P	Pn	04 45 24.8	+0.9
EZN				S	Sb	04 45 44.5	+1.2
BUHA	Balikesir, Bur	1.49	44	P	Pn	04 45 24.1	-0.2
LIA	Limnos Island	1.52	344	P	Pn	04 45 25.2	+0.5
LIA				S	Sn	04 45 44.8	+0.5
PTL	Penteli	1.52	256	S	Sn	04 45 44.2	-0.1
SOMA	Soma-Manisa	1.58	62	Pn	Pb	04 45 26.8	-0.1
ATHU	Athens Univers	1.60	254	S	Sn	04 45 46.2	-0.2
AOS	Aonnisos	1.62	297	S	Sn	04 45 47.5	+0.7
AKS	Akhisar	1.69	74	Pn	Pb	04 45 28.9	+0.2
GOMA	Golmarmara-Man	1.73	80	Pn	Pb	04 45 29.3	-0.2
AYDB	Zeytinkoy-Aydi	1.77	105	Pn	Pb	04 45 30.3	+0.1
STEP	BALIKESİR_Sava	1.81	58	P	Pb	04 45 30.8	-0.1
ODEM	Odemis-Izmir	1.85	94	Pn	Pb	04 45 31.5	0.0
KTTT	Salihli	1.87	82	P	Pb	04 45 31.3	-0.5
CANM	Can-anakkale	1.88	33	Pn	Pn	04 45 30.9	+1.3
NAZL	Nazilli-Aydin	2.07	102	Pn	Pn	04 45 34.0	+1.7

IDC 26 05:06:55.0±4.6, 7˚.07S×155˚.43E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=140.6km s-min=41.1km az=120.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.13	236	P	P	05 12 13.5	+0.6
	0.4nm,0.5s,baz=63,slow=9.8,SNR=5.7						
	0.4nm,0.5s						
MKAR	Makanchi Array	83.74	319	P	P	05 19 26.6	+0.4
	1.2nm,0.7s,baz=101,slow=6.3,SNR=9.2						
	1.2nm,0.7s						
ZALV	Zalesovo Beam	84.48	326	P	P	05 19 28.8	-0.9
	0.9nm,0.4s,baz=127,slow=5.7,SNR=5.0						
	0.9nm,0.4s						

*IDC **26** 05:08:14.2±2.8, 38˚.08N×69˚.89E, h0km, mb3.6/4, mbtmp3.5/7, ML2.7/3, Error ellipse: s-maj=55.7km s-min=24.0km az=145.0*
*NNC **26** 05:08:21.3±5.1, 38˚.93N×69˚.09E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=37.1km s-min=34.3km az=62.0*

ISC 26 05:08:19.4±1.7, 38˚.6N±0˚.1×69˚.4E±0˚.1, h12km, n12, σ1°95/15, mb3.6/3, 4C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	3.60	7	Pg	Pb	05 09 20.2	-2.9
	29nm,0.5s						
IUG				Lg	Lg	05 10 01.4	
	68nm,0.6s						
BRLS	Borolday	4.47	4	Pg	Pn	05 09 28.9	+1.9
	1.6nm,0.1s						
BRLS				Lg	Lg	05 10 16.9	
	0.4nm,0.1s						
KK31	Karatay Array	4.60	10	⇓Pn	Pn	05 09 28.7	-0.2
	0.8nm,0.4s,baz=187,slow=13,SNR=14						
KK31				⇑Pg	Pb	05 09 40.0	-0.1
	2.5nm,0.5s,baz=182,slow=14,SNR=7.3						
KK31				⇑Sn	Sn	05 10 22.4	+0.1
	3.8nm,0.5s						
KK31				⇓Lg	Lg	05 10 38.5	
	5.0nm,0.5s,baz=196,slow=31,SNR=8.9						
MRKS	Merke	5.08	34	Pg	Pn	05 09 36.8	+1.4
	6.4nm,0.6s						
MRKS				Lg	Lg	05 10 30.9	
	9.5nm,0.7s						
AAK	Ala-Archa	5.60	42	⇑Pn	Pn	05 09 45.4	+2.7
	1.3nm,0.4s						
AAK				⇑Sn	Sn	05 10 49.8	+2.7
	3.6nm,0.8s						
AAK				⇓Lg	Lg	05 11 16.1	
	6.3nm,0.8s						
MKAR	Makanchi Array	12.53	45	Pn	Pn	05 11 15.0	-2.5
	baz=226,slow=9.8,SNR=2.8						
	0.3nm,0.5s						
BVAR	Borovoye Array	14.47	2	Pn	Pn	05 11 44.0	0.0
	baz=164,slow=12,SNR=2.4						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	18.64	29	P	P	05 12 34.1	-2.7
	0.1nm,0.3s,baz=222,slow=12,SNR=3.8						
	0.5nm,0.4s						
FINES	FINESS Array B	35.07	325	P	P	05 15 13.3	+1.3
	0.4nm,0.5s,baz=127,slow=8.2,SNR=3.3						
	0.4nm,0.5s						
HFS	Hagfors	40.67	321	P	P	05 16 00.5	+1.2
	1.0nm,0.5s,baz=108,slow=9.3,SNR=2.4						
	1.0nm,0.5s						
NOA	NORSAR Array B	41.98	322	P	P	05 16 10.4	+0.3
	0.7nm,0.7s,baz=95,slow=8.0,SNR=3.3						
	0.7nm,0.7s						
TORD	Torodi Ar. Bea	64.55	267	P	P	05 18 56.4	-0.2
	0.3nm,0.5s,baz=55,slow=6.4,SNR=4.4						
	0.3nm,0.5s						

*IDC **26** 05:14:58.2±1.6, 20˚.07S×177˚.47W, h530km±17km, mb3.4/12, mbtmp4.3/15, Error ellipse: s-maj=18.7km s-min=14.7km az=139.0*

ISC 26 05:14:58.4±0.6, 20˚.11S±0˚.09×177˚.30W±0˚.10, h550km, n83, σ2°17/76, mb3.7/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.00	297	P	P	05 16 27.4	-1.0
	3.7nm,0.5s,baz=104,slow=23,SNR=7.5						
AFI	Afiamalu	8.11	41	P	P	05 16 55.9	-1.6
	39nm,0.6s,baz=120,slow=15,SNR=5.2						
AFI				S	S	05 18 30.8	-4.3
	18nm,0.3s,baz=101,slow=23,SNR=5.

AK11	**Malin Array Si**	**143.02**	**332**	PKP	**PKPdf**	**05 33 27.1**	**-2.6**
AK11	**Malin Array Si**	**143.02**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.5**
AK18	**Malin Array Si**	**143.04**	**332**	PKP	**PKPdf**	**05 33 27.1**	**-2.6**
AK18	**Malin Array Si**	**143.04**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.5**
AK20	**Malin Array Si**	**143.05**	**332**	PKP	**PKPdf**	**05 33 27.4**	**-2.3**
AK20	**Malin Array Si**	**143.05**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.5**
AK05	**Malin Array Si**	**143.05**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.2**
AK05	**Malin Array Si**	**143.05**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.5**
AK12	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.2**
AK12	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.5**
AK16	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.3**
AK16	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.6**
AK19	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.3**
AK19	**Malin Array Si**	**143.06**	**332**	PKP	**PKPdf**	**05 33 27.2**	**-2.6**
AK17	**Malin Array Si**	**143.07**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.3**
AK17	**Malin Array Si**	**143.07**	**332**	PKP	**PKPdf**	**05 33 27.3**	**-2.5**
AK06	**Malin Array Si**	**143.08**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.3**
AK06	**Malin Array Si**	**143.08**	**332**	PKP	**PKPdf**	**05 33 27.3**	**-2.5**
AK14	**Malin Array Si**	**143.09**	**332**	PKP	**PKPdf**	**05 33 27.5**	**-2.3**
AK14	**Malin Array Si**	**143.09**	**332**	PKP	**PKPdf**	**05 33 27.3**	**-2.5**
AK07	**Malin Array Si**	**143.10**	**332**	PKP	**PKPdf**	**05 33 27.3**	**-2.5**
MI28	**Mi28,Pidlybu**	**143.49**	**333**	PKP	PKPab	05 33 28.5	-0.5
MI28	**Mi28,Pidlybu**	**143.49**	**333**	PKP	PKPab	05 33 28.4	-0.6
RNPP9	**Sopachiv**	**143.84**	**335**	PKP	PKPbc	05 33 29.7	-0.6
RNPP9	**Sopachiv**	**143.84**	**335**	PKP	PKPbc	05 33 29.6	-0.7
RNPP8	**Varash**	**143.92**	**335**	PKP	PKPbc	05 33 29.9	-0.6
RNPP8	**Varash**	**143.92**	**335**	PKP	PKPbc	05 33 30.0	-0.5
RNPP5	**Staryi Chortor**	**143.99**	**335**	PKP	PKPab	05 33 30.4	-0.5
LUBAR	**Lubar, Ukraine**	**144.20**	**332**	PKP	PKPbc	05 33 30.7	-0.7
BRTR	**Keskin Array B**	**147.06**	**313**	PKPbc	**PKiKP**	**05 33 40.7**	**-1.3**
	0.8nm,0.5s,baz=130,slow=3.5,SNR=5.0						
KSP	**Ksiaz**	**147.50**	**344**	PKP	**PKPbc**	**05 33 40.2**	**-0.6**
GERES	**GERESS Array B**	**149.99**	**345**	PKPbc	**PKiKP**	**05 33 48.4**	**+0.7**
	0.7nm,0.6s,baz=9.5,slow=1.6,SNR=10.0						

IDC 26 05:15:19.5±2.4, 6°83S×128°96E, h0km, mb3.5/1, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=105.2km s-min=29.9km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.66**	**196**	Pn	Pn	05 18 07.5	+0.2
	0.2nm,0.3s,baz=23,slow=9.7,SNR=6.3						
FITZ				Sn	Sn	05 20 02.4	-16
	0.3nm,0.3s,baz=114,slow=16,SNR=1.9						
	4.2nm,0.8s						
WRA	**Warramunga Arr**	**14.04**	**159**	Pn	Pn	05 18 39.5	-0.5
	0.3nm,0.3s,baz=337,slow=15,SNR=14						
WRA				Sn	Sn	05 21 02.2	-15
	0.3nm,0.3s,baz=335,slow=22,SNR=7.5						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.40**	**165**	P	Pn	05 19 24.2	+0.3
	0.2nm,0.3s,baz=338,slow=9.8,SNR=10.0						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**67.52**	**327**	P	P	05 26 17.6	0.0
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.2						
	0.2nm,0.4s						

*SJA **26** 05:32:26.9±0.9, 18°30S×69°76W, h124km±4km, ML3.4, MW3.5*
*GUC **26** 05:32:28.6±0.8, 18°36S×69°76W, h111km±3km, ML3.4*
*IDC **26** 05:32:31.8±7.1, 18°27S×69°37W, h146km±46km, mb3.5/2, mbtmp3.9/3, Error ellipse: s-maj=82.0km s-min=52.5km az=18.0*

ISC 26 05:32:27.8±1.0, 18°35S±0°04×69°84W±0°07, h124km±6km, n32, σ0§98/46, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.32**	**87**	*e*P	**Pn**	**05 32 45.6**	**-0.5**
PB16				*e*S	**Sn**	**05 32 58.6**	**-1.2**
PB16				IAML		05 32 59.3	
	comp=Z,2μm,0.4s						
PB16	**IPOC Station P**	**0.32**	**87**	*e*P	**Pn**	**05 32 45.5**	**-0.5**
PB16				*i* S	**Sn**	**05 32 58.2**	**-1.5**
PB16				IAML		05 32 59.1	
	comp=N,3μm,0.3s						
AP01	**Chacalluta**	**0.47**	**268**	*e*P	**Pn**	**05 32 46.6**	**+0.6**
AP01				*e*S	Sn	05 32 46.8	-13
AP01	**Chacalluta**	**0.47**	**268**	*e*P	**Pn**	**05 32 46.2**	**+0.1**
AP01				*i* S	**Sn**	**05 32 59.8**	**0.0**
AP01				IAML		05 33 01.6	
	comp=E,3μm,0.3s						
PB12	**IPOC Station P**	**0.53**	**240**	*e*P	**Pn**	**05 32 46.8**	**+0.2**
PB12				*e*S	**Sn**	**05 33 02.0**	**+1.4**
PB12				IAML		05 33 02.8	
	comp=Z,531nm,0.2s						
PB12	**IPOC Station P**	**0.53**	**240**	*e*P	**Pn**	**05 32 46.6**	**+0.1**
PB12				*i* S	**Sn**	**05 33 00.4**	**-0.2**
PB12				IAML		05 33 02.1	
	comp=E,698nm,0.1s						
PX02	**IPOC Station P**	**0.70**	**209**	*e*P	**Pn**	**05 32 47.1**	**-0.6**
PX02				*i* S	**Sn**	**05 33 02.0**	**-0.8**
PX02				IAML		05 33 02.3	
	comp=N,2μm,0.3s						
PSGCX	**Pisagua**	**1.27**	**192**	*e*P	**Pn**	**05 32 53.4**	**+0.2**
PSGCX				IAML		05 33 13.9	
	comp=Z,263nm,0.3s						
PSGCX	**Pisagua**	**1.27**	**192**	*e*P	**Pn**	**05 32 53.3**	**+0.2**
PSGCX				*i* S	**Sn**	**05 33 12.0**	**-0.3**
PB11	**IPOC Station P**	**1.41**	**173**	*e*P	**Pn**	**05 32 55.1**	**+0.4**
PB11				*e*S	**Sn**	**05 33 16.0**	**+0.8**
PB11				IAML		05 33 17.2	
	comp=Z,390nm,0.2s						
PB11	**IPOC Station P**	**1.41**	**173**	*e*P	**Pn**	**05 32 55.1**	**+0.4**
PB11				*i* S	**Sn**	**05 33 15.3**	**+0.1**
PB11				IAML		05 33 15.9	
	comp=N,644nm,0.6s						
GO01	**Chusmiza**	**1.45**	**155**	*e*P	**Pn**	**05 32 56.4**	**+0.9**
GO01				*e*S	**Sn**	**05 33 17.1**	**+0.7**
GO01				IAML		05 33 19.7	
	comp=Z,232nm,0.1s						
GO01	**Chusmiza**	**1.45**	**155**	*e*P	**Pn**	**05 32 56.0**	**+0.6**
GO01				*i* S	**Sn**	**05 33 16.8**	**+0.4**
PB08	**IPOC Station P**	**1.90**	**160**	*e*P	**Pn**	**05 33 01.4**	**+0.8**
PB08				*e*S	**Sn**	**05 33 26.8**	**+1.1**
PB08				IAML		05 33 27.5	
	comp=Z,155nm,0.4s						
PB08	**IPOC Station P**	**1.90**	**160**	*e*P	**Pn**	**05 33 01.6**	**+1.0**
PB08				*i* S	**Sn**	**05 33 26.1**	**+0.5**
PB08				IAML		05 33 28.1	
	comp=E,312nm,0.2s						
TA02	**Huaiquique**	**1.93**	**188**	*e*P	**Pn**	**05 33 00.7**	**+0.1**
TA02				IAML		05 33 28.8	
	comp=Z,295nm,0.1s						
LPAZ	**La Paz**	**2.62**	**39**	P	**Pn**	**05 33 11.0**	**+1.0**
	comp=Z,45nm,0.3s,baz=217,slow=7.1,SNR=802						
LPAZ				S	**Sn**	**05 33 41.5**	**-0.9**
	comp=Z,8.7nm,0.6s,baz=308,slow=12,SNR=3.9						
LPAZ	**La Paz**	**2.62**	**39**	*e*P	**Pn**	**05 33 09.2**	**-0.8**
PB02	**IPOC Station P**	**2.95**	**181**	*e*P	**Pn**	**05 33 14.2**	**+0.4**
PB02				*e*S	**Sn**	**05 33 48.5**	**-0.7**
PB02				IAML		05 33 49.6	
	comp=Z,197nm,0.2s						
PB07	**IPOC Station P**	**3.36**	**181**	*e*P	**Pn**	**05 33 19.3**	**+0.1**
PB07				*e*S	**Sn**	**05 33 56.8**	**-2.0**
PB07				IAML		05 33 57.5	
	comp=Z,69nm,0.2s						
PB09	**IPOC Station P**	**3.47**	**171**	*e*P	**Pn**	**05 33 21.4**	**+0.7**
PB09				*e*S	**Sn**	**05 34 00.7**	**-0.8**
PB09				IAML		05 34 02.2	
	comp=Z,65nm,0.3s						
PB03	**IPOC Station P**	**3.68**	**179**	*e*P	**Pn**	**05 33 23.4**	**0.0**
PB03				*e*S	**Sn**	**05 34 03.3**	**-3.0**
PB03				IAML		05 34 08.5	
	comp=Z,78nm,0.3s						
PB06	**IPOC Station P**	**4.34**	**177**	*e*P	**Pn**	**05 33 32.3**	**+0.1**
PB06				*e*S	**Sn**	**05 34 20.6**	**-1.5**
PB06				IAML		05 34 23.7	
	comp=Z,37nm,0.4s						
PB05	**IPOC Station P**	**4.49**	**184**	*e*P	**Pn**	**05 33 33.8**	**-0.4**
PB05				*e*S	**Sn**	**05 34 23.9**	**-1.7**
PB05				IAML		05 34 29.7	
	comp=Z,33nm,0.3s						
H03N1	**Juan Fernandez**	**17.09**	**207**	T	T	05 53 52.6	
	baz=29,slow=73,SNR=13						
H03N2	**Juan Fernandez**	**17.09**	**207**	T	T	05 53 49.0	
	baz=29,slow=73,SNR=10						
H03N3	**Juan Fernandez**	**17.10**	**207**	T	T	05 53 48.2	
	baz=29,slow=73,SNR=12						
TORD	**Torodi Ar. Bea**	**77.16**	**71**	P	**P**	**05 44 07.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=250,slow=5.2,SNR=4.7						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**87.94**	**341**	P	**P**	**05 45 04.9**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=138,slow=4.7,SNR=11						
	comp=Z,0.3nm,0.4s						
H11S2	**WAKE ISLAND Hyd**	**26.55**	**280**	T	T	08 10 40.5	
	baz=101,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hyd**	**26.56**	**280**	T	T	08 10 40.5	
	baz=101,slow=75,SNR=3.9						
H11S3	**WAKE ISLAND Hyd**	**26.56**	**280**	T	T	08 10 44.2	
	baz=101,slow=75,SNR=4.0						

*KRNET **26** 05:48:08.7±0.1, 42°27N×70°70E, h35km, mb2.5*
*SOME **26** 05:48:08.1, 42°33N×70°77E, h15km*
*NNC **26** 05:48:09.2±0.4, 42°42N×70°71E, h0km, mpv2.9, Error ellipse: s-maj=2.7km s-min=1.7km az=118.0*
*ISU **26** 05:48:10, 42°26N×70°74E, h5km*

ISC 26 05:48:08.0±1.2, 42°37N±0°03×70°65E±0°03, h24km±13km, n16, σ1§02/31, 6C-9D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSK	**Pskem**	**0.49**	**205**	P	**Pb**	**05 48 18.3**	**+0.2**
PSK				S	**Sb**	**05 48 24.7**	**-0.2**
IUG	**luzhnay**	**0.51**	**244**	P	**Pn**	**05 48 20.2**	**+0.2**
	16nm,0.1s						
IUG				S	**Sn**	**05 48 28.5**	**+0.5**
	113nm,0.5s						
IUG	**luzhnay**	**0.51**	**244**	*e*P	**Pn**	**05 48 20.2**	**+0.2**
	16nm,0.1s						
IUG				*e*S	**Sn**	**05 48 28.5**	**+0.5**
	113nm,0.5s						
KK31	**Karatay Array**	**0.74**	**352**	P	**Pn**	**05 48 22.9**	**-0.2**
	0.6nm,0.2s,baz=168,slow=17,SNR=66						
KK31				⇓S	**Sn**	**05 48 32.7**	**-0.9**
	2.6nm,0.2s,baz=163,slow=32,SNR=7.1						
BRLS	**Borolday**	**0.89**	**318**	P	**Pn**	**05 48 25.1**	**0.0**
	4.4nm,0.1s						
BRLS				S	**Sn**	**05 48 37.1**	**-0.2**
	21nm,0.2s						
BRLS	**Borolday**	**0.89**	**318**	*e*P	**Pn**	**05 48 25.1**	**0.0**
BRLS				*e*S	**Sn**	**05 48 37.1**	**-0.2**
BRLS	**Borolday**	**0.89**	**318**	*e*P	**Pn**	**05 48 25.1**	**0.0**
	4.4nm,0.1s						
BRLS				*e*S	**Sn**	**05 48 37.1**	**-0.2**
	21nm,0.2s						
TRKS	**Terek-Say**	**0.92**	**156**	⇑*i*P	**Pn**	**05 48 25.3**	**-0.3**
TRKS				⇑*i*S	**Sn**	**05 48 37.8**	**-0.3**
ARK	**Arkit**	**1.13**	**120**	⇓*e*P	**Pb**	**05 48 28.1**	**-0.9**
ARK				⇓*i*S	**Sn**	**05 48 43.0**	**-0.4**
MNAS	**Manas**	**1.38**	**84**	⇓*i*P	**Pb**	**05 48 32.6**	**-0.6**
MNAS				⇓*i*S	**Sb**	**05 48 50.7**	**+0.2**
MRKS	**Merke**	**1.94**	**78**	Pg	**Pb**	**05 48 43.9**	**+1.2**
	1.8nm,0.1s						
MRKS				Lg	Lg	05 49 09.3	
	6.3nm,0.5s						
MRKS	**Merke**	**1.94**	**78**	*e*P	**Pb**	**05 48 43.9**	**+1.2**
	1.8nm,0.1s						
MRKS				*e*S	**Sb**	**05 49 09.3**	**+2.7**
	6.3nm,0.5s						
ARSB	**Arslanbob**	**2.03**	**120**	⇑*i*P	**Pn**	**05 48 41.4**	**+0.4**
ARSB				⇑*i*S	**Sn**	**05 49 06.2**	**+0.5**
BTK	**Batken**	**2.31**	**177**	⇑*i*P	**Pn**	**05 48 44.9**	**+0.1**
BTK				⇑*i*S	**Sn**	**05 49 12.2**	**-0.3**
EKS2	**Erkin-Say**	**2.33**	**82**	⇓*i*P	**Pn**	**05 48 45.9**	**+0.8**
EKS2				⇓*i*S	**Sb**	**05 49 14.2**	**-3.7**
OHH	**Osh**	**2.44**	**138**	⇓*i*P	**Pn**	**05 48 46.7**	**+0.1**
OHH				⇓*i*S	**Sn**	**05 49 15.5**	**-0.3**

*MDD **26** 05:53:49.4±0.4, 35°40N×3°75W, h6km±4km, mb_Lg2.5/19, Error ellipse: s-maj=4.1km s-min=2.3km az=164.0*
*SFS **26** 05:53:50.9, 35°44N×3°69W, h24km, ML2.7/23, ML2.7/23, MLv2.8/15*
*INMG **26** 05:53:50.1±1.6, 35°43N×3°74W, h12km±5km, ML2.1, Error ellipse: s-maj=2.7km s-min=2.5km az=14.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*
*CNRM **26** 05:53:51.0, 35°39N×3°91W, h31km, ML2.2*

ISC 26 05:53:49.3±1.0, 35°45N±0°02×3°76W±0°02, h20km±3km, n76, σ1§13/137, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.27**	**212**	P	**Pg**	**05 53 55.8**	**+0.3**
PALE				S	**Sb**	**05 54 00.1**	**+0.5**
EMEL	**Melilla**	**0.68**	**103**	Pg	**Pb**	**05 54 02.0**	**-0.3**
EMEL				Pg	**Pg**	**05 54 02.2**	**-0.4**
EMEL				Sg	**Sb**	**05 54 10.0**	**-1.3**
EMEL				Sg	**Sg**	**05 54 10.8**	**-0.9**
WMEL	**Melilla**	**0.68**	**101**	Pg	**Pb**	**05 54 02.2**	**0.0**
WMEL				Sg	**Sg**	**05 54 11.4**	**-0.4**
EMLI	**Melilla**	**0.68**	**102**	Pg	**Pb**	**05 54 02.5**	**0.0**
EMLI				Sg	**Sb**	**05 54 11.4**	**-0.1**
EALB	**Alboran**	**0.77**	**50**	Pg	**Pg**	**05 54 04.2**	**-0.2**
EALB				Sg	**Sg**	**05 54 14.7**	**0.0**
EALB	**Alboran**	**0.77**	**50**	Pg	**Pb**	**05 54 03.9**	**-0.1**
EALB				Pg	**Pg**	**05 54 04.1**	**-0.3**
EALB				Sg	**Sg**	**05 54 14.3**	**-0.3**
EALB				Sg	**Sb**	**05 54 14.6**	**+0.6**
EALB				*i* lVmb_Lg		05 54 15.2	
AKLM	**AKL**	**0.94**	**185**	P	**Pg**	**05 54 08.3**	**+0.7**
AKLM				S	**Sb**	**05 54 17.5**	**-1.6**
TAF	**Taforalt**	**1.27**	**119**	P	**Pb**	**05 54 12.8**	**+0.1**
TAF				S	**Sg**	**05 54 31.1**	**+0.4**
CHEFC	**Chefchaouen**	**1.33**	**256**	P	**Pb**	**05 54 13.9**	**+0.2**
CHEFC				S	**Sn**	**05 54 27.3**	**-2.8**
SMIR	**Smir Dam**	**1.34**	**280**	P	**Pn**	**05 54 11.3**	**-1.6**
SMIR				S	**Sn**	**05 54 27.0**	**-3.1**
EMIJ	**Mijas**	**1.38**	**324**	Pn	**Pn**	**05 54 12.9**	**-0.6**
EMIJ	**Mijas**	**1.38**	**324**	Pn	**Pn**	**05 54 12.9**	**-0.6**
EMIJ				Pn	**Pb**	**05 54 14.0**	**-0.4**
EMIJ				Sn	**Sb**	**05 54 32.6**	**+0.9**
EMIJ				Sn	**Sg**	**05 54 33.2**	**-0.9**
EMIJ				*i* lVmb_Lg		05 54 35.3	
EMAL	**Malaga-Limoner**	**1.42**	**338**	Pn	**Pn**	**05 54 13.9**	**0.0**
EMAL				Sn	**Sb**	**05 54 33.0**	**+0.3**
ELGU	**Los Guajares,**	**1.42**	**4**	Pn	**Pn**	**05 54 13.3**	**-0.8**
ELGU				Sn	**Sn**	**05 54 31.1**	**-1.1**
ELGU	**Los Guajares,**	**1.42**	**4**	Pn	**Pn**	**05 54 13.3**	**-0.8**
ELGU				Sn	**Sb**	**05 54 32.9**	**0.0**
ELGU				*i* lVmb_Lg		05 54 33.9	
JBK	**JBK**	**1.48**	**138**	P	**Pb**	**05 54 16.7**	**+0.4**
JBK				S	**Sn**	**05 54 32.4**	**-1.6**
EXEJI	**El Ejido**	**1.53**	**30**	Sn	**Sn**	**05 54 34.9**	**+0.1**
EBER	**Berja**	**1.61**	**26**	Pn	**Pn**	**05 54 16.6**	**-0.2**
EBER				Sn	**Sn**	**05 54 36.7**	**-0.4**
EBER	**Berja**	**1.61**	**26**	Pn	**Pn**	**05 54 16.7**	**-0.1**
EBER				Sn	**Sb**	**05 54 38.3**	**-0.1**
EBER				*i* lVmb_Lg		05 54 42.2	
EGOR	**Sierra Gorda,**	**1.68**	**351**	Pn	**Pn**	**05 54 17.9**	**+0.2**
EGOR				Sn	**Sb**	**05 54 39.7**	**-0.8**
EGOR	**Sierra Gorda,**	**1.68**	**351**	Pn	**Pn**	**05 54 17.9**	**+0.2**
EGOR				Sn	**Sb**	**05 54 41.2**	**+0.8**
EGOR				*i* lVmb_Lg		05 54 50.1	
EJIF	**Jimena Fronter**	**1.71**	**306**	Pn	**Pn**	**05 54 18.9**	**+1.0**
EJIF				Sn	**Sb**	**05 54 41.0**	**0.0**
EQUE	**Quentar**	**1.77**	**8**	Pn	**Pb**	**05 54 20.1**	**-1.1**
EQUE				Sn	**Sb**	**05 54 42.5**	**-0.5**
EQUE				*i* lVmb_Lg		05 54 45.9	
EQTA	**Presa de Quent**	**1.77**	**8**	Sn	**Sn**	**05 54 39.7**	**-1.3**
ENIJ	**Nijar**	**1.97**	**39**	Pn	**Pn**	**05 54 20.8**	**-0.9**
ENIJ				Sn	**Sn**	**05 54 43.9**	**-2.0**
ENIJ	**Nijar**	**1.97**	**39**	Pn	**Pn**	**05 54 21.2**	**-0.4**
ENIJ				Sn	**Sn**	**05 54 45.9**	**0.0**
ENIJ				*i* lVmb_Lg		05 54 48.6	
LCRM	**LCR**	**1.98**	**207**	P	**Pb**	**05 54 25.1**	**+0.4**
LCRM				S	**Sn**	**05 54 45.6**	**-0.5**
ESPR	**Espera**	**2.21**	**311**	Pn	**Pb**	**05 54 27.1**	**-1.4**
ESPR	**Espera**	**2.21**	**311**	Pn	**Pn**	**05 54 26.2**	**+1.4**
ESPR				Sn	**Sn**	**05 54 53.3**	**+1.7**
ESPR				*i* lVmb_Lg		05 54 59.5	
IFR	**Ifrane**	**2.23**	**211**	Pn	**Pn**	**05 54 26.3**	**+0.9**
IFR				Sn	**Sn**	**05 54 51.9**	**-0.5**
EQES	**Quesada**	**2.41**	**13**	Pn	**Pn**	**05 54 29.2**	**+1.4**
EQES				Sn	**Sn**	**05 54 58.7**	**+1.9**
EQES				*i* lVmb_Lg		05 55 02.9	
E0802	**Ubeda,Jaen**	**2.59**	**7**	Sn	**Sn**	**05 55 02.2**	**+1.1**
MD31	**MD31**	**2.71**	**198**	P	**Pn**	**05 54 33.1**	**+1.4**
MD31				S	**Sn**	**05 55 04.1**	**+0.1**
MDT	**Midelt**	**2.72**	**195**	P	**Pn**	**05 54 33.9**	**+1.9**
MDT				S	**Sn**	**05 55 02.2**	**-2.2**
EADA	**Adamuz**	**2.79**	**347**	Pn	**Pn**	**05 54 34.5**	**+1.6**
EADA	**Adamuz**	**2.79**	**347**	Pn	**Pn**	**05 54 34.2**	**+1.4**
EADA				Sn	**Sn**	**05 55 06.8**	**+0.8**
EADA				*i* lVmb_Lg		05 55 16.5	
EZAR	**Zarzadilla de**	**2.94**	**34**	Pn	**Pn**	**05 54 35.5**	**+0.6**
EZAR				Sn	**Sn**	**05 55 10.5**	**+0.8**
EZAR				*i* lVmb_Lg		05 55 14.2	
ECAB	**El Cabril**	**2.94**	**334**	Pn	**Pn**	**05 54 36.5**	**+1.6**
ECAB	**El Cabril**	**2.94**	**334**	Pn	**Pn**	**05 54 36.6**	**+1.7**
ECAB				Sn	**Sn**	**05 55 10.2**	**+0.6**
ECAB				*i* lVmb_Lg		05 55 17.9	
CART	**Cartagena**	**3.08**	**45**	Sn	**Sn**	**05 55 10.3**	**-2.9**
ZHG	**ZHG**	**3.11**	**231**	P	**Pn**	**05 54 37.8**	**+0.5**
ZHG				S	**Sn**	**05 55 14.1**	**+0.3**
EMIN	**Mina Concepcio**	**3.29**	**316**	Pn	**Pn**	**05 54 40.3**	**+0.6**
EMIN	**Mina Concepcio**	**3.29**	**316**	Pn	**Pn**	**05 54 40.4**	**+0.6**
EMIN				*i* lVmb_Lg		05 54 52.8	
PSIM	**Granatula de C**	**3.36**	**0**	Pn	**Pn**	**05 54 42.6**	**+1.8**
PSIM				Sn	**Sn**	**05 55 21.5**	**+1.3**
EGRO	**El Granado**	**3.65**	**306**	Pn	**Pn**	**05 54 45.4**	**+0.7**
EGRO				Sn	**Sn**	**05 55 24.8**	**-2.2**
EGRO	**El Granado**	**3.65**	**306**	Pn	**Pn**	**05 54 45.1**	**+0.5**
EGRO				Pn	Pb	05 54 45.4	-7.7
EGRO				Sn	**Sn**	**05 55 27.1**	**0.0**
EGRO				Sn	Sb	05 55 27.4	-9.5
ETOB	**Tobarra**	**3.65**	**28**	Pn	**Pn**	**05 54 46.8**	**+2.1**
ETOB				Sn	**Sn**	**05 55 27.0**	**-0.2**
AVE	**Averroes**	**3.70**	**236**	Sn	**Sn**	**05 55 26.7**	**-1.8**
PVAQ	**Vaqueiros**	**3.74**	**303**	*e*Pn	**Pn**	**05 54 46.7**	**+0.8**
PVAQ				*e*Sn	**Sn**	**05 55 27.5**	**-1.8**
PVAQ				*i* IAML		05 55 29.6	
PVAQ				*i* IAML		05 55 32.4	
PVAQ				*i* IAML		05 55 33.1	
PVAQ	**Vaqueiros**	**3.74**	**303**	P	**Pn**	**05 54 47.1**	**+1.2**
PVAQ				S	**Sn**	**05 55 27.7**	**-1.6**
PBAR	**Barrancos**	**3.78**	**317**	Pn	**Pn**	**05 54 47.1**	**+0.7**
PBAR	**Barrancos**	**3.78**	**317**	*e*Pn	**Pn**	**05 54 47.2**	**+0.7**
PBAR				*e*Sn	**Sn**	**05 55 30.7**	**+0.3**
PBAR				*i* IAML		05 55 35.0	
PBAR				*i* IAML		05 55 35.2	
PBAR				*i* IAML		05 55 36.4	
PBDV	**Barranco-do-Ve**	**3.81**	**299**	Pn	**Pn**	**05 54 47.4**	**+0.5**
PBDV				Sn	**Sn**	**05 55 29.8**	**-1.4**
PBDV	**Barranco-do-Ve**	**3.81**	**299**	*e*Pn	**Pn**	**05 54 47.5**	**+0.6**
PBDV				*e*Sn	**Sn**	**05 55 30.0**	**-1.2**
PBDV				*i* IAML		05 55 32.1	
PBDV				*i* IAML		05 55 34.4	
PBDV				*i* IAML		05 55 38.6	
PCVE	**Castro Verde**	**4.07**	**304**	*e*Pn	**Pn**	**05 54 51.6**	**+1.1**
PCVE				*e*Sn	**Sn**	**05 55 37.5**	**-0.1**
PCVE				*i* IAML		05 55 40.8	
PCVE				*i* IAML		05 55 41.6	
PAB	**San Pablo**	**4.12**	**354**	Pn	**Pn**	**05 54 52.6**	**+1.4**
PBEJ	**Beja**	**4.18**	**309**	*e*Sn	**Sn**	**05 55 39.8**	**-0.4**
EBAD	**Badajoz**	**4.20**	**323**	Pn	**Pn**	**05 54 53.6**	**+1.4**
EBAD				Sn	**Sn**	**05 55 39.4**	**-1.3**
EBAD	**Badajoz**	**4.20**	**323**	Pn	**Pn**	**05 54 53.0**	**+0.8**
EBAD				Sn	**Sn**	**05 55 40.5**	**-0.2**
ESDC	**Sonseca Array**	**4.22**	**358**	Pn	**Pn**	**05 54 53.9**	**+1.3**
ESDC				Sn	**Sn**	**05 55 41.8**	**+0.5**
ESBB	**Sonseca Array**	**4.22**	**358**	Pn	**Pn**	**05 54 54.3**	**+1.7**
ESBB				Sn	**Sn**	**05 55 41.8**	**+0.5**
MESJ	**Messejana**	**4.30**	**305**	*e*Pn	**Pn**	**05 54 55.1**	**+1.4**
MESJ				*e*Sn	**Sn**	**05 55 42.7**	**-0.6**
PTEO	**Sao Teotonio**	**4.51**	**299**	*e*Pn	**Pn**	**05 54 57.6**	**+1.1**
PTEO				*e*Sn	**Sn**	**05 55 48.1**	**-0.2**
PTEO				*i* IAML		05 55 49.7	
PTEO				*i* IAML		05 55 49.8	
PTEO				*i* IAML		05 55 50.6	
PLOUS	**Minas do Lousa**	**4.54**	**306**	*e*Pn	**Pn**	**05 54 57.8**	**+0.9**
PLOUS				*e*Sn	**Sn**	**05 55 48.5**	**-0.7**
PLOUS				*i* IAML		05 55 52.8	
PLOUS				*i* IAML		05 56 00.9	
PLOUS				*i* IAML		05 56 05.3

0.9nm,0.5s
GERES GERESS Array B 38.51 314 P **P** 06 13 53.4 -0.2
0.4nm,0.8s,baz=120,slow=6.8,SNR=4.6
0.4nm,0.8s
FINES FINESS Array B 38.91 338 P **P** 06 13 54.9 -1.8
1.2nm,0.8s,baz=148,slow=8.3,SNR=7.0
1.2nm,0.8s
HFS Hagfors 42.96 330 P **P** 06 14 29.4 -0.8
0.9nm,0.5s,baz=139,slow=12,SNR=4.8
0.9nm,0.5s
TORD Torodi Ar. Bea 52.62 265 P **P** 06 15 45.9 +0.3
1.4nm,0.6s,baz=57,slow=7.1,SNR=8.0
1.4nm,0.6s
ASAR Alice Springs 90.91 116 P **P** 06 19 35.1 -0.4
0.2nm,0.5s,baz=306,slow=5.5,SNR=5.0
0.2nm,0.5s

*PRE **26** 06:11:40.4±0.9,21°.72S×33°.93E,h5km,ML2.7,Presumed earthquake*
BUL 26 06:11:43.1±1.3,21°.08S×33°.52E,h10km,MD3.1,
Presumed earthquake,Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**3.12**	**219**	*i* P	Pn	06 12 31.3	-1.1
MOPA				*i* S	Sn	06 13 07.6	-2.1
MOPA	**Mopani**	**3.12**	**219**	*i* P	Pn	06 12 31.7	-0.7
MOPA				*i* S	Sn	06 13 05.5	-4.2
MOPA	**Mopani**	**3.12**	**219**	*e*P	Pn	06 12 29.2	-3.2
MOPA				*e*S	Sn	06 13 04.3	-5.5
MOPA				IAML		06 13 17.8	
	comp=Z,53nm,0.5s						
MUSN	**Musina, Limpop**	**3.61**	**250**	*i* P	Pn	06 12 40.0	+0.9
MUSN				*i* S	Sn	06 13 20.0	-1.8
MUSN	**Musina, Limpop**	**3.61**	**250**	*i* P	Pn	06 12 40.2	+1.1
MUSN				*i* S	Sn	06 13 19.8	-2.0
MUSN	**Musina, Limpop**	**3.61**	**250**	*e*P	Pn	06 12 41.3	+2.2
MUSN				*e*S	Sn	06 13 24.9	+3.1
MUSN				IAML		06 13 40.1	
	comp=Z,16nm,0.4s						
BLWY	**Bulawayo**	**4.69**	**281**	*i* P	Pn	06 12 56.1	+2.0
BLWY				*i* S	Sn	06 13 48.0	-0.8
BLWY	**Bulawayo**	**4.69**	**281**	*i* P	Pn	06 12 56.6	+2.5
BLWY				*i* S	Sn	06 13 50.8	+2.0
MATP	**Matopo**	**4.74**	**277**	*i* P	Pn	06 12 53.8	-1.0
MATP				*i* S	Sn	06 13 45.8	-4.2
MATP	**Matopo**	**4.74**	**277**	*i* P	Pn	06 12 56.6	+1.7
MATP				*i* S	Sn	06 13 48.3	-1.7
LEPH	**Lephalale, Lim**	**5.97**	**241**	*e*P	Pn	06 13 10.7	-0.9
LEPH				*e*S	Sn	06 14 17.9	-2.3
LEPH				IAML		06 14 51.2	
	comp=Z,13nm,0.7s						
BRAK	**Brakfontein**	**14.28**	**220**	*e*P	Pn	06 15 01.5	-3.9
FRAZ	**Fraserburg**	**15.29**	**223**	*e*P	Pn	06 15 16.3	-2.9

*UPP **26** 06:17:22.3±0.6,61°.12N×11°.62E,h3km,ML3.3,Presumed earthquake*
*IDC **26** 06:17:23.2±0.6,61°.19N×11°.90E,h0km,mb3.6/1,*
mbtmp3.4/3,ML2.6/2,Error ellipse: s-maj=6.4km
s-min=3.8km az=177.0
*NAO **26** 06:17:24.4±0.4,61°.15N×11°.82E,h13km±2km,ML2.8*
*DNK **26** 06:17:24.7±3.0,61°.07N×11°.73E,h12km±16km,ML2.9,*
Presumed earthquake
*BER **26** 06:17:26.3±2.7,61°.11N×11°.75E,h15km±4km,ML2.8,*
ML2.8(NAO),Confirmed Earthquake
ISC 26 06:17:23.4±0.8,61°.16N±0°.02×11°.89E±0°.01,h18km±4km,
n121,σ1s70/222,1C-1D,Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NC4	**NORSAR Subarra**	**0.11**	**227**	Pg	**Pg**	**06 17 27.4**	**+0.2**
NC4				Sg	**Sg**	**06 17 29.4**	**-0.4**
NC3	**NORSAR Subarra**	**0.25**	**295**	Pg	**Pb**	**06 17 29.5**	**+0.2**
NC3				Sg	**Sb**	**06 17 33.0**	**-0.3**
NC303	**NORSAR Array S**	**0.26**	**286**	*e*P	**Pb**	**06 17 29.6**	**+0.1**
NC303				*e*S	**Sg**	**06 17 33.0**	**-0.2**
NC303				IAML		06 17 33.6	
	comp=Z,3μm,0.3s						
NB201	**NORSAR Array S**	**0.31**	**250**	*e*P	**Pb**	**06 17 30.0**	**-0.3**
NB201				*e*S	**Sg**	**06 17 34.1**	**-0.4**
NB201				IAML		06 17 34.3	
	comp=Z,2μm,0.1s						
NB2	**NORSAR Subarra**	**0.35**	**251**	Pg	**Pg**	**06 17 30.0**	**-0.7**
NB2				Pg	**Pb**	**06 17 30.8**	**-0.3**
NB2				Sg	**Sg**	**06 17 34.1**	**-1.6**
NOA	**NORSAR Array B**	**0.35**	**251**	Pg	**Pg**	**06 17 30.6**	**-0.1**
	comp=Z,19nm,0.3s,baz=148,slow=18,SNR=2646						
NOA				Lg	Lg	06 17 33.9	
	comp=Z,5.9nm,0.3s,baz=82,slow=16,SNR=187						
NC602	**NORSAR Array S**	**0.45**	**202**	*i* P	**Pg**	**06 17 32.5**	**0.0**
NC602				*e*S	**Sg**	**06 17 38.1**	**-0.6**
NC602				IAML		06 17 38.7	
	comp=Z,861nm,0.2s						
NRA0	**NORESS Array S** baz=18,slow=37	**0.45**	**202**	Pg	**Pg**	**06 17 32.5**	**-0.1**
NRA0				Sg	**Sg**	**06 17 38.2**	**-0.6**
	baz=25,slow=28						
NRA0	**NORESS Array S**	**0.45**	**202**	Pg	**Pg**	**06 17 32.5**	**-0.1**
NRA0				Sg	**Sg**	**06 17 38.2**	**-0.6**
NC6	**NORSAR Subarra**	**0.46**	**207**	Pg	**Pg**	**06 17 32.4**	**-0.2**
NC6				Sg	**Sg**	**06 17 38.2**	**-0.7**
NC2	**NORSAR Subarra**	**0.52**	**284**	Pg	**Pb**	**06 17 34.5**	**+0.4**
NC2				Sg	**Sb**	**06 17 41.6**	**+0.3**
NBO	**NORSAR Subarra**	**0.55**	**257**	Pg	**Pg**	**06 17 34.1**	**-0.3**
NBO				Sg	**Sg**	**06 17 40.9**	**-1.0**
NBO00	**NORSAR Array S**	**0.55**	**257**	*e*P	**Pg**	**06 17 34.1**	**-0.3**
NBO00				*e*S	**Sg**	**06 17 41.3**	**-0.5**
NBO00				IAML		06 17 41.6	
	comp=Z,930nm,0.1s						
NC204	**NORSAR Array S**	**0.56**	**283**	*e*P	**Pb**	**06 17 34.5**	**-0.1**
NC204				*e*S	**Sg**	**06 17 41.6**	**-0.4**
NC204				IAML		06 17 42.2	
	comp=Z,427nm,0.2s						
NAO01	**NORSAR Array S**	**0.58**	**238**	*e*P	**Pg**	**06 17 34.4**	**-0.5**
NAO01				*e*S	**Sg**	**06 17 41.7**	**-0.9**
NAO01				IAML		06 17 42.8	
	comp=Z,558nm,0.2s						
NAO	**NORSAR Subarra**	**0.61**	**238**	Pg	**Pg**	**06 17 34.5**	**-0.9**
NAO				Sg	**Sg**	**06 17 41.7**	**-2.0**
OSL	**Oslo**	**1.35**	**206**	Pb	**Pb**	**06 17 48.1**	**0.0**
OSL				Sb	**Sb**	**06 18 05.4**	**+0.5**
OSL	**Oslo**	**1.35**	**206**	*e*P	**Pb**	**06 17 48.1**	**0.0**
OSL				*e*S	**Sb**	**06 18 05.5**	**+0.5**
OSL				IAML		06 18 07.4	
	comp=Z,403nm,0.3s						
HFS	**Hagfors**	**1.36**	**138**	Pg	**Pb**	**06 17 48.4**	**+0.2**
	comp=Z,24nm,0.3s,baz=320,slow=16,SNR=1311						
HFS				Lg	Lg	06 18 06.1	
	comp=Z,91nm,0.3s,baz=324,slow=29,SNR=54						
HFS	**Hagfors** baz=322,slow=16	**1.36**	**138**	Pb	**Pb**	**06 17 48.2**	**0.0**
HFS				Sb	**Sb**	**06 18 05.9**	**+0.6**
	baz=320,slow=37						
HFS	**Hagfors**	**1.36**	**138**	Pb	**Pb**	**06 17 48.2**	**0.0**
HFS				Sb	**Sb**	**06 18 05.9**	**+0.6**
UDD	**Uddeholm**	**1.36**	**141**	*i* P	**Pb**	**06 17 48.5**	**+0.1**
UDD				*e*S	**Sb**	**06 18 06.6**	**+1.1**
UDD	**Uddeholm**	**1.36**	**141**	P	**Pb**	**06 17 48.7**	**+0.3**
UDD				S	**Sg**	**06 18 06.7**	**-0.7**
UDD	**Uddeholm**	**1.36**	**141**	P	**Pb**	**06 17 48.7**	**+0.3**
UDD				S	**Sg**	**06 18 06.7**	**-0.7**
DOMB	**Dombas**	**1.62**	**305**	Pb	**Pb**	**06 17 52.1**	**-0.5**
DOMB				Sb	**Sb**	**06 18 13.3**	**+0.6**
DOMB	**Dombas**	**1.62**	**305**	*e*P	**Pb**	**06 17 52.2**	**-0.5**
DOMB				*e*Sg	**Sb**	**06 18 13.4**	**+0.6**
DOMB				IAML		06 18 14.4	
	comp=Z,688nm,0.2s						
FINU	**Finntorp**	**1.78**	**170**	P	**Pn**	**06 17 54.0**	**+0.7**
FINU				S	**Sb**	**06 18 18.3**	**+0.9**
FINU	**Finntorp**	**1.78**	**170**	P	**Pn**	**06 17 54.0**	**+0.7**
FINU				S	**Sb**	**06 18 18.3**	**+0.9**
SKAR	**Skarslia**	**1.81**	**256**	Pn	**Pn**	**06 17 53.9**	**+0.2**
SKAR				Sn	**Sb**	**06 18 18.3**	**-0.1**
SKAR	**Skarslia**	**1.81**	**256**	*e*P	**Pn**	**06 17 53.9**	**+0.2**
SKAR				*e*S	**Sn**	**06 18 16.8**	**+0.6**
SKAR				IAML		06 18 19.1	
	comp=Z,179nm,0.3s						
KON	**Kongsberg**	**1.89**	**218**	Pn	**Pn**	**06 17 54.8**	**+0.1**
KON				Sn	**Sb**	**06 18 20.6**	**+0.1**
KONO	**Kongsberg**	**1.89**	**218**	*e*P	**Pn**	**06 17 54.8**	**+0.1**
KONO				*e*S	**Sn**	**06 18 18.9**	**+0.9**
KONO				IAML		06 18 22.4	
	comp=Z,55nm,0.3s						
ROTU	**Roteberg**	**1.92**	**80**	P	**Pb**	**06 17 57.5**	**-0.2**
ROTU				S	**Sg**	**06 18 23.6**	**-1.3**
ROTU	**Roteberg**	**1.92**	**80**	P	**Pb**	**06 17 57.5**	**-0.2**
ROTU				S	**Sg**	**06 18 23.6**	**-1.3**
FALU	**Falun** baz=276	**2.04**	**107**	P	**Pb**	**06 17 59.0**	**-0.9**
FALU				S	**Sb**	**06 18 26.6**	**+1.6**
FALU	**Falun** baz=276	**2.04**	**107**	P	**Pb**	**06 17 59.0**	**-0.9**
FALU				S	**Sb**	**06 18 26.6**	**+1.6**
STRU	**Stroemstad**	**2.16**	**190**	*e*P	**Pn**	**06 17 58.9**	**+0.5**
STRU				*e*Pg	**Pb**	**06 18 01.8**	**-0.1**
STRU				*e*Sg	**Sb**	**06 18 28.7**	**+0.5**
STRU	**Stroemstad**	**2.16**	**190**	P	**Pn**	**06 17 58.9**	**+0.5**
STRU	**Stroemstad**	**2.16**	**190**	*e*P	**Pb**	**06 18 00.2**	**-1.6**
STRU	**Stroemstad**	**2.16**	**190**	P	**Pn**	**06 17 58.9**	**+0.5**
STRU				*i* P	**Pb**	**06 18 01.6**	**-0.3**
STRU				*e*S	**Sn**	**06 18 22.7**	**-1.9**
NRAU	**Nora**	**2.23**	**134**	P	**Pb**	**06 18 02.0**	**-1.1**
NRAU	**Nora**	**2.23**	**134**	P	**Pb**	**06 18 02.0**	**-1.1**
NASU	**Vaermlandsnaes**	**2.33**	**163**	P	**Pn**	**06 18 01.2**	**+0.5**
NASU	**Vaermlandsnaes**	**2.33**	**163**	P	**Pn**	**06 18 01.2**	**+0.5**
HASU	**Hassela**	**2.47**	**64**	P	**Pb**	**06 18 06.0**	**-1.1**
HASU	**Hassela**	**2.47**	**64**	P	**Pb**	**06 18 06.0**	**-1.1**
MOL	**Molde**	**2.50**	**307**	*e*P	**Pn**	**06 18 03.8**	**+0.7**
MOL				*e*Pg	**Pb**	**06 18 06.8**	**-0.8**
MOL				*e*S	**Sn**	**06 18 33.4**	**+0.4**
MOL				*e*Sg	**Sb**	**06 18 38.5**	**+0.5**
MOL				IAML		06 18 41.2	
	comp=Z,151nm,0.2s						
AKN	**Aaknes**	**2.55**	**296**	Pn	**Pn**	**06 18 04.2**	**+0.5**
AKN				Sn	**Sn**	**06 18 34.7**	**+0.4**
AKN	**Aaknes**	**2.55**	**296**	*e*P	**Pn**	**06 18 04.3**	**+0.5**
AKN				*e*Pg	**Pb**	**06 18 07.9**	**-0.6**
AKN				*e*S	**Sn**	**06 18 34.3**	**0.0**
AKN				IAML		06 18 46.4	
	comp=Z,107nm,0.1s						
ARNU	**Arnoeviken**	**2.69**	**76**	*e*P	**Pn**	**06 18 08.2**	**+2.5**
ARNU				*e*S	**Sn**	**06 18 39.5**	**+1.7**
ARNU				smax	smax	06 18 49.6	
HYA	**Hoyanger**	**2.76**	**273**	*e*P	**Pn**	**06 18 06.6**	**-0.1**
HYA				*e*Pg	**Pb**	**06 18 11.3**	**-0.8**
HYA				*e*S	**Sn**	**06 18 38.5**	**-1.0**
HYA				*e*Sg	**Sb**	**06 18 46.7**	**+1.1**
ODD1	**Odda**	**2.88**	**247**	*e*P	**Pn**	**06 18 09.0**	**+0.6**
ODD1				*e*Sg	**Sb**	**06 18 50.2**	**+1.1**
ODD1				IAML		06 18 51.0	
	comp=Z,244nm,0.3s						
UPP	**Uppsala**	**3.12**	**112**	*e*P	**Pb**	**06 18 15.2**	**-3.1**
TJOU	**Tjoern**	**3.14**	**183**	*e*P	**Pn**	**06 18 12.6**	**+0.8**
TJOU				*i* S	**Sn**	**06 18 47.1**	**-1.6**
TJOU	**Tjoern**	**3.14**	**183**	*e*P	**Pn**	**06 18 12.6**	**+0.8**
TJOU				*i* S	**Sn**	**06 18 47.1**	**-1.6**
BLS5	**Blasjo**	**3.21**	**240**	*e*P	**Pn**	**06 18 13.5**	**+0.6**
BLS5				*e*S	**Sn**	**06 18 50.1**	**-0.6**
BLS5				*e*Sg	**Sb**	**06 18 59.9**	**+1.3**
BLS5				IAML		06 19 05.0	
	comp=Z,100nm,0.3s						
HEMU	**Hemsoen**	**3.29**	**60**	*e*P	**Pn**	**06 18 16.4**	**+2.5**
HEMU				*e*S	**Sn**	**06 18 54.1**	**+1.7**
HEMU				smax	smax	06 19 11.6	
BER	**Bergen**	**3.31**	**259**	*e*P	**Pn**	**06 18 14.9**	**+0.8**
BER				*e*Pg	**Pb**	**06 18 20.4**	**-1.0**
BER				*e*Sg	**Sb**	**06 19 02.7**	**+1.4**
BER				IAML		06 19 06.0	
	comp=Z,110nm,0.3s						
FOO	**Floro**	**3.32**	**281**	*e*P	**Pn**	**06 18 15.6**	**+1.2**
FOO				*e*Pg	**Pb**	**06 18 20.4**	**-1.2**
FOO				*e*S	**Sn**	**06 18 54.1**	**+0.8**
FOO				*e*Sg	**Sb**	**06 19 04.1**	**+2.4**
FOO				IAML		06 19 13.9	
	comp=Z,66nm,0.2s						
ASK	**Askoy**	**3.35**	**261**	*e*P	**Pn**	**06 18 14.5**	**-0.2**
ASK				*e*S	**Sn**	**06 18 52.5**	**-1.4**
ASK				*e*Sg	**Sb**	**06 19 04.6**	**+2.2**
ASK				IAML		06 19 15.0	
	comp=Z,72nm,0.4s						
HOMB	**Homborsund**	**3.36**	**212**	*e*P	**Pn**	**06 18 14.7**	**-0.3**
HOMB				*e*S	**Sn**	**06 18 52.5**	**-1.8**
HOMB				*e*Sg	**Sg**	**06 19 08.0**	**-3.2**
HOMB				IAML		06 19 13.0	
	comp=Z,34nm,0.4s						
HOMB	**Homborsund**	**3.36**	**212**	*i* P	**Pn**	**06 18 17.7**	**+2.8**
HOMB				*i* S	**Sn**	**06 18 53.6**	**-0.7**
HOMB				IAML		06 19 13.2	
	comp=Z,18nm,0.3s						
NSS	**Namsos**	**3.39**	**1**	*e*P	**Pn**	**06 18 17.6**	**+2.3**
NSS				*e*S	**Sn**	**06 18 58.0**	**+3.1**
NSS				*e*Sg	**Sg**	**06 19 09.6**	**-2.5**
NSS				IAML		06 19 19.2	
	comp=Z,50nm,0.3s						
SUE	**Sulen**	**3.46**	**271**	*e*P	**Pn**	**06 18 16.2**	**0.0**
SUE				*e*S	**Sn**	**06 18 55.5**	**-1.2**
SUE				*e*Sg	**Sg**	**06 19 10.4**	**-4.0**
SUE				IAML		06 19 14.0	
	comp=Z,56nm,0.2s						
NRTU	**Norrtaelje**	**3.66**	**111**	*e*P	**Pn**	**06 18 20.6**	**+1.6**
NRTU				*e*S	**Sn**	**06 19 01.3**	**-0.3**
NRTU				smax	smax	06 19 21.3	
SNART	**Snartemo**	**3.68**	**222**	*e*	**Pb**	**06 18 26.7**	**-1.2**
SNART				*e*S	**Sn**	**06 19 01.5**	**-0.8**
SNART				*e*Sg	**Sb**	**06 19 14.1**	**+2.0**
SNART	**Snartemo**	**3.68**	**222**	*e*P	**Pn**	**06 18 22.7**	**+3.4**
SNART				IAML		06 19 24.1	
	comp=Z,3.8nm,0.3s						
ONAU	**Onsala**	**3.77**	**180**	*e*P	**Pn**	**06 18 20.9**	**+0.4**
ONAU				*e*Pg	**Pb**	**06 18 30.8**	**+1.5**
ONAU				*e*S	**Sn**	**06 19 03.2**	**-1.1**
ONAU				*e*Sg	**Sb**	**06 19 18.0**	**+3.4**
ONAU	**Onsala**	**3.77**	**180**	*e*P	**Pn**	**06 18 21.1**	**+0.6**
ONAU				*e*S	**Sn**	**06 19 03.6**	**-0.8**
KMY	**Karmoy**	**3.84**	**242**	*e*P	**Pn**	**06 18 21.9**	**+0.3**
KMY				*e*Pg	**Pb**	**06 18 31.8**	**+1.2**
KMY				*e*Sg	**Sb**	**06 19 18.4**	**+1.6**
KMY				IAML		06 19 29.8	
	comp=Z,47nm,0.3s						
AAL	**Aland**	**4.11**	**100**	*e*P	**Pn**	**06 18 26.8**	**+1.7**
AAL				*e*S	**Sn**	**06 19 12.6**	**-0.1**
AAL				smax	smax	06 19 34.3	
AAL	**Aland**	**4.11**	**100**	*e*P	**Pn**	**06 18 26.7**	**+1.5**
FABU	**Falkenberg**	**4.19**	**174**	*e*P	**Pn**	**06 18 25.7**	**-0.5**
FABU				*e*S	**Sn**	**06 19 13.8**	**-0.8**
FABU	**Falkenberg**	**4.19**	**174**	*e*P	**Pn**	**06 18 25.7**	**-0.5**
FABU				*e*S	**Sn**	**06 19 13.8**	**-0.8**
DEL	**Delary**	**4.81**	**167**	*e*P	**Pn**	**06 18 35.7**	**+0.9**
DEL				*i* S	**Sn**	**06 19 31.9**	**+1.9**
DEL	**Delary**	**4.81**	**167**	*i* P	**Pn**	**06 18 37.5**	**+2.7**
DEL				*i* S	**Sn**	**06 19 29.8**	**-0.2**
MUD	**Monsted U'grnd**	**4.92**	**198**	*i* P	**Pn**	**06 18 38.7**	**+2.4**
MUD				*e*S	**Sn**	**06 19 35.6**	**+2.9**
MUD	**Monsted U'grnd**	**4.92**	**198**	*i* P	**Pn**	**06 18 38.7**	**+2.4**
KPF	**Kankaanpaa**	**4.93**	**78**	*e*P	**Pn**	**06 18 39.0**	**+2.6**
KPF				*e*S	**Sn**	**06 19 33.1**	**+0.2**
KPF				smax	smax	06 20 00.0	
LEIR	**Leirfjorden**	**5.01**	**6**	*e*P	**Pn**	**06 18 40.7**	**+3.3**
LEIR				*e*S	**Sn**	**06 19 35.7**	**+0.9**
LEIR				*e*Sg	**Sb**	**06 19 53.8**	**+3.7**
LEIR				IAML		06 20 04.4	
	comp=Z,18nm,0.9s						
BJUU	**Bjuv**	**5.13**	**173**	*e*P	**Pn**	**06 18 39.9**	**+0.7**
BJUU	**Bjuv**	**5.13**	**173**	*i* P	**Pn**	**06 18 41.1**	**+1.9**
BJUU				*i* S	**Sn**	**06 19 36.1**	**-1.8**
MOR8	**Moi Rana**	**5.16**	**12**	*e*P	**Pn**	**06 18 44.4**	**+4.7**
MOR8				*e*S	**Sb**	**06 19 48.6**	**-6.0**
MOR8				*e*Sg	**Sg**	**06 20 09.0**	**+0.2**
STOK	**Stokkvaagen**	**5.22**	**5**	*e*P	**Pn**	**06 18 43.7**	**+3.2**
STOK				*e*S	**Sn**	**06 19 43.1**	**+3.0**
STOK				IAML		06 20 10.9	
	comp=Z,18nm,0.4s						
BLEU	**Blekinge**	**5.28**	**155**	*e*P	**Pn**	**06 18 39.9**	**-1.3**
BLEU	**Blekinge**	**5.28**	**155**	*i* P	**Pn**	**06 18 45.3**	**+4.1**
BLEU				*i* S	**Sn**	**06 19 40.3**	**-1.2**
RAUS	**Rausandaksla**	**5.39**	**9**	*e*P	**Pn**	**06 18 45.4**	**+2.7**
RAUS				*e*S	**Sn**	**06 19 45.7**	**+1.5**
RAUS				*e*Sg	**Sg**	**06 20 11.4**	**-4.7**
VAF	**Ylistaro**	**5.41**	**65**	*e*P	**Pn**	**06 18 45.5**	**+2.5**
VAF				*e*S	**Sn**	**06 19 44.9**	**+0.2**
VAF				smax	smax	06 20 15.3	
VAF	**Ylistaro**	**5.41**	**65**	*e*P	**Pn**	**06 18 46.7**	**+3.7**
LUNU	**Lund**	**5.60**	**171**	*e*P	**Pn**	**06 18 45.3**	**-0.3**
LUNU	**Lund**	**5.60**	**171**	*e*P	**Pn**	**06 18 45.3**	**-0.3**
LUNU				*e*P	**Pn**	**06 18 46.3**	**+0.7**
VAGH	**Vaagaholmen**	**5.63**	**6**	*e*P	**Pn**	**06 18 48.7**	**+2.6**
VAGH				*e*Sg	**Sb**	**06 20 13.8**	**+5.8**
MEF	**Metsahovi**	**6.22**	**93**	*e*P	**Pn**	**06 18 55.3**	**+1.2**
MEF				*e*S	**Sn**	**06 20 03.1**	**-1.5**
MEF				smax	smax	06 20 39.4	
MEF	**Metsahovi**	**6.22**	**93**	*e*P	**Pn**	**06 18 57.3**	**+3.2**
BSD	**Bornholm Skovb**	**6.27**	**164**	*i* P	**Pn**	**06 18 54.0**	**-0.8**
BSD				*i* S	**Sn**	**06 20 02.5**	**-3.4**
BSD				IAML		06 20 43.9	
	comp=Z,17nm,0.4s						
BSD	**Bornholm Skovb**	**6.27**	**164**	*e*P	**Pn**	**06 18 55.1**	**+0.3**
BSD	**Bornholm Skovb**	**6.27**	**164**	*i* P	**Pn**	**06 18 54.7**	**-0.1**
BSD				*i* S	**Sn**	**06 20 01.3**	**-4.6**
BSD				IAML		06 20 44.1	
	comp=Z,33nm,0.6s						
KEF	**Keuruu**	**6.27**	**75**	*e*P	**Pn**	**06 18 58.1**	**+3.3**
NUR	**Nurmijarvi**	**6.28**	**90**	*e*P	**Pn**	**06 18 56.3**	**+1.4**
NUR				*e*S	**Sn**	**06 20 04.9**	**-1.2**
NUR				smax	smax	06 20 42.3	
SLIT	**Slitere, Latvi**	**6.38**	**119**	*e*P	**Pn**	**06 18 56.9**	**+0.5**
FAUS	**Fauske**	**6.42**	**12**	*e*P	**Pn**	**06 19 00.3**	**+3.4**
MTSE	**Matsula**	**6.47**	**107**	*e*P	**Pn**	**06 18 59.2**	**+1.6**
LRW	**Lerwick**	**6.51**	**267**	*e*	**Pn**	**06 18 59.7**	**+1.7**
FINES	**FINESS Array B**	**6.84**	**81**	Pn	**Pn**	**06 19 04.0**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=278,slow=12,SNR=1.7						
FINES				Sn	**Sn**	**06 20 18.8**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=270,slow=21,SNR=7.8						
FINES				Lg	Lg	06 20 55.6	
	comp=Z,6.0nm,0.3s,baz=272,slow=25,SNR=16						
	comp=Z,0.5nm,0.3s						
SALU	**Saltoluokta**	**6.88**	**22**	*e*P	**Pn**	**06 19 05.3**	**+2.2**
SUF	**Sumiainen**	**6.91**	**71**	*e*P	**Pn**	**06 19 05.7**	**+2.1**
STEI	**Steigen**	**6.95**	**11**	*e*P	**Pn**	**06 19 06.5**	**+2.3**
LOF	**Lofoten**	**7.04**	**5**	*e*P	**Pn**	**06 19 05.6**	**+0.2**
ARBE	**Arbavere**	**7.21**	**98**	*e*P	**Pn**	**06 19 08.5**	**+0.7**
PBUR	**Paburge**	**7.34**	**130**	*e*P	**Pn**	**06 19 10.2**	**+0.7**
VSU	**Vasula**	**7.96**	**103**	*e*P	**Pn**	**06 19 19.1**	**+1.2**
LANU	**Lannavaara**	**8.16**	**28**	*e*P	**Pn**	**06 19 22.6**	**+1.8**
HEF	**Hetta**	**8.83**	**29**	*e*P	**Pn**	**06 19 30.4**	**+0.5**
JETT	**Jettan, Norway**	**9.14**	**19**	*e*P	**Pn**	**06 19 36.0**	**+1.8**
KTK1	**Kautokeino**	**9.21**	**26**	*e*P	**Pn**	**06 19 35.8**	**+0.7**
JOF	**Joensuu**	**9.29**	**71**	*e*P	**Pn**	**06 19 37.0**	**+0.8**
ISAL	**Salakas**	**9.33**	**121**	*e*P	**Pn**	**06 19 36.1**	**-0.7**
NACGM	**Naroch**	**10.07**	**122**	*e*P	Pn	06 19 52.1	+5.2
	comp=Z,3.0nm,0.7s,baz=315						
ARCES	**ARCESS Array B**	**10.12**	**28**	Pn	**Pn**	**06 19 47.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=214,slow=14,SNR=16						
ARCES				Sn	**Sn**	**06 21 33.9**	**-6.6**
	comp=Z,0.4nm,0.3s,baz=214,slow=23,SNR=5.7						
ARCES				Lg	Lg	06 22 36.4	
	comp=Z,0.3nm,0.3s,baz=220,slow=28,SNR=7.7						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**14.23**	**130**	Lg	Lg	06 24 50.1	
	comp=Z,0.5nm,0.3s,baz=315,slow=28,SNR=4.2						
ZALV	**Zalesovo Beam**	**37.86**	**67**	P	**P**	**06 24 40.2**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=306,slow=12,SNR=3.9						
	comp=Z,0.2nm,0.3s						

*IDC **26** 06:23:22.0±1.4,26°.64N×56°.20E,h0km,mb3.7/11,*
mbtmp3.8/12,ML4.3/1,MS3.8/1,Error ellipse:
s-maj=32.2km s-min=20.3km az=169.0
*TEH **26** 06:23:24.9,26°.89N×56°.17E,h9km±36km,ML3.6,*
Presumed earthquake
*DSN **26** 06:23:25.9±0.8,26°.99N×56°.43E,h10km,ML3.5/12,Error*
ellipse: s-maj=20.1km s-min=5.5km az=100.0
*OMAN **26** 06:23:33.1±0.8,26°.62N×56°.32E,h22km±5km,ml3.5/23,*
Error ellipse: s-maj=6.5km s-min=5.9km az=139.0
ISC 26 06:23:26.2±1.2,26°.95N±0°.03×56°.23E±0°.05,h14km±8km,
n62,σ1s84/80,mb3.6/9,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.46**	**354**	Pg	**Pg**	**06 23 34.7**	**-0.6**
IBND	**Bandar-abas**	**0.57**	**29**	Pg	**Pg**	**06 23 38.2**	**+0.8**
SHME	**Shamm** SNR=37	**0.90**	**185**	*e*P	**Pg**	**06 23 43.6**	**+0.1**
SHME				S	**Sb**	**06 23 58.0**	**+2.7**
SHME	**Shamm**	**0.90**	**185**	P	**Pg**	**06 23 44.0**	**+0.5**
SHME				S	**Sg**	**06 23 52.1**	**-3.2**
BANOM	**Banah** SNR=57	**1.02**	**176**	*e*P	**Pg**	**06 23 45.7**	**-0.2**
BANOM				S	**Sb**	**06 24 01.6**	**+2.6**

0.6nm,0.5s,baz=128,slow=12,SNR=5.9
0.6nm,0.5s

BVAR	**Borovoye Array**	**28.11**	**18**	P		**P**		**06 29 18.3**	**+0.8**
	0.7nm,0.4s,baz=196,slow=10,SNR=5.1								
	0.7nm,0.4s								
MKAR	**Makanchi Array**	**28.55**	**39**	P		**P**		**06 29 22.5**	**+1.1**
	0.6nm,0.5s,baz=225,slow=8.0,SNR=4.3								
	0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**29.13**	**30**	P		**P**		**06 29 26.6**	**+0.1**
	0.5nm,0.8s,baz=226,slow=8.4,SNR=6.2								
	0.5nm,0.8s								
ZALV	**Zalesovo Beam**	**34.22**	**30**	P		**P**		**06 30 11.9**	**+0.6**
	0.5nm,0.3s,baz=251,slow=9.2,SNR=5.2								
	0.5nm,0.3s								
FINES	**FINESS Array B**	**39.99**	**338**	P		**P**		**06 30 59.2**	**-0.9**
	0.7nm,0.5s,baz=151,slow=10,SNR=9.5								
	0.7nm,0.5s								
HFS	**Hagfors**	**43.99**	**331**	P		**P**		**06 31 32.2**	**-0.7**
	0.6nm,0.4s,baz=144,slow=8.2,SNR=1.8								
	0.6nm,0.4s								
SONM	**Songino Array**	**44.09**	**48**	P		**P**		**06 31 33.3**	**-0.7**
	0.4nm,0.4s,baz=272,slow=10.0,SNR=2.1								
	0.4nm,0.4s								
TORD	**Torodi Ar. Bea**	**52.67**	**266**	P		**P**		**06 32 38.5**	**-1.9**
	1.1nm,0.6s,baz=68,slow=7.6,SNR=6.8								
	1.1nm,0.6s								
ASAR	**Alice Springs**	**90.30**	**116**	P		P		06 36 24.4	-2.7
	0.4nm,0.8s,baz=322,slow=4.8,SNR=4.1								
	0.4nm,0.8s								

DJA 26 06:38:25.3±2.1,9°S±15′×10°3E±1°3,h10km,M4.4/12,
mb4.4/3,MLv4.3/12,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CGJI	**Cibinong**	**3.18**	**51**	P		Pn	06 39 15.3	-0.1
KASI	**Kota Agung**	**3.34**	**23**	P		Pn	06 39 18.0	+0.3
EGSI	**Enggano, Bengk**	**3.38**	**344**	P		Pn	06 39 18.1	-0.1
LWLI	**Liwa**	**3.69**	**13**	P		Pn	06 39 22.4	-0.1
MDSI	**Maura Dua**	**4.23**	**13**	P		Pn	06 39 29.8	-0.1
BBJI	**Bungbulang**	**4.56**	**76**	P		Pn	06 39 33.2	-1.2
KPJI	**Karang Pucung**	**5.82**	**78**	P		Pn	06 39 53.2	+1.5
	0.2nm34nm,1.1s							

*IDC **26** 06:42:25.3±1.7,36°.38N×23°.42E,h0km,mb3.8/4,*
mbtmp3.7/6,ML3.1/1,MS3.5/1,Error ellipse:
s-maj=184.7km s-min=23.8km az=142.0
ISC 26 06:42:30.3±1.5,36°.4N±0°.7×23°.4E±0°.5,h35km,n7,σ1s32/6,
mb3.7/3,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRTR	**Keskin Array B**	**8.71**	**64**	Pn		**Pn**	**06 44 33.2**	**-0.7**
	0.5nm,0.6s,baz=242,slow=9.2,SNR=1.4							
KBZ	**Khabaz**	**16.58**	**58**	Pn		**P**	**06 46 23.3**	**+1.1**
	0.1nm,0.3s,baz=255,slow=11,SNR=6.1							
	4.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**30.28**	**226**	P		**P**	**06 48 38.1**	**0.0**
	0.8nm,0.7s,baz=35,slow=9.2,SNR=4.5							
	0.8nm,0.7s							
KURBB	**Kurchatov Arra**	**41.46**	**52**	P		**P**	**06 50 14.9**	**+1.4**
	1.1nm,0.7s,baz=276,slow=8.9,SNR=5.1							
	1.1nm,0.7s							
MKAR	**Makanchi Array**	**44.28**	**57**	P		**P**	**06 50 36.3**	**-0.2**
	1.0nm,0.7s,baz=287,slow=6.3,SNR=5.7							
	1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**45.18**	**47**	P		**P**	**06 50 42.2**	**-1.2**
	0.5nm,0.5s,baz=267,slow=8.7,SNR=2.1							
	0.5nm,0.5s							
TLY	**Talaya**	**56.79**	**47**	LR		LR	07 18 28.9	
	comp=Z,36nm,18.4s,baz=174,slow=38							

*IDC **26** 07:12:00.3±3.0,48°.63N×77°.66E,h0km,mbtmp2.6/2,*
ML2.0/2,Error ellipse: s-maj=38.4km s-min=12.9km
az=75.0
*NNC **26** 07:12:05.3±4.6,48°.73N×78°.80E,h0km,mb2.7,mpv2.3,*
Error ellipse: s-maj=72.7km s-min=23.7km az=68.0,
Suspected Mining explosion.
ISC 26 07:11:59.4±1.7,48°.55N±0°.07×77°.7E±0°.1,h0km,n8,
σ1s72/10,6D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.15**	**14**	Pg		**Pb**	**07 12 38.0**	**-1.2**
	0.4nm,0.3s,baz=198,slow=16,SNR=38							
KURBB				Lg		Lg	07 13 05.3	
	0.3nm,0.3s,baz=198,slow=28,SNR=14							
KURBB	**Kurchatov Arra**	**2.15**	**14**	⇓Pn		**Pn**	**07 12 37.2**	**+0.7**
	5.1nm,0.5s							
KURBB				⇓Sn		**Sn**	**07 13 05.0**	**+1.2**
	16nm,0.7s							
KURK	**Kurchatov**	**2.25**	**15**	⇓Pn		**Pn**	**07 12 38.6**	**+0.7**
	1.6nm,0.6s							
KURK				⇓Sn		**Sn**	**07 13 07.9**	**+1.4**
	3.6nm,0.5s							
MK31	**Makanchi Array**	**3.57**	**118**	⇓Pg		**Pb**	**07 13 01.5**	**-1.8**
	0.1nm,0.3s,baz=320,slow=16,SNR=3.9							
MK31				⇓Lg		Lg	07 13 45.8	
	1.2nm,0.5s,baz=313,slow=28,SNR=15							
MKAR	**Makanchi Array**	**3.57**	**118**	Pn		**Pn**	**07 12 58.0**	**+2.0**
	0.1nm,0.3s,baz=307,slow=13,SNR=6.3							
MKAR				Lg		Lg	07 13 48.5	
	0.7nm,0.3s,baz=314,slow=22,SNR=14							
	0.6nm,0.7s							
BVAR	**Borovoye Array**	**6.45**	**317**	Sn		**Sn**	**07 14 49.2**	**-0.6**
	baz=129,slow=21,SNR=3.7							
BVAR				Lg		Lg	07 15 23.4	
	baz=131,slow=31,SNR=2.8							
ZALV	**Zalesovo Beam**	**7.02**	**37**	Pn		**Pn**	**07 13 45.0**	**+1.7**
	0.1nm,0.3s,baz=216,slow=14,SNR=2.1							
ZALV				Sn		**Sn**	**07 15 01.6**	**-2.1**
	0.1nm,0.3s,baz=229,slow=24,SNR=4.3							
	0.3nm,0.3s							
I31KZ	**AKTYUBINSK INF**	**12.92**	**286**	I		I	08 27 50.0	
	baz=90,slow=323,SNR=0.4							

*IDC **26** 07:22:54.6±3.3,9°.37N×127°.17E,h0km,mb3.5/3,*
mbtmp3.5/3,Error ellipse: s-maj=241.0km s-min=28.1km
az=66.0
*MAN **26** 07:23:01.0,9°.10N×126°.53E,h10km,MS3.4*
ISC 26 07:22:55.8±1.9,9°.21N±0°.04×126°.75E±0°.07,h5km±11km,
n15,σ1s79/26,mb3.5/3,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSSP	**Tandag City**	**0.56**	**253**	*i* P		**Pn**	**07 23 09.5**	**-0.9**
TSSP				*e*S		**Sg**	**07 23 15.6**	**+1.7**
BIPH	**Bislig**	**1.08**	**201**	*e*P		**Pn**	**07 23 17.9**	**+0.3**
BIPH				*i* S		**Sg**	**07 23 29.7**	**-1.0**
BUTP	**Butuan**	**1.14**	**258**	*i* P		**Pn**	**07 23 18.4**	**+0.1**
BUTP				*i* S		**Sg**	**07 23 32.4**	**+0.1**
SCPH	**Surigao**	**1.36**	**295**	*i* P		**Pg**	**07 23 22.9**	**+0.9**
SCPH				*i* S		**Sn**	**07 23 41.0**	**+1.1**
BUKP	**Musuan**	**2.12**	**232**	*e*P		**Pb**	**07 23 35.0**	**+0.2**
BUKP				*i* S		**Sn**	**07 23 59.6**	**+0.8**
CGP	**Cagayan de Oro**	**2.16**	**250**	*e*P		**Pn**	**07 23 33.6**	**+1.2**
CGP				*e*S		**Sn**	**07 23 54.7**	**-4.9**
PLP	**Palo**	**2.61**	**318**	*e*P		**Pb**	**07 23 41.6**	**-1.4**
PLP				*e*S		**Sn**	**07 24 10.2**	**-0.5**
KCP	**Kidapawan**	**2.73**	**217**	*e*P		Pn	07 23 33.4	-7.0
KCP				*i* S		**Sn**	**07 24 17.0**	**+3.2**
LLP	**Lapu-Lapu**	**2.95**	**292**	*e*P		**Pb**	**07 23 47.9**	**-1.0**
LLP				*i* S		**Sb**	**07 24 24.6**	**-0.8**
DDMP	**Don Marcelino,**	**3.25**	**198**	*e*P		**Pb**	**07 23 52.0**	**-1.9**
DDMP				*e*S		**Sn**	**07 24 26.9**	**+0.4**
DCPH	**Dipolog City**	**3.41**	**260**	*i* P		**Pn**	**07 23 51.0**	**+1.4**
DCPH				*i* S		**Sn**	**07 24 31.0**	**+0.6**
PAGZ	**Pagadian**	**3.59**	**248**	*i* P		**Pb**	**07 23 56.2**	**-3.6**
PAGZ				*e*S		**Sn**	**07 24 36.7**	**+1.8**
WRA	**Warramunga Arr**	**29.91**	**166**	P		**P**	**07 29 04.6**	**-0.2**
	0.6nm,0.7s,baz=347,slow=8.7,SNR=2.8							
	0.6nm,0.7s							
ASAR	**Alice Springs**	**33.41**	**168**	P		**P**	**07 29 36.0**	**+0.5**
	0.2nm,0.4s,baz=346,slow=8.1,SNR=5.9							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**53.15**	**323**	P		**P**	**07 32 15.2**	**+0.5**
	0.5nm,0.7s,baz=120,slow=8.9,SNR=5.6							
	0.5nm,0.7s							

*SJA **26** 07:32:47.7±0.7,27°.17S×65°.87W,h20km±7km,ML4.1,*
MW4.1

*IDC **26** 07:32:50.8±4.0,27°.14S×65°.89W,h33km±30km,mb3.7/5,*
mbtmp3.8/9,ML3.6/4,MS3.1/2,Error ellipse: s-maj=26.4km
s-min=17.5km az=89.0
*NEIC **26** 07:32:51.9±2.0,27°.13S±0°.07×65°.85W±0°.08,h47km±6km,*
mb4.3/6,Error ellipse: s-maj=10.7km s-min=10.1km
az=109.0
ISC 26 07:32:50.2±1.1,27°.14S±0°.03×65°.80W±0°.05,h30km±8km,
n75,σ1s77/91,mb4.3/9,5C,Tucuman Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AHML	**Horco Molle**	**0.54**	**50**	*e*P		**Pb**	**07 33 00.2**	**-1.1**
AHML				*e*S		**Sb**	**07 33 09.0**	**+0.1**
FSA	**Cafayete**	**1.03**	**351**	*e*P		Pn	07 33 03.2	-5.6
FSA				*e*S		**Sn**	**07 33 13.9**	**-8.4**
TINO	**Tinogasta**	**1.82**	**239**	*e*P		**Pn**	**07 33 19.6**	**0.0**
TINO				*e*S		**Sn**	**07 33 42.4**	**+0.6**
TINO				IAML			07 33 45.0	
	comp=Z,3μm,0.5s							
SLA	**San Lorenzo**	**2.42**	**6**	*e*P		**Pn**	**07 33 28.4**	**+0.6**
SLA				IAML			07 34 54.3	
	comp=Z,714nm,3.0s							
ACLC	**CERRO LA CRUZ**	**2.50**	**204**	*e*P		**Pn**	**07 33 29.4**	**+0.5**
ACLC				*e*S		**Sb**	**07 34 03.0**	**-1.8**
ACLC				IAML			07 34 08.8	
	comp=Z,692nm,0.2s							
VCA	**Vinchina**	**2.66**	**233**	*e*P		**Pn**	**07 33 31.4**	**+0.3**
VCA				*e*S		**Sb**	**07 34 05.2**	**-4.3**
VCA				IAML			07 34 11.4	
	comp=Z,3μm,0.4s							
SALTA		**2.94**	**350**	*e*P		**Pn**	**07 33 38.9**	**+3.6**
SALTA				*i* S		**Sn**	**07 34 13.8**	**+3.9**
SALTA				IAML			07 34 30.2	
	comp=Z,400nm,0.7s							
ACD2	**Maricunga**	**2.99**	**275**	*e*P		**Pn**	**07 33 37.3**	**+1.4**
ACD2				*e*S		**Sn**	**07 34 12.5**	**+1.4**
AC02	**Maricunga**	**2.99**	**275**			**Pn**	**07 33 36.5**	**+0.5**
HJA	**Humahuaca**	**3.93**	**5**	*i* P		**Pn**	**07 33 49.3**	**+0.5**
HJA				*e*S		**Sb**	**07 34 49.0**	**+2.8**
HJA				IAML			07 34 59.6	
	comp=Z,101nm,0.8s							
ACDV	**Cuesta del Vie**	**4.20**	**223**	⇑*e*P		**Pn**	**07 33 53.3**	**+0.9**
ACDV				*e*S		**Sb**	**07 34 50.4**	**-3.4**
ACDV				IAML			07 35 08.4	
	comp=Z,148nm,0.8s							
AC05	**El Transito**	**4.30**	**246**	*e*P		**Pn**	**07 33 54.2**	**+0.5**
AC05				*e*S		**Sn**	**07 34 45.5**	**+2.5**
AC05	**El Transito**	**4.30**	**246**			**Pn**	**07 33 54.3**	**+0.5**
AC05				Sn		**Sn**	**07 34 44.4**	**+1.3**
TCA	**Tanti**	**4.32**	**166**	*e*P		**Pn**	**07 33 54.9**	**+1.0**
TCA				*e*S		**Sb**	**07 34 56.9**	**-0.1**
TCA				IAML			07 35 14.3	
	comp=Z,636nm,0.4s							
AC01	**Pan de Azucar**	**4.41**	**282**	Pn		**Pn**	**07 33 55.1**	**+0.1**
AROD	**Rodeo**	**4.42**	**226**	*e*P		**Pn**	**07 33 57.0**	**+1.4**
ACCO	**Cerro Coronel**	**4.48**	**219**	*e*P		**Pn**	**07 33 57.1**	**+0.8**
ACCO				*e*S		**Sb**	**07 35 04.9**	**+3.0**
ACCO				IAML			07 35 14.8	
	comp=Z,92nm,0.7s							
LCO	**Las Campanas**	**4.72**	**246**			**Pn**	**07 33 59.5**	**-0.1**
CO01	**Juntas del Tor**	**4.72**	**232**	*e*P		**Pn**	**07 34 01.3**	**+1.7**
CO01				*e*S		**Sb**	**07 35 08.9**	**+0.1**
CO01				IAML			07 35 18.5	
	comp=Z,77nm,0.9s							
CO01	**Juntas del Tor**	**4.72**	**232**			**Pn**	**07 34 01.6**	**+2.0**
RTLL	**Cerro Villicun**	**4.79**	**209**	*e*P		**Pn**	**07 34 01.3**	**+1.0**
RTLL				*e*S		**Sb**	**07 35 07.9**	**-2.7**
RTLL				IAML			07 35 18.8	
	comp=Z,298nm,0.7s							
AC04	**Llanos de Chal**	**4.80**	**256**	*e*P		**Pn**	**07 34 00.3**	**-0.1**
PB14	**IPOC Station P**	**4.84**	**300**			**Pn**	**07 34 00.8**	**-0.6**
CFA	**Coronel Fontan**	**4.94**	**205**	Pn		**Pn**	**07 34 02.8**	**+0.5**
	comp=Z,5.7nm,0.3s,baz=48,slow=17,SNR=141							
CFA				Sn		**Sn**	**07 35 00.4**	**+1.9**
	comp=Z,8.4nm,0.3s,baz=332,slow=20,SNR=6.8							
CFA				Lg	Lg		07 35 20.0	
	comp=Z,12nm,0.3s,baz=350,slow=16,SNR=7.0							
	comp=Z,16nm,0.3s							
CFA	**Coronel Fontan**	**4.94**	**205**	*e*P		**Pn**	**07 34 02.9**	**+0.6**
CFA				*e*S		**Sn**	**07 34 55.4**	**-3.0**
CFA				IAML			07 35 01.1	
	comp=Z,201nm,0.8s							
ZON	**Zonda**	**5.06**	**209**	*e*P		**Pn**	**07 34 05.5**	**+1.4**
ZON				*e*S		**Sb**	**07 35 23.2**	**+4.7**
ZON				IAML			07 35 27.8	
	comp=Z,90nm,0.8s							
ZON	**Zonda**	**5.06**	**209**			**Pn**	**07 34 05.6**	**+1.4**
GO04	**Tololo Observa**	**5.33**	**234**	*e*P		Pn	07 33 55.6	-12
GO04				IAML			07 35 39.0	
	comp=Z,94nm,0.9s							
GO04	**Tololo Observa**	**5.33**	**234**			**Pn**	**07 34 08.0**	**0.0**
CO03	**El Pedregal**	**5.65**	**228**			**Pn**	**07 34 12.9**	**+0.7**
PB05	**IPOC Station P**	**5.84**	**316**			**Pn**	**07 34 14.3**	**-0.6**
CO02	**Combarbal**	**6.09**	**227**			**Pn**	**07 34 18.3**	**0.0**
PB09	**IPOC Station P**	**6.17**	**329**	Pn		**Pn**	**07 34 19.2**	**-0.3**
PB03	**IPOC Station P**	**6.21**	**324**			**Pn**	**07 34 19.7**	**-0.3**
CO04	**Los Peladeros**	**6.65**	**221**			**Pn**	**07 34 25.4**	**-0.8**
VA03	**San Esteban**	**6.96**	**215**			**Pn**	**07 34 31.1**	**+0.9**
MT08	**Bocatoma Ro**	**7.27**	**209**			**Pn**	**07 34 36.8**	**+2.2**
MT05	**Renca**	**7.56**	**213**			**Pn**	**07 34 38.9**	**+0.5**
PB08	**IPOC Station P**	**7.61**	**335**			**Pn**	**07 34 40.5**	**+1.1**
CPUP	**Villa Florida**	**7.62**	**86**	Pn		**Pn**	**07 34 40.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=260,slow=14,SNR=10.0							
CPUP				Lg		Lg	07 36 54.0	
	comp=Z,3.3nm,0.3s,baz=182,slow=20,SNR=4.7							
CPUP				LR		LR	07 38 03.3	
	comp=Z,114nm,18.2s,baz=252,slow=41							
	comp=Z,1.9nm,0.7s							
CPUP	**Villa Florida**	**7.62**	**86**	Pn		**Pn**	**07 34 40.3**	**+1.2**
MT13	**San Alfonso**	**7.64**	**209**			**Pn**	**07 34 41.2**	**+1.6**
LPAZ	**La Paz**	**11.01**	**348**	Pn		**Pn**	**07 35 26.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=169,slow=8.3,SNR=7.1							
LPAZ				LR		LR	07 40 38.9	
	comp=Z,93nm,20.7s,baz=159,slow=43							
	comp=Z,1.4nm,0.7s							
LPAZ	**La Paz**	**11.01**	**348**	Pn		**Pn**	**07 35 27.1**	**+0.8**
CPSB	**Cacapava Do Su**	**11.32**	**110**	Pn		**Pn**	**07 35 30.3**	**+0.4**
TRQA	**Tornquist**	**11.35**	**165**	Pn		**Pn**	**07 35 29.7**	**-0.6**
SIV	**San Ignacio**	**11.93**	**23**	Pn		**Pn**	**07 35 40.1**	**+1.8**
	baz=187,slow=12,SNR=9.5							
	comp=Z,0.7nm,0.4s							
ITAB	**Concordia**	**12.17**	**94**	Pn		**Pn**	**07 35 43.0**	**+1.5**
CZSB	**Cruzeiro do Su**	**20.38**	**340**	P		**P**	**07 37 23.9**	**-0.7**
CZSB				IAmb		IAmb	07 37 34.3	
	comp=Z,7.4nm,0.7s							
GO08	**Villa O'Higgin**	**21.93**	**192**	P		**P**	**07 37 40.1**	**-1.0**
GO08				IAmb		IAmb	07 37 48.0	
	comp=Z,17nm,1.1s							
BELA	**Belgrano 2**	**52.80**	**172**	P		**P**	**07 42 02.9**	**+0.7**
BELA				IAmb		IAmb	07 42 04.0	
	comp=Z,2.4nm,0.8s							
VNA1	**Neumayer--Stat**	**54.04**	**160**	⇑P		**P**	**07 42 12.5**	**+1.2**
	comp=Z,6.5nm,0.8s							
VNA2	**Neumayer--Watz**	**54.41**	**160**	⇑P		**P**	**07 42 14.9**	**+0.9**
	comp=Z,7.4nm,0.6s,baz=290,slow=7.0							
SNAA	**Sanae**	**56.04**	**160**	⇑P		**P**	**07 42 26.6**	**+0.6**
SNAA	**Sanae**	**56.04**	**160**	P		**P**	**07 42 26.4**	**+0.5**
	comp=Z,6.2nm,0.9s,baz=293,slow=5.8,SNR=11							
	comp=Z,6.2nm,0.9s							
SNAA	**Sanae**	**56.04**	**160**	P		**P**	**07 42 25.4**	**-0.5**
TROLL	**Troll, Antarti**	**57.76**	**160**	⇑P		**P**	**07 42 39.1**	**+0.9**
	comp=Z,445nm,0.8s							
QSPA	**South Pole Qui**	**63.08**	**180**	P		**P**	**07 43 14.4**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=165,slow=3.3,SNR=7.4							
	comp=Z,1.6nm,1.0s							
QSPA	**South Pole Qui**	**63.08**	**180**	P		**P**	**07 43 13.6**	**-1.0**
QSPA				IAmb		IAmb	07 43 16.4	
	comp=Z,5.5nm,1.4s							
TXAR	**Lajitas Array**	**66.85**	**324**	P		**P**	**07 43 40.3**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=144,slow=6.2,SNR=3.0							
	comp=Z,0.3nm,0.8s							
MAW	**Mawson**	**78.13**	**162**	P		**P**	**07 44 46.7**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=243,slow=11,SNR=4.6							
	comp=Z,1.6nm,0.8s							
MAW	**Mawson**	**78.13**	**162**	P		**P**	**07 44 46.0**	**0.0**
PDAR	**Pinedale Array**	**80.38**	**329**	P		**P**	**07 44 57.5**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=117,slow=7.6,SNR=5.7							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**80.38**	**329**	P		**P**	**07 44 58.1**	**-0.7**
ASAR	**Alice Springs**	**126.03**	**202**	PKP		**PKPdf**	**07 51 49.1**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=64,slow=1.0,SNR=4.8							
ASAR	**Alice Springs**	**126.03**	**202**			**PKPdf**	**07 51 49.2**	**-0.9**
WRA	**Warramunga Arr**	**129.29**	**205**	PKP		**PKPdf**	**07 51 54.9**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=158,slow=2.1,SNR=3.4							
WRA	**Warramunga Arr**	**129.29**	**205**			**PKPdf**	**07 51 55.8**	**-0.6**
ZALV	**Zalesovo Beam**	**145.58**	**31**	PKPbc		**PKPbc**	**07 52 25.5**	**+0.2**
	comp=Z,6.5nm,0.8s,baz=298,slow=3.2,SNR=23							
ZALV	**Zalesovo Beam**	**145.58**	**31**	PKPbc		**PKPab**	**07 52 25.9**	**+0.3**
KSH2	**Kashi**	**145.75**	**60**	PKPbc		**PKPdf**	**07 52 26.5**	**+0.4**
MKAR	**Makanchi Array**	**148.15**	**43**	PKPbc		**PKPbc**	**07 52 33.0**	**0.0**
	comp=Z,1.9nm,0.8s,baz=321,slow=2.5,SNR=15							
MKAR	**Makanchi Array**	**148.15**	**43**			**PKPdf**	**07 52 30.3**	**+0.7**
HHC	**Hu-ho-hao-te**	**166.15**	**8**	*e*P		**PKPdf**	**07 52 51.5**	**-1.0**
PZH	**PanZhiHua**	**168.85**	**90**	PKP		**PKPdf**	**07 52 51.5**	**-3.4**

*SJA **26** 07:34:56.0±0.7,34°.88S×71°.91W,h66km±4km,ML3.3,*
MW3.6
*GUC **26** 07:34:58.9±0.7,34°.72S×71°.79W,h44km±1km,ML3.4*
ISC 26 07:34:59.6±1.0,34°.74S±0°.03×71°.86W±0°.05,h29km±9km,
n34,σ1s52/58,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BO03	**Pichilemu**	**0.26**	**341**	*e*P		**Pb**	**07 35 06.9**	**+0.4**
BO03				*i* S		**Sb**	**07 35 12.3**	**+1.2**
BO03				IAML			07 35 13.3	
	comp=N,8μm,0.1s							
GO05	**Hualane**	**0.27**	**193**	*e*P		**Pb**	**07 35 07.0**	**+0.3**
GO05				*e*S		**Sn**	**07 35 14.1**	**+1.2**
GO05				IAML			07 35 14.7	
	comp=Z,1μm,0.3s							
GO05	**Hualane**	**0.27**	**193**	*e*P		**Pb**	**07 35 07.0**	**+0.3**
GO05				*i* S		**Sn**	**07 35 13.3**	**+0.4**
GO05				IAML			07 35 14.1	
	comp=E,2μm,0.1s							
BO01	**Tunca**	**0.73**	**61**	*e*P		**Pn**	**07 35 12.3**	**-1.7**
BO01				*e*S		**Sb**	**07 35 21.9**	**-1.5**
BO01				IAML			07 35 22.3	
	comp=Z,1μm,0.5s							
BO01	**Tunca**	**0.73**	**61**	*e*P		**Pn**	**07 35 12.1**	**-1.8**
BO01				*i* S		**Sb**	**07 35 21.9**	**-1.5**
BO02	**Sierra Bellavi**	**0.89**	**93**	*e*P		**Pn**	**07 35 14.6**	**-1.7**
BO02				*e*S		Sn	07 35 14.6	-14
BO02	**Sierra Bellavi**	**0.89**	**93**	*e*P		**Pn**	**07 35 14.5**	**-1.7**
BO02				*i* S		**Sn**	**07 35 26.3**	**-1.8**
MT01	**Popeta**	**1.01**	**30**	*e*P		**Pn**	**07 35 15.9**	**-1.9**
MT01				*e*S		**Sb**	**07 35 31.4**	**0.0**
MT01				IAML			07 35 32.9	
	comp=Z,732nm,0.3s							
MT01	**Popeta**	**1.01**	**30**	*e*P		**Pn**	**07 35 15.7**	**-2.1**
MT01				*i* S		**Sn**	**07 35 29.4**	**-1.6**
MT01				IAML			07 35 32.9	
	comp=N,894nm,0.1s							
ML02	**Panimavida**	**1.08**	**161**	*e*P		Pn	07 35 02.9	-16
ML02				*e*S		**Sn**	**07 35 29.2**	**-3.6**
ML02				IAML			07 35 29.6	
	comp=Z,420nm,0.4s							
ML02	**Panimavida**	**1.08**	**161**	*e*P		**Pn**	**07 35 18.3**	**-0.5**
ML02				*i* S		**Sn**	**07 35 32.6**	**-0.2**
ML02				IAML			07 35 36.6	
	comp=E,956nm,0.2s							
MT09	**Talagante**	**1.20**	**37**	*e*P		**Pn**	**07 35 19.4**	**-1.3**
MT09				*i* S		**Sn**	**07 35 34.6**	**-1.5**
MT09				IAML			07 35 38.1	
	comp=N,2μm,0.3s							
BO04	**La Punta**	**1.28**	**54**	*e*P		**Pn**	**07 35 20.2**	**-1.4**
BO04				*i* S		**Sn**	**07 35 36.6**	**-1.1**
BO04				IAML			07 35 38.4	
	comp=E,2μm,0.3s							
MT12	**Pirque**	**1.48**	**47**	*e*P		**Pn**	**07 35 23.1**	**-1.2**
MT12				*i* S		**Sn**	**07 35 42.5**	**-0.3**
MT12				IAML			07 35 45.7	
	comp=N,2μm,0.3s							
MT02	**Curacav**	**1.60**	**22**	*e*P		**Pn**	**07 35 24.5**	**-1.4**
MT02				*e*S		**Sn**	**07 35 44.4**	**-1.1**
MT02				IAML			07 35 52.8	
	comp=Z,236nm,0.5s							
MT02	**Curacav**	**1.60**	**22**	*e*P		**Pn**	**07 35 24.3**	**-1.6**
MT02				*i* S		**Sn**	**07 35 44.2**	**-1.3**
MT15	**Las Vizcachas**	**1.60**	**45**	*e*P		**Pn**	**07 35 24.9**	**-1.1**
MT15				*i*

comp=Z,331nm,22.0s,baz=83,slow=32
6.5nm,1.1s
H10N3 ASCENSION HYDR 14.38 126 T T 08 09 02.7
baz=305,slow=75,SNR=39
H10N2 ASCENSION HYDR 14.38 126 T T 08 08 56.7
baz=305,slow=75,SNR=40
H10N1 ASCENSION HYDR 14.40 126 T T 08 09 04.2
baz=305,slow=75,SNR=47
H10S3 ASCENSION HYDR 14.92 130 T T 08 09 38.5
baz=307,slow=74,SNR=16
H10S2 ASCENSION HYDR 14.94 130 T T 08 09 39.8
baz=273,slow=74,SNR=13
DBIC Dimbokro 22.10 74 P **P** **07 55 45.3 -0.1**
4.8nm,0.8s,baz=276,slow=11,SNR=5.6
DBIC LR LR 08 02 23.9
comp=Z,388nm,21.8s,baz=260,slow=32
4.8nm,0.8s
MDP Montagnes des 26.79 280 LR LR 08 05 31.0
comp=Z,50nm,21.6s,baz=73,slow=33
BDFB Brasilia 26.96 232 LR LR 08 05 56.0
comp=Z,484nm,21.9s,baz=37,slow=34
TORD Torodi Ar. Bea 30.28 65 P **P** **07 57 00.2 -1.1**
1.7nm,0.9s,baz=256,slow=8.2,SNR=5.7
1.7nm,0.9s
MDT Midelt 37.90 30 LR LR 08 13 00.6
comp=Z,201nm,20.3s,baz=248,slow=35
SIV San Ignacio 38.20 243 LR LR 08 13 21.6
comp=Z,395nm,18.8s,baz=112,slow=35
CPUP Villa Florida 40.26 226 LR LR 08 14 45.7
comp=Z,197nm,19.0s,baz=61,slow=36
ESDC Sonseca Array 43.82 25 P **P** **07 58 56.5 +0.5**
0.8nm,1.0s,baz=224,slow=8.5,SNR=5.1
ESDC LR LR 08 14 29.4
comp=Z,48nm,21.7s,baz=246,slow=32
0.8nm,1.0s
LPAZ La Paz 44.67 246 P **P** **07 59 04.4 +0.5**
1.2nm,0.9s,baz=48,slow=7.4,SNR=4.6
LPAZ LR LR 08 17 18.1
comp=Z,418nm,19.0s,baz=54,slow=36
1.2nm,0.9s
SDV Santo Domingo 45.00 282 LR LR 08 17 37.3
comp=Z,50nm,19.0s,baz=80,slow=36
KEST Kesra 48.04 39 LR LR 08 19 29.2
comp=Z,149nm,20.1s,baz=216,slow=36
ROSC El Rosal 48.25 276 LR LR 08 18 37.3
comp=Z,178nm,19.0s,baz=75,slow=35
VAE Valguarnera 52.35 41 LR LR 08 23 10.0
comp=Z,382nm,19.5s,baz=326,slow=37
ATAH Atahualpa 52.65 261 LR LR 08 21 38.8
comp=Z,116nm,20.6s,baz=61,slow=35
EKA Eskdalemuir Ar 57.65 15 LR LR 08 21 09.3
comp=Z,62nm,20.0s,baz=190,slow=32
GERES GERESS Array B 58.98 30 P **P** **08 00 49.8 +0.1**
0.7nm,0.8s,baz=231,slow=6.4,SNR=7.6
0.7nm,0.8s
SCHQ Schefferville 63.38 335 LR LR 08 26 37.2
comp=Z,32nm,18.1s,baz=152,slow=34
MLR Muntele Rosu 63.91 38 LR LR 08 30 13.5
comp=Z,102nm,20.5s,baz=230,slow=37
BORG Borgarnes 64.06 2 LR LR 08 24 06.8
comp=Z,17nm,18.5s,baz=318,slow=31
NOA NORSAR Array B 66.65 19 LR LR 08 28 12.8
comp=Z,22nm,19.1s,baz=235,slow=34
BRTR Keskin Array B 66.75 47 P **P** **08 01 41.8 +0.1**
1.0nm,0.7s,baz=321,slow=1.6,SNR=4.7
1.0nm,0.7s
HFS Hagfors 66.81 20 LR LR 08 26 57.7
comp=Z,44nm,21.5s,baz=240,slow=32
AKASG Malin Array Be 68.31 34 P **P** **08 01 50.5 -0.6**
3.2nm,0.8s,baz=245,slow=6.0,SNR=7.4
3.2nm,0.8s
CMIG Matias Romero 69.47 288 LR LR 08 31 18.5
comp=Z,25nm,21.7s,baz=56,slow=35
FINES FINESS Array B 72.31 24 P **P** **08 02 16.9 +1.6**
1.8nm,0.9s,baz=264,slow=12,SNR=5.9
FINES LR LR 08 32 21.3
comp=Z,34nm,19.3s,baz=222,slow=34
1.8nm,0.9s
TXAR Lajitas Array 78.77 300 P **P** **08 02 52.3 -0.9**
0.5nm,0.9s,baz=122,slow=9.5,SNR=4.5
0.5nm,0.9s
PDAR Pinedale Array 84.69 313 P **P** **08 03 24.1 -0.3**
0.3nm,0.6s,baz=96,slow=9.1,SNR=3.5
0.3nm,0.6s
QSPA South Pole Qui 90.71 180 P **P** **08 03 53.6 +0.9**
3.0nm,1.0s,baz=224,slow=2.9,SNR=4.1
3.0nm,1.0s
ASAR Alice Springs 150.05 141 PKPbc **PKPbc** **08 10 41.0 -0.6**
1.8nm,0.7s,baz=206,slow=2.0,SNR=22

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*IDC **26** 08:08:36.1±5.3, 28°.23S×177°.29W, h56^{km}±36^{km}, mb3.4/4, mbtmp3.6/4, Error ellipse: s-maj=46.8km s-min=33.2km az=49.0*

ISC 26 08:08:35.3±2.2, 28°.2S±0°.2×177°.3W±0°.3, h50^{km}, n7, σ0^{s}81/6, mb3.8/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island 1.23 208**			P	**Pn**	**08 08 56.6**	**+0.5**
	3μm,0.2s,baz=82,slow=5.4,SNR=63						
RAO				S	**Sn**	**08 09 11.1**	**-0.5**
	3μm,0.3s,baz=78,slow=23,SNR=24						
URZ	**Urewera 11.11 204**			S	Sn	08 13 01.5	-13
	1.9nm,0.3s,baz=120,slow=17,SNR=5.6						
STKA	**Stephens Creek 35.67 254**			P	**P**	**08 15 29.6**	**+0.8**
	0.5nm,0.3s,baz=96,slow=9.2,SNR=1.6						
	0.5nm,0.3s						
ASAR	**Alice Springs 43.93 264**			P	**P**	**08 16 37.1**	**-0.4**
	0.2nm,0.5s,baz=96,slow=7.2,SNR=6.7						
	0.2nm,0.5s						
WRA	**Warramunga Arr 44.72 270**			P	**P**	**08 16 43.1**	**-0.8**
	0.8nm,0.6s,baz=108,slow=7.6,SNR=5.9						
	0.8nm,0.6s						
QSPA	**South Pole Qui 61.93 180**			P	**P**	**08 18 49.5**	**-0.2**
	0.8nm,0.8s,baz=303,slow=0.4,SNR=7.1						
	0.8nm,0.8s						
FINES	**FINESS Array B 143.26 341**			PKP	PKPbc	08 28 00.8	+0.4
	0.4nm,0.3s,baz=62,slow=3.3,SNR=6.1						

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*IDC **26** 08:16:59.2±0.6, 22°.66S×12°.78W, h0^{km}, mb4.2/13, mbtmp4.2/13, Error ellipse: s-maj=19.4km s-min=16.9km az=108.0*

*NEIC **26** 08:17:01.1±0.9, 22°.7S±0°.1×12°.6W±0°.1, h10^{km}±1^{km}, mb4.7/29, Error ellipse: s-maj=19.2km s-min=16.5km az=126.0*

*GCMT **26** 08:17:02.1±0.2, 22°.79S±0°.02×12°.86W±0°.01, h12^{km}, MW5.0/139, Moment Tensor Solution. s67,c81; s139,c218; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.28±.08; $M_{\theta\theta}$0.18±.09; $M_{\phi\phi}$=4.09±.08; $M_{r\theta}$=1.65±.30; $M_{\theta\phi}$0.12±.08; $M_{\phi r}$=1.24±.26; Best double couple: M_{o}=4.63000×10^{16} NP1:ϕ_1=198.00000°, δ39.00000°, λ=-62.00000°. NP2:ϕ_2=343.00000°, δ56.00000°, λ=-111.00000°. Principal axes: T 4.2730, Plg9.0000°, Azm88.0000°; N 0.7050, Plg17.0000°, Azm356.0000°; P -4.9870, Plg71.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 08:17:00.5±0.4, 22°.65S±0°.09×12°.66W±0°.08, h10^{km}, n64, σ0^{s}86/61, mb4.6/25, 2C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR 13.74 352**			T	T	08 34 29.5	
	baz=172,slow=74,SNR=135						
H10S3	**ASCENSION HYDR 13.75 352**			T	T	08 34 34.8	
	baz=48,slow=74,SNR=104						
SJMB	**Sao Joao De Ma 26.95 273**			*eP*	**P**	**08 22 42.8**	**+0.3**
WIN	**Windhoek 27.45 96**			P	**P**	**08 22 46.0**	**-1.1**
WIN				IAmb	IAmb	08 22 51.5	
	comp=Z,24nm,1.1s						
TSUM	**Tsumeb 28.43 89**			P	**P**	**08 22 54.8**	**-1.1**
TSUM				IAmb	IAmb	08 23 04.8	
	comp=Z,8.4nm,1.1s						
JANB	**Januaria 30.84 279**			*eP*	**P**	**08 23 17.7**	**+0.6**
PMNB	**Patos De Minas 31.84 271**			*eP*	**P**	**08 23 26.4**	**+0.4**
SDBA	**SAO DESIDERIO 32.32 283**			*eP*	**P**	**08 23 29.8**	**-0.3**
BDFB	**Brasilia 34.06 275**			P	**P**	**08 23 45.0**	**-0.4**
	comp=Z,9.6nm,1.0s,baz=70,slow=6.2,SNR=8.4						
	comp=Z,9.6nm,1.0s						
BDFB	**Brasilia 34.06 275**				**P**	**08 23 45.9**	**+0.5**
BOSA	**Boshof 34.60 108**			P	**P**	**08 23 50.5**	**+0.5**
	comp=Z,7.1nm,1.1s,baz=322,slow=5.4,SNR=3.7						
	comp=Z,7.1nm,1.1s						
BOSA	**Boshof 34.60 108**			P	**P**	**08 23 49.3**	**-0.7**
BOSA				IAmb	IAmb	08 23 53.4	
	comp=Z,13nm,1.1s						
SMTB	**Santa Maria do 36.19 287**			*eP*	**P**	**08 24 03.9**	**+0.2**
TORD	**Torodi Ar. Bea 38.26 23**			P	**P**	**08 24 22.1**	**+1.0**
	comp=Z,4.7nm,0.8s,baz=200,slow=8.9,SNR=14						
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea 38.26 23**			P	**P**	**08 24 20.9**	**-0.2**
SNDB	**Serra Nova Dou 38.27 280**			*eP*	**P**	**08 24 20.8**	**-0.6**
SJPY	**San Joaquin 39.69 258**			*eP*	P	08 24 28.1	-5.1
AQDB	**Aquidauana 39.99 265**				**P**	**08 24 35.9**	**+0.2**
AQDB				IAmb	IAmb	08 24 38.4	
	comp=Z,11nm,1.0s						
CPUP	**Villa Florida 40.67 255**			P	**P**	**08 24 39.9**	**-1.3**
	comp=Z,2.6nm,0.9s,baz=100,slow=9.3,SNR=6.4						
	comp=Z,2.6nm,0.9s						
CPUP	**Villa Florida 40.67 255**			P	**P**	**08 24 40.4**	**-0.9**
SALV	**Santo Antonio 41.06 272**			*eP*	**P**	**08 24 43.8**	**-0.8**
COIM	**Forte Coimbra 42.02 265**			*eP*	**P**	**08 24 50.7**	**-1.8**
CLDB	**Colider 42.78 279**			*eP*	**P**	**08 24 59.0**	**+0.3**
ORCD	**Orcadas 44.10 202**			P	**P**	**08 25 08.2**	**-0.5**
PTLB	**Pontes e Lacer 44.37 271**				**P**	**08 25 11.8**	**+0.4**
PTLB				IAmb	IAmb	08 25 14.9	
	comp=Z,7.6nm,1.0s						
PTLB	**Pontes e Lacer 44.37 271**			*eP*	**P**	**08 25 10.3**	**-1.2**
TRQA	**Tornquist 44.73 238**			P	**P**	**08 25 14.0**	**-0.2**
BBSD	**Serra de San D 45.26 268**			*eP*	**P**	**08 25 17.1**	**-1.5**
ITTB	**Itaituba 45.42 287**			*eP*	**P**	**08 25 20.6**	**+0.7**
VILB	**Vilhena 46.11 274**			P	**P**	**08 25 26.2**	**+0.9**
VILB				IAmb	IAmb	08 25 29.2	
	comp=Z,11nm,1.1s						
MBAR	**Mbarara 47.53 69**			P	**P**	**08 25 35.3**	**-1.3**
MBAR				IAmb	IAmb	08 25 49.3	
	comp=Z,10nm,1.1s						
VNA1	**Neumayer--Stat 48.09 178**			P	**P**	**08 25 41.1**	**+1.1**
	comp=Z,3.2nm,0.7s						
VNA2	**Neumayer--Watz 48.39 178**			⇑P	**P**	**08 25 43.4**	**+1.1**
	comp=Z,9.8nm,0.7s,baz=347,slow=8.1						
SNAA	**Sanae 49.37 176**			⇑P	**P**	**08 25 52.3**	**+2.4**
	comp=Z,74nm,0.7s						
SNAA	**Sanae 49.37 176**			P	**P**	**08 25 50.2**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=296,slow=9.0,SNR=7.6						
	comp=Z,2.7nm,0.7s						
SNAA	**Sanae 49.37 176**				**P**	**08 25 50.3**	**+0.3**
CO01	**Juntas del Tor 51.55 249**			P	**P**	**08 26 07.8**	**+0.5**
LPAZ	**La Paz 52.44 266**			P	**P**	**08 26 12.7**	**-1.8**
	comp=Z,1.8nm,0.9s,baz=87,slow=2.4,SNR=5.1						
	comp=Z,1.8nm,0.9s						
LPAZ	**La Paz 52.44 266**				**P**	**08 26 14.3**	**-0.1**
BOAV	**Boa Vista 52.89 292**				**P**	**08 26 17.7**	**+0.6**
BOAV				IAmb	IAmb	08 26 20.3	
	comp=Z,11nm,1.1s						
BOAV	**Boa Vista 52.89 292**			*eP*	**P**	**08 26 17.7**	**+0.6**
PSGCX	**Pisagua 53.41 262**			P	**P**	**08 26 20.2**	**-0.8**
GO08	**Villa O'Higgin 53.55 226**			P	**P**	**08 26 22.1**	**+0.6**
GO08				IAmb	IAmb	08 26 24.3	
	comp=Z,6.2nm,1.1s						
BELA	**Belgrano 2 56.27 185**			P	**P**	**08 26 40.9**	**+0.1**
BELA				IAmb	IAmb	08 26 41.6	
	comp=Z,6.2nm,0.8s						
CZSB	**Cruzeiro do Su 59.45 274**				**P**	**08 27 03.4**	**-0.7**
CZSB				IAmb	IAmb	08 27 08.8	
	comp=Z,9.3nm,1.1s						
CZSB	**Cruzeiro do Su 59.45 274**			*eP*	**P**	**08 27 03.1**	**-0.9**
ESDC	**Sonseca Array 62.53 8**			P	**P**	**08 27 25.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=179,slow=7.3,SNR=6.3						
	comp=Z,0.9nm,0.8s						
ESDC	**Sonseca Array 62.53 8**			P	**P**	**08 27 25.0**	**+0.6**
ESDC				IAmb	IAmb	08 27 33.3	
	comp=Z,3.5nm,1.1s						
MAW	**Mawson 63.76 156**			P	**P**	**08 27 33.0**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=281,slow=7.7,SNR=12						
	comp=Z,5.4nm,0.8s						
MAW	**Mawson 63.76 156**				**P**	**08 27 32.3**	**0.0**
ROSC	**El Rosal 66.11 286**			P	**P**	**08 27 49.6**	**+0.7**
	comp=Z,6.6nm,0.8s,baz=91,slow=12,SNR=4.5						
	comp=Z,6.6nm,0.8s						
ROSC	**El Rosal 66.11 286**			P	**P**	**08 27 48.5**	**-0.5**
QSPA	**South Pole Qui 67.56 180**			P	**P**	**08 27 57.7**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=234,slow=2.2,SNR=16						
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui 67.56 180**			P	**P**	**08 27 57.6**	**+0.5**
ARSA	**Arzberg 74.07 20**			P	**P**	**08 28 37.0**	**+0.3**
UCC	**Uccle 74.65 11**			P	**P**	**08 28 40.2**	**+0.3**
GERES	**GERESS Array B 74.97 18**			P	**P**	**08 28 41.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=192,slow=4.9,SNR=4.2						
	comp=Z,0.5nm,0.8s						
BRTR	**Keskin Array B 75.61 35**			P	**P**	**08 28 46.4**	**+0.5**
	comp=Z,2.5nm,1.1s,baz=180,slow=3.6,SNR=8.7						
	comp=Z,2.5nm,1.1s						
BR131	**Keskin Array S 75.61 35**			P	**P**	**08 28 45.6**	**-0.3**
GAZ	**Gaziantep 75.81 39**			P	**P**	**08 28 47.0**	**+0.1**
GAZ				IAmb	IAmb	08 29 05.0	
	comp=Z,8.9nm,1.1s						
FINES	**FINESS Array B 89.40 18**			P	**P**	**08 29 58.6**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=236,slow=6.5,SNR=4.2						
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B 89.40 18**			P	**P**	**08 29 57.5**	**+0.5**
ASAR	**Alice Springs 123.64 143**			PKP	**PKPdf**	**08 35 58.3**	**-0.9**
	comp=Z,0.7nm,1.1s,baz=204,slow=2.0,SNR=4.6						
ASAR	**Alice Springs 123.64 143**				**PKPdf**	**08 35 58.1**	**-1.2**

IDC 26 08:25:24.4±16.0, 24°.30S×179°.57E, h650^{km}±217^{km}, mb3.1/5, mbtmp4.1/5, Error ellipse: s-maj=79.1km s-min=35.0km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower 31.09 271**			P	P	08 30 53.2	+0.2
	5.7nm,0.4s,baz=94,slow=10.0,SNR=20						
	5.7nm,0.4s						
ASAR	**Alice Springs 41.58 261**			P	P	08 32 18.9	+0.3
	0.6nm,0.5s,baz=98,slow=7.5,SNR=19						
	0.6nm,0.5s						
WRA	**Warramunga Arr 41.99 267**			P	P	08 32 21.6	-0.1
	2.0nm,0.5s,baz=98,slow=8.3,SNR=40						
	2.0nm,0.5s						
QSPA	**South Pole Qui 65.78 180**			P	P	08 35 07.3	0.0
	1.2nm,0.6s,baz=72,slow=3.2,SNR=14						
	1.2nm,0.6s						
TXAR	**Lajitas Array 90.97 58**			P	P	08 37 21.9	+0.3
	0.3nm,0.6s,baz=214,slow=5.6,SNR=4.5						
	0.3nm,0.6s						

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*IDC **26** 08:26:53.3±0.5, 22°.63S×12°.71W, h0^{km}, mb4.4/15, mbtmp4.4/15, MS4.4/50, Error ellipse: s-maj=17.7km s-min=15.3km az=119.0*

*GCMT **26** 08:26:55.8±0.2, 22°.80S±0°.02×12°.94W±0°.01, h12^{km}, MW5.1/137, Moment Tensor Solution. s52,c57; s137,c218; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=5.02±.20; $M_{\theta\theta}$0.04±.10; $M_{\phi\phi}$=4.98±.14; $M_{r\theta}$=2.32±.40; $M_{\theta\phi}$-0.39±.07; $M_{\phi r}$0.46±.30; Best double couple: M_{o}=5.48600×10^{16} NP1:ϕ_1=336.00000°, δ47.00000°, λ=-120.00000°. NP2:ϕ_2=196.00000°, δ51.00000°, λ=-62.00000°. Principal axes: T 5.0200, Plg2.0000°, Azm266.0000°; N 0.9330, Plg21.0000°, Azm357.0000°; P -5.9520, Plg68.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **26** 08:26:55.8±1.1, 22°.7S±0°.1×12°.6W±0°.1, h10^{km}±1^{km}, mb4.9/62 Error ellipse: s-maj=18.6km s-min=16.5km az=149.0*

*GFZ **26** 08:26:55.7±0.3, 23°.5S±6°.1×1°.3W±°., h10^{km}, M4.7/12, mb4.7/12*

ISC 26 08:26:54.9±0.4, 22°.65S±0°.08×12°.64W±0°.07, h9^{km}, n185, σ0^{s}97/144, mb4.8/55, MS4.4/51, 4C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR 13.74 352**			T	T	08 44 30.9	
	baz=48,slow=74,SNR=144						
H10S3	**ASCENSION HYDR 13.75 352**			T	T	08 44 27.8	
	baz=172,slow=74,SNR=129						
SJMB	**Sao Joao De Ma 26.98 273**			*eP*	**P**	**08 32 37.5**	**+0.3**
NBTA	**Tacaratu-PE 27.84 295**			*eP*	**P**	**08 32 45.1**	**+0.1**
RCBR	**Riachuelo 28.00 303**			LR	LR	08 40 59.8	
	comp=Z,391nm,20.5s,baz=122,slow=30						
ARCA	**Araŭai, MG 28.17 277**			*eP*	**P**	**08 32 47.9**	**0.0**
TSUM	**Tsumeb 28.41 89**			LR	LR	08 41 59.2	
	comp=Z,2μm,21.1s,baz=331,slow=32						
TSUM	**Tsumeb 28.41 89**			P	**P**	**08 32 48.2**	**-2.0**
NBPN	**Ponto Novo - B 28.82 289**			*eP*	**P**	**08 32 54.2**	**+0.5**
DBIC	**Dimbokro 30.11 16**			LR	LR	08 42 13.2	
	comp=Z,665nm,21.1s,baz=200,slow=30						
KOOLE	**Kule 30.23 97**			P	**P**	**08 33 05.5**	**-0.8**
KOOLE				IAmb	IAmb	08 33 09.9	
	comp=Z,16nm,1.1s						
JANB	**Januaria 30.86 279**			*eP*	**P**	**08 33 11.6**	**-0.3**
SUR	**Sutherland 31.10 115**			LR	LR	08 42 53.4	
	comp=Z,849nm,21.7s,baz=274,slow=31						
GRTLG	**Ghanzi 31.38 94**			P	**P**	**08 33 15.6**	**-0.8**
GRTLG				IAmb	IAmb	08 33 19.2	
	comp=Z,9.9nm,1.0s						
PMNB	**Patos De Minas 31.86 271**			*eP*	**P**	**08 33 20.4**	**-0.3**
SDBA	**SAO DESIDERIO 32.34 283**			*eP*	**P**	**08 33 25.4**	**+0.6**
BDFB	**Brasilia 34.08 275**			P	**P**	**08 33 38.8**	**-1.3**
	comp=Z,7.9nm,0.8s,baz=95,slow=7.4,SNR=14						
BDFB				LR	LR	08 44 59.3	
	comp=Z,1μm,21.1s,baz=117,slow=32						
	comp=Z,7.9nm,0.8s						
BDFB	**Brasilia 34.08 275**				**P**	**08 33 40.4**	**+0.3**
BDFB				IAmb	IAmb	08 33 42.6	
	comp=Z,19nm,1.1s						
BOSA	**Boshof 34.58 108**			P	**P**	**08 33 44.5**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=260,slow=8.7,SNR=8.5						
BOSA				LR	LR	08 45 14.5	
	comp=Z,939nm,20.7s,baz=266,slow=32						
	comp=Z,4.2nm,0.7s						
BOSA	**Boshof 34.58 108**			P	**P**	**08 33 44.4**	**0.0**
LDASE	**Londrina, Braz 35.36 261**			*eP*	**P**	**08 33 52.8**	**+1.7**
GRHM	**Grahamstown, E 35.87 116**			P	**P**	**08 33 56.5**	**+1.2**
ITAB	**Concordia 36.00 254**			P	**P**	**08 33 56.3**	**-0.2**
ITAB	**Concordia 36.00 254**			*eP*	**P**	**08 33 57.2**	**+0.8**
SMTB	**Santa Maria do 36.21 287**			*eP*	**P**	**08 33 59.2**	**+0.8**
ARAG	**Araguaiana, MT 37.56 274**			*eP*	**P**	**08 34 11.2**	**+1.3**
TORD	**Torodi Ar. Bea 38.24 23**			P	**P**	**08 34 15.3**	**-0.2**
	comp=Z,7.8nm,1.0s,baz=201,slow=8.5,SNR=26						
TORD				LR	LR	08 48 44.5	
	comp=Z,738nm,18.4s,baz=216,slow=34						
	comp=Z,7.8nm,1.0s						
TORD	**Torodi Ar. Bea 38.24 23**			P	**P**	**08 34 15.9**	**+0.4**
MATP	**Matopo 38.24 95**			LR	LR	08 47 58.4	
	comp=Z,981nm,19.5s,baz=284,slow=33						
SNDB	**Serra Nova Dou 38.30 279**			*eP*	**P**	**08 34 16.2**	**+0.1**
LSZ	**Lusaka 39.20 87**			LR	LR	08 49 08.9	
	comp=Z,2μm,19.6s,baz=261,slow=34						
LSZ	**Lusaka 39.20 87**				**P**	**08 34 24.2**	**+0.4**
PRPB	**Paraupebas 39.40 289**			*eP*	**P**	**08 34 25.6**	**+0.3**
AQDB	**Aquidauana 40.01 265**				**P**	**08 34 30.4**	**0.0**
AQDB				IAmb	IAmb	08 34 33.9	
	comp=Z,16nm,0.9s						
CPUP	**Villa Florida 40.69 255**			P	**P**	**08 34 35.0**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=90,slow=8.4,SNR=7.9						
CPUP				LR	LR	08 48 43.5	
	comp=Z,1μm,19.9s,baz=104,slow=32						
	comp=Z,4.0nm,0.8s						
CPUP	**Villa Florida 40.69 255**				**P**	**08 34 36.3**	**+0.4**
CPUP	**Villa Florida 40.69 255**			P	**P**	**08 34 37.4**	**+1.4**
SALV	**Santo Antonio 41.09 272**			*eP*	**P**	**08 34 40.2**	**+0.9**
MURT	**Porto Murtinho 41.55 262**			*eP*	**P**	**08 34 43.0**	**-0.1**
COIM	**Forte Coimbra 42.05 265**			*eP*	**P**	**08 34 48.3**	**+1.1**
CLDB	**Colider 42.80 279**			*eP*	**P**	**08 34 53.6**	**+0.2**
CLDB	**Colider 42.80 279**			P	**P**	**08 34 53.8**	**+0.4**
ORCD	**Orcadas 44.12 202**			P	**P**	**08 35 02.6**	**-0.7**
PTLB	**Pontes e Lacer 44.39 271**				**P**	**08 35 06.7**	**+0.6**
PTLB				IAmb	IAmb	08 35 09.9	
	comp=Z,8.2nm,0.8s						
PTLB	**Pontes e Lacer 44.39 271**			*eP*	**P**	**08 35 06.9**	**+0.8**
TRQA	**Tornquist 44.75 238**				**P**	**08 35 08.5**	**-0.4**
TRQA				IAmb	IAmb	08 35 11.6	
	comp=Z,28nm,1.1s						
BBSD	**Serra de San D 45.28 268**			*eP*	**P**	**08 35 14.0**	**+0.7**
ITTB	**Itaituba 45.45 287**			*eP*	**P**	**08 35 13.1**	**-1.5**
SIV	**San Ignacio 46.03 269**			LR	LR	08 52 38.8	
	comp=Z,1μm,20.0s,baz=110,slow=34						
VILB	**Vilhena 46.13 274**				**P**	**08 35 21.2**	**+1.1**
VILB				IAmb	IAmb	08 35 28.7	
	comp=Z,20nm,1.0s						
VILB	**Vilhena 46.13 274**			*eP*	**P**	**08 35 20.4**	**+0.3**
MBAR	**Mbarara 47.51 69**			LR	LR	08 54 16.5	
	comp=Z,384nm,18.1s,baz=234,slow=34						
MBAR	**Mbarara 47.51 69**			P	**P**	**08 35 29.5**	**-1.5**
MBAR				IAmb	IAmb	08 35 46.1	
	comp=Z,20nm,1.4s						
VNA1	**Neumayer--Stat 48.09 178**			⇑P	**P**	**08 35 35.6**	**+1.1**
	comp=Z,7.3nm,1.1s						
VNA2	**Neumayer--Watz 48.40 178**			⇑P	**P**	**08 35 37.4**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=353,slow=7.8						
VNA2	**Neumayer--Watz 48.40 178**			P	**P**	**08 35 37.4**	**+0.5**
TAM	**Tamanrasset 48.50 23**			P	**P**	**08 35 38.6**	**+0.2**
SALTA	**49.05 257**			P	**P**	**08 35 43.1**	**-0.1**
SNAA	**Sanae 49.37 176**			⇑P	**P**	**08 35 45.3**	**+0.8**
	comp=Z,198nm,1.1s						
SNAA	**Sanae 49.37 176**			P	**P**	**08 35 44.4**	**0.0**
	comp=Z,7.2nm,1.0s,baz=323,slow=6.9,SNR=5.1						
	comp=Z,7.2nm,1.0s						
SNAA	**Sanae 49.37 176**				**P**	**08 35 44.8**	**+0.3**
SNAA				IAmb	IAmb	08 35 47.1	
	comp=Z,13nm,1.1s						
SNAA	**Sanae 49.37 176**			P	**P**	**08 35 45.1**	**+0.7**
CFA	**Coronel Fontan 49.84 247**			LR	LR	08 54 24.1	
	comp=Z,328nm,20.0s,baz=284,slow=33						
TROLL	**Troll, Antarti 50.14 174**			⇑P	**P**	**08 35 51.4**	**+1.0**
	comp=Z,188nm,0.7s						
ZON	**Zonda 50.22 247**				**P**	**08 35 51.8**	**+0.3**
ZON				IAmb	IAmb	08 36 09.0	
	comp=Z,8.1nm,1.0s						
MACA	**Manacapuru-AM 50.38 285**			P	**P**	**08 35 53.6**	**+0.7**
MACA				IAmb	IAmb	08 36 02.0	
	comp=Z,18nm,1.1s						
MACA	**Manacapuru-AM 50.38 285**			*eP*	**P**	**08 35 52.6**	**-0.3**
AC02	**Maricunga 51.13 253**			P	**P**	**08 35 58.9**	**-0.1**
AC02				IAmb	IAmb	08 36 02.1	

CZSB	Cruzeiro do Su	59.47	274			P		08 36 57.8	-1.0
CZSB	Cruzeiro do Su	59.47	274	*e*P		P		08 36 57.7	-1.1
KEST	Kesra	61.68	20	P		P		08 37 14.7	+1.3
	comp=Z,3.1nm,0.9s,baz=217,slow=7.5,SNR=4.0								
KEST				LR		LR		09 02 08.5	
	comp=Z,391nm,20.2s,baz=212,slow=34								
	comp=Z,3.1nm,0.9s								
KEST	Kesra	61.68	20	P		P		08 37 13.6	+0.2
KEST				IAmb		IAmb		08 37 22.6	
	comp=Z,8.4nm,1.1s								
NNA	Nana	61.81	268	LR		LR		09 04 16.7	
	comp=Z,180nm,18.2s,baz=110,slow=36								
ESDC	Sonseca Array	62.52	8	P		P		08 37 19.9	+1.0
	comp=Z,1.0nm,0.8s,baz=190,slow=7.3,SNR=9.3								
ESDC				LR		LR		09 02 54.4	
	comp=Z,46nm,20.3s,baz=157,slow=35								
	comp=Z,1.0nm,0.8s								
ESDC	Sonseca Array	62.52	8	P		P		08 37 19.7	+0.7
ESDC				IAmb		IAmb		08 37 33.6	
	comp=Z,6.5nm,1.4s								
MAW	Mawson	63.76	156	P		P		08 37 27.1	+0.3
	comp=Z,7.1nm,0.9s,baz=273,slow=9.5,SNR=16								
MAW				LR		LR		08 58 52.4	
	comp=Z,134nm,21.1s,baz=287,slow=30								
	comp=Z,7.1nm,0.9s								
MAW	Mawson	63.76	156			P		08 37 26.8	0.0
MAW	Mawson	63.76	156	P		P		08 37 28.3	+1.5
ATD	Arta Tunnel	64.08	64	LR		LR		09 04 26.4	
	comp=Z,23nm,18.0s,baz=232,slow=35								
SDV	Santo Domingo	64.85	292	LR		LR		09 03 26.9	
	comp=Z,506nm,21.6s,baz=108,slow=34								
SDV	Santo Domingo	64.85	292			P		08 37 34.6	-0.4
ATAH	Atahualpa	64.94	273	LR		LR		09 04 34.8	
	comp=Z,2µm,20.1s,baz=109,slow=35								
VAE	Valguarnera	65.00	24	LR		LR		09 04 49.1	
	comp=Z,413nm,19.0s,baz=154,slow=35								
ROSC	El Rosal	66.14	286	P		P		08 37 43.7	+0.1
	comp=Z,9.9nm,0.8s,baz=9.2,slow=4.2,SNR=10								
ROSC				LR		LR		09 05 40.5	
	comp=Z,941nm,19.1s,baz=115,slow=35								
	comp=Z,9.9nm,0.8s								
ROSC	El Rosal	66.14	286			P		08 37 43.5	-0.1
CEST	Esterri de Car	66.17	11	P		P		08 37 43.7	+0.8
CEST				IAmb		IAmb		08 37 58.2	
	comp=Z,5.9nm,0.9s								
QSPA	South Pole Qui	67.56	180	P		P		08 37 52.7	+1.1
	comp=Z,20nm,1.0s,baz=220,slow=3.8,SNR=29								
QSPA				LR		LR		09 03 34.8	
	comp=Z,152nm,19.4s,baz=210,slow=33								
	comp=Z,20nm,1.0s								
QSPA	South Pole Qui	67.56	180	P		P		08 37 52.1	+0.5
IDI	Anoyia	67.71	33	LR		LR		09 05 29.7	
	comp=Z,75nm,21.9s,baz=260,slow=34								
OTAV	Otavalo	67.86	280			P		08 37 53.6	-1.1
OTAV				IAmb		IAmb		08 37 55.2	
	comp=Z,8.8nm,1.5s								
EIL	Elat	69.28	43	LR		LR		09 06 23.6	
	comp=Z,268nm,19.6s,baz=268,slow=34								
FDMO	Fiordimonte	69.52	20	P		P		08 38 04.5	+0.6
FDMO				IAmb		IAmb		08 38 05.4	
	comp=Z,13nm,1.4s								
XOR	Xorichti	70.20	29	P		P		08 38 09.7	+1.6
DAVOX	Davos/Dischmat	72.04	16	LR		LR		09 09 16.0	
	comp=Z,298nm,18.4s,baz=255,slow=35								
ASF	Jabal al Asfar	72.20	43	LR		LR		09 06 59.3	
	comp=Z,221nm,21.3s,baz=206,slow=33								
FETA	Feichten	72.48	17	*e*P		P		08 38 21.7	-0.2
	comp=Z,5.5nm,1.2s								
DAVA	Damuels	72.51	16	*e*P		P		08 38 22.3	+0.3
	comp=Z,7.1nm,1.0s								
ECH	Echery	72.74	14	P		P		08 38 23.9	+0.6
ECH				IAmb		IAmb		08 38 33.0	
	comp=Z,8.9nm,1.5s								
RAYN	Ar Rayn	72.80	55	P		P		08 38 24.1	-0.1
MYKA	Terra Mystica	72.94	19	*e*P		P		08 38 25.6	+1.1
	comp=Z,1.6nm,0.8s								
WTTA	Wattenberg	72.95	17	*e*P		P		08 38 25.2	+0.5
	comp=Z,5.3nm,1.3s								
KBA	Koelnbreinsper	73.25	18	*e*P		P		08 38 28.1	+1.6
	comp=Z,2.0nm,0.9s								
LESA	Schwarzleotal	73.38	18	*e*P		P		08 38 27.9	+0.7
	comp=Z,2.3nm,0.6s								
SOKA	Soboth	73.40	19	*e*P		P		08 38 28.6	+1.4
	comp=Z,5.0nm,1.3s								
SESA	Seetaler Alpe,	73.65	19	*e*P		P		08 38 29.8	+0.9
	comp=Z,8.4nm,1.5s								
ARSA	Arzberg	74.06	20	*e*P		P		08 38 33.0	+1.9
	comp=Z,1.4nm,0.5s								
ARSA	Arzberg	74.06	20	P		P		08 38 32.6	+1.5
MORH	Mrgy, Hungar	74.17	22	P		P		08 38 33.1	+1.4
RONA	Rosalia, Austr	74.70	20	*e*P		P		08 38 37.1	+2.3
	comp=Z,1.0nm,0.5s								
CONA	Conrad Observa	74.77	19	*e*P		P		08 38 36.8	+1.5
	comp=Z,3.0nm,1.3s								
GEC2	GERESS Array S	74.96	18	P		P		08 38 36.3	0.0
GERES	GERESS Array B	74.96	18	P		P		08 38 36.7	+0.4
	comp=Z,0.7nm,0.8s,baz=193,slow=5.5,SNR=4.1								
	comp=Z,0.7nm,0.8s								
GERES	GERESS Array B	74.96	18	P		P		08 38 36.2	-0.1
BR131	Keskin Array S	75.59	35	P		P		08 38 39.2	-1.1
BR131				IAmb		IAmb		08 38 43.3	
	comp=Z,8.8nm,1.3s								
BRTR	Keskin Array B	75.59	35	P		P		08 38 40.2	-0.1
	comp=Z,1.2nm,0.8s,baz=205,slow=5.5,SNR=9.3								
BRTR				LR		LR		09 11 42.7	
	comp=Z,65nm,20.9s,baz=220,slow=36								
	comp=Z,1.2nm,0.8s								
BRTR	Keskin Array B	75.59	35			P		08 38 40.8	+0.5
GAZ	Gaziantep	75.79	39	P		P		08 38 41.3	0.0
GAZ				IAmb		IAmb		08 39 01.5	
	comp=Z,8.4nm,1.0s								
PSZ	Piszkesteto	76.07	22	P		P		08 38 43.2	+0.4
VRAC	Vranov	76.22	19	LR		LR		09 10 49.1	
	comp=Z,257nm,20.7s,baz=208,slow=35								
MLR	Muntele Rosu	76.36	27	LR		LR		09 12 27.1	
	comp=Z,118nm,20.0s,baz=222,slow=36								
MORC	Moravsky Berou	76.92	20	P		P		08 38 48.3	+0.8
BURAR	Bucovina Array	77.78	25	P		P		08 38 52.3	-0.1
EKA	Eskdalemuir Ar	78.08	6	LR		LR		09 12 18.3	
	comp=Z,89nm,19.7s,baz=184,slow=35								
VNDA	Vanda	80.00	179	LR		LR		09 09 35.0	
	comp=Z,140nm,21.9s,baz=180,slow=32								
AKASG	Malin Array Be	81.83	25	P		P		08 39 13.5	-0.6
	comp=Z,1.1nm,0.6s,baz=223,slow=5.3,SNR=7.9								
	comp=Z,1.1nm,0.6s								
AKASG	Malin Array Be	81.83	25	P		P		08 39 14.4	+0.2
GNI	Garni	82.19	41	LR		LR		09 15 27.2	
	comp=Z,64nm,18.4s,baz=230,slow=35								
SUW	Suwalki	82.35	20	P		P		08 39 16.7	-0.1
KBZ	Khabaz	83.38	37	P		P		08 39 22.0	-0.3
	comp=Z,1.9nm,0.8s,baz=354,slow=4.1,SNR=3.9								
KBZ				LR		LR		09 16 01.8	
	comp=Z,65nm,21.3s,baz=236,slow=35								
	comp=Z,1.9nm,0.8s								
NACGM	Naroch	84.28	22	*e*P		P		08 39 28.2	+1.4
	comp=Z,14nm,0.9s,baz=216								
F64A	Sherman	84.85	325	P		P		08 39 30.1	+0.3
F64A				IAmb		IAmb		08 39 31.6	
	comp=Z,12nm,1.1s								
APG	El Apazote	84.85	288	LR		LR		09 18 20.4	
	comp=Z,13nm,19.0s,baz=67,slow=36								
HFS	Hagfors	85.24	13	LR		LR		09 16 53.2	
	comp=Z,132nm,20.4s,baz=191,slow=35								
RPN	Rapa Nui	85.55	243	LR		LR		09 12 14.7	
	comp=Z,266nm,18.2s,baz=98,slow=32								
NOA	NORSAR Array B	85.59	11	LR		LR		09 18 16.1	
	comp=Z,36nm,20.0s,baz=190,slow=36								
U54A	Nelsons Funny	87.84	311	P		P		08 39 45.8	+0.9
BG3	Lake Jocassee	87.87	309	P		P		08 39 45.4	+0.4
BG3				IAmb		IAmb		08 39 47.1	
	comp=Z,8.9nm,1.0s								
L56A	Greenwood	87.97	318	P		P		08 39 46.1	+0.7
Y52A	Lilburn	88.14	308	P		P		08 39 46.5	+0.2
Y52A				IAmb		IAmb		08 39 47.4	
	comp=Z,6.3nm,0.9s								
TRQ	Mont Tremblant	88.49	322	P		P		08 39 48.2	+0.5
TRQ				IAmb		IAmb		08 39 49.0	
	comp=Z,9.1nm,1.0s								
TKL	Tuckaleechee C	88.79	310	LR		LR		09 12 11.0	
	comp=Z,166nm,20.8s,baz=142,slow=31								
FINES	FINESS Array B	89.39	17	LR		LR		09 21 27.7	
	comp=Z,124nm,18.1s,baz=214,slow=37								
CMIG	Matias Romero	89.58	289	LR		LR		09 19 15.3	
	comp=Z,168nm,21.7s,baz=132,slow=35								
SCHQ	Schefferville	89.97	332	LR		LR		09 14 24.5	
	comp=Z,190nm,19.0s,baz=137,slow=32								
SADO	Sadowa	90.36	319	LR		LR		09 12 42.4	
	comp=Z,134nm,20.7s,baz=151,slow=30								
KIRV	Kirov	95.70	28	LR		LR		09 23 54.7	
	comp=Z,56nm,19.9s,baz=241,slow=36								
PALK	Pallekele	95.83	85	LR		LR		09 17 46.4	
	comp=Z,339nm,21.9s,baz=254,slow=32								
ARCES	ARCESS Array B	95.90	13	LR		LR		09 23 10.1	
	comp=Z,133nm,20.1s,baz=212,slow=35								
ARTI	Arti	98.69	32	LR		LR		09 27 27.5	
	comp=Z,80nm,19.0s,baz=226,slow=37								
ASAR	Alice Springs	123.63	143	PKP		PKPdf		08 45 52.8	-1.0
	comp=Z,1.0nm,0.9s,baz=198,slow=3.0,SNR=8.1								
ASAR	Alice Springs	123.63	143			PKPdf		08 45 53.0	-0.7
WRA	Warramunga Arr	126.79	140	PKP		PKPdf		08 45 58.4	-1.4
	comp=Z,1.0nm,1.0s,baz=195,slow=1.0,SNR=4.9								
ILAR	Eielson Array	128.47	337	PKP		PKPdf		08 46 01.1	-0.5
	comp=Z,0.6nm,0.8s,baz=325,slow=2.0,SNR=7.3								
ILAR	Eielson Array	128.47	337	PKPdf		PKPdf		08 46 02.5	+0.9
PETK	Petropavlovsk-	148.70	11	PKPbc		PKPdf		08 46 40.2	+1.6
	comp=Z,2.3nm,0.8s,baz=143,slow=0.7,SNR=4.0								
MJAR	Matsushiro Arr	151.24	55	PKPbc		PKPbc		08 46 48.7	-0.4
	comp=Z,2.7nm,0.9s,baz=269,slow=2.1,SNR=7.8								

*IDC **26** 08:29:21.4±0.7,54˚.92N×160˚.49W,h37km±4km, mb4.2/29, mbtmp4.4/33, ML3.9/4, MS3.5/19, Error ellipse: s-maj=16.1km s-min=10.2km az=169.0*

*AEIC **26** 08:29:21.7±2.2,54˚.87N±0˚.04×160˚.30W±0˚.06,h31km±3km, Error ellipse: s-maj=5.1km s-min=4.9km az=153.0*

*GFZ **26** 08:29:21.4±0.3,55˚N±6˚×16˚OW±˚,h34km, M5.1/38, mb4.8/38*

*NEIC **26** 08:29:22.1±1.6,54˚.90N±0˚.04×160˚.25W±0˚.06, h38km±5km, mb4.7/220, ML4.5/36, ML4.3(AEIC), Error ellipse: s-maj=7.2km s-min=3.6km az=149.0*

ISC 26 08:29:21.4±0.4,54˚.86N±0˚.05×160˚.27W±0˚.03, h38km±2km, h39km:pP-P,n486,σ1§16/420,mb4.7/142,MS3.5/18,1D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHNA	Chernabura Isl	0.39	94	P	Op	Pn	08 29 29.9	-0.5
CNBA	Chernabura Isl	0.39	96			Pn	08 29 30.1	-0.3
CNBA						Sn	08 29 34.0	-3.1
CNBA					IAML		08 29 36.8	
	comp=E,20µm,0.6s							
SDPT	Sand Point	0.50	346	P		Pn	08 29 32.0	0.0
SDPT	Sand Point	0.50	346			Pn	08 29 32.2	+0.2
SDPT						Sn	08 29 39.7	+0.2
SDPT					IAML		08 29 41.7	
	comp=N,25µm,1.0s							
SDPT					IAML		08 29 45.2	
	comp=E,17µm,0.6s							
DOL	Dolgoi Island	0.96	288			Pn	08 29 38.5	+0.1
DOL						Sn	08 29 51.0	+0.2
PVV	Pavlof Volcano	1.01	301			Pn	08 29 39.5	+0.5
PS1A	Pavlof South-1	1.02	304			Pn	08 29 39.7	+0.6
PS1A						Sn	08 29 53.2	+1.1
PS4A	Pavlof South-4	1.03	299			Pn	08 29 39.8	+0.5
PS4A						Sn	08 29 54.0	+1.4
HAG	Hague Volcano	1.05	297			Pn	08 29 40.2	+0.7
PN7A	Pavlof North-7	1.15	301			Pn	08 29 41.9	+1.0
PN7A						Sn	08 29 56.2	+0.8
DTNA	Dutton South F	1.18	285			Pn	08 29 41.9	+0.6
DTNA						Sn	08 29 56.9	+0.8
DT1	Dutton Round H	1.19	283			Pn	08 29 41.5	+0.1
VNSG	Veniaminof 6	1.44	27			Pn	08 29 46.1	+1.3
VNSG						Sn	08 30 04.2	+1.7
VNSS	Veniaminof 8	1.45	18			Pn	08 29 46.7	+1.6
VNFG	Fog Glacier, M	1.48	16			Pn	08 29 47.4	+1.8
CHGN	Chignik	1.79	35			Pn	08 29 50.8	+1.2
CHGN					IAML		08 30 03.0	
	comp=N,3µm,0.8s							
CHGN					IAML		08 30 19.7	
	comp=E,6µm,0.9s							
CHGN	Chignik	1.79	35			Sn	08 30 15.4	+4.4
ISNN	Isanotski Nort	2.03	271			Pn	08 29 54.7	+1.7
SSLN	Shishaldin Nor	2.16	270			Pn	08 29 56.5	+1.7
SSLS	Shishaldin Sou	2.17	268			Sn	08 30 24.3	+3.8
SSBA	Shishaldin	2.23	269			Pn	08 29 57.2	+1.4
ANPB	Aniakchak Plen	2.25	29			Pn	08 29 58.0	+2.0
ANNE	Aniakchak Nort	2.40	30			Pn	08 29 59.8	+1.6
CHIR	Chirikof Islan	2.82	68	P		Pn	08 30 04.6	+0.8
CHIR	Chirikof Islan	2.82	68			Pn	08 30 04.8	+0.9
CHIR						Sn	08 30 37.7	+1.2
CHIR	Chirikof Islan	2.82	68		IAML		08 30 54.2	
	comp=N,2µm,0.8s							
CHIR					IAML		08 31 04.9	
	comp=E,2µm,1.0s							
AKSA	Akutan Strait	3.25	259			Pn	08 30 11.0	+1.3
AKUT	Akutan	3.29	259	P		Pn	08 30 12.4	+2.1
AKUT	Akutan	3.29	259	S		Sn	08 30 50.5	+2.4
AKUT	Akutan	3.29	259			Pn	08 30 13.0	+2.7
AKUT					Sn	Sn	08 30 50.3	+2.2
AKUT					IAML		08 31 07.4	
	comp=N,1µm,0.7s							
AHB	Akutan Harbor	3.32	259			Pn	08 30 12.3	+1.5
AKLV	Akutan Long Va	3.39	260			Pn	08 30 13.2	+1.6
AKBBA	Akutan Broad B	3.39	259			Pn	08 30 12.5	+0.8
AKGG	Akutan Green G	3.40	261			Pn	08 30 13.4	+1.6
ZRO	Akutan Zero	3.42	259			Pn	08 30 13.4	+1.3
PLBL	Peulik Blue Cr	3.43	33			Pn	08 30 14.5	+2.2
LVA	Lava Point	3.44	261			Pn	08 30 14.8	+2.5
LVA					IAML		08 31 11.7	
	comp=E,1µm,0.6s							
AKRB	Akutan Reef Bi	3.46	260			Pn	08 30 14.3	+1.7
PLK3	Peulik 3	3.61	37			Pn	08 30 17.1	+2.5
PLK2	Peulik 2	3.65	35			Pn	08 30 17.5	+2.3
PLK5	Peulik 5	3.66	30			Pn	08 30 17.5	+2.2
UNV	Unalaska Valle	3.79	257	P		Pn	08 30 17.9	+0.8
UNV	Unalaska Valle	3.79	257	S		Sn	08 31 03.1	+2.7
SII	Sitkinak Islan	3.84	61	P		Pn	08 30 18.6	+0.8
SII	Sitkinak Islan	3.84	61			Pn	08 30 18.3	+0.5
MNAT	Makushin Natee	3.88	258			Pn	08 30 19.4	+1.0
MREP	Makushin Rep't	3.94	257			Pn	08 30 20.4	+1.2
MGOD	Makushin Gods	4.01	257			Pn	08 30 21.4	+1.2
KJL	Kejulik	4.12	37			Pn	08 30 23.6	+1.8
Q17K	Contact Creek	4.18	34			Pn	08 30 24.3	+1.7
Q16K	King Salmon	4.31	26			Pn	08 30 25.9	+1.6
ACHA	Angle Creek He	4.33	37	Pn		Pn	08 30 26.1	+1.4
O15K	Ungalikthiuk R	4.33	3			Pn	08 30 25.1	+0.5
P16K	Nushagak River	4.36	16			Pn	08 30 26.5	+1.6
P16K	Nushagak River	4.36	16		IAML		08 31 59.2	
	comp=N,598nm,1.0s							
KABU	Katmai Buttres	4.39	37			Pn	08 30 27.5	+2.0
O14K	Tigyukauivet M	4.44	353			Pn	08 30 26.9	+0.9
KAKN	Katmai Knife C	4.49	38			Pn	08 30 28.6	+1.8
OHAK	Old Harbor	4.57	56	P		Pn	08 30 27.9	0.0
OHAK	Old Harbor	4.57	56			Pn	08 30 28.1	+0.2
OHAK					IAML		08 31 43.6	
	comp=N,356nm,0.9s							
OHAK					IAML		08 31 55.6	
	comp=E,313nm,1.1s							
OKFG	Magazine Ridge	4.72	255			Pn	08 30 31.1	+1.1
OKTU	Okmok Mt. Tuli	4.81	255			Pn	08 30 32.2	+1.1
KAHG	Katmai Hook Gl	4.82	39			Pn	08 30 33.0	+1.7
P17K	Kvichak River	4.82	24			Pn	08 30 33.0	+1.7
OKNC	Okmok New Cone	4.83	256			Pn	08 30 32.3	+0.9
O16K	Kokwok River B	4.89	13			Pn	08 30 33.1	+0.9
N14K	Kuskokwak Cree	5.13	352			Pn	08 30 36.4	+0.9
N14K					IAML		08 32 21.4	
	comp=E,327nm,1.1s							
N14K					IAML		08 32 21.8	
	comp=N,368nm,1.0s							
KDAK	Kodiak Island	5.18	52	Pn		Pn	08 30 36.5	+0.3
	comp=N,3.1nm,0.3s,baz=79,slow=1.3,SNR=228							
KDAK					Sn	Sn	08 31 32.8	-1.8
	baz=19,slow=22							
KDAK					LR	LR	08 32 55.5	
	comp=N,894nm,21.1s,baz=223,slow=41							
	comp=N,26nm,0.5s							
KDAK	Kodiak Island	5.18	52			Pn	08 30 36.3	+0.1
KDAK					IAML		08 32 01.7	
	comp=N,265nm,0.8s							
KDAK					IAML		08 32 09.4	
	comp=N,334nm,0.9s							
KDAK	Kodiak Island	5.18	52	P		Pn	08 30 37.4	+1.2
O17K	Koliganek Bris	5.22	18			Pn	08 30 38.2	+1.6
P18K	Big Mountain,	5.31	29			Pn	08 30 39.6	+1.6
N15K	Kwethluk River	5.32	1			Pn	08 30 39.4	+1.2
N15K					IAML		08 32 23.8	
	comp=N,280nm,0.9s							
N15K					IAML		08 32 24.4	
	comp=E,404nm,0.8s							
M13K	Dall Lake	5.81	345			Pn	08 30 46.5	+1.7
M15K	Kasigluk River	5.86	358			Pn	08 30 45.8	+0.3
N17K	Nushagak Hills	5.92	15			Pn	08 30 47.6	+1.3
CLCO	Concord Point,	5.97	254			Pn	08 30 48.3	+1.2
M14K	Bethel	5.98	352			Pn	08 30 47.9	+0.8
SPIA	Saint Paul Isl	6.06	297	P		Pn	08 30 49.9	+1.7
SPIA	Saint Paul Isl	6.06	297	S		Sn	08 31 59.7	+3.5
SPIA	Saint Paul Isl	6.06	297			Pn	08 30 49.7	+1.4
P19K	Oil Pt	6.13	36			Pn	08 30 51.2	+1.8
M16K	Timber Creek	6.22	6			Pn	08 30 51.8	+1.3
O19K	Port Alsworth	6.23	28			Pn	08 30 52.4	+1.8
M11K	Mekoryuk	6.39	333			Pn	08 30 53.8	+1.1
ILSW	Iliamna Southw	6.41	34			Pn	08 30 54.9	+1.6
IVE	Iliamna Volcan	6.48	34			Pn	08 30 55.8	+1.7
L14K	Kuka Creek	6.62	350			Pn	08 30 56.7	+0.7
O20K	Slope Mountain	6.66	35			Pn	08 30 58.3	+1.8
M17K	Holitna River	6.73	12			Pn	08 30 58.1	+0.7
CNPM	China Poot	6.78	43			Pn	08 30 58.5	+0.4
L15K	Ungalak Mounta	6.87	355			Pn	08 30 59.0	-0.3
RED	Redoubt Volcan	6.87	33			Pn	08 31 01.8	+2.4
L16K	Owhat River	6.88	3			Pn	08 31 00.1	+0.6
RDSO	Redoubt South	6.91	33			Pn	08 31 02.9	+2.9
DFR	Drift River	7.03	32			Pn	08 31 04.2	+2.6
BRLK	Bradley Lake	7.07	42			Pn	08 31 02.1	0.0
RDT	Redoubt	7.10	33			Pn	08 31 04.0	+1.4
BRSE	Bradley Lake S	7.11	43			Pn	08 31 02.8	+0.1
L17K	Donlin	7.37	7			Pn	08 31 06.6	+0.4
K13K	Kusilvak Mount	7.46	344			Pn	08 31 08.4	+1.0
K15K	Wolf Creek Mou	7.48	355			Pn	08 31 09.0	+1.2
SPNN	North Nagishla	7.65	28			Pn	08 31 13.2	+3.0
M19K	Big River Lodg	7.71	21			Pn	08 31 13.2	+2.4
SILK	Silak Lake	7.81	39			Pn	08 31 13.9	+1.0
SEW	Seward	7.84	44	Pn		Pn	08 31 13.6	+0.9
L19K	White Mountain	7.87	19			Pn	08 31 14.1	+1.0
K17K	Iditarod	7.95	7			Pn	08 31 14.8	+0.7
M20K	Styx River	7.97	25			Pn	08 31 17.2	+2.7
O22K	Cooper Landing	7.97	41			Pn	08 31 16.3	+1.9
STLK	Strandline Lak	8.00	30	Pn		Pn	08 31 16.6	+1.6
J14K	Nanvaranak Lak	8.09	349			Pn	08 31 16.9	+0.9
RC01	Rabbit Creek A	8.38	38			Pn	08 31 21.9	+1.9
J16K	Anvik River	8.45	359			Pn	08 31 21.9	+0.9
SKT	Skwentna	8.48	29			Pn	08 31 23.3	+1.9
J17K	VABM Dome	8.58	4			Pn	08 31 22.9	+0.1
KOFP	Korovin Flat P	8.63	258			Pn	08 31 25.1	+1.5
P23K	Montague Islan	8.63	48			Pn	08 31 24.2	+0.7
ATKA	Atka Island	8.71	258	P		Pn	08 31 25.8	+1.1
ATKA	Atka Island	8.71	258	S		Sn	08 33 04.4	+2.9
ATKA	Atka Island	8.71	258			Pn	08 31 25.6	+0.9
PWL	Port Wells	8.74	42			Pn	08 31 24.6	-0.5
J18K	Innoko River	8.82	10			Pn	08 31 26.7	+0.6
PMR	Palmer	8.94	36	P		Pn	08 31 30.7	+3.0
PMR	Palmer	8.94	36	S		Sn	08 33 09.9	+3.0
PMR	Palmer	8.94	36			Pn	08 31 27.5	-0.1
KNK	Knik Glacier	9.05	39			Pn	08 31 29.0	-0.3
I17K	Unalakleet	9.06	359			Pn	08 31 28.4	-0.9
PPLA	Purkeypile	9.07	24			Pn	08 31 32.7	+3.0
L22K	Petersville	9.13	29			Pn	08 31 31.6	+1.2
HIN	Hinchinbrook I	9.22	47			Pn	08 31 31.4	-0.3
GLI	Glacier Island	9.24	44			Pn	08 31 31.6	-0.3
SML	Sawmill	9.36	37			Pn	08 31 33.1	-0.4
FID	Port Fidalgo	9.42	46			Pn	08 31 32.9	-1.4
J19K	Poorman	9.46	13			Pn	08 31 35.9	+1.1
CAST	Castle Rocks	9.55	23			Pn	08 31 37.9	+1.8
M23K	Glacier View	9.57	38			Pn	08 31 36.5	+0.1
EYAK	Cordova Ski Ar	9.62	48	P		Pn	08 31 37.2	+0.1
EYAK	Cordova Ski Ar	9.62	48	S		Sn	08 33 27.1	+3.4
EYAK	Cordova Ski Ar	9.62	48			Pn	08 31 36.5	-0.5
SCM

PEA0B IAmb IAmb 08 34 38.0
comp=Z,15nm,0.5s
PETK Petropavlovsk- 24.51 283 P P 08 34 35.3 -1.5
comp=Z,11nm,0.4s,baz=77,slow=13,SNR=150
comp=Z,11nm,0.4s
PETK Petropavlovsk- 24.51 283 P P 08 34 35.8 -1.0
D05A Enumclaw 25.01 92 IAmb IAmb 08 34 45.5
comp=Z,17nm,1.0s
F04D Rainier, OR 25.02 95 P P **08 34 41.7 +0.2**
F04D IAmb IAmb 08 34 55.8
comp=Z,21nm,0.7s
MA2 Magadan 26.42 300 LR LR 08 46 10.9
comp=Z,56nm,18.1s,baz=54,slow=38
WAH2 Wahluke Slope 26.64 91 IAmb IAmb 08 34 59.1
comp=Z,10nm,0.5s
EDM Edmonton 27.20 74 IAmb IAmb 08 35 03.3
comp=Z,13nm,1.1s
NEW Newport 27.26 86 LR LR 08 43 57.4
comp=Z,65nm,21.6s,baz=310,slow=32
NEW Newport 27.26 86 P P **08 35 02.5 +0.7**
YBH Yreka Blue Hor 27.85 102 LR LR 08 43 37.8
comp=Z,101nm,21.0s,baz=324,slow=31
HLID Hailey 31.46 92 P **08 35 39.5 +0.4**
HLID Hailey 31.46 92 P P **08 35 40.3 +1.2**
RES Resolute Bay 31.72 27 LR LR 08 49 44.3
comp=Z,99nm,20.6s,baz=356,slow=38
BLKN Baker Lake 32.46 47 P **08 35 47.7 +0.2**
BLKN IAmb IAmb 08 35 48.8
comp=Z,11nm,0.9s
NVAR Mina Array Bea 32.57 103 P P **08 35 51.4 +2.4**
comp=Z,0.3nm,0.4s,baz=317,slow=7.8,SNR=1.6
NVAR LR LR 08 46 44.2
comp=Z,60nm,21.6s,baz=353,slow=32
comp=Z,0.3nm,0.4s
ELK Elko 32.76 97 LR LR 08 47 13.0
comp=Z,62nm,19.9s,baz=354,slow=33
TIXI Tiksi 33.49 327 LR LR 08 50 44.4
comp=Z,91nm,18.9s,baz=32,slow=38
HVU Hansel Valley 33.51 93 IAmb IAmb 08 36 00.2
comp=Z,7.4nm,1.0s
LAO LASA Array 34.36 81 IAmb IAmb 08 36 07.2
comp=Z,6.5nm,1.1s
DUG Dugway, Tooele 34.51 95 IAmb IAmb 08 36 08.9
comp=Z,6.1nm,1.1s
DUG Dugway, Tooele 34.51 95 P P **08 36 07.8 +2.0**
DUG pP pP **08 36 17.2 +0.7**
PDAR Pinedale Array 34.75 89 P P **08 36 09.2 +1.3**
comp=Z,0.5nm,0.7s,baz=322,slow=4.5,SNR=5.6
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 34.75 89 P P **08 36 07.8 -0.2**
PRN Pahroc Range 35.13 101 IAmb IAmb 08 36 14.6
comp=Z,7.8nm,1.4s
CCCA Chr Cany lake 35.17 105 IAmb IAmb 08 36 24.9
comp=Z,5.8nm,0.8s
YAK Yakutsk 35.65 311 LR LR 08 52 16.1
comp=Z,112nm,19.2s,baz=78,slow=39
Q16A Castle Valley 36.31 95 IAmb IAmb 08 36 24.6
comp=Z,7.7nm,1.1s
ILON Igloolik, Nuna 36.48 36 P **08 36 22.5 +0.4**
SRU San Rafael Swe 36.55 95 P P **08 36 24.7 +1.3**
SRU IAmb IAmb 08 36 26.4
comp=Z,11nm,1.1s
PKCU Pink Cliffs 36.66 98 IAmb IAmb 08 36 27.5
comp=Z,5.3nm,1.0s
PFO Pinyon Flats O 37.08 107 LR LR 08 48 52.0
comp=Z,86nm,18.4s,baz=280,slow=31
RSSD Black Hills 37.11 83 P P **08 36 28.6 +0.6**
RSSD IAmb IAmb 08 36 29.8
comp=Z,4.5nm,0.8s
RSSD Black Hills 37.11 83 P P **08 36 29.3 +1.3**
O20A White River Ci 37.19 91 IAmb IAmb 08 36 31.1
comp=Z,7.9nm,0.8s
HMU Henry Mountain 37.22 96 IAmb IAmb 08 36 32.1
comp=Z,9.0nm,0.8s
ASAJ Asahikawa 37.63 278 LR LR 08 51 32.8
comp=Z,44nm,20.9s,baz=348,slow=36
PV10 Paradox Valley 37.91 94 IAmb IAmb 08 36 37.7
comp=Z,13nm,1.3s
PV19 Morning Glory 37.98 94 IAmb IAmb 08 36 48.1
comp=Z,4.7nm,0.7s
PV18 Skein Mesa, Pa 38.07 94 IAmb IAmb 08 36 58.5
comp=Z,5.5nm,0.8s
PV13 Radium Mtn., P 38.18 94 IAmb IAmb 08 36 39.4
comp=Z,9.3nm,0.9s
ULM Lac du Bonnet 38.19 69 P P **08 36 37.6 +0.8**
comp=Z,7.1nm,0.8s,baz=306,slow=7.7,SNR=7.1
comp=Z,7.1nm,0.8s
ULM Lac du Bonnet 38.19 69 IAmb IAmb 08 36 38.5
comp=Z,9.6nm,1.0s
PV02 Paradox Valley 38.20 94 IAmb IAmb 08 36 39.6
comp=Z,10nm,0.9s
PV15 Paradox Valley 38.25 94 IAmb IAmb 08 36 40.0
comp=Z,6.8nm,1.1s
AGMN Agassiz Nation 39.27 72 IAmb IAmb 08 36 47.5
comp=Z,12nm,0.8s
AGMN Agassiz Nation 39.27 72 P P **08 36 46.7 +0.7**
NEEM North Greenlan 41.01 18 *i* P P **08 36 59.8 -0.6**
NEEM IAmb IAmb 08 37 01.0
comp=Z,9.2nm,0.8s
EYMN Ely 41.86 70 IAmb IAmb 08 37 08.9
comp=Z,16nm,0.7s
EYMN Ely 41.86 70 P P **08 37 08.2 +0.8**
NOR Nord 42.38 7 P P **08 37 11.1 -0.1**
NOR Nord 42.38 7 *i* P P **08 37 11.0 -0.1**
NOR IAmb IAmb 08 37 12.1
comp=Z,6.7nm,0.8s
E38A The Farm, Brul 42.63 72 IAmb IAmb 08 37 14.9
comp=Z,18nm,0.9s
H11N2 WAKE ISLAND Hy 42.99 229 T T 09 22 34.7
baz=27,slow=76,SNR=76
H11N3 WAKE ISLAND Hy 43.00 228 T T 09 22 37.3
baz=27,slow=76,SNR=92
H11N1 WAKE ISLAND Hy 43.01 229 T T 09 22 33.2
baz=27,slow=76,SNR=44
I37A Lemond, Waseca 43.21 76 IAmb IAmb 08 37 20.0
comp=Z,15nm,0.8s
FRB Frobisher Bay 43.69 40 LR LR 08 57 07.2
comp=Z,101nm,19.9s,baz=336,slow=38
H11S1 WAKE ISLAND Hy 44.16 228 T T 09 23 54.8
baz=27,slow=75,SNR=40
H11S2 WAKE ISLAND Hy 44.17 228 T T 09 23 54.8
baz=27,slow=75,SNR=40
H11S3 WAKE ISLAND Hy 44.18 228 T T 09 23 56.2
baz=27,slow=75,SNR=25
G40A Rib Lake 44.20 72 IAmb IAmb 08 37 27.5
comp=Z,8.8nm,0.8s
MNTX Cornudas Mount 44.76 98 P P **08 37 32.3 +1.5**
MJAR Matsushiro Art 45.11 272 P P **08 37 33.3 -0.3**
comp=Z,2.2nm,0.6s,baz=36,slow=7.1,SNR=7.9
MJAR LR LR 08 55 35.8
comp=Z,32nm,21.5s,baz=96,slow=35
comp=Z,2.2nm,0.6s
MJB9 Matsu-Tunnel 45.11 272 P P **08 37 34.3 +0.7**
MJB9 IAmb IAmb 08 37 37.3
comp=Z,16nm,1.2s
BNX BinXian 45.14 290 ||P P **08 37 32.8 -0.9**
BNX pmax pmax
comp=Z,6.0nm,0.8s
TPB11 China Draw 45.35 97 IAmb IAmb 08 37 38.1
comp=Z,4.3nm,0.7s
N38A Joes South For 45.39 79 IAmb IAmb 08 37 36.9
comp=Z,18nm,1.1s
JFWS Jewell Farm 45.68 75 IAmb IAmb 08 37 38.6
comp=Z,11nm,0.8s
128A Castleberry Fa 45.74 95 IAmb IAmb 08 37 41.3
comp=Z,7.4nm,1.4s
WMOK Wichita Mounta 46.36 89 P P **08 37 44.7 +1.1**
KBS Kingsbay 46.39 2 *i* P P **08 37 43.5 +0.4**
DAG Danmarks Havn 46.40 11 P P **08 37 42.9 -0.4**
DAG Danmarks Havn 46.40 11 *i* P P **08 37 42.8 -0.4**
DAG IAmb IAmb 08 37 43.9
comp=Z,15nm,0.9s
L42A Oliver, Polo 46.60 75 IAmb IAmb 08 37 45.7
comp=Z,17nm,1.2s
OK052 Battle Ridge R 46.62 87 IAmb IAmb 08 37 46.6
comp=Z,7.3nm,0.7s
SUMG Summit 46.67 21 P **08 37 45.8 -0.1**
SUMG IAmb IAmb 08 37 48.8
comp=Z,6.1nm,0.8s
SUMG Summit 46.67 21 P P **08 37 46.1 +0.2**
SUMG Summit 46.67 21 *i* P P **08 37 45.7 -0.2**
SUMG IAmb IAmb 08 37 48.8
comp=Z,6.1nm,0.7s
NRIK Noril'sk 46.74 333 P P **08 37 45.6 -0.4**
comp=Z,2.8nm,0.5s,baz=90,slow=16,SNR=4.4
NRIK LR LR 08 59 59.8
comp=Z,88nm,19.1s,baz=42,slow=39
comp=Z,2.8nm,0.5s
NRIK Noril'sk 46.74 333 P P **08 37 45.5 -0.5**
NRIK IAmb IAmb 08 37 58.5
comp=Z,4.6nm,0.7s
P40A Paris 46.91 80 IAmb IAmb 08 37 48.5
comp=Z,16nm,1.2s
TX31 Lajitas Ar. Si 47.50 99 P **08 37 54.2 +1.6**
TX31 IAmb IAmb 08 37 55.0
comp=Z,6.0nm,1.2s
TXAR Lajitas Array 47.50 99 P P **08 37 53.9 +1.3**
comp=Z,1.6nm,0.6s,baz=301,slow=6.3,SNR=28
TXAR PcP **PcP 08 39 23.1 +0.8**
comp=Z,0.7nm,0.5s,baz=208,slow=1.0,SNR=10.0
comp=Z,1.6nm,0.6s
R40A Maddies Statio 47.63 81 P **08 37 52.5 -0.8**
R40A IAmb IAmb 08 37 52.7
comp=Z,4.3nm,0.5s
SFJD Kangerlussuaq 47.63 30 *i* P P **08 37 53.5 +0.5**
SFJD IAmb IAmb 08 37 54.3
comp=Z,16nm,0.8s
HDIL Hopedale 47.77 77 P **08 37 54.7 +0.3**
Q44A Meyer Farm, Va 49.05 78 IAmb IAmb 08 38 05.2
comp=Z,12nm,1.0s
FCAR Ozark Folk Cen 49.38 83 IAmb IAmb 08 38 06.8
comp=Z,12nm,1.3s
MIAR Mount Ida 49.50 85 IAmb IAmb 08 38 09.1
comp=Z,7.0nm,1.0s
MIAR Mount Ida 49.50 85 P P **08 38 08.2 +0.4**
SCHQ Schoferville 49.80 49 P P **08 38 10.1 +0.3**
comp=Z,2.6nm,0.8s,baz=318,slow=8.7,SNR=3.6
comp=Z,2.6nm,0.8s
BLO Bloomington 50.27 76 IAmb IAmb 08 38 14.5
comp=Z,6.6nm,0.7s
O48B Farmland 50.29 74 P **08 38 13.2 -0.5**
N49A Columbus Grove 50.37 73 P P **08 38 14.1 -0.3**
N49A IAmb IAmb 08 38 14.8
comp=Z,12nm,1.1s
KSRS Korea Array 50.38 281 P P **08 38 14.4 +0.1**
comp=Z,2.8nm,0.7s,baz=50,slow=7.4,SNR=8.4
KSRS pP **pP 08 38 25.2 -0.3**
comp=Z,4.0nm,0.6s,baz=46,slow=7.5,SNR=9.2
comp=Z,2.8nm,0.7s
USIN University of 50.47 78 P P **08 38 15.2 +0.1**
SADO Sadowa 50.49 66 P P **08 38 15.2 0.0**
SADO IAmb IAmb 08 38 15.5
comp=Z,7.5nm,0.7s
T47A Sharon Grove 51.47 78 IAmb IAmb 08 38 23.8
comp=Z,16nm,1.3s
WVT Waverly 51.67 80 P **08 38 24.6 +0.5**
WVT Waverly 51.67 80 P P **08 38 24.5 +0.4**
TRQ Mont Tremblant 51.88 62 IAmb IAmb 08 38 26.3
comp=Z,14nm,1.1s
R50A Paris 52.12 75 IAmb IAmb 08 38 28.3
comp=Z,8.5nm,0.9s
O52A Adamsville 52.22 72 IAmb IAmb 08 38 28.7
comp=Z,15nm,1.2s
N53A Lisbon 52.29 71 IAmb IAmb 08 38 29.6
comp=Z,14nm,1.0s
PAOC Oil Creek Stat 52.42 69 IAmb IAmb 08 38 29.9
comp=Z,7.5nm,0.9s
CLTN Cedars of Leba 52.55 79 IAmb IAmb 08 38 32.0
comp=Z,6.0nm,0.9s
P53A Whipple 52.91 72 IAmb IAmb 08 38 33.6
comp=Z,10nm,1.1s
S51A Beattyville 52.99 75 IAmb IAmb 08 38 34.5
comp=Z,9.7nm,1.0s
TLY Talaya 53.11 309 P **08 38 34.3 -0.3**
TLY IAmb IAmb 08 38 35.0
comp=Z,3.5nm,0.8s
W50A Signal Mountai 53.76 79 IAmb IAmb 08 38 40.2
comp=Z,8.9nm,1.0s
J59A Piesco 53.81 64 IAmb IAmb 08 38 40.7
comp=Z,8.9nm,0.9s
BINY Binghamton 53.92 66 IAmb IAmb 08 38 42.5
comp=Z,12nm,1.0s
BINY Binghamton 53.92 66 P P **08 38 40.2 -0.5**
FPAL Fort Paine 54.07 79 IAmb IAmb 08 38 41.8
comp=Z,3.3nm,0.6s
SONM Songino Array 54.53 304 P P **08 38 44.8 -0.4**
comp=Z,3.5nm,0.7s,baz=48,slow=7.6,SNR=13
SONM pP **pP 08 38 56.4 0.0**
comp=Z,1.3nm,0.5s,baz=46,slow=5.8,SNR=5.1
SONM PcP **PcP 08 39 48.2 +0.2**
comp=Z,2.6nm,0.6s,baz=37,slow=1.4,SNR=6.5
comp=Z,3.5nm,0.7s
SONM Songino Array 54.53 304 P P **08 38 45.1 -0.1**
SONM IAmb IAmb 08 38 45.6
comp=Z,3.9nm,0.9s
SONM **PcP 08 39 48.3 +0.2**
G62A West of Eustis 54.61 60 P P **08 38 45.9 +0.2**
G62A IAmb IAmb 08 38 46.4
comp=Z,8.8nm,0.9s
V53A Saluda 54.84 76 IAmb IAmb 08 38 48.4
comp=Z,12nm,1.3s
SDMD Soldier's Deli 55.44 69 IAmb IAmb 08 38 52.2
comp=Z,5.4nm,1.0s
KSCT Kent School, K 55.58 65 P P **08 38 53.3 +0.6**
KEV Kevo 55.58 357 P **08 38 51.4 -0.9**
ARCES ARCESS Array B 55.84 358 P P **08 38 53.1 -1.1**
comp=Z,2.3nm,0.4s,baz=29,slow=7.4,SNR=17
ARCES PcP **PcP 08 39 52.5 -0.1**
comp=Z,1.4nm,0.7s,baz=356,slow=3.6,SNR=4.9
comp=Z,2.3nm,0.4s
ARCES ARCESS Array B 55.84 358 P **08 38 53.2 -0.9**
ARCES IAmb IAmb 08 38 53.9
comp=Z,5.6nm,0.8s
R58B Mineral 55.92 71 IAmb IAmb 08 38 56.4
comp=Z,13nm,1.3s
V58A Windy Hill, Pi 56.81 74 IAmb IAmb 08 39 02.2
comp=Z,6.7nm,0.8s
HHC Hu-ho-hao-te 56.93 295 *eP* P **08 39 03.8 +1.3**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,58nm,4.5s
LVZ Lovozero 57.05 353 P P **08 39 02.5 -0.3**
LVZ IAmb IAmb 08 39 02.7
comp=Z,14nm,1.1s
LVZ Lovozero 57.05 353 P P **08 39 01.7 -1.2**
comp=Z,16nm,0.9s
LVZ Lovozero 57.05 353 P P **08 39 02.0 -0.9**
SGF Sodankyl 57.91 357 P P **08 39 08.0 -0.8**
ZALV Zalesovo Beam 59.06 321 P P **08 39 16.6 -0.5**
comp=Z,0.6nm,0.4s,baz=28,slow=6.5,SNR=1.5
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 59.06 321 P P **08 39 16.2 -0.8**
MSF Masselka 59.34 356 P P **08 39 18.4 -0.4**
OUL Oulu 60.29 357 P P **08 39 24.5 -0.7**
KURK Kurchatov 63.90 323 P **08 39 49.9 +0.2**
KURK IAmb IAmb 08 39 49.9
comp=Z,4.5nm,1.0s
KURK Kurchatov 63.90 323 P P **08 39 49.2 -0.6**
FIA1 FINESS Array S 63.93 357 P **08 39 49.2 -0.6**
FINES FINESS Array B 63.93 357 P P **08 39 48.9 -0.8**
comp=Z,5.8nm,0.5s,baz=18,slow=7.6,SNR=91
FINES pP **pP 08 39 59.6 -1.6**
comp=Z,6.1nm,0.8s,baz=17,slow=8.0,SNR=8.0
comp=Z,5.8nm,0.5s
FINES FINESS Array B 63.93 357 P **08 39 49.2 -0.5**
GTA2 Gaotai 63.94 302 P P **08 39 49.8 -0.6**
GTA2 sP sP 08 40 05.0 -1.3
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 LR LR
comp=N,120nm,16.2s
GTA2 LR LR
comp=E,99nm,16.2s
GTA2 LR LR
comp=Z,170nm,19.0s
NC204 NORSAR Array S 63.99 5 P **08 39 50.8 +0.6**
KURBB Kurchatov Arra 64.01 323 P P **08 39 49.6 -0.8**
comp=Z,1.1nm,0.2s,baz=20,slow=6.5,SNR=10
comp=Z,1.1nm,0.2s
NB2 NORSAR Subarra 64.25 5 P P **08 39 51.4 -0.5**
comp=Z,8.1nm,0.9s,baz=354,slow=6.5
NOA NORSAR Array B 64.25 5 P P **08 39 51.5 -0.4**
comp=Z,5.9nm,0.8s,baz=356,slow=6.5,SNR=8.7
comp=Z,5.9nm,0.8s
BVAR Borovoye Array 64.61 329 P P **08 39 54.0 -0.4**
comp=Z,14nm,0.7s,baz=39,slow=6.9,SNR=62
comp=Z,14nm,0.7s
ARTI Arti 64.72 337 P **08 39 54.4 -0.7**
HFS Hagfors 65.25 3 P P **08 39 58.0 -0.4**
comp=Z,10nm,0.7s,baz=345,slow=3.5,SNR=19
comp=Z,10nm,0.7s
MKAR Makanchi Array 65.81 318 P P **08 40 01.3 -1.0**
comp=Z,1.2nm,0.5s,baz=44,slow=6.8,SNR=11
comp=Z,1.2nm,0.5s
MKAR Makanchi Array 65.81 318 P P **08 40 01.6 -0.7**
MAKZ Makanchi 65.92 318 P P **08 40 02.3 -0.7**
MAKZ IAmb IAmb 08 40 02.6
comp=Z,2.5nm,0.7s
WMQ Urumqi 66.05 313 *eP* P **08 40 04.3 +0.4**
WMQ sP sP 08 40 18.5 -1.3
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ LR LR
comp=Z,57nm,23.5s
EKA Eskdalemuir Ar 68.57 14 P P **08 40 20.0 +0.4**
comp=Z,4.9nm,0.6s,baz=336,slow=5.2,SNR=18
EKA pP **pP 08 40 31.2 +0.1**
comp=Z,6.1nm,0.6s,baz=340,slow=5.2,SNR=7.2
comp=Z,4.9nm,0.6s
ESK Eskdalemuir 68.58 14 P P **08 40 20.1 +0.5**
NACGM Naroch 70.44 356 *eP* P **08 40 30.8 -0.3**
comp=Z,11nm,0.8s,baz=4.4
ABKAR Akbulak array 70.91 333 P **08 40 34.1 +0.1**
KDJ Kajisay 71.70 319 IAmb IAmb 08 40 40.2
comp=Z,7.6nm,1.0s
KDJ Kajisay 71.70 319 P P **08 40 39.1 -0.1**
TARG Taragay, Kyrgy 71.81 318 IAmb IAmb 08 40 41.6
comp=Z,3.4nm,0.6s
TARG Taragay, Kyrgy 71.81 318 P P **08 40 39.9 -0.3**
BOOM Boomskoye usch 71.86 320 IAmb IAmb 08 40 41.2
comp=Z,7.2nm,0.8s
BOOM Boomskoye usch 71.86 320 P P **08 40 40.5 +0.3**
AAK Ala-Archa 72.27 321 P P **08 40 42.8 +0.2**
NRN Naryn 72.75 319 IAmb IAmb 08 40 47.0
comp=Z,13nm,1.3s
ASAI AK-SAY(Kyrgyzs 73.00 318 P P **08 40 47.7 +0.5**
PZH PanZhiHua 73.13 292 P P **08 40 50.3 +2.4**
KK31 Karatay Array 73.27 324 P **08 40 48.4 +0.1**
KK31 IAmb IAmb 08 40 48.8
comp=Z,6.6nm,0.8s
KKAR Karatay Array 73.27 324 P P **08 40 48.2 -0.2**
RNPP9 Sopachiv 73.97 356 P P **08 40 51.4 -0.8**
CLL Collm 74.05 4 P P **08 40 52.3 -0.4**
comp=Z,5.2nm,1.0s
CLL Collm 74.05 4 *i* P P **08 40 52.3 -0.4**
comp=Z,5.0nm,1.0s
CLL *i* x x 08 40 57.4
CLL *e*pP **pP 08 41 03.0 -1.4**
CLL AMS AMS 09 01 00.0
comp=Z,100nm,20.5s
CLL AMS AMS 09 11 00.0
comp=Z,200nm,20.6s
RNPP5 Staryi Chortor 74.16 356 P P **08 40 52.9 -0.4**
MI28 Mi28,Pidlybu 74.37 355 P P **08 40 53.0 -1.6**
AK21 Malin Array Si 74.44 354 P P **08 40 54.2 -0.8**
AK22 Malin Array Si 74.46 354 P P **08 40 54.1 -1.0**
AK20 Malin Array Si 74.48 354 P P **08 40 54.3 -0.9**
AK03 Malin Array Si 74.48 354 P P **08 40 54.1 -1.1**
AK04 Malin Array Si 74.49 354 P P **08 40 54.1 -1.2**
AK18 Malin Array Si 74.50 354 P P **08 40 54.2 -1.1**
AK19 Malin Array Si 74.50 354 P P **08 40 54.2 -1.1**
AKASG Malin Array Be 74.51 354 P P **08 40 54.4 -1.0**
comp=Z,9.5nm,0.7s,baz=8.2,slow=5.7,SNR=27
AKASG pP **pP 08 41 05.7 -1.4**
comp=Z,4.4nm,0.5s,baz=8.7,slow=5.6,SNR=8.2
comp=Z,9.5nm,0.7s
AKASG Malin Array Be 74.51 354 P P **08 40 55.2 -0.2**
AKBB Malin Array Si 74.51 354 P P **08 40 54.7 -0.7**
AKBB Malin Array Si 74.51 354 P P **08 40 54.2 -1.2**
KIEV Kiev 74.52 354 P P **08 40 54.6 -0.9**
KIEV IAmb IAmb 08 40 55.3
comp=Z,11nm,0.8s
KIEV Kiev 74.52 354 P P **08 40 54.2 -1.2**
comp=Z,70nm,0.9s
KIEV Kiev 74.52 354 P P **08 40 54.6 -0.9**
KIEV pP **pP 08 41 05.4 -1.7**
AK01 Malin Array Si 74.52 354 P P **08 40 54.3 -1.1**
BRG Berggiesshubel 74.53 4 *eP* P **08 40 55.5 0.0**
BRG Amp 08 40 56.7
comp=Z,3.2nm,0.8s
AK11 Malin Array Si 74.53 354 P P **08 40 54.5 -1.0**
AK17 Malin Array Si 74.53 354 P P **08 40 54.5 -1.0**
AK16 Malin Array Si 74.55 354 P P **08 40 54.5 -1.1**
AK02 Malin Array Si 74.55 354 P P **08 40 54.6 -1.0**
AK12 Malin Array Si 74.57 354 P P **08 40 54.7 -1.0**
AK08 Malin Array Si 74.57 354 P P **08 40 54.7 -1.1**
AK14 Malin Array Si 74.59 354 P P **08 40 54.8 -1.0**
AK05 Malin Array Si 74.59 354 P P **08 40 54.8 -1.1**
AK09 Malin Array Si 74.59 354 P P **08 40 54.8 -1.1**
AK13 Malin Array Si 74.61 354 P P **08 40 54.9 -1.1**
AK10 Malin Array Si 74.61 354 P P **08 40 54.9 -1.1**
AK06 Malin Array Si 74.63 354 P P **08 40 55.1 -1.0**
KSP Ksiaz 74.63 2 P P **08 40 55.6 -0.5**
comp=Z,7.4nm,1.0s
MOX Moxa 74.64 5 P P **08 40 56.8 +0.5**
MOX pP **pP 08 41 08.0 +0.1**
AK07 Malin Array Si 74.66 354 P P **08 40 55.3 -1.0**
KSH2 Kashi 74.90 318 P P **08 40 58.5 +0.4**
KSH2 pP pP 08 41 09.8 +0.1
KSH2 pmax pmax
comp=Z,18nm,0.8s
OSTC Ostas 74.91 2 *eP* P **08 40 58.5 +0.7**
DPC Dobruska-Polom 75.12 2 *eP* P **08 40 57.9 -1.1**
DPC Dobruska-Polom 75.12 2 P P **08 40 59.3 +0.3**
comp=Z,7.5nm,1.1s
DPC Dobruska-Polom 75.12 2 P P **08 40 59.6 +0.5**
DPC pP **pP 08 41 10.4 -0.3**
LUBAR Lubar, Ukraine 75.37 355 P P **08 40 59.3 -1.1**
KRLC Kraliky 75.41 2 *eP* P **08 41 00.9 +0.2**
STEB Steborice 75.56 1 *eP* P **08 41 01.5 0.0**
MORC Moravsky Berou 75.72 1 P **08 41 02.1 -0.3**
MORC Moravsky Berou 75.72 1 *eP* P **08 41 02.2 -0.3**
BTK Batken 75.86 322 IAmb IAmb 08 41 04.1
comp=Z,6.8nm,1.0s
BTK Batken 75.86 322 P P **08 41 03.4 -0.1**
GRB3 Grafenberg Arr 75.95 5 P P **08 41 04.6 +0.9**
STHS Stebnicka Huta 76.09 359 *eP* P **08 41 02.0 -2.5**
SLVN Son La 76.09 287 IAmb IAmb 08 41 16.9
comp=Z,9.3nm,1.0s
VRAC Vranov 76.17 2 *eP* P **08 41 04.7 -0.3**
KHC Kasperske Hory 76.25 4 *eP* P **08 41 04.0 -1.5**
KHC Kasperske Hory 76.25 4 P P **08 41 05.8 +0.3**
comp=Z,7.4nm,1.2s
KRUC Moravsky 76.41 2 *eP* P **08 41 07.2 +0.9**
GEC2 GERESS Array S 76.54 4 IAmb IAmb 08 41 08.3
comp=Z,5.0nm,1.1s
GERES GERESS Array B 76.54 4 P P **08 41 07.5 +0.3**
comp=Z,1.7nm,0.9s,baz=343,slow=4.2,SNR=8.3
GERES pP **PcP 08 41 18.1 -0.5**
comp=Z,1.5nm,0.8s,baz=345,slow=5.3,SNR=4.7
comp=Z,1.7nm,0.9s
GERES GERESS Array B 76.54 4 P P **08 41 07.5 +0.3**
GERES **PcP 08 41 18.6 -0.1**
KOLS Kolonicke sedl 76.56 358 P P **08 41 07.0 -0.2**
KOLS Kolonicke sedl 76.56 358 *eP* P **08 41 07.7 +0.5**
KMPD K-Podol'skiy 76.79 355 P P **08 41 07.8 -0.7**
GAR Garm 76.98 322 P **08 41 09.8 -0.1**
GAR Garm 76.98 322 P P **08 41 09.8 -0.1**
VYHS Vyhne 77.02 1 *eP* P **08 41 09.7 -0.1**
MODS Modra-Piesok 77.12 2 *eP* P **08 41 10.6 +0.2**
SORM Soroca 77.12 354 P P **08 41 09.1 -1.2**
comp=Z,11nm,0.9s
ABAH Abaujker 77.21 359 P P **08 41 11.9 +1.1**
TRPA Tarpa 77.35 358 P P **08 41 11.3 -0.3**
WINA Alland / Wiene 77.36 3 *eP* P **08 41 12.6 +0.9**
comp=Z,3.1nm,0.7s
CONA Conrad Observa 77.53 3 *eP* P **08 41 13.2 +0.4**
comp=Z,1.6nm,0.6s
RJOB Jochberg 77.61 5 P P **08 41 13.8 +0.7**
CHGR Chuyangaron 77.69 323 P P **08 41 13.5 -0.3**
BUR08 Bucovina Ar. S 77.76 356 IAmb IAmb 08 41 15.1
comp=Z,4.7nm,1.0s
MANEM Manem 77.77 320 P P **08 41 14.6 +0.1**
MANEM IAmb IAmb 08 41 31.1
comp=Z,24nm,1.1s
RONA Rosalia, Austr 77.77 2 *eP* P **08 41 15.1 +1.1**
comp=Z,4.0nm,1.0s
BURAR Bucovina Array 77.79 356 P **08 41 14.1 -0.2**
LESA Schwarzleotal 77.91 5 *eP* P **08 41 14.1 -0.8**
comp=Z,1.6nm,0.6s
WATA Walderalm 77.94 6 *i* P P **08 41 15.3 +0.1**
comp=Z,8.0nm,1.2s
WTTA Wattenberg 78.02 6 *eP* P **08 41 16.0 +0.4**
comp=Z,2.7nm,0.5s,SNR=5.1
SQTA Sankt Quirin 78.04 6 *i* P P **08 41 16.0 +0.4**
comp=Z,9.2nm,1.1s
ARSA Arzberg 78.20 3 *eP* P **08 41 17.0 +0.6**

	comp=Z,1.4nm,0.6s								
FETA	**Feichten**	**78.21**	**6**	*i* P		**P**	**08 41 17.0**	**+0.3**
	comp=Z,4.4nm,1.0s								
KBA	**Koelnbreinsper**	**78.29**	**4**	*i* P		**P**	**08 41 17.7**	**+0.6**
	comp=Z,3.5nm,0.6s,SNR=6.6								
KBA	**Koelnbreinsper**	**78.29**	**4**	P		**P**	**08 41 18.0**	**+0.8**
SESA	**Seetaler Alpe,**	**78.31**	**4**	*eP*		**P**	**08 41 17.8**	**+0.6**
	comp=Z,4.4nm,0.7s								
FUORN	**Ofenpass-Fuorn**	**78.58**	**7**	P		**P**	**08 41 19.7**	**+0.9**
FUORN				IAmb		IAmb	08 41 20.6		
	comp=Z,10nm,1.4s								
ABTA	**Abfaltersbach**	**78.58**	**5**	*i* P		**P**	**08 41 18.9**	**+0.2**
	comp=Z,2.0nm,0.6s								
SOKA	**Soboth**	**78.76**	**3**	*i* P		**P**	**08 41 19.9**	**+0.4**
	comp=Z,2.7nm,0.5s,SNR=6.3								
OBKA	**Obir**	**78.91**	**4**	*eP*		**P**	**08 41 20.7**	**+0.3**
	comp=Z,5.6nm,0.6s,SNR=4.3								
OBKA	**Obir**	**78.91**	**4**	P		**P**	**08 41 20.9**	**+0.5**
SHAA	**Shahritus**	**79.03 323**		IAmb		IAmb	08 41 38.0		
	comp=Z,25nm,1.1s								
EVN	**Everest**	**79.55 304**		P		**P**	**08 41 24.9**	**0.0**
KBZ	**Khabaz**	**79.82 343**		P		**P**	**08 41 25.6**	**+0.3**
	comp=Z,8.7nm,0.9s,baz=338,slow=4.3,SNR=15								
	comp=Z,8.7nm,0.9s								
BZS	**Buzias**	**79.88 359**		P		**P**	**08 41 26.0**	**+0.4**
ARR	**Arges**	**80.06 356**		P		**P**	**08 41 27.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**81.14 289**		P		**P**	**08 41 32.8**	**0.0**
	comp=Z,9.4nm,0.9s,baz=16,slow=5.4,SNR=42								
	comp=Z,9.4nm,0.9s								
KBL	**Kabul**	**81.41 321**		P		**P**	**08 41 33.0**	**-1.3**
KBL				IAmb		IAmb	08 41 33.6		
	comp=Z,8.0nm,0.9s								
KBL	**Kabul**	**81.41 321**		P		**P**	**08 41 32.8**	**-1.5**
ESDC	**Sonseca Array**	**83.67 18**		P		**P**	**08 41 46.3**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=342,slow=4.8,SNR=30								
	comp=Z,4.3nm,0.8s								
ESDC	**Sonseca Array**	**83.67 18**				**P**	**08 41 46.2**	**+0.5**
KELT	**Kelkit**	**83.89 345**		P		**P**	**08 41 47.9**	**+0.8**
RDO	**Rodhopi**	**84.24 356**		P		**P**	**08 41 49.1**	**+0.6**
KNT	**Kendrikon**	**84.31 358**		P		**P**	**08 41 51.1**	**+2.2**
GRG	**Griva**	**84.53 358**		P		**P**	**08 41 50.6**	**+0.6**
BR106	**Keskin Array S**	**85.03 349**		P		**P**	**08 41 52.7**	**0.0**
	comp=Z,33nmcomp=Z,4.0nm,1.0s								
BR131	**Keskin Array S**	**85.03 349**		IAmb		IAmb	08 41 53.9		
	comp=Z,4.0nm,0.8s								
BRTR	**Keskin Array B**	**85.03 349**		P		**P**	**08 41 52.8**	**0.0**
	comp=Z,3.8nm,1.0s,baz=54,slow=2.1,SNR=9.8								
	comp=Z,3.8nm,1.0s								
BR105	**Keskin Array S**	**85.04 349**		P		**P**	**08 41 52.1**	**-0.7**
	comp=Z,45nmcomp=Z,5.5nm,1.0s								
BR104	**Keskin Array S**	**85.05 349**		P		**P**	**08 41 52.8**	**0.0**
ARPR	**Arapgir-MALATY**	**85.06 346**		IAmb		IAmb	08 41 55.0		
	comp=Z,6.2nm,0.9s								
CTA	**Charters Tower**	**87.43 229**		P		**P**	**08 42 04.8**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=6.6,slow=8.0,SNR=3.6								
	comp=Z,1.6nm,0.5s								
WRA	**Warramunga Arr**	**92.88 239**		P		**P**	**08 42 29.1**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=32,slow=5.3,SNR=4.5								
	comp=Z,0.6nm,0.7s								
ASAR	**Alice Springs**	**96.24 237**		P		**P**	**08 42 43.5**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=31,slow=7.2,SNR=4.3								
	comp=Z,0.4nm,0.8s								
ASAR	**Alice Springs**	**96.24 237**		P		**P**	**08 42 45.1**	**-0.2**
STKA	**Stephens Creek**	**99.74 227**		LR		LR	09 28 07.2		
	comp=Z,39nm,19.2s,baz=209,slow=35								
H03N2	**Juan Fernandez**	**112.00 117**		T		T	10 48 59.7		
	baz=314,slow=76,SNR=1.2								
H03N1	**Juan Fernandez**	**112.02 117**		T		T	10 49 03.6		
	baz=308,slow=76,SNR=1.8								
QSPA	**South Pole Qui**	**144.64 180**		PKP		**PKPab**	**08 48 50.7**	**-0.3**
	comp=Z,5.8nm,0.6s,baz=315,slow=0.4,SNR=52								
QSPA	**South Pole Qui**	**144.64 180**				**PKPab**	**08 48 50.9**	**-0.1**
BOSA	**Boshof**	**153.47 349**		PKPbc		**PKPbc**	**08 49 14.4**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=274,slow=2.9,SNR=3.8								
BOSA	**Boshof**	**153.47 349**		PKPbc		**PKiKP**	**08 49 16.2**	**+0.8**
BOSA				PKPab		**PKPab**	**08 49 27.4**	**-0.2**

NIED ***26*** *08:42:33.9, 31.48N× 129.28E, h10km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr0.08; Mθθ0.07; Mϕϕ -0.15; Mrθ -0.18; Mrϕ 1.69; Mθϕ 0.12; Fault plane solution: M0 1.71000×10^14 NP1: ϕs182.00000°, δ84.00000°, λ-177.00000°. NP2: ϕs92.00000°, δ87.00000°, λ-6.00000°.*

JMA 26 08:42:33.9±0.1, 31.5N±0.3× 129.3E±0.5, h10km±1km, MV3.6/40, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.42**	**63**	*i* P	Pg	08 42 42.3	0.0
JSJ				S	Sg	08 42 48.0	+0.1
JSU	**Suzuyama**	**1.01**	**88**	P	Pg	08 42 53.1	-0.2
JSU				S	Sb	08 43 06.9	+0.1
JHD	**Hondo**	**1.22**	**37**	P	Pn	08 42 56.4	-0.6
JFU	**Fukue jima 2**	**1.25**	**339**	P	Pn	08 42 56.7	-0.7
JFU				S	Sb	08 43 12.8	-0.9
JKC	**Kuchinoerabu**	**1.29**	**142**	P	Pn	08 42 57.4	-0.5
JZO	**Okuchi**	**1.30**	**60**	*eP*	Pb	08 42 58.7	+0.2

NEIC ***26*** *08:53:17.4±0.6, 18.7N±0.1× 69.42W±0.04, h95km±8km, mb3.9/2, Error ellipse: s-maj=20.5km s-min=4.1km az=191.0*
SDD ***26*** *08:53:18.6±2.1, 18.72N× 69.41W, h89km±7km, MD3.4, ML3.8, MW3.9, Presumed earthquake*
OSPL ***26*** *08:53:18.3±1.9, 18.54N× 69.43W, h103km±10km, ML3.8, Presumed earthquake*
PTWC ***26*** *08:53:18, 18.70N× 69.40W, h83km, Ml3.9/14, DOMINICAN REPUBLIC REGION*

ISC 26 08:53:16.2±0.8, 18.74N±0.04× 69.44W±0.03, h102km±6km, n93, σ1s81/119, 30C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATOM	**Hato Mayor del**	**0.07**	**49**	⇑*i* P	**Pn**	**08 53 30.1**	**-0.3**
HATOM				⇑*i* S	**Sn**	**08 53 39.4**	**-1.6**
HATOM				IAML		08 53 40.9	
	comp=N,4μm,0.2s						
DR12	**Loma Pena Alta**	**0.08**	**49**		**Pn**	**08 53 30.1**	**-0.3**
DR12				Sn	**Sn**	**08 53 40.7**	**-0.4**
SDD	**Santo Domingo**	**0.53**	**238**		**Pn**	**08 53 32.1**	**-0.2**
SDD				Sn	**Sn**	**08 53 44.0**	**-0.4**
SDD	**Santo Domingo**	**0.53**	**238**	P	**Pn**	**08 53 32.3**	**-0.2**
SDD	**Santo Domingo**	**0.53**	**238**	⇑*i* P	**Pn**	**08 53 32.3**	**-0.2**
SDD				⇑*i* S	**Sn**	**08 53 44.0**	**-0.4**
SDD				IAML		08 53 45.3	
	comp=N,4μm,0.2s						
SDD	**Santo Domingo**	**0.53**	**238**	*i* P	**Pn**	**08 53 32.2**	**-0.2**
SDD				*eS*	**Sn**	**08 53 44.1**	**-0.4**
SMDR	**Samana, DR**	**0.60**	**24**	P	**Pn**	**08 53 32.9**	**-0.1**
SMDR	**Samana, DR**	**0.60**	**24**	⇓*i* P	**Pn**	**08 53 32.7**	**-0.2**
SMDR				⇑*i* S	**Sn**	**08 53 44.0**	**-1.5**
SMDR				IAML		08 53 51.2	
	comp=N,9μm,0.6s						
HGY1	**Higuey**	**0.70**	**102**	P	**Pn**	**08 53 33.7**	**-0.1**
HGY1				S	**Sn**	**08 53 47.7**	**+0.7**
HIDR	**Higuey Centro**	**0.70**	**102**	⇑*i* P	**Pn**	**08 53 33.7**	**-0.2**
HIDR				⇑*i* S	**Sn**	**08 53 44.7**	**-2.3**
HIDR				IAML		08 53 50.0	
	comp=N,5μm,0.2s						
LOSC1	**San Cristbal**	**0.71**	**243**	*i* P	**Pn**	**08 53 34.2**	**+0.3**
LOSC1				*eS*	**Sn**	**08 53 47.1**	**0.0**
BANI	**BANI**	**0.94**	**249**		**Pn**	**08 53 36.9**	**+0.7**
BANI				Sn	**Sn**	**08 53 52.6**	**+1.3**
BANI	**BANI**	**0.94**	**249**	⇑*i* P	**Pn**	**08 53 36.9**	**+0.7**
BANI				⇑*i* S	**Sn**	**08 53 52.2**	**+0.9**
BANI				IAML		08 53 55.5	
	comp=N,8μm,0.2s						
PCDR	**Punta Cana, DR**	**1.03**	**102**		**Pn**	**08 53 37.2**	**+0.1**
PCDR				Sn	**Sn**	**08 53 53.7**	**+0.9**
PCDR	**Punta Cana, DR**	**1.03**	**102**	⇑*i* P	**Pn**	**08 53 37.1**	**+0.1**
PCDR				IAML		08 53 57.0	
	comp=N,1μm,0.8s						
PCDR	**Punta Cana, DR**	**1.03**	**102**	*i* P	**Pn**	**08 53 37.8**	**+0.7**
PCDR				*eS*	**Sn**	**08 53 53.7**	**+0.9**
PCDR				IAML		08 53 58.0	
	comp=Z,441nm,0.5s						
CADR	**Cabrera**	**1.04**	**333**	⇑*i* S	**Sn**	**08 53 53.2**	**+0.2**
CADR				IAML		08 53 54.9	
	comp=N,4μm,0.6s						
ABDR	**Alto Bandera**	**1.13**	**274**	⇑*i* P	**Pn**	**08 53 39.1**	**+0.5**
ABDR				⇑*i* S	**Sn**	**08 53 52.8**	**-2.5**
ABDR				IAML		08 54 02.9	
	comp=N,0.2nm,0.7s						
SC01	**Santiago de Io**	**1.40**	**300**		**Pn**	**08 53 42.5**	**+1.2**
SC01	**Santiago de Io**	**1.40**	**300**	P	**Pn**	**08 53 42.7**	**+1.4**
SC01	**Santiago de Io**	**1.40**	**300**	⇑*i* P	**Pn**	**08 53 42.8**	**+1.4**
SC01				IAML		08 54 06.5	
	comp=N,2μm,0.7s						
SC01	**Santiago de Io**	**1.40**	**300**	*i* P	**Pn**	**08 53 42.8**	**+1.4**
SC01				*eS*	**Sn**	**08 54 03.2**	**+2.9**
SC01				IAML		08 54 11.7	
	comp=Z,1μm,0.3s						
SODR	**Sosua Marina B**	**1.47**	**313**	⇑*i* P	**Pn**	**08 53 42.7**	**+0.4**
SODR				⇑*i* S	**Sn**	**08 54 02.4**	**+0.5**
SODR				IAML		08 54 18.6	
	comp=N,2μm,0.5s						
SDDR	**Presa de Saban**	**1.77**	**278**		**Pn**	**08 53 46.9**	**+1.0**
SDDR	**Presa de Saban**	**1.77**	**278**	P	**Pn**	**08 53 47.0**	**+1.0**
SDDR	**Presa de Saban**	**1.77**	**278**	P	**Pn**	**08 53 46.8**	**+0.8**
SDDR				S	**Sn**	**08 54 10.5**	**+1.9**
SDDR	**Presa de Saban**	**1.77**	**278**	⇑*i* P	**Pn**	**08 53 46.9**	**+1.0**
SDDR				⇑*i* S	**Sn**	**08 54 09.6**	**+1.0**
SDDR				IAML		08 54 17.5	
	comp=N,686nm,0.6s						
SDDR	**Presa de Saban**	**1.77**	**278**	*i* P	**Pn**	**08 53 47.7**	**+1.7**
SDDR				*eS*	**Sn**	**08 54 10.3**	**+1.7**
SDDR				IAML		08 54 15.7	
	comp=Z,10μm,0.2s						
SDDR	**Presa de Saban**	**1.77**	**278**	*eP*	**Pn**	**08 53 46.9**	**+1.0**
SDDR				*eS*	**Sn**	**08 54 07.9**	**-0.6**
SDDR				IAML		08 54 14.5	
	comp=Z,716nm,0.5s						
SDDR				IAML		08 54 15.6	
	comp=Z,645nm,0.3s						
MADR	**Mao Valverde**	**1.77**	**298**	⇑*i* P	**Pn**	**08 53 46.1**	**+0.2**
MADR				IAML		08 54 19.8	
	comp=N,2μm,0.5s						
LUDR	**Luperon**	**1.83**	**309**	⇑*i* P	**Pn**	**08 53 47.5**	**+0.8**
NEDR	**Neiba UASD**	**1.89**	**263**	⇓*i* P	**Pn**	**08 53 48.3**	**+0.8**
NEDR				IAML		08 54 15.5	
	comp=N,648nm,0.5s						
REDR	**Restauracion**	**1.90**	**283**	⇑*i* P	**Pn**	**08 53 51.6**	**+4.1**
REDR				⇑*i* S	**Sn**	**08 54 18.6**	**+7.1**
REDR				IAML		08 54 23.8	
	comp=N,1μm,0.2s						
LODU1	**El Espartillar**	**1.97**	**259**	*i* P	**Pn**	**08 53 49.4**	**+0.9**
LOVI	**El Cajuil, Ovi**	**2.06**	**243**	*i* P	**Pn**	**08 53 49.3**	**-0.3**
LOVI				*eS*	**Sn**	**08 54 13.5**	**-1.6**
LOVI				IAML		08 54 20.6	
	comp=Z,408nm,0.5s						
AGPR	**Aguadilla, PR**	**2.23**	**97**		**Pn**	**08 53 52.2**	**+0.4**
AGPR	**Aguadilla, PR**	**2.23**	**97**	P	**Pn**	**08 53 53.5**	**+1.7**
AGPR	**Aguadilla, PR**	**2.23**	**97**	⇑*i* P	**Pn**	**08 53 52.0**	**+0.2**
AGPR				IAML		08 54 30.2	
	comp=N,412nm,0.4s						
PRSN	**Puerto Rico Se**	**2.24**	**103**		**Pn**	**08 53 52.6**	**+0.6**
PRSN	**Puerto Rico Se**	**2.24**	**103**	P	**Pn**	**08 53 53.3**	**+1.3**
PRSN	**Puerto Rico Se**	**2.24**	**103**	⇑*i* P	**Pn**	**08 53 52.8**	**+0.9**
PRSN				IAML		08 54 29.1	
	comp=N,734nm,0.3s						
LOBH	**Bahia de las A**	**2.26**	**248**	*i* P	**Pn**	**08 53 52.6**	**+0.3**
LODA1	**ITESIL, Dajabo**	**2.29**	**291**	⇑*i* P	**Pn**	**08 53 53.9**	**+1.3**
LODA1				IAML		08 54 41.2	
	comp=N,2μm,2.3s						
CRPR	**Cabo Rojo, PR**	**2.33**	**108**		**Pn**	**08 53 53.6**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.33**	**108**	P	**Pn**	**08 53 53.9**	**+0.7**
MCDR	**Montecristi**	**2.39**	**299**	P	**Pn**	**08 53 55.7**	**+1.8**
MCDR	**Montecristi**	**2.39**	**299**	⇑*i* P	**Pn**	**08 53 53.9**	**0.0**
MCDR				⇑*i* S	**Sn**	**08 54 22.6**	**-0.1**
MCDR				IAML		08 54 38.7	
	comp=N,811nm,0.5s						
MLPR	**Magueyes Islan**	**2.40**	**108**		**Pn**	**08 53 54.3**	**+0.2**
MLPR	**Magueyes Islan**	**2.40**	**108**	P	**Pn**	**08 53 55.8**	**+1.7**
MLPR	**Magueyes Islan**	**2.40**	**108**	⇑*i* P	**Pn**	**08 53 54.4**	**+0.3**
MLPR				IAML		08 54 35.8	
	comp=N,61nm,0.4s						
AOPR	**Arecibo Observ**	**2.58**	**98**		**Pn**	**08 53 56.8**	**+0.3**
AOPR	**Arecibo Observ**	**2.58**	**98**	P	**Pn**	**08 53 57.8**	**+1.3**
AOPR	**Arecibo Observ**	**2.58**	**98**	⇑*i* P	**Pn**	**08 53 57.5**	**+1.0**
AOPR				IAML		08 54 41.4	
	comp=N,692nm,0.3s						
UUPR	**Utuado, UPR, P**	**2.63**	**100**		**Pn**	**08 53 57.7**	**+0.6**
UUPR	**Utuado, UPR, P**	**2.63**	**100**	P	**Pn**	**08 53 58.3**	**+1.2**
OBIP	**Obispado Ponce**	**2.78**	**104**		**Pn**	**08 53 59.5**	**+0.4**
CELP	**Cerrillos**	**2.80**	**103**		**Pn**	**08 53 60.0**	**+0.6**
CELP	**Cerrillos**	**2.80**	**103**	⇑*i* P	**Pn**	**08 54 00.1**	**+0.8**
CELP				IAML		08 54 42.8	
	comp=N,114nm,0.3s						
ECPR	**Experimental S**	**2.95**	**98**		**Pn**	**08 54 00.1**	**-1.3**
ECPR	**Experimental S**	**2.95**	**98**	P	**Pn**	**08 54 00.4**	**-1.0**
GRTK	**Grand Turk**	**3.18**	**330**	IAML		08 54 50.5	
	comp=N,224nm,0.3s						
GRTK	**Grand Turk**	**3.18**	**330**	*eP*	**Pn**	**08 54 02.6**	**-1.9**
GRTK				*eS*	**Sn**	**08 54 37.2**	**-4.5**
GRTK				IAML		08 54 41.0	
	comp=N,153nm,0.2s						
GRTK				IAML		08 54 41.2	
	comp=N,167nm,0.2s						
SJG	**San Juan**	**3.19**	**101**	Pn	**Pn**	**08 54 04.3**	**-0.2**
SJG	**San Juan**	**3.19**	**101**	P	**Pn**	**08 54 04.8**	**+0.3**
SJG				S	**Sn**	**08 54 42.9**	**+1.1**
PDPR	**Patillas Dam,**	**3.33**	**102**		**Pn**	**08 54 07.2**	**+0.8**
HUMP	**Col San Antoni**	**3.46**	**99**		**Pn**	**08 54 07.8**	**-0.4**
MASC	**Masc**	**4.74**	**288**	*eP*	**Pn**	**08 54 24.1**	**-1.4**
MASC				*eS*	**Sn**	**08 55 13.4**	**-5.9**
QMBU	**Quimbuelo**	**5.27**	**287**	*eP*	**Pn**	**08 54 29.3**	**-3.4**
QMBU				*eS*	**Sn**	**08 55 28.1**	**-4.1**
GTBY	**Guantanamo Bay**	**5.48**	**283**	P	**Pn**	**08 54 36.3**	**+0.8**
	comp=N,31nm,1.2s						
GTBY	**Guantanamo Bay**	**5.48**	**283**	*eP**	**Pn**	**08 54 33.5**	**-2.0**
NMDO	**Nuevo Mundo**	**5.53**	**290**	Pn	**Pn**	**08 54 37.1**	**+1.0**
NMDO	**Nuevo Mundo**	**5.53**	**290**	*eP*	**Pn**	**08 54 33.4**	**-2.8**
MOAC	**Moa**	**5.54**	**291**	*eP*	**Pn**	**08 54 34.6**	**-1.7**
HLGC	**Holguin**	**6.59**	**290**	*eP*	**Pn**	**08 54 49.8**	**-0.8**
URIC	**Uribia, Colomb**	**7.42**	**200**	P	**Pn**	**08 54 59.7**	**-2.2**
	comp=N,11nm,1.3s						
URIC				S	**Sn**	**08 56 17.3**	**-7.2**
	comp=N,11nm,1.3s						
MTDJ	**Mount Denham**	**7.70**	**267**	Pn	**Pn**	**08 55 06.5**	**+0.7**
MTDJ	**Mount Denham**	**7.70**	**267**	P	**Pn**	**08 55 01.7**	**-4.1**
	comp=N,47nm,1.0s						
CCCC	**Cccc**	**8.20**	**289**	*eP*	Pn	08 55 04.7	-7.8
BIM	**Bigot**	**9.05**	**116**	Pn	**Pn**	**08 55 24.2**	**0.0**
OCAC	**Ocana**	**11.10**	**200**	P	**Pn**	**08 55 50.3**	**-1.7**
	comp=N,612nmcomp=N,25nm,0.8s						
OCAC				S	Sn	08 57 46.8	-7.5
	comp=N,612nmcomp=N,25nm,0.8s						
PAMC	**Pamplona, Colo**	**11.77**	**196**	P	**Pn**	**08 56 01.3**	**0.0**
PAMC				S	Sn	08 58 01.5	-9.5
BRJC	**Barrancabermej**	**12.42**	**200**	P	**Pn**	**08 56 07.3**	**-2.3**
	comp=N,26nm,1.0s						
UREC	**San Jos de Ur**	**12.42**	**209**	P	**Pn**	**08 56 05.8**	**-3.8**
	comp=N,1μmcomp=N,26nm,0.4s						
BARC	**Barichara**	**12.61**	**197**	P	**Pn**	**08 56 15.0**	**+2.7**
	comp=N,12nm,0.6s						
PTBC	**PUERTO BERRIO,**	**13.07**	**203**	P	**Pn**	**08 56 19.2**	**+1.1**
	comp=N,25nm,0.6s						
RUSC	**La Rusia**	**13.25**	**196**	P	**Pn**	**08 56 20.5**	**-0.4**
	comp=N,17nm,0.8s						
SPBC	**San Pablo de B**	**13.77**	**200**	P	**Pn**	**08 56 28.1**	**+0.8**
	comp=N,12nm,0.4s						
CBOC	**Ciudad Bolivar**	**14.31**	**207**	P	**Pn**	**08 56 36.4**	**+2.0**
	comp=N,11nm,0.5s						
ROSC	**El Rosal**	**14.61**	**200**	P	**Pn**	**08 56 40.7**	**+2.3**
	comp=N,7.3nm,0.6s						
GUY2C	**Guyana, Caldas**	**14.62**	**204**	P	**Pn**	**08 56 38.5**	**-0.2**
	comp=N,12nm,0.8s						
CHIC	**Chingaza**	**14.64**	**197**	P	**P**	**08 56 43.3**	**+0.9**
	comp=N,10nm,0.9s						
BOAB	**BOACO BROADBAN**	**16.83**	**251**		**P**	**08 57 07.3**	**+1.1**
BOAB				IAmb	IAmb	08 57 21.1	
	comp=Z,20nm,1.1s						
BOAV	**Boa Vista**	**18.44**	**151**	P	**P**	**08 57 24.4**	**+0.4**
BOAV				IAmb	IAmb	08 57 45.8	
	comp=Z,3.1nm,1.0s						

IDC ***26*** *09:20:48.6±1.2, 7.77N× 67.76W, h0km, mb3.4/4, mbtmp3.8/8, ML3.5/4, MS2.8/1, Error ellipse: s-maj=29.7km s-min=15.9km az=6.0*
NEIC ***26*** *09:20:51.5±0.8, 7.85N±0.08× 67.77W±0.07, h10km±2km, mb4.3/4, Error ellipse: s-maj=14.6km s-min=8.8km az=35.0*
RSNC ***26*** *09:20:55.1±1.0, 8.N±4.× 67.8W±1.4, h13km±19km, M3.8, mB4.9, mb4.4, ML3.5, Mw(mB)4.1*
FUNV ***26*** *09:20:55.5, 7.82N× 67.80W, h27km, MW4.0, Presumed earthquake*

ISC 26 09:20:51.0±0.7, 7.82N±0.05× 67.84W±0.05, h10km, n43, σ1s75/56, mb3.6/4, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TACV	**Tcata**	**2.44**	**19**	*eP*	**Pn**	**09 21 32.7**	**+1.7**
TACV				*eS*	**Sn**	**09 22 00.0**	**-0.9**
FUNV	**FUNVISIS**	**2.82**	**21**	*eP*	**Pn**	**09 21 38.4**	**+2.1**
FUNV				*eS*	**Sn**	**09 22 09.0**	**-1.5**
SDV	**Santo Domingo**	**2.96**	**291**	Pn	**Pn**	**09 21 39.6**	**+1.4**
	29nm,0.3s,baz=127,slow=8.2,SNR=29						
SDV				Pg	**Pb**	**09 21 44.3**	**+0.3**
	52nm,0.3s,baz=91,slow=6.6,SNR=18						
SDV				Sn	**Sn**	**09 22 13.1**	**-0.8**
	76nm,0.3s,baz=60,slow=18,SNR=7.0						
SDV				Lg	Lg	09 22 24.7	
	56nm,0.3s,baz=14,slow=18,SNR=9.2						
	61nm,0.3s						
SDV	**Santo Domingo**	**2.96**	**291**		**Pn**	**09 21 39.2**	**+1.0**
SDV	**Santo Domingo**	**2.96**	**291**	*eP*	**Pn**	**09 21 39.7**	**+1.5**
SDV				*eS*	**Sn**	**09 22 13.6**	**-0.3**
PAMC	**Pamplona, Colo**	**4.84**	**265**	P	**Pn**	**09 22 04.9**	**+0.6**
PAMC				S	**Sn**	**09 22 58.5**	**-2.2**
BARC	**Barichara**	**5.44**	**257**	P	**Pn**	**09 22 13.7**	**+1.3**
	1μm34nm,0.5s						
BARC				S	**Sn**	**09 23 14.7**	**-0.5**
	1μm34nm,0.5s						
OCAC	**Ocana**	**5.44**	**275**	P	**Pn**	**09 22 13.1**	**+0.8**
	2μm83nm,0.6s						
OCAC				S	**Sn**	**09 23 13.7**	**-1.4**
	2μm83nm,0.6s						
RUSC	**La Rusia**	**5.54**	**250**	P	**Pn**	**09 22 14.8**	**+0.8**
	758nm35nm,1.0s						
RUSC				S	**Sn**	**09 23 18.6**	**+0.4**
	758nm35nm,1.0s						
RUSC	**La Rusia**	**5.54**	**250**	*eP*	**Pn**	**09 22 14.9**	**+0.8**
RUSC				*eS*	**Sn**	**09 23 14.4**	**-3.8**
URIC	**Uribia, Colomb**	**5.62**	**314**	P	**Pn**	**09 22 15.7**	**+1.0**
	24nm,1.1s						
URIC	**Uribia, Colomb**	**5.62**	**314**	*eP*	**Pn**	**09 22 15.9**	**+1.2**
URIC				*eS*	**Sn**	**09 23 15.2**	**-4.1**
BRJC	**Barrancabermej**	**5.91**	**262**	P	**Pn**	**09 22 19.8**	**+1.1**
	975nm23nm,0.5s						
SPBC	**San Pablo de B**	**6.55**	**251**	P	**Pn**	**09 22 26.9**	**-0.6**
	782nm31nm,0.6s						
SPBC				S	**Sn**	**09 23 37.8**	**-4.6**
	782nm31nm,0.6s						
CHIC	**Chingaza**	**6.66**	**242**	P	**Pn**	**09 22 31.2**	**+1.9**
	16nm,0.6s						
PTBC	**PUERTO BERRIO,**	**6.69**	**259**	P	**Pn**	**09 22 28.8**	**-0.5**
PTBC				S	**Sn**	**09 23 43.7**	**-1.9**
ROSC	**El Rosal**	**7.09**	**246**	Pn	**Pn**	**09 22 36.0**	**+0.9**
	5.4nm,0.3s,baz=176,slow=3.9,SNR=13						
ROSC				Lg	Lg	09 24 35.4	
	2.7nm,0.3s,baz=342,slow=24,SNR=1.7						
	7.4nm,0.3s						
ROSC	**El Rosal**	**7.09**	**246**		**Pn**	**09 22 36.7**	**+1.6**
ROSC	**El Rosal**	**7.09**	**246**	P	**Pn**	**09 22 37.7**	**+2.5**
	16nm,0.5s						
SJCC	**San Jacinto, C**	**7.54**	**286**	P	**Pn**	**09 22 42.0**	**+0.9**
	13nm,1.1s						
SJCC	**San Jacinto, C**	**7.54**	**286**	*eP*	**Pn**	**09 22 42.2**	**+1.1**
SJCC				*eS*	Sn	09 24 00.9	-5.8
UREC	**San Jos de Ur**	**7.62**	**270**	P	**Pn**	**09 22 42.9**	**+0.7**
	8.7nm,0.6s						
GUY2C	**Guyana, Caldas**	**7.91**	**251**	P	**Pn**	**09 22 47.4**	**+0.9**
	19nm,0.5s						
MACC	**Macarena, Meta**	**8.22**	**227**	P	**Pn**	**09 22 51.2**	**+0.8**
	560nm13nm,0.5s						
CBOC	**Ciudad Bolivar**	**8.34**	**257**	P	**Pn**	**09 22 53.6**	**+1.4**
BOAV	**Boa Vista**	**9.06**	**126**		**Pn**	**09 23 01.4**	**-0.6**
FDFM	**Morne la Roset**	**9.49**	**43**	Pn	**Pn**	**09 23 06.6**	**-1.3**
CRPR	**Cabo Rojo, PR**	**10.15**	**4**	Pn	**Pn**	**09 23 16.

*MOS **26** 09:58:55.9±1.0,30˙.37N×94˙.87E,h13^{km},mb4.8/34,Error ellipse: s-maj=8.2km s-min=3.7km az=122.5*
*BJI **26** 09:58:55.6,30˙.36N×94˙.87E,h8^{km},mB4.8/12,mb4.4/41, ML4.1/6,Ms4.1/35,Ms7 3.9/35*
*IDC **26** 09:58:55.3±0.6,30˙.29N×94˙.80E,h0^{km},mb4.3/24, mbtmp4.3/28,ML3.9/4,MS3.2/3,Error ellipse: s-maj=17.4km s-min=12.3km az=43.0*
*NEIC **26** 09:58:58.1±1.2,30˙.4N±0˙.1×94˙.81E±0˙.10,h10^{km}±1^{km}, mb4.7/54,Error ellipse: s-maj=17.7km s-min=13.8km az=198.0*
*GFZ **26** 09:58:58.9±0.3,30˚N±3˚×9˚5E±˚,h10^{km},M4.5/24, mb4.5/24*
ISC 26 09:58:58.2±0.5,30˙.47N±0˙.03×94˙.82E±0˙.04,h10^{km}±3^{km}, h10^{km}:pP-P,n288,σ1§27/308,mb4.6/73,MS3.8/6,9C-3D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKP	**Lekhapani**	**3.25**	**164**	*e*P	Pn	09 59 30.9	-18
LKP				*e*S	Sn	10 00 13.8	-14
LKP				IAML		10 00 24.3	
	comp=N,638nm,2.1s						
LKP				IAML		10 00 25.3	
	comp=E,442nm,1.3s						
LSA	**Lhasa**	**3.27**	**257**	P	**Pn**	**09 59 50.8**	**+0.8**
LSA	**Lhasa**	**3.27**	**257**	Pn	**Pn**	**09 59 50.8**	**+0.8**
TAWA	**Tawang**	**3.86**	**223**	*e*P	Pn	09 59 52.8	-5.1
TAWA				IAML		10 01 03.5	
	comp=N,363nm,0.6s						
TAWA				IAML		10 01 09.2	
	comp=E,504nm,1.0s						
MOKO	**MOKOCHONG**	**4.14**	**184**	*e*P	**Pn**	**10 00 01.0**	**-0.6**
MOKO				IAML		10 01 14.2	
	comp=E,304nm,1.0s						
MOKO				IAML		10 01 17.6	
	comp=N,345nm,0.6s						
TEZP	**TEZPUR**	**4.23**	**205**	*e*P	**Pn**	**10 00 02.3**	**-0.4**
KOHI	**KOHIMA**	**4.77**	**188**	*e*P	**Pn**	**10 00 09.7**	**-0.6**
GUWA	**GUWAHATI**	**5.07**	**214**	*e*P	**Pn**	**10 00 11.6**	**-2.7**
GUWA				*i* x	x	10 00 30.3	
SHL	**Shillong**	**5.53**	**209**	P	**Pn**	**10 00 19.0**	**-1.8**
SHL	**Shillong**	**5.53**	**209**		**Pn**	**10 00 18.6**	**-2.2**
SHL	**Shillong**	**5.53**	**209**	*e*P	**Pn**	**10 00 18.1**	**-2.7**
IMP	**Imphal**	**5.67**	**188**	*e*P	**Pn**	**10 00 21.4**	**-1.2**
IMP				*i* x	x	10 00 44.2	
IMP				*e*S	**Sn**	**10 01 27.3**	**-0.5**
GOMU	**GeErMu**	**5.72**	**360**	Pn	**Pn**	**10 00 24.0**	**+0.5**
GOMU				Sn	**Sn**	**10 01 33.5**	**+4.1**
GOMU				Sg	**Sg**	**10 01 55.3**	**-6.5**
DHUB	**DHUBRI**	**6.14**	**225**	*ex*	**Pn**	**10 00 29.4**	**+0.4**
MORE	**Moreh**	**6.22**	**184**	Pn	**Pn**	**10 00 29.8**	**-0.3**
TNCH	**TengChong**	**6.33**	**148**	*e*Pg	**Pg**	**10 01 02.5**	**+3.0**
TNCH				Sg	**Sg**	**10 02 21.8**	**+0.3**
TNCH				smax	smax		
	comp=N,300nm,0.9s						
TNCH				smax	smax		
	comp=E,290nm,0.5s						
TNCH				LR	LR		
	comp=N,3μm,3.3s						
TNCH				LR	LR		
	comp=E,2μm,2.8s						
TNCH				LR	LR		
	comp=Z,510nm,4.4s						
PZH	**PanZhiHua**	**7.26**	**121**	Pn	**Pn**	**10 00 43.5**	**-1.0**
EVN	**Everest**	**7.43**	**252**		**Pn**	**10 00 47.6**	**+0.4**
EVN	**Everest**	**7.43**	**252**	P	**Pn**	**10 00 48.4**	**+1.1**
CD2	**Chengdu**	**7.71**	**84**	Pn	**Pn**	**10 00 51.0**	**+0.4**
CD2				Sn	**Sn**	**10 02 22.0**	**+3.9**
CD2				L	L		
	comp=Z,2μm,8.8s						
CD2				L	L		
	comp=Z,2μm,7.8s						
CD2				L	L		
	comp=Z,2μm,8.2s						
KMI2	**Kunming**	**8.79**	**125**	P	**Pn**	**10 01 06.3**	**+0.6**
KMI2				S	**Sn**	**10 02 45.8**	**+0.8**
KMI2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMI2				L	L		
	comp=Z,980nm,5.5s						
KMI2				L	L		
	comp=Z,1μm,4.2s						
KMI2				L	L		
	comp=Z,530nm,7.7s						
LZDM	**Lanzhou Array**	**9.23**	**51**	Pn	**Pn**	**10 01 12.9**	**+1.2**
	baz=226,slow=9.6						
	comp=Z,7.1nm,0.6s						
LZH	**Lanzhou**	**9.40**	**51**	*e*P	**Pn**	**10 01 17.5**	**+3.5**
LZH				pmax	pmax		
	comp=Z,19nm,1.7s						
LZH				L	L		
	comp=Z,770nm,11.4s						
LZH				L	L		
	comp=Z,880nm,13.7s						
LZH				L	L		
	comp=Z,640nm,12.1s						
GTA2	**Gaotai**	**9.87**	**23**	*e*P	**Pn**	**10 01 23.0**	**+2.7**
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA2				L	L		
	comp=Z,510nm,9.5s						
GTA2				L	L		
	comp=Z,460nm,7.9s						
GTA2				L	L		
	comp=Z,550nm,8.9s						
GYA	**Guiyang**	**11.16**	**108**	⇑P	**Pn**	**10 01 37.5**	**-0.5**
GYA				pmax	pmax		
	comp=Z,27nm,0.7s						
CHTO	**Chiang Mai**	**12.19**	**161**	P	**Pn**	**10 01 49.7**	**-2.3**
CHTO	**Chiang Mai**	**12.19**	**161**	Pn	**Pn**	**10 01 49.7**	**-2.3**
CHTO	**Chiang Mai**	**12.19**	**161**	P	**Pn**	**10 01 52.2**	**+0.2**
CM31	**Chiang Mai Arr**	**12.53**	**162**	Pn	**Pn**	**10 01 55.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**12.53**	**162**	Pn	**Pn**	**10 01 54.2**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=332,slow=12,SNR=9.1						
	comp=Z,1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**12.53**	**162**	*i* P	**Pn**	**10 01 57.0**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**12.53**	**162**	Pn	**Pn**	**10 01 54.5**	**-2.1**
WMQ	**Urumqi**	**14.48**	**339**	*e*P	**Pn**	**10 02 25.5**	**+2.2**
WMQ				sP	P	10 02 33.5	+3.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				L	L		
	comp=Z,590nm,15.5s						
WMQ				L	L		
	comp=Z,340nm,12.9s						
WMQ				L	L		
	comp=Z,75nm,16.3s						
BTO2	**Baotou**	**15.95**	**46**	*e*P	**Pn**	**10 02 42.0**	**-0.9**
BTO2				pP	**P**	**10 02 45.3**	**-1.2**
BTO2				sP	**pP**	**10 02 49.0**	**-1.6**
BTO2				PP	**sP**	**10 02 55.0**	**+2.5**
BTO2				pmax	pmax		
	comp=Z,19nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,330nm,5.3s						
BTO2				L	L		
	comp=Z,600nm,12.5s						
BTO2				L	L		
	comp=Z,350nm,12.3s						
BTO2				L	L		
	comp=Z,740nm,12.1s						
WHN	**Wuhan**	**16.84**	**85**	⇓P	**Pn**	**10 02 52.0**	**-2.1**
WHN				sP	**pP**	**10 03 00.3**	**+0.2**
WHN				pmax	pmax		
	comp=Z,36nm,0.8s						
WHN				L	L		
	comp=Z,1μm,10.3s						
WHN				L	L		
	comp=Z,560nm,9.2s						
WHN				L	L		
	comp=Z,2μm,9.6s						
HHC	**Hu-ho-hao-te**	**17.07**	**48**	*e*P	**P**	**10 02 58.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,60nm,4.0s						
HHC				L	L		
	comp=Z,280nm,10.6s						
HHC				L	L		
	comp=Z,200nm,11.7s						
HHC				L	L		
	comp=Z,250nm,11.2s						
SHLS	**Shalkode**	**17.62**	**320**	*e*P	**Pn**	**10 03 01.0**	**-2.9**
SHLS	**Shalkode**	**17.62**	**320**	*e*P	**Pn**	**10 03 01.0**	**-2.9**
PDGK	**Podgornoye**	**17.71**	**321**	P	**Pn**	**10 03 04.5**	**-0.6**
PDGK	**Podgornoye**	**17.71**	**321**	P	**Pn**	**10 03 04.5**	**-0.6**
TARG	**Taragay, Kyrgy**	**17.72**	**314**	P	**Pn**	**10 03 05.7**	**+0.2**
TARG				pmax	pmax		
	comp=Z,36nm,1.2s						
TARG	**Taragay, Kyrgy**	**17.72**	**314**		**Pn**	**10 03 05.7**	**+0.2**
TARG	**Taragay, Kyrgy**	**17.72**	**314**	P	**P**	**10 03 07.9**	**+1.5**
QIZ	**Qiongzhong**	**17.75**	**126**	P	**P**	**10 03 06.0**	**-0.4**
QIZ				S	**Sn**	**10 06 24.5**	**+1.0**
QIZ				L	L		
	comp=Z,280nm,8.3s						
QIZ				L	L		
	comp=Z,260nm,6.8s						
QIZ				L	L		
	comp=Z,290nm,9.6s						
PRZ	**Przheval'sk**	**17.80**	**317**	P	**P**	**10 03 07.6**	**+0.6**
PRZ				pmax	pmax		
	comp=Z,96nm,1.2s						
PRZ	**Przheval'sk**	**17.80**	**317**	P	**P**	**10 03 07.6**	**+0.6**
PRZ				IAmb	IAmb	10 03 13.3	
	comp=Z,96nm,1.2s						
PRZ	**Przheval'sk**	**17.80**	**317**	P	**P**	**10 03 10.2**	**+3.2**
UZB	**Uzynbulak**	**17.86**	**319**	*e*P	**Pn**	**10 03 06.9**	**0.0**
UZB	**Uzynbulak**	**17.86**	**319**	*e*P	**Pn**	**10 03 06.9**	**0.0**
HNS	**HongShan**	**17.88**	**62**	⇑P	**Pn**	**10 03 06.0**	**-1.0**
HNS				pmax	pmax		
	comp=Z,13nm,0.9s						
HNS				L	L		
	comp=Z,260nm,9.9s						
HNS				L	L		
	comp=Z,150nm,10.0s						
HNS				L	L		
	comp=Z,310nm,12.0s						
KSH2	**Kashi**	**18.00**	**304**	P	**P**	**10 03 09.5**	**+0.3**
KSH2				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ASAI	**AK-SAY(Kyrgyzs**	**18.12**	**310**	P	**P**	**10 03 11.8**	**+1.0**
SATY	**Saty**	**18.15**	**318**	*e*P	**Pn**	**10 03 10.5**	**0.0**
SATY				*e*S	**Sn**	**10 06 34.3**	**+1.2**
SATY	**Saty**	**18.15**	**318**	*e*P	**Pn**	**10 03 10.6**	**0.0**
SATY				*e*S	**Sn**	**10 06 34.4**	**+1.2**
KPKS	**Kokpek**	**18.25**	**320**	*e*P	**Pn**	**10 03 11.6**	**-0.1**
KPKS				*e*S	**Sn**	**10 06 36.6**	**+1.1**
KPKS	**Kokpek**	**18.25**	**320**	*e*P	**Pn**	**10 03 11.6**	**-0.1**
KPKS				*e*S	**Sn**	**10 06 36.6**	**+1.1**
KDJ	**Kajisay**	**18.33**	**314**	P	**Pn**	**10 03 12.7**	**-0.1**
KDJ				pmax	pmax		
	comp=Z,27nm,1.2s						
KDJ	**Kajisay**	**18.33**	**314**	P	**Pn**	**10 03 12.7**	**-0.1**
KDJ	**Kajisay**	**18.33**	**314**	P	**P**	**10 03 14.0**	**+1.1**
ZSN	**Zaisan**	**18.61**	**338**	*e*P	**P**	**10 03 15.8**	**+0.1**
ZSN	**Zaisan**	**18.61**	**338**	*e*P	**P**	**10 03 15.8**	**+0.1**
NRN	**Naryn**	**18.72**	**311**	P	**P**	**10 03 17.3**	**0.0**
NRN				pmax	pmax		
	comp=Z,11nm,1.0s						
NRN	**Naryn**	**18.72**	**311**	P	**P**	**10 03 17.3**	**0.0**
MK31	**Makanchi Array**	**18.98**	**333**	*ce*P	**P**	**10 03 19.6**	**-0.1**
MKAR	**Makanchi Array**	**18.98**	**333**	P	**P**	**10 03 19.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=146,slow=13,SNR=26						
MKAR				LR	LR	10 10 49.5	
	comp=Z,43nm,19.9s,baz=136,slow=37						
	comp=Z,5.1nm,0.8s						
MKAR	**Makanchi Array**	**18.98**	**333**	*i* P	**P**	**10 03 19.2**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**18.98**	**333**		**P**	**10 03 19.1**	**-0.6**
TNSS	**Tian-Shan**	**18.99**	**316**	*e*P	**P**	**10 03 20.3**	**0.0**
TNSS	**Tian-Shan**	**18.99**	**316**	*e*P	**P**	**10 03 20.4**	**+0.1**
MDOK	**Medeo**	**19.00**	**317**	*e*P	**Pn**	**10 03 20.6**	**-0.3**
MDOK	**Medeo**	**19.00**	**317**	*e*P	**Pn**	**10 03 20.6**	**-0.3**
AAA	**Alma-Ata**	**19.11**	**317**	*e*P	**P**	**10 03 21.3**	**+0.1**
AAA	**Alma-Ata**	**19.11**	**317**	*e*P	**P**	**10 03 21.4**	**+0.1**
MAKZ	**Makanchi**	**19.11**	**332**	P	**P**	**10 03 21.2**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.2s						
MAKZ	**Makanchi**	**19.11**	**332**	P	**P**	**10 03 21.2**	**0.0**
MAKZ	**Makanchi**	**19.11**	**332**	P	**Pn**	**10 03 21.7**	**-0.3**
BOOM	**Boomskoye usch**	**19.30**	**314**	P	**P**	**10 03 23.3**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,33nm,1.3s						
BOOM	**Boomskoye usch**	**19.30**	**314**		**P**	**10 03 23.3**	**-0.2**
TDK	**Taldyqorghan**	**19.41**	**323**	*e*P	**P**	**10 03 24.7**	**+0.2**
TDK	**Taldyqorghan**	**19.41**	**323**	*e*P	**P**	**10 03 24.7**	**+0.2**
TIA	**Tai'an**	**19.48**	**67**	P	**Pn**	**10 03 27.3**	**+0.8**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SONM	**Songino Array**	**19.49**	**24**	P	**P**	**10 03 25.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=211,slow=12,SNR=17						
SONM				LR	LR	10 11 35.2	
	comp=Z,127nm,21.5s,baz=72,slow=39						
	comp=Z,8.2nm,0.9s						
SONM	**Songino Array**	**19.49**	**24**	P	**Pn**	**10 03 26.3**	**-0.4**
SONM				pmax	pmax		
	comp=Z,11nm,1.2s						
SONM	**Songino Array**	**19.49**	**24**		**Pn**	**10 03 26.3**	**-0.4**
HYB	**Hyderabad**	**19.71**	**232**	*e*P	**P**	**10 03 28.3**	**+0.4**
HYB				*e*S	**Sn**	**10 07 19.4**	**+8.4**
ULN	**Ulaanbaatar**	**19.75**	**25**	*ce*P	**Pn**	**10 03 29.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	**Ulaanbaatar**	**19.75**	**25**	P	**P**	**10 03 28.3**	**0.0**
ULN	**Ulaanbaatar**	**19.75**	**25**	P	**P**	**10 03 29.1**	**+0.7**
DGZ	**Jazzator, Alta**	**20.01**	**346**	*i* P	**P**	**10 03 31.2**	**+0.1**
KNGR	**Kungurtug, Tuv**	**20.22**	**5**	*i* P	**P**	**10 03 33.2**	**-0.2**
KNGR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AAK	**Ala-Archa**	**20.29**	**312**	P	**P**	**10 03 34.9**	**+0.6**
	comp=Z,18nm,0.9s,baz=128,slow=11,SNR=24						
	comp=Z,18nm,0.9s						
AAK	**Ala-Archa**	**20.29**	**312**	*ce*P	Pn	10 03 36.2	-0.1
AAK				pmax	pmax		
	comp=Z,51nm,1.3s						
AAK	**Ala-Archa**	**20.29**	**312**		**P**	**10 03 34.3**	**0.0**
AAK				IAmb	IAmb	10 03 39.7	
	comp=Z,55nm,1.3s						
AAK	**Ala-Archa**	**20.29**	**312**	P	Pn	10 03 36.4	+0.1
MANEM	**Manem**	**20.41**	**296**		**P**	**10 03 35.4**	**-0.3**
MANEM				IAmb	IAmb	10 03 42.4	
	comp=Z,67nm,1.1s						
NJ2	**Nanjing**	**20.60**	**79**	*e*P	**P**	**10 03 37.8**	**+0.3**
NJ2				pP	**sP**	**10 03 42.8**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
SGDS	**Sogindy**	**20.63**	**314**	*e*P	**P**	**10 03 38.0**	**+0.2**
ARSB	**Arslanbob**	**20.69**	**308**	P	**P**	**10 03 38.6**	**0.0**
ARSB				pmax	pmax		
	comp=Z,37nm,1.3s						
ARSB	**Arslanbob**	**20.69**	**308**	P	**P**	**10 03 38.6**	**0.0**
ARSB				IAmb	IAmb	10 03 42.3	
	comp=Z,36nm,1.3s						
ZAK	**Zakamensk**	**20.88**	**15**	*e*P	**P**	**10 03 41.0**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,22nm,1.4s						
ARK	**Arkit**	**21.58**	**308**	P	**P**	**10 03 49.1**	**+0.9**
ARK	**Arkit**	**21.58**	**308**	P	**P**	**10 03 49.1**	**+0.9**
BTK	**Batken**	**21.75**	**303**	P	**P**	**10 03 49.6**	**-0.4**
BTK				pmax	pmax		
	comp=Z,28nm,1.0s						
BTK	**Batken**	**21.75**	**303**	P	**P**	**10 03 49.6**	**-0.4**
BTK				IAmb	IAmb	10 04 01.5	
	comp=Z,28nm,1.0s						
BTK	**Batken**	**21.75**	**303**	P	**P**	**10 03 51.0**	**+1.0**
GAR	**Garm**	**21.82**	**300**	P	**P**	**10 03 49.8**	**-0.9**
GAR				IAmb	IAmb	10 03 54.3	
	comp=Z,43nm,1.0s						
GAR	**Garm**	**21.82**	**300**	P	**P**	**10 03 50.2**	**-0.5**
BTLS	**Baital**	**21.85**	**318**	*e*P	**P**	**10 03 51.1**	**+0.2**
BTLS	**Baital**	**21.85**	**318**	*e*P	**P**	**10 03 51.2**	**+0.2**
KBL	**Kabul**	**22.09**	**287**	P	**P**	**10 03 53.0**	**-0.9**
KBL				pmax	pmax		
	comp=Z,122nm,1.3s						
KBL	**Kabul**	**22.09**	**287**		**P**	**10 03 53.0**	**-0.9**
KBL	**Kabul**	**22.09**	**287**	P	**P**	**10 03 53.9**	**0.0**
TLY	**Talaya**	**22.18**	**15**	*i* P	**P**	**10 03 55.6**	**+1.2**
TLY				pmax	pmax		
	comp=Z,12nm,1.9s						
TLY	**Talaya**	**22.18**	**15**	P	**P**	**10 03 58.7**	**+4.3**
DZA	**Taraz**	**22.47**	**310**	*e*P	**P**	**10 03 58.2**	**+0.6**
DZA				pmax	pmax		
	comp=Z,19nm,1.4s						
DZA	**Taraz**	**22.47**	**310**	*e*P	**P**	**10 03 58.2**	**+0.6**
	comp=Z,19nm,1.4s						
CHGR	**Chuyangaron**	**22.61**	**298**	*i* P	**P**	**10 03 57.8**	**-1.4**
CHGR				pmax	pmax		
	comp=Z,54nm,0.8s						
CHGR	**Chuyangaron**	**22.61**	**298**	P	**P**	**10 03 57.4**	**-1.8**
CHGR	**Chuyangaron**	**22.61**	**298**	P	**P**	**10 03 58.4**	**-0.8**
IRK	**Irkutsk**	**22.85**	**15**	*e*P	**P**	**10 04 02.2**	**+0.7**
IRK				pmax	pmax		
	comp=Z,35nm,1.6s						
IUG	**Iuzhnay**	**23.04**	**307**	*e*P	**P**	**10 04 03.9**	**+0.2**
IUG				pmax	pmax		
	comp=Z,35nm,1.3s						
IUG	**Iuzhnay**	**23.04**	**307**	*e*P	**P**	**10 04 03.9**	**+0.2**
	comp=Z,35nm,1.3s						
KK31	**Karatay Array**	**23.10**	**310**	P	**P**	**10 04 03.7**	**-0.5**
KK31				pmax	pmax		
	comp=Z,19nm,1.3s						
KK31	**Karatay Array**	**23.10**	**310**	P	**P**	**10 04 03.7**	**-0.5**
KK31				IAmb	IAmb	10 04 08.1	
	comp=Z,19nm,1.3s						
KKAR	**Karatay Array**	**23.10**	**310**	P	**P**	**10 04 03.9**	**-0.4**
KKAR	**Karatay Array**	**23.10**	**310**	P	**P**	**10 04 03.9**	**-0.4**
SHAA	**Shahritus**	**23.18**	**295**	P	**P**	**10 04 03.8**	**-1.4**
SHAA				IAmb	IAmb	10 04 09.6	
	comp=Z,91nm,1.5s						
CHM	**Chimkent**	**23.40**	**307**	*e*P	**P**	**10 04 07.5**	**+0.3**
CHM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CHM	**Chimkent**	**23.40**	**307**	*e*P	**P**	**10 04 07.6**	**+0.3**
	comp=Z,8.5nm,0.6s						
BRLS	**Boroldai**	**23.52**	**309**	*e*P	**P**	**10 04 08.7**	**+0.2**
BRLS	**Boroldai**	**23.52**	**309**	*e*P	**P**	**10 04 08.8**	**+0.2**
KURBB	**Kurchatov Arra**	**23.54**	**333**	P	**P**	**10 04 07.9**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=142,slow=11,SNR=29						
KURBB				PcP	**PcP**	**10 07 52.7**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=142,slow=1.5,SNR=5.3						
	comp=Z,4.8nm,0.8s						
KURK	**Kurchatov**	**23.58**	**334**	*ce*P	**P**	**10 04 08.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,33nm,1.7s						
KURK	**Kurchatov**	**23.58**	**334**	P	**P**	**10 04 08.1**	**-0.8**
KURK	**Kurchatov**	**23.58**	**334**	P	**P**	**10 04 08.6**	**-0.3**
ZAA0	**Zalesovo Array**	**24.56**	**346**	P	**P**	**10 04 17.6**	**-0.5**
ZAA0				IAmb	IAmb	10 04 20.4	
	comp=Z,16nm,1.1s						
ZALV	**Zalesovo Beam**	**24.56**	**346**	P	**P**	**10 04 18.0**	**-0.1**
	comp=Z,6.0nm,0.9s,baz=163,slow=8.7,SNR=22						
	comp=Z,6.0nm,0.9s						
ZALV	**Zalesovo Beam**	**24.56**	**346**	P	**P**	**10 04 17.9**	**-0.1**
HILR	**Hailar Array B**	**26.78**	**38**	P	**P**	**10 04 39.1**	**+0.8**
	comp=Z,4.3nm,0.6s,baz=224,slow=10,SNR=4.3						
	comp=Z,4.3nm,0.6s						
CN2	**Changchun**	**27.64**	**53**	*e*P	**P**	**10 04 46.0**	**0.0**
CN2				*e*S	**S**	**10 09 27.0**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,4.5s						
CN2				L	L		
	comp=Z,300nm,11.0s						
CN2				L	L		
	comp=Z,200nm,11.0s						
CN2				L	L		
	comp=Z,200nm,10.0s						
KSRS	**Korea Array**	**28.23**	**67**	LR	LR	10 16 50.9	
	comp=Z,56nm,19.1s,baz=70,slow=38						
BVAR	**Borovoye Array**	**28.73**	**329**	P	**P**	**10 04 56.2**	**+0.6**
	comp=Z,1.0nm,0.3s						
	comp=Z,1.0nm,0.3s						
AB31	**Akbulak array**	**32.30**	**315**	P	**P**	**10 05 27.2**	**0.0**
ABKAR	**Akbulak array**	**32.30**	**315**	P	**P**	**10 05 26.4**	**-0.8**
ZEA	**Zeya**	**32.99**	**36**	*e*P	**P**	**10 05 33.9**	**+0.7**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,100nm,10.0s						
SVE	**Sverdlovsk**	**35.50**	**328**	*e*P	**P**	**10 05 56.0**	**+1.1**
SVE				pmax	pmax		
	comp=Z,19nm,1.3s						
ARTI	**Arti**	**36.33**	**326**	*d i* P	**P**	**10 06 02.2**	**+0.2**
ARTI						10 07 19.2	
ARTI				S	**S**	**10 11 45.0**	**+2.2**
ARTI				SS	**SnSn**	**10 14 10.4**	**+0.6**
ARTI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARTI	**Arti**	**36.33**	**326**	P	**P**	**10 06 01.5**	**-0.5**
ARTI				IAmb	IAmb	10 06 05.2	
	comp=Z,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**36.45**	**69**	P	**P**	**10 06 01.7**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=271,slow=6.8,SNR=4.2						
	comp=Z,0.5nm,0.4s						
YAK	**Yakutsk**	**38.84**	**25**	P	**P**	**10 06 23.4**	**+0.2**
	comp=Z,17nm,0.7s,baz=342,slow=11,SNR=6.1						
	comp=Z,17nm,0.7s						
YAK	**Yakutsk**	**38.84**	**25**	*ce*P	**P**	**10 06 23.3**	**+0.2**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK	**Yakutsk**	**38.84**	**25**	P	**P**	**10 06 23.4**	**+0.2**
YAK				IAmb	IAmb	10 06 25.6	
	comp=Z,18nm,0.8s						
NRIK	**Noril'sk**	**39.14**	**356**	P	**P**	**10 06 25.4**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=175,slow=6.5,SNR=5.4						
	comp=Z,3.8nm,0.9s						
NRIK	**Noril'sk**	**39.14**	**356**	P	**P**	**10 06 25.7**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NRIK	**Noril'sk**	**39.14**	**356**	P	**P**	**10 06 25.7**	**+0.1**
YSS	**Yuzhno-Sakhali**	**40.20**	**52**	*e*P	**P**	**10 06 34.1**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=Z,100nm,3.8s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=N,100nm,14.0s						
YSS	**Yuzhno-Sakhali**	**40.20**	**52**	P	**P**	**10 06 34.4**	**-0.4**
YSS				IAmb	IAmb	10 06 37.2	
	comp=Z,24nm,1.1s						
YSS	**Yuzhno-Sakhali**	**40.20**	**52**	P	**P**	**10 06 35.0**	**+0.3**
BELG	**Belogornoye**	**40.69**	**316**	*i* P	**P**	**10 06 40.8**	**+2.1**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GNI	**Garni**	**41.52**	**298**	*i* P	**P**	**10 06 47.6**	**+1.7**
GNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI	**Garni**	**41.52**	**298**	P	**P**	**10 06 46.4**	**+0.4**
GNI				IAmb	IAmb	10 06 51.2

comp=Z,35nm,0.4s
KELT Kelkit 45.71 298 P **P** **10 07 20.1 +0.4**
LPSR Galich'ya Gora 45.96 315 *e*P **P** **10 07 20.6 -0.7**
LPSR pmax pmax
comp=Z,21nm,1.1s
MOS Moscow 47.11 320 *e*P **P** **10 07 30.9 +0.7**
KLMR Klimovskoe 47.12 327 *e*P **P** **10 07 29.2 -1.0**
KLMR *e* 10 09 19.4
KLMR pmax pmax
comp=Z,39nm,1.4s
OBN Obninsk 47.63 319⇓ *e*P **P** **10 07 34.7 +0.5**
OBN *e**PP **sP** **10 07 40.2 -0.2**
OBN 10 09 02.0
OBN *e*PPP PPP 10 10 11.1
OBN *e*S **S** **10 14 27.3 -2.4**
OBN pmax pmax
comp=Z,21nm,1.6s
OBN MLR MLR
comp=Z,29nm,16.0s
OBN Obninsk 47.63 319 P **P** **10 07 34.2 0.0**
TOKA Tokat 47.80 299 P **P** **10 07 36.1 +0.1**
BR131 Keskin Array S 50.05 298 P **P** **10 07 52.4 -0.9**
BR131 pmax pmax
comp=Z,6.0nm,1.2s
BR131 Keskin Array S 50.05 298 P **P** **10 07 52.4 -0.9**
BRTR Keskin Array B 50.05 298 P **P** **10 07 52.8 -0.5**
comp=Z,2.0nm,0.9s,baz=108,slow=6.0,SNR=8.8
comp=Z,2.0nm,0.9s
BR104 Keskin Array S 50.05 298 P **P** **10 07 52.3 -1.0**
comp=Z,3.0nm,1.2s
BR106 Keskin Array S 50.06 298 P **P** **10 07 52.4 -1.0**
comp=Z,3.2nm,0.8s
PETK Petropavlovsk- 50.22 44 P **P** **10 07 55.8 +1.5**
comp=Z,4.1nm,0.9s,baz=201,slow=2.5,SNR=3.8
comp=Z,4.1nm,0.9s
PETK Petropavlovsk- 50.22 44 P **P** **10 07 55.2 +1.0**
AK09 Malin Array Si 51.93 313 P **P** **10 08 06.4 -0.7**
AK08 Malin Array Si 51.94 313 P **P** **10 08 06.5 -0.7**
AK10 Malin Array Si 51.95 313 P **P** **10 08 06.6 -0.6**
AK03 Malin Array Si 51.96 313 P **P** **10 08 06.3 -1.0**
AKASG Malin Array Be 51.96 313 P **P** **10 08 06.7 -0.7**
comp=Z,5.8nm,0.9s,baz=78,slow=7.0,SNR=13
comp=Z,5.8nm,0.9s
AKASG Malin Array Be 51.96 313 *i* P **P** **10 08 06.6 -0.7**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 51.96 313 P **P** **10 08 06.7 -0.6**
AKBB pmax pmax
comp=Z,10.0nm,1.0s
AKBB Malin Array Si 51.96 313 P **P** **10 08 06.7 -0.6**
AKBB IAmb IAmb 10 08 09.5
comp=Z,10nm,0.9s
AKBB Malin Array Si 51.96 313 P **P** **10 08 06.4 -0.9**
AK01 Malin Array Si 51.97 313 P **P** **10 08 06.4 -1.0**
KIEV Kiev 51.97 313 P **P** **10 08 06.7 -0.7**
KIEV Kiev 51.97 313 P **P** **10 08 06.3 -1.1**
comp=Z,42nm,1.2s
KIEV Kiev 51.97 313 P **P** **10 08 06.3 -1.1**
AK02 Malin Array Si 51.97 313 P **P** **10 08 06.4 -1.0**
AK05 Malin Array Si 51.98 313 P **P** **10 08 06.5 -0.9**
AK07 Malin Array Si 51.98 312 P **P** **10 08 06.5 -1.0**
AK11 Malin Array Si 52.00 313 P **P** **10 08 06.6 -1.0**
AK12 Malin Array Si 52.01 313 P **P** **10 08 06.7 -1.0**
AK15 Malin Array Si 52.02 313 P **P** **10 08 06.8 -1.0**
AK16 Malin Array Si 52.04 313 P **P** **10 08 06.9 -1.0**
AK14 Malin Array Si 52.04 313 P **P** **10 08 06.9 -1.0**
AK22 Malin Array Si 52.05 313 P **P** **10 08 07.0 -1.0**
AK18 Malin Array Si 52.06 313 P **P** **10 08 07.1 -0.9**
AK21 Malin Array Si 52.07 313 P **P** **10 08 07.2 -0.9**
SORM Soroca 52.73 309 P **P** **10 08 12.1 -1.0**
comp=Z,7.7nm,1.2s
LUBAR Lubar, Ukraine 52.95 312 P **P** **10 08 13.7 -1.0**
NACGM Naroch 53.25 318 *e*P **P** **10 08 17.4 +0.7**
comp=Z,12nm,0.9s,baz=88
ELL Elmali 53.52 295 P **P** **10 08 17.7 -1.6**
ELL pmax pmax
comp=Z,16nm,1.0s
ELL Elmali 53.52 295 P **P** **10 08 17.6 -1.6**
ELL IAmb IAmb 10 08 19.1
comp=Z,16nm,1.0s
FINES FINESS Array B 53.64 326 P **P** **10 08 19.4 -0.2**
comp=Z,1.1nm,0.6s,baz=86,slow=7.9,SNR=11
comp=Z,1.1nm,0.6s
RNPP9 Sopachiv 54.01 314 P **P** **10 08 21.4 -1.0**
RNPP8 Varash 54.03 314 P **P** **10 08 21.6 -1.0**
VRI Vrincioaia 54.12 307 P **P** **10 08 24.1 +0.7**
VRI Vrincioaia 54.12 307 P **P** **10 08 22.4 -1.0**
comp=Z,558nmcomp=Z,14nm,1.4s
VRI Vrincioaia 54.12 307 P **P** **10 08 24.1 +0.7**
MLR Muntele Rosu 54.73 307 P **P** **10 08 27.9 -0.1**
MLR pmax pmax
comp=Z,29nm,1.1s
MLR Muntele Rosu 54.73 307 P **P** **10 08 27.9 -0.1**
MLR Muntele Rosu 54.73 307 P **P** **10 08 28.6 +0.7**
BURAR Bucovina Array 54.89 309 P **P** **10 08 27.8 -1.3**
BURAR pmax pmax
comp=Z,2.0nm,1.2s
BURAR Bucovina Array 54.89 309 P **P** **10 08 27.8 -1.3**
ALN Alexandroupoli 55.53 301 P **P** **10 08 33.2 -0.4**
ALN pmax pmax
comp=Z,17nm,1.3s
ALN Alexandroupoli 55.53 301 P **P** **10 08 33.2 -0.4**
ALN IAmb IAmb 10 08 36.1
comp=Z,17nm,1.3s
RDO Rodhopi 55.85 301 P **P** **10 08 35.5 -0.4**
RDO IAmb IAmb 10 08 39.2
comp=Z,14nm,1.5s
DRGR 56.71 309 P **P** **10 08 42.3 +0.2**
DRGR 56.71 309 P **P** **10 08 42.3 +0.2**
BZS Buzias 57.69 307 P **P** **10 08 50.4 +1.5**
KNT Kendrikon 57.78 302 P **P** **10 08 50.3 +0.6**
NIE Niedzica 57.82 312 P **P** **10 08 49.3 -0.6**
comp=Z,1.9nm,1.5s
OJC Ojcow 57.99 313 P **P** **10 08 50.8 -0.2**
OJC Ojcow 57.99 313 P **P** **10 08 50.8 -0.2**
OJC Ojcow 57.99 313 P **P** **10 08 50.5 -0.5**
comp=Z,7.0nm,1.3s
OJC Ojcow 57.99 313 P **P** **10 08 51.8 +0.8**
GRG Griva 58.20 302 P **P** **10 08 51.5 -1.1**
MORC Moravsky Berou 59.51 313 *e*P **P** **10 09 01.3 -0.3**
MORH Mrgy, Hungar 59.58 309 P **P** **10 09 01.6 -0.5**
JAVC Velka Javorina 59.62 312 *e*P **P** **10 09 03.6 +1.2**
KSP Ksiaz 60.06 314 P **P** **10 09 04.9 -0.5**
comp=Z,5.9nm,1.6s
VRAC Vranov 60.22 312 P **P** **10 09 09.2 +2.8**
VRAC Vranov 60.22 312 *e*P **P** **10 09 06.6 +0.2**
KRUC Moravsky 60.40 312 *e*P **P** **10 09 07.9 +0.2**
NB2 NORSAR Subarra 60.82 326 P **P** **10 09 09.3 -1.1**
comp=Z,1.1nm,0.7s,baz=80,slow=6.9
NOA NORSAR Array B 60.82 326 P **P** **10 09 09.8 -0.6**
comp=Z,2.2nm,0.8s,baz=78,slow=6.6,SNR=8.3
comp=Z,2.2nm,0.8s
BRG Berggiesshubel 61.51 315 *e*P **P** **10 09 15.3 +0.1**
BRG Amp 10 09 17.1
comp=Z,1.9nm,0.8s
GEC2 GERESS Array S 62.17 312 P **P** **10 09 19.8 0.0**
GEC2 IAmb IAmb 10 09 21.7
comp=Z,9.6nm,1.4s
GERES GERESS Array B 62.17 312 P **P** **10 09 19.5 -0.3**
comp=Z,0.9nm,0.6s,baz=59,slow=5.1,SNR=10
comp=Z,0.9nm,0.6s
GERES GERESS Array B 62.17 312 P **P** **10 09 19.2 -0.6**
WRA Warramunga Arr 62.90 138 P **P** **10 09 23.0 -1.9**
comp=Z,1.8nm,0.8s,baz=318,slow=8.7,SNR=13
comp=Z,1.8nm,0.8s
WRA Warramunga Arr 62.90 138 P **P** **10 09 23.0 -1.9**
CIMO Cimolais 63.70 310 P **P** **10 09 29.4 -0.6**
CIMO IAmb IAmb 10 09 31.8
comp=Z,3.5nm,1.0s
CEL Celeste 63.79 301 P **P** **10 09 29.5 -1.2**
CEL Celeste 63.79 301 P **P** **10 09 29.5 -1.2**
comp=Z,30nm,1.0s
MURB Monte Urbino 64.59 307 P **P** **10 09 35.6 -0.3**
ASAR Alice Springs 65.60 141 P **P** **10 09 40.5 -2.0**
comp=Z,1.8nm,0.7s,baz=324,slow=6.1,SNR=39
comp=Z,1.8nm,0.7s
TUE Stuetta 65.69 311 P **P** **10 09 42.2 -0.9**
TUE IAmb IAmb 10 09 51.7
comp=Z,3.4nm,0.8s
TUE Stuetta 65.69 311 P **P** **10 09 42.2 -0.9**
comp=Z,22nm,0.9s
G16K Koyuk River 67.80 26 P **P** **10 09 56.6 +0.7**
G16K IAmb IAmb 10 09 58.9
comp=Z,8.1nm,0.9s
D20K Etivluk River 68.33 22 P **P** **10 10 00.7 +1.3**
H17K Granite Mounta 68.92 26 P **P** **10 10 03.4 +0.3**
H17K IAmb IAmb 10 10 06.2
comp=Z,9.6nm,0.9s
J16K Anvik River 69.40 28 P **P** **10 10 07.0 +1.0**
KEST Kesra 69.59 300 P **P** **10 10 06.8 -1.1**
comp=Z,6.0nm,1.0s,baz=100,slow=1.3,SNR=7.4
comp=Z,6.0nm,1.0s
KEST Kesra 69.59 300 P **P** **10 10 07.3 -0.5**
F21K Alatna River 70.10 23 P **P** **10 10 10.8 +0.5**
F21K IAmb IAmb 10 10 12.5
comp=Z,6.0nm,1.1s
K17K Iditarod 70.60 28 P **P** **10 10 13.3 -0.1**
E23K Chandalar 70.88 21 P **P** **10 10 16.5 +1.3**
E23K IAmb IAmb 10 10 22.3
comp=Z,6.1nm,1.1s
COLA College 73.32 23 P **P** **10 10 30.1 +0.4**
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA College 73.32 23 P **P** **10 10 30.1 +0.4**
COLA IAmb IAmb 10 10 32.1
comp=Z,8.0nm,0.8s
IL31 73.72 23 P **P** **10 10 32.6 +0.7**
IL31 IAmb IAmb 10 10 34.6
comp=Z,4.9nm,1.0s
ILAR Eielson Array 73.72 23 P **P** **10 10 31.1 -0.9**
comp=Z,3.6nm,0.9s,baz=295,slow=5.4,SNR=16
comp=Z,3.6nm,0.9s
ILAR Eielson Array 73.72 23 P **P** **10 10 31.2 -0.8**
ILAR Eielson Array 73.72 23 P **P** **10 10 31.2 -0.8**
A36M Sachs Harbour 74.10 12 P **P** **10 10 34.0 -0.1**
INK Inuvik 75.23 17 P **P** **10 10 40.3 -0.4**
comp=Z,5.5nm,1.0s,baz=302,slow=13,SNR=4.2
comp=Z,5.5nm,1.0s
INK Inuvik 75.23 17 P **P** **10 10 41.0 +0.3**
INK pmax pmax
comp=Z,9.0nm,1.2s
INK Inuvik 75.23 17 P **P** **10 10 41.0 +0.3**
INK IAmb IAmb 10 10 44.2
comp=Z,9.4nm,1.2s
STKA Stephens Creek 76.24 140 P **P** **10 10 44.2 -2.7**
comp=Z,3.0nm,0.9s,baz=344,slow=7.1,SNR=4.8
comp=Z,3.0nm,0.9s
BCAR Beaver Creek A 76.54 23 P **P** **10 10 49.0 +0.6**
ESDC Sonseca Array 77.35 309 P **P** **10 10 51.9 -1.5**
comp=Z,2.4nm,1.2s,baz=37,slow=4.9,SNR=7.5
comp=Z,2.4nm,1.2s
YKA Yellowknife Ar 84.40 13 P **P** **10 11 29.6 -1.0**
comp=Z,1.4nm,0.9s,baz=333,slow=4.5,SNR=7.4
comp=Z,1.4nm,0.9s
TORD Torodi Ar. Bea 86.09 283 P **P** **10 11 38.5 -1.4**
comp=Z,3.6nm,1.0s,baz=37,slow=3.5,SNR=10
TORD PP **PP** **10 15 01.1 +1.0**
comp=Z,1.3nm,1.1s,baz=45,slow=6.8,SNR=3.6
comp=Z,3.6nm,1.0s

ANF 26 10:00:10.1±0.3, 60.52N×152.09W, h87km±5km, Error ellipse: s-maj=3.6km s-min=2.4km az=1.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
O20K	**Slope Mountain**	**0.51**	**211**	P	Pn	10 00 24.6	-0.1
	baz=34						
O20K				S	Sn	10 00 35.8	+0.3
	baz=34						
CAPN	**Captain Cook N**	**0.53**	**61**	P	Pn	10 00 26.0	+1.4
	baz=238						
HOM	**Homer**	**0.89**	**165**	P	Pn	10 00 28.6	+0.3
	baz=346						
HOM				S	Sn	10 00 43.0	+1.1
	baz=346						
BRSE	**Bradley Lake S**	**1.03**	**138**	P	Pn	10 00 29.4	-0.5
	baz=319						
P19K	**Oil Pt**	**1.04**	**214**	P	Pn	10 00 30.1	+0.1
	baz=34						
P19K				S	Sn	10 00 45.4	+0.4
	baz=34						
O19K	**Port Alsworth**	**1.15**	**255**	P	Pn	10 00 31.0	-0.3
	baz=74						
O22K	**Cooper Landing**	**1.17**	**91**	P	Pn	10 00 31.8	+0.3
	baz=271						
N19K	**Bonanza Creek**	**1.21**	**285**	P	Pn	10 00 31.9	-0.2
	baz=104						
N19K				S	Sn	10 00 48.6	-0.1
	baz=104						
RC01	**Rabbit Creek A**	**1.29**	**63**	P	Pn	10 00 33.8	+0.8
	baz=243						
O18K	**Koktuh Hills**	**1.69**	**248**	P	Pn	10 00 37.8	-0.3
	baz=67						
M19K	**Big River Lodg**	**1.78**	**322**	P	Pn	10 00 39.7	+0.5
	baz=141						
N18K	**Kilae Creek**	**1.88**	**277**	P	Pn	10 00 40.5	-0.1
	baz=94						
PWL	**Port Wells**	**1.88**	**78**	P	Pn	10 00 39.7	-0.9
	baz=260						
P18K	**Big Mountain,**	**1.94**	**236**	P	Pn	10 00 41.1	-0.2
	baz=54						
KNK	**Knik Glacier**	**1.99**	**62**	P	Pn	10 00 41.7	-0.3
	baz=244						
M18K	**Stony River**	**2.06**	**300**	P	Pn	10 00 42.8	-0.1
	baz=117						
N17K	**Nushagak Hills**	**2.52**	**272**	P	Pn	10 00 49.1	+0.2
	baz=89						
P17K	**Kvichak River**	**2.56**	**241**	P	Pn	10 00 50.0	+0.5
	baz=58						
SCM	**Sheep Creek Mo**	**2.66**	**58**	P	Pn	10 00 50.6	-0.3
	baz=242						
M17K	**Holitna River**	**2.75**	**291**	P	Pn	10 00 52.4	+0.3
	baz=107						
KDAK	**Kodiak Island**	**2.75**	**185**	P	Pn	10 00 51.0	-1.2
	baz=5.3						
WAT6	**Susitna Watana**	**2.94**	**43**	P	Pn	10 00 54.9	+0.2
	baz=226						
KLU	**Klutina**	**3.16**	**69**	P	Pn	10 00 56.7	-0.9
	baz=254						
M24K	**Tolsona, Glenn**	**3.27**	**58**	P	Pn	10 00 59.4	+0.3
	baz=243						
N16K	**Nishlik Lake**	**3.30**	**272**	P	Pn	10 01 00.5	+1.0
	baz=87						

*IDC **26** 10:00:27.7±0.7, 55.23N×158.97W, h29km±5km, mb4.4/33, mbtmp4.5/37, ML4.2/4, MS3.6/23, Error ellipse: s-maj=14.8km s-min=10.3km az=2.0*
*AEIC **26** 10:00:27.2±1.4, 55.05N±0.02×158.72W±0.04, h33km±4km, Error ellipse: s-maj=4.6km s-min=1.0km az=135.0*
*NEIC **26** 10:00:28.1, 55.06N×158.73W, h33km*
*NEIC **26** 10:00:28.4±1.3, 55.08N±0.03×158.74W±0.05, h36km±6km, mb4.7/65, ML4.6/40, Mwr4.3/25, ML4.5(AEIC), Error ellipse: s-maj=5.5km s-min=3.9km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr2.57; Mθθ-2.20; Mϕϕ-0.37; Mrθ2.41; Mrϕ-0.99; Mθϕ1.75; Fault plane solution: M0 3.95000×10^15 NP1:ϕs57.00000°, δ69.61000°, λ83.33000°. NP2:ϕs255.56000°, δ21.41000°, λ107.36000°. Principal axes: T 3.9559, Plg65.0000°, Azm316.0000°; N -0.0053, Plg6.0000°, Azm59.0000°; P -3.9507, Plg24.0000°, Azm152.0000°;*
*ANF **26** 10:00:28.5±0.2, 55.09N×158.77W, h52km±3km, ML4.8/24 Error ellipse: s-maj=2.4km s-min=1.6km az=8.0*
*GFZ **26** 10:00:29.0±0.3, 56°N±5°×15°9W±°, h10km, M4.8/40, mb4.8/40*
ISC 26 10:00:27.5±0.5, 55.13N±0.03×158.76W±0.03, h32km±3km, h32km:pP-P, n733, σ1↯01/724, mb4.7/106, MS3.6/20, 28C-2D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.56**	**238**	P	**Pb**	**10 00 38.5**	**-0.5**
CHNA	**Chernabura Isl**	**0.56**	**238**	S	**Sb**	**10 00 46.5**	**-0.3**
CHNA	**Chernabura Isl**	**0.56**	**238**	P	**Pb**	**10 00 38.4**	**-0.6**
	baz=57,SNR=306						
CHNA				S	**Sn**	**10 00 49.3**	**+1.9**
	baz=57						
CNBA	**Chernabura Isl**	**0.57**	**237**		**Pb**	**10 00 38.3**	**-0.7**
CNBA				IAML		10 00 49.6	
	comp=E,36μm,0.6s						
CNBA				IAML		10 00 50.0	
	comp=N,32μm,0.6s						
CNBA	**Chernabura Isl**	**0.57**	**237**		**Sn**	**10 00 48.6**	**+1.0**
VNKR	**Veniaminof 5**	**0.97**	**340**		**Pb**	**10 00 46.0**	**+0.1**
SDPT	**Sand Point**	**1.01**	**284**	P	**Pb**	**10 00 45.5**	**+0.2**
SDPT	**Sand Point**	**1.01**	**284**	S	**Sb**	**10 00 59.1**	**-0.1**
SDPT	**Sand Point**	**1.01**	**284**		**Pn**	**10 00 45.2**	**-0.2**
SDPT				IAML		10 01 03.1	
	comp=N,9μm,0.5s						
SDPT				IAML		10 01 06.8	
	comp=E,10μm,0.6s						
SDPT	**Sand Point**	**1.01**	**284**		**Sb**	**10 00 59.4**	**+0.1**
SDPT	**Sand Point**	**1.01**	**284**	P	**Pn**	**10 00 45.6**	**+0.2**
	baz=102,SNR=207						
SDPT				S	**Sb**	**10 00 59.2**	**-0.1**
	baz=102						
VNSW	**Veniaminof 7**	**1.05**	**335**		**Pb**	**10 00 47.3**	**+0.1**
VNSS	**Veniaminof 8**	**1.17**	**341**		**Pb**	**10 00 49.4**	**+0.1**
CHGN	**Chignik**	**1.19**	**9**		**Pn**	**10 00 48.2**	**+0.2**
CHGN				IAML		10 01 09.7	
	comp=N,13μm,0.6s						
CHGN				IAML		10 01 09.8	
	comp=E,14μm,0.6s						
CHGN	**Chignik**	**1.19**	**9**		**Sb**	**10 01 04.9**	**+0.2**
CHGN	**Chignik**	**1.19**	**9**	P	**Pn**	**10 00 48.5**	**+0.5**
	baz=190,SNR=347						
CHGN				S	**Sb**	**10 01 05.1**	**+0.4**
	baz=190						
S14K	**Fog Glacier**	**1.24**	**339**	P	**Pb**	**10 00 50.8**	**+0.3**
	baz=159,SNR=273						
VNFG	**Fog Glacier, M**	**1.24**	**339**		**Pb**	**10 00 50.3**	**-0.1**
VNFG	**Fog Glacier, M**	**1.24**	**339**		**Pb**	**10 00 50.7**	**+0.3**
VNFG	**Fog Glacier, M**	**1.24**	**339**		**Sb**	**10 01 07.4**	**+1.2**
BPBCA	**Veniaminof**	**1.48**	**7**		**Pb**	**10 00 53.4**	**-1.0**
ANPB	**Aniakchak Plen**	**1.70**	**9**		**Pn**	**10 00 56.6**	**+1.6**
PS1A	**Pavlof South-1**	**1.73**	**281**		**Pn**	**10 00 56.4**	**+1.1**
PS1A					**Sn**	**10 01 18.1**	**+1.8**
DOL	**Dolgoi Island**	**1.78**	**272**		**Pn**	**10 00 56.7**	**+0.7**
DOL					**Sn**	**10 01 18.4**	**+0.8**
PS4A	**Pavlof South-4**	**1.79**	**278**		**Pn**	**10 00 56.8**	**+0.8**
PS4A					**Sb**	**10 01 19.7**	**-1.8**
AZAC	**Aniakchak**	**1.80**	**9**		**Pb**	**10 00 58.1**	**-1.7**
HAG	**Hague Volcano**	**1.81**	**277**		**Pn**	**10 00 57.5**	**+1.1**
ANNW	**Aniakchak Nort**	**1.87**	**9**		**Pn**	**10 00 58.5**	**+1.1**
PN7A	**Pavlof North-7**	**1.88**	**281**		**Pn**	**10 00 58.7**	**+1.3**
CHIR	**Chirikof Islan**	**1.92**	**67**	P	**Pn**	**10 00 58.2**	**+0.3**
CHIR	**Chirikof Islan**	**1.92**	**67**	S	**Sb**	**10 01 23.7**	**-1.6**
CHIR	**Chirikof Islan**	**1.92**	**67**		**Pn**	**10 00 58.3**	**+0.4**
CHIR				IAML		10 01 36.1	
	comp=E,5μm,0.7s						
CHIR				IAML		10 01 37.9	
	comp=N,6μm,0.9s						
CHIR	**Chirikof Islan**	**1.92**	**67**	P	**Pn**	**10 00 58.2**	**+0.3**
	baz=250,SNR=25						
DTNA	**Dutton South F**	**2.00**	**272**		**Pn**	**10 01 00.1**	**+1.0**
DT1	**Dutton Round H**	**2.02**	**271**		**Pn**	**10 01 00.1**	**+0.7**
DT1					**Sn**	**10 01 24.5**	**+1.1**
PLBL	**Peulik Blue Cr**	**2.80**	**22**		**Pn**	**10 01 11.6**	**+1.6**
R17L	**Mt. Peulik Vol**	**2.84**	**27**		**Pn**	**10 01 12.6**	**+1.8**
R17L	**Mt. Peulik Vol**	**2.84**	**27**	P	**Pn**	**10 01 12.5**	**+1.8**
	baz=209,SNR=254						
ISNN	**Isanotski Nort**	**2.91**	**266**		**Pn**	**10 01 13.4**	**+1.9**
PLK1	**Peulik 1**	**2.94**	**23**		**Pn**	**10 01 13.4**	**+1.5**
SII	**Sitkinak Islan**	**2.96**	**59**	P	**Pn**	**10 01 13.0**	**+0.8**
SII	**Sitkinak Islan**	**2.96**	**59**	S	**Sn**	**10 01 49.2**	**+2.6**
SII	**Sitkinak Islan**	**2.96**	**59**		**Pn**	**10 01 12.5**	**+0.3**
SII				IAML		10 02 13.3	
	comp=N,3μm,0.9s						
SII	**Sitkinak Islan**	**2.96**	**59**	P	**Pn**	**10 01 12.7**	**+0.5**
	baz=243						
PLK2	**Peulik 2**	**2.97**	**26**		**Pn**	**10 01 14.2**	**+1.8**
SSLS	**Shishaldin Sou**	**3.05**	**264**		**Pn**	**10 01 15.1**	**+1.5**
PLK5	**Peulik 5**	**3.06**	**19**		**Pn**	**10 01 15.3**	**+1.7**
SSBA	**Shishaldin**	**3.11**	**266**		**Pn**	**10 01 15.6**	**+1.2**
KJL	**Kejulik**	**3.42**	**30**		**Pn**	**10 01 19.8**	**+1.1**
Q17K	**Contact Creek**	**3.52**	**26**		**Pn**	**10 01 21.1**	**+1.1**
Q17K	**Contact Creek**	**3.52**	**26**	P	**Pn**	**10 01 21.1**	**+1.1**
	baz=208						
ANCK	**Angle Creek**	**3.57**	**29**		**Pn**	**10 01 21.6**	**+0.9**
MGLS	**Mageik Landsli**	**3.61**	**32**		**Pn**	**10 01 22.1**	**+0.9**
ACHA	**Angle Creek He**	**3.63**	**30**		**Pn**	**10 01 22.4**	**+0.9**
KABU	**Katmai Buttres**	**3.69**	**30**		**Pn**	**10 01 23.7**	**+1.3**
OHAK	**Old Harbor**	**3.71**	**53**	P	**Pn**	**10 01 22.6**	**0.0**
OHAK	**Old Harbor**	**3.71**	**53**	Pn	**Pn**	**10 01 22.6**	**0.0**
OHAK				IAML		10 02 33.4	
	comp=E,596nm,1.1s						
OHAK	**Old Harbor**	**3.71**	**53**	P	**Pn**	**10 01 22.4**	**-0.1**
	baz=238,SNR=18						
Q16K	**King Salmon**	**3.74**	**17**		**Pn**	**10 01 24.1**	**+1.1**
Q16K	**King Salmon**	**3.74**	**17**	P	**Pn**	**10 01 24.3**	**+1.3**
	baz=199,SNR=174						
KAKN	**Katmai Knife C**	**3.78**	**31**		**Pn**	**10 01 24.5**	**+1.0**
KAWH	**Katmai**	**3.93**	**32**		**Pn**	**10 01 26.0**	**+0.5**
P16K	**Nushagak River**	**3.94**	**6**		**Pn**	**10 01 26.9**	**+1.3**
P16K	**Nushagak River**	**3.94**	**6**	P	**Pn**	**10 01 27.3**	**+1.6**
	baz=187,SNR=116						
KARR	**Katmai Rainbow**	**4.05**	**32**		**Pn**	**10 01 28.0**	**+0.8**
Q18K	**Katmai Hardscr**	**4.09**	**29**		**Pn**	**10 01 28.8**	**+0.9**
Q18K	**Katmai Hardscr**	**4.09**	**29**	P	**Pn**	**10 01 28.7**	**+0.9**
	baz=212,SNR=71						
KAHG	**Katmai Hook Gl**	**4.09**	**33**		**Pn**	**10 01 28.8**	**+0.9**
O15K	**Ungaliktiuk R**	**4.10**	**352**		**Pn**	**10 01 28.8**	**+0.9**
O15K				IAML		10 02 19.7	
	comp=E,538nm,0.6s						
O15K	**Ungaliktiuk R**	**4.10**	**352**	P	**Pn**	**10 01 29.0**	**+1.1**
	baz=172,SNR=78						
AKSA	**Akutan Strait**	**4.15**	**259**		**Pn**	**10 01 29.9**	**+1.4**
AKUT	**Akutan**	**4.19**	**259**	P	**Pn**	**10 01 30.4**	**+1.3**
AKUT	**Akutan**	**4.19**	**259**	S	**Sn**	**10 02 18.2**	**+1.2**
AKUT	**Akutan**	**4.19**	**259**		**Pn**	**10 01 30.5**	**+1.3**
AKUT				IAML		10 02 38.6	
	comp=N,574nm,0.9s						
AKUT				IAML		10 02 48.4	
	comp=E,469nm,0.7s						
AHB	**Akutan Harbor**	**4.22**	**259**		**Pn**	**10 01 30.6**	**+0.9**
P17K	**Kvichak River**	**4.27**	**16**		**Pn**	**10 01 31.5**	**+1.3**
P17K	**Kvichak River**	**4.27**	**16**	P	**Pn**	**10 01 31.6**	**+1.3**
	baz=198,SNR=50						
AKLV	**Akutan Long Va**	**4.29**	**260**		**Pn**	**10 01 31.5**	**+1.0**
AKBBA	**Akutan Broad B**	**4.29**	**259**		**Pn**	**10 01 31.7**	**+1.1**
AKGG	**Akutan Green G**	**4.30**	**260**		**Pn**	**10 01 31.8**	**+1.1**
ZRO	**Akutan Zero**	**4.32**	**259**		**Pn**	**10 01 32.1**	**+1.1**
LVA	**Lava Point**	**4.33**	**260**		**Pn**	**10 01 32.1**	**+1.0**
LVA				IAML		10 02 50.5	
	comp=E,654nm,0.9s						
KDAK	**Kodiak Island**	**4.34**	**50**	Pn	**Pn**	**10 01 30.9**	**-0.3**
	comp=E,7.7nm,0.3s,baz=227,slow=6.2,SNR=117						
KDAK				Sn	**Sn**	**10 02 17.9**	**-2.7**
	comp=E,13nm,0.3s,baz=31,slow=19,SNR=6.7						
	comp=E,33nm,0.5s						
KDAK	**Kodiak Island**	**4.34**	**50**		**Pn**	**10 01 30.7**	**-0.5**
KDAK	**Kodiak Island**	**4.34**	**50**	P	**Pn**	**10 01 30.9**	**-0.3**
	baz=235						
KDAK	**Kodiak Island**	**4.34**	**50**	P	**Pn**	**10 01 31.1**	**-0.1**
O14K	**Tigyukauivet M**	**4.36**	**343**	Pn	**Pn**	**10 01 32.8**	**+1.4**
O14K				IAML		10 02 55.3	
	comp=N,521nm,0.8s						
O14K	**Tigyukauivet M**	**4.36**	**343**	P	**Pn**	**10 01 32.3**	**+0.9**
	baz=161,SNR=124						
O14K				S	**Sn**	**10 02 23.3**	**+2.3**
	baz=161						
O16K	**Kokwok River B**	**4.49**	**4**		**Pn**	**10 01 33.9**	**+0.6**
O16K				IAML		10 03 05.6	
	comp=N,448nm,0.8s						
O16K				IAML		10 03 05.6	
	comp=E,381nm,0.9s						
O16K	**Kokwok River B**	**4.49**	**4**	P	**Pn**	**10 01 34.3**	**+1.0**
	baz=185,SNR=79						
P18K	**Big Mountain,**	**4.69**	**23**		**Pn**	**10 01 37.2**	**+1.2**
P18K	**Big Mountain,**	**4.69**	**23**	P	**Pn**	**10 01 37.2**	**+1.2**
	baz=206,SNR=34						
UNV	**Unalaska Valle**	**4.69**	**257**	P	**Pn**	**10 01 36.5**	**+0.5**
UNV	**Unalaska Valle**	**4.69**	**257**	S	**Sn**	**10 02 29.8**	**+0.5**
UNV	**Unalaska Valle**	**4.69**	**257**		**Pn**	**10 01 36.2**	**+0.2**
UNV				IAML		10 02 59.0	
	comp=E,297nm,1.0s						
UNV	**Unalaska Valle**	**4.69**	**257**	P	**Pn**	**10 01 36.6**	**+0.5**
	baz=71,SNR=16						
**

N15K Kwethluk River 5.11 353 P Pn 10 01 43.3 +1.6
baz=172,SNR=193
O18K Koktuh Hills 5.11 21 Pn 10 01 43.1 +1.2
O18K Koktuh Hills 5.11 21 P Pn 10 01 43.2 +1.4
baz=204,SNR=62
N16K Nishlik Lake 5.36 360 Pn 10 01 46.9 +1.6
N16K Nishlik Lake 5.36 360 P Pn 10 01 46.8 +1.6
baz=180,SNR=333
N17K Nushagak Hills 5.48 8 Pn 10 01 47.3 +0.5
N17K Nushagak Hills 5.48 8 P Pn 10 01 47.8 +1.0
baz=190
O19K Port Alsworth 5.61 23 Pn 10 01 49.6 +0.9
O19K Port Alsworth 5.61 23 P Pn 10 01 50.0 +1.3
baz=207,SNR=17
OKFG Magazine Ridge 5.63 256 Pn 10 01 49.7 +0.8
M15K Kasigluk River 5.68 350 Pn 10 01 50.7 +1.1
M15K Kasigluk River 5.68 350 P Pn 10 01 50.6 +1.1
baz=169,SNR=171
OKTU Okmok Mt. Tuli 5.71 256 Pn 10 01 50.9 +0.8
N18K Kilae Creek 5.78 14 P Pn 10 01 52.0 +1.1
baz=197
M13K Dall Lake 5.84 337 Pn 10 01 53.6 +1.8
M13K Dall Lake 5.84 337 P Pn 10 01 53.6 +1.8
baz=153,SNR=99
M14K Bethel 5.89 345 Pn 10 01 53.6 +1.1
M14K Bethel 5.89 345 P Pn 10 01 53.6 +1.1
baz=162,SNR=212
M16K Timber Creek 5.91 359 Pn 10 01 54.8 +2.0
M16K Timber Creek 5.91 359 P Pn 10 01 54.3 +1.5
baz=179,SNR=222
N19K Bonanza Creek 6.14 20 Pn 10 01 57.1 +1.1
N19K Bonanza Creek 6.14 20 P Pn 10 01 57.6 +1.6
baz=204
NCT North Crescent 6.28 27 Pn 10 01 59.4 +1.5
M17K Holitna River 6.33 6 Pn 10 01 59.8 +1.3
M17K Holitna River 6.33 6 P Pn 10 01 59.7 +1.1
baz=187,SNR=77
L14K Kuka Creek 6.57 343 Pn 10 02 02.7 +1.0
L14K Kuka Creek 6.57 343 P Pn 10 02 02.5 +0.8
baz=160
M18K Stony River 6.57 12 Pn 10 02 03.3 +1.6
M18K Stony River 6.57 12 P Pn 10 02 03.3 +1.6
baz=195,SNR=79
M11K Mekoryuk 6.60 326 Pn 10 02 03.6 +1.4
M11K Mekoryuk 6.60 326 P Pn 10 02 03.6 +1.4
baz=140,SNR=12
L16K Owhat River 6.61 357 Pn 10 02 03.4 +1.0
L16K Owhat River 6.61 357 P Pn 10 02 03.2 +0.8
baz=177,SNR=134
L15K Ungalak Mounta 6.72 349 Pn 10 02 04.2 +0.3
L15K Ungalak Mounta 6.72 349 P Pn 10 02 04.4 +0.5
baz=167,SNR=92
SPIA Saint Paul Isl 6.74 292 P Pn 10 02 05.2 +1.1
SPIA Saint Paul Isl 6.74 292 S Sn 10 03 20.3 +0.7
SPIA Saint Paul Isl 6.74 292 Pn 10 02 05.3 +1.3
SPIA Saint Paul Isl 6.74 292 P Pn 10 02 05.0 +0.9
baz=103
CLCO Concord Point, 6.88 255 Pn 10 02 06.9 +0.8
CLES Cleveland East 6.96 255 Pn 10 02 09.2 +2.1
SPCR Spurr Chakacha 7.00 27 P Pn 10 02 08.6 +0.7
baz=213,SNR=6.4
L17K Donlin 7.03 2 Pn 10 02 09.1 +1.0
L17K Donlin 7.03 2 P Pn 10 02 09.2 +1.0
baz=182
M19K Big River Lodg 7.17 17 Pn 10 02 11.3 +1.3
M19K Big River Lodg 7.17 17 P Pn 10 02 11.4 +1.3
baz=201
L18K Granite Mounta 7.20 8 Pn 10 02 11.2 +0.8
L18K Granite Mounta 7.20 8 P Pn 10 02 11.5 +1.1
baz=190,SNR=56
K15K Wolf Creek Mou 7.33 350 Pn 10 02 13.2 +1.0
K15K Wolf Creek Mou 7.33 350 P Pn 10 02 13.8 +1.6
baz=168,SNR=54
L19K White Mountain 7.36 14 Pn 10 02 13.9 +1.2
L19K White Mountain 7.36 14 P Pn 10 02 13.8 +1.2
baz=198
M20K Styx River 7.39 21 Pn 10 02 14.6 +1.5
M20K Styx River 7.39 21 P Pn 10 02 14.8 +1.7
baz=206
K13K Kusilvak Mount 7.49 338 Pn 10 02 15.5 +1.2
K13K Kusilvak Mount 7.49 338 P Pn 10 02 15.8 +1.4
baz=153,SNR=98
K17K Iditarod 7.62 2 Pn 10 02 17.0 +0.9
K17K Iditarod 7.62 2 P Pn 10 02 17.2 +1.1
baz=182,SNR=167
P23K Montague Islan 7.81 47 Pn 10 02 19.5 +0.6
SKT Skwentna 7.84 26 P Pn 10 02 19.9 +0.7
baz=212
PWL Port Wells 7.98 40 Pn 10 02 21.1 0.0
PWL Port Wells 7.98 40 P Pn 10 02 21.9 +0.8
baz=229,SNR=7.7
Q23K Middleton Isla 7.99 52 P Pn 10 02 22.3 +1.1
baz=243
J14K Nanvaranak Lak 8.03 344 Pn 10 02 22.6 +0.8
J14K Nanvaranak Lak 8.03 344 P Pn 10 02 22.7 +0.8
baz=160,SNR=25
M22K Willow 8.04 31 Pn 10 02 22.7 +0.8
M22K Willow 8.04 31 P Pn 10 02 22.8 +1.0
baz=218
PMR Palmer 8.22 34 P Pn 10 02 25.4 +1.1
baz=222
J16K Anvik River 8.24 354 Pn 10 02 25.5 +0.9
J16K Anvik River 8.24 354 P Pn 10 02 25.7 +1.1
baz=173,SNR=150
J17K VABM Dome 8.30 359 P Pn 10 02 25.9 +0.4
baz=179
KNK Knik Glacier 8.31 37 P Pn 10 02 26.5 +0.8
baz=225
HIN Hinchinbrook I 8.41 46 Pn 10 02 27.2 +0.1
J18K Innoko River 8.43 6 P Pn 10 02 28.4 +1.1
baz=188,SNR=84
GLI Glacier Island 8.46 42 P Pn 10 02 27.6 -0.1
baz=232
L22K Petersville 8.49 26 Pn 10 02 29.2 +1.0
L22K Petersville 8.49 26 P Pn 10 02 28.9 +0.7
baz=213
PPLA Purkeypile 8.49 21 Pn 10 02 30.0 +1.7
PPLA Purkeypile 8.49 21 P Pn 10 02 29.5 +1.2
baz=206,SNR=40
CUT Chulitna 8.52 28 P Pn 10 02 29.0 +0.5
baz=215
K20K Telida 8.60 14 P Pn 10 02 29.9 +0.4
baz=198
FID Port Fidalgo 8.62 44 Pn 10 02 28.8 -1.1
SML Sawmill 8.64 35 Pn 10 02 31.0 +0.8
SML Sawmill 8.64 35 P Pn 10 02 31.0 +0.8
baz=224
EYAK Cordova Ski Ar 8.81 47 P Pn 10 02 33.1 +0.7
EYAK Cordova Ski Ar 8.81 47 S Sn 10 04 12.3 +1.9
EYAK Cordova Ski Ar 8.81 47 Pn 10 02 33.0 +0.5
EYAK Cordova Ski Ar 8.81 47 P Pn 10 02 33.1 +0.7
baz=238,SNR=5.9
M23K Glacier View 8.83 36 P Pn 10 02 33.6 +0.8
baz=226
I17K Unalakleet 8.84 354 Pn 10 02 34.0 +1.2
I17K Unalakleet 8.84 354 P Pn 10 02 34.1 +1.2
baz=173,SNR=47
CAST Castle Rocks 8.99 20 Pn 10 02 36.4 +1.5
CAST Castle Rocks 8.99 20 P Pn 10 02 36.3 +1.4
baz=205
SCM Sheep Creek Mo 8.99 37 Pn 10 02 35.8 +0.7
SCM Sheep Creek Mo 8.99 37 P Pn 10 02 36.0 +1.0
baz=227,SNR=13
J19K Poorman 9.04 9 P Pn 10 02 36.7 +1.1
baz=192,SNR=126
KAIM Kayak Island 9.09 52 Pn 10 02 36.7 +0.4
KAIM Kayak Island 9.09 52 P Pn 10 02 36.6 +0.4
baz=244
DIV Divide 9.12 43 Pn 10 02 37.3 +0.5
RAGM Ragged Mountai 9.18 49 Pn 10 02 38.0 +0.4
GOAT Goat Mountain 9.26 48 Pn 10 02 38.4 -0.2
KLU Klutina 9.28 41 Pn 10 02 39.3 +0.2
KLU Klutina 9.28 41 P Pn 10 02 39.8 +0.7
baz=232,SNR=27
WAT1 Susitna Watana 9.34 30 P Pn 10 02 40.3 +0.5
baz=219
KTH Kantishna Hill 9.34 22 Pn 10 02 41.0 +1.1
CHUM Lake Minchumin 9.37 18 Pn 10 02 41.6 +1.5
CHUM Lake Minchumin 9.37 18 P Pn 10 02 41.2 +1.1
baz=203,SNR=33
J20K Nowinta River 9.37 13 Pn 10 02 40.5 +0.3
J20K Nowinta River 9.37 13 P Pn 10 02 41.2 +1.0
baz=197
WAT6 Susitna Watana 9.39 33 P Pn 10 02 40.9 +0.3
baz=222

TRF Thorofare Moun 9.40 24 Pn 10 02 41.0 +0.3
TRF Thorofare Moun 9.40 24 P Pn 10 02 41.0 +0.3
baz=211,SNR=21
BMRM Bremner River 9.51 46 Pn 10 02 42.0 -0.1
BMRM Bremner River 9.51 46 P Pn 10 02 41.9 -0.1
baz=238
KOFP Korovin Flat P 9.53 259 Pn 10 02 43.5 +1.1
KONW Korovin Northw 9.55 260 Pn 10 02 42.5 -0.1
KOKL Mount Kliuchef 9.57 259 Pn 10 02 43.1 +0.1
KOWE Korovin West 9.58 260 Pn 10 02 43.5 +0.4
M24K Tolsona, Glenn 9.58 38 Pn 10 02 44.2 +1.1
M24K Tolsona, Glenn 9.58 38 P Pn 10 02 43.5 +0.4
baz=229
BERG Berg Lake 9.61 51 Pn 10 02 43.6 +0.1
ATKA Atka Island 9.62 259 P Pn 10 02 43.8 +0.2
ATKA Atka Island 9.62 259 Pn 10 02 43.7 +0.2
GCSA Galena City Sc 9.70 5 Pn 10 02 45.3 +0.7
GCSA Galena City Sc 9.70 5 P Pn 10 02 45.7 +1.1
baz=186,SNR=89
H16K Elim 9.70 351 Pn 10 02 45.7 +1.0
H16K Elim 9.70 351 P Pn 10 02 45.8 +1.2
baz=168,SNR=19
RND Reindeer 9.72 27 Pn 10 02 44.9 -0.1
H17K Granite Mounta 9.86 357 Pn 10 02 47.6 +0.8
H17K Granite Mounta 9.86 357 P Pn 10 02 47.9 +1.0
baz=176,SNR=47
N25K Chitina, Valde 9.86 43 P Pn 10 02 47.5 +0.5
baz=235
DHY Denali Highway 9.88 32 Pn 10 02 46.3 -0.9
DHY Denali Highway 9.88 32 P Pn 10 02 47.7 +0.5
baz=221,SNR=12
I20K Naaghedeneel 9.93 11 P Pn 10 02 48.9 +1.1
baz=194
MCK McKinley 9.96 26 P Pn 10 02 48.1 -0.2
baz=214,SNR=6.1
ANM Nome 10.03 343 Pn 10 02 50.3 +1.2
ANM Nome 10.03 343 P Pn 10 02 50.0 +0.8
baz=158
CRQM Cirque 10.03 49 Pn Pn 10 02 49.7 +0.4
CRQE Cirque 10.04 50 P Pn 10 02 49.7 +0.2
baz=243
H18K Honhosa River 10.06 1 Pn 10 02 51.5 +1.9
H18K Honhosa River 10.06 1 P Pn 10 02 51.3 +1.7
baz=171,SNR=85
GLB Gilahina Butte 10.09 45 Pn Pn 10 02 50.4 +0.4
VRDI Verde Repeater 10.12 47 Pn Pn 10 02 51.3 +0.7
HARP HAARP 10.13 39 P Pn 10 02 51.6 +0.9
baz=230
G15K Niukluk 10.24 347 P Pn 10 02 53.3 +1.3
baz=163,SNR=20
MCARA McCarthy VSAT 10.38 46 P Pn 10 02 54.5 +0.5
baz=240
PAX Paxson 10.40 36 P Pn 10 02 54.5 +0.1
baz=227,SNR=31
G17K Kiwalik Mounta 10.45 356 P Pn 10 02 56.1 +1.2
baz=174,SNR=56
G16K Koyuk River 10.45 352 P Pn 10 02 56.0 +1.1
baz=169,SNR=21
H19K Roundabout Mou 10.50 5 P Pn 10 02 56.4 +0.8
baz=187
H20K Anotleneega Mo 10.57 9 P Pn 10 02 57.6 +1.0
baz=192,SNR=59
I21K Tanana 10.63 16 P Pn 10 02 58.3 +0.9
baz=202,SNR=42
GRNC Granite Creek 10.63 51 Pn Pn 10 02 57.7 +0.1
NEA2 Nenana 10.66 23 P Pn 10 02 55.9 -1.9
baz=212,SNR=20
MLY Manley 10.70 19 P Pn 10 02 58.9 +0.5
baz=206,SNR=26
G18K Tagagawik 10.81 0 Pn 10 03 01.2 +1.5
G18K Tagagawik 10.81 0 P Pn 10 03 01.8 +2.0
baz=180,SNR=42
GAMB Gambell 10.87 328 P Pn 10 03 01.1 +0.6
baz=137
K24K Donnelly Dome 10.90 32 P Pn 10 03 02.2 +1.1
baz=223,SNR=14
M26K Nabesna, AK 10.94 42 P Pn 10 03 02.6 +0.9
baz=235
H21K Melozitna Rive 10.96 13 P Pn 10 03 02.9 +1.0
baz=198
MENT Mentasta 10.99 39 Pn 10 03 03.1 +0.8
F15K North Star Dit 11.00 347 P Pn 10 03 03.9 +1.5
baz=162,SNR=18
F14K Arctic Creek 11.03 343 P Pn 10 03 04.2 +1.4
baz=157
HDA Harding Lake 11.03 28 P Pn 10 03 01.2 -1.6
baz=218,SNR=13
I23K Minto, Yukon-K 11.07 21 P Pn 10 03 03.4 -0.1
baz=209,SNR=24
G19K Purcell Mounta 11.09 4 Pn 10 03 04.1 +0.5
G19K Purcell Mounta 11.09 4 P Pn 10 03 04.3 +0.8
baz=185,SNR=39
PINM Pinnacle 11.09 56 P Pn 10 03 04.3 +0.5
baz=252
RIDG Independent Ri 11.14 34 P Pn 10 03 05.3 +0.8
baz=226,SNR=16
ADK Adak 11.15 260 P Pn 10 03 04.8 +0.3
COLA College 11.18 25 P Pn 10 03 04.6 -0.2
COLA College 11.18 25 P Pn 10 03 03.3 -1.5
baz=214
COLA College 11.18 25 P Pn 10 03 02.9 -1.9
L26K Log Cabin Wild 11.18 39 P Pn 10 03 06.2 +1.3
baz=232,SNR=16
ILAR Eielson Array 11.33 27 Pn Pn 10 03 02.9 -4.1
comp=E,1.0nm,0.3s,baz=220,slow=13,SNR=33
ILAR Sn Sn 10 05 07.3 -5.1
comp=E,0.5nm,0.3s,baz=221,slow=22,SNR=7.7
ILAR LR LR 10 07 45.7
comp=E,188nm,20.6s,baz=260,slow=39
comp=E,3.1nm,0.4s
M27K Edge Creek, AK 11.35 44 P Pn 10 03 07.8 +0.5
baz=238
O28M Mount Upton 11.35 53 P Pn 10 03 07.7 +0.2
baz=248
H22K Ishtalitna Cre 11.39 16 P Pn 10 03 08.5 +0.8
baz=202,SNR=16
TNA Tin City 11.39 340 P Pn 10 03 08.8 +1.1
baz=152,SNR=7.5
F17K Baldwin Pennin 11.42 355 Pn 10 03 09.7 +1.6
F17K Baldwin Pennin 11.42 355 P Pn 10 03 09.4 +1.3
baz=173,SNR=8.8
KIWB Kanaga Island 11.43 261 Pn 10 03 08.5 +0.2
POKR Poker Plat Res 11.48 25 P Pn 10 03 09.6 +0.6
baz=215
F18K Selawik 11.52 358 P Pn 10 03 10.2 +0.6
baz=178,SNR=12
J25K Salcha River, 11.62 30 P Pn 10 03 09.4 -1.6
baz=221
H23K Yukon River 11.64 19 P Pn 10 03 10.3 -0.9
baz=207
G21K Allakaket 11.71 10 P Pn 10 03 13.2 +1.1
baz=195,SNR=22
YUK8 Steele Glacier 11.74 51 P Pn 10 03 13.6 +0.8
baz=247,SNR=10
L27K Beaver Creek, 11.76 41 P Pn 10 03 13.5 +0.7
baz=235
F19K Shaleruckik Mo 11.76 2 P Pn 10 03 14.3 +1.6
baz=183,SNR=81
BVCY Beaver Creek 11.78 44 P Pn 10 03 14.6 +1.4
baz=240
O29M Mount Kennedy 11.95 56 P Pn 10 03 16.7 +1.1
baz=253
H24K Noodor Dome 11.98 22 P Pn 10 03 17.1 +1.2
baz=212
F20K Avaraart Lake 12.05 6 P Pn 10 03 18.6 +1.8
baz=188,SNR=42
E17K Hotham Inlet 12.09 354 P Pn 10 03 18.7 +1.5
baz=172,SNR=9.6
BRWY Burwash Landin 12.10 51 P Pn 10 03 18.8 +1.3
baz=248
P29M Windy Craggy 12.19 60 10 03 19.2 +0.5
P29M Windy Craggy 12.19 60 P Pn 10 03 20.0 +1.2
baz=258
YUK6 Outpost Mounta 12.25 53 P Pn 10 03 19.8 +0.1
baz=251
YUK4 Talbot Arm 12.26 51 P Pn 10 03 22.3 +2.4
baz=248
PRP Porcupine Dome 12.28 27 P Pn 10 03 19.6 -0.4
baz=218,SNR=12
G23K Bananza Creek 12.36 16 Pn 10 03 20.8 -0.2
G23K Bananza Creek 12.36 16 P Pn 10 03 23.0 +2.0
baz=204,SNR=12
E18K Tukpahlearik C 12.37 357 Pn 10 03 22.6 +1.4
E18K Tukpahlearik C 12.37 357 P Pn 10 03 22.9 +1.8
baz=175,SNR=23
F21K Alatna River 12.39 10 P Pn 10 03 23.2 +1.7
baz=194,SNR=41

E19K Redstone River 12.40 3 Pn Pn 10 03 23.3 +1.8
E19K Redstone River 12.40 3 P Pn 10 03 23.3 +1.8
baz=184,SNR=93
HYT Haines Junctio 12.61 54 P Pn 10 03 25.8 +1.2
baz=252
P30M Million Dollar 12.68 58 P Pn 10 03 25.8 +0.4
baz=256
S31K Pelican 12.73 68 P Pn 10 03 26.0 -0.1
baz=267
I26K Coal Creek Min 12.77 31 P Pn 10 03 26.8 +0.2
baz=224
D17K Noatak River 12.78 353 P Pn 10 03 27.9 +1.2
baz=169,SNR=7.9
M29M Somme Creek 12.78 47 P Pn 10 03 27.5 +0.6
baz=244
COLD Coldfoot 12.80 15 P Pn 10 03 27.7 +0.6
baz=203
F22K John River 12.81 11 P Pn 10 03 28.1 +0.9
baz=197
G24K Hadweenzic Riv 12.81 21 P Pn 10 03 27.7 +0.6
baz=210
PLBC Pleasant Camp 12.84 61 P Pn 10 03 28.6 +1.0
baz=260
N30M Aishikik Lake 13.00 52 P Pn 10 03 31.0 +1.1
baz=250
RDOG Red Dog Mine 13.12 353 Pn Pn 10 03 34.2 +2.9
RDOG Red Dog Mine 13.12 353 P Pn 10 03 32.9 +1.6
baz=170,SNR=24
G25K Bearman Lake 13.16 22 P Pn 10 03 32.8 +1.0
baz=214
FYU Fort Yukon 13.19 24 Pn 10 03 31.5 -0.8
L29M L29M 13.22 44 P Pn 10 03 33.7 +0.8
baz=242
DAWY Dawson 13.23 40 Pn 10 03 33.1 +0.2
DAWY Dawson 13.23 40 P Pn 10 03 33.4 +0.5
baz=236,SNR=14
E20K Nigu River 13.23 4 P Pn 10 03 34.6 +1.6
baz=186,SNR=29
O30N Mendenhall 13.26 56 Pn 10 03 34.4 +1.0
O30N Mendenhall 13.26 56 P Pn 10 03 34.3 +1.0
baz=255
SKAG Skagway 13.36 62 Pn 10 03 35.6 +1.0
D19K Kuna River 13.42 1 P Pn 10 03 36.5 +1.0
baz=182
I27K Kandik River 13.44 32 P Pn 10 03 36.6 +0.8
baz=227
F24K Squaw Lake 13.45 18 P Pn 10 03 36.7 +0.8
baz=208
M30M Minto, Yukon 13.54 48 Pn 10 03 37.6 +0.4
M30M Minto, Yukon 13.54 48 P Pn 10 03 38.2 +1.0
baz=247
C16K Lisburne Hills 13.54 350 P Pn 10 03 38.5 +1.4
baz=164
E21K Killik River 13.55 8 P Pn 10 03 38.0 +0.8
baz=192
C17K DeLong Mountai 13.55 353 P Pn 10 03 38.3 +1.0
baz=169,SNR=17
N31M Braeburn, Yuko 13.61 53 Pn 10 03 39.1 +1.1
N31M Braeburn, Yuko 13.61 53 P Pn 10 03 39.0 +0.9
baz=252
S32K Killisnoo 13.61 70 P Pn 10 03 39.4 +1.3
baz=270
C18K Utukok River 13.62 356 Pn 10 03 39.5 +1.3
C18K Utukok River 13.62 356 P Pn 10 03 39.0 +0.8
baz=174,SNR=8.9
AMKA Amchitka 13.64 263 Pn 10 03 38.1 -0.4
R32K Eaglecrest 13.66 67 P Pn 10 03 39.6 +0.8
baz=267
E23K Chandalar 13.66 15 Pn 10 03 39.4 +0.6
E23K Chandalar 13.66 15 P Pn 10 03 40.0 +1.1
baz=203,SNR=5.6
D20K Etivluk River 13.67 3 Pn 10 03 39.5 +0.6
D20K Etivluk River 13.67 3 P Pn 10 03 39.7 +0.8
baz=185,SNR=14
JIS Juneau Island 13.73 67 P Pn 10 03 41.8 +2.1
WHY Whitehorse 13.81 57 Pn 10 03 42.5 +1.6
WHY Whitehorse 13.81 57 P Pn 10 03 42.1 +1.2
baz=257
K29M Barlow Dome 13.81 42 Pn 10 03 41.9 +0.9
K29M Barlow Dome 13.81 42 P Pn 10 03 42.2 +1.2
baz=241
G26K Porcupine Rive 13.84 25 P Pn 10 03 41.5 +0.2
baz=218
E24K Your Creek 13.85 16 P Pn 10 03 41.7 +0.3
baz=205,SNR=10.0
I28M Miner Creek 13.86 34 P Pn 10 03 42.2 +0.6
baz=231,SNR=10
J29N Klondike Camp 13.87 39 Pn 10 03 42.8 +1.1
H27K Steamboat Moun 13.90 30 P Pn 10 03 42.6 +0.5
baz=225
F25K Christian Rive 13.95 21 P Pn 10 03 43.7 +1.0
baz=213
C19K Lookout Ridge 14.04 359 P Pn 10 03 45.0 +1.1
baz=178
P32M Atlin 14.19 61 P Pn 10 03 47.1 +1.0
baz=263
C21K Knifeblade Rid 14.20 6 P Pn 10 03 47.2 +1.2
baz=189
TOLK Toolik Lake Re 14.21 14 P Pn 10 03 47.2 +0.9
baz=202,SNR=13
G27K Doyon Strip 14.29 28 P Pn 10 03 47.5 +0.1
baz=223
F26K Sheenjek River 14.36 23 P Pn 10 03 47.8 -0.5
baz=216
D23K Nanushuk River 14.37 12 Pn 10 03 49.4 +0.9
D23K Nanushuk River 14.37 12 P Pn 10 03 48.6 +0.2
baz=199,SNR=9.8
E25K Arctic Village 14.41 20 P Pn 10 03 49.0 -0.1
baz=212
M31M Drury Creek, Y 14.46 51 P Pn 10 03 50.2 +0.5
baz=252,SNR=12
U33K Whale Pass 14.50 76 P Pn 10 03 50.6 +0.5
baz=277
CRAG Craig 14.59 78 P Pn 10 03 51.5 +0.1
baz=279
J30M Hart River 14.63 41 P Pn 10 03 52.2 +0.2
baz=240
B21K Ikpikpuk River 14.67 6 P Pn 10 03 52.9 +0.4
baz=190,SNR=10
P33M Teslin, Yukon 14.73 59 P Pn 10 03 53.7 +0.3
baz=261,SNR=10
N32M Quiet Lake 14.78 55 P Pn 10 03 54.3 +0.3
baz=257
D24K Happy Valley 14.79 14 P Pn 10 03 54.3 +0.3
baz=203
H29M Whitestone 14.85 33 P Pn 10 03 55.4 +0.4
baz=231
Q32M Nakina River 14.87 64 P Pn 10 03 55.1 -0.4
baz=267
WRAK Wrangell Islan 14.89 74 P Pn 10 03 55.4 -0.1
baz=276
I30M Mount Dempster 14.95 38 P Pn 10 03 56.0 -0.3
baz=238
B20K Meade River 14.96 2 P Pn 10 03 56.4 +0.1
baz=184
A19K Wainwright 15.17 357 P Pn 10 03 58.8 -0.3
baz=175
C23K Itkillik River 15.21 11 P Pn 10 03 59.4 -0.3
baz=198
D25K Kavik River 15.32 17 P Pn 10 03 59.9 -1.2
baz=208
E27K Coleen River 15.34 25 P Pn 10 04 00.4 -1.0
baz=220
F28M Old Crow 15.35 28 P Pn 10 04 00.8 -0.7
baz=225
G29M Pine Creek 15.40 32 P Pn 10 04 01.2 -1.0
baz=230
B22K Teshekpuk Lake 15.46 7 P Pn 10 04 02.6 -0.2
baz=192
V35K Ketchikan 15.46 78 P Pn 10 04 03.3 +0.4
baz=280
EPYK Eagle Plains 15.47 35 P Pn 10 04 03.0 -0.1
baz=234,SNR=110
R33M Jennings River 15.57 63 P Pn 10 04 04.4 -0.1
baz=266
MMPY Sheldon Lake, 15.97 51 P Pn 10 04 09.7 +0.1
baz=255,SNR=11
H31M Peel River 15.97 38 P Pn 10 04 09.2 -0.3
baz=240,SNR=20
T35M Bob Quinn 15.99 72 P Pn 10 04 09.8 0.0
baz=275
G30M tAoh Zraii Nji 16.00 33 P Pn 10 04 10.0 +0.1
baz=233,SNR=64
DLBC Dease Lake 16.03 66 Pn Pn 10 04 10.9 +0.6
comp=E,0.3nm,0.3s,baz=253,slow=16,SNR=4.5
DLBC LR LR 10 09 56.1
comp=E,104nm,18.7s,baz=248,slow=35
comp=E,0.6nm,0.5s

DLBC Dease Lake 16.03 66 P **Pn** **10 04 10.5 +0.1**
baz=270
C27K Jago River 16.05 19 P **Pn** **10 04 10.4 -0.1**
baz=213
C26K Camden Bay 16.09 17 P **Pn** **10 04 11.1 +0.1**
baz=210
SHEM Shemya Is, Ala 16.12 273 LR LR 10 10 19.6
comp=E,208nm,19.7s,baz=116,slow=37
E28M Babbage River 16.16 26 P **Pn** **10 04 11.8 -0.1**
baz=223
D27M Malcolm River 16.31 23 P **Pn** **10 04 13.2 -0.6**
baz=219
E29M Blow River 16.43 28 P **Pn** **10 04 14.2 -1.1**
baz=226
F30M Barrier River 16.52 32 P **Pn** **10 04 16.1 -0.3**
baz=232,SNR=21
G31M Satah River 16.59 35 P **Pn** **10 04 16.8 -0.6**
baz=236,SNR=19
INK Inuvik 17.62 32 P **Pn** **10 04 28.4 -1.8**
comp=E,1.9nm,0.3s,baz=231,slow=12,SNR=32
INK LR LR 10 11 57.3
comp=E,147nm,18.1s,baz=209,slow=39
comp=E,8.4nm,0.5s
INK Inuvik 17.62 32 P **Pn** **10 04 29.3 -0.8**
baz=234,SNR=16
INK Inuvik 17.62 32 P **Pn** **10 04 29.5 -0.7**
BBB Bella Bella 18.33 87 LR LR 10 10 15.9
comp=E,172nm,20.1s,baz=262,slow=32
WRGLY Wrigley 19.59 51 P **Pn** **10 04 53.6 -0.4**
WRGLY IAmb IAmb 10 05 12.4
comp=Z,29nm,0.9s
WRGLY Wrigley 19.59 51 P **P** **10 04 52.6 0.0**
baz=262,SNR=9.0
C36M Paulatuk 21.11 34 P **P** **10 05 08.7 -0.3**
C36M IAmb IAmb 10 05 09.5
comp=Z,25nm,0.7s
C36M Paulatuk 21.11 34 P **P** **10 05 08.2 -0.7**
baz=245,SNR=6.8
A36M Sachs Harbour 22.03 27 P **P** **10 05 17.7 -1.2**
baz=238,SNR=8.3
YKAW3 Yellowknife Wh 23.60 54 P **P** **10 05 35.2 +0.1**
YKA Yellowknife Ar 23.60 54 P **P** **10 05 34.7 -0.4**
comp=Z,1.7nm,0.5s,baz=270,slow=7.1,SNR=40
YKA LR LR 10 16 14.2
comp=Z,126nm,18.6s,baz=308,slow=40
comp=Z,1.7nm,0.5s
YKA Yellowknife Ar 23.60 54 P **P** **10 05 35.7 +0.6**
PET Petropavlovsk 24.79 283 P **P** **10 05 45.4 -0.8**
PET IAmb IAmb 10 05 46.2
comp=Z,17nm,0.7s
PET Petropavlovsk 24.79 283 P **P** **10 05 45.4 -0.8**
comp=Z,24nm,0.8s
PET Petropavlovsk 24.79 283 P **P** **10 05 44.8 -1.4**
PEA0B Petropavlovsk- 25.29 284 P **P** **10 05 49.8 -0.9**
PEA0B IAmb IAmb 10 05 50.8
comp=Z,21nm,0.7s
PETK Petropavlovsk- 25.29 284 P **P** **10 05 50.0 -0.8**
comp=Z,20nm,0.6s,baz=74,slow=12,SNR=38
PETK LR LR 10 15 32.5
comp=Z,89nm,20.5s,baz=88,slow=36
comp=Z,20nm,0.6s
PETK Petropavlovsk- 25.29 284 P **P** **10 05 49.8 -0.9**
H04A Detroit Lake 25.48 99 P **P** **10 05 54.1 +1.5**
SEY Seymchan 25.73 308 P **P** **10 05 52.4 -2.2**
comp=Z,7.5nm,0.6s,baz=103,slow=9.7,SNR=23
comp=Z,7.5nm,0.6s
WAH2 Wahluke Slope 25.78 93 P **P** **10 05 56.1 +0.9**
WAH2 IAmb IAmb 10 06 08.2
comp=Z,13nm,0.6s
EDM Edmonton 26.30 75 P **P** **10 05 59.9 0.0**
NEW Newport 26.38 88 LR LR 10 14 54.8
comp=Z,112nm,21.0s,baz=299,slow=33
NEW Newport 26.38 88 P P 10 06 11.1 +10
MA2 Magadan 27.04 300 LR LR 10 18 20.5
comp=Z,142nm,18.2s,baz=106,slow=40
YBH Yreka Blue Hor 27.07 105 LR LR 10 14 30.5
comp=Z,272nm,21.1s,baz=305,slow=31
F10A Beach Ranch, E 27.56 92 P **P** **10 06 14.0 +2.5**
JTMT Jette 28.28 86 P **P** **10 06 19.7 +1.8**
J08A Circle Bar Ran 28.41 98 P **P** **10 06 20.9 +1.8**
O03E Paynes Creek 28.55 106 P **P** **10 06 21.4 +1.1**
O03E IAmb IAmb 10 06 32.9
comp=Z,15nm,1.1s
HLID Hailey 30.60 94 P P 10 06 50.3 +12
PNTR Pine Nut 30.61 105 P **P** **10 06 40.3 +1.6**
PNTR IAmb IAmb 10 06 52.1
comp=Z,9.8nm,0.8s
RES Resolute Bay 31.08 28 LR LR 10 21 09.0
comp=Z,53nm,19.3s,baz=274,slow=40
WAKR Walker 31.11 106 P **P** **10 06 44.5 +1.4**
YHL Hebgen Lake 31.68 89 P **P** **10 06 49.5 +1.3**
YHL IAmb IAmb 10 07 00.5
comp=Z,12nm,1.1s
NVAR Mina Array Bea 31.80 105 P **P** **10 06 51.4 +2.3**
comp=Z,1.6nm,0.6s,baz=298,slow=8.2,SNR=17
NVAR pP **sP** **10 07 00.6 -1.5**
comp=Z,2.3nm,0.6s,baz=298,slow=8.6,SNR=12
NVAR PcP **PcP** **10 09 40.2 +0.6**
comp=Z,0.5nm,0.6s,baz=337,slow=4.7,SNR=2.8
NVAR LR LR 10 17 36.0
comp=Z,185nm,19.9s,baz=346,slow=32
comp=Z,1.6nm,0.6s
ELK Elko 31.93 98 LR LR 10 18 13.6
comp=Z,159nm,19.6s,baz=298,slow=33
MDPB Devils Postpil 31.93 107 P **P** **10 06 50.5 +0.1**
YNE Yellowstone No 32.27 88 P **P** **10 06 54.5 +1.2**
YNE IAmb IAmb 10 07 05.4
comp=Z,17nm,1.2s
DUG Dugway, Tooele 33.68 97 P P 10 07 17.2 +12
TIXI Tiksi 33.74 327 LR LR 10 22 51.7
comp=Z,162nm,18.6s,baz=14,slow=40
PDAR Pinedale Array 33.88 91 P **P** **10 07 09.1 +1.7**
comp=Z,0.9nm,0.5s,baz=328,slow=3.9,SNR=19
PDAR pP **pP** **10 07 17.9 +1.4**
comp=Z,2.2nm,0.6s,baz=313,slow=5.2,SNR=13
comp=Z,0.9nm,0.5s
PDAR Pinedale Array 33.88 91 P **P** **10 07 08.3 +1.0**
FURC Furnace Creek, 34.00 106 P **P** **10 07 09.3 +1.3**
FURC IAmb IAmb 10 07 21.0
comp=Z,8.6nm,1.1s
BSUT Blindstream Ca 34.63 95 P **P** **10 07 15.8 +1.9**
P17A Butcher Ranch, 35.35 96 P **P** **10 07 20.4 +0.4**
P18A Preston Nutter 35.53 95 P **P** **10 07 22.3 +0.7**
ILON Igloolik, Nuna 35.76 36 P **P** **10 07 23.1 +0.2**
YAK Yakutsk 36.14 311 P **P** **10 07 25.3 -0.9**
comp=Z,17nm,0.5s,baz=348,slow=0.8,SNR=4.5
comp=Z,17nm,0.5s
RSSD Black Hills 36.22 84 P **P** **10 07 28.3 +0.9**
RSSD IAmb IAmb 10 07 39.1
comp=Z,18nm,1.3s
RSSD Black Hills 36.22 84 P P 10 07 34.7 +7.3
DNR Dunn Ranch,Anz 36.28 109 P **P** **10 07 28.6 +0.7**
DNR IAmb IAmb 10 07 40.9
comp=Z,8.0nm,0.8s
PFO Pinyon Flats O 36.34 109 LR LR 10 19 46.1
comp=Z,147nm,20.1s,baz=274,slow=32
PV23 Carpenter Ridg 37.03 96 P **P** **10 07 35.4 +0.9**
PV23 IAmb IAmb 10 08 08.9
comp=Z,6.0nm,0.8s
MVCO Mesa Verde 38.18 97 P P 10 07 50.1 +5.9
JEM Erimo 39.45 275 P **P** **10 07 54.6 +0.2**
ERM Erimo 39.45 275 P **P** **10 07 54.7 +0.3**
K30B Basset 39.64 83 P **P** **10 07 57.4 +1.3**
KSCO Kaye Shedlock' 40.31 90 P **P** **10 08 02.9 +1.1**
KSCO IAmb IAmb 10 08 14.2
comp=Z,15nm,0.9s
TUC Tucson 40.45 104 P **P** **10 08 04.1 +1.2**
TUC Tucson 40.45 104 P **P** **10 08 05.4 +2.5**
NEEM North Greenlan 40.48 19 *i* P **P** **10 08 02.1 -0.9**
NEEM IAmb IAmb 10 08 03.3
comp=Z,6.1nm,0.7s
KULLO Kullorsuaq 40.71 24 *i* P **P** **10 08 04.1 -0.4**
KULLO IAmb IAmb 10 08 05.6
comp=Z,30nm,1.1s
ANMO Albuquerque 40.95 97 LR LR 10 23 44.1
comp=Z,66nm,18.4s,baz=307,slow=34
ANMO Albuquerque 40.95 97 P P 10 08 16.2 +9.0
EYMN Ely 40.96 71 P **P** **10 08 05.7 -1.2**
JTM Tenmabayashi 41.44 276 P **P** **10 08 11.1 +0.2**
UPNV Upernavik 41.92 26 *i* P **P** **10 08 13.1 -1.3**
UPNV IAmb IAmb 10 08 15.1
comp=Z,52nm,1.2s
NOR Nord 42.01 8 P **P** **10 08 15.3 +0.3**
NOR Nord 42.01 8 *i* P **P** **10 08 15.1 0.0**
NOR IAmb IAmb 10 08 16.2
comp=Z,9.0nm,1.1s

H11N2 WAKE ISLAND Hy 43.82 230 T T 10 54 51.1
baz=28,slow=75,SNR=10.0
H11N3 WAKE ISLAND Hy 43.83 230 T T 10 54 51.6
baz=28,slow=75,SNR=8.6
H11N1 WAKE ISLAND Hy 43.84 230 T T 10 54 51.7
baz=28,slow=75,SNR=4.6
MNTX Cornudas Mount 43.94 100 P P 10 08 43.2 +12
USRK Ussuriysk Ar. 44.35 286 LR LR 10 27 05.9
comp=Z,46nm,21.9s,baz=46,slow=36
H11S1 WAKE ISLAND Hy 44.99 230 T T 10 56 20.0
baz=28,slow=76,SNR=7.8
H11S2 WAKE ISLAND Hy 45.00 230 T T 10 56 20.0
baz=28,slow=76,SNR=8.2
H11S3 WAKE ISLAND Hy 45.01 230 T T 10 56 20.0
baz=28,slow=76,SNR=8.4
WMOK Wichita Mounta 45.49 91 P P 10 08 54.2 +11
BNX BinXian 45.87 290 ⇓P **P** **10 08 45.5 -0.9**
BNX pmax pmax
comp=Z,8.0nm,0.7s
MAJO Matsushiro 45.97 273 P **P** **10 08 48.4 +1.0**
MAJO Matsushiro 45.97 273 P **P** **10 08 47.0 -0.4**
MAJO IAmb IAmb 10 08 48.6
comp=Z,17nm,1.2s
MJAR Matsushiro Arr 45.97 273 P **P** **10 08 47.2 -0.2**
comp=Z,3.2nm,0.6s,baz=29,slow=7.4,SNR=16
comp=Z,3.2nm,0.6s
MJAR Matsushiro Arr 45.97 273 P **P** **10 08 47.2 -0.2**
MJB9 Matsu-Tunnel 45.97 273 P **P** **10 08 48.0 +0.6**
MJB9 IAmb IAmb 10 08 49.6
comp=Z,16nm,1.2s
P40A Paris 46.01 81 P **P** **10 08 47.8 +0.1**
P40A IAmb IAmb 10 08 57.9
comp=Z,6.3nm,0.7s
KBS Kingsbay 46.09 2 *eP* **P** **10 08 48.9 +1.2**
KBS Kingsbay 46.09 2 *i* P **P** **10 08 49.2 +1.5**
SUMG Summit 46.11 21 P **P** **10 08 49.0 +0.5**
SUMG Summit 46.11 21 *i* P **P** **10 08 48.8 +0.2**
SUMG IAmb IAmb 10 08 50.2
comp=Z,14nm,1.0s
TX31 Lajitas Ar. Si 46.69 100 P **P** **10 08 54.2 +1.0**
TX31 IAmb IAmb 10 09 05.4
comp=Z,7.0nm,1.0s
TXAR Lajitas Array 46.69 100 P **P** **10 08 55.2 +2.0**
comp=Z,0.5nm,0.5s,baz=306,slow=5.8,SNR=9.7
TXAR pP **pP** **10 09 02.6 -0.1**
comp=Z,5.9nm,1.0s,baz=310,slow=6.2,SNR=17
TXAR LR LR 10 27 20.5
comp=Z,138nm,19.5s,baz=310,slow=34
comp=Z,0.5nm,0.5s
NRIK Noril'sk 46.89 334 P **P** **10 08 53.8 -0.4**
comp=Z,16nm,0.7s,baz=52,slow=7.1,SNR=12
comp=Z,15nm,0.7s
NRIK Noril'sk 46.89 334 P **P** **10 08 53.7 -0.4**
SPITS Spitsbergen Ar 46.92 1 P **P** **10 08 54.5 +0.1**
comp=Z,5.1nm,0.8s,baz=333,slow=10,SNR=3.5
SPITS PcP **PcP** **10 10 26.0 -0.4**
comp=Z,1.5nm,0.4s,baz=77,slow=4.5,SNR=4.6
comp=Z,5.1nm,0.8s
JGF Kuroka 47.12 273 P **P** **10 08 57.0 +0.6**
HPIG 47.41 104 P P 10 09 10.0 +11
HSPB Hornsund (broa 48.09 2 P **P** **10 09 07.0 +3.6**
CN2 Changchun 48.19 290 *eP* **P** **10 09 03.5 -1.0**
CN2 *eS* **S** **10 16 00.3 -1.0**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
HOPEN Hopen 48.61 359 *eP* **P** **10 09 07.8 +0.5**
MIAR Mount Ida 48.62 87 P **P** **10 09 07.9 -0.1**
SCHQ Schefferville 48.97 50 P **P** **10 09 09.8 -0.7**
comp=Z,1.0nm,0.7s,baz=301,slow=8.9,SNR=4.3
comp=Z,2.1nm,0.7s
USIN University of 49.57 79 P **P** **10 09 15.0 -0.2**
T47A Sharon Grove 50.57 80 P **P** **10 09 23.2 +0.4**
T47A IAmb IAmb 10 09 33.3
comp=Z,7.5nm,1.1s
WVT Waverly 50.77 81 P **P** **10 09 24.5 +0.1**
WVT IAmb IAmb 10 09 35.0
comp=Z,11nm,0.9s
WVT Waverly 50.77 81 P **P** **10 09 24.7 +0.4**
SCO Scoresbysund 50.93 17 *i* P **P** **10 09 25.4 +0.4**
SCO IAmb IAmb 10 09 27.1
comp=Z,6.1nm,0.5s
TRQ Mont Tremblant 50.99 63 P **P** **10 09 25.9 0.0**
TRQ IAmb IAmb 10 09 27.1
comp=Z,12nm,1.1s
SOEG Soedalen 51.01 22 *i* P **P** **10 09 25.4 -0.3**
SOEG IAmb IAmb 10 09 27.1
comp=Z,16nm,1.0s
KS19 Wonju Array Si 51.17 282 P **P** **10 09 27.6 +0.2**
KSRS Korea Array 51.17 282 P **P** **10 09 27.6 +0.3**
comp=Z,9.7nm,0.7s,baz=46,slow=6.9,SNR=38
KSRS LR LR 10 29 46.5
comp=Z,25nm,21.6s,baz=65,slow=34
comp=Z,9.7nm,0.7s
KSAR Wonju Array Be 51.20 282 P **P** **10 09 27.6 0.0**
Q51A Peebles 51.24 75 P **P** **10 09 28.3 +0.4**
Q51A IAmb IAmb 10 09 38.2
comp=Z,8.7nm,0.9s
ANGG Ammassalik, Gr 51.58 27 *i* P **P** **10 09 29.4 -0.5**
ANGG IAmb IAmb 10 09 30.1
comp=Z,9.5nm,0.8s
IVI Ivigtut 51.80 35 *i* P **P** **10 09 31.9 +0.3**
IVI IAmb IAmb 10 09 32.9
comp=Z,21nm,1.2s
JMIC Jan Mayen 52.41 12 LR LR 10 32 49.8
comp=Z,46nm,21.7s,baz=246,slow=37
JTU Tsushima 52.44 278 P **P** **10 09 37.0 +0.2**
NRS Narsarsuaq 52.73 34 P **P** **10 09 42.2 +3.6**
FPAL Fort Paine 53.17 81 P **P** **10 09 41.8 -0.5**
VADS Vadso 54.92 357 *eP* **P** **10 09 53.8 -0.6**
SONM Songino Array 55.09 305 P **P** **10 09 56.1 -0.2**
comp=Z,5.7nm,0.7s,baz=52,slow=7.2,SNR=16
SONM PcP **PcP** **10 10 58.1 +0.8**
comp=Z,2.3nm,0.6s,baz=36,slow=3.1,SNR=6.5
comp=Z,5.7nm,0.7s
KEV Kevo 55.35 358 P **P** **10 09 56.7 -0.9**
KEV Kevo 55.35 358 P **P** **10 09 56.9 -0.7**
TRO Tromso 55.54 1 *eP* **P** **10 09 58.3 -0.6**
TRO IAmb IAmb 10 09 59.4
comp=Z,31nm,1.3s
ARCES ARCESS Array B 55.61 358 P **P** **10 09 58.6 -0.9**
comp=Z,2.4nm,0.5s,baz=20,slow=7.2,SNR=19
ARCES PcP **PcP** **10 10 59.0 +0.2**
comp=Z,4.9nm,0.8s,baz=15,slow=5.1,SNR=8.1
comp=Z,2.4nm,0.5s
ARCES ARCESS Array B 55.61 358 P **P** **10 09 58.5 -0.9**
ARCES IAmb IAmb 10 09 60.0
comp=Z,8.9nm,1.1s
KTK1 Kautokeino 56.16 359 *eP* **P** **10 10 03.1 -0.4**
KTK1 IAmb IAmb 10 10 03.3
comp=Z,7.4nm,0.8s
LVZ Lovozero 56.89 354 P **P** **10 10 08.4 -0.2**
LVZ Lovozero 56.89 354 P **P** **10 10 07.5 -1.1**
comp=Z,20nm,1.0s
LVZ Lovozero 56.89 354 P **P** **10 10 06.5 -2.2**
STEI Steigen 57.18 3 *eP* **P** **10 10 10.3 -0.3**
STEI IAmb IAmb 10 10 17.1
comp=Z,119nm,2.5s
HHC Hu-ho-hao-te 57.60 296 *eP* **P** **10 10 14.5 +0.3**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,41nm,4.6s
SGF Sodankyl 57.69 358 P **P** **10 10 14.1 -0.1**
FAUS Fauske 57.73 3 *eP* **P** **10 10 14.6 +0.1**
FAUS IAmb IAmb 10 10 15.2
comp=Z,6.0nm,0.8s
TIA Tai'an 58.05 289 P **P** **10 10 17.3 0.0**
TIA pmax pmax
comp=Z,7.0nm,0.6s
HNS HongShan 58.48 291 ⇑P **P** **10 10 20.5 +0.3**
HNS pmax pmax
comp=Z,45nm,0.9s
RAUS Rausandaksla 58.64 3 *eP* **P** **10 10 20.6 -0.3**
RAUS IAmb IAmb 10 10 21.8
comp=Z,16nm,1.0s
LEIR Leirfjorden 58.93 4 *eP* **P** **10 10 23.0 +0.1**
LEIR IAmb IAmb 10 10 23.5
comp=Z,16nm,1.1s
MSF Maaselka 59.14 356 P **P** **10 10 24.6 +0.2**
ZALV Zalesovo Beam 59.39 322 P **P** **10 10 26.2 -0.1**
comp=Z,5.2nm,0.8s,baz=33,slow=5.7,SNR=25
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 59.39 322 P **P** **10 10 26.3 0.0**
OUL Oulu 60.06 358 P **P** **10 10 30.4 -0.3**

NJ2 Nanjing 60.20 284 *eP* **P** **10 10 32.5 +0.3**
NJ2 pmax pmax
comp=Z,32nm,0.5s
NSS Namsos 60.46 5 *eP* **P** **10 10 33.1 -0.3**
LYN LuoYang 61.81 291 P **P** **10 10 43.5 +0.4**
LYN pmax pmax
comp=Z,40nm,0.9s
MOL Molde 62.15 7 *eP* **P** **10 10 45.0 +0.1**
AKN Aaknes 62.50 7 *eP* **P** **10 10 47.9 +0.6**
DOMB Dombas 62.78 6 *eP* **P** **10 10 49.0 -0.2**
SUE Sulen 63.43 9 *eP* **P** **10 10 54.1 +0.7**
FIA1 FINESS Array S 63.71 357 P **P** **10 10 54.9 -0.4**
FINES FINESS Array B 63.71 357 P **P** **10 10 54.6 -0.7**
comp=Z,4.3nm,0.6s,baz=17,slow=7.8,SNR=40
FINES pP **pP** **10 11 03.9 -1.1**
comp=Z,3.5nm,0.6s,baz=1.7,slow=5.6,SNR=2.9
comp=Z,4.3nm,0.6s
NB2 NORSAR Subarra 63.91 5 P **P** **10 10 56.8 +0.1**
comp=Z,2.8nm,0.6s,baz=354,slow=6.9
NB2 NORSAR Subarra 63.91 5 P **P** **10 10 56.8 +0.1**
NOA NORSAR Array B 63.91 5 P **P** **10 10 56.5 -0.1**
comp=Z,3.7nm,0.6s,baz=353,slow=6.6,SNR=6.2
comp=Z,3.7nm,0.6s
ASK Askoy 64.03 9 *eP* **P** **10 10 57.7 +0.3**
SKAR Skarslia 64.08 7 *eP* **P** **10 10 58.1 +0.3**
KURK Kurchatov 64.21 324 P **P** **10 10 58.6 -0.1**
KURK IAmb IAmb 10 10 59.5
comp=Z,6.1nm,0.8s
KURK Kurchatov 64.21 324 P **P** **10 10 58.6 -0.1**
NC602 NORSAR Array S 64.23 5 *eP* **P** **10 10 58.7 0.0**
KURBB Kurchatov Arra 64.32 324 P **P** **10 10 59.1 -0.3**
comp=Z,4.2nm,0.8s,baz=23,slow=6.3,SNR=28
comp=Z,4.2nm,0.8s
GTA2 Gaotai 64.53 303 P **P** **10 11 00.8 -0.4**
GTA2 pmax pmax
comp=Z,30nm,0.9s
ARTI Arti 64.80 338 LR LR 10 43 15.5
comp=Z,57nm,18.2s,baz=36,slow=40
ARTI Arti 64.80 338 P **P** **10 11 02.2 -0.3**
BVAR Borovoye Array 64.82 330 P **P** **10 11 02.3 -0.5**
comp=Z,6.1nm,0.6s,baz=29,slow=7.7,SNR=25
comp=Z,6.1nm,0.6s
HFS Hagfors 64.93 4 P **P** **10 11 02.9 -0.4**
comp=Z,8.7nm,0.5s,baz=23,slow=4.8,SNR=35
comp=Z,8.7nm,0.5s
LZH Lanzhou 65.15 298 *eP* **P** **10 11 04.3 -1.1**
LZH sP sP 10 11 21.5 +2.7
LZH pmax pmax
comp=Z,29nm,1.5s
BLS5 Blasjo 65.19 8 *eP* **P** **10 11 05.4 +0.4**
LZDM Lanzhou Array 65.33 298 P **P** **10 11 05.5 -1.3**
comp=Z,2.2nm,0.3s,baz=310,slow=5.6,SNR=4.9
comp=Z,2.2nm,0.3s
MKAR Makanchi Array 66.18 319 P **P** **10 11 10.9 -0.7**
comp=Z,3.2nm,0.5s,baz=41,slow=6.0,SNR=25
comp=Z,3.2nm,0.5s
MAKZ Makanchi 66.29 319 P **P** **10 11 11.4 -0.9**
MAKZ Makanchi 66.29 319 P **P** **10 11 11.8 -0.6**
WMQ Urumqi 66.50 314 *eP* **P** **10 11 15.5 +1.7**
WMQ LR LR
comp=Z,94nm,24.9s
VSU Vasula 66.68 357 P **P** **10 11 11.2 -3.3**
EKA Eskdalemuir Ar 68.10 15 P **P** **10 11 23.4 -0.2**
comp=Z,4.4nm,0.7s,baz=342,slow=5.0,SNR=13
comp=Z,4.4nm,0.7s
CD2 Chengdu 69.26 294 P **P** **10 11 31.8 +0.5**
CD2 pmax pmax
comp=Z,40nm,0.6s
AFI Afiamalu 69.64 193 LR LR 10 32 54.3
comp=Z,36nm,21.9s,baz=112,slow=28
PABE Paberze 69.71 358 P **P** **10 11 33.7 +0.2**
PDGK Podgornoye 70.17 319 P **P** **10 11 36.9 +0.1**
AB31 Akbulak array 71.05 334 P **P** **10 11 41.4 -0.5**
ABKAR Akbulak array 71.05 334 P **P** **10 11 41.6 -0.3**
KDJ Kajisay 72.07 320 P **P** **10 11 48.3 -0.2**
KDJ IAmb IAmb 10 11 49.8
comp=Z,8.2nm,1.0s
TARG Taragay, Kyrgy 72.18 319 P **P** **10 11 50.0 +0.6**
TARG IAmb IAmb 10 11 51.3
comp=Z,5.2nm,0.7s
TARG Taragay, Kyrgy 72.18 319 P **P** **10 11 50.9 +1.5**
BOOM Boomskoye usch 72.22 321 P **P** **10 11 49.6 +0.3**
BOOM IAmb IAmb 10 11 50.7
comp=Z,9.3nm,0.8s
AAK Ala-Archa 72.61 322 P **P** **10 11 51.7 +0.1**
comp=Z,5.7nm,0.5s,baz=44,slow=1.8,SNR=9.4
comp=Z,5.7nm,0.5s
AAK Ala-Archa 72.61 322 P **P** **10 11 51.9 +0.2**
AAK IAmb IAmb 10 11 53.0
comp=Z,15nm,1.2s
AAK Ala-Archa 72.61 322 P **P** **10 11 52.3 +0.7**
NRN Naryn 73.11 320 P **P** **10 11 55.2 +0.4**
NRN IAmb IAmb 10 11 56.6
comp=Z,15nm,1.2s
ASAI AK-SAY(Kyrgyzs 73.37 319 P **P** **10 11 57.6 +1.3**
KK31 Karatay Array 73.57 325 P **P** **10 11 56.9 -0.1**
CLL Collm 73.71 5 P **P** **10 11 57.6 -0.1**
CLL IAmb IAmb 10 11 59.3
comp=Z,7.2nm,1.2s
CLL Collm 73.71 5 P **P** **10 11 57.7 -0.1**
CLL Collm 73.71 5 *i* P **P** **10 11 57.8 +0.1**
comp=Z,6.0nm,1.1s
CLL AMS AMS 11 01 00.0
comp=Z,100nm,21.0s
RNPP9 Sopachiy 73.76 357 P **P** **10 11 58.0 0.0**
PZH PanZhiHua 73.83 293 P **P** **10 11 58.8 -0.2**
RNPP8 Varash 73.84 357 P **P** **10 11 58.4 -0.1**
RNPP5 Staryi Chortor 73.94 357 P **P** **10 11 59.0 -0.1**
BRG Berggiesshubel 74.19 5 P **P** **10 12 01.3 +0.7**
BRG Berggiesshubel 74.19 5 *eP* **P** **10 12 01.2 +0.6**
BRG Amp 10 12 02.6
comp=Z,4.6nm,0.9s
BRG pP **pP** **10 12 12.0 +1.5**
BRG Amp 10 12 12.7
comp=Z,2.4nm,0.8s
BRG sP **PcP** **10 12 17.0 +1.6**
BRG Amp 10 12 18.7
comp=Z,2.5nm,0.9s
AK21 Malin Array Si 74.27 355 P **P** **10 12 00.5 -0.5**
AK22 Malin Array Si 74.28 355 P **P** **10 12 00.6 -0.5**
MOX Moxa 74.29 6 P **P** **10 12 02.0 +0.8**
ARSB Arslanbob 74.30 322 P **P** **10 12 01.3 -0.2**
ARSB IAmb IAmb 10 12 07.5
comp=Z,9.3nm,0.8s
AK20 Malin Array Si 74.30 355 P **P** **10 12 00.7 -0.5**
AK03 Malin Array Si 74.31 355 P **P** **10 12 00.8 -0.4**
AK04 Malin Array Si 74.31 355 P **P** **10 12 00.8 -0.5**
AK18 Malin Array Si 74.32 355 P **P** **10 12 00.8 -0.5**
AK19 Malin Array Si 74.32 355 P **P** **10 12 00.9 -0.4**
AKASG Malin Array Be 74.33 355 P **P** **10 12 00.8 -0.6**
comp=Z,5.7nm,0.4s,baz=6.4,slow=5.7,SNR=34
comp=Z,5.7nm,0.4s
KIEV Kiev 74.34 355 ⇑P **P** **10 12 00.7 -0.7**
KIEV Kiev 74.34 355 P **P** **10 12 00.5 -0.9**
comp=Z,88nm,0.9s
KIEV Kiev 74.34 355 P **P** **10 12 00.9 -0.5**
AK01 Malin Array Si 74.34 355 P **P** **10 12 01.2 -0.2**
AK15 Malin Array Si 74.34 355 P **P** **10 12 01.2 -0.2**
AK17 Malin Array Si 74.36 355 P **P** **10 12 01.3 -0.2**
AK11 Malin Array Si 74.36 355 P **P** **10 12 01.0 -0.5**
AK16 Malin Array Si 74.37 355 P **P** **10 12 01.0 -0.6**
AK02 Malin Array Si 74.38 355 P **P** **10 12 00.7 -0.9**
AK14 Malin Array Si 74.41 355 P **P** **10 12 00.8 -1.0**
AK09 Malin Array Si 74.41 355 P **P** **10 12 00.9 -0.9**
AK10 Malin Array Si 74.43 355 P **P** **10 12 01.0 -0.9**
AK07 Malin Array Si 74.48 355 P **P** **10 12 01.3 -0.9**
DPC Dobruska-Polom 74.81 3 *eP* **P** **10 12 04.9 +0.6**
DPC Dobruska-Polom 74.81 3 P **P** **10 12 03.5 -0.8**
comp=Z,9.0nm,1.1s
DPC Dobruska-Polom 74.81 3 P **P** **10 12 04.6 +0.4**
LUBAR Lubar, Ukraine 75.18 356 P **P** **10 12 05.2 -1.1**
KSH2 Kashi 75.27 319 P **P** **10 12 08.0 +0.8**
KSH2 pmax pmax
comp=Z,21nm,0.9s
MORC Moravsky Berou 75.42 2 *eP* **P** **10 12 07.7 -0.1**
VRAC Vranov 75.86 3 ⇑P **P** **10 12 10.3 0.0**
VRAC Vranov 75.86 3 *eP* **P** **10 12 10.5 +0.2**
VRAC Vranov 75.86 3 P **P** **10 12 10.9 +0.6**
KHC Kasperske Hory 75.92 5 *eP* **P** **10 12 11.2 +0.6**
DAV Davao City (W) 76.04 262 LR LR 10 46 32.2
comp=Z,10nm,19.8s,baz=359,slow=36
KRUC Moravsky 76.10 3 *eP* **P** **10 12 11.7 +0.1**
GERES GERESS Array B 76.21 5 P **P** **10 12 12.8 +0.4**
comp=Z,1.1nm,0.6s,baz=345,slow=4.9,SNR=10.0
comp=Z,1.1nm,0.6s

KOLS	Kolonicke sedl	76.31	359	P		P		10 12 13.9	+1.1
KOLS	Kolonicke sedl	76.31	359	*e*P		P		10 12 13.0	+0.2
JAVC	Velka Javorina	76.34	2	*e*P		P		10 12 14.1	+1.0
KMPD	K-Podol'skiy	76.59	356	P		P		10 12 13.6	-0.7
VYHS	Vyhne	76.73	2	P		P		10 12 16.3	+1.1
VYHS	Vyhne	76.73	2	*e*P		P		10 12 16.5	+1.3
MODS	Modra-Piesok	76.82	3	P		P		10 12 16.9	+1.2
MODS	Modra-Piesok	76.82	3	*e*P		P		10 12 16.9	+1.2
SORM	Soroca	76.94	355	⇑P		P		10 12 15.6	-0.7
SORM	Soroca	76.94	355	P		P		10 12 15.4	-0.9
	comp=Z,16nm,0.9s								
ABAH	Abaujker	76.95	360	P		P		10 12 17.7	+1.3
WINA	Alland / Wiene	77.05	4	*e*P		P		10 12 17.5	+0.5
	comp=Z,2.1nm,0.7s								
CONA	Conrad Observa	77.22	4	*i* P		P		10 12 18.6	+0.6
	comp=Z,5.2nm,1.2s								
RJOB	Jochberg	77.26	6	P		P		10 12 18.8	+0.5
GAR	Garm	77.30	323	P		P		10 12 18.9	+0.2
PSZ	Piszkesteto	77.32	1	⇑P		P		10 12 19.4	+0.8
BIOA	Bad Ischl, Aus	77.36	5	*e*P		P		10 12 19.5	+0.8
	comp=Z,3.3nm,1.0s								
MOTA	Moosalm	77.54	7	*i* P		P		10 12 20.3	+0.3
	comp=Z,5.7nm,1.3s								
BUR08	Bucovina Ar. S	77.55	357	P		P		10 12 20.1	+0.1
LESA	Schwarzleotal	77.57	6	*i* P		P		10 12 20.4	+0.4
	comp=Z,2.1nm,0.5s								
BURAR	Bucovina Array	77.58	357	⇑P		P		10 12 20.3	+0.2
WATA	Walderalm	77.59	7	*e*P		P		10 12 20.5	+0.3
	comp=Z,5.5nm,0.7s								
WTTA	Wattenberg	77.66	7	*e*P		P		10 12 21.2	+0.6
	comp=Z,2.7nm,0.7s								
SQTA	Sankt Quirin	77.67	7	*e*P		P		10 12 21.2	+0.5
	comp=Z,3.8nm,0.8s								
FETA	Feichten	77.84	7	*i* P		P		10 12 22.2	+0.5
	comp=Z,2.2nm,0.8s								
ARSA	Arzberg	77.88	4	P		P		10 12 21.6	-0.1
ARSA	Arzberg	77.88	4	*e*P		P		10 12 22.5	+0.8
	comp=Z,3.2nm,1.2s								
KBA	Koelnbreinsper	77.95	6	*e*P		P		10 12 23.2	+0.9
	comp=Z,6.6nm,0.7s								
KBA	Koelnbreinsper	77.95	6	P		P		10 12 23.3	+1.1
SESA	Seetaler Alpe,	77.98	5	*e*P		P		10 12 23.2	+0.8
	comp=Z,12nm,1.4s								
CHGR	Chuyangaron	78.00	324			P		10 12 22.5	-0.1
CHGR	Chuyangaron	78.00	324	P		P		10 12 22.8	+0.2
MPLH	Magyarpolny	78.03	3	P		P		10 12 21.7	-0.8
BIZ	Bicaz	78.22	357	⇑P		P		10 12 24.1	+0.5
ABTA	Abfaltersbach	78.23	6	*i* P		P		10 12 24.2	+0.4
	comp=Z,1.1nm,0.5s								
SOKA	Soboth	78.43	4	*e*P		P		10 12 25.6	+0.8
	comp=Z,3.1nm,0.7s								
DRGR		78.45	359	⇑P		P		10 12 25.1	+0.2
DRGR		78.45	359	P		P		10 12 25.5	+0.6
MARR	Marisel-Cluj	78.56	359	⇑P		P		10 12 25.3	-0.2
OBKA	Obir	78.58	5	*e*P		P		10 12 26.2	+0.5
	comp=Z,7.3nm,0.6s								
OBKA	Obir	78.58	5	P		P		10 12 26.3	+0.7
ONER	Baraj Valea Uz	78.82	356	⇑P		P		10 12 27.6	+0.8
SIRR	Siria	78.98	360	⇑P		P		10 12 28.4	+0.7
MORH	Mrgy, Hungar	79.01	2	⇑P		P		10 12 27.1	-0.8
MORH	Mrgy, Hungar	79.01	2	P		P		10 12 26.5	-1.3
VARL	Varlezi	79.19	355	⇑P		P		10 12 30.1	+1.2
VLDR	Vladesti	79.23	355	⇑P		P		10 12 27.2	-1.9
VRI	Vrincioaia	79.27	356	⇑P		P		10 12 29.7	+0.4
PLOR	Plostina	79.29	356	⇓P		P		10 12 29.9	+0.5
COVR	Voineasa-Covas	79.31	356	⇑P		P		10 12 30.7	+1.1
SHAA	Shahritus	79.34	324			P		10 12 30.2	+0.3
SHAA					IAmb	IAmb		10 12 32.5	
	comp=Z,29nm,1.0s								
SAHR	Sahastru	79.41	356	⇑P		P		10 12 31.0	+0.8
BZS	Buzias	79.63	360	⇑P		P		10 12 31.5	+0.2
VOIR		79.76	357	⇑P		P		10 12 32.5	+0.4
KBZ	Khabaz	79.81	344	P		P		10 12 32.6	+0.4
	comp=Z,6.3nm,0.9s,baz=331,slow=5.0,SNR=9.9								
	comp=Z,6.3nm,0.9s								
ARR	Arges	79.84	358	⇑P		P		10 12 32.8	+0.3
ARR	Arges	79.84	358	P		P		10 12 33.7	+1.2
GZR	Gura Zlata	79.84	359	⇑P		P		10 12 33.0	+0.4
CFR	Carcaliu	79.90	355	⇑P		P		10 12 32.6	-0.1
EVN	Everest	80.11	305			P		10 12 34.5	-0.4
TPGR	Topolog	80.20	355	⇑P		P		10 12 34.8	+0.4
HERR	Herculane	80.36	359	⇑P		P		10 12 35.1	-0.1
MDVR	Moldovita	80.46	360	⇑P		P		10 12 36.1	+0.3
PBRG	Braganca	80.54	21	*e*P		P		10 12 37.6	+1.3
TIRR	Tirgusor	80.60	355	⇑P		P		10 12 35.2	-1.3
POLO	Lamas de Olo	80.73	22	*e*P		P		10 12 39.0	+1.5
PVIS	Viseu	81.34	22	*e*P		P		10 12 42.1	+1.4
MTE	Manteigas	81.72	22	*e*P		P		10 12 44.1	+1.5
PCAS	Casmilo, Conde	81.84	23	*e*P		P		10 12 44.6	+1.4
CMAR	Chiang Mai Arr	81.86	290	P		P		10 12 43.5	-0.1
	comp=Z,5.9nm,0.8s,baz=11,slow=5.4,SNR=37								
	comp=Z,5.9nm,0.8s								
CMAR	Chiang Mai Arr	81.86	290			P		10 12 44.0	+0.4
PCBR	Castelo Branco	82.27	22	*e*P		P		10 12 46.6	+1.2
PMRV	Marv??o	82.68	22	*e*P		P		10 12 48.6	+1.0
PDG	Podgorica	82.80	1	⇑P		P		10 12 45.2	-3.0
PARRA	Arraiolos	83.13	23	*e*P		P		10 12 50.6	+0.6
ESDC	Sonseca Array	83.14	19	P		P		10 12 50.9	+0.8
	comp=Z,8.6nm,0.9s,baz=341,slow=4.7,SNR=47								
	comp=Z,8.6nm,0.9s								
EVO	Evora	83.41	23	*e*P		P		10 12 52.5	+1.1
PBAR	Barrancos	83.96	22	*e*P		P		10 12 55.3	+1.1
PVAQ	Vaqueiros	84.55	23	*e*P		P		10 12 58.4	+1.2
BRTR	Keskin Array B	84.92	350	P		P		10 12 59.8	+0.5
	comp=Z,2.9nm,0.8s,baz=35,slow=3.0,SNR=16								
	comp=Z,2.9nm,0.8s								
BRTR	Keskin Array B	84.92	350			P		10 12 59.3	+0.1
TIP	Timpagrande	85.99	3	⇑P		P		10 13 04.3	-0.1
PMAR	Madeira	86.58	31	*e*P		P		10 13 07.5	-0.1
KEST	Kesra	88.93	10	P		P		10 13 19.1	+0.4
	comp=Z,2.9nm,0.9s,baz=338,slow=2.8,SNR=4.0								
	comp=Z,2.9nm,0.9s								
WRA	Warramunga Arr	93.76	240	P		P		10 13 39.9	-1.1
	comp=Z,0.6nm,0.7s,baz=34,slow=5.5,SNR=6.3								
	comp=Z,0.6nm,0.7s								
ASAR	Alice Springs	97.11	238	P		P		10 13 54.9	-1.4
	comp=Z,0.3nm,0.7s,baz=28,slow=4.5,SNR=2.1								
	comp=Z,0.3nm,0.7s								
QSPA	South Pole Qui	144.91	180	PKPbc		PKPab		10 19 58.2	-0.9
	comp=Z,2.4nm,0.6s,baz=9.3,slow=1.5,SNR=14								
BOSA	Boshof	153.35	352	PKPbc		PKPbc		10 20 21.8	-0.3
	comp=Z,2.5nm,0.7s,baz=100,slow=5.3,SNR=3.2								

*AEIC **26** 10:01:21.0±0.8, 60.04N±0.04×152.78W±0.07, h101km±2km, Error ellipse: s-maj=6.6km s-min=4.9km az=209.0*

*ANF **26** 10:01:20.5±0.4, 60.02N×152.73W, h99km±4km, ML2.7/17, Error ellipse: s-maj=4.2km s-min=2.1km az=177.0*

NEIC 26 10:01:20.0±0.9, **60.02N**±0.04×**152.81W**±0.08, **h103**km±4km, **ML2.7**/58, **ML2.5**(AEIC), **Error ellipse: s-maj=6.8km s-min=5.1km az=217.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.10	271		Pn	10 01 34.2	-0.2
O20K	Slope Mountain	0.12	54		Pn	10 01 34.4	0.0
O20K					Sn	10 01 45.4	+0.3
O20K	Slope Mountain	0.12	54	P	Pn	10 01 34.4	0.0
	baz=222						
O20K				S	Sn	10 01 45.6	+0.4
	baz=222						
ILS	Iliamna Low So	0.14	246		Pn	10 01 34.4	-0.1
ILSW	Iliamna Southw	0.17	259		Sn	10 01 45.5	0.0
ILSW	Iliamna Southw	0.17	259	Pn	Pn	10 01 33.9	-0.6
ILSW	Iliamna Southw	0.17	259	IAML		10 01 59.5	
	comp=E,186nm,0.8s						
ILSW				IAML		10 02 00.5	
	comp=N,189nm,0.9s						
RED	Redoubt Volcan	0.41	3	Pn	Pn	10 01 35.2	-0.3
P19K	Oil Pt	0.42	211		Sn	10 01 47.1	-0.1
P19K	Oil Pt	0.42	211		Pn	10 01 35.5	0.0
P19K	Oil Pt	0.42	211	P	Pn	10 01 35.6	+0.1
	baz=33						
P19K				S	Sn	10 01 47.1	-0.1
	baz=33						
RDSO	Redoubt South	0.44	4		Pn	10 01 35.8	0.0
RDSO					Sn	10 01 47.3	-0.4
RDWB	Redoubt West	0.47	358		Pn	10 01 36.1	+0.1
RDWB					Sn	10 01 47.7	-0.4
NCT	North Crescent	0.55	354		Pn	10 01 36.7	+0.2
DFR	Drift River	0.58	6		Pn	10 01 36.9	+0.1
DFR					Sn	10 01 49.1	-0.3
RDT	Redoubt	0.60	20		Pn	10 01 36.7	-0.1
HOM	Homer	0.69	121		Pn	10 01 37.3	-0.2
HOM				IAML		10 01 52.0	
	comp=N,189nm,0.6s						
HOM				IAML		10 02 12.9	
	comp=E,162nm,1.0s						
HOM	Homer	0.69	121		Sn	10 01 51.2	+0.5
HOM	Homer	0.69	121	P	Pn	10 01 37.8	+0.3
	baz=300						
HOM				S	Sn	10 01 51.1	+0.4
	baz=300						
O19K	Port Alsworth	0.78	284	Pn	Pn	10 01 38.4	+0.1
O19K	Port Alsworth	0.78	284	P	Pn	10 01 38.6	+0.3
	baz=105						
CNPM	China Poot	0.94	121		Pn	10 01 39.8	-0.1
CNPM					Sn	10 01 54.3	-0.6
CNPM	China Poot	0.94	121	IAML		10 01 55.2	
	comp=N,87nm,0.4s						
CNPM				IAML		10 02 06.0	
	comp=E,130nm,0.8s						
BRLK	Bradley Lake	1.00	104		Pn	10 01 40.5	-0.1
BRLK	Bradley Lake	1.00	104	IAML		10 01 56.2	
	comp=N,123nm,0.1s						
BRLK				IAML		10 01 56.5	
	comp=E,99nm,0.1s						
BRSE	Bradley Lake S	1.08	104		Pn	10 01 41.5	0.0
BRSE					Sn	10 01 57.1	-0.6
BRSE	Bradley Lake S	1.08	104	P	Pn	10 01 41.4	-0.1
	baz=284						
BRSE				S	Sn	10 01 57.1	-0.6
	baz=284						
N19K	Bonanza Creek	1.15	315		Pn	10 01 42.8	+0.5
N19K	Bonanza Creek	1.15	315	P	Pn	10 01 42.7	+0.4
	baz=134						
SPU	Mount Spurr	1.23	17		Pn	10 01 43.4	+0.2
SPWE	Spurr West	1.27	6		Pn	10 01 44.7	+1.0
SPCG	Spurr Capps Gl	1.34	17		Pn	10 01 45.1	+0.6
SPNN	North Nagishla	1.36	2		Pn	10 01 45.3	+0.5
SLKM	Skilak Lake	1.38	68		Pn	10 01 44.8	-0.1
STLK	Strandline Lak	1.56	17		Pn	10 01 47.5	+0.3
O22K	Cooper Landing	1.61	72		Pn	10 01 47.9	+0.2
O22K	Cooper Landing	1.61	72	P	Pn	10 01 47.9	+0.2
	baz=253						
O22K				S	Sn	10 02 08.0	-0.7
	baz=253						
N18K	Kilae Creek	1.67	295		Pn	10 01 48.8	+0.4
N18K	Kilae Creek	1.67	295	IAML		10 02 47.1	
	comp=N,63nm,0.7s						
N18K				IAML		10 03 04.9	
	comp=E,76nm,0.5s						
N18K	Kilae Creek	1.67	295	P	Pn	10 01 48.9	+0.5
	baz=113						
SEW	Seward	1.69	86		Pn	10 01 48.0	-0.6
SEW	Seward	1.69	86	P	Sn	10 02 09.4	-1.0
	baz=229						
SEW	Seward	1.69	86	P	Pn	10 01 48.3	-0.3
	baz=267						
SEW				S	Sn	10 02 08.9	-1.5
	baz=267						
RC01	Rabbit Creek A	1.86	53		Pn	10 01 51.0	+0.2
RC01				IAML		10 02 43.8	
	comp=E,30nm,0.9s						
RC01	Rabbit Creek A	1.86	53	P	Pn	10 01 51.3	+0.5
	baz=235						
RC01				S	Sn	10 02 13.9	-0.4
	baz=235						
M20K	Styx River	1.88	355		Pn	10 01 51.5	+0.3
M20K	Styx River	1.88	355	IAML		10 02 21.6	
	comp=N,54nm,0.8s						
M20K				IAML		10 02 51.6	
	comp=E,35nm,0.9s						
M20K	Styx River	1.88	355	P	Pn	10 01 52.1	+0.9
	baz=175						
M19K	Big River Lodg	2.05	339	Pn	Pn	10 01 53.5	+0.3
M19K				IAML		10 02 22.7	
	comp=N,55nm,0.7s						
M19K				IAML		10 02 35.9	
	comp=E,44nm,0.8s						
M19K	Big River Lodg	2.05	339	P	Pn	10 01 54.0	+0.8
	baz=158						
SKT	Skwentna	2.07	17	Pn	Pn	10 01 53.7	+0.2
M18K	Stony River	2.09	316		Pn	10 01 54.1	+0.4
M18K	Stony River	2.09	316	P	Pn	10 01 54.1	+0.4
	baz=134						
PWL	Port Wells	2.38	67		Pn	10 01 55.8	-1.7
PWL				IAML		10 02 26.7	
	comp=E,45nm,0.7s						
PWL				IAML		10 02 49.7	
	comp=N,39nm,0.8s						
L19K	White Mountain	2.39	336		Pn	10 01 58.0	+0.3
L19K				IAML		10 02 20.1	
	comp=N,42nm,0.6s						
L19K				IAML		10 02 21.7	
	comp=E,51nm,0.6s						
L19K	White Mountain	2.39	336	P	Pn	10 01 58.4	+0.7
	baz=155						
PMR	Palmer	2.40	47		Pn	10 01 57.1	-0.7
PMR	Palmer	2.40	47	IAML		10 02 41.5	
	comp=E,21nm,1.0s						
KNK	Knik Glacier	2.56	55		Pn	10 01 59.4	-0.5
KNK				IAML		10 02 54.1	
	comp=N,28nm,1.2s						
KNK				IAML		10 03 01.9	
	comp=E,30nm,0.8s						
GHO	Glory Hole Cre	2.59	45	Pn	Pn	10 02 00.2	-0.1
GHO				IAML		10 02 50.3	
	comp=E,30nm,0.8s						
GHO				IAML		10 02 52.5	
	comp=N,39nm,0.8s						
L22K	Petersville	2.71	20	Pn	Pn	10 02 01.4	-0.4
L22K				IAML		10 02 37.2	
	comp=E,21nm,0.8s						
L22K				IAML		10 02 58.1	
	comp=N,28nm,1.1s						
P23K	Montague Islan	2.72	88		Pn	10 02 01.5	-0.4
P23K	Montague Islan	2.72	88	P	Pn	10 02 01.7	-0.2
	baz=272						
SML	Sawmill	2.83	49		Pn	10 02 02.8	-0.7
SML	Sawmill	2.83	49	IAML		10 03 00.1	
	comp=N,26nm,1.1s						
SML				IAML		10 03 04.3	
	comp=E,23nm,1.0s						
L18K	Granite Mounta	2.90	321		Pn	10 02 04.7	+0.3
L18K				IAML		10 03 35.4	
	comp=N,98nm,0.9s						
L18K				IAML		10 03 36.9	
	comp=E,48nm,0.8s						
L18K	Granite Mounta	2.90	321	P	Pn	10 02 04.9	+0.5
	baz=138						
GLI	Glacier Island	2.96	71		Pn	10 02 03.7	-1.5
GLI	Glacier Island	2.96	71	IAML		10 03 31.3	
	comp=N,32nm,1.1s						
GLI				IAML		10 04 09.3	
	comp=E,33nm,0.6s						
HIN	Hinchinbrook I	3.17	80		Pn	10 02 07.2	-0.8
FID	Port Fidalgo	3.23	74		Pn	10 02 06.7	-2.0
SCM	Sheep Creek Mo	3.24	53	Pn	Pn	10 02 08.6	-0.3
SCM	Sheep Creek Mo	3.24	53	P	Pn	10 02 08.9	0.0
	baz=238						
MID	Middleton Isla	3.33	97	Pn	Pn	10 02 10.1	0.0
SIT	Sitka	9.61	100	P	Pn	10 03 33.9	-1.2

*IDC **26** 10:02:05.9±1.8, 55.60N×158.83W, h0km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=55.4km s-min=28.0km az=17.0*

*ANF **26** 10:02:05.5±0.6, 55.16N×158.24W, h0km, Error ellipse: s-maj=5.5km s-min=4.4km az=149.0*

*NEIC **26** 10:02:07.1±1.1, 55.01N±0.09×158.36W±0.09, h35km±8km, mb4.0/4, ML3.7/14, ML3.6(AEIC), Error ellipse: s-maj=13.6km s-min=6.2km az=155.0*

*AEIC **26** 10:02:07.2±1.7, 55.08N±0.08×158.34W±0.09, h32km±6km, Error ellipse: s-maj=12.8km s-min=5.7km az=155.0*

ISC 26 10:02:06.9±0.9, **55.09N**±0.06×**158.37W**±0.06, **h30**km, **n30, s079/31, mb4.1/9, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	Chernabura Isl	0.75	250	P	Pn	10 02 21.3	-0.1
	baz=75						
CHNA				S	Sn	10 02 33.7	+1.9
	baz=75						
CNBA	Chernabura Isl	0.76	250	Pn	Pb	10 02 20.9	-0.7
CNBA				IAML		10 02 34.6	
	comp=E,3μm,0.4s						
CHGN	Chignik	1.22	359	Pn	Pn	10 02 27.8	-0.1
CHGN				IAML		10 02 48.3	
	comp=N,2μm,0.6s						
CHGN	Chignik	1.22	359	P	Pb	10 02 28.2	-1.0
	baz=179						
CHGN				S	Sb	10 02 43.1	-1.5
	baz=179						
SDPT	Sand Point	1.24	283	Pn	Pn	10 02 27.4	-0.7
SDPT				IAML		10 02 51.6	
	comp=E,1μm,0.9s						
SDPT				IAML		10 02 57.2	
	comp=N,1μm,0.8s						
SDPT	Sand Point	1.24	283	P	Pb	10 02 29.2	-0.4
	baz=105						
S14K	Fog Glacier	1.38	331	P	Pb	10 02 32.1	+0.1
	baz=152						
VNFG	Fog Glacier, M	1.38	331	Pn	Pb	10 02 31.5	-0.5
CHIR	Chirikof Islan	1.73	64	Pn	Pn	10 02 34.8	0.0
CHIR				IAML		10 03 09.1	
	comp=N,625nm,0.7s						
CHIR				IAML		10 03 12.1	
	comp=E,640nm,0.9s						
CHIR	Chirikof Islan	1.73	64	P	Pn	10 02 35.4	+0.5
	baz=244						
OHAK	Old Harbor	3.56	51	Pn	Pn	10 02 59.6	-0.3
O14K	Tigyukauivet M	4.46	340	Pn	Pn	10 03 13.6	+1.1
O14K				IAML		10 04 11.6	
	comp=E,89nm,0.8s						
O14K				IAML		10 04 22.0	
	comp=N,80nm,1.1s						
M16K	Timber Creek	5.96	357	Pn	Pn	10 03 34.0	+1.0
M17K	Holitna River	6.35	4	Pn	Pn	10 03 38.9	+0.6
L16K	Owhat River	6.67	355	Pn	Pn	10 03 42.9	+0.2
KNK	Knik Glacier	8.21	35	Pn	Pn	10 04 03.9	+0.1
B20K	Meade River	14.98	2	Pn	Pn	10 05 37.3	+1.1
B20K				IAmb	IAmb	10 05 39.5	
	comp=Z,12nm,1.1s						
G30M	tAoh Zrail Nji	15.91	33	Pn	Pn	10 05 49.5	+1.2
G30M				IAmb	IAmb	10 06 02.7	
	comp=Z,6.8nm,0.8s						
F30M	Barrier River	16.43	31	Pn	Pn	10 05 55.8	+0.9
PEA0B	Petropavlovsk-	25.52	284	P	P	10 07 31.9	-0.6
PETK	Petropavlovsk-	25.52	284	P	P	10 07 31.7	-0.8
	comp=Z,2.5nm,0.6s,baz=70,slow=13,SNR=2.5						
	comp=Z,2.5nm,0.6s						
PETK	Petropavlovsk-	25.52	284	P	P	10 07 32.1	-0.4
TXAR	Lajitas Array	46.46	101	P	P	10 10 37.3	+6.2
	comp=Z,0.3nm,0.6s,baz=316,slow=6.6,SNR=4.5						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	55.30	305	P	P	10 11 37.8	+0.5
	comp=Z,1.1nm,0.5s,baz=58,slow=5.8,SNR=2.3						
	comp=Z,1.1nm,0.5s						
ARCES	ARCESS Array B	55.65	358	P	P	10 11 39.4	0.0
	comp=Z,1.8nm,0.9s,baz=23,slow=7.0,SNR=1.4						
	comp=Z,1.8nm,0.9s						
FINES	FINESS Array B	63.76	358	P	P	10 12 35.2	0.0
	comp=Z,0.9nm,0.5s,baz=10,slow=8.5,SNR=2.1						
	comp=Z,0.9nm,0.5s						
KURBB	Kurchatov Arra	64.48	324	P	P	10 12 41.1	+1.0
	comp=Z,0.5nm,0.9s,baz=39,slow=6.0,SNR=1.2						
	comp=Z,0.5nm,0.9s						
BVAR	Borovoye Array	64.97	330	P	P	10 12 43.4	+0.1
	comp=Z,1.3nm,0.6s,baz=28,slow=6.5,SNR=2.5						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	66.36	319	P	P	10 12 52.0	-0.4
	comp=Z,0.3nm,0.5s,baz=35,slow=5.3,SNR=1.6						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	74.39	355	P	P	10 13 41.1	-0.2
	comp=Z,0.8nm,0.3s,baz=8.6,slow=5.9,SNR=4.1						
	comp=Z,0.8nm,0.3s						

*GUC **26** 10:03:58.1±0.8, 17.31S×69.87W, h15km, ML4.1*

*IDC **26** 10:03:58.8±0.8, 17.38S×69.96W, h0km, mb4.1/10, mbtmp4.1/12, ML3.7/2, Error ellipse: s-maj=23.5km s-min=14.6km az=165.0*

*NEIC **26** 10:04:00.9±1.7, 17.58S±0.02×69.81W±0.04, h18km±4km, mb4.6/21, Mwr4.2/26, Mwr4.3(GUC), Error ellipse: s-maj=5.4km s-min=2.1km az=70.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.72; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$ 1.78; $M_{r\theta}$-0.06; $M_{r\phi}$-0.05; $M_{\theta\phi}$-2.11; Fault plane solution: $M_0$2.74000×10^{15} NP1:ϕa0.91000°, δ70.20000°, λ-88.20000°. NP2:ϕ_b175.61000°, δ19.88000°, λ-94.98000°. Principal axes: T 2.7704, Plg25.0000°, Azm90.0000°; N -0.0563, Plg2.0000°, Azm180.0000°; P -2.7141, Plg65.0000°, Azm274.0000°;*

*NEIC **26** 10:04:00.8, 17.57S×69.82W, h17km*

*VAO **26** 10:04:06.9±1.4, 17.46S×69.72W, h43km±11km, mb4.3, Presumed earthquake*

ISC 26 10:04:00.4±1.3, **17.53S**±0.04×**69.87W**±0.05, **h13**km±8km, **n72, σ1°46/83, mb4.5**/19, **3C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	Visviri	0.37	99	⇑*i*P	Pg	10 04 07.3	-0.8
PB18				*e*S	Sb	10 04 14.1	-1.1
PB18				IAML		10 04 17.1	
	comp=N,21μm,0.7s						
PB18	Visviri	0.37	99		Pg	10 04 07.2	-0.8
PB18				Sg	Sg	10 04 12.5	-0.8
PB16	IPOC Station P	0.87	157	⇑*i*P	Pg	10 04 17.0	-0.3
PB16	IPOC Station P	0.87	157		Pg	10 04 17.3	-0.1
PB16				Sn	Sn	10 04 30.6	-1.2
AP01	Chacalluta	0.95	208	*e*P	Pb	10 04 18.0	-0.7
AP01				*e*S	Sn	10 04 32.9	0.0
AP01				IAML		10 04 33.7	
	comp=N,18μm,0.3s						
AP01	Chacalluta	0.95	208		Pb	10 04 18.0	-0.7
AP01					Sn	10 04 33.2	+0.3
PB12	IPOC Station P	1.16	202	⇑*i*P	Pn	10 04 21.6	-0.9
PB12				*e*S	Sg	10 04 39.1	+1.2
PB12				IAML		10 04 40.5	
	comp=E,4μm,0.3s						
PB12	IPOC Station P	1.16	202		Pn	10 04 21.0	-1.5
PB12				Sn	Sg	10 04 38.2	+0.3

ITTB	**Itaituba**	**19.05**	**48**	*eP*		**Pn**	**10 08 24.4**	**+1.1**
BDFB	**Brasilia**	**21.03**	**88**	P			10 08 45.3	
	comp=N,2.2nm,0.7s,baz=263,slow=6.3,SNR=4.0							
	comp=N,2.2nm,0.7s							
TRQA	**Tornquist**	**21.59**	**163**			**P**	**10 08 49.6**	**-0.4**
TRQA				IAmb		IAmb	10 08 55.2	
	comp=Z,13nm,0.9s							
TXAR	**Lajitas Array**	**56.88**	**325**	P		**P**	**10 13 44.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=154,slow=7.4,SNR=4.9							
	comp=Z,0.6nm,0.7s							
ABTX	**Abilene, Hawle**	**57.44**	**330**			**P**	**10 13 47.6**	**-1.5**
ABTX				IAmb		IAmb	10 13 52.1	
	comp=Z,7.2nm,1.0s							
APMT	**Aspermont**	**58.24**	**330**			**P**	**10 13 54.8**	**0.0**
APMT				IAmb		IAmb	10 13 57.2	
	comp=Z,9.8nm,1.1s							
FVM	**French Village**	**58.51**	**341**			**P**	**10 13 55.4**	**-1.1**
FVM				IAmb		IAmb	10 13 59.1	
	comp=Z,6.2nm,0.9s							
129A	**Stewart Farms,**	**58.53**	**328**	P		**P**	**10 13 55.2**	**-1.7**
129A				IAmb		IAmb	10 14 00.1	
	comp=Z,6.4nm,1.1s							
VHRN	**Van Horn**	**58.73**	**325**			**P**	**10 13 57.9**	**-0.4**
VHRN				IAmb		IAmb	10 14 00.2	
	comp=Z,2.5nm,0.9s							
OK052	**Battle Ridge R**	**59.03**	**335**	P		**P**	**10 13 58.9**	**-1.2**
OK052				IAmb		IAmb	10 14 02.2	
	comp=Z,11nm,1.1s							
ECSD	**EROS Data Cent**	**65.71**	**339**			**P**	**10 14 43.9**	**-0.9**
ECSD				IAmb		IAmb	10 14 47.4	
	comp=Z,4.1nm,1.1s							
WUAZ	**Wupatki**	**65.81**	**324**			**P**	**10 14 46.0**	**+0.2**
WUAZ				IAmb		IAmb	10 14 47.6	
	comp=Z,4.0nm,1.1s							
KNB	**Kanab**	**67.70**	**324**	P		**P**	**10 14 58.4**	**+0.6**
KNB				IAmb		IAmb	10 15 01.6	
	comp=Z,5.2nm,1.1s							
P18A	**Preston Nutter**	**68.22**	**327**	P		**P**	**10 15 00.3**	**-0.9**
P17A	**Butcher Ranch,**	**68.36**	**327**	P		**P**	**10 15 00.8**	**-1.1**
P17A				IAmb		IAmb	10 15 05.1	
	comp=Z,3.7nm,1.0s							
DBIC	**Dimbokro**	**68.54**	**75**	P		**P**	**10 15 02.8**	**-0.6**
	comp=Z,3.5nm,0.9s,baz=274,slow=4.1,SNR=3.5							
	comp=Z,3.5nm,0.9s							
PDAR	**Pinedale Array**	**70.24**	**330**	P		**P**	**10 15 11.9**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=76,slow=6.3,SNR=7.8							
	comp=Z,0.7nm,0.7s							
MDND	**Maddock**	**70.32**	**339**	P		**P**	**10 15 13.7**	**0.0**
ULM	**Lac du Bonnet**	**71.28**	**343**	P		**P**	**10 15 19.3**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=112,slow=4.9,SNR=3.3							
	comp=Z,2.5nm,0.9s							
FXWY	**Fox Creek**	**71.60**	**330**	P		**P**	**10 15 21.6**	**-0.2**
NVAR	**Mina Array Bea**	**71.83**	**322**	P		**P**	**10 15 23.7**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=142,slow=6.8,SNR=5.7							
	comp=Z,0.8nm,0.8s							
GCMT	**Greycliff**	**72.60**	**332**	P		**P**	**10 15 27.2**	**-0.5**
QSPA	**South Pole Qui**	**72.64**	**180**	P		**P**	**10 15 29.4**	**+1.8**
	comp=Z,2.3nm,0.9s,baz=177,slow=1.1,SNR=9.0							
	comp=Z,2.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**76.92**	**72**	P		**P**	**10 15 53.0**	**-0.2**
	comp=Z,5.1nm,0.9s,baz=253,slow=4.9,SNR=12							
	comp=Z,5.1nm,0.9s							
ESDC	**Sonseca Array**	**83.67**	**45**	P		**P**	**10 16 30.0**	**+0.9**
	comp=Z,1.5nm,1.2s,baz=246,slow=11,SNR=4.8							
	comp=Z,1.5nm,1.2s							
YKA	**Yellowknife Ar**	**87.16**	**341**	P		**P**	**10 16 45.1**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=136,slow=5.0,SNR=16							
	comp=Z,1.8nm,0.9s							
ASAR	**Alice Springs**	**132.93**	**210**	PKP		**PKiKP**	**10 23 17.2**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=126,slow=1.9,SNR=5.0							
ZALV	**Zalesovo Beam**	**138.71**	**23**	PKP		**PKPdf**	**10 23 26.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=262,slow=3.0,SNR=4.2							
MJAR	**Matsushiro Arr**	**148.81**	**313**	PKPbc		**PKPbc**	**10 23 47.9**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=91,slow=0.8,SNR=5.0							
SONM	**Songino Array**	**149.62**	**5**	PKPbc		**PKiKP**	**10 23 50.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=348,slow=1.9,SNR=4.7							
HHC	**Hu-ho-hao-te**	**156.73**	**357**	*eP*		**PKPdf**	**10 23 52.0**	**-3.9**
NJ2	**Nanjing**	**163.53**	**333**	*eP*		**PKPdf**	**10 24 04.8**	**+1.2**
NJ2				pmax		pmax		
	comp=Z,19nm,0.5s							
PZH	**PanZhiHua**	**168.16**	**40**	PKP		**PKPdf**	**10 24 05.8**	**-1.9**

*GUC **26** 10:07:12.4±0.9, 17°.32S×69°.87W, h14km±9km, ML3.9*
*IDC **26** 10:07:15.0±0.7, 17°.21S×69°.97W, h0km, mb4.2/11, mbtmp4.2/13, ML3.8/2, MS3.8/34, Error ellipse: s-maj=22.0km s-min=17.8km az=35.0*
*NEIC **26** 10:07:15.1±1.8, 17°.53S±0°.03×69°.84W±0°.03, h10km±1km, mb4.6/25, Mwr4.5/28, Mwr4.5(GUC), Error ellipse: s-maj=6.2km s-min=3.6km az=153.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-4.05; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$4.57; $M_{r\theta}$-0.50; $M_{r\phi}$-1.22; $M_{\theta\phi}$-5.10; Fault plane solution: $M_0$6.82000×10^{15} NP1:$\phi_1$149.81000°, δ23.08000°, λ-119.84000°. NP2:$\phi_2$1.75000°, δ70.12000°, λ-78.03000°. Principal axes: T 7.0434, Plg24.0000°, Azm82.0000°; N -0.4730, Plg11.0000°, Azm178.0000°; P -6.5704, Plg63.0000°, Azm291.0000°;*
*NEIC **26** 10:07:15.1, 17°.53S×69°.84W, h10km*
ISC 26 10:07:13.6±1.5, 17°.52S±0°.04×69°.95W±0°.04, h1km±9km, n99, σ1°68/81, mb4.5/21, MS3.8/33, 7C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.45**	**99**		*eP*		**Pg**	**10 07 21.5**	**-0.8**
PB18					*eS*		**Sg**	**10 07 29.1**	**+0.8**
PB18					IAML			10 07 35.7	
	comp=N,20μm,0.2s								
PB18	**Visviri**	**0.45**	**99**				**Pg**	**10 07 21.5**	**-0.8**
PB18						Sg	**Sg**	**10 07 27.0**	**-1.2**
PB16	**IPOC Station P**	**0.92**	**153**		*eP*		**Pg**	**10 07 31.4**	**+0.1**
PB16					*eS*		**Sn**	**10 07 46.0**	**-2.4**
PB16	**IPOC Station P**	**0.92**	**153**				**Pg**	**10 07 31.5**	**+0.3**
PB16						Sg	**Sb**	**10 07 44.7**	**-1.0**
AP01	**Chacalluta**	**0.93**	**204**		*eP*		**Pg**	**10 07 32.0**	**+0.5**
AP01					IAML			10 07 49.3	
	comp=N,9μm,0.4s								
AP01	**Chacalluta**	**0.93**	**204**				**Pg**	**10 07 31.5**	**0.0**
AP01						Sg	**Sn**	**10 07 47.0**	**-0.9**
PB12	**IPOC Station P**	**1.15**	**198**		*eP*		**Pg**	**10 07 35.8**	**+0.1**
PB12					*eS*		**Sn**	**10 07 53.6**	**+0.1**
PB12					IAML			10 07 55.5	
	comp=N,2μm,0.5s								
PB12	**IPOC Station P**	**1.15**	**198**	Pn			**Pg**	**10 07 35.5**	**-0.3**
PX02	**IPOC Station P**	**1.46**	**189**	*eP*			**Pn**	**10 07 40.5**	**-0.8**
PX02				*eS*			**Sg**	**10 08 02.1**	**+1.5**
I08BO	**LAS PENAS INFR**	**1.93**	**48**	I			I	10 18 40.0	
	baz=230,slow=325,SNR=0.9								
PSGCX	**Pisagua**	**2.08**	**185**	*eP*			**Pb**	**10 07 50.7**	**-1.6**
PSGCX				*eS*			**Sg**	**10 08 20.9**	**+0.4**
PSGCX	**Pisagua**	**2.08**	**185**	Pn			**Pn**	**10 07 50.0**	**+0.2**
LPAZ	**La Paz**	**2.12**	**55**	Pn			**Pn**	**10 07 51.3**	**+0.4**
	comp=N,14nm,0.3s,baz=259,slow=7.5,SNR=25								
LPAZ	**La Paz**	**2.12**	**55**	Pn			**Pb**	**10 07 52.2**	**-1.1**
PB11	**IPOC Station P**	**2.25**	**173**		*eP*		**Pb**	**10 07 54.2**	**-1.0**
PB11					*eS*		**Sg**	**10 08 26.7**	**+0.7**
PB11					IAML			10 08 30.7	
	comp=E,1μm,0.5s								
PB11					IVMs_BB		IVMs_BB	10 09 16.4	
	comp=Z,9μm,3.5s								
GO01	**Chusmiza**	**2.26**	**162**		*eP*		**Pg**	**10 07 56.2**	**-0.8**
GO01					*eP*		**Pb**	**10 07 57.2**	**+1.7**
GO01					*eS*		**Sg**	**10 08 28.0**	**+1.8**
GO01					IAML			10 08 34.9	
	comp=E,614nm,0.2s								
GO01					IVMs_BB		IVMs_BB	10 09 01.5	
	comp=Z,5μm,3.3s								
PB08	**IPOC Station P**	**2.72**	**164**		*eP*		**Pb**	**10 08 03.1**	**-0.2**
PB08					*eS*		**Sg**	**10 08 40.7**	**-0.4**
PB08					IAML			10 08 46.1	
	comp=N,579nm,0.7s								
PB08					IVMs_BB		IVMs_BB	10 09 48.0	
	comp=Z,4μm,3.5s								
TA02	**Huaiquique**	**2.75**	**184**		*eP*		**Pb**	**10 08 01.2**	**-2.3**
TA02					IVMs_BB		IVMs_BB	10 09 25.8	
	comp=Z,6μm,3.1s								
PB02	**IPOC Station P**	**3.79**	**179**		*eP*		**Pb**	**10 08 17.1**	**-4.3**
PB06	**IPOC Station P**	**5.18**	**176**				**Pn**	**10 08 30.5**	**-2.0**
PB05	**IPOC Station P**	**5.32**	**183**				**Pn**	**10 08 35.3**	**+1.0**
AF01	**San Pedro de A**	**5.66**	**163**				**Pn**	**10 08 37.9**	**-1.3**
PB14	**IPOC Station P**	**7.09**	**183**	Pn			**Pn**	**10 08 58.9**	**0.0**
AC01	**Pan de Azucar**	**8.61**	**184**	Pn			**Pn**	**10 09 19.3**	**-0.2**
SIV	**San Ignacio**	**8.63**	**81**	Pn			**Pn**	**10 09 22.3**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=277,slow=10,SNR=8.4								
SIV					LR		LR	10 13 05.5	
	comp=Z,3μm,18.0s,baz=290,slow=41								
	comp=Z,23nm,0.7s								
CFA	**Coronel Fontan**	**14.11**	**174**	Pn			**P**	**10 10 42.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=354,slow=11,SNR=6.0								
	comp=Z,1.1nm,0.6s								
CPUP	**Villa Florida**	**14.62**	**129**	LR			LR	10 17 42.6	
	comp=Z,546nm,18.2s,baz=306,slow=42								
MT02	**Curacav**	**15.71**	**184**	Pn			**Pn**	**10 10 55.3**	**-1.1**
MT05	**Renca**	**15.83**	**182**	Pn			**Pn**	**10 10 57.5**	**-0.3**
MT05					IAmb		IAmb	10 11 06.7	
	comp=Z,41nm,1.1s								
MT13	**San Alfonso**	**16.16**	**181**	Pn			**Pn**	**10 11 00.8**	**-1.5**
BO02	**Sierra Bellavi**	**17.22**	**182**	Pn			**Pn**	**10 11 15.3**	**-0.4**
SLOR	**San Lorenzo -**	**18.68**	**332**				**Pn**	**10 11 36.3**	**+2.2**
BDFB	**Brasilia**	**21.10**	**88**	P			**P**	**10 12 02.7**	**+2.7**
	comp=Z,2.9nm,0.9s,baz=287,slow=10.0,SNR=4.0								
BDFB					LR		LR	10 20 36.0	
	comp=Z,332nm,20.6s,baz=288,slow=38								
	comp=Z,2.9nm,0.9s								
SDV	**Santo Domingo**	**26.24**	**358**	LR			LR	10 24 01.8	
	comp=Z,497nm,18.4s,baz=162,slow=39								
MDP	**Montagnes des**	**28.23**	**39**	LR			LR	10 24 11.5	
	comp=Z,238nm,21.6s,baz=216,slow=36								
RGM0	**Gandoca**	**29.70**	**334**	P			**P**	**10 13 21.6**	**+0.2**
JTS	**Las Juntas de**	**31.36**	**331**	LR			LR	10 27 34.3	
	comp=Z,192nm,18.2s,baz=167,slow=39								
RCBR	**Riachuelo**	**35.23**	**75**	LR			LR	10 29 04.5	
	comp=Z,176nm,21.9s,baz=256,slow=37								
SJG	**San Juan**	**35.60**	**6**	LR			LR	10 29 37.9	
	comp=Z,149nm,20.4s,baz=208,slow=38								
RPN	**Rapa Nui**	**37.54**	**248**	LR			LR	10 24 46.5	
	comp=Z,55nm,20.1s,baz=74,slow=28								
APG	**El Apazote**	**38.13**	**327**	LR			LR	10 30 07.9	
	comp=Z,11nm,21.8s,baz=107,slow=36								
CMIG	**Matias Romero**	**42.26**	**321**	LR			LR	10 32 39.1	
	comp=Z,53nm,19.4s,baz=183,slow=36								
PMSA	**Palmer Station**	**47.39**	**177**	LR			LR	10 36 09.1	
	comp=Z,93nm,18.9s,baz=20,slow=36								
SMAI	**San Martin Ant**	**50.62**	**179**	P			**P**	**10 16 13.3**	**-0.6**
MIAR	**Mount Ida**	**56.44**	**337**				**P**	**10 16 56.5**	**-0.6**
MIAR					IAmb		IAmb	10 17 00.7	
	comp=Z,4.5nm,1.1s								
TXAR	**Lajitas Array**	**56.82**	**325**	P			**P**	**10 17 01.0**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=115,slow=5.9,SNR=5.6								
	comp=Z,1.2nm,0.9s								
LPIG	**La Paz**	**57.11**	**315**	LR			LR	10 37 14.2	
	comp=Z,36nm,21.7s,baz=180,slow=32								
MNHN	**Monahans**	**57.90**	**327**	P			**P**	**10 17 07.6**	**0.0**
MNHN					IAmb		IAmb	10 17 08.3	
	comp=Z,8.0nm,1.2s								
TPB01	**Permian Basin**	**58.13**	**326**	P			**P**	**10 17 09.7**	**+0.4**
TPB01					IAmb		IAmb	10 17 13.2	
	comp=Z,5.7nm,1.1s								
APMT	**Aspermont**	**58.19**	**330**				**P**	**10 17 09.7**	**+0.2**
APMT					IAmb		IAmb	10 17 13.3	
	comp=Z,8.3nm,1.1s								
W35A	**Tecumseh**	**58.29**	**334**				**P**	**10 17 09.1**	**-1.0**
W35A					IAmb		IAmb	10 17 09.3	
	comp=Z,4.7nm,1.0s								
SN07	**Snyder 07**	**58.37**	**330**	P			**P**	**10 17 11.1**	**+0.3**
SN07					IAmb		IAmb	10 17 15.0	
	comp=Z,4.1nm,0.8s								
FVM	**French Village**	**58.47**	**341**				**P**	**10 17 09.8**	**-1.6**
BLOK	**Blackwell**	**59.81**	**335**	P			**P**	**10 17 20.6**	**-0.1**
SADO	**Sadowa**	**62.55**	**353**	LR			LR	10 47 15.7	
	comp=Z,79nm,19.7s,baz=186,slow=39								
ANMO	**Albuquerque**	**62.65**	**327**	LR			LR	10 47 43.8	
	comp=Z,36nm,18.6s,baz=126,slow=39								
VNA1	**Neumayer--Stat**	**64.35**	**161**	P			**P**	**10 17 54.6**	**+3.9**
	comp=Z,6.1nm,1.0s								
VNA2	**Neumayer--Watz**	**64.72**	**161**	⇑P			**P**	**10 17 56.5**	**+3.4**
	comp=Z,3.0nm,0.8s,baz=294,slow=6.7								
ECSD	**EROS Data Cent**	**65.67**	**339**				**P**	**10 17 58.0**	**-1.6**
ECSD					IAmb		IAmb	10 18 03.2	
	comp=Z,6.2nm,1.1s								
SNAA	**Sanae**	**66.35**	**161**	⇑P			**P**	**10 18 07.6**	**+3.8**
	comp=Z,77nm,1.0s								
SNAA	**Sanae**	**66.35**	**161**	P			**P**	**10 18 07.6**	**+3.8**
	comp=Z,2.3nm,0.9s,baz=219,slow=12,SNR=4.5								
	comp=Z,2.3nm,0.9s								
SNAA	**Sanae**	**66.35**	**161**	P			**P**	**10 18 04.0**	**+0.2**
SNAA					IAmb		IAmb	10 18 08.1	
	comp=Z,6.0nm,1.1s								
IRM	**Iron Mountain**	**67.02**	**320**	P			**P**	**10 18 08.5**	**-0.1**
IRM					IAmb		IAmb	10 18 12.4	
	comp=Z,2.8nm,1.1s								
PFO	**Pinyon Flats O**	**67.47**	**319**	LR			LR	10 46 31.6	
	comp=Z,52nm,21.6s,baz=152,slow=35								
MTPU	**Mount Pierson**	**68.02**	**325**				**P**	**10 18 15.2**	**0.0**
MTPU					IAmb		IAmb	10 18 21.5	
	comp=Z,1.7nm,1.0s								
TROLL	**Troll, Antarti**	**68.06**	**161**	⇑P			**P**	**10 18 18.2**	**+3.5**
	comp=Z,74nm,0.6s								
DBIC	**Dimbokro**	**68.61**	**75**	P			**P**	**10 18 19.1**	**+0.1**
	comp=Z,15nm,1.2s,baz=235,slow=6.6,SNR=3.7								
DBIC					LR		LR	10 46 47.9	
	comp=Z,257nm,19.1s,baz=252,slow=35								
	comp=Z,15nm,1.2s								
DBIC	**Dimbokro**	**68.61**	**75**	P			**P**	**10 18 18.7**	**-0.3**
PD31	**Pinedale Array**	**70.19**	**330**	P			**P**	**10 18 27.3**	**-1.1**
PDAR	**Pinedale Array**	**70.19**	**330**	P			**P**	**10 18 27.9**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=131,slow=4.5,SNR=8.5								
PDAR					LR		LR	10 52 39.6	
	comp=Z,35nm,20.1s,baz=124,slow=39								
	comp=Z,0.9nm,0.9s								
ULM	**Lac du Bonnet**	**71.24**	**343**	P			**P**	**10 18 33.8**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=150,slow=7.2,SNR=4.9								
ULM					LR		LR	10 51 17.3	
	comp=Z,37nm,21.3s,baz=132,slow=37								
	comp=Z,2.4nm,0.6s								
NVAR	**Mina Array Bea**	**71.77**	**322**	P			**P**	**10 18 38.7**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=142,slow=7.8,SNR=7.7								
	comp=Z,1.0nm,0.8s								
SCHQ	**Schefferville**	**72.11**	**2**	LR			LR	10 52 11.3	
	comp=Z,27nm,18.3s,baz=205,slow=38								
QSPA	**South Pole Qui**	**72.65**	**180**	P			**P**	**10 18 46.3**	**+3.4**
	comp=Z,3.9nm,1.1s,baz=151,slow=1.8,SNR=8.8								
	comp=Z,3.9nm,1.1s								
TBI	**Tubuai**	**73.89**	**250**	*e*LR			LR	10 41 20.0	
	comp=Z,1μm,33.8s								
YBH	**Yreka Blue Hor**	**76.48**	**322**	LR			LR	10 52 12.9	
	comp=Z,40nm,21.4s,baz=132,slow=35								
TORD	**Torodi Ar. Bea**	**76.99**	**72**	P			**P**	**10 19 09.2**	**+0.5**
	comp=Z,6.9nm,1.0s,baz=258,slow=5.5,SNR=14								
	comp=Z,6.9nm,1.0s								
NEW	**Newport**	**77.83**	**330**	LR			LR	10 57 23.4	
	comp=Z,45nm,21.1s,baz=134,slow=39								
RAR	**Rarotonga**	**83.67**	**250**	LR			LR	10 47 49.4	
	comp=Z,76nm,20.7s,baz=158,slow=29								
ESDC	**Sonseca Array**	**83.71**	**45**	P			**P**	**10 19 45.7**	**+1.2**
	comp=Z,2.4nm,1.2s,baz=251,slow=4.7,SNR=6.2								
ESDC					LR		LR	10 52 38.4	
	comp=Z,58nm,20.9s,baz=259,slow=33								
	comp=Z,2.4nm,1.2s								
BBB	**Bella Bella**	**85.75**	**328**	LR			LR	11 00 16.1	
	comp=Z,63nm,21.0s,baz=148,slow=37								
BOSA	**Boshof**	**86.19**	**119**	LR			LR	10 56 34.1	
	comp=Z,90nm,18.0s,baz=215,slow=34								
YKA	**Yellowknife Ar**	**87.12**	**341**	P			**P**	**10 20 00.5**	**-0.4**
	comp=Z,5.1nm,1.0s,baz=137,slow=4.9,SNR=15								
YKA					LR		LR	11 01 22.7	
	comp=Z,38nm,20.6s,baz=315,slow=37								
	comp=Z,5.1nm,1.0s								
BORG	**Borgarnes**	**89.98**	**19**	LR			LR	10 57 15.8	
	comp=Z,17nm,20.7s,baz=252,slow=34								
DLBC	**Dease Lake**	**90.23**	**333**	LR			LR	11 05 32.7	
	comp=Z,30nm,18.4s,baz=16,slow=39								
MATP	**Matop**	**91.58**	**112**	LR			LR	11 00 23.4	
	comp=Z,132nm,18.0s,baz=282,slow=35								
KEST	**Kesra**	**91.70**	**53**	LR			LR	11 01 02.1	
	comp=Z,78nm,21.0s,baz=268,slow=35								
EKA	**Eskdalemuir Ar**	**91.75**	**32**	LR			LR	10 58 25.4	
	comp=Z,75nm,18.1s,baz=196,slow=34								
RES	**Resolute Bay**	**93.35**	**354**	LR			LR	11 04 40.9	
	comp=Z,52nm,21.6s,baz=106,slow=37								
VAE	**Valguarnera**	**96.12**	**53**	LR			LR	11 05 23.7	
	comp=Z,75nm,19.1s,baz=298,slow=36								
INK	**Inuvik**	**96.88**	**340**	LR			LR	11 06 54.4	
	comp=Z,52nm,21.9s,baz=99,slow=37								
ASAR	**Alice Springs**	**132.91**	**210**	PKP			**PKiKP**	**10 26 32.3**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=124,slow=2.0,SNR=6.3								
ZALV	**Zalesovo Beam**	**138.72**	**22**	PKP			**PKPdf**	**10 26 41.4**	**0.0**
	comp=Z,1.2nm,0.8s,baz=259,slow=1.5,SNR=5.6								
USRK	**Ussuriysk Ar.**	**147.61**	**330**	PKPbc			**PKiKP**	**10 27 01.0**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=50,slow=2.5,SNR=7.0								
MJAR	**Matsushiro Arr**	**148.74**	**313**	PKPbc			**PKPbc**	**10 27 02.6**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=96,slow=1.9,SNR=7.2								
SONM	**Songino Array**	**149.61**	**5**	PKPbc			**PKiKP**	**10 27 05.2**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=300,slow=2.0,SNR=5.7								
HHC	**Hu-ho-hao-te**	**156.71**	**357**	*eP*			**PKPdf**	**10 27 05.0**	**-6.2**
NJ2	**Nanjing**	**163.48**	**333**	*eP*			**PKPdf**	**10 27 19.5**	**+0.7**
NJ2				pmax			pmax		
	comp=Z,15nm,0.5s								
PZH	**PanZhiHua**	**168.20**	**39**	PKP			**PKPdf**	**10 27 20.5**	**-2.5**

*PTWC **26** 10:39:42, 18°.50N×64°.60W, h10km, Ml3.8/15*
*NEIC **26** 10:39:43.4±1.0, 18°.7N±0°.1×64°.57W±0°.05, h45km±22km, mb3.7/4, ML3.7/57, Md4.0/17(RSPR), Error ellipse: s-maj=15.7km s-min=6.5km az=187.0*
*RSPR **26** 10:39:44.7, 18°.71N×64°.60W, h31km±25km, MD4.0/17*
ISC 26 10:39:40.5±3.0, 18°.74N±0°.08×64°.61W±0°.04, h17km±22km, n91, σ1°43/106, 10C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.31**	**243**				**Pb**	**10 40 04.9**	**+0.1**
HUMP						Sn	**Sn**	**10 40 21.1**	**-0.1**
HUMP						IAML		10 40 27.5	
	1μm,0.2s								
HUMP						IAML		10 40 27.8	
	1μm,0.2s								
HUMP	**Col San Antoni**	**1.31**	**243**	P			**Pn**	**10 40 04.0**	**-0.1**
HUMP						S	**Sn**	**10 40 20.6**	**-0.6**
HUMP	**Col San Antoni**	**1.31**	**243**	⇓*eP*			**Pb**	**10 40 05.0**	**+0.3**
PDPR	**Patillas Dam,**	**1.52**	**242**				**Pb**	**10 40 08.5**	**+0.3**
PDPR						Sn	**Sn**	**10 40 26.2**	**0.0**
PDPR						IAML		10 40 32.8	
	669nm,0.1s								
PDPR	**Patillas Dam,**	**1.52**	**242**	P			**Pb**	**10 40 08.2**	**0.0**
PDPR	**Patillas Dam,**	**1.52**	**242**	⇓*eP*			**Pb**	**10 40 08.3**	**+0.2**
SJG	**San Juan**	**1.59**	**247**				**Pb**	**10 40 09.0**	**-0.4**
SJG	**San Juan**	**1.59**	**247**	IAML				10 40 36.2	
	601nm,0.3s								
SJG	**San Juan**	**1.59**	**247**	P			**Pb**	**10 40 08.9**	**-0.4**
IGPR	**InterUniversit**	**1.61**	**242**				**Pb**	**10 40 09.5**	**-0.3**
IGPR							**Sn**	**10 40 29.1**	**+0.5**
IGPR	**InterUniversit**	**1.61**	**242**	P			**Pb**	**10 40 10.1**	**+0.3**
IGPR						S	**Sn**	**10 40 29.0**	**+0.4**
IGPR	**InterUniversit**	**1.61**	**242**	⇑*eP*			**Pb**	**10 40 09.5**	**-0.3**
SMRT	**St. Maarten**	**1.61**	**115**				**Pn**	**10 40 07.8**	**-0.4**
SMRT						IAML		10 40 37.7	
	comp=E,1μm,0.3s								
SMRT	**St. Maarten**	**1.61**	**115**	P			**Pb**	**10 40 09.6**	**-0.2**
ECPR	**Experimental S**	**1.71**	**256**				**Pn**	**10 40 10.4**	**+0.9**
ECPR	**Experimental S**	**1.71**	**256**				**Sn**	**10 40 31.7**	**+0.6**
ECPR	**Experimental S**	**1.71**	**256**	P			**Pn**	**10 40 10.7**	**+1.1**
ECPR	**Experimental S**	**1.71**	**256**	⇓*eP*			**Pn**	**10 40 10.7**	**+1.1**
SABA	**Saba**	**1.71**	**130**				**Pn**	**10 40 09.7**	**+0.1**
SABA						IAML		10 40 41.5	
	comp=E,1μm,

QMBU	**Quimbuelo**	**9.73**	**280**	*eP*	**Pn**	**10 41 58.9**	**-0.9**
QMBU				*eS*	**Sn**	**10 43 44.1**	**-4.7**
ROSC	**El Rosal**	**16.75**	**216**	Pn	**Pn**	**10 43 33.6**	**-1.3**
ROSC				IAmb	IAmb	10 43 51.8	
	comp=Z,4.5nm,0.6s						
SOR	**Soroa**	**17.67**	**286**	Pn	**Pn**	**10 43 45.2**	**-0.7**
GOGA	**Godfrey**	**22.31**	**315**	P	**P**	**10 44 37.8**	**+0.6**
GOGA				IAmb	IAmb	10 44 48.6	
	comp=Z,3.6nm,1.1s						
SDMD	**Soldier's Deli**	**23.16**	**335**	P	**P**	**10 44 46.8**	**+0.7**

IDC 26 10:56:47.2±3.0, 17°.80S×70°.13W, h0km, mb3.9/2, mbtmp3.8/4, ML3.4/2, Error ellipse: s-maj=87.5km s-min=38.2km az=179.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.43**	**52**	Pn	Pn	10 57 28.2	-0.5
	6.3nm,0.3s,baz=235,slow=15,SNR=10						
	18nm,0.5s						
SIV	**San Ignacio**	**8.85**	**80**	Pn	Pn	10 58 58.5	+2.0
	0.1nm,0.3s,baz=259,slow=13,SNR=13						
	4.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.24**	**72**	P	P	11 08 42.9	-0.9
	1.0nm,1.0s,baz=248,slow=5.0,SNR=3.4						
	1.0nm,1.0s						
YKA	**Yellowknife Ar**	**87.33**	**341**	P	P	11 09 36.1	+0.5
	0.8nm,0.8s,baz=142,slow=5.2,SNR=8.5						
	0.8nm,0.8s						

*IDC **26** 10:57:22.6±3.0, 17°.66S×70°.10W, h0km, mb3.9/3, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=91.1km s-min=30.9km az=4.0*
*GUC **26** 10:57:22.7±0.7, 17°.28S×69°.88W, h10km±13km, ML3.6*
*NEIC **26** 10:57:25.8, 17°.51S×69°.80W, h10km*
*NEIC **26** 10:57:25.8±1.7, 17°.51S±0°.04×69°.78W±0°.03, h10km±1km, mb4.2/11, Mwr4.1/15, Error ellipse: s-maj=6.7km s-min=3.7km az=158.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.05; $M_{\theta\theta}$=-0.09; $M_{\phi\phi}$=1.14; $M_{r\theta}$=0.58; $M_{\theta\phi}$=-0.54; $M_{\phi r}$=-0.94; Fault plane solution: M_0=1.64000×10^{15} NP1:ϕs=171.42000°, δ24.80000°, λ-70.99000°. NP2:ϕs=330.63000°, δ66.64000°, λ-98.56000°. Principal axes: T 1.7583, Plg21.0000°, Azm67.0000°; N -0.2591, Plg8.0000°, Azm334.0000°; P -1.4992, Plg67.0000°, Azm225.0000°;*
ISC 26 10:57:24.6±1.6, 17°.47S±0°.05×69°.86W±0°.05, h4km±11km, n38, σ1$\hat{v}$11/47, mb4.1/8, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.38**	**109**	*eP*	**Pg**	**10 57 32.4**	**+0.3**
PB18				*eS*	**Sb**	**10 57 39.5**	**-1.2**
PB18				IAML		10 57 45.7	
	comp=N,8μm,0.5s						
PB18	**Visviri**	**0.38**	**109**		**Pg**	**10 57 32.5**	**+0.3**
PB18				Sg	**Sg**	**10 57 36.0**	**-1.3**
PB16	**IPOC Station P**	**0.93**	**159**	*eP*	**Pg**	**10 57 42.6**	**+0.2**
PB16	**IPOC Station P**	**0.93**	**159**		**Pg**	**10 57 42.5**	**+0.1**
AP01	**Chacalluta**	**1.01**	**207**	*eP*	**Pg**	**10 57 43.1**	**-0.8**
AP01				IAML		10 57 59.5	
	comp=E,2μm,0.3s						
AP01	**Chacalluta**	**1.01**	**207**	Pn	**Pg**	**10 57 45.1**	**+1.1**
AP01				Sg	**Sg**	**10 57 58.2**	**+1.2**
PB12	**IPOC Station P**	**1.22**	**201**	*eP*	**Pn**	**10 57 46.8**	**-1.7**
PB12				*eS*	**Sb**	**10 58 04.6**	**+0.1**
PB12	**IPOC Station P**	**1.22**	**201**	Pn	**Pn**	**10 57 48.2**	**-0.3**
PB12				Sn	**Sb**	**10 58 03.4**	**-1.1**
LPAZ	**La Paz**	**2.03**	**55**	Pn	**Pb**	**10 58 02.2**	**-0.1**
	comp=E,16nm,0.3s,baz=222,slow=12,SNR=7.5						
	comp=E,33nm,0.3s						
LPAZ	**La Paz**	**2.03**	**55**		**Pn**	**10 57 59.1**	**-0.9**
PSGCX	**Pisagua**	**2.13**	**187**	*eP*	**Pn**	**10 57 58.3**	**-2.7**
PSGCX				*eS*	**Sb**	**10 58 31.7**	**+1.0**
GO01	**Chusmiza**	**2.28**	**164**	*eP*	**Pb**	**10 58 05.6**	**-0.9**
GO01				*eS*	**Sg**	**10 58 39.3**	**+1.4**
GO01				IAML		10 58 43.4	
	comp=E,314nm,0.1s						
GO01	**Chusmiza**	**2.28**	**164**	Pn	**Pn**	**10 58 02.0**	**-1.4**
PB11	**IPOC Station P**	**2.29**	**175**	*eP*	**Pn**	**10 58 04.2**	**+1.0**
PB11				*eS*	**Sg**	**10 58 38.3**	**0.0**
PB11	**IPOC Station P**	**2.29**	**175**	Pn	**Pn**	**10 58 03.8**	**+0.5**
PB08	**IPOC Station P**	**2.74**	**166**	*eP*	**Pb**	**10 58 14.9**	**+0.5**
PB08				*eS*	**Sg**	**10 58 52.0**	**-0.8**
PB08				IAML		10 58 57.8	
	comp=E,172nm,0.4s						
PB08	**IPOC Station P**	**2.74**	**166**		**Pn**	**10 58 09.9**	**+0.2**
TA02	**Huaiquique**	**2.80**	**185**	*eP*	**Pb**	**10 58 12.8**	**-2.3**
PB02	**IPOC Station P**	**3.83**	**180**	Pn	**Pn**	**10 58 25.5**	**+1.1**
PB07	**IPOC Station P**	**4.24**	**180**		**Pn**	**10 58 29.9**	**-0.1**
PB09	**IPOC Station P**	**4.35**	**172**		**Pn**	**10 58 32.1**	**+0.6**
PB03	**IPOC Station P**	**4.56**	**179**		**Pn**	**10 58 35.3**	**+0.8**
PB06	**IPOC Station P**	**5.22**	**177**	Pn	**Pn**	**10 58 44.4**	**+0.9**
PB05	**IPOC Station P**	**5.37**	**183**	Pn	**Pn**	**10 58 45.6**	**+0.1**
SIV	**San Ignacio**	**8.55**	**81**	Pn	**Pn**	**10 59 33.0**	**+3.8**
	comp=E,0.1nm,0.3s,baz=262,slow=16,SNR=6.3						
	comp=E,3.1nm,0.4s						
BO01	**Tunca**	**16.89**	**183**	Pn	**Pn**	**11 01 21.9**	**+0.1**
BO01				IAmb	IAmb	11 01 25.4	
	comp=Z,16nm,0.6s						
SLOR	**San Lorenzo -**	**18.68**	**332**	P	**P**	**11 01 44.5**	**+0.3**
OTAV	**Otavalo**	**19.52**	**333**	P	**P**	**11 01 53.4**	**-0.1**
MNHN	**Monahans**	**57.91**	**327**	P	**P**	**11 07 18.1**	**+0.1**
MNHN				IAmb	IAmb	11 07 19.3	
	comp=Z,4.9nm,1.2s						
129A	**Stewart Farms,**	**58.48**	**328**	P	**P**	**11 07 22.0**	**+0.1**
PV01	**Paradox Valley**	**66.18**	**327**	P	**P**	**11 08 13.7**	**0.0**
PV01				IAmb	IAmb	11 08 20.1	
	comp=Z,3.9nm,1.2s						
KNB	**Kanab**	**67.65**	**324**	P	**P**	**11 08 24.0**	**+1.0**
KNB				IAmb	IAmb	11 08 41.4	
	comp=Z,1.6nm,1.1s						
PDAR	**Pinedale Array**	**70.19**	**330**	P	**P**	**11 08 38.4**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=111,slow=10,SNR=4.2						
	comp=Z,0.2nm,0.5s						
YHL	**Hebgen Lake**	**72.53**	**331**	P	**P**	**11 08 53.5**	**+0.5**
YHL				IAmb	IAmb	11 08 56.9	
	comp=Z,1.0nm,0.9s						
ORV	**Oroville**	**74.41**	**321**	P	**P**	**11 09 04.7**	**+0.9**
ORV				IAmb	IAmb	11 09 05.6	
	comp=Z,1.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.90**	**72**	P	**P**	**11 09 18.4**	**-0.2**
	comp=Z,1.5nm,1.1s,baz=237,slow=5.7,SNR=4.3						
	comp=Z,1.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**76.90**	**72**	P	**P**	**11 09 17.8**	**-0.7**
TORD				IAmb	IAmb	11 09 22.6	
	comp=Z,2.0nm,1.1s						
YKA	**Yellowknife Ar**	**87.10**	**341**	P	**P**	**11 10 10.1**	**-1.1**
	comp=Z,2.7nm,1.1s,baz=136,slow=5.0,SNR=13						
	comp=Z,2.7nm,1.1s						

*NEIC **26** 11:05:29.4±1.3, 18°.1S±0°.1×178°.3W±0°.1, h617km±8km, mb4.0/15, Error ellipse: s-maj=25.2km s-min=10.1km az=133.0*
*IDC **26** 11:05:29.8±2.1, 17°.95S×178°.39W, h621km±20km, mb3.5/5, mbtmp4.5/6, Error ellipse: s-maj=28.5km s-min=26.6km az=19.0*
ISC 26 11:05:28.5±0.9, 18°.2S±0°.2×178°.3W±0°.1, h600km, n25, σ1$\hat{v}$28/27, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.51**	**276**	P	**P**	**11 06 53.0**	**+2.2**
	50nm,0.8s,baz=76,slow=4.2,SNR=22						
MSVF	**Nonsavu**	**3.51**	**276**	P	**P**	**11 06 53.6**	**+2.8**
KHZ	**Kahutara**	**25.16**	**194**	P	**P**	**11 10 08.0**	**+0.1**
CTAO	**Charters Tower**	**33.52**	**261**	P	**P**	**11 11 19.7**	**-0.6**
CTAO				IAmb	IAmb	11 11 20.3	
	comp=Z,3.4nm,0.7s						
COEN	**Coen**	**37.22**	**271**	P	**P**	**11 11 50.6**	**-0.3**
STKA	**Stephens Creek**	**38.61**	**241**	P	**P**	**11 12 02.5**	**+0.6**
	comp=Z,3.6nm,0.5s,baz=80,slow=5.9,SNR=17						
	comp=Z,3.6nm,0.5s						
INKA	**Innaminka**	**38.76**	**248**	P	**P**	**11 12 04.1**	**+1.0**
INKA				IAmb	IAmb	11 12 04.9	
	comp=Z,2.4nm,0.7s						
BBOO	**Buckleboo**	**43.38**	**241**	P	**P**	**11 12 39.4**	**-0.2**
BBOO				IAmb	IAmb	11 12 40.2	
	comp=Z,5.6nm,0.6s						
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**	**11 12 48.2**	**-1.6**
WRAB				IAmb	IAmb	11 13 22.3	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**	**11 12 48.8**	**-1.1**
	comp=Z,2.5nm,0.3s,baz=95,slow=7.5,SNR=56						
WRA				PcP	**PcP**	**11 14 17.8**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=93,slow=3.1,SNR=4.3						
	comp=Z,2.5nm,0.3s						
WRA	**Warramunga Arr**	**44.70**	**260**		**P**	**11 12 48.6**	**-1.3**
AS31	**Alice Springs**	**44.83**	**254**		**P**	**11 12 49.9**	**-1.0**
AS31				IAmb	IAmb	11 12 51.5	
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**11 12 50.5**	**-0.4**
	comp=Z,14nm,0.5s,baz=86,slow=8.7,SNR=292						
ASAR				PcP	**PcP**	**11 14 18.4**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=106,slow=4.0,SNR=6.8						
	comp=Z,14nm,0.5s						
MTN	**Manton Dam**	**48.91**	**269**	P	**P**	**11 13 19.9**	**-1.6**
MTN				IAmb	IAmb	11 13 30.1	
	comp=Z,5.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.10**	**261**	P	**P**	**11 13 50.9**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=80,slow=6.1,SNR=2.0						
	comp=Z,2.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.10**	**261**	P	**P**	**11 13 50.5**	**-1.3**
MBWA	**Marble Bar**	**58.12**	**256**	P	**P**	**11 14 25.0**	**-1.4**
MBWA				IAmb	IAmb	11 15 01.6	
	comp=Z,9.3nm,1.0s						
SBA	**South Base**	**60.18**	**184**	P	**P**	**11 14 38.7**	**-0.3**
QSPA	**South Pole Qui**	**71.90**	**180**	P	**P**	**11 15 52.6**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=329,slow=1.0,SNR=16						
	comp=Z,1.6nm,0.6s						
QSPA	**South Pole Qui**	**71.90**	**180**	P	**P**	**11 15 53.0**	**+1.1**
O02D	**Mt. Diablo Mer**	**77.67**	**40**	P	**P**	**11 16 23.6**	**-0.9**
O02D				IAmb	IAmb	11 16 23.7	
	comp=Z,6.2nm,1.1s						
BELA	**Belgrano 2**	**81.90**	**173**	P	**P**	**11 16 45.5**	**-0.3**
BELA				IAmb	IAmb	11 16 53.4	
	comp=Z,4.2nm,1.1s						
BRTR	**Keskin Array B**	**145.04**	**315**	PKP	**PKPdf**	**11 23 57.6**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=63,slow=1.9,SNR=4.4						
MMAI	**Mount Meron Ar**	**146.37**	**303**	PKPbc	**PKPdf**	**11 24 02.3**	**+1.1**
	comp=Z,4.2nm,0.6s,baz=76,slow=2.3,SNR=2.0						
GERES	**GERESS Array B**	**147.88**	**345**	PKPbc	**PKPdf**	**11 24 05.2**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=21,slow=3.3,SNR=8.6						

*GUC **26** 11:06:21.7±0.8, 17°.28S×69°.88W, h10km±14km, ML3.9*
*NEIC **26** 11:06:24.6±1.6, 17°.47S±0°.04×69°.89W±0°.03, h10km±1km, mb4.7/25, Mwr4.4/22, Mwr4.3(GUC), Error ellipse: s-maj=6.4km s-min=3.9km az=153.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=3.31; $M_{\theta\theta}$=0.40; $M_{\phi\phi}$=3.71; $M_{r\theta}$=0.65; $M_{\theta\phi}$=0.18; $M_{\phi r}$=3.47; Fault plane solution: M_0=5.00000×10^{15} NP1:ϕs=5.00000°, δ22.92000°, λ-77.43000°. NP2:ϕs=171.39000°, δ67.66000°, λ-95.26000°. Principal axes: T 5.1700, Plg22.0000°, Azm265.0000°; N -0.3650, Plg5.0000°, Azm173.0000°; P -4.8050, Plg67.0000°, Azm72.0000°;*
*NEIC **26** 11:06:24.6, 17°.47S×69°.89W, h10km*
*IDC **26** 11:06:32.0±2.4, 17°.34S×69°.74W, h70km±19km, mb3.9/11, mbtmp4.2/13, MS3.8/10, Error ellipse: s-maj=20.8km s-min=16.8km az=24.0*
ISC 26 11:06:22.5±1.5, 17°.40S±0°.04×69°.97W±0°.04, h1km±10km, n92, σ1$\hat{v}$26/90, mb4.5/21, MS3.6/8, 3C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.51**	**112**	⇑*iP*	**Pg**	**11 06 31.4**	**-0.9**
PB18				*eS*	**Sg**	**11 06 38.6**	**-0.2**
PB18				IAML		11 06 42.4	
	comp=N,13μm,0.4s						
PB18	**Visviri**	**0.51**	**112**	Pg	**Pg**	**11 06 31.6**	**-0.6**
PB18				Sg	**Sg**	**11 06 38.2**	**-0.6**
AP01	**Chacalluta**	**1.02**	**200**	*eP*	**Pg**	**11 06 42.0**	**-0.2**
AP01				*eS*	**Sb**	**11 06 57.3**	**+0.2**
AP01				IAML		11 06 57.9	
	comp=E,6μm,0.2s						
AP01	**Chacalluta**	**1.02**	**200**		**Pg**	**11 06 42.4**	**+0.2**
AP01				Sg	**Sb**	**11 06 57.1**	**0.0**
PB16	**IPOC Station P**	**1.03**	**155**	*eP*	**Pg**	**11 06 41.6**	**-0.7**
PB16	**IPOC Station P**	**1.03**	**155**		**Pg**	**11 06 41.7**	**-0.6**
PB16				Sg	**Sg**	**11 06 55.4**	**-0.2**
PB12	**IPOC Station P**	**1.25**	**196**	*eP*	**Pb**	**11 06 45.8**	**-1.2**
PB12				*eS*	**Sg**	**11 07 03.7**	**+1.0**
PB12	**IPOC Station P**	**1.25**	**196**		**Pb**	**11 06 45.9**	**-1.1**
PB12				Sg	**Sb**	**11 07 03.6**	**-0.1**
PX02	**IPOC Station P**	**1.57**	**188**	*eP*	**Pn**	**11 06 50.9**	**-0.7**
I08BO	**LAS PENAS INFR**	**1.88**	**51**	I	I	11 17 50.0	
	baz=231,slow=325,SNR=2.2						
LPAZ	**La Paz**	**2.08**	**58**	P	**Pb**	**11 07 01.1**	**-0.5**
	comp=E,103nm,0.7s,baz=234,slow=13,SNR=60						
LPAZ				S	**Sn**	**11 07 26.4**	**+0.2**
	comp=E,117nm,0.6s,baz=192,slow=22,SNR=3.7						
LPAZ				LR	LR	11 08 07.9	
	comp=E,4μm,21.2s,baz=244,slow=52						
LPAZ	**La Paz**	**2.08**	**58**		**Pn**	**11 07 00.0**	**+0.8**
PSGCX	**Pisagua**	**2.19**	**184**	*eP*	**Pn**	**11 07 00.7**	**+0.6**
PSGCX				*eS*	**Sb**	**11 07 30.3**	**-0.3**
PSGCX	**Pisagua**	**2.19**	**184**		**Pn**	**11 07 00.4**	**+0.2**
PB11	**IPOC Station P**	**2.36**	**173**	*eP*	**Pn**	**11 07 04.3**	**+1.6**
PB11				IAML		11 07 38.0	
	comp=E,600nm,0.2s						
PB11				IVMs_BB	IVMs_BB	11 08 25.8	
	comp=Z,5μm,3.6s						
PB11	**IPOC Station P**	**2.36**	**173**		**Pn**	**11 07 03.0**	**+0.3**
GO01	**Chusmiza**	**2.37**	**162**	*eP*	**Pb**	**11 07 06.3**	**0.0**
GO01	**Chusmiza**	**2.37**	**162**		**Pn**	**11 07 03.0**	**0.0**
PB08	**IPOC Station P**	**2.83**	**164**	*eP*	**Pb**	**11 07 13.1**	**-1.1**
PB08				IVMs_BB	IVMs_BB	11 08 11.3	
	comp=Z,3μm,4.7s						
PB08	**IPOC Station P**	**2.83**	**164**		**Pn**	**11 07 09.8**	**+0.5**
TA02	**Huaiquique**	**2.86**	**183**	*eP*	**Pn**	**11 07 11.3**	**+2.0**
TA02				IVMs_BB	IVMs_BB	11 08 34.9	
	comp=Z,3μm,3.7s						
PB02	**IPOC Station P**	**3.90**	**179**		**Pn**	**11 07 24.1**	**+0.4**
PB07	**IPOC Station P**	**4.30**	**179**		**Pn**	**11 07 29.2**	**-0.2**
PB09	**IPOC Station P**	**4.42**	**171**		**Pn**	**11 07 34.7**	**+3.7**
PB03	**IPOC Station P**	**4.63**	**177**		**Pn**	**11 07 34.2**	**+0.4**
PB06	**IPOC Station P**	**5.29**	**176**		**Pn**	**11 07 44.9**	**+2.0**
PB05	**IPOC Station P**	**5.43**	**182**		**Pn**	**11 07 45.8**	**+1.1**
PB14	**IPOC Station P**	**7.20**	**183**	Pn	**Pn**	**11 08 08.4**	**-0.8**
NNA	**Nana**	**8.55**	**308**	P	Pn	11 08 35.9	+8.3
	comp=Z,17nm,0.9s,baz=171,slow=9.8,SNR=4.4						
NNA				S	Sn	11 10 21.4	+17
	comp=Z,3.4nm,0.4s,baz=229,slow=3.6,SNR=1.9						
SIV	**San Ignacio**	**8.64**	**82**	P	**Pn**	**11 08 30.1**	**+1.2**
	comp=Z,17nm,0.6s,baz=261,slow=13,SNR=64						
SIV				S	**Sn**	**11 10 11.3**	**+4.2**
	comp=Z,5.6nm,0.7s,baz=161,slow=23,SNR=2.1						
SIV				LR	LR	11 12 24.3	
	comp=Z,2μm,18.8s,baz=293,slow=42						
AC02	**Maricunga**	**9.42**	**175**	Pn	**Pn**	**11 08 39.6**	**-0.3**
CZSB	**Cruzeiro do Su**	**9.98**	**344**		**Pn**	**11 08 49.0**	**+1.9**
VILB	**Vilhena**	**10.42**	**66**		**Pn**	**11 08 53.8**	**+0.5**
PTLB	**Pontes e Lacer**	**10.58**	**81**		**Pn**	**11 08 56.9**	**+1.6**
ATAH	**Atahualpa**	**13.10**	**320**	LR	LR	11 15 14.3	
	comp=Z,797nm,19.5s,baz=164,slow=40						
ZON	**Zonda**	**14.13**	**175**	Pn	**Pn**	**11 09 45.1**	**+1.1**
CPUP	**Villa Florida**	**14.71**	**129**	LR	LR	11 16 42.1	
	comp=Z,334nm,20.0s,baz=296,slow=42						
MT08	**Bocatoma Ro**	**15.97**	**180**	Pn	**Pn**	**11 10 08.8**	**-0.1**
MT13	**San Alfonso**	**16.27**	**181**	Pn	**Pn**	**11 10 12.8**	**+0.2**
SLOR	**San Lorenzo -**	**18.57**	**332**		**P**	**11 10 42.5**	**+0.9**
BDFB	**Brasilia**	**21.12**	**88**	LR	LR	11 19 45.6	
	comp=Z,195nm,21.2s,baz=291,slow=38						
TRQA	**Tornquist**	**21.74**	**163**	P	**P**	**11 11 15.8**	**+0.4**
TRQA				IAmb	IAmb	11 11 37.3	
	comp=Z,28nm,1.4s						
SDV	**Santo Domingo**	**26.13**	**359**	LR	LR	11 23 10.7	
	comp=Z,324nm,18.3s,baz=248,slow=38						
MDP	**Montagnes des**	**28.16**	**39**	LR	LR	11 23 48.0	
	comp=Z,351nm,20.2s,baz=214,slow=37						
JTS	**Las Juntas de**	**31.25**	**331**	LR	LR	11 26 52.0	
	comp=Z,125nm,18.5s,baz=169,slow=39						
RCBR	**Riachuelo**	**35.23**	**75**	LR	LR	11 28 22.7	
	comp=Z,157nm,19.1s,baz=249,slow=38						
SJG	**San Juan**	**35.49**	**6**	LR	LR	11 28 56.5	
	comp=Z,84nm,19.5s,baz=120,slow=38						
APG	**El Apazote**	**38.02**	**327**	LR	LR	11 30 01.4	
	comp=Z,7.1nm,21.2s,baz=73,slow=37						
CMIG	**Matias Romero**	**42.15**	**323**	LR	LR	11 31 57.2	
	comp=Z,48nm,20.8s,baz=178,slow=36						
HNDO	**Hondo**	**54.56**	**328**	P	**P**	**11 15 53.4**	**+0.9**
HNDO				IAmb	IAmb	11 15 54.4	
	comp=Z,8.2nm,1.0s						
TXAR	**Lajitas Array**	**56.72**	**325**	P	**P**	**11 16 08.8**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=140,slow=6.6,SNR=4.4						
	comp=Z,0.6nm,0.7s						
S44A	**Carbondale**	**57.73**	**342**	P	**P**	**11 16 14.6**	**-0.4**
S44A				IAmb	IAmb	11 16 15.6	
	comp=Z,8.9nm,0.9s						
HHAR	**Hobbs**	**58.01**	**337**	P	**P**	**11 16 16.9**	**-0.2**
TPB01	**Permian Basin**	**58.03**	**326**	P	**P**	**11 16 18.4**	**+1.0**
TPB01				IAmb	IAmb	11 16 19.2	
	comp=Z,5.3nm,1.1s						
129A	**Stewart Farms,**	**58.37**	**328**	P	**P**	**11 16 19.9**	**+0.2**
129A				IAmb	IAmb	11 16 20.9	
	comp=Z,11nm,1.2s						
DEOK	**Depew**	**58.61**	**335**	P	**P**	**11 16 21.7**	**+0.4**
OK029	**Liberty Lake**	**58.97**	**334**	P	**P**	**11 16 23.2**	**-0.5**
BLOK	**Blackwell**	**59.70**	**335**	P	**P**	**11 16 29.0**	**+0.2**
VNA1	**Neumayer--Stat**	**64.46**	**161**	P	**P**	**11 17 03.9**	**+3.5**
	comp=Z,4.4nm,0.9s						
VNA2	**Neumayer--Watz**	**64.83**	**161**	⇑P	**P**	**11 17 05.8**	**+3.0**
	comp=Z,1.3nm,0.6s,baz=289,slow=6.7						
ECSD	**EROS Data Cent**	**65.55**	**339**		**P**	**11 17 07.1**	**-0.7**
WUAZ	**Wupatki**	**65.65**	**324**	P	**P**	**11 17 09.4**	**+0.6**
WUAZ				IAmb	IAmb	11 17 11.4	
	comp=Z,5.5nm,1.2s						
SNAA	**Sanae**	**66.46**	**161**	P	**P**	**11 17 12.9**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=264,slow=4.6,SNR=4.5						
	comp=Z,3.3nm,1.0s						
SNAA	**Sanae**	**66.46**	**161**	P	**P**	**11 17 15.0**	**+1.6**
SNAA				IAmb	IAmb	11 17 15.6	
	comp=Z,11nm,1.4s						
TROLL	**Troll, Antarti**	**68.18**	**161**	⇑P	**P**	**11 17 25.4**	**+1.0**
	comp=Z,147nm,1.0s						
DBIC	**Dimbokro**	**68.61**	**75**	P	**P**	**11 17 26.4**	**-1.4**
	comp=Z,4.4nm,0.8s,baz=234,slow=12,SNR=3.9						
	comp=Z,4.4nm,0.8s						
E28A	**Huff**	**69.45**	**338**		**P**	**11 17 33.2**	**+0.8**
WCT	**Wildcat Mounta**	**69.58**	**321**		**P**	**11 17 34.8**	**+1.3**
PDAR	**Pinedale Array**	**70.08**	**330**	P	**P**	**11 17 37.2**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=130,slow=8.0,SNR=6.6						
	comp=Z,0.7nm,0.8s						
VES	**Vestal, Richgr**	**70.46**	**319**	P	**P**	**11 17 39.3**	**+0.5**
VES				IAmb	IAmb	11 17 41.8	
	comp=Z,8.4nm,1.0s						
TPH	**Tonopah**	**70.80**	**322**	P	**P**	**11 17 42.6**	**+1.5**
TPH				IAmb	IAmb	11 17 43.9	
	comp=Z,4.5nm,1.1s						
ULM	**Lac du Bonnet**	**71.13**	**343**	P	**P**	**11 17 42.3**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=140,slow=9.1,SNR=3.8						
	comp=Z,2.6nm,0.8s						
NVAR	**Mina Array Bea**	**71.67**	**322**	P	**P**	**11 17 47.4**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=141,slow=6.0,SNR=8.1						
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**72.77**	**180**	P	**P**	**11 17 53.8**	**+1.4**
	comp=Z,2.7nm,1.0s,baz=135,slow=2.6,SNR=7.2						
	comp=Z,2.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.98**	**72**	P	**P**	**11 18 16.1**	**-1.5**
	comp=Z,4.7nm,1.0s,baz=256,slow=3.9,SNR=12						
	comp=Z,4.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.98**	**72**	P	**P**	**11 18 16.6**	**-0.9**
TORD				IAmb	IAmb	11 18 18.0	
	comp=Z,5.5nm,1.1s						
ESDC	**Sonseca Array**	**83.65**	**45**	P	**P**	**11 18 52.7**	**-0.4**
	comp=Z,2.2nm,1.1s,baz=260,slow=4.6,SNR=6.9						
	comp=Z,2.2nm,1.1s						
ESDC	**Sonseca Array**	**83.65**	**45**	P	**P**	**11 18 53.3**	**+0.2**
ESDC				IAmb	IAmb	11 19 33.9	
	comp=Z,5.6nm,1.4s						
YKA	**Yellowknife Ar**	**87.01**	**341**	P	**P**	**11 19 08.2**	**-1.0**
	comp=Z,4.8nm,0.9s,baz=138,slow=4.9,SNR=32						
	comp=Z,4.8nm,0.9s						
GERES	**GERESS Array B**	**98.84**	**42**	P	**P**	**11 20 03.0**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=251,slow=4.4,SNR=3.7						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**132.99**	**210**	PKP	**PKPdf**	**11 25 40.9**	**+0.2**
	comp=Z,0.7nm,1.1s,baz=120,slow=5.5,SNR=2.7						
WRA	**Warramunga Arr**	**135.87**	**214**	PKP	**PKPdf**	**11 25 45.2**	**-0.9**
	comp=Z,0.7nm,0.9s

comp=Z,0.5nm,0.3s,baz=94,slow=9.7,SNR=2.7
comp=Z,26nm,1.0s
PMSA Palmer Station 18.11 240 P **P** **11 20 26.9 +0.7**
PMSA IAmb IAmb 11 21 10.2
comp=Z,37nm,1.1s
MG03 Isla Dawson 25.05 265 P **P** **11 21 38.0 -0.5**
MG02 Cerro Sombrero 25.05 268 P **P** **11 21 39.1 +0.5**
QSPA South Pole Qui 29.54 180 P **P** **11 22 20.2 +1.2**
comp=Z,2.6nm,0.8s,baz=181,slow=5.5,SNR=20
QSPA LR LR 11 33 42.7
comp=Z,67nm,18.6s,baz=227,slow=36
comp=Z,2.6nm,0.8s
QSPA South Pole Qui 29.54 180 P **P** **11 22 18.8 -0.2**
QSPA IAmb IAmb 11 23 01.8
comp=Z,4.8nm,0.8s
TRQA Tornquist 32.34 298 P **P** **11 22 42.9 -0.9**
TRQA IAmb IAmb 11 22 45.5
comp=Z,4.5nm,0.8s
MAW Mawson 35.81 139 P **P** **11 23 13.9 +0.5**
comp=Z,3.1nm,1.0s,baz=234,slow=6.7,SNR=4.9
comp=Z,3.1nm,1.0s
MAW Mawson 35.81 139 P **P** **11 23 12.5 -0.9**
MT09 Talagante 39.94 291 P **P** **11 23 46.5 -2.4**
MT09 IAmb IAmb 11 23 47.7
comp=Z,11nm,0.8s
MT01 Popeta 39.98 291 P **P** **11 23 46.5 -2.6**
MT01 IAmb IAmb 11 23 49.7
comp=Z,6.0nm,0.9s
MT02 Curacav 40.44 291 P **P** **11 23 51.1 -1.8**
MT02 IAmb IAmb 11 24 26.0
comp=Z,8.4nm,1.1s
CO04 Los Peladeros 41.38 293 P **P** **11 24 00.4 -0.6**
CO04 IAmb IAmb 11 24 03.5
comp=Z,9.1nm,0.9s
VNDA Vanda 41.97 182 P **P** **11 24 07.2 +2.3**
comp=Z,1.6nm,0.9s,baz=184,slow=5.6,SNR=3.8
VNDA LR LR 11 41 27.5
comp=Z,27nm,18.4s,baz=158,slow=36
comp=Z,1.6nm,0.9s
VNDA Vanda 41.97 182 P **P** **11 24 06.7 +1.8**
H04S2 CROZET ISLANDS 44.81 108 T T 12 12 58.4
baz=223,slow=74,SNR=10
H04S3 CROZET ISLANDS 44.82 108 T T 12 13 02.7
baz=223,slow=74,SNR=8.5
H04S1 CROZET ISLANDS 44.83 108 T T 12 12 58.1
baz=223,slow=74,SNR=9.0
CASY Casey 49.15 158 P **P** **11 25 02.9 +1.0**
CASY IAmb IAmb 11 25 06.7
comp=Z,3.0nm,0.8s
H10N1 ASCENSION HYDR 53.33 13 T T 12 23 26.4
baz=186,slow=80
H10N3 ASCENSION HYDR 53.33 13 T T 12 23 36.9
baz=186,slow=80
H10N2 ASCENSION HYDR 53.35 13 T T 12 23 29.6
baz=186,slow=80
TORD Torodi Ar. Bea 76.63 27 P **P** **11 28 06.7 +1.5**
comp=Z,1.6nm,0.6s,baz=196,slow=6.5,SNR=7.5
comp=Z,1.6nm,0.6s
ASAR Alice Springs 94.21 161 P **P** **11 29 33.8 +0.1**
comp=Z,0.8nm,0.9s,baz=188,slow=3.5,SNR=6.5
comp=Z,0.8nm,0.9s
ASAR Alice Springs 94.21 161 P **P** **11 29 33.4 -0.3**
WRA Warramunga Arr 97.93 160 Pdif **PKiKP** **11 29 51.8 +1.2**
YKA Yellowknife Ar 140.29 313 PKP **PKiKP** **11 35 44.3 -0.2**
comp=Z,0.4nm,0.7s,baz=133,slow=2.0,SNR=4.5
R32K Eaglecrest 145.67 298 PKPdf **PKPdf** **11 35 50.8 -0.8**
A36M Sachs Harbour 148.71 324 PKPdf **PKPdf** **11 35 55.1 -1.1**
SONM Songino Array 149.63 93 PKPbc **PKPbc** **11 36 03.3 0.0**
comp=Z,0.6nm,0.6s,baz=236,slow=1.6,SNR=5.9
ILAR Eielson Array 153.87 304 PKPbc **PKiKP** **11 36 14.2 +1.8**
comp=Z,1.3nm,1.0s,baz=111,slow=1.4,SNR=6.4

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*GUC **26** 11:28:45.8±0.9, 17°.30S×69°.86W, h13km±27km, ML4.0*
*IDC **26** 11:28:47.4±0.7, 17°.23S×69°.91W, h0km, mb4.1/9, mbtmp4.1/11, ML4.0/2, MS4.3/47, Error ellipse: s-maj=19.7km s-min=13.6km az=162.0*
*NEIC **26** 11:28:49.2, 17°.52S×69°.81W, h17km*
*GFZ **26** 11:28:49.7±0.2, 17°.5±2°×7°.0W±°, h10km, M4.5/12, mb4.5/12*
*NEIC **26** 11:28:49.2±1.7, 17°.52S±0°.04×69°.83W±0°.05, h17km±1km, mb4.7/36, Mwr4.8/29, ML4.0(GUC), Error ellipse: s-maj=6.6km s-min=5.3km az=118.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.52; Mθθ=0.30; Mϕϕ=1.22; Mrθ=0.31; Mϕθ=-0.57; Mϕr=-1.59; Fault plane solution: M₀=2.21000×10¹⁶ NP1:φ₁=344.69000°, δ=68.71000°, λ=-82.67000°. NP2:φ₂=145.19000°, δ=22.46000°, λ=-108.12000°. Principal axes: T 2.1711, Plg=23.0000°, Azm=69.0000°; N 0.0772, Plg=7.0000°, Azm=162.0000°; P -2.2484, Plg=66.0000°, Azm=267.0000°;*
*GCMT **26** 11:28:50.2±0.3, 17°.67S±0°.02×69°.92W±0°.01, h17km±1km, MW=5.0/92, Moment Tensor Solution. s24,c25; s92,c122; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.76±.17; Mθθ=0.43±.10; Mϕϕ=3.19±.12; Mrθ=-4.18±.44; Mϕθ=0.12±.07; Mϕr=0.10±.21; Best double couple: M₀=4.58900×10¹⁶ NP1:φ₁=21.00000°, δ=46.00000°, λ=-37.00000°. NP2: φ₂=138.00000°, δ=64.00000°, λ=-130.00000°. Principal axes: T 3.2410, Plg=11.0000°, Azm=256.0000°; N 2.6900, Plg=35.0000°, Azm=158.0000°; P -5.9360, Plg=53.0000°, Azm=0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **26** 11:29:07.8±1.3, 17°.10S×68°.52W, h64km±8km, mb4.3, Presumed earthquake*

ISC 26 11:28:47.9±1.3, 17°.48S±0°.03×69°.90W±0°.04, h9km±8km, n161, σ1=9.41/133, mb4.5/20, MS4.2/47, 5C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.41**	**106**	*eP*		**Pg**	**11 28 55.2**	**-0.9**
PB18				*eS*		**Sg**	**11 29 02.1**	**+0.5**
PB18				IAML			11 29 07.0	
	comp=N,15μm,0.5s							
PB18	**Visviri**	**0.41**	**106**			**Pg**	**11 28 55.3**	**-0.9**
PB18						**Sg**	**11 29 02.0**	**+0.3**
PB18	**Visviri**	**0.41**	**106**	P		**Pg**	**11 28 56.2**	**0.0**
PB16	**IPOC Station P**	**0.93**	**157**	*eP*		**Pg**	**11 29 05.3**	**-0.6**
PB16				*eS*		**Sb**	**11 29 19.2**	**-0.1**
PB16	**IPOC Station P**	**0.93**	**157**			**Pg**	**11 29 05.3**	**-0.6**
PB16	**IPOC Station P**	**0.93**	**157**	P		**Pb**	**11 29 06.8**	**+0.3**
AP01	**Chacalluta**	**0.99**	**205**	*eP*		**Pg**	**11 29 05.8**	**-1.1**
AP01				*eS*		**Sn**	**11 29 21.1**	**-0.8**
AP01	**Chacalluta**	**0.99**	**205**	Pn		**Pg**	**11 29 06.1**	**-0.7**
AP01				Sn		**Sb**	**11 29 20.6**	**+0.4**
AP01	**Chacalluta**	**0.99**	**205**	P		**Pg**	**11 29 06.5**	**-0.3**
PB12	**IPOC Station P**	**1.20**	**200**	*eP*		**Pn**	**11 29 08.8**	**-2.1**
PB12				*eS*		**Sn**	**11 29 27.9**	**+0.4**
PB12				IAML			11 29 30.2	
	comp=E,4μm,0.6s							
PB12	**IPOC Station P**	**1.20**	**200**	Pn		**Pn**	**11 29 09.7**	**-1.3**
PB12				Sn		**Sn**	**11 29 27.3**	**-0.2**
PB12	**IPOC Station P**	**1.20**	**200**	P		**Pn**	**11 29 09.8**	**-1.1**
PX02	**IPOC Station P**	**1.51**	**191**	*eP*		**Pn**	**11 29 14.2**	**-1.0**
PX02				*eS*		**Sg**	**11 29 36.1**	**-0.3**
PX02				IAML			11 29 43.7	
	comp=N,1μm,0.3s							
I08BO	**LAS PENAS INFR**	**1.87**	**48**	I		I	11 38 20.0	
	baz=231,slow=328,SNR=1.9							
LPAZ	**La Paz**	**2.06**	**55**	Pg		**Pn**	**11 29 24.4**	**+1.1**
	comp=N,40nm,0.3s,baz=244,slow=14,SNR=22							
LPAZ				Lg		Lg	11 29 50.1	
	comp=N,36nm,0.3s,baz=43,slow=16,SNR=3.9							
LPAZ				LR		LR	11 30 31.6	
	comp=N,22μm,19.7s,baz=250,slow=54							
LPAZ	**La Paz**	**2.06**	**55**	Pn		**Pn**	**11 29 23.0**	**-0.2**
LPAZ	**La Paz**	**2.06**	**55**	*eP*		**Pn**	**11 29 24.2**	**+1.0**
LPAZ	**La Paz**	**2.06**	**55**	P		**Pb**	**11 29 25.2**	**-0.6**
PSGCX	**Pisagua**	**2.12**	**186**	*eP*		**Pn**	**11 29 24.7**	**+1.1**
PSGCX				*eS*		**Sb**	**11 29 54.4**	**+1.4**
PSGCX	**Pisagua**	**2.12**	**186**			**Pn**	**11 29 24.4**	**+0.8**
PSGCX	**Pisagua**	**2.12**	**186**	P		**Pb**	**11 29 25.4**	**-1.2**
GO01	**Chusmiza**	**2.28**	**163**	*eP*		**Pg**	**11 29 30.6**	**+1.1**
GO01				*eP*		**Pg**	**11 29 30.7**	**-0.9**
GO01				*eS*		**Sg**	**11 30 01.8**	**+0.6**
GO01				IAML			11 30 07.3	
	comp=E,1μm,0.1s							
GO01	**Chusmiza**	**2.28**	**163**			**Pn**	**11 29 25.1**	**-1.0**
GO01	**Chusmiza**	**2.28**	**163**	P		**Pg**	**11 29 32.4**	**+0.7**
PB11	**IPOC Station P**	**2.28**	**174**	*eP*		**Pb**	**11 29 28.1**	**-1.3**
PB11				*eS*		**Sg**	**11 30 00.8**	**-0.5**
PB11				IAML			11 30 04.8	
	comp=E,1μm,0.5s							
PB11	**IPOC Station P**	**2.28**	**174**	Pn		**Pn**	**11 29 27.6**	**+1.7**
PB11	**IPOC Station P**	**2.28**	**174**	P		**Pb**	**11 29 29.2**	**-0.2**
PB08	**IPOC Station P**	**2.74**	**165**	*eP*		**Pb**	**11 29 37.1**	**-0.2**
PB08				*eS*		**Sg**	**11 30 15.6**	**-0.6**
PB08				IAML			11 30 22.9	
	comp=E,833nm,0.5s							
PB08	**IPOC Station P**	**2.74**	**165**	P		**Pb**	**11 29 38.4**	**+1.0**
TA02	**Huaiquique**	**2.79**	**185**	*eP*		**Pn**	**11 29 35.3**	**+2.6**
TA02	**Huaiquique**	**2.79**	**185**	P		**Pn**	**11 29 37.5**	**-0.4**
PB02	**IPOC Station P**	**3.82**	**180**	*eP*		**Pn**	**11 29 50.9**	**+3.9**
PB02	**IPOC Station P**	**3.82**	**180**			**Pn**	**11 29 46.0**	**-1.0**
PB02	**IPOC Station P**	**3.82**	**180**	P		**Pb**	**11 29 54.8**	**-0.8**
PB07	**IPOC Station P**	**4.23**	**180**			**Pn**	**11 29 52.5**	**-0.2**
PB07	**IPOC Station P**	**4.23**	**180**	P		**Pb**	**11 29 59.6**	**-2.9**
PB03	**IPOC Station P**	**4.55**	**178**	P		**Pb**	**11 30 03.6**	**-4.4**
PB06	**IPOC Station P**	**5.21**	**177**	P		Pn	11 30 11.5	+5.3
PB05	**IPOC Station P**	**5.36**	**183**			**Pn**	**11 30 08.6**	**+0.4**
PB05	**IPOC Station P**	**5.36**	**183**	P		**Pn**	**11 30 11.4**	**+3.3**
PB14	**IPOC Station P**	**7.13**	**184**			**Pn**	**11 30 32.4**	**-0.3**
SIV	**San Ignacio**	**8.58**	**81**	Pn		**Pn**	**11 30 53.5**	**+1.1**
	comp=E,0.6nm,0.3s,baz=265,slow=10,SNR=31							
SIV				Lg		Lg	11 33 16.8	
	comp=E,0.4nm,0.3s,baz=180,slow=20,SNR=3.6							
SIV				LR		LR	11 34 48.7	
	comp=E,9μm,19.0s,baz=278,slow=42							
	comp=E,6.6nm,0.4s							
NNA	**Nana**	**8.65**	**308**	Pn		**Pn**	**11 30 57.0**	**+3.7**
	baz=127,slow=14							
NNA				Lg		Lg	11 33 15.9	
	comp=E,1.1nm,0.3s,baz=294,slow=20,SNR=3.8							
AC01	**Pan de Azucar**	**8.65**	**184**	Pn		**Pn**	**11 30 52.5**	**-0.9**
BBSD	**Serra de San D**	**8.88**	**90**	*eP*		**Pn**	**11 30 56.0**	**-0.3**
AC02	**Maricunga**	**9.34**	**176**	Pn		**Pn**	**11 31 03.5**	**+0.4**
PTLB	**Pontes e Lacer**	**10.52**	**81**	*eP*		**Pn**	**11 31 16.8**	**-2.1**
AC05	**El Transito**	**11.31**	**182**	Pn		**Pn**	**11 31 31.2**	**+1.4**
CFA	**Coronel Fontan**	**14.15**	**174**	Pn		**P**	**11 32 13.3**	**-2.8**
	comp=E,0.2nm,0.3s,baz=357,slow=11,SNR=6.3							
CFA				LR		LR	11 39 18.2	
	comp=E,460nm,18.6s,baz=339,slow=44							
	comp=E,1.0nm,0.5s							
CLDB	**Colider**	**15.16**	**66**	*eP*		**Pn**	**11 32 21.2**	**-1.2**
PEL	**Peldehue**	**15.62**	**182**	Pn		**Pn**	**11 32 29.5**	**+1.2**
PEL				IAmb		IAmb	11 32 37.8	
	comp=Z,51nm,1.4s							
PEL	**Peldehue**	**15.62**	**182**	P		**P**	**11 32 34.5**	**+2.0**
MT05	**Renca**	**15.87**	**183**	Pn		**Pn**	**11 32 32.0**	**+0.5**
MT05				IAmb		IAmb	11 32 49.3	
	comp=Z,105nm,1.4s							
MT08	**Bocatoma Ro**	**15.90**	**180**	Pn		**Pn**	**11 32 30.4**	**-1.7**
VA05	**Santo Domingo**	**16.19**	**185**	Pn		**Pn**	**11 32 35.6**	**0.0**
VA05	**Santo Domingo**	**16.19**	**185**	P		**P**	**11 32 42.7**	**+3.9**
MT13	**San Alfonso**	**16.20**	**181**	Pn		**Pn**	**11 32 35.9**	**0.0**
MT09	**Talagante**	**16.26**	**183**	Pn		**Pn**	**11 32 35.6**	**-1.1**
MACA	**Manacapuru-AM**	**16.86**	**33**			**Pn**	**11 32 43.1**	**-1.1**
MACA	**Manacapuru-AM**	**16.86**	**33**	*eP*		**P**	**11 32 46.8**	**+0.5**
BO03	**Pichilemu**	**17.05**	**186**	P		**P**	**11 32 50.9**	**+2.6**
BO02	**Sierra Bellavi**	**17.26**	**182**			**Pn**	**11 32 49.8**	**+0.5**
BO02	**Sierra Bellavi**	**17.26**	**182**	P		**P**	**11 32 55.0**	**+4.2**
ARAG	**Araguiana, MT**	**17.42**	**87**	*eP*		**Pn**	**11 32 50.9**	**-0.4**
LDASE	**Londrina, Braz**	**18.55**	**112**	*eP*		**Pn**	**11 33 07.0**	**+1.8**
SLOR	**San Lorenzo -**	**18.67**	**332**			**Pn**	**11 33 08.0**	**+0.9**
CASC	**Dorado de Casc**	**18.97**	**337**	P		**P**	**11 33 09.9**	**+0.1**
ITTB	**Itaituba**	**19.03**	**48**	*eP*		**P**	**11 33 10.6**	**+0.3**
IPMB	**Ipameri, GO**	**20.66**	**95**	*eP*		**P**	**11 33 28.5**	**+0.3**
BBAC	**Balboa, Cauca**	**20.68**	**339**	P		**P**	**11 33 28.9**	**+0.3**
POPC	**Popayan, Colom**	**20.98**	**341**	P		**P**	**11 33 32.1**	**+0.3**
TRQA	**Tornquist**	**21.65**	**163**			**P**	**11 33 36.5**	**-2.2**
BOAV	**Boa Vista**	**21.80**	**26**	P		**P**	**11 33 39.0**	**-1.4**
GO06	**Curarrehue**	**22.07**	**183**	P		**P**	**11 33 46.6**	**+3.3**
SMTB	**Santa Maria do**	**23.33**	**71**	*eP*		**P**	**11 33 56.3**	**-0.3**
SDV	**Santo Domingo**	**26.20**	**358**	LR		LR	11 45 35.1	
	comp=Z,1μm,18.4s,baz=192,slow=39							
MDP	**Montagnes des**	**28.17**	**39**	LR		LR	11 47 29.0	
	comp=Z,541nm,18.6s,baz=216,slow=40							
JTS	**Las Juntas de**	**31.34**	**331**	LR		LR	11 48 12.8	
	comp=Z,646nm,21.9s,baz=163,slow=37							
RCBR	**Riachuelo**	**35.18**	**75**	LR		LR	11 50 47.3	
	comp=Z,1000nm,18.1s,baz=248,slow=38							
SJG	**San Juan**	**35.56**	**6**	LR		LR	11 51 11.6	
	comp=Z,451nm,20.7s,baz=220,slow=38							
APG	**El Apazote**	**38.12**	**327**	LR		LR	11 51 41.7	
	comp=Z,32nm,21.8s,baz=200,slow=36							
CMIG	**Matias Romero**	**42.25**	**323**	LR		LR	11 54 22.4	
	comp=Z,176nm,20.8s,baz=170,slow=36							
PMSA	**Palmer Station**	**47.42**	**177**	LR		LR	11 56 59.5	
	comp=Z,304nm,20.9s,baz=6.0,slow=36							
HNDO	**Hondo**	**54.66**	**328**			**P**	**11 38 17.9**	**+0.6**
HNDO				IAmb		IAmb	11 38 23.7	
	comp=Z,13nm,1.2s							
MIAR	**Mount Ida**	**56.43**	**337**			**P**	**11 38 29.3**	**-0.6**
MIAR				IAmb		IAmb	11 38 30.2	
	comp=Z,15nm,1.4s							
MIAR	**Mount Ida**	**56.43**	**337**	P		**P**	**11 38 29.6**	**-0.2**
TX31	**Lajitas Ar. Si**	**56.82**	**325**	P		**P**	**11 38 33.4**	**+0.5**
TX31				IAmb		IAmb	11 38 34.3	
	comp=Z,9.6nm,1.5s							
TXAR	**Lajitas Array**	**56.82**	**325**	P		**P**	**11 38 32.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=140,slow=7.9,SNR=5.3							
TXAR				LR		LR	12 02 34.4	
	comp=Z,148nm,20.8s,baz=135,slow=36							
	comp=Z,0.5nm,0.7s							
ABTX	**Abilene, Hawle**	**57.38**	**330**			**P**	**11 38 36.7**	**0.0**
ABTX				IAmb		IAmb	11 38 37.8	
	comp=Z,12nm,1.1s							
ALPN	**Alpine**	**57.61**	**325**			**P**	**11 38 38.7**	**+0.2**
ALPN				IAmb		IAmb	11 38 39.7	
	comp=Z,9.2nm,1.4s							
APMT	**Aspermont**	**58.18**	**330**	P		**P**	**11 38 42.3**	**-0.1**
APMT				IAmb		IAmb	11 38 49.4	
	comp=Z,7.3nm,1.1s							
RLO	**Rose Lookout**	**58.41**	**336**	P		**P**	**11 38 43.4**	**-0.4**
TUL3	**Leonard**	**58.48**	**335**	P		**P**	**11 38 43.8**	**-0.5**
DEOK	**Depew**	**58.71**	**335**	P		**P**	**11 38 45.1**	**-0.8**
CCM	**Cathedral Cave**	**58.77**	**340**	P		**P**	**11 38 45.2**	**-1.1**
OK052	**Battle Ridge R**	**58.97**	**335**	P		**P**	**11 38 47.4**	**-0.3**
TPB28		**59.08**	**326**	P		**P**	**11 38 48.7**	**0.0**
TPB28				IAmb		IAmb	11 38 49.9	
	comp=Z,5.0nm,1.3s							
MNTX	**Cornudas Mount**	**59.58**	**325**	P		**P**	**11 38 52.0**	**-0.1**
SADO	**Sadowa**	**62.52**	**353**	LR		LR	12 08 50.3	
	comp=Z,183nm,19.4s,baz=181,slow=39							
ANMO	**Albuquerque**	**62.64**	**327**	LR		LR	12 08 24.1	
	comp=Z,85nm,22.0s,baz=131,slow=38							
ANMO	**Albuquerque**	**62.64**	**327**	P		**P**	**11 39 13.4**	**+0.4**
TASM	**ASL Pad, Albuq**	**62.64**	**327**	P		**P**	**11 39 12.6**	**-0.5**
TASM				IAmb		IAmb	11 39 16.7	
	comp=Z,4.5nm,1.4s							
SDCO	**Great Sand Dun**	**64.33**	**329**	P		**P**	**11 39 24.1**	**-0.2**
SDCO				IAmb		IAmb	11 39 26.1	
	comp=Z,11nm,1.4s							
X16A	**Lo Mia Camp, P**	**65.00**	**323**	P		**P**	**11 39 29.2**	**+0.6**
X16A				IAmb		IAmb	11 39 40.7	
	comp=Z,4.1nm,1.2s							
MVCO	**Mesa Verde**	**65.43**	**327**	P		**P**	**11 39 32.0**	**+0.6**
ECSD	**EROS Data Cent**	**65.65**	**339**	P		**P**	**11 39 32.1**	**-0.3**
ISCO	**Idaho Springs**	**66.00**	**331**	P		**P**	**11 39 35.5**	**+0.4**
SNAA	**Sanae**	**66.37**	**161**	P		**P**	**11 39 40.6**	**+3.8**
	comp=Z,2.4nm,0.9s,baz=268,slow=6.3,SNR=4.1							
SNAA				LR		LR	12 08 17.6	
	comp=Z,110nm,20.0s,baz=12,slow=36							
	comp=Z,2.4nm,0.9s							
SNAA	**Sanae**	**66.37**	**161**	P		**P**	**11 39 37.2**	**+0.4**
SNAA				IAmb		IAmb	11 39 44.1	
	comp=Z,8.2nm,1.3s							
PFO	**Pinyon Flats O**	**67.47**	**319**	LR		LR	12 08 41.0	
	comp=Z,120nm,21.0s,baz=120,slow=36							
DBIC	**Dimbokro**	**68.56**	**75**	LR		LR	12 08 02.3	
	comp=Z,799nm,20.1s,baz=256,slow=34							
RSSD	**Black Hills**	**68.79**	**334**	P		**P**	**11 39 53.6**	**+1.0**
PSUT	**Pine Spring**	**69.29**	**324**			**P**	**11 39 55.8**	**0.0**
PSUT				IAmb		IAmb	11 40 02.9	
	comp=Z,3.1nm,0.9s							
AGMN	**Agassiz Nation**	**69.46**	**342**	P		**P**	**11 39 55.9**	**-0.5**
EPLO	**Experimental L**	**70.11**	**344**			**P**	**11 39 59.9**	**-0.5**
EPLO				IAmb		IAmb	11 40 04.8	
	comp=Z,12nm,1.4s							
PDAR	**Pinedale Array**	**70.18**	**330**	P		**P**	**11 40 00.9**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=148,slow=4.2,SNR=9.0							
PDAR				LR		LR	12 14 03.5	
	comp=Z,85nm,21.9s,baz=128,slow=39							
	comp=Z,0.5nm,0.6s							
ULM	**Lac du Bonnet**	**71.22**	**343**	P		**P**	**11 40 06.4**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=139,slow=6.7,SNR=4.4							
ULM				LR		LR	12 14 22.8	
	comp=Z,92nm,18.1s,baz=150,slow=38							
	comp=Z,3.5nm,0.8s							
NVAR	**Mina Array Bea**	**71.77**	**322**	P		**P**	**11 40 11.7**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=127,slow=5.9,SNR=5.5							
NVAR				LR		LR	12 12 23.2	
	comp=Z,105nm,19.4s,baz=150,slow=37							
	comp=Z,1.0nm,0.8s							
SCHQ	**Schefferville**	**72.06**	**2**	LR		LR	12 12 00.5	
	comp=Z,96nm,21.9s,baz=192,slow=36							
QSPA	**South Pole Qui**	**72.69**	**180**	P		**P**	**11 40 18.1**	**+2.0**
	comp=Z,1.3nm,0.7s,baz=166,slow=2.4,SNR=7.7							
QSPA				LR		LR	12 16 06.2	
	comp=Z,210nm,19.4s,baz=182,slow=39							
	comp=Z,1.3nm,0.7s							
QSPA	**South Pole Qui**	**72.69**	**180**	P		**P**	**11 40 17.1**	**+1.1**
QSPA				IAmb		IAmb	11 40 24.0	
	comp=Z,6.1nm,1.1s							
HLID	**Hailey**	**73.16**	**328**	P		**P**	**11 40 20.3**	**+1.2**
ORV	**Oroville**	**74.40**	**321**			**P**	**11 40 27.1**	**+0.9**
LYMT	**Lyon Mountain**	**74.62**	**331**	P		**P**	**11 40 28.2**	**+0.5**
YBH	**Yreka Blue Hor**	**76.48**	**322**	LR		LR	12 15 09.2	
	comp=Z,68nm,19.3s,baz=132,slow=36							
TORD	**Torodi Ar. Bea**	**76.93**	**72**	P		**P**	**11 40 40.7**	**-0.6**
	comp=Z,5.2nm,1.0s,baz=257,slow=5.2,SNR=10							
	comp=Z,5.2nm,1.0s							
TORD	**Torodi Ar. Bea**	**76.93**	**72**	P		**P**	**11 40 40.2**	**-1.0**
NEW	**Newport**	**77.82**	**330**	LR		LR	12 19 41.1	
	comp=Z,116nm,19.8s,baz=138,slow=39							
MDT	**Midelt**	**79.92**	**51**	LR		LR	12 14 57.1	
	comp=Z,162nm,20.6s,baz=238,slow=35							
VNDA	**Vanda**	**80.63**	**190**	LR		LR	12 13 31.3	
	comp=Z,62nm,18.0s,baz=160,slow=33							
FRB	**Frobisher Bay**	**80.97**	**1**	LR		LR	12 19 42.2	
	comp=Z,112nm,19.5s,baz=154,slow=38							
SUR	**Sutherland**	**81.43**	**121**	LR		LR	12 14 33.7	
	comp=Z,438nm,19.0s,baz=256,slow=34							
TSUM	**Tsumeb**	**82.11**	**108**	LR		LR	12 14 30.4	
	comp=Z,342nm,21.7s,baz=330,slow=33							
ESDC	**Sonseca Array**	**83.65**	**45**	P		**P**	**11 41 17.1**	**+0.1**
	comp=Z,1.3nm,1.1s,baz=255,slow=5.8,SNR=4.1							
ESDC				LR		LR	12 16 28.9	
	comp=Z,153nm,20.5s,baz=237,slow=34							
	comp=Z,1.3nm,1.1s							
RAR	**Rarotonga**	**83.72**	**250**	LR		LR	12 10 03.5	
	comp=Z,96nm,21.2s,baz=112,slow=30							
BBB	**Bella Bella**	**85.74**	**328**	LR		LR	12 22 48.3	
	comp=Z,96nm,19.8s,baz=120,slow=38							
BOSA	**Boshof**	**86.17**	**119**	LR		LR	12 18 08.0	
	comp=Z,285nm,18.1s,baz=216,slow=34							
YKA	**Yellowknife Ar**	**87.10**	**341**	P		**P**	**11 41 32.6**	**-1.0**
	comp=Z,3.7nm,1.1s,baz=136,slow=4.8,SNR=25							
YKA				LR		LR	12 22 55.5	
	comp=Z,130nm,20.4s,baz=118,slow=37							
	comp=Z,3.7nm,1.1s							
MAW	**Mawson**	**88.43**	**164**	LR		LR	12 20 35.7	
	comp=Z,169nm,21.0s,baz=245,slow=35							
BORG	**Borgarnes**	**89.93**	**19**	LR		LR	12 18 37.7	
	comp=Z,52nm,19.9s,baz=237,slow=33							
DLBC	**Dease Lake**	**90.22**	**333**	LR		LR	12 26 12.4	
	comp=Z,76nm,20.7s,baz=96,slow=38							
MATP	**Matopo**	**91.56**	**112**	LR		LR	12 21 57.0	
	comp=Z,492nm,18.1s,baz=282,slow=35							
KEST	**Kesra**	**91.64**	**53**	LR		LR	12 23 38.0	
	comp=Z,170nm,19.5s,baz=278,slow=36							
EKA	**Eskdalemuir Ar**	**91.69**	**32**	LR		LR	12 19 59.6	
	comp=Z,127nm,18.4s,baz=198,slow=34							
LSZ	**Lusaka**	**92.95**	**107**	LR		LR	12 21 51.3	
	comp=Z,709nm,20.1s,baz=270,slow=34							
RES	**Resolute Bay**	**93.32**	**354**	LR		LR	12 25 41.4	
	comp=Z,174nm,22.0s,baz=162,slow=37							
DAVOX	**Davos/Dischmat**	**95.76**	**43**	LR		LR	12 24 27.2	
	comp=Z,271nm,19.0s,baz=259,slow=35							
VAE	**Valguarnera**	**96.06**	**53**	LR		LR	12 27 07.4	
	comp=Z,200nm,19.3s,baz=264,slow=36							
URZ	**Urewera**	**96.28**	**227**	LR		LR	12 15 30.9	
	comp=Z,70nm,20.9s,baz=161,slow=29							
INK	**Inuvik**	**96.86**	**340**	LR		LR	12 28 39.6	
	comp=Z,127nm,21.8s,baz=89,slow=37							
RPZ	**Rata Peaks**	**97.50**	**220**	LR		LR	12 16 18.4	
	comp=Z,36nm,21.6s,baz=237,slow=29							
MBAR	**Mbarara

SMLA					IAML		11 46 52.3	
	comp=E,58nm,0.1s							
SMLA					IAML		11 46 53.0	
	comp=N,37nm,0.1s							
AAK	**Ala-Archa**	**7.00**	**19**	⇑P		**Pn**	**11 45 34.5**	**+2.1**
AAK				⇑S		**Sn**	**11 46 50.8**	**-1.2**
	comp=N,3.8nm,0.8s							
KK31	**Karatay Array**	**7.07**	**355**	⇓P		**Pn**	**11 45 33.2**	**+0.1**
	comp=N,1.1nm,0.2s,baz=175,slow=12,SNR=32							
KK31				⇓S		**Sn**	**11 46 49.8**	**-3.6**
	comp=N,6.7nm,0.5s,baz=186,slow=23,SNR=8.0							
KLP	**Kalpa**	**7.29**	**126**	*eP*		**Pn**	**11 45 38.2**	**+1.7**
KLP				*eS*		**Sn**	**11 46 56.2**	**-3.1**
KLP					IAML		11 47 04.6	
	comp=N,62nm,0.2s							
KLP					IAML		11 47 04.9	
	comp=E,56nm,0.8s							
KUDL	**Kundal**	**9.01**	**150**	*eS*		**Sn**	**11 47 34.1**	**-5.3**
AB31	**Akbulak array**	**15.61**	**331**	P		**P**	**11 47 24.9**	**+3.4**
	comp=E,0.5nm,0.3s,baz=141,slow=13,SNR=29							
AB31				⇓S		**S**	**11 50 11.3**	**-3.3**
	comp=E,1.2nm,0.6s,baz=150,slow=24,SNR=3.9							

*AEIC **26** 11:44:52.7±1.8,64°.67N±0°.02×149°.75W±0°.04,h20km±7km, Error ellipse: s-maj=2.7km s-min=2.5km az=92.0*

NEIC 26 11:44:53.0±1.6,64°.66N±0°.02×149°.74W±0°.04,h28km±8km, ML3.7/160,**ML3.5**(AEIC),**Error ellipse: s-maj=2.8km s-min=2.3km az=169.0,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEA2	**Nenana**	**0.30**	**102**		Pb	11 44 59.5	-0.8
NEA2				IAML		11 45 03.9	
	comp=E,6μm,0.5s						
NEA2				IAML		11 45 03.9	
	comp=N,7μm,0.7s						
BWN	**Browne**	**0.50**	**166**		Pb	11 45 02.9	-0.5
BWN				IAML		11 45 12.1	
	comp=E,3μm,0.2s						
BWN	**Browne**	**0.50**	**166**		Sb	11 45 10.8	+0.4
I23K	**Minto, Yukon-K**	**0.52**	**18**		Pb	11 45 03.7	0.0
I23K				IAML		11 45 11.8	
	comp=N,6μm,0.7s						
I23K	**Minto, Yukon-K**	**0.52**	**18**		Sb	11 45 10.8	-0.2
MLY	**Manley**	**0.57**	**312**		Pb	11 45 04.2	-0.3
MLY				IAML		11 45 14.5	
	comp=E,3μm,0.4s						
MLY	**Manley**	**0.57**	**312**		Sb	11 45 11.8	-0.6
MDM	**Murphy Dome**	**0.71**	**64**		Pb	11 45 06.5	-0.4
MDM					Pn	11 45 06.7	-0.6
MDM					Sn	11 45 16.3	-1.1
MDM					Sb	11 45 16.0	-0.4
WRH	**Wood River Hil**	**0.74**	**104**		Pb	11 45 06.9	-0.4
WRH				IAML		11 45 18.3	
	comp=N,2μm,0.4s						
WRH	**Wood River Hil**	**0.74**	**104**		Sb	11 45 16.5	-0.5
WRH	**Wood River Hil**	**0.74**	**104**		Sb	11 45 17.2	+0.2
CCB	**Clear Creek Bu**	**0.83**	**90**		Pn	11 45 08.4	-0.5
CCB				IAML		11 45 20.1	
	comp=N,2μm,0.4s						
CCB	**Clear Creek Bu**	**0.83**	**90**		Sb	11 45 19.4	-0.4
CCB					Sn	11 45 19.8	-0.4
COLA	**College**	**0.84**	**74**		Pn	11 45 08.4	-0.5
COLA	**College**	**0.84**	**74**		Sb	11 45 20.1	+0.2
PS07	**TAPS Pump Stn7**	**0.91**	**43**		Pn	11 45 09.8	0.0
PS07					Sn	11 45 22.2	+0.3
MCK	**McKinley**	**0.99**	**159**		Pn	11 45 11.2	+0.1
MCK				IAML		11 45 24.3	
	comp=E,3μm,0.5s						
MCK				IAML		11 45 24.8	
	comp=N,2μm,0.5s						
MCK	**McKinley**	**0.99**	**159**		Sn	11 45 24.1	0.0
POKR	**Poker Plat Res**	**1.09**	**64**		Pn	11 45 12.1	-0.3
POKR					Sb	11 45 27.3	+0.3
I21K	**Tanana**	**1.09**	**300**		Pn	11 45 12.7	+0.3
I21K				IAML		11 45 29.3	
	comp=N,2μm,0.7s						
I21K	**Tanana**	**1.09**	**300**		Sb	11 45 27.6	+0.5
H23K	**Yukon River**	**1.18**	**4**		Pn	11 45 13.7	+0.1
H23K					Pb	11 45 14.0	-0.7
H23K					Sb	11 45 30.0	+0.5
PS06	**TAPS Pump Stn6**	**1.20**	**0**		Pn	11 45 14.2	+0.3
KTH	**Kantishna Hill**	**1.22**	**206**		Pn	11 45 13.8	-0.5
KTH				IAML		11 45 32.5	
	comp=E,1μm,0.5s						
KTH				IAML		11 45 33.3	
	comp=N,2μm,0.3s						
KTH	**Kantishna Hill**	**1.22**	**206**		Sn	11 45 30.2	+0.3
IL31		**1.23**	**83**		Pn	11 45 13.5	-0.8
IL31		**1.23**	**83**		Sb	11 45 30.9	-0.1
ILAR	**Eielson Array**	**1.23**	**83**		Pn	11 45 13.6	-0.8
HDA	**Harding Lake**	**1.23**	**100**		Pn	11 45 14.2	-0.2
HDA				IAML		11 45 32.4	
	comp=N,1μm,0.4s						
HDA				IAML		11 45 32.9	
	comp=E,2μm,0.3s						
IL04	**Eielson Array**	**1.23**	**84**		Sb	11 45 31.5	+0.3
TRF	**Thorofare Moun**	**1.23**	**191**		Pn	11 45 14.3	-0.2
TRF				IAML		11 45 32.5	
	comp=N,938nm,0.6s						
TRF				IAML		11 45 34.5	
	comp=E,1μm,1.3s						
TRF	**Thorofare Moun**	**1.23**	**191**		Sb	11 45 31.0	-0.4
PS08	**TAPS Pump Stn8**	**1.27**	**94**		Pn	11 45 14.1	-0.7
RND	**Reindeer**	**1.31**	**162**		Pn	11 45 15.6	0.0
RND	**Reindeer**	**1.31**	**162**		Sb	11 45 33.4	-0.1
CHUM	**Lake Minchumin**	**1.36**	**236**		Pn	11 45 16.1	-0.1
CHUM					Pb	11 45 16.2	-1.7
H22K	**Ishtalitna Cre**	**1.42**	**332**		Pn	11 45 17.2	+0.2
H22K				IAML		11 45 39.9	
	comp=E,739nm,0.5s						
H24K	**Noodor Dome**	**1.42**	**33**		Pn	11 45 16.6	-0.4
H24K				IAML		11 45 39.5	
	comp=E,1μm,0.5s						
H24K				IAML		11 45 40.1	
	comp=N,713nm,0.6s						
CAST	**Castle Rocks**	**1.61**	**221**		Pn	11 45 18.9	-0.7
CAST				IAML		11 45 44.5	
	comp=E,1μm,0.7s						
H21K	**Melozitna Rive**	**1.64**	**309**		Pn	11 45 19.9	0.0
WAT7	**Susitna Watana**	**1.87**	**167**		Pn	11 45 24.1	+0.9
J25K	**Salcha River,**	**1.88**	**89**		Pn	11 45 22.5	-0.9
J25K				IAML		11 45 54.0	
	comp=N,462nm,0.5s						
DHY	**Denali Highway**	**1.90**	**146**		Pn	11 45 24.5	+0.8
DHY				IAML		11 45 52.1	
	comp=E,622nm,0.6s						
DHY				IAML		11 45 52.5	
	comp=N,670nm,0.8s						
WAT1	**Susitna Watana**	**1.91**	**163**		Pn	11 45 24.4	+0.7
K24K	**Donnelly Dome**	**1.93**	**115**		Pn	11 45 23.6	-0.4
J20K	**Nowinta River**	**1.97**	**258**		Pn	11 45 24.3	-0.2
PRP	**Porcupine Dome**	**1.98**	**62**		Pn	11 45 24.2	-0.6
I20K	**Naaghedeneel**	**2.04**	**276**		Pn	11 45 25.1	-0.3
G23K	**Bananza Creek**	**2.07**	**357**		Pn	11 45 25.9	0.0
PPLA	**Purkeypile**	**2.08**	**213**		Pn	11 45 25.5	-0.5
PPLA				IAML		11 46 02.9	
	comp=E,750nm,0.9s						
PPLA				IAML		11 46 07.5	
	comp=N,574nm,0.7s						
PS10	**TAPS Pump St10**	**2.14**	**123**		Pn	11 45 27.4	+0.5
IM01	**Indian Mountai**	**2.15**	**311**		Pn	11 45 27.1	+0.2
IMAR	**Indian Mountai**	**2.15**	**310**		Pn	11 45 27.8	+0.9
L22K	**Petersville**	**2.19**	**193**		Pn	11 45 28.7	+1.2
L22K				IAML		11 46 01.1	
	comp=N,500nm,0.3s						
PS05	**TAPS Pump Stn5**	**2.20**	**350**		Pn	11 45 28.9	+1.3
G24K	**Hadweenzic Riv**	**2.26**	**24**		Pn	11 45 28.6	+0.2
G24K				IAML		11 46 09.3	
	comp=N,306nm,1.0s						
G24K				IAML		11 46 09.5	
	comp=E,334nm,0.7s						
WAT6	**Susitna Watana**	**2.27**	**156**		Pn	11 45 29.2	+0.5
CUT	**Chulitna**	**2.27**	**186**		Pn	11 45 28.6	0.0
CUT	**Chulitna**	**2.27**	**186**	IAML		11 46 08.9	
	comp=E,584nm,0.9s						
K20K	**Telida**	**2.31**	**238**		Pn	11 45 28.8	-0.4
RIDG	**Independent Ri**	**2.33**	**111**		Pn	11 45 29.2	-0.3
RIDG				IAML		11 46 11.3	
	comp=E,476nm,0.7s						
RIDG				IAML		11 46 14.4	
	comp=N,399nm,0.6s						
H20K	**Anotleneega Mo**	**2.33**	**293**		Pn	11 45 29.4	-0.1
G21K	**Allakaket**	**2.44**	**322**		Pn	11 45 31.5	+0.6
G21K	**Allakaket**	**2.44**	**322**	IAML		11 46 08.7	
	comp=E,540nm,0.5s						
G21K				IAML		11 46 15.5	
	comp=N,484nm,0.7s						
PAX	**Paxson**	**2.54**	**130**		Pn	11 45 32.9	+0.4
PAX				IAML		11 46 14.1	
	comp=E,277nm,0.9s						
PAX				IAML		11 46 14.2	
	comp=N,306nm,0.7s						
COLD	**Coldfoot**	**2.59**	**356**		Pn	11 45 33.5	+0.5
G25K	**Bearman Lake**	**2.60**	**34**		Pn	11 45 33.2	+0.1
J19K	**Poorman**	**2.65**	**258**		Pn	11 45 33.2	-0.6
J19K				IAML		11 46 18.8	
	comp=E,325nm,0.4s						
J19K				IAML		11 46 24.1	
	comp=N,342nm,0.7s						
FYU	**Fort Yukon**	**2.68**	**42**		Pn	11 45 34.2	0.0
FYU	**Fort Yukon**	**2.68**	**42**	IAML		11 46 17.6	
	comp=E,371nm,0.7s						
SKT	**Skwentna**	**2.81**	**198**		Pn	11 45 36.9	+0.9
SKT				IAML		11 46 29.7	
	comp=E,239nm,1.1s						
I26K	**Coal Creek Min**	**2.88**	**74**		Pn	11 45 36.9	0.0
GHO	**Glory Hole Cre**	**2.92**	**172**		Pn	11 45 36.8	-0.8
M22K	**Willow**	**2.92**	**184**		Pn	11 45 38.2	+0.7
SML	**Sawmill**	**2.93**	**167**		Pn	11 45 38.3	+0.6
SML				IAML		11 46 28.9	
	comp=N,164nm,0.9s						
H19K	**Roundabout Mou**	**2.97**	**290**		Pn	11 45 38.1	-0.1
H19K				IAML		11 46 29.7	
	comp=N,225nm,0.7s						
H19K				IAML		11 46 37.5	
	comp=E,254nm,0.8s						
F24K	**Squaw Lake**	**2.97**	**14**		Pn	11 45 39.0	+0.7
F24K				IAML		11 46 26.5	
	comp=E,196nm,0.8s						
F21K	**Alatna River**	**3.00**	**331**		Pn	11 45 39.7	+1.1
F21K				IAML		11 46 26.8	
	comp=E,175nm,0.5s						
M23K	**Glacier View**	**3.02**	**161**		Pn	11 45 39.9	+1.0
M24K	**Tolsona, Glenn**	**3.02**	**146**		Pn	11 45 40.3	+1.3
M24K	**Tolsona, Glenn**	**3.02**	**146**	IAML		11 46 37.1	
	comp=E,264nm,1.0s						
M24K				IAML		11 46 41.2	
	comp=N,266nm,1.1s						
F22K	**John River**	**3.03**	**342**		Pn	11 45 40.6	+1.6
SCM	**Sheep Creek Mo**	**3.04**	**158**		Pn	11 45 41.1	+1.9
SCM	**Sheep Creek Mo**	**3.04**	**158**	IAML		11 46 29.9	
	comp=N,188nm,1.0s						
SCM				IAML		11 46 30.4	
	comp=E,242nm,1.0s						
HARP	**HAARP**	**3.06**	**136**		Pn	11 45 40.7	+1.3
GCSA	**Galena City Sc**	**3.07**	**275**		Pn	11 45 41.0	+1.5
PMR	**Palmer**	**3.09**	**175**		Pn	11 45 41.1	+1.2
M20K	**Styx River**	**3.18**	**210**		Pn	11 45 41.8	+0.6
M20K	**Styx River**	**3.18**	**210**	IAML		11 46 34.3	
	comp=N,178nm,0.4s						
M20K				IAML		11 46 38.0	
	comp=E,153nm,0.9s						
MENT	**Mentasta**	**3.18**	**120**		Pn	11 45 41.0	-0.2
L26K	**Log Cabin Wild**	**3.27**	**117**		Pn	11 45 41.8	-0.6
J18K	**Innoko River**	**3.29**	**252**		Pn	11 45 41.9	-0.7
J18K				IAML		11 46 38.9	
	comp=N,230nm,0.5s						
J18K				IAML		11 46 39.3	
	comp=E,195nm,0.5s						
STLK	**Strandline Lak**	**3.31**	**198**		Pn	11 45 43.8	+0.9
STLK				IAML		11 46 38.2	
	comp=E,115nm,0.7s						
G26K	**Porcupine Rive**	**3.36**	**44**		Pn	11 45 43.3	-0.3
G26K	**Porcupine Rive**	**3.36**	**44**	IAML		11 46 43.4	
	comp=N,260nm,0.9s						
L19K	**White Mountain**	**3.38**	**225**		Pn	11 45 44.0	0.0
L19K				IAML		11 46 40.7	
	comp=N,228nm,0.7s						
F25K	**Christian Five**	**3.39**	**28**		Pn	11 45 43.8	-0.2
F25K				IAML		11 46 40.9	
	comp=E,142nm,0.9s						
F25K				IAML		11 46 44.3	
	comp=N,128nm,0.7s						
K27K	**Chicken**	**3.39**	**97**		Pn	11 45 44.2	+0.2
K27K	**Chicken**	**3.39**	**97**	IAML		11 46 43.8	
	comp=N,137nm,0.8s						
G19K	**Purcell Mounta**	**3.42**	**299**		Pn	11 45 45.0	+0.7
G19K				IAML		11 46 42.6	
	comp=E,181nm,0.6s						
E23K	**Chandalar**	**3.42**	**1**		Pn	11 45 45.3	+0.9
F20K	**Avaraart Lake**	**3.44**	**317**		Pn	11 45 45.9	+1.3
F20K	**Avaraart Lake**	**3.44**	**317**	IAML		11 46 45.4	
	comp=E,103nm,0.7s						
M19K	**Big River Lodg**	**3.47**	**219**		Pn	11 45 44.7	-0.4
BM05	**Burnt Mountain**	**3.49**	**35**		Pn	11 45 45.4	0.0
SPCG	**Spurr Capps Gl**	**3.53**	**198**		Pn	11 45 47.4	+1.3
I27K	**Kandik River**	**3.56**	**71**		Pn	11 45 46.1	-0.3
SPNN	**North Nagishla**	**3.57**	**204**		Pn	11 45 48.0	+1.4
E22K	**Anaktuvuk Pass**	**3.59**	**348**		Pn	11 45 48.6	+1.8
H18K	**Honhosa River**	**3.71**	**282**		Pn	11 45 48.8	+0.5
H27K	**Steamboat Moun**	**3.78**	**62**		Pn	11 45 49.3	-0.1
H27K				IAML		11 46 54.7	
	comp=E,159nm,0.7s						
PS04	**TAPS Pump Stn4**	**3.79**	**2**		Pn	11 45 51.2	+1.7
F26K	**Sheenjek River**	**3.80**	**34**		Pn	11 45 49.9	+0.2
F26K				IAML		11 46 52.3	
	comp=N,111nm,0.5s						
F26K				IAML		11 46 53.7	
	comp=E,92nm,0.6s						
L27K	**Beaver Creek,**	**3.85**	**111**		Pn	11 45 49.6	-0.7
L27K	**Beaver Creek,**	**3.85**	**111**	IAML		11 46 55.5	
	comp=N,88nm,0.6s						
E25K	**Arctic Village**	**3.86**	**24**		Pn	11 45 50.5	-0.1
E25K				IAML		11 47 03.0	
	comp=E,74nm,1.2s						
BC04	**Beaver Creek A**	**3.87**	**111**		Pn	11 45 49.9	-0.7
BCAR	**Beaver Creek A**	**3.87**	**111**		Pn	11 45 49.6	-0.9
G18K	**Tagagawik**	**3.94**	**292**		Pn	11 45 52.0	+0.4
L18K	**Granite Mounta**	**3.96**	**235**		Pn	11 45 51.4	-0.5
F19K	**Shaleruckik Mo**	**3.97**	**307**		Pn	11 45 53.0	+1.1
F19K				IAML		11 46 58.5	
	comp=E,138nm,0.7s						
F19K				IAML		11 46 59.6	
	comp=N,83nm,0.7s						
G27K	**Doyon Strip**	**3.98**	**53**		Pn	11 45 52.2	+0.1
G27K				IAML		11 47 02.8	
	comp=N,70nm,1.1s						
GLI	**Glacier Island**	**3.98**	**161**		Pn	11 45 51.8	-0.3
TOLK	**Toolik Lake Re**	**4.00**	**1**		Pn	11 45 54.6	+2.1
E19K	**Redstone River**	**4.15**	**316**		Pn	11 45 56.4	+2.0
E19K	**Redstone River**	**4.15**	**316**	IAML		11 47 05.8	
	comp=E,95nm,1.2s						
E19K				IAML		11 47 12.1	
	comp=N,102nm,0.9s						
E21K	**Killik River**	**4.16**	**338**		Pn	11 45 56.2	+1.6
E21K	**Killik River**	**4.16**	**338**	IAML		11 47 05.9	
	comp=E,88nm,0.9s						
E21K				IAML		11 47 07.2	
	comp=N,69nm,0.7s						
M18K	**Stony River**	**4.21**	**224**		Pn	11 45 54.7	-0.6
M27K	**Edge Creek, AK**	**4.21**	**120**		Pn	11 45 55.0	-0.4
I28M	**Miner Creek**	**4.23**	**75**		Pn	11 45 55.2	-0.4
I28M				IAML		11 47 14.9	
	comp=E,123nm,0.6s						
K17K	**Iditarod**	**4.28**	**247**		Pn	11 45 55.5	-0.7
K17K				IAML		11 47 12.4	
	comp=E,111nm,1.2s						
D23K	**Nanushuk River**	**4.34**	**356**		Pn	11 45 59.4	+2.3
H17K	**Granite Mounta**	**4.36**	**278**		Pn	11 45 58.0	+0.7
H17K				IAML		11 46 50.0	
	comp=E,107nm,0.6s						
H17K				IAML		11 47 14.8	
	comp=N,61nm,0.8s						
N19K	**Bonanza Creek**	**4.43**	**212**		Pn	11 45 58.1	-0.2
E20K	**Nigu River**	**4.44**	**327**		Pn	11 46 00.3	+1.8
D24K	**Happy Valley**	**4.53**	**4**		Pn	11 46 01.6	+2.0
D24K	**Happy Valley**	**4.53**	**4**	IAML		11 47 19.6	
	comp=N,61nm,0.7s						
D24K				IAML		11 47 26.8	
	comp=E,60nm,1.0s						
DAWY	**Dawson**	**4.54**	**93**		Pn	11 45 59.7	-0.1
F18K	**Selawik**	**4.54**	**300**		Pn	11 46 00.6	+0.8
BVCY	**Beaver Creek**	**4.57**	**115**		Pn	11 45 59.9	-0.3
L17K	**Donlin**	**4.60**	**241**		Pn	11 45 59.8	-0.9
G17K	**Kiwalik Mounta**	**4.69**	**285**		Pn	11 46 02.4	+0.5
M17K	**Holitna River**	**4.79**	**231**		Pn	11 46 02.7	-0.5
E27K	**Coleen River**	**4.82**	**39**		Pn	11 46 03.3	-0.3
E27K				IAML		11 47 34.2	
	comp=E,39nm,1.2s						
I17K	**Unalakleet**	**4.84**	**266**		Pn	11 46 03.6	-0.2
D25K	**Kavik River**	**4.87**	**14**		Pn	11 46 05.9	+1.6
D25K				IAML		11 47 38.9	
	comp=E,44nm,1.4s						
N18K	**Kilae Creek**	**4.89**	**218**		Pn	11 46 04.5	-0.1
D20K	**Etivluk River**	**4.90**	**329**		Pn	11 46 06.4	+1.7
C21K	**Knifeblade Rid**	**4.94**	**339**		Pn	11 46 06.9	+1.7
J16K	**Anvik River**	**4.98**	**259**		Pn	11 46 05.0	-0.7
F28M	**Old Crow**	**4.99**	**49**		Pn	11 46 05.3	-0.6
H29M	**Whitestone**	**5.00**	**67**		Pn	11 46 06.0	-0.1
D19K	**Kuna River**	**5.10**	**323**		Pn	11 46 08.9	+1.5
F17K	**Baldwin Pennin**	**5.11**	**296**		Pn	11 46 08.7	+1.3
C23K	**Itkillik River**	**5.21**	**357**		Pn	11 46 10.2	+1.2
E18K	**Tukpahlearik C**	**5.22**	**307**		Pn	11 46 11.1	+2.0
L16K	**Owhat River**	**5.30**	**241**		Pn	11 46 09.4	-0.9
G29M	**Pine Creek**	**5.33**	**60**		Pn	11 46 10.8	+0.2
B21K	**Ikpikpuk River**	**5.33**	**341**		Pn	11 46 11.5	+0.9
L29M	**L29M**	**5.36**	**102**		Pn	11 46 11.4	+0.3
H16K	**Elim**	**5.37**	**275**		Pn	11 46 12.0	+0.8
K29M	**Barlow Dome**	**5.39**	**93**		Pn	11 46 12.7	+1.1
G16K	**Koyuk River**	**5.40**	**284**		Pn	11 46 11.8	+0.3
O18K	**Koktuh Hills**	**5.45**	**210**		Pn	11 46 13.0	+0.7
M29M	**Somme Creek**	**5.51**	**109**		Pn	11 46 13.3	+0.1
C27K	**Jago River**	**5.51**	**23**		Pn	11 46 14.6	+1.4
E17K	**Hotham Inlet**	**5.52**	**302**		Pn	11 46 14.5	+1.3
M16K	**Timber Creek**	**5.58**	**233**		Pn	11 46 13.3	-0.7
C26K	**Camden Bay**	**5.61**	**17**		Pn	11 46 15.9	+1.6
E28M	**Babbage River**	**5.67**	**41**		Pn	11 46 14.5	-0.8
I30M	**Mount Dempster**	**5.71**	**78**		Pn	11 46 15.4	-0.5
D27M	**Malcolm River**	**5.75**	**33**		Pn	11 46 17.0	+0.6
J30M	**Hart River**	**5.77**	**85**		Pn	11 46 16.5	-0.3
K15K	**Wolf Creek Mou**	**5.79**	**251**		Pn	11 46 16.4	-0.6
P18K	**Big Mountain,**	**5.88**	**209**		Pn	11 46 18.0	-0.2
N16K	**Nishlik Lake**	**5.92**	**229**		Pn	11 46 18.6	-0.1
G30M	**tAoh Zraii Nji**	**6.02**	**61**		Pn	11 46 19.3	-0.8
E29M	**Blow River**	**6.03**	**46**		Pn	11 46 19.7	-0.5
B20K	**Meade River**	**6.09**	**335**		Pn	11 46 21.6	+0.6
L15K	**Ungalak Mounta**	**6.10**	**246**		Pn	11 46 20.4	-0.7
G15K	**Niukluk**	**6.11**	**280**		Pn	11 46 21.2	-0.1
F15K	**North Star Dit**	**6.36**	**286**		Pn	11 46 25.7	+0.9
M15K	**Kasigluk River**	**6.41**	**237**		Pn	11 46 24.8	-0.7
J14K	**Nanvaranak Lak**	**6.43**	**259**		Pn	11 46 25.2	-0.4
H31M	**Peel River**	**6.57**	**73**		Pn	11 46 27.1	-0.6
N30M	**Aishikik Lake**	**6.58**	**113**		Pn	11 46 27.7	-0.2
N15K	**Kwethluk River**	**6.58**	**232**		Pn	11 46 27.3	-0.5
ANM	**Nome**	**6.72**	**276**		Pn	11 46 30.4	+0.7
L14K	**Kuka Creek**	**6.76**	**246**		Pn	11 46 30.7	+0.5
F14K	**Arctic Creek**	**7.06**	**284**		Pn	11 46 35.1	+0.8

*IDC **26** 11:54:20.3±15.0,23°.11S×27°.25E,h0km, Error ellipse: s-maj=108.8km s-min=86.9km az=106.0*

BGSI 26 11:54:46.2±1.1,22°.54S×25°.36E,h8km±15km,ML1.7, Presumed earthquake,Botswana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHWEE	**KHWEE**	**0.60**	**8**	*i* P	Pg	11 54 57.1	-0.6
LPHEP	**Lephephe**	**0.94**	**151**	*i* P	Pg	11 55 03.1	-1.2
LPHEP				IAML		11 55 35.6	
	comp=E,23nm,0.5s						
SOOWA	**Sowa**	**2.12**	**22**	*i* P	Pn	11 55 20.4	-1.7
BROLN	**TIhalogang**	**2.33**	**52**	*i* P	Pn	11 55 22.2	-2.7
BROLN				*i* S	Sn	11 55 50.8	-3.1
BROLN				IAML		11 56 06.0	
	comp=E,9.4nm,0.4s						
BOSA	**Boshof**	**6.05**	**181**	Pg	Pn	11 56 04.8	-11
	comp=E,0.1nm,0.3s,baz=13,slow=18,SNR=1.4						
BOSA				Sn	Sn	11 56 54.1	-31
	comp=E,0.1nm,0.3s,baz=299,slow=12,SNR=2.1						
BOSA				Lg	Lg	11 57 25.3	
	comp=E,0.9nm,0.3s,baz=107,slow=20,SNR=4.5						
I47ZA	**BOSHOF INFRASO**	**6.06**	**181**	I	I	12 27 20.0	
	baz=17,slow=336,SNR=1.3						
I35NA	**TSUMEB INFRASO**	**8.00**	**293**	I	I	12 57 40.0	
	baz=118,slow=309,SNR=5.3						

*IDC **26** 11:58:18.6±1.2,31°.81S×67°.85W,h129km±15km,mb3.6/2, mbtmp4.0/2,Error ellipse: s-maj=79.3km s-min=26.2km az=101.0*

*SJA **26** 11:58:18.2±0.7,31°.80S×67°.48W,h121km±2km,ML3.7, MW3.7*

ISC 26 11:58:17.8±0.8,31°.80S±0°.03×67°.36W±0°.03,h123km±6km, n44,σ1s63/76,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	**Cantantal**	**0.49**	**163**	*eP*	**Pn**	**11 58 37.9**	**+1.8**
ACAN				*i* S	**Sn**	**11 58 51.4**	**+1.4**
ACAN				IAML		11 58 51.4	
	comp=Z,18μm,0.2s						
CFA	**Coronel Fontan**	**0.77**	**285**	P	**Pn**	**11 58 37.5**	**-0.6**
	comp=Z,589nm,0.4s,baz=125,slow=4.5,SNR=4893						
CFA				S	**Sn**	**11 58 52.2**	**-1.2**
	comp=Z,648nm,0.2s,baz=209,slow=22,SNR=86						
CFA	**Coronel Fontan**	**0.77**	**285**	*eP*	**Pn**	**11 58 38.2**	**+0.1**
CFA				*eS*	**Sn**	**11 58 52.6**	**-0.8**
CFA				IAML		11 58 53.1	
	comp=Z,1μm,0.3s						
SJA	**San Juan**	**1.06**	**285**	*eP*	**Pn**	**11 58 41.0**	**+0.3**
SJA				*eS*	**Sn**	**11 58 58.3**	**+0.2**
SJA				IAML		11 58 59.3	
	comp=Z,769nm,0.2s						
RTLL	**Cerro Villicun**	**1.06**	**296**	*eP*	**Pn**	**11 58 40.9

VA03				*e*S	Sn	11 59 27.9	-9.1
VA03				*e*S		11 59 28.4	
VA03				IAML		11 59 41.6	
	comp=Z,275nm,0.6s						
CO01	**Juntas del Tor**	**2.97**	**307**	*e*P	**Pn**	**11 59 05.1**	**+1.0**
CO01				*e*S	**Sn**	**11 59 40.3**	**+0.6**
CO01				IAML		11 59 40.9	
	comp=Z,167nm,0.8s						
CO03	**El Pedregal**	**3.01**	**288**	*e*P	**Pn**	**11 59 05.0**	**+0.7**
CO03				*e*S	**Sn**	**11 59 40.5**	**+0.2**
CO03				IAML		11 59 41.4	
	comp=Z,804nm,0.7s						
PEL	**Peldehue**	**3.11**	**244**	*e*P	**Pn**	**11 59 05.9**	**+0.2**
PEL				*e*S	**Sn**	**11 59 43.4**	**+0.7**
PEL				IAML		11 59 49.8	
	comp=Z,96nm,0.3s						
MT13	**San Alfonso**	**3.13**	**231**	*e*P	**Pn**	**11 59 06.6**	**+0.6**
MT13				*e*S	**Sn**	**11 59 41.7**	**-1.6**
MT13				IAML		11 59 47.2	
	comp=Z,72nm,0.5s						
VCA	**Vinchina**	**3.14**	**346**	*e*P	**Pn**	**11 59 07.5**	**+1.2**
VCA				*e*S	Sn	11 59 33.9	-10
VCA				IAML		11 59 50.2	
	comp=Z,283nm,0.6s						
CO02	**Combarbal**	**3.17**	**280**	*e*P	**Pn**	**11 59 06.5**	**0.0**
CO02				*e*S	**Sn**	**11 59 44.7**	**+0.7**
CO02				IAML		11 59 45.6	
	comp=Z,457nm,0.2s						
MT05	**Renca**	**3.26**	**240**	*e*P	**Pn**	**11 59 07.9**	**+0.2**
MT05				*e*S	**Sn**	**11 59 47.8**	**+1.6**
MT05				IAML		11 59 52.2	
	comp=Z,209nm,0.2s						
GO04	**Tololo Observa**	**3.37**	**298**	*e*P	**Pn**	**11 59 09.5**	**+0.1**
GO04				*e*S	**Sn**	**11 59 49.3**	**+0.2**
GO04				IAML		11 59 56.2	
	comp=Z,323nm,0.8s						
MT02	**Curacav**	**3.51**	**245**	*e*P	**Pn**	**11 59 09.6**	**-1.3**
MT02				*e*S	Sn	11 59 38.2	-14
MT02				IAML		11 59 52.3	
	comp=Z,84nm,0.4s						
VA01	**Torpederas**	**3.83**	**250**	*e*P	**Pn**	**11 59 13.2**	**-1.8**
VA01				*e*S	**Sn**	**11 59 56.2**	**-3.2**
VA01				IAML		12 00 02.9	
	comp=Z,48nm,0.2s						
MT01	**Popeta**	**3.87**	**237**	*e*P	**Pn**	**11 59 13.9**	**-1.7**
MT01				*e*S	**Sn**	**11 59 58.2**	**-2.2**
MT01				IAML		12 00 01.2	
	comp=Z,70nm,0.1s						
AC05	**El Transito**	**3.88**	**319**	*e*P	**Pn**	**11 59 17.2**	**+1.2**
AC05				*e*S	**Sn**	**12 00 01.4**	**+0.3**
AC05				IAML		12 00 06.9	
	comp=Z,118nm,0.7s						
LCO	**Las Campanas**	**4.01**	**313**	*e*P	**Pn**	**11 59 16.6**	**-1.2**
LCO				*e*S	**Sn**	**12 00 04.2**	**-0.1**
LCO				IAML		12 00 07.5	
	comp=Z,239nm,0.5s						
BO01	**Tunca**	**4.05**	**229**	*e*P	**Pn**	**11 59 17.5**	**-0.6**
BO01				IAML		12 00 05.9	
	comp=Z,54nm,0.6s						
BO02	**Sierra Bellavi**	**4.13**	**223**	*e*P	**Pn**	**11 59 19.4**	**+0.2**
BO02				*e*S	**Sn**	**12 00 12.3**	**+5.4**
BO02				IAML		12 00 17.5	
	comp=Z,79nm,0.5s						
AC04	**Llanos de Chal**	**4.82**	**317**	*e*P	**Pn**	**11 59 27.8**	**-0.7**
AC04				*e*S	**Sn**	**12 00 18.2**	**-5.2**
AC04				IAML		12 00 29.0	
	comp=Z,57nm,1.1s						
GO03	**Copiapo**	**4.88**	**328**	*e*P	**Pn**	**11 59 29.6**	**+0.3**
GO03				*e*S	**Sn**	**12 00 23.2**	**-1.8**
GO03				IAML		12 00 30.8	
	comp=Z,41nm,0.4s						
AC02	**Maricunga**	**5.19**	**342**	*e*P	**Pn**	**11 59 35.5**	**+1.6**
AC02				*e*S	**Sn**	**12 00 34.1**	**+1.3**
AC02				IAML		12 00 35.9	
	comp=Z,19nm,1.4s						
QSPA	**South Pole Qui**	**58.43**	**180**	P	**P**	**12 08 00.9**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=143,slow=6.8,SNR=12						
	comp=Z,1.1nm,0.6s						
MAW	**Mawson**	**74.12**	**162**	P	**P**	**12 09 40.3**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=225,slow=8.6,SNR=2.7						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**124.50**	**205**	PKP	**PKPdf**	**12 17 02.4**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=160,slow=1.7,SNR=15						
KURBB	**Kurchatov Arra**	**148.58**	**43**	PKPbc	**PKPbc**	**12 17 50.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=300,slow=3.3,SNR=10						
ZALV	**Zalesovo Beam**	**150.24**	**34**	PKPbc	**PKPbc**	**12 17 54.1**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=311,slow=2.6,SNR=6.7						
MKAR	**Makanchi Array**	**152.36**	**48**	PKPbc	**PKPbc**	**12 17 59.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=270,slow=2.4,SNR=4.7						

*GUC **26** 12:01:28.0±0.7, 17°.30S×69°.88W, h12km, ML3.6*
*IDC **26** 12:01:29.1±1.3, 17°.29S×70°.04W, h0km, mb3.8/3, mbtmp3.8/5, ML3.4/2, MS3.2/6, Error ellipse: s-maj=41.5km s-min=18.3km az=151.0*
*NEIC **26** 12:01:32.2±0.8, 17°.61S±0°.03×69°.74W±0°.02, h10km±1km, mb4.1/5, Error ellipse: s-maj=5.5km s-min=3.3km az=167.0*

ISC 26 12:01:30.2±1.7, 17°.53S±0°.06×69°.86W±0°.05, h5km±10km, n35, σ1§06/40, mb4.1/4, MS3.1/3, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB18	**Visviri**	**0.36**	**100**	*e*P		**Pg**	**12 01 37.6**	**+0.2**
PB18				*e*S		**Sb**	**12 01 44.4**	**-1.3**
PB18				IAML			12 01 45.8	
	comp=N,7μm,0.3s							
PB18	**Visviri**	**0.36**	**100**			**Pg**	**12 01 37.6**	**+0.2**
PB18				Sg		**Sg**	**12 01 41.5**	**-0.8**
PB16	**IPOC Station P**	**0.87**	**158**	*e*P		**Pb**	**12 01 47.5**	**-0.6**
PB16	**IPOC Station P**	**0.87**	**158**			**Pg**	**12 01 47.2**	**+0.3**
AP01	**Chacalluta**	**0.96**	**209**	*e*P		**Pg**	**12 01 47.8**	**-0.8**
AP01				*e*S		**Sb**	**12 02 03.2**	**+0.9**
AP01				IAML			12 02 03.7	
	comp=N,6μm,0.2s							
AP01	**Chacalluta**	**0.96**	**209**			**Pg**	**12 01 48.4**	**-0.1**
AP01				Sg		**Sg**	**12 02 02.7**	**+1.8**
PB12	**IPOC Station P**	**1.17**	**203**	*e*P		**Pb**	**12 01 51.8**	**-1.2**
PB12				*e*S		**Sb**	**12 02 09.2**	**+0.8**
PB12				IAML			12 02 10.2	
	comp=N,1μm,0.3s							
PB12	**IPOC Station P**	**1.17**	**203**	Pn		**Pb**	**12 01 52.1**	**-0.8**
PB12				Sg		**Sg**	**12 02 08.8**	**+1.0**
PX02	**IPOC Station P**	**1.46**	**193**	*e*P		**Pn**	**12 01 55.7**	**-1.7**
PX02				*e*S		**Sg**	**12 02 17.4**	**+0.2**
LPAZ	**La Paz**	**2.06**	**53**	Pn		**Pn**	**12 02 07.7**	**+1.6**
	comp=N,10nm,0.3s,baz=242,slow=14,SNR=17							
LPAZ				Lg		Lg	12 02 34.9	
	comp=N,5.9nm,0.3s,baz=19,slow=18,SNR=4.1							
LPAZ				LR		LR	12 03 13.7	
	comp=N,588nm,20.7s,baz=239,slow=50							
	comp=N,27nm,0.4s							
LPAZ	**La Paz**	**2.06**	**53**	Pn		**Pn**	**12 02 06.8**	**+0.7**
PSGCX	**Pisagua**	**2.07**	**187**	*e*P		**Pn**	**12 02 03.4**	**-2.4**
PSGCX				*e*S		**Sg**	**12 02 36.4**	**-0.5**
PSGCX	**Pisagua**	**2.07**	**187**			**Pn**	**12 02 03.9**	**-1.9**
GO01	**Chusmiza**	**2.22**	**164**	Pn		**Pn**	**12 02 07.9**	**-0.2**
PB11	**IPOC Station P**	**2.23**	**175**	*e*P		**Pn**	**12 02 09.5**	**+1.5**
PB11				*e*S		**Sg**	**12 02 41.7**	**-0.2**
PB11				IAML			12 02 45.7	
	comp=E,327nm,0.5s							
PB11	**IPOC Station P**	**2.23**	**175**	Pn		**Pn**	**12 02 08.1**	**+0.2**
PB02	**IPOC Station P**	**3.77**	**181**			**Pn**	**12 02 30.5**	**+1.4**
PB07	**IPOC Station P**	**4.18**	**180**			**Pn**	**12 02 35.4**	**+0.6**
PB09	**IPOC Station P**	**4.28**	**172**			**Pn**	**12 02 36.3**	**0.0**
PB03	**IPOC Station P**	**4.50**	**179**			**Pn**	**12 02 39.7**	**+0.6**
PB05	**IPOC Station P**	**5.31**	**183**	Pn		**Pn**	**12 02 51.1**	**+0.8**
AF01	**San Pedro de A**	**5.62**	**164**	Pn		**Pn**	**12 02 55.0**	**+0.3**
SIV	**San Ignacio**	**8.55**	**81**	Pn		**Pn**	**12 03 36.4**	**+1.6**
	comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=7.4							
SIV				Lg		Lg	12 05 55.4	
	comp=E,0.1nm,0.3s,baz=172,slow=23,SNR=1.8							
SIV				LR		LR	12 07 38.2	
	comp=E,144nm,20.0s,baz=294,slow=42							
	comp=E,3.7nm,0.5s							
ATAH	**Atahualpa**	**13.27**	**320**	LR		LR	12 09 33.0	
	comp=E,119nm,21.5s,baz=165,slow=37							
MT08	**Bocatoma Ro**	**15.85**	**180**	Pn		**Pn**	**12 05 14.1**	**-0.2**
VA05	**Santo Domingo**	**16.14**	**185**	Pn		**Pn**	**12 05 17.6**	**-0.2**
VA05				IAmb		IAmb	12 05 25.3	
	comp=Z,19nm,1.2s							
TRQA	**Tornquist**	**21.59**	**163**	P		**P**	**12 06 20.7**	**-0.2**
TRQA				IAmb		IAmb	12 06 37.8	
	comp=Z,15nm,1.4s							
GO06	**Curarrehue**	**22.02**	**183**	P		**P**	**12 06 25.9**	**+0.2**
GO06				IAmb		IAmb	12 06 40.0	
	comp=Z,7.1nm,1.1s							
MDP	**Montagnes des**	**28.19**	**39**	LR		LR	12 19 29.1	
	comp=Z,41nm,21.2s,baz=226,slow=38							
RCBR	**Riachuelo**	**35.16**	**75**	LR			12 23 54.6	
	comp=Z,33nm,18.2s,baz=252,slow=38							
RPN	**Rapa Nui**	**37.61**	**248**	LR		LR	12 20 17.0	
	comp=Z,54nm,18.7s,baz=196,slow=30							
QSPA	**South Pole Qui**	**72.64**	**180**	P		**P**	**12 13 00.2**	**+1.5**
	comp=Z,0.7nm,0.9s,baz=142,slow=6.2,SNR=3.5							
	comp=Z,0.7nm,0.9s							
QSPA	**South Pole Qui**	**72.64**	**180**	P		**P**	**12 12 59.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**76.91**	**72**	P		**P**	**12 13 23.6**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=251,slow=5.1,SNR=5.5							
	comp=Z,0.7nm,0.8s							
YKA	**Yellowknife Ar**	**87.16**	**341**	P		**P**	**12 14 15.4**	**-1.5**
	comp=Z,1.3nm,1.0s,baz=140,slow=4.8,SNR=10							
	comp=Z,1.3nm,1.0s							

*IDC **26** 12:42:15.3±0.7, 34°.35N×25°.88E, h0km, mb4.2/20, mbtmp4.2/32, ML3.9/11, MS3.3/16, Error ellipse: s-maj=16.0km s-min=9.7km az=23.0*
*MOS **26** 12:42:16.3±1.2, 34°.32N×25°.90E, h15km, mb4.5/31, Error ellipse: s-maj=5.6km s-min=3.7km az=90.1*
*ATH **26** 12:42:17.6±0.5, 34°.37N×26°.00E, h10km, ML3.9/8, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*MCSM **26** 12:42:17.2±1.3, 34°.N±4°×2°.6E±°, h10km±9km, mb4.2, mB4.2, MLv4.1, Mw(mB)3.3*
*ISK **26** 12:42:17.2, 34°.39N×25°.84E, h14km, ML4.0/8*
*GFZ **26** 12:42:18.5±0.3, 34°.N±3°×2°.6E±°, h10km, M4.2/25, mb4.3/25*
*AFAD **26** 12:42:18.8, 34°.47N×26°.22E, h8km±6km, MW4.0*
*NEIC **26** 12:42:18.4±1.5, 34°.35N±0°.09×25°.80E±0°.07, h15km±5km, mb4.3/26, Error ellipse: s-maj=13.2km s-min=7.3km az=195.0*
*THE **26** 12:42:19.2, 35°.N±3°×2°.6E±°, h1km±2km, M3.7/8, MLh3.7/8*

ISC 26 12:42:17.2±0.8, 34°.33N±0°.04×25°.88E±0°.02, h10km±4km, n414, σ1§39/437, mb4.4/56, MS3.3/12, 24C-7D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZKR	**Zakros**	**0.84**	**20**	Pg		**Pg**	**12 42 32.6**	**-0.7**
ZKR				Sg		**Sb**	**12 42 44.6**	**-0.6**
ZKR	**Zakros**	**0.84**	**20**	P		**Pg**	**12 42 32.2**	**-1.1**
ZKR	**Zakros**	**0.84**	**20**	P		**Pg**	**12 42 32.2**	**-1.1**
ZKR	**Zakros**	**0.84**	**20**	P		**Pg**	**12 42 32.6**	**-0.7**
ZKR				S		**Sg**	**12 42 43.6**	**-0.7**
AGNA	**Agios Nikolaos**	**0.87**	**351**	P		**Pb**	**12 42 34.4**	**-0.1**
AGNA				S		**Sb**	**12 42 46.4**	**+0.2**
SIT2	**Siteia**	**0.90**	**12**	P		**Pg**	**12 42 34.1**	**-0.4**
SIT2				S		**Sg**	**12 42 45.7**	**-0.5**
NPS	**Neapolis**	**0.96**	**347**	P		**Pg**	**12 42 33.9**	**-1.8**
NPS				S		**Sg**	**12 42 45.2**	**-3.1**
NPS	**Neapolis**	**0.96**	**347**	P		**Pg**	**12 42 33.9**	**-1.8**
NPS	**Neapolis**	**0.96**	**347**	P		**Pg**	**12 42 35.3**	**-0.4**
NPS				S		**Sb**	**12 42 48.8**	**0.0**
SIVA	**Sivas**	**1.12**	**308**	P		**Pb**	**12 42 37.2**	**-1.4**
SIVA				S		**Sg**	**12 42 51.4**	**-1.9**
SIVA	**Sivas**	**1.12**	**308**	P		**Pn**	**12 42 39.0**	**0.0**
SIVA				S		**Sn**	**12 42 55.2**	**+0.8**
IACM	**Heraklion**	**1.18**	**326**	P		**Pb**	**12 42 38.7**	**-1.1**
IACM				S		**Sb**	**12 42 53.1**	**-2.0**
IACM	**Heraklion**	**1.18**	**326**	P		**Pn**	**12 42 39.9**	**+0.1**
IACM				S		**Sn**	**12 42 56.6**	**+0.6**
IDI	**Anoyia**	**1.26**	**320**	Pg		**Pn**	**12 42 39.5**	**-1.4**
	11nm,0.3s,baz=145,slow=18,SNR=112							
IDI				Lg		Lg	12 42 55.8	
	121nm,0.3s,baz=201,slow=21,SNR=15							
IDI	**Anoyia**	**1.26**	**320**	Pn		**Pn**	**12 42 39.8**	**-1.2**
IDI				Sn		**Sb**	**12 42 56.5**	**-0.9**
IDI	**Anoyia**	**1.26**	**320**	P		**Pn**	**12 42 39.6**	**-1.4**
IDI				S		**Sb**	**12 42 55.0**	**-2.4**
IDI	**Anoyia**	**1.26**	**320**			**Pn**	**12 42 40.2**	**-0.8**
IDI	**Anoyia**	**1.26**	**320**	P		**Pn**	**12 42 40.6**	**-0.3**
IDI				S		**Sn**	**12 42 58.9**	**+0.9**
GVD	**Gavdhos**	**1.56**	**290**	Pn		**Pn**	**12 42 44.8**	**-0.2**
GVD	**Gavdhos**	**1.56**	**290**	P		**Pn**	**12 42 44.9**	**-0.2**
GVD				S		**Sb**	**12 43 06.2**	**+0.1**
GVD	**Gavdhos**	**1.56**	**290**	P		**Pn**	**12 42 45.4**	**+0.3**
GVD	**Gavdhos**	**1.56**	**290**	P		**Pn**	**12 42 45.7**	**+0.6**
GVD				S		**Sg**	**12 43 08.5**	**+1.0**
KARP	**Karpathos**	**1.61**	**41**	Pn		**Pn**	**12 42 45.8**	**0.0**
KARP	**Karpathos**	**1.61**	**41**	P		**Pn**	**12 42 46.3**	**+0.5**
KARP				S		**Sb**	**12 43 07.9**	**+0.3**
KARP	**Karpathos**	**1.61**	**41**			**Pn**	**12 42 46.1**	**+0.3**
KARP	**Karpathos**	**1.61**	**41**	P		**Pb**	**12 42 47.2**	**+0.1**
KARP	**Karpathos**	**1.61**	**41**	P		**Pg**	**12 42 47.9**	**-0.3**
KARP	**Karpathos**	**1.61**	**41**	P		**Pb**	**12 42 47.6**	**+0.5**
KARP	**Karpathos**	**1.61**	**41**	P		**Pn**	**12 42 45.0**	**-0.8**
VAM	**Vamos**	**1.75**	**309**	P		**Pn**	**12 42 48.2**	**+0.5**
VAM				S		**Sn**	**12 43 09.8**	**-0.3**
VAM	**Vamos**	**1.75**	**309**	P		**Pn**	**12 42 48.1**	**+0.5**
VAM				S		**Sg**	**12 43 13.0**	**-0.5**
VAM	**Vamos**	**1.75**	**309**	P		**Pb**	**12 42 48.9**	**-0.5**
VAM				S		**Sg**	**12 43 12.7**	**-0.8**
CHAN	**Chania**	**1.92**	**309**	P		**Pb**	**12 42 51.4**	**-0.9**
IMMV	**Iera Moni Meta**	**1.93**	**307**	Pn		**Pn**	**12 42 49.8**	**-0.3**
IMMV	**Iera Moni Meta**	**1.93**	**307**	P		**Pn**	**12 42 50.6**	**+0.5**
IMMV				S		**Sn**	**12 43 15.2**	**+0.8**
IMMV	**Iera Moni Meta**	**1.93**	**307**	P		**Pb**	**12 42 51.6**	**-0.9**
IMMV	**Iera Moni Meta**	**1.93**	**307**	P		**Pn**	**12 42 50.8**	**+0.7**
IMMV				S		**Sb**	**12 43 17.2**	**+0.6**
KNDR	**Palaiochora Ch**	**2.06**	**297**	P		**Pn**	**12 42 53.1**	**+1.2**
THERA	**Ancient Thera,**	**2.06**	**351**	P		**Pn**	**12 42 52.3**	**+0.3**
THERA				S		**Sn**	**12 43 17.8**	**0.0**
THERA	**Ancient Thera,**	**2.06**	**351**	P		**Pn**	**12 42 51.7**	**-0.3**
THR6	**Thira Island,**	**2.06**	**349**	P		**Pn**	**12 42 51.8**	**-0.1**
THR9	**Santorini-Faro**	**2.07**	**348**	P		**Pn**	**12 42 52.3**	**+0.2**
THR9	**Santorini-Faro**	**2.07**	**348**	P		**Pn**	**12 42 51.7**	**-0.4**
THR8	**Santorini-Mono**	**2.10**	**351**	P		**Pn**	**12 42 53.1**	**+0.6**
THR8	**Santorini-Mono**	**2.10**	**351**	P		**Pn**	**12 42 52.7**	**+0.2**
SNT5	**Nea Kammeni, S**	**2.11**	**349**	P		**Pn**	**12 42 53.6**	**+1.0**
THR3	**Thira Island,**	**2.12**	**350**	P		**Pn**	**12 42 53.2**	**+0.5**
THR3	**Thira Island,**	**2.12**	**350**	P		**Pn**	**12 42 53.6**	**+1.0**
THR5	**Thira Island,**	**2.13**	**348**	P		**Pn**	**12 42 53.6**	**+0.7**
SAP3	**Santorini-Thir**	**2.15**	**349**	P		**Pn**	**12 42 53.5**	**+0.3**
ARG	**Arkhangelos**	**2.64**	**44**	Pn		**Pn**	**12 43 00.2**	**+0.4**
ARG	**Arkhangelos**	**2.64**	**44**	P		**Pn**	**12 43 00.7**	**+0.9**
ARG	**Arkhangelos**	**2.64**	**44**			**Pn**	**12 43 00.7**	**+0.9**
ARG	**Arkhangelos**	**2.64**	**44**	P		**Pn**	**12 43 02.1**	**+2.2**
YAZI	**Mula-Dat§a-**	**2.68**	**28**	P		**Pn**	**12 43 01.8**	**+1.3**
YAZI				S		**Sg**	**12 43 42.2**	**-1.2**
APE	**Apeiranthos**	**2.75**	**354**	*i* P		**Pn**	**12 43 01.9**	**+0.4**
DAT	**Datca**	**2.77**	**30**	Pn		**Pn**	**12 43 01.6**	**-0.2**
BODT	**Bodrum**	**2.97**	**23**	Pn		**Pn**	**12 43 04.9**	**+0.4**
KTHA	**Kythira Island**	**3.00**	**311**	Pn		**Pn**	**12 43 04.7**	**-0.2**
BDRM	**Kayabasi**	**3.02**	**25**	P		**Pn**	**12 43 06.0**	**+0.9**
TURN	**Turunc**	**3.12**	**38**	Pn		**Pn**	**12 43 06.8**	**+0.4**
TURN	**Turunc**	**3.12**	**38**	P		**Pn**	**12 43 09.0**	**+2.6**
TURN				S		**Sn**	**12 43 44.5**	**+0.8**
TURN				IAML			12 44 04.0	
	comp=N,87nm,0.9s							
TURN				IAML			12 44 17.0	
	comp=E,66nm,1.0s							
YER	**Yerkesik**	**3.42**	**34**	Pn		**Pn**	**12 43 11.6**	**+0.9**
YER	**Yerkesik**	**3.42**	**34**	P		**Pn**	**12 43 11.2**	**+0.5**
IZZE	**Mula-Seydike**	**3.45**	**51**	P		**Pn**	**12 43 12.0**	**+0.9**
IZZE				S		**Sn**	**12 43 50.9**	**-1.2**
IZZE				IAML			12 43 58.0	
	comp=E,109nm,0.4s							
IZZE				IAML			12 44 06.0	
	comp=N,204nm,0.4s							
SABU	**Mula-Dalaman**	**3.54**	**44**	P		**Pn**	**12 43 13.4**	**+1.0**
AKAS	**Kas**	**3.59**	**57**	Pn		**Pn**	**12 43 14.2**	**+1.0**
AKAS	**Kas**	**3.59**	**57**			**Pn**	**12 43 13.9**	**+0.7**
AKAS	**Kas**	**3.59**	**57**	P		**Pn**	**12 43 14.2**	**+1.0**
AKAS				S		**Sn**	**12 43 55.5**	**-0.2**
AKAS				IAML			12 44 07.0	
	comp=E,131nm,0.9s							
AKAS				IAML			12 44 08.0	
	comp=N,188nm,0.5s							
AKAS	**Kas**	**3.59**	**57**	P		**Pn**	**12 43 13.8**	**+0.7**
AYDN	**Tasoluk**	**3.70**	**25**	P		**Pn**	**12 43 15.2**	**+0.6**
AYDN	**Tasoluk**	**3.70**	**25**	P		**Pn**	**12 43 16.2**	**+1.6**
CAME	**Cameli-Denizli**	**3.82**	**46**	Pn		**Pn**	**12 43 17.1**	**+0.8**
KNIK	**Mula-Seydike**	**3.92**	**49**	P		**Pn**	**12 43 18.9**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.96**	**24**	Pn		**Pn**	**12 43 19.1**	**+0.9**
TAVA	**DENIZLI_Tavas**	**3.99**	**37**	P		**Pn**	**12 43 20.3**	**+1.8**
TAVA				S		**Sn**	**12 44 09.4**	**+4.1**
TAVA				IAML			12 44 35.0	
	comp=N,53nm,1.7s							
TAVA				IAML			12 44 36.0	
	comp=E,48nm,1.1s							
ESEN	**Aydn-Nazilli**	**4.00**	**29**	P		**Pn**	**12 43 20.0**	**+1.4**
ESEN				S		**Sn**	**12 44 04.0**	**-1.6**
ESEN				IAML			12 44 10.0	
	comp=E,32nm,0.9s							
CHOS	**Chios island**	**4.06**	**2**	Pn		**Pn**	**12 43 19.6**	**+0.2**
URLA	**Izmir**	**4.07**	**8**	Pn		**Pn**	**12 43 20.0**	**+0.4**
ELL	**Elmali**	**4.08**	**53**	Pn		**Pn**	**12 43 21.0**	**+1.2**
ELL	**Elmali**	**4.08**	**53**	P		**Pn**	**12 43 21.0**	**+1.2**
ELL	**Elmali**	**4.08**	**53**			**Pn**	**12 43 21.0**	**+1.2**
NAZL	**Nazilli-Aydin**	**4.12**	**28**	Pn		**Pn**	**12 43 21.0**	**+0.7**
AKUM	**Antalya-Kumluc**	**4.16**	**60**	P		**Pn**	**12 43 20.4**	**-0.4**
AKUM				S		**Sn**	**12 44 08.7**	**-0.8**
AKUM				IAML			12 44 12.0	
	comp=E,50nm,1.2s							
AKUM				IAML			12 44 17.0	
	comp=N,45nm,0.6s							
BLCB	**Balcova**	**4.16**	**13**	Pn		**Pn**	**12 43 21.5**	**+0.7**
GOLH	**Golhisar**	**4.17**	**45**	P		**Pn**	**12 43 22.7**	**+1.6**
APMY	**Acipayam-Deniz**	**4.19**	**41**	Pn		**Pn**	**12 43 22.7**	**+1.4**
ITM	**Ithomi**	**4.29**	**313**	Pn		**Pn**	**12 43 23.4**	**+0.8**
ITM	**Ithomi**	**4.29**	**313**			**Pn**	**12 43 22.7**	**+0.1**
ODEM	**Odemis-Izmir**	**4.32**	**24**	Pn		**Pn**	**12 43 23.9**	**+0.8**
KIRA	**zmir-Kiraz**	**4.37**	**27**	P		**Pn**	**12 43 24.5**	**+0.7**
SULTU	**Buldan**	**4.39**	**31**	P		**Pn**	**12 43 24.7**	**+0.5**
SULTU				S		**Sn**	**12 44 15.2**	**-0.2**
SULTU				IAML			12 44 52.0	
	comp=E,52nm,1.2s							
KORT	**Korkueli**	**4.52**	**52**	Pn		**Pn**	**12 43 27.7**	**+1.9**
KORT	**Korkueli**	**4.52**	**52**	P		Pn	12 43 30.7	+4.9
KORT				S		**Sn**	**12 44 18.0**	**-0.4**
MANT	**Manisa**	**4.69**	**27**			**Pn**	**12 43 29.1**	**+0.9**
MANT	**Manisa**	**4.69**	**27**	P		**Pn**	**12 43 29.0**	**+0.8**
KULA	**Kula-Manisa**	**4.75**	**27**	Pn		**Pn**	**12 43 29.4**	**+0.5**
KULA	**Kula-Manisa**	**4.75**	**27**	P		**Pn**	**12 43 29.6**	**+0.7**
BRDR	**BURDUR-Merkez**	**4.78**	**44**	P		**Pn**	**12 43 33.3**	**+4.0**
BRDR				S		**Sn**	**12 44 26.9**	**+2.1**
BRDR				IAML			12 44 52.0	
	comp=E,31nm,1.1s							
BUCA	**Burdur, Bucak-**	**4.84**	**50**	P		**Pn**	**12 43 33.3**	**+3.1**
BUCA				S		**Sn**	**12 44 25.0**	**-1.4**
BUCA				IAML			12 44 36.0	
	comp=N,37nm,1.2s							
BUCA				IAML			12 44 51.0	
	comp=E,42nm,1.3s							
GORD	**Gordes-Manisa**	**4.94**	**21**	Pn		**Pn**	**12 43 32.3**	**+0.8**
BCK	**Bucak**	**4.94**	**49**	P		**Pn**	**12 43 33.9**	**+2.3**
PASA	**Karahalli, USA**	**4.96**	**35**	P		**Pn**	**12 43 30.7**	**-1.2**
USAK	**Uak-Merkez**	**5.06**	**29**	P		**Pn**	**12 43 34.0**	**+0.8**
KEPZ	**Antalya-Kepez**	**5.33**	**60**	P		**Pn**	**12 43 38.0**	**+1.2**
KEPZ				S		**Sn**	**12 44 36.1**	**-2.2**
KEPZ				IAML			12 44 44.0	
	comp=E,40nm,0.6s							
KEPZ				IAML			12 44 52.0	
	comp=N,33nm,0.9s							
AGG	**Agios Georgios**	**5.49**	**330**	P		**Pn**	**12 43 41.8**	**+2.8**
EZN	**Ezine**	**5.50**	**4**	P		**Pn**	**12 43 40.0**	**+0.8**
	0.1nm30nm,0.8s							
BALY	**Balya**	**5.58**	**14**	P		**Pn**	**12 43 42.3**	**+1.9**
GAZI	**Gazipasa**	**5.60**	**68**	P

comp=Z,0.2nmcomp=Z,590nmcomp=Z,45nm,0.7s
HRFI Mount Harif 8.86 116 P **Pn** **12 44 26.3 +0.9**
CEL Celeste 8.96 299 **Pn** **12 44 26.0 -0.8**
CEL Celeste 8.96 299 P **Pn** **12 44 25.4 -1.4**
comp=Z,19nm,0.6s
EIL Elat 8.99 119 Pn **Pn** **12 44 26.5 -0.7**
comp=Z,3.8nm,0.3s,baz=229,slow=5.0,SNR=18
EIL Sn **Sn** **12 46 07.0 -1.5**
comp=Z,1.3nm,0.3s,baz=289,slow=20,SNR=3.8
comp=Z,12nm,0.5s
EIL Elat 8.99 119 P **Pn** **12 44 27.3 +0.1**
comp=Z,32nm,0.9s
EIL Elat 8.99 119 P **Pn** **12 44 26.6 -0.7**
AQBJ Aqaba 9.03 118 P Pn 12 44 38.1 +10
PLVB Pleven 9.10 354 ⇑P Pn 12 44 21.5 -7.1
BNN Bunyan 9.20 58 **Pn** **12 44 31.4 +1.3**
ASF Jabal al Asfar 9.48 100 Pn **Pn** **12 44 36.5 +2.7**
comp=Z,0.6nm,0.3s,baz=259,slow=6.8,SNR=3.6
ASF Sn **Sn** **12 46 22.9 +2.3**
comp=Z,0.3nm,0.3s,baz=271,slow=18,SNR=1.4
RAFF Raffo Rosso 9.79 290 **Pn** **12 44 39.7 +1.6**
VAE Valguarnera 9.82 292 Pn **Pn** **12 44 39.1 +0.6**
comp=Z,8.8nm,0.5s,baz=111,slow=14,SNR=6.1
VAE Sn **Sn** **12 46 30.3 +1.5**
comp=Z,0.7nm,0.3s,baz=143,slow=18,SNR=1.3
MARCO Tramutola 9.99 310 P **Pn** **12 44 43.0 +2.1**
HERR Herculane 10.87 347 ⇑P Pn 12 44 45.8 -7.1
MDVR Moldovita 10.92 344 ⇑P Pn 12 44 47.2 -6.4
ARR Arges 11.07 355 ⇑P Pn 12 44 48.1 -7.5
MLR Muntele Rosu 11.15 0 Pn **Pn** **12 44 57.8 +0.9**
comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=1.7
MLR LR LR 12 49 53.1
comp=Z,298nm,18.6s,baz=188,slow=41
comp=Z,1.3nm,0.7s
MLR Muntele Rosu 11.15 0 ⇑P Pn 12 44 49.7 -7.1
PAOL Paolisi 11.18 310 Pn **Pn** **12 44 55.6 -1.5**
PLOR Plostina 11.53 3 ⇓P **Pn** **12 44 59.0 -2.9**
PLOR Plostina 11.53 3 ⇓P **Pn** **12 44 59.0 -2.9**
VRI Vrincioaia 11.55 3 ⇑P Pn 12 44 55.7 -6.4
VRI Vrincioaia 11.55 3 ⇑P Pn 12 44 55.7 -6.4
DOPR Dopca 11.63 358 ⇑P Pn 12 44 57.6 -5.7
BZS Buzias 11.74 345 ⇑P Pn 12 44 58.2 -6.6
BZS Buzias 11.74 345 ⇑P Pn 12 44 58.2 -6.5
KELT Kelkit 12.14 58 P **Pn** **12 45 13.5 +3.0**
DRGR 12.68 350 ⇑P Pn 12 45 10.8 -6.9
DRGR 12.68 350 ⇑P Pn 12 45 10.8 -6.9
MORH Mrgy, Hungar 13.09 337 P **Pn** **12 45 24.4 +1.3**
comp=Z,2.2nm,1.1s
NRCA Norcia 13.10 314 **Pn** **12 45 22.8 -0.6**
FDMO Fiordimonte 13.23 315 Pn **Pn** **12 45 24.6 -0.6**
BURAR Bucovina Array 13.29 358 ⇑P Pn 12 45 19.1 -6.8
BURAR Bucovina Array 13.29 358 ⇑P Pn 12 45 19.1 -6.8
KEST Kesra 13.62 281 Pn **Pn** **12 45 31.3 +0.7**
comp=Z,0.5nm,0.3s,baz=103,slow=4.6,SNR=2.2
comp=Z,1.7nm,0.4s
SOC Sochi 14.18 45 *e*P **Pn** **12 45 39.1 +1.1**
SOC *e* 12 48 17.2
SOC pmax pmax
comp=Z,13nm,0.8s
SOC MLR MLR
comp=Z,74nm,16.0s
KMPD K-Podol'skiy 14.23 2 P **Pn** **12 45 40.0 +1.2**
SOKA Soboth 14.82 330 *e*P **P** **12 45 54.5 +1.7**
comp=Z,1.1nm,0.5s
OBKA Obir 14.90 328 *e*P **P** **12 45 55.4 +1.7**
comp=Z,2.4nm,0.9s
SABO M.te Sabotino 14.93 325 Pn **Pn** **12 45 47.5 -0.9**
SOP Sopron 15.07 335 P **P** **12 45 55.6 +0.1**
ARSA Arzberg 15.09 332 *e*P **P** **12 45 57.4 +1.7**
comp=Z,0.7nm,0.5s
EPOS Posof 15.10 57 P **P** **12 45 54.3 -1.7**
SESA Seetaler Alpe, 15.36 330 *e*P **P** **12 46 00.4 +1.4**
comp=Z,2.5nm,0.6s
STHS Stebnicka Huta 15.46 349 *e*P **P** **12 46 02.1 +2.2**
STHS pmax pmax
comp=Z,12nm,0.9s
STHS Stebnicka Huta 15.46 349 *e*P **P** **12 46 02.1 +2.2**
KWP Kalwaria Pacla 15.47 352 P **Pn** **12 45 56.9 +1.4**
comp=Z,8.3nm,1.1s
STAL STALIGIAL 15.56 324 **Pn** **12 45 56.8 +0.1**
STAL IAmb IAmb 12 46 09.8
comp=Z,10.0nm,0.8s
NIE Niedzica 15.63 346 P **Pn** **12 45 59.0 +1.4**
comp=Z,1.5nm,1.3s
LUBAR Lubar, Ukraine 15.65 5 P **Pn** **12 45 59.3 +1.6**
CIMO Cimolais 15.73 324 P **P** **12 46 01.8 -1.1**
KBA Koelnbreinsper 15.87 327 P **P** **12 46 06.2 +1.7**
KBA Koelnbreinsper 15.87 327 *e*P **P** **12 46 05.7 +1.2**
comp=Z,1.1nm,0.5s
ABTA Abfaltersbach 16.01 325 *e*P **P** **12 46 07.4 +1.4**
comp=Z,2.9nm,0.8s
SHA1 Shidzhatmaz 16.05 49 *i*P **Pn** **12 46 04.4 +1.2**
MOA Molln 16.07 331 *e*P **P** **12 46 08.2 +1.6**
comp=Z,2.3nm,0.8s
GNI Garni 16.10 63 Pn **P** **12 46 06.1 -1.1**
comp=Z,0.9nm,0.3s,baz=254,slow=13,SNR=3.0
comp=Z,3.2nm,0.4s
GNI Garni 16.10 63*ce*P **Pn** **12 46 05.5 +1.6**
GNI pmax pmax
comp=Z,6.0nm,0.6s
GNI Garni 16.10 63 P **Pn** **12 46 05.4 +1.6**
comp=Z,17nm,0.9s
KIV Kislovodsk 16.18 49 *e*P **Pn** **12 46 05.7 +1.0**
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,6.0nm,14.0s
KIV Kislovodsk 16.18 49 Pn **Pn** **12 46 06.4 +1.7**
KIV Kislovodsk 16.18 49 P **P** **12 46 06.6 -1.3**
comp=Z,35nm,1.1s
KIV Kislovodsk 16.18 49 P **P** **12 46 09.7 +1.8**
KBZ Khabaz 16.20 50 Pn **P** **12 46 08.6 +0.7**
comp=Z,0.2nm,0.3s,baz=269,slow=6.5,SNR=24
comp=Z,16nm,0.9s
KBZ Khabaz 16.20 50 *i*P **Pn** **12 46 05.6 +0.8**
KRUC Moravsky 16.32 337 *e*PN **P** **12 46 07.9 -1.4**
KRUC Moravsky 16.32 337 P **P** **12 46 07.9 -1.4**
AK07 Malin Array Si 16.40 8 P **Pn** **12 46 08.5 +1.1**
LESA Schwarzleotal 16.43 327 *e*Pn **P** **12 46 09.7 -0.9**
comp=Z,1.8nm,0.7s
AK06 Malin Array Si 16.43 8 P **Pn** **12 46 08.9 +1.1**
AK13 Malin Array Si 16.44 7 P **Pn** **12 46 09.1 +1.2**
AK10 Malin Array Si 16.45 8 P **Pn** **12 46 09.2 +1.2**
AK05 Malin Array Si 16.46 7 P **Pn** **12 46 09.4 +1.2**
AK14 Malin Array Si 16.47 7 P **Pn** **12 46 09.4 +1.2**
AK09 Malin Array Si 16.47 8 P **Pn** **12 46 09.4 +1.1**
VRAC Vranov 16.47 338 Pn **Pn** **12 46 09.5 +1.2**
comp=Z,0.6nm,0.3s,baz=152,slow=8.8,SNR=3.9
VRAC LR LR 12 53 29.8
comp=Z,74nm,18.3s,baz=168,slow=41
comp=Z,1.5nm,0.3s
VRAC Vranov 16.47 338 P **P** **12 46 10.5 -0.6**
VRAC Vranov 16.47 338 *e*PN **P** **12 46 09.8 -1.3**
VRAC Vranov 16.47 338 P **P** **12 46 10.5 -0.6**
AK12 Malin Array Si 16.48 7 P **Pn** **12 46 09.6 +1.1**
AK08 Malin Array Si 16.48 8 P **Pn** **12 46 09.6 +1.1**
OJC Ojcow 16.50 346 P **Pn** **12 46 09.6 +0.9**
AK02 Malin Array Si 16.50 7 P **Pn** **12 46 09.8 +1.1**
AK16 Malin Array Si 16.50 7 P **Pn** **12 46 09.9 +1.2**
AK17 Malin Array Si 16.52 7 P **Pn** **12 46 10.0 +1.2**
AK11 Malin Array Si 16.52 7 P **Pn** **12 46 10.2 +1.3**
AK01 Malin Array Si 16.54 7 P **Pn** **12 46 10.2 +1.1**
KIEV Kiev 16.54 7 P **P** **12 46 14.0 +2.2**
KIEV pmax pmax
comp=Z,10.0nm,0.7s
KIEV Kiev 16.54 7 P **Pn** **12 46 09.8 +0.6**
comp=Z,40nm,0.7s
KIEV Kiev 16.54 7 P **Pn** **12 46 10.1 +0.9**
AK19 Malin Array Si 16.55 7 P **Pn** **12 46 10.1 +0.8**
AKASG Malin Array Be 16.55 7 Pn **Pn** **12 46 07.3 -2.0**
comp=Z,1.2nm,0.3s,baz=195,slow=11,SNR=7.2
AKASG LR LR 12 52 55.9
comp=Z,77nm,21.1s,baz=188,slow=39
comp=Z,1.2nm,0.6s
AKASG Malin Array Be 16.55 7 *i*P **Pn** **12 46 09.8 +0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 16.55 7*ce*P **Pn** **12 46 09.4 +0.1**
AKBB pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 16.55 7 P **Pn** **12 46 09.8 +0.5**
AKBB Malin Array Si 16.55 7 P **Pn** **12 46 10.3 +1.0**
AK18 Malin Array Si 16.55 7 P **Pn** **12 46 10.4 +1.1**
AK04 Malin Array Si 16.56 7 P **Pn** **12 46 10.3 +0.8**
AK20 Malin Array Si 16.57 7 P **Pn** **12 46 10.3 +0.8**
AK03 Malin Array Si 16.57 7 P **Pn** **12 46 10.4 +0.8**
AK22 Malin Array Si 16.59 7 P **Pn** **12 46 10.0 +0.2**
AK21 Malin Array Si 16.60 7 P **Pn** **12 46 10.5 +0.5**
MORC Moravsky Berou 16.62 341 *e*PN **P** **12 46 11.6 -1.1**
MORC Moravsky Berou 16.62 341 P **Pn** **12 46 11.4 +1.2**
MI28 Mi28,Pidlybu 16.65 4 P **Pn** **12 46 11.0 +0.5**
WTTA Wattenberg 16.80 325 P **P** **12 46 15.1 +0.3**
WTTA Wattenberg 16.80 325 *e*Pn **P** **12 46 14.5 -0.4**
comp=Z,9.7nm,1.2s
WTTA Wattenberg 16.80 325 P **P** **12 46 15.1 +0.3**
CKRC Cesky Krumlov 16.84 333 *e*P **P** **12 46 16.8 +1.6**
CKRC MLR MLR
comp=Z,100nm,13.1s
CKRC Cesky Krumlov 16.84 333 *e*P **P** **12 46 16.8 +1.6**
CKRC AMS AMS 12 53 10.0
comp=Z,100nm,13.1s
WATA Walderalm 16.88 325 *e*Pn **P** **12 46 15.3 -0.4**
comp=Z,4.3nm,0.6s
RNPP5 Staryi Chortor 16.89 0 P **Pn** **12 46 14.1 +0.4**
SQTA Sankt Quirin 16.97 324 *e*Pn **P** **12 46 16.5 -0.3**
comp=Z,3.4nm,1.0s
RNPP8 Varash 17.00 360 P **P** **12 46 16.1 -0.8**
FUORN Ofenpass-Fuorn 17.05 321 **Pn** **12 46 15.9 0.0**
FUORN IAmb IAmb 12 46 20.7
comp=Z,13nm,0.9s
FUORN Ofenpass-Fuorn 17.05 321 P **P** **12 46 18.8 +1.1**
FETA Feichten 17.07 322 *e*Pn **P** **12 46 17.6 -0.4**
comp=Z,7.0nm,0.9s
RNPP9 Sopachiv 17.08 0 P **Pn** **12 46 15.8 -0.2**
GEC2 GERESS Array S 17.10 332 P **Pn** **12 46 16.8 +0.5**
GERES GERESS Array B 17.10 332 P **Pn** **12 46 16.5 +0.2**
baz=148,slow=13,SNR=8.5
comp=Z,1.0nm,0.5s
GERES GERESS Array B 17.10 332 **Pn** **12 46 16.8 +0.5**
MOTA Moosalm 17.11 324 *e*Pn **P** **12 46 18.0 -0.3**
comp=Z,5.6nm,1.5s
SBF Sospel 17.16 309 *e*P **P** **12 46 20.1 +1.3**
SBF pmax pmax
comp=Z,11nm,0.8s
DAVOX Davos/Dischmat 17.35 321 P **Pn** **12 46 20.3 +0.7**
comp=Z,0.3nm,0.3s,baz=158,slow=19,SNR=5.8
DAVOX LR LR 12 54 53.2
comp=Z,132nm,18.1s,baz=82,slow=44
comp=Z,1.3nm,0.5s
KHC Kasperske Hory 17.37 332 *e*P **P** **12 46 20.6 -0.5**
KHC MLR MLR
comp=Z,200nm,9.8s
KHC Kasperske Hory 17.37 332 *e*P **P** **12 46 20.6 -0.5**
KHC AMS AMS 12 54 20.0
comp=Z,200nm,9.8s
RETA Reutte 17.38 324 *i* Pn **P** **12 46 21.5 +0.4**
comp=Z,1.7nm,0.5s
TUE Stuetta 17.44 319 **Pn** **12 46 20.5 -0.3**
TUE Stuetta 17.44 319 P **Pn** **12 46 20.8 0.0**
comp=Z,24nm,1.1s
TUE Stuetta 17.44 319 P **P** **12 46 25.3 +3.2**
DPC Dobruska-Polom 17.48 339 *e*P **Pn** **12 46 21.2 +0.2**
DPC MLR MLR
comp=Z,100nm,11.4s
DPC Dobruska-Polom 17.48 339 *e*P **Pn** **12 46 21.2 +0.2**
DPC AMS AMS 12 54 10.0
comp=Z,100nm,11.4s
DPC Dobruska-Polom 17.48 339 P **Pn** **12 46 21.4 +0.4**
comp=Z,5.2nm,0.9s
DPC Dobruska-Polom 17.48 339 P **Pn** **12 46 21.3 +0.2**
DAVA Damuels 17.68 322 *e*Pn **P** **12 46 25.1 +0.4**
comp=Z,3.4nm,0.5s
DAVA Damuels 17.68 322 P **P** **12 46 26.0 +1.3**
MBDF Montbardon 17.99 311 *e*P **P** **12 46 29.5 +1.5**
MBDF pmax pmax
comp=Z,13nm,1.0s
LPG La Plagne 18.38 313 *e*P **P** **12 46 34.4 +1.9**
LPG pmax pmax
comp=Z,2.0nm,0.3s
GRB4 Grafenberg Arr 18.46 329 P **P** **12 46 32.9 -0.1**
SENIN Laz. Senin/Sane 18.52 316 **Pn** **12 46 34.2 +0.1**
AKT Akhty 18.64 61 *e*P **P** **12 46 34.4 -0.8**
TANN Tannenbergstha 18.84 333 P **Pn** **12 46 39.1 +1.4**
STU Stuttgart 19.02 324 P **P** **12 46 39.1 -0.1**
STU pmax pmax
comp=Z,14nm,0.7s
STU Stuttgart 19.02 324 P **P** **12 46 39.1 -0.1**
STU IAmb IAmb 12 46 53.2
comp=Z,14nm,0.7s
STU Stuttgart 19.02 324 P **P** **12 46 39.6 +0.4**
VORD Divnogorie 19.29 26 *e*P **P** **12 46 40.8 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.9s
CABF La Chapelle 19.36 315 *e*P **Pn** **12 46 45.0 +0.9**
CABF pmax pmax
comp=Z,6.0nm,1.0s
VSR Storozhevoye 19.45 26 *e*P **P** **12 46 42.2 -1.6**
VSR pmax pmax
comp=Z,8.0nm,1.0s
CDF Champ du Feu 19.75 321 *e*P **P** **12 46 46.5 -0.8**
CDF pmax pmax
comp=Z,5.0nm,0.8s
SUW Suwalki 19.77 355 P **P** **12 46 47.1 -0.2**
SUW Suwalki 19.77 355 P **P** **12 46 47.1 -0.2**
VORR Voronezh 19.84 25 *e*P **P** **12 46 47.8 -0.2**
VORR pmax pmax
comp=Z,10.0nm,0.9s
HAU Haudompre 20.00 319 *e*P **P** **12 46 49.8 -0.1**
HAU pmax pmax
comp=Z,4.0nm,0.6s
RAYN Ar Rayn 20.24 117 P **P** **12 46 53.4 +0.7**
RAYN pmax pmax
comp=Z,10.0nm,1.4s
RAYN Ar Rayn 20.24 117 **P** **12 46 53.4 +0.7**
RAYN IAmb IAmb 12 47 04.9
comp=Z,9.6nm,1.4s
TNS Taunus Mts 20.38 326 P Pn 12 46 56.0 -0.1
TNS Taunus Mts 20.38 326 P Pn 12 46 56.0 -0.1
VRH Novokhopyorsk 20.41 30 *e*P **P** **12 46 52.3 -2.0**
VRH pmax pmax
comp=Z,31nm,0.6s
MTLF Montolieu 20.46 303 *e*P **P** **12 46 54.9 0.0**
MTLF pmax pmax
comp=Z,13nm,1.4s
LPSR Galich'ya Gora 20.52 23 *e*P **P** **12 46 55.4 -0.1**
LPSR pmax pmax
comp=Z,17nm,0.7s
NACGM Naroch 20.59 1 *e*P Pn 12 46 57.6 -0.8
comp=Z,9.0nm,0.8s,baz=182
GTTG Gottingen 20.70 331 P **P** **12 46 57.4 -0.1**
SMF Signal de Mont 20.71 313 *e*P Pn 12 47 00.3 +0.3
SMF pmax pmax
comp=Z,13nm,1.4s
LOR Lormes 21.01 315 *e*P **P** **12 47 02.1 +1.3**
LOR pmax pmax
comp=Z,13nm,1.4s
WLF Walferdange 21.11 322 *d*P **P** **12 47 02.6 +0.7**
comp=Z,9.8nm,0.9s
TAM Tamanrasset 21.21 243 P **P** **12 47 03.6 +0.3**
TAM pmax pmax
comp=Z,23nm,0.4s
TAM Tamanrasset 21.21 243 **P** **12 47 03.6 +0.3**
TAM Tamanrasset 21.21 243 P **P** **12 47 05.3 +2.0**
BGF Bois d'Agland 21.28 312 *e*P **P** **12 47 07.8 +4.1**
BGF pmax pmax
comp=Z,5.0nm,0.4s
RJF Les Rejaudoux 21.61 308 *e*P **P** **12 47 09.0 +1.7**
RJF pmax pmax
comp=Z,30nm,0.9s
MEM Membach 21.79 324 *d*P **P** **12 47 07.7 -1.5**
MEM Membach 21.79 324 P **P** **12 47 08.0 -1.2**
LFF La Frestale 21.99 306 *e*P **P** **12 47 12.5 +1.2**
LFF pmax pmax
comp=Z,71nm,1.2s
GIVF Givet 22.06 322 *e*P **P** **12 47 12.7 +0.6**
GIVF pmax pmax
comp=Z,7.0nm,0.8s
OBN Obninsk 22.08 16 LR LR 12 56 33.0
comp=Z,142nm,18.3s,baz=180,slow=39
OBN Obninsk 22.08 16⇓*e*P **P** **12 47 13.7 +1.5**
OBN *e*PP **pwP** **12 47 17.0 -1.2**
OBN *e*SP **sP** **12 47 17.5 +2.4**
OBN S S **12 51 17.0 +1.5**
OBN SS **SnSn** **12 51 44.0 +2.3**
OBN SSS SSS 12 52 04.0
OBN pmax pmax
comp=Z,27nm,1.3s
OBN MLR MLR
comp=Z,116nm,15.0s
DOU Dourbes 22.17 322 *d*P **P** **12 47 12.6 -0.7**
comp=Z,7.5nm,1.0s
BMRD Maredsous 22.21 322 *d*P **P** **12 47 13.4 -0.3**
BAIF Baives 22.35 321 *e*P **P** **12 47 15.1 -0.1**
BAIF pmax pmax
comp=Z,10.0nm,0.8s
SJPF Ste Jean 22.82 301 *e*P **P** **12 47 23.6 +3.3**
SJPF pmax pmax
comp=Z,4.0nm,0.8s
MOS Moscow 22.90 17 *e*P **P** **12 47 20.5 -0.5**
MOS *e* 12 47 44.7
MFF Saint Martin d 23.17 310 *e*P **P** **12 47 25.1 +1.2**
MFF pmax pmax
comp=Z,422nm,2.6s
BELG Belogornoye 23.85 34 *i*P **P** **12 47 30.4 0.0**
BELG pmax pmax
comp=Z,4.0nm,0.8s
LDF La Druitiere 23.99 314 *e*P **P** **12 47 31.6 -0.3**
LDF pmax pmax
comp=Z,12nm,1.0s
VSU Vasula 24.15 1 *i*P **P** **12 47 31.6 -1.6**
FLN La Foliniere 24.28 314 *e*P **P** **12 47 34.0 -0.6**
FLN pmax pmax
comp=Z,50nm,1.7s
ESBB Sonseca Array 24.36 291 P **P** **12 47 34.7 -0.8**
ESBB IAmb IAmb 12 47 36.9
comp=Z,6.0nm,1.0s
ESDC Sonseca Array 24.36 291 P **P** **12 47 34.4 -1.1**
comp=Z,3.3nm,0.9s,baz=81,slow=9.1,SNR=27
ESDC LR LR 12 58 13.4
comp=Z,19nm,19.0s,baz=81,slow=39
comp=Z,3.3nm,0.9s
ESDC Sonseca Array 24.36 291 **P** **12 47 34.9 -0.5**
ESDC IAmb IAmb 12 47 36.6
comp=Z,18nm,1.4s
PAB San Pablo 24.65 291 P **P** **12 47 36.9 -1.2**
PAB pmax pmax
comp=Z,7.0nm,1.1s
PAB San Pablo 24.65 291 P **P** **12 47 36.9 -1.2**
PAB IAmb IAmb 12 47 53.6
comp=Z,6.7nm,1.1s
QUIF Quistinic 25.57 311 *e*P **P** **12 47 46.8 +0.5**
QUIF pmax pmax
comp=Z,44nm,1.5s
HFS Hagfors 27.02 347 P **P** **12 47 57.2 -2.0**
comp=Z,5.2nm,1.0s,baz=158,slow=16,SNR=4.1
HFS LR LR 12 59 32.0
comp=Z,67nm,20.4s,baz=174,slow=38
comp=Z,5.2nm,1.0s
FINES FINESS Array B 27.14 0 P **P** **12 47 57.9 -2.4**
comp=Z,4.3nm,0.8s,baz=179,slow=13,SNR=12
FINES LR LR 12 58 45.5
comp=Z,42nm,22.0s,baz=186,slow=36
comp=Z,4.3nm,0.8s
FINES FINESS Array B 27.14 0 P **P** **12 47 58.8 -1.4**
FINES FINESS Array B 27.14 0 P **P** **12 47 58.8 -1.4**
FIA1 FINESS Array S 27.14 0 P **P** **12 47 59.5 -0.7**
KLMR Klimovskoe 27.97 14 *e*P **P** **12 48 05.0 -2.8**
KLMR pmax pmax
comp=Z,16nm,1.1s
NORES NORESS Array B 28.01 345 P **P** **12 48 13.1 +5.0**
NOA NORSAR Array B 28.36 345 LR LR 13 01 17.7
comp=Z,39nm,18.1s,baz=165,slow=40
NBO00 NORSAR Array S 28.44 345 P **P** **12 48 12.3 +0.3**
NBO00 IAmb IAmb 12 48 23.8
comp=Z,10.0nm,1.1s
KIRV Kirov 28.89 26*ce*P **P** **12 48 15.3 -0.6**
EKA Eskdalemuir Ar 29.06 325 P **P** **12 48 16.7 -0.8**
comp=Z,0.7nm,0.5s,baz=122,slow=7.3,SNR=3.5
comp=Z,0.7nm,0.5s
AB31 Akbulak array 29.16 49 *i*P **P** **12 48 18.5 0.0**
AB31 pmax pmax
comp=Z,80nm,0.8s
ABKAR Akbulak array 29.16 49 P **P** **12 48 18.8 +0.3**
TORD Torodi Ar. Bea 30.42 232 P **P** **12 48 29.6 -0.4**
comp=Z,5.7nm,0.7s,baz=34,slow=9.6,SNR=34
comp=Z,5.7nm,0.7s
ARTI Arti 31.28 35⇑*i*P **P** **12 48 35.1 -2.0**
SVE Sverdlovsk 32.58 36 *e*P **P** **12 48 48.0 -0.5**
CHGR Chuyangaron 34.83 70 *i*P **P** **12 49 07.5 -0.9**
CHGR pmax pmax
comp=Z,6.0nm,1.1s
MBAR Mbarara 35.04 172 LR LR 13 02 48.2
comp=Z,51nm,20.5s,baz=11,slow=35
ARCES ARCESS Array B 35.26 360 P **P** **12 49 09.6 -2.1**
comp=Z,1.4nm,0.6s,baz=182,slow=9.2,SNR=8.9
ARCES LR LR 13 03 57.3
comp=Z,55nm,20.4s,baz=124,slow=37
comp=Z,1.4nm,0.6s
KK31 Karatay Array 35.56 62 P **P** **12 49 14.5 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 35.56 62 **P** **12 49 14.5 -0.1**
KK31 IAmb IAmb 12 49 21.2
comp=Z,3.7nm,0.7s
KKAR Karatay Array 35.56 62 P **P** **12 49 15.0 +0.4**
KKAR Karatay Array 35.56 62 **P** **12 49 15.0 +0.4**
BVAR Borovoye Array 36.50 45 P **P** **12 49 21.8 -0.8**
comp=Z,4.3nm,0.8s,baz=263,slow=6.0,SNR=18
comp=Z,4.3nm,0.8s
AAK Ala-Archa 38.51 63*ce*P **P** **12 49 41.9 +2.0**
AAK pmax pmax
comp=Z,8.0nm,1.7s
DBIC Dimbokro 39.52 233 LR LR 13 08 51.2
comp=Z,62nm,19.1s,baz=45,slow=40
KSH2 Kashi 39.71 68 P **P** **12 49 52.5 +2.5**
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
NRN Naryn 39.73 65 P **P** **12 49 50.7 +0.4**
NRN pmax pmax
comp=Z,6.0nm,1.1s
NRN Naryn 39.73 65 P **P** **12 49 50.7 +0.4**
NRN IAmb IAmb 12 49 57.5
comp=Z,6.4nm,1.1s
TARG Taragay, Kyrgy 41.04 64 P **P** **12 50 01.8 +0.5**
TARG pmax pmax
comp=Z,3.0nm,1.0s
TARG Taragay, Kyrgy 41.04 64 P **P** **12 50 01.8 +0.5**
KURBB Kurchatov Arra 41.19 50 P **P** **12 50 01.9 +0.1**
comp=Z,7.8nm,0.9s,baz=277,slow=8.7,SNR=46
comp=Z,7.8nm,0.9s
KURK Kurchatov 41.25 50*ce*P **P** **12 50 02.7 +0.3**
KURK pmax pmax
comp=Z,12nm,1.3s
KURK Kurchatov 41.25 50 **P** **12 50 02.3 0.0**
KURK IAmb IAmb 12 50 05.9
comp=Z,10nm,1.1s
BORG Borgarnes 41.56 332 LR LR 13 08 36.3
comp=Z,40nm,19.3s,baz=63,slow=38
MAKZ Makanchi 43.53 56 P **P** **12 50 21.3 +0.3**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 43.53 56 P **P** **12 50 21.3 +0.3**
MAKZ IAmb IAmb 12 50 26.3
comp=Z,5.0nm,1.1s
MK31 Makanchi Array 43.75 56 *i*P **P** **12 50 23.1 +0.3**
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 43.75 56 P **P** **12 50 22.7 -0.1**
comp=Z,3.1nm,0.6s,baz=276,slow=6.2,SNR=31
comp=Z,3.1nm,0.6s
MKAR Makanchi Array 43.75 56 *i*P **P** **12 50 23.0 +0.2**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 43.75 56 **P** **12 50 22.9 +0.1**
SPITS Spitsbergen Ar 44.15 357 P **P** **12 50 25.4 -0.2**
comp=Z,5.1nm,0.8s,baz=161,slow=5.3,SNR=3.9
comp=Z,5.1nm,0.8s
ZAA0 Zalesovo Array 45.16 46 **P** **12 50 33.3 -0.6**
ZAA0 IAmb IAmb 12 50 36.3
comp=Z,3.9nm,0.6s
ZALV Zalesovo Beam 45.16 46 P **P** **12 50 32.9 -1.0**
comp=Z,2.6nm,0.5s,baz=267,slow=8.9,SNR=14
comp=Z,2.6nm,0.5s
ZALV Zalesovo Beam 45.16 46 **P** **12 50 33.2 -0.7**
DGZ Jazzator, Alta 46.93 51 *i*P **P** **12 50 48.6 +0.5**
DGZ pmax pmax
comp=Z,5.0nm,1.1s
WMQ Urumqi 47.92 59 *e*P **P** **12 50 58.0 +2.2**
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ LR LR
comp=N,680nm,18.7s
WMQ LR LR
comp=E,540nm,13.3s
WMQ LR LR
comp=Z,410nm,23.1s

NRIK	**Noril'sk**	**48.39**	**25**	P		**P**		**12 50 59.5**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=286,slow=4.3,SNR=3.7								
	comp=Z,4.2nm,0.8s								
SUMG	**Summit**	**49.97**	**339**	P		**P**		**12 51 11.5**	**0.0**
SUMG				pmax	pmax				
	comp=Z,9.0nm,1.2s								
SUMG	**Summit**	**49.97**	**339**			**P**		**12 51 11.5**	**0.0**
TSUM	**Tsumeb**	**53.81**	**190**	LR		LR		13 17 54.4	
	comp=Z,78nm,19.0s,baz=345,slow=40								
SONM	**Songino Array**	**59.56**	**50**	P		**P**		**12 52 20.9**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=286,slow=9.1,SNR=6.7								
	comp=Z,1.9nm,0.8s								
SONM	**Songino Array**	**59.56**	**50**	P		**P**		**12 52 21.5**	**+0.4**
SONM				pmax	pmax				
	comp=Z,2.0nm,0.9s								
SONM	**Songino Array**	**59.56**	**50**	P		**P**		**12 52 21.5**	**+0.4**
SONM				IAmb	IAmb			12 52 24.4	
	comp=Z,1.7nm,0.9s								
ULN	**Ulaanbaatar**	**59.97**	**50**	*ce*P		**P**		**12 52 25.0**	**+1.1**
ULN				pmax	pmax				
	comp=Z,5.0nm,1.0s								
ULN	**Ulaanbaatar**	**59.97**	**50**	P		**P**		**12 52 24.4**	**+0.5**
SCHQ	**Schefferville**	**64.20**	**320**	P		**P**		**12 52 52.5**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=76,slow=5.8,SNR=6.2								
	comp=Z,2.5nm,0.7s								
HHC	**Hu-ho-hao-te**	**65.61**	**56**	*e*P		**P**		**12 53 02.5**	**+0.9**
HHC				pmax	pmax				
	comp=Z,12nm,0.7s								
HHC				pmax	pmax				
	comp=Z,60nm,4.2s								
CMAR	**Chiang Mai Arr**	**66.08**	**83**	P		**P**		**12 53 04.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=294,slow=7.7,SNR=7.0								
	comp=Z,0.4nm,0.3s								
SUR	**Sutherland**	**66.52**	**185**	LR		LR		13 25 53.6	
	comp=Z,103nm,18.4s,baz=13,slow=39								
ZEA	**Zeya**	**69.23**	**39**	*e*P		**P**		**12 53 22.3**	**-1.8**
HEH	**HeiHe**	**71.09**	**42**	*e*P		**P**		**12 53 35.3**	**-0.2**
HEH				pmax	pmax				
	comp=Z,4.0nm,0.9s								
BNX	**BinXian**	**73.45**	**46**	⇑P		**P**		**12 53 50.3**	**+0.5**
BNX				pmax	pmax				
	comp=Z,6.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**77.01**	**45**	P		**P**		**12 54 09.0**	**-1.2**
	comp=Z,5.9nm,0.9s,baz=304,slow=5.5,SNR=6.6								
	comp=Z,5.9nm,0.9s								
KSRS	**Korea Array**	**78.32**	**53**	P		**P**		**12 54 17.4**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=289,slow=5.4,SNR=4.3								
	comp=Z,1.8nm,0.9s								
YKA	**Yellowknife Ar**	**78.42**	**342**	P		**P**		**12 54 17.0**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=34,slow=5.3,SNR=12								
	comp=Z,1.4nm,0.8s								
ILAR	**Eielson Array**	**81.07**	**357**	P		**P**		**12 54 31.9**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=351,slow=5.0,SNR=5.8								
	comp=Z,0.5nm,0.9s								
MJAR	**Matsushiro Arr**	**85.44**	**48**	P		**P**		**12 54 54.8**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=306,slow=5.7,SNR=7.8								
	comp=Z,2.7nm,0.9s								
SYO	**Syowa Base**	**103.53**	**175**	⇑*e*P		**Pdif**		**12 56 20.6**	**+3.2**
QSPA	**South Pole Qui**	**124.18**	**180**	PKP		**PKPdf**		**13 01 14.9**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=236,slow=3.0,SNR=5.2								

BJI ***26*** *12:52:26.1,24˚.22N×122˚.61E,h40km,mB5.3/50,mb5.3/85, ML5.0/10,Ms4.8/88,Ms7 4.6/81*

JMA ***26*** *12:52:29.0±0.1,24˚N±2˚×122˚.4E±0˚.4,h51km±3km, MD5.5/17,MW5.2/17,NW OFF ISHIGAKIJIMA IS*

JMA Felt II J1 at NW OFF ISHIGAKIJIMA IS .

NIED ***26*** *12:52:29.0,24˚.17N×122˚.40E,h51km,MW5.3,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁶Nm; Mrr1.34; Mθθ6.52; Mθφ-7.86; Mrθ7.00; Mφφ-0.90; Mrφ0.52; Fault plane solution: Mo9.73000×10¹⁶ NP1: φs146.00000°,δ59.00000°,λ20.00000°. NP2:φs45.00000°, δ73.00000°,λ148.00000°*

ASIES ***26*** *12:52:29.5,24˚.26N×122˚.44E,h53km,Mw5.3,Fault plane solution: NP1:φs156.00000°,δ46.00000°,λ31.00000°. NP2:φs44.00000°,δ68.00000°,λ132.00000°.*

MOS ***26*** *12:52:29.0±0.8,24˚.48N×122˚.59E,h67km,mb5.8/100, MS4.5/20,Error ellipse: s-maj=6.6km s-min=3.5km az=121.3*

NEIC ***26*** *12:52:29.7,24˚.31N×122˚.47E,h52km*

TAP ***26*** *12:52:29.8,24˚.26N×122˚.42E,h54km,ML6.2,B*

GCMT ***26*** *12:52:29.3±0.1,24˚.23N±0˚.01×122˚.37E±0˚.01,h59km±1km, MW5.2/131,Moment Tensor Solution. s107,c160; s131,c217; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.45±.01; Mθθ0.49±.01; Mφφ-0.94±.01; Mrθ0.41±.01; Mθφ-0.15±.01; Mφr0.02±.01; Best double couple: Mo0.92400×10¹⁷ NP1:φs150.0000°,δ59.00000°, λ32.00000°. NP2:φs42.00000°,δ63.00000°,λ145.00000°. Principal axes: T 0.8870, Plg43.0000°, Azm4.0000°; N 0.0730, Plg47.0000°, Azm190.0000°; P -0.9610, Plg3.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *12:52:29.8±2.1,24˚.28N±0˚.02×122˚.46E±0˚.04,h56km±5km, mb5.5/135,Mwr5.3/13,Mww5.2/24 Error ellipse: s-maj=5.0km s-min=2.9km az=73.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr2.42; Mθθ6.36; Mφφ-8.78; Mrθ4.78; Mθφ-1.01; Mφr2.05; Fault plane solution: Mo9.47000×10¹⁶ NP1:φs143.62000°, δ56.56000°,λ16.70000°. NP2:φs44.23000°,δ76.12000°, λ145.42000°. Principal axes: T 9.5602, Plg34.0000°, Azm359.0000°; N -0.1804, Plg53.0000°, Azm205.0000°; P -9.3797, Plg13.0000°, Azm98.0000°;*

GFZ ***26*** *12:52:30.1±0.3,24˚N±3˚×12˚.2E±˚,h40km±5km,M5.1/19, mb5.5/19*

IDC ***26*** *12:52:30.3±1.5,24˚.45N×122˚.56E,h66km±12km,mb5.1/37, mbtmp5.4/40,MS4.3/67,Error ellipse: s-maj=13.0km s-min=8.6km az=61.0*

GFZ ***26*** *12:52:30.6,24˚.39N×122˚.44E,h65km,Mw5.2/56,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr3.04; Mθθ4.28; Mφφ-7.33; Mrθ4.00; Mθφ-0.53; Mφr0.05; Fault plane solution: Mo7.54716×10¹⁶ NP1: φs145.38146°,δ61.49474°,λ30.16341°. NP2:φs39.87999°, δ63.79684°,λ147.86603°. Principal axes: T 7.7240, Plg40.5179°, Azm1.8476°; N -0.3671, Plg49.4451°, Azm184.7738°; P -7.3569, Plg1.4459°, Azm93.0836°;*

BKK ***26*** *12:52:31.8±0.6,24˚N±4˚×12˚3E±˚,h71km±6km,M5.1/48, mB5.5/36,mb5.3/48,Mjma5.4/4,ML5.6/1,MLv5.7/1, Mw(mB)4.9/36,MwMwp4.7/7,Mwp5.1/7*

ISC 26 12:52:29.3±0.3,24˚29N±0˚.02×122˚47E±0˚.02,h57km±2km, h57km:pP-P,n1525,σ1937/1836,mb5.5/347,MS4.5/112, 114C-182D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EOS3	**EOS3**	**0.14**	**270**	⇑*i*P		**Pn**	**12 52 38.4**	**+0.5**
EOS3				*i* S		**Sn**	**12 52 44.9**	**+0.9**
EOS4	**EOS4**	**0.21**	**219**	⇑*i*P		**Pn**	**12 52 38.0**	**-0.1**
EOS4				S		**Sn**	**12 52 44.6**	**+0.2**
EOS2	**EOS2**	**0.25**	**301**	⇑*i*P		**Pn**	**12 52 39.5**	**+0.9**
EOS2				*e*S		**Sn**	**12 52 46.9**	**+1.6**
JYNG	**Yonagunijimaku**	**0.47**	**69**	*i* P		**Pn**	**12 52 41.3**	**+0.6**
JYNG				A		A	12 52 41.3	
	comp=N,455nm,3.1s,comp=E,627nm,0.8s							
JYNG				S		**Sn**	**12 52 49.7**	**+0.8**
YOJ	**Yonaguni jima**	**0.53**	**71**	P		**Pn**	**12 52 41.9**	**+0.6**
YOJ	**Yonaguni jima**	**0.53**	**71**	P		**Pn**	**12 52 41.9**	**+0.6**
YOJ				S		**Sn**	**12 52 50.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.53**	**71**			**Pn**	**12 52 41.9**	**+0.6**
YOJ				Sn		**Sn**	**12 52 50.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.53**	**71**	P		**Pn**	**12 52 42.0**	**+0.7**
YOJ	**Yonaguni jima**	**0.53**	**71**	⇓*i*P		**Pn**	**12 52 42.0**	**+0.6**
YOJ				*e*S		**Sn**	**12 52 50.4**	**+0.4**
YOJ	**Yonaguni jima**	**0.53**	**71**	P		**Pn**	**12 52 41.9**	**+0.6**
YOJ				A		A	12 52 41.9	
	comp=N,347nm,1.0s,comp=E,405nm,2.2s							
ESAO	**Su ao**	**0.64**	**297**	⇓*i*P		**Pn**	**12 52 42.7**	**+0.1**
ESAO				*e*S		**Sn**	**12 52 52.2**	**-0.1**
EWUT	**Wuta**	**0.65**	**284**	⇓*e*P		**Pn**	**12 52 42.6**	**-0.1**
EWUT				*e*S		**Sn**	**12 52 52.3**	**-0.2**
TWC	**Suao**	**0.65**	**300**	⇓*i*P		**Pn**	**12 52 42.8**	**+0.1**
TWC				*i* S		**Sn**	**12 52 51.8**	**-0.7**
EHP	**Heping Village**	**0.66**	**272**	⇓P		**Pn**	**12 52 43.1**	**+0.1**
EHP				S		**Sn**	**12 52 53.2**	**+0.3**
ENA	**Nanau**	**0.68**	**282**	⇓*e*P		**Pn**	**12 52 41.3**	**-1.8**
NDS	**Dongshan**	**0.77**	**297**	⇓*i*P		**Pn**	**12 52 44.8**	**+0.6**
NDS				S		**Sn**	**12 52 55.9**	**+0.7**
ETL	**Fush Village**	**0.78**	**261**	⇓*i*P		**Pn**	**12 52 44.1**	**-0.3**
ETL				S		**Sn**	**12 52 54.6**	**-0.9**
NACB	**Ninganchiao**	**0.80**	**262**	P		**Pn**	**12 52 44.1**	**-0.6**
NACB	**Ninganchiao**	**0.80**	**262**	S		**Sn**	**12 52 55.1**	**-0.9**
NACB	**Ninganchiao**	**0.80**	**262**			**Pn**	**12 52 44.2**	**-0.6**
NACB				Sn		**Sn**	**12 52 54.4**	**-1.6**
NACB	**Ninganchiao**	**0.80**	**262**	P		**Pn**	**12 52 43.6**	**-1.1**
NACB	**Ninganchiao**	**0.80**	**262**	⇓*i*P		**Pn**	**12 52 44.3**	**-0.4**
NACB				*i* S		**Sn**	**12 52 54.5**	**-1.4**
NTC	**Toucheng**	**0.81**	**314**	*e*P		**Pn**	**12 52 45.5**	**+0.7**
NTC				S		**Sn**	**12 52 56.9**	**+0.8**
ILA	**Ilan**	**0.81**	**306**	⇓P		**Pn**	**12 52 45.6**	**+0.8**
ILA				S		**Sn**	**12 52 57.2**	**+1.1**
TWB1	**Santiao Chiao**	**0.84**	**329**	⇓*i*P		**Pn**	**12 52 45.6**	**+0.4**
TWB1				*i* S		**Sn**	**12 52 56.6**	**+0.2**
HWA	**Hwalien**	**0.85**	**249**	⇓*i*P		**Pn**	**12 52 45.0**	**-0.2**
HWA				S		**Sn**	**12 52 56.4**	**-0.5**
TWE	**Neicheng**	**0.85**	**301**	⇓*i*P		**Pn**	**12 52 45.9**	**+0.7**
TWE				S		**Sn**	**12 52 57.4**	**+0.5**
LATG	**Datong**	**0.89**	**286**	⇓*i*P		**Pn**	**12 52 46.4**	**+0.4**
LATG				*i* S		**Sn**	**12 52 58.8**	**+0.6**
TIPB	**Shuangxi**	**0.90**	**320**	⇓*i*P		**Pn**	**12 52 46.4**	**+0.5**
TIPB				S		**Sn**	**12 52 57.9**	**-0.3**
TEYL	**Yanliau Villag**	**0.90**	**242**	⇓*i*P		**Pn**	**12 52 45.4**	**-0.5**
TEYL				S		**Sn**	**12 52 56.4**	**-1.6**
ETLH	**Xiulin Townshi**	**0.90**	**265**	⇓*i*P		**Pn**	**12 52 45.8**	**-0.3**
ETLH				*e*S		**Sn**	**12 52 57.7**	**-0.6**
NDT	**Datong Townshi**	**0.93**	**290**	⇓*i*P		**Pn**	**12 52 47.0**	**+0.8**
NDT				*i* S		**Sn**	**12 52 59.3**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.93**	**301**	⇓*i*P		**Pn**	**12 52 47.4**	**+1.0**
FUSB				*i* S		**Sn**	**12 52 59.7**	**+0.8**
ETM	**Tongmen**	**0.95**	**250**	⇓*i*P		**Pn**	**12 52 45.9**	**-0.6**
ETM				S		**Sn**	**12 52 57.6**	**-1.6**
SHUL	**Shoufeng**	**0.96**	**239**	⇓P		**Pn**	**12 52 46.4**	**-0.4**
SHUL				*i* S		**Sn**	**12 52 58.2**	**-1.5**
SXI1	**Grass Mountain**	**0.97**	**326**	⇓*i*P		**Pn**	**12 52 47.5**	**+0.6**
SXI1				*e*S		**Sn**	**12 52 59.6**	**-0.2**
LXIB	**Xiulin Townshi**	**1.00**	**255**	⇓*i*P		**Pn**	**12 52 46.9**	**-0.5**
LXIB				*e*S		**Sn**	**12 52 59.1**	**-1.6**
NNSB	**Datong**	**1.00**	**278**	⇓*i*P		**Pn**	**12 52 47.5**	**+0.2**
NNSB				S		**Sn**	**12 52 59.8**	**-0.8**
NNSH	**Datong**	**1.00**	**278**	⇓*i*P		**Pn**	**12 52 47.6**	**+0.2**
NNSH				*e*S		**Sn**	**12 53 00.4**	**-0.3**
WFSB	**Wu-fen Shan**	**1.00**	**321**	⇓*i*P		**Pn**	**12 52 48.0**	**+0.8**
WFSB				*i* S		**Sn**	**12 53 00.5**	**+0.1**
NWLT	**Wulai**	**1.00**	**299**	⇓*i*P		**Pn**	**12 52 48.4**	**+1.1**
NWLT				S		**Sn**	**12 53 01.4**	**+0.8**
NNS	**Nan Shan**	**1.01**	**279**	⇓*i*P		**Pn**	**12 52 47.7**	**+0.2**
NNS				*e*S		**Sn**	**12 52 59.9**	**-1.1**
TEGC	**Jichi Village**	**1.02**	**236**	*e*P		**Pn**	**12 52 47.1**	**-0.4**
TEGC				*e*S		**Sn**	**12 52 59.4**	**-1.6**
ESL	**Shilin**	**1.06**	**244**	⇓*i*P		**Pn**	**12 52 47.1**	**-0.9**
ESL				*e*S		**Sn**	**12 52 59.4**	**-2.5**
YHNB	**Yeheng**	**1.06**	**291**	P		**Pn**	**12 52 49.0**	**+0.8**
YHNB	**Yeheng**	**1.06**	**291**	P		Pn	12 53 02.7	+15
YHNB	**Yeheng**	**1.06**	**291**			**Pn**	**12 52 49.0**	**+0.8**
YHNB				Sn		**Sn**	**12 53 02.8**	**+0.7**
YHNB	**Yeheng**	**1.06**	**291**	P		**Pn**	**12 52 49.1**	**+0.9**
YHNB	**Yeheng**	**1.06**	**291**	⇓*i*P		**Pn**	**12 52 49.0**	**+0.8**
YHNB				S		**Sn**	**12 53 02.9**	**+0.7**
TNOU	**National Taiwa**	**1.07**	**324**	⇓*i*P		**Pn**	**12 52 48.6**	**+0.5**
TNOU				S		**Sn**	**12 53 01.4**	**-0.6**
NSK	**Sanguang**	**1.08**	**291**	⇓*i*P		**Pn**	**12 52 49.1**	**+0.7**
NSK				S		**Sn**	**12 53 03.1**	**+0.6**
NHDH	**Xindian Distri**	**1.09**	**308**	P		**Pn**	**12 52 49.3**	**+0.9**
NHDH				*i* S		**Sn**	**12 53 03.2**	**+0.6**
WHF	**Hehuan Shan**	**1.11**	**263**	⇓*i*P		**Pn**	**12 52 48.8**	**-0.3**
WHF				S		**Sn**	**12 53 02.8**	**-0.9**
NHY	**Taipei**	**1.11**	**313**	*e*P		**Pn**	**12 52 49.6**	**+0.9**
NHY				*e*S		**Sn**	**12 53 03.4**	**+0.4**
FUSS	**Fushou**	**1.12**	**268**	⇓*i*P		**Pn**	**12 52 49.2**	**+0.2**
FUSS				*e*S		**Sn**	**12 53 03.1**	**-0.5**
TATO	**Taipei**	**1.12**	**308**	P		**Pn**	**12 52 50.0**	**+1.1**
TATO	**Taipei**	**1.12**	**308**	P		Pn	12 53 03.0	+14
TATO	**Taipei**	**1.12**	**308**	P		**Pn**	**12 52 49.8**	**+1.0**
TATO				S		**Sn**	**12 53 06.0**	**+2.5**
TATO	**Taipei**	**1.12**	**308**			**Pn**	**12 52 49.5**	**+0.6**
TATO				Sn		**Sn**	**12 53 03.6**	**+0.2**
TATO	**Taipei**	**1.12**	**308**	⇓*i*P		**Pn**	**12 52 49.6**	**+0.7**
TATO				S		**Sn**	**12 53 03.7**	**+0.3**
EGFH	**Guangfu**	**1.13**	**237**	⇓*e*P		**Pn**	**12 52 48.4**	**-0.6**
EGFH				*e*S		**Sn**	**12 53 02.0**	**-1.6**
WARBT	**Fenglin Townsh**	**1.14**	**240**	⇓*i*P		**Pn**	**12 52 48.2**	**-0.9**
WARBT				*e*S		**Sn**	**12 53 01.1**	**-2.7**
TAP	**Taipei**	**1.15**	**311**	⇓P		**Pn**	**12 52 49.9**	**+0.6**
TAP				S		**Sn**	**12 53 04.4**	**+0.3**
IRIF	**Iriomote-Funau**	**1.15**	**87**	P		**Pn**	**12 52 49.8**	**+0.6**
IRIF				A		A	12 52 49.8	
	comp=N,185nm,1.2s,comp=E,166nm,1.7s							
IRIF				S		**Sn**	**12 53 05.6**	**+1.5**
BACT	**New Taipei Cit**	**1.17**	**307**	*e*P		**Pn**	**12 52 50.5**	**+1.0**
BACT				*e*S		**Sn**	**12 53 05.6**	**+1.0**
NWRT	**Kuosheng**	**1.17**	**321**	*e*P		**Pn**	**12 52 49.8**	**+0.3**
NWRT				*e*S		**Sn**	**12 53 04.2**	**-0.3**
TWT	**Tachien**	**1.18**	**269**	⇓*i*P		**Pn**	**12 52 50.4**	**+0.6**
TWT				S		**Sn**	**12 53 05.0**	**0.0**
TDCB	**Techi**	**1.20**	**269**	⇓*i*P		**Pn**	**12 52 50.5**	**+0.5**
TDCB				*i* S		**Sn**	**12 53 04.5**	**-0.8**
ZUZH	**Zhuzihu**	**1.21**	**316**	⇓P		**Pn**	**12 52 50.4**	**+0.3**
ZUZH				*e*S		**Sn**	**12 53 05.3**	**-0.2**
OWD	**Renai**	**1.23**	**255**	⇓*i*P		**Pn**	**12 52 50.2**	**-0.2**
OWD				S		**Sn**	**12 53 04.5**	**-1.6**
HGSD	**Ruisui**	**1.24**	**231**	⇑*e*P		**Pn**	**12 52 49.6**	**-0.8**
ANP	**Anpu**	**1.24**	**316**	⇓*i*P		**Pn**	**12 52 50.6**	**0.0**
ANP				*e*S		**Sn**	**12 53 07.0**	**+0.6**
HATJ	**Hateruma jima**	**1.24**	**100**	P		**Pn**	**12 52 51.5**	**+1.0**
HATJ				A		A	12 52 51.5	
	comp=N,231nm,1.4s,comp=E,171nm,5.7s							
TWS1	**Kuangyinshan**	**1.25**	**311**	⇓*i*P		**Pn**	**12 52 51.4**	**+0.8**
TWS1				S		**Sn**	**12 53 07.1**	**+0.6**
TWY	**Chenhua**	**1.26**	**321**	⇓P		**Pn**	**12 52 51.4**	**+0.6**
TWY				*e*S		**Sn**	**12 53 07.0**	**+0.3**
WUSB	**Renai**	**1.27**	**257**	⇓*i*P		**Pn**	**12 52 51.1**	**+0.1**
WUSB				S		**Sn**	**12 53 06.1**	**-0.9**
NTST	**Danshui**	**1.27**	**314**	⇓*i*P		**Pn**	**12 52 51.6**	**+0.7**
NTST				*i* S		**Sn**	**12 52 57.7**	**+0.7**
KSHI	**Guanxi Townshi**	**1.27**	**293**	⇓*i*P		**Pn**	**12 52 52.5**	**+1.6**
KSHI				S		**Sn**	**12 53 08.5**	**+1.5**
NFF	**Wufeng Townshi**	**1.28**	**286**	⇓*i*P		**Pn**	**12 52 51.9**	**+0.9**
NFF				S		**Sn**	**12 53 07.8**	**+0.7**
NTY	**Taoyuan**	**1.28**	**304**	*e*P		**Pn**	**12 52 52.0**	**+1.0**
NTY				S		**Sn**	**12 53 08.1**	**+1.0**
EHYH	**Wanrong**	**1.30**	**233**	⇓P		**Pn**	**12 52 50.5**	**-0.7**
EHYH				*e*S		**Sn**	**12 53 05.6**	**-1.9**
EHY	**Hungye**	**1.30**	**234**	⇓*e*P		**Pn**	**12 52 50.5**	**-0.9**
EHY				*e*S		**Sn**	**12 53 06.2**	**-1.6**
VWDT	**VWDT**	**1.32**	**247**	⇓*i*P		**Pn**	**12 52 51.8**	**+0.2**
VWDT				*i* S		**Sn**	**12 53 06.8**	**-1.4**
NJD	**Zhudong**	**1.33**	**290**	⇓*i*P		**Pn**	**12 52 53.1**	**+1.4**
NJD				S		**Sn**	**12 53 10.5**	**+2.1**
ECBN	**Changbin**	**1.34**	**224**	⇑*i*P		**Pn**	**12 52 51.2**	**-0.6**
ECBN				*e*S		**Sn**	**12 53 06.0**	**-2.6**
NCUH	**Zhongli**	**1.35**	**300**	⇓*i*P		**Pn**	**12 52 53.0**	**+1.1**
NCUH				*e*S		**Sn**	**12 53 12.2**	**+1.4**
LIOB	**Emei**	**1.37**	**285**	⇓*i*P		**Pn**	**12 52 53.6**	**+1.4**
LIOB				*e*S		**Sn**	**12 53 10.7**	**+1.3**
NSTT	**Nanjuang**	**1.38**	**285**	⇓*i*P		**Pn**	**12 52 53.6**	**+1.3**
NSTT				*e*S		**Sn**	**12 53 10.6**	**+1.1**
PCYT	**Pengchaiyu**	**1.38**	**345**	⇑*i*P		**Pn**	**12 52 53.4**	**+1.0**
PCYT				*e*S		**Sn**	**12 53 09.7**	**+0.1**
WHP	**Taichung City**	**1.39**	**270**	⇓*i*P		**Pn**	**12 52 53.7**	**+1.2**
WHP				*i* S		**Sn**	**12 53 10.3**	**+0.4**
YULB	**Yu-li**	**1.39**	**230**	P		**Pn**	**12 52 51.8**	**-0.7**
YULB	**Yu-li**	**1.39**	**230**			**Pn**	**12 52 51.7**	**-0.7**
YULB				Sn		**Sn**	**12 53 07.5**	**-2.4**
YULB	**Yu-li**	**1.39**	**230**	P		**Pn**	**12 52 51.9**	**-0.7**
YULB	**Yu-li**	**1.39**	**230**	⇓*i*P		**Pn**	**12 52 51.8**	**-0.7**
YULB				*e*S		**Sn**	**12 53 07.5**	**-2.4**
WPL	**Puli Township**	**1.41**	**259**	⇓P		**Pn**	**12 52 53.1**	**+0.5**
WPL				*e*S		**Sn**	**12 53 09.9**	**-0.4**
HSN1	**Hsinchu**	**1.41**	**291**	⇓P		**Pn**	**12 52 54.0**	**+1.3**
HSN1				*e*S		**Sn**	**12 53 11.1**	**+0.9**
EYUL	**Yuli**	**1.41**	**229**	*e*P		**Pn**	**12 52 52.5**	**-0.2**
EYUL				*e*S		**Sn**	**12 53 09.2**	**-1.0**
JKRS	**Kuro-shima**	**1.41**	**92**	P		**Pn**	**12 52 53.8**	**+1.1**
JKRS				A		A	12 52 53.8	
	comp=N,193nm,1.3s,comp=E,250nm,4.0s							
DPDB	**Guoxing**	**1.43**	**260**	⇓*i*P		**Pn**	**12 52 53.7**	**+0.7**
DPDB				*e*S		**Sn**	**12 53 10.6**	**-0.3**
WCS	**Beigang Elemen**	**1.44**	**261**	⇓*i*P		**Pn**	**12 52 53.8**	**+0.6**
WCS				*e*S		**Sn**	**12 53 10.6**	**-0.4**
SBCB	**Hsinchu**	**1.44**	**291**	⇓*i*P		**Pn**	**12 52 54.2**	**+1.1**
SBCB				*i* S		**Sn**	**12 53 12.5**	**+1.5**
HSN	**Hsinchu**	**1.46**	**291**	⇓*i*P		**Pn**	**12 52 54.1**	**+0.7**
HSN				S		**Sn**	**12 53 12.2**	**+0.8**
CHKH	**Chenggong**	**1.47**	**222**	⇑*e*P		**Pn**	**12 52 52.3**	**-1.2**
CHKH				*e*S		**Sn**	**12 53 08.6**	**-3.0**
SSLB	**Suanglung**	**1.47**	**251**	P		**Pn**	**12 52 53.8**	**+0.2**
SSLB	**Suanglung**	**1.47**	**251**	S		**Sn**	**12 53 11.1**	**-0.7**
SSLB	**Suanglung**	**1.47**	**251**			**Pn**	**12 52 53.6**	**0.0**
SSLB				Sn		**Sn**	**12 53 10.0**	**-1.8**
SSLB	**Suanglung**	**1.47**	**251**	P		**Pn**	**12 52 53.6**	**0.0**
SSLB	**Suanglung**	**1.47**	**251**	⇓*i*P		**Pn**	**12 52 53.7**	**+0.2**
SSLB				S		**Sn**	**12 53 09.7**	**-2.1**
NHW	**Xinwu Township**	**1.48**	**299**	*i* P		**Pn**	**12 52 54.2**	**+0.6**
NHW				S		**Sn**	**12 53 12.7**	**+0.8**
SMLT	**Sun Moon Lake**	**1.49**	**255**	⇓*i*P		**Pn**	**12 52 54.3**	**+0.4**
SMLT				*i* S		**Sn**	**12 53 12.0**	**-0.3**
NJN	**Zhunan**	**1.51**	**285**	⇓*e*P		**Pn**	**12 52 55.1**	**+1.1**
NJN				*e*S		**Sn**	**12 53 13.7**	**+1.1**
TYC	**Yuchr**	**1.52**	**256**	⇓*i*P		**Pn**	**12 52 54.7**	**+0.5**
TYC				*i* S		**Sn**	**12 53 12.4**	**-0.5**
FULB	**Fuli**	**1.53**	**225**	⇑*i*P		**Pn**	**12 52 53.4**	**-0.9**
FULB				*e*S		**Sn**	**12 53 11.3**	**-1.9**
JIJ	**Ishigaki jima**	**1.53**	**87**	P		**Pn**	**12 52 54.8**	**+0.4**
JIJ				A		A	12 52 54.8	
	comp=N,77nm,2.5s,comp=E,62nm,3.0s							
TWQ1	**Liyutan**	**1.55**	**273**	⇓P		**Pn**	**12 52 55.8**	**+1.2**
NMLH	**Miaoli**	**1.55**	**280**	⇓*i*P		**Pn**	**12 52 55.1**	**+1.5**
NMLH				*e*S		**Sn**	**12 53 15.3**	**+1.6**
CHKT	**Chengkung**	**1.56**	**221**	⇑*i*P		**Pn**	**12 52 53.4**	**-1.3**
CHKT				*e*S		**Sn**	**12 53 10.1**	**-3.7**
NSY	**Sanyi**	**1.56**	**275**	⇓*i*P		**Pn**	**12 52 56.4**	**+1.6**
NSY				S		**Sn**	**12 53 16.2**	**+2.2**
WHYT	**Xinyi Township**	**1.59**	**249**	⇓*i*P		**Pn**	**12 52 55.9**	**+0.7**
WHYT				S		**Sn**	**12 53 14.5**	**-0.2**
EHD	**Haiduan**	**1.62**	**226**	*e*P		**Pn**	**12 52 54.6**	**-1.0**
EHD				S		**Sn**	**12 53 13.7**	**-1.7**
WWF	**Wufeng**	**1.63**	**262**	⇓P		**Pn**	**12 52 57.5**	**+1.7**
WWF				*e*S		**Sn**	**12 53 17.2**	**+1.5**
TCU	**Taichung**	**1.64**	**265**	⇓P		**Pn**	**12 52 57.4**	**+1.5**
TCU				*e*S		**Sn**	**12 53 17.1**	**+1.3**
ECS	**Chishang**	**1.65**	**224**	⇑*e*P		**Pn**	**12 52 55.6**	**-0.4**

SGLT	Jiouru	2.39	230	⇓eP	Pn	12 53 08.5	+2.5
SGLT				eS	Sn	12 53 37.9	+3.7
LAY	Lan-yu	2.39	201	⇑P	Pn	12 53 04.5	-1.6
LAY				eS	Sn	12 53 30.3	-3.9
TAI1	Yung-k'ang	2.40	239	eP	Pn	12 53 07.6	+1.5
TAI1				eS	Sn	12 53 35.6	+1.2
TAW	Tawu	2.40	217	eP	Pn	12 53 05.3	-1.0
TAW				eS	Sn	12 53 31.3	-3.2
EAST	Anshuo	2.41	218	⇑P	Pn	12 53 05.5	-0.9
EAST				eS	Sn	12 53 31.9	-2.8
LYUB	Lan-yu	2.42	200	⇑iP	Pn	12 53 04.5	-1.9
LYUB				eS	Sn	12 53 29.5	-5.3
TSPT	Pingtung City	2.42	229	eP	Pn	12 53 08.7	+2.2
TAWH	Dawu Township	2.42	217	⇑eP	Pn	12 53 05.6	-0.9
TAWH				eS	Sn	12 53 31.8	-3.2
TAI	Tainan	2.45	239	eP	Pn	12 53 08.0	+1.2
TAI				eS	Sn	12 53 36.6	+1.0
TSCK	Chigu Township	2.46	243	⇓P	Pn	12 53 08.0	+1.0
TSCK				eS	Sn	12 53 36.9	+1.0
SNJT	Kaohsiung City	2.48	232	eP	Pn	12 53 09.1	+1.8
SNJT				eS	Sn	12 53 38.7	+2.3
SSPT	Xinbi	2.50	225	⇑eP	Pn	12 53 08.8	+1.2
SSPT				eS	Sn	12 53 37.5	+0.5
JIRJ	Irabujima	2.54	77	P	Pn	12 53 09.2	+1.0
JIRJ				A	A	12 53 09.2	
	comp=N,47nm,5.0s,comp=E,49nm,2.7s						
JIRJ				eS	Sn	12 53 38.6	+0.7
SCZT	Fangliau	2.55	222	⇑eP	Pn	12 53 08.4	+0.2
SCZT				eS	Sn	12 53 38.8	+0.6
SLIU	Shizi	2.57	217	⇑eP	Pn	12 53 07.5	-1.0
WSSB	Gushan	2.60	231	⇓eP	Pn	12 53 10.8	+1.8
WSSB				eS	Sn	12 53 40.8	+1.3
JIKM	Ikemajima	2.61	75	P	Pn	12 53 10.2	+1.2
JIKM				A	A	12 53 10.2	
	comp=N,48nm,1.9s,comp=E,44nm,3.3s						
KAU	Kaohsiung	2.62	230	eP	Pn	12 53 10.6	+1.4
KAU				eS	Sn	12 53 42.0	+2.1
JMJ	Miyako jima 2	2.63	78	P	Pn	12 53 11.1	+1.8
JMJ	Miyako jima 2	2.63	78	⇓eP	Pn	12 53 10.9	+1.6
JMJ				eS	Sn	12 53 41.9	+1.9
JMJ2	Miyako jima3	2.64	80	P	Pn	12 53 10.9	+1.4
JMJ2				A	A	12 53 10.9	
	comp=N,52nm,5.7s,comp=E,66nm,4.0s						
JMJ2				eS	Sn	12 53 42.0	+1.6
SMST	Manzhou Townsh	2.71	214	⇑eP	Pn	12 53 10.1	-0.4
SMST				eS	Sn	12 53 39.7	-2.3
JOGS	Gusukube	2.72	79	A	A	12 53 12.5	
	comp=N,67nm,3.1s,comp=E,81nm,5.9s						
WLCH	Liuqiu	2.72	225	⇓eP	Pn	12 53 12.9	+2.3
TWP	Hsiaoliuchiu	2.73	225	⇓P	Pn	12 53 13.2	+2.4
TWP				eS	Sn	12 53 44.6	+2.0
PHUB	P'eng-hu	2.76	254	⇓iP	Pn	12 53 10.8	-0.3
PHUB				S	Sn	12 53 42.0	-1.2
PNG	Penghu	2.76	256	⇓P	Pn	12 53 10.9	-0.2
PNG				eS	Sn	12 53 42.5	-0.7
WDGT	Dungji	2.77	249	eP	Pn	12 53 11.6	+0.4
WDGT				eS	Sn	12 53 41.2	-2.3
HEN	Hengchun	2.77	215	⇑eP	Pn	12 53 11.4	+0.1
HEN				eS	Sn	12 53 42.3	-1.3
TSEB	Hengchuen, Pin	2.78	212	⇑eP	Pn	12 53 11.5	+0.1
TSEB				eS	Sn	12 53 42.2	-1.5
TWKBT	Hengchun	2.79	213	⇑P	Pn	12 53 11.2	-0.3
TWKBT				eS	Sn	12 53 41.6	-2.3
TWK1	Hengchun	2.79	214	⇑P	Pn	12 53 11.3	-0.3
TWK1				i S	Sn	12 53 42.3	-1.7
SNW	Nanwan	2.81	215	eP	Pn	12 53 12.4	+0.7
SNW				eS	Sn	12 53 43.9	-0.5
VWUC	VWUC	2.83	285	⇓eP	Pn	12 53 12.0	-0.1
MATB	Ma-tsu	2.94	310	⇓eP	Pn	12 53 13.5	-0.1
MSUT	Lienchiang	2.97	310	eP	Pn	12 53 14.1	+0.2
VCHM	Qimei	2.98	250	⇓P	Pn	12 53 14.5	+0.3
VCHM				eS	Sn	12 53 47.8	-0.9
PTMZ	Houxiangcun	3.14	285	⇓P	Pn	12 53 16.1	-0.2
LYJJ	Jianjiangzhen	3.33	313	⇓eP	Pn	12 53 18.7	-0.2
XPSS	Dashiqiu	3.34	322	⇓eP	Pn	12 53 18.8	-0.3
QZH2	Quanzhou	3.58	281	⇓iP	Pn	12 53 22.0	-0.4
QZH2				S	Sn	12 53 59.5	-3.9
QZH2				SMN			
	comp=E,5µm,0.7s						
QZH2				SME			
	comp=E,5µm,0.8s						
QZH2				L	L		
	comp=E,9µm,6.0s						
MHZQ	Yeshan	3.60	301	⇓P	Pn	12 53 22.2	-0.4
KNM	Kinmen	3.68	273	⇓eP	Pn	12 53 25.0	+1.2
KNMB	Chin-men Tao	3.72	274		Pn	12 53 23.6	-0.7
KNMB	Chin-men Tao	3.72	274	⇓eP	Pn	12 53 23.7	-0.6
KNMB				eS	Sn	12 54 05.0	-1.9
AXDP	Jialang	4.14	279	⇓eP	Pn	12 53 29.9	-0.1
ZPLA	Ao Xicun	4.33	266	⇓eP	Pn	12 53 32.2	-0.3
DSXP	Dongshan	4.65	264	⇓eP	Pn	12 53 36.6	-0.4
SXFK	Yanhouchang	4.84	297	⇓eP	Pn	12 53 39.1	-0.6
JOW	Kunigami	5.82	63	P	Pn	12 53 53.0	-0.1
JOW	Kunigami	5.82	63	S	Sn	12 54 58.7	+0.1
JOW	Kunigami	5.82	63		Pn	12 53 52.6	-0.5
JOW	Kunigami	5.82	63	P	Pn	12 53 52.8	-0.4
PACPP	Pamplona Cagay	5.89	190	i P	Pn	12 53 53.1	-0.9
PACPP				i S	Sn	12 54 53.6	-6.7
SGCP	Gonzaga	6.03	184	eP	Pn	12 53 54.6	-1.3
SGCP				eS	Sn	12 54 53.9	-10
VDOS	Pratas Island	6.39	237	⇓eP	Pn	12 54 02.2	+1.2
CVP	Callao Caves	6.58	185	eP	Pn	12 54 02.9	-0.6
CVP				eS	Sn	12 55 17.1	-0.1
SIPP	Brgy, Tapao	6.61	197	eP	Pn	12 54 04.4	+0.6
SIPP				eS	Sn	12 55 14.4	-3.4
SSE	Sheshan	6.88	351	P	Pn	12 54 07.5	0.0
SSE				S	Sn	12 55 21.8	-2.5
SSE				SMN			
	comp=E,380nm,1.1s						
SSE				SME			
	comp=E,340nm,1.0s						
SSE				L	L		
	comp=E,2µm,22.6s						
SSE				L	L		
	comp=E,3µm,24.0s						
SZP	Santa	6.96	196	P	Pn	12 54 10.3	+1.6
SZP	Santa	6.96	196	S	Sn	12 55 27.9	+1.4
PALP	Palanan	7.19	180	eP	Pn	12 54 11.8	0.0
PALP				eS	Sn	12 55 23.9	-8.3
HKPS	Hong Kong Po S	7.91	257	P	Pn	12 54 22.1	+0.4
HKPS	Hong Kong Po S	7.91	257	S	Sn	12 55 49.8	-0.1
HKPS	Hong Kong Po S	7.91	257		Pn	12 54 20.9	-0.8
HKPS	Hong Kong Po S	7.91	257	P	Pn	12 54 21.9	+0.2
HKPS	Hong Kong Po S	7.91	257	eP	Pn	12 54 21.5	-0.2
GZH2	Guangzhou	8.09	267	⇓iP	Pn	12 54 24.3	+0.2
GZH2				S	Sn	12 55 51.8	-2.3
GZH2				pmax	pmax		
	comp=E,760nm,0.8s						
GZH2				SMN			
	comp=E,3µm,0.8s						
GZH2				SME			
	comp=E,2µm,1.0s						
JMZ	Minamidaito 2	8.09	77		Pn	12 54 21.0	-3.1
JMZ	Minamidaito 2	8.09	77	P	Pn	12 54 21.8	-2.3
NJ2	Nanjing	8.37	338	⇓iP	Pn	12 54 28.0	+0.1
NJ2				pP		12 54 36.5	
NJ2				S	Sn	12 55 57.5	-3.4
NJ2				pmax	pmax		
	comp=E,540nm,0.7s						
NJ2				SMN			
	comp=E,2µm,0.9s						
NJ2				SME			
	comp=E,1µm,0.8s						
NJ2				L	L		
	comp=E,13µm,4.4s						
NJ2				L	L		
	comp=E,19µm,6.5s						
NJ2				L	L		
	comp=E,7µm,6.2s						
MCO	Taipa Grande	8.47	257	P	Pn	12 54 29.0	-0.4
CNSH	ChangSha	9.40	296	P	Pn	12 54 41.5	-0.5
CNSH				S	Sn	12 56 25.3	-0.9
CNSH				SMN			
	comp=E,2µm,1.3s						
CNSH				SME			
	comp=E,1µm,1.1s						
WHN	Wuhan	9.53	313	⇑P	Pn	12 54 43.8	0.0
WHN				S	Sn	12 56 26.8	-2.6
WHN				L	L		
	comp=E,18µm,7.6s						
WHN				L	L		
	comp=E,18µm,6.9s						
JSU	Suzuyama	10.08	43	P	Pn	12 54 53.2	+1.9
JSU	Suzuyama	10.08	43		Pn	12 54 53.1	+1.7
JSU	Suzuyama	10.08	43	P	Pn	12 54 55.8	+4.5
LQP	Lukban	10.16	185	eP	Pn	12 54 53.1	+0.4
TGY	Tagaytay City	10.23	188	P	Pn	12 55 00.6	+7.0
	comp=E,718nm,0.5s,baz=358,slow=13,SNR=8.1						
TGY				S	Sn	12 56 53.0	+6.0
	comp=E,367nm,0.6s,baz=45,slow=22,SNR=1.3						
TGY				LR	LR	12 58 53.7	
	comp=E,3µm,19.0s,baz=20,slow=37						
TGY	Tagaytay City	10.23	188	eP	Pn	12 54 52.6	-1.0
GQP	Guinayangan	10.33	180	eP	Pn	12 54 56.0	+1.2
GQP				eS	Sn	12 56 43.0	-6.1
GULI	GuiLin	11.04	278	⇓iP	Pn	12 55 02.3	-2.2
GULI				S	Sn	12 57 03.5	-3.0
GULI				L	L		
	comp=E,2µm,8.4s						
GULI				L	L		
	comp=E,4µm,10.8s						
GULI				L	L		
	comp=E,4µm,12.7s						
JNU	Nakatsue	11.48	38	P	Pn	12 55 12.6	+2.1
	comp=E,61nm,0.8s,baz=221,slow=13,SNR=42						
JNU				LR	LR	12 59 54.9	
	comp=E,2µm,20.7s,baz=224,slow=39						
JTU	Tsushima	11.85	29	P	Pn	12 55 18.2	+2.7
JTU	Tsushima	11.85	29	P	Pn	12 55 20.1	+4.5
IBAJ	Ibajay, Aklan	12.41	181	i P	Pn	12 55 24.3	+1.1
TIA	Tai'an	12.75	340	P	Pn	12 55 28.8	+1.1
TIA				pmax	pmax		
	comp=E,10.0nm,0.7s						
TIA				pmax	pmax		
	comp=E,1µm,4.1s						
TIA				L	L		
	comp=E,1µm,7.9s						
TIA				L	L		
	comp=E,5µm,7.9s						
TIA				L	L		
	comp=E,2µm,15.5s						
TJN	Taejon	12.77	18	P	Pn	12 55 29.9	+2.0
TJN	Taejon	12.77	18	P	Pn	12 55 30.0	+2.0
TJN	Taejon	12.77	18		Pn	12 55 30.0	+2.0
QIZ	Qiongzhong	12.85	248	P	Pn	12 55 29.7	+0.5
QIZ	Qiongzhong	12.85	248	P	Pn	12 55 29.8	+0.5
QIZ				sP	P	12 55 44.0	+5.7
QIZ				S	Sn	12 57 51.8	+1.1
QIZ				pmax	pmax		
	comp=E,81nm,1.2s						
QIZ				pmax	pmax		
	comp=E,450nm,9.3s						
QIZ				L	L		
	comp=E,2µm,15.7s						
QIZ				L	L		
	comp=E,2µm,14.1s						
QIZ				L	L		
	comp=E,1µm,14.4s						
PLP	Palo	13.27	169	eP	Pn	12 55 36.1	+1.1
LYN	LuoYang	13.43	322	P	Pn	12 55 37.3	+0.3
LYN				pP	P	12 55 46.8	+2.2
LYN				S	Sn	12 58 07.8	+3.2
LYN				sS	S	12 58 17.8	-7.7
LYN				pmax	pmax		
	comp=E,40nm,0.7s						
LYN				pmax	pmax		
	comp=E,310nm,5.5s						
LYN				L	L		
	comp=E,5µm,8.9s						
LYN				L	L		
	comp=E,6µm,9.4s						
LYN				L	L		
	comp=E,4µm,15.0s						
INCN	Inchon	13.63	14	P	Pn	12 55 40.6	+0.8
INCN	Inchon	13.63	14	P	Pn	12 55 41.4	+1.6
INCN	Inchon	13.63	14	P	Pn	12 55 41.8	+2.0
INCN				P	Pn	12 55 41.8	+2.0
INCN				S	Sn	12 58 08.7	-0.8
INCN				S	Sn	12 58 08.7	-0.8
INCN	Inchon	13.63	14		Pn	12 55 41.4	+1.6
INCN	Inchon	13.63	14	P	Pn	12 55 43.3	+3.5
JMN	Monobe	13.71	44		Pn	12 55 36.9	-4.0
KSAR	Wonju Array Be	13.91	18		Pn	12 55 46.6	+3.1
KSRS	Korea Array	13.93	18	P	Pn	12 55 45.9	+2.1
	comp=E,433nm,0.6s,baz=201,slow=13,SNR=330						
KSRS				LR	LR	13 01 35.3	
	comp=E,761nm,20.1s,baz=195,slow=40						
KS19	Wonju Array Si	13.96	18		Pn	12 55 46.6	+2.4
MSLP	Maasin	14.26	170	i P	Pn	12 55 50.2	+1.9
GYA	Guiyang	14.45	282	⇓P	Pn	12 55 51.8	+0.9
GYA				pmax	pmax		
	comp=E,150nm,0.9s						
DL2	Dalian	14.59	357	P	Pn	12 55 53.5	+1.0
DL2				pP	P	12 56 01.0	+3.5
DL2				S	Sn	12 58 38.3	+5.4
DL2				pmax	pmax		
	comp=E,74nm,1.6s						
DL2				pmax	pmax		
	comp=E,2µm,7.1s						
DL2				L	L		
	comp=E,2µm,18.5s						
DL2				L	L		
	comp=E,2µm,15.6s						
DL2				L	L		
	comp=E,2µm,23.0s						
HNS	HongShan	14.66	335	⇑P	P	12 55 56.0	-2.3
HNS				S	Sn	12 58 38.8	+4.2
HNS				pmax	pmax		
	comp=E,130nm,1.7s						
HNS				L	L		
	comp=E,3µm,10.6s						
HNS				L	L		
	comp=E,3µm,15.0s						
HNS				L	L		
	comp=E,2µm,17.3s						
SCPH	Surigao	14.71	168	eP	Pn	12 55 56.0	+1.8
SNPH	Sibulan	14.88	177	eP	P	12 56 02.5	+1.5
LSIP	Lazi, Siquijor	15.11	176	i P	P	12 56 06.9	+3.4
XAN	Xi'an	15.30	313	⇑P	Pn	12 56 02.3	+0.6
XAN				pP	P	12 56 07.5	+2.0
XAN				S	Sn	12 58 52.3	+2.1
XAN				pmax	pmax		
	comp=E,71nm,1.3s						
XAN				pmax	pmax		
	comp=E,170nm,3.9s						
XAN				L	L		
	comp=E,7µm,7.6s						
XAN				L	L		
	comp=E,4µm,10.9s						
XAN				L	L		
	comp=E,4µm,13.7s						
DCPH	Dipolog City	15.64	177	eP	Pn	12 56 06.1	-0.1
CGP	Cagayan de Oro	15.89	172	eP	P	12 56 11.8	-0.3
TIY	Taiyuan	15.89	330	P	P	12 56 12.5	+0.4
TIY				S	S	12 59 11.0	-5.1
TIY				pmax	pmax		
	comp=E,110nm,0.7s						
TIY				pmax	pmax		
	comp=E,990nm,9.7s						
TIY				L	L		
	comp=E,3µm,17.0s						
TIY				L	L		
	comp=E,3µm,13.4s						
TIY				L	L		
	comp=E,2µm,20.6s						
PAGZ	Pagadian	16.37	177	eP	P	12 56 18.1	+0.6
BJI2	Beijing	16.56	343	P	P	12 56 19.8	+0.4
BJI2				S	Sn	12 59 23.8	+3.2
BJI2				pmax	pmax		
	comp=E,37nm,1.4s						
BJI2				pmax	pmax		
	comp=E,600nm,7.9s						
BJI2				L	L		
	comp=E,510nm,21.4s						
BJI2				L	L		
	comp=E,930nm,20.2s						
BJI2				L	L		
	comp=E,760nm,24.3s						
BJT	Baijiatuau	16.56	343	P	P	12 56 20.0	+0.6
INU	Inuyama	16.74	45	P	Pn	12 56 20.1	+0.2
INU	Inuyama	16.74	45	P	Pn	12 56 19.9	0.0
INU	Inuyama	16.74	45	P	P	12 56 21.6	+0.1
CDOP	Cateel, Davao	16.85	166	i P	P	12 56 22.9	+0.2
CDOP				i S	Sn	12 58 59.1	-29
JGF	Kuroka	17.11	45	P	P	12 56 25.8	+0.2
JGF	Kuroka	17.11	45	P	Pn	12 56 22.9	-1.7
JGF	Kuroka	17.11	45	P	Pn	12 56 23.6	-1.1
JSG	Sagara	17.14	49	P	P	12 56 27.9	+2.1
JSG	Sagara	17.14	49	P	Pn	12 56 25.0	+0.1
SLVN	Son La	17.36	264	P	Pn	12 56 27.6	-0.3
DAV	Davao City (W)	17.38	170	LR	LR	13 02 35.9	
	comp=E,1µm,20.6s,baz=353,slow=35						
SNY	Shenyang	17.52	3	⇓P	P	12 56 31.0	+1.1
SNY				pmax	pmax		
	comp=E,160nm,0.7s						
SNY				pmax	pmax		
	comp=E,830nm,14.2s						
SNY				L	L		
	comp=E,940nm,18.9s						
SNY				L	L		
	comp=E,1µm,16.1s						
SNY				L	L		
	comp=E,1µm,21.8s						
JHJ	Hachijo jima 2	17.54	56	P	P	12 56 31.2	+1.0
	comp=E,1µm,0.8s,baz=238,slow=7.3,SNR=44						
JHJ				LR	LR	13 03 20.5	
	comp=E,431nm,18.6s,baz=280,slow=37						
JHJ2	Mitsune	17.56	56	P	P	12 56 30.8	+0.3
JHJ2	Mitsune	17.56	56	P	P	12 56 31.0	+0.5
JHJ2	Mitsune	17.56	56	P	P	12 56 34.1	+3.7
CD2	Chengdu	17.84	296	P	P	12 56 34.0	+0.4
CD2				pP	pP	12 56 44.0	-2.0
CD2				sP	sP	12 56 52.0	-1.2
CD2				S	Sn	12 59 45.5	-6.2
CD2				pmax	pmax		
	comp=E,130nm,0.7s						
CD2				pmax	pmax		
	comp=E,390nm,3.9s						
CD2				L	L		
	comp=E,2µm,5.5s						
CD2				L	L		
	comp=E,2µm,7.5s						
CD2				L	L		
	comp=E,2µm,8.4s						
KMI2	Kunming	17.94	277	⇓P	Pn	12 56 36.5	+1.4
KMI2				pP	pP	12 56 48.0	+0.8
KMI2				sP	sP	12 56 55.3	+1.0
KMI2				S	S	12 59 58.5	+0.5
KMI2				pmax	pmax		
	comp=E,48nm,1.2s						
KMI2				pmax	pmax		
	comp=E,600nm,5.3s						
KMI2				L	L		
	comp=E,2µm,10.2s						
KMI2				L	L		
	comp=E,3µm,11.1s						
KMI2				L	L		
	comp=E,3µm,19.7s						
JCJ	Chichijima	17.99	77	P	P	12 56 34.9	-0.4
	comp=E,221nm,0.8s,baz=257,slow=8.2,SNR=8.4						
JCJ				LR	LR	13 02 50.4	
	comp=E,1µm,21.7s,baz=250,slow=35						
JCJ	Chichijima	17.99	77	P	Pn	12 56 36.8	+1.4
JCJ	Chichijima	17.99	77	P	Pn	12 56 35.8	+0.4
JCJ				IAmb	IAmb	12 56 38.8	
	comp=Z,294nm,0.9s						
JCJ	Chichijima	17.99	77	P	Pn	12 56 37.9	+2.5
DLV	Lat	18.07	230	P	Pn	12 56 38.0	+1.3
DLV	Lat	18.07	230	P	Pn	12 56 39.6	+2.9
MAJO	Matsushiro	18.23	44	P	P	12 56 36.8	-1.1
MAJO	Matsushiro	18.23	44	P	P	12 56 36.6	-1.3
MAJO				pmax	pmax		
	comp=Z,75nm,1.1s						
MAJO	Matsushiro	18.23	44	P	P	12 56 36.6	-1.3
MAJO	Matsushiro	18.23	44	P	P	12 56 36.9	-1.1
MJAR	Matsushiro Arr	18.23	44	P	P	12 56 36.6	-1.3
	comp=Z,22nm,0.8s,baz=222,slow=9.5,SNR=61						
MJAR				LR	LR	13 04 12.1	
	comp=Z,803nm,19.6s,baz=222,slow=39						
MJAR	Matsushiro Arr	18.23	44	P	P	12 56 35.8	-2.1
MJB9	Matsu-Tunnel	18.23	44	P	P	12 56 37.1	-0.8
DDMP	Don Marcelino,	18.35	170	eP	Pn	12 56 40.3	+0.5
PZH	PanZhiHua	18.85	281	P	Pn	12 56 47.3	+1.3
PZH				sP	sP	12 57 04.0	+0.5
PZH				S	Sn	13 00 19.3	+2.9
PZH				sS	sS	13 00 30.0	-6.3
PZH				SS	S	13 00 41.5	+25
PZH				pmax	pmax		
	comp=Z,50nm,1.1s						
PZH				pmax	pmax		
	comp=Z,440nm,4.1s						
PZH				L	L		
	comp=Z,2µm,12.7s						
PZH				L	L		
	comp=Z,2µm,16.1s						
PZH				L	L		
	comp=Z,3µm,15.9s						
HHC	Hu-ho-hao-te	18.87	334	⇑iP	Pn	12 56 47.5	+1.4
HHC				PP	sP	12 57 07.5	+2.9
HHC				S	Sn	13 00 18.0	+1.4
HHC				sS	S	13 00 25.0	+8.5
HHC				pmax	pmax		
	comp=Z,240nm,1.2s						
HHC				pmax	pmax		
	comp=Z,870nm,4.0s						
HHC				L	L		
	comp=Z,1µm,14.9s						
HHC				L	L		
	comp=Z,800nm,14.9s						
HHC				L	L		
	comp=Z,1µm,16.1s						
MYLDM	Lahad Datu	19.38	192	P	Pn	12 56 52.9	+0.8
MYLDM	Lahad Datu	19.38	192	P	Pn	12 56 53.1	+1.0
MYLDM	Lahad Datu	19.38	192	P	Pn	12 56 53.5	+1.4
	comp=Z,4µmcomp=Z,3µmcomp=Z,247nm,1.2s						
MYLDM	Lahad Datu	19.38	192	P	Pn	12 56 54.4	+2.3
BTO2	Baotou	19.51	330	eP	Pn	12 56 53.5	-0.2
BTO2				pP	pP	12 57 06.3	+1.9
BTO2				S	S	13 00 26.5	-2.9
BTO2				SS	Sn	13 00 55.3	+23
BTO2				pmax	pmax		
	comp=Z,200nm,1.3s						
BTO2				pmax	pmax		
	comp=Z,2µm,8.6s						
BTO2				L	L		
	comp=Z,6µm,16.4s						
BTO2				L	L		
	comp=Z,8µm,18.6s						
BTO2				L	L		
	comp=Z,5µm,24.3s						
PSTR	Posyet	19.57	19	i P	P	12 56 53.2	+0.7
CN2	Changchun	19.62	6	eP	P	12 56 52.8	-0.2
CN2				eS	S	13 00 26.8	-4.5
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				pmax	pmax		
	comp=Z,500nm,8.0s						
CN2				L	L		
	comp=Z,2µm,17.0s						
CN2				L	L		
	comp=Z,1µm,17.0s						
CN2				L	L		
	comp=Z,2µm,17.6s						
LZH	Lanzhou	19.90	311	P	Pn	12 56 58.8	+0.5
LZH				pP	pP	12 57 10.8	+2.0
LZH				sP	sP	12 57 18.0	+2.1
LZH				S	S	13 00 38.5	+1.2
LZH				PcP	PcP	13 01 12.8	+1.3
LZH				pmax	pmax		
	comp=Z,540nm,1.9s						
LZH				pmax	pmax		
	comp=Z,1µm,4.5s						
LZH				L	L		
	comp=Z,3µm,15.6s						
LZH				L	L		
	comp=Z,2µm,16.2s						
LZH				L	L		
	comp=Z,3µm,16.8s						
LZDM	Lanzhou Array	19.93	310	P	Pn	12 56 58.4	-0.5
	comp=Z,319nm,0.7s,baz=141,slow=9.6,SNR=48						
LZDM				PcP	PcP	13 01 12.7	+0.9
	comp=Z,13nm,0.6s,baz=117,slow=1.7,SNR=7.0						
LZDM				LR	LR	13 05 28.9	
	comp=Z,988nm,20.2s,baz=65,slow=39						
XLT	XiLinHaoTe	20.25	347	eP	P	12 57 00.5	+0.5
XLT				sS	sS	13 01 00.5	-3.7
XLT				SS	SnSn	13 01 11.5	+6.2
XLT				pmax	pmax		
	comp=Z,160nm,1.0s						
XLT				L	L		
	comp=Z,2µm,14.6s						
XLT				L	L		

comp=Z,1μm,21.7s
VLA Vladivostok 20.33 20 *i* P **P** **12 57 01.4 +0.7**
SGSI Sangihe 20.69 171 P Pn 12 57 10.7 +3.0
comp=Z,2μmcomp=Z,260nm,0.8s
MDJ Mudanjiang 21.10 14 P **P** **12 57 08.4 -0.6**
MDJ Mudanjiang 21.10 14 P **P** **12 57 08.3 -0.7**
MDJ Mudanjiang 21.10 14 P **P** **12 57 09.0 0.0**
MDJ PP **PnPn** **12 57 32.0 +1.8**
MDJ pmax pmax
comp=Z,130nm,1.0s
MDJ L L
comp=Z,820nm,19.9s
MDJ L L
comp=Z,1μm,17.9s
MDJ L L
comp=Z,1μm,15.1s
USA0B Ussuriysk Arra 21.34 19 *i* P **P** **12 57 10.9 -0.6**
USRK Ussuriysk Ar. 21.34 19 P **P** **12 57 11.2 -0.3**
comp=Z,244nm,0.7s,baz=204,slow=9.4,SNR=235
USRK LR LR 13 05 37.2
comp=Z,1μm,20.3s,baz=194,slow=37
comp=Z,244nm,0.7s
USRK Ussuriysk Ar. 21.34 19 P **P** **12 57 10.8 -0.7**
BNX BinXian 21.77 9 ⇑P **P** **12 57 14.5 -1.7**
BNX pP **pP** **12 57 26.5 -2.1**
BNX sP **sP** **12 57 32.3 -3.3**
BNX S **S** **13 01 15.8 +2.0**
BNX pmax pmax
comp=Z,130nm,0.8s
BNX pmax pmax
comp=Z,390nm,4.6s
BNX L L
comp=Z,640nm,9.5s
BNX L L
comp=Z,670nm,6.8s
BNX L L
comp=Z,1μm,20.6s
TNCH TengChong 21.77 277 ⇓P **P** **12 57 19.0 +2.4**
TNCH pP pP 12 57 25.8 -2.9
TNCH sP pwP 12 57 32.5 +0.8
TNCH PP **PnPn** **12 57 41.3 +1.5**
TNCH SS Sn 13 01 46.0 +19
TNCH pmax pmax
comp=Z,68nm,1.0s
TNCH L L
comp=Z,1μm,11.3s
TNCH L L
comp=Z,2μm,10.0s
TNCH L L
comp=Z,3μm,12.6s
LAMP Lampang 22.01 259 P **P** **12 57 20.9 +1.9**
comp=Z,1μmcomp=Z,120nm,1.1s
CMAI Chiengmai2 22.12 263 P **P** **12 57 22.3 +1.9**
comp=Z,879nmcomp=Z,67nm,1.2s
CHTO Chiang Mai 22.53 261 P **P** **12 57 25.9 +1.3**
comp=Z,678nmcomp=Z,53nm,1.1s
CHTO Chiang Mai 22.53 261 P **P** **12 57 25.6 +1.0**
CHTO pmax pmax
comp=Z,37nm,0.9s
CHTO Chiang Mai 22.53 261 P **P** **12 57 26.4 +1.8**
CHTO P **P** **12 57 26.4 +1.8**
CHTO S **S** **13 01 31.6 +3.5**
CHTO S **S** **13 01 31.6 +3.5**
CHTO Chiang Mai 22.53 261 P **P** **12 57 25.6 +1.0**
CHTO Chiang Mai 22.53 261 P **P** **12 57 26.0 +1.3**
CHTO Chiang Mai 22.53 261 P **P** **12 57 26.1 +1.5**
CM09 Chiang Mai Arr 22.61 260 P **P** **12 57 26.7 +1.2**
CM04 Chiang Mai Arr 22.63 260 P **P** **12 57 27.2 +1.5**
CM31 Chiang Mai Arr 22.65 260 P **P** **12 57 27.6 +1.7**
SNR=14
CM31 Chiang Mai Arr 22.65 260 P **P** **12 57 26.8 +1.0**
CMAR Chiang Mai Arr 22.65 260 P **P** **12 57 27.4 +1.5**
comp=Z,11nm,0.8s,baz=59,slow=8.1,SNR=33
CMAR PcP **PcP** **13 01 17.2 +0.3**
comp=Z,11nm,0.7s,baz=37,slow=0.6,SNR=23
CMAR ScP **ScP** **13 04 49.4 -0.4**
comp=Z,2.5nm,1.1s,baz=51,slow=2.1,SNR=5.3
CMAR LR LR 13 07 25.5
comp=Z,1μm,18.4s,baz=75,slow=39
CMAR PKiKP **PKiKP** **13 09 01.1 -1.0**
comp=Z,0.8nm,0.6s,baz=299,slow=1.6,SNR=5.9
CMAR Chiang Mai Arr 22.65 260 P **P** **12 57 26.8 +1.0**
MNI Manado 22.82 174 P **P** **12 57 32.8 +5.1**
TOLI2 Tolitoli 23.10 184 P **P** **12 57 32.6 +2.2**
TOLI2 Tolitoli 23.10 184 P **P** **12 57 31.2 +0.7**
TOLI2 IAmb IAmb 12 57 50.7
comp=Z,118nm,1.0s
TOLI2 Tolitoli 23.10 184 P **P** **12 57 34.6 +4.1**
UTHA Uthaitani 23.29 252 P **P** **12 57 35.3 +3.0**
GUMO Guam 23.68 113 LR LR 13 05 08.9
comp=Z,749nm,21.3s,baz=286,slow=32
GUMO Guam 23.68 113 P **P** **12 57 36.1 +0.2**
GUMO pmax pmax
comp=Z,384nm,1.1s
GUMO Guam 23.68 113 P **P** **12 57 36.0 +0.2**
TNTI Ternate 23.85 168 P **P** **12 57 38.3 +0.8**
TNTI IAmb IAmb 12 57 57.4
comp=Z,180nm,1.0s
TNTI Ternate 23.85 168 P **P** **12 57 38.7 +1.2**
comp=Z,2μmcomp=Z,209nm,1.1s
TNTI Ternate 23.85 168 P **P** **12 57 39.3 +1.8**
MPSI Mapaga 23.94 186 P **P** **12 57 42.8 +4.5**
GTA2 Gaotai 24.43 314 P **P** **12 57 43.0 +0.3**
GTA2 pP pP 12 57 55.0 -1.8
GTA2 PcP **PcP** **13 01 21.5 +1.0**
GTA2 S **S** **13 02 05.0 +6.2**
GTA2 PcS **PcS** **13 04 58.8 -1.7**
GTA2 pmax pmax
comp=Z,370nm,1.1s
GTA2 pmax pmax
comp=Z,620nm,8.3s
GTA2 L L
comp=Z,1μm,17.8s
GTA2 L L
comp=Z,1μm,14.9s
GTA2 L L
comp=Z,1μm,18.1s
ERM Erimo 24.64 39 P **P** **12 57 41.1 -3.4**
HIA Hailar 25.02 356 P **P** **12 57 49.6 +1.7**
PCI Palu 25.17 186 P **P** **12 57 54.8 +5.3**
comp=Z,3μmcomp=Z,175nm,0.9s
LUWI Luwuk 25.18 179 P **P** **12 57 49.6 0.0**
LUWI Luwuk 25.18 179 P **P** **12 57 55.3 +5.7**
comp=Z,3μmcomp=Z,343nm,1.1s
LUWI Luwuk 25.18 179 P **P** **12 57 54.8 +5.2**
HILR Hailar Array B 25.31 356 P **P** **12 57 49.2 -1.3**
comp=Z,57nm,0.8s,baz=172,slow=10,SNR=24
HILR PcP **PcP** **13 01 22.4 +0.2**
comp=Z,4.5nm,0.5s,baz=194,slow=3.1,SNR=4.4
HILR LR LR 13 09 07.6
comp=Z,745nm,20.1s,baz=95,slow=40
comp=Z,57nm,0.8s
MORE Moreh 25.66 276 P **P** **12 57 54.2 +0.2**
ASAJ Asahikawa 25.73 35 LR LR 13 08 35.1
comp=Z,393nm,18.7s,baz=239,slow=38
ASAJ Asahikawa 25.73 35 P **P** **12 57 52.7 -1.6**
ASAJ pmax pmax
comp=Z,80nm,0.5s
JKA Kamikawa-asahi 25.73 35 P **P** **12 57 52.7 -1.7**
JKA IAmb IAmb 12 57 54.5
comp=Z,80nm,0.5s
HEH HeiHe 26.20 7 *eP* **P** **12 57 57.0 -1.6**
HEH PcP **PcP** **13 01 23.3 -0.8**
HEH S **S** **13 02 26.8 +0.3**
HEH pmax pmax
comp=Z,73nm,0.8s
HEH L L
comp=Z,1μm,16.5s
HEH L L
comp=Z,510nm,16.9s
HEH L L
comp=Z,2μm,17.3s
SWI Sorong 26.42 160 P **P** **12 58 01.4 +0.6**
comp=Z,78nm,1.0s
SIJI Sorong 26.43 160 LR LR 13 07 36.7
comp=Z,262nm,21.4s,baz=354,slow=34
ULN Ulaanbaatar 26.52 336 *ceP* **P** **12 58 01.4 -0.3**
ULN pmax pmax
comp=Z,167nm,0.8s
ULN Ulaanbaatar 26.52 336 P **P** **12 58 01.6 -0.1**
ULN P **P** **12 58 01.6 -0.1**
ULN Ulaanbaatar 26.52 336 P **P** **12 58 01.4 -0.3**
ULN IAmb IAmb 12 58 02.7
comp=Z,152nm,0.8s
ULN Ulaanbaatar 26.52 336 P **P** **12 58 01.1 -0.6**

GOMU GeErMu 26.58 303 P **P** **12 58 02.8 +0.2**
GOMU S **S** **13 02 34.0 +0.5**
GOMU pmax pmax
comp=Z,37nm,0.9s
GOMU L L
comp=Z,950nm,12.5s
GOMU L L
comp=Z,540nm,12.8s
GOMU L L
comp=Z,2μm,12.6s
SONM Songino Array 26.74 336 P **P** **12 58 03.5 -0.2**
comp=Z,243nm,0.8s,baz=150,slow=9.7,SNR=954
SONM PcP **PcP** **13 01 25.6 0.0**
comp=Z,7.1nm,0.5s,baz=158,slow=3.5,SNR=10
SONM ScP **ScP** **13 04 59.5 -1.4**
comp=Z,3.8nm,0.9s,baz=146,slow=4.0,SNR=5.8
SONM PKiKP **PKiKP** **13 09 02.7 -1.0**
comp=Z,1.2nm,0.5s,baz=115,slow=1.1,SNR=6.6
SONM LR LR 13 09 54.4
comp=Z,2μm,19.7s,baz=148,slow=39
comp=Z,243nm,0.8s
SONM Songino Array 26.74 336 P **P** **12 58 03.0 -0.6**
NLAI Namlea 27.73 170 P **P** **12 58 18.5 +6.0**
SHL Shillong 27.74 279 P **P** **12 58 13.4 +0.6**
SHL pmax pmax
comp=Z,70nm,1.0s
SHL Shillong 27.74 279 P **P** **12 58 14.2 +1.4**
SNR=23
SHL Shillong 27.74 279 P **P** **12 58 13.4 +0.6**
SHL IAmb IAmb 12 58 51.6
comp=Z,70nm,1.0s
YSS Yuzhno-Sakhali 27.83 31 P **P** **12 58 14.2 +1.0**
YSS Yuzhno-Sakhali 27.83 31 *eP* **P** **12 58 10.3 -2.9**
YSS *e**SP **sP** **12 58 31.1 -2.8**
YSS *e* 12 59 21.3
YSS *e* 13 01 28.5
YSS *eS* **S** **13 02 43.1 -9.2**
YSS 13 04 32.1
YSS pmax pmax
comp=Z,200nm,2.4s
YSS pmax pmax
comp=Z,130nm,0.9s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS Yuzhno-Sakhali 27.83 31 P **P** **12 58 13.6 +0.4**
YSS IAmb IAmb 12 58 16.0
comp=Z,121nm,0.8s
SPSI Sidrap Palu 28.20 186 P P 12 58 24.5 +7.7
comp=Z,2μmcomp=Z,49nm,0.9s
KULM Kulim 28.23 231 P **P** **12 58 18.7 +1.6**
BRDH Bariadhala 28.29 273 LR LR 13 12 15.2
comp=Z,806nm,18.8s,baz=98,slow=42
LSA Lhasa 28.37 288 P **P** **12 58 21.2 +2.4**
GRNR Gornyy 28.56 19 ⇑*iP* **P** **12 58 17.5 -2.2**
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=Z,450nm,14.0s
FAKI Fak Fak 28.67 159 P **P** **12 58 20.7 -0.2**
UGL Uglegorsk 29.14 27 *eP* **P** **12 58 23.3 -1.5**
UGL *eS* **S** **13 03 07.7 -5.1**
UGL pmax pmax
comp=Z,40nm,0.8s
UGL smax smax
comp=E,1μm,18.0s
UGL smax smax
comp=N,300nm,13.0s
KAPI Kappang 29.24 186 LR LR 13 09 47.1
comp=N,298nm,20.5s,baz=4.5,slow=35
ZEA Zeya 29.63 6 *eP* **P** **12 58 28.2 -0.9**
ZEA pmax pmax
comp=Z,100nm,1.3s
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=N,40nm,1.3s
ZEA pmax pmax
comp=Z,50nm,0.7s
ZAK Zakamensk 30.01 335 *eP* **P** **12 58 31.0 -1.6**
ZAK pmax pmax
comp=Z,37nm,1.2s
TYV Tymovskoe 30.78 25 *eP* **P** **12 58 39.0 -0.3**
TYV *eS* **S** **13 03 39.0 +0.6**
TYV pmax pmax
comp=Z,19nm,0.7s
TYV pmax pmax
comp=Z,100nm,3.8s
TYV smax smax
comp=N,400nm,8.9s
TYV smax smax
comp=E,400nm,8.9s
TLY Talaya 30.93 337 PcP **PcP** **13 01 36.2 +0.4**
comp=E,9.4nm,0.6s,baz=170,slow=5.4,SNR=5.5
TLY LR LR 13 12 30.0
comp=E,1μm,18.2s,baz=136,slow=39
TLY Talaya 30.93 337 *ceP* **P** **12 58 40.2 -0.5**
TLY pmax pmax
comp=Z,91nm,0.7s
TLY Talaya 30.93 337 P **P** **12 58 40.4 -0.2**
TLY P **P** **12 58 40.4 -0.2**
TLY Talaya 30.93 337 P **P** **12 58 40.1 -0.5**
TLY IAmb IAmb 12 58 41.3
comp=Z,85nm,0.7s
TLY Talaya 30.93 337 P **P** **12 58 40.5 -0.2**
TLY PcP **PcP** **13 01 36.9 +1.0**
LHMI Lhok Sumawe 31.00 236 P **P** **12 58 40.6 -1.0**
LHMI IAmb IAmb 12 59 07.3
comp=Z,54nm,0.6s
IRK Irkutsk 31.17 338 *eP* **P** **12 58 40.6 -2.2**
IRK *e* 13 01 34.3
IRK *e* 13 09 13.2
IRK pmax pmax
comp=Z,153nm,1.7s
PSI Prapat 31.19 230 P **P** **12 58 43.6 +0.2**
PSI pmax pmax
comp=Z,27nm,0.9s
RPSI Rantau Prapat 31.27 230 P **P** **12 58 43.6 -0.4**
BKNI Bangkinang 31.60 224 P **P** **12 58 47.6 +0.7**
BKNI IAmb IAmb 12 58 55.5
comp=Z,57nm,0.6s
MOY Mondy 31.91 334 *eP* **P** **12 58 48.6 -0.8**
MOY pmax pmax
comp=Z,118nm,1.7s
EVN Everest 32.15 284 P **P** **12 58 53.4 +1.0**
EVN IAmb IAmb 12 59 20.8
comp=Z,38nm,0.8s
KNGR Kungurtug, Tuv 32.60 330 *i* P **P** **12 58 54.9 -0.6**
KNGR pmax pmax
comp=Z,38nm,1.0s
MMRI Maumere 32.72 180 P **P** **12 58 57.0 +0.3**
MMRI IAmb IAmb 12 59 17.2
comp=Z,109nm,0.9s
BLJI Banyuglugur 32.99 196 P P 12 59 05.5 +6.5
comp=Z,145nm,0.9s
KHKI Kahang-Kahang 33.14 192 P P 12 59 06.8 +6.5
comp=Z,165nm,0.9s
KRJI Kerinci 33.23 221 P **P** **12 59 05.9 +4.7**
comp=Z,268nm,1.0s
PLAI Plampang 33.23 188 P **P** **12 59 02.6 +1.5**
BOK Bokaro 33.35 277 *eP* **P** **12 59 05.4 +3.2**
BOK IAmb IAmb 12 59 13.6
comp=Z,24nm,1.1s
SJI Sawahan 33.50 199 P P 12 59 09.2 +5.7
SNJI Sawahan-Nganju 33.54 199 P **P** **12 59 08.6 +4.6**
comp=Z,127nm,0.8s
CTJI Waduk Cacaban 33.70 204 P P 12 59 10.2 +5.0
comp=Z,76nm,0.9s
GAYA Gaya 33.81 279 *eP* **P** **12 59 08.9 +2.8**
WOJI Wonogiri, Jawa 33.86 201 P P 12 59 14.2 +7.6
comp=Z,138nm,1.1s
SOEI Soe 33.88 177 P **P** **12 59 07.3 +0.4**
SOEI IAmb IAmb 13 00 00.6
comp=Z,62nm,0.9s
BATI Baumata 34.30 178 LR LR 13 14 00.4
comp=Z,295nm,20.4s,baz=42,slow=37
WMQ Urumqi 34.43 313 ⇑P **P** **12 59 12.0 +0.6**
WMQ PcP **PcP** **13 01 46.0 +0.2**
WMQ ScP **ScP** **13 05 27.5 +1.3**
WMQ pmax pmax
comp=Z,87nm,0.9s
WMQ pmax pmax
comp=Z,370nm,3.8s
WMQ L L
comp=Z,670nm,15.1s
WMQ L L
comp=Z,540nm,11.3s

WMQ L L
comp=Z,410nm,21.7s
WMQ Urumqi 34.43 313 P **P** **12 59 12.7 +1.2**
WMQ PcP **PcP** **13 01 46.1 +0.2**
RAGD RAYAGADA 36.49 270 *eP* **P** **12 59 31.5 +2.2**
DGZ Jazzator, Alta 37.23 322 ⇑*iP* **P** **12 59 35.1 -0.3**
DGZ pmax pmax
comp=Z,91nm,1.5s
DRS Darwin Rock St 37.41 166 P **P** **12 59 37.7 +0.7**
MTN Manton Dam 37.86 166 P **P** **12 59 41.0 +0.2**
comp=Z,67nm,1.2s
MTN Manton Dam 37.86 166 P **P** **12 59 40.0 -0.8**
PTH Pithoragarh 37.89 287 *eP* **P** **12 59 42.5 +1.2**
LGTI Lohaghat 38.00 287 *eP* **P** **12 59 43.9 +1.7**
LGTI *i* x x 13 01 57.2
YAK Yakutsk 38.05 6 P **P** **12 59 39.9 -1.9**
comp=Z,280nm,0.9s,baz=198,slow=3.2,SNR=26
YAK LR LR 13 17 15.1
comp=Z,851nm,18.0s,baz=186,slow=39
comp=Z,280nm,0.9s
YAK Yakutsk 38.05 6 *c iP* **P** **12 59 40.0 -1.9**
YAK *e* 13 01 06.5
YAK *e* 13 01 55.9
YAK *eS* **S** **13 05 32.1 +2.0**
YAK pmax pmax
comp=Z,179nm,1.1s
YAK pmax pmax
comp=N,40nm,0.9s
YAK pmax pmax
comp=E,22nm,0.9s
YAK pmax pmax
comp=Z,35nm,1.3s
YAK pmax pmax
comp=N,33nm,1.2s
YAK pmax pmax
comp=E,11nm,1.0s
YAK smax smax
comp=N,59nm,3.7s
YAK smax smax
comp=E,17nm,2.0s
YAK MLR MLR
comp=Z,898nm,24.0s
YAK MLR MLR
comp=N,497nm,19.0s
YAK MLR MLR
comp=E,420nm,16.0s
YAK Yakutsk 38.05 6 P **P** **12 59 40.1 -1.8**
YAK Yakutsk 38.05 6 P **P** **12 59 40.1 -1.8**
MK31 Makanchi Array 39.08 315 *i* P **P** **12 59 50.6 -0.3**
MK31 pmax pmax
comp=Z,90nm,0.7s
MKAR Makanchi Array 39.08 315 P **P** **12 59 51.0 +0.1**
comp=Z,124nm,0.7s,baz=100,slow=11,SNR=845
MKAR PcP **PcP** **13 01 59.7 -0.1**
comp=Z,34nm,0.7s,baz=91,slow=5.4,SNR=11
MKAR ScP **ScP** **13 05 42.0 -1.4**
comp=Z,2.0nm,0.7s,baz=115,slow=4.1,SNR=4.2
MKAR PKiKP **PKiKP** **13 09 10.8 -1.8**
comp=Z,0.6nm,0.6s,baz=230,slow=2.4,SNR=4.0
MKAR LR LR 13 17 23.7
comp=Z,656nm,21.4s,baz=94,slow=38
comp=Z,124nm,0.7s
MKAR Makanchi Array 39.08 315 P **P** **12 59 50.8 -0.1**
PEA0B Petropavlovsk- 39.13 33 *i* P **P** **12 59 49.3 -1.8**
PEA0B Petropavlovsk- 39.13 33 P **P** **12 59 48.9 -2.3**
PETK Petropavlovsk- 39.13 33 P **P** **12 59 49.0 -2.2**
comp=Z,11nm,0.6s,baz=214,slow=4.5,SNR=22
PETK LR LR 13 16 28.5
comp=Z,375nm,20.7s,baz=231,slow=37
comp=Z,11nm,0.6s
PETK Petropavlovsk- 39.13 33 P **P** **12 59 49.6 -1.6**
PETK Petropavlovsk- 39.13 33 P **P** **12 59 49.5 -1.6**
MAKZ Makanchi 39.29 315 P **P** **12 59 52.9 +0.3**
MAKZ Makanchi 39.29 315 P **P** **12 59 52.5 -0.1**
MAKZ Makanchi 39.29 315 P **P** **12 59 52.8 +0.3**
MAKZ PcP **PcP** **13 02 00.2 -0.2**
UTK UTTARKASHI 39.38 289 *eP* **P** **12 59 55.3 +1.7**
KLP Kalpa 39.53 291 *eP* **P** **12 59 56.6 +1.4**
PET Petropavlovsk 39.57 34 P **P** **12 59 53.0 -1.7**
PET Petropavlovsk 39.57 34 *eP* **P** **12 59 51.8 -2.9**
PET *eS* **S** **13 05 49.1 -4.2**
PET 13 09 46.8
PET pmax pmax
comp=Z,71nm,0.5s
PET MLR MLR
comp=Z,300nm,12.0s
PET MLR MLR
comp=Z,300nm,15.0s
PET Petropavlovsk 39.57 34 P **P** **12 59 52.2 -2.5**
PET IAmb IAmb 12 59 54.2
comp=Z,50nm,0.5s
WUS Wushi 39.65 306 P **P** **12 59 57.5 +1.7**
WUS PcP **PcP** **13 02 02.3 +0.5**
JHNI Jhansi 39.67 281 *eP* **P** **12 59 56.2 +0.1**
SHLS Shalkode 39.91 309 *eP* **P** **12 59 56.4 -1.5**
SHLS pmax pmax
comp=Z,76nm,0.7s
SHLS Shalkode 39.91 309 *eP* **P** **12 59 56.4 -1.5**
comp=Z,76nm,0.7s
PDGK Podgornoye 39.93 309 P **P** **12 59 58.7 +0.6**
PDGK Podgornoye 39.93 309 P **P** **12 59 58.7 +0.6**
KNRA Kununurra 40.19 171 P **P** **13 00 01.3 +1.0**
comp=Z,64nm,0.9s
KNRA Kununurra 40.19 171 P **P** **13 00 00.3 0.0**
KNRA IAmb IAmb 13 00 18.7
comp=Z,43nm,0.8s
UZB Uzynbulak 40.22 309 *c iP* **P** **13 00 01.4 +0.9**
UZB *eS* **S** **13 06 05.7 +2.1**
UZB pmax pmax
comp=Z,93nm,1.1s
UZB Uzynbulak 40.22 309 ⇑*iP* **P** **13 00 01.4 +0.9**
comp=Z,93nm,1.1s
UZB *eS* **S** **13 06 05.7 +2.1**
MA2 Magadan 40.45 22 LR LR 13 17 14.8
comp=Z,685nm,21.5s,baz=219,slow=37
MA2 Magadan 40.45 22 *ceP* **P** **12 59 59.8 -2.2**
MA2 pmax pmax
comp=Z,27nm,1.0s
MA2 Magadan 40.45 22 P **P** **13 00 00.1 -1.9**
RABL Rabaul 40.46 130 P **P** **13 00 03.9 +1.2**
RABL IAmb IAmb 13 00 23.0
comp=Z,59nm,0.8s
SMLA Simla 40.46 290 *eP* **P** **13 00 03.9 +1.4**
SMLA IAmb IAmb 13 00 06.0
comp=Z,97nm,0.6s
SMLA *eS* S 13 05 55.4 -12
KPKS Kokpek 40.53 309 *eP* **P** **13 00 04.0 +1.0**
KPKS Kokpek 40.53 309 *eP* **P** **13 00 04.1 +1.0**
NDI New Delhi 40.56 286 *eP* **P** **13 00 04.1 +0.8**
NPLP NPLP New Delhi 40.60 286 *eP* **P** **13 00 04.4 +0.7**
SATY Saty 40.63 308 *c iP* **P** **13 00 04.8 +0.9**
SATY pmax pmax
comp=Z,73nm,1.0s
SATY Saty 40.63 308 ⇑*iP* **P** **13 00 04.9 +1.0**
comp=Z,72nm,1.0s
AYAN Aya Nagar 40.65 286 *eP* **P** **13 00 04.6 +0.5**
SONA Sohna 40.73 286 *eP* **P** **13 00 05.2 +0.5**
TARG Taragay, Kyrgy 40.80 306 P **P** **13 00 06.8 +1.2**
TARG pmax pmax
comp=Z,272nm,1.6s
TARG Taragay, Kyrgy 40.80 306 P **P** **13 00 06.8 +1.2**
TARG IAmb IAmb 13 00 08.6
comp=Z,272nm,1.6s
ZAA0 Zalesovo Array 40.80 326 P **P** **13 00 04.0 -1.0**
ZAA0 IAmb IAmb 13 00 05.0
comp=Z,166nm,1.0s
ZALV Zalesovo Beam 40.80 326 P **P** **13 00 03.8 -1.1**
comp=Z,118nm,0.8s,baz=111,slow=8.1,SNR=403
ZALV PcP **PcP** **13 02 04.0 -1.0**
comp=Z,26nm,0.6s,baz=104,slow=4.1,SNR=18
ZALV ScP **ScP** **13 05 47.1 -2.8**
comp=Z,2.0nm,0.8s,baz=130,slow=5.8,SNR=2.1
ZALV PKiKP **PKiKP** **13 09 12.2 -1.5**
comp=Z,1.7nm,0.6s,baz=211,slow=1.2,SNR=4.9
ZALV LR LR 13 18 22.8
comp=Z,949nm,19.0s,baz=124,slow=38
comp=Z,118nm,0.8s
ZALV Zalesovo Beam 40.80 326 *i* P **P** **13 00 03.7 -1.2**
ZALV pmax pmax
comp=Z,118nm,0.8s
ZALV Zalesovo Beam 40.80 326 P **P** **13 00 03.7 -1.2**
GUNA GUNA 40.94 280 *eP* **P** **13 00 08.6 +2.0**
GUNA IAmb IAmb 13 00 09.0
comp=Z,29nm,0.7s
BHPL Bhopal 41.10 278 *eP* **P** **13 00 08.9 +1.0**

BHPL IAmb IAmb 13 00 12.1
comp=Z,15nm,0.6s
TDK Taldyqorghan 41.11 311 *c i* P **P 13 00 08.8 +1.1**
TDK Taldyqorghan 41.11 311 *i* P **P 13 00 08.8 +1.1**
DHRM DHARAMSHALA 41.17 292 *eP* **P 13 00 08.6 0.0**
DHRM IAmb IAmb 13 00 11.9
comp=Z,37nm,0.8s
KUDL Kundal 41.24 286 *eP* **P 13 00 09.1 +0.1**
KUDL IAmb IAmb 13 00 13.3
comp=Z,30nm,0.7s
PMG Port Moresby 41.26 141 P **P 13 00 09.7 +0.5**
PMG pmax pmax
comp=Z,53nm,0.9s
PMG Port Moresby 41.26 141 P **P 13 00 09.7 +0.5**
PMG IAmb IAmb 13 00 51.0
comp=Z,53nm,0.8s
TSSA Tissa 41.29 293 *eP* **P 13 00 10.4 +0.8**
TSSA IAmb IAmb 13 00 13.3
comp=Z,78nm,0.8s
H11N1 WAKE ISLAND Hy 41.31 87 T T 13 45 52.2
baz=282,slow=75,SNR=18
H11N2 WAKE ISLAND Hy 41.31 87 T T 13 45 59.3
baz=282,slow=75,SNR=30
H11N3 WAKE ISLAND Hy 41.33 87 T T 13 45 59.3
baz=282,slow=75,SNR=35
H11S3 WAKE ISLAND Hy 41.45 89 T T 13 46 09.8
baz=284,slow=74,SNR=32
H11S1 WAKE ISLAND Hy 41.45 89 T T 13 46 09.8
baz=284,slow=74,SNR=27
H11S2 WAKE ISLAND Hy 41.46 89 T T 13 46 09.8
baz=284,slow=74,SNR=19
HYB Hyderabad 41.47 269 *eP* **P 13 00 09.5 -1.5**
HYB *eS* **S 13 06 22.6 0.0**
MDOK Medeo 41.63 308 *eP* **P 13 00 13.1 +1.0**
MDOK *eS* **S 13 06 26.7 +2.1**
MDOK Medeo 41.63 308 *eP* **P 13 00 13.1 +1.0**
MDOK *eS* **S 13 06 26.8 +2.1**
THN Thein Dam 41.63 292 *eP* **P 13 00 12.8 +0.6**
THN IAmb IAmb 13 00 15.7
comp=Z,76nm,1.0s
TNSS Tian-Shan 41.67 308 *eP* **P 13 00 13.5 +0.7**
TNSS Tian-Shan 41.67 308 *eP* **P 13 00 13.6 +0.7**
AAA Alma-Ata 41.73 308 *eP* **P 13 00 14.0 +1.1**
AAA pmax pmax
comp=Z,96nm,0.9s
AAA Alma-Ata 41.73 308 *eP* **P 13 00 14.0 +1.1**
comp=Z,96nm,0.9s
ULHL Ulahol 42.03 307 P **P 13 00 17.3 +1.7**
SNR=10
NRN Naryn 42.08 306 P **P 13 00 17.2 +1.2**
NRN pmax pmax
comp=Z,247nm,0.9s
NRN Naryn 42.08 306 P **P 13 00 17.1 +1.2**
KSH2 Kashi 42.10 302 P **P 13 00 18.0 +2.0**
KSH2 PcP **PcP 13 02 10.5 +0.7**
KSH2 pmax pmax
comp=Z,120nm,1.0s
KSH2 L L
comp=Z,690nm,15.5s
KSH2 L L
comp=Z,810nm,17.5s
KSH2 L L
comp=Z,580nm,19.6s
FITZ Fitzroy Crossi 42.24 176 LR LR 13 20 00.2
comp=Z,98nm,18.3s,baz=358,slow=39
FITZ Fitzroy Crossi 42.24 176 P **P 13 00 18.4 +1.3**
BOOM Boomskoye usch 42.30 307 P **P 13 00 18.4 +0.8**
BOOM pmax pmax
comp=Z,52nm,0.7s
BOOM Boomskoye usch 42.30 307 P **P 13 00 18.4 +0.8**
BOOM IAmb IAmb 13 00 19.8
comp=Z,52nm,0.7s
JMU Jammu 42.41 293 *eP* **P 13 00 20.1 +1.7**
TKM2 Tokmak 2 42.62 308 P **P 13 00 21.7 +1.4**
SNR=219
KURK Kurchatov 42.77 320 *ceP* **P 13 00 20.6 -0.4**
KURK pmax pmax
comp=Z,308nm,1.3s
KURK Kurchatov 42.77 320 P **P 13 00 20.7 -0.4**
KURK Kurchatov 42.77 320 P **P 13 00 20.3 -0.8**
KURK Kurchatov 42.77 320 P **P 13 00 20.9 -0.2**
KURK PcP **PcP 13 02 11.2 -0.4**
KURBB Kurchatov Arra 42.79 319 P **P 13 00 20.8 -0.5**
comp=Z,122nm,0.8s,baz=109,slow=7.9,SNR=394
KURBB PcP **PcP 13 02 11.0 -0.7**
comp=Z,30nm,0.7s,baz=110,slow=3.7,SNR=13
KURBB ScP **ScP 13 05 56.3 -1.6**
comp=Z,2.4nm,0.9s,baz=134,slow=3.5,SNR=2.2
KURBB PKiKP **PKiKP 13 09 14.0 -1.6**
comp=Z,0.1nm,0.3s,baz=123,slow=0.7,SNR=5.6
KURBB LR LR 13 19 32.0
comp=Z,320nm,18.3s,baz=180,slow=38
comp=Z,122nm,0.8s
KBK Karagaybulak 43.05 307 P **P 13 00 25.4 +1.7**
SNR=46
COEN Coen 43.06 150 P **P 13 00 25.2 +1.4**
COEN Coen 43.06 150 P **P 13 00 25.4 +1.7**
comp=Z,102nm,1.1s
COEN Coen 43.06 150 P **P 13 00 24.8 +1.0**
COEN IAmb IAmb 13 00 44.3
comp=Z,59nm,0.8s
AJM Ajmer 43.09 283 *eP* **P 13 00 25.0 +1.0**
AJM IAmb IAmb 13 00 26.6
comp=Z,71nm,0.7s
CHMS Chumysh 43.25 308 P **P 13 00 26.4 +1.2**
SNR=95
UCH Uchtor 43.30 306 P **P 13 00 28.0 +1.9**
SNR=30
FRU1 Bishkek 43.31 307 P **P 13 00 26.2 +0.6**
FRU1 pmax pmax
comp=Z,170nm,1.1s
FRU1 Bishkek 43.31 307 P **P 13 00 26.2 +0.6**
FRU1 IAmb IAmb 13 00 28.0
comp=Z,170nm,1.1s
AAK Ala-Archa 43.38 307 LR LR 13 21 13.5
comp=Z,590nm,18.7s,baz=88,slow=40
AAK Ala-Archa 43.38 307 P **P 13 00 27.7 +1.4**
SNR=28
AAK Ala-Archa 43.38 307 *i* P **P 13 00 27.7 +1.4**
SNR=30
AAK Ala-Archa 43.38 307 *ceP* **P 13 00 27.5 +1.1**
AAK pmax pmax
comp=Z,55nm,0.7s
AAK Ala-Archa 43.38 307 P **P 13 00 27.6 +1.4**
AAK Ala-Archa 43.38 307 P **P 13 00 27.4 +1.1**
AAK IAmb IAmb 13 00 28.6
comp=Z,66nm,0.9s
AAK Ala-Archa 43.38 307 P **P 13 00 27.9 +1.5**
AAK PcP **PcP 13 02 14.3 +0.3**
PALK Pallekele 43.39 254 LR LR 13 20 27.0
comp=Z,216nm,18.6s,baz=63,slow=38
SGDS Sogindy 43.42 308 *eP* **P 13 00 27.4 +0.8**
SGDS *eS* **S 13 06 53.1 +2.4**
USP Ospenovka 43.48 308 P **P 13 00 28.0 +1.0**
SNR=60
SEY Seymchan 43.49 19 *ceP* **P 13 00 26.0 -0.7**
SEY pmax pmax
comp=Z,31nm,1.3s
EKS2 Erkin-Say 43.90 307 P **P 13 00 31.8 +1.3**
SNR=58
BTLS Baital 44.13 310 *eP* **P 13 00 33.1 +1.0**
BTLS Baital 44.13 310 *eP* **P 13 00 33.1 +1.0**
MANEM Manem 45.03 299 P **P 13 00 40.8 +1.0**
MANEM IAmb IAmb 13 00 42.5
comp=Z,309nm,1.3s
MBWA Marble Bar 45.25 184 P **P 13 00 41.7 +0.5**
MBWA Marble Bar 45.25 184 P **P 13 00 44.2 +3.0**
comp=Z,43nm,0.8s
MBWA Marble Bar 45.25 184 P **P 13 00 43.8 +2.6**
MBWA Marble Bar 45.25 184 P **P 13 00 40.8 -0.4**
POO Poona 45.45 273 *eP* **P 13 00 44.0 +1.0**
WRAB Tennant Creek 45.45 164 P **P 13 00 43.2 +0.3**
WRAB Tennant Creek 45.45 164 *ceP* **P 13 00 43.9 +1.0**
WRAB pmax pmax
comp=Z,29nm,0.7s
WRAB Tennant Creek 45.45 164 P **P 13 00 43.0 +0.2**
WRAB IAmb IAmb 13 01 00.6
comp=Z,48nm,0.8s
WRAB Tennant Creek 45.45 164 P **P 13 00 43.4 +0.6**
WRAB PcP **PcP 13 02 18.2 -3.0**
WRA Warramunga Arr 45.46 164 P **P 13 00 43.5 +0.6**
comp=Z,30nm,0.8s,baz=347,slow=8.8,SNR=129
WRA PcP **PcP 13 02 21.3 +0.1**
comp=Z,13nm,0.6s,baz=346,slow=3.7,SNR=7.8
comp=Z,30nm,0.8s

DZA Taraz 45.72 307 *eP* **P 13 00 45.9 +1.1**
DZA pmax pmax
comp=Z,27nm,0.7s
DZA Taraz 45.72 307 *eP* **P 13 00 45.9 +1.1**
comp=Z,27nm,0.7s
BTK Batken 45.83 303 P **P 13 00 46.6 +0.7**
BTK pmax pmax
comp=Z,240nm,1.5s
BTK Batken 45.83 303 P **P 13 00 46.6 +0.7**
GAR Garm 46.16 301 P **P 13 00 49.2 +0.7**
JASL Jaisalmer 46.31 285 *eP* **P 13 00 51.2 +1.5**
KK31 Karatay Array 46.34 307 P **P 13 00 50.1 +0.4**
KK31 pmax pmax
comp=Z,59nm,1.1s
KK31 Karatay Array 46.34 307 P **P 13 00 50.1 +0.4**
KK31 IAmb IAmb 13 00 51.7
comp=Z,59nm,1.1s
KKAR Karatay Array 46.34 307 P **P 13 00 50.1 +0.4**
KKAR Karatay Array 46.34 307 P **P 13 00 50.1 +0.4**
IUG Iuzhnay 46.59 306 *eP* **P 13 00 55.2 +3.4**
IUG pmax pmax
comp=Z,147nm,1.0s
BRLS Borolday 46.83 307 *eP* **P 13 00 54.8 +1.3**
BRLS Borolday 46.83 307 *eP* **P 13 00 54.9 +1.3**
CHM Chimkent 46.93 306 *eP* **P 13 00 55.4 +1.1**
CHM pmax pmax
comp=Z,50nm,1.0s
CHM Chimkent 46.93 306 *eP* **P 13 00 55.5 +1.1**
comp=Z,50nm,1.0s
CHGR Chuyangaron 47.05 301 *i* P **P 13 00 56.0 +0.6**
CHGR Chuyangaron 47.05 301 P **P 13 00 55.9 +0.4**
KBL Kabul 47.18 295 P **P 13 00 57.6 +0.9**
KBL pmax pmax
comp=Z,240nm,0.8s
KBL Kabul 47.18 295 P **P 13 00 58.1 +1.5**
SNR=106
KBL Kabul 47.18 295 P **P 13 00 57.5 +0.9**
MTSU Mount Surprise 47.24 151 P **P 13 00 59.2 +2.2**
comp=Z,76nm,0.8s
TIXI Tiksi 47.53 3 P **P 13 00 57.1 -1.4**
comp=Z,65nm,0.6s,baz=182,slow=4.7,SNR=26
comp=Z,65nm,0.6s
TIXI Tiksi 47.53 3 *ceP* **P 13 00 57.0 -1.5**
TIXI pmax pmax
comp=Z,90nm,0.8s
QIS Mount Isa 47.59 158 P **P 13 01 00.9 +1.2**
QIS Mount Isa 47.59 158 P **P 13 01 00.9 +1.2**
comp=Z,67nm,0.8s
SHAA Shahritus 47.85 299 P **P 13 01 02.8 +1.1**
SHAA IAmb IAmb 13 01 04.5
comp=Z,478nm,0.9s
SHEM Shemya Is, Ala 48.00 40 LR LR 13 20 20.6
comp=Z,319nm,21.7s,baz=283,slow=35
BVAR Borovoye Array 48.34 320 P **P 13 01 04.7 -0.4**
comp=Z,45nm,0.6s,baz=107,slow=8.9,SNR=274
BVAR PcP **PcP 13 02 30.6 -0.3**
comp=Z,76nm,0.7s,baz=101,slow=3.1,SNR=20
BVAR ScP **ScP 13 06 19.5 -1.4**
comp=Z,4.1nm,0.8s,baz=126,slow=3.7,SNR=4.3
comp=Z,45nm,0.6s
AS15 Alice Springs 48.92 166 P **P 13 01 11.4 +1.6**
comp=Z,31nm,0.7s
AS31 Alice Springs 48.94 166 P **P 13 01 11.4 +1.4**
comp=Z,15nm,0.7s
AS31 Alice Springs 48.94 166 P **P 13 01 10.9 +0.8**
ASAR Alice Springs 48.94 166 P **P 13 01 11.2 +1.1**
comp=Z,17nm,0.7s,baz=342,slow=7.0,SNR=225
ASAR PcP **PcP 13 02 33.6 +0.1**
comp=Z,14nm,0.7s,baz=342,slow=3.2,SNR=7.3
ASAR ScP **ScP 13 06 21.9 -1.9**
comp=Z,0.9nm,0.7s,baz=0.0,slow=3.7,SNR=3.2
comp=Z,17nm,0.7s
ASAR Alice Springs 48.94 166 P **P 13 01 11.0 +1.0**
AS01 Alice Springs 48.95 166 P **P 13 01 11.1 +1.0**
AS17 Alice Springs 48.96 166 P **P 13 01 11.8 +1.6**
comp=Z,36nm,0.6s
AS09 Alice Springs 48.98 166 P **P 13 01 11.8 +1.5**
comp=Z,41nm,0.7s
NRIK Noril'sk 49.61 345 P **P 13 01 13.0 -1.5**
comp=Z,47nm,0.8s,baz=162,slow=23,SNR=9.1
NRIK PcP **PcP 13 02 35.0 -0.2**
comp=Z,22nm,0.6s,baz=130,slow=3.0,SNR=7.0
NRIK LR LR 13 24 09.2
comp=Z,590nm,21.4s,baz=140,slow=38
comp=Z,47nm,0.8s
NRIK Noril'sk 49.61 345 *i* P **P 13 01 12.9 -1.6**
NRIK pmax pmax
comp=Z,53nm,0.9s
HNR Honiara 49.62 128 LR LR 13 20 51.1
comp=Z,10nm,21.0s,baz=12,slow=34
CTA Charters Tower 49.82 150 LR LR 13 20 20.4
comp=Z,266nm,21.9s,baz=332,slow=34
CTA Charters Tower 49.82 150 P **P 13 01 18.0 +1.3**
CTA Charters Tower 49.82 150 P **P 13 01 18.6 +1.8**
comp=Z,18nm,1.2s
CTAO Charters Tower 49.82 150 P **P 13 01 17.6 +0.9**
CTAO Charters Tower 49.82 150 P **P 13 01 18.0 +1.3**
CTAO pmax pmax
comp=Z,39nm,1.0s
CTAO Charters Tower 49.82 150 P **P 13 01 18.0 +1.3**
CTAO IAmb IAmb 13 01 37.4
comp=Z,39nm,1.0s
CTAO Charters Tower 49.82 150 P **P 13 01 18.3 +1.6**
CTAO PcP **PcP 13 02 38.3 +1.5**
MEEK Meekatharra 50.76 184 P **P 13 01 25.9 +2.1**
AMKA Amchitka 50.83 43 P **P 13 01 23.3 -0.7**
BILL Bilibino 51.19 20 *ceP* **P 13 01 26.0 -0.5**
BILL pmax pmax
comp=Z,27nm,1.0s
HRA Herat 52.79 296 P **P 13 01 39.6 +0.4**
ADK Adak 53.38 42 P **P 13 01 42.4 -0.5**
MORW Morawa 53.41 187 P **P 13 01 44.9 +1.6**
AB31 Akbulak array 54.21 314 *i* P **P 13 01 49.2 +0.1**
AB31 pmax pmax
comp=Z,72nm,0.5s
AB31 Akbulak array 54.21 314 P **P 13 01 49.3 +0.3**
ABKAR Akbulak array 54.21 314 P **P 13 01 49.4 +0.4**
INKA Innaminka 54.65 160 P **P 13 01 53.9 +1.5**
SVE Sverdlovsk 54.66 324 *di* P **P 13 01 51.9 -0.3**
SVE pmax pmax
comp=Z,123nm,0.8s
SVE MLR MLR
comp=Z,582nm,20.0s
QLP Quilpie 54.77 156 P **P 13 01 55.2 +1.9**
QLP Quilpie 54.77 156 P **P 13 01 54.7 +1.4**
comp=Z,45nm,1.2s
BLDU Ballidu 54.87 186 P **P 13 01 55.0 +1.1**
ATKA Atka Island 54.94 42 P **P 13 01 53.6 -0.7**
ATKA Atka Island 54.94 42 P **P 13 01 53.4 -0.9**
ATKA IAmb IAmb 13 01 59.2
comp=Z,54nm,1.1s
FORT Forrest 55.02 174 P **P 13 01 56.8 +1.8**
comp=Z,38nm,0.8s
FORT Forrest 55.02 174 P **P 13 01 56.0 +1.0**
FORT IAmb IAmb 13 02 23.2
comp=Z,27nm,0.7s
AKTO Aktyubinsk 55.52 316 LR LR 13 27 25.5
comp=Z,439nm,20.1s,baz=83,slow=38
ARTI Arti 55.82 323 P **P 13 01 59.6 -1.0**
comp=Z,68nm,0.6s,baz=100,slow=3.4,SNR=121
ARTI PcP **PcP 13 02 57.8 -1.2**
comp=Z,35nm,0.9s,baz=88,slow=2.1,SNR=6.6
ARTI LR LR 13 28 18.3
comp=Z,308nm,21.6s,baz=98,slow=38
comp=Z,68nm,0.6s
ARTI Arti 55.82 323 *c i* P **P 13 01 59.3 -1.3**
ARTI *PP **pP** 13 02 14.7 -0.9
ARTI 13 02 58.0
ARTI 13 04 03.6
ARTI S **S 13 09 42.4 -1.1**
ARTI SS **SS 13 13 23.5 -5.9**
ARTI pmax pmax
comp=Z,82nm,0.7s
ARTI MLR MLR
comp=Z,444nm,21.0s
ARTI Arti 55.82 323 P **P 13 01 59.6 -1.0**
ARTI Arti 55.82 323 P **P 13 01 59.7 -1.0**
ARTI PcP **PcP 13 02 58.0 -1.0**
EIDS Eidsvold 56.60 149 P **P 13 02 09.4 +2.9**
EIDS Eidsvold 56.60 149 P **P 13 02 08.0 +1.5**
comp=Z,22nm,1.1s
EIDS Eidsvold 56.60 149 P **P 13 02 07.0 +0.5**
EIDS IAmb IAmb 13 02 42.8
comp=Z,71nm,1.8s
NWAO Narrogin (SRO) 57.11 185 P **P 13 02 11.9 +2.0**

NWAO Narrogin (SRO) 57.11 185 P **P 13 02 11.1 +1.2**
JLN Jalan Bani Buh 57.54 282 P **P 13 02 15.0 +1.6**
SPIA Saint Paul Isl 57.66 36 P **P 13 02 14.4 +0.8**
SPIA Saint Paul Isl 57.66 36 P **P 13 02 13.9 +0.3**
baz=265
WBK Wadi Bani Khal 57.82 282 P **P 13 02 17.2 +1.9**
GAMB Gambell 57.83 29 P **P 13 02 14.8 +0.2**
baz=260
WSAR Wadi Sarin 57.95 283 P **P 13 02 17.6 +1.3**
BBOO Buckleboo 58.24 167 P **P 13 02 18.8 +0.9**
BBOO Buckleboo 58.24 167 P **P 13 02 19.0 +1.1**
comp=Z,103nm,0.9s
BBOO Buckleboo 58.24 167 P **P 13 02 18.6 +0.7**
BIDO Bidbid 58.33 284 P **P 13 02 20.7 +1.8**
SNR=11
SMDO Samad 58.52 283 P **P 13 02 21.9 +1.6**
SNR=6.3
JMDO Jabal Madar 58.65 282 P **P 13 02 22.5 +1.4**
SNR=5.8
STKA Stephens Creek 58.77 161 P **P 13 02 22.3 +0.7**
comp=Z,5.4nm,0.6s,baz=332,slow=5.7,SNR=14
STKA LR LR 13 30 37.9
comp=Z,113nm,19.4s,baz=6.2,slow=39
STKA PKP2ab 13 32 16.2
comp=Z,2.5nm,0.8s,baz=137,slow=8.6,SNR=4.2
comp=Z,5.4nm,0.6s
STKA Stephens Creek 58.77 161 P **P 13 02 22.6 +1.0**
STKA Stephens Creek 58.77 161 P **P 13 02 22.6 +1.0**
comp=Z,160nm,0.9s
HOQ Hoqain 59.04 284 P **P 13 02 26.0 +2.2**
SNR=20
MHTO MHTO 59.15 281 P **P 13 02 25.3 +0.8**
BANOM Banah 59.34 287 P **P 13 02 26.3 +0.4**
BANOM Banah 59.34 287 P **P 13 02 27.1 +1.1**
BSY Bisya 59.36 283 P **P 13 02 27.2 +1.2**
SNR=7.8
SHME Shamm 59.45 287 *i* P **P 13 02 28.4 +1.8**
SNR=9.3
SHME Shamm 59.45 287 P **P 13 02 28.4 +1.8**
MDH Madha 59.50 286 P **P 13 02 27.2 +0.2**
MDH Madha 59.50 286 P **P 13 02 27.3 +0.4**
HTT Hallett 59.50 164 P **P 13 02 28.4 +1.7**
HTT Hallett 59.50 164 P **P 13 02 28.4 +1.7**
comp=Z,21nm,1.0s
SOHO SOHO 59.58 285 *i* P **P 13 02 28.5 +1.0**
SNR=22
SOHO SOHO 59.58 285 P **P 13 02 28.9 +1.4**
MASF Masafi 59.60 286 P **P 13 02 29.5 +1.8**
MSFE Esma-Masafi 59.60 286 *i* P **P 13 02 29.4 +1.7**
SNR=8.6
UNV Unalaska Valle 59.65 40 P **P 13 02 30.2 +2.7**
UNV Unalaska Valle 59.65 40 P **P 13 02 27.3 -0.1**
baz=270
UOSS Minazif 59.67 286 P **P 13 02 28.8 +0.6**
UOSS Minazif 59.67 286 P **P 13 02 28.9 +0.8**
UOSS Minazif 59.67 286 P **P 13 02 28.1 0.0**
UOSS IAmb IAmb 13 02 40.4
comp=Z,17nm,0.8s
TNA Tin City 59.72 27 P **P 13 02 27.9 +0.2**
baz=262
HATD Hatta, Dubai 59.76 286 *i* P **P 13 02 30.7 +1.9**
SNR=12
HATD Hatta, Dubai 59.76 286 P **P 13 02 30.3 +1.6**
CMSA Cobar Meteorol 59.79 157 P **P 13 02 30.6 +2.0**
CMSA Cobar Meteorol 59.79 157 P **P 13 02 30.9 +2.3**
comp=Z,64nm,1.0s
ARQ Araqi 59.80 284 P **P 13 02 31.0 +1.9**
SNR=8.7
DQM DQM 59.84 280 P **P 13 02 31.2 +1.8**
ASHO Ashiyiah 59.86 285 *i* P **P 13 02 30.8 +1.3**
SNR=27
ASHO Ashiyiah 59.86 285 P **P 13 02 32.0 +2.5**
SNR=9.9
M11K Mekoryuk 59.99 33 P **P 13 02 30.0 +0.3**
baz=267
UMQ Umm Al-Quwin 60.00 286 P **P 13 02 33.0 +2.6**
NAZ Nazwa, Dubai 60.13 286 *i* P **P 13 02 32.9 +1.6**
SNR=12
NAZ Nazwa, Dubai 60.13 286 P **P 13 02 33.0 +1.7**
SNR=8.9
FAQ Al Faqa, Dubai 60.26 286 *i* P **P 13 02 33.2 +1.0**
SNR=16
FAQ Al Faqa, Dubai 60.26 286 P **P 13 02 33.5 +1.4**
SNR=10
ALNE Al Ain 60.29 285 *i* P **P 13 02 33.5 +1.1**
SNR=22
ALNE Al Ain 60.29 285 P **P 13 02 34.0 +1.6**
SNR=14
F14K Arctic Creek 60.37 27 P **P 13 02 32.3 +0.1**
baz=264,SNR=22
ASUD Al Ashush, Dub 60.52 286 *i* P **P 13 02 35.6 +1.7**
SNR=8.8
ASUD Al Ashush, Dub 60.52 286 P **P 13 02 35.8 +1.9**
SNR=6.6
ANM Nome 60.68 28 P **P 13 02 35.0 +0.6**
ANM pmax pmax
comp=Z,38nm,0.6s
ANM Nome 60.68 28 P **P 13 02 35.0 +0.6**
ANM IAmb IAmb 13 02 36.1
comp=Z,37nm,0.6s
ANM Nome 60.68 28 P **P 13 02 34.6 +0.3**
baz=265,SNR=12
KIRV Kirov 60.81 325 P **P 13 02 34.4 -0.9**
comp=Z,128nm,0.7s,baz=91,slow=3.2,SNR=70
KIRV LR LR 13 31 25.3
comp=Z,548nm,19.2s,baz=93,slow=38
comp=Z,128nm,0.7s
K13K Kusilvak Mount 60.83 31 P **P 13 02 35.3 -0.1**
K13K IAmb IAmb 13 02 37.0
comp=Z,18nm,0.6s
K13K Kusilvak Mount 60.83 31 P **P 13 02 35.5 +0.1**
baz=267,SNR=9.2
AJN Ajban 60.84 286 *i* P **P 13 02 36.9 +0.8**
SNR=6.1
AJN Ajban 60.84 286 P **P 13 02 37.2 +1.1**
SNR=6.0
C16K Lisburne Hills 61.08 24 P **P 13 02 36.6 -0.4**
C16K IAmb IAmb 13 02 37.5
comp=Z,24nm,0.8s
C16K Lisburne Hills 61.08 24 P **P 13 02 36.4 -0.6**
baz=263,SNR=7.6
F15K North Star Dit 61.09 27 P **P 13 02 37.4 +0.3**
F15K IAmb IAmb 13 02 38.8
comp=Z,32nm,0.9s
F15K North Star Dit 61.09 27 P **P 13 02 36.8 -0.3**
baz=265,SNR=25
ARMA Armidale 61.16 151 P **P 13 02 40.0 +1.8**
UMZA Um Al Zommool 61.18 284 P **P 13 02 39.2 +0.8**
G15K Niukluk 61.29 28 P **P 13 02 38.1 -0.3**
baz=266,SNR=26
J14K Nanvaranak Lak 61.38 30 P **P 13 02 39.5 +0.4**
J14K IAmb IAmb 13 02 40.3
comp=Z,14nm,0.7s
J14K Nanvaranak Lak 61.38 30 P **P 13 02 39.1 0.0**
baz=268,SNR=9.4
M13K Dall Lake 61.41 33 P **P 13 02 39.5 +0.2**
baz=269
L14K Kuka Creek 61.75 32 P **P 13 02 41.8 +0.2**
L14K IAmb IAmb 13 02 43.6
comp=Z,36nm,0.6s
L14K Kuka Creek 61.75 32 P **P 13 02 41.8 +0.2**
baz=269,SNR=26
D17K Anaatak River 61.87 25 P **P 13 02 42.1 -0.2**
baz=265,SNR=46
C17K DeLong Mountai 61.90 24 P **P 13 02 42.7 +0.1**
baz=265
RDOG Red Dog Mine 61.97 24 P **P 13 02 42.8 -0.2**
baz=265
BELG Belogornoye 62.00 318 *i* P **P 13 02 42.2 -1.2**
BELG pmax pmax
comp=Z,12nm,0.6s
G16K Koyuk River 62.02 27 P **P 13 02 43.8 +0.4**
G16K IAmb IAmb 13 03 25.8
comp=Z,41nm,0.9s
G16K Koyuk River 62.02 27 P **P 13 02 43.5 +0.2**
baz=267,SNR=20
MZWR Madinat Zayed 62.02 285 P **P 13 02 44.8 +0.7**
H16K Elim 62.04 28 P **P 13 02 43.6 +0.1**
baz=268,SNR=13
M14K Bethel 62.10 33 P **P 13 02 44.2 +0.2**
baz=270,SNR=11
N14K Kuskokwak Cree 62.24 33 P **P 13 02 45.5 +0.5**
baz=271
K15K Wolf Creek Mou 62.30 31 P **P 13 02 45.9 +0.6**
K15K IAmb IAmb 13 02 46.7
comp=Z,14nm,0.7s

K15K	**Wolf Creek Mou**	**62.30**	**31**	P		**P**		**13 02 45.6**	**+0.3**
	baz=270,SNR=12								
E17K	**Hotham Inlet**	**62.32**	**25**	P		**P**		**13 02 45.3**	**-0.1**
	baz=267,SNR=8.6								
L15K	**Ungalak Mounta**	**62.33**	**32**	P		**P**		**13 02 45.1**	**-0.3**
	baz=270								
O14K	**Tigyukauivet M**	**62.47**	**34**	P		**P**		**13 02 46.6**	**+0.1**
	baz=272								
F17K	**Baldwin Pennin**	**62.52**	**26**	P		**P**		**13 02 47.1**	**+0.5**
F17K				IAmb		IAmb		13 02 48.3	
	comp=Z,36nm,0.7s								
F17K	**Baldwin Pennin**	**62.52**	**26**	P		**P**		**13 02 46.7**	**0.0**
	baz=268,SNR=12								
MZR	**Muzera**	**62.59**	**284**	*i* P		**P**		**13 02 48.6**	**+0.7**
	SNR=40								
MZR	**Muzera**	**62.59**	**284**	P		**P**		**13 02 48.8**	**+0.9**
	SNR=22								
JRN	**Qarnain Island**	**62.61**	**287**	P		**P**		**13 02 48.8**	**+0.8**
	SNR=9.1								
C18K	**Utukok River**	**62.64**	**24**	P		**P**		**13 02 47.1**	**-0.4**
C18K	**Utukok River**	**62.64**	**24**	P		**P**		**13 02 47.6**	**0.0**
	baz=267,SNR=9.9								
I17K	**Unalakleet**	**62.69**	**29**	P		**P**		**13 02 48.5**	**+0.7**
I17K				IAmb		IAmb		13 02 49.5	
	comp=Z,30nm,0.6s								
I17K	**Unalakleet**	**62.69**	**29**	P		**P**		**13 02 47.6**	**-0.3**
	baz=270,SNR=13								
M15K	**Kasigluk River**	**62.72**	**33**	P		**P**		**13 02 47.9**	**-0.3**
	baz=271								
G17K	**Kiwalik Mounta**	**62.73**	**27**	P		**P**		**13 02 48.2**	**0.0**
	baz=269,SNR=78								
J16K	**Anvik River**	**62.73**	**30**	P		**P**		**13 02 48.8**	**+0.6**
J16K				IAmb		IAmb		13 03 29.1	
	comp=Z,34nm,0.9s								
J16K	**Anvik River**	**62.73**	**30**	P		**P**		**13 02 48.2**	**+0.1**
	baz=270,SNR=7.1								
A19K	**Wainwright**	**62.78**	**22**	P		**P**		**13 02 48.5**	**+0.1**
	baz=266								
E18K	**Tukpahlearik C**	**62.81**	**25**	P		**P**		**13 02 48.3**	**-0.3**
	baz=268								
DZM	**Mont Dzumac**	**62.85**	**134**	P		**P**		**13 02 50.5**	**+0.8**
	comp=Z,14nm,0.8s,baz=135,slow=22,SNR=5.7								
	comp=Z,14nm,0.8s								
DMTO	**DMTO**	**62.85**	**278**	P		**P**		**13 02 50.1**	**+0.4**
GHWR	**Ruwais**	**62.85**	**286**	P		**P**		**13 02 50.5**	**+0.9**
N15K	**Kwethluk River**	**63.03**	**33**	P		**P**		**13 02 50.3**	**+0.1**
N15K				IAmb		IAmb		13 02 53.4	
	comp=Z,25nm,0.8s								
N15K	**Kwethluk River**	**63.03**	**33**	P		**P**		**13 02 50.4**	**+0.1**
	baz=272,SNR=13								
H17K	**Granite Mounta**	**63.04**	**28**	P		**P**		**13 02 50.3**	**+0.1**
	baz=270,SNR=48								
SDPT	**Sand Point**	**63.10**	**39**	P		**P**		**13 02 52.8**	**+2.1**
SDPT	**Sand Point**	**63.10**	**39**	P		**P**		**13 02 50.0**	**-0.7**
	baz=274								
MAK	**Makhachkala**	**63.16**	**307**	*e*P		**P**		**13 02 51.6**	**+0.3**
MAK				*e**SP		**sP**		**13 03 12.1**	**-0.9**
MAK				*e*				13 05 09.2	
MAK				*e*S		**S**		**13 11 19.6**	**+1.2**
MAK				*e**SS		**sS**		**13 11 44.3**	**-0.2**
MAK				pmax		pmax			
	comp=Z,191nm,1.2s								
MAK				MLR		MLR			
	comp=Z,266nm,15.0s								
F18K	**Selawik**	**63.16**	**26**	P		**P**		**13 02 50.7**	**-0.2**
	baz=269,SNR=33								
O15K	**Ungalikthiuk R**	**63.21**	**34**	P		**P**		**13 02 51.4**	**0.0**
	baz=273,SNR=5.1								
AKT	**Akhty**	**63.23**	**306**	⇑*i* P		**P**		**13 02 52.4**	**+0.4**
AKT				*e**SP		**sP**		**13 03 12.3**	**-1.4**
AKT				*e*				13 03 29.0	
AKT				*e*				13 05 12.4	
AKT				*e*PPP		PPP		13 06 41.4	
AKT				pmax		pmax			
	comp=Z,64nm,0.9s								
AKT				MLR		MLR			
	comp=Z,394nm,21.0s								
C19K	**Lookout Ridge**	**63.25**	**23**	P		**P**		**13 02 51.2**	**-0.4**
	baz=268,SNR=9.2								
L16K	**Owhat River**	**63.28**	**31**	P		**P**		**13 02 51.9**	**0.0**
L16K				IAmb		IAmb		13 03 30.4	
	comp=Z,64nm,1.6s								
L16K	**Owhat River**	**63.28**	**31**	P		**P**		**13 02 51.6**	**-0.2**
	baz=272,SNR=7.9								
ARPS	**Mount Arapiles**	**63.42**	**163**	P		**P**		**13 02 54.0**	**+1.0**
	comp=Z,34nm,1.1s								
J17K	**VABM Dome**	**63.42**	**30**	P		**P**		**13 02 52.9**	**+0.1**
	baz=271,SNR=64								
M16K	**Timber Creek**	**63.56**	**32**	P		**P**		**13 02 53.7**	**0.0**
	baz=273,SNR=10.0								
G18K	**Tagagawik**	**63.56**	**27**	P		**P**		**13 02 53.2**	**-0.4**
	baz=270,SNR=29								
RBK	**Rabkut**	**63.59**	**278**	P		**P**		**13 02 55.6**	**+0.9**
CHNA	**Chernabura Isl**	**63.65**	**39**	P		**P**		**13 02 53.2**	**-1.2**
	baz=275								
N16K	**Nishlik Lake**	**63.68**	**33**	P		**P**		**13 02 54.4**	**-0.1**
	baz=273								
H18K	**Honhosa River**	**63.69**	**28**	P		**P**		**13 02 54.3**	**-0.2**
	baz=271								
D19K	**Kuna River**	**63.77**	**24**	P		**P**		**13 02 54.5**	**-0.5**
	baz=270								
K17K	**Iditarod**	**63.80**	**30**	P		**P**		**13 02 55.3**	**+0.1**
	baz=272								
L17K	**Donlin**	**63.82**	**31**	P		**P**		**13 02 55.8**	**+0.3**
	baz=273,SNR=17								
WHFO	**Wadi Hawf**	**63.85**	**279**	P		**P**		**13 02 56.7**	**+0.4**
F19K	**Shaleruckik Mo**	**63.91**	**26**	P		**P**		**13 02 55.1**	**-0.7**
	baz=271,SNR=23								
O16K	**Kokwok River B**	**64.07**	**34**	P		**P**		**13 02 57.0**	**-0.1**
O16K	**Kokwok River B**	**64.07**	**34**	P		**P**		**13 02 56.7**	**-0.4**
	baz=274,SNR=7.0								
E19K	**Redstone River**	**64.11**	**25**	P		**P**		**13 02 56.9**	**-0.3**
	baz=271								
B20K	**Meade River**	**64.11**	**22**	P		**P**		**13 02 56.9**	**-0.3**
	baz=270								
P16K	**Nushagak River**	**64.17**	**34**	P		**P**		**13 02 57.5**	**-0.2**
	baz=274								
G19K	**Purcell Mounta**	**64.20**	**26**	P		**P**		**13 02 58.0**	**+0.2**
G19K				IAmb		IAmb		13 03 34.7	
	comp=Z,43nm,0.8s								
G19K	**Purcell Mounta**	**64.20**	**26**	P		**P**		**13 02 57.4**	**-0.4**
	baz=272,SNR=15								
M17K	**Holitna River**	**64.27**	**32**	P		**P**		**13 02 59.2**	**+0.8**
M17K				IAmb		IAmb		13 03 06.8	
	comp=Z,30nm,1.1s								
M17K	**Holitna River**	**64.27**	**32**	P		**P**		**13 02 58.7**	**+0.3**
	baz=274,SNR=11								
D20K	**Etivluk River**	**64.32**	**24**	P		**P**		**13 02 58.1**	**-0.5**
	baz=271								
GCSA	**Galena City Sc**	**64.34**	**28**	P		**P**		**13 02 58.2**	**-0.5**
	baz=273,SNR=9.9								
SAKB	**Bahrain**	**64.34**	**288**	P		**P**		**13 03 00.3**	**+0.8**
CAN	**Canberra**	**64.39**	**156**	P		**P**		**13 03 01.6**	**+2.1**
N17K	**Nushagak Hills**	**64.46**	**33**	P		**P**		**13 02 59.6**	**0.0**
N17K	**Nushagak Hills**	**64.46**	**33**	P		**P**		**13 02 59.6**	**0.0**
	baz=274,SNR=6.7								
J18K	**Innoko River**	**64.48**	**29**	P		**P**		**13 02 59.4**	**-0.3**
	baz=273,SNR=16								
H19K	**Roundabout Mou**	**64.48**	**27**	P		**P**		**13 02 59.7**	**+0.1**
	baz=273,SNR=58								
O17K	**Koliganek Bris**	**64.56**	**34**	P		**P**		**13 03 00.4**	**+0.1**
	baz=275,SNR=8.4								
L18K	**Granite Mounta**	**64.57**	**31**	P		**P**		**13 03 00.5**	**+0.2**
	baz=274,SNR=9.7								
F20K	**Avaraart Lake**	**64.71**	**25**	P		**P**		**13 03 01.0**	**-0.1**
	baz=273,SNR=30								
A22K	**Sinclair Lake**	**64.84**	**21**	P		**P**		**13 03 01.8**	**-0.1**
	baz=271								
Q16K	**King Salmon**	**64.89**	**35**	P		**P**		**13 03 02.2**	**-0.2**
	baz=276,SNR=14								
J19K	**Poorman**	**64.93**	**29**	P		**P**		**13 03 02.4**	**-0.2**
	baz=274,SNR=36								
P17K	**Kvichak River**	**64.95**	**34**	P		**P**		**13 03 03.1**	**+0.3**
	baz=276,SNR=11								
C21K	**Knifeblade Rid**	**64.97**	**23**	P		**P**		**13 03 02.6**	**-0.1**
	baz=272,SNR=30								
M18K	**Stony River**	**65.04**	**32**	P		**P**		**13 03 03.6**	**+0.3**
	baz=275								
N18K	**Kilae Creek**	**65.08**	**32**	P		**P**		**13 03 03.9**	**+0.2**
	baz=275								
H20K	**Anotleneega Mo**	**65.14**	**27**	P		**P**		**13 03 04.0**	**0.0**
	baz=274,SNR=70								
R17L	**Mt. Peulik Vol**	**65.16**	**36**	P		**P**		**13 03 03.7**	**-0.6**
	baz=276								
E21K	**Killik River**	**65.30**	**24**	P		**P**		**13 03 04.7**	**-0.3**
	baz=274								
Q17K	**Contact Creek**	**65.34**	**35**	P		**P**		**13 03 05.0**	**-0.4**
	baz=277								
I20K	**Naaghedeneel**	**65.36**	**28**	P		**P**		**13 03 05.8**	**+0.4**
	baz=275								
B22K	**Teshekpuk Lake**	**65.38**	**22**	P		**P**		**13 03 05.2**	**-0.2**
	baz=273								
TBLG	**Delisi**	**65.39**	**306**	P		**P**		**13 03 06.5**	**+0.4**
L19K	**White Mountain**	**65.43**	**31**	P		**P**		**13 03 06.0**	**0.0**
	baz=276,SNR=16								
O18K	**Koktuh Hills**	**65.50**	**33**	P		**P**		**13 03 06.2**	**-0.2**
	baz=276,SNR=16								
P18K	**Big Mountain,**	**65.55**	**34**	P		**P**		**13 03 06.2**	**-0.6**
	baz=277,SNR=9.8								
J20K	**Nowinta River**	**65.56**	**29**	P		**P**		**13 03 07.1**	**+0.4**
	baz=275,SNR=84								
F21K	**Alatna River**	**65.57**	**25**	P		**P**		**13 03 06.2**	**-0.6**
	baz=275,SNR=30								
G21K	**Allakaket**	**65.62**	**26**	P		**P**		**13 03 06.9**	**-0.1**
	baz=275								
ACHA	**Angle Creek He**	**65.64**	**35**	P		**P**		**13 03 06.8**	**-0.6**
ACHA				IAmb		IAmb		13 03 10.9	
	comp=Z,25nm,0.8s								
K20K	**Telida**	**65.67**	**29**	P		**P**		**13 03 07.7**	**+0.3**
	baz=276								
M19K	**Big River Lodg**	**65.68**	**31**	P		**P**		**13 03 07.8**	**+0.3**
	baz=276								
KLMR	**Klimovskoe**	**65.70**	**328**	*e*P		**P**		**13 03 06.4**	**-1.2**
KLMR				*e**PP		**pP**		**13 03 22.9**	**-0.1**
KLMR				pmax		pmax			
	comp=Z,80nm,1.1s								
KLMR				MLR		MLR			
	comp=Z,435nm,15.0s								
GNI	**Garni**	**65.71**	**305**	LR		LR		13 36 29.3	
	comp=Z,158nm,18.2s,baz=97,slow=40								
GNI	**Garni**	**65.71**	**305**	P		**P**		**13 03 09.7**	**+1.4**
GNI	**Garni**	**65.71**	**305**	*i* P		**P**		**13 03 09.0**	**+0.7**
GNI				pmax		pmax			
	comp=Z,53nm,1.0s								
GNI	**Garni**	**65.71**	**305**	P		**P**		**13 03 09.3**	**+1.0**
GNI	**Garni**	**65.71**	**305**	P		**P**		**13 03 08.9**	**+0.7**
GNI				IAmb		IAmb		13 03 10.9	
	comp=Z,99nm,1.3s								
Q18K	**Katmai Hardscr**	**65.75**	**35**	P		**P**		**13 03 06.8**	**-1.4**
	baz=277,SNR=9.6								
N19K	**Bonanza Creek**	**65.75**	**32**	P		**P**		**13 03 08.2**	**+0.1**
	baz=277								
VRH	**Novokhopyorsk**	**65.78**	**317**	*e*P		**P**		**13 03 06.8**	**-1.5**
VRH				pmax		pmax			
	comp=Z,72nm,0.8s								
CHIR	**Chirikof Islan**	**65.79**	**38**	P		**P**		**13 03 09.7**	**+1.4**
O19K	**Port Alsworth**	**65.91**	**33**	P		**P**		**13 03 09.0**	**+0.1**
	baz=277,SNR=5.3								
KBD	**Kabd**	**65.92**	**292**	P		**P**		**13 03 10.1**	**+0.5**
ADZR	**Andozero**	**65.93**	**331**	*e*P		**P**		**13 03 06.0**	**-3.1**
ADZR				pmax		pmax			
	comp=Z,100nm,0.7s								
H21K	**Melozitna Rive**	**65.98**	**27**	P		**P**		**13 03 09.6**	**+0.1**
	baz=276,SNR=137								
F22K	**John River**	**66.05**	**25**	P		**P**		**13 03 10.1**	**+0.3**
	baz=276								
E22K	**Anaktuvuk Pass**	**66.12**	**24**	P		**P**		**13 03 10.5**	**+0.1**
	baz=276								
KBZ	**Khabaz**	**66.33**	**309**	P		**P**		**13 03 12.3**	**+0.3**
	comp=Z,43nm,0.9s,baz=89,slow=6.0,SNR=76								
KBZ				LR		LR		13 33 56.2	
	comp=Z,236nm,18.4s,baz=72,slow=38								
	comp=Z,43nm,0.9s								
KBZ	**Khabaz**	**66.33**	**309**	*i* P		**P**		**13 03 12.4**	**+0.4**
KBZ				pmax		pmax			
	comp=Z,10.0nm,0.9s								
G22K	**Bettles**	**66.37**	**25**	P		**P**		**13 03 11.5**	**-0.3**
	baz=276								
I21K	**Tanana**	**66.38**	**27**	P		**P**		**13 03 12.2**	**+0.3**
	baz=277,SNR=58								
C23K	**Itkillik River**	**66.38**	**22**	P		**P**		**13 03 11.7**	**-0.1**
	baz=276								
CHUM	**Lake Minchumin**	**66.39**	**29**	P		**P**		**13 03 12.3**	**+0.3**
	baz=277,SNR=20								
KIV	**Kislovodsk**	**66.43**	**309**	⇓P		**P**		**13 03 12.6**	**-0.2**
KIV	**Kislovodsk**	**66.43**	**309**	*i* P		**P**		**13 03 13.4**	**+0.6**
	SNR=21								
KIV	**Kislovodsk**	**66.43**	**309**	*e*P		**P**		**13 03 13.1**	**+0.3**
KIV				*e*S		**S**		**13 12 00.1**	**+1.2**
KIV				pmax		pmax			
	comp=Z,102nm,1.0s								
KIV				pmax		pmax			
	comp=Z,41nm,3.3s								
KIV				MLR		MLR			
	comp=Z,249nm,17.0s								
KIV	**Kislovodsk**	**66.43**	**309**	P		**P**		**13 03 13.4**	**+0.6**
KIV	**Kislovodsk**	**66.43**	**309**	P		**P**		**13 03 13.6**	**+0.8**
KIV				PcP		**PcP**		**13 03 41.6**	**-0.5**
D23K	**Nanushuk River**	**66.45**	**23**	P		**P**		**13 03 12.5**	**+0.2**
	baz=276								
SII	**Sitkinak Islan**	**66.48**	**37**	P		**P**		**13 03 14.9**	**+2.2**
SII	**Sitkinak Islan**	**66.48**	**37**	P		**P**		**13 03 12.5**	**-0.2**
	baz=279								
SHA1	**Shidzhatmaz**	**66.50**	**309**	*i* P		**P**		**13 03 12.7**	**-0.7**
P19K	**Oil Pt**	**66.52**	**33**	P		**P**		**13 03 12.5**	**-0.5**
	baz=278								
H22K	**Ishtalitna Cre**	**66.54**	**27**	P		**P**		**13 03 13.4**	**+0.4**
	baz=277								
CAST	**Castle Rocks**	**66.56**	**29**	P		**P**		**13 03 13.1**	**0.0**
	baz=278,SNR=37								
PPLA	**Purkeypile**	**66.58**	**30**	P		**P**		**13 03 13.1**	**-0.4**
	baz=278,SNR=29								
RED	**Redoubt Volcan**	**66.64**	**33**	P		**P**		**13 03 13.7**	**-0.1**
O20K	**Slope Mountain**	**66.76**	**33**	P		**P**		**13 03 14.3**	**-0.2**
	baz=278								
SPCR	**Spurr Chakacha**	**66.80**	**32**	P		**P**		**13 03 14.6**	**-0.2**
	baz=278,SNR=5.5								
COLD	**Coldfoot**	**66.84**	**25**	P		**P**		**13 03 14.6**	**-0.2**
	baz=278,SNR=32								
OHAK	**Old Harbor**	**66.86**	**36**	P		**P**		**13 03 15.6**	**+0.5**
OHAK	**Old Harbor**	**66.86**	**36**	P		**P**		**13 03 14.5**	**-0.6**
	baz=279,SNR=12								
SPU	**Mount Spurr**	**66.88**	**32**	P		**P**		**13 03 14.7**	**-0.6**
TOLK	**Toolik Lake Re**	**66.89**	**23**	P		**P**		**13 03 15.0**	**-0.2**
	baz=278,SNR=47								
MLY	**Manley**	**66.92**	**27**	P		**P**		**13 03 15.5**	**0.0**
	baz=278,SNR=72								
LVZ	**Lovozero**	**66.94**	**336**	*i* P		**P**		**13 03 14.1**	**-1.4**
LVZ	**Lovozero**	**66.94**	**336**	P		**P**		**13 03 15.0**	**-0.5**
LVZ				IAmb		IAmb		13 03 21.5	
	comp=Z,32nm,0.7s								
LVZ	**Lovozero**	**66.94**	**336**	P		**P**		**13 03 14.7**	**-0.8**
	comp=Z,505nmcomp=Z,58nm,1.3s								
LVZ	**Lovozero**	**66.94**	**336**	P		**P**		**13 03 14.7**	**-0.8**
E23K	**Chandalar**	**66.95**	**24**	P		**P**		**13 03 15.8**	**+0.1**
	baz=278,SNR=81								
G23K	**Bananza Creek**	**66.98**	**26**	P		**P**		**13 03 16.3**	**+0.5**
G23K				IAmb		IAmb		13 03 17.2	
	comp=Z,35nm,0.7s								
G23K	**Bananza Creek**	**66.98**	**26**	P		**P**		**13 03 15.8**	**0.0**
	baz=278,SNR=55								
SKT	**Skwentna**	**67.01**	**31**	P		**P**		**13 03 15.0**	**-1.1**
	baz=279,SNR=16								
D24K	**Happy Valley**	**67.09**	**23**	P		**P**		**13 03 16.3**	**-0.1**
	baz=278								
KDAK	**Kodiak Island**	**67.14**	**35**	*i* P		**P**		**13 03 16.9**	**0.0**
KDAK				pmax		pmax			
	comp=Z,62nm,0.9s								
KDAK	**Kodiak Island**	**67.14**	**35**	P		**P**		**13 03 16.1**	**-0.8**
	baz=280								
KDAK	**Kodiak Island**	**67.14**	**35**	P		**P**		**13 03 16.8**	**0.0**
LPSR	**Galich'ya Gora**	**67.25**	**319**	*e*P		**P**		**13 03 15.1**	**-2.5**
LPSR				pmax		pmax			
	comp=Z,50nm,0.9s								
VORR	**Voronezh**	**67.25**	**318**	*e*P		**P**		**13 03 16.2**	**-1.5**
VORR				pmax		pmax			
	comp=Z,63nm,0.5s								
L22K	**Petersville**	**67.28**	**30**	P		**P**		**13 03 16.8**	**-0.9**
	baz=279,SNR=49								
H23K	**Yukon River**	**67.30**	**26**	P		**P**		**13 03 18.3**	**+0.4**
	baz=279								
HOM	**Homer**	**67.32**	**33**	P		**P**		**13 03 17.6**	**-0.4**
	baz=279								
VORD	**Divnogorie**	**67.33**	**317**	*e*P		**P**		**13 03 15.3**	**-2.9**
VORD				pmax		pmax			
	comp=Z,30nm,1.0s								
TRF	**Thorofare Moun**	**67.35**	**29**	P		**P**		**13 03 17.7**	**-0.7**
	baz=279,SNR=17								
VSR	**Storozhevoye**	**67.36**	**317**	*e*P		**P**		**13 03 17.0**	**-1.4**
VSR				pmax		pmax			
	comp=Z,44nm,0.8s								
E24K	**Your Creek**	**67.37**	**24**	P		**P**		**13 03 18.3**	**0.0**
	baz=279,SNR=79								
MOS	**Moscow**	**67.44**	**322**	*e*P		**P**		**13 03 18.0**	**-0.8**
MOS				*e*				13 03 45.7	
MOS				*e*S		**S**		**13 12 09.3**	**-1.0**
MOS				pmax		pmax			
	comp=Z,41nm,0.7s								
APA	**Apatity**	**67.45**	**335**	*e*P		**P**		**13 03 16.1**	**-2.6**
APA				*e*				13 03 45.2	
APA				*e*				13 05 43.6	
APA				pmax		pmax			
	comp=Z,69nm,1.1s								
APA				MLR		MLR			
	comp=Z,426nm,20.7s								
I23K	**Minto, Yukon-K**	**67.48**	**27**	P		**P**		**13 03 18.8**	**-0.1**
	baz=279,SNR=30								
CUT	**Chulitna**	**67.53**	**30**	P		**P**		**13 03 18.2**	**-1.1**
	baz=280,SNR=9.1								
ERBR	**Yeremizino-Bor**	**67.60**	**311**	*e*P		**P**		**13 03 20.2**	**+0.1**
ERBR				*e**PP		**pP**		**13 03 35.5**	**0.0**
ERBR				pmax		pmax			
	comp=Z,155nm,0.9s								
BATM	**Batumi**	**67.65**	**307**	⇑P		**P**		**13 03 20.2**	**-0.2**
BATM	**Batumi**	**67.65**	**307**	P		**P**		**13 03 20.2**	**-0.2**
LABN	**Labinsk**	**67.67**	**310**	*e*P		**P**		**13 03 20.3**	**-0.2**
LABN				*e**PP		**pP**		**13 03 37.2**	**+1.2**
LABN				*e*S		**S**		**13 12 15.0**	**+1.4**
LABN				pmax		pmax			
	comp=Z,25nm,0.7s								
F24K	**Squaw Lake**	**67.68**	**25**	P		**P**		**13 03 20.3**	**+0.1**
	baz=280,SNR=159								
NEA2	**Nenana**	**67.69**	**28**	P		**P**		**13 03 19.8**	**-0.5**
	baz=280,SNR=100								
M22K	**Willow**	**67.70**	**31**	P		**P**		**13 03 19.2**	**-1.2**
	baz=280,SNR=19								
BRSE	**Bradley Lake S**	**67.75**	**33**	P		**P**		**13 03 19.8**	**-1.0**
	baz=280,SNR=5.6								
MCK	**McKinley**	**67.90**	**29**	P		**P**		**13 03 20.8**	**-0.9**
	baz=280,SNR=15								
D25K	**Kavik River**	**67.93**	**23**	P		**P**		**13 03 21.4**	**-0.4**
	baz=280								
H24K	**Noodor Dome**	**67.97**	**26**	P		**P**		**13 03 22.3**	**+0.2**
	baz=280,SNR=56								
G24K	**Hadweenzic Riv**	**67.98**	**25**	P		**P**		**13 03 22.2**	**+0.2**
	baz=280,SNR=69								
RC01	**Rabbit Creek A**	**68.00**	**32**	P		**P**		**13 03 21.6**	**-0.7**
	baz=280,SNR=8.8								
O22K	**Cooper Landing**	**68.12**	**32**	P		**P**		**13 03 21.6**	**-1.4**
	baz=281,SNR=13								
OBN	**Obninsk**	**68.14**	**322**	LR		LR		13 36 56.9	
	comp=Z,290nm,20.0s,baz=60,slow=39								
OBN	**Obninsk**	**68.14**	**322**	⇑P		**P**		**13 03 22.6**	**-0.6**
OBN	**Obninsk**	**68.14**	**322**	*c i* P		**P**		**13 03 21.8**	**-1.4**
OBN				*i* *SP		**pP**		**13 03 39.2**	**+0.5**
OBN				*i*				13 03 47.9	
OBN				S		**S**		**13 12 18.0**	**-0.8**
OBN				pmax		pmax			
	comp=Z,17nm,0.8s								
OBN				MLR		MLR			
	comp=Z,456nm,22.0s								
OBN	**Obninsk**	**68.14**	**322**	P		**P**		**13 03 22.3**	**-0.9**
	comp=Z,832nmcomp=Z,62nm,0.7s								
COLA	**College**	**68.16**	**27**	P		**P**		**13 03 24.4**	**+1.2**
COLA	**College**	**68.16**	**27**	*i* P		**P**		**13 03 22.8**	**-0.4**
COLA				pmax		pmax			
	comp=Z,26nm,0.7s								
COLA	**College**	**68.16**	**27**	P		**P**		**13 03 23.8**	**+0.6**
COLA				IAmb		IAmb		13 03 25.0	
	comp=Z,33nm,0.8s								
COLA	**College**	**68.16**	**27**	P		**P**		**13 03 22.3**	**-0.9**
	baz=281								
COLA	**College**	**68.16**	**27**	P		**P**		**13 03 22.7**	**-0.5**
PMR	**Palmer**	**68.20**	**31**	P		**P**		**13 03 22.8**	**-0.7**
PMR	**Palmer**	**68.20**	**31**	P		**P**		**13 03 22.6**	**-0.9**
PMR				pmax		pmax			
	comp=Z,19nm,0.8s								
PMR	**Palmer**	**68.20**	**31**	P		**P**		**13 03 22.6**	**-0.9**
PMR	**Palmer**	**68.20**	**31**	P		**P**		**13 03 22.3**	**-1.2**
	baz=281,SNR=17								
WAT1	**Susitna Watana**	**68.23**	**30**	P		**P**		**13 03 22.4**	**-1.3**
	baz=281								
POKR	**Poker Plat Res**	**68.29**	**27**	P		**P**		**13 03 23.7**	**-0.4**
	baz=281								
HOPEN	**Hopen**	**68.30**	**345**	*e*P		**P**		**13 03 23.7**	**-0.2**
HOPEN				IAmb		IAmb		13 03 24.3	
	comp=Z,66nm,0.9s								
HOPEN				IAMs_20		IAMs_20		13 38 28.7	
	comp=Z,810nm,20.8s								
C26K	**Camden Bay**	**68.32**	**22**	P		**P**		**13 03 24.3**	**+0.2**
	baz=281								
SEW	**Seward**	**68.33**	**33**	P		**P**		**13 03 23.2**	**-1.0**
	baz=281,SNR=8.9								
VSLR	**Vesyoloye**	**68.42**	**309**	*i* P		**P**		**13 03 24.9**	**-0.3**
VSLR				pmax		pmax			
	comp=Z,83nm,0.8s								
MSVF	**Nonsavu**	**68.42**	**122**	LR		LR		13 29 59.5	
	comp=Z,133nm,20.3s,baz=357,slow=33								
MSVF	**Non

baz=283
RAYN Ar Rayn 69.44 287 *i* P **P** **13 03 32.6 +0.6**
SNR=89
RAYN Ar Rayn 69.44 287 P **P** **13 03 32.6 +0.6**
RAYN Ar Rayn 69.44 287 P **P** **13 03 32.7 +0.7**
RAYN Ar Rayn 69.44 287 P **P** **13 03 32.5 +0.6**
M24K Tolsona, Glenn 69.46 30 P **P** **13 03 31.4 0.0**
baz=283,SNR=19
PAX Paxson 69.58 29 P **P** **13 03 31.7 -0.5**
baz=283,SNR=18
SPB2 Spitsbergen Ar 69.63 348 P **P** **13 03 31.3 -0.9**
SPB2 IAmb IAmb 13 03 33.0
comp=Z,77nm,0.7s
SPA0 Spitsbergen Ar 69.63 348 *e*P **P** **13 03 31.1 -1.1**
SPA0 IAmb IAmb 13 03 32.5
comp=Z,76nm,0.8s
SPA0 IAMs_20 IAMs_20 13 37 33.6
comp=Z,432nm,23.1s
SPITS Spitsbergen Ar 69.63 348 P **P** **13 03 30.8 -1.4**
comp=Z,31nm,0.5s,baz=81,slow=10,SNR=75
SPITS LR LR 13 38 21.8
comp=Z,366nm,20.3s,baz=56,slow=40
comp=Z,31nm,0.5s
RIDG Independent Ri 69.68 28 P **P** **13 03 31.6 -1.1**
baz=284,SNR=14
KLU Klutina 69.72 31 P **P** **13 03 33.1 0.0**
KLU Klutina 69.72 31 P **P** **13 03 32.8 -0.3**
baz=284,SNR=15
D27M Malcolm River 69.82 22 P **P** **13 03 33.8 +0.2**
baz=285
HARP HAARP 69.86 30 P **P** **13 03 33.4 -0.4**
baz=284
E27K Coleen River 69.87 23 P **P** **13 03 34.0 +0.1**
baz=285,SNR=28
DIV Divide 69.88 31 P **P** **13 03 33.6 -0.5**
ARA0 ARCESS Array S 69.88 338 *e*P **P** **13 03 33.0 -0.8**
ARA0 IAmb IAmb 13 03 34.0
comp=Z,56nm,0.9s
ARA0 IAMs_20 IAMs_20 13 35 10.6
comp=Z,363nm,24.6s
ARA0 IAMs_20 IAMs_20 13 35 10.9
comp=Z,363nm,24.6s
ARCES ARCESS Array B 69.88 338 P **P** **13 03 33.0 -0.8**
comp=Z,46nm,0.9s,baz=60,slow=6.0,SNR=88
ARCES LR LR 13 39 10.3
comp=Z,222nm,18.3s,baz=88,slow=40
comp=Z,46nm,0.9s
ANN Anapa 69.91 311 *e*P **P** **13 03 34.0 -0.4**
ANN *e*S **S** **13 12 41.1 +1.0**
ANN pmax pmax
comp=Z,163nm,1.0s
ANN MLR MLR
comp=Z,347nm,22.0s
I26K Coal Creek Min 70.01 26 P **P** **13 03 33.9 -0.8**
baz=284
EYAK Cordova Ski Ar 70.03 32 P **P** **13 03 34.0 -0.8**
EYAK Cordova Ski Ar 70.03 32 P **P** **13 03 34.8 0.0**
baz=284
SGF Sodankyl 70.07 336 P **P** **13 03 34.3 -0.7**
SGF pmax pmax
comp=Z,102nm,1.2s
KBS Kingsbay 70.16 349 P **P** **13 03 35.0 -0.3**
KBS pmax pmax
comp=Z,37nm,0.8s
KBS Kingsbay 70.16 349 *e*P **P** **13 03 34.3 -1.0**
KBS IAmb IAmb 13 03 35.5
comp=Z,23nm,0.7s
KBS IAMs_20 IAMs_20 13 37 13.9
comp=Z,549nm,21.7s
KBS Kingsbay 70.16 349 *i* P **P** **13 03 34.5 -0.8**
G27K Doyon Strip 70.21 25 P **P** **13 03 36.0 +0.1**
baz=285
N25K Chitina, Valde 70.31 30 P **P** **13 03 36.5 -0.2**
baz=285
BJO1 Bjornoya 70.32 344 *e*P **P** **13 03 35.2 -1.1**
BJO1 IAmb IAmb 13 03 36.1
comp=Z,40nm,0.7s
BJO1 IAMs_20 IAMs_20 13 35 47.6
comp=Z,787µm,99.9s
H27K Steamboat Moun 70.41 25 P **P** **13 03 37.5 +0.3**
baz=286,SNR=29
BMRM Bremner River 70.47 31 P **P** **13 03 37.3 -0.4**
baz=285,SNR=6.5
E28M Babbage River 70.49 23 P **P** **13 03 37.5 -0.1**
baz=286
L26K Log Cabin Wild 70.51 29 P **P** **13 03 37.8 0.0**
baz=285,SNR=18
I27K Kandik River 70.55 26 P **P** **13 03 38.3 +0.3**
baz=286
RAGM Ragged Mountai 70.58 32 P **P** **13 03 38.4 0.0**
RAGM IAmb IAmb 13 04 23.1
comp=Z,53nm,1.2s
F28M Old Crow 70.66 24 P **P** **13 03 38.7 +0.1**
baz=287,SNR=41
GLB Gilahina Butte 70.72 31 P **P** **13 03 39.4 +0.3**
KTK1 Kautokeino 70.80 338 *e*P **P** **13 03 38.6 -0.9**
KTK1 IAmb IAmb 13 03 40.1
comp=Z,33nm,0.7s
KTK1 IAMs_20 IAMs_20 13 40 39.7
comp=Z,252nm,14.4s
M26K Nabesna, AK 70.83 29 P **P** **13 03 39.5 -0.4**
baz=286
OUL Oulu 70.96 334 P **P** **13 03 39.4 -1.0**
OUL pmax pmax
comp=Z,86nm,1.0s
BERG Berg Lake 71.05 32 P **P** **13 03 41.5 +0.4**
BERG IAmb IAmb 13 04 20.7
comp=Z,156nm,1.8s
MCARA McCarthy VSAT 71.10 30 P **P** **13 03 41.2 -0.1**
baz=286,SNR=7.7
E29M Blow River 71.14 23 P **P** **13 03 41.3 -0.2**
baz=288,SNR=15
L27K Beaver Creek, 71.17 29 P **P** **13 03 42.0 +0.2**
baz=286
CRQE Cirque 71.24 31 P **P** **13 03 42.0 -0.4**
baz=286
I28M Miner Creek 71.26 26 P **P** **13 03 42.6 +0.2**
baz=287,SNR=36
M27K Edge Creek, AK 71.34 29 P **P** **13 03 42.8 -0.3**
baz=287,SNR=12
G29M Pine Creek 71.55 24 P **P** **13 03 43.9 -0.1**
G29M IAmb IAmb 13 03 45.0
comp=Z,40nm,0.8s
G29M Pine Creek 71.55 24 P **P** **13 03 44.0 -0.1**
baz=288,SNR=54
JETT Jettan, Norway 71.58 339 *e*P **P** **13 03 43.7 -0.5**
JETT IAmb IAmb 13 03 44.6
comp=Z,100nm,0.8s
H29M Whitestone 71.64 25 P **P** **13 03 44.3 -0.2**
baz=288,SNR=22
BVCY Beaver Creek 71.78 29 P **P** **13 03 45.7 +0.2**
baz=287,SNR=6.8
GRNC Granite Creek 71.88 31 P **P** **13 03 46.7 +0.4**
DAWY Dawson 71.91 27 P **P** **13 03 45.9 -0.4**
DAWY IAmb IAmb 13 03 46.9
comp=Z,24nm,0.7s
DAWY Dawson 71.91 27 P **P** **13 03 46.0 -0.2**
baz=288,SNR=33
FINES FINESS Array B 71.95 330 P **P** **13 03 45.5 -1.0**
comp=Z,31nm,0.7s,baz=53,slow=5.3,SNR=100
FINES LR LR 13 38 45.4
comp=Z,684nm,19.8s,baz=74,slow=39
comp=Z,31nm,0.7s
FINES FINESS Array B 71.95 330 P **P** **13 03 45.9 -0.5**
FINES FINESS Array B 71.95 330 P **P** **13 03 45.9 -0.5**
TRO Tromso 72.04 339 *e*P **P** **13 03 45.8 -1.0**
TRO IAmb IAmb 13 03 46.6
comp=Z,37nm,0.9s
TRO IAMs_20 IAMs_20 13 36 31.1
comp=Z,464nm,21.0s
F30M Barrier River 72.14 23 P **P** **13 03 47.4 -0.2**
baz=290,SNR=31
SIM Simferopol' 72.14 312 *e*P **P** **13 03 47.7 -0.3**
SIM S **S** **13 13 01.0 -5.0**
SIM pmax pmax
comp=Z,110nm,0.9s
SIM smax smax
comp=E,60nm,10.0s
YUK3 Moose Creek 72.16 30 P **P** **13 03 47.9 -0.1**
baz=288,SNR=9.2
G30M tAoh Zrail Nji 72.20 24 P **P** **13 03 47.0 -1.0**
baz=290
EPYK Eagle Plains 72.22 25 P **P** **13 03 47.3 -0.8**
baz=290,SNR=30
J29N Klondike Camp 72.27 27 P **P** **13 03 48.1 -0.4**
baz=289,SNR=5.6
NOR Nord 72.36 354 *i* P **P** **13 03 46.8 -1.8**

NOR IAmb IAmb 13 03 49.4
comp=Z,12nm,0.8s
O28M Mount Upton 72.59 31 P **P** **13 03 49.9 -0.8**
baz=288
YUK8 Steele Glacier 72.63 30 P **P** **13 03 50.3 -0.6**
baz=289
INK Inuvik 72.69 22 LR LR 13 39 14.0
comp=Z,302nm,20.6s,baz=270,slow=39
INK Inuvik 72.69 22 P **P** **13 03 50.0 -0.7**
baz=292,SNR=38
I30M Mount Dempster 72.75 26 P **P** **13 03 51.0 -0.3**
baz=290
L29M L29M 72.75 28 P **P** **13 03 51.6 +0.3**
L29M IAmb IAmb 13 03 52.5
comp=Z,29nm,0.8s
L29M L29M 72.75 28 P **P** **13 03 52.0 +0.7**
baz=290,SNR=24
K29M Barlow Dome 72.76 27 P **P** **13 03 51.6 +0.1**
baz=290,SNR=16
PINM Pinnacle 72.78 31 P **P** **13 03 51.8 +0.3**
baz=289,SNR=8.3
M29M Somme Creek 72.83 29 P **P** **13 03 52.4 +0.6**
baz=289
BRWY Burwash Landin 72.93 30 P **P** **13 03 52.6 +0.2**
baz=289
G31M Satah River 72.94 24 P **P** **13 03 51.0 -1.2**
baz=292,SNR=17
VAF Yiistaro 72.94 332 P **P** **13 03 51.7 -0.6**
VAF pmax pmax
comp=Z,36nm,0.7s
J30M Hart River 73.00 26 P **P** **13 03 52.8 -0.1**
baz=291
BZK Bozkurt 73.10 309 ⇑P **P** **13 03 53.3 -0.3**
YUK4 Talbot Arm 73.12 30 P **P** **13 03 53.6 -0.1**
baz=290,SNR=6.3
MNK Minsk 73.16 323 *i* P **P** **13 03 54.1 +0.3**
comp=E,26nm,1.1s
MNK *i* P **P** **13 03 54.1 +0.3**
comp=N,54nm,1.1s
MNK *i* P **P** **13 03 54.1 +0.3**
comp=Z,76nm,1.0s,baz=72
MNK *i* pP **pP** **13 04 08.6 -0.8**
MNK *i* sP **sP** **13 04 14.4 -1.3**
MNK *i* PP **PP** **13 06 37.6 +0.7**
MNK *i* PPP PPP 13 08 23.1
MNK *i* S **SKiKP** **13 13 19.8 -0.8**
MNK *i* sS **sS** **13 13 43.1 -0.7**
MNK *i* SS **SS** **13 18 03.6 +4.9**
MNK *i* SSS SSS 13 21 24.7
MNK *i* LR LR 13 35 28.2
MNK *i* LRM MLR 13 38 40.3
comp=E,222nm,20.0s
MNK *i* LRM MLR 13 38 51.4
comp=N,155nm,17.8s
MNK *i* LRM MLR 13 39 03.3
comp=Z,201nm,19.1s
MNK Minsk 73.16 323 *i* P **P** **13 03 54.1 +0.3**
MNK *i* 13 04 10.1
MNK *i* *SP **sP** **13 04 14.4 -1.3**
MNK *i* 13 06 37.6
MNK *i* PPP PPP 13 08 23.0
MNK *i* S **SKiKP** **13 13 19.8 -0.8**
MNK *i* *SS **sS** **13 13 43.0 -0.7**
MNK *i* SS **SS** **13 18 03.6 +4.9**
MNK pmax pmax
comp=E,26nm,1.1s
MNK pmax pmax
comp=Z,76nm,1.0s
MNK pmax pmax
comp=N,54nm,1.1s
MNK MLR MLR
comp=E,222nm,20.0s
MNK MLR MLR
comp=N,155nm,18.0s
MNK MLR MLR
comp=Z,201nm,19.0s
H31M Peel River 73.33 25 P **P** **13 03 54.2 -0.4**
H31M Peel River 73.33 25 P **P** **13 03 53.8 -0.9**
baz=292,SNR=16
YUK6 Outpost Mounta 73.38 30 P **P** **13 03 55.6 +0.3**
baz=290,SNR=5.1
O29M Mount Kennedy 73.50 31 P **P** **13 03 56.2 +0.3**
baz=290
M30M Minto, Yukon 73.51 28 P **P** **13 03 56.3 +0.5**
baz=291,SNR=25
AK09 Malin Array Si 73.56 318 P **P** **13 03 55.3 -0.9**
AK03 Malin Array Si 73.56 319 P **P** **13 03 55.1 -1.1**
AKASG Malin Array Be 73.57 319 P **P** **13 03 55.0 -1.2**
comp=Z,9.0nm,0.4s,baz=61,slow=5.8,SNR=81
AKASG LR LR 13 40 05.7
comp=Z,184nm,18.4s,baz=70,slow=39
comp=Z,9.0nm,0.4s
AKBB Malin Array Si 73.57 319 P **P** **13 03 54.8 -1.5**
AK08 Malin Array Si 73.57 318 P **P** **13 03 55.1 -1.2**
AK01 Malin Array Si 73.58 319 P **P** **13 03 55.1 -1.2**
KIEV Kiev 73.58 319 ⇑P **P** **13 03 55.2 -1.1**
KIEV Kiev 73.58 319 *i* P **P** **13 03 55.2 -1.1**
SNR=22
KIEV Kiev 73.58 319 P **P** **13 03 55.2 -1.1**
KIEV Kiev 73.58 319 P **P** **13 03 55.1 -1.2**
comp=Z,2µmcomp=Z,181nm,0.9s
KIEV Kiev 73.58 319 P **P** **13 03 55.2 -1.2**
AK10 Malin Array Si 73.59 318 P **P** **13 03 55.1 -1.3**
AK02 Malin Array Si 73.59 319 P **P** **13 03 55.2 -1.2**
AK04 Malin Array Si 73.60 319 P **P** **13 03 55.2 -1.2**
AK05 Malin Array Si 73.61 318 P **P** **13 03 55.3 -1.2**
AK23 Malin Array Si 73.61 319 P **P** **13 03 55.3 -1.2**
AK11 Malin Array Si 73.61 319 P **P** **13 03 55.3 -1.2**
AK06 Malin Array Si 73.62 318 P **P** **13 03 55.3 -1.3**
AK07 Malin Array Si 73.63 318 P **P** **13 03 55.4 -1.2**
AK12 Malin Array Si 73.63 319 P **P** **13 03 55.4 -1.2**
AK15 Malin Array Si 73.63 319 P **P** **13 03 55.4 -1.2**
AK21 Malin Array Si 73.66 319 P **P** **13 03 55.5 -1.3**
AK18 Malin Array Si 73.66 319 P **P** **13 03 55.6 -1.2**
A36M Sachs Harbour 73.68 17 P **P** **13 03 55.8 -0.7**
baz=298
AK19 Malin Array Si 73.69 319 P **P** **13 03 55.8 -1.2**
N30M Aishikik Lake 73.78 29 P **P** **13 03 57.8 +0.4**
baz=291,SNR=9.6
HYT Haines Junctio 73.82 30 P **P** **13 03 58.3 +0.6**
baz=291,SNR=8.9
STEI Steigen 73.94 338 *e*P **P** **13 03 57.1 -1.0**
STEI IAmb IAmb 13 03 58.0
comp=Z,89nm,0.9s
STEI IAMs_20 IAMs_20 13 41 32.2
comp=Z,290nm,13.5s
ASF Jabal al Asfar 73.95 298 LR LR 13 40 27.4
comp=Z,161nm,21.4s,baz=25,slow=39
KIRS Kirsehir-Merke 74.03 306 ⇑P **P** **13 03 59.2 -0.1**
BR131 Keskin Array S 74.05 307 P **P** **13 03 59.9 +0.4**
BR131 pmax pmax
comp=Z,97nm,0.9s
BR131 Keskin Array S 74.05 307 P **P** **13 04 00.0 +0.4**
SNR=73
BR131 Keskin Array S 74.05 307 P **P** **13 03 59.9 +0.4**
BR131 IAmb IAmb 13 04 00.8
comp=Z,97nm,0.9s
BRTR Keskin Array B 74.05 307 P **P** **13 03 59.5 -0.1**
comp=Z,62nm,0.9s,baz=103,slow=5.3,SNR=267
comp=Z,62nm,0.9s
BR104 Keskin Array S 74.06 307 P **P** **13 03 58.1 -1.4**
comp=Z,594nmcomp=Z,83nm,1.0s
BR106 Keskin Array S 74.06 307 P **P** **13 03 59.1 -0.5**
comp=Z,710nmcomp=Z,99nm,1.0s
BR105 Keskin Array S 74.07 307 P **P** **13 03 59.1 -0.5**
comp=Z,755nmcomp=Z,105nm,1.0s
P29M Windy Craggy 74.13 31 P **P** **13 03 59.9 +0.4**
baz=291
FAUS Fauske 74.16 337 *e*P **P** **13 03 58.4 -1.0**
FAUS IAmb IAmb 13 03 59.2
comp=Z,93nm,0.9s
FAUS IAMs_20 IAMs_20 13 38 23.6
comp=Z,502nm,27.4s
BAL3X Bal3x, Balta 74.21 316 P **P** **13 03 59.8 -0.3**
P30M Million Dollar 74.32 31 P **P** **13 04 00.9 +0.3**
baz=291
N31M Braeburn, Yuko 74.36 29 P **P** **13 04 01.1 +0.4**
baz=292,SNR=7.6
MI28 Mi28_Pidlybu 74.43 319 P **P** **13 03 59.3 -2.0**
LOF Lofoten 74.43 338 *e*P **P** **13 03 59.3 -1.7**
LOF IAmb IAmb 13 04 01.9
comp=Z,29nm,0.8s
LOF IAMs_20 IAMs_20 13 36 43.9
comp=Z,257nm,19.8s
O30N Mendenhall 74.48 30 P **P** **13 04 01.8 +0.3**
baz=292,SNR=8.3

PURM Purcari 74.49 314 ⇑P **P** **13 04 01.8 0.0**
PURM Purcari 74.49 314 P **P** **13 04 00.9 -0.8**
comp=Z,3µmcomp=Z,75nm,1.0s
AFI Afiamalu 74.56 113 LR LR 13 32 25.9
comp=Z,147nm,19.0s,baz=222,slow=32
M31M Drury Creek, Y 74.69 28 P **P** **13 04 02.4 -0.2**
baz=293,SNR=17
LUBAR Lubar, Ukraine 74.71 318 P **P** **13 04 01.1 -1.9**
PLBC Pleasant Camp 74.85 31 P **P** **13 04 03.7 +0.1**
baz=292,SNR=8.1
MMAI Mount Meron Ar 74.87 300 P **P** **13 04 04.7 +0.4**
comp=Z,20nm,0.6s,baz=73,slow=5.9,SNR=11
comp=Z,20nm,0.6s
SORM Soroca 74.94 316 ⇓P **P** **13 04 03.0 -1.3**
SORM Soroca 74.94 316 P **P** **13 04 03.1 -1.2**
MOR8 Moi Rana 74.99 336 *e*P **P** **13 04 02.1 -2.1**
MOR8 IAmb IAmb 13 04 03.0
comp=Z,42nm,0.8s
MOR8 IAMs_20 IAMs_20 13 35 02.5
comp=Z,5037µm,99.9s
RAUS Rausandaksla 75.02 337 *e*P **P** **13 04 03.0 -1.4**
RAUS IAmb IAmb 13 04 04.1
comp=Z,92nm,1.0s
RAUS IAMs_20 IAMs_20 13 41 10.2
comp=Z,337nm,16.3s
WHY Whitehorse 75.08 30 P **P** **13 04 05.2 +0.2**
baz=293,SNR=7.2
VAGH Vaagaholmen 75.16 337 *e*P **P** **13 04 03.5 -1.6**
VAGH IAmb IAmb 13 04 04.7
comp=Z,58nm,1.1s
VAGH IAMs_20 IAMs_20 13 39 43.9
comp=Z,462nm,21.8s
C36M Paulatuk 75.31 20 P **P** **13 04 06.5 +0.5**
baz=300
KONS Konsvik 75.32 337 *e*P **P** **13 04 05.0 -1.1**
KONS IAmb IAmb 13 04 05.7
comp=Z,42nm,0.9s
KONS IAMs_20 IAMs_20 13 44 39.0
comp=Z,437nm,20.9s
RNPP9 Sopachiv 75.32 320 P **P** **13 04 05.5 -0.9**
SKAG Skagway 75.33 31 P **P** **13 04 06.8 +0.5**
baz=293,SNR=11
RNPP2 Kostyukhnivka 75.35 320 P **P** **13 04 05.7 -0.9**
RNPP8 Varash 75.37 320 P **P** **13 04 05.8 -0.9**
RNPP5 Staryi Chortor 75.39 320 P **P** **13 04 05.9 -0.9**
STOK Stokkvaagen 75.43 337 *e*P **P** **13 04 05.6 -1.1**
STOK IAmb IAmb 13 04 07.7
comp=Z,34nm,0.8s
STOK IAMs_20 IAMs_20 13 39 38.8
comp=Z,444nm,23.9s
S31K Pelican 75.48 33 P **P** **13 04 07.6 +0.4**
baz=292
LEIR Leirfjorden 75.50 337 *e*P **P** **13 04 05.9 -1.3**
LEIR IAmb IAmb 13 04 06.8
comp=Z,57nm,1.0s
LEIR IAMs_20 IAMs_20 13 44 50.4
comp=Z,373nm,17.3s
TLCR 75.64 313 ⇑P **P** **13 04 07.8 -0.5**
TLCR 75.64 313 P **P** **13 04 07.8 -0.5**
N32M Quiet Lake 75.69 29 P **P** **13 04 08.4 0.0**
baz=294
SAHE Sakarya_HENDEK 75.70 309 ⇑P **P** **13 04 08.2 -0.7**
HORU Horodok 75.77 318 P **P** **13 04 08.6 -0.5**
CSS Mathiatis 75.84 302 P **P** **13 04 09.7 -0.1**
CSS Mathiatis 75.84 302 P **P** **13 04 09.4 -0.4**
comp=Z,2µmcomp=Z,198nm,1.0s
MMPY Sheldon Lake, 75.85 27 P **P** **13 04 09.2 -0.1**
baz=295,SNR=8.1
VLDR Vladesti 75.89 314 ⇑P **P** **13 04 10.0 +0.1**
ATD Arta Tunnel 75.97 276 P **P** **13 04 12.8 +1.9**
KMPD K-Podol'skiy 75.98 317 P **P** **13 04 08.4 -1.8**
SCTR Scanteiesti 76.01 314 ⇑P **P** **13 04 09.6 -0.8**
TPGR Topolog 76.01 313 ⇓P **P** **13 04 10.5 -0.1**
P32M Atlin 76.04 31 P **P** **13 04 10.8 +0.3**
baz=294,SNR=5.3
BIR Birlad 76.04 315 ⇑P **P** **13 04 11.0 +0.4**
BIR Birlad 76.04 315 P **P** **13 04 11.0 +0.4**
CFR Carcaliu 76.09 313 ⇑P **P** **13 04 09.7 -1.2**
CFR Carcaliu 76.09 313 P **P** **13 04 10.5 -0.4**
TIRR Tirgusor 76.16 313 ⇑P **P** **13 04 11.9 +0.6**
TIRR Tirgusor 76.16 313 P **P** **13 04 11.9 +0.6**
R32K Eaglecrest 76.19 32 P **P** **13 04 11.7 +0.5**
baz=294
P33M Teslin, Yukon 76.19 30 P **P** **13 04 11.6 +0.2**
baz=295,SNR=12
GHRR 76.26 314 P **P** **13 04 12.0 +0.1**
SIT Sitka 76.28 33 P **P** **13 04 13.8 +2.0**
SIT Sitka 76.28 33 P **P** **13 04 12.1 +0.3**
SIT pmax pmax
comp=Z,157nm,1.0s
SIT Sitka 76.28 33 P **P** **13 04 12.1 +0.3**
SIT Sitka 76.28 33 P **P** **13 04 12.5 +0.7**
baz=293,SNR=6.9
TLBR Topalu 76.37 313 ⇑P **P** **13 04 12.6 +0.1**
S32K Killisnoo 76.49 33 P **P** **13 04 13.3 +0.4**
baz=294
GIRR Girov 76.53 316 ⇑P **P** **13 04 13.6 +0.2**
PRAR RASCA 76.55 316 ⇑P **P** **13 04 12.7 -0.8**
TESR Tescani 76.59 315 ⇑P **P** **13 04 13.4 -0.4**
TESR Tescani 76.59 315 P **P** **13 04 13.4 -0.4**
comp=Z,2µmcomp=Z,56nm,1.2s
ODBI Odobesti 76.59 314 ⇑P **P** **13 04 12.6 -1.2**
NSS Namsos 76.67 335 *e*P **P** **13 04 12.5 -1.3**
NSS IAmb IAmb 13 04 14.4
comp=Z,30nm,0.7s
ICOR Ion Corvin 76.69 312 ⇑P **P** **13 04 14.8 +0.5**
VRI Vrincioaia 76.77 314 ⇓P **P** **13 04 14.8 -0.1**
VRI Vrincioaia 76.77 314 P **P** **13 04 15.2 +0.4**
VRI Vrincioaia 76.77 314 P **P** **13 04 14.5 -0.3**
comp=Z,764nmcomp=Z,70nm,1.2s
BIZ Bicaz 76.78 316 ⇑P **P** **13 04 14.1 -0.8**
ONER Baraj Valea Uz 76.82 315 ⇑P **P** **13 04 15.3 +0.2**
PLOR Plostina 76.83 314 ⇓P **P** **13 04 15.3 +0.1**
PLOR Plostina 76.83 314 P **P** **13 04 15.3 +0.1**
SAHR Sahastru 76.85 314 ⇓P **P** **13 04 15.3 -0.1**
Q32M Nakina River 76.98 31 P **P** **13 04 16.5 +0.5**
baz=295
LVV L'vov 77.00 319 P **P** **13 04 15.4 -0.6**
BURAR Bucovina Array 77.10 316 ⇓P **P** **13 04 16.3 -0.5**
BURAR Bucovina Array 77.10 316 P **P** **13 04 16.2 -0.5**
COVR Voineasa-Covas 77.12 315 ⇑P **P** **13 04 17.2 +0.4**
TURR Turia 77.17 315 ⇓P **P** **13 04 17.0 -0.1**
NEHR Nehoiu 77.21 314 ⇑P **P** **13 04 17.3 -0.1**
MORS Morshin 77.34 318 P **P** **13 04 17.9 -0.1**
NEF NEVSHA 77.35 312 P **P** **13 04 18.2 +0.1**
MLR Muntele Rosu 77.42 314 LR LR 13 42 37.8
comp=Z,597nm,21.4s,baz=68,slow=39
MLR Muntele Rosu 77.42 314 ⇓P **P** **13 04 18.5 -0.2**
MLR Muntele Rosu 77.42 314 P **P** **13 04 18.8 +0.2**
MLR Muntele Rosu 77.42 314 P **P** **13 04 17.8 -0.8**
comp=Z,403nmcomp=Z,42nm,1.0s
DOPR Dopca 77.60 315 ⇑P **P** **13 04 19.7 +0.2**
RAZG Razgrad 77.76 312 ⇑P **P** **13 04 20.4 0.0**
U33K Whale Pass 77.78 34 P **P** **13 04 20.8 +0.6**
baz=295,SNR=5.2
ELL Elmali 77.82 305 P **P** **13 04 20.5 -0.5**
ELL pmax pmax
comp=Z,461nm,1.0s
BAND Balkesir-Ban 77.84 309 ⇑P **P** **13 04 20.7 -0.2**
ARCR ARCALIA 77.84 316 ⇑P **P** **13 04 20.5 -0.2**
KWP Kalwaria Pacla 77.87 319 P **P** **13 04 20.8 -0.1**
comp=Z,1µmcomp=Z,134nm,0.9s
S34M Telegraph Cree 77.97 32 P **P** **13 04 22.2 +0.9**
baz=296,SNR=17
VOIR 78.02 314 ⇑P **P** **13 04 21.1 -0.8**
VOIR 78.02 314 P **P** **13 04 21.1 -0.8**
VOIR 78.02 314 P **P** **13 04 21.5 -0.4**
comp=Z,11nm,0.8s
WTLY Watson Lake, Y 78.04 29 P **P** **13 04 21.9 +0.3**
baz=298
WRAK Wrangell Islan 78.04 33 P **P** **13 04 21.3 -0.3**
baz=296
HFS Hagfors 78.05 331 P **P** **13 04 20.5 -1.1**
comp=Z,16nm,0.7s,baz=73,slow=5.0,SNR=40
HFS LR LR 13 42 33.7
comp=Z,938nm,18.0s,baz=64,slow=38
comp=Z,16nm,0.7s
CRAG Craig 78.06 34 P **P** **13 04 22.8 +1.0**
CRAG Craig 78.06 34 P **P** **13 04 22.1 +0.3**
baz=295
BMR Baia Mare 78.15 317 ⇑P **P** **13 04 22.0 -0.5**
BMR Baia Mare 78.15 317 P **P** **13 04 22.0 -0.5**
SZH Strazhitsa 78.23 312 P **P** **13 04 22.8 -0.2**
DLBC Dease Lake 78.26 31 LR LR 13 38 46.7
comp=Z,80nm,21.8s,baz=304,slow=36

DLBC Dease Lake 78.26 31 P **P** **13 04 23.9 +0.9**
baz=297,SNR=22
ARR Arges 78.32 315 ⇑P **P** **13 04 22.8 -0.7**
RES Resolute Bay 78.37 9 LR LR 13 43 20.4
comp=Z,234nm,19.1s,baz=0.5,slow=39
KOLS Kolonicke sedl 78.41 319 *e*P **P** **13 04 23.0 -0.9**
KOLS pmax pmax
comp=Z,1.0nm,0.5s
KOLS Kolonicke sedl 78.41 319 *e*P **P** **13 04 23.0 -0.9**
HUMR Humele 78.42 314 ⇓P **P** **13 04 23.8 -0.2**
NEEM North Greenlan 78.42 359 *i*P **P** **13 04 23.0 -0.8**
NEEM IAmb IAmb 13 04 26.5
comp=Z,46nm,0.9s
CJR Cluj-Napoca 78.46 316 ⇓P **P** **13 04 23.2 -1.1**
CJR Cluj-Napoca 78.46 316 P **P** **13 04 23.2 -1.1**
NB2 NORSAR Subarra 78.68 332 P **P** **13 04 23.9 -1.3**
comp=Z,23nm,0.7s,baz=56,slow=5.3
NB2 NORSAR Subarra 78.68 332 P **P** **13 04 23.9 -1.3**
NOA NORSAR Array B 78.68 332 P **P** **13 04 23.9 -1.3**
comp=Z,16nm,0.8s,baz=56,slow=5.2,SNR=24
NOA PP **PP** **13 07 23.1 -0.2**
comp=Z,3.5nm,0.9s,baz=65,slow=8.1,SNR=3.4
NOA LR LR 13 42 49.3
comp=Z,455nm,18.9s,baz=65,slow=38
comp=Z,16nm,0.8s
NC602 NORSAR Array S 78.69 332 *e*P **P** **13 04 22.9 -2.3**
NC602 IAmb IAmb 13 04 24.8
comp=Z,38nm,1.2s
NC602 IAMs_20 IAMs_20 13 42 30.6
comp=Z,797nm,18.8s
NORES NORESS Array B 78.69 332 P **P** **13 04 23.9 -1.3**
NORES pmax pmax
comp=Z,1.0nm,0.3s
WRGLY Wrigley 78.69 25 P **P** **13 04 25.0 -0.1**
baz=302
DBG Daneborg 78.69 350 *i*P **P** **13 04 24.9 0.0**
DBG IAmb IAmb 13 04 25.0
comp=Z,33nm,0.9s
MARR Marisel-Cluj 78.78 316 ⇑P **P** **13 04 26.1 0.0**
BLEU Blekinge 78.82 327 *i*P **P** **13 04 24.7 -1.3**
T35M Bob Quinn 78.82 32 P **P** **13 04 26.4 +0.4**
baz=297,SNR=8.0
LOT Lotru 78.85 315 ⇑P **P** **13 04 25.9 -0.6**
YER Yerkesik 78.89 306 P **P** **13 04 25.1 -1.7**
V35K Ketchikan 78.89 34 P **P** **13 04 25.6 -0.8**
baz=297
DRGR 78.99 316 ⇑P **P** **13 04 26.7 -0.6**
DRGR 78.99 316 P **P** **13 04 26.9 -0.3**
DOMB Dombas 79.05 334 *e*P **P** **13 04 26.6 -0.6**
DOMB IAmb IAmb 13 04 26.7
comp=Z,59nm,1.1s
DOMB IAMs_20 IAMs_20 13 42 31.0
comp=Z,552nm,19.8s
PLVB Pleven 79.10 313 ⇓P **P** **13 04 26.8 -1.0**
JMI Jan Mayen 79.12 345 *e*P **P** **13 04 28.3 +1.0**
JMI IAmb IAmb 13 04 29.6
comp=Z,151nm,1.1s
JMI IAMs_20 IAMs_20 13 44 24.7
comp=Z,731nm,22.8s
DEV Deva 79.23 315 ⇑P **P** **13 04 28.5 0.0**
DEV Deva 79.23 315 P **P** **13 04 29.1 +0.6**
EZN Ezine 79.30 309 P **P** **13 04 28.6 -0.3**
comp=Z,835nmcomp=Z,40nm,1.0s
OJC Ojcow 79.34 320 P **P** **13 04 28.6 -0.4**
comp=Z,781nmcomp=Z,79nm,0.9s
MOL Molde 79.37 335 *e*P **P** **13 04 28.3 -0.5**
MOL IAmb IAmb 13 04 29.2
comp=Z,182nm,1.5s
MOL IAMs_20 IAMs_20 13 43 16.1
comp=Z,477nm,16.9s
NIE Niedzica 79.39 319 P **P** **13 04 29.1 -0.2**
comp=Z,282nmcomp=Z,20nm,1.4s
DIB Dawson Inlet, 79.39 36 P **P** **13 04 29.4 +0.2**
H02S1 DAWSON INLET T 79.39 36 P **P** **13 04 29.8 +0.7**
SNR=54
H02S2 DAWSON INLET T 79.39 36 P **P** **13 04 29.8 +0.7**
SNR=56
HIZ Hauiti 79.44 141 P **P** **13 04 32.5 +3.0**
OSL Oslo 79.44 332 *e*P **P** **13 04 28.7 -0.6**
OSL IAmb IAmb 13 04 28.9
comp=Z,70nm,1.3s
GZR Gura Zlata 79.51 315 ⇑P **P** **13 04 30.1 0.0**
GZR Gura Zlata 79.51 315 P **P** **13 04 30.3 +0.2**
LIRD Liard River Hi 79.58 29 P **P** **13 04 30.3 +0.3**
baz=300
RZN Rozhen 79.68 311 P **P** **13 04 30.9 -0.3**
MOBC Moresby Island 79.69 36 P **P** **13 04 31.0 +0.1**
STRU Stroemstad 79.70 331 *i*P **P** **13 04 29.8 -0.9**
MPEP Malo Peshtene 79.70 313 P **P** **13 04 31.3 +0.2**
DEL Delary 79.70 328 *i*P **P** **13 04 29.6 -1.2**
QRZ Quartz Range 79.74 144 P **P** **13 04 32.9 +1.8**
PGB Panagyurishte 79.74 312 P **P** **13 04 31.5 +0.2**
VALD Valchedram 79.77 313 P **P** **13 04 31.9 +0.5**
AKN Aaknes 79.80 335 *e*P **P** **13 04 30.9 -0.3**
AKN IAmb IAmb 13 04 31.8
comp=Z,65nm,0.8s
BSD Bornholm Skovb 79.82 326 *i*P **P** **13 04 31.1 -0.3**
BSD IAmb IAmb 13 04 31.5
comp=Z,44nm,0.9s
PUNG Punghina 79.86 314 ⇑P **P** **13 04 31.9 0.0**
SIRR Siria 79.87 316 ⇓P **P** **13 04 31.7 -0.2**
HERR Herculane 79.95 315 ⇓P **P** **13 04 32.2 -0.2**
FABU Falkenberg 80.00 328 *i*P **P** **13 04 31.5 -0.8**
TJOU Tjoern 80.00 330 *i*P **P** **13 04 31.5 -0.9**
SKAR Skarslia 80.08 333 *e*P **P** **13 04 32.7 -0.2**
SKAR IAmb IAmb 13 04 33.5
comp=Z,48nm,1.1s
SKAR IAMs_20 IAMs_20 13 43 17.9
comp=Z,792nm,22.7s
KOTAN Kotaneelee Air 80.09 28 P **P** **13 04 32.8 -0.1**
baz=302
BZS Buzias 80.17 316 ⇑P **P** **13 04 33.0 -0.6**
BZS Buzias 80.17 316 P **P** **13 04 32.9 -0.6**
ONAU Onsala 80.18 329 *i*P **P** **13 04 32.6 -0.7**
BLSH Balsha 80.21 313 P **P** **13 04 34.3 +0.4**
PLNA Plana 80.26 312 P **P** **13 04 34.5 +0.2**
PSZ Piszkesteto 80.27 318 ⇑P **P** **13 04 33.4 -0.7**
PSZ Piszkesteto 80.27 318 P **P** **13 04 33.8 -0.4**
PSZ pmax pmax
comp=Z,37nm,1.1s
PSZ Piszkesteto 80.27 318 P **P** **13 04 33.8 -0.4**
PSZ IAmb IAmb 13 04 35.4
comp=Z,37nm,1.1s
BJUU Bjuv 80.31 328 *i*P **P** **13 04 33.5 -0.5**
LUNU Lund 80.31 327 *i*P **P** **13 04 34.1 0.0**
KARP Karpathos 80.33 305 P **P** **13 04 34.2 -0.5**
comp=Z,2µmcomp=Z,205nm,1.1s
VTS Vitosha 80.33 312 P **P** **13 04 34.9 +0.2**
MDVR Moldovita 80.45 315 ⇑P **P** **13 04 34.4 -0.7**
URZ Urewera 80.59 139 P **P** **13 04 35.5 -0.2**
comp=Z,6.9nm,0.5s,baz=85,slow=2.2,SNR=10
URZ LR LR 13 34 31.0
comp=Z,178nm,21.9s,baz=312,slow=31
comp=Z,6.9nm,0.5s
URZ Urewera 80.59 139 P **P** **13 04 36.4 +0.7**
STEB Steborice 80.64 321 *e*P **P** **13 04 35.9 -0.1**
HYA Hoyanger 80.68 334 *e*P **P** **13 04 35.8 -0.1**
HYA IAmb IAmb 13 04 36.2
comp=Z,312nm,1.9s
HYA IAMs_20 IAMs_20 13 43 41.0
comp=Z,764nm,19.3s
KKB Krupnik 80.72 312 P **P** **13 04 36.2 -0.4**
BKZ Black Stump Fm 80.83 140 P **P** **13 04 38.6 +1.6**
MORC Moravsky Berou 80.85 321 ⇑P **P** **13 04 36.9 -0.3**
MORC Moravsky Berou 80.85 321 P **P** **13 04 36.8 -0.3**
MORC Moravsky Berou 80.85 321 *e*P **P** **13 04 36.7 -0.5**
MAUC Maruska 80.87 320 *e*P **P** **13 04 37.8 +0.5**
FOO Floro 80.89 335 *e*P **P** **13 04 36.5 -0.5**
FOO IAmb IAmb 13 04 37.7
comp=Z,32nm,0.9s
FOO IAMs_20 IAMs_20 13 44 20.4
comp=Z,651nm,14.6s
RPZ Rata Peaks 81.02 147 P **P** **13 04 38.4 +0.5**
comp=Z,8.1nm,0.8s,baz=331,slow=1.8,SNR=20
RPZ LR LR 13 37 49.4
comp=Z,32nm,20.7s,baz=354,slow=34
comp=Z,8.1nm,0.8s
RPZ Rata Peaks 81.02 147 P **P** **13 04 39.2 +1.3**
KSP Ksiaz 81.07 322 P **P** **13 04 37.8 -0.5**
comp=Z,587nmcomp=Z,55nm,1.2s
JAVC Velka Javorina 81.19 320 *e*P **P** **13 04 39.9 +0.9**
ODD1 Odda 81.20 333 *e*P **P** **13 04 38.5 -0.3**
ODD1 IAmb IAmb 13 04 39.1
comp=Z,32nm,1.0s
ODD1 IAMs_20 IAMs_20 13 44 27.2
comp=Z,421nm,10.5s
OSTC Ostas 81.25 322 *e*P **P** **13 04 39.9 +0.6**
OSTC Ostas 81.25 322 *e*P **P** **13 04 39.9 +0.6**
SNZO South Karori 81.26 143 P **P** **13 04 41.7 +2.5**
DPC Dobruska-Polom 81.28 321 *e*P **P** **13 04 39.6 +0.1**
DPC MLR MLR
comp=Z,300nm,20.0s
DPC Dobruska-Polom 81.28 321 *e*P **P** **13 04 39.6 +0.1**
DPC AMS AMS 13 41 10.0
comp=Z,300nm,20.0s
DPC Dobruska-Polom 81.28 321 P **P** **13 04 38.9 -0.6**
comp=Z,419nmcomp=Z,31nm,1.1s
HOMB Homborsund 81.29 331 *i*P **P** **13 04 39.3 +0.1**
SUE Sulen 81.31 334 *e*P **P** **13 04 38.9 -0.4**
SUE IAmb IAmb 13 04 39.2
comp=Z,29nm,0.8s
SUE IAMs_20 IAMs_20 13 44 29.1
comp=Z,528nm,9.8s
CHVC Chvalec 81.33 322 *e*P **P** **13 04 39.1 -0.6**
CHVC Chvalec 81.33 322 *e*P **P** **13 04 39.1 -0.6**
KULLO Kullorsuaq 81.38 360 *i*P **P** **13 04 38.0 -1.4**
KHZ Kahutara 81.39 144 P **P** **13 04 39.8 0.0**
KHZ Kahutara 81.39 144 P **P** **13 04 39.8 0.0**
KHZ IAmb IAmb 13 04 43.8
comp=Z,71nm,1.5s
ASK Askoy 81.47 334 *e*P **P** **13 04 39.7 -0.4**
ASK IAmb IAmb 13 04 40.4
comp=Z,1µm,3.0s
ASK IAMs_20 IAMs_20 13 44 13.7
comp=Z,816nm,18.2s
BER Bergen 81.47 333 *e*P **P** **13 04 39.6 -0.5**
BER IAmb IAmb 13 04 39.9
comp=Z,47nm,1.0s
BER IAMs_20 IAMs_20 13 43 28.2
comp=Z,767nm,23.3s
FRGS Fruska Gora 81.51 316 ⇑*i*P **P** **13 04 40.2 -0.6**
BLS5 Blasjo 81.55 332 IAmb IAmb 13 04 40.5
comp=Z,78nm,1.3s
BLS5 *e*P **P** **13 04 40.6 0.0**
BLS5 IAMs_20 IAMs_20 13 44 10.3
comp=Z,612nm,14.7s
VRAC Vranov 81.61 320 ⇑P **P** **13 04 40.5 -0.7**
VRAC Vranov 81.61 320 P **P** **13 04 40.4 -0.7**
VRAC Vranov 81.61 320 *e*P **P** **13 04 41.3 +0.1**
MORH Mrgy, Hungar 81.78 317 ⇑P **P** **13 04 41.9 -0.1**
MORH Mrgy, Hungar 81.78 317 ⇑*i*P **P** **13 04 41.7 -0.4**
MORH Mrgy, Hungar 81.78 317 P **P** **13 04 41.6 -0.5**
comp=Z,452nmcomp=Z,35nm,1.2s
SNART Snartemo 81.83 331 *e*P **P** **13 04 42.4 +0.3**
SNART Snartemo 81.83 331 *i*P **P** **13 04 42.5 +0.4**
KRUC Moravsky 81.84 320 *e*P **P** **13 04 42.3 -0.1**
TEKS Tekeris 81.96 315 ⇑*i*P **P** **13 04 42.2 -0.9**
MUD Monsted U'grnd 81.96 329 *i*P **P** **13 04 42.8 0.0**
MUD IAmb IAmb 13 04 43.4
comp=Z,32nm,0.8s
MPLH Magyarpolny 82.03 318 P **P** **13 04 42.9 -0.5**
comp=Z,1µmcomp=Z,98nm,1.4s
KMY Karmoy 82.18 333 *e*P **P** **13 04 44.6 +0.7**
KMY IAMs_20 IAMs_20 13 44 30.2
comp=Z,566nm,20.1s
SCO Scoresbysund 82.19 349 *i*P **P** **13 04 44.1 +0.3**
SCO IAmb IAmb 13 04 44.5
comp=Z,45nm,1.2s
SJES Sjenica 82.23 314 ⇑*i*P **P** **13 04 44.7 0.0**
TREC Trest 82.26 321 P **P** **13 04 44.6 0.0**
BBLS Lazi&#263i 82.34 315 ⇑*i*P **P** **13 04 44.9 -0.3**
BRG Berggiesshubel 82.37 323 *i*P **P** **13 04 45.1 +0.1**
BRG Amp 13 04 46.1
comp=Z,10nm,0.8s
BRG Berggiesshubel 82.37 323 P **P** **13 04 47.5 +2.5**
BRG Amp 13 04 47.9
comp=Z,12nm,0.8s
BRG Berggiesshubel 82.37 323 P P 13 04 52.7 +7.6
BRG Amp 13 04 53.8
comp=Z,5.6nm,0.9s
BRG PP **PP** **13 07 53.0 -1.0**
BRG Amp 13 07 53.8
comp=Z,5.7nm,1.0s
SOP Sopron 82.39 319 P **P** **13 04 45.6 +0.4**
YKA Yellowknife Ar 82.42 23 P **P** **13 04 44.3 -0.8**
comp=Z,32nm,0.8s,baz=315,slow=4.9,SNR=196
YKA PKiKP **PKiKP** **13 10 04.0 -1.7**
comp=Z,0.4nm,0.6s,baz=310,slow=1.7,SNR=4.7
YKA PKKPbc **PKKPbc** **13 23 09.4 -3.1**
comp=Z,1.0nm,0.5s,baz=138,slow=2.4,SNR=23
YKA LR LR 13 44 28.1
comp=Z,96nm,20.8s,baz=322,slow=38
comp=Z,32nm,0.8s
PRU Pruhonice 82.47 322 *e*P **P** **13 04 46.1 +0.5**
PRU pmax pmax
comp=Z,3.0nm,0.6s
PRU MLR MLR
comp=Z,300nm,17.0s
PRU Pruhonice 82.47 322 *e*P **P** **13 04 46.1 +0.5**
comp=Z,3.0nm,0.6s
PRU AMS AMS 13 44 50.0
comp=Z,300nm,17.0s
WINA Alland / Wiene 82.48 320 *e*P **P** **13 04 46.1 +0.4**
comp=Z,24nm,1.1s,SNR=14
SUMG Summit 82.52 354 *i*P **P** **13 04 46.0 +0.1**
SUMG IAmb IAmb 13 04 47.4
comp=Z,42nm,0.9s
RONA Rosalia, Austr 82.53 319 *e*P **P** **13 04 45.9 -0.2**
comp=Z,9.6nm,0.9s,SNR=5.4
RONA *e*PP **PP** **13 07 55.8 +0.3**
comp=Z,5.3nm,0.8s
CLL Collm 82.67 323 *i*P **P** **13 04 46.6 0.0**
CLL *i* *PP **pP** **13 05 01.9 -0.6**
CLL *e*S **S** **13 14 54.0 -5.7**
CLL pmax pmax
comp=Z,26nm,0.7s
CLL MLR MLR
comp=Z,400nm,20.2s
CLL Collm 82.67 323 P **P** **13 04 45.8 -0.8**
comp=Z,39nm,0.8s
CLL Collm 82.67 323 *i*P **P** **13 04 46.6 0.0**
comp=Z,26nm,0.7s
CLL *i* x x 13 04 48.0
comp=Z,25nm,0.7s
CLL *i* pP **pP** **13 05 01.9 -0.6**
CLL *i* PP **PP** **13 07 56.2 -0.3**
comp=Z,17nm,1.0s
CLL *e*pPP 13 08 11.0
CLL *i* PPP PPP 13 09 48.7
CLL *e*S **S** **13 14 54.0 -5.7**
CLL *e*sS **sS** **13 15 30.0 +3.2**
CLL *e*SP **SPn** **13 15 47.0 -1.0**
CLL *e*x x 13 21 54.0
CLL AMS AMS 13 45 00.0
comp=Z,400nm,20.2s
CONA Conrad Observa 82.69 319 *i*P **P** **13 04 46.8 -0.1**
comp=Z,26nm,1.2s,SNR=21
CONA PP **PP** **13 07 56.8 -0.1**
comp=Z,3.9nm,1.1s
BEHE Becsehely 82.82 318 ⇑*i*P **P** **13 04 47.2 -0.3**
ZVC Zvikov 82.93 321 *e*P **P** **13 04 48.1 0.0**
PDG Podgorica 83.08 313 ⇑*i*P **P** **13 04 48.2 -0.7**
CKRC Cesky Krumlov 83.17 321 *e*P **P** **13 04 49.4 +0.1**
CKRC Cesky Krumlov 83.17 321 *e*P **P** **13 04 49.4 +0.1**
CKRC AMS AMS 13 44 40.0
comp=Z,300nm,27.8s
ARSA Arzberg 83.21 319 *e*P **P** **13 04 49.0 -0.5**
comp=Z,16nm,1.2s,SNR=12
ARSA *e*PP **PP** **13 08 00.1 -0.9**
comp=Z,6.0nm,1.0s
DRME Dracevica, Mon 83.23 313 ⇑*i*P **P** **13 04 48.9 -0.9**
BRY Bratogost 83.34 314 ⇑*i*P **P** **13 04 49.6 -0.9**
BLY Banja Luka 83.36 316 ⇑P **P** **13 04 50.4 +0.1**
BLY Banja Luka 83.36 316 ⇑*i*P **P** **13 04 50.0 -0.4**
KHC Kasperske Hory 83.43 321 *e*P **P** **13 04 51.0 +0.3**
KHC pmax pmax
comp=Z,5.0nm,0.6s
KHC MLR MLR
comp=Z,300nm,17.2s
KHC Kasperske Hory 83.43 321 *e*P **P** **13 04 51.0 +0.3**
comp=Z,5.3nm,0.6s
KHC AMS AMS 13 41 00.0
comp=Z,300nm,17.2s
KHC Kasperske Hory 83.43 321 P **P** **13 04 49.8 -0.9**
comp=Z,390nmcomp=Z,27nm,1.3s
GEC2 GERESS Array S 83.50 321 P **P** **13 04 50.5 -0.6**
GEC2 IAmb IAmb 13 04 52.1
comp=Z,32nm,1.0s
GERES GERESS Array B 83.50 321 P **P** **13 04 50.8 -0.3**
comp=Z,19nm,0.9s,baz=56,slow=3.4,SNR=86
GERES PKKPbc **PKKPbc** **13 23 09.7 -0.1**
comp=Z,1.0nm,0.7s,baz=222,slow=1.8,SNR=7.3
comp=Z,19nm,0.9s
GERES GERESS Array B 83.50 321 P **P** **13 04 50.4 -0.7**
ITM Ithomi 83.52 308 P **P** **13 04 50.0 -1.3**
TREB Trebinje 83.54 314 ⇑*i*P **P** **13 04 49.5 -1.8**
HCY Herceg Novi 83.57 314 *e*P **P** **13 04 50.8 -0.7**
MOA Molln 83.67 320 *e*P **P** **13 04 51.8 -0.1**
comp=Z,14nm,0.7s,SNR=18
MOA *e*PP **PP** **13 08 02.9 -1.8**
comp=Z,6.1nm,1.2s
DOBS Dobrina 83.77 318 *i*P **P** **13 04 51.7 -0.7**
SOKA Soboth 83.78 319 *e*P **P** **13 04 52.0 -0.6**
comp=Z,20nm,0.8s,SNR=30
SOKA *e*PP **PP** **13 08 05.0 -0.8**
comp=Z,12nm,1.7s
SESA Seetaler Alpe, 83.85 319 *e*P **P** **13 04 52.8 -0.3**
comp=Z,94nm,0.8s,SNR=61
SESA *e*PP **PP** **13 08 05.0 -1.5**
comp=Z,12nm,1.3s
CRES Cresnjevec Ost 83.93 318 *i*P **P** **13 04 52.9 -0.4**
BIOA Bad Ischl, Aus 84.11 320 *e*P **P** **13 04 53.9 -0.3**
comp=Z,18nm,0.8s,SNR=16
OBKA Obir 84.15 319 *i*P **P** **13 04 53.8 -0.6**
comp=Z,24nm,1.0s,SNR=20
OBKA *e*PP **PP** **13 08 07.5 -1.3**
comp=Z,6.4nm,0.9s
LRW Lerwick 84.20 335 *e*P **P** **13 04 53.4 -0.9**
LRW IAmb IAmb 13 04 54.8
comp=Z,38nm,0.8s
KBA Koelnbreinsper 84.59 320 *i*P **P** **13 04 56.0 -0.8**
comp=Z,12nm,0.7s,SNR=22
KBA *e*PP **PP** **13 08 12.0 -0.5**
comp=Z,12nm,1.3s
CEY Cerknica 84.60 318 *i*P **P** **13 04 56.1 -0.6**
MYKA Terra Mystica 84.64 319 *i*P **P** **13 04 55.7 -1.2**
comp=Z,15nm,1.1s,SNR=10
MYKA *e*PP **PP** **13 08 12.4 -0.4**
comp=Z,2.1nm,0.6s
KNDS Knezji Dol 84.73 318 *i*P **P** **13 04 56.8 -0.7**
LESA Schwarzleotal 84.81 320 *i*P **P** **13 04 57.1 -0.7**
comp=Z,34nm,1.2s,SNR=26
LESA *e*PP **PP** **13 08 13.5 -0.6**
comp=Z,14nm,1.3s
ABPO Ambohimpanom 84.98 247 P **P** **13 05 00.3 +1.1**
ABTA Abfaltersbach 85.25 320 *i*P **P** **13 04 58.5 -1.5**
comp=Z,25nm,1.0s,SNR=26
ABTA *e*PP **PP** **13 08 17.0 -0.7**
comp=Z,4.7nm,1.2s
WATA Walderalm 85.50 320 *i*P **P** **13 05 00.2 -1.1**
comp=Z,23nm,1.1s,SNR=18
WATA *e*PP **PP** **13 08 18.7 -1.0**
comp=Z,6.8nm,1.0s
WTTA Wattenberg 85.50 320 *i*P **P** **13 05 00.4 -0.9**
comp=Z,33nm,0.9s,SNR=22
WTTA *e*PP **PP** **13 08 19.3 -0.6**
comp=Z,8.6nm,1.0s
MOTA Moosalm 85.77 321 *i*P **P** **13 05 01.5 -1.1**
comp=Z,16nm,0.9s,SNR=11
MOTA *e*PP **PP** **13 08 21.6 -0.4**
comp=Z,6.3nm,0.8s
SQTA Sankt Quirin 85.77 320 *i*P **P** **13 05 01.6 -1.0**
comp=Z,24nm,1.0s,SNR=18
SQTA *e*PP **PP** **13 08 21.1 -0.9**
comp=Z,11nm,1.3s
SOEG Soedalen 85.78 350 *i*P **P** **13 05 01.2 -0.9**
SOEG IAmb IAmb 13 05 02.2
comp=Z,29nm,0.9s
KIBK Kibwezi 85.87 266 P **P** **13 05 05.4 +1.8**
SNR=6.1
RETA Reutte 85.89 321 *e*P **P** **13 05 02.2 -0.9**
comp=Z,9.1nm,1.1s,SNR=6.8
RETA *e*PP **PP** **13 08 22.6 -0.2**
comp=Z,4.7nm,0.9s
LODK Lodwar 85.97 272 P **P** **13 05 06.0 +1.9**
SNR=9.1
STU Stuttgart 86.09 322 P **P** **13 05 03.3 -0.7**
STU pmax pmax
comp=Z,48nm,1.5s
STU Stuttgart 86.09 322 P **P** **13 05 03.3 -0.7**
STU IAmb IAmb 13 05 04.8
comp=Z,48nm,1.5s
FETA Feichten 86.15 320 *i*P **P** **13 05 03.7 -0.9**
comp=Z,19nm,1.1s,SNR=13
FETA *e*PP **PP** **13 08 24.1 -1.1**
comp=Z,10.0nm,1.1s
TIP Timpagrande 86.25 311 P **P** **13 05 04.1 -1.0**
comp=Z,509nmcomp=Z,39nm,1.5s
DAVA Damuels 86.50 321 *e*P **P** **13 05 05.6 -0.7**
comp=Z,19nm,1.2s,SNR=6.6
DAVA *e*PP **PP** **13 08 25.9 -2.0**
comp=Z,15nm,1.4s
PGC Sidney 86.61 37 P **P** **13 05 06.4 -0.1**
MCD Coleburn Disti 86.70 334 *e*P **P** **13 05 05.0 -1.8**
MCD IAmb IAmb 13 05 06.9
comp=Z,17nm,0.7s
BTNL Ternell 86.73 325 *d*P **P** **13 05 06.9 -0.3**
comp=Z,11nm,1.1s
DAVOX Davos/Dischmat 86.78 321 LR LR 13 48 00.7
comp=Z,212nm,20.3s,baz=73,slow=38
MEM Membach 86.78 325 *d*P **P** **13 05 07.2 -0.2**
comp=Z,16nm,0.0s
BFO Black Forest 86.81 322 P **P** **13 05 07.2 -0.4**
DRUM Mains of Drumt 86.83 333 *e*P **P** **13 05 05.8 -1.7**
DRUM IAmb IAmb 13 05 08.8
comp=Z,18nm,0.6s
BEBN Eben Emael 86.84 325 *d*P **P** **13 05 07.6 0.0**
BEBN *d*pP **pP** **13 05 23.1 -0.5**
NRCA Norcia 86.87 316 P **P** **13 05 07.5 -0.5**
AQU L'Aquila 86.93 315 P **P** **13 05 08.5 +0.2**
AQU pmax pmax
comp=Z,84nm,1.2s
AQU L'Aquila 86.93 315 ⇑*i*P **P** **13 05 08.2 -0.1**
AQU L'Aquila 86.93 315 P **P** **13 05 07.8 -0.5**
comp=Z,840nmcomp=Z,84nm,1.2s
BHOU Houvegnez 86.93 325 *d*P **P** **13 05 07.6 -0.5**
comp=Z,14nm,1.1s
BHOU *d*pP **pP** **13 05 23.9 -0.2**
BSTI Sart Tilman 87.02 325 *d*P **P** **13 05 08.1 -0.4**
comp=Z,6.8nm,0.9s
SLE Schleitheim 87.03 322 P **P** **13 05 07.3 -1.4**
NLWA Neilton Lookou 87.06 39 P **P** **13 05 09.6 +0.7**
WLF Walferdange 87.25 324 P **P** **13 05 09.8 +0.2**
WLF pmax pmax
comp=Z,99nm,1.3s
WLF Walferdange 87.25 324 *d*P **P** **13 05 09.6 -0.1**
comp=Z,54nm,1.0s
WLF *d*pP **pP** **13 05 23.9 -1.8**
TUE Stuetta 87.25 320 P **P** **13 05 09.1 -0.9**
comp=Z,1µmcomp=Z,72nm,1.1s
BCLA Clavier 87.25 325 *d*P **P** **13 05 09.3 -0.3**
comp=Z,14nm,1.2s
BCLA *d*PP **PP** **13 08 34.1 +0.5**
CEL Celeste 87.29 311 P **P** **13 05 09.5 -0.7**
comp=Z,2µmcomp=Z,143nm,1.1s
CDF Champ du Feu 87.35 323 *e*P **P** **13 05 09.4 -0.9**
CDF pmax pmax
comp=Z,50nm,1.0s
BGES Gesves 87.39 325 *d*P **P** **13 05 09.7 -0.6**
BGES *d*pP **pP** **13 05 25.1 -1.2**
RCHB Rochefort 87.45 325 *d*P **P** **13 05 10.2 -0.4**
comp=Z,25nm,1.0s
RCHB *d*PP **PP** **13 08 35.9 +0.7**
UCC Uccle 87.52 326 *d*P **P** **13 05 10.5 -0.4**
comp=Z,18nm,1.0s
UCC *d*PP **PP** **13 08 35.8 +0.1**
BMRD Maredsous 87.60 325 *d*P **P** **13 05 10.7 -0.6**
comp=Z,25nm,0.9s
BMRD *d*pP **pP** **13 05 25.3 -2.1**
RADR Rader Ridge 87.63 39 P **P** **13 05 12.8 +1.2**
GIVF Givet 87.69 325 *e*P **P** **13 05 10.8 -1.0**
GIVF pmax pmax
comp=Z,21nm,0.8s
INVG Invergeldie, C 87.80 333 *e*P **P** **13 05 10.6 -1.5**
INVG IAmb IAmb 13 05 11.6
comp=Z,4.6nm,0.5s
DOU Dourbes 87.81 325 *d*P **P** **13 05 10.9 -1.5**
comp=Z,23nm,0.9s
HINF Hinteralfeld 87.92 323 *e*P **P** **13 05 11.6 -1.4**
HINF pmax pmax
comp=Z,8.0nm,0.7s
EDMD Edmundbyers 87.99 331 *e*P **P** **13 05 11.9 -1.2**
EDMD IAmb IAmb 13 05 12.9
comp=Z,22nm,0.5s
BAIF Baives 88.04 325 *e*P **P** **13 05 12.4 -1.0**
BAIF pmax pmax

comp=Z,150nm,1.0s
RAR Rarotonga 88.09 114 LR LR 13 38 42.3
comp=Z,105nm,20.4s,baz=282,slow=32
HAU Haudompre 88.09 323 *eP* **P** **13 05 12.5 -1.3**
HAU pmax pmax
comp=Z,24nm,1.0s
LMK Market Rasen 88.15 330 *eP* **P** **13 05 13.5 -0.3**
LMK IAmb IAmb 13 05 14.8
comp=Z,163nm,0.6s
EKA Eskdalemuir Ar 88.17 332 P **P** **13 05 13.2 -0.8**
comp=Z,11nm,0.6s,baz=53,slow=1.8,SNR=48
EKA LR LR 13 49 28.8
comp=Z,313nm,19.4s,baz=42,slow=39
comp=Z,11nm,0.6s
ESK Eskdalemuir 88.20 332 *eP* **P** **13 05 13.1 -1.0**
ESK IAmb IAmb 13 05 15.2
comp=Z,15nm,0.7s
ELMS Elmsett, Ipswi 88.40 328 *eP* **P** **13 05 14.3 -0.7**
ELMS IAmb IAmb 13 05 15.3
comp=Z,36nm,0.6s
HPK Haverah Park 88.41 331 *eP* **P** **13 05 14.4 -0.7**
HPK IAmb IAmb 13 05 16.0
comp=Z,39nm,0.7s
VAE Valguarnera 88.69 311 LR LR 13 50 14.2
comp=Z,103nm,19.5s,baz=106,slow=39
LBWR Ladybower, Pea 88.82 330 *eP* **P** **13 05 15.7 -1.3**
LBWR IAmb IAmb 13 05 18.4
comp=Z,87nm,0.8s
COR Corvallis 88.94 41 P **P** **13 05 19.5 +1.7**
CWF Charnwood Fore 89.07 330 *eP* **P** **13 05 17.0 -1.2**
CWF IAmb IAmb 13 05 18.4
comp=Z,19nm,0.6s
ANGG Ammassalik, Gr 89.09 352 *i* P **P** **13 05 16.6 -1.4**
ANGG IAmb IAmb 13 05 18.1
comp=Z,26nm,1.1s
GAL1 Galloway 89.14 333 *eP* **P** **13 05 17.3 -1.2**
GAL1 IAmb IAmb 13 05 18.7
comp=Z,25nm,0.9s
LPG La Plagne 89.30 321 *eP* **P** **13 05 19.2 -0.6**
LPG pmax pmax
comp=Z,38nm,0.9s
LPL La Plagne 89.30 321 *eP* **P** **13 05 19.1 -0.6**
LPL pmax pmax
comp=Z,32nm,0.8s
ISOG Isortoq, Green 89.32 352 *i* P **P** **13 05 18.2 -0.9**
ISOG IAmb IAmb 13 05 18.6
comp=Z,54nm,1.2s
CLGH Cloghs, Cushen 89.57 333 *eP* **P** **13 05 19.1 -1.4**
CLGH IAmb IAmb 13 05 20.8
comp=Z,21nm,0.7s
PGF Pioggiola 89.60 317 *eP* **P** **13 05 21.2 +0.1**
PGF pmax pmax
comp=Z,57nm,1.0s
MBDF Montbardon 89.72 320 *eP* **P** **13 05 21.0 -0.7**
MBDF pmax pmax
comp=Z,14nm,0.8s
SBF Sospel 89.82 319 *eP* **P** **13 05 20.7 -1.3**
SBF pmax pmax
comp=Z,42nm,1.0s
FOEL Foel Wylfa 89.83 331 *eP* **P** **13 05 21.3 -0.5**
FOEL IAmb IAmb 13 05 22.4
comp=Z,29nm,0.7s
LOR Lormes 89.89 323 *eP* **P** **13 05 20.8 -1.4**
LOR pmax pmax
comp=Z,24nm,1.1s
HLM1 Long Mynd 89.93 330 *eP* **P** **13 05 21.1 -1.1**
HLM1 IAmb IAmb 13 05 22.4
comp=Z,18nm,0.7s
WLF1 Llynfaes 90.09 331 *eP* **P** **13 05 22.3 -0.7**
WLF1 IAmb IAmb 13 05 23.6
comp=Z,66nm,0.8s
ORIF Oris-en-Rattie 90.13 321 *eP* **P** **13 05 22.6 -0.9**
ORIF pmax pmax
comp=Z,24nm,0.9s
IDGL Inch Island, C 90.15 334 P **P** **13 05 22.3 -0.9**
SMF Signal de Mont 90.27 323 *eP* **P** **13 05 22.9 -1.1**
SMF pmax pmax
comp=Z,65nm,0.9s
MCH1 Michaelchurch 90.34 330 *eP* **P** **13 05 23.4 -0.7**
MCH1 IAmb IAmb 13 05 24.6
comp=Z,41nm,0.7s
ILTH Belurgan, Co L 90.41 333 P **P** **13 05 23.3 -1.1**
AVF Avril sur Loir 90.45 323 *eP* **P** **13 05 23.6 -1.2**
AVF pmax pmax
comp=Z,43nm,1.1s
VIVF Saint-Julien-l 90.87 321 *eP* **P** **13 05 25.9 -0.9**
VIVF pmax pmax
comp=Z,42nm,1.1s
BGF Bois d'Agland 90.87 323 *eP* **P** **13 05 25.6 -1.2**
BGF pmax pmax
comp=Z,22nm,1.2s
DSB Dublin 90.98 332 P **P** **13 05 26.3 -0.8**
VSL Villasalto 91.02 315 P **P** **13 05 27.0 -0.6**
LDF La Druitiere 91.17 326 *eP* **P** **13 05 26.3 -1.8**
LDF pmax pmax
comp=Z,25nm,1.2s
FLN La Foliniere 91.25 326 *eP* **P** **13 05 27.3 -1.1**
FLN pmax pmax
comp=Z,42nm,1.4s
GRR Gorron 91.68 326 *eP* **P** **13 05 30.8 +0.3**
GRR pmax pmax
comp=Z,68nm,1.7s
NUUK Nuuk 91.71 357 *i* P **P** **13 05 28.6 -1.6**
NUUK IAmb IAmb 13 05 30.2
comp=Z,38nm,1.1s
IWEX Carrickbyrne, 91.76 332 P **P** **13 05 30.2 -0.5**
IWEX Carrickbyrne, 91.76 332 *eP* **P** **13 05 30.1 -0.7**
IWEX IAmb IAmb 13 05 31.4
comp=Z,18nm,0.8s
MBAR Mbarara 91.82 270 LR LR 13 48 03.2
comp=Z,51nm,21.2s,baz=75,slow=36
MBAR Mbarara 91.82 270 P **P** **13 05 33.1 +1.2**
FRB Frobisher Bay 91.83 5 LR LR 13 48 34.5
comp=Z,155nm,22.0s,baz=334,slow=37
IGLA Glengowla, Co 92.10 334 P **P** **13 05 30.5 -1.8**
CAF Calviac 92.30 322 *eP* **P** **13 05 32.3 -1.2**
CAF pmax pmax
comp=Z,65nm,1.0s
RJF Les Rejaudoux 92.37 323 *eP* **P** **13 05 33.5 -0.3**
RJF pmax pmax
comp=Z,443nm,1.2s
MFF Saint Martin d 92.46 324 *eP* **P** **13 05 33.2 -0.9**
MFF pmax pmax
comp=Z,23nm,0.8s
FFC Flin Flon 92.56 24 P **P** **13 05 33.9 -0.5**
LFF La Frestale 93.03 323 *eP* **P** **13 05 36.5 -0.3**
LFF pmax pmax
comp=Z,191nm,1.3s
KEST Kesra 93.08 311 P **P** **13 05 37.4 +0.1**
comp=Z,28nm,0.9s,baz=3.3,slow=2.7,SNR=29
KEST LR LR 13 54 38.0
comp=Z,135nm,19.1s,baz=55,slow=40
comp=Z,28nm,0.9s
KEST Kesra 93.08 311 P **P** **13 05 36.9 -0.4**
QUIF Quistinic 93.15 327 *eP* **P** **13 05 35.8 -1.4**
QUIF pmax pmax
comp=Z,19nm,1.0s
MTLF Montolieu 93.19 321 *eP* **P** **13 05 36.9 -0.7**
MTLF pmax pmax
comp=Z,39nm,1.2s
EPF Esparros 94.46 321 *eP* **P** **13 05 42.8 -0.7**
EPF pmax pmax
comp=Z,16nm,1.3s
IVI Ivigtut 94.47 355 *i* P **P** **13 05 41.9 -1.1**
IVI IAmb IAmb 13 05 43.6
comp=Z,30nm,1.2s
BBGB Big Mountain B 94.88 46 P **P** **13 05 45.5 -0.1**
BBGB IAmb IAmb 13 05 52.6
comp=Z,29nm,1.0s
ETSF Etsaut 95.05 322 *eP* **P** **13 05 45.9 -0.3**
ETSF pmax pmax
comp=Z,19nm,1.1s
PPT Papeete 95.26 107 LR LR 13 40 28.8
comp=Z,184nm,21.6s,baz=304,slow=30
SJPF Ste Jean 95.29 322 *eP* **P** **13 05 47.0 -0.2**
SJPF pmax pmax
comp=Z,26nm,1.4s
NVAR Mina Array Bea 95.55 44 P **P** **13 05 49.0 +0.2**
comp=Z,16nm,0.7s,baz=294,slow=4.6,SNR=84
NVAR PKiKP **PKiKP** **13 10 27.7 -1.0**
comp=Z,0.3nm,0.7s,baz=326,slow=3.3,SNR=1.7
NVAR LR LR 13 44 38.3
comp=Z,76nm,21.0s,baz=324,slow=33
comp=Z,16nm,0.7s
DUG Dugway, Tooele 97.77 39 P Pdif 13 05 59.0 +0.3
DUG pmax pmax
comp=Z,14nm,1.3s
DUG Dugway, Tooele 97.77 39 P Pdif 13 05 59.0 +0.3
DUG IAmb IAmb 13 06 04.4
comp=Z,14nm,1.2s
PDAR Pinedale Array 97.86 36 P **P** **13 05 58.4 -0.8**
comp=Z,2.0nm,0.6s,baz=46,slow=0.5,SNR=24
PDAR PKKPbc **PKKPbc** **13 22 31.0 -2.9**
comp=Z,0.1nm,0.3s,baz=130,slow=4.6,SNR=4.5
comp=Z,2.0nm,0.6s
ULM Lac du Bonnet 98.39 24 P **P** **13 05 59.2 -1.8**
comp=Z,6.8nm,0.8s,baz=326,slow=6.4,SNR=8.9
ULM LR LR 13 55 16.8
comp=Z,96nm,19.6s,baz=2.5,slow=38
comp=Z,6.8nm,0.8s
ESDC Sonseca Array 99.10 321 P **Pdif** **13 06 03.7 -0.9**
comp=Z,1.2nm,1.0s,baz=30,slow=4.6,SNR=6.2
ESDC PKKPbc **PKKPbc** **13 22 30.2 +0.1**
comp=Z,0.7nm,0.9s,baz=247,slow=2.3,SNR=5.0
ESDC LR LR 13 56 18.5
comp=Z,137nm,18.2s,baz=32,slow=39
comp=Z,1.2nm,1.0s
PFO Pinyon Flats O 99.65 46 LR LR 13 47 30.2
comp=Z,104nm,19.8s,baz=282,slow=33
SCHQ Schefferville 100.80 5 P **Pdif** **13 06 10.9 -0.9**
comp=Z,4.9nm,1.0s,baz=295,slow=6.8,SNR=4.5
MAW Mawson 101.59 200 PKiKP **PKiKP** **13 10 38.1 +0.1**
comp=Z,1.4nm,0.6s,baz=89,slow=2.0,SNR=4.2
VNDA Vanda 104.23 172 PKiKP **PKiKP** **13 10 42.3 -0.4**
comp=Z,7.6nm,1.3s,baz=253,slow=3.0,SNR=4.6
SYO Syowa Base 109.92 202 ‖ *e*PKiKP PKiKP 13 11 02.6 +9.2
TXAR Lajitas Array 110.66 42 Pdiff **Pdif** **13 06 57.2 +1.0**
comp=Z,1.2nm,0.8s,baz=307,slow=2.7,SNR=6.3
TXAR PKiKP **PKiKP** **13 10 55.8 -0.5**
comp=Z,2.9nm,0.8s,baz=266,slow=0.7,SNR=14
TORD Torodi Ar. Bea 111.24 296 PKiKP **PKiKP** **13 10 56.8 -0.8**
comp=Z,5.3nm,0.6s,baz=22,slow=3.0,SNR=22
TORD PKKPbc **PKKPbc** **13 21 52.5 -0.3**
comp=Z,1.4nm,0.8s,baz=244,slow=3.2,SNR=5.4
TORD PKKPab **PKKPab** **13 22 03.5 -0.8**
comp=Z,3.2nm,0.8s,baz=252,slow=4.1,SNR=10
QSPA South Pole Qui 114.08 180 PKP PKPdf 13 11 00.8 -0.7
comp=Z,4.6nm,0.8s,baz=284,slow=0.5,SNR=33
QSPA PKKPbc **PKKPbc** **13 21 40.3 -5.1**
comp=Z,2.8nm,0.8s,baz=350,slow=0.5,SNR=5.4
ELIB Princess Elisa 115.70 200 *d*PKPdf **PKiKP** **13 11 04.3 -0.2**
NVL N'lazarevskaya 119.50 201 *e*PKiKP **PKPdf** **13 11 11.4 -0.3**
NVL pmax pmax
comp=Z,12nm,0.9s
DBIC Dimbokro 120.16 294 PKP **PKPdf** **13 11 14.2 -0.4**
comp=Z,18nm,0.6s,baz=75,slow=2.0,SNR=8.2
DBIC PKKPab **PKKPbc** **13 21 23.0 +1.3**
comp=Z,4.2nm,0.6s,baz=235,slow=4.5,SNR=7.2
TROLL Troll, Antarti 122.03 199 ⇑PKPdf **PKiKP** **13 11 16.9 0.0**
comp=Z,1µm,0.5s
SNAA Sanae 123.70 198 ⇑PKPdf **PKPdf** **13 11 19.4 -0.5**
comp=Z,122nm,0.5s
SNAA Sanae 123.70 198 PKP **PKPdf** **13 11 19.5 -0.3**
comp=Z,4.8nm,0.6s,baz=194,slow=5.1,SNR=14
SNAA PKKPbc **PKKPab** **13 21 06.3 +0.6**
comp=Z,1.6nm,0.8s,baz=254,slow=5.5,SNR=4.2
VNA2 Neumayer--Watz 125.35 198 ⇑PKPdf **PKPdf** **13 11 23.1 +0.2**
comp=Z,67nm,0.6s,baz=97,slow=2.0
VNA1 Neumayer--Stat 125.74 198 ⇑PKPdf **PKiKP** **13 11 24.0 0.0**
comp=Z,29nm,0.9s
SDV Santo Domingo 144.63 23 *eP* **PKPab** **13 11 59.3 0.0**
PAMC Pamplona, Colo 145.26 27 PKP **PKPbc** **13 12 01.8 0.0**
SPBC San Pablo de B 146.16 31 PKP **PKPab** **13 12 04.9 +0.1**
comp=Z,2µmcomp=Z,143nm,0.6s
RUSC La Rusia 146.39 29 PKP **PKPab** **13 12 06.4 +0.2**
comp=Z,3µmcomp=Z,280nm,1.1s
ROSC El Rosal 146.75 32 PKPbc **PKPbc** **13 12 06.4 +0.1**
comp=Z,29nm,0.6s,baz=59,slow=4.9,SNR=18
JAMC Jamundi, Valle 146.93 37 PKP **PKPbc** **13 12 06.9 +0.3**
comp=Z,2µmcomp=Z,105nm,0.9s
PRAC Prado 147.44 34 PKP **PKPdf** **13 12 05.9 +0.6**
comp=Z,809nmcomp=Z,69nm,1.1s
BBAC Balboa, Cauca 147.58 39 PKP **PKPdf** **13 12 06.6 +0.9**
comp=Z,493nmcomp=Z,43nm,0.7s
PAC1 Pacto, Paraso 148.05 43 PKP **PKPdf** **13 12 06.9 +0.5**
comp=Z,2µmcomp=Z,185nm,1.0s
CUSE Cuicocha Este 148.27 43 PKP **PKPdf** **13 12 08.6 +1.5**
comp=Z,4µmcomp=Z,73nm,0.7s
GARC Garzon, Huila 148.42 36 PKP **PKPdf** **13 12 07.9 +0.7**
comp=Z,2µmcomp=Z,140nm,0.9s
FLOC Florencia 148.84 37 PKP **PKPdf** **13 12 08.2 +0.6**
comp=Z,1µmcomp=Z,108nm,1.1s
MACC Macarena, Meta 149.31 33 PKP **PKPdf** **13 12 08.4 +0.1**
comp=Z,801nmcomp=Z,44nm,0.7s
PIAT Ana Tenorio 149.36 44 PKP **PKPdf** **13 12 10.4 +1.5**
comp=Z,2µmcomp=Z,64nm,1.1s
PTLC Puerto Leguiza 150.48 37 PKP **PKPdf** **13 12 12.5 +2.4**
comp=Z,3µmcomp=Z,336nm,1.0s
MCRA Macar, Loja 150.70 51 PKP **PKPbc** **13 12 15.4 -0.7**
NBPV Pedro Velho 152.23 306 *eP* **PKPdf** **13 12 11.9 -0.8**
RCBR Riachuelo 152.27 308 *eP* **PKPdf** **13 12 14.3 +1.5**
NBPA Parau_RN 153.08 310 *eP* **PKPdf** **13 12 12.9 -1.1**
NBMO Morrinhos-CE 153.17 318 *eP* **PKPdf** **13 12 15.3 +1.2**
BOAV Boa Vista 153.32 7 *eP* **PKPdf** **13 12 14.9 +0.5**
SGC2 Sao Gabriel da 154.32 22 *eP* **PKPdf** **13 12 14.1 -1.7**
NBMA Muriti-CE 155.38 310 *eP* **PKPdf** **13 12 18.4 +1.2**
NBPN Ponto Novo - B 158.78 306 *eP* **PKPdf** **13 12 23.2 +1.7**
CMC01 Camacan, BA 160.88 294 *eP* **PKPdf** **13 12 23.8 0.0**
GUA01 Guaratinga, BA 161.72 291 *eP* **PKPdf** **13 12 26.6 +1.9**
LPAZ La Paz 167.27 53 PKP **PKPdf** **13 12 31.1 +0.7**
comp=Z,21nm,1.1s,baz=14,slow=3.4,SNR=41
LPAZ PKPab **PKPab** **13 13 34.2 -1.0**
comp=Z,9.2nm,0.8s,baz=357,slow=11,SNR=5.7
LPAZ La Paz 167.27 53 *eP* **PKPdf** **13 12 31.6 +1.2**
BDFB Brasilia 167.59 312 PKP **PKPdf** **13 12 29.6 -0.4**
comp=Z,22nm,1.0s,baz=101,slow=0.2,SNR=19
BDFB PKPab **PKPab** **13 13 35.7 -0.4**
comp=Z,14nm,0.9s,baz=101,slow=1.7,SNR=8.6
AC02 Maricunga 169.23 106 ‖ *eP* **PKPdf** **13 12 33.1 +1.8**
TINO Tinogasta 170.23 115 *eP* **PKPdf** **13 12 33.1 +1.7**
SIV San Ignacio 171.10 23 PKP **PKPdf** **13 12 31.9 -0.1**
comp=Z,21nm,0.8s,baz=14,slow=0.6,SNR=38
SIV PKPab **PKPab** **13 13 49.5 -1.8**
comp=Z,11nm,0.8s,baz=338,slow=3.5,SNR=8.3
FSA Cafayete 172.14 105 *eP* **PKPdf** **13 12 34.4 +1.9**
BBSD Serra de San D 172.37 23 *eP* **PKPdf** **13 12 31.9 -0.7**
AHML Horco Molle 172.53 111 ‖ *eP* **PKPdf** **13 12 34.8 +2.3**
PSAL Palomas, Salto 173.23 179 *eP* **PKPdf** **13 12 34.3 +1.8**
CPUP Villa Florida 177.96 185 PKP **PKPdf** **13 12 33.9 0.0**
comp=Z,7.4nm,1.1s,baz=30,slow=1.9,SNR=6.7
SJPY San Joaquin 178.52 241 *eP* **PKPdf** **13 12 36.1 +2.1**

*NEIC **26** 13:13:49.0±1.7, 19°.1S±0°.2×176°.7W±0°.2, h560km±12km, mb4.2/19, Error ellipse: s-maj=29.8km s-min=18.6km az=133.0*
*IDC **26** 13:13:50.3±11.0, 19°.36S×176°.77W, h577km±63km, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=280.1km s-min=32.0km az=140.0*
ISC 26 13:13:47.5±1.2, 19°.2S±0°.2×176°.5W±0°.2, h550km, n29, σ1§49/29, mb4.1/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
FUTU	**Fugatoga**	**5.09**	**342**	P	**P**		**13 15 17.7**	**-0.6**
MSVF	**Nonsavu**	**5.38**	**285**	P	**P**		**13 15 23.3**	**+2.6**
44nm,0.7s,baz=112,slow=8.8,SNR=19								
MSVF	**Nonsavu**	**5.38**	**285**	P	**P**		**13 15 23.7**	**+3.0**
MARNC	**Mare, Loyalty**	**14.70**	**258**	P	**P**		**13 16 54.8**	**+0.8**
TCW	**Tory Channel**	**23.33**	**198**	P	**P**		**13 18 14.2**	**+0.9**
LTZ	**Lake Taylor**	**25.38**	**200**	P	**P**		**13 18 31.0**	**-0.4**
EIDS	**Eidsvold**	**30.59**	**252**	P	**P**		**13 19 16.8**	**-0.2**
ARMA	**Armidale**	**30.93**	**243**	P	**P**		**13 19 19.3**	**-0.8**
CTAO	**Charters Tower**	**35.06**	**262**	P	**P**		**13 19 53.3**	**-1.7**
CTAO					IAmb	IAmb	13 20 25.6	
comp=Z,6.7nm,1.2s								
COEN	**Coen**	**38.95**	**271**	P	**P**		**13 20 24.9**	**-2.1**
COEN					IAmb	IAmb	13 20 48.3	
comp=Z,14nm,1.2s								
INKA	**Innaminka**	**39.98**	**249**	P	**P**		**13 20 35.2**	**+0.1**
INKA					IAmb	IAmb	13 21 16.3	
comp=Z,4.2nm,1.5s								
WR8	**Warramunga Arr**	**46.05**	**260**	P	**P**		**13 21 21.0**	**-1.5**
WR8					IAmb	IAmb	13 21 43.2	
comp=Z,15nm,1.4s								
WB0	**Warramunga Arr**	**46.18**	**261**	P	**P**		**13 21 21.6**	**-1.9**
WB0					IAmb	IAmb	13 21 33.5	
comp=Z,6.9nm,1.2s								
WRAB	**Tennant Creek**	**46.20**	**260**	P	**P**		**13 21 22.2**	**-1.4**
WRAB					IAmb	IAmb	13 22 00.9	
comp=Z,13nm,1.4s								
WRA	**Warramunga Arr**	**46.21**	**260**	P	**P**		**13 21 22.1**	**-1.6**
comp=Z,0.9nm,0.4s,baz=98,slow=6.8,SNR=23								
comp=Z,0.9nm,0.4s								
WRA	**Warramunga Arr**	**46.21**	**260**	P	**P**		**13 21 21.9**	**-1.9**
AS31	**Alice Springs**	**46.22**	**255**	P	**P**		**13 21 22.7**	**-1.1**
ASAR	**Alice Springs**	**46.22**	**255**	P	**P**		**13 21 22.5**	**-1.2**
comp=Z,1.9nm,0.6s,baz=90,slow=7.9,SNR=57								
comp=Z,1.9nm,0.6s								
ASAR	**Alice Springs**	**46.22**	**255**	P	**P**		**13 21 21.9**	**-1.9**
FITZ	**Fitzroy Crossi**	**54.62**	**261**	P	**P**		**13 22 24.1**	**-1.0**
ATKA	**Atka Island**	**71.11**	**1**	P	**P**		**13 24 10.7**	**+0.4**
ATKA					IAmb	IAmb	13 24 21.4	
comp=Z,18nm,1.2s								
K15K	**Wolf Creek Mou**	**82.06**	**7**	P	**P**		**13 25 11.5**	**+1.4**
K15K					IAmb	IAmb	13 25 13.7	
comp=Z,8.4nm,1.2s								
SPU	**Mount Spurr**	**82.46**	**12**	P	**P**		**13 25 13.0**	**+0.8**
TRF	**Thorofare Moun**	**84.88**	**11**	P	**P**		**13 25 25.3**	**+1.1**
TRF					IAmb	IAmb	13 26 05.1	
comp=Z,8.0nm,1.5s								
CCB	**Clear Creek Bu**	**86.43**	**12**	P	**P**		**13 25 32.8**	**+1.3**
CCB					IAmb	IAmb	13 25 33.9	
comp=Z,4.5nm,1.4s								
N31M	**Braeburn, Yuko**	**86.72**	**18**	P	**P**		**13 25 34.0**	**+1.1**
ILAR	**Eielson Array**	**86.73**	**12**	P	**P**		**13 25 34.2**	**+1.4**
comp=Z,0.2nm,0.4s,baz=203,slow=4.5,SNR=4.9								
comp=Z,0.2nm,0.4s								
ILAR	**Eielson Array**	**86.73**	**12**	P	**P**		**13 25 32.2**	**-0.6**
FYU	**Fort Yukon**	**88.64**	**12**	P	**P**		**13 25 42.9**	**+1.3**
FYU					IAmb	IAmb	13 26 10.7	
comp=Z,6.5nm,1.4s								

*GUC **26** 13:14:22.2±0.7, 17°.28S×69°.85W, h10km±16km, ML3.6*
*NEIC **26** 13:14:26.1±1.6, 17°.55S±0°.04×69°.83W±0°.02, h10km±1km, mb4.5/14, Error ellipse: s-maj=7.6km s-min=3.0km az=178.0*
*IDC **26** 13:14:33.0±5.0, 17°.12S×69°.72W, h71km±35km, mb3.4/6, mbtmp3.8/7, ML3.7/1, MS3.5/7, Error ellipse: s-maj=58.4km s-min=28.8km az=12.0*
ISC 26 13:14:24.4±0.5, 17°.45S±0°.04×69°.91W±0°.05, h10km, n56, σ1§54/54, mb4.4/12, MS3.3/5, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
PB18	**Visviri**	**0.43**	**109**	‖ *eP*	**Pg**		**13 14 31.7**	**-1.3**
PB18	**Visviri**	**0.43**	**109**		**Pg**		**13 14 31.6**	**-1.3**
PB16	**IPOC Station P**	**0.96**	**157**	*eP*	**Pg**		**13 14 41.7**	**-1.2**
PB16	**IPOC Station P**	**0.96**	**157**		**Pg**		**13 14 41.7**	**-1.2**
AP01	**Chacalluta**	**1.00**	**204**	*eP*	**Pg**		**13 14 42.6**	**-1.1**
AP01				*eS*	**Sn**		**13 14 58.3**	**-0.4**
AP01				IAML			13 14 58.8	
comp=N,4µm,0.4s								
AP01	**Chacalluta**	**1.00**	**204**	Pg	**Pg**		**13 14 43.1**	**-0.6**
PB12	**IPOC Station P**	**1.22**	**199**	*eP*	**Pn**		**13 14 46.5**	**-1.2**
PB12				*eS*	**Sn**		**13 15 04.5**	**+0.1**
PB12	**IPOC Station P**	**1.22**	**199**		**Pn**		**13 14 46.6**	**-1.0**
PX02	**IPOC Station P**	**1.53**	**190**	*eP*	**Pn**		**13 14 50.6**	**-1.2**
PX02				IAML			13 15 17.3	
comp=N,373nm,0.3s								
I08BO	**LAS PENAS INFR**	**1.86**	**49**	I	I		13 25 40.0	
baz=231,slow=329,SNR=0.9								
LPAZ	**La Paz**	**2.06**	**56**	P	**Pb**		**13 15 01.2**	**-0.9**
comp=N,103nm,0.6s,baz=248,slow=8.8,SNR=95								
LPAZ				S	**Sn**		**13 15 23.6**	**-2.0**
comp=N,167nm,1.0s,baz=326,slow=13,SNR=2.5								
LPAZ				LR	LR		13 16 07.1	
comp=N,2µm,18.9s,baz=250,slow=54								
LPAZ	**La Paz**	**2.06**	**56**	Pn	**Pb**		**13 15 00.1**	**-2.0**
PSGCX	**Pisagua**	**2.14**	**185**	*eP*	**Pb**		**13 15 01.4**	**-2.0**
PSGCX				*eS*	**Sb**		**13 15 31.6**	**+1.5**
PSGCX	**Pisagua**	**2.14**	**185**		**Pb**		**13 15 01.6**	**-1.7**
GO01	**Chusmiza**	**2.31**	**163**	*eP*	**Pb**		**13 15 06.6**	**+0.2**
GO01				IAML			13 15 46.7	
comp=N,255nm,0.4s								
GO01	**Chusmiza**	**2.31**	**163**		**Pn**		**13 15 03.0**	**+0.1**
PB11	**IPOC Station P**	**2.31**	**174**	*eP*	**Pb**		**13 15 04.6**	**-1.6**
PB11				*eS*	**Sg**		**13 15 37.1**	**-1.5**
PB11				IAML			13 15 43.9	
comp=N,366nm,0.2s								
PB11	**IPOC Station P**	**2.31**	**174**		**Pn**		**13 15 03.3**	**+0.6**
PB08	**IPOC Station P**	**2.77**	**165**	*eP*	**Pb**		**13 15 13.6**	**-0.6**
PB08				IAML			13 15 57.4	
comp=N,173nm,0.5s								
TA02	**Huaiquique**	**2.81**	**184**	*eP*	**Pn**		**13 15 11.5**	**+2.1**
PB03	**IPOC Station P**	**4.57**	**178**		**Pn**		**13 15 35.1**	**+1.3**
PB14	**IPOC Station P**	**7.15**	**184**	Pn	**Pn**		**13 16 10.1**	**+0.7**
SIV	**San Ignacio**	**8.59**	**82**	P	**Pn**		**13 16 31.2**	**+2.4**
comp=N,0.1nm,0.3s,baz=288,slow=19,SNR=9.7								
SIV				S	**Sn**		**13 18 09.1**	**+3.2**
comp=N,5.5nm,0.8s,baz=184,slow=16,SNR=1.2								
SIV				LR	LR		13 20 24.5	
comp=N,882nm,19.3s,baz=286,slow=42								
comp=N,7.7nm,0.6s								
VILB	**Vilhena**	**10.38**	**66**		**Pn**		**13 16 53.9**	**+0.4**
CPUP	**Villa Florida**	**14.63**	**129**	LR	LR		13 24 42.9	
comp=N,256nm,18.7s,baz=256,slow=42								
MT09	**Talagante**	**16.29**	**183**	P	**P**		**13 18 16.6**	**+0.2**
MT01	**Popeta**	**16.39**	**184**	P	**P**		**13 18 17.2**	**-0.2**
TRQA	**Tornquist**	**21.67**	**163**	P	**P**		**13 19 15.1**	**-0.2**
TRQA				IAmb	IAmb		13 19 30.8	
comp=Z,23nm,1.1s								
SDV	**Santo Domingo**	**26.18**	**358**	LR	LR		13 31 11.6	
comp=Z,151nm,19.2s,baz=176,slow=39								
MDP	**Montagnes des**	**28.16**	**39**	LR	LR		13 33 15.4	
comp=Z,44nm,21.3s,baz=222,slow=40								
JTS	**Las Juntas de**	**31.32**	**331**	LR	LR		13 35 03.4	
comp=Z,60nm,18.2s,baz=158,slow=40								
RPN	**Rapa Nui**	**37.60**	**248**	LR	LR		13 33 40.6	
comp=Z,82nm,19.5s,baz=128,slow=30								
PMSA	**Palmer Station**	**47.45**	**177**	LR	LR		13 42 33.9	
comp=Z,26nm,19.8s,baz=16,slow=35								
TXAR	**Lajitas Array**	**56.80**	**325**	P	**P**		**13 24 08.4**	**-0.7**
comp=Z,0.8nm,0.8s,baz=161,slow=13,SNR=3.5								
comp=Z,0.8nm,0.8s								
TXAR	**Lajitas Array**	**56.80**	**325**	P	**P**		**13 24 09.7**	**+0.6**
APMT	**Aspermont**	**58.16**	**330**	P	**P**		**13 24 20.5**	**+2.0**
APMT				IAmb	IAmb		13 24 21.0	
comp=Z,4.2nm,0.9s								
PAL	**Palisades**	**58.28**	**356**	P	**P**		**13 24 20.5**	**+1.4**
MSTX	**Muleshoe**	**59.97**	**329**		**P**		**13 24 33.2**	**+2.0**
MSTX				IAmb	IAmb		13 24 34.6	
comp=Z,5.7nm,1.0s								
SDCO	**Great Sand Dun**	**64.31**	**329**	P	**P**		**13 25 00.9**	**+0.4**
BATG	**Bathurst New B**	**64.52**	**3**	P	**P**		**13 25 03.1**	**+1.8**
KNB	**Kanab**	**67.61**	**324**	P	**P**		**13 25 24.0**	**+2.3**
KNB				IAmb	IAmb		13 25 26.3	
comp=Z,4.8nm,1.1s								
DBIC	**Dimbokro**	**68.56**	**75**	P	**P**		**13 25 28.6**	**+0.7**
TPNV	**Topopah Spring**	**69.55**	**322**	P	**P**		**13 25 35.7**	**+2.0**
TPNV				IAmb	IAmb		13 25 38.0	
comp=Z,2.8nm,1.0s								
PDAR	**Pinedale Array**	**70.15**	**330**	P	**P**		**13 25 36.6**	**-0.9**
comp=Z,0.1nm,0.5s,baz=131,slow=6.1,SNR=5.0								
comp=Z,0.1nm,0.5s								
NVAR	**Mina Array Bea**	**71.75**	**322**	P	**P**		**13 25 48.2**	**+1.0**
comp=Z,0.6nm,0.8s,baz=181,slow=6.8,SNR=4.5								
comp=Z,0.6nm,0.8s								
YNE	**Yellowstone No**	**72.07**	**331**	P	**P**		**13 25 50.1**	**+1.1**
YNE				IAmb	IAmb		13 25 54.4	
comp=Z,5.3nm,0.9s								
PAHR	**Pah Rah Range**	**73.22**	**322**		**P**		**13 25 57.5**	**+1.6**
PAHR				IAmb	IAmb		13 26 00.8	
comp=Z,3.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**76.93**	**72**	P	**P**		**13 26 16.4**	**-1.3**
comp=Z,2.5nm,1.1s,ba

*IDC **26** 13:28:26.0±0.5,5°.98S×149°.33E,h91km±4km,mb4.0/17, mbtmp4.3/19,MS3.4/17,Error ellipse: s-maj=16.6km s-min=7.6km az=110.0*

*GFZ **26** 13:28:27.5±0.3,6°S±3°×14°9E±°,h94km±2km,M4.7/26, mb4.8/26,Error ellipse: s-maj=8.0km s-min=5.9km az=70.3,confirmed*

*NEIC **26** 13:28:27.0±1.7,6°.02S±0°.06×149°.41E±0°.08,h88km±6km, mb4.7/63,Error ellipse: s-maj=11.2km s-min=8.5km az=110.0*

*DJA **26** 13:28:35.3±3.3,6°S±17°×14°9E±3°2,h110km±9km,M5.3/7, mb5.8/5,mb5.0/7,MLv5.5/1,Mw(mB)5.3/5,MwMwp4.7/1, Mwp5.0/1*

ISC 26 13:28:26.9±0.4,6°.00S±0°.04×149°.33E±0°.06,h91km±3km, h91km:pP-P,n197,σ1%15/196,mb4.6/52,1C,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BULU	**Kimbe**	**1.08**	**65**	P			Pn	13 28 55.8	+8.2
I40PG	**Keravat**	**3.16**	**58**	I			I	13 47 40.0	
	1.0nm,0.4s,baz=232,slow=319,SNR=1.3								
KRVT	**Keravat (AS076**	**3.17**	**58**	LR		LR	LR	13 30 36.4	
	comp=Z,330nm,19.2s,baz=164,slow=41								
RABL	**Rabaul**	**3.34**	**58**				**Pn**	**13 29 16.2**	**-0.9**
KAVG	**Kavieng**	**3.70**	**24**	P			Pn	13 29 27.6	+5.7
PMG	**Port Moresby**	**4.01**	**212**	P			**Pn**	**13 29 26.8**	**+0.6**
	710nm,0.4s,baz=19,slow=3.8,SNR=402								
PMG				S			**Sn**	**13 30 12.8**	**+0.7**
	2µm,0.7s,baz=348,slow=16,SNR=12								
PMG	**Port Moresby**	**4.01**	**212**	P			**Pn**	**13 29 27.6**	**+1.4**
PMG	**Port Moresby**	**4.01**	**212**	S			**Sn**	**13 30 13.0**	**+0.9**
PMG	**Port Moresby**	**4.01**	**212**	P			**Pn**	**13 29 27.4**	**+1.2**
PMG	**Port Moresby**	**4.01**	**212**	S			**Sn**	**13 30 13.2**	**+1.1**
PMG	**Port Moresby**	**4.01**	**212**				**Pn**	**13 29 26.6**	**+0.4**
PMG	**Port Moresby**	**4.01**	**212**	P			**Pn**	**13 29 27.4**	**+1.2**
PMG	**Port Moresby**	**4.01**	**212**	P			**Pn**	**13 29 26.5**	**+0.4**
MANU	**Manus Island**	**4.39**	**333**				**Pn**	**13 29 32.1**	**+0.8**
GENI	**Genyem**	**9.74**	**290**	P			**Pn**	**13 30 47.6**	**+3.4**
GENI	**Genyem**	**9.74**	**290**	P			**Pn**	**13 30 46.0**	**+1.8**
COEN	**Coen**	**9.96**	**217**	P			**Pn**	**13 30 46.5**	**-0.7**
	comp=Z,21nm,1.0s								
COEN	**Coen**	**9.96**	**217**				**Pn**	**13 30 46.3**	**-0.9**
COEN	**Coen**	**9.96**	**217**	P			**Pn**	**13 30 46.8**	**-0.5**
TATA	**Tatamba Isabel**	**10.66**	**103**	P			Pn	13 31 02.4	+5.7
HNR	**Honiara**	**11.06**	**109**	LR			LR	13 34 38.3	
	comp=Z,13nm,21.3s,baz=359,slow=34								
NGOA	**Tingoa Renbel**	**11.96**	**118**	P			Pn	13 31 19.7	+5.5
MTSU	**Mount Surprise**	**13.02**	**202**	P			**Pn**	**13 31 30.2**	**+1.7**
MTSU	**Mount Surprise**	**13.02**	**202**	P			**Pn**	**13 31 30.7**	**+2.3**
	comp=Z,39nm,0.9s								
MTSU	**Mount Surprise**	**13.02**	**202**	P			**Pn**	**13 31 28.9**	**+0.4**
AUAYR	**Ayr State High**	**13.63**	**188**	P			**Pn**	**13 31 38.8**	**+2.4**
CTA	**Charters Tower**	**14.32**	**192**	P			**Pn**	**13 31 46.5**	**+1.1**
	comp=Z,3.8nm,0.3s,baz=21,slow=13,SNR=6.9								
CTA	**Charters Tower**	**14.32**	**192**	P			**Pn**	**13 31 47.0**	**+1.5**
CTA	**Charters Tower**	**14.32**	**192**	P			**P**	**13 31 48.7**	**-1.2**
	comp=Z,16nm,1.5s								
CTAO	**Charters Tower**	**14.32**	**192**	P			**Pn**	**13 31 47.5**	**+2.0**
CTAO	**Charters Tower**	**14.32**	**192**	Pn			**Pn**	**13 31 44.6**	**-0.9**
CTAO	**Charters Tower**	**14.32**	**192**	P			**Pn**	**13 31 45.5**	**+0.1**
PATS	**Pohnpei**	**15.58**	**35**	P			**Pn**	**13 32 02.0**	**+0.5**
QIS	**Mount Isa**	**17.28**	**212**	P			**Pn**	**13 32 22.5**	**0.0**
QIS	**Mount Isa**	**17.28**	**212**	P			**P**	**13 32 23.5**	**+0.9**
	comp=Z,55nm,1.3s								
QIS	**Mount Isa**	**17.28**	**212**	P			**Pn**	**13 32 22.1**	**-0.5**
AUNRC	**North Rockhamp**	**17.29**	**176**	P			**P**	**13 32 24.6**	**+1.9**
FAKI	**Fak Fak**	**17.30**	**279**	P			**Pn**	**13 32 22.9**	**+0.1**
KDU	**Kakadu**	**17.91**	**247**	P			**P**	**13 32 28.6**	**-0.9**
	comp=Z,30nm,0.8s								
SIJI	**Sorong**	**18.73**	**285**	LR			LR	13 41 41.4	
	comp=Z,102nm,18.9s,baz=174,slow=42								
SIJI	**Sorong**	**18.73**	**285**	P			Pn	13 33 01.0	+21
SIJI	**Sorong**	**18.73**	**285**	P			**P**	**13 32 38.0**	**-0.7**
MTN	**Manton Dam**	**19.19**	**248**				**P**	**13 32 43.3**	**-0.4**
MTN				IAmb			IAmb	13 32 44.1	
	comp=Z,46nm,0.9s								
MTN	**Manton Dam**	**19.19**	**248**	P			**P**	**13 32 42.7**	**-0.9**
DRS	**Darwin Rock St**	**19.28**	**249**	P			**P**	**13 32 44.6**	**0.0**
EIDS	**Eidsvold**	**19.34**	**175**	P			**Pn**	**13 32 47.7**	**+0.6**
EIDS	**Eidsvold**	**19.34**	**175**	P			**Pn**	**13 32 47.0**	**-0.1**
	comp=Z,24nm,1.2s								
EIDS	**Eidsvold**	**19.34**	**175**	P			**P**	**13 32 45.4**	**+0.3**
EIDS				IAmb			IAmb	13 32 47.9	
	comp=Z,52nm,1.4s								
EIDS	**Eidsvold**	**19.34**	**175**	P			**Pn**	**13 32 46.7**	**-0.4**
GUMO	**Guam**	**19.95**	**347**	LR			LR	13 39 25.3	
	comp=Z,68nm,19.0s,baz=172,slow=33								
WB0	**Warramunga Arr**	**19.96**	**225**				**P**	**13 32 52.3**	**+0.3**
WR8	**Warramunga Arr**	**20.01**	**225**	P			**P**	**13 32 52.7**	**+0.2**
WR8				IAmb			IAmb	13 32 53.8	
	comp=Z,92nm,1.0s								
WRAB	**Tennant Creek**	**20.10**	**225**	P			**P**	**13 32 53.8**	**+0.3**
WRAB	**Tennant Creek**	**20.10**	**225**	S			**S**	**13 36 32.3**	**-2.1**
WRAB	**Tennant Creek**	**20.10**	**225**	P			**P**	**13 32 53.5**	**0.0**
WRAB				IAmb			IAmb	13 32 54.6	
	comp=Z,98nm,1.0s								
WRAB	**Tennant Creek**	**20.10**	**225**	P			**P**	**13 32 53.2**	**-0.3**
WRA	**Warramunga Arr**	**20.11**	**225**	P			**P**	**13 32 53.7**	**+0.1**
	comp=Z,30nm,0.4s,baz=52,slow=11,SNR=190								
WRA				S			**S**	**13 36 32.4**	**-2.4**
	comp=Z,12nm,1.1s,baz=37,slow=19,SNR=9.5								
WRA				ScP			**ScP**	**13 40 32.8**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=49,slow=2.2,SNR=5.3								
	comp=Z,30nm,0.4s								
WRA	**Warramunga Arr**	**20.11**	**225**	P			**P**	**13 32 52.5**	**-1.1**
WRA							**S**	**13 36 31.8**	**-3.0**
QLP	**Quilpie**	**21.04**	**193**	P			**P**	**13 33 04.9**	**+1.4**
QLP	**Quilpie**	**21.04**	**193**	S			**S**	**13 36 52.9**	**+0.1**
QLP	**Quilpie**	**21.04**	**193**	P			**P**	**13 33 05.2**	**+1.7**
	comp=Z,181nm,0.9s								
QLP	**Quilpie**	**21.04**	**193**	P			**P**	**13 33 03.5**	**0.0**
KNRA	**Kununurra**	**22.35**	**243**	P			**P**	**13 33 16.8**	**-0.8**
	comp=Z,114nm,0.7s								
KNRA	**Kununurra**	**22.35**	**243**				**P**	**13 33 16.0**	**-1.6**
AS01	**Alice Springs**	**22.97**	**219**	P			**P**	**13 33 24.5**	**+0.6**
AS31	**Alice Springs**	**23.00**	**219**	P			**P**	**13 33 23.4**	**-0.8**
	comp=Z,25nm,0.9s								
AS31	**Alice Springs**	**23.00**	**219**	P			**P**	**13 33 24.0**	**-0.2**
AS31				IAmb			IAmb	13 33 47.4	
	comp=Z,24nm,1.1s								
ASAR	**Alice Springs**	**23.00**	**219**	P			**P**	**13 33 23.9**	**-0.4**
	comp=Z,18nm,0.5s,baz=50,slow=9.0,SNR=484								
ASAR				S			**S**	**13 37 29.0**	**+1.2**
	comp=Z,9.0nm,0.9s,baz=33,slow=20,SNR=14								
ASAR				LR			LR	13 43 31.6	
	comp=Z,225nm,18.3s,baz=28,slow=39								
	comp=Z,18nm,0.5s								
ASAR	**Alice Springs**	**23.00**	**219**	P			**P**	**13 33 24.0**	**-0.3**
DZM	**Mont Dzumac**	**23.00**	**136**	P			**P**	**13 33 23.7**	**-0.6**
	comp=Z,36nm,1.0s,baz=320,slow=7.9,SNR=18								
	comp=Z,36nm,1.0s								
AUALC	**St Philip's Co**	**23.03**	**219**	P			**P**	**13 33 24.9**	**+0.4**
AUALC	**St Philip's Co**	**23.03**	**219**	S			**S**	**13 37 27.6**	**-0.7**
INKA	**Innaminka**	**23.11**	**200**				**P**	**13 33 25.3**	**+0.1**
INKA				IAmb			IAmb	13 33 26.7	
	comp=Z,60nm,1.3s								
YATNC	**Mamie plateau,**	**23.30**	**135**	P			**P**	**13 33 30.0**	**+2.9**
AULRC	**Lightning Ridg**	**23.34**	**183**	P			**P**	**13 33 28.4**	**+1.1**
SANI	**Sanana**	**23.61**	**279**	P			**P**	**13 33 28.4**	**-1.5**
ARMA	**Armidale**	**24.39**	**175**	P			**P**	**13 33 37.1**	**+0.2**
ARMA				IAmb			IAmb	13 33 42.3	
	comp=Z,54nm,1.5s								
ARMA	**Armidale**	**24.39**	**175**	P			**P**	**13 33 37.4**	**+0.6**
SOEI	**Soe**	**25.10**	**260**	P			**P**	**13 33 43.0**	**-0.6**
SOEI				IAmb			IAmb	13 34 14.2	
	comp=Z,58nm,0.9s								
SOEI	**Soe**	**25.10**	**260**	P			**P**	**13 33 44.9**	**+1.3**
SOEI	**Soe**	**25.10**	**260**	P			**P**	**13 33 44.6**	**+1.1**
CMSA	**Cobar Meteorol**	**25.64**	**187**	P			**P**	**13 33 49.0**	**+0.9**
CMSA	**Cobar Meteorol**	**25.64**	**187**	P			**P**	**13 33 48.2**	**+0.1**
	comp=Z,26nm,0.9s								
CMSA	**Cobar Meteorol**	**25.64**	**187**	P			**P**	**13 33 47.8**	**-0.3**
BATI	**Baumata**	**25.75**	**259**	P			**P**	**13 33 49.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**26.06**	**240**	P			**P**	**13 33 51.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**26.06**	**240**	P			**P**	**13 33 51.6**	**-0.4**
	comp=Z,15nm,0.9s								
FITZ	**Fitzroy Crossi**	**26.06**	**240**				**P**	**13 33 51.5**	**-0.6**
FITZ				IAmb			IAmb	13 33 56.9	
	comp=Z,27nm,1.3s								
FITZ	**Fitzroy Crossi**	**26.06**	**240**	P			**P**	**13 33 51.6**	**-0.4**
AUDCS	**Dubbo College**	**26.11**	**181**	P			**P**	**13 33 53.2**	**+0.9**
STKA	**Stephens Creek**	**26.75**	**195**	P			**P**	**13 33 58.0**	**-0.1**
	comp=Z,9.9nm,0.7s,baz=17,slow=11,SNR=14								
STKA						LR	LR	13 45 47.9	
	comp=Z,101nm,18.0s,baz=342,slow=39								
	comp=Z,9.9nm,0.7s								
STKA	**Stephens Creek**	**26.75**	**195**	P			**P**	**13 33 59.4**	**+1.3**
STKA	**Stephens Creek**	**26.75**	**195**	P			**P**	**13 33 57.6**	**-0.5**
LHI	**Lord Howe Isla**	**26.98**	**161**	P			**P**	**13 33 59.8**	**-0.4**
MMRI	**Maumere**	**27.00**	**263**	P			**P**	**13 34 00.5**	**0.0**
DAV	**Davao City (W)**	**27.02**	**299**	LR			LR	13 45 25.5	
	comp=Z,53nm,18.0s,baz=98,slow=38								
WRKA	**Warakurna**	**27.65**	**225**	P			**P**	**13 34 04.2**	**-2.1**
	comp=Z,16nm,0.9s								
WSI	**Waingapu**	**28.98**	**261**	P			**P**	**13 34 22.1**	**+3.8**
BBOO	**Buckleboo**	**29.41**	**203**	P			**P**	**13 34 21.3**	**-0.5**
BBOO				IAmb			IAmb	13 34 56.3	
	comp=Z,35nm,1.4s								
BBOO	**Buckleboo**	**29.41**	**203**	P			**P**	**13 34 21.2**	**-0.5**
KAPI	**Kappang**	**29.46**	**270**	P			**P**	**13 34 21.8**	**-0.7**
WBSI	**Waikabubak, Su**	**29.87**	**261**	P			**P**	**13 34 26.3**	**+0.2**
MSVF	**Nonsavu**	**30.38**	**115**	P			**P**	**13 34 31.1**	**+0.5**
ARPS	**Mount Arapiles**	**31.39**	**192**	P			**P**	**13 34 39.8**	**+0.6**
	comp=Z,17nm,1.2s								
PLAI	**Plampang**	**31.41**	**263**	P			**P**	**13 34 40.2**	**+0.5**
TOO	**Toolangi**	**31.62**	**186**	P			**P**	**13 34 42.6**	**+1.3**
	comp=Z,8.7nm,2.9s								
TOO	**Toolangi**	**31.62**	**186**	P			**P**	**13 34 41.8**	**+0.5**
TOO				IAmb			IAmb	13 34 43.2	
	comp=Z,8.3nm,1.2s								
FORT	**Forrest**	**31.73**	**216**	P			**P**	**13 34 42.2**	**-0.1**
FORT				IAmb			IAmb	13 34 42.9	
	comp=Z,14nm,0.9s								
MBWA	**Marble Bar**	**32.39**	**239**	P			**P**	**13 34 45.0**	**-3.2**
	comp=Z,19nm,0.8s								
MBWA	**Marble Bar**	**32.39**	**239**	P			**P**	**13 34 47.3**	**-0.9**
MBWA				IAmb			IAmb	13 34 52.1	
	comp=Z,14nm,0.6s								
MBWA	**Marble Bar**	**32.39**	**239**	P			**P**	**13 34 46.9**	**-1.3**
JCJ	**Chichijima**	**33.62**	**348**	LR			LR	13 46 40.7	
	comp=Z,63nm,20.1s,baz=137,slow=33								
TGY	**Tagaytay City**	**34.53**	**306**	LR			LR	13 49 21.9	
	comp=Z,76nm,18.5s,baz=218,slow=36								
JAGI	**Jaiag, Banyuwa**	**34.98**	**264**	P			**P**	**13 35 10.0**	**-0.7**
MEEK	**Meekatharra**	**35.75**	**231**	P			**P**	**13 35 17.0**	**-0.3**
MEEK	**Meekatharra**	**35.75**	**231**	P			**P**	**13 35 17.0**	**-0.3**
	comp=Z,44nm,0.9s								
MEEK	**Meekatharra**	**35.75**	**231**	P			**P**	**13 35 16.9**	**-0.3**
MOO	**Moorlands**	**36.34**	**183**	P			**P**	**13 35 22.7**	**+0.6**
MOO				pP			**pP**	**13 35 44.1**	**+2.3**
TAU	**Tasmania Unive**	**36.81**	**182**	P			**P**	**13 35 26.8**	**+0.8**
TAU	**Tasmania Unive**	**36.81**	**182**	P			**P**	**13 35 26.2**	**+0.3**
GIRL	**Giralia**	**37.67**	**240**	P			**P**	**13 35 34.2**	**+0.6**
MORW	**Morawa**	**38.92**	**230**	P			**P**	**13 35 43.9**	**-0.1**
MORW				IAmb			IAmb	13 35 48.9	
	comp=Z,32nm,1.4s								
MORW	**Morawa**	**38.92**	**230**	P			**P**	**13 35 42.7**	**-1.3**
JHJ2	**Mitsune**	**39.93**	**348**	P			**P**	**13 35 53.7**	**+1.5**
YULB	**Yu-li**	**40.04**	**318**	P			**P**	**13 35 54.4**	**+1.1**
YULB				IAmb			IAmb	13 36 15.2	
	comp=Z,12nm,1.0s								
YULB	**Yu-li**	**40.04**	**318**	P			**P**	**13 35 54.4**	**+1.1**
YULB				pP			**pP**	**13 36 13.8**	**-0.9**
YHNB	**Yeheng**	**40.87**	**319**	P			**P**	**13 36 01.4**	**+1.2**
MRNZ	**Matariki Terra**	**40.98**	**153**	P			**P**	**13 36 01.1**	**+0.2**
FOZ	**Fox Glacier**	**41.51**	**157**	P			**P**	**13 36 05.3**	**+0.1**
FOZ				IAmb			IAmb	13 36 20.4	
	comp=Z,25nm,1.2s								
TCW	**Tory Channel**	**41.54**	**151**	P			**P**	**13 36 05.8**	**+0.3**
BFZ	**Birch Farm**	**42.11**	**149**	P			**P**	**13 36 10.3**	**+0.2**
RPZ	**Rata Peaks**	**42.12**	**156**	LR			LR	13 52 19.3	
	comp=Z,13nm,19.8s,baz=299,slow=34								
MJAR	**Matsushiro Arr**	**43.58**	**347**	P			**P**	**13 36 21.7**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=171,slow=9.2,SNR=7.7								
MJAR				pP			**pP**	**13 36 43.0**	**-0.6**
	comp=Z,3.5nm,1.1s,baz=168,slow=8.1,SNR=4.4								
MJAR				PcP			**PcP**	**13 38 07.7**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=158,slow=4.0,SNR=2.4								
	comp=Z,1.8nm,0.7s								
MJAR	**Matsushiro Arr**	**43.58**	**347**	P			**P**	**13 36 21.6**	**-0.3**
MJAR							**pP**	**13 36 43.5**	**0.0**
MAJO	**Matsushiro**	**43.58**	**347**	P			**P**	**13 36 22.7**	**+0.7**
MAJO				pP			**pP**	**13 36 44.1**	**+0.5**
MJB9	**Matsu-Tunnel**	**43.58**	**347**	P			**P**	**13 36 22.5**	**+0.5**
MJB9				IAmb			IAmb	13 36 47.3	
	comp=Z,15nm,1.4s								
TJN	**Taejon**	**46.91**	**336**	P			**P**	**13 36 48.6**	**+0.3**
JTM	**Tennamayashi**	**47.17**	**351**	P			**P**	**13 36 51.4**	**+1.1**
KSRS	**Korea Array**	**47.62**	**337**	P			**P**	**13 36 53.7**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=156,slow=8.4,SNR=9.5								
KSRS				pP			**pP**	**13 37 15.4**	**-0.3**
	comp=Z,6.8nm,1.1s,baz=153,slow=8.7,SNR=9.6								
KSRS				LR			LR	13 55 59.1	
	comp=Z,45nm,19.0s,baz=170,slow=35								
	comp=Z,1.2nm,0.5s								
NJ2	**Nanjing**	**47.69**	**324**	*e*P			**P**	**13 36 56.5**	**+2.0**
NJ2				pmax			pmax		
	comp=Z,14nm,0.5s								
JKA	**Kamikawa-asahi**	**50.25**	**354**	P			**P**	**13 37 14.8**	**+1.0**
JKA				IAmb			IAmb	13 37 15.5	
	comp=Z,17nm,1.2s								
ASAJ	**Asahikawa**	**50.25**	**354**	LR			LR	13 54 09.2	
	comp=Z,47nm,20.7s,baz=186,slow=31								
YSS	**Yuzhno-Sakhali**	**53.04**	**354**	P			**P**	**13 37 35.0**	**+0.5**
YSS				IAmb			IAmb	13 37 35.9	
	comp=Z,9.2nm,0.9s								
BNX	**BinXian**	**55.10**	**341**	⇑P			**P**	**13 37 51.3**	**+1.7**
BNX				pP			**pP**	**13 38 13.5**	**+1.5**
BNX				pmax			pmax		
	comp=Z,7.0nm,1.4s								
CMAR	**Chiang Mai Arr**	**55.30**	**297**	P			**P**	**13 37 50.0**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=119,slow=7.0,SNR=1.8								
CMAR				pP			**pP**	**13 38 14.1**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=117,slow=5.5,SNR=4.1								
	comp=Z,0.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**55.30**	**297**	P			**P**	**13 37 51.5**	**0.0**
CMAR							**pP**	**13 38 14.0**	**0.0**
PZH	**PanZhiHua**	**56.28**	**307**	P			**P**	**13 38 01.5**	**+2.9**
HHC	**Hu-ho-hao-te**	**58.07**	**327**	*e*P			P	13 38 16.8	+5.9
HHC				pmax			pmax		
	comp=Z,15nm,0.6s								
HHC				pmax			pmax		
	comp=Z,36nm,5.0s								
HEH	**HeiHe**	**59.15**	**344**	*e*P			**P**	**13 38 18.0**	**0.0**
PEA0B	**Petropavlovsk-**	**59.30**	**6**	P			**P**	**13 38 19.1**	**+0.1**
PETK	**Petropavlovsk-**	**59.30**	**6**	P			**P**	**13 38 19.0**	**0.0**
	comp=Z,21nm,0.6s,baz=161,slow=5.6,SNR=66								
PETK				LR			LR	14 00 37.5	
	comp=Z,30nm,20.5s,baz=197,slow=33								
	comp=Z,21nm,0.6s								
PET	**Petropavlovsk**	**59.32**	**7**	P			**P**	**13 38 18.8**	**-0.4**
PUH	**Pauahi**	**60.12**	**64**	P			**P**	**13 38 25.5**	**+0.1**
KIWB	**Kanaga Island**	**64.35**	**22**	P			**P**	**13 38 52.3**	**-0.5**
ADK	**Adak**	**64.55**	**23**	P			**P**	**13 38 53.7**	**-0.4**
MA2	**Magadan**	**65.35**	**1**	LR			LR	14 08 42.6	
	comp=Z,15nm,18.8s,baz=240,slow=37								
SONM	**Songino Array**	**65.55**	**330**	P			**P**	**13 39 00.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=143,slow=5.0,SNR=3.8								
SONM				pP			**pP**	**13 39 23.4**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=148,slow=5.5,SNR=8.0								
	comp=Z,0.6nm,0.6s								
CLES	**Cleveland East**	**68.00**	**25**	P			**P**	**13 39 16.4**	**+0.2**
VNDA	**Vanda**	**71.79**	**177**	P			**P**	**13 39 39.4**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=343,slow=8.4,SNR=5.8								
	comp=Z,1.3nm,0.6s								
VNDA	**Vanda**		**71.79**	**177**	P		**P**	**13 39 39.6**	**+0.5**
VNDA					IAmb		IAmb	13 40 18.9	
	comp=Z,8.4nm,1.4s								
WMQ	**Urumqi**		**74.31**	**319**	*e*P		**P**	**13 39 57.5**	**+2.9**
WMQ					LR		LR		
	comp=Z,38nm,18.9s								
O14K	**Tigyukauivet M**		**75.91**	**24**	P		**P**	**13 40 03.3**	**-0.1**
O14K					IAmb		IAmb	13 40 35.8	
	comp=Z,28nm,1.4s								
O15K	**Ungalikthiuk R**		**76.44**	**24**	P		**P**	**13 40 07.2**	**+0.8**
O15K					IAmb		IAmb	13 40 34.6	
	comp=Z,11nm,1.1s								
KDAK	**Kodiak Island**		**78.81**	**28**	LR		LR	14 10 04.1	
	comp=Z,23nm,21.4s,baz=275,slow=32								
MKAR	**Makanchi Array**		**78.98**	**320**	P		**P**	**13 40 19.2**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=105,slow=5.6,SNR=4.9								
MKAR					pP		**pP**	**13 40 43.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=105,slow=7.3,SNR=6.0								
	comp=Z,0.2nm,0.5s								
MKAR	**Makanchi Array**		**78.98**	**320**	P		**P**	**13 40 19.4**	**-1.4**
MKAR							**pP**	**13 40 45.0**	**+0.3**
G16K	**Koyuk River**		**79.47**	**19**	P		**P**	**13 40 22.8**	**-0.2**
G16K						IAmb	IAmb	13 40 23.6	
	comp=Z,4.0nm,0.8s								
H17K	**Granite Mounta**		**79.97**	**20**	P		**P**	**13 40 26.4**	**+0.6**
H17K						IAmb	IAmb	13 40 54.3	
	comp=Z,5.0nm,1.1s								
J18K	**Innoko River**		**80.20**	**22**	P		**P**	**13 40 26.9**	**-0.2**
ZALV	**Zalesovo Beam**		**80.25**	**327**	LR		LR	14 16 20.5	
	comp=Z,22nm,20.1s,baz=85,slow=36								
H19K	**Roundabout Mou**		**81.49**	**20**	P		**P**	**13 40 33.7**	**-0.1**
H19K						IAmb	IAmb	13 41 00.7	
	comp=Z,4.7nm,1.0s								
F19K	**Shaleruckik Mo**		**81.83**	**19**	P		**P**	**13 40 35.8**	**+0.2**
KNK	**Knik Glacier**		**82.41**	**25**	IAmb		IAmb	13 41 25.6	
	comp=Z,18nm,0.8s								
KURK	**Kurchatov**		**82.60**	**323**	P		**P**	**13 40 37.8**	**-2.2**
KURK							**pP**	**13 41 02.8**	**-1.1**
KURBB	**Kurchatov Arra**		**82.62**	**323**	P		**P**	**13 40 37.8**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=128,slow=3.9,SNR=4.1								
KURBB					pP		**pP**	**13 41 02.8**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=107,slow=4.4,SNR=3.4								
	comp=Z,0.2nm,0.3s								
IMAR	**Indian Mountai**		**82.67**	**20**	P		**P**	**13 40 39.5**	**-0.5**
C19K	**Lookout Ridge**		**82.69**	**16**	P		**P**	**13 40 40.2**	**+0.1**
C19K						IAmb	IAmb	13 41 00.6	
	comp=Z,11nm,1.4s								
MAW	**Mawson**		**83.14**	**203**	P		**P**	**13 40 41.4**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=85,slow=10,SNR=4.3								
	comp=Z,1.2nm,0.7s								
RND	**Reindeer**		**83.18**	**24**	IAmb		IAmb	13 40 41.3	
	comp=Z,5.5nm,0.9s								
MCK	**McKinley**		**83.30**	**23**	IAmb		IAmb	13 40 42.3	
	comp=Z,6.5nm,0.8s								
QSPA	**South Pole Qui**		**83.97**	**180**	P		**P**	**13 40 45.6**	**-1.3**
	comp=Z,3.0nm,0.9s,baz=10,slow=1.9,SNR=17								
QSPA					pP		**pP**	**13 41 10.1**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=354,slow=3.3,SNR=2.9								
	comp=Z,3.0nm,0.9s								
QSPA	**South Pole Qui**		**83.97**	**180**	P		**P**	**13 40 46.7**	**-0.2**
QSPA						IAmb	IAmb	13 41 18.5	
	comp=Z,5.2nm,0.8s								
IL31			**84.57**	**23**	P		**P**	**13 40 47.5**	**-2.2**
ILAR	**Eielson Array**		**84.57**	**23**	P		**P**	**13 40 47.4**	**-2.4**
	comp=Z,2.7nm,0.7s,baz=253,slow=5.2,SNR=29								
ILAR					pP		**pP**	**13 41 11.7**	**-2.2**
	comp=Z,1.9nm,0.8s,baz=255,slow=5.0,SNR=6.8								
	comp=Z,2.7nm,0.7s								
ILAR	**Eielson Array**		**84.57**	**23**	P

AC01 Sn Sn 13 56 57.7 -1.4
AC01 Pan de Azucar 1.10 248 P Pn 13 56 42.8 -0.8
AC02 Maricunga 1.12 165 eP Pb 13 56 41.1 -2.6
AC02 eS Sg 13 56 55.8 -2.1
AC02 Maricunga 1.12 165⇑ iP Pb 13 56 41.1 -2.6
AC02 i S Sg 13 56 55.4 -2.4
PB14 IPOC Station P 1.41 322 eP Pn 13 56 48.2 +0.2
PB14 eS Sg 13 57 08.7 +1.9
PB14 IPOC Station P 1.41 322⇓ iP Pn 13 56 48.1 +0.2
PB14 i S Sg 13 57 08.1 +1.4
PB14 IPOC Station P 1.41 322 Pn 13 56 48.1 +0.1
PB14 IPOC Station P 1.41 322 P Pn 13 56 48.2 +0.1
GO03 Copiapo 1.97 200 eP Pb 13 56 56.7 -1.1
GO03 eS Sg 13 57 24.3 -0.5
GO03 IAML 13 57 26.5
comp=Z,5µm,0.7s
GO03 Copiapo 1.97 200⇓ iP Pb 13 56 56.4 -1.5
GO03 i S Sg 13 57 23.3 -1.5
GO03 IAML 13 57 25.6
comp=E,5µm,0.2s
GO03 Copiapo 1.97 200 Pb 13 56 56.4 -1.5
GO03 Copiapo 1.97 200 P Pb 13 56 56.5 -1.3
AC04 Llanos de Chal 2.84 210 eP Pb 13 57 09.7 -3.0
AC04 eS Sn 13 57 43.3 +1.2
AC04 IAML 13 57 54.2
comp=Z,923nm,0.6s
AC04 Llanos de Chal 2.84 210⇓ eP Pn 13 57 09.2 +1.7
AC04 Llanos de Chal 2.84 210 Pn 13 57 08.9 +1.4
AC04 Llanos de Chal 2.84 210 P Pn 13 57 08.8 +1.3
TINO Tinogasta 2.86 144 eP Pn 13 57 10.8 +2.9
TINO eS Sb 13 57 50.3 +1.9
PB05 IPOC Station P 2.96 347 eP Pn 13 57 11.9 +2.7
PB05 eS Sn 13 57 47.8 +2.6
PB05 IAML 13 58 05.8
comp=Z,812nm,0.6s
PB05 IPOC Station P 2.96 347 eP Pn 13 57 11.6 +2.3
PB05 IAML 13 58 02.0
comp=N,856nm,0.4s
PB05 IPOC Station P 2.96 347 Pn 13 57 11.3 +2.0
PB05 IPOC Station P 2.96 347 P Pn 13 57 11.0 +1.8
AF01 San Pedro de A 3.02 23 eP Pb 13 57 14.7 -1.1
AF01 eS Sb 13 57 53.8 +0.7
AF01 IAML 13 58 35.2
comp=Z,1µm,0.8s
AF01 San Pedro de A 3.02 23 eP Pb 13 57 14.1 -1.8
AF01 i S Sb 13 57 54.8 +1.7
AF01 San Pedro de A 3.02 23 Pn 13 57 12.8 +2.6
PB06 IPOC Station P 3.03 358 eP Pn 13 57 13.7 +3.5
PB06 eS Sn 13 57 50.3 +3.4
PB06 IAML 13 57 57.9
comp=Z,804nm,0.7s
PB06 IPOC Station P 3.03 358 eP Pn 13 57 12.6 +2.3
PB06 IAML 13 57 58.5
comp=N,1µm,0.5s
PB06 IPOC Station P 3.03 358 Pn 13 57 12.1 +1.9
PB06 IPOC Station P 3.03 358 P Pn 13 57 11.6 +1.4
FSA Cafayete 3.15 97 eP Pb 13 57 17.1 -1.0
AC05 El Transito 3.16 193 eP Pn 13 57 14.4 +2.4
AC05 eS Sb 13 57 54.3 -2.9
AC05 IAML 13 58 05.5
comp=Z,1µm,0.8s
AC05 El Transito 3.16 193 eP Pn 13 57 14.2 +2.2
AC05 El Transito 3.16 193 Pn 13 57 14.0 +2.0
AC05 El Transito 3.16 193 P Pn 13 57 13.6 +1.6
VCA Vinchina 3.18 160 eP Pb 13 57 16.6 -2.0
VCA eS Sg 13 58 12.8 +9.0
VCA Vinchina 3.18 160⇑ eP Pb 13 57 15.9 -2.6
SALTA 3.21 63 eP Pn 13 57 17.0 +4.0
SALTA 3.21 63 P Pn 13 57 14.9 +1.9
LCO Las Campanas 3.44 198 eP Pn 13 57 18.0 +2.1
LCO eS Sn 13 57 50.8 -6.3
LCO IAML 13 58 09.9
comp=Z,1µm,0.6s
LCO Las Campanas 3.44 198 eP Pn 13 57 17.4 +1.5
LCO Las Campanas 3.44 198 Pn 13 57 17.2 +1.3
LCO Las Campanas 3.44 198 P Pn 13 57 17.6 +1.7
PB03 IPOC Station P 3.69 356 eP Pn 13 57 22.0 +2.7
PB03 eS Sb 13 58 10.3 -2.1
PB03 IAML 13 58 30.6
comp=Z,760nm,0.5s
PB03 IPOC Station P 3.69 356 eP Pn 13 57 21.7 +2.4
PB03 IPOC Station P 3.69 356 Pn 13 57 21.0 +1.7
PB03 IPOC Station P 3.69 356 P Pn 13 57 20.8 +1.5
SLA San Lorenzo 3.72 75 eP Pn 13 57 24.7 +4.9
AHML Horco Molle 3.85 107 eP Pb 13 57 27.0 -2.8
AHML eS Sb 13 58 20.4 +3.7
AHML Horco Molle 3.85 107 eP Pn 13 57 26.2 +4.9
PB09 IPOC Station P 3.94 3 eP Pn 13 57 26.8 +4.1
PB09 eS Sb 13 58 18.8 -0.7
PB09 eS Sg 13 58 21.3 -6.8
PB09 IAML 13 58 33.4
comp=Z,992nm,0.6s
PB09 IPOC Station P 3.94 3 eP Pn 13 57 26.2 +3.5
PB09 IPOC Station P 3.94 3 P Pn 13 57 23.2 +0.5
PB07 IPOC Station P 4.02 354 eP Pn 13 57 26.3 +2.4
PB07 eS Sb 13 58 21.3 -0.6
PB07 IAML 13 58 32.8
comp=Z,870nm,0.6s
PB07 IPOC Station P 4.02 354 Pn 13 57 25.3 +1.5
PB07 IPOC Station P 4.02 354 P Pn 13 57 25.0 +1.1
CO01 Juntas del Tor 4.25 187 Pn 13 57 28.9 +1.7
CO01 Juntas del Tor 4.25 187 P Pn 13 57 29.0 +1.8
ACLC CERRO LA CRUZ 4.29 149 eP Pn 13 57 30.6 +3.1
ACDV Cuesta del Vie 4.42 176 eP Pn 13 57 33.7 +4.4
PB02 IPOC Station P 4.42 355 eP Pn 13 57 31.6 +2.2
PB02 eS Sb 13 58 33.8 +0.3
PB02 IAML 13 58 47.0
comp=Z,754nm,0.5s
PB02 IPOC Station P 4.42 355 Pn 13 57 30.9 +1.5
PB02 IPOC Station P 4.42 355 P Pn 13 57 31.4 +2.1
HJA Humahuaca 4.47 56 eP Pn 13 57 35.0 +4.7
GO04 Tololo Observa 4.57 195 eP Pn 13 57 33.3 +1.9
GO04 eS Sb 13 58 40.3 +2.6
GO04 IAML 13 58 48.3
comp=Z,826nm,0.7s
GO04 Tololo Observa 4.57 195 P Pn 13 57 32.8 +1.3
CO03 El Pedregal 5.19 192 eP Pn 13 57 41.8 +1.9
CO03 eS Sb 13 58 54.3 -1.2
CO03 IAML 13 59 08.9
comp=Z,425nm,0.8s
CO03 El Pedregal 5.19 192 Pn 13 57 41.1 +1.2
CO03 El Pedregal 5.19 192 P Pn 13 57 41.1 +1.2
TA02 Huaiquique 5.49 353 P Pn 13 57 45.0 +1.2
PB08 IPOC Station P 5.59 3 Pn 13 57 47.4 +1.8
PB08 IPOC Station P 5.59 3 P Pn 13 57 47.2 +1.7
CO02 Combarbal 5.60 194 Pn 13 57 46.1 +0.5
CO02 Combarbal 5.60 194 P Pn 13 57 46.9 +1.3
ZON Zonda 5.82 173 P Pn 13 57 50.0 +1.5
CFA Coronel Fontan 5.94 170 Pn Pn 13 57 51.8 +1.7
comp=Z,5.8nm,0.3s,baz=352,slow=13,SNR=64
CFA Sn Sn 13 58 58.8 +0.3
comp=Z,4.8nm,0.3s,baz=201,slow=19,SNR=6.1
CFA Lg Lg 13 59 28.5
comp=Z,3.2nm,0.3s,baz=230,slow=13,SNR=2.0
comp=Z,16nm,0.4s
PB11 IPOC Station P 5.96 358 Pn 13 57 50.8 +0.2
PB11 IPOC Station P 5.96 358 P Pn 13 57 50.6 +0.1
GO01 Chusmiza 6.05 2 Pn 13 57 53.2 +1.1
GO01 Chusmiza 6.05 2 P Pn 13 57 53.1 +1.0
PSGCX Pisagua 6.15 354 P Pn 13 57 52.7 -0.4
CO04 Los Peleaderos 6.41 192 P Pn 13 57 58.4 +1.5
VA03 San Esteban 7.06 188 P Pn 13 58 07.3 +1.8
PB12 IPOC Station P 7.14 353 P Pn 13 58 06.3 -0.4
PB16 IPOC Station P 7.38 360 P Pn 13 58 11.2 +0.8
PEL Peldehue 7.45 188 P Pn 13 58 11.6 +0.8
VA01 Torpederas 7.50 194 P Pn 13 58 11.9 +0.4
MT08 Bocatoma Ro 7.69 183 Pn 13 58 15.2 +0.9
VA05 Santo Domingo 8.10 193 P Pn 13 58 21.1 +1.4
BO02 Sierra Bellavi 9.09 187 P Pn 13 58 33.0 -0.3
GO05 Hualane 9.48 192 P Pn 13 58 39.0 +0.4
LPAZ La Paz 9.49 8 Pn Pn 13 58 41.9 +2.5
comp=Z,1.3nm,0.3s,baz=201,slow=5.0,SNR=28
LPAZ Lg Lg 14 01 15.5
comp=Z,0.1nm,0.3s,baz=355,slow=9.0,SNR=1.7
comp=Z,3.2nm,0.4s
LPAZ La Paz 9.49 8 Pn 13 58 41.8 +2.3
LPAZ La Paz 9.49 8 P Pn 13 58 40.7 +1.2
CPUP Villa Florida 10.93 96 Pn Pn 13 58 57.2 -1.3
comp=Z,0.2nm,0.3s,baz=234,slow=4.1,SNR=2.9
comp=Z,1.2nm,0.6s
CPUP Villa Florida 10.93 96 P Pn 13 58 59.9 +1.4
BI02 San Fabin de 10.99 188 P Pn 13 59 00.4 +0.9

H03N1 Juan Fernandez 11.24 225 T T 14 08 59.5
baz=52,slow=72,SNR=60
H03N2 Juan Fernandez 11.25 225 T T 14 08 59.4
baz=52,slow=72,SNR=56
H03N3 Juan Fernandez 11.26 225 T T 14 08 57.2
baz=52,slow=72,SNR=63
BBSD Serra de San D 11.84 46 eP Pn 13 59 09.5 -1.7
COIM Forte Coimbra 12.23 64 eP Pn 13 59 15.3 -1.0
SIV San Ignacio 12.47 41 Pn Pn 13 59 17.5 -2.2
comp=Z,0.1nm,0.3s,baz=217,slow=13,SNR=19
comp=Z,4.0nm,0.4s
GO06 Curarrehue 13.90 186 P Pn 13 59 40.8 +1.5
PTLB Pontes e Lacer 14.07 45 Pn 13 59 43.2 +1.6
PTLB Pontes e Lacer 14.07 45 eP Pn 13 59 40.7 -0.9
CPSB Cacapava Do Su 14.88 112 P Pn 13 59 55.2 +2.7
ITAB Concordia 15.59 99 Pn 14 00 04.2 +2.2
ITAB IAmb IAmb 14 00 05.8
comp=Z,51nm,1.2s
ITAB Concordia 15.59 99 eP Pn 14 00 03.8 +1.8
ITAB eS Sn 14 02 49.8 -5.3
ITAB Concordia 15.59 99 P Pn 14 00 04.3 +2.4
PTGB Pitanga 15.78 90 eP Pn 14 00 05.5 +1.0
PTGB eS Sn 14 02 53.7 -6.1
SALV Santo Antonio 16.16 55 eP Pn 14 00 07.4 -2.0
LDASE Londrina, Braz 16.85 86 eP Pn 14 00 18.0 -0.2
LDASE eS Sn 14 03 17.6 -8.2
FRTB Fartura 18.26 87 P Pn 14 00 34.7 -1.0
CLDB Colider 19.65 44 eP P 14 00 50.4 -0.8
CLDB Colider 19.65 44 P P 14 00 50.5 -0.8
BB19B Bebedouro 19.76 81 eP P 14 00 50.6 -1.8
PET01 Itanhaem-SP 20.16 91 eP P 14 00 55.9 -0.8
RCLB Rio Claro- Sao 20.29 85 eP P 14 00 56.0 -2.2
VAO Valinhos 20.67 87 eP P 14 01 00.7 -1.7
IPMB Ipameri, GO 21.16 73 eP P 14 01 04.7 -3.0
CANS Sao Roque de M 21.90 80 eP P 14 01 13.7 -2.0
SNDB Serra Nova Dou 21.94 55 eP P 14 01 13.6 -2.5
BDFB Brasilia 22.41 68 P P 14 01 18.4 -2.7
comp=Z,3.3nm,0.5s,baz=239,slow=11,SNR=6.0
comp=Z,3.3nm,0.5s
BDFB Brasilia 22.41 68 P P 14 01 19.8 -1.4
PMNB Patos De Minas 22.48 76 eP P 14 01 19.1 -2.8
PMNB Patos De Minas 22.48 76 P P 14 01 19.0 -2.9
GO08 Villa O'Higgin 22.81 185 P P 14 01 26.6 +1.6
GO08 Villa O'Higgin 22.81 185 P P 14 01 25.9 +0.9
NPGB Novo Progresso 22.95 38 eP P 14 01 24.8 -2.1
BSCB Bom Sucesso 23.13 83 eP P 14 01 25.1 -3.6
MACA Manacapuru-AM 23.99 22 eP P 14 01 35.9 -1.2
DIAM Diamantina, MG 25.00 78 eP P 14 01 44.7 -1.9
ITTB Itaituba 25.00 34 eP P 14 01 44.6 -1.7
SGC2 Sao Gabriel da 25.56 6 eP P 14 01 51.9 +0.5
CAM01 Campos-RJ 25.72 87 eP P 14 01 52.1 -0.7
JANB Januaria 25.81 71 eP P 14 01 51.5 -2.4
SMTB Santa Maria do 26.72 55 eP P 14 02 00.7 -1.3
PRPB Parauapebas 27.04 47 eP P 14 02 02.0 -2.9
BOAV Boa Vista 29.28 19 P P 14 02 24.8 0.0
BOAV Boa Vista 29.28 19 eP P 14 02 23.8 -1.0
NBPN Ponto Novo - B 31.39 67 eP P 14 02 41.4 -2.1
ESPZ Base Esperanza 38.54 171 P P 14 03 46.7 +2.1
TEIG Tepich 49.22 336 P P 14 05 12.4 +1.5
BELA Belgrano 2 54.64 171 P P 14 05 50.6 0.0
MOIG Morelia 54.67 323 P P 14 05 50.0 -1.9
VNA2 Neumayer--Watz 56.85 160⇓ P P 14 06 06.4 -0.2
comp=Z,3.4nm,0.7s,baz=285,slow=7.7
SNAA Sanae 58.46 160⇓ P P
comp=Z,37nm,0.6s
SNAA Sanae 58.46 160 P P 14 06 17.2 -0.9
comp=Z,0.8nm,0.3s,baz=277,slow=4.4,SNR=3.6
comp=Z,0.8nm,0.3s
SNAA Sanae 58.46 160 P P 14 06 17.5 -0.6
SNAA IAmb IAmb 14 06 17.8
comp=Z,5.0nm,1.2s
RGRS Roger Stewart 59.22 349 P P 14 06 25.4 +1.8
TROLL Troll, Antarti 60.18 160 P P 14 06 29.5 -0.5
comp=Z,62nm,0.6s
833A Chaparral WMA, 60.98 330 P P 14 06 36.9 +1.2
833A IAmb IAmb 14 06 39.7
comp=Z,5.5nm,0.6s
HNDO Hondo 61.96 331 P P 14 06 44.0 +1.6
TXAR Lajitas Array 63.85 327 P P 14 06 57.6 +2.5
comp=Z,0.2nm,0.5s,baz=146,slow=6.1,SNR=2.2
comp=Z,0.2nm,0.5s
WVT Waverly 63.94 344 P P 14 06 55.0 -0.4
WVT IAmb IAmb 14 06 57.0
comp=Z,3.4nm,0.6s
FW06 Azle 64.23 334 P P 14 06 58.0 +0.6
QSPA South Pole Qui 64.46 180 P P 14 06 59.2 +0.4
comp=Z,2.1nm,0.5s,baz=132,slow=5.5,SNR=22
comp=Z,2.1nm,0.5s
QSPA South Pole Qui 64.46 180 IAmb IAmb 14 07 09.1
comp=Z,9.6nm,1.5s
FCAR Ozark Folk Cen 64.94 340 P P 14 07 03.4 +1.4
FCAR IAmb IAmb 14 07 12.9
comp=Z,4.3nm,1.4s
APMT Aspermont 65.59 332 P P 14 07 07.3 +1.0
APMT IAmb IAmb 14 07 09.6
comp=Z,3.1nm,0.7s
FVM French Village 66.38 342 P P 14 07 11.3 0.0
FVM IAmb IAmb 14 07 13.3
comp=Z,3.3nm,0.7s
S39A Bolivar 66.97 340 P P 14 07 15.9 +0.9
S39A IAmb IAmb 14 07 17.4
comp=Z,3.0nm,0.7s
DBIC Dimbokro 70.47 72 P P 14 07 36.7 -0.7
comp=Z,4.4nm,0.8s,baz=229,slow=11,SNR=4.3
comp=Z,4.4nm,0.8s
DBIC Dimbokro 70.47 72 IAmb IAmb 14 07 38.5
comp=Z,11nm,1.1s
VNDA Vanda 72.60 190 P P 14 07 51.0 +1.7
VNDA IAmb IAmb 14 07 52.1
comp=Z,6.9nm,1.5s
O20A White River Ci 74.83 330 P P 14 08 04.2 +1.1
O20A IAmb IAmb 14 08 06.9
comp=Z,4.0nm,1.0s
PDAR Pinedale Array 77.54 331 P P 14 08 19.6 +1.2
comp=Z,0.3nm,0.7s,baz=144,slow=5.4,SNR=3.6
comp=Z,0.3nm,0.7s
NVAR Mina Array Bea 78.54 323 P P 14 08 27.2 +3.1
comp=Z,0.5nm,0.6s,baz=138,slow=5.5,SNR=3.2
comp=Z,0.5nm,0.6s
ULM Lac du Bonnet 79.20 343 P P 14 08 27.8 +0.7
comp=Z,3.9nm,0.8s,baz=166,slow=5.8,SNR=5.3
comp=Z,3.9nm,0.8s
ULM Lac du Bonnet 79.20 343 IAmb IAmb 14 08 31.8
comp=Z,1.1nm,1.3s
TORD Torodi Ar. Bea 79.27 70 P P 14 08 27.4 -0.9
comp=Z,3.7nm,0.7s,baz=240,slow=5.6,SNR=16
comp=Z,3.7nm,0.7s
TORD Torodi Ar. Bea 79.27 70 IAmb IAmb 14 08 29.3
comp=Z,12nm,0.7s
RLMT Red Lodge 79.32 333 P P 14 08 29.1 +0.9
YNE Yellowstone No 79.53 332 P P 14 08 30.4 +0.9
HLID Hailey 80.37 329 P P 14 08 35.2 +1.3
ESDC Sonseca Array 89.20 45 P P 14 09 18.3 0.0
comp=Z,0.4nm,0.8s,baz=256,slow=12,SNR=3.0
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 95.01 341 P P 14 09 45.2 +0.6
comp=Z,0.8nm,0.7s,baz=141,slow=4.3,SNR=12
comp=Z,0.8nm,0.7s
ASAR Alice Springs 125.92 207 PKP PKPdf 14 15 24.3 -0.9
comp=Z,0.5nm,0.5s,baz=153,slow=2.1,SNR=16
H11S2 WAKE ISLAND Hy 127.79 274 T T 16 35 24.0
baz=108,slow=75,SNR=22
H11S1 WAKE ISLAND Hy 127.80 274 T T 16 35 33.9
baz=108,slow=75,SNR=17
H11S3 WAKE ISLAND Hy 127.81 274 T T 16 35 35.2
baz=108,slow=75,SNR=20
WRA Warramunga Arr 129.04 209 PKP PKPdf 14 15 30.9 -0.4
comp=Z,0.5nm,0.5s,baz=162,slow=1.7,SNR=6.8
KURK Kurchatov 145.10 36 PKPdf 14 15 60.0 +0.3
KURBB Kurchatov Arra 145.10 36 PKP PKPab 14 15 59.3 0.0
comp=Z,5.4nm,0.8s,baz=300,slow=3.5,SNR=32
ZALV Zalesovo Beam 145.97 27 PKPbc PKPbc 14 16 01.8 0.0
comp=Z,6.1nm,0.6s,baz=307,slow=3.5,SNR=25
AAK Ala-Archa 146.06 51 PKPbc PKPab 14 16 03.3 0.0
comp=Z,1.5nm,0.3s,baz=278,slow=1.9,SNR=5.5
KSH2 Kashi 147.81 57 PKPbc PKPbc 14 16 07.5 -0.3
MKAR Makanchi Array 149.29 40 PKPbc PKPbc 14 16 11.0 -0.2
comp=Z,4.0nm,0.6s,baz=314,slow=2.7,SNR=42
MKAR Makanchi Array 149.29 40 PKPbc PKPbc 14 16 11.2 0.0
HHC Hu-ho-hao-te 164.91 357 eP PKPdf 14 16 26.3 -0.5
NJ2 Nanjing 170.38 313 eP PKPdf 14 16 32.0 +1.2
NJ2 pmax pmax
comp=Z,21nm,0.6s

*IDC **26** 13:59:42.6±1.3, 9.26S×160.05E, h61km±15km, mb3.3/5, mbtmp3.6/5, MS3.1/1, Error ellipse: s-maj=80.6km s-min=25.2km az=134.0*

ISC 26 13:59:42.2±3.5, 9.4S±0.4×160.3E±0.5, h68km±13km, n13, σ0.8s32/7, mb3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.32**	**272**	P	**Pn**	**13 59 53.5**	**+0.2**
	47nm,0.3s,baz=354,slow=0.6,SNR=163						
HNR				S	**Sn**	**14 00 01.2**	**-0.2**
	255nm,0.5s,baz=152,slow=23,SNR=29						
MSVF	**Nonsavu**	**19.13**	**117**	LR	LR	14 10 55.1	
	comp=Z,58nm,19.8s,baz=53,slow=35						
WRA	**Warramunga Arr**	**27.13**	**244**	P	**P**	**14 05 19.4**	**+0.3**
	0.4nm,0.5s,baz=70,slow=9.2,SNR=8.5						
	0.4nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**28.48**	**13**	T	T	14 34 11.0	
	baz=194,slow=76,SNR=125						
H11S3	**WAKE ISLAND Hy**	**28.48**	**13**	T	T	14 34 10.1	
	baz=194,slow=76,SNR=116						
H11S1	**WAKE ISLAND Hy**	**28.49**	**13**	T	T	14 34 14.0	
	baz=194,slow=76,SNR=86						
ASAR	**Alice Springs**	**28.89**	**237**	P	**P**	**14 05 34.6**	**-0.2**
	0.4nm,1.1s,baz=10,SNR=7.7						
	0.4nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**29.70**	**13**	T	T	14 35 44.3	
	baz=194,slow=76,SNR=94						
H11N3	**WAKE ISLAND Hy**	**29.71**	**13**	T	T	14 35 44.9	
	baz=194,slow=76,SNR=122						
H11N2	**WAKE ISLAND Hy**	**29.72**	**13**	T	T	14 35 45.7	
	baz=194,slow=76,SNR=102						
SONM	**Songino Array**	**74.25**	**326**	P	**P**	**14 11 11.9**	**-0.2**
	1.3nm,0.6s,baz=142,slow=6.1,SNR=8.6						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**83.79**	**20**	P	**P**	**14 12 03.6**	**-0.1**
	0.2nm,0.4s,baz=242,slow=4.5,SNR=7.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**88.70**	**318**	P	**P**	**14 12 28.5**	**+0.3**
	0.2nm,0.5s,baz=108,slow=4.7,SNR=2.1						
	0.2nm,0.5s						

*IDC **26** 14:11:21.5±0.7, 26.34N×129.55E, h0km, mb4.1/22, mbtmp4.1/24, ML3.7/2, MS3.3/10, Error ellipse: s-maj=22.8km s-min=14.8km az=78.0*

*NEIC **26** 14:11:23.2±0.8, 26.35N±0.09×129.57E±0.06, h10km±1km, mb4.6/28, Error ellipse: s-maj=15.7km s-min=7.8km az=203.0*

*NIED **26** 14:11:24.0, 26.36N×129.59E, h47km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.35; $M_{\theta\theta}$=0.62; $M_{\phi\phi}$=0.73; $M_{r\theta}$=1.13; $M_{\theta\phi}$=0.80; $M_{\phi r}$=1.03; Fault plane solution: $M_0$2.08000×10^{15} NP1: ϕ_s=219.00000°, δ21.00000°, λ=-97.00000°. NP2:ϕ_s=47.00000°, δ69.00000°, λ=-87.00000°.*

*JMA **26** 14:11:24.0±0.1, 26.4N±0.7×129.6E±0.5, h47km, MV4.0/18, NEAR OKINAWAJIMA ISLAND*

*BJI **26** 14:11:27.2, 26.88N×128.99E, h10km, mB4.7/3, mb4.5/17, Ms3.9/4, Ms7 3.7/4*

ISC 26 14:11:22.0±1.5, 26.35N±0.04×129.56E±0.03, h6km±9km, n105, σ1.853/113, mb4.4/35, MS3.4/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**1.20**	**304**	*i* P	**Pg**	**14 11 45.1**	**0.0**
JYRO				*e*S	**Sg**	**14 12 00.0**	**-0.6**
JOW	**Kunigami**	**1.25**	**293**	LR	LR	14 12 25.4	
	comp=Z,1µm,18.6s,baz=199,slow=51						
JOW	**Kunigami**	**1.25**	**293**	P	**Pg**	**14 11 46.0**	**0.0**
JOW	**Kunigami**	**1.25**	**293**		**Pg**	**14 11 45.9**	**-0.1**
JOW	**Kunigami**	**1.25**	**293**	P	**Pg**	**14 11 46.0**	**0.0**
JOW				S	**Sg**	**14 12 00.6**	**-1.6**
JOKE	**Okinoerabujima**	**1.34**	**319**	P	**Pn**	**14 11 47.2**	**-0.1**
JOKE				S	**Sb**	**14 12 03.1**	**-1.9**
JNTH	**Nagotoyohara**	**1.39**	**277**	P	**Pn**	**14 11 47.8**	**-0.2**
JNTH				S	**Sb**	**14 12 03.9**	**-2.6**
JTK	**Tokunoshima**	**1.53**	**339**	P	**Pn**	**14 11 49.8**	**-0.2**
JTK				S	**Sn**	**14 12 07.2**	**-3.0**
JIH	**Iheya**	**1.58**	**296**	P	**Pn**	**14 11 50.9**	**+0.2**
JIH				S	**Sn**	**14 12 09.1**	**-2.3**
JMZ	**Minamidaito 2**	**1.58**	**109**	P	**Pn**	**14 11 49.8**	**-0.9**
JMZ	**Minamidaito 2**	**1.58**	**109**	S	**Sn**	**14 12 08.1**	**-3.4**
JMZ	**Minamidaito 2**	**1.58**	**109**	Pn	**Pn**	**14 11 50.2**	**-0.5**
JMZ	**Minamidaito 2**	**1.58**	**109**	P	**Pn**	**14 11 49.8**	**-0.9**
JMZ				S	**Sn**	**14 12 06.8**	**-4.7**
JJT3	**Tamagusuku3**	**1.61**	**263**	P	**Pn**	**14 11 51.4**	**+0.4**
JJT3				*e*S	**Sn**	**14 12 11.2**	**-0.9**
JKDJ	**Kitadaitoujima**	**1.61**	**104**	*i* P	**Pn**	**14 11 50.2**	**-0.8**
JKDJ				*e*S	**Sn**	**14 12 08.7**	**-3.4**
JAMN	**Amaminishikomi**	**1.92**	**350**	P	**Pn**	**14 11 55.0**	**-0.3**
JAMN				S	**Sn**	**14 12 16.5**	**-3.2**
JZK	**Kikaishima**	**1.99**	**10**	P	**Pn**	**14 11 56.4**	**+0.1**
JZK				S	**Sn**	**14 12 20.2**	**-1.4**
JAM	**Amami Oshima**	**2.05**	**1**	P	**Pn**	**14 11 56.7**	**-0.5**
JAM				S	**Sn**	**14 12 19.5**	**-3.6**
JAGN	**Aguni-jima**	**2.09**	**277**	P	**Pn**	**14 11 58.1**	**+0.4**
JAGN				S	**Sn**	**14 12 22.0**	**-2.0**
JKE	**Kume jima 2**	**2.49**	**270**	P	**Pn**	**14 12 02.7**	**-0.5**
JKE				S	**Sn**	**14 12 30.4**	**-3.5**
JTAJ	**Takarajima**	**2.81**	**354**	P	**Pn**	**14 12 06.8**	**-0.8**
JTAJ				S	**Sn**	**14 12 37.9**	**-3.8**
JMJ	**Miyako jima 2**	**4.15**	**249**	P	**Pn**	**14 12 24.8**	**-1.1**
JSU	**Suzuyama**	**5.20**	**8**	P	**Pn**	**14 12 40.4**	**0.0**
JSU	**Suzuyama**	**5.20**	**8**	Pn	**Pn**	**14 12 39.8**	**-0.5**
YOJ	**Yonaguni jima**	**6.21**	**254**	P	**Pn**	**14 12 52.5**	**-1.8**
YOJ	**Yonaguni jima**	**6.21**	**254**	Pn	**Pn**	**14 12 52.1**	**-2.2**
JNU	**Nakatsue**	**6.85**	**9**	Pn	**Pn**	**14 13 04.0**	**+1.0**
	2.8nm,0.3s,baz=213,slow=7.7,SNR=25						
JNU				Sn	**Sn**	**14 14 15.3**	**-6.0**
	1.4nm,0.3s,baz=241,slow=17,SNR=1.6						
	8.1nm,0.3s						
JNU	**Nakatsue**	**6.85**	**9**		Pn	14 13 00.0	-3.0
NACB	**Ninganchiao**	**7.53**	**255**	P	**Pn**	**14 13 10.3**	**-2.1**
NACB	**Ninganchiao**	**7.53**	**255**	Pn	**Pn**	**14 13 10.3**	**-2.1**
YHNB	**Yeheng**	**7.58**	**259**	Pn	**Pn**	**14 13 13.9**	**+0.7**
YULB	**Yu-li**	**8.06**	**250**	P	Pn	14 13 15.7	-4.0
SSLB	**Suanglung**	**8.21**	**254**	P	**Pn**	**14 13 19.4**	**-2.4**
TWGBT	**Beinan**	**8.48**	**247**	P	Pn	14 13 21.6	-3.9
TPUB	**Ta-pu**	**8.66**	**251**	P	**Pn**	**14 13 26.4**	**-1.6**
TPUB	**Ta-pu**	**8.66**	**251**	Pn	**Pn**	**14 13 26.6**	**-1.4**
NJ2	**Nanjing**	**10.94**	**304**	*e*P	Pn	14 13 54.8	-4.4
NJ2				pmax	pmax		
	comp=Z,27nm,0.6s						
KSRS	**Korea Array**	**11.16**	**353**	Pn	**Pn**	**14 14 03.1**	**+1.0**
	0.1nm,0.3s,baz=171,slow=14,SNR=5.2						
KSRS				LR	LR	14 18 16.2	
	comp=Z,88nm,18.4s,baz=170,slow=37						
	1.5nm,0.9s						
MJAR	**Matsushiro Arr**	**12.55**	**34**	Pn	**Pn**	**14 14 26.0**	**+4.8**
	baz=131,slow=15						
GUMO	**Guam**	**19.16**	**129**	LR	LR	14 21 58.4	
	comp=Z,34nm,20.6s,baz=308,slow=33						
ASAJ	**Asahikawa**	**20.63**	**27**	P	**P**	**14 16 04.5**	**+2.3**
	4.3nm,0.7s,baz=233,slow=13,SNR=5.7						
	4.3nm,0.7s						
JKA	**Kamikawa-asahi**	**20.63**	**27**	P	**P**	**14 16 02.8**	**+0.6**
HHC	**Hu-ho-hao-te**	**20.77**	**319**	*e*P	**P**	**14 16 04.8**	**+0.9**
LZDM	**Lanzhou Array**	**24.06**	**300**	P	**P**	**14 16 38.5**	**0.0**
	3.1nm,0.3s,baz=105,slow=9.7,SNR=1.9						
	3.1nm,0.3s						
HILR	**Hailar Array B**	**24.38**	**344**	P	**P**	**14 16 42.1**	**+1.1**
	3.3nm,0.6s,baz=163,slow=10,SNR=2.0						
	3.3nm,0.6s						
PZH	**PanZhiHua**	**24.90**	**277**	P	**P**	**14 16 47.8**	**+1.8**
SIJI	**Sorong**	**27.11**	**176**	LR	LR	14 25 23.8	
	comp=Z,33nm,20.7s,baz=106,slow=31						
GTA2	**Gaotai**	**28.10**	**305**	P	**P**	**14 17 14.3**	**-0.5**
GTA2				pP	pP	14 17 18.8	+4.0
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA2				L	L		
	comp=N,170nm,15.9s						
GTA2				L	L		
	comp=E,96nm,13.7s						
GTA2				L	L		
	comp=Z,120nm,16.5s						
SONM	**Songino Array**	**28.11**	**326**	P	**P**	**14 17 15.7**	**+0.8**
	0.5nm,0.6s,baz=133,slow=12,SNR=4.2						

n442,σ1$44/527, mb4.3/38, MS3.3/11, 41C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**29.32**	**261**	P	**P**		**14 17 27.5**	**+1.8**
	0.4nm,0.5s,baz=48,slow=8.3,SNR=6.8							
	0.4nm,0.5s							
TLY	**Talaya**	**32.01**	**329**	LR	LR		14 32 12.1	
	comp=Z,79nm,18.6s,baz=130,slow=39							
WMQ	**Urumqi**	**37.98**	**308**	*e*P	**P**		**14 18 42.0**	**+1.2**
WMQ				pmax	pmax			
	comp=Z,11nm,0.7s							
ZALV	**Zalesovo Beam**	**42.88**	**322**	P	**P**		**14 19 20.3**	**-0.8**
	1.0nm,0.5s,baz=110,slow=9.2,SNR=5.0							
ZALV				PcP	**PcP**		**14 21 11.2**	**-0.8**
	1.4nm,0.9s,baz=90,slow=4.3,SNR=3.9							
	1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**42.88**	**322**		**PcP**		**14 21 11.7**	**-0.2**
TIXI	**Tiksi**	**45.34**	**360**	P	**P**		**14 19 40.3**	**-0.2**
KURK	**Kurchatov**	**45.56**	**316**		**P**		**14 19 42.4**	**-0.2**
KURBB	**Kurchatov Arra**	**45.59**	**316**	P	**P**		**14 19 42.4**	**-0.5**
	1.6nm,0.7s,baz=102,slow=8.6,SNR=13							
	1.6nm,0.7s							
WB0	**Warramunga Arr**	**46.08**	**174**	P	**P**		**14 19 47.4**	**+0.4**
WB0				IAmb	IAmb		14 20 22.7	
	comp=Z,7.5nm,1.2s							
HNR	**Honiara**	**46.22**	**136**	P	**P**		**14 19 47.2**	**-1.1**
WRA	**Warramunga Arr**	**46.25**	**174**	P	**P**		**14 19 48.3**	**0.0**
	comp=Z,1.2nm,0.5s,baz=354,slow=8.5,SNR=10							
	comp=Z,1.2nm,0.5s							
WRA	**Warramunga Arr**	**46.25**	**174**	P	**P**		**14 19 46.9**	**-1.5**
WR8	**Warramunga Arr**	**46.28**	**174**	P	**P**		**14 19 48.7**	**+0.1**
WR8				IAmb	IAmb		14 19 52.5	
	comp=Z,10nm,1.3s							
ADK	**Adak**	**47.53**	**43**	P	**P**		**14 19 57.6**	**-0.4**
NRIK	**Noril'sk**	**49.51**	**342**	LR	LR		14 42 57.3	
	comp=Z,31nm,19.8s,baz=108,slow=38							
ASAR	**Alice Springs**	**49.90**	**175**	P	**P**		**14 20 17.1**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=6.1,slow=12,SNR=15							
ASAR				PcP	**PcP**		**14 21 37.3**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=0.0,slow=4.0,SNR=2.8							
	comp=Z,1.0nm,0.8s							
BVAR	**Borovoye Array**	**50.98**	**318**	P	**P**		**14 20 24.9**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=86,slow=8.6,SNR=14							
BVAR				PcP	**PcP**		**14 21 40.8**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=116,slow=3.4,SNR=5.1							
	comp=Z,2.6nm,0.7s							
AB31	**Akbulak array**	**57.44**	**313**		**P**		**14 21 12.1**	**+0.5**
ABKAR	**Akbulak array**	**57.44**	**313**	P	**P**		**14 21 11.9**	**+0.3**
ARTI	**Arti**	**58.14**	**322**	P	**P**		**14 21 16.4**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=86,slow=4.1,SNR=7.4							
	comp=Z,4.1nm,0.6s							
ARTI	**Arti**	**58.14**	**322**	P	**P**		**14 21 16.5**	**+0.1**
ARTI				IAmb	IAmb		14 21 17.4	
	comp=Z,6.8nm,0.6s							
AKTO	**Aktyubinsk**	**58.60**	**315**	P	**P**		**14 21 20.5**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=78,slow=7.3,SNR=4.2							
	comp=Z,0.9nm,0.4s							
E22K	**Anaktuvuk Pass**	**61.60**	**25**	P	**P**		**14 21 40.5**	**+0.4**
E22K				IAmb	IAmb		14 22 06.7	
	comp=Z,5.7nm,1.5s							
H23K	**Yukon River**	**62.56**	**27**	P	**P**		**14 21 47.1**	**+0.6**
H23K				IAmb	IAmb		14 21 49.8	
	comp=Z,2.2nm,0.8s							
NEA2	**Nenana**	**62.85**	**29**	P	**P**		**14 21 49.3**	**+0.8**
NEA2				IAmb	IAmb		14 21 50.7	
	comp=Z,2.6nm,0.8s							
F24K	**Squaw Lake**	**63.11**	**25**	P	**P**		**14 21 50.7**	**+0.5**
F24K				IAmb	IAmb		14 21 53.0	
	comp=Z,2.2nm,0.8s							
ILAR	**Eielson Array**	**63.77**	**28**	P	**P**		**14 21 54.9**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=267,slow=6.5,SNR=6.2							
	comp=Z,0.5nm,0.8s							
P23K	**Montague Islan**	**64.13**	**34**	P	**P**		**14 21 57.3**	**+0.3**
H27K	**Steamboat Moun**	**65.77**	**26**	P	**P**		**14 22 07.5**	**-0.1**
H27K				IAmb	IAmb		14 22 43.3	
	comp=Z,3.8nm,1.4s							
I28M	**Miner Creek**	**66.56**	**27**	P	**P**		**14 22 13.4**	**+0.6**
I28M				IAmb	IAmb		14 22 54.2	
	comp=Z,7.3nm,1.5s							
H31M	**Peel River**	**68.72**	**26**	P	**P**		**14 22 27.1**	**+0.8**
H31M				IAmb	IAmb		14 22 28.4	
	comp=Z,4.0nm,1.0s							
A36M	**Sachs Harbour**	**69.73**	**19**		**P**		**14 22 33.2**	**+0.8**
A36M				IAmb	IAmb		14 22 34.8	
	comp=Z,6.3nm,0.8s							
KBZ	**Khabaz**	**70.00**	**310**	P	**P**		**14 22 35.9**	**+1.3**
	comp=Z,5.3nm,0.8s,baz=73,slow=6.2,SNR=10.0							
	comp=Z,5.3nm,0.8s							
ARCES	**ARCESS Array B**	**70.33**	**339**	LR	LR		14 58 07.9	
	comp=Z,20nm,18.7s,baz=116,slow=40							
FIA1	**FINESS Array S**	**73.34**	**331**	P	**P**		**14 22 54.6**	**+0.2**
FINES	**FINESS Array B**	**73.34**	**331**	P	**P**		**14 22 54.6**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=69,slow=5.6,SNR=20							
FINES				LR	LR		14 58 30.0	
	comp=Z,54nm,18.7s,baz=78,slow=39							
	comp=Z,4.4nm,0.6s							
FINES	**FINESS Array B**	**73.34**	**331**	P	**P**		**14 22 54.8**	**+0.4**
AKASG	**Malin Array Be**	**76.21**	**320**	P	**P**		**14 23 11.3**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=59,slow=6.4,SNR=7.5							
AKASG				LR	LR		14 59 27.7	
	comp=Z,74nm,18.7s,baz=59,slow=38							
	comp=Z,2.0nm,0.6s							
AKASG	**Malin Array Be**	**76.21**	**320**	IAmb	IAmb		14 23 17.3	
	comp=Z,2.7nm,1.1s							
AKBB	**Malin Array Si**	**76.21**	**320**	P	**P**		**14 23 11.4**	**+0.2**
AKBB				IAmb	IAmb		14 23 11.8	
	comp=Z,3.5nm,0.6s							
BR131	**Keskin Array S**	**77.90**	**308**	P	**P**		**14 23 21.1**	**-0.1**
BR131				IAmb	IAmb		14 23 22.8	
	comp=Z,3.7nm,0.8s							
BRTR	**Keskin Array B**	**77.90**	**308**	P	**P**		**14 23 22.2**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=66,slow=5.6,SNR=12							
	comp=Z,2.5nm,0.8s							
BRTR	**Keskin Array B**	**77.90**	**308**	P	**P**		**14 23 20.7**	**-0.4**
YKA	**Yellowknife Ar**	**77.91**	**25**	P	**P**		**14 23 21.1**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=291,slow=5.3,SNR=4.3							
	comp=Z,0.7nm,0.9s							
HFS	**Hagfors**	**79.27**	**333**	P	**P**		**14 23 28.4**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=36,slow=5.4,SNR=4.0							
	comp=Z,2.3nm,0.8s							
NC405	**NORSAR Array S**	**79.49**	**334**	P	**P**		**14 23 29.5**	**+0.2**
NB201	**NORSAR Array S**	**79.69**	**334**	P	**P**		**14 23 30.7**	**+0.2**
NB2	**NORSAR Subarra**	**79.73**	**334**	P	**P**		**14 23 30.8**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=52,slow=5.6							
NOA	**NORSAR Array B**	**79.73**	**334**	P	**P**		**14 23 30.5**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=51,slow=5.3,SNR=7.3							
NOA				LR	LR		15 01 50.9	
	comp=Z,16nm,20.5s,baz=15,slow=38							
	comp=Z,1.8nm,0.8s							
CLL	**Collm**	**84.73**	**326**	P	**P**		**14 23 57.3**	**+0.3**
CLL				IAmb	IAmb		14 23 58.4	
	comp=Z,3.5nm,0.6s							
CLL	**Collm**	**84.73**	**326**	*i* P	**P**		**14 23 57.9**	**+0.9**
	comp=Z,4.0nm,0.6s							
GERES	**GERESS Array B**	**85.82**	**323**	P	**P**		**14 24 03.2**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=50,slow=4.2,SNR=7.6							
	comp=Z,1.0nm,0.6s							
DAVOX	**Davos/Dischmat**	**89.12**	**323**	P	**P**		**14 24 18.6**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=52,slow=5.0,SNR=2.6							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**116.13**	**180**	PKP	**PKPdf**		**14 30 05.4**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=337,slow=1.8,SNR=5.7							
TIR	**Tirane**	**0.37**	**11**	Pg	**Pb**		**14 16 11.6**	**-0.8**
TIR				Sg	**Sb**		**14 16 18.2**	**+0.2**
TIR				AML	AML		14 16 24.4	
	76nm,0.8s							
TIR	**Tirane**	**0.37**	**11**	P	**Pb**		**14 16 11.6**	**-0.8**
TIR				S	**Sb**		**14 16 18.1**	**+0.2**
VLO	**Vlora**	**0.56**	**202**	Pg	**Pn**		**14 16 15.2**	**-1.1**
VLO				Sg	**Sn**		**14 16 25.7**	**+0.9**
VLO				AML	AML		14 16 27.1	
	134nm,0.5s							
VLO	**Vlora**	**0.56**	**202**	P	**Pb**		**14 16 14.9**	**-0.6**
VLO				S	**Sn**		**14 16 25.4**	**+0.7**
VLO	**Vlora**	**0.56**	**202**	P	**Pb**		**14 16 14.8**	**-0.6**
OHR	**Ohrid**	**0.79**	**81**	⇓*i* Pg	**Pb**		**14 16 17.8**	**-1.5**
OHR				*e*Sg	**Sn**		**14 16 30.2**	**-0.4**
OHR				*e*Lg	Lg		14 16 32.4	
	comp=E,9μm,1.1s							
OHR				*e*Lg	Lg		14 16 36.7	
	comp=N,4μm,0.8s							
KBN	**Korca**	**0.85**	**115**	Pg	**Pb**		**14 16 18.4**	**-2.1**
KBN				Sg	**Sb**		**14 16 31.5**	**-0.1**
KBN				AML	AML		14 16 35.4	
	comp=N,22nm,0.6s							
KBN	**Korca**	**0.85**	**115**	P	**Pb**		**14 16 18.0**	**-2.5**
KBN				S	**Sb**		**14 16 29.9**	**-1.7**
KBN	**Korca**	**0.85**	**115**	P	**Pb**		**14 16 18.4**	**-2.1**
KBN				S	**Sb**		**14 16 31.4**	**-0.1**
KBN	**Korca**	**0.85**	**115**	P	**Pb**		**14 16 18.4**	**-2.1**
PHP	**Peshkopia**	**0.86**	**36**	Pn	**Pb**		**14 16 19.0**	**-1.6**
PHP				Sn	**Sn**		**14 16 32.9**	**+0.6**
PHP				AML	AML		14 16 41.2	
	comp=N,17nm,0.5s							
PHP	**Peshkopia**	**0.86**	**36**	P	**Pb**		**14 16 18.7**	**-1.9**
PHP				S	**Sn**		**14 16 32.0**	**-0.4**
PHP	**Peshkopia**	**0.86**	**36**	P	**Pb**		**14 16 18.6**	**-1.9**
PHP				S	**Sn**		**14 16 31.9**	**-0.4**
ULC	**Ulcinj**	**1.05**	**338**	P	**Pb**		**14 16 19.2**	**-2.8**
ULC				S	**Sb**		**14 16 36.0**	**-1.2**
ULC	**Ulcinj**	**1.05**	**338**	*e*Pg	**Pb**		**14 16 21.0**	**-2.8**
ULC				*i* Sg	**Sn**		**14 16 36.8**	**-0.2**
SDA	**Shkodra**	**1.08**	**349**	Pn	**Pb**		**14 16 24.8**	**+0.5**
SDA				Sn	**Sn**		**14 16 42.2**	**+4.5**
SDA				AML	AML		14 16 46.4	
	comp=N,14nm,0.7s							
SRN	**Sarande**	**1.12**	**171**	⇑Pg	**Pb**		**14 16 25.1**	**+0.2**
SRN				Sg	**Sn**		**14 16 40.9**	**+2.2**
SRN	**Sarande**	**1.12**	**171**	P	**Pb**		**14 16 24.3**	**-0.6**
SRN				S	**Sn**		**14 16 40.6**	**+2.0**
SRN	**Sarande**	**1.12**	**171**	P	**Pb**		**14 16 24.7**	**-0.2**
DRME	**Dracevica, Mon**	**1.27**	**340**	⇑*i* Pn	**Pb**		**14 16 27.4**	**-0.2**
DRME	**Dracevica, Mon**	**1.27**	**340**	*e*Pg	**Pn**		**14 16 25.1**	**-1.2**
DRME				*i* Sg	**Sb**		**14 16 44.4**	**+0.8**
KEK	**Kerkira**	**1.27**	**179**	P	**Pb**		**14 16 25.8**	**-0.4**
KEK				S	**Sb**		**14 16 43.6**	**+0.1**
KEK	**Kerkira**	**1.27**	**179**		**Pn**		**14 16 25.5**	**-0.7**
KEK	**Kerkira**	**1.27**	**179**	P	**Pn**		**14 16 26.2**	**0.0**
PENT	**Pentalofos**	**1.31**	**127**	P	**Pb**		**14 16 27.3**	**-0.9**
PENT				S	**Sb**		**14 16 45.5**	**+0.9**
BUM	**Brajici-Budva**	**1.47**	**334**	*e*Pg	**Pn**		**14 16 28.5**	**-0.5**
BUM				*i* Sg	**Sb**		**14 16 50.4**	**+1.3**
PDG	**Podgorica**	**1.49**	**345**	⇑P	**Pb**		**14 16 30.3**	**-1.0**
PDG				⇑S	**Sb**		**14 16 49.5**	**-0.2**
PDG	**Podgorica**	**1.49**	**345**	Pn	**Pb**		**14 16 30.9**	**-0.3**
PDG				Sn	**Sb**		**14 16 52.3**	**+2.6**
PDG	**Podgorica**	**1.49**	**345**		**Pb**		**14 16 30.2**	**-1.0**
PDG	**Podgorica**	**1.49**	**345**	*e*Pg	**Pb**		**14 16 30.7**	**-0.5**
PDG				*e*Sg	**Sb**		**14 16 51.9**	**+2.2**
PDG	**Podgorica**	**1.49**	**345**	⇑*i* Pn	**Pb**		**14 16 30.3**	**-1.0**
PDG	**Podgorica**	**1.49**	**345**	P	**Pb**		**14 16 30.6**	**-0.7**
PDG	**Podgorica**	**1.49**	**345**	*e*Pg	**Pn**		**14 16 29.2**	**0.0**
PDG				*i* Sg	**Sb**		**14 16 51.3**	**+1.6**
TTG	**Podgorica**	**1.49**	**345**	P	**Pn**		**14 16 29.2**	**0.0**
TTG				S	**Sb**		**14 16 51.0**	**+1.3**
IGT	**Igoumenitsa**	**1.52**	**163**	Pn	**Pb**		**14 16 32.0**	**+0.3**
IGT				Sn	**Sb**		**14 16 52.1**	**+1.6**
IGT	**Igoumenitsa**	**1.52**	**163**	P	**Pb**		**14 16 30.8**	**-0.9**
IGT				S	**Sb**		**14 16 50.9**	**+0.4**
IGT	**Igoumenitsa**	**1.52**	**163**	P	**Pb**		**14 16 30.7**	**-0.9**
IGT				S	**Sb**		**14 16 50.8**	**+0.4**
LFKM	**Lefkimmi**	**1.56**	**172**	S	**Sb**		**14 16 52.3**	**+0.8**
JAN	**Janina**	**1.57**	**148**	P	**Pb**		**14 16 32.3**	**-0.2**
JAN				S	**Sb**		**14 16 54.1**	**+2.2**
JAN	**Janina**	**1.57**	**148**	P	**Pb**		**14 16 32.0**	**-0.5**
SKO	**Skopje**	**1.59**	**51**	*i* Pg	**Pb**		**14 16 32.3**	**-0.6**
SKO				*e*Sn	**Sb**		**14 16 54.2**	**+1.5**
KPRO	**Kipourio**	**1.59**	**130**	P	**Pb**		**14 16 32.4**	**-0.6**
KPRO				S	**Sb**		**14 16 54.8**	**+2.1**
PVY	**Plav**	**1.61**	**5**	*e*Pn	**Pb**		**14 16 31.7**	**+0.7**
PVY				*i* Sn	**Sb**		**14 16 55.0**	**+1.7**
KZN	**Kozani**	**1.67**	**113**	P	**Pb**		**14 16 33.0**	**-1.3**
KZN				S	**Sb**		**14 16 56.0**	**+1.1**
KZN	**Kozani**	**1.67**	**113**	P	**Pb**		**14 16 32.9**	**-1.3**
KZN				S	**Sb**		**14 16 55.9**	**+1.1**
CEME	**Cevo**	**1.68**	**338**	⇑*i* Pn	**Pn**		**14 16 32.3**	**+0.4**
CEME				*i* Sn	**Sb**		**14 16 55.8**	**+0.5**
HCY	**Herceg Novi**	**1.74**	**327**	⇑*i* Pn	**Pn**		**14 16 32.9**	**+0.2**
HCY	**Herceg Novi**	**1.74**	**327**	⇓*i* Pn	**Pn**		**14 16 32.8**	**+0.1**
HCY				*i* Sn	**Sb**		**14 16 57.0**	**0.0**
PRMD	**Pramanda**	**1.78**	**145**	P	**Pb**		**14 16 35.3**	**-0.8**
PRMD				S	**Sb**		**14 16 58.6**	**+0.6**
KOME	**Kolasin**	**1.87**	**354**	*e*Pn	**Pn**		**14 16 35.1**	**+0.6**
KOME				*i* Sn	**Sb**		**14 17 00.8**	**+0.1**
NKME	**Niksic**	**1.88**	**341**	*e*Pn	**Pn**		**14 16 35.0**	**+0.4**
NKME				*i* Sn	**Sb**		**14 17 00.7**	**-0.2**
KTI	**Kastanea**	**1.88**	**108**	P	**Pb**		**14 16 36.0**	**-2.0**
IVA	**Berane**	**1.88**	**3**	⇓*i* Pn	**Pn**		**14 16 35.4**	**+0.7**
IVA				*i* Sn	**Sb**		**14 17 01.3**	**+0.2**
GRG	**Griva**	**1.99**	**90**	P	**Pn**		**14 16 37.3**	**+1.1**
GRG				S	**Sb**		**14 17 02.3**	**-1.9**
GRG	**Griva**	**1.99**	**90**	P	**Pn**		**14 16 37.2**	**+1.1**
GRG				S	**Sb**		**14 17 02.2**	**-1.9**
GRG	**Griva**	**1.99**	**90**	P	**Pn**		**14 16 37.6**	**+1.4**
TETR	**Tetrakomo, Epi**	**2.01**	**144**	P	**Pb**		**14 16 38.5**	**-1.5**
TETR				S	**Sb**		**14 17 04.7**	**+0.1**
TREB	**Trebinje**	**2.03**	**329**	*e*Pn	**Pn**		**14 16 36.8**	**+0.2**
NOCI	**Noci**	**2.06**	**265**	Pn	**Pn**		**14 16 36.9**	**-0.2**
NOCI				Sn	**Sb**		**14 17 08.6**	**+2.4**
NOCI				AML	AML		14 17 12.0	
	comp=N,13nm,0.3s							
BRY	**Bratogost**	**2.12**	**335**	P	**Pn**		**14 16 38.3**	**+0.3**
BRY				S	**Sb**		**14 17 06.0**	**-2.0**
BRY	**Bratogost**	**2.12**	**335**	*e*Pn	**Pn**		**14 16 38.2**	**+0.3**
BRY	**Bratogost**	**2.12**	**335**	⇑*i* Pn	**Pn**		**14 16 38.3**	**+0.3**
BRY				*i* Sn	**Sb**		**14 17 06.2**	**-1.8**
VAY	**Valandovo**	**2.14**	**80**	*e*Sg	**Sb**		**14 17 06.8**	**-1.5**
VAY				*e*Lg	Lg		14 17 07.8	
	comp=E,1μm,1.1s							
VAY				*e*Lg	Lg		14 17 19.8	
	comp=N,1μm,1.2s							
THL	**Klokotos Trika**	**2.23**	**129**	P	**Pn**		**14 16 40.7**	**+1.3**
THL				S	**Sb**		**14 17 09.6**	**-1.4**
LIT	**Litokhoron**	**2.25**	**112**	P	**Pn**		**14 16 40.4**	**+0.7**
LIT	**Litokhoron**	**2.25**	**112**		**Pn**		**14 16 40.4**	**+0.7**
LIT	**Litokhoron**	**2.25**	**112**	P	**Pn**		**14 16 40.9**	**+1.2**
TSLK	**Tsoukalades, L**	**2.27**	**162**	P	**Pn**		**14 16 41.2**	**+1.3**
TSLK				S	**Sb**		**14 17 09.3**	**-2.7**
TYRN	**Tyrnavos**	**2.27**	**123**	P	**Pn**		**14 16 41.2**	**+1.3**
TYRN				S	**Sb**		**14 17 10.5**	**-1.7**
SJES	**Sjenica**	**2.28**	**4**	*e*Pn	**Pb**		**14 16 42.5**	**-2.2**
SJES				*e*Sn	**Sb**		**14 17 10.0**	**-2.4**
SJES	**Sjenica**	**2.28**	**4**	⇑*i* Pn	**Pb**		**14 16 42.4**	**-2.2**
LKD2	**Lefkada island**	**2.30**	**162**	Pn	**Pn**		**14 16 41.4**	**+1.0**
LKD2				Sn	**Sb**		**14 17 12.9**	**-0.1**
LKD2	**Lefkada island**	**2.30**	**162**	P	**Pn**		**14 16 41.0**	**+0.6**
LKD2				S	**Sb**		**14 17 10.2**	**-2.9**
LKD2	**Lefkada island**	**2.30**	**162**	P	**Pb**		**14 16 42.2**	**-2.9**
UPM	**Unac-Piva**	**2.31**	**344**	*e*Pn	**Pn**		**14 16 40.2**	**-0.4**
UPM	**Unac-Piva**	**2.31**	**344**	⇑*i* Pn	**Pn**		**14 16 41.0**	**+0.4**
UPM				*i* Sn	**Sb**		**14 17 10.9**	**-2.4**
AMPL	**Ampelaki**	**2.34**	**151**	P	**Pn**		**14 16 42.6**	**+1.7**
MATE	**Matera**	**2.35**	**263**	⇑P	**Pn**		**14 16 41.0**	**0.0**
MATE				⇓S	**Sn**		**14 17 07.5**	**-1.5**
MATE	**Matera**	**2.35**	**263**	P	**Pn**		**14 16 41.1**	**0.0**
PLE	**Pljevlja**	**2.36**	**353**	P	**Pn**		**14 16 41.8**	**+0.6**
PLE				S	**Sb**		**14 17 12.0**	**-2.7**
PLE	**Pljevlja**	**2.36**	**353**	*e*Pn	**Pn**		**14 16 41.9**	**+0.7**
PLE				*i* Sn	**Sb**		**14 17 12.4**	**-2.3**
KNT	**Kendrikon**	**2.37**	**85**	P	**Pb**		**14 16 44.0**	**-2.2**
KNT				S	**Sn**		**14 17 12.0**	**+2.4**
KNT	**Kendrikon**	**2.37**	**85**	P	**Pn**		**14 16 43.0**	**+1.7**
KNT				S	**Sn**		**14 17 11.9**	**+2.4**
KNT	**Kendrikon**	**2.37**	**85**	P	**Pb**		**14 16 44.0**	**-2.2**
BARS	**Barje**	**2.38**	**39**	*e*Pn	**Pn**		**14 16 43.5**	**+2.0**
BARS				*e*Sn	**Sb**		**14 17 12.6**	**-2.7**
NYDR	**Nydri-Lefkada**	**2.38**	**162**	P	**Pn**		**14 16 42.1**	**+0.7**
DRAG	**Dragano-Lefkad**	**2.38**	**165**	P	**Pn**		**14 16 41.9**	**+0.4**
SELS	**Selova**	**2.44**	**24**	*e*Pn	**Pn**		**14 16 43.9**	**+1.5**
SELS				*e*Sn	**Sb**		**14 17 15.5**	**-1.7**
THE	**Thessaloniki**	**2.45**	**97**	P	**Pn**		**14 16 43.8**	**+1.3**
THE	**Thessaloniki**	**2.45**	**97**	P	**Pn**		**14 16 43.7**	**+1.3**
EVGI	**Lefkada island**	**2.46**	**164**	P	**Pn**		**14 16 43.1**	**+0.6**
BOSS	**Bosilegrad**	**2.53**	**53**	*e*Pn	**Pn**		**14 16 44.5**	**+1.0**
BOSS				*e*Sn	**Sn**		**14 17 15.5**	**+2.1**
HORT	**Hortiatis**	**2.56**	**98**	P	**Pn**		**14 16 43.3**	**-0.7**
HORT	**Hortiatis**	**2.56**	**98**	P	**Pn**		**14 16 44.4**	**+0.4**
EVR	**Evrytania**	**2.60**	**142**	P	**Pb**		**14 16 47.1**	**-3.0**
FSK	**Fiskardo**	**2.60**	**166**	P	**Pn**		**14 16 44.5**	**+0.1**
KKB	**Krupnik**	**2.67**	**70**	P	**Pn**		**14 16 46.9**	**+1.5**
KKB	**Krupnik**	**2.67**	**70**	P	**Pn**		**14 16 46.8**	**+1.5**
GOCS	**Kraljevo Serbi**	**2.70**	**17**	*e*Pn	**Pn**		**14 16 47.7**	**+1.8**
GOCS				*e*Sn	**Sb**		**14 17 21.8**	**-2.8**
SOH	**Sokhos**	**2.72**	**92**	P	**Pn**		**14 16 47.5**	**+1.3**
SOH	**Sokhos**	**2.72**	**92**	P	**Pn**		**14 16 47.4**	**+1.3**
SOH	**Sokhos**	**2.72**	**92**	P	**Pn**		**14 16 47.5**	**+1.3**
PVO	**Paravola**	**2.73**	**150**	P	**Pn**		**14 16 47.6**	**+1.4**
AGG	**Agios Georgios**	**2.78**	**134**	P	**Pn**		**14 16 48.6**	**+1.6**
AGG	**Agios Georgios**	**2.78**	**134**	P	**Pn**		**14 16 49.0**	**+2.0**
AGG	**Agios Georgios**	**2.78**	**134**	P	**Pn**		**14 16 49.0**	**+2.0**
DMLN	**Damoulianata-K**	**2.79**	**170**	P	**Pn**		**14 16 47.0**	**0.0**
PLG	**Polygyros**	**2.86**	**101**	P	**Pn**		**14 16 49.6**	**+1.5**
PLEV	**Plevrona-Mesol**	**2.87**	**153**	P	**Pn**		**14 16 49.1**	**+0.9**
VLS	**Valsamata**	**2.88**	**167**	P	**Pn**		**14 16 48.1**	**-0.3**
VLS	**Valsamata**	**2.88**	**167**	P	**Pn**		**14 16 48.3**	**0.0**
BBLS	**Lazi&#263i**	**2.89**	**355**	*e*Pn	**Pn**		**14 16 49.5**	**+1.0**
BBLS	**Lazi&#263i**	**2.89**	**355**	⇑*i* Pn	**Pn**		**14 16 49.7**	**+1.2**
SRS	**Serrai**	**2.89**	**86**	P	**Pn**		**14 16 49.6**	**+1.2**
SRS	**Serrai**	**2.89**	**86**	P	**Pn**		**14 16 49.7**	**+1.2**
SRS	**Serrai**	**2.89**	**86**	P	**Pn**		**14 16 49.7**	**+1.2**
ANX	**Ano Chora**	**2.91**	**145**	P	**Pn**		**14 16 51.0**	**+2.2**
TIP	**Timpagrande**	**2.93**	**233**	⇓P	**Pn**		**14 16 48.4**	**-0.7**
TIP	**Timpagrande**	**2.93**	**233**		**Pn**		**14 16 48.3**	**-0.8**
TIP	**Timpagrande**	**2.93**	**233**	P	**Pn**		**14 16 48.8**	**-0.4**
TIP	**Timpagrande**	**2.93**	**233**	P	**Pn**		**14 16 48.7**	**-0.4**
GRUS	**Gruza**	**2.98**	**13**	*e*Pn	**Pn**		**14 16 51.4**	**+1.7**
RTZL	**Ratzakli, Kefa**	**3.01**	**165**	P	**Pn**		**14 16 51.2**	**+1.1**
AXS	**Araxos**	**3.05**	**156**	P	**Pn**		**14 16 52.4**	**+1.5**
VTS	**Vitosha**	**3.06**	**57**	P	**Pn**		**14 16 52.4**	**+1.5**
VTS	**Vitosha**	**3.06**	**57**	P	**Pn**		**14 16 52.2**	**+1.2**
XOR	**Xorichti**	**3.08**	**121**	P	**Pn**		**14 16 52.0**	**+0.9**
XOR	**Xorichti**	**3.08**	**121**	P	**Pn**		**14 16 52.3**	**+1.2**
MARCO	**Tramutola**	**3.09**	**258**	P	**Pn**		**14 16 51.8**	**+0.4**
NVR	**Nevrokopi**	**3.11**	**82**	P	**Pn**		**14 16 52.8**	**+1.3**
DIVS	**Divibare**	**3.11**	**3**	*e*Pn	**Pn**		**14 16 52.8**	**+1.2**
DIVS				*e*Sn	**Sb**		**14 17 32.5**	**-3.9**
PLNA	**Plana**	**3.11**	**60**	P	**Pn**		**14 16 53.3**	**+1.7**
SERG	**Sergoula**	**3.12**	**145**	P	**Pn**		**14 16 53.1**	**+1.5**
ZAPS	**Zavoj**	**3.12**	**42**	*e*Pn	**Pn**		**14 16 53.6**	**+1.9**
Z

VISS IAML 14 19 51.7
comp=Z,181nm,1.3s
CLTB Caltabellotta 6.12 238 P Pn 14 17 35.5 +2.6
DRGR 6.18 19 ⇑P Pn 14 17 34.3 +0.6
DRGR 6.18 19 P Pn 14 17 34.2 +0.6
GBAS Gorenja Brezov 6.28 324 *i* Pn **Pn 14 17 35.5 +0.4**
GBAS *e*Sn **Sn 14 18 44.0 -1.9**
GBAS IAML 14 18 49.1
comp=Z,34nm,0.4s
LJU Ljubljana 6.33 325 P Pn 14 17 35.9 +0.2
LJU pmax pmax
comp=Z,131nm,0.7s
MLR Muntele Rosu 6.37 43 P Pn 14 17 37.7 +1.3
comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=4.6
MLR S **Sn 14 18 46.7 -1.6**
comp=Z,8.0nm,0.8s,baz=184,slow=22,SNR=1.5
MLR LR LR 14 20 43.0
comp=Z,422nm,18.4s,baz=223,slow=44
comp=Z,1nm,0.9s
MLR Muntele Rosu 6.37 43 ⇓P Pn 14 17 38.3 +1.9
MLR Muntele Rosu 6.37 43 P Pn 14 17 38.3 +1.9
MLR Muntele Rosu 6.37 43 Pn 14 17 38.2 +1.9
MPLH Magyarpolny 6.38 346 P Pn 14 17 37.7 +1.2
DOPR Dopca 6.44 38 ⇑P Pn 14 17 39.6 +2.4
ISR Istrita 6.45 48 ⇑P Pn 14 17 40.0 +2.6
ISR Istrita 6.45 48 P Pn 14 17 40.0 +2.6
BUD Budapest 6.52 356 P Pn 14 17 38.4 +0.2
BUD Budapest 6.52 356 P Pn 14 17 38.4 +0.2
SOKA Soboth 6.64 331 *e*Pn **Pn 14 17 39.5 -0.5**
comp=Z,2.6nm,0.2s,SNR=7.6
SOKA *e*Sn **Sn 14 18 55.4 +0.6**
comp=Z,9.0nm,0.4s
OBKA Obir 6.69 327 *e*Pn **Pn 14 17 40.0 -0.7**
comp=Z,4.7nm,0.4s,SNR=6.4
OBKA *e*Sn **Sn 14 18 55.8 -0.2**
comp=Z,38nm,0.4s
OBKA Obir 6.69 327 P Pn 14 17 40.9 +0.2
OZUR 6.72 39 ⇓P Pn 14 17 43.5 +2.4
COVR Voineasa-Covas 6.75 42 ⇑P Pn 14 17 44.2 +2.7
SRO Srobarova 6.90 352 P Pn 14 17 45.7 +2.2
SRO Srobarova 6.90 352 P Pn 14 17 45.7 +2.2
PSZ Piszkesteto 6.93 1 ⇑P Pn 14 17 44.3 +0.3
PSZ Piszkesteto 6.93 1 P Pn 14 17 44.6 +0.6
PSZ Piszkesteto 6.93 1 Pn 14 17 44.6 +0.6
PSZ Piszkesteto 6.93 1 P Pn 14 17 43.7 -0.3
ARSA Arzberg 6.96 335 Pn 14 17 44.7 +0.3
ARSA Arzberg 6.96 335 *i* Pn **Pn 14 17 44.8 +0.3**
comp=Z,4.0nm,0.3s,SNR=12
ARSA *e*Sn **Sn 14 19 04.3 +1.6**
comp=Z,4.2nm,0.5s
ARSA Arzberg 6.96 335 P Pn 14 17 44.8 +0.3
IDI Anoyia 6.97 143 P Pn 14 17 48.3 +3.7
comp=Z,2.9nm,0.5s,baz=337,slow=16,SNR=6.1
IDI S **Sn 14 18 59.0 -4.1**
comp=Z,14nm,0.7s,baz=94,slow=23,SNR=4.3
PLOR Plostina 6.98 44 ⇑P Pn 14 17 46.4 +1.8
PLOR Plostina 6.98 44 P Pn 14 17 46.4 +1.8
VRI Vrincioaia 7.03 44 ⇑P Pn 14 17 48.2 +2.9
VRI Vrincioaia 7.03 44 P Pn 14 17 48.2 +2.9
VRI Vrincioaia 7.03 44 P Pn 14 17 46.2 +0.9
comp=Z,0.1nmcomp=Z,265nmcomp=Z,13nm,0.8s
RONA Rosalia, Austr 7.16 341 *e*Sn **Sn 14 19 08.6 +1.2**
comp=Z,5.0nm,0.6s
MYKA Terra Mystica 7.17 324 *e*Pn **Pn 14 17 47.0 -0.4**
comp=Z,1.4nm,0.4s
MYKA *e*Sn **Sn 14 19 07.6 -0.3**
comp=Z,6.0nm,0.3s
SESA Seetaler Alpe, 7.18 330 *e*Pn **Pn 14 17 47.4 -0.1**
comp=Z,4.4nm,0.2s,SNR=6.3
SESA *e*Sn **Sn 14 19 08.7 +0.5**
comp=Z,5.4nm,0.3s
ONER Baraj Valea Uz 7.18 40 ⇑P Pn 14 17 49.1 +1.7
ABAH Abaujker 7.38 8 P Pn 14 17 51.3 +1.2
TRPA Tarpa 7.41 15 P Pn 14 17 52.2 +1.7
CONA Conrad Observa 7.48 339 *e*Pn **Pn 14 17 51.5 -0.1**
comp=Z,0.7nm,0.2s
CONA *e*Sn **Sn 14 19 18.5 +3.0**
comp=Z,6.5nm,0.6s
KECS Kecovo 7.51 4 *e*PG Pb 14 18 25.7 +12
CIMO Cimolais 7.52 317 P Pn 14 17 51.0 -1.0
VYHS Vyhne 7.53 355 P Pn 14 17 55.5 +3.2
VYHS Vyhne 7.53 355 *e*PN Pb 14 18 06.4 -7.7
VYHS *e*PG Pn 14 18 25.7 +33
WINA Alland / Wiene 7.59 341 *e*Pn **Pn 14 17 53.1 +0.1**
comp=Z,0.6nm,0.2s
KBA Koelnbreinsper 7.65 325 P Pn 14 17 54.1 +0.2
KBA Koelnbreinsper 7.65 325 *e*Pn **Pn 14 17 53.8 -0.1**
comp=Z,1.4nm,0.2s,SNR=6.4
KBA *e*Sn **Sn 14 19 17.4 -2.3**
comp=Z,13nm,0.8s
KBA Koelnbreinsper 7.65 325 P Pn 14 17 54.1 +0.2
BURAR Bucovina Array 7.69 29 ⇑P Pn 14 17 56.2 +1.7
BURAR Bucovina Array 7.69 29 P Pn 14 17 56.1 +1.7
BURAR Bucovina Array 7.69 29 Pn 14 17 53.6 -0.8
BUR08 Bucovina Ar. S 7.71 28 Pn Pn 14 17 53.9 -0.8
ABTA Abfaltersbach 7.78 320 *i* Pn **Pn 14 17 55.1 -0.6**
comp=Z,2.6nm,0.2s,SNR=8.2
ABTA *e*Sn **Sn 14 19 20.9 -2.1**
comp=Z,19nm,0.7s
MOA Molln 7.91 332 *i* Pn **Pn 14 17 58.2 +0.8**
comp=Z,3.8nm,0.3s,SNR=5.4
MOA *e*Sn **Sn 14 19 26.4 +0.5**
comp=Z,5.7nm,0.3s
MOA Molln 7.91 332 P Pn 14 17 58.2 +0.8
JAVC Velka Javorina 8.01 350 *e*PN **Pn 14 17 56.3 -2.5**
JAVC Velka Javorina 8.01 350 P Pn 14 17 56.4 -2.3
BIOA Bad Ischl, Aus 8.01 329 *e*Pn **Pn 14 17 59.3 +0.5**
comp=Z,1.7nm,0.3s,SNR=11
BIOA *e*Sn **Sn 14 19 27.3 -1.1**
comp=Z,14nm,0.4s
KOLS Kolonicke sedl 8.14 12 *e*P **Pn 14 18 02.7 +2.2**
KOLS Kolonicke sedl 8.14 12 P Pn 14 18 03.3 +2.8
KOLS Kolonicke sedl 8.14 12 *e*PN **Pn 14 18 02.7 +2.2**
KOLS *e*PG Pb 14 18 36.4 +12
LESA Schwarzleotal 8.20 324 *e*Pn **Pn 14 18 01.5 0.0**
comp=Z,3.2nm,0.3s,SNR=5.3
LESA *e*Sn **Sn 14 19 31.2 -2.1**
comp=Z,14nm,0.5s
RJOB Jochberg 8.39 326 P Pn 14 18 04.8 +0.7
KRUC Moravsky 8.42 345 *e*PN **Pn 14 18 05.8 +1.5**
NIE Niedzica 8.44 2 P Pn 14 18 05.2 +0.6
comp=Z,4.9nm,0.8s
MAUC Maruska 8.49 351 *e*PN **Pn 14 18 06.3 +1.0**
STHS Stebnicka Huta 8.49 7 *e*PG **Pb 14 18 29.0 -1.4**
WTTA Wattenberg 8.57 320 P Pn 14 18 07.8 +1.2
WTTA Wattenberg 8.57 320 *i* Pn **Pn 14 18 06.9 +0.3**
comp=Z,17nm,0.3s,SNR=13
WTTA *e*Sn **Sn 14 19 41.4 -1.2**
comp=Z,26nm,0.6s
WTTA Wattenberg 8.57 320 P Pn 14 18 07.8 +1.2
VRAC Vranov 8.62 346 P Pn 14 18 06.9 -0.1
comp=Z,0.3nm,0.3s,baz=150,slow=11,SNR=3.4
VRAC S Sn 14 19 33.2 -10
comp=Z,1.4nm,0.5s,baz=134,slow=20,SNR=1.0
VRAC LR LR 14 21 53.8
comp=Z,135nm,20.0s,baz=180,slow=41
comp=Z,2.0nm,0.8s
VRAC Vranov 8.62 346 *e*PN **Pn 14 18 08.7 +1.6**
WATA Walderalm 8.65 320 *i* Pn **Pn 14 18 08.2 +0.5**
comp=Z,18nm,0.5s,SNR=18
WATA *e*Sn **Sn 14 19 43.6 -0.8**
comp=Z,15nm,0.5s
SQTA Sankt Quirin 8.76 318 *e*Pn **Pn 14 18 09.5 +0.4**
comp=Z,9.5nm,0.4s,SNR=9.5
SQTA *e*Sn **Sn 14 19 45.1 -1.8**
comp=Z,26nm,0.6s
FETA Feichten 8.87 316 *e*Pn **Pn 14 18 11.1 +0.3**
comp=Z,0.4nm,0.4s
FETA *e*Sn **Sn 14 19 50.2 +0.3**
comp=Z,5.9nm,0.5s
FUORN Ofenpass-Fuorn 8.88 312 Pn 14 18 11.4 +0.5
MOTA Moosalm 8.89 318 *i* Pn **Pn 14 18 11.2 +0.1**
comp=Z,12nm,0.6s,SNR=10
MOTA *e*Sn **Sn 14 19 49.4 -0.9**
comp=Z,18nm,0.4s
MORC Moravsky Berou 8.93 351 *e*PN **Pn 14 18 11.8 +0.5**
GEC2 GERESS Array S 8.96 333 P Pn 14 18 11.8 +0.1
GEC2 GERESS Array S 8.96 333 Pn 14 18 11.9 +0.1
GERES GERESS Array B 8.96 333 P Pn 14 18 11.3 -0.4
comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=20
GERES S **Sn 14 19 50.4 -1.3**
comp=Z,2.8nm,0.4s,baz=156,slow=22,SNR=9.8
comp=Z,1.3nm,0.5s
GERES GERESS Array B 8.96 333 *e*P **Pn 14 18 11.5 -0.3**
GERES GERESS Array B 8.96 333 Pn 14 18 11.1 -0.7

RETA Reutte 9.16 318 *e*Sn **Sn 14 19 55.6 -1.2**
comp=Z,14nm,0.4s
DAVOX Davos/Dischmat 9.19 312 P Pn 14 18 16.0 +0.9
comp=Z,0.7nm,0.3s,baz=134,slow=18,SNR=6.1
DAVOX S **Sn 14 19 54.8 -2.9**
comp=Z,16nm,0.6s,baz=256,slow=20,SNR=3.9
DAVOX LR LR 14 23 02.2
comp=Z,109nm,18.7s,baz=80,slow=46
comp=Z,1.6nm,0.4s
OJC Ojcow 9.23 0 P Pn 14 18 17.8 +2.3
OJC Ojcow 9.23 0 P Pn 14 18 15.4 -0.1
comp=Z,6.9nm,0.9s
OJC Ojcow 9.23 0 P Pn 14 18 17.8 +2.3
KHC Kasperske Hory 9.24 334 *e*P **Pn 14 18 15.4 -0.3**
KHC *e* 14 19 58.4
KHC Kasperske Hory 9.24 334 *e*PN **Pn 14 18 15.4 -0.3**
KHC *e*SN **Sn 14 19 58.4 -0.3**
KHC Kasperske Hory 9.24 334 P Pn 14 18 14.7 -1.0
comp=Z,7.5nm,0.8s
TUE Stuetta 9.32 309 P Pn 14 18 16.5 -0.4
comp=Z,48nm,0.7s
TUE Stuetta 9.32 309 P Pn 14 18 19.1 +2.2
SORM Soroca 9.40 38 P Pn 14 18 18.6 +0.8
comp=Z,7.6nm,1.1s
DAVA Damuels 9.49 315 *e*Pn **Pn 14 18 18.7 -0.5**
comp=Z,4.3nm,0.4s
DAVA *e*Sn **Sn 14 20 03.6 -1.4**
comp=Z,15nm,0.6s
DAVA Damuels 9.49 315 P Pn 14 18 21.6 +2.3
DPC Dobruska-Polom 9.67 347 P Pn 14 18 21.6 +0.1
comp=Z,3.2nm,1.0s
KEST Kesra 9.72 241 P Pn 14 18 25.3 +2.9
comp=Z,0.3nm,0.3s,baz=246,slow=4.6,SNR=6.6
comp=Z,4.2nm,0.8s
SENIN Lac Senin/Sane 10.51 305 Pn 14 18 33.0 -0.2
LUBAR Lubar, Ukraine 10.54 29 P Pn 14 18 33.9 +0.5
BR106 Keskin Array S 10.64 92 P Pn 14 18 36.0 +1.0
comp=Z,2.1nm,1.1s
BR131 Keskin Array S 10.66 92 *i* P **Pn 14 18 37.0 +1.8**
BRTR Keskin Array B 10.66 92 P Pn 14 18 36.8 +1.6
comp=Z,0.1nm,0.3s,baz=270,slow=12,SNR=4.5
BRTR LR LR 14 23 51.3
comp=Z,48nm,18.7s,baz=286,slow=44
comp=Z,0.5nm,0.5s
BRTR Keskin Array B 10.66 92 Pn 14 18 34.0 -1.3
BR104 Keskin Array S 10.67 92 P Pn 14 18 36.3 +1.0
comp=Z,1.7nm,0.8s
STU Stuttgart 10.80 320 P Pn 14 18 37.0 0.0
STU pmax pmax
comp=Z,60nm,0.9s
STU Stuttgart 10.80 320 P Pn 14 18 35.9 -1.0
CLL Collm 11.33 338 *e*P Pn 14 18 52.0 +7.8
CLL Collm 11.33 338 *e*(Pn) Pn 14 18 52.0 +7.8
CLL *e*Sn Sn 14 20 36.0 -14
CLL *e*Sb 14 21 22.0
CLL *e*Sg 14 21 58.0
CLL *ex* x 14 22 07.0
MI28 Mi28,Pidlybu 11.35 26 P Pn 14 18 44.7 +0.2
AK17 Malin Array Si 11.65 31 P Pn 14 18 48.6 0.0
AK16 Malin Array Si 11.66 31 P Pn 14 18 49.3 +0.7
AK18 Malin Array Si 11.68 30 P Pn 14 18 49.7 +0.7
AK01 Malin Array Si 11.72 31 P Pn 14 18 50.2 +0.8
AK22 Malin Array Si 11.72 30 P Pn 14 18 50.2 +0.7
AK21 Malin Array Si 11.72 30 P Pn 14 18 50.2 +0.7
AK04 Malin Array Si 11.72 31 P Pn 14 18 50.5 +1.0
AKASG Malin Array Be 11.73 31 P Pn 14 18 51.8 +2.2
comp=Z,0.1nm,0.3s,baz=212,slow=9.9,SNR=4.2
AKASG LR LR 14 23 49.6
comp=Z,141nm,18.1s,baz=226,slow=40
AKBB Malin Array Si 11.73 31 *i* P **Pn 14 18 49.9 +0.3**
MNK Minsk 14.56 19 *i* P **Pn 14 19 30.8 +2.4**
comp=E,29nm,0.8s
MNK *i* P **Pn 14 19 30.8 +2.4**
comp=N,12nm,1.1s
MNK *i* P **Pn 14 19 30.8 +2.4**
comp=Z,31nm,0.8s,baz=206
MNK *i* PP **PnPn 14 19 40.7 +4.4**
MNK *i* PPP PPP 14 19 47.1
MNK *i* S **Sn 14 22 15.3 +6.5**
MNK *i* SS **S 14 22 27.4 -0.1**
MNK *i* SSS SSS 14 22 40.8
MNK *i* LQ LQ 14 23 50.5
MNK *i* LR LR 14 24 39.6
MNK *i* LRM MLR 14 25 38.8
comp=Z,152nm,17.9s
MNK *i* LRM MLR 14 25 43.5
comp=N,124nm,20.7s
MNK *i* LRM MLR 14 25 48.9
comp=E,129nm,17.6s
MNK Minsk 14.56 19 *i* P **Pn 14 19 30.7 +2.4**
MNK *i* S **Sn 14 22 15.2 +6.5**
MNK pmax pmax
comp=N,12nm,1.1s
MNK pmax pmax
comp=E,29nm,0.8s
MNK pmax pmax
comp=Z,31nm,0.8s
MNK MLR MLR
comp=Z,152nm,18.0s
MNK MLR MLR
comp=N,124nm,21.0s
MNK MLR MLR
comp=E,129nm,18.0s
NACGM Naroch 14.68 16 *e*P **P 14 19 32.9 -3.0**
comp=Z,27nm,0.8s,baz=201
SOC Sochi 14.99 73 *e*P **Pn 14 19 34.3 +0.2**
SOC *e* 14 22 22.6
SOC MLR MLR
comp=Z,37nm,16.0s
EIL Elat 16.73 128 P Pn 14 19 56.3 -0.4
comp=Z,0.3nm,0.3s,baz=323,slow=10,SNR=2.2
comp=Z,3.7nm,0.7s
SHA1 Shidzhatmaz 17.13 73 *i* P **P 14 20 04.1 +0.8**
KIV Kislovodsk 17.15 72 Pn 14 20 02.6 +0.6
KBZ Khabaz 17.30 73 P P 14 20 05.2 +0.3
comp=Z,0.1nm,0.3s,baz=273,slow=10,SNR=5.8
comp=Z,3.0nm,0.9s
KBZ Khabaz 17.30 73 *e*P **P 14 20 06.2 +1.3**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
OBN Obninsk 17.98 33 *c* iP **P 14 20 12.6 +0.2**
OBN S **Sn 14 23 29.0 -2.5**
OBN pmax pmax
comp=Z,34nm,1.2s
OBN MLR MLR
comp=Z,58nm,18.0s
OBN Obninsk 17.98 33 P P 14 20 12.5 +0.2
comp=Z,23nm,0.5s
VSU Vasula 18.04 12 *i* P **Pn 14 20 11.4 -1.3**
VSU pmax pmax
comp=Z,16nm,0.8s
ESDC Sonseca Array 18.14 274 P P 14 20 15.0 +0.8
baz=87,slow=11,SNR=6.4
ESDC LR LR 14 27 16.8
comp=Z,36nm,21.2s,baz=24,slow=37
comp=Z,0.3nm,0.7s
MOS Moscow 18.85 32 *e*P **P 14 20 21.3 -0.6**
MOS *e*S **Sn 14 23 51.9 -0.6**
MOS pmax pmax
comp=Z,29nm,0.7s
GNI Garni 18.98 84 *ce*P **Pn 14 20 25.0 +0.6**
GNI pmax pmax
comp=Z,9.0nm,1.0s
HFS Hagfors 19.54 351 P P 14 20 27.3 -2.1
comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=6.8
HFS LR LR 14 29 26.2
comp=Z,44nm,18.2s,baz=151,slow=41
comp=Z,3.6nm,0.8s
NB2 NORSAR Subarra 20.75 348 P P 14 20 42.5 -0.1
comp=Z,7.4nm,1.4s,baz=161,slow=11
NOA NORSAR Array B 20.75 348 P P 14 20 40.7 -2.0
comp=Z,0.7nm,0.6s,baz=154,slow=10,SNR=3.6
NOA LR LR 14 29 39.8
comp=Z,55nm,20.5s,baz=180,slow=39
comp=Z,0.7nm,0.6s
EKA Eskdalemuir Ar 20.84 321 P P 14 20 43.1 -0.5
comp=Z,6.2nm,0.8s,baz=114,slow=10,SNR=9.9
comp=Z,6.2nm,0.8s
FINES FINESS Array B 20.84 9 P P 14 20 42.2 -1.3
comp=Z,6.2nm,0.9s,baz=194,slow=12,SNR=13
FINES LR LR 14 29 42.3
comp=Z,99nm,18.1s,baz=213,slow=39
comp=Z,6.2nm,0.9s
FINES FINESS Array B 20.84 9 P P 14 20 42.4 -1.1
FINES FINESS Array B 20.84 9 P P 14 20 42.4 -1.1
FIA1 FINESS Array S 20.84 9 P 14 20 42.4 -1.1

MDT Midelt 21.09 255 LR LR 14 28 21.8
comp=Z,68nm,18.8s,baz=43,slow=35
BELG Belogornoye 22.11 50 *i* P **P 14 20 57.1 -0.1**
BELG pmax pmax
comp=Z,4.0nm,0.9s
KLMR Klimovskoe 23.29 25 *e*P **P 14 21 07.2 -2.3**
KLMR pmax pmax
comp=Z,15nm,0.7s
KIRV Kirov 25.68 37 LR LR 14 32 39.9
comp=Z,134nm,19.3s,baz=225,slow=39
KIRV Kirov 25.68 37 *ce*P **P 14 21 31.1 -0.5**
AKTO Aktyubinsk 28.05 57 P P 14 21 51.1 -1.9
comp=Z,2.7nm,0.8s,baz=280,slow=10,SNR=6.1
AKTO LR LR 14 34 57.9
comp=Z,56nm,18.1s,baz=190,slow=40
comp=Z,2.7nm,0.8s
ARCES ARCESS Array B 28.77 4 LR LR 14 34 05.9
comp=Z,72nm,19.9s,baz=148,slow=38
AB31 Akbulak array 29.24 60 P P 14 22 02.6 -1.0
ARTI Arti 29.31 45 P P 14 22 02.8 -1.3
comp=Z,2.7nm,0.5s,baz=246,slow=9.4,SNR=5.2
comp=Z,2.7nm,0.5s
ARTI Arti 29.31 45 *d* iP **P 14 22 03.4 -0.8**
ARTI S **S 14 26 57.0 +1.5**
ARTI SS **SnSn 14 28 21.5 -0.7**
ARTI pmax pmax
comp=Z,5.0nm,0.9s
ARTI Arti 29.31 45 P P 14 22 03.3 -0.9
ARTI IAmb IAmb 14 22 04.2
comp=Z,5.3nm,0.6s
TORD Torodi Ar. Bea 31.93 215 P P 14 22 27.8 +0.2
comp=Z,0.9nm,0.8s,baz=24,slow=8.3,SNR=4.9
comp=Z,0.9nm,0.8s
BORG Borgarnes 33.39 329 LR LR 14 39 14.4
comp=Z,36nm,18.6s,baz=77,slow=42
BVAR Borovoye Array 35.82 53 P P 14 23 01.1 0.0
comp=Z,6.7nm,0.7s,baz=270,slow=5.9,SNR=37
comp=Z,6.7nm,0.7s
CHGR Chuyangaron 37.60 77 *i* P **P 14 23 15.6 -1.0**
CHGR pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 40.22 69 *ce*P **P 14 23 40.3 +1.8**
AAK pmax pmax
comp=Z,1.0nm,0.7s
KURBB Kurchatov Arra 41.08 56 P P 14 23 44.7 -0.6
comp=Z,1.2nm,0.6s,baz=289,slow=9.6,SNR=7.6
comp=Z,1.2nm,0.6s
KURK Kurchatov 41.12 56 *ce*P **P 14 23 45.0 -0.7**
KURK pmax pmax
comp=Z,4.0nm,1.1s
KURK Kurchatov 41.12 56 P P 14 23 45.0 -0.7
ZAA0 Zalesovo Array 44.29 50 P P 14 24 10.9 -0.4
ZALV Zalesovo Beam 44.29 50 P P 14 24 10.5 -0.8
comp=Z,8.9nm,0.7s,baz=281,slow=8.7,SNR=44
comp=Z,8.9nm,0.7s
ZALV Zalesovo Beam 44.29 50 *e*P **P 14 24 10.9 -0.4**
ZALV pmax pmax
comp=Z,9.0nm,0.7s
MK31 Makanchi Array 44.38 61 *i* P **P 14 24 11.1 -1.1**
MKAR Makanchi Array 44.38 61 P P 14 24 11.2 -1.0
comp=Z,0.8nm,0.7s,baz=283,slow=7.6,SNR=8.5
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 44.38 61 P P 14 24 11.0 -1.2
NRIK Noril'sk 44.57 28 *i* P **P 14 24 12.6 -0.7**
NRIK pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 44.57 28 P P 14 24 12.6 -0.7
NRIK IAmb IAmb 14 24 14.5
comp=Z,6.4nm,1.2s
SCHQ Schefferville 56.02 316 P P 14 25 40.4 +0.2
SCHQ IAmb IAmb 14 25 48.1
comp=Z,4.7nm,1.3s
TIXI Tiksi 57.23 21 LR LR 14 51 38.3
comp=Z,40nm,19.5s,baz=190,slow=37
SONM Songino Array 59.15 52 P P 14 26 02.7 +0.2
comp=Z,2.7nm,0.8s,baz=289,slow=8.4,SNR=16
comp=Z,2.7nm,0.8s
SONM Songino Array 59.15 52 *e*P **P 14 26 02.8 +0.3**
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 59.15 52 P P 14 26 02.5 0.0
SONM IAmb IAmb 14 26 03.5
comp=Z,4.5nm,1.0s
ULN Ulaanbaatar 59.52 51 *ce*P **P 14 26 05.8 +0.7**
ULN pmax pmax
comp=Z,4.0nm,1.7s
YAK Yakutsk 62.95 30 LR LR 14 56 23.3
comp=Z,49nm,19.2s,baz=242,slow=38
A36M Sachs Harbour 64.66 349 P P 14 26 39.2 +0.2
HHC Hu-ho-hao-te 65.94 56 *e*P **P 14 26 48.5 +0.6**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,55nm,5.5s
PZH PanZhiHua 67.37 74 P P 14 26 59.0 +1.7
M57A Sunshine Farm, 68.81 307 P P 14 27 05.7 -0.2
INK Inuvik 69.20 350 P P 14 27 07.1 -0.7
INK pmax pmax
comp=Z,5.0nm,1.3s
INK Inuvik 69.20 350 P P 14 27 07.1 -0.7
INK IAmb IAmb 14 27 45.8
comp=Z,5.2nm,1.3s
HEH HeiHe 69.28 41 *e*P **P 14 27 08.8 +0.1**
HEH pmax pmax
comp=Z,5.0nm,0.9s
E29M Blow River 69.67 351 P P 14 27 10.9 +0.1
CMAR Chiang Mai Arr 70.09 83 P P 14 27 12.5 -1.7
comp=Z,0.6nm,0.5s,baz=303,slow=7.9,SNR=7.7
comp=Z,0.6nm,0.5s
CMAR Chiang Mai Arr 70.09 83 *e*P **P 14 27 13.6 -0.6**
YKA Yellowknife Ar 70.56 339 P P 14 27 15.8 -0.5
comp=Z,2.0nm,0.8s,baz=39,slow=5.5,SNR=14
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 70.56 339 *e*P **P 14 27 16.3 0.0**
YKA pmax pmax
comp=Z,2.0nm,0.8s
G31M Satah River 70.60 349 P P 14 27 16.1 -0.4
G31M IAmb IAmb 14 27 16.9
comp=Z,3.4nm,0.8s
G29M Pine Creek 71.09 351 P 14 27 19.7 +0.1
F24K Squaw Lake 71.41 355 IAmb IAmb 14 27 23.6
comp=Z,3.9nm,0.9s
H29M Whitestone 71.80 351 P P 14 27 23.7 -0.1
H27K Steamboat Moun 72.14 352 IAmb IAmb 14 27 27.9
comp=Z,3.8nm,0.8s
G24K Hadweenzic Riv 72.19 355 P P 14 27 26.8 +0.6
F19K Shaleruckik Mo 72.49 359 P P 14 27 28.0 +0.1
F19K IAmb IAmb 14 27 28.9
comp=Z,3.6nm,1.1s
ULM Lac du Bonnet 73.10 323 P P 14 27 31.4 -0.4
comp=Z,3.5nm,0.9s,baz=56,slow=7.3,SNR=3.3
ULM LR LR 14 59 05.5
comp=Z,39nm,20.8s,baz=48,slow=35
comp=Z,3.5nm,0.9s
ULM Lac du Bonnet 73.10 323 P P 14 27 31.8 0.0
ULM pmax pmax
comp=Z,10.0nm,1.4s
ULM Lac du Bonnet 73.10 323 P P 14 27 31.8 0.0
H23K Yukon River 73.20 355 IAmb IAmb 14 27 34.3
comp=Z,3.1nm,0.9s
IMAR Indian Mountai 73.24 357 P P 14 27 33.1 +0.8
H21K Melozitna Rive 73.53 357 IAmb IAmb 14 27 36.5
comp=Z,3.5nm,0.8s
F15K North Star Dit 73.58 2 P P 14 27 34.7 +0.3
F15K IAmb IAmb 14 28 06.7
comp=Z,3.2nm,0.9s
I23K Minto, Yukon-K 73.86 355 IAmb IAmb 14 27 38.4
comp=Z,6.7nm,1.4s
DAWY Dawson 73.99 351 P P 14 27 37.4 +0.5
DAWY IAmb IAmb 14 27 38.4
comp=Z,4.2nm,0.9s
ILAR Eielson Array 74.06 354 P P 14 27 36.6 -0.6
comp=Z,0.9nm,0.7s,baz=358,slow=5.9,SNR=14
comp=Z,0.9nm,0.7s
ILAR Eielson Array 74.06 354 *e*P **P 14 27 37.7 +0.5**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
HDA Harding Lake 74.42 354 P P 14 27 39.4 +0.1
WRH Wood River Hil 74.44 355 IAmb IAmb 14 27 40.5
comp=Z,4.0nm,1.0s
BCAR Beaver Creek A 75.25 351 P P 14 27 45.0 +0.9
CAST Castle Rocks 75.73 356 P P 14 27 47.4 +0.4
CAST IAmb IAmb 14 27 48.7
comp=Z,3.4nm,1.0s
DHY Denali Highway 75.77 354 P P 14 27 47.6 +0.2
NJ2 Nanjing 75.90 60 *e*P **P 14 27 48.3 -0.1**

NJ2				pmax	pmax				
	comp=Z,17nm,0.7s								
TKL	**Tuckaleechee C**	**76.42**	**305**	LR	LR	15 04 18.4			
	comp=Z,28nm,18.0s,baz=176,slow=38								
L19K	**White Mountain**	**77.09**	**357**	P	**P**	**14 27 55.2**	**+0.6**		
L19K				IAmb	IAmb	14 27 56.4			
	comp=Z,3.1nm,0.9s								
KSRS	**Korea Array**	**78.00**	**51**	P	**P**	**14 27 59.7**	**-0.4**		
	comp=Z,1.4nm,0.8s,baz=316,slow=4.7,SNR=5.5								
	comp=Z,1.4nm,0.8s								
KSRS	**Korea Array**	**78.00**	**51**	*e*P	**P**	**14 28 00.0**	**-0.1**		
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.8s								
O18K	**Koktuh Hills**	**79.43**	**357**	P	**P**	**14 28 08.2**	**+0.6**		
MJAR	**Matsushiro Arr**	**84.43**	**45**	P	**P**	**14 28 33.6**	**-0.7**		
	comp=Z,1.7nm,0.8s,baz=328,slow=4.5,SNR=4.5								
	comp=Z,1.7nm,0.8s								
MJAR	**Matsushiro Arr**	**84.43**	**45**	IAmb	IAmb	14 28 34.8			
	comp=Z,2.4nm,1.1s								
MJA0	**Matsu Arr-Jizo**	**84.45**	**45**	*e*P	**P**	**14 28 35.4**	**+0.9**		
MJA0				pmax	pmax				
	comp=Z,1.0nm,0.6s								
PDAR	**Pinedale Array**	**84.91**	**325**	P	**P**	**14 28 36.5**	**-0.4**		
	comp=Z,0.3nm,0.7s,baz=29,slow=4.8,SNR=3.7								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**123.00**	**94**	PKP	**PKPdf**	**14 34 56.9**	**-1.4**		
	comp=Z,0.6nm,0.8s,baz=321,slow=2.0,SNR=7.1								

*IDC **26** 14:16:16.9±1.3,45°.85N×106°.60W,h0km,mbtmp3.0/3, ML2.8/3,Error ellipse: s-maj=42.2km s-min=9.8km az=132.0*
*NEIC **26** 14:16:16.1±1.6,45°.89N±0°.06×106°.60W±0°.08,h0km±1km, ML3.1/32,Error ellipse: s-maj=10.3km s-min=9.4km az=33.0*
ISC 26 14:16:17.1±1.1,**45°.99N**±0°.06×**106°.54W**±0°.07,**h0**km,**n33,** σ1$08/30,**Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAO	**LASA Array**	**0.74**	**17**			**Pn**	**14 16 33.6**	**-1.2**
RLMT	**Red Lodge**	**2.10**	**247**			**Pn**	**14 16 52.0**	**-1.6**
RLMT				IAML			14 17 24.8	
	91nm,0.8s							
RLMT				IAML			14 17 24.8	
	189nm,0.4s							
GCMT	**Greycliff**	**2.19**	**266**			**Pn**	**14 16 53.4**	**-1.5**
RSSD	**Black Hills**	**2.58**	**135**			**Pn**	**14 16 59.5**	**-0.8**
RSSD	**Black Hills**	**2.58**	**135**	IAML			14 17 39.2	
	67nm,0.6s							
RSSD				IAML			14 17 40.6	
	91nm,0.5s							
YNE	**Yellowstone No**	**2.63**	**249**			**Pn**	**14 16 59.0**	**-1.9**
YNE				IAML			14 17 45.2	
	comp=E,98nm,0.4s							
YMP	**Mirror Lake Pl**	**2.84**	**245**			**Pn**	**14 17 02.1**	**-1.8**
DGMT	**Dagmar**	**2.96**	**32**	Pn		**Pn**	**14 17 06.8**	**+1.6**
EGMT	**Eagleton**	**3.00**	**314**			**Pn**	**14 17 06.1**	**+0.2**
YNR	**Norris Junctio**	**3.18**	**248**	Pn		**Pn**	**14 17 06.9**	**-1.7**
YNR				IAML			14 18 08.0	
	comp=E,37nm,0.5s							
K22A	**Casper**	**3.33**	**180**			**Pn**	**14 17 08.1**	**-2.5**
K22A				IAML			14 18 04.1	
	comp=E,54nm,0.3s							
K22A				IAML			14 18 04.2	
	comp=E,43nm,0.5s							
YHL	**Hebgen Lake**	**3.46**	**252**			**Pn**	**14 17 12.3**	**-0.2**
YHL				IAML			14 18 11.9	
	comp=E,47nm,1.1s							
YHL				IAML			14 18 14.1	
	comp=N,46nm,0.5s							
YPP	**Pitchstone Pla**	**3.47**	**242**	Pn		**Pn**	**14 17 12.4**	**-0.2**
YHB	**Horse Butte**	**3.50**	**251**	Pn		**Pn**	**14 17 11.0**	**-2.0**
YHB				IAML			14 18 10.6	
	comp=E,32nm,1.1s							
FLWY	**Flagg Ranch**	**3.51**	**239**			**Pn**	**14 17 13.0**	**0.0**
BW06	**Boulder Array**	**3.88**	**215**			**Pn**	**14 17 17.8**	**-0.3**
BW06				IAML			14 18 24.0	
	comp=E,20nm,0.6s							
PD31	**Pinedale Array**	**3.88**	**215**			**Pn**	**14 17 17.8**	**-0.4**
PDAR	**Pinedale Array**	**3.88**	**215**	Pn		**Pn**	**14 17 18.6**	**+0.5**
	comp=E,0.5nm,0.3s,baz=45,slow=14,SNR=17							
PDAR				Pg		**Pb**	**14 17 26.9**	**+0.4**
	comp=E,1.5nm,0.3s,baz=27,slow=19,SNR=9.8							
PDAR				Lg		Lg	14 18 13.1	
	comp=E,2.6nm,0.3s,baz=42,slow=33,SNR=3.5							
	comp=E,0.8nm,0.4s							
PDAR	**Pinedale Array**	**3.88**	**215**			**Pn**	**14 17 18.2**	**+0.1**
LYMT	**Lyon Mountain**	**4.09**	**286**			**Pn**	**14 17 21.6**	**+0.5**
DLMT	**Dillon**	**4.29**	**264**			**Pn**	**14 17 23.4**	**-0.3**
DLMT				IAML			14 18 38.4	
	comp=E,15nm,1.3s							
DLMT				IAML			14 18 47.6	
	comp=E,16nm,1.8s							
HAYD	**Hayden**	**5.49**	**186**	IAML			14 19 14.1	
	comp=N,13nm,1.3s							
HAYD				IAML			14 19 18.5	
	comp=E,12nm,1.2s							
HWUT	**Hardware Ranch**	**5.69**	**221**	Pn		**Pn**	**14 17 42.7**	**-0.3**
SPUT	**South Promonto**	**6.34**	**225**	Pn		**Pn**	**14 17 52.0**	**+0.1**
P18A	**Preston Nutter**	**6.91**	**204**			**Pn**	**14 17 59.5**	**-0.4**
SRU	**San Rafael Swe**	**7.47**	**205**			**Pn**	**14 18 07.1**	**-0.3**
I56US	**NEWPORT INFRAS**	**7.57**	**291**	I		I	14 57 10.0	
	comp=E,0.1nm,1.1s,baz=106,slow=310,SNR=6.1							
PV07	**Paradox Valley**	**7.70**	**192**			**Pn**	**14 18 10.8**	**+0.2**
PV04	**Paradox Valley**	**7.79**	**194**	Pn		**Pn**	**14 18 11.7**	**-0.1**
PV16	**Nyswonger Mesa**	**7.87**	**194**			**Pn**	**14 18 12.8**	**-0.1**
I10CA	**LAC DU BONNET**	**8.20**	**55**	I		I	15 01 00.0	
	baz=241,slow=313,SNR=0.3							
ULM	**Lac du Bonnet**	**8.31**	**55**	Pn		**Pn**	**14 18 19.3**	**+0.5**
	comp=E,0.3nm,0.3s,baz=243,slow=12,SNR=2.0							
ULM				Lg		Lg	14 20 34.0	
	comp=E,0.8nm,0.3s,baz=208,slow=17,SNR=4.4							
	comp=E,0.9nm,0.4s							
YKA	**Yellowknife Ar**	**17.17**	**347**	P		**Pn**	**14 20 18.3**	**+0.2**
	baz=170,slow=12,SNR=2.7							
	comp=E,0.2nm,0.5s							

*IDC **26** 14:21:18.1±7.7,15°.44S×172°.87W,h0km,mb3.9/3, mbtmp3.9/3,MS3.5/2,Error ellipse: s-maj=345.4km s-min=23.4km az=139.0*
*NEIC **26** 14:21:19.2±0.6,15°.29S±0°.05×172°.7W±0°.1,h10km±1km, mb4.2/4,Error ellipse: s-maj=24.6km s-min=7.5km az=280.0*
ISC 26 14:21:22.3±1.0,**15°.31S**±0°.08×**172°.7W**±0°.1,**h35**km,**n20,** σ1$44/13,**mb3.9/5,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**1.64**	**32**	Pn		**Pn**	**14 21 49.2**	**+0.4**
	24nm,0.3s,baz=200,slow=2.1,SNR=36							
AFI				Sn		**Sn**	**14 22 06.7**	**-2.0**
	94nm,0.3s,baz=53,slow=21,SNR=7.6							
AFI	**Afiamalu**	**1.64**	**32**			**Pn**	**14 21 48.2**	**-0.5**
NIUE	**Niue**	**4.57**	**145**	Pn		**Pn**	**14 22 28.7**	**-0.2**
RAR	**Rarotonga**	**13.58**	**118**	LR		LR	14 28 50.5	
	comp=Z,97nm,19.1s,baz=280,slow=33							
H11S2	**WAKE ISLAND Hy**	**39.26**	**328**	T		T	15 10 21.3	
	baz=148							
H11S3	**WAKE ISLAND Hy**	**39.27**	**328**	T		T	15 10 27.7	
	baz=148,slow=74							
H11S1	**WAKE ISLAND Hy**	**39.27**	**328**	T		T	15 10 11.4	
	baz=148,slow=74							
H11N3	**WAKE ISLAND Hy**	**40.19**	**329**	T		T	15 11 26.6	
	baz=150,slow=76,SNR=4.2							
H11N1	**WAKE ISLAND Hy**	**40.20**	**329**	T		T	15 11 29.7	
	baz=150,slow=76,SNR=3.2							
H11N2	**WAKE ISLAND Hy**	**40.21**	**329**	T		T	15 11 29.8	
	baz=150,slow=76,SNR=3.3							
WR8	**Warramunga Arr**	**50.40**	**257**	P		**P**	**14 30 16.1**	**-0.6**
WB0	**Warramunga Arr**	**50.51**	**257**	P		**P**	**14 30 16.8**	**-0.7**
WB0				IAmb		IAmb	14 30 55.7	
	comp=Z,8.7nm,1.4s							
WRA	**Warramunga Arr**	**50.55**	**257**	P		**P**	**14 30 16.2**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=94,slow=6.3,SNR=20							
	comp=Z,1.0nm,0.7s							
WRA	**Warramunga Arr**	**50.55**	**257**	P		**P**	**14 30 16.6**	**-1.1**
AS31	**Alice Springs**	**50.81**	**252**	P		**P**	**14 30 18.8**	**-0.9**
AS31				IAmb		IAmb	14 30 21.3	
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**50.81**	**252**	P		**P**	**14 30 18.3**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=90,slow=7.6,SNR=54							
	comp=Z,2.8nm,0.7s							
ASAR	**Alice Springs**	**50.81**	**252**	P		**P**	**14 30 18.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**58.92**	**258**	LR		LR	14 54 07.2	
	comp=Z,84nm,19.8s,baz=358,slow=34							
ILAR	**Eielson Array**	**82.22**	**11**	P		**P**	**14 33 42.3**	**+2.9**
	comp=Z,0.4nm,0.8s,baz=197,slow=4.8,SNR=4.0							
	comp=Z,0.4nm,0.8s							
BRTR	**Keskin Array B**	**146.53**	**322**	PKPbc		**PKiKP**	**14 41 03.3**	**0.0**
	comp=Z,0.8nm,0.7s,baz=45,slow=3.2,SNR=5.9							

*SVSA **26** 14:23:09.6±1.3,36°.96N×24°.33W,h5km,ML3.3(INMG), Error ellipse: s-maj=8.2km s-min=5.5km az=87.0, #DIST_RANGE: LOCAL #IPMA_REGION: Falha de Gloria*
ISC 26 14:23:07.8±1.4,**37°.0N**±0°.1×**24°.44W**±0°.09,**h22**km,**n14,** σ0$84/21,**Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PSMN	**Pico do Norte,**	**0.50**	**269**	*e*P		**Pn**	**14 23 19.6**	**0.0**
PSMN				*e*S		**Sn**	**14 23 27.3**	**-0.3**
PSMN				*i* IAML			14 23 27.8	
PSMN				*i* IAML			14 23 28.1	
PSMN				*i* IAML			14 23 32.9	
BART	**Pico Bartolome**	**0.96**	**323**	*e*P		**Pb**	**14 23 25.6**	**-0.1**
BART				*e*S		**Sb**	**14 23 38.3**	**+0.2**
BART				*i* IAML			14 23 39.8	
BART				*i* IAML			14 23 43.0	
BART				*i* IAML			14 23 44.1	
PGRON	**Lagoa das Cont**	**1.06**	**316**	*e*S		**Sn**	**14 23 41.7**	**+0.1**
PGRON				*i* IAML			14 23 42.7	
PGRON				*i* IAML			14 23 42.7	
PGRON				*i* IAML			14 23 42.7	
CMLA	**Cha da Macela**	**1.15**	**311**	*e*P		**Pb**	**14 23 28.7**	**-0.2**
CMLA				*e*S		**Sb**	**14 23 43.2**	**-0.1**
CMLA				*i* IAML			14 23 43.7	
CMLA				*i* IAML			14 23 44.3	
CMLA				*i* IAML			14 23 44.9	
PCALD	**Caldeiras da R**	**1.15**	**314**	*e*S		**Sb**	**14 23 43.3**	**0.0**
PDA	**Ponta Delgada**	**1.22**	**307**	*e*P		**Pn**	**14 23 29.5**	**0.0**
PDA				*e*S		**Sn**	**14 23 45.2**	**-0.2**
PDA				*i* IAML			14 23 45.9	
PDA				*i* IAML			14 23 46.2	
PDA				*i* IAML			14 23 48.2	
PSET	**Sete Cidades**	**1.30**	**309**	*e*S		**Sn**	**14 23 47.1**	**-0.3**
PSET				*i* IAML			14 23 50.6	
PSET				*i* IAML			14 23 53.5	
PSET				*i* IAML			14 23 54.2	
PSCM	**Serra do Cume**	**2.71**	**309**	*e*S		**Sn**	**14 24 22.0**	**-0.1**
PSCM				*i* IAML			14 24 23.5	
PSCM				*i* IAML			14 24 24.9	
PSCM				*i* IAML			14 24 29.6	
ROSA	**Rosais**	**3.46**	**301**	*e*P		**Pn**	**14 24 01.3**	**+1.0**
ROSA				*e*S		**Sn**	**14 24 39.2**	**-1.4**
ROSA				*i* IAML			14 24 41.5	
ROSA				*i* IAML			14 24 42.3	
ROSA				*i* IAML			14 24 42.4	
PICO	**Pico**	**3.49**	**296**	*e*P		**Pn**	**14 24 02.3**	**+1.5**
PICO				*e*S		**Sn**	**14 24 40.4**	**-1.1**
PICO				*i* IAML			14 24 43.2	
PICO				*i* IAML			14 24 45.6	
PICO				*i* IAML			14 24 47.8	
PCED	**Cedros**	**3.74**	**297**	*e*P		**Pn**	**14 24 05.3**	**+1.2**
PCED				*e*S		**Sn**	**14 24 46.2**	**-1.3**
PCED				*i* IAML			14 24 48.4	
PCED				*i* IAML			14 24 49.2	
PCED				*i* IAML			14 24 49.4	
PMOZ	**Porto Moniz, M**	**7.27**	**123**	*e*P		**Pn**	**14 24 54.2**	**+1.4**
PMOZ				*e*S		Sn	14 25 52.4	-22
PMAR	**Madeira**	**7.52**	**122**	*e*P		**Pn**	**14 24 56.2**	**0.0**
PMAR				*e*S		Sn	14 25 56.8	-24
PMPST	**Porto Santo, M**	**7.72**	**118**	*e*P		**Pn**	**14 24 57.9**	**-0.9**

*IDC **26** 14:24:25.7±0.8,24°.21N×142°.55E,h0km,mb4.1/16, mbtmp4.1/17,ML3.1/2,MS3.0/5,Error ellipse: s-maj=33.9km s-min=14.5km az=84.0*
*NEIC **26** 14:24:27.3±1.6,24°.24N±0°.08×142°.9E±0°.2,h10km±1km, mb4.5/38,Error ellipse: s-maj=23.7km s-min=12.7km az=80.0*
ISC 26 14:24:30.6±0.6,**24°.25N**±0°.06×**142°.9E**±0°.1,**h35**km,**n78,** σ0$75/68,**mb4.4/34,MS3.2/3,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**2.90**	**348**	Pn		**Pn**	**14 25 15.3**	**+1.1**
	5.8nm,0.3s,baz=115,slow=24,SNR=6.5							
JCJ				Sn		**Sn**	**14 25 49.4**	**+1.5**
	21nm,0.3s,baz=126,slow=24,SNR=6.0							
JCJ	**Chichijima**	**2.90**	**348**			**Pn**	**14 25 14.3**	**0.0**
MJAR	**Matsushiro Arr**	**12.89**	**343**	Pn		**Pn**	**14 27 29.1**	**-2.3**
	baz=162,slow=11,SNR=4.5							
	0.3nm,0.4s							
MJAR	**Matsushiro Arr**	**12.89**	**343**	Pn		**Pn**	**14 27 31.2**	**-0.1**
MAJO	**Matsushiro**	**12.89**	**343**	Pn		**Pn**	**14 27 31.0**	**-0.4**
JOW	**Kunigami**	**13.42**	**284**	LR		LR	14 32 16.7	
	comp=Z,132nm,20.3s,baz=162,slow=36							
TJN	**Taejon**	**18.00**	**316**			**P**	**14 28 38.9**	**+0.5**
TJN				IAmb		IAmb	14 29 14.2	
	comp=Z,93nm,1.5s							
KSRS	**Korea Array**	**18.35**	**319**	P		**Pn**	**14 28 43.0**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=135,slow=11,SNR=6.1							
KSRS				LR		LR	14 34 51.3	
	comp=Z,24nm,21.1s,baz=155,slow=34							
INCN	**Inchon**	**19.15**	**317**	P		**Pn**	**14 28 51.4**	**-0.6**
H11N1	**WAKE ISLAND Hy**	**22.72**	**97**	T		T	14 53 01.1	
	baz=287							
H11N2	**WAKE ISLAND Hy**	**22.72**	**97**	T		T	14 53 01.8	
	baz=287							
H11N3	**WAKE ISLAND Hy**	**22.73**	**97**	T		T	14 53 03.9	
	baz=287							
H11S3	**WAKE ISLAND Hy**	**22.89**	**100**	T		T	14 53 12.1	
	baz=289,slow=74,SNR=8.4							
H11S1	**WAKE ISLAND Hy**	**22.90**	**100**	T		T	14 53 14.4	
	baz=289,slow=74,SNR=3.0							
H11S2	**WAKE ISLAND Hy**	**22.91**	**100**	T		T	14 53 16.4	
	baz=289,slow=74,SNR=3.7							
HEH	**HeiHe**	**28.61**	**339**	*e*P		**P**	**14 30 24.5**	**+1.0**
HEH				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KRVT	**Keravat (AS076**	**29.75**	**161**	LR		LR	14 42 25.3	
	comp=Z,7.8nm,18.0s,baz=77,slow=36							
PEA0B	**Petropavlovsk-**	**30.92**	**17**	P		**P**	**14 30 43.4**	**-0.6**
MTN	**Manton Dam**	**38.61**	**199**	P		**P**	**14 31 50.7**	**+0.1**
MTN				IAmb		IAmb	14 32 03.2	
	comp=Z,8.8nm,1.3s							
CHTO	**Chiang Mai**	**41.09**	**271**	P		**P**	**14 32 11.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**41.19**	**271**	P		**P**	**14 32 13.0**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=61,slow=7.4,SNR=15							
CMAR	**Chiang Mai Arr**	**41.19**	**271**	P		**P**	**14 32 12.2**	**0.0**
KNRA	**Kununurra**	**42.01**	**201**	P		**P**	**14 32 18.9**	**+0.2**
KNRA				IAmb		IAmb	14 32 44.3	
	comp=Z,14nm,1.1s							
WB0	**Warramunga Arr**	**44.53**	**191**	P		**P**	**14 32 38.8**	**-0.2**
WB0				IAmb		IAmb	14 32 39.6	
	comp=Z,5.0nm,0.9s							
WR8	**Warramunga Arr**	**44.69**	**191**	P		**P**	**14 32 40.3**	**-0.1**
WR8				IAmb		IAmb	14 32 41.0	
	comp=Z,4.7nm,0.9s							
WRAB	**Tennant Creek**	**44.70**	**191**	P		**P**	**14 32 40.4**	**0.0**
WRA	**Warramunga Arr**	**44.71**	**191**	P		**P**	**14 32 40.1**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=6.8,slow=7.9,SNR=79							
WRA				PcP		**PcP**	**14 34 23.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=18,slow=3.6,SNR=3.3							
	comp=Z,4.1nm,0.7s							
WRA	**Warramunga Arr**	**44.71**	**191**	P		**P**	**14 32 39.0**	**-1.5**
FITZ	**Fitzroy Crossi**	**45.32**	**203**	P		**P**	**14 32 45.8**	**+0.4**
SHL	**Shillong**	**46.03**	**283**			**P**	**14 32 51.1**	**-0.1**
AS31	**Alice Springs**	**48.42**	**191**	P		**P**	**14 33 09.0**	**-0.6**
ASAR	**Alice Springs**	**48.42**	**191**	P		**P**	**14 33 09.1**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=11,slow=7.5,SNR=20							
	comp=Z,0.6nm,0.4s							
ASAR	**Alice Springs**	**48.42**	**191**	P		**P**	**14 33 08.9**	**-0.7**
EVN	**Everest**	**50.10**	**287**			**P**	**14 33 23.5**	**+0.2**
INKA	**Innaminka**	**51.73**	**182**	P		**P**	**14 33 34.4**	**-0.2**
ZALV	**Zalesovo Beam**	**52.05**	**321**	P		**P**	**14 33 35.9**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=108,slow=8.0,SNR=5.9							
	comp=Z,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**52.05**	**321**	P		**P**	**14 33 35.2**	**-1.5**
MKAR	**Makanchi Array**	**52.78**	**311**	P		**P**	**14 33 41.2**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=89,slow=8.7,SNR=12							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**52.78**	**311**	P		**P**	**14 33 40.9**	**-1.4**
MAKZ	**Makanchi**	**53.00**	**311**	P		**P**	**14 33 43.3**	**-0.6**
KURK	**Kurchatov**	**55.43**	**316**			**P**	**14 34 00.5**	**-1.0**
KURK				IAmb		IAmb	14 34 02.0	
	comp=Z,2.4nm,0.8s							
J18K	**Innoko River**	**55.43**	**28**	P		**P**	**14 34 01.4**	**0.0**
J18K				IAmb		IAmb	14 34 27.9	
	comp=Z,5.9nm,1.5s							
KURBB	**Kurchatov Arra**	**55.48**	**316**	P		**P**	**14 34 01.1**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=94,slow=7.9,SNR=12							
	comp=Z,1.7nm,0.4s							
STKA	**Stephens Creek**	**55.83**	**181**	P		**P**	**14 34 04.2**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=1.1,slow=7.3,SNR=3.5							
	comp=Z,1.4nm,0.5s							
KDAK	**Kodiak Island**	**56.29**	**36**	LR		LR	14 57 56.2	
	comp=Z,28nm,19.6s,baz=226,slow=36							
FORT	**Forrest**	**56.53**	**195**	P		**P**	**14 34 09.8**	**+0.3**
FORT				IAmb		IAmb	14 34 43.9	
	comp=Z,12nm,1.3s							
BBOO	**Buckleboo**	**57.12**	**187**	P		**P**	**14 34 13.4**	**-0.2**
BOOM	**Boomskoye usch**	**57.35**	**306**	P		**P**	**14 34 15.7**	**+0.1**
SKT	**Skwentna**	**57.44**	**31**	P		**P**	**14 34 16.0**	**+0.3**
SKT				IAmb		IAmb	14 34 33.5	
	comp=Z,7.5nm,1.5s							
MORW	**Morawa**	**58.96**	**207**	P		**P**	**14 34 26.7**	**+0.1**
ILAR	**Eielson Array**	**59.91**	**28**	P		**P**	**14 34 35.3**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=240,slow=4.9,SNR=5.0							
	comp=Z,0.4nm,0.8s							
KLU	**Klutina**	**60.04**	**32**	P		**P**	**14 34 33.0**	**-0.8**
KLU				IAmb		IAmb	14 34 37.4	
	comp=Z,3.0nm,0.8s							
BVAR	**Borovoye Array**	**60.56**	**319**	P		**P**	**14 34 37.1**	**-0.3**
	comp=Z,5.4nm,0.5s,baz=87,slow=7.3,SNR=28							
	comp=Z,5.4nm,0.5s							
KK31	**Karatay Array**	**61.27**	**307**	P		**P**	**14 34 42.4**	**-0.1**
KK31				IAmb		IAmb	14 34 43.8	
	comp=Z,4.0nm,1.2s							
KKAR	**Karatay Array**	**61.27**	**307**	P		**P**	**14 34 42.3**	**-0.2**
AB31	**Akbulak array**	**67.53**	**315**			**P**	**14 35 22.6**	**-0.6**
AB31				IAmb		IAmb	14 35 23.5	
	comp=Z,1.6nm,0.7s							
ABKAR	**Akbulak array**	**67.53**	**315**	P		**P**	**14 35 22.6**	**-0.7**
NNZ	**Nelson**	**71.03**	**156**	P		**P**	**14 35 45.4**	**+0.6**
LTZ	**Lake Taylor**	**72.00**	**158**	P		**P**	**14 35 51.0**	**+0.2**
LTZ				IAmb		IAmb	14 36 28.3	
	comp=Z,11nm,1.2s							
YKA	**Yellowknife Ar**	**74.34**	**28**	P		**P**	**14 36 04.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=291,slow=5.5,SNR=4.4							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**74.34**	**28**	P		**P**	**14 36 04.3**	**-0.1**
ARCES	**ARCESS Array B**	**76.42**	**341**	P		**P**	**14 36 16.5**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=73,slow=9.0,SNR=7.9							
	comp=Z,1.4nm,0.6s							
ARCES	**ARCESS Array B**	**76.42**	**341**	IAmb		IAmb	14 36 53.8	
	comp=Z,7.0nm,1.4s							
KBZ	**Khabaz**	**80.40**	**314**	P		**P**	**14 36 38.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=64,slow=5.5,SNR=3.8							
	comp=Z,1.0nm,0.6s							
FIA1	**FINESS Array S**	**80.76**	**334**	P		**P**	**14 36 40.1**	**-0.1**
FINES	**FINESS Array B**	**80.76**	**334**	P		**P**	**14 36 40.3**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=79,slow=5.2,SNR=30							
	comp=Z,0.8nm,0.3s							
SUMG	**Summit**	**83.42**	**0**	P		**P**	**14 36 54.2**	**-0.3**
SUMG				IAmb		IAmb	14 37 27.4	
	comp=Z,9.2nm,1.3s							
AKASG	**Malin Array Be**	**85.27**	**324**	P		**P**	**14 37 03.2**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=53,slow=4.9,SNR=7.2							
	comp=Z,0.9nm,0.5s							
AKASG	**Malin Array Be**	**85.27**	**324**	IAmb		IAmb	14 37 47.4	
	comp=Z,2.8nm,1.2s							
AKBB	**Malin Array Si**	**85.27**	**324**	P		**P**	**14 37 03.1**	**-0.7**
AKBB				IAmb		IAmb	14 37 04.1	
	comp=Z,3.0nm,0.7s							
KIEV	**Kiev**	**85.28**	**324**	P		**P**	**14 37 03.1**	**-0.7**
KIEV				IAmb		IAmb	14 37 04.1	
	comp=Z,2.8nm,0.7s							
NC405	**NORSAR Array S**	**86.25**	**339**	P		**P**	**14 37 08.8**	**+0.4**
NC405				IAmb		IAmb	14 37 28.3	
	comp=Z,7.8nm,1.1s							
HFS	**Hagfors**	**86.27**	**337**	P		**P**	**14 37 08.3**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=45,slow=5.6,SNR=1.5							
	comp=Z,1.4nm,0.7s							
NC204	**NORSAR Array S**	**86.45**	**339**	P		**P**	**14 37 09.8**	**+0.3**
NOA	**NORSAR Array B**	**86.47**	**339**	P		**P**	**14 37 09.5**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=52,slow=6.6,SNR=2.1							
	comp=Z,2.2nm,0.8s							
BRTR	**Ke

BOLP *i* S **Sn** **14 53 07.6 -2.2**
QVPH **Quezon City--P** **1.25 128** *e*P **Pn** **14 53 00.0 +0.5**
QVPH *e*S **Sn** **14 53 18.0 +1.8**
PCPS **Palayan City** **1.25 128** *e*P **Pn** **14 52 56.6 -2.9**
PCPS *e*S **Sn** **14 53 11.7 -4.5**
TGY **Tagaytay City** **1.58 147** P **Pn** **14 53 04.7 +0.9**
2µm,0.3s,baz=313,slow=2.9,SNR=59
TGY S **Sn** **14 53 25.9 +2.1**
1µm,0.3s,baz=124,slow=4.3,SNR=4.2
TGY LR LR 14 54 04.0
comp=Z,519nm,19.7s,baz=262,slow=60
TGY **Tagaytay City** **1.58 147** *e*P **Pn** **14 53 04.8 +0.9**
TGY *e*S **Sn** **14 53 26.2 +2.4**
LQP **Lukban** **1.95 132** *e*P **Pn** **14 53 09.1 +0.2**
ABRA **Dolores** **2.29 16** *e*P **Pn** **14 53 13.2 0.0**
ABRA *i* S **Sn** **14 53 41.3 +0.6**
SIPP **Brgy, Tapao** **2.51 9** *e*P **Pn** **14 53 15.0 -1.1**
SIPP *e*S **Sn** **14 53 48.4 +2.7**
PALP **Palanan** **2.80 54** *e*P **Pn** **14 53 22.9 +2.8**
PALP *i* S Sn 14 54 07.5 +15
CVP **Callao Caves** **2.83 37** *e*P **Pn** **14 53 20.9 +0.5**
PACPP **Pamplona Cagay** **3.26 22** *e*P **Pn** **14 53 26.3 +0.1**
PACPP *e*S **Sn** **14 54 03.9 -0.1**
PLP **Palo** **6.41 131** *e*P **Pn** **14 54 11.2 +2.1**
TWG **Pinlang** **7.41 7** Pn **Pn** **14 54 23.6 +0.7**
SCPH **Surigao** **7.71 136** *e*P **Pn** **14 54 30.8 +3.5**
TPUB **Ta-pu** **7.84 4** Pn **Pn** **14 54 27.8 -1.0**
YULB **Yu-li** **8.01 8** Pn **Pn** **14 54 32.6 +1.7**
NACB **Ninganchiao** **8.82 9** Pn **Pn** **14 54 43.1 +1.1**
YHNB **Yeheng** **9.27 8** Pn **Pn** **14 54 49.2 +0.8**
DAV **Davao City (W)** **9.92 146** LR LR 14 59 28.6
comp=Z,84nm,21.0s,baz=278,slow=42
MYLDM **Lahad Datu** **10.30 189** **Pn** **14 55 04.1 +1.7**
TOLI2 **Tolitoli** **14.25 177** P **P** **14 56 00.6 +0.4**
SIJI **Sorong** **19.63 145** LR LR 15 05 08.7
comp=Z,36nm,20.0s,baz=252,slow=38
KAPI **Kappang** **20.32 181** P **P** **14 57 04.2 -2.8**
5.4nm,0.3s,baz=83,slow=12,SNR=2.2
5.4nm,0.3s
CMAR **Chiang Mai Arr** **20.41 281** P **P** **14 57 10.4 +2.4**
1.6nm,0.8s,baz=95,slow=7.6,SNR=14
CMAR LR LR 15 04 42.9
comp=Z,44nm,19.1s,baz=185,slow=35
1.6nm,0.8s
CMAR **Chiang Mai Arr** **20.41 281** P **P** **14 57 10.0 +2.0**
KSRS **Korea Array** **23.02 16** P **P** **14 57 35.0 -0.5**
2.2nm,0.7s,baz=200,slow=11,SNR=9.8
KSRS LR LR 15 06 24.1
comp=Z,36nm,20.8s,baz=215,slow=36
2.2nm,0.7s
JHJ2 **Mitsune** **25.11 42** P **P** **14 57 51.7 -2.9**
MJAR **Matsushiro Arr** **26.52 34** P **P** **14 58 05.0 -2.4**
SONM **Songino Array** **34.23 344** P **P** **14 59 15.7 +0.4**
1.1nm,0.6s,baz=163,slow=9.2,SNR=6.7
SONM LR LR 15 13 36.3
comp=Z,60nm,18.4s,baz=190,slow=36
1.1nm,0.6s
SONM **Songino Array** **34.23 344** P **P** **14 59 15.5 +0.1**
HEH **HeiHe** **35.24 8** *e*P **P** **14 59 23.3 -0.6**
MBWA **Marble Bar** **36.37 180** P **P** **14 59 32.3 -1.5**
WB0 **Warramunga Arr** **37.72 158** P **P** **14 59 43.0 -2.3**
WRAB **Tennant Creek** **37.85 158** P **P** **14 59 43.9 -2.5**
WRAB IAmb IAmb 14 59 57.5
comp=Z,7.5nm,1.2s
WRA **Warramunga Arr** **37.86 158** P **P** **14 59 43.7 -2.8**
comp=Z,0.7nm,0.6s,baz=340,slow=8.4,SNR=5.4
comp=Z,0.7nm,0.6s
WRA **Warramunga Arr** **37.86 158** P **P** **14 59 43.0 -3.5**
AS31 **Alice Springs** **41.15 161** P **P** **15 00 12.5 -1.4**
ASAR **Alice Springs** **41.15 161** P **P** **15 00 11.5 -2.4**
comp=Z,1.0nm,0.7s,baz=337,slow=6.9,SNR=31
ASAR PcP **PcP** **15 02 11.6 -0.3**
comp=Z,0.2nm,0.4s,baz=355,slow=4.5,SNR=2.2
comp=Z,1.0nm,0.7s
ASAR **Alice Springs** **41.15 161** P **P** **15 00 12.7 -1.2**
MKAR **Makanchi Array** **44.27 323** P **P** **15 00 39.5 +0.6**
comp=Z,0.6nm,0.8s,baz=127,slow=9.8,SNR=7.5
MKAR PcP **PcP** **15 02 21.8 -0.2**
comp=Z,0.6nm,0.6s,baz=94,slow=3.6,SNR=5.6
MKAR LR LR 15 20 06.6
comp=Z,42nm,18.3s,baz=147,slow=37
comp=Z,0.6nm,0.8s
MKAR **Makanchi Array** **44.27 323** P **P** **15 00 39.0 +0.1**
MORW **Morawa** **44.41 185** P **P** **15 00 38.7 -1.3**
YAK **Yakutsk** **47.04 6** LR LR 15 25 21.2
comp=Z,42nm,18.1s,baz=212,slow=42
ZALV **Zalesovo Beam** **47.24 332** P **P** **15 01 02.4 +0.4**
comp=Z,0.8nm,0.6s,baz=126,slow=8.1,SNR=2.8
comp=Z,0.8nm,0.6s
AAK **Ala-Archa** **47.41 314** LR LR 15 22 26.5
comp=Z,69nm,18.5s,baz=151,slow=38
PETK **Petropavlovsk-** **47.83 30** P **P** **15 01 07.1 +0.3**
comp=Z,4.5nm,0.6s,baz=222,slow=6.1,SNR=15
comp=Z,4.5nm,0.6s
PETK **Petropavlovsk-** **47.83 30** P **P** **15 01 06.0 -0.7**
KURBB **Kurchatov Arra** **48.41 326** P **P** **15 01 11.8 +0.7**
comp=Z,1.0nm,0.3s,baz=120,slow=8.5,SNR=7.7
comp=Z,1.0nm,0.3s
KURK **Kurchatov** **48.41 326** **P** **15 01 12.1 +0.9**
KURK IAmb IAmb 15 01 14.7
comp=Z,4.0nm,0.7s
KK31 **Karatay Array** **50.32 314** **P** **15 01 26.3 +0.3**
KK31 IAmb IAmb 15 01 27.7
comp=Z,3.3nm,0.8s
KKAR **Karatay Array** **50.32 314** **P** **15 01 26.5 +0.5**
BVAR **Borovoye Array** **53.99 325** P **P** **15 01 53.7 +0.8**
comp=Z,0.7nm,0.5s,baz=111,slow=11,SNR=4.3
BVAR PcP **PcP** **15 02 57.2 +0.1**
comp=Z,1.4nm,0.6s,baz=147,slow=3.5,SNR=6.0
comp=Z,0.7nm,0.5s
NRIK **Noril'sk** **57.59 347** P **P** **15 02 19.1 +0.7**
comp=Z,10nm,0.7s,baz=138,slow=6.6,SNR=8.3
comp=Z,10nm,0.7s
NRIK **Noril'sk** **57.59 347** **P** **15 02 18.9 +0.5**
AB31 **Akbulak array** **59.02 319** **P** **15 02 29.2 +0.6**
AB31 IAmb IAmb 15 02 29.9
comp=Z,2.7nm,0.7s
ABKAR **Akbulak array** **59.02 319** P **P** **15 02 29.2 +0.5**
RAYN **Ar Rayn** **70.07 290** P **P** **15 03 42.0 +0.7**
RAYN IAmb IAmb 15 03 42.6
comp=Z,5.0nm,0.8s
C16K **Lisburne Hills** **70.08 22** P **P** **15 03 40.8 +0.4**
C16K IAmb IAmb 15 03 54.8
comp=Z,7.5nm,1.1s
KBZ **Khabaz** **70.27 311** P **P** **15 03 42.6 +0.6**
comp=Z,2.9nm,0.8s,baz=86,slow=6.2,SNR=5.3
comp=Z,2.9nm,0.8s
KVAR **Kislovodsk Arr** **70.40 312** LR LR 15 36 52.1
comp=Z,125nm,22.0s,baz=267,slow=38
L16K **Owhat River** **72.03 30** P **P** **15 03 52.4 +0.1**
L16K IAmb IAmb 15 03 54.0
comp=Z,4.0nm,0.9s
G18K **Tagagawik** **72.48 25** P **P** **15 03 55.1 +0.1**
H18K **Honhosa River** **72.58 26** P **P** **15 03 55.6 +0.1**
H18K IAmb IAmb 15 03 57.1
comp=Z,2.9nm,0.8s
L19K **White Mountain** **74.20 29** P **P** **15 04 05.1 -0.1**
L19K IAmb IAmb 15 04 07.0
comp=Z,4.2nm,0.9s
IMAR **Indian Mountai** **74.49 25** P **P** **15 04 06.7 -0.1**
CAST **Castle Rocks** **75.39 28** P **P** **15 04 12.3 +0.3**
CAST IAmb IAmb 15 04 13.6
comp=Z,7.8nm,0.8s
SKT **Skwentna** **75.78 29** P **P** **15 04 14.1 -0.2**
SKT IAmb IAmb 15 04 14.3
comp=Z,2.5nm,0.7s
L22K **Petersville** **76.07 29** P **P** **15 04 15.2 -0.7**
L22K IAmb IAmb 15 04 16.3
comp=Z,4.5nm,0.7s
I23K **Minto, Yukon-K** **76.38 26** P **P** **15 04 17.4 -0.1**
I23K IAmb IAmb 15 04 20.4
comp=Z,3.1nm,0.9s
RND **Reindeer** **76.83 28** P **P** **15 04 19.6 -0.7**
RND IAmb IAmb 15 04 20.7
comp=Z,4.0nm,0.8s
ARCES **ARCESS Array B** **77.25 339** P **P** **15 04 22.5 +0.1**
comp=Z,3.9nm,0.7s,baz=73,slow=6.7,SNR=17
ARCES LR LR 15 42 29.2
comp=Z,23nm,19.5s,baz=102,slow=39
comp=Z,3.9nm,0.7s
ARCES **ARCESS Array B** **77.25 339** IAmb IAmb 15 04 35.8
comp=Z,12nm,1.4s
ILAR **Eielson Array** **77.48 26** P **P** **15 04 22.4 -1.4**
comp=Z,0.5nm,0.8s,baz=285,slow=5.2,SNR=7.5
comp=Z,0.5nm,0.8s
BRTR **Keskin Array B** **77.59 308** P **P** **15 04 25.1 +0.1**
comp=Z,0.2nm,0.3s,baz=85,slow=6.0,SNR=3.9
comp=Z,0.2nm,0.3s
SPITS **Spitsbergen Ar** **77.78 348** P **P** **15 04 25.5 +0.3**
comp=Z,6.5nm,0.8s,baz=71,slow=6.0,SNR=5.2
comp=Z,6.5nm,0.8s
J25K **Salcha River,** **78.15 26** P **P** **15 04 26.4 -1.1**
FIA1 **FINESS Array S** **78.47 331** P **P** **15 04 29.2 0.0**
FINES **FINESS Array B** **78.47 331** P **P** **15 04 29.2 -0.1**
comp=Z,3.3nm,0.5s,baz=62,slow=5.5,SNR=49
comp=Z,3.3nm,0.5s
FINES **FINESS Array B** **78.47 331** P **P** **15 04 29.3 0.0**
G29M **Pine Creek** **80.54 23** P **P** **15 04 40.7 +0.3**
G30M **tAoh Zraii Nji** **81.19 23** P **P** **15 04 43.5 -0.5**
G30M IAmb IAmb 15 05 26.3
comp=Z,7.8nm,1.4s
G31M **Satah River** **81.94 23** P **P** **15 04 47.1 -0.6**
MLR **Muntele Rosu** **81.98 315** P **P** **15 04 49.0 +0.3**
comp=Z,2.1nm,0.6s,baz=79,slow=5.2,SNR=4.0
comp=Z,2.1nm,0.6s
MLR **Muntele Rosu** **81.98 315** IAmb IAmb 15 04 50.3
comp=Z,3.5nm,0.8s
HFS **Hagfors** **84.66 331** P **P** **15 05 01.8 -0.2**
comp=Z,4.3nm,0.6s,baz=66,slow=5.6,SNR=18
comp=Z,4.3nm,0.6s
NC405 **NORSAR Array S** **85.19 332** P **P** **15 05 04.6 0.0**
NC303 **NORSAR Array S** **85.30 333** P **P** **15 05 05.1 0.0**
NB2 **NORSAR Subarra** **85.44 332** P **P** **15 05 05.3 -0.6**
comp=Z,4.7nm,0.7s,baz=65,slow=4.8
NOA **NORSAR Array B** **85.44 332** P **P** **15 05 05.0 -0.9**
comp=Z,3.8nm,0.7s,baz=66,slow=5.0,SNR=7.3
NOA LR LR 15 45 52.0
comp=Z,16nm,18.5s,baz=75,slow=37
comp=Z,3.8nm,0.7s
MORC **Moravsky Berou** **86.22 321** *e*P **P** **15 05 10.9 +0.9**
JAVC **Velka Javorina** **86.44 320** *e*P **P** **15 05 13.3 +2.2**
VRAC **Vranov** **86.96 320** P **P** **15 05 14.4 +0.9**
comp=Z,5.3nm,1.0s,baz=79,slow=5.2,SNR=6.6
comp=Z,5.3nm,1.0s
VRAC **Vranov** **86.96 320** *e*P **P** **15 05 14.7 +1.1**
KRUC **Moravsky** **87.16 320** *e*P **P** **15 05 15.5 +1.0**
ARSA **Arzberg** **88.35 319** *e*P **P** **15 05 20.4 +0.1**
comp=Z,1.2nm,0.9s
CLL **Collm** **88.37 323** *i* P **P** **15 05 20.3 +0.1**
comp=Z,2.0nm,0.9s
CLL AMS AMS 18 07 00.0
comp=Z,100nm,18.5s
GERES **GERESS Array B** **88.90 321** P **P** **15 05 23.1 +0.1**
comp=Z,1.8nm,0.8s,baz=63,slow=3.3,SNR=16
comp=Z,1.8nm,0.8s
MOA **Molln** **88.92 320** *e*PcP **P** **15 05 23.8 +0.8**
comp=Z,5.1nm,0.7s
SESA **Seetaler Alpe,** **89.00 319** *e*P **P** **15 05 24.0 +0.4**
comp=Z,2.4nm,0.7s
BIOA **Bad Ischl, Aus** **89.37 320** *e*P **P** **15 05 25.4 +0.3**
comp=Z,4.8nm,1.0s
KBA **Koebreinsper** **89.79 319** *e*P **P** **15 05 27.0 -0.3**
comp=Z,1.5nm,0.6s
LESA **Schwarzleotal** **90.08 320** *e*P **P** **15 05 28.5 0.0**
comp=Z,2.3nm,0.6s,SNR=4.4
WTTA **Wattenberg** **90.79 320** *e*P **P** **15 05 32.0 +0.1**
comp=Z,7.2nm,0.7s,SNR=8.5
WATA **Walderalm** **90.80 320** *e*P **P** **15 05 31.6 -0.2**
comp=Z,5.8nm,1.0s
SQTA **Sankt Quirin** **91.07 320** *e*P **P** **15 05 33.3 +0.1**
comp=Z,6.9nm,0.8s,SNR=4.0
MOTA **Moosalm** **91.09 320** *e*P **P** **15 05 33.2 -0.1**
comp=Z,6.8nm,1.0s
RETA **Reutte** **91.24 320** *e*P **P** **15 05 34.0 +0.1**
comp=Z,3.1nm,1.1s
YKA **Yellowknife Ar** **91.42 22** P **P** **15 05 34.5 +0.3**
comp=Z,1.3nm,0.8s,baz=308,slow=4.2,SNR=12
comp=Z,1.3nm,0.8s
YKA **Yellowknife Ar** **91.42 22** P **P** **15 05 34.0 -0.2**
FETA **Feichten** **91.45 320** *e*PcP **P** **15 05 35.4 +0.4**
comp=Z,5.6nm,0.9s,SNR=9.8
DAVA **Damuels** **91.87 320** *e*PcP **P** **15 05 37.4 +0.5**
comp=Z,8.3nm,1.4s
DAVOX **Davos/Dischmat** **92.08 320** P **P** **15 05 38.1 +0.2**
comp=Z,5.8nm,0.9s,baz=79,slow=5.2,SNR=11
comp=Z,5.8nm,0.9s
YBH **Yreka Blue Hor** **98.92 42** LR LR 15 42 17.2
comp=Z,10.0nm,21.2s,baz=324,slow=30

*IDC **26** 15:02:13.6±1.1,34°.35N×25°.95E, h0km, mb3.8/7, mbtmp3.6/13, ML3.3/6, MS2.8/3, Error ellipse: s-maj=20.2km s-min=12.4km az=25.0*
*ISK **26** 15:02:14.3,34°.34N×25°.91E, h9km, ML3.5/12*
*NEIC **26** 15:02:15.2±1.3,34°.40N±0°.08×25°.89E±0°.06, h10km±1km, mb4.4/8, Error ellipse: s-maj=14.3km s-min=8.4km az=189.0*
*ATH **26** 15:02:16.0±0.7,34°.41N×25°.88E, h20km, ML3.5/6, Latitude uncertainty: 4 km; Longitude uncertainty: 4 km*
*AFAD **26** 15:02:17.0,34°.37N×25°.77E, h32km, ML3.2*
*THE **26** 15:02:18.1,35°.N±3°×2°.6E±°, h3km×2km, M3.2/8, MLh3.2/8*
ISC 26 15:02:14.0±1.4, 34°.35N±0°.05×25°.87E±0°.03, h7km±9km, n74, σ1°40/96, mb3.9/9, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ZKR	**Zakros**	**0.81**	**21**	Pg	**Pg**		**15 02 30.1**	**+0.5**
ZKR				Sg	**Sn**		**15 02 42.1**	**-1.9**
ZKR	**Zakros**	**0.81**	**21**	P	**Pg**		**15 02 30.0**	**+0.4**
ZKR	**Zakros**	**0.81**	**21**	P	**Pb**		**15 02 31.0**	**+0.6**
ZKR				S	**Sn**		**15 02 42.2**	**-1.9**
AGNA	**Agios Nikolaos**	**0.84**	**352**	P	**Pn**		**15 02 31.7**	**-0.5**
AGNA				S	**Sn**		**15 02 43.2**	**-1.6**
STIA	**Sitia Lasithi**	**0.86**	**12**	P	**Pn**		**15 02 32.1**	**-0.4**
STIA				S	**Sn**		**15 02 43.9**	**-1.5**
SIT2	**Siteia**	**0.87**	**13**	P	**Pn**		**15 02 32.3**	**-0.3**
SIT2				S	**Sn**		**15 02 43.3**	**-2.2**
NPS	**Neapolis**	**0.93**	**347**	P	**Pb**		**15 02 32.1**	**-0.3**
NPS				S	**Sg**		**15 02 42.1**	**-1.8**
NPS	**Neapolis**	**0.93**	**347**	P	**Pb**		**15 02 32.0**	**-0.5**
NPS				S	**Sn**		**15 02 45.7**	**-1.3**
SIVA	**Sivas**	**1.10**	**307**	P	**Pg**		**15 02 35.4**	**+0.4**
SIVA				S	**Sg**		**15 02 48.1**	**-1.2**
SIVA	**Sivas**	**1.10**	**307**	P	**Pn**		**15 02 35.8**	**+0.1**
IACM	**Heraklion**	**1.16**	**326**	S	**Sg**		**15 02 50.1**	**-1.0**
IDI	**Anoyia**	**1.23**	**319**	Pg	**Pg**		**15 02 37.8**	**+0.2**
	6.1nm,0.3s,baz=146,slow=16,SNR=37							
IDI				Lg	Lg		15 02 56.5	
	28nm,0.3s,baz=43,slow=19,SNR=8.5							
IDI	**Anoyia**	**1.23**	**319**	Pn	**Pg**		**15 02 38.6**	**+1.0**
IDI				Sn	**Sn**		**15 02 56.3**	**+1.7**
IDI	**Anoyia**	**1.23**	**319**	P	**Pb**		**15 02 37.1**	**-0.5**
IDI				S	**Sb**		**15 02 51.8**	**-1.9**
IDI	**Anoyia**	**1.23**	**319**		**Pg**		**15 02 37.6**	**0.0**
IDI	**Anoyia**	**1.23**	**319**	P	**Pb**		**15 02 37.4**	**-0.2**
GVD	**Gavdhos**	**1.55**	**289**	Pn	**Pb**		**15 02 43.1**	**+0.2**
GVD	**Gavdhos**	**1.55**	**289**	P	**Pb**		**15 02 43.4**	**+0.5**
GVD				S	**Sg**		**15 03 03.3**	**-0.5**
GVD	**Gavdhos**	**1.55**	**289**	P	**Pb**		**15 02 42.8**	**-0.1**
KARP	**Karpathos**	**1.59**	**41**	Pn	**Pn**		**15 02 43.3**	**+0.7**
KARP	**Karpathos**	**1.59**	**41**	P	**Pg**		**15 02 45.5**	**+0.9**
KARP				S	**Sg**		**15 03 05.7**	**+0.5**
KARP	**Karpathos**	**1.59**	**41**		**Pn**		**15 02 42.9**	**+0.3**
KARP	**Karpathos**	**1.59**	**41**	P	**Pn**		**15 02 42.7**	**+0.1**
VAM	**Vamos**	**1.73**	**308**	P	**Pb**		**15 02 45.5**	**-0.5**
VAM				S	**Sg**		**15 03 07.9**	**-1.6**
IMMV	**Iera Moni Meta**	**1.91**	**306**	Pn	**Pb**		**15 02 48.5**	**-0.5**
IMMV	**Iera Moni Meta**	**1.91**	**306**	P	**Pb**		**15 02 48.8**	**-0.2**
IMMV				S	**Sb**		**15 03 11.9**	**-1.1**
THERA	**Ancient Thera,**	**2.03**	**351**	P	**Pb**		**15 02 50.5**	**-0.7**
THERA				S	**Sn**		**15 03 13.8**	**-0.5**
ARG	**Arkhangelos**	**2.62**	**44**	Pn	**Pn**		**15 02 57.8**	**+1.2**
ARG	**Arkhangelos**	**2.62**	**44**		**Pn**		**15 02 57.2**	**+0.6**
YAZI	**Mula-Dat§a-**	**2.66**	**29**	P	**Pn**		**15 02 58.2**	**+1.1**
KTHA	**Kythira Island**	**2.98**	**310**	Pn	**Pn**		**15 03 03.7**	**+2.1**
TURN	**Turunc**	**3.10**	**38**	Pn	**Pn**		**15 03 04.8**	**+1.6**
IZZE	**Mula-Seydike**	**3.44**	**52**	P	**Pn**		**15 03 09.5**	**+1.6**
IZZE				S	**Sn**		**15 03 48.8**	**-0.2**
IZZE				IAML			15 03 57.0	
	comp=E,54nm,0.5s							
SABU	**Mula-Dalaman**	**3.53**	**45**	P	**Pn**		**15 03 11.6**	**+2.4**
SABU				S	**Sn**		**15 03 51.8**	**+0.7**
SABU				IAML			15 04 23.0	
	comp=N,42nm,1.2s							
AKAS	**Kas**	**3.58**	**57**	Pn	**Pn**		**15 03 10.9**	**+0.8**
AKAS	**Kas**	**3.58**	**57**	Pn	**Pn**		**15 03 10.8**	**+0.8**
AKAS	**Kas**	**3.58**	**57**	P	**Pn**		**15 03 11.8**	**+1.7**
AKAS				S	**Sn**		**15 03 55.5**	**+2.8**
AKAS				IAML			15 04 00.0	
	comp=E,84nm,0.8s							
AKAS				IAML			15 04 08.0	
	comp=N,74nm,0.6s							
CAME	**Cameli-Denizli**	**3.81**	**46**	Pn	**Pn**		**15 03 14.6**	**+1.5**
ELL	**Elmali**	**4.07**	**53**	Pn	**Pn**		**15 03 18.5**	**+1.8**
ELL	**Elmali**	**4.07**	**53**		**Pn**		**15 03 17.1**	**+0.4**
GOLH	**Golhisar**	**4.16**	**45**	P	**Pn**		**15 03 19.8**	**+1.9**
GOLH				S	**Sn**		**15 04 10.0**	**+3.3**
GOLH				IAML			15 04 20.0	
	comp=E,32nm,1.3s							
GOLH				IAML			15 04 40.0	
	comp=N,38nm,1.4s							
APMY	**Acipayam-Deniz**	**4.17**	**41**	Pn	**Pn**		**15 03 19.9**	**+1.8**
KEPZ	**Antalya-Kepez**	**5.32**	**60**	P	**Pn**		**15 03 35.6**	**+1.8**
KEPZ				S	**Sn**		**15 04 33.0**	**-2.3**
KEPZ				IAML			15 04 37.0	
	comp=N,14nm,0.6s							
KEPZ				IAML			15 04 41.0	
	comp=E,26nm,0.7s							
SEDI	**Konya, Seydise**	**5.69**	**55**	P	**Pn**		**15 03 41.8**	**+2.9**
SEDI				S	**Sn**		**15 04 46.7**	**+2.2**
SEDI				IAML			15 04 52.0	
	comp=E,23nm,0.8s							
CSS	**Mathiatis**	**6.18**	**82**	Pn	**Pn**		**15 03 45.4**	**-0.2**
KKBE	**Karaman, Kazim**	**6.42**	**62**	P	**Pn**		**15 03 50.5**	**+1.5**
KKBE				S	**Sn**		**15 05 01.2**	**-1.3**
KKBE				IAML			15 05 06.0	
	comp=N,11nm,1.1s							
CY604	**RAF Akrotiri,**	**7.15**	**88**		**Pn**		**15 03 58.9**	**+0.3**
MMAI	**Mount Meron Ar**	**8.06**	**97**	Pn	**Pn**		**15 04 11.5**	**+0.1**
	1.2nm,0.3s,baz=283,slow=13,SNR=2.2							
MMAI				Sn	**Sn**		**15 05 39.3**	**-3.5**
	1.4nm,0.3s,baz=308,slow=22,SNR=2.5							
	1.6nm,0.4s							
BRTR	**Keskin Array B**	**8.20**	**47**	Pn	**Pn**		**15 04 14.4**	**+0.9**
	0.1nm,0.3s,baz=242,slow=9.2,SNR=2.0							
BRTR				Sn	**Sn**		**15 05 46.0**	**-0.5**
	0.1nm,0.3s,baz=218,slow=26,SNR=4.1							
BRTR				LR	LR		15 08 26.3	
	comp=Z,103nm,18.7s,baz=222,slow=46							
	0.2nm,0.3s							
BRTR	**Keskin Array B**	**8.20**	**47**		**Pn**		**15 04 12.9**	**-0.6**
CEL	**Celeste**	**8.95**	**299**	Pn	**Pn**		**15 04 24.0**	**+0.5**
EIL	**Elat**	**9.01**	**119**	Pn	**Pn**		**15 04 24.9**	**+0.4**
	0.7nm,0.3s,baz=247,slow=7.4,SNR=4.7							
EIL				Sn	**Sn**		**15 06 01.5**	**-4.7**
	0.3nm,0.3s,baz=294,slow=20,SNR=1.6							
	4.7nm,0.6s							
ASF	**Jabal al Asfar**	**9.49**	**100**	Pn	**Pn**		**15 04 32.0**	**+1.0**
	0.2nm,0.3s,baz=297,slow=16,SNR=1.6							
ASF				Sn	**Sn**		**15 06 14.2**	**-3.8**
	0.2nm,0.3s,baz=115,slow=24,SNR=19							
	1.0nm,0.4s							
KEST	**Kesra**	**13.61**	**280**	LR	LR		15 11 33.1	
	comp=Z,55nm,21.9s,baz=339,slow=41							
AKASG	**Malin Array Be**	**16.52**	**8**	Pn	**Pn**		**15 06 06.4**	**+0.5**
	0.4nm,0.3s,baz=198,slow=11,SNR=2.5							
	0.2nm,0.4s							
GERES	**GERESS Array B**	**17.07**	**332**	P	**P**		**15 06 14.6**	**-0.3**
	baz=142,slow=13,SNR=1.9							
	0.3nm,0.5s							
GERES	**GERESS Array B**	**17.07**	**332**	Pn	**Pn**		**15 06 13.3**	**+0.3**
ESDC	**Sonseca Array**	**24.34**	**291**	P	**P**		**15 07 33.3**	**+0.9**
	0.8nm,0.9s,baz=81,slow=8.9,SNR=6.2							
	0.8nm,0.9s							
FINES	**FINESS Array B**	**27.11**	**0**	P	**P**		**15 07 56.1**	**-1.0**
	1.7nm,0.9s,baz=180,slow=8.7,SNR=2.6							
	1.7nm,0.9s							
NOA	**NORSAR Array B**	**28.33**	**345**	LR	LR		15 20 23.9	
	comp=Z,11nm,19.0s,baz=225,slow=38							
NBO00	**NORSAR Array S**	**28.41**	**345**	P	**P**		**15 08 08.2**	**-0.6**
NBO00				IAmb	IAmb		15 08 40.0	
	comp=Z,18nm,1.5s							
DSB	**Dublin**	**29.60**	**320**	P	**P**		**15 08 20.3**	**+0.8**
TORD	**Torodi Ar. Bea**	**30.44**	**232**	P	**P**		**15 08 28.4**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=35,slow=9.4,SNR=7.3							
	comp=Z,1.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.44**	**232**	P	**P**		**15 08 27.4**	**+0.2**
TORD				IAmb	IAmb		15 08 33.9	
	comp=Z,5.8nm,0.6s							
ARCES	**ARCESS Array B**	**35.23**	**360**	P	**P**		**15 09 08.7**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=186,slow=8.3,SNR=4.0							
	comp=Z,0.3nm,0.4s							
ARCES	**ARCESS Array B**	**35.23**	**360**	IAmb	IAmb		15 09 11.2	
	comp=Z,6.5nm,1.4s							
KURBB	**Kurchatov Arra**	**41.18**	**50**	P	**P**		**15 09 59.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=280,slow=8.8,SNR=4.3							
	comp=Z,0.7nm,0.3s							
KURK	**Kurchatov**	**41.24**	**50**	P	**P**		**15 09 59.4**	**0.0**
KURK	**Kurchatov**	**41.24**	**50**	IAmb	IAmb		15 10 39.7	
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**43.73**	**56**	P	**P**		**15 10 20.4**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=274,slow=6.3,SNR=14							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**43.73**	**56**	P	**P**		**15 10 19.7**	**-0.1**
ZALV	**Zalesovo Beam**	**45.14**	**46**	P	**P**		**15 10 31.4**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=273,slow=9.9,SNR=4.0							
	comp=Z,0.8nm,0.6s							
GAMB	**Gambell**	**81.21**	**8**	P	**P**		**15 14 30.5**	**+0.5**
JYT	**Yasato**	**86.85**	**48**	P	**P**		**15 14 58.1**	**-1.2**

*IDC **26** 15:14:00.8±1.1,34°.03N×138°.38E, h0km, mb3.4/4, mbtmp3.3/5, ML2.1/1, Error ellipse: s-maj=28.9km s-min=16.1km az=57.0*
*JMA **26** 15:14:00.3±0.2,34°.7N±0°.6×140°.7E±0°.8, h54km±1km, MV3.1/38, SE OFF BOSO PENINSULA*
ISC 26 15:14:00.8±1.1, 34°.72N±0°.05×140°.61E±0°.06, h52km±8km, n26, σ1°00/28, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BSO3	**Boso 3**	**0.12**	**315**	*i* P	**Pn**		**15 14 08.6**	**0.0**
BSO3				X			15 14 15.4	
BSO1	**Boso 1**	**0.31**	**101**	*i* P	**Pn**		**15 14 09.6**	**0.0**
BSO1				X			15 14 16.6	
BSO4	**Boso 4**	**0.36**	**321**	P	**Pn**		**15 14 11.0**	**+0.5**
BSO4				X			15 14 18.9	
KTR	**Katsuura**	**0.50**	**330**	P	**Pn**		**15 14 12.3**	**+0.1**
KTR				*e*S	**Sn**		**15 14 20.3**	**0.0**
JKUC	**kamogawauchiur**	**0.56**	**323**	*i* P	**Pn**		**15 14 12.9**	**+0.1**
JKUC				S	**Sn**		**15 14 21.6**	**0.0**
TATJ	**Tateyama 2**	**0.67**	**298**	*i* P	**Pn**		**15 14 15.0**	**+0.8**
TATJ				S	**Sn**		**15 14

ASAR	**Alice Springs**	**58.41**	**187**	P		**P**		**15 23 52.3**	**+1.2**
	0.4nm,0.7s,baz=19,slow=10,SNR=10								
	0.4nm,0.7s								

*GII **26** 15:22:20.4±0.0,33˚.608N±0˚.001×34˚.802E±0˚.001, h0km, Mws2.1, confirmed*
*GRAL **26** 15:22:22.1±0.6,33˚.84N×34˚.94E,h27km±6km, MD2.8*
ISC 26 15:22:18.0±2.3,33˚.80N±0˚.05×34˚.8E±0˚.1,h19km±4km,n17,
σ0§87/27,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DQRL	**Deir Qamar**	**0.67**	**98**	*e*P		**Pg**	**15 22 32.5**	**+1.1**
BHL	**Bhannes**	**0.74**	**81**	*e*P		**Pg**	**15 22 32.8**	**+0.2**
QRWL	**Qaraoun**	**0.80**	**108**	*e*P		**Pg**	**15 22 34.5**	**+0.8**
KIRY	**Kiryat Shemona**	**0.89**	**131**	P		**Pg**	**15 22 35.2**	**-0.2**
KIRY				S		**Sg**	**15 22 46.4**	**-0.8**
SHBL	**Chebaa**	**0.93**	**119**	*e*P		**Pg**	**15 22 36.6**	**+0.4**
ZAHL	**Zahle**	**0.93**	**86**	*e*P		**Pg**	**15 22 36.6**	**+0.4**
RCY	**Rachaya**	**0.94**	**108**	*e*P		**Pg**	**15 22 36.8**	**+0.5**
RCY				*e*S		**Sg**	**15 22 47.6**	**-1.1**
GEM	**Giv'at Ha'Em**	**0.95**	**128**	P		**Pg**	**15 22 36.4**	**-0.1**
GEM				S		**Sg**	**15 22 48.3**	**-0.6**
NATI	**Neve Ativ**	**0.97**	**123**	P		**Pg**	**15 22 37.1**	**+0.2**
NATI				S		**Sg**	**15 22 49.6**	**+0.1**
HWQ	**Hawqa**	**1.09**	**63**	*e*P		**Pb**	**15 22 38.6**	**+0.3**
HWQ				*e*S		**Sg**	**15 22 50.9**	**-2.6**
KNHM	**Kefar Nahum**	**1.14**	**143**	P		Pn	15 22 38.9	0.0
KNHM				S		**Sb**	**15 22 52.9**	**-0.6**
OFRI	**`Ofer**	**1.19**	**171**	P		**Pn**	**15 22 39.4**	**-0.3**
OFRI				S		**Sb**	**15 22 53.5**	**-1.4**
KSHT	**Keshet**	**1.19**	**133**	P		**Pn**	**15 22 40.6**	**+0.8**
KSHT				S		**Sb**	**15 22 55.4**	**+0.2**
BEIL	**Beino**	**1.39**	**57**	*e*P		**Pn**	**15 22 43.0**	**+0.5**
MMLI	**Mount Malkishu**	**1.46**	**158**	P		**Pn**	**15 22 44.4**	**+0.9**
MMLI				S		**Sn**	**15 23 01.9**	**-0.2**
SLTI	**Sal'it**	**1.57**	**172**	P		**Pn**	**15 22 45.8**	**+0.9**
SLTI				S		**Sn**	**15 23 04.5**	**-0.3**
ROII	**Roi**	**1.66**	**158**	P		**Pn**	**15 22 47.0**	**+0.9**
ROII				S		**Sn**	**15 23 07.0**	**+0.1**

*IDC **26** 15:32:21.8±25.0,21˚.56N×143˚.01E,h380km±273km, mb2.9/7, mbtmp3.7/7, Error ellipse: s-maj=73.6km s-min=28.6km az=60.0*
ISC 26 15:32:15.1±1.2,21˚.6N±0˚.2×143˚.1E±0˚.4,h311km,n7,
σ0§52/7,mb3.2/7,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.18**	**192**	P		**P**	**15 39 38.4**	**+0.1**
	0.4nm,0.8s,baz=14,slow=9.0,SNR=2.2							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**45.89**	**192**	P		**P**	**15 40 07.5**	**0.0**
	0.3nm,0.9s,baz=9.2,slow=12,SNR=2.3							
	0.3nm,0.9s							
KURBB	**Kurchatov Arra**	**57.50**	**317**	P		**P**	**15 41 32.4**	**0.0**
	0.4nm,0.6s,baz=94,slow=7.4,SNR=7.9							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**62.66**	**320**	P		**P**	**15 42 07.5**	**+0.3**
	0.8nm,0.3s,baz=97,slow=6.1,SNR=7.2							
	0.8nm,0.3s							
YKA	**Yellowknife Ar**	**76.57**	**28**	P		**P**	**15 43 31.3**	**0.0**
	0.3nm,0.6s,baz=299,slow=5.1,SNR=2.9							
	0.3nm,0.6s							
ARCES	**ARCESS Array B**	**78.96**	**341**	P		**P**	**15 43 44.9**	**+0.5**
	1.4nm,0.9s,baz=60,slow=5.3,SNR=1.6							
	1.4nm,0.9s							
FINES	**FINESS Array B**	**83.20**	**334**	P		**P**	**15 44 05.8**	**-0.8**
	1.2nm,0.9s,baz=67,slow=6.7,SNR=5.7							
	1.2nm,0.9s							

*ATH **26** 15:59:20.7,34˚.32N×25˚.91E,h6km±2km, ML3.6/12, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*IDC **26** 15:59:20.1±0.8,34˚.37N×25˚.89E,h0km,mb4.0/15, mbtmp3.9/22,ML3.5/8,MS3.1/7, Error ellipse: s-maj=15.9km s-min=10.6km az=24.0*
*ISK **26** 15:59:21.7,34˚.37N×25˚.88E,h14km,ML3.5/8*
*NEIC **26** 15:59:21.7±1.5,34˚.31N±0˚.09×25˚.85E±0˚.03,h10km±5km, mb4.1/19, Error ellipse: s-maj=12.5km s-min=3.3km az=183.0*
*MCSM **26** 15:59:21.9±0.6,34˚N±5˚×2˚6E±˚,h12km±4km,mb4.0, mB4.6,MLv3.8,Mw(mB)3.8*
*AFAD **26** 15:59:24.0,34˚.27N×25˚.89E,h35km, ML3.2*
*THE **26** 15:59:27.5,35˚N±3˚×2˚6E±˚,h3km±3km,M3.3/7, MLh3.3/7*
ISC 26 15:59:20.7±1.5,34˚.31N±0˚.05×25˚.85E±0˚.03,h7km±9km,
n154,σ1§33/170,mb4.0/19,MS3.2/5,Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**0.86**	**21**	Pg		**Pg**	**15 59 36.9**	**-0.4**
ZKR				Sg		**Sg**	**15 59 49.3**	**+0.8**
ZKR	**Zakros**	**0.86**	**21**	P		**Pg**	**15 59 36.8**	**-0.6**
ZKR	**Zakros**	**0.86**	**21**	P		**Pg**	**15 59 36.9**	**-0.4**
ZKR				S		**Sg**	**15 59 48.2**	**-0.3**
AGNA	**Agios Nikolaos**	**0.89**	**353**	P		**Pg**	**15 59 37.8**	**0.0**
AGNA				S		**Sg**	**15 59 49.4**	**+0.1**
STIA	**Sitia Lasithi**	**0.92**	**13**	P		**Pg**	**15 59 38.0**	**-0.3**
STIA				S		**Sg**	**15 59 50.4**	**+0.1**
SIT2	**Siteia**	**0.92**	**13**	P		**Pg**	**15 59 38.0**	**-0.5**
SIT2				S		**Sg**	**15 59 50.2**	**-0.3**
NPS	**Neapolis**	**0.97**	**349**	P		**Pg**	**15 59 38.6**	**-0.8**
NPS				S		**Sg**	**15 59 47.2**	**-4.9**
NPS	**Neapolis**	**0.97**	**349**	P		**Pg**	**15 59 38.9**	**-0.5**
NPS				S		**Sg**	**15 59 52.1**	**+0.1**
SIVA	**Sivas**	**1.11**	**310**	P		**Pb**	**15 59 42.3**	**+0.1**
SIVA				S		**Sb**	**15 59 52.9**	**-4.1**
SIVA	**Sivas**	**1.11**	**310**	P		**Pb**	**15 59 42.9**	**+0.6**
IACM	**Heraklion**	**1.18**	**328**	S		**Sb**	**15 59 54.5**	**-4.6**
IACM	**Heraklion**	**1.18**	**328**	P		**Pg**	**15 59 44.8**	**+1.4**
IDI	**Anoyia**	**1.26**	**322**	Pg		**Pn**	**15 59 44.0**	**-0.8**
	6.3nm,0.3s,baz=135,slow=18,SNR=30							
IDI				Lg		Lg	16 00 00.1	
	38nm,0.3s,baz=211,slow=22,SNR=15							
IDI	**Anoyia**	**1.26**	**322**	Pn		**Pn**	**15 59 45.0**	**+0.2**
IDI				Sn		**Sb**	**16 00 01.6**	**+0.4**
IDI	**Anoyia**	**1.26**	**322**	P		**Pn**	**15 59 43.9**	**-0.9**
IDI				S		**Sb**	**15 59 57.6**	**-3.7**
IDI	**Anoyia**	**1.26**	**322**			**Pn**	**15 59 44.5**	**-0.3**
IDI	**Anoyia**	**1.26**	**322**	P		**Pn**	**15 59 44.4**	**-0.3**
GVD	**Gavdhos**	**1.54**	**291**	Pn		**Pb**	**15 59 50.1**	**+0.4**
GVD	**Gavdhos**	**1.54**	**291**	P		**Pn**	**15 59 49.7**	**+1.0**
GVD				S		**Sn**	**16 00 09.7**	**+0.6**
GVD	**Gavdhos**	**1.54**	**291**	P		**Pb**	**15 59 49.9**	**+0.2**
KARP	**Karpathos**	**1.64**	**41**	Pn		**Pn**	**15 59 50.3**	**+0.2**
KARP	**Karpathos**	**1.64**	**41**	P		**Pb**	**15 59 51.9**	**+0.5**
KARP				S		**Sb**	**16 00 12.9**	**+0.5**
KARP	**Karpathos**	**1.64**	**41**			**Pn**	**15 59 50.0**	**-0.1**
KARP	**Karpathos**	**1.64**	**41**	P		**Pn**	**15 59 50.4**	**+0.3**
KARP	**Karpathos**	**1.64**	**41**	P		**Pn**	**15 59 50.0**	**-0.1**
VAM	**Vamos**	**1.74**	**310**	P		**Pb**	**15 59 53.7**	**+0.6**
VAM				S		**Sn**	**16 00 12.4**	**-1.5**
VAM	**Vamos**	**1.74**	**310**	P		**Pb**	**15 59 53.5**	**+0.4**
IMMV	**Iera Moni Meta**	**1.92**	**307**	Pn		**Pn**	**15 59 54.8**	**+1.0**
IMMV	**Iera Moni Meta**	**1.92**	**307**	P		**Pb**	**15 59 56.0**	**-0.1**
IMMV				S		**Sn**	**16 00 18.0**	**-0.2**
IMMV	**Iera Moni Meta**	**1.92**	**307**	P		**Pb**	**15 59 56.0**	**-0.1**
THERA	**Ancient Thera,**	**2.08**	**352**	P		**Pn**	**15 59 57.2**	**+1.2**
THERA				S		**Sn**	**16 00 20.3**	**-1.9**
THERA	**Ancient Thera,**	**2.08**	**352**	P		**Pn**	**15 59 55.5**	**-0.5**
THR8	**Santorini-Mono**	**2.12**	**352**	P		**Pn**	**15 59 57.4**	**+0.8**
THR8	**Santorini-Mono**	**2.12**	**352**	P		**Pn**	**15 59 56.6**	**0.0**
SNT5	**Nea Kammeni, S**	**2.12**	**350**	P		**Pn**	**15 59 56.8**	**+0.2**
THR3	**Thira Island,**	**2.13**	**350**	P		**Pn**	**15 59 56.8**	**+0.1**
THR5	**Thira Island,**	**2.15**	**349**	P		**Pn**	**15 59 57.2**	**+0.2**
ANKY	**Antikythira Is**	**2.60**	**307**	P		**Pn**	**16 00 04.9**	**+1.7**
ARG	**Arkhangelos**	**2.67**	**44**	Pn		**Pn**	**16 00 04.5**	**+0.4**
ARG	**Arkhangelos**	**2.67**	**44**			**Pn**	**16 00 03.8**	**-0.4**
ARG	**Arkhangelos**	**2.67**	**44**	P		**Pn**	**16 00 03.9**	**-0.2**
YAZI	**Mula-Dat§a-**	**2.71**	**29**	P		**Pn**	**16 00 04.8**	**+0.1**
DAT	**Datca**	**2.80**	**30**	Pn		**Pn**	**16 00 06.2**	**+0.1**
KTHA	**Kythira Island**	**3.00**	**311**	Pn		**Pn**	**16 00 09.9**	**+1.2**
BODT	**Bodrum**	**3.00**	**23**	Pn		**Pn**	**16 00 09.2**	**+0.5**
TURN	**Turunc**	**3.15**	**38**	Pn		**Pn**	**16 00 11.9**	**+1.2**
YER	**Yerkesik**	**3.45**	**34**	Pn		**Pn**	**16 00 15.3**	**+0.3**
SABU	**Mula-Dalaman**	**3.58**	**45**	P		**Pn**	**16 00 17.3**	**+0.7**
SABU				S		**Sn**	**16 00 59.2**	**0.0**
AKAS	**Kas**	**3.63**	**57**	Pn		**Pn**	**16 00 17.9**	**+0.4**
AKAS	**Kas**	**3.63**	**57**			**Pn**	**16 00 17.6**	**+0.1**
AKAS	**Kas**	**3.63**	**57**	P		**Pn**	**16 00 16.3**	**-1.2**
AKAS				S		**Sn**	**16 00 59.2**	**-1.4**
AKAS				IAML			16 01 05.0	
	comp=N,63nm,0.4s							
AKAS				IAML			16 01 08.0	
	comp=E,49nm,0.9s							
CAME	**Cameli-Denizli**	**3.85**	**46**	Pn		**Pn**	**16 00 21.5**	**+0.9**
TAVA	**DENIZLI_Tavas**	**4.02**	**37**	P		**Pn**	**16 00 25.2**	**+2.4**
TAVA				S		**Sn**	**16 01 14.1**	**+3.9**
ESEN	**Aydn-Nazilli**	**4.03**	**29**	P		**Pn**	**16 00 23.3**	**+0.4**
ESEN				S		**Sn**	**16 01 09.5**	**-0.9**
CHOS	**Chios island**	**4.08**	**2**	Pn		**Pn**	**16 00 24.7**	**+1.1**
ELL	**Elmali**	**4.11**	**53**	Pn		**Pn**	**16 00 25.2**	**+1.1**
ELL	**Elmali**	**4.11**	**53**			**Pn**	**16 00 24.0**	**-0.2**
GOLH	**Golhisar**	**4.20**	**45**	P		**Pn**	**16 00 26.0**	**+0.7**
GOLH				S		**Sn**	**16 01 11.4**	**-3.4**
GOLH				IAML			16 01 54.0	
	comp=E,35nm,0.9s							
GOLH				IAML			16 02 07.0	
	comp=N,60nm,1.7s							
APMY	**Acipayam-Deniz**	**4.22**	**41**	Pn		**Pn**	**16 00 27.0**	**+1.4**
KEPZ	**Antalya-Kepez**	**5.36**	**59**	P		**Pn**	**16 00 41.3**	**+0.1**
KEPZ				S		**Sn**	**16 01 39.1**	**-4.1**
KEPZ				IAML			16 01 48.0	
	comp=E,12nm,0.5s							
KEPZ				IAML			16 01 57.0	
	comp=N,14nm,0.7s							
GAZI	**Gazipasa**	**5.63**	**68**	P		**Pn**	**16 00 41.8**	**-3.1**
GAZI				S		**Sn**	**16 01 42.7**	**-7.2**
SEDI	**Konya, Seydise**	**5.73**	**55**	P		**Pn**	**16 00 46.7**	**+0.3**
SEDI				S		**Sn**	**16 01 53.0**	**+0.5**
SEDI				IAML			16 02 01.0	
	comp=E,18nm,1.0s							
SEDI				IAML			16 02 24.0	
	comp=N,12nm,0.9s							
CSS	**Mathiatis**	**6.21**	**82**	Pn		**Pn**	**16 00 52.1**	**-0.7**
CSS	**Mathiatis**	**6.21**	**82**	P		**Pn**	**16 00 53.2**	**+0.4**
	0.1nm14nm,1.0s							
KKBE	**Karaman, Kazim**	**6.46**	**61**	P		**Pn**	**16 00 57.6**	**+1.2**
KKBE				S		**Sn**	**16 02 08.8**	**-1.6**
CY604	**RAF Akrotiri,**	**7.17**	**87**			**Pn**	**16 01 05.4**	**-0.4**
MMAI	**Mount Meron Ar**	**8.07**	**97**	Pn		**Pn**	**16 01 18.2**	**-0.3**
	1.5nm,0.3s,baz=279,slow=12,SNR=2.8							
MMAI				Sn		**Sn**	**16 02 48.0**	**-2.1**
	1.2nm,0.3s,baz=262,slow=20,SNR=2.2							
	1.1nm,0.3s							
BRTR	**Keskin Array B**	**8.25**	**47**	Pn		**Pn**	**16 01 22.5**	**+1.5**
	0.1nm,0.3s,baz=239,slow=11,SNR=2.6							
BRTR				LR		LR	16 05 32.3	
	comp=Z,69nm,20.2s,baz=222,slow=46							
TIP	**Timpagrande**	**8.76**	**306**	Pn		**Pn**	**16 01 27.5**	**-0.4**
TIP	**Timpagrande**	**8.76**	**306**	P		**Pn**	**16 01 29.0**	**+1.0**
	6.3nm,1.0s							
CEL	**Celeste**	**8.95**	**299**	Pn		**Pn**	**16 01 30.5**	**0.0**
CEL	**Celeste**	**8.95**	**299**	P		**Pn**	**16 01 30.0**	**-0.5**
	19nm,1.2s							
EIL	**Elat**	**9.01**	**118**	Pn		**Pn**	**16 01 30.8**	**-0.5**
	1.7nm,0.3s,baz=247,slow=6.4,SNR=10							
EIL				Sn		**Sn**	**16 03 09.6**	**-3.4**
	0.9nm,0.3s,baz=54,slow=20,SNR=2.2							
	5.0nm,0.5s							
ASF	**Jabal al Asfar**	**9.50**	**100**	Pn		**Pn**	**16 01 37.7**	**-0.3**
	0.3nm,0.3s,baz=270,slow=10,SNR=1.6							
ASF				Sn		**Sn**	**16 03 24.3**	**-0.8**
	0.3nm,0.3s,baz=144,slow=17,SNR=1.5							
	1.0nm,0.5s							
RAFF	**Raffo Rosso**	**9.77**	**291**			**Pn**	**16 01 42.4**	**+0.6**
SGRT	**San Giovanni R**	**10.89**	**316**	Pn		**Pn**	**16 01 57.3**	**+0.2**
MLR	**Muntele Rosu**	**11.17**	**0**	LR		LR	16 06 48.2	
	comp=Z,54nm,18.2s,baz=177,slow=40							
KMPD	**K-Podol'skiy**	**14.25**	**2**	P		**Pn**	**16 02 42.7**	**-0.2**
SABO	**M.te Sabotino**	**14.93**	**325**	P		**P**	**16 02 58.7**	**+0.8**
ARSA	**Arzberg**	**15.09**	**332**	Pn		**Pn**	**16 02 55.2**	**+0.9**
RONA	**Rosalia, Austr**	**15.18**	**335**	*e*pP		pP	16 03 03.1	+1.1
	2.2nm,0.9s							
SESA	**Seetaler Alpe,**	**15.37**	**330**	*e*pP		pP	16 03 04.9	+0.6
	2.5nm,0.5s							
KWP	**Kalwaria Pacla**	**15.49**	**352**	P		**Pn**	**16 02 59.9**	**+0.3**
	6.3nm,1.8s							
LUBAR	**Lubar, Ukraine**	**15.67**	**5**	P		**Pn**	**16 03 02.1**	**+0.2**
KBA	**Koelnbreinsper**	**15.87**	**327**	*e*P		**P**	**16 03 10.3**	**+1.8**
	1.0nm,0.6s							
KIV	**Kislovodsk**	**16.21**	**49**	P		**Pn**	**16 03 09.3**	**+0.3**
	12nm,0.9s							
KBZ	**Khabaz**	**16.23**	**50**	Pn		**Pn**	**16 03 09.9**	**+0.8**
	0.1nm,0.3s,baz=261,slow=5.7,SNR=11							
	3.2nm,0.8s							
AK07	**Malin Array Si**	**16.42**	**8**	P		**Pn**	**16 03 12.2**	**+0.7**
AK06	**Malin Array Si**	**16.45**	**8**	P		**Pn**	**16 03 12.6**	**+0.6**
AK13	**Malin Array Si**	**16.46**	**7**	P		**Pn**	**16 03 12.8**	**+0.7**
AK10	**Malin Array Si**	**16.47**	**8**	P		**Pn**	**16 03 13.0**	**+0.8**
VRAC	**Vranov**	**16.48**	**338**	Pn		**Pn**	**16 03 13.0**	**+0.6**
	0.2nm,0.3s,baz=149,slow=5.9,SNR=2.1							
	0.7nm,0.4s							
AK05	**Malin Array Si**	**16.49**	**8**	P		**Pn**	**16 03 13.2**	**+0.8**
AK14	**Malin Array Si**	**16.49**	**7**	P		**Pn**	**16 03 13.2**	**+0.8**
AK09	**Malin Array Si**	**16.49**	**8**	P		**Pn**	**16 03 13.2**	**+0.7**
AK12	**Malin Array Si**	**16.50**	**7**	P		**Pn**	**16 03 13.4**	**+0.8**
AK08	**Malin Array Si**	**16.51**	**8**	P		**Pn**	**16 03 13.2**	**+0.6**
AK02	**Malin Array Si**	**16.52**	**8**	P		**Pn**	**16 03 13.3**	**+0.4**
AK16	**Malin Array Si**	**16.53**	**7**	P		**Pn**	**16 03 13.4**	**+0.5**
AK17	**Malin Array Si**	**16.54**	**7**	P		**Pn**	**16 03 13.9**	**+0.9**
AK11	**Malin Array Si**	**16.54**	**7**	P		**Pn**	**16 03 14.0**	**+0.9**
AK01	**Malin Array Si**	**16.56**	**8**	P		**Pn**	**16 03 14.2**	**+0.9**
KIEV	**Kiev**	**16.56**	**8**	P		**P**	**16 03 16.7**	**+0.8**
KIEV	**Kiev**	**16.56**	**8**	P		**Pn**	**16 03 14.3**	**+1.0**
	19nm,0.7s							
AKASG	**Malin Array Be**	**16.57**	**8**	Pn		**Pn**	**16 03 12.1**	**-1.3**
	0.7nm,0.3s,baz=198,slow=11,SNR=5.7							
	0.6nm,0.6s							
AKBB	**Malin Array Si**	**16.57**	**8**	P		**P**	**16 03 16.8**	**+0.8**
AKBB				IAmb		IAmb	16 03 32.7	
	comp=Z,4.0nm,0.8s							
AK03	**Malin Array Si**	**16.59**	**8**	P		**Pn**	**16 03 14.7**	**+0.9**
AK22	**Malin Array Si**	**16.61**	**7**	P		**Pn**	**16 03 14.1**	**+0.1**
WTTA	**Wattenberg**	**16.80**	**325**	*e*P		**P**	**16 03 20.3**	**+1.5**
	comp=Z,3.5nm,0.7s							
WATA	**Walderalm**	**16.88**	**325**	*e*P		**P**	**16 03 21.2**	**+1.6**
	comp=Z,2.8nm,0.7s							
SQTA	**Sankt Quirin**	**16.97**	**324**	*e*P		**P**	**16 03 22.2**	**+1.5**
	comp=Z,0.8nm,0.4s							
FETA	**Feichten**	**17.07**	**323**	*e*P		**P**	**16 03 23.7**	**+1.8**
	comp=Z,2.7nm,0.8s							
GEC2	**GERESS Array S**	**17.10**	**332**			**Pn**	**16 03 20.9**	**+0.6**
GERES	**GERESS Array B**	**17.10**	**332**	P		**Pn**	**16 03 20.9**	**+0.6**
	baz=160,slow=13,SNR=8.7							
	comp=Z,0.6nm,0.5s							
GERES	**GERESS Array B**	**17.10**	**332**	Pn		**Pn**	**16 03 20.6**	**+0.3**
MOTA	**Moosalm**	**17.11**	**324**	*e*P		**P**	**16 03 24.0**	**+1.7**
	comp=Z,2.7nm,1.3s							
DPC	**Dobruska-Polom**	**17.49**	**339**	P		**Pn**	**16 03 25.9**	**+0.9**
	comp=Z,2.6nm,2.2s							
KSP	**Ksiaz**	**17.93**	**340**	P		**P**	**16 03 31.4**	**+0.3**
	comp=Z,2.2nm,1.1s							
BFO	**Black Forest**	**19.16**	**322**	P		**P**	**16 03 45.5**	**+0.9**
BFO				IAmb		IAmb	16 04 26.9	
	comp=Z,8.4nm,1.4s							
ESBB	**Sonseca Array**	**24.34**	**291**	P		**P**	**16 04 39.5**	**+0.2**
ESBB				IAmb		IAmb	16 04 59.6	
	comp=Z,8.3nm,1.5s							
ESDC	**Sonseca Array**	**24.34**	**291**	P		**P**	**16 04 39.3**	**0.0**
	comp=Z,1.2nm,0.9s,baz=78,slow=8.8,SNR=10							
	comp=Z,1.2nm,0.9s							
ESDC	**Sonseca Array**	**24.34**	**291**	IAmb		IAmb	16 04 46.8	
	comp=Z,3.0nm,1.1s							
HFS	**Hagfors**	**27.03**	**347**	P		**P**	**16 05 04.5**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=144,slow=11,SNR=1.9							
	comp=Z,1.6nm,0.7s							
FIA1	**FINESS Array S**	**27.16**	**0**	P		**P**	**16 05 03.1**	**-1.3**
FINES	**FINESS Array B**	**27.16**	**0**	P		**P**	**16 05 03.2**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=157,slow=10,SNR=9.9							
	comp=Z,1.4nm,0.6s							
FINES	**FINESS Array B**	**27.16**	**0**	P		**P**	**16 05 03.0**	**-1.4**
AKTO	**Aktyubinsk**	**28.43**	**46**	LR		LR	16 20 47.3	
	comp=Z,39nm,18.9s,baz=158,slow=45							
EKA	**Eskdalemuir Ar**	**29.06**	**325**	P		**P**	**16 05 21.8**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=126,slow=9.5,SNR=3.4							
	comp=Z,1.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**30.39**	**232**	P		**P**	**16 05 34.3**	**+0.7**
	comp=Z,4.7nm,0.7s,baz=35,slow=9.7,SNR=27							
	comp=Z,4.7nm,0.7s							
MBAR	**Mbarara**	**35.03**	**171**	LR		LR	16 19 55.1	
	comp=Z,37nm,18.5s,baz=99,slow=35							
ARCES	**ARCESS Array B**	**35.28**	**360**	P		**P**	**16 06 14.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=178,slow=8.1,SNR=6.1							
	comp=Z,0.6nm,0.5s							
ARCES	**ARCESS Array B**	**35.28**	**360**	IAmb		IAmb	16 06 17.4	
	comp=Z,9.8nm,1.4s							
KK31	**Karatay Array**	**35.59**	**62**	P		**P**	**16 06 19.1**	**+0.2**
KK31				IAmb		IAmb	16 06 26.1	
	comp=Z,1.9nm,0.8s							
KKAR	**Karatay Array**	**35.59**	**62**	P		**P**	**16 06 19.2**	**+0.3**
BVAR	**Borovoye Array**	**36.53**	**45**	P		**P**	**16 06 26.9**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=263,slow=6.8,SNR=6.6							
	comp=Z,1.3nm,0.9s							
DBIC	**Dimbokro**	**39.49**	**233**	P		**P**	**16 06 53.4**	**+1.3**
	comp=Z,2.8nm,0.6s,baz=53,slow=7.0,SNR=4.2							
DBIC				LR		LR	16 24 54.1	
	comp=Z,35nm,19.2s,baz=96,slow=39							
	comp=Z,2.8nm,0.6s							
DBIC	**Dimbokro**	**39.49**	**233**	P		**P**	**16 06 51.8**	**-0.3**
DBIC				IAmb		IAmb	16 07 15.0	
	comp=Z,17nm,1.4s							
KURBB	**Kurchatov Arra**	**41.23**	**50**	P		**P**	**16 07 06.4**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=277,slow=8.8,SNR=16							
	comp=Z,1.2nm,0.5s							
KURK	**Kurchatov**	**41.29**	**50**	P		**P**	**16 07 06.4**	**-0.2**
KURK	**Kurchatov**	**41.29**	**50**	IAmb		IAmb	16 07 12.9	
	comp=Z,2.4nm,0.8s							
BORG	**Borgarnes**	**41.57**	**332**	LR		LR	16 28 10.1	
	comp=Z,1.5nm,18.1s,baz=333,slow=42							
MKAR	**Makanchi Array**	**43.78**	**56**	P		**P**	**16 07 27.3**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=272,slow=7.2,SNR=25							
	comp=Z,1.5nm,0.5s							
MKAR	**Makanchi Array**	**43.78**	**56**	P		**P**	**16 07 27.1**	**+0.1**
ZALV	**Zalesovo Beam**	**45.19**	**46**	P		**P**	**16 07 37.7**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=277,slow=8.8,SNR=10							
	comp=Z,1.6nm,0.5s							
TSUM	**Tsumeb**	**53.79**	**190**	LR		LR	16 34 21.6	
	comp=Z,43nm,20.0s,baz=330,slow=39							
SONM	**Songino Array**	**59.59**	**50**	P		**P**	**16 09 25.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=247,slow=7.5,SNR=2.6							
	comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**59.59**	**50**	IAmb		IAmb	16 09 46.0	
	comp=Z,2.0nm,1.3s							
M57A	**Sunshine Farm,**	**76.75**	**311**	P		**P**	**16 11 12.3**	**-0.6**
USRK	**Ussuriysk Ar.**	**77.04**	**45**	P		**P**	**16 11 14.2**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=280,slow=6.7,SNR=4.7							
	comp=Z,2.1nm,0.8s							
G31M	**Satah River**	**77.95**	**352**	P		**P**	**16 11 19.6**	**+0.5**
G31M				IAmb		IAmb	16 11 25.6	
	comp=Z,6.5nm,1.4s							
KSRS	**Korea Array**	**78.35**	**53**	P		**P**	**16 11 22.3**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=329,slow=3.0,SNR=2.3							
	comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**78.43**	**342**	P		**P**	**16 11 22.1**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=34,slow=5.5,SNR=8.0							
	comp=Z,0.6nm,0.7s							
G27K	**Doyon Strip**	**78.75**	**355**	P		**P**	**16 11 23.5**	**-0.2**
G27K				IAmb		IAmb	16 11 28.1	
	comp=Z,2.5nm,1.2s							
R32K	**Eaglecrest**	**86.31**	**350**	P		**P**	**16 12 03.5**	**+0.3**

*IDC **26** 16:07:44.6±0.9,29˚.40S×72˚.18W,h0km,mb4.1/4, mbtmp3.9/8,ML3.7/4,MS2.7/3,Error ellipse: s-maj=37.5km s-min=23.4km az=102.0*
*SJA **26** 16:07:46.9±0.8,29˚.35S×71˚.94W,h41km±607km,ML

comp=Z,76nm,0.6s
AC01 Pan de Azucar 3.41 22 *i* P **Pn 16 08 38.5 -0.4**
AC01 IAML 16 09 45.0
comp=E,101nm,0.4s
AC01 Pan de Azucar 3.41 22 Pn **Pn 16 08 38.6 -0.3**
RTLS Leoncito 3.41 137 *e*P **Pn 16 08 41.5 +2.3**
RTLS *e*P 16 08 41.6
RTLS *e*S **Sn 16 09 20.5 +0.5**
RTLS IAML 16 09 37.3
comp=Z,572nm,0.5s
AC02 Maricunga 3.56 47 *e*P **Pn 16 08 42.7 +1.2**
AC02 *e*S **Sn 16 09 25.1 +1.2**
AC02 IAML 16 09 41.7
comp=Z,169nm,1.4s
AC02 Maricunga 3.56 47 *e*P **Pn 16 08 42.6 +1.2**
AC02 *e*S **Sn 16 09 23.5 -0.4**
AC02 IAML 16 09 42.4
comp=E,232nm,0.4s
AC02 Maricunga 3.56 47 Pn 16 08 42.4 +0.9
VA03 San Esteban 3.66 160 *e*P **Pn 16 08 43.4 +1.0**
VA03 *e*S **Sn 16 09 25.4 -0.2**
VA03 IAML 16 09 31.5
comp=Z,192nm,0.6s
VA03 San Esteban 3.66 160 *i* P **Pn 16 08 43.2 +0.8**
VA03 *i* S **Sn 16 09 22.6 -3.1**
VA03 IAML 16 09 31.2
comp=E,291nm,0.2s
VA03 San Esteban 3.66 160 Pn 16 08 42.9 +0.5
VA01 Torpederas 3.70 175 *e*P **Pn 16 08 41.1 -1.8**
VA01 Torpederas 3.70 175 Pn **Pn 16 08 42.8 -0.1**
ROCH El Roble 3.74 167⇑ *e*P **Pn 16 08 43.7 0.0**
ROCH ⇑*e*P 16 08 43.7
PEL Peldehue 3.98 164 *e*P **Pn 16 08 46.9 +0.1**
PEL Peldehue 3.98 164 Pn 16 08 47.0 +0.3
CFA Coronel Fontan 3.98 126 Pn **Pn 16 08 48.5 +1.6**
comp=E,3.0nm,0.3s,baz=319,slow=11,SNR=74
CFA Sn **Sn 16 09 32.6 -1.1**
comp=E,10nm,0.3s,baz=61,slow=22,SNR=9.1
comp=E,7.2nm,0.3s
CFA Coronel Fontan 3.98 126 *e*P **Pn 16 08 48.2 +1.4**
CFA *e*S **Sn 16 09 33.4 -0.3**
CFA IAML 16 09 52.4
comp=Z,136nm,0.6s
MT02 Curacav 4.00 169 *e*P **Pn 16 08 46.6 -0.4**
MT02 *e*S **Sn 16 09 32.6 -1.3**
MT02 IAML 16 09 49.4
comp=Z,67nm,0.6s
MT02 Curacav 4.00 169 *e*P **Pn 16 08 46.5 -0.4**
MT02 Curacav 4.00 169 Pn 16 08 46.5 -0.4
TINO Tinogasta 4.11 73 *e*P **Pn 16 08 45.1 -3.5**
TINO *e*P 16 08 50.6
TINO IAML 16 09 60.0
comp=Z,82nm,0.9s
MT10 Hacienda Santa 4.14 162 *e*P **Pn 16 08 49.6 +0.6**
MT05 Renca 4.20 165 *e*P **Pn 16 08 50.6 +0.7**
MT05 *e*S **Sn 16 09 41.6 +2.5**
MT05 IAML 16 10 13.1
comp=Z,88nm,1.3s
MT05 Renca 4.20 165 Pn 16 08 50.0 +0.2
MT16 CCHEN 4.29 163 Pn 16 08 51.2 +0.2
VA05 Santo Domingo 4.33 175 Pn 16 08 50.9 -0.7
MT04 Ro Olivares 4.38 159 *e*P **Pn 16 08 54.5 +2.1**
MT04 *e*P 16 08 54.6
MT04 IAML 16 10 08.1
comp=Z,53nm,1.2s
ACLC CERRO LA CRUZ 4.43 93 *e*P **Pn 16 08 48.6 -4.4**
ACLC IAML 16 10 06.4
comp=Z,79nm,0.8s
MT09 Talagante 4.53 169 Pn 16 08 54.3 -0.1
AAGR Agrelo 4.64 145 *e*P **Pn 16 08 59.6 +3.6**
MT13 San Alfonso 4.65 162 Pn 16 08 56.4 +0.3
BO04 La Punta 4.81 166 Pn 16 08 58.2 +0.1
PB14 IPOC Station P 4.90 18 Pn **Pn 16 08 58.7 -0.9**
BO02 Sierra Bellavi 5.55 169 Pn 16 09 08.5 +0.1
H03N1 Juan Fernandez 7.17 233 Pn **Pn 16 09 31.1 +0.8**
baz=112,slow=18
H03N1 Sn **Sn 16 10 45.7 -6.1**
H03N1 T T 16 17 13.1
baz=64,slow=72,SNR=541
H03N2 Juan Fernandez 7.19 233 Pn **Pn 16 09 31.5 +1.0**
baz=112,slow=18
H03N2 Sn **Sn 16 10 45.7 -6.4**
H03N2 T T 16 17 13.1
baz=64,slow=72,SNR=530
H03N3 Juan Fernandez 7.19 233 Pn **Pn 16 09 31.1 +0.5**
baz=112,slow=18
H03N3 Sn **Sn 16 10 45.3 -7.0**
H03N3 T T 16 17 19.8
baz=64,slow=72,SNR=532
H03S3 Juan Fernandez 7.39 231 Pn **Pn 16 09 33.0 -0.3**
baz=72,slow=78
H03S3 Sn **Sn 16 10 48.8 -8.3**
baz=168,slow=74
H03S1 Juan Fernandez 7.40 231 Pn **Pn 16 09 31.7 -1.7**
baz=72,slow=78
H03S1 Sn Sn 16 10 47.9 -9.4
baz=168,slow=74
H03S2 Juan Fernandez 7.41 231 Pn **Pn 16 09 32.5 -1.1**
baz=72,slow=78
H03S2 Sn **Sn 16 10 48.8 -8.7**
baz=168,slow=74
PLCA Paso Flores 11.45 174 LR LR 16 15 11.4
comp=Z,34nm,19.1s,baz=21,slow=39
CPUP Villa Florida 13.35 81 Pn **Pn 16 10 58.4 +3.3**
comp=Z,0.3nm,0.3s,baz=225,slow=10.0,SNR=2.2
CPUP LR LR 16 17 01.6
comp=Z,32nm,19.6s,baz=253,slow=41
comp=Z,0.8nm,0.3s
LPAZ La Paz 13.46 16 Pn **Pn 16 10 59.8 +2.5**
comp=Z,0.1nm,0.3s,baz=148,slow=6.0,SNR=4.6
LPAZ LR LR 16 16 42.6
comp=Z,38nm,18.0s,baz=132,slow=40
comp=Z,0.9nm,0.6s
SIV San Ignacio 16.67 40 Pn **P 16 11 42.0 +0.1**
baz=240,slow=8.9,SNR=8.6
comp=Z,1.5nm,0.6s
NMDO Nuevo Mundo 49.67 356 P **P 16 16 38.8 +1.0**
BELA Belgrano 2 51.47 171 P **P 16 16 51.3 +0.6**
SNAA Sanae 55.92 159 P **P 16 17 23.6 +0.1**
comp=Z,1.4nm,0.5s,baz=264,slow=5.8,SNR=5.3
comp=Z,1.4nm,0.5s
SNAA Sanae 55.92 159 P **P 16 17 23.5 +0.1**
SNAA IAmb IAmb 16 17 24.1
comp=Z,4.0nm,1.0s
QSPA South Pole Qui 60.90 180 P **P 16 17 59.2 +0.7**
comp=Z,1.5nm,0.9s,baz=165,slow=2.0,SNR=9.4
comp=Z,1.5nm,0.9s
QSPA South Pole Qui 60.90 180 P **P 16 17 59.3 +0.9**
QSPA IAmb IAmb 16 18 05.2
comp=Z,4.6nm,1.4s
GOGA Godfrey 63.33 349 P **P 16 18 15.0 +0.2**
GOGA IAmb IAmb 16 18 23.4
comp=Z,3.5nm,1.1s
TX31 Lajitas Ar. Si 65.69 330 P **P 16 18 30.8 +0.3**
TX31 IAmb IAmb 16 18 31.9
comp=Z,4.1nm,1.4s
WVT Waverly 66.78 346 P **P 16 18 38.8 +1.5**
WVT IAmb IAmb 16 18 51.1
comp=Z,3.5nm,1.1s
LCAR Lake Charles 67.49 343 P **P 16 18 43.4 +1.7**
MAW Mawson 77.65 164 P **P 16 19 42.0 +0.1**
comp=Z,0.6nm,0.4s,baz=223,slow=7.0,SNR=2.2
comp=Z,0.6nm,0.4s
MAW Mawson 77.65 164 P **P 16 19 42.0 +0.1**
TORD Torodi Ar. Bea 82.63 71 P **P 16 20 09.7 0.0**
comp=Z,1.0nm,0.6s,baz=282,slow=5.2,SNR=4.6
comp=Z,1.0nm,0.6s
CASY Casey 84.68 181 P **P 16 20 20.3 +1.0**
ASAR Alice Springs 121.71 208 PKP **PKPdf 16 26 39.9 -0.6**
comp=Z,0.4nm,0.9s,baz=102,slow=1.3,SNR=1.9
WRA Warramunga Arr 124.81 211 PKP **PKiKP 16 26 46.5 -0.3**
comp=Z,0.2nm,0.4s,baz=155,slow=1.5,SNR=5.6
KURK Kurchatov 149.32 38 PKiKP 16 27 35.0 -0.5
KURBB Kurchatov Arra 149.32 38 PKPbc **PKiKP 16 27 35.4 -0.2**
comp=Z,0.8nm,0.4s,baz=304,slow=3.2,SNR=14
ZAA0 Zalesovo Array 150.18 28 PKiKP 16 27 37.2 -0.1
ZALV Zalesovo Beam 150.18 28 PKPbc **PKiKP 16 27 37.5 +0.2**
comp=Z,2.1nm,0.4s,baz=294,slow=2.7,SNR=15
ZALV Zalesovo Beam 150.18 28 PKiKP 16 27 37.0 -0.3
MKAR Makanchi Array 153.48 42 PKPbc **PKiKP 16 27 45.0 +0.7**
comp=Z,0.2nm,0.6s,baz=301,slow=3.0,SNR=3.8
MKAR Makanchi Array 153.48 42 PKiKP 16 27 44.5 +0.2

*NIED **26** 16:32:19.7, 40˚.35N×142˚.07E, h50km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.74; $M_{\theta\theta}$0.62; $M_{\phi\phi}$-2.36; $M_{r\theta}$2.03; $M_{r\phi}$-0.91; $M_{\theta\phi}$2.79; Fault plane solution: M_{o}4.13000×10^{14} NP1: ϕ_s169.00000°, δ21.00000°, λ46.00000°. NP2:ϕ_s35.00000°, δ75.00000°, λ105.00000°.*
*JMA **26** 16:32:19.7±0.1, 40˚.4N±0˚.3×142˚.1E±0˚.7, h50km, MD3.6/40, MV3.8/40, NE OFF IWATE PREF*
JMA Felt II J1 at NE OFF IWATE PREF .
*IDC **26** 16:32:20.8±1.9, 40˚.38N×142˚.26E, h76km±15km, mb3.5/9, mbtmp3.8/14, MS2.9/2, Error ellipse: s-maj=28.3km s-min=12.4km az=97.0*
*NEIC **26** 16:32:21.0±0.8, 40˚.40N±0˚.03×141˚.91E±0˚.09, h60km±8km, mb4.1/12, Error ellipse: s-maj=10.8km s-min=3.4km az=104.0*

ISC 26 16:32:19.4±1.0, 40˚.36N±0˚.04×142˚.10E±0˚.07, h54km±7km, n54,σ1$19/56, mb4.0/14, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.33**	**243**	*i* P		**Pn**	**16 32 29.0**	**-0.1**
JKEN					A	A	16 32 29.0	
	comp=N,22nm,0.3s,comp=E,20nm,1.0s							
JKEN					S	**Sn**	**16 32 35.5**	**-0.6**
JANG	**Nango**	**0.44**	**272**	⇓*i* P		**Pn**	**16 32 30.1**	**-0.2**
JANG					A	A	16 32 30.1	
	comp=N,6.0nm,0.3s,comp=E,6.0nm,0.3s							
JANG					⇓S	**Sn**	**16 32 37.3**	**-0.8**
JTH	**Tanohata**	**0.45**	**203**	*i* P		**Pn**	**16 32 30.4**	**-0.1**
JTH					S	**Sn**	**16 32 37.8**	**-0.6**
JKZ	**Kuzumaki**	**0.69**	**238**	⇓*i* P		**Pn**	**16 32 33.5**	**+0.1**
JKZ					⇓S	**Sn**	**16 32 43.1**	**-0.3**
JARK	**Aomorirokkasho**	**0.85**	**320**	⇓*i* P		**Pn**	**16 32 34.9**	**-0.5**
JARK					⇓S	**Sn**	**16 32 45.8**	**-1.2**
JTM	**Tenmabayashi**	**0.89**	**299**			**Pn**	**16 32 35.3**	**-0.6**
JTM	**Tenmabayashi**	**0.89**	**299**	⇓*i* P		**Pn**	**16 32 35.4**	**-0.4**
JTM					⇓S	**Sn**	**16 32 46.6**	**-1.2**
JOM	**Ohasama**	**1.08**	**215**	*i* P		**Pn**	**16 32 38.6**	**+0.3**
JOM					S	**Sn**	**16 32 52.4**	**+0.1**
JAH	**Hinai**	**1.13**	**262**	⇓*i* P		**Pn**	**16 32 39.1**	**+0.1**
JAH					⇓S	**Sn**	**16 32 53.4**	**-0.1**
JOT	**Ohata**	**1.30**	**323**	⇓*i* P		**Pn**	**16 32 40.7**	**-0.5**
JRG	**Rokugo**	**1.48**	**230**	*i* P		**Pn**	**16 32 44.3**	**+0.6**
ERM	**Erimo**	**1.84**	**25**			**Pn**	**16 32 49.6**	**+1.0**
ASAJ	**Asahikawa**	**3.77**	**5**	P		**Pn**	**16 33 16.6**	**+1.5**
	comp=E,15nm,0.3s,baz=220,slow=9.6,SNR=44							
ASAJ					S	**Sn**	**16 33 59.6**	**+1.4**
	comp=E,11nm,0.4s,baz=55,slow=31,SNR=5.9							
JKA	**Kamikawa-asahi**	**3.77**	**6**			**Pn**	**16 33 16.0**	**+0.9**
JKA	**Kamikawa-asahi**	**3.77**	**6**			**Sn**	**16 33 59.6**	**+1.4**
MJB9	**Matsu-Tunnel**	**4.88**	**220**			**Pn**	**16 33 31.2**	**+0.9**
MAJO	**Matsushiro**	**4.88**	**220**			**Pn**	**16 33 30.9**	**+0.6**
MJAR	**Matsushiro Arr**	**4.88**	**220**	P		**Pn**	**16 33 33.4**	**+3.1**
	comp=E,2.5nm,0.5s,baz=30,slow=13,SNR=17							
MJAR	**Matsushiro Ar**	**4.88**	**220**			**Pn**	**16 33 31.0**	**+0.7**
JHJ	**Hachijo jima 2**	**7.46**	**195**	P		**Pn**	**16 34 06.2**	**+0.6**
	comp=E,34nm,0.8s,baz=63,slow=11,SNR=0.9							
JHJ					S	**Sn**	**16 35 24.9**	**-3.9**
	comp=E,61nm,0.8s,baz=64,slow=14,SNR=1.6							
USA0B	**Ussuriysk Arra**	**8.42**	**300**	Pn		**Pn**	**16 34 18.6**	**-0.1**
USRK	**Ussuriysk Ar.**	**8.42**	**300**	P		**Pn**	**16 34 21.4**	**+2.7**
	comp=E,4.7nm,0.7s,baz=99,slow=15,SNR=12							
KSRS	**Korea Array**	**11.42**	**260**	P		**Pn**	**16 35 03.9**	**+4.2**
	comp=E,0.7nm,0.8s,baz=64,slow=14,SNR=5.1							
KSRS				LR		LR	16 39 09.9	
	comp=E,23nm,18.4s,baz=145,slow=35							
YHNB	**Yeheng**	**23.37**	**234**	P		**P**	**16 37 23.7**	**+0.4**
SONM	**Songino Array**	**26.52**	**298**	P		**P**	**16 37 52.1**	**+0.1**
	comp=E,0.3nm,0.4s,baz=104,slow=9.2,SNR=2.3							
	comp=E,0.3nm,0.4s							
SONM	**Songino Array**	**26.52**	**298**	P		**P**	**16 37 51.5**	**-0.5**
TLY	**Talaya**	**28.68**	**306**	LR		LR	16 51 28.5	
	comp=E,41nm,18.5s,baz=177,slow=40							
H11N2	**WAKE ISLAND Hy**	**29.55**	**127**	T		T	17 09 11.3	
	baz=318,slow=75,SNR=81							
H11N1	**WAKE ISLAND Hy**	**29.56**	**127**	T		T	17 09 10.8	
	baz=318,slow=75,SNR=76							
H11N3	**WAKE ISLAND Hy**	**29.57**	**127**	T		T	17 09 11.6	
	baz=318,slow=75,SNR=57							
H11S1	**WAKE ISLAND Hy**	**30.37**	**129**	T		T	17 10 49.7	
	baz=322,slow=76,SNR=44							
H11S3	**WAKE ISLAND Hy**	**30.37**	**129**	T		T	17 10 48.4	
	baz=322,slow=76,SNR=23							
H11S2	**WAKE ISLAND Hy**	**30.38**	**129**	T		T	17 10 50.8	
	baz=322,slow=76,SNR=30							
ZAA0	**Zalesovo Array**	**40.14**	**310**	P		**P**	**16 39 49.4**	**-0.4**
ZAA0				IAmb		IAmb	16 39 50.0	
	comp=Z,1.8nm,0.6s							
ZALV	**Zalesovo Beam**	**40.14**	**310**	P		**P**	**16 39 49.5**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=95,slow=9.0,SNR=10							
	comp=Z,1.5nm,0.4s							
ZALV	**Zalesovo Beam**	**40.14**	**310**	P		**P**	**16 39 49.4**	**-0.4**
MKAR	**Makanchi Array**	**42.88**	**299**	P		**P**	**16 40 12.2**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=83,slow=11,SNR=7.5							
	comp=Z,0.8nm,0.7s							
MKAR	**Makanchi Array**	**42.88**	**299**	P		**P**	**16 40 11.8**	**-0.6**
MAKZ	**Makanchi**	**43.09**	**299**	P		**P**	**16 40 13.4**	**-0.7**
KURK	**Kurchatov**	**44.37**	**306**	P		**P**	**16 40 23.0**	**-1.2**
KURK				IAmb		IAmb	16 40 26.7	
	comp=Z,2.5nm,0.6s							
KURBB	**Kurchatov Arra**	**44.44**	**305**	P		**P**	**16 40 24.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=80,slow=8.6,SNR=22							
	comp=Z,1.6nm,0.5s							
C27K	**Jago River**	**47.38**	**27**	P		**P**	**16 40 49.0**	**+1.2**
BVAR	**Borovoye Array**	**48.78**	**310**	P		**P**	**16 40 58.5**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=70,slow=7.9,SNR=8.4							
	comp=Z,0.9nm,0.4s							
KKAR	**Karatay Array**	**51.98**	**298**	P		**P**	**16 41 22.6**	**-0.5**
AB31	**Akbulak array**	**56.24**	**309**	P		**P**	**16 41 53.7**	**-0.3**
AB31				IAmb		IAmb	16 42 10.9	
	comp=Z,1.9nm,1.3s							
ABKAR	**Akbulak array**	**56.24**	**309**	P		**P**	**16 41 53.4**	**-0.6**
WRA	**Warramunga Arr**	**60.42**	**188**	P		**P**	**16 42 22.5**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=5.9,slow=6.8,SNR=2.0							
	comp=Z,0.6nm,1.0s							
ASAR	**Alice Springs**	**64.15**	**188**	P		**P**	**16 42 47.8**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=4.4,slow=7.2,SNR=4.2							
	comp=Z,0.3nm,0.8s							
FINES	**FINESS Array B**	**66.13**	**332**	P		**P**	**16 43 00.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=38,slow=7.2,SNR=4.7							
	comp=Z,1.3nm,0.7s							
AKASG	**Malin Array Be**	**72.00**	**322**	P		**P**	**16 43 36.7**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=43,slow=7.1,SNR=2.7							
	comp=Z,0.4nm,0.4s							
AKASG	**Malin Array Be**	**72.00**	**322**	IAmb		IAmb	16 44 17.4	
	comp=Z,2.4nm,1.1s							
AKBB	**Malin Array Si**	**72.00**	**322**	P		**P**	**16 43 36.6**	**-0.7**
AKBB				IAmb		IAmb	16 43 52.1	
	comp=Z,2.5nm,1.1s							
KIEV	**Kiev**	**72.02**	**322**	P		**P**	**16 43 36.6**	**-0.8**
KIEV				IAmb		IAmb	16 43 52.1	
	comp=Z,2.2nm,1.1s							
BBOO	**Buckleboo**	**73.02**	**185**	P		**P**	**16 43 43.9**	**+0.6**

*IDC **26** 16:49:18.7±1.5, 14˚.94S×166˚.48E, h0km, mb3.7/4, mbtmp3.8/7, ML3.5/2, Error ellipse: s-maj=32.5km s-min=30.2km az=82.0*
*NEIC **26** 16:49:19.9±1.7, 14˚.95S±0˚.06×166˚.67E±0˚.09, h10km±1km, mb4.1/9, Error ellipse: s-maj=15.4km s-min=9.3km az=283.0*
*NOU **26** 16:49:22.3, 15˚.10S×166˚.39E, h0km, MLv4.9/21, Vanuatu Islands*

ISC 26 16:49:24.4±0.8, 15˚.00S±0˚.07×166˚.42E±0˚.09, h36km, n35, σ1$25/37, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.20**	**148**	P		**Pn**	**16 50 13.0**	**+0.9**
DVP	**Devils Point**	**3.20**	**148**	S		**Sn**	**16 50 51.5**	**+2.5**
RTV	**Rentapao**	**3.38**	**145**	P		**Pn**	**16 50 15.8**	**+1.2**
KOUNC	**Koumac, New Ca**	**5.88**	**200**	P		**Pn**	**16 50 49.9**	**+0.8**
KOUNC	**Koumac, New Ca**	**5.88**	**200**			**Pn**	**16 50 49.8**	**+0.8**
MARNC	**Mare, Loyalty**	**6.63**	**167**	P		**Pn**	**16 50 59.7**	**+0.5**
MARNC	**Mare, Loyalty**	**6.63**	**167**	Pn		**Pn**	**16 50 58.9**	**-0.3**
DZM	**Mont Dzumac**	**7.03**	**180**	Pn		**Pn**	**16 51 05.1**	**+0.2**
	17nm,0.4s,baz=18,slow=20							
DZM					Sn	**Sn**	**16 52 22.1**	**-1.7**
	1.9nm,0.3s,baz=323,slow=20,SNR=1.6							
YATNC	**Mamie plateau,**	**7.04**	**176**	P		**Pn**	**16 51 04.8**	**-0.1**
NOUC	**Port Laguerre**	**7.06**	**181**	P		**Pn**	**16 51 06.1**	**+0.8**
NGOA	**Tingoa Renbel**	**7.07**	**298**	P		**Pn**	**16 51 05.7**	**+0.4**
OUENC	**Ouen Island, N**	**7.39**	**177**	P		**Pn**	**16 51 10.8**	**+1.1**
OUENC	**Ouen Island, N**	**7.39**	**177**	Pn		**Pn**	**16 51 09.2**	**-0.5**
HNR	**Honiara**	**8.40**	**310**	Pn		**Pn**	**16 51 24.1**	**+0.4**
	0.3nm,0.3s,baz=288,slow=2.8,SNR=7.0							
HNR					Sn	**Sn**	**16 52 56.7**	**-0.6**
	0.2nm,0.3s,baz=81,slow=11,SNR=1.2							
	1.8nm,0.5s							
HNR	**Honiara**	**8.40**	**310**	P		**Pn**	**16 51 26.5**	**+2.9**
HNR	**Honiara**	**8.40**	**310**			**Sn**	**16 52 57.8**	**+0.5**
TATA	**Tatamba Isabel**	**9.22**	**315**	P		**Pn**	**16 51 38.7**	**+3.8**
EIDS	**Eidsvold**	**17.69**	**232**	P		**P**	**16 53 29.7**	**+1.0**
CTA	**Charters Tower**	**19.87**	**252**	P		**P**	**16 53 53.3**	**+0.6**
	0.1nm,0.3s,baz=76,slow=12,SNR=2.5							
	3.8nm,0.9s							
CTAO	**Charters Tower**	**19.87**	**252**	P		**P**	**16 53 53.4**	**+0.7**
CTAO				IAmb		IAmb	16 54 01.9	
	comp=Z,8.3nm,1.1s							
TOZ	**Tahuroa Road**	**24.03**	**162**	P		**P**	**16 54 35.0**	**-0.9**
TOZ				IAmb		IAmb	16 54 40.6	
	comp=Z,15nm,1.3s							
INKA	**Innaminka**	**26.99**	**238**	P		**P**	**16 55 03.9**	**+0.9**
INKA				IAmb		IAmb	16 55 05.0	
	comp=Z,4.5nm,1.3s							
WB0	**Warramunga Arr**	**30.90**	**257**	P		**P**	**16 55 37.7**	**-0.1**
WRA	**Warramunga Arr**	**30.96**	**256**	P		**P**	**16 55 38.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=83,slow=9.2,SNR=6.5							
	comp=Z,0.2nm,0.4s							
WRA	**Warramunga Arr**	**30.96**	**256**	P		**P**	**16 55 37.6**	**-0.7**
AS31	**Alice Springs**	**31.80**	**249**	P		**P**	**16 55 45.6**	**-0.2**
AS31				IAmb		IAmb	16 55 50.4	
	comp=Z,2.5nm,1.5s							
ASAR	**Alice Springs**	**31.80**	**249**	P		**P**	**16 55 45.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=75,slow=9.2,SNR=18							
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**31.80**	**249**	P		**P**	**16 55 45.7**	**-0.1**
KNRA	**Kununurra**	**36.29**	**264**	P		**P**	**16 56 24.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**39.15**	**260**	P		**P**	**16 56 49.3**	**+0.4**
KSAR	**Wonju Array Be**	**63.51**	**326**	P		**P**	**16 59 48.2**	**-2.8**
PETK	**Petropavlovsk-**	**68.24**	**354**	P		**P**	**17 00 20.3**	**-0.9**
QSPA	**South Pole Qui**	**75.03**	**180**	P		**P**	**17 01 02.3**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=326,slow=6.6,SNR=3.6							
	comp=Z,1.7nm,1.0s							
QSPA	**South Pole Qui**	**75.03**	**180**	P		**P**	**17 01 00.9**	**-1.2**
QSPA				IAmb		IAmb	17 01 05.9	
	comp=Z,2.5nm,1.1s							
ILAR	**Eielson Array**	**87.04**	**18**	P		**P**	**17 02 05.3**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=227,slow=4.7,SNR=5.3							
	comp=Z,0.5nm,0.8s							

*SJA **26** 17:02:44.2±0.7, 32˚.16S×72˚.12W, h5km, ML4.7, MW4.2*
*IDC **26** 17:02:45.4±0.7, 32˚.10S×71˚.84W, h0km, mb4.6/8, mbtmp4.5/12, ML4.3/4, MS3.9/17, Error ellipse: s-maj=28.5km s-min=16.0km az=105.0*
*VAO **26** 17:02:45.1±0.5, 32˚.27S×71˚.91W, h10km, mb4.6, Presumed earthquake*
*GFZ **26** 17:02:46.9±0.3, 32˚S±2˚×7˚2W±˚, h10km, M4.9/16, mb5.0/16*
*NEIC **26** 17:02:49.1, 32˚.14S×71˚.90W, h22km*
*GUC **26** 17:02:49.2±0.7, 32˚.15S×71˚.89W, h27km±2km, ML4.6*
*NEIC **26** 17:02:49.4±1.6, 32˚.14S±0˚.04×71˚.9W±0˚.1, h25km±4km, mb4.8/15, Mwr4.4/78, Mwr4.5(GUC), Error ellipse: s-maj=13.3km s-min=5.0km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.73; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-3.14; $M_{r\theta}$0.82; $M_{r\phi}$-0.76; $M_{\theta\phi}$-4.01; Fault plane solution: M_{o}5.11000×10^{15} NP1:ϕ_s32.49000°, δ21.97000°, λ127.64000°. NP2:ϕ_s172.73000°, δ72.77000°, λ76.16000°. Principal axes: T 5.0227, Plg60.0000°, Azm63.0000°; N 0.1738, Plg13.0000°, Azm177.0000°; P -5.1966, Plg27.0000°, Azm274.0000°:*

ISC 26 17:02:46.2±1.2, 32˚.15S±0˚.02×71˚.97W±0˚.03, h10km±7km, n204,σ1$39/234, mb4.7/13, MS4.0/14, 1C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.85**	**83**	⇓*i* P		**Pn**	**17 03 04.0**	**-0.5**
CO04				IAML			17 03 19.5	
	comp=N,30μm,0.2s							
CO04	**Los Peladeros**	**0.85**	**83**			**Pn**	**17 03 03.8**	**-0.7**
CO04	**Los Peladeros**	**0.85**	**83**	P		**Pn**	**17 03 04.0**	**-0.5**
VA01	**Torpederas**	**0.91**	**163**	*e*P		**Pn**	**17 03 05.3**	**+0.3**
VA01				IAML			17 03 23.5	
	comp=Z,4μm,1.1s							
VA01	**Torpederas**	**0.91**	**163**	*e*P		**Pn**	**17 03 05.3**	**+0.3**
VA01				*e*S		**Sb**	**17 03 17.2**	**+1.0**
VA01	**Torpederas**	**0.91**	**163**			**Pn**	**17 03 05.3**	**+0.3**
VA01				Sn		**Sn**	**17 03 18.2**	**0.0**
VA01	**Torpederas**	**0.91**	**163**	P		**Pn**	**17 03 05.4**	**+0.3**
ROCH	**El Roble**	**1.15**	**136**	*e*P		**Pn**	**17 03 09.1**	**+0.5**
ROCH				*e*P		**Pn**	**17 03 09.1**	**+0.5**
ROCH				*e*S		**Sn**	**17 03 24.1**	**-0.4**
ROCH				IAML			17 03 27.3	
	comp=N,45μm,0.4s							
ROCH				IAML			17 03 27.3	
	comp=N,22μm,0.3s							
CO02	**Combarbal**	**1.25**	**41**	*e*P		**Pg**	**17 03 10.5**	**+0.2**
CO02				*e*S		**Sn**	**17 03 28.1**	**+1.2**
CO02				IAML			17 03 32.2	
	comp=Z,20μm,0.6s							
CO02	**Combarbal**	**1.25**	**41**	⇓*e*P		**Pg**	**17 03 10.6**	**+0.2**
CO02				*e*S		**Sn**	**17 03 27.0**	**+0.1**
CO02	**Combarbal**	**1.25**	**41**			**Pg**	**17 03 10.5**	**+0.2**
CO02	**Combarbal**	**1.25**	**41**	P		**Pg**	**17 03 10.7**	**+0.3**
MT02	**Curacav**	**1.31**	**148**	*e*P		**Pb**	**17 03 11.4**	**+0.5**
MT02				*e*S		**Sg**	**17 03 29.1**	**+0.8**
MT02				IAML			17 03 31.6	
	comp=Z,7μm,0.7s							
MT02	**Curacav**	**1.31**	**148**	*e*P		**Pb**	**17 03 11.4**	**+0.5**
MT02				*e*S		**Sg**	**17 03 28.7**	**+0.4**
MT02	**Curacav**	**1.31**	**148**			**Pb**	**17 03 11.5**	**+0.5**
VA03	**San Esteban**	**1.34**	**117**	⇓*e*P		**Pg**	**17 03 11.9**	**-0.1**
VA03				*e*S		**Sg**	**17 03 28.9**	**-0.5**
VA03				IAML			17 03 30.0	
	comp=N,41μm,0.3s							
VA03	**San Este

MT01	**Popeta**	**1.81**	**161**	*eP*		**Pn**	17 03 18.7	**+1.3**
MT01				IAML			17 03 52.5	
	comp=E,9µm,0.5s							
MT01	**Popeta**	**1.81**	**161**			**Pn**	**17 03 18.8**	**+1.3**
MT09	**Talagante**	**1.82**	**153**	*eP*		**Pb**	**17 03 19.7**	**+0.1**
MT09				*eS*		**Sb**	**17 03 43.1**	**+0.5**
MT09				IAML			17 03 49.5	
	comp=N,13µm,0.3s							
MT09	**Talagante**	**1.82**	**153**			**Pb**	**17 03 19.3**	**-0.3**
MT15	**Las Vizcachas**	**1.90**	**140**	ǁ *eP*		**Pb**	**17 03 20.6**	**-0.4**
MT12	**Pirque**	**1.98**	**143**	*eP*		**Pb**	**17 03 21.8**	**-0.6**
MT04	**Ro Olivares**	**1.98**	**130**	*eP*		**Pb**	**17 03 22.0**	**-0.5**
MT04				*eS*		**Sg**	**17 03 48.4**	**-1.7**
MT04				IAML			17 03 51.0	
	comp=Z,4µm,0.5s							
MT04	**Ro Olivares**	**1.98**	**130**	*eP*		**Pb**	**17 03 21.9**	**-0.7**
MT04				*eS*		**Sb**	**17 03 47.3**	**-0.2**
MT04				IAML			17 03 50.0	
	comp=E,8µm,0.6s							
MT08	**Bocatoma Ro**	**2.09**	**129**	*eP*		**Pn**	**17 03 18.1**	**-3.4**
MT08				*eP*		**Pb**	**17 03 24.0**	**-0.4**
MT08				*eS*		**Sg**	**17 03 53.1**	**-0.3**
MT08				IAML			17 03 54.8	
	comp=Z,3µm,0.6s							
MT08	**Bocatoma Ro**	**2.09**	**129**	*eP*		**Pb**	**17 03 23.8**	**-0.6**
MT13	**San Alfonso**	**2.12**	**139**	*eP*		**Pb**	**17 03 24.2**	**-0.7**
MT13				*eS*		**Sg**	**17 03 53.7**	**-0.8**
MT13				IAML			17 04 00.6	
	comp=Z,5µm,0.5s							
MT13	**San Alfonso**	**2.12**	**139**	IAML			17 03 57.8	
	comp=E,7µm,0.2s							
MT13	**San Alfonso**	**2.12**	**139**			**Pb**	**17 03 23.8**	**-1.1**
BO04	**La Punta**	**2.16**	**149**	*eP*		**Pb**	**17 03 24.5**	**-0.9**
BO04				IAML			17 04 00.4	
	comp=N,7µm,0.5s							
BO04	**La Punta**	**2.16**	**149**			**Pb**	**17 03 24.5**	**-0.9**
GO04	**Tololo Observa**	**2.21**	**27**			**Pn**	**17 03 24.3**	**+1.1**
GO04	**Tololo Observa**	**2.21**	**27**	P		**Pn**	**17 03 24.5**	**+1.2**
RTLS	**Leoncito**	**2.29**	**82**	*eP*		**Pb**	**17 03 28.1**	**+0.2**
RTLS				*eS*		**Sb**	**17 03 55.6**	**-0.9**
RTLS				*eS*		**Sg**	**17 04 02.7**	**+2.7**
RTLS				IAML			17 04 04.6	
	comp=Z,12µm,0.6s							
BO03	**Pichilemu**	**2.34**	**180**	P		**Pn**	**17 03 24.8**	**+0.1**
BO01	**Tunca**	**2.35**	**162**	*eP*		**Pn**	**17 03 26.8**	**+1.9**
BO01				*eS*		**Sg**	**17 04 01.9**	**+0.1**
BO01				IAML			17 04 04.2	
	comp=Z,2µm,0.4s							
BO01	**Tunca**	**2.35**	**162**	P		**Pn**	**17 03 26.6**	**+1.7**
ARCO	**CERRO ARCO**	**2.65**	**106**	*eP*		**Pn**	**17 03 29.1**	**-0.2**
ARCO				*eP*		**Pb**	**17 03 34.4**	**+0.4**
ARCO				*eS*		**Sg**	**17 04 11.1**	**-0.5**
ARCO				IAML			17 04 18.3	
	comp=Z,3µm,0.6s							
CO01	**Juntas del Tor**	**2.70**	**37**	*eP*		**Pn**	**17 03 32.1**	**+2.2**
CO01				*eS*		**Sb**	**17 04 09.6**	**+1.6**
CO01				IAML			17 04 12.5	
	comp=Z,3µm,0.6s							
CO01	**Juntas del Tor**	**2.70**	**37**	*eP*		**Pn**	**17 03 32.3**	**+2.4**
CO01	**Juntas del Tor**	**2.70**	**37**	P		**Pn**	**17 03 32.3**	**+2.4**
AAGR	**Agrelo**	**2.81**	**110**	*eP*		**Pb**	**17 03 36.4**	**-0.1**
AAGR				*eS*		**Sg**	**17 04 21.4**	**+5.0**
AAGR				IAML			17 04 24.2	
	comp=Z,1µm,1.7s							
BO02	**Sierra Bellavi**	**2.81**	**160**	*eP*		**Pn**	**17 03 33.1**	**+1.7**
BO02				*eS*		**Sn**	**17 04 08.6**	**+3.2**
BO02				IAML			17 04 14.5	
	comp=Z,4µm,0.6s							
BO02	**Sierra Bellavi**	**2.81**	**160**			**Pn**	**17 03 33.0**	**+1.7**
BO02	**Sierra Bellavi**	**2.81**	**160**	P		**Pn**	**17 03 33.5**	**+2.2**
GO05	**Hualane**	**2.85**	**179**	*eP*		**Pn**	**17 03 32.4**	**+0.6**
GO05				*eS*		**Sn**	**17 04 05.6**	**-0.6**
GO05				IAML			17 04 32.4	
	comp=Z,1µm,0.8s							
GO05	**Hualane**	**2.85**	**179**			**Pn**	**17 03 32.2**	**+0.4**
GO05	**Hualane**	**2.85**	**179**	P		**Pn**	**17 03 34.3**	**+2.5**
ZON	**Zonda**	**2.86**	**79**	*eP*		**Pb**	**17 03 36.1**	**-1.3**
ZON				*eS*		**Sb**	**17 04 10.6**	**-2.0**
ZON				IAML			17 04 28.2	
	comp=Z,2µm,0.6s							
AROD	**Rodeo**	**2.91**	**48**	*eP*		**Pn**	**17 03 33.6**	**+0.6**
AROD				*eS*		**Sb**	**17 04 12.1**	**-2.2**
ACCO	**Cerro Coronel**	**2.93**	**59**	*eP*		**Pb**	**17 03 37.6**	**-1.2**
ACCO				*eS*		**Sb**	**17 04 15.6**	**+0.8**
ACCO				IAML			17 04 21.9	
	comp=Z,4µm,1.1s							
RTLL	**Cerro Villicun**	**3.08**	**75**	*eP*		**Pb**	**17 03 39.5**	**-1.8**
RTLL				*eS*		**Sb**	**17 04 18.1**	**-0.9**
RTLL				IAML			17 04 29.3	
	comp=Z,2µm,0.4s							
ACDV	**Cuesta del Vie**	**3.14**	**52**	*eS*		**Sb**	**17 04 20.6**	**0.0**
ACDV				IAML			17 04 28.5	
	comp=Z,2µm,0.5s							
CFA	**Coronel Fontan**	**3.22**	**81**	Pn		**Pb**	**17 03 40.5**	**-3.0**
	comp=Z,57nm,0.3s,baz=252,slow=8.9,SNR=294							
CFA				Sn		**Sb**	**17 04 19.1**	**-3.7**
	comp=Z,60nm,0.3s,baz=263,slow=13,SNR=4.0							
LCO	**Las Campanas**	**3.31**	**20**			**Pn**	**17 03 39.3**	**+0.9**
AC05	**El Transito**	**3.61**	**24**	P		**Pn**	**17 03 43.9**	**+1.5**
ML02	**Panimavida**	**3.63**	**173**	P		**Pn**	**17 03 43.5**	**+1.0**
AC04	**Llanos de Chal**	**4.01**	**11**	*eS*		**Sn**	**17 04 39.6**	**+4.8**
AC04				IAML			17 04 57.4	
	comp=Z,1µm,0.5s							
AC04	**Llanos de Chal**	**4.01**	**11**			**Pn**	**17 03 48.0**	**+0.3**
AC04	**Llanos de Chal**	**4.01**	**11**	P		**Pn**	**17 03 47.4**	**-0.3**
BI02	**San Fabin de**	**4.54**	**173**			**Pn**	**17 03 56.7**	**+1.7**
BI02	**San Fabin de**	**4.54**	**173**	P		**Pn**	**17 03 56.3**	**+1.3**
GO03	**Copiapo**	**4.79**	**19**			**Pn**	**17 03 59.2**	**+0.8**
GO03	**Copiapo**	**4.79**	**19**	P		**Pn**	**17 03 58.6**	**+0.2**
AC02	**Maricunga**	**5.85**	**26**			**Pn**	**17 04 14.3**	**+0.9**
AC02	**Maricunga**	**5.85**	**26**	P		**Pn**	**17 04 13.9**	**+0.5**
H03N1	**Juan Fernandez**	**5.99**	**256**	Pn		**Pn**	**17 04 17.2**	**+2.5**
	baz=118,slow=19							
H03N1				T		T	17 10 50.1	
	baz=86,slow=73,SNR=1926							
H03N3	**Juan Fernandez**	**6.00**	**256**	Pn		**Pn**	**17 04 16.7**	**+1.8**
	baz=118,slow=19							
H03N3				T		T	17 10 52.9	
	baz=86,slow=73,SNR=1908							
H03N2	**Juan Fernandez**	**6.01**	**256**	Pn		**Pn**	**17 04 16.9**	**+2.0**
	baz=118,slow=19							
H03N2				T		T	17 10 54.6	
	baz=86,slow=73,SNR=2326							
H03S3	**Juan Fernandez**	**6.07**	**252**	Pn		**Pn**	**17 04 17.3**	**+1.5**
H03S3				Sn		**Sn**	**17 05 21.8**	**-3.4**
	baz=118,slow=74							
H03S3				T		T	17 11 00.1	
	baz=83,slow=75,SNR=181							
H03S1	**Juan Fernandez**	**6.07**	**252**	Pn		**Pn**	**17 04 16.5**	**+0.7**
	baz=352,slow=74							
H03S1				Sn		**Sn**	**17 05 20.8**	**-4.4**
	baz=62,slow=74							
H03S1				T		T	17 10 58.8	
	baz=83,slow=75,SNR=318							
H03S2	**Juan Fernandez**	**6.08**	**252**	Pn		**Pn**	**17 04 16.6**	**+0.7**
	baz=68,slow=74							
H03S2				Sn		**Sn**	**17 05 21.9**	**-3.6**
H03S2				T		T	17 10 50.4	
	baz=83,slow=75,SNR=177							
AC01	**Pan de Azucar**	**6.10**	**12**			**Pn**	**17 04 14.7**	**-1.8**
AC01	**Pan de Azucar**	**6.10**	**12**	P		**Pn**	**17 04 14.5**	**-2.0**
GO06	**Curarrehue**	**7.43**	**177**			**Pn**	**17 04 36.7**	**+1.9**
GO06	**Curarrehue**	**7.43**	**177**	P		**Pn**	**17 04 36.7**	**+1.9**
PB14	**IPOC Station P**	**7.62**	**11**			**Pn**	**17 04 36.9**	**-0.8**
PB14	**IPOC Station P**	**7.62**	**11**	P		**Pn**	**17 04 36.5**	**-1.2**
PLCA	**Paso Flores**	**8.64**	**173**	Pn		**Pn**	**17 04 52.7**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=335,slow=11,SNR=33							
PLCA				LR		LR	17 08 49.9	
	comp=Z,340nm,19.6s,baz=348,slow=42 comp=Z,2.9nm,0.4s							
PLCA	**Paso Flores**	**8.64**	**173**	Pn		**Pn**	**17 04 53.3**	**+1.9**
PLCA	**Paso Flores**	**8.64**	**173**	*eP*		**Pn**	**17 04 48.6**	**-2.7**
SALTA		**9.32**	**34**	P		**Pn**	**17 05 01.3**	**+0.1**
PB05	**IPOC Station P**	**9.39**	**10**	P		**Pn**	**17 05 00.9**	**-0.9**
PB06	**IPOC Station P**	**9.65**	**13**	P		**Pn**	**17 05 05.0**	**-0.3**
TROA	**Tornquist**	**10.08**	**129**	Pn		**Pn**	**17 05 12.1**	**+1.1**
PB03	**IPOC Station P**	**10.26**	**12**	P		**Pn**	**17 05 12.7**	**-0.9**
PB07	**IPOC Station P**	**10.55**	**11**	P		**Pn**	**17 05 17.7**	**0.0**
PB09	**IPOC Station P**	**10.60**	**14**	P		**Pn**	**17 05 18.0**	**-0.4**
PB02	**IPOC Station P**	**10.95**	**10**	P		**Pn**	**17 05 22.9**	**-0.2**
ANCO	**Parque Anchore**	**11.91**	**104**	*eP*		**Pn**	**17 05 33.6**	**-2.6**
PSAL	**Palomas, Salto**	**12.29**	**89**	*eP*		**Pn**	**17 05 40.4**	**-0.8**
PB11	**IPOC Station P**	**12.51**	**10**	P		**Pn**	**17 05 45.2**	**+0.7**
GO01	**Chusmiza**	**12.68**	**12**	P		**Pn**	**17 05 48.5**	**+1.4**
PB16	**IPOC Station P**	**13.94**	**10**	P		**Pn**	**17 06 05.1**	**+0.7**
CPUP	**Villa Florida**	**14.03**	**69**	Pn		**Pn**	**17 06 03.6**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=234,slow=12,SNR=7.6							
CPUP				Sn		**Sn**	**17 08 38.2**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=223,slow=18,SNR=3.9							
CPUP				LR		LR	17 11 45.4	
	comp=Z,428nm,20.1s,baz=252,slow=39 comp=Z,0.6nm,0.3s							
CPUP	**Villa Florida**	**14.03**	**69**	Pn		**Pn**	**17 06 03.1**	**-2.0**
CPUP	**Villa Florida**	**14.03**	**69**	*eP*		**Pn**	**17 06 02.4**	**-2.7**
CPUP	**Villa Florida**	**14.03**	**69**	P		**Pn**	**17 06 05.2**	**+0.1**
SJPY	**San Joaquin**	**15.64**	**67**	*eP*		**Pn**	**17 06 24.6**	**-2.2**
CPSB	**Cacapava Do Su**	**15.94**	**89**	*eP*		**Pn**	**17 06 30.0**	**-0.6**
LPAZ	**La Paz**	**16.17**	**13**	Pn		**Pn**	**17 06 35.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=185,slow=7.9,SNR=29 comp=Z,14nm,0.7s							
LPAZ	**La Paz**	**16.17**	**13**	Pn		**Pn**	**17 06 31.7**	**-2.6**
LPAZ	**La Paz**	**16.17**	**13**	*eP*		**Pn**	**17 06 34.6**	**+0.3**
COIM	**Forte Coimbra**	**17.61**	**50**	*eP*		**Pn**	**17 06 52.0**	**+0.2**
ITAB	**Concordia**	**17.91**	**79**	*eP*		**Pn**	**17 06 54.5**	**-1.0**
BBSD	**Serra de San D**	**18.10**	**37**	*eP*		**Pn**	**17 06 55.3**	**-2.6**
CNLB	**Canela**	**18.37**	**87**	*eP*		**Pn**	**17 06 58.0**	**-3.2**
SIV	**San Ignacio**	**18.89**	**34**	P		**P**	**17 07 05.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=203,slow=9.8,SNR=36							
SIV				LR		LR	17 15 33.0	
	comp=Z,183nm,18.7s,baz=242,slow=41 comp=Z,6.8nm,0.7s							
PTGB	**Pitanga**	**18.99**	**72**	*eP*		**P**	**17 07 07.5**	**-0.6**
PTLB	**Pontes e Lacer**	**20.32**	**38**	P		**P**	**17 07 22.4**	**-0.1**
PTLB	**Pontes e Lacer**	**20.32**	**38**	*eP*		**P**	**17 07 22.0**	**-0.6**
LDASE	**Londrina, Braz**	**20.38**	**70**	*eP*		**P**	**17 07 22.0**	**-1.3**
FRTB	**Fartura**	**21.65**	**72**	*eP*		**P**	**17 07 35.9**	**-1.0**
SALV	**Santo Antonio**	**21.92**	**46**	*eP*		**P**	**17 07 39.2**	**-0.7**
VILB	**Vilhena**	**21.95**	**32**	P		**P**	**17 07 39.2**	**-0.9**
VILB				IAmb		IAmb	17 07 40.6	
	comp=Z,31nm,0.7s							
VILB	**Vilhena**	**21.95**	**32**	*eP*		**P**	**17 07 40.0**	**-0.2**
EFI	**East Falkland**	**22.01**	**156**	P		**P**	**17 07 40.7**	**+0.2**
EFI				IAmb		IAmb	17 08 08.7	
	comp=Z,117nm,1.5s							
PET01	**Itanhaem-SP**	**23.09**	**76**	*eP*		**P**	**17 07 52.5**	**+0.3**
SPB	**Sao Paulo**	**23.26**	**75**	*eP*		**P**	**17 07 53.7**	**-0.3**
CZSB	**Cruzeiro do Su**	**24.31**	**358**	P		**P**	**17 08 04.7**	**+0.6**
CZSB				IAmb		IAmb	17 08 27.8	
	comp=Z,13nm,0.9s							
CZSB	**Cruzeiro do Su**	**24.31**	**358**	*eP*		**P**	**17 08 06.2**	**+2.1**
ARAG	**Araguaiana, MT**	**24.57**	**53**	*eP*		**P**	**17 08 06.1**	**-0.4**
IPMB	**Ipameri, GO**	**25.65**	**62**	*eP*		**P**	**17 08 15.5**	**-0.8**
CLDB	**Colider**	**25.91**	**39**	*eP*		**P**	**17 08 18.3**	**-0.3**
CLDB	**Colider**	**25.91**	**39**	P		**P**	**17 08 18.9**	**+0.3**
BDFB	**Brasilia**	**27.28**	**59**	P		**P**	**17 08 30.6**	**-0.6**
	comp=Z,24nm,1.0s,baz=238,slow=7.7,SNR=19							
BDFB				LR		LR	17 20 53.1	
	comp=Z,548nm,18.3s,baz=234,slow=40 comp=Z,24nm,1.0s							
BDFB	**Brasilia**	**27.28**	**59**	P		**P**	**17 08 28.7**	**-2.4**
BDFB				IAmb		IAmb	17 08 32.6	
	comp=Z,29nm,1.1s							
SNDB	**Serra Nova Dou**	**27.65**	**48**	*eP*		**P**	**17 08 34.2**	**-0.2**
NPGB	**Novo Progresso**	**29.39**	**35**	*eP*		**P**	**17 08 48.8**	**-0.9**
JANB	**Januaria**	**30.39**	**62**	*eP*		**P**	**17 08 58.1**	**-0.6**
MACA	**Manacapuru-AM**	**30.73**	**22**	*eP*		**P**	**17 09 00.3**	**-1.3**
SMTB	**Santa Maria do**	**32.37**	**50**	*eP*		**P**	**17 09 16.1**	**-0.1**
ESPZ	**Base Esperanza**	**32.67**	**168**	P		**P**	**17 09 18.2**	**0.0**
ESPZ				IAmb		IAmb	17 09 20.7	
	comp=Z,14nm,1.2s							
PMSA	**Palmer Station**	**33.01**	**174**	LR		LR	17 22 26.3	
	comp=Z,200nm,20.1s,baz=18,slow=36							
PRPB	**Parapebas**	**33.10**	**40**	*eP*		**P**	**17 09 21.0**	**-1.5**
BOAV	**Boa Vista**	**36.03**	**20**	P		**P**	**17 09 47.8**	**0.0**
BOAV				IAmb		IAmb	17 09 49.0	
	comp=Z,8.4nm,0.8s							
BOAV	**Boa Vista**	**36.03**	**20**	*eP*		**P**	**17 09 46.8**	**-1.0**
NBPN	**Ponto Novo - B**	**36.15**	**61**	*eP*		**P**	**17 09 47.0**	**-1.9**
NBTA	**Tacaratu-PE**	**38.86**	**61**	*eP*		**P**	**17 10 11.0**	**-1.0**
NBPS	**Pedro II - PI**	**39.74**	**52**	*eP*		**P**	**17 10 18.8**	**-0.5**
MDP	**Montagnes des**	**41.36**	**30**	LR		LR	17 29 31.5	
	comp=Z,183nm,20.0s,baz=192,slow=39							
RCBR	**Riachuelo**	**42.64**	**60**	LR		LR	17 30 12.8	
	comp=Z,84nm,19.9s,baz=250,slow=39							
CELP	**Cerrillos**	**50.21**	**7**	P		**P**	**17 11 42.6**	**+0.2**
SNAA	**Sanae**	**53.27**	**158**	ǁ P		**P**	**17 12 06.4**	**+1.6**
	comp=Z,112nm,0.5s							
SNAA	**Sanae**	**53.27**	**158**	P		**P**	**17 12 06.0**	**+1.2**
	comp=Z,6.4nm,0.7s,baz=284,slow=6.5,SNR=16							
SNAA				LR		LR	17 32 54.1	
	comp=Z,73nm,19.9s,baz=277,slow=34 comp=Z,6.4nm,0.7s							
SNAA	**Sanae**	**53.27**	**158**	P		**P**	**17 12 05.8**	**+1.1**
SNAA				IAmb		IAmb	17 12 09.1	
	comp=Z,7.9nm,0.8s							
SNAA	**Sanae**	**53.27**	**158**	P		**P**	**17 12 06.7**	**+1.9**
TROLL	**Troll, Antarti**	**54.98**	**159**	ǁ P		**P**	**17 12 19.0**	**+1.6**
	comp=Z,341nm,0.8s							
QSPA	**South Pole Qui**	**58.08**	**180**	P		**P**	**17 12 40.9**	**+1.5**
	comp=Z,2.8nm,0.8s,baz=294,slow=1.2,SNR=18 comp=Z,2.8nm,0.8s							
QSPA	**South Pole Qui**	**58.08**	**180**	P		**P**	**17 12 41.6**	**+2.1**
QSPA				IAmb		IAmb	17 12 50.8	
	comp=Z,7.2nm,0.8s							
QSPA	**South Pole Qui**	**58.08**	**180**	P		**P**	**17 12 40.4**	**+0.9**
TXAR	**Lajitas Array**	**68.16**	**330**	P		**P**	**17 13 47.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=270,slow=40,SNR=2.4							
WVT	**Waverly**	**69.53**	**346**	P		**P**	**17 13 55.9**	**+0.9**
DBIC	**Dimbokro**	**74.54**	**72**	P		**P**	**17 14 25.6**	**+0.1**
	comp=Z,11nm,0.5s,baz=225,slow=6.6,SNR=15							
DBIC				LR		LR	17 43 39.4	
	comp=Z,76nm,21.9s,baz=176,slow=33 comp=Z,11nm,0.5s							
DBIC	**Dimbokro**	**74.54**	**72**	P		**P**	**17 14 25.5**	**0.0**
MAW	**Mawson**	**74.93**	**164**	P		**P**	**17 14 27.8**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=210,slow=5.5,SNR=12							
MAW				LR		LR	17 49 35.4	
	comp=Z,88nm,18.9s,baz=238,slow=38 comp=Z,1.4nm,0.5s							
MAW	**Mawson**	**74.93**	**164**	P		**P**	**17 14 28.2**	**+1.2**
SUR	**Sutherland**	**75.67**	**119**	LR		LR	17 44 03.6	
	comp=Z,45nm,18.3s,baz=150,slow=33							
TSUM	**Tsumeb**	**79.66**	**106**	LR		LR	17 45 04.0	
	comp=Z,108nm,18.9s,baz=232,slow=32							
BOSA	**Boshof**	**80.88**	**118**	P		**P**	**17 15 01.2**	**+0.2**
	comp=Z,10nm,0.9s,baz=296,slow=2.1,SNR=9.9							
BOSA				LR		LR	17 48 07.5	
	comp=Z,70nm,18.2s,baz=207,slow=34 comp=Z,10nm,0.9s							
BOSA	**Boshof**	**80.88**	**118**	P		**P**	**17 15 01.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**83.53**	**70**	P		**P**	**17 15 14.9**	**+0.2**
	comp=Z,7.6nm,0.7s,baz=261,slow=4.4,SNR=34 comp=Z,7.6nm,0.7s							
MATP	**Matopo**	**87.75**	**113**	LR		LR	17 54 03.6	
	comp=Z,86nm,18.1s,baz=255,slow=35							
LSZ	**Lusaka**	**90.32**	**108**	LR		LR	17 53 01.3	
	comp=Z,66nm,19.3s,baz=150,slow=33							
MDT	**Midelt**	**90.61**	**51**	LR		LR	17 57 02.4	
	comp=Z,49nm,18.6s,baz=232,slow=36							
ESDC	**Sonseca Array**	**95.25**	**46**	P		**P**	**17 16 10.5**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=252,slow=5.1,SNR=2.4							
ESDC				LR		LR	17 58 06.1	
	comp=Z,45nm,19.1s,baz=200,slow=35 comp=Z,0.3nm,0.8s							
ASAR	**Alice Springs**	**119.24**	**207**	PKP		**PKPdf**	**17 21 35.8**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=133,slow=1.7,SNR=6.0							
ASAR				PKKPbc		**PKKPbc**	**17 31 47.8**	**-0.8**
	comp=Z,0.2nm,0.8s,baz=331,slow=3.1,SNR=4.4							
WRA	**Warramunga Arr**	**122.40**	**210**	PKP		**PKPdf**	**17 21 42.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=155,slow=1.7,SNR=13							
H11S2	**WAKE ISLAND Hyd**	**25.84**	**270**	T		T	19 40 50.6	
	baz=118,slow=75,SNR=226							
H11S1	**WAKE ISLAND Hyd**	**25.85**	**270**	T		T	19 40 52.4	
	baz=118,slow=75,SNR=206							
H11S3	**WAKE ISLAND Hyd**	**25.86**	**270**	T		T	19 40 51.9	
	baz=118,slow=75,SNR=180							
H11N3	**WAKE ISLAND Hyd**	**26.21**	**272**	T		T	19 41 13.9	
	baz=117,slow=75,SNR=18							
H11N1	**WAKE ISLAND Hyd**	**26.22**	**272**	T		T	19 41 17.2	
	baz=117,slow=75,SNR=9.3							
H11N2	**WAKE ISLAND Hyd**	**26.22**	**272**	T		T	19 41 20.6	
	baz=117,slow=75,SNR=85							
BVAR	**Borovoye Array**	**145.87**	**41**	PKPbc		**PKPab**	**17 22 26.7**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=292,slow=4.0,SNR=21							
KURBB	**Kurchatov Arra**	**151.46**	**41**	PKPbc		**PKiKP**	**17 22 40.8**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=304,slow=2.8,SNR=38							
KURBB				PKPab		**PKPab**	**17 22 49.4**	**+1.0**
	comp=Z,7.3nm,0.6s,baz=300,slow=3.0,SNR=39							
KURK	**Kurchatov**	**151.47**	**41**			**PKiKP**	**17 22 40.9**	**+0.4**
ZALV	**Zalesovo Beam**	**152.62**	**30**	PKPbc		**PKiKP**	**17 22 43.2**	**+0.5**
	comp=Z,3.6nm,0.5s,baz=309,slow=3.2,SNR=17							
ZALV				PKPab		**PKPab**	**17 22 51.5**	**-1.5**
	comp=Z,12nm,0.6s,baz=297,slow=3.1,SNR=30							
MKAR	**Makanchi Array**	**155.47**	**46**	PKPbc		PKPdf	17 22 49.2	+9.4
	comp=Z,0.7nm,0.8s,baz=333,slow=1.6,SNR=6.6							
MKAR				PKPab		**PKPab**	**17 23 06.2**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=294,slow=3.9,SNR=11							
NJ2	**Nanjing**	**170.82**	**272**	*eP*		**PKPdf**	**17 22 54.3**	**-0.5**
NJ2				pmax		pmax		
	comp=Z,17nm,0.6s							
HHC	**Hu-ho-hao-te**	**170.87**	**343**	*eP*		**PKPdf**	**17 22 53.8**	**-0.9**
PZH	**PanZhiHua**	**172.14**	**134**	PKP		**PKPdf**	**17 22 55.3**	**-0.5**

MAN 26 17:03:05.0, 8.40N×124.39E, h21km, MS3.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.31**	**80**	*i* P		Pn	17 03 13.2	-1.0
CGP				*i* S		Sn	17 03 18.7	-1.4
BUKP	**Musuan**	**0.84**	**128**	*i* P		Pn	17 03 21.4	-0.3
BUKP				*eS*		Sn	17 03 33.7	+0.2
DCPH	**Dipolog City**	**1.04**	**280**	*i* P		Pb	17 03 23.4	-0.9
DCPH				*i* S		Sn	17 03 38.5	+0.2
LSIP	**Lazi, Siquijor**	**1.04**	**314**	*i* P		Pn	17 03 24.9	+0.5
LSIP				*i* S		Sn	17 03 38.2	-0.2
PAGZ	**Pagadian**	**1.14**	**241**	*i* P		Pn	17 03 25.8	+0.1
PAGZ				*eS*		Sn	17 03 41.1	+0.4
CTBH	**Cotabato--PC H**	**1.18**	**187**	*eP*		Pb	17 03 26.6	-0.1
CTBH				*i* S		Sn	17 03 43.0	+1.3
SNPH	**Sibulan**	**1.48**	**309**	*i* P		Pb	17 03 31.3	-0.5
SNPH				*i* S		Sb	17 03 50.2	+0.1
KCP	**Kidapawan**	**1.55**	**153**	*i* P		Pb	17 03 33.9	+0.9
KCP				*i* S		Sb	17 03 54.7	+2.6
DMPH	**Davao City--Mi**	**1.71**	**140**	*eP*		Pb	17 03 37.1	+1.3
DMPH				*i* S		Sb	17 04 00.4	+3.4
SCPH	**Surigao**	**1.75**	**38**	*eP*		Pn	17 03 34.4	+0.2
SCPH				*eS*		Sn	17 03 56.7	+0.9
MSLP	**Maasin**	**1.79**	**15**	*i* P		Pn	17 03 35.5	+0.9
MSLP				*i* S		Sb	17 03 58.5	-0.5
TSSP	**Tandag City**	**1.90**	**70**	*eP*		Pn	17 03 37.0	+0.8
TSSP				*eS*		Sn	17 03 58.0	-1.6
LLP	**Lapu-Lapu**	**1.95**	**348**	*eP*		Pn	17 03 38.0	+1.1
LLP				*i* S		Sb	17 04 02.6	-1.1
BIPH	**Bislig**	**1.96**	**96**	*eP*		Pn	17 03 38.1	+1.1
BIPH				*i* S		Sb	17 04 04.7	+0.6
CDOP	**Cateel, Davao**	**2.12**	**107**	*eP*	

comp=Z,0.3nm,0.6s,baz=7.8,slow=7.9,SNR=4.2
comp=Z,0.3nm,0.6s
ZALV Zalesovo Beam 38.66 67 P **P 17 35 19.5 +0.8**
comp=Z,0.7nm,0.5s,baz=334,slow=9.9,SNR=5.9
comp=Z,0.7nm,0.5s
KURBB Kurchatov Arra 41.12 74 P **P 17 35 40.5 +1.4**
comp=Z,1.5nm,0.9s,baz=352,slow=7.2,SNR=15
comp=Z,1.5nm,0.9s
ESDC Sonseca Array 43.05 164 P **P 17 35 55.6 +0.5**
comp=Z,0.7nm,0.9s,baz=354,slow=8.5,SNR=4.8
comp=Z,0.7nm,0.9s
TLY Talaya 43.05 51 LR LR 17 53 41.5
comp=Z,46nm,19.9s,baz=190,slow=36
KBZ Khabaz 43.17 112 P **P 17 35 57.6 +1.7**
comp=Z,2.3nm,0.9s,baz=353,slow=6.2,SNR=4.8
comp=Z,2.3nm,0.9s
MKAR Makanchi Array 45.36 72 P **P 17 36 13.8 +0.3**
comp=Z,0.8nm,0.8s,baz=356,slow=9.0,SNR=7.4
comp=Z,0.8nm,0.8s
HILR Hailar Array B 46.65 37 LR LR 17 54 54.9
comp=Z,93nm,21.3s,baz=215,slow=35
PDAR Pinedale Array 48.05 278 P **P 17 36 35.1 +0.2**
comp=Z,0.3nm,0.5s,baz=44,slow=8.1,SNR=3.8
comp=Z,0.3nm,0.5s
YBH Yreka Blue Hor 50.78 291 LR LR 17 59 11.6
comp=Z,23nm,20.9s,baz=36,slow=37
TXAR Lajitas Array 60.47 270 P **P 17 38 04.4 -0.9**
comp=Z,0.6nm,0.7s,baz=23,slow=6.8,SNR=5.0
comp=Z,0.6nm,0.7s
MJAR Matsushiro Arr 60.81 21 P **P 17 38 07.8 +0.4**
comp=Z,1.0nm,0.8s,baz=13,slow=6.9,SNR=4.2
comp=Z,1.0nm,0.8s

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*IDC **26** 17:31:54.8±3.1, 18°.72N×145°.64E, h185km±28km, mb3.1/5, mbtmp3.6/6, Error ellipse: s-maj=51.4km s-min=20.3km az=87.0*
*NEIC **26** 17:31:55.9±1.2, 18°.69N±0°.06×145°.5E±0°.3, h181km±14km, mb3.8/7, Error ellipse: s-maj=39.1km s-min=8.4km az=86.0*
ISC 26 17:31:55.9±0.8, 18°.66N±0°.07×145°.5E±0°.2, h200km, n17, σ1§03/19, mb3.4/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.41**	**176**	Pn	**Pn**	**17 32 50.2**	**-0.2**
DPSS				Sn	**Sn**	**17 33 31.9**	**-1.3**
GUMO	**Guam**	**5.08**	**187**	P	**Pn**	**17 33 10.5**	**-0.9**
GUMO	27nm,0.8s,baz=17,slow=19,SNR=1.4			S	**Sn**	**17 34 11.8**	**+0.8**
GUMO	**Guam**	**5.08**	**187**		**Pn**	**17 33 09.8**	**-1.6**
JCJ	**Chichijima**	**8.95**	**340**	Pn	**Pn**	**17 34 01.1**	**-0.4**
PATS	**Pohnpei**	**17.11**	**132**	P	**Pn**	**17 35 43.5**	**-0.1**
JYT	**Yasato**	**18.13**	**346**	P	**P**	**17 35 53.0**	**0.0**
JYT				IAmb	IAmb	17 35 55.7	
	comp=Z,0.4nm,0.8s						
INU	**Inuyama**	**18.26**	**337**	P	**Pn**	**17 35 55.6**	**-1.3**
INU				IAmb	IAmb	17 35 60.0	
	comp=Z,8.1nm,1.1s						
WR8	**Warramunga Arr**	**39.88**	**196**	P	**P**	**17 39 11.4**	**+1.1**
WR8				IAmb	IAmb	17 39 35.7	
	comp=Z,4.6nm,1.1s						
WRAB	**Tennant Creek**	**39.90**	**197**	P	**P**	**17 39 10.7**	**+0.2**
WRAB				IAmb	IAmb	17 39 15.0	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**39.91**	**197**	P	**P**	**17 39 11.6**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=20,slow=8.6,SNR=14						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**39.91**	**197**	P	**P**	**17 39 11.1**	**+0.5**
AS31	**Alice Springs**	**43.57**	**196**	P	**P**	**17 39 41.2**	**+0.9**
AS31				IAmb	IAmb	17 40 18.8	
	comp=Z,1.1nm,1.1s						
ASAR	**Alice Springs**	**43.58**	**196**	P	**P**	**17 39 41.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=16,slow=6.1,SNR=6.3						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**43.58**	**196**	P	**P**	**17 39 42.5**	**+2.1**
KURBB	**Kurchatov Arra**	**61.25**	**318**	P	**P**	**17 41 50.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=96,slow=7.7,SNR=5.9						
	comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**66.41**	**320**	P	**P**	**17 42 24.3**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=95,slow=7.8,SNR=5.5						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**78.09**	**28**	P	**P**	**17 43 32.7**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=291,slow=6.8,SNR=2.5						
	comp=Z,0.3nm,0.6s						

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*IDC **26** 17:50:50.3±1.7, 54°.64N×162°.71E, h0km, mb3.6/5, mbtmp3.6/6, ML2.5/1, Error ellipse: s-maj=47.7km s-min=22.8km az=162.0*
*KRSC **26** 17:50:50.4±1.1, 54°.25N×162°.97E, h46km±24km, Ml3.9*
ISC 26 17:50:48.9±1.8, 54°.40N±0°.05×162°.88E±0°.04, h2km±11km, n47, σ1§41/74, mb3.8/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.69**	**284**	*e*P	**Pn**	**17 51 06.1**	**+0.4**
MKZ				*e*S	**Sn**	**17 51 17.1**	**+0.1**
TUMD	**Tumrok D**	**1.65**	**300**	*e*P	**Pb**	**17 51 20.9**	**+0.9**
TUMD				*e*S	**Sg**	**17 51 41.9**	**+0.1**
TUMR	**Tumrok**	**1.82**	**300**	*e*P	**Pg**	**17 51 24.0**	**+0.4**
TUMR				*e*S	**Sg**	**17 51 47.0**	**-0.2**
KBTR	**Krutoberegovo**	**1.82**	**359**	*e*P	**Pb**	**17 51 22.6**	**-0.2**
KBTR				*e*S	**Sg**	**17 51 45.5**	**-1.7**
BKI	**Bering**	**1.96**	**64**	*e*P	**Pb**	**17 51 24.9**	**-0.4**
BKI				*e*S	**Sn**	**17 51 47.2**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**1.99**	**322**	*e*P	**Pb**	**17 51 26.0**	**+0.1**
BZGR				*e*S	**Sg**	**17 51 52.7**	**-0.1**
ZLN	**Zelenaya**	**2.02**	**325**	*e*P	**Pb**	**17 51 26.6**	**+0.4**
ZLN				*e*S	**Sg**	**17 51 54.0**	**+0.5**
BZP	**Bezymyannyi-Pe**	**2.03**	**319**	*e*P	**Pb**	**17 51 26.9**	**+0.3**
KMNR	**Kamenistaya**	**2.04**	**313**	*e*P	**Pb**	**17 51 27.0**	**+0.3**
KMNR				*e*S	**Sg**	**17 51 54.1**	**-0.4**
BZMR	**Bezymyannaya**	**2.07**	**319**	*e*P	**Pb**	**17 51 27.2**	**+0.1**
BZMR				*e*S	**Sg**	**17 51 54.7**	**-0.5**
BZWR	**Bezymyannyi-We**	**2.08**	**320**	*e*P	**Pb**	**17 51 27.4**	**-0.1**
LGNR	**Loginova**	**2.11**	**324**	*e*S	**Sg**	**17 51 56.7**	**+0.2**
CIRR	**Tsirk**	**2.11**	**326**	*e*P	**Pb**	**17 51 28.1**	**+0.2**
KIRR	**Kirishev**	**2.14**	**318**	*e*P	**Pb**	**17 51 28.5**	**+0.2**
SPN	**Mys Shipunski**	**2.14**	**234**	*e*P	**Pn**	**17 51 26.0**	**+0.4**
SPN				*e*S	**Sn**	**17 51 50.0**	**-2.6**
KPT	**Kopyto**	**2.19**	**317**	*e*P	**Pb**	**17 51 29.4**	**+0.1**
KLY	**Klyuchi**	**2.31**	**327**	*e*P	**Pb**	**17 51 29.7**	**-1.5**
KLY				*e*S	**Sb**	**17 51 57.9**	**-2.2**
KOZ	**Kozyrevsk**	**2.40**	**315**	*e*P	**Pb**	**17 51 32.1**	**-0.7**
KOZ				*e*S	**Sg**	**17 52 04.5**	**-1.3**
NLC	**Nalytchevo**	**2.43**	**241**	*e*P	**Pn**	**17 51 30.4**	**+0.8**
NLC				*e*S	**Sn**	**17 51 58.6**	**-1.2**
SDLR	**Sedlovina**	**2.62**	**246**	*e*P	**Pn**	**17 51 33.1**	**+0.8**
SDLR				*e*S	**Sn**	**17 52 03.9**	**-0.9**
SRDR	**Sredinnyy**	**2.64**	**318**	*e*P	**Pb**	**17 51 35.3**	**-1.6**
SMAR	**Somma**	**2.67**	**247**	*e*P	**Pn**	**17 51 34.2**	**+1.1**
SMAR				*e*S	**Sn**	**17 52 05.4**	**-0.7**
KRER	**Koryakskii**	**2.68**	**248**	*e*P	**Pn**	**17 51 34.6**	**+1.4**
KRER				*e*S	**Sn**	**17 52 05.7**	**-0.7**
AVH	**Avacha**	**2.71**	**247**	*e*P	**Pn**	**17 51 34.9**	**+1.5**
AVH				*e*S	**Sn**	**17 52 06.6**	**-0.1**
KRX	**Arik**	**2.71**	**249**	*e*P	**Pn**	**17 51 34.9**	**+1.3**
KRX				*e*S	**Sn**	**17 52 06.4**	**-0.6**
KOK	**Koryaka**	**2.75**	**248**	*e*P	**Pn**	**17 51 35.4**	**+1.4**
KOK				*e*S	**Sn**	**17 52 06.9**	**-1.0**
DALK	**Dalny**	**2.81**	**243**	*e*P	**Pn**	**17 51 35.7**	**+0.9**
DALK				*e*S	**Sn**	**17 52 07.1**	**-2.0**
ESO	**Esso**	**2.85**	**304**	*e*P	**Pn**	**17 51 37.8**	**+2.4**
ESO				*e*S	**Sb**	**17 52 12.0**	**-3.7**
PET	**Petropavlovsk**	**2.87**	**243**	*e*P	**Pn**	**17 51 36.7**	**+1.2**
PET				*e*S	**Sn**	**17 52 08.3**	**-2.3**
INSR	**Institute**	**2.87**	**244**	*e*S	**Sn**	**17 52 09.7**	**-0.9**
GNL	**Ganaly**	**3.00**	**258**	*e*P	**Pn**	**17 51 39.9**	**+2.4**
GNL				*e*S	**Sn**	**17 52 14.8**	**+0.8**
KRMR	**Karymshinskiy**	**3.24**	**243**	*e*P	**Pn**	**17 51 43.1**	**+2.5**
KRMR				*e*S	**Sn**	**17 52 18.7**	**-1.0**
RUS	**Russkaya**	**3.27**	**235**	*e*P	**Pn**	**17 51 42.0**	**+0.9**
RUS				*e*S	**Sn**	**17 52 18.7**	**-1.8**
PETK	**Petropavlovsk-**	**3.34**	**249**	Pn	**Pn**	**17 51 44.1**	**+2.1**
	2.3nm,0.3s,baz=72,slow=18,SNR=58						
PETK				Sn	**Sn**	**17 52 24.0**	**+1.8**
	3.0nm,0.3s,baz=51,slow=28,SNR=5.1						
	5.3nm,0.5s						
MTVR	**Mutnovka**	**3.40**	**238**	*e*P	**Pn**	**17 51 44.0**	**+1.0**
MTVR				*e*S	**Sn**	**17 52 22.7**	**-1.3**
GRL	**Gorelyy**	**3.42**	**239**	*e*P	**Pn**	**17 51 44.9**	**+1.7**
GRL				*e*S	**Sn**	**17 52 24.6**	**+0.3**
ASAK	**Asacha**	**3.60**	**238**	*e*P	**Pn**	**17 51 47.3**	**+1.6**
ASAK				*e*S	**Sn**	**17 52 28.4**	**-0.4**
APC	**Apacha**	**3.71**	**249**	*e*P	**Pn**	**17 51 50.9**	**+3.7**
KDTR	**Khodutka, Kamc**	**3.89**	**230**	*e*P	**Pn**	**17 51 50.2**	**+0.6**
KDTR				*e*S	**Sn**	**17 52 32.2**	**-3.5**
ILAR	**Eielson Array**	**26.72**	**47**	P	**P**	**17 56 29.3**	**+0.1**
	0.4nm,0.7s,baz=249,slow=8.2,SNR=4.9						
	0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**34.74**	**173**	T	T	18 35 01.9	
	baz=355,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**34.75**	**173**	T	T	18 35 06.0	
	baz=355,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**34.76**	**173**	T	T	18 35 12.7	
	baz=355,slow=76,SNR=20						
BVAR	**Borovoye Array**	**50.87**	**309**	P	**P**	**17 59 49.8**	**-1.0**
	0.3nm,0.5s,baz=39,slow=9.3,SNR=2.2						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**59.56**	**338**	P	**P**	**18 00 53.9**	**+0.6**
	0.8nm,0.4s,baz=32,slow=7.9,SNR=13						
	0.8nm,0.4s						
AKASG	**Malin Array Be**	**68.33**	**330**	P	**P**	**18 01 51.0**	**-0.1**
	0.4nm,0.4s,baz=26,slow=7.2,SNR=2.7						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**68.61**	**69**	P	**P**	**18 01 55.6**	**+2.2**
	0.4nm,0.6s,baz=311,slow=5.7,SNR=5.5						
	0.4nm,0.6s						

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*IDC **26** 18:09:42.3±4.4, 30°.70N×94°.81E, h0km, mb3.6/6, mbtmp3.5/8, ML2.8/1, Error ellipse: s-maj=81.2km s-min=40.0km az=179.0*
ISC 26 18:09:44.8±4.0, 30°.8N±0°.5×94°.8E±0°.2, h10km, n8, σ1§18/8, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.66**	**332**	P	**P**	**18 14 01.1**	**-1.7**
	baz=155,slow=12,SNR=6.9						
	0.6nm,0.8s						
SONM	**Songino Array**	**19.18**	**24**	P	**P**	**18 14 09.4**	**+0.8**
	0.3nm,0.4s,baz=210,slow=12,SNR=6.1						
AAK	**Ala-Archa**	**20.05**	**312**	P	**P**	**18 14 19.6**	**+1.4**
	1.5nm,0.4s,baz=118,slow=8.7,SNR=5.9						
	1.5nm,0.4s						
KURBB	**Kurchatov Arra**	**23.22**	**333**	P	**P**	**18 14 51.9**	**0.0**
	0.5nm,0.3s,baz=144,slow=10,SNR=5.8						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**24.22**	**346**	P	**P**	**18 15 01.6**	**+0.1**
	0.6nm,0.7s,baz=177,slow=10,SNR=4.4						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**28.42**	**328**	P	**P**	**18 15 40.1**	**+0.6**
	0.7nm,0.7s,baz=129,slow=12,SNR=4.4						
	0.7nm,0.7s						
AKASG	**Malin Array Be**	**51.71**	**312**	P	**P**	**18 18 51.1**	**-0.9**
	1.3nm,0.8s,baz=81,slow=6.2,SNR=4.4						
	1.3nm,0.8s						
ILAR	**Eielson Array**	**73.40**	**23**	P	**P**	**18 21 16.4**	**-0.3**
	0.2nm,0.6s,baz=339,slow=5.7,SNR=2.8						
	0.2nm,0.6s						

WEL 26 18:50:19.1±0.5, 32°S±6°×178°0E±1°.1, h12km, M3.9/14, mB4.6/11, ML4.1/24, MLv4.2/14, Mw(mB)3.8/11, Error ellipse: s-maj=15.7km s-min=4.2km az=113.3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.46**	**39**	P	Pn	18 51 16.0	+3.2
GLKZ				S	Sn	18 51 55.0	+1.2
MXZ	**Matakaoa Point**	**5.67**	**190**	P	Pn	18 51 42.9	-0.2
MXZ				S	Sn	18 52 53.0	+4.8
WCZ	**Waipu Caves**	**5.87**	**226**	P	Pn	18 51 52.8	+6.8
WMGZ	**Waiomatatini S**	**5.91**	**189**	P	Pn	18 51 48.6	+2.1
WMGZ				S	Sn	18 52 59.1	+5.1
HAZ	**Te Kaha**	**5.95**	**194**	P	Pn	18 51 48.7	+1.6
HAZ				S	Sn	18 53 01.1	+6.0
PKGZ	**Pakihiroa**	**6.00**	**191**	P	Pn	18 51 49.2	+1.4
PKGZ				S	Sn	18 52 59.1	+2.6
MBAZ	**Motutapu North**	**6.15**	**218**	P	Pn	18 51 56.5	+6.7
RUGZ	**Raukumara Rang**	**6.17**	**194**	P	Pn	18 51 51.1	+0.9
RUGZ				S	Sn	18 53 02.0	+1.1
PUZ	**Puketiti**	**6.18**	**190**	P	Pn	18 51 50.9	+0.7
PUZ				S	Sn	18 53 03.4	+2.6
TWGZ	**Tauwhareparae**	**6.32**	**191**	P	Pn	18 51 53.8	+1.6
TWGZ				S	Sn	18 53 06.9	+2.5
MWZ	**Matawai**	**6.56**	**194**	P	Pn	18 51 53.9	-1.6
MWZ				S	Sn	18 53 12.1	+1.8
URZ	**Urewera**	**6.58**	**197**	P	Pn	18 51 55.2	-0.5
URZ				S	Sn	18 53 14.0	+3.3
RIGZ	**Rimuhau**	**6.88**	**192**	P	Pn	18 51 58.0	-1.8
RIGZ				S	Sn	18 53 19.9	+1.9
MTHZ	**Maungataniwha**	**7.21**	**197**	P	Pn	18 52 03.1	-1.3
MTHZ				S	Sn	18 53 26.9	+0.6
RAHZ	**Arahi**	**7.22**	**196**	P	Pn	18 52 03.0	-1.4
RAHZ				S	Sn	18 53 27.5	+1.1
MHGZ	**Mahia Peninsul**	**7.29**	**190**	P	Pn	18 52 03.3	-2.1
MRHZ	**Matea Rd**	**7.31**	**200**	P	Pn	18 52 04.5	-1.3
NMHZ	**Naumai**	**7.45**	**197**	P	Pn	18 52 06.4	-1.4
NMHZ				S	Sn	18 53 34.3	+2.1
NTVZ	**North Tongariro**	**7.78**	**203**	P	Pn	18 52 11.1	-1.2
TMVZ	**Te Maari**	**7.79**	**203**	P	Pn	18 52 11.4	-1.0
ETVZ	**East Tongariro**	**7.80**	**203**	P	Pn	18 52 11.5	-1.1
WTVZ	**West Tongariro**	**7.83**	**203**	P	Pn	18 52 11.4	-1.6
TWVZ	**Taurewa**	**7.84**	**204**	P	Pn	18 52 11.5	-1.6
OTVZ	**Oturere**	**7.84**	**203**	P	Pn	18 52 09.6	-3.6
SNVZ	**South Ngauruho**	**7.87**	**203**	P	Pn	18 52 10.1	-3.5
NGZ	**Ngauruhoe**	**7.88**	**203**	P	Pn	18 52 12.4	-1.3
FWVZ	**Far West T-bar**	**7.96**	**203**	P	Pn	18 52 12.5	-2.4
WHVZ	**Whangaehu Hut**	**7.98**	**203**	P	Pn	18 52 12.4	-2.7
WNVZ	**Wahianoa**	**8.02**	**203**	P	Pn	18 52 13.2	-2.3
PKVZ	**Pokaka**	**8.07**	**204**	P	Pn	18 52 14.0	-2.2
VRZ	**Vera Road**	**8.14**	**207**	P	Pn	18 52 16.0	-1.1
TSZ	**Takapari Road**	**8.58**	**199**	P	Pn	18 52 18.0	-5.1
BFZ	**Birch Farm**	**9.09**	**196**	P	Pn	18 52 22.1	-8.1
BFZ				S	Sn	18 54 05.0	-7.5
MRZ	**Mangatainoka R**	**9.24**	**199**	P	Pn	18 52 23.4	-8.8
MRZ				S	Sn	18 54 06.5	-10
TIWZ	**Tintock**	**9.27**	**198**	P	Pn	18 52 25.9	-6.7
TIWZ				S	Sn	18 54 09.3	-7.6
OGWZ	**Otaki Gorge**	**9.51**	**201**	P	Pn	18 52 26.5	-9.3
KIW	**Kapiti Island**	**9.63**	**202**	P	Pn	18 52 29.8	-7.7
MTW	**Mount Morrison**	**9.73**	**198**	P	Pn	18 52 30.8	-8.1
CAW	**Cannon Point**	**9.80**	**200**	P	Pn	18 52 32.4	-7.5
DUWZ	**D'Urville Isla**	**9.91**	**206**	P	Pn	18 52 32.3	-9.1
MSWZ	**Moikau Station**	**10.04**	**199**	P	Pn	18 52 34.5	-8.6
TCW	**Tory Channel**	**10.15**	**203**	P	Pn	18 52 35.2	-9.4
PLWZ	**Palliser**	**10.18**	**199**	P	Pn	18 52 37.0	-8.1
TUWZ	**Tuamarina**	**10.46**	**204**	P	Pn	18 52 39.3	-10
NNZ	**Nelson**	**10.48**	**207**	P	Pn	18 52 40.6	-8.5
QRZ	**Quartz Range**	**10.49**	**211**	P	Pn	18 52 39.9	-9.4
THZ	**Tophouse**	**11.13**	**207**	P	Pn	18 52 46.5	-12
KHZ	**Kahutara**	**11.47**	**203**	P	Pn	18 52 50.2	-13
DSZ	**Denniston Nort**	**11.56**	**210**	P	Pn	18 52 51.8	-12
GVZ	**Greta Valley S**	**12.13**	**203**	P	Pn	18 52 58.3	-14
LTZ	**Lake Taylor**	**12.24**	**206**	P	Pn	18 53 00.1	-13
OXZ	**Oxford**	**12.80**	**206**	P	Pn	18 53 07.3	-14
TMZ	**Timaru**	**14.09**	**206**	P	Pn	18 53 22.2	-16

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*SDD **26** 18:56:34.9±1.2, 20°.38N×73°.32W, h23km±999km, MD3.3, ML3.0, MW3.0, Presumed earthquake*
*SSNC **26** 18:56:39.0±1.8, 19°.40N×73°.63W, h0km±7km, MD3.3, ML2.6, Presumed earthquake*
*OSPL **26** 18:56:39.1±1.1, 19°.47N×73°.61W, h6km±13km, ML3.0, Presumed earthquake*
ISC 26 18:56:37.7±1.4, 19°.59N±0°.08×73°.62W±0°.04, h14km±11km, n23, σ1§46/36, 6C, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**0.82**	**315**	*i* P	**Pn**	**18 56 55.4**	**+0.5**
MASC				*e*S	**Sn**	**18 57 07.7**	**+0.9**
MASC				IAML		18 57 09.2	
	comp=Z,122nm,0.2s						
MASC	**Masc**	**0.82**	**315**	*e*P	**Pn**	**18 56 55.3**	**+0.5**
MASC				*e*S	**Sn**	**18 57 08.3**	**+1.5**
MASC				IAML		18 57 09.5	
	comp=N,139nm,0.1s						
MASC				IAML		18 57 09.7	
	comp=E,130nm,0.1s						
QMBU	**Quimbuelo**	**1.28**	**299**	*e*P	**Pn**	**18 57 01.6**	**+0.5**
QMBU				*e*S	**Sn**	**18 57 19.4**	**+1.3**
QMBU				IAML		18 57 21.0	
	comp=N,172nm,0.1s						
QMBU				IAML		18 57 21.0	
	comp=E,132nm,0.1s						
GTBY	**Guantanamo Bay**	**1.45**	**284**	⇑*e*Pg	**Pn**	**18 57 04.2**	**+0.9**
GTBY				⇑*e*Sg	**Sg**	**18 57 26.2**	**+1.8**
GTBY				IAML		18 57 27.8	
	comp=N,94nm,0.4s						
GTBY	**Guantanamo Bay**	**1.45**	**284**	*i* P	**Pn**	**18 57 04.3**	**+0.9**
GTBY				IAML		18 57 27.8	
	comp=Z,50nm,0.5s						
GTBY	**Guantanamo Bay**	**1.45**	**284**	*e*P	**Pg**	**18 57 05.2**	**-0.4**
GTBY				*e*S	**Sn**	**18 57 22.6**	**+0.5**
NMDO	**Nuevo Mundo**	**1.61**	**307**	*e*P	**Pg**	**18 57 08.2**	**-0.4**
NMDO				*e*S	**Sg**	**18 57 28.9**	**-0.6**
NMDO				IAML		18 57 33.0	
	comp=N,33nm,0.1s						
NMDO				IAML		18 57 33.2	
	comp=E,33nm,0.2s						
MOAC	**Moa**	**1.65**	**310**	*e*P	**Pg**	**18 57 08.9**	**-0.6**
MOAC				*e*S	**Sg**	**18 57 30.8**	**-0.2**
MOAC				IAML		18 57 35.2	
	comp=N,51nm,0.2s						
MOAC				IAML		18 57 36.5	
	comp=E,41nm,0.2s						
RCC	**Rio Carpintero**	**2.00**	**282**	*e*P	**Pn**	**18 57 11.2**	**+0.2**
RCC				*e*S	**Sn**	**18 57 36.5**	**+0.7**
RCC				IAML		18 57 45.1	
	comp=N,42nm,0.1s						
RCC				IAML		18 57 45.2	
	comp=E,22nm,0.1s						
PINC	**Pinares de May**	**2.23**	**294**	*e*P	**Pn**	**18 57 15.3**	**+1.1**
SDDR	**Presa de Saban**	**2.28**	**105**	⇑*e*Pg	**Pn**	**18 57 15.1**	**+0.2**
SDDR				⇑*e*Sg	**Sn**	**18 57 43.9**	**+1.1**
SDDR				IAML		18 57 46.5	
	comp=N,73nm,0.9s						
SDDR	**Presa de Saban**	**2.28**	**105**	*i* P	**Pn**	**18 57 14.9**	**0.0**
SDDR				*e*S	**Sn**	**18 57 42.1**	**-0.7**
SDDR				IAML		18 57 46.3	
	comp=Z,616nm,0.1s						
SDDR	**Presa de Saban**	**2.28**	**105**	*e*P	**Pn**	**18 57 15.7**	**+0.8**
SDDR				*e*S	**Sn**	**18 57 41.8**	**-1.0**
SDDR				IAML		18 57 46.0	
	comp=Z,51nm,0.3s						
SDDR				IAML		18 57 46.3	
	comp=Z,63nm,0.2s						
LOPP1	**Punta Rusia, P**	**2.29**	**83**	*i* P	**Pn**	**18 57 15.2**	**+0.1**
LOPP1				IAML		18 57 41.8	
	comp=Z,89nm,1.2s						
NEDR	**Neiba UASD**	**2.35**	**117**	⇑*e*Pg	**Pn**	**18 57 16.9**	**+1.1**
NEDR				IAML		18 58 04.2	
	comp=N,53nm,0.8s						
LODU1	**El Espartillar**	**2.37**	**121**	*i* P	**Pn**	**18 57 16.8**	**+0.7**
LODU1				IAML		18 57 53.6	
	comp=Z,44nm,0.9s						
LOBH	**Bahia de las A**	**2.54**	**132**	*i* P	**Pn**	**18 57 17.9**	**-0.5**
LOBH				IAML		18 58 04.7	
	comp=Z,74nm,1.6s						
CHIV	**Chivirico**	**2.67**	**279**	*e*P	**Pn**	**18 57 20.7**	**+0.6**
YAR	**Yar**	**2.70**	**287**	*e*P	**Pn**	**18 57 21.6**	**+1.0**
LOVI	**El Cajuil, Ovi**	**2.77**	**130**	*i* P	**Pn**	**18 57 20.9**	**-0.7**
LOVI				IAML		18 58 03.8	
	comp=Z,85nm,0.7s						
LMGC	**Las Mercedes**	**3.23**	**279**	*e*P	**Pn**	**18 57 29.8**	**+1.9**
LMGC				*e*S	**Sn**	**18 58 06.2**	**+0.1**
LMGC				IAML		18 58 11.7	
	comp=N,13nm,0.1s						
LMGC				IAML		18 58 11.9	
	comp=E,9.4nm,0.1s						
HATOM	**Hato Mayor del**	**4.08**	**101**	⇑*e*Pg	**Pn**	**18 57 41.4**	**+1.7**
HATOM				IAML		18 58 43.0	
	comp=N,28nm,1.9s						
CCCC	**Cccc**	**4.21**	**293**	*e*P	**Pn**	**18 57 38.8**	**-2.6**
CCCC				*e*S	**Sn**	**18 58 24.6**	**-5.8**

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*IDC **26** 19:06:13.2±1.2, 5°.39S×146°.75E, h0km, mb3.6/6, mbtmp3.7/9, ML3.9/2, MS3.0/6, Error ellipse: s-maj=49.0km s-min=22.3km az=96.0*
ISC 26 19:06:18.9±1.1, 5°.48S±0°.10×146°.7E±0°.3, h35km, n11, σ1§20/10, mb3.6/6, MS3.3/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.92**	**173**	Pn	**Pn**	**19 07 17.4**	**+0.7**
	30nm,0.3s,baz=328,slow=6.6,SNR=48						
PMG				Sn	**Sn**	**19 07 59.8**	**-1.8**
	6.7nm,0.3s,baz=359,slow=16,SNR=3.0						
PMG				LR	LR	19 08 32.5	
	comp=Z,53nm,18.7s,baz=334,slow=35						
KRVT	**Keravat (AS076**	**5.44**	**78**	LR	LR	19 09 42.8	
	comp=Z,24nm,21.3s,baz=172,slow=39						
CTA	**Charters Tower**	**14.52**	**182**	Pn	**Pn**	**19 09 43.3**	**+1.2**
	0.5n

PMBG				IAML			19 35 37.8	
	comp=Z,10nm,0.6s							
SNKL	**Senekal, Frees**	**8.19 215**	*eP*		**Pn**	**19 33 07.1**	**+0.6**
SNKL				*eS*	**Sn**	**19 34 37.6**	**-1.6**
SNKL				IAML		19 35 48.4	
	comp=Z,33nm,0.8s							
BOSA	**Boshof**	**9.94 224**	Pn		**Pn**	**19 33 31.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=47,slow=12,SNR=2.0							
BOSA				Sn	**Sn**	**19 35 21.3**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=35,slow=16,SNR=4.2							
BOSA				Lg	Lg	19 36 20.9		
	comp=Z,1.6nm,0.3s,baz=319,slow=20,SNR=5.1							
	comp=Z,2.1nm,0.4s							
BOSA	**Boshof**	**9.94 224**	*i* P		**Pn**	**19 33 34.2**	**+3.7**
BOSA	**Boshof**	**9.94 224**	*eP*		**Pn**	**19 33 31.4**	**+0.9**
BOSA				*eS*	**Sn**	**19 35 19.4**	**-2.8**
BOSA				IAML		19 35 48.9		
	comp=Z,1.9nm,0.3s							
UPI	**Upington**	**12.67 236**	*eP*		**Pn**	**19 34 09.4**	**+1.6**
UPI				*eS*	**Sn**	**19 36 25.3**	**-3.7**
UPI				IAML		19 36 35.6		
	comp=Z,7.0nm,0.5s							
GRAF	**Camdeboo Natio**	**13.08 214**	*eP*		**Pn**	**19 34 15.3**	**+1.9**
GRAF				*eS*	**Sn**	**19 36 34.1**	**-4.9**
GRAF				IAML		19 36 38.6		
	comp=Z,4.5nm,0.6s							
BRAK	**Brakfontein**	**13.60 220**	*eP*		**Pn**	**19 34 22.3**	**+1.7**
BRAK				*eS*	**Sn**	**19 36 47.4**	**-4.5**
BRAK				IAML		19 36 49.4		
	comp=Z,5.0nm,0.7s							
ROOI	**Rooidraai Farm**	**13.75 216**	*eP*		**Pn**	**19 34 24.8**	**+2.3**
ROOI				*eS*	**Sn**	**19 36 50.2**	**-5.3**
GRAN	**Grantham**	**14.40 220**	*eP*		**Pn**	**19 34 33.2**	**+1.6**
GRAN				IAML		19 36 47.0		
	comp=Z,3.1nm,0.8s							
FRAZ	**Fraserburg**	**14.62 223**	*eP*		**Pn**	**19 34 36.9**	**+2.3**
FRAZ				IAML		19 36 51.3		
	comp=Z,1.2nm,0.7s							
TSUM	**Tsumeb**	**14.78 277**	*i* P		**Pn**	**19 34 38.9**	**+2.0**
SUR	**Sutherland**	**15.30 223**	*eP*		**Pn**	**19 34 46.2**	**+2.4**
TORD	**Torodi Ar. Bea**	**46.36 315**	P		**P**	**19 39 33.5**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=138,slow=7.6,SNR=4.9							
	comp=Z,0.7nm,0.7s							
DBIC	**Dimbokro**	**46.70 303**	P		**P**	**19 39 36.2**	**-0.6**
	comp=Z,2.6nm,1.0s,baz=144,slow=6.1,SNR=1.4							
	comp=Z,2.6nm,1.0s							

*TAP **26** 19:32:23.0,24˚.60N×122˚.81E,h101km,ML2.6,D*
*JMA **26** 19:32:23.5±0.2,25˚N±2˚×122˚.8E±0˚.7,h95km,MV1.4/8, NW OFF ISHIGAKIJIMA IS*

ISC 26 19:32:23.3±1.6,**24˚.55N**±0˚.05×**122˚.77E**±0˚.03,**h102**km±9km, **n56**,σ0**69**/106,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.19**	**121**	P	**Pn**	**19 32 37.5**	**-0.1**
JYNG				*eS*	**Sn**	**19 32 48.1**	**-0.3**
YOJ	**Yonaguni jima**	**0.24**	**111**	P	**Pn**	**19 32 37.7**	**-0.1**
YOJ				S	**Sn**	**19 32 48.2**	**-0.5**
YOJ	**Yonaguni jima**	**0.24**	**111**	*eP*	**Pn**	**19 32 37.5**	**-0.3**
EOS3	**EOS3**	**0.49**	**238**	*eP*	**Pn**	**19 32 39.7**	**+0.7**
EOS3				*eS*	**Sn**	**19 32 52.3**	**+1.6**
EOS2	**EOS2**	**0.51**	**255**	*eP*	**Pn**	**19 32 39.7**	**+0.6**
EOS2				S	**Sn**	**19 32 52.5**	**+1.5**
EOS4	**EOS4**	**0.59**	**224**	*i* P	**Pn**	**19 32 39.9**	**+0.4**
EOS4				S	**Sn**	**19 32 52.9**	**+1.2**
TWC	**Suao**	**0.84**	**274**	*eP*	**Pn**	**19 32 41.8**	**-0.3**
TWC				*eS*	**Sn**	**19 32 55.7**	**-0.7**
IRIF	**Iriomote-Funau**	**0.90**	**103**	P	**Pn**	**19 32 42.9**	**+0.1**
IRIF				*eS*	**Sn**	**19 32 57.2**	**-0.3**
EWUT	**Wuta**	**0.91**	**264**	P	**Pn**	**19 32 43.4**	**+0.6**
EWUT				S	**Sn**	**19 32 57.7**	**+0.1**
NTC	**Toucheng**	**0.91**	**290**	*eP*	**Pn**	**19 32 41.2**	**-1.6**
ENA	**Nanau**	**0.94**	**263**	P	**Pn**	**19 32 41.9**	**-1.3**
ENA				S	**Sn**	**19 32 56.5**	**-1.8**
TIPB	**Shuangxi**	**0.95**	**296**	*eP*	**Pn**	**19 32 43.4**	**0.0**
TIPB				*eS*	**Sn**	**19 32 57.3**	**-1.3**
NDS	**Dongshan**	**0.96**	**275**	*eP*	**Pn**	**19 32 44.3**	**+0.9**
NDS				*eS*	**Sn**	**19 32 57.9**	**-0.8**
SXI1	**Grass Mountain**	**0.98**	**304**	*eP*	**Pn**	**19 32 43.8**	**+0.1**
SXI1				*eS*	**Sn**	**19 32 59.3**	**+0.3**
TWE	**Neicheng**	**1.02**	**280**	*eP*	**Pn**	**19 32 44.0**	**0.0**
TWE				*eS*	**Sn**	**19 32 59.9**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.09**	**281**	P	**Pn**	**19 32 45.2**	**+0.2**
FUSB				S	**Sn**	**19 33 00.5**	**-0.8**
ETL	**Fush Village**	**1.11**	**250**	*eP*	**Pn**	**19 32 44.7**	**-0.4**
ETL				*eS*	**Sn**	**19 33 01.4**	**-0.3**
LATG	**Datong**	**1.13**	**270**	*eP*	**Pn**	**19 32 45.9**	**+0.5**
LATG				*eS*	**Sn**	**19 33 01.7**	**-0.4**
NACB	**Ninganchiao**	**1.13**	**251**	*eP*	**Pn**	**19 32 45.2**	**-0.1**
NACB				*i* S	**Sn**	**19 33 02.0**	**+0.1**
NDT	**Datong Townshi**	**1.14**	**273**	*eP*	**Pn**	**19 32 44.8**	**-0.6**
NDT				*eS*	**Sn**	**19 33 02.2**	**0.0**
JKRS	**Kuro-shima**	**1.17**	**105**	*eP*	**Pn**	**19 32 46.3**	**+0.6**
JKRS				*eS*	**Sn**	**19 33 03.2**	**+0.5**
NWLT	**Wulai**	**1.17**	**282**	*eP*	**Pn**	**19 32 46.2**	**+0.4**
NWLT				*eS*	**Sn**	**19 33 02.1**	**-0.7**
ETLH	**Xiulin Townshi**	**1.22**	**254**	*eP*	**Pn**	**19 32 46.4**	**0.0**
ETLH				*i* S	**Sn**	**19 33 03.4**	**-0.4**
TEYL	**Yanliau Villag**	**1.26**	**238**	*eP*	**Pn**	**19 32 46.8**	**0.0**
TEYL				*eS*	**Sn**	**19 33 04.4**	**-0.2**
JIJ	**Ishigaki jima**	**1.27**	**98**	P	**Pn**	**19 32 47.0**	**+0.1**
JIJ				*eS*	**Sn**	**19 33 03.8**	**-0.9**
NNSB	**Datong**	**1.27**	**265**	*eP*	**Pn**	**19 32 47.0**	**0.0**
NNSB				*eS*	**Sn**	**19 33 04.5**	**-0.4**
YHNB	**Yeheng**	**1.27**	**276**	*eP*	**Pn**	**19 32 47.6**	**+0.6**
YHNB				*eS*	**Sn**	**19 33 04.6**	**-0.3**
NNS	**Nan Shan**	**1.27**	**265**	*eP*	**Pn**	**19 32 47.5**	**+0.4**
NNS				*eS*	**Sn**	**19 33 05.0**	**-0.1**
NSK	**Sanguang**	**1.29**	**276**	*eP*	**Pn**	**19 32 48.0**	**+0.8**
NSK				*eS*	**Sn**	**19 33 04.6**	**-0.6**
ETM	**Tongmen**	**1.30**	**244**	*eP*	**Pn**	**19 32 47.0**	**-0.2**
ETM				*eS*	**Sn**	**19 33 04.5**	**-0.9**
SHUL	**Shoufeng**	**1.34**	**236**	*i* P	**Pn**	**19 32 47.8**	**+0.2**
SHUL				*i* S	**Sn**	**19 33 06.3**	**+0.2**
LXIB	**Xiulin Townshi**	**1.34**	**247**	P	**Pn**	**19 32 47.8**	**-0.1**
LXIB				S	**Sn**	**19 33 05.7**	**-0.8**
JISG	**Ishigakijimahi**	**1.41**	**88**	*eP*	**Pn**	**19 32 48.8**	**+0.3**
ESL	**Shilin**	**1.42**	**239**	*eP*	**Pn**	**19 32 48.2**	**-0.5**
ESL				*eS*	**Sn**	**19 33 07.2**	**-0.8**
WHF	**Hehuan Shan**	**1.43**	**254**	*eP*	**Pn**	**19 32 49.5**	**+0.3**
WHF				*eS*	**Sn**	**19 33 08.1**	**-0.7**
TDCB	**Techi**	**1.50**	**259**	*eP*	**Pn**	**19 32 50.6**	**+0.9**
TDCB				*eS*	**Sn**	**19 33 09.6**	**-0.2**
NFF	**Wufeng Townshi**	**1.50**	**274**	*eP*	**Pn**	**19 32 50.8**	**+1.0**
NFF				*eS*	**Sn**	**19 33 09.6**	**-0.3**
WARBT	**Fenglin Townsh**	**1.51**	**237**	*i* P	**Pn**	**19 32 49.6**	**-0.2**
WARBT				S	**Sn**	**19 33 08.9**	**-0.9**
OWD	**Renai**	**1.57**	**248**	*eP*	**Pn**	**19 32 51.0**	**+0.3**
OWD				*i* S	**Sn**	**19 33 10.5**	**-0.9**
LIOB	**Emei**	**1.60**	**274**	*eP*	**Pn**	**19 32 51.0**	**+0.1**
LIOB				*eS*	**Sn**	**19 33 12.0**	**+0.1**
WUSB	**Renai**	**1.60**	**250**	*eP*	**Pn**	**19 32 51.8**	**+0.7**
WUSB				*eS*	**Sn**	**19 33 12.4**	**+0.2**
NSTT	**Nanjuang**	**1.61**	**273**	*eP*	**Pn**	**19 32 51.4**	**+0.3**
NSTT				*eS*	**Sn**	**19 33 12.1**	**0.0**
HGSD	**Ruisui**	**1.62**	**230**	*eP*	**Pn**	**19 32 50.9**	**-0.2**
HGSD				*eS*	**Sn**	**19 33 12.7**	**+0.4**
EHYH	**Wanrong**	**1.67**	**231**	*eP*	**Pn**	**19 32 52.0**	**+0.2**
EHY	**Hungye**	**1.68**	**232**	*eP*	**Pn**	**19 32 52.2**	**+0.3**
VWDT	**VWDT**	**1.68**	**242**	*eP*	**Pn**	**19 32 52.7**	**+0.8**
VWDT				*i* S	**Sn**	**19 33 13.8**	**+0.1**
WHP	**Taichung City**	**1.68**	**261**	*eP*	**Pn**	**19 32 52.7**	**+0.7**
WHP				*eS*	**Sn**	**19 33 14.1**	**+0.3**
WCS	**Beigang Elemen**	**1.76**	**254**	*eP*	**Pn**	**19 32 53.9**	**+1.0**
WCS				*eS*	**Sn**	**19 33 16.3**	**+0.8**
YULB	**Yu-li**	**1.77**	**230**	*i* P	**Pn**	**19 32 53.0**	**-0.1**
YULB				S	**Sn**	**19 33 14.9**	**-0.8**
SSLB	**Suanglung**	**1.82**	**246**	*eP*	**Pn**	**19 32 54.7**	**+1.0**
SSLB				*eS*	**Sn**	**19 33 16.2**	**-0.7**
SMLT	**Sun Moon Lake**	**1.83**	**249**	*eP*	**Pn**	**19 32 55.1**	**+1.2**
FULB	**Fuli**	**1.90**	**225**	*eP*	**Pn**	**19 32 54.9**	**+0.1**
FULB				*eS*	**Sn**	**19 33 17.6**	**-1.1**
CHKT	**Chengkung**	**1.93**	**222**	*eP*	**Pn**	**19 32 54.7**	**-0.3**
CHKT				*eS*	**Sn**	**19 33 17.8**	**-1.5**
WHYT	**Xinyi Township**	**1.94**	**245**	*eP*	**Pn**	**19 32 56.2**	**+0.9**
WHYT				*eS*	**Sn**	**19 33 21.0**	**+1.4**
ALS	**Alishan**	**2.07**	**241**	*eP*	**Pn**	**19 32 58.2**	**+1.1**
ALS				*eS*	**Sn**	**19 33 22.2**	**-0.7**
ELDTW	**Lidau**	**2.10**	**230**	*eP*	**Pn**	**19 32 57.4**	**0.0**
ELDTW				*eS*	**Sn**	**19 33 22.2**	**-1.1**

TRN 26 19:57:33.3,16˚.62N×60˚.60W,h20km,MD3.5,North-east of Guadeloupe.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSDZ	**La Diserade, G**	**0.54**	**236**	*eP*	Pn	19 57 46.0	+0.2
DSDZ				*eS*	Sn	19 57 55.3	+1.0
DHSZ	**Broadband at M**	**1.17**	**253**	*eP*	Pg	19 57 55.9	0.0
DHSZ				*eS*	Sg	19 58 13.2	+2.0
MMLZ	**Guadeloupe Bro**	**1.17**	**241**	*eP*	Pg	19 57 56.1	+0.1
MMLZ				*eS*	Sg	19 58 12.2	+0.8
DWS	**Wesley**	**1.24**	**213**	*eP*	Pg	19 57 57.4	-0.1
DWS				*eS*	Sg	19 58 15.2	+1.5
TBG	**Guadaloupe-3**	**1.26**	**233**	*eP*	Pb	19 57 56.9	+0.5
TBG				*eS*	Sg	19 58 15.6	+1.4
DSLB	**Salisbury**	**1.41**	**214**	*eP*	Pg	19 58 00.3	-0.3
DSLB				*eS*	Sg	19 58 18.4	-0.6
MBWH	**Windy Hill**	**1.53**	**275**	*eP*	Pb	19 58 01.7	+0.7
MBWH				*eS*	Sg	19 58 22.1	-0.6
ANWB	**Willy Bob**	**1.54**	**313**	*eP*	Pb	19 58 01.4	+0.2
ANWB				*eS*	Sg	19 58 21.8	-1.4

*GFZ **26** 20:03:44.9±0.3,31˚.S±2˚×6˚.8W±˚,h108km,M4.5/13, mb4.5/13*
*IDC **26** 20:03:46.9±0.9,31˚.49S×68˚.70W,h100km±7km,mb3.7/4, mbtmp3.9/8,MS3.3/1,Error ellipse: s-maj=29.2km s-min=20.6km az=99.0*
*SJA **26** 20:03:46.6±0.7,31˚.48S×68˚.71W,h106km±2km,ML3.9, MW3.9*
*NEIC **26** 20:03:47.9±2.5,31˚.53S±0˚.05×68˚.9W±0˚.1,h117km±8km, mb4.3/6,Error ellipse: s-maj=14.2km s-min=7.7km az=91.0*

ISC 26 20:03:46.8±0.6,**31˚.50S**±0˚.03×**68˚.72W**±0˚.04,**h107**km±5km, **n116**,σ1**9**/131,**mb4.2**/5,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.06**	**147**	*eP*	**Pn**	**20 04 01.9**	**+0.2**
ZON				*eS*	**Sn**	**20 04 13.5**	**+0.8**
ZON				*eS*		20 04 14.2	
ZON				IAML		20 04 14.2	
	comp=Z,2μm,0.5s						
ZON	**Zonda**	**0.06**	**147**		**Pn**	**20 04 01.8**	**+0.2**
ZON	**Zonda**	**0.06**	**147**	P	**Pn**	**20 04 01.9**	**+0.2**
SJA	**San Juan**	**0.14**	**103**	*eP*	**Pn**	**20 04 02.1**	**+0.4**
SJA				*eS*	**Sn**	**20 04 02.1**	**+0.4**
SJA				IAML		20 04 02.3	
	comp=Z,7μm,0.1s						
RTLL	**Cerro Villicun**	**0.27**	**51**	*eP*	**Pn**	**20 04 02.3**	**+0.2**
RTLL				*eS*	**Sn**	**20 04 14.0**	**+0.5**
RTLL				IAML		20 04 14.4	
	comp=Z,6μm,0.3s						
CFA	**Coronel Fontan**	**0.42**	**105**	P	**Pn**	**20 04 03.0**	**+0.2**
	comp=Z,1μm,0.3s,baz=277,slow=8.9						
CFA				S	**Sn**	**20 04 15.4**	**+0.5**
	comp=Z,854nm,0.3s,baz=109,slow=21,SNR=88						
CFA	**Coronel Fontan**	**0.42**	**105**	*eP*	**Pn**	**20 04 03.3**	**+0.5**
CFA				*eS*	**Sn**	**20 04 15.7**	**+0.8**
CFA				IAML		20 04 15.9	
	comp=Z,3μm,0.1s						
RTLS	**Leoncito**	**0.58**	**239**	*eP*	**Pn**	**20 04 04.6**	**+0.4**
RTLS				*eS*	**Sn**	**20 04 18.8**	**+1.5**
RTLS				IAML		20 04 21.1	
	comp=Z,5μm,0.2s						
ACCO	**Cerro Coronel**	**0.96**	**342**	*eP*	**Pn**	**20 04 08.1**	**+0.4**
ACCO				*eS*	**Sn**	**20 04 24.7**	**+1.4**
ACCO				IAML		20 04 25.1	
	comp=Z,2μm,0.8s						
ARCO	**CERRO ARCO**	**1.35**	**188**	*eP*	**Pn**	**20 04 13.0**	**+1.1**
ARCO				*eS*	**Sn**	**20 04 32.8**	**+2.0**
ARCO				IAML		20 04 33.8	
	comp=Z,3μm,0.5s						
AVFE	**Valle Fertil**	**1.37**	**53**	*i* P	**Pn**	**20 04 11.8**	**-0.1**
AVFE				IAML		20 04 32.8	
	comp=Z,248nm,0.3s						
ACDV	**Cuesta del Vie**	**1.37**	**345**	*eP*	**Pn**	**20 04 12.7**	**+0.7**
ACDV				*eS*	**Sn**	**20 04 27.3**	**-3.8**
ACDV				IAML		20 04 32.5	
	comp=Z,2μm,0.5s						
AROD	**Rodeo**	**1.48**	**334**	*eP*	**Pn**	**20 04 14.2**	**+0.7**
ACAN	**Cantantal**	**1.51**	**121**	*eP*	**Pn**	**20 04 15.3**	**+1.7**
ACAN				IAML		20 04 37.9	
	comp=Z,4μm,0.3s						
AAGR	**Agrelo**	**1.59**	**183**	*eP*	**Pn**	**20 04 15.7**	**+1.1**
AAGR				*eS*	**Sn**	**20 04 37.4**	**+1.7**
AAGR				IAML		20 04 44.0	
	comp=Z,872nm,0.7s						
CO03	**El Pedregal**	**1.81**	**291**		**Pn**	**20 04 17.9**	**+0.5**
CO03	**El Pedregal**	**1.81**	**291**	P	**Pn**	**20 04 18.1**	**+0.7**
CO01	**Juntas del Tor**	**1.93**	**322**	*eP*	**Pn**	**20 04 20.2**	**+1.2**
CO01				*eS*	**Sn**	**20 04 44.9**	**+1.5**
CO01				IAML		20 04 46.0	
	comp=Z,364nm,0.6s						
CO01				*eS*		20 04 46.5	
CO01	**Juntas del Tor**	**1.93**	**322**		**Pn**	**20 04 20.1**	**+1.2**
CO01	**Juntas del Tor**	**1.93**	**322**	P	**Pn**	**20 04 20.4**	**+1.4**
CO02	**Combarbal**	**1.98**	**278**	*eP*	**Pn**	**20 04 19.7**	**+0.3**
CO02				*eS*	**Sn**	**20 04 45.6**	**+1.2**
CO02				IAML		20 04 46.1	
	comp=Z,2μm,0.4s						
CO02	**Combarbal**	**1.98**	**278**		**Pn**	**20 04 19.7**	**+0.3**
CO02	**Combarbal**	**1.98**	**278**	P	**Pn**	**20 04 19.8**	**+0.3**
AVIZ	**Vizcacheras**	**1.98**	**175**	*eP*	**Pn**	**20 04 20.7**	**+1.3**
AVIZ				*eS*	**Sn**	**20 04 40.8**	**-3.5**
CO04	**Los Peladeros**	**2.00**	**254**		**Pn**	**20 04 19.8**	**-0.1**
CO04	**Los Peladeros**	**2.00**	**254**	P	**Pn**	**20 04 19.9**	**0.0**
VA03	**San Esteban**	**2.00**	**230**	*eP*	**Pn**	**20 04 20.8**	**+1.0**
VA03				*eS*	**Sn**	**20 04 46.5**	**+1.5**
VA03				IAML		20 04 52.5	
	comp=Z,624nm,0.3s						
VA03	**San Esteban**	**2.00**	**230**		**Pn**	**20 04 20.5**	**+0.7**
VA03	**San Esteban**	**2.00**	**230**	P	**Pn**	**20 04 20.8**	**+1.0**
GO04	**Tololo Observa**	**2.23**	**306**	*eP*	**Pn**	**20 04 22.7**	**-0.1**
GO04				*eS*	**Sn**	**20 04 51.6**	**+1.3**
GO04				IAML		20 04 52.5	
	comp=Z,2μm,0.2s						
GO04	**Tololo Observa**	**2.23**	**306**		**Pn**	**20 04 22.6**	**-0.1**
GO04	**Tololo Observa**	**2.23**	**306**	P	**Pn**	**20 04 22.7**	**-0.1**
MT08	**Bocatoma Ro**	**2.23**	**209**	*eP*	**Pn**	**20 04 18.8**	**-4.0**
MT08				*eP*		20 04 19.3	
MT08				*eP*		20 04 24.5	
MT08				*eP*		20 04 24.7	
MT08				*eS*	**Sn**	**20 04 49.3**	**-1.1**
MT08				IAML		20 04 54.8	
	comp=Z,402nm,0.7s						
MT08	**Bocatoma Ro**	**2.23**	**209**		**Pn**	**20 04 24.4**	**+1.5**
MT04	**Ro Olivares**	**2.25**	**212**	*eP*	**Pn**	**20 04 24.7**	**+1.6**
MT04				*eS*	**Sn**	**20 04 50.8**	**0.0**
MT04				IAML		20 04 57.7	
	comp=Z,285nm,0.6s						
PEL	**Peldehue**	**2.34**	**225**		**Pn**	**20 04 24.6**	**+0.6**
PEL	**Peldehue**	**2.34**	**225**	P	**Pn**	**20 04 24.5**	**+0.5**
MT16	**CCHEN**	**2.46**	**218**		**Pn**	**20 04 26.2**	**+0.6**
MT05	**Renca**	**2.55**	**222**	*eP*	**Pn**	**20 04 27.1**	**+1.0**
MT05				*eS*	**Sn**	**20 05 00.1**	**+2.6**
MT05				IAML		20 05 01.6	
	comp=Z,600nm,0.3s						
MT05	**Renca**	**2.55**	**222**		**Pn**	**20 04 27.2**	**+0.4**
MT13	**San Alfonso**	**2.60**	**210**	*eP*	**Pn**	**20 04 28.8**	**+1.2**
MT13				*eS*	**Sn**	**20 04 58.3**	**-0.6**
MT13				IAML		20 05 07.4	
	comp=Z,195nm,0.4s						
MT13	**San Alfonso**	**2.60**	**210**		**Pn**	**20 04 28.1**	**+0.6**
CO06	**Fray Jorge**	**2.64**	**287**		**Pn**	**20 04 26.1**	**-1.8**
MT02	**Curacav**	**2.70**	**229**	*eP*	**Pn**	**20 04 28.4**	**-0.3**
MT02				IAML		20 05 33.8	
	comp=Z,124nm,0.5s						
MT02	**Curacav**	**2.70**	**229**		**Pn**	**20 04 28.3**	**-0.4**
VA01	**Torpederas**	**2.91**	**238**		**Pn**	**20 04 30.8**	**-0.7**
VA01	**Torpederas**	**2.91**	**238**	P	**Pn**	**20 04 30.3**	**-1.2**
BO04	**La Punta**	**2.95**	**212**		**Pn**	**20 04 32.6**	**+0.5**
MT09	**Talagante**	**2.97**	**220**		**Pn**	**20 04 32.2**	**-0.3**
AC05	**El Transito**	**2.98**	**333**	*eS*	**Sn**	**20 05 09.1**	**+1.4**
AC05				IAML		20 05 12.8	
	comp=Z,264nm,0.6s						
AC05	**El Transito**	**2.98**	**333**		**Pn**	**20 04 33.4**	**+0.8**
AC05	**El Transito**	**2.98**	**333**	P	**Pn**	**20 04 33.7**	**+1.1**
LCO	**Las Campanas**	**3.02**	**325**		**Pn**	**20 04 32.9**	**-0.3**
LCO	**Las Campanas**	**3.02**	**325**	P	**Pn**	**20 04 32.5**	**-0.7**
MT01	**Popeta**	**3.18**	**222**	*eP*	**Pn**	**20 04 34.2**	**-1.0**
MT01				IAML		20 05 16.2	
	comp=Z,143nm,0.2s						
VA05	**Santo Domingo**	**3.26**	**228**	P	**Pn**	**20 04 35.1**	**-1.0**
BO01	**Tunca**	**3.51**	**214**	*eS*	**Sn**	**20 05 20.5**	**+0.3**
BO01				IAML		20 05 22.2	
	comp=Z,85nm,0.3s						
BO01	**Tunca**	**3.51**	**214**	P	**Pn**	**20 04 38.3**	**-1.2**
TCA	**Tanti**	**3.53**	**88**	*eS*	**Sn**	**20 05 20.9**	**+0.1**
TCA				IAML		20 05 38.0	
	comp=Z,348nm,0.6s						
BO02	**Sierra Bellavi**	**3.71**	**207**		**Pn**	**20 04 42.5**	**+0.3**
BO02	**Sierra Bellavi**	**3.71**	**207**	P	**Pn**	**20 04 42.6**	**+0.3**
AC04	**Llanos de Chal**	**3.87**	**327**		**Pn**	**20 04 43.3**	**-1.0**
AC04	**Llanos de Chal**	**3.87**	**327**	P	**Pn**	**20 04 43.5**	**-0.9**
BO03	**Pichilemu**	**4.05**	**222**	P	**Pn**	**20 04 46.2**	**-0.5**
GO03	**Copiapo**	**4.11**	**341**	*eS*	**Sn**	**20 05 34.4**	**-0.4**
GO03				IAML		20 05 36.3	
	comp=Z,202nm,0.5s						
GO03	**Copiapo**	**4.11**	**341**	P	**Pn**	**20 04 47.3**	**-0.4**
GO05	**Hualane**	**4.42**	**217**	P	**Pn**	**20 04 50.3**	**-1.4**
AC02	**Maricunga**	**4.66**	**355**	*eS*	**Sn**	**20 05 49.7**	**+1.0**
AC02				IAML		20 05 52.3	
	comp=Z,75nm,0.6s						
AC02	**Maricunga**	**4.66**	**355**	P	**Pn**	**20 04 55.7**	**+0.2**
ML02	**Panimavida**	**4.81**	**207**	P	**Pn**	**20 04 55.8**	**-1.2**
BI02	**San Fabin de**	**5.57**	**202**		**Pn**	**20 05 06.1**	**-1.3**
BI02	**San Fabin de**	**5.57**	**202**	P	**Pn**	**20 05 06.5**	**-0.9**
AC01	**Pan de Azucar**	**5.58**	**342**	P	**Pn**	**20 05 06.1**	**-1.4**
PB14	**IPOC Station P**	**7.01**	**347**	P	**Pn**	**20 05 24.1**	**-3.1**
SALTA		**7.54**	**17**	P	**Pn**	**20 05 32.9**	**-1.7**
GO06	**Curarrehue**	**8.37**	**195**		**Pn**	**20 05 42.7**	**-2.7**
GO06	**Curarrehue**	**8.37**	**195**	P	**Pn**	**20 05 42.5**	**-2.9**
TRQA	**Tornquist**	**8.57**	**142**		**Pn**	**20 05 47.8**	**-0.2**
PB05	**IPOC Station P**	**8.71**	**351**	P	**Pn**	**20 05 50.2**	**0.0**
PB06	**IPOC Station P**	**8.79**	**355**	P	**Pn**	**20 05 47.9**	**-3.3**
PLCA	**Paso Flores**	**9.33**	**189**	P	**Pn**	**20 05 57.6**	**-0.8**
	comp=Z,14nm,0.4s,baz=12,slow=13,SNR=5.8						
PLCA	**Paso Flores**	**9.33**	**189**	P	**Pn**	**20 05 57.4**	**-1.0**
PB03	**IPOC Station P**	**9.46**	**354**	Pn	**Pn**	**20 05 56.0**	**-4.3**
PB03	**IPOC Station P**	**9.46**	**354**	P	**Pn**	**20 05 56.3**	**-4.0**
PB09	**IPOC Station P**	**9.67**	**357**	P	**Pn**	**20 06 00.2**	**-3.0**
PB07	**IPOC Station P**	**9.79**	**354**	Pn	**Pn**	**20 06 00.4**	**-4.4**
PB07	**IPOC Station P**	**9.79**	**354**	P	Pn	20 05 59.6	-5.2
PB02	**IPOC Station P**	**10.19**	**354**		Pn	20 06 05.3	-4.8
PB02	**IPOC Station P**	**10.19**	**354**	P	Pn	20 06 04.9	-5.3
CPUP	**Villa Florida**	**11.22**	**66**	P	**Pn**	**20 06 24.4**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=254,slow=15,SNR=1.3						
PB11	**IPOC Station P**	**11.72**	**356**	Pn	Pn	20 06 25.8	-5.1
GO01	**Chusmiza**	**11.79**	**358**	P	**Pn**	**20 06 29.6**	**-2.4**
PB16	**IPOC Station P**	**13.13**	**357**	P	**Pn**	**20 06 45.3**	**-4.4**
AP01	**Chacalluta**	**13.15**	**353**	P	**Pn**	**20 06 47.9**	**-1.6**
LPAZ	**La Paz**	**15.15**	**2**	P	**Pn**	**20 07 15.7**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=170,slow=7.7,SNR=28						
LPAZ	**La Paz**	**15.15**	**2**	Pn	**Pn**	**20 07 14.7**	**-1.1**
LPAZ	**La Paz**	**15.15**	**2**	P	**Pn**	**20 07 16.5**	**+0.7**
SIV	**San Ignacio**	**16.94**	**26**	P	**P**	**20 07 37.7**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=216,slow=12,SNR=7.7						
GO08	**Villa O'Higgin**	**17.20**	**189**	P	**P**	**20 07 38.2**	**-2.0**
GO08				IAmb	IAmb	20 07 45.1	

2.8nm,0.7s
TXAR Lajitas Array 80.97 56 P **P** **20 16 19.8 -0.3**
0.4nm,0.6s,baz=231,slow=4.0,SNR=4.1
0.4nm,0.6s
ILAR Eielson Array 82.40 11 P **P** **20 16 26.4 -0.2**
0.7nm,0.6s,baz=228,slow=6.6,SNR=9.7
0.7nm,0.6s
PDAR Pinedale Array 82.51 42 P **P** **20 16 27.5 -0.6**
1.6nm,0.8s,baz=212,slow=3.0,SNR=12
1.6nm,0.8s
H03S2 Juan Fernandez 85.73 124 T T 21 50 49.7
baz=250
H03S1 Juan Fernandez 85.75 124 T T 21 50 53.3
baz=250
H03S3 Juan Fernandez 85.75 124 T T 21 51 09.3
baz=250
MAW Mawson 87.77 199 P **P** **20 16 53.0 -0.7**
1.8nm,0.6s,baz=120,slow=6.1,SNR=9.9
1.8nm,0.6s
YKA Yellowknife Ar 90.17 24 P **P** **20 17 03.5 -1.3**
1.1nm,0.9s,baz=260,slow=3.7,SNR=5.2
1.1nm,0.9s
ULM Lac du Bonnet 94.15 39 P **P** **20 17 23.9 +0.4**
2.7nm,0.7s,baz=188,slow=9.4,SNR=2.0
2.7nm,0.7s
BRDH Bariadhala 99.71 291 LR LR 20 57 20.8
comp=Z,64nm,21.4s,baz=168,slow=32
BRTR Keskin Array B 145.70 321 PKPbc **PKPdf** **20 23 43.0 -0.6**
0.7nm,0.6s,baz=41,slow=2.1,SNR=5.8
GERES GERESS Array B 145.91 351 PKPbc **PKPdf** **20 23 43.6 0.0**
0.2nm,0.3s,baz=316,slow=3.7,SNR=4.4

*IDC **26** 20:31:33.9±1.2,34°.36N×25°.76E,h0km,mb3.8/8, mbtmp3.6/12,ML3.0/3,MS3.0/6,Error ellipse: s-maj=23.1km s-min=16.7km az=177.0*
*ISK **26** 20:31:35.9,34°.47N×25°.97E,h22km,ML3.0/9*
*ATH **26** 20:31:37.6±0.5,34°.49N×25°.81E,h10km,ML3.3/13, Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **26** 20:31:39.0,35°.N±3°.×2°.6E±°,h4km±2km,M3.1/7,MLh3.1/7*
ISC 26 20:31:35.6±1.5,**34°.53N**±0°.05×**25°.85E**±0°.03,**h6**km±9km, **n63,σ0s84/76,mb3.7/7,MS3.0/3,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.66**	**27**	Pg	**Pn**	**20 31 50.2**	**-1.3**
ZKR				Sg	**Sb**	**20 31 59.6**	**+0.7**
ZKR	**Zakros**	**0.66**	**27**	P	**Pb**	**20 31 49.9**	**+0.4**
ZKR	**Zakros**	**0.66**	**27**	P	**Pb**	**20 31 49.9**	**+0.4**
ZKR				S	**Sn**	**20 32 02.0**	**-0.1**
AGNA	**Agios Nikolaos**	**0.67**	**351**	P	**Pn**	**20 31 51.2**	**-0.4**
AGNA				S	**Sn**	**20 32 01.5**	**-0.9**
SIT2	**Siteia**	**0.70**	**17**	P	**Pn**	**20 31 52.6**	**+0.5**
SIT2				S	**Sn**	**20 32 04.0**	**+0.7**
NPS	**Neapolis**	**0.76**	**345**	S	**Sg**	**20 31 59.6**	**-0.3**
NPS	**Neapolis**	**0.76**	**345**	P	**Pn**	**20 31 52.6**	**-0.3**
NPS				S	**Sn**	**20 32 04.2**	**-0.5**
SIVA	**Sivas**	**0.98**	**300**	P	**Pb**	**20 31 55.4**	**+0.3**
SIVA				S	**Sb**	**20 32 08.1**	**-0.2**
SIVA	**Sivas**	**0.98**	**300**	P	**Pb**	**20 31 55.2**	**+0.2**
SIVA				S	**Sn**	**20 32 09.6**	**-0.6**
IACM	**Heraklion**	**1.00**	**321**	S	**Sb**	**20 32 09.1**	**+0.2**
IACM	**Heraklion**	**1.00**	**321**	P	**Pn**	**20 31 56.5**	**+0.2**
IACM				S	**Sn**	**20 32 11.2**	**+0.5**
IDI	**Anoyia**	**1.09**	**314**	Pn	**Pn**	**20 31 58.0**	**+0.5**
	2.4nm,0.3s,baz=306,slow=19,SNR=34						
IDI				Sn	**Sn**	**20 32 15.5**	**+2.5**
	14nm,0.3s,baz=164,slow=20,SNR=20						
IDI	**Anoyia**	**1.09**	**314**	Pn	**Pn**	**20 31 58.1**	**+0.5**
IDI				Sn	**Sn**	**20 32 14.1**	**+1.0**
IDI	**Anoyia**	**1.09**	**314**	P	**Pn**	**20 31 57.3**	**-0.3**
IDI				S	**Sb**	**20 32 11.5**	**0.0**
IDI	**Anoyia**	**1.09**	**314**	P	**Pn**	**20 31 57.7**	**+0.2**
IDI				S	**Sn**	**20 32 13.9**	**+0.8**
KARP	**Karpathos**	**1.48**	**46**	Pn	**Pn**	**20 32 01.7**	**-1.1**
KARP	**Karpathos**	**1.48**	**46**	P	**Pg**	**20 32 05.1**	**+1.2**
KARP				S	**Sg**	**20 32 24.7**	**+1.6**
KARP	**Karpathos**	**1.48**	**46**	P	**Pg**	**20 32 04.5**	**+0.5**
GVD	**Gavdhos**	**1.48**	**282**	Pn	**Pn**	**20 32 03.3**	**+0.4**
GVD	**Gavdhos**	**1.48**	**282**	P	**Pb**	**20 32 03.8**	**+0.2**
GVD				S	**Sg**	**20 32 23.7**	**+0.4**
GVD	**Gavdhos**	**1.48**	**282**	P	**Pb**	**20 32 03.5**	**-0.1**
GVD				S	**Sb**	**20 32 23.3**	**+0.6**
VAM	**Vamos**	**1.61**	**303**	P	**Pg**	**20 32 06.4**	**-0.1**
VAM				S	**Sb**	**20 32 26.6**	**+0.1**
VAM	**Vamos**	**1.61**	**303**	P	**Pb**	**20 32 06.0**	**+0.2**
VAM				S	**Sg**	**20 32 27.1**	**-0.3**
IMMV	**Iera Moni Meta**	**1.79**	**302**	Pn	**Pn**	**20 32 07.9**	**+0.8**
IMMV	**Iera Moni Meta**	**1.79**	**302**	P	**Pb**	**20 32 09.3**	**+0.4**
IMMV				S	**Sb**	**20 32 31.8**	**+0.2**
IMMV	**Iera Moni Meta**	**1.79**	**302**	P	**Pb**	**20 32 08.3**	**-0.5**
THERA	**Ancient Thera,**	**1.86**	**351**	P	**Pb**	**20 32 09.7**	**-0.2**
THERA	**Ancient Thera,**	**1.86**	**351**	P	**Pg**	**20 32 10.4**	**-0.7**
THR6	**Thira Island,**	**1.86**	**349**	P	**Pb**	**20 32 09.8**	**+0.2**
THR9	**Santorini-Faro**	**1.87**	**348**	P	**Pg**	**20 32 10.7**	**-0.7**
THR8	**Santorini-Mono**	**1.90**	**351**	P	**Pb**	**20 32 10.4**	**-0.2**
SNT5	**Nea Kammeni, S**	**1.90**	**349**	P	**Pg**	**20 32 11.4**	**-0.7**
THR3	**Thira Island,**	**1.91**	**349**	P	**Pb**	**20 32 11.1**	**+0.3**
THR5	**Thira Island,**	**1.93**	**348**	Pn	**Pn**	**20 32 08.5**	**-0.4**
THR5	**Thira Island,**	**1.93**	**348**	P	**Pb**	**20 32 10.7**	**-0.5**
THR2	**Thira island,**	**1.94**	**350**	P	**Pb**	**20 32 11.6**	**+0.2**
SAP3	**Santorini-Thir**	**1.94**	**348**	P	**Pg**	**20 32 11.9**	**-0.9**
KNDR	**Palaiochora Ch**	**1.96**	**292**	P	**Pb**	**20 32 10.8**	**-0.9**
KNDR				S	**Sb**	**20 32 36.0**	**-0.4**
MHLO	**Agia Marina, M**	**2.46**	**332**	P	**Pb**	**20 32 18.4**	**-1.8**
ANKY	**Antikythira Is**	**2.48**	**303**	P	**Pb**	**20 32 18.6**	**-2.0**
ARG	**Arkhangelos**	**2.51**	**47**	P	**Pb**	**20 32 19.1**	**-2.0**
DAT	**Datca**	**2.60**	**32**	Pn	**Pn**	**20 32 17.9**	**-0.5**
BODT	**Bodrum**	**2.79**	**25**	Pn	**Pn**	**20 32 20.8**	**-0.1**
TURN	**Turunc**	**2.97**	**40**	Pn	**Pn**	**20 32 23.1**	**-0.2**
VLI	**Veliai**	**3.22**	**313**	P	**Pn**	**20 32 28.6**	**+1.7**
YER	**Yerkesik**	**3.26**	**37**	Pn	**Pn**	**20 32 27.2**	**-0.2**
BRTR	**Keskin Array B**	**8.09**	**48**	Pn	Pn	20 33 38.6	+4.8
	0.1nm,0.3s,baz=232,slow=11,SNR=5.2						
BRTR				LR	LR	20 37 45.1	
	comp=Z,81nm,18.6s,baz=210,slow=45						
	0.8nm,0.8s						
MLR	**Muntele Rosu**	**10.95**	**0**	LR	LR	20 39 00.7	
	comp=Z,70nm,18.8s,baz=182,slow=40						
KBZ	**Khabaz**	**16.08**	**50**	Pn	**P**	**20 35 27.4**	**+1.7**
	2.5nm,0.8s,baz=272,slow=5.7,SNR=11						
AKASG	**Malin Array Be**	**16.35**	**8**	Pn	**Pn**	**20 35 26.1**	**+0.4**
	0.2nm,0.3s,baz=198,slow=10,SNR=2.1						
	0.2nm,0.4s						
GERES	**GERESS Array B**	**16.90**	**331**	P	**Pn**	**20 35 33.5**	**+0.6**
	baz=140,slow=13,SNR=2.7						
	0.2nm,0.5s						
DAVOX	**Davos/Dischmat**	**17.18**	**320**	LR	LR	20 42 58.1	
	comp=Z,31nm,20.6s,baz=109,slow=40						
ESDC	**Sonseca Array**	**24.27**	**291**	P	**P**	**20 36 52.6**	**-1.0**
	0.4nm,0.9s,baz=73,slow=9.3,SNR=4.3						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**26.93**	**0**	P	**P**	**20 37 16.8**	**-0.6**
	3.1nm,1.0s,baz=238,slow=7.9,SNR=6.0						
	3.1nm,1.0s						
NOA	**NORSAR Array B**	**28.15**	**345**	LR	LR	20 50 43.3	
	comp=Z,17nm,19.0s,baz=145,slow=41						
TORD	**Torodi Ar. Bea**	**30.53**	**232**	P	**P**	**20 37 47.8**	**-2.2**
	1.6nm,0.8s,baz=36,slow=6.9,SNR=8.6						
	1.6nm,0.8s						
ARTI	**Arti**	**31.12**	**35**	LR	LR	20 52 18.5	
	comp=Z,30nm,19.3s,baz=132,slow=40						
BVAR	**Borovoye Array**	**36.37**	**46**	P	**P**	**20 38 41.7**	**+1.2**
	1.0nm,0.8s,baz=282,slow=8.9,SNR=4.2						
	1.0nm,0.8s						
DBIC	**Dimbokro**	**39.63**	**233**	LR	LR	20 57 38.7	
	comp=Z,38nm,18.5s,baz=110,slow=40						
KURBB	**Kurchatov Arra**	**41.08**	**50**	P	**P**	**20 39 20.0**	**0.0**
	1.1nm,0.2s,baz=277,slow=8.7,SNR=6.3						
	1.1nm,0.2s						
MKAR	**Makanchi Array**	**43.65**	**56**	P	**P**	**20 39 41.0**	**0.0**
	0.6nm,0.7s,baz=277,slow=6.9,SNR=9.4						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**45.03**	**46**	P	**P**	**20 39 51.7**	**-0.2**
	0.7nm,0.6s,baz=280,slow=8.9,SNR=4.7						
	0.7nm,0.6s						
SONM	**Songino Array**	**59.45**	**51**	P	**P**	**20 41 40.1**	**+0.8**
	0.5nm,0.9s,baz=255,slow=5.5,SNR=1.1						
	0.5nm,0.9s						

*IDC **26** 20:31:50.5±1.2,21°.61S×33°.31E,h0km,mb3.9/6, mbtmp4.1/12,ML4.0/4,MS3.0/4,Error ellipse: s-maj=29.1km s-min=21.7km az=2.0*

*PRE **26** 20:31:50.2±0.7,21°.64S×33°.39E,h5km,ML3.4,Presumed earthquake*
*NEIC **26** 20:31:55.1±1.5,21°.66S±0°.07×33°.1E±0°.1,h10km±2km, mb4.3/2,Error ellipse: s-maj=21.2km s-min=9.6km az=64.0*
ISC 26 20:31:52.8±0.7,**21°.63S**±0°.05×**33°.11E**±0°.06,**h15**km,**n59,**
σ2s69/91,mb3.9/6,Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PILG	**Pilgrimsrest,**	**3.96**	**213**	*e*P	**Pn**	**20 32 54.6**	**+1.5**
PILG				*e*S	**Sn**	**20 33 41.6**	**+2.2**
PILG				IAML		20 34 07.4	
	comp=Z,201nm,0.4s						
BLWY	**Bulawayo**	**4.46**	**289**	*i* P	**Pn**	**20 33 03.7**	**+3.6**
BLWY				*i* S	**Sn**	**20 33 54.5**	**+2.7**
MATP	**Matopo**	**4.47**	**285**	Pn	**Pn**	**20 33 03.7**	**+3.5**
	comp=Z,2.4nm,0.3s,baz=107,slow=15,SNR=44						
MATP				Sn	**Sn**	**20 33 55.3**	**+3.2**
	comp=Z,5.5nm,0.3s,baz=88,slow=19,SNR=6.9						
MATP				Lg	Lg	20 34 12.2	
	comp=Z,11nm,0.3s,baz=140,slow=7.5,SNR=6.6						
MATP				LR	LR	20 35 07.9	
	comp=Z,134nm,18.3s,baz=160,slow=42						
	comp=Z,9.1nm,0.3s						
MATP	**Matopo**	**4.47**	**285**	*i* P	**Pn**	**20 33 02.7**	**+2.5**
MATP				*i* S	**Sn**	**20 33 51.2**	**-0.9**
LEPH	**Lephalale, Lim**	**5.38**	**245**	*e*P	**Pn**	**20 33 16.1**	**+3.4**
LEPH				*e*S	**Sn**	**20 34 17.7**	**+3.3**
LEPH				IAML		20 34 49.9	
	comp=Z,172nm,0.5s						
BROLN	**Tlhalogang**	**5.41**	**275**	*i* P	**Pn**	**20 33 16.0**	**+2.9**
BROLN				*i* S	**Sn**	**20 34 20.7**	**+5.6**
BROLN				IAML		20 34 57.5	
	comp=N,258nm,0.5s						
POGA	**Pongola**	**5.83**	**192**	Pn	**Pn**	**20 33 21.0**	**+2.3**
POGA				Sn	**Sn**	**20 34 28.3**	**+3.0**
SOOWA	**Sowa**	**6.52**	**278**	*i* P	**Pn**	**20 33 32.3**	**+4.0**
SOOWA				*i* S	**Sn**	**20 34 46.4**	**+3.8**
SOOWA				IAML		20 35 32.5	
	comp=E,407nm,0.6s						
HRAO	**HartRAO**	**6.53**	**228**	*e*P	**Pn**	**20 33 31.5**	**+3.1**
HRAO				*e*S	**Sn**	**20 34 44.4**	**+1.6**
HRAO				IAML		20 35 30.3	
	comp=Z,82nm,0.6s						
LPHEP	**Lephephe**	**6.92**	**254**	*i* P	**Pn**	**20 33 36.5**	**+2.7**
LPHEP				*i* S	**Sn**	**20 34 55.1**	**+2.7**
LPHEP				IAML		20 35 57.1	
	comp=N,135nm,0.8s						
WDLM	**Western Deep L**	**7.05**	**226**	*e*P	**Pn**	**20 33 38.9**	**+3.2**
WDLM				*e*S	**Sn**	**20 34 57.0**	**+1.2**
WDLM				IAML		20 35 52.1	
	comp=Z,61nm,0.5s						
KHWEE	**KHWEE**	**7.13**	**266**	Pn	Pn	20 33 41.6	+4.9
KHWEE	**KHWEE**	**7.13**	**266**	*i* P	**Pn**	**20 33 39.8**	**+3.1**
KHWEE				*i* S	**Sn**	**20 35 02.2**	**+4.7**
KHWEE				IAML		20 35 44.7	
	comp=E,408nm,0.5s						
LSZ	**Lusaka**	**7.86**	**323**	Pn	**Pn**	**20 33 47.5**	**+0.7**
	comp=E,16nm,0.4s,baz=156,slow=12,SNR=22						
LSZ				Sn	**Sn**	**20 35 12.6**	**-3.0**
	comp=E,1.9nm,0.3s,baz=216,slow=21,SNR=7.8						
LSZ				Lg	Lg	20 35 57.7	
	comp=E,6.3nm,0.3s,baz=61,slow=19,SNR=12						
LSZ	**Lusaka**	**7.86**	**323**	Pn	**Pn**	**20 33 48.0**	**+1.2**
LSZ	**Lusaka**	**7.86**	**323**	*i* P	**Pn**	**20 33 48.0**	**+1.2**
LSZ				*i* S	**Sn**	**20 35 11.3**	**-4.3**
LSZ	**Lusaka**	**7.86**	**323**	*e*P	**Pn**	**20 33 47.9**	**+1.2**
LSZ				*e*S	**Sn**	**20 35 14.8**	**-0.8**
LSZ				IAML		20 35 42.1	
	comp=Z,17nm,0.6s						
KDWAN	**Kaudwane**	**8.00**	**256**	*i* P	**Pn**	**20 33 50.5**	**+1.8**
KDWAN				*i* S	**Sn**	**20 35 20.6**	**+1.6**
KDWAN				IAML		20 36 23.3	
	comp=E,230nm,0.6s						
PMBG	**Pietermaritzbu**	**8.19**	**196**	*e*P	**Pn**	**20 33 52.0**	**+0.9**
PMBG				*e*S	**Sn**	**20 35 20.4**	**-3.1**
PMBG				IAML		20 35 44.1	
	comp=Z,17nm,0.4s						
SNKL	**Senekal, Frees**	**8.20**	**215**	*e*P	**Pn**	**20 33 54.2**	**+2.8**
SNKL				*e*S	**Sn**	**20 35 22.8**	**-1.1**
SNKL				IAML		20 35 48.4	
	comp=Z,21nm,0.6s						
KSANE	**Kasane**	**8.40**	**296**	Pn	**Pn**	**20 33 57.1**	**+2.9**
KSANE	**Kasane**	**8.40**	**296**	*i* P	**Pn**	**20 33 55.2**	**+1.1**
KSANE				*i* S	**Sn**	**20 35 28.2**	**-0.7**
KSANE				IAML		20 36 21.8	
	comp=N,89nm,0.8s						
MAKGR	**Makgori**	**8.68**	**240**	Pn	**Pn**	**20 34 01.5**	**+3.6**
MAKGR	**Makgori**	**8.68**	**240**	*i* P	**Pn**	**20 33 58.7**	**+0.8**
MAKGR				*i* S	**Sn**	**20 35 32.9**	**-2.7**
MAKGR				IAML		20 36 41.7	
	comp=E,190nm,0.5s						
SKOMA	**Sekoma**	**8.92**	**250**	*i* P	**Pn**	**20 34 02.2**	**+0.9**
SKOMA				*i* S	**Sn**	**20 35 38.9**	**-2.8**
SKOMA				IAML		20 36 50.2	
	comp=N,59nm,0.6s						
BOSA	**Boshof**	**9.95**	**224**	Pn	**Pn**	**20 34 16.8**	**+1.5**
	comp=N,1.4nm,0.3s,baz=55,slow=12,SNR=27						
BOSA				Sn	**Sn**	**20 36 07.0**	**+0.2**
	comp=N,1.5nm,0.3s,baz=93,slow=18,SNR=6.6						
BOSA				Lg	Lg	20 37 05.3	
	comp=N,1.5nm,0.3s,baz=138,slow=7.7,SNR=6.6						
BOSA				LR	LR	20 38 32.7	
	comp=N,53nm,21.2s,baz=44,slow=40						
	comp=N,5.0nm,0.4s						
BOSA	**Boshof**	**9.95**	**224**	*i* P	**Pn**	**20 34 14.5**	**-0.8**
BOSA	**Boshof**	**9.95**	**224**	*e*P	**Pn**	**20 34 17.2**	**+1.9**
BOSA				*e*S	**Sn**	**20 36 05.8**	**-0.9**
BOSA				IAML		20 36 38.8	
	comp=Z,8.1nm,0.4s						
PHPEN	**Phepeng**	**10.15**	**246**	*i* P	**Pn**	**20 34 16.7**	**-1.5**
PHPEN				*i* S	**Sn**	**20 36 06.9**	**-4.9**
PHPEN				IAML		20 37 27.2	
	comp=E,169nm,0.6s						
GMARE	**Gumare**	**10.50**	**280**	Pn	Pn	20 34 27.9	+5.0
GMARE	**Gumare**	**10.50**	**280**	*i* P	**Pn**	**20 34 24.8**	**+1.9**
GMARE				*i* S	**Sn**	**20 36 18.4**	**-2.0**
GMARE				IAML		20 37 48.0	
	comp=N,219nm,1.0s						
GRTLG	**Ghanzi**	**11.08**	**269**	Pn	**Pn**	**20 34 33.3**	**+2.4**
GRTLG	**Ghanzi**	**11.08**	**269**	*i* P	**Pn**	**20 34 30.5**	**-0.4**
GRTLG				*i* S	**Sn**	**20 36 30.2**	**-4.5**
GRTLG				IAML		20 37 48.8	
	comp=N,73nm,0.9s						
QNGWA	**Qangwa**	**11.38**	**278**	*i* P	**Pn**	**20 34 34.1**	**-0.8**
QNGWA				IAML		20 38 06.8	
	comp=N,45nm,0.7s						
KOOLE	**Kule**	**12.03**	**261**		**Pn**	**20 34 46.8**	**+2.8**
KOOLE	**Kule**	**12.03**	**261**	*i* P	**Pn**	**20 34 44.4**	**+0.5**
KOOLE				*i* S	**Sn**	**20 36 51.8**	**-6.2**
KOOLE				IAML		20 38 28.5	
	comp=N,62nm,0.9s						
GRAF	**Camdeboo Natio**	**13.09**	**214**	*e*P	**Pn**	**20 35 00.3**	**+2.0**
GRAF				*e*S	**Sn**	**20 37 19.5**	**-4.2**
GRAF				IAML		20 37 46.5	
	comp=Z,6.5nm,0.6s						
BFON	**Badsfontein, M**	**13.16**	**218**	*e*P	**Pn**	**20 35 01.8**	**+2.5**
BFON				*e*S	**Sn**	**20 37 21.9**	**-3.6**
BFON				IAML		20 37 39.6	
	comp=Z,7.2nm,0.6s						
OPO	**Ambohidratompo**	**13.57**	**80**	Pn	**Pn**	**20 35 01.4**	**-3.6**
	baz=354,slow=16,SNR=1.5						
OPO				Sn	Sn	20 37 16.6	-19
	baz=181,slow=4.5,SNR=1.7						
	comp=Z,2.4nm,0.7s						
BRAK	**Brakfontein**	**13.61**	**220**	*e*P	**Pn**	**20 35 08.0**	**+2.6**
BRAK				*e*S	**Sn**	**20 37 32.9**	**-3.6**
BRAK				IAML		20 37 49.5	
	comp=Z,5.1nm,0.6s						
ROOI	**Rooidraai Farm**	**13.76**	**216**	*e*P	**Pn**	**20 35 09.7**	**+2.3**
ROOI				*e*S	**Sn**	**20 37 35.8**	**-4.3**
ROOI				IAML		20 37 43.1	
	comp=Z,3.6nm,0.5s						
GRAN	**Grantham**	**14.41**	**220**	*e*P	**Pn**	**20 35 19.2**	**+2.9**
FRAZ	**Fraserburg**	**14.63**	**223**	*e*P	**Pn**	**20 35 22.6**	**+3.2**
TSUM	**Tsumeb**	**14.76**	**277**	Pn	**Pn**	**20 35 22.0**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=109,slow=13,SNR=8.8						
TSUM				Sn	**Sn**	**20 38 02.4**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=233,slow=23,SNR=5.6						
TSUM				Lg	Lg	20 39 38.5	
	comp=Z,0.6nm,0.3s,baz=45,slow=23,SNR=3.1						
TSUM				LR	LR	20 41 23.3	
	comp=Z,85nm,20.9s,baz=136,slow=38						
TSUM	**Tsumeb**	**14.76**	**277**	Pn	**Pn**	**20 35 23.4**	**+2.2**
TSUM	**Tsumeb**	**14.76**	**277**	*i* P	**Pn**	**20 35 22.2**	**+1.0**
TSUM				*i* S	**Sn**	**20 38 07.8**	**+3.2**
TSUM	**Tsumeb**	**14.76**	**277**	*e*P	**P**	**20 35 25.1**	**-2.0**
WIN	**Windhoek**	**14.87**	**263**	Pn	**Pn**	**20 35 24.8**	**+2.0**
MERW	**Merweville**	**15.06**	**221**	*e*P	**Pn**	**20 35 27.7**	**+2.5**
SUR	**Sutherland**	**15.31**	**223**	Pn	**Pn**	**20 35 30.1**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=54,slow=14,SNR=16						
SUR				Sn	**Sn**	**20 38 13.9**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=66,slow=10.0,SNR=1.7						
SUR				Lg	Lg	20 39 54.2	
	comp=Z,0.1nm,0.3s,baz=341,slow=18,SNR=1.6						
SUR				LR	LR	20 41 35.3	
	comp=Z,115nm,18.1s,baz=62,slow=38						
	comp=Z,6.1nm,0.5s						
SUR	**Sutherland**	**15.31**	**223**	Pn	**P**	**20 35 31.5**	**-1.8**
SUR				IAmb	IAmb	20 35 46.5	
	comp=Z,45nm,1.4s						
SUR	**Sutherland**	**15.31**	**223**	*e*P	**P**	**20 35 31.3**	**-2.0**
LODK	**Lodwar**	**25.00**	**5**	P	**P**	**20 37 18.8**	**+2.5**
LODK				IAmb	IAmb	20 37 21.1	
	comp=Z,2.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**46.32**	**315**	P	**P**	**20 40 19.4**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=108,slow=7.0,SNR=7.1						
	comp=Z,1.8nm,0.7s						
DBIC	**Dimbokro**	**46.66**	**303**	P	**P**	**20 40 22.2**	**+1.1**
	comp=Z,3.8nm,0.7s,baz=130,slow=11,SNR=4.6						
	comp=Z,3.8nm,0.7s						
BRTR	**Keskin Array B**	**61.04**	**0**	P	**P**	**20 42 05.4**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=177,slow=6.9,SNR=4.5						
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**70.13**	**330**	P	**P**	**20 43 05.4**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=148,slow=5.9,SNR=5.6						
	comp=Z,0.9nm,0.9s						
BVAR	**Borovoye Array**	**81.08**	**22**	P	**P**	**20 44 07.4**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=195,slow=4.5,SNR=2.9						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**90.77**	**116**	P	**P**	**20 44 55.4**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=234,slow=3.7,SNR=4.6						
	comp=Z,0.6nm,0.7s						

*MAN **26** 20:39:03.0,13°.60N×120°.26E,h1km,MS3.7*
MAN INTENSITY IV - LUBANG OCCIDENTAL MINDORO.
*IDC **26** 20:39:09.1±1.9,13°.63N×120°.56E,h41km±18km,mb3.7/15, mbtmp3.9/15,MS3.3/2,Error ellipse: s-maj=29.4km s-min=14.9km az=69.0*
ISC 26 20:39:07.7±1.7,**13°.61N**±0°.04×**120°.37E**±0°.07,**h25**km±12km, **n30,σ1s91/35,mb4.1/15,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.74**	**49**	P	**Pn**	**20 39 21.7**	**-0.9**
	2μm,0.3s,baz=233,slow=5.8,SNR=30						
TGY				S	**Sn**	**20 39 31.8**	**-1.3**
	4μm,0.3s,baz=148,slow=21,SNR=5.6						
TGY	**Tagaytay City**	**0.74**	**49**	*e*P	**Pb**	**20 39 20.0**	**-2.0**
TGY				*e*S	**Sn**	**20 39 34.8**	**+1.7**
QVPH	**Quezon City--P**	**1.23**	**33**	*e*P	**Pb**	**20 39 30.0**	**-0.3**
QVPH				*e*S	**Sn**	**20 39 52.3**	**+7.1**
LQP	**Lukban**	**1.24**	**66**	*e*P	**Pb**	**20 39 29.6**	**-1.1**
GQP	**Guinayangan**	**2.04**	**82**	*e*P	**Pb**	**20 39 42.5**	**-1.7**
GQP				*i* S	**Sb**	**20 40 10.8**	**+1.6**
IBAJ	**Ibajay, Aklan**	**2.51**	**135**	*e*P	**Pn**	**20 39 47.3**	**+0.4**
IBAJ				*e*S	**Sb**	**20 40 25.9**	**+3.5**
BOLP	**Bolinao**	**2.79**	**351**	*i* P	**Pn**	**20 39 52.0**	**+1.3**
BOLP				*i* S	**Sn**	**20 40 25.7**	**+2.0**
JAP	**San Jose, Anti**	**3.24**	**151**	*e*P	**Pn**	**20 39 56.9**	**0.0**
GUIM	**Jordan**	**3.68**	**144**	*i* P	**Pn**	**20 40 03.5**	**+0.5**
GUIM				*i* S	**Sn**	**20 40 45.0**	**-0.6**
SIPP	**Brgy, Tapao**	**4.29**	**1**	*e*P	Pn	20 40 00.8	-11
SIPP				*e*S	**Sb**	**20 41 11.8**	**-2.0**
LLP	**Lapu-Lapu**	**4.81**	**133**	*e*P	Pb	20 40 25.6	-5.7
LLP				*i* S	**Sb**	**20 41 31.5**	**+2.7**
PLP	**Palo**	**5.12**	**118**	*e*P	**Pn**	**20 40 21.8**	**-1.1**
DAV	**Davao City (W)**	**8.28**	**141**	LR	LR	20 44 52.9	
	comp=Z,131nm,20.8s,baz=315,slow=42						
CMAR	**Chiang Mai Arr**	**21.14**	**286**	P	**P**	**20 43 53.0**	**+2.0**
	1.4nm,0.7s,baz=97,slow=9.1,SNR=12						
	1.4nm,0.7s						
PMG	**Port Moresby**	**35.07**	**129**	LR	LR	21 02 53.5	
	comp=Z,78nm,18.1s,baz=236,slow=41						
SONM	**Songino Array**	**36.05**	**344**	P	**P**	**20 46 07.8**	**+0.5**
	1.2nm,0.5s,baz=164,slow=11,SNR=10						
	1.2nm,0.5s						
WRA	**Warramunga

BOLP				*e*S	**Sb**	**20 44 46.7**	**-3.4**
JAP	**San Jose, Anti**	**3.25**	**151**	*e*P	**Pn**	**20 44 17.2**	**+0.2**
MJAR	**Matsushiro Arr**	**27.91**	**32**	LR	LR	21 01 14.4	
	comp=Z,23nm,19.4s,baz=218,slow=38						
SONM	**Songino Array**	**36.05**	**344**	P	**P**	**20 50 28.3**	**+0.7**
	0.3nm,0.4s,baz=146,slow=8.0,SNR=2.8						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**36.08**	**157**	P	**P**	**20 50 26.0**	**-2.0**
	0.8nm,0.7s,baz=336,slow=9.4,SNR=7.4						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**39.35**	**160**	P	**P**	**20 50 54.6**	**-1.1**
	0.4nm,0.5s,baz=339,slow=6.9,SNR=6.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**45.89**	**324**	P	**P**	**20 51 50.7**	**+2.0**
	0.3nm,0.7s,baz=114,slow=7.0,SNR=2.7						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**50.06**	**326**	P	**P**	**20 52 23.4**	**+2.6**
	0.3nm,0.2s,baz=121,slow=7.3,SNR=1.7						
	0.3nm,0.2s						
BVAR	**Borovoye Array**	**55.64**	**326**	P	**P**	**20 53 02.3**	**+0.3**
	0.3nm,0.6s,baz=111,slow=7.9,SNR=2.2						
	0.3nm,0.6s						

WEL 26 20:55:06.0±1.0, 31°S±7'×17°8E±1'2, h12km, M4.2/11, mB4.8/11, ML4.3/6, MLv4.5/11, Mw(mB)4.0/11, Error ellipse: s-maj=17.4km s-min=4.6km az=117.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.00**	**59**	P	Pn	20 56 06.1	-0.9
GLKZ				S	Sn	20 56 54.8	+1.1
TWGZ	**Tauwhareparae**	**6.80**	**181**	P	Pn	20 56 46.2	+0.6
TWGZ				S	Sn	20 58 05.4	+2.4
URZ	**Urewera**	**6.94**	**187**	P	Pn	20 56 48.6	+1.2
URZ				S	Sn	20 58 09.2	+3.0
MWZ	**Matawai**	**6.98**	**184**	P	Pn	20 56 48.7	+0.7
MWZ				S	Sn	20 58 09.4	+2.1
TKGZ	**Te Karaka**	**7.07**	**182**	P	Pn	20 56 48.9	-0.3
TKGZ				S	Sn	20 58 09.3	-0.1
RAGZ	**Rawiri**	**7.14**	**185**	P	Pn	20 56 50.2	-0.2
RAGZ				S	Sn	20 58 12.3	+0.8
MUGZ	**Murupara**	**7.19**	**189**	P	Pn	20 56 52.9	+2.0
RIGZ	**Rimuhau**	**7.34**	**182**	P	Pn	20 56 53.9	+1.0
RIGZ				S	Sn	20 58 16.1	-0.1
MTHZ	**Maungataniwha**	**7.55**	**188**	P	Pn	20 56 55.9	0.0
MTHZ				S	Sn	20 58 22.4	+0.9
NMHZ	**Naumai**	**7.80**	**188**	P	Pn	20 57 00.1	+0.8
NMHZ				S	Sn	20 58 28.2	+0.6
OTVZ	**Oturere**	**8.04**	**194**	P	Pn	20 57 03.7	+0.9
KWHZ	**Kaweka Forest**	**8.17**	**189**	P	Pn	20 57 03.6	-0.7
KWHZ				S	Sn	20 58 36.6	0.0
WNVZ	**Wahianoa**	**8.22**	**194**	P	Pn	20 57 05.6	+0.5
BHHZ	**Black Hill Sta**	**8.29**	**191**	P	Pn	20 57 03.9	-2.1
BHHZ				S	Sn	20 58 38.1	-1.4
KRHZ	**Kereru**	**8.39**	**189**	P	Pn	20 57 06.0	-1.4
KAHZ	**Kahuranaki**	**8.48**	**187**	P	Pn	20 57 06.6	-2.0
PNHZ	**Pukenui**	**8.68**	**190**	P	Pn	20 57 07.9	-3.5
TSZ	**Takapari Road**	**8.86**	**191**	P	Pn	20 57 11.0	-2.8
PRHZ	**Porangahau**	**8.97**	**187**	P	Pn	20 57 11.6	-3.8
BFZ	**Birch Farm**	**9.43**	**189**	P	Pn	20 57 17.1	-4.5
MRZ	**Mangatainoka R**	**9.51**	**192**	P	Pn	20 57 18.0	-4.7
TIWZ	**Tintock**	**9.57**	**190**	P	Pn	20 57 18.7	-4.9
OGWZ	**Otaki Gorge**	**9.74**	**193**	P	Pn	20 57 20.8	-5.0
HOWZ	**Holdsworth Sta**	**9.75**	**192**	P	Pn	20 57 21.0	-5.0
KIW	**Kapiti Island**	**9.83**	**195**	P	Pn	20 57 23.0	-4.2
MTW	**Mount Morrison**	**10.01**	**192**	P	Pn	20 57 24.1	-5.4
MSWZ	**Moikau Station**	**10.30**	**192**	P	Pn	20 57 27.9	-5.7
TCW	**Tory Channel**	**10.31**	**197**	P	Pn	20 57 28.2	-5.5

*IDC **26** 20:55:41.8±0.9, 6°.16N×126°.25E, h107km±6km, mb3.5/12, mbtmp4.0/14, MS3.4/2, Error ellipse: s-maj=38.3km s-min=9.4km az=64.0*
*DJA **26** 20:55:41.5±0.7, 6°N±6°×12°6E±°, h109km±12km, M4.6/18, mb4.7/18, mB5.1/11, MLv4.8/13, Mw(mB)4.4/11*
*MAN **26** 20:55:42.0, 6°.16N×126°.20E, h73km, MS3.9*
ISC 26 20:55:41.3±0.7, 6°.09N±0°.04×126°.23E±0°.06, h100km±6km, n46, σ1§38/66, mb3.8/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.52**	**271**	*i* P	**Pn**	**20 55 56.3**	**-1.0**
DDMP				*i* S	**Sn**	**20 56 08.3**	**-0.9**
DAV	**Davao City (W)**	**1.17**	**326**	P	**Pn**	**20 56 03.9**	**+0.3**
	300nm,0.4s,baz=95,slow=2.3,SNR=17						
DAV				S	**Sn**	**20 56 21.3**	**+0.8**
	1μm,0.5s,baz=286,slow=22,SNR=13						
DAV	**Davao City (W)**	**1.17**	**326**	P	**Pn**	**20 56 03.8**	**+0.1**
DMPH	**Davao City--Mi**	**1.22**	**324**	*i* P	**Pn**	**20 56 04.2**	**-0.1**
DMPH				*i* S	**Sn**	**20 56 22.0**	**+0.4**
GSPH	**General Santos**	**1.28**	**270**	*i* P	**Pn**	**20 56 02.8**	**-2.2**
GSPH				*i* S	**Sn**	**20 56 20.5**	**-2.5**
KCP	**Kidapawan**	**1.46**	**309**	*i* P	**Pn**	**20 56 06.7**	**-0.4**
KCP				*i* S	**Sn**	**20 56 26.3**	**-0.3**
CDOP	**Cateel, Davao**	**1.69**	**7**	*i* P	**Pn**	**20 56 09.3**	**-0.7**
CDOP				*i* S	**Sn**	**20 56 29.9**	**-1.9**
BIPH	**Bislig**	**2.08**	**3**	*i* P	**Pn**	**20 56 14.3**	**-0.7**
BIPH				*e*S	**Sn**	**20 56 39.9**	**-0.8**
BUKP	**Musuan**	**2.12**	**327**	*i* P	**Pn**	**20 56 15.9**	**+0.4**
BUKP				*i* S	**Sn**	**20 56 41.9**	**+0.2**
CTBH	**Cotabato--PC H**	**2.27**	**300**	*i* P	**Pn**	**20 56 17.3**	**-0.1**
SGSI	**Sangihe**	**2.49**	**196**	P	**Pn**	**20 56 22.4**	**+2.1**
CGP	**Cagayan de Oro**	**2.80**	**327**	*i* P	**Pn**	**20 56 24.2**	**-0.2**
CGP				*i* S	**Sn**	**20 56 58.8**	**+1.2**
TSSP	**Tandag City**	**2.93**	**359**	*e*P	**Pn**	**20 56 26.3**	**+0.1**
TSSP				*e*S	**Sn**	**20 57 03.2**	**+2.4**
PAGZ	**Pagadian**	**3.33**	**302**	*e*P	**Pn**	**20 56 31.4**	**0.0**
SCPH	**Surigao**	**3.74**	**349**	*e*P	**Pn**	**20 56 37.9**	**+0.9**
SCPH				*e*S	**Sn**	**20 57 20.5**	**+0.3**
LSIP	**Lazi, Siquijor**	**3.97**	**320**	*i* P	**Pn**	**20 56 40.8**	**+0.7**
LSIP				*i* S	**Sn**	**20 57 26.4**	**+0.7**
MSLP	**Maasin**	**4.24**	**341**	*e*P	**Pn**	**20 56 45.6**	**+1.8**
MSLP				*i* S	**Sn**	**20 57 31.4**	**-0.9**
LLP	**Lapu-Lapu**	**4.76**	**332**	*e*P	**Pn**	**20 56 51.4**	**+0.6**
LLP				*i* S	**Sn**	**20 57 47.8**	**+2.9**
MNI	**Manado**	**4.82**	**197**	P	**Pn**	**20 56 53.0**	**+1.3**
PLP	**Palo**	**5.19**	**346**	*e*P	**Pn**	**20 56 58.6**	**+1.9**
PLP				*e*S	**Sn**	**20 57 56.2**	**+0.9**
TNTI	**Ternate**	**5.40**	**168**	P	**Pn**	**20 57 01.0**	**+1.4**
	0.4nm2μm106nm,0.8s						
IBAJ	**Ibajay, Aklan**	**6.96**	**325**	*i* P	**Pn**	**20 57 24.4**	**+3.7**
MYLDM	**Lahad Datu**	**7.75**	**264**	P	**Pn**	**20 57 32.5**	**+1.1**
LUWI	**Luwuk**	**7.88**	**206**	P	Pn	20 57 38.4	+5.1
	2μm179nm,0.8s						
SANI	**Sanana**	**8.09**	**182**	P	**Pn**	**20 57 34.2**	**-1.9**
	2μm151nm,0.7s						
APSI	**Ampana**	**8.33**	**214**	P	**Pn**	**20 57 43.7**	**+4.4**
	765nm82nm,1.0s						
SWI	**Sorong**	**8.54**	**144**	P	**Pn**	**20 57 42.8**	**+0.6**
	14nm,0.6s						
SIJI	**Sorong**	**8.55**	**144**	P	**Pn**	**20 57 43.8**	**+1.5**
	3.9nm,0.3s,baz=168,slow=23,SNR=9.0						
SIJI				S	**Sn**	**20 59 17.6**	**+0.5**
	2.0nm,0.3s,baz=197,slow=23,SNR=1.6						
SIJI				LR	LR	21 01 10.7	
	comp=Z,49nm,18.1s,baz=24,slow=38						
SIJI	**Sorong**	**8.55**	**144**	P	**Pn**	**20 57 43.3**	**+1.0**
NLAI	**Namlea**	**9.31**	**175**	P	**Pn**	**20 57 52.0**	**-0.7**
	2μm105nm,0.7s						
KDI	**Kendari**	**10.62**	**200**	P	**Pn**	**20 58 11.7**	**+1.3**
	21nm,0.7s						
KAPI	**Kappang**	**12.79**	**211**	P	**Pn**	**20 58 40.3**	**+0.7**
	25nm,1.0s,baz=23,slow=9.0,SNR=6.3						
BATI	**Baumata**	**16.39**	**189**	P	**Pn**	**20 59 25.4**	**-0.1**
	29nm,0.4s,baz=343,slow=4.8,SNR=8.1						
WRA	**Warramunga Arr**	**27.07**	**163**	P	**P**	**21 01 14.3**	**-0.4**
	0.9nm,0.3s,baz=339,slow=10,SNR=75						
WRA				PcP	**PcP**	**21 04 33.9**	**+0.4**
	0.4nm,0.8s,baz=342,slow=2.6,SNR=1.9						
WRA				ScP	**ScP**	**21 08 05.3**	**+0.4**
	0.4nm,0.5s,baz=343,slow=2.6,SNR=2.6						
WRA				LR	LR	21 13 32.0	
	comp=Z,364nm,21.9s,baz=25,slow=39						
	0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.31**	**297**	P	**P**	**21 01 34.2**	**-0.4**
	0.3nm,0.3s,baz=116,slow=8.9,SNR=1.1						
CMAR				ScP	**ScP**	**21 08 12.7**	**+0.8**
	0.5nm,0.3s,baz=92,slow=3.3,SNR=6.3						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**30.51**	**166**	P	**P**	**21 01 45.8**	**+0.6**
	1.2nm,0.3s,baz=341,slow=7.3,SNR=38						
ASAR				PcP	**PcP**	**21 04 42.7**	**+0.6**
	0.5nm,0.5s,baz=349,slow=3.0,SNR=3.1						
ASAR				ScP	**ScP**	**21 08 16.4**	**+0.7**
	0.2nm,0.6s,baz=339,slow=3.1,SNR=2.3						
	1.2nm,0.3s						
STKA	**Stephens Creek**	**40.50**	**160**	P	**P**	**21 03 11.7**	**+1.2**
	7.6nm,0.6s,baz=336,slow=8.6,SNR=14						
	7.8nm,0.6s						
SONM	**Songino Array**	**44.92**	**341**	P	**P**	**21 03 45.7**	**-0.4**
	0.2nm,0.5s,baz=144,slow=8.6,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.35**	**325**	P	**P**	**21 05 03.8**	**-1.1**
	0.3nm,0.3s,baz=113,slow=6.8,SNR=11						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**58.27**	**333**	P	**P**	**21 05 25.1**	**-0.3**
	0.3nm,0.6s,baz=108,slow=9.3,SNR=1.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**59.50**	**327**	P	**P**	**21 05 32.9**	**-1.0**
	0.2nm,0.4s,baz=128,slow=7.1,SNR=6.7						
	0.2nm,0.4s						
MAW	**Mawson**	**85.79**	**200**	P	**P**	**21 08 08.1**	**-1.0**
	0.8nm,0.6s,baz=250,slow=13,SNR=2.2						
	0.8nm,0.6s						
VNDA	**Vanda**	**85.82**	**173**	P	**P**	**21 08 09.4**	**+0.3**
	0.3nm,0.5s,baz=332,slow=7.6,SNR=5.1						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**88.08**	**340**	P	**P**	**21 08 17.7**	**-2.5**
	0.9nm,0.6s,baz=75,slow=5.3,SNR=2.3						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**89.53**	**332**	P	**P**	**21 08 24.8**	**-2.4**
	0.9nm,0.9s,baz=29,slow=4.4,SNR=5.1						
	0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**121.69**	**289**	PKP	**PKPdf**	**21 14 24.2**	**-0.3**
	0.2nm,0.3s,baz=72,slow=2.0,SNR=8.5						

*NEIC **26** 21:08:50.0±1.7, 22°.48S±0°.07×174°.09E±0°.07, h10km±1km, mb4.4/15, Error ellipse: s-maj=13.9km s-min=8.6km az=224.0*
*IDC **26** 21:08:54.1±2.0, 22°.36S×173°.89E, h44km±19km, mb3.8/12, mbtmp4.1/15, ML3.5/2, MS3.7/16, Error ellipse: s-maj=17.6km s-min=13.1km az=133.0*
ISC 26 21:08:53.3±0.5, 22°.44S±0°.08×173°.98E±0°.07, h35km, n58, σ1§42/47, mb4.4/20, MS3.7/12, 5C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.05**	**40**	P	**Pn**	**21 10 19.0**	**-1.3**
	45nm,0.5s,baz=220,slow=21,SNR=40						
MSVF				S	**Sn**	**21 11 29.6**	**+1.2**
	18nm,0.6s,baz=106,slow=23,SNR=1.7						
MSVF				LR	LR	21 12 06.9	
	comp=Z,1μm,18.4s,baz=209,slow=32						
MSVF	**Nonsavu**	**6.05**	**40**		**Pn**	**21 10 19.0**	**-1.3**
MSVF					**Sn**	**21 11 27.6**	**-0.8**
DZM	**Mont Dzumac**	**6.99**	**272**	P	**Pn**	**21 10 33.7**	**+0.5**
	0.7nm,0.3s,baz=124,slow=14,SNR=9.3						
DZM				S	**Sn**	**21 11 50.1**	**-1.4**
	14nm,0.8s,baz=141,slow=21,SNR=3.6						
	2.9nm,0.3s						
RAO	**Raoul Island**	**9.96**	**135**	LR	LR	21 14 27.6	
	comp=Z,347nm,19.3s,baz=102,slow=33						
AFI	**Afiamalu**	**15.96**	**60**	LR	LR	21 17 29.9	
	comp=Z,276nm,18.7s,baz=167,slow=32						
URZ	**Urewera**	**16.00**	**171**	P	**P**	**21 12 38.6**	**-0.1**
	0.2nm,0.3s,baz=279,slow=6.2,SNR=2.7						
URZ				LR	LR	21 17 24.3	
	comp=Z,243nm,22.0s,baz=0.5,slow=32						
	10.0nm,0.9s						
KHZ	**Kahutara**	**19.93**	**181**	P	**P**	**21 13 20.9**	**-1.0**
KHZ				IAmb	IAmb	21 13 31.9	
	comp=Z,10nm,0.9s						
LTZ	**Lake Taylor**	**20.34**	**184**	P	**P**	**21 13 26.5**	**0.0**
LTZ				IAmb	IAmb	21 13 46.6	
	comp=Z,23nm,1.1s						
EIDS	**Eidsvold**	**21.13**	**258**	P	**P**	**21 13 35.6**	**+0.4**
EIDS				IAmb	IAmb	21 13 48.8	
	comp=Z,19nm,1.2s						
RPZ	**Rata Peaks**	**21.36**	**186**	P	**P**	**21 13 39.1**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=37,slow=10,SNR=3.6						
RPZ				LR	LR	21 21 25.0	
	comp=Z,107nm,18.7s,baz=312,slow=35						
	comp=Z,0.6nm,0.3s						
RAR	**Rarotonga**	**24.39**	**92**	LR	LR	21 23 34.4	
	comp=Z,64nm,18.8s,baz=272,slow=36						
CAN	**Canberra**	**25.28**	**234**	P	**P**	**21 14 16.5**	**+0.1**
CTA	**Charters Tower**	**25.93**	**270**	LR	LR	21 24 49.4	
	comp=Z,225nm,18.2s,baz=63,slow=37						
STKA	**Stephens Creek**	**30.21**	**245**	LR	LR	21 26 03.2	
	comp=Z,281nm,18.9s,baz=47,slow=34						
PPT2	**Papeete2**	**34.53**	**89**	*e*LR	LR	21 24 41.0	
	comp=Z,140nm,25.0s						
PPT	**Papeete**	**34.53**	**89**	LR	LR	21 26 01.8	
	comp=Z,64nm,20.4s,baz=308,slow=30						
AS31	**Alice Springs**	**36.81**	**260**	P	**P**	**21 15 58.6**	**+0.5**
ASAR	**Alice Springs**	**36.81**	**260**	P	**P**	**21 15 57.3**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=82,slow=8.1,SNR=14						
ASAR				LR	LR	21 30 45.0	
	comp=Z,132nm,21.6s,baz=111,slow=36						
	comp=Z,3.8nm,0.9s						
ASAR	**Alice Springs**	**36.81**	**260**	P	**P**	**21 15 56.7**	**-1.4**
WR8	**Warramunga Arr**	**36.82**	**266**	P	**P**	**21 15 57.0**	**-1.2**
WR8				IAmb	IAmb	21 16 09.2	
	comp=Z,9.8nm,1.2s						
WB0	**Warramunga Arr**	**36.95**	**267**	P	**P**	**21 15 58.5**	**-0.8**
WB0				IAmb	IAmb	21 16 16.7	
	comp=Z,10.0nm,1.3s						
WB2	**Warramunga Arr**	**36.96**	**266**	P	**P**	**21 16 00.7**	**+1.3**
WB2				IAmb	IAmb	21 16 31.9	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**36.97**	**266**	P	**P**	**21 15 57.9**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=97,slow=8.6,SNR=8.4						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**36.97**	**266**	P	**P**	**21 15 58.4**	**-1.1**
FORT	**Forrest**	**41.65**	**248**	P	**P**	**21 16 39.1**	**+0.7**
FORT				IAmb	IAmb	21 16 49.6	
	comp=Z,5.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**45.40**	**266**	LR	LR	21 35 03.1	
	comp=Z,109nm,19.5s,baz=7.5,slow=35						
MBWA	**Marble Bar**	**50.15**	**261**	P	**P**	**21 17 45.0**	**-0.6**
KAPI	**Kappang**	**55.12**	**280**	LR	LR	21 44 48.9	
	comp=Z,162nm,18.3s,baz=244,slow=39						
VNDA	**Vanda**	**55.45**	**183**	P	**P**	**21 18 25.3**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=53,slow=6.0,SNR=1.3						
VNDA				LR	LR	21 38 17.8	
	comp=Z,43nm,21.6s,baz=346,slow=32						
	comp=Z,0.2nm,0.6s						
VNDA	**Vanda**	**55.45**	**183**	P	**P**	**21 18 23.9**	**+0.1**
VNDA				IAmb	IAmb	21 18 49.4	
	comp=Z,4.2nm,1.5s						
QSPA	**South Pole Qui**	**67.63**	**180**	P	**P**	**21 19 46.5**	**+0.1**
	comp=Z,4.0nm,1.1s,baz=354,slow=0.8,SNR=9.6						
QSPA				LR	LR	21 49 28.2	
	comp=Z,28nm,18.1s,baz=40,slow=36						
	comp=Z,4.0nm,1.1s						
QSPA	**South Pole Qui**	**67.63**	**180**	P	**P**	**21 19 45.8**	**-0.6**
MJAR	**Matsushiro Arr**	**67.69**	**329**	P	**P**	**21 19 46.6**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=161,slow=6.8,SNR=5.3						
	comp=Z,2.1nm,0.8s						
MJAR	**Matsushiro Arr**	**67.69**	**329**	P	**P**	**21 19 46.9**	**-0.1**
MJAR				IAmb	IAmb	21 19 58.7	
	comp=Z,4.9nm,1.2s						
KSRS	**Korea Array**	**73.67**	**323**	P	**P**	**21 20 23.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=124,slow=7.5,SNR=2.2						
	comp=Z,0.4nm,0.4s						
PETK	**Petropavlovsk-**	**76.55**	**350**	P	**P**	**21 20 40.0**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=167,slow=7.0,SNR=3.8						
	comp=Z,3.0nm,0.8s						
PETK	**Petropavlovsk-**	**76.55**	**350**	P	**P**	**21 20 40.6**	**+1.0**
MAW	**Mawson**	**77.12**	**202**	P	**P**	**21 20 43.1**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=113,slow=7.8,SNR=14						
MAW				LR	LR	21 52 10.5	
	comp=Z,55nm,18.4s,baz=57,slow=34						
	comp=Z,2.6nm,0.7s						
MAW	**Mawson**	**77.12**	**202**	P	**P**	**21 20 43.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**83.84**	**293**	P	P	21 21 24.2	+4.6
	comp=Z,0.4nm,0.3s,baz=127,slow=6.1,SNR=5.3						
CMAR	**Chiang Mai Arr**	**83.84**	**293**	P	**P**	**21 21 19.1**	**-0.6**
TROLL	**Troll, Antarti**	**85.62**	**183**	⇑P	P	21 21 37.0	+9.0
	comp=Z,369nm,0.7s						
TROLL	**Troll, Antarti**	**85.62**	**183**	⇑P	**P**	**21 21 26.7**	**-1.2**
	comp=Z,286nm,0.6s						
SNAA	**Sanae**	**86.11**	**181**	⇑P	P	21 21 38.8	+8.4
	comp=Z,64nm,0.8s						
SNAA	**Sanae**	**86.11**	**181**	⇑P	**P**	**21 21 29.0**	**-1.4**
SNAA	**Sanae**	**86.11**	**181**	P	**P**	**21 21 28.6**	**-1.7**
	comp=Z,1.7nm,0.7s,baz=162,slow=5.4,SNR=4.0						
SNAA				LR	LR	21 59 16.2	
	comp=Z,24nm,18.4s,baz=200,slow=35						
	comp=Z,1.7nm,0.7s						
VNA2	**Neumayer--Watz**	**86.89**	**180**	P	P	21 21 43.5	+9.5
	comp=Z,4.1nm,0.6s,baz=184,slow=5.5						
VNA1	**Neumayer--Stat**	**87.15**	**179**	⇑P	P	21 21 45.1	+10
	comp=Z,6.7nm,1.1s						
NVAR	**Mina Array Bea**	**87.67**	**47**	P	**P**	**21 21 38.7**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=261,slow=4.6,SNR=2.0						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**87.67**	**47**	P	**P**	**21 21 38.2**	**-0.4**
ILAR	**Eielson Array**	**92.03**	**16**	P	**P**	**21 21 56.8**	**-1.2**
	comp=Z,1.1nm,1.0s,baz=227,slow=6.0,SNR=3.4						
	comp=Z,1.1nm,1.0s						
ILAR	**Eielson Array**	**92.03**	**16**	P	**P**	**21 21 58.3**	**+0.3**
EKA	**Eskdalemuir Ar**	**147.08**	**357**	PKPbc	**PKPdf**	**21 28 30.0**	**0.0**
	comp=Z,1.7nm,0.8s,baz=7.6,slow=2.3,SNR=2.8						
CLL	**Collm**	**147.61**	**338**	*e*PKPbc	**PKPdf**	**21 28 32.0**	**+1.0**
	comp=Z,4.0nm,1.0s						
CLL				*ex*	x	21 28 43.0	
BRG	**Berggiesshubel**	**147.63**	**336**	*e*PKP	**PKPbc**	**21 28 33.0**	**-0.8**
BRG				Amp		21 28 33.8	
	comp=Z,3.1nm,1.1s						
BRG	**Berggiesshubel**	**147.63**	**336**	P	**PKPab**	**21 28 43.0**	**+6.9**
BRG				Amp		21 28 43.3	
	comp=Z,3.5nm,1.0s						
GERES	**GERESS Array B**	**149.34**	**334**	PKPbc	**PKPbc**	**21 28 36.7**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=17,slow=1.4,SNR=6.3						
GERES	**GERESS Array B**	**149.34**	**334**	PKPdf	**PKPdf**	**21 28 34.9**	**+0.8**

*CNRM **26** 21:11:45.0, 35°.51N×4°.56W, h98km, ML1.8*
*SFS **26** 21:11:46.3, 35°.58N×4°.63W, h72km, ML2.7/12, ML2.7/12, MLv2.8/12*
*MDD **26** 21:11:46.9±1.0, 35°.60N×4°.65W, h70km±15km, Mb3.0/11, Error ellipse: s-maj=9.6km s-min=5.3km az=174.0*
*INMG **26** 21:11:46.9±1.5, 35°.61N×4°.70W, h54km±10km, ML2.2, Error ellipse: s-maj=4.1km s-min=3.0km az=100.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*
*IGIL **26** 21:11:47.8, 35°.60N×4°.65W, h70km, ML2.2*
ISC 26 21:11:44.0±1.3, 35°.59N±0°.03×4°.60W±0°.04, h97km±9km, n64, σ1§59/107, 10C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIR	**Smir Dam**	**0.64**	**278**	P	**Pn**	**21 12 02.8**	**+2.2**
PALE	**Palemas**	**0.66**	**124**	P	**Pn**	**21 12 01.3**	**+0.6**
PALE				S	**Sn**	**21 12 13.0**	**-0.3**
CHEFC	**Chefchaouen**	**0.77**	**232**	P	**Pn**	**21 12 03.4**	**+1.5**
CHEFC				S	**Sn**	**21 12 16.6**	**+1.3**
EMIJ	**Mijas**	**0.98**	**352**	Pn	**Pn**	**21 12 04.2**	**+0.2**
EMIJ				Sn	**Sn**	**21 12 17.8**	**-1.2**
EMIJ	**Mijas**	**0.98**	**352**	Pn	**Pn**	**21 12 04.1**	**+0.2**
EMIJ				⇑*i*IVmb_VC		21 12 04.7	
	292nm,SNR=5.7						
EMIJ				Sn	**Sn**	**21 12 16.3**	**-2.7**
EMAL	**Malaga-Limoner**	**1.18**	**7**	Pn	**Pn**	**21 12 07.1**	**+0.9**
EMAL				Sn	**Sn**	**21 12 22.1**	**-0.8**
AKLM	**AKL**	**1.24**	**150**	P	**Pn**	**21 12 07.5**	**+0.6**
AKLM				S	**Sn**	**21 12 20.9**	**-3.3**
ELGU	**Los Guajares,**	**1.50**	**31**	Pn	**Pn**	**21 12 10.5**	**+0.4**
ELGU				Sn	**Sn**	**21 12 28.4**	**-1.6**
ELGU	**Los Guajares,**	**1.50**	**31**	Pn	**Pn**	**21 12 10.6**	**+0.4**
ELGU				⇑*i*IVmb_VC		21 12 12.9	
	158nm,SNR=2.4						
ELGU				Sn	**Sn**	**21 12 29.0**	**-0.9**
EGOR	**Sierra Gorda,**	**1.57**	**15**	Sn	**Sn**	**21 12 31.3**	**-0.3**
SICH	**Sidi Chahed**	**1.59**	**202**	P	**Pn**	**21 12 11.7**	**+0.4**
ESPR	**Espera**	**1.63**	**322**	Sn	**Sn**	**21 12 31.8**	**-0.9**
EBER	**Berja**	**1.90**	**46**	Sn	**Sn**	**21 12 38.1**	**-1.1**
IFR	**Ifrane**	**2.11**	**192**	Pn	**Pn**	**21 12 18.8**	**+0.8**
IFR				Sn	**Sn**	**21 12 42.4**	**-1.7**
EQES	**Quesada**	**2.53**	**29**	⇑*i*IVmb_VC		21 12

PFVI	**Vila Bisbo**	**3.74**	**296**	P		**Pn**	**21 12 41.4**	**+1.9**
PTEO	**Sao Teotonio**	**3.85**	**302**	*e*S		**Sn**	**21 13 24.0**	**-1.2**
PTEO				*i* IAML			21 13 25.9	
PTEO				*i* IAML			21 13 28.2	
PTEO				*i* IAML			21 13 29.1	
ETOB	**Tobarra**	**3.91**	**38**	Pn		**Pn**	**21 12 43.6**	**+1.7**
PLOUS	**Minas do Lousa**	**3.92**	**310**	*e*P		**Pn**	**21 12 43.3**	**+1.4**
PLOUS				*e*S		**Sn**	**21 13 25.6**	**-1.2**
PLOUS				*i* IAML			21 13 27.5	
PLOUS				*i* IAML			21 13 28.4	
PLOUS				*i* IAML			21 13 29.1	
PAB	**San Pablo**	**3.95**	**3**	Pn		**Pn**	**21 12 44.1**	**+1.5**
PAB				⇑*i*IVmb_VC			21 12 44.5	
	comp=N,50nm,SNR=1.4							
PAB				Sn		**Sn**	**21 13 25.5**	**-2.4**
EVO	**Evora**	**4.01**	**318**	Pn		**Pn**	**21 12 45.0**	**+1.8**
EVO				Sn		**Sn**	**21 13 27.0**	**-2.1**
EVO	**Evora**	**4.01**	**318**	*e*P		**Pn**	**21 12 45.0**	**+1.8**
EVO				*e*S		**Sn**	**21 13 27.5**	**-1.5**
EVO				*i* IAML			21 13 29.0	
EVO				*i* IAML			21 13 29.3	
EVO				*i* IAML			21 13 47.7	
PESTR	**Estremoz**	**4.05**	**325**	*e*P		**Pn**	**21 12 45.6**	**+1.9**
PESTR				*e*S		**Sn**	**21 13 28.4**	**-1.6**
PESTR				*i* IAML			21 13 30.1	
PESTR				*i* IAML			21 13 30.4	
PESTR				*i* IAML			21 13 32.5	
PESTR	**Estremoz**	**4.05**	**325**	P		**Pn**	**21 12 45.5**	**+1.7**
MOE	**Montemor**	**4.19**	**315**	*e*S		**Sn**	**21 13 32.4**	**-1.1**
PARRA	**Arraiolos**	**4.23**	**321**	*e*P		**Pn**	**21 12 47.7**	**+1.5**
PARRA				*e*S		**Sn**	**21 13 32.5**	**-2.0**
PARRA				*i* IAML			21 13 32.7	
PARRA				*i* IAML			21 13 32.8	
PARRA				*i* IAML			21 13 34.5	
PMRV	**Marv??o**	**4.43**	**331**	*e*P		**Pn**	**21 12 50.5**	**+1.6**
PMRV				*e*S		**Sn**	**21 13 37.4**	**-1.8**
PMRV				*i* IAML			21 13 50.6	
PMRV				*i* IAML			21 13 51.6	
PMRV				*i* IAML			21 13 52.0	
PMTG	**Montargil**	**4.52**	**321**	*e*P		**Pn**	**21 12 51.7**	**+1.7**
PMTG				*e*S		**Sn**	**21 13 39.0**	**-2.4**
PMTG				*i* IAML			21 13 41.2	
PMTG				*i* IAML			21 13 41.6	
PMTG				*i* IAML			21 13 42.1	
EPLA	**Plasencia**	**4.62**	**346**	Pn		**Pn**	**21 12 52.3**	**+0.8**
EPLA				⇑*i*IVmb_VC			21 12 54.4	
	comp=N,83nm,SNR=1.8							
PCBR	**Castelo Branco**	**4.82**	**333**	*e*S		**Sn**	**21 13 46.7**	**-1.9**
PCBR				*i* IAML			21 13 47.7	
PCBR				*i* IAML			21 13 50.9	
PSARD	**Sardoal**	**4.90**	**326**	⇓*e*P		**Pn**	**21 12 57.2**	**+1.9**
PSARD				*e*S		**Sn**	**21 13 48.3**	**-2.4**
PSARD				*i* IAML			21 13 48.8	
PSARD				*i* IAML			21 13 49.1	
PSARD				*i* IAML			21 14 01.6	
PSBE	**So Bento**	**5.14**	**321**	*e*P		**Pn**	**21 13 01.0**	**+2.4**
PSBE				*e*S		**Sn**	**21 13 55.3**	**-1.3**
PSBE				*i* IAML			21 13 59.2	
PSBE				*i* IAML			21 14 15.6	
PSBE				*i* IAML			21 14 17.6	
PCAS	**Casmilo, Conde**	**5.42**	**326**	*e*S		**Sn**	**21 14 00.7**	**-2.6**
ETOR	**Torete**	**5.59**	**20**	Pn		**Pn**	**21 13 06.3**	**+1.6**
ETOR				⇑*i*IVmb_VC			21 13 10.1	
	comp=N,60nm,SNR=1.0							
PVIS	**Viseu**	**5.74**	**334**	*e*S		**Sn**	**21 14 10.5**	**-0.6**
POLO	**Lamas de Olo**	**6.29**	**338**	*e*P		**Pn**	**21 13 16.4**	**+2.2**
POLO				*e*S		**Sn**	**21 14 21.8**	**-2.9**
PGAV	**Gavieira, Arco**	**6.98**	**337**	*e*P		**Pn**	**21 13 24.8**	**+1.2**
PGAV				*e*S		**Sn**	**21 14 38.4**	**-3.1**

NIED ***26*** *21:13:06.4, 43.67N×147.51E, h0km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.45; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$-0.58; $M_{r\theta}$1.09; $M_{\theta\phi}$-0.71; $M_{\phi r}$1.38; Fault plane solution: $M_0$2.28000×10^{15} NP1: ϕ_s240.00000°,δ21.00000°,λ107.00000°. NP2: ϕ_s41.00000°,δ70.00000°,λ84.00000°.*

JMA ***26*** *21:13:06.4±0.6, 44.1N×14.8E±, h0km, MV4.4/34, E OFF HOKKAIDO*

SKHL ***26*** *21:13:08.5±0.6, 43.80N×147.80E, h55km±5km, mb5.5/3*

MOS ***26*** *21:13:08.1±1.0, 43.86N×147.65E, h48km, mb4.7/15, Error ellipse: s-maj=7.8km s-min=6.0km az=106.9*

NEIC ***26*** *21:13:09.5±1.3, 43.88N±0.04×147.6E±0.1, h35km±1km, mb4.6/96, Error ellipse: s-maj=13.1km s-min=6.1km az=276.0*

GFZ ***26*** *21:13:10.6±0.7, 44.19×14.8E±, h55km, M4.8/19, mb4.8/19*

IDC ***26*** *21:13:11.3±2.4, 44.01N×147.62E, h56km±20km, mb3.9/28, mbtmp4.1/36, ML3.8/7, MS3.2/12, Error ellipse: s-maj=16.9km s-min=12.4km az=153.0*

ISC 26 21:13:09.1±0.4, 43.82N±0.05×147.69E±0.05, h39km±4km, h40km:pP-P, n496, σ0.98/515, mb4.5/106, MS3.4/9, 34C-9D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.62**	**275**	*e*P		Pn	21 13 33.7	+12
SHO					AMB	AMB	21 13 34.7	
	5μm,0.4s							
SHO				*e*S		Sn	21 13 42.3	+12
SHO					A	A	21 13 43.4	
	23μm,0.3s							
SHO					A	A	21 13 43.4	
	9μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.34**	**280**	*d*	*i* PN	**Pn**	**21 13 30.4**	**-0.9**
YUK					*i* S	**Sn**	**21 13 46.3**	**-1.5**
YUK					pmax	pmax		
	comp=Z,2μm,0.2s							
YUK					pmax	pmax		
	comp=N,377nm,0.1s							
YUK					pmax	pmax		
	comp=E,596nm,0.1s							
YUK					smax	smax		
	comp=E,6μm,1.3s							
YUK					smax	smax		
	comp=N,6μm,0.9s							
YUK					smax	smax		
	comp=N,5μm,0.3s							
YUK					smax	smax		
	comp=E,5μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.34**	**280**	*i*	P	**Pn**	**21 13 30.4**	**-0.9**
YUK					AMB	AMB	21 13 31.9	
	comp=E,3μm,0.3s							
YUK				*i*	S	**Sn**	**21 13 46.3**	**-1.5**
YUK					A	A	21 13 50.1	
	comp=E,5μm,0.3s							
YUK					A	A	21 13 50.1	
	comp=E,7μm,0.3s							
KUR	**Kuril'sk**	**1.42**	**5**	*e*	PN	**Pn**	**21 13 31.2**	**-1.1**
KUR				*e*	S	**Sn**	**21 13 48.0**	**-1.8**
KUR					pmax	pmax		
	comp=Z,442nm,0.6s							
KUR					smax	smax		
	comp=E,3μm,0.4s							
KUR					smax	smax		
	comp=N,1μm,0.2s							
KUR	**Kuril'sk**	**1.42**	**5**	*i*	P	**Pn**	**21 13 31.6**	**-0.7**
KUR					AMB	AMB	21 13 33.7	
	comp=N,480nm,0.2s							
KUR				*i*	S	**Sn**	**21 13 48.4**	**-1.4**
KUR					A	A	21 13 51.1	
	comp=N,2μm,0.4s							
KUR					A	A	21 13 51.1	
	comp=N,2μm,0.4s							
REI	**Reidovoe**	**1.46**	**9**	*i*	P	**Pn**	**21 13 32.4**	**-0.6**
REI					AMB	AMB	21 13 34.2	
	comp=N,170nm,0.2s							
REI				*i*	S	**Sn**	**21 13 50.0**	**-0.9**
REI					A	A	21 13 51.0	
	comp=N,640nm,0.2s							
REI					A	A	21 13 51.0	
	comp=N,580nm,0.2s							
NEM2	**Nemuro 2**	**1.49**	**253**	P		**Pn**	**21 13 31.7**	**-1.6**
NMR	**Nemuro--Hokkai**	**1.50**	**253**	⇓*i*	PN	**Pn**	**21 13 31.6**	**-1.8**
NMR					*i* S	**Sn**	**21 13 51.1**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.50**	**253**	*i*	P	**Pn**	**21 13 31.7**	**-1.7**
NMR					*i* S	**Sn**	**21 13 50.4**	**-1.3**
RUSJ	**Misakicho**	**1.79**	**280**	⇓*i*	PN	**Pn**	**21 13 37.5**	**+0.1**
RUSJ					*i* S	**Sn**	**21 13 55.4**	**-3.5**
JRA	**Rausu**	**1.86**	**274**	P		**Pn**	**21 13 38.2**	**-0.2**
JRA					*e*S	**Sn**	**21 14 02.0**	**+1.3**
JNSB	**Nemuroshibetsu**	**1.94**	**270**	P		**Pn**	**21 13 39.5**	**-0.1**
JKHN	**Kushirohamanak**	**1.98**	**249**	*e*P		**Pn**	**21 13 39.2**	**-0.9**
JNK	**Nakash**	**2.17**	**265**	*i* P		**Pn**	**21 13 42.0**	**-0.7**
AKK	**Akkeshi**	**2.23**	**250**	*e*P		**Pn**	**21 13 42.2**	**-1.2**
JAK	**Akkeshi**	**2.33**	**250**	*e*P		**Pn**	**21 13 43.8**	**-1.1**
JAK					*e*S	**Sn**	**21 14 12.2**	**-0.1**
JTKR	**Abashiri--Toko**	**2.74**	**274**	P		**Pn**	**21 13 51.1**	**+0.7**
JAR	**Ashorobuto**	**2.90**	**261**	P		**Pn**	**21 13 52.9**	**+0.2**
JOB	**Onbets**	**2.96**	**253**	P		**Pn**	**21 13 53.2**	**-0.3**
JMP	**Maruseppu**	**3.13**	**275**	P		**Pn**	**21 13 56.8**	**+0.8**
JCH	**Churui**	**3.39**	**251**	*e*P		**Pn**	**21 13 58.9**	**-0.5**
JKK2	**Kamakawa 2**	**3.58**	**273**	P		**Pn**	**21 14 03.9**	**+1.8**
JKA	**Kamikawa-asahi**	**3.69**	**276**			**Pn**	**21 14 04.0**	**+0.5**
JKA	**Kamikawa-asahi**	**3.69**	**276**	P		**Pn**	**21 14 06.5**	**+2.9**
JKA	**Kamikawa-asahi**	**3.69**	**276**	*e*P		**Pn**	**21 14 06.2**	**+2.7**
ASAJ	**Asahikawa**	**3.69**	**276**	P		**Pn**	**21 14 06.2**	**+2.6**
	comp=N,6.1nm,0.3s,baz=76,slow=13,SNR=40							
ASAJ					LR	LR	21 15 41.9	
	comp=N,567nm,19.1s,baz=158,slow=42							
	comp=N,16nm,0.4s							
ASAJ	**Asahikawa**	**3.69**	**276**	*e*P		**Pn**	**21 14 05.8**	**+2.2**
JFR	**Furan**	**3.77**	**262**	*e*P		**Pn**	**21 14 06.0**	**+1.3**
ERM	**Erimo**	**3.79**	**243**	*ce*P	N	**Pn**	**21 14 06.3**	**+1.4**
ERM					pmax	pmax		
	comp=Z,136nm,1.3s							
ERM	**Erimo**	**3.79**	**243**			**Pn**	**21 14 06.4**	**+1.5**
ERM	**Erimo**	**3.79**	**243**	P		**Pn**	**21 14 07.7**	**+2.8**
JEM	**Erimo**	**3.79**	**243**	*e*P		**Pn**	**21 14 06.8**	**+2.0**
YSS	**Yuzhno-Sakhali**	**4.68**	**314**	⇑*e*	PN	**Pn**	**21 14 18.3**	**+1.2**
YSS					*e*S	**Sn**	**21 15 12.1**	**+2.0**
YSS					pmax	pmax		
	comp=Z,60nm,0.5s							
YSS					smax	smax		
	comp=N,20nm,0.7s							
YSS					smax	smax		
	comp=E,30nm,0.8s							
YSS					MLR	MLR		
	comp=Z,300nm,16.0s							
YSS	**Yuzhno-Sakhali**	**4.68**	**314**			**Pn**	**21 14 18.0**	**+0.9**
YSS	**Yuzhno-Sakhali**	**4.68**	**314**	P		**Pn**	**21 14 18.4**	**+1.2**
YSS	**Yuzhno-Sakhali**	**4.68**	**314**	*e*P		**Pn**	**21 14 18.1**	**+0.9**
YSS					*e*S	**Sn**	**21 15 09.7**	**-0.4**
JTM	**Tenmabayashi**	**5.77**	**241**			**Pn**	**21 14 31.6**	**-0.6**
TYV	**Tymovskoe**	**7.83**	**336**	*e*P		**Pn**	**21 15 00.9**	**+0.6**
SKR	**Severo-Kuril's**	**8.94**	**37**	*e*P		**Pn**	**21 15 17.0**	**+1.5**
PAU	**Pauzhetka**	**9.81**	**36**	*e*P		**Pn**	**21 15 29.1**	**+1.6**
MJA0	**Matsu Arr-Jizo**	**10.24**	**228**	*e*P	N	**Pn**	**21 15 35.2**	**+1.7**
MJA0					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MJAR	**Matsushiro Arr**	**10.27**	**228**	P		**Pn**	**21 15 33.4**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=30,slow=12,SNR=5.1							
MJAR					S	**Sn**	**21 17 32.5**	**+5.0**
	comp=Z,0.5nm,0.3s,baz=74,slow=22,SNR=1.7							
MJAR	**Matsushiro Arr**	**10.27**	**228**	PN		**Pn**	**21 15 33.1**	**-0.7**
MJAR	**Matsushiro Arr**	**10.27**	**228**	Pn		**Pn**	**21 15 33.1**	**-0.7**
MJAR						**Sn**	**21 17 26.7**	**-0.8**
USRK	**Ussuriysk Ar.**	**11.32**	**277**	P		**Pn**	**21 15 49.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=91,slow=14,SNR=5.9							
USRK					LR	LR	21 20 06.7	
	comp=Z,149nm,20.4s,baz=63,slow=37							
	comp=Z,2.4nm,0.6s							
USRK	**Ussuriysk Ar.**	**11.32**	**277**			**Pn**	**21 15 47.8**	**-0.3**
PEA0B	**Petropavlovsk-**	**11.41**	**32**	PN		**Pn**	**21 15 50.6**	**+1.2**
PEA0B	**Petropavlovsk-**	**11.41**	**32**	Pn		**Pn**	**21 15 50.6**	**+1.2**
PETK	**Petropavlovsk-**	**11.41**	**32**	P		**Pn**	**21 15 49.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=196,slow=11,SNR=8.2							
	comp=Z,3.2nm,0.8s							
PETK	**Petropavlovsk-**	**11.41**	**32**	PN		**Pn**	**21 15 51.6**	**+2.2**
PETK	**Petropavlovsk-**	**11.41**	**32**	Pn		**Pn**	**21 15 51.6**	**+2.2**
BNX	**BinXian**	**14.53**	**285**	⇓P		**Pn**	**21 16 33.0**	**+1.0**
BNX					pmax	pmax		
	comp=Z,6.0nm,0.9s							
HEH	**HeiHe**	**15.22**	**302**	*e*P		**P**	**21 16 44.0**	**-1.5**
HEH					pmax	pmax		
	comp=Z,4.0nm,0.8s							
HEH					LR	LR		
	comp=N,63nm,12.3s							
HEH					LR	LR		
	comp=E,140nm,11.6s							
HEH					LR	LR		
	comp=Z,180nm,14.0s							
MA2	**Magadan**	**15.89**	**6**	P		**Pn**	**21 16 49.3**	**-0.3**
	comp=Z,7.1nm,0.5s,baz=127,slow=5.7,SNR=4.6							
MA2					LR	LR	21 22 23.7	
	comp=Z,67nm,20.9s,baz=218,slow=35							
MA2	**Magadan**	**15.89**	**6**	P		**Pn**	**21 16 49.7**	**+0.1**
MA2					pmax	pmax		
	comp=Z,21nm,1.1s							
MA2	**Magadan**	**15.89**	**6**	P		**Pn**	**21 16 49.7**	**+0.1**
MA2	**Magadan**	**15.89**	**6**	*e*P		**Pn**	**21 16 49.7**	**+0.1**
KSRS	**Korea Array**	**16.28**	**254**	P		**P**	**21 16 56.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=60,slow=11,SNR=14							
KSRS					LR	LR	21 23 34.8	
	comp=Z,52nm,18.2s,baz=135,slow=38							
	comp=Z,2.6nm,0.8s							
KSRS	**Korea Array**	**16.28**	**254**	*e*P		**P**	**21 16 57.4**	**+0.1**
KSRS					pmax	pmax		
	comp=Z,3.0nm,0.9s							
ZEA	**Zeya**	**16.67**	**314**	*e*P		**P**	**21 17 05.1**	**+3.6**
ZEA					pmax	pmax		
	comp=Z,10.0nm,1.0s							
ZEA					MLR	MLR		
	comp=Z,100nm,16.0s							
JNU	**Nakatsue**	**16.92**	**237**	P		**P**	**21 17 05.2**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=23,slow=23,SNR=2.7							
	comp=Z,7.1nm,0.8s							
SEY	**Seymchan**	**19.34**	**6**	P		**P**	**21 17 29.1**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=193,slow=8.9,SNR=4.6							
	comp=Z,1.0nm,0.3s							
SEY	**Seymchan**	**19.34**	**6**	*i* P		**P**	**21 17 29.1**	**-1.7**
SEY					pmax	pmax		
	comp=Z,2.0nm,0.7s							
SHEM	**Shemya Is, Ala**	**19.61**	**54**	LR		LR	21 27 31.9	
	comp=Z,17nm,18.4s,baz=313,slow=44							
HILR	**Hailar Array B**	**19.94**	**297**	P		**P**	**21 17 37.4**	**-0.1**
	baz=74,slow=11							
	comp=Z,1.5nm,0.3s							
YAK	**Yakutsk**	**21.09**	**336**	LR		LR	21 26 25.9	
	comp=Z,58nm,20.0s,baz=155,slow=38							
YAK	**Yakutsk**	**21.09**	**336**	*e*P		**P**	**21 17 53.0**	**+3.2**
YAK					pmax	pmax		
	comp=Z,12nm,0.9s							
YAK					pmax	pmax		
	comp=N,9.0nm,1.4s							
YAK					pmax	pmax		
	comp=E,4.0nm,1.1s							
BJT	**Baijiatuan**	**23.68**	**272**	P		**P**	**21 18 17.1**	**+0.1**
ULN	**Ulaanbaatar**	**28.36**	**293**	*ce*P		**P**	**21 19 00.4**	**+0.9**
ULN					pmax	pmax		
	comp=Z,8.0nm,2.5s							
ULN	**Ulaanbaatar**	**28.36**	**293**	*e*P		**P**	**21 19 00.4**	**+0.9**
TATO	**Taipei**	**28.46**	**237**	P		**P**	**21 19 00.0**	**-0.3**
SONM	**Songino Array**	**28.80**	**293**	P		**P**	**21 19 03.3**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=82,slow=8.9,SNR=12							
SONM					LR	LR	21 32 21.2	
	comp=Z,79nm,18.1s,baz=132,slow=40							
	comp=Z,1.0nm,0.5s							
SONM	**Songino Array**	**28.80**	**293**	*e*P		**P**	**21 19 03.5**	**+0.1**
SONM	**Songino Array**	**28.80**	**293**	P		**P**	**21 19 02.6**	**-0.8**
H11N2	**WAKE ISLAND Hy**	**28.90**	**140**	T		T	21 49 38.8	
	baz=331,slow=76,SNR=400							
H11N1	**WAKE ISLAND Hy**	**28.91**	**140**	T		T	21 49 44.7	
	baz=331,slow=76,SNR=445							
H11N3	**WAKE ISLAND Hy**	**28.92**	**140**	T		T	21 49 47.6	
	baz=331,slow=76,SNR=400							
TIXI	**Tiksi**	**29.37**	**348**	LR		LR	21 30 09.7	
	comp=Z,26nm,21.3s,baz=194,slow=35							
TIXI	**Tiksi**	**29.37**	**348**	P		**P**	**21 19 09.3**	**+1.4**
TIXI					pmax	pmax		
	comp=Z,20nm,1.1s							
TIXI	**Tiksi**	**29.37**	**348**	P		**P**	**21 19 09.3**	**+1.4**
TIXI	**Tiksi**	**29.37**	**348**	*e*P		**P**	**21 19 09.3**	**+1.4**
H11S1	**WAKE ISLAND Hy**	**29.88**	**142**	T		T	21 50 54.0	
	baz=332,slow=76,SNR=1901							
H11S3	**WAKE ISLAND Hy**	**29.88**	**142**	T		T	21 50 59.6	
	baz=332,slow=76,SNR=746							
H11S2	**WAKE ISLAND Hy**	**29.89**	**142**	T		T	21 50 55.2	
	baz=332,slow=76,SNR=710							
TLY	**Talaya**	**30.25**	**301**	LR		LR	21 32 03.6	
	comp=Z,81nm,18.1s,baz=114,slow=38							
K13K	**Kusilvak Mount**	**33.01**	**40**	P		**P**	**21 19 40.2**	**+0.1**
K13K					IAmb	IAmb	21 19 45.3	
	comp=Z,13nm,1.4s							
J14K	**Nanvaranak Lak**	**33.67**	**39**	P		**P**	**21 19 46.6**	**+0.8**
J14K					IAmb	IAmb	21 19 47.3	
	comp=Z,7.5nm,1.0s							
M14K	**Bethel**	**34.12**	**42**	P		**P**	**21 19 50.9**	**+1.2**
M14K					IAmb	IAmb	21 20 02.1	
	comp=Z,5.6nm,0.7s							
LZDM	**Lanzhou Array**	**34.33**	**272**	P		**P**	**21 19 52.4**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=42,slow=4.5,SNR=1.8							
	comp=Z,2.0nm,0.4s							
K15K	**Wolf Creek Mou**	**34.52**	**40**	P		**P**	**21 19 54.1**	**+0.9**
K15K					IAmb	IAmb	21 20 28.3	
	comp=Z,13nm,1.5s							
SDPT	**Sand Point**	**34.73**	**52**	P		**P**	**21 19 55.8**	**+0.7**
	baz=273							
M15K	**Kasigluk River**	**34.73**	**43**	P		**P**	**21 19 55.8**	**+0.7**
	baz=265							
N15K	**Kwethluk River**	**34.99**	**44**	P		**P**	**21 19 58.4**	**+1.1**
N15K	**Kwethluk River**	**34.99**	**44**	P		**P**	**21 19 58.9**	**+1.6**
	baz=266							
O15K	**Ungalikthiuk R**	**35.07**	**45**	P		**P**	**21 19 58.9**	**+1.0**
O15K	**Ungalikthiuk R**	**35.07**	**45**	P		**P**	**21 19 59.1**	**+1.1**
	baz=268							
J16K	**Anvik River**	**35.09**	**38**	P		**P**	**21 19 59.3**	**+1.2**
	baz=261							
D17K	**Noatak River**	**35.10**	**30**	P		**P**	**21 19 58.4**	**+0.3**
	baz=252							
RDOG	**Red Dog Mine**	**35.27**	**30**	P		**P**	**21 19 59.4**	**-0.2**
	baz=252							
CHNA	**Chernabura Isl**	**35.27**	**53**	P		**P**	**21 20 00.2**	**+0.5**
	baz=274							
C17K	**DeLong Mountai**	**35.31**	**29**	P		**P**	**21 19 59.6**	**-0.4**
	baz=251							
E17K	**Hotham Inlet**	**35.39**	**31**	P		**P**	**21 20 00.2**	**-0.4**
	baz=255							
L16K	**Owhat River**	**35.41**	**41**	P		**P**	**21 20 01.9**	**+1.0**
L16K					IAmb	IAmb	21 20 37.6	
	comp=Z,7.0nm,1.4s							
L16K	**Owhat River**	**35.41**	**41**	P		**P**	**21 20 01.4**	**+0.5**
	baz=265							
F17K	**Baldwin Pennin**	**35.45**	**33**	P		**P**	**21 20 02.0**	**+0.9**
F17K					IAmb	IAmb	21 20 03.6	
	comp=Z,6.3nm,0.8s							
F17K	**Baldwin Pennin**	**35.45**	**33**	P		**P**	**21 20 01.4**	**+0.3**
	baz=256							
G17K	**Kiwalik Mounta**	**35.47**	**34**	P		**P**	**21 20 01.8**	**+0.5**
	baz=258							
M16K	**Timber Creek**	**35.60**	**42**	P		**P**	**21 20 03.5**	**+0.9**
M16K	**Timber Creek**	**35.60**	**42**	P		**P**	**21 20 03.6**	**+1.0**
	baz=266							
N16K	**Nishlik Lake**	**35.66**	**43**	P		**P**	**21 20 03.8**	**+0.7**
	baz=267							
H17K	**Granite Mounta**	**35.67**	**35**	P		**P**	**21 20 03.3**	**+0.2**
	baz=260							
GTA2	**Gaotai**	**35.68**	**280**	*e*P		**P**	**21 20 04.3**	**+0.7**
GTA2					sP	pP	21 20 15.5	+0.9
GTA2					pmax	pmax		
	comp=Z,6.0nm,1.3s							
J17K	**VABM Dome**	**35.79**	**38**	P		**P**	**21 20 05.3**	**+1.2**
J17K	**VABM Dome**	**35.79**	**38**	P		**P**	**21 20 04.7**	**+0.5**
	baz=263							
E18K	**Tukpahlearik C**	**35.94**	**31**	P		**P**	**21 20 04.3**	**-1.0**
E18K	**Tukpahlearik C**	**35.94**	**31**	P		**P**	**21 20 05.9**	**+0.6**
	baz=256							
O16K	**Kokwok River B**	**35.97**	**45**	P		**P**	**21 20 06.3**	**+0.7**
	baz=269							
L17K	**Donlin**	**36.01**	**40**	P		**P**	**21 20 07.0**	**+1.0**
	baz=265							
P16K	**Nushagak River**	**36.01**	**46**	P		**P**	**21 20 06.1**	**+0.1**
	baz=270							
C18K	**Utukok River**	**36.05**	**29**	P		**P**	**21 20 06.1**	**-0.3**
	baz=253							
K17K	**Iditarod**	**36.06**	**39**	P		**P**	**21 20 07.6**	**+1.2**
K17K					IAmb	IAmb	21 20 08.9	
	comp=Z,5.1nm,0.9s							
K17K	**Iditarod**	**36.06**	**39**	P		**P**	**21 20 07.2**	**+0.8**
	baz=264							
F18K	**Selawik**	**36.11**	**33**	P		**P**	**21 20 07.5**	**+0.8**
	baz=258							
H18K	**Honhosa River**	**36.35**	**35**			**P**	**21 20 09.8**	**+0.8**
H18K					IAmb	IAmb	21 20 10.4	
	comp=Z,5.2nm,0.8s							
H18K	**Honhosa River**	**36.35**	**35**	P		**P**	**21 20 09.3**	**+0.4**
	baz=261,SNR=5.3							
G18K	**Tagagawik**	**36.36**	**34**			**P**	**21 20 09.8**	**+0.8**
G18K					IAmb	IAmb	21 20 10.2	
	comp=Z,4.3nm,0.8s							
G18K	**Tagagawik**	**36.36**	**34**	P		**P**	**21 20 09.8**	**+0.8**
	baz=260,SNR=6.9							
M17K	**Holitna River**	**36.36**	**42**	P		**P**	**21 20 09.6**	**+0.5**
M17K					IAmb	IAmb	21 20 42.8	
	comp=Z,9.4nm,1.1s							
M17K	**Holitna River**	**36.36**	**42**	P		**P**	**21 20 09.6**	**+0.5**
	baz=267							
N17K	**Nushagak Hills**	**36.45**	**43**	P		**P**	**21 20 09.2**	**-0.5**
N17K					IAmb	IAmb	21 20 37.5	
	comp=Z,7.1nm,1.2s							
O17K	**Koliganek Bris**	**36.48**	**44**	P		**P**	**21 20 11.2**	**+1.2**
	baz=269							
C19K	**Lookout Ridge**	**36.74**	**29**	P		**P**	**21 20 12.1**	**-0.2**
C19K					IAmb	IAmb	21 20 13.0	
	comp=Z,11nm,1.2s							
C19K	**Lookout Ridge**	**36.74**

J20K Nowinta River 38.05 37 P P 21 20 24.3 +1.1
J20K IAmb IAmb 21 20 24.9
comp=Z,5.7nm,0.9s
J20K Nowinta River 38.05 37 P P 21 20 24.0 +0.8
baz=266,SNR=8.9
Q19K Cape Douglas, 38.26 46 P P 21 20 25.8 +0.6
baz=273
A21K Barrow 38.31 25 P P 21 20 25.8 +0.4
baz=255
IMAR Indian Mountai 38.37 34 P 21 20 26.2 +0.3
C21K Knifeblade Rid 38.43 29 P P 21 20 27.0 +0.5
baz=259
M20K Styx River 38.43 41 P P 21 20 26.8 +0.2
baz=270
G21K Allakaket 38.52 33 P 21 20 27.9 +0.6
G21K IAmb IAmb 21 20 28.7
comp=Z,5.0nm,0.8s
G21K Allakaket 38.52 33 P P 21 20 26.6 -0.6
baz=264,SNR=5.5
B21K Ikpikpuk River 38.58 28 P P 21 20 27.8 +0.1
B21K IAmb IAmb 21 20 28.7
comp=Z,12nm,1.0s
B21K Ikpikpuk River 38.58 28 P P 21 20 27.6 0.0
baz=259
OHAK Old Harbor 38.59 48 P P 21 20 27.4 -0.5
baz=276
E21K Killik River 38.60 30 P P 21 20 28.1 +0.3
baz=261
F21K Alatna River 38.61 32 P 21 20 27.5 -0.5
F21K Alatna River 38.61 32 P P 21 20 28.6 +0.6
baz=263
H21K Melozitna Rive 38.72 35 P P 21 20 29.6 +0.6
H21K Melozitna Rive 38.72 35 P P 21 20 29.0 +0.1
baz=266
CHUM Lake Minchumin 38.84 38 P P 21 20 30.0 +0.1
baz=268
PPLA Purkeypile 38.88 39 P P 21 20 30.7 +0.3
baz=270
CAST Castle Rocks 38.93 38 P P 21 20 31.4 +0.7
CAST Castle Rocks 38.93 38 P P 21 20 31.2 +0.5
baz=269,SNR=6.2
I21K Tanana 39.03 36 P P 21 20 32.1 +0.5
baz=267
B22K Teshekpuk Lake 39.12 27 P P 21 20 32.6 +0.4
baz=259
F22K John River 39.14 32 P P 21 20 32.9 +0.5
baz=264
SKT Skwentna 39.19 41 P P 21 20 35.4 +2.5
SKT Skwentna 39.19 41 P P 21 20 34.5 +1.6
baz=271,SNR=7.5
H22K Ishtalitna Cre 39.33 35 P P 21 20 33.8 -0.2
baz=267
G22K Bettles 39.35 33 P P 21 20 34.3 +0.2
baz=265
E22K Anaktuvuk Pass 39.35 31 P P 21 20 34.8 +0.5
baz=264
NRIK Noril'sk 39.38 331 LR LR 21 38 20.0
comp=Z,39nm,18.4s,baz=116,slow=38
KTH Kantishna Hill 39.45 38 P P 21 20 36.6 +1.5
KTH IAmb IAmb 21 20 37.6
comp=Z,8.9nm,0.9s
L22K Petersville 39.53 40 P P 21 20 36.7 +0.9
baz=271,SNR=5.5
MLY Manley 39.55 36 P P 21 20 36.7 +0.7
baz=268
BRSE Bradley Lake S 39.69 44 P P 21 20 37.6 +0.4
baz=275
TRF Thorofare Moun 39.74 38 P P 21 20 38.1 +0.5
baz=271
CUT Chulitna 39.77 40 P P 21 20 38.2 +0.5
baz=272
D23K Nanushuk River 39.86 30 P P 21 20 38.8 +0.5
baz=264
COLD Coldfoot 39.88 32 P P 21 20 39.0 +0.5
baz=266
G23K Bananza Creek 39.92 33 P P 21 20 39.1 +0.2
baz=267
C23K Itkillik River 39.99 28 P P 21 20 39.7 +0.3
baz=263
H23K Yukon River 40.08 35 P P 21 20 41.0 +0.8
baz=268
RC01 Rabbit Creek A 40.09 42 P P 21 20 40.6 +0.2
baz=274
I23K Minto, Yukon-K 40.14 36 P P 21 20 41.0 +0.3
baz=270
E23K Chandalar 40.16 31 P 21 20 41.4 +0.4
E23K Chandalar 40.16 31 P P 21 20 40.9 -0.1
baz=266
TOLK Toolik Lake Re 40.23 30 P P 21 20 41.4 -0.1
baz=265
NEA2 Nenana 40.26 37 P P 21 20 42.6 +0.8
NEA2 IAmb IAmb 21 20 43.2
comp=Z,6.3nm,0.8s
NEA2 Nenana 40.26 37 P P 21 20 42.2 +0.4
baz=270,SNR=6.5
MCK McKinley 40.34 38 P P 21 20 43.3 +0.8
baz=272
D24K Happy Valley 40.54 30 P P 21 20 44.7 +0.7
D24K IAmb IAmb 21 20 44.8
comp=Z,8.5nm,0.7s
D24K Happy Valley 40.54 30 P P 21 20 44.7 +0.7
baz=265
E24K Your Creek 40.59 31 P P 21 20 44.9 +0.4
E24K IAmb IAmb 21 21 00.9
comp=Z,10nm,1.2s
E24K Your Creek 40.59 31 P P 21 20 44.9 +0.4
baz=267,SNR=5.5
SML Sawmill 40.71 41 P P 21 20 46.7 +1.1
SML IAmb IAmb 21 20 48.0
comp=Z,8.4nm,0.8s
SML Sawmill 40.71 41 P P 21 20 46.1 +0.6
baz=274
DGZ Jazzator, Alta 40.72 300 *i* P P 21 20 43.9 -2.0
DGZ pmax pmax
comp=Z,1.0nm,0.9s
H24K Noodor Dome 40.76 35 P P 21 20 46.3 +0.4
baz=270
COLA College 40.78 36 *i* P P 21 20 44.5 -1.5
COLA pmax pmax
comp=Z,7.0nm,0.8s
COLA College 40.78 36 P P 21 20 46.2 +0.2
baz=271
F24K Squaw Lake 40.79 32 P P 21 20 46.5 +0.4
baz=268
G24K Hadweenzic Riv 40.93 33 P P 21 20 48.3 +1.0
baz=269
WAT6 Susitna Watana 40.93 40 P P 21 20 47.8 +0.3
baz=274
POKR Poker Plat Res 40.96 36 P P 21 20 48.0 +0.5
baz=271
DHY Denali Highway 41.07 39 P P 21 20 49.0 +0.4
baz=274
HDA Harding Lake 41.19 37 P P 21 20 49.8 +0.4
baz=272
ILAR Eielson Array 41.20 36 P P 21 20 49.5 0.0
comp=Z,1.4nm,0.4s,baz=273,slow=8.8,SNR=20
comp=Z,1.4nm,0.4s
ILAR Eielson Array 41.20 36 P P 21 20 50.5 +1.0
ILAR Eielson Array 41.20 36 P P 21 20 50.5 +1.0
ZALV Zalesovo Beam 41.27 307 P P 21 20 48.3 -1.8
comp=Z,0.7nm,0.6s,baz=102,slow=6.2,SNR=3.6
ZALV PcP PcP 21 22 48.1 -0.1
comp=Z,2.1nm,0.6s,baz=113,slow=2.5,SNR=11
ZALV LR LR 21 38 52.5
comp=Z,42nm,18.5s,baz=100,slow=38
comp=Z,0.7nm,0.6s
ZALV Zalesovo Beam 41.27 307 *e*P P 21 20 52.6 +2.4
ZALV pmax pmax
comp=Z,1.0nm,0.7s
GLI Glacier Island 41.39 42 P P 21 20 51.5 +0.4
baz=276
D25K Kavik River 41.42 29 P P 21 20 51.3 -0.1
D25K IAmb IAmb 21 20 52.6
comp=Z,6.9nm,0.8s
D25K Kavik River 41.42 29 P P 21 20 50.5 -0.8
baz=267,SNR=7.2
G25K Bearman Lake 41.48 33 P P 21 20 51.1 -0.6
baz=271
F25K Christian River 41.65 32 P P 21 20 52.9 -0.4
baz=270
M24K Tolsona, Glenn 41.70 40 P P 21 20 53.1 -0.6
baz=276
K24K Donnelly Dome 41.73 38 P P 21 20 54.1 +0.1
baz=274
PRP Porcupine Dome 41.74 35 P 21 20 54.8 +0.7
PRP IAmb IAmb 21 20 56.1
comp=Z,8.0nm,0.9s
PRP Porcupine Dome 41.74 35 P P 21 20 54.3 +0.2
baz=272,SNR=8.5
J25K Salcha River, 41.86 36 P P 21 20 54.8 -0.1
baz=274
KLU Klutina 41.88 41 P P 21 20 57.5 +2.3
KLU Klutina 41.88 41 P P 21 20 55.3 0.0
baz=277
PAX Paxson 41.94 39 P P 21 20 55.4 -0.3
baz=275
Q23K Middleton Isla 41.95 44 P P 21 20 55.5 -0.1
baz=279
C26K Camden Bay 41.96 28 P P 21 20 55.5 -0.1
baz=268
RIDG Independent Ri 42.15 38 P P 21 20 57.6 +0.2
baz=275
F26K Sheenjek River 42.23 32 P P 21 20 59.1 +1.3
F26K Sheenjek River 42.23 32 P P 21 20 58.5 +0.7
baz=271
C27K Jago River 42.37 29 P P 21 20 59.4 +0.4
C27K Jago River 42.37 29 P P 21 20 59.1 +0.1
baz=270
G26K Porcupine Rive 42.39 33 P P 21 20 59.3 +0.2
baz=272
N25K Chitina, Valde 42.50 41 P P 21 21 01.1 +0.8
baz=278
BMRM Bremner River 42.58 42 P P 21 21 01.6 +0.7
baz=278
KAIM Kayak Island 42.84 43 P P 21 21 03.7 +0.8
baz=280
L26K Log Cabin Wild 42.90 39 P P 21 21 04.3 +0.9
baz=277
M26K Nabesna, AK 43.14 40 P P 21 21 06.1 +0.7
baz=278
E27K Coleen River 43.17 31 P P 21 21 05.1 -0.4
baz=273
G27K Doyon Strip 43.24 33 P P 21 21 06.4 +0.3
baz=274
MCARA McCarthy VSAT 43.28 41 P P 21 21 06.8 +0.3
baz=279
H27K Steamboat Moun 43.34 34 P 21 21 07.8 +0.9
H27K IAmb IAmb 21 21 09.3
comp=Z,10.0nm,1.1s
H27K Steamboat Moun 43.34 34 P P 21 21 07.7 +0.9
baz=275,SNR=8.9
K27K Chicken 43.34 37 P P 21 21 06.8 -0.1
K27K IAmb IAmb 21 21 08.7
comp=Z,8.8nm,0.9s
D27M Malcolm River 43.35 29 P P 21 21 07.4 +0.4
baz=273
L27K Beaver Creek, 43.58 39 P P 21 21 10.2 +1.3
L27K Beaver Creek, 43.58 39 P P 21 21 10.2 +1.3
baz=278
BCAR Beaver Creek A 43.60 39 P 21 21 10.4 +1.3
M27K Edge Creek, AK 43.66 40 P P 21 21 10.4 +0.7
baz=279
F28M Old Crow 43.86 32 P P 21 21 12.0 +1.0
baz=275
E28M Babbage River 43.90 30 P P 21 21 12.0 +0.6
baz=274
I28M Miner Creek 44.07 35 P 21 21 13.5 +0.6
I28M IAmb IAmb 21 21 15.0
comp=Z,9.4nm,0.8s
I28M Miner Creek 44.07 35 P P 21 21 13.5 +0.6
baz=277,SNR=16
BVCY Beaver Creek 44.12 39 P P 21 21 14.2 +0.9
baz=280
YUK3 Moose Creek 44.42 40 P P 21 21 16.7 +0.8
baz=281
E29M Blow River 44.52 31 P P 21 21 17.7 +1.4
baz=276
H29M Whitestone 44.61 34 P P 21 21 18.8 +1.7
baz=278
G29M Pine Creek 44.65 33 P 21 21 18.8 +1.4
G29M IAmb IAmb 21 21 19.8
comp=Z,7.7nm,0.8s
G29M Pine Creek 44.65 33 P P 21 21 18.4 +0.9
baz=278,SNR=8.9
O28M Mount Upton 44.74 42 P P 21 21 19.4 +0.8
baz=282
YUK8 Steele Glacier 44.84 41 P P 21 21 20.5 +1.2
baz=282
PINM Pinnacle 44.86 43 P P 21 21 19.9 +0.7
baz=283
MK31 Makanchi Array 44.90 298 *ce*P P 21 21 18.8 -0.9
MKAR Makanchi Array 44.90 298 P P 21 21 19.1 -0.6
comp=Z,2.0nm,0.8s,baz=77,slow=7.7,SNR=17
MKAR PcP PcP 21 23 00.2 -0.4
comp=Z,0.9nm,0.7s,baz=61,slow=5.7,SNR=4.4
MKAR LR LR 21 40 45.4
comp=Z,68nm,18.5s,baz=80,slow=37
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 44.90 298 P 21 21 19.1 -0.6
MKAR PcP PcP 21 23 00.6 -0.1
MAKZ Makanchi 45.09 298 P P 21 21 20.9 -0.3
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 45.09 298 P P 21 21 20.9 -0.3
MAKZ Makanchi 45.09 298 P P 21 21 20.9 -0.3
M29M Somme Creek 45.21 39 P P 21 21 22.9 +0.9
baz=282
L29M L29M 45.23 38 P P 21 21 23.0 +0.9
baz=281
EPYK Eagle Plains 45.25 33 P P 21 21 23.4 +1.2
EPYK Eagle Plains 45.25 33 P P 21 21 23.2 +1.1
baz=279,SNR=8.3
G30M tAoh Zraii Nji 45.34 32 P 21 21 23.8 +0.8
G30M IAmb IAmb 21 21 24.5
comp=Z,7.5nm,0.9s
G30M tAoh Zraii Nji 45.34 32 P P 21 21 24.2 +1.2
baz=279
K29M Barlow Dome 45.36 37 P P 21 21 23.9 +0.7
baz=281
F30M Barrier River 45.41 32 P P 21 21 25.5 +2.1
F30M Barrier River 45.41 32 P P 21 21 23.9 +0.5
baz=279,SNR=5.5
I30M Mount Dempster 45.58 35 P 21 21 26.0 +1.0
I30M Mount Dempster 45.58 35 P P 21 21 25.7 +0.8
baz=281
J30M Hart River 45.73 36 P P 21 21 26.8 +0.8
baz=281
KURK Kurchatov 45.81 304 *i* P P 21 21 26.0 -0.8
KURK Kurchatov 45.81 304 P P 21 21 27.4 +0.6
KURK Kurchatov 45.81 304 *e*P P 21 21 26.0 -0.8
KURBB Kurchatov Arra 45.90 304 P P 21 21 26.7 -0.8
comp=Z,2.1nm,0.3s,baz=76,slow=8.8,SNR=3.3
KURBB PcP PcP 21 23 03.6 -0.3
comp=Z,1.4nm,0.2s,baz=76,slow=3.5,SNR=6.5
comp=Z,2.1nm,0.3s
M30M Minto, Yukon 45.94 39 P P 21 21 28.1 +0.4
baz=283
HYT Haines Junctio 46.02 41 P 21 21 29.7 +1.2
HYT IAmb IAmb 21 21 42.3
comp=Z,8.9nm,0.9s
HYT Haines Junctio 46.02 41 P P 21 21 29.5 +1.1
baz=284
G31M Satah River 46.11 32 P 21 21 29.4 +0.6
G31M IAmb IAmb 21 21 30.2
comp=Z,7.9nm,1.1s
G31M Satah River 46.11 32 P P 21 21 29.3 +0.4
baz=281
INK Inuvik 46.14 30 P P 21 21 29.4 +0.3
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 46.14 30 P 21 21 29.4 +0.3
INK Inuvik 46.14 30 P P 21 21 29.5 +0.3
baz=280
P29M Windy Craggy 46.20 43 P P 21 21 29.7 -0.1
baz=285
H31M Peel River 46.30 34 P 21 21 31.6 +1.1
H31M IAmb IAmb 21 21 32.7
comp=Z,9.7nm,1.1s
H31M Peel River 46.30 34 P P 21 21 30.4 -0.1
baz=282
P30M Million Dollar 46.45 42 P P 21 21 32.3 +0.5
baz=285
N31M Braeburn, Yuko 46.66 40 P P 21 21 34.2 +0.8
baz=285
PLBC Pleasant Camp 46.92 43 P P 21 21 36.1 +0.8
baz=286
CHTO Chiang Mai 47.68 254 P P 21 21 41.4 -0.4
CHTO pmax pmax
comp=Z,7.0nm,1.1s
CHTO Chiang Mai 47.68 254 P 21 21 41.4 -0.4
CHTO IAmb IAmb 21 21 43.6
comp=Z,6.6nm,1.1s
CHTO Chiang Mai 47.68 254 P P 21 21 42.7 +0.9
CMAR Chiang Mai Arr 47.92 254 P P 21 21 43.8 +0.2
comp=Z,1.7nm,0.9s,baz=47,slow=8.1,SNR=10
comp=Z,1.7nm,0.9s
CMAR Chiang Mai Arr 47.92 254 *e*P P 21 21 44.5 +0.9
CMAR pmax pmax
comp=Z,1.0nm,0.4s
PDGK Podgornoye 48.09 294 P P 21 21 44.6 -0.3
PDGK Podgornoye 48.09 294 P P 21 21 44.6 -0.3
SHL Shillong 48.43 267 P P 21 21 46.4 -1.3
SHL pmax pmax
comp=Z,5.0nm,1.2s
SHL Shillong 48.43 267 P 21 21 46.4 -1.3
SHL IAmb IAmb 21 21 48.8
comp=Z,5.2nm,1.2s
NPW Naypyitaw 49.01 258 P P 21 21 52.6 +0.6
WUS Wushi 49.22 292 P P 21 21 53.3 -0.2
WUS Wushi 49.22 292 P P 21 21 53.9 +0.3
BVAR Borovoye Array 49.76 309 P P 21 21 56.5 -0.8
comp=Z,0.7nm,0.5s,baz=81,slow=8.9,SNR=6.2
BVAR PcP PcP 21 23 17.8 0.0
comp=Z,0.8nm,0.4s,baz=60,slow=2.8,SNR=5.6
comp=Z,0.7nm,0.5s
TARG Taragay, Kyrgy 49.92 293 P P 21 21 59.6 +0.4
TARG pmax pmax
comp=Z,4.0nm,1.0s
TARG Taragay, Kyrgy 49.92 293 P P 21 21 59.6 +0.4
ASAI AK-SAY(Kyrgyzs 51.15 293 P P 21 22 07.8 -0.7
AAK Ala-Archa 51.68 296 *ce*P P 21 22 12.2 +0.1
AAK pmax pmax
comp=Z,5.0nm,1.3s
AAK Ala-Archa 51.68 296 *e*P P 21 22 12.2 +0.1
KSH2 Kashi 52.66 291 P P 21 22 19.5 +0.1
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
ARSB Arslanbob 53.30 295 P P 21 22 24.9 +0.7
ARSB pmax pmax
comp=Z,13nm,0.8s
ARSB Arslanbob 53.30 295 P P 21 22 24.9 +0.7
ARK Arkit 53.73 296 P P 21 22 27.8 +0.6
KK31 Karatay Array 54.02 298 P P 21 22 28.7 -0.6
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KK31 Karatay Array 54.02 298 P 21 22 28.7 -0.6
KKAR Karatay Array 54.02 298 P P 21 22 28.8 -0.5
KKAR Karatay Array 54.02 298 P 21 22 28.8 -0.5
ARTI Arti 54.67 317 P P 21 22 32.5 -1.1
comp=Z,3.1nm,0.5s,baz=55,slow=4.4,SNR=9.7
comp=Z,3.1nm,0.5s
ARTI Arti 54.67 317 *c i*P P 21 22 32.6 -1.1
ARTI *PP pP 21 22 44.6 -0.5
ARTI 21 23 30.9
ARTI S S 21 30 11.8 +1.1
ARTI SS SS 21 33 53.2 0.0
ARTI pmax pmax
comp=Z,3.0nm,0.6s
ARTI Arti 54.67 317 P 21 22 33.0 -0.7
BTK Batken 55.36 295 P P 21 22 38.7 -0.4
BTK pmax pmax
comp=Z,3.0nm,0.6s
BTK Batken 55.36 295 P 21 22 38.7 -0.4
BTK IAmb IAmb 21 22 39.4
comp=Z,3.5nm,0.6s
BTK Batken 55.36 295 P P 21 22 38.6 -0.4
YKA Yellowknife Ar 55.52 34 P P 21 22 39.9 +0.1
comp=Z,1.6nm,0.8s,baz=298,slow=6.7,SNR=5.2
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 55.52 34 P P 21 22 41.1 +1.3
GAR Garm 56.24 294 P P 21 22 45.1 -0.3
GAR Garm 56.24 294 P P 21 22 45.1 -0.3
CHGR Chuyangaron 57.19 294 *i* P P 21 22 51.5 -0.6
CHGR pmax pmax
comp=Z,18nm,0.6s
CHGR Chuyangaron 57.19 294 P 21 22 51.8 -0.4
CHGR Chuyangaron 57.19 294 P P 21 22 51.7 -0.4
AB31 Akbulak array 57.32 309 P 21 22 52.3 -0.5
AB31 IAmb IAmb 21 22 53.0
comp=Z,6.2nm,1.2s
ABKAR Akbulak array 57.32 309 P 21 22 52.3 -0.5
AKTO Aktyubinsk 57.78 311 P P 21 22 55.2 -0.8
comp=Z,1.1nm,0.5s,baz=122,slow=1.8,SNR=5.7
comp=Z,1.1nm,0.5s
SHAA Shahritus 58.47 294 P 21 23 00.3 -0.8
SHAA IAmb IAmb 21 23 01.4
comp=Z,15nm,0.5s
ARCES ARCESS Array B 59.31 340 P P 21 23 03.5 -2.9
comp=Z,2.1nm,1.0s,baz=51,slow=6.5,SNR=5.7
comp=Z,2.1nm,1.0s
ARCES ARCESS Array B 59.31 340 *e*P P 21 23 04.8 -1.6
ILON Igloolik, Nuna 61.40 19 P P 21 23 19.6 -1.0
BELG Belogorsk 62.11 317 P P 21 23 25.0 -0.6
comp=Z,5.8nm,0.4s,baz=356,slow=0.8,SNR=9.1
comp=Z,5.8nm,0.4s
HRA Herat 64.19 294 P P 21 23 40.1 +0.1
HRA IAmb IAmb 21 23 41.1
comp=Z,3.1nm,0.8s
WRA Warramunga Arr 64.62 194 P P 21 23 42.6 +0.1
comp=Z,0.6nm,0.7s,baz=8.6,slow=6.8,SNR=3.6
comp=Z,0.6nm,0.7s
WRA Warramunga Arr 64.62 194 P P 21 23 41.9 -0.6
FINES FINESS Array B 64.99 333 P P 21 23 43.0 -1.5
comp=Z,2.8nm,0.5s,baz=45,slow=6.9,SNR=32
comp=Z,2.8nm,0.5s
FINES FINESS Array B 64.99 333 P P 21 23 43.2 -1.3
OBN Obninsk 65.49 324 ‖ *e*P P 21 23 47.9 +0.1
OBN *e*PP pP 21 23 59.7 +0.2
OBN *SP sP 21 24 05.0 +1.0
OBN 21 24 19.0
OBN *e*S S 21 32 35.9 +6.5
OBN *e* 21 33 33.2
OBN *e*SS SS 21 36 38.1 -4.4
OBN pmax pmax
comp=Z,3.0nm,0.4s
OBN MLR MLR
comp=Z,24nm,17.0s
OBN Obninsk 65.49 324 *e*P P 21 23 47.9 +0.1
NVAR Mina Array Bea 67.21 58 P P 21 23 59.7 +0.3
comp=Z,0.4nm,0.5s,baz=309,slow=6.9,SNR=2.7
comp=Z,0.4nm,0.5s
ASAR Alice Springs 68.34 194 P P 21 24 07.7 +1.4
comp=Z,0.5nm,0.8s,baz=12,slow=6.6,SNR=3.3
comp=Z,0.5nm,0.8s
ASAR Alice Springs 68.34 194 P P 21 24 07.2 +0.9
PDAR Pinedale Array 69.56 50 P P 21 24 13.7 -0.4
comp=Z,0.4nm,0.7s,baz=267,slow=3.0,SNR=4.7
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 69.56 50 P P 21 24 14.2 +0.1
NB2 NORSAR Subarra 69.68 339 P P 21 24 12.6 -1.6
comp=Z,1.4nm,0.6s,baz=30,slow=6.2
NB2 NORSAR Subarra 69.68 339 P P 21 24 12.8 -1.4
NB2 pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 69.68 339 P P 21 24 13.1 -1.1
comp=Z,1.0nm,0.4s,baz=32,slow=6.7,SNR=16
comp=Z,1.0nm,0.4s
HFS Hagfors 69.77 337 P P 21 24 13.3 -1.5
comp=Z,3.3nm,0.4s,baz=42,slow=4.6,SNR=36
comp=Z,3.3nm,0.4s
NORES NORESS Array B 69.85 339 P P 21 24 14.3 -0.9
KIV Kislovodsk 70.01 312 ‖ P P 21 24 16.9 +0.3
KIV Kislovodsk 70.01 312 *e*P P 21 24 16.7 +0.1
KIV pmax pmax
comp=Z,22nm,0.9s
KIV MLR MLR
comp=Z,32nm,18.0s
KIV Kislovodsk 70.01 312 P 21 24 16.8 +0.1
KIV Kislovodsk 70.01 312 P P 21 24 16.5 -0.1
KIV Kislovodsk 70.01 312 *e*P P 21 24 16.7 +0.1
KBZ Khabaz 70.04 312 P P 21 24 17.4 +0.8
comp=Z,12nm,0.8s,baz=71,slow=4.4,SNR=30
KBZ Khabaz 70.04 312 *ce*P P 21 24 17.5 +0.8
KBZ pmax pmax
comp=Z,11nm,0.7s
SHA1 Shidzhatmaz 70.17 312 *ce*P P 21 24 18.7 +0.9
TCRU Three Creeks R 70.63 55 P P 21 24 21.1 +0.4
AK03 Malin Array Si 71.73 324 P P 21 24 25.9 -0.9
AKASG Malin Array Be 71.75 324 P P 21 24 25.9 -1.0
comp=Z,4.8nm,0.6s,baz=40,slow=6.1,SNR=26
comp=Z,4.8nm,0.6s
AKASG Malin Array Be 71.75 324 P P 21 24 26.8 -0.2
AKBB Malin Array Si 71.75 324 *ce*P P 21 24 26.2 -0.7
AKBB pmax pmax
comp=Z,11nm,0.9s
AKBB Malin Array Si 71.75 324 P 21 24 25.8 -1.1
KIEV Kiev 71.76 324 ⇑ P P 21 24 26.2 -0.8
KIEV Kiev 71.76 324 ⇑ P P 21 24 26.2 -0.8
KIEV Kiev 71.76 324 P P 21 24 26.2 -0.8

KOPT	**Kop Dagi**	**73.88**	**310**		**P**	**P**	**21 24 38.4 -1.7**
KOPT				IAmb	IAmb	21 24 42.7	
	comp=Z,5.7nm,1.2s						
GURO	**Guroymak-BITLI**	**74.03**	**308**	P	**P**	**P**	**21 24 41.2 +0.3**
GURO				IAmb	IAmb	21 24 42.7	
	comp=Z,9.1nm,1.1s						
SORM	**Soroca**		**74.05 323**	⇑P	**P**	**P**	**21 24 39.7 -0.9**
SORM	**Soroca**		**74.05 323**	⇑P	**P**	**P**	**21 24 39.7 -0.9**
GIRR	**Girov**		**75.77 323**	⇑P	**P**	**P**	**21 24 50.4 -0.2**
BUR08	**Bucovina Ar. S**	**75.79**	**324**			**P**	**21 24 50.1 -0.8**
BUR08				IAmb	IAmb	21 24 51.5	
	comp=Z,5.3nm,0.8s						
BURAR	**Bucovina Array**		**75.81 324**	⇑P	**P**	**P**	**21 24 50.6 -0.3**
BURAR	**Bucovina Array**		**75.81 324**	⇑P	**P**	**P**	**21 24 50.6 -0.3**
BURAR	**Bucovina Array**		**75.81 324**		**P**	**P**	**21 24 50.1 -0.8**
BURAR				IAmb	IAmb	21 24 51.9	
	comp=Z,6.3nm,0.8s						
VLDR	**Vladesti**		**75.91 321**	⇓P	**P**	**P**	**21 24 51.2 -0.2**
OJC	**Ojcow**	**75.92**	**328**	P	**P**	**P**	**21 24 50.9 -0.5**
OJC	**Ojcow**	**75.92**	**328**		**P**	**P**	**21 24 50.9 -0.5**
OJC	**Ojcow**	**75.92**	**328**	P	**P**	**P**	**21 24 51.4 0.0**
BIZ	**Bicaz**		**75.95 323**	⇑P	**P**	**P**	**21 24 51.4 -0.2**
TESR	**Tescani**		**76.04 322**	⇑P	**P**	**P**	**21 24 51.5 -0.6**
TESR	**Tescani**		**76.04 322**	P	**P**	**P**	**21 24 52.2 0.0**
ONER	**Baraj Valea Uz**		**76.29 322**	⇑P	**P**	**P**	**21 24 53.1 -0.5**
CFR	**Carcaliu**		**76.39 321**	⇑P	**P**	**P**	**21 24 53.8 -0.3**
CFR	**Carcaliu**		**76.39 321**	⇑P	**P**	**P**	**21 24 53.8 -0.3**
TPGR	**Topolog**		**76.51 320**	⇑P	**P**	**P**	**21 24 54.8 0.0**
TRPA	**Tarpa**	**76.52**	**326**	P	**P**	**P**	**21 24 53.9 -0.9**
SAHR	**Sahastru**		**76.63 322**	⇑P	**P**	**P**	**21 24 55.5 -0.1**
COVR	**Voineasa-Covas**		**76.75 322**	⇑P	**P**	**P**	**21 24 55.1 -1.1**
STEB	**Steborice**		**76.91 329**	*e*P	**P**	**P**	**21 24 56.9 -0.1**
CHVC	**Chvalec**		**76.99 331**	*e*P	**P**	**P**	**21 24 57.6 +0.1**
CHVC	**Chvalec**		**76.99 331**	*e*P	**P**	**P**	**21 24 57.6 +0.1**
DOPR	**Dopca**		**77.02 323**	⇓P	**P**	**P**	**21 24 57.6 -0.1**
DPC	**Dobruska-Polom**		**77.09 330**	*e*P	**P**	**P**	**21 24 58.1 0.0**
DPC	**Dobruska-Polom**		**77.09 330**	*e*P	**P**	**P**	**21 24 58.1 0.0**
DPC	**Dobruska-Polom**		**77.09 330**	P	**P**	**P**	**21 24 55.7 -2.4**
MORC	**Moravsky Berou**		**77.13 329**	⇑P	**P**	**P**	**21 24 57.6 -0.7**
MORC	**Moravsky Berou**		**77.13 329**	⇑P	**P**	**P**	**21 24 57.6 -0.7**
MORC	**Moravsky Berou**		**77.13 329**		**P**	**P**	**21 24 57.4 -0.9**
MORC				IAmb	IAmb	21 24 59.2	
	comp=Z,4.9nm,0.8s						
MORC	**Moravsky Berou**		**77.13 329**	*e*P	**P**	**P**	**21 24 57.8 -0.5**
MORC	**Moravsky Berou**		**77.13 329**	P	**P**	**P**	**21 24 58.3 0.0**
MLR	**Muntele Rosu**		**77.14 322**	⇑P	**P**	**P**	**21 24 57.9 -0.6**
MLR	**Muntele Rosu**		**77.14 322**	⇑P	**P**	**P**	**21 24 57.9 -0.6**
ICOR	**Ion Corvin**		**77.36 320**	⇑P	**P**	**P**	**21 24 59.2 -0.4**
SCHQ	**Schefferville**	**77.42**	**20**	P	**P**	**P**	**21 24 59.5 -0.2**
	comp=Z,3.0nm,0.9s,baz=260,slow=9.4,SNR=5.1						
	comp=Z,3.0nm,0.9s						
SCHQ	**Schefferville**	**77.42**	**20**	P	**P**	**P**	**21 24 59.7 -0.1**
CLL	**Collm**	**77.43**	**333**	*i* P	**P**	**P**	**21 24 58.7 -1.2**
CLL				*e**PP	**pP**	**pP**	**21 25 12.0 +0.3**
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	**Collm**	**77.43**	**333**		**P**	**P**	**21 24 59.0 -0.9**
CLL	**Collm**	**77.43**	**333**	*i* P	**P**	**P**	**21 24 58.7 -1.2**
	comp=Z,11nm,1.0s						
CLL				*e*pP	**pP**	**pP**	**21 25 12.0 +0.3**
VOIR			**77.58 323**	⇑P	**P**	**P**	**21 24 59.7 -1.2**
VOIR			**77.58 323**	⇑P	**P**	**P**	**21 24 59.7 -1.2**
BRTR	**Keskin Array B**	**77.78**	**314**	P	**P**	**P**	**21 25 01.7 -0.5**
	comp=Z,0.8nm,0.7s,baz=60,slow=4.0,SNR=6.0						
	comp=Z,0.8nm,0.7s						
BRTR	**Keskin Array B**	**77.78**	**314**	*e*P	**P**	**P**	**21 25 02.3 +0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**77.78**	**314**	P	**P**	**P**	**21 25 01.9 -0.3**
ARR	**Arges**	**77.81**	**323**	⇑P	**P**	**P**	**21 25 02.7 +0.5**
ARR	**Arges**	**77.81**	**323**	P	**P**	**P**	**21 25 02.2 -0.1**
ARR				pP	**sP**	**sP**	**21 25 17.5 -1.1**
JAVC	**Velka Javorina**	**77.83**	**329**	*e*P	**P**	**P**	**21 25 03.1 +0.8**
VRAC	**Vranov**	**77.86**	**330**	P	**P**	**P**	**21 25 02.8 +0.4**
	comp=Z,3.7nm,0.8s,baz=17,slow=4.6,SNR=7.5						
	comp=Z,3.7nm,0.8s						
VRAC	**Vranov**	**77.86**	**330**	⇑P	**P**	**P**	**21 25 01.4 -1.0**
VRAC	**Vranov**	**77.86**	**330**	*e*P	**P**	**P**	**21 25 02.2 -0.1**
VRAC	**Vranov**	**77.86**	**330**	P	**P**	**P**	**21 25 02.7 +0.4**
VRAC				pP	**sP**	**sP**	**21 25 17.5 -1.2**
PRU	**Pruhonice**	**78.03**	**331**	*e*P	**P**	**P**	**21 25 02.8 -0.4**
PRU	**Pruhonice**	**78.03**	**331**	*e*P	**P**	**P**	**21 25 02.8 -0.4**
KRUC	**Moravsky**	**78.14**	**330**	*e*P	**P**	**P**	**21 25 03.5 -0.4**
EKA	**Eskdalemuir Ar**	**78.17**	**343**	P	**P**	**P**	**21 25 03.2 -0.7**
	comp=Z,1.0nm,0.3s,baz=18,slow=5.2,SNR=10.0						
	comp=Z,1.0nm,0.3s						
KKUL	**Konya-Kulu**	**78.56**	**314**	P	**P**	**P**	**21 25 07.3 +0.8**
WINA	**Alland / Wiene**	**79.05**	**329**	*i* P	**P**	**P**	**21 25 09.1 +0.2**
	comp=Z,1.4nm,0.5s						
KHC	**Kasperske Hory**	**79.09**	**331**	*e*P	**P**	**P**	**21 25 08.6 -0.5**
KHC	**Kasperske Hory**	**79.09**	**331**	*e*P	**P**	**P**	**21 25 08.6 -0.5**
CONA	**Conrad Observa**	**79.28**	**329**	*e*P	**P**	**P**	**21 25 10.4 +0.2**
	comp=Z,0.9nm,0.6s						
GERES	**GERESS Array B**	**79.28**	**331**	P	**P**	**P**	**21 25 09.7 -0.6**
	comp=Z,0.7nm,0.4s,baz=37,slow=5.3,SNR=11						
	comp=Z,0.7nm,0.4s						
GERES	**GERESS Array B**	**79.28**	**331**	P	**P**	**P**	**21 25 10.0 -0.3**
GERES	**GERESS Array B**	**79.28**	**331**	P	**P**	**P**	**21 25 09.9 -0.3**
RONA	**Rosalia, Austr**	**79.31**	**329**	*e*P	**P**	**P**	**21 25 10.7 +0.3**
	comp=Z,1.1nm,0.5s						
MOA	**Molln**	**79.93**	**330**	*e*P	**P**	**P**	**21 25 13.8 +0.1**
	comp=Z,1.3nm,0.7s						
SESA	**Seetaler Alpe,**	**80.44**	**330**	*e*P	**P**	**P**	**21 25 16.7 -0.1**
	comp=Z,2.6nm,0.5s						
SOKA	**Soboth**	**80.64**	**329**	*e*P	**P**	**P**	**21 25 17.2 -0.4**
	comp=Z,3.7nm,0.8s						
RDO	**Rodhopi**	**80.71**	**320**	P	**P**	**P**	**21 25 17.0 -1.0**
BMRD	**Maredsous**	**80.84**	**337**	*d*P	**P**	**P**	**21 25 17.9 -0.7**
	comp=Z,5.2nm,1.2s						
LESA	**Schwarzleotal**	**80.86**	**331**	*e*P	**P**	**P**	**21 25 18.6 -0.2**
	comp=Z,1.2nm,0.5s						
KBA	**Koelnbreinsper**	**80.91**	**330**	*e*P	**P**	**P**	**21 25 19.2 0.0**
	comp=Z,2.2nm,0.7s						
OBKA	**Obir**	**80.96**	**329**	*i* P	**P**	**P**	**21 25 19.2 -0.2**
	comp=Z,1.3nm,0.6s						
WATA	**Walderalm**	**81.32**	**332**	*e*P	**P**	**P**	**21 25 21.1 -0.3**
	comp=Z,1.6nm,0.4s						
WTTA	**Wattenberg**	**81.36**	**331**	*e*P	**P**	**P**	**21 25 21.4 -0.2**
	comp=Z,2.0nm,0.5s						
MOTA	**Moosalm**	**81.47**	**332**	*e*P	**P**	**P**	**21 25 21.7 -0.4**
	comp=Z,1.9nm,0.5s						
SQTA	**Sankt Quirin**	**81.54**	**332**	*e*P	**P**	**P**	**21 25 22.3 -0.2**
	comp=Z,1.2nm,0.6s						
MMAI	**Mount Meron Ar**	**81.75**	**308**	P	**P**	**P**	**21 25 23.8 0.0**
	comp=Z,5.2nm,0.6s,baz=17,slow=6.1,SNR=3.4						
	comp=Z,5.2nm,0.6s						
TXAR	**Lajitas Array**	**82.28**	**57**	P	**P**	**P**	**21 25 26.9 +0.3**
	comp=Z,0.6nm,0.7s,baz=267,slow=3.4,SNR=6.0						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**82.28**	**57**	P	**P**	**P**	**21 25 27.0 +0.3**
TXAR	**Lajitas Array**	**82.28**	**57**	P	**P**	**P**	**21 25 27.0 +0.3**
RAYN	**Ar Rayn**	**82.32**	**295**	⇑P	**P**	**P**	**21 25 26.9 0.0**
T47A	**Sharon Grove**	**85.45**	**41**		**P**	**P**	**21 25 42.3 -0.3**
T47A				IAmb	IAmb	21 25 43.5	
	comp=Z,3.9nm,0.9s						
DBIC	**Dimbokro**	**123.94**	**326**	PKP	**PKiKP**	**P**	**21 32 03.8 +0.2**
	comp=Z,6.6nm,1.1s,baz=197,slow=6.5,SNR=2.8						
DBIC	**Dimbokro**	**123.94**	**326**			**PKPdf**	**21 32 03.4 +0.1**
QSPA	**South Pole Qui**	**133.56**	**180**	PKP		**PKPdf**	**21 32 20.1 0.0**
	comp=Z,1.2nm,1.0s,baz=281,slow=3.8,SNR=3.2						
QSPA	**South Pole Qui**	**133.56**	**180**		**PKiKP**	**P**	**21 32 20.9 -0.4**
BDFB	**Brasilia**	**148.89**	**30**	PKPbc	**PKPbc**		**21 32 52.9 0.0**
	comp=Z,1.3nm,0.6s,baz=175,slow=5.7,SNR=3.4						
BDFB	**Brasilia**	**148.89**	**30**		**PKPbc**		**21 32 52.7 -0.3**
PLCA	**Paso Flores**	**151.71**	**97**	PKPbc	**PKPbc**		**21 32 58.6 -0.3**
	comp=Z,2.6nm,1.0s,baz=243,slow=8.5,SNR=3.1						

IDC ***26*** *21:28:00.6±2.5, 24.°06S×179.°79E, h542km±22km, mb3.4/4, mbtmp4.4/6, Error ellipse: s-maj=36.1km s-min=23.9km az=121.0*

NEIC ***26*** *21:28:02.2±1.7, 24.°0S±0.°1×179.°6E±0.°1, h532km±8km, mb4.3/24, Error ellipse: s-maj=17.7km s-min=16.8km az=52.0*

ISC 26 21:28:03.0±0.5, 23.°85S±0.°07×179.°49E±0.°09, h550km, n68, σ1ˢ64/70, mb4.3/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.87**	**157**	P	**P**	**21 29 42.8**	**+2.5**
GLKZ				S	**S**	**21 31 03.7**	**+3.8**
MSVF	**Nonsavu**	**6.24**	**347**	P	**P**	**21 29 43.4**	**-0.6**
	4.3nm,0.4s,baz=198,slow=19,SNR=5.8						
MSVF	**Nonsavu**	**6.24**	**347**	P	**P**	**21 29 43.0**	**-1.1**
NIUE	**Niue**	**10.94**	**66**	P	**P**	**21 30 30.1**	**-0.6**
OUZ	**Omahuta**	**12.43**	**203**	P	**P**	**21 30 48.0**	**+2.2**
HAZ	**Te Kaha**	**13.94**	**186**	P	**P**	**21 31 01.4**	**+0.1**
TOZ	**Tahuroa Road**	**14.25**	**193**	P	P	21 31 08.6	+4.0
URZ	**Urewera**	**14.50**	**187**	P	**P**	**21 31 04.9**	**-2.2**
	5.2nm,0.3s,baz=281,slow=2.3,SNR=13						
URZ				S	**S**	**21 33 36.6**	**-2.3**
	11nm,1.0s,baz=84,slow=10.0,SNR=3.8						
URZ	**Urewera**	**14.50**	**187**	P	**P**	**21 31 06.1**	**-1.1**
MWZ	**Matawai**	**14.53**	**186**	P	**P**	**21 31 06.7**	**-0.8**
OTVZ	**Oturere**	**15.60**	**191**	P	**P**	**21 31 18.0**	**-0.7**
SNVZ	**South Ngauruho**	**15.63**	**191**	P	**P**	**21 31 18.7**	**-0.2**
KWHZ	**Kaweka Forest**	**15.74**	**189**	P	**P**	**21 31 18.3**	**-1.5**
KWHZ				S	**S**	**21 33 55.0**	**-6.0**
WNVZ	**Wahianoa**	**15.78**	**191**	P	**P**	**21 31 18.0**	**-2.4**
BHHZ	**Black Hill Sta**	**15.86**	**190**	P	**P**	**21 31 19.2**	**-1.9**
KAHZ	**Kahuranaki**	**16.05**	**187**	P	**P**	**21 31 20.9**	**-1.9**
PNHZ	**Pukenui**	**16.25**	**189**	P	**P**	**21 31 23.6**	**-1.2**
TSZ	**Takapari Road**	**16.43**	**190**	P	**P**	**21 31 25.2**	**-1.2**
BFZ	**Birch Farm**	**17.00**	**188**	P	**P**	**21 31 29.8**	**-1.7**
BFZ				IAmb	IAmb	21 32 10.3	
	comp=Z,17nm,1.2s						
BFZ	**Birch Farm**	**17.00**	**188**	P	**P**	**21 31 29.9**	**-1.6**
MRZ	**Mangatainoka R**	**17.08**	**190**	P	**P**	**21 31 30.3**	**-1.9**
MRZ				IAmb	IAmb	21 31 52.3	
	comp=Z,16nm,1.4s						
MRZ	**Mangatainoka R**	**17.08**	**190**	P	**P**	**21 31 30.8**	**-1.5**
OGWZ	**Otaki Gorge**	**17.30**	**191**	P	**P**	**21 31 28.4**	**-5.8**
DUWZ	**D'Urville Isla**	**17.53**	**194**	P	**P**	**21 31 36.6**	**+0.1**
TCW	**Tory Channel**	**17.85**	**193**	P	**P**	**21 31 39.1**	**-0.1**
MSWZ	**Moikau Station**	**17.87**	**190**	P	**P**	**21 31 38.2**	**-1.3**
QRZ	**Quartz Range**	**17.90**	**197**	P	**P**	**21 31 40.0**	**+0.2**
QRZ	**Quartz Range**	**17.90**	**197**	P	**P**	**21 31 41.1**	**+1.3**
TKNZ	**Takaka Hill**	**17.98**	**196**	P	**P**	**21 31 40.2**	**-0.4**
TKNZ	**Takaka Hill**	**17.98**	**196**	P	**P**	**21 31 40.8**	**+0.2**
THZ	**Tophouse**	**18.68**	**196**	P	**P**	**21 31 47.9**	**+0.9**
DSZ	**Denniston Nort**	**18.96**	**198**	P	**P**	**21 31 50.5**	**+1.0**
KHZ	**Kahutara**	**19.16**	**194**	P	**P**	**21 31 50.8**	**-0.5**
LTZ	**Lake Taylor**	**19.80**	**196**	P	**P**	**21 31 56.2**	**-0.9**
LTZ	**Lake Taylor**	**19.80**	**196**	P	**P**	**21 31 56.3**	**-0.9**
OXZ	**Oxford**	**20.37**	**196**	P	**P**	**21 32 06.0**	**+3.8**
JCZ	**Jackson Bay**	**22.00**	**201**	P	**P**	**21 32 17.3**	**+0.4**
CTA	**Charters Tower**	**31.00**	**270**	P	**P**	**21 33 36.8**	**+0.5**
	comp=Z,10nm,0.3s,baz=94,slow=10,SNR=17						
	comp=Z,10nm,0.3s						
CTAO	**Charters Tower**	**31.00**	**270**	P	**P**	**21 33 36.9**	**+0.7**
COEN	**Coen**	**35.64**	**279**	P	**P**	**21 34 15.8**	**+0.4**
COEN				IAmb	IAmb	21 34 36.4	
	comp=Z,8.4nm,1.1s						
AS31	**Alice Springs**	**41.58**	**261**	P	**P**	**21 35 03.2**	**-0.2**
ASAR	**Alice Springs**	**41.58**	**261**	P	**P**	**21 35 03.0**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=96,slow=7.3,SNR=17						
ASAR				PcP	**PcP**	**21 36 48.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=103,slow=3.8,SNR=3.7						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**41.58**	**261**	P	**P**	**21 35 02.8**	**-0.6**
WR0	**Warramunga Arr**	**41.75**	**266**	P	**P**	**21 35 04.1**	**-0.6**
WR0				IAmb	IAmb	21 35 45.0	
	comp=Z,15nm,1.5s						
WR8	**Warramunga Arr**	**41.79**	**266**	P	**P**	**21 35 04.4**	**-0.7**
WR8				IAmb	IAmb	21 35 27.6	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**41.93**	**266**	P	**P**	**21 35 05.6**	**-0.5**
WB2				IAmb	IAmb	21 35 07.4	
	comp=Z,6.8nm,1.1s						
WB0	**Warramunga Arr**	**41.93**	**267**	P	**P**	**21 35 05.2**	**-1.0**
WB0				IAmb	IAmb	21 35 06.0	
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**41.94**	**266**	P	**P**	**21 35 05.2**	**-1.1**
	comp=Z,2.1nm,0.4s,baz=95,slow=8.1,SNR=157						
	comp=Z,2.1nm,0.4s						
WRA	**Warramunga Arr**	**41.94**	**266**	P	**P**	**21 35 05.5**	**-0.8**
FORT	**Forrest**	**45.88**	**250**	P	**P**	**21 35 35.6**	**-1.0**
FORT				IAmb	IAmb	21 35 44.3	
	comp=Z,9.8nm,1.1s						
KNRA	**Kununurra**	**48.22**	**270**	P	**P**	**21 35 54.2**	**-0.1**
KNRA				IAmb	IAmb	21 36 35.2	
	comp=Z,16nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.36**	**266**	P	**P**	**21 36 10.2**	**+0.1**
NWAO	**Narrogin (SRO)**	**54.83**	**246**	P	**P**	**21 36 42.4**	**+0.6**
NWAO				IAmb	IAmb	21 36 55.7	
	comp=Z,28nm,1.3s						
MORW	**Morawa**	**56.45**	**250**	P	**P**	**21 36 52.7**	**-0.4**
MORW				IAmb	IAmb	21 37 25.4	
	comp=Z,21nm,1.4s						
GIRL	**Giralia**	**59.47**	**257**	P	**P**	**21 37 14.2**	**+0.6**
RPN	**Rapa Nui**	**63.54**	**110**	P	**P**	**21 37 39.0**	**-1.2**
MJAR	**Matsushiro Arr**	**71.59**	**326**	P	**P**	**21 38 29.6**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=152,slow=6.0,SNR=4.2						
	comp=Z,0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**71.59**	**326**	P	**P**	**21 38 29.9**	**+0.9**
BELA	**Belgrano 2**	**76.54**	**173**	P	**P**	**21 38 57.4**	**+1.1**
MAW	**Mawson**	**77.63**	**201**	P	**P**	**21 39 03.6**	**+1.2**
GO08	**Villa O'Higgin**	**83.56**	**140**	P	**P**	**21 39 32.4**	**-1.2**
GO08				IAmb	IAmb	21 39 41.7	
	comp=Z,23nm,1.4s						
N32M	**Quiet Lake**	**92.94**	**21**	P	**P**	**21 40 17.9**	**+0.7**
AKASG	**Malin Array Be**	**144.68**	**327**	PKPbc	PKPbc	21 46 36.6	-0.8
	comp=Z,0.6nm,0.5s,baz=49,slow=3.4,SNR=6.4						
BNN	**Bunyan**	**145.79**	**305**		**PKPab**	**21 46 41.7**	**-1.3**
BR131	**Keskin Array S**	**147.17**	**307**		**PKPab**	**21 46 49.2**	**+0.6**
BRTR	**Keskin Array B**	**147.17**	**307**	PKPbc	**PKPbc**	**21 46 45.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=99,slow=1.9,SNR=3.8						
BRTR	**Keskin Array B**	**147.17**	**307**		**PKiKP**	**21 46 45.3**	**-1.5**
CLL	**Collm**	**150.67**	**343**	*i* PKPbc	**PKiKP**	**21 46 54.3**	**+0.9**
	comp=Z,3.0nm,0.8s						

NEIC ***26*** *21:31:39.6±0.6, 56.°2S±0.°1×28.°2W±0.°2, h170km±3km, mb4.2/13, Error ellipse: s-maj=19.5km s-min=14.7km az=199.0*

IDC ***26*** *21:31:40.1±7.3, 56.°15S×28.°11W, h178km±69km, mb3.6/4, mbtmp4.1/5, Error ellipse: s-maj=32.9km s-min=21.2km az=73.0*

ISC 26 21:31:37.4±0.6, 56.°15S±0.°10×28.°1W±0.°1, h150km, n28, σ0ˢ85/28, mb4.1/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.17**	**288**	Pn	**Pn**	**21 32 54.8**	**+2.0**
VNA2	**Neumayer--Watz**	**17.29**	**157**	P	**P**	**21 35 28.7**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=314,slow=12						
SNAA	**Sanae**	**18.86**	**155**	P	**P**	**21 35 45.3**	**-0.3**
	comp=Z,116nm,0.6s						
SNAA	**Sanae**	**18.86**	**155**	P	**P**	**21 35 45.7**	**+0.2**
	comp=Z,3.4nm,0.5s,baz=299,slow=10,SNR=12						
SNAA	**Sanae**	**18.86**	**155**	P	**P**	**21 35 45.8**	**+0.2**
SNAA				IAmb	IAmb	21 35 46.2	
	comp=Z,4.0nm,0.6s						
TROLL	**Troll, Antarti**	**20.38**	**153**	P	**P**	**21 36 02.0**	**0.0**
	comp=Z,108nm,0.7s						
BELA	**Belgrano 2**	**21.94**	**184**	P	**P**	**21 36 18.6**	**+0.2**
BELA				IAmb	IAmb	21 36 37.1	
	comp=Z,11nm,1.5s						
MG03	**Isla Dawson**	**24.14**	**258**	P	**P**	**21 36 39.0**	**-0.1**
LL07	**Hotel Espejo d**	**31.74**	**275**	P	**P**	**21 37 46.1**	**-0.7**
QSPA	**South Pole Qui**	**34.10**	**180**	P	**P**	**21 38 07.6**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=342,slow=16,SNR=26						
	comp=Z,1.3nm,0.4s						
QSPA	**South Pole Qui**	**34.10**	**180**	P	**P**	**21 38 07.8**	**+0.5**
QSPA				IAmb	IAmb	21 38 11.1	
	comp=Z,3.9nm,1.2s						
BO01	**Tunca**	**36.45**	**288**	P	**P**	**21 38 26.5**	**-1.0**
BO01				IAmb	IAmb	21 38 59.7	
	comp=Z,12nm,0.7s						
SHEL	**Horse Pasture**	**43.58**	**32**	P	**P**	**21 39 27.9**	**+1.4**
VNDA	**Vanda**	**46.45**	**183**	P	**P**	**21 39 48.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=191,slow=6.6,SNR=14						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**46.45**	**183**	P	**P**	**21 39 48.9**	**+0.5**
BOSA	**Boshof**	**46.48**	**77**	P	**P**	**21 39 49.6**	**+0.3**
BOSA				IAmb	IAmb	21 40 01.1	
	comp=Z,7.4nm,1.2s						
PB08	**IPOC Station P**	**47.15**	**303**	P	**P**	**21 39 54.7**	**-0.2**
PB08				IAmb	IAmb	21 40 20.2	
	comp=Z,8.2nm,1.2s						
GO01	**Chusmiza**	**47.58**	**303**	P	**P**	**21 39 57.6**	**-0.8**
KOOLE	**Kule**	**48.31**	**67**	P	**P**	**21 40 03.9**	**+0.3**
KOOLE				IAmb	IAmb	21 40 21.7	
	comp=Z,9.5nm,1.1s						
LPAZ	**La Paz**	**50.03**	**306**	P	**P**	**21 40 16.9**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=105,slow=2.1,SNR=8.9						
	comp=Z,1.1nm,0.4s						
LPAZ	**La Paz**	**50.03**	**306**	P	**P**	**21 40 16.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**73.39**	**30**	P	**P**	**21 42 52.8**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=197,slow=6.5,SNR=8.4						
	comp=Z,0.6nm,0.4s						
INK	**Inuvik**	**145.57**	**321**	PKPbc	**PKPdf**	**21 50 54.9**	**-1.1**
	comp=Z,1.1nm,1.0s,baz=348,slow=5.5,SNR=1.7						
INK	**Inuvik**	**145.57**	**321**		**PKPdf**	**21 50 55.5**	**-0.5**
ILAR	**Eielson Array**	**149.81**	**312**	PKPbc	**PKPbc**	**21 51 06.2**	**-1.8**
	comp=Z,2.0nm,0.8s,baz=126,slow=2.3,SNR=4.3						
ILAR	**Eielson Array**	**149.81**	**312**		**PKPbc**	**21 51 07.1**	**-0.9**
SONM	**Songino Array**	**151.23**	**87**	PKPbc	**PKPbc**	**21 51 10.8**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=225,slow=1.8,SNR=2.0						
SONM	**Songino Array**	**151.23**	**87**		**PKPbc**	**21 51 11.0**	**-1.1**

NIED ***26*** *21:31:51.6, 42.°08N×148.°19E, h24km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr~1.44; Mθθ1.56; Mφφ-0.13; Mrθ2.52; Mθφ0.44; Mφr-0.89; Fault plane solution: M₀3.09000×10¹⁴ NP1:φ₁54.00000°, δ20.00000°, λ-138.00000°. NP2:φ₂284.00000°, δ76.00000°, λ-75.00000°.*

IDC ***26*** *21:31:51.7±2.8, 41.°77N×147.°90E, h0km, mb3.6/4, mbtmp3.8/7, ML3.6/3 Error ellipse: s-maj=50.6km s-min=34.5km az=107.0*

JMA ***26*** *21:31:51.6±0.3, 42.°1N±0.°8×14.°8E±.°, h24km, MV4.3/28, FAR SE OFF HOKKAIDO*

NEIC ***26*** *21:31:53.7±1.0, 41.°7N±0.°1×147.°9E±0.°1, h10km±1km, mb4.6/11, Error ellipse: s-maj=17.9km s-min=14.3km az=209.0*

ISC 26 21:31:53.2±0.9, 41.°77N±0.°07×147.°85E±0.°08, h10km, n41, σ1ˢ75/47, mb4.2/11, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.23**	**316**	P	**Pn**	**21 32 27.9**	**-2.2**
NEM2				S	**Sn**	**21 32 54.9**	**-2.9**
JKHN	**Kushirohamanak**	**2.38**	**304**	P	**Pn**	**21 32 31.6**	**-0.7**
JAK	**Akkeshi**	**2.64**	**299**	P	**Pn**	**21 32 35.4**	**-0.4**
JAK				S	**Sn**	**21 33 07.6**	**-0.3**
JRA	**Rausu**	**2.95**	**318**	P	**Pn**	**21 32 38.0**	**-2.1**
JRA				S	**Sn**	**21 33 12.7**	**-2.9**
JAR	**Ashorobuto**	**3.38**	**298**	*i* P	**Pn**	**21 32 45.8**	**-0.2**
JAR				S	**Sn**	**21 33 26.0**	**-0.2**
JCH	**Churui**	**3.44**	**286**	*i* P	**Pn**	**21 32 48.1**	**+1.3**
JCH				S	**Sn**	**21 33 29.4**	**+1.8**
ERM	**Erimo**	**3.51**	**276**		**Pn**	**21 32 49.9**	**+2.1**
JTKR	**Abashiri--Toko**	**3.64**	**309**	P	**Pn**	**21 32 49.0**	**-0.6**
JNBK	**Urakawa-

Plg78.0000°, Azm317.0000°; N 0.2064, Plg4.0000°, Azm66.0000°; P -2.8126, Plg12.0000°, Azm157.0000°;
*BGR **26** 21:36:07.6, 57°.03N, 160°.15W, h33km, mb4.9, Ms3.9*
ISC 26 21:35:52.8,0.4,**54°.76N**,0°.04,**160°.16W**,0°.02,**h32**km,2km,
h32km:**pP-P**,**n1136**,0°.87/1008,**mb5.0**/323,**MS4.1**/74,
58C-19D,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.34**	**79**	Op		**Pb**	**21 36 00.3**	**-0.6**
CNBA						**Sb**	**21 36 05.6**	**-0.8**
CNBA				IAML			21 36 06.3	
	comp=E,53μm,0.4s							
CHNA	**Chernabura Isl**	**0.34**	**77**	P		**Pb**	**21 36 00.0**	**-0.9**
CHNA	**Chernabura Isl**	**0.34**	**77**	S		**Sb**	**21 36 05.5**	**-1.0**
CHNA	**Chernabura Isl**	**0.34**	**77**	P		**Pb**	**21 36 00.4**	**-0.5**
	baz=267,SNR=1000							
SDPT	**Sand Point**	**0.62**	**343**	P		**Pb**	**21 36 05.0**	**-0.3**
SDPT	**Sand Point**	**0.62**	**343**	S		**Sb**	**21 36 12.9**	**-0.9**
SDPT	**Sand Point**	**0.62**	**343**			**Pb**	**21 36 05.0**	**-0.3**
SDPT						**Sb**	**21 36 13.1**	**-0.7**
SDPT				IAML			21 36 15.0	
	comp=N,46μm,0.9s							
SDPT				IAML			21 36 15.6	
	comp=E,25μm,1.1s							
SDPT	**Sand Point**	**0.62**	**343**	P		**Pn**	**21 36 05.2**	**-0.2**
	baz=164,SNR=1000							
DOL	**Dolgoi Island**	**1.06**	**292**			**Pn**	**21 36 11.4**	**0.0**
DOL						**Sb**	**21 36 25.8**	**-0.4**
PVV	**Pavlof Volcano**	**1.12**	**304**			**Pn**	**21 36 12.8**	**+0.6**
PS1A	**Pavlof South-1**	**1.13**	**307**			**Pb**	**21 36 13.0**	**-0.8**
PS1A						**Sb**	**21 36 28.9**	**+0.7**
PS4A	**Pavlof South-4**	**1.14**	**302**			**Pn**	**21 36 13.1**	**+0.5**
PS4A						**Sb**	**21 36 28.7**	**+0.2**
HAG	**Hague Volcano**	**1.15**	**300**			**Pn**	**21 36 13.4**	**+0.7**
PN7A	**Pavlof North-7**	**1.26**	**303**			**Pb**	**21 36 15.2**	**-0.8**
PN7A						**Sb**	**21 36 31.9**	**+0.1**
DTNA	**Dutton South F**	**1.27**	**289**			**Pn**	**21 36 14.6**	**+0.3**
DTNA						**Sb**	**21 36 31.7**	**-0.5**
DT1	**Dutton Round H**	**1.27**	**287**			**Pn**	**21 36 14.4**	**+0.1**
DT1						**Sn**	**21 36 30.6**	**+0.2**
VNSW	**Veniaminof 7**	**1.36**	**14**			**Pb**	**21 36 16.3**	**-1.4**
VNFG	**Fog Glacier, M**	**1.57**	**12**	Pn		**Pn**	**21 36 19.5**	**+1.0**
VNFG				Sn		**Sn**	**21 36 38.2**	**+0.5**
VNNF	**Veniaminof 3**	**1.60**	**17**			**Pb**	**21 36 20.7**	**-1.2**
BPBCA	**Veniaminof**	**2.07**	**27**			**Pb**	**21 36 27.4**	**-2.4**
ISNN	**Isanotski Nort**	**2.10**	**274**			**Sb**	**21 36 54.0**	**-1.9**
SSLS	**Shishaldin Sou**	**2.23**	**270**			**Pn**	**21 36 28.8**	**+1.3**
SSBA	**Shishaldin**	**2.30**	**272**			**Pn**	**21 36 29.9**	**+1.4**
ANPB	**Aniakchak Plen**	**2.31**	**27**			**Pn**	**21 36 30.0**	**+1.5**
ANPK	**Aniakchak Peak**	**2.38**	**28**			**Pn**	**21 36 31.5**	**+1.8**
AZAC	**Aniakchak**	**2.40**	**26**			**Pn**	**21 36 31.6**	**+1.7**
ANNE	**Aniakchak Nort**	**2.46**	**28**			**Pn**	**21 36 32.5**	**+1.7**
ANNW	**Aniakchak Nort**	**2.47**	**26**			**Pn**	**21 36 32.5**	**+1.7**
AKUT	**Akutan**	**3.34**	**262**	P		**Pn**	**21 36 44.6**	**+1.9**
AKUT	**Akutan**	**3.34**	**262**	S		**Sn**	**21 37 22.5**	**+1.4**
AKUT	**Akutan**	**3.34**	**262**			**Pn**	**21 36 44.3**	**+1.7**
AKUT				IAML			21 37 32.4	
	comp=E,3μm,1.0s							
LVA	**Lava Point**	**3.48**	**263**			**Pn**	**21 36 45.9**	**+1.2**
LVA				IAML			21 37 48.6	
	comp=E,3μm,0.9s							
R17L	**Mt. Peulik Vol**	**3.58**	**35**			**Pn**	**21 36 48.1**	**+2.1**
R17L	**Mt. Peulik Vol**	**3.58**	**35**	P		**Pn**	**21 36 47.8**	**+1.8**
	baz=219							
PLK1	**Peulik 1**	**3.64**	**32**			**Pn**	**21 36 48.3**	**+1.5**
PLK2	**Peulik 2**	**3.69**	**34**			**Pn**	**21 36 49.4**	**+1.8**
UNV	**Unalaska Valle**	**3.83**	**259**	P		**Pn**	**21 36 50.6**	**+1.2**
UNV	**Unalaska Valle**	**3.83**	**259**	S		**Sn**	**21 37 34.6**	**+1.3**
UNV	**Unalaska Valle**	**3.83**	**259**			**Pn**	**21 36 50.3**	**+0.8**
UNV				IAML			21 37 50.8	
	comp=N,2μm,0.6s							
UNV				IAML			21 37 53.4	
	comp=E,1μm,1.0s							
UNV	**Unalaska Valle**	**3.83**	**259**	P		**Pn**	**21 36 50.3**	**+0.8**
	baz=73,SNR=45							
MREP	**Makushin Rep't**	**3.98**	**259**			**Pn**	**21 36 52.4**	**+0.8**
KJL	**Kejulik**	**4.17**	**36**			**Pn**	**21 36 55.5**	**+1.4**
Q17K	**Contact Creek**	**4.24**	**32**			**Pn**	**21 36 56.3**	**+1.2**
Q17K	**Contact Creek**	**4.24**	**32**	P		**Pn**	**21 36 56.0**	**+0.9**
	baz=216							
CAHL	**Cahill**	**4.26**	**37**			**Pn**	**21 36 56.7**	**+1.3**
ACHA	**Angle Creek He**	**4.38**	**36**			**Pn**	**21 36 57.2**	**+0.2**
Q16K	**King Salmon**	**4.38**	**25**			**Pn**	**21 36 58.7**	**+1.8**
Q16K	**King Salmon**	**4.38**	**25**	P		**Pn**	**21 36 58.2**	**+1.3**
	baz=208,SNR=22							
KELA	**Mount Kelaz**	**4.42**	**32**			**Pn**	**21 36 58.9**	**+1.2**
O15K	**Ungalikthiuk R**	**4.43**	**2**			**Pn**	**21 36 58.5**	**+0.8**
O15K				IAML			21 38 33.5	
	comp=E,693nm,1.2s							
O15K	**Ungalikthiuk R**	**4.43**	**2**	P		**Pn**	**21 36 58.4**	**+0.6**
	baz=183,SNR=83							
P16K	**Nushagak River**	**4.45**	**15**			**Pn**	**21 36 59.0**	**+1.1**
P16K				IAML			21 38 31.1	
	comp=N,1μm,1.0s							
P16K				IAML			21 38 43.3	
	comp=E,1μm,0.9s							
P16K	**Nushagak River**	**4.45**	**15**	P		**Pn**	**21 36 58.6**	**+0.7**
	baz=197							
O14K	**Tigyukauivet M**	**4.55**	**353**			**Pn**	**21 37 00.1**	**+0.8**
O14K				IAML			21 38 36.6	
	comp=E,519nm,1.0s							
O14K				IAML			21 38 39.2	
	comp=N,753nm,1.1s							
O14K	**Tigyukauivet M**	**4.55**	**353**	P		**Pn**	**21 37 00.2**	**+0.8**
	baz=172,SNR=92							
OHAK	**Old Harbor**	**4.58**	**55**			**Pn**	**21 36 58.6**	**-1.1**
OHAK				IAML			21 38 21.7	
	comp=E,523nm,1.1s							
OKFG	**Magazine Ridge**	**4.76**	**257**			**Pn**	**21 37 03.0**	**+0.8**
Q18K	**Katmai Hardscr**	**4.82**	**34**	P		**Pn**	**21 37 04.3**	**+1.2**
	baz=219,SNR=62							
OKTU	**Okmok Mt. Tuli**	**4.84**	**257**			**Pn**	**21 37 04.6**	**+1.1**
OKNC	**Okmok New Cone**	**4.87**	**258**			**Pn**	**21 37 04.5**	**+0.8**
P17K	**Kvichak River**	**4.89**	**23**			**Pn**	**21 37 05.1**	**+1.1**
P17K	**Kvichak River**	**4.89**	**23**	P		**Pn**	**21 37 05.6**	**+1.7**
	baz=207,SNR=53							
OKCE	**Okmok Cone E**	**4.90**	**257**			**Pn**	**21 37 05.2**	**+1.0**
OKWE	**Okmok W'ng Wal**	**4.93**	**258**			**Pn**	**21 37 05.6**	**+1.1**
O16K	**Kokwok River B**	**4.98**	**12**			**Pn**	**21 37 06.3**	**+1.1**
O16K	**Kokwok River B**	**4.98**	**12**	P		**Pn**	**21 37 05.7**	**+0.6**
	baz=194							
KDAK	**Kodiak Island**	**5.20**	**51**	Pn		**Pn**	**21 37 07.7**	**-0.5**
	comp=E,8.2nm,0.3s,baz=214,slow=6.7,SNR=83							
KDAK				Sn		**Sn**	**21 38 03.6**	**-3.3**
	comp=E,10nm,0.3s,baz=200,slow=3.6,SNR=4.0							
KDAK				Lg		Lg	21 38 26.0	
	comp=E,15nm,0.3s,baz=45,slow=14,SNR=6.8							
KDAK				LR		LR	21 39 26.3	
	comp=E,3μm,20.5s,baz=224,slow=42							
	comp=E,32nm,0.4s							
KDAK	**Kodiak Island**	**5.20**	**51**			**Pn**	**21 37 07.5**	**-0.6**
KDAK				IAML			21 38 44.6	
	comp=E,456nm,1.2s							
KDAK				IAML			21 38 51.5	
	comp=E,454nm,1.1s							
KDAK	**Kodiak Island**	**5.20**	**51**	P		**Pn**	**21 37 08.2**	**0.0**
	baz=238							
KDAK	**Kodiak Island**	**5.20**	**51**	P		**Pn**	**21 37 08.5**	**+0.3**
N14K	**Kuskokwak Cree**	**5.25**	**352**			**Pn**	**21 37 09.9**	**+1.0**
N14K				IAML			21 39 15.6	
	comp=N,743nm,1.1s							
N14K	**Kuskokwak Cree**	**5.25**	**352**	P		**Pn**	**21 37 09.8**	**+1.0**
	baz=171,SNR=94							
O17K	**Koliganek Bris**	**5.30**	**17**	P		**Pn**	**21 37 10.7**	**+1.2**
	baz=200,SNR=78							
P18K	**Big Mountain,**	**5.37**	**28**	P		**Pn**	**21 37 12.0**	**+1.4**
	baz=213,SNR=60							
N15K	**Kwethluk River**	**5.43**	**0**			**Pn**	**21 37 12.5**	**+1.2**
N15K	**Kwethluk River**	**5.43**	**0**	P		**Pn**	**21 37 12.2**	**+0.9**
	baz=181,SNR=198							
Q19K	**Cape Douglas,**	**5.50**	**38**			**Pn**	**21 37 12.9**	**+0.5**
Q19K	**Cape Douglas,**	**5.50**	**38**	P		**Pn**	**21 37 13.5**	**+1.1**
	baz=224							
O18K	**Koktuh Hills**	**5.77**	**26**	P		**Pn**	**21 37 17.8**	**+1.7**
	baz=210,SNR=75							
N16K	**Nishlik Lake**	**5.78**	**7**			**Pn**	**21 37 18.1**	**+1.9**
N16K	**Nishlik Lake**	**5.78**	**7**	P		**Pn**	**21 37 17.5**	**+1.3**
	baz=188							
M13K	**Dall Lake**	**5.92**	**344**			**Pn**	**21 37 19.6**	**+1.4**
M13K	**Dall Lake**	**5.92**	**344**	P		**Pn**	**21 37 19.6**	**+1.4**
	baz=162,SNR=72							
M15K	**Kasigluk River**	**5.96**	**357**	P		**Pn**	**21 37 19.5**	**+0.8**
	baz=177,SNR=80							
N17K	**Nushagak Hills**	**6.00**	**14**			**Pn**	**21 37 20.0**	**+0.8**
N17K	**Nushagak Hills**	**6.00**	**14**	P		**Pn**	**21 37 20.2**	**+1.0**
	baz=197,SNR=48							
M14K	**Bethel**	**6.09**	**352**			**Pn**	**21 37 21.0**	**+0.7**
M14K	**Bethel**	**6.09**	**352**	P		**Pn**	**21 37 21.1**	**+0.7**
	baz=170,SNR=347							
CLES	**Cleveland East**	**6.09**	**255**			**Pn**	**21 37 21.2**	**+0.7**
SPIA	**Saint Paul Isl**	**6.16**	**297**	P		**Pn**	**21 37 23.5**	**+2.1**
SPIA	**Saint Paul Isl**	**6.16**	**297**	S		**Sn**	**21 38 32.1**	**+1.4**
SPIA	**Saint Paul Isl**	**6.16**	**297**			**Pn**	**21 37 22.4**	**+0.9**
SPIA	**Saint Paul Isl**	**6.16**	**297**	P		**Pn**	**21 37 22.6**	**+1.1**
	baz=109,SNR=20							
P19K	**Oil Pt**	**6.18**	**35**			**Pn**	**21 37 23.2**	**+1.5**
P19K	**Oil Pt**	**6.18**	**35**	P		**Pn**	**21 37 23.2**	**+1.5**
	baz=221,SNR=30							
O19K	**Port Alsworth**	**6.29**	**28**	P		**Pn**	**21 37 24.8**	**+1.6**
	baz=213,SNR=19							
M16K	**Timber Creek**	**6.32**	**5**	P		**Pn**	**21 37 24.8**	**+1.3**
	baz=187,SNR=96							
N18K	**Kilae Creek**	**6.36**	**19**			**Pn**	**21 37 25.8**	**+1.6**
N18K	**Kilae Creek**	**6.36**	**19**	P		**Pn**	**21 37 25.5**	**+1.3**
	baz=203							
ILSW	**Iliamna Southw**	**6.46**	**33**			**Pn**	**21 37 27.3**	**+1.6**
ILS	**Iliamna Low So**	**6.47**	**33**			**Pn**	**21 37 27.4**	**+1.7**
M11K	**Mekoryuk**	**6.51**	**333**			**Pn**	**21 37 27.4**	**+1.2**
M11K	**Mekoryuk**	**6.51**	**333**	P		**Pn**	**21 37 27.4**	**+1.2**
	baz=148,SNR=14							
IVE	**Iliamna Volcan**	**6.53**	**33**			**Pn**	**21 37 27.9**	**+1.3**
O20K	**Slope Mountain**	**6.71**	**34**			**Pn**	**21 37 30.7**	**+1.7**
O20K	**Slope Mountain**	**6.71**	**34**	P		**Pn**	**21 37 29.5**	**+0.5**
	baz=221							
L14K	**Kuka Creek**	**6.74**	**350**	P		**Pn**	**21 37 30.1**	**+0.8**
	baz=168,SNR=97							
N19K	**Bonanza Creek**	**6.79**	**24**			**Pn**	**21 37 30.7**	**+0.6**
N19K	**Bonanza Creek**	**6.79**	**24**	P		**Pn**	**21 37 31.7**	**+1.7**
	baz=209							
CNPM	**China Poot**	**6.81**	**42**			**Pn**	**21 37 30.0**	**-0.3**
M17K	**Holitna River**	**6.82**	**11**	P		**Pn**	**21 37 31.9**	**+1.5**
	baz=194,SNR=90							
RED	**Redoubt Volcan**	**6.92**	**32**			**Pn**	**21 37 32.9**	**+0.9**
L15K	**Ungalak Mounta**	**6.98**	**355**			**Pn**	**21 37 33.0**	**+0.4**
L15K	**Ungalak Mounta**	**6.98**	**355**	P		**Pn**	**21 37 32.8**	**+0.2**
	baz=174,SNR=28							
L16K	**Owhat River**	**6.98**	**3**	P		**Pn**	**21 37 33.6**	**+0.9**
	baz=184,SNR=55							
NCT	**North Crescent**	**6.99**	**31**			**Pn**	**21 37 34.8**	**+1.9**
RDJH	**Redoubt Jeurge**	**7.05**	**31**			**Pn**	**21 37 35.8**	**+2.1**
DFR	**Drift River**	**7.09**	**31**			**Pn**	**21 37 36.1**	**+1.9**
M18K	**Stony River**	**7.13**	**17**	P		**Pn**	**21 37 36.6**	**+1.9**
	baz=201,SNR=234							
BRSE	**Bradley Lake S**	**7.14**	**42**			**Pn**	**21 37 34.5**	**-0.4**
BRSE	**Bradley Lake S**	**7.14**	**42**	P		**Pn**	**21 37 35.1**	**+0.2**
	baz=230,SNR=8.5							
RDT	**Redoubt**	**7.16**	**32**			**Pn**	**21 37 36.6**	**+1.4**
L17K	**Donlin**	**7.46**	**7**			**Pn**	**21 37 39.4**	**+0.1**
L17K	**Donlin**	**7.46**	**7**	P		**Pn**	**21 37 39.8**	**+0.5**
	baz=189,SNR=35							
K13K	**Kusilvak Mount**	**7.57**	**344**			**Pn**	**21 37 41.9**	**+1.1**
K13K	**Kusilvak Mount**	**7.57**	**344**	P		**Pn**	**21 37 41.7**	**+0.9**
	baz=160,SNR=96							
K15K	**Wolf Creek Mou**	**7.59**	**355**			**Pn**	**21 37 41.8**	**+0.8**
K15K	**Wolf Creek Mou**	**7.59**	**355**	P		**Pn**	**21 37 42.2**	**+1.2**
	baz=174,SNR=38							
SPWE	**Spurr West**	**7.67**	**29**			**Pn**	**21 37 44.0**	**+1.7**
L18K	**Granite Mounta**	**7.70**	**12**	P		**Pn**	**21 37 43.8**	**+1.3**
	baz=196,SNR=57							
SPCR	**Spurr Chakacha**	**7.71**	**30**	P		**Pn**	**21 37 44.4**	**+1.7**
	baz=217							
SPU	**Mount Spurr**	**7.74**	**30**			**Pn**	**21 37 42.7**	**-0.5**
M19K	**Big River Lodg**	**7.78**	**21**			**Pn**	**21 37 44.4**	**+0.8**
M19K	**Big River Lodg**	**7.78**	**21**	P		**Pn**	**21 37 45.2**	**+1.5**
	baz=206							
SPCG	**Spurr Capps Gl**	**7.84**	**30**			**Pn**	**21 37 46.1**	**+1.5**
SLKM	**Skilak Lake**	**7.85**	**39**			**Pn**	**21 37 45.0**	**+0.4**
SEW	**Seward**	**7.87**	**43**			**Pn**	**21 37 44.8**	**-0.1**
SEW	**Seward**	**7.87**	**43**	P		**Pn**	**21 37 46.2**	**+1.3**
	baz=232,SNR=7.5							
L19K	**White Mountain**	**7.94**	**18**			**Pn**	**21 37 46.9**	**+1.0**
L19K	**White Mountain**	**7.94**	**18**	P		**Pn**	**21 37 47.7**	**+1.8**
	baz=203,SNR=156							
O22K	**Cooper Landing**	**8.01**	**40**			**Pn**	**21 37 47.6**	**+0.8**
O22K	**Cooper Landing**	**8.01**	**40**	P		**Pn**	**21 37 48.1**	**+1.3**
	baz=229							
K17K	**Iditarod**	**8.04**	**6**	P		**Pn**	**21 37 48.4**	**+1.2**
	baz=188,SNR=64							
M20K	**Styx River**	**8.04**	**24**			**Pn**	**21 37 49.2**	**+1.9**
M20K	**Styx River**	**8.04**	**24**	P		**Pn**	**21 37 48.5**	**+1.2**
	baz=211,SNR=51							
STLK	**Strandline Lak**	**8.06**	**30**			**Pn**	**21 37 48.4**	**+0.8**
J14K	**Nanvaranak Lak**	**8.21**	**349**	P		**Pn**	**21 37 50.2**	**+0.8**
	baz=166,SNR=59							
RC01	**Rabbit Creek A**	**8.42**	**37**			**Pn**	**21 37 52.4**	**0.0**
RC01	**Rabbit Creek A**	**8.42**	**37**	P		**Pn**	**21 37 53.7**	**+1.3**
	baz=226,SNR=18							
SKT	**Skwentna**	**8.54**	**28**			**Pn**	**21 37 54.4**	**+0.4**
SKT	**Skwentna**	**8.54**	**28**	P		**Pn**	**21 37 55.3**	**+1.3**
	baz=216,SNR=34							
J16K	**Anvik River**	**8.56**	**359**	P		**Pn**	**21 37 55.0**	**+0.8**
	baz=178,SNR=91							
KOSE	**Korovin Southe**	**8.62**	**259**			**Pn**	**21 37 56.1**	**+0.9**
KONE	**Korovin Northe**	**8.64**	**260**			**Pn**	**21 37 56.9**	**+1.5**
P23K	**Montague Islan**	**8.65**	**47**			**Pn**	**21 37 55.4**	**-0.2**
P23K	**Montague Islan**	**8.65**	**47**	P		**Pn**	**21 37 56.0**	**+0.4**
	baz=239							
KOKV	**Korovin Volcan**	**8.68**	**260**			**Pn**	**21 37 57.6**	**+1.6**
J17K	**VABM Dome**	**8.68**	**3**	P		**Pn**	**21 37 56.3**	**+0.3**
	baz=184,SNR=62							
KOKL	**Mount Kliuchef**	**8.71**	**259**			**Pn**	**21 37 57.8**	**+1.2**
KOWE	**Korovin West**	**8.73**	**260**			**Pn**	**21 37 58.1**	**+1.5**
ATKA	**Atka Island**	**8.76**	**259**	P		**Pn**	**21 37 57.8**	**+0.8**
ATKA	**Atka Island**	**8.76**	**259**	S		**Sn**	**21 39 36.0**	**+1.5**
M22K	**Willow**	**8.78**	**33**	P		**Pn**	**21 37 58.8**	**+1.6**
	baz=222,SNR=20							
PWL	**Port Wells**	**8.78**	**41**			**Pn**	**21 37 56.8**	**-0.5**
PWL	**Port Wells**	**8.78**	**41**	P		**Pn**	**21 37 57.9**	**+0.5**
	baz=231,SNR=22							
MID	**Middleton Isla**	**8.85**	**52**	Pn		**Pn**	**21 37 58.0**	**-0.2**
J18K	**Innoko River**	**8.91**	**10**	P		**Pn**	**21 38 00.1**	**+0.9**
	baz=193,SNR=59							
PMR	**Palmer**	**8.98**	**36**	P		**Pn**	**21 38 00.5**	**+0.4**
PMR	**Palmer**	**8.98**	**36**	S		**Sn**	**21 39 43.2**	**+3.2**
PMR	**Palmer**	**8.98**	**36**	P		**Pn**	**21 38 00.9**	**+0.8**
	baz=226							
KNK	**Knik Glacier**	**9.09**	**38**	Pn		**Pn**	**21 38 02.4**	**+0.7**
KNK	**Knik Glacier**	**9.09**	**38**	P		**Pn**	**21 38 02.7**	**+1.0**
	baz=228,SNR=12							
PPLA	**Purkeypile**	**9.14**	**24**			**Pn**	**21 38 02.5**	**+0.1**
PPLA	**Purkeypile**	**9.14**	**24**	P		**Pn**	**21 38 04.0**	**+1.6**
	baz=211,SNR=34							
I17K	**Unalakleet**	**9.16**	**359**	P		**Pn**	**21 38 03.4**	**+0.8**
	baz=178,SNR=26							
K20K	**Telida**	**9.17**	**17**			**Pn**	**21 38 03.4**	**+0.7**
K20K	**Telida**	**9.17**	**17**	P		**Pn**	**21 38 03.5**	**+0.7**
	baz=203							
GHO	**Glory Hole Cre**	**9.18**	**35**			**Pn**	**21 38 02.1**	**-0.7**
L22K	**Petersville**	**9.19**	**28**	P		**Pn**	**21 38 03.7**	**+0.7**
	baz=217,SNR=15							
CUT	**Chulitna**	**9.23**	**30**	P		**Pn**	**21 38 04.0**	**+0.5**
	baz=219							
HIN	**Hinchinbrook I**	**9.25**	**47**			**Pn**	**21 38 03.1**	**-0.7**
GLI	**Glacier Island**	**9.27**	**43**			**Pn**	**21 38 02.3**	**-1.8**
GLI	**Glacier Island**	**9.27**	**43**	P		**Pn**	**21 38 03.7**	**-0.3**
	baz=235							
SML	**Sawmill**	**9.41**	**37**			**Pn**	**21 38 05.2**	**-0.8**
SML	**Sawmill**	**9.41**	**37**	P		**Pn**	**21 38 06.3**	**+0.4**
	baz=227,SNR=8.6							
FID	**Port Fidalgo**	**9.45**	**45**			**Pn**	**21 38 05.5**	**-1.0**
J19K	**Poorman**	**9.55**	**12**			**Pn**	**21 38 08.4**	**+0.6**
J19K	**Poorman**	**9.55**	**12**	P		**Pn**	**21 38 09.0**	**+1.2**
	baz=196,SNR=69							
M23K	**Glacier View**	**9.61**	**38**			**Pn**	**21 38 08.5**	**-0.2**
M23K	**Glacier View**	**9.61**	**38**	P		**Pn**	**21 38 09.1**	**+0.4**
	baz=229,SNR=15							
CAST	**Castle Rocks**	**9.62**	**22**			**Pn**	**21 38 10.1**	**+1.3**
CAST	**Castle Rocks**	**9.62**	**22**	P		**Pn**	**21 38 10.2**	**+1.3**
	baz=209,SNR=37							
EYAK	**Cordova Ski Ar**	**9.65**	**47**	P		**Pn**	**21 38 09.6**	**+0.4**
EYAK	**Cordova Ski Ar**	**9.65**	**47**	S		**Sn**	**21 39 59.6**	**+3.4**
EYAK	**Cordova Ski Ar**	**9.65**	**47**			**Pn**	**21 38 08.5**	**-0.7**
EYAK	**Cordova Ski Ar**	**9.65**	**47**	P		**Pn**	**21 38 09.3**	**+0.1**
	baz=240,SNR=7.3							
SCM	**Sheep Creek Mo**	**9.78**	**38**			**Pn**	**21 38 10.7**	**-0.4**
SCM	**Sheep Creek Mo**	**9.78**	**38**	P		**Pn**	**21 38 11.2**	**+0.1**
	baz=230,SNR=21							
GSIG	**Igitkin Island**	**9.82**	**260**			**Pn**	**21 38 12.4**	**+0.7**
GSMY	**Great Sitkin M**	**9.88**	**261**			**Pn**	**21 38 13.5**	**+1.1**
J20K	**Nowinta River**	**9.92**	**15**	P		**Pn**	**21 38 14.3**	**+1.3**
	baz=201,SNR=41							
GSSP	**Great Sitkin S**	**9.93**	**261**			**Pn**	**21 38 13.6**	**+0.5**
DIV	**Divide**	**9.95**	**44**			**Pn**	**21 38 12.6**	**-0.8**
KAIM	**Kayak Island**	**9.95**	**52**			**Pn**	**21 38 13.8**	**+0.4**
KAIM	**Kayak Island**	**9.95**	**52**	P		**Pn**	**21 38 14.1**	**+0.8**
	baz=246,SNR=5.5							
GSCK	**Great Sitkin C**	**9.95**	**261**			**Pn**	**21 38 14.1**	**+0.7**
H16K	**Elim**	**9.97**	**355**	P		**Pn**	**21 38 14.0**	**+0.5**
	baz=173,SNR=18							
CHUM	**Lake Minchumin**	**9.98**	**20**	P		**Pn**	**21 38 14.7**	**+0.9**
	baz=207,SNR=33							
WAT7	**Susitna Watana**	**9.98**	**31**			**Pn**	**21 38 13.1**	**-0.8**
WAT1	**Susitna Watana**	**10.07**	**32**	P		**Pn**	**21 38 14.8**	**-0.2**
	baz=222							
TRF	**Thorofare Moun**	**10.07**	**26**	P		**Pn**	**21 38 15.7**	**+0.5**
	baz=215,SNR=19							
KLU	**Klutina**	**10.09**	**42**	P		**Pn**	**21 38 15.6**	**+0.2**
	baz=235,SNR=58							
WAT6	**Susitna Watana**	**10.15**	**34**	P		**Pn**	**21 38 16.2**	**0.0**
	baz=225							
GCSA	**Galena City Sc**	**10.15**	**8**	P		**Pn**	**21 38 17.1**	**+1.0**
	baz=191,SNR=19							
ANM	**Nome**	**10.18**	**347**	P		**Pn**	**21 38 16.9**	**+0.4**
	baz=163,SNR=23							
H17K	**Granite Mounta**	**10.21**	**1**	P		**Pn**	**21 38 17.3**	**+0.3**
	baz=181,SNR=24							
ADK	**Adak**	**10.30**	**261**	P		**Pn**	**21 38 18.9**	**+0.8**
ADK	**Adak**	**10.30**	**261**	S		**Sn**	**21 40 14.7**	**+2.4**
ADK	**Adak**	**10.30**	**261**			**Pn**	**21 38 18.7**	**+0.6**
ADK	**Adak**	**10.30**	**261**	P		**Pn**	**21 38 20.5**	**+2.3**
BMRM	**Bremner River**	**10.34**	**47**	P		**Pn**	**21 38 19.0**	**+0.2**
	baz=240							
M24K	**Tolsona, Glenn**	**10.37**	**39**	P		**Pn**	**21 38 20.0**	**+0.8**
	baz=231,SNR=14							
G15K	**Niukluk**	**10.45**	**351**	P		**Pn**	**21 38 20.6**	**+0.4**
	baz=168							
I20K	**Naaghedeneel**	**10.46**	**13**	P		**Pn**	**21 38 21.2**	**+0.9**
	baz=199,SNR=22							
H18K	**Honhosa River**	**10.47**	**4**	P		**Pn**	**21 38 21.1**	**+0.7**
	baz=186,SNR=31							
KIWB	**Kanaga Island**	**10.58**	**261**			**Pn**	**21 38 23.2**	**+1.3**
DHY	**Denali Highway**	**10.62**	**33**	P		**Pn**	**21 38 23.0**	**+0.4**
	baz=224,SNR=16							
MCK	**McKinley**	**10.66**	**28**	P		**Pn**	**21 38 23.5**	**+0.4**
	baz=218,SNR=13							
N25K	**Chitina, Valde**	**10.68**	**44**	P		**Pn**	**21 38 23.6**	**+0.1**
	baz=237,SNR=17							
G16K	**Koyuk River**	**10.73**	**355**	P		**Pn**	**21 38 24.2**	**+0.3**
	ba

D17K **Noatak River** 13.06 355 P Pn 21 38 55.3 -0.5
baz=173
P29M **Windy Craggy** 13.07 59 P Pn 21 38 56.0 0.0
baz=258,SNR=10
YUK6 **Outpost Mounta** 13.11 53 P Pn 21 38 56.6 -0.2
baz=252
F22K **John River** 13.34 13 P Pn 21 39 00.1 +0.4
baz=201,SNR=37
COLD **Coldfoot** 13.38 17 P Pn 21 39 00.1 0.0
baz=206
RDOG **Red Dog Mine** 13.41 356 P Pn 21 38 59.5 -1.0
baz=173
G24K **Hadweenzic Riv** 13.45 22 P Pn 21 39 00.6 -0.5
baz=213,SNR=7.4
HYT **Haines Junctio** 13.48 54 Pn 21 39 02.1 +0.4
HYT **Haines Junctio** 13.48 54 P Pn 21 39 02.0 +0.3
baz=254
P30M **Million Dollar** 13.56 57 P Pn 21 39 03.3 +0.6
baz=257
S31K **Pelican** 13.62 67 P Pn 21 39 03.9 +0.5
baz=267
M29M **Somme Creek** 13.62 47 P Pn 21 39 03.7 +0.1
baz=246,SNR=28
E20K **Nigu River** 13.68 6 P Pn 21 39 04.0 -0.2
baz=190
PLBC **Pleasant Camp** 13.72 60 P Pn 21 39 05.3 +0.5
baz=261,SNR=13
C16K **Lisburne Hills** 13.78 352 P Pn 21 39 05.2 -0.3
baz=167,SNR=5.3
G25K **Bearman Lake** 13.81 24 P Pn 21 39 06.4 +0.4
baz=216
D19K **Kuna River** 13.82 3 P Pn 21 39 05.6 -0.5
baz=185,SNR=6.9
C17K **DeLong Mountai** 13.84 355 P Pn 21 39 06.1 -0.3
baz=173
N30M **Aishikik Lake** 13.86 52 P Pn 21 39 07.0 +0.2
baz=252
C18K **Utukok River** 13.95 358 P Pn 21 39 08.1 +0.1
baz=178,SNR=9.9
DAWY **Dawson** 14.02 40 P Pn 21 39 08.6 -0.4
baz=238,SNR=8.4
E21K **Killik River** 14.03 9 P Pn 21 39 08.8 -0.3
baz=195
L29M **L29M** 14.05 45 P Pn 21 39 09.2 -0.2
baz=244,SNR=12
F24K **Squaw Lake** 14.06 20 P Pn 21 39 09.7 +0.2
baz=211,SNR=7.2
SIT **Sitka** 14.09 70 P Pn 21 39 11.7 +1.8
SIT **Sitka** 14.09 70 P Pn 21 39 10.1 +0.3
baz=271
D20K **Etivluk River** 14.10 5 P Pn 21 39 09.8 -0.2
baz=189
O30N **Mendenhall** 14.13 55 P Pn 21 39 10.4 -0.1
baz=256
I27K **Kandik River** 14.18 33 P Pn 21 39 10.8 -0.4
baz=229,SNR=13
E23K **Chandalar** 14.23 16 P Pn 21 39 11.1 -0.7
baz=206,SNR=22
SKAG **Skagway** 14.24 61 P Pn 21 39 12.1 +0.1
baz=262
M30M **Minto, Yukon** 14.39 48 P Pn 21 39 14.2 +0.3
baz=248,SNR=9.4
C19K **Lookout Ridge** 14.40 1 P Pn 21 39 13.5 -0.7
baz=182
E24K **Your Creek** 14.44 18 P Pn 21 39 14.6 0.0
baz=208,SNR=23
N31M **Braeburn, Yuko** 14.47 52 P Pn 21 39 15.5 +0.4
baz=254
G26K **Porcupine Rive** 14.53 26 P Pn 21 39 15.0 -0.7
baz=221
F25K **Christian Rive** 14.59 22 P Pn 21 39 15.9 -0.9
baz=215,SNR=11
I28M **Miner Creek** 14.62 35 P Pn 21 39 16.3 -0.9
baz=233,SNR=16
K29M **Barlow Dome** 14.63 42 P Pn 21 39 17.1 -0.2
baz=242,SNR=56
H27K **Steamboat Moun** 14.63 31 P Pn 21 39 16.2 -1.1
baz=227,SNR=8.8
C21K **Knifeblade Rid** 14.66 8 P Pn 21 39 17.1 -0.5
baz=192,SNR=35
J29N **Klondike Camp** 14.66 40 P Pn 21 39 17.7 -0.1
baz=239,SNR=21
WHY **Whitehorse** 14.68 56 P Pn 21 39 18.0 0.0
baz=258
TOLK **Toolik Lake Re** 14.77 15 P Pn 21 39 18.7 -0.4
baz=205,SNR=23
D23K **Nanushuk River** 14.91 13 P Pn 21 39 21.0 +0.1
baz=202
G27K **Doyon Strip** 15.00 29 P Pn 21 39 22.2 +0.1
baz=226,SNR=20
F26K **Sheenjek River** 15.02 24 P Pn 21 39 22.5 +0.1
baz=218,SNR=7.4
E25K **Arctic Village** 15.04 21 P Pn 21 39 23.2 +0.4
baz=214,SNR=19
B21K **Ikpikpuk River** 15.13 7 P Pn 21 39 23.8 0.0
baz=192
M31M **Drury Creek, Y** 15.31 51 P Pn 21 39 27.3 +1.0
baz=253,SNR=11
SHEM **Shemya Is, Ala** 15.34 273 Pn Pn 21 39 23.6 -3.0
comp=N,4.0nm,0.3s,baz=293,slow=3.5,SNR=4.8
comp=N,41nm,0.9s
SHEM **Shemya Is, Ala** 15.34 273 IAmb IAmb 21 39 34.0
comp=Z,119nm,1.2s
D24K **Happy Valley** 15.35 15 IAmb IAmb 21 39 32.3
comp=Z,62nm,0.9s
D24K **Happy Valley** 15.35 15 P Pn 21 39 26.7 -0.1
baz=206
B20K **Meade River** 15.37 4 P Pn 21 39 26.9 0.0
baz=187,SNR=6.3
U33K **Whale Pass** 15.37 74 IAmb IAmb 21 39 33.0
comp=Z,51nm,0.8s
U33K **Whale Pass** 15.37 74 P Pn 21 39 27.0 0.0
baz=276
J30M **Hart River** 15.43 41 IAmb IAmb 21 39 35.1
comp=Z,59nm,1.1s
J30M **Hart River** 15.43 41 P Pn 21 39 28.7 +0.7
baz=242,SNR=77
A19K **Wainwright** 15.51 359 P Pn 21 39 29.1 +0.3
baz=178
H29M **Whitestone** 15.61 34 IAmb IAmb 21 39 35.8
comp=Z,51nm,0.8s
H29M **Whitestone** 15.61 34 P Pn 21 39 30.1 0.0
baz=233
N32M **Quiet Lake** 15.65 55 P Pn 21 39 31.7 +1.0
C23K **Itkillik River** 15.73 12 IAmb IAmb 21 39 36.3
comp=Z,87nm,0.9s
C23K **Itkillik River** 15.73 12 P Pn 21 39 31.4 -0.3
baz=201,SNR=25
I30M **Mount Dempster** 15.74 39 P Pn 21 39 31.8 -0.1
baz=240,SNR=149
D25K **Kavik River** 15.91 18 P Pn 21 39 34.0 0.0
baz=210,SNR=16
B22K **Teshekpuk Lake** 15.93 8 IAmb IAmb 21 39 35.9
comp=Z,71nm,1.1s
B22K **Teshekpuk Lake** 15.93 8 P Pn 21 39 34.0 -0.2
baz=194
E27K **Coleen River** 16.01 26 P Pn 21 39 35.3 0.0
baz=222
F28M **Old Crow** 16.06 29 P Pn 21 39 36.0 +0.1
baz=227,SNR=9.0
G29M **Pine Creek** 16.14 32 IAmb IAmb 21 39 41.2
comp=Z,100nm,0.8s
G29M **Pine Creek** 16.14 32 P Pn 21 39 36.4 -0.5
baz=232,SNR=66
EPYK **Eagle Plains** 16.24 35 IAmb IAmb 21 39 44.9
comp=Z,86nm,0.7s
EPYK **Eagle Plains** 16.24 35 P Pn 21 39 37.7 -0.5
baz=236,SNR=54
C27K **Jago River** 16.67 20 P Pn 21 39 44.0 +0.3
baz=215
C26K **Camden Bay** 16.69 18 P Pn 21 39 43.8 0.0
baz=212
G30M **tAoh Zraii Nji** 16.75 34 IAmb IAmb 21 39 49.1
comp=Z,82nm,1.1s
G30M **tAoh Zraii Nji** 16.75 34 P Pn 21 39 44.2 -0.5
baz=235,SNR=33
H31M **Peel River** 16.76 38 IAmb IAmb 21 39 49.7
comp=Z,180nm,1.2s
H31M **Peel River** 16.76 38 P Pn 21 39 44.5 -0.3
baz=241,SNR=85
MMPY **Sheldon Lake,** 16.83 51 P Pn 21 39 46.5 +0.8
baz=256,SNR=15
DLBC **Dease Lake** 16.91 65 LR LR 21 45 59.0
comp=Z,470nm,18.5s,baz=244,slow=36
DLBC **Dease Lake** 16.91 65 P P 21 39 47.8 -0.8
baz=271
D27M **Malcolm River** 16.96 24 P Pn 21 39 47.6 +0.3
baz=221

E29M **Blow River** 17.13 28 P Pn 21 39 49.6 +0.2
baz=228
F30M **Barrier River** 17.26 32 P Pn 21 39 51.4 +0.4
baz=234,SNR=14
G31M **Satah River** 17.36 35 P Pn 21 39 52.1 -0.1
baz=238,SNR=24
INK **Inuvik** 18.36 32 P P 21 40 03.0 -1.3
comp=Z,1.0nm,0.3s,baz=216,slow=12,SNR=29
INK LR LR 21 48 27.2
comp=Z,609nm,18.1s,baz=232,slow=41
comp=Z,11nm,0.5s
INK **Inuvik** 18.36 32 P P 21 40 02.5 -1.8
baz=236,SNR=31
INK **Inuvik** 18.36 32 P P 21 40 03.2 -1.0
BBB **Bella Bella** 19.16 84 LR LR 21 46 24.4
comp=Z,579nm,18.7s,baz=291,slow=33
KOTAN **Kotaneelee Air** 19.97 60 P Pn 21 40 22.9 -0.9
baz=271
WRGLY **Wrigley** 20.45 51 P P 21 40 27.3 +0.2
WRGLY **Wrigley** 20.45 51 P P 21 40 27.5 +0.3
baz=263,SNR=7.8
BILL **Bilibino** 20.50 324 P P 21 40 26.5 -1.2
C36M **Paulatuk** 21.86 34 P P 21 40 41.2 -1.1
C36M IAmb IAmb 21 40 55.1
comp=Z,34nm,1.1s
NLWA **Neilton Lookou** 23.75 93 IAmb IAmb 21 41 18.4
comp=Z,26nm,1.0s
PET **Petropavlovsk** 24.09 283 P P 21 41 06.1 +1.1
PET **Petropavlovsk** 24.09 283 P P 21 41 04.7 -0.4
PET **Petropavlovsk** 24.09 283 P P 21 41 05.0 0.0
comp=Z,3µmcomp=Z,335nm,1.0s
PET **Petropavlovsk** 24.09 283 P P 21 41 05.1 0.0
YKA **Yellowknife Ar** 24.47 53 P P 21 41 09.1 +0.6
comp=Z,6.0nm,0.8s,baz=266,slow=7.7,SNR=31
YKA LR LR 21 51 54.6
comp=Z,431nm,18.6s,baz=266,slow=39
comp=Z,6.0nm,0.8s
YKA **Yellowknife Ar** 24.47 53 P P 21 41 08.2 -0.2
PETK **Petropavlovsk-** 24.60 284 P P 21 41 09.0 -0.8
comp=Z,108nm,0.5s,baz=75,slow=12,SNR=549
PETK LR LR 21 50 41.5
comp=Z,187nm,21.7s,baz=86,slow=36
comp=Z,108nm,0.5s
PETK **Petropavlovsk-** 24.60 284 P P 21 41 09.2 -0.5
SEY **Seymchan** 25.33 308 LR LR 21 52 20.6
comp=Z,832nm,19.9s,baz=126,slow=39
MA2 **Magadan** 26.53 301 P P 21 41 28.0 +0.9
MA2 IAmb IAmb 21 41 29.7
comp=Z,28nm,0.8s
MA2 **Magadan** 26.53 301 P P 21 41 27.7 +0.6
comp=Z,44nm,1.0s
NEW **Newport** 27.21 86 P P 21 41 34.7 +1.3
comp=Z,5.9nm,0.8s,baz=310,slow=5.5,SNR=8.2
NEW LR LR 21 50 45.2
comp=Z,376nm,21.2s,baz=292,slow=33
comp=Z,5.9nm,0.8s
NEW **Newport** 27.21 86 P P 21 41 35.0 +1.6
G08A **Pilot Rock** 27.74 93 P P 21 41 38.9 +0.6
LNOR **Lincton Mounta** 27.80 91 P P 21 41 38.3 -0.4
F10A **Beach Ranch, E** 28.36 90 P P 21 41 43.6 -0.2
HLID **Hailey** 31.39 92 P P 21 42 11.7 +1.0
RES **Resolute Bay** 31.78 27 LR LR 21 57 49.9
comp=Z,267nm,18.8s,baz=292,slow=42
BLKN **Baker Lake** 32.48 47 IAmb IAmb 21 42 21.1
comp=Z,24nm,0.9s
NVAR **Mina Array Bea** 32.49 103 P P 21 42 21.5 +1.0
comp=Z,1.2nm,0.7s,baz=301,slow=9.8,SNR=5.4
NVAR PcP PcP 21 45 07.5 +0.8
comp=Z,3.9nm,0.7s,baz=283,slow=2.8,SNR=12
comp=Z,1.2nm,0.7s
RLMT **Red Lodge** 33.45 85 IAmb IAmb 21 42 40.6
comp=Z,14nm,1.1s
TIXI **Tiksi** 33.62 327 LR LR 21 58 02.5
comp=Z,337nm,19.2s,baz=76,slow=40
BGU **Big Grassy Mou** 33.84 94 IAmb IAmb 21 42 50.2
comp=Z,14nm,1.3s
DUG **Dugway, Tooele** 34.44 95 IAmb IAmb 21 42 49.2
comp=Z,13nm,1.1s
DUG **Dugway, Tooele** 34.44 95 P P 21 42 39.6 +2.3
DUG pP pP 21 42 47.7 +1.0
TPNV **Topopah Spring** 34.69 103 IAmb IAmb 21 42 55.7
comp=Z,19nm,1.3s
PDAR **Pinedale Array** 34.69 89 P P 21 42 40.2 +0.7
comp=Z,0.5nm,0.7s,baz=293,slow=9.1,SNR=4.3
PDAR PcP PcP 21 45 13.9 +1.0
comp=Z,0.5nm,0.7s,baz=346,slow=5.2,SNR=2.3
PDAR LR LR 21 55 55.9
comp=Z,81nm,18.4s,baz=292,slow=35
PDAR **Pinedale Array** 34.69 89 P P 21 42 38.7 -0.9
PDAR PcP 21 45 13.3 +0.4
BSUT **Blindstream Ca** 35.41 93 IAmb IAmb 21 42 57.6
comp=Z,15nm,1.1s
YAK **Yakutsk** 35.77 311 LR LR 21 58 53.1
comp=Z,717nm,19.5s,baz=74,slow=39
YAK **Yakutsk** 35.77 311 P P 21 42 46.5 -1.8
YAK **Yakutsk** 35.77 311 P P 21 42 46.5 -1.8
YSS **Yuzhno-Sakhali** 35.96 282 P P 21 42 51.4 +1.3
YSS **Yuzhno-Sakhali** 35.96 282 P P 21 42 50.9 +0.8
YSS IAmb IAmb 21 42 52.0
comp=Z,26nm,0.9s
YSS **Yuzhno-Sakhali** 35.96 282 P P 21 42 50.6 +0.5
Q16A **Castle Valley** 36.24 95 IAmb IAmb 21 43 05.0
comp=Z,12nm,1.0s
P18A **Preston Nutter** 36.30 94 IAmb IAmb 21 43 10.6
comp=Z,11nm,1.0s
SRU **San Rafael Swe** 36.48 94 IAmb IAmb 21 43 06.8
comp=Z,23nm,1.0s
ILON **Igloolik, Nuna** 36.53 36 P P 21 42 55.4 +0.7
POIN **Pond Inlet** 36.76 30 P P 21 42 56.5 -0.2
PFO **Pinyon Flats O** 36.99 107 LR LR 21 55 18.3
comp=Z,430nm,20.1s,baz=302,slow=32
ALE **Alert** 37.11 12 P P 21 42 59.1 -0.5
O20A **White River Ci** 37.13 91 IAmb IAmb 21 43 11.6
comp=Z,23nm,0.9s
HMU **Henry Mountain** 37.15 96 IAmb IAmb 21 43 12.5
comp=Z,20nm,0.9s
JKA **Kamikawa-asahi** 37.70 278 P P 21 43 05.1 +0.1
JKA IAmb IAmb 21 43 06.3
comp=Z,27nm,0.9s
JKA **Kamikawa-asahi** 37.70 278 P P 21 43 03.9 -1.1
ASAJ **Asahikawa** 37.71 278 P P 21 43 04.9 -0.1
comp=Z,26nm,0.9s,baz=355,slow=4.6,SNR=14
ASAJ LR LR 22 00 23.3
comp=Z,129nm,19.0s,baz=21,slow=39
comp=Z,26nm,0.9s
PV10 **Paradox Valley** 37.84 94 IAmb IAmb 21 43 22.7
comp=Z,22nm,1.0s
PV20 **West Nyswonger** 37.90 94 IAmb IAmb 21 43 18.9
comp=Z,16nm,0.9s
PV04 **Paradox Valley** 37.90 94 IAmb IAmb 21 43 18.1
comp=Z,52nm,1.9s
PV18 **Skein Mesa, Pa** 38.00 94 IAmb IAmb 21 43 20.4
comp=Z,16nm,1.0s
PV05 **Paradox Valley** 38.00 94 IAmb IAmb 21 43 22.6
comp=Z,9.4nm,0.8s
PV03 **Paradox Valley** 38.03 94 IAmb IAmb 21 43 20.5
comp=Z,9.6nm,0.9s
PV13 **Radium Mtn., P** 38.11 94 IAmb IAmb 21 43 19.8
comp=Z,23nm,0.9s
PV02 **Paradox Valley** 38.12 94 IAmb IAmb 21 43 21.4
comp=Z,22nm,0.9s
ULM **Lac du Bonnet** 38.16 69 P P 21 43 09.1 +0.3
comp=Z,6.9nm,0.8s,baz=259,slow=5.4,SNR=5.4
ULM LR LR 21 59 00.6
comp=Z,404nm,18.2s,baz=325,slow=36
comp=Z,6.9nm,0.8s
PV01 **Paradox Valley** 38.27 94 IAmb IAmb 21 43 21.1
comp=Z,12nm,0.9s
ERM **Erimo** 38.68 275 P P 21 43 13.5 +0.3
MVCO **Mesa Verde** 38.94 95 P P 21 43 16.4 +0.7
AGMN **Agassiz Nation** 39.24 72 IAmb IAmb 21 43 19.2
comp=Z,14nm,0.9s
AGMN **Agassiz Nation** 39.24 72 P P 21 43 18.3 +0.4
EPLO **Experimental L** 39.64 69 IAmb IAmb 21 43 31.7
comp=Z,20nm,1.2s
SUSD **Miller** 39.77 79 IAmb IAmb 21 43 24.3
comp=Z,28nm,0.9s
NEEM **North Greenlan** 41.09 18 *i* P P 21 43 32.4 -0.8
NEEM IAmb IAmb 21 43 33.5
comp=Z,30nm,1.0s
TUC **Tucson** 41.14 102 P P 21 43 34.1 +0.2
TUC **Tucson** 41.14 102 P P 21 43 36.3 +2.4
KULLO **Kullorsuaq** 41.37 23 P P 21 43 35.1 +0.1
KULLO **Kullorsuaq** 41.37 23 *i* P P 21 43 35.2 +0.1
KULLO IAmb IAmb 21 43 39.1
comp=Z,21nm,0.9s
ANMO **Albuquerque** 41.71 96 LR LR 21 59 48.1
comp=Z,155nm,19.6s,baz=306,slow=34
ANMO **Albuquerque** 41.71 96 P P 21 43 39.6 +1.0
EYMN **Ely** 41.84 70 IAmb IAmb 21 43 40.6
comp=Z,20nm,0.9s
EYMN **Ely** 41.84 70 P P 21 43 39.8 +0.4
NOR **Nord** 42.48 7 P P 21 43 44.0 -0.1
NOR **Nord** 42.48 7 *i* P P 21 43 44.1 0.0
NOR IAmb IAmb 21 43 44.9
comp=Z,22nm,0.9s
HEH **HeiHe** 42.51 295 *e*P P 21 43 42.8 -1.9
HEH pmax pmax
comp=Z,18nm,0.9s
HEH L L
comp=Z,130nm,16.2s
HEH L L
comp=Z,190nm,17.4s
HEH L L
comp=Z,330nm,16.9s
UPNV **Upernavik** 42.60 25 *i* P P 21 43 45.5 +0.4
UPNV IAmb IAmb 21 43 46.3
comp=Z,20nm,0.8s
E38A **The Farm, Brul** 42.60 71 IAmb IAmb 21 43 46.6
comp=Z,16nm,0.8s
H11N2 **WAKE ISLAND Hy** 42.97 229 T T 22 29 42.7
baz=27,slow=75
H11N3 **WAKE ISLAND Hy** 42.98 229 T T 22 29 41.9
baz=27
H11N1 **WAKE ISLAND Hy** 42.99 229 T T 22 29 41.6
baz=27,slow=75
I37A **Lemond, Waseca** 43.17 76 IAmb IAmb 21 43 51.6
comp=Z,25nm,1.0s
USRK **Ussuriysk Ar.** 43.67 285 P P 21 43 52.9 -1.3
comp=Z,5.0nm,0.8s,baz=63,slow=8.6,SNR=5.5
USRK LR LR 22 01 53.4
comp=Z,189nm,21.8s,baz=50,slow=36
comp=Z,5.0nm,0.8s
USRK **Ussuriysk Ar.** 43.67 285 P P 21 43 54.6 +0.4
FRB **Frobisher Bay** 43.73 40 LR LR 22 03 02.8
comp=Z,351nm,20.8s,baz=309,slow=37
FRB **Frobisher Bay** 43.73 40 P P 21 43 54.8 +0.4
N35A **Tabor** 43.93 81 IAmb IAmb 21 44 20.0
comp=Z,22nm,0.8s
NUUG **Nuugaatsiaq** 44.06 26 *i* P P 21 43 57.5 +0.5
NUUG IAmb IAmb 21 43 57.8
comp=Z,49nm,1.2s
H11S1 **WAKE ISLAND Hy** 44.14 228 T T 22 31 29.2
baz=28,slow=76,SNR=172
H11S2 **WAKE ISLAND Hy** 44.15 228 T T 22 31 30.2
baz=28,slow=76,SNR=133
H11S3 **WAKE ISLAND Hy** 44.16 228 T T 22 31 35.8
baz=28,slow=76,SNR=50
MNTX **Cornudas Mount** 44.68 98 P P 21 44 04.5 +2.0
MDJ **Mudanjiang** 44.74 287 P P 21 44 02.9 +0.1
MDJ **Mudanjiang** 44.74 287 P P 21 44 01.8 -1.0
MDJ pmax pmax
comp=Z,22nm,0.8s
F42A **Maple Grove Fa** 45.00 70 IAmb IAmb 21 44 06.3
comp=Z,18nm,0.7s
MAJO **Matsushiro** 45.18 273 P P 21 44 06.6 +0.2
MAJO **Matsushiro** 45.18 273 P P 21 44 05.8 -0.6
MAJO **Matsushiro** 45.18 273 P P 21 44 06.5 +0.2
MAJO **Matsushiro** 45.18 273 P P 21 44 06.5 +0.2
MJAR **Matsushiro Arr** 45.18 273 P P 21 44 06.2 -0.1
comp=Z,12nm,0.6s,baz=32,slow=6.0,SNR=58
MJAR LR LR 22 02 09.0
comp=Z,160nm,21.9s,baz=50,slow=35
comp=Z,12nm,0.6s
MJAR **Matsushiro Arr** 45.18 273 P P 21 44 06.3 -0.1
MJAR IAmb IAmb 21 44 06.8
comp=Z,14nm,0.8s
MJB9 **Matsu-Tunnel** 45.18 273 P P 21 44 06.8 +0.4
BNX **BinXian** 45.24 290 ‖P P 21 44 06.0 -0.7
BNX pmax pmax
comp=Z,33nm,0.9s
N38A **Joes South For** 45.34 79 IAmb IAmb 21 44 08.4
comp=Z,18nm,0.9s
128A **Castleberry Fa** 45.67 95 IAmb IAmb 21 44 21.3
comp=Z,12nm,1.0s
P38A **Dawn** 45.95 81 IAmb IAmb 21 44 13.0
comp=Z,13nm,1.0s
WMOK **Wichita Mounta** 46.30 89 P P 21 44 15.7 +0.4
JGF **Kuroka** 46.33 272 P P 21 44 16.2 +0.7
JGF **Kuroka** 46.33 272 P P 21 44 15.9 +0.4
DAG **Danmarks Havn** 46.49 11 P P 21 44 15.8 -0.3
DAG **Danmarks Havn** 46.49 11 *i* P P 21 44 15.0 -1.1
DAG IAmb IAmb 21 44 17.1
comp=Z,38nm,0.9s
KBS **Kingsbay** 46.49 2 *e*P P 21 44 16.9 +0.7
KBS IAmb IAmb 21 44 17.5
comp=Z,42nm,0.9s
KBS **Kingsbay** 46.49 2 P P 21 44 16.4 +0.3
KBS **Kingsbay** 46.49 2 P P 21 44 16.9 +0.7
KBS **Kingsbay** 46.49 2 P P 21 44 16.8 +0.6
KBS PcP PcP 21 45 51.2 +1.2
KBS **Kingsbay** 46.49 2 *i* P P 21 44 16.7 +0.6
E46A **Sault Ste Mari** 46.68 67 IAmb IAmb 21 44 19.2
comp=Z,12nm,0.8s
JHJ **Hachijo jima 2** 46.69 268 LR LR 22 02 24.0
comp=Z,88nm,21.9s,baz=82,slow=34
INU **Inuyama** 46.71 272 P P 21 44 18.9 +0.5
INU **Inuyama** 46.71 272 IAmb IAmb 21 44 18.7
comp=Z,16nm,0.7s
SUMG **Summit** 46.74 21 P P 21 44 18.5 -0.1
SUMG **Summit** 46.74 21 P P 21 44 19.9 +1.2
SUMG **Summit** 46.74 21 *i* P P 21 44 19.7 +1.0
SUMG IAmb IAmb 21 44 22.3
comp=Z,27nm,0.9s
NRIK **Noril'sk** 46.86 333 P P 21 44 19.0 -0.1
comp=Z,22nm,0.8s,baz=57,slow=6.4,SNR=25
NRIK LR LR 22 06 47.5
comp=Z,331nm,20.2s,baz=48,slow=40
comp=Z,22nm,0.8s
NRIK **Noril'sk** 46.86 333 P P 21 44 18.4 -0.7
P40A **Paris** 46.86 80 IAmb IAmb 21 44 20.1
comp=Z,11nm,0.8s
HILR **Hailar Array B** 46.89 299 P P 21 44 17.5 -2.2
comp=Z,2.0nm,0.5s,baz=52,slow=9.6,SNR=3.6
HILR LR LR 22 04 10.5
comp=Z,248nm,21.4s,baz=300,slow=36
comp=Z,2.0nm,0.5s
SPA0 **Spitsbergen Ar** 47.31 1 *e*P P 21 44 22.2 -0.3
SPA0 IAmb IAmb 21 44 26.1
comp=Z,32nm,1.0s
SPITS **Spitsbergen Ar** 47.31 1 P P 21 44 21.3 -1.3
comp=Z,21nm,1.0s,baz=15,slow=3.5,SNR=7.7
SPITS PcP PcP 21 45 53.0 0.0
comp=Z,4.6nm,0.7s,baz=230,slow=3.6,SNR=2.5
SPITS LR LR 22 02 50.4
comp=Z,103nm,21.9s,baz=347,slow=34
comp=Z,21nm,1.0s
TXAR **Lajitas Array** 47.42 99 P P 21 44 25.2 +1.1
comp=Z,2.9nm,0.8s,baz=298,slow=5.1,SNR=19
TXAR PcP PcP 21 45 54.9 +0.6
comp=Z,2.2nm,0.7s,baz=234,slow=1.3,SNR=5.3
TXAR LR LR 22 02 56.0
comp=Z,333nm,20.7s,baz=308,slow=34
comp=Z,2.9nm,0.8s
TXAR **Lajitas Array** 47.42 99 P P 21 44 25.2 +1.1
TXAR PcP 21 45 54.0 -0.2
CN2 **Changchun** 47.55 289 *e*P P 21 44 24.5 -0.4
CN2 *es*P sP 21 44 37.0 -1.4
CN2 *e*S S 21 51 14.8 -2.7
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 L L
comp=Z,200nm,20.0s
CN2 L L
comp=Z,300nm,20.0s
CN2 L L
comp=Z,200nm,19.0s
SFJD **Kangerlussuaq** 47.69 30 LR LR 22 06 13.8
comp=Z,116nm,20.3s,baz=314,slow=38
SFJD **Kangerlussuaq** 47.69 30 *i* P P 21 44 26.4 +0.8
SFJD IAmb IAmb 21 44 27.0
comp=Z,22nm,0.8s
LPIG **La Paz** 47.74 109 LR LR 22 02 20.6
comp=Z,117nm,18.3s,baz=276,slow=33
HOPEN **Hopen** 48.96 358 *e*P P 21 44 34.9 -0.4
HOPEN IAmb IAmb 21 44 35.5
comp=Z,36nm,0.9s
FCAR **Ozark Folk Cen** 49.33 83 IAmb IAmb 21 45 09.4
comp=Z,6.2nm,0.8s
MIAR **Mount Ida** 49.45 85 IAmb IAmb 21 46 02.4
comp=Z,7.2nm,0.8s

MIAR Mount Ida 49.45 85 P **P** **21 44 39.9 +0.3**
S44A Carbondale 49.71 79 IAmb IAmb 21 45 31.8
comp=Z,10nm,0.8s
JCJ Chichijima 49.79 261 LR LR 22 10 20.9
comp=Z,38nm,18.0s,baz=133,slow=42
SCHQ Schefferville 49.82 49 P **P** **21 44 43.8 +1.6**
SCHQ LR LR 22 06 34.7
comp=Z,4.8nm,0.9s,baz=309,slow=8.3,SNR=2.9
comp=Z,315nm,19.3s,baz=306,slow=37
comp=Z,4.8nm,0.9s
SCHQ Schefferville 49.82 49 P **P** **21 44 42.5 +0.4**
BUKO Buck Lake 49.89 65 IAmb IAmb 21 44 43.7
comp=Z,15nm,0.9s
PARMO Parma 50.15 81 P **P** **21 44 44.3 -0.5**
O48B Farmland 50.26 74 IAmb IAmb 21 44 45.4
comp=Z,12nm,0.7s
N49A Columbus Grove 50.34 73 IAmb IAmb 21 44 46.6
comp=Z,13nm,1.0s
KS19 Wonju Army Si 50.46 281 IAmb IAmb 21 44 48.6
comp=Z,14nm,0.8s
KSRS Korea Array 50.46 281 P **P** **21 44 47.5 +0.4**
comp=Z,12nm,0.7s,baz=45,slow=7.0,SNR=63
KSRS LR LR 22 07 17.7
comp=Z,74nm,19.6s,baz=55,slow=38
comp=Z,12nm,0.7s
SADO Sadowa 50.47 66 LR LR 22 05 41.5
comp=Z,104nm,20.7s,baz=346,slow=36
KSAR Wonju Array Be 50.49 281 P **P** **21 44 47.3 -0.1**
P48A Milroy 50.65 75 IAmb IAmb 21 44 58.6
comp=Z,21nm,1.2s
T47A Sharon Grove 51.43 78 IAmb IAmb 21 44 55.2
comp=Z,10nm,0.8s
DELO Deloro Mine 51.45 65 IAmb IAmb 21 44 55.5
comp=Z,14nm,1.1s
SCO Scoresbysund 51.52 17 P **P** **21 44 54.8 +0.1**
SCO IAmb IAmb 21 44 55.6
comp=Z,14nm,1.1s
SCO Scoresbysund 51.52 17 P **P** **21 44 55.0 +0.4**
SCO Scoresbysund 51.52 17 *i* P **P** **21 44 54.7 0.0**
SCO IAmb IAmb 21 44 55.8
comp=Z,12nm,1.0s
TJN Taejon 51.54 281 P **P** **21 44 55.9 +0.6**
WVT Waverly 51.62 80 P **P** **21 44 55.8 -0.2**
WVT IAmb IAmb 21 44 56.7
comp=Z,15nm,0.8s
WVT Waverly 51.62 80 P **P** **21 44 55.9 0.0**
WVT Waverly 51.62 80 P **P** **21 44 55.9 0.0**
SOEG Soedalen 51.66 22 *i* P **P** **21 44 55.9 +0.1**
SOEG IAmb IAmb 21 44 56.6
comp=Z,22nm,1.0s
JNU Nakatsue 51.85 275 P **P** **21 44 57.4 -0.3**
comp=Z,14nm,0.9s,baz=22,slow=5.9,SNR=7.6
JNU LR LR 22 06 36.1
comp=Z,198nm,21.8s,baz=62,slow=36
comp=Z,14nm,0.9s
JNU Nakatsue 51.85 275 IAmb IAmb 21 45 11.7
comp=Z,14nm,0.7s
TRQ Mont Tremblant 51.88 62 IAmb IAmb 21 44 58.2
comp=Z,13nm,0.9s
R50A Paris 52.09 75 IAmb IAmb 21 44 60.0
comp=Z,8.8nm,1.0s
Q51A Peebles 52.12 74 IAmb IAmb 21 45 00.3
comp=Z,22nm,0.9s
O52A Adamsville 52.20 72 IAmb IAmb 21 45 00.5
comp=Z,18nm,1.1s
WBO Williamsburg 52.34 63 IAmb IAmb 21 45 01.7
comp=Z,12nm,0.8s
PAOC Oil Creek Stat 52.40 69 IAmb IAmb 21 45 02.2
comp=Z,11nm,0.9s
CLTN Cedars of Leba 52.50 79 IAmb IAmb 21 45 03.6
comp=Z,8.7nm,1.0s
XLT XiLinHaoTe 52.51 295 *e*P **P** **21 45 02.5 -0.1**
XLT pP pP 21 45 13.8 +1.5
XLT sP sP 21 45 16.3 +0.1
XLT sS sS 21 52 40.5 -2.4
XLT pmax pmax
comp=Z,33nm,0.8s
XLT pmax pmax
comp=Z,110nm,5.9s
XLT L L
comp=Z,190nm,16.7s
XLT L L
comp=Z,220nm,17.5s
U49A Red Boiling Sp 52.52 78 IAmb IAmb 21 46 13.8
comp=Z,10nm,0.9s
IVI Ivigtut 52.56 34 IAmb IAmb 21 45 04.7
comp=Z,20nm,1.1s
IVI Ivigtut 52.56 34 *i* P **P** **21 45 03.4 +0.9**
IVI IAmb IAmb 21 45 03.9
comp=Z,18nm,0.9s
T50A Nancy 52.69 77 IAmb IAmb 21 45 13.8
comp=Z,29nm,1.8s
MNTQ Montreal, Queb 52.85 62 IAmb IAmb 21 45 04.8
comp=Z,15nm,1.1s
JMIC Jan Mayen 52.94 11 LR LR 22 08 30.3
comp=Z,145nm,19.9s,baz=48,slow=37
O54A Avella 52.95 71 IAmb IAmb 21 45 05.9
comp=Z,14nm,0.8s
S51A Beattyville 52.95 75 IAmb IAmb 21 45 25.6
comp=Z,11nm,1.0s
DL2 Dalian 52.98 287 P **P** **21 45 06.3 +0.3**
DL2 pmax pmax
comp=Z,28nm,0.6s
CFNY Clifton-Fine, 53.03 64 IAmb IAmb 21 45 07.2
comp=Z,19nm,0.9s
J57A Williamstown 53.06 65 IAmb IAmb 21 45 07.5
comp=Z,16nm,0.8s
L56A Greenwood 53.11 67 IAmb IAmb 21 45 07.9
comp=Z,20nm,0.9s
TLY Talaya 53.22 309 LR LR 22 09 29.0
comp=Z,151nm,18.0s,baz=36,slow=38
TLY Talaya 53.22 309 P **P** **21 45 07.9 +0.2**
TLY Talaya 53.22 309 P **P** **21 45 07.6 -0.1**
Z47A Carrollton 53.59 82 IAmb IAmb 21 46 27.7
comp=Z,13nm,0.8s
W50A Signal Mountai 53.72 79 IAmb IAmb 21 45 11.9
comp=Z,9.3nm,0.9s
J59A Piesco 53.80 64 IAmb IAmb 21 45 12.7
comp=Z,12nm,0.8s
M57A Sunshine Farm, 53.90 68 IAmb IAmb 21 45 13.0
comp=Z,12nm,1.0s
BINY Binghamton 53.91 66 IAmb IAmb 21 45 13.8
comp=Z,18nm,1.0s
BINY Binghamton 53.91 66 P **P** **21 45 13.0 +0.2**
D62A Allapoint, All 54.04 58 IAmb IAmb 21 45 33.4
comp=Z,20nm,1.2s
TKL Tuckaleechee C 54.26 77 LR LR 22 07 56.4
comp=Z,313nm,19.7s,baz=328,slow=36
TKL Tuckaleechee C 54.26 77 IAmb IAmb 21 45 25.0
comp=Z,14nm,1.3s
ULN Ulaanbaatar 54.31 304 P **P** **21 45 15.3 -0.5**
ULN IAmb IAmb 21 45 17.0
comp=Z,12nm,0.8s
ULN Ulaanbaatar 54.31 304 P **P** **21 45 15.0 -0.8**
comp=Z,62nm,0.9s
ULN Ulaanbaatar 54.31 304 P **P** **21 45 15.4 -0.5**
ULN Ulaanbaatar 54.31 304 P **P** **21 45 15.3 -0.5**
ULN PcP **PcP** **21 46 19.8 +0.3**
L59A Walton 54.41 66 IAmb IAmb 21 45 17.7
comp=Z,15nm,1.0s
G62A West of Eustis 54.61 60 IAmb IAmb 21 45 18.4
comp=Z,12nm,0.9s
SONM Songino Array 54.64 304 P **P** **21 45 18.2 0.0**
comp=Z,18nm,0.9s,baz=47,slow=6.7,SNR=96
SONM PcP **PcP** **21 46 21.2 +0.4**
comp=Z,8.4nm,0.8s,baz=30,slow=1.7,SNR=9.9
SONM LR LR 22 11 07.1
comp=Z,410nm,18.8s,baz=47,slow=39
comp=Z,18nm,0.9s
SONM Songino Array 54.64 304 P **P** **21 45 18.0 -0.2**
SONM IAmb IAmb 21 45 19.0
comp=Z,19nm,0.8s
SONM PcP **PcP** **21 46 20.8 0.0**
P57A Homestead Farm 54.73 70 IAmb IAmb 21 45 19.4
comp=Z,18nm,0.9s
TRY Troy 54.75 64 IAmb IAmb 21 45 20.4
comp=Z,15nm,0.9s
HNH Hanover 54.78 63 IAmb IAmb 21 45 20.1
comp=Z,12nm,1.0s
V53A Saluda 54.80 76 IAmb IAmb 21 45 20.0
comp=Z,15nm,1.3s
J61A Chester 54.90 63 IAmb IAmb 21 45 21.0
comp=Z,14nm,0.9s
BJI2 Beijing 55.18 292 P **P** **21 45 21.5 -0.5**
BJI2 pmax pmax
comp=Z,5.0nm,1.3s
BJT Baijiatuau 55.18 292 P **P** **21 45 22.3 +0.3**

BJT Baijiatuau 55.18 292 P **P** **21 45 21.7 -0.3**
NPNY Mohonk Preserv 55.19 65 IAmb IAmb 21 45 23.9
comp=Z,17nm,1.1s
VADS Vadso 55.24 356 *e*P **P** **21 45 21.2 -0.8**
VADS IAmb IAmb 21 45 21.9
comp=Z,22nm,1.0s
F64A Sherman 55.24 58 P **P** **21 45 21.6 -0.8**
F64A IAmb IAmb 21 45 22.6
comp=Z,13nm,0.8s
BATG Bathurst New B 55.35 56 P **P** **21 45 22.6 -0.5**
K62A Royalston 55.55 63 P **P** **21 45 25.0 +0.4**
K62A IAmb IAmb 21 45 25.6
comp=Z,18nm,0.8s
KEV Kevo 55.69 357 P **P** **21 45 24.1 -1.1**
KEV Kevo 55.69 357 P **P** **21 45 24.7 -0.5**
KEV Kevo 55.69 357 P **P** **21 45 24.4 -0.8**
KEV pP **pP** **21 45 36.0 +1.0**
KEV PcP **PcP** **21 46 23.5 -0.7**
R58B Mineral 55.89 71 IAmb IAmb 21 45 28.0
comp=Z,11nm,1.2s
TRO Tromso 55.91 0 *e*P **P** **21 45 26.5 -0.3**
TRO IAmb IAmb 21 45 27.7
comp=Z,21nm,1.2s
ARA0 ARCESS Array S 55.95 358 *e*P **P** **21 45 26.0 -1.1**
ARA0 IAmb IAmb 21 45 26.3
comp=Z,19nm,1.1s
ARCES ARCESS Array B 55.95 358 P **P** **21 45 26.1 -1.0**
comp=Z,8.8nm,0.9s,baz=12,slow=6.2,SNR=17
ARCES PcP **PcP** **21 46 25.4 +0.2**
comp=Z,8.2nm,0.8s,baz=15,slow=5.0,SNR=9.6
comp=Z,8.8nm,0.9s
ARCES ARCESS Array B 55.95 358 P **P** **21 45 26.4 -0.7**
ARCES IAmb IAmb 21 45 26.6
comp=Z,16nm,1.1s
ARCES **PcP** **21 46 25.8 +0.5**
KMSC Kings Mountain 56.01 76 IAmb IAmb 21 45 39.0
comp=Z,17nm,1.4s
KTK1 Kautokeino 56.52 359 *e*P **P** **21 45 30.7 -0.5**
KTK1 IAmb IAmb 21 45 30.9
comp=Z,19nm,1.1s
BORG Borgarnes 56.70 20 LR LR 22 12 08.8
comp=Z,81nm,18.3s,baz=333,slow=38
T59A Double "B" Far 56.79 72 IAmb IAmb 21 45 34.2
comp=Z,12nm,0.7s
HHC Hu-ho-hao-te 57.03 295 *e*P **P** **21 45 35.5 +0.1**
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,64nm,4.4s
HHC L L
comp=Z,180nm,16.8s
HHC L L
comp=Z,180nm,19.3s
HHC L L
comp=Z,230nm,16.7s
LVZ Lovozero 57.16 353 P **P** **21 45 35.3 -0.5**
LVZ Lovozero 57.16 353 P **P** **21 45 34.8 -1.0**
comp=Z,35nm,1.1s
LVZ Lovozero 57.16 353 P **P** **21 45 35.1 -0.7**
LVZ Lovozero 57.16 353 P **P** **21 45 35.2 -0.7**
LVZ pP **pP** **21 45 46.1 +0.4**
TIA Tai'an 57.41 288 P **P** **21 45 37.8 -0.2**
TIA pmax pmax
comp=Z,15nm,1.1s
STEI Steigen 57.58 2 *e*P **P** **21 45 41.5 +2.8**
STEI IAmb IAmb 21 45 41.8
comp=Z,7.9nm,0.9s
HNS HongShan 57.86 290 ⇑P **P** **21 45 41.3 +0.2**
HNS pmax pmax
comp=Z,69nm,1.0s
HNS L L
comp=Z,230nm,16.3s
HNS L L
comp=Z,150nm,16.9s
HNS L L
comp=Z,280nm,20.9s
BTO2 Baotou 57.99 296 *e*P **P** **21 45 42.0 -0.2**
BTO2 pP **pP** **21 45 52.3 +0.3**
BTO2 sP **sP** **21 45 56.0 +0.2**
BTO2 pmax pmax
comp=Z,40nm,1.4s
BTO2 pmax pmax
comp=Z,170nm,6.0s
BTO2 L L
comp=Z,370nm,10.6s
BTO2 L L
comp=Z,480nm,17.8s
BTO2 L L
comp=Z,700nm,17.2s
SGF Sodankyl 58.02 357 P **P** **21 45 41.4 -0.3**
RAUS Rausandaksla 59.05 3 *e*P **P** **21 45 48.9 -0.1**
RAUS IAmb IAmb 21 45 49.7
comp=Z,10nm,1.0s
GUMO Guam 59.09 248 LR LR 22 07 15.6
comp=Z,18nm,20.1s,baz=60,slow=32
ZAA0 Zalesovo Array 59.18 321 IAmb IAmb 21 45 50.5
comp=Z,11nm,1.1s
ZALV Zalesovo Beam 59.18 321 P **P** **21 45 49.0 -1.1**
comp=Z,4.0nm,0.8s,baz=46,slow=6.4,SNR=23
ZALV PcP **PcP** **21 46 38.0 -0.2**
comp=Z,2.4nm,0.7s,baz=25,slow=5.0,SNR=3.8
ZALV LR LR 22 13 27.0
comp=Z,562nm,19.5s,baz=40,slow=38
comp=Z,4.0nm,0.8s
ZALV Zalesovo Beam 59.18 321 P **P** **21 45 49.7 -0.3**
ZALV **PcP** **21 46 38.5 +0.3**
MOR8 Moi Rana 59.33 3 *e*P **P** **21 45 48.6 -2.3**
MOR8 IAmb IAmb 21 45 53.9
comp=Z,127nm,2.6s
LEIR Leirfjorden 59.35 3 *e*P **P** **21 45 52.8 +1.8**
MSF Maaselka 59.45 356 P **P** **21 45 51.5 -0.3**
NJ2 Nanjing 59.51 283 *e*P **P** **21 45 52.3 -0.3**
NJ2 pmax pmax
comp=Z,45nm,0.6s
OUL Oulu 60.40 357 P **P** **21 45 57.6 -0.6**
NSS Namsos 60.89 4 *e*P **P** **21 46 01.3 -0.3**
NSS IAmb IAmb 21 46 01.8
comp=Z,29nm,1.1s
LYN LuoYang 61.19 290 P **P** **21 46 03.8 -0.3**
LYN pmax pmax
comp=Z,63nm,0.7s
LYN L L
comp=Z,170nm,15.5s
LYN L L
comp=Z,260nm,18.4s
LYN L L
comp=Z,420nm,21.8s
CMIG Matias Romero 61.97 100 LR LR 22 11 12.4
comp=Z,136nm,21.8s,baz=358,slow=34
MOL Molde 62.62 6 *e*P **P** **21 46 13.9 +0.7**
AKN Aaknes 62.97 7 *e*P **P** **21 46 15.3 -0.4**
AKN IAmb IAmb 21 46 18.4
comp=Z,45nm,1.1s
WHN Wuhan 63.17 285 ⇓P **P** **21 46 17.0 -0.4**
WHN sP **sP** **21 46 29.8 -1.3**
WHN pmax pmax
comp=Z,46nm,0.8s
DOMB Dombas 63.23 6 *e*P **P** **21 46 17.1 -0.4**
DOMB IAmb IAmb 21 46 18.9
comp=Z,16nm,1.0s
XAN Xi'an 63.49 292 ⇑P **P** **21 46 19.3 -0.3**
XAN pmax pmax
comp=Z,46nm,1.1s
KURK Kurchatov 64.02 323 P **P** **21 46 22.6 -0.1**
KURK Kurchatov 64.02 323 P **P** **21 46 22.3 -0.5**
KURK Kurchatov 64.02 323 P **P** **21 46 22.9 +0.2**
KURK PcP **PcP** **21 46 57.8 -0.1**
FINES FINESS Array B 64.04 357 P **P** **21 46 21.8 -0.9**
comp=Z,16nm,0.8s,baz=15,slow=8.3,SNR=68
comp=Z,16nm,0.8s
FINES FINESS Array B 64.04 357 P **P** **21 46 22.1 -0.6**
GTA2 Gaotai 64.05 302 P **P** **21 46 22.5 -0.8**
GTA2 sP sP 21 46 35.8 -1.2
GTA2 pmax pmax
comp=Z,61nm,1.0s
GTA2 L L
comp=Z,330nm,16.5s
GTA2 L L
comp=Z,300nm,18.4s
GTA2 L L
comp=Z,500nm,16.8s
KURBB Kurchatov Arra 64.13 323 P **P** **21 46 22.9 -0.5**
comp=Z,9.6nm,0.9s,baz=20,slow=6.5,SNR=64
KURBB LR LR 22 17 17.5
comp=Z,432nm,18.3s,baz=164,slow=39
comp=Z,9.6nm,0.9s

LRW Lerwick 64.23 11 *e*P **P** **21 46 24.0 0.0**
LRW IAmb IAmb 21 46 25.2
comp=Z,16nm,0.7s
NBO00 NORSAR Array S 64.33 5 IAmb IAmb 21 46 25.8
comp=Z,14nm,0.9s
NB201 NORSAR Array S 64.34 5 P **P** **21 46 25.1 +0.4**
NB201 IAmb IAmb 21 46 26.0
comp=Z,19nm,1.0s
NB2 NORSAR Subarra 64.34 5 P **P** **21 46 24.2 -0.6**
comp=Z,16nm,0.8s,baz=354,slow=6.5
NB2 NORSAR Subarra 64.34 5 P **P** **21 46 24.2 -0.6**
NOA NORSAR Array B 64.34 5 P **P** **21 46 24.4 -0.4**
comp=Z,14nm,0.9s,baz=355,slow=6.5,SNR=18
NOA LR LR 22 13 19.8
comp=Z,52nm,21.9s,baz=330,slow=35
comp=Z,14nm,0.9s
ZSN Zaisan 64.38 317 ⇑ *i*P **P** **21 46 25.1 -0.1**
comp=Z,16nm,0.8s
ZSN *e*S **S** **21 55 01.0 -0.1**
KIRV Kirov 64.53 343 LR LR 22 18 22.4
comp=Z,112nm,20.5s,baz=16,slow=40
SKAR Skarslia 64.54 6 *e*P **P** **21 46 26.0 -0.1**
SKAR IAmb IAmb 21 46 27.2
comp=Z,16nm,0.9s
SSLB Suanglung 64.59 276 P **P** **21 46 28.0 +1.1**
SSLB Suanglung 64.59 276 P **P** **21 46 26.7 -0.2**
SSLB IAmb IAmb 21 46 42.1
comp=Z,16nm,0.8s
SSLB Suanglung 64.59 276 P **P** **21 46 26.5 -0.4**
LZH Lanzhou 64.61 297 *e*P **P** **21 46 27.0 0.0**
LZH pP pP 21 46 38.3 +1.3
LZH pmax pmax
comp=Z,82nm,1.3s
LZH L L
comp=Z,110nm,16.8s
NC602 NORSAR Array S 64.66 5 *e*P **P** **21 46 30.0 +3.2**
BVAR Borovoye Array 64.73 329 P **P** **21 46 27.1 -0.2**
comp=Z,47nm,0.6s,baz=38,slow=7.1,SNR=332
comp=Z,47nm,0.6s
LZDM Lanzhou Array 64.79 297 P **P** **21 46 28.3 -0.1**
comp=Z,15nm,0.6s,baz=0.0,slow=1.5,SNR=22
LZDM LR LR 22 16 41.2
comp=Z,179nm,21.1s,baz=240,slow=38
comp=Z,15nm,0.6s
ARTI Arti 64.84 337 LR LR 22 18 53.7
comp=Z,170nm,18.9s,baz=16,slow=40
ARTI Arti 64.84 337 P **P** **21 46 27.3 -0.7**
ARTI Arti 64.84 337 P **P** **21 46 27.5 -0.6**
HFS Hagfors 65.35 3 P **P** **21 46 30.1 -1.2**
comp=Z,20nm,0.7s,baz=23,slow=4.8,SNR=33
comp=Z,20nm,0.7s
MKAR Makanchi Array 65.93 318 P **P** **21 46 34.2 -1.1**
comp=Z,5.4nm,0.7s,baz=46,slow=6.5,SNR=68
MKAR LR LR 22 17 22.7
comp=Z,310nm,20.2s,baz=26,slow=38
comp=Z,5.4nm,0.7s
MKAR Makanchi Array 65.93 318 P **P** **21 46 34.4 -0.9**
MAKZ Makanchi 66.04 318 P **P** **21 46 35.1 -0.9**
MAKZ IAmb IAmb 21 46 35.5
comp=Z,9.4nm,0.8s
MAKZ Makanchi 66.04 318 P **P** **21 46 35.1 -0.9**
MAKZ Makanchi 66.04 318 P **P** **21 46 35.1 -0.9**
MAKZ pP **pP** **21 46 47.0 +1.0**
ARBE Arbavere 66.05 357 P **P** **21 46 33.9 -1.8**
ENH Enshi 66.07 289 P **P** **21 46 36.9 +0.5**
ENH Enshi 66.07 289 P **P** **21 46 36.2 -0.2**
WMQ Urumqi 66.17 313 ⇑P **P** **21 46 37.0 +0.1**
WMQ pP sP 21 46 49.0 -1.7
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,110nm,3.8s
WMQ L L
comp=Z,280nm,22.7s
WMQ L L
comp=Z,180nm,20.5s
WMQ L L
comp=Z,230nm,22.7s
WMQ Urumqi 66.17 313 P **P** **21 46 37.3 +0.4**
MCD Coleburn Disti 66.46 13 *e*P **P** **21 46 38.5 +0.1**
MCD IAmb IAmb 21 46 40.2
comp=Z,23nm,0.7s
VSU Vasula 67.00 356 P **P** **21 46 40.4 -1.4**
DRUM Mains of Drumt 67.21 13 P **P** **21 46 42.1 -1.1**
DRUM Mains of Drumt 67.21 13 *e*P **P** **21 46 43.4 +0.1**
DRUM IAmb IAmb 21 46 44.6
comp=Z,58nm,0.7s
LAWE Loch Awe, Argy 67.44 15 *e*P **P** **21 46 45.0 +0.3**
LAWE IAmb IAmb 21 46 46.6
comp=Z,14nm,0.8s
INVG Invergeldie, C 67.47 14 *e*P **P** **21 46 44.9 +0.1**
INVG IAmb IAmb 21 46 47.5
comp=Z,11nm,0.8s
EAB Aberfoyle 67.66 14 *e*P **P** **21 46 45.9 -0.1**
EAB IAmb IAmb 21 46 47.7
comp=Z,21nm,0.8s
EDI Edinburgh 68.08 14 *e*P **P** **21 46 48.8 +0.1**
EDI IAmb IAmb 21 46 50.6
comp=Z,11nm,0.8s
EKA Eskdalemuir Ar 68.66 14 P **P** **21 46 52.5 +0.1**
comp=Z,16nm,0.8s,baz=353,slow=6.3,SNR=30
EKA LR LR 22 17 39.9
comp=Z,137nm,20.1s,baz=7.0,slow=37
comp=Z,16nm,0.8s
ESK Eskdalemuir 68.67 14 P **P** **21 46 52.9 +0.4**
ESK Eskdalemuir 68.67 14 *e*P **P** **21 46 52.7 +0.3**
ESK IAmb IAmb 21 46 54.4
comp=Z,15nm,0.9s
CD2 Chengdu 68.67 293 ⇑P **P** **21 46 53.0 +0.1**
CD2 pmax pmax
comp=Z,100nm,0.6s
NEWG New Galloway 68.72 15 *e*P **P** **21 46 52.7 0.0**
NEWG IAmb IAmb 21 46 54.1
comp=Z,7.3nm,0.9s
TDK Taldyqorghan 68.91 320 ⇑ *i*P **P** **21 46 54.0 -0.1**
comp=Z,26nm,1.0s
GOMU GeErMu 69.05 303 P **P** **21 46 55.3 -0.3**
GOMU S **S** **21 56 00.3 +1.8**
GOMU pmax pmax
comp=Z,23nm,1.0s
GOMU L L
comp=Z,220nm,14.1s
GOMU L L
comp=Z,180nm,14.6s
GOMU L L
comp=Z,400nm,14.3s
AFI Afiamalu 69.11 192 LR LR 22 10 42.1
comp=Z,156nm,19.3s,baz=108,slow=30
EDMD Edmundbyers 69.31 13 *e*P **P** **21 46 56.9 +0.5**
EDMD IAmb IAmb 21 46 58.1
comp=Z,9.1nm,0.8s
OBN Obninsk 69.63 350 LR LR 22 21 25.8
comp=Z,143nm,20.4s,baz=0.0,slow=39
OBN Obninsk 69.63 350 P **P** **21 46 57.3 -1.0**
comp=Z,27nm,1.1s
PABE Paberze 70.05 358 P **P** **21 47 00.8 -0.1**
SHLS Shalkode 70.07 318 ⇑ *i*P **P** **21 47 00.4 -1.0**
comp=Z,8.2nm,0.8s
KPKS Kokpek 70.11 319 *e*P **P** **21 47 01.7 +0.1**
UZB Uzynbulak 70.25 318 *e*P **P** **21 47 02.3 -0.3**
AKTO Aktyubinsk 70.42 335 LR LR 22 22 38.9
comp=Z,103nm,18.2s,baz=334,slow=40
BTLS Baital 70.47 322 *e*P **P** **21 47 03.7 0.0**
SATY Saty 70.56 318 ⇑ *i*P **P** **21 47 04.4 -0.1**
comp=Z,13nm,1.1s
GYA Guiyang 70.59 288 ⇑P **P** **21 47 04.8 -0.1**
GYA pmax pmax
comp=Z,45nm,0.9s
BELG Belogornoye 70.75 342 LR LR 22 23 17.4
comp=Z,179nm,18.1s,baz=62,slow=40
KRVT Keravat (AS076 70.89 231 LR LR 22 16 48.7
comp=Z,14nm,19.2s,baz=111,slow=35
MDOK Medeo 70.99 319 *e*P **P** **21 47 07.0 -0.1**
ABKAR Akbulak array 71.03 333 P **P** **21 47 06.7 -0.3**
FOEL Foel Wylfa 71.03 15 *e*P **P** **21 47 07.4 +0.5**
FOEL IAmb IAmb 21 47 09.2
comp=Z,31nm,0.8s
PRZ Przheval'sk 71.05 318 P **P** **21 47 08.4 +0.9**
TNSS Tian-Shan 71.14 319 *e*P **P** **21 47 08.0 -0.3**
BSEG Bad Segeberg 71.39 6 *e*P **P** **21 47 09.1 0.0**
comp=Z,8.8nm,1.1s,baz=355,slow=5.9
BSEG Bad Segeberg 71.39 6 P **P** **21 47 09.7 +0.7**
HLM1 Long Mynd 71.44 14 *e*P **P** **21 47 09.8 +0.3**
HLM1 IAmb IAmb 21 47 12.9
comp=Z,4.8nm,0.7s
CWF Charnwood Fore 71.44 13 *e*P **P** **21 47 09.7 +0.2**

CWF IAmb IAmb 21 47 11.1
comp=Z,7.5nm,0.9s
SGDS Sogindy 71.64 321 ⇑*i*P **P** **21 47 11.0 +0.1**
TKM2 Tokmak 2 71.74 320 P **P** **21 47 11.9 +0.2**
SNR=24
KDJ Kajisay 71.83 319 P **P** **21 47 12.5 +0.3**
WUS Wushi 71.83 317 P **P** **21 47 12.4 +0.3**
WUS Wushi 71.83 317 P **P** **21 47 12.5 +0.3**
USP Ospenovka 71.84 321 P **P** **21 47 12.4 +0.3**
SNR=17
MCH1 Michaelchurch 71.93 15 *e*P **P** **21 47 12.8 +0.4**
MCH1 IAmb IAmb 21 47 14.5
comp=Z,13nm,0.9s
TARG Taragay, Kyrgy 71.93 318 IAmb IAmb 21 47 14.9
comp=Z,14nm,0.8s
TARG Taragay, Kyrgy 71.93 318 P **P** **21 47 14.4 +1.3**
CHMS Chumysh 71.98 321 P **P** **21 47 13.1 +0.1**
SNR=32
ULHL Ulahol 72.08 319 P **P** **21 47 14.1 +0.4**
SNR=12
KBK Karagaybulak 72.21 321 P **P** **21 47 15.0 +0.5**
SNR=19
AAK Ala-Archa 72.39 321 LR LR 22 21 40.8
comp=Z,554nm,19.0s,baz=38,slow=38
AAK Ala-Archa 72.39 321 P **P** **21 47 16.0 +0.4**
SNR=12
AAK Ala-Archa 72.39 321 P **P** **21 47 15.5 0.0**
AAK Ala-Archa 72.39 321 P **P** **21 47 16.0 +0.4**
AAK Ala-Archa 72.39 321 P **P** **21 47 16.0 +0.4**
RETH Rethem/Aller, 72.52 7 *e*P **P** **21 47 15.6 -0.2**
comp=Z,8.3nm,1.1s,baz=355,slow=5.9
EKS2 Erkin-Say 72.63 321 P **P** **21 47 17.4 +0.5**
SNR=23
IBBN Ibbenburen 72.83 8 *e*P **P** **21 47 18.0 +0.3**
comp=Z,14nm,0.9s,baz=355,slow=5.9
RUE Ruedersdorf 73.01 4 *e*P **P** **21 47 19.5 +0.7**
comp=Z,32nm,1.2s,baz=355,slow=5.9
FLTG Flechtingen 73.04 6 *e*P **P** **21 47 18.7 -0.2**
comp=Z,14nm,1.2s,baz=355,slow=5.9
ASAI AK-SAY(Kyrgyzs 73.12 319 P **P** **21 47 20.8 +0.7**
JTS Las Juntas de 73.12 96 LR LR 22 21 05.0
comp=Z,51nm,20.0s,baz=333,slow=37
ASSE Asse, Remlinge 73.21 6 *e*P **P** **21 47 19.8 -0.1**
comp=Z,17nm,1.3s,baz=355,slow=5.9
ASSE Asse, Remlinge 73.21 6 P **P** **21 47 19.9 0.0**
PZH PanZhiHua 73.23 292 P **P** **21 47 21.8 +1.1**
DZA Taraz 73.30 323 *e*P **P** **21 47 20.8 0.0**
KKAR Karatay Array 73.40 324 P **P** **21 47 21.1 -0.2**
CLZ Clausthal 73.48 6 *e*P **P** **21 47 22.1 +0.5**
comp=Z,30nm,1.4s,baz=355,slow=5.9
CLZ Clausthal 73.48 6 P **P** **21 47 22.4 +0.7**
BUG Bochum--Univer 73.65 8 *e*P **P** **21 47 22.2 -0.3**
comp=Z,17nm,1.0s,baz=355,slow=5.9
BUG Bochum--Univer 73.65 8 P **P** **21 47 22.6 0.0**
GTTG Gottingen 73.75 6 *e*P **P** **21 47 23.4 +0.2**
comp=Z,29nm,1.3s,baz=355,slow=5.9
GTTG Gottingen 73.75 6 P **P** **21 47 23.6 +0.4**
KMI2 Kunming 73.77 290 P **P** **21 47 23.5 -0.5**
KMI2 pP pP 21 47 35.5 +1.4
KMI2 pmax pmax
comp=Z,8.0nm,1.2s
KMI2 L L
comp=Z,140nm,23.4s
KMI2 L L
comp=Z,190nm,15.8s
KMI2 L L
comp=Z,200nm,17.1s
WIMM Wimmelburg 73.86 5 P **P** **21 47 24.2 +0.4**
KASTN Kahler Asten 73.98 7 *e*P **P** **21 47 23.5 -1.1**
comp=Z,5.4nm,0.9s,baz=355,slow=5.9
ARK Arkit 74.04 322 P **P** **21 47 25.3 +0.1**
RNPP9 Sopachiv 74.08 356 P **P** **21 47 24.7 -0.4**
ARSB Arslanbob 74.09 321 IAmb IAmb 21 47 26.7
comp=Z,28nm,1.2s
CLL Collm 74.15 4 *e*P **P** **21 47 25.2 -0.3**
comp=Z,8.0nm,0.9s,baz=355,slow=5.9
CLL Collm 74.15 4 P **P** **21 47 25.2 -0.3**
comp=Z,11nm,1.3s
CLL Collm 74.15 4 ⇑*i*P **P** **21 47 25.3 -0.2**
comp=Z,10.0nm,1.0s
CLL *i* pP **sP** **21 47 37.8 -1.6**
CLL *e*PP **PP** **21 50 10.0 -0.5**
CLL *e*pPP 21 50 21.0
CLL *e*S **S** **21 56 54.0 -2.1**
CLL *e*PS **PnS** **21 57 36.0 +4.2**
CLL *e*SS **SS** **22 01 42.0 +1.8**
CLL *e*SSS SSS 22 05 12.0
CLL *e*SSSS 22 06 54.0
CLL AMS AMS 22 24 00.0
comp=Z,100nm,19.4s
RNPP8 Varash 74.16 356 P **P** **21 47 25.2 -0.4**
NEUB Neuenburg 74.19 5 *e*P **P** **21 47 26.0 +0.2**
comp=Z,14nm,0.7s,baz=355,slow=5.9
NEUB Neuenburg 74.19 5 P **P** **21 47 26.2 +0.4**
RNPP5 Staryi Chortor 74.26 356 P **P** **21 47 25.8 -0.4**
BSTI Sart Tilman 74.35 9 *d*P **P** **21 47 27.1 +0.4**
comp=Z,2.5nm,0.7s
MEM Membach 74.37 9 *d*P **P** **21 47 26.2 -0.6**
comp=Z,8.5nm,0.9s
MEM Membach 74.37 9 P **P** **21 47 27.2 +0.3**
BTNL Ternell 74.40 9 *d*P **P** **21 47 27.5 +0.4**
CHM Chimkent 74.40 324 *e*P **P** **21 47 27.2 0.0**
comp=Z,20nm,0.8s
IUG Iuzhnay 74.41 324 ⇑*i*P **P** **21 47 27.4 +0.1**
comp=Z,27nm,1.1s
MI28 Mi28,Pidlybu 74.48 355 P **P** **21 47 26.4 -1.0**
BCLA Clavier 74.49 10 *d*P **P** **21 47 27.6 +0.1**
BGES Gesves 74.50 10 *d*P **P** **21 47 27.5 -0.1**
comp=Z,6.3nm,1.0s
BMRD Maredsous 74.55 10 *d*P **P** **21 47 28.1 +0.2**
comp=Z,9.6nm,1.0s
AK21 Malin Array Si 74.56 354 P **P** **21 47 26.9 -1.0**
AK22 Malin Array Si 74.57 354 P **P** **21 47 27.1 -0.9**
AK20 Malin Array Si 74.59 354 P **P** **21 47 27.2 -0.9**
AK03 Malin Array Si 74.59 354 P **P** **21 47 27.2 -0.9**
AK04 Malin Array Si 74.60 354 P **P** **21 47 27.3 -0.9**
AK18 Malin Array Si 74.61 354 P **P** **21 47 27.3 -0.9**
AK19 Malin Array Si 74.61 354 P **P** **21 47 27.3 -0.9**
AKASG Malin Array Be 74.62 354 P **P** **21 47 27.4 -0.9**
comp=Z,20nm,0.9s,baz=8.2,slow=5.7,SNR=63
comp=Z,20nm,0.9s
AKASG Malin Array Be 74.62 354 P **P** **21 47 28.1 -0.1**
AKBB Malin Array Si 74.62 354 P **P** **21 47 27.4 -0.9**
BHOU Houvegnez 74.62 9 *d*P **P** **21 47 28.8 +0.5**
comp=Z,4.9nm,1.0s
BHOU *d*PP **PP** **21 50 12.7 -1.8**
BRG Berggiesshubel 74.62 4 *e*P **P** **21 47 28.1 -0.2**
comp=Z,11nm,1.1s,baz=355,slow=5.9
BRG Berggiesshubel 74.62 4 P **P** **21 47 28.4 +0.1**
BRG Berggiesshubel 74.62 4 *e*P **P** **21 47 28.3 0.0**
BRG Amp 21 47 29.7
comp=Z,11nm,1.1s
BRG pP **pP** **21 47 39.2 +0.8**
BRG Amp 21 47 40.6
comp=Z,3.6nm,0.9s
KIEV Kiev 74.63 354 ⇑P **P** **21 47 27.5 -0.8**
KIEV Kiev 74.63 354 P **P** **21 47 27.4 -0.8**
KIEV Kiev 74.63 354 P **P** **21 47 27.4 -0.8**
comp=Z,139nm,1.1s
KIEV Kiev 74.63 354 P **P** **21 47 27.6 -0.8**
KIEV Kiev 74.63 354 P **P** **21 47 27.5 -0.8**
KIEV pP **pP** **21 47 39.7 +1.2**
AK01 Malin Array Si 74.63 354 P **P** **21 47 27.4 -0.9**
AK11 Malin Array Si 74.64 354 P **P** **21 47 27.5 -0.9**
AK02 Malin Array Si 74.66 354 P **P** **21 47 27.6 -0.9**
AK05 Malin Array Si 74.70 354 P **P** **21 47 27.8 -0.9**
KSP Ksiaz 74.73 2 P **P** **21 47 29.1 +0.2**
comp=Z,9.7nm,1.4s
DOU Dourbes 74.74 10 *d*P **P** **21 47 28.8 -0.2**
comp=Z,5.7nm,1.0s
RCHB Rochefort 74.74 10 *d*P **P** **21 47 28.8 -0.2**
comp=Z,6.0nm,1.0s
MOX Moxa 74.74 5 *e*P **P** **21 47 29.4 +0.3**
comp=Z,25nm,1.3s,baz=355,slow=5.9
MOX *e*L L 22 27 39.6
comp=Z,63nm,21.7s
MOX Moxa 74.74 5 P **P** **21 47 29.5 +0.5**
PLN Plauen 74.93 5 *e*P **P** **21 47 30.2 +0.1**
comp=Z,2.3nm,0.9s,baz=355,slow=5.9
TNS Taunus Mts 74.96 8 *e*P **P** **21 47 30.9 +0.6**
comp=Z,8.9nm,0.8s,baz=355,slow=5.9
TNS Taunus Mts 74.96 8 P **P** **21 47 31.0 +0.7**
OSTC Ostas 75.01 2 *e*P **P** **21 47 30.9 +0.3**
TANN Tannenbergstha 75.02 5 *e*P **P** **21 47 30.6 -0.1**
comp=Z,9.5nm,1.3s,baz=355,slow=5.9
TANN Tannenbergstha 75.02 5 P **P** **21 47 30.7 +0.1**
KSH2 Kashi 75.02 318 P **P** **21 47 31.8 +0.8**
KSH2 pP PcP 21 47 44.3 -0.3
KSH2 pmax pmax
comp=Z,82nm,0.8s
NKC Novy Kostel 75.20 5 *e*P **P** **21 47 32.5 +0.8**
DPC Dobruska-Polom 75.22 2 *e*P **P** **21 47 32.2 +0.4**
DPC Dobruska-Polom 75.22 2 P **P** **21 47 32.0 +0.2**
comp=Z,14nm,1.1s
DPC Dobruska-Polom 75.22 2 P **P** **21 47 32.5 +0.6**
WLF Walferdange 75.32 9 IAmb IAmb 21 47 34.1
comp=Z,16nm,1.1s
WLF Walferdange 75.32 9 *d*P **P** **21 47 32.9 +0.6**
comp=Z,7.6nm,0.9s
WLF Walferdange 75.32 9 *e*P **P** **21 47 33.1 +0.8**
comp=Z,14nm,1.0s,baz=355,slow=5.9
OJC Ojcow 75.39 0 P **P** **21 47 32.8 0.0**
comp=Z,7.9nm,0.7s
OJC Ojcow 75.39 0 P **P** **21 47 32.9 +0.2**
LUBAR Lubar, Ukraine 75.48 355 P **P** **21 47 32.6 -0.7**
KRLC Kraliky 75.51 2 *e*P **P** **21 47 33.8 +0.3**
PRU Pruhonice 75.53 4 P **P** **21 47 33.9 +0.4**
GRA3 Grafenberg Arr 75.61 6 P **P** **21 47 34.6 +0.6**
STEB Steborice 75.67 1 *e*P **P** **21 47 33.1 -1.2**
GRA1 Grafenberg Arr 75.67 6 IAmb IAmb 21 47 35.5
comp=Z,10nm,0.9s
GRF Grafenberg Arr 75.67 6 *e*P **P** **21 47 34.7 +0.4**
comp=Z,9.9nm,0.8s,baz=355,slow=5.9
GRF *e*L L 22 19 57.4
comp=Z,74nm,21.2s
GRA2 Grafenberg Arr 75.72 6 P **P** **21 47 34.4 -0.3**
OKC Ostrava-Krasne 75.77 1 P **P** **21 47 35.1 +0.2**
MORC Moravsky Berou 75.82 2 ⇑P **P** **21 47 35.2 -0.1**
MORC Moravsky Berou 75.82 2 IAmb IAmb 21 47 36.5
comp=Z,12nm,1.2s
MORC Moravsky Berou 75.82 2 *e*P **P** **21 47 35.1 -0.2**
MORC Moravsky Berou 75.82 2 P **P** **21 47 35.5 +0.2**
GRB4 Grafenberg Arr 75.91 6 P **P** **21 47 36.4 +0.6**
KWP Kalwaria Pacla 75.95 358 P **P** **21 47 36.0 0.0**
comp=Z,28nm,1.0s
BTK Batken 75.98 322 P **P** **21 47 36.4 0.0**
GRB1 Grafenberg Arr 75.99 6 P **P** **21 47 36.8 +0.5**
GRB3 Grafenberg Arr 76.05 5 P **P** **21 47 36.8 +0.2**
ZVC Zvikov 76.07 4 *e*P **P** **21 47 37.0 +0.4**
LSA Lhasa 76.11 302 P **P** **21 47 38.5 +0.7**
LSA Lhasa 76.11 302 P **P** **21 47 38.6 +0.8**
GRB2 Grafenberg Arr 76.12 6 P **P** **21 47 37.5 +0.6**
DRK Karamyk 76.14 321 P **P** **21 47 38.1 +0.5**
SLVN Son La 76.18 287 P **P** **21 47 38.9 +1.1**
SLVN Son La 76.18 287 IAmb IAmb 21 47 39.0
comp=Z,19nm,0.9s
STHS Stebnicka Huta 76.19 359 *e*P **P** **21 47 36.6 -0.8**
NIE Niedzica 76.19 360 P **P** **21 47 37.7 +0.3**
comp=Z,4.1nm,1.1s
MAUC Maruska 76.23 1 *e*P **P** **21 47 37.9 +0.3**
VRAC Vranov 76.27 2 ⇑P **P** **21 47 38.4 +0.5**
VRAC Vranov 76.27 2 *e*P **P** **21 47 38.0 +0.2**
VRAC Vranov 76.27 2 P **P** **21 47 38.3 +0.5**
GRC4 Grafenberg Arr 76.29 6 P **P** **21 47 38.2 +0.3**
WET Wettzell 76.31 5 *e*P **P** **21 47 38.5 +0.4**
comp=Z,7.5nm,1.1s,baz=355,slow=5.9
WET Wettzell 76.31 5 P **P** **21 47 38.6 +0.6**
KHC Kasperske Hory 76.35 4 *e*P **P** **21 47 38.8 +0.5**
KHC Kasperske Hory 76.35 4 P **P** **21 47 38.6 +0.3**
comp=Z,15nm,1.3s
GRC1 Grafenberg Arr 76.38 6 P **P** **21 47 38.1 -0.3**
LANS Liptovska Anna 76.46 0 *e*P **P** **21 47 40.4 +1.5**
GRC3 Grafenberg Arr 76.49 6 P **P** **21 47 39.1 +0.1**
GRC2 Grafenberg Arr 76.50 6 P **P** **21 47 39.4 +0.3**
KRUC Moravsky 76.51 2 *e*P **P** **21 47 39.0 -0.2**
KRUC Moravsky 76.51 2 P **P** **21 47 39.4 +0.3**
CLF Chambon-Foret 76.52 12 P **P** **21 47 40.2 +1.1**
CLF Chambon-Foret 76.52 12 P **P** **21 47 40.1 +0.9**
CLF pP **sP** **21 47 52.9 -0.2**
GEC2 GERESS Array S 76.64 4 *e*P **P** **21 47 40.0 0.0**
comp=Z,10.0nm,1.2s,baz=355,slow=5.9
GERES GERESS Array B 76.64 4 P **P** **21 47 40.1 0.0**
comp=Z,2.6nm,0.6s,baz=344,slow=3.9,SNR=29
comp=Z,2.6nm,0.6s
GERES GERESS Array B 76.64 4 P **P** **21 47 39.4 -0.6**
KOLS Kolonicke sedl 76.66 358 P **P** **21 47 40.9 +0.9**
JAVC Velka Javorina 76.74 1 *e*P **P** **21 47 41.8 +1.3**
JAVC Velka Javorina 76.74 1 P **P** **21 47 42.4 +1.9**
BFO Black Forest 76.83 8 P **P** **21 47 41.0 0.0**
BFO Black Forest 76.83 8 *e*P **P** **21 47 41.2 +0.2**
comp=Z,7.1nm,1.0s,baz=355,slow=5.9
ECH Echery 76.84 9 IAmb IAmb 21 47 42.4
comp=Z,12nm,0.9s
ECH Echery 76.84 9 P **P** **21 47 41.9 +0.8**
ECH Echery 76.84 9 P **P** **21 47 41.5 +0.4**
KMPD K-Podol'skiy 76.90 355 P **P** **21 47 40.5 -0.8**
GAR Garm 77.10 322 P **P** **21 47 42.8 0.0**
VYHS Vyhne 77.12 1 P **P** **21 47 43.2 +0.5**
VYHS Vyhne 77.12 1 *e*P **P** **21 47 43.1 +0.5**
FUR Furstenfeldbru 77.19 6 *e*P **P** **21 47 43.4 +0.3**
comp=Z,9.7nm,0.8s,baz=355,slow=5.9
MODS Modra-Piesok 77.22 2 P **P** **21 47 44.3 +1.1**
MODS Modra-Piesok 77.22 2 *e*P **P** **21 47 44.2 +1.0**
SORM Soroca 77.23 354 ⇑P **P** **21 47 42.3 -0.9**
SORM Soroca 77.23 354 P **P** **21 47 42.3 -0.9**
comp=Z,29nm,1.1s
ABAH Abaujker 77.31 359 P **P** **21 47 44.4 +0.7**
BAL3X Bal3x, Balta 77.35 353 P **P** **21 47 42.6 -1.3**
SLE Schleitheim 77.40 8 P **P** **21 47 44.1 -0.1**
WINA Alland / Wiene 77.46 3 *e*P **P** **21 47 44.9 +0.4**
comp=Z,11nm,1.0s,SNR=8.0
TRPA Tarpa 77.46 358 P **P** **21 47 45.0 +0.5**
CONA Conrad Observa 77.63 3 *e*P **P** **21 47 46.1 +0.5**
comp=Z,4.6nm,0.7s,SNR=8.6
MOA Molln 77.66 4 *i*P **P** **21 47 45.7 0.0**
comp=Z,1.4nm,0.5s
BOURR Bourrignon 77.67 9 P **P** **21 47 46.2 +0.5**
PSZ Piszkesteto 77.70 360 ⇑P **P** **21 47 46.4 +0.4**
PSZ Piszkesteto 77.70 360 IAmb IAmb 21 47 47.8
comp=Z,16nm,1.1s
PSZ Piszkesteto 77.70 360 P **P** **21 47 46.8 +0.9**
RJOB Jochberg 77.70 5 P **P** **21 47 46.5 +0.5**
BIOA Bad Ischl, Aus 77.79 4 *i*P **P** **21 47 46.6 +0.2**
comp=Z,5.8nm,1.2s
RETA Reutte 77.84 6 *e*P **P** **21 47 46.8 0.0**
comp=Z,5.2nm,0.8s
BUR08 Buvina A. S 77.87 356 IAmb IAmb 21 47 48.2
comp=Z,8.8nm,1.1s
RONA Rosalia, Austr 77.87 2 *e*P **P** **21 47 47.5 +0.6**
comp=Z,3.5nm,0.8s
MANEM Manem 77.89 320 IAmb IAmb 21 47 49.1
comp=Z,54nm,1.0s
SOP Sopron 77.89 2 P **P** **21 47 46.9 0.0**
BURAR Bucovina Array 77.90 356 ⇑P **P** **21 47 47.1 0.0**
BURAR Bucovina Array 77.90 356 P **P** **21 47 47.0 -0.1**
BURAR IAmb IAmb 21 47 48.6
comp=Z,8.7nm,1.0s
DAVA Damuels 77.98 7 *e*P **P** **21 47 47.7 +0.1**
comp=Z,2.6nm,0.7s
MOTA Moosalm 78.00 6 *e*P **P** **21 47 47.8 +0.1**
comp=Z,13nm,0.9s,SNR=8.8
LESA Schwarzleotal 78.01 5 *e*P **P** **21 47 48.1 +0.4**
comp=Z,2.3nm,0.6s
WATA Walderalm 78.04 6 *i*P **P** **21 47 48.2 +0.2**
comp=Z,14nm,1.0s,SNR=11
PRAR RASCA 78.11 356 ⇑P **P** **21 47 47.4 -0.7**
WTTA Wattenberg 78.11 6 *i*P **P** **21 47 48.8 +0.4**
comp=Z,14nm,0.7s,SNR=14
WTTA Wattenberg 78.11 6 P **P** **21 47 49.0 +0.6**
SQTA Sankt Quirin 78.13 6 *i*P **P** **21 47 48.9 +0.5**
comp=Z,17nm,0.8s,SNR=14
BNALP Bannalp 78.28 8 P **P** **21 47 50.0 +0.7**
ARSA Arzberg 78.30 3 IAmb IAmb 21 47 50.5
comp=Z,8.3nm,1.0s
ARSA Arzberg 78.30 3 *e*P **P** **21 47 49.8 +0.6**
comp=Z,9.5nm,1.0s,SNR=5.3
ARSA Arzberg 78.30 3 P **P** **21 47 49.7 +0.5**
FETA Feichten 78.30 6 *i*P **P** **21 47 49.8 +0.4**
comp=Z,11nm,0.9s,SNR=8.7
KBA Koelnbreinsper 78.39 5 *i*P **P** **21 47 50.6 +0.7**
comp=Z,9.5nm,0.7s,SNR=6.8
KBA Koelnbreinsper 78.39 5 P **P** **21 47 50.9 +1.0**
SESA Seetaler Alpe, 78.41 4 *e*P **P** **21 47 50.7 +0.7**
comp=Z,11nm,0.8s,SNR=10
MPLH Magyarpolny 78.43 2 P **P** **21 47 50.2 +0.3**
comp=Z,32nm,1.2s
MPLH Magyarpolny 78.43 2 P **P** **21 47 50.8 +0.9**
GIMEL St. Georges / 78.43 10 P **P** **21 47 51.1 +1.1**
ARCR ARCALIA 78.46 357 ⇑P **P** **21 47 50.4 +0.3**
SWI Sorong 78.50 252 P **P** **21 47 50.7 0.0**
comp=Z,781nmcomp=Z,38nm,1.1s
SIJI Sorong 78.50 252 P **P** **21 47 50.9 +0.2**
comp=Z,30nm,1.1s
BIZ Bicaz 78.54 356 ⇓P **P** **21 47 50.7 +0.2**
FUORN Ofenpass-Fuorn 78.67 7 IAmb IAmb 21 47 52.9
comp=Z,8.6nm,0.9s
FUORN Ofenpass-Fuorn 78.67 7 P **P** **21 47 52.5 +1.0**
ABTA Abfaltersbach 78.68 5 *i*P **P** **21 47 52.0 +0.6**
comp=Z,4.8nm,1.0s,SNR=7.1
PURM Purcari 78.73 353 ⇑P **P** **21 47 51.7 +0.2**
PURM Purcari 78.73 353 P **P** **21 47 51.2 -0.3**
comp=Z,27nm,1.0s
VASR Vaslui 78.75 354 ⇑P **P** **21 47 51.5 -0.2**
TUE Stuetta 78.75 7 P **P** **21 47 52.9 +0.9**
DRGR 78.80 358 ⇑P **P** **21 47 51.9 -0.2**
DRGR 78.80 358 P **P** **21 47 52.2 +0.1**
CJR Cluj-Napoca 78.85 357 ⇑P **P** **21 47 52.6 +0.3**
SOKA Soboth 78.86 3 *e*P **P** **21 47 52.7 +0.3**
comp=Z,13nm,0.9s,SNR=6.9
PERS Pernice 78.90 3 *i*P **P** **21 47 53.0 +0.5**
MARR Marisel-Cluj 78.90 358 ⇓P **P** **21 47 52.6 0.0**
TESR Tescani 78.94 355 ⇑P **P** **21 47 52.4 -0.3**
TESR Tescani 78.94 355 P **P** **21 47 52.3 -0.4**
comp=Z,12nm,1.5s
TESR Tescani 78.94 355 P **P** **21 47 52.4 -0.4**
OBKA Obir 79.01 4 *i*P **P** **21 47 53.6 +0.4**
comp=Z,30nm,0.8s,SNR=26
OBKA Obir 79.01 4 P **P** **21 47 53.8 +0.5**
GROS Grobnik 79.09 3 *i*P **P** **21 47 53.8 +0.1**
ONER Baraj Valea Uz 79.13 355 ⇑P **P** **21 47 54.3 +0.5**
SHL Shillong 79.14 299 *e*P **P** **21 47 52.2 -2.2**
SHL IAmb IAmb 21 47 56.9
comp=Z,14nm,1.2s
SHAA Shahritus 79.16 323 IAmb IAmb 21 47 55.4
comp=Z,72nm,1.2s
SIRR Siria 79.34 359 ⇑P **P** **21 47 55.0 +0.1**
GHRR 79.35 355 ⇑P **P** **21 47 55.6 +0.6**
GHRR 79.35 355 P **P** **21 47 54.6 -0.4**
GHRR 79.35 355 P **P** **21 47 55.5 +0.6**
OZUR 79.39 356 ⇑P **P** **21 47 55.8 +0.6**
MORH Mrgy, Hungar 79.40 1 P **P** **21 47 55.2 0.0**
MDB Medias 79.40 357 ⇑P **P** **21 47 55.8 +0.6**
BOSR Bodos 79.42 356 ⇑P **P** **21 47 56.3 +0.9**
TURR Turia 79.42 356 ⇑P **P** **21 47 56.1 +0.7**
VARL Varlezi 79.49 354 ⇑P **P** **21 47 54.6 -1.1**
SABO M.te Sabotino 79.50 4 IAmb IAmb 21 47 56.5
comp=Z,12nm,1.1s
CGRP Cima Grappa 79.50 6 P **P** **21 47 55.4 -0.7**
VLDR Vladesti 79.53 354 ⇑P **P** **21 47 56.1 +0.2**
DOPR Dopca 79.54 356 ⇑P **P** **21 47 56.8 +0.8**
PLOR Plostina 79.60 355 ⇑P **P** **21 47 55.1 -1.3**
COVR Voineasa-Covas 79.62 355 ⇑P **P** **21 47 56.2 -0.3**
EVN Everest 79.66 304 P **P** **21 47 57.9 +0.1**
SAHR Sahastru 79.72 355 ⇑P **P** **21 47 57.9 +0.9**
KIV Kislovodsk 79.75 343 ⇑P **P** **21 47 57.6 +0.3**
KIV Kislovodsk 79.75 343 P **P** **21 47 57.4 0.0**
KIV Kislovodsk 79.75 343 P **P** **21 47 57.1 -0.2**
comp=Z,255nmcomp=Z,30nm,0.9s
KIV Kislovodsk 79.75 343 P **P** **21 47 57.8 +0.5**
KIV Kislovodsk 79.75 343 P **P** **21 47 57.8 +0.5**
TNR Turnu Rosu 79.89 357 ⇑P **P** **21 47 58.4 +0.4**
KBZ Khabaz 79.94 343 P **P** **21 47 58.2 +0.1**
comp=Z,23nm,0.9s,baz=301,slow=3.1,SNR=33
KBZ LR LR 22 27 33.3
comp=Z,104nm,20.9s,baz=9.5,slow=39
comp=Z,23nm,0.9s
BZS Buzias 79.99 359 ⇑P **P** **21 47 58.0 -0.4**
BZS Buzias 79.99 359 P **P** **21 47 58.6 +0.1**
MLR Muntele Rosu 79.99 356 LR LR 22 29 11.1
comp=Z,63nm,18.1s,baz=23,slow=40
MLR Muntele Rosu 79.99 356 ⇑P **P** **21 47 57.9 -0.7**
MLR Muntele Rosu 79.99 356 IAmb IAmb 21 48 00.5
comp=Z,15nm,1.4s
MLR Muntele Rosu 79.99 356 P **P** **21 47 59.8 +1.2**
GBRS Gornja Briga 79.99 4 *i*P **P** **21 47 58.5 0.0**
VOIR 80.08 356 ⇑P **P** **21 47 59.5 +0.4**
VOIR 80.08 356 P **P** **21 47 59.5 +0.4**
LOT Lotru 80.11 357 P **P** **21 47 58.8 -0.5**
TLCR 80.14 354 ⇓P **P** **21 47 59.3 0.0**
ARR Arges 80.17 357 ⇓P **P** **21 47 60.0 +0.5**
ARR Arges 80.17 357 P **P** **21 48 00.0 +0.5**
CFR Carcaliu 80.19 354 ⇑P **P** **21 47 59.0 -0.5**
GZR Gura Zlata 80.19 358 ⇑P **P** **21 47 59.8 +0.2**
TSSA Tissa 80.27 315 *e*P **P** **21 48 00.4 0.0**
TSSA IAmb IAmb 21 48 02.8
comp=Z,17nm,0.7s
TSSA *i* pP **sP** **21 48 13.7 -0.6**
TPGR Topolog 80.49 354 ⇑P **P** **21 48 00.6 -0.6**
KLP Kalpa 80.51 312 *i*P **P** **21 48 01.7 -0.2**
KLP IAmb IAmb 21 48 04.3
comp=Z,37nm,0.9s
PGAV Gavieira, Arco 80.70 21 *e*P **P** **21 48 03.2 +0.7**
PGAV *i* IAmb IAmb 21 48 07.5
comp=Z,30nm,1.4s
PGAV *e*LR LR 22 16 59.4
PGAV *i* IAMs_20 IAMs_20 22 23 55.6
comp=Z,91nm,22.0s
HERR Herculane 80.71 358 ⇑P **P** **21 48 01.2 -1.1**
MDVR Moldovita 80.82 359 ⇑P **P** **21 48 03.2 +0.1**
TLBR Topalu 80.83 354 ⇑P **P** **21 48 02.7 -0.2**
ISO Isola 80.83 9 P **P** **21 48 04.6 +1.5**
TIRR Tirgusor 80.89 354 ⇑P **P** **21 48 03.5 +0.2**
TIRR Tirgusor 80.89 354 IAmb IAmb 21 48 04.2
comp=Z,22nm,0.9s
TIRR Tirgusor 80.89 354 P **P** **21 48 03.2 -0.1**
comp=Z,28nm,1.0s
TIRR Tirgusor 80.89 354 P **P** **21 48 03.4 +0.1**
SRE Strehaia 80.91 358 ⇓P **P** **21 48 04.2 +0.8**
CHTO Chiang Mai 80.94 290 P **P** **21 48 05.4 +1.4**
CHTO Chiang Mai 80.94 290 P **P** **21 48 03.2 -0.8**
CHTO IAmb IAmb 21 48 16.7
comp=Z,12nm,1.1s
CHTO Chiang Mai 80.94 290 P **P** **21 48 03.5 -0.5**
CHTO Chiang Mai 80.94 290 P **P** **21 48 03.4 -0.6**
CHTO Chiang Mai 80.94 290 P **P** **21 48 03.2 -0.8**
HUMR Humele 80.99 356 P **P** **21 48 03.5 -0.3**
PCAB Cabril 81.00 21 *e*P **P** **21 48 04.4 +0.4**
PCAB *i* IAmb IAmb 21 48 05.4
comp=Z,28nm,1.4s
PBRG Braganca 81.16 20 *e*P **P** **21 48 06.2 +1.3**
PBRG *i* IAmb IAmb 21 48 06.5
comp=Z,16nm,1.2s
CMAR Chiang Mai Arr 81.23 289 P **P** **21 48 05.2 -0.3**
comp=Z,15nm,0.8s,baz=16,slow=5.3,SNR=101
CMAR LR LR 22 28 03.5
comp=Z,60nm,18.5s,baz=185,slow=39
comp=Z,15nm,0.8s
CMAR Chiang Mai Arr 81.23 289 P **P** **21 48 04.9 -0.6**
SMLA Simla 81.33 313 *e*P **P** **21 48 04.6 -1.2**
SMLA IAmb IAmb 21 48 09.1
comp=Z,42nm,0.3s
PTH Pithoragarh 81.34 310 *e*P **P** **21 48 04.7 -1.5**
PTH IAmb IAmb 21 48 12.4
comp=Z,14nm,0.9s
POLO Lamas de Olo 81.37 21 *e*P **P** **21 48 06.6 +0.6**
POLO *i* IAmb IAmb 21 48 12.3
comp=Z,13nm,2.4s
PVRL Vila Real 81.48 21 *e*P **P** **21 48 07.8 +1.3**
PVRL *i* IAmb IAmb 21 48 10.0
comp=Z,26nm,1.2s
KBL Kabul 81.53 321 P **P** **21 48 05.5 -1.7**
KBL IAmb IAmb 21 48 06.6
comp=Z,19nm,0.8s
KBL Kabul 81.53 321 P **P** **21 48 05.8 -1.4**
NPW Naypyitaw 81.68 292 P **P** **21 48 07.2 -0.6**
CEST Esterri de Car 81.73 14 IAmb IAmb 21 48 14.7
comp=Z,7.7nm,0.9s
ZIMR 81.85 356 ⇑P **P** **21 48 07.8 -0.5**
RAZG Razgrad 81.89 355 ⇑P **P** **21 48 07.6 -1.0**
BOVS Bovan 81.97 359 ⇑P **P** **21 48 08.7 -0.3**
PVIS Viseu 81.98 21 *e*P **P** **21 48 11.1 +1.9**
EPOS Posof 82.13 343 P **P** **21 48 11.0 +0.8**
PLVB Pleven 82.14 356 ⇑P **P** **21 48 09.4 -0.6**
MTE Manteigas 82.35 21 *e*P **P** **21 48 11.9 +0.7**
MTE *i* IAmb IAmb 21 48 13.6
comp=Z,45nm,1.2s
MTE *e*LR LR 22 17 44.4
MTE *i* IAMs_20 IAMs_20 22 24 45.2
comp=Z,70nm,20.0s
MTE Manteigas 82.35 21 P **P** **21 48 12.9 +1.7**
FDMO Fiordimonte 82.41 5 IAmb IAmb 21 48 14.6
comp=Z,8.9nm,0.9s

PCAS Casmilo, Conde 82.49 22 *e*P **P** **21 48 12.7 +0.9**
PCAS *i* IAmb IAmb 21 48 14.3
comp=Z,42nm,1.2s
CASP Castiglione de 82.52 7 IAmb IAmb 21 48 14.7
comp=Z,20nm,1.2s
SDV Santo Domingo 82.54 85 LR LR 22 26 40.1
comp=Z,73nm,20.0s,baz=266,slow=37
NRCA Norcia 82.61 5 IAmb IAmb 21 48 18.3
comp=Z,7.9nm,0.8s
PCBR Castelo Branco 82.91 21 *e*P **P** **21 48 14.8 +0.9**
PCBR *i* IAmb IAmb 21 48 16.1
comp=Z,46nm,1.0s
PSBE So Bento 82.94 22 *e*P **P** **21 48 15.8 +1.5**
PSBE *i* IAmb IAmb 21 48 16.7
comp=Z,49nm,1.0s
PSARD Sardoal 82.99 21 *e*P **P** **21 48 15.5 +1.0**
PSARD *i* IAmb IAmb 21 48 16.7
comp=Z,59nm,1.0s
DIGO Kars 83.08 342 P **P** **21 48 16.3 +1.1**
GNI Garni 83.09 341 LR LR 22 32 14.7
comp=Z,86nm,18.1s,baz=14,slow=41
GNI Garni 83.09 341 P **P** **21 48 15.6 +0.4**
GNI IAmb IAmb 21 48 44.2
comp=Z,14nm,0.9s
GNI Garni 83.09 341 P **P** **21 48 15.8 +0.7**
comp=Z,316nmcomp=Z,21nm,1.0s
GNI Garni 83.09 341 P **P** **21 48 16.5 +1.4**
GNI Garni 83.09 341 P **P** **21 48 16.6 +1.4**
AQU L'Aquila 83.11 5 IAmb IAmb 21 48 48.6
comp=Z,13nm,1.0s
PDG Podgorica 83.18 0 ⇑P **P** **21 48 15.2 -0.1**
PDG Podgorica 83.18 0 IAmb IAmb 21 48 16.3
comp=Z,15nm,0.9s
PDG Podgorica 83.18 0 P **P** **21 48 15.4 0.0**
UCM Universidad Co 83.26 18 P **P** **21 48 16.9 +1.0**
PMRV Marv??o 83.32 21 *e*P **P** **21 48 16.7 +0.5**
PMRV *i* IAmb IAmb 21 48 18.2
comp=Z,32nm,1.2s
PMRV eLR LR 22 17 43.1
PMRV *i* IAMs_20 IAMs_20 22 23 47.7
comp=Z,72nm,22.0s
PMAFR Mafra 83.37 22 *e*P **P** **21 48 14.2 -2.2**
PMAFR *i* IAmb IAmb 21 48 21.1
comp=Z,114nm,1.4s
INTR Introdacqua 83.47 4 IAmb IAmb 21 48 18.6
comp=Z,8.6nm,0.9s
PMTG Montargil 83.49 22 *e*P **P** **21 48 17.3 +0.3**
PMTG *i* IAmb IAmb 21 48 18.8
comp=Z,30nm,1.1s
ROSC El Rosal 83.67 91 LR LR 22 26 46.5
comp=Z,36nm,21.9s,baz=69,slow=36
ESDC Sonseca Array 83.75 18 P **P** **21 48 19.1 +0.6**
comp=Z,22nm,0.9s,baz=343,slow=4.9,SNR=122
ESDC LR LR 22 26 45.0
comp=Z,75nm,20.0s,baz=353,slow=36
comp=Z,22nm,0.9s
ESDC Sonseca Array 83.75 18 P **P** **21 48 18.7 +0.3**
PARRA Arraiolos 83.77 22 *e*P **P** **21 48 18.9 +0.4**
PARRA *i* IAmb IAmb 21 48 20.3
comp=Z,33nm,1.1s
PAB San Pablo 83.80 19 P **P** **21 48 19.1 +0.4**
PAB IAmb IAmb 21 48 20.5
comp=Z,18nm,1.0s
PESTR Estremoz 83.82 21 *e*P **P** **21 48 19.3 +0.6**
PESTR *i* IAmb IAmb 21 48 20.6
comp=Z,26nm,1.2s
PESTR Estremoz 83.82 21 P **P** **21 48 19.8 +1.1**
PHP Peshkopia 83.93 360 P **P** **21 48 18.7 -0.6**
KOPT Kop Dagi 83.95 344 IAmb IAmb 21 48 34.5
comp=Z,10nm,0.8s
MOE Montemor 83.99 22 *e*P **P** **21 48 20.1 +0.5**
MOE *i* IAmb IAmb 21 48 40.7
comp=Z,42nm,1.7s
KELT Kelkit 84.01 345 P **P** **21 48 20.9 +1.0**
HRA Herat 84.02 326 IAmb IAmb 21 48 20.5
comp=Z,9.6nm,0.9s
EVO Evora 84.05 22 *e*P **P** **21 48 20.4 +0.5**
EVO *i* IAmb IAmb 21 48 21.9
comp=Z,36nm,1.3s
KUDL Kundal 84.21 312 *e*P **P** **21 48 20.2 -0.6**
KUDL IAmb IAmb 21 48 22.1
comp=Z,78nm,0.1s
RDO Rodhopi 84.34 356 P **P** **21 48 22.0 +0.7**
KNT Kendrikon 84.42 358 P **P** **21 48 24.1 +2.4**
SRS Serrai 84.44 357 P **P** **21 48 21.8 0.0**
PLOUS Minas do Lousa 84.44 22 *e*P **P** **21 48 22.8 +0.9**
PAOL Paolisi 84.48 4 IAmb IAmb 21 48 24.7
comp=Z,10nm,1.1s
ALN Alexandroupoli 84.57 355 P **P** **21 48 22.6 +0.1**
PBAR Barrancos 84.60 21 *e*P **P** **21 48 24.2 +1.5**
PBAR *i* IAmb IAmb 21 48 24.8
comp=Z,62nm,1.1s
GRG Griva 84.63 358 P **P** **21 48 23.5 +0.7**
MESJ Messejana 84.67 22 *e*P **P** **21 48 23.3 +0.3**
MESJ IAmb IAmb 21 48 24.0
comp=Z,31nm,1.3s
MESJ Messejana 84.67 22 *e*P **P** **21 48 23.4 +0.3**
MESJ *i* IAmb IAmb 21 48 25.0
comp=Z,34nm,1.5s
SOH Sokhos 84.75 357 P **P** **21 48 23.8 +0.3**
HORT Hortiatis 84.97 358 P **P** **21 48 23.3 -1.4**
BAND Balkesir-Ban 84.99 354 ⇓P **P** **21 48 24.8 +0.2**
MORF Marmelete 85.09 22 *e*P **P** **21 48 25.5 +0.3**
MORF IAmb IAmb 21 48 27.2
comp=Z,32nm,1.0s
GURO Guroymak-BITLI 85.13 343 IAmb IAmb 21 48 27.0
comp=Z,5.5nm,1.0s
BR106 Keskin Array S 85.14 349 P **P** **21 48 25.4 -0.2**
comp=Z,93nmcomp=Z,11nm,1.0s
BR131 Keskin Array S 85.15 349 IAmb IAmb 21 48 27.0
comp=Z,13nm,0.9s
BRTR Keskin Array B 85.15 349 P **P** **21 48 25.8 +0.2**
comp=Z,10nm,0.9s,baz=37,slow=2.6,SNR=48
BRTR LR LR 22 33 58.8
comp=Z,59nm,18.7s,baz=18,slow=41
comp=Z,10nm,0.9s
BRTR Keskin Array B 85.15 349 P **P** **21 48 25.3 -0.3**
BR105 Keskin Array S 85.16 349 P **P** **21 48 25.4 -0.2**
comp=Z,111nmcomp=Z,13nm,1.0s
BR104 Keskin Array S 85.16 349 P **P** **21 48 25.5 -0.2**
comp=Z,109nmcomp=Z,14nm,1.0s
GEVA Gevas 85.18 342 IAmb IAmb 21 48 27.6
comp=Z,13nm,0.9s
PVAQ Vaqueiros 85.20 22 *e*LR LR 22 20 02.9
PVAQ *i* IAMs_20 IAMs_20 22 24 04.7
comp=Z,109nm,22.0s
MARCO Tramutola 85.25 3 P **P** **21 48 26.5 +0.5**
LIT Litokhoron 85.48 358 P **P** **21 48 27.1 -0.1**
BALY Balya 85.64 354 P **P** **21 48 27.9 0.0**
VSL Villasalto 85.69 8 IAmb IAmb 21 48 29.6
comp=Z,13nm,0.9s
VSL Villasalto 85.69 8 P **P** **21 48 28.7 +0.5**
KIRS Kirsehir-Merke 85.70 349 ⇑P **P** **21 48 28.8 +0.5**
KKUL Konya-Kulu 85.77 350 P **P** **21 48 29.5 +0.8**
HAKT HAKKARI 85.79 341 P **P** **21 48 29.5 +0.5**
XOR Xorichti 86.20 357 P **P** **21 48 30.4 -0.3**
TIP Timpagrande 86.40 2 ⇑P **P** **21 48 32.1 +0.4**
TIP Timpagrande 86.40 2 P **P** **21 48 31.6 -0.1**
comp=Z,16nm,0.9s
TIP Timpagrande 86.40 2 P **P** **21 48 32.1 +0.4**
EMAL Malaga-Limoner 86.49 19 P **P** **21 48 32.9 +0.9**
AGG Agios Georgios 86.56 358 P **P** **21 48 32.3 -0.2**
MTSU Mount Surprise 86.57 232 P **P** **21 48 33.2 +0.7**
comp=Z,8.3nm,0.8s
ANDN Andirin 86.94 347 P **P** **21 48 35.4 +0.9**
PMOZ Porto Moniz, M 87.13 31 *e*pP pP 21 48 46.6 +0.9
GAZ Gaziantep 87.23 346 IAmb IAmb 21 48 37.6
comp=Z,8.6nm,0.9s
CTA Charters Tower 87.41 229 P **P** **21 48 38.1 +1.5**
CTAO Charters Tower 87.41 229 P **P** **21 48 37.1 +0.5**
AYDN Tasoluk 87.69 354 P **P** **21 48 38.2 +0.2**
BHPL Bhopal 88.06 309 *e*P **P** **21 48 37.9 -2.0**
BHPL *i* x x 21 48 49.1
KEST Kesra 89.42 9 P **P** **21 48 46.8 +0.6**
comp=Z,6.6nm,0.9s,baz=25,slow=2.6,SNR=10.0
comp=Z,6.6nm,0.9s
KEST Kesra 89.42 9 IAmb IAmb 21 48 48.5
comp=Z,6.7nm,0.9s
VIS Vishakhapatnam 90.01 301 *e*P **P** **21 48 48.0 -1.1**
IMMV Iera Moni Meta 90.07 357 P **P** **21 48 49.5 +0.3**
MD01 Midelt array s 90.19 21 P **P** **21 48 49.6 -0.3**
MD31 MD31 90.19 21 IAmb IAmb 21 48 51.1
comp=Z,5.5nm,0.8s
MDT Midelt 90.28 20 LR LR 22 31 25.8
comp=Z,38nm,19.9s,baz=17,slow=37

QIS Mount Isa 90.85 234 P **P** **21 48 52.6 -0.2**
comp=Z,12nm,1.1s
RPN Rapa Nui 92.48 136 LR LR 22 19 60.0
comp=Z,84nm,20.3s,baz=16,slow=29
WRA Warramunga Arr 92.88 239 P **P** **21 49 01.3 -0.9**
comp=Z,4.4nm,0.8s,baz=34,slow=5.8,SNR=25
comp=Z,4.4nm,0.8s
WRA Warramunga Arr 92.88 239 P **P** **21 49 01.2 -1.0**
EIL Elat 94.92 347 LR LR 22 37 57.6
comp=Z,35nm,18.1s,baz=70,slow=39
MDP Montagnes des 95.84 73 LR LR 22 31 15.1
comp=Z,80nm,21.6s,baz=355,slow=35
AS17 Alice Springs 96.19 237 P **P** **21 49 17.6 +0.2**
comp=Z,5.5nm,0.9s
ASAR Alice Springs 96.23 237 P **P** **21 49 17.1 -0.4**
comp=Z,2.6nm,0.8s,baz=36,slow=4.4,SNR=20
comp=Z,2.6nm,0.8s
RAYN Ar Rayn 98.98 336 P **P** **21 49 30.1 0.0**
H03N2 Juan Fernandez 111.90 117 T T 23 55 32.9
baz=323,slow=77,SNR=24
H03N1 Juan Fernandez 111.91 117 T T 23 55 31.0
baz=323,slow=77,SNR=18
H03N3 Juan Fernandez 111.92 117 T T 23 55 28.7
baz=323,slow=77,SNR=21
QSPA South Pole Qui 144.53 180 PKP **PKPab** **21 55 22.4 -0.5**
comp=Z,16nm,0.7s,baz=30,slow=0.7,SNR=130
BOSA Boshof 153.58 349 PKPbc **PKPbc** **21 55 47.5 -0.4**
comp=Z,3.0nm,0.7s,baz=292,slow=1.4,SNR=4.0
TROLL Troll, Antarti 161.17 163 ⇑PKPdf **PKPdf** **21 55 46.4 -1.9**
comp=Z,90nm,0.9s

PRE ***26*** *21:37:23.7±0.8, 21°.43S×32°.99E, h5km, ML2.6, Presumed earthquake*

ISC 26 21:37:29.2±3.3, 21°.77S±0°.10×32°.9E±0°.2, h10km, n18, σ1s82/24, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PILG	**Pilgrimsrest,**	**3.75**	**213**	*e*P		**Pn**	**21 38 28.4**	**+1.1**
PILG				*e*S		**Sn**	**21 39 14.8**	**+3.2**
PILG				IAML			21 39 45.2	
	comp=Z,24nm,0.6s							
MATP	**Matopo**	**4.35**	**287**	*i* P		**Pn**	**21 38 35.1**	**-0.4**
MATP				*i* S		**Sn**	**21 39 24.2**	**-2.1**
BLWY	**Bulawayo**	**4.35**	**291**	*i* P		**Pn**	**21 38 34.3**	**-1.3**
BLWY				*i* S		**Sn**	**21 39 27.3**	**+0.9**
LEPH	**Lephalale, Lim**	**5.17**	**245**	*e*P		**Pn**	**21 38 46.5**	**-0.2**
LEPH				*e*S		**Sn**	**21 39 45.2**	**-1.4**
LEPH				IAML			21 40 30.9	
	comp=Z,29nm,0.6s							
BROLN	**Tlhalogang**	**5.25**	**276**	*i* P		**Pn**	**21 38 47.4**	**-0.6**
BROLN				*i* S		**Sn**	**21 39 52.5**	**+3.8**
BROLN				IAML			21 40 25.8	
	comp=N,46nm,0.5s							
SOOWA	**Sowa**	**6.38**	**280**	*i* P		**Pn**	**21 39 03.5**	**+0.1**
LPHEP	**Lephephe**	**6.72**	**255**	*i* P		**Pn**	**21 39 09.0**	**+0.9**
KHWEE	**KHWEE**	**6.95**	**267**	*i* P		**Pn**	**21 39 11.3**	**+0.1**
KHWEE				IAML			21 41 23.2	
	comp=N,147nm,0.5s							
KDWAN	**Kaudwane**	**7.81**	**257**	*i* P		**Pn**	**21 39 24.1**	**+1.1**
KDWAN				IAML			21 41 46.0	
	comp=E,30nm,0.7s							
LSZ	**Lusaka**	**7.87**	**324**	*i* P		Pn	21 39 17.0	-6.9
LSZ	**Lusaka**	**7.87**	**324**	*e*P		Pn	21 39 16.7	-7.2
LSZ				*e*S		Sn	21 40 39.4	-14
LSZ				IAML			21 41 39.5	
	comp=Z,17nm,0.6s							
SNKL	**Senekal, Frees**	**7.99**	**215**	*e*P		**Pn**	**21 39 26.1**	**+0.6**
SNKL				*e*S		**Sn**	**21 40 55.0**	**-1.0**
SNKL				IAML			21 41 15.7	
	comp=Z,3.0nm,0.9s							
PMBG	**Pietermaritzbu**	**8.01**	**195**	*e*P		**Pn**	**21 39 26.4**	**+0.6**
PMBG				*e*S		**Sn**	**21 40 56.4**	**0.0**
PMBG				IAML			21 41 13.6	
	comp=Z,3.0nm,0.5s							
KSANE	**Kasane**	**8.31**	**297**	*i* P		Pn	21 39 23.6	-6.3
MAKGR	**Makgori**	**8.46**	**240**	*i* P		**Pn**	**21 39 30.6**	**-1.3**
MAKGR				*i* P		**Pn**	**21 39 32.6**	**+0.6**
MAKGR				IAML			21 42 06.0	
	comp=E,28nm,0.6s							
BOSA	**Boshof**	**9.73**	**224**	*i* P		**Pn**	**21 39 44.6**	**-4.8**
BOSA	**Boshof**	**9.73**	**224**	*e*P		**Pn**	**21 39 49.1**	**-0.3**
BOSA				*e*S		**Sn**	**21 41 36.7**	**-2.0**
BOSA				IAML			21 41 54.4	
	comp=Z,1.2nm,0.5s							
BRAK	**Brakfontein**	**13.40**	**220**	*e*P		**Pn**	**21 40 40.7**	**+1.2**

BER 26 21:48:43.6±1.5, 71°.46N×3°.51W, h24km±20km, Mw3.9, Confirmed Earthquake, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.62**	**255**	*e*P		Pn	21 48 58.7	-12
DBG	**Daneborg**	**5.69**	**308**	*e*P		Pn	21 50 04.6	-1.8
DAG	**Danmarks Havn**	**6.73**	**329**	*e*P		Pn	21 50 17.7	-3.0
LOF	**Lofoten**	**6.77**	**111**	*e*P		Pn	21 50 18.0	-3.2
STEI	**Steigen**	**7.40**	**109**	*e*P		Pn	21 50 26.0	-3.9
VAGH	**Vaagaholmen**	**7.63**	**120**	*e*P		Pn	21 50 30.2	-2.9
TRO	**Tromso**	**7.69**	**93**	*e*P		Pn	21 50 30.2	-3.6
KONS	**Konsvik**	**7.76**	**122**	*e*P		Pn	21 50 31.9	-2.8
KONS				IAML			21 50 33.6	
	comp=Z,2.9nm,0.6s							
KONS				*e*S		Sn	21 51 52.1	-10
STOK	**Stokkvaagen**	**7.85**	**123**	*e*P		Pn	21 50 33.4	-2.6
STOK				IAML			21 50 40.9	
	comp=Z,4.1nm,0.9s							
STOK				*e*S		Sn	21 51 54.2	-10
LEIR	**Leirfjorden**	**8.05**	**124**	*e*P		Pn	21 50 36.0	-2.7
LEIR				IAML			21 50 38.3	
	comp=Z,1.7nm,0.3s							
BRBB	**Barentsburg B**	**8.08**	**27**	*e*P		Pn	21 50 36.5	-2.5
SALU	**Saltoluokta**	**8.73**	**107**	*e*P		Pn	21 50 45.1	-3.0
KOVU	**Salmi**	**8.76**	**100**	*e*P		Pn	21 50 44.3	-4.2
NSS	**Namsos**	**9.03**	**133**	*e*P		Pn	21 50 51.5	-0.7
KTK1	**Kautokeino**	**9.34**	**92**	*e*P		Pn	21 50 52.8	-3.6
LANU	**Lannavaara**	**9.43**	**99**	*e*P		Pn	21 50 53.4	-4.4
HEF	**Hetta**	**9.77**	**95**	*e*P		Pn	21 50 57.6	-4.7
ARA0	**ARCESS Array S**	**9.83**	**87**	*e*P		Pn	21 50 58.4	-4.8
AKN	**Aaknes**	**10.18**	**151**	*e*P		Pn	21 51 08.3	+0.4

BJI ***26*** *22:01:18.8, 0°.12N×98°.53E, h62km, mB5.1/10, mb5.0/55, Ms4.3/7, Ms7 4.1/8*

BKK ***26*** *22:01:20.4±0.7, 0°.5±9°.8E±°, h50km±6km, M4.6/34, mb4.9/34, mB5.0/21, Mjma4.4/24, ML5.3/7, MLv5.1/7, Mw(mB)4.3/21*

NEIC ***26*** *22:01:23.4±1.4, 0°.55N±0°.05×98°.59E±0°.04, h54km±4km, mb4.9/76, Error ellipse: s-maj=8.2km s-min=6.1km az=204.0*

IDC ***26*** *22:01:23.1±1.5, 0°.58N×98°.72E, h57km±13km, mb4.3/29, mbtmp4.6/32, MS3.5/16, Error ellipse: s-maj=15.4km s-min=9.3km az=61.0*

GFZ ***26*** *22:01:24.4±0.1, 1°.1±2°.9×9°.9E±°, h62km, M4.8/51, mb5.0/51*

DJA ***26*** *22:01:24.5±0.1, 1°.1±2°.9×9°.9E±°, h55km±3km, M4.9/50, mb5.0/48, mB5.4/18, MLv5.3/50, Mw(mB)4.8/18, MwMwp4.8/1, Mwp5.2/1*

ISC 26 22:01:23.5±0.4, 0°.57N±0°.03×98°.63E±0°.04, h59km±3km, h60km:pP-P, n449, σ1s107/464, mb4.8/118, MS3.6/15, 24C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.71**	**209**	P		**Pn**	**22 01 38.8**	**+0.9**
PBSI				S		**Sn**	**22 01 50.7**	**+2.4**
PBSI	**Pulau Batu**	**0.71**	**209**	P		**Pn**	**22 01 38.7**	**+0.9**
MNSI	**Mandailing Nat**	**0.98**	**76**	P		**Pn**	**22 01 42.1**	**+0.8**
MNSI	**Mandailing Nat**	**0.98**	**76**	P		**Pn**	**22 01 41.7**	**+0.4**
SBSI	**Sibolga**	**1.01**	**15**	P		**Pn**	**22 01 44.3**	**+2.5**
SBSI				S		**Sn**	**22 01 59.0**	**+3.8**
GSI	**Gunungsitoli**	**1.28**	**305**	P		**Pn**	**22 01 46.0**	**+0.7**
GSI	**Gunungsitoli**	**1.28**	**305**			**Pn**	**22 01 44.7**	**-0.6**
GSI				Sn		**Sn**	**22 02 00.9**	**-0.7**
GSI	**Gunungsitoli**	**1.28**	**305**	P		**Pn**	**22 01 46.9**	**+1.6**
GSI	**Gunungsitoli**	**1.28**	**305**	P		**Pn**	**22 01 46.5**	**+1.2**
PPI	**Padang Panjang**	**2.04**	**120**	P		**Pn**	**22 01 57.6**	**+2.0**
RPSI	**Rantau Prapat**	**2.14**	**8**			**Pn**	**22 01 57.1**	**+0.2**
PSI	**Prapat**	**2.24**	**8**	P		**Pn**	**22 01 58.0**	**-0.4**
PSI	**Prapat**	**2.24**	**8**	P		**Pn**	**22 01 58.3**	**-0.1**
PDSI	**Padang**	**2.35**	**129**	P		**Pn**	**22 01 58.9**	**-0.9**
PDSI	**Padang**	**2.35**	**129**	P		**Pn**	**22 02 01.0**	**+1.2**

BKNI Bangkinang 2.42 96 P **Pn** **22 02 01.7 +0.9**
BKNI Bangkinang 2.42 96 **Pn** **22 02 01.5 +0.7**
BKNI Sn **Sn** **22 02 29.9 +0.6**
BKNI Bangkinang 2.42 96 P **Pn** **22 02 01.2 +0.4**
BKNI Bangkinang 2.42 96 P **Pn** **22 02 01.8 +1.0**
TSI Tuntungan 2.92 359 P **Pn** **22 02 09.6 +2.1**
TSI Tuntungan 2.92 359 P **Pn** **22 02 08.9 +1.4**
SNSI Sinabang, Aceh 2.94 309 P **Pn** **22 02 08.0 +0.2**
SNSI Sinabang, Aceh 2.94 309 P **Pn** **22 02 08.4 +0.6**
KCSI Kotacane, Aceh 3.06 344 P **Pn** **22 02 09.9 +0.4**
KCSI Kotacane, Aceh 3.06 344 P **Pn** **22 02 10.0 +0.4**
SDSI Sungai Dareh 3.17 118 P **Pn** **22 02 12.1 +1.1**
SDSI Sungai Dareh 3.17 118 P **Pn** **22 02 13.1 +2.1**
PPSI Pulau Pagai 3.58 157 P **Pn** **22 02 18.8 +2.1**
PPSI Pulau Pagai 3.58 157 P **Pn** **22 02 18.5 +1.9**
KRJI Kerinci 3.87 133 P **Pn** **22 02 22.3 +1.6**
KRJI Kerinci 3.87 133 P **Pn** **22 02 22.9 +2.2**
MLSI Meulaboh, Aceh 4.30 329 P **Pn** **22 02 26.5 +0.1**
LHMI Lhok Sumawe 4.93 340 P **Pn** **22 02 35.3 +0.2**
LHMI Lhok Sumawe 4.93 340 **Pn** **22 02 35.2 +0.1**
LHMI Lhok Sumawe 4.93 340 P **Pn** **22 02 36.4 +1.3**
LHMI Lhok Sumawe 4.93 340 P **Pn** **22 02 35.5 +0.4**
KULM Kulim 5.11 23 P **Pn** **22 02 39.0 +1.4**
KULM Kulim 5.11 23 **Pn** **22 02 38.6 +1.0**
KULM Kulim 5.11 23 P **Pn** **22 02 38.0 +0.4**
2µm160nm,0.9s
KULM Kulim 5.11 23 P **Pn** **22 02 39.5 +1.9**
MASI Maura Aman, Be 5.16 136 P **Pn** **22 02 39.2 +0.9**
MASI Maura Aman, Be 5.16 136 P **Pn** **22 02 38.6 +0.4**
BTDF Bukit Timah Da 5.21 81 P **Pn** **22 02 40.7 +1.8**
BTDF Bukit Timah Da 5.21 81 P **Pn** **22 02 40.1 +1.2**
MYKOM Kota Tinggi 5.36 77 P **Pn** **22 02 41.9 +0.9**
MYKOM Kota Tinggi 5.36 77 **Pn** **22 02 41.6 +0.6**
MYKOM Kota Tinggi 5.36 77 P **Pn** **22 02 40.7 -0.3**
0.8nm3µm144nm,0.6s
MYKOM Kota Tinggi 5.36 77 P **Pn** **22 02 42.3 +1.3**
UBSI University, Be 5.63 140 P **Pn** **22 02 43.8 -1.0**
3.3nm413nm,1.6s
KSI Kapahiang 5.77 137 P **Pn** **22 02 49.7 +3.0**
1.8nm4µm319nm,1.3s
TPRI Tanjung Pinang 5.91 87 P **Pn** **22 02 49.7 +1.2**
0.9nm2µm126nm,0.7s
TPRI Tanjung Pinang 5.91 87 P **Pn** **22 02 48.7 +0.1**
BSI Banda Aceh 5.92 326 P **Pn** **22 02 47.5 -1.2**
1.6nm3µm160nm,0.5s
MNAI Manna 6.53 139 P **Pn** **22 02 59.2 +2.1**
MNAI Manna 6.53 139 Pn **Pn** **22 02 58.0 +0.9**
MNAI Manna 6.53 139 P **Pn** **22 02 57.6 +0.5**
LHSI Lahat 6.55 132 P **Pn** **22 03 00.5 +3.1**
0.6nm2µm99nm,0.9s
LHSI Lahat 6.55 132 P **Pn** **22 02 59.1 +1.7**
PKDT Phuket 7.29 358 P **Pn** **22 03 05.8 -1.6**
0.8nm0.3nm0.5nm1µm76nm,0.7s
MDSI Maura Dua 7.48 132 P **Pn** **22 03 12.0 +1.9**
0.3nm78nm,0.8s
MDSI Maura Dua 7.48 132 P **Pn** **22 03 11.1 +1.1**
KASI Kota Agung 8.42 136 P **Pn** **22 03 22.7 -0.3**
88nm,1.2s
KASI Kota Agung 8.42 136 P **Pn** **22 03 24.6 +1.6**
TPI Tanjungpandan 9.61 110 P **Pn** **22 03 41.6 +2.4**
825nm63nm,0.9s
CGJI Cibinong 10.03 135 P **Pn** **22 03 44.7 -0.3**
92nm,1.4s
LEM Lembang 11.59 129 P **Pn** **22 04 07.1 +0.6**
14nm,0.6s,baz=187,slow=22,SNR=2.0
LEM LR LR 22 08 53.2
comp=Z,292nm,21.2s,baz=316,slow=39
LEM Lembang 11.59 129 P **Pn** **22 04 06.1 -0.4**
BBJI Bungbulang 12.02 132 P **Pn** **22 04 09.7 -2.6**
BBJI Bungbulang 12.02 132 **Pn** **22 04 09.4 -2.9**
BBJI Bungbulang 12.02 132 P **Pn** **22 04 11.0 -1.3**
29nm,0.7s
BBJI Bungbulang 12.02 132 P **Pn** **22 04 10.7 -1.6**
PHET Kaeng Krachan 12.31 5 P **Pn** **22 04 16.9 +0.8**
COCO West Island 12.80 188 P **Pn** **22 04 23.8 +1.0**
KPJI Karang Pucung 12.93 128 P **Pn** **22 04 27.0 +2.4**
41nm,0.9s
KPJI Karang Pucung 12.93 128 P **Pn** **22 04 25.2 +0.6**
CTJI Waduk Cacaban 12.94 126 P **Pn** **22 04 25.7 +0.9**
SRAK Srakaew 13.78 14 P **P** **22 04 40.1 -2.7**
0.3nm1µm107nm,0.6s
SMRI Semarang 14.00 123 P **Pn** **22 04 40.9 +1.7**
105nm,0.7s
SMRI Semarang 14.00 123 P **Pn** **22 04 40.1 +0.9**
KHLT Khaolaem Dam 14.14 360 P **P** **22 04 46.3 -0.5**
UGM Wanagama 14.55 126 P **Pn** **22 04 45.1 -1.2**
UTHA Uthaitani 14.92 3 P **P** **22 04 54.4 -1.0**
SJI Sawahan 15.48 122 P **Pn** **22 04 58.1 -0.3**
SNJI Sawahan-Nganju 15.50 123 P **Pn** **22 04 59.4 +0.7**
UTTA Uttaradit 17.18 6 P **Pn** **22 05 20.0 +0.4**
0.1nm483nm67nm,0.7s
CM04 Chiang Mai Arr 17.73 1 P **Pn** **22 05 26.1 -0.3**
0.1nm238nm25nm,0.6s
CM09 Chiang Mai Arr 17.77 1 P **P** **22 05 27.0 0.0**
0.1nm310nm32nm,0.6s
CM31 Chiang Mai Arr 17.78 1 P **Pn** **22 05 26.6 -0.5**
CMAR Chiang Mai Arr 17.78 1 P **Pn** **22 05 26.9 -0.1**
12nm,0.5s,baz=190,slow=11,SNR=83
CMAR ScP **ScP** **22 13 32.9 +0.6**
0.5nm,0.3s,baz=156,slow=2.4,SNR=6.0
CMAR LR LR 22 13 34.3
comp=Z,119nm,18.6s,baz=180,slow=41
CMAR Chiang Mai Arr 17.78 1 P **Pn** **22 05 26.6 -0.5**
CMAR **ScP** **22 13 32.2 -0.2**
CHTO Chiang Mai 18.14 1 P **P** **22 05 30.6 -0.5**
CHTO Chiang Mai 18.14 1 P **P** **22 05 30.1 -1.0**
CHTO Chiang Mai 18.14 1 **P** **22 05 29.8 -1.3**
CHTO Chiang Mai 18.14 1 P **P** **22 05 30.4 -0.7**
CHTO Chiang Mai 18.14 1 P **P** **22 05 30.7 -0.3**
PALK Pallekele 19.07 291 P **Pn** **22 05 43.5 +0.7**
20nm,0.7s,baz=104,slow=9.5,SNR=15
PALK LR LR 22 12 50.9
comp=Z,174nm,18.2s,baz=114,slow=36
PALK Pallekele 19.07 291 P **P** **22 05 40.7 -0.7**
PALK Pallekele 19.07 291 P **Pn** **22 05 44.6 +1.8**
PALK Pallekele 19.07 291 P **Pn** **22 05 42.2 -0.6**
NPW Naypyitaw 19.25 353 P **Pn** **22 05 44.3 -0.4**
CMAI Chiengmai2 19.25 1 P **P** **22 05 43.3 -0.2**
0.3nm25nm,0.6s
MALK Mahakanadarawa 19.62 294 P **Pn** **22 05 48.6 -0.6**
MYLDM Lahad Datu 20.36 77 P Pn 22 05 58.3 +0.3
MYLDM Lahad Datu 20.36 77 P **P** **22 05 55.3 -0.2**
MYLDM IAmb IAmb 22 05 59.9
comp=Z,105nm,1.3s
MYLDM Lahad Datu 20.36 77 P **P** **22 05 55.9 +0.5**
PLAI Plampang 21.24 116 P **P** **22 06 05.2 +0.3**
PCI Palu 21.26 94 P **P** **22 06 05.9 +0.8**
comp=Z,107nm,0.7s
SLVN Son La 21.28 14 P **P** **22 06 05.7 +0.5**
SLVN Son La 21.28 14 P **P** **22 06 05.0 -0.3**
DBNI Kabupaten Domp 21.59 115 P **P** **22 06 11.3 +2.7**
comp=Z,41nm,0.7s
SPSI Sidrap Palu 21.60 102 P **P** **22 06 12.7 +4.0**
KAPI Kappang 21.82 105 P **P** **22 06 11.0 0.0**
comp=Z,7.6nm,0.3s,baz=265,slow=12,SNR=6.3
KAPI LR LR 22 15 46.0
comp=Z,133nm,18.5s,baz=282,slow=40
comp=Z,7.6nm,0.3s
KAPI Kappang 21.82 105 P **P** **22 06 10.8 -0.2**
KAPI IAmb IAmb 22 06 21.5
comp=Z,33nm,0.8s
KAPI Kappang 21.82 105 P **P** **22 06 12.2 +1.1**
TOLI2 Tolitoli 22.16 88 P **P** **22 06 14.6 -0.1**
TOLI2 Tolitoli 22.16 88 **P** **22 06 14.8 0.0**
TOLI2 IAmb IAmb 22 06 16.5
comp=Z,25nm,0.7s
TOLI2 Tolitoli 22.16 88 P **P** **22 06 14.6 -0.1**
BRDH Bariadhala 23.01 343 P **P** **22 06 23.8 +0.3**
comp=Z,160nm,0.3s,baz=262,slow=18,SNR=2.7
BRDH LR LR 22 17 19.8
comp=Z,210nm,18.5s,baz=158,slow=42
SALM Salem 23.12 299 *e*P **P** **22 06 27.5 +2.7**
KOD Kodaikanal 23.13 295 *e*P **P** **22 06 27.4 +2.1**
KOD IAmb IAmb 22 06 31.4
comp=Z,9.3nm,0.9s
BWNR Bhubaneshwar 23.23 328 *e*P **P** **22 06 26.2 +0.4**
BWNR IAmb IAmb 22 06 27.6
comp=Z,32nm,0.8s
RAGD RAYAGADA 23.79 322 *e*P **P** **22 06 32.4 +1.4**
MORE Moreh 23.90 350 **P** **22 06 30.6 -1.3**
LUWI Luwuk 24.20 94 P **P** **22 06 33.8 -1.0**
LUWI Luwuk 24.20 94 P **P** **22 06

TNCH pmax pmax
comp=Z,31nm,0.5s
IMP Imphal 24.55 350 *eP* **P 22 06 37.8 -0.1**
KMI2 Kunming 24.76 9 ⇓P **P 22 06 41.0 +1.0**
KMI2 pmax pmax
comp=Z,11nm,0.9s
KOHI KOHIMA 25.39 350 *eP* **P 22 06 45.1 -0.5**
KOHI *eP* **P 22 06 45.9 +0.2**
SHL Shillong 25.70 346 P **P 22 06 47.8 -0.7**
SHL Shillong 25.70 346 *eP* **P 22 06 48.4 -0.1**
HYB Hyderabad 25.89 311 *eP* **P 22 06 50.4 +0.2**
HYB eS **S 22 11 16.9 +0.6**
MOKO MOKOCHONG 25.91 352 *eP* **P 22 06 50.8 +0.5**
PZH PanZhiHua 25.96 6 P **P 22 06 54.8 +4.0**
BOK Bokaro 26.19 333 *eP* **P 22 06 54.4 +1.6**
BOK IAmb IAmb 22 06 55.9
comp=Z,55nm,0.8s
GUWA GUWAHATI 26.34 346 *eP* **P 22 06 53.9 -0.1**
DHUB DHUBRI 26.64 342 ⇓*eP* **P 22 06 56.2 -0.6**
H08S2 Diego Garcia H 27.31 252 T T 22 34 40.2
baz=72,slow=75,SNR=138
H08S3 Diego Garcia H 27.31 252 T T 22 34 46.7
baz=72,slow=75,SNR=324
H08S1 Diego Garcia H 27.33 252 T T 22 34 50.4
baz=72,slow=75,SNR=30
GAYA Gaya 27.36 333 *eP* **P 22 07 04.3 +1.1**
DAV Davao City (W) 27.64 76 LR LR 22 18 25.3
comp=Z,152nm,21.0s,baz=275,slow=37
DAV Davao City (W) 27.64 76 P **P 22 07 06.7 +0.7**
TAWA Tawang 27.65 347 *eP* **P 22 07 07.3 +1.1**
NGP Nagpur 28.01 318 *eP* **P 22 07 10.7 +1.6**
EVN Everest 29.50 338 **P 22 07 21.8 -1.2**
EVN Everest 29.50 338 P **P 22 07 22.6 -0.4**
LSA Lhasa 29.84 347 P **P 22 07 25.9 +0.1**
LSA IAmb IAmb 22 07 27.8
comp=Z,28nm,1.2s
LSA Lhasa 29.84 347 P **P 22 07 27.0 +1.2**
BHPL Bhopal 30.53 319 *eP* **P 22 07 33.0 +1.5**
BHPL IAmb IAmb 22 07 35.6
comp=Z,10nm,0.4s
ENH Enshi 31.30 18 P **P 22 07 37.6 -0.6**
ENH Enshi 31.30 18 P **P 22 07 37.2 -0.9**
ENH Enshi 31.30 18 P **P 22 07 37.5 -0.7**
JHNI Jhansi 31.40 324 *eP* **P 22 07 39.5 +0.4**
FITZ Fitzroy Crossi 32.40 126 LR LR 22 21 15.1
comp=Z,91nm,19.7s,baz=357,slow=37
YHNB Yeheng 32.54 41 P **P 22 07 49.4 +0.2**
LGTI Lohaghat 33.69 330 *eP* **P 22 07 59.9 +0.6**
PTH Pithoragarh 33.78 330 *eP* **P 22 08 00.8 +0.7**
PTH IAmb IAmb 22 08 02.3
comp=Z,14nm,0.8s
PTH *i* pP **pP 22 08 16.6 +1.7**
FAKI Fak Fak 33.79 96 P **P 22 07 58.9 -1.3**
UDPR Udaipur 33.93 317 *eP* **P 22 08 02.9 +1.6**
AJM Ajmer 34.56 320 *eP* **P 22 08 08.1 +1.4**
XAN Xi'an 34.67 15 ⇓P **P 22 08 07.0 -0.6**
XAN pmax pmax
comp=Z,80nm,0.6s
XAN Xi'an 34.67 15 P **P 22 08 06.8 -0.8**
BLDU Ballidu 35.46 153 P **P 22 08 14.1 -0.3**
LZDM Lanzhou Array 35.53 7 P **P 22 08 15.4 +0.2**
comp=Z,9.7nm,0.5s,baz=183,slow=8.9,SNR=8.1
comp=Z,9.7nm,0.5s
LZH Lanzhou 35.67 7 *eP* **P 22 08 16.8 +0.5**
LZH pP pP 22 08 27.8 -3.4
LZH pmax pmax
comp=Z,20nm,1.0s
LYN LuoYang 36.20 20 P **P 22 08 21.8 +1.1**
LYN pmax pmax
comp=Z,30nm,0.6s
SMLA Simla 36.57 328 *eP* **P 22 08 24.4 +0.6**
NJ2 Nanjing 36.69 29 *eP* **P 22 08 27.5 +2.7**
NJ2 pmax pmax
comp=Z,15nm,0.6s
NWAO Narrogin (SRO) 37.65 154 LR LR 22 21 53.3
comp=Z,106nm,21.2s,baz=310,slow=33
NWAO Narrogin (SRO) 37.65 154 P **P 22 08 34.7 +1.7**
NWAO Narrogin (SRO) 37.65 154 P **P 22 08 34.9 +1.9**
THN Thein Dam 38.34 328 *eP* **P 22 08 39.4 +0.4**
THN IAmb IAmb 22 08 40.8
comp=Z,118nm,0.2s
TSSA Tissa 38.45 329 *eP* **P 22 08 39.6 -0.3**
TSSA IAmb IAmb 22 08 41.7
comp=Z,28nm,0.5s
TIA Tai'an 39.41 24 P **P 22 08 48.0 +0.3**
TIA pmax pmax
comp=Z,8.0nm,0.8s
HNS HongShan 39.55 20 ⇑P **P 22 08 49.8 +1.0**
HNS pmax pmax
comp=Z,37nm,0.6s
WB0 Warramunga Arr 40.46 122 **P 22 08 54.5 -2.2**
WB0 IAmb IAmb 22 08 55.6
comp=Z,13nm,0.9s
WRA Warramunga Arr 40.49 122 P **P 22 08 54.9 -2.1**
comp=Z,10nm,0.9s,baz=301,slow=9.0,SNR=33
WRA PcP **PcP 22 10 58.8 0.0**
comp=Z,1.7nm,0.5s,baz=310,slow=2.5,SNR=7.5
WRA ScP **ScP 22 14 42.1 -1.2**
comp=Z,0.4nm,0.7s,baz=310,slow=3.0,SNR=1.9
comp=Z,10nm,0.9s
WRA Warramunga Arr 40.49 122 IAmb IAmb 22 08 55.6
comp=Z,0.6nm,1.1s
WRA **PcP 22 10 58.6 -0.2**
WRA **ScP 22 14 41.4 -1.9**
WRAB Tennant Creek 40.50 122 P **P 22 08 54.8 -2.2**
WRAB Tennant Creek 40.50 122 P **P 22 08 55.0 -2.0**
WR8 Warramunga Arr 40.63 122 **P 22 08 56.1 -2.1**
WR8 IAmb IAmb 22 08 56.8
comp=Z,17nm,0.9s
BTO2 Baotou 41.28 13 *eP* **P 22 09 04.3 +1.1**
BTO2 pP **pP 22 09 19.5 +1.1**
BTO2 sP **sP 22 09 26.8 +1.5**
BTO2 pmax pmax
comp=Z,26nm,1.7s
BTO2 pmax pmax
comp=Z,230nm,4.4s
HHC Hu-ho-hao-te 41.78 15 *eP* **P 22 09 11.0 +3.6**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,52nm,5.6s
AS31 Alice Springs 41.88 128 **P 22 09 06.3 -2.0**
ASAR Alice Springs 41.88 128 P **P 22 09 06.5 -1.8**
comp=Z,5.5nm,0.6s,baz=300,slow=7.8,SNR=61
ASAR PcP **PcP 22 11 03.7 +0.4**
comp=Z,2.4nm,0.8s,baz=320,slow=3.7,SNR=7.5
ASAR ScP **ScP 22 14 47.5 -1.3**
comp=Z,0.9nm,0.8s,baz=297,slow=4.2,SNR=4.8
comp=Z,5.5nm,0.6s
ASAR Alice Springs 41.88 128 P **P 22 09 06.5 -1.8**
ASAR **PcP 22 11 03.9 +0.6**
ASAR **ScP 22 14 46.9 -1.9**
FORT Forrest 41.88 141 **P 22 09 08.8 +0.6**
FORT IAmb IAmb 22 09 35.5
comp=Z,14nm,0.7s
AS01 Alice Springs 41.91 127 P **P 22 09 06.8 -1.8**
BJT Baijiatuau 42.40 20 P **P 22 09 13.5 +1.3**
BJT Baijiatuau 42.40 20 P **P 22 09 13.1 +0.9**
BJT IAmb IAmb 22 09 14.7
comp=Z,19nm,0.7s
BJT Baijiatuau 42.40 20 P **P 22 09 13.5 +1.3**
BJI2 Beijing 42.40 20 P **P 22 09 13.5 +1.3**
BJI2 pP **pP 22 09 26.3 -1.1**
BJI2 sP **sP 22 09 31.8 -2.5**
BJI2 pmax pmax
comp=Z,14nm,0.7s
DL2 Dalian 43.59 26 P **P 22 09 21.8 -0.1**
DL2 pmax pmax
comp=Z,21nm,0.8s
KBL Kabul 43.67 324 **P 22 09 22.7 -0.1**
KBL Kabul 43.67 324 P **P 22 09 21.5 -1.3**
KSH2 Kashi 43.81 334 P **P 22 09 24.0 +0.1**
KSH2 pmax pmax
comp=Z,15nm,0.7s
KSH2 L L
comp=Z,430nm,17.9s
KSH2 L L
comp=Z,300nm,18.2s
KSH2 L L
comp=Z,550nm,21.3s
WUS Wushi 44.10 339 P **P 22 09 26.6 +0.5**
WUS IAmb IAmb 22 09 27.8
comp=Z,30nm,0.7s
WUS Wushi 44.10 339 P **P 22 09 27.1 +0.9**

WMQ Urumqi 44.16 349 ⇓P **P 22 09 27.3 +0.8**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,99nm,3.9s
WMQ L L
comp=Z,67nm,19.7s
MANEM Manem 44.40 329 **P 22 09 29.5 +0.8**
MANEM IAmb IAmb 22 09 31.3
comp=Z,165nm,0.7s
ASAI AK-SAY(Kyrgyzs 44.89 336 P **P 22 09 33.8 +1.1**
TARG Taragay, Kyrgy 45.08 338 **P 22 09 34.6 +0.3**
TARG Taragay, Kyrgy 45.08 338 P **P 22 09 34.9 +0.6**
QIS Mount Isa 45.25 120 P **P 22 09 35.6 +0.1**
NRN Naryn 45.53 336 **P 22 09 38.2 +0.4**
KSAR Wonju Array Be 45.55 33 **P 22 09 37.6 0.0**
KSRS Korea Array 45.58 33 P **P 22 09 36.7 -1.1**
comp=Z,6.5nm,0.8s,baz=223,slow=8.7,SNR=26
comp=Z,6.5nm,0.8s
KDJ Kajisay 45.66 338 **P 22 09 39.2 +0.6**
KDJ Kajisay 45.66 338 P **P 22 09 40.1 +1.5**
SHLS Shalkode 45.74 340 ⇓*iP* **P 22 09 39.0 -0.2**
comp=Z,13nm,0.6s
DRK Karamyk 45.83 331 P **P 22 09 40.5 +0.4**
DRK Karamyk 45.83 331 P **P 22 09 41.3 +1.2**
UZB Uzynbulak 45.88 340 ⇑*iP* **P 22 09 41.1 +0.8**
comp=Z,11nm,0.6s
PDGK Podgornoye 45.89 341 P **P 22 09 40.1 -0.2**
SATY Saty 46.02 339 ⇑*iP* **P 22 09 42.4 +1.0**
comp=Z,16nm,0.9s
ULHL Ulahol 46.12 337 P **P 22 09 43.0 +0.7**
SNR=8.2
OHH Osh 46.18 333 P **P 22 09 41.9 -0.8**
GAR Garm 46.20 329 **P 22 09 42.5 -0.3**
GAR Garm 46.20 329 P **P 22 09 42.8 -0.1**
KPKS Kokpek 46.28 340 *eP* **P 22 09 44.3 +0.9**
SHAA Shahritus 46.32 326 **P 22 09 42.6 -1.1**
SHAA IAmb IAmb 22 09 44.2
comp=Z,98nm,1.1s
COEN Coen 46.41 110 P **P 22 09 43.3 -1.4**
TNSS Tian-Shan 46.53 338 *eP* **P 22 09 46.3 +0.6**
CHGR Chuyangaron 46.55 328 **P 22 09 44.7 -0.9**
CHGR Chuyangaron 46.55 328 P **P 22 09 45.0 -0.5**
MDOK Medeo 46.60 338 *eP* **P 22 09 46.9 +0.9**
AAA Alma-Ata 46.69 338 *eP* **P 22 09 47.4 +0.9**
comp=Z,19nm,0.7s
ARSB Arslanbob 46.73 333 P **P 22 09 47.0 0.0**
BTK Batken 46.76 331 **P 22 09 46.4 -0.7**
BTK IAmb IAmb 22 09 48.8
comp=Z,10nm,0.7s
BTK Batken 46.76 331 P **P 22 09 48.5 +1.4**
TKM2 Tokmak 2 46.95 337 P **P 22 09 49.4 +0.7**
SNR=36
KBK Karagaybulak 46.99 336 P **P 22 09 50.4 +1.4**
SNR=16
AAK Ala-Archa 47.16 336 P **P 22 09 50.6 +0.3**
AAK IAmb IAmb 22 09 57.0
comp=Z,11nm,1.1s
AAK Ala-Archa 47.16 336 P **P 22 09 51.7 +1.4**
CHMS Chumysh 47.35 336 P **P 22 09 52.5 +0.8**
SNR=16
EKS2 Erkin-Say 47.48 335 P **P 22 09 54.2 +1.4**
SNR=18
GUMO Guam 47.56 72 LR LR 22 34 23.7
comp=Z,11nm,18.0s,baz=27,slow=42
SONM Songino Array 47.56 7 P **P 22 09 53.8 +0.4**
comp=Z,6.7nm,0.6s,baz=194,slow=9.1,SNR=38
SONM PcP **PcP 22 11 22.6 +0.1**
comp=Z,1.2nm,0.4s,baz=197,slow=4.5,SNR=4.0
comp=Z,6.7nm,0.6s
SONM Songino Array 47.56 7 **P 22 09 53.0 -0.3**
SONM IAmb IAmb 22 09 54.6
comp=Z,7.3nm,0.6s
SONM PcP **PcP 22 11 22.3 -0.1**
ARK Arkit 47.57 333 P **P 22 09 54.4 +0.9**
USP Ospenovka 47.68 336 P **P 22 09 55.1 +0.9**
SNR=37
ULN Ulaanbaatar 47.68 8 P **P 22 09 54.3 +0.1**
ULN IAmb IAmb 22 09 57.4
comp=Z,6.5nm,0.8s
ULN Ulaanbaatar 47.68 8 P **P 22 09 55.1 +0.9**
ULN Ulaanbaatar 47.68 8 P **P 22 09 55.2 +0.9**
TDK Taldygorghan 47.73 341 *eP* **P 22 09 55.0 +0.5**
comp=Z,11nm,0.6s
SGDS Sogindy 47.78 336 *eP* **P 22 09 55.6 +0.6**
MKAR Makanchi Array 48.21 345 P **P 22 09 58.6 +0.4**
comp=Z,39nm,0.5s,baz=154,slow=7.9,SNR=544
MKAR S **S 22 16 54.4 +1.1**
comp=Z,0.5nm,0.9s,baz=167,slow=16,SNR=3.6
comp=Z,39nm,0.5s
MKAR Makanchi Array 48.21 345 **P 22 09 58.0 -0.2**
ZSN Zaisan 48.21 347 ⇑*iP* **P 22 09 59.4 +1.2**
comp=Z,7.7nm,0.7s
MAKZ Makanchi 48.30 345 P **P 22 09 58.9 -0.1**
MAKZ Makanchi 48.30 345 P **P 22 09 59.3 +0.4**
MAKZ Makanchi 48.30 345 P **P 22 09 59.4 +0.4**
BBOO Buckleboo 48.44 137 P **P 22 09 59.5 -0.7**
DZA Taraz 48.72 333 *eP* **P 22 10 02.8 +0.5**
comp=Z,6.9nm,0.7s
IUG Iuzinay 48.74 332 ⇓*iP* **P 22 10 03.3 +0.8**
comp=Z,16nm,1.1s
CHM Chimkent 49.08 332 *eP* **P 22 10 05.8 +0.8**
INKA Innaminka 49.24 128 **P 22 10 06.0 -0.4**
KK31 Karatay Array 49.26 333 **P 22 10 06.2 -0.1**
KK31 IAmb IAmb 22 10 07.8
comp=Z,18nm,1.4s
KKAR Karatay Array 49.26 333 **P 22 10 06.9 +0.6**
BTLS Baital 49.34 337 *eP* **P 22 10 07.3 +0.5**
HTT Hallett 50.77 136 P **P 22 10 17.9 -0.1**
MJAR Matsushiro Arr 51.21 41 P **P 22 10 19.7 -1.5**
comp=Z,1.7nm,0.5s,baz=230,slow=7.2,SNR=8.0
MJAR LR LR 22 35 01.0
comp=Z,14nm,18.3s,baz=192,slow=40
comp=Z,1.7nm,0.5s
MJAR Matsushiro Arr 51.21 41 P **P 22 10 20.0 -1.2**
BNX BinXian 51.63 25 ⇓P **P 22 10 23.8 -0.3**
BNX pmax pmax
comp=Z,19nm,0.7s
STKA Stephens Creek 51.88 133 P **P 22 10 25.8 -0.4**
comp=Z,11nm,0.7s,baz=311,slow=7.1,SNR=26
comp=Z,11nm,0.7s
STKA Stephens Creek 51.88 133 P **P 22 10 25.5 -0.7**
HILR Hailar Array B 52.06 17 P **P 22 10 26.9 -0.4**
comp=Z,7.1nm,0.5s,baz=197,slow=7.7,SNR=8.6
comp=Z,7.1nm,0.5s
USA0B Ussuriysk Arra 52.59 30 P **P 22 10 31.5 +0.2**
USA0B IAmb IAmb 22 10 32.8
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 52.59 30 P **P 22 10 30.2 -1.1**
comp=Z,9.9nm,0.8s,baz=218,slow=6.8,SNR=11
comp=Z,9.9nm,0.8s
KURBB Kurchatov Arra 52.72 344 P **P 22 10 30.9 -1.2**
comp=Z,6.5nm,0.4s,baz=164,slow=7.3,SNR=49
KURBB S **S 22 17 57.7 +2.1**
comp=Z,0.7nm,0.8s,baz=159,slow=14,SNR=4.8
comp=Z,6.5nm,0.4s
KURK Kurchatov 52.78 344 **P 22 10 33.0 +0.4**
KURK IAmb IAmb 22 10 34.2
comp=Z,18nm,0.8s
KURK Kurchatov 52.78 344 P **P 22 10 33.0 +0.4**
ZAA0 Zalesovo Array 54.42 350 **P 22 10 44.7 +0.2**
ZALV Zalesovo Beam 54.42 350 P **P 22 10 44.5 +0.1**
comp=Z,20nm,0.5s,baz=167,slow=6.7,SNR=132
comp=Z,20nm,0.5s
ZALV Zalesovo Beam 54.42 350 **P 22 10 44.7 +0.2**
CMSA Cobar Meteorol 54.80 130 P **P 22 10 47.0 -0.7**
HEH HeiHe 55.24 22 *eP* **P 22 10 51.0 +0.5**
HEH pmax pmax
comp=Z,6.0nm,0.7s
RAYN Ar Rayn 56.31 298 **P 22 10 58.9 +0.2**
RAYN IAmb IAmb 22 10 59.9
comp=Z,6.7nm,0.8s
RAYN Ar Rayn 56.31 298 P **P 22 10 59.3 +0.5**
RAYN Ar Rayn 56.31 298 P **P 22 10 59.2 +0.4**
EIDS Eidsvold 56.83 121 P **P 22 11 01.4 -1.0**
EIDS Eidsvold 56.83 121 **P 22 11 01.7 -0.6**
EIDS IAmb IAmb 22 11 02.3
comp=Z,14nm,0.6s
BVAR Borovoye Array 57.32 340 P **P 22 11 04.8 -0.5**
comp=Z,16nm,0.5s,baz=143,slow=9.1,SNR=151
BVAR S **S 22 18 56.9 -0.3**
comp=Z,0.2nm,0.4s,baz=119,slow=12,SNR=3.8
comp=Z,16nm,0.5s
AB31 Akbulak array 58.75 331 **P 22 11 14.9 -0.4**
AB31 IAmb IAmb 22 11 15.7
comp=Z,13nm,0.7s
ABKAR Akbulak array 58.75 331 **P 22 11 15.0 -0.3**
GNI Garni 62.74 316 P **P 22 11 42.4 -0.5**
GNI IAmb IAmb 22 12 00.1
comp=Z,11nm,0.9s
GURO Guroymak-BITLI 64.04 313 P **P 22 11 51.4 -0.1**
ARTI Arti 64.36 337 LR LR 22 42 31.1
comp=Z,39nm,20.1s,baz=123,slow=38
ARTI Arti 64.36 337 **P 22 11 52.5 -0.5**
ARTI Arti 64.36 337 P **P 22 11 52.4 -0.7**
KBZ Khabaz 65.48 319 P **P 22 12 00.6 +0.1**
comp=Z,8.6nm,0.8s,baz=121,slow=6.8,SNR=22
comp=Z,8.6nm,0.8s
KOPT Kop Dagi 65.69 314 P **P 22 12 00.7 -1.7**
KIV Kislovodsk 65.72 319 ⇑P **P 22 12 02.6 +0.4**
KIV Kislovodsk 65.72 319 **P 22 12 02.0 -0.2**
KIV IAmb IAmb 22 12 03.1
comp=Z,12nm,0.8s
KIV Kislovodsk 65.72 319 P **P 22 12 02.1 -0.1**
comp=Z,14nm,1.1s
KIV Kislovodsk 65.72 319 P **P 22 12 02.4 +0.1**
KELT Kelkit 66.62 314 P **P 22 12 08.4 +0.2**
ARPR Arapgir-MALATY 66.93 313 P **P 22 12 09.7 -0.5**
ARPR IAmb IAmb 22 12 11.9
comp=Z,16nm,1.3s
EIL Elat 67.00 302 P **P 22 12 11.7 +1.1**
HRFI Mount Harif 67.01 302 P **P 22 12 11.8 +1.0**
GAZ Gaziantep 67.17 310 **P 22 12 12.0 +0.4**
GAZ IAmb IAmb 22 12 13.4
comp=Z,21nm,0.8s
MMAI Mount Meron Ar 67.43 306 P **P 22 12 13.4 0.0**
comp=Z,24nm,0.6s,baz=91,slow=8.6,SNR=2.5
comp=Z,24nm,0.6s
ANDN Andirin 67.95 311 P **P 22 12 17.5 +0.9**
TOKA Tokat 68.69 313 P **P 22 12 20.9 -0.2**
TOKA IAmb IAmb 22 12 22.4
comp=Z,9.8nm,0.7s
BNN Bunyan 68.70 312 **P 22 12 20.8 -0.5**
BNN IAmb IAmb 22 12 22.3
comp=Z,10nm,0.9s
NRIK Noril'sk 69.06 356 P **P 22 12 22.0 -0.7**
comp=Z,7.9nm,0.9s,baz=156,slow=2.9,SNR=6.9
comp=Z,7.9nm,0.9s
NRIK Noril'sk 69.06 356 P **P 22 12 21.8 -0.9**
NRIK IAmb IAmb 22 12 23.1
comp=Z,11nm,1.1s
CSS Mathiatis 69.58 307 P **P 22 12 26.7 0.0**
comp=Z,12nm,1.3s
KIRS Kirsehir-Merke 70.22 312 ⇓P **P 22 12 30.5 -0.1**
BR104 Keskin Array S 70.58 312 P **P 22 12 32.3 -0.6**
comp=Z,49nmcomp=Z,6.8nm,0.8s
BR131 Keskin Array S 70.59 312 **P 22 12 32.1 -0.9**
BRTR Keskin Array B 70.59 312 P **P 22 12 32.2 -0.7**
comp=Z,3.9nm,0.7s,baz=133,slow=7.3,SNR=33
comp=Z,3.9nm,0.7s
BRTR Keskin Array B 70.59 312 **P 22 12 31.9 -1.0**
BR105 Keskin Array S 70.61 312 P **P 22 12 32.4 -0.6**
comp=Z,50nmcomp=Z,6.4nm,0.8s
BR105 pP **pP 22 12 46.9 -2.4**
comp=Z,50nmcomp=Z,6.4nm,0.8s
BR106 Keskin Array S 70.61 312 P **P 22 12 32.4 -0.6**
comp=Z,49nmcomp=Z,6.6nm,0.8s
BR106 pP **pP 22 12 47.0 -2.3**
comp=Z,49nmcomp=Z,6.6nm,0.8s
BZK Bozkurt 70.97 315 ⇑P **P 22 12 35.7 +0.7**
BZK Bozkurt 70.97 315 P **P 22 12 35.0 +0.1**
BZK Bozkurt 70.97 315 P **P 22 12 35.0 +0.1**
comp=Z,60nm,0.7s
KKUL Konya-Kulu 70.98 311 P **P 22 12 35.5 +0.2**
PETK Petropavlovsk- 71.48 33 P **P 22 12 37.2 -0.6**
comp=Z,2.6nm,0.8s,baz=284,slow=4.9,SNR=6.5
comp=Z,2.6nm,0.8s
MAW Mawson 72.43 194 P **P 22 12 43.6 +0.5**
comp=Z,1.1nm,0.6s,baz=53,slow=5.1,SNR=2.4
comp=Z,1.1nm,0.6s
MAW Mawson 72.43 194 P **P 22 12 43.6 +0.5**
MDUB Mudurnu 72.59 312 **P 22 12 43.9 -1.0**
MDUB IAmb IAmb 22 12 45.4
comp=Z,26nm,0.9s
OBN Obninsk 73.91 328 P **P 22 12 51.9 -0.2**
comp=Z,16nm,1.1s
YLV Yalova 73.97 312 P **P 22 12 52.5 -0.5**
comp=Z,20nm,1.0s
BOSA Boshof 75.70 240 P **P 22 13 03.2 -0.1**
comp=Z,3.9nm,1.0s,baz=334,slow=6.8,SNR=3.8
comp=Z,3.9nm,1.0s
BOSA Boshof 75.70 240 P **P 22 13 01.9 -1.5**
JCZ Jackson Bay 76.24 136 P **P 22 13 06.6 +0.6**
SORM Soroca 76.51 320 ⇑P **P 22 13 06.6 -0.7**
SORM Soroca 76.51 320 P **P 22 13 06.7 -0.6**
comp=Z,24nm,0.9s
AK09 Malin Array Si 76.57 322 P **P 22 13 07.0 -0.6**
AK10 Malin Array Si 76.58 322 P **P 22 13 07.1 -0.6**
AK08 Malin Array Si 76.59 322 P **P 22 13 07.1 -0.6**
AK07 Malin Array Si 76.60 322 P **P 22 13 07.1 -0.6**
AK05 Malin Array Si 76.62 322 P **P 22 13 06.9 -1.0**
AK02 Malin Array Si 76.63 322 P **P 22 13 07.0 -0.9**
AKASG Malin Array Be 76.63 322 P **P 22 13 07.0 -0.9**
comp=Z,1.8nm,0.6s,baz=88,slow=5.0,SNR=14
comp=Z,1.8nm,0.6s
AKASG Malin Array Be 76.63 322 P **P 22 13 07.8 -0.1**
AKBB Malin Array Si 76.63 322 P **P 22 13 06.8 -1.1**
AKBB Malin Array Si 76.63 322 P **P 22 13 07.0 -0.9**
AK01 Malin Array Si 76.63 322 P **P 22 13 07.0 -0.9**
AK03 Malin Array Si 76.64 322 P **P 22 13 07.0 -1.0**
KIEV Kiev 76.64 322 P **P 22 13 07.0 -0.9**
comp=Z,33nm,0.8s
KIEV Kiev 76.64 322 P **P 22 13 07.2 -0.8**
AK12 Malin Array Si 76.66 322 P **P 22 13 07.1 -1.0**
AK11 Malin Array Si 76.66 322 P **P 22 13 07.1 -1.0**
AK04 Malin Array Si 76.67 322 P **P 22 13 07.2 -0.9**
AK14 Malin Array Si 76.68 322 P **P 22 13 07.3 -0.9**
AK16 Malin Array Si 76.69 322 P **P 22 13 07.3 -1.0**
AK13 Malin Array Si 76.70 322 P **P 22 13 07.4 -0.9**
AK17 Malin Array Si 76.73 322 P **P 22 13 07.3 -1.2**
AK18 Malin Array Si 76.73 322 P **P 22 13 07.5 -1.0**
AK22 Malin Array Si 76.74 322 P **P 22 13 07.6 -0.9**
AK21 Malin Array Si 76.76 322 P **P 22 13 07.7 -0.9**
AK19 Malin Array Si 76.77 322 P **P 22 13 07.7 -1.0**
AK20 Malin Array Si 76.77 322 P **P 22 13 07.8 -0.9**
CCD Concordia, Ant 76.97 174 P **P 22 13 12.1 +2.2**
SAHR Sahastru 77.05 317 ⇑P **P 22 13 11.1 +0.6**
VRI Vrincioaia 77.05 317 ⇑P **P 22 13 11.3 +0.8**
VRI Vrincioaia 77.05 317 P **P 22 13 11.1 +0.6**
comp=Z,15nm,1.0s
VRI Vrincioaia 77.05 317 P **P 22 13 11.0 +0.6**
PLOR Plostina 77.10 317 ⇑P **P 22 13 11.3 +0.5**
TESR Tescani 77.25 318 ⇑P **P 22 13 11.7 +0.1**
TESR Tescani 77.25 318 P **P 22 13 11.9 +0.4**
comp=Z,25nm,1.1s
TESR Tescani 77.25 318 P **P 22 13 11.9 +0.4**
LUBAR Lubar, Ukraine 77.33 321 P **P 22 13 11.8 -0.1**
MLR Muntele Rosu 77.51 317 ⇑P **P 22 13 13.8 +0.7**
MLR Muntele Rosu 77.51 317 **P 22 13 12.5 -0.6**
MLR IAmb IAmb 22 13 14.6
comp=Z,12nm,0.9s
MLR Muntele Rosu 77.51 317 P **P 22 13 13.5 +0.4**
comp=Z,15nm,1.5s
MLR Muntele Rosu 77.51 317 P **P 22 13 13.6 +0.4**
PRAR RASCA 77.72 318 ⇑P **P 22 13 13.8 -0.3**
RPZ Rata Peaks 77.75 135 LR LR 22 46 33.8
comp=Z,15nm,19.8s,baz=272,slow=35
PLVB Pleven 78.02 314 ⇑P **P 22 13 15.8 0.0**
VOIR 78.11 316 ⇓P **P 22 13 16.1 -0.4**
QRZ Quartz Range 78.23 132 P **P 22 13 17.4 -0.3**
ARR Arges 78.39 316 ⇑P **P 22 13 17.4 -0.5**
ARR Arges 78.39 316 P **P 22 13 17.4 -0.2**
BURAR Bucovina Array 78.44 319 ⇑P **P 22 13 18.7 +0.4**
BURAR Bucovina Array 78.44 319 **P 22 13 18.0 -0.3**
BURAR IAmb IAmb 22 13 19.9
comp=Z,7.5nm,0.8s
BUR08 Bucovina Ar. S 78.46 319 **P 22 13 17.8 -0.6**
BUR08 IAmb IAmb 22 13 20.2
comp=Z,11nm,1.1s
THZ Tophouse 78.69 133 P **P 22 13 18.7 -0.9**
THZ IAmb IAmb 22 13 31.2
comp=Z,11nm,0.7s
LIT Litokhoron 79.04 311 P **P 22 13 20.4 -1.2**
LIT IAmb IAmb 22 15 06.6
comp=Z,13nm,0.7s
LIT Litokhoron 79.04 311 P **P 22 13 20.6 -1.0**
KHZ Kahutara 79.27 133 P **P 22 13 22.8 +0.1**
BMR Baia Mare 79.59 318 P **P 22 13 25.4 +0.9**
MARR Marisel-Cluj 79.67 317 ⇓P **P 22 13 25.7 +0.7**

DEV	Deva	79.67 317	⇑P	P	22 13 24.3	-0.6	
DEV	Deva	79.67 317	P	P	22 13 26.2	+1.3	
GZR	Gura Zlata	79.68 316	⇑P	P	22 13 24.8	-0.2	
DRGR		79.96 317	⇑P	P	22 13 25.4	-1.1	
DRGR		79.96 317	P	P	22 13 27.2	+0.6	
BOVS	Bovan	80.15 314	⇑P	P	22 13 27.4	-0.1	
TRPA	Tarpa	80.31 319	P	P	22 13 26.8	-1.4	
BZS	Buzias	80.52 316	⇑P	P	22 13 29.8	+0.3	
BZS	Buzias	80.52 316	P	P	22 13 29.6	+0.2	
SIRR	Siria	80.59 317	⇑P	P	22 13 29.9	0.0	
KOLS	Kolonicke sedl	80.62 319	P	P	22 13 31.1	+1.1	
BKZ	Black Stump Fm	80.95 130	P	P	22 13 31.5	-0.5	
SUW	Suwalki	81.01 325	P	P	22 13 31.1	-0.7	
FINES	FINESS Array B	81.22 332	P	P	22 13 32.7	-0.1	
	comp=Z,3.1nm,0.6s,baz=100,slow=6.2,SNR=30						
	comp=Z,3.1nm,0.6s						
FINES	FINESS Array B	81.22 332	P	P	22 13 32.5	-0.3	
URZ	Urewera	81.31 129	LR	LR	22 52 41.3		
	comp=Z,69nm,18.7s,baz=251,slow=38						
PDG	Podgorica	81.77 313	⇑P	P	22 13 35.1	-1.1	
PDG	Podgorica	81.77 313	P	P	22 13 35.1	-1.1	
PDG			IAmb	IAmb	22 13 36.5		
	comp=Z,9.3nm,0.8s						
MORH	Mrgy, Hungar	82.66 316	⇑P	P	22 13 40.0	-0.7	
MORH	Mrgy, Hungar	82.66 316	P	P	22 13 40.6	-0.1	
	comp=Z,4.5nm,1.4s						
MORH	Mrgy, Hungar	82.66 316	P	P	22 13 40.4	-0.3	
MPLH	Magyarpolny	83.52 317	P	P	22 13 45.1	-0.1	
MPLH	Magyarpolny	83.52 317	P	P	22 13 45.8	+0.6	
ARCES	ARCESS Array B	83.61 340	P	P	22 13 44.1	-1.1	
	comp=Z,2.6nm,0.8s,baz=99,slow=7.5,SNR=8.1						
ARCES			LR	LR	22 54 40.1		
	comp=Z,27nm,19.9s,baz=105,slow=38						
	comp=Z,2.6nm,0.8s						
ARCES	ARCESS Array B	83.61 340	P	P	22 13 44.4	-0.8	
ARCES			IAmb	IAmb	22 14 57.5		
	comp=Z,23nm,1.8s						
MORC	Moravsky Berou	83.80 320	P	P	22 13 45.9	-0.7	
WINA	Alland / Wiene	84.60 318	*e*pP	pP	22 14 06.5	-0.8	
	comp=Z,5.7nm,1.5s						
CONA	Conrad Observa	84.72 318	*e*pP	pP	22 14 07.2	-0.9	
	comp=Z,2.6nm,1.0s						
ARSA	Arzberg	84.90 317	*e*P	P	22 13 52.4	+0.2	
	comp=Z,1.4nm,0.7s						
ARSA			*e*pP	pP	22 14 07.6	-1.3	
	comp=Z,3.6nm,1.1s						
VNDA	Vanda	84.93 169	P	P	22 13 51.9	+0.2	
	comp=Z,0.4nm,0.5s,baz=308,slow=6.3,SNR=2.0						
VNDA			LR	LR	22 43 38.2		
	comp=Z,62nm,21.5s,baz=324,slow=30						
	comp=Z,0.4nm,0.5s						
VNDA	Vanda	84.93 169	P	P	22 13 51.8	+0.2	
OBKA	Obir	85.51 316	*e*P	P	22 13 55.9	+0.6	
	comp=Z,1.5nm,1.0s						
SESA	Seetaler Alpe	85.54 317	*e*P	P	22 13 56.0	+0.4	
	comp=Z,1.8nm,0.5s						
SESA			*e*pP	pP	22 14 11.7	-0.7	
	comp=Z,6.0nm,1.0s						
GEC2	GERESS Array S	86.23 319		P	22 13 58.4	-0.5	
GEC2			IAmb	IAmb	22 14 16.0		
	comp=Z,12nm,1.6s						
GERES	GERESS Array B	86.23 319	P	P	22 13 59.4	+0.5	
	comp=Z,2.1nm,1.1s,baz=100,slow=3.0,SNR=12						
	comp=Z,2.1nm,1.1s						
GERES	GERESS Array B	86.23 319		P	22 13 58.5	-0.4	
CLL	Collm	86.82 321	*e*P	P	22 14 01.0	-0.6	
	comp=Z,5.0nm,1.5s						
CLL			*e*pP	pP	22 14 17.0	-1.3	
CLL			*e*PP	PP	22 17 26.0	+1.2	
CLL			*e*pPP		22 17 41.0		
LESA	Schwarzleotal	86.84 317	*e*P	P	22 14 02.3	+0.5	
	comp=Z,1.6nm,1.0s						
LESA			*e*pP	pP	22 14 16.9	-1.8	
	comp=Z,1.4nm,0.9s						
HFS	Hagfors	86.98 330	P	P	22 14 01.7	-0.4	
	comp=Z,1.7nm,0.6s,baz=126,slow=7.5,SNR=5.2						
	comp=Z,1.7nm,0.6s						
WTTA	Wattenberg	87.54 317	*e*pP	pP	22 14 19.6	-2.6	
	comp=Z,2.9nm,0.8s						
WATA	Walderalm	87.58 317	*i* P	P	22 14 05.4	-0.1	
	comp=Z,0.4nm,0.2s						
WATA			*e*pP	pP	22 14 20.5	-1.9	
	comp=Z,4.6nm,1.3s						
SPITS	Spitsbergen Ar	87.86 348	P	P	22 14 05.6	-0.5	
	comp=Z,4.3nm,0.6s,baz=123,slow=9.1,SNR=5.2						
	comp=Z,4.3nm,0.6s						
MOTA	Moosalm	87.91 317	*e*pP	pP	22 14 22.8	-1.2	
	comp=Z,2.3nm,0.8s						
RETA	Reutte	88.14 317	*e*P	P	22 14 08.2	+0.1	
	comp=Z,8.3nm,2.1s						
NOA	NORSAR Array B	88.25 331	P	P	22 14 08.6	+0.4	
	comp=Z,0.8nm,0.8s,baz=96,slow=4.9,SNR=3.4						
NOA			LR	LR	22 59 50.9		
	comp=Z,15nm,18.8s,baz=85,slow=40						
	comp=Z,0.8nm,0.8s						
DAVA	Damuels	88.74 317	*e*P	P	22 14 11.5	+0.4	
	comp=Z,6.2nm,1.2s						
H19K	Roundabout Mou	95.64 24	P	P	22 14 43.0	+0.7	
H19K			IAmb	IAmb	22 15 02.9		
	comp=Z,3.0nm,0.8s						
G21K	Allakaket	96.55 23		P	22 14 47.0	+0.5	
G21K			IAmb	IAmb	22 15 03.8		
	comp=Z,7.0nm,1.3s						
PDAR	Pinedale Array	129.97 27	PKP	PKPdf	22 20 26.4	-0.9	
	comp=Z,0.2nm,0.5s,baz=108,slow=4.8,SNR=3.7						
PDAR	Pinedale Array	129.97 27		PKPdf	22 20 26.0	-1.2	
TXAR	Lajitas Array	143.43 34	PKP	PKPbc	22 20 50.7	+1.1	
	comp=Z,0.4nm,0.5s,baz=217,slow=2.2,SNR=5.6						
TXAR	Lajitas Array	143.43 34		PKPdf	22 20 51.2	-1.0	
BDFB	Brasilia	143.83 244	PKP	PKPbc	22 20 51.5	+0.4	
	comp=Z,1.9nm,0.5s,baz=152,slow=3.3,SNR=5.6						
BDFB	Brasilia	143.83 244		PKPbc	22 20 52.0	+0.9	
CPUP	Villa Florida	145.47 220	PKPbc	PKPab	22 20 56.6	+0.5	
	comp=Z,5.1nm,0.7s,baz=124,slow=2.3,SNR=20						
CPUP	Villa Florida	145.47 220		PKPbc	22 20 55.9	+0.1	
CO03	El Pedregal	148.23 198	PKPbc	PKPbc	22 21 02.8	-1.0	
CO01	Juntas del Tor	148.84 199	PKPab	PKiKP	22 21 07.1	+0.1	
GO04	Tololo Observa	148.88 198	PKPbc	PKiKP	22 21 06.4	-0.6	
LCO	Las Campanas	149.93 199	PKPbc	PKPbc	22 21 07.8	-0.5	
AC05	El Transito	149.95 200	PKPbc	PKiKP	22 21 09.3	+0.2	
656A	Willston	150.21 2	PKPbc	PKPbc	22 21 08.7	+0.1	

NEIC ***26*** *22:15:04.4±1.1, 18°.8S±0°.1×177°.51W±0°.04, h612km±7km, mb4.3/23, Error ellipse: s-maj=19.3km s-min=4.4km az=189.0*

IDC ***26*** *22:15:07.3±1.5, 18°.73S×177°.89W, h631km±16km, mb3.6/13, mbtmp4.6/14, Error ellipse: s-maj=17.2km s-min=14.8km az=177.0*

ISC 26 22:15:03.6±0.5, 18°.7S±0°.1×177°.65W±0°.08, h600km, n71, σ1°04′75, mb4.4/25, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.20	283	P	P	22 16 33.4	+2.8
	14nm,0.5s,baz=102,slow=5.7,SNR=15						
MSVF	Nonsavu	4.20	283	P	P	22 16 33.0	+2.4
NIUE	Niue	7.32	94	P	P	22 16 56.5	-0.1
URZ	Urewera	20.02	192	P	P	22 18 55.6	-1.6
	4.3nm,0.5s,baz=7.8,slow=7.8,SNR=3.5						
BFZ	Birch Farm	22.52	192	P	P	22 19 19.4	-0.4
BFZ				IAmb	IAmb	22 19 37.5	
	comp=Z,15nm,1.1s						
THZ	Tophouse	24.36	197	P	P	22 19 35.7	-0.3
THZ				IAmb	IAmb	22 20 19.4	
	comp=Z,22nm,1.5s						
DSZ	Denniston Nort	24.67	199	P	P	22 19 39.9	+1.2
CTA	Charters Tower	34.03	262	P	P	22 21 00.0	+0.4
	comp=Z,6.1nm,0.6s,baz=88,slow=9.6,SNR=6.7						
	comp=Z,6.1nm,0.6s						
PMG	Port Moresby	35.30	280	P	P	22 21 11.0	+0.8
	comp=Z,17nm,0.7s,baz=58,slow=5.0,SNR=3.6						
	comp=Z,17nm,0.7s						
PMG	Port Moresby	35.30	280	P	P	22 21 11.1	+0.8
PMG				IAmb	IAmb	22 21 12.2	
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	38.89	242	P	P	22 21 39.6	+0.4
	comp=Z,3.1nm,0.5s,baz=95,slow=9.6,SNR=11						
	comp=Z,3.1nm,0.5s						
JAY	Jayapura	43.82	286	P	P	22 22 19.1	+0.9
	comp=Z,13nm,0.5s,baz=124,slow=6.4,SNR=17						
	comp=Z,13nm,0.5s						
WB0	Warramunga Arr	45.17	260	P	P	22 22 28.2	-0.3
WB0				IAmb	IAmb	22 22 28.8	
	comp=Z,12nm,0.5s						
WB0	Warramunga Arr	45.17	260	Pn	P	22 22 27.8	-0.7
WRAB	Tennant Creek	45.19	260	P	P	22 22 28.0	-0.7
WRAB				IAmb	IAmb	22 22 28.9	
	comp=Z,9.2nm,0.9s						
WRA	Warramunga Arr	45.20	260	P	P	22 22 28.3	-0.5
	comp=Z,6.4nm,0.4s,baz=98,slow=6.5,SNR=280						
WRA				PcP	PcP	22 23 55.8	-0.1
	comp=Z,0.7nm,0.5s,baz=100,slow=2.8,SNR=3.2						
WRA				S	S	22 28 22.3	-4.0
	comp=Z,0.6nm,0.8s,baz=109,slow=14,SNR=2.5						
	comp=Z,6.4nm,0.4s						
WRA	Warramunga Arr	45.20	260	P	P	22 22 27.7	-1.1
WRA					PcP	22 23 55.4	-0.5
AS31	Alice Springs	45.27	255	P	P	22 22 29.4	+0.1
AS31				IAmb	IAmb	22 22 29.9	
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	45.27	255	P	P	22 22 29.2	-0.1
	comp=Z,10nm,0.5s,baz=88,slow=7.9,SNR=129						
ASAR				PcP	PcP	22 23 56.1	0.0
	comp=Z,1.3nm,0.5s,baz=88,slow=3.3,SNR=6.0						
ASAR				S	S	22 28 24.2	-3.0
	comp=Z,1.4nm,0.8s,baz=93,slow=14,SNR=8.0						
	comp=Z,10nm,0.5s						
ASAR	Alice Springs	45.27	255	P	P	22 22 28.8	-0.5
ASAR					PcP	22 23 55.8	-0.4
FORT	Forrest	50.32	245	P	P	22 23 05.9	-0.8
FORT				IAmb	IAmb	22 23 45.9	
	comp=Z,8.2nm,1.1s						
SIJI	Sorong	53.12	283	P	P	22 23 27.4	+0.4
	comp=Z,16nm,0.4s,baz=114,slow=4.9,SNR=9.5						
	comp=Z,16nm,0.4s						
FITZ	Fitzroy Crossi	53.61	261	P	P	22 23 30.4	0.0
	comp=Z,2.8nm,0.3s,baz=106,slow=5.2,SNR=8.0						
	comp=Z,2.8nm,0.3s						
FITZ	Fitzroy Crossi	53.61	261	P	P	22 23 30.6	+0.2
FITZ				IAmb	IAmb	22 23 30.6	
	comp=Z,5.3nm,1.4s						
SOEI	Soe	56.79	270	P	P	22 23 52.8	+0.2
SOEI				IAmb	IAmb	22 23 55.3	
	comp=Z,36nm,1.0s						
MBWA	Marble Bar	58.58	256	P	P	22 24 04.2	-0.3
MBWA				IAmb	IAmb	22 24 31.7	
	comp=Z,34nm,1.4s						
VNDA	Vanda	59.72	185	P	P	22 24 12.5	+1.4
	comp=Z,0.7nm,0.9s,baz=343,slow=5.3,SNR=3.0						
	comp=Z,0.7nm,0.9s						
VNDA	Vanda	59.72	185	P	P	22 24 11.2	+0.1
MORW	Morawa	60.82	247	P	P	22 24 18.6	-0.6
MORW				IAmb	IAmb	22 24 57.5	
	comp=Z,23nm,1.4s						
GIRL	Giralia	63.36	254	P	P	22 24 35.8	+0.1
TOLI2	Tolitoli	63.57	281	P	P	22 24 36.8	-0.4
TOLI2				IAmb	IAmb	22 24 37.9	
	comp=Z,4.3nm,0.7s						
JAGI	Jajag, Banyuwa	66.74	269	P	P	22 24 55.8	-1.2
MJAR	Matsushiro Arr	68.97	323	P	P	22 25 10.3	+0.3
	comp=Z,0.9nm,0.5s,baz=150,slow=7.4,SNR=4.2						
	comp=Z,0.9nm,0.5s						
MJAR	Mashiro Arr	68.97	323	P	P	22 25 10.4	+0.3
UGM	Wanagama	70.34	268	P	P	22 25 18.2	-0.5
QSPA	South Pole Qui	71.36	180	P	P	22 25 25.2	+1.4
	comp=Z,2.1nm,0.6s,baz=274,slow=1.0,SNR=13						
	comp=Z,2.1nm,0.6s						
QSPA	South Pole Qui	71.36	180	P	P	22 25 23.8	0.0
BBGB	Big Mountain B	76.66	44	P	P	22 25 52.3	-1.9
MAW	Mawson	83.36	200	P	P	22 26 28.7	+0.4
	comp=Z,0.6nm,0.4s,baz=149,slow=2.9,SNR=6.1						
	comp=Z,0.6nm,0.4s						
MAW	Mawson	83.36	200	P	P	22 26 28.2	-0.1
YHB	Horse Butte	87.36	41	P	P	22 26 47.0	-1.1
YHB				IAmb	IAmb	22 26 53.4	
	comp=Z,11nm,0.7s						
TROLL	Troll, Antarti	89.52	180	⇑P	P	22 26 58.3	+0.6
	comp=Z,42nm,0.5s						
CMAR	Chiang Mai Arr	89.83	289	P	P	22 27 01.2	+1.3
	comp=Z,0.9nm,0.3s,baz=84,slow=1.7,SNR=5.9						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	89.83	289	P	P	22 26 58.3	-1.7
VNA1	Neumayer--Stat	90.58	176	⇑P	P	22 27 02.9	+0.5
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	110.20	314	PKiKP	PKiKP	22 32 27.2	-1.0
	comp=Z,0.1nm,0.5s,baz=151,slow=0.8,SNR=5.1						
KURBB	Kurchatov Arra	112.95	318	PKiKP	PKiKP	22 32 31.4	-1.8
	comp=Z,0.2nm,0.4s,baz=108,slow=3.0,SNR=4.0						
BVAR	Borovoye Array	117.91	321	PKP	PKPdf	22 32 42.4	-0.3
	comp=Z,0.9nm,0.5s,baz=180,slow=1.5,SNR=6.1						
ARCES	ARCESS Array B	127.22	350	PKP	PKPdf	22 33 00.1	0.0
	comp=Z,0.5nm,0.4s,baz=21,slow=4.1,SNR=10.0						
AKASG	Malin Array Be	141.59	332	PKhKP	PKPpre	22 33 22.6	
	comp=Z,0.5nm,0.4s,baz=41,slow=3.7,SNR=4.6						
AKASG	Malin Array Be	141.59	332	PKPdf	PKPdf	22 33 27.2	-0.2
EKA	Eskdalemuir Ar	143.19	5	PKP	PKPab	22 33 28.5	+0.3
	comp=Z,0.3nm,0.4s,baz=329,slow=2.6,SNR=4.7						
BRTR	Keskin Array B	145.85	314	PKPbc	PKPdf	22 33 36.8	+1.5
	comp=Z,0.8nm,0.6s,baz=150,slow=5.1,SNR=7.0						
CLL	Collm	146.39	348	*i* PKPbc	PKPbc	22 33 38.7	+0.6
	comp=Z,3.0nm,0.5s						
MMAI	Monti Meron Ar	147.17	302	PKPbc	PKPbc	22 33 41.7	+0.8
	comp=Z,1.7nm,0.4s,baz=74,slow=5.1,SNR=2.5						
GERES	GERESS Array B	148.56	346	PKPbc	PKPbc	22 33 44.5	+0.6
	comp=Z,0.7nm,0.7s,baz=27,slow=3.3,SNR=7.6						
GERES	GERESS Array B	148.56	346		PKPbc	22 33 43.5	-0.5
CONA	Conrad Observa	148.84	342	*e*PKP	PKPbc	22 33 45.3	+0.7
	comp=Z,1.8nm,0.8s						
RONA	Rosalia, Austr	148.91	342	*e*PKP	PKPbc	22 33 45.4	+0.6
	comp=Z,1.1nm,0.5s						
BIOA	Bad Ischl, Aus	149.65	345	*i* PKP	PKPbc	22 33 47.4	+0.9
	comp=Z,1.5nm,0.8s						
SESA	Seetaler Alpe,	149.94	343	*e*PKP	PKPbc	22 33 47.8	+0.3
	comp=Z,8.1nm,0.6s						
LESA	Schwarzleotal	150.13	346	*e*PKP	PKPbc	22 33 48.2	+0.5
	comp=Z,1.7nm,0.5s						
KBA	Koelnbreinsper	150.29	345	*i* PKP	PKPbc	22 33 47.7	-0.5
	comp=Z,1.7nm,0.5s						
WATA	Walderalm	150.46	347	*i* PKP	PKPbc	22 33 49.0	+0.4
	comp=Z,2.6nm,0.5s						
RETA	Reutte	150.47	348	*e*PKP	PKPbc	22 33 48.9	+0.4
	comp=Z,0.8nm,0.5s						
OBKA	Obir	150.50	343	*e*PKP	PKPbc	22 33 48.5	-0.1
	comp=Z,1.3nm,0.7s						
WTTA	Wattenberg	150.51	347	*e*PKP	PKPbc	22 33 49.0	+0.3
	comp=Z,3.4nm,0.4s						
MYKA	Terra Mystica	150.63	344	*e*PKP	PKPbc	22 33 48.6	-0.3
	comp=Z,1.8nm,0.6s						
SQTA	Sankt Quirin	150.64	348	*i* PKP	PKPbc	22 33 49.4	+0.5
	comp=Z,1.0nm,0.4s						
ABTA	Abfaltersbach	150.81	346	*e*PKP	PKPbc	22 33 49.3	0.0
	comp=Z,3.3nm,0.5s						
FETA	Feichten	150.93	348	*e*PKP	PKPbc	22 33 50.4	+0.7
	comp=Z,1.5nm,0.5s						

NEIC ***26*** *22:19:27.8±1.4, 6°.81S±0°.07×129°.60E±0°.08, h104km±9km, mb4.2/7, Error ellipse: s-maj=11.8km s-min=9.7km az=79.0*

IDC ***26*** *22:19:28.0±2.4, 6°.91S×129°.61E, h86km±25km, mb3.6/3, mbtmp3.9/7, Error ellipse: s-maj=26.1km s-min=19.3km az=97.0*

ISC 26 22:19:29.8±0.7, 6°.80S±0°.06×129°.63E±0°.08, h139km, n22, σ2°48′23, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.03	126	Pn	Pn	22 20 01.1	-3.6
FAKI	Fak Fak	4.65	34	Pn	Pn	22 20 35.6	-2.9
SIJI	Sorong	6.11	16	P	Pn	22 20 57.4	-0.5
	3.4nm,0.2s,baz=262,slow=23,SNR=12						
SIJI				S	Sn	22 22 02.7	-4.1
	12nm,0.2s,baz=157,slow=23,SNR=9.2						
MTN	Manton Dam	6.19	166	Pn	Pn	22 20 56.7	-2.2
BATI	Baumata	6.81	240	P	Pn	22 21 03.7	-3.6
	10.0nm,0.4s,baz=205,slow=17,SNR=1.7						
BATI				S	Sn	22 22 20.6	-3.0
	10nm,0.4s,baz=95,slow=22,SNR=1.4						
KNRA	Kununurra	8.87	185	Pn	Pn	22 21 31.9	-2.9
FITZ	Fitzroy Crossi	11.89	199	P	Pn	22 22 12.7	-2.4
	2.9nm,0.8s,baz=24,slow=12,SNR=10						
FITZ				S	Sn	22 24 14.0	-12
	4.2nm,0.3s,baz=143,slow=18,SNR=7.7						
FITZ	Fitzroy Crossi	11.89	199		Pn	22 22 14.0	-1.0
COEN	Coen	15.09	119	Pn	Pn	22 22 54.6	-1.4
COEN				IAmb	IAmb	22 23 28.1	
	comp=Z,13nm,1.3s						
ASAR	Alice Springs	17.27	167	P	Pn	22 23 23.1	+0.5
	comp=Z,1.5nm,0.5s,baz=344,slow=10.0,SNR=9.1						
ASAR	Alice Springs	17.27	167	P	P	22 23 22.0	+0.1
PMG	Port Moresby	17.54	100		Pn	22 23 26.1	+0.2
PMG				IAmb	IAmb	22 23 42.8	
	comp=Z,25nm,1.1s						
FORT	Forrest	23.90	183	P	P	22 24 33.5	+2.7
FORT				IAmb	IAmb	22 24 37.1	
	comp=Z,9.9nm,1.2s						
STKA	Stephens Creek	27.34	157	P	P	22 25 04.0	+2.2
	comp=Z,1.0nm,0.3s,baz=337,slow=13,SNR=4.3						
	comp=Z,1.0nm,0.3s						
JCJ	Chichijima	35.82	19	P	P	22 26 16.9	+0.9
CASY	Casey	60.84	189	P	P	22 29 28.4	+1.3
CASY				IAmb	IAmb	22 29 58.3	
	comp=Z,8.2nm,1.5s						
MKAR	Makanchi Array	67.86	327	P	P	22 30 18.4	+5.2
	comp=Z,0.3nm,0.4s,baz=118,slow=7.8,SNR=8.2						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	67.86	327	P	P	22 30 15.0	+1.9
KURBB	Kurchatov Arra	72.15	329	P	P	22 30 43.2	+4.1
	comp=Z,0.4nm,0.4s,baz=137,slow=5.1,SNR=4.8						
	comp=Z,0.4nm,0.4s						
KURK	Kurchatov	72.16	329	P	P	22 30 40.7	+1.5
KURK				IAmb	IAmb	22 30 58.8	
	comp=Z,1.1nm,0.9s						
AB31	Akbulak array	82.13	322	P	P	22 31 36.2	+1.3
ABKAR	Akbulak array	82.13	322	P	P	22 31 36.2	+1.3

ISK ***26*** *22:45:04.3, 39°.37N×40°.26E, h10km, ML2.8/9*
AFAD ***26*** *22:45:05.7, 39°.38N×40°.31E, h7km±3km, ML2.3*

ISC 26 22:45:04.8±1.2, 39°.35N±0°.03×40°.26E±0°.03, h7km±10km, n19, σ0°38′29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YEDI	Yedisu-Bingol	0.24	67	Pg	Pg	22 45 09.6	0.0
YEDI				Sg	Sg	22 45 13.3	+0.5
ERZN	Erzincan	0.48	300	Pg	Pg	22 45 13.9	-0.2
BNGB	Bingl	0.48	137	Pg	Pg	22 45 14.5	+0.4
BNGB				Sg	Sb	22 45 22.1	-0.8
EUZM	Uzumlu	0.56	310	P	Pb	22 45 17.3	+0.3
EUZM				S	Sb	22 45 26.0	+0.6
ECAT	Cat-ERZURUM	0.61	65	P	Pg	22 45 16.4	-0.2
ECAT				S	Sg	22 45 24.5	-0.2
KARO	Karliova-Bingo	0.61	93	Pg	Pg	22 45 16.9	+0.3
MAYK		0.61	172	P	Pb	22 45 18.0	+0.1
KOPT	Kop Dagi	0.70	15	P	Pb	22 45 18.8	-0.6
KOPT				IAML		22 45 35.0	
	comp=N,116nm,0.5s						
KOPT				IAML		22 45 36.0	
	comp=E,108nm,1.2s						
SLHN	Bingol, Solhan	0.71	123	P	Pb	22 45 19.2	-0.3
SLHN				S	Sb	22 45 30.0	+0.4
BAYB	BAYBURT	0.91	360	P	Pg	22 45 22.3	-0.1
BAYB				S	Sb	22 45 35.2	-0.3
VRTB	Varto-Mus	0.95	101	Pg	Pg	22 45 23.1	+0.1
VRTB	Varto-Mus	0.95	101	P	Pb	22 45 23.4	-0.2
VRTB				S	Sb	22 45 36.4	0.0
VRTB				IAML		22 45 52.0	
	comp=N,168nm,0.8s						
ERZM	Erzurum	1.02	56	P	Pg	22 45 24.2	-0.2
ERZM				S	Sb	22 45 38.5	-0.1
KRIK	Erzurum-spir	1.12	27	P	Pn	22 45 27.4	+0.4
KRIK				S	Sn	22 45 43.4	+0.6
KRIK				IAML		22 45 44.0	
	comp=E,55nm,0.7s						
KRIK				IAML		22 45 50.0	
	comp=N,84nm,0.6s						
MUSM	Mu-Merkez	1.16	122	P	Pg	22 45 26.4	-0.5
MUSM				S	Sb	22 45 42.5	+0.1
MUSM				IAML		22 45 43.0	
	comp=E,133nm,0.4s						
MUSM				IAML		22 45 44.0	
	comp=N,151nm,0.6s						
SVRC	Sivrice-ELAZID	1.22	218	Pn	Pn	22 45 28.1	-0.3
ILIC	ilic-Erzincan	1.31	275	Pn	Pn	22 45 29.2	-0.4
SVAN	Silvan-Diyarba	1.40	148	Pn	Pn	22 45 30.8	+0.1
GURO	Guroymak-BITLI	1.59	119	Pn	Pn	22 45 33.5	0.0

IDC ***26*** *23:08:47.5±2.0, 1°.22N×101°.45W, h0km, mb3.6/6, mbtmp3.6/6, MS3.5/24, Error ellipse: s-maj=90.4km s-min=27.3km az=55.0*

ISC 26 23:08:48.9±2.0, 1°.2N±0°.4×101°.5W±0°.5, h10km, n35, σ0°41′7, mb3.6/6, MS3.5/23, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTS	Las Juntas de	18.74	61	LR	LR	23 18 23.8	
	comp=Z,45nm,18.6s,baz=242,slow=31						
LPIG	La Paz	24.33	340	LR	LR	23 21 21.2	
	comp=Z,223nm,21.7s,baz=237,slow=31						
ATAH	Atahualpa	24.46	110	LR	LR	23 21 18.1	
	comp=Z,182nm,21.6s,baz=279,slow=31						
NNA	Nana	27.75	119	LR	LR	23 23 26.9	
	comp=Z,105nm,19.6s,baz=269,slow=32						
TXAR	Lajitas Array	28.06	356	P	P	23 14 41.1	+0.4

H11S2	**WAKE ISLAND Hy**	**91.36**	**288**	T	T	01 03 07.7	
	baz=89,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**91.36**	**288**	T	T	01 03 11.2	
	baz=89,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy**	**91.38**	**288**	T	T	01 03 14.2	
	baz=89,slow=75,SNR=15						
CMAR	**Chiang Mai Arr**	**151.99**	**315**	PKPbc	**PKiKP**	**23 28 45.8**	**0.0**
	0.7nm,0.3s,baz=46,slow=1.1,SNR=4.1						

*IDC **26** 23:26:16.0±1.2,29.°80S×70.°74W,h0km,mb3.8/1, mbtmp3.8/1,Error ellipse: s-maj=192.8km s-min=28.4km az=150.0*
*SJA **26** 23:26:21.1±1.4,29.°00S×71.°44W,h27km±10km,ML3.5, MW3.4*
*GUC **26** 23:26:22.3±0.7,28.°97S×71.°38W,h55km±2km,ML3.7*
ISC 26 23:26:16.0±1.6,**28.°91S**±0.°04×**71.°74W**±0.°05,**h5**km±11km, **n44,σ2°59/57,5C-5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.92**	**40**	*i* P	**Pn**	**23 26 38.0**	**+2.3**
AC04				IAML		23 26 53.8	
	comp=Z,812nm,0.5s						
AC04	**Llanos de Chal**	**0.92**	**40**	⇑*i* P	**Pn**	**23 26 37.9**	**+2.3**
AC04				*e*S	**Sb**	**23 26 49.1**	**+2.2**
AC04				IAML		23 26 52.7	
	comp=E,2μm,0.3s						
LCO	**Las Campanas**	**0.92**	**96**	*i* P	**Pb**	**23 26 35.2**	**+0.6**
LCO				IAML		23 26 49.0	
	comp=Z,4μm,0.2s						
LCO	**Las Campanas**	**0.92**	**96**	⇓*i* P	**Pb**	**23 26 35.4**	**+0.8**
LCO				*i* S	**Sg**	**23 26 44.8**	**-0.8**
LCO				IAML		23 26 46.0	
	comp=Z,16μm,0.2s						
AC05	**El Transito**	**1.29**	**87**	*i* P	**Pg**	**23 26 40.7**	**-0.1**
AC05				IAML		23 26 59.8	
	comp=Z,341nm,0.2s						
AC05	**El Transito**	**1.29**	**87**	⇓*i* P	**Pg**	**23 26 40.7**	**-0.1**
AC05				*i* S	**Sg**	**23 26 53.7**	**-3.8**
AC05				IAML		23 26 54.6	
	comp=N,1μm,0.3s						
GO04	**Tololo Observa**	**1.50**	**147**	*i* P	**Pg**	**23 26 45.3**	**+0.4**
GO04				IAML		23 27 07.7	
	comp=Z,1μm,0.2s						
GO04	**Tololo Observa**	**1.50**	**147**	⇑*i* P	**Pg**	**23 26 45.3**	**+0.4**
GO04				*i* S	**Sg**	**23 27 02.1**	**-2.3**
GO04				IAML		23 27 04.9	
	comp=N,5μm,0.5s						
CO01	**Juntas del Tor**	**1.79**	**127**	*i* P	**Pn**	**23 26 49.0**	**+1.3**
CO01				⇓*e*S	**Sn**	**23 27 09.1**	**-1.9**
CO01				IAML		23 27 09.6	
	comp=Z,984nm,0.2s						
CO01	**Juntas del Tor**	**1.79**	**127**	⇓*i* P	**Pn**	**23 26 49.0**	**+1.3**
CO01				*i* S	**Sn**	**23 27 08.4**	**-2.5**
CO01				IAML		23 27 10.1	
	comp=N,1μm,0.2s						
GO03	**Copiapo**	**1.87**	**46**	*i* P	**Pn**	**23 26 50.6**	**+1.9**
GO03				IAML		23 27 21.3	
	comp=Z,424nm,0.3s						
GO03	**Copiapo**	**1.87**	**46**	⇓*i* P	**Pn**	**23 26 50.1**	**+1.4**
GO03				*i* S	**Sn**	**23 27 11.4**	**-1.3**
CO03	**El Pedregal**	**2.13**	**155**	*i* P	**Pn**	**23 26 54.3**	**+2.0**
CO03				IAML		23 27 30.3	
	comp=Z,300nm,0.3s						
CO03	**El Pedregal**	**2.13**	**155**	⇑*i* P	**Pn**	**23 26 54.2**	**+2.0**
CO03				*i* S	**Sn**	**23 27 18.0**	**-1.1**
CO03				IAML		23 27 19.3	
	comp=N,1μm,0.3s						
AROD	**Rodeo**	**2.34**	**123**	*i* P	**Pb**	**23 26 58.3**	**-0.6**
CO02	**Combarbal**	**2.37**	**164**	*i* P	**Pn**	**23 26 58.0**	**+2.3**
CO02				IAML		23 27 44.2	
	comp=Z,521nm,0.3s						
CO02	**Combarbal**	**2.37**	**164**	⇑*i* P	**Pn**	**23 26 57.9**	**+2.1**
CO02				*i* S	**Sn**	**23 27 25.1**	**-0.2**
ACDV	**Cuesta del Vie**	**2.61**	**119**	*i* P	**Pn**	**23 27 02.1**	**+3.1**
ACDV				IAML		23 27 35.3	
	comp=Z,199nm,0.5s						
ACCO	**Cerro Coronel**	**2.87**	**126**	*i* P	**Pb**	**23 27 06.5**	**-1.4**
ACCO				*e*S	Sn	23 27 21.8	-16
ACCO				IAML		23 27 41.9	
	comp=Z,365nm,0.4s						
AC01	**Pan de Azucar**	**2.94**	**21**	*i* P	**Pn**	**23 27 05.5**	**+2.1**
AC01				IAML		23 27 57.5	
	comp=Z,133nm,0.5s						
AC02	**Maricunga**	**3.10**	**49**	*i* P	**Pn**	**23 27 08.7**	**+2.6**
AC02				IAML		23 27 59.5	
	comp=Z,206nm,0.4s						
RTLS	**Leoncito**	**3.57**	**144**	*i* P	**Pn**	**23 27 17.0**	**+4.7**
RTLS				IAML		23 28 13.3	
	comp=Z,312nm,0.5s						
TINO	**Tinogasta**	**3.77**	**78**	*i* P	**Pn**	**23 27 17.4**	**+2.5**
TINO				IAML		23 28 03.2	
	comp=Z,64nm,1.1s						
VA03	**San Esteban**	**3.97**	**165**	*i* P	**Pn**	**23 27 21.1**	**+3.4**
VA03				IAML		23 28 25.4	
	comp=Z,100nm,0.7s						
CFA	**Coronel Fontan**	**4.05**	**132**	*i* P	**Pn**	**23 27 21.9**	**+3.2**
CFA				IAML		23 28 17.0	
	comp=Z,56nm,0.5s						
ACLC	**CERRO LA CRUZ**	**4.22**	**98**	*i* P	**Pn**	**23 27 23.3**	**+2.1**
ACLC				IAML		23 28 26.6	
	comp=Z,37nm,0.3s						
MT02	**Curacav**	**4.36**	**173**	*i* P	**Pn**	**23 27 25.0**	**+2.1**
MT02				IAML		23 28 35.6	
	comp=Z,40nm,0.3s						
MT05	**Renca**	**4.55**	**169**	*i* P	**Pn**	**23 27 29.4**	**+3.9**
MT05				IAML		23 28 44.7	
	comp=Z,48nm,0.8s						
ARCO	**CERRO ARCO**	**4.60**	**149**	*i* P	Pn	23 27 31.7	+5.3
ARCO				IAML		23 28 45.5	
	comp=Z,62nm,0.8s						
MT04	**Ro Olivares**	**4.69**	**163**	*i* P	**Pn**	**23 27 31.9**	**+4.2**
MT04				IAML		23 28 39.3	
	comp=Z,28nm,0.7s						
AAGR	**Agrelo**	**4.85**	**150**	*e*Pg	Pn	23 27 34.8	+5.0
AAGR				*i* P	Pb	23 27 34.9	-6.7
AAGR				IAML		23 28 53.8	
	comp=Z,41nm,0.5s						
MT01	**Popeta**	**4.96**	**175**	⇑*e*S		23 26 45.3	
MT01				IAML		23 27 25.6	
	comp=Z,11nm,3.9s						
MT01				*i* P	**Pn**	**23 27 33.2**	**+2.2**
MT13	**San Alfonso**	**4.97**	**166**	*i* P	**Pn**	**23 27 36.1**	**+4.6**
MT13				IAML		23 28 57.9	
	comp=Z,25nm,0.6s						
ACAN	**Cantantal**	**5.16**	**132**	*i* P	**Pn**	**23 27 36.2**	**+2.2**
ACAN				IAML		23 28 53.9	
	comp=Z,121nm,0.4s						
H03N1	**Juan Fernandez**	**7.62**	**232**	Pn	**Pn**	**23 28 11.9**	**+4.4**
	baz=108,slow=18						
H03N1				Sn	**Sn**	**23 29 33.0**	**-1.1**
H03N1				T	T	23 36 13.1	
	baz=60,slow=72,SNR=866						
H03N2	**Juan Fernandez**	**7.63**	**232**	Pn	**Pn**	**23 28 12.3**	**+4.7**
	baz=108,slow=18						
H03N2				Sn	**Sn**	**23 29 32.5**	**-1.9**
H03N2				T	T	23 36 13.5	
	baz=60,slow=72,SNR=712						
H03N3	**Juan Fernandez**	**7.64**	**232**	Pn	**Pn**	**23 28 11.7**	**+3.9**
	baz=108,slow=18						
H03N3				Sn	**Sn**	**23 29 32.2**	**-2.3**
H03N3				T	T	23 36 11.4	
	baz=60,slow=72,SNR=781						
H03S3	**Juan Fernandez**	**7.84**	**230**	Pn	**Pn**	**23 28 13.2**	**+2.7**
	baz=108,slow=14						
H03S3				Sn	**Sn**	**23 29 36.5**	**-3.1**
	baz=268,slow=19						
H03S1	**Juan Fernandez**	**7.85**	**229**	Pn	**Pn**	**23 28 12.7**	**+2.1**
	baz=108,slow=14						
H03S1				Sn	**Sn**	**23 29 35.3**	**-4.4**
	baz=268,slow=19						
H03S2	**Juan Fernandez**	**7.86**	**230**	Pn	**Pn**	**23 28 13.5**	**+2.8**
	baz=108,slow=14						
H03S2				Sn	**Sn**	**23 29 36.4**	**-3.5**
	baz=268,slow=19						
TORD	**Torodi Ar. Bea**	**82.26**	**70**	P	**P**	**23 38 37.0**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=243,slow=5.3,SNR=5.5						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**148.84**	**38**	PKPbc	**PKPbc**	**23 46 05.6**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=305,slow=3.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**149.71**	**28**	PKPbc	**PKPbc**	**23 46 07.6**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=293,slow=2.8,SNR=5.3						
MKAR	**Makanchi Array**	**153.00**	**42**	PKPbc	**PKPbc**	**23 46 14.8**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=318,slow=1.9,SNR=2.9						

*NOU **26** 23:33:58.3,39.°45S×174.°44E,h248km,MLv4.0/18,North Island, New Zealand*
*WEL **26** 23:34:01.0±0.6,39.°5±4.°×17.°4E±.°,h235km±4km,M3.7/108, ML2.7/4,MLv3.7/108,Error ellipse: s-maj=6.6km s-min=5.3km az=105.5*
ISC 26 23:33:56.2±1.8,**39.°41S**±0.°06×**174.°40E**±0.°05, **h269**km±11km,**n186,σ1°46/205,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.05**	**180**	P	**Pn**	**23 34 32.2**	**+1.6**
LREZ				S	S	23 34 57.4	-0.3
PREZ	**Palmer Road**	**0.20**	**289**	P	**Pn**	**23 34 32.2**	**+1.4**
DREZ	**Durham Road**	**0.27**	**324**	P	**Pn**	**23 34 32.7**	**+1.8**
DREZ				S	S	23 34 57.6	-0.5
NEZ	**North Egmont**	**0.27**	**300**	P	**Pn**	**23 34 32.7**	**+1.7**
NEZ				S	S	23 34 57.9	-0.4
MHEZ	**Mangahewa**	**0.34**	**349**	P	**Pn**	**23 34 32.5**	**+1.5**
MHEZ				S	S	23 34 57.8	-0.6
PKE	**Pukeiti**	**0.39**	**303**	P	**Pn**	**23 34 32.6**	**+1.5**
PKE				S	S	23 34 58.2	-0.3
VRZ	**Vera Road**	**0.39**	**45**	P	**Pn**	**23 34 32.0**	**+0.9**
VRZ				S	S	23 34 56.7	-1.8
WAZ	**Wanganui**	**0.57**	**128**	P	**Pn**	**23 34 33.5**	**+2.1**
WAZ				S	S	23 34 58.9	-0.4
PKVZ	**Pokaka**	**0.74**	**81**	P	**Pn**	**23 34 33.4**	**+1.3**
PKVZ				S	S	23 34 58.9	-1.6
MTVZ	**Mangateitei**	**0.83**	**89**	P	**Pn**	**23 34 34.1**	**+1.5**
MTVZ				S	S	23 34 59.3	-1.9
TWVZ	**Taurewa**	**0.87**	**68**	P	**Pn**	**23 34 33.8**	**+1.0**
TWVZ				S	S	23 34 59.4	-2.2
TRVZ	**Turoa**	**0.90**	**83**	P	**Pn**	**23 34 34.5**	**+1.5**
TRVZ				S	S	23 34 59.8	-2.3
FWVZ	**Far West T-bar**	**0.91**	**81**	P	**Pn**	**23 34 34.4**	**+1.3**
COVZ	**Chateau Observ**	**0.91**	**77**	P	**Pn**	**23 34 34.2**	**+1.2**
COVZ				S	S	23 34 59.8	-2.1
MAVZ	**Matarangi**	**0.91**	**82**	P	**Pn**	**23 34 34.5**	**+1.3**
WHVZ	**Whangaehu Hut**	**0.93**	**83**	P	**Pn**	**23 34 34.5**	**+1.3**
WNVZ	**Wahianoa**	**0.93**	**86**	P	**Pn**	**23 34 34.5**	**+1.4**
NGZ	**Ngauruhoe**	**0.96**	**76**	P	**Pn**	**23 34 34.5**	**+1.3**
HIZ	**Hauiti**	**0.96**	**22**	P	**Pn**	**23 34 33.7**	**+0.6**
HIZ	**Hauiti**	**0.96**	**22**	P	**Pn**	**23 34 33.9**	**+0.7**
HIZ				S	S	23 35 00.3	-1.9
WTVZ	**West Tongariro**	**0.97**	**73**	P	**Pn**	**23 34 34.6**	**+1.3**
TUVZ	**Tukino**	**0.98**	**82**	P	**Pn**	**23 34 34.9**	**+1.5**
SNVZ	**South Ngauruho**	**0.98**	**78**	P	**Pn**	**23 34 34.8**	**+1.4**
OTVZ	**Oturere**	**1.01**	**76**	P	**Pn**	**23 34 35.0**	**+1.5**
KRVZ	**Carewarewa**	**1.01**	**72**	P	**Pn**	**23 34 34.8**	**+1.3**
NTVZ	**North Tongarir**	**1.04**	**73**	P	**Pn**	**23 34 35.0**	**+1.4**
MOVZ	**Moawhango**	**1.05**	**90**	P	**Pn**	**23 34 34.7**	**+1.1**
MOVZ				S	S	23 35 00.0	-3.1
ETVZ	**East Tongariro**	**1.05**	**76**	P	**Pn**	**23 34 34.9**	**+1.2**
TMVZ	**Te Maari**	**1.05**	**74**	P	**Pn**	**23 34 35.0**	**+1.3**
OHWZ	**Ohakea**	**1.06**	**139**	P	**Pn**	**23 34 35.9**	**+2.4**
OHWZ				S	S	23 35 02.9	-0.2
KATZ	**Kakaramea**	**1.09**	**67**	P	**Pn**	**23 34 35.3**	**+1.3**
RATZ	**Rangitukua**	**1.19**	**64**	P	**Pn**	**23 34 35.5**	**+1.1**
RITZ	**Rihia Road**	**1.21**	**70**	P	**Pn**	**23 34 36.0**	**+1.5**
WATZ	**Wairara**	**1.25**	**56**	P	**Pn**	**23 34 36.1**	**+1.3**
BHHZ	**Black Hill Sta**	**1.29**	**94**	P	**Pn**	**23 34 36.2**	**+1.2**
BHHZ				S	S	23 35 02.9	-2.7
TSZ	**Takapari Road**	**1.37**	**119**	P	**Pn**	**23 34 37.5**	**+2.1**
TLZ	**Tolley Road**	**1.39**	**40**	P	**Pn**	**23 34 36.6**	**+0.9**
WHTZ	**Whakana**	**1.42**	**59**	P	**Pn**	**23 34 37.2**	**+1.3**
KUTZ	**Kaahu Road**	**1.44**	**51**	P	**Pn**	**23 34 37.3**	**+1.3**
POWZ	**Post Office Ro**	**1.44**	**134**	P	**Pn**	**23 34 37.6**	**+1.8**
DUWZ	**D'Urville Isla**	**1.44**	**195**	P	**Pn**	**23 34 37.6**	**+1.7**
WAKS	**Wakarara Rangi**	**1.48**	**105**	P	**Pn**	**23 34 38.2**	**+2.0**
PNHZ	**Pukenui**	**1.48**	**111**	P	**Pn**	**23 34 38.0**	**+1.8**
KIW	**Kapiti Island**	**1.50**	**165**	P	**Pn**	**23 34 37.9**	**+1.6**
OGWZ	**Otaki Gorge**	**1.53**	**158**	P	**Pn**	**23 34 38.3**	**+1.9**
OGWZ				S	S	23 35 07.1	-1.3
KRHZ	**Kereru**	**1.54**	**99**	P	**Pn**	**23 34 38.4**	**+1.7**
MRZ	**Mangatainoka R**	**1.54**	**145**	P	**Pn**	**23 34 38.2**	**+1.6**
MRZ				S	S	23 35 07.1	-1.5
KWHZ	**Kaweka Forest**	**1.56**	**91**	P	**Pn**	**23 34 38.8**	**+1.9**
DVHZ	**Dannevirke**	**1.62**	**124**	P	**Pn**	**23 34 39.0**	**+1.8**
WPRZ	**Whakapapatarin**	**1.63**	**58**	P	**Pn**	**23 34 38.2**	**+0.9**
BKZ	**Black Stump Fm**	**1.64**	**82**	P	**Pn**	**23 34 38.3**	**+0.9**
BKZ	**Black Stump Fm**	**1.64**	**82**	S	S	23 35 07.7	-2.3
BKZ	**Black Stump Fm**	**1.64**	**82**	P	**Pn**	**23 34 38.7**	**+1.2**
MRHZ	**Matea Rd**	**1.67**	**71**	P	**Pn**	**23 34 38.3**	**+0.6**
WPHZ	**Waipukurau**	**1.70**	**113**	P	**Pn**	**23 34 39.9**	**+2.1**
HOWZ	**Holdsworth Sta**	**1.72**	**151**	P	**Pn**	**23 34 39.5**	**+1.6**
ALRZ	**Allen Road**	**1.73**	**61**	P	**Pn**	**23 34 39.1**	**+1.0**
PWES	**Porirua West**	**1.75**	**169**	P	**Pn**	**23 34 39.8**	**+1.7**
TRMS	**Tiraumea**	**1.76**	**137**	P	**Pn**	**23 34 40.1**	**+1.9**
CAW	**Cannon Point**	**1.77**	**164**	P	**Pn**	**23 34 40.0**	**+1.7**
MCHZ	**McNeill Hill**	**1.78**	**92**	P	**Pn**	**23 34 40.8**	**+2.4**
TIWZ	**Tintock**	**1.78**	**141**	P	**Pn**	**23 34 40.3**	**+1.8**
HRRZ	**Handcock Road**	**1.78**	**56**	P	**Pn**	**23 34 39.5**	**+1.0**
UHCS	**Upper Hutt Col**	**1.79**	**164**	P	**Pn**	**23 34 40.2**	**+1.8**
KHLK	**Kaihoka Lakes**	**1.79**	**230**	P	**Pn**	**23 34 39.6**	**+1.1**
TCW	**Tory Channel**	**1.81**	**183**	P	**Pn**	**23 34 40.3**	**+1.8**
HSRZ	**Hossack Road**	**1.81**	**53**	P	**Pn**	**23 34 39.8**	**+1.1**
MKBS	**Makara Bunker**	**1.83**	**173**	P	**Pn**	**23 34 40.5**	**+1.7**
FAIS	**Fairfield**	**1.85**	**167**	P	**Pn**	**23 34 40.4**	**+1.6**
NEWS	**Newlands**	**1.85**	**170**	P	**Pn**	**23 34 40.6**	**+1.6**
WANS	**Wainuiomata Hi**	**1.87**	**168**	P	**Pn**	**23 34 40.7**	**+1.7**
INSS	**Lower Hutt GNS**	**1.87**	**168**	P	**Pn**	**23 34 40.7**	**+1.6**
TOZ	**Tahuroa Road**	**1.88**	**28**	P	**Pn**	**23 34 40.2**	**+0.9**
SOMS	**Somes Island**	**1.88**	**169**	P	**Pn**	**23 34 40.7**	**+1.5**
PHHS	**Point Howard**	**1.88**	**168**	P	**Pn**	**23 34 40.8**	**+1.6**
NMHZ	**Naumai**	**1.89**	**81**	P	**Pn**	**23 34 41.6**	**+2.2**
WEL	**Wellington**	**1.90**	**172**	P	**Pn**	**23 34 41.0**	**+1.7**
BFZ	**Birch Farm**	**1.90**	**133**	P	**Pn**	**23 34 40.8**	**+1.4**
BFZ	**Birch Farm**	**1.90**	**133**	S	S	23 35 11.9	-1.8
BFZ	**Birch Farm**	**1.90**	**133**	P	**Pn**	**23 34 41.1**	**+1.7**
NGRZ	**Ngongotaha**	**1.91**	**48**	P	**Pn**	**23 34 40.8**	**+1.1**
ANWZ	**Angora Road**	**1.91**	**124**	P	**Pn**	**23 34 41.7**	**+2.2**
HLRZ	**Highlands Stat**	**1.91**	**53**	P	**Pn**	**23 34 41.5**	**+1.9**
SNZO	**South Karori**	**1.92**	**173**	P	**Pn**	**23 34 40.6**	**+1.2**
SNZO	**South Karori**	**1.92**	**173**	S	S	23 35 12.2	-1.6
PRHZ	**Porangahau**	**1.92**	**117**	P	**Pn**	**23 34 41.6**	**+2.0**
HAVS	**Havelock**	**1.92**	**194**	P	**Pn**	**23 34 41.4**	**+1.9**
MTW	**Mount Morrison**	**1.94**	**155**	P	**Pn**	**23 34 41.4**	**+1.7**
KAHZ	**Kahuranaki**	**1.95**	**102**	P	**Pn**	**23 34 42.2**	**+2.3**
RRRZ	**Republican Roa**	**1.96**	**58**	P	**Pn**	**23 34 40.9**	**+0.9**
TKNZ	**Takaka Hill**	**1.96**	**214**	P	**Pn**	**23 34 41.2**	**+1.3**
KMRZ	**Kaimai**	**1.97**	**38**	P	**Pn**	**23 34 41.4**	**+1.3**
NNZ	**Nelson**	**1.97**	**203**	P	**Pn**	**23 34 41.7**	**+1.8**
NNZ				S	S	23 35 13.0	-1.6
MTHZ	**Maungataniwha**	**1.98**	**75**	P	**Pn**	**23 34 41.2**	**+1.0**
PWZ	**Pawanui**	**2.00**	**109**	P	**Pn**	**23 34 42.2**	**+2.0**
PXZ	**Pawanui**	**2.00**	**109**	P	**Pn**	**23 34 42.2**	**+2.0**
KARZ	**Kaharoa**	**2.00**	**47**	P	**Pn**	**23 34 41.4**	**+1.1**
OMRZ	**Omania**	**2.01**	**50**	P	**Pn**	**23 34 41.3**	**+0.9**
ARHZ	**Aropaoanui**	**2.02**	**87**	P	**Pn**	**23 34 42.4**	**+2.0**
TARZ	**Mount Tarawera**	**2.02**	**55**	P	**Pn**	**23 34 41.5**	**+1.0**
QRZ	**Quartz Range**	**2.02**	**225**	P	**Pn**	**23 34 41.0**	**+0.6**
QRZ	**Quartz Range**	**2.02**	**225**	P	**Pn**	**23 34 41.4**	**+1.0**
CPWZ	**Castlepoint**	**2.04**	**138**	P	**Pn**	**23 34 42.9**	**+2.4**
TMWZ	**Te Maipa**	**2.04**	**147**	P	**Pn**	**23 34 42.4**	**+1.8**
MUGZ	**Murupara**	**2.07**	**64**	P	**Pn**	**23 34 41.3**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.08**	**98**	P	**Pn**	**23 34 43.3**	**+2.3**
MSHZ	**Moikau Station**	**2.11**	**162**	P	**Pn**	**23 34 42.7**	**+1.6**
PAWZ	**Paruwai Farm**	**2.12**	**159**	P	**Pn**	**23 34 43.0**	**+1.6**
RAHZ	**Arahi**	**2.14**	**78**	P	**Pn**	**23 34 43.2**	**+1.6**
RTZ	**Ruatahuna**	**2.16**	**69**	P	**Pn**	**23 34 42.6**	**+0.9**
TRWZ	**Traveller**	**2.22**	**154**	P	**Pn**	**23 34 44.0**	**+1.8**
TGRZ	**Tauranga**	**2.22**	**42**	P	**Pn**	**23 34 43.3**	**+1.0**
WHHZ	**Waihua**	**2.22**	**82**	P	**Pn**	**23 34 44.1**	**+1.9**
EDRZ	**Edgecumbe**	**2.24**	**55**	P	**Pn**	**23 34 43.1**	**+0.6**
PLWZ	**Palliser**	**2.26**	**164**	P	**Pn**	**23 34 44.1**	**+1.6**
MARZ	**Manawahe**	**2.27**	**52**	P	**Pn**	**23 34 43.7**	**+0.9**
BSWZ	**Blackbirch Sta**	**2.34**	**190**	P	**Pn**	**23 34 45.0**	**+1.7**
CMWZ	**Cape Campbell**	**2.34**	**183**	P	**Pn**	**23 34 45.4**	**+2.1**
AWAZ	**Awhitu Peninsu**	**2.35**	**5**	P	**Pn**	**23 34 44.7**	**+1.3**
MRNZ	**Matariki Terra**	**2.35**	**212**	P	**Pn**	**23 34 44.7**	**+1.3**
MKAZ	**Moumakai**	**2.38**	**15**	P	**Pn**	**23 34 44.9**	**+1.2**
URZ	**Urewera**	**2.41**	**62**	P	**Pn**	**23 34 43.7**	**-0.2**
URZ	**Urewera**	**2.41**	**62**	P	**Pn**	**23 34 44.2**	**+0.2**
WTAZ	**Waiatarua**	**2.47**	**3**	P	**Pn**	**23 34 46.2**	**+1.5**
ETAZ	**East Tamaki Re**	**2.48**	**10**	P	**Pn**	**23 34 46.1**	**+1.3**
RAGZ	**Rawiri**	**2.52**	**70**	P	**Pn**	**23 34 46.1**	**+0.9**
EPAZ	**Eden Park BICE**	**2.54**	**6**	P	**Pn**	**23 34 46.3**	**+1.0**
WHRZ	**Whale Island**	**2.54**	**53**	P	**Pn**	**23 34 46.8**	**+1.5**
MYRZ	**Mayor Island**	**2.57**	**35**	P	**Pn**	**23 34 46.9**	**+1.3**
KNZ	**Kokohu**	**2.57**	**82**	P	**Pn**	**23 34 47.1**	**+1.6**
THZ	**Tophouse**	**2.62**	**205**	P	**Pn**	**23 34 47.5**	**+1.6**
MBAZ	**Motutapu North**	**2.66**	**9**	P	**Pn**	**23 34 47.8**	**+1.3**
MWZ	**Matawai**	**2.66**	**67**	P	**Pn**	**23 34 47.2**	**+0.7**
WIAZ	**Waiheke Island**	**2.67**	**13**	P	**Pn**	**23 34 47.9**	**+1.3**
RIGZ	**Rimuhau**	**2.71**	**76**	P	**Pn**	**23 34 48.4**	**+1.5**
MHGZ	**Mahia Peninsul**	**2.73**	**86**	P	**Pn**	**23 34 49.0**	**+1.9**
PRGZ	**Paritu Road**	**2.75**	**81**	P	**Pn**	**23 34 48.9**	**+1.6**
ABAZ	**Army Bay**	**2.82**	**7**	P	**Pn**	**23 34 49.7**	**+1.6**
TKGZ	**Te Karaka**	**2.86**	**71**	P	**Pn**	**23 34 49.9**	**+1.5**
WIZ	**White Island**	**2.88**	**50**	P	**Pn**	**23 34 48.8**	**+0.2**
RUGZ	**Raukumara Rang**	**2.94**	**62**	P	**Pn**	**23 34 49.1**	**-0.3**
TWGZ	**Tauwhareparae**	**3.05**	**67**	P	**Pn**	**23 34 51.8**	**+1.3**
DSZ	**Denniston Nort**	**3.06**	**219**	P	**Pn**	**23 34 51.6**	**+1.1**
KHZ	**Kahutara**	**3.08**	**192**	P	**Pn**	**23 34 51.7**	**+1.1**
KHZ	**Kahutara**	**3.08**	**192**	S	S	**23 35 32.3**	**-1.5**
KHZ	**Kahutara**	**3.08**	**192**	P	**Pn**	**23 34 52.1**	**+1.5**
CNGZ	**Carnagh Statio**	**3.11**	**74**	P	**Pn**	**23 34 52.7**	**+1.7**
HAZ	**Te Kaha**	**3.12**	**59**	P	**Pn**	**23 34 50.9**	**-0.2**
GRZ	**Great Barrier**	**3.26**	**15**	P	**Pn**	**23 34 54.1**	**+1.4**
PKGZ	**Pakihiroa**	**3.27**	**63**	P	**Pn**	**23 34 53.1**	**+0.4**
PUZ	**Puketiti**	**3.30**	**67**	P	**Pn**	**23 34 53.6**	**+0.6**
WCZ	**Waipu Caves**	**3.46**	**359**	P	**Pn**	**23 34 56.2**	**+1.3**
WMGZ	**Waiomatatini S**	**3.52**	**65**	P	**Pn**	**23 34 56.0**	**+0.5**
MXZ	**Matakaoa Point**	**3.57**	**60**	P	**Pn**	**23 34 56.3**	**+0.2**
MXZ	**Matakaoa Point**	**3.57**	**60**	P	**Pn**	**23 34 56.5**	**+0.5**
GVZ	**Greta Valley S**	**3.71**	**196**	P	**Pn**	**23 34 58.5**	**+1.1**
LTZ	**Lake Taylor**	**3.74**	**205**	P	**Pn**	**23 34 59.2**	**+1.4**
AMCZ	**Amberley**	**3.99**	**199**	P	**Pn**	**23 35 01.9**	**+1.3**
OUZ	**Omahuta**	**4.23**	**351**	P	**Pn**	**23 35 05.3**	**+1.8**
OUZ	**Omahuta**	**4.23**	**351**	P	**Pn**	**23 35 05.3**	**+1.8**
OXZ	**Oxford**	**4.30**	**204**	P	**Pn**	**23 35 05.0**	**+0.8**
OKCZ	**Okains Bay**	**4.43**	**193**	P	**Pn**	**23 35 07.0**	**+1.2**
MQZ	**McQueen's Vall**	**4.49**	**196**	P	**Pn**	**23 35 07.0**	**+0.6**
WVZ	**Waitaha Valley**	**4.59**	**216**	P	**Pn**	**23 35 08.2**	**+0.6**
AKCZ	**Akaroa Harbour**	**4.60**	**194**	P	**Pn**	**23 35 08.7**	**+1.0**
MHCZ	**Mount Hutt**	**4.64**	**206**	P	**Pn**	**23 35 09.1**	**+0.8**
RACZ	**Rakaia**	**4.64**	**201**	P	**Pn**	**23 35 09.9**	**+1.7**
WACZ	**Wakanui South**	**4.92**	**202**	P	**Pn**	**23 35 13.0**	**+1.5**
GCSZ	**Gaunt Creek Bo**	**4.97**	**217**	P	**Pn**	**23 35 13.1**	**+1.1**
RPZ	**Rata Peaks**	**4.98**	**209**	P	**Pn**	**23 35 13.3**	**+1.0**
RPZ	**Rata Peaks**	**4.98**	**209**	P	**Pn**	**23 35 12.9**	**

h110km,3km, Error ellipse: s-maj=6.2km s-min=5.3km az=165.0

ISC 26 23:48:18.3N0.6, 59°66'N0'03, 153°03'W0'03,
h117km,5km, n450, o0883/499, mb4.1/9, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.10**	**268**		**Pn**	**23 48 34.1**	**-0.3**
P19K					**Sn**	**23 48 45.7**	**-0.7**
P19K	**Oil Pt**	**0.10**	**268**	P	**Pn**	**23 48 34.1**	**-0.3**
	baz=90						
P19K				S	**Sn**	**23 48 46.0**	**-0.5**
	baz=90						
ILS	**Iliamna Low So**	**0.30**	**357**		**Pn**	**23 48 34.6**	**-0.3**
ILS					**Sn**	**23 48 46.6**	**-0.9**
ILSW	**Iliamna Southw**	**0.33**	**351**		**Pn**	**23 48 34.8**	**-0.3**
ILSW				Sn	**Sn**	**23 48 46.9**	**-0.9**
ILSW				IAML		23 48 47.8	
	comp=E,4µm,0.3s						
AUCH	**Augustine Cone**	**0.36**	**216**		**Pn**	**23 48 35.2**	**0.0**
IVE	**Iliamna Volcan**	**0.36**	**1**		**Pn**	**23 48 34.9**	**-0.3**
IVE					**Sn**	**23 48 47.1**	**-0.9**
O20K	**Slope Mountain**	**0.47**	**26**		**Pn**	**23 48 35.7**	**0.0**
O20K					**Sn**	**23 48 48.5**	**-0.5**
O20K	**Slope Mountain**	**0.47**	**26**	P	**Pn**	**23 48 35.8**	**0.0**
	baz=206						
O20K				S	**Sn**	**23 48 48.9**	**-0.2**
	baz=206						
HOM	**Homer**	**0.71**	**89**	Pn	**Pn**	**23 48 37.6**	**+0.3**
HOM					**Sn**	**23 48 52.2**	**+0.5**
HOM	**Homer**	**0.71**	**89**	P	**Pn**	**23 48 37.7**	**+0.4**
	baz=270						
HOM				S	**Sn**	**23 48 52.2**	**+0.5**
	baz=270						
RED	**Redoubt Volcan**	**0.78**	**10**		**Pn**	**23 48 37.9**	**-0.1**
RED				Sn	**Sn**	**23 48 52.1**	**-0.9**
RED				IAML		23 48 52.7	
	comp=E,2µm,0.8s						
RED				IAML		23 48 52.8	
	comp=N,2µm,0.6s						
Q19K	**Cape Douglas,**	**0.79**	**204**		**Sn**	**23 48 52.2**	**-0.8**
Q19K	**Cape Douglas,**	**0.79**	**204**		**Pn**	**23 48 37.9**	**-0.3**
Q19K				IAML		23 48 55.0	
	comp=E,3µm,0.7s						
Q19K				IAML		23 48 57.8	
	comp=N,4µm,0.8s						
Q19K	**Cape Douglas,**	**0.79**	**204**	P	**Pn**	**23 48 37.9**	**-0.3**
	baz=23						
Q19K				S	**Sn**	**23 48 52.5**	**-0.6**
	baz=23						
RDWB	**Redoubt West**	**0.84**	**7**		**Sn**	**23 48 53.3**	**-0.8**
O19K	**Port Alsworth**	**0.84**	**310**	Pn	**Pn**	**23 48 38.1**	**-0.3**
O19K				IAML		23 48 53.4	
	comp=N,4µm,0.5s						
O19K	**Port Alsworth**	**0.84**	**310**		**Sn**	**23 48 52.6**	**-1.1**
O19K	**Port Alsworth**	**0.84**	**310**	P	**Pn**	**23 48 38.2**	**-0.3**
	baz=130						
O19K				S	**Sn**	**23 48 52.6**	**-1.1**
	baz=130						
NCT	**North Crescent**	**0.91**	**3**		**Pn**	**23 48 39.2**	**0.0**
NCT					**Sn**	**23 48 54.4**	**-0.8**
CNPM	**China Poot**	**0.92**	**97**		**Pn**	**23 48 39.4**	**+0.1**
CNPM				Sn	**Sn**	**23 48 54.6**	**-0.5**
CNPM				IAML		23 48 59.0	
	comp=E,3µm,0.5s						
DFR	**Drift River**	**0.96**	**10**		**Pn**	**23 48 39.7**	**+0.1**
DFR					**Sn**	**23 48 55.3**	**-0.5**
BRLK	**Bradley Lake**	**1.09**	**83**		**Pn**	**23 48 40.9**	**-0.1**
BRLK				Sn	**Sn**	**23 48 57.7**	**-0.5**
BRLK				IAML		23 49 00.0	
	comp=E,2µm,0.3s						
BRLK				IAML		23 49 00.1	
	comp=N,2µm,0.2s						
O18K	**Koktuh Hills**	**1.12**	**281**		**Pn**	**23 48 40.9**	**-0.3**
O18K	**Koktuh Hills**	**1.12**	**281**	P	**Pn**	**23 48 40.7**	**-0.5**
	baz=100						
P18K	**Big Mountain,**	**1.15**	**258**	P	**Pn**	**23 48 40.8**	**-0.8**
	baz=76						
P18K				S	**Sn**	**23 48 57.6**	**-1.6**
	baz=76						
BRSE	**Bradley Lake S**	**1.17**	**85**		**Sn**	**23 48 58.8**	**-0.8**
BRSE	**Bradley Lake S**	**1.17**	**85**	P	**Pn**	**23 48 41.8**	**+0.1**
	baz=267						
BRSE				S	**Sn**	**23 48 59.1**	**-0.4**
	baz=267						
KAPH	**Katmai Pasha**	**1.26**	**213**		**Pn**	**23 48 42.8**	**0.0**
N19K	**Bonanza Creek**	**1.37**	**329**		**Pn**	**23 48 44.0**	**-0.1**
N19K				IAML		23 49 03.1	
	comp=E,517nm,0.6s						
N19K				IAML		23 49 03.5	
	comp=N,378nm,1.2s						
N19K	**Bonanza Creek**	**1.37**	**329**		**Sn**	**23 49 02.4**	**-1.2**
N19K	**Bonanza Creek**	**1.37**	**329**	P	**Pn**	**23 48 44.0**	**-0.1**
	baz=148						
N19K				S	**Sn**	**23 49 02.6**	**-1.0**
	baz=148						
KAHG	**Katmai Hook Gl**	**1.40**	**214**		**Sn**	**23 49 03.3**	**-1.0**
Q18K	**Katmai Hardscr**	**1.43**	**226**		**Sn**	**23 49 03.5**	**-1.4**
Q18K	**Katmai Hardscr**	**1.43**	**226**	P	**Pn**	**23 48 44.5**	**-0.3**
	baz=44						
Q18K				S	**Sn**	**23 49 03.6**	**-1.4**
	baz=44						
CAPN	**Captain Cook N**	**1.46**	**39**		**Pn**	**23 48 46.0**	**+1.1**
CAPN	**Captain Cook N**	**1.46**	**39**	P	**Pn**	**23 48 47.1**	**+2.2**
	baz=221						
CAPN				S	**Sn**	**23 49 08.9**	**+3.7**
	baz=221						
SPCR	**Spurr Chakacha**	**1.60**	**14**		**Pn**	**23 48 46.9**	**+0.2**
SPCR	**Spurr Chakacha**	**1.60**	**14**	P	**Pn**	**23 48 46.9**	**+0.2**
	baz=195						
SPU	**Mount Spurr**	**1.61**	**17**		**Pn**	**23 48 46.9**	**+0.2**
SPU				Sn	**Sn**	**23 49 08.8**	**+0.3**
SPBG	**Spurr Blockage**	**1.64**	**11**		**Sn**	**23 49 09.0**	**-0.3**
SLKM	**Skilak Lake**	**1.65**	**58**		**Pn**	**23 48 47.0**	**-0.2**
SLKM				IAML		23 49 10.0	
	comp=N,2µm,0.3s						
SLKM				IAML		23 49 12.2	
	comp=E,2µm,0.3s						
KAKN	**Katmai Knife C**	**1.72**	**218**		**Sn**	**23 49 09.7**	**-1.2**
KVTA	**Katmai Vly 10**	**1.73**	**223**		**Pn**	**23 48 48.1**	**-0.1**
N18K	**Kilae Creek**	**1.76**	**307**	Pn	**Pn**	**23 48 48.1**	**-0.4**
N18K	**Kilae Creek**	**1.76**	**307**		**Sn**	**23 49 10.3**	**-1.4**
N18K	**Kilae Creek**	**1.76**	**307**	P	**Pn**	**23 48 48.2**	**-0.4**
	baz=125						
N18K				S	**Sn**	**23 49 10.4**	**-1.4**
	baz=125						
KBM	**Katmai Bkd Mtn**	**1.78**	**220**		**Pn**	**23 48 48.9**	**0.0**
P17K	**Kvichak River**	**1.80**	**257**	Pn	**Pn**	**23 48 49.0**	**0.0**
P17K				IAML		23 49 13.0	
	comp=E,651nm,0.9s						
P17K				IAML		23 49 13.0	
	comp=N,730nm,1.2s						
P17K	**Kvichak River**	**1.80**	**257**		**Sn**	**23 49 11.9**	**-0.6**
P17K	**Kvichak River**	**1.80**	**257**	P	**Pn**	**23 48 49.0**	**0.0**
	baz=74						
P17K				S	**Sn**	**23 49 12.0**	**-0.5**
	baz=74						
KABU	**Katmai Buttres**	**1.81**	**221**		**Sn**	**23 49 12.6**	**-0.3**
O22K	**Cooper Landing**	**1.85**	**62**		**Pn**	**23 48 49.8**	**+0.1**
O22K				Sn	**Sn**	**23 49 13.7**	**0.0**
O22K	**Cooper Landing**	**1.85**	**62**	P	**Pn**	**23 48 50.2**	**+0.5**
	baz=245						
SEW	**Seward**	**1.86**	**74**		**Pn**	**23 48 49.6**	**-0.1**
SEW				Sn	**Sn**	**23 49 12.8**	**-1.0**
SEW				IAML		23 49 13.8	
	comp=E,791nm,0.4s						
SEW				IAML		23 49 17.5	
	comp=N,613nm,0.5s						
SEW	**Seward**	**1.86**	**74**	P	**Pn**	**23 48 49.8**	**+0.1**
	baz=257						
SEW				S	**Sn**	**23 49 12.7**	**-1.1**
	baz=257						
ACHA	**Angle Creek He**	**1.87**	**220**	Pn	**Pn**	**23 48 49.7**	**-0.4**
KDAK	**Kodiak Island**	**1.89**	**173**	P	**Pn**	**23 48 48.8**	**-1.4**
	comp=N,216nm,0.4s,baz=11,slow=6.0,SNR=939						
KDAK				S	**Sn**	**23 49 11.9**	**-2.7**
	comp=N,109nm,0.3s,baz=4.1,slow=4.6,SNR=5.7						
KDAK				LR	LR	23 49 47.1	
	comp=N,39nm,21.6s,baz=244,slow=46						
KDAK	**Kodiak Island**	**1.89**	**173**		**Pn**	**23 48 49.1**	**-1.0**
KDAK				IAML		23 49 23.2	
	comp=N,488nm,0.3s						
KDAK				IAML		23 49 25.1	
	comp=N,550nm,0.5s						
KDAK	**Kodiak Island**	**1.89**	**173**	P	**Pn**	**23 48 49.2**	**-1.0**
	baz=353						
STLK	**Strandline Lak**	**1.94**	**17**		**Pn**	**23 48 49.9**	**-0.9**
STLK				IAML		23 49 18.7	
	comp=N,472nm,0.6s						
STLK				IAML		23 49 19.0	
	comp=E,294nm,0.6s						
CAHL	**Cahill**	**1.99**	**217**		**Pn**	**23 48 51.4**	**-0.1**
Q17K	**Contact Creek**	**2.03**	**228**		**Pn**	**23 48 51.8**	**-0.3**
Q17K	**Contact Creek**	**2.03**	**228**	P	**Pn**	**23 48 51.9**	**-0.2**
	baz=46						
Q17K				S	**Sn**	**23 49 16.5**	**-1.4**
	baz=46						
O17K	**Koliganek Bris**	**2.06**	**275**	P	**Pn**	**23 48 52.0**	**-0.2**
	baz=82						
KJL	**Kejulik**	**2.08**	**221**		**Pn**	**23 48 52.6**	**0.0**
RC01	**Rabbit Creek A**	**2.18**	**47**	Pn	**Pn**	**23 48 53.9**	**+0.2**
RC01				IAML		23 49 21.7	
	comp=E,937nm,0.3s						
RC01				IAML		23 49 22.4	
	comp=N,743nm,0.5s						
RC01	**Rabbit Creek A**	**2.18**	**47**	P	**Pn**	**23 48 54.3**	**+0.5**
	baz=230						
RC01				S	**Sn**	**23 49 20.2**	**-0.8**
	baz=230						
M20K	**Styx River**	**2.23**	**359**	Pn	**Pn**	**23 48 54.9**	**+0.4**
M20K	**Styx River**	**2.23**	**359**	P	**Pn**	**23 48 55.1**	**+0.5**
	baz=179						
N17K	**Nushagak Hills**	**2.26**	**295**		**Pn**	**23 48 54.6**	**-0.2**
N17K	**Nushagak Hills**	**2.26**	**295**		**Sn**	**23 49 21.0**	**-1.7**
N17K	**Nushagak Hills**	**2.26**	**295**	P	**Pn**	**23 48 54.5**	**-0.2**
	baz=111						
N17K				S	**Sn**	**23 49 21.4**	**-1.3**
	baz=111						
M18K	**Stony River**	**2.30**	**324**		**Sn**	**23 49 22.9**	**-0.8**
M18K	**Stony River**	**2.30**	**324**	P	**Pn**	**23 48 55.0**	**-0.3**
	baz=142						
M18K				S	**Sn**	**23 49 23.1**	**-0.6**
	baz=142						
M19K	**Big River Lodg**	**2.35**	**344**		**Pn**	**23 48 56.0**	**0.0**
M19K	**Big River Lodg**	**2.35**	**344**	P	**Pn**	**23 48 56.0**	**0.0**
	baz=163						
OHAK	**Old Harbor**	**2.44**	**183**		**Pn**	**23 48 55.8**	**-1.4**
OHAK	**Old Harbor**	**2.44**	**183**	P	**Pn**	**23 48 55.7**	**-1.4**
	baz=3.1						
SKT	**Skwentna**	**2.45**	**17**		**Pn**	**23 48 57.4**	**+0.2**
SKT				IAML		23 49 29.8	
	comp=E,233nm,0.3s						
SKT				IAML		23 49 30.3	
	comp=N,299nm,0.4s						
SKT	**Skwentna**	**2.45**	**17**	P	**Pn**	**23 48 57.4**	**+0.2**
	baz=198						
M22K	**Willow**	**2.55**	**33**		**Pn**	**23 48 58.3**	**-0.1**
M22K	**Willow**	**2.55**	**33**	P	**Pn**	**23 48 59.1**	**+0.7**
	baz=215						
M22K				S	**Sn**	**23 49 29.8**	**+0.5**
	baz=215						
PLK2	**Peulik 2**	**2.56**	**224**		**Pn**	**23 48 58.5**	**-0.1**
O16K	**Kokwok River B**	**2.57**	**271**		**Pn**	**23 48 58.7**	**-0.1**
O16K	**Kokwok River B**	**2.57**	**271**	P	**Pn**	**23 48 58.9**	**+0.1**
	baz=86						
P16K	**Nushagak River**	**2.62**	**258**	Pn	**Pn**	**23 48 58.8**	**-0.5**
P16K				IAML		23 49 32.2	
	comp=E,211nm,0.9s						
P16K				IAML		23 49 33.2	
	comp=N,271nm,0.8s						
P16K	**Nushagak River**	**2.62**	**258**	P	**Pn**	**23 48 59.8**	**+0.5**
	baz=74						
P16K				S	**Sn**	**23 49 31.0**	**+0.1**
	baz=74						
PWL	**Port Wells**	**2.63**	**61**		**Pn**	**23 48 59.5**	**-0.1**
PWL	**Port Wells**	**2.63**	**61**	P	**Pn**	**23 48 59.5**	**-0.1**
	baz=245						
R17L	**Mt. Peulik Vol**	**2.67**	**222**		**Pn**	**23 49 00.1**	**0.0**
R17L	**Mt. Peulik Vol**	**2.67**	**222**	P	**Pn**	**23 49 00.2**	**+0.1**
	baz=39						
R17L				S	**Sn**	**23 49 32.3**	**0.0**
	baz=39						
L19K	**White Mountain**	**2.69**	**341**	Pn	**Pn**	**23 49 00.0**	**-0.3**
L19K				IAML		23 49 34.0	
	comp=E,115nm,0.8s						
L19K	**White Mountain**	**2.69**	**341**	P	**Pn**	**23 49 00.1**	**-0.2**
	baz=160						
PMR	**Palmer**	**2.73**	**43**		**Pn**	**23 49 00.0**	**-0.8**
PMR				IAML		23 49 37.5	
	comp=N,302nm,0.3s						
PMR				IAML		23 49 40.6	
	comp=E,318nm,0.7s						
PMR	**Palmer**	**2.73**	**43**	P	**Pn**	**23 49 00.5**	**-0.4**
	baz=226						
PMR				S	**Sn**	**23 49 31.6**	**-2.1**
	baz=226						
PLBL	**Peulik Blue Cr**	**2.78**	**227**		**Pn**	**23 49 01.5**	**-0.1**
M17K	**Holitna River**	**2.79**	**311**		**Pn**	**23 49 00.5**	**-1.2**
M17K				IAML		23 49 51.1	
	comp=E,110nm,0.7s						
M17K				IAML		23 50 19.9	
	comp=N,146nm,0.8s						
M17K	**Holitna River**	**2.79**	**311**	P	**Pn**	**23 49 01.6**	**-0.1**
	baz=127						
P23K	**Montague Islan**	**2.86**	**81**	Pn	**Pn**	**23 49 02.8**	**+0.2**
P23K				IAML		23 49 37.8	
	comp=E,667nm,0.7s						
P23K	**Montague Islan**	**2.86**	**81**	P	**Pn**	**23 49 03.0**	**+0.5**
	baz=266						
P23K				S	**Sn**	**23 49 35.4**	**-1.4**
	baz=266						
KNK	**Knik Glacier**	**2.87**	**50**		**Pn**	**23 49 02.4**	**-0.2**
KNK	**Knik Glacier**	**2.87**	**50**	P	**Pn**	**23 49 02.5**	**-0.2**
	baz=234						
KNK				S	**Sn**	**23 49 35.1**	**-1.7**
	baz=234						
GHO	**Glory Hole Cre**	**2.93**	**42**	Pn	**Pn**	**23 49 03.2**	**-0.3**
GHO				IAML		23 49 44.5	
	comp=E,531nm,0.6s						
GHO				IAML		23 49 56.0	
	comp=N,386nm,0.6s						
N16K	**Nishlik Lake**	**2.99**	**288**	P	**Pn**	**23 49 04.6**	**+0.4**
	baz=104						
CUT	**Chulitna**	**3.07**	**25**	Pn	**Pn**	**23 49 05.4**	**+0.1**
CUT				IAML		23 49 42.6	
	comp=E,551nm,0.4s						
CUT				IAML		23 49 42.7	
	comp=N,537nm,0.5s						
CUT	**Chulitna**	**3.07**	**25**	P	**Pn**	**23 49 05.3**	**+0.1**
	baz=207						
L22K	**Petersville**	**3.08**	**20**	Pn	**Pn**	**23 49 05.4**	**-0.1**
L22K				IAML		23 49 43.6	
	comp=E,407nm,0.4s						
L22K				IAML		23 49 45.8	
	comp=N,173nm,0.3s						
L22K	**Petersville**	**3.08**	**20**	P	**Pn**	**23 49 05.9**	**+0.4**
	baz=202						
L18K	**Granite Mounta**	**3.13**	**327**	Pn	**Pn**	**23 49 05.4**	**-0.7**
L18K	**Granite Mounta**	**3.13**	**327**	P	**Pn**	**23 49 05.7**	**-0.4**
	baz=144						
SML	**Sawmill**	**3.16**	**45**	Pn	**Pn**	**23 49 06.1**	**-0.5**
SML				IAML		23 49 50.5	
	comp=N,356nm,0.8s						
SML				IAML		23 49 52.9	
	comp=E,321nm,1.1s						
SML	**Sawmill**	**3.16**	**45**	P	**Pn**	**23 49 06.1**	**-0.5**
	baz=229						
SML				S	**Sn**	**23 49 41.8**	**-2.1**
	baz=229						
GLI	**Glacier Island**	**3.20**	**65**		**Pn**	**23 49 06.1**	**-0.9**
GLI				IAML		23 49 45.2	
	comp=N,472nm,0.3s						
GLI	**Glacier Island**	**3.20**	**65**	P	**Pn**	**23 49 06.6**	**-0.4**
	baz=250						
M16K	**Timber Creek**	**3.25**	**298**		**Pn**	**23 49 07.5**	**-0.1**
M16K	**Timber Creek**	**3.25**	**298**	P	**Pn**	**23 49 07.8**	**+0.2**
	baz=112						
M16K				S	**Sn**	**23 49 44.9**	**-0.9**
	baz=112						
PPLA	**Purkeypile**	**3.28**	**7**		**Pn**	**23 49 08.5**	**+0.3**
PPLA				IAML		23 50 08.5	
	comp=E,85nm,1.1s						
PPLA				IAML		23 50 14.1	
	comp=N,90nm,0.8s						
PPLA	**Purkeypile**	**3.28**	**7**	P	**Pn**	**23 49 09.0**	**+0.8**
	baz=188						
HIN	**Hinchinbrook I**	**3.36**	**74**		**Pn**	**23 49 09.1**	**-0.1**
HIN				IAML		23 49 49.0	
	comp=N,431nm,0.5s						
HIN				IAML		23 49 50.5	
	comp=E,367nm,0.8s						
M23K	**Glacier View**	**3.38**	**48**		**Pn**	**23 49 09.1**	**-0.2**
	baz=233						
M23K				S	**Sn**	**23 49 46.9**	**-1.9**
	baz=233						
Q23K	**Middleton Isla**	**3.41**	**91**	P	**Pn**	**23 49 10.0**	**+0.2**
	baz=277						
Q23K				S	**Sn**	**23 49 50.3**	**+0.8**
	baz=277						
MID	**Middleton Isla**	**3.42**	**91**		**Pn**	**23 49 09.7**	**-0.2**
MID	**Middleton Isla**	**3.42**	**91**	IAML		23 49 51.1	
	comp=N,350nm,0.4s						
MID				IAML		23 49 51.9	
	comp=E,207nm,0.6s						
FID	**Port Fidalgo**	**3.45**	**69**		**Pn**	**23 49 09.3**	**-1.0**
O15K	**Ungalikthiuk R**	**3.50**	**265**		**Pn**	**23 49 11.4**	**+0.4**
O15K				IAML		23 49 52.0	
	comp=E,65nm,0.8s						
O15K				IAML		23 49 53.1	
	comp=N,66nm,0.8s						
O15K	**Ungalikthiuk R**	**3.50**	**265**	P	**Pn**	**23 49 11.7**	**+0.6**
	baz=79						
O15K				S	**Sn**	**23 49 51.3**	**-0.5**
	baz=79						
SCM	**Sheep Creek Mo**	**3.55**	**50**		**Pn**	**23 49 11.4**	**-0.4**
SCM				IAML		23 49 56.4	
	comp=E,355nm,0.7s						
SCM	**Sheep Creek Mo**	**3.55**	**50**	P	**Pn**	**23 49 11.7**	**0.0**
	baz=234						
L17K	**Donlin**	**3.58**	**316**	P	**Pn**	**23 49 11.6**	**-0.4**
	baz=132						
N15K	**Kwethluk River**	**3.59**	**281**		**Pn**	**23 49 12.7**	**+0.5**
N15K				IAML		23 49 55.1	
	comp=N,72nm,0.8s						
N15K	**Kwethluk River**	**3.59**	**281**	P	**Pn**	**23 49 13.1**	**+0.9**
	baz=95						
K20K	**Telida**	**3.75**	**353**	Pn	**Pn**	**23 49 14.0**	**-0.2**
K20K	**Telida**	**3.75**	**353**	P	**Pn**	**23 49 14.4**	**+0.2**
	baz=172						
EYAK	**Cordova Ski Ar**	**3.75**	**73**		**Pn**	**23 49 13.9**	**-0.4**
EYAK				IAML		23 49 57.6	
	comp=E,159nm,0.6s						
EYAK				IAML		23 49 60.0	
	comp=N,158nm,0.5s						
EYAK	**Cordova Ski Ar**	**3.75**	**73**	P	**Pn**	**23 49 14.0**	**-0.4**
	baz=259						
L16K	**Owhat River**	**3.78**	**306**		**Pn**	**23 49 14.0**	**-0.6**
L16K	**Owhat River**	**3.78**	**306**	P	**Pn**	**23 49 14.5**	**-0.1**
	baz=120						
CAST	**Castle Rocks**	**3.81**	**6**	Pn	**Pn**	**23 49 14.9**	**-0.1**
CAST	**Castle Rocks**	**3.81**	**6**	P	**Pn**	**23 49 15.1**	**+0.1**
	baz=187						
WAT1	**Susitna Watana**	**3.85**	**32**	P	**Pn**	**23 49 15.7**	**0.0**
	baz=216						
DIV	**Divide**	**3.90**	**65**		**Pn**	**23 49 16.4**	**+0.1**
DIV				IAML		23 50 02.1	
	comp=E,218nm,0.3s						
WAT6	**Susitna Watana**	**3.90**	**39**	P	**Pn**	**23 49 16.2**	**-0.2**
	baz=223						
KLU	**Klutina**	**3.96**	**59**		**Pn**	**23 49 17.1**	**-0.1**
KLU	**Klutina**	**3.96**	**59**	P	**Pn**	**23 49 17.1**	**-0.1**
	baz=245						
M15K	**Kasigluk River**	**3.96**	**289**	P	**Pn**	**23 49 16.7**	**-0.4**
	baz=102						
ANPB	**Aniakchak Plen**	**3.98**	**226**		**Pn**	**23 49 17.1**	**-0.4**
K17K	**Iditarod**	**3.99**	**323**		**Pn**	**23 49 17.5**	**0.0**
K17K				IAML		23 50 20.0	
	comp=E,70nm,0.9s						
K17K				IAML		23 50 22.1	
	comp=N,44nm,0.9s						
K17K	**Iditarod**	**3.99**	**323**	P	**Pn**	**23 49 17.4**	**-0.1**
	baz=138						
TRF	**Thorofare Moun**	**4.03**	**18**	Pn	**Pn**	**23 49 17.8**	**-0.4**
TRF				IAML		23 50 27.2	
	comp=N,128nm,0.9s						
TRF				IAML		23 50 30.0	
	comp=E,118nm,0.8s						
TRF	**Thorofare Moun**	**4.03**	**18**	P	**Pn**	**23 49 17.9**	**-0.3**
	baz=200						
KTH	**Kantishna Hill**	**4.04**	**14**		**Pn**	**23 49 17.5**	**-0.8**
KTH				IAML		23 50 39.7	
	comp=E,67nm,1.0s						
KTH				IAML		23 50 55.8	
	comp=N,105nm,1.0s						
M24K	**Tolsona, Glenn**	**4.16**	**51**		**Pn**	**23 49 19.7**	**-0.1**
M24K	**Tolsona, Glenn**	**4.16**	**51**	P	**Pn**	**23 49 20.2**	**+0.4**
	baz=237						
M24K				S	**Sn**	**23 50 07.4**	**-0.1**
	baz=237						
J18K	**Innoko River**	**4.21**	**337**		**Pn**	**23 49 19.4**	**-1.0**
J18K	**Innoko River**	**4.21**	**337**	P	**Pn**	**23 49 20.1**	**-0.4**
	baz=154						
O14K	**Tigyukauivet M**	**4.22**	**268**		**Pn**	**23 49 20.4**	**-0.2**
O14K				IAML		23 50 10.1	
	comp=N,41nm,1.0s						
O14K	**Tigyukauivet M**	**4.22**	**268**	P	**Pn**	**23 49 21.3**	**+0.8**
	baz=81						
O14K				S	**Sn**	**23 50 09.2**	**+0.3**
	baz=81						
CHUM	**Lake Minchumin**	**4.26**	**4**		**Pn**	**23 49 21.0**	**0.0**
CHUM	**Lake Minchumin**	**4.26**	**4**	P	**Pn**	**23 49 21.1**	**+0.1**
	baz=185						
RAGM	**Ragged Mountai**	**4.26**	**76**		**Pn**	**23 49 20.8**	**-0.3**
GOAT	**Goat Mountain**	**4.26**	**74**		**Pn**	**23 49 20.9**	**-0.3**
RND	**Reindeer**	**4.26**	**26**		**Pn**	**23 49 20.8**	**-0.4**
RND				IAML		23 50 10.0	
	comp=E,163nm,0.3s						
RND				IAML		23 50 10.2	
	comp=N,104nm,0.5s						
PS12	**TAPS Pump St12**	**4.30**	**61**		**Pn**	**23 49 21.9**	**+0.3**
KAIM	**Kayak Island**	**4.36**	**83**		**Pn**	**23 49 22.9**	**+0.5**
KAIM				IAML		23 50 20.0	
	comp=N,217nm,0.6s						
KAIM	**Kayak Island**	**4.36**	**83**	P	**Pn**	**23 49 23.3**	**+0.8**
	baz=270						
DHY	**Denali Highway**	**4.38**	**36**	Pn	**Pn**	**23 49 22.5**	**-0.3**
DHY				IAML		23 50 14.4	
	comp=N,166nm,0.5s						
DHY				IAML		23 50 15.2	
	comp=E,169nm,0.6s						
DHY	**Denali Highway**	**4.38**	**36**	P	**Pn**	**23 49 22.7**	**-0.2**
	baz=221						
DHY				S	**Sn**	**23 50 11.0**	**-2.0**
	baz=221						
N14K	**Kuskokwak Cree**	**4.38**	**277**		**Pn**	**23 49 22.9**	**+0.3**
N14K				IAML		23 50 57.6	
	comp=N,38nm,1.2s						
N14K				IAML		23 51 06.7	
	comp=E,53nm,1.0s						
N14K	**Kuskokwak Cree**	**4.38**	**277**	P	**Pn**	**23 49 23.7**	**+1.0**
	baz=90						
BMRM	**Bremner River**	**4.39**	**69**		**Pn**	**23 49 22.9**	**-0.1**
BMRM	**Bremner River**	**4.39**	**69**	P	**Pn**	**23 49 23.2**	**+0.2**
	baz=256						
PS11	**TAPS Pump St11**	**4.42**	**53**		**Pn**	**23 49 23.5**	**+0.2**
J19K	**Poorman**	**4.52**	**345**	P	**Pn**	**23 49 24.2**	**-0.4**
	baz=163						
MCK	**McKinley**	**4.53**	**24**	Pn	**Pn**	**23 49 24.7**	**0.0**
MCK				IAML		23 50 18.2	
	comp=E,92nm,0.3s						
MCK				IAML		23 50 18.5	
	comp=N,85nm,0.4s						
**MCK

BERG	Berg Lake	4.74	77			Pn		23 49 26.7	-0.9
BWN	Browne	4.84	19			Pn		23 49 28.9	+0.1
BWN					IAML			23 51 14.4	
	comp=N,109nm,1.1s								
BWN					IAML			23 51 14.4	
	comp=E,78nm,1.0s								
VNFG	Fog Glacier, M	4.84	229		Pn	Pn		23 49 27.8	-1.2
VNFG					IAML			23 50 36.8	
	comp=E,100nm,1.1s								
VNFG					IAML			23 50 41.5	
	comp=N,122nm,0.8s								
GLB	Gilahina Butte	4.89	65			Pn		23 49 29.9	+0.2
K15K	Wolf Creek Mou	4.91	306			Pn		23 49 29.7	-0.1
K15K	Wolf Creek Mou	4.91	306	P		Pn		23 49 30.4	+0.6
	baz=119								
PAX	Paxson	4.93	44		Pn	Pn		23 49 30.1	-0.1
PAX					IAML			23 50 26.9	
	comp=E,49nm,0.5s								
PAX					IAML			23 50 27.7	
	comp=N,68nm,0.5s								
PAX	Paxson	4.93	44	P		Pn		23 49 30.8	+0.5
	baz=231								
WAZA	Wrangell Mount	4.97	57			Pn		23 49 31.1	+0.2
VRDI	Verde Repeater	5.00	68			Pn		23 49 31.4	+0.2
CRQM	Cirque	5.06	73			Pn		23 49 32.6	+0.6
L14K	Kuka Creek	5.06	294			Pn		23 49 32.5	+0.7
L14K	Kuka Creek	5.06	294		IAML			23 51 40.7	
	comp=E,21nm,1.1s								
L14K	Kuka Creek	5.06	294	P		Pn		23 49 32.7	+0.9
	baz=105								
J16K	Anvik River	5.14	318			Pn		23 49 32.5	-0.4
J16K	Anvik River	5.14	318	P		Pn		23 49 32.6	-0.2
	baz=132								
I20K	Naaghedeneel	5.20	353			Pn		23 49 33.9	+0.2
I20K					IAML			23 51 25.7	
	comp=N,92nm,0.9s								
I20K					IAML			23 51 29.6	
	comp=E,78nm,0.9s								
I20K	Naaghedeneel	5.20	353	P		Pn		23 49 34.5	+0.7
	baz=172								
TGL	Tana Glacier	5.21	73	Pn		Pn		23 49 34.6	+0.7
TGL					IAML			23 50 36.7	
	comp=E,100nm,0.5s								
M13K	Dall Lake	5.23	283			Pn		23 49 34.0	-0.1
M13K	Dall Lake	5.23	283	P		Pn		23 49 35.4	+1.3
	baz=94								
MCARA	McCarthy VSAT	5.24	66	P		Pn		23 49 35.2	+0.9
	baz=255								
NEA2	Nenana	5.29	19	Pn		Pn		23 49 34.1	-0.8
NEA2					IAML			23 50 37.4	
	comp=N,23nm,0.9s								
NEA2					IAML			23 50 40.8	
	comp=E,18nm,0.6s								
NEA2	Nenana	5.29	19	P		Pn		23 49 34.4	-0.6
	baz=202								
BARK	Barkley Ridge	5.34	77			Pn		23 49 36.1	+0.4
WRH	Wood River Hil	5.36	24			Pn		23 49 35.1	-0.8
WRH					IAML			23 50 35.4	
	comp=E,34nm,0.4s								
WRH					IAML			23 50 35.5	
	comp=N,29nm,1.1s								
K24K	Donnelly Dome	5.40	37	Pn		Pn		23 49 36.5	0.0
K24K	Donnelly Dome	5.40	37	P		Pn		23 49 37.7	+1.2
	baz=223								
K24K					S	Sn		23 50 37.7	+0.3
	baz=223								
GCSA	Galena City Sc	5.42	342	P		Pn		23 49 36.4	-0.2
	baz=159								
PTPK	Patty Peak	5.46	69			Pn		23 49 38.0	+0.7
KIAG	Kiagna River	5.46	72			Pn		23 49 37.7	+0.2
BALM	Baldy	5.49	71			Pn		23 49 38.2	+0.5
MLY	Manley	5.50	10	Pn		Pn		23 49 36.9	-0.9
MLY	Manley	5.50	10	P		Pn		23 49 38.0	+0.2
	baz=192								
HDA	Harding Lake	5.56	28	Pn		Pn		23 49 38.0	-0.6
HDA	Harding Lake	5.56	28	P		Pn		23 49 38.3	-0.3
	baz=214								
MENT	Mentasta	5.57	50			Pn		23 49 38.6	-0.1
I21K	Tanana	5.57	5	Pn		Pn		23 49 38.2	-0.5
I21K	Tanana	5.57	5	P		Pn		23 49 38.7	+0.1
	baz=186								
CCB	Clear Creek Bu	5.58	24			Pn		23 49 38.0	-0.7
I17K	Unalakleet	5.59	323	Pn		Pn		23 49 38.7	-0.2
I17K	Unalakleet	5.59	323	P		Pn		23 49 39.1	+0.2
	baz=136								
M26K	Nabesna, AK	5.60	56	Pn		Pn		23 49 39.9	+0.7
M26K	Nabesna, AK	5.60	56	P		Pn		23 49 40.6	+1.4
	baz=245								
RIDG	Independent Ri	5.65	40	Pn		Pn		23 49 39.7	-0.1
RIDG	Independent Ri	5.65	40	P		Pn		23 49 40.4	+0.5
	baz=227								
GRNC	Granite Creek	5.73	74			Pn		23 49 40.9	-0.2
L26K	Log Cabin Wild	5.76	50	Pn		Pn		23 49 42.2	+1.0
COLA	College	5.77	23			Pn		23 49 41.0	-0.3
COLA	College	5.77	23	P		Pn		23 49 41.0	-0.3
	baz=207								
I23K	Minto, Yukon-K	5.77	16	P		Pn		23 49 41.2	-0.2
	baz=199								
MDM	Murphy Dome	5.77	21			Pn		23 49 40.8	-0.7
BARN	Barnard Glacie	5.82	71			Pn		23 49 42.9	+0.6
IL31		5.88	27			Pn		23 49 42.3	-0.5
ILAR	Eielson Array	5.88	27	P		Pn		23 49 41.9	-1.0
	comp=N,29nm,0.5s,baz=220,slow=14,SNR=358								
ILAR					S	Sn		23 50 43.9	-5.1
	comp=N,6.9nm,0.3s,baz=332,slow=14,SNR=8.2								
ILAR	Eielson Array	5.88	27			Pn		23 49 42.2	-0.7
SDPT	Sand Point	5.89	226	Pn		Pn		23 49 41.9	-1.2
SDPT	Sand Point	5.89	226	P		Pn		23 49 42.1	-1.0
	baz=40								
H20K	Anotleneega Mo	5.92	353			Pn		23 49 43.5	+0.1
H20K	Anotleneega Mo	5.92	353	P		Pn		23 49 43.6	+0.1
	baz=171								
J14K	Nanvaranak Lak	5.96	306	Pn		Pn		23 49 43.6	-0.3
J14K	Nanvaranak Lak	5.96	306	P		Pn		23 49 45.3	+1.5
	baz=117								
CNBA	Chernabura Isl	6.01	219	Pn		Pn		23 49 42.1	-2.5
H21K	Melozitna Rive	6.03	1	Pn		Pn		23 49 43.8	-1.0
H21K	Melozitna Rive	6.03	1	P		Pn		23 49 44.8	0.0
	baz=181								
H18K	Honhosa River	6.05	338	Pn		Pn		23 49 44.6	-0.5
H18K	Honhosa River	6.05	338	P		Pn		23 49 44.8	-0.3
	baz=153								
M27K	Edge Creek, AK	6.06	59	Pn		Pn		23 49 45.7	+0.2
M27K	Edge Creek, AK	6.06	59	P		Pn		23 49 47.0	+1.5
	baz=248								
POKR	Poker Plat Res	6.07	23			Pn		23 49 44.9	-0.5
POKR	Poker Plat Res	6.07	23	P		Pn		23 49 45.0	-0.5
	baz=208								
H19K	Roundabout Mou	6.10	346	Pn		Pn		23 49 45.7	-0.1
H19K	Roundabout Mou	6.10	346	P		Pn		23 49 45.9	+0.1
	baz=164								
LOGN	Logan Glacier	6.11	74			Pn		23 49 45.8	-0.3
K13K	Kusilvak Mount	6.13	297			Pn		23 49 46.5	+0.3
K13K	Kusilvak Mount	6.13	297	P		Pn		23 49 47.6	+1.4
	baz=107								
J25K	Salcha River,	6.13	33	P		Pn		23 49 46.0	-0.4
	baz=219								
H17K	Granite Mounta	6.19	332			Pn		23 49 46.4	-0.7
H17K	Granite Mounta	6.19	332	P		Pn		23 49 46.9	-0.2
	baz=146								
H22K	Ishtalitna Cre	6.31	6	Pn		Pn		23 49 47.8	-0.9
H22K	Ishtalitna Cre	6.31	6	P		Pn		23 49 48.5	-0.1
	baz=188								
YUK2	White River	6.35	65			Pn		23 49 50.0	+0.6
IMAR	Indian Mountai	6.36	357	Pn		Pn		23 49 49.3	0.0
BC01	Beaver Creek A	6.38	53			Pn		23 49 49.7	+0.1
L27K	Beaver Creek,	6.38	53	P		Pn		23 49 51.0	+1.4
	baz=243								
BCAR	Beaver Creek A	6.40	53			Pn		23 49 49.8	-0.1
H23K	Yukon River	6.40	13			Pn		23 49 49.3	-0.6
H23K	Yukon River	6.40	13	P		Pn		23 49 50.0	+0.2
	baz=196								
PS06	TAPS Pump Stn6	6.40	12			Pn		23 49 50.1	+0.1
BC05	Beaver Creek A	6.41	53			Pn		23 49 50.0	0.0
PCA	Pinnacle	6.45	81	Pn		Pn		23 49 50.9	+0.2
PINM	Pinnacle	6.45	81	P		Pn		23 49 51.9	+1.2
	baz=272								
O28M	Mount Upton	6.50	75	Pn		Pn		23 49 52.1	+0.6
O28M	Mount Upton	6.50	75	P		Pn		23 49 52.7	+1.1
	baz=266								
BVCY	Beaver Creek	6.53	60			Pn		23 49 53.4	+1.7
BVCY	Beaver Creek	6.53	60	P		Pn		23 49 53.7	+2.1
	baz=250								
H24K	Noodor Dome	6.64	19	Pn		Pn		23 49 51.7	-1.5
H24K	Noodor Dome	6.64	19	P		Pn		23 49 52.6	-0.5
	baz=203								
YUK8	Steele Glacier	6.76	70			Pn		23 49 56.7	+1.6
YUK8	Steele Glacier	6.76	70	P		Pn		23 49 57.0	+2.0
	baz=262								
DT1	Dutton Round H	6.76	232			Pn		23 49 53.9	-0.9
G19K	Purcell Mounta	6.77	346			Pn		23 49 53.6	-1.2
G19K	Purcell Mounta	6.77	346	P		Pn		23 49 54.6	-0.2
	baz=162								
G18K	Tagagawik	6.77	340			Pn		23 49 54.3	-0.6
G18K	Tagagawik	6.77	340	P		Pn		23 49 54.6	-0.3
	baz=155								
K27K	Chicken	6.79	45			Pn		23 49 55.1	0.0
PRP	Porcupine Dome	6.82	27	P		Pn		23 49 55.5	-0.2
	baz=214								
G17K	Kiwalik Mounta	6.84	332			Pn		23 49 54.9	-0.8
G21K	Allakaket	6.89	358			Pn		23 49 56.2	-0.3
G21K	Allakaket	6.89	358	P		Pn		23 49 57.0	+0.5
	baz=178								
G16K	Koyuk River	7.19	327	Pn		Pn		23 49 59.5	-1.0
G16K	Koyuk River	7.19	327	P		Pn		23 50 00.1	-0.4
	baz=139								
G23K	Bananza Creek	7.21	10			Pn		23 50 00.3	-0.6
G23K	Bananza Creek	7.21	10	P		Pn		23 50 00.6	-0.3
	baz=192								
O29M	Mount Kennedy	7.28	79			Pn		23 50 02.8	+0.8
G24K	Hadweenzic Riv	7.50	17	P		Pn		23 50 04.1	-0.7
	baz=202								
F19K	Shaleruckik Mo	7.51	346	Pn		Pn		23 50 04.4	-0.5
F19K	Shaleruckik Mo	7.51	346	P		Pn		23 50 05.5	+0.6
	baz=161								
F20K	Avaraart Lake	7.52	352	Pn		Pn		23 50 05.4	+0.4
F20K	Avaraart Lake	7.52	352	P		Pn		23 50 05.4	+0.4
	baz=170								
F18K	Selawik	7.58	340	P		Pn		23 50 06.3	+0.4
	baz=154								
ANM	Nome	7.59	316	Pn		Pn		23 50 08.0	+2.0
F21K	Alatna River	7.60	359	Pn		Pn		23 50 06.5	+0.4
F21K	Alatna River	7.60	359	P		Pn		23 50 06.5	+0.4
	baz=178								
M29M	Somme Creek	7.60	62	Pn		Pn		23 50 06.7	+0.5
M29M	Somme Creek	7.60	62	P		Pn		23 50 07.7	+1.4
	baz=255								
COLD	Coldfoot	7.71	8	Pn		Pn		23 50 05.7	-1.8
COLD	Coldfoot	7.71	8	P		Pn		23 50 07.3	-0.3
	baz=191								
P29M	Windy Craggy	7.75	84	Pn		Pn		23 50 08.3	0.0
P29M	Windy Craggy	7.75	84	P		Pn		23 50 09.8	+1.6
	baz=277								
F17K	Baldwin Pennin	7.76	335	Pn		Pn		23 50 07.6	-0.6
F17K	Baldwin Pennin	7.76	335	P		Pn		23 50 08.1	-0.2
	baz=148								
FYU	Fort Yukon	7.78	24			Pn		23 50 07.0	-1.5
G25K	Bearman Lake	7.79	21	P		Pn		23 50 07.9	-0.7
	baz=207								
DAWY	Dawson	7.81	50			Pn		23 50 09.4	+0.4
HYT	Haines Junctio	7.82	75			Pn		23 50 10.0	+0.8
L29M	L29M	7.94	58	Pn		Pn		23 50 12.4	+1.6
L29M	L29M	7.94	58	P		Pn		23 50 11.9	+1.1
	baz=251								
I27K	Kandik River	7.95	37	Pn		Pn		23 50 09.9	-1.0
E19K	Redstone River	8.05	348	Pn		Pn		23 50 12.2	0.0
E19K	Redstone River	8.05	348	P		Pn		23 50 12.7	+0.5
	baz=165								
N30M	Aishikik Lake	8.06	70	Pn		Pn		23 50 11.7	-0.8
N30M	Aishikik Lake	8.06	70	P		Pn		23 50 13.1	+0.7
	baz=264								
N30M					S	Sn		23 51 37.8	-4.0
	baz=264								
F15K	North Star Dit	8.08	324	Pn		Pn		23 50 12.3	-0.3
F24K	Squaw Lake	8.22	14	Pn		Pn		23 50 14.3	-0.2
F24K	Squaw Lake	8.22	14	P		Pn		23 50 14.0	-0.5
	baz=199								
I28M	Miner Creek	8.38	41	Pn		Pn		23 50 16.3	-0.4
I28M	Miner Creek	8.38	41	P		Pn		23 50 16.6	-0.1
	baz=232								
M30M	Minto, Yukon	8.38	63	Pn		Pn		23 50 16.6	-0.2
G26K	Porcupine Rive	8.41	26			Pn		23 50 16.1	-1.0
G26K	Porcupine Rive	8.41	26	P		Pn		23 50 16.2	-0.8
	baz=214								
H27K	Steamboat Moun	8.41	34	Pn		Pn		23 50 16.7	-0.5
H27K	Steamboat Moun	8.41	34	P		Pn		23 50 16.9	-0.3
	baz=224								
E17K	Hotham Inlet	8.43	336	P		Pn		23 50 17.8	+0.6
	baz=148								
J29N	Klondike Camp	8.45	49	Pn		Pn		23 50 17.9	+0.3
K29M	Barlow Dome	8.46	54	Pn		Pn		23 50 18.1	+0.2
K29M	Barlow Dome	8.46	54	P		Pn		23 50 19.2	+1.3
	baz=247								
PLBC	Pleasant Camp	8.47	84			Pn		23 50 19.4	+1.6
E18K	Tukpahlearik C	8.49	340			Pn		23 50 18.3	+0.2
E18K	Tukpahlearik C	8.49	340	P		Pn		23 50 19.6	+1.5
	baz=153								
O30N	Mendenhall	8.51	75			Pn		23 50 18.0	-0.5
E23K	Chandalar	8.57	9	Pn		Pn		23 50 18.7	-0.6
E23K	Chandalar	8.57	9	P		Pn		23 50 19.3	+0.1
	baz=192								
F25K	Christian Rive	8.61	19	Pn		Pn		23 50 18.0	-1.9
F25K	Christian Rive	8.61	19	P		Pn		23 50 18.6	-1.3
	baz=206								
E24K	Your Creek	8.69	11	Pn		Pn		23 50 19.6	-1.2
E24K	Your Creek	8.69	11	P		Pn		23 50 20.3	-0.6
	baz=195								
N31M	Braeburn, Yuko	8.69	70	Pn		Pn		23 50 20.2	-0.7
E20K	Nigu River	8.75	352			Pn		23 50 21.6	0.0
E20K	Nigu River	8.75	352	P		Pn		23 50 22.6	+1.0
	baz=169								
G27K	Doyon Strip	8.81	31	Pn		Pn		23 50 20.8	-1.7
G27K	Doyon Strip	8.81	31	P		Pn		23 50 21.7	-0.8
	baz=221								
S31K	Pelican	8.88	94	Pn		Pn		23 50 23.4	-0.1
F26K	Sheenjek River	8.97	22	Pn		Pn		23 50 23.4	-1.3
F26K	Sheenjek River	8.97	22	P		Pn		23 50 24.1	-0.5
	baz=210								
SKAG	Skagway	8.99	84	Pn		Pn		23 50 25.7	+0.8
E25K	Arctic Village	9.10	18	Pn		Pn		23 50 24.5	-1.9
WHY	Whitehorse	9.11	76			Pn		23 50 26.9	+0.3
D19K	Kuna River	9.14	348	Pn		Pn		23 50 26.6	-0.4
TOLK	Toolik Lake Re	9.15	8			Pn		23 50 27.2	+0.1
TOLK	Toolik Lake Re	9.15	8	P		Pn		23 50 27.5	+0.5
	baz=191								
J30M	Hart River	9.23	51			Pn		23 50 29.1	+0.8
J30M	Hart River	9.23	51	P		Pn		23 50 29.9	+1.6
	baz=245								
H29M	Whitestone	9.36	39			Pn		23 50 29.2	-0.6
SPIA	Saint Paul Isl	9.37	262	Pn		Pn		23 50 30.5	+0.5
D23K	Nanushuk River	9.40	5			Pn		23 50 30.1	-0.4
D23K	Nanushuk River	9.40	5	P		Pn		23 50 30.5	+0.1
	baz=187								
UNV	Unalaska Valle	9.40	238	Pn		Pn		23 50 28.9	-1.6
BESE	Bessie Mountai	9.41	89	Pn		Pn		23 50 30.2	-0.4
M31M	Drury Creek, Y	9.42	66	Pn		Pn		23 50 29.8	-0.9
MNAT	Makushin Natee	9.46	238			Pn		23 50 30.2	-1.0
I30M	Mount Dempster	9.51	47			Pn		23 50 32.5	+0.6
I30M	Mount Dempster	9.51	47	P		Pn		23 50 33.3	+1.4
	baz=242								
MGOD	Makushin Gods	9.60	238			Pn		23 50 32.4	-0.8
R32K	Eaglecrest	9.66	90	Pn		Pn		23 50 34.3	+0.3
SIT	Sitka	9.66	98	Pn		Pn		23 50 33.5	-0.5
C18K	Utukok River	9.69	342	Pn		Pn		23 50 34.5	0.0
D24K	Happy Valley	9.71	9	P		Pn		23 50 34.8	+0.3
	baz=193								
P32M	Atlin	9.78	82	Pn		Pn		23 50 34.8	-0.9
F28M	Old Crow	9.88	31			Pn		23 50 35.7	-1.2
C19K	Lookout Ridge	9.89	346	Pn		Pn		23 50 37.1	0.0
G29M	Pine Creek	9.90	36			Pn		23 50 37.8	+0.6
E27K	Coleen River	9.91	26	Pn		Pn		23 50 36.4	-0.9
E27K	Coleen River	9.91	26	P		Pn		23 50 36.3	-1.1
	baz=216								
EPYK	Eagle Plains	9.99	41			Pn		23 50 37.9	-0.5
B21K	Ikpikpuk River	10.03	357	Pn		Pn		23 50 38.4	-0.5
D25K	Kavik River	10.11	14			Pn		23 50 39.3	-0.8
D25K	Kavik River	10.11	14	P		Pn		23 50 39.3	-0.8
	baz=200								
P33M	Teslin, Yukon	10.15	78	Pn		Pn		23 50 41.1	+0.4
C16K	Lisburne Hills	10.18	333	Pn		Pn		23 50 41.5	+0.6
C23K	Itkillik River	10.28	5	Pn		Pn		23 50 41.8	-0.3
C23K	Itkillik River	10.28	5	P		Pn		23 50 42.0	-0.2
	baz=187								
G30M	tAoh Zraii Nji	10.51	39	Pn		Pn		23 50 44.7	-0.6
H31M	Peel River	10.53	46	Pn		Pn		23 50 45.9	+0.2
H31M	Peel River	10.53	46	P		Pn		23 50 46.2	+0.5
	baz=243								
B20K	Meade River	10.54	352	Pn		Pn		23 50 43.4	-2.4
Q32M	Nakina River	10.63	85	Pn		Pn		23 50 48.4	+1.2

E28M	Babbage River	10.71	27	Pn		Pn		23 50 46.7	-1.3
C27K	Jago River	10.76	18	Pn		Pn		23 50 49.2	+0.5
D27M	Malcolm River	10.91	23	Pn		Pn		23 50 51.2	+0.3
MMPY	Sheldon Lake,	10.91	65	Pn		Pn		23 50 51.3	+0.4
E29M	Blow River	10.95	31	Pn		Pn		23 50 50.9	-0.4
E29M	Blow River	10.95	31	P		Pn		23 50 51.6	+0.3
	baz=224								
F30M	Barrier River	11.02	36	Pn		Pn		23 50 51.7	-0.5
G31M	Satah River	11.11	41			Pn		23 50 53.0	-0.3
G31M	Satah River	11.11	41	P		Pn		23 50 53.3	-0.1
	baz=238								
U33K	Whale Pass	11.16	100	Pn		Pn		23 50 54.7	+0.5
U33K	Whale Pass	11.16	100	P		Pn		23 50 55.5	+1.3
	baz=297								
CRAG	Craig	11.47	103	Pn		Pn		23 50 58.1	-0.2
S34M	Telegraph Cree	11.49	89	Pn		Pn		23 51 00.3	+1.8
DLBC	Dease Lake	11.89	86	P		Pn		23 51 05.0	+1.0
	comp=N,4.2nm,0.5s,baz=228,slow=6.9,SNR=18								
INK	Inuvik	12.12	36	P		Pn		23 51 05.8	-1.0
	comp=N,4.2nm,0.6s,baz=236,slow=16,SNR=15								
INK	Inuvik	12.12	36	Pn		Pn		23 51 06.5	-0.3
INK	Inuvik	12.12	36	P		Pn		23 51 07.2	+0.4
	baz=234								
T35M	Bob Quinn	12.26	93	Pn		Pn		23 51 11.2	+2.6
V35K	Ketchikan	12.29	101	Pn		Pn		23 51 08.5	-0.5
DIB	Dawson Inlet,	13.05	111	Pn		Pn		23 51 20.1	+1.2
MOBC	Moresby Island	13.32	110	Pn		Pn		23 51 23.3	+0.7
RUBB	Prince Rupert	13.48	103	Pn		Pn		23 51 25.7	+1.2
ATKA	Atka Island	13.97	247	Pn		Pn		23 51 31.6	+0.8
HG4B	Hotspring	14.22	112	P		P		23 51 38.0	0.0
GSTR	Great Sitkin T	14.91	250	Pn		Pn		23 51 42.1	-0.8
ADK	Adak	15.35	250	Pn		Pn		23 51 47.9	-0.4
ADK					IAmb	IAmb		23 51 54.7	
	comp=Z,13nm,0.8s								
KIWB	Kanaga Island	15.59	251			Pn		23 51 52.0	+0.7
AMKA	Amchitka	17.61	254			P		23 52 15.5	+0.3
YKAW3	Yellowknife Wh	18.60	65			P		23 52 27.1	+1.1
YKA	Yellowknife Ar	18.61	65	P		Pn		23 52 27.9	+0.1
	comp=Z,1.3nm,0.5s,baz=277,slow=10,SNR=7.8								
YKA	Yellowknife Ar	18.61	65	P		P		23 52 25.9	-0.2
PETK	Petropavlovsk-	27.49	278	P		P		23 53 52.5	-0.7
	comp=Z,1.7nm,0.7s,baz=69,slow=14,SNR=5.2								
	comp=Z,1.7nm,0.7s								
PETK	Petropavlovsk-	27.49	278	P		P		23 53 53.0	-0.2
KSRS	Korea Array	53.24	283	P		P		23 57 24.5	+0.2
	comp=Z,0.6nm,0.4s,baz=36,slow=7.2,SNR=2.4								
	comp=Z,0.6nm,0.4s								
SONM	Songino Array	54.98	306	P		P		23 57 37.7	+0.7
	comp=Z,1.8nm,0.7s,baz=42,slow=7.6,SNR=11								
	comp=Z,1.8nm,0.7s								
SONM	Songino Array	54.98	306	P		P		23 57 37.4	+0.4
SONM					IAmb	IAmb		23 57 38.5	
	comp=Z,1.7nm,0.7s								
ZAA0	Zalesovo Array	57.64	324	P		P		23 57 55.4	-0.2
ZAA0					IAmb	IAmb		23 57 56.9	
	comp=Z,1.3nm,0.7s								
ZALV	Zalesovo Beam	57.64	324	P		P		23 57 55.5	-0.1
	comp=Z,1.7nm,0.6s,baz=22,slow=6.8,SNR=11								
	comp=Z,1.7nm,0.6s								
KURK	Kurchatov	62.30	326	P		P		23 58 27.7	+0.2
KURK					IAmb	IAmb		23 58 28.1	
	comp=Z,1.1nm,0.5s								
BVAR	Borovoye Array	62.37	332	P		P		23 58 28.1	+0.2
	comp=Z,1.8nm,0.5s,baz=25,slow=5.8,SNR=12								
	comp=Z,1.8nm,0.5s								
KURBB	Kurchatov Arra	62.41	326	P		P		23 58 28.3	+0.1
	comp=Z,0.9nm,0.4s,baz=28,slow=6.7,SNR=15								
	comp=Z,0.9nm,0.4s								
MKAR	Makanchi Array	64.69	321	P		P		23 58 43.0	-0.3
	comp=Z,0.5nm,0.5s,baz=44,slow=6.5,SNR=8.5								
	comp=Z,0.5nm,0.5s								
MKAR	Makanchi Array	64.69	321	P		P		23 58 43.2	-0.1
MAKZ	Makanchi	64.78	322	P		P		23 58 43.9	+0.1
BOSA	Boshof	148.94	3	PKPbc		PKPbc		00 07 51.8	-0.2
	comp=Z,1.8nm,0.7s,baz=28,slow=3.5,SNR=6.4								

LOBH IAML 00 23 37.4
comp=Z,46nm,2.1s

*IDC **27** 00:48:24.3±0.9,35˚.09N×25˚.60E,h0^km,mb3.9/11, mbtmp3.8/21,ML3.4/10,MS2.9/11,Error ellipse: s-maj=19.6km s-min=7.4km az=7.0*
*THE **27** 00:48:25.8,35˚N±2˚×2˚6E±˚,h8^km±1^km,M3.6/16, MLh3.6/16*
*ISK **27** 00:48:25.4,35˚.13N×25˚.56E,h5^km,ML3.5/21*
*ATH **27** 00:48:25.4,35˚.11N×25˚.55E,h6^km±1^km,ML3.6/18, Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*
*GII **27** 00:48:27.8±0.0,34˚.863N±0˚.002×25˚.834E±0˚.001, h0^km,Mws3.8,confirmed*
*AFAD **27** 00:48:28.0,35˚.17N×25˚.55E,h8^km±4^km,MW3.8*
ISC 27 00:48:25.9±0.8,35˚.12N±0˚.03×25˚.56E±0˚.02,h11^km±5^km, n190,σ1§51/241,mb3.8/10,MS3.0/5,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGNA	**Agios Nikolaos**	**0.15**	**60**	P	**Pg**	**00 48 28.6**	**-0.7**
AGNA				S	**Sg**	**00 48 31.6**	**-0.1**
NPS	**Neapolis**	**0.15**	**16**	P	**Pg**	**00 48 28.8**	**-0.7**
NPS				S	**Sg**	**00 48 31.5**	**-0.3**
NPS	**Neapolis**	**0.15**	**16**	P	**Pg**	**00 48 28.8**	**-0.7**
NPS				S	**Sg**	**00 48 31.6**	**-0.3**
IACM	**Heraklion**	**0.45**	**295**	P	**Pg**	**00 48 34.5**	**-0.2**
IACM				S	**Sg**	**00 48 39.9**	**-0.7**
IACM	**Heraklion**	**0.45**	**295**	P	**Pg**	**00 48 34.1**	**-0.5**
IACM				S	**Sg**	**00 48 40.2**	**-0.4**
SIT2	**Siteia**	**0.46**	**79**	P	**Pg**	**00 48 34.6**	**-0.3**
SIT2				S	**Sg**	**00 48 40.8**	**-0.1**
ZKR	**Zakros**	**0.54**	**90**	Pg	**Pg**	**00 48 36.4**	**0.0**
ZKR				Sg	**Sg**	**00 48 44.4**	**+0.9**
ZKR	**Zakros**	**0.54**	**90**	P	**Pg**	**00 48 35.8**	**-0.6**
ZKR	**Zakros**	**0.54**	**90**	P	**Pg**	**00 48 35.5**	**-0.9**
ZKR				S	**Sg**	**00 48 44.1**	**+0.6**
IDI	**Anoyia**	**0.58**	**287**	Pg	**Pg**	**00 48 36.2**	**-1.0**
	36nm,0.3s,baz=155,slow=11,SNR=20						
IDI				Lg	Lg	00 48 45.4	
	422nm,0.3s,baz=166,slow=22,SNR=42						
IDI	**Anoyia**	**0.58**	**287**	Pg	**Pg**	**00 48 36.8**	**-0.4**
IDI				Sg	**Sg**	**00 48 45.4**	**+0.6**
IDI	**Anoyia**	**0.58**	**287**	P	**Pg**	**00 48 36.5**	**-0.7**
IDI				S	**Sg**	**00 48 45.1**	**+0.3**
IDI	**Anoyia**	**0.58**	**287**	P	**Pg**	**00 48 36.2**	**-1.0**
SIVA	**Sivas**	**0.62**	**261**	P	**Pg**	**00 48 37.4**	**-0.7**
SIVA				S	**Sg**	**00 48 46.9**	**+0.6**
SIVA	**Sivas**	**0.62**	**261**	P	**Pg**	**00 48 37.2**	**-0.9**
SIVA				S	**Sg**	**00 48 46.0**	**-0.3**
RTHF	**Rethymno-Limin**	**0.92**	**286**	P	**Pg**	**00 48 42.7**	**-0.9**
RTHF				S	**Sg**	**00 48 54.6**	**-1.0**
VAM	**Vamos**	**1.15**	**285**	P	**Pg**	**00 48 47.5**	**-0.6**
VAM				S	**Sb**	**00 49 03.5**	**+0.6**
VAM	**Vamos**	**1.15**	**285**	P	**Pg**	**00 48 47.4**	**-0.7**
VAM				S	**Sg**	**00 49 02.6**	**-0.5**
GVD	**Gavdhos**	**1.24**	**258**	Pn	**Pg**	**00 48 49.6**	**-0.2**
GVD	**Gavdhos**	**1.24**	**258**	P	**Pg**	**00 48 49.1**	**-0.7**
GVD	**Gavdhos**	**1.24**	**258**	P	**Pg**	**00 48 48.7**	**-1.1**
THERA	**Ancient Thera,**	**1.25**	**357**	P	**Pg**	**00 48 47.8**	**-2.1**
THERA				S	**Sg**	**00 49 05.6**	**-0.6**
THR9	**Santorini-Faro**	**1.25**	**352**	P	**Pg**	**00 48 48.4**	**-1.6**
THR9	**Santorini-Faro**	**1.25**	**352**	P	**Pg**	**00 48 48.3**	**-1.6**
CHNB	**Souda**	**1.28**	**287**	P	**Pn**	**00 48 49.9**	**+0.1**
THR8	**Santorini-Mono**	**1.29**	**357**	P	**Pn**	**00 48 48.5**	**-1.4**
SNT5	**Nea Kammeni, S**	**1.29**	**354**	P	**Pn**	**00 48 49.7**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.29**	**354**	P	**Pn**	**00 48 49.9**	**0.0**
THR3	**Thira Island,**	**1.30**	**354**	P	**Pn**	**00 48 48.7**	**-1.3**
THR3	**Thira Island,**	**1.30**	**354**	P	**Pn**	**00 48 48.8**	**-1.2**
THRA	**Thira**	**1.30**	**355**	P	**Pn**	**00 48 49.1**	**-1.0**
THRA	**Thira**	**1.30**	**355**	P	**Pn**	**00 48 49.0**	**-1.1**
CHAN	**Chania**	**1.31**	**288**	P	**Pn**	**00 48 50.2**	**+0.1**
CHAN				S	**Sg**	**00 49 06.1**	**-1.9**
THR5	**Thira Island,**	**1.31**	**352**	P	**Pn**	**00 48 49.5**	**-0.7**
CH01	**Chania**	**1.32**	**288**	P	**Pb**	**00 48 50.9**	**+0.1**
CH01				S	**Sb**	**00 49 07.7**	**0.0**
SAP3	**Santorini-Thir**	**1.33**	**352**	P	**Pn**	**00 48 49.1**	**-1.4**
SAP3	**Santorini-Thir**	**1.33**	**352**	P	**Pn**	**00 48 49.7**	**-0.7**
THR2	**Thira island,**	**1.33**	**356**	P	**Pn**	**00 48 49.9**	**-0.6**
THR2	**Thira island,**	**1.33**	**356**	P	**Pn**	**00 48 49.4**	**-1.1**
IMMV	**Iera Moni Meta**	**1.34**	**285**	Pn	**Pb**	**00 48 51.3**	**+0.2**
IMMV				Sn	**Sn**	**00 49 09.9**	**+1.5**
IMMV	**Iera Moni Meta**	**1.34**	**285**	P	**Pn**	**00 48 49.9**	**-0.7**
IMMV	**Iera Moni Meta**	**1.34**	**285**	P	**Pn**	**00 48 51.0**	**+0.4**
IMMV				S	**Sn**	**00 49 08.9**	**+0.5**
KARP	**Karpathos**	**1.38**	**71**	Pn	**Pb**	**00 48 52.1**	**+0.4**
KARP				Sn	**Sn**	**00 49 11.3**	**+1.9**
KARP	**Karpathos**	**1.38**	**71**	P	**Pn**	**00 48 51.1**	**0.0**
KARP	**Karpathos**	**1.38**	**71**	P	**Pg**	**00 48 52.4**	**0.0**
KARP	**Karpathos**	**1.38**	**71**	P	**Pn**	**00 48 51.8**	**+0.7**
KARP				S	**Sb**	**00 49 09.3**	**0.0**
KNDR	**Palaiochora Ch**	**1.59**	**275**	P	**Pn**	**00 48 53.4**	**-0.7**
KNDR	**Palaiochora Ch**	**1.59**	**275**	P	**Pn**	**00 48 54.8**	**+0.7**
KNDR				S	**Sn**	**00 49 15.1**	**+0.5**
MHLO	**Agia Marina, M**	**1.83**	**329**	P	**Pn**	**00 48 56.8**	**-0.6**
MHLO	**Agia Marina, M**	**1.83**	**329**	P	**Pn**	**00 48 57.1**	**-0.2**
MILOS	**Milos**	**1.86**	**331**	P	**Pn**	**00 48 58.8**	**+0.9**
NAX1	**Naxos Island**	**1.99**	**356**	P	**Pn**	**00 48 58.5**	**-0.9**
ANKY	**Antikythira Is**	**1.99**	**293**	P	**Pn**	**00 48 58.7**	**-0.9**
ANKY	**Antikythira Is**	**1.99**	**293**	P	**Pn**	**00 48 59.9**	**+0.4**
YAZI	**Mula-Dat§a-**	**2.19**	**44**	P	**Pn**	**00 49 01.7**	**-0.6**
YAZI				S	**Sn**	**00 49 23.0**	**-6.4**
YAZI				IAML		00 49 37.0	
	comp=N,71nm,1.0s						
YAZI				IAML		00 49 45.0	
	comp=E,49nm,1.0s						
DAT	**Datca**	**2.29**	**45**	Pn	**Pn**	**00 49 04.6**	**+0.8**
KTHA	**Kythira Island**	**2.33**	**300**	Pn	**Pn**	**00 49 05.4**	**+1.1**
KTHA	**Kythira Island**	**2.33**	**300**	P	**Pn**	**00 49 04.0**	**-0.3**
KTHA				S	**Sn**	**00 49 33.5**	**+0.5**
ARG	**Arkhangelos**	**2.36**	**62**	Pn	**Pn**	**00 49 05.6**	**+1.0**
ARG	**Arkhangelos**	**2.36**	**62**	P	**Pn**	**00 49 05.6**	**+1.0**
BODT	**Bodrum**	**2.40**	**36**	Pn	**Pn**	**00 49 06.6**	**+1.4**
NPS1	**Neapolis Lacon**	**2.46**	**305**	P	**Pn**	**00 49 06.2**	**+0.2**
BDRM	**Kayabasi**	**2.47**	**38**	P	**Pn**	**00 49 06.0**	**-0.1**
BDRM				IAML		00 49 50.0	
	comp=E,44nm,1.0s						
BDRM				IAML		00 49 58.0	
	comp=N,72nm,0.7s						
VLI	**Veliai**	**2.66**	**308**	P	**Pn**	**00 49 08.7**	**-0.1**
VLI	**Veliai**	**2.66**	**308**	P	**Pn**	**00 49 08.7**	**-0.1**
TURN	**Turunc**	**2.73**	**52**	Pn	**Pn**	**00 49 11.1**	**+1.3**
TURN	**Turunc**	**2.73**	**52**	P	**Pn**	**00 49 10.9**	**+1.2**
TURN				S	**Sn**	**00 49 44.6**	**+1.8**
TURN				IAML		00 49 54.0	
	comp=N,80nm,0.7s						
TURN				IAML		00 49 58.0	
	comp=E,53nm,0.4s						
GCAM	**G?zelcami?**	**2.91**	**27**	Pn	**Pn**	**00 49 13.6**	**+1.4**
YER	**Yerkesik**	**2.98**	**47**	Pn	**Pn**	**00 49 14.7**	**+1.4**
DALY	**Dalyan (Mula)**	**3.03**	**55**	Pn	**Pn**	**00 49 15.2**	**+1.4**
DALY	**Dalyan (Mula)**	**3.03**	**55**	P	**Pn**	**00 49 16.4**	**+2.6**
DALY				S	**Sn**	**00 49 48.9**	**-1.1**
DALY				IAML		00 50 04.0	
	comp=E,74nm,0.8s						
DALY				IAML		00 50 14.0	
	comp=N,76nm,0.7s						
MET6	**Megalochori,Me**	**3.04**	**325**	P	**Pn**	**00 49 15.3**	**+1.2**
KARY	**Karystos**	**3.05**	**343**	P	**Pn**	**00 49 14.1**	**0.0**
MET4	**Agioi Theodoro**	**3.05**	**326**	P	**Pn**	**00 49 15.3**	**+1.2**
MET2	**Kameni Chora,**	**3.07**	**325**	P	**Pn**	**00 49 15.1**	**+0.7**
VLY	**Voula,Athens**	**3.08**	**333**	P	**Pn**	**00 49 15.8**	**+1.3**
MET3	**Ano Fanari,Met**	**3.09**	**323**	P	**Pn**	**00 49 14.7**	**-0.1**
DGB	**zmir**	**3.12**	**20**	P	**Pn**	**00 49 14.7**	**-0.3**
DGB				IAML		00 50 11.0	
	comp=N,32nm,0.7s						
DGB				IAML		00 50 11.0	
	comp=E,46nm,1.1s						
AYDN	**Tasoluk**	**3.15**	**36**	P	**Pn**	**00 49 16.9**	**+1.3**
AYDN				IAML		00 50 20.0	
	comp=E,41nm,1.1s						
AYDN				IAML		00 50 30.0	
	comp=N,41nm,0.9s						
ATHU	**Athens Univers**	**3.18**	**334**	P	**Pn**	**00 49 16.1**	**+0.1**
PTL	**Penteli**	**3.23**	**335**	P	**Pn**	**00 49 17.6**	**+0.9**
DION	**Dionisos Attik**	**3.23**	**337**	P	**Pn**	**00 49 17.4**	**+0.7**
SABU	**Mula-Dalaman**	**3.25**	**57**	P	**Pn**	**00 49 19.1**	**+2.2**
SABU				S	**Sn**	**00 49 57.1**	**+1.6**
SABU				IAML		00 50 21.0	
	comp=E,52nm,1.1s						
SABU				IAML		00 50 28.0	
	comp=N,71nm,1.1s						
IZZE	**Mula-Seydike**	**3.26**	**65**	P	**Pn**	**00 49 19.6**	**+2.6**
IZZE				S	**Sn**	**00 49 57.1**	**+1.4**
IZZE				IAML		00 50 01.0	
	comp=N,91nm,0.4s						
IZZE				IAML		00 50 04.0	
	comp=E,65nm,0.4s						
CHOS	**Chios island**	**3.29**	**7**	Pn	**Pn**	**00 49 17.8**	**+0.3**
CHOS	**Chios island**	**3.29**	**7**	P	**Pn**	**00 49 17.1**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**3.39**	**33**	Pn	**Pn**	**00 49 20.6**	**+1.7**
STFN	**Stefani**	**3.46**	**333**	P	**Pn**	**00 49 20.1**	**+0.3**
AKAS	**Kas**	**3.47**	**70**	Pn	**Pn**	**00 49 21.8**	**+1.7**
AKAS	**Kas**	**3.47**	**70**	P	**Pn**	**00 49 22.1**	**+2.0**
AKAS				S	**Sn**	**00 50 02.5**	**+1.2**
ESEN	**Aydn-Nazilli**	**3.49**	**39**	P	**Pn**	**00 49 22.3**	**+2.1**
ESEN				IAML		00 50 13.0	
	comp=E,23nm,0.8s						
ESEN				IAML		00 50 25.0	
	comp=N,29nm,1.0s						
ACOR	**Acrocorinthos**	**3.52**	**323**	P	**Pn**	**00 49 20.2**	**-0.4**
CAME	**Cameli-Denizli**	**3.54**	**58**	Pn	**Pn**	**00 49 22.6**	**+1.6**
LOUT	**Loutraki**	**3.54**	**325**	P	**Pn**	**00 49 22.1**	**+1.2**
PYL	**PYLOS**	**3.57**	**301**	P	**Pn**	**00 49 22.3**	**+1.0**
LTK	**Loutraki**	**3.57**	**325**	P	**Pn**	**00 49 22.2**	**+0.8**
TAVA	**DENIZLI_Tavas**	**3.58**	**48**	P	**Pn**	**00 49 23.7**	**+2.2**
TAVA				S	**Sn**	**00 50 02.3**	**-1.6**
TAVA				IAML		00 50 32.0	
	comp=E,31nm,0.8s						
TAVA				IAML		00 50 33.0	
	comp=N,29nm,1.3s						
ITM	**Ithomi**	**3.59**	**306**	P	**Pn**	**00 49 23.0**	**+1.5**
NAZL	**Nazilli-Aydin**	**3.59**	**37**	Pn	**Pn**	**00 49 23.4**	**+1.8**
VIL2	**Platees**	**3.60**	**330**	P	**Pn**	**00 49 21.1**	**-0.6**
CAEL	**Denizli, Camel**	**3.64**	**56**	P	**Pn**	**00 49 26.1**	**+3.7**
CAEL				S	**Sb**	**00 50 14.0**	**-0.7**
CAEL				IAML		00 50 24.0	
	comp=N,186nm,0.9s						
CAEL				IAML		00 50 44.0	
	comp=E,170nm,0.9s						
KNIK	**Mula-Seydike**	**3.68**	**61**	P	**Pn**	**00 49 25.0**	**+2.1**
KNIK				S	**Sn**	**00 50 08.1**	**+1.8**
KNIK				IAML		00 50 17.0	
	comp=N,23nm,0.6s						
KNIK				IAML		00 50 20.0	
	comp=E,38nm,0.8s						
KYMI	**Kymi, Euboea I**	**3.70**	**342**	P	**Pn**	**00 49 23.3**	**+0.3**
THAL	**Thalero**	**3.73**	**322**	P	**Pn**	**00 49 24.3**	**+0.8**
ODEM	**Odemis-Izmir**	**3.74**	**32**	Pn	**Pn**	**00 49 25.6**	**+1.9**
DNIZ	**Denizli-Tavas-**	**3.76**	**47**	P	**Pn**	**00 49 26.0**	**+2.0**
APMY	**Acipayam-Deniz**	**3.83**	**51**	Pn	**Pn**	**00 49 26.6**	**+1.7**
GUR	**Goura**	**3.83**	**318**	P	**Pn**	**00 49 25.7**	**+0.8**
KIRA	**zmir-Kiraz**	**3.83**	**36**	P	**Pn**	**00 49 28.0**	**+3.1**
GOLH	**Golhisar**	**3.87**	**56**	P	**Pn**	**00 49 26.9**	**+1.5**
GOLH				S	**Sn**	**00 50 15.3**	**+4.4**
GOLH				IAML		00 50 36.0	
	comp=E,66nm,0.7s						
GOLH				IAML		00 50 42.0	
	comp=N,67nm,1.1s						
ELL	**Elmali**	**3.88**	**64**	Pn	**Pn**	**00 49 27.8**	**+2.1**
ELL	**Elmali**	**3.88**	**64**	P	**Pn**	**00 49 26.4**	**+0.7**
CAMT	**Merkez**	**3.89**	**21**	P	**Pn**	**00 49 26.7**	**+1.1**
CAMT				IAML		00 50 43.0	
	comp=N,75nm,0.8s						
CAMT				IAML		00 50 45.0	
	comp=E,82nm,1.3s						
KLV	**Kalavryta, Ach**	**4.01**	**318**	P	**Pn**	**00 49 28.1**	**+0.7**
AKUM	**Antalya-Kumluc**	**4.07**	**71**	P	**Pn**	**00 49 30.2**	**+2.1**
AKUM				S	**Sn**	**00 50 18.9**	**+3.1**
AKUM				IAML		00 50 21.0	
	comp=N,28nm,0.6s						
AKUM				IAML		00 50 25.0	
	comp=E,28nm,0.6s						
LKR	**Lokris**	**4.08**	**331**	P	**Pn**	**00 49 29.5**	**+1.2**
DKL	**Dikili**	**4.09**	**15**	P	**Pn**	**00 49 27.4**	**-0.9**
ATAL	**Atalanti**	**4.11**	**331**	P	**Pn**	**00 49 29.9**	**+1.2**
INCE	**Denizli-Bozkur**	**4.14**	**50**	P	**Pn**	**00 49 32.2**	**+3.0**
INCE				S	**Sn**	**00 50 19.1**	**+1.4**
PRK	**Paraskevi**	**4.16**	**8**	P	**Pn**	**00 49 28.8**	**-0.6**
TEME	**Temeni, Aigial**	**4.16**	**319**	P	**Pn**	**00 49 30.2**	**+0.9**
AIOA	**Agios Ioannis,**	**4.17**	**318**	P	**Pn**	**00 49 29.8**	**+0.3**
DRO	**Drossia**	**4.20**	**313**	P	**Pn**	**00 49 30.7**	**+0.7**
AGEO	**AgiosGiorgios,**	**4.22**	**319**	P	**Pn**	**00 49 31.2**	**+1.1**
AOS2	**Alonissos-2**	**4.25**	**342**	P	**Pn**	**00 49 31.0**	**+0.4**
KALE	**Kalithea**	**4.27**	**321**	P	**Pn**	**00 49 31.3**	**+0.4**
KORT	**Korkueli**	**4.31**	**63**	P	**Pn**	**00 49 32.7**	**+1.1**
KORT				S	**Sn**	**00 50 20.5**	**-1.4**
KORT				IAML		00 50 35.0	
	comp=E,51nm,0.6s						
KORT				IAML		00 50 44.0	
	comp=N,38nm,0.9s						
AXAR	**Agios Charalam**	**4.32**	**328**	P	**Pn**	**00 49 31.9**	**+0.3**
PYRG	**Pyrgos, Dorida**	**4.35**	**320**	P	**Pn**	**00 49 32.3**	**+0.3**
MG00	**Magoula, Dorid**	**4.39**	**320**	P	**Pn**	**00 49 33.2**	**+0.7**
RLS	**Riolos of Patr**	**4.41**	**313**	P	**Pn**	**00 49 34.0**	**+1.2**
EFP	**Efpalio**	**4.42**	**319**	P	**Pn**	**00 49 33.6**	**+0.7**
BRDR	**BÜRDUR-Merkez**	**4.45**	**53**	P	**Pn**	**00 49 36.7**	**+3.2**
AGRP	**Agrapidokambos**	**4.50**	**318**	P	**Pn**	**00 49 34.7**	**+0.7**
USAK	**Uak-Merkez**	**4.53**	**37**	P	**Pn**	**00 49 37.0**	**+2.4**
USAK				IAML		00 50 23.0	
	comp=N,30nm,0.9s						
USAK				IAML		00 50 23.0	
	comp=E,10nm,1.2s						
ANX	**Ano Chora**	**4.54**	**321**	P	**Pn**	**00 49 34.7**	**0.0**
NEO	**Neokhori**	**4.58**	**337**	P	**Pn**	**00 49 35.3**	**+0.2**
BUCA	**Burdur, Bucak-**	**4.60**	**60**	P	**Pn**	**00 49 38.4**	**+2.8**
BUCA				S	**Sn**	**00 50 30.2**	**+1.2**
BUCA				IAML		00 50 48.0	
	comp=N,15nm,0.7s						
BUCA				IAML		00 50 51.0	
	comp=E,20nm,0.7s						
XOR	**Xorichti**	**4.64**	**337**	P	**Pn**	**00 49 36.1**	**0.0**
AGG	**Agios Georgios**	**4.68**	**327**	P	**Pn**	**00 49 37.1**	**+0.6**
PLEV	**Plevrona-Mesol**	**4.68**	**316**	P	**Pn**	**00 49 36.8**	**+0.2**
PVO	**Paravola**	**4.76**	**318**	P	**Pn**	**00 49 38.2**	**+0.6**
EVR	**Evrytania**	**4.84**	**323**	P	**Pn**	**00 49 38.9**	**+0.1**
KEPZ	**Antalya-Kepez**	**5.21**	**68**	P	**Pn**	**00 49 47.3**	**+3.4**
KEPZ				S	**Sn**	**00 50 45.6**	**+1.7**
SEDI	**Konya, Seydise**	**5.52**	**63**	P	**Pn**	**00 49 51.5**	**+3.4**
SEDI				S	**Sn**	**00 50 54.8**	**+3.2**
GAZI	**Gazipasa**	**5.61**	**77**	P	**Pn**	**00 49 50.8**	**+1.5**
GAZI				S	**Sn**	**00 50 51.1**	**-2.7**
DOGA	**KONYA_Doganhis**	**5.75**	**57**	P	**Pn**	**00 49 56.0**	**+4.7**
DOGA				S	**Sn**	**00 50 58.6**	**+1.3**
CSS	**Mathiatis**	**6.37**	**89**	P	**Pn**	**00 50 00.3**	**+0.5**
CSS				S	**Sn**	**00 51 12.4**	**-0.3**
BRTR	**Keskin Array B**	**7.90**	**52**	Pn	**Pn**	**00 50 22.4**	**+1.5**
	0.2nm,0.3s,baz=216,slow=14,SNR=12						
BRTR				LR	LR	00 54 22.8	
	comp=Z,22nm,18.3s,baz=143,slow=45 1.1nm,0.6s						
MMAI	**Mount Meron Ar**	**8.43**	**102**	Pn	**Pn**	**00 50 28.6**	**+0.5**
	1.4nm,0.3s,baz=264,slow=7.3,SNR=2.1 0.8nm,0.3s						
KZIT	**Kziot**	**8.52**	**117**	P	**Pn**	**00 50 29.4**	**+0.1**
	0.2nm40nm,0.8s						
KZIT	**Kziot**	**8.52**	**117**	P	**Pn**	**00 50 28.8**	**-0.5**
KZIT				S	**Sn**	**00 52 02.6**	**-2.9**
GEM	**Giv'at Ha'Em**	**8.58**	**100**	P	**Pn**	**00 50 30.1**	**-0.1**
GEM				S	**Sn**	**00 52 05.2**	**-1.8**
SALP	**Salfit**	**8.59**	**108**	P	**Pn**	**00 50 29.9**	**-0.3**
	0.2nm40nm,0.9s						
AMAZ	**Amatzia**	**8.60**	**112**	P	**Pn**	**00 50 29.6**	**-0.9**
AMAZ				S	**Sn**	**00 52 04.9**	**-2.6**
YITV	**Yitav**	**8.82**	**108**	P	**Pn**	**00 50 32.8**	**-0.5**
YITV				S	**Sn**	**00 52 10.2**	**-2.5**
UJAP	**Al Uja**	**8.85**	**108**	P	**Pn**	**00 50 34.7**	**+1.0**
	0.1nm19nm,0.9s						
RMNI	**Mount Ramon**	**8.95**	**118**	P	**Pn**	**00 50 34.6**	**-0.7**
RMNI				S	**Sn**	**00 52 13.7**	**-2.6**
MSBI	**Mazada**	**9.04**	**112**	P	**Pn**	**00 50 35.6**	**-0.8**
MSBI				S	**Sn**	**00 52 14.9**	**-3.2**
GHAJ	**Ghor Haditha**	**9.20**	**112**	P	**Pn**	**00 50 38.1**	**-0.5**
GHAJ				S	**Sn**	**00 52 19.2**	**-3.0**
ZFRI	**Zfri**	**9.28**	**117**	P	**Pn**	**00 50 38.8**	**-0.8**
ZFRI				S	**Sn**	**00 52 20.9**	**-3.1**
VAE	**Valguarnera**	**9.30**	**288**	Sn	**Sn**	**00 52 24.5**	**-0.3**
	0.2nm,0.3s,baz=199,slow=20,SNR=1.6						
HRFI	**Mount Harif**	**9.46**	**120**	P	**Pn**	**00 50 43.0**	**+0.8**
	0.1nm16nm,1.1s						
HRFI	**Mount Harif**	**9.46**	**120**	P	**Pn**	**00 50 41.6**	**-0.6**
HRFI				S	**Sn**	**00 52 25.7**	**-3.0**
EIL	**Elat**	**9.62**	**122**	Pn	**Pn**	**00 50 43.5**	**-0.8**
	0.5nm,0.3s,baz=297,slow=1.8,SNR=6.9						
EIL				Sn	**Sn**	**00 52 25.6**	**-6.8**
	0.3nm,0.3s,baz=311,slow=21,SNR=2.7						
EIL				LR	LR	00 56 10.6	
	comp=Z,47nm,18.3s,baz=259,slow=49 6.9nm,0.7s						
EIL	**Elat**	**9.62**	**122**	P	**Pn**	**00 50 45.2**	**+0.9**
EIL	**Elat**	**9.62**	**122**	P	**Pn**	**00 50 43.3**	**-1.0**
EIL				S	**Sn**	**00 52 28.9**	**-3.4**
ASF	**Jabal al Asfar**	**9.89**	**104**	P	**Pn**	**00 50 48.0**	**-0.2**
	0.2nm,0.3s,baz=127,slow=21,SNR=1.9						
ASF				Sn	**Sn**	**00 52 37.3**	**-2.0**
	baz=192,slow=3.8 1.1nm,0.5s						
MLR	**Muntele Rosu**	**10.37**	**1**	Pn	**Pn**	**00 50 56.6**	**+1.9**
	0.1nm,0.3s,baz=125,slow=12,SNR=3.1						
MLR				LR	LR	00 55 19.7	
	comp=Z,39nm,18.1s,baz=152,slow=40 1.9nm,0.9s						
VRAC	**Vranov**	**15.64**	**338**	Pn	**Pn**	**00 52 06.2**	**0.0**
	0.1nm,0.3s,baz=131,slow=13,SNR=4.4						
VRAC				LR	LR	00 58 36.7	
	comp=Z,17nm,20.3s,baz=126,slow=39 0.4nm,0.3s						
AKASG	**Malin Array Be**	**15.80**	**9**	Pn	**Pn**	**00 52 09.2**	**+0.9**
	1.2nm,0.3s,baz=202,slow=11,SNR=19						
AKASG				LR	LR	00 58 44.6	
	comp=Z,33nm,19.0s,baz=169,slow=39 3.3nm,0.8s						
KBZ	**Khabaz**	**15.89**	**52**	Pn	**Pn**	**00 52 11.4**	**+1.9**
	0.2nm,0.3s,baz=251,slow=10,SNR=8.0 2.6nm,0.7s						
GERES	**GERESS Array B**	**16.28**	**331**	Pn	**Pn**	**00 52 14.6**	**0.0**
	baz=144,slow=12,SNR=15 1.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**16.58**	**319**	Pn	**Pn**	**00 52 18.7**	**+0.2**
	0.1nm,0.3s,baz=161,slow=23,SNR=1.4						
DAVOX				LR	LR	01 00 22.9	
	comp=Z,50nm,18.7s,baz=94,slow=43 0.6nm,0.7s						
NACGM	**Naroch**	**19.80**	**2**	*e*P	**P**	**00 52 57.4**	**+1.1**
	comp=Z,8.0nm,0.9s,baz=183						
ESDC	**Sonseca Array**	**23.84**	**290**	P	**P**	**00 53 39.3**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=83,slow=8.8,SNR=8.1 comp=Z,0.4nm,0.6s						
MDT	**Midelt**	**25.08**	**273**	LR	LR	01 06 23.6	
	comp=Z,35nm,18.4s,baz=90,slow=43						
HFS	**Hagfors**	**26.19**	**347**	LR	LR	01 05 09.5	
	comp=Z,40nm,18.4s,baz=88,slow=38						
FINES	**FINESS Array B**	**26.35**	**1**	P	**P**	**00 54 01.2**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=153,slow=13,SNR=4.2 comp=Z,1.6nm,0.9s						
NOA	**NORSAR Array B**	**27.52**	**345**	LR	LR	01 04 49.9	
	comp=Z,12nm,21.9s,baz=120,slow=36						
EKA	**Eskdalemuir Ar**	**28.27**	**325**	P	**P**	**00 54 18.0**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=138,slow=7.7,SNR=4.0 comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.72**	**231**	P	**P**	**00 54 41.1**	**0.0**
	comp=Z,1.4nm,0.4s,baz=33,slow=8.9,SNR=21 comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**36.14**	**46**	P	**P**	**00 55 28.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=284,slow=4.6,SNR=3.6 comp=Z,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**40.89**	**51**	P	**P**	**00 56 07.7**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=276,slow=8.8,SNR=17 comp=Z,2.2nm,0.5s						
MKAR	**Makanchi Array**	**43.52**	**57**	P	**P**	**00 56 30.3**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=277,slow=7.2,SNR=28 comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**44.80**	**46**	P	**P**	**00 56 39.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=267,slow=8.6,SNR=6.3 comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**59.26**	**51**	P	**P**	**

KUR Kuril'sk 3.38 354 *e*P **Pn** **01 13 34.7 -1.7**
KUR AMB AMB 01 13 36.4
comp=E,80nm,0.2s
KUR *e*S **Sn** **01 14 10.4 -6.1**
KUR A A 01 14 20.0
comp=E,450nm,0.4s
KUR A A 01 14 20.0
comp=E,180nm,0.4s
REI Reidovoe 3.41 355 *e*P **Pn** **01 13 34.5 -2.2**
REI AMB AMB 01 13 36.4
comp=E,70nm,0.3s
REI *e*S **Sn** **01 14 09.7 -7.3**
REI A A 01 14 11.2
comp=E,60nm,0.2s
REI A A 01 14 11.2
comp=E,140nm,0.2s
JAR Ashorobuto 3.71 294 P **Pn** **01 13 40.0 -0.9**
JAR S **Sn** **01 14 20.4 -4.1**
JCH Churui 3.81 283 ⇓P **Pn** **01 13 42.2 -0.1**
JCH ⇓*e*S **Sn** **01 14 23.4 -3.7**
JTKR Abashiri--Toko 3.91 304 P **Pn** **01 13 42.9 -0.8**
JTKR *e*S **Sn** **01 14 25.7 -3.8**
ERM Erimo 3.92 274 *ce*P **Pn** **01 13 45.3 +1.6**
ERM pmax pmax
comp=Z,304nm,1.0s
ERM Erimo 3.92 274 **Pn** **01 13 44.5 +0.8**
JNBK Urakawa-nobuka 4.22 277 P **Pn** **01 13 47.5 -0.5**
JKK2 Kamakawa 2 4.61 298 P **Pn** **01 13 53.5 +0.2**
JKK2 *e*S **Sn** **01 14 45.2 -1.6**
JKA Kamikawa-asahi 4.81 300 Pn **Pn** **01 13 55.7 -0.3**
JKA Kamikawa-asahi 4.81 300 *e*P **Pn** **01 13 57.1 +1.1**
ASAJ Asahikawa 4.81 300 Pn **Pn** **01 13 57.1 +1.0**
comp=Z,12nm,0.3s,baz=139,slow=9.3,SNR=30
ASAJ Sn **Sn** **01 14 49.6 -2.1**
comp=Z,8.8nm,0.3s,baz=217,slow=32,SNR=11
ASAJ LR LR 01 15 58.2
comp=Z,338nm,21.3s,baz=64,slow=40
comp=Z,22nm,0.3s
JEW Eniwo 5.24 283 *e*P **Pn** **01 14 02.0 0.0**
JEW S **Sn** **01 15 00.2 -2.2**
JHR Hokuryu 5.26 293 *e*P **Pn** **01 14 02.9 +0.7**
JHR *e*S **Sn** **01 15 00.8 -1.9**
JANG Nango 5.41 256 P **Pn** **01 14 03.1 -1.3**
JANG *e*S **Sn** **01 15 00.3 -6.2**
JSS Shosan 5.42 300 P **Pn** **01 14 06.4 +2.0**
JOT Ohata 5.53 267 P **Pn** **01 14 05.4 -0.6**
JOT S **Sn** **01 15 04.6 -5.0**
JTM Tenmabayashi 5.63 261 **Pn** **01 14 06.3 -1.0**
JOM Ohasama 5.91 248 P **Pn** **01 14 10.6 -0.6**
JMK Ichinoseki 6.21 244 P **Pn** **01 14 14.5 -0.8**
JRBN Rebuntou 6.40 306 *e*P **Pn** **01 14 19.0 +1.2**
YSS Yuzhno-Sakhali 6.49 323 *e*P **Pn** **01 14 22.2 +3.1**
YSS *e*S **Sn** **01 15 35.9 +2.8**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS smax smax
comp=N,30nm,1.1s
YSS smax smax
comp=E,20nm,1.0s
YSS MLR MLR
comp=E,200nm,13.0s
YSS MLR MLR
comp=Z,300nm,13.0s
YSS MLR MLR
comp=N,300nm,14.0s
YSS Yuzhno-Sakhali 6.49 323 *e*P **Pn** **01 14 18.9 -0.2**
JOSM Okushiri--Mats 6.66 275 P **Pn** **01 14 21.0 -0.4**
MJAR Matsushiro Arr 9.53 239 Pn **Pn** **01 15 01.2 +0.3**
comp=N,0.2nm,0.3s,baz=36,slow=12,SNR=12
MJAR Sn **Sn** **01 16 42.6 -5.4**
comp=N,0.1nm,0.3s,baz=323,slow=19,SNR=1.3
comp=N,2.9nm,0.5s
MJAR Matsushiro Arr 9.53 239 **Pn** **01 15 00.4 -0.5**
MAJO Matsushiro 9.53 239 *i* P **Pn** **01 15 00.9 0.0**
MAJO Matsushiro 9.53 239 Pn **Pn** **01 15 00.3 -0.6**
MJB9 Matsu-Tunnel 9.53 239 Pn **Pn** **01 15 01.0 +0.1**
JGF Kuroka 10.65 238 Pn **Pn** **01 15 16.5 +0.2**
JHJ2 Mitsune 11.08 221 Pn **Pn** **01 15 20.9 -1.2**
JHJ Hachijo jima 2 11.09 221 Pn **Pn** **01 15 19.6 -2.7**
comp=N,10.0nm,0.3s,baz=275,slow=24,SNR=7.8
JHJ Sn Sn 01 17 15.2 -11
comp=N,4.0nm,0.3s,baz=233,slow=22,SNR=1.8
comp=N,44nm,0.6s
USRK Ussuriysk Ar. 12.24 286 Pn **Pn** **01 15 37.8 -0.1**
comp=N,0.3nm,0.3s,baz=94,slow=12,SNR=2.6
USRK LR LR 01 20 28.1
comp=N,71nm,21.1s,baz=147,slow=38
comp=N,2.6nm,0.6s
PETK Petropavlovsk- 12.87 26 LR LR 01 23 02.4
comp=N,83nm,18.2s,baz=220,slow=48
BNX BinXian 15.64 291 ⇓P **Pn** **01 16 22.0 -1.9**
BNX pmax pmax
comp=N,18nm,1.0s
KSRS Korea Array 16.37 261 Pn **Pn** **01 16 32.4 -1.0**
comp=N,0.2nm,0.3s,baz=72,slow=9.0,SNR=4.3
KSRS LR LR 01 21 57.5
comp=N,32nm,21.3s,baz=235,slow=34
comp=N,0.8nm,0.5s
JNU Nakatsue 16.40 244 Pn **Pn** **01 16 32.7 -1.2**
comp=N,0.4nm,0.3s,baz=38,slow=7.9,SNR=5.0
comp=N,4.1nm,0.7s
HEH HeiHe 16.76 307 *e*P **Pn** **01 16 39.5 +1.2**
HEH pmax pmax
comp=N,8.0nm,0.9s
HEH L L
comp=N,64nm,15.3s
HEH L L
comp=N,140nm,13.6s
HEH L L
comp=N,200nm,15.5s
MA2 Magadan 17.79 4 LR LR 01 24 07.3
comp=N,44nm,18.3s,baz=125,slow=38
ZEA Zeya 18.43 317 *e*P **P** **01 16 59.3 +0.4**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA Zeya 18.43 317 *e*P **P** **01 16 59.3 +0.4**
SEY Seymchan 21.23 5 P **P** **01 17 28.4 -0.9**
comp=Z,1.0nm,0.3s,baz=177,slow=12,SNR=5.2
comp=Z,1.0nm,0.3s
SEY Seymchan 21.23 5 ⇓*e*P **P** **01 17 28.5 -0.8**
SEY pmax pmax
comp=Z,7.0nm,1.0s
SEY Seymchan 21.23 5 *e*P **P** **01 17 28.5 -0.8**
HILR Hailar Array B 21.34 301 P **P** **01 17 30.5 -0.1**
comp=Z,8.0nm,0.5s,baz=89,slow=10,SNR=8.8
comp=Z,8.0nm,0.5s
YAK Yakutsk 23.09 337 LR LR 01 26 22.7
comp=Z,48nm,21.4s,baz=138,slow=35
YAK Yakutsk 23.09 337 *e*P **P** **01 17 47.8 -1.3**
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK Yakutsk 23.09 337 *e*P **P** **01 17 47.8 -1.3**
NJ2 Nanjing 25.46 257 *e*P **P** **01 18 11.0 -0.6**
NJ2 pmax pmax
comp=E,25nm,0.5s
HNS HongShan 26.23 271 ⇓P **P** **01 18 20.5 +1.9**
HNS pmax pmax
comp=E,6.0nm,0.7s
H11N2 WAKE ISLAND Hy 27.08 139 T T 01 46 41.4
baz=329,slow=76
H11N1 WAKE ISLAND Hy 27.09 139 T T 01 46 43.8
baz=329,slow=76
H11N3 WAKE ISLAND Hy 27.10 139 T T 01 46 51.7
baz=329,slow=76,SNR=23
HHC Hu-ho-hao-te 27.54 280 *e*P **P** **01 18 30.0 -0.5**
HHC pmax pmax
comp=E,11nm,0.5s
HHC pmax pmax
comp=E,71nm,3.8s
H11S1 WAKE ISLAND Hy 28.03 141 T T 01 47 58.8
baz=329,slow=76
H11S3 WAKE ISLAND Hy 28.04 141 T T 01 47 55.5
baz=329,slow=76
H11S2 WAKE ISLAND Hy 28.05 141 T T 01 48 02.3
baz=329,slow=76
GUMO Guam 28.35 187 LR LR 01 29 00.1
comp=E,20nm,20.0s,baz=80,slow=35
BTO2 Baotou 28.80 281 *e*P **P** **01 18 38.8 -3.0**
BTO2 pP **pP** **01 18 43.3 -0.4**
BTO2 sP **sP** **01 18 45.8 +1.3**
BTO2 PP **PnPn** **01 19 31.8 -0.7**
BTO2 pmax pmax
comp=E,18nm,0.6s
BTO2 pmax pmax
comp=E,120nm,4.8s
ULN Ulaanbaatar 29.64 296 *ce*P **P** **01 18 50.0 +0.8**
ULN pmax pmax
comp=Z,15nm,1.2s
ULN Ulaanbaatar 29.64 296 P **P** **01 18 49.4 +0.2**
ULN Ulaanbaatar 29.64 296 *e*P **P** **01 18 50.0 +0.8**
SONM Songino Array 30.08 296 P **P** **01 18 54.0 +1.0**
comp=Z,5.3nm,0.7s,baz=86,slow=8.1,SNR=27
SONM LR LR 01 32 05.0
comp=Z,122nm,19.0s,baz=64,slow=39
comp=Z,5.3nm,0.7s
SONM Songino Array 30.08 296 P **P** **01 18 52.8 -0.3**
SONM pmax pmax
comp=Z,20nm,1.3s
SONM Songino Array 30.08 296 **P** **01 18 52.8 -0.3**
TLY Talaya 31.73 304 LR LR 01 32 29.0
comp=Z,70nm,18.4s,baz=90,slow=37
ZAK Zakamensk 31.98 301 *e*P **P** **01 19 12.4 +2.7**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
M11K Mekoryuk 33.11 40 P **P** **01 19 19.5 +0.2**
baz=257
J14K Nanvaranak Lak 34.90 37 P **P** **01 19 35.0 +0.2**
baz=256
L14K Kuka Creek 34.99 39 P **P** **01 19 35.9 +0.2**
baz=259
M14K Bethel 35.23 40 P **P** **01 19 37.7 0.0**
baz=261
N14K Kuskokwak Cree 35.24 42 P **P** **01 19 37.9 +0.1**
baz=262
F15K North Star Dit 35.28 32 P **P** **01 19 38.2 +0.1**
baz=251
O14K Tigyukauivet M 35.37 43 P **P** **01 19 39.2 +0.3**
baz=263
K15K Wolf Creek Mou 35.71 38 P **P** **01 19 41.9 0.0**
baz=259
H16K Elim 35.94 34 P **P** **01 19 43.3 -0.5**
baz=255
C16K Lisburne Hills 35.96 27 P **P** **01 19 44.1 +0.2**
baz=247
N15K Kwethluk River 36.07 42 P **P** **01 19 45.1 +0.1**
baz=263
S14K Fog Glacier 36.09 48 P **P** **01 19 45.4 +0.1**
baz=269
G16K Koyuk River 36.09 33 P **P** **01 19 45.5 +0.4**
baz=254
O15K Ungalikthiuk R 36.10 43 P **P** **01 19 45.0 -0.2**
baz=265
J16K Anvik River 36.33 36 P **P** **01 19 47.2 0.0**
baz=258
D17K Noatak River 36.54 29 P **P** **01 19 48.7 -0.2**
baz=250
L16K Owhat River 36.57 39 P **P** **01 19 48.8 -0.4**
baz=262
GTA2 Gaotai 36.58 283 *e*P **P** **01 19 52.0 +2.3**
GTA2 pmax pmax
comp=Z,3.0nm,0.8s
M16K Timber Creek 36.73 40 P **P** **01 19 50.5 0.0**
baz=263
N16K Nishlik Lake 36.76 41 P **P** **01 19 50.6 -0.3**
baz=264
C17K DeLong Mountai 36.78 27 P **P** **01 19 51.2 +0.2**
baz=249
E17K Hotham Inlet 36.80 30 P **P** **01 19 51.0 -0.1**
baz=252
G17K Kiwalik Mounta 36.81 33 P **P** **01 19 51.3 +0.1**
baz=256
F17K Baldwin Pennin 36.83 31 P **P** **01 19 51.4 +0.1**
baz=254
J17K VABM Dome 37.02 36 P **P** **01 19 53.3 +0.2**
baz=260
L17K Donlin 37.18 39 P **P** **01 19 54.6 +0.2**
baz=262
K17K Iditarod 37.26 38 P **P** **01 19 55.6 +0.5**
baz=262
E18K Tukpahlearik C 37.35 30 P **P** **01 19 56.1 +0.3**
baz=253
F18K Selawik 37.48 31 P **P** **01 19 57.5 +0.6**
baz=255
M17K Holitna River 37.50 40 P **P** **01 19 57.3 +0.2**
baz=264
C18K Utuk River 37.52 28 P **P** **01 19 57.3 0.0**
baz=251
O17K Koliganek Bris 37.53 43 P **P** **01 19 57.7 +0.3**
baz=266
N17K Nushagak Hills 37.54 41 P **P** **01 19 57.8 +0.3**
baz=265
H18K Honhosa River 37.67 34 P **P** **01 19 58.6 +0.1**
baz=258
G18K Tagagawik 37.71 32 P **P** **01 19 58.7 -0.2**
G18K Tagagawik 37.71 32 P **P** **01 19 58.7 -0.2**
baz=257
R17L Mt. Peulik Vol 37.85 46 P **P** **01 19 59.8 -0.3**
baz=270
L18K Granite Mounta 37.94 39 P **P** **01 20 00.9 +0.1**
baz=264
J18K Innoko River 38.08 37 P **P** **01 20 01.9 -0.2**
baz=262
Q17K Contact Creek 38.10 45 P **P** **01 20 02.0 -0.4**
baz=270
N18K Kiae Creek 38.19 41 P **P** **01 20 02.8 -0.2**
baz=266
GCSA Galena City Sc 38.21 34 P **P** **01 20 03.5 +0.5**
baz=260
C19K Lookout Ridge 38.22 27 P **P** **01 20 03.0 -0.2**
baz=252
F19K Shaleruckik Mo 38.27 31 P **P** **01 20 03.3 -0.2**
baz=257
G19K Purcell Mounta 38.39 32 P **P** **01 20 04.2 -0.4**
baz=258
P18K Big Mountain, 38.46 43 P **P** **01 20 04.9 -0.5**
baz=269
O18K Koktuh Hills 38.49 42 P **P** **01 20 05.2 -0.3**
baz=268
H19K Roundabout Mou 38.53 33 **P** **01 20 06.0 +0.3**
H19K Roundabout Mou 38.53 33 P **P** **01 20 05.6 -0.1**
baz=260,SNR=5.1
D19K Kuna River 38.56 28 P **P** **01 20 05.9 -0.1**
baz=254
Q18K Katmai Hardscr 38.57 44 P **P** **01 20 06.0 -0.3**
baz=270
E19K Redstone River 38.62 30 **P** **01 20 06.7 +0.2**
E19K Redstone River 38.62 30 P **P** **01 20 06.4 -0.1**
baz=257
J19K Poorman 38.64 36 P **P** **01 20 06.4 -0.3**
baz=262
L19K White Mountain 38.79 39 P **P** **01 20 07.7 -0.4**
baz=266
N19K Bonanza Creek 38.89 41 P **P** **01 20 09.1 +0.1**
baz=268
M19K Big River Lodg 38.99 39 P **P** **01 20 09.2 -0.5**
baz=266
F20K Avaraart Lake 39.10 31 P **P** **01 20 10.5 0.0**
baz=259
D20K Etivluk River 39.15 28 P **P** **01 20 10.6 -0.3**
baz=256
H20K Anotleneega Mo 39.16 34 P **P** **01 20 10.9 -0.2**
baz=261
E20K Nigu River 39.19 29 P **P** **01 20 11.3 0.0**
baz=257
K20K Telida 39.25 37 P **P** **01 20 12.1 +0.2**
baz=265
B20K Meade River 39.30 26 P **P** **01 20 12.7 +0.6**
baz=254
J20K Nowinta River 39.30 36 P **P** **01 20 12.3 0.0**
baz=264
P19K Oil Pt 39.48 43 P **P** **01 20 13.8 0.0**
baz=270
OHAK Old Harbor 39.52 47 P **P** **01 20 14.4 +0.3**
baz=273
M20K Styx River 39.59 39 P **P** **01 20 15.0 +0.2**
baz=267
O20K Slope Mountain 39.79 42 P **P** **01 20 15.9 -0.6**
baz=270
KDAK Kodiak Island 39.87 46 P **P** **01 20 16.3 -0.8**
comp=Z,7.9nm,0.7s,baz=239,slow=1.4,SNR=8.1
comp=Z,7.9nm,0.7s
KDAK Kodiak Island 39.87 46 P **P** **01 20 16.1 -0.9**
KDAK pmax pmax
comp=Z,10.0nm,0.8s
KDAK Kodiak Island 39.87 46 P **P** **01 20 16.1 -0.9**
KDAK IAmb IAmb 01 20 17.0
comp=Z,10nm,0.8s
KDAK Kodiak Island 39.87 46 P **P** **01 20 16.9 -0.1**
baz=273
G21K Allakaket 39.87 32 P **P** **01 20 17.0 0.0**
baz=262
C21K Knifeblade Rid 39.89 28 P **P** **01 20 17.5 +0.4**
baz=257
F21K Alatna River 39.99 31 P **P** **01 20 18.1 +0.1**
baz=261
B21K Ikpikpuk River 40.06 27 P **P** **01 20 18.7 +0.3**
baz=257
PPLA Purkeypile 40.07 38 P **P** **01 20 18.9 0.0**
baz=267
CAST Castle Rocks 40.15 37 P **P** **01 20 20.1 +0.8**
CAST Castle Rocks 40.15 37 P **P** **01 20 19.5 +0.2**
baz=267
F22K John River 40.54 31 P **P** **01 20 22.6 +0.1**
baz=262
B22K Teshekpuk Lake 40.62 26 P **P** **01 20 23.4 +0.3**
baz=257
H22K Ishtalitna Cre 40.65 33 P **P** **01 20 23.2 -0.3**
baz=264
L22K Petersville 40.71 38 P **P** **01 20 23.8 -0.2**
baz=269
BRSE Bradley Lake S 40.75 43 P **P** **01 20 24.6 +0.3**
baz=272
MLY Manley 40.84 35 P **P** **01 20 25.3 +0.2**
baz=266
TRF Thorofare Moun 40.96 37 P **P** **01 20 25.4 -0.8**
baz=268
PZH PanZhiHua 41.02 263 P **P** **01 20 28.3 +1.2**
G23K Bananza Creek 41.28 32 P **P** **01 20 28.5 -0.1**
baz=265
D23K Nanushuk River 41.31 29 P **P** **01 20 29.4 +0.6**
D23K Nanushuk River 41.31 29 P **P** **01 20 28.6 -0.1**
baz=262
H23K Yukon River 41.40 33 P **P** **01 20 29.2 -0.4**
baz=266
I23K Minto, Yukon-K 41.44 34 P **P** **01 20 29.7 -0.1**
baz=267
C23K Itkillik River 41.47 27 P **P** **01 20 30.6 +0.5**
C23K IAmb IAmb 01 20 31.6
comp=Z,12nm,0.7s
C23K Itkillik River 41.47 27 P **P** **01 20 29.8 -0.2**
baz=261
PMR Palmer 41.49 40 P **P** **01 20 29.9 -0.4**
baz=271
NEA2 Nenana 41.53 35 P **P** **01 20 30.5 -0.2**
baz=268
MCK McKinley 41.57 37 P **P** **01 20 30.6 -0.4**
baz=269
E23K Chandalar 41.58 30 P **P** **01 20 31.9 +0.8**
E23K IAmb IAmb 01 20 33.3
comp=Z,9.6nm,1.1s
E23K Chandalar 41.58 30 P **P** **01 20 31.0 -0.1**
baz=264,SNR=6.9
RND Reindeer 41.60 37 P **P** **01 20 31.0 -0.4**
RND pmax pmax
comp=Z,6.0nm,1.0s
RND Reindeer 41.60 37 P **P** **01 20 31.0 -0.4**
TOLK Toolik Lake Re 41.66 29 P **P** **01 20 31.5 -0.2**
baz=263
KNK Knik Glacier 41.81 40 P **P** **01 20 33.1 0.0**
baz=272
SML Sawmill 41.86 39 P **P** **01 20 33.1 -0.4**
baz=272
D24K Happy Valley 41.99 28 P **P** **01 20 35.3 +0.9**
D24K Happy Valley 41.99 28 P **P** **01 20 34.4 0.0**
baz=263
E24K Your Creek 42.00 30 P **P** **01 20 34.9 +0.3**
E24K IAmb IAmb 01 20 36.2
comp=Z,8.5nm,0.9s
E24K Your Creek 42.00 30 P **P** **01 20 34.3 -0.2**
baz=265,SNR=8.0
H24K Noodor Dome 42.09 33 P **P** **01 20 35.4 +0.1**
baz=268
WAT6 Susitna Watana 42.12 38 P **P** **01 20 35.3 -0.4**
baz=271
M23K Glacier View 42.15 39 P **P** **01 20 35.8 0.0**
baz=272
DGZ Jazzator, Alta 42.18 302 *i* P **P** **01 20 37.0 +0.6**
DGZ pmax pmax
comp=Z,6.0nm,1.1s
F24K Squaw Lake 42.18 31 P **P** **01 20 36.0 0.0**
baz=266
POKR Poker Plat Res 42.25 34 P **P** **01 20 36.2 -0.3**
baz=269
DHY Denali Highway 42.27 38 P **P** **01 20 36.0 -1.0**
baz=271
G24K Hadweenzic Riv 42.29 32 P **P** **01 20 38.0 +1.1**
G24K IAmb IAmb 01 20 38.8
comp=Z,10nm,1.1s
G24K Hadweenzic Riv 42.29 32 P **P** **01 20 36.4 -0.4**
baz=267,SNR=7.3
SCM Sheep Creek Mo 42.34 39 P **P** **01 20 37.4 0.0**
baz=273
P23K Montague Islan 42.41 42 P **P** **01 20 38.0 0.0**
baz=275
HDA Harding Lake 42.45 36 P **P** **01 20 38.3 +0.1**
baz=270
ILAR Eielson Array 42.48 35 P **P** **01 20 37.5 -1.0**
comp=Z,1.9nm,1.0s,baz=253,slow=6.5,SNR=15
comp=Z,1.9nm,1.0s
ILAR Eielson Array 42.48 35 P **P** **01 20 38.8 +0.4**
D25K Kavik River 42.88 28 P **P** **01 20 41.5 -0.2**
D25K IAmb IAmb 01 20 42.9
comp=Z,9.9nm,0.8s
D25K Kavik River 42.88 28 P **P** **01 20 42.0 +0.3**
baz=265,SNR=12
ZAA0 Zalesovo Array 42.88 309 P **P** **01 20 41.4 -0.4**
ZALV Zalesovo Beam 42.88 309 P **P** **01 20 42.2 +0.4**
comp=Z,1.5nm,0.8s,baz=81,slow=9.2,SNR=6.8
ZALV PcP **PcP** **01 22 32.3 -0.2**
comp=Z,0.8nm,0.7s,baz=83,slow=4.5,SNR=2.1
ZALV LR LR 01 40 33.8
comp=Z,34nm,18.8s,baz=102,slow=39
comp=Z,1.5nm,0.8s
ZALV Zalesovo Beam 42.88 309 *i* P **P** **01 20 44.9 +3.1**
ZALV pmax pmax
comp=Z,4.0nm,0.9s
ZALV Zalesovo Beam 42.88 309 **P** **01 20 41.6 -0.2**
KLU Klutina 43.02 40 P **P** **01 20 43.1 +0.1**
baz=274
F25K Christian Rive 43.04 31 P **P** **01 20 43.4 +0.4**
F25K Christian Rive 43.04 31 P **P** **01 20 43.1 +0.1**
baz=268
PRP Porcupine Dome 43.05 34 P **P** **01 20 43.2 0.0**
baz=270
E25K Arctic Village 43.09 30 P **P** **01 20 43.5 +0.1**
baz=267
J25K Salcha River, 43.13 35 P **P** **01 20 43.7 -0.1**
baz=271
PAX Paxson 43.15 38 P **P** **01 20 43.6 -0.3**
baz=273
C26K Camden Bay 43.44 27 P **P** **01 20 46.2 +0.2**
baz=266
F26K Sheenjek River 43.62 31 P **P** **01 20 47.7 +0.1**
baz=269,SNR=6.7
N25K Chitina, Valde 43.65 40 P **P** **01 20 48.4 +0.3**
baz=275
BMRM Bremner River 43.71 41 P **P** **01 20 48.9 +0.5**
baz=276
G26K Porcupine Rive 43.75 32 P **P** **01 20 49.0 +0.4**
baz=270
C27K Jago River 43.84 28 P **P** **01 20 49.4 +0.1**
baz=268
KAIM Kayak Island 43.91 42 P **P** **01 20 50.5 +0.4**
baz=277
L26K Log Cabin Wild 44.11 37 P **P** **01 20 52.0 +0.4**
baz=275
M26K Nabesna, AK 44.33 38 IAmb IAmb 01 20 55.3
comp=Z,6.4nm,0.7s
M26K Nabesna, AK 44.33 38 P **P** **01 20 53.3 -0.1**
baz=276
MCARA McCarthy VSAT 44.42 40 P **P** **01 20 54.0 -0.2**
baz=277
CRQM Cirque 44.44 41 P **P** **01 20 54.8 +0.3**
CRQE Cirque 44.47 41 P **P** **01 20 54.7 0.0**
baz=277
E27K Coleen River 44.58 30 IAmb IAmb 01 20 57.2
comp=Z,5.5nm,0.8s
E27K Coleen River 44.58 30 P **P** **01 20 55.5 +0.2**
baz=271
K27K Chicken 44.59 36 IAmb IAmb 01 20 57.0
comp=Z,9.7nm,1.2s
G27K Doyon Strip 44.60 32 P **P** **01 20 55.4 -0.1**
baz=272
H27K Steamboat Moun 44.68 33 P **P** **01 20 57.1 +0.9**
H27K IAmb IAmb 01 20 58.2
comp=Z,9.8nm,1.2s
H27K Steamboat Moun 44.68 33 P **P** **01 20 56.6 +0.5**
baz=273,SNR=7.5

I27K **Kandik River** 44.68 34 P P 01 20 56.4 +0.2
baz=274
L27K **Beaver Creek,** 44.80 37 IAmb IAmb 01 20 59.8
comp=Z,6.2nm,0.9s
L27K **Beaver Creek,** 44.80 37 P P 01 20 57.4 +0.2
baz=276
D27M **Malcolm River** 44.80 29 P P 01 20 57.5 +0.4
baz=270
BCAR **Beaver Creek A** 44.81 37 P P 01 20 57.7 +0.4
F28M **Old Crow** 45.25 31 IAmb IAmb 01 21 02.7
comp=Z,5.9nm,1.0s
F28M **Old Crow** 45.25 31 P P 01 21 01.3 +0.6
baz=273,SNR=7.5
BVCY **Beaver Creek** 45.31 38 P P 01 21 01.5 +0.2
baz=278
E28M **Babbage River** 45.33 29 IAmb IAmb 01 21 03.1
comp=Z,5.2nm,1.0s
E28M **Babbage River** 45.33 29 P P 01 21 01.6 +0.3
baz=272
I28M **Miner Creek** 45.38 34 P P 01 21 01.9 +0.1
I28M **Miner Creek** 45.38 34 P P 01 21 02.5 +0.6
baz=275,SNR=6.6
YUK3 **Moose Creek** 45.59 39 P P 01 21 04.0 +0.4
baz=278
D28M **Stokes Point** 45.59 28 P P 01 21 03.6 +0.4
baz=272
O28M **Mount Upton** 45.87 40 P P 01 21 06.4 +0.4
baz=280
E29M **Blow River** 45.95 30 IAmb IAmb 01 21 08.3
comp=Z,9.7nm,1.0s
E29M **Blow River** 45.95 30 P P 01 21 06.3 +0.2
baz=274,SNR=7.8
H29M **Whitestone** 45.95 33 P P 01 21 06.3 0.0
baz=276
YUK8 **Steele Glacier** 45.99 40 P P 01 21 06.9 -0.1
baz=279
G29M **Pine Creek** 46.02 32 P P 01 21 07.5 +0.7
G29M IAmb IAmb 01 21 08.9
comp=Z,7.7nm,0.9s
G29M **Pine Creek** 46.02 32 P P 01 21 07.0 +0.3
baz=276,SNR=5.7
KRVT **Keravat (AS076** 46.08 175 LR LR 01 37 11.8
comp=Z,14nm,20.4s,baz=284,slow=32
MK31 **Makanchi Array** 46.29 300 *ce* P P 01 21 10.4 +1.2
MKAR **Makanchi Array** 46.29 300 P P 01 21 09.9 +0.7
comp=Z,2.9nm,0.8s,baz=74,slow=8.9,SNR=21
MKAR LR LR 01 40 51.5
comp=Z,57nm,18.8s,baz=152,slow=36
comp=Z,2.9nm,0.8s
MKAR **Makanchi Array** 46.29 300 P P 01 21 09.6 +0.4
M29M **Somme Creek** 46.41 38 P P 01 21 10.0 0.0
baz=279
L29M **L29M** 46.46 37 P P 01 21 10.6 +0.3
baz=279
MAKZ **Makanchi** 46.49 300 P P 01 21 11.0 +0.3
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ **Makanchi** 46.49 300 P P 01 21 11.0 +0.3
MAKZ IAmb IAmb 01 21 12.5
comp=Z,3.6nm,0.8s
EPYK **Eagle Plains** 46.60 32 IAmb IAmb 01 21 12.5
comp=Z,7.8nm,1.0s
EPYK **Eagle Plains** 46.60 32 P P 01 21 11.8 +0.4
baz=277
K29M **Barlow Dome** 46.61 36 IAmb IAmb 01 21 13.4
comp=Z,8.6nm,1.1s
K29M **Barlow Dome** 46.61 36 P P 01 21 11.5 -0.1
baz=279,SNR=6.6
G30M **tAoh Zraii Nji** 46.72 32 P P 01 21 12.1 -0.2
baz=277,SNR=6.3
YUK6 **Outpost Mounta** 46.72 40 P P 01 21 12.7 +0.1
baz=281
F30M **Barrier River** 46.81 31 IAmb IAmb 01 21 15.3
comp=Z,11nm,1.2s
F30M **Barrier River** 46.81 31 P P 01 21 13.2 +0.3
baz=277,SNR=5.1
I30M **Mount Dempster** 46.90 34 P P 01 21 13.7 -0.1
I30M **Mount Dempster** 46.90 34 P P 01 21 13.8 -0.1
baz=278,SNR=9.7
J30M **Hart River** 47.01 35 IAmb IAmb 01 21 16.8
comp=Z,4.3nm,1.1s
J30M **Hart River** 47.01 35 P P 01 21 14.6 -0.1
baz=279
M30M **Minto, Yukon** 47.15 38 P P 01 21 15.6 -0.2
baz=281
HYT **Haines Junctio** 47.16 40 P P 01 21 16.8 +0.9
HYT **Haines Junctio** 47.16 40 P P 01 21 15.7 -0.2
baz=282
N30M **Aishikik Lake** 47.23 39 P P 01 21 16.1 -0.3
baz=281
P29M **Windy Craggy** 47.29 42 P P 01 21 16.7 -0.1
baz=283
KURK **Kurchatov** 47.36 306 *ce* P P 01 21 18.8 +1.4
KURK pmax pmax
comp=Z,10.0nm,1.7s
KURK **Kurchatov** 47.36 306 P P 01 21 18.0 +0.5
KURK IAmb IAmb 01 21 19.7
comp=Z,8.6nm,1.2s
KURK **Kurchatov** 47.36 306 *eP* P 01 21 18.8 +1.4
KURBB **Kurchatov Arra** 47.44 306 P P 01 21 18.7 +0.6
comp=Z,0.9nm,0.2s,baz=76,slow=8.5,SNR=16
comp=Z,0.9nm,0.2s
G31M **Satah River** 47.49 31 P P 01 21 18.4 +0.2
baz=279
INK **Inuvik** 47.57 30 P P 01 21 19.1 +0.4
comp=Z,3.7nm,0.8s,baz=270,slow=16,SNR=8.8
comp=Z,3.7nm,0.8s
INK **Inuvik** 47.57 30 P P 01 21 19.2 +0.4
INK IAmb IAmb 01 21 20.2
comp=Z,5.2nm,0.9s
INK **Inuvik** 47.57 30 P P 01 21 18.7 0.0
baz=278,SNR=5.4
P30M **Million Dollar** 47.57 41 P P 01 21 19.0 -0.1
baz=283
F31M **Tsiigehtchic** 47.61 31 P P 01 21 19.2 +0.1
baz=279
H31M **Peel River** 47.64 33 P P 01 21 19.2 -0.3
baz=280,SNR=8.0
N31M **Braeburn, Yuko** 47.84 39 P P 01 21 21.4 +0.3
baz=282
O30N **Mendenhall** 47.85 40 P P 01 21 21.2 0.0
baz=283
CMAR **Chiang Mai Arr** 47.93 256 P P 01 21 22.8 +0.5
comp=Z,1.2nm,0.3s,baz=63,slow=9.2,SNR=5.2
comp=Z,1.2nm,0.3s
CMAR **Chiang Mai Arr** 47.93 256 *i* P P 01 21 23.2 +0.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
M31M **Drury Creek, Y** 48.32 38 P P 01 21 24.3 -0.5
baz=283
WHY **Whitehorse** 48.45 40 P P 01 21 25.6 -0.3
baz=284
S31K **Pelican** 48.45 44 P P 01 21 25.7 -0.1
baz=285
SKAG **Skagway** 48.53 41 P P 01 21 26.5 +0.1
baz=284
SIT **Sitka** 49.17 45 P P 01 21 31.0 -0.3
baz=287
P32M **Atlin** 49.29 41 P P 01 21 32.5 +0.2
baz=286
P33M **Teslin, Yukon** 49.55 40 P P 01 21 34.2 -0.1
baz=286
MMPY **Sheldon Lake,** 49.64 37 P P 01 21 35.1 +0.2
baz=285
CRAG **Craig** 50.83 46 P P 01 21 43.9 0.0
baz=289
WRAK **Wrangell Islan** 50.93 45 P P 01 21 45.0 +0.3
baz=289
EVN **Everest** 51.35 275 P P 01 21 48.3 -0.7
BVAR **Borovoye Array** 51.42 311 P P 01 21 48.6 +0.2
comp=Z,0.7nm,0.3s,baz=97,slow=5.1,SNR=7.9
comp=Z,0.7nm,0.3s
DLBC **Dease Lake** 51.45 42 P P 01 21 48.4 -0.3
baz=289
AAK **Ala-Archa** 53.02 297 *ce* P P 01 22 02.2 +1.5
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK **Ala-Archa** 53.02 297 *eP* P 01 22 02.2 +1.5
KSH2 **Kashi** 53.88 293 P P 01 22 08.3 +1.3
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
ARSB **Arslanbob** 54.62 297 P P 01 22 13.0 +0.6
ARSB pmax pmax
comp=Z,15nm,1.0s
ARSB **Arslanbob** 54.62 297 P P 01 22 13.0 +0.6
SVE **Sverdlovsk** 55.15 318 *eP* P 01 22 16.3 +0.6
SVE **Sverdlovsk** 55.15 318 *eP* P 01 22 16.3 +0.6

KK31 **Karatay Array** 55.42 300 P P 01 22 18.5 +0.5
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KK31 **Karatay Array** 55.42 300 P P 01 22 18.5 +0.5
KK31 IAmb IAmb 01 22 19.3
comp=Z,2.8nm,0.7s
KKAR **Karatay Array** 55.42 300 P P 01 22 17.8 -0.2
KKAR **Karatay Array** 55.42 300 P P 01 22 17.8 -0.2
DRK **Karamyk** 56.29 295 P P 01 22 24.9 +0.3
DRK pmax pmax
comp=Z,7.0nm,1.0s
DRK **Karamyk** 56.29 295 P P 01 22 24.9 +0.3
DRK IAmb IAmb 01 22 25.8
comp=Z,7.0nm,1.0s
ARTI **Arti** 56.46 318 LR LR 01 49 09.0
comp=Z,43nm,18.3s,baz=98,slow=39
ARTI **Arti** 56.46 318 *c i* P P 01 22 25.8 +0.6
ARTI 01 23 21.4
ARTI S S 01 30 16.3 +0.5
ARTI pmax pmax
comp=Z,8.0nm,1.0s
ARTI **Arti** 56.46 318 P P 01 22 25.2 0.0
ARTI IAmb IAmb 01 22 26.4
comp=Z,8.1nm,1.0s
YKA **Yellowknife Ar** 56.86 33 P P 01 22 27.5 -0.4
comp=Z,1.4nm,0.9s,baz=298,slow=5.4,SNR=4.0
comp=Z,1.4nm,0.9s
YKA **Yellowknife Ar** 56.86 33 *i* P P 01 22 29.2 +1.3
YKA pmax pmax
comp=Z,1.0nm,0.9s
GAR **Garm** 57.52 295 P P 01 22 32.9 -0.2
CHGR **Chuyangaron** 58.48 296 *i* P P 01 22 40.0 +0.2
CHGR pmax pmax
comp=Z,24nm,0.8s
AB31 **Akbulak array** 58.97 310 P P 01 22 43.5 +0.5
ABKAR **Akbulak array** 58.97 310 P P 01 22 42.9 0.0
AKTO **Aktyubinsk** 59.47 312 LR LR 01 48 58.4
comp=Z,38nm,20.7s,baz=141,slow=36
KIRV **Kirov** 59.65 323 *ce* P P 01 22 49.0 +1.6
SHAA **Shahritus** 59.74 295 IAmb IAmb 01 22 50.3
comp=Z,13nm,0.8s
KBL **Kabul** 60.71 292 P P 01 22 54.8 -0.7
KBL pmax pmax
comp=Z,7.0nm,1.0s
KBL **Kabul** 60.71 292 P P 01 22 54.8 -0.7
KBL IAmb IAmb 01 22 56.0
comp=Z,7.3nm,1.0s
ARCES **ARCESS Array B** 61.33 340 P P 01 22 58.4 -0.4
comp=Z,0.9nm,0.6s,baz=46,slow=6.4,SNR=10
ARCES LR LR 01 54 25.7
comp=Z,33nm,18.5s,baz=96,slow=41
comp=Z,0.9nm,0.6s
ARCES **ARCESS Array B** 61.33 340 P P 01 22 59.1 +0.3
ARCES IAmb IAmb 01 23 03.9
comp=Z,8.0nm,1.2s
KLMR **Klimovskoe** 62.51 329 *eP* P 01 23 05.7 -1.2
KLMR pmax pmax
comp=Z,14nm,1.5s
WB0 **Warramunga Arr** 62.68 195 P P 01 23 07.7 -0.8
BLKN **Baker Lake** 62.74 26 P P 01 23 08.2 -0.1
WR8 **Warramunga Arr** 62.85 195 P P 01 23 09.5 -0.1
WRA **Warramunga Arr** 62.87 195 P P 01 23 08.6 -1.1
comp=Z,3.3nm,0.7s,baz=10.0,slow=6.7,SNR=15
comp=Z,3.3nm,0.7s
WRA **Warramunga Arr** 62.87 195 P P 01 23 07.7 -2.0
MSO **Missoula** 65.47 48 P P 01 23 26.8 0.0
MSO IAmb IAmb 01 23 27.9
comp=Z,3.3nm,0.9s
ASAR **Alice Springs** 66.58 194 P P 01 23 32.5 -1.3
comp=Z,1.4nm,0.9s,baz=4.0,slow=5.0,SNR=7.9
comp=Z,1.4nm,0.9s
ASAR **Alice Springs** 66.58 194 P P 01 23 33.5 -0.3
ASAR **Alice Springs** 66.58 194 P P 01 23 33.5 -0.3
FIA1 **FINESS Array S** 66.96 334 P P 01 23 35.2 -0.6
FINES **FINESS Array B** 66.97 334 P P 01 23 36.0 +0.1
comp=Z,2.2nm,0.7s,baz=47,slow=5.7,SNR=12
FINES LR LR 01 55 24.6
comp=Z,32nm,19.6s,baz=80,slow=38
comp=Z,2.2nm,0.7s
FINES **FINESS Array B** 66.97 334 *i* P P 01 23 38.7 +2.8
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES **FINESS Array B** 66.97 334 P P 01 23 35.5 -0.4
MCMT **McKenzie Canyo** 67.27 50 P P 01 23 38.0 -0.4
OBN **Obninsk** 67.38 325 *eP* P 01 23 39.1 +0.5
OBN *e* 01 24 06.9
OBN *e* 01 26 08.5
OBN *e*PPP PPP 01 27 43.1
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN **Obninsk** 67.38 325 *eP* P 01 23 39.1 +0.5
BOZ **Bozeman (W)** 67.50 48 IAmb IAmb 01 23 41.1
comp=Z,3.8nm,0.8s
NVAR **Mina Array Bea** 67.80 58 P P 01 23 42.5 +0.6
comp=Z,0.9nm,0.7s,baz=290,slow=5.6,SNR=6.4
comp=Z,0.9nm,0.7s
NVAR **Mina Array Bea** 67.80 58 P P 01 23 41.8 -0.1
QLMT **Earthquake Lak** 68.07 49 P P 01 23 43.3 -0.1
FXWY **Fox Creek** 69.03 50 IAmb IAmb 01 23 51.6
comp=Z,3.2nm,1.0s
HVU **Hansel Valley** 69.16 52 IAmb IAmb 01 23 52.0
comp=Z,3.0nm,0.9s
DUG **Dugway, Tooele** 70.11 54 IAmb IAmb 01 23 57.9
comp=Z,4.6nm,1.1s
PDAR **Pinedale Array** 70.42 50 P P 01 23 57.3 -0.7
comp=Z,0.6nm,0.6s,baz=278,slow=4.3,SNR=5.4
comp=Z,0.6nm,0.6s
PDAR **Pinedale Array** 70.42 50 P P 01 23 57.9 -0.2
AKT **Akhty** 70.44 308 *eP* P 01 23 58.8 +0.8
AKT *e* 01 24 19.7
AKT pmax pmax
comp=Z,10.0nm,1.4s
MNK **Minsk** 71.40 328 *i* P P 01 24 04.8 +1.3
comp=E,13nm,1.0s
MNK *i* P P 01 24 04.8 +1.3
comp=N,6.0nm,0.8s
MNK *i* P P 01 24 04.8 +1.3
comp=Z,9.0nm,0.8s,baz=42
MNK *i* PcP PcP 01 24 24.4 +1.3
MNK *i* PP PP 01 26 42.7 +1.4
MNK *i* PPP PPP 01 28 25.9
MNK *i* S S 01 33 23.2 +1.9
MNK *i* ScS ScS 01 34 09.3 +1.4
MNK *i* SS SS 01 37 58.2 +3.6
MNK *i* SSS SSS 01 41 17.4
MNK *i* LQ LQ 01 50 53.8
MNK *i* LR LR 01 56 06.6
MNK *i* LRM MLR 01 58 36.7
comp=N,28nm,16.5s
MNK *i* LRM MLR 01 58 40.6
comp=Z,24nm,15.8s
MNK *i* LRM MLR 01 59 24.9
comp=E,25nm,15.1s
MNK **Minsk** 71.40 328 *i* P P 01 24 04.8 +1.3
MNK *i* 01 24 24.3
MNK *i* 01 26 42.7
MNK *i* PPP PPP 01 28 25.8
MNK *i* S S 01 33 23.1 +1.9
MNK *i* 01 34 09.3
MNK *i* SS SS 01 37 58.2 +3.6
MNK pmax pmax
comp=Z,9.0nm,0.8s
MNK pmax pmax
comp=E,13nm,1.0s
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK MLR MLR
comp=N,28nm,17.0s
MNK MLR MLR
comp=Z,24nm,16.0s
MNK MLR MLR
comp=E,25nm,15.0s
NB2 **NORSAR Subarra** 71.68 340 P P 01 24 05.0 -0.2
comp=Z,0.6nm,0.6s,baz=33,slow=6.2
NOA **NORSAR Array B** 71.68 340 P P 01 24 04.6 -0.6
comp=Z,1.7nm,0.9s,baz=30,slow=4.2,SNR=3.9
NOA LR LR 02 01 33.2
comp=Z,7.3nm,18.2s,baz=30,slow=41
comp=Z,1.7nm,0.9s
KIV **Kislovodsk** 71.71 313 *eP* P 01 24 07.4 +1.7
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,32nm,18.0s
KIV **Kislovodsk** 71.71 313 P P 01 24 07.3 +1.6

KBZ **Khabaz** 71.74 313 P P 01 24 07.2 +1.4
comp=Z,5.3nm,0.9s,baz=70,slow=6.8,SNR=11
KBZ LR LR 01 59 42.0
comp=Z,28nm,18.2s,baz=47,slow=39
comp=Z,5.3nm,0.9s
KBZ **Khabaz** 71.74 313 *ce* P P 01 24 07.0 +1.3
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ **Khabaz** 71.74 313 *eP* P 01 24 07.0 +1.3
HFS **Hagfors** 71.78 338 P P 01 24 06.0 +0.4
comp=Z,2.1nm,0.7s,baz=29,slow=12,SNR=5.4
HFS LR LR 02 00 43.3
comp=Z,34nm,18.6s,baz=68,slow=40
comp=Z,2.1nm,0.7s
P17A **Butcher Ranch,** 71.81 53 IAmb IAmb 01 24 08.1
comp=Z,5.0nm,0.9s
KNB **Kanab** 72.09 56 P P 01 24 09.2 +0.9
KNB pmax pmax
comp=Z,6.0nm,1.1s
KNB **Kanab** 72.09 56 P P 01 24 09.2 +0.9
KNB IAmb IAmb 01 24 10.3
comp=Z,5.7nm,1.1s
SRU **San Rafael Swe** 72.17 53 IAmb IAmb 01 24 10.1
comp=Z,6.8nm,0.9s
RSSD **Black Hills** 72.60 46 P P 01 24 10.3 -0.9
RSSD pmax pmax
comp=Z,4.0nm,1.0s
RSSD **Black Hills** 72.60 46 P P 01 24 10.3 -0.9
RSSD IAmb IAmb 01 24 11.9
comp=Z,4.5nm,0.9s
HMU **Henry Mountain** 72.79 54 IAmb IAmb 01 24 13.9
comp=Z,4.0nm,0.8s
U15A **North Rim** 72.80 56 IAmb IAmb 01 24 14.5
comp=Z,4.2nm,1.1s
PV21 **Cone Mtn., Par** 73.45 53 IAmb IAmb 01 24 17.7
comp=Z,4.2nm,0.9s
PV23 **Carpenter Ridg** 73.50 53 P P 01 24 16.2 -0.5
PV23 IAmb IAmb 01 24 18.1
comp=Z,9.6nm,1.0s
PV04 **Paradox Valley** 73.60 53 IAmb IAmb 01 24 18.5
comp=Z,8.6nm,1.1s
PV19 **Morning Glory** 73.61 53 P P 01 24 17.3 +0.1
AKASG **Malin Array Be** 73.64 325 P P 01 24 16.9 0.0
comp=Z,2.9nm,0.8s,baz=40,slow=5.3,SNR=13
AKASG LR LR 02 00 16.3
comp=Z,33nm,18.1s,baz=86,slow=39
comp=Z,2.9nm,0.8s
AKASG **Malin Array Be** 73.64 325 *i* P P 01 24 17.2 +0.3
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB **Malin Array Si** 73.64 325 *ce* P P 01 24 17.6 +0.7
AKBB pmax pmax
comp=Z,6.0nm,0.9s
AKBB **Malin Array Si** 73.64 325 IAmb IAmb 01 24 17.9
comp=Z,6.0nm,0.8s
PV17 **East Wray Mesa** 73.64 53 IAmb IAmb 01 24 18.7
comp=Z,7.3nm,0.9s
PV16 **Nyswonger Mesa** 73.65 53 IAmb IAmb 01 24 18.9
comp=Z,6.7nm,1.0s
KIEV **Kiev** 73.65 325 P P 01 24 17.8 +0.8
KIEV **Kiev** 73.65 325 P P 01 24 17.8 +0.8
PV11 **David Mesa, Pa** 73.68 53 IAmb IAmb 01 24 19.1
comp=Z,10nm,1.1s
PV05 **Paradox Valley** 73.69 53 IAmb IAmb 01 24 19.3
comp=Z,7.4nm,1.1s
PV13 **Radium Mtn., P** 73.80 53 P P 01 24 18.6 +0.1
PV13 IAmb IAmb 01 24 19.8
comp=Z,5.7nm,1.0s
ANMO **Albuquerque** 77.35 54 *ce* P P 01 24 40.1 +1.3
ANMO pmax pmax
comp=Z,4.0nm,2.5s
BURAR **Bucovina Array** 77.70 325 P P 01 24 40.8 +0.5
BURAR **Bucovina Array** 77.70 325 P P 01 24 40.9 +0.5
OJC **Ojcow** 77.86 329 P P 01 24 41.4 +0.3
OJC **Ojcow** 77.86 329 P P 01 24 41.4 +0.3
KOLS **Kolonicke sedl** 77.91 327 *eP* P 01 24 43.6 +2.2
KOLS pmax pmax
comp=Z,6.0nm,1.3s
KOLS **Kolonicke sedl** 77.91 327 *eP* P 01 24 43.6 +2.2
OSTC **Ostas** 78.92 331 *eP* P 01 24 47.8 +0.8
OSTC **Ostas** 78.92 331 *eP* P 01 24 47.8 +0.8
BNN **Bunyan** 78.94 313 IAmb IAmb 01 24 49.5
comp=Z,3.5nm,0.8s
CHVC **Chvalec** 78.95 331 *eP* P 01 24 47.8 +0.7
CHVC **Chvalec** 78.95 331 *eP* P 01 24 47.8 +0.7
DPC **Dobruska-Polom** 79.05 331 *eP* P 01 24 48.7 +1.0
DPC *e**PP PcP 01 24 55.4 -0.8
DPC **Dobruska-Polom** 79.05 331 *eP* P 01 24 48.7 +1.0
DPC *e*PCP PcP 01 24 55.4 -0.8
MORC **Moravsky Berou** 79.07 330 *eP* P 01 24 48.5 +0.6
SCHQ **Schefferville** 79.08 20 P P 01 24 46.9 -0.8
comp=Z,5.0nm,0.9s,baz=256,slow=6.2,SNR=4.1
comp=Z,5.0nm,0.9s
KRLC **Kraliky** 79.11 331 *eP* P 01 24 48.8 +0.8
KRLC *e**PP pwP 01 24 57.1 0.0
KRLC **Kraliky** 79.11 331 *eP* P 01 24 48.8 +0.8
KRLC *e*PCP pwP 01 24 57.1 0.0
CLL **Collm** 79.41 333 *i* P P 01 24 49.3 -0.3
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL **Collm** 79.41 333 IAmb IAmb 01 24 50.4
comp=Z,5.2nm,0.8s
CLL **Collm** 79.41 333 *i* P P 01 24 49.3 -0.3
comp=Z,6.0nm,0.9s
CLL *i* PcP PcP 01 24 58.1 +0.5
BRTR **Keskin Array B** 79.51 315 P P 01 24 51.0 +0.4
comp=Z,1.0nm,0.8s,baz=119,slow=2.1,SNR=5.5
BRTR LR LR 02 06 15.8
comp=Z,26nm,19.4s,baz=180,slow=40
comp=Z,1.0nm,0.8s
BRTR **Keskin Array B** 79.51 315 *i* P P 01 24 51.4 +0.8
BRTR pmax pmax
comp=Z,1.0nm,0.8s
VRAC **Vranov** 79.81 330 LR LR 02 06 14.8
comp=Z,15nm,18.8s,baz=50,slow=40
VRAC **Vranov** 79.81 330 *eP* P 01 24 51.5 -0.3
KRUC **Moravsky** 80.09 330 *eP* P 01 24 53.5 +0.2
EKA **Eskdalemuir Ar** 80.18 344 P P 01 24 53.0 -0.7
comp=Z,1.4nm,0.7s,baz=27,slow=5.7,SNR=3.1
comp=Z,1.4nm,0.7s
EKA **Eskdalemuir Ar** 80.18 344 P P 01 24 53.0 -0.7
MODS **Modra-Piesok** 80.32 329 *eP* P 01 24 55.1 +0.5
MODS pmax pmax
comp=Z,11nm,1.6s
MODS **Modra-Piesok** 80.32 329 *eP* P 01 24 55.1 +0.5
KHC **Kasperske Hory** 81.05 332 *eP* P 01 24 59.2 +0.7
KHC **Kasperske Hory** 81.05 332 *eP* P 01 24 59.2 +0.7
KHC *e*PCP pwP 01 25 08.5 +0.9
CKRC **Cesky Krumlov** 81.05 331 *eP* P 01 24 59.1 +0.6
CKRC **Cesky Krumlov** 81.05 331 *eP* P 01 24 59.1 +0.6
CONA **Conrad Observa** 81.23 330 *i* P P 01 25 00.5 +0.9
comp=Z,4.0nm,1.3s
GERES **GERESS Array B** 81.25 332 P P 01 24 58.7 -1.0
comp=Z,0.7nm,0.8s,baz=350,slow=6.8,SNR=7.0
comp=Z,0.7nm,0.8s
GERES **GERESS Array B** 81.25 332 P P 01 24 59.4 -0.2
RONA **Rosalia, Austr** 81.25 330 *i* P P 01 25 00.2 +0.5
comp=Z,4.0nm,1.0s
MOA **Molln** 81.88 331 *eP* P 01 25 02.8 -0.2
comp=Z,3.2nm,1.5s
BIOA **Bad Ischl, Aus** 82.24 331 *i* P P 01 25 04.9 +0.1
comp=Z,4.3nm,1.1s
PPT **Papeete** 82.26 122 LR LR 01 52 36.5
comp=Z,25nm,20.9s,baz=318,slow=29
UCC **Uccle** 82.51 338 *d* P P 01 25 07.2 +1.0
SOKA **Soboth** 82.58 330 *i* P P 01 25 07.1 +0.4
comp=Z,5.5nm,1.0s
BGES **Gesves** 82.68 337 *d* P P 01 25 07.2 +0.2
comp=Z,4.1nm,1.2s
LESA **Schwarzleotal** 82.81 331 *eP* P 01 25 08.0 +0.1
comp=Z,3.4nm,1.0s
BMRD **Maredsous** 82.84 337 *d* P P 01 25 08.6 +0.8
comp=Z,6.6nm,1.0s
BMRD *d*PP PP 01 28 16.0 -1.2
KBA **Koelnbreinsper** 82.87 331 *i* P P 01 25 09.0 +0.7
comp=Z,3.7nm,1.1s
OBKA **Obir** 82.91 330 *eP* P 01 25 08.1 -0.3
comp=Z,4.0nm,0.9s
TX31 **Lajitas Ar. Si** 82.91 57 IAmb IAmb 01 25 24.2
comp=Z,6.2nm,1.4s
TXAR **Lajitas Array** 82.92 57 P P 01 25 09.0 +0.2
comp=Z,0.9nm,0.7s,baz=280,slow=3.7,SNR=7.3
comp=Z,0.9nm,0.7s
TXAR **Lajitas Array** 82.92 57 P P 01 25 07.7 -1.1
TXAR **Lajitas Array** 82.92 57 P P 01 25 07.7 -1.1
MYKA **Terra Mystica** 83.14 330 *eP* P 01 25 10.0 +0.4

	comp=Z,2.2nm,1.0s							
WATA	**Walderalm**	**83.28**	**332**	*i* P		**P**	**01 25 11.1**	**+0.7**
	comp=Z,3.0nm,0.7s							
WTTA	**Wattenberg**	**83.32**	**332**	*i* P		**P**	**01 25 11.1**	**+0.4**
	comp=Z,2.2nm,0.7s							
RETA	**Reutte**	**83.43**	**333**	*i* P		**P**	**01 25 11.6**	**+0.5**
	comp=Z,3.0nm,0.9s							
MOTA	**Moosalm**	**83.44**	**332**	*eP*		**P**	**01 25 11.3**	**+0.1**
	comp=Z,4.0nm,0.9s							
ABTA	**Abfaltersbach**	**83.45**	**331**	*eP*		**P**	**01 25 09.3**	**-1.9**
	comp=Z,3.0nm,1.3s							
SQTA	**Sankt Quirin**	**83.51**	**332**	*eP*		**P**	**01 25 12.0**	**+0.5**
	comp=Z,3.9nm,1.2s							
FETA	**Feichten**	**83.85**	**332**	*i* P		**P**	**01 25 13.7**	**+0.4**
	comp=Z,3.6nm,1.3s							
DAVA	**Damuels**	**83.91**	**333**	*eP*		**P**	**01 25 12.9**	**-0.8**
	comp=Z,5.3nm,1.3s							
DAVOX	**Davos/Dischmat**	**84.35**	**333**	LR		LR	02 05 54.1	
	comp=Z,16nm,19.8s,baz=60,slow=38							
NRCA	**Norcia**	**86.56**	**329**	IAmb		IAmb	01 25 28.2	
	comp=Z,5.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**117.25**	**323**	PKP		**PKPdf**	**01 31 27.4**	**-2.0**
	comp=Z,0.3nm,1.0s,baz=15,slow=3.8,SNR=1.3							
LPAZ	**La Paz**	**139.61**	**62**	PKP		**PKPdf**	**01 32 12.7**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=349,slow=5.2,SNR=2.6							
H03N2	**Juan Fernandez**	**142.00**	**93**	T		T	04 10 22.9	
	baz=300,slow=77							
H03N3	**Juan Fernandez**	**142.01**	**93**	T		T	04 10 27.5	
	baz=300,slow=77							
H03N1	**Juan Fernandez**	**142.01**	**93**	T		T	04 10 29.1	
	baz=300,slow=77							
H03S2	**Juan Fernandez**	**142.18**	**94**	T		T	04 10 50.7	
	baz=291							
H03S3	**Juan Fernandez**	**142.19**	**94**	T		T	04 10 54.2	
	baz=291							
H03S1	**Juan Fernandez**	**142.20**	**94**	T		T	04 10 52.0	
	baz=291							
TROLL	**Troll, Antarti**	**145.51**	**198**	PKPdf		**PKPab**	**01 32 21.4**	**+0.3**
	comp=Z,265nm,0.8s							
SNAA	**Sanae**	**146.93**	**196**	PKPbc		**PKPbc**	**01 32 24.8**	**-0.2**
	comp=Z,3.2nm,0.9s,baz=238,slow=2.4,SNR=5.6							

NDI ***27*** *01:18:36.9±2.1,24°.73N×94°.88E,h106km±15km,ML3.6, MW3.7,Presumed earthquake*
IDC ***27*** *01:18:38.9±4.0,24°.66N×95°.13E,h105km±38km,mb3.2/4, mbtmp3.5/5,MS3.5/1,Error ellipse: s-maj=80.1km s-min=21.8km az=69.0*

ISC 27 01:18:37.3±1.0,24°.73N±0°.08×94°.79E±0°.08,h100km,n12, σ1§48/17,mb3.4/4,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
IMP	**Imphal**	**0.78**	**277**	*eP*	g	**Pn**		**01 18 56.7**	**+1.2**
IMP				*eS*		**Sn**		**01 19 09.9**	**+0.7**
KOHI	**KOHIMA**	**1.16**	**328**	*eP*		**Pn**		**01 18 59.2**	**-0.5**
KOHI				*eS*		**Sn**		**01 19 17.9**	**+1.3**
KOHI				IAML				01 19 23.4	
	comp=E,726nm,0.5s								
KOHI				IAML				01 19 26.7	
	comp=E,495nm,0.4s								
MOKO	**MOKOCHONG**	**1.60**	**351**	*eP*		**Pn**		**01 19 04.5**	**-0.4**
MOKO				*eS*		**Sn**		**01 19 24.9**	**-1.1**
MOKO				IAML				01 19 32.9	
	comp=E,698nm,0.4s								
MOKO				IAML				01 19 38.9	
	comp=E,627nm,0.6s								
SHL	**Shillong**	**2.76**	**288**	*eP*		**Pn**		**01 19 20.4**	**+0.3**
SHL				*eS*		**Sn**		**01 19 50.7**	**-2.3**
SHL				IAML				01 19 52.8	
	comp=N,571nm,0.1s								
SHL				IAML				01 19 53.0	
	comp=E,464nm,0.2s								
GUWA	**GUWAHATI**	**3.16**	**298**	*eP*		**Pn**		**01 19 25.0**	**-0.1**
GUWA				*eS*		**Sn**		**01 19 59.8**	**-2.2**
TAWA	**Tawang**	**3.88**	**318**	*eP*		**Pn**		**01 19 35.6**	**+0.4**
TAWA				*eS*		**Sn**		**01 20 18.2**	**-1.7**
TAWA				IAML				01 20 22.6	
	comp=E,302nm,0.1s								
TAWA				IAML				01 20 22.7	
	comp=N,223nm,0.3s								
CMAR	**Chiang Mai Arr**	**7.34**	**147**	P		**Pn**		**01 20 20.4**	**-1.5**
	comp=N,2.3nm,0.7s,baz=332,slow=13,SNR=20								
MKAR	**Makanchi Array**	**24.18**	**339**	P		**P**		**01 23 46.9**	**+2.6**
	comp=N,0.6nm,0.6s,baz=144,slow=9.0,SNR=3.6								
	comp=N,0.6nm,0.6s								
SONM	**Songino Array**	**24.82**	**19**	P		**P**		**01 23 51.3**	**+1.1**
	comp=N,0.3nm,0.3s,baz=202,slow=11,SNR=2.3								
	comp=N,0.3nm,0.3s								
DAV	**Davao City (W)**	**34.29**	**116**	LR		LR		01 39 58.7	
	comp=N,72nm,18.8s,baz=143,slow=38								
WRA	**Warramunga Arr**	**58.76**	**136**	P		**P**		**01 28 24.3**	**-0.8**
	comp=N,0.7nm,0.8s,baz=326,slow=7.2,SNR=2.2								
	comp=N,0.7nm,0.8s								
ASAR	**Alice Springs**	**61.26**	**139**	P		**P**		**01 28 41.4**	**-0.8**
	comp=N,0.5nm,0.6s,baz=315,slow=6.5,SNR=4.5								
	comp=N,0.5nm,0.6s								

IDC ***27*** *01:31:30.4±1.1,21°.49N×65°.58W,h0km,mb3.6/8, mbtmp3.8/10,ML3.4/2,Error ellipse: s-maj=27.5km s-min=20.2km az=60.0*
CATAC ***27*** *01:31:30.5±0.4,22°.N±3°.×6°.5W±°,h42km±10km,M5.0/12, mb4.9/12,mB5.5/5,MLv5.0/6,Mw(mB)5.0/5,Error ellipse: s-maj=7.4km s-min=4.0km az=22.1,confirmed*
NEIC ***27*** *01:31:31.3±1.0,21°.45N±0°.08×65°.43W±0°.09,h10km±1km, mb4.5/30,Error ellipse: s-maj=17.0km s-min=10.5km az=47.0*

ISC 27 01:31:30.2±0.5,21°.43N±0°.05×65°.56W±0°.05,h10km,n126, σ2§43/139,mb4.2/17,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
ECPR	**Experimental S**	**3.19**	**194**			**Pn**		**01 32 22.3**	**+1.8**
AOPR	**Arecibo Observ**	**3.27**	**200**	Pn		**Pn**		**01 32 23.1**	**+1.5**
HUMP	**Col San Antoni**	**3.28**	**185**	Pn		**Pn**		**01 32 22.8**	**+1.1**
AGPR	**Aguadilla, PR**	**3.29**	**207**	Pn		**Pn**		**01 32 23.4**	**+1.5**
UUPR	**Utuado, UPR, P**	**3.35**	**199**	Pn		**Pn**		**01 32 23.9**	**+1.3**
SJG	**San Juan**	**3.35**	**190**	Pn		**Pn**		**01 32 25.0**	**+2.4**
	20nm,0.3s,baz=4.5,slow=14,SNR=49								
SJG				Sn		**Sn**		**01 32 59.7**	**-2.8**
	216nm,0.3s,baz=242,slow=21,SNR=27								
	57nm,0.2s								
SJG	**San Juan**	**3.35**	**190**	P		**Pn**		**01 32 24.9**	**+2.2**
SJG				S		**Sn**		**01 33 01.4**	**-1.2**
SJG	**San Juan**	**3.35**	**190**	Pn		**Pn**		**01 32 23.7**	**+1.1**
SJG	**San Juan**	**3.35**	**190**	*eP*		**Pn**		**01 32 25.1**	**+2.4**
PDPR	**Patillas Dam,**	**3.42**	**187**	Pn		**Pn**		**01 32 24.9**	**+1.2**
CELP	**Cerrillos**	**3.48**	**196**	Pn		**Pn**		**01 32 26.1**	**+1.7**
OBIP	**Obispado Ponce**	**3.51**	**197**	Pn		**Pn**		**01 32 26.6**	**+1.7**
PRSN	**Puerto Rico Se**	**3.53**	**205**	Pn		**Pn**		**01 32 26.9**	**+1.7**
CRPR	**Cabo Rojo, PR**	**3.71**	**204**	Pn		**Pn**		**01 32 29.7**	**+2.1**
MLPR	**Magueyes Islan**	**3.72**	**202**	Pn		**Pn**		**01 32 29.1**	**+1.4**
PCDR	**Punta Cana, DR**	**3.93**	**223**	Pn		**Pn**		**01 32 32.4**	**+1.7**
SMRT	**St. Maarten**	**4.09**	**145**	Pn		**Pn**		**01 32 33.1**	**+0.1**
SMRT	**St. Maarten**	**4.09**	**145**	*eP*		**Pn**		**01 32 33.7**	**+0.7**
SABA	**Saba**	**4.37**	**150**	Pn		**Pn**		**01 32 37.0**	**+0.3**
SABA	**Saba**	**4.37**	**150**	*eP*		**Pn**		**01 32 38.0**	**+1.2**
DR12	**Loma Pena Alta**	**4.45**	**234**	Pn		**Pn**		**01 32 39.4**	**+1.4**
SEUS	**St. Eustatius**	**4.61**	**148**	Pn		**Pn**		**01 32 40.4**	**+0.4**
SEUS	**St. Eustatius**	**4.61**	**148**	*eP*		**Pn**		**01 32 40.9**	**+0.9**
SKI	**Saint Kitts**	**4.87**	**146**	*eP*		**Pn**		**01 32 44.3**	**+0.7**
SDD	**Santo Domingo**	**5.05**	**235**	Pn		**Pn**		**01 32 48.7**	**+2.5**
ANWB	**Willy Bob**	**5.16**	**136**	P		**Pn**		**01 32 45.2**	**-2.4**
ANWB				S		**Sn**		**01 33 40.3**	**-6.9**
ANWB	**Willy Bob**	**5.16**	**136**	Pn		**Pn**		**01 32 46.1**	**-1.5**
ANWB	**Willy Bob**	**5.16**	**136**	*eP*		**Pn**		**01 32 46.2**	**-1.4**
ANWB				*eS*		**Sn**		**01 33 41.3**	**-6.0**
GRTK	**Grand Turk**	**5.19**	**272**	P		**Pn**		**01 32 46.8**	**-1.3**
GRTK	**Grand Turk**	**5.19**	**272**	Pn		**Pn**		**01 32 46.4**	**-1.7**
GRTK	**Grand Turk**	**5.19**	**272**	*eP*		**Pn**		**01 32 46.9**	**-1.2**
GRTK				*eS*		**Sn**		**01 33 41.9**	**-6.1**
SC01	**Santiago de lo**	**5.24**	**249**	P		**Pn**		**01 32 52.0**	**+3.3**
SC01				S		**Sn**		**01 33 52.6**	**+3.4**
BANI	**BANI**	**5.43**	**237**	Pn		**Pn**		**01 32 54.0**	**+2.5**
MBWH	**Windy Hill**	**5.65**	**145**	*eP*		**Pn**		**01 32 54.6**	**+0.3**
SDDR	**Presa de Saban**	**5.91**	**247**	P		**Pn**		**01 32 59.8**	**+1.9**
SDDR				S		**Sn**		**01 34 07.4**	**+1.6**
SDDR	**Presa de Saban**	**5.91**	**247**	Pn		**Pn**		**01 33 00.7**	**+2.8**
SDDR	**Presa de Saban**	**5.91**	**247**	*eP*		**Pn**		**01 33 01.1**	**+3.2**
SDDR	**Presa de Saban**	**5.91**	**247**	*eS*		**Sn**		**01 33 59.3**	**-6.4**
ABD	**La Joyeuse, An**	**6.25**	**141**	Pn		**Pn**		**01 33 01.3**	**-1.3**
DHSZ	**Broadband at M**	**6.26**	**144**	*eP*		**Pn**		**01 33 02.7**	**0.0**
GDHS	**Morne Mazeau,**	**6.26**	**144**	Pn		**Pn**		**01 33 02.3**	**-0.5**
ATGZ	**Broadband at L**	**6.43**	**145**	x		**Pg**		**01 33 35.5**	**+2.1**
MMLZ	**Guadeloupe Bro**	**6.50**	**145**	*eP*		**Pn**		**01 33 06.7**	**+0.7**
CBE	**Ff, Capester**	**6.51**	**144**	P		**Pn**		**01 33 05.6**	**-0.6**
CBE				S		**Sn**		**01 34 15.7**	**-5.0**
CBE	**Ff, Capester**	**6.51**	**144**	Pn		**Pn**		**01 33 06.2**	**0.0**
DSDZ	**La Diserade, G**	**6.63**	**139**	*eP*		**Pn**		**01 33 06.2**	**-1.6**
GDSD	**La Dsirade Is**	**6.63**	**139**	Pn		**Pn**		**01 33 06.0**	**-1.8**
H05N1	**Guadeloupe/Mar**	**6.63**	**139**	Pn		**Pn**		**01 33 06.6**	**-1.3**
H05N1				Sn		**Sn**		**01 34 18.1**	**-5.5**
TBG	**Guadaloupe-3**	**6.67**	**146**	*eP*		**Pn**		**01 33 08.7**	**+0.3**
TDBA	**Terre de Bas,**	**6.68**	**146**	Pn		**Pn**		**01 33 09.1**	**+0.6**
MAGL	**Barre de l'ile**	**6.79**	**143**	Pn		**Pn**		**01 33 09.3**	**-0.7**
MAGL	**Barre de l'ile**	**6.79**	**143**	*eP*		**Pn**		**01 33 09.8**	**-0.2**
DWS	**Wesley**	**7.09**	**145**	*eP*		**Pn**		**01 33 14.6**	**+0.5**
DSLB	**Salisbury**	**7.14**	**146**	*eP*		**Pn**		**01 33 15.3**	**+0.5**
LGNH	**Logne**	**7.24**	**248**	S		**Sn**		**01 34 38.1**	**-0.3**
SVN	**Savane Anatole**	**7.77**	**147**	Pn		**Pn**		**01 33 23.4**	**0.0**
CXM	**Morne La Croix**	**7.79**	**147**	Pn		**Pn**		**01 33 23.9**	**0.0**
FDFM	**Morne la Roset**	**7.86**	**147**	Pn		**Pn**		**01 33 24.9**	**+0.2**
BIM	**Bigot**	**8.09**	**147**	*eP*		**Pn**		**01 33 28.5**	**+0.6**
MASC	**Masc**	**8.21**	**263**	P		**Pn**		**01 33 29.3**	**-0.2**
MASC	**Masc**	**8.21**	**263**	*eP*		**Pn**		**01 33 29.7**	**+0.2**
H05S1	**Guadeloupe/Mar**	**8.29**	**146**	Pn		**Pn**		**01 33 30.6**	**0.0**
H05S1				Sn		**Sn**		**01 35 00.1**	**-4.3**
SLBI	**Saint Lucia, B**	**8.56**	**149**	x		**Pn**		**01 33 34.6**	**+0.3**
SLAC	**Saint Lucia, A**	**8.71**	**149**	x		**Pn**		**01 33 35.6**	**-0.8**
QMBU	**Quimbuelo**	**8.74**	**264**	P		**Pn**		**01 33 36.4**	**-0.4**
QMBU				S		**Sn**		**01 35 10.4**	**-5.2**
QMBU	**Quimbuelo**	**8.74**	**264**	*eP*		**Pn**		**01 33 36.8**	**0.0**
QMBU				*eS*		**Sn**		**01 35 08.8**	**-6.7**
MOAC	**Moa**	**8.82**	**267**	*eP*		**Pn**		**01 33 37.8**	**0.0**
MOAC				*eS*		**Sn**		**01 35 10.6**	**-6.7**
NMDO	**Nuevo Mundo**	**8.85**	**266**	P		**Pn**		**01 33 37.2**	**-1.1**
NMDO				S		**Sn**		**01 35 13.5**	**-4.6**
NMDO	**Nuevo Mundo**	**8.85**	**266**	Pn		**Pn**		**01 33 38.1**	**-0.1**
GTBY	**Guantanamo Bay**	**9.07**	**262**	P		**Pn**		**01 33 40.3**	**-0.9**
GTBY	**Guantanamo Bay**	**9.07**	**262**	Pn		**Pn**		**01 33 41.3**	**0.0**
GTBY	**Guantanamo Bay**	**9.07**	**262**	*eP*		**Pn**		**01 33 40.8**	**-0.5**
RCC	**Rio Carpintero**	**9.60**	**263**	*eP*		**Pn**		**01 33 48.3**	**-0.2**
RCC				*eS*		**Sn**		**01 35 29.0**	**-7.5**
HLGC	**Holguin**	**9.82**	**269**	*eP*		**Pn**		**01 33 53.2**	**+1.6**
GRGR	**Grenville**	**9.97**	**157**	x		Pg		01 33 59.6	
YAR	**Yar**	**10.15**	**266**	*eP*		**Pn**		**01 33 55.5**	**-0.7**
YAR				*eS*		**Sn**		**01 35 42.7**	**-7.5**
CHIV	**Chivirico**	**10.27**	**264**	P		**Pn**		**01 33 56.2**	**-1.4**
CHIV	**Chivirico**	**10.27**	**264**	*eP*		**Pn**		**01 33 57.8**	**+0.1**
LMGC	**Las Mercedes**	**10.80**	**265**	*eP*		**Pn**		**01 34 04.1**	**-0.9**
BBSR	**BB Station**	**10.92**	**4**	P		**Pn**		**01 34 03.0**	**-3.7**
BBSR	**BB Station**	**10.92**	**4**	Pn		**Pn**		**01 34 03.8**	**-2.9**
CCCC	**Cccc**	**11.38**	**271**	*eP*		Pn		01 34 07.4	**-5.6**
MGV	**Manicaragua**	**13.42**	**276**	*eP*		**Pn**		**01 34 40.9**	**+0.1**
060A	**Indiantown**	**14.61**	**295**	Pn		**Pn**		**01 34 54.5**	**-2.6**
060A	**Indiantown**	**14.61**	**295**	*eP*		**Pn**		**01 34 58.9**	**+1.8**
CAMR	**Camarioca**	**14.73**	**279**	*eP*		**Pn**		**01 34 59.4**	**+0.6**
DWPF	**Disney Wildern**	**15.87**	**298**	Pn		**Pn**		**01 35 12.8**	**-1.0**
DWPF				IAmb		IAmb		01 35 22.6	
	comp=Z,31nm,0.6s								
Y60A	**Bolivia**	**16.79**	**321**	Pn		**Pn**		**01 35 24.2**	**-1.3**
Y60A				IAmb		IAmb		01 35 32.1	
	comp=Z,54nm,0.9s								
RUSC	**La Rusia**	**17.08**	**206**	P		**P**		**01 35 31.4**	**-0.2**
656A	**Willston**	**17.24**	**301**	Pn		**Pn**		**01 35 30.1**	**-1.2**
656A				IAmb		IAmb		01 35 34.8	
	comp=Z,21nm,0.5s								
V61A	**Roper**	**17.25**	**328**	Pn		**Pn**		**01 35 30.7**	**-0.6**
456A	**Hilliard**	**17.43**	**305**	P		**P**		**01 35 35.5**	**+0.7**
456A				IAmb		IAmb		01 35 36.8	
	comp=Z,34nm,0.6s								
HELC	**Santa Helena**	**17.96**	**214**	P		**Pn**		**01 35 39.7**	**-0.9**
S61A	**Accomac**	**18.41**	**334**			**P**		**01 35 45.4**	**-0.2**
ROSC	**El Rosal**	**18.55**	**208**	P		**Pn**		**01 35 50.1**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=3.4,slow=19,SNR=3.7								
	comp=Z,2.7nm,0.3s								
HODGE	**Hodges**	**19.48**	**314**	P		**P**		**01 35 57.3**	**-0.1**
BOAV	**Boa Vista**	**19.55**	**165**	P		**P**		**01 35 58.6**	**+0.4**
PRAC	**Prado**	**19.81**	**209**	P		**P**		**01 35 59.3**	**-1.8**
BLA	**Blacksburg**	**20.33**	**324**	P		Pn		01 36 08.4	-0.3
MDP	**Montagnes des**	**20.50**	**141**	P		Pn		01 36 10.1	-0.7
	comp=Z,4.5nm,0.8s,baz=326,slow=15,SNR=7.6								
MDP				S		S		01 39 42.7	-15
	comp=Z,0.9nm,0.3s,baz=69,slow=22,SNR=5.9								
	comp=Z,4.5nm,0.8s								
TEIG	**Tepich**	**21.27**	**271**	P		**P**		**01 36 17.5**	**+0.6**
	baz=38,slow=24,SNR=1.7								
TKL	**Tuckaleechee C**	**21.33**	**316**	P		**P**		**01 36 18.4**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=133,slow=15,SNR=6.2								
TKL				S		**S**		**01 40 13.4**	**-0.9**
	comp=Z,11nm,0.6s,baz=219,slow=20,SNR=10								
	comp=Z,3.6nm,0.9s								
TKL	**Tuckaleechee C**	**21.33**	**316**	P		**P**		**01 36 18.8**	**+1.3**
TKL				IAmb		IAmb		01 36 30.6	
	comp=Z,7.3nm,0.6s								
CPCT	**Cooper Cave**	**21.70**	**314**	P		**P**		**01 36 23.8**	**+2.4**
CPCT				IAmb		IAmb		01 36 35.4	
	comp=Z,7.1nm,0.7s								
TZTN	**Tazewell**	**21.73**	**318**	P		**P**		**01 36 25.0**	**+3.3**
TZTN				IAmb		IAmb		01 36 37.0	
	comp=Z,13nm,0.7s								
W50A	**Signal Mountai**	**22.09**	**313**	P		**P**		**01 36 29.8**	**+4.1**
W50A				IAmb		IAmb		01 36 41.2	
	comp=Z,7.9nm,0.5s								
Y49A	**Blount Mountai**	**22.19**	**308**	P		**P**		**01 36 29.6**	**+2.9**
P53A	**Whipple**	**22.52**	**327**	P		**P**		**01 36 31.3**	**+1.1**
P53A				IAmb		IAmb		01 36 56.6	
	comp=Z,16nm,0.6s								
T50A	**Nancy**	**22.83**	**317**	P		**P**		**01 36 35.9**	**+2.4**
R50A	**Paris**	**23.31**	**320**	P		**P**		**01 36 41.7**	**+3.2**
LONY	**Lake Ozonia**	**24.30**	**344**	P		**P**		**01 36 48.5**	**+0.7**
LONY				IAmb		IAmb		01 37 20.9	
	comp=Z,8.0nm,0.6s								
SADO	**Sadowa**	**25.84**	**337**	P		**P**		**01 37 03.0**	**+1.2**
SADO				IAmb		IAmb		01 37 41.8	
	comp=Z,7.2nm,1.0s								
TXAR	**Lajitas Array**	**35.20**	**291**	P		**P**		**01 38 26.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=118,slow=11,SNR=2.8								
	comp=Z,0.4nm,0.7s								
TX31	**Lajitas Ar. Si**	**35.20**	**291**	P		**P**		**01 38 27.5**	**+2.6**
TX31				IAmb		IAmb		01 38 44.9	
	comp=Z,6.0nm,1.5s								
PSGCX	**Pisagua**	**41.02**	**187**	P		**P**		**01 39 15.6**	**+1.6**
PB11	**IPOC Station P**	**41.13**	**186**	P		**P**		**01 39 16.4**	**+1.5**
PB11				IAmb		IAmb		01 39 46.4	
	comp=Z,9.6nm,1.1s								
PDAR	**Pinedale Array**	**42.33**	**311**	P		**P**		**01 39 25.8**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=116,slow=14,SNR=1.7								
	comp=Z,0.2nm,0.4s								
NVAR	**Mina Array Bea**	**48.10**	**303**	P		**P**		**01 40 12.2**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=83,slow=6.3,SNR=5.1								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**52.75**	**334**	P		**P**		**01 40 45.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=112,slow=8.1,SNR=4.4								
	comp=Z,1.0nm,0.6s								
ESDC	**Sonseca Array**	**55.04**	**56**	P		**P**		**01 41 04.3**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=268,slow=7.0,SNR=2.2								
	comp=Z,0.6nm,0.9s								
BCAR	**Beaver Creek A**	**64.89**	**331**	P		**P**		**01 42 12.2**	**+2.6**
F25K	**Christian Rive**	**66.61**	**336**	P		**P**		**01 42 22.8**	**+2.2**
ILAR	**Eielson Array**	**67.14**	**333**	P		**P**		**01 42 25.5**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=98,slow=6.3,SNR=5.7								
	comp=Z,0.4nm,0.7s								
CCB	**Clear Creek Bu**	**67.54**	**333**	P		**P**		**01 42 27.4**	**+0.9**
CCB				IAmb		IAmb		01 42 41.4	
	comp=Z,2.6nm,1.4s								
E24K	**Your Creek**	**67.68**	**336**	P		**P**		**01 42 29.6**	**+2.2**
E24K				IAmb		IAmb		01 42 33.4	
	comp=Z,2.4nm,1.1s								
IMAR	**Indian Mountai**	**69.91**	**334**	P		**P**		**01 42 43.0**	**+1.7**

PRE ***27*** *01:32:00.6±0.7,21°.50S×33°.51E,h5km,ML2.8,Presumed earthquake*
BUL ***27*** *01:32:03.3±0.6,21°.64S×33°.59E,h10km,MD3.7, Presumed earthquake*

ISC 27 01:32:03.0±2.4,21°.57S±0°.08×33°.5E±0°.2,h13km,n9, σ2§19/13,Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PILG	**Pilgrimsrest,**	**4.19**	**217**	*eP*		**Pn**		**01 33 08.0**	**+1.1**
PILG				*eS*		**Sn**		**01 33 56.0**	**+0.1**
PILG				IAML				01 34 25.9	
	comp=Z,35nm,0.5s								

BLWY	**Bulawayo**	**4.75**	**287**	*i* P		**Pn**	**01 33 18.3**	**+3.7**
MATP	**Matopo**	**4.77**	**283**	*i* P		**Pn**	**01 33 16.1**	**+1.2**
MATP				*i* S		**Sn**	**01 34 10.2**	**+0.1**
LSZ	**Lusaka**	**8.01**	**320**	*i* P		**Pn**	**01 34 00.1**	**+0.8**
LSZ				*i* S		**Sn**	**01 35 25.6**	**-4.4**
PMBG	**Pietermaritzbu**	**8.34**	**198**	*eP*		**Pn**	**01 34 04.1**	**+0.4**
PMBG				*eS*		**Sn**	**01 35 35.4**	**-2.5**
PMBG				IAML			01 36 31.8	
	comp=Z,5.8nm,0.6s							
BOSA	**Boshof**	**10.22**	**225**	*i* P		**Pn**	**01 34 28.5**	**-1.1**
GRAF	**Camdeboo Natio**	**13.32**	**215**	*eP*		**Pn**	**01 35 13.2**	**+1.2**
BRAK	**Brakfontein**	**13.87**	**221**	*eP*		**Pn**	**01 35 20.5**	**+1.0**
FRAZ	**Fraserburg**	**14.90**	**224**	*eP*		**Pn**	**01 35 34.7**	**+1.2**

TEH ***27*** *02:00:24.8,38°.83N×43°.83E,h6km±85km,ML2.5, Presumed earthquake*
AZER ***27*** *02:00:24.9,38°.69N×44°.06E,h3km,ml2.3*
AFAD ***27*** *02:00:26.6,38°.65N×44°.12E,h22km±1km,ML2.5*
ISK ***27*** *02:00:27.3,38°.66N×43°.99E,h5km,ML2.4/10*

ISC 27 02:00:28.1±0.8,38°.72N±0°.02×44°.02E±0°.02,h11km±6km, n35,σ1§61/57,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
OZAP	**Van, Ozalp-Mer**	**0.06**	**201**	P		**Pg**		**02 00 31.4**	**+0.8**
OZAP				S		**Sg**		**02 00 34.1**	**+1.8**
OZAP				IAML				02 00 35.0	
	comp=N,2μm,0.2s								
CLDR	**Calderan**	**0.43**	**349**	P		**Pg**		**02 00 32.9**	**-3.8**
CLDR				S		**Sg**		**02 00 38.9**	**-3.6**
CLDR				IAML				02 00 43.0	
	comp=E,625nm,0.5s								
VMUR	**Van-Muradiye**	**0.44**	**308**	P		**Pb**		**02 00 38.2**	**+0.2**
VMUR				S		**Sb**		**02 00 46.4**	**+1.6**
VMUR				IAML				02 00 49.0	
	comp=N,520nm,0.4s								
VMUR				IAML				02 00 51.0	
	comp=E,576nm,0.4s								
TVAN	**Van**	**0.52**	**249**	P		**Pb**		**02 00 38.2**	**-1.1**
TVAN				IAML				02 00 56.0	
	comp=E,332nm,0.6s								
TVAN				IAML				02 01 00.0	
	comp=N,324nm,0.5s								
GEVA	**Gevas**	**0.85**	**242**	P		**Pg**		**02 00 43.3**	**-1.3**
GEVA				S		**Sb**		**02 00 57.5**	**+0.9**
DYDN	**Diyadin**	**0.87**	**343**	P		**Pb**		**02 00 45.2**	**0.0**
DYDN				S		**Sb**		**02 00 57.3**	**+0.3**
DYDN				IAML				02 01 04.0	
	comp=E,163nm,0.7s								
DYDN				IAML				02 01 06.0	
	comp=N,102nm,0.9s								
AKDM	**Akdamar-Van**	**0.90**	**245**	Pg		**

ASAR	**Alice Springs**	**22.14**	**137**	P		P	02 06 42.4	+1.2
	1.1nm,0.5s,baz=316,slow=9.0,SNR=13							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**62.79**	**333**	P		P	02 12 10.9	-0.3
	0.2nm,0.3s,baz=134,slow=6.2,SNR=1.5							
	0.2nm,0.3s							

IDC ***27*** *02:06:33.2±2.6, 6°.08S×146°.90E, h66km±24km, mb3.7/14, mbtmp4.0/18, MS3.2/2, Error ellipse: s-maj=27.6km s-min=14.8km az=81.0*

NEIC ***27*** *02:06:35.8±2.0, 6°.09S±0°.09×146°.8E±0°.1, h76km±7km, mb4.2/14, Error ellipse: s-maj=21.6km s-min=6.9km az=58.0*

ISC 27 02:06:32.9±0.6, 6°.02S±0°.07×146°.8E±0°.1, h50km, n49, σ1§48/39, mb4.2/18, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.38**	**173**	P	**Pn**	**02 07 24.7**	**+1.4**
	31nm,0.3s,baz=353,slow=10,SNR=8.1						
PMG				S	**Sn**	**02 08 00.2**	**-2.0**
	60nm,0.3s,baz=292,slow=19,SNR=6.2						
PMG	**Port Moresby**	**3.38**	**173**		**Pn**	**02 07 24.4**	**+1.2**
COEN	**Coen**	**8.64**	**204**	Pn	**Pn**	**02 08 35.7**	**+0.3**
CTA	**Charters Tower**	**13.99**	**182**	P	**Pn**	**02 09 49.7**	**+1.2**
	2.8nm,0.4s,baz=355,slow=14,SNR=5.7						
CTAO	**Charters Tower**	**13.99**	**182**	Pn	**Pn**	**02 09 50.6**	**+2.1**
SIJI	**Sorong**	**16.29**	**288**	P	**Pn**	**02 10 21.5**	**+3.1**
	27nm,0.9s,baz=118,slow=11,SNR=5.8						
WB0	**Warramunga Arr**	**18.20**	**220**	P	**P**	**02 10 42.5**	**+0.7**
WR8	**Warramunga Arr**	**18.27**	**220**	P	**P**	**02 10 42.0**	**-0.6**
WR8				IAmb	IAmb	02 11 05.5	
	comp=Z,8.6nm,1.1s						
WRA	**Warramunga Arr**	**18.36**	**220**	P	**P**	**02 10 42.1**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=34,slow=12,SNR=9.3						
WRA	**Warramunga Arr**	**18.36**	**220**	P	**P**	**02 10 41.8**	**-1.8**
GUMO	**Guam**	**19.57**	**354**	LR	LR	02 18 40.0	
	comp=Z,43nm,18.3s,baz=104,slow=37						
AS31	**Alice Springs**	**21.47**	**214**	P	**P**	**02 11 18.6**	**+1.3**
ASAR	**Alice Springs**	**21.47**	**214**	P	**P**	**02 11 16.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=53,slow=8.5,SNR=8.0						
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**21.47**	**214**	P	**P**	**02 11 16.1**	**-1.2**
INKA	**Innaminka**	**22.34**	**194**	P	**P**	**02 11 25.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**23.85**	**238**	P	**P**	**02 11 40.8**	**-1.0**
	comp=Z,3.2nm,0.5s,baz=71,slow=11,SNR=2.2						
	comp=Z,3.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.85**	**238**	P	**P**	**02 11 40.6**	**-1.2**
FITZ				IAmb	IAmb	02 11 59.8	
	comp=Z,6.7nm,1.5s						
STKA	**Stephens Creek**	**26.17**	**190**	P	**P**	**02 12 02.6**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=4.6,slow=6.3,SNR=4.2						
	comp=Z,1.5nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**31.30**	**38**	T	T	02 45 51.1	
	baz=220,slow=74						
H11S2	**WAKE ISLAND Hy**	**31.31**	**39**	T	T	02 45 52.1	
	baz=220,slow=74						
H11S1	**WAKE ISLAND Hy**	**31.32**	**38**	T	T	02 45 55.0	
	baz=220						
H11N1	**WAKE ISLAND Hy**	**32.35**	**37**	T	T	02 47 08.2	
	baz=219						
H11N3	**WAKE ISLAND Hy**	**32.36**	**37**	T	T	02 47 09.3	
	baz=219						
H11N2	**WAKE ISLAND Hy**	**32.37**	**37**	T	T	02 47 09.6	
	baz=219						
KSRS	**Korea Array**	**46.69**	**339**	P	**P**	**02 14 56.8**	**0.0**
	comp=Z,2.6nm,0.8s,baz=156,slow=8.8,SNR=8.4						
	comp=Z,2.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.74**	**346**	P	**P**	**02 15 34.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=195,slow=7.0,SNR=4.3						
	comp=Z,1.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.74**	**346**	P	**P**	**02 15 35.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**53.05**	**298**	P	**P**	**02 15 45.5**	**0.0**
	comp=Z,1.4nm,0.3s,baz=127,slow=6.6,SNR=6.6						
	comp=Z,1.4nm,0.3s						
PETK	**Petropavlovsk-**	**59.63**	**8**	P	**P**	**02 16 31.1**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=201,slow=7.6,SNR=2.2						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**71.90**	**177**	P	**P**	**02 17 49.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=344,slow=5.7,SNR=8.8						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**71.90**	**177**	P	**P**	**02 17 49.4**	**-1.0**
VNDA				IAmb	IAmb	02 18 10.7	
	comp=Z,2.5nm,1.4s						
MKAR	**Makanchi Array**	**77.36**	**321**	P	**P**	**02 18 21.4**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=86,slow=9.4,SNR=1.4						
	comp=Z,0.3nm,0.4s						
L14K	**Kuka Creek**	**77.68**	**22**	P	**P**	**02 18 24.8**	**+0.9**
ZALV	**Zalesovo Beam**	**78.91**	**328**	P	P	02 18 28.5	-2.4
	comp=Z,0.6nm,0.4s,baz=116,slow=3.4,SNR=1.1						
	comp=Z,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**81.11**	**323**	P	**P**	**02 18 41.2**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=116,slow=4.3,SNR=2.6						
	comp=Z,0.2nm,0.4s						
G18K	**Tagagawik**	**81.86**	**20**	P	**P**	**02 18 45.6**	**-0.9**
G18K				IAmb	IAmb	02 19 25.5	
	comp=Z,4.2nm,1.2s						
E19K	**Redstone River**	**83.21**	**19**	P	**P**	**02 18 53.4**	**-0.1**
E19K				IAmb	IAmb	02 19 28.0	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**83.94**	**180**	P	**P**	**02 18 55.5**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=294,slow=1.2,SNR=7.4						
	comp=Z,0.8nm,0.5s						
QSPA	**South Pole Qui**	**83.94**	**180**	P	**P**	**02 18 55.7**	**-1.9**
QSPA				IAmb	IAmb	02 18 57.1	
	comp=Z,6.7nm,1.4s						
ILAR	**Eielson Array**	**85.59**	**23**	P	P	02 19 03.5	-2.2
	comp=Z,1.3nm,0.8s,baz=255,slow=5.2,SNR=12						
	comp=Z,1.3nm,0.8s						
D23K	**Nanushuk River**	**86.08**	**19**	P	**P**	**02 19 08.9**	**+0.9**
BVAR	**Borovoye Array**	**86.65**	**324**	P	P	02 19 08.4	-2.7
	comp=Z,0.6nm,0.4s,baz=100,slow=6.9,SNR=4.3						
	comp=Z,0.6nm,0.4s						
H27K	**Steamboat Moun**	**88.21**	**23**	P	**P**	**02 19 18.8**	**+0.4**
H27K				IAmb	IAmb	02 19 57.1	
	comp=Z,4.0nm,1.4s						
K29M	**Barlow Dome**	**89.12**	**25**	P	**P**	**02 19 22.6**	**-0.2**
K29M				IAmb	IAmb	02 19 51.5	
	comp=Z,4.2nm,1.2s						
H31M	**Peel River**	**90.92**	**24**	P	**P**	**02 19 30.4**	**-0.6**
YKA	**Yellowknife Ar**	**99.30**	**28**	LR	LR	03 04 04.4	
	comp=Z,17nm,19.2s,baz=334,slow=35						
TORD	**Torodi Ar. Bea**	**144.87**	**284**	PKPbc	**PKPab**	**02 26 04.0**	**-0.6**
	comp=Z,7.9nm,0.8s,baz=66,slow=3.3,SNR=49						
DBIC	**Dimbokro**	**151.79**	**273**	PKPbc	**PKPdf**	**02 26 21.8**	**+5.0**
	comp=Z,4.3nm,0.7s,baz=149,slow=3.0,SNR=5.4						
BOAV	**Boa Vista**	**152.56**	**96**	PKPbc	**PKPbc**	**02 26 24.1**	**-0.9**

SKHL ***27*** *02:29:49.2±0.9, 47°.60N×154°.50E, h76km±6km, mb5.5/9*

MOS ***27*** *02:29:50.0±0.9, 47°.80N×154°.05E, h74km, mb5.0/75, MS4.0/10, Error ellipse: s-maj=6.7km s-min=4.6km az=93.4*

NEIC ***27*** *02:29:51.5±1.4, 47°.80N±0°.10×154°.0E±0°.1, h72km±5km, mb4.6/118, Error ellipse: s-maj=16.1km s-min=10.5km az=145.0*

GFZ ***27*** *02:29:51.5±0.2, 48°.5N×15°.4E±, h56km, M5.0/84, mb4.9/84*

IDC ***27*** *02:29:53.3±1.6, 47°.95N×153°.77E, h88km±13km, mb4.1/29, mbtmp4.5/35, MS3.7/52, Error ellipse: s-maj=12.9km s-min=8.9km az=142.0*

BGR ***27*** *02:29:56.4, 49°.08N×153°.32E, h33km, mb4.9, Ms3.8*

ISC 27 02:29:49.5±0.5, 47°.64N±0°.05×154°.24E±0°.04, h64km±3km, n721, σ1§28/716, mb4.7/235, 52C-20D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.28**	**21**	*e*PN	**Pn**	**02 30 38.3**	**-0.2**
SKR				*e*S	**Sn**	**02 31 14.5**	**-1.8**
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.5s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR	**Severo-Kuril's**	**3.28**	**21**	*e*P	**Pn**	**02 30 38.3**	**-0.2**
SKR				AMB	AMB	02 30 40.7	
	comp=Z,1μm,0.5s						
SKR				*e*S	**Sn**	**02 31 13.8**	**-2.5**
SKR				A	A	02 31 22.9	
	comp=Z,1μm,0.3s						
SKR				A	A	02 31 22.9	
	comp=Z,1μm,0.3s						
PAU	**Pauzhetka**	**4.18**	**23**	*e*P	**Pn**	**02 30 50.3**	**-0.4**
PAU				AMB	AMB	02 30 56.2	
	comp=Z,280nm,0.3s						
PAU				*e*S	**Sn**	**02 31 36.1**	**-2.1**
PAU				A	A	02 31 40.3	
	comp=Z,1μm,0.4s						
PAU				A	A	02 31 40.3	
	comp=Z,1μm,0.4s						
REI	**Reidovoe**	**4.91**	**243**	*i* P	**Pn**	**02 31 02.4**	**+1.7**
REI				AMB	AMB	02 31 05.4	
	comp=Z,210nm,0.4s						
REI				*i* S	**Sn**	**02 31 56.7**	**+0.5**
REI				A	A	02 32 02.4	
	comp=Z,340nm,0.3s						
REI				A	A	02 32 02.4	
	comp=Z,340nm,0.3s						
KUR	**Kuril'sk**	**5.02**	**244**	*d i*PN	**Pn**	**02 31 03.9**	**+1.7**
KUR				*e*S	**Sn**	**02 32 00.7**	**+1.8**
KUR				pmax	pmax		
	comp=Z,441nm,0.4s						
KUR				pmax	pmax		
	comp=E,199nm,0.7s						
KUR				pmax	pmax		
	comp=N,136nm,0.3s						
KUR				smax	smax		
	comp=N,316nm,0.5s						
KUR				smax	smax		
	comp=E,648nm,0.5s						
KUR				smax	smax		
	comp=N,3μm,3.5s						
KUR				smax	smax		
	comp=E,3μm,1.5s						
KUR				MLR	MLR		
	comp=Z,1μm,11.0s						
KUR	**Kuril'sk**	**5.02**	**244**	*i* P	**Pn**	**02 31 04.2**	**+2.0**
KUR				AMB	AMB	02 31 14.9	
	comp=Z,440nm,0.5s						
KUR				*i* S	**Sn**	**02 32 00.0**	**+1.1**
KUR				A	A	02 32 07.5	
	comp=Z,320nm,0.5s						
KUR				A	A	02 32 07.5	
	comp=Z,650nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.90**	**21**	*i* PN	**Pn**	**02 31 15.3**	**+1.0**
PEA0B	**Petropavlovsk-**	**5.90**	**21**		**Pn**	**02 31 13.8**	**-0.5**
PETK	**Petropavlovsk-**	**5.90**	**21**	P	**Pn**	**02 31 14.9**	**+0.6**
	comp=Z,43nm,0.4s,baz=172,slow=12,SNR=186						
PETK				S	**Sn**	**02 32 22.6**	**+2.1**
	comp=Z,19nm,0.6s,baz=185,slow=14,SNR=1.1						
PETK				LR	LR	02 33 41.2	
	comp=Z,588nm,21.4s,baz=202,slow=40						
PETK	**Petropavlovsk-**	**5.90**	**21**	Pn	**Pn**	**02 31 14.3**	**0.0**
PET	**Petropavlovsk**	**6.08**	**26**	*e*PN	**Pn**	**02 31 13.3**	**-3.4**
PET				pmax	pmax		
	comp=Z,213nm,1.1s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
PET				MLR	MLR		
	comp=Z,500nm,14.0s						
PET	**Petropavlovsk**	**6.08**	**26**	Pn	**Pn**	**02 31 15.7**	**-1.0**
PET	**Petropavlovsk**	**6.08**	**26**	P	**Pn**	**02 31 15.8**	**-0.9**
PET	**Petropavlovsk**	**6.08**	**26**	*e*P	**Pn**	**02 31 16.3**	**-0.4**
PET				AMB	AMB	02 31 20.8	
	comp=Z,100nm,0.3s						
PET				*e*S	**Sn**	**02 32 21.5**	**-3.3**
PET				A	A	02 32 22.4	
	comp=Z,170nm,0.3s						
PET				A	A	02 32 22.4	
	comp=Z,240nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.87**	**241**	*d i*PN	**Pn**	**02 31 28.6**	**+1.0**
YUK				pmax	pmax		
	comp=Z,295nm,1.1s						
YUK				pmax	pmax		
	comp=Z,333nm,0.2s						
YUK				pmax	pmax		
	comp=E,94nm,0.1s						
YUK				pmax	pmax		
	comp=N,76nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.87**	**241**	*i* P	**Pn**	**02 31 28.7**	**+1.1**
YUK				AMB	AMB	02 31 39.5	
	comp=N,340nm,0.4s						
YUK				*e*S	**Sn**	**02 32 44.2**	**-0.1**
RUSJ	**Misakicho**	**7.20**	**244**	PN	**Pn**	**02 31 33.6**	**+1.5**
RUSJ				*e*S	**Sn**	**02 32 53.7**	**+1.3**
NMR	**Nemuro--Hokkai**	**7.35**	**238**	‖ *i*PN	**Pn**	**02 31 32.0**	**-2.1**
NMR	**Nemuro--Hokkai**	**7.35**	**238**	*i* P	**Pn**	**02 31 32.2**	**-1.9**
YSS	**Yuzhno-Sakhali**	**7.84**	**269**	*ce*PN	**Pn**	**02 31 44.0**	**+3.2**
YSS				*e*S	**Sn**	**02 33 08.3**	**+0.3**
YSS				pmax	pmax		
	comp=Z,110nm,0.7s						
YSS				pmax	pmax		
	comp=E,400nm,2.7s						
YSS				pmax	pmax		
	comp=Z,200nm,2.7s						
YSS				smax	smax		
	comp=N,100nm,0.7s						
YSS				smax	smax		
	comp=E,330nm,0.6s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	**Yuzhno-Sakhali**	**7.84**	**269**		**Pn**	**02 31 40.1**	**-0.7**
YSS	**Yuzhno-Sakhali**	**7.84**	**269**	*e*P	**Pn**	**02 31 43.4**	**+2.6**
YSS				AMB	AMB	02 31 44.7	
	comp=Z,110nm,0.7s						
YSS				*e*S	**Sn**	**02 33 09.3**	**+1.3**
AKK	**Akkeshi**	**8.07**	**239**	*e*P	**Pn**	**02 31 42.0**	**-2.0**
TYV	**Tymovskoe**	**8.24**	**297**	*e*PN	**Pn**	**02 31 48.1**	**+1.9**
TYV				*e*S	**Sn**	**02 33 21.5**	**+3.9**
TYV				pmax	pmax		
	comp=Z,49nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,2.2s						
TYV				smax	smax		
	comp=N,25nm,1.1s						
TYV				smax	smax		
	comp=E,21nm,1.1s						
TYV				smax	smax		
	comp=N,100nm,3.8s						
TYV				smax	smax		
	comp=E,200nm,3.8s						
TYV	**Tymovskoe**	**8.24**	**297**	*e*P	**Pn**	**02 31 48.1**	**+1.9**
TYV				AMB	AMB	02 31 49.2	
	comp=E,50nm,0.4s						
TYV				*e*S	**Sn**	**02 33 20.0**	**+2.4**
UGL	**Uglegorsk**	**8.24**	**285**	*e*PN	**Pn**	**02 31 50.2**	**+4.0**
UGL				*e*S	**Sn**	**02 33 19.6**	**+1.9**
UGL				pmax	pmax		
	comp=Z,130nm,1.0s						
UGL				MLR	MLR		
	comp=E,600nm,13.0s						
UGL				MLR	MLR		
	comp=N,800nm,14.0s						
UGL				MLR	MLR		
	comp=Z,2μm,14.0s						
UGL	**Uglegorsk**	**8.24**	**285**	*e*P	**Pn**	**02 31 49.8**	**+3.6**
UGL				AMB	AMB	02 31 50.5	
	comp=Z,130nm,0.6s						
UGL				*e*S	**Sn**	**02 33 19.5**	**+1.9**
JKA	**Kamikawa-asahi**	**8.85**	**251**	Pn	**Pn**	**02 31 55.7**	**+1.1**
JKA	**Kamikawa-asahi**	**8.85**	**251**	P	**Pn**	**02 31 53.9**	**-0.7**
JKA	**Kamikawa-asahi**	**8.85**	**251**	*e*P	**Pn**	**02 31 56.9**	**+2.3**
ASAJ	**Asahikawa**	**8.85**	**251**	P	**Pn**	**02 31 56.9**	**+2.2**
	comp=Z,57nm,0.8s,baz=83,slow=14,SNR=33						
ASAJ				S	**Sn**	**02 33 31.8**	**-1.1**
	comp=Z,4.7nm,0.4s,baz=314,slow=21,SNR=1.1						
ASAJ				LR	LR	02 34 55.3	
	comp=Z,453nm,21.9s,baz=3.5,slow=35						
ERM	**Erimo**	**9.67**	**239**	PN	**Pn**	**02 32 04.3**	**-1.5**
ERM	**Erimo**	**9.67**	**239**		**Pn**	**02 32 04.3**	**-1.5**
ERM	**Erimo**	**9.67**	**239**	P	**Pn**	**02 32 06.4**	**+0.5**
NKL	**Nikolayevsk**	**10.26**	**308**	*e*P	**Pn**	**02 32 15.1**	**+1.3**
JTM	**Tenmabayashi**	**11.66**	**239**	Pn	**Pn**	**02 32 29.4**	**-3.6**
MA2	**Magadan**	**12.13**	**352**	P	**Pn**	**02 32 38.1**	**-1.2**
	comp=Z,16nm,0.4s,baz=155,slow=17,SNR=7.5						
MA2				LR	LR	02 37 06.6	
	comp=Z,333nm,20.3s,baz=146,slow=37						
MA2	**Magadan**	**12.13**	**352**	*ce*PN	**Pn**	**02 32 39.2**	**-0.1**
MA2				pmax	pmax		
	comp=Z,40nm,1.3s						
MA2	**Magadan**	**12.13**	**352**		**Pn**	**02 32 37.8**	**-1.5**
MA2	**Magadan**	**12.13**	**352**	*e*P	**Pn**	**02 32 39.2**	**-0.1**
SHEM	**Shemya Is, Ala**	**13.69**	**61**	P	**Pn**	**02 32 59.7**	**-0.7**
	comp=Z,42nm,0.5s,baz=292,slow=19,SNR=11						
SHEM				S	Sn	02 35 20.2	-10
	comp=Z,37nm,0.4s,baz=288,slow=21,SNR=9.9						
SHEM	**Shemya Is, Ala**	**13.69**	**61**	Pn	**Pn**	**02 32 58.9**	**-1.5**
SMY	**Shemya**	**13.69**	**61**	P	**Pn**	**02 32 58.7**	**-1.7**
SMY	**Shemya**	**13.69**	**61**	Pn	**Pn**	**02 32 58.7**	**-1.7**
SEY	**Seymchan**	**15.36**	**357**	P	**Pn**	**02 33 21.1**	**-1.0**
	comp=Z,4.3nm,0.3s,baz=166,slow=11,SNR=23						
SEY	**Seymchan**	**15.36**	**357**	*i* P	**Pn**	**02 33 23.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**15.85**	**266**	P	**Pn**	**02 33 28.0**	**-0.5**
	comp=Z,9.3nm,0.6s,baz=70,slow=14,SNR=18						
USRK				LR	LR	02 39 30.3	
	comp=Z,239nm,18.3s,baz=59,slow=37						
USRK	**Ussuriysk Ar.**	**15.85**	**266**	P	**P**	**02 33 29.7**	**-1.4**
USRK	**Ussuriysk Ar.**	**15.85**	**266**	P	**P**	**02 33 29.7**	**-1.4**
USRK	**Ussuriysk Ar.**	**15.85**	**266**	*e*P	**P**	**02 33 29.7**	**-1.4**
USA0B	**Ussuriysk Arra**	**15.85**	**266**	*i* P	**Pn**	**02 33 28.7**	**+0.2**
USA0B	**Ussuriysk Arra**	**15.85**	**266**	Pn	**Pn**	**02 33 26.9**	**-1.6**
MJAR	**Matsushiro Arr**	**16.23**	**233**	P	**Pn**	**02 33 31.4**	**-2.0**
	comp=Z,3.6nm,0.6s,baz=26,slow=14,SNR=9.9						
MJAR	**Matsushiro Arr**	**16.23**	**233**	P	**Pn**	**02 33 30.6**	**-2.8**
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	**Matsushiro Arr**	**16.23**	**233**	Pn	**Pn**	**02 33 30.6**	**-2.8**
MJB9	**Matsu-Tunnel**	**16.23**	**233**	Pn	**Pn**	**02 33 30.6**	**-2.8**
MAJO	**Matsushiro**	**16.23**	**233**	P	**Pn**	**02 33 30.7**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,19nm,0.7s						
MAJO	**Matsushiro**	**16.23**	**233**	Pn	**Pn**	**02 33 30.7**	**-2.7**
JGF	**Kuroka**	**17.39**	**232**	Pn	**Pn**	**02 33 46.6**	**-1.2**
JGF				IAmb	IAmb	02 33 54.1	
	comp=Z,25nm,0.8s						
JGF	**Kuroka**	**17.39**	**232**	P	**P**	**02 33 50.5**	**+2.3**
INU	**Inuyama**	**17.76**	**233**	P	**P**	**02 33 52.7**	**+0.4**
INU				IAmb	IAmb	02 33 55.6	
	comp=Z,45nm,1.1s						
INU	**Inuyama**	**17.76**	**233**	P	**P**	**02 33 54.9**	**+2.5**
HEH	**HeiHe**	**17.78**	**288**	*e*P	**P**	**02 33 52.5**	**+0.1**
HEH				pmax	pmax		
	comp=Z,43nm,1.0s						
HEH				L	L		
	comp=Z,230nm,17.0s						
HEH				L	L		
	comp=Z,270nm,18.5s						
HEH				L	L		
	comp=Z,430nm,20.9s						
ZEA	**Zeya**	**18.09**	**300**	*e*P	**Pn**	**02 33 57.3**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.4s						
ZEA				MLR	MLR		
	comp=N,100nm,16.0s						
ZEA	**Zeya**	**18.09**	**300**	*e*P	**Pn**	**02 33 57.3**	**+1.2**
BNX	**BinXian**	**18.48**	**274**	‖P	**Pn**	**02 34 03.5**	**+2.6**
BNX				pmax	pmax		
	comp=N,27nm,0.9s						
YAK	**Yakutsk**	**20.01**	**325**	P	**P**	**02 34 14.6**	**-2.0**
	comp=N,33nm,0.6s,baz=115,slow=5.0,SNR=13						
YAK				LR	LR	02 41 33.3	
	comp=N,234nm,21.5s,baz=130,slow=36						
YAK	**Yakutsk**	**20.01**	**325**	*e*P	**P**	**02 34 17.6**	**+1.0**
YAK				*e*S	**S**	**02 37 53.6**	**-4.2**
YAK				pmax	pmax		
	comp=Z,66nm,1.1s						
YAK				pmax	pmax		
	comp=N,21nm,1.4s						
YAK				pmax	pmax		
	comp=E,29nm,1.5s						
YAK				smax	smax		
	comp=E,42nm,2.5s						
YAK				smax	smax		
	comp=N,19nm,2.0s						
YAK	**Yakutsk**	**20.01**	**325**	P	**P**	**02 34 16.0**	**-0.6**
YAK	**Yakutsk**	**20.01**	**325**	*e*P	**P**	**02 34 17.6**	**+1.0**
CN2	**Changchun**	**20.41**	**270**	P	**P**	**02 34 19.5**	**-1.7**
CN2				S	**S**	**02 37 57.3**	**-8.8**
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
CN2				L	L		
	comp=N,140nm,15.0s						
CN2				L	L		
	comp=N,160nm,15.0s						
CN2				L	L		
	comp=N,250nm,16.0s						
KSRS	**Korea Array**	**21.80**	**252**	P	**P**	**02 34 36.9**	**+0.8**
	comp=N,21nm,0.9s,baz=54,slow=10.0,SNR=36						
KSRS				LR	LR	02 42 53.2	
	comp=N,154nm,18.1s,baz=80,slow=36						
	comp=N,21nm,0.9s						
KS19	**Wonju Array Si**	**21.81**	**252**	P	**P**	**02 34 35.9**	**-0.4**
KS19				IAmb	IAmb	02 34 40.2	
	comp=Z,24nm,0.8s						
KSAR	**Wonju Array Be**	**21.83**	**252**	P	**P**	**02 34 36.3**	**-0.2**
KSAR	**Wonju Array Be**	**21.83**	**252**	P	**P**	**02 34 36.3**	**-0.2**
INCN	**Inchon**	**22.62**	**253**	P	**P**	**02 34 44.7**	**-0.2**
INCN				pmax	pmax		
	comp=Z,26nm,1.0s						
INCN	**Inchon**	**22.62**	**253**	P	**P**	**02 34 44.7**	**-0.2**
INCN				IAmb	IAmb	02 34 50.0	
	comp=Z,26nm,0.9s						
INCN	**Inchon**	**22.62**	**253**	*e*P	**P**	**02 34 44.7**	**-0.2**
TJN	**Taejon**	**22.81**	**250**	P	**P**	**02 34 46.4**	**-0.5**
TJN				pmax	pmax		
	comp=Z,114nm,1.0s						
TJN	**Taejon**	**22.81**	**250**	P	**P**	**02 34 46.4**	**-0.5**
JNU	**Nakatsue**	**22.84**	**239**	P	**P**	**02 34 48.8**	**+1.5**
	comp=Z,8.1nm,0.8s,baz=71,slow=8.9,SNR=4.0						
	comp=Z,8.1nm,0.8s						
TIXI	**Tiksi**	**26.84**	**343**	LR	LR	02 47 03.9	
	comp=Z,208nm,18.6s,baz=172,slow=39						
M16K	**Timber Creek**	**29.67**	**46**	P	**P**	**02 35 50.5**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**29.68**	**155**	T	T	03 07 08.4	
	baz=342,slow=75,SNR=1707						
H11N1	**WAKE ISLAND Hy**	**29.70**	**155**	T	T	03 07 09.4	
	baz=342,slow=75,SNR=3646						
H11N3	**WAKE ISLAND Hy**	**29.70**	**155**	T	T	03 07 07.4	
	baz=342,slow=75,SNR=2189						
M17K	**Holitna River**	**30.44**	**45**	P	**P**	**02 35 57.6**	**+2.0**
M17K				IAmb	IAmb	02 36 00.9	
	comp=Z,11nm,1.3s						
HNS	**HongShan**	**30.58**	**265**	‖P	**P**	**02 35 58.3**	**+1.2**
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
HNS				L	L

SONM Songino Array 31.77 288 P **P** 02 36 06.9 -0.7
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 31.77 288 P **P** 02 36 06.9 -0.7
B20K Meade River 32.27 29 P **P** 02 36 12.6 +1.1
TLY Talaya 32.46 296 LR LR 02 50 30.9
comp=Z,208nm,18.7s,baz=80,slow=39
TLY Talaya 32.46 296 P **P** 02 36 13.7 +0.2
IMAR Indian Mountai 32.59 37 P **P** 02 36 15.8 +1.3
G21K Allakaket 32.77 36 P **P** 02 36 17.3 +1.3
KDAK Kodiak Island 32.95 52 P **P** 02 36 18.2 +0.6
KDAK pmax pmax
comp=Z,13nm,1.2s
KDAK Kodiak Island 32.95 52 P **P** 02 36 18.2 +0.6
KDAK IAmb IAmb 02 36 36.4
comp=Z,13nm,1.2s
PPLA Purkeypile 32.99 43 P **P** 02 36 20.3 +2.2
PPLA IAmb IAmb 02 36 46.7
comp=Z,17nm,1.3s
B21K Ikpikpuk River 33.01 30 P **P** 02 36 17.9 -0.1
SPU Mount Spurr 33.03 46 P **P** 02 36 19.8 +1.4
SKT Skwentna 33.27 44 P **P** 02 36 21.9 +1.4
SKT IAmb IAmb 02 37 00.1
comp=Z,9.7nm,1.5s
CNPM China Poot 33.50 49 P **P** 02 36 23.4 +0.9
L22K Petersville 33.63 43 P **P** 02 36 25.3 +1.7
L22K IAmb IAmb 02 36 25.4
comp=Z,11nm,1.5s
COLD Coldfoot 34.16 35 P **P** 02 36 29.2 +1.1
COLD IAmb IAmb 02 36 32.6
comp=Z,8.9nm,1.1s
G23K Bananza Creek 34.17 36 P **P** 02 36 28.8 +0.5
BWN Browne 34.25 40 P **P** 02 36 31.5 +2.7
H23K Yukon River 34.29 37 P **P** 02 36 31.7 +2.4
H23K IAmb IAmb 02 36 48.5
comp=Z,5.5nm,1.1s
RND Reindeer 34.51 42 P **P** 02 36 32.7 +1.5
RND pmax pmax
comp=Z,8.0nm,1.1s
SML Sawmill 34.80 45 P **P** 02 36 34.7 +1.0
SML pmax pmax
comp=Z,14nm,0.7s
SML Sawmill 34.80 45 P **P** 02 36 34.6 +1.0
GUMO Guam 34.84 196 LR LR 02 50 17.2
comp=Z,44nm,20.3s,baz=36,slow=35
WHN Wuhan 34.90 255 ⇑P **P** 02 36 35.3 +0.5
E24K Your Creek 34.91 34 IAmb IAmb 02 36 37.6
comp=Z,8.1nm,0.9s
D24K Happy Valley 34.92 32 IAmb IAmb 02 36 52.1
comp=Z,18nm,1.4s
COLA College 34.96 39 *i* P **P** 02 36 36.4 +1.5
COLA pmax pmax
comp=Z,6.0nm,1.4s
COLA College 34.96 39 P **P** 02 36 37.2 +2.3
CCB Clear Creek Bu 34.98 40 P **P** 02 36 36.7 +1.6
CCB IAmb IAmb 02 37 10.5
comp=Z,7.9nm,1.4s
H24K Noodor Dome 34.98 37 P **P** 02 36 36.5 +1.3
H24K IAmb IAmb 02 36 59.9
comp=Z,8.2nm,1.3s
ILAR Eielson Array 35.37 39 P **P** 02 36 39.5 +1.0
comp=Z,0.4nm,0.4s,baz=272,slow=8.2,SNR=14
comp=Z,0.4nm,0.4s
D25K Kavik River 35.81 31 IAmb IAmb 02 37 04.8
comp=Z,8.0nm,0.7s
E25K Arctic Village 36.00 34 P **P** 02 36 45.5 +1.6
E25K IAmb IAmb 02 36 50.3
comp=Z,10nm,1.3s
G26K Porcupine Rive 36.65 36 IAmb IAmb 02 36 55.7
comp=Z,13nm,1.2s
E27K Coleen River 37.49 34 P **P** 02 36 58.7 +2.1
H27K Steamboat Moun 37.57 37 P **P** 02 36 59.5 +2.2
H27K IAmb IAmb 02 37 25.9
comp=Z,9.8nm,1.3s
D27M Malcolm River 37.73 32 IAmb IAmb 02 37 05.9
comp=Z,6.5nm,1.1s
LZH Lanzhou 38.63 271 *e*P **P** 02 37 09.3 +2.6
LZH sP pP 02 37 21.8 0.0
LZH pmax pmax
comp=Z,19nm,1.1s
LZH L L
comp=Z,200nm,14.8s
LZH L L
comp=Z,180nm,14.6s
LZH L L
comp=Z,200nm,14.6s
LZDM Lanzhou Array 38.80 271 P **P** 02 37 07.5 -0.9
comp=Z,2.8nm,0.4s,baz=88,slow=7.4,SNR=3.5
LZDM LR LR 02 52 55.2
comp=Z,128nm,19.8s,baz=170,slow=36
comp=Z,2.8nm,0.4s
GTA2 Gaotai 39.59 279 P **P** 02 37 14.0 -0.6
GTA2 pmax pmax
comp=Z,10.0nm,1.0s
GTA2 L L
comp=Z,160nm,15.6s
GTA2 L L
comp=Z,110nm,17.1s
GTA2 L L
comp=Z,180nm,19.4s
I30M Mount Dempster 39.79 38 P **P** 02 37 18.0 +2.1
I30M IAmb IAmb 02 37 33.4
comp=Z,5.5nm,0.9s
INK Inuvik 40.48 33 P **P** 02 37 22.7 +1.2
INK pmax pmax
comp=Z,9.0nm,1.2s
INK Inuvik 40.48 33 P **P** 02 37 23.1 +1.7
CD2 Chengdu 41.72 265 P **P** 02 37 32.0 -0.2
CD2 pmax pmax
comp=Z,40nm,0.9s
ZALV Zalesovo Beam 42.72 305 P **P** 02 37 36.0 -3.9
comp=Z,1.0nm,0.3s,baz=60,slow=8.4,SNR=8.0
ZALV PcP **PcP** 02 39 30.1 -0.3
comp=Z,1.0nm,0.3s,baz=58,slow=3.6,SNR=6.9
ZALV LR LR 02 56 32.0
comp=Z,170nm,19.3s,baz=65,slow=38
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 42.72 305 *i* P **P** 02 37 40.7 +0.8
ZALV pmax pmax
comp=Z,2.0nm,0.8s
DGZ Jazzator, Alta 42.85 299 *i* P **P** 02 37 40.4 -0.8
DGZ pmax pmax
comp=Z,7.0nm,1.1s
WMQ Urumqi 45.32 291 *e*P **P** 02 38 02.0 +1.0
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ L L
comp=Z,130nm,18.9s
PZH PanZhiHua 45.90 262 P **P** 02 38 07.8 +2.0
KMI2 Kunming 46.14 260 ⇑P **P** 02 38 08.8 +1.0
KMI2 pmax pmax
comp=Z,17nm,1.0s
MK31 Makanchi Array 47.22 297 *ce*P **P** 02 38 14.3 -1.5
MKAR Makanchi Array 47.22 297 P **P** 02 38 12.4 -3.4
comp=Z,7.3nm,0.9s,baz=64,slow=8.6,SNR=27
MKAR PcP **PcP** 02 39 45.3 -0.9
comp=Z,0.5nm,0.5s,baz=65,slow=4.1,SNR=2.1
MKAR ScP **ScP** 02 43 31.2 -3.1
comp=Z,0.5nm,0.7s,baz=41,slow=4.8,SNR=2.2
MKAR LR LR 02 58 08.2
comp=Z,120nm,21.9s,baz=72,slow=36
comp=Z,7.3nm,0.9s
MKAR Makanchi Array 47.22 297 *i* P **P** 02 38 14.3 -1.5
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 47.22 297 **P** 02 38 13.0 -2.8
MAKZ Makanchi 47.40 297 P **P** 02 38 15.4 -1.8
MAKZ pmax pmax
comp=Z,10.0nm,1.2s
MAKZ Makanchi 47.40 297 P **P** 02 38 15.4 -1.8
MAKZ IAmb IAmb 02 38 18.7
comp=Z,9.5nm,1.2s
MAKZ Makanchi 47.40 297 P **P** 02 38 15.7 -1.4
KURK Kurchatov 47.51 303 *ce*P **P** 02 38 15.9 -2.1
KURK pmax pmax
comp=Z,21nm,1.0s
KURK Kurchatov 47.51 303 P **P** 02 38 16.3 -1.7
KURBB Kurchatov Arra 47.61 303 P **P** 02 38 16.2 -2.5
comp=Z,9.1nm,0.8s,baz=67,slow=8.3,SNR=29
KURBB PcP **PcP** 02 39 47.2 -0.2
comp=Z,1.9nm,0.8s,baz=65,slow=3.4,SNR=4.4
comp=Z,9.1nm,0.8s
BBB Bella Bella 47.97 54 LR LR 02 57 42.9
comp=Z,25nm,20.3s,baz=233,slow=35
RES Resolute Bay 49.74 19 LR LR 03 00 38.3
comp=Z,53nm,21.5s,baz=7.5,slow=37

YKA Yellowknife Ar 49.75 37 P **P** 02 38 34.9 -0.1
comp=Z,0.5nm,0.5s,baz=304,slow=7.5,SNR=4.2
comp=Z,0.5nm,0.5s
BVAR Borovoye Array 50.89 309 P **P** 02 38 41.2 -2.4
comp=Z,2.6nm,0.4s,baz=57,slow=8.6,SNR=13
comp=Z,2.6nm,0.4s
KOHI KOHIMA 51.56 267 *e*P **P** 02 38 49.6 +0.4
WUS Wushi 52.03 292 P **P** 02 38 52.0 -0.5
TARG Taragay, Kyrgy 52.61 294 P **P** 02 38 55.8 -1.4
TARG pmax pmax
comp=Z,3.0nm,0.7s
TARG Taragay, Kyrgy 52.61 294 P **P** 02 38 55.8 -1.4
TARG IAmb IAmb 02 39 01.0
comp=Z,2.6nm,0.7s
TARG Taragay, Kyrgy 52.61 294 P **P** 02 38 57.0 -0.2
KDJ Kajisay 52.77 294 P **P** 02 38 56.9 -1.2
KDJ pmax pmax
comp=Z,6.0nm,0.8s
GUWA GUWAHATI 52.88 269 *e*P **P** 02 38 59.1 +0.3
CHTO Chiang Mai 53.07 257 P **P** 02 39 01.1 +0.8
CHTO pmax pmax
comp=Z,18nm,0.9s
CHTO Chiang Mai 53.07 257 P **P** 02 39 01.6 +1.2
CHTO Chiang Mai 53.07 257 P **P** 02 39 01.1 +0.8
CHTO Chiang Mai 53.07 257 P **P** 02 39 01.6 +1.2
CHTO pP **pP** 02 39 16.6 +0.5
SHL Shillong 53.16 269 P **P** 02 39 00.6 -0.5
SHL pmax pmax
comp=Z,32nm,0.7s
SHL Shillong 53.16 269 P **P** 02 39 01.0 -0.2
SHL Shillong 53.16 269 P **P** 02 39 00.6 -0.5
SHL Shillong 53.16 269 *e*P **P** 02 39 00.9 -0.3
SHL IAmb IAmb 02 39 04.1
comp=Z,11nm,0.5s
CMAR Chiang Mai Arr 53.33 257 P **P** 02 39 02.5 +0.3
comp=Z,7.9nm,0.8s,baz=32,slow=7.6,SNR=39
CMAR LR LR 03 02 43.6
comp=Z,89nm,18.7s,baz=70,slow=37
comp=Z,7.9nm,0.8s
CMAR Chiang Mai Arr 53.33 257 *i* P **P** 02 39 04.0 +1.8
CMAR pmax pmax
comp=Z,9.0nm,0.8s
ASAI AK-SAY(Kyrgyzs 53.87 294 P **P** 02 39 06.2 -0.2
AAK Ala-Archa 54.13 296 LR LR 03 05 02.6
comp=Z,113nm,18.0s,baz=48,slow=39
AAK Ala-Archa 54.13 296 *ce*P **P** 02 39 06.4 -1.6
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 54.13 296 P **P** 02 39 07.1 -0.9
AAK Ala-Archa 54.13 296 P **P** 02 39 06.6 -1.4
AAK IAmb IAmb 02 39 10.5
comp=Z,4.5nm,0.8s
AAK Ala-Archa 54.13 296 P **P** 02 39 07.1 -0.9
AAK Ala-Archa 54.13 296 *e*P **P** 02 39 06.4 -1.6
NEEM North Greenlan 54.19 7 *i* P **P** 02 39 07.5 -0.6
NEEM IAmb IAmb 02 39 08.2
comp=Z,20nm,0.9s
ARTI Arti 54.98 318 *d* iP **P** 02 39 14.2 +0.5
ARTI *PP **sP** 02 39 36.0 -0.7
ARTI 02 40 14.2
ARTI 02 41 13.4
ARTI S **S** 02 46 51.5 +0.9
ARTI SS **SS** 02 50 37.2 +3.0
ARTI pmax pmax
comp=Z,3.0nm,0.9s
EVN Everest 55.03 275 **P** 02 39 15.2 -0.1
EVN Everest 55.03 275 P **P** 02 39 14.3 -0.9
EDM Edmonton 55.14 47 P **P** 02 39 16.9 +1.9
EDM pmax pmax
comp=Z,9.0nm,1.0s
KSH2 Kashi 55.50 292 P **P** 02 39 17.5 -0.4
KSH2 pmax pmax
comp=Z,5.0nm,1.5s
KSH2 L L
comp=Z,460nm,21.0s
KSH2 L L
comp=Z,260nm,10.6s
KSH2 L L
comp=Z,270nm,17.5s
ARSB Arslanbob 55.81 296 P **P** 02 39 19.3 -0.8
ARSB pmax pmax
comp=Z,5.0nm,0.8s
ARSB Arslanbob 55.81 296 P **P** 02 39 19.3 -0.8
ARSB IAmb IAmb 02 39 22.4
comp=Z,5.2nm,0.8s
NEW Newport 56.02 54 LR LR 03 05 21.4
comp=Z,24nm,18.1s,baz=303,slow=38
ARK Arkit 56.14 297 P **P** 02 39 22.2 -0.3
ARK Arkit 56.14 297 P **P** 02 39 22.2 -0.3
KKAR Karatay Array 56.24 299 P **P** 02 39 20.9 -2.1
KKAR Karatay Array 56.24 299 P **P** 02 39 20.9 -2.1
KULLO Kullorsuaq 56.26 10 *i* P **P** 02 39 22.1 -0.5
KULLO IAmb IAmb 02 39 22.8
comp=Z,27nm,0.9s
ILON Igloolik, Nuna 56.28 21 **P** 02 39 23.5 +0.6
YBH Yreka Blue Hor 56.65 63 LR LR 03 00 17.6
comp=Z,30nm,21.9s,baz=330,slow=32
PMG Port Moresby 57.14 188 LR LR 03 01 25.0
comp=Z,37nm,20.7s,baz=202,slow=33
ARA0 ARCESS Array S 57.26 341 *e*P **P** 02 39 28.9 -1.0
ARCES ARCESS Array B 57.26 341 P **P** 02 39 27.9 -2.0
comp=Z,0.4nm,0.3s,baz=35,slow=7.6,SNR=18
ARCES LR LR 03 07 36.3
comp=Z,141nm,20.8s,baz=58,slow=40
comp=Z,0.4nm,0.3s
BTK Batken 57.88 296 P **P** 02 39 33.7 -1.0
BMO Blue Mountains 57.94 57 P **P** 02 39 36.5 +1.4
BMO pmax pmax
comp=Z,5.0nm,1.0s
BMO Blue Mountains 57.94 57 P **P** 02 39 36.5 +1.4
BMO IAmb IAmb 02 39 38.8
comp=Z,4.5nm,0.9s
UPNV Upernavik 58.03 10 *i* P **P** 02 39 34.4 -0.8
UPNV IAmb IAmb 02 39 37.9
comp=Z,36nm,1.2s
003E Paynes Creek 58.06 64 P **P** 02 39 36.7 +0.7
JETT Jettan, Norway 58.32 343 *e*P **P** 02 39 36.0 -1.3
JETT IAmb IAmb 02 39 40.8
comp=Z,7.7nm,0.9s
AB31 Akbulak array 58.45 310 **P** 02 39 36.7 -1.7
AB31 IAmb IAmb 02 39 39.8
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 58.45 310 **P** 02 39 37.2 -1.1
TRO Tromso 58.55 343 *e*P **P** 02 39 37.9 -0.9
WVOR Wild Horse Val 58.64 60 P **P** 02 39 40.1 0.0
WVOR pmax pmax
comp=Z,6.0nm,1.0s
WVOR Wild Horse Val 58.64 60 P **P** 02 39 43.0 +2.9
ORV Oroville 58.70 64 P **P** 02 39 41.3 +1.0
ORV pmax pmax
comp=Z,4.0nm,1.0s
AKTO Aktyubinsk 58.70 312 LR LR 03 09 42.5
comp=Z,95nm,19.2s,baz=112,slow=41
GAR Garm 58.84 295 P **P** 02 39 39.2 -2.3
GAR Garm 58.84 295 P **P** 02 39 39.7 -1.7
LYMT Lyon Mountain 59.42 53 P **P** 02 39 47.6 +2.2
SMLA Simla 59.42 284 *e*P **P** 02 39 44.6 -0.8
SMLA IAmb IAmb 02 39 46.5
comp=Z,51nm,1.5s
SUMG Summit 59.76 4 P **P** 02 39 47.6 0.0
SUMG pmax pmax
comp=Z,25nm,1.0s
SUMG Summit 59.76 4 P **P** 02 39 48.4 +0.8
SUMG Summit 59.76 4 *i* P **P** 02 39 47.0 -0.6
SUMG IAmb IAmb 02 39 49.0
comp=Z,25nm,1.0s
CHGR Chuyangaron 59.76 295 *i* P **P** 02 39 46.4 -1.4
CHGR pmax pmax
comp=Z,12nm,0.7s
CHGR Chuyangaron 59.76 295 P **P** 02 39 46.8 -1.0
EGMT Eagleton 60.10 50 P **P** 02 39 50.9 +1.0
EGMT IAmb IAmb 02 39 53.2
comp=Z,7.6nm,1.2s
CMB Columbia Colle 60.33 65 P **P** 02 39 52.7 +1.1
CMB pmax pmax
comp=Z,11nm,1.5s
HLID Hailey 60.37 57 P **P** 02 39 54.9 +2.9
MCMT McKenzie Canyo 60.45 55 P **P** 02 39 53.7 +1.1
WAKR Walker 60.61 64 P **P** 02 39 55.2 +1.5
WAKR IAmb IAmb 02 39 57.6
comp=Z,5.0nm,1.0s
BOZ Bozeman (W) 60.63 53 P **P** 02 39 54.7 +1.0
BOZ pmax pmax
comp=Z,5.0nm,0.9s
KVN Kaiserville 61.07 63 P **P** 02 39 58.5 +1.7

KVN pmax pmax
comp=Z,5.0nm,1.0s
QLMT Earthquake Lak 61.23 54 P **P** 02 40 00.7 +2.8
NVAR Mina Array Bea 61.34 63 P **P** 02 40 01.4 +2.7
comp=Z,4.4nm,0.9s,baz=290,slow=7.3,SNR=22
NVAR LR LR 03 02 22.8
comp=Z,30nm,22.0s,baz=299,slow=32
comp=Z,4.4nm,0.9s
NVAR Mina Array Bea 61.34 63 P **P** 02 40 00.2 +1.5
ELK Elko 61.69 60 P **P** 02 40 02.2 +1.2
ELK pmax pmax
comp=Z,3.0nm,1.0s
H17A Grant Village 61.98 54 IAmb IAmb 02 40 08.2
comp=Z,6.0nm,1.0s
VAGH Vaagaholmen 62.14 344 *e*P **P** 02 40 02.5 -0.8
DSP Deep Springs 62.22 64 P **P** 02 40 06.5 +2.1
DSP IAmb IAmb 02 40 08.5
comp=Z,5.7nm,1.0s
HVU Hansel Valley 62.44 57 P **P** 02 40 07.1 +1.1
HVU pmax pmax
comp=Z,3.0nm,1.0s
KBL Kabul 62.45 292 P **P** 02 40 04.7 -1.5
KBL pmax pmax
comp=Z,6.0nm,0.8s
GMN Gold Mountain 62.70 64 P **P** 02 40 09.8 +2.0
LEIR Leirfjorden 62.71 343 *e*P **P** 02 40 05.8 -1.4
LEIR IAmb IAmb 02 40 10.2
comp=Z,21nm,1.2s
HWUT Hardware Ranch 63.24 57 P **P** 02 40 14.1 +2.8
DUG Dugway, Tooele 63.45 59 P **P** 02 40 14.0 +1.3
DUG pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway, Tooele 63.45 59 P **P** 02 40 14.0 +1.3
DUG IAmb IAmb 02 40 16.5
comp=Z,7.3nm,0.9s
DUG Dugway, Tooele 63.45 59 P **P** 02 40 15.5 +2.8
FINES FINESS Array B 63.56 335 P **P** 02 40 10.8 -2.0
comp=Z,3.4nm,0.4s,baz=38,slow=7.1,SNR=97
FINES LR LR 03 09 55.5
comp=Z,107nm,21.3s,baz=16,slow=38
comp=Z,3.4nm,0.4s
BW06 Boulder Array 63.60 55 P **P** 02 40 15.5 +1.7
BW06 IAmb IAmb 02 40 17.6
comp=Z,6.8nm,1.1s
PDAR Pinedale Array 63.60 55 P **P** 02 40 15.7 +2.0
comp=Z,3.9nm,0.9s,baz=318,slow=2.0,SNR=30
PDAR LR LR 03 06 57.6
comp=Z,16nm,21.9s,baz=324,slow=35
comp=Z,3.9nm,0.9s
PDAR Pinedale Array 63.60 55 P **P** 02 40 14.8 +1.1
SFJD Kangerlussuaq 64.14 11 LR LR 03 10 59.6
comp=Z,76nm,18.7s,baz=354,slow=39
BSUT Blindstream Ca 64.40 57 P **P** 02 40 21.2 +2.0
BHPL Bhopal 64.47 277 *e*P **P** 02 40 19.6 +0.1
BHPL IAmb IAmb 02 40 20.9
comp=Z,14nm,1.1s
BHPL *i* pP **sP** 02 40 45.0 +2.3
NGP Nagpur 64.80 274 *e*P **P** 02 40 21.7 +0.1
NGP IAmb IAmb 02 40 22.5
comp=Z,26nm,0.8s
CCUT Cedar City 64.87 61 **P** 02 40 24.6 +2.4
OBN Obninsk 65.01 326 LR LR 03 11 59.2
comp=Z,84nm,18.6s,baz=227,slow=39
OBN Obninsk 65.01 326 *e*P **P** 02 40 22.0 -0.4
OBN *e*PP **sP** 02 40 43.1 -2.6
OBN *e*SP **PcP** 02 40 49.0 -5.8
OBN *e* 02 40 54.3
OBN *e* 02 42 45.9
OBN *e*S **S** 02 48 52.2 -6.9
OBN *e*SS **SS** 02 53 12.3 +1.3
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,95nm,21.0s
OBN Obninsk 65.01 326 *e*P **P** 02 40 22.0 -0.4
MTPU Mount Pierson 65.24 60 P **P** 02 40 26.3 +1.6
LCMT Little Creek M 65.30 62 P **P** 02 40 26.9 +2.0
LCMT IAmb IAmb 02 40 28.6
comp=Z,7.4nm,0.9s
ULM Lac du Bonnet 65.34 42 LR LR 03 10 22.9
comp=Z,36nm,18.7s,baz=320,slow=37
SRU San Rafael Swe 65.49 58 P **P** 02 40 27.2 +1.1
SRU pmax pmax
comp=Z,10.0nm,1.0s
KNB Kanab 65.55 61 P **P** 02 40 27.7 +1.2
KNB pmax pmax
comp=Z,9.0nm,1.0s
PFO Pinyon Flats O 65.62 66 LR LR 03 03 19.3
comp=Z,27nm,20.6s,baz=240,slow=30
RSSD Black Hills 65.66 51 P **P** 02 40 28.3 +1.2
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD Black Hills 65.66 51 P **P** 02 40 28.3 +1.2
RSSD IAmb IAmb 02 40 30.0
comp=Z,7.9nm,1.0s
RSSD Black Hills 65.66 51 P **P** 02 40 29.5 +2.4
BC3 Big Chuckawall 66.21 66 P **P** 02 40 31.2 +0.5
AKL Akola 66.49 275 *e*P **P** 02 40 32.9 +0.4
AKL IAmb IAmb 02 40 34.8
comp=Z,13nm,0.6s
PV22 Blue Mesa, Par 66.88 58 P **P** 02 40 36.0 +1.0
PV22 IAmb IAmb 02 40 38.3
comp=Z,7.5nm,1.0s
PV16 Nyswonger Mesa 66.96 58 P **P** 02 40 37.2 +1.7
PV16 IAmb IAmb 02 40 38.8
comp=Z,12nm,1.2s
MOL Molde 66.97 344 *e*P **P** 02 40 35.0 +0.1
MOL IAmb IAmb 02 40 35.1
comp=Z,414nm,2.6s
PV18 Skein Mesa, Pa 67.01 58 P **P** 02 40 37.8 +2.0
WUAZ Wupatki 67.42 62 P **P** 02 40 40.0 +1.6
WUAZ IAmb IAmb 02 40 42.2
comp=Z,6.1nm,1.1s
Y14A Wickenburg 67.52 64 P **P** 02 40 40.5 +1.6
NB2 NORSAR Subarra 67.63 342 P **P** 02 40 38.1 -1.0
comp=Z,1.3nm,0.5s,baz=26,slow=6.5
NB2 NORSAR Subarra 67.63 342 P **P** 02 40 38.1 -1.0
NOA NORSAR Array B 67.63 342 P **P** 02 40 37.2 -1.9
comp=Z,1.4nm,0.5s,baz=28,slow=6.6,SNR=20
NOA LR LR 03 15 09.0
comp=Z,49nm,18.1s,baz=25,slow=40
comp=Z,1.4nm,0.5s
CTA Charters Tower 67.80 188 LR LR 03 10 53.7
comp=Z,46nm,18.8s,baz=208,slow=36
ISCO Idaho Springs 67.80 55 P **P** 02 40 42.7 +1.8
ISCO pmax pmax
comp=Z,4.0nm,0.9s
ISCO Idaho Springs 67.80 55 P **P** 02 40 43.7 +2.8
NC602 NORSAR Array S 67.83 341 *e*P **P** 02 40 39.2 -1.1
NC602 IAmb IAmb 02 40 44.8
comp=Z,34nm,1.5s
NORES NORESS Array B 67.83 341 P **P** 02 40 39.3 -1.1
HFS Hagfors 67.89 340 P **P** 02 40 39.2 -1.5
comp=Z,4.8nm,0.3s,baz=46,slow=4.3,SNR=74
HFS LR LR 03 14 20.2
comp=Z,81nm,19.4s,baz=36,slow=40
comp=Z,4.8nm,0.3s
MVCO Mesa Verde 67.95 59 P **P** 02 40 43.7 +1.9
X16A Lo Mia Camp, P 68.14 63 P **P** 02 40 44.3 +1.4
AFI Afiamalu 68.37 144 LR LR 03 04 50.4
comp=Z,57nm,21.8s,baz=121,slow=30
HYA Hoyanger 68.52 344 *e*P **P** 02 40 44.4 -0.2
MNK Minsk 68.62 330 *i* P **P** 02 40 45.9 +0.6
comp=E,9.0nm,0.7s
MNK *i* P **P** 02 40 45.9 +0.6
comp=N,6.0nm,0.7s
MNK *i* P **P** 02 40 45.9 +0.6
comp=Z,10.0nm,0.8s,baz=36
MNK *i* pP **PcP** 02 41 10.2 +0.3
MNK *i* PP **PP** 02 43 18.1 +1.2
MNK *i* PPP PPP 02 44 58.2
MNK *i* S **S** 02 49 42.8 0.0
MNK *i* sS sS 02 50 18.8 +7.6
MNK *i* SS **SS** 02 54 09.4 +2.5
MNK *i* SSS SSS 02 57 26.6
MNK *i* LQ LQ 03 06 11.2
MNK *i* LR LR 03 11 24.6
MNK *i* LRM MLR 03 12 56.7
comp=N,41nm,17.5s
MNK *i* LRM MLR 03 13 11.2
comp=Z,64nm,18.8s
MNK *i* LRM MLR 03 13 39.1
comp=E,35nm,18.6s
MNK Minsk 68.62 330 *i* P **P** 02 40 45.9 +0.6
MNK *i* 02 41 10.2

MNK *i* 02 43 18.0
MNK *i* PPP PPP 02 44 58.2
MNK *i* S **S** **02 49 42.7 0.0**
MNK *i* *SS sS 02 50 18.8 +7.5
MNK *i* 02 50 38.3
MNK *i* SS **SS** **02 54 09.4 +2.5**
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK pmax pmax
comp=N,6.0nm,0.7s
MNK pmax pmax
comp=E,9.0nm,0.7s
MNK MLR MLR
comp=N,41nm,17.0s
MNK MLR MLR
comp=Z,64nm,19.0s
MNK MLR MLR
comp=E,35nm,19.0s
SUE Sulen 68.88 345 *eP* **P** **02 40 47.1 +0.2**
SUE IAmb IAmb 02 40 48.4
comp=Z,358nm,2.3s
MAK Makhachkala 69.07 311 *eP* **P** **02 40 50.2 +1.9**
MAK *e* 02 43 23.0
MAK *e*PPP PPP 02 44 58.5
MAK *e*S **S** **02 49 54.5 +6.1**
MAK pmax pmax
comp=Z,103nm,0.8s
MAK MLR MLR
comp=Z,138nm,17.0s
ASK Askoy 69.34 344 *eP* **P** **02 40 50.0 +0.3**
BER Bergen 69.41 344 *eP* **P** **02 40 50.1 0.0**
STRU Stroemstad 69.45 341 *iP* **P** **02 40 50.2 -0.2**
WRA Warramunga Arr 69.61 200 P **P** **02 40 52.5 +0.7**
comp=Z,3.0nm,0.8s,baz=17,slow=6.5,SNR=9.4
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 69.61 200 *iP* **P** **02 40 53.5 +1.7**
WRA pmax pmax
comp=Z,3.0nm,0.9s
ECSD EROS Data Cent 69.71 47 **P** **02 40 53.4 +1.0**
ECSD IAmb IAmb 02 40 56.8
comp=Z,9.2nm,1.4s
ECSD EROS Data Cent 69.71 47 P **P** **02 40 54.1 +1.7**
TUC Tucson 69.99 64 P **P** **02 40 55.8 +1.5**
TUC pmax pmax
comp=Z,5.0nm,1.2s
TJOU Tjoern 70.25 340 *iP* **P** **02 40 55.6 +0.2**
T25A Trinidad 70.33 56 P **P** **02 40 57.6 +1.1**
TASM ASL Pad, Albuq 70.71 59 P **P** **02 40 59.9 +1.1**
TASM ASL Pad, Albuq 70.71 59 P **P** **02 41 00.3 +1.4**
TASM IAmb IAmb 02 41 02.3
comp=Z,2.6nm,0.9s
ANMO Albuquerque 70.72 59 LR LR 03 12 20.6
comp=Z,19nm,19.1s,baz=316,slow=36
ANMO Albuquerque 70.72 59 P **P** **02 41 00.3 +1.5**
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 70.72 59 **P** **02 41 00.3 +1.5**
ANMO Albuquerque 70.72 59 P **P** **02 41 01.5 +2.6**
ALQ Albuquerque 70.72 59 P **P** **02 41 00.4 +1.6**
KIV Kislovodsk 70.72 315 *eP* **P** **02 40 59.0 +0.4**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,72nm,18.0s
KIV Kislovodsk 70.72 315 *eP* **P** **02 40 59.0 +0.4**
BLEU Blekinge 70.75 337 *iP* **P** **02 40 56.8 -1.6**
ONAU Onsala 70.75 339 *iP* **P** **02 40 57.7 -0.7**
KBZ Khabaz 70.79 314 P **P** **02 40 57.7 -1.1**
comp=Z,4.5nm,0.9s,baz=40,slow=6.9,SNR=8.5
KBZ LR LR 03 17 40.4
comp=Z,97nm,18.2s,baz=36,slow=41
comp=Z,4.5nm,0.9s
KBZ Khabaz 70.79 314 *ceP* **P** **02 40 58.5 -0.4**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 70.79 314 *eP* **P** **02 40 58.5 -0.4**
SHA1 Shidzhatmaz 70.90 314 *ceP* **P** **02 41 00.2 +0.3**
FABU Falkenberg 70.92 339 *iP* **P** **02 40 58.5 -0.9**
DEL Delary 71.11 338 *iP* **P** **02 40 59.5 -1.1**
L34A Svendsen Farm, 71.13 48 P **P** **02 41 01.6 +0.6**
L34A IAmb IAmb 02 41 03.4
comp=Z,6.8nm,0.7s
AKASG Malin Array Be 71.23 327 P **P** **02 40 59.2 -2.2**
comp=Z,0.9nm,0.3s,baz=35,slow=6.1,SNR=9.1
AKASG LR LR 03 13 59.5
comp=Z,72nm,21.4s,baz=26,slow=37
comp=Z,0.9nm,0.3s
AKASG Malin Array Be 71.23 327 *iP* **P** **02 40 59.9 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AK02 Malin Array Si 71.27 327 P **P** **02 41 00.4 -1.3**
AK08 Malin Array Si 71.27 327 P **P** **02 41 00.4 -1.3**
AK20 Malin Array Si 71.28 327 P **P** **02 41 00.4 -1.3**
AK09 Malin Array Si 71.28 327 P **P** **02 41 00.4 -1.3**
AK19 Malin Array Si 71.29 327 P **P** **02 41 00.5 -1.3**
AK16 Malin Array Si 71.30 327 P **P** **02 41 00.5 -1.3**
AK10 Malin Array Si 71.30 327 P **P** **02 41 00.6 -1.3**
AK12 Malin Array Si 71.30 327 P **P** **02 41 00.6 -1.3**
AK05 Malin Array Si 71.30 327 P **P** **02 41 00.6 -1.3**
AK17 Malin Array Si 71.30 327 P **P** **02 41 00.6 -1.3**
AK14 Malin Array Si 71.33 327 P **P** **02 41 00.7 -1.3**
AK06 Malin Array Si 71.33 327 P **P** **02 41 00.7 -1.4**
AK07 Malin Array Si 71.36 327 P **P** **02 41 00.9 -1.3**
AK13 Malin Array Si 71.36 327 P **P** **02 41 00.9 -1.3**
319A Douglas 71.55 64 P **P** **02 41 05.1 +1.2**
BJUU Bjuv 71.67 338 *iP* **P** **02 41 03.4 -0.6**
RNPP8 Varash 71.92 329 P **P** **02 41 06.5 +0.9**
LUNU Lund 71.96 338 *iP* **P** **02 41 05.7 0.0**
RNPP5 Staryi Chortor 72.00 329 P **P** **02 41 06.9 +0.8**
BSD Bornholm Skovb 72.04 337 *iP* **P** **02 41 05.5 -0.7**
SCHQ Schefferville 72.19 24 P **P** **02 41 07.3 +0.2**
comp=Z,1.5nm,0.3s,baz=259,slow=8.9,SNR=11
SCHQ LR LR 03 15 55.7
comp=Z,25nm,19.7s,baz=331,slow=38
comp=Z,1.5nm,0.3s
N35A Tabor 72.32 48 P **P** **02 41 08.7 +0.5**
LUBAR Lubar, Ukraine 72.41 327 P **P** **02 41 08.2 -0.3**
GNI Garni 72.54 311 LR LR 03 16 32.8
comp=Z,100nm,19.7s,baz=76,slow=39
GNI Garni 72.54 311 P **P** **02 41 09.1 -0.6**
AS31 Alice Springs 73.30 199 **P** **02 41 15.3 +1.3**
ASAR Alice Springs 73.30 199 P **P** **02 41 16.5 +2.5**
comp=Z,3.6nm,0.8s,baz=6.7,slow=5.0,SNR=22
comp=Z,3.6nm,0.8s
ASAR Alice Springs 73.30 199 **P** **02 41 15.2 +1.2**
PALK Pallekele 73.58 263 P **P** **02 41 16.8 +0.8**
MNTX Cornudas Mount 73.66 61 P **P** **02 41 17.7 +1.4**
DRUM Mains of Drumt 74.02 347 *eP* **P** **02 41 17.5 -0.4**
DRUM IAmb IAmb 02 41 18.2
comp=Z,8.8nm,0.5s
KWP Kalwaria Pacla 74.45 330 *eP* **P** **02 41 20.0 -0.5**
KWP Kalwaria Pacla 74.45 330 P **P** **02 41 20.2 -0.3**
comp=Z,13nm,1.1s
128A Castleberry Fa 74.68 58 P **P** **02 41 23.6 +1.3**
INVG Invergeldie, C 74.72 348 *eP* **P** **02 41 21.7 -0.3**
INVG IAmb IAmb 02 41 22.3
comp=Z,4.1nm,0.7s
OJC Ojcow 74.91 332 *eP* **P** **02 41 23.2 0.0**
OJC Ojcow 74.91 332 P **P** **02 41 22.8 -0.3**
OJC Ojcow 74.91 332 P **P** **02 41 22.8 -0.3**
OJC Ojcow 74.91 332 P **P** **02 41 22.6 -0.6**
comp=Z,6.2nm,1.2s
OJC Ojcow 74.91 332 P **P** **02 41 22.9 -0.3**
EAB Aberfoyle 75.00 348 *eP* **P** **02 41 23.2 -0.3**
EAB IAmb IAmb 02 41 24.2
comp=Z,9.8nm,0.8s
HAKT HAKKARI 75.01 310 P **P** **02 41 23.8 -0.5**
LAWE Loch Awe, Argy 75.08 348 *eP* **P** **02 41 23.9 -0.1**
LAWE IAmb IAmb 02 41 24.6
comp=Z,7.2nm,0.8s
EDI Edinburgh 75.08 347 *eP* **P** **02 41 23.8 -0.2**
EDI IAmb IAmb 02 41 24.4
comp=Z,3.7nm,0.7s
KOLS Kolonicke sedl 75.19 330 *eP* **P** **02 41 24.5 -0.3**
KOLS pmax pmax
comp=Z,2.0nm,0.7s
KOLS Kolonicke sedl 75.19 330 *eP* **P** **02 41 24.5 -0.3**
WMOK Wichita Mounta 75.21 55 P **P** **02 41 25.9 +0.7**
WMOK pmax pmax
comp=Z,3.0nm,0.9s
BUR08 Bucovina Ar. S 75.24 327 **P** **02 41 24.1 -1.2**
BURAR Bucovina Array 75.26 327 ⇑P **P** **02 41 24.9 -0.5**
BURAR Bucovina Array 75.26 327 ⇑P **P** **02 41 24.9 -0.5**
BURAR Bucovina Array 75.26 327 **P** **02 41 24.1 -1.3**

KELT Kelkit 75.28 314 P **P** **02 41 25.4 -0.4**
PGBU Glenifferbraes 75.38 348 *eP* **P** **02 41 25.6 -0.1**
PGBU IAmb IAmb 02 41 27.0
comp=Z,32nm,0.7s
NIE Niedzica 75.44 331 *eP* **P** **02 41 25.9 -0.4**
NIE Niedzica 75.44 331 P **P** **02 41 26.5 +0.2**
comp=Z,2.3nm,1.2s
KSP Ksiaz 75.44 334 *eP* **P** **02 41 26.8 +0.6**
KSP Ksiaz 75.44 334 P **P** **02 41 26.1 -0.1**
comp=Z,8.5nm,1.3s
MNHN Monahans 75.45 59 P **P** **02 41 27.3 +0.6**
MNHN IAmb IAmb 02 41 30.0
comp=Z,4.8nm,0.8s
FLTG Flechtingen 75.51 338 *eP* **P** **02 41 25.8 -0.7**
comp=Z,10nm,1.0s,baz=24,slow=5.7
TESR Tescani 75.65 326 ⇑P **P** **02 41 26.4 -1.1**
TESR Tescani 75.65 326 P **P** **02 41 26.4 -1.1**
comp=Z,8.7nm,0.9s
TESR Tescani 75.65 326 P **P** **02 41 26.9 -0.6**
EKA Eskdalemuir Ar 75.65 347 P **P** **02 41 26.7 -0.6**
comp=Z,4.0nm,0.5s,baz=20,slow=5.3,SNR=45
comp=Z,4.0nm,0.5s
ESK Eskdalemuir 75.67 347 *eP* **P** **02 41 27.3 -0.1**
ESK IAmb IAmb 02 41 28.0
comp=Z,6.4nm,0.6s
OSTC Ostas 75.72 334 *eP* **P** **02 41 27.6 -0.3**
OSTC MLR MLR
comp=Z,100nm,19.9s
OSTC Ostas 75.72 334 *eP* **P** **02 41 27.6 -0.3**
OSTC AMS AMS 03 18 10.0
comp=Z,100nm,19.9s
CHVC Chvalec 75.74 334 *eP* **P** **02 41 27.7 -0.3**
CHVC Chvalec 75.74 334 *eP* **P** **02 41 27.7 -0.3**
TRPA Tarpa 75.78 329 P **P** **02 41 28.1 -0.1**
DPC Dobruska-Polom 75.87 334 *eP* **P** **02 41 28.6 -0.1**
DPC MLR MLR
comp=Z,100nm,12.8s
DPC Dobruska-Polom 75.87 334 *eP* **P** **02 41 28.6 -0.1**
DPC AMS AMS 03 18 20.0
comp=Z,100nm,12.8s
DPC Dobruska-Polom 75.87 334 P **P** **02 41 28.8 +0.1**
comp=Z,7.6nm,1.5s
DPC Dobruska-Polom 75.87 334 P **P** **02 41 29.0 +0.3**
TLCR 75.90 324 ⇑P **P** **02 41 28.9 0.0**
TLCR 75.90 324 ⇑P **P** **02 41 28.9 0.0**
LANS Liptovska Anna 75.94 331 *eP* **P** **02 41 29.0 -0.2**
LANS pmax pmax
comp=Z,2.0nm,1.3s
LANS Liptovska Anna 75.94 331 *eP* **P** **02 41 29.0 -0.2**
CLL Collm 75.97 336 *iP* **P** **02 41 28.4 -0.8**
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 75.97 336 **P** **02 41 28.5 -0.8**
CLL Collm 75.97 336 *eP* **P** **02 41 28.6 -0.6**
comp=Z,16nm,1.0s,baz=24,slow=5.7
CLL Collm 75.97 336 P **P** **02 41 28.1 -1.1**
comp=Z,17nm,1.1s
CLL Collm 75.97 336 *iP* **P** **02 41 28.4 -0.8**
comp=Z,17nm,1.0s
CLL AMS AMS 03 44 00.0
comp=N,100nm,21.8s
CLL AMS AMS 03 44 00.0
comp=E,100nm,21.6s
CLL AMS AMS 03 51 00.0
comp=Z,100nm,19.5s
KRLC Kraliky 75.97 333 *eP* **P** **02 41 29.0 -0.3**
KRLC MLR MLR
comp=Z,100nm,20.8s
KRLC Kraliky 75.97 333 *eP* **P** **02 41 29.0 -0.3**
KRLC AMS AMS 03 20 10.0
comp=Z,100nm,20.8s
MORC Moravsky Berou 76.00 333 ⇑P **P** **02 41 29.0 -0.6**
MORC Moravsky Berou 76.00 333 ⇑P **P** **02 41 29.0 -0.6**
MORC Moravsky Berou 76.00 333 **P** **02 41 28.9 -0.6**
MORC IAmb IAmb 02 41 30.4
comp=Z,12nm,1.2s
MORC Moravsky Berou 76.00 333 *eP* **P** **02 41 29.3 -0.2**
MORC Moravsky Berou 76.00 333 P **P** **02 41 29.5 0.0**
LPIG La Paz 76.09 70 LR LR 03 07 43.2
comp=Z,20nm,21.3s,baz=222,slow=30
ABAH Abaujker 76.09 330 P **P** **02 41 29.6 -0.3**
BRG Berggiesshubel 76.10 335 *eP* **P** **02 41 29.6 -0.4**
comp=Z,6.1nm,1.1s,baz=24,slow=5.7
BRG Berggiesshubel 76.10 335 P **P** **02 41 29.5 -0.4**
BRG Berggiesshubel 76.10 335 *eP* **P** **02 41 29.4 -0.6**
BRG Amp 02 41 30.4
comp=Z,4.1nm,0.9s
VRI Vrincioaia 76.16 325 ⇑P **P** **02 41 30.6 +0.2**
VRI Vrincioaia 76.16 325 ⇑P **P** **02 41 30.6 +0.2**
CFR Carcaliu 76.18 324 ⇑P **P** **02 41 29.7 -0.8**
CFR Carcaliu 76.18 324 ⇑P **P** **02 41 29.7 -0.8**
WIMM Wimmelburg 76.18 337 P **P** **02 41 30.1 -0.3**
CLZ Clausthal 76.18 338 *eP* **P** **02 41 30.7 +0.2**
comp=Z,18nm,1.2s,baz=24,slow=5.7
CLZ Clausthal 76.18 338 P **P** **02 41 30.8 +0.3**
PVCC Panska Ves 76.23 335 AMS AMS 03 13 30.0
comp=Z,100nm,19.6s
TURR Turia 76.27 326 ⇑P **P** **02 41 30.7 -0.4**
OZUR 76.33 326 ⇑P **P** **02 41 32.2 +0.8**
TPGR Topolog 76.33 324 ⇑P **P** **02 41 30.7 -0.7**
GAL1 Galloway 76.33 348 *eP* **P** **02 41 31.1 0.0**
GAL1 IAmb IAmb 02 41 32.0
comp=Z,4.7nm,0.8s
BANOM Banah 76.34 293 P **P** **02 41 31.4 -0.4**
SHME Shamm 76.35 294 P **P** **02 41 31.8 0.0**
RICC Richard 76.35 335 *eP* **P** **02 41 31.7 +0.3**
COVR Voineasa-Covas 76.38 325 ⇑P **P** **02 41 31.8 +0.1**
TXAR Lajitas Array 76.39 61 P **P** **02 41 33.8 +1.6**
comp=Z,3.3nm,0.4s,baz=303,slow=4.9,SNR=58
comp=Z,3.3nm,0.4s
TXAR Lajitas Array 76.39 61 **P** **02 41 33.0 +0.9**
NEUB Neuenburg 76.39 337 *eP* **P** **02 41 31.4 -0.2**
comp=Z,20nm,1.2s,baz=24,slow=5.7
NEUB Neuenburg 76.39 337 P **P** **02 41 31.2 -0.4**
HHAR Hobbs 76.65 50 P **P** **02 41 33.7 +0.3**
HHAR IAmb IAmb 02 41 35.3
comp=Z,5.3nm,1.0s
VRAC Vranov 76.71 333 LR LR 03 21 07.6
comp=Z,105nm,18.5s,baz=43,slow=40
VRAC Vranov 76.71 333 ⇑P **P** **02 41 33.5 0.0**
VRAC Vranov 76.71 333 ⇑P **P** **02 41 33.5 0.0**
VRAC Vranov 76.71 333 *eP* **P** **02 41 33.3 -0.2**
VRAC Vranov 76.71 333 P **P** **02 41 33.8 +0.3**
PRU Pruhonice 76.72 335 *eP* **P** **02 41 33.1 -0.4**
PRU MLR MLR
comp=Z,100nm,15.6s
PRU Pruhonice 76.72 335 *eP* **P** **02 41 33.1 -0.4**
PRU AMS AMS 03 15 00.0
comp=Z,100nm,15.6s
PRU Pruhonice 76.72 335 P **P** **02 41 33.6 +0.1**
SADO Sadowa 76.72 36 LR LR 03 17 17.4
comp=Z,30nm,20.2s,baz=344,slow=37
VYHS Vyhne 76.72 331 *eP* **P** **02 41 33.7 +0.2**
VYHS pmax pmax
comp=Z,5.0nm,0.9s
VYHS Vyhne 76.72 331 *eP* **P** **02 41 33.7 +0.2**
HPK Haverah Park 76.73 346 *eP* **P** **02 41 33.8 +0.3**
HPK IAmb IAmb 02 41 34.8
comp=Z,18nm,0.7s
TLBR Topalu 76.74 324 ⇑P **P** **02 41 33.7 0.0**
JAVC Velka Javorina 76.77 332 *eP* **P** **02 41 34.7 +0.8**
MLR Muntele Rosu 76.77 325 LR LR 03 17 35.1
comp=Z,52nm,20.3s,baz=39,slow=38
MLR Muntele Rosu 76.77 325 ⇑P **P** **02 41 34.6 +0.6**
MLR Muntele Rosu 76.77 325 ⇑P **P** **02 41 34.6 +0.6**
MLR Muntele Rosu 76.77 325 P **P** **02 41 34.5 +0.5**
comp=Z,12nm,1.0s
MLR Muntele Rosu 76.77 325 P **P** **02 41 34.7 +0.6**
WSAR Wadi Sarin 76.81 290 P **P** **02 41 35.3 +0.9**
MARR Marisel-Cluj 76.82 328 ⇑P **P** **02 41 32.5 -1.8**
ISR Istrita 76.85 325 ⇑P **P** **02 41 34.4 0.0**
ISR Istrita 76.85 325 ⇑P **P** **02 41 34.4 0.0**
DRGR 76.87 328 ⇑P **P** **02 41 33.7 -0.8**
DRGR 76.87 328 ⇑P **P** **02 41 33.7 -0.8**
DRGR 76.87 328 P **P** **02 41 34.0 -0.5**
PSZ Piszkesteto 76.87 330 P **P** **02 41 33.7 -0.8**
PSZ pmax pmax
comp=Z,9.0nm,1.2s
PSZ Piszkesteto 76.87 330 P **P** **02 41 33.7 -0.8**
PSZ IAmb IAmb 02 41 35.5
comp=Z,9.4nm,1.2s
PSZ Piszkesteto 76.87 330 P **P** **02 41 33.1 -1.4**
TANN Tannenbergstha 76.92 336 *eP* **P** **02 41 34.4 -0.3**
comp=Z,16nm,1.8s,baz=24,slow=5.7

BIDO Bidbid 76.92 290 P **P** **02 41 36.6 +1.5**
PLN Plauen 76.94 336 *eP* **P** **02 41 34.6 -0.1**
comp=Z,1.9nm,0.9s,baz=24,slow=5.7
MOX Moxa 76.94 337 *eP* **P** **02 41 34.8 0.0**
comp=Z,12nm,1.1s,baz=24,slow=5.7
MOX *eL* L 03 14 02.2
comp=Z,53nm,21.6s
MOX Moxa 76.94 337 P **P** **02 41 34.7 0.0**
KRUC Moravsky 76.99 333 *eP* **P** **02 41 35.1 +0.1**
KRUC Moravsky 76.99 333 P **P** **02 41 35.1 +0.1**
WBK Wadi Bani Khal 77.04 289 P **P** **02 41 37.3 +1.5**
TREC Trest 77.06 334 AMS AMS 03 20 10.0
comp=Z,100nm,21.3s
NKC Novy Kostel 77.09 336 AMS AMS 03 20 00.0
comp=Z,100nm,19.3s
JLN Jalan Bani Buh 77.09 289 P **P** **02 41 34.3 -1.7**
UOSS Minazif 77.11 293 P **P** **02 41 36.2 +0.1**
VOIR 77.16 326 ⇓P **P** **02 41 36.4 +0.2**
VOIR 77.16 326 ⇓P **P** **02 41 36.4 +0.2**
VOIR 77.16 326 P **P** **02 41 36.0 -0.2**
comp=Z,13nm,0.9s
VOIR 77.16 326 P **P** **02 41 36.3 +0.2**
UBBA Unterbreizbach 77.21 338 *eP* **P** **02 41 36.1 0.0**
comp=Z,6.2nm,0.9s,baz=24,slow=5.7
UBBA Unterbreizbach 77.21 338 P **P** **02 41 36.3 +0.2**
HATD Hatta, Dubai 77.24 293 P **P** **02 41 36.5 -0.3**
KASTN Kahler Asten 77.25 339 *eP* **P** **02 41 36.5 0.0**
comp=Z,7.6nm,0.8s,baz=24,slow=5.7
ZVC Zvikov 77.31 335 *eP* **P** **02 41 36.8 0.0**
MODS Modra-Piesok 77.32 332 *eP* **P** **02 41 37.7 +0.8**
MODS pmax pmax
comp=Z,15nm,1.2s
MODS Modra-Piesok 77.32 332 P **P** **02 41 37.1 +0.1**
MODS Modra-Piesok 77.32 332 *eP* **P** **02 41 37.7 +0.8**
ARR Arges 77.37 326 ⇑P **P** **02 41 38.1 +0.8**
ARR Arges 77.37 326 P **P** **02 41 37.9 +0.6**
ASHO Ashiyiah 77.39 293 P **P** **02 41 37.6 -0.1**
HOQ Hoqain 77.40 291 P **P** **02 41 37.6 -0.2**
NAZ Nazwa, Dubai 77.41 293 P **P** **02 41 38.4 +0.7**
SOHO SOHO 77.49 292 P **P** **02 41 37.3 -0.9**
SIRR Siria 77.69 328 ⇑P **P** **02 41 38.9 -0.2**
KHC Kasperske Hory 77.77 335 *eP* **P** **02 41 39.6 +0.2**
KHC MLR MLR
comp=Z,100nm,22.1s
KHC Kasperske Hory 77.77 335 *eP* **P** **02 41 39.6 +0.2**
KHC AMS AMS 03 15 20.0
comp=Z,100nm,22.1s
KHC Kasperske Hory 77.77 335 P **P** **02 41 39.4 0.0**
comp=Z,14nm,0.9s
JMDO Jabal Madar 77.77 290 P **P** **02 41 39.6 -0.2**
GRA3 Grafenberg Arr 77.82 336 P **P** **02 41 40.4 +0.7**
CKRC Cesky Krumlov 77.83 334 *eP* **P** **02 41 39.1 -0.7**
CKRC MLR MLR
comp=Z,100nm,21.8s
CKRC Cesky Krumlov 77.83 334 *eP* **P** **02 41 39.1 -0.7**
CKRC AMS AMS 03 19 10.0
comp=Z,100nm,21.8s
CWF Charnwood Fore 77.84 345 *eP* **P** **02 41 39.8 0.0**
CWF IAmb IAmb 02 41 41.7
comp=Z,4.4nm,0.7s
ASUD Al Ashush, Dub 77.88 293 P **P** **02 41 40.7 +0.3**
GRA2 Grafenberg Arr 77.91 336 P **P** **02 41 40.7 +0.5**
GRA1 Grafenberg Arr 77.92 336 P **P** **02 41 39.8 -0.4**
GRA1 Grafenberg Arr 77.92 336 P **P** **02 41 39.9 -0.3**
GRF Grafenberg Arr 77.92 336 P **P** **02 41 39.8 -0.4**
GRF pmax pmax
comp=Z,23nm,0.9s
GRF Grafenberg Arr 77.92 336 *eP* **P** **02 41 40.6 +0.4**
comp=Z,20nm,0.9s,baz=24,slow=5.7
GRF *eL* L 03 14 29.6
comp=Z,62nm,21.4s
GRFO Grafenberg 77.92 336 P **P** **02 41 39.9 -0.3**
WET Wettzell 77.95 335 *eP* **P** **02 41 40.9 +0.4**
comp=Z,13nm,1.0s,baz=24,slow=5.7
WET Wettzell 77.95 335 P **P** **02 41 40.3 -0.2**
GEC2 GERESS Array S 77.99 335 *eP* **P** **02 41 40.4 -0.3**
comp=Z,4.8nm,0.9s,baz=24,slow=5.7
GERES GERESS Array B 77.99 335 P **P** **02 41 39.8 -1.0**
comp=Z,5.9nm,1.0s,baz=27,slow=4.3,SNR=34
comp=Z,5.9nm,1.0s
GRB4 Grafenberg Arr 78.03 336 P **P** **02 41 41.1 +0.3**
ALNE Al Ain 78.03 292 P **P** **02 41 41.2 -0.1**
GZR Gura Zlata 78.04 327 ⇑P **P** **02 41 40.4 -0.6**
GZR Gura Zlata 78.04 327 ⇑P **P** **02 41 40.4 -0.6**
GRB1 Grafenberg Arr 78.07 336 P **P** **02 41 41.0 -0.1**
GRB3 Grafenberg Arr 78.07 336 P **P** **02 41 41.3 +0.2**
ARQ Araqi 78.07 291 P **P** **02 41 41.4 -0.1**
BSY Bisya 78.07 291 P **P** **02 41 42.1 +0.5**
SNR=6.4
TNS Taunus Mts 78.15 338 *eP* **P** **02 41 41.7 +0.1**
comp=Z,11nm,0.8s,baz=24,slow=5.7
TNS Taunus Mts 78.15 338 P **P** **02 41 41.7 +0.1**
CONA Conrad Observa 78.16 333 *iP* **P** **02 41 41.9 +0.2**
comp=Z,10nm,1.2s
SOP Sopron 78.16 332 P **P** **02 41 42.3 +0.7**
MIAR Mount Ida 78.17 51 P **P** **02 41 42.5 +0.6**
MIAR pmax pmax
comp=Z,8.0nm,1.3s
MIAR Mount Ida 78.17 51 P **P** **02 41 42.5 +0.6**
MIAR IAmb IAmb 02 41 44.9
comp=Z,7.8nm,1.2s
COPA Copaceanca 78.19 325 ⇑P **P** **02 41 40.8 -1.0**
RONA Rosalia, Austr 78.23 332 *iP* **P** **02 41 42.5 +0.5**
comp=Z,13nm,1.2s,SNR=6.6
HGN Heimansgroeve 78.25 340 P **P** **02 41 41.3 -0.7**
BR131 Keskin Array S 78.26 317 P **P** **02 41 42.4 -0.1**
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 78.26 317 P **P** **02 41 42.7 +0.3**
SNR=7.1
BR131 Keskin Array S 78.26 317 P **P** **02 41 42.4 -0.1**
BR131 IAmb IAmb 02 41 46.9
comp=Z,5.1nm,0.9s
BRTR Keskin Array B 78.26 317 P **P** **02 41 41.9 -0.6**
comp=Z,2.6nm,0.7s,baz=65,slow=3.3,SNR=16
BRTR LR LR 03 21 54.6
comp=Z,41nm,18.5s,baz=66,slow=40
comp=Z,2.6nm,0.7s
BRTR Keskin Array B 78.26 317 P **P** **02 41 42.0 -0.5**
BRTR Keskin Array B 78.26 317 **P** **02 41 42.0 -0.5**
BR106 Keskin Array S 78.26 317 P **P** **02 41 42.9 +0.4**
comp=Z,35nmcomp=Z,4.4nm,1.0s
BZS Buzias 78.27 328 ⇑P **P** **02 41 41.8 -0.4**
BZS Buzias 78.27 328 ⇑P **P** **02 41 41.8 -0.4**
BZS Buzias 78.27 328 P **P** **02 41 41.6 -0.6**
BR104 Keskin Array S 78.28 317 P **P** **02 41 42.7 +0.2**
comp=Z,44nmcomp=Z,5.3nm,1.0s
BR105 Keskin Array S 78.28 317 P **P** **02 41 42.7 +0.1**
comp=Z,48nmcomp=Z,5.2nm,1.0s
BEBN Eben Emael 78.28 340 *dP* **P** **02 41 41.9 -0.2**
comp=Z,23nm,0.7s
MPLH Magyarpolny 78.30 331 P **P** **02 41 42.2 -0.2**
comp=Z,42nm,1.1s
MPLH Magyarpolny 78.30 331 P **P** **02 41 42.4 0.0**
BTNL Ternell 78.37 340 *dP* **P** **02 41 42.8 +0.1**
comp=Z,7.3nm,0.7s
MEM Membach 78.38 340 *dP* **P** **02 41 42.4 -0.3**
comp=Z,13nm,0.9s
MEM Membach 78.38 340 P **P** **02 41 43.1 +0.4**
GRC1 Grafenberg Arr 78.47 336 P **P** **02 41 43.0 -0.2**
BSTI Sart Tilman 78.50 340 *dP* **P** **02 41 43.8 +0.4**
comp=Z,4.8nm,0.8s
GRC3 Grafenberg Arr 78.55 336 P **P** **02 41 43.8 +0.1**
UCC Uccle 78.57 341 P **P** **02 41 43.9 +0.1**
UCC pmax pmax
comp=Z,10.0nm,1.0s
UCC Uccle 78.57 341 *dP* **P** **02 41 43.0 -0.8**
comp=Z,5.4nm,0.9s
KIRS Kirsehir-Merke 78.61 317 ⇑P **P** **02 41 45.0 +0.6**
HERR Herculane 78.61 327 ⇑P **P** **02 41 42.5 -1.6**
BHOU Houvegnez 78.62 340 *dP* **P** **02 41 44.4 +0.4**
GRC2 Grafenberg Arr 78.62 336 P **P** **02 41 44.2 +0.1**
ANDN Andirin 78.70 314 P **P** **02 41 45.5 +0.6**
MOA Molln 78.71 334 *iP* **P** **02 41 44.9 +0.2**
comp=Z,4.7nm,0.8s
MOA Molln 78.71 334 P **P** **02 41 44.8 +0.1**
BCLA Clavier 78.72 340 *dP* **P** **02 41 44.3 -0.3**
comp=Z,7.7nm,0.7s
MDUB Mudurnu 78.76 319 P **P** **02 41 44.5 -0.7**
MORH Mrgy, Hungar 78.78 330 ⇓P **P** **02 41 44.0 -0.9**
MORH Mrgy, Hungar 78.78 330 P **P** **02 41 44.3 -0.7**
comp=Z,5.3nm,1.1s
MORH Mrgy, Hungar 78.78 330 P **P** **02 41 44.2 -0.8**
BGES Gesves 78.80 340 *dP* **P** **02 41 45.1 0.0**

comp=Z,7.0nm,1.0s
MHTO **MHTO** 78.86 289 P P 02 41 46.6 +0.8
ARSA **Arzberg** 78.87 333 P 02 41 45.0 -0.6
ARSA IAmb IAmb 02 41 46.7
comp=Z,8.6nm,1.1s
ARSA **Arzberg** 78.87 333 *i* P P 02 41 45.5 0.0
comp=Z,9.2nm,1.2s,SNR=5.5
ARSA **Arzberg** 78.87 333 P P 02 41 45.8 +0.3
BMRD **Maredsous** 78.95 341 *d*P P 02 41 45.7 -0.1
comp=Z,9.7nm,0.9s
MDVR **Moldovita** 78.95 328 ⇑P P 02 41 44.7 -1.4
RCHB **Rochefort** 78.98 340 *d*P P 02 41 45.8 -0.2
comp=Z,6.6nm,1.1s
KKUL **Konya-Kulu** 79.04 317 P P 02 41 47.7 +0.9
BIOA **Bad Ischl, Aus** 79.04 334 *i* P P 02 41 46.5 0.0
comp=Z,14nm,1.3s,SNR=5.9
PLVB **Pleven** 79.06 325 ⇑P P 02 41 46.1 -0.4
SWN1 **Swindon** 79.11 345 *e*P P 02 41 47.1 +0.4
SWN1 IAmb IAmb 02 41 47.9
comp=Z,35nm,0.8s
DOU **Dourbes** 79.18 341 *d*P P 02 41 45.9 -1.2
comp=Z,4.3nm,1.1s
JRN **Qarnain Island** 79.18 295 P P 02 41 45.8 -1.8
RJOB **Jochberg** 79.25 335 P P 02 41 48.4 +0.8
SESA **Seetaler Alpe,** 79.28 333 *i* P P 02 41 48.4 +0.4
SNR=12
FUR **Furstenfeldbru** 79.29 336 *e*P P 02 41 47.9 +0.1
comp=Z,16nm,0.8s,baz=24,slow=5.7
STU **Stuttgart** 79.30 337 P P 02 41 46.9 -0.9
STU pmax pmax
comp=Z,10.0nm,0.7s
STU **Stuttgart** 79.30 337 P P 02 41 46.9 -0.9
STU **Stuttgart** 79.30 337 *e*P P 02 41 47.9 +0.1
comp=Z,23nm,0.7s,baz=24,slow=5.7
BAIF **Baives** 79.30 341 *e*P P 02 41 47.1 -0.7
BAIF pmax pmax
comp=Z,43nm,1.7s
UMZA **Um Al Zommool** 79.38 292 P P 02 41 48.2 -0.5
H06N1 **SOCORRO T-PHAS** 79.43 74 T T 04 09 28.8
SNR=6.3
SOKA **Soboth** 79.53 333 *i* P P 02 41 49.1 -0.1
comp=Z,14nm,1.2s,SNR=13
PERS **Pernice** 79.54 333 *i* P P 02 41 48.8 -0.4
LESA **Schwarzleotal** 79.56 335 *i* P P 02 41 49.7 +0.3
comp=Z,15nm,0.9s,SNR=9.8
GROS **Grobnik** 79.58 332 *i* P P 02 41 49.0 -0.5
KBA **Koelnbreinsper** 79.68 334 *i* P P 02 41 50.6 +0.4
comp=Z,23nm,1.0s,SNR=17
KBA **Koelnbreinsper** 79.68 334 P P 02 41 50.8 +0.6
OBKA **Obir** 79.83 333 *i* P P 02 41 50.4 -0.4
comp=Z,3.3nm,0.6s
OBKA **Obir** 79.83 333 P P 02 41 51.1 +0.2
GHWR **Ruwais** 79.89 294 P P 02 41 50.6 -0.8
BFO **Black Forest** 79.93 338 P P 02 41 50.7 -0.6
BFO pmax pmax
comp=Z,26nm,1.4s
BFO **Black Forest** 79.93 338 *e*P P 02 41 50.9 -0.3
comp=Z,20nm,1.2s,baz=24,slow=5.7
BOVS **Bovan** 79.94 327 ⇑P P 02 41 50.3 -1.1
WATA **Walderalm** 79.96 335 *i* P P 02 41 52.0 +0.3
comp=Z,23nm,1.4s,SNR=7.6
MYKA **Terra Mystica** 80.00 334 *e*P P 02 41 50.9 -0.8
comp=Z,3.2nm,0.5s
WTTA **Wattenberg** 80.01 335 *i* P P 02 41 52.4 +0.4
comp=Z,20nm,0.6s,SNR=13
WTTA **Wattenberg** 80.01 335 P P 02 41 52.6 +0.6
RETA **Reutte** 80.05 336 *i* P P 02 41 52.0 0.0
comp=Z,11nm,0.9s,SNR=7.5
GCIS **Gornji Cirnik** 80.07 332 *i* P P 02 41 51.6 -0.4
MOTA **Moosalm** 80.09 336 *i* P P 02 41 52.5 +0.2
comp=Z,27nm,1.0s,SNR=13
CDF **Champ du Feu** 80.12 338 *e*P P 02 41 51.6 -0.8
CDF pmax pmax
comp=Z,15nm,1.0s
SQTA **Sankt Quirin** 80.17 335 *i* P P 02 41 53.0 +0.3
comp=Z,23nm,1.1s,SNR=11
MZR **Muzera** 80.22 293 P P 02 41 53.1 -0.1
ABTA **Abfaltersbach** 80.22 334 *i* P P 02 41 52.7 -0.3
comp=Z,7.1nm,1.0s
ECH **Echery** 80.33 338 P P 02 41 52.7 -0.7
ECH pmax pmax
comp=Z,11nm,0.9s
ECH **Echery** 80.33 338 P P 02 41 53.8 +0.4
SLE **Schleitheim** 80.41 337 P P 02 41 53.8 -0.1
DAVA **Damuels** 80.48 336 *i* P P 02 41 54.3 -0.1
comp=Z,12nm,0.8s,SNR=6.3
DAVA **Damuels** 80.48 336 P P 02 41 54.7 +0.3
FETA **Feichten** 80.49 336 *i* P P 02 41 54.7 +0.2
comp=Z,8.9nm,0.9s,SNR=6.3
RAO **Raoul Island** 80.54 156 LR LR 03 11 45.0
comp=Z,126nm,21.9s,baz=136,slow=31
BLY **Banja Luka** 80.55 331 ⇑P P 02 41 53.6 -1.1
RDO **Rodhopi** 80.59 323 P P 02 41 55.0 +0.1
ALN **Alexandroupoli** 80.59 323 P P 02 41 54.8 -0.1
ALN pmax pmax
comp=Z,12nm,1.0s
ALN **Alexandroupoli** 80.59 323 P 02 41 54.8 -0.1
ALN IAmb IAmb 02 41 55.5
comp=Z,12nm,1.0s
ALN **Alexandroupoli** 80.59 323 P P 02 41 54.8 -0.1
HAU **Haudompre** 80.72 339 *e*P P 02 41 54.7 -0.9
HAU pmax pmax
comp=Z,7.0nm,0.9s
HINF **Hinteralfeld** 80.78 338 *e*P P 02 41 54.8 -1.1
HINF pmax pmax
comp=Z,7.0nm,1.2s
BALB **Balikesir** 80.88 321 P P 02 41 56.3 -0.2
BALB IAmb IAmb 02 41 57.1
comp=Z,12nm,0.9s
BALY **Balya** 80.91 321 P P 02 41 55.8 -0.9
DAVOX **Davos/Dischmat** 80.94 336 LR LR 03 23 04.5
comp=Z,45nm,18.1s,baz=44,slow=40
FUORN **Ofenpass-Fuorn** 80.98 336 P P 02 41 57.0 -0.2
FUORN **Ofenpass-Fuorn** 80.98 336 P P 02 41 57.9 +0.7
TUE **Stuetta** 81.37 336 P 02 41 58.9 -0.3
TUE **Stuetta** 81.37 336 P P 02 41 59.2 0.0
comp=Z,85nm,0.8s
TUE **Stuetta** 81.37 336 P P 02 41 59.7 +0.5
EZN **Ezine** 81.38 322 P P 02 41 58.6 -0.5
comp=Z,1μmcomp=Z,11nm,1.2s
SRS **Serrai** 81.39 325 P P 02 41 59.1 0.0
FLN **La Foliniere** 81.50 343 *e*P P 02 42 00.5 +0.9
FLN pmax pmax
comp=Z,33nm,1.6s
MANT **Manisa** 81.54 320 P 02 42 00.1 -0.3
MANT IAmb IAmb 02 42 00.8
comp=Z,11nm,0.9s
LDF **La Druitiere** 81.60 343 *e*P P 02 42 00.2 +0.1
LDF pmax pmax
comp=Z,38nm,1.7s
KNT **Kendrikon** 81.62 325 P P 02 42 00.9 +0.5
PDG **Podgorica** 81.88 328 ⇓P P 02 42 00.8 -0.9
PDG **Podgorica** 81.88 328 P P 02 42 01.0 -0.7
GRR **Gorron** 81.94 344 *e*P P 02 42 01.4 -0.5
GRR pmax pmax
comp=Z,29nm,1.3s
GRG **Griva** 81.99 325 P P 02 42 02.2 -0.2
LOR **Lormes** 82.00 340 *e*P P 02 42 01.6 -0.7
LOR pmax pmax
comp=Z,12nm,0.9s
PPT **Papeete** 82.07 127 LR LR 03 09 19.7
comp=Z,70nm,21.7s,baz=13,slow=29
CABF **La Chapelle** 82.09 338 *e*P P 02 42 02.4 -0.5
CABF pmax pmax
comp=Z,7.0nm,0.9s
PHP **Peshkopia** 82.10 327 P P 02 42 02.2 -0.7
TKL **Tuckaleechee C** 82.19 44 LR LR 03 18 43.5
comp=Z,31nm,21.4s,baz=342,slow=36
CSS **Mathiatis** 82.25 315 P 02 42 03.0 -0.8
CSS **Mathiatis** 82.25 315 P P 02 42 03.7 -0.1
comp=Z,21nm,1.0s
CSS **Mathiatis** 82.25 315 P P 02 42 04.1 +0.3
ELL **Elmali** 82.39 318 P P 02 42 04.0 -0.7
ELL pmax pmax
comp=Z,11nm,0.8s
ELL **Elmali** 82.39 318 P 02 42 04.0 -0.7
ROSF **Rostrenen** 82.43 345 *e*P P 02 42 04.3 -0.2
ROSF pmax pmax
comp=Z,18nm,1.0s
AYDN **Tasoluk** 82.53 320 P P 02 42 05.8 +0.5
ASF **Jabal al Asfar** 82.71 311 LR LR 03 22 16.0
comp=Z,78nm,19.4s,baz=26,slow=38
MMAI **Mount Meron Ar** 82.79 312 P P 02 42 06.8 0.0
comp=Z,13nm,0.8s,baz=47,slow=7.4,SNR=7.0
comp=Z,13nm,0.8s

KBN **Korca** 82.89 326 P P 02 42 06.8 -0.4
LPL **La Plagne** 82.95 338 *e*P P 02 42 07.6 +0.1
LPL pmax pmax
comp=Z,15nm,0.9s
LPG **La Plagne** 82.96 338 *e*P P 02 42 07.8 +0.1
LPG pmax pmax
comp=Z,19nm,1.0s
MURB **Monte Urbino** 83.38 333 P P 02 42 09.6 0.0
FDMO **Fiordimonte** 83.41 332 P P 02 42 09.6 -0.1
FDMO IAmb IAmb 02 42 12.1
comp=Z,12nm,1.0s
MFF **Saint Martin d** 83.50 343 *e*P P 02 42 09.8 -0.3
MFF pmax pmax
comp=Z,66nm,1.2s
ARG **Arkhangelos** 83.63 319 P P 02 42 09.0 -1.9
ARG pmax pmax
comp=Z,30nm,0.9s
MBDF **Montbardon** 83.67 337 *e*P P 02 42 11.2 0.0
MBDF pmax pmax
comp=Z,7.0nm,0.8s
SSB **Saint Sauveur** 83.72 339 P P 02 42 10.8 -0.5
SSB pmax pmax
comp=Z,12nm,1.0s
SSB **Saint Sauveur** 83.72 339 P 02 42 10.8 -0.5
SSB IAmb IAmb 02 42 12.9
comp=Z,12nm,1.0s
SSB **Saint Sauveur** 83.72 339 P P 02 42 11.8 +0.6
ORIF **Oris-en-Rattie** 83.72 338 *e*P P 02 42 11.5 +0.1
ORIF pmax pmax
comp=Z,12nm,0.8s
WHFO **Wadi Hawf** 83.78 290 P P 02 42 11.3 -0.8
SNR=9.1
AQU **L'Aquila** 83.93 332 P P 02 42 12.2 -0.2
AQU pmax pmax
comp=Z,13nm,1.0s
AQU **L'Aquila** 83.93 332 P P 02 42 12.7 +0.3
comp=Z,13nm,1.0s
AQU **L'Aquila** 83.93 332 P P 02 42 13.2 +0.8
INTR **Introdacqua** 84.07 331 P 02 42 12.2 -1.0
INTR IAmb IAmb 02 42 14.2
comp=Z,10nm,0.9s
GHAJ **Ghor Haditha** 84.08 311 P P 02 42 12.1 -1.2
VIVF **Saint-Julien-l** 84.08 339 *e*P P 02 42 13.2 +0.1
VIVF pmax pmax
comp=Z,16nm,1.3s
SBF **Sospel** 84.30 337 *e*P P 02 42 14.2 -0.1
SBF pmax pmax
comp=Z,21nm,1.1s
RJF **Les Rejaudoux** 84.39 341 *e*P P 02 42 14.4 -0.2
RJF pmax pmax
comp=Z,126nm,1.6s
CAF **Calviac** 84.63 341 *e*P P 02 42 16.4 +0.5
CAF pmax pmax
comp=Z,14nm,1.6s
RAYN **Ar Rayn** 84.67 299 P P 02 42 15.7 -0.8
RAYN pmax pmax
comp=Z,14nm,1.0s
RAYN **Ar Rayn** 84.67 299 P P 02 42 17.3 +0.8
RAYN **Ar Rayn** 84.67 299 P P 02 42 15.7 -0.8
RAYN **Ar Rayn** 84.67 299 P P 02 42 16.8 +0.4
KZIT **Kziot** 84.99 312 P P 02 42 18.3 +0.4
LMR **La Mourre** 85.04 337 *e*P P 02 42 17.5 -0.4
LMR pmax pmax
comp=Z,21nm,1.1s
HRFI **Mount Harif** 85.37 311 P P 02 42 20.7 +0.9
TIP **Timpagrande** 85.64 328 ⇑P P 02 42 20.7 -0.4
TIP **Timpagrande** 85.64 328 P P 02 42 21.0 -0.1
comp=Z,12nm,1.2s
TIP **Timpagrande** 85.64 328 P P 02 42 20.5 -0.6
EIL **Elat** 85.71 310 LR LR 03 24 19.5
comp=Z,87nm,20.5s,baz=90,slow=38
EIL **Elat** 85.71 310 P P 02 42 22.4 +0.9
IMMV **Iera Moni Meta** 86.06 321 P P 02 42 22.4 -0.7
EPF **Esparros** 86.81 341 *e*P P 02 42 27.0 +0.2
EPF pmax pmax
comp=Z,7.0nm,1.4s
ETSF **Etsaut** 87.13 342 *e*P P 02 42 29.6 +1.2
ETSF pmax pmax
comp=Z,10.0nm,1.5s
VAE **Valguarnera** 87.98 329 LR LR 03 25 41.8
comp=Z,50nm,20.4s,baz=78,slow=38
ESDC **Sonseca Array** 90.93 343 P P 02 42 44.6 -1.7
comp=Z,1.0nm,1.0s,baz=6.1,slow=4.1,SNR=5.1
ESDC LR LR 03 30 13.8
comp=Z,66nm,18.3s,baz=38,slow=40
comp=Z,1.0nm,1.0s
KEST **Kesra** 91.25 332 P P 02 42 47.6 -0.3
comp=Z,2.5nm,0.7s,baz=43,slow=3.2,SNR=4.0
KEST LR LR 03 27 53.5
comp=Z,62nm,18.3s,baz=337,slow=38
comp=Z,2.5nm,0.7s
KEST **Kesra** 91.25 332 P P 02 42 47.2 -0.7
TORD **Torodi Ar. Bea** 114.71 330 PKiKP PKiKP 02 48 22.5 -0.4
comp=Z,0.1nm,0.4s,baz=37,slow=1.6,SNR=4.2
VNDA **Vanda** 124.98 178 PKP PKiKP 02 48 42.0 +1.0
comp=Z,0.3nm,0.6s,baz=308,slow=4.1,SNR=4.1
VNDA **Vanda** 124.98 178 PKIKP PKiKP 02 48 42.0 +1.0
VNDA **Vanda** 124.98 178 PKiKP 02 48 41.6 +0.6
QSPA **South Pole Qui** 137.38 180 PKP PKPdf 02 49 05.4 +0.9
comp=Z,2.5nm,1.0s,baz=325,slow=2.7,SNR=6.2
H03N2 **Juan Fernandez** 137.99 90 T T 05 22 39.4
baz=306
H03N1 **Juan Fernandez** 138.00 90 T T 05 22 40.6
baz=306
H03N3 **Juan Fernandez** 138.00 90 T T 05 22 54.6
baz=306
CPUP **Villa Florida** 147.36 61 PKPbc PKPbc 02 49 26.8 +1.0
comp=Z,0.5nm,0.5s,baz=342,slow=5.3,SNR=3.2
CPUP **Villa Florida** 147.36 61 PKP2 PKPbc 02 49 24.8 -1.0
CPUP **Villa Florida** 147.36 61 PKPbc 02 49 24.8 -1.0
PLCA **Paso Flores** 147.52 95 PKPbc PKiKP 02 49 27.9 -0.2
comp=Z,5.3nm,0.9s,baz=291,slow=2.1,SNR=6.4
TROLL **Troll, Antarti** 152.28 198 ⇑PKPdf PKiKP 02 49 37.9 +1.0
comp=Z,136nm,0.3s
SNAA **Sanae** 153.62 196 PKPbc PKPbc 02 49 39.3 -0.2
comp=Z,0.8nm,0.4s,baz=190,slow=3.7,SNR=4.5
SNAA PKPab PKPab 02 49 53.5 +0.9
comp=Z,0.9nm,0.5s,baz=188,slow=6.0,SNR=3.6

*IDC **27** 03:11:03.4±2.7, 18°.04S×178°.51W,h614km±23km, mb3.1/6, mbtmp4.0/7, Error ellipse: s-maj=126.3km s-min=18.7km az=153.0*
*NEIC **27** 03:11:03.8±1.6, 18°.3S±0°.2×178°.4W±0°.1, h617km±12km, mb4.0/11, Error ellipse: s-maj=31.2km s-min=13.1km az=147.0*
ISC 27 03:11:01.9±0.8, 18°.3S±0°.3×178°.4W±0°.2, h600km, n23, σ0s78/23, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MSVF	**Nonsavu**	3.44	278	P	P	03 12 25.6	+1.8
	43nm,0.8s,baz=124,slow=7.3,SNR=18						
NIUE	**Niue**	8.05	97	P	P	03 13 05.4	+3.6
EIDS	**Eidsvold**	29.17	251	P	P	03 16 16.1	-0.5
EIDS				IAmb	IAmb	03 16 28.2	
	comp=Z,5.7nm,1.1s						
CTAO	**Charters Tower**	33.41	261	P	P	03 16 52.9	+0.1
COEN	**Coen**	37.13	271	P	P	03 17 23.4	-0.2
STKA	**Stephens Creek**	38.48	242	P	P	03 17 34.2	0.0
	comp=Z,1.7nm,0.5s,baz=104,slow=9.6,SNR=3.0						
	comp=Z,1.7nm,0.5s						
BBOO	**Buckleboo**	43.25	241	P	P	03 18 13.0	+1.0
BBOO				IAmb	IAmb	03 18 38.7	
	comp=Z,5.5nm,1.1s						
WR8	**Warramunga Arr**	44.44	260	P	P	03 18 20.6	-0.7
WR8				IAmb	IAmb	03 18 25.6	
	comp=Z,1.2nm,1.0s						
WB0	**Warramunga Arr**	44.56	260	P	P	03 18 21.5	-0.7
WB0				IAmb	IAmb	03 18 37.1	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	44.59	260	P	P	03 18 22.4	-0.1
	comp=Z,1.4nm,0.3s,baz=96,slow=7.2,SNR=34						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	44.59	260	P	P	03 18 22.1	-0.4
AS31	**Alice Springs**	44.72	255	P	P	03 18 23.8	+0.4
AS31				IAmb	IAmb	03 18 24.8	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	44.72	255	P	P	03 18 23.9	+0.5
	comp=Z,8.6nm,0.5s,baz=87,slow=8.7,SNR=137						
ASAR				PcP	PcP	03 19 52.3	-0.3
	comp=Z,0.5nm,0.6s,baz=105,slow=3.2,SNR=2.4						
	comp=Z,8.6nm,0.5s						
ASAR	**Alice Springs**	44.72	255	P	P	03 18 23.0	-0.4
FORT	**Forrest**	49.87	245	P	P	03 19 01.6	-0.1
FORT				IAmb	IAmb	03 19 04.2	
	comp=Z,8.3nm,1.1s						
FITZ	**Fitzroy Crossi**	52.99	261	P	P	03 19 24.6	+0.3
MBWA	**Marble Bar**	58.01	256	P	P	03 19 58.2	-0.8
MBWA				IAmb	IAmb	03 20 03.5	
	comp=Z,12nm,1.1s						
NVAR	**Mina Array Bea**	79.67	44	P	P	03 22 08.2	-0.5
	comp=Z,0.3nm,0.7s,baz=239,slow=4.2,SNR=1.9						
	comp=Z,0.3nm,0.7s						
BELA	**Belgrano 2**	81.80	173	P	P	03 22 18.8	0.0
TXAR	**Lajitas Array**	86.17	58	P	P	03 22 42.3	+1.1
	comp=Z,0.5nm,0.7s,baz=220,slow=7.5,SNR=5.1						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	86.17	58	P	P	03 22 41.9	+0.7
PDAR	**Pinedale Array**	87.60	43	P	P	03 22 46.9	-0.8
	comp=Z,0.2nm,0.5s,baz=239,slow=6.9,SNR=4.3						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	145.06	314	PKP	PKPbc	03 29 31.8	-1.5
	comp=Z,0.2nm,0.3s,baz=29,slow=3.3,SNR=1.8						

*NEIC **27** 03:19:31.2±1.4, 54°.89N±0°.04×160°.22W±0°.04, h47km±5km, mb3.9/18, ML3.7/32, Mwr4.0/13, ML3.6(AEIC), Error ellipse: s-maj=5.7km s-min=2.6km az=153.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.70; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$0.04; $M_{r\theta}$0.85; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.21; Fault plane solution: $M_0$1.2100×10^{15} NP1:ϕ_s236.23000°, δ22.19000°, λ72.38000°. NP2:ϕ_s75.16000°, δ68.90000°, λ97.04000°. Principal axes: T 1.0979, Plg65.0000°, Azm357.0000°; N 0.1923, Plg7.0000°, Azm253.0000°; P -1.2902, Plg24.0000°, Azm160.0000°;*
*AEIC **27** 03:19:31.6±2.4, 54°.90N±0°.05×160°.33W±0°.05, h30km±5km Error ellipse: s-maj=7.5km s-min=2.2km az=151.0*
*NEIC **27** 03:19:31.1, 54°.87N×160°.25W, h42km*
*IDC **27** 03:19:33.4±3.6, 55°.14N×160°.37W, h57km±29km, mb3.6/18, mbtmp3.9/21, ML3.6/3, MS3.1/7, Error ellipse: s-maj=32.1km s-min=18.1km az=169.0*
ISC 27 03:19:31.3±0.9, 54°.91N±0°.07×160°.30W±0°.04, h46km±8km, n198, σ1s11/194, mb4.0/18, MS3.3/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CNBA	**Chernabura Isl**	0.42	102		Pn	03 19 40.5	-0.7
CNBA					Sn	03 19 47.3	-1.0
CNBA				IAML		03 19 48.2	
	comp=N,7μm,0.2s						
CNBA				IAML		03 19 48.3	
	comp=E,5μm,0.2s						
SDPT	**Sand Point**	0.46	347	Pn	Pn	03 19 41.5	-0.2
SDPT				Sn	Sn	03 19 49.0	-0.2
DOL	**Dolgoi Island**	0.94	286		Pn	03 19 48.0	-0.1
DOL					Sn	03 20 00.4	+0.1
PS1A	**Pavlof South-1**	0.98	303		Pn	03 19 49.0	+0.4
PS1A					Sn	03 20 02.4	+1.1
PVV	**Pavlof Volcano**	0.98	299		Pn	03 19 48.9	+0.3
PS4A	**Pavlof South-4**	1.00	297		Pn	03 19 49.2	+0.4
PS4A					Sn	03 20 03.0	+1.1
HAG	**Hague Volcano**	1.01	295		Pn	03 19 49.6	+0.5
PN7A	**Pavlof North-7**	1.11	299		Pn	03 19 51.3	+0.8
DTNA	**Dutton South F**	1.15	283		Sn	03 20 06.2	+0.6
DT1	**Dutton Round H**	1.16	281		Sn	03 20 06.3	+0.5
VNKR	**Veniaminof 5**	1.25	25		Pn	03 19 53.3	+1.0
VNKR					Sn	03 20 09.5	+1.5
VNSG	**Veniaminof 6**	1.40	29		Pn	03 19 55.6	+1.1
VNSG					Sn	03 20 14.1	+2.3
VNSS	**Veniaminof 8**	1.41	19		Pn	03 19 55.9	+1.2
VNFG	**Fog Glacier, M**	1.45	17	Pn	Pn	03 19 56.5	+0.5
VNFG	**Fog Glacier, M**	1.45	17		Pn	03 19 56.5	+1.4
VNNF	**Veniaminof 3**	1.49	22		Pn	03 19 57.1	+1.4
ISNN	**Isanotski Nort**	2.01	269		Pn	03 20 04.7	+1.9
SSLS	**Shishaldin Sou**	2.15	266		Pn	03 20 06.3	+1.5
ANPB	**Aniakchak Plen**	2.21	30		Pn	03 20 06.8	+1.3
SSBA	**Shishaldin**	2.22	268		Pn	03 20 07.1	+1.4
ANPK	**Aniakchak Peak**	2.29	31		Pn	03 20 08.2	+1.5
AZAC	**Aniakchak**	2.31	29		Pn	03 20 08.2	+1.3
ANNE	**Aniakchak Nort**	2.37	31		Pn	03 20 09.1	+1.4
ANNW	**Aniakchak Nort**	2.38	29		Pn	03 20 09.3	+1.6
AKSA	**Akutan Strait**	3.24	258		Pn	03 20 21.5	+1.9
AKUT	**Akutan**	3.28	259	Pn	Pn	03 20 21.2	+1.0
AKUT				IAML		03 21 14.9	
	comp=E,166nm,0.8s						
AKUT				IAML		03 21 16.2	
	comp=N,136nm,0.5s						
AKLV	**Akutan Long Va**	3.38	260		Pn	03 20 22.8	+1.3
AKBBA	**Akutan Broad B**	3.38	258		Pn	03 20 23.1	+1.5
AKGG	**Akutan Green G**	3.39	260		Pn	03 20 23.0	+1.3
AKV	**Akutan Volcano**	3.39	259		Pn	03 20 23.0	+1.3
PLBL	**Peulik Blue Cr**	3.41	33		Pn	03 20 23.9	+2.1
ZRO	**Akutan Zero**	3.41	258		Pn	03 20 23.5	+1.5
LVA	**Lava Point**	3.42	260		Pn	03 20 21.9	-0.2
LVA				IAML		03 21 25.5	
	comp=E,146nm,0.8s						
R17L	**Mt. Peulik Vol**	3.50	37		Pn	03 20 25.4	+2.1
PLK1	**Peulik 1**	3.56	34		Pn	03 20 25.9	+2.0
PLK2	**Peulik 2**	3.62	36		Pn	03 20 26.9	+2.1
PLK5	**Peulik 5**	3.63	30		Pn	03 20 26.8	+1.9
UNV	**Unalaska Valle**	3.78	256	Pn	Pn	03 20 27.6	+0.7
MNAT	**Makushin Natee**	3.87	257		Pn	03 20 29.1	+0.8
MREP	**Makushin Rep't**	3.93	256		Pn	03 20 30.1	+1.1
MGOD	**Makushin Gods**	4.01	257		Pn	03 20 31.1	+0.9
KJL	**Kejulik**	4.10	38		Pn	03 20 33.1	+1.7
Q17K	**Contact Creek**	4.16	34		Pn	03 20 33.8	+1.6
O15K	**Ungalikthiuk R**	4.29	3		Pn	03 20 34.4	+0.4
ACHA	**Angle Creek He**	4.30	38		Pn	03 20 35.3	+1.0
MGLS	**Mageik Landsli**	4.31	39		Pn	03 20 35.7	+1.5
P16K	**Nushagak River**	4.33	16	Pn	Pn	03 20 35.2	+0.8
P16K				IAML		03 22 05.7	
	comp=N,134nm,0.7s						
KABU	**Katmai Buttres**	4.37	37		Pn	03 20 36.9	+1.8
O14K	**Tigyukauivet M**	4.39	353	Pn	Pn	03 20 35.8	+0.4
O14K				IAML		03 21 57.7	
	comp=E,43nm,1.0s						
KVTA	**Katmai Vly 10**	4.45	36		Pn	03 20 38.0	+1.9
KAKN	**Katmai Knife C**	4.46	38		Pn	03 20 38.2	+1.8
OHAK	**Old Harbor**	4.56	57	Pn	Pn	03 20 37.1	-0.5
OHAK				IAML		03 21 59.2	
	comp=N,52nm,1.1s						
KAWH	**Katmai**	4.62	39		Pn	03 20 39.1	+0.5
KARR	**Katmai Rainbow**	4.74	38		Pn	03 20 41.9	+1.7
Q18K	**Katmai Hardscr**	4.75	36		Pn	03 20 42.0	+1.7
P17K	**Kvichak River**	4.79	24	Pn	Pn	03 20 42.1	+1.4
KAHG	**Katmai Hook Gl**	4.79	39		Pn	03 20 42.5	+1.6
OKTU	**Okmok Mt. Tuli**	4.80	255		Pn	03 20 42.2	+1.1
O16K	**Kokwok River B**	4.85	13		Pn	03 20 42.2	+0.6
O16K	**Kokwok River B**	4.85	13	IAML		03 22 14.7	
	comp=E,47nm,0.8s						
O16K				IAML		03 22 21.6	
	comp=N,36nm,0.8s						
N14K	**Kuskokwak Cree**	5.09	352		Pn	03 20 45.1	+0.3
N14K				IAML		03 22 12.0	
	comp=N,62nm,1.1s						
N14K				IAML		03 22 33.1	
	comp=E,60nm,1.1s						
KDAK	**Kodiak Island**	5.17	53	P	Pn	03 20 47.6	+1.6
	comp=E,2.2nm,0.3s,baz=211,slow=2.8,SNR=25						
KDAK				S	Sn	03 21 43.4	-0.8
	comp=E,12nm,0.6s,baz=335,slow=16,SNR=1.5						
KDAK				LR	LR	03 23 02.0	
	comp=E,58nm,19.7s,baz=215,slow=41						
	comp=E,6.5nm,0.4s						
KDAK	**Kodiak Island**	5.17	53	Pn	Pn	03 20 45.7	-0.3
KDAK				IAML		03 22 09.6	
	comp=E,57nm,0.9s						
KDAK				IAML		03 22 12.8	
	comp=E,60nm,0.7s						
O17K	**Koliganek Bris**	5.18	18		Pn	03 20 47.3	+1.2
P18K	**Big Mountain,**	5.28	29		Pn	03 20 48.5	+1.0
N15K	**Kwethluk River**	5.28	1		Pn	03 20 48.6	+1.1
N15K				IAML		03 22 34.6	
	comp=E,61nm,0.9s						
N15K				IAML		03 22 41.6	
	comp=N,50nm,1.1s						
Q19K	**Cape Douglas,**	5.43	39	Pn	Pn	03 20 49.6	-0.1
M13K	**Dall Lake**	5.76	345	Pn	Pn	03 20 55.4	+1.3
M15K	**Kasigluk River**	5.81	358		Pn	03 20 55.1	+0.3
N17K	**Nushagak Hills**	5.88	15		Pn	03 20 57.0	+1.3
M14K	**Bethel**	5.93	352		Pn	03 20 56.4	0.0
SPIA	**Saint Paul Isl**	6.02	296	Pn	Pn	03 20 58.2	+0.5
M16K	**Timber Creek**	6.18	6		Pn	03 21 00.2	+0.4
N18K	**Kilae Creek**	6.25	20	Pn	Pn	03 21 01.3	+0.4
M11K	**Mekoryuk**	6.34	332	Pn	Pn	03 21 01.3	-0.7

L14K	Kuka Creek	6.58	350	Pn		Pn		03 21 05.4	+0.1
N19K	Bonanza Creek	6.68	25			Pn		03 21 08.3	+1.4
M17K	Holitna River	6.69	12			Pn		03 21 07.8	+1.0
L16K	Owhat River	6.84	3			Pn		03 21 09.7	+0.8
M18K	Stony River	7.01	18			Pn		03 21 12.7	+1.4
K13K	Kusilvak Mount	7.41	344			Pn		03 21 17.3	+0.6
K15K	Wolf Creek Mou	7.44	356			Pn		03 21 17.7	+0.6
L18K	Granite Mounta	7.57	13			Pn		03 21 19.1	+0.2
L19K	White Mountain	7.83	19			Pn		03 21 23.0	+0.5
K17K	Iditarod	7.90	7			Pn		03 21 23.9	+0.5
STLK	Strandline Lak	7.97	31			Pn		03 21 25.0	+0.5
J14K	Nanvaranak Lak	8.05	349			Pn		03 21 26.0	+0.6
J16K	Anvik River	8.41	359			Pn		03 21 30.9	+0.6
J17K	VABM Dome	8.54	4	Pn		Pn		03 21 31.9	-0.3
KOFP	Korovin Flat P	8.62	258			Pn		03 21 34.3	+0.9
KOWE	Korovin West	8.67	259			Pn		03 21 35.2	+1.1
ATKA	Atka Island	8.71	258	Pn		Pn		03 21 34.6	+0.2
PWL	Port Wells	8.72	42	Pn		Pn		03 21 34.8	+0.1
J18K	Innoko River	8.78	11	Pn		Pn		03 21 35.7	+0.3
PPLA	Purkeypile	9.04	24	Pn		Pn		03 21 41.1	+2.0
HIN	Hinchinbrook I	9.21	48			Pn		03 21 41.8	+0.5
GLI	Glacier Island	9.22	44	Pn		Pn		03 21 41.3	-0.2
FID	Port Fidalgo	9.40	46	Pn		Pn		03 21 43.6	-0.4
J19K	Poorman	9.42	13	Pn		Pn		03 21 44.6	+0.4
CAST	Castle Rocks	9.51	23	Pn		Pn		03 21 48.0	+2.5
SCM	Sheep Creek Mo	9.71	39	Pn		Pn		03 21 47.1	-1.2
J20K	Nowinta River	9.80	16	Pn		Pn		03 21 50.5	+1.0
KTH	Kantishna Hill	9.90	25	Pn		Pn		03 21 50.1	-0.7
KAIM	Kayak Island	9.92	53	Pn		Pn		03 21 52.4	+1.3
ANM	Nome	10.02	347	Pn		Pn		03 21 53.0	+0.6
KLU	Klutina	10.04	43	Pn		Pn		03 21 52.7	-0.1
H17K	Granite Mounta	10.07	1	Pn		Pn		03 21 53.5	+0.5
ADK	Adak	10.24	260	Pn		Pn		03 21 55.2	-0.3
BMRM	Bremner River	10.30	48	Pn		Pn		03 21 56.5	+0.1
M24K	Tolsona, Glenn	10.31	40	Pn		Pn		03 21 56.4	-0.1
H18K	Honhosa River	10.33	5	Pn		Pn		03 21 56.8	+0.2
DHY	Denali Highway	10.54	34	Pn		Pn		03 21 59.9	+0.2
G16K	Koyuk River	10.57	355	Pn		Pn		03 22 00.6	+0.7
H19K	Roundabout Mou	10.82	9	Pn		Pn		03 22 03.3	-0.1
GLB	Gilahina Butte	10.87	46	Pn		Pn		03 22 04.2	+0.1
VRDI	Verde Repeater	10.92	48	Pn		Pn		03 22 04.9	0.0
G18K	Tagagawik	11.06	4	Pn		Pn		03 22 07.6	+1.0
G19K	Purcell Mounta	11.38	7	Pn		Pn		03 22 11.0	0.0
K24K	Donnelly Dome	11.56	34	Pn		Pn		03 22 14.0	+0.5
IMAR	Indian Mountai	11.56	13	Pn		Pn		03 22 14.3	+0.8
RIDG	Independent Ri	11.82	35	Pn		Pn		03 22 18.5	+1.4
H22K	Ishtalitna Cre	11.85	18	Pn		Pn		03 22 19.4	+1.9
IL31		11.94	29	Pn		Pn		03 22 17.7	-0.9
ILAR	Eielson Array	11.94	29	P		Pn		03 22 19.6	+1.0
	comp=N,0.1nm,0.3s,baz=225,slow=12,SNR=6.2								
ILAR				S		Sn		03 24 25.8	-4.4
	comp=N,0.3nm,0.7s,baz=213,slow=23,SNR=3.4								
ILAR				LR		LR		03 27 02.8	
	comp=N,55nm,18.0s,baz=271,slow=38								
	comp=N,0.3nm,0.4s								
ILAR	Eielson Array	11.94	29	Pn		Pn		03 22 18.3	-0.3
F19K	Shaleruckik Mo	12.03	5	Pn		Pn		03 22 20.2	+0.4
G21K	Allakaket	12.10	13			Pn		03 22 22.0	+1.1
F20K	Avaraart Lake	12.38	8	Pn		Pn		03 22 25.2	+0.6
L27K	Beaver Creek,	12.51	42	Pn		Pn		03 22 25.3	-1.1
BCAR	Beaver Creek A	12.52	42	Pn		Pn		03 22 26.6	-0.1
H24K	Noodor Dome	12.53	24	Pn		Pn		03 22 28.6	+1.8
E18K	Tukpahlearik C	12.56	359	Pn		Pn		03 22 28.8	+1.7
AMKA	Amchitka	12.74	262	Pn		Pn		03 22 29.8	+0.3
F21K	Alatna River	12.78	12			Pn		03 22 31.0	+1.0
O29M	Mount Kennedy	12.81	56	Pn		Pn		03 22 31.0	+0.4
G23K	Bananza Creek	12.83	19	Pn		Pn		03 22 30.8	0.0
K27K	Chicken	12.96	38	Pn		Pn		03 22 33.6	+1.0
G24K	Hadweenzic Riv	13.34	22			Pn		03 22 37.6	-0.1
M29M	Somme Creek	13.58	47			Pn		03 22 40.6	-0.5
L29M	L29M	14.00	45	Pn		Pn		03 22 47.5	+0.7
I27K	Kandik River	14.10	33	Pn		Pn		03 22 48.2	+0.1
M30M	Minto, Yukon	14.35	48	Pn		Pn		03 22 53.3	+1.9
H27K	Steamboat Moun	14.55	31	Pn		Pn		03 22 53.3	-0.7
I28M	Miner Creek	14.55	35			Pn		03 22 53.6	-0.6
K29M	Barlow Dome	14.57	43	P		P		03 23 02.9	+2.9
D23K	Nanushuk River	14.79	14	Pn		Pn		03 22 57.7	+0.6
G27K	Doyon Strip	14.91	29	Pn		Pn		03 22 59.2	+0.4
J30M	Hart River	15.38	41	P		P		03 23 11.8	+2.9
J30M				IAmb		IAmb		03 23 28.5	
	comp=Z,7.5nm,0.7s								
H29M	Whitestone	15.53	34	Pn		Pn		03 23 07.2	+0.3
H29M				IAmb		IAmb		03 23 28.0	
	comp=Z,7.2nm,0.8s								
I30M	Mount Dempster	15.67	39	P		P		03 23 14.1	+1.9
F28M	Old Crow	15.97	29	Pn		Pn		03 23 12.2	-0.3
G29M	Pine Creek	16.06	33			P		03 23 16.3	-0.1
G29M				IAmb		IAmb		03 23 32.4	
	comp=Z,10nm,0.8s								
EPYK	Eagle Plains	16.16	35	P		P		03 23 17.7	+0.1
EPYK				IAmb		IAmb		03 23 29.8	
	comp=Z,7.5nm,0.6s								
C27K	Jago River	16.56	21			Pn		03 23 20.8	+0.9
G30M	tAoh Zraii Nji	16.67	34	P		P		03 23 23.8	+0.6
G30M				IAmb		IAmb		03 23 47.5	
	comp=Z,4.2nm,0.6s								
H31M	Peel River	16.70	39	P		Pn		03 23 21.9	+0.2
H31M				IAmb		IAmb		03 23 41.0	
	comp=Z,13nm,1.1s								
MMPY	Sheldon Lake,	16.80	51			Pn		03 23 23.6	+0.7
MMPY				IAmb		IAmb		03 24 04.5	
	comp=Z,9.9nm,1.4s								
E29M	Blow River	17.04	29	Pn		Pn		03 23 25.4	-0.5
F30M	Barrier River	17.18	33			Pn		03 23 28.4	+0.8
F30M				IAmb		IAmb		03 23 44.8	
	comp=Z,4.0nm,0.6s								
G31M	Satah River	17.28	36	P		Pn		03 23 28.5	-0.4
G31M				IAmb		IAmb		03 23 32.4	
	comp=Z,7.6nm,1.1s								
INK	Inuvik	18.27	32	P		P		03 23 39.0	-1.7
	comp=Z,0.3nm,0.3s,baz=232,slow=18,SNR=6.0								
INK				LR		LR		03 31 56.2	
	comp=Z,36nm,20.1s,baz=158,slow=41								
	comp=Z,0.9nm,0.4s								
INK	Inuvik	18.27	32	P		P		03 23 40.5	-0.3
YKA	Yellowknife Ar	24.45	53	P		P		03 24 45.6	+0.3
	comp=Z,0.6nm,0.6s,baz=274,slow=8.6,SNR=2.6								
	comp=Z,0.6nm,0.6s								
PEA0B	Petropavlovsk-	24.49	283	P		P		03 24 45.8	0.0
PETK	Petropavlovsk-	24.49	283	P		P		03 24 46.1	+0.2
	comp=Z,3.3nm,0.5s,baz=79,slow=14,SNR=37								
	comp=Z,3.3nm,0.5s								
PETK	Petropavlovsk-	24.49	283	P		P		03 24 45.5	-0.4
YBH	Yreka Blue Hor	27.88	103	LR		LR		03 33 59.4	
	comp=Z,30nm,18.2s,baz=308,slow=31								
NVAR	Mina Array Bea	32.60	103	LR		LR		03 37 33.5	
	comp=Z,24nm,20.0s,baz=199,slow=33								
PDAR	Pinedale Array	34.77	89	P		P		03 26 18.9	+1.6
	comp=Z,0.1nm,0.4s,baz=316,slow=8.4,SNR=1.0								
	comp=Z,0.1nm,0.4s								
H11N2	WAKE ISLAND Hy	43.01	228	T		T		04 13 48.2	
	baz=28,slow=76,SNR=13								
H11N3	WAKE ISLAND Hy	43.02	228	T		T		04 13 34.9	
	baz=28,slow=76,SNR=14								
H11N1	WAKE ISLAND Hy	43.03	228	T		T		04 13 33.2	
	baz=28,slow=76,SNR=13								
H11S1	WAKE ISLAND Hy	44.18	228	T		T		04 15 13.8	
	baz=28,slow=76,SNR=7.6								
H11S2	WAKE ISLAND Hy	44.19	228	T		T		04 15 15.3	
	baz=28,slow=76,SNR=5.1								
H11S3	WAKE ISLAND Hy	44.20	228	T		T		04 15 15.1	
	baz=28,slow=76,SNR=4.4								
SONM	Songino Array	54.49	304	P		P		03 28 53.5	-0.6
	comp=Z,0.8nm,0.7s,baz=43,slow=4.7,SNR=5.1								
	comp=Z,0.8nm,0.7s								
SONM	Songino Array	54.49	304	P		P		03 28 53.6	-0.5
SONM				IAmb		IAmb		03 28 55.5	
	comp=Z,0.9nm,1.0s								
ARCES	ARCESS Array B	55.80	358	P		P		03 29 02.2	-0.8
	comp=Z,0.8nm,0.5s,baz=27,slow=8.2,SNR=7.3								
	comp=Z,0.8nm,0.5s								
ARCES	ARCESS Array B	55.80	358	P		P		03 29 01.3	-1.7
FINES	FINESS Array B	63.88	357	P		P		03 29 58.0	-0.6
	comp=Z,1.4nm,0.6s,baz=21,slow=7.5,SNR=21								
	comp=Z,1.4nm,0.6s								
FINES	FINESS Array B	63.88	357	P		P		03 29 57.8	-0.8
KURBB	Kurchatov Arra	63.97	323	P		P		03 29 59.1	-0.2
	comp=Z,0.7nm,0.9s,baz=23,slow=6.8,SNR=4.6								
	comp=Z,0.7nm,0.9s								
NOA	NORSAR Array B	64.20	5	P		P		03 30 00.0	-0.8
	comp=Z,1.0nm,0.7s,baz=351,slow=6.1,SNR=2.4								
	comp=Z,1.0nm,0.7s								
BVAR	Borovoye Array	64.56	329	P		P		03 30 03.3	+0.1
	comp=Z,1.8nm,0.5s,baz=26,slow=7.2,SNR=8.4								
	comp=Z,1.8nm,0.5s								
HFS	Hagfors	65.21	3	P		P		03 30 06.6	-0.7
	comp=Z,1.4nm,0.5s,baz=20,slow=4.7,SNR=5.6								
	comp=Z,1.4nm,0.5s								
MKAR	Makanchi Array	65.76	318	P		P		03 30 09.9	-1.2
	comp=Z,0.3nm,0.5s,baz=15,slow=3.5,SNR=3.6								
	comp=Z,0.3nm,0.5s								
EKA	Eskdalemuir Ar	68.53	14	P		P		03 30 27.0	-1.5
	comp=Z,0.8nm,0.6s,baz=350,slow=4.2,SNR=4.7								
	comp=Z,0.8nm,0.6s								
AKASG	Malin Array Be	74.46	354	P		P		03 31 03.5	-0.7
	comp=Z,2.1nm,0.6s,baz=11,slow=6.2,SNR=7.9								
	comp=Z,2.1nm,0.6s								
JAY	Jayapura	74.84	243	LR		LR		03 59 49.6	
	comp=Z,30nm,20.0s,baz=332,slow=32								
GERES	GERESS Array B	76.50	4	P		P		03 31 16.7	+0.6
	comp=Z,0.4nm,0.8s,baz=339,slow=3.3,SNR=4.3								
	comp=Z,0.4nm,0.8s								
DAVOX	Davos/Dischmat	78.35	7	LR		LR		04 06 48.3	
	comp=Z,35nm,19.1s,baz=46,slow=36								
KBZ	Khabaz	79.78	343	P		P		03 31 33.8	-0.4
	comp=Z,1.8nm,0.8s,baz=14,slow=4.2,SNR=4.3								
	comp=Z,1.8nm,0.8s								
CMAR	Chiang Mai Arr	81.11	289	P		P		03 31 41.5	-0.3
	comp=Z,1.2nm,0.3s,baz=19,slow=5.8,SNR=9.6								
	comp=Z,1.2nm,0.3s								
ESDC	Sonseca Array	83.63	18	P		P		03 31 55.3	+0.6
	comp=Z,0.9nm,0.7s,baz=333,slow=4.3,SNR=7.8								
	comp=Z,0.9nm,0.7s								
ESDC	Sonseca Array	83.63	18	P		P		03 31 55.3	+0.6
BRTR	Keskin Array B	84.99	349	P		P		03 32 02.4	+0.7
	comp=Z,0.5nm,0.8s,baz=351,slow=7.0,SNR=2.9								
	comp=Z,0.5nm,0.8s								
QSPA	South Pole Qui	144.68	180	PKP		PKPbc		03 39 00.7	+0.3
	comp=Z,1.3nm,0.8s,baz=322,slow=1.3,SNR=6.3								
QSPA	South Pole Qui	144.68	180			PKPbc		03 39 00.5	+0.1

*AEIC **27** 03:28:26.7±1.1,58.36N±0.02×133.54W±0.03,h2km±6km, Error ellipse: s-maj=3.3km s-min=1.8km az=153.0*
*NEIC **27** 03:28:26.2±1.4,58.32N±0.01×133.50W±0.02,h5km±2km, ML2.6/20,ML1.8(AEIC),Error ellipse: s-maj=3.0km s-min=2.5km az=357.0*
*PGC **27** 03:28:27.6±0.4,58.36N×133.53W,h1km,ML2.9/4, ML2.7(AEIC),51km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 27 03:28:26.2±1.2,58.34N±0.03×133.50W±0.03,h1km±12km, n39,σ066/44,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	Juneau Island	0.47	263		Pg	03 28 35.4	+0.2
JIS					Sg	03 28 41.9	+0.7
R32K	Eaglecrest	0.54	264	Pg	Pg	03 28 36.6	+0.1
R32K				Sg	Sg	03 28 43.0	-0.5
BESE	Bessie Mountai	0.75	289	P	Pg	03 28 40.5	-0.1
BESE	Bessie Mountai	0.75	289	Pg	Pg	03 28 40.3	-0.3
BESE				Sg	Sg	03 28 49.8	-0.5
Q32M	Nakina River	0.90	45	P	Pg	03 28 43.1	-0.2
Q32M	Nakina River	0.90	45	Pg	Pg	03 28 43.0	-0.4
Q32M	Nakina River	0.90	45		Sb	03 28 56.6	-0.6
Q32M	Nakina River	0.90	45	IAML		03 29 03.3	
	comp=N,152nm,1.1s						
Q32M				IAML		03 29 06.5	
	comp=E,164nm,0.8s						
S32K	Killisnoo	1.04	214	Pg	Pg	03 28 46.2	+0.1
S32K	Killisnoo	1.04	214		Sb	03 29 01.7	+0.6
S32K	Killisnoo	1.04	214	IAML		03 29 05.1	
	comp=E,150nm,0.5s						
S32K				IAML		03 29 05.3	
	comp=N,124nm,0.5s						
R31K	City Hall, Gus	1.18	275		Pg	03 28 49.0	+0.2
R31K					Sb	03 29 05.5	+0.4
P32M	Atlin	1.26	355	P	Pg	03 28 49.6	-0.7
P32M				S	Sb	03 29 07.1	-0.4
P32M	Atlin	1.26	355		Pg	03 28 49.9	-0.4
P32M				Sg	Sg	03 29 06.5	-0.2
P32M				IAML		03 29 11.4	
	comp=E,107nm,0.6s						
P32M				IAML		03 29 29.1	
	comp=N,148nm,1.0s						
S34M	Telegraph Cree	1.33	108	P	Pn	03 28 51.7	-0.1
S34M				S	Sg	03 29 10.1	+1.3
S34M	Telegraph Cree	1.33	108		Pn	03 28 50.7	-1.1
SKAG	Skagway	1.47	321	Pn	Pn	03 28 54.0	+0.1
SKAG	Skagway	1.47	321		Sn	03 29 14.0	+0.2
SKAG	Skagway	1.47	321	IAML		03 29 19.1	
	comp=N,99nm,1.0s						
SKAG				IAML		03 29 38.0	
	comp=E,139nm,0.8s						
S31K	Pelican	1.50	257	Pn	Pn	03 28 53.5	-0.6
S31K				Sn	Sb	03 29 13.8	-0.3
S31K				IAML		03 29 19.6	
	comp=E,66nm,0.9s						
S31K				IAML		03 29 23.6	
	comp=N,80nm,1.1s						
SIT	Sitka	1.61	218	Pn	Pn	03 28 54.6	-1.2
SIT				IAML		03 29 54.4	
	comp=E,94nm,0.7s						
SIT	Sitka	1.61	218		Sb	03 29 18.3	+0.7
DLBC	Dease Lake	1.83	85	Pn	Pn	03 29 00.2	+1.4
DLBC	Dease Lake	1.83	85		Pn	03 28 59.7	+0.8
PLBC	Pleasant Camp	1.86	308	Pg	Pb	03 29 01.1	+0.1
P33M	Teslin, Yukon	1.91	10	Pn	Pn	03 28 59.9	-0.1
WRAK	Wrangell Islan	2.02	162	Pn	Pn	03 29 00.2	-1.2
T35M	Bob Quinn	2.21	127	Pn	Pn	03 29 03.3	-0.7
U33K	Whale Pass	2.24	175	Pn	Pn	03 29 03.3	-1.0
WHY	Whitehorse	2.43	344		Pn	03 29 07.3	+0.2
O30N	Mendenhall	2.77	333	Pn	Pn	03 29 12.2	+0.5
O30N	Mendenhall	2.77	333	Pn	Pn	03 29 11.7	0.0
CRAG	Craig	2.88	176	Pn	Pn	03 29 13.8	+0.7
WTLY	Watson Lake, Y	3.00	52	Pn	Pn	03 29 14.5	-0.4
N30M	Aishikik Lake	3.62	332	Pn	Pn	03 29 23.7	+0.3
M31M	Drury Creek, Y	3.90	354	Pn	Pn	03 29 27.6	+0.4
RUBB	Prince Rupert	4.41	154	Pn	Pn	03 29 32.9	-1.3
M30M	Minto, Yukon	4.55	340	Pn	Pn	03 29 36.8	+0.6
M29M	Somme Creek	4.80	331	Pn	Pn	03 29 39.1	-0.5

IDC 27 03:51:46.1±4.2,6.39S×149.18E,h0km,mb3.2/1, mbtmp3.6/3,ML3.7/1,Error ellipse: s-maj=156.5km s-min=39.2km az=114.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.61	214	Pn	Pn	03 52 43.6	+0.3
	14nm,0.5s,baz=354,slow=9.2,SNR=4.6						
PMG				Sn	Sn	03 53 28.9	+2.2
	5.8nm,0.3s,baz=325,slow=23,SNR=9.0						
WRA	Warramunga Arr	19.73	226	P	Pn	03 56 18.6	-0.4
	0.2nm,0.3s,baz=51,slow=11,SNR=11						
	3.1nm,0.9s						
ASAR	Alice Springs	22.60	219	P	P	03 56 47.4	-1.2
	0.8nm,0.9s,baz=46,slow=11,SNR=5.0						
	0.8nm,0.9s						
TORD	Torodi Ar. Bea	147.28	284	PKPbc	PKPbc	04 11 32.0	-0.7
	0.3nm,0.7s,baz=80,slow=2.8,SNR=2.0						

*IDC **27** 04:48:16.5±0.8,31.22S×179.84E,h424km±9km,mb3.4/6, mbtmp4.3/8,Error ellipse: s-maj=22.5km s-min=14.5km az=149.0*
*WEL **27** 04:48:23.1±0.9,32.52S±7.7×18.70W±1.7,h346km±14km, M4.3/15,mB4.7/13,ML4.4/16,MLv5.2/15,Mw(mB)4.0/13, Error ellipse: s-maj=23.0km s-min=5.7km az=107.5*

ISC 27 04:48:16.4±0.6,31.43S±0.07×180.0E±0.1,h400km,n59, σ2938/68,mb3.5/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.84	41	P	Pn	04 49 20.9	+2.5
GLKZ				S	S	04 50 10.3	+1.8
RAO	Raoul Island	2.85	41	P	Pn	04 49 21.5	+3.0
	263nm,0.2s,baz=129,slow=6.2,SNR=9.7						
RAO				S	S	04 50 10.8	+2.1
	396nm,0.3s,baz=84,slow=22,SNR=5.6						
MXZ	Matakaoa Point	6.26	192	P	Pn	04 49 54.4	+2.6
MXZ				S	S	04 51 07.2	-2.4
WCZ	Waipu Caves	6.48	225	P	Pn	04 49 58.7	+4.5
WMGZ	Waiomatatini S	6.50	191	P	P	04 49 57.0	+2.6
WMGZ				S	S	04 51 15.6	+1.3
OUZ	Omahuta	6.52	233	P	P	04 49 59.1	+3.9
HAZ	Te Kaha	6.56	195	P	P	04 49 57.5	+1.9
HAZ				S	S	04 51 16.0	+0.4
PKGZ	Pakihiroa	6.60	193	P	P	04 50 00.0	+3.9
PKGZ				S	S	04 51 12.8	-3.7
PUZ	Puketiti	6.77	191	P	P	04 50 00.3	+2.3
PUZ				S	S	04 51 18.6	-1.3
RUGZ	Raukumara Rang	6.78	195	P	P	04 49 60.0	+1.7
RUGZ				S	S	04 51 18.6	-1.8
TWGZ	Tauwhareparae	6.92	193	P	P	04 50 03.2	+3.4
TWGZ				S	S	04 51 23.9	+0.9
MWZ	Matawai	7.17	195	P	P	04 50 04.6	+2.2
LIRZ	Lichensteins R	7.18	203	P	P	04 50 04.7	+2.1
URZ	Urewera	7.20	198	P	Pn	04 50 03.1	+0.9
	25nm,0.4s,baz=260,slow=4.1,SNR=77						
URZ				S	S	04 51 26.9	-1.8
	60nm,0.4s,baz=61,slow=23,SNR=25						
URZ	Urewera	7.20	198	P	Pn	04 50 03.4	+1.2
TKGZ	Te Karaka	7.20	193	P	P	04 50 05.5	+2.7
TOZ	Tahuroa Road	7.28	209	P	P	04 50 09.4	+5.8
RAGZ	Rawiri	7.35	196	P	P	04 50 06.4	+1.9
TARZ	Mount Tarawera	7.35	202	P	P	04 50 08.3	+3.7
RIGZ	Rimuhau	7.48	193	P	P	04 50 09.0	+3.1
MUGZ	Murupara	7.50	199	P	P	04 50 07.7	+1.6
PRGZ	Paritu Road	7.66	192	P	P	04 50 10.6	+2.7
TLZ	Tolley Road	7.78	207	P	P	04 50 13.7	+4.4
RAHZ	Arahi	7.83	197	P	P	04 50 11.9	+2.2
MTHZ	Maungataniwha	7.83	198	P	P	04 50 11.5	+1.7
MHGZ	Mahia Peninsul	7.88	192	P	P	04 50 12.9	+2.5
MRHZ	Matea Rd	7.93	200	P	P	04 50 12.6	+1.7
WHHZ	Waihua	7.95	195	P	P	04 50 13.4	+2.4
NMHZ	Naumai	8.07	198	P	Pn	04 50 13.6	+1.5
ARHZ	Aropaoanui	8.18	196	P	P	04 50 15.5	+1.8
HIZ	Hauiti	8.21	209	P	P	04 50 18.7	+4.7
TMVZ	Te Maari	8.41	203	P	P	04 50 18.2	+1.8
MCHZ	McNeill Hill	8.42	197	P	Pn	04 50 17.4	+1.3
ETVZ	East Tongariro	8.43	203	P	P	04 50 18.4	+1.8
WTVZ	West Tongariro	8.45	204	P	P	04 50 18.6	+1.8
OTVZ	Oturere	8.47	203	P	Pn	04 50 16.8	0.0
KWHZ	Kaweka Forest	8.48	199	P	Pn	04 50 17.0	+0.2
SNVZ	South Ngauruho	8.50	203	P	P	04 50 19.2	+1.8
CKHZ	Cape Kidnapper	8.54	195	P	P	04 50 19.9	+2.3
TUVZ	Tukino	8.57	203	P	Pn	04 50 19.3	+1.4
FWVZ	Far West T-bar	8.59	203	P	Pn	04 50 19.2	+0.9
WHVZ	Whangaehu Hut	8.60	203	P	Pn	04 50 20.0	+1.6
TRVZ	Turoa	8.63	203	P	Pn	04 50 20.4	+1.6
BHHZ	Black Hill Sta	8.64	200	P	Pn	04 50 19.0	+0.3
WNVZ	Wahianoa	8.64	203	P	Pn	04 50 20.2	+1.4
PKVZ	Pokaka	8.69	204	P	Pn	04 50 20.7	+1.4
KAHZ	Kahuranaki	8.71	196	P	Pn	04 50 20.9	+1.5
RAR	Rarotonga	20.80	66	P	P	04 52 25.5	-2.8
	14nm,0.8s,baz=62,slow=15,SNR=1.7						
	14nm,0.8s						
STKA	Stephens Creek	32.54	259	P	P	04 54 10.3	-1.8
	1.6nm,0.4s,baz=101,slow=10,SNR=3.1						
	1.6nm,0.4s						
ASAR	Alice Springs	41.31	269	P	P	04 55 22.7	-2.5
	1.7nm,0.6s,baz=104,slow=7.4,SNR=23						
	1.7nm,0.6s						
WRA	Warramunga Arr	42.39	274	P	P	04 55 31.0	-2.8
	2.5nm,0.4s,baz=112,slow=7.9,SNR=28						
	2.5nm,0.4s						
QSPA	South Pole Qui	58.68	180	P	P	04 57 33.6	+0.2
	1.1nm,0.9s,baz=0.5,slow=1.6,SNR=6.1						
	1.1nm,0.9s						
NVAR	Mina Array Bea	90.20	44	P	P	05 00 31.6	-1.2
	0.2nm,0.4s,baz=251,slow=3.9,SNR=0.6						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	120.52	314	PKP	PKPdf	05 06 16.8	-4.0
	0.1nm,0.3s,baz=101,slow=1.9,SNR=4.6						
BVAR	Borovoye Array	125.90	315	PKP	PKPdf	05 06 27.9	-3.1
	0.8nm,0.3s,baz=106,slow=3.2,SNR=2.7						
ARCES	ARCESS Array B	139.20	347	PKP	PKPdf	05

VTVB eSg Sn 05 15 31.1 -3.4
VTVB IAML 05 15 35.8
comp=E,26µm,2.5s
VTVB IAML 05 15 37.2
comp=N,27µm,0.6s
TGV Tuan Giao 1.39 301 ⇑ *i* Pg Pn 05 15 12.6 -3.6
THV Thanh Hoa 1.44 135 ⇓ *e* Pn Pn 05 15 15.3 -1.5
DBV Dienbien 1.65 288 ⇑ *e* Pn Pn 05 15 18.1 -1.8
DBV IAML 05 15 47.5
comp=E,29µm,0.5s
DBV IAML 05 15 49.3
comp=N,28µm,0.5s
SPV Sa-pa 1.67 331 *e* Pg Pb 05 15 21.1 -0.4
PLV Phu-Lien 1.80 92 ⇑ *e* Pn Pn 05 15 20.2 -1.7
CCVB Con Cuong 1.82 175 ⇓ *e* Pn Pn 05 15 20.4 -1.8
CCVB eSg Sg 05 15 49.5 0.0
CCVB IAML 05 15 50.9
comp=E,15µm,0.5s
CCVB IAML 05 15 59.4
comp=N,11µm,1.6s
LSVB Lang Son stati 2.14 63 ⇑ *e* Pn Pn 05 15 24.5 -2.0
LSVB IAML 05 16 04.6
comp=N,11µm,1.3s
LSVB IAML 05 16 05.9
comp=E,6µm,0.8s
CBVB Cao Bang 2.25 38 ⇑ *e* Pn Pn 05 15 26.6 -1.4
CBVB eSg Sb 05 16 00.5 +1.1
CBVB IAML 05 16 09.8
comp=N,17µm,0.7s
CBVB IAML 05 16 12.2
comp=E,13µm,0.9s
SKNT Sakolnakorn 3.94 190 P Pn 05 15 51.4 +0.1
KMI2 Kunming 4.62 337 ⇓ Pn Pn 05 15 59.3 -1.5
KMI2 Sg Sg 05 17 21.0 +1.8
KMI2 SMN
comp=E,2µm,0.8s
KMI2 SME
comp=E,2µm,0.9s
KMI2 L L
comp=E,16µm,9.6s
KMI2 L L
comp=E,15µm,6.0s
KMI2 L L
comp=E,15µm,7.7s
UTTA Uttaradit 5.00 232 P Pn 05 16 04.2 -1.7
comp=E,4.2nmcomp=E,8.5nmcomp=E,10nmcomp=E,5µm comp=E,122µmcomp=E,308nm,0.7s
QIZ Qiongzhong 5.17 110 Pn Pn 05 16 07.1 -1.1
QIZ Qiongzhong 5.17 110 Pn Pn 05 16 07.0 -1.2
QIZ Sn Sn 05 17 06.0 -2.0
QIZ SMN
comp=E,2µm,0.8s
QIZ SME
comp=E,2µm,1.0s
QIZ L L
comp=E,22µm,8.9s
QIZ L L
comp=E,13µm,7.7s
QIZ L L
comp=E,7µm,13.7s
LAMP Lampang 5.32 245 P Pn 05 16 08.6 -1.7
comp=E,4.4nmcomp=E,6.4nmcomp=E,25nmcomp=E,2µm comp=E,32µmcomp=E,244nm,0.8s
CMAI Chiengmai2 5.39 261 P Pn 05 16 09.6 -1.8
comp=E,5.6nmcomp=E,3.0nmcomp=E,18nmcomp=E,3µm comp=E,78µmcomp=E,235nm,1.3s
CHTO Chiang Mai 5.79 250 P Pn 05 16 15.4 -1.4
CHTO Chiang Mai 5.79 250 Pn Pn 05 16 14.4 -2.5
CHTO Chiang Mai 5.79 250 P Pn 05 16 14.1 -2.7
comp=E,2.5nmcomp=E,5µmcomp=E,90nm,1.5s
CHTO Chiang Mai 5.79 250 P Pn 05 16 16.2 -0.6
GYA Guiyang 5.84 18 Pn Pn 05 16 16.8 -0.8
GYA Sn Sn 05 17 28.8 +4.1
GYA SMN
comp=E,4µm,0.8s
GYA SME
comp=E,3µm,1.0s
CM09 Chiang Mai Arr 5.90 247 P Pn 05 16 17.2 -1.1
comp=E,1.9nmcomp=E,2.7nmcomp=E,1µmcomp=E,41µm comp=E,95nm,0.9s
CM04 Chiang Mai Arr 5.93 246 P Pn 05 16 17.5 -1.2
comp=E,1.7nmcomp=E,1.7nmcomp=E,1µmcomp=E,24µm comp=E,125nm,1.0s
CM31 Chiang Mai Arr 5.94 247 Pn Pn 05 16 17.7 -1.0
CMAR Chiang Mai Arr 5.94 247 Pn Pn 05 16 17.7 -1.1
comp=E,2.9nm,0.3s,baz=61,slow=12,SNR=29
CMAR Pg Pg 05 16 38.5 -6.0
comp=E,4.4nm,0.3s,baz=63,slow=17,SNR=11
CMAR Lg Lg 05 18 00.9
comp=E,7.1nm,0.3s,baz=74,slow=31,SNR=7.9 comp=E,5.2nm,0.3s
CMAR Chiang Mai Arr 5.94 247 Pn Pn 05 16 16.9 -1.8
CM01 Chiang Mai Arr 5.94 247 P Pn 05 16 17.7 -1.1
comp=E,2.6nmcomp=E,2.2nmcomp=E,1µmcomp=E,31µm comp=E,120nm,0.8s
CM02 Chiang Mai Arr 5.94 247 P Pn 05 16 17.7 -1.2
comp=E,2.0nmcomp=E,2.1nmcomp=E,50nmcomp=E,1µm comp=E,36µmcomp=E,108nm,1.2s
CM05 Chiang Mai Arr 5.96 247 P Pn 05 16 17.6 -1.5
comp=E,796nmcomp=E,30µmcomp=E,67nm,0.7s
PZH PanZhiHua 6.22 335 Pn Pn 05 16 21.3 -1.5
PZH Pg Pb 05 16 41.5 +2.2
PZH Sg Sb 05 18 00.5 +6.6
PZH SMN
comp=E,270nm,1.4s
PZH SME
comp=E,440nm,1.3s
GULI GuiLin 6.82 49 Pn Pn 05 16 26.5 -4.4
GULI Sn Sn 05 17 51.0 +2.4
GULI Sg Sg 05 18 22.8 -6.9
GULI SMN
comp=E,2µm,1.2s
GULI SME
comp=E,2µm,1.3s
TNCH TengChong 7.04 307 Pn Pn 05 16 32.8 -1.3
TNCH Sn Sn 05 17 54.0 -0.3
TNCH Sg Sg 05 18 39.5 +2.7
TNCH SMN
comp=E,2µm,1.0s
TNCH SME
comp=E,820nm,0.8s
TNCH L L
comp=E,20µm,5.6s
TNCH L L
comp=E,8µm,6.0s
UTHA Uthaitani 7.27 224 P Pn 05 16 36.9 -0.2
GZH2 Guangzhou 8.74 70 P Pn 05 16 54.5 -2.7
GZH2 S Sn 05 18 35.5 -0.3
GZH2 SMN
comp=E,2µm,0.9s
GZH2 SME
comp=E,1µm,0.8s
DLV Lat 9.59 157 P Pn 05 17 07.6 -1.5
CD2 Chengdu 10.03 355 P Pn 05 17 14.3 -0.7
CD2 S Sn 05 19 06.0 -1.6
CD2 pmax pmax
comp=E,30nm,0.3s
CD2 pmax pmax
comp=E,370nm,3.6s
CD2 L L
comp=E,8µm,4.7s
CD2 L L
comp=E,24µm,6.6s
CD2 L L
comp=E,12µm,8.7s
LKP Lekhapani 10.33 310 *i* x x 05 20 18.7
CNSH ChangSha 10.44 44 P Pn 05 17 18.5 -2.0
CNSH S Sn 05 19 17.0 -0.6
CNSH L L
comp=E,9µm,3.9s
CNSH L L
comp=E,14µm,3.7s
CNSH L L
comp=E,9µm,7.6s
IMP Imphal 10.67 294 *e* P Pn 05 17 26.3 +2.5
IMP *i* x x 05 21 26.7
MOKO MOKOCHONG 10.80 302 *e* P Pn 05 17 29.0 +3.4
MOKO *i* x x 05 20 58.1
KOHI KOHIMA 10.86 298 *ex* x 05 21 07.9
AZL Aizawl 11.48 287 *i* x x 05 21 15.3
AZL *i* x x 05 21 41.9
SILR SILCHAR 11.64 292 *i* x x 05 22 17.5
BRDH Bariadhala 12.27 281 LR LR 05 24 05.0
comp=E,1µm,18.8s,baz=142,slow=45
BELO BELONIA 12.52 283 *ex* x 05 21 15.3
BELO *ex* x 05 22 37.0

SHL Shillong 12.68 294 Pn Pn 05 17 51.0 -0.3
SHL Shillong 12.68 294 *e* P Pn 05 17 51.2 -0.2
SHL IAmb IAmb 05 18 01.2
comp=Z,9.9nm,0.3s
SHL *ex* x 05 22 16.5
SHL *i* x x 05 22 41.2
WHN Wuhan 12.97 40 P Pn 05 17 53.8 -1.3
WHN sP 05 18 00.8
WHN S Sn 05 20 16.0 -3.5
WHN L L
comp=Z,72µm,11.2s
WHN L L
comp=Z,40µm,5.0s
WHN L L
comp=Z,26µm,6.3s
GUWA GUWAHATI 13.05 296 *i* x x 05 22 27.3
XAN Xi'an 13.64 15 ⇑ P Pn 05 18 04.8 +0.5
XAN pP P 05 18 09.5 -3.7
XAN S Sn 05 20 38.3 +2.4
XAN pmax pmax
comp=Z,37nm,0.8s
XAN pmax pmax
comp=Z,310nm,11.5s
XAN L L
comp=Z,19µm,9.6s
XAN L L
comp=Z,55µm,10.7s
XAN L L
comp=Z,13µm,11.7s
TPUB Ta-pu 14.96 78 P Pn 05 18 21.4 -1.0
LZDM Lanzhou Array 15.05 357 Pn Pn 05 18 21.1 -2.7
baz=177,slow=13
LZDM LR LR 05 24 47.4
comp=Z,2µm,19.4s,baz=185,slow=40 comp=Z,9.4nm,0.4s
LSA Lhasa 15.07 308 Pn Pn 05 18 22.8 -1.5
LZH Lanzhou 15.18 357 *e* P Pn 05 18 22.0 -3.3
LZH sP P 05 18 30.0 -0.5
LZH S Sn 05 21 18.8 +5.2
LZH pmax pmax
comp=Z,40nm,1.0s
LZH pmax pmax
comp=Z,110nm,5.6s
LZH L L
comp=Z,4µm,10.6s
LZH L L
comp=Z,12µm,11.8s
LZH L L
comp=Z,5µm,12.9s
LYN LuoYang 15.25 25 P Pn 05 18 26.3 +0.1
LYN S Sn 05 21 17.3 +2.1
LYN SS S 05 21 32.3 +0.3
LYN pmax pmax
comp=Z,41nm,0.6s
LYN pmax pmax
comp=Z,130nm,8.3s
LYN L L
comp=Z,17µm,11.2s
LYN L L
comp=Z,32µm,8.9s
LYN L L
comp=Z,8µm,7.9s
SSLB Suanglung 15.31 76 P Pn 05 18 27.0 -0.1
TWG Pinlang 15.32 80 Pn 05 18 26.6 -0.6
TWG IAmb IAmb 05 18 35.9
comp=Z,32nm,1.0s
TWG Pinlang 15.32 80 P Pn 05 18 28.2 +1.0
YULB Yu-li 15.58 78 Pn 05 18 28.5 -2.1
YULB Yu-li 15.58 78 P Pn 05 18 31.4 +0.8
YHNB Yeheng 15.83 73 Pn 05 18 35.5 +1.6
YHNB Yeheng 15.83 73 P Pn 05 18 36.3 +2.4
KULM Kulim 15.98 195 P P 05 18 43.1 +3.7
KULM Kulim 15.98 195 P Pn 05 18 35.5 -0.3
NJ2 Nanjing 16.85 46 ⇓ P P 05 18 49.8 +1.0
NJ2 pP pP 05 18 52.0 +0.2
NJ2 S Sn 05 21 54.8 +0.8
NJ2 pmax pmax
comp=Z,56nm,0.9s
NJ2 L L
comp=Z,26µm,9.0s
NJ2 L L
comp=Z,35µm,9.6s
NJ2 L L
comp=Z,15µm,9.7s
TGY Tagaytay City 16.88 111 Pn Pn 05 18 45.4 -1.9
comp=Z,61nm,0.3s,baz=102,slow=11,SNR=1.2
TGY LR LR 05 25 31.1
comp=Z,2µm,18.3s,baz=276,slow=38
GOMU GeErMu 17.55 333 P Pn 05 18 56.3 +0.4
GOMU pP pP 05 18 59.8 -0.1
GOMU sP sP 05 19 03.3 +2.0
GOMU S Sn 05 22 09.8 -1.7
GOMU pmax pmax
comp=Z,9.0nm,0.6s
GOMU L L
comp=Z,3µm,13.5s
GOMU L L
comp=Z,5µm,13.7s
GOMU L L
comp=Z,2µm,13.7s
BOK Bokaro 17.65 283 *e* P Pn 05 18 56.7 -0.1
BOK IAmb IAmb 05 19 04.2
comp=Z,37nm,1.1s
EVN Everest 17.74 297 Pn Pn 05 18 56.3 -2.3
EVN IAmb IAmb 05 19 01.9
comp=Z,44nm,0.8s
EVN Everest 17.74 297 P P 05 18 59.9 +0.5
SSE Sheshan 17.96 52 P Pn 05 19 00.3 -0.3
SSE S Sn 05 22 21.0 +0.1
SSE pmax pmax
comp=Z,10.0nm,0.8s
SSE L L
comp=Z,8µm,8.2s
SSE L L
comp=Z,4µm,8.7s
TIY Taiyuan 18.07 20 P P 05 19 03.0 +0.6
TIY L L
comp=Z,5µm,11.4s
TIY L L
comp=Z,12µm,12.3s
TIY L L
comp=Z,3µm,7.6s
KCSI Kotacane, Aceh 18.52 202 P Pn 05 19 10.4 +2.8
HNS HongShan 18.62 26 ⇓ P P 05 19 08.5 +0.1
HNS pmax pmax
comp=Z,13nm,1.3s
HNS L L
comp=Z,7µm,11.2s
HNS L L
comp=Z,10µm,11.6s
HNS L L
comp=Z,3µm,7.9s
TIA Tai'an 18.75 33 P P 05 19 10.0 +0.2
TIA pmax pmax
comp=Z,33nm,0.8s
TIA L L
comp=Z,5µm,14.3s
TIA L L
comp=Z,10µm,13.4s
TIA L L
comp=Z,4µm,9.8s
PSI Prapat 18.83 198 P Pn 05 19 15.2 +3.8
RPSI Rantau Prapat 18.93 198 Pn 05 19 12.6 +0.1
RPSI IAmb IAmb 05 19 21.9
comp=Z,103nm,1.8s
GTA2 Gaotai 19.03 348 P P 05 19 11.3 -1.7
GTA2 pmax pmax
comp=Z,18nm,1.1s
GTA2 pmax pmax
comp=Z,370nm,5.7s
GTA2 L L
comp=Z,1µm,13.6s
GTA2 L L
comp=Z,3µm,14.3s
GTA2 L L
comp=Z,3µm,18.1s
RAGD RAYAGADA 20.02 269 *e* P Pn 05 19 25.8 +0.1
RAGD IAmb IAmb 05 19 28.6
comp=Z,47nm,1.2s
SBSI Sibolga 20.03 197 P Pn 05 19 26.2 +0.5
BTO2 Baotou 20.29 11 *e* P P 05 19 27.8 +1.0
BTO2 pP sP 05 19 32.0 +0.9
BTO2 sP pP 05 19 34.8 +5.0
BTO2 PP PnPn 05 19 48.5 +4.9
BTO2 S S 05 23 09.0 -5.4

BTO2 pmax pmax
comp=Z,42nm,1.4s
BTO2 pmax pmax
comp=Z,720nm,8.4s
BTO2 L L
comp=Z,10µm,7.5s
BTO2 L L
comp=Z,30µm,13.5s
BTO2 L L
comp=Z,13µm,9.5s
VIS Vishakhapatnam 20.41 265 *e* P Pn 05 19 29.3 -1.0
VIS IAmb IAmb 05 19 33.3
comp=Z,26nm,0.6s
MYLDM Lahad Datu 20.56 137 P Pn 05 19 33.1 +1.1
MYLDM Lahad Datu 20.56 137 P Pn 05 19 33.8 +1.8
comp=Z,56nm,1.2s
MYLDM Lahad Datu 20.56 137 P Pn 05 19 34.0 +2.0
BKNI Bangkinang 20.73 190 P Pn 05 19 33.0 -1.0
BKNI Bangkinang 20.73 190 P Pn 05 19 34.2 +0.2
HHC Hu-ho-hao-te 20.75 15 *e* P P 05 19 33.3 +1.6
HHC pP sP 05 19 37.0 +0.9
HHC S S 05 23 19.0 -4.5
HHC sS sS 05 23 25.0 -3.4
HHC pmax pmax
comp=Z,31nm,1.2s
HHC pmax pmax
comp=Z,170nm,3.8s
HHC L L
comp=Z,3µm,12.4s
HHC L L
comp=Z,13µm,12.9s
HHC L L
comp=Z,3µm,12.3s
BLSP Bilaspur 21.00 277 *e* P P 05 19 34.5 +0.1
BLSP IAmb IAmb 05 19 36.9
comp=Z,43nm,0.8s
BJI2 Beijing 21.45 25 P P 05 19 40.3 +1.1
BJI2 pmax pmax
comp=Z,10.0nm,1.2s
BJI2 pmax pmax
comp=Z,48nm,3.1s
BJI2 L L
comp=Z,1µm,10.0s
BJI2 L L
comp=Z,740nm,9.6s
BJI2 L L
comp=Z,1µm,12.4s
PPI Padang Panjang 21.61 192 P P 05 19 44.3 +3.2
comp=Z,56nm,1.8s
SDSI Sungai Dareh 21.91 189 P P 05 19 46.7 +2.5
comp=Z,55nm,1.8s
PDSI Padang 22.05 191 P P 05 19 47.6 +1.8
comp=Z,3µmcomp=Z,48nm,1.3s
JOW Kunigami 22.34 70 LR LR 05 28 46.1
comp=Z,792nm,19.2s,baz=201,slow=38
DL2 Dalian 23.13 35 P P 05 19 57.5 +0.4
DL2 S S 05 24 08.5 0.0
DL2 pmax pmax
comp=Z,33nm,0.9s
DL2 pmax pmax
comp=Z,150nm,6.9s
DL2 L L
comp=Z,4µm,12.2s
DL2 L L
comp=Z,8µm,12.9s
DL2 L L
comp=Z,4µm,10.1s
PTH Pithoragarh 23.76 296 *e* P P 05 20 04.0 +0.3
PTH IAmb IAmb 05 20 05.5
comp=Z,38nm,1.1s
LGTI Lohaghat 23.81 296 *e* P P 05 20 04.3 +0.1
NGP Nagpur 23.94 275 *e* P P 05 20 06.8 +1.5
DAV Davao City (W) 24.42 121 LR LR 05 28 48.0
comp=Z,784nm,21.7s,baz=279,slow=34
XLT XiLinHaoTe 24.84 20 *e* P P 05 20 13.8 +0.4
XLT S S 05 24 33.3 -2.9
XLT sS sS 05 24 44.8 +3.3
XLT PcS PcS 05 27 34.3 +4.8
XLT pmax pmax
comp=Z,21nm,1.0s
XLT L L
comp=Z,11µm,10.4s
XLT L L
comp=Z,3µm,13.0s
HYB Hyderabad 24.93 267 *e* P P 05 20 12.8 -1.6
HYB *e* S S 05 24 37.3 -0.8
TOLI2 Tolitoli 25.15 139 P 05 20 17.9 +1.6
TOLI2 Tolitoli 25.15 139 P P 05 20 18.0 +1.7
MDSI Maura Dua 25.21 181 P P 05 20 18.6 +1.8
comp=Z,70nm,1.5s
BHPL Bhopal 25.38 280 *e* P P 05 20 19.1 +0.7
BHPL IAmb IAmb 05 20 29.7
comp=Z,10.0nm,0.7s
BHPL *i* x x 05 21 36.0
HNLY HANLEY 25.77 303 *e* P P 05 20 22.2 -0.2
HNLY IAmb IAmb 05 20 26.5
comp=Z,13nm,0.7s
HNLY *i* x x 05 29 33.1
KSAR Wonju Array Be 26.02 46 P P 05 20 22.7 -1.3
KS19 Wonju Array Si 26.04 45 P P 05 20 23.4 -0.7
KS19 IAmb IAmb 05 20 44.2
comp=Z,37nm,1.6s
KSRS Korea Array 26.05 46 P P 05 20 22.4 -1.8
comp=Z,1.8nm,0.8s,baz=239,slow=11,SNR=8.1
KSRS LR LR 05 31 04.1
comp=Z,947nm,20.2s,baz=225,slow=38 comp=Z,1.8nm,0.8s
JNU Nakatsue 26.24 57 LR LR 05 31 47.2
comp=Z,1µm,19.4s,baz=246,slow=39
KUDL Kundal 26.63 291 *e* P P 05 20 28.4 -1.2
SMLA Simla 26.71 298 *e* P P 05 20 30.0 -0.3
PALK Pallekele 26.87 243 LR LR 05 31 28.6
comp=Z,526nm,19.6s,baz=54,slow=37
WMQ Urumqi 26.91 332 *e* P P 05 20 34.8 +2.7
WMQ S S 05 25 12.0 +3.0
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ pmax pmax
comp=Z,61nm,4.1s
WMQ L L
comp=Z,1µm,24.2s
WMQ L L
comp=Z,2µm,19.3s
WMQ L L
comp=Z,910nm,23.7s
SONM Songino Array 26.93 3 P P 05 20 32.0 -0.3
comp=Z,10nm,1.0s,baz=186,slow=9.6,SNR=25
SONM LR LR 05 32 31.7
comp=Z,474nm,21.2s,baz=182,slow=40 comp=Z,10nm,1.0s
SONM Songino Array 26.93 3 P 05 20 32.5 +0.3
ULN Ulaanbaatar 26.99 3 P P 05 20 32.6 -0.3
ULN IAmb IAmb 05 20 35.5
comp=Z,14nm,1.0s
ULN Ulaanbaatar 26.99 3 P P 05 20 33.3 +0.4
LEM Lembang 27.68 174 LR LR 05 32 24.4
comp=Z,1µm,19.9s,baz=269,slow=38
AJM Ajmer 28.06 287 *i* x x 05 31 33.2
THN Thein Dam 28.23 300 *e* P P 05 20 44.4 +0.4
THN IAmb IAmb 05 20 45.8
comp=Z,40nm,0.7s
CN2 Changchun 28.65 32 P P 05 20 45.8 -1.8
CN2 pP pP 05 20 49.5 -1.4
CN2 S S 05 25 32.5 -3.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 L L
comp=Z,2µm,16.0s
CN2 L L
comp=Z,2µm,16.0s
CN2 L L
comp=Z,2µm,10.0s
SPSI Sidrap Palu 28.77 147 P P 05 20 51.9 +3.0
comp=Z,8µmcomp=Z,45nm,1.7s
KAPI Kappang 29.67 148 LR LR 05 35 51.5
comp=Z,308nm,18.3s,baz=303,slow=43
TLY Talaya 30.76 359 LR LR 05 35 21.7
comp=Z,273nm,18.9s,baz=164,slow=40
TARG Taragay, Kyrgy 30.78 319 P P 05 21 09.2 +2.3
KSH2 Kashi 30.92 313 P P 05 21 11.3 +3.4
KSH2 sP sP 05 21 18.3 +5.7
KSH2 pmax pmax
comp=Z,6.0nm,0.8s
HILR Hailar Array B 31.03 19 P P 05 21 07.7 -0.9
comp=Z,2.2nm,0.6s,baz=188,slow=8.3,SNR=1.7
HILR LR LR 05 34 47.3

comp=Z,811nm,21.5s,baz=200,slow=39
comp=Z,2.2nm,0.6s
KDJ Kajisay 31.39 319 P **P** **05 21 12.0 0.0**
KDJ IAmb IAmb 05 21 15.8
comp=Z,18nm,0.8s
KDJ Kajisay 31.39 319 P **P** **05 21 14.5 +2.5**
MK31 Makanchi Array 31.64 330 P **P** **05 21 13.2 -0.9**
MK31 IAmb IAmb 05 21 17.2
comp=Z,23nm,1.2s
MKAR Makanchi Array 31.64 330 P **P** **05 21 14.7 +0.6**
comp=Z,21nm,1.1s,baz=134,slow=8.7,SNR=46
MKAR PcP **PcP** **05 24 05.3 -0.7**
comp=Z,1.4nm,0.6s,baz=106,slow=3.3,SNR=3.3
MKAR LR LR 05 35 36.7
comp=Z,705nm,18.3s,baz=138,slow=39
comp=Z,21nm,1.1s
MKAR Makanchi Array 31.64 330 P **P** **05 21 13.3 -0.7**
MAKZ Makanchi 31.80 330 P **P** **05 21 14.3 -1.1**
MAKZ IAmb IAmb 05 21 21.6
comp=Z,23nm,1.5s
MAKZ Makanchi 31.80 330 P **P** **05 21 16.6 +1.2**
DBNI Kabupaten Domp 32.11 154 P **P** **05 21 21.1 +2.7**
comp=Z,36nm,1.6s
PLAI Plampang 32.19 155 P **P** **05 21 21.9 +2.8**
PLAI Plampang 32.19 155 P **P** **05 21 22.3 +3.2**
BOOM Boomskoye usch 32.35 318 P **P** **05 21 18.3 -2.2**
USA0B Ussuriysk Arra 32.45 38 P **P** **05 21 21.9 +0.8**
USA0B IAmb IAmb 05 21 24.0
comp=Z,6.8nm,0.7s
USRK Ussuriysk Ar. 32.45 38 P **P** **05 21 19.8 -1.3**
comp=Z,3.4nm,0.7s,baz=228,slow=15,SNR=4.4
USRK LR LR 05 34 09.4
comp=Z,1μm,18.6s,baz=229,slow=36
comp=Z,3.4nm,0.7s
USRK Ussuriysk Ar. 32.45 38 P **P** **05 21 19.6 -1.5**
TKM2 Tokmak 2 32.80 319 P **P** **05 21 26.6 +2.1**
SNR=5.5
MANEM Manem 33.05 307 IAmb IAmb 05 21 30.1
comp=Z,52nm,0.7s
KBK Karagaybulak 33.06 318 P **P** **05 21 29.1 +2.3**
SNR=6.7
MJAR Matsushiro Arr 33.07 55 P **P** **05 21 25.2 -1.5**
comp=Z,2.7nm,0.7s,baz=253,slow=9.0,SNR=7.5
MJAR LR LR 05 35 42.2
comp=Z,774nm,18.1s,baz=248,slow=38
comp=Z,2.7nm,0.7s
MJAR Matsushiro Arr 33.07 55 P **P** **05 21 25.5 -1.3**
AAK Ala-Archa 33.34 318 P **P** **05 21 29.5 +0.4**
comp=Z,12nm,0.8s,baz=137,slow=5.8,SNR=14
AAK LR LR 05 35 52.5
comp=Z,845nm,18.7s,baz=94,slow=38
comp=Z,12nm,0.8s
AAK Ala-Archa 33.34 318 P **P** **05 21 32.2 +3.0**
SNR=6.6
AAK Ala-Archa 33.34 318 P **P** **05 21 28.2 -1.0**
AAK IAmb IAmb 05 21 32.6
comp=Z,13nm,0.8s
AAK Ala-Archa 33.34 318 P **P** **05 21 31.5 +2.3**
JHJ Hachijo jima 2 33.40 61 LR LR 05 36 14.2
comp=Z,446nm,18.2s,baz=152,slow=39
USP Ospenovka 33.66 318 P **P** **05 21 33.8 +1.9**
SNR=7.9
ARSB Arslanbob 33.68 314 IAmb IAmb 05 21 58.3
comp=Z,13nm,1.3s
SIJI Sorong 33.80 127 LR LR 05 35 11.6
comp=Z,228nm,21.4s,baz=323,slow=36
EKS2 Erkin-Say 33.81 317 P **P** **05 21 35.7 +2.5**
SNR=8.9
MMRI Maumere 34.02 148 P **P** **05 21 35.6 +0.5**
KBL Kabul 34.19 301 P **P** **05 21 35.8 -1.0**
KBL Kabul 34.19 301 P **P** **05 21 37.6 +0.9**
HEH HeiHe 34.37 26 *eP* **P** **05 21 35.5 -2.3**
HEH pmax pmax
comp=Z,8.0nm,0.7s
HEH L L
comp=Z,1μm,16.6s
HEH L L
comp=Z,2μm,15.1s
HEH L L
comp=Z,1μm,14.0s
GAR Garm 34.58 309 P **P** **05 21 40.7 +0.8**
BTK Batken 34.62 311 IAmb IAmb 05 22 21.8
comp=Z,36nm,1.7s
JCJ Chichijima 34.71 72 LR LR 05 35 01.1
comp=Z,261nm,21.8s,baz=118,slow=35
CHGR Chuyangaron 35.30 308 P **P** **05 21 46.1 -0.1**
SHAA Shahritus 35.73 306 P **P** **05 21 48.5 -1.2**
SHAA IAmb IAmb 05 21 51.5
comp=Z,64nm,0.7s
BATI Baumata 36.08 147 LR LR 05 38 36.5
comp=Z,700nm,19.5s,baz=302,slow=40
KKAR Karatay Array 36.13 316 P **P** **05 21 53.1 0.0**
KURBB Kurchatov Arra 36.13 332 P **P** **05 21 52.8 -0.1**
comp=Z,11nm,0.8s,baz=138,slow=9.0,SNR=47
KURBB LR LR 05 38 05.0
comp=Z,2μm,21.5s,baz=140,slow=39
comp=Z,11nm,0.8s
KURK Kurchatov 36.16 332 **P** **05 21 52.8 -0.4**
KURK Kurchatov 36.16 332 P **P** **05 21 53.4 +0.2**
ZAA0 Zalesovo Array 36.34 340 IAmb IAmb 05 21 57.0
comp=Z,30nm,1.1s
ZALV Zalesovo Beam 36.34 340 P **P** **05 21 54.9 +0.3**
comp=Z,9.0nm,0.6s,baz=142,slow=7.2,SNR=42
ZALV LR LR 05 37 50.9
comp=Z,1μm,21.1s,baz=144,slow=38
comp=Z,9.0nm,0.6s
ZALV Zalesovo Beam 36.34 340 **P** **05 21 54.7 0.0**
GUMO Guam 38.96 94 LR LR 05 36 30.2
comp=Z,360nm,20.8s,baz=292,slow=34
ASAJ Asahikawa 38.99 45 LR LR 05 39 12.2
comp=Z,473nm,19.4s,baz=250,slow=38
JKA Kamikawa-asahi 38.99 45 P **P** **05 22 18.4 +1.1**
JKA IAmb IAmb 05 22 23.6
comp=Z,29nm,1.3s
BVAR Borovoye Array 41.51 329 P **P** **05 22 38.4 +0.4**
comp=Z,5.8nm,0.5s,baz=127,slow=9.4,SNR=24
BVAR PcP **PcP** **05 24 35.4 0.0**
comp=Z,2.1nm,0.5s,baz=150,slow=1.2,SNR=3.7
comp=Z,5.8nm,0.5s
JAY Jayapura 42.24 119 LR LR 05 38 03.1
comp=Z,202nm,21.8s,baz=330,slow=33
FITZ Fitzroy Crossi 43.83 151 LR LR 05 43 58.1
comp=Z,198nm,19.4s,baz=325,slow=40
YAK Yakutsk 44.60 16 LR LR 05 42 13.4
comp=Z,902nm,18.1s,baz=214,slow=37
AB31 Akbulak array 45.36 320 P **P** **05 23 08.5 -0.7**
AB31 IAmb IAmb 05 23 11.4
comp=Z,5.0nm,0.7s
ABKAR Akbulak array 45.36 320 P **P** **05 23 08.8 -0.4**
AKTO Aktyubinsk 46.95 320 P **P** **05 23 22.5 +0.8**
comp=Z,2.0nm,0.5s,baz=96,slow=11,SNR=7.2
AKTO LR LR 05 45 19.4
comp=Z,572nm,20.4s,baz=127,slow=39
comp=Z,2.0nm,0.5s
ARTI Arti 49.19 328 P **P** **05 23 38.9 0.0**
comp=Z,6.1nm,0.6s,baz=114,slow=2.4,SNR=11
ARTI LR LR 05 46 03.9
comp=Z,631nm,19.6s,baz=118,slow=38
comp=Z,6.1nm,0.6s
ARTI Arti 49.19 328 P **P** **05 23 38.6 -0.3**
ARTI IAmb IAmb 05 23 41.8
comp=Z,10nm,0.7s
NRIK Noril'sk 49.59 352 P **P** **05 23 41.5 -0.2**
comp=Z,13nm,0.8s,baz=130,slow=7.1,SNR=13
NRIK LR LR 05 46 44.0
comp=Z,286nm,20.5s,baz=159,slow=39
comp=Z,13nm,0.8s
NRIK Noril'sk 49.59 352 **P** **05 23 42.3 +0.6**
NRIK IAmb IAmb 05 23 43.9
comp=Z,15nm,0.9s
WRA Warramunga Arr 49.87 143 P **P** **05 23 44.0 -0.5**
comp=Z,8.4nm,0.9s,baz=329,slow=8.3,SNR=20
comp=Z,8.4nm,0.9s
WRA Warramunga Arr 49.87 143 P **P** **05 23 43.8 -0.7**
WR8 Warramunga Arr 49.97 142 P **P** **05 23 44.4 -0.9**
WR8 IAmb IAmb 05 23 48.4
comp=Z,14nm,0.9s
MA2 Magadan 50.57 28 P **P** **05 23 48.5 -0.8**
comp=Z,40nm,1.8s
PETK Petropavlovsk- 51.54 38 LR LR 05 46 06.2
comp=Z,189nm,18.8s,baz=247,slow=36
AS31 Alice Springs 52.62 146 P **P** **05 24 05.8 +0.6**
ASAR Alice Springs 52.62 146 P **P** **05 24 04.8 -0.4**
comp=Z,4.7nm,0.8s,baz=331,slow=6.8,SNR=21
ASAR LR LR 05 48 13.8
comp=Z,109nm,18.7s,baz=302,slow=38
comp=Z,4.7nm,0.8s
ASAR Alice Springs 52.62 146 P **P** **05 24 05.8 +0.6**
TIXI Tiksi 52.68 9 LR LR 05 48 46.2
comp=Z,490nm,21.9s,baz=230,slow=39
KRVT Keravat (AS076 52.72 113 LR LR 05 43 59.1
comp=Z,79nm,21.0s,baz=201,slow=33
BELG Belogornoye 53.74 320 LR LR 05 49 34.6
comp=Z,439nm,19.5s,baz=94,slow=39
GNI Garni 54.10 305 P **P** **05 24 16.0 -0.1**
comp=Z,11nm,0.6s
KIRV Kirov 54.50 328 P **P** **05 24 19.2 +0.7**
comp=Z,7.1nm,0.5s,baz=153,slow=2.3,SNR=4.2
KIRV LR LR 05 49 19.4
comp=Z,595nm,19.6s,baz=112,slow=38
comp=Z,7.1nm,0.5s
RAYN Ar Rayn 54.54 285 P **P** **05 24 18.1 -1.3**
RAYN IAmb IAmb 05 24 19.7
comp=Z,7.2nm,0.9s
RAYN Ar Rayn 54.54 285 P **P** **05 24 19.4 -0.1**
NWAO Narrogin (SRO) 54.82 167 LR LR 05 47 22.9
comp=Z,288nm,21.6s,baz=319,slow=36
KBZ Khabaz 55.65 309 P **P** **05 24 26.4 -0.6**
comp=Z,1.0nm,0.5s,baz=37,slow=9.5,SNR=4.2
KBZ LR LR 05 51 21.7
comp=Z,269nm,18.5s,baz=86,slow=39
comp=Z,1.0nm,0.5s
KIV Kislovodsk 55.81 310 P **P** **05 24 28.2 -0.1**
comp=Z,17nm,0.8s
OBN Obninsk 60.66 322 LR LR 05 53 20.4
comp=Z,437nm,18.1s,baz=146,slow=38
ASF Jabal al Asfar 60.84 296 LR LR 05 53 25.6
comp=Z,259nm,21.6s,baz=31,slow=38
SHEM Shemya Is, Ala 61.23 40 LR LR 05 51 17.7
comp=Z,128nm,20.9s,baz=302,slow=36
HNR Honiara 62.07 113 LR LR 05 49 31.8
comp=Z,6.2nm,21.1s,baz=21,slow=34
CY604 RAF Akrotiri, 62.54 299 P **P** **05 25 13.9 -0.7**
CY604 IAmb IAmb 05 26 00.2
comp=Z,11nm,1.1s
BRTR Keskin Array B 62.64 305 P **P** **05 25 14.7 -1.1**
comp=Z,1.0nm,0.8s,baz=72,slow=4.7,SNR=2.9
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 62.64 305 P **P** **05 25 14.1 -1.7**
EIL Elat 62.86 293 LR LR 05 57 41.5
comp=Z,172nm,18.2s,baz=89,slow=41
STKA Stephens Creek 63.25 145 P **P** **05 25 18.5 -1.1**
comp=Z,7.4nm,0.7s,baz=322,slow=8.6,SNR=8.5
STKA LR LR 05 57 14.1
comp=Z,174nm,18.1s,baz=317,slow=40
comp=Z,7.4nm,0.7s
AK10 Malin Array Si 65.00 317 P **P** **05 25 30.1 -0.8**
AKASG Malin Array Be 65.01 317 P **P** **05 25 29.7 -1.3**
comp=Z,1.5nm,0.7s,baz=78,slow=6.2,SNR=5.9
AKASG LR LR 05 56 27.2
comp=Z,448nm,19.5s,baz=86,slow=38
comp=Z,1.5nm,0.7s
AKASG Malin Array Be 65.01 317 P **P** **05 25 31.0 +0.1**
AKBB Malin Array Si 65.01 317 P **P** **05 25 30.1 -0.8**
KIEV Kiev 65.02 317 P **P** **05 25 30.1 -0.9**
comp=Z,26nm,1.2s
AK04 Malin Array Si 65.04 317 P **P** **05 25 30.2 -1.0**
MI28 Mi28,Pidlybu 65.98 318 P **P** **05 25 37.0 -0.2**
LUBAR Lubar, Ukraine 65.99 316 P **P** **05 25 36.4 -1.0**
FINES FINESS Array B 66.47 329 P **P** **05 25 40.1 0.0**
comp=Z,1.7nm,0.7s,baz=108,slow=4.2,SNR=6.6
FINES LR LR 05 57 11.5
comp=Z,462nm,18.1s,baz=94,slow=38
comp=Z,1.7nm,0.7s
ARCES ARCESS Array B 66.84 338 P **P** **05 25 42.4 -0.1**
comp=Z,3.2nm,0.8s,baz=62,slow=8.4,SNR=7.7
ARCES LR LR 05 57 22.7
comp=Z,563nm,18.1s,baz=91,slow=38
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 66.84 338 P **P** **05 25 43.1 +0.7**
ARCES IAmb IAmb 05 25 49.5
comp=Z,12nm,1.4s
VRI Vrincioaia 67.07 312 P **P** **05 25 44.3 -0.1**
comp=Z,7.7nm,0.8s
VRI Vrincioaia 67.07 312 P **P** **05 25 43.9 -0.5**
MLR Muntele Rosu 67.67 312 LR LR 05 59 48.0
comp=Z,293nm,18.5s,baz=64,slow=40
MLR Muntele Rosu 67.67 312 P **P** **05 25 48.3 0.0**
comp=Z,6.5nm,1.5s
OPO Ambohidratompo 68.64 239 LR LR 05 52 36.1
comp=Z,31nm,20.9s,baz=324,slow=33
KWP Kalwaria Pacla 69.28 316 P **P** **05 25 58.6 +0.4**
comp=Z,7.6nm,1.1s
SPITS Spitsbergen Ar 69.38 347 P **P** **05 25 58.6 +0.4**
comp=Z,6.2nm,0.9s,baz=177,slow=18,SNR=3.8
SPITS LR LR 06 01 07.1
comp=Z,372nm,18.4s,baz=90,slow=40
comp=Z,6.2nm,0.9s
IDI Anoyia 70.18 301 LR LR 06 00 24.4
comp=Z,133nm,20.5s,baz=112,slow=39
KBS Kingsbay 70.19 348 *i* P **P** **05 26 06.8 +3.6**
HFS Hagfors 72.64 328 P **P** **05 26 18.5 +0.1**
comp=Z,1.9nm,0.6s,baz=222,slow=2.0,SNR=5.0
HFS LR LR 05 58 40.0
comp=Z,170nm,20.7s,baz=72,slow=36
comp=Z,1.9nm,0.6s
VRAC Vranov 73.26 317 LR LR 06 01 55.1
comp=Z,257nm,19.0s,baz=74,slow=38
NB2 NORSAR Subarra 73.64 330 P **P** **05 26 23.8 -0.5**
comp=Z,2.5nm,0.8s,baz=77,slow=6.2
NOA NORSAR Array B 73.64 330 P **P** **05 26 24.3 0.0**
comp=Z,1.3nm,0.6s,baz=77,slow=6.0,SNR=3.6
NOA LR LR 06 01 32.3
comp=Z,422nm,19.5s,baz=95,slow=38
comp=Z,1.3nm,0.6s
NOR Nord 73.81 352 *i* P **P** **05 26 25.9 +1.0**
NOR IAmb IAmb 05 26 27.2
comp=Z,5.5nm,0.9s
CONA Conrad Observa 74.05 316 *eP* **P** **05 26 26.0 -0.9**
comp=Z,1.8nm,1.0s
GERES GERESS Array B 75.22 317 P **P** **05 26 33.2 -0.6**
comp=Z,1.3nm,0.6s,baz=58,slow=5.0,SNR=11
comp=Z,1.3nm,0.6s
GERES GERESS Array B 75.22 317 P **P** **05 26 32.6 -1.2**
MBAR Mbarara 75.25 264 LR LR 05 57 56.0
comp=Z,120nm,21.6s,baz=66,slow=34
OBKA Obir 75.26 314 *eP* **P** **05 26 32.7 -1.3**
comp=Z,1.3nm,0.3s
J18K Innoko River 75.30 27 **P** **05 26 34.1 +0.2**
F21K Alatna River 75.42 23 IAmb IAmb 05 26 38.5
comp=Z,4.5nm,0.8s
M17K Holitna River 75.58 29 IAmb IAmb 05 26 45.0
comp=Z,8.4nm,0.9s
G21K Allakaket 75.64 24 IAmb IAmb 05 27 19.6
comp=Z,9.4nm,1.3s
KBA Koelnbreinsper 75.91 315 *i* P **P** **05 26 37.4 -0.5**
comp=Z,1.5nm,0.4s
LESA Schwarzleotal 76.25 316 *eP* **P** **05 26 39.7 -0.1**
comp=Z,4.0nm,0.6s
E23K Chandalar 76.51 22 P **P** **05 26 41.6 +0.8**
E23K IAmb IAmb 05 26 49.3
comp=Z,4.9nm,1.0s
G23K Bananza Creek 76.88 23 IAmb IAmb 05 26 47.1
comp=Z,5.1nm,0.9s
DAG Danmarks Havn 76.92 349 *i* P **P** **05 26 43.5 +0.7**
DAG IAmb IAmb 05 26 46.5
comp=Z,9.3nm,1.1s
WTTA Wattenberg 76.98 316 *i* P **P** **05 26 43.7 -0.3**
comp=Z,2.5nm,0.4s
SQTA Sankt Quirin 77.27 316 *eP* **P** **05 26 45.3 -0.2**
comp=Z,1.8nm,0.2s
MOTA Moosalm 77.30 316 *i* P **P** **05 26 45.5 -0.2**
comp=Z,6.1nm,0.6s
FETA Feichten 77.64 316 *i* P **P** **05 26 47.5 -0.1**
comp=Z,4.7nm,0.7s
JMIC Jan Mayen 77.65 342 LR LR 06 04 39.2
comp=Z,160nm,21.6s,baz=53,slow=38
C27K Jago River 77.80 19 IAmb IAmb 05 26 52.4
comp=Z,4.9nm,0.9s
VAE Valguarnera 77.83 306 LR LR 06 06 07.9
comp=Z,114nm,20.0s,baz=126,slow=40
FUORN Ofenpass-Fuorn 78.07 315 P **P** **05 26 49.2 -0.9**
FUORN IAmb IAmb 05 27 04.1
comp=Z,5.2nm,0.9s
DAVOX Davos/Dischmat 78.27 316 LR LR 06 04 42.4
comp=Z,345nm,21.3s,baz=65,slow=38
F26K Sheenjek River 78.55 21 IAmb IAmb 05 27 59.2
comp=Z,8.4nm,1.4s
RND Reindeer 78.63 26 IAmb IAmb 05 27 39.1
comp=Z,10nm,1.2s
ILAR Eielson Array 78.84 24 P **P** **05 26 52.1 -1.7**
comp=Z,0.5nm,0.6s,baz=292,slow=4.8,SNR=8.0
ILAR LR LR 06 05 43.5
comp=Z,162nm,19.6s,baz=295,slow=39
comp=Z,0.5nm,0.6s
ILAR Eielson Array 78.84 24 P **P** **05 26 52.7 -1.1**
OHAK Old Harbor 78.97 33 P **P** **05 26 53.3 -1.3**
KDAK Kodiak Island 79.11 32 LR LR 06 04 16.6
comp=Z,211nm,21.1s,baz=339,slow=38
E27K Coleen River 79.16 20 IAmb IAmb 05 27 04.4
comp=Z,12nm,1.6s
H27K Steamboat Moun 80.15 22 **P** **05 27 01.1 +0.2**
NEEM North Greenlan 80.85 355 *i* P **P** **05 27 05.8 +1.0**
NEEM IAmb IAmb 05 27 08.3
comp=Z,17nm,0.9s
I28M Miner Creek 81.11 22 IAmb IAmb 05 27 31.5
comp=Z,24nm,1.9s
INK Inuvik 81.62 19 LR LR 06 07 13.9
comp=Z,222nm,18.4s,baz=304,slow=39
KEST Kesra 82.25 305 LR LR 06 10 31.4
comp=Z,78nm,20.1s,baz=328,slow=41
I30M Mount Dempster 82.49 22 IAmb IAmb 05 27 24.6
comp=Z,8.6nm,1.4s
EKA Eskdalemuir Ar 82.71 327 P **P** **05 27 15.1 +0.5**
comp=Z,2.4nm,0.6s,baz=68,slow=5.0,SNR=10
EKA LR LR 06 08 19.9
comp=Z,229nm,18.1s,baz=32,slow=39
comp=Z,2.4nm,0.6s
LSZ Lusaka 83.24 251 LR LR 06 00 40.7
comp=Z,173nm,21.5s,baz=120,slow=33
SUMG Summit 83.55 350 P **P** **05 27 18.8 -0.4**
SUMG IAmb IAmb 05 27 21.8
comp=Z,7.3nm,0.9s
SUMG Summit 83.55 350 *i* P **P** **05 27 20.0 +0.8**
SUMG IAmb IAmb 05 27 22.0
comp=Z,7.6nm,0.9s
RES Resolute Bay 83.83 5 LR LR 06 08 03.2
comp=Z,159nm,19.0s,baz=346,slow=38
MATP Matopo 85.05 246 LR LR 06 05 33.6
comp=Z,72nm,18.2s,baz=53,slow=36
BORG Borgarnes 85.18 340 LR LR 06 07 38.4
comp=Z,121nm,19.0s,baz=55,slow=37
CEST Esterri de Car 85.51 314 P **P** **05 27 28.3 -1.0**
CEST IAmb IAmb 05 27 34.2
comp=Z,9.7nm,1.2s
RPZ Rata Peaks 88.39 138 LR LR 06 09 16.7
comp=Z,35nm,19.4s,baz=140,slow=37
AFI Afiamalu 88.98 105 LR LR 06 01 57.4
comp=Z,59nm,20.7s,baz=90,slow=32
DLBC Dease Lake 89.01 25 LR LR 06 10 07.2
comp=Z,196nm,18.2s,baz=287,slow=37
LBTB Lobatse 89.35 243 LR LR 06 07 47.8
comp=Z,179nm,18.1s,baz=76,slow=36
RTZ Ruatahuna 89.84 132 P **P** **05 27 49.6 -0.4**
ESDC Sonseca Array 90.33 313 P **P** **05 27 53.1 +0.7**
comp=Z,0.9nm,0.8s,baz=51,slow=4.0,SNR=7.2
ESDC LR LR 06 12 51.5
comp=Z,140nm,21.4s,baz=50,slow=38
comp=Z,0.9nm,0.8s
SFJD Kangerlussuaq 90.47 351 LR LR 06 13 21.4
comp=Z,305nm,18.8s,baz=18,slow=39
BOSA Boshof 91.04 240 LR LR 06 05 53.9
comp=Z,110nm,18.5s,baz=40,slow=34
MAW Mawson 93.45 195 P **P** **05 28 07.0 +1.1**
comp=Z,0.9nm,0.8s,baz=27,slow=9.0,SNR=1.9
MAW LR LR 06 06 04.3
comp=Z,168nm,19.0s,baz=23,slow=33
comp=Z,0.9nm,0.8s
BBB Bella Bella 93.95 29 LR LR 06 13 46.3
comp=Z,106nm,19.4s,baz=302,slow=38
MDT Midelt 93.98 307 LR LR 06 17 00.8
comp=Z,76nm,18.2s,baz=60,slow=40
TSUM Tsumeb 94.09 251 LR LR 06 09 43.7
comp=Z,176nm,18.3s,baz=134,slow=35
FRB Frobisher Bay 95.49 357 LR LR 06 13 10.0
comp=Z,217nm,18.8s,baz=345,slow=37
SUR Sutherland 96.00 238 LR LR 06 09 21.8
comp=Z,78nm,18.1s,baz=82,slow=34
TORD Torodi Ar. Bea 97.18 287 P Pdif 05 28 24.3 0.0
comp=Z,0.9nm,0.9s,baz=41,slow=3.9,SNR=3.8
TORD PP **PP** **05 32 19.6 -0.7**
comp=Z,0.7nm,0.7s,baz=54,slow=7.3,SNR=4.3
comp=Z,0.9nm,0.9s
TORD Torodi Ar. Bea 97.18 287 P **P** **05 28 22.7 -1.5**
TXAR Lajitas Array 123.08 30 PKP **PKPdf** **05 33 47.0 -1.3**
comp=Z,0.4nm,0.7s,baz=352,slow=2.4,SNR=1.5
TKL Tuckaleechee C 123.21 8 PKP **PKiKP** **05 33 49.9 +1.4**
comp=Z,1.3nm,0.7s,baz=37,slow=5.1,SNR=1.9
LPAZ La Paz 171.82 303 PKPab **PKPab** **05 36 21.6 -1.8**
comp=Z,1.1nm,0.9s,baz=135,slow=1.4,SNR=3.8

*ASRS **27** 05:15:20.0ₛ1.4, 54°.31N×86°.18E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 27 05:15:19.3±3.1, 54°.39N×86°.48E, h0km, mbtmp3.0/2, ML2.9/2, Error ellipse: s-maj=24.4km s-min=15.9km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**246**	I	I	05 21 00.0	
	baz=66,slow=321,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.07**	**246**	Pg	Pg	05 15 38.4	-1.4
	2.4nm,0.3s,baz=69,slow=17,SNR=17						
ZALV				Lg	Lg	05 15 54.2	
	4.4nm,0.3s,baz=61,slow=26,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.15**	**235**	Pn	Pn	05 16 53.7	+2.5
	0.2nm,0.3s,baz=52,slow=14,SNR=4.0						
KURBB				Lg	Lg	05 18 37.3	
	baz=53,slow=31,SNR=1.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.06**	**201**	Pn	Pn	05 17 17.4	-0.1
	0.3nm,0.3s,baz=21,slow=14,SNR=5.3						
MKAR				Lg	Lg	05 19 38.8	
	0.3nm,0.3s,baz=19,slow=27,SNR=3.5						
	0.3nm,0.3s						

*ISK **27** 05:22:05.8, 38°.67N×38°.16E, h9km, ML2.7/6*
*AFAD **27** 05:22:05.4, 38°.68N×38°.11E, h7km±2km, ML2.7*
ISC 27 05:22:05.9±1.0, 38°.67N±0°.02×38°.12E±0°.03, h12km±9km, n22, σ0°.74/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.24**	**330**	P	**Pg**	**05 22 10.7**	**-0.5**
HEKM				S	**Sg**	**05 22 14.9**	**+0.2**
MAYA	**Malatya/Merkez**	**0.42**	**144**	P	**Pg**	**05 22 14.4**	**+0.2**
MAYA				S	**Sg**	**05 22 20.1**	**+0.3**
MAYA				IAML		05 22 23.0	
	comp=N,680nm,0.3s						
MAYA				IAML		05 22 23.0	
	comp=E,979nm,0.5s						
ARPR	**Arapgir-MALATY**	**0.46**	**22**	Pg	**Pg**	**05 22 15.1**	**+0.1**
ARPR				Sg	**Sb**	**05 22 21.8**	**-1.1**
MDIV		**0.66**	**355**	P	**Pg**	**05 22 17.9**	**-0.8**
MDIV				S	**Sg**	**05 22 27.2**	**-0.1**
CUGUR	**Gurin_SVAS**	**0.66**	**275**	P	**Pg**	**05 22 18.3**	**-0.5**
CUGUR				S	**Sg**	**05 22 28.1**	**+0.6**
CUGUR				IAML		05 22 30.0	
	comp=N,459nm,0.4s						
CUGUR				IAML		05 22 34.0	
	comp=E,542nm,0.4s						
ELZG	**Elazig**	**0.70**	**104**	P	**Pg**	**05 22 19.4**	**-0.2**
ELZG				S	**Sb**	**05 22 30.2**	**+0.3**
ELZG				IAML		05 22 31.0	
	comp=E,448nm,0.2s						
ESGZ	**Sivrice-Elazig**	**0.78**	**107**	Pg	**Pg**	**05 22 20.6**	**-0.4**
ESGZ				Sg	**Sb**	**05 22 31.5**	**-0.6**
MDYL	**Doganyol-Malat**	**0.81**	**116**	Pg	**Pg**	**05 22 21.2**	**-0.3**
ELZ	**Elazig**	**0.85**	**88**	P	**Pg**	**05 22 21.6**	**-0.8**
ELZ				S	**Sb**	**05 22 34.0**	**-0.3**
ELZ				IAML		05 22 35.0	
	comp=E,293nm,0.3s						
ILIC	**ilic-Erzincan**	**0.86**	**24**	Pg	**Pb**	**05 22 22.5**	**-0.4**
ILIC				Sg	**Sb**	**05 22 34.7**	**+0.3**
ESIJ	**Sivrice-Elazig**	**0.96**	**103**	Pg	**Pg**	**05 22 23.9**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.98**	**107**	Pg	**Pg**	**05 22 23.8**	**-1.0**
SVRC				Sg	**Sb**	**05 22 37.9**	**+0.1**
TNCL	**Tunceli-Merkez**	**1.20**	**68**	P	**Pg**	**05 22 27.8**	**-1.2**
TNCL				S	**Sn**	**05 22 44.8**	**-0.1**
TNCL				IAML		05 22 50.0	
	comp=N,240nm,0.8s						
TNCL				IAML		05 22 53.0	
	comp=E,216nm,0.7s						
CUAYA	**Sivas-Altinyay**	**1.22**	**300**	P	**Pb**	**05 22 28.3**	**-0.8**
CUAYA				S	**Sb**	**05 22 45.5**	**+0.6**
CUAYA				IAML		05 22 53.0	
	comp=E,93nm,0.6s						
CUAYA				IAML		05 22 54.0	
	comp=N,99nm,0.4s						

URFA	**Urfa**	**1.34**	**155**	Pn		**Pn**	**05 22 30.8**	**+0.2**
KMRS	**Kahramanmaras**	**1.50**	**220**	Pn		**Pb**	**05 22 33.9**	**+0.1**
SUSE	**Susehri**	**1.54**	**2**	P		**Pb**	**05 22 34.6**	**0.0**
SUSE				S		**Sg**	**05 22 57.3**	**+1.8**
SUSE				IAML			05 22 59.0	
	comp=N,102nm,0.5s							
SUSE				IAML			05 22 59.0	
	comp=E,102nm,1.1s							
ERZN	**Erzincan**	**1.55**	**53**	Pn		**Pn**	**05 22 33.8**	**+0.3**
EUZM	**Uzumlu**	**1.61**	**49**	P		**Pg**	**05 22 36.9**	**+0.1**
EUZM				S		**Sg**	**05 22 59.1**	**+1.4**
EUZM				IAML			05 23 02.0	
	comp=N,66nm,0.4s							
EUZM				IAML			05 23 02.0	
	comp=E,94nm,0.4s							
GAZ	**Gaziantep**	**1.66**	**206**	Pn		**Pb**	**05 22 36.2**	**-0.2**
KELT	**Kelkit**	**1.72**	**30**	P		**Pb**	**05 22 37.2**	**-0.5**
KELT				S		**Sg**	**05 23 01.3**	**-0.1**
ALUC	**Giresun/Alucra**	**1.75**	**17**	P		**Pg**	**05 22 39.1**	**-0.4**
ALUC				S		**Sg**	**05 23 04.4**	**+2.2**
ALUC				IAML			05 23 05.0	
	comp=N,95nm,0.4s							
ALUC				IAML			05 23 06.0	
	comp=E,81nm,0.4s							

*IDC **27** 05:22:13.4±0.7, 44°.11N×115°.11W, h0km, mbtmp3.1/7, ML3.2/7, Error ellipse: s-maj=9.1km s-min=6.6km az=88.0*
*NEIC **27** 05:22:14.1±1.5, 44°.15N±0°.02×115°.08W±0°.01, h10km±2km, ML3.4/116, ML3.7/31(BUT), Error ellipse: s-maj=4.1km s-min=3.1km az=178.0*
*BUT **27** 05:22:14.7±1.4, 44°.12N±0°.03×115°.09W±0°.03, h13km±8km, Error ellipse: s-maj=4.3km s-min=2.7km az=221.0*

ISC 27 05:22:14.2±0.8, 44°.14N±0°.03×115°.09W±0°.03, h10km, n70, σ1§53/53, Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HLID	**Hailey**	**0.76**	**139**	Pg		**Pg**	**05 22 28.6**	**-0.2**
HLID				Sg		**Sg**	**05 22 38.5**	**-0.2**
HLID				IAML			05 22 39.6	
	2μm,0.3s							
HLID				IAML			05 22 41.8	
	1μm,0.2s							
MFID	**Camas Ranch**	**0.90**	**217**	Pg		**Pg**	**05 22 31.4**	**-0.1**
MFID				Sg		**Sg**	**05 22 43.4**	**+0.2**
PLID	**Pearl Lake**	**1.15**	**326**	Pg		**Pb**	**05 22 36.1**	**-0.2**
PLID				Sg		**Sg**	**05 22 50.7**	**-0.6**
PLID				IAML			05 22 54.8	
	737nm,0.5s							
PLID				IAML			05 22 54.8	
	955nm,0.8s							
CNCI	**Crows Nest Can**	**1.20**	**100**			**Pn**	**05 22 37.2**	**0.0**
BMO	**Blue Mountains**	**1.74**	**295**			**Pn**	**05 22 44.6**	**+0.1**
MCMT	**McKenzie Canyo**	**1.75**	**66**			**Pb**	**05 22 45.9**	**-0.6**
MOMT	**Monida**	**1.99**	**76**			**Pb**	**05 22 50.2**	**-0.3**
DLMT	**Dillon**	**2.16**	**55**			**Pn**	**05 22 51.1**	**+0.7**
F10A	**Beach Ranch, E**	**2.38**	**321**			**Pn**	**05 22 54.5**	**+1.2**
VCMT	**Victor**	**2.39**	**15**			**Pn**	**05 22 54.1**	**+0.6**
HBMT	**Mount Humbug**	**2.42**	**46**			**Pn**	**05 22 54.4**	**+0.4**
BGMT	**Barton Gulch**	**2.44**	**62**			**Pn**	**05 22 55.7**	**+1.5**
LRM	**Limekiln Ridge**	**2.52**	**47**			**Pn**	**05 22 56.0**	**+0.6**
J08A	**Circle Bar Ran**	**2.57**	**254**			**Pn**	**05 22 56.5**	**+0.5**
J08A				IAML			05 23 49.5	
	comp=N,196nm,0.9s							
BPMT	**Black Pine Rid**	**2.58**	**26**			**Pn**	**05 22 56.5**	**+0.3**
BUT	**Butte**	**2.59**	**43**	Pn		**Pn**	**05 22 57.9**	**+1.6**
BUT				IAML			05 23 36.4	
	comp=N,259nm,0.7s							
BUT				IAML			05 23 36.5	
	comp=E,248nm,0.7s							
QLMT	**Earthquake Lak**	**2.71**	**74**	Pn		**Pn**	**05 22 59.1**	**+1.2**
MSO	**Missoula**	**2.81**	**16**			**Pn**	**05 23 00.1**	**+0.9**
MSO	**Missoula**	**2.81**	**16**	IAML			05 23 49.8	
	comp=E,114nm,0.8s							
MSO				IAML			05 23 56.4	
	comp=E,134nm,1.1s							
LNOR	**Lincton Mounta**	**2.85**	**309**			**Pn**	**05 23 00.8**	**+1.0**
YHB	**Horse Butte**	**2.86**	**76**			**Pn**	**05 23 02.1**	**+2.0**
YHB				IAML			05 23 43.5	
	comp=N,183nm,0.8s							
BOZ	**Bozeman (W)**	**2.86**	**58**	Pn		**Pn**	**05 23 01.1**	**+1.0**
BOZ				IAML			05 23 47.3	
	comp=N,151nm,0.6s							
HVU	**Hansel Valley**	**2.91**	**143**	Pn		**Pn**	**05 23 01.8**	**+1.2**
ECR	**Eagle Creek**	**2.91**	**111**			**Pb**	**05 23 03.5**	**-2.8**
FXWY	**Fox Creek**	**2.98**	**98**	Pn		**Pn**	**05 23 02.3**	**+0.6**
FXWY				IAML			05 23 55.3	
	comp=N,80nm,0.9s							
G08A	**Pilot Rock**	**2.99**	**294**	Pn		**Pn**	**05 23 02.0**	**+0.2**
ELMT	**Elliston**	**3.00**	**37**			**Pn**	**05 23 02.1**	**0.0**
CHMT	**Chamberlain Mo**	**3.06**	**24**			**Pn**	**05 23 03.1**	**+0.3**
WVOR	**Wild Horse Val**	**3.10**	**238**	Pn		**Pn**	**05 23 04.3**	**+1.0**
WVOR				IAML			05 23 54.8	
	comp=N,77nm,1.9s							
WVOR				IAML			05 23 56.0	
	comp=N,91nm,0.9s							
NDMT	**Ninemile Divid**	**3.14**	**4**			**Pn**	**05 23 04.8**	**+1.0**
FLWY	**Flagg Ranch**	**3.16**	**90**			**Pn**	**05 23 05.9**	**+1.6**
PCMT	**Pistol Creek**	**3.17**	**13**			**Pn**	**05 23 04.9**	**+0.6**
E09A	**Wood Farm, Sta**	**3.21**	**319**			**Pn**	**05 23 08.0**	**+3.4**
E09A	**Wood Farm, Sta**	**3.21**	**319**	IAML			05 23 58.0	
	comp=N,76nm,1.1s							
E09A				IAML			05 24 05.4	
	comp=E,69nm,1.4s							
SNOW	**Snow King Moun**	**3.21**	**101**	IAML			05 24 00.4	
	comp=E,133nm,1.2s							
YNR	**Norris Junctio**	**3.21**	**78**	IAML			05 23 58.4	
	comp=E,93nm,0.7s							
YNR				IAML			05 23 59.5	
	comp=N,106nm,1.0s							
AHID	**Auburn Hatcher**	**3.21**	**114**	IAML			05 24 03.0	
	comp=N,144nm,0.7s							
BEMT	**Mount Belmont**	**3.25**	**36**			**Pn**	**05 23 05.9**	**+0.4**
OVMT	**Ovando**	**3.27**	**26**			**Pn**	**05 23 05.9**	**+0.2**
LOHW	**Long Hollow**	**3.29**	**98**	IAML			05 24 01.0	
	comp=N,67nm,0.8s							
LOHW				IAML			05 24 03.7	
	comp=N,106nm,1.1s							
SLMT	**Seeley Lake**	**3.30**	**19**			**Pn**	**05 23 06.9**	**+0.8**
FBMT	**Ferry Basin**	**3.30**	**8**			**Pn**	**05 23 06.9**	**+0.8**
ELK	**Elko**	**3.39**	**182**	Pn		**Pn**	**05 23 08.4**	**+1.0**
	comp=N,4.7nm,0.3s,baz=353,slow=17,SNR=90							
ELK				Pg		**Pb**	**05 23 12.9**	**-1.7**
	comp=N,4.7nm,0.3s,baz=352,slow=17,SNR=77							
ELK				Lg		Lg	05 23 58.2	
	comp=N,13nm,0.3s,baz=113,slow=18,SNR=23							
	comp=N,6.1nm,0.6s							
ELK	**Elko**	**3.39**	**182**	IAML			05 23 59.8	
	comp=N,71nm,0.9s							
ELK				IAML			05 24 00.5	
	comp=N,84nm,1.0s							
BHMT	**Big Hole Peak**	**3.44**	**1**			**Pn**	**05 23 08.7**	**+0.6**
LYMT	**Lyon Mountain**	**3.45**	**34**			**Pn**	**05 23 08.3**	**+0.1**
SWMT	**Swartz Lake**	**3.46**	**12**			**Pn**	**05 23 08.6**	**+0.4**
BGU	**Big Grassy Mou**	**3.55**	**154**	IAML			05 24 10.3	
	comp=N,89nm,0.9s							
BGU				IAML			05 24 16.3	
	comp=E,80nm,1.3s							
YMP	**Mirror Lake Pl**	**3.58**	**79**	IAML			05 24 13.3	
	comp=N,45nm,1.5s							
YMP				IAML			05 24 25.2	
	comp=E,53nm,0.8s							
HWUT	**Hardware Ranch**	**3.62**	**133**	IAML			05 24 09.3	
	comp=E,85nm,1.2s							
HWUT				IAML			05 24 15.1	
	comp=E,79nm,0.9s							
JTMT	**Jette**	**3.65**	**9**			**Pn**	**05 23 11.9**	**+1.0**
YNE	**Yellowstone No**	**3.73**	**75**	IAML			05 24 16.3	
	comp=N,84nm,1.0s							
YNE				IAML			05 24 23.4	
	comp=E,52nm,1.2s							
F07A	**Phinny Hill Vi**	**3.85**	**299**	IAML			05 24 33.6	
	comp=E,60nm,0.9s							
F07A				IAML			05 24 34.8	
	comp=N,48nm,1.1s							
D08A	**Wollman Farm,**	**3.97**	**319**	IAML			05 24 26.0	
	comp=E,33nm,1.0s							
NOQ	**North Oquirrh**	**4.12**	**147**	IAML			05 24 34.4	
	comp=N,41nm,0.7s							
NOQ				IAML			05 24 35.5	
	comp=E,42nm,1.0s							
E07A	**Sunnyside**	**4.14**	**307**	IAML			05 24 37.1	
	comp=E,33nm,0.7s							
E07A				IAML			05 24 41.5	
	comp=N,42nm,1.1s							
PDAR	**Pinedale Array**	**4.25**	**107**	Pn		**Pn**	**05 23 22.8**	**+3.5**
	comp=N,0.3nm,0.3s,baz=290,slow=12,SNR=36							
PDAR				Lg		Lg	05 24 27.4	
	comp=N,0.7nm,0.3s,baz=300,slow=24,SNR=6.1							
	comp=N,3.7nm,0.7s							
RLMT	**Red Lodge**	**4.27**	**75**	IAML			05 24 34.9	
	comp=N,59nm,0.8s							
RLMT				IAML			05 24 36.3	
	comp=N,38nm,0.7s							
NEW	**Newport**	**4.36**	**342**	Pn		**Pn**	**05 23 21.7**	**+1.2**
	comp=N,1.2nm,0.3s,baz=165,slow=14,SNR=13							
NEW				Sn		**Sn**	**05 24 07.1**	**-4.3**
	comp=N,1.7nm,0.3s,baz=111,slow=11,SNR=4.7							
NEW				Lg		Lg	05 24 29.1	
	comp=N,12nm,0.3s,baz=91,slow=23,SNR=13							
	comp=N,6.0nm,0.5s							
NEW	**Newport**	**4.36**	**342**	IAML			05 24 35.5	
	comp=N,44nm,1.2s							
MXC	**Moxie City**	**4.40**	**305**	IAML			05 24 53.6	
	comp=E,25nm,1.2s							
EPH	**Ephrata**	**4.50**	**317**	IAML			05 24 44.9	
	comp=E,23nm,1.0s							
EPH				IAML			05 24 53.8	
	comp=N,28nm,1.1s							
NLU	**North Lily Min**	**4.75**	**151**	IAML			05 24 51.6	
	comp=E,24nm,1.6s							
NLU				IAML			05 24 56.6	
	comp=N,26nm,1.5s							
BSUT	**Blindstream Ca**	**4.82**	**137**	IAML			05 24 54.2	
	comp=N,19nm,1.7s							
BSUT				IAML			05 25 02.8	
	comp=E,20nm,1.8s							
WIFE	**Three Sisters-**	**4.85**	**271**	IAML			05 25 03.4	
	comp=N,19nm,2.1s							
WIFE				IAML			05 26 35.7	
	comp=E,23nm,3.3s							
LTY	**Liberty**	**5.00**	**311**	IAML			05 25 10.6	
	comp=N,21nm,1.3s							
YBH	**Yreka Blue Hor**	**6.09**	**249**	Pn		**Pn**	**05 23 48.0**	**+3.6**
	comp=N,0.1nm,0.3s,baz=71,slow=18,SNR=1.4							
YBH				Lg		Lg	05 25 25.5	
	comp=N,0.1nm,0.3s,baz=60,slow=8.1,SNR=1.8							
	comp=N,0.2nm,0.3s							
NVAR	**Mina Array Bea**	**6.20**	**204**	Pn		**Pn**	**05 23 49.2**	**+3.3**
	comp=N,0.3nm,0.3s,baz=16,slow=15,SNR=9.2							
NVAR				Pg		**Pb**	**05 24 00.3**	**-1.9**
	comp=N,0.8nm,0.3s,baz=15,slow=16,SNR=16							
NVAR				Lg		Lg	05 25 25.5	
	comp=N,0.5nm,0.3s,baz=23,slow=30,SNR=1.5							
	comp=N,0.4nm,0.4s							
TXAR	**Lajitas Array**	**17.36**	**145**	Pn		**P**	**05 26 20.3**	**+2.3**
	baz=332,slow=11,SNR=3.6							
	comp=N,0.2nm,0.8s							
YKA	**Yellowknife Ar**	**18.39**	**1**	P		**Pn**	**05 26 30.0**	**+1.0**
	comp=N,0.1nm,0.3s,baz=184,slow=9.0,SNR=4.6							
	comp=N,1.1nm,0.8s							

*IDC **27** 05:33:50.0±4.6, 57°.88S×25°.68W, h61km±41km, mb4.0/11, mbtmp4.3/12, ML4.4/1, MS3.0/3, Error ellipse: s-maj=21.3km s-min=14.3km az=64.0*
*NEIC **27** 05:33:50.2±1.4, 57°.90S±0°.06×25°.5W±0°.2, h66km±7km, mb4.5/23, Error ellipse: s-maj=15.6km s-min=8.3km az=89.0*

ISC 27 05:33:48.3±0.4, 57°.92S±0°.07×25°.41W±0°.09, h49km, n64, σ1§57/58, mb4.4/19, 2C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**7.19**	**296**	Pn		**Pn**	**05 35 34.0**	**+3.4**
ORCD	**Orcadas**	**10.26**	**246**	Pn		**Pn**	**05 36 14.6**	**+2.0**
VNA1	**Neumayer--Stat**	**14.69**	**157**	P		**Pn**	**05 37 13.4**	**+0.7**
	comp=Z,5.0nm,0.2s							
VNA2	**Neumayer--Watz**	**15.09**	**157**	P		**Pn**	**05 37 18.2**	**+0.3**
	comp=Z,4.4nm,0.2s,baz=321,slow=13							
VNA2				⇑S		Sn	05 39 51.5	-12
	comp=E,1.2nm,0.2s,baz=323,slow=24							
SNAA	**Sanae**	**16.63**	**155**	P		**Pn**	**05 37 39.4**	**+1.7**
	comp=Z,80nm,0.3s							
SNAA	**Sanae**	**16.63**	**155**	P		**Pn**	**05 37 39.5**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=324,slow=15,SNR=17							
SNAA				S		**Sn**	**05 40 33.2**	**-7.8**
	comp=Z,0.8nm,0.5s,baz=75,slow=17,SNR=3.1							
SNAA				LR		LR	05 43 14.2	
	comp=Z,26nm,20.7s,baz=348,slow=34							
	comp=Z,4.4nm,0.4s							
SNAA	**Sanae**	**16.63**	**155**	P		**Pn**	**05 37 39.4**	**+1.7**
TROLL	**Troll, Antarti**	**18.13**	**152**	⇑P		**Pn**	**05 37 59.2**	**+3.0**
	comp=Z,180nm,0.4s							
BELA	**Belgrano 2**	**20.29**	**186**	P		**P**	**05 38 20.1**	**+0.7**
GO08	**Villa O'Higgin**	**29.22**	**268**	P		**P**	**05 39 44.2**	**-0.8**
GO08				IAmb		IAmb	05 39 58.8	
	comp=Z,20nm,1.4s							
QSPA	**South Pole Qui**	**32.32**	**180**	P		**P**	**05 40 13.8**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=197,slow=3.6,SNR=16							
QSPA				PcP		**PcP**	**05 42 58.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=153,slow=4.7,SNR=2.1							
QSPA				LR		LR	05 53 00.0	
	comp=Z,40nm,18.8s,baz=216,slow=36							
	comp=Z,2.1nm,0.7s							
QSPA	**South Pole Qui**	**32.32**	**180**	IAmb		IAmb	05 40 14.4	
	comp=Z,5.6nm,1.0s							
PLCA	**Paso Flores**	**33.30**	**281**	P		**P**	**05 40 20.4**	**-0.7**
	comp=Z,4.0nm,1.2s,baz=180,slow=4.3,SNR=4.7							
PLCA				LR		LR	05 53 42.0	
	comp=Z,40nm,18.2s,baz=128,slow=36							
	comp=Z,4.0nm,1.2s							
PLCA	**Paso Flores**	**33.30**	**281**	P		**P**	**05 40 20.4**	**-0.6**
PLCA				IAmb		IAmb	05 41 01.0	
	comp=Z,8.1nm,1.4s							
ITAB	**Concordia**	**35.96**	**317**	P		**P**	**05 40 42.3**	**-1.7**
ITAB				IAmb		IAmb	05 41 15.2	
	comp=Z,8.4nm,1.1s							
MAW	**Mawson**	**38.07**	**142**	P		**P**	**05 41 02.5**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=232,slow=8.5,SNR=4.3							
MAW				PcP		**PcP**	**05 43 16.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=200,slow=3.3,SNR=1.9							
	comp=Z,2.0nm,0.8s							
MAW	**Mawson**	**38.07**	**142**	P		**P**	**05 41 02.2**	**+0.8**
CPUP	**Villa Florida**	**38.78**	**311**	P		**P**	**05 41 06.0**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=141,slow=11,SNR=3.8							
	comp=Z,1.1nm,0.8s							
CPUP	**Villa Florida**	**38.78**	**311**	P		**P**	**05 41 06.9**	**-0.9**
CPUP				IAmb		IAmb	05 41 32.7	
	comp=Z,6.0nm,1.4s							
MT09	**Talagante**	**38.82**	**288**	P		**P**	**05 41 07.0**	**-1.3**
AC05	**El Transito**	**42.47**	**294**	P		**P**	**05 41 37.2**	**-1.3**
AC05				IAmb		IAmb	05 41 57.3	
	comp=Z,18nm,1.4s							
VNDA	**Vanda**	**44.74**	**182**	P		**P**	**05 41 57.7**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=185,slow=7.3,SNR=17							
	comp=Z,1.7nm,0.7s							
VNDA	**Vanda**	**44.74**	**182**	P		**P**	**05 41 57.2**	**+1.2**
BDFB	**Brasilia**	**45.47**	**329**	P		**P**	**05 42 03.0**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=133,slow=5.8,SNR=6.8							
	comp=Z,2.8nm,0.6s							
BDFB	**Brasilia**	**45.47**	**329**	P		**P**	**05 42 02.5**	**0.0**
BOSA	**Boshof**	**45.55**	**72**	P		**P**	**05 42 03.7**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=221,slow=12,SNR=3.2							
	comp=Z,2.5nm,0.8s							
BOSA	**Boshof**	**45.55**	**72**	P		**P**	**05 42 03.7**	**+0.5**
H04S2	**CROZET ISLANDS**	**45.93**	**111**	T		T	06 32 35.6	
	baz=226,slow=74,SNR=21							
H04S3	**CROZET ISLANDS**	**45.94**	**111**	T		T	06 32 37.3	
	baz=226,slow=74,SNR=17							
H04S1	**CROZET ISLANDS**	**45.95**	**111**	T		T	06 32 36.7	
	baz=226,slow=74,SNR=11							
PTLB	**Pontes e Lacer**	**49.32**	**315**			**P**	**05 42 30.8**	**-1.5**
PTLB				IAmb		IAmb	05 42 33.2	
	comp=Z,3.1nm,0.9s							
H10S2	**ASCENSION HYDR**	**49.55**	**14**	T		T	06 37 07.4	
	baz=188,slow=74,SNR=10							
H10S3	**ASCENSION HYDR**	**49.55**	**14**	T		T	06 37 08.0	
	baz=32,slow=74,SNR=11							
H10N1	**ASCENSION HYDR**	**50.67**	**14**	T		T	06 38 34.1	
	baz=201,slow=76,SNR=6.6							
H10N3	**ASCENSION HYDR**	**50.67**	**14**	T		T	06 38 32.4	
	baz=201,slow=76,SNR=12							
H10N2	**ASCENSION HYDR**	**50.69**	**14**	T		T	06 38 33.8	
	baz=201,slow=76,SNR=12							
PB16	**IPOC Station P**	**51.06**	**302**	P		**P**	**05 42 44.9**	**-1.3**
PB16				IAmb		IAmb	05 42 54.8	
	comp=Z,6.9nm,1.5s							
VILB	**Vilhena**	**52.00**	**315**	P		**P**	**05 42 51.5**	**-1.1**
VILB				IAmb		IAmb	05 42 53.4	
	comp=Z,6.4nm,0.8s							
LPAZ	**La Paz**	**52.25**	**305**	P		**P**	**05 42 54.3**	**-0.8**
	comp=Z,2.2nm,0.4s,baz=89,slow=6.8,SNR=20							
	comp=Z,2.2nm,0.4s							
LPAZ	**La Paz**	**52.25**	**305**	P		**P**	**05 42 53.7**	**-1.4**
LPAZ				IAmb		IAmb	05 42 56.4	
	comp=Z,3.4nm,1.1s							
MACA	**Manacapuru-AM**	**61.23**	**319**	P		**P**	**05 43 56.7**	**-1.3**
BOAV	**Boa Vista**	**66.36**	**321**	P		**P**	**05 44 31.0**	**-0.7**
BOAV				IAmb		IAmb	05 44 31.7	
	comp=Z,4.3nm,0.6s							
DBIC	**Dimbokro**	**66.50**	**22**	P		**P**	**05 44 33.4**	**+0.7**
	comp=Z,3.5nm,0.4s,baz=187,slow=7.3,SNR=10.0							
	comp=Z,3.5nm,0.4s							
DBIC	**Dimbokro**	**66.50**	**22**	P		**P**	**05 44 32.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**74.24**	**27**	P		**P**	**05 45 21.1**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=198,slow=6.4,SNR=46							
	comp=Z,3.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**74.24**	**27**	P		**P**	**05 45 19.7**	**-0.2**
TORD				IAmb		IAmb	05 45 22.0	
	comp=Z,5.1nm,1.1s							
TKNZ	**Takaka Hill**	**80.22**	**194**	P		**P**	**05 45 52.9**	**-0.3**
ASAR	**Alice Springs**	**96.90**	**161**	P		**P**	**05 47 14.0**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=197,slow=4.6,SNR=6.4							
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**96.90**	**161**	P		**P**	**05 47 14.2**	**0.0**
AS31	**Alice Springs**	**96.90**	**161**	P		**P**	**05 47 13.6**	**-0.6**
AS31				IAmb		IAmb	05 47 32.7	
	comp=Z,1.1nm,1.0s							
WRA	**Warramunga Arr**	**100.62**	**161**	P		**Pdif**	**05 47 29.5**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=186,slow=4.3,SNR=2.1							
PDAR	**Pinedale Array**	**122.15**	**300**	PKP		**PKPdf**	**05 52 36.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=120,slow=5.2,SNR=7.5							
ULM	**Lac du Bonnet**	**122.27**	**314**	PKP		**PKPdf**	**05 52 35.0**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=191,slow=5.2,SNR=2.1							
NVAR	**Mina Array Bea**	**123.00**	**291**	PKP		**PKPdf**	**05 52 38.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=120,slow=3.1,SNR=6.4							
CMAR	**Chiang Mai Arr**	**123.50**	**110**	PKP		**PKPdf**	**05 52 40.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=236,slow=5.5,SNR=4.6							
FINES	**FINESS Array B**	**125.59**	**28**	PKP		**PKPdf**	**05 52 42.6**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=224,slow=3.8,SNR=16							
ARCES	**ARCESS Array B**	**132.33**	**22**	PKP		**PKPdf**	**05 52 55.1**	**0.0**
	comp=Z,0.4nm,0.4s,baz=218,slow=1.7,SNR=9.4							
YKA	**Yellowknife Ar**	**138.21**	**316**	PKP		**PKPdf**	**05 53 06.1**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=137,slow=2.2,SNR=15							
C36M	**Paulatuk**	**145.00**	**322**	PKPbc		**PKPdf**	**05 53 18.3**	**+0.1**
M31M	**Drury Creek, Y**	**145.93**	**308**	PKPdf		**PKPbc**	**05 53 20.8**	**-0.1**
O30N	**Mendenhall**	**146.03**	**305**	PKPdf		**PKPbc**	**05 53 21.1**	**-0.2**
N31M	**Braeburn, Yuko**	**146.21**	**306**	PKPdf		**PKPdf**	**05 53 21.1**	**+0.5**
SONM	**Songino Array**	**149.84**	**88**	PKPbc		**PKPbc**	**05 53 32.1**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=234,slow=3.3,SNR=9.9							
ILAR	**Eielson Array**	**152.07**	**309**	PKPbc		**PKPbc**	**05 53 36.4**	**-0.1**
	comp=Z,7.5nm,0.7s,baz=135,slow=2.5,SNR=72							

*CATAC **27** 05:39:20.0±0.2, 12°.N±2°.×8°.6W±°., h81km±2km, M3.2/48, MLv3.2/48, Error ellipse: s-maj=6.4km s-min=2.0km az=41.7, confirmed*
*UCR **27** 05:39:19.3±0.4, 11°.78N×86°.36W, h86km±6km, MW3.7, Presumed earthquake*

ISC 27 05:39:19.7±1.3, 11°.80N±0°.04×86°.37W±0°.05, h96km±6km, n77, σ0§59/113, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SABN	**Sabanita**	**0.26**	**53**	P		**Pn**	**05 39 33.4**	**-0.3**
NANN	**Nandasmo**	**0.28**	**60**	P		**Pn**	**05 39 34.3**	**+0.6**
NANN				S		**Sn**	**05 39 45.7**	**+1.4**
MASN	**Masaya**	**0.28**	**49**	P		**Pn**	**05 39 33.7**	**-0.1**
MASN				S		**Sn**	**05 39 43.8**	**-0.6**
MAS3	**Al N del Volca**	**0.29**	**41**	P		**Pn**	**05 39 33.5**	**-0.4**
MAS3				S		**Sn**	**05 39 44.5**	**+0.1**
ABCN	**Banco Central**	**0.33**	**11**	P		**Pn**	**05 39 34.0**	**0.0**
ABCN				S		**Sn**	**05 39 44.6**	**0.0**
NADN	**Granada**	**0.34**	**99**	P		**Pn**	**05 39 33.3**	**-0.7**
NADN				S		**Sn**	**05 39 44.2**	**-0.5**
ALLN	**Telcor Managua**	**0.37**	**15**	P		**Pn**	**05 39 34.1**	**-0.2**
ALLN				S		**Sn**	**05 39 45.3**	**+0.3**
MGAN	**Managua**	**0.37**	**19**	P		**Pn**	**05 39 33.9**	**-0.3**
MGAN				S		**Sn**	**05 39 44.6**	**-0.4**
SAPS	**Ciudad Sandino**	**0.37**	**355**	P		**Pn**	**05 39 34.1**	**-0.1**
SAPS				S		**Sn**	**05 39 45.3**	**+0.2**
AERN	**Aeropuerto Man**	**0.40**	**30**	P		**Pn**	**05 39 34.1**	**-0.2**
APQ2	**Apoy

PAQE	**Paquera**	**2.42**	**144**	*eP*	**Pn**	**05 39 57.8**	**+0.1**
PACA	**Pacayal**	**2.53**	**311**	P	**Pn**	**05 39 59.1**	**-0.1**
PACA				S	**Sn**	**05 40 30.0**	**+0.5**
BLUN	**Bluefields**	**2.55**	**85**	P	**Pn**	**05 39 59.3**	**0.0**
TRB2	**Turrubares**	**2.66**	**135**	P	**Pn**	**05 40 01.4**	**+0.5**
TRB2				S	**Sn**	**05 40 33.3**	**+0.8**
ATEO	**Atenas**	**2.66**	**133**	*eP*	**Pn**	**05 40 00.9**	**-0.1**
MARCA	**Marcala la Paz**	**2.85**	**326**	P	**Pn**	**05 40 03.3**	**-0.2**
TRT2	**Tortugero**	**2.87**	**115**	P	**Pn**	**05 40 02.9**	**-0.7**
TECO	**Alcaldia de Te**	**2.92**	**307**	P	**Pn**	**05 40 03.8**	**-0.5**
TECO				S	**Sn**	**05 40 38.2**	**-0.5**
COEG	**Centro de Oper**	**3.04**	**307**	S	**Sn**	**05 40 41.8**	**+0.1**
PAVA	**Las Pavas**	**3.14**	**308**	P	**Pn**	**05 40 08.0**	**+0.6**
P5NO	**Presa 5 de nov**	**3.18**	**313**	P	**Pn**	**05 40 07.9**	**0.0**
LOMA	**Loma Larga**	**3.29**	**304**	P	**Pn**	**05 40 09.2**	**-0.2**
LOMA				S	**Sn**	**05 40 47.6**	**-0.1**

BJI ***27*** *05:50:18.1, 30˚.44N×94˚.84E, h8km, mB4.8/8, mb4.5/41, ML4.0/7, Ms4.2/32, Ms7 4.0/29*

IDC ***27*** *05:50:18.0±0.6, 30˚.28N×94˚.74E, h0km, mb4.3/24, mbtmp4.3/29, ML4.0/4, MS3.5/3, Error ellipse: s-maj=15.2km s-min=12.6km az=47.0*

NDI ***27*** *05:50:18.0±2.7, 30˚.82N×94˚.53E, h10km, mb4.6, ML4.0, MW4.5, Presumed earthquake*

MOS ***27*** *05:50:19.9±1.0, 30˚.39N×94˚.83E, h18km, mb5.0/27, Error ellipse: s-maj=8.3km s-min=3.9km az=121.1*

NEIC ***27*** *05:50:20.4±1.6, 30˚.41N±0˚.08×94˚.82E±0˚.08, h10km±1km, mb4.9/141, Error ellipse: s-maj=16.0km s-min=9.0km az=36.0*

GFZ ***27*** *05:50:24.1±0.2, 30˚N×3˚×9˚5E±˚, h44km, M4.6/53, mb4.7/53*

ISC 27 05:50:20.8±0.5, 30˚30N±0˚04×94˚76E±0˚03, h15km±3km, h16km:pP-P, n531, σ1s34/499, mb4.8/132, MS3.8/11, 10C-4D, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.19**	**260**	P		**Pn**		**05 51 11.5**	**+0.7**
LSA	**Lhasa**	**3.19**	**260**			**Pn**		**05 51 11.5**	**+0.7**
LSA	**Lhasa**	**3.19**	**260**	P		**Pb**		**05 51 15.8**	**-1.6**
TAWA	**Tawang**	**3.70**	**224**	*eP*		**Pn**		**05 51 20.8**	**+3.1**
TAWA				IAML				05 52 27.9	
	comp=N,381nm,1.5s								
TAWA				IAML				05 52 33.1	
	comp=E,510nm,1.9s								
MOKO	**MOKOCHONG**	**3.97**	**183**	*ex*		**Pn**		**05 51 23.9**	**+2.6**
MOKO				IAML				05 52 36.1	
	comp=E,281nm,0.3s								
KOHI	**KOHIMA**	**4.60**	**187**	*eP*		**Pn**		**05 51 33.6**	**+3.7**
KOHI				*ex*		x		05 52 28.3	
KOHI				IAML				05 52 50.4	
	comp=N,322nm,0.3s								
GUWA	**GUWAHATI**	**4.90**	**214**	*ex*		**Pn**		**05 51 36.0**	**+2.0**
GUWA				*ex*		x		05 51 36.2	
SHL	**Shillong**	**5.36**	**209**	P		**Pn**		**05 51 42.0**	**+1.6**
SHL	**Shillong**	**5.36**	**209**			**Pn**		**05 51 42.0**	**+1.6**
SHL	**Shillong**	**5.36**	**209**	*ex*		x		05 51 41.9	
SHL				IAML				05 53 25.0	
	comp=N,451nm,1.7s								
GOMU	**GeErMu**	**5.88**	**0**	Pn		**Pn**		**05 51 46.5**	**-1.3**
GOMU				Sn		**Sn**		**05 52 52.0**	**-3.1**
GOMU				Sg		Sg		05 53 19.0	-11
GOMU				SMN					
	comp=N,28nm,1.5s								
GOMU				SME					
	comp=N,22nm,1.0s								
GOMU				L		L			
	comp=N,2μm,8.0s								
GOMU				L		L			
	comp=N,960nm,8.1s								
GOMU				L		L			
	comp=N,1μm,8.3s								
DHUB	**DHUBRI**	**5.99**	**226**	*eP*		**Pn**		**05 51 49.7**	**+0.8**
MORE	**Moreh**	**6.05**	**184**	Pn		**Pn**		**05 51 50.4**	**+0.6**
TNCH	**TengChong**	**6.22**	**147**	Pn		**Pn**		**05 51 54.5**	**+2.2**
TNCH				Sn		**Sn**		**05 53 06.5**	**+3.3**
TNCH				L		L			
	comp=N,580nm,4.4s								
PZH	**PanZhiHua**	**7.22**	**120**	Pn		**Pn**		**05 52 09.3**	**+3.4**
EVN	**Everest**	**7.33**	**253**			**Pn**		**05 52 09.3**	**+1.5**
EVN	**Everest**	**7.33**	**253**	P		**Pn**		**05 52 10.1**	**+2.3**
BRDH	**Bariadhala**	**8.09**	**201**	Pn		**Pn**		**05 52 15.4**	**-2.3**
	comp=N,79nm,0.3s,baz=63,slow=12,SNR=3.7								
BRDH				Sn		**Sn**		**05 53 48.4**	**-0.5**
	comp=N,14nm,0.3s,baz=253,slow=22,SNR=1.2								
KMI2	**Kunming**	**8.74**	**124**	P		**Pn**		**05 52 30.0**	**+3.1**
KMI2				pmax		pmax			
	comp=N,15nm,1.4s								
KMI2				L		L			
	comp=N,1μm,5.3s								
KMI2				L		L			
	comp=N,1μm,4.2s								
LZDM	**Lanzhou Array**	**9.38**	**51**	Pn		**Pn**		**05 52 36.8**	**+1.1**
	baz=223,slow=10								
LZDM				Lg		Lg		05 55 14.7	
	baz=257,slow=26								
	comp=N,3.4nm,0.4s								
LZH	**Lanzhou**	**9.55**	**50**	*eP*		**Pn**		**05 52 42.3**	**+4.4**
LZH				pmax		pmax			
	comp=N,21nm,1.1s								
LZH				L		L			
	comp=N,780nm,6.0s								
LZH				L		L			
	comp=N,790nm,6.0s								
LZH				L		L			
	comp=N,700nm,7.6s								
GTA2	**Gaotai**	**10.04**	**23**	*eP*		**Pn**		**05 52 45.0**	**+0.4**
GTA2				pmax		pmax			
	comp=N,4.0nm,1.1s								
GTA2				L		L			
	comp=N,610nm,9.2s								
GTA2				L		L			
	comp=N,470nm,8.3s								
GTA2				L		L			
	comp=N,620nm,8.9s								
CHTO	**Chiang Mai**	**12.05**	**161**	P		**Pn**		**05 53 13.9**	**+1.8**
CHTO	**Chiang Mai**	**12.05**	**161**	P		**Pn**		**05 53 13.9**	**+1.8**
CMAR	**Chiang Mai Arr**	**12.39**	**161**	Pn		**Pn**		**05 53 16.6**	**-0.1**
	comp=N,0.2nm,0.3s,baz=333,slow=13,SNR=19								
	comp=N,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**12.39**	**161**	*i* P		**Pn**		**05 53 20.1**	**+3.4**
CMAR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**12.39**	**161**			**Pn**		**05 53 17.3**	**+0.6**
WMQ	**Urumqi**	**14.62**	**339**	*eP*		**Pn**		**05 53 46.8**	**-0.3**
WMQ				pmax		pmax			
	comp=Z,9.0nm,1.3s								
WMQ				pmax		pmax			
	comp=Z,110nm,5.5s								
WMQ				L		L			
	comp=Z,330nm,8.7s								
WMQ				L		L			
	comp=Z,300nm,8.7s								
WMQ				L		L			
	comp=Z,700nm,15.9s								
GULI	**GuiLin**	**14.69**	**106**	P		Pn		05 53 42.0	-6.0
GULI				pmax		pmax			
	comp=Z,11nm,1.0s								
DHRM	**DHARAMSHALA**	**15.90**	**282**	*ex*		x		05 54 07.4	
BTO2	**Baotou**	**16.11**	**46**	*eP*		**P**		**05 54 08.8**	**-1.2**
BTO2				pP		**pP**		**05 54 12.5**	**-3.0**
BTO2				sP		**sP**		**05 54 16.0**	**-2.1**
BTO2				PP		Pn		05 54 22.0	+15
BTO2				S		**Sn**		**05 57 08.8**	**+3.7**
BTO2				sS		**S**		**05 57 13.5**	**-5.0**
BTO2				SS		**SnSn**		**05 57 25.3**	**+7.2**
BTO2				pmax		pmax			
	comp=Z,27nm,1.2s								
BTO2				pmax		pmax			
	comp=Z,370nm,4.5s								
BTO2				L		L			
	comp=Z,660nm,9.4s								
BTO2				L		L			
	comp=Z,700nm,12.7s								
BTO2				L		L			
	comp=Z,530nm,12.2s								
WUS	**Wushi**	**16.63**	**315**	Pn		**Pn**		**05 54 12.6**	**-0.8**
WUS				IAmb		IAmb		05 54 19.6	
	comp=Z,133nm,1.0s								
WUS	**Wushi**	**16.63**	**315**	P		**P**		**05 54 16.9**	**+1.0**
WHN	**Wuhan**	**16.91**	**84**	⇓P		**Pn**		**05 54 14.8**	**-2.0**
WHN				pP		**pP**		**05 54 23.0**	**-1.0**
WHN				pmax		pmax			
	comp=Z,130nm,1.4s								
BHPL	**Bhopal**	**16.99**	**250**	*eP*		**Pn**		**05 54 14.4**	**-3.6**
HHC	**Hu-ho-hao-te**	**17.23**	**48**	*eP*		**P**		**05 54 22.5**	**+0.1**
HHC				pmax		pmax			
	comp=Z,13nm,0.6s								
HHC				pmax		pmax			
	comp=Z,100nm,4.3s								
HHC				L		L			
	comp=Z,250nm,11.2s								
HHC				L		L			
	comp=Z,110nm,12.1s								
HHC				L		L			
	comp=Z,320nm,12.9s								
QIZ	**Qiongzhong**	**17.70**	**126**	P		**P**		**05 54 28.3**	**+0.7**
QIZ				S		**S**		**05 57 48.0**	**-2.9**
QIZ				L		L			
	comp=Z,290nm,10.7s								
QIZ				L		L			
	comp=Z,320nm,11.0s								
QIZ				L		L			
	comp=Z,430nm,9.7s								
SHLS	**Shalkode**	**17.71**	**321**	*eP*		**Pn**		**05 54 24.2**	**-2.7**
SHLS	**Shalkode**	**17.71**	**321**	*eP*		**Pn**		**05 54 24.3**	**-2.7**
TARG	**Taragay, Kyrgy**	**17.80**	**314**	P		**Pn**		**05 54 27.3**	**-1.1**
TARG				pmax		pmax			
	comp=Z,60nm,1.4s								
TARG	**Taragay, Kyrgy**	**17.80**	**314**	Pn		**Pn**		**05 54 27.2**	**-1.1**
TARG	**Taragay, Kyrgy**	**17.80**	**314**	P		**P**		**05 54 30.6**	**+1.5**
PDGK	**Podgornoye**	**17.81**	**321**	P		**Pn**		**05 54 27.1**	**-1.0**
PDGK	**Podgornoye**	**17.81**	**321**	P		**Pn**		**05 54 27.1**	**-1.0**
PRZ	**Przheval'sk**	**17.89**	**317**	P		**Pn**		**05 54 29.6**	**+0.4**
PRZ				pmax		pmax			
	comp=Z,123nm,1.1s								
PRZ	**Przheval'sk**	**17.89**	**317**	P		**Pn**		**05 54 29.6**	**+0.4**
PRZ				IAmb		IAmb		05 54 36.1	
	comp=Z,123nm,1.1s								
PRZ	**Przheval'sk**	**17.89**	**317**	P		**P**		**05 54 33.4**	**+3.6**
UZB	**Uzynbulak**	**17.95**	**320**	*eP*		**Pn**		**05 54 30.0**	**+0.2**
UZB				*eS*		**Sn**		**05 57 50.1**	**+0.3**
UZB	**Uzynbulak**	**17.95**	**320**	*eP*		**Pn**		**05 54 30.1**	**+0.2**
UZB				*eS*		**Sn**		**05 57 50.1**	**+0.3**
HNS	**HongShan**	**18.00**	**62**	⇑P		**Pn**		**05 54 30.3**	**-0.1**
HNS				pmax		pmax			
	comp=Z,14nm,0.9s								
HNS				L		L			
	comp=Z,370nm,10.8s								
HNS				L		L			
	comp=Z,290nm,12.0s								
KSH2	**Kashi**	**18.05**	**304**	P		**Pn**		**05 54 31.3**	**+0.1**
KSH2				pmax		pmax			
	comp=Z,14nm,1.3s								
AJM	**Ajmer**	**18.13**	**263**	*eP*		**Pn**		**05 54 29.2**	**-2.9**
AJM				IAmb		IAmb		05 54 39.0	
	comp=Z,28nm,0.9s								
ASAI	**AK-SAY(Kyrgyzs**	**18.19**	**311**	P		**P**		**05 54 34.7**	**+1.4**
SATY	**Saty**	**18.24**	**319**	*eP*		**Pn**		**05 54 33.5**	**+0.1**
SATY	**Saty**	**18.24**	**319**	*eP*		**Pn**		**05 54 33.5**	**+0.1**
KDJ	**Kajisay**	**18.41**	**315**	P		**Pn**		**05 54 38.8**	**+3.2**
KDJ	**Kajisay**	**18.41**	**315**	P		**Pn**		**05 54 38.8**	**+3.2**
ZSN	**Zaisan**	**18.75**	**339**	*eP*		**P**		**05 54 39.2**	**+0.2**
ZSN	**Zaisan**	**18.75**	**339**	*eP*		**P**		**05 54 39.2**	**+0.2**
TNSS	**Tian-Shan**	**19.07**	**317**	*eP*		**P**		**05 54 43.0**	**-0.1**
TNSS	**Tian-Shan**	**19.07**	**317**	*eP*		**P**		**05 54 43.0**	**-0.1**
MK31	**Makanchi Array**	**19.10**	**333**	*ceP*		**P**		**05 54 42.5**	**-0.4**
MKAR	**Makanchi Array**	**19.10**	**333**	P		**P**		**05 54 42.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=142,slow=12,SNR=33								
	comp=Z,4.7nm,0.7s								
MKAR	**Makanchi Array**	**19.10**	**333**			**P**		**05 54 41.8**	**-1.1**
AAA	**Alma-Ata**	**19.19**	**317**	*eP*		**P**		**05 54 44.5**	**+0.5**
AAA	**Alma-Ata**	**19.19**	**317**	*eP*		**P**		**05 54 44.5**	**+0.5**
MAKZ	**Makanchi**	**19.23**	**333**	P		**P**		**05 54 44.0**	**-0.4**
MAKZ				pmax		pmax			
	comp=Z,21nm,1.2s								
MAKZ	**Makanchi**	**19.23**	**333**	P		**P**		**05 54 44.0**	**-0.4**
MAKZ	**Makanchi**	**19.23**	**333**	P		**P**		**05 54 44.2**	**-0.2**
BOOM	**Boomskoye usch**	**19.38**	**314**	P		**P**		**05 54 46.1**	**-0.1**
BOOM				pmax		pmax			
	comp=Z,50nm,1.4s								
BOOM	**Boomskoye usch**	**19.38**	**314**	P		**P**		**05 54 46.1**	**-0.1**
BOOM	**Boomskoye usch**	**19.38**	**314**	P		**Pn**		**05 54 48.9**	**+1.6**
TDK	**Taldyqorghan**	**19.52**	**323**	*eP*		**P**		**05 54 47.8**	**+0.4**
TDK	**Taldyqorghan**	**19.52**	**323**	*eP*		**P**		**05 54 47.9**	**+0.4**
UDPR	**Udaipur**	**19.52**	**258**	*eP*		**P**		**05 54 43.9**	**-3.8**
UDPR				IAmb		IAmb		05 54 51.1	
	comp=Z,31nm,0.5s								
HYB	**Hyderabad**	**19.57**	**233**	*eP*		**Pn**		**05 54 49.5**	**-0.1**
HYB				*eS*		**Sn**		**05 58 32.6**	**+3.5**
TIA	**Tai'an**	**19.59**	**67**	P		**Pn**		**05 54 50.3**	**+0.5**
TIA				pmax		pmax			
	comp=Z,11nm,1.8s								
SONM	**Songino Array**	**19.66**	**24**	P		**P**		**05 54 49.2**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=208,slow=10,SNR=22								
	comp=Z,9.1nm,1.0s								
SONM	**Songino Array**	**19.66**	**24**	P		**P**		**05 54 49.3**	**+0.1**
SONM				pmax		pmax			
	comp=Z,15nm,1.3s								
SONM	**Songino Array**	**19.66**	**24**			**P**		**05 54 49.2**	**+0.1**
ULN	**Ulaanbaatar**	**19.93**	**25**	*ceP*		**P**		**05 54 50.9**	**-1.2**
ULN				pmax		pmax			
	comp=Z,6.0nm,0.7s								
ULN	**Ulaanbaatar**	**19.93**	**25**	P		**P**		**05 54 51.8**	**-0.2**
ULN	**Ulaanbaatar**	**19.93**	**25**	P		**P**		**05 54 51.9**	**-0.2**
KUU	**Kurty**	**19.94**	**318**	*eP*		**P**		**05 54 52.5**	**+0.5**
KUU	**Kurty**	**19.94**	**318**	*eP*		**P**		**05 54 52.6**	**+0.5**
BJI2	**Beijing**	**19.97**	**55**	P		**P**		**05 54 52.8**	**+0.3**
BJI2				pmax		pmax			
	comp=Z,4.0nm,1.5s								
DGZ	**Jazzator, Alta**	**20.15**	**346**	*i* P		**P**		**05 54 55.2**	**+0.7**
DGZ				pmax		pmax			
	comp=Z,31nm,1.1s								
AAK	**Ala-Archa**	**20.36**	**313**	P		**P**		**05 54 57.3**	**+0.4**
	comp=Z,36nm,1.1s,baz=130,slow=9.4,SNR=33								
	comp=Z,36nm,1.1s								
AAK	**Ala-Archa**	**20.36**	**313**	*ceP*		Pn		05 54 58.5	-0.5
AAK				pmax		pmax			
	comp=Z,82nm,1.3s								
AAK	**Ala-Archa**	**20.36**	**313**			**P**		**05 54 58.0**	**+1.1**
AAK				IAmb		IAmb		05 55 04.6	
	comp=Z,87nm,1.3s								
AAK	**Ala-Archa**	**20.36**	**313**	P		Pn		05 54 59.2	+0.2
MANEM	**Manem**	**20.44**	**297**	P		**P**		**05 54 58.3**	**+0.4**
MANEM				IAmb		IAmb		05 55 03.8	
	comp=Z,101nm,1.2s								
OHH	**Osh**	**20.56**	**306**	P		Pn		05 55 00.8	-0.4
NJ2	**Nanjing**	**20.68**	**79**	*eP*		Pn		05 55 01.8	-0.8
NJ2				pmax		pmax			
	comp=Z,34nm,0.5s								
SGDS	**Sogindy**	**20.71**	**315**	*eP*		**P**		**05 55 00.9**	**+0.4**
SGDS				*eS*		**S**		**05 58 52.6**	**+1.3**
DRK	**Karamyk**	**20.89**	**302**	P		**P**		**05 55 04.1**	**+1.3**
ZAK	**Zakamensk**	**21.06**	**15**	*eP*		**P**		**05 55 03.1**	**-1.2**
ZAK				pmax		pmax			
	comp=Z,35nm,1.9s								
ARK	**Arkit**	**21.64**	**308**	P		**P**		**05 55 11.0**	**+0.4**
ARK	**Arkit**	**21.64**	**308**	P		**P**		**05 55 12.0**	**+1.3**
BTK	**Batken**	**21.80**	**303**	P		**P**		**05 55 12.6**	**+0.3**
BTK				pmax		pmax			
	comp=Z,63nm,1.1s								
BTK	**Batken**	**21.80**	**303**	P		**P**		**05 55 12.6**	**+0.3**
BTK				IAmb		IAmb		05 55 16.7	
	comp=Z,63nm,1.1s								
BTK	**Batken**	**21.80**	**303**	P		**P**		**05 55 13.9**	**+1.6**
MOY	**Mondy**	**21.84**	**10**	*eP*		**P**		**05 55 11.8**	**-0.9**
MOY				pmax		pmax			
	comp=Z,32nm,1.8s								
GAR	**Garm**	**21.85**	**300**	P		**P**		**05 55 12.4**	**-0.5**
GAR	**Garm**	**21.85**	**300**	P		**P**		**05 55 12.7**	**-0.3**
BTLS	**Baital**	**21.94**	**318**	*eP*		**P**		**05 55 14.2**	**+0.5**
BTLS				*eS*		**S**		**05 59 16.7**	**+1.3**
BTLS	**Baital**	**21.94**	**318**	*eP*		**P**		**05 55 14.2**	**+0.5**
BTLS				*eS*		**S**		**05 59 16.8**	**+1.3**
KBL	**Kabul**	**22.09**	**288**	P		**P**		**05 55 15.6**	**0.0**
KBL				pmax		pmax			
	comp=Z,166nm,1.4s								
KBL	**Kabul**	**22.09**	**288**	P		**P**		**05 55 15.6**	**0.0**
KBL	**Kabul**	**22.09**	**288**	P		**P**		**05 55 16.6**	**+1.0**
TRKS	**Terek-Say**	**22.10**	**307**	P		**P**		**05 55 16.3**	**+0.7**
TLY	**Talaya**	**22.36**	**15**	LR		LR		06 04 39.0	
	comp=Z,113nm,20.5s,baz=234,slow=38								
DZA	**Taraz**	**22.53**	**310**	*eP*		**P**		**05 55 20.6**	**+0.5**
DZA				pmax		pmax			
	comp=Z,34nm,1.3s								
DZA	**Taraz**	**22.53**	**310**	*eP*		**P**		**05 55 20.7**	**+0.6**
	comp=Z,34nm,1.3s								
CHGR	**Chuyangaron**	**22.64**	**298**	⇓*i*P		**P**		**05 55 21.0**	**-0.3**
CHGR				pmax		pmax			
	comp=Z,261nm,1.3s								
CHGR	**Chuyangaron**	**22.64**	**298**	P		**P**		**05 55 20.8**	**-0.5**
CHGR	**Chuyangaron**	**22.64**	**298**	P		**P**		**05 55 21.2**	**-0.1**
IRK	**Irkutsk**	**23.02**	**15**	*eP*		**P**		**05 55 23.8**	**-1.3**
IRK				pmax		pmax			
	comp=Z,42nm,1.3s								
IUG	**Luzhnay**	**23.10**	**308**	*eP*		**P**		**05 55 26.7**	**+0.6**
IUG				pmax		pmax			
	comp=Z,16nm,1.0s								
IUG	**Luzhnay**	**23.10**	**308**	*eP*		**P**		**05 55 26.7**	**+0.6**
	comp=Z,16nm,1.0s								
KKAR	**Karatay Array**	**23.17**	**310**	P		**P**		**05 55 27.2**	**+0.5**
KKAR	**Karatay Array**	**23.17**	**310**			**P**		**05 55 27.2**	**+0.5**
SHAA	**Shahritus**	**23.21**	**295**	IAmb		IAmb		05 55 31.5	
	comp=Z,115nm,1.3s								
CHM	**Chimkent**	**23.46**	**308**	*eP*		**P**		**05 55 30.3**	**+0.7**
CHM				pmax		pmax			
	comp=Z,22nm,1.0s								
CHM	**Chimkent**	**23.46**	**308**	*eP*		**P**		**05 55 30.4**	**+0.7**
	comp=Z,22nm,1.0s								
BRLS	**Borolday**	**23.59**	**309**	*eP*		**P**		**05 55 31.7**	**+0.8**
BRLS	**Borolday**	**23.59**	**309**	*eP*		**P**		**05 55 31.7**	**+0.8**
KURBB	**Kurchatov Arra**	**23.66**	**334**	P		**P**		**05 55 30.8**	**-0.7**
	comp=Z,9.0nm,0.8s,baz=142,slow=11,SNR=50								
KURBB				PcP		**PcP**		**05 59 14.9**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=156,slow=1.8,SNR=7.4								
	comp=Z,9.0nm,0.8s								
KURK	**Kurchatov**	**23.70**	**334**	*ceP*		**P**		**05 55 31.2**	**-0.7**
KURK				pmax		pmax			
	comp=Z,34nm,1.3s								
KURK	**Kurchatov**	**23.70**	**334**	P		**P**		**05 55 30.9**	**-0.9**
KURK	**Kurchatov**	**23.70**	**334**	P		**P**		**05 55 31.4**	**-0.5**
TPUB	**Ta-pu**	**24.09**	**101**	P		**P**		**05 55 36.2**	**+0.4**
SSLB	**Suanglung**	**24.19**	**99**	P		**P**		**05 55 37.5**	**+0.7**
TWG	**Pinlang**	**24.65**	**101**	P		**P**		**05 55 34.0**	**-7.0**
ZAA0	**Zalesovo Array**	**24.71**	**346**			**P**		**05 55 40.8**	**-0.4**
ZALV	**Zalesovo Beam**	**24.71**	**346**	P		**P**		**05 55 40.6**	**-0.6**
	comp=Z,5.9nm,0.7s,baz=168,slow=7.9,SNR=29								
	comp=Z,5.9nm,0.7s								
ZALV	**Zalesovo Beam**	**24.71**	**346**	*i* P		**P**		**05 55 40.7**	**-0.4**
ZALV				pmax		pmax			
	comp=Z,6.0nm,0.7s								
ZALV	**Zalesovo Beam**	**24.71**	**346**			**P**		**05 55 40.7**	**-0.4**
KOD	**Kodaikanal**	**25.66**	**223**	*eP*		**P**		**05 55 50.6**	**+0.2**
KOD				IAmb		IAmb		05 55 55.7	
	comp=Z,12nm,0.7s								
HILR	**Hailar Array B**	**26.95**	**37**	P		**P**		**05 56 01.2**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=213,slow=11,SNR=5.0								
	comp=Z,0.7nm,0.3s								
HRA	**Herat**	**27.70**	**287**	P		**P**		**05 56 08.6**	**-0.1**
CN2	**Changchun**	**27.78**	**52**	P		**P**		**05 56 09.0**	**0.0**
CN2				PP		**PnPn**		**05 56 57.3**	**+2.2**
CN2				S		**S**		**06 00 48.5**	**-2.7**
CN2				pmax		pmax			
	comp=Z,20nm,1.2s								
CN2				L		L			
	comp=Z,140nm,11.0s								
CN2				L		L			
	comp=Z,290nm,11.0s								
CN2				L		L			
	comp=Z,220nm,10.0s								
KSRS	**Korea Array**	**28.34**	**66**	P		**P**		**05 56 14.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=259,slow=11,SNR=1.8								
	comp=Z,0.3nm,0.3s								
BVAR	**Borovoye Array**	**28.84**	**329**	P		**P**		**05 56 19.1**	**+0.7**
	comp=Z,4.9nm,0.9s,baz=123,slow=11,SNR=12								
BVAR				PcP		**PcP**		**05 59 27.5**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=134,slow=6.2,SNR=4.4								
	comp=Z,4.9nm,0.9s								
BNX	**BinXian**	**29.73**	**50**	⇓P		**P**		**05 56 26.5**	**+0.1**
BNX				pmax		pmax			
	comp=Z,10.0nm,1.2s								
HEH	**HeiHe**	**31.53**	**41**	*eP*		**P**		**05 56 44.0**	**+1.8**
HEH				L		L			
	comp=Z,130nm,14.1s								
HEH				L		L			
	comp=Z,190nm,12.3s								
HEH				L		L			
	comp=Z,290nm,15.3s								
AB31	**Akbulak array**	**32.38**	**316**	P		**P**		**05 56 48.6**	**-1.1**
ABKAR	**Akbulak array**	**32.38**	**316**	P		**P**		**05 56 48.6**	**-1.1**
ZEA	**Zeya**	**33.16**	**36**	*eP*		**P**		**05 56 58.2**	**+1.8**
ZEA				pmax		pmax			
	comp=Z,20nm,1.1s								
ZEA				MLR		MLR			
	comp=E,100nm,12.0s								
ZEA				MLR		MLR			
	comp=N,100nm,8.0s								
ZEA				MLR		MLR			
	comp=Z,200nm,11.0s								
SVE	**Sverdlovsk**	**35.62**	**328**	*eP*		**P**		**05 57 18.9**	**+1.3**
SVE				pmax		pmax			
	comp=Z,33nm,1.3s								
ARTI	**Arti**	**36.44**	**326**	*c i*P		**P**		**05 57 25.3**	**+0.6**
ARTI								05 58 43.9	
ARTI							

comp=Z,22nm,1.2s
RAYN Ar Rayn 44.16 273 P **P** **05 58 29.1 -0.1**
RAYN Ar Rayn 44.16 273 P **P** **05 58 29.1 -0.1**
SOC Sochi 45.17 303 *e*P **P** **05 58 38.6 +1.7**
SOC *e* 06 00 26.2
SOC *e*PPP PPP 06 00 58.1
SOC *e*S **S** **06 05 18.3 +2.3**
SOC *e*SSS SSS 06 09 24.7
SOC pmax pmax
comp=Z,22nm,1.0s
SOC MLR MLR
comp=Z,85nm,22.0s
TIXI Tiksi 45.33 14 P **P** **05 58 37.6 -0.1**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
TIXI Tiksi 45.33 14 P **P** **05 58 37.6 -0.1**
KELT Kelkit 45.74 298 P **P** **05 58 42.1 +0.4**
VSR Storozhevoye 45.76 314 *e*P **P** **05 58 41.4 0.0**
VSR pmax pmax
comp=Z,24nm,1.2s
VORR Voronezh 45.78 314 *e*P **P** **05 58 41.3 -0.3**
VORR pmax pmax
comp=Z,34nm,0.4s
LPSR Galich'ya Gora 46.04 315 *e*P **P** **05 58 43.7 0.0**
LPSR pmax pmax
comp=Z,30nm,1.0s
MOS Moscow 47.20 320 *e*P **P** **05 58 54.2 +1.6**
MOS pmax pmax
comp=Z,62nm,1.2s
KLMR Klimovskoe 47.22 327 *e*P **P** **05 58 52.0 -0.8**
KLMR *e* 06 00 42.1
KLMR pmax pmax
comp=Z,39nm,1.2s
OBN Obninsk 47.72 319*d* *i*P **P** **05 58 57.9 +1.2**
OBN *e* 06 00 27.0
OBN *e* 06 00 49.3
OBN *e*PPP PPP 06 01 35.3
OBN pmax pmax
comp=Z,18nm,1.2s
OBN MLR MLR
comp=Z,54nm,16.0s
ANDN Andirin 48.33 295 P **P** **05 59 01.8 -0.1**
BNN Bunyan 48.52 297 IAmb IAmb 05 59 06.9
comp=Z,17nm,1.1s
BRTR Keskin Array B 50.08 298 P **P** **05 59 15.3 0.0**
comp=Z,3.3nm,0.9s,baz=117,slow=7.2,SNR=12
comp=Z,3.3nm,0.9s
BRTR Keskin Array B 50.08 298 *i* P **P** **05 59 16.5 +1.2**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 50.08 298 P **P** **05 59 14.2 -1.1**
BR104 Keskin Array S 50.08 298 P **P** **05 59 15.6 +0.3**
comp=Z,37nmcomp=Z,4.5nm,1.2s
BR106 Keskin Array S 50.09 298 P **P** **05 59 15.6 +0.2**
comp=Z,39nmcomp=Z,4.5nm,0.9s
PETK Petropavlovsk- 50.38 44 P **P** **05 59 18.0 +0.8**
comp=Z,4.4nm,0.9s,baz=322,slow=9.4,SNR=5.0
comp=Z,4.4nm,0.9s
PETK Petropavlovsk- 50.38 44 P **P** **05 59 16.7 -0.4**
KKUL Konya-Kulu 50.72 298 P **P** **05 59 21.2 +1.1**
HRFI Mount Harif 51.08 286 P **P** **05 59 23.6 +0.7**
AK09 Malin Array Si 52.00 313 P **P** **05 59 29.2 -0.1**
AK08 Malin Array Si 52.02 313 P **P** **05 59 29.2 -0.3**
AK10 Malin Array Si 52.02 313 P **P** **05 59 29.4 -0.1**
AKASG Malin Array Be 52.03 313 P **P** **05 59 29.5 -0.1**
comp=Z,8.5nm,0.9s,baz=79,slow=6.8,SNR=21
comp=Z,8.5nm,0.9s
AKASG Malin Array Be 52.03 313 P **P** **05 59 28.9 -0.6**
AKBB Malin Array Si 52.03 313 IAmb IAmb 05 59 32.3
comp=Z,20nm,1.1s
AKBB Malin Array Si 52.03 313 P **P** **05 59 29.4 -0.2**
AK03 Malin Array Si 52.03 313 P **P** **05 59 29.6 0.0**
AK01 Malin Array Si 52.04 313 P **P** **05 59 29.3 -0.3**
KIEV Kiev 52.04 313 P **P** **05 59 29.6 0.0**
KIEV Kiev 52.04 313 P **P** **05 59 29.3 -0.3**
comp=Z,63nm,1.1s
KIEV Kiev 52.04 313 P **P** **05 59 29.7 0.0**
MNK Minsk 52.71 318 *i* P **P** **05 59 36.4 +1.8**
comp=E,21nm,0.9s
MNK *i* P **P** **05 59 36.4 +1.8**
comp=N,24nm,0.9s
MNK *i* P **P** **05 59 36.4 +1.8**
comp=Z,10.0nm,0.7s,baz=89
MNK *i* PcP **PcP** **06 00 46.0 +1.9**
MNK *i* PP **PP** **06 01 35.6 +2.1**
MNK *i* PPP PPP 06 02 39.1
MNK *i* S **S** **06 07 04.8 +3.1**
MNK *i* ScS **ScS** **06 09 26.3 +2.7**
MNK *i* SS **SS** **06 10 44.7 +4.9**
MNK *i* SSS SSS 06 12 30.2
MNK *i* LQ 06 18 15.5
MNK *i* LR LR 06 23 30.2
MNK *i* LRM MLR 06 25 41.6
comp=N,67nm,17.5s
MNK *i* LRM MLR 06 25 43.2
comp=Z,80nm,16.9s
MNK *i* LRM MLR 06 25 47.6
comp=E,42nm,16.0s
MNK Minsk 52.71 318 *i* P **P** **05 59 36.3 +1.8**
MNK *i* 06 00 46.0
MNK *i* 06 01 35.6
MNK *i* PPP PPP 06 02 39.1
MNK *i* S **S** **06 07 04.7 +3.1**
MNK *i* 06 09 26.2
MNK *i* SS **SS** **06 10 44.7 +4.9**
MNK *i* SSS SSS 06 12 30.2
MNK pmax pmax
comp=E,21nm,0.9s
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK MLR MLR
comp=N,67nm,18.0s
MNK MLR MLR
comp=Z,80nm,17.0s
MNK MLR MLR
comp=E,42nm,16.0s
SORM Soroca 52.80 310 P **P** **05 59 35.0 -0.3**
comp=E,7µmcomp=E,10nm,1.2s
MI28 Mi28,Pidlybu 53.00 313 P **P** **05 59 36.9 +0.1**
LUBAR Lubar, Ukraine 53.02 312 P **P** **05 59 36.8 -0.2**
YLV Yalova 53.16 300 P **P** **05 59 38.6 +0.4**
comp=E,12nm,1.0s
FINES FINESS Array B 53.75 326 P **P** **05 59 41.9 -0.2**
comp=E,2.6nm,0.8s,baz=149,slow=4.0,SNR=6.8
comp=E,2.6nm,0.8s
FINES FINESS Array B 53.75 326 *i* P **P** **05 59 42.9 +0.8**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 53.75 326 P **P** **05 59 42.7 +0.6**
KMPD K-Podol'skiy 54.01 310 P **P** **05 59 43.2 -1.0**
SGF Sodankyl 54.06 334 P **P** **05 59 45.2 +0.9**
SGF pP **sP** **05 59 56.3 +3.2**
RNPP5 Staryi Chortor 54.10 314 P **P** **05 59 44.2 -0.6**
RNPP8 Varash 54.11 314 P **P** **05 59 45.0 +0.1**
VRI Vrincioaia 54.18 307 P **P** **05 59 47.7 +2.1**
VRI Vrincioaia 54.18 307 P **P** **05 59 46.5 +0.9**
comp=Z,22nm,1.4s
VRI Vrincioaia 54.18 307 P **P** **05 59 45.4 -0.1**
BALY Balya 54.64 299 P **P** **05 59 49.3 +0.3**
ARCES ARCESS Array B 54.71 336 P **P** **05 59 48.5 -0.5**
comp=Z,2.5nm,0.9s,baz=27,slow=5.7,SNR=5.4
comp=Z,2.5nm,0.9s
ARCES ARCESS Array B 54.71 336 P **P** **05 59 48.2 -0.8**
ARCES IAmb IAmb 06 01 04.3
comp=Z,19nm,1.6s
MLR Muntele Rosu 54.78 307 P **P** **05 59 51.8 +1.7**
MLR Muntele Rosu 54.78 307 P **P** **05 59 50.5 +0.4**
comp=Z,31nm,1.4s
MLR Muntele Rosu 54.78 307 P **P** **05 59 49.6 -0.5**
PABE Paberze 54.92 319 P **P** **05 59 52.0 +1.4**
BURAR Bucovina Array 54.96 309 P **P** **05 59 49.9 -1.4**
BURAR pmax pmax
comp=Z,4.0nm,1.3s
BURAR Bucovina Array 54.96 309 P **P** **05 59 49.9 -1.4**
BUR08 Bucovina Ar. S 54.96 309 P **P** **05 59 50.3 -1.0**
BUR08 IAmb IAmb 05 59 54.7
comp=Z,19nm,1.8s
VOIR 55.41 307 P **P** **05 59 56.1 +1.6**
ALN Alexandroupoli 55.57 301 P **P** **05 59 56.1 +0.5**
EZN Ezine 55.59 300 P **P** **05 59 56.1 +0.3**
comp=Z,1µmcomp=Z,16nm,1.2s
ARR Arges 55.71 307 P **P** **05 59 57.4 +0.7**

RDO Rodhopi 55.89 301 IAmb IAmb 06 00 02.6
comp=Z,14nm,1.2s
RDO Rodhopi 55.89 301 P **P** **05 59 58.4 +0.5**
KWP Kalwaria Pacla 56.31 312 P **P** **06 00 02.5 +1.7**
KWP Kalwaria Pacla 56.31 312 P **P** **06 00 01.5 +0.7**
comp=Z,31nm,1.2s
TRPA Tarpa 56.66 310 P **P** **06 00 04.2 +0.9**
PAIG Paliouri 57.55 300 P **P** **06 00 09.9 +0.2**
KNT Kendrikon 57.83 302 P **P** **06 00 12.1 +0.4**
NIE Niedzica 57.89 312 P **P** **06 00 13.2 +1.1**
comp=Z,3.5nm,1.4s
OJC Ojcow 58.07 313 P **P** **06 00 12.8 -0.5**
OJC Ojcow 58.07 313 P **P** **06 00 12.8 -0.5**
OJC Ojcow 58.07 313 P **P** **06 00 13.4 +0.2**
GRG Griva 58.24 302 P **P** **06 00 14.2 -0.4**
LIT Litokhoron 58.39 301 IAmb IAmb 06 00 18.6
comp=Z,17nm,1.2s
KBN Korca 59.51 302 P **P** **06 00 23.3 -0.3**
MORC Moravsky Berou 59.58 313 P **P** **06 00 26.2 +2.4**
MORC Moravsky Berou 59.58 313 *e*P **P** **06 00 24.4 +0.6**
MORC Moravsky Berou 59.58 313 P **P** **06 00 24.1 +0.3**
MORH Mrgy, Hungar 59.64 309 P **P** **06 00 24.2 0.0**
comp=Z,6.1nm,1.4s
MORH Mrgy, Hungar 59.64 309 P **P** **06 00 24.5 +0.3**
JAVC Velka Javorina 59.70 312 *e*P **P** **06 00 25.7 +1.1**
JAVC Velka Javorina 59.70 312 P **P** **06 00 25.2 +0.5**
HFS Hagfors 59.88 325 P **P** **06 00 23.8 -1.8**
comp=Z,6.6nm,1.0s,baz=72,slow=4.8,SNR=5.6
comp=Z,6.6nm,1.0s
MPLH Magyarpolny 60.16 310 P **P** **06 00 28.5 +0.7**
comp=Z,17nm,1.6s
MPLH Magyarpolny 60.16 310 P **P** **06 00 28.2 +0.5**
DPC Dobruska-Polom 60.23 314 P **P** **06 00 28.4 +0.1**
comp=Z,5.1nm,1.3s
DPC Dobruska-Polom 60.23 314 P **P** **06 00 28.1 -0.2**
VRAC Vranov 60.29 312 P **P** **06 00 31.5 +2.9**
VRAC Vranov 60.29 312 *e*P **P** **06 00 29.5 +0.9**
VRAC Vranov 60.29 312 P **P** **06 00 29.9 +1.3**
KRUC Moravsky 60.47 312 P **P** **06 00 32.5 +2.6**
KRUC Moravsky 60.47 312 *e*P **P** **06 00 30.0 +0.1**
KRUC Moravsky 60.47 312 P **P** **06 00 30.4 +0.5**
NB2 NORSAR Subarra 60.93 326 P **P** **06 00 31.9 -1.0**
comp=Z,1.9nm,0.7s,baz=78,slow=6.9
NOA NORSAR Array B 60.93 326 P **P** **06 00 31.7 -1.1**
comp=Z,4.3nm,0.9s,baz=78,slow=6.8,SNR=5.4
comp=Z,4.3nm,0.9s
NC204 NORSAR Array S 61.10 327 P **P** **06 00 32.9 -1.1**
PRU Pruhonice 61.43 314 P **P** **06 00 37.5 +1.2**
LODK Lodwar 62.01 257 P **P** **06 00 41.3 +0.4**
LODK Lodwar 62.01 257 P **P** **06 00 40.7 -0.2**
CLL Collm 62.05 315 *i* P **P** **06 00 41.6 +1.1**
CLL Collm 62.05 315 *i* P **P** **06 00 41.6 +1.1**
GEC2 GERESS Array S 62.24 312 IAmb IAmb 06 00 45.1
comp=Z,16nm,1.5s
GERES GERESS Array B 62.24 312 P **P** **06 00 41.6 -0.4**
comp=Z,1.6nm,0.8s,baz=98,slow=4.0,SNR=14
comp=Z,1.6nm,0.8s
GERES GERESS Array B 62.24 312 P **P** **06 00 41.5 -0.6**
KHC Kasperske Hoy 62.25 313 P **P** **06 00 42.5 +0.5**
comp=Z,3.2nm,1.6s
WET Wettzell 62.69 313 P **P** **06 00 45.1 +0.3**
WET pP **sP** **06 00 56.8 +3.5**
WRA Warramunga Arr 62.81 138 P **P** **06 00 45.0 -0.9**
comp=Z,2.0nm,0.9s,baz=323,slow=8.0,SNR=10
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 62.81 138 P **P** **06 00 45.2 -0.8**
WRA pmax pmax
comp=Z,1.0nm,1.5s
WRA Warramunga Arr 62.81 138 P **P** **06 00 45.2 -0.8**
WIMM Wimmelburg 62.91 316 P **P** **06 00 47.6 +1.4**
MARCO Tramutola 63.24 303 P **P** **06 00 49.9 +1.1**
CLZ Clausthal 63.50 316 P **P** **06 00 50.4 +0.1**
CEL Celeste 63.83 301 P **P** **06 00 52.9 +0.2**
FDMO Fiordimonte 64.33 306 IAmb IAmb 06 00 58.4
comp=Z,7.3nm,1.0s
NRCA Norcia 64.37 306 IAmb IAmb 06 01 00.2
comp=Z,6.5nm,1.0s
MURB Monte Urbino 64.65 307 P **P** **06 00 58.8 +0.8**
ASAR Alice Springs 65.51 140 P **P** **06 01 03.5 -0.2**
comp=Z,2.0nm,0.7s,baz=324,slow=6.3,SNR=18
comp=Z,2.0nm,0.7s
ASAR Alice Springs 65.51 140 P **P** **06 01 03.0 -0.6**
TUE Stuetta 65.75 311 P **P** **06 01 05.2 -0.1**
comp=Z,26nm,1.0s
TUE Stuetta 65.75 311 P **P** **06 01 05.1 -0.1**
SENIN Lac Senin/Sane 67.12 311 P **P** **06 01 12.0 -2.1**
G16K Koyuk River 67.97 26 P **P** **06 01 17.7 -1.0**
baz=295
D19K Kuna River 68.12 22 P **P** **06 01 19.0 -0.7**
baz=297
VSL Villasalto 68.17 304 P **P** **06 01 20.6 +0.1**
H16K Elim 68.33 27 P **P** **06 01 20.1 -0.9**
baz=295
F18K Selawik 68.45 24 P **P** **06 01 21.0 -0.7**
baz=296
K13K Kusilvak Mount 68.46 30 P **P** **06 01 20.7 -1.1**
baz=294
D20K Etivluk River 68.50 22 P **P** **06 01 20.8 -1.3**
baz=298
G17K Kiwalik Mounta 68.57 26 P **P** **06 01 22.1 -0.5**
baz=296
J14K Nanvaranak Lak 68.59 29 P **P** **06 01 21.9 -0.8**
baz=295
E20K Nigu River 68.86 22 P **P** **06 01 23.5 -0.9**
baz=299
C21K Knifeblade Rid 68.87 21 P **P** **06 01 23.7 -0.7**
baz=300
E19K Redstone River 68.89 23 P **P** **06 01 23.4 -1.2**
baz=298
F19K Shaleruckik Mo 69.00 24 IAmb IAmb 06 01 26.9
comp=Z,8.3nm,1.1s
F19K Shaleruckik Mo 69.00 24 P **P** **06 01 24.8 -0.4**
baz=298
H17K Granite Mounta 69.10 26 P **P** **06 01 24.7 -1.2**
baz=297
G18K Tagagawik 69.13 25 P **P** **06 01 24.7 -1.3**
baz=298
I17K Unalakleet 69.27 27 P **P** **06 01 27.1 +0.2**
baz=296
E21K Killik River 69.48 22 P **P** **06 01 28.0 -0.2**
baz=301
L14K Kuka Creek 69.56 30 IAmb IAmb 06 01 32.7
comp=Z,10nm,1.1s
L14K Kuka Creek 69.56 30 P **P** **06 01 28.5 -0.2**
baz=296
G19K Purcell Mounta 69.57 24 P **P** **06 01 28.7 0.0**
baz=299
J16K Anvik River 69.57 28 P **P** **06 01 28.4 -0.4**
baz=297,SNR=6.1
H18K Honhosa River 69.58 26 P **P** **06 01 28.5 -0.4**
baz=298
F20K Avaraart Lake 69.61 23 P **P** **06 01 28.3 -0.7**
baz=300
KEST Kesra 69.62 300 P **P** **06 01 29.5 -0.2**
comp=Z,8.9nm,1.0s,baz=52,slow=0.7,SNR=7.6
comp=Z,8.9nm,1.0s
KEST Kesra 69.62 300 P **P** **06 01 29.8 +0.1**
KEST IAmb IAmb 06 01 33.3
comp=Z,13nm,1.1s
K15K Wolf Creek Mou 69.64 29 IAmb IAmb 06 01 34.0
comp=Z,20nm,1.5s
K15K Wolf Creek Mou 69.64 29 P **P** **06 01 28.9 -0.3**
baz=296
M13K Dall Lake 69.67 31 P **P** **06 01 29.2 -0.2**
baz=296
C23K Itkillik River 69.77 20 P **P** **06 01 29.8 -0.1**
baz=303
EKA Eskdalemuir Ar 69.88 323 P **P** **06 01 30.6 -0.2**
comp=Z,1.7nm,0.7s,baz=64,slow=7.6,SNR=5.1
comp=Z,1.7nm,0.7s
L15K Ungalak Mounta 69.93 30 P **P** **06 01 30.3 -0.7**
baz=297
H19K Roundabout Mou 70.10 25 IAmb IAmb 06 01 34.7
comp=Z,19nm,1.4s
H19K Roundabout Mou 70.10 25 P **P** **06 01 31.7 -0.3**
baz=300
J17K VABM Dome 70.13 27 IAmb IAmb 06 01 34.7
comp=Z,13nm,1.1s
J17K VABM Dome 70.13 27 P **P** **06 01 31.5 -0.7**
baz=298
M14K Bethel 70.14 31 IAmb IAmb 06 01 36.5
comp=Z,16nm,1.1s
M14K Bethel 70.14 31 P **P** **06 01 31.6 -0.7**
baz=297
D23K Nanushuk River 70.22 20 P **P** **06 01 31.2 -1.5**
baz=303

F21K Alatna River 70.27 23 IAmb IAmb 06 01 36.8
comp=Z,12nm,1.4s
F21K Alatna River 70.27 23 P **P** **06 01 31.9 -1.2**
baz=301
E22K Anaktuvuk Pass 70.33 21 P **P** **06 01 32.7 -0.8**
baz=303
GCSA Galena City Sc 70.33 26 P **P** **06 01 32.9 -0.4**
baz=299
CTA Charters Tower 70.45 129 LR LR 06 33 31.3
comp=Z,34nm,20.6s,baz=216,slow=37
G21K Allakaket 70.64 23 P **P** **06 01 34.7 -0.6**
baz=302
N14K Kuskokwak Cree 70.64 31 P **P** **06 01 35.0 -0.4**
baz=297
D24K Happy Valley 70.67 20 P **P** **06 01 34.8 -0.7**
baz=305
H20K Anotleneega Mo 70.69 24 P **P** **06 01 35.1 -0.5**
baz=301
M15K Kasigluk River 70.72 30 P **P** **06 01 35.4 -0.5**
baz=298,SNR=5.7
TOLK Toolik Lake Re 70.74 20 P **P** **06 01 35.1 -0.9**
baz=304
L16K Owhat River 70.77 29 IAmb IAmb 06 01 40.8
comp=Z,12nm,1.4s
L16K Owhat River 70.77 29 P **P** **06 01 35.7 -0.4**
baz=298
K17K Iditarod 70.77 28 P **P** **06 01 35.9 -0.3**
baz=299,SNR=7.2
UNV Unalaska Valle 70.94 38 P **P** **06 01 36.8 -0.5**
baz=295
J18K Innoko River 71.03 27 IAmb IAmb 06 01 39.9
comp=Z,11nm,1.1s
J18K Innoko River 71.03 27 P **P** **06 01 36.8 -1.0**
baz=300,SNR=9.7
L17K Donlin 71.05 28 P **P** **06 01 37.5 -0.4**
baz=299
E23K Chandalar 71.06 21 IAmb IAmb 06 01 43.7
comp=Z,12nm,1.3s
E23K Chandalar 71.06 21 P **P** **06 01 37.2 -0.7**
baz=304
G22K Bettles 71.09 22 P **P** **06 01 37.4 -0.6**
baz=303
J19K Poorman 71.18 26 IAmb IAmb 06 01 42.4
comp=Z,11nm,1.0s
J19K Poorman 71.18 26 P **P** **06 01 37.4 -1.2**
baz=301,SNR=8.5
I20K Naaghedeneel 71.19 25 P **P** **06 01 37.8 -0.8**
baz=301
N15K Kwethluk River 71.23 31 P **P** **06 01 38.7 -0.3**
baz=298
D25K Kavik River 71.28 19 IAmb IAmb 06 01 43.1
comp=Z,7.8nm,1.1s
D25K Kavik River 71.28 19 P **P** **06 01 38.5 -0.7**
baz=307
M16K Timber Creek 71.31 30 IAmb IAmb 06 01 43.6
comp=Z,20nm,1.6s
M16K Timber Creek 71.31 30 P **P** **06 01 39.3 -0.2**
baz=299
C26K Camden Bay 71.32 18 P **P** **06 01 38.8 -0.5**
baz=308
H21K Melozitna Rive 71.34 24 P **P** **06 01 39.0 -0.5**
baz=302
COLD ColdFoot 71.34 22 P **P** **06 01 39.3 -0.3**
baz=304
E24K Your Creek 71.40 21 IAmb IAmb 06 01 42.5
comp=Z,10nm,1.1s
E24K Your Creek 71.40 21 P **P** **06 01 39.6 -0.3**
baz=305
J20K Nowinta River 71.64 26 IAmb IAmb 06 01 44.2
comp=Z,12nm,1.2s
J20K Nowinta River 71.64 26 P **P** **06 01 41.1 -0.3**
baz=302,SNR=8.0
N16K Nishlik Lake 71.66 30 P **P** **06 01 40.9 -0.7**
baz=299
L18K Granite Mounta 71.67 28 P **P** **06 01 40.8 -0.7**
baz=300
G23K Bananza Creek 71.69 22 P **P** **06 01 41.9 +0.1**
baz=304
H22K Ishtalitna Cre 71.70 23 P **P** **06 01 41.6 -0.2**
baz=304
M17K Holitna River 71.77 29 IAmb IAmb 06 01 49.2
comp=Z,17nm,1.4s
M17K Holitna River 71.77 29 P **P** **06 01 42.0 -0.2**
baz=300
O15K Ungalikthiuk R 71.83 31 P **P** **06 01 42.4 -0.2**
baz=299
C27K Jago River 71.83 18 IAmb IAmb 06 01 45.8
comp=Z,13nm,1.0s
C27K Jago River 71.83 18 P **P** **06 01 42.3 -0.1**
baz=309
I21K Tanana 71.89 24 P **P** **06 01 42.3 -0.5**
baz=303
F24K Squaw Lake 71.91 21 P **P** **06 01 41.5 -1.5**
baz=306
K20K Telida 72.11 26 IAmb IAmb 06 01 47.1
comp=Z,9.2nm,1.1s
K20K Telida 72.11 26 P **P** **06 01 43.0 -1.2**
baz=302
E25K Arctic Village 72.25 20 IAmb IAmb 06 01 47.5
comp=Z,9.2nm,1.3s
E25K Arctic Village 72.25 20 P **P** **06 01 44.0 -1.0**
baz=308
N17K Nushagak Hills 72.32 30 P **P** **06 01 44.7 -0.8**
baz=300
H23K Yukon River 72.36 23 P **P** **06 01 45.1 -0.7**
baz=305
M18K Stony River 72.39 28 P **P** **06 01 45.1 -0.9**
baz=301
O16K Kokwok River B 72.39 31 IAmb IAmb 06 01 48.9
comp=Z,13nm,1.1s
O16K Kokwok River B 72.39 31 P **P** **06 01 44.9 -1.1**
baz=300
MLY Manley 72.41 24 IAmb IAmb 06 01 49.0
comp=Z,7.1nm,1.0s
MLY Manley 72.41 24 P **P** **06 01 45.2 -0.8**
baz=304,SNR=6.3
L19K White Mountain 72.42 27 IAmb IAmb 06 01 49.4
comp=Z,13nm,1.1s
L19K White Mountain 72.42 27 P **P** **06 01 46.0 -0.1**
baz=302,SNR=6.6
CHUM Lake Minchumin 72.48 25 P **P** **06 01 45.6 -0.8**
baz=303
G24K Hadweenzic Riv 72.53 22 IAmb IAmb 06 01 51.2
comp=Z,17nm,1.7s
G24K Hadweenzic Riv 72.53 22 P **P** **06 01 46.1 -0.5**
baz=307
SUMG Summit 72.53 347 P **P** **06 01 46.4 -0.6**
SUMG pmax pmax
comp=Z,11nm,1.3s
SUMG Summit 72.53 347 P **P** **06 01 46.4 -0.6**
SUMG IAmb IAmb 06 01 48.8
comp=Z,11nm,1.3s
F25K Christian Rive 72.55 20 P **P** **06 01 46.1 -0.8**
baz=308
CEST Esterri de Car 72.57 309 IAmb IAmb 06 01 51.9
comp=Z,11nm,1.2s
O17K Koliganek Bris 72.74 30 P **P** **06 01 47.4 -0.6**
baz=301
M19K Big River Lodg 72.76 28 P **P** **06 01 48.0 -0.1**
baz=302
N18K Kilae Creek 72.79 29 P **P** **06 01 47.7 -0.7**
baz=301
I23K Minto, Yukon-K 72.82 23 P **P** **06 01 47.9 -0.5**
baz=306
D27M Malcolm River 72.82 18 P **P** **06 01 47.8 -0.7**
baz=312
CAST Castle Rocks 72.82 26 P **P** **06 01 49.2 +0.7**
CAST IAmb IAmb 06 01 51.2
comp=Z,13nm,1.3s
CAST Castle Rocks 72.82 26 P **P** **06 01 47.9 -0.6**
baz=304,SNR=9.1
H24K Noodor Dome 72.91 22 P **P** **06 01 48.4 -0.6**
baz=307
G25K Bearman Lake 72.92 21 P **P** **06 01 48.8 -0.1**
baz=308
F26K Sheenjek River 72.93 20 P **P** **06 01 48.6 -0.6**
baz=309
PPLA Purkeypile 73.08 26 P **P** **06 01 49.2 -1.0**
baz=304,SNR=5.3
NEA2 Nenana 73.24 24 IAmb IAmb 06 01 53.6
comp=Z,8.1nm,1.0s
NEA2 Nenana 73.24 24 P **P** **06 01 50.1 -0.9**
baz=306,SNR=6.0
M20K Styx River 73.27 27 IAmb IAmb 06 01 57.2
comp=Z,11nm,1.2s
M20K Styx River 73.27 27 P **P** **06 01 50.7 -0.6**
baz=303
N19K Bonanza Creek 73.30 29 P **P** **06 01 51.0 -0.4**

baz=302
P17K Kvichak River 73.33 31 P P 06 01 51.4 -0.1
baz=301
D28M Stokes Point 73.35 17 P P 06 01 51.0 -0.4
baz=314
E27K Coleen River 73.35 19 IAmb IAmb 06 01 54.7
comp=Z,7.2nm,0.9s
E27K Coleen River 73.35 19 P P 06 01 50.7 -0.9
baz=311,SNR=8.0
TRF Thorofare Moun 73.47 25 P P 06 01 51.4 -1.1
baz=305
POKR Poker Plat Res 73.49 23 P P 06 01 51.4 -1.0
baz=307
COLA College 73.50 23 P P 06 01 54.1 +1.7
COLA College 73.50 23 P P 06 01 52.4 0.0
O18K Koktuh Hills 73.51 30 P P 06 01 51.8 -0.8
baz=302
G26K Porcupine Rive 73.52 21 IAmb IAmb 06 01 55.7
comp=Z,14nm,1.2s
G26K Porcupine Rive 73.52 21 P P 06 01 51.6 -0.9
baz=310
E28M Babbage River 73.64 18 IAmb IAmb 06 01 56.3
comp=Z,8.7nm,1.0s
E28M Babbage River 73.64 18 P P 06 01 52.6 -0.6
baz=313,SNR=11
P18K Big Mountain, 73.75 30 P P 06 01 53.0 -1.1
baz=302
MCK McKinley 73.80 25 P P 06 01 53.3 -0.9
baz=306
L22K Petersville 73.83 26 IAmb IAmb 06 01 56.7
comp=Z,12nm,0.9s
L22K Petersville 73.83 26 P P 06 01 53.7 -0.7
baz=305,SNR=10
SKT Skwentna 73.84 27 IAmb IAmb 06 01 56.8
comp=Z,11nm,1.1s
SKT Skwentna 73.84 27 P P 06 01 53.6 -0.9
baz=304,SNR=6.3
PRP Porcupine Dome 73.88 22 IAmb IAmb 06 01 57.9
comp=Z,7.5nm,1.0s
PRP Porcupine Dome 73.88 22 P P 06 01 54.0 -0.8
baz=309,SNR=6.8
ILAR Eielson Array 73.89 23 P P 06 01 53.8 -0.9
comp=Z,3.6nm,0.9s,baz=296,slow=5.4,SNR=21
comp=Z,3.6nm,0.9s
F28M Old Crow 74.22 19 IAmb IAmb 06 01 59.7
comp=Z,7.7nm,0.9s
F28M Old Crow 74.22 19 P P 06 01 55.9 -0.8
baz=313,SNR=9.8
E29M Blow River 74.22 18 IAmb IAmb 06 01 59.1
comp=Z,9.6nm,1.1s
E29M Blow River 74.22 18 P P 06 01 55.8 -0.9
baz=314,SNR=6.3
G27K Doyon Strip 74.25 20 P P 06 01 55.8 -1.0
baz=312
WAT1 Susitna Watana 74.48 25 P P 06 01 57.6 -0.6
baz=307
J25K Salcha River, 74.50 23 P P 06 01 57.9 -0.5
baz=309
H27K Steamboat Moun 74.67 20 IAmb IAmb 06 02 02.8
comp=Z,12nm,0.9s
H27K Steamboat Moun 74.67 20 P P 06 01 58.3 -1.1
baz=312,SNR=19
DHY Denali Highway 74.76 25 P P 06 01 59.0 -1.0
baz=308
K24K Donnelly Dome 74.87 24 IAmb IAmb 06 02 02.3
comp=Z,13nm,0.9s
K24K Donnelly Dome 74.87 24 P P 06 01 59.3 -1.2
baz=309
WAT6 Susitna Watana 74.92 25 P P 06 02 00.2 -0.8
baz=307
PMR Palmer 75.00 26 IAmb IAmb 06 02 03.3
comp=Z,8.4nm,1.0s
PMR Palmer 75.00 26 P P 06 02 00.2 -1.0
baz=306
RC01 Rabbit Creek A 75.06 27 P P 06 02 00.9 -0.7
baz=306
I27K Kandik River 75.07 21 IAmb IAmb 06 02 05.2
comp=Z,14nm,1.0s
I27K Kandik River 75.07 21 P P 06 02 01.1 -0.5
baz=312,SNR=14
HOM Homer 75.12 29 P P 06 02 01.5 -0.4
baz=305
SML Sawmill 75.17 26 IAmb IAmb 06 02 04.9
comp=Z,12nm,0.9s
SML Sawmill 75.17 26 P P 06 02 00.9 -1.4
baz=307
G29M Pine Creek 75.23 19 IAmb IAmb 06 02 05.0
comp=Z,11nm,1.2s
G29M Pine Creek 75.23 19 P P 06 02 01.6 -0.9
baz=315
RIDG Independent Ri 75.23 23 IAmb IAmb 06 02 03.8
comp=Z,20nm,1.5s
RIDG Independent Ri 75.23 23 P P 06 02 01.3 -1.3
baz=310
F30M Barrier River 75.34 18 IAmb IAmb 06 02 06.1
comp=Z,10nm,0.9s
F30M Barrier River 75.34 18 P P 06 02 01.9 -1.2
baz=316,SNR=6.6
KNK Knik Glacier 75.36 26 P P 06 02 02.6 -0.8
baz=307
INK Inuvik 75.40 17 P P 06 02 02.4 -1.0
baz=318,SNR=5.4
INK Inuvik 75.40 17 P P 06 02 03.3 -0.1
M23K Glacier View 75.41 26 P P 06 02 02.5 -1.2
baz=308
BRSE Bradley Lake S 75.45 28 P P 06 02 03.4 -0.5
baz=306
PAX Paxson 75.50 24 P P 06 02 03.7 -0.6
baz=309
SCM Sheep Creek Mo 75.54 26 P P 06 02 03.8 -0.7
baz=308
H29M Whitestone 75.62 20 IAmb IAmb 06 02 07.4
comp=Z,12nm,1.1s
H29M Whitestone 75.62 20 P P 06 02 03.5 -1.2
baz=314,SNR=6.9
G30M tAoh Zraii Nji 75.68 18 P P 06 02 03.9 -1.2
baz=316,SNR=13
I28M Miner Creek 75.69 21 P P 06 02 04.2 -1.0
baz=313,SNR=8.5
PWL Port Wells 75.75 27 P P 06 02 04.1 -1.5
baz=307
SEW Seward 75.76 28 P P 06 02 04.5 -1.1
baz=307
M24K Tolsona, Glenn 75.79 25 P P 06 02 04.9 -1.0
baz=309
OHAK Old Harbor 75.80 31 P P 06 02 05.2 -0.7
baz=304
K27K Chicken 75.97 22 IAmb IAmb 06 02 08.7
comp=Z,28nm,1.8s
HARP HAARP 75.98 25 P P 06 02 05.7 -1.2
baz=310
EPYK Eagle Plains 75.98 19 IAmb IAmb 06 02 25.0
comp=Z,21nm,1.6s
EPYK Eagle Plains 75.98 19 P P 06 02 06.1 -0.7
baz=316
F31M Tsiigehtchic 76.00 17 IAmb IAmb 06 02 08.7
comp=Z,14nm,1.2s
F31M Tsiigehtchic 76.00 17 P P 06 02 05.8 -1.1
baz=318,SNR=5.9
G31M Satah River 76.24 18 IAmb IAmb 06 02 10.5
comp=Z,11nm,0.9s
G31M Satah River 76.24 18 P P 06 02 07.5 -0.7
baz=318,SNR=6.7
KLU Klutina 76.27 26 IAmb IAmb 06 02 12.4
comp=Z,17nm,1.3s
KLU Klutina 76.27 26 P P 06 02 07.7 -0.9
baz=309
P23K Montague Islan 76.64 27 P P 06 02 10.1 -0.6
baz=308
N25K Chitina, Valde 76.69 25 P P 06 02 10.2 -0.8
baz=310
L27K Beaver Creek, 76.70 23 P P 06 02 10.0 -1.0
baz=312,SNR=6.6
BCAR Beaver Creek A 76.72 23 P P 06 02 10.9 -0.2
DAWY Dawson 76.81 21 P P 06 02 10.3 -1.3
baz=314
I30M Mount Dempster 76.91 20 IAmb IAmb 06 02 16.1
comp=Z,9.9nm,1.1s
I30M Mount Dempster 76.91 20 P P 06 02 11.2 -1.1
baz=316,SNR=7.5
H31M Peel River 77.06 19 P 06 02 12.9 -0.1
H31M IAmb IAmb 06 02 17.0
comp=Z,16nm,1.1s
H31M Peel River 77.06 19 P P 06 02 11.5 -1.4
baz=318,SNR=13
BMRM Bremner River 77.10 26 P P 06 02 12.2 -1.1
baz=310
M27K Edge Creek, AK 77.16 24 IAmb IAmb 06 02 16.7
comp=Z,11nm,1.2s
M27K Edge Creek, AK 77.16 24 P P 06 02 13.3 -0.4
baz=312
J30M Hart River 77.39 20 P P 06 02 14.0 -1.0
baz=316
ESDC Sonseca Array 77.41 309 P P 06 02 15.2 -0.2
comp=Z,3.7nm,1.1s,baz=39,slow=4.7,SNR=12
comp=Z,3.7nm,1.1s
ESDC Sonseca Array 77.41 309 P P 06 02 14.5 -0.9
BVCY Beaver Creek 77.47 23 P P 06 02 14.8 -0.5
baz=313
K29M Barlow Dome 77.56 21 P P 06 02 15.2 -0.7
baz=316,SNR=5.1
CRQE Cirque 77.80 25 P P 06 02 16.9 -0.4
baz=312
L29M L29M 77.89 22 P P 06 02 16.9 -0.8
baz=315
M29M Somme Creek 78.25 22 P P 06 02 19.5 -0.3
baz=315
LSZ Lusaka 78.44 245 P P 06 02 21.2 -0.3
LSZ pmax pmax
comp=Z,41nm,2.0s
LSZ Lusaka 78.44 245 P P 06 02 21.2 -0.3
YUK8 Steele Glacier 78.63 24 P P 06 02 22.1 +0.1
baz=314
M30M Minto, Yukon 78.70 22 P P 06 02 21.5 -0.7
baz=316
N30M Aishikik Lake 79.41 23 P P 06 02 25.3 -0.8
baz=316
HYT Haines Junctio 79.73 23 P P 06 02 27.0 -0.9
baz=316
M31M Drury Creek, Y 79.73 21 P P 06 02 27.5 -0.3
baz=318
O29M Mount Kennedy 79.74 24 P P 06 02 27.2 -0.8
baz=315
N31M Braeburn, Yuko 79.83 22 P P 06 02 27.5 -0.8
baz=317
O30N Mendenhall 80.25 23 P P 06 02 30.1 -0.6
baz=317
MMPY Sheldon Lake, 80.36 20 P P 06 02 29.9 -1.3
baz=321
IFR Ifrane 81.26 304 P P 06 02 35.9 -0.9
P33M Teslin, Yukon 81.74 22 P P 06 02 38.1 -0.5
baz=320
YKA Yellowknife Ar 84.57 13 P P 06 02 53.5 +0.4
comp=Z,1.7nm,0.9s,baz=308,slow=6.5,SNR=5.5
comp=Z,1.7nm,0.9s
YKA Yellowknife Ar 84.57 13 P P 06 02 51.0 -2.0
TORD Torodi Ar. Bea 86.08 283 P P 06 03 01.6 +0.2
comp=Z,5.1nm,1.0s,baz=31,slow=1.5,SNR=14
TORD PP PP 06 06 20.0 -1.7
comp=Z,1.3nm,1.0s,baz=55,slow=7.8,SNR=5.3
comp=Z,5.1nm,1.0s

IDC 27** 06:05:21.5±3.8, **54°.50N×87°.22E, h0**km, **mbtmp2.6**/2, **ML2.4**/2, **Error ellipse: s-maj=33.4km s-min=21.9km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**249**	I	I	06 13 30.0	
	baz=67,slow=319,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.52**	**249**	Pg	Pn	06 05 47.4	-2.4
	0.8nm,0.3s,baz=66,slow=19,SNR=8.0						
ZALV				Lg	Lg	06 06 10.2	
	0.7nm,0.3s,baz=72,slow=26,SNR=4.2						
KURBB	**Kurchatov Arra**	**6.57**	**237**	Pn	Pn	06 07 00.0	+0.8
	0.1nm,0.3s,baz=52,slow=15,SNR=2.0						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.33**	**204**	Pn	Pn	06 07 24.7	+1.3
	0.1nm,0.3s,baz=25,slow=13,SNR=1.6						
	0.1nm,0.3s						

IDC 27** 06:10:48.7±3.8, **6°.42S×149°.48E, h0**km, **mb3.0**/1, **mbtmp3.6**/3, **ML3.9**/1, **Error ellipse: s-maj=135.0km s-min=39.4km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.76**	**218**	Pn	Pn	06 11 49.9	+1.9
	14nm,0.2s,baz=57,slow=5.4,SNR=5.2						
PMG				Sn	Sn	06 12 32.6	-0.3
	11nm,0.3s,baz=25,slow=19,SNR=11						
WRA	**Warramunga Arr**	**19.93**	**226**	P	P	06 15 22.2	-0.1
	0.3nm,0.3s,baz=51,slow=11,SNR=14						
	2.7nm,0.8s						
ASAR	**Alice Springs**	**22.77**	**220**	P	P	06 15 52.0	-0.9
	0.4nm,0.7s,baz=57,slow=9.5,SNR=4.2						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**147.59**	**284**	PKPbc	PKPbc	06 30 35.6	-0.5
	0.4nm,0.5s,baz=82,slow=3.4,SNR=2.7						

*CATAC **27** 06:13:04.6±0.7, 13°.N±4°.×9°.1W±°., h3km±4km, M3.4/15, MLv3.4/15, Error ellipse: s-maj=8.4km s-min=2.9km az=20.6, confirmed*
*GCG **27** 06:13:09.4±0.8, 13°.62N×91°.23W, h12km±19km, MD4.3, Presumed earthquake*
*SNET **27** 06:13:23.9±22.0, 13°.81N×90°.25W, h27km, ML2.7, Presumed earthquake*

ISC 27 06:13:04.2±2.4, 13°.56N±0°.08×91°.42W±0°.07, h6**km±12km, **n40**, σ1**°17**/62, **Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**1.00**	**345**	P	Pn	06 13 24.5	-0.2
RTAL				S	Sn	06 13 39.7	+0.5
RTAL	**Retalhuleu**	**1.00**	**345**	*e*P	Pn	06 13 24.7	-0.1
FG8	**Yepocapa, Chim**	**1.09**	**50**	*i* P	Pg	06 13 25.3	+0.2
FG16	**Alotenango, Sa**	**1.14**	**51**	*i* P	Pn	06 13 26.6	-0.2
FG16				*i* S	Sg	06 13 39.4	-1.3
PCG5	**San Vicente Pa**	**1.21**	**57**	*i* P	Pb	06 13 27.1	-0.5
GCG4	**OSOP**	**1.34**	**40**	*i* P	Pg	06 13 30.9	+0.9
FAME	**Alcaldia de Sa**	**1.40**	**78**	P	Pb	06 13 30.7	-0.1
FAME				S	Sg	06 13 50.3	+1.1
LOAL	**Lomas de Alarc**	**1.65**	**74**	P	Pb	06 13 34.4	-0.7
LOAL				S	Sg	06 13 57.3	-0.1
SLOZ	**Alcaldia de Sa**	**1.66**	**74**	P	Pb	06 13 34.7	-0.5
SLOZ				S	Sg	06 13 58.1	+0.6
SLOZ	**Alcaldia de Sa**	**1.66**	**74**	*e*P	Pb	06 13 35.4	+0.1
APG	**El Apazote**	**1.71**	**33**	*i* P	Pg	06 13 37.2	+0.2
HUEH	**Huehuetenango**	**1.75**	**357**	S	Sg	06 14 01.6	+1.0
CEVE	**Cerro Verde**	**1.77**	**81**	P	Pb	06 13 36.6	-0.6
CEVE				S	Sb	06 13 59.8	0.0
CEVE	**Cerro Verde**	**1.77**	**81**	*e*P	Pn	06 13 26.3	-9.3
SBLS	**San Blas**	**1.77**	**81**	*e*P	Pn	06 13 25.3	-10
JUAM	**Asuncion Mita**	**1.84**	**65**	*i* P	Pb	06 13 37.9	-0.3
UNIC	**Universidad Ca**	**1.87**	**77**	P	Pb	06 13 37.9	-1.0
UNIC				S	Sb	06 14 02.8	+0.3
UNIC	**Universidad Ca**	**1.87**	**77**	*e*P	Pb	06 13 38.9	+0.1
JAYA	**Jayaque - finc**	**1.92**	**87**	P	Pb	06 13 38.6	-1.2
JAYA				S	Sb	06 14 03.6	-0.5
JAYA	**Jayaque - finc**	**1.92**	**87**	*i* P	Pb	06 13 38.6	-1.2
JAYA	**Jayaque - finc**	**1.92**	**87**	*e*P	Pn	06 13 38.2	+0.6
JAYA				*e*S	Sn	06 14 01.6	-0.7
CEDA	**San Andres**	**1.99**	**83**	S	Sb	06 14 06.6	+0.7
PMON	**Piamonte**	**2.06**	**85**	P	Pb	06 13 40.7	-1.3
PMON				S	Sb	06 14 07.8	-0.1
PMON	**Piamonte**	**2.06**	**85**	*e*P	Pb	06 13 40.9	-1.2
PMON				*e*S	Sn	06 14 05.4	-0.1
UEES	**Universidad Ev**	**2.13**	**85**	P	Pb	06 13 42.1	-1.2
UEES				S	Sb	06 14 09.2	-0.7
UEES	**Universidad Ev**	**2.13**	**85**	*e*P	Pb	06 13 43.0	-0.2
UEES				*e*S	Sb	06 14 08.3	-1.6
SEMO	**Seminario San**	**2.14**	**86**	P	Pn	06 13 40.6	0.0
SEMO				S	Sb	06 14 10.1	-0.2
MTO3	**Montecristo**	**2.17**	**67**	P	Pb	06 13 42.6	-1.4
MTO3				S	Sb	06 14 10.8	-0.5
MTO3	**Montecristo**	**2.17**	**67**	*i* P	Pb	06 13 42.8	-1.2
LOMA	**Loma Larga**	**2.19**	**87**	P	Pn	06 13 41.3	0.0
LOMA				S	Sb	06 14 11.1	-0.8
LOMA	**Loma Larga**	**2.19**	**87**	*e*P	Pn	06 13 42.3	+1.0
LOMA				*e*S	Sn	06 14 08.7	-0.1
ESQI	**Esquipulas**	**2.25**	**63**	P	Pb	06 13 44.0	-1.3
ESQI				S	Sb	06 14 13.1	-0.4
PAVA	**Las Pavas**	**2.42**	**86**	P	Pn	06 13 44.0	-0.5
PAVA				S	Sb	06 14 17.3	-1.1
COEG	**Centro de Oper**	**2.47**	**88**	P	Pb	06 13 47.6	-1.6
COEG				S	Sb	06 14 18.2	-1.7
LLGN	**La Laguna**	**2.48**	**76**	S	Sb	06 14 19.0	-1.2
TECO	**Alcaldia de Te**	**2.57**	**90**	P	Pn	06 13 47.7	+1.3
TECO				S	Sb	06 14 20.2	-2.4
SCLA	**Alcaldia de Sa**	**2.62**	**87**	S	Sb	06 14 23.1	-1.1
SARH	**Santa Rosa de**	**2.85**	**65**	P	Pn	06 13 52.4	+2.0
SARH				S	Sn	06 14 26.9	+1.8
MARCA	**Marcala la Paz**	**3.34**	**79**	P	Pn	06 13 58.9	+1.7
MARCA				S	Sb	06 14 40.9	-4.2
MACN	**El Madrono**	**4.75**	**103**	P	Pn	06 14 17.3	+0.9
MACN				S	Sn	06 15 14.6	+2.6

*NEIC **27** 06:17:36.4±1.2, 23°.9S±0°.1×179°.4E±0°.2, h506km±3km, mb4.0/21, Error ellipse: s-maj=23.0km s-min=17.0km az=116.0*
*NOU **27** 06:17:39.1, 23°.79S×179°.55E, h561km, mb4.0/15, South of Fiji Islands*
*IDC **27** 06:17:39.3±1.9, 23°.81S×179°.25E, h533km±20km, mb3.4/8, mbtmp4.3/10, Error ellipse: s-maj=19.0km s-min=16.5km az=127.0*

ISC 27 06:17:39.0±0.5, 23°.89S±0°.06×179°.32E±0°.09, h537**km, **n82**, σ1**°77**/87, **mb3.9**/18, **2C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.88**	**156**	P	P	06 19 11.4	-4.4
GLKZ	**Green Lake**	**5.89**	**156**	P	P	06 19 19.1	+3.2
GLKZ				S	S	06 20 39.6	+4.5
LKBA	**Tubou, Lakemba**	**5.89**	**18**	P	P	06 19 16.5	+0.4
MSVF	**Nonsavu**	**6.24**	**349**	P	P	06 19 18.6	-0.9
	14nm,0.5s,baz=180,slow=8.0,SNR=17						
MSVF	**Nonsavu**	**6.24**	**349**	P	P	06 19 18.9	-0.6
MSVF	**Nonsavu**	**6.24**	**349**	P	P	06 19 15.7	-3.8
TAVE	**Taveuni**	**7.18**	**6**	P	P	06 19 29.2	+0.8
OUZ	**Omahuta**	**12.34**	**202**	P	P	06 20 24.6	+3.7
OUZ	**Omahuta**	**12.34**	**202**	P	P	06 20 24.5	+3.7
WCZ	**Waipu Caves**	**12.76**	**199**	P	P	06 20 29.0	+3.8
GRZ	**Great Barrier**	**12.76**	**194**	P	P	06 20 28.1	+2.9
AFI	**Afiamalu**	**13.01**	**42**	P	P	06 20 24.8	-3.5
	13nm,0.3s,baz=108,slow=3.2,SNR=1.5						
AFI	**Afiamalu**	**13.01**	**42**	P	P	06 20 25.2	-3.1
MXZ	**Matakaoa Point**	**13.65**	**183**	P	P	06 20 34.4	-0.1
MXZ	**Matakaoa Point**	**13.65**	**183**	P	P	06 20 34.1	-0.4
HAZ	**Te Kaha**	**13.88**	**185**	P	P	06 20 36.7	-0.2
WMGZ	**Waiomatatini S**	**13.91**	**183**	P	P	06 20 37.6	+0.5
WMGZ				S	S	06 23 00.6	-3.3
RUGZ	**Raukumara Rang**	**14.10**	**185**	P	P	06 20 40.3	+1.0
PUZ	**Puketiti**	**14.16**	**183**	P	P	06 20 39.4	-0.5
PUZ				S	S	06 23 05.1	-3.8
KMRZ	**Kaimai**	**14.21**	**191**	P	P	06 20 42.8	+2.5
TWGZ	**Tauwhareparae**	**14.29**	**184**	P	P	06 20 41.2	0.0
URZ	**Urewera**	**14.45**	**187**	P	P	06 20 42.1	-0.7
	36nm,0.7s,baz=12,slow=2.7,SNR=37						
URZ				S	S	06 23 08.5	-5.8
	9.9nm,0.6s,baz=0.2,slow=22,SNR=8.3						
URZ	**Urewera**	**14.45**	**187**	P	P	06 20 42.0	-0.7
URZ	**Urewera**	**14.45**	**187**	P	P	06 20 41.9	-0.8
MWZ	**Matawai**	**14.48**	**186**	P	P	06 20 42.0	-1.1
RIGZ	**Rimuhau**	**14.83**	**185**	P	P	06 20 43.5	-3.2
PRGZ	**Paritu Road**	**15.04**	**184**	P	P	06 20 50.3	+1.4
MTHZ	**Maungataniwha**	**15.06**	**187**	P	P	06 20 49.9	+0.7
HIZ	**Hauiti**	**15.06**	**194**	P	P	06 20 50.6	+1.4
RAHZ	**Arahi**	**15.10**	**187**	P	P	06 20 49.9	+0.3
MHGZ	**Mahia Peninsul**	**15.26**	**184**	P	P	06 20 51.4	+0.2
BKZ	**Black Stump Fm**	**15.42**	**188**	P	P	06 20 52.8	-0.1
TMVZ	**Te Maari**	**15.49**	**191**	P	P	06 20 54.9	+1.2
BFZ	**Birch Farm**	**16.94**	**188**	P	P	06 21 07.7	+0.1
QRZ	**Quartz Range**	**17.82**	**197**	P	P	06 21 17.7	+2.0
KHZ	**Kahutara**	**19.09**	**193**	P	P	06 21 27.4	+0.2
JCZ	**Jackson Bay**	**21.91**	**201**	P	P	06 21 53.6	+0.7
CMSA	**Cobar Meteorol**	**30.64**	**248**	P	P	06 23 10.7	+1.0
CTA	**Charters Tower**	**30.85**	**271**	P	P	06 23 12.4	+0.7
	5.1nm,0.4s,baz=86,slow=10,SNR=7.3						
	5.1nm,0.4s						
BBOO	**Buckleboo**	**38.88**	**247**	P	P	06 24 18.4	-0.1
BBOO	**Buckleboo**	**38.88**	**247**	P	P	06 24 17.4	-1.0
AS31	**Alice Springs**	**41.42**	**261**	P	P	06 24 37.9	-1.1
ASAR	**Alice Springs**	**41.42**	**261**	P	P	06 24 39.4	+0.3
	2.1nm,0.9s,baz=91,slow=7.8,SNR=13						
ASAR				PcP	PcP	06 26 24.8	+0.5
	0.9nm,0.8s,baz=87,slow=3.7,SNR=5.0						
ASAR				S	S	06 30 13.0	-2.5
	0.6nm,0.8s,baz=95,slow=15,SNR=4.7						
	2.1nm,0.9s						
ASAR	**Alice Springs**	**41.42**	**261**	P	P	06 24 38.6	-0.4
WR8	**Warramunga Arr**	**41.64**	**266**	P	P	06 24 38.5	-2.2
WR8				IAmb	IAmb	06 24 56.8	
	comp=Z,8.5nm,1.3s						
WRAB	**Tennant Creek**	**41.78**	**266**	P	P	06 24 41.1	-0.7
WB0	**Warramunga Arr**	**41.78**	**267**	P	P	06 24 41.4	-0.4
WRA	**Warramunga Arr**	**41.79**	**266**	P	P	06 24 41.1	-0.8
	comp=Z,1.3nm,0.7s,baz=90,slow=5.7,SNR=25						
WRA				PcP	PcP	06 26 25.9	+0.4
	comp=Z,0.5nm,0.9s,baz=88,slow=4.2,SNR=1.9						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**41.79**	**266**	P	P	06 24 41.2	-0.7
FORT	**Forrest**	**45.73**	**250**	P	P	06 25 11.0	-1.3
FORT				IAmb	IAmb	06 25 22.9	
	comp=Z,6.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.21**	**266**	P	P	06 25 45.0	-0.9
QSPA	**South Pole Sui**	**66.19**	**180**	P	P	06 27 34.7	+1.3
	comp=Z,2.7nm,0.7s,baz=356,slow=1.4,SNR=14						
	comp=Z,2.7nm,0.7s						
QSPA	**South Pole Qui**	**66.19**	**180**	P	P	06 27 33.6	+0.3
QSPA				IAmb	IAmb	06 27 35.7	
	comp=Z,3.4nm,0.8s						
BELA	**Belgrano 2**	**76.52**	**173**	P	P	06 28 33.7	+0.3
BELA				IAmb	IAmb	06 28 35.0	
	comp=Z,6.2nm,0.9s						
MAW	**Mawson**	**77.54**	**201**	P	P	06 28 40.5	+1.5
	comp=Z,3.4nm,0.7s,baz=142,slow=6.4,SNR=11						
	comp=Z,3.4nm,0.7s						
MAW	**Mawson**	**77.54**	**201**	P	P	06 28 40.5	+1.5
O02D	**Mt. Diablo Mer**	**83.46**	**41**	P	P	06 29 09.8	-0.5
O02D				IAmb	IAmb	06 29 13.4	
	comp=Z,3.4nm,0.9s						
CMB	**Columbia Colle**	**83.62**	**44**	P	P	06 29 11.5	+0.4
CMB				IAmb	IAmb	06 29 13.1	
	comp=Z,3.1nm,0.9s						
M02C	**Callahan**	**84.18**	**40**	P	P	06 29 13.9	+0.1
M02C				IAmb	IAmb	06 29 14.2	
	comp=Z,6.5nm,1.3s						
TROLL	**Troll, Antarti**	**84.33**	**181**	⇑P	P	06 29 15.2	+0.9
	comp=Z,178nm,0.4s						
SNAA	**Sanae**	**84.68**	**179**	P	P	06 29 16.0	+0.1
	comp=Z,0.8nm,0.4s,baz=214,slow=11,SNR=1.8						
	comp=Z,0.8nm,0.4s						
SNAA	**Sanae**	**84.68**	**179**	P	P	06 29 16.0	+0.1
SNAA				IAmb	IAmb	06 29 45.0	
	comp=Z,4.2nm,1.2s						
NVAR	**Mina Array Bea**	**85.18**	**44**	P	P	06 29 18.9	-0.1
	comp=Z,0.9nm,0.7s,baz=249,slow=3.7,SNR=6.8						
	comp=Z,0.9nm,0.7s						
VNA2	**Neumayer--Watz**	**85.33**	**178**	⇑P	P	06 29 19.5	+0.5
	comp=Z,2.3nm,0.5s,baz=213,slow=4.2						
N15K	**Kwethluk River**	**85.43**	**10**	P	P	06 29 19.5	+0.1
TPNV	**Topopah Spring**	**85.67**	**46**	P	P	06 29 21.8	+0.4
TPNV				IAmb	IAmb	06 29 23.3	
	comp=Z,1.3nm,0.7s						
PRN	**Pahroc Range**	**86.72**	**47**	IAmb	IAmb	06 29 28.4	
	comp=Z,2.0nm,1.0s						
L19K	**White Mountain**	**88.23**	**12**	P	P	06 29 32.9	+0.3
ORCD	**Orcadas**	**88.42**	**160**	P	P	06 29 34.3	+0.7
J18K	**Innoko River**	**89.09**	**11**	P	P	06 29 37.1	+0.6
J18K				IAmb	IAmb	06 29 37.5	
	comp=Z,2.1nm,0.8s						
TXAR	**Lajitas Array**	**90.95**	**58**	P	P	06 29 48.0	+1.9
	comp=Z,1.2nm,0.8s,baz=214,slow=6.6,SNR=16						
	comp=Z,1.2nm,0.8s						
ARCES	**ARCESS Array B**	**131.75**	**348**	PKP	**PKPdf**	06 35 50.0	-0.3
	comp=Z,0.7nm,0.6s,baz=90,slow=2.7,SNR=6.5						
FINES	**FINESS Array B**	**138.24**	**341**	PKhKP	PKPpre	06 35 55.7	
	comp=Z,1.7nm,1.0s,baz=54,slow=3.3,SNR=5.0						
FINES				PKP	**PKPdf**	06 36 01.8	-0.7
	comp=Z,0.7nm,0.4s,baz=96,slow=1.9,SNR=5.0						
NOA	**NORSAR Array B**	**141.97**	**351**	PKhKP	PKPpre	06 36 05.0	
	comp=Z,0.3nm,0.4s,baz=299,slow=1.7,SNR=3.0						
HFS	**Hagfors**	**142.41**	**348**	PKhKP	PKPpre	06 36 06.4	
	comp=Z,4.5nm,0.4s,baz=48,slow=2.2,SNR=48						
AKASG	**Malin Array Be**	**144.62**	**327**	PKP	**PKPdf**	06 36 13.8	-0.4
	comp=Z,1.6nm,0.5s,baz=47,slow=4.0,SNR=13						
BRTR	**Keskin Array B**	**147.08**	**307**	PKPbc	**PKPbc**	06 36 22.0	0.0
	comp=Z,1.6nm,0.7s,baz=123,slow=4.0,SNR=5.5						
EKA	**Eskdalemuir Ar**	**148.54**	**3**	PKPbc	**PKPbc**	06 36 25.0	0.0
	comp=Z,0.6nm,0.4s,baz=356,slow=3.1,SNR=6.9						
CLL	**Collm**	**150.66**	**342**	⇓*i* PKPbc	**PKiKP**	06 36 30.6	0.0
	comp=Z,9.0nm,0.8s				

BRG	**Berggiesshubel**	**150.78**	**341**	*i* P		**PKiKP**	**06 36 31.1**	**+0.2**
BRG				Amp			06 36 31.7	
	comp=Z,4.7nm,0.5s							
GERES	**GERESS Array B**	**152.63**	**339**	PKPbc		**PKPbc**	**06 36 33.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=349,slow=2.7,SNR=4.3							
TORD	**Torodi Ar. Bea**	**169.08**	**192**	PKP		**PKPdf**	**06 36 44.9**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=72,slow=1.7,SNR=2.4							
TORD				PKPab		**PKPab**	**06 38 00.7**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=180,slow=2.5,SNR=5.1							

ASRS ***27*** *06:18:38.0±1.8, 53.35N×91.11E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 27 06:18:47.1±3.7, 53.46N×90.51E, h0km, mbtmp2.7/3, ML1.8/3, Error ellipse: s-maj=31.7km s-min=24.9km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.42**	**281**	I		I	06 40 50.0	
	0.1nm,0.8s,baz=95,slow=318,SNR=4.6							
ZALV	**Zalesovo Beam**	**3.42**	**281**	Pn		Pn	06 19 42.3	+0.7
	0.5nm,0.3s,baz=98,slow=13,SNR=8.3							
ZALV				Pg		Pb	06 19 50.0	+1.5
	0.8nm,0.3s,baz=98,slow=16,SNR=14							
ZALV				Lg		Lg	06 20 35.8	
	0.7nm,0.3s,baz=100,slow=25,SNR=3.6							
	1.4nm,0.4s							
KURBB	**Kurchatov Arra**	**7.91**	**254**	Pn		Pn	06 20 41.2	-2.1
	baz=69,slow=14,SNR=2.5							
KURBB				Sn		Sn	06 22 13.0	-0.5
	baz=68,slow=25							
KURBB				Lg		Lg	06 22 57.1	
	baz=69,slow=35							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**8.50**	**222**	Pn		Pn	06 20 53.5	+2.1
	baz=41,slow=11,SNR=1.6							
MKAR				Lg		Lg	06 23 16.7	
	0.1nm,0.3s,baz=41,slow=18,SNR=2.0							
	0.2nm,0.5s							

ASRS ***27*** *06:30:16.0±1.0, 54.09N×86.47E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 27 06:30:13.4±3.2, 54.30N×86.73E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=26.1km s-min=16.6km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**254**	I		I	06 38 30.0	
	baz=70,slow=322,SNR=3.0							
ZALV	**Zalesovo Beam**	**1.18**	**254**	Pg		Pg	06 30 34.6	-1.3
	0.9nm,0.3s,baz=74,slow=16,SNR=5.4							
ZALV				Lg		Lg	06 30 51.7	
	1.9nm,0.3s,baz=75,slow=29,SNR=9.5							
KURBB	**Kurchatov Arra**	**6.22**	**237**	Pn		Pn	06 31 47.5	+1.3
	0.1nm,0.3s,baz=54,slow=13,SNR=8.1							
KURBB				Lg		Lg	06 33 31.4	
	0.2nm,0.3s,baz=51,slow=30,SNR=4.9							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**8.02**	**202**	Pn		Pn	06 32 11.7	+0.6
	0.1nm,0.3s,baz=26,slow=14,SNR=1.4							
	0.2nm,0.3s							

SDD ***27*** *07:10:20.9±1.8, 18.05N×71.18W, h31km±28km, MD2.8, ML2.0, MW3.2, Presumed earthquake*
OSPL ***27*** *07:10:21.3±0.4, 18.24N×70.94W, h22km±2km, ML2.1, Presumed earthquake*
ISC 27 07:10:21.6±1.5, 18.22N±0.05×71.06W±0.03, h7km±13km, n10, σ0°83/19, 12C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LODU1	**El Espartillar**	**0.42**	**289**	*i* P		**Pb**	**07 10 30.9**	**-0.4**
LODU1				*e*S		**Sb**	**07 10 38.4**	**+0.5**
LODU1				IAML			07 10 40.2	
	comp=Z,180nm,0.4s							
NEDR	**Neiba UASD**	**0.43**	**308**	↑*e*Pg		**Pg**	**07 10 30.8**	**+0.7**
NEDR				↑*e*Sg		**Sb**	**07 10 38.1**	**-0.2**
NEDR				IAML			07 10 43.6	
	comp=N,47nm,0.6s							
LOVI	**El Cajuil, Ovi**	**0.51**	**215**	*i* P		**Pb**	**07 10 32.4**	**-0.5**
LOVI				*e*S		**Sb**	**07 10 40.3**	**-0.2**
LOVI				IAML			07 10 42.8	
	comp=Z,58nm,1.4s							
LOBH	**Bahia de las A**	**0.65**	**238**	*i* P		**Pb**	**07 10 34.9**	**-0.4**
LOBH				*e*S		**Sb**	**07 10 45.1**	**+0.4**
LOBH				IAML			07 10 50.4	
	comp=Z,24nm,2.0s							
BANI	**BANI**	**0.69**	**75**	↑*e*Pg		**Pb**	**07 10 36.2**	**+0.1**
BANI				↑*e*Sg		**Sb**	**07 10 46.6**	**+0.7**
SDDR	**Presa de Saban**	**0.79**	**344**	↑*e*Pg		**Pg**	**07 10 37.4**	**+0.5**
SDDR				↑*e*Sg		**Sg**	**07 10 47.6**	**+0.3**
SDDR				IAML			07 11 13.7	
	comp=N,12nm,1.3s							
SDDR	**Presa de Saban**	**0.79**	**344**	*i* P		**Pg**	**07 10 35.8**	**-1.1**
SDDR				IAML			07 10 49.9	
	comp=Z,229nm,0.1s							
SC01	**Santiago de lo**	**1.25**	**15**	↑*e*Pg		**Pn**	**07 10 44.2**	**-1.3**
SC01				↑*e*Sg		**Sn**	**07 11 04.0**	**+1.4**
SC01				IAML			07 11 04.5	
	comp=N,35nm,2.8s							
HATOM	**Hato Mayor del**	**1.69**	**70**	↑*e*Pg		**Pn**	**07 10 52.0**	**+0.3**
HATOM				IAML			07 11 12.3	
	comp=N,19nm,1.8s							
HATOM				↑*e*Sg		**Sb**	**07 11 14.3**	**-0.4**
HIDR	**Higuey Centro**	**2.25**	**80**	↑*e*Pg		**Pn**	**07 10 59.5**	**+0.2**
HIDR				↑*e*Sg		**Sb**	**07 11 29.2**	**-1.7**
HIDR				IAML			07 11 40.8	
	comp=N,36nm,1.8s							

IDC 27 07:14:40.3±36.0, 18.64S×178.16W, h488km±294km, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=354.0km s-min=26.6km az=41.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**19.98**	**191**	P		P	07 18 39.1	-0.1
	7.5nm,1.0s,baz=18,slow=9.6,SNR=2.5							
WRA	**Warramunga Arr**	**44.74**	**260**	P		P	07 22 09.2	-0.4
	0.7nm,0.7s,baz=97,slow=7.3,SNR=11							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**44.83**	**255**	P		P	07 22 10.4	+0.1
	1.6nm,0.8s,baz=92,slow=8.3,SNR=21							
	1.6nm,0.8s							
VNDA	**Vanda**	**59.74**	**185**	P		P	07 23 57.5	+0.8
	0.2nm,0.4s,baz=346,slow=8.3,SNR=1.6							
	0.2nm,0.4s							
QSPA	**South Pole Qui**	**71.42**	**180**	P		P	07 25 09.8	-0.6
	1.5nm,0.9s,baz=72,slow=3.2,SNR=2.7							
	1.5nm,0.9s							

STR ***27*** *07:21:08.8±0.0, 42.92N±0.1×0.24E±0.05, h7km, MLv2.9/16, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
MRB ***27*** *07:21:08.9±0.2, 42.89N×0.24E, h5km±1km, ML2.8/40, Error ellipse: s-maj=0.7km s-min=0.4km az=27.0*
MDD ***27*** *07:21:09.4±0.1, 42.92N×0.24E, h0km, mb_Lg3.1/66, Error ellipse: s-maj=1.4km s-min=0.8km az=12.0*
LDG ***27*** *07:21:09.3±0.1, 42.92N×0.22E, h2km, Ml3.6/19, Error ellipse: s-maj=1.3km s-min=1.1km az=49.0*
INMG ***27*** *07:21:09.4±0.9, 42.91N×0.23E, h0km, ML2.7, Error ellipse: s-maj=1.4km s-min=0.9km az=23.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pireneus (ESP)*
SFS ***27*** *07:21:12.8, 42.93N×0.25E, h22km, ML3.1/9, ML3.5/9, MLv3.6/7*
ISC 27 07:21:08.2±0.8, 42.95N±0.01×0.25E±0.01, h13km±4km, n175, σ1°27/355, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
EPF	**Esparros**	**0.10**	**39**	*e*Pg		**Pg**	**07 21 11.8**	**+0.5**
EPF				*e*Sg		**Sg**	**07 21 13.8**	**+0.3**
	5µm,0.2s							
RESF	**Ens**	**0.16**	**156**	P		**Pg**	**07 21 11.3**	**-0.7**
RESF				S		**Sg**	**07 21 13.1**	**-1.6**
LABF	**Labassere**	**0.16**	**307**	Pg		**Pg**	**07 21 12.4**	**+0.3**
LABF				Sg		**Sg**	**07 21 15.2**	**+0.4**
VIEF	**Viey**	**0.18**	**248**	P		**Pg**	**07 21 12.3**	**0.0**
VIEF				S		**Sg**	**07 21 14.4**	**-0.8**
	1µm,0.2s							
VIEF	**Viey**	**0.18**	**248**	Pg		**Pg**	**07 21 11.7**	**-0.6**
VIEF				Sg		**Sg**	**07 21 14.2**	**-1.1**
PYLO	**Lourdes**	**0.26**	**304**	P		**Pb**	**07 21 14.7**	**-0.1**
PYLO				S		**Sb**	**07 21 18.7**	**-0.5**
	1µm,0.3s							
PYLO	**Lourdes**	**0.26**	**304**	Pg		**Pg**	**07 21 14.1**	**+0.4**
PYLO				Sg		**Sg**	**07 21 18.0**	**+0.5**
ECHI	**Chisagues Biel**	**0.29**	**188**	↑Pg		**Pg**	**07 21 13.5**	**-0.7**
ECHI				Sg		**Sg**	**07 21 16.7**	**-1.6**
ECHI	**Chisagues Biel**	**0.29**	**188**	P		**Pg**	**07 21 13.5**	**-0.7**
ECHI				S		**Sg**	**07 21 16.8**	**-1.5**
	4µm,0.1s							
MELF	**Melles**	**0.38**	**102**	Pg		**Pg**	**07 21 15.9**	**0.0**
MELF				Sg		**Sb**	**07 21 22.0**	**-0.6**
VIER	**Vielha - Casau**	**0.46**	**122**	Pg		**Pg**	**07 21 17.5**	**+0.1**
VIER				Sg		**Sg**	**07 21 24.1**	**+0.6**
VIER	**Vielha - Casau**	**0.46**	**122**	P		**Pg**	**07 21 17.3**	**-0.1**
VIER				S		**Sg**	**07 21 23.7**	**+0.1**
	531nm,0.3s							
CARA	**Val d'Aran**	**0.48**	**120**	P		**Pg**	**07 21 17.8**	**+0.1**
CARA				S		**Sg**	**07 21 24.1**	**-0.1**
	419nm,0.3s							
REYF	**Montagne du Re**	**0.49**	**284**	Pg		**Pg**	**07 21 17.8**	**0.0**
REYF				Sg		**Sg**	**07 21 24.6**	**+0.3**
ETSF	**Etsaut**	**0.60**	**265**	*e*Pg		**Pg**	**07 21 19.4**	**-0.4**
ETSF				*e*Sg		**Sg**	**07 21 27.0**	**-0.8**
	506nm,0.2s							
MLS	**Moulis**	**0.62**	**89**	P		**Pb**	**07 21 20.6**	**-0.3**
MLS				S		**Sb**	**07 21 29.5**	**0.0**
	38nm,0.2s							
MLS	**Moulis**	**0.62**	**89**	Pg		**Pg**	**07 21 20.0**	**-0.3**
MLS				Sg		**Sb**	**07 21 29.3**	**-0.1**
ATE	**Arette**	**0.71**	**281**	P		**Pg**	**07 21 22.3**	**+0.3**
ATE				S		**Sb**	**07 21 32.3**	**+0.2**
	154nm,0.2s							
ATE	**Arette**	**0.71**	**281**	Pg		**Pg**	**07 21 21.6**	**-0.3**
ATE				Sg		**Sb**	**07 21 32.0**	**-0.1**
SALF	**Salau**	**0.72**	**105**	P		**Pg**	**07 21 22.2**	**+0.1**
SALF				S		**Sb**	**07 21 32.1**	**-0.2**
	134nm,0.1s							
SALF	**Salau**	**0.72**	**105**	Pg		**Pg**	**07 21 21.9**	**-0.2**
SALF				Sg		**Sb**	**07 21 32.2**	**-0.1**
CTRE	**Tremp**	**0.74**	**148**	P		**Pg**	**07 21 22.1**	**-0.3**
CTRE				S		**Sg**	**07 21 31.7**	**-0.5**
	65nm,0.3s							
URDF	**Urds**	**0.79**	**309**	P		**Pb**	**07 21 24.4**	**+0.7**
URDF				S		**Sb**	**07 21 35.5**	**+1.3**
	124nm,0.3s							
CEST	**Esterri de Car**	**0.82**	**115**	P		**Pg**	**07 21 23.8**	**-0.2**
CEST				S		**Sb**	**07 21 35.3**	**0.0**
	148nm,0.3s							
CRAS	**Crastes**	**0.85**	**24**	Pg		**Pn**	**07 21 26.5**	**+0.8**
CRAS				Sg		**Sn**	**07 21 39.2**	**+1.2**
CSOR	**Sort**	**0.87**	**131**	P		**Pg**	**07 21 24.5**	**-0.5**
CSOR				S		**Sg**	**07 21 36.1**	**-0.3**
	89nm,0.3s							
ORDF	**Ordiarp**	**0.91**	**287**	Pg		**Pg**	**07 21 25.5**	**-0.2**
ORDF				Sg		**Sn**	**07 21 39.1**	**-0.5**
MLZA	**Monlezun-d-Arm**	**0.92**	**343**	Pg		**Pn**	**07 21 27.2**	**+0.5**
MLZA				Sg		**Sn**	**07 21 41.7**	**+1.9**
CTRM	**Tremp**	**0.92**	**149**	Pg		**Pg**	**07 21 26.0**	**0.0**
CTRM				Sg		**Sg**	**07 21 38.0**	**0.0**
GENF	**Genat**	**0.98**	**97**	P		**Pg**	**07 21 26.8**	**-0.3**
GENF				S		**Sb**	**07 21 40.1**	**+0.2**
GENF	**Genat**	**0.98**	**97**	Pg		**Pg**	**07 21 26.8**	**-0.3**
PAND	**Andorre**	**1.05**	**114**	P		**Pb**	**07 21 27.9**	**-0.3**
PAND				S		**Sg**	**07 21 42.5**	**+0.5**
	137nm,0.2s							
PAND	**Andorre**	**1.05**	**114**	Pg		**Pb**	**07 21 27.9**	**-0.3**
PAND				Sn		**Sn**	**07 21 45.3**	**+2.0**
CORG	**Organya**	**1.07**	**132**	P		**Pb**	**07 21 28.0**	**-0.5**
CORG				S		**Sb**	**07 21 42.1**	**-0.2**
	55nm,0.2s							
EXSEU	**La Seu d''Urge**	**1.07**	**123**	Pg		**Pg**	**07 21 28.9**	**+0.1**
EXSEU				Sg		**Sn**	**07 21 43.5**	**-0.1**
EXSEU	**La Seu d''Urge**	**1.07**	**123**	S		**Sb**	**07 21 42.6**	**+0.1**
	95nm,0.4s							
ARBS	**La Rabassa**	**1.08**	**117**	P		**Pb**	**07 21 28.5**	**-0.3**
ARBS				S		**Sb**	**07 21 43.0**	**+0.1**
	132nm,0.3s							
SJPF	**Ste Jean**	**1.09**	**279**	*e*Pn		**Pb**	**07 21 28.9**	**0.0**
SJPF				*e*Sn		**Sb**	**07 21 43.0**	**-0.1**
	117nm,0.2s							
CAVN	**Les Avellanes**	**1.13**	**161**	P		**Pb**	**07 21 28.7**	**-0.9**
CAVN				S		**Sb**	**07 21 43.4**	**-0.8**
	280nm,0.3s							
DUNF	**Dun**	**1.15**	**86**	Pg		**Pg**	**07 21 30.2**	**0.0**
OSSF	**Osses**	**1.15**	**286**	P		**Pb**	**07 21 30.0**	**+0.1**
OSSF				S		**Sn**	**07 21 46.4**	**+0.9**
	67nm,0.3s							
OSSF	**Osses**	**1.15**	**286**	Pg		**Pb**	**07 21 29.6**	**-0.2**
OSSF				Sg		**Sn**	**07 21 46.2**	**+0.7**
TERF	**Tercis-les-Bai**	**1.23**	**307**	Pg		**Pg**	**07 21 33.4**	**+1.5**
EALK	**Alkurruntz**	**1.31**	**282**	Pg		**Pb**	**07 21 33.3**	**+0.6**
EALK				Sg		**Sg**	**07 21 51.1**	**+0.5**
EALK				*i* IVmb_Lg			07 21 56.8	
ESAC	**San Caprasio**	**1.34**	**204**	Pg		**Pb**	**07 21 33.4**	**+0.3**
ESAC				Sg		**Sg**	**07 21 51.2**	**-0.1**
ESAC	**San Caprasio**	**1.34**	**204**	P		**Pn**	**07 21 32.4**	**-0.2**
ESAC				S		**Sb**	**07 21 50.0**	**-0.2**
CLLI	**Llivia**	**1.35**	**110**	P		**Pb**	**07 21 33.4**	**0.0**
CLLI				S		**Sg**	**07 21 51.7**	**-0.2**
	120nm,0.4s							
EARA	**Aranguren**	**1.36**	**263**	Pg		**Pb**	**07 21 34.0**	**+0.6**
EARA				Sg		**Sg**	**07 21 52.1**	**+0.2**
EARA				*i* IVmb_Lg			07 21 58.3	
ILER	**Lleida**	**1.36**	**168**	Pg		**Pb**	**07 21 33.7**	**+0.2**
ILER				Sg		**Sg**	**07 21 52.0**	**0.0**
LLIS	**Llivia - Polie**	**1.36**	**110**	Pg		**Pg**	**07 21 34.5**	**+0.1**
LLIS				Sg		**Sg**	**07 21 52.5**	**+0.4**
CARF	**Carcanieres**	**1.39**	**99**	P		**Pb**	**07 21 34.1**	**+0.1**
CARF				S		**Sg**	**07 21 52.6**	**-0.2**
	180nm,0.3s							
CARF	**Carcanieres**	**1.39**	**99**	Pg		**Pg**	**07 21 34.8**	**0.0**
CARF				Sg		**Sg**	**07 21 54.0**	**+1.3**
EMIR	**Miracle**	**1.40**	**137**	Pn		**Pb**	**07 21 34.6**	**+0.4**
EMIR				Pg		**Pg**	**07 21 34.8**	**-0.3**
EMIR				Sg		**Sg**	**07 21 53.4**	**+0.1**
VALC	**Valcebollere**	**1.44**	**113**	P		**Pb**	**07 21 34.6**	**-0.3**
VALC				S		**Sg**	**07 21 54.0**	**-0.5**
VALC	**Valcebollere**	**1.44**	**113**	Pn		**Pb**	**07 21 35.1**	**+0.2**
MTLF	**Montolieu**	**1.49**	**74**	*e*Pn		**Pg**	**07 21 37.0**	**+0.2**
MTLF				*e*Sn		**Sg**	**07 21 57.2**	**+1.0**
MTLF	**Montolieu**	**1.49**	**74**	Pn		**Pb**	**07 21 35.4**	**-0.3**
MTLF				Pg		**Pg**	**07 21 37.3**	**+0.5**
MTLF				Sn		**Sg**	**07 21 57.4**	**+1.2**
EXQUE	**Queralbs**	**1.53**	**112**	Pg		**Pg**	**07 21 37.6**	**-0.1**
EXQUE				Sg		**Sg**	**07 21 58.2**	**+0.7**
EXQUE	**Queralbs**	**1.53**	**112**	S		**Sg**	**07 21 57.1**	**-0.5**
CBRU	**Bruguera**	**1.57**	**114**	P		**Pb**	**07 21 37.0**	**-0.1**
CBRU				S		**Sb**	**07 21 57.8**	**+0.8**
EXRIP	**Ripoll, Girona**	**1.62**	**117**	Pg		**Pb**	**07 21 38.5**	**+0.7**
EXRIP				Sg		**Sg**	**07 22 00.5**	**+0.4**
CORI	**Orista**	**1.65**	**126**	P		**Pb**	**07 21 37.9**	**-0.5**
CORI				S		**Sb**	**07 21 59.0**	**-0.1**
	256nm,0.3s							
AVIN	**Avinyo**	**1.68**	**130**	Pg		**Pb**	**07 21 39.6**	**+0.6**
AVIN				Sn		**Sb**	**07 22 00.3**	**+0.2**
AVIN	**Avinyo**	**1.68**	**130**	S		**Sb**	**07 22 00.0**	**-0.1**
	179nm,0.2s							
EPOB	**Poblet**	**1.71**	**159**	Pn		**Pn**	**07 21 38.8**	**+1.0**
EPOB				Sn		**Sb**	**07 22 00.8**	**-0.1**
EPOB				*i* IVmb_Lg			07 22 03.6	
EPOB	**Poblet**	**1.71**	**159**	P		**Pn**	**07 21 38.4**	**+0.7**
EPOB				S		**Sn**	**07 21 59.9**	**+0.4**
	41nm,0.2s							
FILF	**Fillols**	**1.75**	**102**	P		**Pn**	**07 21 38.0**	**-0.2**
FILF				S		**Sn**	**07 21 59.9**	**-0.4**
	61nm,0.3s							
FILF	**Fillols**	**1.75**	**102**	Pg		**Pb**	**07 21 39.5**	**-0.5**
FILF				Sg		**Sg**	**07 22 03.3**	**-1.0**
CMON	**Montserrat**	**1.80**	**139**	Pg		**Pb**	**07 21 41.2**	**+0.3**
CMON				Sn		**Sb**	**07 22 02.8**	**-0.6**
CMON				Sg		**Sg**	**07 22 06.0**	**+0.1**
OLOS	**Olot**	**1.82**	**114**	Pg		**Pg**	**07 21 42.5**	**-0.7**
SLVF	**La Salvetat-Pe**	**1.86**	**48**	Pn		**Pn**	**07 21 40.5**	**+0.8**
SLVF				Pg		**Pg**	**07 21 44.4**	**+0.5**
CBEU	**Beuda**	**1.92**	**110**	P		**Pn**	**07 21 41.6**	**+1.1**
CBEU				S		**Sb**	**07 22 06.1**	**-0.9**
	165nm,0.4s							
ERTA	**Horta de San J**	**1.99**	**178**	Pg		**Pb**	**07 21 45.2**	**+0.9**
ERTA				Sn		**Sn**	**07 22 07.0**	**+0.7**
ERTA				*i* IVmb_Lg			07 22 11.9	
ERTA	**Horta de San J**	**1.99**	**178**	P		**Pn**	**07 21 42.1**	**+0.5**
ERTA				S		**Sn**	**07 22 06.9**	**+0.5**
	70nm,0.2s							
SJAF	**Saint Jean de**	**2.00**	**103**	P		**Pn**	**07 21 42.9**	**+1.3**
SJAF				S		**Sb**	**07 22 08.3**	**-0.7**
	72nm,0.3s							
SJAF	**Saint Jean de**	**2.00**	**103**	Pg		**Pg**	**07 21 45.8**	**-0.6**
SJAF				Sg		**Sg**	**07 22 14.0**	**+1.7**
CFON	**Fontmartina**	**2.01**	**126**	P		**Pn**	**07 21 42.7**	**+0.9**
CFON				S		**Sn**	**07 22 07.6**	**+0.8**
EJON	**La Jonquera**	**2.01**	**104**	Pn		**Pb**	**07 21 45.6**	**+1.0**
EJON				Sg		**Sg**	**07 22 13.1**	**+0.4**
EJON	**La Jonquera**	**2.01**	**104**	Pg		**Pg**	**07 21 45.8**	**-0.9**
EJON				Sg		**Sg**	**07 22 13.1**	**+0.4**
EJON				*i* IVmb_Lg			07 22 17.3	
LFF	**La Frestale**	**2.02**	**10**	*e*Pn		**Pn**	**07 21 43.0**	**+1.1**
LFF				*e*Pg		**Pg**	**07 21 46.9**	**0.0**
LFF				*e*Sg		**Sg**	**07 22 14.0**	**+0.9**
	225nm,0.3s							
VAN2	**Vandellos 2**	**2.04**	**168**	P		**Pn**	**07 21 42.8**	**+0.7**
VAN2				S		**Sn**	**07 22 08.0**	**+0.5**
	69nm,0.3s							
CGAR	**Garraf**	**2.07**	**143**	P		**Pn**	**07 21 43.2**	**+0.6**
CGAR				S		**Sn**	**07 22 08.9**	**+0.7**
	41nm,0.4s							
FBR	**Fabra**	**2.07**	**137**	Pg		**Pb**	**07 21 46.4**	**+0.8**
FBR				Sn		**Sn**	**07 22 09.7**	**+1.4**
CLAF	**Gruissan**	**2.09**	**84**	*e*Sn		**Sb**	**07 22 10.6**	**-1.1**
CLAF				*e*Sg		**Sg**	**07 22 14.8**	**-0.5**
CLAF	**Gruissan**	**2.09**	**84**	P		**Pn**	**07 21 44.2**	**+1.4**
CLAF				S		**Sb**	**07 22 10.6**	**-1.1**
CLAF	**Gruissan**	**2.09**	**84**	Pn		**Pn**	**07 21 44.2**	**+1.4**
MTJR	**Montjuic**	**2.12**	**137**	Pn		**Pn**	**07 21 44.2**	**+0.9**
MTJR				Sg		**Sg**	**07 22 15.9**	**-0.4**
EBR	**Ebro Roquetas**	**2.14**	**175**	P		**Pn**	**07 21 43.9**	**+0.4**
EBR				S		**Sn**	**07 22 10.2**	**+0.4**
	95nm,0.3s							
CGIR	**Ginora - Unive**	**2.14**	**116**	Pg		**Pg**	**07 21 48.1**	**-1.1**
CGIR				Sg		**Sg**	**07 22 17.2**	**+0.3**
CMAS	**Mas de Barbera**	**2.22**	**179**	P		**Pn**	**07 21 45.2**	**+0.5**
CMAS				S		**Sn**	**07 22 12.3**	**+0.2**
	51nm,0.2s							
CCAS	**Cassa de la Se**	**2.24**	**118**	P		**Pn**	**07 21 45.9**	**+1.1**
CCAS				S		**Sn**	**07 22 13.3**	**+1.1**
	68nm,0.6s							
CPAL	**Palau Saverder**	**2.24**	**106**	P		**Pn**	**07 21 46.1**	**+1.2**
CPAL				S		**Sn**	**07 22 14.1**	**+1.7**
	30nm,0.3s							
BLAN	**Blanes**	**2.27**	**123**	Pn		**Pn**	**07 21 46.7**	**+1.4**
BLAN				Pg		**Pg**	**07 21 50.4**	**-1.3**
BLAN				Sn		**Sn**	**07 22 14.8**	**+1.6**
BLAN				Sg		**Sg**	**07 22 21.5**	**+0.4**
CBUD	**Illa de Buda**	**2.29**	**169**	P		**Pn**	**07 21 45.9**	**+0.4**
CBUD				S		**Sn**	**07 22 13.6**	**+0.1**
	74nm,0.3s							
CAF	**Calviac**	**2.37**	**33**	*e*Pn		**Pn**	**07 21 47.2**	**+0.5**
CAF				*e*Pg		**Pg**	**07 21 53.1**	**-0.5**
CAF				*e*Sn		**Sn**	**07 22 16.0**	**+0.3**
CAF				*e*Sg		**Sg**	**07 22 25.1**	**+0.8**
	67nm,0.2s							
LAJAS	**L'Hospitalet-d**	**2.39**	**64**	Pn		**Pn**	**07 21 47.8**	**+0.8**
ALCN	**Alcanar**	**2.41**	**176**	P		**Pn**	**07 21 47.4**	**+0.3**
ALCN				S		**Sn**	**07 22 16.4**	**0.0**
	40nm,0.3s							
CFAR	**Far de la Bany**	**2.41**	**173**	P		**Pn**	**07 21 47.9**	**+0.7**
CFAR				S		**Sn**	**07 22 16.6**	**+0.1**
	129nm,0.7s							
RJF	**Les Rejaudoux**	**2.52**	**21**	*e*Pn		**Pb**	**07 21 51.3**	**-2.0**
RJF				*e*Pg		**Pg**	**07 21 56.3**	**-0.2**
RJF				*e*Sg		**Sg**	**07 22 30.2**	**+1.0**
	93nm,0.2s							
EMOS	**Mosqueruela**	**2.64**	**192**	Pn		**Pn**	**07 21 51.3**	**+0.7**
EMOS				Pg		**Pb**	**07 21 56.6**	**+1.2**
EMOS				Sn		**Sn**	**07 22 23.1**	**+0.6**
EMOS				Sg		**Sg**	**07 22 31.6**	**-1.4**
EMOS				*i* IVmb_Lg			07 22 42.2	
EMOS	**Mosqueruela**	**2.64**	**192**	P		**Pn**	**07 21 51.1**	**+0.6**
EMOS				S		**Sn**	**07 22 23.2**	**+0.6**
	22nm,0.4s							
E0901	**Celadas (Terue**	**2.67**	**203**	Pn		**Pn**	**07 21 51.8**	**+0.8**
E0901				Sn		**Sn**	**07 22 24.0**	**+0.7**
E0901				*i* IVmb_Lg			07 22 38.4	
ALCX	**Castello**	**2.69**	**180**	P		**Pn**	**07 21 51.6**	**+0.5**
ALCX				S		**Sn**	**07 22 23.1**	**-0.3**
	62nm,0.5s							
ELAN	**Lanestosa**	**2.71**	**

AVF	**Avril sur Loir**	**4.43**	**29**	*e*Pn	**Pn**	**07 22 16.1**	**+1.1**
AVF				*e*Sg	**Sg**	**07 23 28.9**	**-1.3**
	26nm,0.3s						
SMF	**Signal de Mont**	**4.49**	**33**	*e*Pn	**Pn**	**07 22 17.4**	**+1.5**
SMF				*e*Pg	**Pg**	**07 22 33.7**	**-0.4**
SMF				*e*Sg	**Sg**	**07 23 30.5**	**-1.8**
	11nm,0.3s						
ETOB	**Tobarra**	**4.51**	**198**	Pn	**Pn**	**07 22 18.7**	**+2.5**
ETOB				Sn	**Sn**	**07 23 06.2**	**-2.3**
ETOB	**Tobarra**	**4.51**	**198**	Pn	**Pn**	**07 22 17.1**	**+0.9**
ETOB				Sn	**Sn**	**07 23 07.1**	**-1.5**
ETOB				*i* IVmb_Lg		07 23 52.6	
ESBB	**Sonseca Array**	**4.56**	**226**	Pn	**Pn**	**07 22 17.7**	**+0.9**
ESBB				Sn	**Sn**	**07 23 07.7**	**-2.0**
ESDC	**Sonseca Array**	**4.56**	**226**	Pn	**Pn**	**07 22 17.7**	**+0.9**
ESDC				Sn	**Sn**	**07 23 08.2**	**-1.5**
ESDC				*i* IVmb_Lg		07 23 30.8	
SSF	**Saint Saulge**	**4.71**	**28**	*e*Pn	**Pn**	**07 22 20.3**	**+1.4**
SSF				*e*Pg	**Pg**	**07 22 37.3**	**-1.1**
SSF				*e*Sg	**Sg**	**07 23 37.2**	**-2.2**
	28nm,0.4s						
PAB	**San Pablo**	**4.86**	**227**	Pn	**Pn**	**07 22 21.9**	**+0.9**
PAB				Pn	**Pn**	**07 22 22.3**	**+1.3**
PAB				Sn	**Sn**	**07 23 15.4**	**-1.7**
PAB				Sn	**Sn**	**07 23 15.9**	**-1.1**
PAB				*i* IVmb_Lg		07 23 43.6	
EJUZ	**Juzbado, Salam**	**4.94**	**250**	Pn	**Pn**	**07 22 23.8**	**+1.2**
EJUZ				Sn	**Sn**	**07 23 17.4**	**-1.7**
LOR	**Lormes**	**5.02**	**29**	*e*Pn	**Pn**	**07 22 23.8**	**+0.7**
LOR				*e*Pg	**Pg**	**07 22 41.8**	**-2.4**
LOR				*e*Sg	**Sg**	**07 23 46.6**	**-2.5**
	9.3nm,0.3s						
PSIM	**Granatula de C**	**5.12**	**218**	Pn	**Pn**	**07 22 24.9**	**+0.4**
PSIM				Sn	**Sn**	**07 23 21.4**	**-2.2**
CLF	**Chambon-Foret**	**5.27**	**15**	Sg	**Sg**	**07 23 58.2**	**+1.1**
ECAL	**Calabor**	**5.27**	**261**	Pn	**Pn**	**07 22 28.2**	**+1.6**
ECAL				Sn	**Sn**	**07 23 26.1**	**-1.1**
ECAL	**Calabor**	**5.27**	**261**	Pn	**Pn**	**07 22 28.0**	**+1.4**
ECAL				Sn	**Sn**	**07 23 25.8**	**-1.4**
ECAL				*i* IVmb_Lg		07 23 29.7	
EZAR	**Zarzadilla de**	**5.28**	**197**	Pn	**Pn**	**07 22 28.4**	**+1.5**
EZAR				*i* IVmb_Lg		07 23 20.6	
PBRG	**Braganca**	**5.30**	**260**	*e*Pn	**Pn**	**07 22 30.0**	**+2.9**
PBRG				*e*Sn	**Sn**	**07 23 27.1**	**-0.9**
PBRG				*i* IAML		07 23 29.6	
PBRG				*i* IAML		07 23 31.2	
PBRG				*i* IAML		07 23 55.9	
EPON	**Pontenova**	**5.43**	**276**	Pn	**Pn**	**07 22 30.2**	**+1.5**
EPON				Sn	**Sn**	**07 23 29.3**	**-1.8**
EPON				*i* IVmb_Lg		07 23 38.6	
GRR	**Gorron**	**5.49**	**352**	*e*Pn	**Pn**	**07 22 29.5**	**-0.1**
GRR				*e*Sn	**Sn**	**07 23 30.6**	**-2.0**
GRR				*e*Sg	**Sg**	**07 24 01.8**	**-2.6**
	5.4nm,0.2s						
QUIF	**Quistinic**	**5.52**	**335**	*e*Pn	**Pn**	**07 22 30.3**	**+0.4**
QUIF				*e*Pg	**Pg**	**07 22 52.0**	**-1.7**
QUIF				*e*Sn	**Sn**	**07 23 31.1**	**-2.0**
QUIF				*e*Sg	**Sg**	**07 24 04.4**	**-0.7**
	4.7nm,0.3s						
CABF	**La Chapelle**	**5.54**	**47**	*e*Pn	**Pn**	**07 22 31.5**	**+1.2**
CABF				*e*Pg	**Pg**	**07 22 51.0**	**-3.1**
CABF				*e*Sg	**Sg**	**07 24 03.0**	**-2.8**
	8.8nm,0.5s						
LDF	**La Druitiere**	**5.65**	**357**	*e*Sn	**Sn**	**07 23 33.0**	**-3.4**
LDF				*e*Sg	**Sg**	**07 24 06.7**	**-2.7**
	14nm,0.4s						
SGMF	**Saint Gilles**	**5.66**	**341**	*e*Sg	**Sg**	**07 24 07.9**	**-1.8**
	9.3nm,0.3s						
EQES	**Quesada**	**5.73**	**207**	Pn	**Pn**	**07 22 34.2**	**+1.2**
EQES				Sn	**Sn**	**07 23 36.3**	**-2.4**
EQES				*i* IVmb_Lg		07 23 44.9	
FLN	**La Foliniere**	**5.83**	**355**	*e*Pn	**Pn**	**07 22 33.6**	**-0.7**
FLN				*e*Pg	**Pg**	**07 22 57.0**	**-2.8**
FLN				*e*Sn	**Sn**	**07 23 37.5**	**-3.5**
FLN				*e*Sg	**Sg**	**07 24 12.6**	**-2.7**
	14nm,0.4s						
ROSF	**Rostrenen**	**5.92**	**337**	*e*Pn	**Pn**	**07 22 36.9**	**+1.4**
EADA	**Adamuz**	**6.03**	**219**	Pn	**Pn**	**07 22 38.5**	**+1.5**
EADA				Sn	**Sn**	**07 23 43.1**	**-2.8**
EADA	**Adamuz**	**6.03**	**219**	Pn	**Pn**	**07 22 38.3**	**+1.3**
EADA				Sn	**Sn**	**07 23 43.7**	**-2.2**
EADA				*i* IVmb_Lg		07 23 45.4	
SENIN	**Lac Senin/Sane**	**6.08**	**53**	Sg	**Sg**	**07 24 24.2**	**+1.1**
EAGO	**Agolada(Pontev**	**6.13**	**271**	Pn	**Pn**	**07 22 40.1**	**+1.8**
EAGO				Sn	**Sn**	**07 23 46.8**	**-1.5**
EAGO				*i* IVmb_Lg		07 23 50.5	
PVRL	**Vila Real**	**6.16**	**257**	*e*Sn	**Sn**	**07 23 47.3**	**-1.8**
POLO	**Lamas de Olo**	**6.18**	**258**	*e*Pn	**Pn**	**07 22 40.8**	**+1.6**
POLO				*e*Sn	**Sn**	**07 23 48.4**	**-1.4**
POLO				*e*Sg	**Sb**	**07 24 16.7**	**+7.2**
POLO				*i* IAML		07 24 23.0	
POLO				*i* IAML		07 24 30.5	
POLO				*i* IAML		07 24 36.9	
ELOB	**Lobios**	**6.25**	**263**	Pn	**Pn**	**07 22 41.2**	**+1.2**
ELOB				Sn	**Sn**	**07 23 48.6**	**-2.7**
ELOB				*i* IVmb_Lg		07 23 52.5	
PCAB	**Cabril**	**6.26**	**261**	*e*Sn	**Sn**	**07 23 50.9**	**-0.6**
PCAB				*i* IAML		07 24 14.8	
PCAB				*i* IAML		07 24 27.8	
PCAB				*i* IAML		07 24 43.3	
PVIS	**Viseu**	**6.48**	**253**	*e*Sn	**Sn**	**07 23 55.1**	**-1.9**
ECAB	**El Cabril**	**6.51**	**223**	Pn	**Pn**	**07 23 45.3**	**+1.7**
ECAB				Sn	**Sn**	**07 23 55.4**	**-2.3**
ECAB	**El Cabril**	**6.51**	**223**	Pn	**Pn**	**07 22 44.6**	**+1.0**
ECAB				Sn	**Sn**	**07 23 54.5**	**-3.2**
ECAB				*i* IVmb_Lg		07 23 58.9	
PCBR	**Castelo Branco**	**6.59**	**244**	*e*Sn	**Sn**	**07 23 57.3**	**-2.3**
EMAZ	**Mazaricos**	**6.77**	**273**	Pn	**Pn**	**07 22 48.7**	**+1.5**
EMAZ				Sn	**Sn**	**07 24 01.5**	**-2.6**
EMAZ				*i* IVmb_Lg		07 25 31.5	
PSARD	**Sardoal**	**7.17**	**245**	*e*Pn	**Pn**	**07 22 53.4**	**+0.8**
PSARD				*e*Sn	**Sn**	**07 24 10.2**	**-3.7**
PSARD				*i* IAML		07 24 15.1	
PSARD				*i* IAML		07 24 56.7	
PSARD				*i* IAML		07 25 03.4	
PESTR	**Estremoz**	**7.20**	**238**	*e*Pn	**Pn**	**07 22 54.2**	**+1.1**
PBAR	**Barrancos**	**7.32**	**232**	*e*Pn	**Pn**	**07 22 56.7**	**+2.0**
PBAR				*e*Sn	**Sn**	**07 24 13.6**	**-3.9**
PBAR				*i* IAML		07 24 22.9	
PBAR				*i* IAML		07 24 29.1	
PBAR				*i* IAML		07 24 30.2	
PARRA	**Arraiolos**	**7.52**	**239**	*e*Pn	**Pn**	**07 22 58.1**	**+0.7**
PARRA				*e*Sn	**Sn**	**07 24 18.3**	**-4.2**
MOE	**Montemor**	**7.88**	**239**	*e*Pn	**Pn**	**07 23 03.3**	**+0.8**
MOE				*e*Sn	**Sn**	**07 24 28.5**	**-3.0**
MOE				*i* IAML		07 24 29.6	
MOE				*i* IAML		07 24 29.8	
MOE				*i* IAML		07 24 46.5	

*IDC **27** 07:35:41.6±0.8, 8.°70S×123.°45E, h0km, mb3.7/7, mbtmp3.8/12, ML3.8/5, MS3.1/2, Error ellipse: s-maj=38.1km s-min=13.2km az=72.0*
*DJA **27** 07:35:45.8±0.3, 8.°S±3.°×12.°3E±.°, h10km, M4.3/16, mB6.2/1, mb4.8/3, MLv4.1/16, Mw(mB)5.9/1*
ISC 27 07:35:43.6±0.6, **8.°61S**±0.°05×**123.°43E**±0.°05, **h10**km, **n29, σ2s14**/30, **mb3.9**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMRI	**Maumere**	**1.18**	**269**	P		**Pb**	**07 36 05.2**	**-0.8**
MMRI				S		**Sg**	**07 36 20.6**	**-0.9**
SOEI	**Soe**	**1.41**	**144**	P		**Pn**	**07 36 14.0**	**+4.6**
BATI	**Baumata**	**1.60**	**172**	Pn		Pn	07 36 10.6	-1.5
	60nm,0.3s,baz=17,slow=3.4,SNR=12							
BATI				Sn		**Sn**	**07 36 30.8**	**-2.0**
	40nm,0.3s,baz=0.6,slow=10,SNR=5.4							
BATI	**Baumata**	**1.60**	**172**	P		**Pn**	**07 36 13.3**	**+1.3**
BBSI	**Bau Bau**	**3.22**	**345**	P		**Pn**	**07 36 33.8**	**-0.4**
BASI	**Baing, Sumba**	**3.23**	**240**	P		**Pn**	**07 36 35.4**	**+1.0**
BSSI	**Bau Bau, Buton**	**3.81**	**310**	P		**Pn**	**07 36 43.0**	**+0.7**
WBSI	**Waikabubak, Su**	**4.12**	**255**	P		**Pn**	**07 36 47.5**	**+0.9**
KDI	**Kendari**	**4.69**	**350**	P		**Pn**	**07 36 54.0**	**-0.5**
DBNI	**Kabupaten Domp**	**5.06**	**271**	P		**Pn**	**07 37 02.6**	**+3.0**
KAPI	**Kappang**	**5.11**	**314**	Pn		**Pn**	**07 37 01.8**	**+1.6**
	2.7nm,0.3s,baz=155,slow=3.7,SNR=6.0							
KAPI				Sn		**Sn**	**07 38 01.4**	**+2.1**
	1.6nm,0.3s,baz=114,slow=19,SNR=6.4							
KAPI				LR		LR	07 38 51.9	
	comp=Z,146nm,20.0s,baz=170,slow=37 8.4nm,0.5s							
KAPI	**Kappang**	**5.11**	**314**	P		**Pn**	**07 37 03.0**	**+2.8**
PLAI	**Plampang**	**5.59**	**267**	P		**Pn**	**07 37 09.9**	**+3.0**
	0.3nm42nm,0.8s							
TWSI	**Taliwang, Sumb**	**6.47**	**268**	P		**Pn**	**07 37 20.2**	**+1.2**
	0.2nm19nm,0.5s							
FITZ	**Fitzroy Crossi**	**9.67**	**167**	Pn		Pn	07 38 01.9	-1.0
	0.9nm,0.3s,baz=12,slow=9.8,SNR=7.8							
FITZ				Sn		**Sn**	**07 39 48.4**	**-3.4**
	1.7nm,0.3s,baz=330,slow=15,SNR=7.5 2.1nm,0.3s							
SIJI	**Sorong**	**10.96**	**46**	Pn		**Pn**	**07 38 20.4**	**-0.2**
	1.2nm,0.3s,baz=237,slow=17,SNR=1.7 3.5nm,0.2s							
WRA	**Warramunga Arr**	**15.44**	**138**	Pn		**Pn**	**07 39 19.4**	**-2.2**
	0.3nm,0.3s,baz=307,slow=14,SNR=14							
WRA				Sn		Sn	07 42 05.7	-7.2
	0.4nm,0.3s,baz=316,slow=23,SNR=6.7 1.1nm,0.6s							
ASAR	**Alice Springs**	**18.02**	**147**	P		**Pn**	**07 39 54.1**	**-0.2**
	0.3nm,0.3s,baz=319,slow=12,SNR=12							
ASAR				S		Sn	07 43 07.4	-8.2
	2.0nm,0.8s,baz=326,slow=25,SNR=8.0 1.5nm,0.6s							
CTA	**Charters Tower**	**24.85**	**120**	LR		LR	07 51 33.4	
	comp=Z,75nm,20.6s,baz=202,slow=38							
SONM	**Songino Array**	**58.19**	**347**	P		**P**	**07 45 38.5**	**+0.6**
	0.4nm,0.5s,baz=141,slow=4.8,SNR=1.6 0.4nm,0.5s							
MKAR	**Makanchi Array**	**66.19**	**330**	P		**P**	**07 46 31.7**	**+0.2**
	0.9nm,0.6s,baz=134,slow=6.9,SNR=7.3 0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**70.32**	**337**	P		**P**	**07 46 57.4**	**+0.2**
	0.6nm,0.6s,baz=145,slow=5.3,SNR=2.1 0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**70.64**	**332**	P		**P**	**07 46 59.2**	**0.0**
	0.2nm,0.4s,baz=145,slow=5.3,SNR=1.9 0.2nm,0.4s							
MAW	**Mawson**	**71.12**	**201**	P		**P**	**07 47 00.9**	**-0.9**
	0.7nm,0.6s,baz=59,slow=5.9,SNR=2.5 0.7nm,0.6s							
VNDA	**Vanda**	**71.72**	**172**	P		**P**	**07 47 05.5**	**+0.1**
	0.3nm,0.7s,baz=316,slow=3.4,SNR=1.9 0.3nm,0.7s							
QSPA	**South Pole Qui**	**81.38**	**180**	P		**P**	**07 47 59.2**	**-1.2**
	1.0nm,0.9s,baz=346,slow=2.9,SNR=1.5 1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**122.70**	**280**	PKP		**PKPdf**	**07 54 40.6**	**-0.2**
	0.3nm,0.5s,baz=112,slow=2.9,SNR=2.1							
CPUP	**Villa Florida**	**145.26**	**179**	PKPbc		**PKPbc**	**07 55 20.1**	**-2.0**
	1.2nm,1.0s,baz=225,slow=8.6,SNR=3.1							
LPAZ	**La Paz**	**152.75**	**155**	PKPbc		**PKPdf**	**07 55 41.4**	**+6.0**
	1.3nm,1.1s,baz=134,slow=1.6,SNR=2.6							

*IDC **27** 07:40:33.9±5.1, 7.°50S×128.°91E, h124km±48km, mb3.4/4, mbtmp3.8/8, Error ellipse: s-maj=43.4km s-min=19.9km az=51.0*
ISC 27 07:40:35.1±1.2, **7.°62S**±0.°09×**128.°9E**±0.°1, **h131**km, **n8, σ1s81/12, mb3.5/4, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	**Baumata**	**5.78**	**243**	P		**Pn**	**07 41 58.7**	**0.0**
	46nm,0.5s,baz=129,slow=1.0,SNR=2.9							
BATI				S		**Sn**	**07 43 04.7**	**+0.8**
	19nm,0.3s,baz=261,slow=18,SNR=1.8							
FITZ	**Fitzroy Crossi**	**10.88**	**197**	P		**Pn**	**07 43 08.9**	**+1.6**
	3.3nm,0.8s,baz=17,slow=11,SNR=8.5							
FITZ				S		**Sn**	**07 45 04.4**	**-2.9**
	3.3nm,0.5s,baz=334,slow=16,SNR=2.0							
WRA	**Warramunga Arr**	**13.33**	**157**	P		**Pn**	**07 43 40.7**	**+1.4**
	1.7nm,0.7s,baz=341,slow=13,SNR=9.5							
WRA				S		**Sn**	**07 46 04.8**	**-1.7**
	1.1nm,0.4s,baz=333,slow=24,SNR=7.4							
ASAR	**Alice Springs**	**16.66**	**164**	P		**Pn**	**07 44 22.9**	**+1.9**
	0.6nm,0.4s,baz=337,slow=9.8,SNR=5.2							
ASAR				S		**Sn**	**07 47 25.0**	**-1.6**
	0.2nm,0.3s,baz=349,slow=24,SNR=1.9							
MKAR	**Makanchi Array**	**68.16**	**327**	P		**P**	**07 51 20.0**	**-1.1**
	0.3nm,0.4s,baz=132,slow=5.5,SNR=3.9 0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**71.67**	**334**	P		**P**	**07 51 41.6**	**-0.8**
	0.4nm,0.5s,baz=118,slow=5.5,SNR=2.0 0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**72.48**	**329**	P		**P**	**07 51 45.7**	**-1.6**
	0.5nm,0.6s,baz=128,slow=4.7,SNR=5.7 0.5nm,0.6s							
QSPA	**South Pole Qui**	**82.36**	**180**	P		**P**	**07 52 43.6**	**+1.4**
	0.7nm,0.8s,baz=357,slow=2.4,SNR=1.7 0.7nm,0.8s							

*IDC **27** 07:41:33.4±1.0, 63.°83N×19.°20W, h0km, mb3.5/8, mbtmp3.6/12, ML3.6/3, MS3.5/21, Error ellipse: s-maj=26.4km s-min=11.4km az=39.0*
ISC 27 07:41:34.6±0.8, **63.°8N**±0.°1×**19.°1W**±0.°1, **h10**km, **n30, σ1s25/13, mb3.5/6, MS3.5/17, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BORG	**Borgarnes**	**1.33**	**314**	Pg		**Pn**	**07 41 57.6**	**-1.5**
	56nm,0.3s,baz=100,slow=5.9,SNR=140							
BORG				Lg		Lg	07 42 14.7	
	35nm,0.3s,baz=179,slow=20,SNR=8.1							
EKA	**Eskdalemuir Ar**	**11.71**	**129**	Pn		**Pn**	**07 44 20.6**	**-0.9**
	baz=316,slow=13 2.8nm,0.8s							
SFJD	**Kangerlussuaq**	**13.40**	**298**	LR		LR	07 49 33.8	
	comp=Z,173nm,18.6s,baz=102,slow=36							
NOA	**NORSAR Array B**	**14.24**	**88**	LR		LR	07 50 49.0	
	comp=Z,123nm,18.8s,baz=300,slow=39							
HFS	**Hagfors**	**15.74**	**89**	Pn		**Pn**	**07 45 14.7**	**-1.2**
	1.5nm,0.9s,baz=339,slow=7.7,SNR=1.9							
HFS				LR		LR	07 51 36.6	
	comp=Z,101nm,18.3s,baz=284,slow=38							
SPITS	**Spitsbergen Ar**	**17.90**	**23**	P		**Pn**	**07 45 42.0**	**-1.2**
	baz=248,slow=15 11nm,1.1s							
ARCES	**ARCESS Array B**	**18.17**	**52**	P		**P**	**07 45 48.7**	**+1.8**
	baz=261,slow=10,SNR=1.9							
ARCES				LR		LR	07 52 10.6	
	comp=Z,103nm,18.1s,baz=100,slow=35 1.1nm,0.8s							
FINES	**FINESS Array B**	**20.57**	**76**	P		Pn	07 46 14.5	-0.8
	3.0nm,0.7s,baz=296,slow=10,SNR=9.1							
FINES				LR		LR	07 54 21.0	
	comp=Z,117nm,18.5s,baz=222,slow=37 3.0nm,0.7s							
BRG	**Berggiesshubel**	**21.73**	**111**	*e*P		**P**	**07 46 26.0**	**+0.3**
BRG				Amp			07 46 27.6	
	comp=Z,3.3nm,0.8s							
GERES	**GERESS Array B**	**23.21**	**115**	P		**P**	**07 46 42.1**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=299,slow=7.7,SNR=1.7 comp=Z,0.3nm,0.2s							
DAVOX	**Davos/Dischmat**	**23.42**	**123**	LR		LR	07 55 38.8	
	comp=Z,52nm,20.6s,baz=274,slow=36							
SCHQ	**Schefferville**	**25.36**	**272**	LR		LR	07 55 31.2	
	comp=Z,76nm,19.6s,baz=64,slow=33							
ESDC	**Sonseca Array**	**25.82**	**152**	P		**P**	**07 47 06.3**	**+0.6**
	comp=Z,1.2nm,1.1s,baz=347,slow=12,SNR=4.7							
ESDC				LR		LR	07 57 03.3	
	comp=Z,126nm,18.2s,baz=346,slow=36 comp=Z,1.2nm,1.1s							
RES	**Resolute Bay**	**26.74**	**325**	LR		LR	07 57 32.9	
	comp=Z,35nm,18.2s,baz=33,slow=36							
AKASG	**Malin Array Be**	**28.45**	**94**	P		**P**	**07 47 28.7**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=323,slow=11,SNR=1.4 comp=Z,0.2nm,0.3s							
MLR	**Muntele Rosu**	**30.97**	**105**	LR		LR	08 00 18.7	
	comp=Z,56nm,20.5s,baz=348,slow=36							
MDT	**Midelt**	**32.35**	**157**	LR		LR	08 00 15.1	
	comp=Z,66nm,19.9s,baz=23,slow=35							
ARTI	**Arti**	**37.02**	**64**	LR		LR	08 03 40.9	
	comp=Z,110nm,18.4s,baz=36,slow=36							
YKA	**Yellowknife Ar**	**39.27**	**313**	LR		LR	08 05 32.2	
	comp=Z,110nm,18.3s,baz=326,slow=37							
KBZ	**Khabaz**	**39.80**	**90**	LR		LR	08 07 19.2	
	comp=Z,92nm,18.7s,baz=6.5,slow=39							
GNI	**Garni**	**43.49**	**92**	LR		LR	08 09 38.6	
	comp=Z,45nm,19.0s,baz=105,slow=39							
ILAR	**Eielson Array**	**46.09**	**332**	P		**P**	**07 49 57.8**	**-0.2**
	comp=Z,0.5nm,1.1s,baz=21,slow=6.6,SNR=4.2							
ILAR				LR		LR	08 11 49.9	
	comp=Z,21nm,18.1s,baz=290,slow=39 comp=Z,0.5nm,1.1s							
TKL	**Tuckaleechee C**	**47.57**	**266**	LR		LR	08 07 49.2	
	comp=Z,60nm,21.4s,baz=12,slow=33							
TORD	**Torodi Ar. Bea**	**52.68**	**154**	P		**P**	**07 50 48.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=358,slow=7.7,SNR=3.1							
	comp=Z,0.5nm,0.7s							
PDAR	**Pinedale Array**	**52.85**	**293**	P		**P**	**07 50 51.9**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=57,slow=5.5,SNR=4.7 comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	**53.76**	**57**	P		**P**	**07 50 58.2**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=328,slow=5.1,SNR=1.8 comp=Z,0.2nm,0.4s							
TLY	**Talaya**	**56.48**	**39**	LR		LR	08 18 02.7	
	comp=Z,110nm,18.3s,baz=146,slow=39							
ELK	**Elko**	**56.85**	**296**	LR		LR	08 15 28.5	
	comp=Z,63nm,18.6s,baz=25,slow=36							
DBIC	**Dimbokro**	**57.98**	**163**	LR		LR	08 14 34.5	
	comp=Z,43nm,18.3s,baz=298,slow=34							
NVAR	**Mina Array Bea**	**60.05**	**297**	LR		LR	08 18 53.3	
	comp=Z,43nm,18.2s,baz=345,slow=37							

*IDC **27** 07:56:02.0±1.9, 38.°26N×142.°03E, h51km±16km, mb3.7/17, mbtmp4.0/23, ML3.8/6, MS3.5/2, Error ellipse: s-maj=17.0km s-min=9.9km az=101.0*
*NIED **27** 07:56:02.0, 38.°32N×141.°91E, h45km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.84; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-6.65; $M_{r\theta}$0.57; $M_{r\phi}$-3.04; $M_{\theta\phi}$5.35; Fault plane solution: $M_0$9.13000×10^{14} NP1: ϕ_s213.00000°, δ28.00000°, λ109.00000°. NP2: ϕ_s12.00000°, δ63.00000°, λ80.00000°.*
*JMA **27** 07:56:02.0±0.1, 38.°3N±0.°4×141.°9E±0.°7, h45km, MD3.8/40, MV4.3/40, E OFF MIYAGI PREF*
JMA Felt II J1 at E OFF MIYAGI PREF .
ISC 27 07:56:01.3±1.4, **38.°28N**±0.°05×**142.°01E**±0.°09, **h42**km±11km, **n56, σ1s34/55, mb4.0**/17, **16D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**0.43**	**274**	↓*i* P		**Pn**	**07 56 11.2**	**-0.1**
JIKH				A		A	07 56 11.2	
	comp=N,16nm,0.3s,comp=E,25nm,0.3s							
JIKH				↓S		**Sn**	**07 56 17.4**	**-0.8**
JIO	**Ouri**	**0.55**	**289**	↓*i* P		**Pn**	**07 56 12.5**	**-0.2**
JIO				A		A	07 56 12.5	
	comp=N,8.0nm,0.3s,comp=E,10.0nm,0.5s							
JIO				↓S		**Sn**	**07 56 19.8**	**-1.2**
JKMT	**Kesennumamotoy**	**0.68**	**322**	↓*i* P		**Pn**	**07 56 14.4**	**-0.1**
JKMT				A		A	07 56 14.4	
	comp=N,6.0nm,0.8s,comp=E,11nm,0.9s							
JKMT				↓S		**Sn**	**07 56 22.9**	**-1.0**
OFUJ	**Ofunato**	**0.84**	**341**	↓*i* P		**Pn**	**07 56 16.7**	**0.0**
OFUJ				A		A	07 56 16.7	
	comp=N,6.0nm,1.0s,comp=E,7.0nm,0.6s							
OFUJ				↓S		**Sn**	**07 56 26.9**	**-1.0**
JMK	**Ichinoseki**	**0.91**	**317**	↓*i* P		**Pn**	**07 56 17.7**	**0.0**
JMK				↓S		**Sn**	**07 56 28.7**	**-1.0**
JMM	**Marumori**	**1.05**	**247**	↓*i* P		**Pn**	**07 56 18.9**	**-0.6**
JMST	**Minamisoumatoc**	**1.05**	**238**	A		A	07 56 19.9	
	comp=N,12nm,0.3s,comp=E,8.0nm,0.3s							
JOU	**Okura**	**1.06**	**275**	↓*i* P		**Pn**	**07 56 19.6**	**-0.1**
JOU				A		A	07 56 19.6	
	comp=N,7.0nm,0.3s,comp=E,8.0nm,0.4s							
JFK	**Kawauchi**	**1.28**	**225**	↓*i* P		**Pn**	**07 56 22.5**	**-0.3**
JOM	**Ohasama**	**1.32**	**335**	↓*i* P		**Pn**	**07 56 23.5**	**+0.3**
JYK	**Kaneyama**	**1.44**	**297**	↓*i* P		**Pn**	**07 56 24.9**	**0.0**
JOTO	**OTAMA OYAMA**	**1.51**	**242**	*i* P		**Pn**	**07 56 26.0**	**+0.1**
JOTO				*e*S		**Sn**	**07 56 44.3**	**0.0**
JYS	**Shirataka**	**1.54**	**268**	*i* P		**Pn**	**07 56 26.1**	**-0.1**
JRG	**Rokugo**	**1.55**	**316**	↓*i* P		**Pn**	**07 56 26.7**	**+0.3**
JTM	**Tenmabayashi**	**2.61**	**344**	P		**Pn**	**07 56 41.8**	**+0.9**
MJAR	**Matsushiro Arr**	**3.49**	**241**	P		**Pn**	**07 56 54.0**	**+0.9**
	comp=E,0.8nm,0.3s,baz=66,slow=12,SNR=28							
MJAR				S		**Sn**	**07 57 36.4**	**+3.2**
	comp=E,11nm,0.7s,baz=59,slow=12,SNR=4.2 comp=E,4.5nm,0.3s							
MAJO	**Matsushiro**	**3.49**	**241**	P		**Pn**	**07 56 55.1**	**+2.0**
ERM	**Erimo**	**3.83**	**13**	P		**Pn**	**07 56 58.8**	**+1.1**
JEM	**Erimo**	**3.83**	**13**	P		**Pn**	**07 56 58.7**	**+1.0**
JGF	**Kuroka**	**4.59**	**236**	P		**Pn**	**07 57 11.6**	**+3.4**
INU	**Inuyama**	**4.96**	**235**	P		**Pn**	**07 57 16.5**	**

	comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**88.99**	**53**	P		**P**	**08 08 53.1**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=322,slow=3.6,SNR=2.6							
	comp=Z,0.2nm,0.6s							
LPAZ	**La Paz**	**145.65**	**59**	PKPbc		**PKPdf**	**08 15 33.8**	**-2.5**
	comp=Z,0.8nm,0.8s,baz=297,slow=2.3,SNR=2.6							
H03N2	**Juan Fernandez**	**146.66**	**94**	T		T	11 00 05.3	
	baz=292,slow=76,SNR=13							
H03N3	**Juan Fernandez**	**146.67**	**94**	T		T	11 00 04.9	
	baz=292,slow=76,SNR=18							
H03N1	**Juan Fernandez**	**146.68**	**94**	T		T	11 00 10.6	
	baz=292,slow=76,SNR=15							

*IDC **27** 08:06:58.2±0.7,28°.31N×104°.93E,h0km,mb3.9/15, mbtmp3.9/16,ML3.9/1,Error ellipse: s-maj=24.7km s-min=15.4km az=57.0*

*NEIC **27** 08:06:59.5±1.1,28°.30N±0°.08×104°.98E±0°.09,h10km±1km, mb4.2/17,Error ellipse: s-maj=13.6km s-min=12.1km az=129.0*

ISC 27 08:07:00.4±0.5,28°25N±0°.06×104°96E±0°.07,h19km,n46, σ0s84/49,mb4.1/22,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.44**	**62**	Pn	**Pn**	**08 08 08.3**	**+1.6**
SLVN	**Son La**	**6.95**	**188**	Pn	**Pn**	**08 08 42.7**	**+1.3**
LZDM	**Lanzhou Array**	**7.76**	**352**	Pn	Pn	08 08 59.2	+6.6
	baz=166,slow=13						
LZDM				Sn	**Sn**	**08 10 18.4**	**-1.7**
	baz=150,slow=18						
LZDM				Lg	Lg	08 10 59.5	
	baz=172,slow=36						
CRAI	**Chiangrai**	**9.02**	**209**	Pn	**Pn**	**08 09 10.1**	**+0.4**
HKPS	**Hong Kong Po S**	**10.21**	**124**	Pn	**Pn**	**08 09 24.6**	**-1.4**
CMAR	**Chiang Mai Arr**	**11.20**	**211**	Pn	Pn	08 09 46.5	+6.8
	baz=20,slow=11						
CMAR	**Chiang Mai Arr**	**11.20**	**211**		**Pn**	**08 09 39.9**	**+0.3**
LSA	**Lhasa**	**12.18**	**280**	Pn	**Pn**	**08 09 52.4**	**-1.0**
YULB	**Yu-li**	**15.48**	**105**		**P**	**08 10 41.8**	**-0.4**
YULB				IAmb	IAmb	08 10 47.2	
	comp=Z,10.0nm,1.0s						
SONM	**Songino Array**	**19.59**	**3**	P	**Pn**	**08 11 27.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=177,slow=11,SNR=5.5						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**19.59**	**3**	P	**P**	**08 11 26.6**	**-0.8**
KSAR	**Wonju Array Be**	**21.29**	**59**	P	**P**	**08 11 44.6**	**-1.2**
KS19	**Wonju Array Si**	**21.29**	**58**	P	**P**	**08 11 45.8**	**-0.1**
KS19				IAmb	IAmb	08 11 49.1	
	comp=Z,6.7nm,0.9s						
KSRS	**Korea Array**	**21.32**	**59**	P	**P**	**08 11 46.2**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=246,slow=9.9,SNR=15						
	comp=Z,4.1nm,0.7s						
TLY	**Talaya**	**23.42**	**358**	P	**P**	**08 12 08.5**	**+0.2**
	comp=Z,3.1nm,0.4s,baz=263,slow=16,SNR=2.7						
	comp=Z,3.1nm,0.4s						
HILR	**Hailar Array B**	**24.10**	**24**	P	**P**	**08 12 15.2**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=172,slow=12,SNR=2.3						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**25.66**	**322**	P	**P**	**08 12 29.5**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=129,slow=9.7,SNR=8.4						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**25.66**	**322**	P	**P**	**08 12 29.7**	**+0.7**
TARG	**Taragay, Kyrgy**	**25.87**	**308**	P	**P**	**08 12 31.0**	**-0.4**
TARG				IAmb	IAmb	08 12 38.0	
	comp=Z,3.2nm,0.7s						
RPSI	**Rantau Prapat**	**26.06**	**194**	P	**P**	**08 12 31.8**	**-1.0**
RPSI				IAmb	IAmb	08 13 03.9	
	comp=Z,5.7nm,1.0s						
MYLDM	**Lahad Datu**	**26.30**	**148**	P	**P**	**08 12 33.4**	**-1.6**
USRK	**Ussuriysk Ar.**	**26.83**	**46**	P	**P**	**08 12 39.5**	**0.0**
	comp=Z,2.6nm,0.6s,baz=246,slow=8.9,SNR=3.7						
	comp=Z,2.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**26.83**	**46**	P	**P**	**08 12 38.3**	**-1.3**
KURBB	**Kurchatov Arra**	**29.98**	**325**	P	**P**	**08 13 08.6**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=134,slow=9.2,SNR=9.8						
KURBB				PcP	**PcP**	**08 16 10.1**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=114,slow=2.3,SNR=3.3						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**30.00**	**326**	P	**P**	**08 13 06.8**	**-0.9**
KURK				IAmb	IAmb	08 13 45.9	
	comp=Z,2.9nm,1.2s						
KURK					**PcP**	**08 16 08.8**	**-0.9**
AB31	**Akbulak array**	**40.16**	**314**		**P**	**08 14 36.1**	**+1.0**
KAAM	**Kaadhehdhoo**	**41.20**	**233**	P	**P**	**08 14 45.4**	**+1.2**
WRA	**Warramunga Arr**	**55.70**	**146**	P	**P**	**08 16 37.1**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=337,slow=8.2,SNR=31						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**55.70**	**146**	P	**P**	**08 16 35.7**	**0.0**
ASAR	**Alice Springs**	**58.67**	**149**	P	**P**	**08 16 58.5**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=325,slow=6.9,SNR=14						
ASAR				PcP	**PcP**	**08 17 47.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=340,slow=3.2,SNR=2.9						
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**58.67**	**149**	P	**P**	**08 16 56.8**	**0.0**
BR131	**Keskin Array S**	**58.83**	**301**	P	**P**	**08 16 57.6**	**-0.3**
BR131				IAmb	IAmb	08 17 25.4	
	comp=Z,2.5nm,1.1s						
BR131				PcP	**PcP**	**08 17 47.1**	**-0.3**
BRTR	**Keskin Array B**	**58.83**	**301**	P	**P**	**08 16 57.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=2.1						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**58.83**	**301**	P	**P**	**08 16 57.9**	**-0.1**
KEV	**Kevo**	**59.64**	**337**	P	**P**	**08 17 03.0**	**+0.2**
ARCES	**ARCESS Array B**	**60.16**	**337**	P	**P**	**08 17 07.5**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=110,slow=6.8,SNR=3.9						
	comp=Z,1.3nm,0.8s						
ARCES	**ARCESS Array B**	**60.16**	**337**	P	**P**	**08 17 07.0**	**+0.5**
FIA1	**FINESS Array S**	**60.35**	**327**	P	**P**	**08 17 07.8**	**0.0**
FINES	**FINESS Array B**	**60.35**	**327**	P	**P**	**08 17 08.1**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=102,slow=6.2,SNR=4.4						
	comp=Z,2.4nm,0.9s						
HFS	**Hagfors**	**66.56**	**327**	P	**P**	**08 17 48.6**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=88,slow=5.2,SNR=4.5						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**67.46**	**328**	P	**P**	**08 17 55.2**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=69,slow=4.0,SNR=1.4						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**72.08**	**25**	P	**P**	**08 18 23.2**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=284,slow=6.3,SNR=2.9						
	comp=Z,0.2nm,0.5s						
G26K	**Porcupine Rive**	**72.13**	**23**	P	**P**	**08 18 24.3**	**+1.0**
G26K				IAmb	IAmb	08 18 59.8	
	comp=Z,4.8nm,1.5s						
E28M	**Babbage River**	**72.62**	**20**	P	**P**	**08 18 26.1**	**-0.1**
E28M				IAmb	IAmb	08 18 39.1	
	comp=Z,2.2nm,1.1s						
J25K	**Salcha River,**	**72.73**	**25**	P	**P**	**08 18 27.1**	**+0.1**
J25K				IAmb	IAmb	08 19 05.6	
	comp=Z,3.6nm,1.4s						
DAVOX	**Davos/Dischmat**	**73.24**	**314**	P	**P**	**08 18 30.5**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=36,slow=8.7,SNR=1.4						
	comp=Z,0.9nm,0.3s						

*IDC **27** 08:30:10.5±3.6,54°.24N×87°.46E,h0km,mbtmp2.7/2, ML2.7/2,Error ellipse: s-maj=31.5km s-min=19.7km az=45.0*

ASRS 27 08:30:10.0±0.8,54°12N×87°22E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.43**	**264**	I	I	08 39 20.0	
	baz=80,slow=321,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.43**	**264**	Pg	Pb	08 30 37.7	+0.2
	2.6nm,0.3s,baz=79,slow=13,SNR=19						
ZALV				Lg	Lg	08 31 01.6	
	2.8nm,0.3s,baz=78,slow=26,SNR=13						
KURBB	**Kurchatov Arra**	**6.37**	**240**	Pn	Pn	08 31 48.4	+3.3
	0.1nm,0.3s,baz=55,slow=13,SNR=4.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.98**	**205**	Pn	Pn	08 32 11.7	+4.5
	0.1nm,0.3s,baz=26,slow=13,SNR=1.3						
	0.2nm,0.4s						

*IDC **27** 08:30:15.3±1.2,20°.11S×177°.61W,h541km±15km,mb3.5/9, mbtmp4.4/13,Error ellipse: s-maj=15.8km s-min=13.5km az=121.0*

*NEIC **27** 08:30:16.1±0.9,20°.0S±0°.1×177°.5W±0°.1,h547km±9km, mb4.2/18,Error ellipse: s-maj=20.4km s-min=15.2km az=153.0*

*NOU **27** 08:30:18.5,20°.39S×177°.86W,h526km,mb4.2/17,Fiji Islands Region*

ISC 27 08:30:15.8±0.5,20°06S±0°.07×177°58W±0°.07,h550km, n76,σ1s56/82,mb4.2/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**4.00**	**326**	P	**P**	**08 31 38.6**	**+0.8**
MSVF	**Nonsavu**	**4.74**	**298**	P	**P**	**08 31 42.1**	**-1.5**
	9.8nm,0.8s,baz=100,slow=4.1,SNR=2.5						
MSVF	**Nonsavu**	**4.74**	**298**	P	**P**	**08 31 45.0**	**+1.3**
MSVF	**Nonsavu**	**4.74**	**298**	P	**P**	**08 31 43.8**	**+0.1**
NIUE	**Niue**	**7.28**	**84**	P	**P**	**08 32 06.7**	**+0.1**
NIUE	**Niue**	**7.28**	**84**	P	**P**	**08 32 07.2**	**+0.7**
NIUE				S	S	08 33 47.3	+10
AFI	**Afiamalu**	**8.25**	**43**	P	**P**	**08 32 15.1**	**-1.2**
	11nm,0.3s,baz=176,slow=12,SNR=6.5						
AFI				S	**S**	**08 33 50.4**	**-4.6**
	27nm,0.4s,baz=271,slow=22,SNR=9.2						
AFI	**Afiamalu**	**8.25**	**43**	P	**P**	**08 32 14.7**	**-1.6**
AFI	**Afiamalu**	**8.25**	**43**	P	**P**	**08 32 14.6**	**-1.6**
AFI				S	**S**	**08 33 51.0**	**-4.0**
RAO	**Raoul Island**	**9.16**	**182**	P	**P**	**08 32 25.2**	**+0.2**
GLKZ	**Green Lake**	**9.17**	**182**	P	**P**	**08 32 22.1**	**-3.1**
MARNC	**Mare, Loyalty**	**13.54**	**261**	P	**P**	**08 33 10.5**	**+0.2**
OUENC	**Ouen Island, N**	**14.72**	**258**	P	**P**	**08 33 22.9**	**+0.5**
DZM	**Mont Dzumac**	**15.05**	**260**	P	**P**	**08 33 26.5**	**+0.5**
	4.4nm,0.3s,baz=86,slow=13,SNR=14						
OUZ	**Omahuta**	**17.00**	**205**	P	**P**	**08 33 44.8**	**+0.4**
OUZ	**Omahuta**	**17.00**	**205**	P	**P**	**08 33 45.0**	**+0.7**
KOUNC	**Koumac, New Ca**	**17.02**	**265**	P	**P**	**08 33 46.3**	**+1.5**
KOUNC	**Koumac, New Ca**	**17.02**	**265**	P	**P**	**08 33 45.0**	**+0.2**
WCZ	**Waipu Caves**	**17.34**	**202**	P	**P**	**08 33 49.0**	**+1.4**
MXZ	**Matakaoa Point**	**17.81**	**191**	P	**P**	**08 33 53.3**	**+1.5**
MXZ	**Matakaoa Point**	**17.81**	**191**	P	**P**	**08 33 53.2**	**+1.5**
WIAZ	**Waiheke Island**	**17.85**	**199**	P	**P**	**08 33 54.0**	**+1.8**
MBAZ	**Motutapu North**	**17.91**	**200**	P	**P**	**08 33 54.7**	**+2.0**
WMGZ	**Waiomatatini S**	**18.04**	**190**	P	**P**	**08 33 55.7**	**+1.9**
HAZ	**Te Kaha**	**18.09**	**192**	P	**P**	**08 33 53.5**	**-0.8**
MKAZ	**Moumakai**	**18.13**	**199**	P	**P**	**08 33 56.2**	**+1.5**
WTAZ	**Waiatarua**	**18.16**	**201**	P	**P**	**08 33 57.4**	**+2.3**
AWAZ	**Awhitu Peninsu**	**18.26**	**200**	P	**P**	**08 33 57.5**	**+1.6**
PUZ	**Puketiti**	**18.31**	**191**	P	**P**	**08 33 57.0**	**+0.6**
RUGZ	**Raukumara Rang**	**18.32**	**192**	P	**P**	**08 33 56.0**	**-0.6**
TWGZ	**Tauwhareparae**	**18.46**	**191**	P	**P**	**08 33 59.0**	**+1.2**
TOZ	**Tahuroa Road**	**18.61**	**197**	P	**P**	**08 34 00.5**	**+1.4**
MWZ	**Matawai**	**18.70**	**192**	P	**P**	**08 33 59.9**	**-0.1**
URZ	**Urewera**	**18.72**	**193**	P	**P**	**08 33 59.2**	**-0.9**
	9.2nm,0.3s,baz=48,slow=10,SNR=39						
URZ				S	**S**	**08 36 57.6**	**-4.8**
	8.0nm,1.0s,baz=13,slow=19,SNR=3.1						
URZ	**Urewera**	**18.72**	**193**	P	**P**	**08 33 59.5**	**-0.6**
URZ	**Urewera**	**18.72**	**193**	P	**P**	**08 33 58.3**	**-1.8**
HIZ	**Hauiti**	**19.53**	**198**	P	**P**	**08 34 07.7**	**+0.3**
BKZ	**Black Stump Fm**	**19.72**	**194**	P	**P**	**08 34 09.1**	**-0.2**
BFZ	**Birch Farm**	**21.23**	**193**	P	**P**	**08 34 22.2**	**-0.6**
QRZ	**Quartz Range**	**22.36**	**200**	P	**P**	**08 34 33.1**	**+0.1**
KHZ	**Kahutara**	**23.52**	**197**	P	**P**	**08 34 43.3**	**+0.1**
PPTF	**Pamatai, Papee**	**26.61**	**89**	P	**P**	**08 35 18.1**	**+7.0**
EIDS	**Eidsvold**	**29.35**	**254**	P	**P**	**08 35 35.0**	**+0.2**
EIDS				IAmb	IAmb	08 35 42.6	
	comp=Z,7.0nm,1.3s						
ARMA	**Armidale**	**29.62**	**243**	P	**P**	**08 35 38.2**	**+1.0**
ARMA				IAmb	IAmb	08 35 58.9	
	comp=Z,15nm,1.1s						
CTA	**Charters Tower**	**33.93**	**264**	P	**P**	**08 36 13.9**	**0.0**
	comp=Z,10nm,0.5s,baz=88,slow=9.7,SNR=23						
	comp=Z,10nm,0.5s						
CTAO	**Charters Tower**	**33.93**	**264**	P	**P**	**08 36 14.0**	**+0.1**
CTAO	**Charters Tower**	**33.93**	**264**	P	**P**	**08 36 14.0**	**+0.1**
CMSA	**Cobar Meteorol**	**34.84**	**243**	P	**P**	**08 36 22.2**	**+0.9**
COEN	**Coen**	**37.95**	**273**	P	**P**	**08 36 47.5**	**+0.3**
COEN				IAmb	IAmb	08 36 48.0	
	comp=Z,7.2nm,0.8s						
STKA	**Stephens Creek**	**38.34**	**244**	P	**P**	**08 36 50.1**	**0.0**
	comp=Z,3.0nm,0.7s,baz=64,slow=8.0,SNR=6.0						
	comp=Z,3.0nm,0.7s						
INKA	**Innaminka**	**38.72**	**250**	P	**P**	**08 36 53.5**	**+0.3**
INKA				IAmb	IAmb	08 37 02.4	
	comp=Z,3.7nm,1.4s						
BBOO	**Buckleboo**	**43.10**	**243**	P	**P**	**08 37 28.0**	**0.0**
BBOO				IAmb	IAmb	08 37 47.5	
	comp=Z,29nm,1.5s						
WR8	**Warramunga Arr**	**44.91**	**262**	P	**P**	**08 37 41.5**	**-0.7**
WR8				IAmb	IAmb	08 37 42.7	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**45.01**	**256**	P	**P**	**08 37 42.7**	**-0.2**
AS31				IAmb	IAmb	08 37 43.3	
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**45.01**	**256**	P	**P**	**08 37 42.6**	**-0.2**
	comp=Z,12nm,0.8s,baz=92,slow=7.9,SNR=150						
ASAR				PcP	**PcP**	**08 39 12.8**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=107,slow=3.8,SNR=4.1						
ASAR				S	**S**	**08 43 39.9**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=94,slow=14,SNR=4.3						
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**45.01**	**256**	P	**P**	**08 37 42.3**	**-0.6**
WB0	**Warramunga Arr**	**45.03**	**262**	P	**P**	**08 37 42.5**	**-0.6**
WRA	**Warramunga Arr**	**45.06**	**262**	P	**P**	**08 37 42.6**	**-0.7**
	comp=Z,5.9nm,0.4s,baz=93,slow=5.5,SNR=211						
	comp=Z,5.9nm,0.4s						
WRA	**Warramunga Arr**	**45.06**	**262**	P	**P**	**08 37 42.3**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.48**	**262**	P	**P**	**08 38 45.3**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=87,slow=8.9,SNR=15						
	comp=Z,2.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.48**	**262**	P	**P**	**08 38 45.0**	**-0.4**
VNDA	**Vanda**	**58.38**	**185**	P	**P**	**08 39 19.9**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=9.5,slow=6.1,SNR=2.1						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**58.38**	**185**	P	**P**	**08 39 19.9**	**+1.6**
QSPA	**South Pole Qui**	**70.01**	**180**	P	**P**	**08 40 33.9**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=304,slow=0.7,SNR=7.8						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**70.01**	**180**	P	**P**	**08 40 33.4**	**+1.1**
QSPA				IAmb	IAmb	08 40 55.1	
	comp=Z,5.5nm,1.5s						
MJAR	**Matsushiro Arr**	**70.09**	**323**	P	**P**	**08 40 33.1**	**0.0**
	comp=Z,1.7nm,0.5s,baz=156,slow=6.4,SNR=6.0						
	comp=Z,1.7nm,0.5s						
MJAR	**Matsushiro Arr**	**70.09**	**323**	P	**P**	**08 40 33.3**	**+0.2**
MAJO	**Matsushiro**	**70.09**	**323**	P	**P**	**08 40 33.4**	**+0.3**
MAJO				IAmb	IAmb	08 40 52.6	
	comp=Z,8.0nm,1.1s						
D19K	**Kuna River**	**89.43**	**7**	P	**P**	**08 42 14.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**90.34**	**289**	P	**P**	**08 42 19.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=120,slow=3.1,SNR=5.9						
	comp=Z,0.8nm,0.3s						
F28M	**Old Crow**	**91.72**	**14**	P	**P**	**08 42 24.4**	**+0.1**
F28M				IAmb	IAmb	08 42 30.6	
	comp=Z,2.6nm,1.1s						
BRTR	**Keskin Array B**	**146.83**	**313**	PKPbc	**PKPbc**	**08 48 56.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=134,slow=3.6,SNR=4.4						
BRTR	**Keskin Array B**	**146.83**	**313**	PKPbc	**PKPbc**	**08 48 57.2**	**+0.2**
CLL	**Collm**	**147.72**	**348**	*i* PKPbc	**PKiKP**	**08 48 59.8**	**-0.4**
	comp=Z,5.0nm,0.7s						
CLL				*i* PKPab	**PKPab**	**08 49 03.9**	**+0.9**
CLL				AMS	AMS	16 10 00.0	
	comp=Z,100nm,18.6s						
MMAI	**Mount Meron Ar**	**147.94**	**301**	PKPbc	**PKPbc**	**08 48 58.8**	**-1.2**
GERES	**GERESS Array B**	**149.88**	**345**	PKPbc	**PKiKP**	**08 49 04.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=45,slow=2.3,SNR=5.4						

*ASRS **27** 08:30:08.0±1.9,53°.75N×91°.10E,h0km,M3.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*IDC **27** 08:30:15.5±3.2,53°.55N×90°.91E,h0km,mbtmp3.5/4, ML2.9/4,Error ellipse: s-maj=30.8km s-min=22.7km az=98.0*

*NNC **27** 08:30:26.0±2.9,53°.34N×89°.74E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=24.4km s-min=17.3km az=87.0, Suspected Mining explosion.*

ISC 27 08:30:21.0±3.8,53°6N±0°.1×90°1E±0°.2,h0km,n11, σ1s98/15,7C-7D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.14**	**279**	I	I	08 52 10.0	
	0.1nm,1.1s,baz=91,slow=320,SNR=7.6						
ZAA0	**Zalesovo Array**	**3.14**	**279**	⇓Pn	**Pb**	**08 31 15.7**	**-2.0**
	9.4nm,0.7s						
ZAA0				⇑Lg	Lg	08 32 01.4	
	107nm,1.1s						
ZALV	**Zalesovo Beam**	**3.14**	**279**	Pn	**Pn**	**08 31 14.2**	**+2.5**
	2.8nm,0.3s,baz=97,slow=16,SNR=11						
ZALV				Lg	Lg	08 32 07.2	
	3.6nm,0.3s,baz=100,slow=23,SNR=3.6						
	6.7nm,0.4s						
KURK	**Kurchatov**	**7.61**	**252**	⇑Pn	**Pn**	**08 32 10.6**	**-2.4**
	0.8nm,0.6s						
KURK				⇓Sn	**Sn**	**08 33 38.3**	**-1.5**
	4.0nm,0.7s						
KURK				⇓Lg	Lg	08 34 20.0	
	28nm,1.4s						
KURBB	**Kurchatov Arra**	**7.70**	**252**	Pn	**Pn**	**08 32 14.7**	**+0.5**
	0.2nm,0.3s,baz=65,slow=15,SNR=13						
KURBB				Sn	**Sn**	**08 33 45.8**	**+3.7**
	0.1nm,0.3s,baz=68,slow=25,SNR=9.5						
KURBB				Lg	Lg	08 34 33.3	
	0.2nm,0.3s,baz=71,slow=32,SNR=6.4						
	2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**7.70**	**252**	⇑Pn	**Pn**	**08 32 13.8**	**-0.5**
	3.7nm,0.5s						
KURBB				⇑Sn	**Sn**	**08 33 42.6**	**+0.5**
	53nm,1.1s						
KURBB				⇑Lg	Lg	08 34 23.5	
	22nm,0.9s						
MK31	**Makanchi Array**	**8.42**	**219**	⇑Pn	**Pn**	**08 32 25.2**	**+0.9**
	1.9nm,0.8s,baz=0.0,slow=0.1,SNR=5.8						
MK31				⇓Sn	**Sn**	**08 33 59.3**	**-0.7**
	3.3nm,1.1s,baz=226,slow=47,SNR=3.5						
MK31				⇓Lg	Lg	08 34 44.4	
	22nm,1.2s,baz=37,slow=28,SNR=5.7						
MKAR	**Makanchi Array**	**8.42**	**219**	Pn	**Pn**	**08 32 23.2**	**-1.0**
	0.4nm,0.3s,baz=42,slow=13,SNR=6.1						
MKAR				Sn	**Sn**	**08 34 03.0**	**+3.1**
	0.3nm,0.3s,baz=41,slow=24,SNR=6.2						
MKAR				Lg	Lg	08 34 51.2	
	0.1nm,0.3s,baz=32,slow=25,SNR=5.5						
	1.0nm,0.5s						
MAKZ	**Makanchi**	**8.53**	**221**	⇑Pn	**Pn**	**08 32 27.3**	**+1.6**
	2.6nm,0.6s						
MAKZ				⇓Sn	**Sn**	**08 34 02.8**	**+0.2**
	6.5nm,1.0s						
MAKZ				⇓Lg	Lg	08 34 47.9	
	20nm,1.3s						
BVAR	**Borovoye Array**	**11.79**	**275**	Pn	**Pn**	**08 33 10.6**	**+0.3**
	baz=76,slow=14,SNR=1.7						
	0.3nm,0.3s						
SONM	**Songino Array**	**11.82**	**112**	Lg	Lg	08 36 10.0	
	0.3nm,0.3s,baz=304,slow=21,SNR=9.1						

*PLV **27** 08:52:25.5±0.8,20°.93N×104°.73E,h0km±117km,ML3.4, MW3.5,Presumed earthquake*

*BKK **27** 08:52:34.1±0.5,21°.N±4°×10°4E±°,h10km,M3.6/18, mB4.1/2,mb3.5/7,Mjma3.9/18,MLv3.5/8,Mw(mB)3.1/2*

ISC 27 08:52:24.9±1.4,20°92N±0°.05×104°70E±0°.05,h4km±14km, n15,σ0s54/17,2C,Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCVV	**Moc Chau**	**0.13**	**200**	⇑*i*Pg	**Pg**	**08 52 27.4**	**-0.1**
MCVV				*e*Sg	**Sg**	**08 52 29.0**	**-0.2**
HBVN	**Hoa-Binh**	**0.62**	**99**	⇑*i*Pg	**Pg**	**08 52 36.5**	**-0.2**
HBVN				IAML		08 52 48.8	
	comp=N,3μm,0.3s						
HBVN				IAML		08 52 52.5	
	comp=E,3μm,0.2s						
SLVN	**Son La**	**0.85**	**299**	*e*Pg	**Pg**	**08 52 41.3**	**+0.2**
SLVN				*e*Sg	**Sb**	**08 52 53.6**	**-0.3**
VTVB	**Vinh Tuy**	**1.34**	**8**	*e*Pg	**Pn**	**08 52 50.4**	**0.0**
SKNT	**Sakolnakorn**	**3.98**	**190**	P	**Pb**	**08 53 36.4**	**+0.7**
LOEI	**Loei**	**4.70**	**224**	P	**Pn**	**08 53 36.3**	**-0.3**
UTTA	**Uttaradit**	**5.03**	**232**	P	**Pn**	**08 53 41.7**	**+0.6**
LAMP	**Lampang**	**5.33**	**244**	P	**Pn**	**08 53 45.1**	**-0.3**
CHTO	**Chiang Mai**	**5.81**	**250**	P	**Pn**	**08 53 51.4**	**-0.5**
	comp=E,0.0nmcomp=E,0.3nmcomp=E,266nmcomp=E,1.8nm,0.4s						
CM09	**Chiang Mai Arr**	**5.92**	**246**	P	**Pn**	**08 53 53.0**	**-0.3**
	comp=E,0.0nmcomp=E,0.0nmcomp=E,3.4nm,0.6s						
CM04	**Chiang Mai Arr**	**5.94**	**246**	P	**Pn**	**08 53 53.5**	**-0.2**
CM01	**Chiang Mai Arr**	**5.95**	**246**	P	**Pn**	**08 53 52.8**	**-1.0**
	comp=E,0.0nmcomp=E,0.0nmcomp=E,124nmcomp=E,3.9nm,0.6s						
CM02	**Chiang Mai Arr**	**5.96**	**246**	P	**Pn**	**08 53 53.2**	**-0.7**
	comp=E,0.0nmcomp=E,0.0nmcomp=E,3.7nm,0.8s

MAJO					IAmb	IAmb	09 39 55.3	
	comp=Z,6.2nm,0.6s							
MJB9	**Matsu-Tunnel**	**72.03**	**325**	P	**P**		**09 39 37.4**	**-0.4**
MJB9					IAmb	IAmb	09 39 56.3	
	comp=Z,6.0nm,0.6s							
BELA	**Belgrano 2**	**76.49**	**173**	P	**P**		**09 40 04.8**	**+2.4**

IDC ***27*** *09:30:10.0±3.1,53°56N×87°92E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=27.5km s-min=18.0km az=61.0*

ASRS 27 09:30:06.0±1.1, 53°63N×87°95E, h0km, M2.8(MOS)**, The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.89**	**281**	I	I	09 42 10.0	
	0.1nm,0.8s,baz=98,slow=317,SNR=13						
ZALV	**Zalesovo Beam**	**1.89**	**281**	Pn	Pg	09 30 43.0	+0.9
	1.5nm,0.3s,baz=102,slow=17,SNR=15						
ZALV				Lg	Lg	09 31 09.9	
	1.9nm,0.3s,baz=102,slow=25,SNR=11						
ZALV				I	I	09 42 10.2	
	baz=142,slow=42,SNR=4.1						
KURBB	**Kurchatov Arra**	**6.53**	**246**	Pn	Pn	09 31 47.2	+4.0
	0.1nm,0.3s,baz=62,slow=14,SNR=2.5						
KURBB				Lg	Lg	09 33 35.2	
	baz=62,slow=32						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.74**	**210**	Pn	Pn	09 32 04.4	+4.5
	0.1nm,0.3s,baz=30,slow=15,SNR=1.7						
MKAR				Lg	Lg	09 34 11.5	
	0.1nm,0.3s,baz=27,slow=29,SNR=1.4						
	0.1nm,0.3s						

IDC ***27*** *09:32:59.3±1.0,58°06N×133°57W, h0km, mb2.4/2, mbtmp3.2/7, ML2.9/5, Error ellipse: s-maj=12.1km s-min=8.6km az=40.0*

ANF ***27*** *09:33:01.1±0.1,58°33N×133°43W, h0km, ML3.6/27, Error ellipse: s-maj=1.7km s-min=1.1km az=58.0*

AEIC ***27*** *09:33:01.6±1.1,58°33N±0°03×133°47W±0°03, h4km±6km, Error ellipse: s-maj=4.7km s-min=2.1km az=169.0*

NEIC ***27*** *09:33:01.5±1.9,58°29N±0°02×133°46W±0°03, h5km±2km, ML3.3/58, ML3.1(AEIC), Error ellipse: s-maj=4.0km s-min=3.0km az=332.0*

PGC ***27*** *09:33:02.3±0.0,58°33N×133°43W, h1km, ML3.4/14, 56km east of Juneau, Alaska, Usa Southeastern Alaska*

ISC 27 09:33:01.3±1.1, 58°31N±0°02×133°43W±0°02, h7km±9km, n152, σ1°29/173, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.51**	**267**		**Pg**	**09 33 10.8**	**-0.3**
JIS					**Sg**	**09 33 17.6**	**0.0**
R32K	**Eaglecrest**	**0.58**	**267**		**Pg**	**09 33 12.1**	**-0.3**
R32K					**Sg**	**09 33 19.8**	**-0.1**
R32K	**Eaglecrest**	**0.58**	**267**	P	**Pg**	**09 33 11.8**	**-0.6**
	baz=84						
R32K				S	**Sg**	**09 33 19.6**	**-0.4**
	baz=84						
BESE	**Bessie Mountai**	**0.80**	**290**	P	**Pg**	**09 33 15.6**	**-1.1**
BESE	**Bessie Mountai**	**0.80**	**290**	Pg	**Pg**	**09 33 15.8**	**-0.8**
BESE	**Bessie Mountai**	**0.80**	**290**		**Sg**	**09 33 26.6**	**-0.4**
BESE	**Bessie Mountai**	**0.80**	**290**	IAML		09 33 32.2	
	comp=N,528nm,0.7s						
BESE				IAML		09 33 34.1	
	comp=E,614nm,0.8s						
Q32M	**Nakina River**	**0.89**	**42**	P	**Pg**	**09 33 18.2**	**-0.1**
Q32M	**Nakina River**	**0.89**	**42**		**Sg**	**09 33 31.1**	**+1.1**
Q32M	**Nakina River**	**0.89**	**42**		**Pg**	**09 33 18.3**	**-0.1**
Q32M	**Nakina River**	**0.89**	**42**	IAML		09 33 35.2	
	comp=E,280nm,0.8s						
Q32M				IAML		09 33 38.9	
	comp=N,314nm,1.2s						
Q32M	**Nakina River**	**0.89**	**42**	P	**Pg**	**09 33 17.9**	**-0.5**
	baz=225,SNR=70						
Q32M				S	**Sg**	**09 33 29.1**	**-0.9**
	baz=225						
S32K	**Killisnoo**	**1.04**	**217**		**Pg**	**09 33 21.7**	**+0.5**
S32K	**Killisnoo**	**1.04**	**217**		**Sb**	**09 33 36.2**	**+0.7**
S32K	**Killisnoo**	**1.04**	**217**	P	**Pg**	**09 33 21.6**	**+0.3**
	baz=34						
S32K				S	**Sb**	**09 33 37.5**	**+2.0**
	baz=34						
R31K	**City Hall, Gus**	**1.22**	**276**	S	**Sg**	**09 33 40.3**	**-0.3**
R31K	**City Hall, Gus**	**1.22**	**276**		**Pg**	**09 33 24.1**	**-0.7**
R31K					**Sg**	**09 33 40.6**	**0.0**
R31K	**City Hall, Gus**	**1.22**	**276**	P	**Pg**	**09 33 23.8**	**-1.0**
	baz=93						
R31K				S	**Sb**	**09 33 41.5**	**+0.8**
	baz=93						
S34M	**Telegraph Cree**	**1.28**	**107**	P	**Pg**	**09 33 25.2**	**-0.6**
S34M	**Telegraph Cree**	**1.28**	**107**		**Pg**	**09 33 25.6**	**-0.2**
S34M					**Sn**	**09 33 44.5**	**+1.5**
S34M	**Telegraph Cree**	**1.28**	**107**	IAML		09 33 48.9	
	comp=E,710nm,0.9s						
S34M				IAML		09 33 51.7	
	comp=N,424nm,1.1s						
S34M	**Telegraph Cree**	**1.28**	**107**	P	**Pg**	**09 33 24.8**	**-1.1**
	baz=290,SNR=146						
S34M				S	**Sb**	**09 33 43.9**	**+1.5**
	baz=290						
P32M	**Atlin**	**1.29**	**353**	P	**Pg**	**09 33 24.4**	**-1.7**
P32M				S	**Sg**	**09 33 42.6**	**-0.3**
P32M	**Atlin**	**1.29**	**353**		**Pg**	**09 33 24.7**	**-1.4**
P32M	**Atlin**	**1.29**	**353**	P	**Pg**	**09 33 24.7**	**-1.4**
	baz=174,SNR=75						
P32M				S	**Sb**	**09 33 42.9**	**+0.1**
	baz=174						
SKAG	**Skagway**	**1.52**	**320**		**Pn**	**09 33 28.8**	**-0.1**
SKAG				IAML		09 33 53.5	
	comp=N,235nm,0.8s						
SKAG				IAML		09 33 57.4	
	comp=E,345nm,0.9s						
SKAG	**Skagway**	**1.52**	**320**		**Sb**	**09 33 49.2**	**0.0**
SKAG	**Skagway**	**1.52**	**320**	P	**Pn**	**09 33 28.4**	**-0.5**
	baz=139,SNR=49						
SKAG				S	**Sn**	**09 33 49.8**	**+0.8**
	baz=139						
T33K	**Petersburg**	**1.52**	**170**	Sn	**Sg**	**09 33 51.5**	**+1.4**
T33K	**Petersburg**	**1.52**	**170**		**Pn**	**09 33 29.4**	**+0.5**
T33K					**Sg**	**09 33 50.9**	**+0.8**
T33K	**Petersburg**	**1.52**	**170**	S	**Sg**	**09 33 51.4**	**+1.3**
	baz=350						
S31K	**Pelican**	**1.53**	**258**		**Pn**	**09 33 29.2**	**+0.3**
S31K					**Sn**	**09 33 49.8**	**+0.7**
S31K	**Pelican**	**1.53**	**258**	IAML		09 33 56.3	
	comp=E,265nm,0.8s						
S31K	**Pelican**	**1.53**	**258**	P	**Pn**	**09 33 28.7**	**-0.3**
	baz=75						
S31K				S	**Sn**	**09 33 50.1**	**+1.0**
	baz=75						
SIT	**Sitka**	**1.62**	**220**		**Pn**	**09 33 30.4**	**+0.2**
SIT					**Sn**	**09 33 52.6**	**+1.3**
SIT	**Sitka**	**1.62**	**220**	IAML		09 33 54.9	
	comp=N,208nm,0.9s						
SIT	**Sitka**	**1.62**	**220**	P	**Pn**	**09 33 30.6**	**+0.4**
	baz=37						
SIT				S	**Sg**	**09 33 53.3**	**+0.1**
	baz=37						
DLBC	**Dease Lake**	**1.80**	**84**	Pg	**Pn**	**09 33 33.9**	**+1.1**
	comp=N,6.9nm,0.3s,baz=244,slow=15,SNR=176						
DLBC				Lg	Lg	09 33 59.8	
	comp=N,30nm,0.3s,baz=336,slow=20,SNR=19						
DLBC	**Dease Lake**	**1.80**	**84**	Pn	**Pn**	**09 33 33.6**	**+0.8**
DLBC				Sn	**Sb**	**09 33 58.4**	**+1.1**
DLBC	**Dease Lake**	**1.80**	**84**		**Pn**	**09 33 34.2**	**+1.4**
DLBC	**Dease Lake**	**1.80**	**84**	P	**Pn**	**09 33 33.8**	**+1.0**
	baz=268,SNR=113						
DLBC				Sg	**Sg**	**09 33 59.8**	**+0.9**
	baz=268						
PLBC	**Pleasant Camp**	**1.91**	**308**	P	**Pn**	**09 33 35.3**	**+1.0**
PLBC	**Pleasant Camp**	**1.91**	**308**		**Pn**	**09 33 34.9**	**+0.6**
PLBC	**Pleasant Camp**	**1.91**	**308**	P	**Pn**	**09 33 34.8**	**+0.5**
	baz=126,SNR=80						
PLBC				S	**Sb**	**09 34 01.1**	**+0.6**
	baz=126						
P33M	**Teslin, Yukon**	**1.93**	**9**	Pn	**Pn**	**09 33 34.9**	**+0.2**
P33M				Sn	**Sn**	**09 34 00.9**	**+1.6**
P33M	**Teslin, Yukon**	**1.93**	**9**		**Pn**	**09 33 34.7**	**0.0**
P33M	**Teslin, Yukon**	**1.93**	**9**	IAML		09 34 03.7	
	comp=N,135nm,0.7s						
P33M	**Teslin, Yukon**	**1.93**	**9**	P	**Pn**	**09 33 34.7**	**0.0**
	baz=190,SNR=83						
P33M				S	**Sn**	**09 33 59.9**	**+0.6**
	baz=190						
WRAK	**Wrangell Islan**	**1.98**	**162**	P	**Pn**	**09 33 36.2**	**+0.9**
WRAK	**Wrangell Islan**	**1.98**	**162**		**Pn**	**09 33 35.9**	**+0.7**
WRAK				IAML		09 34 07.8	
	comp=N,167nm,0.8s						
WRAK				IAML		09 34 10.1	
	comp=N,241nm,0.8s						
WRAK	**Wrangell Islan**	**1.98**	**162**	P	**Pn**	**09 33 36.0**	**+0.7**
	baz=343,SNR=23						
WRAK				S	**Sn**	**09 34 02.7**	**+2.4**
	baz=343						
T35M	**Bob Quinn**	**2.17**	**127**	Pn	**Pn**	**09 33 40.0**	**+2.1**
T35M	**Bob Quinn**	**2.17**	**127**		**Pn**	**09 33 39.4**	**+1.6**
T35M	**Bob Quinn**	**2.17**	**127**	IAML		09 34 14.2	
	comp=N,207nm,0.9s						
T35M	**Bob Quinn**	**2.17**	**127**	P	**Pn**	**09 33 38.5**	**+0.7**
	baz=310,SNR=46						
T35M				Sg	**Sg**	**09 34 13.0**	**+2.2**
	baz=310						
U33K	**Whale Pass**	**2.21**	**176**		**Pn**	**09 33 39.2**	**+0.9**
U33K				IAML		09 34 18.3	
	comp=E,183nm,1.1s						
U33K	**Whale Pass**	**2.21**	**176**	P	**Pn**	**09 33 38.7**	**+0.4**
	baz=355						
U33K				Sb	**Sg**	**09 34 12.2**	**+0.1**
	baz=355						
WHY	**Whitehorse**	**2.47**	**343**		**Pn**	**09 33 42.1**	**0.0**
WHY	**Whitehorse**	**2.47**	**343**	IAML		09 34 28.6	
	comp=N,182nm,1.2s						
WHY				IAML		09 34 29.8	
	comp=E,169nm,0.9s						
WHY	**Whitehorse**	**2.47**	**343**	P	**Pn**	**09 33 41.8**	**-0.3**
	baz=162						
WHY				S	**Sn**	**09 34 13.2**	**+0.6**
	baz=162						
P30M	**Million Dollar**	**2.57**	**317**	Pn	**Pn**	**09 33 44.9**	**+1.5**
P30M				Sg	**Sb**	**09 34 21.2**	**+1.6**
P30M	**Million Dollar**	**2.57**	**317**		**Pn**	**09 33 43.4**	**0.0**
P30M	**Million Dollar**	**2.57**	**317**	IAML		09 34 25.6	
	comp=N,106nm,0.9s						
P30M				IAML		09 34 25.7	
	comp=E,142nm,0.9s						
P30M	**Million Dollar**	**2.57**	**317**	P	**Pn**	**09 33 43.6**	**+0.2**
	baz=134						
P30M				Sb	**Sb**	**09 34 21.1**	**+1.6**
	baz=134						
P29M	**Windy Craggy**	**2.60**	**303**		**Pn**	**09 33 43.9**	**+0.2**
P29M	**Windy Craggy**	**2.60**	**303**	IAML		09 34 25.8	
	comp=E,172nm,0.8s						
P29M	**Windy Craggy**	**2.60**	**303**	P	**Pn**	**09 33 44.1**	**+0.4**
	baz=119,SNR=10						
P29M				Sb	**Sb**	**09 34 22.3**	**+2.1**
	baz=119						
O30N	**Mendenhall**	**2.82**	**332**	Pn	**Pn**	**09 33 47.1**	**+0.3**
O30N				Sg	**Sb**	**09 34 28.9**	**+2.3**
O30N	**Mendenhall**	**2.82**	**332**		**Pn**	**09 33 47.3**	**+0.6**
O30N				IAML		09 34 31.4	
	comp=E,137nm,0.7s						
O30N				IAML		09 34 42.2	
	comp=N,112nm,0.9s						
O30N	**Mendenhall**	**2.82**	**332**	P	**Pn**	**09 33 47.1**	**+0.3**
	baz=150,SNR=19						
O30N				Sb	**Sb**	**09 34 28.7**	**+2.1**
	baz=150						
CRAG	**Craig**	**2.85**	**177**		**Pn**	**09 33 47.8**	**+0.6**
CRAG	**Craig**	**2.85**	**177**	IAML		09 34 37.8	
	comp=N,80nm,0.9s						
CRAG				IAML		09 34 38.8	
	comp=E,61nm,1.1s						
N32M	**Quiet Lake**	**2.86**	**3**	Pn	**Pn**	**09 33 48.3**	**+1.0**
N32M	**Quiet Lake**	**2.86**	**3**		**Pn**	**09 33 47.8**	**+0.5**
N32M	**Quiet Lake**	**2.86**	**3**	P	**Pn**	**09 33 47.9**	**+0.6**
	baz=184,SNR=16						
V35K	**Ketchikan**	**3.15**	**161**		**Pn**	**09 33 52.0**	**+0.7**
V35K	**Ketchikan**	**3.15**	**161**	IAML		09 34 46.1	
	comp=N,49nm,0.9s						
V35K				IAML		09 34 47.5	
	comp=E,57nm,0.9s						
HYT	**Haines Junctio**	**3.27**	**322**	Pn	**Pn**	**09 33 54.5**	**+1.5**
HYT				Sg	**Sb**	**09 34 42.1**	**+2.4**
HYT	**Haines Junctio**	**3.27**	**322**		**Pn**	**09 33 53.2**	**+0.2**
HYT	**Haines Junctio**	**3.27**	**322**	IAML		09 34 52.0	
	comp=N,99nm,0.9s						
HYT				IAML		09 34 57.5	
	comp=E,80nm,1.1s						
HYT	**Haines Junctio**	**3.27**	**322**	P	**Pn**	**09 33 53.5**	**+0.4**
	baz=139						
HYT				Sb	**Sb**	**09 34 42.3**	**+2.7**
	baz=139						
O29M	**Mount Kennedy**	**3.31**	**309**	Sb	**Sb**	**09 34 44.1**	**+3.2**
	baz=125						
N31M	**Braeburn, Yuko**	**3.40**	**341**	Pn	**Pn**	**09 33 56.2**	**+1.4**
N31M	**Braeburn, Yuko**	**3.40**	**341**		**Pn**	**09 33 55.2**	**+0.4**
N31M	**Braeburn, Yuko**	**3.40**	**341**	P	**Pn**	**09 33 55.2**	**+0.4**
	baz=159,SNR=12						
YUK5	**Granite Creek**	**3.61**	**323**	Pn	**Pn**	**09 33 59.1**	**+1.3**
YUK5	**Granite Creek**	**3.61**	**323**		**Pn**	**09 33 58.1**	**+0.3**
YUK6	**Outpost Mounta**	**3.64**	**319**	Pb	**Pb**	**09 34 06.8**	**+0.7**
	baz=134						
N30M	**Aishikik Lake**	**3.66**	**331**	Pn	**Pn**	**09 33 59.3**	**+0.9**
N30M				Sg	**Sb**	**09 34 53.6**	**+2.7**
N30M	**Aishikik Lake**	**3.66**	**331**		**Pn**	**09 33 58.7**	**+0.4**
N30M	**Aishikik Lake**	**3.66**	**331**	IAML		09 35 01.2	
	comp=E,60nm,0.8s						
N30M				IAML		09 35 01.9	
	comp=N,78nm,0.7s						
N30M	**Aishikik Lake**	**3.66**	**331**	P	**Pn**	**09 33 58.8**	**+0.4**
	baz=148						
N30M				Sb	**Sb**	**09 34 53.9**	**+3.0**
	baz=148						
M31M	**Drury Creek, Y**	**3.94**	**353**	Pn	**Pn**	**09 34 03.8**	**+1.7**
M31M	**Drury Creek, Y**	**3.94**	**353**	IAML		09 35 19.7	
	comp=N,47nm,0.9s						
M31M	**Drury Creek, Y**	**3.94**	**353**	P	**Pn**	**09 34 03.0**	**+0.9**
	baz=173,SNR=13						
PINM	**Pinnacle**	**3.94**	**300**	Pb	**Pb**	**09 34 11.1**	**0.0**
	baz=114						
O28M	**Mount Upton**	**4.24**	**309**	Pb	**Pb**	**09 34 17.1**	**+0.9**
	baz=123						
YUK8	**Steele Glacier**	**4.38**	**316**	P	**Pn**	**09 34 09.9**	**+1.5**
	baz=130						
MMPY	**Sheldon Lake,**	**4.46**	**13**		**Pn**	**09 34 10.6**	**+1.3**
MMPY				IAML		09 35 26.1	
	comp=N,24nm,0.7s						
MMPY				IAML		09 35 31.9	
	comp=E,35nm,0.8s						
MMPY	**Sheldon Lake,**	**4.46**	**13**	Pb	**Pb**	**09 34 20.1**	**+0.2**
	baz=195						
M30M	**Minto, Yukon**	**4.59**	**340**	Pn	**Pn**	**09 34 11.6**	**+0.4**
M30M	**Minto, Yukon**	**4.59**	**340**	IAML		09 35 45.5	
	comp=N,40nm,0.9s						
M30M	**Minto, Yukon**	**4.59**	**340**	P	**Pn**	**09 34 11.5**	**+0.3**
	baz=157,SNR=6.9						
M29M	**Somme Creek**	**4.84**	**331**	P	**Pn**	**09 34 15.3**	**+0.6**
	baz=147						
L29M	**L29M**	**5.34**	**336**	Pn	**Pn**	**09 34 21.8**	**+0.4**
L29M	**L29M**	**5.34**	**336**	P	**Pn**	**09 34 21.5**	**+0.1**
	baz=152						
K29M	**Barlow Dome**	**5.90**	**342**	Pn	**Pn**	**09 34 30.1**	**+0.9**
K29M	**Barlow Dome**	**5.90**	**342**	P	**Pn**	**09 34 30.0**	**+0.9**
	baz=159,SNR=5.9						
BC01	**Beaver Creek A**	**6.30**	**323**		**Pn**	**09 34 35.1**	**+0.5**
L27K	**Beaver Creek,**	**6.30**	**323**		**Pn**	**09 34 35.9**	**+1.3**
L27K	**Beaver Creek,**	**6.30**	**323**	P	**Pn**	**09 34 35.4**	**+0.8**
	baz=135						
J30M	**Hart River**	**6.44**	**349**	Pn	**Pn**	**09 34 37.5**	**+1.0**
J30M	**Hart River**	**6.44**	**349**	P	**Pn**	**09 34 37.5**	**+1.0**
	baz=166,SNR=18						
DAWY	**Dawson**	**6.45**	**336**	Pn	**Pn**	**09 34 37.3**	**+0.6**
DAWY	**Dawson**	**6.45**	**336**		**Pn**	**09 34 37.8**	**+1.1**
BBB	**Bella Bella**	**6.85**	**151**	Pn	**Pn**	**09 34 39.5**	**-2.5**
	comp=N,0.1nm,0.3s,baz=324,slow=16,SNR=3.2						
BBB				Sn	**Sn**	**09 35 54.1**	**-6.0**
	comp=N,0.1nm,0.3s,baz=6.4,slow=19,SNR=2.3						
BBB				Lg	Lg	09 36 30.7	
	comp=N,0.2nm,0.3s,baz=338,slow=16,SNR=1.9						
	comp=N,6.3nm,1.0s						
I30M	**Mount Dempster**	**7.08**	**350**	Pn	**Pn**	**09 34 47.3**	**+2.0**
I30M	**Mount Dempster**	**7.08**	**350**	P	**Pn**	**09 34 47.1**	**+1.8**
	baz=167,SNR=46						
H31M	**Peel River**	**7.54**	**357**	Pn	**Pn**	**09 34 52.6**	**+1.1**
H31M	**Peel River**	**7.54**	**357**		**Pn**	**09 34 52.4**	**+0.9**
H31M	**Peel River**	**7.54**	**357**	P	**Pn**	**09 34 52.6**	**+1.1**
	baz=176,SNR=9.9						
I28M	**Miner Creek**	**7.79**	**340**	Pn	**Pn**	**09 34 57.1**	**+2.0**
EPYK	**Eagle Plains**	**8.23**	**351**	Pn	**Pn**	**09 35 03.1**	**+2.0**
EPYK	**Eagle Plains**	**8.23**	**351**	Pn	**Pn**	**09 35 02.9**	**+1.8**
EPYK	**Eagle Plains**	**8.23**	**351**	P	**Pn**	**09 35 02.5**	**+1.4**
	baz=168,SNR=13						
I26K	**Coal Creek Min**	**8.39**	**331**	Pn	**Pn**	**09 35 05.0**	**+1.9**
I26K	**Coal Creek Min**	**8.39**	**331**	P	**Pn**	**09 35 04.6**	**+1.5**
	baz=142						
G31M	**Satah River**	**8.65**	**358**	Pn	**Pn**	**09 35 07.8**	**+1.0**
G31M	**Satah River**	**8.65**	**358**		**Pn**	**09 35 07.0**	**+0.3**
G31M	**Satah River**	**8.65**	**358**	P	**Pn**	**09 35 07.8**	**+1.0**
	baz=177,SNR=6.8						
H27K	**Steamboat Moun**	**8.79**	**338**	P	**Pn**	**09 35 09.7**	**+1.0**
	baz=151						
G30M	**tAoh Zraii Nji**	**8.80**	**353**	P	**Pn**	**09 35 09.1**	**+0.3**
	baz=170						
G29M	**Pine Creek**	**8.89**	**348**	Pn	**Pn**	**09 35 11.0**	**+1.0**
G29M	**Pine Creek**	**8.89**	**348**	P	**Pn**	**09 35 10.9**	**+0.9**
	baz=164						
ILAR	**Eielson Array**	**9.11**	**321**	Pn	**Pn**	**09 35 13.9**	**+0.9**
	comp=N,0.1nm,0.3s,baz=135,slow=10,SNR=4.5						
ILAR				Pg		09 35 41.2	
	baz=129,slow=14						
ILAR				Sn	**Sn**	**09 36 57.3**	**+1.6**
	baz=112,slow=17,SNR=4.1						
ILAR				Lg	Lg	09 37 47.0	
	comp=N,0.1nm,0.3s,baz=122,slow=25,SNR=9.9						
	comp=N,0.2nm,0.8s						
F31M	**Tsiigehtchic**	**9.17**	**359**	Pn	**Pn**	**09 35 15.5**	**+1.7**
F31M	**Tsiigehtchic**	**9.17**	**359**	Pn	**Pn**	**09 35 15.5**	**+1.7**
F31M	**Tsiigehtchic**	**9.17**	**359**	P	**Pn**	**09 35 15.1**	**+1.3**
	baz=179						
G27K	**Doyon Strip**	**9.33**	**340**	P	**Pn**	**09 35 16.0**	**-0.1**
	baz=152						
F30M	**Barrier River**	**9.40**	**354**		**Pn**	**09 35 16.9**	**-0.1**
F30M	**Barrier River**	**9.40**	**354**	P	**Pn**	**09 35 17.5**	**+0.5**
	baz=172,SNR=5.7						
L22K	**Petersville**	**9.55**	**304**	P	**Pn**	**09 35 20.5**	**+1.3**
	baz=108						
INK	**Inuvik**	**10.04**	**360**	Pn	**Pn**	**09 35 26.6**	**+1.0**
	comp=N,0.2nm,0.3s,baz=176,slow=14,SNR=8.0						
INK				Lg	Lg	09 38 20.1	
	baz=277,slow=16,SNR=3.7						
	comp=N,3.4nm,0.8s						
INK	**Inuvik**	**10.04**	**360**		**Pn**	**09 35 25.6**	**0.0**
INK	**Inuvik**	**10.04**	**360**	P	**Pn**	**09 35 25.9**	**+0.2**
	baz=180						
KDAK	**Kodiak Island**	**10.17**	**275**	Pn	**Pn**	**09 35 24.2**	**-3.3**
	baz=67,slow=7.7,SNR=1.3						
	comp=N,2.7nm,1.1s						
YKA	**Yellowknife Ar**	**10.20**	**58**	Pn	**Pn**	**09 35 27.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=254,slow=13,SNR=3.0						
YKA				Lg	Lg	09 38 23.6	
	comp=N,0.1nm,0.3s,baz=250,slow=30,SNR=2.3						
	comp=N,0.9nm,0.7s						
E29M	**Blow River**	**10.31**	**351**		**Pn**	**09 35 30.1**	**+0.6**
E29M	**Blow River**	**10.31**	**351**	P	**Pn**	**09 35 30.7**	**+1.3**
	baz=167						
E28M	**Babbage River**	**10.68**	**348**		**Pn**	**09 35 34.2**	**-0.3**
PDAR	**Pinedale Array**	**21.55**	**126**	P	**P**	**09 37 49.6**	**-1.7**
	comp=N,0.2nm,0.9s,baz=314,slow=8.9,SNR=1.3						
	comp=N,0.2nm,0.9s						
NVAR	**Mina Array Bea**	**22.19**	**147**	P	**P**	**09 37 53.8**	**-4.3**
	comp=N,0.1nm,0.3s,baz=345,slow=7.1,SNR=1.7						
	comp=N,0.1nm,0.3s						

IDC ***27*** *09:37:54.4±1.2,29°14N×142°04E, h0km, mb3.8/10, mbtmp3.7/12, ML3.1/3, Error ellipse: s-maj=49.8km s-min=16.6km az=73.0*

ISC 27 09:37:58.4±0.9, 29°05N±0°09×141°9E±0°2, h30km, n13, σ1°47/14, mb3.9/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.96**	**173**	Pn	**Pn**	**09 38 30.0**	**+0.4**
	9.5nm,0.3s,baz=291,slow=23,SNR=1.9						
JCJ				Sn	**Sn**	**09 38 50.2**	**-2.8**
	13nm,0.3s,baz=300,slow=20,SNR=1.9						
MJAR	**Matsushiro Arr**	**8.10**	**338**	Pn	**Pn**	**09 39 52.4**	**-1.6**
	0.1nm,0.3s,baz=211,slow=15,SNR=7.3						
	1.5nm,0.6s						
KSRS	**Korea Array**	**14.40**	**309**	Pn	**Pn**	**09 41 19.2**	**-0.9**
	0.1nm,0.3s,baz=105,slow=12,SNR=1.7						
	0.4nm,0.5s						
SONM	**Songino Array**	**33.17**	**314**	P	**P**	**09 44 30.9**	**-1.5**
	0.2nm,0.2s,baz=95,slow=6.7,SNR=4.0						
	0.2nm,0.2s						
ZALV	**Zalesovo Beam**	**47.88**	**318**	P	**P**	**09 46 34.0**	**+0.5**
	0.7nm,0.6s,baz=102,slow=8.2,SNR=2.3						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**49.08**	**308**	P	**P**	**09 46 44.6**	**+1.7**
	0.7nm,0.6s,baz=88,slow=9.1,SNR=5.5						
	2.7nm,0.6s						
WRA	**Warramunga Arr**	**49.25**	**189**	P	**P**	**09 46 45.6**	**+1.2**
	1.6nm,0.8s,baz=7.6,slow=7.7,SNR=9.6						
	1.6nm,0.8s						
NRIK	**Noril'sk**	**50.76**	**338**	P	**P**	**09 46 54.9**	**-0.4**
	4.2nm,0.6s,baz=115,slow=8.4,SNR=3.8						
	4.2nm,0.6s						
KURBB	**Kurchatov Arra**	**51.53**	**313**	P	**P**	**09 47 02.4**	**+1.1**
	1.2nm,0.6s,baz=93,slow=6.9,SNR=12						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**52.97**	**189**	P	**P**	**09 47 13.3**	**+0.9**
	0.2nm,0.4s,baz=12,slow=7.9,SNR=6.5						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**56.47**	**317**	P	**P**	**09 47 37.3**	**-0.1**
	1.2nm,0.6s,baz=59,slow=6.9,SNR=4.1						
	1.2nm,0.6s						
BRTR	**Keskin Array B**	**84.52**	**313**	P	**P**	**09 50 30.6**	**+1.7**
	0.3nm,0.4s,baz=53,slow=5.6,SNR=1.9

*SJA **27** 10:10:31.4±0.7, 32°.46S×71°.79W, h10km±5km, ML3.5, MW3.3*
*GUC **27** 10:10:36.3±0.7, 32°.47S×71°.48W, h42km±2km, ML3.5*
*IDC **27** 10:10:40.5±3.8, 32°.69S×71°.47W, h76km±31km, mb3.5/2, mbtmp3.5/6, Error ellipse: s-maj=43.5km s-min=19.3km az=123.0*

ISC 27 10:10:34.3±1.1, **32°.46S**±0°.02×**71°.48W**±0°.04, **h15**km±8km, **n66**, σ1§15/82, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA01	**Torpederas**	**0.57**	**194**	*e*P	**Pn**	**10 10 48.0**	**+0.1**
VA01	**Torpederas**	**0.57**	**194**	*e*P	**Pn**	**10 10 48.1**	**+0.2**
VA01				*i*S	**Sn**	**10 10 56.5**	**-0.6**
VA01				IAML		10 10 57.5	
	comp=E,4µm,0.1s						
CO04	**Los Peladeros**	**0.60**	**46**	*e*P	**Pn**	**10 10 48.9**	**+0.4**
CO04				*i*S	**Sn**	**10 10 57.7**	**-0.4**
CO04				IAML		10 10 58.8	
	comp=N,9µm,0.1s						
ROCH	**El Roble**	**0.64**	**142**	*e*P	**Pn**	**10 10 49.2**	**+0.1**
ROCH				*e*P		10 10 49.2	
ROCH				*i*S	**Sn**	**10 10 58.3**	**-0.8**
ROCH				*i*S		10 10 58.6	
VA03	**San Esteban**	**0.84**	**111**	*e*P	**Pn**	**10 10 52.1**	**+0.4**
VA03				IAML		10 11 07.7	
	comp=Z,2µm,0.3s						
VA03	**San Esteban**	**0.84**	**111**	*e*P	**Pn**	**10 10 52.3**	**+0.6**
VA03				*i*S	**Sn**	**10 11 03.7**	**-0.1**
MT02	**Curacav**	**0.84**	**160**	*e*P	**Pn**	**10 10 51.5**	**-0.1**
MT02				IAML		10 11 10.5	
	comp=Z,568nm,0.6s						
MT02	**Curacav**	**0.84**	**160**	*e*P	**Pn**	**10 10 51.5**	**-0.1**
PEL	**Peldehue**	**0.95**	**136**	*e*P	**Pn**	**10 10 53.9**	**+0.7**
PEL				*e*S	**Sn**	**10 11 07.2**	**+0.6**
PEL				IAML		10 11 08.8	
	comp=Z,936nm,0.2s						
PEL	**Peldehue**	**0.95**	**136**	*e*P	**Pn**	**10 10 53.6**	**+0.5**
PEL				*i*S	**Sn**	**10 11 06.6**	**+0.1**
PEL				IAML		10 11 07.5	
	comp=E,2µm,0.3s						
MT05	**Renca**	**1.12**	**146**	*e*P	**Pn**	**10 10 56.0**	**+0.5**
MT05				*e*S	**Sn**	**10 11 13.8**	**+3.2**
MT05				IAML		10 11 17.4	
	comp=Z,677nm,0.2s						
MT05	**Renca**	**1.12**	**146**	*e*P	**Pn**	**10 10 55.9**	**+0.5**
MT05				*i*S	**Sn**	**10 11 10.6**	**0.0**
MT05				IAML		10 11 16.9	
	comp=N,2µm,0.4s						
MT10	**Hacienda Santa**	**1.13**	**136**	*e*P	**Pn**	**10 10 56.6**	**+0.9**
MT10				*i*S	**Sn**	**10 11 11.6**	**+0.5**
MT10				IAML		10 11 14.1	
	comp=N,5µm,0.2s						
VA05	**Santo Domingo**	**1.20**	**185**	*e*P	**Pg**	**10 10 56.7**	**-0.6**
VA05				*i*S	**Sn**	**10 11 13.1**	**+0.7**
MT14	**Cerro Cal¡n**	**1.22**	**140**	*e*P	**Pg**	**10 10 57.8**	**-0.1**
MT14				*i*S	**Sn**	**10 11 14.1**	**+0.9**
MT14				IAML		10 11 15.2	
	comp=N,2µm,0.4s						
MT16	**CCHEN**	**1.25**	**140**	*e*P	**Pg**	**10 10 58.1**	**-0.4**
MT16				*i*S	**Sn**	**10 11 14.9**	**+0.9**
MT16				IAML		10 11 16.2	
	comp=E,638nm,0.5s						
CO02	**Combarbal**	**1.32**	**18**	*e*P	Pn	10 10 51.0	-7.3
CO02				*e*S	**Sg**	**10 11 17.4**	**+0.5**
CO02				IAML		10 11 19.2	
	comp=Z,2µm,0.2s						
CO02	**Combarbal**	**1.32**	**18**	*e*P	**Pg**	**10 10 59.5**	**-0.2**
CO02				*i*S	**Sg**	**10 11 17.2**	**+0.3**
MT09	**Talagante**	**1.37**	**163**	*e*P	**Pb**	**10 10 60.0**	**+0.2**
MT09				*i*S	**Sg**	**10 11 18.6**	**0.0**
MT15	**Las Vizcachas**	**1.40**	**144**	*e*P	**Pb**	**10 10 59.9**	**-0.2**
MT15				*i*S	**Sg**	**10 11 19.2**	**-0.2**
MT15				IAML		10 11 21.4	
	comp=N,3µm,0.1s						
MT01	**Popeta**	**1.41**	**172**	*e*P	**Pb**	**10 11 00.3**	**0.0**
MT01				*e*S	**Sg**	**10 11 21.7**	**+1.9**
MT01				IAML		10 11 23.0	
	comp=Z,402nm,0.2s						
MT01	**Popeta**	**1.41**	**172**	*e*P	**Pb**	**10 11 00.2**	**0.0**
MT01				*i*S	**Sg**	**10 11 18.9**	**-0.9**
MT04	**Ro Olivares**	**1.47**	**130**	*e*P	**Pb**	**10 11 01.6**	**+0.2**
MT04				IAML		10 11 26.8	
	comp=Z,508nm,0.1s						
MT04	**Ro Olivares**	**1.47**	**130**	*e*P	**Pb**	**10 11 01.5**	**0.0**
MT04				*i*S	**Sg**	**10 11 21.0**	**-0.7**
MT08	**Bocatoma Ro**	**1.57**	**129**	*e*P	**Pg**	**10 11 03.8**	**-0.7**
MT08				IAML		10 11 35.7	
	comp=Z,251nm,0.4s						
MT08	**Bocatoma Ro**	**1.57**	**129**	*e*P	**Pb**	**10 11 03.4**	**+0.2**
MT08				*i*S	**Sg**	**10 11 24.2**	**-0.8**
MT08				IAML		10 11 25.7	
	comp=E,418nm,0.5s						
MT13	**San Alfonso**	**1.62**	**142**	*e*P	**Pb**	**10 11 03.9**	**-0.2**
MT13				IAML		10 11 31.0	
	comp=Z,450nm,0.2s						
MT13	**San Alfonso**	**1.62**	**142**	*e*P	**Pb**	**10 11 03.6**	**-0.4**
MT13				*i*S	**Sb**	**10 11 24.2**	**-0.2**
MT13				IAML		10 11 24.4	
	comp=N,906nm,0.4s						
BO04	**La Punta**	**1.69**	**155**	*e*P	**Pb**	**10 11 04.4**	**-0.7**
BO04				*i*S	**Sb**	**10 11 26.1**	**-0.1**
BO04				IAML		10 11 30.6	
	comp=E,850nm,0.3s						
CO03	**El Pedregal**	**1.75**	**23**	*e*P	**Pb**	**10 11 05.9**	**-0.3**
CO03				IAML		10 11 40.6	
	comp=Z,472nm,0.2s						
CO03	**El Pedregal**	**1.75**	**23**	*e*P	**Pb**	**10 11 05.7**	**-0.6**
CO03				*i*S	**Sb**	**10 11 28.5**	**+0.4**
CO03				IAML		10 11 33.9	
	comp=N,942nm,0.2s						
BO01	**Tunca**	**1.95**	**170**	*e*P	**Pn**	**10 11 08.0**	**+1.1**
BO01				*e*S	**Sg**	**10 11 38.4**	**+1.3**
BO01				IAML		10 11 41.2	
	comp=Z,191nm,0.7s						
RTLS	**Leoncito**	**1.97**	**71**	*e*P	**Pg**	**10 11 11.6**	**-0.5**
RTLS				IAML		10 11 44.4	
	comp=Z,689nm,0.5s						
ARCO	**CERRO ARCO**	**2.18**	**101**	*e*P	**Pg**	**10 11 15.2**	**-1.0**
ARCO				IAML		10 11 50.0	
	comp=Z,209nm,0.3s						
AAGR	**Agrelo**	**2.32**	**106**	*e*P	**Pb**	**10 11 16.8**	**+0.9**
AAGR				IAML		10 11 53.0	
	comp=Z,156nm,1.9s						
GO04	**Tololo Observa**	**2.36**	**14**	*e*P	**Pn**	**10 11 13.8**	**+1.2**
GO04				IAML		10 11 49.4	
	comp=Z,668nm,0.3s						
BO02	**Sierra Bellavi**	**2.40**	**166**	*e*P	**Pn**	**10 11 14.3**	**+1.3**
BO02				*e*S	**Sn**	**10 11 42.5**	**+0.3**
BO02				IAML		10 11 55.3	
	comp=Z,390nm,0.8s						
GO05	**Hualane**	**2.57**	**188**	*e*P	**Pn**	**10 11 15.2**	**-0.2**
GO05				*e*S	**Sb**	**10 11 50.7**	**-0.7**
GO05				IAML		10 12 02.7	
	comp=Z,104nm,0.8s						
SJA	**San Juan**	**2.65**	**70**	*e*P	Pn	10 11 09.0	-7.5
SJA				IAML		10 12 04.9	
	comp=Z,117nm,0.3s						
AVIZ	**Vizcacheras**	**2.69**	**113**	*e*P	**Pn**	**10 11 18.2**	**+1.2**
CO01	**Juntas del Tor**	**2.75**	**26**	*e*P	**Pn**	**10 11 20.2**	**+2.2**
CO01				IAML		10 12 06.8	
	comp=Z,126nm,0.2s						
ACCO	**Cerro Coronel**	**2.78**	**48**	*e*P	**Pb**	**10 11 23.1**	**-0.9**
ACCO				IAML		10 12 07.7	
	comp=Z,124nm,0.2s						
RTLL	**Cerro Villicun**	**2.80**	**67**	*e*P	**Pb**	**10 11 22.4**	**-1.6**
RTLL				IAML		10 12 12.4	
	comp=Z,140nm,0.4s						
AROD	**Rodeo**	**2.86**	**37**	*e*P	**Pb**	**10 11 24.2**	**-1.1**
CFA	**Coronel Fontan**	**2.88**	**74**	P	**Pb**	**10 11 23.3**	**-2.2**
	comp=Z,11nm,0.2s,baz=231,slow=7.2,SNR=231						
CFA				S	**Sb**	**10 12 00.4**	**-0.2**
	comp=Z,40nm,0.3s,baz=153,slow=22,SNR=11						
CFA	**Coronel Fontan**	**2.88**	**74**	*e*P	**Pb**	**10 11 23.4**	**-2.0**
CFA				IAML		10 12 16.4	
	comp=Z,138nm,0.6s						
ACDV	**Cuesta del Vie**	**3.05**	**42**	IAML		10 12 11.8	
	comp=Z,106nm,0.6s						
ML02	**Panimavida**	**3.29**	**179**	*e*P	**Pn**	**10 11 25.8**	**+0.5**
LCO	**Las Campanas**	**3.51**	**11**	*e*P	**Pn**	**10 11 29.5**	**+1.0**
AC05	**El Transito**	**3.76**	**16**	*e*P	**Pn**	**10 11 33.4**	**+1.5**
BI02	**San Fabin de**	**4.19**	**178**	*e*P	**Pn**	**10 11 39.4**	**+1.7**
AC04	**Llanos de Chal**	**4.26**	**5**	IAML		10 12 50.2	
	comp=Z,46nm,1.0s						
BI05	**Punta Hualpn**	**4.50**	**198**	IAML		10 13 18.5	
	comp=Z,41nm,0.1s						
BI05				IAML		10 13 18.5	
	comp=Z,41nm,0.1s						
ACLC	**CERRO LA CRUZ**	**4.93**	**53**	*e*P	**Pn**	**10 11 51.1**	**+3.1**
ACLC				IAML		10 12 59.8	
	comp=Z,44nm,0.3s						
H03N1	**Juan Fernandez**	**6.32**	**259**	T	T	10 18 40.8	
	baz=86,slow=73,SNR=763						
H03N3	**Juan Fernandez**	**6.33**	**259**	T	T	10 18 39.0	
	baz=86,slow=73,SNR=788						
H03N2	**Juan Fernandez**	**6.34**	**259**	T	T	10 18 39.8	
	baz=86,slow=73,SNR=789						
H03S3	**Juan Fernandez**	**6.38**	**256**	T	T	10 18 34.5	
	baz=81,slow=75,SNR=43						
H03S1	**Juan Fernandez**	**6.38**	**256**	T	T	10 18 33.1	
	baz=81,slow=75,SNR=42						
H03S2	**Juan Fernandez**	**6.39**	**256**	T	T	10 18 33.9	
	baz=81,slow=75,SNR=64						
PLCA	**Paso Flores**	**8.29**	**175**	P	**Pn**	**10 12 35.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=330,slow=13,SNR=6.5						
LPAZ	**La Paz**	**16.39**	**11**	P	**P**	**10 14 30.7**	**+3.4**
	comp=Z,0.5nm,0.5s,baz=183,slow=18,SNR=2.1						
SIV	**San Ignacio**	**18.93**	**32**	P	**Pn**	**10 14 58.5**	**+3.2**
	comp=Z,0.7nm,0.8s,baz=250,slow=20,SNR=1.5						
QSPA	**South Pole Qui**	**57.77**	**180**	P	**P**	**10 20 22.7**	**-1.8**
	comp=Z,1.4nm,1.0s,baz=79,slow=0.7,SNR=3.8						
	comp=Z,1.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**83.25**	**70**	P	**P**	**10 22 58.7**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=253,slow=4.8,SNR=3.5						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**152.68**	**31**	PKPbc	**PKPbc**	**10 30 27.5**	**-2.3**
	comp=Z,0.6nm,0.4s,baz=312,slow=3.4,SNR=2.7						

*MRB **27** 10:24:07.8±0.2, 42°.89N×0°.24E, h6km±1km, ML1.8/26, Error ellipse: s-maj=0.7km s-min=0.5km az=42.0*
*STR **27** 10:24:07.7±0.0, 42°.91N±0°.09×0°.23E±0°.06, h7km, MLv2.0/13, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*LDG **27** 10:24:07.8±0.1, 42°.92N×0°.22E, h2km, Ml2.7/12, Error ellipse: s-maj=1.5km s-min=1.2km az=21.0*
*MDD **27** 10:24:08.1±0.2, 42°.91N×0°.24E, h0km, mb_Lg2.3/24, Error ellipse: s-maj=2.5km s-min=1.2km az=11.0*

ISC 27 10:24:07.7±0.8, **42°.91N**±0°.01×**0°.23E**±0°.01, **h10**km±5km, **n79**, σ0§89/146, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RESF	**Ens**	**0.13**	**144**	P	**Pg**	**10 24 10.3**	**-0.6**
RESF				S	**Sg**	**10 24 12.0**	**-1.0**
EPF	**Esparros**	**0.14**	**33**	*e*Pg	**Pg**	**10 24 10.6**	**-0.4**
EPF				*e*Sg	**Sg**	**10 24 12.4**	**-0.9**
	638nm,0.2s						
VIEF	**Viey**	**0.16**	**259**	P	**Pg**	**10 24 11.1**	**-0.1**
VIEF				S	**Sg**	**10 24 13.6**	**-0.1**
	181nm,0.1s						
VIEF	**Viey**	**0.16**	**259**	Pg	**Pg**	**10 24 10.6**	**-0.6**
VIEF				Sg	**Sg**	**10 24 13.2**	**-0.5**
LABF	**Labassere**	**0.18**	**319**	Pg	**Pg**	**10 24 11.3**	**-0.3**
LABF				Sg	**Sg**	**10 24 14.2**	**-0.1**
ECHI	**Chisagues Biel**	**0.25**	**187**	Pg	**Pg**	**10 24 12.3**	**-0.5**
ECHI				Sg	**Sg**	**10 24 15.6**	**-0.7**
ECHI	**Chisagues Biel**	**0.25**	**187**	P	**Pg**	**10 24 12.3**	**-0.5**
ECHI				S	**Sg**	**10 24 15.7**	**-0.7**
	496nm,0.1s						
ECHI	**Chisagues Biel**	**0.25**	**187**	Pg	**Pg**	**10 24 12.3**	**-0.5**
ECHI				Sg	**Sg**	**10 24 15.7**	**-0.7**
PYLO	**Lourdes**	**0.28**	**312**	P	**Pg**	**10 24 13.6**	**+0.2**
PYLO				S	**Sg**	**10 24 17.6**	**+0.5**
	132nm,0.3s						
PYLO	**Lourdes**	**0.28**	**312**	Pg	**Pg**	**10 24 13.1**	**-0.3**
PYLO				Sg	**Sg**	**10 24 16.9**	**-0.2**
VIER	**Vielha - Casau**	**0.46**	**117**	Pg	**Pg**	**10 24 16.4**	**-0.3**
VIER				Sg	**Sg**	**10 24 22.7**	**+0.1**
VIER	**Vielha - Casau**	**0.46**	**117**	P	**Pg**	**10 24 16.3**	**-0.3**
VIER				S	**Sg**	**10 24 22.6**	**-0.1**
	59nm,0.2s						
CARA	**Val d'Aran**	**0.48**	**115**	P	**Pg**	**10 24 16.8**	**-0.2**
CARA				S	**Sg**	**10 24 23.4**	**0.0**
	55nm,0.3s						
REYF	**Montagne du Re**	**0.48**	**289**	Pg	**Pg**	**10 24 16.8**	**-0.5**
REYF				Sg	**Sg**	**10 24 23.5**	**-0.1**
CANF	**Canfranc**	**0.57**	**255**	Pg	**Pg**	**10 24 18.0**	**-0.8**
CANF				Sg	**Sg**	**10 24 25.9**	**-0.5**
ETSF	**Etsaut**	**0.58**	**269**	*e*Pg	**Pg**	**10 24 18.2**	**-0.9**
ETSF				*e*Sg	**Sg**	**10 24 25.7**	**-1.0**
	51nm,0.2s						
MLS	**Moulis**	**0.63**	**86**	P	**Pg**	**10 24 19.6**	**-0.4**
MLS				S	**Sg**	**10 24 28.4**	**+0.1**
	5.2nm,0.1s						
MLS	**Moulis**	**0.63**	**86**	Pg	**Pg**	**10 24 18.9**	**-1.1**
ATE	**Arette**	**0.71**	**284**	P	**Pg**	**10 24 21.2**	**-0.2**
ATE				S	**Sg**	**10 24 31.3**	**+0.6**
	14nm,0.2s						
ATE	**Arette**	**0.71**	**284**	Pg	**Pg**	**10 24 20.9**	**-0.5**
ATE				Sg	**Sg**	**10 24 31.2**	**+0.6**
CTRE	**Tremp**	**0.71**	**146**	P	**Pg**	**10 24 20.9**	**-0.6**
CTRE				S	**Sg**	**10 24 30.6**	**-0.2**
	6.1nm,0.2s						
SALF	**Salau**	**0.72**	**102**	P	**Pg**	**10 24 21.1**	**-0.5**
SALF				S	**Sg**	**10 24 31.2**	**+0.1**
	22nm,0.1s						
SALF	**Salau**	**0.72**	**102**	Pg	**Pg**	**10 24 20.8**	**-0.8**
SALF				Sg	**Sg**	**10 24 31.4**	**+0.4**
CEST	**Esterri de Car**	**0.81**	**112**	P	**Pg**	**10 24 22.8**	**-0.7**
CEST				S	**Sg**	**10 24 34.1**	**0.0**
	15nm,0.1s						
CRAS	**Crastes**	**0.89**	**24**	Pn	**Pb**	**10 24 25.7**	**+0.5**
CRAS				Sn	**Sn**	**10 24 39.0**	**-0.2**
ORDF	**Ordiarp**	**0.91**	**290**	Pg	**Pg**	**10 24 25.2**	**0.0**
ORDF				Pn	**Pb**	**10 24 26.1**	**+0.5**
ORDF				Sg	**Sb**	**10 24 37.8**	**+0.1**
PAND	**Andorre**	**1.04**	**112**	P	**Pg**	**10 24 26.7**	**-1.1**
PAND				S	**Sg**	**10 24 40.9**	**-0.5**
	18nm,0.2s						
CORG	**Organya**	**1.05**	**130**	P	**Pg**	**10 24 27.0**	**-1.0**
CORG				S	**Sg**	**10 24 41.1**	**-0.5**
	4.2nm,0.2s						
ARBS	**La Rabassa**	**1.08**	**115**	P	**Pg**	**10 24 27.4**	**-1.0**
ARBS				S	**Sg**	**10 24 41.5**	**-0.9**
	15nm,0.3s						
SJPF	**Ste Jean**	**1.09**	**281**	*e*Pg	**Pg**	**10 24 27.5**	**-1.2**
SJPF				*e*Sg	**Sg**	**10 24 41.4**	**-1.4**
	8.0nm,0.2s						
CAVN	**Les Avellanes**	**1.10**	**159**	P	**Pg**	**10 24 27.6**	**-1.2**
CAVN				S	**Sg**	**10 24 42.2**	**-0.9**
	37nm,0.2s						
OSSF	**Osses**	**1.15**	**288**	P	**Pg**	**10 24 28.8**	**-1.0**
OSSF				S	**Sg**	**10 24 44.4**	**-0.3**
	5.3nm,0.2s						
OSSF	**Osses**	**1.15**	**288**	Pn	**Pg**	**10 24 29.5**	**-0.3**
DUNF	**Dun**	**1.16**	**84**	Pn	**Pg**	**10 24 29.8**	**-0.3**
DUNF				Sn	**Sb**	**10 24 45.8**	**+0.7**
ESAC	**San Caprasio**	**1.30**	**204**	Pg	**Pn**	**10 24 32.3**	**+0.3**
ESAC				Sg	**Sb**	**10 24 49.7**	**+0.7**
ESAC	**San Caprasio**	**1.30**	**204**	P	**Pn**	**10 24 31.2**	**-0.9**
ESAC				S	**Sg**	**10 24 48.4**	**-1.2**
EALK	**Alkurruntz**	**1.31**	**284**	Pg	**Pn**	**10 24 32.3**	**+0.1**
EALK				Sg	**Sb**	**10 24 50.1**	**+0.6**
EALK				*i* lVmb_Lg		10 24 55.6	
EALK	**Alkurruntz**	**1.31**	**284**	Pn	**Pn**	**10 24 31.8**	**-0.4**
EARA	**Aranguren**	**1.34**	**265**	Sg	**Sn**	**10 24 51.5**	**+1.0**
EARA				*i* lVmb_Lg		10 24 58.2	
CLLI	**Llivia**	**1.35**	**108**	P	**Pn**	**10 24 32.1**	**-0.7**
CLLI				S	**Sb**	**10 24 50.6**	**-0.1**
	14nm,0.4s						
CARF	**Carcanieres**	**1.39**	**98**	P	**Pn**	**10 24 33.0**	**-0.3**
CARF				S	**Sb**	**10 24 51.6**	**-0.1**
	19nm,0.3s						
CARF	**Carcanieres**	**1.39**	**98**	Pg	**Pn**	**10 24 33.6**	**+0.2**
CARF				Sg	**Sn**	**10 24 52.9**	**+1.0**
VALC	**Valcebollere**	**1.44**	**111**	P	**Pn**	**10 24 33.7**	**-0.3**
VALC				S	**Sb**	**10 24 52.9**	**-0.2**
VALC	**Valcebollere**	**1.44**	**111**	Pg	**Pg**	**10 24 35.1**	**-0.2**
VALC				Sg	**Sg**	**10 24 54.8**	**+0.9**
MTLF	**Montolieu**	**1.51**	**73**	*e*Sg	**Sn**	**10 24 55.6**	**+0.9**
	12nm,0.2s						
MTLF	**Montolieu**	**1.51**	**73**	Pg	**Pn**	**10 24 35.7**	**+0.8**
MTLF				Sg	**Sg**	**10 24 56.4**	**-0.1**
CBRU	**Bruguera**	**1.57**	**113**	P	**Pn**	**10 24 35.8**	**0.0**
CBRU				S	**Sn**	**10 24 56.7**	**+0.4**
CORI	**Orista**	**1.64**	**124**	P	**Pn**	**10 24 36.4**	**-0.3**
CORI				S	**Sn**	**10 24 58.0**	**+0.2**
EPOB	**Poblet**	**1.68**	**158**	Pg	**Pb**	**10 24 39.2**	**+0.3**
EPOB				Sg	**Sb**	**10 25 00.9**	**+0.8**
EPOB				*i* lVmb_Lg		10 25 02.5	
EPOB	**Poblet**	**1.68**	**158**	P	**Pn**	**10 24 37.1**	**-0.2**
EPOB				S	**Sn**	**10 24 59.4**	**+0.4**
	5.4nm,0.3s						
FILF	**Fillols**	**1.75**	**101**	S	**Sn**	**10 24 59.0**	**-1.7**
	6.5nm,0.2s						
FILF	**Fillols**	**1.75**	**101**	Pg	**Pn**	**10 24 38.5**	**+0.3**
SLVF	**La Salvetat-Pe**	**1.90**	**47**	Pn	**Pn**	**10 24 39.2**	**-1.0**
CBEU	**Beuda**	**1.92**	**109**	P	**Pn**	**10 24 40.5**	**-0.1**
CBEU				S	**Sn**	**10 25 04.9**	**0.0**
ERTA	**Horta de San J**	**1.96**	**178**	Pn	**Pn**	**10 24 40.4**	**-0.7**
ERTA				Sn	**Sn**	**10 25 05.9**	**+0.3**
ERTA				*i* lVmb_Lg		10 25 11.5	
ERTA	**Horta de San J**	**1.96**	**178**	P	**Pn**	**10 24 40.8**	**-0.2**
ERTA				S	**Sn**	**10 25 06.0**	**+0.3**
	7.7nm,0.2s						
SJAF	**Saint Jean de**	**2.00**	**101**	P	**Pn**	**10 24 41.8**	**+0.2**
SJAF				S	**Sn**	**10 25 07.3**	**+0.6**
	8.8nm,0.3s						
SJAF	**Saint Jean de**	**2.00**	**101**	Pg	**Pb**	**10 24 45.1**	**+0.9**
SJAF				Sg	**Sg**	**10 25 12.4**	**+0.4**
VAN2	**Vandellos 2**	**2.01**	**167**	S	**Sn**	**10 25 07.0**	**+0.1**
	5.6nm,0.2s						
EJON	**La Jonquera**	**2.01**	**102**	Pg	**Pb**	**10 24 45.3**	**+0.9**
EJON				Sg	**Sg**	**10 25 11.9**	**-0.4**
EJON				*i* lVmb_Lg		10 25 15.5	
CGAR	**Garraf**	**2.04**	**142**	S	**Sn**	**10 25 07.8**	**0.0**
	4.5nm,0.4s						
LFF	**La Frestale**	**2.06**	**10**	*e*Pg	**Pb**	**10 24 45.2**	**0.0**
LFF				*e*Sn	**Sn**	**10 25 05.4**	**-2.7**
LFF				*e*Sg	**Sb**	**10 25 12.2**	**+1.3**
	23nm,0.3s						
CLAF	**Gruissan**	**2.11**	**83**	*e*Pn	**Pn**	**10 24 43.1**	**+0.1**
CLAF	**Gruissan**	**2.11**	**83**	P	**Pn**	**10 24 43.1**	**+0.1**
CLAF				S	**Sn**	**10 25 09.8**	**+0.5**
CMAS	**Mas de Barbera**	**2.19**	**178**	P	**Pn**	**10 24 43.8**	**-0.4**
CMAS				S	**Sn**	**10 25 11.0**	**-0.3**
	6.5nm,0.3s						
CCAS	**Cassa de la Se**	**2.23**	**117**	P	**Pn**	**10 24 44.5**	**-0.2**
CCAS				S	**Sn**	**10 25 12.5**	**+0.1**
	8.9nm,0.4s						
CPAL	**Palau Saverder**	**2.25**	**105**	P	**Pn**	**10 24 44.8**	**-0.1**
CPAL				S	**Sn**	**10 25 12.5**	**-0.2**
	4.1nm,0.4s						
ALCN	**Alcanar**	**2.37**	**175**	S	**Sn**	**10 25 15.2**	**-0.5**
CAF	**Calviac**	**2.41**	**33**	*e*Pg	**Pb**	**10 24 50.2**	**-1.0**
CAF				*e*Sg	**Sb**	**10 25 23.0**	**+2.0**
	6.3nm,0.2s						
RJF	**Les Rejaudoux**	**2.56**	**21**	*e*Pg	**Pb**	**10 24 55.5**	**+1.7**
RJF				*e*Sg	**Sb**	**10 25 27.9**	**+2.5**
	8.3nm,0.2s						
EMOS	**Mosqueruela**	**2.60**	**192**	Pg	**Pb**	**10 24 55.8**	**+1.2**
EMOS				Sn	**Sn**	**10 25 22.1**	**+0.3**
EMOS				Sg	**Sg**	**10 25 30.6**	**-0.7**
EMOS				*i* lVmb_Lg		10 25 38.1	
EMOS	**Mosqueruela**	**2.60**	**192**	P	**Pn**	**10 24 49.8**	**-0.3**
EMOS				S	**Sn**	**10 25 21.1**	**-0.7**
ALCX	**Castello**	**2.65**	**179**	S	**Sn**	**10 25 22.6**	**-0.1**
ETOR	**Torete**	**2.70**	**220**	Pn	**Pn**	**10 24 51.7**	**+0.3**
ETOR				Sn	**Sn**	**10 25 24.0**	**-0.1**
ETOR				*i* lVmb_Lg		10 25 45.8	
LASF	**Ste Croix**	**2.88**	**65**	*e*Sg	**Sg**	**10 25 38.1**	**-2.2**
	3.7nm,0.2s						
TCF	**Toulx Ste Croi**	**3.66**	**22**	*e*Sg	**Sg**	**10 26 03.6**	**-1.6**
	3.4nm,0.3s						
MFF	**Saint Martin d**	**3.70**	**356**	*e*Pg	**Pb**	**10 25 15.5**	**+2.3**
MFF				*e*Sg	**Sg**	**10 26 03.4**	**-3.1**
	4.5nm,0.3s						
MFF				*e*Sg	**Sg**	**10 26 03.4**	**-3.1**
	2.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.75**	**57**	*e*Pg	**Pb**	**10 25 16.1**	**+2.0**
VIVF				*e*Sg	**Sg**	**10 26 05.8**	**-2.3**
	2.5nm,0.3s						
BGF	**Bois d'Agland**	**4.09**	**26**	*e*Sg	**Sg**	**10 26 17.3**	**-1.8**
	13nm,0.4s						

IDC 27 10:33:52.2±16.0, **13°.86S**×**168°.67E**, **h0**km, **mb3.9**/4, **mbtmp4.0**/4, **Error ellipse: s-maj=264.4km s-min=118.8km az=54.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**22.31**	**251**	P	P	10 38 51.7	+0.2
	2.9nm,0.8s,baz=88,slow=15,SNR=2.3						
	2.9nm,0.8s						
STKA	**Stephens Creek**	**30.59**	**230**	P	P	10 40 08.1	+0.2
	2.0nm,0.5s,baz=50,slow=10.0,SNR=7.1						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**33.36**	**255**	P	P	10 40 32.3	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**19.00**	**291**	I	I	12 48 53.8	
	0.1nm,0.6s,baz=99,slow=305,SNR=6.4						
I26DE	**FREYUNG INFRAS**	**22.30**	**328**	I	I	13 15 14.6	
	baz=136,slow=326,SNR=0.8						
I42PT	**GRACIOSA ISLAN**	**48.53**	**297**	I	I	16 04 50.0	
	baz=84,slow=318,SNR=1.3						

IDC 27 11:07:39.9±1.6, 28°.29N×104°.94E, h0km, mb3.5/3, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=60.1km s-min=28.5km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.22**	**211**	Pn	Pn	11 10 21.2	-0.4
	0.1nm,0.3s,baz=17,slow=12,SNR=5.5						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**25.61**	**322**	P	P	11 13 10.9	0.0
	0.5nm,0.7s,baz=142,slow=11,SNR=3.8						
	0.5nm,0.7s						
GNI	**Garni**	**50.30**	**300**	P	P	11 16 37.1	-1.4
	28nm,1.3s						
WRA	**Warramunga Arr**	**55.74**	**146**	P	P	11 17 18.5	-0.1
	0.7nm,1.0s,baz=336,slow=8.4,SNR=5.4						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**58.72**	**149**	P	P	11 17 39.5	0.0
	0.6nm,0.8s,baz=331,slow=6.5,SNR=6.7						
	0.6nm,0.8s						

*IDC **27** 11:12:33.5±0.7, 26°.90N×56°.05E, h0km, mb4.2/26, mbtmp4.2/29, ML3.7/4, MS3.6/29, Error ellipse: s-maj=16.0km s-min=12.8km az=2.0*

*MOS **27** 11:12:33.2±1.2, 26°.80N×56°.04E, h12km, mb4.7/46, Error ellipse: s-maj=5.3km s-min=4.0km az=80.5*

*NEIC **27** 11:12:35.0±0.9, 26°.95N±0°.06×55°.96E±0°.08, h10km±1km, mb4.6/140, Error ellipse: s-maj=12.1km s-min=10.1km az=284.0*

*TEH **27** 11:12:34.6, 26°.87N×56°.14E, h8km±38km, ML4.4, Presumed earthquake*

*BJI **27** 11:12:34.3, 27°.13N×55°.60E, h26km, mB4.9/4, mb4.8/32, Ms4.3/11, Ms7 3.9/12*

*DSN **27** 11:12:35.6±0.6, 26°.97N×56°.46E, h10km, ML4.2/17, Error ellipse: s-maj=12.5km s-min=4.5km az=98.0*

*GFZ **27** 11:12:36.5±0.3, 27°.N±4°×5°.6E±°, h10km, Ml4.5/23, mb4.6/23*

*OMAN **27** 11:12:36.9±1.2, 26°.90N×56°.07E, h10km, mb4.5/6, ml4.4/23, Mwp4.6/6, Error ellipse: s-maj=9.9km s-min=6.8km az=41.0*

*THR **27** 11:12:37.5±0.0, 27°.05N×56°.25E, h18km±9km, ML4.3, Presumed earthquake*

ISC 27 11:12:37.0±0.6, 26°.94N±0°.02×56°.08E±0°.03, h23km±3km, n450, σ1°52/464, mb4.5/132, MS3.6/35, 3C-11D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.47**	**10**	*e*Pg	**Pb**	**11 12 45.1**	**-1.7**
BNDS				IAML		11 13 01.9	
	comp=Z,15μm,1.0s						
GENO	**Geno**	**0.47**	**10**	Pg	**Pb**	**11 12 45.2**	**-1.6**
IBND	**Bandar-abas**	**0.65**	**39**	Pg	**Pb**	**11 12 47.8**	**-2.0**
SHME	**Shamm**	**0.88**	**176**	*e*P	**Pb**	**11 12 53.4**	**-0.3**
	SNR=49						
SHME				S	**Sn**	**11 13 08.5**	**+2.3**
SHME	**Shamm**	**0.88**	**176**	P	**Pn**	**11 12 55.3**	**+1.2**
	SNR=70						
SHME				P	**Pn**	**11 12 55.3**	**+1.2**
	SNR=70						
SHME				S	**Sn**	**11 13 07.5**	**+1.3**
SHME				S	**Sn**	**11 13 07.5**	**+1.3**
BANOM	**Banah**	**1.03**	**169**	*e*P	**Pn**	**11 12 55.5**	**-0.6**
	SNR=168						
BANOM				S	**Sn**	**11 13 10.3**	**+0.5**
BANOM	**Banah**	**1.03**	**169**	P	**Pb**	**11 12 56.5**	**+0.3**
BANOM				S	**Sn**	**11 13 10.6**	**+0.8**
UMQ	**Umm Al-Quwin**	**1.45**	**195**	*e*P	**Pb**	**11 13 04.6**	**+1.2**
	SNR=5.6						
UMQ	**Umm Al-Quwin**	**1.45**	**195**	P	**Pb**	**11 13 05.0**	**+1.6**
	SNR=5.7						
MASF	**Masafi**	**1.56**	**177**	P	**Pb**	**11 13 05.6**	**+0.4**
	SNR=112						
MASF				P	**Pb**	**11 13 05.6**	**+0.4**
	SNR=112						
MSFE	**Esma-Masafi**	**1.57**	**177**	*e*P	**Pb**	**11 13 05.3**	**-0.2**
	SNR=66						
MDH	**Madha**	**1.64**	**173**	*e*P	**Pn**	**11 13 04.9**	**+0.4**
	SNR=119						
MDH	**Madha**	**1.64**	**173**	P	**Pb**	**11 13 05.8**	**-0.8**
	SNR=45						
MDH				P	**Pb**	**11 13 05.8**	**-0.8**
	SNR=45						
MDH				S	**Sn**	**11 13 24.5**	**-0.4**
MDH				S	**Sn**	**11 13 24.5**	**-0.4**
KHNJ	**Kahnooj**	**1.76**	**55**	Pg	**Pn**	**11 13 06.9**	**+0.8**
JASK	**Jask - Hormozg**	**1.92**	**123**	Pn	**Pn**	**11 13 08.5**	**+0.1**
NAZ	**Nazwa, Dubai**	**1.98**	**191**	*e*P	**Pb**	**11 13 11.4**	**-1.0**
	SNR=57						
NAZ	**Nazwa, Dubai**	**1.98**	**191**	P	**Pb**	**11 13 12.0**	**-0.3**
	SNR=55						
NAZ				P	**Pb**	**11 13 12.0**	**-0.3**
	SNR=55						
UOSS	**Minazif**	**1.98**	**177**	*e*P	**Pn**	**11 13 10.3**	**+1.1**
	SNR=130						
UOSS	**Minazif**	**1.98**	**177**	P	**Pb**	**11 13 11.0**	**-1.5**
UOSS	**Minazif**	**1.98**	**177**		**Pn**	**11 13 08.9**	**-0.3**
UOSS	**Minazif**	**1.98**	**177**	Pn	**Pn**	**11 13 10.0**	**+0.7**
UOSS	**Minazif**	**1.98**	**177**	P	**Pb**	**11 13 10.8**	**-1.7**
HATD	**Hatta, Dubai**	**2.10**	**179**	*e*P	**Pn**	**11 13 12.4**	**+1.5**
	SNR=154						
HATD	**Hatta, Dubai**	**2.10**	**179**	P	**Pb**	**11 13 12.8**	**-1.7**
	SNR=111						
FAQ	**Al Faqa, Dubai**	**2.23**	**192**	*e*P	**Pn**	**11 13 14.4**	**+1.8**
	SNR=72						
FAQ	**Al Faqa, Dubai**	**2.23**	**192**	P	**Pb**	**11 13 15.0**	**-1.5**
	SNR=71						
FAQ				P	**Pb**	**11 13 15.0**	**-1.5**
	SNR=71						
FAQ				S	**Sn**	**11 13 38.8**	**-0.5**
FAQ				S	**Sn**	**11 13 38.8**	**-0.5**
ASHO	**Ashiyiah**	**2.24**	**181**	*e*P	**Pn**	**11 13 14.6**	**+1.8**
	SNR=52						
ASHO	**Ashiyiah**	**2.24**	**181**	P	**Pb**	**11 13 15.8**	**-1.1**
	SNR=82						
ASUD	**Al Ashush, Dub**	**2.40**	**197**	*e*P	**Pb**	**11 13 18.0**	**-1.5**
	SNR=70						
ASUD	**Al Ashush, Dub**	**2.40**	**197**	P	**Pb**	**11 13 18.0**	**-1.5**
	SNR=70						
AJN	**Ajban**	**2.56**	**203**	P	**Pb**	**11 13 19.8**	**-2.5**
AJN	**Ajban**	**2.56**	**203**	P	**Pn**	**11 13 18.6**	**+1.4**
KHL1	**Khalili_Fars**	**2.57**	**286**	Pn	**Pn**	**11 13 19.6**	**+2.3**
NGRK	**Negar Kerman**	**2.76**	**12**	Pn	**Pn**	**11 13 22.3**	**+2.1**
SOHO	**SOHO**	**2.82**	**172**	*e*P	**Pn**	**11 13 20.3**	**-0.4**
	SNR=22						
SOHO	**SOHO**	**2.82**	**172**	P	**Pn**	**11 13 22.5**	**+1.8**
ALNE	**Al Ain**	**2.88**	**186**	*e*P	**Pn**	**11 13 23.4**	**+1.8**
	SNR=10						
ALNE	**Al Ain**	**2.88**	**186**	P	**Pn**	**11 13 24.0**	**+2.4**
	SNR=10						
KBAM	**BAM**	**3.03**	**43**	Pn	**Pn**	**11 13 25.4**	**+1.7**
HOQ	**Hoqain**	**3.52**	**161**	P	**Pn**	**11 13 31.8**	**+1.5**
	SNR=24						
HOQ				S	**Sn**	**11 14 13.9**	**+2.6**
HOQ	**Hoqain**	**3.52**	**161**	Pn	**Pn**	**11 13 29.9**	**-0.4**
ARQ	**Araqi**	**3.61**	**174**	P	**Pn**	**11 13 33.9**	**+2.3**
	SNR=34						
ARQ				S	**Sn**	**11 14 16.7**	**+3.2**
BIDO	**Bidbid**	**3.87**	**151**	P	**Pn**	**11 13 36.0**	**+0.8**
	SNR=17						
BIDO				S	**Sn**	**11 14 21.1**	**+1.1**
SHI	**Shiraz**	**4.14**	**311**	Pn	**Pn**	**11 13 40.8**	**+1.7**
CHBR	**Chabahar**	**4.17**	**108**	*e*Pn	**Pn**	**11 13 40.8**	**+1.5**
CHBR				IAML		11 15 22.2	
	comp=Z,360nm,1.0s						
SMDO	**Samad**	**4.25**	**155**	P	**Pn**	**11 13 43.3**	**+2.8**
	SNR=9.4						
SMDO				S	**Sn**	**11 14 32.0**	**+2.5**
UMZA	**Um Al Zommool**	**4.29**	**191**	P	**Pn**	**11 13 42.2**	**+1.3**
BSY	**Bisya**	**4.29**	**166**	P	**Pn**	**11 13 45.3**	**+4.2**
	SNR=26						
BSY				S	**Sn**	**11 14 34.6**	**+4.1**
WSAR	**Wadi Sarin**	**4.35**	**147**	P	**Pn**	**11 13 43.6**	**+1.8**
	SNR=44						
WSAR				S	**Sn**	**11 14 34.0**	**+2.3**
MZR	**Muzera**	**4.57**	**212**	P	**Pn**	**11 13 47.4**	**+2.6**
MZR				S	**Sn**	**11 14 39.4**	**+2.0**
IMEH	**Mehriz**	**4.62**	**344**	Pn	**Pn**	**11 13 48.0**	**+2.3**
IBAF	**Bafgh**	**4.66**	**355**	Pn	**Pn**	**11 13 48.5**	**+2.3**
NGCH	**Negor - Chabah**	**4.81**	**108**	Pn	**Pn**	**11 13 47.9**	**-0.1**
JMDO	**Jabal Madar**	**4.90**	**158**	P	**Pn**	**11 13 51.7**	**+2.2**
	SNR=9.6						
JMDO				S	**Sn**	**11 14 48.5**	**+3.0**
ZHSF	**Zahedan**	**4.92**	**56**	*e*Pn	**Pn**	**11 13 49.0**	**-0.8**
ZHSF				IAML		11 15 30.6	
	comp=Z,67nm,1.0s						
WBK	**Wadi Bani Khal**	**5.04**	**148**	P	**Pn**	**11 13 52.0**	**+0.7**
	SNR=40						
WBK	**Wadi Bani Khal**	**5.04**	**148**	Pn	**Pn**	**11 13 51.8**	**+0.5**
TAFT	**Taft - Yazd**	**5.05**	**341**	Pn	**Pn**	**11 13 53.9**	**+2.3**
YZKH	**Yazd**	**5.59**	**347**	*e*Pn	**Pn**	**11 14 01.8**	**+2.9**
YZKH				IAML		11 15 08.0	
	comp=Z,84nm,1.0s						
JLN	**Jalan Bani Buh**	**5.65**	**147**	P	**Pn**	**11 13 59.9**	**+0.3**
	SNR=42						
SRVN	**Saravan**	**5.65**	**84**	*e*Pn	**Pn**	**11 14 01.4**	**+1.7**
SRVN				IAML		11 16 11.4	
	comp=Z,68nm,1.0s						
SRVN	**Saravan**	**5.65**	**84**	Pn	**Pn**	**11 14 01.0**	**+1.3**
KLNJ	**Kolanjah**	**5.65**	**317**	*e*Pn	**Pn**	**11 14 02.0**	**+2.0**
KLNJ				IAML		11 15 20.8	
	comp=Z,130nm,1.0s						
BSRN	**Basiran**	**5.67**	**27**	*e*Pn	**Pn**	**11 14 01.8**	**+1.7**
BSRN				IAML		11 15 52.7	
	comp=Z,150nm,1.0s						
MHTO	**MHTO**	**6.17**	**163**	P	**Pn**	**11 14 10.0**	**+3.2**
	SNR=35						
NASN	**Na'in**	**6.50**	**335**	*e*Pn	**Pn**	**11 14 14.0**	**+2.4**
NASN				IAML		11 15 29.0	
	comp=Z,57nm,1.0s						
TABS	**Tabas**	**6.75**	**7**	*e*Pn	**Pn**	**11 14 17.8**	**+3.0**
TABS				IAML		11 16 34.1	
	comp=Z,98nm,1.0s						
DQM	**DQM**	**7.10**	**169**	P	**Pn**	**11 14 19.9**	**+0.3**
SHRT	**Shahrakht**	**7.61**	**28**	*e*Pn	**Pn**	**11 14 29.5**	**+2.8**
SHRT				IAML		11 16 58.6	
	comp=Z,36nm,1.0s						
KHMZ	**Khomeyn**	**8.60**	**324**	*e*Pn	**Pn**	**11 14 42.4**	**+2.1**
SHAO	**Shalim**	**8.88**	**183**	P	**Pn**	**11 14 44.0**	**0.0**
	SNR=16						
HRA	**Herat**	**9.12**	**34**		**Pn**	**11 14 46.8**	**-0.7**
ASAO	**Ashtian**	**9.20**	**327**	*e*Pn	**Pn**	**11 14 50.8**	**+2.2**
WHFO	**Wadi Hawf**	**9.22**	**194**	P	**Pn**	**11 14 48.1**	**-0.6**
	SNR=43						
DMTO	**DMTO**	**9.23**	**187**	P	**Pn**	**11 14 47.7**	**-1.2**
DAMV	**Damavand**	**9.35**	**339**	*e*Pn	**Pn**	**11 14 54.9**	**+4.2**
SBZV	**Sabzevar**	**9.51**	**7**	*e*Pn	**Pn**	**11 14 56.6**	**+3.7**
CHTH	**Charan**	**9.89**	**336**	*e*Pn	**Pn**	**11 15 01.5**	**+3.4**
RAYN	**Ar Rayn**	**10.16**	**253**	P	**Pn**	**11 14 00.4**	**-1.2**
RAYN	**Ar Rayn**	**10.16**	**253**		**Pn**	**11 14 58.6**	**-3.0**
RAYN	**Ar Rayn**	**10.16**	**253**	P	**Pn**	**11 15 00.4**	**-1.2**
KBL	**Kabul**	**13.47**	**53**	P	**Pn**	**11 15 48.3**	**+1.3**
KBL	**Kabul**	**13.47**	**53**	Pn	**Pn**	**11 15 48.3**	**+1.3**
SHAA	**Shahritus**	**14.68**	**41**		**Pn**	**11 16 02.8**	**-0.7**
HAKT	**HAKKARI**	**14.88**	**318**	P	**Pn**	**11 16 05.8**	**-0.3**
GEVA	**Gevas**	**15.76**	**319**	Pn	**Pn**	**11 16 15.4**	**-2.3**
GANJ	**Ganja**	**15.88**	**332**	P	**P**	**11 16 25.5**	**+2.8**
SEKA	**Sheki**	**16.01**	**335**	P	**P**	**11 16 28.0**	**+3.8**
CHGR	**Chuyangaron**	**16.03**	**40**	*i* P	**Pn**	**11 16 20.0**	**-1.1**
CHGR	**Chuyangaron**	**16.03**	**40**		**Pn**	**11 16 19.8**	**-1.2**
CHGR	**Chuyangaron**	**16.03**	**40**	P	**Pn**	**11 16 21.4**	**+0.3**
AKT	**Akhty**	**16.05**	**337**	*e*P	**P**	**11 16 24.5**	**-0.2**
AKT				pmax	pmax		
	comp=Z,13nm,0.3s						
AKT				MLR	MLR		
	comp=Z,77nm,11.0s						
GNI	**Garni**	**16.20**	**327**	Pn	**Pn**	**11 16 24.0**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=290,slow=2.2,SNR=6.2						
	comp=Z,3.7nm,0.3s						
GNI	**Garni**	**16.20**	**327**	*i* P	**Pn**	**11 16 23.4**	**+0.1**
GNI	**Garni**	**16.20**	**327**	Pn	**Pn**	**11 16 21.2**	**-2.1**
GNI				IAmb	IAmb	11 16 39.2	
	comp=Z,52nm,1.4s						
GNI	**Garni**	**16.20**	**327**	P	**P**	**11 16 27.8**	**+1.5**
NIL	**Nilore**	**16.26**	**62**	P	**Pn**	**11 16 24.2**	**+0.1**
NIL				pmax	pmax		
	comp=Z,22nm,1.1s						
NIL	**Nilore**	**16.26**	**62**	Pn	**Pn**	**11 16 24.2**	**+0.1**
NIL	**Nilore**	**16.26**	**62**	P	**Pn**	**11 16 24.2**	**+0.1**
MANEM	**Manem**	**16.89**	**47**	Pn	**Pn**	**11 16 30.9**	**-1.3**
MANEM				IAmb	IAmb	11 16 36.2	
	comp=Z,52nm,0.8s						
GAR	**Garm**	**16.93**	**41**		**Pn**	**11 16 31.7**	**-0.9**
GAR				IAmb	IAmb	11 16 35.6	
	comp=Z,61nm,1.1s						
GAR	**Garm**	**16.93**	**41**	P	**Pn**	**11 16 32.0**	**-0.5**
DIGO	**Kars**	**17.08**	**325**	P	**P**	**11 16 40.3**	**+4.2**
MAK	**Makhachkala**	**17.45**	**339**	*e*P	**Pn**	**11 16 37.2**	**-1.6**
MAK				*e*S	**Sn**	**11 19 49.8**	**-2.6**
MAK				pmax	pmax		
	comp=Z,278nm,1.3s						
MAK				MLR	MLR		
	comp=Z,245nm,13.0s						
ASF	**Jabal al Asfar**	**17.48**	**292**	P	**P**	**11 16 40.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=104,slow=6.6,SNR=6.1						
ASF				LR	LR	11 24 43.0	
	comp=Z,70nm,18.9s,baz=208,slow=42						
	comp=Z,11nm,1.1s						
BTK	**Batken**	**17.92**	**39**	P	**Pn**	**11 16 44.4**	**-0.4**
BTK				pmax	pmax		
	comp=Z,42nm,1.4s						
BTK	**Batken**	**17.92**	**39**		**Pn**	**11 16 44.4**	**-0.4**
EPOS	**Posof**	**18.22**	**326**	P	**P**	**11 16 52.3**	**+3.6**
KOPT	**Kop Dagi**	**18.38**	**319**	P	**P**	**11 16 48.4**	**-2.2**
GHAJ	**Ghor Haditha**	**18.44**	**288**	P	**P**	**11 16 48.8**	**-2.1**
GHAJ				IAmb	IAmb	11 17 18.0	
	comp=Z,43nm,1.0s						
EIL	**Elat**	**18.80**	**283**	LR	LR	11 25 45.3	
	comp=Z,113nm,18.6s,baz=90,slow=42						
CHM	**Chimkent**	**18.92**	**32**	*e*P	**Pn**	**11 16 57.7**	**+0.8**
CHM	**Chimkent**	**18.92**	**32**	*e*P	**Pn**	**11 16 57.7**	**+0.8**
GAZ	**Gaziantep**	**18.94**	**307**	P	**P**	**11 16 54.8**	**-1.7**
GAZ				IAmb	IAmb	11 17 05.3	
	comp=Z,34nm,1.4s						
IUG	**luzhnay**	**18.99**	**33**	*e*P	**Pn**	**11 16 58.4**	**+0.5**
IUG				*e*S	**S**	**11 20 31.2**	**-0.1**
IUG	**luzhnay**	**18.99**	**33**	*e*P	**Pn**	**11 16 58.5**	**+0.5**
IUG				*e*S	**S**	**11 20 31.2**	**-0.1**
ARPR	**Arapgir-MALATY**	**19.15**	**314**	P	**P**	**11 16 56.6**	**-2.3**
ARPR				IAmb	IAmb	11 17 07.3	
	comp=Z,72nm,1.5s						
KELT	**Kelkit**	**19.20**	**318**	P	**Pn**	**11 17 04.5**	**+4.0**
BRLS	**Borolday**	**19.57**	**31**	*e*P	**P**	**11 17 01.6**	**-1.8**
BRLS				*e*S	**S**	**11 20 38.1**	**-4.9**
BRLS	**Borolday**	**19.57**	**31**	*e*P	**P**	**11 17 01.6**	**-1.8**
BRLS				*e*S	**S**	**11 20 38.2**	**-4.9**
ANDN	**Andirin**	**19.74**	**307**	P	**Pn**	**11 17 09.2**	**+2.3**
ATD	**Arta Tunnel**	**19.75**	**222**	P	**P**	**11 17 05.3**	**-0.1**
	baz=357,slow=18,SNR=1.7						
ATD	**Arta Tunnel**	**19.75**	**222**	P	**P**	**11 17 03.7**	**-1.8**
ATD				IAmb	IAmb	11 17 23.0	
	comp=Z,40nm,1.3s						
KBZ	**Khabaz**	**19.87**	**331**	P	**P**	**11 17 07.1**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=153,slow=8.3,SNR=15						
	comp=Z,4.8nm,0.9s						
KBZ	**Khabaz**	**19.87**	**331**	⇓ *i* P	**Pn**	**11 17 09.6**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,13nm,0.9s						
KK31	**Karatay Array**	**19.95**	**32**	P	**P**	**11 17 07.1**	**-0.4**
KK31				pmax	pmax		
	comp=Z,12nm,0.8s						
KK31	**Karatay Array**	**19.95**	**32**		**P**	**11 17 07.1**	**-0.4**
KKAR	**Karatay Array**	**19.95**	**32**	P	**P**	**11 17 07.3**	**-0.2**
KKAR	**Karatay Array**	**19.95**	**32**		**P**	**11 17 07.3**	**-0.2**
SHA1	**Shidzhatmaz**	**19.98**	**330**	*d i* P	**Pn**	**11 17 11.2**	**+1.4**
SHA1				*i* *PP	**sP**	**11 17 18.3**	**+1.0**
KIV	**Kislovodsk**	**20.14**	**331**	*e*P	Pn	11 17 12.8	+1.3
KIV				*e*S	Sn	11 20 58.1	+0.5
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,14.0s						
KIV	**Kislovodsk**	**20.14**	**331**	P	**P**	**11 17 07.9**	**-1.7**
KIV				IAmb	IAmb	11 17 20.8	
	comp=Z,41nm,0.8s						
KIV	**Kislovodsk**	**20.14**	**331**	P	Pn	11 17 13.3	+1.8
DZA	**Taraz**	**20.19**	**34**	*e*P	Pn	11 17 11.3	-0.8
DZA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DZA	**Taraz**	**20.19**	**34**	*e*P	Pn	11 17 11.3	-0.7
	comp=Z,9.1nm,0.6s						
KSH2	**Kashi**	**20.32**	**48**	P	**P**	**11 17 10.3**	**-1.4**
KSH2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH2				L	L		
	comp=Z,480nm,16.1s						
KSH2				L	L		
	comp=Z,320nm,15.5s						
KSH2				L	L		
	comp=Z,220nm,12.4s						
BNN	**Bunyan**	**20.68**	**310**		**P**	**11 17 14.2**	**-1.4**
BNN				IAmb	IAmb	11 17 38.0	
	comp=Z,62nm,1.4s						
CSS	**Mathiatis**	**21.06**	**298**	P	**P**	**11 17 18.1**	**-1.5**
CSS	**Mathiatis**	**21.06**	**298**	P	**P**	**11 17 24.6**	**+5.0**
SOC	**Sochi**	**21.25**	**326**	*e*P	**P**	**11 17 22.3**	**+0.8**
SOC				*e*S	**S**	**11 21 17.5**	**+0.9**
SOC				*e*SSS	SSS	11 21 57.1	
SOC				MLR	MLR		
	comp=Z,91nm,12.0s						
AAK	**Ala-Archa**	**21.70**	**39**	P	**P**	**11 17 27.9**	**+1.3**
	comp=Z,11nm,0.8s,baz=209,slow=9.2,SNR=6.4						
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**21.70**	**39**	*c i* P	**P**	**11 17 27.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AAK	**Ala-Archa**	**21.70**	**39**	P	**P**	**11 17 26.6**	**+0.1**
AAK				IAmb	IAmb	11 17 39.8	
	comp=Z,21nm,1.0s						
AAK	**Ala-Archa**	**21.70**	**39**	P	**P**	**11 17 27.6**	**+1.1**
NRN	**Naryn**	**21.85**	**43**	P	**P**	**11 17 27.9**	**-0.5**
NRN				pmax	pmax		
	comp=Z,60nm,0.8s						
NRN	**Naryn**	**21.85**	**43**		**P**	**11 17 27.9**	**-0.5**
ASAI	**AK-SAY(Kyrgyzs**	**21.89**	**45**	P	**P**	**11 17 29.7**	**+1.0**
SGDS	**Sogindy**	**22.31**	**38**	*e*P	**P**	**11 17 34.2**	**+1.2**
BOOM	**Boomskoye usch**	**22.44**	**41**	P	**P**	**11 17 34.0**	**-0.5**
BOOM				pmax	pmax		
	comp=Z,13nm,0.8s						
BOOM	**Boomskoye usch**	**22.44**	**41**	P	**P**	**11 17 34.0**	**-0.5**
BOOM				IAmb	IAmb	11 17 46.4	
	comp=Z,13nm,0.8s						
AB31	**Akbulak array**	**22.48**	**7**		**P**	**11 17 34.6**	**-0.1**
AB31				IAmb	IAmb	11 17 52.3	
	comp=Z,18nm,1.0s						
ABKAR	**Akbulak array**	**22.48**	**7**		**P**	**11 17 34.5**	**-0.2**
BR131	**Keskin Array S**	**22.61**	**310**	*d i* P	**P**	**11 17 38.0**	**+1.7**
BR131				*i* *PP	**sP**	**11 17 45.7**	**+0.1**
BR131	**Keskin Array S**	**22.61**	**310**		**P**	**11 17 34.1**	**-2.1**
BR131				IAmb	IAmb	11 17 48.8	
	comp=Z,21nm,1.1s						
BRTR	**Keskin Array B**	**22.61**	**310**	P	**P**	**11 17 37.5**	**+1.2**
	comp=Z,6.5nm,0.9s,baz=135,slow=11,SNR=29						
BRTR				LR	LR	11 27 46.1	
	comp=Z,184nm,19.4s,baz=114,slow=40						
	comp=Z,6.5nm,0.9s						
BRTR	**Keskin Array B**	**22.61**	**310**	P	**P**	**11 17 33.5**	**-2.8**
SNOP	**Sinop**	**22.77**	**317**	P	**P**	**11 17 36.3**	**-1.6**
HYB	**Hyderabad**	**22.83**	**110**	*e*P	**P**	**11 17 38.3**	**-0.4**
HYB				*e*S	**S**	**11 21 50.2**	**+3.3**
KDJ	**Kajisay**	**22.97**	**43**	P	**P**	**11 17 39.5**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,25nm,0.8s						
KDJ	**Kajisay**	**22.97**	**43**	P	**P**	**11 17 39.5**	**-0.6**
KDJ				IAmb	IAmb	11 17 43.9	
	comp=Z,24nm,0.8s						
TARG	**Taragay, Kyrgy**	**23.14**	**45**	P	**P**	**11 17 42.2**	**+0.1**
TARG				pmax	pmax		
	comp=Z,19nm,1.1s						
TARG	**Taragay, Kyrgy**	**23.14**	**45**		**P**	**11 17 42.2**	**+0.1**
TARG				IAmb	IAmb	11 18 02.0	
	comp=Z,19nm,1.1s						
TARG	**Taragay, Kyrgy**	**23.14**	**45**	P	**P**	**11 17 43.2**	**+1.1**
ANN	**Anapa**	**23.27**	**325**	*e*P	**P**	**11 17 43.7**	**+0.8**
ANN				*e**PP	**sP**	**11 17 53.4**	**+1.0**
ANN				*e*S	**S**	**11 21 54.6**	**+0.7**
ANN				pmax	pmax		
	comp=Z,15nm,0.6s						
TNSS	**Tian-Shan**	**23.36**	**41**	*e*P	**P**	**11 17 45.1**	**+0.8**
TNSS	**Tian-Shan**	**23.36**	**41**	*e*P	**P**	**11 17 45.1**	**+0.8**
AAA	**Alma-Ata**	**23.45**	**41**	*e*P	**P**	**11 17 45.8**	**+1.1**
AAA				pmax	pmax		
	comp=Z,15nm,0.5s						
AAA	**Alma-Ata**	**23.45**	**41**	*e*P	**P**	**11 17 45.9**	**+1.1**
	comp=Z,15nm,0.5s						
BZK	**Bozkurt**	**23.49**	**315**	P	**P**	**11 17 44.2**	**-0.8**
MDOK	**Medeo**	**23.50**	**41**	*e*P	**P**	**11 17 46.6**	**+1.3**
MDOK	**Medeo**	**23.50**	**41**	*e*P	**P**	**11 17 46.6**	**+1.3**
AKTO	**Aktyubinsk**	**23.51**	**3**	LR	LR	11 28 05.5	
	comp=Z,223nm,18.7s,baz=161,slow=40						
KUU	**Kurty**	**23.54**	**39**	*e*P	**P**	**11 17 46.6**	**+1.0**
KUU	**Kurty**	**23.54**	**39**	*e*P	**P**	**11 17 46.6**	**+1.0**
WUS	**Wushi**	**23.77**	**47**	P	**P**	**11 17 48.1**	**+0.1**
WUS				IAmb	IAmb	11 17 53.6	
	comp=Z,20nm,1.4s						
ELL	**Elmali**	**24.23**	**300**

ARTI Arti 29.48 3 P **P** 11 18 37.6 -1.5
ARTI lAmb lAmb 11 18 45.5
comp=Z,12nm,1.4s
SRS Serrai 30.22 306 P **P** 11 18 47.6 +1.7
SRS Serrai 30.22 306 P **P** 11 18 47.5 +1.7
SOH Sokhos 30.30 306 P **P** 11 18 48.6 +1.9
SOH Sokhos 30.30 306 P **P** 11 18 48.6 +1.9
MLR Muntele Rosu 30.31 316 LR LR 11 33 26.8
comp=Z,96nm,18.4s,baz=94,slow=41
MLR Muntele Rosu 30.31 316 P **P** 11 18 44.4 -2.4
MLR pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 30.31 316 P **P** 11 18 44.4 -2.4
MLR lAmb lAmb 11 19 00.8
comp=Z,5.8nm,0.9s
ZSN Zaisan 30.46 40 *eP* **P** 11 18 48.9 +0.9
ZSN Zaisan 30.46 40 *eP* **P** 11 18 49.0 +0.9
ITM Ithomi 30.55 298 P **P** 11 18 46.8 -2.1
ITM lAmb lAmb 11 19 01.7
comp=Z,13nm,0.9s
WMQ Urumqi 30.55 48 *eP* **P** 11 18 51.5 +2.6
WMQ L L
comp=Z,81nm,21.7s
VOIR 30.84 315 P **P** 11 18 52.4 +0.9
VOIR 30.84 315 P **P** 11 18 52.4 +0.9
AKASG Malin Array Be 31.33 326 P **P** 11 18 55.2 -0.3
comp=Z,1.4nm,0.6s,baz=135,slow=8.1,SNR=7.2
AKASG LR LR 11 32 07.5
comp=Z,42nm,20.2s,baz=112,slow=38
comp=Z,1.4nm,0.6s
AKASG Malin Array Be 31.33 326 *i* P **P** 11 18 57.7 +2.2
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 31.33 326 P **P** 11 18 54.2 -1.3
AKBB Malin Array Si 31.33 326⇓ *i* P **P** 11 18 55.8 +0.3
AKBB pmax pmax
comp=Z,5.0nm,0.9s
AKBB Malin Array Si 31.33 326 P **P** 11 18 54.8 -0.8
AKBB lAmb lAmb 11 19 12.7
comp=Z,8.1nm,1.1s
KIEV Kiev 31.33 326 P **P** 11 18 55.2 -0.3
KIEV pmax pmax
comp=Z,7.0nm,1.1s
KIEV Kiev 31.33 326 P **P** 11 18 55.2 -0.3
KIEV lAmb lAmb 11 19 12.7
comp=Z,7.3nm,1.1s
KIEV Kiev 31.33 326 P **P** 11 18 56.0 +0.4
OBN Obninsk 31.54 338 *eP* **P** 11 18 59.1 +1.8
OBN pmax pmax
comp=Z,9.0nm,1.3s
MOS Moscow 31.73 340 *eP* **P** 11 18 59.2 +0.2
BURAR Bucovina Array 31.76 319 P **P** 11 18 58.3 -1.2
BURAR pmax pmax
comp=Z,1.0nm,0.8s
BURAR Bucovina Array 31.76 319 P **P** 11 18 58.1 -1.5
BUR08 Bucovina Ar. S 31.78 319 P **P** 11 18 57.8 -2.0
KIRV Kirov 31.98 353 LR LR 11 34 39.2
comp=Z,86nm,18.6s,baz=174,slow=41
KIRV Kirov 31.98 353 *eP* **P** 11 19 01.0 -0.1
SHL Shillong 32.08 84 P **P** 11 19 02.3 -0.3
SHL pmax pmax
comp=Z,5.0nm,1.0s
SHL Shillong 32.08 84 P **P** 11 19 02.3 -0.3
SHL lAmb lAmb 11 19 03.2
comp=Z,4.8nm,1.0s
PHP Peshkopia 32.65 306 P **P** 11 19 08.8 +1.4
PHP Peshkopia 32.65 306 P **P** 11 19 08.8 +1.4
KEK Kerkira 32.66 302 P **P** 11 19 05.9 -1.5
DGZ Jazzator, Alta 33.10 38*d* *i* P **P** 11 19 12.9 +1.6
DGZ *i* *PP **sP** 11 19 21.0 0.0
DGZ pmax pmax
comp=Z,6.0nm,1.0s
ZAA0 Zalesovo Array 34.30 30 P **P** 11 19 21.2 -0.3
ZAA0 lAmb lAmb 11 19 23.3
comp=Z,17nm,1.2s
ZALV Zalesovo Beam 34.30 30 P **P** 11 19 21.6 +0.2
comp=Z,9.0nm,0.9s,baz=243,slow=9.3,SNR=26
ZALV LR LR 11 34 07.4
comp=Z,77nm,18.4s,baz=219,slow=38
comp=Z,9.0nm,0.9s
ZALV Zalesovo Beam 34.30 30 *i* P **P** 11 19 22.1 +0.7
ZALV pmax pmax
comp=Z,9.0nm,0.9s
ZALV Zalesovo Beam 34.30 30 **P** 11 19 21.3 -0.1
MNK Minsk 34.42 331 *i* P **P** 11 19 23.8 +1.3
comp=E,6.0nm,0.5s
MNK *i* P **P** 11 19 23.8 +1.3
comp=N,13nm,0.7s
MNK *i* P **P** 11 19 23.8 +1.3
comp=Z,12nm,0.7s,baz=132
MNK *i* PP **PP** 11 20 39.2 -1.4
MNK *i* PPP PPP 11 20 51.9
MNK *i* PcP **PcP** 11 21 58.5 +0.9
MNK *i* S **S** 11 24 50.5 +1.3
MNK *i* SS **SnSn** 11 27 03.6 +3.5
MNK *i* SSS SSS 11 27 20.4
MNK *i* LQ LQ 11 29 46.4
MNK *i* LR LR 11 33 30.6
MNK *i* LRM MLR 11 35 05.5
comp=Z,43nm,16.4s
MNK *i* LRM MLR 11 35 14.4
comp=N,275nm,22.2s
MNK *i* LRM MLR 11 35 18.8
comp=E,302nm,22.0s
MNK Minsk 34.42 331 *i* P **P** 11 19 23.8 +1.3
MNK *i* 11 20 39.2
MNK *i* PPP PPP 11 20 51.8
MNK *i* 11 21 58.5
MNK *i* S **S** 11 24 50.4 +1.3
MNK *i* SS **SnSn** 11 27 03.6 +3.5
MNK pmax pmax
comp=E,6.0nm,0.5s
MNK pmax pmax
comp=Z,12nm,0.7s
MNK pmax pmax
comp=N,13nm,0.7s
MNK MLR MLR
comp=Z,43nm,16.0s
MNK MLR MLR
comp=N,275nm,22.0s
MNK MLR MLR
comp=E,302nm,22.0s
TIP Timpagrande 34.89 301 P **P** 11 19 25.0 -1.9
TIP lAmb lAmb 11 19 29.4
comp=Z,17nm,1.4s
NACGM Naroch 35.17 331 *eP* **P** 11 19 30.9 +2.0
comp=Z,5.0nm,0.8s,baz=131
KLMR Klimovskoe 35.73 346 *eP* **P** 11 19 32.9 -0.8
KLMR pmax pmax
comp=Z,27nm,1.4s
BLY Banja Luka 35.78 310 P **P** 11 19 33.3 -1.1
BLY lAmb lAmb 11 19 35.4
comp=Z,3.8nm,0.6s
MARCO Tramutola 35.78 302 P **P** 11 19 37.0 +2.4
OJC Ojcow 36.14 320 P **P** 11 19 36.7 -0.7
OJC Ojcow 36.14 320 P **P** 11 19 36.7 -0.7
MBAR Mbarara 36.67 226 LR LR 11 36 58.2
comp=Z,134nm,18.7s,baz=63,slow=40
MBAR Mbarara 36.67 226 P **P** 11 19 40.6 -1.9
MBAR pmax pmax
comp=Z,7.0nm,1.2s
MBAR Mbarara 36.67 226 P **P** 11 19 40.6 -1.9
PABE Paberze 36.80 330 P **P** 11 19 41.7 -1.2
PABE lAmb lAmb 11 19 48.1
comp=Z,13nm,0.7s
PAOL Paolisi 36.83 303 P **P** 11 19 41.2 -2.3
PAOL lAmb lAmb 11 19 56.4
comp=Z,12nm,1.2s
MORC Moravsky Berou 37.27 318 P **P** 11 19 45.1 -2.0
MORC pmax pmax
comp=Z,8.0nm,1.2s
MORC Moravsky Berou 37.27 318 P **P** 11 19 45.1 -2.0
MORC Moravsky Berou 37.27 318 *eP* **P** 11 19 46.4 -0.7
MORC Moravsky Berou 37.27 318 P **P** 11 19 47.6 +0.5
RONA Rosalia, Austr 37.28 314 *eP* **P** 11 19 47.8 +0.5
comp=Z,4.7nm,1.2s
INTR Introdacqua 37.49 305 P **P** 11 19 46.9 -2.2
INTR lAmb lAmb 11 19 51.9
comp=Z,9.7nm,1.0s
CONA Conrad Observa 37.64 315 *eP* **P** 11 19 50.5 +0.2
comp=Z,6.0nm,1.5s
VRAC Vranov 37.66 317 LR LR 11 37 44.2
comp=Z,56nm,20.4s,baz=131,slow=40
VRAC Vranov 37.66 317 *eP* **P** 11 19 50.3 -0.1
KRUC Moravsky 37.70 317 *eP* **P** 11 19 50.9 +0.3

AQU L'Aquila 37.91 305 P **P** 11 19 51.2 -1.5
AQU pmax pmax
comp=Z,16nm,0.7s
AQU L'Aquila 37.91 305 P **P** 11 19 51.2 -1.5
OBKA Obir 38.06 312 *eP* **P** 11 19 53.4 -0.4
comp=Z,2.4nm,0.8s
NRCA Norcia 38.21 306 P **P** 11 19 53.1 -2.1
FDMO Fiordimonte 38.27 306 **P** 11 19 53.6 -2.0
FDMO lAmb lAmb 11 20 07.7
comp=Z,8.0nm,1.0s
GTA2 Gaotai 38.28 60 *eP* **P** 11 19 57.8 +1.9
GTA2 sP sP 11 20 08.8 +3.2
GTA2 pmax pmax
comp=Z,8.0nm,1.0s
GTA2 L L
comp=Z,120nm,18.7s
GTA2 L L
comp=Z,120nm,16.8s
GTA2 L L
comp=Z,180nm,16.5s
TRI Trieste 38.37 311 P **P** 11 19 54.4 -2.0
TRI pmax pmax
comp=Z,4.0nm,0.8s
TRI Trieste 38.37 311 P **P** 11 19 54.4 -2.0
SABO M.te Sabotino 38.55 311 P **P** 11 19 55.9 -2.0
CESX Cesi 38.56 305 P **P** 11 19 56.4 -1.6
MOA Molln 38.63 314 *eP* **P** 11 19 59.1 +0.6
comp=Z,3.8nm,0.8s
MYKA Terra Mystica 38.69 312 *eP* **P** 11 20 00.6 +1.4
comp=Z,3.6nm,0.9s
PRED Cave del Predi 38.69 312 **P** 11 19 58.0 -1.1
MURB Monte Urbino 38.71 306 P **P** 11 19 57.6 -1.8
MURB lAmb lAmb 11 20 26.4
comp=Z,10nm,1.0s
KBA Koelnbreinsper 39.01 313 P **P** 11 20 02.9 +0.9
KBA Koelnbreinsper 39.01 313 *i* P **P** 11 20 03.3 +1.4
comp=Z,6.5nm,1.6s
KBA Koelnbreinsper 39.01 313 P **P** 11 20 02.9 +0.9
STAL STALIGIAL 39.22 311 P **P** 11 20 02.0 -1.5
GEC2 GERESS Array S 39.29 315 P **P** 11 20 02.9 -1.3
GERES GERESS Array B 39.29 315 P **P** 11 20 03.9 -0.3
comp=Z,0.3nm,0.4s,baz=127,slow=10,SNR=3.4
comp=Z,0.3nm,0.4s
GERES GERESS Array B 39.29 315 P **P** 11 20 03.0 -1.2
KNGR Kungurtug, Tuv 39.31 42⇓ *i* P **P** 11 20 06.4 +2.1
KNGR pmax pmax
comp=Z,19nm,1.1s
ABTA Abfaltersbach 39.47 312 *i* P **P** 11 20 06.4 +0.7
comp=Z,4.7nm,0.9s
LESA Schwarzleotal 39.54 313 *eP* **P** 11 20 07.2 +0.9
comp=Z,0.5nm,0.3s
CASP Castiglione de 39.83 305 P **P** 11 20 05.5 -3.1
FIA1 FINESS Array S 39.95 338 P **P** 11 20 08.0 -1.3
FIA1 lAmb lAmb 11 20 12.0
comp=Z,24nm,1.2s
FINES FINESS Array B 39.95 338 P **P** 11 20 08.7 -0.6
comp=Z,1.5nm,0.6s,baz=144,slow=10.0,SNR=11
FINES LR LR 11 39 14.3
comp=Z,43nm,20.3s,baz=124,slow=40
comp=Z,1.5nm,0.6s
FINES FINESS Array B 39.95 338 *i* P **P** 11 20 10.6 +1.3
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 39.95 338 P **P** 11 20 08.0 -1.3
ZCCA Zocca 40.01 308 P **P** 11 20 07.8 -2.4
CHTO Chiang Mai 40.16 92 P **P** 11 20 10.6 -1.0
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CHTO Chiang Mai 40.16 92 P **P** 11 20 10.6 -1.0
CHTO Chiang Mai 40.16 92 P **P** 11 20 13.4 +1.7
WTTA Wattenberg 40.18 312 P **P** 11 20 11.9 +0.2
WTTA Wattenberg 40.18 312 *i* P **P** 11 20 12.2 +0.4
comp=Z,4.8nm,0.9s
WTTA Wattenberg 40.18 312 P **P** 11 20 11.9 +0.2
WATA Walderalm 40.24 312 *eP* **P** 11 20 12.0 -0.1
comp=Z,10nm,1.3s
CM31 Chiang Mai Arr 40.28 93 P **P** 11 20 12.8 +0.1
CMAR Chiang Mai Arr 40.28 93 P **P** 11 20 13.4 +0.8
comp=Z,1.4nm,0.8s,baz=283,slow=10,SNR=7.5
comp=Z,1.4nm,0.8s
CMAR Chiang Mai Arr 40.28 93 P **P** 11 20 11.4 -1.3
SQTA Sankt Quirin 40.45 312 *eP* **P** 11 20 14.0 +0.1
comp=Z,1.9nm,0.4s
CLL Collm 40.53 319 P **P** 11 20 12.9 -1.4
CLL pmax pmax
comp=Z,9.0nm,1.3s
CLL Collm 40.53 319 P **P** 11 20 12.9 -1.4
MOTA Moosalm 40.55 312 *i* P **P** 11 20 14.8 +0.1
comp=Z,7.5nm,1.1s
KEST Kesra 40.55 294 P **P** 11 20 12.8 -2.1
VSL Villasalto 40.61 300 **P** 11 20 13.6 -1.5
VSL lAmb lAmb 11 20 18.2
comp=Z,8.3nm,0.8s
PZH PanZhiHua 40.62 80 P **P** 11 20 17.5 +2.0
FETA Feichten 40.73 312 *eP* **P** 11 20 16.7 +0.5
comp=Z,10.0nm,1.4s
RETA Reutte 40.81 312 *eP* **P** 11 20 16.8 0.0
comp=Z,3.1nm,0.9s
FUORN Ofenpass-Fuorn 40.95 311 P **P** 11 20 16.0 -2.1
GRA1 Grafenberg Arr 41.10 316 P **P** 11 20 17.4 -1.6
GRA1 lAmb lAmb 11 20 18.8
comp=Z,22nm,1.2s
GRF Grafenberg Arr 41.10 316 P **P** 11 20 17.4 -1.6
GRF pmax pmax
comp=Z,22nm,1.2s
DAVA Damuels 41.35 312 *i* P **P** 11 20 20.2 -1.1
comp=Z,9.4nm,0.8s
DAVA Damuels 41.35 312 P **P** 11 20 21.6 +0.2
LZH Lanzhou 41.38 65 *eP* **P** 11 20 23.8 +2.0
LZH sP sP 11 20 32.0 +0.5
LZH pmax pmax
comp=Z,18nm,1.0s
LZH L L
comp=Z,150nm,15.8s
LZH L L
comp=Z,230nm,14.6s
LZH L L
comp=Z,170nm,17.7s
SENIN Lac Senin/Sane 42.91 310 P **P** 11 20 33.0 -1.2
APA Apatity 42.93 347 *eP* **P** 11 20 33.1 -0.6
APA *e* 11 22 25.1
APA *e*SS SS 11 30 10.1 +1.3
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,149nm,2.9s
TLY Talaya 43.31 42 LR LR 11 39 47.7
comp=Z,64nm,18.6s,baz=230,slow=38
ECH Echery 43.34 313 P **P** 11 20 35.7 -1.7
ECH pmax pmax
comp=Z,9.0nm,1.2s
ECH Echery 43.34 313 P **P** 11 20 35.7 -1.7
ECH lAmb lAmb 11 20 38.7
comp=Z,9.1nm,1.2s
HFS Hagfors 43.94 331 P **P** 11 20 42.0 +0.1
comp=Z,2.0nm,0.7s,baz=123,slow=11,SNR=4.1
HFS LR LR 11 42 02.7
comp=Z,53nm,19.4s,baz=136,slow=40
comp=Z,2.0nm,0.7s
HFS Hagfors 43.94 331 P **P** 11 20 42.0 +0.1
SONM Songino Array 44.19 48 P **P** 11 20 45.3 +1.0
comp=Z,3.2nm,0.9s,baz=254,slow=8.9,SNR=14
comp=Z,3.2nm,0.9s
SONM Songino Array 44.19 48 P **P** 11 20 43.6 -0.7
ULN Ulaanbaatar 44.63 48⇓ *i* P **P** 11 20 49.3 +1.4
ULN pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 44.63 48 P **P** 11 20 47.5 -0.4
ULN lAmb lAmb 11 20 50.1
comp=Z,4.7nm,0.7s
NC405 NORSAR Array S 45.27 331 P **P** 11 20 51.8 -0.8
NC405 lAmb lAmb 11 21 20.3
comp=Z,5.9nm,0.8s
NB2 NORSAR Subarra 45.45 331 P **P** 11 20 54.4 +0.4
comp=Z,2.8nm,0.9s,baz=116,slow=7.9
NOA NORSAR Array B 45.45 331 P **P** 11 20 53.6 -0.4
comp=Z,1.2nm,0.7s,baz=118,slow=7.9,SNR=3.9
NOA LR LR 11 42 58.2
comp=Z,39nm,19.2s,baz=115,slow=40
comp=Z,1.2nm,0.7s
NAO01 NORSAR Array S 45.50 331 P **P** 11 20 53.1 -1.3
NAO01 lAmb lAmb 11 21 04.3
comp=Z,9.6nm,1.1s
TAM Tamanrasset 45.82 276 P **P** 11 20 55.6 -2.0
TAM Tamanrasset 45.82 276 **P** 11 20 55.6 -2.0
KEV Kevo 46.05 346 P **P** 11 20 58.1 -0.5
KEV pmax pmax
comp=Z,11nm,1.0s
KEV Kevo 46.05 346 P **P** 11 20 58.1 -0.5
KEV lAmb lAmb 11 21 04.5
comp=Z,11nm,1.0s
ARCES ARCESS Array B 46.20 346 P **P** 11 20 59.9 +0.1
comp=Z,0.5nm,0.4s,baz=140,slow=7.7,SNR=6.9
ARCES LR LR 11 41 40.3
comp=Z,56nm,18.6s,baz=102,slow=38
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 46.20 346 P **P** 11 20 58.8 -1.1
ARCES lAmb lAmb 11 21 23.4
comp=Z,6.2nm,1.2s
NRIK Noril'sk 46.25 15 P **P** 11 21 00.2 0.0
comp=Z,3.2nm,0.6s,baz=194,slow=5.8,SNR=4.2
NRIK LR LR 11 43 17.7
comp=Z,69nm,19.9s,baz=210,slow=40
comp=Z,3.2nm,0.6s
NRIK Noril'sk 46.25 15⇓ *i* P **P** 11 21 01.4 +1.2
NRIK pmax pmax
comp=Z,6.0nm,0.8s
NRIK Noril'sk 46.25 15 P **P** 11 21 00.1 0.0
NRIK lAmb lAmb 11 21 10.6
comp=Z,5.0nm,0.8s
GSI Gunungsitoli 47.26 116 P **P** 11 21 08.4 -0.4
HHC Hu-ho-hao-te 47.37 58 *eP* **P** 11 21 12.0 +2.5
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,77nm,4.5s
HHC L L
comp=Z,130nm,14.9s
HHC L L
comp=Z,110nm,14.9s
HHC L L
comp=Z,73nm,14.9s
RER Riviere de l'E 47.81 180 P **P** 11 21 11.8 -1.2
VOI Vohitsoka 49.38 191 P **P** 11 21 24.4 -0.7
VOI lAmb lAmb 11 21 34.8
comp=Z,11nm,1.1s
CNSH ChangSha 50.01 75 P **P** 11 21 31.5 +1.6
CNSH pmax pmax
comp=Z,20nm,0.9s
XLT XiLinHaoTe 50.65 54 *eP* **P** 11 21 36.5 +1.9
XLT pmax pmax
comp=Z,12nm,1.0s
WHN Wuhan 50.73 71 P **P** 11 21 36.5 +1.2
ESBB Sonseca Array 50.91 301 P **P** 11 21 35.5 -1.1
ESBB lAmb lAmb 11 21 48.4
comp=Z,7.0nm,1.2s
ESDC Sonseca Array 50.91 301 P **P** 11 21 36.6 0.0
comp=Z,0.5nm,0.4s,baz=72,slow=5.7,SNR=8.4
comp=Z,0.5nm,0.4s
ESDC Sonseca Array 50.91 301 P **P** 11 21 34.8 -1.8
ESDC lAmb lAmb 11 21 42.2
comp=Z,8.5nm,1.4s
BJT Baijiatuau 50.91 59 P **P** 11 21 37.0 +0.5
BJT pmax pmax
comp=Z,4.0nm,0.7s
BJT Baijiatuau 50.91 59 P **P** 11 21 37.0 +0.5
BJT lAmb lAmb 11 21 39.2
comp=Z,4.0nm,0.7s
TIA Tai'an 52.08 64 P **P** 11 21 46.5 +1.2
TIA PcP **PcP** 11 22 58.0 +0.8
TIA pmax pmax
comp=Z,15nm,0.9s
TORD Torodi Ar. Bea 52.54 266 P **P** 11 21 49.0 +0.1
comp=Z,5.1nm,0.8s,baz=63,slow=7.4,SNR=21
comp=Z,5.1nm,0.8s
TORD Torodi Ar. Bea 52.54 266 P **P** 11 21 47.2 -1.7
TORD lAmb lAmb 11 21 50.1
comp=Z,6.7nm,1.2s
MATP Matopo 54.14 212 LR LR 11 44 58.2
comp=Z,128nm,18.3s,baz=110,slow=36
NJ2 Nanjing 54.21 69 *eP* **P** 11 22 00.8 -0.3
NJ2 pmax pmax
comp=Z,17nm,0.6s
SPITS Spitsbergen Ar 54.37 351 P **P** 11 22 00.9 -0.7
comp=Z,7.3nm,0.9s,baz=140,slow=18,SNR=4.5
comp=Z,7.3nm,0.9s
SPITS Spitsbergen Ar 54.37 351 P **P** 11 22 01.6 0.0
SPITS pmax pmax
comp=Z,13nm,1.1s
COCO West Island 55.48 129 P **P** 11 22 10.0 -0.3
COCO pmax pmax
comp=Z,409nm,0.4s
COCO West Island 55.48 129 P **P** 11 22 10.0 -0.3
KBS Kingsbay 55.53 351*de* P **P** 11 22 11.3 +1.4
KBS pmax pmax
comp=Z,6.0nm,0.9s
KBS Kingsbay 55.53 351 P **P** 11 22 09.6 -0.3
KBS lAmb lAmb 11 22 13.6
comp=Z,6.3nm,0.7s
KNMB Chin-men Tao 55.69 78 P **P** 11 22 11.8 -0.1
HEH HeiHe 58.07 46 *eP* **P** 11 22 28.8 +0.5
HEH pmax pmax
comp=Z,10.0nm,1.2s
SSLB Suanglung 58.13 78 P **P** 11 22 28.3 -0.9
SSLB lAmb lAmb 11 22 33.1
comp=Z,8.2nm,0.9s
YHNB Yeheng 58.23 76 P **P** 11 22 29.4 -0.6
BNX BinXian 58.54 51⇓ P **P** 11 22 32.5 +0.8
BNX pmax pmax
comp=Z,12nm,1.0s
NACB Ninganchiao 58.57 77 P **P** 11 22 31.6 -0.7
YAK Yakutsk 58.92 32 LR LR 11 49 00.7
comp=Z,75nm,18.8s,baz=228,slow=37
YAK Yakutsk 58.92 32 *eP* **P** 11 22 32.8 -1.3
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,11nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.2s
TIXI Tiksi 59.27 21 LR LR 11 49 24.2
comp=E,52nm,20.0s,baz=220,slow=37
TIXI Tiksi 59.27 21 *eP* **P** 11 22 34.9 -1.4
TIXI pmax pmax
comp=Z,4.0nm,1.0s
LBTB Lobatse 59.43 212 LR LR 11 50 11.3
comp=Z,66nm,18.1s,baz=56,slow=38
YOJ Yonaguni jima 59.71 76 P **P** 11 22 39.7 -0.4
YOJ pmax pmax
comp=Z,74nm,1.1s
YOJ Yonaguni jima 59.71 76 P **P** 11 22 39.7 -0.4
KSAR Wonju Array Be 60.35 60 P **P** 11 22 44.2 -0.1
KSAR Wonju Array Be 60.35 60 P **P** 11 22 44.2 -0.1
KSRS Korea Array 60.38 60 P **P** 11 22 44.4 -0.2
comp=Z,2.7nm,0.9s,baz=276,slow=7.6,SNR=12
comp=Z,2.7nm,0.9s
USRK Ussuriysk Ar. 62.01 52 P **P** 11 22 55.5 +0.1
comp=Z,1.1nm,0.6s,baz=282,slow=8.7,SNR=2.3
USRK LR LR 11 53 19.3
comp=Z,91nm,18.2s,baz=172,slow=39
comp=Z,1.1nm,0.6s
BOSA Boshof 62.65 210 P **P** 11 22 59.5 -0.6
comp=Z,4.9nm,1.0s,baz=356,slow=12,SNR=3.8
BOSA LR LR 11 49 55.5
comp=Z,53nm,18.4s,baz=28,slow=36
comp=Z,4.9nm,1.0s
BOSA Boshof 62.65 210 P **P** 11 22 59.4 -0.6
MYLDM Lahad Datu 63.12 98 P **P** 11 23 03.2 -0.1
BKB Balikpapan 64.83 105 P **P** 11 23 14.2 -0.3
SUMG Summit 65.90 341 P **P** 11 23 21.5 +0.4
SUMG pmax pmax
comp=Z,13nm,1.1s
SUMG Summit 65.90 341 P **P** 11 23 21.5 +0.4
SUMG Summit 65.90 341 *i* P **P** 11 23 22.6 +1.5
JMN Monobe 66.03 63 P **P** 11 23 21.9 -0.3
GRHM Grahamstown, E 66.20 207 P **P** 11 23 22.2 -0.9
TYV Tymovskoe 67.52 43 *eP* **P** 11 23 32.3 +1.0
TYV pmax pmax
comp=Z,13nm,0.9s
TYV pmax pmax
comp=Z,100nm,4.7s
NEEM North Greenlan 67.54 347 *i* P **P** 11 23 32.1 +0.8
SUR Sutherland 67.88 212 LR LR 11 57 01.0
comp=Z,43nm,19.7s,baz=24,slow=39
MJAR Matsushiro Arr 68.56 59 P **P** 11 23 37.9 -0.2
comp=Z,1.1nm,0.6s,baz=281,slow=8.6,SNR=4.5
comp=Z,1.1nm,0.6s
MJAR Matsushiro Arr 68.56 59 P **P** 11 23 37.5 -0.6
DAV Davao City (W) 68.57 93 P **P** 11 23 38.2 -0.3
YSS Yuzhno-Sakhali 68.67 47 *eP* **P** 11 23 38.9 +0.3
YSS pmax pmax
comp=Z,30nm,1.0s

YSS	Yuzhno-Sakhali	68.67	47	P		P	11 23 38.5	-0.1
SEY	Seymchan	69.16	29	⇑P		P	11 23 42.5	+1.2
SEY				pmax	pmax			
	comp=Z,7.0nm,0.9s							
JTM	Tenmabayashi	69.36	54	P		P	11 23 43.1	+0.1
MA2	Magadan	69.47	33	P		P	11 23 43.7	+0.4
MA2				pmax	pmax			
	comp=Z,43nm,1.3s							
MA2	Magadan	69.47	33	P		P	11 23 43.7	+0.4
PEA0B	Petropavlovsk-	75.46	38	eP		P	11 24 22.2	+3.1
PEA0B	Petropavlovsk-	75.46	38	P		P	11 24 19.1	-0.1
PETK	Petropavlovsk-	75.46	38	P		P	11 24 18.2	-1.0
	comp=Z,3.2nm,0.9s,baz=230,slow=6.9,SNR=3.7							
	comp=Z,3.2nm,0.9s							
PETK	Petropavlovsk-	75.46	38	P		P	11 24 18.9	-0.2
PETK	Petropavlovsk-	75.46	38	P		P	11 24 18.9	-0.2
RES	Resolute Bay	76.89	352	LR		LR	12 04 36.1	
	comp=Z,35nm,18.6s,baz=12,slow=41							
C23K	Itkillik River	81.60	9	P		P	11 24 52.4	-0.3
D25K	Kavik River	82.64	8	P		P	11 24 58.1	-0.1
D25K				IAmb	IAmb		11 25 00.6	
	comp=Z,10nm,1.4s							
C27K	Jago River	82.65	7	P		P	11 24 58.9	+0.7
F20K	Avaraart Lake	83.28	12	P		P	11 25 02.1	+0.6
F20K				IAmb	IAmb		11 25 18.5	
	comp=Z,4.2nm,1.1s							
E24K	Your Creek	83.53	9	P		P	11 25 02.5	-0.4
E24K				IAmb	IAmb		11 25 13.3	
	comp=Z,7.2nm,1.3s							
G18K	Tagagawik	83.71	14	P		P	11 25 03.4	-0.4
G18K				IAmb	IAmb		11 25 30.6	
	comp=Z,8.2nm,1.4s							
E25K	Arctic Village	83.87	8	IAmb	IAmb		11 25 06.8	
	comp=Z,7.5nm,1.2s							
E29M	Blow River	84.40	5	P		P	11 25 06.5	-0.7
E29M				IAmb	IAmb		11 25 13.8	
	comp=Z,8.7nm,1.4s							
IMAR	Indian Mountai	84.60	12	P		P	11 25 07.7	-0.6
INK	Inuvik	84.78	4	P		P	11 25 09.5	+0.4
INK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
INK	Inuvik	84.78	4	P		P	11 25 09.5	+0.4
INK				IAmb	IAmb		11 25 10.4	
	comp=Z,3.6nm,1.1s							
SCHQ	Schefferville	85.02	331	LR		LR	12 04 40.5	
	comp=Z,24nm,19.5s,baz=114,slow=37							
H21K	Melozitna Rive	85.06	12	IAmb	IAmb		11 25 13.1	
	comp=Z,5.8nm,1.3s							
H22K	Ishtalitna Cre	85.10	11	IAmb	IAmb		11 25 17.4	
	comp=Z,7.5nm,1.3s							
G27K	Doyon Strip	85.58	7	P		P	11 25 13.4	+0.2
G27K				IAmb	IAmb		11 25 15.9	
	comp=Z,6.1nm,1.1s							
J20K	Nowinta River	86.14	13	IAmb	IAmb		11 25 18.2	
	comp=Z,3.0nm,0.9s							
H29M	Whitestone	86.48	6	P		P	11 25 17.8	+0.2
I27K	Kandik River	86.75	7	IAmb	IAmb		11 25 21.2	
	comp=Z,6.7nm,1.2s							
ILAR	Eielson Array	86.86	10	P		P	11 25 19.5	0.0
	comp=Z,1.0nm,0.7s,baz=324,slow=3.8,SNR=14							
ILAR				LR	LR		12 08 41.8	
	comp=Z,25nm,19.2s,baz=318,slow=39							
	comp=Z,1.0nm,0.7s							
I26K	Coal Creek Min	86.86	8	IAmb	IAmb		11 25 21.0	
	comp=Z,5.3nm,1.1s							
K20K	Telida	86.90	13	IAmb	IAmb		11 25 21.7	
	comp=Z,4.8nm,0.9s							
J25K	Salcha River,	87.23	9	IAmb	IAmb		11 25 23.0	
	comp=Z,5.0nm,1.1s							
I30M	Mount Dempster	87.64	5	IAmb	IAmb		11 25 24.5	
	comp=Z,4.1nm,0.8s							
K29M	Barlow Dome	88.89	6	IAmb	IAmb		11 25 30.9	
	comp=Z,2.5nm,0.8s							
WRA	Warramunga Arr	88.96	113	P		P	11 25 30.7	+0.4
	comp=Z,3.6nm,0.9s,baz=310,slow=4.1,SNR=15							
	comp=Z,3.6nm,0.9s							
WRA	Warramunga Arr	88.96	113	P		P	11 25 30.2	-0.1
WB2	Warramunga Ar	88.97	113	P		P	11 25 30.4	+0.1
ASAR	Alice Springs	90.41	116	P		P	11 25 37.2	+0.2
	comp=Z,1.2nm,0.7s,baz=305,slow=4.7,SNR=16							
	comp=Z,1.2nm,0.7s							
ASAR	Alice Springs	90.41	116	P		P	11 25 36.2	-0.8
YKA	Yellowknife Ar	90.57	356	LR		LR	12 14 28.6	
	comp=Z,21nm,18.2s,baz=359,slow=41							
YKAW1	Yellowknife Wh	90.57	356	P		P	11 25 35.8	-1.3
ULM	Lac du Bonnet	99.23	342	LR		LR	12 13 01.0	
	comp=Z,34nm,18.6s,baz=21,slow=36							
TXAR	Lajitas Array	120.78	339	PKP		PKPdf	11 31 26.9	-1.1
	comp=Z,0.3nm,0.8s,baz=33,slow=2.5,SNR=2.0							
TXAR	Lajitas Array	120.78	339			PKPdf	11 31 26.2	-1.7

IDC 27 11:28:52.5±999.0, 31°19N×30°89E, h0km, Error ellipse: s-maj=1290.0km s-min=299.6km az=117.0, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	KESRA INFRASON	18.56	290	I	I	13 11 49.9	
	0.1nm,0.7s,baz=100,slow=305,SNR=8.4						
I26DE	FREYUNG INFRAS	21.92	329	I	I	13 38 22.8	
	baz=134,slow=324,SNR=1.1						
I42PT	GRACIOSA ISLAN	48.08	296	I	I	16 30 00.0	
	baz=82,slow=315,SNR=3.4						

IDC 27 11:53:08.7±5.0, 56°.59S×27°.27W, h136km±47km, mb4.3/9, mbtmp4.7/10, Error ellipse: s-maj=20.9km s-min=12.5km az=60.0
NEIC 27 11:53:08.7±1.0, 56°.6S±0°.1×27°.4W±0°.2, h135km±6km, mb4.6/45, Error ellipse: s-maj=15.8km s-min=11.9km az=212.0
ISC 27 11:53:09.6±0.4, 56°.70S±0°.06×27°.44W±0°.07, h150km, n109, σ1s24/108, mb4.6/27, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.68	291	Pn	Pn	11 54 31.5	-0.4
HOPE				Sn	Sn	11 55 34.4	-1.9
ORCD	Orcadas	9.85	239	Pn	Pn	11 55 27.8	+0.4
VNA1	Neumayer--Stat	16.25	157	P	P	11 56 50.0	+0.9
	comp=Z,3.2nm,0.2s						
VNA1				ScP	ScP	12 04 54.7	+1.8
	comp=Z,0.3nm,0.4s						
VNA2	Neumayer--Watz	16.65	157	⇑P	Pn	11 56 53.7	0.0
	comp=Z,2.6nm,0.2s,baz=314,slow=11						
VNA2				⇑S	S	11 59 48.7	-10
	comp=E,0.8nm,0.3s,baz=310,slow=12						
VNA2				ScP	ScP	12 04 54.9	+1.1
	comp=Z,1.6nm,0.6s,baz=324,slow=4.0						
SNAA	Sanae	18.21	155	⇑P	P	11 57 10.9	+0.2
	comp=Z,162nm,0.5s						
SNAA	Sanae	18.21	155	P	P	11 57 11.0	+0.4
	comp=Z,13nm,0.6s,baz=306,slow=9.2,SNR=46						
SNAA				PcP	PcP	12 01 36.7	+0.6
	comp=Z,1.3nm,0.6s,baz=349,slow=8.8,SNR=2.1						
SNAA	Sanae	18.21	155		P	11 57 11.1	+0.4
SNAA					PcP	12 01 37.0	+0.9
EFI	East Falkland	18.51	273	P	Pn	11 57 15.5	-0.6
TROLL	Troll, Antarti	19.73	153	⇑P	P	11 57 27.2	-0.1
	comp=Z,1μm,0.5s						
SMAI	San Martin Ant	21.18	221	P	P	11 57 43.4	+0.8
BELA	Belgrano 2	21.42	184	P	P	11 57 45.5	+0.4
BELA				IAmb	IAmb	11 57 47.9	
	comp=Z,22nm,0.8s						
MG02	Cerro Sombrero	24.16	262	P	P	11 58 11.9	+0.5
GO08	Villa O'Higgin	28.16	268	P	P	11 58 47.6	+0.1
GO08				IAmb	IAmb	11 59 16.8	
	comp=Z,26nm,1.4s						
TRQA	Tornquist	29.45	294	P	P	11 58 58.9	-0.2
TRQA				IAmb	IAmb	11 58 59.3	
	comp=Z,22nm,1.4s						
PLCA	Paso Flores	31.98	281	P	P	11 59 21.2	-0.1
QSPA	South Pole Qui	33.55	180	P	P	11 59 36.4	+1.6
	comp=Z,3.7nm,0.4s,baz=203,slow=4.4,SNR=68						
	comp=Z,3.7nm,0.4s						
QSPA	South Pole Qui	33.55	180		P	11 59 36.5	+1.7
QSPA				IAmb	IAmb	11 59 36.9	
	comp=Z,6.3nm,0.7s						
ITAB	Concordia	34.31	319	P	P	11 59 42.2	+0.6
ITAB				IAmb	IAmb	11 59 46.5	
	comp=Z,17nm,1.2s						
CAM01	Campos-RJ	36.37	337	eP	P	11 59 59.9	+0.8
VAO	Valinhos	36.57	329	P	P	12 00 00.8	-0.2
VAO	Valinhos	36.57	329	eP	P	12 00 02.4	+1.5
PTGB	Pitanga	36.59	321	eP	P	12 00 00.8	-0.3
GO05	Hualane	36.93	287	P	P	12 00 03.8	0.0
MT08	Bocatoma Ro	37.14	290	P	P	12 00 06.4	+0.6
CPUP	Villa Florida	37.14	312	P	P	12 00 05.3	-0.3
	comp=Z,5.1nm,0.6s,baz=150,slow=8.6,SNR=17						
	comp=Z,5.1nm,0.6s						
CPUP	Villa Florida	37.14	312		P	12 00 05.5	-0.1
CPUP				IAmb	IAmb	12 00 05.6	
	comp=Z,5.3nm,0.6s						
CPUP	Villa Florida	37.14	312	eP	P	12 00 05.2	-0.4
ALF01	Guarapari-ES	37.36	339	eP	P	12 00 08.4	+0.9
MT09	Talagante	37.38	289	P	P	12 00 06.5	-1.3
MT01	Popeta	37.45	289	P	P	12 00 07.1	-1.1
MT01				IAmb	IAmb	12 00 12.1	
	comp=Z,24nm,1.4s						
LDASE	Londrina, Braz	37.49	323	eP	P	12 00 09.4	+0.8
PEL	Peldehue	37.72	290	P	P	12 00 10.9	+0.4
SJPY	San Joaquin	37.84	315	eP	P	12 00 10.6	-0.9
MT02	Curacav	37.86	289	P	P	12 00 11.4	-0.2
MT02				IAmb	IAmb	12 00 48.1	
	comp=Z,18nm,1.1s						
ZON	Zonda	37.96	294	P	P	12 00 11.3	-1.2
ZON				IAmb	IAmb	12 00 13.3	
	comp=Z,4.8nm,0.6s						
RIB01	Linhares ES	38.56	340	eP	P	12 00 18.5	+0.9
CO04	Los Peladeros	38.74	291	P	P	12 00 19.1	-0.2
BB19B	Bebedouro	38.85	328	eP	P	12 00 21.0	+0.9
BSFB	Barra de Sao F	39.12	340	eP	P	12 00 23.1	+0.9
SJMB	Sao Joao De Ma	39.31	339	eP	P	12 00 24.3	+0.5
MAW	Mawson	39.71	143	P	P	12 00 27.0	+0.4
	comp=Z,2.7nm,0.3s,baz=225,slow=4.3,SNR=40						
	comp=Z,2.7nm,0.3s						
MAW	Mawson	39.71	143		P	12 00 27.1	+0.5
CO01	Juntas del Tor	39.94	294	P	P	12 00 30.3	+1.0
CO01				IAmb	IAmb	12 00 32.6	
	comp=Z,15nm,1.4s						
DIAM	Diamantina, MG	40.23	336	eP	P	12 00 32.3	+0.7
PMNB	Patos De Minas	40.67	332	eP	P	12 00 36.1	+0.9
SUR	Sutherland	40.95	74	P	P	12 00 37.9	+0.4
SUR				IAmb	IAmb	12 00 41.7	
	comp=Z,18nm,1.2s						
LCO	Las Campanas	41.03	294	P	P	12 00 38.1	-0.1
LCO				IAmb	IAmb	12 00 42.3	
	comp=Z,18nm,1.3s						
GUA01	Guaratinga, BA	41.12	342	eP	P	12 00 39.3	+0.6
IPMB	Ipameri, GO	41.68	330	eP	P	12 00 42.3	-1.0
AQDB	Aquidauana	41.79	318	eP	P	12 00 43.3	-0.8
AC04	Llanos de Chal	41.88	294	P	P	12 00 44.9	+0.1
AC04				IAmb	IAmb	12 01 01.9	
	comp=Z,19nm,1.1s						
AC02	Maricunga	42.05	297	P	P	12 00 47.2	+0.4
CMC01	Camacan, BA	42.27	343	eP	P	12 00 48.4	+0.3
COIM	Forte Coimbra	43.09	316	eP	P	12 00 53.8	-0.8
JANB	Januaria	43.50	336	eP	P	12 00 58.2	+0.1
BDFB	Brasilia	43.86	331	P	P	12 01 00.9	-0.1
	comp=Z,5.3nm,0.5s,baz=166,slow=5.7,SNR=7.2						
	comp=Z,5.3nm,0.5s						
BDFB	Brasilia	43.86	331	P	P	12 00 59.8	-1.2
ARAG	Araguaiana, MT	44.90	326	eP	P	12 01 09.6	+0.5
SBA	Scott Base	45.42	184	P	P	12 01 13.4	+1.0
VNDA	Vanda	45.92	183	P	P	12 01 18.4	+2.0
	comp=Z,3.9nm,0.8s,baz=188,slow=7.0,SNR=33						
	comp=Z,3.9nm,0.8s						
VNDA	Vanda	45.92	183		P	12 01 18.0	+1.6
SALV	Santo Antonio	46.00	321	eP	P	12 01 18.1	+0.3
SDBA	SAO DESIDERIO	46.20	336	eP	P	12 01 19.1	-0.2
BOSA	Boshof	46.27	75	P	P	12 01 19.1	-0.8
	comp=Z,4.2nm,0.7s,baz=206,slow=6.7,SNR=11						
	comp=Z,4.2nm,0.7s						
BOSA	Boshof	46.27	75	P	P	12 01 19.8	-0.1
PB09	IPOC Station P	46.36	301	P	P	12 01 21.6	+0.9
PB09				IAmb	IAmb	12 01 57.2	
	comp=Z,23nm,1.3s						
PB03	IPOC Station P	46.39	300	P	P	12 01 20.7	-0.2
PB03				IAmb	IAmb	12 01 33.6	
	comp=Z,23nm,1.5s						
BBSD	Serra de San D	46.66	314	eP	P	12 01 22.2	-0.7
PB07	IPOC Station P	46.73	300	P	P	12 01 23.7	+0.2
PB07				IAmb	IAmb	12 01 48.4	
	comp=Z,27nm,1.4s						
NBPN	Ponto Novo - B	46.81	343	eP	P	12 01 23.6	-0.4
PTLB	Pontes e Lacer	47.67	317		P	12 01 30.1	-0.6
PTLB				IAmb	IAmb	12 01 31.4	
	comp=Z,23nm,1.4s						
PTLB	Pontes e Lacer	47.67	317	eP	P	12 01 30.4	-0.2
PB08	IPOC Station P	47.74	302	P	P	12 01 31.8	0.0
PB08				IAmb	IAmb	12 02 10.4	
	comp=Z,15nm,1.4s						
GO01	Chusmiza	48.17	303	P	P	12 01 35.3	+0.2
NBTA	Tacaratu-PE	48.18	346	eP	P	12 01 34.5	-0.2
KOOLE	Kule	48.20	66		P	12 01 34.6	-0.3
SNDB	Serra Nova Dou	48.27	328	eP	P	12 01 36.1	+0.8
H10S2	ASCENSION HYDR	48.66	17	T	T	12 54 34.7	
	baz=32,slow=74,SNR=3.9						
H10S3	ASCENSION HYDR	48.67	17	T	T	12 54 31.9	
	baz=188,slow=74,SNR=4.8						
LBTB	Lobatse	49.33	73	P	P	12 01 43.1	-0.4
LBTB				IAmb	IAmb	12 01 43.6	
	comp=Z,7.8nm,0.6s						
PB16	IPOC Station P	49.47	303	P	P	12 01 45.2	0.0
PB16				IAmb	IAmb	12 01 53.9	
	comp=Z,11nm,1.4s						
H10N1	ASCENSION HYDR	49.78	17	T	T	12 55 55.1	
	baz=189						
H10N3	ASCENSION HYDR	49.78	17	T	T	12 55 55.1	
	baz=189						
H10N2	ASCENSION HYDR	49.80	17	T	T	12 55 55.1	
	baz=189						
SMTB	Santa Maria do	50.25	334	eP	P	12 01 51.1	+0.7
LPAZ	La Paz	50.64	306	P	P	12 01 54.9	+0.8
	comp=Z,29nm,0.4s,baz=121,slow=4.5,SNR=105						
	comp=Z,29nm,0.4s						
LPAZ	La Paz	50.64	306		P	12 01 54.8	+0.8
LPAZ	La Paz	50.64	306	eP	P	12 01 52.5	-1.4
CLDB	Colider	50.72	323	eP	P	12 01 53.2	-0.6
CASY	Casey	53.34	160	P	P	12 02 14.0	+1.4
CASY				IAmb	IAmb	12 02 14.9	
	comp=Z,6.2nm,0.8s						
LSZ	Lusaka	58.74	69		P	12 02 51.5	-0.3
SGC2	Sao Gabriel da	64.68	315	eP	P	12 03 30.2	-1.1
BOAV	Boa Vista	64.71	323	P	P	12 03 30.9	-0.6
BOAV				IAmb	IAmb	12 03 31.7	
	comp=Z,5.5nm,0.7s						
BOAV	Boa Vista	64.71	323	eP	P	12 03 31.2	-0.3
TORD	Torodi Ar. Bea	73.69	30	P	P	12 04 27.3	+0.6
	comp=Z,1.9nm,0.4s,baz=199,slow=6.5,SNR=28						
	comp=Z,1.9nm,0.4s						
TORD	Torodi Ar. Bea	73.69	30	P	P	12 04 26.9	+0.2
ASAR	Alice Springs	98.41	163	P	Pdif	12 06 30.6	+0.1
	comp=Z,0.8nm,0.5s,baz=190,slow=4.0,SNR=18						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	98.41	163	P	Pdif	12 06 30.4	-0.1
WRA	Warramunga Arr	102.13	162	P	Pdif	12 06 47.3	+0.3
	comp=Z,0.4nm,0.7s,baz=176,slow=2.9,SNR=1.7						
WRA	Warramunga Arr	102.13	162		Pdif	12 06 47.7	+0.6
YKA	Yellowknife Ar	136.56	318	PKP	PKiKP	12 12 12.4	-1.5
	comp=Z,0.3nm,0.3s,baz=142,slow=2.3,SNR=8.0						
P29M	Windy Craggy	144.65	305		PKPdf	12 12 26.7	-0.1
A36M	Sachs Harbour	144.69	328		PKPdf	12 12 26.7	+0.2
HYT	Haines Junctio	145.07	307	PKPbc	PKPab	12 12 28.1	+0.4
N30M	Aishikik Lake	145.15	308	PKPbc	PKiKP	12 12 29.5	-2.2
J30M	Hart River	146.04	313	PKPdf	PKPab	12 12 31.2	-0.1
INK	Inuvik	146.21	320	PKPdf	PKPab	12 12 30.8	-0.8
ILAR	Eielson Array	150.44	311	PKPbc	PKiKP	12 12 41.9	-0.5
	comp=Z,2.0nm,0.7s,baz=140,slow=2.0,SNR=27						
SONM	Songino Array	150.90	88	PKPbc	PKiKP	12 12 43.5	-0.6
	comp=Z,2.3nm,0.5s,baz=240,slow=3.3,SNR=9.3						

MEX 27 12:13:28.5±0.9, 14°.20N×93°.62W, h17km±30km, MD4.0
GCG 27 12:13:32.3±1.5, 14°.29N×93°.08W, h36km±999km, MD4.1, Presumed earthquake
ISC 27 12:13:18.8±2.1, 13°.83N±0°.09×93°.47W±0°.04, h13km±12km, n20, σ2s64/28, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	El Naranjo	1.75	43	eP	Pg	12 13 53.1	+0.6
PATR				eS	Sb	12 14 12.6	-0.3
CHUJ	Union Juarez	1.82	46	eP	Pg	12 13 54.0	+0.2
CHUJ				eS	Sg	12 14 15.7	-1.8
PAVE	Pavencul	1.85	43	eP	Pg	12 13 54.5	+0.3
PAVE				eS	Sn	12 14 14.5	+0.8
STG5	El Palmar, Qui	2.14	74	i P	Pn	12 13 56.5	+2.2
STG8	El Palmar, Qui	2.15	73	i P	Pn	12 13 57.9	+3.3
CARR	Arriaga	2.44	350	eP	Pb	12 14 02.4	-0.2
CARR				eS	Sn	12 14 26.3	-1.8
FG8	Yepocapa, Chim	2.86	81	i P	Pn	12 14 05.3	+1.1
FG16	Alotenango, Sa	2.91	81	i P	Pn	12 14 06.5	+1.5
TGIG		2.95	7	eP	Pb	12 14 10.8	-0.5
TGIG				eS	Sn	12 14 42.5	+1.7
TGIG		2.95	7	i P	Pb	12 14 10.6	-0.7
TGIG				i S	Sn	12 14 40.0	-0.7
PCG5	San Vicente Pa	3.03	82	i P	Pn	12 14 09.0	+2.4
APG	El Apazote	3.14	68	i P	Pb	12 14 14.7	+0.1
HUIG	Huatulco	3.19	307	eP	Pn	12 14 11.8	+3.0
HUIG				eS	Sn	12 14 42.8	-3.9
CMIG	Matias Romero	3.52	337	eP	Pn	12 14 17.2	+4.0
CMIG				eS	Sn	12 14 53.1	-1.6
JAYA	Jayaque - finc	3.91	92	i P	Pn	12 14 25.6	+6.8
PEIG	Puerto Escondi	4.16	302	eP	Pn	12 14 25.6	+3.6
PEIG				eS	Sn	12 15 04.2	-6.2
YOIG	Yosondua	4.95	308	eP	Pn	12 14 36.4	+3.2
YOIG				eS	Sn	12 15 28.6	-1.8
TXIG	Tlaxiaco	5.36	310	eP	Pn	12 14 43.4	+4.6
TXIG				eS	Sn	12 15 38.9	-1.6
HLIG	Huajuapan de L	5.76	314	eS	Sn	12 15 44.3	-6.0
FTIG	Fresnillo de T	6.04	313	eP	Pn	12 14 54.1	+6.1
FTIG				eS	Sn	12 15 48.3	-9.0

IDC 27 12:20:01.2±2.1, 3°.74S×102°.34E, h0km, mb3.9/9, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=109.0km s-min=15.3km az=53.0
NEIC 27 12:20:08.5±1.6, 3°.54S±0°.10×102°.7E±0°.1, h39km±9km, mb4.1/6, Error ellipse: s-maj=21.5km s-min=4.6km az=49.0
DJA 27 12:20:10.7±0.4, 4°.5S±4°×10°.2E±°, h35km±5km, M4.5/26, mB5.2/1, mb4.6/2, MLv4.4/26, Mw(mB)4.6/1
ISC 27 12:20:02.7±0.8, 4°.30S±0°.08×101°.72E±0°.07, h30km, n52, σ1s97/38, mb4.0/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UBSI	University, Be	0.76	46	P	Pb	12 20 19.8	+2.3
KSI	Kapahiang	1.08	54	P	Pb	12 20 21.9	-0.9
EGSI	Enggano, Bengk	1.19	152	P	Pb	12 20 32.8	+8.2
MNAI	Manna	1.23	93		Pb	12 20 24.1	-1.3
MNAI					Sn	12 20 35.3	-4.3
MNAI	Manna	1.23	93	P	Pb	12 20 24.4	-1.0
MASI	Maura Aman, Be	1.26	24	P	Pb	12 20 27.4	+1.6
LHSI	Lahat	1.86	76	P	Pn	12 20 32.5	0.0
KRJI	Kerinci	2.21	353	P	Pb	12 20 44.6	+2.6
MDSI	Maura Dua	2.46	95	P	Pn	12 20 40.4	-0.3
KASI	Kota Agung	3.02	114	P	Pn	12 20 50.2	+1.7
SDSI	Sungai Dareh	3.35	355	P	Pb	12 20 59.7	-1.8
PDSI	Padang	3.59	339	P	Pb	12 21 02.8	-2.7
PPI	Padang Panjang	4.04	341	P	Pb	12 21 09.8	-3.3
CBJI	Citeko	5.53	113	P	Pb	12 21 31.2	-7.3
LEM	Lembang	6.38	113	Pn	Pn	12 21 32.8	-2.2
	2.8nm,0.3s,baz=302,slow=23,SNR=2.4						
	5.5nm,0.3s						
BBJI	Bungbulang	6.68	118	Pn	Pn	12 21 39.5	+0.6
BBJI					Sn	12 22 48.5	-5.7
GSI	Gunungsitoli	6.94	323	Pn	Pn	12 21 49.3	+6.9
CMAR	Chiang Mai Arr	22.77	353	P	P	12 25 01.1	-1.7
	0.2nm,0.4s,baz=188,slow=7.9,SNR=6.4						
	0.2nm,0.4s						
CMAR	Chiang Mai Arr	22.77	353	P	P	12 25 00.1	-2.8
H08S2	Diego Garcia H	29.25	262	T	T	12 56 26.1	
	baz=84,slow=75,SNR=3.5						
H08S3	Diego Garcia H	29.26	262	T	T	12 56 24.5	
	baz=84,slow=75,SNR=8.1						
H08S1	Diego Carcia H	29.27	262	T	T	12 56 27.4	
	baz=84,slow=75,SNR=2.6						
H01W3	Cape Leeuwin H	32.54	161	T	T	13 00 35.2	
	baz=339,slow=75,SNR=14						
H01W2	Cape Leeuwin H	32.55	161	T	T	13 00 35.8	
	baz=339,slow=75,SNR=14						
H01W1	Cape Leeuwin H	32.55	161	T	T	13 00 33.0	
	baz=339,slow=75,SNR=8.5						
WB0	Warramunga Arr	35.35	119	P	P	12 26 56.2	+0.4
WRA	Warramunga Arr	35.37	119	P	P	12 26 56.1	+0.1
	0.8nm,0.5s,baz=300,slow=8.5,SNR=14						
	0.8nm,0.5s						
WRA	Warramunga Arr	35.37	119	P	P	12 26 56.7	+0.7
AS31	Alice Springs	36.53	125	P	P	12 27 06.6	+0.7
AS31				IAmb	IAmb	12 27 14.7	
	comp=Z,0.9nm,1.0s						
ASAR	Alice Springs	36.53	125	P	P	12 27 07.7	+1.8
	comp=Z,0.7nm,0.5s,baz=301,slow=7.4,SNR=36						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	36.53	125	P	P	12 27 06.1	+0.2
STKA	Stephens Creek	46.35	131	P	P	12 28 28.9	+2.5
	comp=Z,0.9nm,0.5s,baz=320,slow=9.7,SNR=5.2						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	53.70	344	P	P	12 29 22.9	+1.1
	comp=Z,0.8nm,0.4s,baz=151,slow=9.3,SNR=6.4						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	53.70	344	P	P	12 29 23.2	+1.5
KURBB	Kurchatov Arra	58.23	343	P	P	12 29 55.3	+1.2
	comp=

PS1A						Sn		12 31 42.0	+0.5
CNBA	**Chernabura Isl**	**0.88**	**80**			**Pn**		12 31 30.2	-0.6
CNBA					Sn	**Sn**		12 31 41.4	-1.2
CNBA					IAML			12 31 46.0	
	comp=E,1µm,0.3s								
PN7A	**Pavlof North-7**	**0.92**	**326**			**Pn**		12 31 31.6	+0.2
PN7A						Sn		12 31 31.9	-12
ISNN	**Isanotski Nort**	**1.56**	**277**			**Pn**		12 31 41.2	+1.1
ISNN						**Sn**		12 32 00.9	+1.7
VNSW	**Veniaminof 7**	**1.65**	**31**			**Pn**		12 31 42.8	+1.4
VNKR	**Veniaminof 5**	**1.68**	**35**			**Pn**		12 31 43.3	+1.5
VNKR						**Sn**		12 32 04.9	+2.9
SSLS	**Shishaldin Sou**	**1.69**	**273**			**Pn**		12 31 42.6	+0.8
SSBA	**Shishaldin**	**1.76**	**274**			**Pn**		12 31 43.4	+0.6
VNSS	**Veniaminof 8**	**1.82**	**30**			**Pn**		12 31 45.8	+2.1
VNFG	**Fog Glacier, M**	**1.84**	**28**			**Pn**		12 31 44.1	+0.2
VNFG	**Fog Glacier, M**	**1.84**	**28**			**Pn**		12 31 46.1	+2.1
VNHG	**Veniaminof 1**	**1.90**	**34**			**Pn**		12 31 46.8	+2.0
VNHG						**Sn**		12 32 12.0	+4.5
ANPB	**Aniakchak Plen**	**2.66**	**36**			**Pn**		12 31 57.0	+1.8
AKSA	**Akutan Strait**	**2.75**	**261**			**Pn**		12 31 57.8	+1.6
AKSA						**Sn**		12 32 30.0	+1.8
AKUT	**Akutan**	**2.79**	**261**	Pn		**Pn**		12 31 58.2	+1.4
AKUT				Sn		**Sn**		12 32 31.1	+1.9
AKUT				IAML				12 32 44.5	
	comp=N,158nm,0.5s								
AKUT				IAML				12 32 45.2	
	comp=E,155nm,0.6s								
ANNW	**Aniakchak Nort**	**2.81**	**34**			**Pn**		12 31 59.3	+2.0
AHB	**Akutan Harbor**	**2.82**	**260**			**Pn**		12 31 58.6	+1.4
AHB						**Sn**		12 32 30.4	+0.4
ANNE	**Aniakchak Nort**	**2.82**	**36**			**Pn**		12 31 59.3	+1.9
AKLV	**Akutan Long Va**	**2.89**	**262**			**Pn**		12 31 59.6	+1.4
AKBBA	**Akutan Broad B**	**2.89**	**260**			**Pn**		12 31 59.4	+1.2
AKV	**Akutan Volcano**	**2.90**	**261**			**Pn**		12 31 59.7	+1.2
AKGG	**Akutan Green G**	**2.90**	**263**			**Pn**		12 31 59.6	+1.2
ZRO	**Akutan Zero**	**2.92**	**260**			**Pn**		12 31 59.9	+1.2
LVA	**Lava Point**	**2.93**	**262**			**Pn**		**12 31 58.8**	**0.0**
LVA				IAML				12 32 50.7	
	comp=N,257nm,0.6s								
LVA				IAML				12 33 01.7	
	comp=E,157nm,0.7s								
UNV	**Unalaska Valle**	**3.28**	**258**			**Pn**		12 32 04.9	+1.3
MNAT	**Makushin Natee**	**3.37**	**259**			**Pn**		12 32 05.8	+0.9
MNAT						**Sn**		12 32 44.3	+0.7
PLBL	**Peulik Blue Cr**	**3.86**	**36**			**Pn**		12 32 13.5	+2.0
R17L	**Mt. Peulik Vol**	**3.97**	**40**			**Pn**		12 32 15.4	+2.3
PLK1	**Peulik 1**	**4.01**	**37**			**Pn**		12 32 15.8	+2.2
PLK5	**Peulik 5**	**4.08**	**33**			**Pn**		12 32 16.5	+2.0
PLK2	**Peulik 2**	**4.08**	**39**			**Pn**		12 32 16.7	+2.1
OKTU	**Okmok Mt. Tuli**	**4.30**	**255**			**Pn**		12 32 19.1	+1.5
OKCE	**Okmok Cone E**	**4.35**	**256**			**Pn**		12 32 19.7	+1.4
O15K	**Ungalikthiuk R**	**4.57**	**8**			**Pn**		**12 32 21.8**	**+0.5**
O15K				IAML				12 33 45.9	
	comp=E,49nm,0.9s								
O15K				IAML				12 33 51.0	
	comp=N,37nm,0.8s								
O14K	**Tigyukauivet M**	**4.59**	**359**			**Pn**		12 32 22.4	+0.9
O14K				IAML				12 33 46.2	
	comp=E,34nm,1.0s								
O14K				IAML				12 34 00.4	
	comp=N,37nm,1.4s								
Q17K	**Contact Creek**	**4.61**	**37**			**Pn**		12 32 23.5	+1.5
P16K	**Nushagak River**	**4.69**	**20**			**Pn**		12 32 23.7	+0.9
P16K				IAML				12 33 51.2	
	comp=E,85nm,0.9s								
ACHA	**Angle Creek He**	**4.78**	**40**			**Pn**		12 32 24.7	+0.5
MGLS	**Mageik Landsli**	**4.78**	**41**			**Pn**		12 32 25.8	+1.5
KABU	**Katmai Buttres**	**4.83**	**39**			**Pn**		12 32 26.9	+1.9
KAKN	**Katmai Knife C**	**4.94**	**40**			**Pn**		12 32 28.0	+1.7
OHAK	**Old Harbor**	**5.08**	**57**			**Pn**		12 32 28.4	+0.2
OHAK				IAML				12 34 01.1	
	comp=N,50nm,0.9s								
OHAK				IAML				12 34 01.9	
	comp=E,59nm,0.9s								
KAWH	**Katmai**	**5.09**	**41**			**Pn**		12 32 29.4	+0.9
O16K	**Kokwok River B**	**5.20**	**17**	Pn		**Pn**		12 32 30.9	+1.0
P17K	**Kvichak River**	**5.20**	**27**			**Pn**		12 32 31.5	+1.7
Q18K	**Katmai Hardscr**	**5.21**	**38**			**Pn**		12 32 31.9	+1.7
KAHG	**Katmai Hook Gl**	**5.27**	**41**			**Pn**		12 32 32.6	+1.7
N14K	**Kuskokwak Cree**	**5.28**	**357**			**Pn**		12 32 31.9	+1.0
N14K	**Kuskokwak Cree**	**5.28**	**357**	IAML				12 34 14.6	
	comp=E,53nm,1.2s								
N14K				IAML				12 34 45.1	
	comp=N,49nm,1.4s								
CLCO	**Concord Point,**	**5.46**	**253**			**Pn**		12 32 35.0	+1.5
N15K	**Kwethluk River**	**5.54**	**5**			**Pn**		12 32 35.5	+1.0
CLES	**Cleveland East**	**5.54**	**254**	Pn		**Pn**		12 32 33.3	-1.3
O17K	**Koliganek Bris**	**5.55**	**21**			**Pn**		12 32 35.4	+0.6
KDAK	**Kodiak Island**	**5.68**	**53**	Pn		**Pn**		**12 32 36.4**	**0.0**
	comp=N,0.7nm,0.3s,baz=111,slow=0.2,SNR=49								
KDAK					Sn	**Sn**		**12 33 37.1**	**-3.1**
	comp=N,0.8nm,0.3s,baz=325,slow=16,SNR=1.1								
KDAK					Lg	Lg		12 34 00.0	
	comp=N,2.2nm,0.3s,baz=23,slow=18,SNR=7.1								
KDAK					LR	LR		12 35 14.7	
	comp=N,31nm,19.8s,baz=233,slow=43 comp=N,2.2nm,0.3s								
KDAK	**Kodiak Island**	**5.68**	**53**	Pn		**Pn**		**12 32 36.7**	**+0.3**
SPIA	**Saint Paul Isl**	**5.73**	**300**			**Pn**		12 32 37.5	+0.4
M13K	**Dall Lake**	**5.88**	**349**			**Pn**		12 32 40.5	+1.3
Q19K	**Cape Douglas,**	**5.91**	**41**			**Pn**		12 32 41.0	+1.4
N15K	**Nishlik Lake**	**5.95**	**11**			**Pn**		12 32 41.0	+0.8
M15K	**Kasigluk River**	**6.04**	**2**			**Pn**		12 32 41.8	+0.3
O18K	**Koktuh Hills**	**6.10**	**29**			**Pn**		12 32 44.3	+2.1
M14K	**Bethel**	**6.11**	**356**			**Pn**		12 32 43.1	+0.7
N17K	**Nushagak Hills**	**6.23**	**18**			**Pn**		12 32 45.3	+1.3
M11K	**Mekoryuk**	**6.35**	**336**	Pn		**Pn**		12 32 47.0	+1.3
M16K	**Timber Creek**	**6.47**	**9**			**Pn**		12 32 48.3	+1.0
L14K	**Kuka Creek**	**6.74**	**353**	Pn		**Pn**		12 32 52.1	+1.1
ILSW	**Iliamna Southw**	**6.84**	**36**	Pn		**Pn**		12 32 54.3	+1.8
M17K	**Holitna River**	**7.02**	**15**			**Pn**		12 32 55.5	+0.7
L15K	**Ungalak Mounta**	**7.03**	**358**			**Pn**		12 32 54.9	0.0
N19K	**Bonanza Creek**	**7.10**	**27**			**Pn**		12 32 57.8	+1.8
L16K	**Owhat River**	**7.11**	**6**	Pn		**Pn**		12 32 57.0	+1.0
CNPM	**China Poot**	**7.24**	**44**	Pn		**Pn**		12 32 59.4	+1.5
M18K	**Stony River**	**7.38**	**20**			**Pn**		12 33 00.5	+0.7
K13K	**Kusilvak Mount**	**7.52**	**347**			**Pn**		12 33 02.3	+0.6
BRLK	**Bradley Lake**	**7.53**	**43**	Pn		**Pn**		12 33 01.5	-0.3
BRSE	**Bradley Lake S**	**7.57**	**44**			**Pn**		12 33 03.1	+0.7
K15K	**Wolf Creek Mou**	**7.65**	**358**	Pn		**Pn**		12 32 04.0	+0.6
M19K	**Big River Lodg**	**8.06**	**23**			**Pn**		12 33 10.8	+1.7
K17K	**Iditarod**	**8.20**	**9**			**Pn**		12 33 11.5	+0.6
J14K	**Nanvaranak Lak**	**8.20**	**352**	Pn		**Pn**		12 33 11.9	+1.0
ATKA	**Atka Island**	**8.21**	**258**			**Pn**		12 33 11.8	+0.7
L19K	**White Mountain**	**8.21**	**21**			**Pn**		12 33 11.8	+0.7
SLKM	**Skilak Lake**	**8.26**	**41**	Pn		**Pn**		12 33 13.2	+1.3
SEW	**Seward**	**8.31**	**44**	Pn		**Pn**		12 33 13.5	+1.1
M20K	**Styx River**	**8.35**	**27**			**Pn**		12 33 14.5	+1.4
J16K	**Anvik River**	**8.64**	**1**	Pn		**Pn**		12 33 17.5	+0.5
J17K	**VABM Dome**	**8.81**	**6**			**Pn**		12 33 18.9	-0.4
SKT	**Skwentna**	**8.88**	**31**			**Pn**		12 33 21.8	+1.6
P23K	**Montague Islan**	**9.12**	**49**			**Pn**		12 33 23.8	+0.3
PWL	**Port Wells**	**9.20**	**43**			**Pn**		12 33 25.1	+0.4
GSCK	**Great Sitkin C**	**9.40**	**260**			**Pn**		12 33 28.6	+1.2
K20K	**Telida**	**9.43**	**20**			**Pn**		12 33 28.3	+0.5
HIN	**Hinchinbrook I**	**9.71**	**48**			**Pn**		12 33 32.0	+0.4
FID	**Port Fidalgo**	**9.90**	**46**			**Pn**		12 33 34.0	-0.2
DHY	**Denali Highway**	**10.99**	**34**			**Pn**		12 33 48.8	-0.5
VRDI	**Verde Repeater**	**11.42**	**48**	Pn		**Pn**		12 33 53.4	-1.8
PAX	**Paxson**	**11.57**	**38**	Pn		**Pn**		12 33 56.5	-0.7
H21K	**Melozitna Rive**	**11.75**	**17**	Pn		**Pn**		12 34 01.0	+1.5
IMAR	**Indian Mountai**	**11.90**	**15**	Pn		**Pn**		12 34 03.1	+1.5
K24K	**Donnelly Dome**	**12.02**	**34**	Pn		**Pn**		12 34 04.6	+1.4
RIDG	**Independent Ri**	**12.28**	**36**	Pn		**Pn**		12 34 07.1	+0.3
F19K	**Shaleruckik Mo**	**12.31**	**6**	Pn		**Pn**		12 34 07.6	+0.6
IL31		**12.37**	**29**	Pn		**Pn**		12 34 05.9	-1.9
ILAR	**Eielson Array**	**12.37**	**29**	Pn		Pn		12 34 01.1	-6.7
	comp=N,0.1nm,0.3s,baz=221,slow=14,SNR=8.7								
ILAR					Sn	Sn		12 36 14.4	-10
	baz=219,slow=20,SNR=1.5								
ILAR					LR	LR		12 39 00.2	
	comp=N,37nm,18.6s,baz=256,slow=38 comp=N,0.2nm,0.4s								
G21K	**Allakaket**	**12.44**	**14**	Pn		**Pn**		12 34 09.4	+0.6
DAWY	**Dawson**	**14.44**	**41**	Pn		**Pn**		12 34 35.2	-0.9
I27K	**Kandik River**	**14.55**	**33**	Pn		**Pn**		12 34 36.8	-0.7
I28M	**Miner Creek**	**15.01**	**36**	Pn		**Pn**		12 34 42.8	-0.8
K29M	**Barlow Dome**	**15.06**	**43**	Pn		**Pn**		12 34 43.2	-1.1
K29M				IAmb		IAmb		12 35 00.2	
	comp=Z,3.5nm,0.9s								
D23K	**Nanushuk River**	**15.12**	**14**	Pn		**Pn**		**12 34 44.5**	**-0.5**
J30M	**Hart River**	**15.86**	**41**	Pn		**Pn**		12 34 53.2	-1.3
J30M				IAmb		IAmb		12 35 10.9	
	comp=Z,4.1nm,0.7s								
H29M	**Whitestone**	**15.98**	**35**	Pn		**Pn**		12 34 56.6	+0.6
H29M				IAmb		IAmb		12 35 01.6	
	comp=Z,5.0nm,1.1s								
I30M	**Mount Dempster**	**16.14**	**39**	Pn		**Pn**		12 34 57.6	-0.7
I30M				IAmb		IAmb		12 35 03.5	
	comp=Z,3.4nm,0.7s								
G29M	**Pine Creek**	**16.50**	**33**	Pn		**Pn**		12 35 02.4	-0.2
G29M				IAmb		IAmb		12 35 11.7	
	comp=Z,3.5nm,0.9s								
EPYK	**Eagle Plains**	**16.62**	**36**	Pn		**Pn**		12 35 03.9	-0.2
EPYK				IAmb		IAmb		12 35 19.9	
	comp=Z,4.4nm,0.8s								
G30M	**tAoh Zraii Nji**	**17.12**	**34**	Pn		**Pn**		12 35 08.4	-1.9
H31M	**Peel River**	**17.17**	**39**	Pn		**Pn**		12 35 09.9	-1.0
H31M				IAmb		IAmb		12 35 18.4	
	comp=Z,4.9nm,0.9s								
G31M	**Satah River**	**17.74**	**36**	Pn		**Pn**		12 35 16.5	-1.4
INK	**Inuvik**	**18.72**	**32**	P		**P**		12 35 27.8	-1.2
	comp=Z,0.3nm,0.3s,baz=231,slow=7.3,SNR=9.9 comp=Z,1.3nm,0.8s								
INK	**Inuvik**	**18.72**	**32**	P		**P**		12 35 27.7	-1.2
INK				IAmb		IAmb		12 35 31.1	
	comp=Z,2.7nm,1.0s								
PEA0B	**Petropavlovsk-**	**24.09**	**283**	P		**P**		12 36 24.2	-1.3
PETK	**Petropavlovsk-**	**24.09**	**283**	P		**P**		12 36 24.5	-1.0
	comp=Z,2.0nm,0.4s,baz=77,slow=13,SNR=4.1 comp=Z,2.0nm,0.4s								
YBH	**Yreka Blue Hor**	**28.28**	**101**	LR		LR		12 45 02.3	
	comp=Z,28nm,20.2s,baz=292,slow=29								
H11N2	**WAKE ISLAND Hy**	**42.51**	**228**	T		T		13 24 10.3	
	baz=27,slow=76,SNR=15								
H11N3	**WAKE ISLAND Hy**	**42.52**	**228**	T		T		13 24 09.7	
	baz=27,slow=76,SNR=16								
H11N1	**WAKE ISLAND Hy**	**42.53**	**228**	T		T		13 24 12.0	
	baz=27,slow=76,SNR=12								
H11S1	**WAKE ISLAND Hy**	**43.68**	**227**	T		T		13 25 34.0	
	baz=27,slow=75,SNR=11								
H11S2	**WAKE ISLAND Hy**	**43.69**	**227**	T		T		13 25 36.1	
	baz=27,slow=75,SNR=9.5								
H11S3	**WAKE ISLAND Hy**	**43.70**	**227**	T		T		13 25 30.7	
	baz=27,slow=75,SNR=6.6								
FINES	**FINESS Array B**	**64.09**	**356**	P		**P**		**12 41 42.5**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=18,slow=8.0,SNR=7.9 comp=Z,0.7nm,0.5s								
FINES	**FINESS Array B**	**64.09**	**356**	P		**P**		12 41 43.0	-0.2
NC405	**NORSAR Array S**	**64.42**	**4**	P		**P**		12 41 46.3	+0.8
HFS	**Hagfors**	**65.47**	**3**	P		**P**		12 41 51.4	-0.8
	comp=Z,0.9nm,0.4s,baz=57,slow=5.5,SNR=7.9 comp=Z,0.9nm,0.4s								
MKAR	**Makanchi Array**	**65.63**	**318**	P		**P**		**12 41 52.8**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=46,slow=5.7,SNR=6.8 comp=Z,0.5nm,0.5s								
MKAR	**Makanchi Array**	**65.63**	**318**	P		**P**		12 41 53.3	-0.2
EKA	**Eskdalemuir Ar**	**68.87**	**13**	P		**P**		12 42 14.4	+0.6
	comp=Z,0.9nm,0.6s,baz=3.4,slow=3.9,SNR=1.8 comp=Z,0.9nm,0.6s								
ABKAR	**Akbulak array**	**70.86**	**333**	P		**P**		12 42 26.6	+0.5
BOOM	**Boomskoye usch**	**71.70**	**319**	P		**P**		12 42 32.7	+1.1
BOOM				IAmb		IAmb		12 42 32.8	
	comp=Z,4.0nm,0.9s								
AKASG	**Malin Array Be**	**74.64**	**353**	P		**P**		**12 42 48.4**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=9.7,slow=5.7,SNR=11 comp=Z,1.8nm,0.5s								
AKBB	**Malin Array Si**	**74.64**	**353**	P		**P**		12 42 48.9	+0.3
KIEV	**Kiev**	**74.65**	**353**	P		**P**		12 42 48.9	+0.3
CMAR	**Chiang Mai Arr**	**80.75**	**289**	P		**P**		12 43 23.4	+0.3
	comp=Z,1.0nm,0.8s,baz=20,slow=5.2,SNR=9.0 comp=Z,1.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**80.75**	**289**	P		**P**		12 43 22.7	-0.4
ESDC	**Sonseca Array**	**84.00**	**18**	P		**P**		12 43 40.8	+1.0
	comp=Z,0.9nm,0.8s,baz=347,slow=4.0,SNR=6.7 comp=Z,0.9nm,0.8s								
ESDC	**Sonseca Array**	**84.00**	**18**	P		**P**		12 43 40.0	+0.2
H03N2	**Juan Fernandez**	**112.35**	**116**	T		T		14 52 10.7	
	baz=323								
H03N1	**Juan Fernandez**	**112.36**	**116**	T		T		14 52 07.2	
	baz=323								
H03N3	**Juan Fernandez**	**112.36**	**116**	T		T		14 52 11.5	
	baz=323								
QSPA	**South Pole Qui**	**144.45**	**180**	PKP		**PKPdf**		12 50 43.2	-1.0
	comp=Z,1.5nm,1.1s,baz=25,slow=0.2,SNR=2.2								
QSPA	**South Pole Qui**	**144.45**	**180**			**PKPdf**		**12 50 43.6**	**-0.6**

*IDC **27** 12:40:40.9±3.5, 12°.36N×123°.78E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=360.0km s-min=23.1km az=64.0*

MAN 27 12:40:44.0, 13°.10N×125°.11E, h110km, MS3.1, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PLP	**Palo**	**1.93**	**184**	*e*P		Pn	12 41 17.4	+1.2
PLP				*e*S		Sn	12 41 42.0	+1.4
LQP	**Lukban**	**3.62**	**287**	*e*P		Pn	12 41 27.8	-11
WRA	**Warramunga Arr**	**34.07**	**164**	P		P	12 47 24.2	+6.1
	0.4nm,0.8s,baz=341,slow=8.4,SNR=5.4 0.4nm,0.8s							
ASAR	**Alice Springs**	**37.54**	**167**	P		P	12 47 53.6	+6.0
	0.1nm,0.3s,baz=346,slow=8.5,SNR=1.0 0.1nm,0.3s							
MKAR	**Makanchi Array**	**49.11**	**322**	P		P	12 49 28.7	+8.4
	0.6nm,0.7s,baz=123,slow=7.7,SNR=4.0 0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**53.12**	**325**	P		P	12 49 59.0	+8.8
	1.0nm,0.7s,baz=121,slow=8.0,SNR=9.6 1.0nm,0.7s							

IDC 27 12:59:10.0±2.1, 0°.46N×126°.27E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=160.9km s-min=28.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.77**	**159**	P		P	13 04 02.8	-0.8
	0.2nm,0.5s,baz=338,slow=11,SNR=5.9 0.2nm,0.5s							
ASAR	**Alice Springs**	**25.11**	**163**	P		P	13 04 37.3	+0.6
	0.4nm,0.9s,baz=350,slow=15,SNR=5.0 0.4nm,0.9s							
MKAR	**Makanchi Array**	**59.99**	**327**	P		P	13 09 18.3	-0.1
	0.2nm,0.7s,baz=121,slow=8.5,SNR=1.6 0.2nm,0.7s							

*KRNET **27** 13:28:52.5±0.1, 41°.35N×72°.07E, h30km, mb2.5*
*SOME **27** 13:28:52.7, 41°.25N×72°.13E, h10km*
*ISU **27** 13:28:53, 41°.40N×72°.11E, h6km*

ISC 27 13:28:52.6±1.3, 41°.36N±0°.04×72°.14E±0°.03, h5km±11km, n17, σ1s55/31, 11C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ARK	**Arkit**	**0.46**	**343**	⇑*e*P		**Pg**	**13 29 02.1**	**+0.7**
ARK				⇑*e*S		**Sb**	13 29 08.9	-1.6
KSNS	**Kasansay**	**0.51**	**247**	S		**Sg**	13 29 09.0	+0.1
KSNS				S		**Sb**	13 29 16.7	+5.0
TRKS	**Terek-Say**	**0.77**	**283**	⇓*e*P		**Pg**	13 29 05.9	-1.4
TRKS				⇑*e*S		**Sg**	13 29 15.6	-1.7
FRG	**Fergana**	**1.02**	**195**	S		**Sn**	13 29 31.3	+3.0
MNAS	**Manas**	**1.16**	**13**	⇓*e*P		**Pb**	13 29 14.4	-0.9
MNAS				⇓*e*S		**Sb**	13 29 30.1	-0.6
SALK	**Salom-Alik**	**1.36**	**110**	⇑*e*P		**Pn**	13 29 18.0	-0.4
SALK				⇑*e*S		**Sn**	13 29 36.4	-0.5
MRKS	**Merke**	**1.61**	**30**	*e*P		**Pg**	13 29 23.8	+0.4
	8.3nm,0.2s							
MRKS				*e*S		**Sg**	13 29 45.8	+1.6
	12nm,0.4s							
CHMG	**Chimgan**	**1.61**	**278**	S		**Sg**	13 29 43.8	-0.5
BTK	**Batken**	**1.64**	**218**	⇓*e*P		**Pn**	13 29 21.2	-1.0
BTK				⇓*e*S		**Sn**	13 29 41.9	-1.8
SFK	**Sufi-Kurgan**	**1.70**	**142**	⇑*e*P		**Pn**	13 29 22.8	-0.3
SFK				⇑*i*S		**Sn**	13 29 44.8	-0.6
IUG	**Iuzhnay**	**1.76**	**297**	*e*P		**Pg**	13 29 26.1	-0.3
	23nm,0.1s							
IUG				*e*S		**Sg**	13 29 49.6	+0.5
	34nm,0.3s							
EKS2	**Erkin-Say**	**1.79**	**43**	⇓*e*P		**Pn**	13 29 24.2	0.0
EKS2				⇓*e*S		**Sn**	13 29 47.3	-0.1
TVKS	**Tavaksay**	**1.88**	**277**	S		**Sg**	13 29 54.2	+1.2
KK31	**Karatay Array**	**2.12**	**326**	⇑Pn		**Pb**	13 29 32.0	+0.5
	0.8nm,0.1s,baz=156,slow=18,SNR=8.6							
KK31				⇑Sn		**Sb**	13 29 59.0	+0.7
	2.2nm,0.2s,baz=144,slow=30,SNR=13							
AAK	**Ala-Archa**	**2.17**	**53**	⇑Pn		**Pb**	13 29 31.3	-1.2
	1.5nm,0.7s							
AAK				⇓Sn		**Sg**	13 30 03.8	+1.4
	0.8nm,0.5s							
KST	**Kastek**	**3.30**	**58**	*e*P		**Pg**	13 29 54.8	-1.0
	1.1nm,0.3s							
KST				*e*S		**Sg**	13 30 38.6	0.0
	3.5nm,0.5s							
BTLS	**Baital**	**3.94**	**20**	*e*P		**Pg**	13 30 08.1	+0.1
	0.6nm,0.3s							
BTLS				*e*S		**Sg**	13 31 01.5	+2.5
	2.0nm,0.3s							

*SFS **27** 13:31:31.8, 35°.43N×3°.72W, h19km, ML2.6/13, ML2.7/13, MLv2.7/10*
*MDD **27** 13:31:32.0±0.6, 35°.44N×3°.74W, h15km±6km, mb_Lg2.5/18, Error ellipse: s-maj=4.9km s-min=3.5km az=147.0*
*CNRM **27** 13:31:32.0, 35°.36N×3°.93W, h29km, ML2.2*
*IGIL **27** 13:31:32.3, 35°.39N×3°.95W, h3km*
*INMG **27** 13:31:32.1±1.4, 35°.45N×3°.71W, h21km±7km, ML2.1, Error ellipse: s-maj=5.0km s-min=3.5km az=141.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 27 13:31:30.1±1.0, 35°.44N±0°.02×3°.80W±0°.02, h18km±4km, n55, σ1s44/93, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PALE	**Palemas**	**0.25**	**207**	P		**Pg**	**13 31 37.1**	**+1.2**
PALE				S		**Sg**	13 31 40.9	+1.1
EMEL	**Melilla**	**0.70**	**101**	P		**Pg**	**13 31 43.9**	**0.0**
EMEL				S		**Sg**	13 31 53.1	-0.2
EMEL				*i* lVmb_Lg			13 31 56.4	
WMELI	**Melilla**	**0.70**	**100**	Pg		**Pg**	**13 31 43.8**	**-0.1**
WMELI				Sg		**Sg**	13 31 52.7	-0.7
EMLI	**Melilla**	**0.71**	**101**	Pg		**Pg**	13 31 44.0	-0.1
EMLI				Sg		**Sg**	13 31 52.7	-0.8
EALB	**Alboran**	**0.80**	**51**	Pg		**Pg**	13 31 44.8	-0.9
EALB				Sg		**Sg**	13 31 56.0	-0.3
EALB	**Alboran**	**0.80**	**51**	P		**Pg**	13 31 45.5	-0.2
EALB				S		**Sg**	13 31 55.8	-0.5
EALB				*i* lVmb_Lg			13 31 56.5	
AKLM	**AKL**	**0.93**	**183**	P		**Pg**	**13 31 47.1**	**-1.2**
AKLM				S		**Sg**	13 31 58.1	-2.5
TAF	**Taforalt**	**1.30**	**118**	P		**Pg**	13 31 55.0	-0.2
TAF				S		**Sg**	13 32 13.6	+1.5
CHEFC	**Chefchaouen**	**1.30**	**256**	P		**Pg**	13 31 54.0	-1.3
CHEFC				S		**Sg**	13 32 08.5	-3.8
SMIR	**Smir Dam**	**1.31**	**281**	P		Pn	13 31 52.7	-0.8
SMIR				S		**Sg**	13 32 10.9	-1.7
EMIJ	**Mijas**	**1.37**	**325**	Pn		Pn	13 31 54.1	-0.3
EMIJ	**Mijas**	**1.37**	**325**	P		**Pn**	**13 31 55.4**	**+1.0**
EMIJ				S		**Sg**	13 32 12.7	-1.9
EMIJ				*i* lVmb_Lg			13 32 14.6	
EMAL

PMTG	**Montargil**	**5.06**	**317**	*eP*	**Pn**	**13 32 46.7 +1.7**
OUZM	**OUZ**	**5.16**	**210**	P	**Pn**	**13 32 48.2 +1.7**
OUZM				S	**Sn**	**13 33 46.8 +1.2**
PSARD	**Sardoal**	**5.41**	**321**	*eP*	**Pn**	**13 32 51.9 +2.0**
PSARD				*eS*	**Sn**	**13 33 52.0 +0.4**

*JMA **27** 13:49:12.5±0.1,32°.4**N**±0°.2×131°.9**E**±0°.3,h17km,MV3.4/40, HYUGANADA REGION*
JMA Felt I J1 at HYUGANADA REGION .
*IDC **27** 13:49:14.3±4.2,32°.65**N**×131°.92**E**,h0km,mb3.4/1, mbtmp3.1/3,ML2.6/2,Error ellipse: s-maj=68.3km s-min=18.3km az=10.0*

ISC 27 13:49:12.4±1.2,32°.38N±0°.05×131°.89E±0°.04,h19km±3km, n21,σ1$87/24,7D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHC	**Hyugahichiya**	**0.22**	**286**	⇓*iP*	**Pg**	**13 49 17.6**	**-0.1**
JHHC				⇓*eS*	**Sg**	**13 49 20.9**	**-0.5**
JTSN	**Tsuno**	**0.35**	**247**	⇓P	**Pg**	**13 49 19.4**	**-0.5**
JTSN				⇓S	**Sg**	**13 49 24.2**	**-0.8**
JSKE	**Saikikamae**	**0.41**	**1**	*i* P	**Pb**	**13 49 21.2**	**+0.1**
JSKE				S	**Sb**	**13 49 27.2**	**+0.1**
JKIT	**Kitakata**	**0.44**	**303**	⇓P	**Pg**	**13 49 21.6**	**+0.2**
JKIT				⇓S	**Sb**	**13 49 27.9**	**+0.1**
JUS	**Usuki**	**0.69**	**350**	P	**Pb**	**13 49 26.1**	**+0.3**
JUS				S	**Sn**	**13 49 35.8**	**-1.6**
JTZ	**Takazaki**	**0.83**	**235**	P	**Pg**	**13 49 27.5**	**-1.2**
JTO	**Tosashimizu**	**0.91**	**58**	P	**Pg**	**13 49 29.3**	**-0.8**
JTO				*eS*	**Sb**	**13 49 41.5**	**+0.3**
JIU3	**Izumi3**	**0.92**	**281**	P	**Pg**	**13 49 29.6**	**-0.8**
JIU3				S	**Sg**	**13 49 41.9**	**-0.7**
JNAR	**Kushima--Naru**	**1.00**	**212**	⇓P	**Pg**	**13 49 31.8**	**0.0**
UWA2	**Uwa jima 2**	**1.03**	**37**	P	**Pb**	**13 49 32.0**	**+0.3**
UWA2				S	**Sn**	**13 49 45.9**	**0.0**
JZO	**Okuchi**	**1.12**	**258**	P	**Pg**	**13 49 33.0**	**-1.1**
JNU	**Nakatsue** 20nm,0.3s,baz=114,slow=17,SNR=103	**1.13**	**311**	Pg	**Pg**	**13 49 33.5**	**-0.7**
JNU	72nm,0.3s,baz=76,slow=17,SNR=42			Lg	Lg	13 49 47.5	
KSRS	**Korea Array** 0.3nm,0.3s,baz=148,slow=15,SNR=4.5 0.5nm,0.3s	**6.02**	**328**	Pn	**Pn**	**13 50 40.7**	**+0.3**
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=235,slow=13,SNR=4.5	**6.67**	**50**	Pn	**Pn**	**13 50 51.7**	**+2.4**
MJAR	0.1nm,0.3s,baz=241,slow=28,SNR=4.4 0.3nm,0.3s			Sn	**Sn**	**13 51 58.0**	**-6.7**
SONM	**Songino Array** 0.8nm,0.9s,baz=133,slow=11,SNR=3.9 0.8nm,0.9s	**24.71**	**316**	P	**P**	**13 54 35.5**	**+3.1**
H11N2	**WAKE ISLAND Hy** baz=300	**33.73**	**103**	T	T	14 31 43.3	
H11N1	**WAKE ISLAND Hy** baz=300	**33.73**	**103**	T	T	14 31 41.6	
H11N3	**WAKE ISLAND Hy** baz=300	**33.74**	**103**	T	T	14 31 43.9	
H11S3	**WAKE ISLAND Hy** baz=301,slow=75,SNR=6.1	**34.17**	**105**	T	T	14 32 10.9	
H11S1	**WAKE ISLAND Hy** baz=301,slow=75,SNR=5.5	**34.17**	**105**	T	T	14 32 14.3	
H11S2	**WAKE ISLAND Hy** baz=301,slow=75,SNR=6.3	**34.18**	**105**	T	T	14 32 14.3	

*IDC **27** 13:57:52.4±1.2,30°.48N×95°.03E,h0km,mb3.7/5, mbtmp3.5/8,ML3.5/3,Error ellipse: s-maj=52.8km s-min=21.6km az=64.0*

ISC 27 13:57:55.7±0.9,30°.4N±0°.1×95°.0E±0°.3,h23km,n8,σ1$19/8, mb3.5/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=336,slow=13,SNR=4.1 0.4nm,0.8s	**12.45**	**162**	Pn	**Pn**	**14 00 51.0**	**-0.5**
MKAR	**Makanchi Array** baz=129,slow=11,SNR=1.7 0.7nm,0.9s	**19.08**	**332**	P	**P**	**14 02 14.8**	**-1.8**
SONM	**Songino Array** 0.5nm,0.3s,baz=213,slow=11,SNR=7.1 0.2nm,0.5s	**19.44**	**24**	P	**P**	**14 02 20.6**	**0.0**
KURBB	**Kurchatov Arra** 0.3nm,0.2s,baz=139,slow=11,SNR=7.1 0.3nm,0.2s	**23.64**	**333**	P	**P**	**14 03 04.3**	**-0.7**
ZALV	**Zalesovo Beam** 1.0nm,0.8s,baz=152,slow=10,SNR=4.6 1.0nm,0.8s	**24.63**	**345**	P	**P**	**14 03 13.7**	**-0.5**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=78,slow=7.0,SNR=1.5 0.2nm,0.3s	**52.11**	**313**	P	**P**	**14 07 03.7**	**-0.1**
ASAR	**Alice Springs** 0.7nm,0.9s,baz=330,slow=7.2,SNR=4.4 0.7nm,0.9s	**65.47**	**141**	P	**P**	**14 08 37.3**	**+0.2**
EKA	**Eskdalemuir Ar** 4.2nm,0.9s,baz=34,slow=6.1,SNR=3.5 4.2nm,0.9s	**69.91**	**323**	P	**P**	**14 09 06.3**	**+1.7**

WEL 27 14:01:44.0±1.2,40°S±3°×177°E±°,h28km±9km,M1.0/5, ML1.1/6,MLv1.0/5,Error ellipse: s-maj=4.5km s-min=4.2km az=9.4,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVHZ	**Dannevirke**	**0.09**	**310**	P	Pb	14 01 50.1	+1.1
DVHZ				S	Sb	14 01 54.5	+2.0
ANWZ	**Angora Road**	**0.20**	**122**	P	Pn	14 01 51.4	+0.3
ANWZ				S	Sb	14 01 56.8	+2.8
PRWZ	**Pori Road**	**0.29**	**228**	P	Pn	14 01 53.0	+0.4
PRWZ				S	Sn	14 01 59.4	+1.4
PRHZ	**Porangahau**	**0.30**	**73**	P	Pn	14 01 53.1	+0.5
PRHZ				S	Sn	14 01 59.2	+1.0
BFZ	**Birch Farm**	**0.32**	**181**	P	Pn	14 01 52.8	-0.1
BFZ				S	Sn	14 01 59.0	+0.3
WPHZ	**Waipukurau**	**0.33**	**26**	P	Pn	14 01 53.0	+0.1
WPHZ				S	Sn	14 01 59.9	+1.1
POWZ	**Post Office Ro**	**0.38**	**265**	P	Pn	14 01 53.9	+0.3
POWZ				S	Sn	14 02 01.1	+1.1
TSZ	**Takapari Road**	**0.38**	**323**	P	Pn	14 01 53.5	-0.2
TSZ				S	Sn	14 02 00.2	+0.2

NOU 27 14:04:22.6,16°.37S×167°.84E,h45km,MLv4.4/16, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.39**	**166**	P	Pn	14 04 46.8	+1.3
RTV	**Rentapao**	**1.52**	**159**	P	Pn	14 04 47.8	+0.4
MARNC	**Mare, Loyalty**	**5.09**	**178**	P	Pn	14 05 35.8	-0.5
KOUNC	**Koumac, New Ca**	**5.35**	**219**	P	Pn	14 05 41.4	+1.4
KOUNC	**Koumac, New Ca**	**5.35**	**219**	S	Sn	14 06 40.0	-0.4
YATNC	**Mamie plateau,**	**5.73**	**189**	P	Pn	14 05 45.1	-0.1
NOUC	**Port Laguerre**	**5.88**	**194**	P	Pn	14 05 48.1	+0.8

*AZER **27** 14:10:13.8,40°.94N×50°.00E,h21km,ml2.8*
*DRS **27** 14:10:16.2,40°.79N×49°.65E,h45km*

ISC 27 14:10:14.7±1.0,40°.83N±0°.03×50°.04E±0°.05,h56km±9km, n39,σ2$37/78,1C-3D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDR	**Nardaran**	**0.25**	**189**	P	**Pn**	**14 03 23.3**	**-0.7**
NDR				S	**Sn**	**14 10 29.8**	**-0.9**
GALA	**Gala**	**0.43**	**168**	P	**Pn**	**14 10 26.5**	**+0.9**
GALA				S	**Sn**	**14 10 35.5**	**+2.1**
GOBA	**Gobu**	**0.49**	**209**	P	**Pn**	**14 10 27.0**	**+0.7**
GOBA				S	**Sn**	**14 10 38.0**	**+3.4**
ATGJ	**Altiaghaj**	**0.84**	**273**	P	**Pn**	**14 10 30.7**	**+0.1**
ATGJ				S	**Sn**	**14 10 42.9**	**+0.7**
GBS	**Qobustan**	**0.89**	**251**	P	**Pn**	**14 10 32.4**	**+1.2**
GBS				S	**Sn**	**14 10 46.5**	**+3.2**
SIZA	**Siyzn**	**0.90**	**286**	P	**Pn**	**14 10 32.2**	**+0.9**
SIZA				S	**Sn**	**14 10 44.3**	**+0.6**
PQL	**Pirkuli**	**1.10**	**268**	P	**Pn**	**14 10 35.5**	**+1.4**
PQL				S	**Sn**	**14 10 51.2**	**+2.7**
ALIB	**&Aumlli-Bayram**	**1.18**	**223**	P	**Pn**	**14 10 36.5**	**+1.6**
ALIB				S	**Sn**	**14 10 54.9**	**+4.9**
QUBA	**Quba, Azerbaij**	**1.28**	**295**	P	**Pn**	**14 10 38.2**	**+1.8**
QUBA				S	**Sn**	**14 10 55.4**	**+2.8**
IML	**Ismayilli**	**1.41**	**269**	Pn	**Pn**	**14 10 38.6**	**+0.4**
IML				S	**Sn**	**14 10 56.4**	**+0.6**
XNQ	**Khinaliq**	**1.48**	**284**	Pn	**Pn**	**14 10 39.4**	**+0.1**
XNQ				Sn	**Sn**	**14 11 01.4**	**+3.8**
QSAR	**Qusar**	**1.51**	**298**	Pn	**Pn**	**14 10 40.5**	**+1.1**
QSAR				Sn	**Sn**	**14 11 00.9**	**+2.9**
KSMR	**Kasumkent** 53nm,0.2s	**1.64**	**299**	*e*Pg	**Pn**	**14 10 42.6**	**+1.4**
KSMR	320nm,0.4s			*e*Sg	**Sn**	**14 11 03.6**	**+2.4**
QBL	**Gabala**	**1.67**	**275**	Pn	**Pn**	**14 10 41.9**	**+0.1**
QBL				Sn	**Sn**	**14 11 01.9**	**-0.2**
DRN	**Derbent** 67nm,0.3s	**1.76**	**314**	*e*Pg	**Pn**	**14 10 44.4**	**+1.6**
DRN	262nm,0.3s			*e*Sg	**Sn**	**14 11 06.5**	**+2.4**
AKT	**Akhty** 40nm,0.6s	**1.86**	**291**	*e*Pg	**Pn**	**14 10 44.9**	**+0.6**
AKT	118nm,0.3s			*e*Sg	**Sn**	**14 11 07.3**	**+0.5**
GLBA	**Clilabad**	**2.03**	**219**	Pn	**Pn**	**14 10 49.6**	**+3.2**
GLBA				Sn	**Sn**	**14 11 16.3**	**+5.6**
SEKA	**Sheki**	**2.18**	**281**	Pn	**Pn**	**14 10 48.9**	**+0.2**
SEKA				Sn	**Sn**	**14 11 14.9**	**+0.3**
SGKR	**Sergokala** 14nm,0.1s	**2.42**	**313**	*e*Pg	**Pn**	**14 10 53.6**	**+1.8**
SGKR	170nm,0.4s			*e*Sg	**Sn**	**14 11 22.9**	**+2.6**
ASTR	**Astara**	**2.46**	**203**	Pn	**Pn**	**14 10 56.6**	**+4.2**
ASTR				Sn	**Sn**	**14 11 19.2**	**-2.1**
LRK	**Lerik**	**2.55**	**212**	Pn	**Pn**	**14 10 55.6**	**+1.8**
LRK				Sn	**Sn**	**14 11 25.2**	**+1.6**
KMKR	**Kumukh** 40nm,0.1s	**2.56**	**301**	*e*Pn	**Pn**	**14 10 55.9**	**+1.9**
KMKR	72nm,0.6s			*e*Sn	**Sn**	**14 11 27.1**	**+3.0**
ZKTA	**Zakatala**	**2.70**	**289**	Pn	**Pn**	**14 10 56.1**	**+0.4**
ZKTA				Sn	**Sn**	**14 11 27.9**	**+0.7**
VSHL	**Vashlovani**	**2.78**	**279**	P	**Pn**	**14 10 57.6**	**+0.8**
VSHL				S	**Sn**	**14 11 29.2**	**0.0**
GNBR	**Gunib** 24nm,0.6s	**2.78**	**305**	*e*Pn	**Pn**	**14 10 58.8**	**+2.0**
GNBR	71nm,0.5s			*e*Sn	**Sn**	**14 11 32.7**	**+3.4**
GANJ	**Ganja**	**2.83**	**268**	Pn	**Pn**	**14 10 56.1**	**-1.4**
GANJ				Sn	**Sn**	**14 11 27.1**	**-3.3**
ARKR	**Arakani** 6.0nm,0.5s	**2.89**	**309**	*e*Pn	**Pn**	**14 10 59.9**	**+1.6**
ARKR	35nm,0.5s			*e*Sn	**Sn**	**14 11 34.3**	**+2.5**
LGD	**Lagodekhi**	**3.03**	**291**	P	**Pn**	**14 11 01.5**	**+1.3**
LGD				S	**Sn**	**14 11 35.8**	**+0.5**
TLTR	**Tlyarata** 4.0nm,0.2s	**3.05**	**296**	*e*Pn	**Pn**	**14 11 01.9**	**+1.3**
TLTR	13nm,0.4s			*e*Sn	**Sn**	**14 11 38.4**	**+2.4**
UNCR	**Uncukul** 11nm,0.2s	**3.07**	**309**	*e*Pn	**Pn**	**14 11 03.4**	**+2.6**
UNCR	28nm,0.3s			*e*Sn	**Sn**	**14 11 40.3**	**+3.9**
KRNR	**Karanay** 8.0nm,0.7s	**3.08**	**311**	*e*Pn	**Pn**	**14 11 03.6**	**+2.7**
KRNR	24nm,0.3s			*e*Sn	**Sn**	**14 11 40.9**	**+4.4**
DBC	**Dubki** 8.0nm,0.2s	**3.25**	**313**	*e*Pn	**Pn**	**14 11 05.4**	**+2.2**
DBC	39nm,0.2s			*e*Sn	**Sn**	**14 11 43.9**	**+3.2**
GDB	**GEDABAY**	**3.26**	**269**	Pn	**Pn**	**14 11 02.1**	**-1.4**
GDB				Sn	**Sn**	**14 11 37.2**	**-3.9**
QZX	**Qazax, Azerbai**	**3.54**	**275**	Pn	**Pn**	**14 11 06.4**	**-0.9**
QZX				Sn	**Sn**	**14 11 45.0**	**-2.9**
DGRG	**David-gareji**	**3.58**	**282**	P	**Pn**	**14 11 08.2**	**+0.5**
DGRG				S	**Sn**	**14 11 49.0**	**+0.2**
ORD	**Ordubad**	**3.65**	**240**	Pn	**Pn**	**14 11 08.6**	**-0.1**
ORD				Sn	**Sn**	**14 11 48.5**	**-2.1**
CHRG	**Chargali**	**4.12**	**293**	P	**Pn**	**14 11 15.3**	**+0.1**
CHRG				S	**Sn**	**14 12 01.8**	**-0.4**
AB31	**Akbulak array** 0.1nm,0.2s,baz=230,slow=12,SNR=8.8	**10.95**	**36**	⇓P	**Pn**	**14 12 49.1**	**+0.6**
AB31	0.3nm,0.3s,baz=219,slow=22,SNR=3.9			⇑S	**Sn**	**14 14 45.7**	**-3.6**
AKTO	**Aktyubinsk** 1.4nm,1.2s	**11.10**	**27**	⇓P	**Pn**	**14 12 50.1**	**-0.5**
AKTO	1.6nm,0.9s			⇓S	**Sn**	**14 14 46.3**	**-6.8**

*IDC **27** 14:12:53.4±0.7,21°.68N×121°.15E,h0km,mb3.8/15, mbtmp3.8/16,ML3.6/1,MS3.5/16,Error ellipse: s-maj=26.9km s-min=14.5km az=67.0*
*NIED **27** 14:12:55.9,21°.85N×121°.11E,h19km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.15; Mθθ-2.26; Mφφ1.12; Mrθ-0.47; Mrφ-1.69; Mθφ-1.14; Fault plane solution: M₀2.80000×10¹⁵ NP1: φs108.00000°,δ56.00000°,λ161.00000°. NP2: φs210.00000°,δ74.00000°,λ36.00000°.*
*NEIC **27** 14:12:55.6±1.7,21°.82N±0°.05×121°.17E±0°.03,h10km±1km, mb4.5/30 Error ellipse: s-maj=9.3km s-min=4.9km az=195.0*
*TAP **27** 14:12:55.8,21°.77N×121°.10E,h14km,ML4.1,D*
*JMA **27** 14:12:55.9±0.6,22°N±2°×12°1E±°,h19km±3km,MV4.5/17, TAIWAN REGION*

ISC 27 14:12:55.2±1.3,21°.78N±0°.03×121°.16E±0°.03,h13km±8km, n176,σ1$11/187,mb4.3/29,MS3.5/15,7C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.27**	**296**	⇓*iP*	**Pb**	**14 13 02.3**	**+0.4**
TSEB				*i* S	**Sb**	**14 13 07.5**	**+1.1**
TWKBT	**Hengchun**	**0.36**	**296**	⇓P	**Pb**	**14 13 03.2**	**-0.3**
TWKBT				S	**Sb**	**14 13 08.6**	**-0.5**
TWK1	**Hengchun**	**0.37**	**296**	⇓*i*P	**Pg**	**14 13 03.2**	**+0.5**
TWK1				*i* S	**Sb**	**14 13 08.6**	**-0.6**
SMST	**Manzhou Townsh**	**0.38**	**309**	⇓P	**Pb**	**14 13 04.0**	**+0.2**
SMST				*e*S	**Sb**	**14 13 10.1**	**+0.4**
LAY	**Lan-yu**	**0.45**	**55**	*e*P	**Pn**	**14 13 07.2**	**-0.1**
HEN	**Hengchun**	**0.45**	**300**	*i* P	**Pb**	**14 13 05.0**	**0.0**
HEN				*e*S	**Sb**	**14 13 12.3**	**+0.6**
LYUB	**Lan-yu**	**0.45**	**61**	P	**Pn**	**14 13 07.0**	**-0.4**
LYUB				S	**Sn**	**14 13 14.7**	**-0.6**
TAW	**Tawu**	**0.62**	**337**	⇑*i*P	**Pb**	**14 13 08.5**	**+0.5**
TAW				*i* S	**Sn**	**14 13 17.9**	**-1.7**
EAST	**Anshuo**	**0.67**	**334**	⇑P	**Pb**	**14 13 09.1**	**+0.4**
EAST				S	**Sn**	**14 13 19.6**	**-1.1**
SCZT	**Fangliau**	**0.77**	**320**	⇑P	**Pb**	**14 13 11.3**	**-0.5**
SCZT				S	**Sn**	**14 13 22.5**	**-0.8**
ECL	**Taimali**	**0.83**	**347**	⇑*i*P	**Pg**	**14 13 10.9**	**-0.5**
ECL				*i* S	**Sb**	**14 13 22.5**	**-0.2**
SSPT	**Xinbi**	**0.89**	**322**	⇑P	**Pn**	**14 13 13.9**	**+0.5**
WLCH	**Liuqiu**	**0.92**	**308**	P	**Pn**	**14 13 14.8**	**+1.0**
TWP	**Hsiaoliuchiu**	**0.93**	**307**	⇑*i*P	**Pn**	**14 13 14.7**	**+0.8**
MASBT	**Mashibuluo**	**0.96**	**330**	⇑P	**Pn**	**14 13 14.0**	**-0.4**
MASBT				S	**Sn**	**14 13 29.4**	**+1.5**
TWGBT	**Beinan**	**1.03**	**356**	P	**Pb**	**14 13 13.6**	**-1.4**
TWGBT	**Beinan**	**1.03**	**356**	*e*P	**Pb**	**14 13 13.9**	**-1.1**
TWG	**Pinlang**	**1.04**	**356**		**Pb**	**14 13 13.7**	**-1.4**
TWG	**Pinlang**	**1.04**	**356**	*e*P	**Pb**	**14 13 13.8**	**-1.2**
SGLT	**Jiouru**	**1.12**	**327**	*i* P	**Pg**	**14 13 20.1**	**+3.2**
TWM1	**Shoushan**	**1.24**	**327**	P	**Pg**	**14 13 21.4**	**+2.3**
SLGT	**Liugui**	**1.30**	**339**	*e*P	**Pg**	**14 13 20.1**	**-0.1**
ECS	**Chishang**	**1.31**	**2**	*e*P	**Pn**	**14 13 18.7**	**-0.5**
ECS				*e*S	**Sg**	**14 13 36.6**	**-0.9**
CHKT	**Chengkung**	**1.33**	**8**	*i* P	**Pn**	**14 13 18.9**	**-0.5**
CHKT				*i* S	**Sb**	**14 13 36.1**	**-0.7**
EHD	**Haiduan**	**1.36**	**2**	*e*P	**Pn**	**14 13 18.8**	**-1.2**
EHD				*e*S	**Sb**	**14 13 36.5**	**-1.4**
SGST	**Jiashian**	**1.40**	**338**	*e*P	**Pb**	**14 13 20.8**	**-0.5**
ELDTW	**Lidau**	**1.41**	**355**	*e*P	**Pn**	**14 13 20.1**	**-0.6**
FULB	**Fuli**	**1.42**	**5**	P	**Pn**	**14 13 20.6**	**-0.1**
FULB				S	**Sg**	**14 13 40.4**	**-0.5**
CHKH	**Chenggong**	**1.42**	**9**	*e*P	**Pn**	**14 13 20.5**	**-0.2**
CHKH				*e*S	**Sn**	**14 13 38.7**	**-0.6**
STYH	**Taoyuan**	**1.43**	**346**	*e*P	**Pb**	**14 13 22.0**	**+0.3**
CHN1	**Nanshi**	**1.51**	**337**	*e*P	**Pb**	**14 13 23.1**	**-0.1**
WTP	**Ta-pu**	**1.54**	**341**	*e*P	**Pb**	**14 13 23.5**	**-0.2**
ECBN	**Changbin**	**1.55**	**10**	*e*P	**Pn**	**14 13 22.6**	**+0.1**
ECBN				*e*S	**Sb**	**14 13 43.7**	**+0.3**
TPUB	**Ta-pu**	**1.59**	**342**	P	**Pb**	**14 13 23.9**	**-0.6**
TPUB	**Ta-pu**	**1.59**	**342**		**Pn**	**14 13 22.5**	**-0.6**
TPUB	**Ta-pu**	**1.59**	**342**	*e*P	**Pb**	**14 13 24.6**	**+0.1**
TWK	**Hsinying**	**1.60**	**337**	*e*P	**Pb**	**14 13 24.1**	**-0.6**
YULB	**Yu-li**	**1.61**	**5**	P	**Pn**	**14 13 22.4**	**-0.9**
YULB	**Yu-li**	**1.61**	**5**		**Pn**	**14 13 21.9**	**-1.4**
YULB	**Yu-li**	**1.61**	**5**	*e*P	**Pn**	**14 13 22.1**	**-1.2**
CHN4	**Tsaushan**	**1.65**	**342**	*e*P	**Pb**	**14 13 25.4**	**-0.1**
EHYH	**Wanrong**	**1.71**	**6**	*e*P	**Pn**	**14 13 24.9**	**+0.1**
HGSD	**Ruisui**	**1.72**	**8**	*e*P	**Pb**	**14 13 26.5**	**-0.2**
WCKO	**Fanlu**	**1.73**	**343**	*e*P	**Pb**	**14 13 26.4**	**-0.5**
ALS	**Alishan**	**1.75**	**349**	*e*P	**Pb**	**14 13 27.2**	**-0.3**
CHY	**Chiayi**	**1.84**	**338**	*e*P	**Pb**	**14 13 27.6**	**-1.2**
CHN5	**Tsauling**	**1.86**	**346**	*e*P	**Pb**	**14 13 28.3**	**-0.8**
WHYT	**Xinyi Township**	**1.93**	**352**	*e*P	**Pb**	**14 13 29.9**	**-0.4**
WSL	**Shuilin Townsh**	**1.94**	**334**	*e*P	**Pn**	**14 13 28.3**	**+0.5**
WARBT	**Fenglin Townsh**	**1.94**	**6**	*e*P	**Pn**	**14 13 28.8**	**+0.9**
VWDT	**VWDT**	**1.96**	**360**	*e*P	**Pn**	**14 13 29.2**	**+1.0**
WDLH	**Douliu**	**1.98**	**343**	*e*P	**Pn**	**14 13 29.6**	**+1.2**
SSLB	**Suanglung**	**2.01**	**355**	P	**Pn**	**14 13 31.0**	**-0.6**
SSLB	**Suanglung**	**2.01**	**355**		**Pn**	**14 13 29.4**	**+0.5**
SSLB	**Suanglung**	**2.01**	**355**	*e*P	**Pb**	**14 13 30.9**	**-0.6**
WDGT	**Dungji**	**2.02**	**317**	*e*P	**Pn**	**14 13 27.9**	**-1.1**
SHUL	**Shoufeng**	**2.03**	**10**	*e*P	**Pn**	**14 13 30.4**	**+1.3**
SHUL				*e*S	**Sb**	**14 13 55.9**	**-1.3**
WSF	**Szhu**	**2.04**	**335**	*e*S	**Sb**	**14 13 56.3**	**-1.1**
SMLT	**Sun Moon Lake**	**2.11**	**354**	*i* P	**Pb**	**14 13 32.4**	**-0.9**
TYC	**Yuchr**	**2.13**	**353**	*e*P	**Pb**	**14 13 32.8**	**-0.9**
WNT	**Mingjian**	**2.13**	**348**	*e*P	**Pb**	**14 13 32.0**	**-1.7**
OWD	**Renai**	**2.16**	**0**	*e*P	**Pn**	**14 13 31.8**	**+0.7**
WUSB	**Renai**	**2.20**	**359**	*i* P	**Pn**	**14 13 32.8**	**+1.2**
WUSB				S	**Sb**	**14 13 59.9**	**-2.3**
LXIB	**Xiulin Townshi**	**2.24**	**6**	*e*P	**Pn**	**14 13 33.4**	**+1.2**
PHUB	**P'eng-hu**	**2.26**	**320**	*e*P	**Pn**	**14 13 31.2**	**-1.1**
WCS	**Beigang Elemen**	**2.28**	**354**	*e*P	**Pb**	**14 13 34.5**	**-1.7**
PNG	**Penghu**	**2.31**	**320**	*e*S	**Sn**	**14 13 59.9**	**-1.5**
WHF	**Hehuan Shan**	**2.35**	**2**	*e*P	**Pn**	**14 13 35.2**	**+1.2**
NACB	**Ninganchiao**	**2.42**	**9**	P	**Pn**	**14 13 35.2**	**+0.8**
NACB	**Ninganchiao**	**2.42**	**9**	S	**Sb**	**14 14 06.9**	**-1.3**
NACB	**Ninganchiao**	**2.42**	**9**		**Pn**	**14 13 34.2**	**-0.2**
NACB	**Ninganchiao**	**2.42**	**9**	*e*P	**Pn**	**14 13 34.9**	**+0.5**
ETLH	**Xiulin Townshi**	**2.43**	**7**	*e*P	**Pn**	**14 13 35.2**	**+0.5**
TDCB	**Techi**	**2.46**	**360**	*e*P	**Pn**	**14 13 36.6**	**+1.4**
WHP	**Taichung City**	**2.49**	**356**	*e*P	**Pb**	**14 13 37.8**	**-2.1**
EOS4	**EOS4**	**2.56**	**24**	*e*S	**Sb**	**14 14 09.7**	**-2.4**
NNSB	**Datong**	**2.64**	**4**	*e*P	**Pn**	**14 13 39.9**	**+2.2**
NNS	**Nan Shan**	**2.65**	**4**	P	**Pn**	**14 13 39.8**	**+2.0**
LATG	**Datong**	**2.76**	**7**	*e*P	**Pn**	**14 13 41.5**	**+2.2**
NFF	**Wufeng Townshi**	**2.84**	**359**	*e*P	**Pb**	**14 13 43.7**	**-2.1**
YHNB	**Yeheng**	**2.88**	**4**	P	**Pn**	**14 13 42.2**	**+1.3**
YHNB	**Yeheng**	**2.88**	**4**		**Pn**	**14 13 41.2**	**+0.3**
JYNG	**Yonagunijimaku**	**3.12**	**31**	*e*S	**Sn**	**14 14 22.1**	**+0.7**
YOJ	**Yonaguni jima**	**3.17**	**32**	P	**Pn**	**14 13 46.8**	**+2.1**
YOJ	**Yonaguni jima**	**3.17**	**32**	*e*P	**Pn**	**14 13 47.8**	**+3.1**
YOJ				*e*S	**Sn**	**14 14 25.4**	**+3.0**
YOJ	**Yonaguni jima**	**3.17**	**32**	*e*S	**Sn**	**14 14 23.6**	**+1.2**
TATO	**Taipei**	**3.19**	**5**	P	**Pn**	**14 13 46.1**	**+1.0**
TATO	**Taipei**	**3.19**	**5**		**Pn**	**14 13 45.2**	**+0.1**
HATJ	**Hateruma jima**	**3.33**	**47**	*e*S	**Sn**	**14 14 26.9**	**+0.5**
IRIF	**Iriomote-Funau**	**3.47**	**42**	*e*P	**Pn**	**14 13 50.7**	**+1.7**
IRIF				*e*S	**Sn**	**14 14 30.5**	**+0.6**
VWUC	**VWUC**	**3.56**	**334**	*e*P	**Pn**	**14 13 50.9**	**+0.8**
VWUC				*i* S	**Sn**	**14 14 32.8**	**+0.7**
JKRS	**Kuro-shima**	**3.59**	**46**	P	**Pn**	**14 13 52.4**	**+1.9**
JKRS				*e*S	**Sn**	**14 14 33.4**	**+0.7**
KNMB	**Chin-men Tao**	**3.69**	**317**	Pn	**Pn**	**14 13 51.4**	**-0.6**
KNMB	**Chin-men Tao**	**3.69**	**317**	*i* P	**Pn**	**14 13 51.6**	**-0.4**
PTMZ	**Houxiangcun**	**3.75**	**330**	*e*P	**Pn**	**14 13 54.0**	**+1.3**
JIJ	**Ishigaki jima**	**3.76**	**46**	*e*P	**Pn**	**14 13 54.6**	**+1.7**
JIJ				*e*S	**Sn**	**14 14 36.7**	**-0.4**
SIPP	**Brgy, Tapao**	**3.90**	**190**	*e*P	**Pg**	**14 14 09.5**	**-0.4**
SIPP				*e*S	**Sn**	**14 14 39.9**	**-0.5**
DSXP	**Dongshan**	**3.94**	**300**	P	**Pn**	**14 13 55.1**	**-0.4**
JISG	**Ishigakijimahi**	**4.03**	**45**	*e*P	**Pn**	**14 13 58.1**	**+1.5**
JISG				*e*S	**Sn**	**14 14 44.0**	**+0.4**
JTJ	**Tarama**	**4.33**	**48**	*e*P	**Pn**	**14 14 02.9**	**+2.2**
JTJ				*e*S	**Sn**	**14 14 52.7**	**+1.7**
MATB	**Ma-tsu**	**4.49**	**346**	*e*P	**Pn**	**14 14 03.2**	**+0.3**
MATB				S	**Sn**	**14 14 53.0**	**-2.0**
JIRJ	**Irabujima**	**4.79**	**50**	*e*P	**Pn**	**14 14 09.2**	**+2.0**
JIRJ				*e*S	**Sn

KURK	**Kurchatov**	**43.93**	**322**	P		**P**		**14 21 02.2**	**+0.5**
KURBB	**Kurchatov Arra**	**43.95**	**322**	P		**P**		**14 21 02.7**	**+0.9**
	comp=Z,1.8nm,0.2s,baz=120,slow=7.5,SNR=6.6 comp=Z,1.8nm,0.2s								
AAK	**Ala-Archa**	**43.97**	**309**	LR		LR		14 42 23.2	
	comp=Z,97nm,18.7s,baz=160,slow=40								
AS31	**Alice Springs**	**46.84**	**164**	P		**P**		**14 21 24.5**	**-0.6**
ASAR	**Alice Springs**	**46.85**	**164**	P		**P**		**14 21 24.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=343,slow=7.1,SNR=30								
ASAR				PcP		**PcP**		**14 22 57.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=346,slow=2.5,SNR=2.7 comp=Z,0.4nm,0.3s								
CTA	**Charters Tower**	**48.30**	**148**	LR		LR		14 42 24.4	
	comp=Z,73nm,18.0s,baz=242,slow=37								
BVAR	**Borovoye Array**	**49.53**	**322**	P		**P**		**14 21 46.8**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=107,slow=8.0,SNR=5.8								
BVAR				PcP		**PcP**		**14 23 07.5**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=101,slow=4.3,SNR=2.7 comp=Z,0.9nm,0.5s								
TIXI	**Tiksi**	**50.08**	**3**	P		**P**		**14 21 49.8**	**+0.4**
TIXI				IAmb		IAmb		14 22 32.4	
	comp=Z,4.0nm,0.9s								
ABKAR	**Akbulak array**	**55.12**	**316**	P		**P**		**14 22 26.1**	**-1.0**
BBOO	**Buckleboo**	**56.12**	**165**	P		**P**		**14 22 33.1**	**-1.2**
STKA	**Stephens Creek**	**56.83**	**159**	P		**P**		**14 22 39.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=347,slow=3.3,SNR=3.3 comp=Z,1.5nm,0.7s								
ARTI	**Arti**	**57.11**	**324**	P		**P**		**14 22 41.5**	**+0.4**
ARTI				IAmb		IAmb		14 22 42.0	
	comp=Z,5.3nm,0.7s								
M16K	**Timber Creek**	**66.31**	**32**	P		**P**		**14 23 43.8**	**+0.6**
H19K	**Roundabout Mou**	**67.25**	**27**	P		**P**		**14 23 50.3**	**+1.2**
H19K				IAmb		IAmb		14 23 56.0	
	comp=Z,5.0nm,1.2s								
J20K	**Nowinta River**	**68.33**	**28**	P		**P**		**14 23 57.0**	**+1.1**
J20K				IAmb		IAmb		14 24 32.5	
	comp=Z,6.6nm,1.4s								
K20K	**Telida**	**68.44**	**29**	P		**P**		**14 23 57.8**	**+1.1**
K20K				IAmb		IAmb		14 24 06.1	
	comp=Z,6.2nm,1.4s								
CAST	**Castle Rocks**	**69.32**	**29**	P		**P**		**14 24 02.8**	**+0.7**
CAST				IAmb		IAmb		14 24 12.0	
	comp=Z,6.1nm,1.5s								
KDAK	**Kodiak Island**	**69.88**	**35**	P		**P**		**14 24 06.0**	**+0.4**
E24K	**Your Creek**	**70.14**	**24**	P		**P**		**14 24 07.8**	**+0.7**
E24K				IAmb		IAmb		14 24 08.6	
	comp=Z,4.5nm,1.2s								
CCB	**Clear Creek Bu**	**70.99**	**27**	P		**P**		**14 24 13.2**	**+0.9**
ILAR	**Eielson Array**	**71.35**	**27**	P		**P**		**14 24 16.5**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=284,slow=5.0,SNR=2.8 comp=Z,0.3nm,0.5s								
ARCES	**ARCESS Array B**	**71.75**	**338**	P		**P**		**14 24 17.8**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=70,slow=6.3,SNR=2.4 comp=Z,0.8nm,0.6s								
ARCES	**ARCESS Array B**	**71.75**	**338**	P		**P**		**14 24 17.8**	**+1.0**
ARCES				IAmb		IAmb		14 24 22.1	
	comp=Z,7.0nm,1.3s								
SCM	**Sheep Creek Mo**	**71.75**	**30**	P		**P**		**14 24 17.8**	**+0.7**
FINES	**FINESS Array B**	**73.50**	**330**	P		**P**		**14 24 27.9**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=62,slow=4.5,SNR=5.0 comp=Z,1.0nm,0.7s								
FINES	**FINESS Array B**	**73.50**	**330**	P		**P**		**14 24 28.0**	**+0.6**
G29M	**Pine Creek**	**74.32**	**24**	P		**P**		**14 24 32.6**	**+0.4**
G29M				IAmb		IAmb		14 24 39.5	
	comp=Z,5.0nm,1.4s								
BRTR	**Keskin Array B**	**74.58**	**307**	P		**P**		**14 24 34.9**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=72,slow=5.7,SNR=2.9 comp=Z,0.6nm,0.6s								
BRTR	**Keskin Array B**	**74.58**	**307**	P		**P**		**14 24 34.5**	**+0.1**
INK	**Inuvik**	**75.45**	**22**	P		**P**		**14 24 37.4**	**-1.2**
DAH	**Dandelion**	**76.95**	**74**	P		**P**		**14 24 47.0**	**-1.5**
SKAG	**Skagway**	**78.09**	**30**	P		**P**		**14 24 54.5**	**+0.9**
HFS	**Hagfors**	**79.64**	**331**	P		**P**		**14 25 01.8**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=70,slow=5.7,SNR=2.0 comp=Z,1.0nm,0.6s								
Q32M	**Nakina River**	**79.74**	**30**	P		**P**		**14 25 03.3**	**+0.3**
Q32M				IAmb		IAmb		14 25 25.8	
	comp=Z,8.8nm,1.4s								
NOA	**NORSAR Array B**	**80.33**	**332**	LR		LR		15 04 37.4	
	comp=Z,54nm,18.6s,baz=80,slow=39								
JMIC	**Jan Mayen**	**81.14**	**345**	LR		LR		15 04 53.3	
	comp=Z,26nm,19.7s,baz=18,slow=38								
YKA	**Yellowknife Ar**	**85.18**	**23**	LR		LR		15 06 15.9	
	comp=Z,14nm,19.3s,baz=310,slow=38								
DAVOX	**Davos/Dischmat**	**87.93**	**320**	LR		LR		15 06 45.9	
	comp=Z,21nm,18.1s,baz=80,slow=37								

*PRE **27** 14:35:06.2±1.0, 25.°78S×30.°25E, h0km, ML2.0, Suspected explosion*
*IDC **27** 14:35:18.7±8.3, 25.°66S×28.°88E, h0km, mbtmp2.8/1, ML2.0/1, Error ellipse: s-maj=91.1km s-min=56.8km az=137.0*
ISC 27 14:35:05.8±0.9, **25.°80S**±0.°03×**30.°25E**±0.°04, **h0**km, **n13, σ1≠26/22, South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRLN	**Carolina, Mapu**	**0.28**	**227**	*eP*			**Pg**	**14 35 11.2**	**0.0**
CRLN				*eS*			**Sg**	**14 35 15.2**	**+0.3**
CRLN				IAML				14 35 15.8	
	comp=Z,137nm,1.0s								
PILG	**Pilgrimsrest,**	**0.96**	**26**	*eP*			**Pg**	**14 35 24.0**	**-0.3**
PILG				*eS*			**Sg**	**14 35 37.1**	**+0.4**
PILG				IAML				14 35 48.5	
	comp=Z,44nm,0.7s								
TEMBE	**Tembe Elephant**	**2.31**	**123**	*eP*			**Pn**	**14 35 46.2**	**+1.1**
TEMBE				*eS*			**Sb**	**14 36 16.5**	**-1.0**
TEMBE				IAML				14 36 25.6	
	comp=Z,34nm,0.5s								
MOPA	**Mopani**	**2.50**	**25**	*eP*			**Pn**	**14 35 48.7**	**+0.9**
MOPA				*eS*			**Sn**	**14 36 18.9**	**-0.2**
MOPA				IAML				14 36 25.3	
	comp=Z,19nm,0.7s								
LEPH	**Lephalale, Lim**	**2.95**	**310**	*eP*			**Pn**	**14 35 55.2**	**+1.1**
LEPH				*eS*			**Sn**	**14 36 31.2**	**+0.9**
LEPH				IAML				14 36 32.3	
	comp=Z,12nm,0.4s								
MUSN	**Musina, Limpop**	**3.52**	**354**	*eP*			**Pn**	**14 36 03.0**	**+1.2**
MUSN				*eS*			**Sn**	**14 36 44.7**	**+0.5**
MUSN				IAML				14 36 56.1	
	comp=Z,6.5nm,0.4s								
PMBG	**Pietermaritzbu**	**3.70**	**177**	*eP*			**Pn**	**14 36 06.3**	**+2.0**
PMBG				*eS*			**Sn**	**14 36 49.4**	**+0.6**
PMBG				IAML				14 37 00.4	
	comp=Z,7.5nm,0.5s								
LBTB	**Lobatse**	**4.28**	**280**	*eP*			**Pn**	**14 36 13.7**	**+1.3**
LBTB				*eS*			**Sn**	**14 37 02.9**	**-0.2**
LBTB				IAML				14 37 19.9	
	comp=Z,4.2nm,0.5s								
KSTD	**Kokstad**	**4.87**	**190**	*eP*			**Pn**	**14 36 22.6**	**+2.1**
KSTD				*eS*			**Sn**	**14 37 17.1**	**-0.6**
KSTD				IAML				14 37 38.3	
	comp=Z,2.3nm,0.5s								
BOSA	**Boshof**	**5.25**	**237**	Pn			**Pn**	**14 36 27.4**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=1.7								
BOSA				Pg			**Pb**	**14 36 36.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=55,slow=16,SNR=1.7								
BOSA				Lg			Lg	14 37 38.3	
	comp=Z,0.6nm,0.3s,baz=156,slow=21,SNR=7.0 comp=Z,1.9nm,0.9s								
BOSA	**Boshof**	**5.25**	**237**	*eP*			**Pn**	**14 36 27.4**	**+1.7**
BOSA				*eS*			**Sn**	**14 37 25.9**	**-1.3**
BOSA				IAML				14 37 46.0	
	comp=Z,1.8nm,0.5s								
I47ZA	**BOSHOF INFRASO**	**5.28**	**237**	I			I	15 02 40.0	
	baz=46,slow=326,SNR=0.5								
I35NA	**TSUMEB INFRASO**	**13.43**	**297**	I			I	15 54 10.0	
	baz=126,slow=334,SNR=1.3								

*IDC **27** 15:17:37.9±3.5, 10.°12N×125.°71E, h0km, mb3.2/3, mbtmp3.2/3, MS3.4/1, Error ellipse: s-maj=283.6km s-min=29.9km az=65.0*
*MAN **27** 15:17:43.0, 10.°31N×126.°09E, h6km, MS3.4*
ISC 27 15:17:39.7±1.9, **10.°14N**±0.°05×**126.°13E**±0.°07, **h8**km±11km, **n18, σ1≠76/27, mb3.2/3, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.73**	**241**	*i* P			**Pn**	**15 17 59.0**	**+2.7**
SCPH				*i* S			**Sg**	**15 18 01.2**	**-1.9**
TSSP	**Tandag City**	**1.09**	**176**	*eP*			**Pn**	**15 18 04.7**	**+3.5**
TSSP				*eS*			**Sn**	**15 18 17.3**	**+0.7**
PLP	**Palo**	**1.52**	**312**	*eP*			**Pn**	**15 18 08.5**	**+1.2**
PLP				*eS*			**Sn**	**15 18 28.1**	**+0.8**
BIPH	**Bislig**	**1.96**	**173**	*eP*			**Pg**	**15 18 17.5**	**+0.3**
BIPH				*i* S			**Sn**	**15 18 38.2**	**+0.4**
LLP	**Lapu-Lapu**	**2.14**	**275**	*eP*			**Pb**	**15 18 18.5**	**-0.2**
LLP				*i* S			**Sg**	**15 18 50.9**	**+2.4**
CGP	**Cagayan de Oro**	**2.19**	**220**	*eP*			**Pb**	**15 18 20.8**	**+1.2**
CGP				*eS*			**Sg**	**15 18 49.4**	**-0.8**
CDOP	**Cateel, Davao**	**2.36**	**173**	*eP*			**Pg**	**15 18 24.1**	**-0.8**
CDOP				*i* S			**Sb**	**15 18 51.4**	**-0.3**
BUKP	**Musuan**	**2.48**	**205**	*i* P			**Pg**	**15 18 27.1**	**-0.2**
BUKP				*i* S			**Sg**	**15 18 59.8**	**+0.3**
LSIP	**Lazi, Siquijor**	**2.66**	**248**	*i* P			**Pb**	**15 18 27.7**	**+0.1**
LSIP				*i* S			**Sn**	**15 18 56.9**	**+1.5**
SNPH	**Sibulan**	**2.96**	**255**	*i* P			**Pb**	**15 18 32.8**	**0.0**
DCPH	**Dipolog City**	**3.15**	**241**	*eP*			**Pb**	**15 18 34.5**	**-1.4**
KCP	**Kidapawan**	**3.28**	**198**	*eP*			**Pb**	**15 18 36.7**	**-1.4**
CTBH	**Cotabato--PC H**	**3.45**	**213**	*i* P			**Pn**	**15 18 33.1**	**-0.6**
GUIM	**Jordan**	**3.52**	**278**	*eP*			**Pn**	**15 18 38.1**	**+3.4**
GUIM				*eS*			**Sn**	**15 19 13.1**	**-3.5**
WRA	**Warramunga Arr**	**30.96**	**165**	P			**P**	**15 23 57.0**	**-0.5**
	0.2nm,0.6s,baz=344,slow=9.5,SNR=1.8 0.2nm,0.6s								
ASAR	**Alice Springs**	**34.45**	**167**	P			**P**	**15 24 28.6**	**+0.6**
	0.2nm,0.5s,baz=352,slow=7.2,SNR=11 0.2nm,0.5s								
CTA	**Charters Tower**	**35.98**	**147**	LR			LR	15 41 05.7	
	comp=Z,54nm,18.6s,baz=217,slow=39								
MKAR	**Makanchi Array**	**52.05**	**323**	P			**P**	**15 26 47.6**	**-2.4**
	0.2nm,0.5s,baz=119,slow=8.4,SNR=1.5 0.2nm,0.5s								

*KRNET **27** 15:32:05.0±0.1, 39.°59N×71.°22E, h16km, mb3.2*
*NNC **27** 15:32:06.8±2.1, 39.°69N×71.°26E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=14.7km s-min=8.7km az=15.0*
*ISU **27** 15:32:07, 39.°60N×71.°32E, h14km*
*SOME **27** 15:32:07.4, 39.°73N×71.°28E, h15km*
ISC 27 15:32:04.7±1.2, **39.°61N**±0.°03×**71.°23E**±0.°02, **h2**km±11km, **n33, σ1≠83/57, 19C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.46**	**106**	*eP*			**Pg**	**15 32 14.2**	**+0.7**
DRK				*eS*			**Sg**	**15 32 20.7**	**+1.3**
BTK	**Batken**	**0.55**	**325**	*eP*			**Pg**	**15 32 15.7**	**+0.4**
BTK				*eS*			**Sg**	**15 32 23.5**	**+1.0**
FRG	**Fergana**	**0.88**	**29**	P			**Pg**	**15 32 22.3**	**+0.8**
FRG				S			**Sg**	**15 32 34.3**	**+1.4**
MINT	**Mingtut**	**0.88**	**347**	P			**Pb**	**15 32 22.0**	**-0.7**
MINT				S			**Sn**	**15 32 35.1**	**-2.5**
GAR	**Garm**	**0.93**	**230**	*eP*			**Pb**	**15 32 22.5**	**-1.2**
GAR				*eS*			**Sg**	**15 32 35.0**	**+0.3**
TSTA	**Tashata**	**1.36**	**44**	P			**Pg**	**15 32 32.8**	**+2.0**
TSTA				S			**Sg**	**15 32 51.0**	**+2.5**
OHH	**Osh**	**1.50**	**52**	*eP*			**Pb**	**15 32 33.1**	**-0.3**
OHH				*eS*			**Sg**	**15 32 54.1**	**+1.1**
KSNS	**Kasansay**	**1.57**	**8**	S			**Sg**	**15 32 59.8**	**+4.7**
SFK	**Sufi-Kurgan**	**1.80**	**76**	*eP*			**Pb**	**15 32 38.3**	**-0.1**
SFK				*eS*			**Sg**	**15 33 02.4**	**0.0**
CHGR	**Chuyangaron**	**1.87**	**240**	*eP*			**Pb**	**15 32 39.0**	**-0.6**
CHGR				*eS*			**Sg**	**15 33 03.7**	**-1.1**
TRKS	**Terek-Say**	**1.92**	**358**	*eP*			**Pb**	**15 32 39.2**	**-1.4**
TRKS				*eS*			**Sb**	**15 33 04.0**	**-1.1**
CHMG	**Chimgan**	**2.15**	**335**	P			**Pg**	**15 32 45.4**	**-0.6**
CHMG				S			**Sg**	**15 33 14.5**	**+0.6**
CHRV	**Charvak**	**2.25**	**335**	S			**Sg**	**15 33 18.1**	**+0.9**
ARK	**Arkit**	**2.26**	**14**	*eP*			**Pb**	**15 32 45.2**	**-1.1**
ARK				*eS*			**Sb**	**15 33 14.4**	**-0.3**
NZBK	**Nazarbek**	**2.28**	**316**	P			**Pg**	**15 32 48.3**	**-0.2**
NZBK				S			**Sg**	**15 33 21.1**	**+3.0**
TVKS	**Tavaksay**	**2.31**	**329**	P			**Pg**	**15 32 47.9**	**-1.0**
TVKS				S			**Sg**	**15 33 19.6**	**+0.8**
SALK	**Salom-Alik**	**2.36**	**56**	*eP*			**Pb**	**15 32 46.2**	**-1.8**
SALK				*eS*			**Sb**	**15 33 16.2**	**-1.4**
PSK	**Pskem**	**2.41**	**345**	P			**Pg**	**15 32 50.5**	**-0.4**
PSK				S			**Sg**	**15 33 23.7**	**+1.6**
IUG	**Iuzhnay**	**2.70**	**341**	Pg			**Pg**	**15 32 55.5**	**-0.9**
	95nm,0.3s								
IUG				Lg			Lg	15 33 30.5	
	22nm,0.6s								
IUG	**Iuzhnay**	**2.70**	**341**	*eP*			**Pg**	**15 32 55.5**	**-0.9**
	95nm,0.3s								
IUG				*eS*			**Sg**	**15 33 30.1**	**-1.3**
	22nm,0.6s								
MNAS	**Manas**	**3.04**	**18**	*eP*			**Pn**	**15 32 55.7**	**+1.8**
MNAS				*eS*			**Sn**	**15 33 32.5**	**+1.6**
AGL	**Agalyk**	**3.37**	**270**	S			**Sg**	**15 33 54.4**	**+1.6**
MRKS	**Merke**	**3.48**	**25**	Pg			**Pg**	**15 33 09.8**	**-1.5**
	4.0nm,0.2s								
MRKS				Lg			Lg	15 33 54.8	
	19nm,0.3s								
MRKS	**Merke**	**3.48**	**25**	*eP*			**Pg**	**15 33 09.8**	**-1.5**
	4.0nm,0.2s								
MRKS				*eS*			**Sg**	**15 33 54.8**	**-1.7**
	19nm,0.3s								
KK31	**Karatay Array**	**3.54**	**351**	Pn			**Pn**	**15 33 01.4**	**+0.7**
	0.5nm,0.2s,baz=178,slow=13,SNR=4.2								
KK31				Pg			**Pb**	**15 33 09.0**	**+1.0**
	1.8nm,0.2s,baz=174,slow=17,SNR=19								
KK31				Sn			**Sn**	**15 33 45.1**	**+2.1**
	1.2nm,0.4s,baz=155,slow=31,SNR=5.9								
KK31				Lg			Lg	15 33 56.1	
	2.2nm,0.2s,baz=155,slow=31,SNR=5.9								
AAK	**Ala-Archa**	**3.91**	**38**	Pg			**Pb**	**15 33 14.8**	**+0.4**
	0.8nm,0.4s								
AAK				Lg			Lg	15 34 10.4	
	9.6nm,0.9s								
NRN	**Naryn**	**4.07**	**62**	*eP*			**Pn**	**15 33 10.1**	**+1.9**
NRN				*eS*			**Sn**	**15 33 57.1**	**+0.6**
SGDS	**Sogindy**	**4.61**	**32**	Pg			**Pb**	**15 33 29.2**	**+2.8**
	1.4nm,0.2s								
SGDS				Lg			Lg	15 34 27.7	
	7.6nm,0.7s								
KST	**Kastek**	**4.95**	**45**	Pg			**Pg**	**15 33 37.2**	**-2.3**
	1.2nm,0.3s								
KST				Lg			Lg	15 34 41.3	
	4.2nm,0.8s								
KST	**Kastek**	**4.95**	**45**	*eP*			**Pg**	**15 33 37.1**	**-2.3**
	1.2nm,0.3s								
KST				*eS*			**Sg**	**15 34 41.3**	**-2.3**
	4.2nm,0.8s								
MDOK	**Medeo**	**5.64**	**49**	Pg			**Pg**	**15 33 50.1**	**-2.6**
	3.2nm,0.5s								
MDOK				Lg			Lg	15 35 03.3	
	5.9nm,0.5s								
BTLS	**Baital**	**5.82**	**20**	Pg			**Pg**	**15 33 52.5**	**-3.6**
	1.3nm,0.2s								
BTLS				Lg			Lg	15 35 07.4	
	3.6nm,0.2s								
BTLS	**Baital**	**5.82**	**20**	*eP*			**Pg**	**15 33 52.5**	**-3.6**
	1.3nm,0.2s								
BTLS				*eS*			**Sg**	**15 35 07.3**	**-4.2**
	3.6nm,0.2s								

*NEIC **27** 15:33:39.9±1.4, 5.°4S±0.°1×12.°3W±0.°1, h10km±1km, mb4.6/13, Error ellipse: s-maj=25.5km s-min=19.2km az=141.0*
*IDC **27** 15:33:40.8±1.2, 5.°28S×12.°20W, h0km, mb4.0/7, mbtmp4.0/8, ML3.5/1, MS4.0/57, Error ellipse: s-maj=62.1km s-min=21.3km az=131.0*
*GCMT **27** 15:33:47.9±0.2, 5.°44S±0.°02×11.°56W±0.°01, h14km±1km, MW5.0/119, Moment Tensor Solution. s40,c47; s119,c165; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.89±.16; Mθθ0.29±.09; Mϕϕ2.60±.11; Mrθ2.12±.29; Mθϕ-0.45±.06; Mϕr-1.01±.20; Best double couple: M=3.55700×10^16^ NP1=ϕs186.00000°, δ34.00000°, λ-52.00000°. NP2=ϕs322.00000°, δ64.00000°, λ-113.00000°. Principal axes: T 3.0870, Plg16.0000°, Azm69.0000°; N 0.9400, Plg20.0000°, Azm332.0000°; P -4.0260, Plg64.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 15:33:39.9±0.7, **5.°5S**±0.°1×**12.°3W**±0.°1, **h10**km, **n77, σ1≠53/18, mb4.4/11, MS4.1/57, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.23**	**223**	T			T	15 38 31.6	
	baz=54,slow=75,SNR=2197								
H10N1	**ASCENSION HYDR**	**3.23**	**222**	T			T	15 38 37.1	
	baz=54,slow=75,SNR=2064								
H10N3	**ASCENSION HYDR**	**3.24**	**223**	T			T	15 38 32.5	
	baz=54,slow=75,SNR=1907								
H10S2	**ASCENSION HYDR**	**4.20**	**214**	T			T	15 39 37.1	
	baz=44,slow=74,SNR=598								
H10S3	**ASCENSION HYDR**	**4.21**	**214**	T			T	15 39 37.1	
	baz=176,slow=74,SNR=390								
DBIC	**Dimbokro**	**14.14**	**32**	Pn			**Pn**	**15 36 59.5**	**-0.8**
	0.2nm,0.3s,baz=214,slow=14,SNR=3.5								
DBIC				LR			LR	15 41 17.7	
	comp=Z,654nm,20.3s,baz=204,slow=33 6.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**23.11**	**37**	P			**P**	**15 38 45.2**	**-1.1**
	5.2nm,0.5s,baz=214,slow=10,SNR=27 5.2nm,0.5s								
RCBR	**Riachuelo**	**23.51**	**268**	LR			LR	15 45 59.8	
	comp=Z,223nm,20.3s,baz=83,slow=31								
EDA	**Edea**	**24.21**	**68**	P			**P**	**15 38 56.9**	**-0.1**
EDA				IAmb			IAmb	15 38 59.7	
	comp=Z,9.4nm,0.7s								
TSUM	**Tsumeb**	**32.14**	**118**	LR			LR	15 50 07.2	
	comp=Z,642nm,21.6s,baz=330,slow=31								
TSUM	**Tsumeb**	**32.14**	**118**	P			**P**	**15 40 08.0**	**-0.1**
TSUM				IAmb			IAmb	15 40 20.3	
	comp=Z,9.2nm,1.4s								
BDFB	**Brasilia**	**36.50**	**251**	P			P	15 40 49.1	+3.1
	comp=Z,2.8nm,0.5s,baz=167,slow=11,SNR=7.9								
BDFB				LR			LR	15 53 36.6	
	comp=Z,460nm,20.4s,baz=51,slow=33 comp=Z,2.8nm,0.5s								
BDFB	**Brasilia**	**36.50**	**251**	P			**P**	**15 40 45.7**	**-0.2**
MDT	**Midelt**	**38.74**	**10**	LR			LR	15 56 39.9	
	comp=Z,251nm,19.2s,baz=229,slow=36								
SUR	**Sutherland**	**40.88**	**135**	LR			LR	15 53 59.9	
	comp=Z,295nm,19.0s,baz=300,slow=30								
LSZ	**Lusaka**	**40.91**	**107**	LR			LR	15 55 34.7	
	comp=Z,340nm,20.4s,baz=294,slow=32								
LBTB	**Lobatse**	**41.18**	**122**	LR			LR	15 55 57.7	
	comp=Z,226nm,20.2s,baz=286,slow=32								
MDP	**Montagnes des**	**41.65**	**284**	LR			LR	15 55 25.8	
	comp=Z,95nm,21.9s,baz=100,slow=31								
MATP	**Matopo**	**42.28**	**114**	LR			LR	15 56 40.2	
	comp=Z,267nm,19.5s,baz=276,slow=33								
BOSA	**Boshof**	**42.35**	**127**	LR			LR	15 55 39.3	
	comp=Z,200nm,20.1s,baz=312,slow=31								
MBAR	**Mbara**	**43.21**	**85**	LR			LR	15 57 31.8	
	comp=Z,914nm,21.1s,baz=256,slow=33								
ESDC	**Sonseca Array**	**45.55**	**9**	LR			LR	16 01 01.9	
	comp=Z,76nm,19.1s,baz=173,slow=36								
KEST	**Kesra**	**45.72**	**25**	P			**P**	**15 42 02.9**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=221,slow=9.3,SNR=4.2								
KEST				LR			LR	16 01 38.2	
	comp=Z,420nm,20.2s,baz=240,slow=37 comp=Z,1.8nm,0.8s								
KEST	**Kesra**	**45.72**	**25**	IAmb			IAmb	15 42 09.7	
	comp=Z,3.5nm,0.9s								
CPUP	**Villa Florida**	**47.72**	**239**	LR			LR	15 59 28.2	
	comp=Z,130nm,21.6s,baz=70,slow=32								
SIV	**San Ignacio**	**48.96**	**254**	LR			LR	16 02 38.9	
	comp=Z,333nm,18.4s,baz=112,slow=35								
VAE	**Valguarnera**	**49.42**	**28**	LR			LR	16 03 03.4	
	comp=Z,280nm,19.1s,baz=158,slow=36								
DAVOX	**Davos/Dischmat**	**55.59**	**18**	LR			LR	16 07 37.1	
	comp=Z,176nm,19.6s,baz=258,slow=37								
LPAZ	**La Paz**	**55.74**	**254**	LR			LR	16 05 49.9	
	comp=Z,280nm,19.5s,baz=94,slow=34								
EIL	**Elat**	**57.19**	**49**	LR			LR	16 06 43.9	
	comp=Z,182nm,20.8s,baz=267,slow=35								
ATD	**Arta Tunnel**	**57.37**	**73**	LR			LR	16 05 12.1	
	comp=Z,10nm,21.8s,baz=222,slow=33								
SJG	**San Juan**	**58.06**	**295**	LR			LR	16 04 55.3	
	comp=Z,169nm,19.0s,baz=92,slow=32								
GERES	**GERESS Array B**	**58.64**	**20**	P			**P**	**15 43 39.1**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=201,slow=7.1,SNR=6.8 comp=Z,0.7nm,0.6s								
ASF	**Jabal al Asfar**	**59.87**	**48**	LR			LR	16 10 54.7	
	comp=Z,229nm,18.1s,baz=206,slow=37								
SDV	**Santo Domingo**	**59.89**	**283**	LR			LR	16 08 12.9	
	comp=Z,94nm,20.0s,baz=82,slow=35								
VRAC	**Vranov**	**60.05**	**21**	LR			LR	16 10 50.9	
	comp=Z,116nm,18.5s,baz=204,slow=37								
CO04	**Los Peladeros**	**60.72**	**236**	P			**P**	**15 43 50.9**	**-1.5**
EKA	**Eskdalemuir Ar**	**61.04**	**6**	LR			LR	16 10 59.1	
	comp=Z,57nm,18.5s,baz=183,slow=37								
MLR	**Muntele Rosu**	**61.11**	**30**	LR			LR	16 11 09.2	
	comp=Z,140nm,21.3s,baz=210,slow=37								
BRTR	**Keskin Array B**	**61.70**	**39**	P			**P**	**15 44 00.5**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=228,slow=5.6,SNR=1.7								
BRTR				LR			LR	16 14 03.0	
	comp=Z,43nm,18.1s,baz=206,slow=39 comp=Z,0.2nm,0.4s				

comp=Z,48nm,21.6s,baz=74,slow=32
LPIG La Paz 99.52 293 LR LR 16 31 39.6
comp=Z,21nm,18.0s,baz=136,slow=35

IDC 27 15:44:49.1±1.5, 28°03'S×177°63'W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=46.8km s-min=39.8km az=35.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.62**	**264**	P	P	15 52 55.7	+0.2
	0.2nm,0.7s,baz=96,slow=6.7,SNR=9.9						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**44.39**	**270**	P	P	15 53 01.1	-0.7
	0.3nm,0.7s,baz=109,slow=7.8,SNR=6.3						
	0.3nm,0.7s						
QSPA	**South Pole Qui**	**62.07**	**180**	P	P	15 55 11.2	-0.2
	0.5nm,0.6s,baz=327,slow=0.8,SNR=5.1						
	0.5nm,0.6s						
HFS	**Hagfors**	**146.99**	**350**	PKPbc	PKPbc	16 04 32.2	-0.9
	1.6nm,0.6s,baz=29,slow=3.3,SNR=6.4						
AKASG	**Malin Array Be**	**149.58**	**325**	PKPbc	PKPbc	16 04 40.1	-0.1
	0.7nm,0.4s,baz=50,slow=2.0,SNR=5.9						

IDC 27 15:49:51.3±9.7, 5°14'S×153°62'E, h206km±65km, mb2.9/4, mbtmp3.5/5, Error ellipse: s-maj=108.7km s-min=31.5km az=100.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.69**	**236**	P	Pn	15 51 40.9	+0.4
	5.4nm,0.5s,baz=321,slow=7.6,SNR=5.7						
PMG				S	S	15 53 07.9	+0.4
	10nm,0.6s,baz=188,slow=18,SNR=3.0						
WRA	**Warramunga Arr**	**23.85**	**230**	P	P	15 54 46.5	+0.5
	0.7nm,0.9s,baz=56,slow=10,SNR=4.6						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**26.47**	**224**	P	P	15 55 09.2	-0.4
	0.4nm,0.9s,baz=55,slow=9.7,SNR=6.4						
	0.4nm,0.9s						
SONM	**Songino Array**	**67.05**	**328**	P	P	16 00 22.5	+0.1
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**81.12**	**319**	P	P	16 01 43.6	-0.1
	0.2nm,0.4s,baz=94,slow=6.3,SNR=5.8						
	0.2nm,0.4s						

IDC 27 15:51:08.4±1.1, 23°.15N×123°.83E, h0km, mb3.7/7, mbtmp3.7/9, ML3.1/2, Error ellipse: s-maj=42.9km s-min=18.8km az=68.0
JMA 27 15:51:11.1±0.3, 23°.N±1'×124°.0E±0°.8, h46km±4km, MD4.0/17, MV3.4/17, NEAR ISHIGAKIJIMA ISLAND
ISC 27 15:51:11.2±2.1, 23°.10N±0°.04×124°.00E±0°.05, h30km±18km, n34, σ1§87/43, mb3.6/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.97**	**350**	P	Pn	15 51 27.1	-1.8
HATJ				A	A	15 51 27.1	
	comp=N,12nm,2.1s,comp=E,13nm,4.6s						
HATJ				S	Sn	15 51 38.9	-2.8
JKRS	**Kuro-shima**	**1.14**	**0**	P	Pn	15 51 29.8	-1.3
JKRS				A	A	15 51 29.8	
	comp=N,9.0nm,2.7s,comp=E,6.0nm,5.9s						
JKRS				eS	Sn	15 51 43.1	-2.6
IRIF	**Iriomote-Funau**	**1.26**	**349**	P	Pn	15 51 31.5	-1.3
IRIF				eS	Sn	15 51 46.1	-2.6
JIJ	**Ishigaki jima**	**1.27**	**6**	P	Pn	15 51 31.3	-1.7
JIJ				eS	Sn	15 51 45.7	-3.3
JISG	**Ishigakijimahi**	**1.51**	**11**	P	Pn	15 51 34.6	-1.7
YOJ	**Yonaguni jima**	**1.63**	**327**	P	Pn	15 51 37.0	-0.9
YOJ	**Yonaguni jima**	**1.63**	**327**	P	Pn	15 51 37.1	-0.8
YOJ				eS	Sn	15 51 55.7	-2.2
JYNG	**Yonagunijimaku**	**1.66**	**325**	P	Pn	15 51 37.4	-0.9
JYNG				S	Sn	15 51 56.7	-1.9
JTJ	**Tarama**	**1.67**	**23**	P	Pn	15 51 37.4	-1.1
JMJ2	**Miyako jima3**	**2.04**	**36**	eP	Pn	15 51 42.9	-0.7
JIRJ	**Irabujima**	**2.05**	**32**	P	Pn	15 51 42.4	-1.2
JIRJ				eS	Sn	15 52 06.5	-1.7
JMJ	**Miyako jima 2**	**2.08**	**34**	P	Pn	15 51 42.7	-1.4
JMJ	**Miyako jima 2**	**2.08**	**34**	S	Sn	15 52 08.2	-0.8
JOGS	**Gusukube**	**2.10**	**38**	eP	Pn	15 51 43.6	-0.8
JIKM	**Ikemajima**	**2.15**	**32**	eP	Pn	15 51 44.4	-0.6
NACB	**Ninganchiao**	**2.45**	**296**	P	Pn	15 51 48.7	-0.5
YULB	**Yu-li**	**2.50**	**277**	P	Pn	15 51 47.8	-2.1
TWGBT	**Beinan**	**2.71**	**265**	P	Pn	15 51 51.6	-1.1
YHNB	**Yeheng**	**2.87**	**304**	P	Pn	15 51 54.6	-0.4
SSLB	**Suanglung**	**2.88**	**284**	P	Pn	15 51 54.9	-0.2
TPUB	**Ta-pu**	**3.11**	**274**	P	Pn	15 51 57.6	-0.6
TPUB	**Ta-pu**	**3.11**	**274**	S	Sn	15 52 34.9	+0.5
PACPP	**Pamplona Cagay**	**5.24**	**209**	eP	Pn	15 52 27.7	+0.2
PACPP				eS	Sn	15 53 23.1	-3.8
JOW	**Kunigami**	**5.38**	**45**	P	Pn	15 52 28.4	-1.0
PALP	**Palanan**	**6.18**	**194**	iP	Pb	15 52 58.6	+0.4
PALP				iS	Sn	15 53 44.5	-5.7
KSRS	**Korea Array**	**14.70**	**12**	Pn	Pn	15 54 37.5	+0.4
	comp=E,0.1nm,0.3s,baz=197,slow=11,SNR=5.5						
	comp=E,0.5nm,0.5s						
MJAR	**Matsushiro Arr**	**18.18**	**39**	P	P	15 55 23.6	+2.1
	baz=215,slow=8.5,SNR=7.1						
	comp=E,2.5nm,0.9s						
SONM	**Songino Array**	**28.41**	**335**	P	P	15 57 02.8	-0.4
	comp=E,0.4nm,0.4s,baz=134,slow=10,SNR=2.8						
	comp=E,0.4nm,0.4s						
MKAR	**Makanchi Array**	**40.91**	**316**	P	P	15 58 51.7	+0.8
	comp=E,0.3nm,0.4s,baz=104,slow=9.1,SNR=7.2						
	comp=E,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**42.56**	**326**	P	P	15 59 03.9	-0.3
	comp=E,1.2nm,0.5s,baz=116,slow=8.0,SNR=6.4						
	comp=E,1.2nm,0.5s						
WRA	**Warramunga Arr**	**43.95**	**166**	P	P	15 59 17.4	+1.6
	comp=E,1.0nm,0.9s,baz=344,slow=8.1,SNR=3.9						
	comp=E,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**44.60**	**320**	P	P	15 59 21.4	+0.8
	comp=E,1.1nm,0.8s,baz=110,slow=8.3,SNR=8.6						
	comp=E,1.1nm,0.8s						
ASAR	**Alice Springs**	**47.47**	**168**	P	P	15 59 46.2	+2.7
	comp=E,0.5nm,0.9s,baz=0.2,slow=6.7,SNR=7.5						
	comp=E,0.5nm,0.9s						
BVAR	**Borovoye Array**	**50.15**	**321**	P	P	16 00 05.0	+1.2
	comp=E,1.0nm,0.6s,baz=104,slow=8.9,SNR=5.2						
	comp=E,1.0nm,0.6s						

SDD 27 15:57:20.8±2.5, 19°.18N×68°.04W, h12km±210km, MD3.2, ML2.5, MW2.7, Presumed earthquake
OSPL 27 15:57:20.6±0.5, 19°.16N×68°.17W, h0km±160km, ML2.7, Presumed earthquake
RSPR 27 15:57:22.2, 19°.33N×68°.00W, h77km±5km, MD3.4/9
NEIC 27 15:57:23.8±1.2, 18°.91N±0°.06×68°.14W±0°.03, h35km±2km, ML2.8/31, Md3.4/9(RSPR), Error ellipse: s-maj=10.9km s-min=4.6km az=182.0
ISC 27 15:57:20.7±1.8, 19°.10N±0°.07×68°.06W±0°.03, h5km±11km, n60, σ1§06/72, 20C-6D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.66**	**207**		Pg	15 57 32.7	-0.6
PCDR					Sg	15 57 41.3	-0.7
PCDR	**Punta Cana, DR**	**0.66**	**207**	⇑ePg	Pg	15 57 32.7	-0.6
PCDR				IAML		15 57 44.0	
	comp=N,155nm,0.7s						
PCDR				IAML		15 57 44.3	
	comp=E,50nm,0.2s						
PCDR	**Punta Cana, DR**	**0.66**	**207**	iP	Pg	15 57 32.8	-0.6
PCDR				eS	Sg	15 57 41.3	-0.7
PCDR				IAML		15 57 41.9	
	comp=Z,94nm,0.9s						
HIDR	**Higuey Centro**	**0.80**	**231**	⇑ePg	Pb	15 57 37.9	+0.8
HIDR				IAML		15 57 47.6	
	comp=E,148nm,0.3s						
HIDR				IAML		15 57 47.9	
	comp=N,251nm,0.2s						
IDE	**Isla Desecheo**	**0.90**	**142**		Pn	15 57 40.1	0.0
IDE					Sn	15 57 55.5	+2.0
IDE	**Isla Desecheo**	**0.90**	**142**	⇓eP	Pn	15 57 40.1	0.0
IDE				eS	Sn	15 57 55.5	+2.0
SMDR	**Samana, DR**	**1.08**	**280**		Pn	15 57 42.5	-0.1
SMDR					Sn	15 57 57.9	0.0
SMDR	**Samana, DR**	**1.08**	**280**	⇓eP	Pn	15 57 42.5	-0.1
SMDR				eS	Sn	15 57 57.9	0.0
AGPR	**Aguadilla, PR**	**1.10**	**125**		Pb	15 57 41.4	-0.8
AGPR					Sb	15 57 55.6	-1.3
AGPR				IAML		15 57 58.5	
	comp=N,150nm,0.2s						
AGPR	**Aguadilla, PR**	**1.10**	**125**	⇑ePg	Pb	15 57 41.6	-0.7
AGPR				⇑eSg	Sg	15 57 57.2	+1.1
AGPR				IAML		15 57 58.5	
	comp=E,113nm,0.2s						
AGPR				IAML		15 58 01.4	
	comp=N,70nm,0.2s						
AGPR	**Aguadilla, PR**	**1.10**	**125**	⇓eP	Pb	15 57 41.7	-0.5
PRSN	**Puerto Rico Se**	**1.24**	**135**		Sg	15 58 03.5	+3.0
PRSN	**Puerto Rico Se**	**1.24**	**135**		Pn	15 57 43.4	-1.2
PRSN	**Puerto Rico Se**	**1.24**	**135**	IAML		15 58 06.2	
	comp=N,297nm,0.2s						
PRSN				IAML		15 58 07.5	
	comp=N,473nm,0.3s						
PRSN	**Puerto Rico Se**	**1.24**	**135**	⇑ePg	Pn	15 57 44.5	-0.2
PRSN				IAML		15 58 06.6	
	comp=E,166nm,0.3s						
PRSN				IAML		15 58 07.5	
	comp=N,283nm,0.2s						
PRSN	**Puerto Rico Se**	**1.24**	**135**	⇑eP	Pn	15 57 44.6	-0.1
DR12	**Loma Pena Alta**	**1.29**	**256**		Pn	15 57 43.4	-2.1
HATOM	**Hato Mayor del**	**1.29**	**256**	⇑ePg	Pb	15 57 46.0	+0.5
HATOM				⇑eSg	Sb	15 58 02.5	+0.2
HATOM				IAML		15 58 05.1	
	comp=N,58nm,0.2s						
HATOM				IAML		15 58 06.4	
	comp=E,33nm,0.5s						
LSP	**Las Mesas**	**1.30**	**135**		Pb	15 57 46.0	+0.3
LSP					Sg	15 58 04.1	+1.3
LSP	**Las Mesas**	**1.30**	**135**	⇑eP	Pb	15 57 46.0	+0.3
LSP				eS	Sg	15 58 04.1	+1.3
CRPR	**Cabo Rojo, PR**	**1.41**	**140**		Pn	15 57 45.5	-1.6
CRPR					Sn	15 58 02.0	-4.1
CRPR				IAML		15 58 10.3	
	comp=E,98nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.41**	**140**	⇑eP	Pn	15 57 47.1	-0.1
AOPR	**Arecibo Observ**	**1.45**	**121**	Pn	Pn	15 57 46.5	-1.1
AOPR				IAML		15 58 09.9	
	comp=E,118nm,0.3s						
AOPR				IAML		15 58 12.0	
	comp=E,237nm,0.3s						
AOPR	**Arecibo Observ**	**1.45**	**121**		Sb	15 58 06.7	-0.2
AOPR	**Arecibo Observ**	**1.45**	**121**	⇑ePg	Pn	15 57 46.7	-0.9
AOPR				IAML		15 58 11.1	
	comp=N,86nm,0.3s						
AOPR				IAML		15 58 12.0	
	comp=E,216nm,0.2s						
AOPR	**Arecibo Observ**	**1.45**	**121**	⇑eP	Pn	15 57 46.9	-0.7
MLPR	**Magueyes Islan**	**1.48**	**139**	Pn	Pn	15 57 47.3	-0.7
MLPR				IAML		15 58 11.6	
	comp=E,81nm,0.5s						
MLPR	**Magueyes Islan**	**1.48**	**139**	⇓ePg	Pn	15 57 47.5	-0.6
MLPR				⇑eSg	Sn	15 58 08.1	+0.3
MLPR				IAML		15 58 11.6	
	comp=N,28nm,0.4s						
MLPR				IAML		15 58 12.0	
	comp=E,21nm,0.3s						
MLPR	**Magueyes Islan**	**1.48**	**139**	⇑eP	Pn	15 57 47.8	-0.3
UUPR	**Utuado, UPR, P**	**1.53**	**123**		Sb	15 58 09.1	-0.1
UUPR	**Utuado, UPR, P**	**1.53**	**123**		Pn	15 57 47.4	-1.3
UUPR	**Utuado, UPR, P**	**1.53**	**123**	IAML		15 58 11.8	
	comp=E,1μm,0.4s						
UUPR				IAML		15 58 12.3	
	comp=E,1μm,0.3s						
UUPR	**Utuado, UPR, P**	**1.53**	**123**	⇑eP	Pn	15 57 48.1	-0.6
EMPR	**Esperanza - Ma**	**1.58**	**113**		Pn	15 57 48.8	-0.6
EMPR					Sn	15 58 08.8	-1.3
EMPR	**Esperanza - Ma**	**1.58**	**113**	⇑eP	Pn	15 57 48.8	-0.6
EMPR				eS	Sn	15 58 08.8	-1.3
OBIP	**Obispado Ponce**	**1.74**	**127**		Pn	15 57 51.1	-0.4
OBIP	**Obispado Ponce**	**1.74**	**127**		Sb	15 58 14.6	-0.6
OBIP	**Obispado Ponce**	**1.74**	**127**	IAML		15 58 17.0	
	comp=N,62nm,0.6s						
OBIP	**Obispado Ponce**	**1.74**	**127**	iP	Pn	15 57 51.4	-0.1
OBIP				eS	Sb	15 58 14.7	-0.5
OBIP				IAML		15 58 17.8	
	comp=Z,277nm,0.3s						
OBIP	**Obispado Ponce**	**1.74**	**127**	⇑eP	Pn	15 57 51.5	-0.1
OBIP				eS	Sb	15 58 14.6	-0.6
CELP	**Cerrillos**	**1.74**	**126**		Pn	15 57 51.2	-0.4
CELP	**Cerrillos**	**1.74**	**126**		Sn	15 58 14.0	-0.2
CELP	**Cerrillos**	**1.74**	**126**	IAML		15 58 16.8	
	comp=Z,104nm,0.4s						
CELP				IAML		15 58 17.3	
	comp=Z,105nm,0.4s						
CELP	**Cerrillos**	**1.74**	**126**	⇓ePg	Pn	15 57 51.3	-0.3
CELP				⇑eSg	Sb	15 58 15.8	+0.6
CELP				IAML		15 58 16.7	
	comp=N,37nm,0.4s						
CELP				IAML		15 58 17.2	
	comp=E,38nm,0.4s						
CELP	**Cerrillos**	**1.74**	**126**	⇑eP	Pn	15 57 51.7	+0.1
ECPR	**Experimental S**	**1.79**	**116**		Sn	15 58 14.9	-0.5
ECPR	**Experimental S**	**1.79**	**116**		Pn	15 57 52.0	-0.3
ECPR	**Experimental S**	**1.79**	**116**	IAML		15 58 17.4	
	comp=E,162nm,0.2s						
ECPR				IAML		15 58 24.3	
	comp=E,143nm,0.2s						
ECPR	**Experimental S**	**1.79**	**116**	⇑eP	Pn	15 57 51.4	-0.9
SJG	**San Juan**	**2.06**	**118**	iP	Pn	15 57 56.2	+0.1
PDPR	**Patillas Dam,**	**2.21**	**119**	Pn	Pn	15 57 57.8	-0.3
HUMP	**Col San Antoni**	**2.30**	**114**		Pn	15 57 58.9	-0.5
HUMP	**Col San Antoni**	**2.30**	**114**		Sn	15 58 26.9	-1.2
HUMP	**Col San Antoni**	**2.30**	**114**	IAML		15 58 32.7	
	comp=E,35nm,0.2s						
HUMP				IAML		15 58 35.1	
	comp=E,29nm,0.2s						
HUMP	**Col San Antoni**	**2.30**	**114**	⇓eP	Pn	15 57 59.2	-0.2
SDDR	**Presa de Saban**	**3.05**	**268**	Pn	Pn	15 58 08.8	-0.9
SDDR				IAML		15 59 00.5	
	comp=E,30nm,0.9s						
SDDR				IAML		15 59 04.2	
	comp=E,31nm,1.1s						
FDFM	**Morne la Roset**	**7.90**	**122**	Pn	Pn	15 59 15.6	-0.8
PB16	**IPOC Station P**	**37.23**	**182**	eP	P	16 04 33.8	-0.2
AP01	**Chacalluta**	**37.30**	**184**	eP	P	16 04 35.3	+1.4
PB12	**IPOC Station P**	**37.55**	**184**	eP	P	16 04 38.5	+2.4

SJA 27 15:59:54.4±0.6, 23°.32S×66°.78W, h216km±7km, ML3.5, MW3.5
GUC 27 15:59:55.1±0.6, 23°.33S×67°.19W, h265km±11km, ML3.7
ISC 27 15:59:52.9±1.9, 23°.32S±0°.04×66°.84W±0°.07, h238km±16km, n28, σ1§66/48, 4C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		**1.01**	**153**	eP	Pn	16 00 26.6	-0.7
SALTA				eP		16 00 26.9	
AF01	**San Pedro de A**	**1.28**	**286**	eP	Pn	16 00 21.1	-7.8
SLA	**San Lorenzo**	**1.86**	**139**	eP	Pn	16 00 33.2	0.0
PB06	**IPOC Station P**	**2.59**	**283**	eP	Pn	16 00 41.7	+1.4
PB06				eS	S	16 01 17.4	-0.2
PB06				IAML		16 01 18.8	
	comp=Z,150nm,0.3s						
PB06	**IPOC Station P**	**2.59**	**283**	⇑iP	Pn	16 00 41.8	+1.4
PB06				iS	S	16 01 16.7	-1.0
PB09	**IPOC Station P**	**2.69**	**304**	eP	Pn	16 00 43.1	+1.7
PB09				eS	S	16 01 20.3	+0.7
PB09				IAML		16 01 20.8	
	comp=Z,70nm,0.7s						
PB09	**IPOC Station P**	**2.69**	**304**	⇑iP	Pn	16 00 43.1	+1.7
PB09				iS	S	16 01 20.1	+0.6
PB09				IAML		16 01 22.7	
	comp=E,92nm,0.5s						
FSA	**Cafayete**	**2.89**	**164**	eP	Pn	16 00 44.3	+0.8
PB03	**IPOC Station P**	**2.97**	**295**	eP	Pn	16 00 46.0	+1.5
PB03				IAML		16 01 28.2	
	comp=Z,129nm,0.4s						
PB03	**IPOC Station P**	**2.97**	**295**	⇑iP	Pn	16 00 45.7	+1.2
PB03				iS	S	16 01 23.4	-1.7
PB05	**IPOC Station P**	**3.13**	**278**	eP	Pn	16 00 47.7	+1.5
PB05				eS	S	16 01 27.1	-1.0
PB05				IAML		16 01 28.5	
	comp=Z,58nm,0.1s						
PB05	**IPOC Station P**	**3.13**	**278**	eP	Pn	16 00 47.5	+1.3
PB05				iS	S	16 01 26.3	-1.9
PB05				IAML		16 01 29.2	
	comp=N,90nm,0.2s						
PB07	**IPOC Station P**	**3.23**	**299**	eP	Pn	16 00 48.9	+1.5
PB07				eS	S	16 01 29.1	-1.2
PB07				IAML		16 01 30.2	
	comp=Z,177nm,0.3s						
PB07	**IPOC Station P**	**3.23**	**299**	eP	Pn	16 00 48.6	+1.2
PB07				iS	S	16 01 28.5	-1.9
PB02	**IPOC Station P**	**3.46**	**305**	eP	Pn	16 00 51.3	+1.3
PB02				eS	S	16 01 33.6	-1.4
PB02				IAML		16 01 37.6	
	comp=Z,177nm,0.6s						
PB02	**IPOC Station P**	**3.46**	**305**	eP	Pn	16 00 50.9	+1.0
PB02				iS	S	16 01 32.6	-2.3
PB14	**IPOC Station P**	**3.51**	**248**	eP	Pn	16 00 52.1	+1.4
PB14				eS	S	16 01 35.6	-0.6
PB14				IAML		16 01 38.4	
	comp=Z,63nm,0.2s						
PB14	**IPOC Station P**	**3.51**	**248**	⇑iP	Pn	16 00 51.8	+1.1
PB14				iS	S	16 01 34.8	-1.4
PB08	**IPOC Station P**	**3.82**	**325**	eS	S	16 01 44.7	+1.6
PB08				IAML		16 01 46.4	
	comp=Z,26nm,0.5s						
PB08	**IPOC Station P**	**3.82**	**325**	eP	Pn	16 00 56.7	+2.2
PB08				iS	S	16 01 43.3	+0.1
AC02	**Maricunga**	**4.07**	**210**	eP	Pn	16 00 59.0	+1.6
AC02				eS	S	16 01 50.2	+1.7
GO01	**Chusmiza**	**4.24**	**328**	eP	Pn	16 01 01.5	+1.9
GO01				eS	S	16 01 54.2	+1.9
GO01				IAML		16 01 58.5	
	comp=Z,18nm,0.8s						
GO01	**Chusmiza**	**4.24**	**328**	eP	Pn	16 01 01.4	+1.8
GO01				iS	S	16 01 51.5	-0.8
PB11	**IPOC Station P**	**4.40**	**323**	eP	Pn	16 01 01.6	+0.4
PB11				iS	S	16 01 52.8	-2.5
AC01	**Pan de Azucar**	**4.43**	**230**	eP	Pn	16 01 01.7	+0.4
AC01				eS	S	16 01 53.3	-2.2
AC01				IAML		16 01 56.2	
	comp=Z,30nm,0.2s						
TINO	**Tinogasta**	**4.77**	**188**	eP	Pn	16 01 07.2	+1.6
PSGCX	**Pisagua**	**4.80**	**320**	eP	Pn	16 01 03.4	-2.7
PSGCX				iS	S	16 01 59.9	-4.8
GO03	**Copiapo**	**5.25**	**215**	eP	Pn	16 01 15.5	+0.1
GO03				eS	S	16 02 12.2	-1.6
GO03				IAML		16 02 13.3	
	comp=Z,36nm,0.1s						

SOF 27 16:05:28.9, 42°.90N±0°.01×23°.46E±0°.01, h13km±2km, MD2.7/7
BEO 27 16:05:28.9±0.3, 42°.91N×23°.40E, h6km±3km, ML2.2/11
ISC 27 16:05:28.9±0.9, 42°.92N±0°.02×23°.41E±0°.02, h13km±6km, n33, σ0§49/57, 13C-3D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLSH	**Balsha**	**0.12**	**235**	iP	Pg	16 05 32.0	-0.2
BLSH				iS	Sg	16 05 34.6	+0.1
VTS	**Vitosha**	**0.33**	**203**	iP	Pg	16 05 35.9	+0.1
VTS				iS	Sg	16 05 40.4	0.0
VTS	**Vitosha**	**0.33**	**203**	ePg	Pg	16 05 35.8	0.0
VTS				eSg	Sg	16 05 40.2	-0.2
PLNA	**Plana**	**0.45**	**179**	iP	Pg	16 05 38.0	+0.2
PLNA				iS	Sg	16 05 44.5	+0.6
MPEP	**Malo Peshtene**	**0.49**	**29**	iP	Pg	16 05 38.9	+0.2
MPEP				iS	Sg	16 05 45.9	+0.6
ZAPS	**Zavoj**	**0.67**	**302**	ePg	Pg	16 05 41.0	-1.0
ZAPS				eSg	Sg	16 05 50.6	-0.2
PGB	**Panagyurishte**	**0.70**	**126**	iP	Pg	16 05 41.9	-0.6
PGB				iS	Sg	16 05 51.0	-0.6
VALD	**Valchedram**	**0.77**	**1**	iP	Pn	16 05 45.6	+0.2
BOSS	**Bosilegrad**	**0.81**	**238**	ePg	Pg	16 05 44.2	-0.4
BOSS				eSg	Sg	16 05 54.0	-1.2
BLKB	**Belogradchik**	**0.88**	**323**	⇓S	Sg	16 05 56.7	-0.9
BLKB	**Belogradchik**	**0.88**	**323**	ePg	Pg	16 05 45.2	-0.8
BLKB				eSg	Sg	16 05 57.0	-0.5
PLVB	**Pleven**	**1.00**	**62**	⇑P	Pn	16 05 48.5	-0.2
PLVB				⇓S	Sn	16 06 02.6	0.0
BAIL	**Bailesti**	**1.10**	**358**	⇓P	Pb	16 05 49.9	+0.2
BAIL				⇑S	Sn	16 06 05.2	+0.2
KKB	**Krupnik**	**1.10**	**191**	iP	Pn	16 05 50.2	+0.1
KKB				iS	Sn	16 06 05.2	+0.1
BARS	**Barje**	**1.18**	**265**	ePg	Pn	16 05 51.0	-0.1
BARS				eSg	Sg	16 06 06.9	0.0
ZAGS	**Zajecar**	**1.23**	**316**	ePg	Pn	16 05 51.3	-0.6
ZAGS				eSg	Sb	16 06 08.3	+0.3
PLD	**Plovdiv**	**1.26**	**128**	iP	Pn	16 05 52.0	-0.2
PLD				iS	Sb	16 06 08.0	-0.6
PLD	**Plovdiv**	**1.26**	**128**	ePg	Pn	16 05 51.8	-0.4
PLD				eSg	Pg	16 06 11.5	+0.6
VLAD	**Vladila**	**1.29**	**34**	⇑P	Pg	16 05 53.7	-0.1
VLAD				⇑S	Sg	16 06 10.8	+0.1
BOVS	**Bovan**	**1.43**	**300**	⇑P	Pn	16 05 55.0	+0.4
BOVS				⇑S	Sg	16 06 14.7	-0.4
BOVS	**Bovan**	**1.43**	**300**	ePg	Pb	16 05 55.7	+0.2
BOVS				eSg	Sb	16 06 14.5	+0.8
RZN	**Rozhen**	**1.57**	**141**	iP	Pb	16 05 58.2	+0.2
RZN				iS	Sg	16 06 19.6	-0.1
SELS	**Selova**	**1.71**	**281**	ePg	Pg	16 06 01.3	-0.4
SELS				eSg	Sb	16 06 21.8	+0.3
VAY	**Valandovo**	**1.72**	**202**	iPn	Pn	16 05 59.2	+0.7
VAY				eSn	Sb	16 06 22.1	+0.2
SRE	**Strehaia**	**1.74**	**355**	⇑P	Pn	16 05 59.3	+0.4
KUBS	**Kucevo**	**1.95**	**320**	ePg	Pn	16 06 02.4	+0.7
GOCS	**Kraljevo Serbi**	**1.96**	**290**	ePn	Pn	16 06 03.1	+1.1
GOCS				eSn	Sn	16 06 26.0	-0.5
HERR	**Herculane**	**2.08**	**340**	⇑P	Pn	16 06 04.6	+1.1
GRUS	**Gruza**	**2.19**	**297**	eSg	Sg	16 06 38.7	-0.6
MDVR	**Moldovita**	**2.23**	**327**	⇑P	Pn

WRMHI Sn 16 06 12.7 -1.1
RIM Rim 0.42 33 Pn 16 06 05.6 -1.4
RIM Sn 16 06 12.3 -1.6
KKO Keanakako'i 0.43 34 Pn 16 06 05.7 -1.3
KKO Sn 16 06 12.6 -1.4
WIH Wilkes Camp 0.43 352 Pn 16 06 06.4 -1.1
WIH Sn 16 06 14.1 -0.6
UWE Uwekahuna 0.44 30 Pn 16 06 05.7 -1.4
UWE Uwekahuna 0.44 30 Sn 16 06 13.0 -1.2
OBL Observatory Le 0.44 31 Pn 16 06 05.8 -1.4
OBL Sn 16 06 13.1 -1.1
PUH Pauahi 0.44 41 Pn 16 06 05.5 -1.7
PUH IAML 16 06 13.2
comp=N,44µm,0.7s
PUH Pauahi 0.44 41 Sn 16 06 12.4 -1.9
KAE Kaena 0.45 56 Pn 16 06 05.6 -1.5
BYL Byron's Ledge 0.45 34 Pn 16 06 05.7 -1.5
BYL IAML 16 06 13.2
comp=E,59µm,0.7s
BYL IAML 16 06 13.3
comp=N,56µm,0.6s
BYL Byron's Ledge 0.45 34 Sn 16 06 12.9 -1.5
UWB Uwekahuna Bluf 0.45 31 Pn 16 06 05.8 -1.5
UWB Sn 16 06 12.8 -1.6
MWH Mokuaweoweo 0.45 351 Pn 16 06 06.5 -1.1
MWH IAML 16 06 15.2
comp=N,46µm,1.0s
MWH IAML 16 06 17.1
comp=E,54µm,0.7s
MWH Mokuaweoweo 0.45 351 Sn 16 06 14.2 -0.8
HATHI Halema'uma'u T 0.45 33 Pn 16 06 05.8 -1.5
HATHI IAML 16 06 13.5
comp=N,54µm,0.8s
HATHI Halema'uma'u T 0.45 33 Sn 16 06 12.9 -1.6
ESR Escape Road 0.46 36 Pn 16 06 05.9 -1.5
ESR Sn 16 06 13.0 -1.6
MLH Mauna Loa 0.47 16 Pn 16 06 06.6 -1.1
MLH IAML 16 06 15.0
comp=N,50µm,0.8s
MLH IAML 16 06 19.1
comp=E,43µm,0.9s
MLH Mauna Loa 0.47 16 Sn 16 06 14.1 -1.0
KNHH Kane Nui o Ham 0.47 45 Pn 16 06 05.9 -1.7
RSD Rainshed 0.48 29 Pn 16 06 06.1 -1.6
RSD Rainshed 0.48 29 Sn 16 06 13.8 -1.4
PLL Puu Ulaula 0.49 7 Pn 16 06 07.1 -1.0
MLOA Mauna Loa Obse 0.50 354 Pn 16 06 07.2 -1.0
MLOA Sn 16 06 15.0 -1.0
MLOA Mauna Loa Obse 0.50 354 IAML 16 06 15.4
comp=E,56µm,0.3s
MLOA IAML 16 06 15.5
comp=N,71µm,0.6s
STCH Steam Cracks 0.51 47 Pn 16 06 06.2 -1.8
STCH IAML 16 06 14.0
comp=N,59µm,0.5s
STCH Steam Cracks 0.51 47 Sn 16 06 13.6 -2.2
ALEP Alea Permanent 0.51 347 Pn 16 06 07.3 -1.0
ALEP Sn 16 06 14.9 -1.3
JCUZ Jacuzzi 0.53 49 Pn 16 06 06.4 -1.8
JCUZ Sn 16 06 14.1 -2.0
NPOC North of Pu'u 0.53 48 Pn 16 06 06.5 -1.8
HMH Humu'ula Sheep 0.56 4 Pn 16 06 08.2 -0.7
HMH IAML 16 06 17.4
comp=E,48µm,0.3s
HMH Humu'ula Sheep 0.56 4 Sn 16 06 16.8 -0.5
KLCH Kalalua Cone 0.56 50 Pn 16 06 06.8 -2.0
CPH Captain Cook 0.58 320 Pn 16 06 07.9 -1.1
JOKA Jonika Flow 0.63 51 Pn 16 06 07.6 -2.0
JOKA IAML 16 06 16.9
comp=N,52µm,0.8s
JOKA Jonika Flow 0.63 51 Sn 16 06 16.0 -2.5
I59US HAWAII INFRASO 0.65 327 Pg Pn 16 06 09.1 -0.9
baz=170,slow=14
KHLU Kahalu`u 0.65 328 Pn 16 06 08.9 -1.1
KHLU IAML 16 06 18.4
comp=E,32µm,0.7s
KHLU Kahalu`u 0.65 328 Sn 16 06 18.0 -1.2
PKL Puu Kaliu 0.70 54 Pn 16 06 08.6 -2.0
HUH Hualalai 0.71 335 Pn 16 06 10.1 -0.7
HUH Hualalai 0.71 335 Sn 16 06 20.1 -0.7
POHA Pohakuloa 0.71 359 Pn 16 06 09.7 -1.2
POHA IAML 16 06 23.8
comp=E,29µm,0.7s
POHA IAML 16 06 35.2
comp=E,27µm,0.6s
POHA Pohakuloa 0.71 359 Sn 16 06 19.8 -1.1
HPU Hale Pohaku 0.74 5 Pn 16 06 10.3 -1.2
KKH Kailua Kona 0.77 323 Pn 16 06 10.5 -1.0
KKH Sn 16 06 21.0 -0.9
KOH Kohala 1.11 347 Pn 16 06 14.8 -1.5
KOH Sn 16 06 28.2 -2.2
MHA Mahukona 1.20 343 Pn 16 06 16.1 -1.2
HLK Haleakala 1.84 338 Pn 16 06 24.8 -1.6
HLK Haleakala 1.84 338 Sn 16 06 45.7 -3.0
KHLH Kahului Airpor 2.04 335 Pn 16 06 27.9 -0.9
KHLH Kahului Airpor 2.04 335 Sn 16 06 52.1 -1.0
WMR Waimanalo Ridg 3.04 319 Pn 16 06 41.0 -1.7
HON Honolulu 3.25 315 Pn 16 06 43.8 -1.8
HON Honolulu 3.25 315 Sn 16 07 19.7 -3.4
KIP Kipapa 3.33 316 Pn 16 06 44.7 -2.0
KIP Kipapa 3.33 316 Sn 16 07 21.0 -4.0
OPA Opana 3.52 319 Pn 16 06 47.1 -2.1
OPA Sn 16 07 24.9 -4.8
KEKH Kekaha 4.90 307 Pn 16 07 05.8 -2.4
KEKH Kekaha 4.90 307 Sn 16 07 57.1 -6.5
H11N3 WAKE ISLAND Hy 35.40 277 T T 16 49 54.9
baz=84,slow=75,SNR=401
H11N2 WAKE ISLAND Hy 35.41 277 T T 16 49 55.9
baz=84,slow=75,SNR=402
H11N1 WAKE ISLAND Hy 35.42 277 T T 16 49 56.3
baz=84,slow=75,SNR=400
H11S2 WAKE ISLAND Hy 35.72 275 T T 16 50 24.4
baz=83,slow=75,SNR=100
H11S1 WAKE ISLAND Hy 35.73 275 T T 16 50 22.7
baz=83,slow=75,SNR=74
H11S3 WAKE ISLAND Hy 35.74 275 T T 16 50 21.0
baz=83,slow=75,SNR=162
UNV Unalaska Vale 35.76 349 P P 16 12 53.2 +1.3
baz=162
CHNA Chernabura Isl 35.86 356 P P 16 12 54.4 +1.6
baz=173
YBH Yreka Blue Hor 35.89 44 P P 16 12 55.0 +1.6
comp=E,1.7nm,0.9s,baz=242,slow=5.1,SNR=3.2
comp=E,1.7nm,0.9s
YBH Yreka Blue Hor 35.89 44 IAmb IAmb 16 13 08.6
comp=Z,4.2nm,1.1s
AFI Afiamalu 36.45 207 LR LR 16 25 41.6
comp=Z,52nm,19.3s,baz=30,slow=33
PPT Papeete 36.84 171 LR LR 16 24 57.5
comp=Z,109nm,20.7s,baz=350,slow=31
ELS Elsinore Mount 36.88 59 P P 16 12 59.8 -2.2
ELS IAmb IAmb 16 13 17.8
comp=Z,6.3nm,1.2s
S14K Fog Glacier 37.31 356 P P 16 13 06.6 +1.4
baz=174
NVAR Mina Array Bea 37.59 51 P P 16 13 08.4 +0.3
comp=Z,0.2nm,0.5s,baz=259,slow=5.0,SNR=1.2
comp=Z,0.2nm,0.5s
OHAK Old Harbor 38.16 2 P P 16 13 13.5 +1.2
baz=183
H02S2 DAWSON INLET T 38.49 22 T T 16 53 21.6
SNR=75
H02S1 DAWSON INLET T 38.49 22 T T 16 53 21.6
SNR=78
R17L Mt. Peulik Vol 38.54 359 P P 16 13 17.4 +1.9
baz=179,SNR=8.0
KDAK Kodiak Island 38.75 3 LR LR 16 25 28.7
comp=Z,109nm,21.6s,baz=160,slow=30
KDAK Kodiak Island 38.75 3 P P 16 13 17.5 +0.2
baz=184
Q17K Contact Creek 39.17 360 P P 16 13 22.5 +1.6
baz=179
BBB Bella Bella 39.42 27 LR LR 16 26 04.4
comp=Z,72nm,19.1s,baz=40,slow=31
Q18K Katmai Hardscr 39.56 0 P P 16 13 26.1 +1.9
baz=181
SPIA Saint Paul Isl 39.63 347 P P 16 13 26.7 +2.1
baz=158
Q19K Cape Douglas, 39.86 2 P P 16 13 28.2 +1.7
baz=183
P16K Nushagak River 39.98 358 P P 16 13 28.8 +1.3
baz=176
P17K Kvichak River 40.11 359 P P 16 13 30.8 +2.2
baz=179

HAWA Hanford 40.20 39 P P 16 13 27.6 -1.9
HAWA IAmb IAmb 16 13 44.0
comp=Z,5.5nm,1.1s
O15K Ungalikthiuk R 40.21 357 P P 16 13 31.3 +1.9
baz=174
RAR Rarotonga 40.22 186 LR LR 16 26 05.1
comp=Z,110nm,19.8s,baz=116,slow=30
P18K Big Mountain, 40.30 0 P P 16 13 31.0 +0.7
baz=180
O14K Tigyukauivet M 40.38 355 P P 16 13 32.3 +1.5
baz=172
V35K Ketchikan 40.51 21 P P 16 13 32.6 +0.7
baz=216
O16K Kokwok River B 40.55 358 P P 16 13 33.3 +1.1
baz=176
P19K Oil Pt 40.60 2 P P 16 13 33.6 +0.9
baz=183
U33K Whale Pass 40.67 19 P P 16 13 33.5 +0.3
baz=213
O17K Koliganek Bris 40.70 359 P P 16 13 34.1 +0.7
baz=178
O18K Koktuh Hills 40.77 0 P P 16 13 35.4 +1.4
baz=180
BRSE Bradley Lake S 40.80 4 P P 16 13 35.3 +1.0
baz=187
SIT Sitka 40.83 17 P P 16 13 35.1 +0.5
baz=210
Q23K Middleton Isla 40.88 7 P P 16 13 35.8 +0.9
baz=193
O20K Slope Mountain 41.05 2 P P 16 13 37.3 +0.8
baz=184
N14K Kuskokwak Cree 41.08 355 P P 16 13 37.4 +0.9
baz=171
SHEM Shemya Is, Ala 41.09 332 LR LR 16 27 40.4
comp=Z,76nm,19.6s,baz=88,slow=32
WRAK Wrangell Islan 41.16 19 P P 16 13 37.6 +0.3
baz=214
N15K Kwethluk River 41.21 357 P P 16 13 38.3 +0.6
baz=173
SEW Seward 41.25 5 P P 16 13 39.1 +1.2
baz=189
P23K Montague Islan 41.33 6 P P 16 13 39.7 +1.1
baz=192
S31K Pelican 41.38 15 P P 16 13 40.2 +1.2
baz=208
N16K Nishlik Lake 41.45 358 P P 16 13 41.2 +1.5
baz=175
N17K Nushagak Hills 41.46 359 P P 16 13 41.4 +1.7
baz=178
N18K Kilae Creek 41.59 360 P P 16 13 40.4 -0.4
N18K Kilae Creek 41.59 360 P P 16 13 41.9 +1.0
baz=179
KAIM Kayak Island 41.61 8 P P 16 13 42.5 +1.6
baz=196
M13K Dal Lake 41.70 354 P P 16 13 43.1 +1.5
baz=169
N19K Bonanza Creek 41.73 1 P P 16 13 43.3 +1.2
baz=181,SNR=11
M15K Kasigluk River 41.77 356 P P 16 13 44.0 +1.7
baz=173
M14K Bethel 41.92 355 P P 16 13 44.4 +1.0
baz=171
M16K Timber Creek 42.01 358 P P 16 13 44.7 +0.5
baz=176
EYAK Cordova Ski Ar 42.05 7 P P 16 13 45.9 +1.5
baz=194
BERG Berg Lake 42.16 9 P P 16 13 44.9 -0.6
BERG IAmb IAmb 16 13 49.6
comp=Z,19nm,1.0s
RC01 Rabbit Creek A 42.20 4 P P 16 13 47.4 +1.6
baz=188
M17K Holitna River 42.34 359 P P 16 13 48.6 +1.7
baz=177
M18K Stony River 42.41 360 P P 16 13 49.3 +1.8
baz=180,SNR=6.4
P29M Windy Craggy 42.53 13 P P 16 13 49.7 +1.2
baz=205
L14K Kuka Creek 42.56 355 P P 16 13 49.0 +0.4
baz=170
BMRM Bremner River 42.59 8 P P 16 13 50.4 +1.3
baz=195
CRQE Cirque 42.60 9 P P 16 13 49.6 +0.5
baz=197
KNK Knik Glacier 42.62 5 P P 16 13 50.3 +1.1
baz=190
PLBC Pleasant Camp 42.68 14 P P 16 13 50.6 +1.0
baz=207
L16K Owhat River 42.72 357 P P 16 13 51.2 +1.2
baz=174
PMR Palmer 42.75 4 P P 16 13 51.5 +1.3
baz=189
L15K Ungalak Mounta 42.80 356 P P 16 13 51.2 +0.6
baz=172
M19K Big River Lodg 42.83 1 P P 16 13 51.6 +0.7
baz=182
M20K Styx River 42.83 2 P P 16 13 52.7 +1.7
baz=183
M22K Willow 42.84 4 P P 16 13 52.4 +1.5
baz=187
SKAG Skagway 42.93 15 P P 16 13 52.9 +1.3
baz=208
KLU Klutina 42.95 7 P P 16 13 53.1 +1.1
baz=193
O29M Mount Kennedy 42.96 12 P P 16 13 52.7 +0.5
baz=204
SKT Skwentna 42.99 3 P P 16 13 53.2 +1.0
baz=185
SML Sawmill 43.02 5 P P 16 13 53.4 +0.9
baz=190
M23K Glacier View 43.06 5 P P 16 13 54.0 +1.2
baz=191
O28M Mount Upton 43.09 11 P P 16 13 54.8 +1.4
baz=201
L17K Donlin 43.10 358 P P 16 13 54.5 +1.5
baz=176
L19K White Mountain 43.10 0 P P 16 13 54.9 +1.7
baz=181,SNR=7.4
SCM Sheep Creek Mo 43.14 6 P P 16 13 55.1 +1.6
baz=191
L18K Granite Mounta 43.15 359 P P 16 13 54.6 +1.2
baz=178
MCARA McCarthy VSAT 43.21 9 P P 16 13 55.5 +1.5
baz=197
N25K Chitina, Valde 43.21 8 P P 16 13 55.4 +1.3
baz=195
Q32M Nakina River 43.31 17 P P 16 13 56.1 +1.1
baz=213
K13K Kusilvak Mount 43.33 354 P P 16 13 55.8 +0.9
baz=167
K15K Wolf Creek Mou 43.42 356 P P 16 13 56.8 +1.2
baz=172
P32M Atlin 43.45 16 P P 16 13 57.3 +1.3
baz=211
CUT Chulitna 43.48 4 P P 16 13 58.2 +2.1
baz=187
M24K Tolsona, Glenn 43.52 6 P P 16 13 58.0 +1.5
baz=193
DLBC Dease Lake 43.54 19 P P 16 13 58.7 +1.9
comp=Z,1.1nm,0.3s,baz=275,slow=6.8,SNR=3.7
DLBC LR LR 16 28 50.5
comp=Z,73nm,19.4s,baz=188,slow=32
comp=Z,1.1nm,0.3s
DLBC Dease Lake 43.54 19 P P 16 13 57.9 +1.2
baz=216
L22K Petersville 43.57 3 P P 16 13 58.3 +1.4
baz=186,SNR=7.8
YUK6 Outpost Mounta 43.59 12 P P 16 13 58.5 +1.2
baz=204
YUK8 Steele Glacier 43.65 11 P P 16 13 58.8 +1.1
baz=202
HYT Haines Junctio 43.66 13 P P 16 13 58.6 +0.8
baz=205
K17K Iditarod 43.68 358 P P 16 13 59.2 +1.5
baz=176
WAT6 Susitna Watana 43.84 5 P P 16 14 00.2 +1.1
baz=190,SNR=6.0
PPLA Purkeypile 43.88 2 P P 16 13 58.9 -0.6
PPLA IAmb IAmb 16 14 23.1
comp=Z,14nm,1.4s
PPLA Purkeypile 43.88 2 P P 16 14 00.3 +0.8
baz=184
O30N Mendenhall 43.91 14 P P 16 14 01.2 +1.5
baz=207
HARP HAARP 43.92 7 P P 16 14 00.8 +1.2
baz=194
YUK3 Moose Creek 43.98 10 P P 16 14 01.2 +0.7
baz=201
WAT1 Susitna Watana 44.02 5 P P 16 14 01.8 +1.4
baz=189

J14K Nanvaranak Lak 44.02 355 P P 16 14 02.3 +1.8
baz=169
WHY Whitehorse 44.09 14 P P 16 14 02.9 +1.7
baz=208
M26K Nabesna, AK 44.19 8 P P 16 14 03.6 +1.7
baz=197,SNR=7.5
P33M Teslin, Yukon 44.22 16 P P 16 14 03.3 +1.2
baz=211
K20K Telida 44.29 1 P P 16 14 02.4 -0.3
K20K Telida 44.29 1 P P 16 14 04.5 +1.9
baz=182
M27K Edge Creek, AK 44.31 9 P P 16 14 04.2 +1.3
baz=198
N30M Aishikik Lake 44.32 13 P P 16 14 04.0 +1.0
baz=205
J16K Anvik River 44.35 357 P P 16 14 05.3 +2.3
baz=173
DHY Denali Highway 44.36 5 P P 16 14 04.7 +1.4
baz=191
J17K VABM Dome 44.39 358 P P 16 14 05.6 +2.2
baz=175
J18K Innoko River 44.40 359 P P 16 14 04.6 +1.1
baz=178,SNR=5.3
CAST Castle Rocks 44.41 2 P P 16 14 04.9 +1.4
baz=185
PAX Paxson 44.44 7 P P 16 14 05.5 +1.6
baz=194,SNR=8.0
BVCY Beaver Creek 44.52 10 P P 16 14 06.1 +1.6
baz=200,SNR=5.0
TRF Thorofare Moun 44.52 3 P P 16 14 06.6 +2.0
baz=187,SNR=5.6
N31M Braeburn, Yuko 44.62 13 P P 16 14 07.3 +1.9
baz=207
L26K Log Cabin Wild 44.74 8 P P 16 14 07.9 +1.6
baz=196
CHUM Lake Minchumin 44.86 2 P P 16 14 09.5 +2.4
baz=184
MCK McKinley 44.88 4 P P 16 14 08.7 +1.3
baz=189
J19K Poorman 44.92 360 P P 16 14 09.7 +2.0
baz=180
I17K Unalakleet 44.95 357 P P 16 14 10.3 +2.5
baz=173
M29M Somme Creek 44.96 11 P P 16 14 10.3 +2.2
baz=203,SNR=7.3
N32M Quiet Lake 44.96 15 P P 16 14 09.9 +1.9
baz=211
L27K Beaver Creek, 44.99 9 P P 16 14 10.1 +1.9
baz=198,SNR=8.0
J20K Nowinta River 45.11 1 P P 16 14 11.8 +2.7
baz=182
K24K Donnelly Dome 45.22 6 P P 16 14 12.6 +2.5
baz=193
RIDG Independent Ri 45.26 7 P P 16 14 12.3 +1.9
baz=194
WTLY Watson Lake, Y 45.27 18 P P 16 14 12.3 +1.8
baz=217
PDAR Pinedale Array 45.28 48 P P 16 14 12.6 +1.4
comp=Z,0.5nm,0.5s,baz=261,slow=6.9,SNR=5.1
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 45.28 48 P P 16 14 09.6 -1.6
M30M Minto, Yukon 45.40 12 P P 16 14 13.6 +2.2
baz=205
M31M Drury Creek, Y 45.57 14 P P 16 14 13.2 +0.4
baz=208
L29M L29M 45.63 11 P P 16 14 13.4 +0.1
baz=203
HDA Harding Lake 45.71 5 P P 16 14 14.7 +0.9
baz=191
NEA2 Nenana 45.73 4 P P 16 14 14.8 +0.8
baz=188
I20K Naaghedeneel 45.73 1 P P 16 14 15.3 +1.3
baz=181
H17K Granite Mounta 45.96 357 P P 16 14 16.5 +0.7
baz=174
GAMB Gambell 46.04 350 P P 16 14 16.7 +0.3
baz=158
J25K Salcha River, 46.05 6 P P 16 14 17.4 +0.8
baz=193,SNR=12
ILAR Eielson Array 46.07 5 P P 16 14 18.1 +1.4
comp=Z,3.9nm,0.7s,baz=197,slow=7.2,SNR=41
ILAR PcP PcP 16 15 52.9 +0.4
comp=Z,0.4nm,0.7s,baz=201,slow=5.1,SNR=2.5
comp=Z,3.9nm,0.7s
ILAR Eielson Array 46.07 5 P P 16 14 16.0 -0.7
MLY Manley 46.07 3 P 16 14 16.3 -0.4
MLY IAmb IAmb 16 14 28.1
comp=Z,4.3nm,1.0s
MLY Manley 46.07 3 P P 16 14 17.2 +0.4
baz=186
H18K Honhosa River 46.12 358 P P 16 14 18.1 +0.9
baz=176
I23K Minto, Yukon-K 46.26 4 P P 16 14 19.1 +0.9
baz=188
DAWY Dawson 46.30 10 P P 16 14 19.2 +0.6
baz=201
POKR Poker Plat Res 46.37 5 P P 16 14 19.9 +0.9
baz=190
K29M Barlow Dome 46.42 11 P P 16 14 20.2 +0.6
baz=204
H20K Anotleneega Mo 46.43 0 P P 16 14 20.3 +0.8
baz=181
H19K Roundabout Mou 46.47 359 P P 16 14 20.6 +0.8
baz=179
G16K Koyuk River 46.55 356 P P 16 14 20.8 +0.4
baz=171
G17K Kiwalik Mounta 46.56 357 P P 16 14 21.2 +0.7
baz=173
H21K Melozitna Rive 46.63 2 P P 16 14 21.6 +0.5
baz=183
MMPY Sheldon Lake, 46.66 15 P P 16 14 22.1 +0.6
baz=212
KOTAN Kotaneelee Air 46.80 21 P P 16 14 23.9 +1.4
baz=222
G18K Tagagawik 46.88 358 P P 16 14 24.2 +1.2
baz=176
H22K Ishtalitna Cre 46.91 2 P P 16 14 24.3 +1.0
baz=185
PRP Porcupine Dome 46.92 6 P P 16 14 24.9 +1.3
baz=193
H23K Yukon River 46.93 3 P P 16 14 24.7 +1.3
baz=188
F14K Arctic Creek 46.96 354 P P 16 14 24.9 +1.3
baz=166
I26K Coal Creek Min 46.97 7 P P 16 14 25.2 +1.5
baz=196
F15K North Star Dit 47.03 355 P P 16 14 25.6 +1.4
baz=168
H24K Noodor Dome 47.04 4 P P 16 14 26.5 +2.2
baz=190
G19K Purcell Mounta 47.09 359 P P 16 14 26.2 +1.5
baz=178
TNA Tin City 47.22 353 P P 16 14 27.5 +1.9
baz=164
J30M Hart River 47.30 11 P P 16 14 28.0 +1.5
baz=205,SNR=5.9
I27K Kandik River 47.44 8 P P 16 14 27.3 -0.2
I27K IAmb IAmb 16 14 30.5
comp=Z,5.5nm,0.9s
I27K Kandik River 47.44 8 P P 16 14 29.1 +1.7
baz=198,SNR=5.2
G21K Allakaket 47.47 1 P P 16 14 29.6 +2.0
baz=182
I28M Miner Creek 47.52 9 P P 16 14 30.1 +2.0
baz=200,SNR=5.7
F17K Baldwin Pennin 47.53 357 P P 16 14 29.9 +1.9
baz=173
F18K Selawik 47.62 358 P P 16 14 30.4 +1.8
baz=175
G23K Bananza Creek 47.78 3 P P 16 14 32.2 +2.0
baz=187
F19K Shaleruckik Mo 47.80 359 P P 16 14 31.2 +1.1
baz=177
I30M Mount Dempster 47.88 11 P P 16 14 31.7 +0.7
baz=205,SNR=15
F20K Avaraart Lake 47.99 360 P P 16 14 32.7 +1.1
baz=180
H27K Steamboat Moun 48.05 8 P P 16 14 33.4 +1.2
baz=198,SNR=6.6
TXAR Lajitas Array 48.07 67 P P 16 14 33.6 +0.6
comp=Z,1.2nm,0.7s,baz=249,slow=8.3,SNR=13
comp=Z,1.2nm,0.7s
TXAR Lajitas Array 48.07 67 P P 16 14 31.6 -1.4
G25K Bearman Lake 48.09 5 P P 16 14 33.9 +1.5
baz=192
F21K Alatna River 48.18 1 P P 16 14 35.3 +2.2
baz=182

E17K	**Hotham Inlet** baz=172	**48.20**	**357**	P		**P**	**16 14 34.8 +1.6**
COLD	**Coldfoot** baz=187	**48.29**	**3**	P		**P**	**16 14 35.9 +1.9**
E18K	**Tukpahlearik C** baz=174	**48.47**	**357**	P		**P**	**16 14 36.6 +1.2**
H29M	**Whitestone** baz=202,SNR=7.6	**48.48**	**9**	P		**P**	**16 14 37.2 +1.8**
G26K	**Porcupine Rive** baz=195	**48.49**	**6**	P		**P**	**16 14 36.9 +1.5**
F22K	**John River** baz=184	**48.50**	**2**	P		**P**	**16 14 36.7 +1.2**
G27K	**Doyon Strip** baz=198	**48.59**	**7**	P		**P**	**16 14 37.2 +0.9**
F24K	**Squaw Lake** baz=190	**48.71**	**4**	P		**P**	**16 14 38.3 +1.1**
H31M	**Peel River** baz=207	**48.78**	**11**	P		**P**	**16 14 38.8 +1.0**
EPYK	**Eagle Plains** baz=204	**48.87**	**10**	P		**P**	**16 14 39.5 +1.0**
F25K	**Christian Rive** baz=192	**48.95**	**5**	P		**P**	**16 14 40.6 +1.5**
MSTX	**Muleshoe**	**48.99**	**61**	P		**P**	**16 14 37.6 -2.4**
E23K	**Chandalar** baz=187	**49.15**	**3**	P		**P**	**16 14 41.8 +1.2**
G29M	**Pine Creek** baz=202,SNR=6.4	**49.17**	**9**	P		**P**	**16 14 42.1 +1.3**
F26K	**Sheenjek River** baz=194	**49.18**	**6**	P		**P**	**16 14 43.0 +2.2**
E20K	**Nigu River** baz=179	**49.21**	**360**	P		**P**	**16 14 42.3 +1.3**
E24K	**Your Creek** baz=189	**49.22**	**3**	P		**P**	**16 14 42.1 +0.9**
RDOG	**Red Dog Mine** baz=171	**49.22**	**356**	P		**P**	**16 14 42.1 +1.0**
WRGLY	**Wrigley** baz=221	**49.30**	**18**	P		**P**	**16 14 42.3 +0.6**
E21K	**Killik River** baz=182	**49.40**	**1**	P		**P**	**16 14 43.6 +1.1**
D19K	**Kuna River** baz=177	**49.47**	**359**	P		**P**	**16 14 44.3 +1.3**
E25K	**Arctic Village** baz=192	**49.47**	**5**	P		**P**	**16 14 44.1 +1.1**
PETK	**Petropavlovsk-** comp=Z,9nm,1.0s,baz=153,slow=5.8,SNR=1.6 comp=Z,2.9nm,1.0s	**49.51**	**325**	P		**P**	**16 14 45.3 +1.7**
G30M	**tAoh Zraii Nji** baz=204	**49.52**	**10**	P		**P**	**16 14 44.7 +1.3**
F28M	**Old Crow** baz=200	**49.58**	**8**	P		**P**	**16 14 44.7 +0.9**
C16K	**Lisburne Hills** baz=168	**49.61**	**355**	P		**P**	**16 14 45.5 +1.5**
C17K	**DeLong Mountai** baz=170	**49.66**	**356**	P		**P**	**16 14 45.5 +1.1**
D20K	**Etivluk River** baz=179	**49.67**	**359**	P		**P**	**16 14 45.3 +0.8**
C18K	**Utukok River** baz=173	**49.72**	**357**	P		**P**	**16 14 45.3 +0.3**
TOLK	**Toolik Lake Re** baz=187	**49.73**	**3**	P		**P**	**16 14 45.8 +0.7**
G31M	**Satah River** G31M comp=Z,7.4nm,0.8s	**49.79**	**11**	P IAmb		**P** IAmb	**16 14 45.5 +0.1** 16 14 47.9
G31M	**Satah River** baz=207	**49.79**	**11**	P		**P**	**16 14 46.2 +0.8**
E27K	**Coleen River** baz=197	**49.91**	**7**	P		**P**	**16 14 47.5 +1.0**
D23K	**Nanushuk River** baz=186	**50.01**	**2**	P		**P**	**16 14 48.5 +1.4**
C21K	**Knifeblade Rid** baz=181	**50.11**	**0**	P		**P**	**16 14 49.3 +1.4**
F30M	**Barrier River** F30M comp=Z,5.7nm,1.1s	**50.16**	**10**	P IAmb		**P** IAmb	**16 14 48.2 -0.1** 16 15 13.2
F30M	**Barrier River** baz=204	**50.16**	**10**	P		**P**	**16 14 49.3 +1.0**
D24K	**Happy Valley** baz=188	**50.28**	**3**	P		**P**	**16 14 50.2 +1.1**
F31M	**Tsiigehtchic** baz=207	**50.35**	**11**	P		**P**	**16 14 50.7 +1.0**
E28M	**Babbage River** baz=200	**50.56**	**8**	P		**P**	**16 14 52.1 +0.9**
E29M	**Blow River** baz=202	**50.57**	**8**	P		**P**	**16 14 52.9 +1.6**
B21K	**Ikpikpuk River** baz=181	**50.58**	**0**	P		**P**	**16 14 52.9 +1.5**
D25K	**Kavik River** baz=191	**50.59**	**4**	P		**P**	**16 14 52.4 +0.9**
C23K	**Itkillik River** baz=186	**50.88**	**2**	P		**P**	**16 14 54.6 +1.0**
B20K	**Meade River** baz=178	**50.97**	**359**	P		**P**	**16 14 55.3 +1.0**
D27M	**Malcolm River** baz=198	**51.00**	**7**	P		**P**	**16 14 55.9 +1.3**
C27K	**Jago River** baz=194	**51.10**	**5**	P		**P**	**16 14 56.5 +1.2**
INK	**Inuvik** comp=Z,112nm,19.1s,baz=210,slow=34	**51.16**	**10**	LR		LR	16 34 37.9
INK	**Inuvik** baz=207,SNR=6.4	**51.16**	**10**	P		**P**	**16 14 56.3 +0.6**
A19K	**Wainwright** baz=173	**51.27**	**358**	P		**P**	**16 14 57.6 +1.1**
C26K	**Camden Bay** baz=193	**51.28**	**5**	P		**P**	**16 14 57.6 +1.0**
D28M	**Stokes Point** baz=200	**51.34**	**8**	P		**P**	**16 14 58.5 +1.4**
YKA	**Yellowknife Ar** comp=Z,2.2nm,0.6s,baz=233,slow=7.5,SNR=8.8	**51.75**	**23**	P		**P**	**16 15 01.6 +1.3**
YKA	comp=Z,76nm,20.2s,baz=298,slow=32 comp=Z,2.2nm,0.6s			LR		LR	16 33 39.2
YKA	**Yellowknife Ar**	**51.75**	**23**	P		**P**	**16 15 00.5 +0.3**
A22K	**Sinclair Lake** baz=181	**51.97**	**0**	P		**P**	**16 15 03.0 +1.3**
A21K	**Barrow** baz=179	**52.29**	**360**	P		**P**	**16 15 05.5 +1.4**
BILL	**Bilibino**	**54.55**	**343**	P		**P**	**16 15 20.5 -0.2**
ASAJ	**Asahikawa** comp=Z,54nm,21.6s,baz=194,slow=30	**56.90**	**311**	LR		LR	16 34 31.0
URZ	**Urewera** comp=Z,60nm,18.6s,baz=242,slow=33	**62.52**	**204**	LR		LR	16 40 06.8
RPN	**Rapa Nui** comp=Z,31nm,21.7s,baz=142,slow=29	**64.11**	**134**	LR		LR	16 36 53.4
BNX	**BinXian** BNX comp=Z,6.0nm,1.0s	**67.69**	**312**	⇓P	pmax	**P** pmax	**16 16 51.8 +1.6**
RPZ	**Rata Peaks** comp=Z,17nm,18.7s,baz=141,slow=35	**69.56**	**205**	LR		LR	16 46 21.1
L59A	**Walton** L59A comp=Z,13nm,1.3s	**70.53**	**51**	P IAmb		**P** IAmb	**16 17 06.5 -1.5** 16 17 42.3
MTDJ	**Mount Denham**	**73.27**	**76**	P		**P**	**16 17 22.6 -2.3**
YOJ	**Yonaguni jima**	**74.84**	**291**	P		**P**	**16 17 32.0 -1.9**
NJ2	**Nanjing** NJ2 comp=Z,37nm,0.5s	**76.55**	**299**	*e*P	pmax	**P** pmax	**16 17 43.5 0.0**
TIA	**Tai'an** TIA comp=Z,12nm,0.4s	**76.94**	**304**	P	pmax	**P** pmax	**16 17 46.5 +0.9**
HHC	**Hu-ho-hao-te** HHC comp=Z,10.0nm,0.5s	**79.93**	**310**	*e*P	pmax	**P** pmax	**16 18 03.3 +1.1**
HHC	comp=Z,55nm,5.0s				pmax	pmax	
ASAR	**Alice Springs** comp=Z,0.5nm,1.0s,baz=62,slow=6.5,SNR=4.4 comp=Z,0.5nm,1.0s	**80.85**	**241**	P		**P**	**16 18 08.5 +1.3**
SONM	**Songino Array** comp=Z,0.8nm,0.7s,baz=87,slow=5.2,SNR=4.2 comp=Z,0.8nm,0.7s	**81.37**	**318**	P		**P**	**16 18 11.4 +1.6**
LZH	**Lanzhou** LZH comp=Z,22nm,1.1s	**87.20**	**307**	*e*P sP	pmax	**P** sP	**16 18 39.5 -0.2** 16 18 57.3 +0.2
GTA2	**Gaotai** GTA2 GTA2 comp=Z,2.0nm,0.9s	**88.89**	**312**	*e*P pP	pmax	**P** pP	**16 18 49.3 +1.7** 16 18 59.8 -0.5
H03N2	**Juan Fernandez** baz=298,slow=76,SNR=94	**89.68**	**126**	T		T	17 58 12.8
H03N3	**Juan Fernandez** baz=298,slow=76,SNR=98	**89.69**	**126**	T		T	17 58 13.9
H03N1	**Juan Fernandez** baz=298,slow=76,SNR=79	**89.70**	**126**	T		T	17 58 14.6
ZALV	**Zalesovo Beam** comp=Z,24nm,20.4s,baz=90,slow=35	**90.87**	**329**	LR		LR	16 58 50.8
PZH	**PanZhiHua**	**92.46**	**299**	P		**P**	**16 19 04.5 0.0**
KURBB	**Kurchatov Arra** comp=Z,25nm,18.0s,baz=172,slow=37	**95.95**	**329**	LR		LR	17 05 21.5
VNDA	**Vanda** comp=Z,34nm,18.9s,baz=348,slow=31	**99.50**	**189**	LR		LR	16 56 53.2
ARTI	**Arti** comp=Z,59nm,18.9s,baz=90,slow=38	**99.62**	**342**	LR		LR	17 08 42.5

*NEIC **27** 16:33:47.3±1.5,22°.26N±0°.03×144°.2E±0°.1,h41km±8km, mb4.3/16,Error ellipse: s-maj=19.8km s-min=3.7km az=82.0*
*IDC **27** 16:34:07.1±5.3,21°.93N×144°.07E,h238km±48km, mb3.4/10,mbtmp3.9/11,Error ellipse: s-maj=42.4km s-min=18.0km az=80.0*

ISC 27 16:33:46.2±0.8,22°.21N±0°.08×144°.2E±0°.1,h35km,n31, σ0s87/30,mb4.2/16,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.19**	**340**	Pn	**Pn**	**16 35 01.6**	**+0.3**
JCJ				Sn	**Sn**	**16 35 58.6**	**-1.4**
JMZ	**Minamidaito 2**	**12.37**	**289**	Pn	**Pn**	**16 36 40.2**	**+0.5**
JYT	**Yasato**	**14.39**	**347**	Pn	**Pn**	**16 37 06.7**	**-0.6**
MJAR	**Matsushiro Arr** 0.5nm,0.4s,baz=160,slow=8.1,SNR=4.8	**15.19**	**341**	P	P	16 37 31.7	+8.9
MAJO	**Matsushiro** comp=Z,3.0nm,0.7s	**15.19**	**341**	Pn IAmb	**Pn** IAmb	**16 37 19.3** 16 37 39.5	**+1.2**
MJB9	**Matsu-Tunnel**	**15.20**	**341**		**P**	**16 37 21.2**	**-1.6**
JSU	**Suzuyama**	**15.34**	**310**	P	**P**	**16 37 23.7**	**-0.7**
KSRS	**Korea Array** comp=Z,2.2nm,0.8s,baz=148,slow=8.6,SNR=15 comp=Z,2.2nm,0.8s	**20.68**	**321**	P	Pn	16 38 31.0	+5.5
MMRI	**Maumere**	**37.45**	**217**	P	**P**	**16 40 56.2**	**-0.3**
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=123,slow=7.8,SNR=2.9 comp=Z,0.5nm,0.6s	**39.54**	**320**	P	**P**	**16 41 16.1**	**+2.3**
SONM	**Songino Array**	**39.54**	**320**	P	**P**	**16 41 15.0**	**+1.2**
WB0	**Warramunga Arr**	**42.80**	**194**	P	**P**	**16 41 40.4**	**-0.4**
WB0	comp=Z,10nm,1.2s			IAmb	IAmb	16 42 14.1	
WRAB	**Tennant Creek**	**42.98**	**194**	P	**P**	**16 41 42.1**	**0.0**
WRAB	comp=Z,10nm,1.4s			IAmb	IAmb	16 41 52.2	
WB2	**Warramunga Arr**	**42.98**	**194**	P	**P**	**16 41 42.1**	**-0.1**
WB2	comp=Z,8.1nm,1.3s			IAmb	IAmb	16 41 55.9	
WRA	**Warramunga Arr** comp=Z,0.4nm,0.9s,baz=16,slow=9.0,SNR=8.4 comp=Z,0.4nm,0.9s	**42.99**	**194**	P	**P**	**16 41 40.8**	**-1.4**
LHMI	**Lhok Sumawe**	**48.65**	**257**	P	**P**	**16 42 26.8**	**-0.3**
O15K	**Ungalikthiuk R**	**53.91**	**32**	P	**P**	**16 43 06.7**	**+0.7**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,baz=104,slow=11,SNR=4.8 comp=Z,0.5nm,0.3s	**54.38**	**321**	P	**P**	**16 43 10.2**	**+0.8**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.6s,baz=85,slow=11,SNR=6.3 comp=Z,0.7nm,0.6s	**55.03**	**312**	P	**P**	**16 43 14.7**	**+0.4**
KURK	**Kurchatov** KURK comp=Z,2.9nm,0.8s	**57.73**	**317**	P IAmb	**P** IAmb	**16 43 33.6** 16 43 34.4	**+0.2**
KURBB	**Kurchatov Arra** comp=Z,2.9nm,0.5s,baz=93,slow=7.6,SNR=67 comp=Z,2.9nm,0.5s	**57.78**	**317**	P	**P**	**16 43 34.2**	**+0.5**
BOOM	**Boomskoye usch** BOOM comp=Z,7.7nm,1.4s	**59.53**	**307**	P IAmb	**P** IAmb	**16 43 46.6** 16 44 21.7	**+0.2**
BVAR	**Borovoye Array** comp=Z,3.8nm,0.4s,baz=94,slow=7.1,SNR=20 comp=Z,3.8nm,0.4s	**62.88**	**319**	P	**P**	**16 44 09.3**	**+0.6**
KKAR	**Karatay Array**	**63.46**	**308**	P	**P**	**16 44 12.4**	**-0.2**
AB31	**Akbulak array** AB31 comp=Z,1.5nm,0.6s	**69.82**	**316**	P IAmb	**P** IAmb	**16 44 52.6** 16 44 53.3	**-0.5**
YKAW3	**Yellowknife Wh** YKAW3 comp=Z,1.9nm,1.0s	**75.54**	**28**	P IAmb	**P** IAmb	**16 45 27.1** 16 45 27.4	**+0.2**
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.6s,baz=288,slow=5.9,SNR=2.4 comp=Z,0.7nm,0.6s	**75.57**	**28**	P	**P**	**16 45 27.2**	**+0.2**
ARCES	**ARCESS Array B** comp=Z,2.4nm,0.9s,baz=74,slow=8.9,SNR=5.8 comp=Z,2.4nm,0.9s	**78.72**	**342**	P	**P**	**16 45 43.7**	**-0.9**
ARCES	**ARCESS Array B**	**78.72**	**342**	P	**P**	**16 45 44.2**	**-0.4**
FINES	**FINESS Array B** comp=Z,0.7nm,0.4s,baz=54,slow=4.1,SNR=14 comp=Z,0.7nm,0.4s	**83.11**	**335**	P	**P**	**16 46 07.2**	**-0.9**
FINES	**FINESS Array B**	**83.11**	**335**	P	**P**	**16 46 07.5**	**-0.6**

IDC 27 16:34:29.8±9.5,21°.92N×146°.18E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=357.6km s-min=31.1km az=78.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=18,slow=8.2,SNR=12 0.3nm,0.3s	**43.18**	**196**	P	P	16 42 32.4	-0.1
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=107,slow=4.8,SNR=2.4 0.4nm,0.4s	**55.78**	**321**	P	P	16 44 08.9	+0.5
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=74,slow=6.1,SNR=5.2 0.3nm,0.5s	**56.60**	**312**	P	P	16 44 13.9	-0.5

*NEIC **27** 16:34:36.9±0.6,32°.76S±0°.08×178°.6W±0°.1,h15km±6km, mb4.3/8,Error ellipse: s-maj=18.0km s-min=10.6km az=101.0*
*IDC **27** 16:34:41.9±8.7,32°.85S×178°.72W,h51km±69km,mb3.7/3, mbtmp4.0/4,ML3.6/1,Error ellipse: s-maj=57.7km s-min=32.4km az=52.0*

ISC 27 16:34:36.6±1.2,32°.74S±0°.09×178°.8W±0°.2,h10km,n21, σ0s69/15,mb4.1/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.55**	**12**	Pn	**Pn**	**16 35 31.1**	**-0.6**
MXZ	**Matakaoa Point**	**5.38**	**206**	Pn	**Pn**	**16 35 56.8**	**-0.2**
URZ	**Urewera** 1.2nm,0.3s,baz=262,slow=4.9,SNR=34	**6.46**	**210**	P	**Pn**	**16 36 13.2**	**+1.4**
URZ	18nm,0.6s,baz=107,slow=21,SNR=6.5 3.3nm,0.3s			S	**Sn**	**16 37 25.1**	**-0.4**
RTZ	**Ruatahuna**	**6.82**	**209**		**Pn**	**16 36 17.3**	**+0.6**
PMG	**Port Moresby**	**39.10**	**299**	P	**P**	**16 42 03.9**	**-0.3**
AS31	**Alice Springs** AS31 comp=Z,1.7nm,1.3s	**42.40**	**270**	P IAmb	**P** IAmb	**16 42 31.5** 16 42 33.2	**0.0**
ASAR	**Alice Springs** comp=Z,1.0nm,0.7s,baz=108,slow=8.3,SNR=11 comp=Z,1.0nm,0.7s	**42.40**	**270**	P	**P**	**16 42 31.8**	**+0.2**
ASAR	**Alice Springs**	**42.40**	**270**	P	**P**	**16 42 31.3**	**-0.2**
WRAB	**Tennant Creek** WRAB comp=Z,13nm,1.5s	**43.60**	**275**	P IAmb	**P** IAmb	**16 42 41.4** 16 42 42.2	**+0.2**
WRA	**Warramunga Arr** comp=Z,1.5nm,0.6s,baz=116,slow=6.5,SNR=16 comp=Z,1.5nm,0.6s	**43.60**	**275**	P	**P**	**16 42 41.5**	**+0.3**
WB0	**Warramunga Arr** WB0 comp=Z,4.0nm,0.8s	**43.64**	**275**	P IAmb	**P** IAmb	**16 42 41.6** 16 42 42.0	**0.0**
SAUI	**Saumlaki**	**52.31**	**287**	P	**P**	**16 43 48.2**	**-0.5**
QSPA	**South Pole Qui** comp=Z,2.6nm,1.0s,baz=90,slow=16,SNR=5.3 comp=Z,2.6nm,1.0s	**57.38**	**180**	P	**P**	**16 44 24.2**	**-0.8**
QSPA	**South Pole Qui** comp=Z,4.8nm,1.1s	**57.38**	**180**	IAmb	IAmb	16 44 44.5	
H03S2	**Juan Fernandez** baz=235	**79.71**	**124**	T	T	18 15 10.0	
H03S1	**Juan Fernandez** baz=235	**79.72**	**124**	T	T	18 15 10.0	
H03S3	**Juan Fernandez** baz=235	**79.73**	**124**	T	T	18 15 09.4	
H03N3	**Juan Fernandez** baz=240,slow=72,SNR=4.1	**79.92**	**123**	T	T	18 15 17.3	
H03N2	**Juan Fernandez** baz=240,slow=72,SNR=4.5	**79.92**	**123**	T	T	18 15 16.0	
H03N1	**Juan Fernandez** baz=240,slow=72,SNR=20	**79.93**	**123**	T	T	18 15 16.8	
FINES	**FINESS Array B** comp=Z,1.3nm,0.7s,baz=31,slow=3.7,SNR=5.5	**147.09**	**338**	PKPbc	**PKPdf**	**16 54 18.1**	**+1.2**

*IDC **27** 16:37:34.0±0.6,62°.11N×26°.52W,h0km,mb3.8/22,*
mbtmp3.9/25,ML3.9/3,MS3.7/44,Error ellipse: s-maj=17.8km s-min=11.3km az=3.0
*NEIC **27** 16:37:36.6±1.7,62°.26N±0°.08×26°.3W±0°.1,h10km±1km, mb4.4/46,Error ellipse: s-maj=14.1km s-min=10.6km az=163.0*
*GFZ **27** 16:37:38.5±0.3,62°.N±3°×2°.6W±°,h10km,M4.2/27, mb4.2/27*

ISC 27 16:37:36.2±0.4,62°.25N±0°.07×26°.35W±0°.05,h10km,n138, σ1s26/106,mb4.2/43,MS3.7/40,Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes** 33nm,0.3s,baz=233,slow=2.7,SNR=155	**3.37**	**40**	Pn	**Pn**	**16 38 27.8**	**-0.9**
BORG	2.9nm,0.3s,baz=41,slow=17,SNR=6.2 150nm,0.5s			Sn	**Sn**	**16 39 08.7**	**0.0**
BORG	**Borgarnes**	**3.37**	**40**		**Pn**	**16 38 27.5**	**-1.3**
BORG	**Borgarnes**	**3.37**	**40**	P	**Pn**	**16 38 27.8**	**-0.9**
ANGG	**Ammassalik, Gr**	**6.01**	**309**	P	**Pn**	**16 39 08.4**	**+3.4**
SCO	**Scoresbysund**	**8.45**	**10**	P	**Pn**	**16 39 38.5**	**+0.1**
NRS	**Narsarsuaq**	**9.12**	**272**	Pn	**Pn**	**16 39 48.0**	**+0.4**
JMIC	**Jan Mayen**	**11.21**	**31**	P	**Pn**	**16 40 15.5**	**-0.7**
SUMG	**Summit**	**11.33**	**341**		**Pn**	**16 40 17.6**	**-0.6**
SUMG	**Summit**	**11.33**	**341**	P	**Pn**	**16 40 18.8**	**+0.7**
SFJD	**Kangerlussuaq** 1.1nm,0.3s,baz=136,slow=7.8,SNR=3.5	**11.40**	**305**	Pn	**Pn**	**16 40 17.8**	**-1.0**
SFJD	comp=Z,996nm,18.1s,baz=54,slow=35 6.7nm,0.7s			LR	LR	16 44 09.5	
SFJD	**Kangerlussuaq**	**11.40**	**305**	P	**Pn**	**16 40 23.4**	**+4.7**
NUUK	**Nuuk**	**11.58**	**291**	P	**Pn**	**16 40 24.7**	**+3.4**
EKA	**Eskdalemuir Ar** baz=304,slow=9.0	**13.81**	**110**	Pn	**Pn**	**16 40 51.7**	**-0.1**
EKA	comp=Z,348nm,19.0s,baz=358,slow=34 3.8nm,0.9s			LR	LR	16 45 19.4	
NOA	**NORSAR Array B** comp=Z,79nm,18.1s,baz=290,slow=36	**17.72**	**77**	LR	LR	16 48 24.1	
FRB	**Frobisher Bay** comp=Z,560nm,18.8s,baz=66,slow=35	**18.97**	**293**	LR	LR	16 48 34.6	
HFS	**Hagfors** comp=Z,96nm,18.0s,baz=292,slow=36	**19.20**	**78**	LR	LR	16 49 18.8	
NOR	**Nord**	**19.62**	**4**	P	**P**	**16 42 04.0**	**-0.2**
TULEG	**Thule**	**19.95**	**332**	P	**P**	**16 42 08.2**	**+0.3**
SPITS	**Spitsbergen Ar** 1.8nm,0.7s,baz=245,slow=10.0,SNR=4.1 1.8nm,0.7s	**20.67**	**23**	P	Pn	16 42 17.6	-0.5
BSEG	**Bad Segeberg**	**20.82**	**97**	P	**P**	**16 42 17.7**	**+0.2**
HGN	**Heimansgroeve**	**20.94**	**108**	P	**P**	**16 42 19.3**	**+0.5**
RCHB	**Rochefort**	**21.07**	**111**	P	**P**	**16 42 21.5**	**+1.3**
MEM	**Membach**	**21.09**	**109**	P	**P**	**16 42 20.2**	**-0.2**
DRLN	**Deer Lake** DRLN comp=Z,30nm,1.5s	**21.56**	**247**	P IAmb	**P** IAmb	**16 42 24.9** 16 42 54.4	**-0.6**
ARCES	**ARCESS Array B** comp=Z,2.2nm,0.7s,baz=272,slow=8.1,SNR=8.1	**21.73**	**48**	P	**P**	**16 42 27.7**	**+0.5**
ARCES	comp=Z,87nm,18.9s,baz=292,slow=33 comp=Z,2.2nm,0.7s			LR	LR	16 49 35.4	
ARCES	**ARCESS Array B** comp=Z,7.5nm,1.1s	**21.73**	**48**	IAmb	IAmb	16 42 33.3	
SCHQ	**Schefferville** comp=Z,3.9nm,0.7s,baz=40,slow=4.9,SNR=5.6	**22.07**	**269**	P	**P**	**16 42 29.5**	**-1.4**
SCHQ	comp=Z,56nm,21.7s,baz=69,slow=33 comp=Z,3.9nm,0.7s			LR	LR	16 49 47.1	
SCHQ	**Schefferville**	**22.07**	**269**	P	**P**	**16 42 30.3**	**-0.6**
SCHQ	comp=Z,15nm,1.2s			IAmb	IAmb	16 42 31.5	
ASSE	**Asse, Remlinge**	**22.15**	**100**	P	**P**	**16 42 32.3**	**+0.6**
CLZ	**Clausthal**	**22.20**	**101**	P	**P**	**16 42 33.1**	**+0.7**
KEV	**Kevo**	**22.23**	**48**	P	**P**	**16 42 32.5**	**+0.1**
RNF	**Rovaniemi**	**22.43**	**56**	P	**P**	**16 42 33.0**	**-1.7**
SGF	**Sodankyl**	**22.44**	**54**	P	**P**	**16 42 32.8**	**-1.9**
TNS	**Taunus Mts**	**22.45**	**106**	P	**P**	**16 42 35.2**	**0.0**
OUL	**Oulu**	**22.79**	**60**	P	**P**	**16 42 37.2**	**-1.3**
WIMM	**Wimmelburg**	**22.94**	**100**	P	**P**	**16 42 40.8**	**+0.7**
ECH	**Echery** ECH comp=Z,11nm,1.1s	**23.36**	**111**	IAmb	**P** IAmb	**16 42 45.1** 16 42 47.7	**+0.5**
ECH	**Echery**	**23.36**	**111**	P	**P**	**16 42 44.5**	**0.0**
ECAL	**Calabor**	**23.45**	**141**	P	**P**	**16 42 48.0**	**+2.4**
MOX	**Moxa**	**23.59**	**102**	P	**P**	**16 42 46.5**	**-0.3**
CLL	**Collm**	**23.78**	**99**	*e*P	**P**	**16 42 50.0**	**+1.5**
CLL				*e*PP	**PnPn**	**16 43 19.0**	**+3.0**
CLL				*e*S	**S**	**16 47 03.0**	**-0.7**
CLL	comp=Z,100nm,21.5s			AMS	AMS	16 51 00.0	
BFO	**Black Forest**	**23.79**	**110**		**P**	**16 42 49.1**	**+0.3**
TANN	**Tannenbergstha**	**24.14**	**101**	P	**P**	**16 42 52.1**	**0.0**
FINES	**FINESS Array B** comp=Z,1.1nm,0.7s,baz=293,slow=12,SNR=5.6	**24.20**	**68**	P	**P**	**16 42 52.9**	**+0.5**
FINES	comp=Z,81nm,19.7s,baz=299,slow=36 comp=Z,1.1nm,0.7s			LR	LR	16 52 01.6	
MANZ	**Manzenberg**	**24.28**	**103**	P	**P**	**16 42 53.4**	**+0.1**
SLE	**Schleitheim**	**24.29**	**110**	P	**P**	**16 42 54.0**	**+0.5**
BNALP	**Bannalp**	**24.95**	**112**	P	**P**	**16 43 01.0**	**+1.4**
WET	**Wettzell**	**25.23**	**103**	P	**P**	**16 43 03.1**	**+1.2**
RETA	**Reutte** comp=Z,3.8nm,1.0s	**25.50**	**108**	*e*P	**P**	**16 43 04.7**	**+0.2**
DAVOX	**Davos/Dischmat** comp=Z,2.0nm,0.7s,baz=296,slow=17,SNR=4.1	**25.65**	**110**	P	**P**	**16 43 04.5**	**-1.5**
DAVOX	comp=Z,67nm,20.0s,baz=260,slow=35 comp=Z,2.0nm,0.7s			LR	LR	16 52 29.7	
TUE	**Stuetta** TUE comp=Z,8.7nm,0.8s	**25.66**	**111**	IAmb	**P** IAmb	**16 43 06.4** 16 43 10.8	**+0.4**
TUE	**Stuetta**	**25.66**	**111**	P	**P**	**16 43 07.8**	**+1.8**
MOTA	**Moosalm** comp=Z,3.7nm,0.7s	**25.76**	**108**	*e*P	**P**	**16 43 07.2**	**+0.3**
GERES	**GERESS Array B** comp=Z,0.3nm,0.6s,baz=305,slow=9.7,SNR=6.1	**25.83**	**103**	P	**P**	**16 43 05.5**	**-1.9**
GERES	comp=Z,166nm,20.0s,baz=353,slow=36 comp=Z,0.3nm,0.6s			LR	LR	16 53 10.9	
FUORN	**Ofenpass-Fuorn** FUORN comp=Z,5.8nm,1.1s	**25.95**	**110**	P IAmb	**P** IAmb	**16 43 06.4** 16 43 21.7	**-2.3**
PESTR	**Estremoz** PESTR comp=Z,8.7nm,1.0s	**26.07**	**145**	P IAmb	**P** IAmb	**16 43 07.7** 16 43 13.3	**-1.9**
RES	**Resolute Bay** comp=Z,206nm,20.8s,baz=42,slow=35	**26.18**	**326**	LR	LR	16 52 51.7	
RJOB	**Jochberg**	**26.23**	**105**	P	**P**	**16 43 12.1**	**+1.0**
ESDC	**Sonseca Array** comp=Z,4.3nm,1.1s,baz=338,slow=8.9,SNR=14	**26.37**	**139**	P	**P**	**16 43 11.6**	**-0.8**
ESDC	comp=Z,161nm,20.8s,baz=302,slow=33 comp=Z,4.3nm,1.1s			LR	LR	16 51 56.4	
ESDC	**Sonseca Array** ESDC comp=Z,17nm,1.4s	**26.37**	**139**	IAmb	**P** IAmb	**16 43 13.3** 16 43 16.3	**+1.0**
LESA	**Schwarzleotal** comp=Z,131nm,4.2s	**26.41**	**106**	*e*P	**P**	**16 43 13.0**	**+0.3**
VRAC	**Vranov** comp=Z,127nm,18.3s,baz=317,slow=38	**26.82**	**99**	LR	LR	16 54 38.3	
KBA	**Koelnbreinsper** comp=Z,1.2nm,0.6s	**26.97**	**106**	*e*P	**P**	**16 43 17.8**	**-0.1**
MYKA	**Terra Mystica** comp=Z,1.1nm,0.5s	**27.44**	**106**	*e*P	**P**	**16 43 22.5**	**+0.5**
AKASG	**Malin Array Be** comp=Z,0.4nm,0.6s,baz=294,slow=9.0,SNR=1.5	**31.76**	**85**	P	**P**	**16 44 00.7**	**+0.6**
AKASG	comp=Z,74nm,19.4s,baz=310,slow=36 comp=Z,0.4nm,0.6s			LR	LR	16 56 38.1	
BURAR	**Bucovina Array**	**32.05**	**93**	P	**P**	**16 44 04.2**	**+1.4**
MD01	**Midelt array s**	**32.48**	**145**		**P**	**16 44 07.4**	**+0.7**
MD31	**MD31** MD31 comp=Z,9.9nm,1.4s	**32.48**	**145**	P IAmb	**P** IAmb	**16 44 07.4** 16 44 10.6	**+0.8**
MDT	**Midelt** comp=Z,84nm,20.4s,baz=60,slow=34	**32.57**	**145**	LR	LR	16 56 15.2	
MLR	**Muntele Rosu** comp=Z,91nm,18.1s,baz=352,slow=38	**33.95**	**95**	LR	LR	16 59 09.0	
KEST	**Kesra** comp=Z,228nm,18.6s,baz=338,slow=36	**34.61**	**123**	LR	LR	16 58 24.7	
**SADO

YKA				LR	LR	16 59 52.4	
	comp=Z,194nm,18.7s,baz=82,slow=35						
	comp=Z,1.1nm,0.8s						
ULM	**Lac du Bonnet**	**38.50**	**285**	LR	LR	16 59 40.5	
	comp=Z,102nm,19.5s,baz=3.0,slow=34						
INK	**Inuvik**	**39.74**	**326**	LR	LR	17 01 36.0	
	comp=Z,145nm,18.4s,baz=52,slow=36						
NRIK	**Norilsk**	**40.63**	**30**	LR	LR	17 02 31.0	
	comp=Z,85nm,18.6s,baz=152,slow=37						
E29M	**Blow River**	**40.79**	**328**	P	**P**	**16 45 17.9 +1.0**	
F30M	**Barrier River**	**40.83**	**326**	P	**P**	**16 45 18.1 +0.7**	
F30M				IAmb	IAmb	16 45 19.3	
	comp=Z,5.9nm,1.0s						
BRTR	**Keskin Array B**	**42.00**	**94**	P	**P**	**16 45 28.2 +0.8**	
	comp=Z,0.3nm,0.4s,baz=337,slow=6.9,SNR=2.0						
BRTR				LR	LR	17 03 41.7	
	comp=Z,55nm,18.8s,baz=280,slow=37						
	comp=Z,0.3nm,0.4s						
KVAR	**Kislovodsk Arr**	**42.93**	**82**	LR	LR	17 02 48.2	
	comp=Z,75nm,18.8s,baz=282,slow=35						
KBZ	**Khabaz**	**43.20**	**82**	P	**P**	**16 45 37.4 +0.5**	
	comp=Z,1.6nm,0.9s,baz=254,slow=6.7,SNR=2.2						
KBZ				LR	LR	17 03 12.7	
	comp=Z,100nm,20.6s,baz=358,slow=36						
	comp=Z,1.6nm,0.9s						
TKL	**Tuckaleechee C**	**44.10**	**260**	LR	LR	17 02 35.0	
	comp=Z,70nm,19.8s,baz=22,slow=34						
G24K	**Hadweenzic Riv**	**44.40**	**331**	P	**P**	**16 45 46.7 +0.4**	
G24K				IAmb	IAmb	16 46 00.7	
	comp=Z,11nm,1.2s						
AKTO	**Aktyubinsk**	**44.86**	**64**	LR	LR	17 04 30.7	
	comp=Z,176nm,18.1s,baz=280,slow=36						
M29M	**Somme Creek**	**45.54**	**323**	P	**P**	**16 45 57.7 +2.1**	
M29M				IAmb	IAmb	16 45 58.5	
	comp=Z,4.0nm,0.9s						
CCM	**Cathedral Cave**	**45.64**	**269**	P	**P**	**16 45 56.5 0.0**	
CCM				IAmb	IAmb	16 45 59.8	
	comp=Z,3.0nm,0.7s						
ILAR	**Eielson Array**	**45.85**	**329**	P	**P**	**16 45 56.7 -1.2**	
	comp=Z,0.6nm,0.9s,baz=12,slow=6.4,SNR=4.6						
ILAR				LR	LR	17 06 35.0	
	comp=Z,81nm,18.0s,baz=20,slow=38						
	comp=Z,0.6nm,0.9s						
L27K	**Beaver Creek,**	**45.97**	**325**	P	**P**	**16 46 00.2 +1.4**	
L27K				IAmb	IAmb	16 46 05.7	
	comp=Z,7.4nm,1.4s						
DLBC	**Dease Lake**	**46.10**	**315**	LR	LR	17 04 57.6	
	comp=Z,103nm,18.8s,baz=32,slow=36						
IMAR	**Indian Mountai**	**46.37**	**333**	P	**P**	**16 46 03.1 +1.1**	
GNI	**Garni**	**46.85**	**84**	LR	LR	17 07 21.7	
	comp=Z,57nm,18.5s,baz=349,slow=38						
S39A	**Bolivar**	**46.90**	**271**	P	**P**	**16 46 06.5 +0.1**	
S39A				IAmb	IAmb	16 46 07.7	
	comp=Z,3.9nm,0.8s						
LCAR	**Lake Charles**	**47.20**	**268**	P	**P**	**16 46 09.1 +0.4**	
BVAR	**Borovoye Array**	**47.85**	**54**	P	**P**	**16 46 13.8 +0.2**	
	comp=Z,1.8nm,0.9s,baz=318,slow=6.0,SNR=7.7						
	comp=Z,1.8nm,0.9s						
WHAR	**Wooly Hollow**	**48.37**	**268**	P	**P**	**16 46 18.1 +0.3**	
NEW	**Newport**	**49.21**	**298**	LR	LR	17 06 51.6	
	comp=Z,116nm,19.3s,baz=34,slow=36						
BW06	**Boulder Array**	**50.31**	**288**	P	**P**	**16 46 32.5 -0.4**	
BW06				IAmb	IAmb	16 46 34.0	
	comp=Z,2.4nm,0.8s						
PD31	**Pinedale Array**	**50.31**	**288**	P	**P**	**16 46 31.9 -0.9**	
PD31				IAmb	IAmb	16 46 34.0	
	comp=Z,2.5nm,0.9s						
PDAR	**Pinedale Array**	**50.31**	**288**	P	**P**	**16 46 31.3 -1.6**	
	comp=Z,1.8nm,0.8s,baz=54,slow=7.5,SNR=13						
PDAR				LR	LR	17 06 54.3	
	comp=Z,74nm,18.9s,baz=30,slow=35						
	comp=Z,1.8nm,0.8s						
BBB	**Bella Bella**	**50.39**	**309**	LR	LR	17 07 58.6	
	comp=Z,168nm,18.3s,baz=48,slow=36						
PLID	**Pearl Lake**	**51.26**	**295**	P	**P**	**16 46 39.9 -0.2**	
KURK	**Kurchatov**	**52.75**	**50**	P	**P**	**16 46 50.9 +0.3**	
KURBB	**Kurchatov Arra**	**52.79**	**51**	P	**P**	**16 46 52.4 +1.4**	
	comp=Z,1.1nm,0.9s,baz=321,slow=7.1,SNR=9.0						
	comp=Z,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**52.98**	**145**	P	**P**	**16 46 51.6 -1.2**	
	comp=Z,0.9nm,0.7s,baz=336,slow=9.5,SNR=4.2						
	comp=Z,0.9nm,0.7s						
KDAK	**Kodiak Island**	**53.27**	**327**	LR	LR	17 10 58.2	
	comp=Z,90nm,18.6s,baz=60,slow=38						
DKNS	**Dickens**	**53.74**	**274**	IAmb	IAmb	16 47 00.2	
	comp=Z,4.9nm,0.8s						
Q16A	**Castle Valley**	**54.14**	**287**	P	**P**	**16 47 00.9 -0.5**	
Q16A				IAmb	IAmb	16 47 09.7	
	comp=Z,5.1nm,1.1s						
ELK	**Elko**	**54.45**	**291**	P	**P**	**16 47 04.1 +0.5**	
	comp=Z,2.0nm,0.9s,baz=20,slow=4.4,SNR=6.3						
ELK				LR	LR	17 09 32.5	
	comp=Z,200nm,21.0s,baz=32,slow=35						
	comp=Z,2.0nm,0.9s						
ELK	**Elko**	**54.45**	**291**		**P**	**16 47 04.3 +0.7**	
BRDY	**Brady**	**54.82**	**271**	P	**P**	**16 47 05.0 -1.1**	
BRDY				IAmb	IAmb	16 47 10.7	
	comp=Z,3.9nm,1.1s						
ANMO	**Albuquerque**	**55.25**	**280**	LR	LR	17 09 04.9	
	comp=Z,114nm,20.0s,baz=32,slow=34						
SGCY	**Sterling City**	**55.29**	**273**	P	**P**	**16 47 10.1 +0.5**	
PSUT	**Pine Spring**	**55.65**	**288**	P	**P**	**16 47 12.7 +0.3**	
PSUT				IAmb	IAmb	16 47 14.6	
	comp=Z,2.1nm,0.8s						
KKAR	**Karatay Array**	**55.89**	**61**	P	**P**	**16 47 14.0 +0.3**	
YBH	**Yreka Blue Hor**	**56.83**	**297**	LR	LR	17 11 39.0	
	comp=Z,192nm,18.3s,baz=28,slow=36						
MKAR	**Makanchi Array**	**57.36**	**51**	P	**P**	**16 47 24.8 +0.7**	
	comp=Z,1.1nm,0.8s,baz=325,slow=5.9,SNR=7.1						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**57.36**	**51**	P	**P**	**16 47 25.0 +0.8**	
DBIC	**Dimbokro**	**57.69**	**154**	LR	LR	17 09 54.2	
	comp=Z,71nm,18.8s,baz=332,slow=34						
NVAR	**Mina Array Bea**	**57.69**	**292**	LR	LR	17 11 54.4	
	comp=Z,196nm,20.6s,baz=36,slow=36						
DSP	**Deep Springs**	**58.43**	**291**	P	**P**	**16 47 32.6 +0.9**	
MA2	**Magadan**	**58.48**	**2**	LR	LR	17 11 49.0	
	comp=Z,52nm,18.3s,baz=258,slow=35						
TXAR	**Lajitas Array**	**58.64**	**274**	P	**P**	**16 47 33.4 0.0**	
	comp=Z,0.4nm,0.9s,baz=39,slow=8.0,SNR=3.5						
TXAR				LR	LR	17 12 18.7	
	comp=Z,98nm,18.7s,baz=20,slow=36						
	comp=Z,0.4nm,0.9s						
GWY	**Greenwater Val**	**58.85**	**289**	P	**P**	**16 47 34.8 -0.1**	
TEIG	**Tepich**	**59.30**	**255**	P	**P**	**16 47 36.6 -1.3**	
	comp=Z,0.1nm,0.4s,baz=45,slow=24,SNR=2.6						
MPMC	**Manual Prospec**	**59.32**	**290**	IAmb	IAmb	16 47 43.6	
	comp=Z,1.9nm,0.9s						
PFO	**Pinyon Flats O**	**60.91**	**287**	LR	LR	17 12 51.8	
	comp=Z,101nm,21.4s,baz=46,slow=35						
SONM	**Songino Array**	**63.96**	**33**	P	**P**	**16 48 10.0 +0.8**	
	comp=Z,0.5nm,0.8s,baz=337,slow=7.1,SNR=4.6						
	comp=Z,0.5nm,0.8s						
SONM	**Songino Array**	**63.96**	**33**	IAmb	IAmb	16 48 12.1	
	comp=Z,2.0nm,1.2s						
CMIG	**Matias Romero**	**65.05**	**259**	P	**P**	**16 48 13.3 -3.2**	
	comp=Z,1.6nm,0.3s,baz=29,slow=22,SNR=2.3						
	comp=Z,1.6nm,0.3s						
LPIG	**La Paz**	**66.18**	**277**	LR	LR	17 16 55.4	
	comp=Z,161nm,19.3s,baz=19,slow=36						
KS19	**Wonju Array Si**	**78.43**	**21**	P	**P**	**16 49 35.1 -1.7**	
KSAR	**Wonju Array Be**	**78.49**	**21**	P	**P**	**16 49 34.0 -3.1**	
CMAR	**Chiang Mai Arr**	**88.77**	**51**	P	**P**	**16 50 30.4 +0.4**	
	comp=Z,0.5nm,0.3s,baz=313,slow=4.9,SNR=5.5						
	comp=Z,0.5nm,0.3s						
MAW	**Mawson**	**144.47**	**139**	PKP	PKPbc	16 57 10.1 +0.6	
	comp=Z,2.9nm,0.9s,baz=319,slow=8.0,SNR=6.4						
MAW	**Mawson**	**144.47**	**139**		PKPbc	16 57 10.5 +1.1	
QSPA	**South Pole Qui**	**152.16**	**180**	PKPbc	**PKPbc**	**16 57 29.7 -0.5**	
	comp=Z,1.6nm,1.0s,baz=191,slow=2.8,SNR=3.6						

*ISK **27** 16:45:33.3,34°.87N×27°.16E,h5km,ML3.0/9*
*ATH **27** 16:45:34.3,34°.98N×27°.19E,h8km±3km,ML2.9/5,Latitude uncertainty: 10 km; Longitude uncertainty: 3 km*
*IDC **27** 16:45:36.9±2.3,35°.47N×27°.23E,h0km,mb3.6/3, mbtmp3.5/4,ML2.8/1,Error ellipse: s-maj=69.0km s-min=19.9km az=169.0*
*THE **27** 16:45:36.2,35°.95N×27°.6E×7,h8km±47km,MLh2.9/2*
*AFAD **27** 16:45:41.0,35°.24N×27°.52E,h34km,ML2.6*

ISC 27 16:45:35.9±1.6,34°.97N±0°.08×27°.13E±0°.04,h13km±9km, n38,σ1°.08/50,mb3.6/3,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZKR	**Zakros**	**0.76**	**281**	Pg		**Pg**	**16 45 50.1**	**-0.6**
ZKR						Sg	**16 46 02.4**	**+1.7**
ZKR	**Zakros**	**0.76**	**281**	P		**Pg**	**16 45 49.8**	**-0.8**
ZKR	**Zakros**	**0.76**	**281**	P		**Pg**	**16 45 49.8**	**-0.8**
ZKR				S		**Sg**	**16 46 00.7**	**0.0**
SIT2	**Siteia**	**0.87**	**286**	P		**Pg**	**16 45 52.4**	**-0.3**
SIT2				S		**Sg**	**16 46 03.6**	**-0.6**
STIA	**Sitia Lasithi**	**0.88**	**286**	P		**Pg**	**16 45 52.1**	**-0.8**
STIA				S		**Sg**	**16 46 05.2**	**+0.7**
AGNA	**Agios Nikolaos**	**1.18**	**281**	P		**Pb**	**16 45 58.1**	**0.0**
NPS	**Neapolis**	**1.28**	**284**	P		**Pn**	**16 45 58.8**	**-0.6**
NPS				S		**Sb**	**16 46 17.0**	**+0.9**
NPS	**Neapolis**	**1.28**	**284**	P		**Pn**	**16 45 59.2**	**-0.3**
ARG	**Arkhangelos**	**1.49**	**33**	Pn		**Pb**	**16 46 03.2**	**-0.2**
ARG	**Arkhangelos**	**1.49**	**33**	P		**Pg**	**16 46 04.0**	**-0.5**
ARG				S		**Sg**	**16 46 25.4**	**+1.6**
ARG	**Arkhangelos**	**1.49**	**33**	P		**Pn**	**16 46 01.0**	**-1.3**
YAZI	**Mula-Dat§a-**	**1.73**	**9**	P		**Pn**	**16 46 05.1**	**-0.6**
DAT	**Datca**	**1.79**	**12**	Pn		**Pn**	**16 46 07.9**	**+1.2**
DAT				Sn		**Sg**	**16 46 33.2**	**-0.5**
DAT	**Datca**	**1.79**	**12**	P		**Pb**	**16 46 08.7**	**0.0**
DAT				S		**Sn**	**16 46 29.9**	**+0.5**
DAT				IAML			16 46 40.0	
	comp=N,91nm,0.8s							
IDI	**Anoyia**	**1.86**	**281**	Pn		**Pb**	**16 46 10.6**	**+0.8**
	8.3nm,0.3s,baz=121,slow=11,SNR=43							
IDI				Sn		**Sg**	**16 46 37.5**	**+1.7**
	8.6nm,0.3s,baz=126,slow=18,SNR=5.2							
IDI	**Anoyia**	**1.86**	**281**	Pn		**Pn**	**16 46 08.2**	**+0.7**
SIVA	**Sivas**	**1.90**	**272**	P		**Pb**	**16 46 11.3**	**+0.9**
SIVA				S		**Sn**	**16 46 31.8**	**-0.1**
THERA	**Ancient Thera,**	**1.94**	**317**	P		**Pn**	**16 46 06.6**	**-2.0**
TURN	**Turunc**	**2.02**	**26**	Pn		**Pn**	**16 46 11.0**	**+1.4**
TURN	**Turunc**	**2.02**	**26**	P		**Pn**	**16 46 10.3**	**+0.6**
BODT	**Bodrum**	**2.10**	**4**	Pn		**Pn**	**16 46 12.3**	**+1.6**
BDRM	**Kayabasi**	**2.11**	**7**	P		**Pb**	**16 46 13.9**	**-0.1**
IZZE	**Mula-Seydike**	**2.25**	**49**	P		**Pn**	**16 46 13.4**	**+0.6**
YER	**Yerkesik**	**2.36**	**23**	Pn		**Pn**	**16 46 15.7**	**+1.4**
SABU	**Mula-Dalaman**	**2.38**	**38**	P		**Pn**	**16 46 14.1**	**-0.5**
AKAS	**Kas**	**2.38**	**57**	Pn		**Pn**	**16 46 15.3**	**+0.6**
AKAS	**Kas**	**2.38**	**57**	P		**Pn**	**16 46 15.3**	**+0.6**
AKAS				S		**Sn**	**16 46 41.4**	**-2.4**
AKAS				IAML			16 46 53.0	
	comp=E,47nm,0.7s							
CAME	**Cameli-Denizli**	**2.65**	**41**	Pn		**Pn**	**16 46 19.5**	**+1.1**
KNIK	**Mula-Seydike**	**2.73**	**46**	P		**Pn**	**16 46 20.6**	**+1.1**
AYDN	**Tasoluk**	**2.75**	**12**	P		**Pn**	**16 46 19.5**	**-0.3**
TAVA	**DENIZLI_Tavas**	**2.88**	**30**	P		**Pn**	**16 46 20.9**	**-0.7**
TAVA				S		**Sn**	**16 46 59.4**	**+3.2**
TAVA				IAML			16 47 16.0	
	comp=N,30nm,1.0s							
ESEN	**Aydn-Nazilli**	**2.99**	**19**	P		**Pn**	**16 46 23.5**	**+0.6**
GOLH	**Golhisar**	**3.00**	**40**	P		**Pn**	**16 46 22.6**	**-0.6**
KIRA	**zmir-Kiraz**	**3.38**	**17**	P		**Pn**	**16 46 27.6**	**-0.9**
GERES	**GERESS Array B**	**17.05**	**328**	Pn		**Pn**	**16 49 32.9**	**-1.2**
	baz=134,slow=13,SNR=4.9							
	0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**39.99**	**51**	P		**P**	**16 53 09.6**	**-0.5**
	0.3nm,0.4s,baz=280,slow=9.1,SNR=5.6							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**42.53**	**57**	P		**P**	**16 53 31.2**	**+0.1**
	0.8nm,0.6s,baz=276,slow=6.8,SNR=10							
	0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**43.97**	**46**	P		**P**	**16 53 42.3**	**-0.2**
	0.5nm,0.4s,baz=278,slow=9.6,SNR=3.0							
	0.5nm,0.4s							

NNC 27 16:56:01.2±0.9,37°.89N×68°.50E,h0km,mb4.0,mpv3.8, 13C-11D,Error ellipse: s-maj=6.9km s-min=5.3km az=8.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**5.43**	**16**	⇑P		Pn	16 57 24.0	+0.5
	0.8nm,0.3s,baz=176,slow=9.1,SNR=17							
KK31				⇓Pg		Pb	16 57 41.1	+4.1
	6.9nm,0.5s,baz=204,slow=20,SNR=6.6							
KK31				⇓Sn		Sn	16 58 27.3	+0.6
	20nm,0.7s,baz=126,slow=52,SNR=5.2							
KK31				⇑Lg		Lg	16 58 54.8	
	46nm,0.6s,baz=193,slow=27,SNR=5.3							
AAK	**Ala-Archa**	**6.60**	**42**	⇓Pn		Pn	16 57 39.5	-0.2
	6.1nm,0.8s							
AAK				⇑Sn		Sn	16 58 56.4	+0.7
	6.4nm,0.9s							
AAK				⇓Lg		Lg	16 59 33.0	
	42nm,1.3s							
MDOK	**Medeo**	**8.38**	**48**	Pn		Pn	16 58 04.3	+0.3
	12nm,0.9s							
MDOK				⇑Lg		Lg	17 00 28.7	
	9.3nm,1.2s							
PDGK	**Podgornoye**	**9.97**	**54**	⇓Pn		Pn	16 58 25.1	-0.7
	6.4nm,1.2s							
PDGK				⇑Lg		Lg	17 01 18.3	
	12nm,1.2s							
AB31	**Akbulak array**	**12.93**	**334**	⇑Pn		Pn	16 59 06.4	+0.2
	1.0nm,0.5s,baz=0.0,slow=0.1,SNR=39							
AB31				⇓Sn		Sn	17 01 32.2	+1.4
	2.1nm,0.5s,baz=0.0,slow=0.1,SNR=12							
AB31				⇑Lg		Lg	17 02 52.4	
	3.0nm,0.6s							
MAKZ	**Makanchi**	**13.36**	**44**	⇓Pn		Pn	16 59 12.1	0.0
	4.4nm,1.3s							
MAKZ				⇑Lg		Lg	17 03 06.9	
	6.1nm,1.4s							
MK31	**Makanchi Array**	**13.52**	**44**	⇑Pn		Pn	16 59 14.7	+0.4
	3.6nm,1.1s,baz=229,slow=13,SNR=6.6							
MK31				⇓Lg		Lg	17 03 12.2	
	2.5nm,0.9s							
KURBB	**Kurchatov Arra**	**14.60**	**26**	⇑Pn		Pn	16 59 27.8	-1.2
	2.0nm,0.8s							
KURBB				⇓Lg		Lg	17 03 46.6	
	21nm,1.2s							
AKTO	**Aktyubinsk**	**14.61**	**333**	⇑Pn		Pn	16 59 28.6	-0.4
	2.4nm,0.9s							
AKTO				⇑Sn		Sn	17 02 12.5	+0.9
	1.6nm,0.7s							
AKTO				⇓Lg		Lg	17 03 45.0	
	6.2nm,1.1s							
KURK	**Kurchatov**	**14.71**	**26**	⇑Pn		Pn	16 59 29.6	-0.9
	1.0nm,1.1s							
KURK				⇓Lg		Lg	17 03 49.7	
	7.4nm,1.3s							

*JMA **27** 17:00:46.5±0.2,24°.5N±0°.5×12°.2E±°,h67km±1km, MV2.4/13,TAIWAN REGION*
*TAP **27** 17:00:47.4,24°.54N×121°.52E,h63km,ML3.5,B*

ISC 27 17:00:47.5±1.2,24°.57N±0°.02×121°.55E±0°.02,h64km±4km, n113,σ0°.76/196,8C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LATG	**Datong**	**0.04**	**216**	⇓*i*P		**Pn**	**17 00 57.3**	**+0.3**
LATG				*i* S		**Sn**	**17 01 04.6**	**+0.6**
NDT	**Datong Townshi**	**0.05**	**316**	P		**Pn**	**17 00 57.3**	**+0.3**
NDT				S		**Sn**	**17 01 04.0**	**+0.2**
NDS	**Dongshan**	**0.16**	**66**	⇓P		**Pn**	**17 00 57.6**	**+0.4**
NDS				*i* S		**Sn**	**17 01 04.8**	**+0.5**
YHNB	**Yeheng**	**0.19**	**303**	⇓*i*P		**Pn**	**17 00 57.2**	**-0.3**
YHNB				S		**Sn**	**17 01 04.4**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.20**	**10**	⇓*i*P		**Pn**	**17 00 57.6**	**+0.1**
FUSB				S		**Sn**	**17 01 05.3**	**+0.6**
NNS	**Nan Shan**	**0.20**	**232**	*i* P		**Pn**	**17 00 57.9**	**+0.3**
NNS				*e*S		**Sn**	**17 01 05.0**	**+0.1**
NNSB	**Datong**	**0.21**	**228**	P		**Pn**	**17 00 57.8**	**+0.2**
NNSB				S		**Sn**	**17 01 04.9**	**0.0**
NSK	**Sanguang**	**0.21**	**302**	⇓*i*P		**Pn**	**17 00 57.3**	**-0.3**
NSK				*i* S		**Sn**	**17 01 04.3**	**-0.5**
NWLT	**Wulai**	**0.21**	**348**	P		**Pn**	**17 00 57.5**	**-0.1**
NWLT				S		**Sn**	**17 01 04.0**	**-0.9**
ENA	**Nanau**	**0.22**	**128**	P		**Pn**	**17 00 55.7**	**-1.8**
ENA				S		**Sn**	**17 01 03.0**	**-1.7**
EWUT	**Wuta**	**0.24**	**120**	*e*P		**Pn**	**17 00 57.4**	**-0.2**
EWUT				*e*S		**Sn**	**17 01 04.8**	**-0.1**
ESAO	**Su ao**	**0.27**	**88**	*e*P		**Pn**	**17 00 57.5**	**-0.2**
ESAO				S		**Sn**	**17 01 05.6**	**+0.4**
ILA	**Ilan**	**0.27**	**42**	*e*P		**Pn**	**17 00 58.4**	**+0.6**
ILA				*e*S		**Sn**	**17 01 06.3**	**+1.0**
TWC	**Suao**	**0.28**	**81**	⇓*i*P		**Pn**	**17 00 58.1**	**+0.3**
TWC				*i* S		**Sn**	**17 01 05.7**	**+0.3**
ETLH	**Xiulin Townshi**	**0.36**	**190**	P		**Pn**	**17 00 58.7**	**0.0**
ETLH				*i* S		**Sn**	**17 01 06.5**	**-0.2**
NTC	**Toucheng**	**0.38**	**41**	*e*S		**Sn**	**17 01 07.9**	**+1.1**
NACB	**Ninganchiao**	**0.39**	**174**	⇑P		**Pn**	**17 00 58.1**	**-0.7**
NACB				*i* S		**Sn**	**17 01 06.4**	**-0.6**
NHDH	**Xindian Distri**	**0.40**	**357**	P		**Pn**	**17 00 58.9**	**+0.1**
NHDH				*i* S		**Sn**	**17 01 07.0**	**0.0**
KSHI	**Guanxi Townshi**	**0.40**	**302**	P		**Pn**	**17 00 59.1**	**+0.3**
KSHI				*i* S		**Sn**	**17 01 07.5**	**+0.4**
NFF	**Wufeng Townshi**	**0.40**	**279**	⇓P		**Pn**	**17 00 58.8**	**-0.1**
NFF				*i* S		**Sn**	**17 01 06.4**	**-0.8**
ETL	**Fush Village**	**0.41**	**171**	P		**Pn**	**17 00 58.2**	**-0.8**
ETL				S		**Sn**	**17 01 06.5**	**-0.8**
TWT	**Tachien**	**0.46**	**228**	⇑P		**Pn**	**17 01 00.2**	**+0.6**
TWT				S		**Sn**	**17 01 09.0**	**+0.6**
NHY	**Taipei**	**0.47**	**2**	P		**Pn**	**17 00 59.7**	**+0.2**
NHY				S		**Sn**	**17 01 08.7**	**+0.4**
TAP	**Taipei**	**0.47**	**355**	⇓P		**Pn**	**17 00 59.6**	**0.0**
TAP				*i* S		**Sn**	**17 01 08.3**	**+0.1**
TDCB	**Techi**	**0.47**	**229**	⇑P		**Pn**	**17 01 00.2**	**+0.5**
TDCB				*e*S		**Sn**	**17 01 09.1**	**+0.5**
TIPB	**Shuangxi**	**0.47**	**32**	*i* P		**Pn**	**17 00 59.9**	**+0.3**
TIPB				*i* S		**Sn**	**17 01 08.6**	**+0.2**
LIOB	**Emei**	**0.49**	**279**	P		**Pn**	**17 00 59.8**	**0.0**
LIOB				*i* S		**Sn**	**17 01 08.8**	**+0.1**
WHF	**Hehuan Shan**	**0.49**	**212**	⇑*i*P		**Pn**	**17 01 00.8**	**+0.6**
WHF				*i* S		**Sn**	**17 01 09.9**	**+0.4**
NSTT	**Nanjuang**	**0.51**	**277**	⇓*i*P		**Pn**	**17 00 59.7**	**-0.1**
NSTT				*i* S		**Sn**	**17 01 08.6**	**-0.2**
NCUH	**Zhongli**	**0.52**	**320**	*i* P		**Pn**	**17 01 00.2**	**+0.2**
NCUH				*e*S		**Sn**	**17 01 08.6**	**-0.6**
WFSB	**Wu-fen Shan**	**0.54**	**23**	P		**Pn**	**17 01 00.6**	**+0.3**
WFSB				*e*S		**Sn**	**17 01 09.4**	**-0.1**
TWS1	**Kuangyinshan**	**0.55**	**347**	⇓P		**Pn**	**17 01 00.5**	**+0.2**
TWS1				*i* S		**Sn**	**17 01 09.3**	**-0.3**
LXIB	**Xiulin Townshi**	**0.56**	**193**	⇑P		**Pn**	**17 01 00.1**	**+0.5**
LXIB				*e*S		**Sn**	**17 01 11.6**	**+1.5**
SBCB	**Hsinchu**	**0.56**	**294**	P		**Pn**	**17 01 00.9**	**+0.4**
SBCB				*e*S		**Sn**	**17 01 09.9**	**0.0**
HSN	**Hsinchu**	**0.58**	**294**	P		**Pn**	**17 01 00.4**	**-0.2**
HSN				*i* S		**Sn**	**17 01 10.2**	**0.0**
TWB1	**Santiao Chiao**	**0.59**	**42**	⇓P		**Pn**	**17 01 01.2**	**+0.4**
TWB1				S		**Sn**	**17 01 10.4**	**0.0**
ZUZH	**Zhuzihu**	**0.59**	**359**	*e*P		**Pn**	**17 01 00.9**	**+0.1**
ZUZH				*e*S		**Sn**	**17 01 10.4**	**-0.2**
ETM	**Tongmen**	**0.60**	**185**	*e*P		**Pn**	**17 00 60.0**	**-0.9**
NTST	**Danshui**	**0.60**	**351**	*i* P		**Pn**	**17 01 01.2**	**+0.3**
NTST				*i* S		**Sn**	**17 01 10.2**	**-0.4**
SXI1	**Grass Mountain**	**0.60**	**29**	⇓P		**Pn**	**17 01 01.1**	**+0.2**
SXI1				*i* S		**Sn**	**17 01 11.1**	**+0.3**
TNOU	**National Taiwa**	**0.61**	**19**	*i* P		**Pn**	**17 01 01.0**	**0.0**
TNOU				S		**Sn**	**17 01 10.5**	**-0.4**
ANP	**Anpu**	**0.62**	**357**	P		**Pn**	**17 01 00.9**	**-0.2**
ANP				*e*S		**Sn**	**17 01 10.6**	**-0.6**
WHP	**Taichung City**	**0.62**	**243**	*i* P		**Pn**	**17 01 01.6**	**+0.5**
WHP				*i* S		**Sn**	**17 01 11.2**	**0.0**
WUSB	**Renai**	**0.69**	**215**	⇑P		**Pn**	**17 01 02.7**	**+0.6**
WUSB				*i* S		**Sn**	**17 01 13.7**	**+0.9**
TEYL	**Yanliau Villag**	**0.70**	**176**	*e*P		**Pn**	**17 01 01.3**	**-0.7**
OWD	**Renai**	**0.70**	**209**	*e*P		**Pn**	**17 01 02.5**	**+0.3**
OWD				S		**Sn**	**17 01 13.6**	**+0.8**
TWY	**Chenhua**	**0.71**	**4**	*e*P		**Pn**	**17 01 02.5**	**+0.4**
ESL	**Shilin**	**0.76**	**188**	⇑*i*P		**Pn**	**17 01 01.4**	**-1.3**
ESL				S		**Sn**	**17 01 14.1**	**+0.3**
WCS	**Beigang Elemen**	**0.77**	**229**

JISG	**Ishigakijimahi**	**2.51**	**89**	*eP*	**Pn**	**17 01 25.8**	**-0.1**
JISG				*eS*	**Sn**	**17 01 55.6**	**+0.2**
LAY	**Lan-yu**	**2.52**	**180**	*eP*	**Pn**	**17 01 24.8**	**-1.3**
LYUB	**Lan-yu**	**2.55**	**179**	*eP*	**Pn**	**17 01 24.6**	**-2.0**
SMST	**Manzhou Townsh**	**2.62**	**195**	*eP*	**Pn**	**17 01 27.7**	**+0.3**
TWKBT	**Hengchun**	**2.70**	**195**	*eP*	**Pn**	**17 01 28.5**	**-0.1**

FUNV ***27*** *17:09:25.3, 7.34N×73.23W, h5km, MW3.1, Presumed earthquake*

RSNC ***27*** *17:09:28.9±0.0, 7.1°N±1.1°×7.3°W±0.1°, h145km±1km, M2.8, ML2.5*

ISC 27 17:09:26.4±1.4,**6.87N**±0.03°×**73.04W**±0.05°,**h156**km±8km, **n25**,σ1°**42**/**48**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.31**	**207**	P		**Pn**	**17 09 48.5**	**+0.5**
BARC				S		**Sn**	**17 10 03.6**	**-0.8**
PAMC	**Pamplona, Colo**	**0.57**	**36**	P		**Pn**	**17 09 51.3**	**+1.9**
PAMC				S		**Sn**	**17 10 07.9**	**+1.0**
BRJC	**Barrancabermej**	**0.71**	**278**	P		**Pn**	**17 09 50.1**	**+0.6**
BRJC				S		**Sn**	**17 10 06.8**	**-0.4**
RUSC	**La Rusia**	**0.97**	**183**	P		**Pn**	**17 09 52.4**	**+0.3**
RUSC				S		**Sn**	**17 10 11.1**	**-0.6**
RUSC	**La Rusia**	**0.97**	**183**	*eP*		**Pn**	**17 09 51.8**	**-0.4**
RUSC				*eS*		**Sn**	**17 10 11.6**	**-0.1**
OCAC	**Ocana**	**1.39**	**349**	P		**Pn**	**17 09 56.4**	**+1.0**
OCAC				S		**Sn**	**17 10 18.0**	**+0.2**
PTBC	**PUERTO BERRIO,**	**1.45**	**257**	P		**Pn**	**17 09 55.1**	**-0.8**
PTBC				S		**Sn**	**17 10 16.3**	**-2.1**
SPBC	**San Pablo de B**	**1.59**	**220**	P		**Pn**	**17 09 57.4**	**0.0**
SPBC				S		**Sn**	**17 10 19.8**	**-1.5**
NORC	**Norcasia**	**2.23**	**235**	P		**Pn**	**17 10 05.0**	**+0.3**
NORC				S		**Sn**	**17 10 32.6**	**-1.6**
CHIC	**Chingaza**	**2.33**	**197**	P		**Pn**	**17 10 06.9**	**+0.7**
CHIC				S		**Sn**	**17 10 36.1**	**-0.8**
ROSC	**El Rosal**	**2.39**	**212**	P		**Pn**	**17 10 08.6**	**+1.7**
ROSC				S		**Sn**	**17 10 38.4**	**+0.4**
CVER	**Cruz Verde, Cu**	**2.55**	**204**	P		**Pn**	**17 10 10.2**	**+1.3**
CVER				S		**Sn**	**17 10 41.7**	**0.0**
HELC	**Santa Helena**	**2.56**	**255**	P		**Pn**	**17 10 09.5**	**+0.5**
HELC	**Santa Helena**	**2.56**	**255**	*eP*		**Pn**	**17 10 07.8**	**-1.2**
HELC				*eS*		**Sn**	**17 10 38.7**	**-3.0**
PTGC	**Puerto Gaitan,**	**2.80**	**161**	P		**Pn**	**17 10 11.9**	**+0.3**
PTGC				S		**Sn**	**17 10 45.1**	**-1.5**
VILC	**Villavicencio,**	**2.82**	**193**	P		**Pn**	**17 10 12.6**	**+0.7**
VILC				S		**Sn**	**17 10 47.2**	**+0.1**
GUY2C	**Guyana, Caldas**	**2.83**	**235**	P		**Pn**	**17 10 13.9**	**+1.5**
GUY2C				S		**Sn**	**17 10 48.1**	**+0.2**
SDV	**Santo Domingo**	**3.11**	**50**	*eP*		Pn	17 10 12.6	-3.1
SDV				*eS*		**Sn**	**17 10 49.3**	**-4.4**
CBOC	**Ciudad Bolivar**	**3.12**	**251**	P		**Pn**	**17 10 16.7**	**+1.0**
CBOC				S		**Sn**	**17 10 53.7**	**-0.1**
DBBC	**Dabeiba**	**3.15**	**273**	P		**Pn**	**17 10 17.0**	**+1.0**
DBBC				S		**Sn**	**17 10 54.0**	**-0.4**
ARGC	**Ariguani, Magd**	**3.20**	**338**	P		**Pn**	**17 10 19.0**	**+2.5**
ARGC				S		**Sn**	**17 10 57.4**	**+2.0**
PRAC	**Prado**	**3.64**	**210**	P		**Pn**	**17 10 22.2**	**0.0**
PRAC				S		**Sn**	**17 11 05.2**	**-0.3**
ORTC	**Ortega, Tolima**	**3.67**	**217**	P		**Pn**	**17 10 24.3**	**+1.6**
ORTC				S		**Sn**	**17 11 07.0**	**+0.6**
SJCC	**San Jacinto, C**	**3.68**	**325**	P		**Pn**	**17 10 22.2**	**-0.5**
SJCC				S		**Sn**	**17 11 03.6**	**-2.9**
SMRC	**Santa Marta, M**	**4.42**	**345**	P		**Pn**	**17 10 33.8**	**+1.4**
SMRC				S		**Sn**	**17 11 21.8**	**-2.0**

NEIC ***27*** *17:27:39.2±1.2, 21.2°S±0.1°×178.4°W±0.1°, h407km±8km, mb4.3/16, Error ellipse: s-maj=18.2km s-min=12.7km az=170.0*

IDC ***27*** *17:27:41.8±2.9, 21.0°S×178.65W, h437km±27km, mb3.0/6, mbtmp3.8/7, Error ellipse: s-maj=59.6km s-min=25.5km az=54.0*

ISC 27 17:27:38.7±0.8,**21.22S**±0.1°×**178.5W**±0.1°,**h400**km,**n25**, σ1°**27**/**26**,**mb3.9**/**12**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.76**	**316**	P		**Pn**	**17 29 01.3**	**+2.8**
	16nm,0.7s,baz=140,slow=16,SNR=8.5							
MSVF	**Nonsavu**	**4.76**	**316**			**Pn**	**17 28 59.8**	**+1.3**
FUTU	**Fugatoga**	**6.88**	**3**			**P**	**17 29 22.2**	**+0.4**
TOZ	**Tahuroa Road**	**17.26**	**196**	P		**P**	**17 31 15.6**	**+0.3**
TOZ				IAmb		IAmb	17 31 27.5	
	comp=Z,14nm,1.2s							
RTZ	**Ruatahuna**	**17.77**	**192**	P		**P**	**17 31 21.0**	**+0.2**
RTZ				IAmb		IAmb	17 31 27.8	
	comp=Z,27nm,1.4s							
RPZ	**Rata Peaks**	**24.07**	**199**	P		**P**	**17 32 20.4**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=19,slow=6.5,SNR=6.9 comp=Z,0.8nm,0.5s							
EIDS	**Eidsvold**	**28.22**	**256**	P		**P**	**17 32 55.6**	**-1.4**
EIDS				IAmb		IAmb	17 33 39.8	
	comp=Z,14nm,1.4s							
ARMA	**Armidale**	**28.35**	**245**	P		**P**	**17 32 58.0**	**-0.1**
ARMA				IAmb		IAmb	17 33 05.9	
	comp=Z,31nm,1.4s							
CAN	**Canberra**	**31.74**	**237**	P		**P**	**17 33 27.9**	**+0.3**
CTAO	**Charters Tower**	**32.97**	**266**	P		**P**	**17 33 38.9**	**+0.5**
CTAO				IAmb		IAmb	17 33 53.1	
	comp=Z,14nm,1.4s							
PATS	**Pohnpei**	**36.00**	**318**	P		**P**	**17 34 03.6**	**-0.4**
STKA	**Stephens Creek**	**37.07**	**245**	P		**P**	**17 34 12.6**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=101,slow=10,SNR=3.6 comp=Z,2.2nm,0.6s							
COEN	**Coen**	**37.18**	**275**	P		**P**	**17 34 14.6**	**+0.8**
COEN				IAmb		IAmb	17 34 17.3	
	comp=Z,14nm,1.2s							
BBOO	**Buckleboo**	**41.82**	**244**	P		**P**	**17 34 51.0**	**-0.5**
BBOO				IAmb		IAmb	17 35 23.3	
	comp=Z,28nm,1.4s							
WR8	**Warramunga Arr**	**43.90**	**263**	P		**P**	**17 35 07.0**	**-1.1**
ASAR	**Alice Springs**	**43.91**	**258**	P		**P**	**17 35 07.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=93,slow=8.3,SNR=20							
ASAR				PcP		**PcP**	**17 36 43.4**	**-2.8**
	comp=Z,0.3nm,0.8s,baz=100,slow=3.6,SNR=2.1 comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	**43.91**	**258**	P		**P**	**17 35 07.0**	**-1.2**
WB0	**Warramunga Arr**	**44.04**	**263**	P		**P**	**17 35 08.5**	**-0.7**
WRA	**Warramunga Arr**	**44.05**	**263**	P		**P**	**17 35 08.2**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=96,slow=7.7,SNR=25 comp=Z,0.3nm,0.4s							
FITZ	**Fitzroy Crossi**	**52.48**	**263**	P		**P**	**17 36 12.3**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=76,slow=8.3,SNR=6.1 comp=Z,0.9nm,0.4s							
SBA	**Scott Base**	**57.13**	**184**	P		**P**	**17 36 44.6**	**-0.1**
VNDA	**Vanda**	**57.16**	**185**	P		**P**	**17 36 47.4**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=332,slow=4.5,SNR=1.7 comp=Z,0.1nm,0.3s							
MBWA	**Marble Bar**	**57.26**	**258**	P		**P**	**17 36 46.0**	**-0.6**
PMSA	**Palmer Station**	**80.81**	**157**	P		**P**	**17 39 10.1**	**+1.3**
CCCA	**Chr Cany lake**	**80.83**	**46**	P		**P**	**17 39 07.6**	**-1.8**
CCCA				IAmb		IAmb	17 39 33.3	
	comp=Z,8.8nm,1.5s							

IDC ***27*** *17:32:03.9±1.9, 35.49N×27.19E, h0km, mb3.6/3, mbtmp3.3/6, ML2.8/3, Error ellipse: s-maj=43.3km s-min=18.8km az=166.0*

THE ***27*** *17:32:04.3, 35.1°N±0.95°×2.7°E±9.7°, h3km±42km, MLh2.8/2*

ATH ***27*** *17:32:06.9, 35.17N±26.92E, h30km±4km, ML2.7/4, Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*

ISC 27 17:32:04.6±2.0,**35.1N**±0.1°×**27.08E**±0.06,**h31**km±12km, **n17**,σ1°**45**/**24**,**mb3.5**/**3**,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.71**	**275**	P		**Pb**	**17 32 16.9**	**-1.6**
ZKR	**Zakros**	**0.71**	**275**	P		**Pn**	**17 32 18.7**	**+0.2**
ZKR				S		**Sb**	**17 32 27.3**	**-0.6**
SIT2	**Siteia**	**0.81**	**281**	P		**Pn**	**17 32 20.1**	**+0.2**
NPS	**Neapolis**	**1.22**	**280**	P		**Pb**	**17 32 26.2**	**-0.8**
NPS				S		**Sb**	**17 32 43.7**	**+1.2**
NPS	**Neapolis**	**1.22**	**280**	P		**Pb**	**17 32 26.2**	**-0.8**
NPS				S		**Sn**	**17 32 40.0**	**-1.0**
ARG	**Arkhangelos**	**1.43**	**36**	P		**Pb**	**17 32 31.1**	**+0.4**
ARG				S		**Sb**	**17 32 51.0**	**+2.4**
ARG	**Arkhangelos**	**1.43**	**36**	P		**Pb**	**17 32 30.9**	**+0.2**
ARG				S		**Sb**	**17 32 48.9**	**+0.3**
IDI	**Anoyia**	**1.81**	**278**	Pn		**Pb**	**17 32 37.4**	**+0.3**
	3.5nm,0.3s,baz=81,slow=16,SNR=27							
IDI						**Sn**	**17 33 03.2**	**+3.8**
	4.6nm,0.3s,baz=258,slow=22,SNR=6.1							
IDI	**Anoyia**	**1.81**	**278**	P		**Pn**	**17 32 34.4**	**+0.7**
IDI				S		**Sn**	**17 32 54.8**	**-0.8**
SIVA	**Sivas**	**1.86**	**269**	P		**Pn**	**17 32 35.0**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.92**	**315**	P		**Pn**	**17 32 35.2**	**+0.1**
BRTR	**Keskin Array B**	**7.00**	**46**	Pn		**Pn**	**17 33 43.1**	**-2.0**
	baz=216,slow=15,SNR=1.6 0.4nm,0.7s							
AKASG	**Malin Array Be**	**15.71**	**5**	Pn		**Pn**	**17 35 41.6**	**-1.9**
	0.2nm,0.3s,baz=198,slow=11,SNR=1.8 0.2nm,0.4s							
GERES	**GERESS Array B**	**16.95**	**328**	Pn		**Pn**	**17 35 58.7**	**-0.8**
	baz=149,slow=14,SNR=3.9 0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**39.96**	**51**	P		**P**	**17 39 37.2**	**+1.2**
	0.3nm,0.5s,baz=276,slow=9.2,SNR=6.4 0.3nm,0.5s							
MKAR	**Makanchi Array**	**42.52**	**57**	P		**P**	**17 39 58.5**	**+1.4**
	0.8nm,0.5s,baz=273,slow=8.0,SNR=16 0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**43.94**	**46**	P		**P**	**17 40 09.4**	**+1.0**
	0.3nm,0.3s,baz=263,slow=8.0,SNR=2.1 0.3nm,0.3s							

GFZ ***27*** *17:32:40.7±0.1, 9.1°N±1.1°×12.6°E±0.1°, h10km, M5.9/212, mB6.4/178, mb6.1/212, Mw(mB)6.1/178, MwMwp5.6/92, Mwp5.7/92*

GFZ ***27*** *17:32:40.7, 9.07N×126.27E, h50km, Mw5.7/120, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr3.47; Mθθ0.81; Mϕϕ-4.28; Mrθ1.95; Mϕϕ0.20; Mϕr0.51; Fault plane solution: Mo4.42849×10¹⁷ NP1: ϕs152.76410°, δ48.14243°, λ51.28507°. NP2:ϕs22.98813°, δ54.46868°, λ124.91929°. Principal axes: T 4.5363, Plg61.9787°, Azm352.4808°; N -0.2241, Plg27.7643°, Azm180.9055°; P -4.3122, Plg3.4918°, Azm89.0646°;*

MOS ***27*** *17:32:42.5±0.9, 8.98N×126.14E, h37km, mb6.5/69, MS5.5/50 Error ellipse: s-maj=6.4km s-min=3.3km az=116.9*

MAN ***27*** *17:32:44.0, 8.89N×126.57E, h45km, MS5.8*

MAN INTENSITY VI - SAN FRANCISCO AND TALACOGON AGUSAN DEL SUR; . INTENSITY V - BAYABAS CAGWAIT AND MARIHATAG SURIGAO DEL SUR; . INTENSITY IV - CITY OF BISLIG CITY OF TANDAG AND HINATUAN SURIGAO DEL SUR; CITY OF BUTUAN ROSARIO AND SANTA JOSEFA AGUSAN DEL SUR; TUBAY AGUSAN DEL NORTE; . INTENSITY III - CITY OF SURIGAO SURIGAO DEL NORTE; CITY OF GINGOOG MAGSAYSAY AND MEDINA MISAMIS ORIENTAL; . INTENSITY II - BALINGASAG JASAAN SALAY TAGOLOAN AND VILLANUEVA MISAMIS ORIENTAL; CITY OF CAGAYAN DE ORO; ALABEL SARANGANI; DON CARLOS BUKIDNON; . INTENSITY I - MAMBAJAO CAMIGUIN; VALENCIA CITY AND MARAMAG BUKIDNON.

BJI ***27*** *17:32:44.8, 9.04N×126.35E, h50km, mB5.7/66, mb5.7/86, Ms5.4/99, Ms7 5.4/92*

NEIC ***27*** *17:32:44.9, 9.02N×126.27E, h40km*

IPGP ***27*** *17:32:44.0, 9.02N×126.27E, h47km, Mw5.8, Fault plane solution: NP1:ϕs178.00000°, δ40.00000°, λ69.00000°. NP2:ϕs24.00000°, δ53.00000°, λ106.00000°.*

NEIC ***27*** *17:32:45.2±2.4, 9.02N±0.06×126.27E±0.08, h43km±3km, mb6.2/504, Ms_20 5.3/543, Mwb5.9/138, Mww5.8/44, Error ellipse: s-maj=11.1km s-min=8.2km az=84.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr8.98; Mθθ-1.74; Mϕϕ-7.24; Mrθ2.09; Mϕθ0.68; Mϕr1.85; Fault plane solution: Mo8.73000×10¹⁷ NP1:ϕs5.50000°, δ51.81000°, λ104.31000°. NP2:ϕs163.07000°, δ40.40000°, λ72.55000°. Principal axes: T 9.5967, Plg77.0000°, Azm328.0000°; N -2.1118, Plg11.0000°, Azm177.0000°; P -7.4849, Plg6.0000°, Azm85.0000°;*

ISC-PP ***27*** *17:32:45, 9.02N×126.27E, h23km, Mwppsm6.2, Moment Tensor Solution. s42 Moment tensor: Scale 10¹⁸Nm; Mrr0.55±.14; Mθθ0.04±.17; Mϕϕ-0.58±.18; Mrθ0.17±.12; Mθϕ0.34±.22; Mϕr-0.18±.11; Fault plane solution: Mo2.09000×10¹⁸ NP1:ϕs21.60000°, δ61.60000°, λ97.00000°. NP2:ϕs187.10000°, δ29.20000°, λ77.30000°.*

NEIC ***27*** *17:32:45.1, 9.01N×126.26E, h43km*

GCMT ***27*** *17:32:47.2±0.1, 8.90N×126.49E, h52km, MW5.8/155, Moment Tensor Solution. s155,c316; s148,c457; Duration: 2s0 Moment tensor: Scale 10¹⁷Nm; Mrr5.89±.05; Mθθ0.91±.04; Mϕϕ-6.79±.04; Mrθ1.83±.04; Mθϕ0.42±.03; Mϕr1.19±.04; Best double couple: Mw6.75900×10¹⁷ NP1:ϕs159.00000°, δ43.00000°, λ63.00000°. NP2:ϕs14.00000°, δ53.00000°, λ113.00000°. Principal axes: T 6.6090, Plg71.0000°, Azm343.0000°; N 0.3070, Plg18.0000°, Azm180.0000°; P -6.9090, Plg5.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***27*** *17:32:47.4±0.3, 9.1°N±2.1°×12.7°E±1.1°, h52km±3km, M5.8/108, mB6.3/106, mb6.0/108, MLv6.8/10, Mw(mB)6.0/106, MwMwp5.5/80, Mwp5.7/80*

IDC ***27*** *17:32:47.3±0.8, 9.03N×126.29E, h66km±7km, mb5.8/42, mbtmp6.0/46, MS5.1/76, Error ellipse: s-maj=10.5km s-min=5.8km az=92.0*

NEIC ***27*** *17:32:51.6, 8.91N×126.87E, h50km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10¹⁷Nm; Mrr5.69; Mθθ0.58; Mϕϕ-6.27; Mrθ1.57; Mϕθ0.91; Mϕr0.36; Fault plane solution: Mo6.28000×10¹⁷ NP1: ϕs156.82000°, δ46.54000°, λ67.18000°. NP2:ϕs8.27000°, δ48.00000°, λ112.26000°. Principal axes: T 6.1655, Plg74.0000°, Azm350.0000°; N 0.2298, Plg16.0000°, Azm173.0000°; P -6.3953, Plg1.0000°, Azm83.0000°;*

ISC 27 17:32:44.7±0.2,**8.95N**±0.02°×**126.32E**±0.03,**h48**km±1km, **h48**km:**pP-P**,**n2227**,σ1°**70**/2329,**mb6.1**/**478**,**MS5.3**/433, **188C-19D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TSSP	**Tandag City**	**0.15**	**310**	*eP*		**Pn**	**17 32 53.5**	**+1.0**
TSSP				*i* S		**Sn**	**17 33 00.3**	**+2.3**
BIPH	**Bislig**	**0.76**	**177**	*i* P		**Pn**	**17 32 59.4**	**+0.2**
BIPH				*i* S		**Sn**	**17 33 09.1**	**-0.6**
CDOP	**Cateel, Davao**	**1.16**	**174**	*eP*		**Pn**	**17 33 04.8**	**+0.2**
CDOP				*i* S		**Sn**	**17 33 18.5**	**-0.9**
SCPH	**Surigao**	**1.17**	**316**	*i* P		**Pn**	**17 33 06.7**	**+2.1**
SCPH				*i* S		Sn	17 33 09.7	-10
BUKP	**Musuan**	**1.63**	**230**	*eP*		**Pn**	**17 33 14.3**	**+3.2**
BUKP				*eS*		**Sn**	**17 33 36.3**	**+5.3**
CGP	**Cagayan de Oro**	**1.68**	**253**	*i* P		**Pn**	**17 33 13.4**	**+1.8**
CGP				*i* S		**Sn**	**17 33 38.2**	**+6.3**
DAV	**Davao City (W)**	**2.00**	**201**	P		**Pn**	**17 33 18.9**	**+2.8**
	13μm,0.8s,baz=46,slow=3.0,SNR=127							
DAV				S		**Sn**	**17 33 46.9**	**+6.9**
	46μm,0.7s,baz=272,slow=20,SNR=15							
DAV				LR		LR	17 34 33.4	
	comp=Z,127μm,19.6s,baz=14,slow=51							
DAV	**Davao City (W)**	**2.00**	**201**			**Pn**	**17 33 18.7**	**+2.6**
DAV						**Sn**	**17 33 40.6**	**+0.6**
DAV	**Davao City (W)**	**2.00**	**201**	P		**Pn**	**17 33 19.4**	**+3.3**
DAV	**Davao City (W)**	**2.00**	**201**	P		**Pn**	**17 33 19.6**	**+3.5**
DAV	**Davao City (W)**	**2.00**	**201**	P		**Pn**	**17 33 18.0**	**+1.9**
DMPH	**Davao City--Mi**	**2.02**	**203**	*eP*		**Pn**	**17 33 19.3**	**+3.0**
DMPH				*i* S		Sn	17 33 55.6	+15
KCP	**Kidapawan**	**2.28**	**212**	*i* P		**Pn**	**17 33 22.1**	**+2.2**
KCP				*i* S		**Sn**	**17 33 50.0**	**+3.3**
PLP	**Palo**	**2.57**	**329**	*eP*		**Pn**	**17 33 26.9**	**+3.0**
PLP				*eS*		**Sn**	**17 34 00.0**	**+6.1**
LSIP	**Lazi, Siquijor**	**2.66**	**274**	*eP*		**Pn**	**17 33 27.4**	**+2.3**
LSIP				*i* S		**Sn**	**17 33 55.9**	**-0.2**
CTBH	**Cotabato--PC H**	**2.67**	**230**	*eP*		**Pn**	**17 33 27.8**	**+2.5**
LLP	**Lapu-Lapu**	**2.69**	**301**	*i* P		**Pn**	**17 33 29.1**	**+3.6**
LLP				*eS*		**Sn**	**17 33 59.9**	**+3.0**
DDMP	**Don Marcelino,**	**2.89**	**192**	*i* P		**Pn**	**17 33 29.6**	**+1.3**
DDMP				*i* S		**Sn**	**17 34 05.8**	**+4.0**
DCPH	**Dipolog City**	**2.95**	**263**	*i* P		**Pn**	**17 33 32.0**	**+2.9**
SNPH	**Sibulan**	**3.07**	**278**	*i* P		**Pn**	**17 33 33.9**	**+3.1**
SNPH				*i* S		Sn	17 34 31.2	+25
PAGZ	**Pagadian**	**3.10**	**250**	*eP*		**Pn**	**17 33 34.1**	**+2.9**
PAGZ				*eS*		**Sn**	**17 33 58.7**	**-8.3**
GSPH	**General Santos**	**3.15**	**206**	*i* P		**Pn**	**17 33 35.1**	**+3.2**
GSPH				*i* S		**Sn**	**17 34 08.8**	**+0.5**

GUIM	**Jordan**	**4.04**	**295**	*i* P		**Pn**	**17 33 47.5**	**+3.6**
GUIM				*eS*		**Sn**	**17 34 32.5**	**+2.5**
MMPH	**Masbate**	**4.30**	**322**	*i* P		**Pn**	**17 33 51.1**	**+3.5**
ZCP	**Zamboanga City**	**4.65**	**245**	*i* P		**Pn**	**17 33 55.4**	**+2.9**
JAP	**San Jose, Anti**	**4.66**	**293**	*eP*		Pn	17 33 58.5	+5.9
IBAJ	**Ibajay, Aklan**	**4.98**	**305**	*i* P		**Pn**	**17 34 01.1**	**+4.1**
SGSI	**Sangihe**	**5.28**	**189**	P		**Pn**	**17 34 04.4**	**+3.2**
GQP	**Guinayangan**	**6.22**	**323**	*eP*		**Pn**	**17 34 17.2**	**+3.2**
LQP	**Lukban**	**6.95**	**318**	*i* P		**Pn**	**17 34 28.1**	**+3.9**
PPR	**Puerto Princes**	**7.53**	**277**	*i* P		**Pn**	**17 34 32.6**	**+0.6**
MNI	**Manado**	**7.60**	**191**	P		**Pn**	**17 34 36.3**	**+3.4**
TNTI	**Ternate**	**8.19**	**173**			**Pn**	**17 34 43.0**	**+2.0**
TNTI	**Ternate**	**8.19**	**173**	P		**Pn**	**17 34 44.3**	**+3.3**
	8.0nm20μm2μm,1.4s							
TNTI	**Ternate**	**8.19**	**173**	P		**Pn**	**17 34 44.6**	**+3.6**
I39PW	**PALAU INFRASON**	**8.27**	**99**	P		Pn	17 34 36.4	-5.7
	baz=259,slow=7.0,SNR=4.8							
I39PW				S		Sn	17 36 04.7	-10
	baz=266,slow=6.8							
I39PW				T		T	17 43 11.2	
	baz=253,slow=72							
MYLDM	**Lahad Datu**	**8.61**	**245**			Pn	17 34 52.2	+5.4
MYLDM	**Lahad Datu**	**8.61**	**245**	P		Pn	17 34 53.3	+6.5
	5.1nm24μm1μm,1.4s							
PALP	**Palanan**	**8.91**	**335**	*eP*		**Pn**	**17 34 51.4**	**+0.5**
PALP				*eS*		**Sn**	**17 36 26.3**	**-3.7**
TOLI2	**Tolitoli**	**9.54**	**216**			**Pn**	**17 34 59.7**	**+0.2**
TOLI2	**Tolitoli**	**9.54**	**216**	P		**Pn**	**17 35 00.4**	**+0.9**
BOLP	**Bolinao**	**9.68**	**320**	*i* P		**Pn**	**17 35 04.6**	**+3.2**
BOLP				*i* S		Sn	17 36 11.9	-37
CVP	**Callao Caves**	**9.74**	**334**	*eP*		**Pn**	**17 35 02.3**	**+0.1**
SGCP	**Gonzaga**	**10.13**	**336**	*eP*		**Pn**	**17 35 08.2**	**+0.6**
SGCP				*eS*		**Sn**	**17 36 55.8**	**-4.1**
ABRA	**Dolores**	**10.22**	**328**	*i* P		**Pn**	**17 35 10.4**	**+1.5**
ABRA				*i* S		Sn	17 36 49.0	-13
TARAI	**Tarakan**	**10.33**	**238**	P		Pn	17 35 17.2	+6.8
	2μm,1.7s							
LUWI	**Luwuk**	**10.53**	**200**			**Pn**	**17 35 16.6**	**+3.5**
LUWI	**Luwuk**	**10.53**	**200**	P		**Pn**	**17 35 17.7**	**+4.6**
	18μm20μm2μm,1.0s							
LUWI	**Luwuk**	**10.53**	**200**	P		**Pn**	**17 35 17.7**	**+4.6**
SIPP	**Brgy, Tapao**	**10.59**	**328**	*eP*		**Pn**	**17 35 17.1**	**+3.3**
SIPP				*eS*		Sn	17 37 29.7	+19
PACPP	**Pamplona Cagay**	**10.61**	**334**	*i* P		**Pn**	**17 35 15.6**	**+1.4**
PACPP				*eS*		**Sn**	**17 37 04.7**	**-6.9**
MPSI	**Mapaga**	**10.68**	**217**	P		**Pn**	**17 35 19.5**	**+4.4**
APSI	**Ampana**	**10.84**	**206**	P		**Pn**	**17 35 21.7**	**+4.4**
	21μm20μm2μm,1.2s							
SWI	**Sorong**	**10.92**	**153**	P		**Pn**	**17 35 18.6**	**+0.2**
	14μm7μm785nm,0.9s							
SIJI	**Sorong**	**10.93**	**153**	P		**Pn**	**17 35 18.3**	**-0.3**
	268nm,0.4s,baz=335,slow=17,SNR=72							
SIJI				S		**Sn**	**17 37 12.8**	**-6.7**
	53nm,0.4s,baz=216,slow=23,SNR=11							
SIJI				LR		LR	17 39 45.2	
	comp=Z,8μm,19.9s,baz=338,slow=38							
SIJI	**Sorong**	**10.93**	**153**	P		**Pn**	**17 35 18.7**	**+0.2**
	12μm407nm,0.9s							
SANI	**Sanana**	**10.93**	**182**	P		**Pn**	**17 35 18.9**	**+0.4**
	8μm9μm1μm,0.8s							
SANI	**Sanana**	**10.93**	**182**	P		**Pn**	**17 35 18.7**	**+0.2**
PCI	**Palu**	**11.72**	**214**	P		**Pn**	**17 35 33.7**	**+4.3**
	21μm11μm1μm,1.1s							
NLAI	**Namlea**	**12.13**	**176**	P		**Pn**	**17 35 36.3**	**+1.3**
	10μm9μm846nm,0.9s							
FAKI	**Fak Fak**	**13.19**	**153**			**Pn**	**17 35 49.8**	**+0.4**
FAKI	**Fak Fak**	**13.19**	**153**	P		**Pn**	**17 35 51.2**	**+1.8**
	14μm7μm511nm,1.3s							
FAKI	**Fak Fak**	**13.19**	**153**	P		**Pn**	**17 35 51.5**	**+2.1**
KDI	**Kendari**	**13.34**	**196**	P		**Pn**	**17 35 55.1**	**+3.6**
	8μm264nm,0.8s							
BKB	**Balikpapan**	**13.82**	**223**			**P**	**17 36 02.8**	**-2.4**
BKB	**Balikpapan**	**13.82**	**223**	P		**P**	**17 36 02.4**	**-2.8**
	22μm22μm1μm,1.4s							
KKSI	**Kolaka, Sulawe**	**13.84**	**200**	P		**Pn**	**17 35 59.9**	**+1.6**
	10μm281nm,0.8s							
BNDI	**Bandanaira**	**13.85**	**165**	P		**P**	**17 36 02.5**	**-3.0**
	18μm1μm,1.8s							
BAKI	**Biak**	**14.02**	**135**	P		**Pn**	**17 36 03.0**	**+2.2**
	21μm13μm717nm,1.9s							
SPSI	**Sidrap Palu**	**14.39**	**207**	P		**P**	**17 36 09.1**	**-2.4**
	13μm8μm632nm,1.2s							
SRPI	**Serui, Papua**	**14.60**	**137**	P		**Pn**	**17 36 10.7**

GUMO **Guam** 18.77 74 P **Pn** 17 37 00.7 -0.2
comp=Z,360nm,1.0s,baz=211,slow=5.7,SNR=24
GUMO S **S** 17 40 32.4 +1.2
comp=Z,32nm,1.0s,baz=12,slow=22,SNR=1.0
GUMO LR LR 17 43 07.8
comp=Z,5μm,19.4s,baz=251,slow=33
GUMO Guam 18.77 74 P **Pn** 17 37 00.6 -0.2
GUMO Guam 18.77 74 P **Pn** 17 37 03.6 +2.7
QIZ Qiongzhong 18.85 304 P **Pn** 17 37 02.5 +0.7
QIZ sP **sP** 17 37 18.0 -0.2
QIZ S **Sn** 17 40 30.3 -1.8
QIZ pmax pmax
comp=Z,590nm,0.8s
QIZ pmax pmax
comp=Z,4μm,5.8s
QIZ L L
comp=Z,5μm,15.5s
QIZ L L
comp=Z,8μm,16.0s
QIZ L L
comp=Z,16μm,23.7s
GZH2 Guangzhou 18.99 322 P **P** 17 37 02.5 +0.1
GZH2 pP **pP** 17 37 12.3 -1.2
GZH2 sP **sP** 17 37 20.5 +0.9
GZH2 S **S** 17 40 36.0 +0.4
GZH2 pmax pmax
comp=Z,630nm,1.0s
GZH2 L L
comp=Z,10μm,17.4s
GZH2 L L
comp=Z,8μm,16.6s
GZH2 L L
comp=Z,22μm,22.6s
DBNI Kabupaten Domp 19.08 205 P **Pn** 17 37 06.4 +1.8
comp=Z,7μmcomp=Z,9μmcomp=Z,580nm,0.9s
BATI Baumata 19.21 188 P **P** 17 37 04.0 -0.9
comp=Z,1μm,0.7s,baz=23,slow=1.0,SNR=140
BATI S **S** 17 40 39.4 -0.7
comp=Z,454nm,1.0s,baz=110,slow=21,SNR=4.5
BATI LR LR 17 46 01.8
comp=Z,5μm,21.1s,baz=330,slow=41
BATI Baumata 19.21 188 P **Pn** 17 37 05.6 -0.6
comp=Z,7μmcomp=Z,10μmcomp=Z,2μm,0.9s
WSI Waingapu 19.44 198 P **P** 17 37 07.5 +0.2
comp=Z,7μmcomp=Z,13μmcomp=Z,534nm,0.8s
PLAI Plampang 19.60 206 P **Pn** 17 37 12.7 +1.9
comp=Z,7μmcomp=Z,8μmcomp=Z,877nm,0.7s
PLAI Plampang 19.60 206 P **Pn** 17 37 12.7 +1.9
WBSI Waikabubak, Su 19.71 201 P **P** 17 37 11.1 +0.7
comp=Z,6μmcomp=Z,7μmcomp=Z,438nm,0.7s
TWSI Taliwang, Sumb 19.92 208 P **Pn** 17 37 16.0 +1.4
comp=Z,7μmcomp=Z,7μmcomp=Z,531nm,1.2s
DPSS Saipan 20.03 70 P Pn 17 37 15.3 -0.6
DPSS IAmb IAmb 17 37 25.8
comp=Z,1μm,1.0s
BWJI Bawean 20.04 223 P Pn 17 37 19.8 +3.8
SRBI Singaraja 20.21 213 P Pn 17 37 21.2 +3.1
comp=Z,8μmcomp=Z,12μmcomp=Z,788nm,1.6s
KHKI Kahang-Kahang 20.24 212 P Pn 17 37 22.4 +4.1
comp=Z,8μmcomp=Z,606nm,0.9s
ABJI Asem Bagus 20.53 216 P Pn 17 37 24.2 +2.4
comp=Z,10μmcomp=Z,476nm,1.1s
RTBI Rangdo, Negare 20.67 214 P Pn 17 37 25.9 +2.4
comp=Z,11μmcomp=Z,771nm,1.2s
DNP Denpasar 20.71 213 P Pn 17 37 25.4 +1.5
comp=Z,20μmcomp=Z,1μm,1.7s
BLJI Banyuglugur 20.87 218 P Pn 17 37 27.9 +2.0
comp=Z,9μmcomp=Z,7μmcomp=Z,391nm,1.0s
JAGI Jajag, Banyuwa 21.12 215 P **P** 17 37 25.6 0.0
JAGI IAmb IAmb 17 37 42.5
comp=Z,938nm,1.4s
JAGI Jajag, Banyuwa 21.12 215 P **P** 17 37 30.2 +4.6
comp=Z,6μmcomp=Z,500nm,1.2s
JAGI Jajag, Banyuwa 21.12 215 P **P** 17 37 30.4 +4.8
TPI Tanjungpandan 21.94 239 P **P** 17 37 36.3 +1.9
comp=Z,9μmcomp=Z,457nm,1.0s
NGJI Ngawi 21.95 223 P **P** 17 37 40.0 +5.5
comp=Z,806nm,1.1s
SJI Sawahan 22.02 222 P **P** 17 37 39.4 +4.1
comp=Z,10μmcomp=Z,754nm,0.8s
SNJI Sawahan-Nganju 22.06 222 P **P** 17 37 40.9 +5.1
MTN Manton Dam 22.17 167 P **P** 17 37 36.0 -0.8
comp=Z,272nm,0.8s,comp=Z,0.0nm
GULI GuiLin 22.24 319 ⇑P **P** 17 37 33.5 -4.1
GULI S **S** 17 41 30.8 -8.8
GULI pmax pmax
comp=Z,140nm,1.2s
GULI L L
comp=Z,5μm,25.5s
GULI L L
comp=Z,8μm,27.5s
GULI L L
comp=Z,16μm,25.5s
KDU Kakadu 22.35 164 P **P** 17 37 38.5 -0.2
comp=Z,370nm,0.9s
SMRI Semarang 22.42 225 P **P** 17 37 40.3 +0.6
SMRI IAmb IAmb 17 37 46.4
comp=Z,772nm,1.0s
SMRI Semarang 22.42 225 P **P** 17 37 43.5 +3.9
comp=Z,13μmcomp=Z,861nm,1.1s
SMRI Semarang 22.42 225 P **P** 17 37 43.2 +3.6
SSE Sheshan 22.55 348 P **P** 17 37 40.8 0.0
SSE S **S** 17 41 42.3 -2.6
SSE pmax pmax
comp=Z,550nm,0.9s
SSE L L
comp=Z,1μm,20.6s
SSE L L
comp=Z,1μm,19.2s
WOJI Wonogiri, Jawa 22.66 223 P **P** 17 37 45.7 +3.7
comp=Z,9μmcomp=Z,518nm,1.5s
JSU Suzuyama 22.77 9 IAmb IAmb 17 37 46.8
comp=Z,1μm,1.2s
JSU Suzuyama 22.77 9 P **P** 17 37 44.1 +0.9
CNSH ChangSha 22.92 328 P **P** 17 37 42.3 -2.4
CNSH S **S** 17 41 50.0 -1.2
CNSH L L
comp=Z,6μm,21.2s
CNSH L L
comp=Z,4μm,20.3s
CNSH L L
comp=Z,8μm,21.6s
TPRI Tanjung Pinang 23.11 251 P **P** 17 37 48.3 +1.5
CTJI Waduk Cacaban 23.30 228 P **P** 17 37 52.0 +3.4
comp=Z,17μmcomp=Z,2μm,1.0s
MYKOM **Kota Tinggi** 23.46 254 P **P** 17 37 52.1 +2.0
JCJ Chichijima 23.48 38 P **P** 17 37 49.3 -0.9
comp=Z,562nm,0.8s,baz=210,slow=5.3,SNR=17
JCJ S **S** 17 41 53.9 -6.6
comp=Z,109nm,1.0s,baz=329,slow=23,SNR=2.1
JCJ LR LR 17 45 04.6
comp=Z,5μm,21.8s,baz=236,slow=32
comp=Z,562nm,0.8s
JCJ Chichijima 23.48 38 IAmb IAmb 17 37 54.5
comp=Z,656nm,0.9s
JCJ Chichijima 23.48 38 P **P** 17 37 49.8 -0.4
NJ2 Nanjing 24.01 344 ⇑P **P** 17 37 55.3 +0.2
NJ2 pP **pP** 17 38 06.0 -1.5
NJ2 S **S** 17 42 08.0 -0.9
NJ2 pmax pmax
comp=Z,750nm,1.0s
NJ2 pmax pmax
comp=Z,4μm,5.0s
NJ2 L L
comp=Z,7μm,22.4s
NJ2 L L
comp=Z,6μm,18.2s
NJ2 L L
comp=Z,12μm,24.9s
WHN Wuhan 24.22 334 ⇑P **P** 17 37 56.5 -0.5
WHN sP **pP** 17 38 11.0 +1.5
WHN PcP **PcP** 17 41 37.5 +0.9
WHN pmax pmax
comp=Z,380nm,0.8s
WHN pmax pmax
comp=Z,3μm,4.8s
WHN L L
comp=Z,12μm,18.7s
WHN L L
comp=Z,11μm,14.8s
WHN L L
comp=Z,27μm,18.9s
JNU Nakatsue 24.43 9 P **P** 17 37 58.6 -0.3
comp=Z,948nm,0.9s,baz=190,slow=4.5,SNR=128
JNU LR LR 17 47 27.8
comp=Z,3μm,21.2s,baz=178,slow=36
comp=Z,948nm,0.9s

PMBI Palembang 24.50 242 P **P** 17 38 04.2 +4.4
KNRA Kununurra 24.58 174 P **P** 17 38 00.0 -0.4
comp=Z,697nm,0.7s,comp=Z,0.0nm
BBJI Bungbulang 24.73 229 P **P** 17 38 01.7 -0.2
BBJI Bungbulang 24.73 229 P **P** 17 38 03.2 +1.3
SLVN Son La 24.85 302 IAMs_20 IAMs_20 17 47 52.4
comp=Z,10μm,20.0s
GYA Guiyang 25.50 316 ⇓P **P** 17 38 09.5 +0.6
GYA S **S** 17 42 30.8 -2.4
GYA pmax pmax
comp=Z,20nm,0.8s
GYA L L
comp=Z,7μm,24.7s
GYA L L
comp=Z,5μm,25.4s
GYA L L
comp=Z,16μm,27.0s
JTU Tsushima 25.61 6 P **P** 17 38 11.2 +1.6
JMN Monobe 25.63 15 P **P** 17 38 11.6 +1.8
KULM Kulim 25.72 264 IAmb IAmb 17 38 15.3
comp=Z,1μm,1.6s
KULM Kulim 25.72 264 P **P** 17 38 13.1 +2.3
ENH Enshi 26.41 326 IAMs_20 IAMs_20 17 49 05.5
comp=Z,11μm,20.0s
ENH Enshi 26.41 326 P **P** 17 38 15.7 -1.3
BKNI Bangkinang 26.59 253 IAmb IAmb 17 38 43.2
comp=Z,574nm,1.0s
BKNI Bangkinang 26.59 253 P **P** 17 38 22.1 +3.4
MNAI Manna 26.78 241 IAmb IAmb 17 38 33.1
comp=Z,1μm,1.1s
MNAI Manna 26.78 241 P **P** 17 38 22.3 +1.8
FITZ Fitzroy Crossi 26.88 181 P **P** 17 38 21.9 +0.7
comp=Z,397nm,0.9s,baz=16,slow=8.8,SNR=312
comp=Z,397nm,0.9s
JHJ Hachijo jima 2 27.08 25 P **P** 17 38 22.5 -0.4
comp=Z,204nm,0.7s,baz=200,slow=9.9,SNR=12
JHJ LR LR 17 49 55.7
comp=Z,3μm,19.2s,baz=241,slow=38
comp=Z,204nm,0.7s
JHJ2 Mitsune 27.09 25 IAmb IAmb 17 38 28.9
comp=Z,416nm,0.9s
JHJ2 Mitsune 27.09 25 P **P** 17 38 22.6 -0.3
TJN Taejon 27.32 2*c* iP **P** 17 38 25.4 +0.4
KMI2 Kunming 27.62 309 ⇑P **P** 17 38 28.8 +0.7
KMI2 PP **PnPn** 17 39 16.5 +1.2
KMI2 PcP **PcP** 17 41 46.0 +1.1
KMI2 S **S** 17 43 06.0 -0.9
KMI2 pmax pmax
comp=Z,160nm,1.0s
KMI2 pmax pmax
comp=Z,1μm,9.3s
KMI2 L L
comp=Z,5μm,24.8s
KMI2 L L
comp=Z,6μm,21.6s
KMI2 L L
comp=Z,11μm,29.2s
PMG Port Moresby 27.62 131 P **P** 17 38 28.2 +0.3
comp=Z,138nm,0.9s,baz=312,slow=6.1,SNR=19
PMG PcP **PcP** 17 41 46.1 +1.4
comp=Z,66nm,1.0s,baz=358,slow=2.8,SNR=3.7
comp=Z,138nm,0.9s
PMG Port Moresby 27.62 131 *c* iP **P** 17 38 27.7 -0.3
PMG pmax pmax
comp=Z,217nm,1.2s
PMG MLR MLR
comp=Z,3μm,17.0s
PMG Port Moresby 27.62 131 P **P** 17 38 27.3 -0.7
PMG Port Moresby 27.62 131 P **P** 17 38 28.5 +0.5
JSG Sagara 27.83 21 P **P** 17 38 31.4 +1.9
PSI Prapat 27.91 259 P **P** 17 38 31.6 +0.9
PSI pmax pmax
comp=Z,319nm,1.0s
RPSI Rantau Prapat 27.94 259 P **P** 17 38 31.6 +0.8
RPSI IAmb IAmb 17 38 35.2
comp=Z,319nm,1.0s
INU Inuyama 28.04 19 IAmb IAmb 17 38 33.5
comp=Z,472nm,0.9s
INU Inuyama 28.04 19 P **P** 17 38 32.5 +1.0
CM31 Chiang Mai Arr 28.19 292 P **P** 17 38 35.1 +2.1
SNR=150
CM31 P **P** 17 38 35.1 +2.1
SNR=150
CM31 Chiang Mai Arr 28.19 292 IAmb IAmb 17 38 36.2
comp=Z,274nm,0.8s
CMAR Chiang Mai Arr 28.19 292 P **P** 17 38 33.8 +0.8
comp=Z,135nm,0.8s,baz=102,slow=6.9,SNR=592
CMAR PcP **PcP** 17 41 47.2 +1.2
comp=Z,46nm,0.9s,baz=89,slow=0.8,SNR=16
CMAR ScP **ScP** 17 45 22.2 -1.1
comp=Z,7.0nm,0.9s,baz=95,slow=3.9,SNR=5.5
CMAR PKiKP **PKiKP** 17 49 21.6 -0.4
comp=Z,4.8nm,0.8s,baz=279,slow=1.3,SNR=16
CMAR LR LR 17 50 38.0
comp=Z,4μm,18.7s,baz=110,slow=38
CMAR P3KPbc 18 10 56.1
comp=Z,2.7nm,1.0s,baz=282,slow=5.8,SNR=14
comp=Z,135nm,0.8s
CMAR Chiang Mai Arr 28.19 292 P **P** 17 38 33.5 +0.5
COEN Coen 28.24 143 P **P** 17 38 32.5 -1.0
comp=Z,175nm,1.1s,comp=Z,0.0nm
CHTO Chiang Mai 28.29 293 P **P** 17 38 34.7 +0.8
CHTO pmax pmax
comp=Z,135nm,0.9s
CHTO MLR MLR
comp=Z,5μm,18.0s
CHTO Chiang Mai 28.29 293 P **P** 17 38 35.4 +1.5
CHTO P **P** 17 38 35.4 +1.5
CHTO P **P** 17 38 35.4 +1.5
CHTO Chiang Mai 28.29 293 P **P** 17 38 34.7 +0.8
CHTO Chiang Mai 28.29 293 P **P** 17 38 35.2 +1.3
JGF Kuroka 28.38 19 P **P** 17 38 35.1 +0.5
TIA Tai'an 28.40 344 P **P** 17 38 34.0 -0.7
TIA PcP **PcP** 17 41 46.8 +0.5
TIA S **S** 17 43 14.5 -4.0
TIA pmax pmax
comp=Z,220nm,0.9s
TIA pmax pmax
comp=Z,1μm,6.8s
TIA L L
comp=Z,3μm,25.0s
TIA L L
comp=Z,3μm,25.0s
TIA L L
comp=Z,7μm,25.0s
INCN Inchon 28.41 1 P **P** 17 38 33.1 -1.7
INCN pmax pmax
comp=Z,119nm,0.9s
INCN MLR MLR
comp=Z,3μm,20.0s
INCN Inchon 28.41 1 P **P** 17 38 35.0 +0.2
INCN P **P** 17 38 35.0 +0.2
INCN Inchon 28.41 1 P **P** 17 38 33.1 -1.7
INCN Inchon 28.41 1 P **P** 17 38 35.0 +0.2
KSRS Korea Array 28.42 3 P **P** 17 38 35.7 +0.9
comp=Z,493nm,1.0s,baz=181,slow=10,SNR=720
KSRS PcP **PcP** 17 41 47.1 +0.9
comp=Z,41nm,1.0s,baz=188,slow=2.3,SNR=9.0
KSRS ScP **ScP** 17 45 23.1 -0.4
comp=Z,24nm,1.0s,baz=189,slow=3.3,SNR=20
KSRS PKiKP **PKiKP** 17 49 20.8 -0.8
comp=Z,3.8nm,0.8s,baz=203,slow=1.0,SNR=10
KSRS LR LR 17 52 21.5
comp=Z,3μm,18.1s,baz=185,slow=42
KSRS P3KPbc 18 10 53.3
comp=Z,6.6nm,0.8s,baz=0.0,slow=4.8,SNR=28
comp=Z,493nm,1.0s
KS19 Wonju Array Si 28.46 3 IAmb IAmb 17 38 37.2
comp=Z,675nm,1.1s
LYN LuoYang 28.48 336 P **P** 17 38 34.8 -0.6
LYN PcP **PcP** 17 41 47.8 +1.3
LYN S **S** 17 43 17.3 -2.4
LYN sS sS 17 43 37.8 -3.0
LYN pmax pmax
comp=Z,140nm,0.7s
LYN pmax pmax
comp=Z,1μm,10.1s
LYN L L
comp=Z,8μm,20.3s
LYN L L
comp=Z,4μm,23.0s
LYN L L
comp=Z,11μm,20.3s
HJU Haeju 28.97 359 P **P** 17 38 40.7 +1.0
HJU AmB
comp=Z,580nm,1.9s

PZH PanZhiHua 29.11 310 P **P** 17 38 41.5 +0.3
PZH S **S** 17 43 30.0 0.0
PZH SS **SnSn** 17 45 00.0 +2.4
PZH pmax pmax
comp=Z,80nm,1.2s
PZH pmax pmax
comp=Z,770nm,8.6s
PZH L L
comp=Z,5μm,21.2s
PZH L L
comp=Z,6μm,21.6s
PZH L L
comp=Z,6μm,21.8s
LHMI Lhok Sumawe 29.37 265 IAmb IAmb 17 39 13.7
comp=Z,495nm,0.9s
LHMI Lhok Sumawe 29.37 265 P **P** 17 38 46.7 +3.1
MJAR Matsushiro Arr 29.52 20 P **P** 17 38 44.1 -0.6
comp=Z,169nm,0.9s,baz=194,slow=9.1,SNR=433
MJAR PcP **PcP** 17 41 49.8 +0.7
comp=Z,33nm,0.9s,baz=164,slow=2.7,SNR=6.5
MJAR ScP **ScP** 17 45 26.2 -1.0
comp=Z,9.8nm,1.1s,baz=208,slow=3.7,SNR=7.0
MJAR LR LR 17 51 53.0
comp=Z,4μm,18.1s,baz=211,slow=39
MJAR P3KPbc 18 10 48.9
comp=Z,13nm,0.8s,baz=16,slow=4.3,SNR=35
comp=Z,169nm,0.9s
MJAR Matsushiro Arr 29.52 20 P **P** 17 38 43.3 -1.3
MAJO Matsushiro 29.52 20 *c* iP **P** 17 38 44.1 -0.5
MAJO pmax pmax
comp=Z,261nm,1.0s
MAJO Matsushiro 29.52 20 P **P** 17 38 43.4 -1.3
MAJO Matsushiro 29.52 20 P **P** 17 38 44.3 -0.3
GSI Gunungsitoli 29.59 257 P **P** 17 38 45.6 0.0
GSI IAmb IAmb 17 38 53.0
comp=Z,223nm,0.8s
GSI Gunungsitoli 29.59 257 P **P** 17 38 47.0 +1.4
XAN Xi'an 29.66 330 P **P** 17 38 44.0 -1.9
XAN S **S** 17 43 32.8 -5.6
XAN pmax pmax
comp=Z,130nm,0.6s
XAN pmax pmax
comp=Z,790nm,4.0s
XAN L L
comp=Z,6μm,21.3s
XAN L L
comp=Z,4μm,21.4s
XAN L L
comp=Z,11μm,24.7s
WRAB Tennant Creek 29.77 165 *c* eP **P** 17 38 46.0 -0.9
WRAB pmax pmax
comp=Z,124nm,0.9s
WRAB MLR MLR
comp=Z,2μm,12.0s
WRAB Tennant Creek 29.77 165 P **P** 17 38 46.1 -0.9
WRAB Tennant Creek 29.77 165 P **P** 17 38 46.4 -0.6
WRA Warramunga Arr 29.77 165 P **P** 17 38 47.0 -0.1
comp=Z,83nm,0.8s,baz=345,slow=9.4,SNR=163
WRA PcP **PcP** 17 41 50.2 +0.3
comp=Z,66nm,0.7s,baz=337,slow=3.1,SNR=11
WRA S **S** 17 43 32.6 -7.7
comp=Z,56nm,0.8s,baz=346,slow=15,SNR=10
WRA ScP **ScP** 17 45 25.9 -2.3
comp=Z,10.0nm,0.7s,baz=346,slow=3.1,SNR=3.0
WRA LR LR 17 53 55.6
comp=Z,2μm,18.6s,baz=332,slow=42
WRA P3KPbc 18 10 46.0
comp=Z,4.5nm,0.9s,baz=168,slow=3.9,SNR=8.5
comp=Z,83nm,0.8s
WRA Warramunga Arr 29.77 165 P **P** 17 38 43.7 -3.3
PYAG Pyongyang 29.98 359 P **P** 17 38 49.7 +1.1
PYAG S **S** 17 43 46.6 +3.5
PYAG AmB
comp=Z,428nm,1.2s
DL2 Dalian 30.13 353 ⇑*i* P **P** 17 38 50.8 +0.9
DL2 sP **sP** 17 39 06.3 -1.7
DL2 *e* PP **PnPn** 17 39 51.3 +2.6
DL2 PcP **PcP** 17 41 51.3 +0.8
DL2 S **S** 17 43 45.5 +0.1
DL2 sS **sS** 17 44 05.5 -1.1
DL2 ScP **ScP** 17 45 29.3 +0.3
DL2 PcS **PcS** 17 45 34.5 +0.5
DL2 ScS **ScS** 17 49 20.5 -4.1
DL2 pmax pmax
comp=Z,840nm,0.8s
DL2 pmax pmax
comp=Z,2μm,4.9s
DL2 L L
comp=Z,3μm,22.2s
DL2 L L
comp=Z,2μm,20.5s
DL2 L L
comp=Z,5μm,22.8s
HNS HongShan 30.21 341 ⇑P **P** 17 38 50.3 -0.4
HNS PcP **PcP** 17 41 52.0 +1.2
HNS S **S** 17 43 44.5 -2.3
HNS pmax pmax
comp=Z,210nm,0.9s
HNS L L
comp=Z,1μm,19.6s
HNS L L
comp=Z,4μm,18.2s
HNS L L
comp=Z,4μm,17.7s
CD2 Chengdu 30.33 319 P **P** 17 38 51.5 -0.4
CD2 S **S** 17 43 48.8 -0.1
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,610nm,3.7s
CD2 L L
comp=Z,9μm,20.3s
CD2 L L
comp=Z,9μm,20.3s
CD2 L L
comp=Z,15μm,24.1s
MBWA Marble Bar 30.61 192 P **P** 17 38 53.4 -0.9
comp=Z,131nm,1.2s
MBWA Marble Bar 30.61 192 P **P** 17 38 55.5 +1.1
MBWA Marble Bar 30.61 192 P **P** 17 38 55.2 +0.8
MBWA Marble Bar 30.61 192 P **P** 17 38 55.2 +0.8
HHU Hamhung 30.87 2 P **P** 17 38 58.1 +1.6
HHU S **S** 17 43 59.8 +2.8
HHU AmB
comp=Z,2μm,1.3s
TNCH TengChong 30.92 305 ⇑*i* P **P** 17 38 58.0 +0.6
TNCH pP pP 17 39 11.8 +1.8
TNCH PcP **PcP** 17 41 54.0 +0.8
TNCH S **S** 17 43 57.0 -1.7
TNCH pmax pmax
comp=Z,500nm,1.0s
TNCH L L
comp=Z,2μm,17.9s
TNCH L L
comp=Z,3μm,15.0s
TNCH L L
comp=Z,7μm,20.2s
SUJ Sinuiju 31.07 357 P **P** 17 39 00.3 +2.1
NPW Naypyitaw 31.10 294 P **P** 17 39 00.8 +2.0
TIY Taiyuan 31.27 338 *e* P **P** 17 38 59.8 -0.3
TIY S **S** 17 43 59.8 -3.7
TIY pmax pmax
comp=Z,76nm,0.8s
TIY pmax pmax
comp=Z,640nm,4.1s
TIY L L
comp=Z,3μm,18.6s
TIY L L
comp=Z,2μm,21.6s
TIY L L
comp=Z,4μm,22.8s
PATS Pohnpei 31.76 91 P **P** 17 39 06.3 +1.7
PATS Pohnpei 31.76 91 P **P** 17 39 04.7 0.0
PATS Pohnpei 31.76 91 P **P** 17 39 07.3 +2.7
QIS Mount Isa 32.10 156 P **P** 17 39 07.3 -0.2
comp=Z,500nm,1.1s
BJI2 Beijing 32.24 345 P **P** 17 39 08.5 0.0
BJI2 S **S** 17 44 17.8 -0.7
BJI2 pmax pmax
comp=Z,150nm,1.1s
BJI2 L L
comp=Z,1μm,23.3s
BJI2 L L
comp=Z,660nm,24.5s
BJI2 L L
comp=Z,2μm,24.9s

BJT Baijiatuao 32.24 345 P **P** **17 39 08.2 -0.4**
BJT pmax pmax
comp=Z,273nm,1.0s
BJT MLR MLR
comp=Z,2μm,22.0s
BJT Baijiatuao 32.24 345 P **P** **17 39 08.2 -0.4**
BJT IAmb IAmb 17 39 09.7
comp=Z,273nm,1.0s
BJT Baijiatuao 32.24 345 P **P** **17 39 08.6 0.0**
BJT Baijiatuao 32.24 345 P **P** **17 39 08.1 -0.4**
BJT PcP **PcP** **17 41 57.5 +1.3**
MTSU Mount Surprise 32.25 147 P **P** **17 39 09.3 +0.4**
comp=Z,139nm,0.7s
SNY Shenyang 32.84 356 ⇑P **P** **17 39 14.5 +0.8**
SNY S **S** **17 44 26.3 -1.4**
SNY pmax pmax
comp=Z,1μm,5.4s
SNY L L
comp=Z,3μm,19.8s
SNY L L
comp=Z,2μm,16.1s
SNY L L
comp=Z,5μm,23.0s
PBA Port Blair 33.13 278 P **P** **17 39 17.6 +1.0**
SNR=11
PBA Port Blair 33.13 278 P **P** **17 39 17.2 +0.6**
PBA IAmb IAmb 17 39 22.1
comp=Z,255nm,0.9s
PBA Port Blair 33.13 278 P **P** **17 39 18.0 +1.3**
PBA Port Blair 33.13 278 ⇑*i*P **P** **17 39 17.8 +1.1**
AS15 Alice Springs 33.22 167 P **P** **17 39 17.0 -0.4**
comp=Z,163nm,1.0s
AS31 Alice Springs 33.25 167 P **P** **17 39 17.1 -0.5**
comp=Z,47nm,0.8s
AS31 Alice Springs 33.25 167 P **P** **17 39 16.8 -0.8**
ASAR Alice Springs 33.25 167 P **P** **17 39 17.7 +0.1**
comp=Z,36nm,0.5s,baz=349,slow=7.2,SNR=587
ASAR PP **PnPn** **17 40 29.0 -0.2**
comp=Z,20nm,0.7s,baz=348,slow=12,SNR=4.5
ASAR PcP **PcP** **17 41 59.6 +0.3**
comp=Z,99nm,0.7s,baz=353,slow=2.3,SNR=18
ASAR S **S** **17 44 27.3 -7.3**
comp=Z,37nm,0.8s,baz=357,slow=22,SNR=11
ASAR ScP **ScP** **17 45 37.0 -2.9**
comp=Z,9.2nm,0.5s,baz=343,slow=3.2,SNR=8.4
ASAR PKiKP **PKiKP** **17 49 24.8 -0.5**
comp=Z,3.4nm,1.0s,baz=299,slow=1.0,SNR=2.4
ASAR LR LR 17 55 11.0
comp=Z,1μm,19.1s,baz=342,slow=40
ASAR P3KPbc 18 10 31.6
comp=Z,2.3nm,0.8s,baz=160,slow=4.4,SNR=13
comp=Z,36nm,0.5s
ASAR Alice Springs 33.25 167 P **P** **17 39 17.0 -0.6**
AS17 Alice Springs 33.27 167 P **P** **17 39 17.1 -0.6**
comp=Z,144nm,0.8s
GIRL Giralia 33.55 200 P **P** **17 39 21.4 +1.3**
comp=Z,112nm,0.9s
PSTR Posyet 33.80 6*c i*P **P** **17 39 23.6 +1.5**
WRKA Warakurna 33.83 177 P **P** **17 39 21.4 -1.2**
comp=Z,306nm,0.9s
LZDM Lanzhou Array 33.88 326 P **P** **17 39 22.7 -0.6**
comp=Z,17nm,0.7s,baz=148,slow=11,SNR=7.7
LZDM PcP **PcP** **17 42 02.5 +1.2**
comp=Z,28nm,0.5s,baz=178,slow=4.5,SNR=9.3
LZDM LR LR 17 53 31.1
comp=Z,6μm,21.8s,baz=110,slow=37
comp=Z,17nm,0.7s
LZH Lanzhou 33.89 326 P **P** **17 39 22.8 -0.4**
LZH sP sP 17 39 41.5 -0.1
LZH PcP **PcP** **17 42 02.5 +1.4**
LZH S **S** **17 44 42.3 -2.3**
LZH PcS **PcS** **17 45 47.3 0.0**
LZH pmax pmax
comp=Z,80nm,1.1s
LZH pmax pmax
comp=Z,500nm,4.6s
LZH L L
comp=Z,4μm,19.4s
LZH L L
comp=Z,7μm,20.6s
LZH L L
comp=Z,10μm,24.9s
MORE Moreh 34.12 300 IAMs_20 IAMs_20 17 54 20.3
comp=Z,7μm,19.0s
JTM Tenmabayashi 34.31 20 IAmb IAmb 17 39 28.7
comp=Z,364nm,0.9s
JTM Tenmabayashi 34.31 20 P **P** **17 39 27.8 +1.2**
HHC Hu-ho-hao-te 34.37 340 ⇑*i*P **P** **17 39 27.3 +0.1**
HHC sP sP 17 39 44.0 -1.6
HHC PP **PP** **17 40 49.3 +3.5**
HHC S **S** **17 44 49.5 -2.2**
HHC sS sS 17 45 12.0 -1.0
HHC pmax pmax
comp=Z,110nm,1.0s
HHC pmax pmax
comp=Z,330nm,5.7s
HHC L L
comp=Z,2μm,18.8s
HHC L L
comp=Z,1μm,18.2s
HHC L L
comp=Z,3μm,18.2s
VLA Vladivostok 34.39 7*d i*P **P** **17 39 28.8 +1.6**
VLA pmax pmax
comp=Z,867nm,1.0s
VLA MLR MLR
comp=Z,1μm,15.0s
CN2 Changchun 34.73 359 P **P** **17 39 30.5 +0.3**
CN2 sP sP 17 39 52.5 +4.0
CN2 PP **PP** **17 40 49.3 -0.3**
CN2 PcP **PcP** **17 42 03.8 +0.7**
CN2 S **S** **17 44 55.5 -1.5**
CN2 SS **SnSn** **17 47 12.3 -1.4**
CN2 pmax pmax
comp=Z,250nm,0.9s
CN2 L L
comp=Z,1μm,24.0s
CN2 L L
comp=Z,2μm,24.0s
CN2 L L
comp=Z,2μm,26.0s
BTO2 Baotou 34.87 338 *e*P **P** **17 39 30.8 -0.8**
BTO2 pP **pP** **17 39 42.8 -1.5**
BTO2 sP **sP** **17 39 48.5 -1.5**
BTO2 S **S** **17 44 54.5 -5.0**
BTO2 sS **sS** **17 45 20.0 -0.9**
BTO2 SS **SnSn** **17 47 14.8 -2.6**
BTO2 pmax pmax
comp=Z,60nm,0.9s
BTO2 pmax pmax
comp=Z,2μm,8.5s
BTO2 L L
comp=Z,8μm,21.6s
BTO2 L L
comp=Z,4μm,20.9s
BTO2 L L
comp=Z,8μm,23.5s
CTA Charters Tower 34.89 146 P **P** **17 39 32.8 +0.9**
comp=Z,68nm,0.6s,baz=324,slow=9.8,SNR=60
CTA PcP **PcP** **17 42 05.5 +1.5**
comp=Z,38nm,0.8s,baz=316,slow=3.5,SNR=5.7
CTA ScP **ScP** **17 45 44.6 -1.2**
comp=Z,46nm,1.0s,baz=319,slow=5.2,SNR=6.8
CTA LR LR 17 55 42.5
comp=Z,3μm,19.0s,baz=317,slow=39
comp=Z,68nm,0.6s
CTAO Charters Tower 34.89 146 P **P** **17 39 32.4 +0.5**
CTAO pmax pmax
comp=Z,612nm,2.0s
CTAO MLR MLR
comp=Z,4μm,20.0s
CTAO Charters Tower 34.89 146 P **P** **17 39 32.4 +0.5**
CTAO IAmb IAmb 17 39 45.2
comp=Z,612nm,1.9s
CTAO Charters Tower 34.89 146 IAMs_20 IAMs_20 17 55 30.7
comp=Z,4μm,20.0s
CTAO Charters Tower 34.89 146 P **P** **17 39 33.0 +1.1**
USA0B Ussuriysk Arra 35.47 7*c i*P **P** **17 39 38.0 +1.5**
USRK Ussuriysk Ar. 35.47 7 P **P** **17 39 38.0 +1.5**
comp=Z,1μm,0.8s,baz=191,slow=7.8,SNR=1040
USRK ScP **ScP** **17 45 46.7 -0.6**
comp=Z,12nm,1.0s,baz=191,slow=2.3,SNR=5.0
USRK LR LR 17 53 30.2
comp=Z,3μm,21.4s,baz=186,slow=35
USRK P3KPbc 18 10 19.8
comp=Z,4.9nm,0.9s,baz=34,slow=5.6,SNR=5.4
comp=Z,1μm,0.8s
USRK Ussuriysk Ar. 35.47 7 P **P** **17 39 37.4 +0.9**
MDJ Mudanjiang 35.65 4 P **P** **17 39 39.8 +1.8**
MDJ PP **PP** **17 41 01.0 +1.2**
MDJ S **S** **17 45 07.8 -3.3**
MDJ ScS **ScS** **17 49 55.5 +2.7**
MDJ pmax pmax
comp=Z,2μm,1.3s
MDJ L L
comp=Z,2μm,19.4s
MDJ L L
comp=Z,2μm,20.0s
MDJ L L
comp=Z,3μm,24.8s
MDJ Mudanjiang 35.65 4 P **P** **17 39 39.7 +1.6**
MDJ Mudanjiang 35.65 4 P **P** **17 39 39.9 +1.8**
BRDH Bariadhala 35.94 296 LR LR 17 54 47.0
comp=Z,7μm,21.9s,baz=144,slow=37
XLT XiLinHaoTe 35.95 347 *e*P **P** **17 39 41.0 +0.3**
XLT SS SS 17 47 37.3 -17
XLT pmax pmax
comp=Z,620nm,0.9s
XLT L L
comp=Z,190nm,24.5s
XLT L L
comp=Z,1μm,23.2s
XLT L L
comp=Z,3μm,23.5s
ERM Erimo 36.13 21*c i*P **P** **17 39 43.9 +1.8**
ERM pmax pmax
comp=Z,472nm,1.1s
ERM MLR MLR
comp=Z,3μm,20.0s
ERM Erimo 36.13 21 P **P** **17 39 44.0 +1.8**
ERM IAmb IAmb 17 39 45.5
comp=Z,379nm,1.0s
ERM Erimo 36.13 21 P **P** **17 39 44.5 +2.3**
MEEK Meekatharra 36.15 192 P **P** **17 39 42.5 -0.1**
comp=Z,127nm,0.7s
SHL Shillong 36.65 301 P **P** **17 39 47.5 +0.4**
SHL Shillong 36.65 301 P **P** **17 39 47.6 +0.4**
SNR=254
SHL Shillong 36.65 301 ⇑*i*P **P** **17 39 47.5 +0.4**
SHL *i* x x 17 53 03.2
BNX BinXian 36.67 1 ⇑P **P** **17 39 47.0 +0.2**
BNX pP **pP** **17 40 00.8 +1.3**
BNX sP **sP** **17 40 07.0 +1.8**
BNX S **S** **17 45 26.8 +0.1**
BNX sS **ScP** **17 45 50.5 -1.3**
BNX pmax pmax
comp=Z,620nm,1.0s
BNX pmax pmax
comp=Z,590nm,5.7s
BNX L L
comp=Z,3μm,21.1s
BNX L L
comp=Z,2μm,17.9s
BNX L L
comp=Z,2μm,15.7s
ASAJ Asahikawa 37.79 19 P **P** **17 39 58.4 +2.1**
comp=Z,482nm,0.9s,baz=234,slow=14,SNR=302
ASAJ LR LR 17 56 26.9
comp=Z,3μm,18.5s,baz=221,slow=38
comp=Z,482nm,0.9s
JKA Kamikawa-asahi 37.79 19 P **P** **17 39 58.8 +2.4**
HNR Honiara 38.14 118 LR LR 17 54 07.4
comp=Z,185nm,20.9s,baz=20,slow=34
GTA2 Gaotai 38.58 326 P **P** **17 40 02.8 -0.4**
GTA2 sP pP 17 40 18.0 +2.0
GTA2 PP **PP** **17 41 39.0 +6.8**
GTA2 PcP **PcP** **17 42 15.8 +0.8**
GTA2 S **S** **17 45 52.8 -3.3**
GTA2 PcS **PcS** **17 46 02.5 -1.9**
GTA2 ScS **ScS** **17 50 06.5 -3.3**
GTA2 pmax pmax
comp=Z,150nm,1.0s
GTA2 pmax pmax
comp=Z,980nm,10.8s
GTA2 L L
comp=Z,3μm,22.2s
GTA2 L L
comp=Z,4μm,22.2s
GTA2 L L
comp=Z,7μm,22.5s
LSA Lhasa 38.84 307 P **P** **17 40 07.0 +1.1**
LSA Lhasa 38.84 307 P **P** **17 40 07.3 +1.4**
LSA Lhasa 38.84 307 IAmb IAmb 17 40 09.7
comp=Z,376nm,1.1s
LSA IAMs_20 IAMs_20 17 56 21.6
comp=Z,3μm,21.0s
LSA Lhasa 38.84 307 P **P** **17 40 07.3 +1.4**
LSA Lhasa 38.84 307 P **P** **17 40 07.3 +1.4**
LSA PcP **PcP** **17 42 17.3 +0.9**
YUK Yuzh-Kuril'sk 38.87 23*d i*P **P** **17 40 06.2 +0.8**
YUK *i* S **S** **17 46 00.9 +0.8**
YUK pmax pmax
comp=Z,1μm,1.1s
YUK pmax pmax
comp=N,383nm,1.2s
YUK pmax pmax
comp=E,336nm,0.9s
COBR COOCHBEHAR 38.95 301 *e*P **P** **17 40 07.3 +1.1**
MORW Morawa 39.07 194 P **P** **17 40 07.4 +0.1**
comp=Z,176nm,0.8s
QLP Quilpie 39.37 154 P **P** **17 40 08.5 -1.2**
comp=Z,283nm,1.3s
GOMU GeErMu 39.45 318 P **P** **17 40 10.8 0.0**
GOMU PP **PP** **17 41 45.8 +3.8**
GOMU S **S** **17 46 10.0 +0.3**
GOMU pmax pmax
comp=Z,100nm,1.0s
GOMU L L
comp=Z,4μm,17.4s
GOMU L L
comp=Z,5μm,17.6s
GOMU L L
comp=Z,9μm,17.9s
FORT Forrest 39.53 178 P **P** **17 40 11.5 +0.5**
comp=Z,867nm,0.7s
SHBG Sahibganj 40.18 299 *e*P **P** **17 40 18.1 +1.5**
H11S3 WAKE ISLAND Hy 40.27 72 P **P** **17 40 19.0 +1.8**
SNR=2.3
H11S3 T T 18 23 20.3
baz=262,slow=75
H11S1 WAKE ISLAND Hy 40.28 72 P **P** **17 40 18.2 +0.9**
H11S1 T T 18 23 18.1
baz=262,slow=75,SNR=5493
H11S2 WAKE ISLAND Hy 40.28 72 P **P** **17 40 18.2 +0.9**
H11S2 T T 18 23 18.7
baz=262,slow=75,SNR=7210
YSS Yuzhno-Sakhali 40.39 17*de*P **P** **17 40 19.4 +1.5**
YSS *e* 17 41 54.6
YSS *e*S **S** **17 46 22.9 +0.2**
YSS *e*SS **SS** **17 49 20.5 -2.6**
YSS pmax pmax
comp=N,160nm,1.1s
YSS pmax pmax
comp=Z,290nm,1.1s
YSS pmax pmax
comp=E,50nm,1.0s
YSS pmax pmax
comp=Z,2μm,4.0s
YSS pmax pmax
comp=N,1μm,3.9s
YSS pmax pmax
comp=E,800nm,3.5s
YSS Yuzhno-Sakhali 40.39 17 P **P** **17 40 18.4 +0.4**
YSS IAmb IAmb 17 40 20.8
comp=Z,389nm,1.1s
YSS Yuzhno-Sakhali 40.39 17 P **P** **17 40 19.5 +1.5**
YSS Yuzhno-Sakhali 40.39 17 P **P** **17 40 19.3 +1.5**
YSS PcP **PcP** **17 42 21.3 +0.9**
BLDU Ballidu 40.40 193 P **P** **17 40 18.0 -0.3**
comp=Z,228nm,1.4s
HIA Hailar 40.56 353 P **P** **17 40 20.0 +0.6**
HIA Hailar 40.56 353 IAMs_20 IAMs_20 17 56 36.2
comp=Z,3μm,21.0s
HIA Hailar 40.56 353 P **P** **17 40 20.0 +0.6**
HIA Hailar 40.56 353 P **P** **17 40 19.9 +0.4**
HIA PcP **PcP** **17 42 21.7 +0.8**
H11N1 WAKE ISLAND Hy 40.64 70 T T 18 23 54.1
baz=265,slow=74,SNR=2138
H11N2 WAKE ISLAND Hy 40.65 70 T T 18 24 01.3
baz=265,slow=74,SNR=1395
KUR Kuril'sk 40.66 23*c i*P **P** **17 40 21.7 +1.5**
KUR *e*S **S** **17 46 27.4 +0.7**
KUR SS **SS** **17 49 31.1 +2.6**
KUR pmax pmax
comp=Z,2μm,1.1s
KUR pmax pmax
comp=Z,4μm,3.9s
BWNR Bhubaneshwar 40.66 291 ⇑*i*P **P** **17 40 22.7 +2.1**
BWNR IAmb IAmb 17 40 24.6
comp=Z,403nm,1.2s
BWNR *i* x x 17 53 24.0
H11N3 WAKE ISLAND Hy 40.66 70 T T 18 23 57.6
baz=265,slow=74,SNR=3107
HILR Hailar Array B 40.85 353 P **P** **17 40 22.4 +0.6**
comp=Z,125nm,0.5s,baz=163,slow=11,SNR=129
HILR PcP **PcP** **17 42 22.9 +0.9**
comp=Z,114nm,0.8s,baz=144,slow=5.6,SNR=9.7
HILR ScP **ScP** **17 46 07.2 -0.6**
comp=Z,8.7nm,0.8s,baz=145,slow=5.3,SNR=5.1
HILR LR LR 18 00 49.7
comp=Z,2μm,18.0s,baz=115,slow=41
comp=Z,125nm,0.5s
HEH HeiHe 41.19 1 ⇑P **P** **17 40 25.3 +0.8**
HEH PP **PnPn** **17 42 06.5 +1.5**
HEH PcP **PcP** **17 42 20.5 -2.4**
HEH S **S** **17 46 32.8 -1.7**
HEH pmax pmax
comp=Z,980nm,0.9s
HEH pmax pmax
comp=Z,3μm,4.0s
HEH L L
comp=Z,2μm,22.0s
HEH L L
comp=Z,1μm,19.6s
HEH L L
comp=Z,3μm,21.3s
BOK Bokaro 41.34 296 *e*P **P** **17 40 28.0 +1.8**
BOK *i* x x 17 42 24.5
EVN Everest 41.72 302 P **P** **17 40 30.4 +0.4**
EVN IAmb IAmb 17 40 32.1
comp=Z,269nm,0.9s
EVN Everest 41.72 302 P **P** **17 40 31.1 +1.1**
EIDS Eidsvold 41.77 145 P **P** **17 40 29.4 -0.3**
comp=Z,111nm,2.1s
ULN Ulaanbaatar 42.08 341*c i*P **P** **17 40 31.9 -0.1**
ULN pmax pmax
comp=Z,134nm,0.9s
ULN Ulaanbaatar 42.08 341 P **P** **17 40 31.8 -0.2**
ULN P **P** **17 40 31.8 -0.2**
ULN Ulaanbaatar 42.08 341 P **P** **17 40 31.6 -0.4**
ULN Ulaanbaatar 42.08 341 IAMs_20 IAMs_20 17 59 24.8
comp=Z,3μm,21.0s
ULN Ulaanbaatar 42.08 341 P **P** **17 40 32.1 +0.1**
ULN Ulaanbaatar 42.08 341 P **P** **17 40 31.9 -0.2**
ULN PcP **PcP** **17 42 27.0 +0.9**
UGL Uglegorsk 42.13 15⇑*i*P **P** **17 40 34.3 +2.1**
UGL *e* 17 42 11.8
UGL *e*S **S** **17 46 47.2 -1.2**
UGL *e*SS **SS** **17 49 55.0 -2.5**
UGL pmax pmax
comp=Z,3μm,5.0s
UGL pmax pmax
comp=Z,1μm,0.9s
UGL smax smax
comp=N,700nm,3.3s
UGL MLR MLR
comp=N,2μm,13.0s
UGL MLR MLR
comp=Z,2μm,17.0s
GAYA Gaya 42.16 297⇑*i*P **P** **17 40 34.1 +1.3**
GAYA IAmb IAmb 17 40 36.8
comp=Z,201nm,0.8s
SONM Songino Array 42.27 340 P **P** **17 40 33.2 -0.4**
comp=Z,56nm,1.0s,baz=161,slow=9.3,SNR=191
SONM PcP **PcP** **17 42 27.0 +0.3**
comp=Z,68nm,0.8s,baz=160,slow=3.7,SNR=14
SONM ScP **ScP** **17 46 13.3 -0.3**
comp=Z,2.6nm,0.9s,baz=169,slow=1.5,SNR=2.1
SONM LR LR 17 59 51.1
comp=Z,2μm,20.6s,baz=154,slow=38
comp=Z,56nm,1.0s
SONM Songino Array 42.27 340 P **P** **17 40 32.5 -1.1**
GRNR Gornyy 42.52 9⇑*i*P **P** **17 40 37.5 +2.1**
GRNR pmax pmax
comp=N,180nm,1.1s
GRNR pmax pmax
comp=Z,340nm,1.0s
GRNR MLR MLR
comp=E,500nm,14.0s
NWAO Narrogin (SRO) 42.53 191 LR LR 18 00 48.4
comp=E,1μm,19.6s,baz=16,slow=40
NWAO Narrogin (SRO) 42.53 191 P **P** **17 40 35.9 +0.3**
comp=Z,282nm,1.7s
NWAO Narrogin (SRO) 42.53 191 P **P** **17 40 36.1 +0.5**
NWAO pmax pmax
comp=Z,226nm,1.0s
NWAO Narrogin (SRO) 42.53 191 P **P** **17 40 37.4 +1.7**
NWAO Narrogin (SRO) 42.53 191 P **P** **17 40 36.1 +0.5**
VIS Vishakhapatnam 42.64 286⇑*i*P **P** **17 40 39.1 +2.3**
VIS IAmb IAmb 17 40 52.6
comp=Z,164nm,1.0s
VIS *i* x x 17 53 50.1
STMR SITAMARHI 42.65 300 *e*P **P** **17 40 38.3 +1.5**
RAGD RAYAGADA 42.70 289⇑*i*P **P** **17 40 39.8 +2.5**
RAGD IAmb IAmb 17 40 41.6
comp=Z,418nm,1.1s
JHSG JHARSUGUGA 42.81 292 *e*P **P** **17 40 40.2 +2.0**
STKA Stephens Creek 43.14 161 P **P** **17 40 41.0 +0.4**
comp=Z,218nm,0.9s,baz=338,slow=7.6,SNR=136
STKA PP **PP** **17 42 23.6 +1.9**
comp=Z,89nm,0.8s,baz=322,slow=10,SNR=3.8
STKA S **S** **17 46 55.2 -8.6**
comp=Z,16nm,0.7s,baz=110,slow=11,SNR=3.2
STKA LR LR 18 01 27.1
comp=Z,2μm,21.8s,baz=338,slow=40
comp=Z,218nm,0.9s
STKA Stephens Creek 43.14 161*c i*P **P** **17 40 40.7 +0.1**
TYV Tymovskoe 43.92 15 *e*P **P** **17 40 49.0 +2.4**
TYV *e*S **S** **17 47 20.8 +6.1**
TYV pmax pmax
comp=Z,160nm,1.1s
TYV pmax pmax
comp=Z,2μm,3.4s
TYV smax smax
comp=N,14nm,1.7s
TYV smax smax
comp=E,20nm,1.7s
TYV smax smax
comp=N,2μm,6.7s
TYV smax smax
comp=E,800nm,6.7s
RKGY Rocky Gully 44.21 191 P **P** **17 40 50.8 +1.6**
comp=Z,534nm,1.2s
VAR Varanasi 44.25 297 *e*P **P** **17 40 50.8 +1.1**
CMSA Cobar Meteorol 44.32 156 P **P** **17 40 49.5 -0.6**
comp=Z,157nm,1.1s
BLSP Bilaspur 44.33 292⇑*e*P **P** **17 40 51.6 +1.2**
ZEA Zeya 44.67 1 *e*P **P** **17 40 53.0 +0.4**
ZEA *e* 17 42 36.4
ZEA *e* 17 47 39.9
ZEA pmax pmax
comp=N,130nm,1.0s
ZEA pmax pmax
comp=Z,340nm,0.9s
ZEA MLR MLR
comp=N,900nm,16.0s
H01W3 Cape Leeuwin H 45.09 194 P **P** **17 41 00.5 +4.6**
baz=36,slow=8.0,SNR=4.8
H01W1 Cape Leeuwin H 45.09 194 P **P** **17 40 59.3 +3.3**
baz=36,slow=8.0,SNR=4.4
VJD Vijayawada 45.10 284⇑*i*x x 17 41 05.0
H01W2 Cape Leeuwin H 45.10 194 P **P** **17 40 59.8 +3.8**
baz=36,slow=8.0,SNR=4.0
PALK Pallekele 45.17 271 LR LR 17 59 43.7
comp=N,3μm,21.9s,baz=76,slow=36
PALK Pallekele 45.17 271 *i* P **P** **17 40 59.2 +2.0**
SNR=8.6
PALK Pallekele 45.17 271 P **P** **17 40 57.7 +0.5**
PALK pmax pmax
comp=Z,495nm,2.0s
PALK MLR MLR
comp=Z,3μm,21.0s
PALK Pallekele 45.17 271 P **P** **17 40 59.6 +2.3**
PALK Pallekele 45.17 271 P **P** **17 40 57.7 +0.5**
PALK IAmb IAmb 17 41 18.8
comp=Z,494nm,1.9s
PALK Pallekele 45.17 271 IAMs_20 IAMs_20 17 59 33.1

PALK **Pallekele** 45.17 271 P P 17 40 59.3 +2.0
MALK **Mahakanadarawa** 45.23 273 P P 17 40 59.9 +2.2
ALBI **Allahabad** 45.30 297 eP P 17 40 59.0 +0.9
HALK **Hakmana** 45.31 270 P P 17 41 00.3 +2.0
MDRS **Chennai** 45.36 280 ⇑iP P 17 41 01.4 +2.7
MDRS iP sP 17 41 17.3 0.0
ZAK **Zakamensk** 45.51 339 eP P 17 40 58.2 -1.3
ZAK pmax pmax
comp=Z,44nm,1.7s
NKL **Nikolayevsk** 45.59 12 eP P 17 41 01.0 +1.1
NKL eS S 17 47 41.0 +2.2
NKL pmax pmax
comp=E,507nm,1.2s
NKL pmax pmax
comp=N,667nm,1.0s
NKL pmax pmax
comp=Z,2µm,1.1s
NKL smax smax
comp=E,490nm,4.9s
NKL smax smax
comp=N,376nm,2.3s
NKL MLR MLR
comp=N,4µm,16.0s
NKL MLR MLR
comp=Z,9µm,17.0s
BRCI **Bahraich** 46.02 300 eP P 17 41 05.0 +1.3
ARMA **Armidale** 46.08 149 P P 17 41 04.7 +0.5
comp=Z,138nm,2.1s
LKN **LUCKNOW** 46.44 298 eP P 17 41 07.5 +0.4
TLY **Talaya** 46.49 341 LR LR 18 02 18.6
comp=Z,2µm,20.8s,baz=139,slow=38
TLY **Talaya** 46.49 341 c iP P 17 41 07.2 +0.1
TLY pmax pmax
comp=Z,159nm,0.9s
TLY MLR MLR
comp=Z,2µm,20.0s
TLY **Talaya** 46.49 341 P P 17 41 07.6 +0.5
TLY P P 17 41 07.6 +0.5
TLY **Talaya** 46.49 341 P P 17 41 06.5 -0.6
TLY **Talaya** 46.49 341 P P 17 41 07.4 +0.3
TLY **Talaya** 46.49 341 P P 17 41 07.4 +0.3
TLY PcP PcP 17 42 41.9 +1.0
IRK **Irkutsk** 46.77 342 eP P 17 41 08.2 -1.1
IRK e 17 42 41.4
IRK pmax pmax
comp=Z,151nm,1.8s
NGP **Nagpur** 47.06 291 ⇑iP P 17 41 13.7 +1.6
HYB **Hyderabad** 47.16 285 ⇑iP P 17 41 14.5 +1.7
HYB IAmb IAmb 17 41 16.3
comp=Z,239nm,0.6s
HYB **Hyderabad** 47.16 285 eP P 17 41 13.9 +1.0
HYB eS S 17 48 01.8 -0.6
MOY **Mondy** 47.38 339 eP P 17 41 14.0 -0.2
MOY pmax pmax
comp=Z,154nm,1.1s
SALM **Salem** 47.42 278 eP P 17 41 16.9 +2.0
PTH **Pithoragarh** 47.74 302 eP P 17 41 16.8 -0.6
PTH IAmb IAmb 17 41 20.4
comp=Z,180nm,1.0s
PTH i x x 17 42 46.3
ARPS **Mount Arapiles** 47.75 163 P P 17 41 17.6 +0.6
comp=Z,322nm,1.1s
KNGR **Kungurtug, Tuv** 47.87 336 ⇑iP P 17 41 18.0 0.0
KNGR pmax pmax
comp=Z,67nm,0.9s
KOD **Kodaikanal** 48.15 276 eP P 17 41 22.7 +1.8
KOD i x x 17 43 18.7
JHNI **Jhansi** 48.16 296 ⇑iP P 17 41 20.5 0.0
WMQ **Urumqi** 48.29 323 ⇑P P 17 41 21.8 +0.5
WMQ PcP PcP 17 42 48.0 +0.4
WMQ PcS PcS 17 46 42.3 -1.2
WMQ S S 17 48 19.0 +1.1
WMQ ScS ScS 17 51 07.0 -3.3
WMQ pmax pmax
comp=Z,170nm,1.3s
WMQ pmax pmax
comp=Z,1µm,3.6s
WMQ L L
comp=Z,3µm,15.9s
WMQ L L
comp=Z,2µm,23.7s
WMQ L L
comp=Z,2µm,24.0s
WMQ **Urumqi** 48.29 323 P P 17 41 22.4 +1.1
WMQ PcP PcP 17 42 48.1 +0.4
SKR **Severo-Kuril's** 48.35 25 eP P 17 41 23.3 +1.8
SKR e 17 43 19.3
SKR eS S 17 48 40.7 +22
SKR eSS SS 17 51 44.4 -3.9
SKR pmax pmax
comp=Z,372nm,1.1s
SKR pmax pmax
comp=Z,700nm,3.3s
JOSI **Joshimath** 48.55 303 eP P 17 41 24.2 +0.6
BHPL **Bhopal** 48.84 293 ⇑iP P 17 41 26.9 +1.0
BHPL IAmb IAmb 17 41 28.6
comp=Z,206nm,0.7s
AKL **Akola** 48.90 290 eP P 17 41 27.9 +1.6
CAN **Canberra** 48.97 155 P P 17 41 27.2 +0.7
CAN pmax pmax
comp=Z,195nm,1.2s
CAN **Canberra** 48.97 155 P P 17 41 27.2 +0.7
CAN IAmb IAmb 17 41 42.5
comp=Z,195nm,1.2s
NRDN **NARMADA NAGAR** 49.00 292 ⇑ix x 17 41 32.9
NRDN i x x 17 56 17.2
GUNA **GUNA** 49.15 295 ⇑iP P 17 41 28.8 +0.6
UGON **Onchagaon** 49.37 300 eP P 17 41 27.6 -2.2
UTK **UTTARKASHI** 49.52 303 eP P 17 41 31.2 +0.2
BOD **Bodaibo** 49.68 351 eP P 17 41 31.8 +0.2
BOD pmax pmax
comp=Z,413nm,1.1s
BISR **Bishrakh** 49.83 300 eP P 17 41 33.2 0.0
KLP **Kalpa** 49.90 304 eP P 17 41 34.8 +0.7
DZM **Mont Dzumac** 49.98 129 LR LR 18 00 07.2
comp=Z,2µm,21.9s,baz=316,slow=33
LDR **Lodi Road** 50.03 300 eP P 17 41 34.0 -0.7
NDI **New Delhi** 50.05 300 ⇑iP P 17 41 34.0 -0.9
NPLP **NPLP New Delhi** 50.08 300 eP P 17 41 34.4 -0.7
AYAN **Aya Nagar** 50.08 300 eP P 17 41 34.2 -0.9
MNGI **Mangalore** 50.60 279 eP P 17 41 40.6 +1.3
SMLA **Simla** 50.68 303 ⇑iP P 17 41 40.2 +0.6
SMLA IAmb IAmb 17 41 56.3
comp=Z,190nm,0.8s
RTK **Rohtak** 50.81 300 eP P 17 41 41.6 +1.0
PEA0B **Petropavlovsk-** 50.82 24 c iP P 17 41 42.1 +1.8
PETK **Petropavlovsk-** 50.82 24 P P 17 41 42.1 +1.8
comp=Z,229nm,0.8s,baz=195,slow=4.8,SNR=270
PETK ScP ScP 17 46 48.7 -0.3
comp=Z,10nm,0.9s,baz=162,slow=3.5,SNR=4.4
PETK LR LR 18 04 47.2
comp=Z,1µm,18.5s,baz=217,slow=38
comp=Z,229nm,0.8s
PETK **Petropavlovsk-** 50.82 24 P P 17 41 42.0 +1.7
PETK ScP 17 46 48.0 -1.0
PET **Petropavlovsk** 51.14 25 ⇑iP P 17 41 44.3 +1.6
PET eS S 17 49 00.1 +2.9
PET pmax pmax
comp=Z,399nm,0.9s
PET pmax pmax
comp=Z,2µm,4.0s
PET pmax pmax
comp=Z,700nm,9.4s
PET **Petropavlovsk** 51.14 25 P P 17 41 43.5 +0.9
PET **Petropavlovsk** 51.14 25 P P 17 41 43.8 +1.1
comp=Z,6µmcomp=Z,463nm,1.3s
PET **Petropavlovsk** 51.14 25 P P 17 41 44.7 +2.0
KAD **Karad** 51.32 285 eP P 17 41 45.7 +1.1
BHK **Bhakra** 51.40 303 ex x 17 41 45.7
POO **Poona** 51.69 286 ⇑iP P 17 41 48.2 +0.7
POO IAmb IAmb 17 41 50.0
comp=Z,128nm,0.8s
AJM **Ajmer** 51.86 297 eP P 17 41 49.1 +0.5
AJM IAmb IAmb 17 41 52.2
comp=Z,291nm,1.6s
AJM i x x 17 43 01.0
DGZ **Jazzator, Alta** 51.91 329 c iP P 17 41 48.9 +0.2
DGZ pmax pmax
comp=Z,109nm,0.8s
TSSA **Tissa** 51.96 305 ⇑iP P 17 41 49.1 -0.4
TSSA IAmb IAmb 17 41 53.2
comp=Z,163nm,0.8s
THN **Thein Dam** 52.18 304 eP P 17 41 50.9 0.0

UDPR **Udaipur** 52.40 294 ⇑iP P 17 41 53.6 +1.0
UDPR IAmb IAmb 17 41 57.7
comp=Z,446nm,0.4s
WUS **Wushi** 52.49 316 IAmb IAmb 17 43 04.7
comp=Z,119nm,0.8s
WUS **Wushi** 52.49 316 P P 17 41 53.7 +0.5
HMDM **Hanimaadhoo** 52.65 272 P P 17 41 56.3 +1.8
HMDM **Hanimaadhoo** 52.65 272 P P 17 41 54.9 +0.3
HMDM IAmb IAmb 17 41 57.5
comp=Z,291nm,1.1s
HMDM **Hanimaadhoo** 52.65 272 P P 17 41 56.7 +2.2
JMU **Jammu** 53.02 304 eP P 17 41 57.8 +0.7
YAK **Yakutsk** 53.04 2 LR LR 18 05 05.1
comp=Z,1µm,20.3s,baz=180,slow=37
YAK **Yakutsk** 53.04 2 c iP P 17 41 57.1 +0.5
YAK e*PP sP 17 42 12.9 -2.6
YAK e 17 43 03.1
YAK e 17 43 54.8
YAK ePPP PPP 17 45 07.1
YAK eS S 17 49 21.4 -1.5
YAK e 17 51 34.1
YAK eSS SS 17 53 00.3 -2.3
YAK pmax pmax
comp=Z,1µm,1.0s
YAK pmax pmax
comp=N,607nm,1.1s
YAK pmax pmax
comp=E,217nm,1.4s
YAK pmax pmax
comp=Z,449nm,3.3s
YAK pmax pmax
comp=N,457nm,3.0s
YAK pmax pmax
comp=E,159nm,2.3s
YAK smax smax
comp=E,528nm,3.0s
YAK smax smax
comp=N,498nm,3.3s
YAK **Yakutsk** 53.04 2 P P 17 41 56.6 0.0
YAK **Yakutsk** 53.04 2 P P 17 41 57.3 +0.6
YAK **Yakutsk** 53.04 2 P P 17 41 57.3 +0.6
YAK pP pP 17 42 09.2 -0.7
YAK PcP PcP 17 43 05.1 +0.4
MK31 **Makanchi Array** 53.11 323 c iP P 17 41 57.5 0.0
MKAR **Makanchi Array** 53.11 323 P P 17 41 57.5 0.0
comp=N,533nm,0.8s,baz=121,slow=7.9,SNR=2242
MKAR PcP PcP 17 43 05.5 +0.2
comp=N,156nm,0.8s,baz=143,slow=3.2,SNR=7.8
MKAR ScP ScP 17 46 56.9 -2.2
comp=N,4.5nm,0.9s,baz=163,slow=3.7,SNR=2.0
MKAR S S 17 49 25.6 +1.2
comp=N,5.3nm,1.1s,baz=124,slow=10,SNR=3.9
MKAR LR LR 18 06 07.5
comp=N,6µm,20.7s,baz=106,slow=38
MKAR PKPPKP P'P'df 18 12 20.4 -3.5
comp=N,2.7nm,1.0s,baz=270,slow=3.4,SNR=4.8
comp=N,533nm,0.8s
MKAR **Makanchi Array** 53.11 323 P P 17 41 57.3 -0.1
SHLS **Shalkode** 53.15 318 c iP P 17 41 56.0 -2.0
SHLS eS S 17 49 21.9 -3.5
SHLS pmax pmax
comp=Z,188nm,1.0s
SHLS **Shalkode** 53.15 318 ⇑iP P 17 41 56.0 -2.0
comp=Z,188nm,1.0s
SHLS eS S 17 49 22.0 -3.5
SRGN **SRI GANGA NAGA** 53.16 301 eP P 17 41 58.3 +0.3
MAKZ **Makanchi** 53.30 323 P P 17 41 59.3 +0.4
MAKZ **Makanchi** 53.30 323 P P 17 41 58.5 -0.4
MAKZ **Makanchi** 53.30 323 P P 17 41 59.1 +0.2
MAKZ **Makanchi** 53.30 323 P P 17 41 59.0 +0.2
MAKZ PcP PcP 17 43 06.1 +0.1
BKNR **BIKANER** 53.32 298 ⇑iP P 17 41 59.2 -0.1
SRNI **Srinagar** 53.37 306 eP P 17 41 59.6 -0.2
UZB **Uzynbulak** 53.44 318 c iP P 17 42 00.1 0.0
UZB eS S 17 49 29.5 +0.2
UZB pmax pmax
comp=Z,160nm,1.1s
UZB **Uzynbulak** 53.44 318 ⇑iP P 17 42 00.2 0.0
comp=Z,160nm,1.1s
UZB eS S 17 49 29.6 +0.2
PRZ **Przheval'sk** 53.57 317 P P 17 42 02.7 +1.5
PRZ **Przheval'sk** 53.57 317 P P 17 42 02.7 +1.5
TARG **Taragay, Kyrgy** 53.67 316 IAmb IAmb 17 42 11.7
comp=Z,131nm,0.9s
TARG **Taragay, Kyrgy** 53.67 316 P P 17 42 03.1 +0.9
KAAM **Kaadhehdhoo** 53.74 264 P P 17 42 04.9 +2.3
KAAM **Kaadhehdhoo** 53.74 264 P P 17 42 03.5 +0.9
KAAM IAmb IAmb 17 42 05.3
comp=Z,189nm,0.9s
MA2 **Magadan** 53.79 15 P P 17 42 03.7 +1.5
comp=Z,152nm,0.7s,baz=201,slow=7.4,SNR=46
MA2 PcP PcP 17 43 08.3 +0.8
comp=Z,74nm,0.8s,baz=187,slow=5.1,SNR=4.4
MA2 ScP ScP 17 47 00.1 -1.6
comp=Z,26nm,1.0s,baz=90,slow=7.1,SNR=3.9
MA2 LR LR 18 06 20.1
comp=Z,538nm,18.7s,baz=200,slow=38
comp=Z,152nm,0.7s
MA2 **Magadan** 53.79 15 i P P 17 42 03.7 +1.5
MA2 pmax pmax
comp=Z,247nm,0.9s
MA2 **Magadan** 53.79 15 P P 17 42 03.0 +0.8
MA2 IAmb IAmb 17 42 04.4
comp=Z,189nm,0.8s
MA2 **Magadan** 53.79 15 P P 17 42 01.9 -0.3
comp=Z,5µmcomp=Z,366nm,1.2s
MA2 **Magadan** 53.79 15 P P 17 42 04.0 +1.7
KPKS **Kokpek** 53.80 318 eP P 17 42 02.7 0.0
KPKS eS S 17 49 34.4 +0.4
KPKS **Kokpek** 53.80 318 eP P 17 42 02.8 0.0
KPKS eS S 17 49 34.5 +0.4
SATY **Saty** 53.81 318 c iP P 17 42 02.9 +0.1
SATY eS S 17 49 34.6 +0.3
SATY pmax pmax
comp=Z,165nm,0.9s
SATY **Saty** 53.81 318 ⇑iP P 17 42 03.0 +0.1
comp=Z,165nm,0.9s
SATY eS S 17 49 34.7 +0.3
KDJ **Kajisay** 54.26 316 P P 17 42 07.0 +0.8
KDJ **Kajisay** 54.26 316 IAmb IAmb 17 42 08.0
comp=Z,231nm,1.0s
KDJ **Kajisay** 54.26 316 P P 17 42 07.0 +0.8
KSH2 **Kashi** 54.32 312 P P 17 42 07.3 +0.6
KSH2 pP pP 17 42 19.3 -0.8
KSH2 sP sP 17 42 26.3 +0.6
KSH2 PcP PcP 17 43 10.8 +0.5
KSH2 S S 17 49 42.0 +0.6
KSH2 pmax pmax
comp=Z,99nm,1.1s
KSH2 pmax pmax
comp=Z,920nm,4.6s
KSH2 L L
comp=Z,2µm,21.0s
KSH2 L L
comp=Z,4µm,20.6s
KSH2 L L
comp=Z,5µm,19.9s
NIL **Nilore** 54.52 305 P P 17 42 08.3 +0.3
NIL pmax pmax
comp=Z,679nm,0.9s
NIL MLR MLR
comp=Z,2µm,21.0s
NIL **Nilore** 54.52 305 P P 17 42 08.4 +0.3
NIL **Nilore** 54.52 305 P P 17 42 08.3 +0.3
NIL **Nilore** 54.52 305 IAMs_20 IAMs_20 18 09 04.9
comp=Z,2µm,21.0s
NIL **Nilore** 54.52 305 P P 17 42 08.7 +0.6
TDK **Taldyqorghan** 54.64 320 eP P 17 42 09.0 +0.3
TDK pmax pmax
comp=Z,226nm,0.9s
TDK **Taldyqorghan** 54.64 320 eP P 17 42 09.0 +0.3
comp=Z,226nm,0.9s
MDOK **Medeo** 54.76 317 eP P 17 42 10.0 +0.2
MDOK eS S 17 49 47.7 +0.6
MDOK **Medeo** 54.76 317 eP P 17 42 10.0 +0.2
MDOK eS S 17 49 47.8 +0.6
TNSS **Tian-Shan** 54.78 317 eP P 17 42 10.1 -0.1
TNSS **Tian-Shan** 54.78 317 eP P 17 42 10.2 -0.1
AAA **Alma-Ata** 54.87 317 eP P 17 42 10.8 +0.4
AAA pmax pmax
comp=Z,207nm,1.2s
AAA **Alma-Ata** 54.87 317 eP P 17 42 10.8 +0.4
comp=Z,207nm,1.2s
ULHL **Ulahol** 54.95 316 P P 17 42 12.0 +0.8
SNR=10

TAU **Tasmania Unive** 55.05 161 P P 17 42 12.0 +0.4
TAU pmax pmax
comp=Z,569nm,1.7s
TAU **Tasmania Unive** 55.05 161 P P 17 42 12.0 +0.4
TAU IAmb IAmb 17 42 25.8
comp=Z,569nm,1.7s
TAU **Tasmania Unive** 55.05 161 P P 17 42 13.1 +1.5
JASL **Jaisalmer** 55.23 297 eP P 17 42 13.2 -0.1
BOOM **Boomskoye usch** 55.25 316 P P 17 42 13.7 +0.3
BOOM **Boomskoye usch** 55.25 316 P P 17 42 13.7 +0.3
KUU **Kurty** 55.52 318 eP P 17 42 15.3 +0.2
KUU eS S 17 49 57.7 +0.6
KUU pmax pmax
comp=Z,262nm,0.9s
KUU **Kurty** 55.52 318 eP P 17 42 15.3 +0.2
comp=Z,262nm,0.9s
KUU eS S 17 49 57.8 +0.6
TKM2 **Tokmak 2** 55.65 316 P P 17 42 16.6 +0.3
SNR=121
ZAA0 **Zalesovo Array** 55.80 332 IAmb IAmb 17 42 17.2
comp=Z,247nm,0.9s
ZALV **Zalesovo Beam** 55.80 332 P P 17 42 16.1 -0.8
comp=Z,194nm,0.8s,baz=116,slow=6.7,SNR=767
ZALV PcP PcP 17 43 14.4 -1.0
comp=Z,98nm,0.8s,baz=124,slow=4.4,SNR=9.3
ZALV ScP ScP 17 47 09.1 -1.6
comp=Z,8.0nm,0.9s,baz=196,slow=4.1,SNR=3.8
ZALV LR LR 18 08 33.7
comp=Z,2µm,19.6s,baz=132,slow=38
ZALV PKPPKP P'P'df 18 12 19.2 -0.3
comp=Z,3.1nm,0.9s,baz=280,slow=2.4,SNR=5.3
ZALV PKP2bc P'P'bc 18 12 29.3 -3.5
comp=Z,6.2nm,0.8s,baz=289,slow=3.3,SNR=11
comp=Z,194nm,0.8s
ZALV **Zalesovo Beam** 55.80 332 P P 17 42 15.7 -1.2
BHUJ **Bhuj** 55.94 292 ⇑iP P 17 42 20.3 +1.9
BHUJ IAmb IAmb 17 42 22.1
comp=Z,363nm,0.4s
KBK **Karagaybulak** 55.99 316 P P 17 42 19.2 +0.6
SNR=106
H08S2 **Diego Garcia H** 56.11 255 P P 17 42 18.4 -1.0
baz=47,slow=10,SNR=5.1
H08S3 **Diego Garcia H** 56.11 255 P P 17 42 18.2 -1.3
baz=47,slow=10,SNR=7.5
H08S1 **Diego Garcia H** 56.12 255 P P 17 42 18.8 -0.7
baz=47,slow=10,SNR=4.5
UCH **Uchtor** 56.14 315 P P 17 42 21.2 +1.2
SNR=72
CHMS **Chumysh** 56.25 316 P P 17 42 20.4 0.0
SNR=38
AAK **Ala-Archa** 56.30 316 LR LR 18 09 48.5
comp=Z,3µm,18.9s,baz=102,slow=40
AAK **Ala-Archa** 56.30 316 P P 17 42 21.3 +0.5
SNR=18
AAK **Ala-Archa** 56.30 316 i P P 17 42 21.0 +0.2
SNR=22
AAK **Ala-Archa** 56.30 316 c iP P 17 42 21.2 +0.4
AAK pmax pmax
comp=Z,72nm,1.1s
AAK **Ala-Archa** 56.30 316 P P 17 42 21.1 +0.2
AAK **Ala-Archa** 56.30 316 P P 17 42 20.7 -0.1
AAK **Ala-Archa** 56.30 316 P P 17 42 21.4 +0.5
USP **Ospenovka** 56.52 316 P P 17 42 22.1 -0.2
SNR=162
MANEM **Manem** 56.75 309 IAmb IAmb 17 42 26.7
comp=Z,396nm,0.8s
OHH **Osh** 56.80 313 P P 17 42 23.3 -1.0
OHH **Osh** 56.80 313 P P 17 42 23.4 -1.0
EKS2 **Erkin-Say** 56.80 316 P P 17 42 25.1 +0.7
SNR=68
SEY **Seymchan** 57.09 14 P P 17 42 27.0 +1.1
comp=Z,107nm,0.9s,baz=227,slow=6.7,SNR=166
SEY LR LR 18 09 41.9
comp=Z,974nm,18.0s,baz=208,slow=39
comp=Z,107nm,0.9s
SEY **Seymchan** 57.09 14 c iP P 17 42 28.1 +2.3
SEY pmax pmax
comp=Z,430nm,1.7s
SEY MLR MLR
comp=Z,1µm,18.0s
KURK **Kurchatov** 57.18 326 c iP P 17 42 26.4 -0.3
KURK pmax pmax
comp=Z,1µm,0.9s
KURK MLR MLR
comp=Z,2µm,17.0s
KURK **Kurchatov** 57.18 326 P P 17 42 27.0 +0.3
KURK **Kurchatov** 57.18 326 P P 17 42 26.2 -0.5
KURK **Kurchatov** 57.18 326 P P 17 42 26.7 -0.1
KURBB **Kurchatov Arra** 57.18 326 P P 17 42 26.5 -0.2
comp=Z,436nm,0.9s,baz=127,slow=6.3,SNR=2349
KURBB LR LR 18 09 37.0
comp=Z,1µm,20.9s,baz=149,slow=39
KURBB PKPPKP P'P'bc 18 12 12.5 -17
comp=Z,6.5nm,0.9s,baz=268,slow=3.5,SNR=17
KURBB PKP2bc 18 12 25.5
comp=Z,4.8nm,1.0s,baz=278,slow=3.8,SNR=6.8
comp=Z,436nm,0.9s
DRK **Karamyk** 57.20 311 P P 17 42 28.1 +0.6
DRK **Karamyk** 57.20 311 IAmb IAmb 17 42 30.7
comp=Z,155nm,0.8s
DRK **Karamyk** 57.20 311 P P 17 42 28.1 +0.6
BTLS **Baital** 57.48 318 eP P 17 42 29.1 +0.2
BTLS **Baital** 57.48 318 eP P 17 42 29.1 +0.2
MSVF **Nonsavu** 57.56 118 LR LR 18 04 22.6
comp=Z,3µm,21.8s,baz=310,slow=33
MSVF **Nonsavu** 57.56 118 P P 17 42 31.6 +1.6
MSVF pmax pmax
comp=Z,312nm,1.5s
MSVF **Nonsavu** 57.56 118 P P 17 42 31.6 +1.6
MSVF IAmb IAmb 17 42 49.7
comp=Z,312nm,1.4s
MSVF **Nonsavu** 57.56 118 P P 17 42 32.6 +2.6
ARK **Arkit** 57.78 314 P P 17 42 31.9 +0.6
BTK **Batken** 58.09 312 P P 17 42 33.7 +0.2
BTK **Batken** 58.09 312 IAmb IAmb 17 42 36.5
comp=Z,202nm,1.0s
BTK **Batken** 58.09 312 P P 17 42 33.7 +0.2
KBL **Kabul** 58.12 305 P P 17 42 33.7 -0.2
KBL pmax pmax
comp=Z,112nm,0.8s
KBL **Kabul** 58.12 305 P P 17 42 34.3 +0.4
SNR=73
KBL P P 17 42 34.3 +0.4
SNR=73
KBL **Kabul** 58.12 305 P P 17 42 33.7 -0.2
KBL IAmb IAmb 17 42 35.9
comp=Z,112nm,0.8s
KBL **Kabul** 58.12 305 P P 17 42 34.2 +0.3
GAR **Garm** 58.17 311 P P 17 42 34.3 +0.2
SHEM **Shemya Is, Ala** 58.24 32 P P 17 42 35.9 +1.8
comp=Z,738nm,1.0s,baz=12,slow=1.4,SNR=24
SHEM PcP PcP 17 43 25.7 +0.7
comp=Z,189nm,0.8s,baz=296,slow=2.5,SNR=5.2
SHEM LR LR 18 09 16.4
comp=Z,381nm,18.7s,baz=246,slow=38
comp=Z,738nm,1.0s
TRKS **Terek-Say** 58.29 314 P P 17 42 35.0 +0.1
DZA **Taraz** 58.58 315 eP P 17 42 36.9 +0.2
DZA pmax pmax
comp=Z,23nm,0.1s
DZA **Taraz** 58.58 315 eP P 17 42 37.0 +0.2
comp=Z,23nm,0.1s
CHGR **Chuyangaron** 58.96 310 c iP P 17 42 39.4 -0.2
CHGR pmax pmax
comp=Z,676nm,0.8s
CHGR **Chuyangaron** 58.96 310 P P 17 42 39.5 -0.1
KK31 **Karatay Array** 59.21 315 IAmb IAmb 17 42 43.8
comp=Z,121nm,0.8s
KKAR **Karatay Array** 59.21 315 P P 17 42 40.5 -0.6
KKAR **Karatay Array** 59.21 315 P P 17 42 40.5 -0.6
IUG **luzhnay** 59.26 314 c iP P 17 42 41.8 +0.2
IUG eS S 17 50 47.0 +0.5
IUG pmax pmax
comp=Z,152nm,1.2s
IUG **luzhnay** 59.26 314 ⇑iP P 17 42 41.9 +0.2
comp=Z,152nm,1.2s
IUG eS S 17 50 47.0 +0.5
SHAA **Shahritus** 59.50 308 IAmb IAmb 17 43 32.5
comp=Z,298nm,1.2s
CHM **Chimkent** 59.62 314 eP P 17 42 44.2 +0.3
CHM pmax pmax
comp=Z,229nm,1.4s
CHM **Chimkent** 59.62 314 eP P 17 42 44.3 +0.3
comp=Z,229nm,1.4s
BRLS **Boroldaу** 59.66 315 eP P 17 42 44.3 +0.1
BRLS pmax pmax

comp=Z,73nm,1.0s
AMKA Amchitka 60.45 35 P **P** **17 42 50.3 +0.9**
OUZ Omahuta 62.61 137 IAMs_20 IAMs_20 18 07 55.1
comp=Z,2μm,22.0s
OUZ Omahuta 62.61 137 P **P** **17 43 07.0 +2.8**
TIXI Tiksi 62.67 1 LR LR 18 10 12.9
comp=Z,2μm,22.0s,baz=192,slow=36
TIXI Tiksi 62.67 1*c i* P **P** **17 43 04.1 +0.1**
TIXI pmax pmax
comp=Z,1μm,0.9s
TIXI MLR MLR
comp=Z,2μm,18.0s
TIXI Tiksi 62.67 1 P **P** **17 43 03.6 -0.4**
BVAR Borovoye Array 62.78 326 P **P** **17 43 04.7 -0.4**
comp=Z,256nm,0.8s,baz=111,slow=8.1,SNR=526
BVAR PKP2bc **P'P'bc** **18 12 08.7 -7.6**
comp=Z,4.9nm,0.9s,baz=300,slow=3.2,SNR=6.0
comp=Z,256nm,0.8s
ADK Adak 62.95 36 P **P** **17 43 07.2 +1.0**
ADK pmax pmax
comp=Z,383nm,1.0s
ADK MLR MLR
comp=Z,2μm,22.0s
ADK Adak 62.95 36 P **P** **17 43 07.2 +1.0**
ADK Adak 62.95 36 IAMs_20 IAMs_20 18 05 31.3
comp=Z,2μm,22.0s
ADK Adak 62.95 36 P **P** **17 43 07.7 +1.4**
ADK Adak 62.95 36 P **P** **17 43 07.5 +1.2**
WCZ Waipu Caves 63.52 138 P **P** **17 43 11.5 +1.3**
HRA Herat 63.63 304 IAmb IAmb 17 43 12.9
comp=Z,180nm,1.1s
ATKA Atka Island 64.50 36 IAMs_20 IAMs_20 18 06 26.4
comp=Z,2μm,22.0s
BILL Bilibino 64.66 16*c i* P **P** **17 43 18.1 +0.9**
BILL pmax pmax
comp=Z,343nm,1.2s
BILL MLR MLR
comp=Z,955nm,17.0s
BILL Bilibino 64.66 16 P **P** **17 43 17.8 +0.6**
BILL IAmb IAmb 17 43 19.7
comp=Z,368nm,1.2s
MKAZ Moumakai 64.72 138 P **P** **17 43 20.3 +2.3**
QRZ Quartz Range 65.28 143 IAmb IAmb 17 43 24.2
comp=Z,164nm,0.9s
QRZ Quartz Range 65.28 143 P **P** **17 43 23.0 +1.3**
QRZ Quartz Range 65.28 143 P **P** **17 43 23.7 +2.0**
NEZ North Egmont 65.29 141 P **P** **17 43 25.2 +3.4**
TOZ Tahuroa Road 65.30 139 IAMs_20 IAMs_20 18 08 46.4
comp=Z,2μm,22.0s
TOZ Tahuroa Road 65.30 139 P **P** **17 43 23.8 +1.9**
NRIK Noril'sk 65.30 346 P **P** **17 43 21.6 +0.2**
comp=Z,774nm,0.9s,baz=126,slow=6.4,SNR=532
NRIK PKP2bc **P'P'bc** **18 12 06.0 -2.9**
comp=Z,7.0nm,0.8s,baz=337,slow=2.7,SNR=7.6
NRIK LR LR 18 14 30.4
comp=Z,2μm,21.6s,baz=138,slow=38
comp=Z,774nm,0.9s
NRIK Noril'sk 65.30 346*c i* P **P** **17 43 21.5 +0.2**
NRIK pmax pmax
comp=Z,1μm,1.0s
NRIK MLR MLR
comp=Z,2μm,18.0s
NRIK Noril'sk 65.30 346 P **P** **17 43 21.1 -0.2**
HIZ Hauiti 65.33 140 IAmb IAmb 17 43 25.4
comp=Z,168nm,1.0s
HIZ IAMs_20 IAMs_20 18 14 32.2
comp=Z,1μm,18.0s
HIZ Hauiti 65.33 140 P **P** **17 43 24.5 +2.5**
HIZ Hauiti 65.33 140 P **P** **17 43 24.9 +2.8**
JLN Jalan Bani Buh 65.34 290 P **P** **17 43 22.0 -0.5**
SNR=9.8
DCZ Deep Cove 65.40 150 IAmb IAmb 17 43 24.4
comp=Z,109nm,0.8s
FOZ Fox Glacier 65.47 147 IAMs_20 IAMs_20 18 12 09.7
comp=Z,2μm,19.0s
LREZ Lake Rotokare 65.60 141 P **P** **17 43 26.9 +3.1**
VRZ Vera Road 65.62 140 P **P** **17 43 26.0 +2.0**
TLZ Tolley Road 65.66 139 P **P** **17 43 26.4 +2.1**
WBK Wadi Bani Khal 65.75 291 P **P** **17 43 25.2 0.0**
SNR=12
WBK P **P** **17 43 25.2 0.0**
SNR=12
RAO Raoul Island 65.76 128 LR LR 18 10 30.6
comp=Z,585nm,21.8s,baz=304,slow=34
MLZ Mavora Lakes 65.82 149 IAMs_20 IAMs_20 18 10 24.0
comp=Z,2μm,19.0s
WKZ Wanaka 65.91 148 IAMs_20 IAMs_20 18 09 32.5
comp=Z,2μm,21.0s
WSAR Wadi Sarin 66.07 291 LR LR 18 14 32.2
comp=Z,5.5nm,21.9s,baz=97,slow=38
WSAR Wadi Sarin 66.07 291 P **P** **17 43 27.4 +0.2**
SNR=16
OMRZ Omania 66.08 139 P **P** **17 43 30.2 +3.3**
THZ Tophouse 66.08 144 IAmb IAmb 17 43 28.4
comp=Z,145nm,0.7s
RATZ Rangitukua 66.12 140 P **P** **17 43 31.0 +3.8**
KATZ Kakaramea 66.13 140 P **P** **17 43 31.0 +3.6**
WAZ Wanganui 66.14 141 IAMs_20 IAMs_20 18 11 24.6
comp=Z,2μm,20.0s
WAZ Wanganui 66.14 141 P **P** **17 43 27.5 +0.3**
WTVZ West Tongariro 66.15 140 P **P** **17 43 32.2 +4.7**
COVZ Chateau Observ 66.16 140 P **P** **17 43 30.1 +2.6**
KRVZ Karewarewa 66.17 140 P **P** **17 43 30.1 +2.5**
HRRZ Handcock Road 66.18 139 P **P** **17 43 30.4 +2.8**
NGZ Ngauruhoe 66.19 140 P **P** **17 43 30.3 +2.5**
NTVZ North Tongarir 66.19 140 P **P** **17 43 30.1 +2.3**
FWVZ Far West T-bar 66.20 140 P **P** **17 43 30.0 +2.0**
SNVZ South Ngauruho 66.22 140 P **P** **17 43 30.5 +2.5**
TMVZ Te Maari 66.22 140 P **P** **17 43 30.7 +2.8**
OTVZ Oturere 66.22 140 P **P** **17 43 30.3 +2.4**
LBZ Lake Benmore 66.23 147 IAmb IAmb 17 43 29.9
comp=Z,202nm,0.9s
LBZ IAMs_20 IAMs_20 18 11 34.0
comp=Z,2μm,22.0s
ETVZ East Tongariro 66.23 140 P **P** **17 43 31.2 +3.2**
WHVZ Whangaehu Hut 66.24 140 P **P** **17 43 31.2 +3.0**
RPZ Rata Peaks 66.27 146 P **P** **17 43 28.6 +0.7**
comp=Z,61nm,0.8s,baz=297,slow=1.2,SNR=109
RPZ LR LR 18 09 57.1
comp=Z,548nm,21.6s,baz=288,slow=34
comp=Z,61nm,0.8s
WNVZ Wahianoa 66.27 140 P **P** **17 43 30.6 +2.3**
PRRZ Plateau Road 66.31 139 P **P** **17 43 30.8 +2.4**
EDRZ Edgecumbe 66.32 138 P P 17 43 23.4 -5.2
LTZ Lake Taylor 66.35 145 IAmb IAmb 17 43 52.4
comp=Z,489nm,1.8s
MOVZ Moawhango 66.42 140 P **P** **17 43 30.7 +1.6**
MRHZ Matea Rd 66.52 139 P **P** **17 43 31.3 +1.5**
BIDO Bidbid 66.53 292 P **P** **17 43 30.3 +0.2**
SNR=45
BIDO P **P** **17 43 30.3 +0.2**
SNR=45
JMDO Jabal Madar 66.55 290 P **P** **17 43 30.1 -0.2**
SNR=21
JMDO P **P** **17 43 30.1 -0.2**
SNR=21
OXZ Oxford 66.56 145 IAmb IAmb 17 43 33.1
comp=Z,110nm,0.6s
OXZ Oxford 66.56 145 P **P** **17 43 31.7 +1.8**
SMDO Samad 66.60 291 P **P** **17 43 30.5 -0.2**
SNR=18
SMDO P **P** **17 43 30.5 -0.2**
SNR=18
URZ Urewera 66.65 138 LR LR 18 10 03.6
comp=Z,2μm,21.5s,baz=298,slow=34
URZ Urewera 66.65 138 P **P** **17 43 33.3 +2.8**
URZ Urewera 66.65 138 P **P** **17 43 31.3 +0.8**
BHHZ Black Hill Sta 66.66 140 P **P** **17 43 31.8 +1.1**
TMZ Timaru 66.67 147 P **P** **17 43 31.7 +1.1**
MHTO MHTO 66.69 289 P **P** **17 43 30.9 -0.3**
SNR=20
BKZ Black Stump Fm 66.75 139 P **P** **17 43 32.2 +0.9**
BKZ Black Stump Fm 66.75 139 P **P** **17 43 32.1 +0.8**
RTZ Ruatahuna 66.76 139 IAmb IAmb 17 44 00.6
comp=Z,270nm,1.0s
APZ The Paps 66.77 150 P **P** **17 43 34.0 +2.8**
MTHZ Maungataniwha 66.80 139 P **P** **17 43 32.6 +1.1**
HAZ Te Kaha 66.82 138 P **P** **17 43 33.1 +1.5**
KWHZ Kaweka Forest 66.85 140 P **P** **17 43 33.5 +1.6**
KHZ Kahutara 66.86 144 P **P** **17 43 32.3 +0.5**
KHZ Kahutara 66.86 144 P **P** **17 43 32.2 +0.5**
RUGZ Raukumara Rang 66.86 138 P **P** **17 43 34.6 +2.5**
OGWZ Otaki Gorge 66.87 142 P **P** **17 43 32.3 +0.4**
SNZO South Karori 66.88 142 P **P** **17 43 31.2 -0.6**
SNZO IAmb IAmb 17 44 02.9
comp=Z,124nm,0.9s
SNZO South Karori 66.88 142 IAMs_20 IAMs_20 18 09 40.1
comp=Z,2μm,21.0s
GVZ Greta Valley S 66.90 144 IAmb IAmb 17 43 35.9
comp=Z,157nm,0.8s
GVZ Greta Valley S 66.90 144 P **P** **17 43 33.4 +1.3**
NMHZ Naumai 66.92 139 P **P** **17 43 34.2 +1.9**
ODZ Otahua Downs 66.92 147 P **P** **17 43 32.8 +0.8**
ODZ Otahua Downs 66.92 147 P **P** **17 43 33.3 +1.2**
TSZ Takapari Road 66.92 141 P **P** **17 43 34.0 +1.7**
KRHZ Kereru 66.94 140 P **P** **17 43 33.4 +1.0**
MWZ Matawai 66.96 138 P **P** **17 43 33.7 +1.1**
RAGZ Rawiri 66.98 138 P **P** **17 43 33.7 +1.0**
PNHZ Pukenui 66.99 140 P **P** **17 43 31.8 -1.0**
POWZ Post Office Ro 66.99 141 P **P** **17 43 33.6 +0.9**
TUZ Tuapeka 66.99 149 P **P** **17 43 33.4 +0.9**
RAHZ Arahi 67.00 139 P **P** **17 43 34.6 +1.8**
MRZ Mangatainoka R 67.03 141 IAmb IAmb 17 43 59.6
comp=Z,351nm,1.8s
MRZ IAMs_20 IAMs_20 18 08 56.2
comp=Z,2μm,22.0s
MRZ Mangatainoka R 67.03 141 P **P** **17 43 32.8 -0.1**
MCHZ McNeill Hill 67.04 140 P **P** **17 43 34.8 +1.8**
MXZ Matakaoa Point 67.06 137 IAMs_20 IAMs_20 18 12 05.1
comp=Z,2μm,22.0s
MXZ Matakaoa Point 67.06 137 P **P** **17 43 37.9 +4.7**
DQM DQM 67.12 288 P **P** **17 43 34.0 +0.1**
SNR=9.9
ARHZ Aropaoanui 67.13 139 P **P** **17 43 35.5 +1.9**
SYZ Scrubby Hill 67.14 149 P **P** **17 43 34.5 +1.1**
MQZ McQueen's Vall 67.15 145 P **P** **17 43 35.6 +2.0**
TWGZ Tauwhareparae 67.18 138 P **P** **17 43 35.6 +1.6**
DVHZ Dannevirke 67.19 141 P **P** **17 43 36.3 +2.4**
PRWZ Pori Road 67.21 141 P **P** **17 43 35.5 +1.5**
MSWZ Moikau Station 67.27 142 P **P** **17 43 32.9 -1.5**
MSWZ Moikau Station 67.27 142 P **P** **17 43 33.3 -1.2**
HOQ Hoqain 67.28 292 P **P** **17 43 34.8 -0.1**
SNR=34
HOQ P **P** **17 43 34.8 -0.1**
SNR=34
PUZ Puketiti 67.30 138 P **P** **17 43 38.3 +3.6**
KAHZ Kahuranaki 67.35 140 P **P** **17 43 37.0 +2.0**
PLWZ Palliser 67.37 142 P **P** **17 43 34.5 -0.6**
BSY Bisya 67.39 291 P **P** **17 43 35.4 -0.2**
SNR=18
BSY P **P** **17 43 35.4 -0.2**
SNR=18
KNZ Kokohu 67.44 139 P **P** **17 43 39.0 +3.5**
BFZ Birch Farm 67.46 141 IAMs_20 IAMs_20 18 14 19.5
comp=Z,2μm,20.0s
BFZ Birch Farm 67.46 141 P **P** **17 43 36.7 +1.1**
BFZ Birch Farm 67.46 141 P **P** **17 43 36.3 +0.7**
PXZ Pawanui 67.47 140 P **P** **17 43 40.2 +4.4**
TMWZ Te Maipa 67.48 141 P **P** **17 43 38.2 +2.4**
CNGZ Carnagh Statio 67.49 138 P **P** **17 43 37.5 +1.7**
TRWZ Traveller 67.53 142 P **P** **17 43 38.6 +2.5**
AB31 Akbulak array 67.91 320 P **P** **17 43 37.7 -0.7**
SOHO SOHO 67.99 292*i* P **P** **17 43 38.8 -0.6**
SNR=41
SOHO SOHO 67.99 292 P **P** **17 43 39.2 -0.2**
SOHO P **P** **17 43 39.2 -0.2**
ARQ Araqi 68.01 292 P **P** **17 43 39.4 -0.1**
SNR=17
ARQ P **P** **17 43 39.4 -0.1**
SNR=17
ROCAM Rodrigues Isla 68.20 245 P **P** **17 43 40.5 -0.1**
MDH Madha 68.21 294*i* P **P** **17 43 39.5 -1.2**
SNR=10
MDH Madha 68.21 294 P **P** **17 43 39.8 -0.9**
MDH P **P** **17 43 39.8 -0.9**
BANOM Banah 68.21 294*i* P **P** **17 43 41.2 +0.4**
SNR=8.4
BANOM Banah 68.21 294 P **P** **17 43 40.9 +0.1**
SPIA Saint Paul Isl 68.27 32 P **P** **17 43 42.8 +2.4**
baz=252,SNR=49
UOSS Minazif 68.29 293*i* P **P** **17 43 40.4 -0.8**
SNR=5.5
UOSS Minazif 68.29 293 P **P** **17 43 41.0 -0.2**
UOSS Minazif 68.29 293 P **P** **17 43 40.6 -0.7**
UOSS Minazif 68.29 293 P **P** **17 43 40.6 -0.7**
UOSS Minazif 68.29 293 P **P** **17 43 41.2 -0.1**
MASF Masafi 68.33 294 P **P** **17 43 41.5 -0.1**
SNR=7.6
MSFE Esa-Masafi 68.33 294*i* P **P** **17 43 41.6 +0.1**
SNR=23
SHME Shamm 68.35 294*i* P **P** **17 43 41.8 +0.2**
SNR=30
SHME Shamm 68.35 294 P **P** **17 43 42.1 +0.6**
SNR=9.5
SHME P **P** **17 43 42.1 +0.6**
SNR=9.5
HATD Hatta, Dubai 68.36 293*i* P **P** **17 43 41.6 0.0**
SNR=49
HATD Hatta, Dubai 68.36 293 P **P** **17 43 41.9 +0.3**
SNR=14
ASHO Ashiyiah 68.42 293*i* P **P** **17 43 42.0 -0.2**
SNR=44
ASHO Ashiyiah 68.42 293 P **P** **17 43 41.9 -0.2**
SNR=17
ALNE Al Ain 68.71 292*i* P **P** **17 43 44.2 +0.3**
SNR=91
ALNE Al Ain 68.71 292 P **P** **17 43 44.4 +0.5**
SNR=41
UMQ Umm Al-Quwin 68.78 294*i* P **P** **17 43 45.4 +1.1**
SNR=11
UMQ Umm Al-Quwin 68.78 294 P **P** **17 43 45.6 +1.3**
SNR=14
UMQ P **P** **17 43 45.6 +1.3**
SNR=14
NAZ Nazwa, Dubai 68.78 293*i* P **P** **17 43 44.0 -0.3**
SNR=17
NAZ Nazwa, Dubai 68.78 293 P **P** **17 43 44.4 +0.1**
SNR=20
FAQ Al Faqa, Dubai 68.85 293*i* P **P** **17 43 44.6 -0.2**
SNR=12
FAQ Al Faqa, Dubai 68.85 293 P **P** **17 43 44.5 -0.2**
SNR=20
FAQ P **P** **17 43 44.5 -0.2**
SNR=20
SHAO Shalim 69.00 286*i* P **P** **17 43 46.8 +1.0**
SNR=26
SHAO Shalim 69.00 286 P **P** **17 43 46.9 +1.0**
SNR=8.6
ASUD Al Ashush, Dub 69.09 293*i* P **P** **17 43 46.6 +0.4**
SNR=23
ASUD Al Ashush, Dub 69.09 293 P **P** **17 43 47.0 +0.8**
SNR=27
UMZA Um Al Zommool 69.27 291 P **P** **17 43 47.2 -0.2**
SVE Sverdlovsk 69.34 328*d i* P **P** **17 43 47.1 -0.1**
SVE *eS* **S** **17 52 47.0 -3.3**
SVE pmax pmax
comp=Z,481nm,1.1s
SVE MLR MLR
comp=Z,2μm,21.0s
AKTO Aktyubinsk 69.37 321 LR LR 18 17 32.4
comp=Z,3μm,19.0s,baz=106,slow=39
AJN Ajban 69.40 293*i* P **P** **17 43 48.0 -0.1**
SNR=12
AJN Ajban 69.40 293 P **P** **17 43 48.3 +0.2**
SNR=15
UNV Unalaska Valle 69.42 36 P **P** **17 43 49.0 +1.3**
baz=257,SNR=512
UNV S **S** **17 52 51.4 +0.2**
baz=257
DMTO DMTO 69.66 286 P **P** **17 43 50.4 +0.6**
GAMB Gambell 69.84 25 IAmb IAmb 17 43 53.5
comp=Z,448nm,1.1s
GAMB Gambell 69.84 25 P **P** **17 43 52.3 +2.3**
baz=248,SNR=16
GAMB S **S** **17 52 59.1 +3.2**
baz=248
RBK Rabkut 70.38 285 P **P** **17 43 54.7 +0.3**
SNR=12
MZWR Madinat Zayed 70.42 292 P **P** **17 43 54.5 +0.1**
ARTI Arti 70.44 327 LR LR 18 16 43.7
comp=Z,2μm,21.7s,baz=105,slow=38
ARTI Arti 70.44 327*c i* P **P** **17 43 52.6 -1.3**
ARTI *PP **pP** **17 44 05.1 -2.6**
ARTI 17 44 15.6
ARTI PPP PPP 17 48 10.5
ARTI S **S** **17 53 00.9 -2.2**
ARTI SS **SS** **17 57 37.5 +2.9**
ARTI pmax pmax
comp=Z,276nm,0.9s
ARTI MLR MLR
comp=Z,2μm,21.0s
ARTI Arti 70.44 327 P **P** **17 43 52.5 -1.4**
ARTI IAmb IAmb 17 43 54.2
comp=Z,220nm,0.8s
ARTI IAMs_20 IAMs_20 18 16 31.4
comp=Z,2μm,22.0s
ARTI Arti 70.44 327 P **P** **17 43 53.0 -0.9**
WHFO Wadi Hawf 70.77 286 P **P** **17 43 56.5 -0.2**
SNR=9.8
MZR Muzera 70.81 291*i* P **P** **17 43 57.4 +0.5**
SNR=227
MZR Muzera 70.81 291 P **P** **17 43 57.2 +0.4**
SNR=75
M11K Mekoryuk 71.22 29 P **P** **17 44 01.4 +3.0**
baz=255,SNR=36
M11K S **S** **17 53 17.4 +5.4**
baz=255
JRN Qarnain Island 71.34 293 P **P** **17 44 00.0 +0.1**
SNR=41
GHWR Ruwais 71.34 292 P **P** **17 44 00.4 +0.4**
MSEY Mahe Island 71.90 262 P **P** **17 44 03.8 +0.2**
MSEY Mahe Island 71.90 262 P **P** **17 44 04.0 +0.4**
KEKH Kekaha 71.90 70 P **P** **17 44 06.9 +3.5**
TNA Tin City 71.99 24 IAMs_20 IAMs_20 18 17 31.7
comp=Z,1μm,20.0s
TNA Tin City 71.99 24 P **P** **17 44 04.9 +1.8**
baz=251
TNA S **S** **17 53 23.0 +2.3**
baz=251
K13K Kusilvak Mount 72.34 28 IAmb IAmb 17 44 08.9
comp=Z,444nm,1.0s
K13K Kusilvak Mount 72.34 28 P **P** **17 44 07.8 +2.6**
baz=256,SNR=70
K13K S **S** **17 53 28.4 +3.5**
baz=256
SLWR Sila 72.42 292 P **P** **17 44 06.9 +0.4**
F14K Arctic Creek 72.59 24 P **P** **17 44 09.2 +2.6**
baz=253,SNR=28
F14K S **S** **17 53 31.3 +3.6**
baz=253
M13K Dall Lake 72.59 29 P **P** **17 44 09.5 +2.8**
baz=257,SNR=126
M13K S **S** **17 53 32.1 +4.3**
baz=257
ANM Nome 72.72 25 P **P** **17 44 09.5 +2.0**
baz=254,SNR=6.7
ANM S **S** **17 53 32.7 +3.5**
baz=254
J14K Nanvaranak Lak 73.04 27 IAmb IAmb 17 44 12.8
comp=Z,298nm,1.1s
J14K IAMs_20 IAMs_20 18 18 24.8
comp=Z,1μm,19.0s
J14K Nanvaranak Lak 73.04 27 P **P** **17 44 11.7 +2.3**
baz=256,SNR=50
J14K S **SKiKP** **17 53 35.6 -2.3**
baz=256
L14K Kuka Creek 73.12 28 P **P** **17 44 12.4 +2.6**
baz=258,SNR=337
L14K S **SKiKP** **17 53 37.3 -0.8**
baz=258
SDPT Sand Point 73.15 35 P **P** **17 44 11.3 +1.2**
baz=261,SNR=120
SDPT S **S** **17 53 33.4 -0.9**
baz=261
N14K Kuskokwak Cree 73.31 30 P **P** **17 44 13.3 +2.3**
baz=259,SNR=149
N14K S **SKiKP** **17 53 37.4 -1.0**
baz=259
F15K North Star Dit 73.33 24 IAmb IAmb 17 44 14.4
comp=Z,326nm,1.1s
F15K IAMs_20 IAMs_20 18 18 42.2
comp=Z,2μm,19.0s
F15K North Star Dit 73.33 24 P **P** **17 44 13.0 +2.0**
baz=254,SNR=28
F15K S **SKiKP** **17 53 37.7 -0.7**
baz=254
M14K Bethel 73.34 29 P **P** **17 44 13.6 +2.5**
baz=258,SNR=327
M14K S **SKiKP** **17 53 39.0 +0.6**
baz=258
G15K Niukluk 73.39 25 P **P** **17 44 13.1 +1.7**
baz=255,SNR=23
G15K S **SKiKP** **17 53 38.2 -0.2**
baz=255
O14K Tigyukauivet M 73.39 31 P **P** **17 44 13.7 +2.2**
baz=259,SNR=110
O14K S **SKiKP** **17 53 38.1 -0.5**
baz=259
SAKB Bahrain 73.40 294 P **P** **17 44 12.4 +0.2**
HON Honolulu 73.52 70 P **P** **17 44 16.3 +3.3**
CHNA Chernabura Isl 73.58 35 P **P** **17 44 14.1 +1.4**
baz=262,SNR=179
CHNA S **S** **17 53 39.6 +0.4**
baz=262
L15K Ungalak Mounta 73.75 28 P **P** **17 44 15.6 +2.0**
baz=258,SNR=107
L15K S **S** **17 53 42.4 +1.5**
baz=258
C16K Lisburne Hills 73.79 21 P **P** **17 44 15.6 +1.9**
baz=253
C16K S **S** **17 53 44.4 +3.3**
baz=253
S14K Fog Glacier 73.81 34 P **P** **17 44 15.3 +1.2**
baz=262,SNR=57
S14K S **S** **17 53 41.5 -0.4**
baz=262
K15K Wolf Creek Mou 73.85 28 IAmb IAmb 17 44 18.0
comp=Z,423nm,1.1s
K15K Wolf Creek Mou 73.85 28 P **P** **17 44 16.8 +2.6**
baz=258,SNR=76
K15K S **S** **17 53 44.6 +2.5**
baz=258
M15K Kasigluk River 73.94 29 P **P** **17 44 16.7 +2.0**
baz=260,SNR=309
M15K S **S** **17 53 44.3 +1.2**
baz=260
H16K Elim 74.05 25 P **P** **17 44 17.0 +1.8**
baz=257,SNR=30
H16K S **S** **17 53 46.1 +2.0**
baz=257
O15K Ungalikthiuk R 74.11 31 P **P** **17 44 17.7 +2.0**
baz=261,SNR=142
O15K S **S** **17 53 46.3 +1.3**
baz=261
N15K Kwethluk River 74.14 30 P **P** **17 44 18.3 +2.4**
baz=260,SNR=288
N15K S **S** **17 53 46.5 +1.1**
baz=260
G16K Koyuk River 74.17 24 IAmb IAmb 17 44 19.2
comp=Z,194nm,1.1s
G16K Koyuk River 74.17 24 P **P** **17 44 17.9 +1.9**
baz=257,SNR=18
G16K S **S** **17 53 47.3 +1.7**
baz=257
D17K Noatak River 74.45 22 P **P** **17 44 20.0 +2.4**
baz=255,SNR=60
D17K S **S** **17 53 50.5 +1.9**
baz=255
J16K Anvik River 74.47 27 IAmb IAmb 17 44 21.5
comp=Z,302nm,1.1s
J16K IAMs_20 IAMs_20 18 19 29.6
comp=Z,1μm,20.0s
J16K Anvik River 74.47 27 P **P** **17 44 20.2 +2.5**
baz=259,SNR=62
J16K S **S** **17 53 51.6 +2.7**
baz=259
I17K Unalakleet 74.55 26 IAmb IAmb 17 44 22.0
comp=Z,495nm,1.1s
I17K Unalakleet 74.55 26 P **P** **17 44 20.8 +2.6**
baz=259,SNR=28
I17K S **S** **17 53 52.3 +2.6**
baz=259
RDOG Red Dog Mine 74.61 22 IAmb IAmb 17 44 21.8
comp=Z,516nm,1.2s
RDOG Red Dog Mine 74.61 22 P **P** **17 44 20.6 +2.2**
baz=255,SNR=41
C17K DeLong Mountai 74.62 21 P **P** **17 44 20.7 +2.1**
baz=255,SNR=17
L16K Owhat River 74.70 28 P **P** **17 44 21.4 +2.3**
baz=260,SNR=374
L16K S **S** **17 53 53.8 +2.3**
baz=260
LKRN Lenkeran, Azer 74.75 308 P **P** **17 44 20.6 +0.7**
E17K Hotham Inlet 74.77 23 P **P** **17 44 21.8 +2.4**
baz=257,SNR=46
E17K S **S** **17 53 53.8 +1.6**
baz=257
M16K Timber Creek 74.83 29 P **P** **17 44 22.2 +2.3**

baz=261,SNR=469
M16K S **S** **17 53 55.0 +1.9**

baz=261
N16K Nishlik Lake **74.84 30** P **P** **17 44 22.6 +2.7**
baz=261,SNR=454
N16K S **S** **17 53 55.2 +2.0**

baz=261
F17K Baldwin Pennin **74.85 23** P **P** **17 44 22.1 +2.2**
baz=257,SNR=17
F17K S **S** **17 53 55.7 +2.6**

baz=257
G17K Kiwalik Mounta **74.89 24** P **P** **17 44 22.4 +2.2**
baz=258,SNR=93
G17K S **S** **17 53 55.5 +1.9**

baz=258
KHLH Kahului Airpor **75.02 71** P **P** **17 44 25.4 +3.7**
P16K Nushagak River **75.02 31** P **P** **17 44 23.3 +2.3**
baz=262,SNR=44
P16K S **S** **17 53 57.9 +2.7**

baz=262
O16K Kokwok River B **75.04 31** P **P** **17 44 23.4 +2.2**
baz=262,SNR=470
O16K S **S** **17 53 58.0 +2.6**

baz=262
H17K Granite Mounta **75.08 25** IAmb IAmb 17 44 24.8
comp=Z,396nm,1.0s
H17K Granite Mounta **75.08 25** P **P** **17 44 23.5 +2.2**
baz=259,SNR=77
H17K S **S** **17 53 57.8 +2.0**

baz=259
J17K VABM Dome **75.17 27** IAMs_20 IAMs_20 18 19 51.0
comp=Z,1µm,20.0s
J17K VABM Dome **75.17 27** P **P** **17 44 24.3 +2.5**
baz=260,SNR=110
J17K S **S** **17 53 59.5 +2.8**

baz=260
E18K Tukpahlearik C **75.31 22** P **P** **17 44 24.9 +2.4**
baz=258
E18K S **S** **17 53 59.5 +1.3**

baz=258
L17K Donlin **75.31 28** P **P** **17 44 25.5 +2.9**
baz=261,SNR=242
L17K S **S** **17 54 02.0 +3.6**

baz=261
C18K Utukok River **75.37 21** IAmb IAmb 17 44 26.0
comp=Z,345nm,0.9s
C18K Utukok River **75.37 21** P **P** **17 44 24.8 +1.8**
baz=257,SNR=41
K17K Iditarod **75.40 27** P **P** **17 44 25.8 +2.6**
baz=261
K17K S **S** **17 54 03.1 +3.8**

baz=261
RER Riviere de l'E **75.44 245** P **P** **17 44 23.7 -0.6**
RER IAmb IAmb 17 45 14.3
comp=Z,341nm,1.6s
F18K Selawik **75.51 23** P **P** **17 44 25.7 +2.1**
baz=259,SNR=86
F18K S **S** **17 54 02.3 +1.9**

baz=259
O17K Koliganek Bris **75.57 31** P **P** **17 44 26.3 +2.1**
baz=263,SNR=276
O17K S **S** **17 54 03.3 +2.0**

baz=263
KIRV Kirov **75.59 328** LR LR 18 19 50.5
comp=Z,2µm,21.8s,baz=99,slow=37
KIRV Kirov **75.59 328***c i*P **P** **17 44 24.0 -0.3**
AKT Akhty **75.59 310** *e*P **P** **17 44 24.9 +0.1**
AKT *e* 17 44 37.4
AKT *e**PP **pP** **17 44 39.9 +1.2**
AKT *e* 17 47 11.4
AKT *e*PPP PPP 17 48 56.3
AKT *e*S **S** **17 54 03.9 +1.4**
AKT pmax pmax
comp=Z,545nm,1.1s
AKT MLR MLR
comp=Z,4µm,25.0s
KHLU Kahalu`u **75.61 72** IAmb IAmb 17 44 29.1
comp=Z,264nm,1.0s
KHLU Kahalu`u **75.61 72** P **P** **17 44 28.1 +2.8**
M17K Holitna River **75.61 29** P **P** **17 44 27.2 +2.8**
baz=262,SNR=244
M17K S **S** **17 54 04.7 +3.0**

baz=262
N17K Nushagak Hills **75.62 30** P **P** **17 44 27.1 +2.7**
baz=263,SNR=452
N17K S **S** **17 54 05.2 +3.3**

baz=263
Q16K King Salmon **75.67 32** P **P** **17 44 25.7 +1.0**
baz=264
R17L Mt. Peulik Vol **75.71 33** P **P** **17 44 26.1 +1.1**
baz=264,SNR=316
R17L S **S** **17 54 00.8 -2.2**

baz=264
A19K Wainwright **75.77 20** P **P** **17 44 27.7 +2.6**
baz=257,SNR=7.5
H18K Honhosa River **75.77 25** IAmb IAmb 17 44 28.3
comp=Z,279nm,1.1s
H18K IAMs_20 IAMs_20 18 19 56.9
comp=Z,1µm,20.0s
H18K Honhosa River **75.77 25** P **P** **17 44 27.1 +1.8**
baz=260,SNR=62
H18K S **S** **17 54 04.6 +1.2**

baz=260
G18K Tagagawik **75.78 24** IAmb IAmb 17 44 28.1
comp=Z,234nm,1.1s
G18K Tagagawik **75.78 24** P **P** **17 44 26.9 +1.6**
baz=260,SNR=91
G18K S **S** **17 54 04.0 +0.6**

baz=260
MAK Makhachkala **75.78 312** *e*P **P** **17 44 25.2 -0.5**
MAK *e**PP **PcP** **17 44 38.8 +0.6**
MAK *e* 17 47 11.2
MAK *e*PPP PPP 17 48 57.6
MAK *e*S **S** **17 54 03.7 -0.5**
MAK *e**SS **sS** **17 54 28.6 +0.9**
MAK *e*SS **SS** **17 58 55.1 -1.6**
MAK pmax pmax
comp=Z,373nm,1.1s
MAK MLR MLR
comp=Z,3µm,21.0s
P17K Kvichak River **75.83 31** P **P** **17 44 27.6 +1.9**
baz=264,SNR=280
P17K S **S** **17 54 05.4 +1.2**

baz=264
MWH Mokuaweoweo **75.90 72** P **P** **17 44 27.8 +0.3**
MWH IAmb IAmb 17 44 31.3
comp=Z,561nm,1.2s
MLOA Mauna Loa Obse **75.91 72** IAmb IAmb 17 44 31.4
comp=Z,465nm,1.0s
MLOA Mauna Loa Obse **75.91 72** P **P** **17 44 29.1 +1.7**
CASY Casey **75.92 187** P **P** **17 44 26.4 +0.6**
CASY IAmb IAmb 17 44 28.1
comp=Z,304nm,0.8s
CASY Casey **75.92 187** IAMs_20 IAMs_20 18 16 17.7
comp=Z,1µm,21.0s
CASY Casey **75.92 187** P **P** **17 44 27.1 +1.2**
CASY Casey **75.92 187** P **P** **17 44 26.7 +0.8**
POHA Pohakuloa **75.94 72** P **P** **17 44 29.4 +2.1**
POHA IAmb IAmb 17 44 31.2
comp=Z,417nm,1.1s
POHA Pohakuloa **75.94 72** P **P** **17 44 30.3 +2.9**
SEKA Sheki **75.99 310** P **P** **17 44 27.2 +0.1**
Q17K Contact Creek **76.02 32** P **P** **17 44 27.7 +0.8**
baz=264
Q17K S **S** **17 54 04.7 -2.0**

baz=264
C19K Lookout Ridge **76.03 21** P **P** **17 44 29.4 +2.6**
baz=258,SNR=81
C19K S **S** **17 54 08.1 +1.9**

baz=258
BELG Belogornoye **76.07 322** LR LR 18 21 08.7
comp=Z,1µm,20.6s,baz=98,slow=38
BELG Belogornoye **76.07 322***c i*P **P** **17 44 26.4 -0.7**
BELG pmax pmax
comp=Z,186nm,0.9s
MNGR Mingechevir, A **76.07 310** P **P** **17 44 28.1 +0.7**
L18K Granite Mounta **76.07 28** IAmb IAmb 17 44 30.8
comp=Z,336nm,1.1s
L18K Granite Mounta **76.07 28** P **P** **17 44 29.6 +2.6**
baz=263,SNR=158
L18K S **S** **17 54 09.2 +2.4**

baz=263
J18K Innoko River **76.23 27** IAmb IAmb 17 44 30.9
comp=Z,160nm,1.0s
J18K Innoko River **76.23 27** P **P** **17 44 29.7 +1.8**
baz=262,SNR=96
J18K S **S** **17 54 09.0 +0.6**

baz=262
N18K Kilae Creek **76.27 30** IAmb IAmb 17 44 32.0
comp=Z,432nm,1.1s
N18K Kilae Creek **76.27 30** P **P** **17 44 30.7 +2.5**
baz=264,SNR=230
N18K S **S** **17 54 12.4 +3.3**

baz=264
F19K Shaleruckik Mo **76.29 23** IAmb IAmb 17 44 30.9
comp=Z,208nm,1.1s
F19K Shaleruckik Mo **76.29 23** P **P** **17 44 29.6 +1.5**
baz=261,SNR=60
F19K S **S** **17 54 08.5 -0.4**

baz=261
ACHA Angle Creek He **76.31 32** IAmb IAmb 17 44 31.2
comp=Z,311nm,1.0s
GCSA Galena City Sc **76.33 25** P **P** **17 44 30.3 +1.9**
baz=262,SNR=13
GCSA S **S** **17 54 10.8 +1.4**

baz=262
M18K Stony River **76.39 29** P **P** **17 44 31.3 +2.4**
baz=264,SNR=362
M18K S **S** **17 54 13.0 +2.7**

baz=264
D19K Kuna River **76.44 22** P **P** **17 44 31.1 +2.0**
baz=260
D19K S **S** **17 54 12.1 +1.3**

baz=260
G19K Purcell Mounta **76.45 24** IAmb IAmb 17 44 32.2
comp=Z,305nm,1.1s
G19K IAMs_20 IAMs_20 18 20 48.8
comp=Z,1µm,19.0s
G19K Purcell Mounta **76.45 24** P **P** **17 44 31.0 +1.9**
baz=261,SNR=106
G19K S **S** **17 54 12.5 +1.7**

baz=261
JOKA Jonika Flow **76.46 72** IAmb IAmb 17 44 33.9
comp=Z,350nm,1.1s
P18K Big Mountain, **76.47 31** P **P** **17 44 30.6 +1.3**
baz=265,SNR=62
P18K S **S** **17 54 11.5 +0.1**

baz=265
Q18K Katmai Hardscr **76.52 32** P **P** **17 44 30.4 +0.7**
baz=265,SNR=132
Q18K S **S** **17 54 09.5 -2.6**

baz=265
O18K Koktuh Hills **76.53 31** P **P** **17 44 32.1 +2.5**
baz=265,SNR=401
O18K S **S** **17 54 14.4 +2.5**

baz=265
E19K Redstone River **76.60 23** P **P** **17 44 32.1 +2.2**
baz=261
E19K S **S** **17 54 12.9 +0.5**

baz=261
H19K Roundabout Mou **76.62 25** P **P** **17 44 32.3 +2.3**
baz=262,SNR=255
H19K S **S** **17 54 14.7 +2.1**

baz=262
GANJ Ganja **76.65 310** P **P** **17 44 30.4 -0.4**
J19K Poorman **76.78 26** IAmb IAmb 17 44 34.4
comp=Z,250nm,1.2s
J19K Poorman **76.78 26** P **P** **17 44 32.9 +2.0**
baz=263,SNR=120
J19K S **S** **17 54 15.6 +1.1**

baz=263
L19K White Mountain **76.92 28** IAmb IAmb 17 44 35.4
comp=Z,297nm,1.0s
L19K White Mountain **76.92 28** P **P** **17 44 34.2 +2.3**
baz=264,SNR=201
L19K S **S** **17 54 18.1 +1.9**

baz=264
N19K Bonanza Creek **76.97 30** P **P** **17 44 34.7 +2.4**
baz=265,SNR=246
N19K S **S** **17 54 19.1 +2.2**

baz=265
O19K Port Alsworth **77.00 30** P **P** **17 44 34.0 +1.8**
baz=265
D20K Etivluk River **77.02 21** P **P** **17 44 34.4 +2.1**
baz=261
D20K S **S** **17 54 17.6 +0.5**

baz=261
B20K Meade River **77.04 20** P **P** **17 44 34.5 +2.2**
baz=260,SNR=31
B20K S **S** **17 54 18.3 +1.2**

baz=260
E20K Nigu River **77.11 22** P **P** **17 44 35.0 +2.2**
baz=262,SNR=153
E20K S **S** **17 54 19.1 +1.0**

baz=262
M19K Big River Lodg **77.11 29** IAmb IAmb 17 44 36.7
comp=Z,219nm,1.2s
M19K Big River Lodg **77.11 29** P **P** **17 44 35.3 +2.4**
baz=265,SNR=87
M19K S **S** **17 54 20.3 +2.1**

baz=265
F20K Avaraart Lake **77.12 23** IAmb IAmb 17 44 36.2
comp=Z,322nm,1.0s
F20K Avaraart Lake **77.12 23** P **P** **17 44 35.1 +2.3**
baz=262,SNR=152
F20K S **S** **17 54 20.1 +2.1**

baz=262
Q19K Cape Douglas, **77.25 32** P **P** **17 44 34.6 +0.9**
baz=266,SNR=32
H20K Anotleneega Mo **77.27 25** P **P** **17 44 35.8 +2.1**
baz=264,SNR=217
H20K S **S** **17 54 22.6 +2.8**

baz=264
NAX Nakhchivan **77.31 308** P **P** **17 44 35.1 +0.5**
OHAK Old Harbor **77.33 33** P **P** **17 44 36.1 +1.9**
baz=267
OHAK S **S** **17 54 21.2 +0.5**

baz=267
I20K Naaghedeneel **77.36 26** IAMs_20 IAMs_20 18 21 15.9
comp=Z,1µm,20.0s
I20K Naaghedeneel **77.36 26** P **P** **17 44 36.7 +2.5**
baz=264,SNR=80
I20K S **S** **17 54 23.7 +3.0**

baz=264
K20K Telida **77.40 27** IAmb IAmb 17 44 38.2
comp=Z,236nm,1.1s
K20K Telida **77.40 27** P **P** **17 44 36.9 +2.4**
baz=265,SNR=138
K20K S **S** **17 54 24.3 +3.1**

baz=265
A21K Barrow **77.44 19** P **P** **17 44 36.5 +2.0**
baz=261
J20K Nowinta River **77.44 26** IAmb IAmb 17 44 38.3
comp=Z,414nm,1.3s
J20K Nowinta River **77.44 26** P **P** **17 44 36.9 +2.2**
baz=265,SNR=229
J20K S **S** **17 54 24.6 +2.9**

baz=265
P19K Oil Pt **77.51 31** P **P** **17 44 36.0 +0.9**
baz=266,SNR=13
P19K S **S** **17 54 20.7 -1.9**

baz=266
ILSW Iliamna Southw **77.57 31** IAmb IAmb 17 44 37.5
comp=Z,160nm,1.0s
M20K Styx River **77.71 29** IAmb IAmb 17 44 39.9
comp=Z,294nm,1.1s
M20K Styx River **77.71 29** P **P** **17 44 38.7 +2.3**
baz=266,SNR=204
M20K S **S** **17 54 26.9 +2.1**

baz=266
KDAK Kodiak Island **77.74 33** P **P** **17 44 37.6 +1.2**
comp=Z,584nm,0.9s,baz=263,slow=3.2,SNR=358
KDAK LR LR 18 14 32.1
comp=Z,2µm,21.8s,baz=244,slow=32
comp=Z,584nm,0.9s
KDAK Kodiak Island **77.74 33** P **P** **17 44 37.8 +1.3**
KDAK pmax pmax
comp=Z,782nm,1.0s
KDAK MLR MLR
comp=Z,2µm,22.0s
KDAK Kodiak Island **77.74 33** P **P** **17 44 37.8 +1.3**
KDAK Kodiak Island **77.74 33** P **P** **17 44 38.5 +2.0**
baz=267
KDAK S **S** **17 54 25.5 +0.4**

baz=267
KDAK Kodiak Island **77.74 33** P **P** **17 44 38.4 +2.0**
KDAK Kodiak Island **77.74 33** P **P** **17 44 38.4 +2.0**
C21K Knifeblade Rid **77.74 21** P **P** **17 44 38.5 +2.2**
baz=263,SNR=31
C21K S **S** **17 54 25.4 +0.6**

baz=263
IMAR Indian Mountai **77.78 24** P **P** **17 44 38.1 +1.6**
RED Redoubt Volcan **77.79 30** IAmb IAmb 17 44 38.9
comp=Z,290nm,1.0s
TBLG Delisi **77.83 311** P **P** **17 44 37.4 0.0**

O20K Slope Mountain **77.84 30** P **P** **17 44 38.0 +0.9**
baz=267,SNR=22
O20K S **S** **17 54 24.6 -1.7**

baz=267
B21K Ikpikpuk River **77.86 21** P **P** **17 44 39.2 +2.3**
baz=263,SNR=64
B21K S **S** **17 54 26.1 +0.1**

baz=263
GNI Garni **77.87 309** LR LR 18 22 48.4
comp=Z,1µm,21.3s,baz=80,slow=39
GNI Garni **77.87 309** P **P** **17 44 38.7 +1.0**
GNI Garni **77.87 309***c i*P **P** **17 44 38.3 +0.5**
GNI pmax pmax
comp=Z,356nm,1.5s
GNI Garni **77.87 309** P **P** **17 44 38.3 +0.5**
GNI Garni **77.87 309** P **P** **17 44 38.3 +0.5**
GNI IAmb IAmb 17 44 55.3
comp=Z,213nm,1.0s
GNI Garni **77.87 309** IAMs_20 IAMs_20 18 23 47.1
comp=Z,2µm,22.0s
GNI Garni **77.87 309** P **P** **17 44 37.5 -0.3**
comp=Z,3µmcomp=Z,216nm,1.0s
GNI Garni **77.87 309** P **P** **17 44 38.8 +1.0**
GNI Garni **77.87 309** P **P** **17 44 38.8 +1.0**
A22K Sinclair Lake **77.92 19** P **P** **17 44 39.5 +2.3**
baz=262
A22K S **S** **17 54 27.0 +0.5**

baz=262
G21K Allakaket **77.93 24** P **P** **17 44 39.6 +2.2**
baz=265
G21K S **S** **17 54 28.1 +1.2**

baz=265
E21K Killik River **77.95 22** P **P** **17 44 39.5 +2.0**
baz=264,SNR=32
E21K S **S** **17 54 26.6 -0.5**

baz=264
F21K Alatna River **78.01 23** P **P** **17 44 39.4 +1.6**
baz=264,SNR=70
F21K S **S** **17 54 28.3 +0.6**

baz=264
SPCR Spurr Chakacha **78.11 29** P **P** **17 44 39.9 +1.3**
baz=267,SNR=32
SPCR S **S** **17 54 27.5 -1.6**

baz=267
RAYN Ar Rayn **78.11 292***i* P **P** **17 44 39.3 +0.1**
SNR=21
RAYN Ar Rayn **78.11 292** P **P** **17 44 39.4 +0.1**
RAYN Ar Rayn **78.11 292** P **P** **17 44 39.3 +0.1**
RAYN Ar Rayn **78.11 292** P **P** **17 44 39.2 -0.1**
RAYN Ar Rayn **78.11 292** IAMs_20 IAMs_20 18 20 53.7
comp=Z,1µm,22.0s
RAYN Ar Rayn **78.11 292** P **P** **17 44 39.4 +0.1**
H21K Melozitna Rive **78.14 25** IAmb IAmb 17 44 42.1
comp=Z,340nm,1.1s
H21K Melozitna Rive **78.14 25** P **P** **17 44 40.8 +2.2**
baz=266,SNR=284
H21K S **S** **17 54 31.1 +1.9**

baz=266
SPU Mount Spurr **78.18 29** IAmb IAmb 17 44 41.3
comp=Z,219nm,1.1s
PPLA Purkeypile **78.21 28** IAmb IAmb 17 44 42.3
comp=Z,512nm,1.6s
PPLA Purkeypile **78.21 28** P **P** **17 44 40.9 +1.7**
baz=267,SNR=63
PPLA S **S** **17 54 30.3 -0.1**

baz=267
CHUM Lake Minchumin **78.22 27** P **P** **17 44 41.1 +2.2**
baz=266,SNR=34
CHUM S **S** **17 54 30.9 +0.9**

baz=266
CAST Castle Rocks **78.29 27** IAmb IAmb 17 44 42.5
comp=Z,327nm,0.9s
CAST Castle Rocks **78.29 27** P **P** **17 44 41.3 +1.8**
baz=267,SNR=373
CAST S **S** **17 54 31.1 +0.2**

baz=267
STLK Strandline Lak **78.30 29** IAmb IAmb 17 44 41.8
comp=Z,165nm,1.1s
HOM Homer **78.31 31** IAmb IAmb 17 44 45.2
comp=Z,360nm,0.9s
HOM Homer **78.31 31** P **P** **17 44 41.7 +2.2**
baz=268,SNR=6.5
TRLG Trialeti **78.31 311** P **P** **17 44 41.7 +1.5**
B22K Teshekpuk Lake **78.35 20** P **P** **17 44 41.6 +2.0**
baz=264,SNR=17
B22K S **S** **17 54 32.2 +1.0**

baz=264
I21K Tanana **78.45 25** IAMs_20 IAMs_20 18 21 48.7
comp=Z,1µm,20.0s
I21K Tanana **78.45 25** P **P** **17 44 42.6 +2.3**
baz=266,SNR=368
I21K S **S** **17 54 34.2 +1.8**

baz=266
RAR Rarotonga **78.47 114** LR LR 18 13 23.7
comp=Z,1µm,21.7s,baz=283,slow=31
SKT Skwentna **78.47 29** IAmb IAmb 17 44 42.6
comp=Z,359nm,1.1s
SKT Skwentna **78.47 29** P **P** **17 44 41.2 +0.7**
baz=267,SNR=257
SKT S **S** **17 54 30.5 -2.4**

baz=267
F22K John River **78.53 23** P **P** **17 44 43.2 +2.4**
baz=266,SNR=81
F22K S **S** **17 54 35.1 +1.7**

baz=266
CAPN Captain Cook N **78.60 30** P **P** **17 44 43.3 +2.1**
baz=268,SNR=7.8
NCK Nalchik **78.64 313***c i*P **P** **17 44 41.7 -0.1**
NCK pmax pmax
comp=Z,250nm,0.9s
E22K Anaktuvuk Pass **78.72 22** P **P** **17 44 44.0 +2.2**
baz=266
E22K S **S** **17 54 35.7 +0.3**

baz=266
H22K Ishtalitna Cre **78.74 25** IAmb IAmb 17 44 45.6
comp=Z,361nm,1.1s
H22K Ishtalitna Cre **78.74 25** P **P** **17 44 44.4 +2.5**
baz=267,SNR=262
H22K S **S** **17 54 38.5 +2.8**

baz=267
G22K Bettles **78.75 23** P **P** **17 44 43.7 +1.9**
baz=266
G22K S **S** **17 54 37.9 +2.3**

baz=266
BRSE Bradley Lake S **78.77 31** P **P** **17 44 43.1 +1.0**
baz=266,SNR=97
BRSE S **S** **17 54 34.4 -1.8**

baz=268
KTH Kantishna Hill **78.82 27** IAmb IAmb 17 44 47.7
comp=Z,222nm,1.1s
L22K Petersville **78.85 28** IAmb IAmb 17 44 44.7
comp=Z,470nm,1.1s
L22K Petersville **78.85 28** P **P** **17 44 43.6 +1.0**
baz=268
L22K S **S** **17 54 34.6 -2.4**

baz=268
DIGO Kars **78.90 309** P **P** **17 44 44.4 +0.8**
MLY Manley **78.97 25** IAmb IAmb 17 44 46.2
comp=Z,287nm,1.0s
MLY IAMs_20 IAMs_20 18 22 04.3
comp=Z,1µm,20.0s
MLY Manley **78.97 25** P **P** **17 44 45.1 +1.9**
baz=268,SNR=164
MLY S **S** **17 54 38.9 +0.7**

baz=268
GOF Gofitskoye **78.99 314***c i*P **P** **17 44 43.5 -0.1**
GOF *e*S **S** **17 54 39.5 +0.5**
CUT Chulitna **79.08 28** P **P** **17 44 44.6 +0.9**
baz=268,SNR=37
CUT S **S** **17 54 37.3 -1.9**

baz=268
TRF Thorofare Moun **79.10 27** IAmb IAmb 17 44 46.5
comp=Z,335nm,1.1s
TRF Thorofare Moun **79.10 27** P **P** **17 44 45.1 +1.0**
baz=268,SNR=162
TRF S **S** **17 54 39.0 -0.8**

baz=268
M22K Willow **79.13 29** P **P** **17 44 44.9 +0.9**
baz=269,SNR=59
M22K S **S** **17 54 37.2 -2.6**

baz=269
KBZ Khabaz **79.14 313** P **P** **17 44 44.4 -0.1**
comp=Z,169nm,0.9s,baz=106,slow=3.8,SNR=171
KBZ LR LR 18 23 55.0
comp=Z,3µm,21.5s,baz=78,slow=39
comp=Z,169nm,0.9s
KBZ Khabaz **79.14 313***c i*P **P** **17 44 44.3 -0.1**
KBZ pmax pmax

comp=Z,245nm,1.0s
D23K Nanushuk River 79.19 21 P P 17 44 46.8 +2.5
baz=267,SNR=98
D23K S S 17 54 41.3 +1.0
baz=267
GEVA Gevas 79.24 307 IAmb IAmb 17 44 47.5
comp=Z,439nm,1.1s
C23K Itkillik River 79.27 21 IAmb IAmb 17 44 47.3
comp=Z,345nm,0.8s
C23K IAMs_20 IAMs_20 18 23 29.0
comp=Z,1μm,20.0s
C23K Itkillik River 79.27 21 P P 17 44 46.8 +2.1
baz=267,SNR=72
C23K S S 17 54 41.7 +0.7
baz=267
KIV Kislovodsk 79.28 313 ⇑P P 17 44 46.0 +0.6
KIV Kislovodsk 79.28 313 *i* P P 17 44 45.2 -0.3
SNR=71
KIV Kislovodsk 79.28 313 *e*P P 17 44 45.1 -0.3
KIV *e* 17 47 44.8
KIV *e*S S 17 54 41.6 -0.7
KIV pmax pmax
comp=Z,398nm,1.1s
KIV pmax pmax
comp=Z,160nm,3.5s
KIV Kislovodsk 79.28 313 P P 17 44 45.5 +0.1
KIV Kislovodsk 79.28 313 P P 17 44 44.8 -0.6
KIV IAmb IAmb 17 44 47.1
comp=Z,427nm,0.9s
KIV Kislovodsk 79.28 313 P P 17 44 45.1 -0.3
comp=Z,2μmcomp=Z,364nm,1.0s
KIV Kislovodsk 79.28 313 P P 17 44 45.3 -0.1
O22K Cooper Landing 79.30 30 P P 17 44 46.1 +1.2
baz=269,SNR=34
O22K S S 17 54 39.5 -2.1
baz=269
RC01 Rabbit Creek A 79.30 29 P P 17 44 45.9 +0.9
baz=269,SNR=47
RC01 S S 17 54 39.1 -2.6
baz=269
SHA1 Shidzhatmaz 79.31 313*c i*P P 17 44 45.4 -0.3
G23K Bananza Creek 79.33 24 IAmb IAmb 17 44 48.8
comp=Z,470nm,1.3s
G23K Bananza Creek 79.33 24 P P 17 44 47.5 +2.4
baz=268,SNR=316
G23K S S 17 54 43.7 +1.8
baz=268
EPOS Posof 79.35 311 P P 17 44 46.8 +0.9
SEW Seward 79.43 30 IAmb IAmb 17 44 48.1
comp=Z,419nm,1.0s
SEW Seward 79.43 30 P P 17 44 47.0 +1.3
baz=270,SNR=124
SEW S S 17 54 41.8 -1.2
baz=270
BWN Browne 79.49 26 IAmb IAmb 17 44 51.2
comp=Z,267nm,1.0s
H23K Yukon River 79.50 25 P P 17 44 48.3 +2.3
baz=268
H23K S S 17 54 46.0 +2.4
baz=268
E23K Chandalar 79.54 22 P P 17 44 48.7 +2.4
baz=268,SNR=244
E23K S S 17 54 44.8 +0.6
baz=268
I23K Minto, Yukon-K 79.55 25 IAMs_20 IAMs_20 18 22 32.9
comp=Z,1μm,20.0s
I23K Minto, Yukon-K 79.55 25 P P 17 44 48.2 +1.9
baz=269,SNR=132
I23K S S 17 54 44.3 +0.1
baz=269
TOLK Toolik Lake Re 79.58 22 P P 17 44 48.6 +2.1
baz=268,SNR=89
TOLK S S 17 54 44.8 +0.3
baz=268
PMR Palmer 79.60 29 IAmb IAmb 17 44 48.7
comp=Z,379nm,1.0s
PMR Palmer 79.60 29 P P 17 44 47.6 +1.0
baz=270,SNR=89
PMR S S 17 54 42.5 -2.2
baz=270
NEA2 Nenana 79.67 26 IAmb IAmb 17 44 49.8
comp=Z,226nm,0.8s
NEA2 Nenana 79.67 26 P P 17 44 48.0 +1.0
baz=269,SNR=224
NEA2 S S 17 54 44.7 -0.8
baz=269
GHO Glory Hole Cre 79.70 29 IAmb IAmb 17 44 49.6
comp=Z,324nm,1.2s
VRH Novokhopyorsk 79.71 320*c i*P P 17 44 46.4 -1.0
VRH pmax pmax
comp=Z,577nm,0.8s
MCK McKinley 79.71 27 IAMs_20 IAMs_20 18 23 02.2
comp=Z,1μm,20.0s
MCK McKinley 79.71 27 P P 17 44 48.4 +1.2
baz=269,SNR=83
MCK S S 17 54 44.6 -1.5
baz=269
D24K Happy Valley 79.87 21 P P 17 44 50.2 +2.3
baz=268
D24K S S 17 54 48.0 +0.6
baz=268
WAT1 Susitna Watana 79.88 28 P P 17 44 49.1 +0.9
baz=270
WAT1 S S 17 54 45.3 -2.6
baz=270
KNK Knik Glacier 79.92 29 P P 17 44 49.9 +1.5
baz=270,SNR=148
KNK S S 17 54 46.9 -1.4
baz=270
E24K Your Creek 79.97 22 IAmb IAmb 17 44 51.9
comp=Z,191nm,0.9s
E24K Your Creek 79.97 22 P P 17 44 50.7 +2.1
baz=269,SNR=151
E24K S S 17 54 50.4 +1.8
baz=269
SML Sawmill 79.98 29 P P 17 44 50.1 +1.3
baz=270,SNR=295
SML S S 17 54 47.7 -1.3
baz=270
PWL Port Wells 79.98 30 P P 17 44 50.2 +1.4
baz=270
PWL S S 17 54 47.9 -1.1
baz=270
BATM Batumi 80.12 311 ⇑P P 17 44 50.0 +0.1
BATM Batumi 80.12 311 P P 17 44 49.9 +0.1
H24K Noodor Dome 80.18 25 IAmb IAmb 17 45 06.8
comp=Z,200nm,1.1s
H24K Noodor Dome 80.18 25 P P 17 44 51.8 +2.1
baz=270,SNR=161
H24K S S 17 54 52.6 +1.6
baz=270
F24K Squaw Lake 80.19 23 IAmb IAmb 17 44 53.3
comp=Z,212nm,0.8s
F24K Squaw Lake 80.19 23 P P 17 44 52.1 +2.3
baz=270,SNR=231
F24K S S 17 54 52.2 +1.2
baz=270
COLA College 80.19 26*c i*P P 17 44 50.1 +0.4
COLA pmax pmax
comp=Z,130nm,0.9s
COLA College 80.19 26 P P 17 44 50.5 +0.8
baz=270
COLA College 80.19 26 P P 17 44 50.5 +0.8
COLA College 80.19 26 P P 17 44 50.6 +0.8
CCB Clear Creek Bu 80.21 26 IAmb IAmb 17 44 51.9
comp=Z,341nm,1.4s
WAT6 Susitna Watana 80.25 28 P P 17 44 51.6 +1.3
baz=271,SNR=420
WAT6 S S 17 54 50.3 -1.7
baz=271
M23K Glacier View 80.27 29 P P 17 44 51.5 +1.2
baz=271,SNR=103
M23K S S 17 54 50.6 -1.3
baz=271
G24K Hadweenzic Riv 80.34 24 P P 17 44 52.8 +2.3
baz=270,SNR=36
G24K S S 17 54 54.5 +1.9
baz=270
POKR Poker Flat Res 80.37 25 P P 17 44 51.4 +0.7
baz=270
POKR S S 17 54 51.5 -1.3
baz=270
DHY Denali Highway 80.41 27 P P 17 44 52.1 +0.9
baz=271,SNR=145
DHY S S 17 54 52.2 -1.5
baz=271
P23K Montague Islan 80.46 31 P P 17 44 53.1 +1.8
baz=271,SNR=84
P23K S S 17 54 54.1 +0.2
baz=271
SCM Sheep Creek Mo 80.46 29 P P 17 44 53.0 +1.6
baz=271,SNR=180
SCM S S 17 54 53.5 -0.6
baz=271
HDA Harding Lake 80.58 26 IAmb IAmb 17 44 54.9
comp=Z,183nm,0.8s
HDA Harding Lake 80.58 26 P P 17 44 52.2 +0.3
baz=271,SNR=116
HDA S S 17 54 52.1 -3.0
baz=271
GLI Glacier Island 80.59 30 P P 17 44 53.5 +1.5
baz=272,SNR=58
GLI S S 17 54 55.0 -0.3
baz=272
ILAR Eielson Array 80.61 26 P P 17 44 51.7 -0.3
comp=Z,56nm,0.8s,baz=241,slow=4.8,SNR=234
ILAR PP PP 17 47 58.8 +3.0
comp=Z,14nm,1.0s,baz=273,slow=8.1,SNR=4.3
ILAR PKKP PKKPdf 18 03 20.8 -2.5
comp=Z,0.5nm,0.9s,baz=37,slow=1.9,SNR=4.0
ILAR PKKPbc PKKPbc 18 03 31.7 -2.9
comp=Z,5.9nm,0.9s,baz=34,slow=1.6,SNR=19
ILAR LR LR 18 18 08.6
comp=Z,419nm,22.0s,baz=258,slow=34
comp=Z,56nm,0.8s
ILAR Eielson Array 80.61 26 P P 17 44 51.4 -0.6
LABN Labinsk 80.66 314 *e*P P 17 44 52.2 -0.5
LABN *e**PP pP 17 45 04.1 -2.6
LABN *e*S S 17 54 55.1 -1.5
LABN pmax pmax
comp=Z,166nm,0.9s
LABN MLR MLR
comp=Z,3μm,22.0s
LABN MLR MLR
comp=E,3μm,22.0s
KLMR Klimovskoe 80.69 330 *e*P P 17 44 51.0 -1.5
KLMR pmax pmax
comp=Z,714nm,1.0s
KLMR MLR MLR
comp=Z,2μm,18.0s
D25K Kavik River 80.74 21 IAmb IAmb 17 44 55.8
comp=Z,332nm,1.1s
D25K Kavik River 80.74 21 P P 17 44 54.5 +1.8
baz=271,SNR=156
D25K S S 17 54 56.5 -0.2
baz=271
ERBR Yeremizino-Bor 80.76 315 *e*P P 17 44 52.7 -0.5
ERBR *e**PP pP 17 45 05.6 -1.7
ERBR *e*S S 17 54 55.1 -2.6
ERBR pmax pmax
comp=Z,413nm,0.9s
ERBR MLR MLR
comp=E,5μm,23.0s
ERBR MLR MLR
comp=Z,2μm,21.0s
G25K Bearman Lake 80.89 24 P P 17 44 55.9 +2.5
baz=271,SNR=40
FID Port Fidalgo 80.89 30 IAmb IAmb 17 44 56.4
comp=Z,351nm,1.2s
HIN Hinchinbrook I 80.90 30 IAmb IAmb 17 44 56.6
comp=Z,455nm,1.2s
M24K Tolsona, Glenn 80.99 28 IAmb IAmb 17 44 57.5
comp=Z,462nm,0.9s
M24K Tolsona, Glenn 80.99 28 P P 17 44 56.2 +2.0
baz=272,SNR=111
Q23K Middleton Isla 81.01 31 P P 17 44 56.3 +2.0
baz=272,SNR=7.9
F25K Christian Rive 81.05 23 P P 17 44 57.0 +2.6
baz=272,SNR=165
E25K Arctic Village 81.06 22 IAmb IAmb 17 44 58.0
comp=Z,284nm,1.1s
E25K Arctic Village 81.06 22 P P 17 44 56.8 +2.3
baz=272,SNR=129
K24K Donnelly Dome 81.11 27 IAmb IAmb 17 44 57.0
comp=Z,261nm,0.9s
K24K Donnelly Dome 81.11 27 P P 17 44 55.9 +1.1
baz=272,SNR=133
K24K S S 17 54 58.4 -2.4
baz=272
KOPT Kop Dagi 81.13 309 IAmb IAmb 17 45 00.5
comp=Z,217nm,1.0s
KLU Klutina 81.14 29 IAmb IAmb 17 44 58.0
comp=Z,346nm,1.4s
KLU Klutina 81.14 29 P P 17 44 56.7 +1.7
baz=272,SNR=109
KLU S S 17 55 01.1 0.0
baz=272
PRP Porcupine Dome 81.16 25 IAMs_20 IAMs_20 18 23 12.3
comp=Z,1μm,20.0s
PRP Porcupine Dome 81.16 25 P P 17 44 55.3 +0.1
baz=272,SNR=6.1
PRP S S 17 54 58.6 -2.8
baz=272
ADZR Andozero 81.17 333*c i*P P 17 44 54.8 -0.1
ADZR pmax pmax
comp=Z,348nm,1.1s
VSLR Vesyoloye 81.23 313*c i*P P 17 44 55.4 -0.4
VSLR pmax pmax
comp=Z,435nm,1.1s
C26K Camden Bay 81.24 20 P P 17 44 57.9 +2.7
baz=272,SNR=8.7
FYU Fort Yukon 81.24 24 IAmb IAmb 17 44 59.1
comp=Z,667nm,1.5s
VORD Divnogorie 81.25 320 *e*P P 17 44 52.8 -2.9
VORD pmax pmax
comp=Z,280nm,0.9s
J25K Salcha River, 81.26 26 P P 17 44 55.9 +0.3
baz=272,SNR=130
J25K S S 17 54 58.7 -3.6
baz=272
EYAK Cordova Ski Ar 81.26 30 IAmb IAmb 17 44 58.8
comp=Z,265nm,1.2s
EYAK Cordova Ski Ar 81.26 30 P P 17 44 57.4 +1.9
baz=273,SNR=49
EYAK S S 17 55 02.2 0.0
baz=273
VORR Voronezh 81.26 321 *e*P P 17 44 54.9 -0.8
VORR pmax pmax
comp=Z,600nm,0.9s
PAX Paxson 81.29 28 IAmb IAmb 17 44 58.7
comp=Z,281nm,1.1s
PAX Paxson 81.29 28 P P 17 44 57.4 +1.7
baz=273,SNR=222
PAX S S 17 55 00.9 -1.8
baz=273
VSR Storozhevoye 81.31 321*c i*P P 17 44 54.9 -1.1
VSR pmax pmax
comp=Z,323nm,0.8s
LPSR Galich'ya Gora 81.38 322*c i*P P 17 44 55.4 -0.9
LPSR pmax pmax
comp=Z,704nm,0.8s
SOC Sochi 81.45 313 *e*P P 17 44 54.9 -2.0
SOC *e*PPP PPP 17 49 50.3
SOC *e*S S 17 55 00.7 -4.2
SOC *e*SS SS 18 00 27.8 +6.0
SOC *e*SSS SSS 18 03 47.2
SOC pmax pmax
comp=Z,121nm,0.7s
SOC MLR MLR
comp=Z,1μm,23.0s
HARP HAARP 81.46 28 IAmb IAmb 17 45 14.5
comp=Z,449nm,1.1s
HARP HAARP 81.46 28 P P 17 44 58.6 +2.0
baz=273,SNR=43
HARP S S 17 55 04.9 +0.5
baz=273
RIDG Independent Ri 81.53 27 IAMs_20 IAMs_20 18 18 00.3
comp=Z,1μm,22.0s
RIDG Independent Ri 81.53 27 P P 17 44 58.3 +1.3
baz=273,SNR=325
RIDG S S 17 55 03.6 -1.5
baz=273
F26K Sheenjek River 81.61 23 P P 17 44 59.8 +2.5
baz=273,SNR=87
F26K S S 17 55 08.5 +2.7
baz=273
C27K Jago River 81.67 21 IAmb IAmb 17 45 01.1
comp=Z,248nm,1.1s
C27K Jago River 81.67 21 P P 17 44 59.9 +2.3
baz=273,SNR=63
C27K S S 17 55 06.7 +0.5
baz=273
N25K Chitina, Valde 81.76 29 P P 17 45 00.4 +2.0
baz=274,SNR=191
N25K S S 17 55 07.9 +0.2
baz=274
G26K Porcupine Rive 81.80 23 IAmb IAmb 17 45 02.0
comp=Z,231nm,1.1s
G26K Porcupine Rive 81.80 23 P P 17 45 00.9 +2.6
baz=274,SNR=128
G26K S S 17 55 10.3 +2.7
baz=274
BMRM Bremner River 81.80 30 IAmb IAmb 17 45 01.6
comp=Z,339nm,1.1s
BMRM IAMs_20 IAMs_20 18 18 15.7
comp=Z,2μm,22.0s
BMRM Bremner River 81.80 30 P P 17 45 00.2 +1.8
baz=274,SNR=94
BMRM S S 17 55 08.1 +0.1
baz=274
RAGM Ragged Mountai 81.80 30 IAmb IAmb 17 45 01.9
comp=Z,385nm,1.1s
ATD Arta Tunnel 81.91 280 P P 17 45 01.9 +2.0
SNR=10
ATD Arta Tunnel 81.91 280 P P 17 45 01.8 +1.8
MOS Moscow 81.94 325 *e*P P 17 44 58.5 -0.7
MOS *e* 17 45 10.5
MOS *e* 17 48 04.1
MOS *e*S S 17 55 07.3 -2.1
MOS pmax pmax
comp=Z,500nm,0.7s
MOS pmax pmax
comp=Z,484nm,0.8s
MOS MLR MLR
comp=E,2μm,23.0s
MOS MLR MLR
comp=Z,3μm,23.0s
KAIM Kayak Island 81.96 31 P P 17 45 01.7 +2.5
baz=274,SNR=48
KELT Kelkit 82.06 309 P P 17 45 01.2 +0.7
MENT Mentasta 82.09 28 IAmb IAmb 17 45 03.0
comp=Z,212nm,0.9s
GLB Gilahina Butte 82.15 29 IAmb IAmb 17 45 03.4
comp=Z,310nm,1.0s
GLB IAMs_20 IAMs_20 18 18 31.9
comp=Z,1μm,22.0s
I26K Coal Creek Min 82.16 25 IAmb IAmb 17 45 04.2
comp=Z,189nm,0.9s
I26K Coal Creek Min 82.16 25 P P 17 45 01.4 +1.2
baz=274
I26K S S 17 55 11.2 -0.2
baz=274
L26K Log Cabin Wild 82.25 27 IAmb IAmb 17 45 03.9
comp=Z,204nm,1.0s
L26K IAMs_20 IAMs_20 18 18 11.3
comp=Z,1μm,22.0s
L26K Log Cabin Wild 82.25 27 P P 17 45 02.5 +1.7
baz=274,SNR=38
L26K S S 17 55 13.3 +0.8
baz=274
BERG Berg Lake 82.28 30 IAmb IAmb 17 45 04.3
comp=Z,368nm,0.9s
VRDI Verde Repeater 82.34 29 IAmb IAmb 17 45 04.4
comp=Z,165nm,0.9s
VRDI IAMs_20 IAMs_20 18 18 45.9
comp=Z,1μm,22.0s
LVZ Lovozero 82.41 338*c i*P P 17 45 01.2 -0.3
LVZ pmax pmax
comp=Z,465nm,1.2s
LVZ Lovozero 82.41 338 P P 17 45 00.9 -0.5
LVZ IAmb IAmb 17 45 02.6
comp=Z,356nm,1.1s
LVZ Lovozero 82.41 338 P P 17 45 01.0 -0.5
comp=Z,4μmcomp=Z,369nm,1.2s
LVZ Lovozero 82.41 338 P P 17 45 01.4 -0.1
M26K Nabesna, AK 82.46 28 IAmb IAmb 17 45 05.1
comp=Z,176nm,1.0s
M26K IAMs_20 IAMs_20 18 16 54.0
comp=Z,1μm,22.0s
M26K Nabesna, AK 82.46 28 P P 17 45 03.7 +1.8
baz=275,SNR=106
M26K S S 17 55 15.4 +0.7
baz=275
CRQM Cirque 82.53 30 IAmb IAmb 17 45 05.6
comp=Z,252nm,0.9s
MCARA McCarthy VSAT 82.53 29 IAmb IAmb 17 45 14.7
comp=Z,168nm,0.9s
MCARA IAMs_20 IAMs_20 18 18 42.0
comp=Z,1μm,22.0s
MCARA McCarthy VSAT 82.53 29 P P 17 45 04.2 +2.0
baz=275,SNR=41
MCARA S S 17 55 16.0 +0.6
baz=275
E27K Coleen River 82.54 22 IAmb IAmb 17 45 05.1
comp=Z,154nm,0.9s
E27K Coleen River 82.54 22 P P 17 45 04.5 +2.3
baz=275,SNR=128
E27K S S 17 55 16.4 +1.1
baz=275
CRQE Cirque 82.56 30 P P 17 45 04.4 +1.8
baz=275,SNR=68
CRQE S S 17 55 15.3 -0.6
baz=275
OBN Obninsk 82.59 325 LR LR 18 23 58.1
comp=Z,2μm,21.2s,baz=86,slow=37
OBN Obninsk 82.59 325 ⇑P P 17 45 02.1 -0.5
OBN Obninsk 82.59 325*c i*P P 17 45 01.9 -0.7
OBN *i* *PP pP 17 45 13.9 -2.8
OBN *i* *SP sP 17 45 18.6 -3.5
OBN *e* 17 48 12.4
OBN *e*PPP PPP 17 50 03.7
OBN *i* S S 17 55 16.2 +0.1
OBN *e*SS SS 18 00 39.9 +1.8
OBN *e*SSS SSS 18 04 08.5
OBN pmax pmax
comp=Z,332nm,1.1s
OBN MLR MLR
comp=Z,3μm,24.0s
OBN Obninsk 82.59 325 P P 17 45 01.7 -0.9
OBN IAmb IAmb 17 45 02.9
comp=Z,472nm,1.2s
OBN Obninsk 82.59 325 P P 17 45 01.2 -1.4
comp=Z,4μmcomp=Z,308nm,1.1s
OBN Obninsk 82.59 325 P P 17 45 02.1 -0.5
OBN Obninsk 82.59 325 P P 17 45 01.9 -0.7
G27K Doyon Strip 82.64 24 P P 17 45 05.0 +2.2
baz=276,SNR=104
G27K S S 17 55 18.6 +2.1
baz=276
D27M Malcolm River 82.67 21 IAmb IAmb 17 45 06.3
comp=Z,189nm,0.8s
D27M Malcolm River 82.67 21 P P 17 45 05.2 +2.3
baz=276,SNR=196
D27M S S 17 55 16.6 0.0
baz=276
TGL Tana Glacier 82.68 30 IAmb IAmb 17 45 06.2
comp=Z,204nm,0.8s
ABPO Ambohimpanom 82.71 249 P P 17 45 02.9 -1.3
ABPO pmax pmax
comp=Z,89nm,1.0s
ABPO MLR MLR
comp=Z,2μm,22.0s
ABPO Ambohimpanom 82.71 249 P P 17 45 02.9 -1.3
ABPO Ambohimpanom 82.71 249 IAMs_20 IAMs_20 18 16 30.8
comp=Z,1μm,22.0s
ABPO Ambohimpanom 82.71 249 P P 17 45 03.5 -0.7
K27K Chicken 82.73 26 IAMs_20 IAMs_20 18 19 30.6
comp=Z,1μm,22.0s
H27K Steamboat Moun 82.75 24 P P 17 45 05.8 +2.4
baz=276,SNR=146
H27K S S 17 55 20.1 +2.6
baz=276
I27K Kandik River 82.78 25 IAMs_20 IAMs_20 18 24 13.1
comp=Z,919nm,20.0s
I27K Kandik River 82.78 25 P P 17 45 06.0 +2.5
baz=276,SNR=479
I27K S S 17 55 18.6 +0.8
baz=276
ARPR Arapgir-MALATY 82.87 308 IAMs_20 IAMs_20 18 26 50.6
comp=Z,2μm,22.0s
ARPR Arapgir-MALATY 82.87 308 P P 17 45 05.8 +1.1
APA Apatity 82.91 337 *e*P P 17 45 02.7 -1.4
APA *e* 17 48 15.5
APA *e*S S 17 55 14.5 -4.5
L27K Beaver Creek, 82.94 27 IAmb IAmb 17 45 07.4
comp=Z,151nm,0.9s
L27K IAMs_20 IAMs_20 18 25 50.5
comp=Z,891nm,19.0s
L27K Beaver Creek, 82.94 27 P P 17 45 06.7 +2.3
baz=276,SNR=199
L27K S S 17 55 20.1 +0.6
baz=276

BCAR	Beaver Creek A	82.95	27	P		P		17 45 06.0	+1.5	
ANN	Anapa	82.98	314	*d* iP		P		17 45 03.9	-1.0	
ANN				*e**PP		pP		17 45 16.3	-2.7	
ANN				*e*S		S		17 55 18.0	-2.5	
ANN				pmax	pmax					
	comp=Z,481nm,1.0s									
ANN				MLR	MLR					
	comp=E,2µm,22.0s									
ANN				MLR	MLR					
	comp=Z,2µm,21.0s									
ANN				MLR	MLR					
	comp=N,920nm,22.0s									
M27K	Edge Creek, AK	82.98	28	IAmb	IAmb			17 45 08.1		
	comp=Z,147nm,1.0s									
M27K	Edge Creek, AK	82.98	28	P		P		17 45 06.9	+2.2	
	baz=276,SNR=126									
M27K				S		S		17 55 20.5	+0.3	
	baz=276									
GRNC	Granite Creek	83.21	30	IAMs_20	IAMs_20			18 18 32.9		
	comp=Z,1µm,22.0s									
F28M	Old Crow	83.25	23	IAmb	IAmb			17 45 08.6		
	comp=Z,210nm,0.8s									
F28M	Old Crow	83.25	23	P		P		17 45 08.1	+2.2	
	baz=277,SNR=141									
F28M				S		S		17 55 23.7	+1.2	
	baz=277									
E28M	Babbage River	83.25	22	IAmb	IAmb			17 45 09.4		
	comp=Z,559nm,1.5s									
E28M	Babbage River	83.25	22	P		P		17 45 08.0	+2.1	
	baz=277,SNR=149									
E28M				S		S		17 55 23.3	+0.8	
	baz=277									
D28M	Stokes Point	83.44	21	P		P		17 45 08.9	+2.2	
	baz=278									
D28M				S		S		17 55 25.3	+1.0	
	baz=278									
BVCY	Beaver Creek	83.45	28	P		P		17 45 09.3	+2.3	
	baz=277,SNR=152									
BVCY				S		S		17 55 26.4	+1.7	
	baz=277									
I28M	Miner Creek	83.49	25	IAMs_20	IAMs_20			18 24 34.9		
	comp=Z,922nm,19.0s									
I28M	Miner Creek	83.49	25	P		P		17 45 09.7	+2.5	
	baz=277,SNR=916									
I28M				S		S		17 55 26.2	+1.0	
	baz=277									
LOGN	Logan Glacier	83.57	30	IAMs_20	IAMs_20			18 18 34.3		
	comp=Z,1µm,22.0s									
VOI	Vohitsoka	83.71	247	P		P		17 45 08.5	-0.7	
	SNR=7.3									
VOI	Vohitsoka	83.71	247	IAmb	IAmb			17 45 09.2		
	comp=Z,147nm,1.2s									
VOI	Vohitsoka	83.71	247	P		P		17 45 08.3	-0.9	
YUK3	Moose Creek	83.71	29	P		P		17 45 10.8	+2.2	
	baz=277,SNR=140									
YUK3				S		S		17 55 28.4	+0.6	
	baz=277									
E29M	Blow River	83.88	22	IAmb	IAmb			17 45 11.5		
	comp=Z,190nm,1.2s									
E29M	Blow River	83.88	22	P		P		17 45 10.8	+1.7	
	baz=279,SNR=58									
E29M				S		SKSac		17 55 25.5	-2.4	
	baz=279									
DAWY	Dawson	83.90	26	P		P		17 45 11.4	+2.1	
	baz=278,SNR=154									
DAWY				S		SKSac		17 55 30.5	+2.2	
	baz=278									
GAZ	Gaziantep	83.96	307	IAmb	IAmb			17 45 12.1		
	comp=Z,265nm,0.9s									
O28M	Mount Upton	83.97	30	IAMs_20	IAMs_20			18 18 46.0		
	comp=Z,1µm,22.0s									
O28M	Mount Upton	83.97	30	P		P		17 45 12.5	+2.5	
	baz=278,SNR=227									
O28M				S		SKSac		17 55 32.1	+2.7	
	baz=278									
HOPEN	Hopen	83.99	347	*e*P		P		17 45 09.9	+0.4	
HOPEN				IAmb	IAmb			17 45 10.7		
	comp=Z,323nm,1.3s									
HOPEN				*e*SKSac		SKSac		17 55 28.3	0.0	
HOPEN				IAMs_20	IAMs_20			18 23 31.8		
	comp=Z,3µm,23.0s									
VADS	Vadso	84.02	340	*e*P		P		17 45 09.4	-0.3	
VADS				IAmb	IAmb			17 45 10.6		
	comp=Z,334nm,1.2s									
VADS				*e*SKSac		SKSac		17 55 29.1	+0.4	
VADS				IAMs_20	IAMs_20			18 27 59.9		
	comp=Z,1µm,21.6s									
H29M	Whitestone	84.02	24	P		P		17 45 11.9	+2.0	
	baz=278,SNR=409									
H29M				S		SKSac		17 55 31.5	+2.6	
	baz=278									
G29M	Pine Creek	84.06	23	P		P		17 45 12.1	+2.0	
	baz=279,SNR=631									
YUK8	Steele Glacier	84.11	29	P		P		17 45 13.2	+2.5	
	baz=278,SNR=145									
YUK8				S		SKSac		17 55 34.0	+3.8	
	baz=278									
FOMA	Nahampoana Res	84.20	244	P		P		17 45 11.4	-0.1	
J29N	Klondike Camp	84.35	26	IAMs_20	IAMs_20			18 25 29.8		
	comp=Z,930nm,20.0s									
J29N	Klondike Camp	84.35	26	P		P		17 45 14.2	+2.6	
	baz=279,SNR=25									
BRWY	Burwash Landin	84.44	29	P		P		17 45 14.7	+2.6	
	baz=278,SNR=110									
BRWY				S		SKSac		17 55 37.1	+5.2	
	baz=278									
M29M	Somme Creek	84.55	28	IAmb	IAmb			17 45 16.6		
	comp=Z,298nm,0.9s									
M29M	Somme Creek	84.55	28	P		P		17 45 15.4	+2.7	
	baz=279,SNR=352									
M29M				S		SKSac		17 55 37.9	+5.2	
	baz=279									
ANDN	Andirin	84.59	307	P		P		17 45 14.1	+0.7	
L29M	L29M	84.60	27	P		P		17 45 15.7	+2.8	
	baz=279,SNR=397									
L29M				S		SKSac		17 55 38.7	+5.8	
	baz=279									
YUK4	Talbot Arm	84.63	29	P		P		17 45 15.7	+2.4	
	baz=279,SNR=58									
EPYK	Eagle Plains	84.66	24	P		P		17 45 14.6	+1.5	
	baz=280,SNR=368									
EPYK				S		SKSac		17 55 36.7	+3.6	
	baz=280									
G30M	tAoh Zraii Nji	84.75	23	P		P		17 45 14.6	+1.1	
	baz=280,SNR=151									
K29M	Barlow Dome	84.75	26	IAmb	IAmb			17 45 17.2		
	comp=Z,219nm,1.0s									
K29M				IAMs_20	IAMs_20			18 20 40.4		
	comp=Z,962nm,22.0s									
K29M	Barlow Dome	84.75	26	P		P		17 45 15.9	+2.2	
	baz=280,SNR=228									
K29M				S		SKSac		17 55 39.9	+5.9	
	baz=280									
F30M	Barrier River	84.80	22	P		P		17 45 15.4	+1.7	
	baz=281,SNR=237									
ASF	Jabal al Asfar	84.82	302	PKKPbc	PKKPbc			18 03 23.2	-0.6	
	comp=Z,3.1nm,0.7s,baz=121,slow=18,SNR=6.0									
ASF				LR	LR			18 27 44.4		
	comp=Z,1µm,21.9s,baz=26,slow=39									
BNN	Bunyan	84.83	308	IAmb	IAmb			17 45 16.1		
	comp=Z,262nm,1.0s									
O29M	Mount Kennedy	84.83	30	IAmb	IAmb			17 45 30.5		
	comp=Z,276nm,1.4s									
O29M				IAMs_20	IAMs_20			18 17 48.7		
	comp=Z,1µm,22.0s									
O29M	Mount Kennedy	84.83	30	P		P		17 45 16.6	+2.4	
	baz=279,SNR=31									
O29M				S		SKSac		17 55 41.3	+6.7	
	baz=279									
YUK6	Outpost Mounta	84.83	29	P		P		17 45 16.8	+2.5	
	baz=279,SNR=39									
MSF	Maaselka	84.86	336	P		P		17 45 13.6	-0.5	
MSF	Maaselka	84.86	336	P		P		17 45 13.6	-0.5	
KEV	Kevo	84.88	340	P		P		17 45 12.7	-1.4	
KEV				pmax	pmax					
	comp=Z,142nm,1.0s									
KEV				MLR	MLR					
	comp=Z,2µm,21.0s									
KEV	Kevo	84.88	340	P		P		17 45 12.7	-1.4	
KEV				IAmb	IAmb			17 45 15.1		
	comp=Z,142nm,1.0s									
KEV	Kevo	84.88	340	P		P		17 45 13.7	-0.4	
I30M	Mount Dempster	85.00	25	IAmb	IAmb			17 45 17.8		
	comp=Z,208nm,0.8s									
I30M	Mount Dempster	85.00	25	P		P		17 45 16.6	+1.6	
	baz=280,SNR=319									
I30M				S		SKSac		17 55 40.1	+4.6	
	baz=280									
J30M	Hart River	85.14	25	IAmb	IAmb			17 45 32.3		
	comp=Z,325nm,1.3s									
J30M				IAMs_20	IAMs_20			18 21 43.5		
	comp=Z,943nm,22.0s									
J30M	Hart River	85.14	25	P		P		17 45 17.6	+2.0	
	baz=280,SNR=173									
J30M				S		SKSac		17 55 43.6	+7.2	
	baz=280									
HYT	Haines Junctio	85.26	29	IAmb	IAmb			17 45 19.8		
	comp=Z,156nm,0.9s									
HYT	Haines Junctio	85.26	29	P		P		17 45 18.6	+2.2	
	baz=280,SNR=142									
HYT				S		S		17 55 45.3	+2.2	
	baz=280									
M30M	Minto, Yukon	85.29	27	IAmb	IAmb			17 45 20.1		
	comp=Z,201nm,1.0s									
M30M	Minto, Yukon	85.29	27	P		P		17 45 18.6	+2.3	
	baz=280,SNR=178									
M30M				S		S		17 55 45.6	+2.5	
	baz=280									
SIM	Simferopol'	85.31	315	*e*P		P		17 45 16.0	-0.7	
SIM				*e*S		SKSac		17 55 39.0	+1.0	
SIM				pmax	pmax					
	comp=Z,769nm,0.9s									
SPA0	Spitsbergen Ar	85.31	349	*e*P		P		17 45 16.2	0.0	
SPA0				IAmb	IAmb			17 45 17.0		
	comp=Z,404nm,1.1s									
SPA0				*e*PP		PP		17 48 34.3	+0.2	
SPA0				*e*SKSac		SKSac		17 55 36.9	0.0	
SPA0				IAMs_20	IAMs_20			18 28 01.6		
	comp=Z,2µm,22.1s									
SPITS	Spitsbergen Ar	85.31	349	P		P		17 45 15.9	-0.2	
	comp=Z,196nm,0.8s,baz=118,slow=14,SNR=117									
SPITS				PKKPbc		PKKPdf		18 03 19.6	+4.1	
	comp=Z,4.7nm,0.6s,baz=197,slow=1.7,SNR=5.0									
SPITS				LR	LR			18 29 31.0		
	comp=Z,1µm,19.1s,baz=47,slow=40									
	comp=Z,196nm,0.8s									
P29M	Windy Craggy	85.35	30	IAMs_20	IAMs_20			18 18 38.6		
	comp=Z,1µm,22.0s									
P29M	Windy Craggy	85.35	30	P		P		17 45 19.3	+2.6	
	baz=280,SNR=49									
P29M				S		S		17 55 46.2	+2.4	
	baz=280									
PUL	Pulkovo	85.35	330	*c**eP		P		17 45 16.5	-0.1	
PUL				pmax	pmax					
	comp=Z,169nm,0.8s									
N30M	Aishikik Lake	85.35	29	IAmb	IAmb			17 45 33.8		
	comp=Z,425nm,1.4s									
N30M				IAMs_20	IAMs_20			18 19 37.5		
	comp=Z,1µm,22.0s									
N30M	Aishikik Lake	85.35	29	P		P		17 45 19.0	+2.3	
	baz=280,SNR=122									
N30M				S		S		17 55 46.6	+2.8	
	baz=280									
ARA0	ARCESS Array S	85.44	340	*e*P		P		17 45 16.3	-0.7	
ARA0				IAmb	IAmb			17 45 18.4		
	comp=Z,240nm,1.0s									
ARA0				*e*PP		PP		17 48 35.1	-0.2	
ARA0				*e*SKSac		SKSac		17 55 37.9	0.0	
ARA0				IAMs_20	IAMs_20			18 28 13.2		
	comp=Z,2µm,18.3s									
ARA0				IAMs_20	IAMs_20			18 28 13.2		
	comp=Z,2µm,18.3s									
ARCES	ARCESS Array B	85.44	340	P		P		17 45 16.3	-0.6	
	comp=Z,193nm,0.9s,baz=71,slow=5.3,SNR=198									
ARCES				PKKiKP		PKiKP		17 50 27.5	+0.4	
	comp=Z,2.0nm,0.6s,baz=111,slow=0.9,SNR=5.4									
ARCES				PKKPbc		PKKPbc		18 03 20.8	-2.8	
	comp=Z,2.0nm,0.7s,baz=251,slow=3.3,SNR=6.7									
ARCES				LR	LR			18 28 21.0		
	comp=Z,1µm,19.7s,baz=83,slow=39									
	comp=Z,193nm,0.9s									
ARCES	ARCESS Array B	85.44	340	P		P		17 45 15.8	-1.1	
ARCES				IAmb	IAmb			17 45 18.7		
	comp=Z,225nm,1.0s									
INK	Inuvik	85.49	22	LR	LR			18 27 56.2		
	comp=Z,348nm,18.3s,baz=274,slow=39									
INK	Inuvik	85.49	22	P		P		17 45 17.5	+0.4	
INK	Inuvik	85.49	22	IAmb	IAmb			17 45 19.5		
	comp=Z,208nm,1.0s									
INK	Inuvik	85.49	22	P		P		17 45 18.4	+1.3	
	baz=283,SNR=153									
INK				S		S		17 55 46.0	+1.3	
	baz=283									
INK	Inuvik	85.49	22	P		P		17 45 18.3	+1.2	
G31M	Satah River	85.51	23	P		P		17 45 18.3	+1.0	
	baz=282,SNR=226									
G31M				S		S		17 55 47.0	+2.0	
	baz=282									
SGF	Sodankyl	85.54	338	P		P		17 45 16.7	-0.7	
SGF	Sodankyl	85.54	338	P		P		17 45 16.7	-0.7	
F31M	Tsiigehtchic	85.60	22	IAmb	IAmb			17 45 19.4		
	comp=Z,203nm,0.8s									
F31M	Tsiigehtchic	85.60	22	P		P		17 45 18.7	+1.0	
	baz=283,SNR=52									
F31M				S		S		17 55 47.3	+1.5	
	baz=283									
P30M	Million Dollar	85.65	30	P		P		17 45 20.4	+2.2	
	baz=280									
P30M				S		S		17 55 49.0	+2.2	
	baz=280									
H31M	Peel River	85.72	24	IAmb	IAmb			17 45 21.0		
	comp=Z,240nm,1.1s									
H31M	Peel River	85.72	24	P		P		17 45 19.4	+1.0	
	baz=282,SNR=154									
H31M				S		S		17 55 48.6	+1.5	
	baz=282									
BZK	Bozkurt	85.80	312	⇑P		P		17 45 19.4	+0.2	
BZK	Bozkurt	85.80	312	IAmb	IAmb			17 45 20.1		
	comp=Z,197nm,0.8s									
BZK	Bozkurt	85.80	312	P		P		17 45 19.0	-0.2	
	comp=Z,4µmcomp=Z,316nm,0.9s									
KBS	Kingsbay	85.83	350	P		P		17 45 18.2	-0.5	
KBS				pmax	pmax					
	comp=Z,97nm,0.8s									
KBS				MLR	MLR					
	comp=Z,2µm,19.0s									
KBS	Kingsbay	85.83	350	*e*P		P		17 45 18.2	-0.5	
KBS				IAmb	IAmb			17 45 19.2		
	comp=Z,97nm,0.8s									
KBS				*e*PP		PP		17 48 38.2	0.0	
KBS				IAMs_20	IAMs_20			18 24 14.5		
	comp=Z,2µm,24.0s									
KBS	Kingsbay	85.83	350	P		P		17 45 18.2	-0.5	
KBS				IAmb	IAmb			17 45 19.4		
	comp=Z,97nm,0.8s									
KBS	Kingsbay	85.83	350	P		P		17 45 18.5	-0.2	
KBS	Kingsbay	85.83	350	*i* P		P		17 45 18.4	-0.2	
H04N2	CROZET ISLANDS	85.86	222	P		P		17 45 20.4	+1.4	
H04N1	CROZET ISLANDS	85.87	222	P		P		17 45 20.4	+1.3	
H04N3	CROZET ISLANDS	85.87	222	P		P		17 45 20.1	+0.9	
HSPB	Hornsund (broa	85.92	348	*e*P		P		17 45 19.6	+0.5	
HSPB	Hornsund (broa	85.92	348	P		P		17 45 19.3	+0.2	
O30N	Mendenhall	85.95	29	P		P		17 45 21.6	+2.0	
	baz=281,SNR=57									
O30N				S		S		17 55 51.8	+2.1	
	baz=281									
N31M	Braeburn, Yuko	85.97	28	IAmb	IAmb			17 45 24.7		
	comp=Z,251nm,1.0s									
N31M				IAMs_20	IAMs_20			18 20 28.7		
	comp=Z,1µm,22.0s									
N31M	Braeburn, Yuko	85.97	28	P		P		17 45 21.9	+2.2	
	baz=281,SNR=108									
N31M				S		S		17 55 52.3	+2.5	
	baz=281									
H04S1	CROZET ISLANDS	85.99	222	P		P		17 45 20.5	+0.7	
BJO1	Bjornoya	86.00	345	*e*PP		PP		17 48 39.8	+0.1	
BJO1				IAMs_20	IAMs_20			18 31 43.6		
	comp=Z,2µm,21.0s									
H04S3	CROZET ISLANDS	86.00	222	P		P		17 45 19.4	-0.4	
H04S2	CROZET ISLANDS	86.00	222	P		P		17 45 20.3	+0.5	
	SNR=3.2									
MMLI	Mount Malkishu	86.02	302	P		P		17 45 21.7	+1.1	
UJAP	Al Uja	86.05	302	P		P		17 45 21.3	+0.7	
GHAJ	Ghor Haditha	86.06	301	IAmb	IAmb			17 45 22.6		
	comp=Z,224nm,0.9s									
GHAJ				IAMs_20	IAMs_20			18 31 02.5		
	comp=Z,912nm,20.0s									
GHAJ	Ghor Haditha	86.06	301	P		P		17 45 21.4	+0.7	
PLBC	Pleasant Camp	86.07	31	P		P		17 45 22.1	+1.9	
	baz=281,SNR=21									
PLBC				S		S		17 55 53.0	+2.3	
	baz=281									
MSBI	Mazada	86.23	301	P		P		17 45 22.1	+0.5	
KIRS	Kirsehir-Merke	86.28	309	⇑P		P		17 45 21.4	-0.4	
OUL	Oulu	86.32	335	P		P		17 45 20.6	-0.7	
OUL	Oulu	86.32	335	P		P		17 45 20.6	-0.7	
FURI	Furi	86.33	278	P		P		17 45 22.1	-0.7	
FURI	Furi	86.33	278	P		P		17 45 25.4	+2.5	
FURI	Furi	86.33	278	P		P		17 45 25.7	+2.8	
FURI				sP		pP		17 45 39.0	+2.0	
KTK1	Kautokeino	86.36	339	*e*P		P		17 45 20.2	-1.2	
KTK1				IAmb	IAmb			17 45 22.2		
	comp=Z,80nm,1.0s									
KTK1				*e*PP		PP		17 48 42.9	+0.2	
KTK1				*e*SKSac		SKSac		17 55 44.7	+1.1	
KTK1				IAMs_20	IAMs_20			18 28 39.9		
	comp=Z,1µm,18.6s									
BR131	Keskin Array S	86.40	309	*c i*P		P		17 45 21.4	-1.0	
BR131	Keskin Array S	86.40	309	P		P		17 45 21.8	-0.7	
	SNR=31									
BRTR	Keskin Array B	86.40	309	P		P		17 45 21.5	-1.0	
	comp=Z,24nm,0.9s,baz=106,slow=4.4,SNR=112									
BRTR				PP		PP		17 48 46.4	+2.3	
	comp=Z,14nm,1.0s,baz=101,slow=6.4,SNR=6.4									
BRTR				PKKPbc		PKKPbc		18 03 20.4	0.0	
	comp=Z,3.4nm,1.0s,baz=192,slow=4.9,SNR=9.5									
BRTR				PKPPKP		P'P'df		18 11 25.6	-2.7	
	comp=Z,0.8nm,0.9s,baz=219,slow=5.7,SNR=4.2									
BRTR				LR	LR			18 29 07.9		
	comp=Z,876nm,21.6s,baz=68,slow=39									
	comp=Z,24nm,0.9s									
BRTR	Keskin Array B	86.40	309	P		P		17 45 21.3	-1.2	
BR104	Keskin Array S	86.40	309	P		P		17 45 21.6	-0.9	
	comp=Z,277nmcomp=Z,41nm,1.0s									
BR106	Keskin Array S	86.42	309	P		P		17 45 21.3	-1.2	
	comp=Z,246nmcomp=Z,33nm,0.8s									
BR105	Keskin Array S	86.42	309	P		P		17 45 21.6	-1.0	
	comp=Z,293nmcomp=Z,36nm,0.9s									
S31K	Pelican	86.42	32	IAmb	IAmb			17 45 38.1		
	comp=Z,110nm,1.2s									
S31K	Pelican	86.42	32	P		P		17 45 23.9	+1.9	
	baz=281,SNR=12									
S31K				S		S		17 55 55.3	+1.1	
	baz=281									
M31M	Drury Creek, Y	86.46	28	IAmb	IAmb			17 45 38.6		
	comp=Z,210nm,1.5s									
M31M	Drury Creek, Y	86.46	28	P		P		17 45 23.6	+1.5	
	baz=282,SNR=50									
CY604	RAF Akrotiri,	86.50	304	P		P		17 45 22.6	+0.1	
WHY	Whitehorse	86.56	29	P		P		17 45 24.7	+1.9	
	baz=282,SNR=76									
WHY				S		S		17 55 58.2	+2.4	
	baz=282									
SKAG	Skagway	86.59	30	P		P		17 45 24.7	+1.9	
	baz=282,SNR=8.3									
R31K	City Hall, Gus	86.59	31	P		P		17 45 24.2	+1.5	
	baz=282									
CIDE	Kastamonu/Cide	86.59	312	⇑P		P		17 45 22.5	-0.6	
HRFI	Mount Harif	86.69	300	P		P		17 45 24.4	+0.5	
EIL	Elat	86.81	299	LR	LR			18 30 27.1		
	comp=Z,1µm,20.9s,baz=89,slow=40									
EIL	Elat	86.81	299	P		P		17 45 25.1	+0.5	
BESE	Bessie Mountai	87.01	31	IAmb	IAmb			17 45 31.2		
	comp=Z,91nm,1.0s									
KKUL	Kenya-Kulu	87.04	309	P		P		17 45 25.4	-0.2	
FINES	FINESS Array B	87.07	332	P		P		17 45 24.3	-0.7	
	comp=Z,60nm,0.6s,baz=72,slow=4.9,SNR=493									
FINES				PKiKP		PKiKP		17 50 30.0	+0.1	
	comp=Z,5.1nm,0.7s,baz=106,slow=4.8,SNR=3.7									
FINES				PKKPbc		PKKPbc		18 03 16.6	-2.8	
	comp=Z,4.1nm,0.8s,baz=191,slow=1.9,SNR=12									
FINES				LR	LR			18 27 28.1		
	comp=Z,1µm,21.4s,baz=80,slow=38									
	comp=Z,60nm,0.6s									
FINES	FINESS Array B	87.07	332	P		P		17 45 24.2	-0.8	
SIT	Sitka	87.08	33	P		P		17 45 27.0	+1.8	
SIT	Sitka	87.08	33	IAmb	IAmb			17 45 29.1		
	comp=Z,147nm,1.2s									
SIT	Sitka	87.08	33	P		P		17 45 27.0	+1.8	
	baz=282,SNR=6.0									
KZIT	Kziot	87.10	301	P		P		17 45 26.1	+0.2	
PPT	Papeete	87.11	108	LR	LR			18 16 17.7		
	comp=Z,980nm,21.7s,baz=272,slow=30									
A36M	Sachs Harbour	87.16	17	IAmb	IAmb			17 45 29.3		
	comp=Z,193nm,0.8s									
A36M	Sachs Harbour	87.16	17	P		P		17 45 26.2	+0.9	
	baz=290,SNR=26									
JETT	Jettan, Norway	87.16	340	*e*P		P		17 45 24.7	-0.8	
JETT				IAmb	IAmb			17 45 25.4		
	comp=Z,222nm,1.2s									
JETT				IAMs_20	IAMs_20			18 31 43.4		
	comp=Z,2µm,20.0s									
R32K	Eaglecrest	87.25	31	IAmb	IAmb			17 45 32.4		
	comp=Z,83nm,0.9s									
R32K	Eaglecrest	87.25	31	P		P		17 45 28.0	+2.0	
	baz=282,SNR=41									
R32K				S		S		17 56 05.2	+3.0	
	baz=282									
N32M	Quiet Lake	87.31	29	P		P		17 45 28.0	+1.7	
	baz=284									
N32M				S		S		17 56 05.1	+2.3	
	baz=284									
P32M	Atlin	87.36	30	P		P		17 45 28.3	+1.7	
	baz=283,SNR=15									
P32M				S		S		17 56 06.9	+3.5	
	baz=283									
CSS	Mathiatis	87.37	305	IAmb	IAmb			17 45 31.0		
	comp=Z,112nm,0.9s									
CSS	Mathiatis	87.37	305	P		P		17 45 26.1	-1.0	
	comp=Z,2µmcomp=Z,110nm,0.8s									
CSS	Mathiatis	87.37	305	P		P		17 45 26.9	-0.2	
S32K	Killisnoo	87.39	32	P		P		17 45 28.2	+1.5	
	baz=282,SNR=12									
S32K				S		S		17 56 06.3	+2.8	
	baz=282									
VSU	Vasula	87.42	329	*c i*P		P		17

MNK *i* LQ LQ 18 19 30.3
MNK *i* LR LR 18 24 39.3
MNK *i* LRM MLR 18 26 46.6
comp=N,2µm,22.8s
MNK *i* LRM MLR 18 26 52.9
comp=Z,3µm,22.3s
MNK *i* LRM MLR 18 26 56.7
comp=E,1µm,21.7s
MNK Minsk 87.65 325 *i* P **P** **17 45 28.2 +0.3**
MNK *i* *PP **pP** **17 45 40.5 -1.6**
MNK *i* 17 48 53.5
MNK *i* PPP PPP 17 50 48.7
MNK *i* S **SKSac** **17 55 52.1 +0.1**
MNK *i* *SS **ScS** **17 56 13.8 +1.0**
MNK *i* SS **SS** **18 01 54.7 +2.1**
MNK *i* SSS SSS 18 05 27.4
MNK pmax pmax
comp=Z,196nm,0.8s
MNK pmax pmax
comp=E,35nm,0.9s
MNK pmax pmax
comp=N,70nm,0.8s
MNK MLR MLR
comp=N,2µm,23.0s
MNK MLR MLR
comp=Z,3µm,22.0s
MNK MLR MLR
comp=E,1µm,22.0s
P33M Teslin, Yukon 87.66 29 IAMs_20 IAMs_20 18 19 32.5
comp=Z,1µm,22.0s
P33M Teslin, Yukon 87.66 29 P **P** **17 45 29.6 +1.6**
baz=284,SNR=41
P33M S **S** **17 56 09.4 +3.1**
baz=284
MMPY Sheldon Lake, 87.78 27 P **P** **17 45 30.3 +1.8**
baz=285,SNR=64
MMPY S **S** **17 56 09.1 +1.8**
baz=285
NOR Nord 87.89 355 P **P** **17 45 28.6 -0.1**
NOR Nord 87.89 355 *i* P **P** **17 45 28.5 -0.1**
NOR IAmb IAmb 17 45 30.5
comp=Z,105nm,1.2s
BAL3X Bal3x, Balta 87.90 318 P **P** **17 45 27.8 -1.5**
MDUB Mudurnu 88.13 311 IAmb IAmb 17 45 31.7
comp=Z,73nm,0.9s
Q32M Nakina River 88.23 31 IAMs_20 IAMs_20 18 21 23.8
comp=Z,907nm,22.0s
Q32M Nakina River 88.23 31 P **P** **17 45 32.9 +1.9**
baz=284,SNR=18
Q32M S **S** **17 56 14.8 +2.7**
baz=284
SAHE Sakarya_HENDEK 88.32 311 ⇑P **P** **17 45 30.3 -1.2**
T33K Petersburg 88.40 33 P **P** **17 45 33.1 +1.7**
baz=284
C36M Paulatuk 88.47 20 P **P** **17 45 32.3 +0.7**
baz=292,SNR=53
C36M S **S** **17 56 12.6 -0.7**
baz=292
MAW Mawson 88.48 200 P **P** **17 45 32.1 +0.6**
comp=Z,111nm,0.8s,baz=65,slow=5.0,SNR=329
MAW PKKPbc **PKKPdf** **18 03 12.7 +1.4**
comp=Z,5.2nm,0.9s,baz=219,slow=4.6,SNR=7.6
MAW PKPPKP 18 11 18.1
comp=Z,5.2nm,0.9s,baz=271,slow=8.5,SNR=9.9
MAW LR LR 18 20 03.7
comp=Z,683nm,21.7s,baz=59,slow=32
comp=Z,111nm,0.8s
MAW Mawson 88.48 200 P **P** **17 45 31.8 +0.3**
U33K Whale Pass 88.48 33 P **P** **17 45 33.7 +1.8**
baz=284,SNR=8.0
U33K S **S** **17 56 15.8 +1.9**
baz=284
MI28 Mi28,Pidlybu 88.53 321 P **P** **17 45 30.1 -2.2**
ALE Alert 88.57 1 P **P** **17 45 32.9 +1.0**
VNDA Vanda 88.62 173 P **P** **17 45 32.8 +0.7**
comp=Z,150nm,0.8s,baz=318,slow=5.8,SNR=900
VNDA PKKPbc **PKKPbc** **18 03 14.7 -2.0**
comp=Z,9.6nm,0.8s,baz=246,slow=3.0,SNR=6.7
VNDA PKPPKP 18 11 18.2
comp=Z,2.5nm,0.9s,baz=234,slow=1.9,SNR=4.8
VNDA LR LR 18 26 56.9
comp=Z,598nm,19.5s,baz=349,slow=37
comp=Z,150nm,0.8s
VNDA Vanda 88.62 173 IAmb IAmb 17 45 34.0
comp=Z,166nm,0.8s
VNDA Vanda 88.62 173 P **P** **17 45 33.0 +0.9**
CRAG Craig 88.63 34 P **P** **17 45 33.7 +1.1**
baz=284
CRAG S **S** **17 56 16.9 +1.5**
baz=284
KIBK Kibwezi 88.65 267 P **P** **17 45 34.1 +0.4**
SNR=11
KIBK Kibwezi 88.65 267 IAmb IAmb 17 45 35.4
comp=Z,123nm,1.1s
KIBK Kibwezi 88.65 267 P **P** **17 45 34.2 +0.5**
SORM Soroca 88.68 318 ⇑P **P** **17 45 32.1 -1.0**
SORM Soroca 88.68 318 P **P** **17 45 32.0 -1.0**
SORM Soroca 88.68 318 P **P** **17 45 31.5 -1.5**
comp=Z,2µmcomp=Z,130nm,0.9s
LUBAR Lubar, Ukraine 88.69 320 P **P** **17 45 31.8 -1.2**
WRAK Wrangell Islan 88.82 33 IAmb IAmb 17 45 36.3
comp=Z,60nm,0.8s
WRAK Wrangell Islan 88.82 33 P **P** **17 45 35.2 +1.7**
baz=284,SNR=24
WRAK S **S** **17 56 18.6 +1.3**
baz=284
MTSE Matsula 88.84 329 P **P** **17 45 32.9 -0.6**
TLCR 88.97 315 ⇑P **P** **17 45 33.9 -0.6**
TLCR 88.97 315 P **P** **17 45 33.8 -0.6**
JURR Jurilovca 89.01 315 ⇑P **P** **17 45 34.1 -0.6**
S34M Telegraph Cree 89.08 31 P **P** **17 45 36.7 +2.0**
baz=285
KMBO Kilima Mbogo 89.25 269 P **P** **17 45 37.0 +0.3**
baz=62,slow=6.4
TPGR Topolog 89.31 315 ⇑P **P** **17 45 35.3 -0.8**
VLDR Vladesti 89.34 316 ⇑P **P** **17 45 35.3 -0.8**
VASR Vaslui 89.37 317 ⇓P **P** **17 45 35.9 -0.4**
TIRR Tirgusor 89.40 315 ⇑P **P** **17 45 35.8 -0.6**
TIRR Tirgusor 89.40 315 P **P** **17 45 35.8 -0.6**
TIRR Tirgusor 89.40 315 IAMs_20 IAMs_20 18 30 35.5
comp=Z,938nm,21.0s
TIRR Tirgusor 89.40 315 P **P** **17 45 35.3 -1.1**
comp=Z,1µmcomp=Z,81nm,0.9s
TIRR Tirgusor 89.40 315 P **P** **17 45 35.8 -0.6**
MANR Mangalia 89.40 314 ⇑P **P** **17 45 35.4 -1.1**
TATR Tatarca 89.41 316 ⇑P **P** **17 45 37.0 +0.5**
CFR Carcaliu 89.44 316 ⇑P **P** **17 45 36.1 -0.5**
CFR Carcaliu 89.44 316 P **P** **17 45 36.1 -0.5**
YLV Yalova 89.48 311 P **P** **17 45 37.0 -0.1**
comp=Z,835nmcomp=Z,45nm,1.0s
STEI Steigen 89.50 339 *eP* **P** **17 45 35.1 -1.3**
STEI IAmb IAmb 17 45 36.5
comp=Z,185nm,0.9s
STEI *ePP* **PP** **17 49 08.0 +0.1**
STEI IAMs_20 IAMs_20 18 31 01.7
comp=Z,2µm,20.4s
V35K Ketchikan 89.50 34 P **P** **17 45 37.9 +1.2**
baz=285
V35K S **S** **17 56 25.6 +2.0**
baz=285
DLBC Dease Lake 89.50 31 LR LR 18 22 31.2
comp=Z,432nm,21.5s,baz=256,slow=33
DLBC Dease Lake 89.50 31 P **P** **17 45 38.7 +1.9**
baz=286,SNR=33
DLBC S **S** **17 56 24.8 +1.1**
baz=286
RNPP9 Sopachiv 89.52 322 P **P** **17 45 35.8 -1.1**
SBA Scott Base 89.53 172 P **P** **17 45 37.6 +1.4**
SBA pmax pmax
comp=Z,177nm,1.2s
SBA Scott Base 89.53 172 P **P** **17 45 37.6 +1.4**
SBA IAmb IAmb 17 45 53.0
comp=Z,177nm,1.2s
NEGRR Negrea 89.54 316 ⇑P **P** **17 45 36.7 -0.4**
DIB Dawson Inlet, 89.55 36 IAmb IAmb 17 45 39.8
comp=Z,97nm,0.8s
H02S1 DAWSON INLET T 89.55 36 P **P** **17 45 38.2 +1.3**
SNR=18
H02S2 DAWSON INLET T 89.55 36 P **P** **17 45 37.7 +0.7**
SNR=19
RNPP8 Varash 89.55 322 P **P** **17 45 35.7 -1.3**
RNPP5 Staryi Chortor 89.56 322 P **P** **17 45 35.9 -1.2**
PABE Paberze 89.61 326 IAmb IAmb 17 45 40.0
comp=Z,120nm,0.8s
PABE Paberze 89.61 326 P **P** **17 45 36.5 -0.7**
WTLY Watson Lake, Y 89.62 29 IAmb IAmb 17 45 40.2
comp=Z,143nm,0.9s
WTLY Watson Lake, Y 89.62 29 P **P** **17 45 39.2 +1.9**
baz=287,SNR=27
TLBR Topalu 89.63 315 ⇑P **P** **17 45 37.2 -0.4**
CVD1 Cernavoda-Powe 89.67 315 ⇓P **P** **17 45 37.9 +0.2**
FAUS Fauske 89.69 339 *eP* **P** **17 45 35.9 -1.5**
FAUS IAmb IAmb 17 45 37.4
comp=Z,198nm,1.0s
FAUS *ePP* **PP** **17 49 10.3 +0.9**
FAUS *e* 17 56 25.8
FAUS IAMs_20 IAMs_20 18 29 39.3
comp=Z,2µm,21.3s
T35M Bob Quinn 89.79 32 P **P** **17 45 40.0 +1.9**
baz=286,SNR=15
T35M S **S** **17 56 28.3 +1.9**
baz=286
ELL Elmali 89.80 307 P **P** **17 45 39.6 +0.9**
KMPD K-Podol'skiy 89.82 319 P **P** **17 45 36.4 -1.9**
ICOR Ion Corvin 89.90 315 ⇑P **P** **17 45 38.7 -0.1**
SLIT Slitere, Latvi 89.92 329 P **P** **17 45 37.1 -1.4**
PANC Panciu 89.97 316 ⇑P **P** **17 45 39.6 +0.5**
LOF Lofoten 90.00 340 *eP* **P** **17 45 36.1 -2.7**
LOF IAmb IAmb 17 45 38.0
comp=Z,791nm,2.6s
LOF *ePP* **PP** **17 49 12.7 +0.8**
LOF *e*SKSac **SKSac** **17 56 05.4 -0.1**
LOF IAMs_20 IAMs_20 18 31 21.2
comp=Z,1µm,20.7s
ODBI Odobesti 90.06 316 ⇑P **P** **17 45 40.0 +0.5**
AMRR Amara 90.12 315 ⇑P **P** **17 45 40.0 +0.1**
AMRR Amara 90.12 315 P **P** **17 45 39.9 +0.1**
GIRR Girov 90.16 318 ⇑P **P** **17 45 39.2 -0.8**
TESR Tescani 90.16 317 ⇑P **P** **17 45 39.6 -0.5**
TESR Tescani 90.16 317 P **P** **17 45 39.1 -0.9**
comp=Z,2µmcomp=Z,108nm,1.2s
TESR Tescani 90.16 317 P **P** **17 45 39.4 -0.6**
GRER 90.20 316 ⇑P **P** **17 45 40.7 +0.5**
U35K Hyder 90.21 33 P **P** **17 45 41.5 +1.6**
baz=286
PRAR RASCA 90.25 318 ⇑P **P** **17 45 40.2 -0.3**
VRI Vrincioaia 90.26 316 ⇑P **P** **17 45 40.5 0.0**
VRI Vrincioaia 90.26 316 P **P** **17 45 40.5 0.0**
VRI Vrincioaia 90.26 316 P **P** **17 45 40.2 -0.3**
comp=Z,1µmcomp=Z,71nm,0.9s
VRI Vrincioaia 90.26 316 P **P** **17 45 40.2 -0.3**
PGOR Pogoanele 90.30 315 ⇑P **P** **17 45 41.3 +0.7**
PLOR Plostina 90.31 316 ⇑P **P** **17 45 40.4 -0.5**
PLOR Plostina 90.31 316 P **P** **17 45 40.3 -0.5**
SAHR Sahastru 90.32 316 ⇑P **P** **17 45 41.1 +0.2**
LODK Lodwar 90.42 274 P **P** **17 45 42.3 +0.4**
LODK Lodwar 90.42 274 IAMs_20 IAMs_20 18 23 59.3
comp=Z,1µm,22.0s
LODK Lodwar 90.42 274 P **P** **17 45 42.2 +0.2**
BIZ Bicaz 90.43 318 ⇑P **P** **17 45 40.9 -0.4**
SUW Suwalki 90.45 325 *eP* **P** **17 45 40.5 -0.7**
BAND Balkesir-Ban 90.47 311 ⇑P **P** **17 45 40.7 -0.9**
MOR8 Moi Rana 90.48 338 *eP* **P** **17 45 38.6 -2.5**
MOR8 IAmb IAmb 17 45 40.2
comp=Z,84nm,0.9s
MOR8 *ePP* **PP** **17 49 14.2 -1.5**
MOR8 *e*SKSac **SKSac** **17 56 07.4 -1.0**
MOR8 IAMs_20 IAMs_20 18 30 11.5
comp=Z,2µm,22.6s
MANT Manisa 90.51 309 IAmb IAmb 17 45 42.1
comp=Z,72nm,1.0s
RAUS Rausandaksla 90.52 338 *eP* **P** **17 45 39.6 -1.7**
RAUS IAmb IAmb 17 45 40.6
comp=Z,198nm,1.1s
RAUS *ePP* **PP** **17 49 16.6 +0.5**
RAUS *e*SKSac **SKSac** **17 56 09.7 +1.1**
RAUS IAMs_20 IAMs_20 18 31 09.0
comp=Z,2µm,20.7s
RUBB Prince Rupert 90.53 35 IAmb IAmb 17 45 44.2
comp=Z,58nm,0.9s
HG4B Hotspring 90.53 37 IAmb IAmb 17 45 45.2
comp=Z,130nm,0.9s
ISR Istrita 90.55 316 ⇑P **P** **17 45 42.2 +0.3**
ISR Istrita 90.55 316 P **P** **17 45 42.2 +0.3**
ISR Istrita 90.55 316 P **P** **17 45 41.7 -0.2**
comp=Z,1µmcomp=Z,40nm,1.0s
PBUR Paburge 90.57 327 P **P** **17 45 41.5 -0.1**
COVR Voineasa-Covas 90.62 317 ⇑P **P** **17 45 41.5 -0.7**
NEHR Nehoiu 90.65 316 ⇑P **P** **17 45 43.0 +0.6**
VAGH Vaagaholmen 90.68 339 *eP* **P** **17 45 40.4 -1.6**
VAGH IAmb IAmb 17 45 41.5
comp=Z,86nm,1.0s
VAGH *ePP* **PP** **17 49 17.4 +0.1**
VAGH *e*SKSac **SKSac** **17 56 09.5 +0.1**
VAGH IAMs_20 IAMs_20 18 30 28.0
comp=Z,2µm,22.8s
TURR Turia 90.70 317 ⇑P **P** **17 45 42.6 0.0**
BALB Balikesir 90.79 310 IAmb IAmb 17 45 43.0
comp=Z,72nm,1.2s
KONS Konsvik 90.83 338 *eP* **P** **17 45 40.6 -2.0**
KONS IAmb IAmb 17 45 42.1
comp=Z,125nm,1.2s
KONS *ePP* **PP** **17 49 18.1 -0.3**
KONS IAMs_20 IAMs_20 18 30 20.9
comp=Z,2µm,20.4s
OZUR 90.84 317 ⇑P **P** **17 45 43.7 +0.5**
SULR 90.85 315 ⇑P **P** **17 45 43.3 0.0**
SULR 90.85 315 P **P** **17 45 43.2 0.0**
BURAR Bucovina Array 90.86 318 ⇑P **P** **17 45 43.3 0.0**
BURAR Bucovina Array 90.86 318 P **P** **17 45 43.3 0.0**
BURAR Bucovina Array 90.86 318 P **P** **17 45 42.6 -0.8**
BURAR IAmb IAmb 17 45 46.3
comp=Z,57nm,0.8s
MLR Muntele Rosu 90.88 316 PKKPbc PKKPbc 18 03 08.8 -0.8
comp=Z,4.4nm,0.7s,baz=143,slow=6.1,SNR=7.7
MLR LR LR 18 31 21.4
comp=Z,3µm,21.8s,baz=64,slow=39
MLR Muntele Rosu 90.88 316 ⇑P **P** **17 45 42.8 -0.8**
MLR Muntele Rosu 90.88 316 P **P** **17 45 42.7 -0.8**
MLR Muntele Rosu 90.88 316 P **P** **17 45 43.0 -0.6**
comp=Z,936nmcomp=Z,34nm,0.9s
MLR Muntele Rosu 90.88 316 P **P** **17 45 43.0 -0.6**
RAZG Razgrad 90.93 314 ⇑P **P** **17 45 43.1 -0.5**
BOSR Bodos 90.93 317 ⇑P **P** **17 45 44.1 +0.4**
STOK Stokkvaagen 90.94 338 *eP* **P** **17 45 41.2 -1.9**
STOK IAmb IAmb 17 45 42.6
comp=Z,98nm,1.1s
STOK *ePP* **PP** **17 49 19.7 +0.4**
STOK *e*SKSac **SKSac** **17 56 10.9 0.0**
BALY Balya 90.96 310 P **P** **17 45 42.8 -1.2**
WRGLY Wrigley 90.97 25 IAmb IAmb 17 45 45.8
comp=Z,105nm,1.0s
WRGLY Wrigley 90.97 25 P **P** **17 45 44.8 +1.4**
baz=292,SNR=24
LEIR Leirfjorden 91.00 338 *eP* **P** **17 45 42.0 -1.5**
LEIR IAmb IAmb 17 45 42.9
comp=Z,199nm,1.2s
LEIR *ePP* **PP** **17 49 19.7 -0.1**
LEIR *e*SKSac **SKSac** **17 56 10.9 -0.4**
LIRD Liard River Hi 91.14 29 P **P** **17 45 46.0 +1.7**
baz=290,SNR=32
DOPR Dopca 91.14 317 ⇑P **P** **17 45 44.0 -0.6**
ARG Arkhangelos 91.31 307 P **P** **17 45 44.4 -1.2**
ARG Arkhangelos 91.31 307 IAmb IAmb 17 45 45.8
comp=Z,98nm,1.0s
ARG Arkhangelos 91.31 307 P **P** **17 45 44.9 -0.7**
VOIR 91.50 316 ⇑P **P** **17 45 45.2 -1.2**
VOIR 91.50 316 P **P** **17 45 45.1 -1.2**
VOIR 91.50 316 P **P** **17 45 45.0 -1.4**
comp=Z,585nmcomp=Z,16nm,1.1s
VOIR 91.50 316 P **P** **17 45 45.3 -1.2**
ARCR ARCALIA 91.56 318 ⇑P **P** **17 45 46.7 +0.2**
HUMR Humele 91.77 315 ⇑P **P** **17 45 46.5 -1.1**
HUMR Humele 91.77 315 P **P** **17 45 46.4 -1.1**
ARR Arges 91.80 316 ⇑P **P** **17 45 47.3 -0.5**
ARR Arges 91.80 316 P **P** **17 45 47.1 -0.6**
KOTAN Kotaneelee Air 91.86 28 P **P** **17 45 49.2 +1.6**
baz=292,SNR=13
KOTAN S **S** **17 56 43.0 -2.1**
baz=292
ALN Alexandroupoli 91.88 312 P **P** **17 45 46.5 -1.6**
ALN Alexandroupoli 91.88 312 P **P** **17 45 46.5 -1.6**
KWP Kalwaria Pacla 91.94 321 *eP* **P** **17 45 48.7 +0.5**
KWP Kalwaria Pacla 91.94 321 P **P** **17 45 48.2 0.0**
comp=Z,3µmcomp=Z,252nm,1.0s
BMR Baia Mare 91.97 319 ⇑P **P** **17 45 48.4 0.0**
BMR Baia Mare 91.97 319 P **P** **17 45 48.4 0.0**
BMR Baia Mare 91.97 319 P **P** **17 45 48.4 0.0**
TNR Turnu Rosu 91.98 317 ⇑P **P** **17 45 48.1 -0.4**
TNR Turnu Rosu 91.98 317 P **P** **17 45 48.1 -0.4**
DAG Danmarks Havn 92.06 352 P **P** **17 45 47.7 -0.5**
DAG Danmarks Havn 92.06 352 P **P** **17 45 47.7 -0.5**
DAG Danmarks Havn 92.06 352 *i* P **P** **17 45 47.4 -0.8**
DAG IAmb IAmb 17 45 48.4
comp=Z,242nm,0.9s
NSS Namsos 92.11 337 *eP* **P** **17 45 46.8 -1.8**
NSS IAmb IAmb 17 45 48.0
comp=Z,73nm,0.8s
NSS *ePP* **PP** **17 49 28.3 -0.3**
R9F13 Warsaw-Wawer 92.14 324 *eP* **P** **17 45 49.0 0.0**
R9F13 *e*SKSac **SKSac** **17 56 16.6 -1.7**
R9F13 *eS* **ScS** **17 56 50.0 -0.2**
CJR Cluj-Napoca 92.15 318 ⇑P **P** **17 45 49.8 +0.5**
CJR Cluj-Napoca 92.15 318 P **P** **17 45 49.8 +0.5**
RDO Rodhopi 92.19 312 P **P** **17 45 47.7 -1.8**
VLAD Vladila 92.31 315 ⇑P **P** **17 45 49.9 -0.1**
PLVB Pleven 92.31 314 ⇑P **P** **17 45 49.6 -0.4**
LOT Lotru 92.37 317 ⇑P **P** **17 45 50.0 -0.4**
LOT Lotru 92.37 317 P **P** **17 45 49.8 -0.6**
BBB Bella Bella 92.38 36 LR LR 18 23 24.5
comp=Z,385nm,19.6s,baz=290,slow=33
BBB Bella Bella 92.38 36 IAmb IAmb 17 45 52.7
comp=Z,71nm,1.1s
BBB Bella Bella 92.38 36 P **P** **17 45 52.0 +1.9**
KOLS Kolonicke sedl 92.41 320 *eP* **P** **17 45 51.1 +0.7**
KOLS pmax pmax
comp=Z,28nm,0.8s
KOLS Kolonicke sedl 92.41 320 P **P** **17 45 50.4 0.0**
KOLS Kolonicke sedl 92.41 320 *eP* **P** **17 45 51.1 +0.7**
TRPA Tarpa 92.46 319 P **P** **17 45 50.1 -0.5**
BEL Belsk 92.46 323 *eP* **P** **17 45 50.9 +0.3**
BEL Belsk 92.46 323 P **P** **17 45 50.4 -0.1**
UZHM Uzhgorod 92.48 320 P **P** **17 45 50.2 -0.5**
MARR Marisel-Cluj 92.48 318 ⇑P **P** **17 45 50.7 -0.2**
DRGR 92.72 318 ⇑P **P** **17 45 51.4 -0.6**
DRGR 92.72 318 P **P** **17 45 51.4 -0.6**
DRGR 92.72 318 P **P** **17 45 51.4 -0.6**
RES Resolute Bay 92.78 10 LR LR 18 32 12.1
comp=Z,512nm,18.7s,baz=324,slow=38
RES Resolute Bay 92.78 10 P **P** **17 45 51.8 +0.2**
RES Resolute Bay 92.78 10 P **P** **17 45 52.5 +1.0**
HOLB Holberg 92.84 38 IAmb IAmb 17 45 55.4
comp=Z,153nm,0.9s
STHS Stebnicka Huta 92.91 321 *eP* **P** **17 45 52.1 -0.6**
STHS pmax pmax
comp=Z,20nm,1.0s
STHS Stebnicka Huta 92.91 321 *eP* **P** **17 45 52.1 -0.6**
GZR Gura Zlata 93.06 317 ⇑P **P** **17 45 52.5 -1.0**
GZR Gura Zlata 93.06 317 P **P** **17 45 52.5 -1.0**
ZKR Zakros 93.07 306 P **P** **17 45 53.1 -0.6**
HFS Hagfors 93.24 332 P **P** **17 45 52.7 -1.3**
comp=Z,78nm,0.8s,baz=93,slow=3.0,SNR=114
HFS PP PP 17 49 27.5 -10
comp=Z,16nm,0.9s,baz=71,slow=11,SNR=4.0
HFS PKKPbc **PKKPdf** **18 03 00.9 -0.6**
comp=Z,4.2nm,0.7s,baz=210,slow=5.0,SNR=8.5
HFS LR LR 18 31 18.1
comp=Z,2µm,20.7s,baz=64,slow=38
comp=Z,78nm,0.8s
ABAH Abaujker 93.25 320 P **P** **17 45 54.1 -0.2**
HERR Herculane 93.44 316 ⇑P **P** **17 45 54.7 -0.5**
NIE Niedzica 93.50 321 *eP* **P** **17 45 56.3 +0.8**
NIE Niedzica 93.50 321 P **P** **17 45 55.2 -0.3**
comp=Z,618nmcomp=Z,41nm,1.1s
OUR Ouranopolis 93.54 312 P **P** **17 45 54.1 -1.7**
OJC Ojcow 93.56 322 *eP* **P** **17 45 55.5 -0.1**
OJC Ojcow 93.56 322 P **P** **17 45 55.4 -0.3**
OJC Ojcow 93.56 322 P **P** **17 45 55.0 -0.7**
comp=Z,1µmcomp=Z,99nm,1.2s
OJC Ojcow 93.56 322 P **P** **17 45 55.4 -0.3**
SIRR Siria 93.56 318 ⇑P **P** **17 45 55.2 -0.6**
SRS Serrai 93.62 312 P **P** **17 45 54.3 -1.9**
SRS Serrai 93.62 312 P **P** **17 45 54.3 -1.9**
KECS Kecovo 93.67 320 *eP* **P** **17 45 56.2 0.0**
KECS pmax pmax
comp=Z,21nm,0.8s
KECS Kecovo 93.67 320 P **P** **17 45 56.5 +0.3**
KECS Kecovo 93.67 320 *eP* **P** **17 45 56.2 0.0**
BLEU Blekinge 93.70 328 *i* P **P** **17 45 54.2 -2.0**
NC405 NORSAR Array S 93.71 334 IAmb IAmb 17 45 56.2
comp=Z,205nm,1.4s
NEEM North Greenlan 93.74 359 *i* P **P** **17 45 56.9 +0.6**
NEEM IAmb IAmb 17 45 57.8
comp=Z,253nm,0.9s
BZS Buzias 93.78 317 ⇑P **P** **17 45 55.8 -1.0**
BZS Buzias 93.78 317 P **P** **17 45 55.8 -1.0**
BZS Buzias 93.78 317 P **P** **17 45 55.7 -1.0**
NC303 NORSAR Array S 93.81 334 IAmb IAmb 17 45 56.7
comp=Z,61nm,0.9s
PAIG Paliouri 93.87 311 P **P** **17 45 55.6 -1.7**
PAIG Paliouri 93.87 311 P **P** **17 45 55.6 -1.7**
SOH Sokhos 93.88 312 P **P** **17 45 55.4 -2.0**
SOH Sokhos 93.88 312 P **P** **17 45 55.4 -2.0**
NC602 NORSAR Array S 93.95 333 *eP* **P** **17 45 55.5 -1.7**
NC602 IAmb IAmb 17 45 56.6
comp=Z,56nm,1.2s
NC602 *ePP* **PP** **17 49 43.2 +0.1**
NC602 IAMs_20 IAMs_20 18 32 12.6
comp=Z,2µm,18.3s
NORES NORESS Array B 93.95 333 P **P** **17 45 55.5 -1.7**
NORES pmax pmax
comp=Z,3.0nm,0.4s
MDVR Moldovita 93.95 316 ⇑P **P** **17 45 57.1 -0.6**
NB2 NORSAR Subarra 93.96 334 P **P** **17 45 55.6 -1.7**
comp=Z,45nm,1.0s,baz=66,slow=4.4
NB2 PKKP **PKKPdf** **18 02 58.6 -1.8**
comp=Z,2.3nm,0.7s,baz=233,slow=2.1
NB2 NORSAR Subarra 93.96 334 P **P** **17 45 55.6 -1.7**
NOA NORSAR Array B 93.96 334 P **P** **17 45 55.7 -1.7**
comp=Z,28nm,0.8s,baz=65,slow=4.6,SNR=47
NOA PKKPbc **PKKPdf** **18 02 59.8 -0.6**
comp=Z,3.5nm,0.7s,baz=71,slow=2.9,SNR=6.5
NOA LR LR 18 31 34.9
comp=Z,1µm,21.6s,baz=75,slow=38
comp=Z,28nm,0.8s
GKP Gorka Klasztor 94.04 325 *eP* **P** **17 45 57.3 -0.4**
NC204 NORSAR Array S 94.05 334 IAmb IAmb 17 45 59.1
comp=Z,52nm,0.8s
IDI Anoyia 94.09 306 PKKPbc PKKPbc 18 03 02.0 +1.0
comp=Z,23nm,1.0s,baz=236,slow=7.3,SNR=8.8
IDI LR LR 18 35 08.0
comp=Z,630nm,21.0s,baz=84,slow=40
IDI Anoyia 94.09 306 IAmb IAmb 17 45 58.8
comp=Z,88nm,1.1s
LANS Liptovska Anna 94.10 321 *eP* **P** **17 45 58.1 -0.1**
LANS Liptovska Anna 94.10 321 *eP* **P** **17 45 58.1 -0.1**
KNT Kendrikon 94.12 313 P **P** **17 45 58.4 0.0**
KNT Kendrikon 94.12 313 P **P** **17 45 58.4 0.0**
NAO01 NORSAR Array S 94.19 334 IAmb IAmb 17 45 58.6
comp=Z,49nm,0.8s
NAO01 NORSAR Array S 94.19 334 P **P** **17 45 57.0 -1.4**
TULEG Thule 94.20 4 IAmb IAmb 17 45 59.4
comp=Z,149nm,1.0s
TULEG IAMs_20 IAMs_20 18 26 54.6
comp=Z,1µm,22.0s
TULEG Thule 94.20 4 P **P** **17 45 58.3 +0.2**
TULEG Thule 94.20 4 *i* P **P** **17 45 58.0 -0.1**
TULEG IAmb IAmb 17 45 59.0
comp=Z,144nm,1.0s
PSZ Piszkesteto 94.22 320 ⇑P **P** **17 45 58.0 -0.9**
PSZ Piszkesteto 94.22 320 P **P** **17 45 57.9 -0.9**
PSZ Piszkesteto 94.22 320 P **P** **17 45 58.3 -0.5**
BOVS Bovan 94.28 315 ⇑P **P** **17 45 58.4 -0.7**
VAY Valandovo 94.31 313 ⇑P **P** **17 45 57.6 -1.7**
DBG Daneborg 94.34 351 *i* P **P** **17 45 57.7 -1.0**
DBG IAmb IAmb 17 45 59.4
comp=Z,187nm,1.0s
DOMB Dombas 94.41 335 *eP* **P** **17 45 58.4 -1.0**
DOMB IAmb IAmb 17 45 59.2
comp=Z,123nm,1.2s
DOMB *ePP* **PP** **17 49 46.3 -0.4**
DOMB IAMs_20 IAMs_20 18 30 02.1
comp=Z,2µm,27.0s
GRG Griva 94.53 312 P **P** **17 45 58.4 -2.0**
GRG Griva 94.53 312 P **P** **17 45 58.4 -2.0**
BSD Bornholm Skovb 94.63 328 *i* P **P** **17 45 59.3 -1.1**
BSD IAmb IAmb 17 45 59.6
comp=Z,75nm,1.0s
DEL Delary 94.64 329 *i* P **P** **17 45 59.1 -1.3**
OSL Oslo 94.67 333 *eP* **P** **17 45 59.8 -0.7**
OSL IAmb IAmb 17 45 60.0
comp=Z,82nm,0.8s
JNE Jan Mayen East 94.67 346 *eP* **P** **17 46 01.0 +0.7**

JNE IAmb IAmb 17 46 01.7
comp=Z,136nm,1.1s
JNE *e*PP **PP** **17 49 48.7 +0.3**
JNE IAMs_20 IAMs_20 18 27 31.8
comp=Z,1µm,30.4s
JNW Jan Mayen West 94.67 347 *e*P **P** **17 46 01.1 +0.8**
JNW IAmb IAmb 17 46 01.9
comp=Z,398nm,1.0s
JNW *e*PP **PP** **17 49 48.7 +0.3**
JNW IAMs_20 IAMs_20 18 27 19.9
comp=Z,1µm,23.5s
OKC Ostrava-Krasne 94.69 322 *e*P **P** **17 46 01.0 +0.2**
OKC MLR MLR
comp=Z,800nm,19.1s
OKC Ostrava-Krasne 94.69 322 *e*P **P** **17 46 01.0 +0.2**
OKC AMS AMS 18 34 30.0
comp=Z,800nm,19.1s
OKC Ostrava-Krasne 94.69 322 P **P** **17 46 00.7 -0.1**
LIT Litokhoron 94.70 312 P **P** **17 45 58.4 -2.8**
LIT Litokhoron 94.70 312 IAmb IAmb 17 46 00.2
comp=Z,89nm,1.2s
LIT Litokhoron 94.70 312 P **P** **17 45 59.0 -2.2**
VYHS Vyhne 94.71 320 *e*P **P** **17 46 00.2 -0.8**
VYHS pmax pmax
comp=Z,38nm,1.8s
VYHS Vyhne 94.71 320 P **P** **17 46 00.7 -0.3**
VYHS Vyhne 94.71 320 *e*P **P** **17 46 00.2 -0.8**
CBB Campbell River 94.71 38 IAmb IAmb 17 46 03.8
comp=Z,64nm,0.9s
JMIC Jan Mayen 94.72 347 LR LR 18 34 46.9
comp=Z,550nm,18.5s,baz=46,slow=39
JMIC Jan Mayen 94.72 347 *e*P **P** **17 46 01.3 +0.7**
JMIC IAmb IAmb 17 46 02.0
comp=Z,227nm,0.9s
JMIC *e*PP **PP** **17 49 49.4 +0.7**
JMIC IAMs_20 IAMs_20 18 27 20.5
comp=Z,1µm,24.4s
IMMV Iera Moni Meta 94.77 307 P **P** **17 46 01.0 -0.5**
MOL Molde 94.78 336 *e*P **P** **17 46 00.1 -0.8**
MOL IAmb IAmb 17 46 01.2
comp=Z,133nm,1.2s
MOL *e*PP **PP** **17 49 49.4 0.0**
MOL IAMs_20 IAMs_20 18 32 23.4
comp=Z,3µm,19.5s
JMI Jan Mayen 94.81 347 *e*P **P** **17 46 01.4 +0.4**
JMI *e*PP **PP** **17 49 50.2 +0.7**
JMI IAMs_20 IAMs_20 18 27 58.5
comp=Z,2603µm,99.9s
GVD Gavdhos 94.83 306 P **P** **17 46 00.9 -1.0**
STRU Stroemstad 94.86 332 *i*P **P** **17 45 59.7 -1.7**
YKAW3 Yellowknife Wh 94.90 24 IAmb IAmb 17 46 03.6
comp=Z,48nm,0.9s
BUD Budapest 94.92 319 P **P** **17 46 01.4 -0.5**
BUD Budapest 94.92 319 P **P** **17 46 01.4 -0.5**
YKA Yellowknife Ar 94.94 24 P **P** **17 46 02.5 +0.9**
comp=Z,89nm,0.8s,baz=300,slow=4.6,SNR=179
YKA PP **PP** **17 49 52.2 +1.5**
comp=Z,5.5nm,0.9s,baz=287,slow=7.9,SNR=3.8
YKA PKiKP **PKiKP** **17 50 44.2 +1.0**
comp=Z,5.1nm,0.8s,baz=314,slow=1.9,SNR=8.3
YKA PKKPbc **PKKPdf** **18 02 56.1 -2.4**
comp=Z,4.9nm,0.6s,baz=127,slow=3.3,SNR=20
YKA LR LR 18 31 13.6
comp=Z,398nm,19.5s,baz=297,slow=37
comp=Z,89nm,0.8s
YKA Yellowknife Ar 94.94 24 P **P** **17 46 02.4 +0.7**
SKO Skopje 94.95 314⇑ *i*P **P** **17 46 01.0 -1.3**
YKAW1 Yellowknife Wh 94.99 24 IAmb IAmb 17 46 04.0
comp=Z,101nm,0.9s
FABU Falkenberg 95.00 330 *i*P **P** **17 46 00.6 -1.5**
MORC Moravsky Berou 95.08 322⇑ P **P** **17 46 02.6 -0.1**
MORC Moravsky Berou 95.08 322 P **P** **17 46 02.5 -0.1**
MORC Moravsky Berou 95.08 322 *e*P **P** **17 46 02.3 -0.4**
MORC Moravsky Berou 95.08 322 P **P** **17 46 02.6 -0.1**
TJOU Tjoern 95.09 331 *i*P **P** **17 46 00.8 -1.6**
AGG Agios Georgios 95.11 311 P **P** **17 46 00.9 -2.2**
FRGS Fruska Gora 95.13 317⇑ *i*P **P** **17 46 01.9 -1.1**
LUNU Lund 95.19 328 *i*P **P** **17 46 01.9 -1.1**
AKN Aaknes 95.19 336 *e*PP **PP** **17 49 53.4 +0.6**
ONAU Onsala 95.22 330 *i*P **P** **17 46 01.5 -1.6**
BJUU Bjuv 95.23 329 *i*P **P** **17 46 01.6 -1.6**
SRO Srobarova 95.26 320 P **P** **17 46 03.8 +0.3**
KTHA Kythira Island 95.29 308 P **P** **17 46 02.2 -1.7**
KONO Kongsberg 95.31 333 P **P** **17 46 02.3 -1.1**
KONO Kongsberg 95.31 333 *e*P **P** **17 46 02.4 -1.1**
KONO *e*PP **PP** **17 49 48.9 -4.7**
KONO IAMs_20 IAMs_20 18 33 12.0
comp=Z,2µm,21.1s
KONO Kongsberg 95.31 333 P **P** **17 46 01.9 -1.5**
KONO Kongsberg 95.31 333 P **P** **17 46 02.8 -0.7**
JAVC Velka Javorina 95.31 321 *e*P **P** **17 46 04.6 +0.8**
JAVC Velka Javorina 95.31 321 P **P** **17 46 05.0 +1.1**
SKAR Skarslia 95.39 334 *e*P **P** **17 46 04.2 +0.3**
SKAR *e*PP **PP** **17 49 55.5 +1.2**
SKAR *e*SKSac **SKSac** **17 56 36.8 +0.9**
SKAR IAMs_20 IAMs_20 18 33 45.2
comp=Z,2µm,17.7s
KRLC Kraliky 95.44 322 *e*P **P** **17 46 04.2 -0.1**
KRLC MLR MLR
comp=Z,2µm,25.4s
KRLC Kraliky 95.44 322 *e*P **P** **17 46 04.2 -0.1**
KRLC AMS AMS 18 30 30.0
comp=Z,2µm,25.4s
KSP Ksiaz 95.45 323 *e*P **P** **17 46 04.4 +0.1**
KSP Ksiaz 95.45 323 P **P** **17 46 02.9 -1.4**
KSP Ksiaz 95.45 323 P **P** **17 46 03.7 -0.6**
comp=Z,876nmcomp=Z,65nm,1.2s
TEKS Tekeris 95.51 317 *e*P **P** **17 46 03.3 -1.5**
MORH Mrgy, Hungar 95.57 318⇑ P **P** **17 46 04.3 -0.7**
MORH Mrgy, Hungar 95.57 318⇑ *i*P **P** **17 46 03.9 -1.0**
MORH Mrgy, Hungar 95.57 318 P **P** **17 46 04.0 -1.0**
comp=Z,386nmcomp=Z,14nm,1.4s
MORH Mrgy, Hungar 95.57 318 P **P** **17 46 04.2 -0.8**
OSTC Ostas 95.60 323 *e*P **P** **17 46 05.4 +0.4**
OSTC MLR MLR
comp=Z,2µm,21.9s
OSTC Ostas 95.60 323 *e*P **P** **17 46 05.4 +0.4**
OSTC AMS AMS 18 31 10.0
comp=Z,2µm,21.9s
SJES Sjenica 95.60 315⇑ *i*P **P** **17 46 04.6 -0.7**
MBAR Mbarara 95.60 270 LR LR 18 26 52.5
comp=Z,782nm,21.7s,baz=66,slow=34
MBAR Mbarara 95.60 270 P **P** **17 46 04.6 -1.4**
MBAR pmax pmax
comp=Z,13nm,0.8s
MBAR MLR MLR
comp=Z,800nm,21.0s
MBAR Mbarara 95.60 270 P **P** **17 46 05.2 -0.8**
MBAR Mbarara 95.60 270 P **P** **17 46 04.6 -1.4**
MBAR Mbarara 95.60 270 IAMs_20 IAMs_20 18 26 18.9
comp=Z,759nm,21.0s
MBAR Mbarara 95.60 270 P **P** **17 46 05.6 -0.4**
DPC Dobruska-Polom 95.61 323 *e*P **P** **17 46 05.3 +0.2**
DPC *e* 17 50 00.2
DPC MLR MLR
comp=E,1µm,24.6s
DPC MLR MLR
comp=Z,2µm,21.5s
DPC Dobruska-Polom 95.61 323 *e*P **P** **17 46 05.3 +0.2**
DPC *e*PP **PP** **17 50 00.2 +3.8**
DPC AMS AMS 18 31 00.0
comp=Z,2µm,21.5s
DPC Dobruska-Polom 95.61 323 P **P** **17 46 04.5 -0.6**
comp=Z,666nmcomp=Z,37nm,1.1s
DPC Dobruska-Polom 95.61 323 P **P** **17 46 05.3 +0.2**
LNIZ Loecknitz 95.64 326 P **P** **17 46 04.3 -0.8**
OHR Ohrid 95.66 313⇑ *i*P **P** **17 46 03.9 -1.7**
CHVC Chvalec 95.69 323 *e*P **P** **17 46 05.6 +0.2**
CHVC *e* 17 50 02.6
CHVC Chvalec 95.69 323 *e*P **P** **17 46 05.6 +0.2**
CHVC *e*PP **PP** **17 50 02.6 +5.6**
MODS Modra-Piesok 95.72 321 *e*P **P** **17 46 05.1 -0.6**
MODS pmax pmax
comp=Z,18nm,1.2s
MODS Modra-Piesok 95.72 321 P **P** **17 46 05.6 0.0**
MODS Modra-Piesok 95.72 321 *e*P **P** **17 46 05.1 -0.6**
UPC Upice 95.74 323 *e*P **P** **17 46 05.9 +0.2**
UPC *e* 17 50 01.1
UPC MLR MLR
comp=E,2µm,21.5s
UPC Upice 95.74 323 *e*P **P** **17 46 05.9 +0.2**
UPC *e*PP **PP** **17 50 01.1 +3.8**
PHP Peshkopia 95.74 314 P **P** **17 46 04.3 -1.7**
PHP Peshkopia 95.74 314 P **P** **17 46 04.2 -1.7**

KBN Korca 95.81 313 P **P** **17 46 04.1 -2.2**
BBLS Lazi&#263i 95.81 316⇑ *i*P **P** **17 46 05.6 -0.6**
VRAC Vranov 95.82 322 LR LR 18 34 17.7
comp=E,733nm,19.0s,baz=82,slow=38
VRAC Vranov 95.82 322⇑ P **P** **17 46 06.4 +0.4**
VRAC Vranov 95.82 322 P **P** **17 46 06.4 +0.4**
VRAC Vranov 95.82 322 *e*P **P** **17 46 05.9 -0.2**
VRAC Vranov 95.82 322 P **P** **17 46 06.2 +0.1**
CLRS Cowichan Lake 95.89 39 IAmb IAmb 17 46 09.1
comp=Z,50nm,0.9s
ITM Ithomi 95.92 309 P **P** **17 46 04.7 -2.1**
MPLH Magyarpolny 95.97 319 P **P** **17 46 06.3 -0.5**
comp=Z,2µmcomp=Z,93nm,1.4s
MPLH Magyarpolny 95.97 319 P **P** **17 46 06.3 -0.5**
KRUC Moravsky 96.03 322 P **P** **17 46 07.1 +0.1**
KRUC Moravsky 96.03 322 *e*P **P** **17 46 06.8 -0.2**
KRUC Moravsky 96.03 322 P **P** **17 46 07.1 +0.1**
HYA Hoyanger 96.04 335 *e*P **P** **17 46 06.7 0.0**
HYA *e*PP **PP** **17 49 59.6 +0.4**
HYA *e*SKSac **SKSac** **17 56 40.1 +1.0**
HYA IAMs_20 IAMs_20 18 31 17.3
comp=Z,2µm,23.5s
RUE Ruedersdorf 96.28 325 P **P** **17 46 08.1 +0.2**
FOO Floro 96.29 336 *e*P **P** **17 46 05.4 -2.4**
FOO *e*PP **PP** **17 50 01.9 +0.7**
FOO *e*SKSac **SKSac** **17 56 41.3 +1.0**
FOO IAMs_20 IAMs_20 18 33 29.0
comp=Z,3µm,18.9s
PGC Sidney 96.37 39 IAmb IAmb 17 46 11.2
comp=Z,47nm,0.9s
HOMB Homborsund 96.46 332 *e*P **P** **17 46 08.8 +0.2**
HOMB *e*PP **PP** **17 50 03.0 +0.4**
HOMB IAMs_20 IAMs_20 18 32 23.7
comp=Z,2µm,23.6s
DRME Dracevica, Mon 96.48 314⇑ *i*P **P** **17 46 07.9 -1.3**
ODD1 Odda 96.49 334 *e*P **P** **17 46 09.7 +0.8**
ODD1 *e*PP **PP** **17 50 03.7 +0.9**
ODD1 IAMs_20 IAMs_20 18 36 14.6
comp=Z,2µm,19.8s
TREC Trest 96.50 322 *e*P **P** **17 46 09.4 +0.2**
TREC *e* 17 50 05.6
TREC MLR MLR
comp=Z,2µm,26.4s
TREC Trest 96.50 322 *e*P **P** **17 46 09.4 +0.2**
TREC *e*PP **PP** **17 50 05.6 +2.3**
TREC AMS AMS 18 31 20.0
comp=Z,2µm,26.4s
B04A Port Angeles 96.55 39 IAmb IAmb 17 46 12.5
comp=Z,80nm,1.1s
NLWA Neilton Lookou 96.56 40 IAmb IAmb 17 46 13.2
comp=Z,70nm,0.9s
WINA Alland / Wiene 96.57 321 *i*PcP **P** **17 46 09.4 -0.1**
SNR=14
RONA Rosalia, Austr 96.58 320 *i*P **P** **17 46 08.9 -0.7**
comp=Z,16nm,1.4s,SNR=6.4
RONA *e*PP **PP** **17 50 03.4 -0.6**
comp=Z,66nm,2.1s
PVCC Panska Ves 96.59 323 *e*P **P** **17 46 09.9 +0.4**
PVCC MLR MLR
comp=Z,2µm,20.3s
PVCC Panska Ves 96.59 323 *e*P **P** **17 46 09.9 +0.4**
PVCC AMS AMS 18 31 50.0
comp=Z,2µm,20.3s
KULLO Kullorsuaq 96.60 1 P **P** **17 46 09.2 +0.2**
KULLO Kullorsuaq 96.60 1 *i*P **P** **17 46 08.8 -0.2**
KULLO IAmb IAmb 17 46 09.9
comp=Z,174nm,1.0s
SUE Sulen 96.69 335 *e*P **P** **17 46 10.0 +0.4**
SUE *e*PP **PP** **17 50 04.2 -0.1**
SUE IAMs_20 IAMs_20 18 35 41.6
comp=Z,2µm,18.1s
BEHE Becsehely 96.70 319⇑ *i*P **P** **17 46 09.6 -0.5**
BRY Bratogost 96.71 315⇑ *i*P **P** **17 46 08.8 -1.6**
CONA Conrad Observa 96.77 321 *i*P **P** **17 46 10.0 -0.5**
comp=Z,101nm,1.8s,SNR=19
CONA *e*PP **PP** **17 50 04.4 -1.1**
comp=Z,53nm,2.8s
CONA *e*PKKP **PKKPbc** **18 02 52.6 -1.7**
comp=Z,4,9nm,1.0s
A04D Lummi Island 96.80 39 IAmb IAmb 17 46 13.3
comp=Z,59nm,0.9s
BER Bergen 96.81 335 *e*P **P** **17 46 10.0 -0.3**
BER *e*PP **PP** **17 50 05.0 -0.2**
BER IAMs_20 IAMs_20 18 32 33.4
comp=Z,2µm,20.5s
PRU Pruhonice 96.81 323 *e*P **P** **17 46 10.5 0.0**
PRU *e* 17 50 09.2
PRU MLR MLR
comp=Z,2µm,21.0s
PRU Pruhonice 96.81 323 *e*P **P** **17 46 10.5 0.0**
PRU *e*PP **PP** **17 50 09.2 +3.6**
PRU AMS AMS 18 32 00.0
comp=Z,2µm,21.0s
ASK Askoy 96.81 335 *e*P **P** **17 46 10.1 -0.1**
ASK *e*PP **PP** **17 50 05.4 +0.2**
ASK IAMs_20 IAMs_20 18 32 32.1
comp=Z,2µm,26.4s
BLS5 Blasjo 96.82 333 *e*P **P** **17 46 09.5 -0.8**
BLS5 IAmb IAmb 17 46 10.7
comp=Z,160nm,1.1s
BLS5 *e*PP **PP** **17 50 05.7 +0.4**
BLS5 IAMs_20 IAMs_20 18 34 18.8
comp=Z,2µm,21.1s
BRG Berggiesshubel 96.82 324 P **P** **17 46 10.2 -0.3**
BRG Berggiesshubel 96.82 324 P **P** **17 46 10.2 -0.3**
BRG Berggiesshubel 96.82 324 *e*P **P** **17 46 10.2 -0.3**
BRG Amp 17 46 12.3
comp=Z,27nm,1.0s
BRG Berggiesshubel 96.82 324 PS PS 17 58 58.0 +2.4
RICC Richard 96.86 323 *e*P **P** **17 46 10.8 +0.1**
RICC AMS AMS 18 32 20.0
comp=Z,2µm,22.4s
HCY Herceg Novi 96.89 315 *e*P **P** **17 46 08.6 -2.4**
RADR Rader Ridge 96.94 41 IAmb IAmb 17 46 14.4
comp=Z,109nm,0.9s
MUD Monsted U'grnd 96.99 330 *i*P **P** **17 46 10.1 -1.0**
MUD IAmb IAmb 17 46 11.2
comp=Z,101nm,1.3s
POIN Pond Inlet 97.01 7 IAmb IAmb 17 46 12.4
comp=Z,47nm,1.1s
SNART Snartemo 97.02 332 *e*P **P** **17 46 11.2 0.0**
BLY Banja Luka 97.03 317⇑ P **P** **17 46 10.6 -1.0**
BLY Banja Luka 97.03 317⇑ *i*P **P** **17 46 10.6 -1.0**
BLY Banja Luka 97.03 317 P **P** **17 46 10.6 -1.0**
A05A Maple Falls 97.08 38 IAmb IAmb 17 46 14.1
comp=Z,49nm,1.0s
SYO Syowa Base 97.11 201⇑ *i*P Pdif 17 46 12.0 +0.6
GNW Green Mountain 97.16 40 IAmb IAmb 17 46 15.2
comp=Z,79nm,1.1s
CLL Collm 97.19 324⇑ *i*P **P** **17 46 11.5 -0.7**
CLL *i* 17 46 30.4
CLL pmax pmax
comp=Z,58nm,1.5s
CLL MLR MLR
comp=Z,1µm,22.0s
CLL Collm 97.19 324 IAmb IAmb 17 46 12.9
comp=Z,68nm,1.5s
CLL Collm 97.19 324 P **P** **17 46 11.4 -0.7**
comp=Z,622nmcomp=Z,31nm,1.2s
CLL Collm 97.19 324⇑ *i*P **P** **17 46 11.5 -0.7**
comp=Z,58nm,1.5s
CLL *i* sP **sP** **17 46 30.4 -1.4**
CLL *e*x x 17 49 16.0
comp=Z,13nm,0.9s
CLL *e*x x 17 50 01.0
comp=Z,20nm,1.2s
CLL *e*PP **PP** **17 50 10.0 +1.5**
CLL *e*PPPP 17 53 48.0
CLL *e*SKSac **SKSac** **17 56 42.0 -3.5**
CLL *e*S **S** **17 57 30.0 -2.0**
CLL *e*(sS) 17 58 06.0
CLL *e*PS PS 17 59 03.0 +3.4
CLL *e*PPS PPS 17 59 40.0
CLL *e*x x 18 03 06.0
CLL *e*SS **SS** **18 04 12.0 +2.6**
CLL *e*SSS SSS 18 07 54.0
CLL *e*SSSS 18 11 12.0
CLL AMS AMS 18 34 00.0
comp=Z,1µm,22.0s
ARSA Arzberg 97.23 320 *i*P **P** **17 46 11.8 -0.7**
comp=Z,151nm,3.2s,SNR=8.8
ARSA *e*PP **PP** **17 50 08.2 -0.7**
comp=Z,0.9nm,0.6s
ARSA Arzberg 97.23 320 P **P** **17 46 12.0 -0.5**

ZVC Zvikov 97.23 322 *e*P Pdif 17 46 12.5 0.0
ZVC *e*PP **PP** **17 50 14.9 +6.0**
ZVC AMS AMS 18 31 50.0
comp=Z,2µm,22.3s
CKRC Cesky Krumlov 97.40 322 *e*P Pdif 17 46 13.4 +0.1
CKRC *e* 17 50 12.8
CKRC MLR MLR
comp=Z,2µm,24.4s
CKRC Cesky Krumlov 97.40 322 *e*P Pdif 17 46 13.4 +0.1
CKRC *e*PP **PP** **17 50 12.8 +2.6**
CKRC AMS AMS 18 31 30.0
comp=Z,2µm,24.4s
KMY Karmoy 97.46 334 *e*P **P** **17 46 12.0 -1.2**
KMY IAmb IAmb 17 46 13.5
comp=Z,152nm,1.1s
KMY *e*PP **PP** **17 50 09.5 -0.7**
KMY *e*SKSac **SKSac** **17 56 45.4 -1.1**
KMY IAMs_20 IAMs_20 18 25 45.6
comp=Z,2µm,33.7s
BSEG Bad Segeberg 97.56 328 P **P** **17 46 13.5 -0.2**
BSEG Bad Segeberg 97.56 328 P **P** **17 46 13.5 -0.2**
F04D Rainier, OR 97.58 41 IAmb IAmb 17 46 17.9
comp=Z,81nm,0.8s
GCIS Gornji Cirnik 97.67 319 *i*P **P** **17 46 13.8 -0.6**
GCIS *e* 17 50 14.9
GCIS *e*S SKSac 17 57 04.2 +16
KHC Kasperske Hory 97.72 322 *e*P **P** **17 46 14.6 -0.1**
KHC *e* 17 50 15.6
KHC MLR MLR
comp=Z,2µm,22.7s
KHC Kasperske Hory 97.72 322 *e*P **P** **17 46 14.6 -0.1**
KHC *e*PP **PP** **17 50 15.6 +2.9**
KHC AMS AMS 18 31 50.0
comp=Z,2µm,22.7s
KHC Kasperske Hory 97.72 322 P **P** **17 46 14.1 -0.6**
comp=Z,653nmcomp=Z,36nm,1.2s
G03D McMinnville, O 97.72 42 IAmb IAmb 17 46 17.6
comp=Z,73nm,1.0s
SOKA Soboth 97.75 320 *i*P **P** **17 46 14.0 -1.0**
comp=Z,215nm,3.7s,SNR=6.3
SOKA *e*PP **PP** **17 50 10.9 -2.2**
comp=Z,24nm,1.5s
GERES GERESS Array B 97.76 322 P **P** **17 46 14.6 -0.4**
comp=Z,23nm,0.8s,baz=62,slow=3.8,SNR=175
GERES PP **PP** **17 50 11.3 -1.8**
comp=Z,2.7nm,0.8s,baz=52,slow=6.4,SNR=2.2
GERES PKKP **PKKPbc** **18 02 45.1 -6.5**
comp=Z,1.0nm,0.9s,baz=257,slow=3.6,SNR=4.5
GERES PKKPbc **PKKPdf** **18 02 50.6 -2.8**
comp=Z,2.3nm,0.8s,baz=232,slow=3.2,SNR=12
GERES PKPPKP 18 11 02.7
comp=Z,0.2nm,0.4s,baz=166,slow=4.9,SNR=3.6
comp=Z,23nm,0.8s
GERES GERESS Array B 97.76 322 P **P** **17 46 13.9 -1.1**
MOA Molln 97.80 321 *i*PcP **P** **17 46 14.8 -0.2**
comp=Z,161nm,2.2s,SNR=20
MOA *e*PP **PP** **17 50 12.0 -1.3**
comp=Z,7.9nm,1.2s
MOA Molln 97.80 321 P Pdif 17 46 15.1 0.0
D05A Enumclaw 97.82 40 IAmb IAmb 17 46 18.3
comp=Z,87nm,1.3s
SCO Scoresbysund 97.87 350 IAmb IAmb 17 46 16.4
comp=Z,63nm,1.0s
SCO IAMs_20 IAMs_20 18 32 55.5
comp=Z,1µm,22.0s
SCO Scoresbysund 97.87 350 P Pdif 17 46 15.1 +0.2
SCO Scoresbysund 97.87 350 *i*P Pdif 17 46 15.3 +0.5
SCO IAmb IAmb 17 46 16.2
comp=Z,51nm,0.9s
TANN Tannenbergstha 97.87 324 P **P** **17 46 15.0 -0.3**
SESA Seetaler Alpe, 97.89 320 *i*P **P** **17 46 15.0 -0.7**
comp=Z,56nm,0.9s,SNR=18
SESA *e*PKKP **PKKPbc** **18 02 47.2 -4.1**
comp=Z,4.4nm,0.9s
COR Corvallis 97.92 43 P Pdif 17 46 16.3 +0.6
COR Corvallis 97.92 43 P Pdif 17 46 16.3 +0.7
COR IAmb IAmb 17 46 24.8
comp=Z,86nm,1.0s
COR Corvallis 97.92 43 P Pdif 17 46 18.4 +2.7
NEUB Neuenburg 97.93 325 P **P** **17 46 15.3 -0.2**
NKC Novy Kostel 97.95 324 *e*P Pdif 17 46 15.9 +0.2
NKC *e* 17 50 17.3
NKC MLR MLR
comp=Z,2µm,20.6s
NKC Novy Kostel 97.95 324 *e*P Pdif 17 46 15.9 +0.2
NKC *e*PP **PP** **17 50 17.3 +2.9**
NKC AMS AMS 18 33 00.0
comp=Z,2µm,20.6s
WIMM Wimmelburg 97.96 325 P **P** **17 46 15.2 -0.4**
SUMG Summit 98.04 355 IAMs_20 IAMs_20 18 36 37.0
comp=Z,1µm,19.0s
SUMG Summit 98.04 355 P Pdif 17 46 16.2 +0.1
SUMG Summit 98.04 355 *i*P Pdif 17 46 16.1 0.0
SUMG IAmb IAmb 17 46 16.5
comp=Z,34nm,1.0s
POGA Pongola 98.12 244 IAmb IAmb 17 46 17.3
comp=Z,58nm,1.0s
POGA Pongola 98.12 244 P **P** **17 46 16.1 -0.7**
OBKA Obir 98.12 320 *i*P **P** **17 46 15.7 -1.0**
comp=Z,23nm,1.1s,SNR=8.7
OBKA *e*PP **PP** **17 50 14.2 -1.7**
comp=Z,18nm,1.5s
OBKA *e*PKKP **PKKPbc** **18 02 48.8 -1.7**
comp=Z,2.0nm,0.7s
OBKA Obir 98.12 320 P **P** **17 46 15.9 -0.7**
WET Wettzell 98.14 323 P Pdif 17 46 16.6 0.0
WET Wettzell 98.14 323 P Pdif 17 46 16.6 0.0
ASSE Asse, Remlinge 98.16 326 P Pdif 17 46 16.9 +0.4
I03D Drain, OR 98.20 43 IAmb IAmb 17 46 19.7
comp=Z,55nm,1.1s
BIOA Bad Ischl, Aus 98.25 321 *i*P **P** **17 46 16.5 -0.6**
comp=Z,64nm,1.6s,SNR=8.6
BIOA *e*PP **PP** **17 50 15.1 -1.7**
comp=Z,49nm,2.3s
BIOA *e*PKKP **PKKPbc** **18 02 48.8 -1.4**
comp=Z,3.5nm,0.6s
MOX Moxa 98.26 324 P **P** **17 46 16.8 -0.3**
MOX Moxa 98.26 324 P **P** **17 46 16.8 -0.3**
BUCK Buck Mountain 98.27 43 IAmb IAmb 17 46 21.4
comp=Z,103nm,1.0s
H04D Lebanon 98.32 42 IAmb IAmb 17 46 20.4
comp=Z,76nm,1.2s
UPNV Upernavik 98.42 1 P Pdif 17 46 17.9 +0.6
UPNV Upernavik 98.42 1 *i*P Pdif 17 46 17.5 +0.2
UPNV IAmb IAmb 17 46 18.1
comp=Z,74nm,1.0s
CLZ Clausthal 98.45 326 P Pdif 17 46 18.1 +0.1
CRNS Crni Vrh 98.47 319 *i*P **P** **17 46 17.0 -1.1**
RETH Rethem/Aller, 98.61 327 P **P** **17 46 18.2 -0.2**
H04A Detroit Lake 98.63 42 IAmb IAmb 17 46 21.1
comp=Z,79nm,1.2s
MYKA Terra Mystica 98.66 320 *e*Pdiff **P** **17 46 17.0 -2.0**
comp=Z,76nm,2.3s
MYKA *e*PP **PP** **17 50 18.7 -1.2**
comp=Z,80nm,3.2s
MYKA *e*PKKP **PKKPbc** **18 02 48.1 -1.0**
comp=Z,2.8nm,0.6s
KBA Koelnbreinsper 98.67 320 P **P** **17 46 18.1 -1.1**
KBA Koelnbreinsper 98.67 320 *i*Pdiff **P** **17 46 17.8 -1.4**
comp=Z,29nm,1.2s,SNR=10
KBA *e*PP **PP** **17 50 17.9 -2.3**
comp=Z,42nm,2.3s
KBA *e*PKKP **PKKPbc** **18 02 47.9 -1.3**
comp=Z,1.0nm,0.6s
KBA Koelnbreinsper 98.67 320 P **P** **17 46 18.1 -1.1**
GRB3 Grafenberg Arr 98.70 323 P Pdif 17 46 19.2 +0.1
JCC Jacoby Creek, 98.72 46 IAmb IAmb 17 46 22.2
comp=Z,46nm,1.1s
HOOD Mount Hood Mea 98.74 41 IAmb IAmb 17 46 22.7
comp=Z,83nm,1.0s
MATE Matera 98.75 314⇓ P **P** **17 46 18.1 -1.3**
RJOB Jochberg 98.75 321 P **P** **17 46 18.9 -0.4**
GRB1 Grafenberg Arr 98.77 323 P Pdif 17 46 19.4 +0.1
GRB4 Grafenberg Arr 98.79 323 P **P** **17 46 19.4 -0.1**
KMPM Mount Pierce 98.79 47 IAmb IAmb 17 46 35.3
comp=Z,73nm,1.6s
GRA3 Grafenberg Arr 98.81 324 P Pdif 17 46 19.8 +0.2
GRB2 Grafenberg Arr 98.81 323 P Pdif 17 46 19.6 0.0
GTTG Gottingen 98.81 326 P Pdif 17 46 19.6 +0.1
QSPA South Pole Qui 98.82 180 P Pdif 17 46 19.7 +0.4
comp=Z,64nm,0.9s,baz=322,slow=1.8,SNR=123
QSPA PP **PP** **17 50 17.4 -3.6**
comp=Z,13nm,0.8s,baz=292,slow=1.7,SNR=3.3
QSPA PKKPbc **PKKPbc** **18 02 45.4 -4.7**
comp=Z,7.8nm,1.0s,baz=149,slow=1.9,SNR=5.8

QSPA PKPPKP **P'P'df** **18 10 55.8 -4.8**
comp=Z,5.3nm,1.0s,baz=255,slow=2.4,SNR=7.0
QSPA LR LR 18 31 26.7
comp=Z,844nm,20.6s,baz=346,slow=36
comp=Z,64nm,0.9s
QSPA South Pole Qui 98.82 180 P **P** **17 46 19.1 -0.1**
QSPA IAmb IAmb 17 46 21.0
comp=Z,74nm,0.9s
QSPA South Pole Qui 98.82 180 P Pdif 17 46 20.0 +0.7
GRA2 Grafenberg Arr 98.83 323 P Pdif 17 46 19.7 +0.1
GRB5 Grafenberg Arr 98.87 323 P Pdif 17 46 20.0 +0.1
ROBS Robic 98.89 320 *i* P **17 46 18.6 -1.3**
ROBS *eS* **pSKSac 17 57 10.7 -3.2**
GRA1 Grafenberg Arr 98.90 323 P Pdif 17 46 20.1 +0.1
GRFO Grafenberg 98.90 323 P Pdif 17 46 20.1 +0.1
KHMM Horse Mountain 98.91 46 IAmb IAmb 17 46 37.0
comp=Z,76nm,1.5s
KHMM IAMs_20 IAMs_20 18 27 40.1
comp=Z,766nm,22.0s
LESA Schwarzleotal 98.95 321 *i* Pdiff **P** **17 46 19.3 -1.1**
comp=Z,24nm,0.9s,SNR=16
LESA *e*PP **PP** **17 50 21.6 -0.6**
comp=Z,188nm,4.3s
LESA *e*PKKP **PKKPbc** **18 02 46.8 -1.5**
comp=Z,3.2nm,0.9s
GRC4 Grafenberg Arr 98.97 323 P Pdif 17 46 20.3 0.0
G05A Wamic 98.99 41 IAmb IAmb 17 46 35.1
comp=Z,58nm,1.1s
B08A Colville Reser 99.01 38 IAmb IAmb 17 46 22.9
comp=Z,77nm,0.8s
GRC1 Grafenberg Arr 99.01 323 P **Pdif** **17 46 20.5 0.0**
GRC3 Grafenberg Arr 99.02 323 P **Pdif** **17 46 20.4 -0.1**
WIFE Three Sisters- 99.10 43 IAmb IAmb 17 46 24.0
comp=Z,71nm,1.1s
UBBA Unterbreizbach 99.11 325 P **Pdif** **17 46 20.7 0.0**
MXC Moxie City 99.13 40 IAmb IAmb 17 46 23.9
comp=Z,51nm,1.0s
GRC2 Grafenberg Arr 99.15 323 P **Pdif** **17 46 20.8 -0.3**
TIP Timpagrande 99.20 312 ⇑P **Pdif** **17 46 21.0 -0.5**
TIP Timpagrande 99.20 312 P **Pdif** **17 46 20.8 -0.8**
comp=Z,433nmcomp=Z,21nm,1.4s
TIP Timpagrande 99.20 312 P **Pdif** **17 46 21.1 -0.5**
J04A Umpqua Nationa 99.21 44 IAmb IAmb 17 46 24.2
comp=Z,83nm,0.9s
EPH Ephrata 99.26 39 IAmb IAmb 17 46 23.9
comp=Z,62nm,1.0s
ABTA Abfaltersbach 99.33 320 *i* Pdiff **Pdif** **17 46 20.3 -1.7**
comp=Z,39nm,1.4s,SNR=12
ABTA *e*PP **PP** **17 50 24.7 -0.4**
comp=Z,53nm,2.7s
ABTA *e*PKKP **PKKPbc** **18 02 47.0 -0.2**
comp=Z,4.0nm,0.9s
YBH Yreka Blue Hor 99.34 45 LR LR 18 22 51.8
comp=Z,669nm,21.3s,baz=293,slow=30
KHBM Hayfork Bally 99.35 46 IAMs_20 IAMs_20 18 27 42.7
comp=Z,830nm,20.0s
KCPM Cahto Peak 99.42 47 IAmb IAmb 17 46 25.4
comp=Z,45nm,1.1s
KCPM IAMs_20 IAMs_20 18 21 26.8
comp=Z,1µm,21.0s
G06A Carlson Farm, 99.44 41 IAmb IAmb 17 46 37.7
comp=Z,76nm,1.7s
ILON Igloolik, Nuna 99.45 10 IAmb IAmb 17 46 23.2
comp=Z,60nm,1.1s
MARCO Tramutola 99.51 313 P **Pdif** **17 46 22.2 -0.7**
WAH2 Wahluke Slope 99.52 40 IAmb IAmb 17 46 25.3
comp=Z,64nm,1.0s
WTTA Wattenberg 99.66 321 *i* Pdiff **Pdif** **17 46 22.7 -0.9**
comp=Z,76nm,1.3s,SNR=20
WTTA *e*PP **PP** **17 50 26.1 -1.7**
comp=Z,29nm,1.4s
WTTA *e*PKKP **PKKPbc** **18 02 44.7 -1.7**
comp=Z,3.0nm,0.6s
WTTA Wattenberg 99.66 321 P **Pdif** **17 46 22.9 -0.8**
WATA Walderalm 99.67 321 *i* Pdiff **Pdif** **17 46 22.6 -1.0**
comp=Z,58nm,1.2s,SNR=13
WATA *e*PP **PP** **17 50 25.2 -2.5**
comp=Z,12nm,1.2s
IBBN Ibbenburen 99.68 327 P **Pdif** **17 46 23.3 +0.1**
NUUG Nuugaatsiaq 99.69 360 *i* P **Pdif** **17 46 22.5 -0.5**
O02D Mt. Diablo Mer 99.83 47 IAMs_20 IAMs_20 18 27 57.4
comp=Z,1µm,21.0s
SQTA Sankt Quirin 99.95 321 *i* Pdiff **Pdif** **17 46 23.9 -0.9**
comp=Z,55nm,1.2s,SNR=17
SQTA *e*PP **PP** **17 50 29.0 -0.8**
comp=Z,25nm,1.4s
SQTA *e*PKKP **PKKPbc** **18 02 45.6 +0.1**
comp=Z,7.4nm,1.2s
MOTA Moosalm 99.96 321 *i* Pdiff **Pdif** **17 46 23.9 -1.0**
comp=Z,45nm,1.1s,SNR=12
MOTA *e*PP **PP** **17 50 26.9 -3.0**
comp=Z,87nm,2.8s
MOTA *e*PKKP **PKKPbc** **18 02 44.5 -1.0**
comp=Z,1.2nm,0.6s
LSZ Lusaka 100.09 256 P **Pdif** **17 46 25.0 -1.1**
LSZ Lusaka 100.09 256 P **Pdif** **17 46 24.9 -1.2**
RETA Reutte 100.11 322 *e*Pdiff **Pdif** **17 46 24.5 -0.9**
comp=Z,44nm,2.2s
RETA *e*PP **PP** **17 50 29.7 -1.3**
comp=Z,28nm,1.8s
RETA *e*PKKP **PKKPbc** **18 02 43.1 -1.9**
comp=Z,6.7nm,1.0s
CEL Celeste 100.14 311 P **Pdif** **17 46 24.9 -0.9**
comp=Z,646nmcomp=Z,54nm,1.1s
CEL Celeste 100.14 311 P **Pdif** **17 46 25.1 -0.7**
TNS Taunus Mts 100.27 325 P **Pdif** **17 46 26.2 +0.1**
TNS Taunus Mts 100.27 325 P **Pdif** **17 46 26.2 +0.1**
FETA Feichten 100.33 321 *i* Pdiff **Pdif** **17 46 26.0 -0.6**
comp=Z,35nm,1.1s,SNR=11
FETA *e*PP **PP** **17 50 30.2 -2.5**
comp=Z,9.3nm,1.2s
FETA *e*PKKP **PKKPbc** **18 02 44.3 -0.1**
comp=Z,4.0nm,1.0s
BUG Bochum--Univer 100.36 326 P **Pdif** **17 46 25.9 -0.4**
BUG Bochum--Univer 100.36 326 P **Pdif** **17 46 25.9 -0.4**
NEW Newport 100.38 37 P **Pdif** **17 46 28.1 +1.5**
NEW Newport 100.38 37 IAMs_20 IAMs_20 18 24 06.9
comp=Z,828nm,22.0s
NEW Newport 100.38 37 P **Pdif** **17 46 28.1 +1.5**
DAVA Damuels 100.74 322 *i* Pdiff **Pdif** **17 46 27.8 -0.6**
comp=Z,20nm,0.8s,SNR=5.2
DAVA *e*PP **PP** **17 50 32.8 -3.1**
comp=Z,47nm,2.0s
DAVA *e*PKKP **PKKPbc** **18 02 42.8 -0.5**
comp=Z,1.3nm,0.4s
DAVA Damuels 100.74 322 P **Pdif** **17 46 28.1 -0.3**
FUORN Ofenpass-Fuorn 100.79 321 P **Pdif** **17 46 28.7 0.0**
SUTB Sutter Butte 100.89 47 IAMs_20 IAMs_20 18 22 23.5
comp=Z,795nm,22.0s
DAVOX Davos/Dischmat 100.96 321 PKKPbc PKKPbc 18 02 42.3 -0.4
comp=Z,0.9nm,0.3s,baz=52,slow=4.2,SNR=3.9
ORV Oroville 100.98 47 IAMs_20 IAMs_20 18 22 40.8
comp=Z,822nm,22.0s
BTNL Ternell 101.40 326 *d*Pdif **Pdif** **17 46 31.2 +0.1**
comp=Z,7.6nm,1.1s
HGN Heimansgroeve 101.42 326 P **Pdif** **17 46 31.0 0.0**
TUE Stuetta 101.42 321 IAMs_20 IAMs_20 18 39 13.3
comp=Z,768nm,21.0s
TUE Stuetta 101.42 321 P **Pdif** **17 46 30.4 -1.1**
TUE Stuetta 101.42 321 P **Pdif** **17 46 31.1 -0.4**
SOEG Soedalen 101.42 352 *i* P **Pdif** **17 46 29.3 -1.4**
MEM Membach 101.45 326 P **Pdif** **17 46 31.1 -0.2**
MEM Membach 101.45 326 *d*Pdif **Pdif** **17 46 30.8 -0.4**
comp=Z,18nm,1.1s
MEM Membach 101.45 326 P **Pdif** **17 46 31.1 -0.2**
BSTI Sart Tilman 101.71 326 *d*Pdif **Pdif** **17 46 32.3 -0.1**
comp=Z,4.9nm,1.1s
BMO Blue Mountains 101.75 41 IAMs_20 IAMs_20 18 24 22.4
comp=Z,731nm,21.0s
BNALP Bannalp 101.81 322 P **Pdif** **17 46 32.9 -0.2**
WLF Walferdange 101.84 325 P **Pdif** **17 46 33.6 +0.6**
WLF Walferdange 101.84 325 *d*Pdif **Pdif** **17 46 33.4 +0.4**
comp=Z,25nm,1.1s
WLF Walferdange 101.84 325 P **Pdif** **17 46 33.6 +0.6**
WVOR Wild Horse Val 101.88 43 IAMs_20 IAMs_20 18 23 34.1
comp=Z,919nm,20.0s
WVOR Wild Horse Val 101.88 43 P **Pdif** **17 46 35.5 +2.0**
BCLA Clavier 101.94 326 *d*Pdif **Pdif** **17 46 32.9 -0.5**
comp=Z,11nm,1.2s
WELL Weller Preserv 101.95 48 IAMs_20 IAMs_20 18 22 37.6
comp=Z,1µm,22.0s
ECH Echery 101.95 323 IAMs_20 IAMs_20 18 36 26.1
comp=Z,1µm,20.0s
ILULI Ilulissat 102.01 359 IAMs_20 IAMs_20 18 41 56.8
comp=Z,926nm,20.0s
RCHB Rochefort 102.11 326 *d*Pdif **Pdif** **17 46 33.6 -0.5**
comp=Z,18nm,1.1s
RCHB Rochefort 102.11 326 P **Pdif** **17 46 33.5 -0.7**
BMRD Maredsous 102.30 326 *d*Pdif **Pdif** **17 46 34.7 -0.3**
comp=Z,15nm,1.1s
ELIB Princess Elisa 102.47 198 *d*Pdif **Pdif** **17 46 36.5 +1.1**
comp=Z,18nm,1.2s
DOU Dourbes 102.50 326 *d*Pdif **Pdif** **17 46 35.6 -0.3**
SENIN Lac Senin/Sane 102.73 322 IAMs_20 IAMs_20 18 38 33.9
comp=Z,1µm,20.0s
PKD Bear Valley Ra 102.99 50 IAMs_20 IAMs_20 18 23 51.5
comp=Z,1µm,22.0s
EKA Eskdalemuir Ar 103.42 333 Pdiff **Pdif** **17 46 40.4 +0.5**
comp=Z,3.4nm,0.8s,baz=58,slow=4.5,SNR=5.8
EKA PP **PP** **17 50 53.2 -2.2**
comp=Z,14nm,1.0s,baz=51,slow=8.0,SNR=4.7
EKA PKKPbc **PKKPbc** **18 02 34.0 -1.6**
comp=Z,6.9nm,0.8s,baz=242,slow=3.2,SNR=8.2
EKA Eskdalemuir Ar 103.42 333 P **Pdif** **17 46 41.8 +1.9**
NVAR Mina Array Bea 103.71 47 Pdiff **Pdif** **17 46 43.4 +1.5**
comp=Z,13nm,0.9s,baz=292,slow=5.2,SNR=36
NVAR PKiKP **PP** **17 50 58.5 0.0**
comp=Z,3.9nm,0.5s,baz=303,slow=4.5,SNR=14
NVAR PKKPbc **PKKPbc** **18 02 34.5 +0.2**
comp=Z,12nm,0.8s,baz=138,slow=4.3,SNR=38
BOSA Boshof 103.90 243 Pdiff **Pdif** **17 46 42.8 0.0**
comp=Z,3.6nm,0.7s,baz=85,slow=4.8,SNR=5.5
BOSA PKiKP **PKiKP** **17 50 59.6 -0.8**
comp=Z,4.6nm,0.8s,baz=161,slow=3.9,SNR=5.5
BOSA PKKP **PKKPdf** **18 02 44.3 +1.7**
comp=Z,2.3nm,0.7s,baz=259,slow=5.2,SNR=6.2
VES Vestal, Richgr 104.13 50 IAMs_20 IAMs_20 18 24 15.6
comp=Z,1µm,22.0s
HLID Hailey 104.19 41 P **Pdif** **17 46 45.8 +2.0**
SFJD Kangerlussuaq 104.22 359 PKiKP **PKiKP** **17 50 57.1 -2.6**
comp=Z,51nm,1.0s,baz=34,slow=3.6,SNR=6.6
SFJD Kangerlussuaq 104.22 359 IAMs_20 IAMs_20 18 39 56.4
comp=Z,793nm,22.0s
DLMT Dillon 104.48 39 IAMs_20 IAMs_20 18 25 17.5
comp=Z,956nm,22.0s
ANGG Ammassalik, Gr 104.69 353 IAMs_20 IAMs_20 18 42 36.8
comp=Z,759nm,20.0s
FFC Flin Flon 104.80 27 P **Pdif** **17 46 47.1 +1.0**
OSI Osito Audit: C 104.86 51 IAMs_20 IAMs_20 18 23 58.2
comp=Z,1µm,22.0s
ELK Elko 104.90 44 IAMs_20 IAMs_20 18 25 39.2
comp=Z,944nm,22.0s
SSB Saint Sauveur 104.95 322 IAMs_20 IAMs_20 18 37 45.5
comp=Z,1µm,22.0s
PASC Pasadena Art C 105.44 51 IAMs_20 IAMs_20 18 24 03.6
comp=Z,1µm,22.0s
MWC Mount Wilson 105.52 51 IAMs_20 IAMs_20 18 24 27.6
comp=Z,948nm,21.0s
BFSC Mount Baldy Ra 105.82 51 IAMs_20 IAMs_20 18 24 27.5
comp=Z,986nm,22.0s
KEST Kesra 105.95 311 PKiKP **PKiKP** **17 51 03.3 -0.7**
comp=Z,8.9nm,0.9s,baz=345,slow=4.5,SNR=4.7
KEST PP **PP** **17 51 16.0 +1.0**
comp=Z,12nm,0.9s,baz=18,slow=6.3,SNR=4.5
DSB Dublin 106.21 333 IAMs_20 IAMs_20 18 37 12.7
comp=Z,908nm,19.0s
FRB Frobisher Bay 106.64 7 Pdiff **Pdif** **17 46 54.0 0.0**
comp=Z,8.7nm,0.9s,baz=315,slow=6.6,SNR=5.9
FRB PKiKP **PKiKP** **17 51 03.5 -0.7**
comp=Z,17nm,0.7s,baz=358,slow=2.6,SNR=11
FRB PP **PP** **17 51 17.8 -0.9**
comp=Z,12nm,0.7s,baz=352,slow=5.7,SNR=4.7
AHID Auburn Hatcher 106.70 40 IAMs_20 IAMs_20 18 26 51.3
comp=Z,1µm,22.0s
DUG Dugway, Tooele 106.80 43 P **Pdif** **17 46 57.3 +1.8**
DUG Dugway, Tooele 106.80 43 IAMs_20 IAMs_20 18 26 39.4
comp=Z,791nm,22.0s
HWUT Hardware Ranch 106.96 42 IAMs_20 IAMs_20 18 27 55.5
comp=Z,723nm,22.0s
PFO Pinyon Flats O 106.98 51 P **Pdif** **17 46 58.0 +1.6**
BELC Belle Mtn. Jos 107.18 50 IAMs_20 IAMs_20 18 25 33.5
comp=Z,1µm,22.0s
BAR Barrett 107.18 52 IAMs_20 IAMs_20 18 27 40.8
comp=Z,837nm,21.0s
DGMT Dagmar 107.63 33 IAMs_20 IAMs_20 18 30 52.9
comp=Z,655nm,22.0s
PDAR Pinedale Array 107.68 40 Pdiff **Pdif** **17 47 00.7 +1.2**
comp=Z,1.9nm,0.9s,baz=272,slow=4.2,SNR=7.2
PDAR PKiKP **PKiKP** **17 51 07.5 +0.3**
comp=Z,3.1nm,1.0s,baz=292,slow=1.5,SNR=5.4
PDAR PP **PP** **17 51 28.1 +0.6**
comp=Z,4.3nm,1.0s,baz=328,slow=5.3,SNR=6.4
PDAR PKKPbc **PKKPbc** **18 02 20.1 -2.4**
comp=Z,5.0nm,0.9s,baz=131,slow=5.1,SNR=14
PDAR PKKP **PKKPdf** **18 02 34.0 -1.4**
comp=Z,7.8nm,1.0s,baz=118,slow=5.4,SNR=12
BC3 Big Chuckawall 107.73 50 IAMs_20 IAMs_20 18 25 37.2
comp=Z,772nm,22.0s
MAHO Mahon 107.74 317 IAMs_20 IAMs_20 18 42 30.9
comp=Z,772nm,20.0s
IRM Iron Mountain 107.76 50 IAMs_20 IAMs_20 18 26 14.9
comp=Z,1µm,22.0s
TROLL Troll, Antarti 108.52 196 ⇑Pdiff **Pdif** **17 47 03.3 +0.9**
comp=Z,355nm,0.8s
TROLL ⇑PKiKP **PKiKP** **17 51 08.5 +0.8**
comp=Z,603nm,0.7s
TROLL PKKPbc **PKKPbc** **18 02 17.8 -2.8**
comp=Z,161nm,0.5s
TROLL ⇑PKKPab **PKKPab** **18 02 31.1 +0.4**
comp=Z,445nm,0.9s
O20A White River Ci 109.88 42 IAMs_20 IAMs_20 18 28 37.7
comp=Z,1µm,22.0s
IVI Ivigtut 109.94 357 IAMs_20 IAMs_20 18 42 36.3
comp=Z,905nm,20.0s
SNAA Sanae 110.12 195 ⇑Pdiff **Pdif** **17 47 11.1 +1.8**
comp=Z,128nm,0.9s
SNAA ⇑PKKPbc **PKKPbc** **18 02 11.4 -4.0**
comp=Z,223nm,0.8s
SNAA ⇑PKKPab **PKKPab** **18 02 23.6 0.0**
comp=Z,356nm,0.9s
SNAA Sanae 110.12 195 P PKiKP 17 51 00.8 -10
comp=Z,32nm,0.2s
SNAA Sanae 110.12 195 Pdiff **Pdif** **17 47 10.1 +0.7**
comp=Z,4.2nm,0.8s,baz=96,slow=3.2,SNR=6.1
SNAA PKiKP **PKiKP** **17 51 11.4 +0.8**
comp=Z,5.9nm,0.7s,baz=182,slow=3.8,SNR=5.2
SNAA PP **PP** **17 51 41.0 -3.6**
comp=Z,11nm,1.0s,baz=118,slow=6.3,SNR=5.0
SNAA PKKPbc **PKKPbc** **18 02 12.0 -3.3**
comp=Z,13nm,0.9s,baz=346,slow=3.1,SNR=6.3
MDND Maddock 110.41 31 IAMs_20 IAMs_20 18 31 56.4
comp=Z,760nm,22.0s
ULM Lac du Bonnet 110.58 27 PKiKP **PKiKP** **17 51 11.9 -0.2**
comp=Z,19nm,1.0s,baz=305,slow=4.0,SNR=10.0
ULM PKKPbc **PKKPbc** **18 02 11.1 -2.0**
comp=Z,2.7nm,0.4s,baz=110,slow=5.3,SNR=5.8
ULM PKKPab **PKKPab** **18 02 20.8 -2.9**
comp=Z,25nm,0.8s,baz=122,slow=3.4,SNR=18
E28A Huff 110.66 33 IAMs_20 IAMs_20 18 29 49.3
comp=Z,703nm,22.0s
VNA2 Neumayer--Watz 111.74 195 ⇑Pdiff **Pdif** **17 47 19.5 +3.0**
comp=Z,6.1nm,0.8s,baz=138,slow=2.8
VNA2 ⇑PKiKP **PKiKP** **17 51 13.6 0.0**
comp=Z,23nm,0.6s,baz=76,slow=1.5
VNA2 ⇓PKKPbc **PKKPbc** **18 02 06.7 -3.2**
comp=Z,4.4nm,0.6s,baz=324,slow=4.5
VNA2 ⇑PKKPab **PKKPab** **18 02 16.4 +0.1**
comp=Z,8.2nm,0.8s,baz=325,slow=4.0
TUC Tucson 111.85 50 IAMs_20 IAMs_20 18 28 04.2
comp=Z,826nm,22.0s
AGMN Agassiz Nation 111.96 29 IAMs_20 IAMs_20 18 38 27.0
comp=Z,768nm,21.0s
VNA1 Neumayer--Stat 112.14 195 ⇑Pdiff **Pdif** **17 47 22.5 +4.3**
comp=Z,6.5nm,0.9s
VNA1 ⇑PKiKP **PKiKP** **17 51 15.1 +0.8**
comp=Z,27nm,0.9s
VNA1 ⇑PKKPbc **PKKPbc** **18 02 05.5 -3.1**
comp=Z,26nm,0.9s
CART Cartagena 112.46 317 IAMs_20 IAMs_20 18 44 49.8
comp=Z,852nm,21.0s
ESDC Sonseca Array 113.25 320 PKiKP **PKiKP** **17 51 17.5 0.0**
comp=Z,3.2nm,0.9s,baz=4.0,slow=3.5,SNR=12
ESDC PP **PP** **17 52 05.0 -2.6**
comp=Z,10.0nm,1.1s,baz=49,slow=6.7,SNR=4.6
ESDC PKKPbc **PKKPbc** **18 02 01.7 -2.4**
comp=Z,1.6nm,1.0s,baz=265,slow=2.0,SNR=5.5
PBRG Braganca 113.69 323 *e*PP **PP** **17 52 10.0 -0.5**
K30B Basset 113.73 35 IAMs_20 IAMs_20 18 32 47.8
comp=Z,737nm,22.0s
ANMO Albuquerque 113.76 46 IAMs_20 IAMs_20 18 30 04.0
comp=Z,961nm,22.0s
ALQ Albuquerque 113.76 46 IAMs_20 IAMs_20 18 30 15.1
comp=Z,931nm,22.0s
ALQ Albuquerque 113.76 46 IAMs_20 IAMs_20 18 30 15.1
comp=Z,929nm,22.0s
TAM Tamanrasset 114.03 300 IAMs_20 IAMs_20 18 45 45.6
comp=Z,799nm,22.0s
MVO Moncorvo 114.25 323 *e*PKPdf PKPdf 17 51 19.8 +0.3
MVO *e*PP **PP** **17 52 14.8 +0.3**
MVO *e*LR LR 18 32 52.5
MVO *i* IAMs_20 IAMs_20 18 45 48.6
comp=Z,584nm,22.0s
PGAV Gavieira, Arco 114.48 324 *e*PKPdf PKPdf 17 51 20.4 +0.5
PGAV *e*PP **PP** **17 52 16.5 +0.4**
PGAV *e*LR LR 18 31 06.4
PGAV *i* IAMs_20 IAMs_20 18 47 17.9
comp=Z,936nm,20.0s
PCAB Cabril 114.50 324 *e*PP **PP** **17 52 16.4 +0.2**
POLO Lamas de Olo 114.57 324 *e*PKPdf PKPdf 17 51 20.8 +0.7
POLO *e*PP **PP** **17 52 18.0 +1.2**
ECSD EROS Data Cent 114.70 33 IAMs_20 IAMs_20 18 42 23.2
comp=Z,583nm,22.0s
MTE Manteigas 115.03 323 *e*PKPdf **PKPdf** **17 51 21.6 +0.6**
MTE *e*PP **PP** **17 52 20.9 +0.9**
MTE *e*LR LR 18 29 18.0
MTE *i* IAMs_20 IAMs_20 18 46 31.0
comp=Z,730nm,22.0s
MTE Manteigas 115.03 323 IAMs_20 IAMs_20 18 45 49.2
comp=Z,926nm,22.0s
PVIS Viseu 115.04 323 *e*PKPdf **PKPdf** **17 51 21.4 +0.4**
PVIS *e*PP PP 17 52 10.6 -10
E38A The Farm, Brul 115.20 28 IAMs_20 IAMs_20 18 41 15.7
comp=Z,877nm,22.0s
EPT El Paso 115.31 49 IAMs_20 IAMs_20 18 29 58.6
comp=Z,637nm,22.0s
PCBR Castelo Branco 115.33 322 *e*PKPdf **PKPdf** **17 51 21.9 +0.4**
PCBR *e*PP **PP** **17 52 22.1 0.0**
SCHQ Schefferville 115.51 8 PKP **PKPdf** **17 51 21.6 +0.3**
comp=Z,29nm,0.7s,baz=358,slow=2.3,SNR=34
SCHQ PP **PP** **17 52 22.8 +0.2**
comp=Z,15nm,0.9s,baz=349,slow=7.8,SNR=3.9
SCHQ PKKPbc **PKKPbc** **18 01 53.4 -3.5**
comp=Z,7.1nm,0.9s,baz=147,slow=7.2,SNR=4.4
SCHQ SKKP **SKKPdf** **18 05 51.4 -0.4**
comp=Z,4.8nm,0.8s,baz=153,slow=5.9,SNR=3.7
PMRV Marv??o 115.53 322 *e*PKPdf **PKPdf** **17 51 22.4 +0.5**
PMRV *e*PP **PP** **17 52 23.5 -0.1**
PMRV *e*LR LR 18 29 17.3
PMRV *i* IAMs_20 IAMs_20 18 45 18.3
comp=Z,760nm,24.0s
SPMN Marine on St. 115.62 30 IAMs_20 IAMs_20 18 45 58.0
comp=Z,594nm,20.0s
PCAS Casmilo, Conde 115.82 323 *e*PKPdf **PKPdf** **17 51 22.9 +0.5**
PCAS *e*PP **PP** **17 52 26.7 +1.1**
PESTR Estremoz 116.00 321 *e*PKPdf **PKPdf** **17 51 23.6 +0.8**
PESTR *e*PP PP 17 52 13.1 -14
CBKS Cedar Bluff 116.05 39 IAMs_20 IAMs_20 18 32 07.7
comp=Z,545nm,21.0s
PBAR Barrancos 116.07 320 *e*PKPdf **PKPdf** **17 51 23.5 +0.6**
PBAR *e*PP **PP** **17 52 27.5 +0.2**
MNTX Cornudas Mount 116.18 48 IAMs_20 IAMs_20 18 30 50.5
comp=Z,627nm,22.0s
I37A Lemond, Waseca 116.19 31 IAMs_20 IAMs_20 18 44 59.2
comp=Z,603nm,20.0s
SLBS Sierra La Lagu 116.19 58 **PKiKP** **17 51 24.7 +1.0**
PMTG Montargil 116.26 322 *e*PKP **PKPdf** **17 51 23.0 -0.2**
PARRA Arraiolos 116.31 321 *e*PKPdf **PKiKP** **17 51 24.1 +0.7**
PSBE So Bento 116.33 322 *e*PKPdf **PKiKP** **17 51 24.2 +0.8**
EVO Evora 116.46 321 *e*PKPdf **PKiKP** **17 51 24.3 +0.6**
MOE Montemor 116.68 321 *e*PKPdf **PKiKP** **17 51 24.7 +0.6**
MOE *e*PP **PP** **17 52 29.8 -1.8**
PBEJ Beja 116.68 321 *e*PKPdf **PKiKP** **17 51 24.8 +0.6**
PBEJ *e*PP PP **17 52 30.6 -1.1**
G40A Rib Lake 116.83 28 IAMs_20 IAMs_20 18 42 01.8
comp=Z,686nm,22.0s
R32A Long Quarter, 116.93 39 IAMs_20 IAMs_20 18 37 38.9
comp=Z,584nm,21.0s
PVAQ Vaqueiros 116.96 320 *e*PKPdf **PKiKP** **17 51 25.3 +0.6**
PVAQ *e*LR LR 18 31 52.7
PVAQ *i* IAMs_20 IAMs_20 18 46 03.3
comp=Z,698nm,20.0s
MESJ Messejana 117.02 321 *e*PKPdf **PKiKP** **17 51 25.2 +0.4**
MESJ *e*PP **PP** **17 52 34.6 +0.6**
MESJ IAMs_20 IAMs_20 18 45 42.0
comp=Z,914nm,20.6s
MESJ Messejana 117.02 321 *e*PKPdf **PKiKP** **17 51 25.5 +0.8**
MESJ Messejana 117.02 321 *e*PKIKP **PKiKP** **17 51 25.2 +0.4**
MESJ *e* 17 52 34.6
MESJ Messejana 117.02 321 **PKPdf** **17 51 24.6 -0.2**
PLOUS Minas do Lousa 117.02 321 *e*PKPdf **PKiKP** **17 51 25.4 +0.7**
PCVE Castro Verde 117.03 320 *e*PKPdf **PKiKP** **17 51 25.4 +0.6**
AMTX Amarillo 117.10 43 IAMs_20 IAMs_20 18 35 07.2
comp=Z,919nm,21.0s
N35A Tabor 117.17 35 IAMs_20 IAMs_20 18 35 28.6
comp=Z,866nm,21.0s
H06S1 SOCORRO T 117.18 64 PKP **PKPdf** **17 51 25.1 -0.4**
PBDV Barranco-do-Ve 117.20 320 *e*PKPdf **PKiKP** **17 51 26.4 +1.2**
F42A Maple Grove Fa 117.39 26 IAMs_20 IAMs_20 18 41 33.5
comp=Z,933nm,22.0s
PTEO Sao Teotonio 117.51 321 *e*PKPdf **PKiKP** **17 51 26.4 +0.7**
MD01 Midelt array s 117.57 314 **PKPdf** **17 51 26.1 0.0**
MORF Marmelete 117.61 320 *e*PKPdf **PKiKP** **17 51 26.3 +0.3**
MORF *e*PP **PP** **17 52 38.7 +0.5**
MORF IAMs_20 IAMs_20 18 45 58.8
comp=E,1µm,17.5s
MORF Marmelete 117.61 320 *e*PKPdf **PKiKP** **17 51 27.0 +1.0**
MORF Marmelete 117.61 320 *e*PKIKP **PKiKP** **17 51 26.3 +0.3**
MORF *e* 17 52 38.7
I40A Norwalk 117.66 29 IAMs_20 IAMs_20 18 40 24.0
comp=Z,596nm,22.0s
KSU1 Kansas State U 117.77 37 IAMs_20 IAMs_20 18 39 37.8
comp=Z,685nm,22.0s
SCIA State Center 117.78 32 IAMs_20 IAMs_20 18 44 52.5
comp=Z,704nm,21.0s
PFVI Vila Bisbo 117.83 320 *e*PKPdf **PKiKP** **17 51 27.8 +1.4**
I42A Draeger Farm, 118.47 28 IAMs_20 IAMs_20 18 45 10.4
comp=Z,922nm,21.0s
E46A Sault Ste Mari 118.51 24 IAMs_20 IAMs_20 18 43 32.7
comp=Z,712nm,22.0s
H43A Windswept, Lux 118.55 27 IAMs_20 IAMs_20 18 48 55.4
comp=Z,507nm,20.0s
JFWS Jewell Farm 118.56 30 IAMs_20 IAMs_20 18 47 29.0
comp=Z,531nm,20.0s
TXAR Lajitas Array 118.65 50 PKP **PKiKP** **17 51 29.1 +0.7**
comp=Z,24nm,0.9s,baz=264,slow=1.0,SNR=85
TXAR PP **PP** **17 52 44.6 -1.3**
comp=Z,5.1nm,0.9s,baz=298,slow=2.5,SNR=2.0
TXAR PKKPbc **PKKPbc** **18 01 46.5 +1.5**
comp=Z,4.9nm,0.9s,baz=135,slow=5.9,SNR=14
TXAR SKKPbc SKKPbc 18 05 19.0 -8.8
comp=Z,0.6nm,0.7s,baz=138,slow=2.0,SNR=1.7
TXAR Lajitas Array 118.65 50 **PKiKP** **17 51 28.4 +0.1**
L40A Anamosa 118.70 31 IAMs_20 IAMs_20 18 47 47.8
comp=Z,610nm,21.0s
WMOK Wichita Mounta 119.13 42 PKiKP **PKiKP** **17 51 29.3 +0.3**
WMOK Wichita Mounta 119.13 42 IAMs_20 IAMs_20 18 36 29.6
comp=Z,706nm,22.0s
P38A Dawn 119.19 35 IAMs_20 IAMs_20 18 36 41.2
comp=Z,734nm,22.0s
T35A Sooner Cattle 119.23 39 IAMs_20 IAMs_20 18 40 47.9
comp=Z,685nm,20.0s
I45A Fountain 119.58 27 IAMs_20 IAMs_20 18 49 20.4
comp=Z,634nm,20.0s
K43A Burlington 119.65 29 IAMs_20 IAMs_20 18 35 56.6
comp=Z,783nm,22.0s
N41A Harden Midland 119.88 32 IAMs_20 IAMs_20 18 47 17.0
comp=Z,594nm,22.0s
P40A Paris 120.08 34 IAMs_20 IAMs_20 18 37 51.6
comp=Z,793nm,21.0s
SMAI San Martin Ant 120.22 174 **PKPdf** **17 51 28.3 -1.6**
L44A Lake County Fo 120.25 29 IAMs_20 IAMs_20 18 38 29.6
comp=Z,650nm,22.0s
S39A Bolivar 120.63 36 IAMs_20 IAMs_20 18 45 09.6
comp=Z,713nm,20.0s
TORD Torodi Ar. Bea 120.79 291 PKP **PKPdf** **17 51 32.0 -0.6**
comp=Z,58nm,0.8s,baz=55,slow=1.8,SNR=153
TORD PP **PP** **17 52 59.7 -1.5**
comp=Z,23nm,1.1s,baz=63,slow=6.7,SNR=4.8
TORD PKKPbc **PKKPbc** **18 01 36.2 -0.5**
comp=Z,7.5nm,0.9s,baz=268,slow=3.5,SNR=12
TORD Torodi Ar. Bea 120.79 291 **PKPdf** **17 51 31.5 -1.1**
HDIL Hopedale 120.79 31 IAMs_20 IAMs_20 18 47 23.1
comp=Z,913nm,22.0s
R40A Maddies Statio 120.82 35 IAMs_20 IAMs_20 18 36 44.5
comp=Z,604nm,22.0s
J47A Sunmer 120.83 26 IAMs_20 IAMs_20 18 47 00.6
comp=Z,757nm,22.0s
U38A Gravette 120.84 38 IAMs_20 IAMs_20 18 41 03.3
comp=Z,821nm,21.0s

JCT	Junction City	120.88	46	IAMs_20	IAMs_20	18 44 21.8		
	comp=Z,659nm,21.0s							
I49A	Point Hope	121.10	24	IAMs_20	IAMs_20	18 45 18.4		
	comp=Z,629nm,20.0s							
P43A	Skaggs, Pawnee	121.35	32	IAMs_20	IAMs_20	18 47 36.0		
	comp=Z,517nm,20.0s							
CCM	Cathedral Cave	121.56	34	PKIKP	PKPdf	17 51 33.2	-0.3	
CCM				MLR	MLR			
	comp=Z,800nm,22.0s							
CCM	Cathedral Cave	121.56	34		PKPdf	17 51 33.2	-0.3	
CCM	Cathedral Cave	121.56	34	IAMs_20	IAMs_20	18 37 41.0		
	comp=Z,780nm,22.0s							
SFIN	Lafayette	122.03	30	IAMs_20	IAMs_20	18 37 54.6		
	comp=Z,544nm,20.0s							
AAM	Ann Arbor	122.09	26	IAMs_20	IAMs_20	18 45 23.9		
	comp=Z,737nm,22.0s							
K50A	Casco	122.15	25	IAMs_20	IAMs_20	18 45 36.1		
	comp=Z,558nm,22.0s							
N47A	Urbana	122.31	28	IAMs_20	IAMs_20	18 40 05.0		
	comp=Z,873nm,22.0s							
T42A	Van Buren	122.37	35	IAMs_20	IAMs_20	18 49 07.5		
	comp=Z,597nm,21.0s							
P46A	Rosedale	122.55	30	IAMs_20	IAMs_20	18 37 41.6		
	comp=Z,857nm,22.0s							
D62A	Allapoint, All	122.57	12	IAMs_20	IAMs_20	18 49 23.0		
	comp=Z,737nm,20.0s							
MIAR	Mount Ida	122.58	39	PKIKP	PKiKP	17 51 36.1	+0.3	
S44A	Carbondale	122.92	33	IAMs_20	IAMs_20	18 48 22.7		
	comp=Z,560nm,22.0s							
N49A	Columbus Grove	122.97	27	IAMs_20	IAMs_20	18 44 13.4		
	comp=Z,815nm,22.0s							
O48B	Farmland	123.05	28	IAMs_20	IAMs_20	18 40 35.6		
	comp=Z,736nm,22.0s							
M50A	Fremont	123.09	26	IAMs_20	IAMs_20	18 44 45.3		
	comp=Z,740nm,22.0s							
LONY	Lake Ozonia	123.44	18	IAMs_20	IAMs_20	18 45 04.5		
	comp=Z,774nm,22.0s							
O49A	Covington	123.49	28	IAMs_20	IAMs_20	18 40 41.1		
	comp=Z,690nm,22.0s							
P48A	Milroy	123.55	29	IAMs_20	IAMs_20	18 38 54.8		
	comp=Z,535nm,21.0s							
M52A	Chesterland	123.69	25	IAMs_20	IAMs_20	18 52 45.1		
	comp=Z,692nm,19.0s							
T45A	Paducah	123.74	33	IAMs_20	IAMs_20	18 45 10.6		
	comp=Z,706nm,22.0s							
F64A	Sherman	123.88	12	IAMs_20	IAMs_20	18 49 34.6		
	comp=Z,749nm,20.0s							
HKT	Hockley	123.99	45	PKIKP	PKiKP	17 51 38.5	-0.1	
HKT				MLR	MLR			
	comp=Z,800nm,19.0s							
HKT	Hockley	123.99	45		PKiKP	17 51 38.5	-0.1	
HKT	Hockley	123.99	45	IAMs_20	IAMs_20	18 49 59.4		
	comp=Z,785nm,19.0s							
G62A	West of Eustis	123.99	14	IAMs_20	IAMs_20	18 54 45.8		
	comp=Z,631nm,20.0s							
ACSO	Alum Creek Sta	124.07	27	IAMs_20	IAMs_20	18 49 01.4		
	comp=Z,736nm,21.0s							
WCI	Wyandotte Cave	124.07	31	PKIKP	PKPdf	17 51 38.3	0.0	
WCI				MLR	MLR			
	comp=Z,600nm,21.0s							
WCI	Wyandotte Cave	124.07	31		PKPdf	17 51 38.3	0.0	
WCI	Wyandotte Cave	124.07	31	IAMs_20	IAMs_20	18 44 26.9		
	comp=Z,644nm,21.0s							
J57A	Williamstown	124.08	20	IAMs_20	IAMs_20	18 51 05.6		
	comp=Z,532nm,21.0s							
PKME	Peaks-Kenny Pk	124.24	13	IAMs_20	IAMs_20	18 49 34.3		
	comp=Z,754nm,22.0s							
H62A	Milan	124.44	15	IAMs_20	IAMs_20	18 50 21.7		
	comp=Z,795nm,21.0s							
K57A	Scipio Center	124.50	20	IAMs_20	IAMs_20	18 48 00.0		
	comp=Z,606nm,20.0s							
J59A	Piesco	124.50	18	IAMs_20	IAMs_20	18 47 20.8		
	comp=Z,776nm,22.0s							
N53A	Lisbon	124.52	25	IAMs_20	IAMs_20	18 49 51.0		
	comp=Z,661nm,21.0s							
LBNH	Lisbon	124.54	16	IAMs_20	IAMs_20	18 43 49.6		
	comp=Z,836nm,22.0s							
R49A	Shelbyville	124.58	30	IAMs_20	IAMs_20	18 49 26.3		
	comp=Z,650nm,22.0s							
L56A	Greenwood	124.66	21	IAMs_20	IAMs_20	18 53 01.3		
	comp=Z,609nm,21.0s							
G65A	Princeton	124.67	12	IAMs_20	IAMs_20	18 47 11.7		
	comp=Z,780nm,20.0s							
O52A	Adamsville	124.67	26	IAMs_20	IAMs_20	18 47 32.1		
	comp=Z,705nm,22.0s							
WVL	Waterville	124.81	14	IAMs_20	IAMs_20	18 50 05.6		
	comp=Z,557nm,22.0s							
WVT	Waverly	124.84	34	IAMs_20	IAMs_20	18 54 23.6		
	comp=Z,543nm,21.0s							
Q51A	Peebles	124.88	28	IAMs_20	IAMs_20	18 38 19.9		
	comp=Z,730nm,21.0s							
HNH	Hanover	124.94	16	IAMs_20	IAMs_20	18 49 45.1		
	comp=Z,659nm,22.0s							
R50A	Paris	125.00	29	IAMs_20	IAMs_20	18 46 05.4		
	comp=Z,781nm,22.0s							
I62A	Tamworth	125.04	16	IAMs_20	IAMs_20	18 46 09.7		
	comp=Z,631nm,22.0s							
I63A	Otisfield	125.07	15	IAMs_20	IAMs_20	18 50 13.5		
	comp=Z,692nm,22.0s							
OXF	Oxford	125.11	36	IAMs_20	IAMs_20	18 50 55.2		
	comp=Z,701nm,21.0s							
PMPST	Porto Santo, M	125.13	321	ePKPdf	PKiKP	17 51 41.6	+0.8	
BINY	Binghamton	125.16	20	IAMs_20	IAMs_20	18 50 45.3		
	comp=Z,507nm,21.0s							
J61A	Chester	125.19	17	IAMs_20	IAMs_20	18 46 41.9		
	comp=Z,513nm,21.0s							
O54A	Avella	125.24	25	IAMs_20	IAMs_20	18 53 40.0		
	comp=Z,678nm,19.0s							
P53A	Whipple	125.38	26	IAMs_20	IAMs_20	18 51 04.0		
	comp=Z,727nm,21.0s							
Q52A	Bidwell	125.42	27	IAMs_20	IAMs_20	18 51 56.2		
	comp=Z,472nm,19.0s							
TRY	Troy	125.43	18	IAMs_20	IAMs_20	18 47 46.2		
	comp=Z,593nm,21.0s							
Y45A	Yeager Farm, C	125.49	37	IAMs_20	IAMs_20	18 38 19.3		
	comp=Z,821nm,22.0s							
M57A	Sunshine Farm,	125.52	22	IAMs_20	IAMs_20	18 51 59.9		
	comp=Z,774nm,22.0s							
U49A	Red Boiling Sp	125.65	32	IAMs_20	IAMs_20	18 50 44.7		
	comp=Z,577nm,21.0s							
V48A	Smith Brothers	125.67	33	IAMs_20	IAMs_20	18 50 40.7		
	comp=Z,500nm,21.0s							
PMAR	Madeira	125.73	322	ePKPdf	PKiKP	17 51 42.9	+0.6	
T50A	Nancy	125.74	31	IAMs_20	IAMs_20	18 46 25.0		
	comp=Z,703nm,22.0s							
PMOZ	Porto Moniz, M	125.84	322	ePKPdf	PKiKP	17 51 43.0	+0.6	
S51A	Beattyville	125.87	29	IAMs_20	IAMs_20	18 52 53.2		
	comp=Z,516nm,21.0s							
MCWV	Mont Chateau	125.90	25	IAMs_20	IAMs_20	18 53 29.5		
	comp=Z,760nm,20.0s							
K62A	Royalston	125.91	17	IAMs_20	IAMs_20	18 47 24.9		
	comp=Z,715nm,22.0s							
L61B	Northampton	125.98	17	IAMs_20	IAMs_20	18 55 00.8		
	comp=Z,575nm,20.0s							
Q54A	Coxs Mills	126.04	26	IAMs_20	IAMs_20	18 48 45.4		
	comp=Z,572nm,21.0s							
N58A	Sunbury	126.10	22	IAMs_20	IAMs_20	18 47 14.4		
	comp=Z,795nm,21.0s							
HRV	Adam Dziewonsk	126.25	16	PKIKP	PKPdf	17 51 42.3	-0.1	
HRV				MLR	MLR			
	comp=Z,600nm,22.0s							
HRV	Adam Dziewonsk	126.25	16		PKPdf	17 51 42.2	-0.1	
HRV	Adam Dziewonsk	126.25	16	IAMs_20	IAMs_20	18 46 58.8		
	comp=Z,578nm,22.0s							
BART	Pico Bartolome	126.42	332	ePKP	PKiKP	17 51 43.7	+0.3	
WES	Weston	126.43	16	IAMs_20	IAMs_20	18 56 39.5		
	comp=Z,547nm,20.0s							
X48A	Hartselle	126.51	34	IAMs_20	IAMs_20	18 49 19.9		
	comp=Z,588nm,20.0s							
PSBA	Serra de Santa	126.56	334	ePKP	PKiKP	17 51 45.0	+1.5	
CMLA	Cha da Macela	126.59	332	ePKP	PKiKP	17 51 45.0	+1.3	
ADH	Angra Heroismo	126.62	334	ePKP	PKiKP	17 51 44.9	+1.2	
PGRA	Graciosa	126.62	335	ePKP	PKiKP	17 51 45.4	+1.7	
PDA	Ponta Delgada	126.67	332	ePKP	PKiKP	17 51 44.8	+1.0	
Q56A	Snyder Ridge,	126.69	25	IAMs_20	IAMs_20	18 48 39.5		
	comp=Z,577nm,21.0s							
TZTN	Tazewell	126.75	30	IAMs_20	IAMs_20	18 50 49.8		
	comp=Z,512nm,21.0s							
P57A	Homestead Farm	126.79	23	IAMs_20	IAMs_20	18 56 34.7		
	comp=Z,540nm,20.0s							
S54A	Dingess, Beckl	126.81	27	IAMs_20	IAMs_20	18 46 32.8		
	comp=Z,660nm,22.0s							
Z47A	Carrollton	126.83	36	IAMs_20	IAMs_20	18 39 01.7		
	comp=Z,786nm,22.0s							
W50A	Signal Mountai	126.89	32	IAMs_20	IAMs_20	18 40 52.7		
	comp=Z,611nm,22.0s							
PAL	Palisades	126.92	19	IAMs_20	IAMs_20	18 54 38.7		
	comp=Z,582nm,20.0s							
R55A	Marlinton	126.94	26	IAMs_20	IAMs_20	18 47 02.0		
	comp=Z,647nm,21.0s							
WSPT	Westport, CT	126.95	19	IAMs_20	IAMs_20	18 47 55.6		
	comp=Z,728nm,22.0s							
L64A	Middleborough	126.98	16	IAMs_20	IAMs_20	18 56 27.0		
	comp=Z,609nm,20.0s							
ROSA	Rosais	126.99	335	ePKP	PKiKP	17 51 46.1	+1.7	
PSMN	Pico do Norte,	126.99	331	ePKP	PKiKP	17 51 44.8	+0.3	
PMAN	Manadas	127.00	335	ePKP	PKiKP	17 51 45.8	+1.3	
N62A	Caumsett State	127.12	19	IAMs_20	IAMs_20	18 53 04.2		
	comp=Z,526nm,21.0s							
M63A	Gales Ferry	127.13	17	IAMs_20	IAMs_20	18 47 04.1		
	comp=Z,703nm,22.0s							
346A	Big Creek Wild	127.26	39	IAMs_20	IAMs_20	18 39 52.4		
	comp=Z,752nm,22.0s							
PCED	Cedros	127.26	335	ePKP	PKiKP	17 51 46.4	+1.4	
CALA	Caldeira	127.30	335	ePKP	PKiKP	17 51 46.3	+1.2	
Y49A	Blount Mountai	127.30	34	IAMs_20	IAMs_20	18 49 53.8		
	comp=Z,670nm,20.0s							
PCAN	Candelaria	127.31	335	ePKP	PKiKP	17 51 46.3	+1.2	
U54A	Nelsons Funny	127.61	29	IAMs_20	IAMs_20	18 50 55.2		
	comp=Z,744nm,21.0s							
X51A	Calhoun	127.61	33	IAMs_20	IAMs_20	18 41 01.9		
	comp=Z,573nm,22.0s							
BLA	Blacksburg	127.69	27	IAMs_20	IAMs_20	18 49 52.2		
	comp=Z,678nm,22.0s							
W52A	Murphy	127.70	31	IAMs_20	IAMs_20	18 46 49.9		
	comp=Z,647nm,22.0s							
P61A	Hamonton	127.82	21	IAMs_20	IAMs_20	18 48 38.7		
	comp=Z,871nm,22.0s							
S57A	Dark Hollow, R	127.87	25	IAMs_20	IAMs_20	18 43 22.8		
	comp=Z,851nm,22.0s							
CBN	Corbin Frederi	128.14	24	IAMs_20	IAMs_20	18 57 04.5		
	comp=Z,696nm,21.0s							
R58B	Mineral	128.15	24	IAMs_20	IAMs_20	18 53 58.9		
	comp=Z,644nm,21.0s							
U56A	King	128.42	28	IAMs_20	IAMs_20	18 56 15.6		
	comp=Z,651nm,21.0s							
V55A	Taylorsville	128.44	29	IAMs_20	IAMs_20	18 54 04.2		
	comp=Z,659nm,20.0s							
Y52A	Lilburn	128.57	33	IAMs_20	IAMs_20	18 52 56.3		
	comp=Z,665nm,20.0s							
DBIC	Dimbokro	128.92	286	PKP	PKPdf	17 51 48.1	-0.1	
	comp=Z,36nm,0.8s,baz=78,slow=2.8,SNR=23							
DBIC				PP	PP	17 53 53.4	-2.3	
	comp=Z,11nm,0.8s,baz=23,slow=2.9,SNR=3.9							
KMSC	Kings Mountain	128.96	29	IAMs_20	IAMs_20	18 42 13.9		
	comp=Z,773nm,22.0s							
152A	Waverly Hall	129.13	34	IAMs_20	IAMs_20	18 50 58.2		
	comp=Z,781nm,20.0s							
GOGA	Godfrey	129.24	32	PKIKP	PKiKP	17 51 49.5	+0.5	
GOGA	Godfrey	129.24	32	IAMs_20	IAMs_20	18 57 58.9		
	comp=Z,640nm,21.0s							
V58A	Windy Hill, Pi	129.45	27	IAMs_20	IAMs_20	18 56 16.8		
	comp=Z,657nm,22.0s							
154A	Montrose	130.05	33	IAMs_20	IAMs_20	18 52 26.4		
	comp=Z,745nm,22.0s							
W59A	Clinton	130.28	27	IAMs_20	IAMs_20	19 00 38.5		
	comp=Z,622nm,20.0s							
Y57A	Sumter	130.32	29	IAMs_20	IAMs_20	18 47 58.1		
	comp=Z,569nm,22.0s							
X58A	Rowland	130.38	28	IAMs_20	IAMs_20	18 58 04.4		
	comp=Z,632nm,20.0s							
V61A	Roper	130.54	25	IAMs_20	IAMs_20	18 55 27.4		
	comp=Z,640nm,20.0s							
TIGA	Tifton	130.68	34	IAMs_20	IAMs_20	18 41 41.4		
	comp=Z,755nm,22.0s							
Y58A	Scranton	130.76	29	IAMs_20	IAMs_20	18 54 03.3		
	comp=Z,637nm,21.0s							
NHSC	New Hope	131.16	30	IAMs_20	IAMs_20	18 43 27.4		
	comp=Z,577nm,21.0s							
Y60A	Bolivia	131.35	27	IAMs_20	IAMs_20	18 58 31.1		
	comp=Z,724nm,21.0s							
TEIG	Tepich	135.29	49		PKPdf	17 51 59.5	-0.5	
TEIG				IAMs_20	IAMs_20	18 43 57.9		
	comp=Z,598nm,21.0s							
060A	Indiantown	135.85	35	IAMs_20	IAMs_20	18 56 18.5		
	comp=Z,581nm,20.0s							
SOR	Soroa	137.34	42	PKIKP	PKiKP	17 52 05.4	-0.3	
GO08	Villa O'Higgin	137.52	161		PKPpre	17 51 54.1		
BBSR	BB Station	137.59	14	IAMs_20	IAMs_20	18 54 01.8		
	comp=Z,520nm,20.0s							
TGUH	Tegucigalpa,Un	139.59	56	IAMs_20	IAMs_20	18 42 09.3		
	comp=Z,718nm,22.0s							
SACV	Santiago Islan	141.88	308		PKPdf	17 52 10.2	-2.1	
JTS	Las Juntas de	143.48	59	PKP	PKPbc	17 52 13.7	+1.3	
	comp=Z,92nm,0.9s,baz=283,slow=3.3,SNR=27							
JTS	Las Juntas de	143.48	59	PKIKP	PKPab	17 52 11.9	+0.4	
JTS				MLR	MLR			
	comp=Z,600nm,21.0s							
JTS	Las Juntas de	143.48	59		PKPab	17 52 11.9	+0.5	
JTS	Las Juntas de	143.48	59	IAMs_20	IAMs_20	18 50 48.5		
	comp=Z,559nm,21.0s							
CVJ	Coleyville	144.18	41 ⇑	*i* P	PKPdf	17 52 15.5	-0.9	
HDC	Heredia	144.34	59	IAMs_20	IAMs_20	18 46 39.2		
	comp=Z,613nm,21.0s							
HDC	Heredia	144.34	59	*e*P	PKPab	17 52 14.4	-0.4	
GTBY	Guantanamo Bay	144.39	36	*i* P	PKPdf	17 52 16.2	-0.4	
BNJ	Bonny Gate	144.48	40 ⇓	*i* P	PKPdf	17 52 16.2	-0.6	
STH	Stony Hill	144.75	40	*i* P	PKPdf	17 52 17.2	-0.1	
STH				*i* P	PKPbc	17 52 17.5	+1.2	
PCJ	Portland Cotta	144.77	41	*i* P	PKPdf	17 52 17.3	0.0	
GWJ	Greenwich	144.81	40 ⇑	*i* P	PKPdf	17 52 17.8	+0.3	
GWJ				⇑ *i* P	PKPbc	17 52 17.9	+1.3	
PLCA	Paso Flores	144.98	157	PKPbc	PKPdf	17 52 17.6	+0.5	
	comp=Z,379nm,0.8s,baz=214,slow=3.7,SNR=438							
PLCA	Paso Flores	144.98	157		PKPdf	17 52 16.9	-0.2	
PLCA	Paso Flores	144.98	157	*e*P	PKPdf	17 52 17.6	+0.5	
H03S2	Juan Fernandez	146.04	141	PKPbc	PKiKP	17 52 22.1	-0.8	
	baz=332,slow=10,SNR=15							
H03S1	Juan Fernandez	146.05	141	PKPbc	PKiKP	17 52 21.9	-0.9	
	baz=332,slow=10,SNR=6.8							
H03S3	Juan Fernandez	146.06	141	PKPbc	PKPab	17 52 20.8	+0.6	
	baz=332,slow=10,SNR=8.7							
VA04	Juan Fernndez	146.23	140		PKPbc	17 52 20.0	-0.4	
H03N3	Juan Fernandez	146.29	140	PKPbc	PKPab	17 52 22.1	+0.9	
	baz=165,slow=17,SNR=11							
H03N2	Juan Fernandez	146.30	140	PKPbc	PKiKP	17 52 22.4	-1.0	
	baz=165,slow=17,SNR=14							
H03N1	Juan Fernandez	146.31	140	PKPbc	PKPab	17 52 22.2	+1.0	
	baz=165,slow=17,SNR=20							
PCDR	Punta Cana, DR	149.10	28		PKPdf	17 52 22.8	-1.7	
MT01	Popeta	150.39	149	IAMs_20	IAMs_20	18 55 20.7		
	comp=Z,604nm,21.0s							
SJG	San Juan	150.43	25	PKP	PKPdf	17 52 26.9	+0.3	
	comp=Z,32nm,0.7s,baz=72,slow=3.2,SNR=3.8							
SJG				PKPbc	PKiKP	17 52 32.3	-0.4	
	comp=Z,107nm,0.6s,baz=256,slow=0.7,SNR=21							
SJG	San Juan	150.43	25	IAMs_20	IAMs_20	18 59 55.1		
	comp=Z,622nm,22.0s							
SJG	San Juan	150.43	25	x	x	17 52 26.1		
PEL	Peldehue	151.25	149	PKIKP	PKPdf	17 52 28.6	+1.0	
SEUS	St. Eustatius	152.17	19	IAMs_20	IAMs_20	19 02 14.5		
	comp=Z,642nm,22.0s							
OTAV	Otavalo	153.70	71	PKIKP	PKPdf	17 52 33.2	+0.9	
OTAV	Otavalo	153.70	71	*e*P	PKPdf	17 52 29.2	-3.0	
CFA	Coronel Fontan	153.71	151	PKP	PKPdf	17 52 31.9	+0.6	
	comp=Z,14nm,0.9s,baz=231,slow=2.1,SNR=21							
CFA				PKPbc	PKiKP	17 52 39.2	0.0	
	comp=Z,38nm,0.7s,baz=228,slow=2.4,SNR=35							
H05N1	Guadeloupe/Mar	153.86	16	PKP	PKPdf	17 52 31.7	-0.1	
	SNR=14							
ROSC	El Rosal	155.28	57	PKP	PKPdf	17 52 35.5	+1.2	
	comp=Z,41nm,0.8s,baz=175,slow=1.9,SNR=26							
FDFM	Morne la Roset	155.33	18	IAMs_20	IAMs_20	18 58 05.1		
	comp=Z,520nm,20.0s							
ATAH	Atahualpa	155.47	88	PKP	PKPdf	17 52 36.5	+1.9	
	comp=Z,30nm,0.9s,baz=342,slow=1.4,SNR=22							
SDV	Santo Domingo	155.53	44	PKP	PKPdf	17 52 34.9	+0.5	
	comp=Z,48nm,0.8s,baz=101,slow=2.4,SNR=24							
SDV	Santo Domingo	155.53	44	*e*P	PKPdf	17 52 31.6	-2.9	
H05S1	Guadeloupe/Mar	155.72	17	PKP	PKPdf	17 52 34.4	+0.1	
	SNR=11							
NNA	Nana	157.03	100	PKP	PKPdf	17 52 36.7	+0.5	
	comp=Z,24nm,0.8s,baz=324,slow=5.1,SNR=7.7							
GRGR	Grenville	157.61	21	IAMs_20	IAMs_20	19 01 43.9		
	comp=Z,611nm,22.0s							
PSAL	Palomas, Salto	157.67	171	*e*P	PKPdf	17 52 37.4	+0.9	
CPSB	Cacapava Do Su	158.65	181	*e*P	PKPdf	17 52 38.5	+0.8	
CZSB	Cruzeiro do Su	161.14	88	*e*P	PKPdf	17 52 41.3	+0.3	
NBPV	Pedro Velho	161.60	277	*e*P	PKPdf	17 52 41.7	+0.2	
ITAB	Concordia	161.75	184	*e*P	PKPdf	17 52 42.5	+1.3	
RCBR	Riachuelo	162.10	279	PKP	PKPdf	17 52 41.7	-0.3	
	comp=Z,14nm,0.9s,baz=278,slow=4.2,SNR=7.6							
RCBR				PKPab	PKPab	17 53 28.4	-0.3	
	comp=Z,27nm,0.9s,baz=78,slow=8.8,SNR=12							
RCBR	Riachuelo	162.10	279		PKPdf	17 52 40.7	-1.3	
RCBR					PKPab	17 53 27.9	-0.8	
RCBR	Riachuelo	162.10	279	*e*P	PKPdf	17 52 43.0	+0.9	
CPUP	Villa Florida	162.37	169	PKP	PKPdf	17 52 42.2	+0.4	
	comp=Z,22nm,1.1s,baz=61,slow=1.6,SNR=22							
CPUP				PKPab	PKPab	17 53 30.4	+1.3	
	comp=Z,70nm,0.9s,baz=195,slow=4.8,SNR=23							
CPUP				PP	PP	17 57 15.0	+3.0	
	comp=Z,12nm,1.1s,baz=168,slow=8.3,SNR=3.7							
CPUP	Villa Florida	162.37	169		PKPdf	17 52 41.1	-0.7	
CPUP	Villa Florida	162.37	169	*e*P	PKPdf	17 52 42.3	+0.4	
CAM01	Campos-RJ	162.74	221	*e*P	PKPdf	17 52 42.6	+0.3	
ALF01	Guarapari-ES	162.94	226	*e*P	PKPdf	17 52 43.2	+0.7	
NBPA	Parau_RN	163.26	280	*e*P	PKPdf	17 52 43.3	+0.2	
RIB01	Linhares ES	163.51	230	*e*P	PKPdf	17 52 43.3	+0.1	
PET01	Itanhaem-SP	163.56	201	*e*P	PKPdf	17 52 43.8	+0.7	
LPAZ	La Paz	164.13	119	PKP	PKPdf	17 52 45.6	+1.0	
	comp=Z,42nm,0.9s,baz=358,slow=0.7,SNR=127							
LPAZ				PKPab	PKPab	17 53 39.8	+1.6	
	comp=Z,26nm,0.9s,baz=235,slow=3.6,SNR=5.6							
LPAZ	La Paz	164.13	119	*e*P	PKPdf	17 52 41.8	-2.8	
SGC2	Sao Gabriel da	164.14	57	*e*P	PKPdf	17 52 44.1	+0.1	
PTGB	Pitanga	164.24	185	*e*P	PKPdf	17 52 43.9	+0.1	
SPB	Sao Paulo	164.25	202	*e*P	PKPdf	17 52 44.1	+0.4	
SJMB	Sao Joao De Ma	164.47	230	*e*P	PKPdf	17 52 44.3	+0.3	
GUA01	Guaratinga, BA	164.49	239	*e*P	PKPdf	17 52 44.2	+0.1	
NBTA	Tacaratu-PE	164.57	268	*e*P	PKPdf	17 52 44.3	0.0	
VAO	Valinhos	164.61	204	*e*P	PKPdf	17 52 45.1	+0.9	
CMC01	Camacan, BA	164.76	244	*e*P	PKPdf	17 52 45.1	+0.8	
NBIT	Itapeh - BA	164.85	246	*e*P	PKPdf	17 52 45.6	+1.2	
NBMA	Muriti-CE	165.15	275	*e*P	PKPdf	17 52 43.8	-1.1	
BSCB	Bom Sucesso	165.26	215	*e*P	PKPdf	17 52 45.0	+0.2	
NBMO	Morrinhos-CE	165.33	292	*e*P	PKPdf	17 52 45.4	+0.4	
RCLB	Rio Claro- Sao	165.36	203	*e*P	PKPdf	17 52 46.0	+1.2	
LDASE	Londrina, Braz	165.43	189	*e*P	PKPdf	17 52 45.4	+0.5	
MDP	Montagnes des	166.01	356	PKP	PKPdf	17 52 45.8	+0.2	
	comp=Z,50nm,1.0s,baz=6.2,slow=2.6,SNR=20							
MDP				PKPab	PKPab	17 53 44.5	-0.9	
	comp=Z,43nm,0.9s,baz=22,slow=3.8,SNR=11							
ARCA	Araçuai, MG	166.14	234	*e*P	PKPdf	17 52 45.3	-0.2	
DIAM	Diamantina, MG	166.55	225	*e*P	PKPdf	17 52 46.2	+0.3	
NBPN	Ponto Novo - B	166.58	261	*e*P	PKPdf	17 52 46.1	+0.1	
CANS	Sao Roque de M	166.70	211	*e*P	PKPdf	17 52 46.0	0.0	
MURT	Porto Murtinho	166.81	164	*e*P	PKPdf	17 52 46.0	+0.1	
BOAV	Boa Vista	166.83	31	*e*P	PKPdf	17 52 46.4	+0.2	
NBPS	Pedro II - PI	167.03	290	*e*P	PKPdf	17 52 45.6	-0.8	
TEFE	Tefe	167.85	64	*e*P	PKPdf	17 52 46.6	-0.3	
PMNB	Patos De Minas	168.15	216	*e*P	PKPdf	17 52 46.6	-0.4	
AQDB	Aquidauana	168.37	171	*e*P	PKPdf	17 52 47.0	-0.1	
COIM	Forte Coimbra	168.40

	comp=Z,1.0nm,0.7s,baz=50,slow=5.2,SNR=2.1							
	comp=Z,1.0nm,0.7s							
AMTX	**Amarillo**	**49.23**	**275**	P		**P**	**17 48 55.6**	**+0.6**
AMTX				IAmb		IAmb	17 49 02.1	
	comp=Z,14nm,1.0s							
TORD	**Torodi Ar. Bea**	**50.11**	**130**	P		**P**	**17 49 01.1**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=333,slow=7.2,SNR=5.3							
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**50.11**	**130**	IAmb		IAmb	17 49 10.4	
	comp=Z,7.2nm,1.5s							
BRDY	**Brady**	**50.22**	**270**	P		**P**	**17 49 01.7**	**-0.8**
BRDY				IAmb		IAmb	17 49 02.5	
	comp=Z,3.5nm,0.8s							
ILAR	**Eielson Array**	**50.41**	**329**	P		**P**	**17 49 04.3**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=55,slow=7.8,SNR=1.8							
	comp=Z,1.1nm,0.9s							
PV18	**Skein Mesa, Pa**	**51.09**	**284**	P		**P**	**17 49 10.2**	**+1.0**
PV18				IAmb		IAmb	17 49 16.4	
	comp=Z,16nm,1.1s							
SAND	**Sanderson**	**53.03**	**271**			**P**	**17 49 23.4**	**-0.1**
SAND				IAmb		IAmb	17 49 24.3	
	comp=Z,3.4nm,0.6s							
TXAR	**Lajitas Array**	**54.39**	**272**	P		**P**	**17 49 34.3**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=38,slow=9.5,SNR=3.9							
	comp=Z,0.5nm,0.8s							
L04D	**Klamath Falls**	**55.73**	**296**	P		**P**	**17 49 44.0**	**+0.8**
BVAR	**Borovoye Array**	**56.68**	**44**	P		**P**	**17 49 49.1**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=350,slow=7.9,SNR=1.8							
	comp=Z,2.6nm,0.8s							
ROSC	**El Rosal**	**58.52**	**228**	P		**P**	**17 50 03.8**	**+0.4**
	comp=Z,19nm,0.6s,baz=101,slow=16,SNR=8.3							
ROSC	**El Rosal**	**58.52**	**228**	P		**P**	**17 50 03.8**	**+0.4**
ZALV	**Zalesovo Beam**	**61.40**	**36**	P		**P**	**17 50 22.2**	**0.0**
	comp=Z,3.7nm,0.8s,baz=306,slow=4.8,SNR=4.0							
	comp=Z,3.7nm,0.8s							
KURK	**Kurchatov**	**61.73**	**41**	P		**P**	**17 50 23.1**	**-1.5**
KURBB	**Kurchatov Arra**	**61.77**	**41**	P		**P**	**17 50 23.6**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=324,slow=7.0,SNR=8.2							
	comp=Z,1.9nm,0.9s							
MKAR	**Makanchi Array**	**66.33**	**42**	P		**P**	**17 50 55.9**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=330,slow=5.2,SNR=2.0							
	comp=Z,1.3nm,0.7s							
BTK	**Batken**	**66.78**	**53**	P		**P**	**17 50 57.0**	**-1.0**
BTK				IAmb		IAmb	17 51 06.6	
	comp=Z,14nm,1.2s							
SONM	**Songino Array**	**73.31**	**26**	P		**P**	**17 51 37.9**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=325,slow=2.3,SNR=1.9							
	comp=Z,1.3nm,0.9s							
PB14	**IPOC Station P**	**84.14**	**212**	P		**P**	**17 52 37.3**	**-0.5**
AC05	**El Transito**	**88.05**	**210**	P		**P**	**17 52 57.0**	**+0.2**
JYT	**Yasato**	**89.90**	**4**	P		**P**	**17 53 05.3**	**-0.1**
RSD	**Rainshed**	**90.62**	**305**	P		**P**	**17 53 08.9**	**-0.4**
MIDW	**Midway**	**91.72**	**327**	P		**P**	**17 53 13.0**	**-1.0**
QSPA	**South Pole Qui**	**144.04**	**180**	PKP		**PKPab**	**17 59 37.9**	**-0.4**
	comp=Z,2.4nm,1.0s,baz=253,slow=1.7,SNR=1.8							
WRA	**Warramunga Arr**	**144.91**	**17**	PKPbc		**PKPab**	**17 59 42.8**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=344,slow=2.7,SNR=6.0							
ASAR	**Alice Springs**	**148.46**	**19**	PKPbc		**PKPbc**	**17 59 53.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=355,slow=2.3,SNR=66							

*NEIC **27** 18:04:44.5±1.7, 41.71°N±0.01°×112.91°W±0.02, h0km±1km, ML1.7/22, Error ellipse: s-maj=3.2km s-min=2.3km az=49.0*
*IDC **27** 18:04:46.5±1.6, 41.13°N×112.82W, h0km, mbtmp2.3/1, ML3.1/1, Error ellipse: s-maj=74.8km s-min=10.9km az=147.0*

ISC 27 18:04:44.7±1.0, 41°17'N±0°04'×112°79'W±0°04, h0km, n20, σ0s65/20, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPUT	**South Promonto**	**0.29**	**62**		**Pb**	**18 04 52.9**	**0.0**
SPUT				IAML		18 05 00.7	
	comp=N,94nm,0.3s						
BGU	**Big Grassy Mou**	**0.31**	**216**		**Pg**	**18 04 50.1**	**-0.4**
BGU				IAML		18 04 55.8	
	comp=N,150nm,0.4s						
HVU	**Hansel Valley**	**0.60**	**1**		**Pb**	**18 04 58.2**	**0.0**
HVU				IAML		18 05 11.5	
	comp=E,55nm,0.5s						
CTU	**Camp Tracy**	**0.93**	**121**		**Pb**	**18 05 04.1**	**+0.4**
DUG	**Dugway, Tooele**	**0.98**	**181**		**Pg**	**18 05 02.9**	**-0.5**
DUG				IAML		18 05 26.4	
	comp=E,35nm,0.5s						
HWUT	**Hardware Ranch**	**1.02**	**65**		**Pn**	**18 05 06.6**	**+0.1**
HWUT				IAML		18 05 27.8	
	comp=E,18nm,0.4s						
HWUT				IAML		18 05 30.3	
	comp=E,21nm,0.4s						
TCUT	**Toone Canyon**	**1.05**	**93**		**Pn**	**18 05 07.3**	**+0.4**
NLU	**North Lily Min**	**1.33**	**156**		**Pg**	**18 05 10.2**	**-0.1**
MPU	**Maple Canyon**	**1.46**	**142**		**Pn**	**18 05 12.3**	**-0.2**
BSUT	**Blindstream Ca**	**1.67**	**112**		**Pb**	**18 05 16.2**	**-0.3**
ELK	**Elko**	**1.90**	**258**		**Pn**	**18 05 18.0**	**-0.7**
ELK				IAML		18 05 46.8	
	comp=E,8.0nm,0.3s						
ELK				IAML		18 05 47.5	
	comp=E,6.1nm,0.4s						
P18A	**Preston Nutter**	**2.48**	**128**	Pn		**Pn**	**18 05 27.5**	**+0.9**
Q16A	**Castle Valley**	**2.58**	**151**	Pn		**Pn**	**18 05 28.3**	**+0.5**
TCRU	**Three Creeks R**	**2.58**	**174**	Pn		**Pn**	**18 05 27.6**	**-0.3**
HLID	**Hailey**	**2.67**	**334**			**Pn**	**18 05 30.0**	**+0.9**
HLID				IAML			18 06 15.9	
	comp=E,3.1nm,1.1s							
HLID				IAML			18 07 16.3	
	comp=E,3.1nm,0.2s							
SRU	**San Rafael Swe**	**2.70**	**139**	Pn		**Pn**	**18 05 30.3**	**+0.8**
PSUT	**Pine Spring**	**2.76**	**198**	Pn		**Pn**	**18 05 29.9**	**-0.6**
PDAR	**Pinedale Array**	**2.89**	**56**	Pn		**Pb**	**18 05 35.9**	**-1.4**
	comp=E,0.3nm,0.3s,baz=234,slow=13,SNR=3.0							
PDAR				Pg		**Pg**	**18 05 40.1**	**+0.1**
	comp=E,1.1nm,0.3s,baz=233,slow=15,SNR=11							
PDAR				Lg		Lg	18 06 20.1	
	comp=E,1.1nm,0.3s,baz=227,slow=24,SNR=7.4							
	comp=E,0.8nm,0.3s							
NVAR	**Mina Array Bea**	**5.05**	**239**	Pg		**Pb**	**18 06 15.2**	**+1.1**
	comp=E,0.2nm,0.3s,baz=49,slow=17,SNR=2.2							
I56US	**NEWPORT INFRAS**	**7.73**	**338**	I		I	18 48 40.0	
	baz=161,slow=314,SNR=8.7							

*IDC **27** 18:04:45.1±1.9, 7.20°S×129.29°E, h87km±22km, mb2.9/2, mbtmp3.6/7, Error ellipse: s-maj=28.1km s-min=14.4km az=116.0*

ISC 27 18:04:44.9±0.9, 7°33'S±0°06×129°42'E±0°10, h100km, n7, σ2s71/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.36**	**243**	P		**Pn**	**18 06 17.4**	**+1.2**
	12nm,0.3s,baz=104,slow=12,SNR=6.9							
BATI				S		**Sn**	**18 07 25.8**	**-1.7**
	6.2nm,0.4s,baz=93,slow=18,SNR=1.3							
SIJI	**Sorong**	**6.68**	**16**	P		**Pn**	**18 06 19.5**	**-1.0**
	6.5nm,0.8s,baz=195,slow=23,SNR=1.5							
SIJI				S		**Sn**	**18 07 33.5**	**-1.8**
	2.5nm,0.3s,baz=239,slow=23,SNR=7.7							
FITZ	**Fitzroy Crossi**	**11.31**	**199**	P		**Pn**	**18 07 25.1**	**+1.6**
	3.6nm,1.1s,baz=23,slow=11,SNR=13							
FITZ				S		**Sn**	**18 09 23.0**	**-5.0**
	1.1nm,0.3s,baz=298,slow=23,SNR=8.8							
WRA	**Warramunga Arr**	**13.41**	**160**	P		**Pn**	**18 07 52.8**	**+1.5**
	0.7nm,0.6s,baz=332,slow=14,SNR=16							
WRA				S		**Sn**	**18 10 15.8**	**-3.2**
	1.8nm,0.6s,baz=336,slow=23,SNR=9.2							
ASAR	**Alice Springs**	**16.80**	**166**	P		**P**	**18 08 37.9**	**+3.1**
	0.9nm,0.6s,baz=346,slow=9.3,SNR=22							
ASAR				S		Sn	18 11 33.9	-7.0
	0.3nm,0.4s,baz=335,slow=23,SNR=4.7							
MKAR	**Makanchi Array**	**68.19**	**327**	P		**P**	**18 15 35.0**	**+0.4**
	0.2nm,0.7s,baz=111,slow=8.9,SNR=1.3							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**72.49**	**329**	P		**P**	**18 16 01.5**	**+0.8**
	0.1nm,0.6s,baz=130,slow=4.5,SNR=1.6							
	0.1nm,0.6s							

*IDC **27** 19:18:12.4±1.0, 31.65°N×94.66E, h0km, mb3.7/5, mbtmp3.6/7, ML3.4/2, Error ellipse: s-maj=51.7km s-min=18.7km az=61.0*

ISC 27 19:18:14.0±1.2, 31°7'N±0°2×94°7'E±0°2, h10km, n7, σ1s14/7, mb3.8/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.82**	**331**	P		**Pn**	**19 22 20.9**	**-1.1**
	0.1nm,0.3s,baz=148,slow=14,SNR=7.0							
	0.5nm,0.5s							
SONM	**Songino Array**	**18.43**	**26**	P		**Pn**	**19 22 29.5**	**-0.1**
	0.1nm,0.3s,baz=218,slow=12,SNR=5.4							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**22.38**	**332**	P		**P**	**19 23 11.8**	**-0.4**
	1.0nm,0.7s,baz=140,slow=11,SNR=13							
	1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**23.33**	**345**	P		**P**	**19 23 23.9**	**+1.8**
	0.7nm,0.6s,baz=167,slow=13,SNR=4.4							
	0.7nm,0.6s							
WRA	**Warramunga Arr**	**63.91**	**138**	P		**P**	**19 28 46.6**	**-0.6**
	1.0nm,0.7s,baz=329,slow=7.0,SNR=11							
	1.0nm,0.7s							
ASAR	**Alice Springs**	**66.64**	**141**	P		**P**	**19 29 05.0**	**+0.1**
	1.4nm,0.7s,baz=326,slow=6.6,SNR=20							
	1.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**85.68**	**283**	P		**P**	**19 30 54.0**	**+0.5**
	0.5nm,0.8s,baz=49,slow=4.8,SNR=2.2							
	0.5nm,0.8s							

*GFZ **27** 19:34:34.5, 55.05°N×160.57W, h49km, Mw5.4/69, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.07; Mθθ-1.17; Mφφ0.10; Mrθ0.69; Mθφ-0.06; Mrφ0.44; Fault plane solution: M₀1.39212×10¹⁷ NP1:φs284.50151°, δ31.19286°, λ120.04838°. Principal axes: T 1.3950, Plg67.2032°, Azm308.4635°; N -0.0058, Plg15.0308°, Azm78.1732°; P -1.3892, Plg16.7307°, Azm172.8031°;*
*NEIC **27** 19:34:38.0±2.6, 54.94N±0.06°×160.31W±0.05, h37km±1km, mb5.3/386, ML5.4/32, Ms_20 4.9/361, Mwb5.4/97, Mww5.5/84 Error ellipse: s-maj=8.1km s-min=4.4km az=180.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.11; Mθθ-1.21; Mφφ0.10; Mrθ0.57; Mθφ-0.87; Mrφ0.18; Fault plane solution: M₀1.58000×10¹⁷ NP1:φs70.23000°, δ57.03000°, λ98.73000°. NP2: φs234.48000°, δ33.98000°, λ76.83000°. Principal axes: T 1.2487, Plg76.0000°, Azm7.0000°; N 0.5212, Plg7.0000°, Azm245.0000°; P -1.7698, Plg12.0000°, Azm154.0000°;*
*BJI **27** 19:34:37.0, 55.15N×160.99W, h41km, mB5.4/48, mb5.5/80, Ms5.2/78, Ms7 5.1/76*
*AEIC **27** 19:34:37.8±2.3, 54.84N±0.06°×160.32W±0.07, h33km±3km, Error ellipse: s-maj=9.2km s-min=6.0km az=169.0*
*IDC **27** 19:34:37.0±2.1, 55.01N×160.47W, h33km±15km, mb5.0/32, mbtmp5.2/36, ML4.2/5, MS4.7/97, Error ellipse: s-maj=14.0km s-min=8.1km az=2.0*
*MOS **27** 19:34:37.2±0.8, 55.11N×160.55W, h42km, mb5.8/79, MS4.8/33, Error ellipse: s-maj=7.7km s-min=3.3km az=94.8*
*NEIC **27** 19:34:38.1, 54.95N×160.31W, h39km*
*NEIC **27** 19:34:39.4, 55.06N×160.44W, h51km*
*PMR **27** 19:34:39.0, 54.96N×160.37W, h28km*
*GFZ **27** 19:34:39.5±0.1, 55.1°N±3.3°×16.1°W±.°, h47km, M5.3/220, mB5.8/157, mb5.5/220, Mw(mB)5.3/157*
*IPGP **27** 19:34:39.0, 55.10N×160.48W, h48km, Mw5.5, Fault plane solution: NP1:φ264.00000°, δ28.00000°, λ112.00000°. NP2:φ59.00000°, δ64.00000°, λ79.00000°.*
*GCMT **27** 19:34:41.0±0.1, 54.87N±0.01°×160.25W±0.01, h53km, MW5.5/144, Moment Tensor Solution. s142,c273; s144,c288; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.52±.03; Mθθ-1.37±.02; Mφφ-0.14±.02; Mrθ0.96±.02; Mθφ-0.81±.02; Mrφ0.48±.02; Best double couple: M₀1.96300×10¹⁷ NP1:φs244.00000°, δ29.00000°, λ90.00000°. NP2:φs64.00000°, δ61.00000°, λ90.00000°. Principal axes: T 1.8360, Plg74.0000°, Azm334.0000°; N 0.2590, Plg0.0000°, Azm244.0000°; P -2.0900, Plg16.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **27** 19:34:43.2, 55.72N×160.04W, h64km, mb5.5, Ms4.7*
*NEIC **27** 19:34:44.5, 54.95N×160.31W, h40km, Moment Tensor Solution. Duration: 2s8 Moment tensor: Scale 10¹⁷Nm; Mrr1.44; Mθθ-1.19; Mφφ-0.26; Mrθ1.04; Mθφ-0.57; Mrφ0.64; Fault plane solution: M₀1.89000×10¹⁷ NP1: φs248.71000°, δ25.11000°, λ97.26000°. NP2:φs60.70000°, δ65.10000°, λ86.61000°. Principal axes: T 1.8929, Plg70.0000°, Azm324.0000°; N 0.0027, Plg3.0000°, Azm62.0000°; P -1.8956, Plg20.0000°, Azm153.0000°;*

ISC 27 19:34:37.6±0.3, 54°97'N±0°04×160°42'W±0°03, h41km±1km, h41km:pP-P,n1898, σ1s38/1686, mb5.4/486, MS4.9/333, 139C-44D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.39**	**355**		**Pn**	**19 34 48.1**	**+1.1**
SDPT				IAML		19 34 56.5	
	comp=E,253µm,1.0s						
SDPT	**Sand Point**	**0.39**	**355**		**Sn**	**19 34 55.8**	**+2.3**
SDPT	**Sand Point**	**0.39**	**355**	P	**Pn**	**19 34 48.3**	**+1.3**
SDPT				S	**Sn**	**19 34 55.6**	**+2.1**
	baz=171,SNR=1000						
	baz=171						
CHNA	**Chernabura Isl**	**0.49**	**106**	P	**Pn**	**19 34 46.9**	**-1.4**
	baz=286,SNR=1000						
CNBA	**Chernabura Isl**	**0.50**	**107**		**Pn**	**19 34 46.7**	**-1.7**
CNBA				IAML		19 34 57.4	
	comp=E,180µm,0.7s						
CNBA	**Chernabura Isl**	**0.50**	**107**		**Sn**	**19 34 55.3**	**-0.7**
DOL	**Dolgoi Island**	**0.85**	**283**		**Pn**	**19 34 54.4**	**+1.2**
DOL					**Sn**	**19 35 07.0**	**+2.4**
PS1A	**Pavlof South-1**	**0.89**	**301**		**Pn**	**19 34 55.6**	**+2.0**
PS1A					**Sn**	**19 35 09.4**	**+4.1**
PVV	**Pavlof Volcano**	**0.89**	**298**		**Pn**	**19 34 55.6**	**+1.9**
PS4A	**Pavlof South-4**	**0.91**	**295**		**Pn**	**19 34 56.0**	**+2.0**
PS4A					**Sn**	**19 35 10.1**	**+4.2**
PN7A	**Pavlof North-7**	**1.02**	**298**		**Pn**	**19 34 57.9**	**+2.3**
PN7A					**Sn**	**19 35 12.6**	**+3.9**
DTNA	**Dutton South F**	**1.07**	**281**		**Pn**	**19 34 57.7**	**+1.5**
DT1	**Dutton Round H**	**1.08**	**278**		**Pn**	**19 34 57.5**	**+1.2**
DT1					**Sn**	**19 35 12.6**	**+2.5**
VNKR	**Veniaminof 5**	**1.22**	**29**		**Pn**	**19 35 00.0**	**+1.7**
S14K	**Fog Glacier**	**1.41**	**20**	P	**Pn**	**19 35 03.2**	**+2.4**
	baz=199,SNR=1000						
VNFG	**Fog Glacier, M**	**1.41**	**20**		**Pn**	**19 35 03.2**	**+2.3**
VNFG	**Fog Glacier, M**	**1.41**	**20**		**Sn**	**19 35 22.1**	**+3.8**
VNHG	**Veniaminof 1**	**1.44**	**29**		**Pn**	**19 35 03.5**	**+2.1**
VNNF	**Veniaminof 3**	**1.46**	**25**		**Pn**	**19 35 04.0**	**+2.3**
BPBCA	**Veniaminof**	**1.97**	**33**		**Pn**	**19 35 11.1**	**+2.6**
SSLS	**Shishaldin Sou**	**2.09**	**264**		**Pn**	**19 35 12.6**	**+2.4**
SSBA	**Shishaldin**	**2.15**	**266**		**Sn**	**19 35 41.6**	**+5.1**
AZAC	**Aniakchak**	**2.29**	**32**		**Pn**	**19 35 15.0**	**+2.0**
ANNW	**Aniakchak Nort**	**2.36**	**31**		**Pn**	**19 35 16.0**	**+2.2**
AKSA	**Akutan Strait**	**3.19**	**257**		**Pn**	**19 35 27.8**	**+2.6**
AKUT	**Akutan**	**3.23**	**257**		**Pn**	**19 35 28.1**	**+2.4**
AKUT				IAML		19 36 23.7	
	comp=N,12µm,1.1s						
AKUT				IAML		19 36 27.0	
	comp=E,12µm,0.8s						
ZRO	**Akutan Zero**	**3.36**	**257**		**Pn**	**19 35 29.8**	**+2.3**
LVA	**Lava Point**	**3.37**	**258**		**Pn**	**19 35 30.2**	**+2.5**
LVA				IAML		19 36 36.6	
	comp=E,10µm,1.0s						
R17L	**Mt. Peulik Vol**	**3.50**	**39**		**Sn**	**19 36 13.6**	**+4.0**
R17L	**Mt. Peulik Vol**	**3.50**	**39**	P	**Pn**	**19 35 32.3**	**+2.8**
	baz=221,SNR=706						
PLK1	**Peulik 1**	**3.54**	**35**		**Pn**	**19 35 32.4**	**+2.4**
PLK2	**Peulik 2**	**3.61**	**37**		**Pn**	**19 35 33.4**	**+2.4**
UNV	**Unalaska Valle**	**3.73**	**255**		**Pn**	**19 35 34.4**	**+1.7**
UNV				IAML		19 36 34.1	
	comp=N,5µm,1.2s						
UNV	**Unalaska Valle**	**3.73**	**255**	P	**Pn**	**19 35 34.4**	**+1.7**
	baz=70,SNR=213						
MNAT	**Makushin Natee**	**3.82**	**256**		**Pn**	**19 35 35.7**	**+1.9**
MREP	**Makushin Rep't**	**3.88**	**255**		**Pn**	**19 35 36.6**	**+1.9**
MAPS	**Pakushin South**	**3.99**	**256**		**Pn**	**19 35 38.0**	**+1.8**
Q17K	**Contact Creek**	**4.14**	**35**		**Pn**	**19 35 40.5**	**+2.0**
Q17K	**Contact Creek**	**4.14**	**35**	P	**Pn**	**19 35 40.4**	**+2.0**
	baz=219						
ANCK	**Angle Creek**	**4.23**	**38**		**Pn**	**19 35 41.7**	**+2.1**
O15K	**Ungalikthiuk R**	**4.23**	**4**		**Pn**	**19 35 41.0**	**+1.4**
O15K	**Ungalikthiuk R**	**4.23**	**4**	P	**Pn**	**19 35 41.1**	**+1.6**
	baz=184,SNR=840						
O15K				S	**Sn**	**19 36 27.2**	**-0.4**
	baz=184						

Q16K	**King Salmon**	**4.25**	**27**			**Pn**	**19 35 41.7**	**+1.9**
Q16K	**King Salmon**	**4.25**	**27**	P		**Pn**	**19 35 41.8**	**+2.0**
	baz=210,SNR=34							
P16K	**Nushagak River**	**4.29**	**17**	Pn		**Pn**	**19 35 42.2**	**+1.9**
P16K				IAML			19 37 16.9	
	comp=E,6µm,1.1s							
P16K	**Nushagak River**	**4.29**	**17**	P		**Pn**	**19 35 42.4**	**+2.2**
	baz=199,SNR=245							
ACHA	**Angle Creek He**	**4.30**	**39**			**Pn**	**19 35 42.1**	**+1.5**
O14K	**Tigyukauivet M**	**4.32**	**354**			**Pn**	**19 35 42.5**	**+1.7**
O14K				IAML			19 36 34.6	
	comp=N,3µm,1.1s							
O14K	**Tigyukauivet M**	**4.32**	**354**	P		**Pn**	**19 35 42.7**	**+2.0**
	baz=173,SNR=544							
O14K				S		**Sn**	**19 36 29.7**	**-0.1**
	baz=173							
KVTA	**Katmai Vly 10**	**4.44**	**37**			**Pn**	**19 35 44.5**	**+2.2**
KAKN	**Katmai Knife C**	**4.46**	**39**			**Pn**	**19 35 44.8**	**+2.0**
OHAK	**Old Harbor**	**4.59**	**58**			**Pn**	**19 35 44.4**	**0.0**
OHAK	**Old Harbor**	**4.59**	**58**	IAML			19 37 01.6	
	comp=N,4µm,0.8s							
OHAK				IAML			19 37 10.1	
	comp=E,2µm,1.0s							
OHAK	**Old Harbor**	**4.59**	**58**	P		**Pn**	**19 35 44.6**	**+0.2**
	baz=243							
OKFG	**Magazine Ridge**	**4.67**	**254**			**Pn**	**19 35 47.5**	**+1.9**
Q18K	**Katmai Hardscr**	**4.74**	**37**	P		**Pn**	**19 35 47.8**	**+1.2**
	baz=221,SNR=242							
OKTU	**Okmok Mt. Tuli**	**4.75**	**254**			**Pn**	**19 35 48.9**	**+2.1**
P17K	**Kvichak River**	**4.76**	**25**	Pn		**Pn**	**19 35 49.0**	**+2.3**
P17K	**Kvichak River**	**4.76**	**25**	P		**Pn**	**19 35 49.1**	**+2.3**
	baz=208,SNR=233							
OKNC	**Okmok New Cone**	**4.77**	**255**			**Pn**	**19 35 48.6**	**+1.7**
KAHG	**Katmai Hook Gl**	**4.79**	**40**			**Pn**	**19 35 49.2**	**+2.0**
OKCE	**Okmok Cone E**	**4.80**	**254**			**Pn**	**19 35 49.4**	**+1.9**
O16K	**Kokwok River B**	**4.81**	**14**			**Pn**	**19 35 48.9**	**+1.5**
O16K				IAML			19 37 19.9	
	comp=E,2µm,0.8s							
O16K	**Kokwok River B**	**4.81**	**14**	P		**Pn**	**19 35 48.7**	**+1.3**
	baz=196,SNR=277							
N14K	**Kuskokwak Cree**	**5.02**	**353**			**Pn**	**19 35 52.2**	**+2.0**
N14K				IAML			19 37 04.9	
	comp=N,3µm,0.9s							
N14K	**Kuskokwak Cree**	**5.02**	**353**	P		**Pn**	**19 35 52.4**	**+2.1**
	baz=171,SNR=851							
O17K	**Koliganek Bris**	**5.14**	**19**			**Pn**	**19 35 53.8**	**+1.8**
O17K	**Koliganek Bris**	**5.14**	**19**	P		**Pn**	**19 35 53.9**	**+1.9**
	baz=202,SNR=389							
KDAK	**Kodiak Island**	**5.19**	**54**	Pn		**Pn**	**19 35 51.9**	**-0.7**
	comp=N,18nm,0.3s,baz=221,slow=9.3,SNR=92							
KDAK				Sn		**Sn**	**19 36 49.3**	**-1.8**
	comp=N,48nm,0.3s,baz=221,slow=4.8,SNR=1.5							
KDAK				LR		LR	19 38 10.0	
	comp=N,13µm,20.1s,baz=228,slow=41							
	comp=N,44nm,0.4s							
KDAK	**Kodiak Island**	**5.19**	**54**	P		**Pn**	**19 35 53.2**	**+0.6**
KDAK				S		**Sn**	**19 36 53.4**	**+2.3**
KDAK	**Kodiak Island**	**5.19**	**54**			**Pn**	**19 35 52.3**	**-0.3**
KDAK				IAML			19 37 19.7	
	comp=N,3µm,0.8s							
KDAK				IAML			19 37 20.0	
	comp=N,3µm,0.9s							
KDAK	**Kodiak Island**	**5.19**	**54**	P		**Pn**	**19 35 53.4**	**+0.8**
	baz=240							
KDAK	**Kodiak Island**	**5.19**	**54**	P		**Pn**	**19 35 53.7**	**+1.1**
N15K	**Kwethluk River**	**5.22**	**2**			**Pn**	**19 35 55.1**	**+2.0**
N15K				IAML			19 37 30.4	
	comp=N,3µm,0.9s							
N15K				IAML			19 37 31.3	
	comp=E,3µm,0.9s							
N15K	**Kwethluk River**	**5.22**	**2**	P		**Pn**	**19 35 54.5**	**+1.4**
	baz=182,SNR=741							
P18K	**Big Mountain,**	**5.26**	**30**	P		**Pn**	**19 35 56.1**	**+2.5**
	baz=214,SNR=193							
Q19K	**Cape Douglas,**	**5.43**	**40**	Pn		**Pn**	**19 35 57.5**	**+1.5**
Q19K	**Cape Douglas,**	**5.43**	**40**	P		**Pn**	**19 35 57.8**	**+1.8**
	baz=226,SNR=82							
N16K	**Nishlik Lake**	**5.59**	**8**	P		**Pn**	**19 36 00.4**	**+2.2**
	baz=190,SNR=1000							
O18K	**Koktuh Hills**	**5.65**	**28**	Pn		**Pn**	**19 36 01.4**	**+2.5**
O18K	**Koktuh Hills**	**5.65**	**28**	P		**Pn**	**19 36 01.8**	**+2.8**
	baz=212,SNR=374							
M13K	**Dall Lake**	**5.68**	**345**	P		**Pn**	**19 36 01.9**	**+2.5**
	baz=162,SNR=309							
M15K	**Kasigluk River**	**5.75**	**359**			**Pn**	**19 36 01.8**	**+1.5**
M15K	**Kasigluk River**	**5.75**	**359**	P		**Pn**	**19 36 01.6**	**+1.4**
	baz=178,SNR=392							
N17K	**Nushagak Hills**	**5.84**	**16**			**Pn**	**19 36 03.2**	**+1.7**
N17K	**Nushagak Hills**	**5.84**	**16**	P		**Pn**	**19 36 03.3**	**+1.8**
	baz=198,SNR=314							
M14K	**Bethel**	**5.86**	**353**			**Pn**	**19 36 03.4**	**+1.6**
M14K	**Bethel**	**5.86**	**353**	P		**Pn**	**19 36 03.6**	**+1.8**
	baz=171,SNR=878							
CLCO	**Concord Point,**	**5.92**	**252**			**

SEW	Seward	7.83	44	P		Pn	19 36 30.5	+1.7
	baz=233,SNR=28							
K17K	Iditarod	7.85	7			Pn	19 36 30.7	+1.5
K17K	Iditarod	7.85	7	P		Pn	19 36 30.6	+1.5
	baz=189,SNR=172							
M20K	Styx River	7.91	26	P		Pn	19 36 33.2	+3.2
	baz=212,SNR=154							
STLK	Strandline Lak	7.96	31			Pn	19 36 33.1	+2.4
J14K	Nanvaranak Lak	7.97	350	P		Pn	19 36 31.7	+1.0
	baz=167,SNR=111							
J16K	Anvik River	8.35	359			Pn	19 36 37.3	+1.4
J16K	Anvik River	8.35	359	P		Pn	19 36 37.2	+1.3
	baz=179,SNR=161							
RC01	Rabbit Creek A	8.35	38			Pn	19 36 36.9	+1.0
RC01	Rabbit Creek A	8.35	38	P		Pn	19 36 37.8	+1.9
	baz=227,SNR=18							
SKT	Skwentna	8.43	30	P		Pn	19 36 38.4	+1.4
	baz=217,SNR=84							
J17K	VABM Dome	8.48	4			Pn	19 36 38.8	+1.0
J17K	VABM Dome	8.48	4	P		Pn	19 36 38.6	+0.8
	baz=185,SNR=63							
KOSE	Korovin Southe	8.51	258			Pn	19 36 40.8	+2.5
KONE	Korovin Northe	8.53	258			Pn	19 36 41.0	+2.5
KOFP	Korovin Flat P	8.57	257			Pn	19 36 41.6	+2.6
KOKL	Mount Kliuchef	8.61	258			Pn	19 36 41.6	+2.1
KOWE	Korovin West	8.62	258			Pn	19 36 41.5	+1.8
P23K	Montague Islan	8.63	49	P		Pn	19 36 40.6	+0.8
	baz=240,SNR=27							
ATKA	Atka Island	8.65	257	P		Pn	19 36 42.2	+2.1
ATKA	Atka Island	8.65	257			Pn	19 36 41.9	+1.8
M22K	Willow	8.69	34	P		Pn	19 36 40.4	-0.1
	baz=223,SNR=19							
PWL	Port Wells	8.72	42	P		Pn	19 36 42.1	+1.0
	baz=232,SNR=44							
J18K	Innoko River	8.73	11	P		Pn	19 36 42.5	+1.3
	baz=194,SNR=114							
Q23K	Middleton Isla	8.84	54	P		Pn	19 36 44.1	+1.4
	baz=246							
MID	Middleton Isla	8.85	54			Pn	19 36 43.0	+0.2
PMR	Palmer	8.90	37	P		Pn	19 36 45.8	+2.3
	baz=227,SNR=14							
I17K	Unalakleet	8.95	359			Pn	19 36 45.7	+1.6
I17K	Unalakleet	8.95	359	P		Pn	19 36 45.7	+1.6
	baz=179,SNR=20							
PPLA	Purkeypile	9.01	25			Pn	19 36 48.5	+3.3
PPLA	Purkeypile	9.01	25	P		Pn	19 36 47.8	+2.6
	baz=212,SNR=181							
K20K	Telida	9.02	19	P		Pn	19 36 46.7	+1.6
	baz=204,SNR=120							
KNK	Knik Glacier	9.02	39			Pn	19 36 45.9	+0.7
KNK	Knik Glacier	9.02	39	P		Pn	19 36 45.6	+0.4
	baz=229,SNR=27							
L22K	Petersville	9.08	30			Pn	19 36 47.7	+1.7
L22K	Petersville	9.08	30	P		Pn	19 36 47.5	+1.5
	baz=218,SNR=58							
GHO	Glory Hole Cre	9.10	37			Pn	19 36 46.5	+0.2
CUT	Chulitna	9.13	31	P		Pn	19 36 48.1	+1.5
	baz=220,SNR=16							
HIN	Hinchinbrook I	9.22	48			Pn	19 36 48.1	+0.2
GLI	Glacier Island	9.23	45			Pn	19 36 48.0	+0.1
GLI	Glacier Island	9.23	45	P		Pn	19 36 48.5	+0.5
	baz=236,SNR=9.4							
SML	Sawmill	9.33	38			Pn	19 36 49.4	-0.1
SML	Sawmill	9.33	38	P		Pn	19 36 50.1	+0.7
	baz=229,SNR=16							
J19K	Poorman	9.38	13	P		Pn	19 36 52.2	+2.2
	baz=197,SNR=168							
FID	Port Fidalgo	9.41	46			Pn	19 36 49.7	-0.8
CAST	Castle Rocks	9.48	23			Pn	19 36 53.5	+2.0
CAST	Castle Rocks	9.48	23	P		Pn	19 36 54.1	+2.6
	baz=210,SNR=96							
M23K	Glacier View	9.54	39			Pn	19 36 52.6	+0.3
M23K	Glacier View	9.54	39	P		Pn	19 36 53.1	+0.9
	baz=230,SNR=42							
EYAK	Cordova Ski Ar	9.62	48	P		Pn	19 36 54.2	+0.9
EYAK	Cordova Ski Ar	9.62	48	S		Sn	19 38 42.3	+2.5
EYAK	Cordova Ski Ar	9.62	48	P		Pn	19 36 53.8	+0.6
	baz=241,SNR=28							
SCM	Sheep Creek Mo	9.71	40	P		Pn	19 36 55.0	+0.3
SCM	Sheep Creek Mo	9.71	40			Pn	19 36 55.0	+0.3
SCM	Sheep Creek Mo	9.71	40	P		Pn	19 36 55.7	+1.1
	baz=230,SNR=26							
GSIG	Igitkin Island	9.72	258			Pn	19 36 56.3	+1.6
H16K	Elim	9.75	355	P		Pn	19 36 56.1	+1.1
	baz=174,SNR=28							
GSTR	Great Sitkin T	9.75	259			Pn	19 36 57.3	+2.1
J20K	Nowinta River	9.76	16	P		Pn	19 36 57.0	+1.7
	baz=202,SNR=128							
GSMY	Great Sitkin M	9.77	259			Pn	19 36 57.8	+2.3
CHUM	Lake Minchumin	9.84	21	P		Pn	19 36 59.1	+2.8
	baz=208,SNR=31							
WAT7	Susitna Watana	9.88	32			Pn	19 36 56.9	-0.2
DIV	Divide	9.90	46			Pn	19 36 58.2	+1.0
KAIM	Kayak Island	9.94	54			Pn	19 36 58.4	+0.6
KAIM	Kayak Island	9.94	54	P		Pn	19 36 59.0	+1.3
	baz=247,SNR=14							
ANM	Nome	9.94	348	P		Pn	19 36 59.6	+1.9
ANM	Nome	9.94	348			Pn	19 36 59.6	+1.9
ANM	Nome	9.94	348	P		Pn	19 36 59.7	+1.9
	baz=163,SNR=14							
TRF	Thorofare Moun	9.95	27	P		Pn	19 36 59.7	+1.7
	baz=216							
GCSA	Galena City Sc	9.97	9	P		Pn	19 37 00.1	+2.0
	baz=192							
WAT1	Susitna Watana	9.97	33	P		Pn	19 36 58.7	+0.5
	baz=223							
H17K	Granite Mounta	10.01	1			Pn	19 36 60.0	+1.3
H17K	Granite Mounta	10.01	1	P		Pn	19 37 00.3	+1.7
	baz=182,SNR=29							
KLU	Klutina	10.04	44	P		Pn	19 37 00.5	+1.3
	baz=236,SNR=99							
WAT6	Susitna Watana	10.06	36	P		Pn	19 36 59.7	+0.2
	baz=226,SNR=40							
ADK	Adak	10.19	259	P		Pn	19 37 01.7	+0.6
ADK	Adak	10.19	259	P		Pn	19 37 02.7	+1.6
ADK	Adak	10.19	259			Pn	19 37 02.7	+1.6
ADK	Adak	10.19	259	P		Pn	19 37 03.6	+2.5
G15K	Niukluk	10.22	351	P		Pn	19 37 04.0	+2.5
	baz=168,SNR=37							
H18K	Honhosa River	10.27	5	P		Pn	19 37 03.6	+1.4
	baz=186,SNR=36							
I20K	Naaghedeneel	10.30	14	P		Pn	19 37 03.4	+0.9
	baz=199,SNR=29							
M24K	Tolsona, Glenn	10.31	40	P		Pn	19 37 04.0	+1.2
	baz=232,SNR=29							
BMRM	Bremner River	10.31	48	P		Pn	19 37 03.5	+0.6
	baz=241,SNR=40							
KIWB	Kanaga Island	10.46	260			Pn	19 37 06.8	+1.9
G16K	Koyuk River	10.51	356	P		Pn	19 37 05.3	-0.2
	baz=174,SNR=24							
DHY	Denali Highway	10.53	34	P		Pn	19 37 06.6	+0.7
	baz=225,SNR=62							
GAMB	Gambell	10.53	332			Pn	19 37 07.0	+1.3
GAMB	Gambell	10.53	332	P		Pn	19 37 05.4	-0.3
	baz=142,SNR=8.0							
MCK	McKinley	10.54	29	P		Pn	19 37 06.0	0.0
	baz=219,SNR=13							
G17K	Kiwalik Mounta	10.57	359	P		Pn	19 37 07.4	+1.0
	baz=179,SNR=24							
H19K	Roundabout Mou	10.78	9	P		Pn	19 37 11.2	+2.1
	baz=192,SNR=95							
HARP	HAARP	10.86	41	P		Pn	19 37 12.2	+1.8
	baz=233,SNR=11							
CRQE	Cirque	10.88	51	P		Pn	19 37 11.2	+0.6
	baz=245,SNR=30							
H20K	Anotleneega Mo	10.91	12	P		Pn	19 37 12.5	+1.6
	baz=197,SNR=139							
F14K	Arctic Creek	10.94	347	P		Pn	19 37 11.5	+0.2
	baz=162,SNR=19							
F15K	North Star Dit	10.98	351	P		Pn	19 37 14.5	+2.7
	baz=167,SNR=25							
G18K	Tagagawik	11.00	4	P		Pn	19 37 14.4	+2.2
	baz=185,SNR=122							
I21K	Tanana	11.06	19	P		Pn	19 37 15.3	+2.2
	baz=206,SNR=110							
PAX	Paxson	11.10	38	P		Pn	19 37 13.5	-0.1
	baz=230,SNR=126							
MLY	Manley	11.18	22	P		Pn	19 37 16.4	+1.8
	baz=210,SNR=71							
MCARA	McCarthy VSAT	11.19	48	P		Pn	19 37 16.4	+1.7
	baz=242,SNR=21							
NEA2	Nenana	11.20	26	P		Pn	19 37 15.7	+0.8
	baz=216,SNR=28							
TNA	Tin City	11.25	344			Pn	19 37 17.7	+2.1
TNA	Tin City	11.25	344	P		Pn	19 37 17.6	+2.0
	baz=157,SNR=17							
G19K	Purcell Mounta	11.33	7	P		Pn	19 37 18.5	+1.7
	baz=190,SNR=31							
H21K	Melozitna Rive	11.36	16	P		Pn	19 37 19.2	+2.1
	baz=203,SNR=120							
IMAR	Indian Mountai	11.52	14			Pn	19 37 20.4	+1.1
K24K	Donnelly Dome	11.55	34	P		Pn	19 37 19.8	0.0
	baz=226,SNR=71							
I23K	Minto, Yukon-K	11.59	24	P		Pn	19 37 20.2	0.0
	baz=213,SNR=131							
HDA	Harding Lake	11.63	30	P		Pn	19 37 19.9	-0.8
	baz=222,SNR=32							
F18K	Selawik	11.68	2	P		Pn	19 37 21.8	+0.4
	baz=182,SNR=16							
M26K	Nabesna, AK	11.70	43	P		Pn	19 37 23.2	+1.4
	baz=238,SNR=70							
MENT	Mentasta	11.72	40	P		Pn	19 37 21.6	-0.4
MENT	Mentasta	11.72	40	S		Sn	19 39 29.8	-1.5
COLA	College	11.74	27	P		Pn	19 37 20.3	-1.9
COLA	College	11.74	27	P		Pn	19 37 23.6	+1.4
COLA	College	11.74	27			Pn	19 37 22.6	+0.4
COLA	College	11.74	27	P		Pn	19 37 22.5	+0.3
	baz=218							
COLA	College	11.74	27	P		Pn	19 37 24.1	+1.9
RIDG	Independent Ri	11.81	36	P		Pn	19 37 24.5	+1.1
	baz=229,SNR=81							
H22K	Ishtalitna Cre	11.82	18	P		Pn	19 37 24.2	+0.8
	baz=206,SNR=99							
L26K	Log Cabin Wild	11.91	40	P		Pn	19 37 24.5	-0.1
	baz=235,SNR=7.4							
ILAR	Eielson Array	11.92	29	Pn		Pn	19 37 22.5	-2.2
	comp=E,1.6nm,0.3s,baz=218,slow=13,SNR=36							
ILAR				Sn		Sn	19 39 35.1	-1.1
	comp=E,3.4nm,0.3s,baz=207,slow=23,SNR=5.2							
ILAR				LR		LR	19 42 23.1	
	comp=E,7µm,19.9s,baz=233,slow=39							
ILAR	Eielson Array	11.92	29	P		Pn	19 37 24.0	-0.7
ILAR	Eielson Array	11.92	29			Pn	19 37 24.0	-0.7
F19K	Shaleruckik Mo	11.98	5	P		Pn	19 37 27.6	+2.1
	baz=187,SNR=38							
POKR	Poker Plat Res	12.04	27	P		Pn	19 37 26.9	+0.5
	baz=218							
G21K	Allakaket	12.06	13	P		Pn	19 37 27.9	+1.3
	baz=199,SNR=71							
H23K	Yukon River	12.12	22	P		Pn	19 37 27.1	-0.4
	baz=211							
M27K	Edge Creek, AK	12.13	45	P		Pn	19 37 28.8	+1.1
	baz=241,SNR=33							
E17K	Hotham Inlet	12.18	357	P		Pn	19 37 27.5	-0.7
	baz=176,SNR=6.0							
O28M	Mount Upton	12.21	53	P		Pn	19 37 28.9	-0.1
	baz=250,SNR=29							
J25K	Salcha River,	12.25	32	P		Pn	19 37 27.9	-1.4
	baz=225,SNR=44							
F20K	Avaraart Lake	12.33	9	P		Pn	19 37 32.2	+1.9
	baz=193,SNR=76							
YUK3	Moose Creek	12.46	49	P		Pn	19 37 32.6	+0.3
	baz=246,SNR=49							
H24K	Noodor Dome	12.51	24	P		Pn	19 37 30.6	-2.2
	baz=215,SNR=53							
L27K	Beaver Creek,	12.51	42	P		Pn	19 37 33.4	+0.6
	baz=238,SNR=42							
BCAR	Beaver Creek A	12.53	42			Pn	19 37 32.4	-0.7
BVCY	Beaver Creek	12.57	46	P		Pn	19 37 34.8	+1.1
	baz=242,SNR=41							
YUK8	Steele Glacier	12.58	51	P		Pn	19 37 34.8	+0.8
	baz=249,SNR=52							
E19K	Redstone River	12.63	6	P		Pn	19 37 35.5	+1.1
	baz=188,SNR=45							
AMKA	Amchitka	12.68	262			Pn	19 37 36.6	+1.5
G22K	Bettles	12.73	16	P		Pn	19 37 37.2	+1.4
	baz=204							
F21K	Alatna River	12.73	12	P		Pn	19 37 37.7	+1.9
	baz=198,SNR=63							
G23K	Bananza Creek	12.80	19	P		Pn	19 37 37.9	+1.1
	baz=208,SNR=30							
D17K	Noatak River	12.84	355	P		Pn	19 37 37.9	+0.7
	baz=173							
PRP	Porcupine Dome	12.86	29	P		Pn	19 37 38.0	+0.3
	baz=222							
BRWY	Burwash Landin	12.94	52	P		Pn	19 37 40.5	+1.8
	baz=250							
P29M	Windy Craggy	13.09	60	P		Pn	19 37 42.7	+1.9
	baz=259,SNR=23							
YUK4	Talbot Arm	13.11	52	P		Pn	19 37 43.9	+2.8
	baz=250,SNR=27							
YUK6	Outpost Mounta	13.11	54	P		Pn	19 37 42.6	+1.4
	baz=252							
F22K	John River	13.17	14	P		Pn	19 37 43.9	+2.0
	baz=201,SNR=44							
RDOG	Red Dog Mine	13.19	356	P		Pn	19 37 42.9	+0.9
	baz=174,SNR=31							
COLD	Coldfoot	13.23	18	P		Pn	19 37 43.4	+0.9
	baz=206							
G24K	Hadweenzic Riv	13.31	23	P		Pn	19 37 46.7	+2.9
	baz=214,SNR=32							
I26K	Coal Creek Min	13.41	33	P		Pn	19 37 45.1	+0.1
	baz=227							
HYT	Haines Junctio	13.48	55	P		Pn	19 37 47.9	+1.8
	baz=254,SNR=7.8							
E20K	Nigu River	13.48	7	P		Pn	19 37 46.6	+0.5
	baz=190,SNR=79							
C16K	Lisburne Hills	13.55	352	P		Pn	19 37 48.6	+1.7
	baz=168							
P30M	Million Dollar	13.57	58	P		Pn	19 37 47.8	+0.4
	baz=258							
M29M	Somme Creek	13.59	48	P		Pn	19 37 47.8	+0.1
	baz=246,SNR=86							
C17K	DeLong Mountai	13.62	356	P		Pn	19 37 50.0	+2.0
	baz=173,SNR=11							
D19K	Kuna River	13.62	4	P		Pn	19 37 48.7	+0.8
	baz=186,SNR=22							
S31K	Pelican	13.68	67	P		Pn	19 37 50.3	+1.6
	baz=268,SNR=14							
G25K	Bearman Lake	13.68	24	P		Pn	19 37 48.9	+0.2
	baz=217							
C18K	Utukok River	13.74	359			Pn	19 37 51.4	+1.9
C18K	Utukok River	13.74	359	P		Pn	19 37 49.1	-0.5
	baz=178,SNR=9.6							
PLBC	Pleasant Camp	13.75	61	P		Pn	19 37 50.7	+1.0
	baz=261,SNR=16							
E22K	Anaktuvuk Pass	13.81	14	P		Pn	19 37 50.8	+0.2
	baz=201							
E21K	Killik River	13.85	10	P		Pn	19 37 50.9	-0.2
	baz=196,SNR=12							
N30M	Aishikik Lake	13.85	53	P		Pn	19 37 51.5	+0.3
	baz=252,SNR=22							
D20K	Etivluk River	13.91	6	P		Pn	19 37 51.7	-0.2
	baz=189,SNR=21							
F24K	Squaw Lake	13.92	20	P		Pn	19 37 52.2	+0.2
	baz=211,SNR=7.5							
DAWY	Dawson	13.96	41	P		Pn	19 37 52.7	0.0
	baz=239,SNR=22							
L29M	L29M	14.01	45	P		Pn	19 37 53.3	+0.1
	baz=244,SNR=28							
E23K	Chandalar	14.07	17	P		Pn	19 37 53.9	-0.3
	baz=206,SNR=43							
I27K	Kandik River	14.09	33	P		Pn	19 37 54.5	+0.1
	baz=230,SNR=13							
O30N	Mendenhall	14.14	56	P		Pn	19 37 55.4	+0.4
	baz=256,SNR=30							
SIT	Sitka	14.16	71	P		P	19 38 00.5	-1.5
SIT	Sitka	14.16	71	P		Pn	19 37 55.7	+0.4
	baz=272							
SKAG	Skagway	14.27	61	P		P	19 38 02.0	-1.2
SKAG	Skagway	14.27	61	P		Pn	19 37 58.1	+1.3
	baz=262							
E24K	Your Creek	14.29	18	P		Pn	19 37 56.0	-1.0
	baz=209,SNR=46							
M30M	Minto, Yukon	14.36	48			Pn	19 37 58.0	0.0
M30M	Minto, Yukon	14.36	48	P		Pn	19 37 58.2	+0.2
	baz=249,SNR=28							
G26K	Porcupine Rive	14.41	27	P		Pn	19 37 57.9	-0.6
	baz=221,SNR=11							
BESE	Bessie Mountai	14.43	65			Pn	19 37 58.9	-0.1
F25K	Christian Rive	14.46	23	P		Pn	19 37 56.8	-2.5
	baz=216,SNR=20							
N31M	Braeburn, Yuko	14.46	53	P		Pn	19 38 00.3	+0.9
	baz=254,SNR=16							
C21K	Knifeblade Rid	14.47	8	P		Pn	19 37 59.1	-0.4
	baz=193							
H27K	Steamboat Moun	14.53	32	P		Pn	19 38 00.8	+0.5
	baz=228,SNR=39							
I28M	Miner Creek	14.54	36	P		Pn	19 38 00.8	+0.3
	baz=233,SNR=20							
S32K	Killisnoo	14.56	70	P		Pn	19 38 01.6	+1.0
	baz=271,SNR=10							
K29M	Barlow Dome	14.58	43	P		Pn	19 38 01.2	+0.2
	baz=243,SNR=22							
J29N	Klondike Camp	14.60	41	P		Pn	19 38 01.3	0.0
	baz=240,SNR=22							
TOLK	Toolik Lake Re	14.61	16	P		Pn	19 38 01.3	0.0
	baz=205,SNR=92							
WHY	Whitehorse	14.69	57	P		Pn	19 38 02.6	0.0
	baz=258,SNR=28							
D23K	Nanushuk River	14.74	14	P		Pn	19 38 02.3	-0.7
	baz=202,SNR=25							
F26K	Sheenjek River	14.89	25	P		Pn	19 38 05.2	+0.2
	baz=219,SNR=20							
G27K	Doyon Strip	14.89	30	P		Pn	19 38 04.4	-0.7
	baz=226,SNR=42							
E25K	Arctic Village	14.90	22	P		Pn	19 38 05.2	-0.1
	baz=215,SNR=36							
B21K	Ikpikpuk River	14.94	8	P		Pn	19 38 06.0	+0.4
	baz=193,SNR=10							
I29M	Ogilvie Camp,	15.05	37	IAmb		IAmb	19 38 14.8	
	comp=Z,68nm,0.7s							
I29M	Ogilvie Camp,	15.05	37	P		Pn	19 38 06.7	-0.4
	baz=237,SNR=41							
P32M	Atlin	15.11	61	P		Pn	19 38 08.9	+1.0
	baz=264							
B20K	Meade River	15.17	4	IAmb		IAmb	19 38 15.2	
	comp=Z,179nm,0.9s							
B20K	Meade River	15.17	4	P		Pn	19 38 08.8	+0.2
	baz=187							
SHEM	Shemya Is, Ala	15.18	272	Pn		Pn	19 38 07.5	-1.4
	comp=Z,8.8nm,0.3s,baz=24,slow=5.7,SNR=5.0							
SHEM				LR		LR	19 43 54.2	
	comp=Z,3µm,21.0s,baz=84,slow=37							
	comp=Z,43nm,0.8s							
SHEM	Shemya Is, Ala	15.18	272	IAmb		IAmb	19 38 16.3	
	comp=Z,167nm,1.2s							
SMY	Shemya	15.18	272	IAmb		IAmb	19 38 16.3	
	comp=Z,163nm,1.1s							
D24K	Happy Valley	15.19	16	P		Pn	19 38 09.3	+0.4
	baz=206							
M31M	Drury Creek, Y	15.30	51	P		Pn	19 38 11.6	+1.2
	baz=253,SNR=23							
A19K	Wainwright	15.30	359	P		Pn	19 38 10.4	+0.1
	baz=178							
J30M	Hart River	15.38	42	P		Pn	19 38 11.7	+0.1
	baz=242,SNR=78							
H29M	Whitestone	15.52	35	P		Pn	19 38 14.0	+0.7
	baz=234,SNR=151							
C23K	Itkillik River	15.56	13	IAmb		IAmb	19 38 19.9	
	comp=Z,184nm,0.9s							
C23K	Itkillik River	15.56	13	P		Pn	19 38 14.3	+0.5
	baz=201,SNR=36							
P33M	Teslin, Yukon	15.63	59	P		Pn	19 38 16.1	+1.3
	baz=262,SNR=24							
N32M	Quiet Lake	15.65	56	P		Pn	19 38 14.8	-0.2
	baz=259							
I30M	Mount Dempster	15.67	39	P		Pn	19 38 14.8	-0.5
	baz=240,SNR=764							
B22K	Teshekpuk Lake	15.74	9	IAmb		IAmb	19 38 20.3	
	comp=Z,139nm,0.9s							
B22K	Teshekpuk Lake	15.74	9	P		Pn	19 38 15.2	-0.8
	baz=195,SNR=8.3							
D25K	Kavik River	15.76	18	P		Pn	19 38 16.0	-0.3
	baz=211,SNR=29							
Q32M	Nakina River	15.80	64	P		Pn	19 38 18.1	+1.0
	baz=268,SNR=15							
E27K	Coleen River	15.89	26	P		Pn	19 38 17.8	-0.2
	baz=223,SNR=21							
F28M	Old Crow	15.95	29	P		Pn	19 38 18.2	-0.6
	baz=227,SNR=16							
G29M	Pine Creek	16.05	33	IAmb		IAmb	19 38 24.5	
	comp=Z,296nm,0.8s							
G29M	Pine Creek	16.05	33	P		Pn	19 38 19.6	-0.4
	baz=232,SNR=193							
EPYK	Eagle Plains	16.15	36	P		Pn	19 38 21.3	0.0
	baz=236,SNR=105							
S34M	Telegraph Cree	16.39	68	P		P	19 38 25.6	-1.1
	baz=272,SNR=14							
V35K	Ketchikan	16.42	77	P		Pn	19 38 25.2	+0.5
	baz=281							
DIB	Dawson Inlet,	16.44	85			P	19 38 27.3	0.0
H02S1	DAWSON INLET T	16.44	85	Pn		Pn	19 38 23.6	-1.4
H02S1				T		T	19 54 58.9	
	SNR=4.9							
H02S2	DAWSON INLET T	16.44	85	Pn		P	19 38 26.5	-0.8
H02S2				T		T	19 54 59.0	
	SNR=5.5							
C27K	Jago River	16.53	21	P		P	19 38 27.5	-0.7
	baz=216,SNR=8.1							
G30M	tAoh Zraii Nji	16.66	34	IAmb		IAmb	19 38 33.5	
	comp=Z,122nm,0.8s							
G30M	tAoh Zraii Nji	16.66	34	P		Pn	19 38 27.4	-0.4
	baz=235,SNR=42							
H31M	Peel River	16.69	39	IAmb		IAmb	19 38 33.3	
	comp=Z,264nm,0.9s							
H31M	Peel River	16.69	39	P		Pn	19 38 27.6	-0.6
	baz=242,SNR=185							
E28M	Babbage River	16.72	27	P		Pn	19 38 28.0	-0.5
	baz=226,SNR=13							
MOBC	Moresby Island	16.75	85	P		P	19 38 31.2	+0.4
MMPY	Sheldon Lake,	16.81	51	P		P	19 38 31.1	-0.3
	baz=256,SNR=64							
D27M	Malcolm River	16.83	24	P		Pn	19 38 29.4	-0.6
	baz=221,SNR=23							
DLBC	Dease Lake	16.96	66	Pn		Pn	19 38 31.1	-0.6
	comp=Z,0.1nm,0.3s,baz=247,slow=15,SNR=15							
DLBC				Sn		Sn	19 41 36.8	-2.2
	comp=Z,0.2nm,0.3s,baz=137,slow=6.5,SNR=0.8							
DLBC				LR		LR	19 44 47.5	
	comp=Z,2µm,18.5s,baz=260,slow=36							
	comp=Z,10nm,0.9s							
DLBC	Dease Lake	16.96	66	P		Pn	19 38 32.2	+0.5
	baz=271,SNR=20							
E29M	Blow River	17.02	29	P		Pn	19 38 32.3	+0.1
	baz=229,SNR=24							
F30M

PET **Petropavlovsk** 23.90 282 P **P** 19 39 47.9 +0.7
PET **Petropavlovsk** 23.90 282 P **P** 19 39 46.6 -0.6
comp=Z,3µmcomp=Z,361nm,1.2s
PET **Petropavlovsk** 23.90 282 P **P** 19 39 47.5 +0.4
NLWA **Neilton Lookou** 23.91 93 IAmb IAmb 19 40 01.8
comp=Z,63nm,1.0s
NLWA IAMs_20 IAMs_20 19 47 06.7
comp=Z,4µm,20.0s
PEA0B **Petropavlovsk-** 24.41 283 *c i*P **P** 19 39 51.9 +0.1
PEA0B **Petropavlovsk-** 24.41 283 P **P** 19 39 52.0 +0.2
PETK **Petropavlovsk-** 24.41 283 P **P** 19 39 51.2 -0.6
comp=Z,64nm,0.5s,baz=75,slow=13,SNR=110
PETK PcP **PcP** 19 43 30.1 +0.3
comp=Z,2.7nm,0.4s,baz=76,slow=6.1,SNR=2.4
PETK LR LR 19 49 24.9
comp=Z,1µm,20.9s,baz=85,slow=36
comp=Z,64nm,0.5s
PETK **Petropavlovsk-** 24.41 283 P **P** 19 39 51.8 0.0
PETK 19 43 30.1
PETK **Petropavlovsk-** 24.41 283 P **P** 19 39 51.8 0.0
YKA **Yellowknife Ar** 24.46 54 P **P** 19 39 52.6 +0.3
comp=Z,8.2nm,0.5s,baz=269,slow=8.1,SNR=33
YKA PcP **PcP** 19 43 30.9 +1.3
comp=Z,3.3nm,0.5s,baz=274,slow=1.9,SNR=6.7
YKA ScP **ScP** 19 47 06.5 +1.8
comp=Z,3.2nm,1.0s,baz=269,slow=8.8,SNR=4.0
YKA LR LR 19 50 02.5
comp=Z,2µm,20.8s,baz=252,slow=38
comp=Z,8.2nm,0.5s
YKA **Yellowknife Ar** 24.46 54 **ScP** 19 47 04.4 -0.3
YKA **Yellowknife Ar** 24.46 54 P **P** 19 39 51.6 -0.6
YKAW1 **Yellowknife Wh** 24.52 54 IAmb IAmb 19 40 07.7
comp=Z,53nm,0.9s
SEY **Seymchan** 25.08 308 LR LR 19 51 00.3
comp=Z,5µm,19.3s,baz=94,slow=39
SEY **Seymchan** 25.08 308 *c i*P **P** 19 39 56.6 -1.2
SEY pmax pmax
comp=Z,41nm,0.9s
LTY **Liberty** 25.82 91 IAmb IAmb 19 40 22.5
comp=Z,88nm,1.5s
COR **Corvallis** 25.82 98 IAMs_20 IAMs_20 19 47 50.4
comp=Z,3µm,20.0s
MA2 **Magadan** 26.30 300 LR LR 19 51 48.7
comp=Z,2µm,18.9s,baz=90,slow=39
MA2 **Magadan** 26.30 300 P **P** 19 40 06.8 -2.1
MA2 **Magadan** 26.30 300 *ce*P **P** 19 40 09.7 +0.8
MA2 pmax pmax
comp=Z,70nm,1.0s
MA2 **Magadan** 26.30 300 P **P** 19 40 09.5 +0.6
MA2 IAmb IAmb 19 40 17.9
comp=Z,59nm,0.9s
MA2 **Magadan** 26.30 300 P **P** 19 40 10.8 +1.9
EPH **Ephrata** 26.39 90 IAmb IAmb 19 40 25.4
comp=Z,62nm,1.2s
WAH2 **Wahluke Slope** 26.73 91 IAmb IAmb 19 40 28.7
comp=Z,218nm,1.9s
HAWA **Hanford** 26.95 91 IAMs_20 IAMs_20 19 49 08.1
comp=Z,3µm,19.0s
EDM **Edmonton** 27.25 74 IAmb IAmb 19 40 32.4
comp=Z,61nm,1.0s
NEW **Newport** 27.34 86 LR LR 19 49 24.8
comp=Z,2µm,21.9s,baz=294,slow=32
NEW **Newport** 27.34 86 P **P** 19 40 22.2 +3.8
NEW **Newport** 27.34 86 P **P** 19 40 22.4 +3.9
YBH **Yreka Blue Hor** 27.96 102 LR LR 19 49 07.1
comp=Z,4µm,20.9s,baz=310,slow=31
YBH **Yreka Blue Hor** 27.96 102 P **P** 19 40 24.9 +0.8
YBH pmax pmax
comp=Z,11nm,0.9s
YBH **Yreka Blue Hor** 27.96 102 P **P** 19 40 24.9 +0.8
KHMM **Horse Mountain** 27.96 105 IAMs_20 IAMs_20 19 48 46.9
comp=Z,3µm,20.0s
M02C **Callahan** 28.11 103 IAMs_20 IAMs_20 19 48 48.8
comp=Z,4µm,21.0s
KHBM **Hayfork Bally** 28.39 105 IAMs_20 IAMs_20 19 48 42.3
comp=Z,3µm,22.0s
KMRM **Mail Ridge** 28.42 106 IAmb IAmb 19 40 45.0
comp=Z,36nm,0.8s
O02D **Mt. Diablo Mer** 28.96 105 IAMs_20 IAMs_20 19 49 11.4
comp=Z,3µm,21.0s
BMO **Blue Mountains** 29.11 92 IAMs_20 IAMs_20 19 50 25.3
comp=Z,3µm,20.0s
HATC **Hat Creek Radi** 29.27 103 IAMs_20 IAMs_20 19 49 26.7
comp=Z,4µm,22.0s
PLID **Pearl Lake** 29.72 91 IAMs_20 IAMs_20 19 50 54.6
comp=Z,2µm,20.0s
WVOR **Wild Horse Val** 29.82 97 IAMs_20 IAMs_20 19 50 23.2
comp=Z,2µm,21.0s
MFID **Camas Ranch** 30.82 93 IAMs_20 IAMs_20 19 50 56.7
comp=Z,2µm,22.0s
JRSC **Jasper Ridge** 31.22 108 IAMs_20 IAMs_20 19 50 03.3
comp=Z,2µm,22.0s
WELL **Weller Preserv** 31.32 105 IAMs_20 IAMs_20 19 50 43.8
comp=Z,2µm,21.0s
PNTR **Pine Nut** 31.50 103 IAmb IAmb 19 41 17.7
comp=Z,47nm,0.8s
HLID **Hailey** 31.55 92 IAMs_20 IAMs_20 19 52 02.8
comp=Z,3µm,19.0s
HLID **Hailey** 31.55 92 P **P** 19 40 59.4 +3.5
RES **Resolute Bay** 31.66 27 LR LR 19 54 60.0
comp=Z,2µm,20.4s,baz=264,slow=39
RES **Resolute Bay** 31.66 27 P **P** 19 40 55.8 -0.6
RES pmax pmax
comp=Z,13nm,0.9s
RES **Resolute Bay** 31.66 27 P **P** 19 40 55.8 -0.6
EGMT **Eagleton** 31.69 81 IAmb IAmb 19 41 11.8
comp=Z,38nm,0.9s
EGMT IAMs_20 IAMs_20 19 52 28.6
comp=Z,2µm,20.0s
CMB **Columbia Colle** 31.79 105 IAMs_20 IAMs_20 19 50 35.4
comp=Z,2µm,22.0s
BLKN **Baker Lake** 32.45 47 IAmb IAmb 19 41 17.7
comp=Z,41nm,0.9s
NVAR **Mina Array Bea** 32.68 103 P **P** 19 41 07.6 +1.6
comp=Z,2.9nm,0.8s,baz=322,slow=8.8,SNR=10.0
NVAR PcP **PcP** 19 43 52.1 +1.2
comp=Z,3.5nm,0.6s,baz=301,slow=2.8,SNR=5.8
NVAR ScP **ScP** 19 47 31.5 +0.3
comp=Z,1.2nm,0.8s,baz=331,slow=3.2,SNR=5.8
NVAR LR LR 19 52 02.8
comp=Z,2µm,21.4s,baz=315,slow=32
comp=Z,2.9nm,0.8s
NVAR **Mina Array Bea** 32.68 103 **ScP** 19 47 31.0 -0.2
LHV **Little Huntoon** 32.69 103 IAmb IAmb 19 41 22.0
comp=Z,23nm,0.8s
HULI **Fort Hunter Li** 32.78 109 IAMs_20 IAMs_20 19 50 45.6
comp=Z,2µm,22.0s
FFC **Flin Flon** 32.80 66 P **P** 19 41 07.7 +1.1
FFC **Flin Flon** 32.80 66 IAMs_20 IAMs_20 19 53 57.9
comp=Z,2µm,20.0s
MDPB **Devils Postpil** 32.81 105 IAmb IAmb 19 41 23.5
comp=Z,28nm,0.9s
ELK **Elko** 32.86 97 LR LR 19 52 42.0
comp=Z,3µm,20.4s,baz=307,slow=33
ELK **Elko** 32.86 97 P **P** 19 41 11.0 +3.5
ELK **Elko** 32.86 97 IAmb IAmb 19 41 21.2
comp=Z,27nm,0.9s
ELK IAMs_20 IAMs_20 19 52 30.5
comp=Z,3µm,20.0s
TIXI **Tiksi** 33.36 327 LR LR 19 56 40.9
comp=Z,2µm,18.3s,baz=102,slow=40
TIXI **Tiksi** 33.36 327 *ce*P **P** 19 41 10.8 -0.4
TIXI pmax pmax
comp=Z,47nm,1.0s
TIXI **Tiksi** 33.36 327 P **P** 19 41 10.6 -0.6
TIXI IAmb IAmb 19 41 12.7
comp=Z,43nm,1.0s
TIXI IAMs_20 IAMs_20 19 56 29.7
comp=Z,2µm,18.0s
KIP **Kipapa** 33.54 176 IAMs_20 IAMs_20 19 51 22.3
comp=Z,3µm,22.0s
RLMT **Red Lodge** 33.58 85 IAmb IAmb 19 41 29.6
comp=Z,27nm,1.1s
HVU **Hansel Valley** 33.60 93 IAmb IAmb 19 41 29.8
comp=Z,32nm,0.9s
DSP **Deep Springs** 33.61 104 IAmb IAmb 19 41 30.6
comp=Z,29nm,1.0s
TIN **Tinemaha, Big** 33.69 104 IAMs_20 IAMs_20 19 52 18.6
comp=Z,2µm,20.0s
TYV **Tymovskoe** 33.76 287 *e*P **P** 19 41 15.8 +0.9
TYV *e*S **S** 19 46 36.4 +1.1
TYV pmax pmax
comp=Z,83nm,0.9s
TYV pmax pmax
comp=Z,400nm,4.0s
TYV smax smax
comp=N,300nm,7.1s
TYV smax smax
comp=E,300nm,7.1s
AHID **Auburn Hatcher** 33.95 90 IAMs_20 IAMs_20 19 53 42.4
comp=Z,1µm,19.0s
CWC **Cottonwood Cre** 34.22 105 IAMs_20 IAMs_20 19 51 58.5
comp=Z,2µm,22.0s
HWUT **Hardware Ranch** 34.41 92 IAMs_20 IAMs_20 19 53 35.6
comp=Z,2µm,20.0s
LAO **LASA Array** 34.43 81 IAMs_20 IAMs_20 19 54 08.1
comp=Z,2µm,20.0s
DGMT **Dagmar** 34.60 77 IAMs_20 IAMs_20 19 55 00.5
comp=Z,2µm,19.0s
DGMT **Dagmar** 34.60 77 IAmb IAmb 19 41 37.3
comp=Z,35nm,0.8s
DUG **Dugway, Tooele** 34.61 95 P **P** 19 41 25.0 +2.4
DUG **Dugway, Tooele** 34.61 95 IAmb IAmb 19 41 38.5
comp=Z,52nm,1.1s
DUG IAMs_20 IAMs_20 19 52 55.9
comp=Z,2µm,22.0s
DUG **Dugway, Tooele** 34.61 95 P **P** 19 41 26.0 +3.4
S11A **Rachel** 34.67 101 IAmb IAmb 19 41 40.2
comp=Z,40nm,0.9s
MPMC **Manual Prospec** 34.82 105 IAmb IAmb 19 41 40.7
comp=Z,36nm,1.0s
PDAR **Pinedale Array** 34.84 89 P **P** 19 41 26.6 +1.9
comp=Z,1.1nm,0.5s,baz=315,slow=3.8,SNR=6.9
PDAR PcP **PcP** 19 43 57.9 +1.0
comp=Z,0.6nm,0.2s,baz=302,slow=3.5,SNR=9.9
PDAR LR LR 19 55 14.3
comp=Z,425nm,18.5s,baz=298,slow=36
PDAR **Pinedale Array** 34.84 89 P **P** 19 41 26.1 +1.5
TPNV **Topopah Spring** 34.88 103 IAmb IAmb 19 41 39.0
comp=Z,52nm,0.9s
TPNV IAMs_20 IAMs_20 19 52 59.1
comp=Z,3µm,22.0s
UGL **Uglegorsk** 35.00 285⇑ *i*P **P** 19 41 26.9 +1.2
UGL *e*S **S** 19 46 46.5 -8.0
UGL pmax pmax
comp=Z,700nm,1.0s
UGL pmax pmax
comp=Z,500nm,0.9s
UGL MLR MLR
comp=E,1µm,17.0s
UGL MLR MLR
comp=N,700nm,15.0s
UGL MLR MLR
comp=Z,1µm,20.0s
FCC **Fort Churchill** 35.12 56 IAmb IAmb 19 41 41.4
comp=Z,78nm,1.2s
PSUT **Pine Spring** 35.13 98 IAmb IAmb 19 41 43.1
comp=Z,80nm,1.6s
LRMC **Laurel Mtn Rad** 35.14 106 IAmb IAmb 19 41 42.4
comp=Z,20nm,0.7s
GWY **Greenwater Val** 35.19 104 IAmb IAmb 19 41 43.1
comp=Z,33nm,0.8s
PRN **Pahroc Range** 35.23 101 IAmb IAmb 19 41 43.6
comp=Z,54nm,0.9s
QSM **Queen of Sheba** 35.24 104 IAmb IAmb 19 41 43.9
comp=Z,47nm,0.9s
POHA **Pohakuloa** 35.34 172 IAMs_20 IAMs_20 19 52 52.9
comp=Z,2µm,19.0s
YAK **Yakutsk** 35.52 310 LR LR 19 57 23.1
comp=Z,5µm,20.2s,baz=74,slow=38
YAK **Yakutsk** 35.52 310 *c i*P **P** 19 41 28.6 -1.4
YAK *e**PP **pP** 19 41 39.5 -1.9
YAK *e* 19 42 47.8
YAK *e* 19 43 57.2
YAK *e*S **S** 19 47 02.4 +0.2
YAK *e*SS **SnSn** 19 49 21.2 -3.2
YAK *e*SSS SSS 19 49 45.2
YAK *e* 19 51 42.7
YAK pmax pmax
comp=Z,125nm,1.0s
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,37nm,1.3s
YAK pmax pmax
comp=Z,56nm,2.1s
YAK pmax pmax
comp=N,32nm,2.2s
YAK pmax pmax
comp=E,46nm,2.7s
YAK smax smax
comp=E,50nm,1.9s
YAK smax smax
comp=N,41nm,1.7s
YAK MLR MLR
comp=Z,5µm,26.0s
YAK MLR MLR
comp=N,2µm,23.0s
YAK MLR MLR
comp=E,4µm,23.0s
YAK **Yakutsk** 35.52 310 P **P** 19 41 28.5 -1.5
YAK **Yakutsk** 35.52 310 P **P** 19 41 28.8 -1.2
YAK **Yakutsk** 35.52 310 P **P** 19 41 28.8 -1.2
BSUT **Blindstream Ca** 35.56 93 IAmb IAmb 19 41 46.1
comp=Z,85nm,1.6s
YSS **Yuzhno-Sakhali** 35.78 281 P **P** 19 41 32.6 +0.2
YSS **Yuzhno-Sakhali** 35.78 281 *ce*P **P** 19 41 33.1 +0.7
YSS *e* 19 42 53.1
YSS *e* 19 43 56.6
YSS *e*S **S** 19 47 04.5 -2.0
YSS pmax pmax
comp=Z,200nm,4.2s
YSS pmax pmax
comp=N,100nm,3.6s
YSS pmax pmax
comp=E,100nm,3.8s
YSS pmax pmax
comp=N,40nm,1.0s
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=E,50nm,0.9s
YSS MLR MLR
comp=Z,600nm,15.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS **Yuzhno-Sakhali** 35.78 281 P **P** 19 41 32.2 -0.2
YSS **Yuzhno-Sakhali** 35.78 281 P **P** 19 41 33.2 +0.8
MWC **Mount Wilson** 35.86 108 IAMs_20 IAMs_20 19 52 45.0
comp=Z,2µm,22.0s
BFSC **Mount Baldy Ra** 36.07 107 IAMs_20 IAMs_20 19 52 53.5
comp=Z,2µm,22.0s
CCUT **Cedar City** 36.09 99 IAmb IAmb 19 41 51.5
comp=Z,55nm,1.7s
RDMU **Red Mountain** 36.23 92 IAmb IAmb 19 41 52.3
comp=Z,34nm,0.8s
Q16A **Castle Valley** 36.41 95 IAmb IAmb 19 41 54.2
comp=Z,52nm,1.1s
MTPU **Mount Pierson** 36.42 97 IAmb IAmb 19 41 54.8
comp=Z,87nm,1.9s
P18A **Preston Nutter** 36.46 94 IAmb IAmb 19 41 54.5
comp=Z,27nm,1.1s
POIN **Pond Inlet** 36.66 30 P **P** 19 41 39.8 +0.3
POIN IAmb IAmb 19 41 55.8
comp=Z,27nm,1.0s
KNB **Kanab** 36.77 99 IAmb IAmb 19 41 57.5
comp=Z,85nm,1.8s
ALE **Alert** 36.94 12 P **P** 19 41 41.9 0.0
RSSD **Black Hills** 37.18 83 P **P** 19 41 44.8 +0.1
RSSD pmax pmax
comp=Z,18nm,0.9s
RSSD MLR MLR
comp=Z,2µm,20.0s
RSSD **Black Hills** 37.18 83 P **P** 19 41 44.8 +0.1
RSSD **Black Hills** 37.18 83 IAMs_20 IAMs_20 19 55 39.9
comp=Z,2µm,20.0s
RSSD **Black Hills** 37.18 83 P **P** 19 41 45.9 +1.2
PFO **Pinyon Flats O** 37.20 107 LR LR 19 54 21.3
comp=Z,2µm,20.8s,baz=316,slow=32
PFO **Pinyon Flats O** 37.20 107 P **P** 19 41 48.2 +3.4
PFO **Pinyon Flats O** 37.20 107 IAMs_20 IAMs_20 19 53 59.5
comp=Z,2µm,21.0s
GRNR **Gornyy** 37.21 290⇑ *i*P **P** 19 41 44.4 -0.2
GRNR pmax pmax
comp=Z,50nm,0.8s
O20A **White River Ci** 37.28 91 IAmb IAmb 19 42 00.8
comp=Z,51nm,0.8s
O20A IAMs_20 IAMs_20 19 55 29.6
comp=Z,2µm,20.0s
MDND **Maddock** 37.51 75 IAMs_20 IAMs_20 19 57 12.5
comp=Z,1µm,18.0s
IRM **Iron Mountain** 37.52 105 IAmb IAmb 19 42 03.0
comp=Z,48nm,0.9s
JKA **Kamikawa-asahi** 37.53 277 P **P** 19 41 47.5 +0.1
JKA IAmb IAmb 19 41 48.9
comp=Z,75nm,0.9s
JKA **Kamikawa-asahi** 37.53 277 P **P** 19 41 47.5 +0.1
ASAJ **Asahikawa** 37.53 277 LR LR 19 59 06.5
comp=Z,723nm,19.0s,baz=62,slow=39
ASAJ **Asahikawa** 37.53 277 P **P** 19 41 47.5 +0.2
ASAJ pmax pmax
comp=Z,76nm,0.9s
W13A **Hualapai Mount** 37.54 102 IAmb IAmb 19 42 03.8
comp=Z,47nm,1.3s
TULEG **Thule** 37.77 22 IAmb IAmb 19 41 49.9
comp=Z,41nm,1.1s
TULEG IAMs_20 IAMs_20 19 59 32.8
comp=Z,2µm,20.0s
TULEG **Thule** 37.77 22 *i* P **P** 19 41 48.6 -0.4
TULEG IAmb IAmb 19 41 49.6
comp=Z,37nm,1.1s
PV10 **Paradox Valley** 38.00 94 IAmb IAmb 19 42 07.3
comp=Z,139nm,1.7s
PV04 **Paradox Valley** 38.06 94 IAmb IAmb 19 42 07.5
comp=Z,120nm,1.8s
PV20 **West Nyswonger** 38.06 94 IAmb IAmb 19 42 08.1
comp=Z,44nm,0.7s
PV19 **Morning Glory** 38.08 94 IAmb IAmb 19 42 06.8
comp=Z,37nm,0.7s
PV18 **Skein Mesa, Pa** 38.16 94 IAmb IAmb 19 42 08.1
comp=Z,40nm,0.7s
PV05 **Paradox Valley** 38.17 95 IAmb IAmb 19 42 08.3
comp=Z,27nm,0.7s
BLYC **Blythe** 38.17 105 IAmb IAmb 19 42 08.9
comp=Z,115nm,1.5s
PV12 **Saucer Basin,** 38.17 94 IAmb IAmb 19 42 08.4
comp=Z,58nm,1.2s
ULM **Lac du Bonnet** 38.23 70 P **P** 19 41 52.8 -0.4
comp=Z,15nm,0.7s,baz=297,slow=8.6,SNR=12
ULM PcP **PcP** 19 44 06.1 -0.6
comp=Z,7.2nm,0.9s,baz=299,slow=1.4,SNR=2.3
ULM LR LR 19 57 50.5
comp=Z,2µm,18.8s,baz=302,slow=36
comp=Z,15nm,0.7s
ULM **Lac du Bonnet** 38.23 70 IAmb IAmb 19 42 14.6
comp=Z,31nm,1.0s
PV13 **Radium Mtn., P** 38.27 94 IAmb IAmb 19 42 09.1
comp=Z,56nm,0.7s
PV15 **Paradox Valley** 38.34 94 IAmb IAmb 19 42 19.5
comp=Z,25nm,0.7s
PV01 **Paradox Valley** 38.43 94 IAmb IAmb 19 42 10.4
comp=Z,34nm,0.7s
ERM **Erimo** 38.52 274 P **P** 19 41 56.2 +0.6
ERM **Erimo** 38.52 274 *c i*P **P** 19 41 55.9 +0.2
ERM pmax pmax
comp=Z,101nm,1.0s
ERM **Erimo** 38.52 274 P **P** 19 41 55.3 -0.3
ERM IAmb IAmb 19 41 58.2
comp=Z,95nm,1.1s
ERM **Erimo** 38.52 274 P **P** 19 41 56.2 +0.6
JEM **Erimo** 38.52 274 P **P** 19 41 56.8 +1.2
GLA **Glamis** 38.52 106 IAMs_20 IAMs_20 19 55 48.4
comp=Z,1µm,18.0s
WUAZ **Wupatki** 38.66 100 IAmb IAmb 19 42 13.2
comp=Z,44nm,1.1s
WUAZ IAMs_20 IAMs_20 19 55 36.1
comp=Z,2µm,22.0s
JOHN **Johnston Islan** 38.80 194 IAMs_20 IAMs_20 19 54 24.0
comp=Z,2µm,20.0s
ISCO **Idaho Springs** 39.02 90 IAMs_20 IAMs_20 19 57 00.6
comp=Z,2µm,20.0s
MVCO **Mesa Verde** 39.11 95 P **P** 19 42 04.0 +2.9
AGMN **Agassiz Nation** 39.32 72 IAmb IAmb 19 42 16.9
comp=Z,37nm,0.8s
AGMN **Agassiz Nation** 39.32 72 P **P** 19 42 03.1 +0.8
EPLO **Experimental L** 39.70 69 IAmb IAmb 19 42 20.2
comp=Z,39nm,0.9s
SUSD **Miller** 39.88 79 IAMs_20 IAMs_20 19 57 42.2
comp=Z,2µm,20.0s
X18A **Snowflake** 40.18 99 IAmb IAmb 19 42 26.0
comp=Z,33nm,1.0s
OGNE **Ogallala** 40.33 85 IAmb IAmb 19 42 26.1
comp=Z,22nm,0.7s
PIX **Pinacate** 40.40 106 IAmb IAmb 19 42 27.2
comp=Z,78nm,1.6s
ZEA **Zeya** 40.43 299 *e*P **P** 19 42 09.8 -1.7
ZEA *e*S **S** 19 48 13.3 -3.5
ZEA *e* 19 51 52.6
ZEA pmax pmax
comp=Z,200nm,7.4s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA smax smax
comp=E,100nm,11.0s
ZEA MLR MLR
comp=N,300nm,13.0s
ZEA MLR MLR
comp=Z,600nm,16.0s
SDCO **Great Sand Dun** 40.47 92 IAMs_20 IAMs_20 19 57 26.9
comp=Z,1µm,19.0s
K30B **Basset** 40.60 82 IAMs_20 IAMs_20 19 57 49.5
comp=Z,2µm,20.0s
NEEM **North Greenlan** 40.94 18 *i* P **P** 19 42 15.2 -0.6
NEEM IAmb IAmb 19 42 16.7
comp=Z,106nm,1.0s
KULLO **Kullorsuaq** 41.24 23 P **P** 19 42 18.2 +0.4
KSCO **Kaye Shedlock'** 41.27 88 IAMs_20 IAMs_20 19 58 20.0
comp=Z,1µm,21.0s
TUC **Tucson** 41.33 102 P **P** 19 42 21.3 +2.0
TUC pmax pmax
comp=Z,34nm,1.3s
TUC **Tucson** 41.33 102 P **P** 19 42 22.1 +2.8
T25A **Trinidad** 41.51 92 IAMs_20 IAMs_20 19 57 51.6
comp=Z,1µm,20.0s
ECSD **EROS Data Cent** 41.64 78 P **P** 19 42 21.0 -0.5
ECSD **EROS Data Cent** 41.64 78 IAMs_20 IAMs_20 19 58 46.8
comp=Z,2µm,20.0s
ECSD **EROS Data Cent** 41.64 78 P **P** 19 42 21.7 +0.2
ANMO **Albuquerque** 41.88 96 LR LR 19 58 49.6
comp=Z,812nm,19.1s,baz=310,slow=35
ANMO **Albuquerque** 41.88 96⇓ *e*P **P** 19 42 25.5 +1.7
ANMO pmax pmax
comp=Z,13nm,1.5s
ANMO **Albuquerque** 41.88 96 P **P** 19 42 24.4 +0.6
ANMO **Albuquerque** 41.88 96 P **P** 19 42 25.6 +1.7
ALQ **Albuquerque** 41.88 96 IAmb IAmb 19 42 39.3
comp=Z,20nm,1.5s
ALQ IAMs_20 IAMs_20 19 58 29.3
comp=Z,796nm,20.0s
EYMN **Ely** 41.91 70 IAmb IAmb 19 42 38.3
comp=Z,69nm,1.0s
EYMN **Ely** 41.91 70 P **P** 19 42 24.5 +0.8
BGNE **Belgrade** 42.25 82 IAMs_20 IAMs_20 19 58 42.1
comp=Z,2µm,21.0s
HEH **HeiHe** 42.29 295 *e*P **P** 19 42 25.5 -1.2
HEH pP **pP** 19 42 31.5 -6.8
HEH PcP **PcP** 19 44 19.0 -0.7
HEH ScP **ScP** 19 48 07.5 +0.8
HEH S **S** 19 48 39.0 -5.3
HEH pmax pmax
comp=Z,29nm,1.1s
HEH L L
comp=Z,670nm,16.0s
HEH L L
comp=Z,1µm,15.3s
HEH L L
comp=Z,2µm,16.8s
NOR **Nord** 42.29 7 P **P** 19 42 26.9 +0.5
NOR **Nord** 42.29 7 P **P** 19 42 26.9 +0.5
NOR **Nord** 42.29 7 *i* P **P** 19 42 26.8 +0.3
NOR IAmb IAmb 19 42 27.8
comp=Z,62nm,0.8s
UPNV **Upernavik** 42.48 25 P **P** 19 42 28.6 +0.6
UPNV **Upernavik** 42.48 25 *i* P **P** 19 42 28.1 +0.1
UPNV IAmb IAmb 19 42 28.7
comp=Z,30nm,0.7s
E38A **The Farm, Brul** 42.68 72 IAmb IAmb 19 42 44.4
comp=Z,71nm,0.8s
SPMN **Marine on St.** 42.84 74 IAmb IAmb 19 42 45.9
comp=Z,34nm,0.8s
121A **Cookes Peak, D** 42.87 99 IAmb IAmb 19 42 48.0
comp=Z,55nm,1.4s
L34A **Svendsen Farm,** 42.90 80 IAmb IAmb 19 42 53.0
comp=Z,58nm,0.8s
L34A IAMs_20 IAMs_20 19 59 25.3
comp=Z,2µm,20.0s
H11N2 **WAKE ISLAND Hy** 43.00 228 T T 20 28 40.7
baz=28,slow=76,SNR=278
H11N3 **WAKE ISLAND Hy** 43.01 228 T T 20 28 40.4
baz=28,slow=76,SNR=218
H11N1 **WAKE ISLAND Hy** 43.02 228 T T 20 28 35.0

baz=28,slow=76,SNR=244
I37A Lemond, Waseca 43.27 76 IAmb IAmb 19 42 49.5
comp=Z,110nm,0.9s
USRK Ussuriysk Ar. 43.48 285 P **P** **19 42 35.1 -1.3**
comp=Z,7.6nm,0.8s,baz=60,slow=7.8,SNR=10
USRK LR LR 20 02 33.0
comp=Z,745nm,19.7s,baz=54,slow=39
comp=Z,7.6nm,0.8s
USRK Ussuriysk Ar. 43.48 285 P **P** **19 42 34.9 -1.5**
FRB Frobisher Bay 43.66 40 LR LR 20 02 23.9
comp=Z,374nm,21.0s,baz=306,slow=38
FRB Frobisher Bay 43.66 40 P **P** **19 42 38.5 +0.8**
FRB Frobisher Bay 43.66 40 P **P** **19 42 38.5 +0.8**
NUUG Nuugaatsiaq 43.94 26 *i* P **P** **19 42 40.0 +0.2**
NUUG IAmb IAmb 19 42 41.0
comp=Z,36nm,0.6s
N35A Tabor 44.04 81 IAMs_20 IAMs_20 19 59 39.4
comp=Z,2µm,21.0s
H11S1 WAKE ISLAND Hy 44.17 228 T T 20 30 07.3
baz=28,slow=76,SNR=8.7
H11S2 WAKE ISLAND Hy 44.18 228 T T 20 30 03.0
baz=28,slow=76,SNR=130
H11S3 WAKE ISLAND Hy 44.19 228 T T 20 30 23.9
baz=28,slow=76,SNR=84
VLA Vladivostok 44.22 284*c i* P **P** **19 42 43.4 +1.0**
VLA pmax pmax
comp=Z,80nm,1.5s
G40A Rib Lake 44.25 72 IAmb IAmb 19 42 57.0
comp=Z,42nm,0.8s
NIAQ Niaqornat 44.28 27 *i* P **P** **19 42 43.1 +0.6**
NIAQ IAmb IAmb 19 42 44.0
comp=Z,86nm,1.2s
BOD Bodaibo 44.44 310 *e*P **P** **19 42 42.6 -1.4**
BOD pmax pmax
comp=Z,38nm,1.2s
MDJ Mudanjiang 44.54 287 IAMs_20 IAMs_20 20 00 21.8
comp=Z,2µm,22.0s
MDJ Mudanjiang 44.54 287 P **P** **19 42 44.0 -1.0**
MDJ pmax pmax
comp=Z,25nm,0.9s
MDJ L L
comp=Z,900nm,21.3s
MDJ L L
comp=Z,1µm,21.9s
MDJ L L
comp=Z,2µm,22.1s
MDJ Mudanjiang 44.54 287 P **P** **19 42 44.3 -0.6**
KSU1 Kansas State U 44.66 83 IAMs_20 IAMs_20 19 59 57.0
comp=Z,1µm,20.0s
AMTX Amarillo 44.67 92 IAMs_20 IAMs_20 19 59 43.2
comp=Z,2µm,21.0s
SCIA State Center 44.73 78 IAmb IAmb 19 43 01.1
comp=Z,54nm,0.9s
SAATT Saattut 44.79 26 *i* P **P** **19 42 47.6 +0.9**
SAATT IAmb IAmb 19 42 47.9
comp=Z,56nm,1.3s
MNTX Cornudas Mount 44.85 98 P **P** **19 42 50.9 +3.2**
I40A Norwalk 44.89 74 IAMs_20 IAMs_20 20 01 14.9
comp=Z,1µm,19.0s
MAJO Matsushiro 45.02 272 P **P** **19 42 49.6 +0.6**
MAJO Matsushiro 45.02 272 P **P** **19 42 49.3 +0.4**
MAJO Matsushiro 45.02 272 P **P** **19 42 48.3 -0.7**
MAJO Matsushiro 45.02 272 IAMs_20 IAMs_20 19 59 44.8
comp=Z,1µm,22.0s
MAJO Matsushiro 45.02 272 P **P** **19 42 49.6 +0.6**
MAJO Matsushiro 45.02 272 P **P** **19 42 49.6 +0.6**
MJAR Matsushiro Arr 45.02 272 P **P** **19 42 49.3 +0.4**
comp=Z,24nm,0.5s,baz=36,slow=6.2,SNR=93
MJAR ScP **ScP** **19 48 18.8 +0.8**
comp=Z,5.3nm,1.2s,baz=70,slow=4.2,SNR=5.5
MJAR LR LR 20 01 05.0
comp=Z,495nm,21.7s,baz=50,slow=35
comp=Z,24nm,0.5s
MJAR Matsushiro Arr 45.02 272 P **P** **19 42 48.5 -0.4**
MJAR IAmb IAmb 19 42 51.3
comp=Z,73nm,1.1s
MJAR **ScP** **19 48 18.9 +0.8**
MJB9 Matsu-Tunnel 45.02 272 P **P** **19 42 49.3 +0.4**
BNX BinXian 45.03 290 ⇑P **P** **19 42 48.3 -0.5**
BNX pP **pP** **19 43 01.0 +0.6**
BNX sP **sP** **19 43 06.8 +1.5**
BNX PP **PP** **19 44 31.8 -2.5**
BNX S **S** **19 49 21.5 -2.9**
BNX sS **sS** **19 49 44.3 +0.6**
BNX pmax pmax
comp=Z,49nm,0.9s
BNX pmax pmax
comp=Z,180nm,4.9s
BNX L L
comp=Z,790nm,21.1s
BNX L L
comp=Z,700nm,18.4s
BNX L L
comp=Z,910nm,23.7s
PSTR Posyet 45.13 284 ⇓*i*P **P** **19 42 50.4 +0.8**
SAQQ Saqqaq 45.22 27 *i* P **P** **19 42 47.6 -2.5**
SAQQ IAmb IAmb 19 42 51.5
comp=Z,43nm,0.9s
GDH Godhavn 45.28 29 *i* P **P** **19 42 51.0 +0.5**
GDH IAmb IAmb 19 42 51.5
comp=Z,43nm,1.1s
N38A Joes South For 45.45 79 IAMs_20 IAMs_20 20 01 05.8
comp=Z,2µm,20.0s
L40A Anamosa 45.75 76 IAmb IAmb 19 43 08.9
comp=Z,56nm,0.9s
VHRN Van Horn 45.76 98 IAmb IAmb 19 43 11.0
comp=Z,37nm,1.3s
128A Castleberry Fa 45.84 95 IAmb IAmb 19 43 10.4
comp=Z,35nm,1.2s
I42A Draeger Farm, 45.84 73 IAMs_20 IAMs_20 20 02 05.8
comp=Z,1µm,20.0s
BLOK Blackwell 45.92 86 IAmb IAmb 19 43 23.8
comp=Z,44nm,0.8s
ILULI Ilulissat 45.97 28 IAMs_20 IAMs_20 20 05 55.3
comp=Z,1µm,19.0s
ILULI Ilulissat 45.97 28 *i* P **P** **19 42 56.4 +0.5**
ILULI IAmb IAmb 19 42 57.2
comp=Z,23nm,0.9s
P38A Dawn 46.07 81 IAmb IAmb 19 43 11.1
comp=Z,43nm,0.6s
P38A IAMs_20 IAMs_20 20 01 03.1
comp=Z,2µm,21.0s
JGF Kuroka 46.17 272 P **P** **19 42 59.6 +1.5**
JGF Kuroka 46.17 272 P **P** **19 42 58.6 +0.6**
KBS Kingsbay 46.28 2*c i*P **P** **19 42 59.2 +0.9**
KBS pmax pmax
comp=Z,146nm,1.1s
KBS Kingsbay 46.28 2 *e*P **P** **19 42 59.3 +0.9**
KBS IAmb IAmb 19 43 00.4
comp=Z,124nm,1.0s
KBS *e*S **S** **19 49 41.2 -0.5**
KBS IAMs_20 IAMs_20 20 00 01.7
comp=Z,996nm,22.1s
KBS Kingsbay 46.28 2 P **P** **19 42 58.6 +0.3**
KBS Kingsbay 46.28 2 P **P** **19 42 59.7 +1.3**
KBS Kingsbay 46.28 2 P **P** **19 42 59.6 +1.3**
KBS PcP **PcP** **19 44 34.3 +1.4**
KBS Kingsbay 46.28 2 *i* P **P** **19 42 59.1 +0.9**
DAG Danmarks Havn 46.31 11 P **P** **19 42 58.6 +0.1**
DAG Danmarks Havn 46.31 11 P **P** **19 42 58.7 +0.1**
DAG Danmarks Havn 46.31 11 *i* P **P** **19 42 59.0 +0.5**
DAG IAmb IAmb 19 42 59.5
comp=Z,136nm,0.9s
WMOK Wichita Mounta 46.44 89 P **P** **19 43 01.3 +1.1**
WMOK Wichita Mounta 46.44 89 IAMs_20 IAMs_20 20 01 12.2
comp=Z,1µm,20.0s
WMOK Wichita Mounta 46.44 89 P **P** **19 43 02.0 +1.9**
INU Inuyama 46.55 272 P **P** **19 43 01.3 +0.4**
INU Inuyama 46.55 272 IAmb IAmb 19 43 03.3
comp=Z,90nm,1.3s
INU Inuyama 46.55 272 P **P** **19 43 01.0 +0.1**
SUMG Summit 46.60 21 P **P** **19 43 02.4 +1.0**
SUMG Summit 46.60 21 P **P** **19 43 02.4 +1.0**
SUMG Summit 46.60 21 *i* P **P** **19 43 01.5 +0.2**
SUMG IAmb IAmb 19 43 03.2
comp=Z,100nm,1.4s
NRIK Noril'sk 46.60 333 P **P** **19 43 01.0 +0.1**
comp=Z,24nm,0.5s,baz=63,slow=6.9,SNR=33
NRIK LR LR 20 05 27.3
comp=Z,2µm,20.5s,baz=52,slow=40
comp=Z,24nm,0.5s
NRIK Noril'sk 46.60 333*c i*P **P** **19 43 00.9 0.0**
NRIK pmax pmax
comp=Z,25nm,0.6s
NRIK Noril'sk 46.60 333 P **P** **19 43 00.4 -0.6**
NRIK IAmb IAmb 19 43 02.2
comp=Z,33nm,0.9s
L42A Oliver, Polo 46.65 75 IAmb IAmb 19 43 15.8
comp=Z,55nm,1.1s
HILR Hailar Array B 46.66 298 P **P** **19 43 01.7 -0.1**
comp=Z,3.9nm,0.5s,baz=60,slow=6.0,SNR=5.1
HILR PcP **PcP** **19 44 34.8 0.0**
comp=Z,13nm,0.9s,baz=96,slow=3.0,SNR=5.1
HILR LR LR 20 04 28.7
comp=Z,805nm,18.3s,baz=80,slow=38
comp=Z,3.9nm,0.5s
OK052 Battle Ridge R 46.70 87 IAmb IAmb 19 43 29.8
comp=Z,40nm,0.7s
HIA Hailar 46.85 298 IAMs_20 IAMs_20 20 04 02.9
comp=Z,1µm,20.0s
N41A Harden Midland 46.85 78 IAmb IAmb 19 43 17.2
comp=Z,52nm,0.9s
K43A Burlington 46.93 74 IAMs_20 IAMs_20 20 02 36.9
comp=Z,1µm,19.0s
P40A Paris 46.97 80 IAmb IAmb 19 43 18.2
comp=Z,51nm,0.9s
P40A IAMs_20 IAMs_20 20 01 53.1
comp=Z,2µm,20.0s
SPA0 Spitsbergen Ar 47.10 1 *e*P **P** **19 43 04.5 -0.2**
SPA0 IAmb IAmb 19 43 06.7
comp=Z,124nm,1.2s
SPA0 *e*S **S** **19 49 53.9 +0.4**
SPA0 IAMs_20 IAMs_20 19 57 26.3
comp=Z,554µm,99.9s
SPITS Spitsbergen Ar 47.10 1 P **P** **19 43 04.3 -0.4**
comp=Z,36nm,0.9s,baz=17,slow=6.1,SNR=16
SPITS PcP **PcP** **19 44 36.5 +0.6**
comp=Z,12nm,0.7s,baz=63,slow=3.8,SNR=5.0
SPITS LR LR 20 01 31.4
comp=Z,720nm,21.9s,baz=0.0,slow=34
comp=Z,36nm,0.9s
W35A Tecumseh 47.25 87 IAmb IAmb 19 43 34.4
comp=Z,64nm,1.5s
CN2 Changchun 47.34 289 P **P** **19 43 06.5 -0.5**
CN2 PP **PP** **19 44 57.5 -0.7**
CN2 S **S** **19 49 52.8 -4.8**
CN2 SS SS 19 53 13.3 -12
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 L L
comp=Z,700nm,17.0s
CN2 L L
comp=Z,600nm,17.0s
CN2 L L
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 47.47 92 IAMs_20 IAMs_20 20 01 42.4
comp=Z,2µm,21.0s
S39A Bolivar 47.51 82 IAMs_20 IAMs_20 20 01 44.3
comp=Z,1µm,21.0s
SFJD Kangerlussuaq 47.58 30 LR LR 20 04 48.1
comp=Z,832nm,20.5s,baz=312,slow=38
SFJD Kangerlussuaq 47.58 30 P **P** **19 43 08.5 -0.1**
SFJD pmax pmax
comp=Z,91nm,0.8s
SFJD MLR MLR
comp=Z,1µm,21.0s
SFJD Kangerlussuaq 47.58 30 P **P** **19 43 08.5 -0.1**
SFJD Kangerlussuaq 47.58 30 IAMs_20 IAMs_20 20 04 26.0
comp=Z,951nm,21.0s
SFJD Kangerlussuaq 47.58 30 P **P** **19 43 09.7 +1.1**
SFJD Kangerlussuaq 47.58 30 *i* P **P** **19 43 10.0 +1.4**
SFJD IAmb IAmb 19 43 10.4
comp=Z,90nm,0.8s
RLO Rose Lookout 47.60 85 IAmb IAmb 19 43 23.1
comp=Z,26nm,1.1s
TXAR Lajitas Array 47.60 99 P **P** **19 43 10.6 +1.3**
comp=Z,2.4nm,0.7s,baz=301,slow=6.1,SNR=16
TXAR PcP **PcP** **19 44 38.2 -0.4**
comp=Z,2.7nm,0.6s,baz=326,slow=4.2,SNR=3.8
TXAR ScP **ScP** **19 48 28.9 -0.2**
comp=Z,1.1nm,0.9s,baz=283,slow=1.4,SNR=4.2
TXAR LR LR 20 01 48.4
comp=Z,2µm,21.0s,baz=312,slow=34
TXAR Lajitas Array 47.60 99 **ScP** **19 48 29.6 +0.5**
TXAR Lajitas Array 47.60 99 P **P** **19 43 09.7 +0.4**
R40A Maddies Statio 47.70 81 IAmb IAmb 19 43 36.4
comp=Z,15nm,0.7s
R40A IAMs_20 IAMs_20 20 02 03.2
comp=Z,2µm,21.0s
U38A Gravette 47.77 84 IAmb IAmb 19 43 24.1
comp=Z,34nm,1.2s
U38A IAMs_20 IAMs_20 20 02 14.3
comp=Z,978nm,21.0s
HDIL Hopedale 47.83 77 IAMs_20 IAMs_20 20 03 08.7
comp=Z,2µm,19.0s
LPIG La Paz 47.95 109 LR LR 20 01 13.7
comp=Z,436nm,19.6s,baz=320,slow=33
PLPT Palo Pinto 48.10 91 IAmb IAmb 19 43 24.6
comp=Z,21nm,0.9s
DBG Daneborg 48.27 14 P **P** **19 43 14.1 +0.2**
DBG Daneborg 48.27 14 *i* P **P** **19 43 13.5 -0.4**
DBG IAmb IAmb 19 43 14.8
comp=Z,67nm,0.8s
Z35A Perchaven, San 48.34 89 IAMs_20 IAMs_20 20 02 11.2
comp=Z,1µm,22.0s
CCM Cathedral Cave 48.44 80 P **P** **19 43 14.5 -1.1**
CCM pmax pmax
comp=Z,18nm,1.0s
CCM MLR MLR
comp=Z,2µm,20.0s
CCM Cathedral Cave 48.44 80 P **P** **19 43 14.5 -1.1**
CCM Cathedral Cave 48.44 80 IAMs_20 IAMs_20 20 02 46.9
comp=Z,2µm,20.0s
CCM Cathedral Cave 48.44 80 P **P** **19 43 15.3 -0.3**
HOPEN Hopen 48.75 358 *e*P **P** **19 43 16.4 -1.0**
HOPEN IAmb IAmb 19 43 18.4
comp=Z,137nm,1.0s
HHU Hamhung 48.78 283 P **P** **19 43 18.4 +0.2**
HHU S **S** **19 50 18.7 +0.7**
HHU AmB
comp=Z,172nm,1.5s
FVM French Village 48.96 80 IAmb IAmb 19 43 33.6
comp=Z,28nm,0.9s
JCT Junction City 48.96 94 IAmb IAmb 19 43 31.7
comp=Z,27nm,0.8s
NUUK Nuuk 49.19 33 P **P** **19 43 22.6 +1.7**
NUUK Nuuk 49.19 33 *i* P **P** **19 43 22.0 +1.1**
NUUK IAmb IAmb 19 43 24.6
comp=Z,104nm,1.4s
WHTX Lake Whitney, 49.19 91 IAMs_20 IAMs_20 20 02 27.0
comp=Z,2µm,22.0s
T42A Van Buren 49.24 81 IAMs_20 IAMs_20 20 03 00.1
comp=Z,2µm,21.0s
FCAR Ozark Folk Cen 49.46 83 IAmb IAmb 19 43 37.0
comp=Z,21nm,0.8s
JMN Monobe 49.52 273 P **P** **19 43 25.6 +1.7**
JMN Monobe 49.52 273 P **P** **19 43 25.3 +1.4**
MIAR Mount Ida 49.58 85 P **P** **19 43 25.2 +0.8**
MIAR Mount Ida 49.58 85 IAmb IAmb 19 43 38.8
comp=Z,21nm,1.0s
MIAR Mount Ida 49.58 85 P **P** **19 43 25.1 +0.8**
JCJ Chichijima 49.68 260 LR LR 20 01 21.2
comp=Z,277nm,20.9s,baz=40,slow=32
JCJ Chichijima 49.68 260 P **P** **19 43 29.1 +3.9**
JCJ Chichijima 49.68 260 P **P** **19 43 25.9 +0.7**
SNY Shenyang 49.68 288 ⇑P **P** **19 43 25.5 +0.5**
SNY S **S** **19 50 28.0 -2.6**
SNY pmax pmax
comp=Z,69nm,1.3s
SNY pmax pmax
comp=Z,340nm,6.2s
SNY L L
comp=Z,440nm,19.4s
SNY L L
comp=Z,890nm,18.2s
SNY L L
comp=Z,2µm,22.0s
Z38A Mt. Pleasant 49.69 88 IAMs_20 IAMs_20 20 04 31.2
comp=Z,1µm,18.0s
AAM Ann Arbor 49.77 71 IAMs_20 IAMs_20 20 04 17.0
comp=Z,950nm,20.0s
SCHQ Schefferville 49.79 49 P **P** **19 43 25.6 -0.1**
comp=Z,17nm,0.8s,baz=316,slow=7.7,SNR=13
SCHQ LR LR 20 05 21.6
comp=Z,936nm,19.2s,baz=319,slow=37
comp=Z,17nm,0.8s
SCHQ Schefferville 49.79 49 IAmb IAmb 19 43 40.1
comp=Z,49nm,1.0s
KS19 Wonju Array Si 50.27 281 P **P** **19 43 29.6 0.0**
KSRS Korea Array 50.27 281 P **P** **19 43 29.4 -0.1**
comp=Z,89nm,1.2s,baz=53,slow=6.9,SNR=129
KSRS PcP **PcP** **19 44 48.9 +0.9**
comp=Z,6.8nm,0.9s,baz=50,slow=3.3,SNR=1.6
KSRS LR LR 20 05 51.5
comp=Z,474nm,19.7s,baz=65,slow=37
comp=Z,89nm,1.2s
KSAR Wonju Array Be 50.30 281 P **P** **19 43 29.7 -0.1**
KSAR Wonju Array Be 50.30 281 P **P** **19 43 29.6 -0.1**
SUJ Sinuiju 50.36 286 P **P** **19 43 30.1 0.0**
PYAG Pyongyang 50.38 284 P **P** **19 43 30.5 +0.2**
PYAG S **S** **19 50 41.0 +0.7**
PYAG AmB
comp=Z,236nm,1.4s
SADO Sadowa 50.52 66 LR LR 20 05 27.5
comp=Z,720nm,19.4s,baz=1.0,slow=37
M50A Fremont 50.72 72 IAMs_20 IAMs_20 20 05 05.0
comp=Z,2µm,20.0s
BJO1 Bjornoya 50.81 0 *e*P **P** **19 43 33.9 +0.7**
BJO1 IAmb IAmb 19 43 34.5
comp=Z,101nm,1.1s
INCN Inchon 50.98 282 P **P** **19 43 36.4 +1.4**
INCN Inchon 50.98 282 P **P** **19 43 34.8 -0.2**
INCN pmax pmax
comp=Z,105nm,1.3s
INCN Inchon 50.98 282 P **P** **19 43 34.8 -0.2**
INCN Inchon 50.98 282 P **P** **19 43 35.7 +0.7**
HJU Haeju 51.10 283 P **P** **19 43 35.9 +0.1**
HJU AmB
comp=Z,451nm,1.2s
TJN Taejon 51.35 280 P **P** **19 43 38.7 +1.0**
TJN Taejon 51.35 280 P **P** **19 43 38.3 +0.6**
SCO Scoresbysund 51.36 17 P **P** **19 43 38.6 +1.3**
SCO Scoresbysund 51.36 17 IAmb IAmb 19 43 40.0
comp=Z,69nm,1.3s
SCO IAMs_20 IAMs_20 20 06 20.1
comp=Z,1µm,21.0s
SCO Scoresbysund 51.36 17 P **P** **19 43 38.6 +1.3**
SCO Scoresbysund 51.36 17 *i* P **P** **19 43 37.9 +0.6**
SCO IAmb IAmb 19 43 38.8
comp=Z,20nm,0.9s
N51A Ashland 51.42 72 IAmb IAmb 19 43 40.5
comp=Z,40nm,1.0s
N51A IAMs_20 IAMs_20 20 05 26.6
comp=Z,2µm,20.0s
DELO Deloro Mine 51.49 65 IAmb IAmb 19 43 53.4
comp=Z,82nm,1.5s
SOEG Soedalen 51.52 22 *i* P **P** **19 43 38.9 +0.4**
SOEG IAmb IAmb 19 43 39.9
comp=Z,115nm,1.1s
HKT Hockley 51.64 91 P **P** **19 43 42.2 +2.4**
HKT Hockley 51.64 91 P **P** **19 43 42.4 +2.6**
JNU Nakatsue 51.68 275 LR LR 20 05 08.4
comp=Z,678nm,21.9s,baz=67,slow=36
WVT Waverly 51.73 80 P **P** **19 43 40.9 +0.3**
WVT pmax pmax
comp=Z,41nm,0.7s
WVT Waverly 51.73 80 P **P** **19 43 40.8 +0.2**
OXF Oxford 51.99 82 IAMs_20 IAMs_20 20 04 34.0
comp=Z,1µm,21.0s
ANGG Ammassalik, Gr 52.15 26 IAMs_20 IAMs_20 20 09 13.6
comp=Z,1µm,19.0s
ANGG Ammassalik, Gr 52.15 26 P **P** **19 43 42.9 -0.4**
ANGG Ammassalik, Gr 52.15 26 *i* P **P** **19 43 42.8 -0.4**
ANGG IAmb IAmb 19 43 43.8
comp=Z,77nm,1.1s
R50A Paris 52.18 75 IAmb IAmb 19 43 58.0
comp=Z,43nm,0.9s
PECO Prince Edward 52.22 65 IAmb IAmb 19 43 58.9
comp=Z,60nm,1.2s
O52A Adamsville 52.27 72 IAmb IAmb 19 43 58.4
comp=Z,42nm,0.9s
O52A IAMs_20 IAMs_20 20 06 01.1
comp=Z,1µm,20.0s
XLT XiLinHaoTe 52.29 295 *e*P **P** **19 43 45.0 +0.3**
XLT pP sP 19 44 01.0 -0.4
XLT PcP **PcP** **19 44 56.5 +1.0**
XLT S **S** **19 51 03.5 -3.3**
XLT pmax pmax
comp=Z,66nm,0.9s
XLT L L
comp=Z,53nm,17.8s
XLT L L
comp=Z,520nm,20.8s
XLT L L
comp=Z,1µm,22.2s
IRK Irkutsk 52.30 309 *e*P **P** **19 43 44.0 -0.6**
IRK *e* 19 44 56.3
IRK pmax pmax
comp=Z,47nm,2.5s
N53A Lisbon 52.34 71 IAmb IAmb 19 43 58.9
comp=Z,46nm,0.8s
N53A IAMs_20 IAMs_20 20 05 56.8
comp=Z,801nm,19.0s
LDAQ Lac Daran 52.37 58 IAmb IAmb 19 43 59.6
comp=Z,68nm,1.4s
Y45A Yeager Farm, C 52.38 83 IAMs_20 IAMs_20 20 04 35.3
comp=Z,1µm,22.0s
IVI Ivigtut 52.47 34 IAMs_20 IAMs_20 20 05 56.1
comp=Z,897nm,20.0s
IVI Ivigtut 52.47 34 P **P** **19 43 47.2 +1.5**
IVI Ivigtut 52.47 34 *i* P **P** **19 43 46.2 +0.6**
IVI IAmb IAmb 19 43 49.0
comp=Z,28nm,0.8s
441A DeRidder 52.57 88 IAMs_20 IAMs_20 20 06 31.3
comp=Z,1µm,18.0s
MMNY Mt. Morris Dam 52.57 67 IAmb IAmb 19 44 00.5
comp=Z,30nm,0.7s
CLTN Cedars of Leba 52.61 79 IAmb IAmb 19 44 01.8
comp=Z,40nm,0.9s
PAMR Moraine State 52.64 70 IAmb IAmb 19 44 01.2
comp=Z,32nm,0.8s
JNW Jan Mayen West 52.73 11 *e*P **P** **19 43 48.4 +0.9**
JNW *e*S **S** **19 51 12.1 +0.1**
JMIC Jan Mayen 52.76 11 LR LR 20 05 50.7
comp=Z,1µm,21.6s,baz=344,slow=36
JMIC Jan Mayen 52.76 11 *e*P **P** **19 43 48.4 +0.7**
JMIC IAMs_20 IAMs_20 20 05 10.0
comp=Z,1µm,25.2s
DL2 Dalian 52.78 287 P **P** **19 43 47.8 -0.5**
DL2 pP **pP** **19 44 01.0 +0.9**
DL2 S **S** **19 51 10.5 -2.9**
DL2 sS **sS** **19 51 34.3 +1.2**
DL2 pmax pmax
comp=Z,55nm,0.9s
DL2 pmax pmax
comp=Z,280nm,3.9s
DL2 L L
comp=Z,620nm,21.5s
DL2 L L
comp=Z,780nm,22.3s
DL2 L L
comp=Z,1µm,24.0s
JNE Jan Mayen East 52.78 11 *e*P **P** **19 43 48.8 +0.9**
JNE IAmb IAmb 19 43 49.3
comp=Z,126nm,1.8s
JNE *e*S **S** **19 51 13.8 +1.2**
JNE IAMs_20 IAMs_20 20 05 01.2
comp=Z,1µm,19.7s
T50A Nancy 52.79 77 IAmb IAmb 19 43 59.3
comp=Z,18nm,0.8s
T50A IAMs_20 IAMs_20 20 05 35.9
comp=Z,2µm,20.0s
JMI Jan Mayen 52.79 11 *e*P **P** **19 43 48.1 +0.2**
JMI IAMs_20 IAMs_20 20 05 23.7
comp=Z,1µm,22.4s
Q52A Bidwell 52.84 73 IAMs_20 IAMs_20 20 06 26.3
comp=Z,1µm,18.0s
MNTQ Montreal, Queb 52.88 62 IAmb IAmb 19 44 02.5
comp=Z,51nm,1.2s
P53A Whipple 52.96 72 IAmb IAmb 19 44 03.3
comp=Z,22nm,0.7s
P53A IAMs_20 IAMs_20 20 06 11.3
comp=Z,728nm,19.0s
TLY Talaya 52.98 309 LR LR 20 06 32.5
comp=Z,1µm,21.8s,baz=35,slow=36
TLY Talaya 52.98 309*c i*P **P** **19 43 49.1 -0.5**
TLY pmax pmax
comp=Z,41nm,0.9s
TLY Talaya 52.98 309 P **P** **19 43 49.6 0.0**
TLY IAmb IAmb 19 43 51.1
comp=Z,29nm,0.8s
TLY Talaya 52.98 309 P **P** **19 43 50.2 +0.6**
TLY Talaya 52.98 309 P **P** **19 43 50.2 +0.6**
LONY Lake Ozonia 53.00 63 IAmb IAmb 19 44 04.0
comp=Z,27nm,1.1s
LONY IAMs_20 IAMs_20 20 06 11.3
comp=Z,1µm,19.0s
O54A Avella 53.02 71 IAMs_20 IAMs_20 20 06 27.0
comp=Z,1µm,20.0s

S51A Beattyville 53.05 75 IAmb IAmb 19 44 04.2
comp=Z,40nm,0.9s
J57A Williamstown 53.11 65 IAMs_20 IAMs_20 20 06 47.1
comp=Z,1µm,20.0s
JSU Suzuyama 53.11 274 P P 19 43 51.5 +0.7
JSU Suzuyama 53.11 274 P P 19 43 51.8 +0.9
ICQ Pointe Anglais 53.20 54 IAmb IAmb 19 44 05.4
comp=Z,53nm,0.8s
K57A Scipio Center 53.31 66 IAmb IAmb 19 44 06.7
comp=Z,34nm,1.0s
K57A IAMs_20 IAMs_20 20 06 04.4
comp=Z,849nm,22.0s
X48A Hartselle 53.38 81 IAMs_20 IAMs_20 20 05 47.8
comp=Z,1µm,20.0s
NRS Narsarsuaq 53.39 33 IAMs_20 IAMs_20 20 10 07.3
comp=Z,993nm,19.0s
146A Union 53.55 84 IAMs_20 IAMs_20 20 05 23.4
comp=Z,1µm,21.0s
Q54A Coxs Mills 53.62 72 IAmb IAmb 19 44 08.3
comp=Z,25nm,0.8s
NCB Newcomb 53.64 63 IAmb IAmb 19 44 09.2
comp=Z,76nm,1.2s
MCWV Mont Chateau 53.68 71 IAMs_20 IAMs_20 20 06 47.4
comp=Z,1µm,20.0s
Z47A Carrollton 53.71 82 IAMs_20 IAMs_20 20 05 27.5
comp=Z,1µm,21.0s
W50A Signal Mountai 53.83 79 IAmb IAmb 19 44 10.0
comp=Z,30nm,0.9s
J59A Piesco 53.84 64 IAmb IAmb 19 44 10.5
comp=Z,71nm,1.3s
TZTN Tazewell 53.85 76 IAmb IAmb 19 44 10.7
comp=Z,50nm,1.2s
TZTN Tazewell 53.85 76 P P 19 43 56.9 +0.6
BINY Binghamton 53.96 66 P P 19 43 56.5 -0.4
BINY IAmb IAmb 19 44 11.7
comp=Z,67nm,1.1s
BINY IAMs_20 IAMs_20 20 06 24.7
comp=Z,896nm,22.0s
BINY Binghamton 53.96 66 P P 19 43 57.5 +0.5
ZAK Zakamensk 54.05 308 eP P 19 43 57.3 -0.3
ZAK pmax pmax
comp=Z,14nm,1.3s
D62A Allapoint, All 54.05 58 IAmb IAmb 19 44 11.9
comp=Z,60nm,1.0s
D62A IAMs_20 IAMs_20 20 07 19.1
comp=Z,1µm,19.0s
ULN Ulaanbaatar 54.06 304c iP P 19 43 57.1 -0.7
ULN pmax pmax
comp=Z,31nm,1.0s
ULN Ulaanbaatar 54.06 304 P P 19 43 57.5 -0.3
ULN IAmb IAmb 19 45 18.2
comp=Z,26nm,0.8s
ULN Ulaanbaatar 54.06 304 P P 19 43 57.8 0.0
comp=Z,2µmcomp=Z,125nm,1.0s
ULN Ulaanbaatar 54.06 304 P P 19 43 58.1 +0.3
ULN Ulaanbaatar 54.06 304 P P 19 43 58.2 +0.3
ULN PcP PcP 19 45 03.0 +0.7
CPCT Cooper Cave 54.09 78 IAmb IAmb 19 44 11.8
comp=Z,33nm,1.1s
MOY Mondy 54.16 311 eP P 19 43 58.5 +0.1
MOY pmax pmax
comp=Z,20nm,1.8s
Y49A Blount Mountai 54.17 81 IAmb IAmb 19 44 12.0
comp=Z,36nm,1.3s
Y49A IAMs_20 IAMs_20 20 05 51.7
comp=Z,1µm,20.0s
TKL Tuckaleechee C 54.36 77 LR LR 20 07 06.0
comp=Z,2µm,19.1s,baz=330,slow=36
TKL Tuckaleechee C 54.36 77 IAmb IAmb 19 44 10.5
comp=Z,24nm,1.1s
SONM Songino Array 54.40 304 P P 19 44 00.1 -0.2
comp=Z,33nm,0.8s,baz=46,slow=6.8,SNR=219
SONM PcP PcP 19 45 04.6 +1.1
comp=Z,14nm,0.9s,baz=87,slow=2.0,SNR=7.2
SONM LR LR 20 09 38.1
comp=Z,3µm,18.2s,baz=44,slow=39
comp=Z,33nm,0.8s
SONM Songino Array 54.40 304 P P 19 43 59.6 -0.6
SONM IAmb IAmb 19 44 01.8
comp=Z,38nm,0.8s
LRAL Lakeview Retre 54.44 82 IAMs_20 IAMs_20 20 05 59.7
comp=Z,908nm,21.0s
Q56A Snyder Ridge, 54.48 71 IAmb IAmb 19 44 22.8
comp=Z,23nm,1.0s
Q56A IAMs_20 IAMs_20 20 07 20.6
comp=Z,1µm,19.0s
R55A Marlinton 54.51 72 IAmb IAmb 19 44 16.6
comp=Z,17nm,0.8s
R55A IAMs_20 IAMs_20 20 08 20.4
comp=Z,716nm,18.0s
N58A Sunbury 54.53 68 IAmb IAmb 19 44 15.0
comp=Z,35nm,0.8s
LBNH Lisbon 54.62 62 IAmb IAmb 19 44 16.2
comp=Z,43nm,1.1s
LBNH IAMs_20 IAMs_20 20 07 20.2
comp=Z,1µm,20.0s
G62A West of Eustis 54.63 60 IAmb IAmb 19 44 16.2
comp=Z,58nm,1.1s
G62A IAMs_20 IAMs_20 20 07 35.5
comp=Z,791nm,21.0s
W52A Murphy 54.68 78 IAmb IAmb 19 44 16.8
comp=Z,18nm,0.8s
H62A Milan 54.78 61 IAMs_20 IAMs_20 20 07 28.3
comp=Z,876nm,20.0s
TRY Troy 54.80 64 IAmb IAmb 19 44 17.8
comp=Z,46nm,1.2s
P57A Homestead Farm 54.80 70 IAMs_20 IAMs_20 20 08 53.1
comp=Z,750nm,19.0s
HNH Hanover 54.82 62 IAmb IAmb 19 44 17.8
comp=Z,42nm,1.1s
HNH IAMs_20 IAMs_20 20 07 16.4
comp=Z,1µm,20.0s
U54A Nelsons Funny 54.83 75 IAmb IAmb 19 44 18.0
comp=Z,57nm,1.2s
V53A Saluda 54.89 76 IAmb IAmb 19 44 18.2
comp=Z,62nm,1.4s
J61A Chester 54.94 63 IAMs_20 IAMs_20 20 07 19.5
comp=Z,1µm,20.0s
PAGS Pennsylvania G 54.97 68 IAmb IAmb 19 44 18.3
comp=Z,43nm,0.8s
BJI2 Beijing 54.97 291 P P 19 44 04.5 +0.3
BJT Baijiatuau 54.97 291 P P 19 44 04.3 0.0
BJT Baijiatuau 54.97 291 IAMs_20 IAMs_20 20 09 28.9
comp=Z,1µm,20.0s
BJT Baijiatuau 54.97 291 P P 19 44 04.3 0.0
VADS Vadso 55.02 356 eP P 19 44 03.9 -0.3
VADS IAmb IAmb 19 44 04.7
comp=Z,77nm,0.9s
VADS eS S 19 51 41.8 -1.0
VADS IAMs_20 IAMs_20 20 06 01.1
comp=Z,2µm,22.7s
BLA Blacksburg 55.11 73 IAmb IAmb 19 44 27.1
comp=Z,30nm,0.8s
I62A Tamworth 55.18 62 IAMs_20 IAMs_20 20 07 38.0
comp=Z,1µm,20.0s
PKME Peaks-Kenny Pk 55.22 59 IAmb IAmb 19 44 20.3
comp=Z,65nm,1.1s
PKME IAMs_20 IAMs_20 20 08 03.0
comp=Z,1µm,21.0s
NPNY Mohonk Preserv 55.24 65 IAmb IAmb 19 44 20.5
comp=Z,39nm,0.7s
F64A Sherman 55.26 58 IAMs_20 IAMs_20 20 08 13.9
comp=Z,1µm,20.0s
MVL Millersville 55.33 68 IAmb IAmb 19 44 22.2
comp=Z,21nm,0.9s
I63A Otisfield 55.44 61 IAMs_20 IAMs_20 20 07 57.8
comp=Z,850nm,20.0s
KEV Kevo 55.47 357 P P 19 44 07.0 -0.4
KEV pmax pmax
comp=Z,89nm,0.7s
KEV MLR MLR
comp=Z,400nm,20.0s
KEV Kevo 55.47 357 P P 19 44 07.0 -0.4
KEV Kevo 55.47 357 P P 19 44 07.2 -0.2
KEV Kevo 55.47 357 P P 19 44 07.2 -0.2
SDMD Soldier's Deli 55.49 69 IAmb IAmb 19 44 22.0
comp=Z,17nm,0.9s
S57A Dark Hollow, R 55.52 72 IAmb IAmb 19 44 11.2
comp=Z,20nm,1.0s
S57A IAMs_20 IAMs_20 20 07 42.2
comp=Z,977nm,19.0s
WVL Waterville 55.54 60 IAmb IAmb 19 44 22.4
comp=Z,74nm,1.3s
WVL IAMs_20 IAMs_20 20 08 13.3
comp=Z,843nm,20.0s
K62A Royalston 55.59 63 IAMs_20 IAMs_20 20 07 38.7
comp=Z,1µm,20.0s

V55A Taylorsville 55.66 75 IAmb IAmb 19 44 23.5
comp=Z,25nm,0.9s
TRO Tromso 55.71 0 P P 19 44 09.5 +0.4
TRO Tromso 55.71 0 eP P 19 44 09.2 +0.1
TRO IAmb IAmb 19 44 10.1
comp=Z,65nm,0.8s
TRO eS S 19 51 52.8 +0.8
TRO IAMs_20 IAMs_20 20 05 17.6
comp=Z,1µm,26.5s
ARA0 ARCESS Array S 55.73 357 eP P 19 44 08.8 -0.5
ARA0 IAmb IAmb 19 44 09.7
comp=Z,51nm,0.8s
ARA0 eS S 19 51 49.1 -3.3
ARA0 IAMs_20 IAMs_20 20 05 41.9
comp=Z,1µm,21.0s
ARCES ARCESS Array B 55.73 357 P P 19 44 08.8 -0.6
comp=Z,39nm,0.8s,baz=24,slow=7.2,SNR=137
ARCES PcP PcP 19 45 08.8 +0.7
comp=Z,8.3nm,0.6s,baz=14,slow=5.4,SNR=5.0
ARCES LR LR 20 11 05.9
comp=Z,466nm,18.7s,baz=356,slow=39
ARCES PKP2bc P'P'bc 20 14 26.0 -4.7
comp=Z,3.0nm,1.0s,baz=28,slow=3.1,SNR=2.7
comp=Z,39nm,0.8s
ARCES ARCESS Array B 55.73 357 P P 19 44 08.6 -0.8
ARCES IAmb IAmb 19 44 10.0
comp=Z,48nm,0.8s
U56A King 55.76 74 IAmb IAmb 19 44 24.4
comp=Z,35nm,1.1s
JETT Jettan, Norway 55.78 360 eP P 19 44 10.2 +0.4
JETT IAmb IAmb 19 44 10.9
comp=Z,74nm,0.8s
BRAL Brewton 55.79 83 IAMs_20 IAMs_20 20 06 54.5
comp=Z,1µm,22.0s
PAL Palisades 55.90 66 IAMs_20 IAMs_20 20 07 57.2
comp=Z,720nm,21.0s
R58B Mineral 55.97 71 IAmb IAmb 19 44 36.2
comp=Z,26nm,1.0s
R58B IAMs_20 IAMs_20 20 08 16.9
comp=Z,1µm,18.0s
UNH University of 55.98 62 IAmb IAmb 19 44 26.0
comp=Z,34nm,1.1s
152A Waverly Hall 56.01 80 IAMs_20 IAMs_20 20 06 28.3
comp=Z,1µm,22.0s
HRV Adam Dziewonsk 56.05 63 P P 19 44 12.1 +0.1
HRV Adam Dziewonsk 56.05 63 IAMs_20 IAMs_20 20 08 01.9
comp=Z,1µm,19.0s
HRV Adam Dziewonsk 56.05 63 P P 19 44 12.1 +0.1
CBN Corbin Frederi 56.07 70 IAMs_20 IAMs_20 20 08 11.6
comp=Z,1µm,19.0s
WSPT Westport, CT 56.09 65 IAmb IAmb 19 44 26.4
comp=Z,45nm,0.8s
WSPT IAMs_20 IAMs_20 20 08 26.1
comp=Z,778nm,20.0s
G65A Princeton 56.12 58 IAmb IAmb 19 44 26.6
comp=Z,54nm,1.1s
G65A IAMs_20 IAMs_20 20 08 40.7
comp=Z,1µm,18.0s
HODGE Hodges 56.25 77 IAmb IAmb 19 44 27.1
comp=Z,15nm,0.8s
WES Weston 56.26 63 IAMs_20 IAMs_20 20 08 00.5
comp=Z,1µm,20.0s
KTK1 Kautokeino 56.30 358 eP P 19 44 13.3 -0.1
KTK1 IAmb IAmb 19 44 13.8
comp=Z,41nm,0.8s
KTK1 IAMs_20 IAMs_20 20 04 52.3
comp=Z,870nm,24.6s
KNGR Kungurtug, Tuv 56.44 312d iP P 19 44 16.2 +1.4
KNGR pmax pmax
comp=Z,56nm,1.0s
EMMW East Machias 56.52 59 P P 19 44 15.1 -0.3
EMMW IAMs_20 IAMs_20 20 08 52.5
comp=Z,1µm,20.0s
BORG Borgarnes 56.56 20 LR LR 20 11 26.7
comp=Z,660nm,19.5s,baz=334,slow=39
BORG Borgarnes 56.56 20 iP P 19 44 14.6 -0.7
BORG Borgarnes 56.56 20 P P 19 44 16.1 +0.8
BORG IAmb IAmb 19 44 18.0
comp=Z,49nm,1.0s
BORG Borgarnes 56.56 20 IAMs_20 IAMs_20 20 11 25.4
comp=Z,863nm,18.0s
BORG Borgarnes 56.56 20 P P 19 44 17.6 +2.3
352A Blakely 56.77 81 IAMs_20 IAMs_20 20 07 12.5
comp=Z,842nm,21.0s
JSC Jenkinsville 56.78 76 IAmb IAmb 19 44 31.1
comp=Z,50nm,1.3s
HHC Hu-ho-hao-te 56.81 295 eP P 19 44 17.8 +0.2
HHC S S 19 52 05.8 -1.9
HHC sS sS 19 52 27.0 -0.6
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,240nm,5.0s
HHC L L
comp=Z,690nm,17.9s
HHC L L
comp=Z,360nm,17.5s
HHC L L
comp=Z,890nm,17.3s
L64A Middleborough 56.83 63 IAMs_20 IAMs_20 20 08 25.6
comp=Z,1µm,20.0s
T59A Double "B" Far 56.86 72 IAMs_20 IAMs_20 20 08 41.7
comp=Z,956nm,19.0s
V58A Windy Hill, Pi 56.86 74 IAmb IAmb 19 44 32.1
comp=Z,34nm,0.8s
LVZ Lovozero 56.94 353 iP P 19 44 17.6 -0.4
LVZ pmax pmax
comp=Z,133nm,1.0s
LVZ Lovozero 56.94 353 P P 19 44 17.7 -0.4
LVZ IAMs_20 IAMs_20 20 08 53.0
comp=Z,1µm,21.0s
LVZ Lovozero 56.94 353 P P 19 44 17.6 -0.4
comp=Z,1µmcomp=Z,137nm,1.0s
LVZ Lovozero 56.94 353 P P 19 44 17.9 -0.1
LVZ Lovozero 56.94 353 P P 19 44 17.7 -0.3
451A Vernon 56.94 83 IAMs_20 IAMs_20 20 07 39.1
comp=Z,1µm,21.0s
LOF Lofoten 57.14 3 eP P 19 44 20.2 +0.9
LOF IAmb IAmb 19 44 21.2
comp=Z,25nm,1.0s
LOF eS S 19 52 12.5 +1.6
LOF IAMs_20 IAMs_20 20 03 24.3
comp=Z,704nm,25.4s
M65A Busby, Falmout 57.20 63 IAMs_20 IAMs_20 20 08 38.4
comp=Z,1µm,21.0s
TIA Tai'an 57.20 287 P P 19 44 20.0 -0.3
TIA pmax pmax
comp=Z,36nm,1.4s
TIA L L
comp=Z,780nm,19.9s
TIA L L
comp=Z,500nm,19.2s
TIA L L
comp=Z,1µm,19.6s
APA Apatity 57.35 354 eP P 19 44 18.2 -2.6
APA e 19 45 12.7
APA e 19 46 24.8
APA eS S 19 52 02.2 -12
APA e 19 54 01.8
APA pmax pmax
comp=Z,24nm,1.0s
APA MLR MLR
comp=Z,1µm,21.5s
S61A Accomac 57.37 70 IAMs_20 IAMs_20 20 09 22.0
comp=Z,1µm,18.0s
STEI Steigen 57.38 2 eP P 19 44 21.0 0.0
STEI IAmb IAmb 19 44 21.3
comp=Z,32nm,0.7s
STEI IAMs_20 IAMs_20 20 04 46.2
comp=Z,1µm,25.5s
TIGA Tifton 57.56 80 IAMs_20 IAMs_20 20 07 59.4
comp=Z,974nm,20.0s
HNS HongShan 57.65 290 ⇑P P 19 44 24.0 +0.6
HNS pP pP 19 44 30.5 -4.8
HNS S S 19 52 19.0 +0.5
HNS pmax pmax
comp=Z,80nm,1.1s
HNS L L
comp=Z,800nm,17.6s
HNS L L
comp=Z,850nm,16.4s
HNS L L
comp=Z,1µm,17.5s
BTO2 Baotou 57.76 296 eP P 19 44 24.5 +0.2
BTO2 pP sP 19 44 40.5 -0.6
BTO2 S S 19 52 17.0 -3.3

BTO2 sS sS 19 52 42.0 +1.8
BTO2 SS SS 19 56 07.8 -2.7
BTO2 pmax pmax
comp=Z,49nm,1.1s
BTO2 pmax pmax
comp=Z,550nm,7.4s
BTO2 L L
comp=Z,2µm,14.2s
BTO2 L L
comp=Z,2µm,14.4s
BTO2 L L
comp=Z,3µm,16.0s
SGF Sodankyl 57.80 357 P P 19 44 24.3 +0.3
SGF Sodankyl 57.80 357 P P 19 44 24.3 +0.3
JOW Kunigami 57.87 272 P P 19 44 27.8 +2.7
JOW Kunigami 57.87 272 P P 19 44 26.4 +1.3
FAUS Fauske 57.93 2 eP P 19 44 25.7 +0.8
FAUS eS S 19 52 18.4 -3.0
FAUS IAMs_20 IAMs_20 20 05 02.4
comp=Z,1µm,26.8s
UNM Universidad Na 57.94 102 IAMs_20 IAMs_20 20 07 24.8
comp=Z,781nm,20.0s
553A Crawfordville 58.02 82 IAMs_20 IAMs_20 20 08 23.4
comp=Z,894nm,22.0s
HAL Halifax 58.45 56 IAmb IAmb 19 44 43.1
comp=Z,44nm,1.1s
VAGH Vaagaholmen 58.53 3 eP P 19 44 29.1 0.0
VAGH IAmb IAmb 19 44 29.8
comp=Z,56nm,1.1s
VAGH eS S 19 52 25.7 -3.5
VAGH IAMs_20 IAMs_20 20 08 40.2
comp=Z,685nm,19.4s
SSE Sheshan 58.71 280 P P 19 44 31.5 +0.6
SSE sP sP 19 44 48.5 +0.9
SSE S S 19 52 33.0 +0.5
SSE pmax pmax
comp=Z,37nm,1.0s
SSE L L
comp=Z,180nm,20.0s
KONS Konsvik 58.76 3 eP P 19 44 30.9 +0.2
KONS IAmb IAmb 19 44 31.5
comp=Z,63nm,1.2s
KONS eS S 19 52 33.0 +0.8
KONS IAMs_20 IAMs_20 20 03 31.6
comp=Z,1µm,43.7s
RAUS Rausandaksla 58.85 3 eP P 19 44 31.6 +0.3
RAUS IAmb IAmb 19 44 32.1
comp=Z,88nm,1.1s
RAUS eS S 19 52 33.0 -0.4
RAUS IAMs_20 IAMs_20 20 04 13.7
comp=Z,1µm,31.6s
STOK Stokkvaagen 58.92 3 eP P 19 44 31.9 +0.1
STOK IAmb IAmb 19 44 32.9
comp=Z,49nm,1.0s
STOK eS S 19 52 33.0 -1.3
STOK IAMs_20 IAMs_20 20 03 58.4
comp=Z,1µm,34.3s
ZAA0 Zalesovo Array 58.92 321 IAmb IAmb 19 45 41.8
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 58.92 321 P P 19 44 31.7 -0.4
comp=Z,4.7nm,0.5s,baz=40,slow=6.4,SNR=38
ZALV PcP PcP 19 45 21.4 +0.6
comp=Z,5.3nm,0.5s,baz=46,slow=4.3,SNR=6.2
ZALV LR LR 20 12 06.4
comp=Z,3µm,19.5s,baz=38,slow=38
comp=Z,4.7nm,0.5s
ZALV Zalesovo Beam 58.92 321 P P 19 44 31.2 -0.8
GUMO Guam 59.03 248 LR LR 20 06 55.0
comp=Z,227nm,21.6s,baz=41,slow=33
MOR8 Moi Rana 59.12 2 eP P 19 44 32.1 -1.2
MOR8 IAmb IAmb 19 44 32.5
comp=Z,28nm,0.8s
MOR8 eS S 19 52 36.7 -0.4
MOR8 IAMs_20 IAMs_20 20 04 17.3
comp=Z,931nm,27.3s
LEIR Leirfjorden 59.15 3 eP P 19 44 34.3 +0.9
LEIR IAmb IAmb 19 44 34.5
comp=Z,64nm,1.2s
LEIR eS S 19 52 36.7 -0.6
LEIR IAMs_20 IAMs_20 20 03 46.5
comp=Z,1µm,36.1s
MSF Maaselka 59.23 356 P P 19 44 34.3 +0.3
MSF Maaselka 59.23 356 P P 19 44 34.3 +0.3
NJ2 Nanjing 59.31 283 ⇑P P 19 44 34.8 -0.2
NJ2 sP sP 19 44 52.0 +0.2
NJ2 pmax pmax
comp=Z,94nm,0.9s
NJ2 L L
comp=Z,1µm,22.9s
NJ2 L L
comp=Z,1µm,23.8s
NJ2 L L
comp=Z,2µm,22.6s
656A Willston 59.71 81 IAMs_20 IAMs_20 20 08 55.4
comp=Z,782nm,22.0s
OUL Oulu 60.18 357 P P 19 44 40.5 0.0
OUL Oulu 60.18 357 P P 19 44 40.5 0.0
ADZR Andozero 60.56 351c iP P 19 44 42.8 -0.3
ADZR pmax pmax
comp=Z,95nm,0.7s
NSS Namsos 60.69 4 eP P 19 44 44.0 0.0
NSS IAmb IAmb 19 44 44.3
comp=Z,39nm,0.9s
LYN LuoYang 60.98 289 P P 19 44 47.0 +0.6
LYN pmax pmax
comp=Z,140nm,0.8s
LYN pmax pmax
comp=Z,160nm,4.8s
LYN L L
comp=Z,1µm,21.0s
LYN L L
comp=Z,900nm,19.2s
LYN L L
comp=Z,2µm,22.0s
DWPF Disney Wildern 61.30 81 IAMs_20 IAMs_20 20 09 54.3
comp=Z,674nm,21.0s
DGZ Jazzator, Alta 61.30 317c iP P 19 44 48.6 0.0
DGZ pmax pmax
comp=Z,35nm,1.2s
CMIG Matias Romero 62.16 100 LR LR 20 10 15.4
comp=Z,657nm,21.9s,baz=338,slow=34
MOL Molde 62.42 6 eP P 19 44 56.5 +0.9
MOL IAmb IAmb 19 44 56.9
comp=Z,120nm,1.6s
MOL eS S 19 53 16.9 -2.2
YOJ Yonaguni jima 62.71 274 P P 19 44 59.6 +1.4
060A Indiantown 62.73 81 IAMs_20 IAMs_20 20 11 12.2
comp=Z,875nm,20.0s
AKN Aaknes 62.78 7 eP P 19 44 58.9 +0.7
AKN IAmb IAmb 19 44 59.7
comp=Z,72nm,0.9s
AKN eS S 19 53 20.5 -3.1
AKN IAMs_20 IAMs_20 20 10 43.2
comp=Z,882nm,21.5s
WHN Wuhan 62.97 285 ⇑P P 19 44 59.8 0.0
WHN pP pP 19 45 06.5 -5.4
WHN S S 19 53 30.5 +3.6
WHN pmax pmax
comp=Z,180nm,1.2s
WHN pmax pmax
comp=Z,750nm,5.0s
WHN L L
comp=Z,610nm,8.8s
WHN L L
comp=Z,3µm,21.2s
WHN L L
comp=Z,2µm,17.1s
DOMB Dombas 63.04 6 eP P 19 45 00.2 +0.3
DOMB IAmb IAmb 19 45 00.3
comp=Z,26nm,0.8s
FOO Floro 63.21 8 eP P 19 45 01.9 +0.9
XAN Xi'an 63.28 292 ⇑P P 19 45 02.0 +0.1
XAN pP pP 19 45 11.8 -2.2
XAN S S 19 53 24.0 -6.8
XAN pmax pmax
comp=Z,100nm,1.0s
XAN pmax pmax
comp=Z,500nm,7.7s
XAN L L
comp=Z,1µm,16.5s
XAN L L
comp=Z,650nm,17.5s
XAN L L
comp=Z,1µm,21.0s
XAN Xi'an 63.28 292 P P 19 45 02.0 +0.1
KLMR Klimovskoe 63.45 349 eP P 19 45 01.6 -0.9

KLMR *e**PP **pP** **19 45 15.8 +1.2**
KLMR pmax pmax
comp=Z,189nm,1.2s
KLMR MLR MLR
comp=Z,688nm,17.0s
YHNB Yeheng **63.49 276** P **P** **19 45 02.3 -1.2**
YHNB IAmb IAmb 19 45 09.8
comp=Z,22nm,0.9s
SVE Sverdlovsk **63.68 336***de*P **P** **19 45 04.5 +0.4**
SVE pmax pmax
comp=Z,120nm,1.0s
SUE Sulen **63.73 8** *e*P **P** **19 45 05.2 +0.9**
HYA Hoyanger **63.73 7** *e*P **P** **19 45 05.4 +1.1**
NACB Ninganchiao **63.75 275** P **P** **19 45 07.7 +2.6**
NACB Ninganchiao **63.75 275** P **P** **19 45 04.2 -0.8**
NACB Ninganchiao **63.75 275** P **P** **19 45 04.5 -0.6**
KURK Kurchatov **63.77 323***c i*P **P** **19 45 04.7 -0.1**
KURK pmax pmax
comp=Z,64nm,1.2s
KURK Kurchatov **63.77 323** P **P** **19 45 04.5 -0.3**
KURK IAmb IAmb 19 45 06.6
comp=Z,27nm,0.7s
KURK Kurchatov **63.77 323** P **P** **19 45 04.9 +0.2**
KURK Kurchatov **63.77 323** P **P** **19 45 05.0 +0.2**
GTA2 Gaotai **63.81 302** P **P** **19 45 05.3 -0.2**
GTA2 S **S** **19 53 36.0 -1.5**
GTA2 pmax pmax
comp=Z,83nm,1.0s
GTA2 pmax pmax
comp=Z,330nm,5.4s
GTA2 L L
comp=Z,2µm,16.2s
GTA2 L L
comp=Z,1µm,17.5s
GTA2 L L
comp=Z,2µm,17.8s
FINES FINESS Array B **63.82 357** P **P** **19 45 04.7 -0.2**
comp=Z,36nm,0.4s,baz=21,slow=7.2,SNR=507
FINES PKPPKP **P'P'df** 20 13 55.7 -8.8
comp=Z,2.1nm,0.9s,baz=176,slow=6.5,SNR=5.0
FINES LR LR 20 17 01.1
comp=Z,350nm,18.1s,baz=12,slow=40
comp=Z,36nm,0.4s
FINES FINESS Array B **63.82 357** *i* P **P** **19 45 04.6 -0.4**
FINES pmax pmax
comp=Z,36nm,0.4s
FINES FINESS Array B **63.82 357** P **P** **19 45 04.5 -0.5**
KURBB Kurchatov Arra **63.88 323** P **P** **19 45 05.4 -0.1**
comp=Z,31nm,1.0s,baz=21,slow=6.7,SNR=132
KURBB PKP2bc **P'P'bc** **20 14 06.0 -4.0**
comp=Z,2.1nm,0.2s,baz=215,slow=4.5,SNR=4.5
KURBB LR LR 20 15 13.4
comp=Z,3µm,18.7s,baz=12,slow=38
comp=Z,31nm,1.0s
LRW Lerwick **64.06 11** *e*P **P** **19 45 07.2 +0.7**
LRW IAmb IAmb 19 45 08.7
comp=Z,66nm,0.8s
ZSN Zaisan **64.13 317***c i*P **P** **19 45 07.7 +0.4**
ZSN pmax pmax
comp=Z,29nm,0.7s
ZSN Zaisan **64.13 317**⇑ *i*P **P** **19 45 07.7 +0.4**
comp=Z,29nm,0.7s
NB2 NORSAR Subarra **64.15 5** P **P** **19 45 07.2 0.0**
comp=Z,17nm,0.7s,baz=355,slow=6.9
NB2 NORSAR Subarra **64.15 5** P **P** **19 45 07.2 0.0**
NOA NORSAR Array B **64.15 5** P **P** **19 45 07.3 0.0**
comp=Z,35nm,0.8s,baz=356,slow=6.6,SNR=60
NOA LR LR 20 13 09.8
comp=Z,254nm,20.7s,baz=340,slow=36
comp=Z,35nm,0.8s
KIRV Kirov **64.28 343** LR LR 20 17 13.7
comp=Z,637nm,20.8s,baz=15,slow=40
KIRV Kirov **64.28 343***c i*P **P** **19 45 07.6 -0.4**
ASK Askoy **64.33 8** *e*P **P** **19 45 08.9 +0.6**
NAO01 NORSAR Array S **64.33 5** P **P** **19 45 08.2 -0.2**
SKAR Skarslia **64.35 6** *e*P **P** **19 45 09.2 +0.7**
SKAR IAMs_20 IAMs_20 20 11 39.9
comp=Z,863nm,24.4s
LZH Lanzhou **64.38 297** P **P** **19 45 10.0 +0.7**
LZH pP pP 19 45 21.8 +0.4
LZH S **S** **19 53 38.3 -6.4**
LZH pmax pmax
comp=Z,79nm,1.2s
LZH pmax pmax
comp=Z,360nm,4.3s
LZH L L
comp=Z,900nm,18.7s
LZH L L
comp=Z,1µm,19.4s
LZH L L
comp=Z,1µm,21.6s
SSLB Suanglung **64.42 275** P **P** **19 45 10.1 +0.6**
SSLB Suanglung **64.42 275** P **P** **19 45 09.2 -0.4**
SSLB Suanglung **64.42 275** P **P** **19 45 09.4 -0.1**
BER Bergen **64.44 8** *e*P **P** **19 45 09.8 +0.8**
NC602 NORSAR Array S **64.47 4** *e*P **P** **19 45 09.8 +0.6**
NC602 *e*S **S** **19 53 42.4 -2.2**
NORES NORESS Array B **64.47 4** P **P** **19 45 09.4 +0.2**
NORES pmax pmax
comp=Z,2.0nm,1.3s
BVAR Borovoye Array **64.47 329** P **P** **19 45 09.7 +0.3**
comp=Z,112nm,0.8s,baz=38,slow=6.6,SNR=363
BVAR S **S** **19 53 46.8 +1.8**
comp=Z,1.3nm,0.8s,baz=31,slow=14,SNR=4.3
BVAR PKPPKP **P'P'df** **20 13 57.0 -6.0**
comp=Z,1.4nm,0.9s,baz=180,slow=3.9,SNR=4.8
comp=Z,112nm,0.8s
YULB Yu-li **64.53 275** P **P** **19 45 12.1 +1.9**
YULB Yu-li **64.53 275** P **P** **19 45 09.6 -0.6**
LZDM Lanzhou Array **64.56 297** P **P** **19 45 10.7 0.0**
comp=Z,8.1nm,0.4s,baz=46,slow=4.3,SNR=8.7
LZDM LR LR 20 15 12.4
comp=Z,764nm,21.8s,baz=340,slow=38
comp=Z,8.1nm,0.4s
ARTI Arti **64.59 337** LR LR 20 17 33.0
comp=Z,1µm,18.7s,baz=13,slow=40
ARTI Arti **64.59 337***c i*P **P** **19 45 10.0 -0.1**
ARTI **PP* **sP** **19 45 25.4 -1.7**
ARTI 19 45 48.1
ARTI S **S** **19 53 44.8 -1.5**
ARTI 19 55 00.3
ARTI pmax pmax
comp=Z,145nm,0.9s
ARTI MLR MLR
comp=Z,1µm,18.0s
ARTI Arti **64.59 337** P **P** **19 45 09.8 -0.3**
ARTI Arti **64.59 337** P **P** **19 45 10.1 -0.1**
ARTI PcP **PcP** **19 45 45.4 +1.6**
TPUB Ta-pu **64.98 275** P **P** **19 45 15.7 +2.5**
TPUB Ta-pu **64.98 275** P **P** **19 45 16.2 +3.0**
ODD1 Odda **65.00 7** *e*P **P** **19 45 13.3 +0.5**
ODD1 IAMs_20 IAMs_20 20 11 05.4
comp=Z,949nm,3.4s
TWGBT Beinan **65.10 275** P **P** **19 45 17.1 +3.2**
TWG Pinlang **65.10 275** IAmb IAmb 19 45 22.9
comp=Z,24nm,0.7s
TWG Pinlang **65.10 275** P **P** **19 45 12.5 -1.5**
HFS Hagfors **65.15 3** P **P** **19 45 13.5 -0.2**
comp=Z,59nm,0.6s,baz=2.9,slow=3.0,SNR=161
HFS LR LR 20 13 17.2
comp=Z,350nm,19.8s,baz=358,slow=36
comp=Z,59nm,0.6s
PUL Pulkovo **65.29 354**⇑ *e*P **P** **19 45 15.7 +1.1**
PUL pmax pmax
comp=Z,87nm,0.6s
KONO Kongsberg **65.45 6***c i*P **P** **19 45 16.4 +0.8**
KONO pmax pmax
comp=Z,65nm,0.9s
KONO Kongsberg **65.45 6** *e*P **P** **19 45 16.5 +0.8**
KONO Kongsberg **65.45 6** P **P** **19 45 16.6 +1.0**
KONO Kongsberg **65.45 6** P **P** **19 45 16.7 +1.0**
BLS5 Blasjo **65.48 7** *e*P **P** **19 45 16.9 +1.0**
CNSH ChangSha **65.57 285** P **P** **19 45 17.3 +0.4**
CNSH pmax pmax
comp=Z,170nm,1.2s
KMY Karmoy **65.59 8** *e*P **P** **19 45 16.9 +0.3**
MK31 Makanchi Array **65.67 318***c i*P **P** **19 45 16.8 -0.6**
MKAR Makanchi Array **65.67 318** P **P** **19 45 16.8 -0.6**
comp=Z,6.1nm,0.5s,baz=52,slow=6.9,SNR=129
MKAR PKPPKP **P'P'df** **20 13 54.2 -6.4**
comp=Z,1.3nm,1.0s,baz=253,slow=1.5,SNR=5.5
MKAR LR LR 20 15 52.3
comp=Z,2µm,21.2s,baz=24,slow=38
comp=Z,6.1nm,0.5s
MKAR Makanchi Array **65.67 318** *i* P **P** **19 45 16.7 -0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.4s
MKAR Makanchi Array **65.67 318** P **P** **19 45 16.4 -0.9**
MAKZ Makanchi **65.78 318** P **P** **19 45 17.4 -0.7**
MAKZ Makanchi **65.78 318** P **P** **19 45 17.4 -0.7**
MAKZ IAmb IAmb 19 45 18.8
comp=Z,48nm,1.4s
MAKZ Makanchi **65.78 318** P **P** **19 45 17.6 -0.4**
MAKZ Makanchi **65.78 318** P **P** **19 45 17.8 -0.2**
ARBE Arbavere **65.83 356** P **P** **19 45 18.5 +0.4**
ENH Enshi **65.86 289** IAMs_20 IAMs_20 20 13 43.2
comp=Z,708nm,20.0s
ENH Enshi **65.86 289** P **P** **19 45 19.0 +0.1**
WMQ Urumqi **65.92 313** ⇑P **P** **19 45 19.8 +0.8**
WMQ sP sP 19 45 40.5 +4.6
WMQ PP **PP** **19 47 45.5 +1.7**
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,180nm,3.6s
WMQ L L
comp=Z,1µm,23.3s
WMQ L L
comp=Z,590nm,24.2s
WMQ L L
comp=Z,2µm,23.8s
WMQ Urumqi **65.92 313** P **P** **19 45 20.0 +1.0**
STRU Stroemstad **66.15 5** *i* P **P** **19 45 20.7 +0.6**
KPL Plockton **66.19 15** *e*P **P** **19 45 21.0 +0.6**
KPL IAmb IAmb 19 45 24.5
comp=Z,17nm,0.6s
MCD Coleburn Disti **66.29 13** *e*P **P** **19 45 22.0 +0.9**
MCD IAmb IAmb 19 45 23.3
comp=Z,78nm,0.9s
SNART Snartemo **66.61 7** *i* P **P** **19 45 24.0 +0.9**
MTSE Matsula **66.62 358** P **P** **19 45 22.1 -1.0**
HOMB Homborsund **66.76 6** *e*P **P** **19 45 24.7 +0.6**
HOMB IAMs_20 IAMs_20 20 12 39.4
comp=Z,694nm,21.8s
HOMB Homborsund **66.76 6** *i* P **P** **19 45 24.6 +0.6**
VSU Vasula **66.78 356***c i*P **P** **19 45 23.3 -0.8**
VSU pmax pmax
comp=Z,123nm,0.8s
VSU Vasula **66.78 356** P **P** **19 45 23.5 -0.6**
DRUM Mains of Drumt **67.04 13** P **P** **19 45 26.8 +0.9**
DRUM Mains of Drumt **67.04 13** *e*P **P** **19 45 26.4 +0.6**
DRUM IAmb IAmb 19 45 27.5
comp=Z,171nm,0.6s
TJOU Tjoern **67.17 5** *i* P **P** **19 45 27.1 +0.4**
LAWE Loch Awe, Argy **67.28 15** *e*P **P** **19 45 28.1 +0.7**
LAWE IAmb IAmb 19 45 30.6
comp=Z,33nm,0.7s
INVG Invergeldie, C **67.31 14** *e*P **P** **19 45 27.8 +0.3**
INVG IAmb IAmb 19 45 29.5
comp=Z,29nm,0.8s
EAB Aberfoyle **67.50 14** *e*P **P** **19 45 29.5 +0.7**
EAB IAmb IAmb 19 45 32.2
comp=Z,57nm,0.9s
SLIT Slitere, Latvi **67.74 358** P **P** **19 45 30.2 0.0**
ONAU Onsala **67.82 4** *i* P **P** **19 45 31.0 +0.3**
PGBU Glenifferbraes **67.84 14** *e*P **P** **19 45 31.5 +0.5**
PGBU IAmb IAmb 19 45 34.2
comp=Z,87nm,0.9s
IDGL Inch Island, C **68.09 16** P **P** **19 45 33.5 +1.0**
IDGL Inch Island, C **68.09 16** P **P** **19 45 34.0 +1.5**
IDGL Inch Island, C **68.09 16** *e*P **P** **19 45 33.2 +0.7**
IDGL IAmb IAmb 19 45 34.9
comp=Z,25nm,0.7s
FABU Falkenberg **68.25 4** *i* P **P** **19 45 33.8 +0.4**
CLGH Cloghs, Cushen **68.31 16** *e*P **P** **19 45 34.6 +0.7**
CLGH IAmb IAmb 19 45 36.4
comp=Z,15nm,0.6s
CD2 Chengdu **68.45 293** P **P** **19 45 35.8 +0.6**
CD2 S **S** **19 54 32.5 -1.4**
CD2 pmax pmax
comp=Z,270nm,0.8s
CD2 pmax pmax
comp=Z,880nm,3.5s
CD2 L L
comp=Z,760nm,15.2s
CD2 L L
comp=Z,690nm,15.9s
CD2 L L
comp=Z,720nm,17.8s
EKA Eskdalemuir Ar **68.49 14** P **P** **19 45 35.8 +0.8**
comp=Z,24nm,0.6s,baz=344,slow=4.5,SNR=84
EKA LR LR 20 16 11.2
comp=Z,750nm,21.1s,baz=349,slow=36
comp=Z,24nm,0.6s
ESK Eskdalemuir **68.50 14** P **P** **19 45 36.1 +1.0**
ESK pmax pmax
comp=Z,62nm,1.0s
ESK MLR MLR
comp=Z,1µm,21.0s
ESK Eskdalemuir **68.50 14** P **P** **19 45 36.1 +1.0**
ESK Eskdalemuir **68.50 14** P **P** **19 45 36.5 +1.4**
ESK Eskdalemuir **68.50 14** *e*P **P** **19 45 35.8 +0.7**
ESK IAmb IAmb 19 45 38.4
comp=Z,33nm,0.9s
NEWG New Galloway **68.55 14** *e*P **P** **19 45 35.7 +0.3**
NEWG IAmb IAmb 19 45 38.5
comp=Z,21nm,1.0s
MUD Monsted U'grnd **68.61 6** *i* P **P** **19 45 36.3 +0.6**
MUD IAmb IAmb 19 45 37.6
comp=Z,68nm,1.0s
TDK Taldyqorghan **68.66 319***c i*P **P** **19 45 36.7 +0.4**
TDK pmax pmax
comp=Z,47nm,1.5s
TDK Taldyqorghan **68.66 319**⇑ *i*P **P** **19 45 36.7 +0.4**
comp=Z,47nm,1.5s
MOS Moscow **68.67 349** *e*P **P** **19 45 36.4 +0.3**
MOS *e* 19 46 01.6
MOS pmax pmax
comp=Z,57nm,0.7s
MOS MLR MLR
comp=Z,800nm,21.0s
GAL1 Galloway **68.72 15** *e*P **P** **19 45 36.9 +0.5**
GAL1 IAmb IAmb 19 45 38.1
comp=Z,34nm,0.7s
DEL Delary **68.83 3** *i* P **P** **19 45 37.2 +0.1**
TGUH Tegucigalpa,Un **68.93 96** IAMs_20 IAMs_20 20 13 24.0
comp=Z,621nm,22.0s
BLEU Blekinge **69.05 2** *i* P **P** **19 45 38.5 0.0**
EDMD Edmundbyers **69.14 13** *e*P **P** **19 45 39.8 +0.7**
EDMD IAmb IAmb 19 45 42.4
comp=Z,43nm,1.1s
BJUU Bjuv **69.19 4** *i* P **P** **19 45 39.5 +0.2**
KESW Keswick, Cumbr **69.22 14** P **P** **19 45 40.0 +0.4**
KESW Keswick, Cumbr **69.22 14** *e*P **P** **19 45 39.8 +0.2**
KESW IAmb IAmb 19 45 43.4
comp=Z,48nm,0.9s
AFI Afiamalu **69.28 192** LR LR 20 09 53.9
comp=Z,740nm,20.8s,baz=7.5,slow=30
ILTH Belurgan, Co L **69.29 16** P **P** **19 45 40.6 +0.6**
ILTH Belurgan, Co L **69.29 16** P **P** **19 45 41.1 +1.2**
ILTH Belurgan, Co L **69.29 16** *e*P **P** **19 45 40.5 +0.6**
ILTH IAmb IAmb 19 45 41.9
comp=Z,37nm,0.9s
PBUR Paburge **69.35 359** P **P** **19 45 40.6 +0.3**
IGLA Glengowla, Co **69.36 18** P **P** **19 45 41.2 +0.8**
IGLA Glengowla, Co **69.36 18** P **P** **19 45 40.3 -0.1**
IGLA Glengowla, Co **69.36 18** *e*P **P** **19 45 41.0 +0.6**
IGLA IAmb IAmb 19 45 42.5
comp=Z,43nm,0.9s
OBN Obninsk **69.40 350** LR LR 20 19 55.4
comp=Z,1µm,21.0s,baz=356,slow=39
OBN Obninsk **69.40 350** ⇑P **P** **19 45 40.4 -0.2**
OBN Obninsk **69.40 350***c i*P **P** **19 45 40.1 -0.5**
OBN *i* *PP **pP** **19 45 55.1 +2.2**
OBN *e* 19 46 04.6
OBN *e* 19 48 14.5
OBN *e*PPP PPP 19 49 55.0
OBN *e*S **S** **19 54 43.8 -0.4**
OBN *e*SS **SS** **19 59 12.0 +1.5**
OBN pmax pmax
comp=Z,116nm,1.3s
OBN MLR MLR
comp=Z,1µm,22.0s
OBN Obninsk **69.40 350** P **P** **19 45 39.2 -1.4**
OBN Obninsk **69.40 350** P **P** **19 45 40.1 -0.5**
comp=Z,1µmcomp=Z,94nm,1.1s
OBN Obninsk **69.40 350** P **P** **19 45 40.4 -0.2**
COP Copenhagen **69.55 4** *i* P **P** **19 45 41.8 +0.3**
COP IAmb IAmb 19 45 42.7
comp=Z,102nm,0.9s
SZP Santa **69.60 272** P **P** **19 45 43.8 +1.4**
SZP Santa **69.60 272** P **P** **19 45 43.5 +1.1**
SSRD Sdr. Stenderup **69.61 6** *i* P **P** **19 45 43.4 +1.5**
SSRD IAmb IAmb 19 45 44.7
comp=Z,82nm,0.8s
LUNU Lund **69.65 4** *i* P **P** **19 45 42.4 +0.2**
PDGK Podgornoye **69.66 318** P **P** **19 45 42.6 0.0**
PDGK Podgornoye **69.66 318** P **P** **19 45 42.6 0.0**
SHLS Shalkode **69.81 318***c i*P **P** **19 45 43.0 -0.6**
SHLS pmax pmax
comp=Z,42nm,1.4s
SHLS Shalkode **69.81 318**⇑ *i*P **P** **19 45 43.1 -0.6**
comp=Z,42nm,1.4s
PABE Paberze **69.83 357** IAMs_20 IAMs_20 20 14 30.7
comp=Z,796nm,21.0s
PABE Paberze **69.83 357** P **P** **19 45 43.8 +0.5**
KPKS Kokpek **69.85 318** *e*P **P** **19 45 44.4 +0.6**
KPKS Kokpek **69.85 318** *e*P **P** **19 45 44.5 +0.6**
UZB Uzynbulak **69.99 318***c i*P **P** **19 45 45.1 +0.4**
UZB Uzynbulak **69.99 318**⇑ *i*P **P** **19 45 45.1 +0.4**
DSB Dublin **70.04 16** P **P** **19 45 45.7 +1.1**
DSB Dublin **70.04 16** IAMs_20 IAMs_20 20 15 20.8
comp=Z,1µm,21.0s
AKTO Aktyubinsk **70.17 335** LR LR 20 20 38.1
comp=Z,878nm,20.6s,baz=41,slow=39
BTLS Baital **70.21 322** *e*P **P** **19 45 46.4 +0.6**
BTLS Baital **70.21 322** *e*P **P** **19 45 46.5 +0.6**
BSD Bornholm Skovb **70.22 3** P **P** **19 45 46.2 +0.6**
BSD Bornholm Skovb **70.22 3** *i* P **P** **19 45 45.9 +0.3**
BSD IAmb IAmb 19 45 46.3
comp=Z,30nm,0.8s
SATY Saty **70.31 318***c i*P **P** **19 45 47.0 +0.4**
SATY pmax pmax
comp=Z,21nm,1.0s
SATY Saty **70.31 318**⇑ *i*P **P** **19 45 47.0 +0.4**
comp=Z,21nm,1.0s
KUU Kurty **70.37 320** *e*P **P** **19 45 47.3 +0.4**
KUU Kurty **70.37 320** *e*P **P** **19 45 47.3 +0.4**
GYA Guiyang **70.38 288** ⇑P **P** **19 45 48.0 +0.7**
GYA S **S** **19 54 57.5 +0.6**
GYA pmax pmax
comp=Z,94nm,1.2s
GYA L L
comp=Z,590nm,20.8s
GYA L L
comp=Z,480nm,21.9s
GYA L L
comp=Z,890nm,21.2s
CHIV Chivirico **70.48 83** IAmb IAmb 19 45 50.9
comp=Z,42nm,0.9s
BELG Belogornoye **70.50 342** LR LR 20 21 18.9
comp=Z,2µm,20.0s,baz=322,slow=40
BELG Belogornoye **70.50 342***c i*P **P** **19 45 47.4 -0.1**
BELG pmax pmax
comp=Z,41nm,1.4s
VAL Valentia **70.61 19** P **P** **19 45 49.1 +1.0**
SIUN Universidad Ur **70.64 94** P **P** **19 45 48.7 -0.1**
MNK Minsk **70.68 355** *i* P **P** **19 45 49.2 +0.7**
comp=E,71nm,1.1s
MNK *i* P **P** **19 45 49.2 +0.7**
comp=N,20nm,0.8s
MNK *i* P **P** **19 45 49.2 +0.7**
comp=Z,128nm,0.9s,baz=5.0
MNK *i* pP **sP** **19 46 03.4 -2.1**
MNK *i* PP **PP** **19 48 25.8 +1.1**
MNK *i* PPP PPP 19 50 08.6
MNK *i* S **S** **19 54 59.7 +0.4**
MNK *i* sS **SKiKP** **19 55 24.1 -3.4**
MNK *i* SS **SS** **19 59 32.9 +2.6**
MNK *i* SSS SSS 20 02 51.6
MNK Minsk **70.68 355** *i* P **P** **19 45 49.2 +0.7**
MNK *i* *PP **sP** **19 46 03.4 -2.1**
MNK *i* 19 48 25.7
MNK *i* PPP PPP 19 50 08.6
MNK *i* S **S** **19 54 59.6 +0.4**
MNK *i* *SS **SKiKP** **19 55 24.0 -3.4**
MNK *i* 19 55 47.9
MNK *i* SS **SS** **19 59 32.8 +2.6**
MNK pmax pmax
comp=Z,128nm,0.9s
MNK pmax pmax
comp=E,71nm,1.1s
MNK pmax pmax
comp=N,20nm,0.8s
RGN Rugen **70.73 4** *e*P **P** **19 45 50.2 +1.4**
comp=N,139nm,0.9s,baz=355,slow=5.8
MDOK Medeo **70.73 319** *e*P **P** **19 45 49.6 +0.3**
MDOK Medeo **70.73 319** *e*P **P** **19 45 49.6 +0.3**
AAA Alma-Ata **70.75 319** *e*P **P** **19 45 49.6 +0.4**
AAA pmax pmax
comp=Z,40nm,1.3s
AAA Alma-Ata **70.75 319** *e*P **P** **19 45 49.6 +0.4**
comp=Z,40nm,1.3s
ABKAR Akbulak array **70.77 333** P **P** **19 45 49.3 +0.1**
STNC Stoke **70.81 14** P **P** **19 45 48.8 -0.6**
IWEX Carrickbyrne, **70.81 17** P **P** **19 45 50.2 +0.9**
FOEL Foel Wylfa **70.86 14** P **P** **19 45 51.3 +1.6**
FOEL Foel Wylfa **70.86 14** *e*P **P** **19 45 50.4 +0.7**
FOEL IAmb IAmb 19 45 53.3
comp=Z,65nm,0.9s
TNSS Tian-Shan **70.88 319** *e*P **P** **19 45 50.5 0.0**
TNSS Tian-Shan **70.88 319** *e*P **P** **19 45 50.5 0.0**
KRVT Keravat (AS076 **70.91 231** LR LR 20 12 43.9
comp=Z,107nm,20.7s,baz=325,slow=32
BOAB BOACO BROADBAN **71.14 95** IAMs_20 IAMs_20 20 18 14.6
comp=Z,728nm,20.0s
BSEG Bad Segeberg **71.19 6** P **P** **19 45 52.8 +1.2**
BSEG Bad Segeberg **71.19 6** *e*P **P** **19 45 52.8 +1.2**
comp=Z,37nm,1.0s,baz=355,slow=5.8
BSEG Bad Segeberg **71.19 6** P **P** **19 45 52.8 +1.2**
HLM1 Long Mynd **71.27 14** *e*P **P** **19 45 53.0 +0.8**
HLM1 IAmb IAmb 19 45 56.3
comp=Z,15nm,0.8s
CWF Charnwood Fore **71.27 13** P **P** **19 45 53.6 +1.5**
CWF Charnwood Fore **71.27 13** *e*P **P** **19 45 52.9 +0.8**
CWF IAmb IAmb 19 45 55.6
comp=Z,28nm,1.0s
SUW Suwalki **71.34 358** IAMs_20 IAMs_20 20 21 00.8
comp=Z,557nm,21.0s
SGDS Sogindy **71.38 321**⇑ *i*P **P** **19 45 53.5 +0.4**
TKM2 Tokmak 2 **71.48 320** P **P** **19 45 54.7 +0.8**
SNR=37
KDJ Kajisay **71.57 319** P **P** **19 45 55.3 +0.9**
KDJ Kajisay **71.57 319** P **P** **19 45 55.3 +0.9**
WUS Wushi **71.57 317** IAMs_20 IAMs_20 20 19 37.4
comp=Z,835nm,20.0s
WUS Wushi **71.57 317** P **P** **19 45 54.9 +0.5**
USP Ospenovka **71.59 321** P **P** **19 45 55.1 +0.8**
SNR=27
LPSR Galich'ya Gora **71.61 348***c i*P **P** **19 45 53.6 -0.5**
LPSR pmax pmax
comp=Z,95nm,1.0s
TARG Taragay, Kyrgy **71.67 318** P **P** **19 45 57.1 +1.8**
TARG Taragay, Kyrgy **71.67 318** P **P** **19 45 57.1 +1.8**
BOOM Boomskoye usch **71.73 320** P **P** **19 45 56.4 +1.1**
BOOM Boomskoye usch **71.73 320** P **P** **19 45 56.4 +1.1**
CHMS Chumysh **71.73 321** P **P** **19 45 56.3 +1.2**
SNR=16
MCH1 Michaelchurch **71.76 14** *e*P **P** **19 45 56.0 +0.9**
MCH1 IAmb IAmb 19 45 59.1
comp=Z,22nm,0.7s
LNIZ Loecknitz **71.81 3** P **P** **19 45 56.4 +1.0**
KBK Karagaybulak **71.95 320** P **P** **19 45 57.7 +1.1**
SNR=28
AAK Ala-Archa **72.14 321** LR LR 20 20 20.0
comp=Z,3µm,18.6s,baz=27,slow=38
AAK Ala-Archa **72.14 321** P **P** **19 45 58.6 +0.9**
SNR=21
AAK Ala-Archa **72.14 321***c i*P **P** **19 45 58.6 +0.9**
AAK pmax pmax
comp=Z,66nm,1.1s
AAK Ala-Archa **72.14 321** P **P** **19 45 58.1 +0.3**
AAK IAmb IAmb 19 45 59.7
comp=Z,59nm,1.1s
AAK Ala-Archa **72.14 321** P **P** **19 45 58.7 +0.9**
AAK Ala-Archa **72.14 321** P **P** **19 45 58.9 +1.1**
GORT1 Trebel **72.19 5** *e*P **P** **19 45 58.6 +1.0**
comp=Z,39nm,1.1s,baz=355,slow=5.8
RETH Rethem/Aller, **72.33 7** *e*P **P** **19 45 58.7 +0.3**
comp=Z,26nm,1.0s,baz=355,slow=5.8
RETH Rethem/Aller, **72.33 7** P **P** **19 45 59.4 +0.9**
EKS2 Erkin-Say **72.38 321** P **P** **19 46 00.1 +1.0**
SNR=33

SWN1 Swindon 72.40 14 *e*P **P** **19 46 00.1 +1.1**
SWN1 IAmb IAmb 19 46 02.4
comp=Z,54nm,0.6s
VORR Voronezh 72.48 347 *e*P **P** **19 45 58.9 -0.5**
VORR pmax pmax
comp=Z,44nm,0.5s
VRH Novokhopyorsk 72.60 346*c i*P **P** **19 45 59.3 -0.8**
VRH pmax pmax
comp=Z,53nm,0.6s
IBBN Ibbenburen 72.64 8 *e*P **P** **19 46 01.3 +1.0**
comp=Z,70nm,1.1s,baz=355,slow=5.8
IBBN Ibbenburen 72.64 8 P **P** **19 46 01.5 +1.1**
WOL Wolverton 72.68 14 *e*P **P** **19 46 00.8 +0.2**
WOL IAmb IAmb 19 46 04.3
comp=Z,52nm,0.9s
RUE Ruedersdorf 72.81 4 *e*P **P** **19 46 02.6 +1.3**
comp=Z,107nm,1.0s,baz=355,slow=5.8
RUE Ruedersdorf 72.81 4 P **P** **19 46 02.6 +1.3**
PPT Papeete 72.83 169 LR LR 20 10 33.7
comp=Z,605nm,21.5s,baz=360,slow=30
FLTG Flechtingen 72.85 5 *e*P **P** **19 46 02.0 +0.4**
comp=Z,42nm,0.9s,baz=355,slow=5.8
WTSB Winterswijk 72.91 8 P **P** **19 46 02.8 +0.9**
VSR Storozhevoye 72.93 347*c i*P **P** **19 46 01.7 -0.4**
VSR pmax pmax
comp=Z,63nm,0.5s
ASSE Asse, Remlinge 73.01 6 *e*P **P** **19 46 03.3 +0.8**
comp=Z,47nm,1.1s,baz=355,slow=5.8
ASSE Asse, Remlinge 73.01 6 P **P** **19 46 03.5 +1.0**
PZH PanZhiHua 73.02 292 P **P** **19 46 03.5 +0.3**
PZH S **S** **19 55 28.3 +1.1**
PZH pmax pmax
comp=Z,70nm,1.2s
PZH pmax pmax
comp=Z,190nm,3.8s
PZH L L
comp=Z,460nm,18.3s
PZH L L
comp=Z,330nm,20.9s
PZH L L
comp=Z,550nm,19.8s
DZA Taraz 73.04 323 *e*P **P** **19 46 03.3 +0.3**
DZA Taraz 73.04 323 *e*P **P** **19 46 03.3 +0.3**
VORD Divnogorie 73.16 347 *e*P **P** **19 46 00.9 -2.5**
VORD pmax pmax
comp=Z,60nm,0.9s
R9F13 Warsaw-Wawer 73.17 359 *e*P **P** **19 46 04.1 +0.6**
CCA1 Carnmenellis 73.18 16 *e*P **P** **19 46 04.5 +0.9**
CCA1 IAmb IAmb 19 46 05.8
comp=Z,28nm,0.9s
CLZ Clausthal 73.28 6 *e*P **P** **19 46 05.4 +1.2**
comp=Z,68nm,1.1s,baz=355,slow=5.8
CLZ Clausthal 73.28 6 P **P** **19 46 05.5 +1.3**
JTS Las Juntas de 73.29 96 LR LR 20 20 07.2
comp=Z,221nm,20.6s,baz=333,slow=37
BRLS Boroldaу 73.43 324 *e*P **P** **19 46 07.0 +1.8**
BRLS Boroldaу 73.43 324 *e*P **P** **19 46 07.0 +1.8**
BUG Bochum--Univer 73.47 8 P **P** **19 46 05.9 +0.7**
BUG Bochum--Univer 73.47 8 *e*P **P** **19 46 05.9 +0.7**
comp=Z,67nm,1.0s,baz=355,slow=5.8
BUG Bochum--Univer 73.47 8 P **P** **19 46 05.9 +0.7**
GTTG Gottingen 73.56 6 *e*P **P** **19 46 06.7 +1.0**
comp=Z,112nm,1.1s,baz=355,slow=5.8
GTTG Gottingen 73.56 6 P **P** **19 46 07.0 +1.2**
KMI2 Kunming 73.56 290 ⇑P **P** **19 46 06.5 0.0**
KMI2 sP sP 19 46 25.8 +2.3
KMI2 PP **PP** **19 48 48.0 -2.4**
KMI2 S **S** **19 55 37.3 +3.7**
KMI2 pmax pmax
comp=Z,25nm,1.3s
KMI2 pmax pmax
comp=Z,240nm,5.6s
KMI2 L L
comp=Z,680nm,20.4s
KMI2 L L
comp=Z,310nm,17.7s
KMI2 L L
comp=Z,790nm,22.6s
WIMM Wimmelburg 73.67 5 P **P** **19 46 07.2 +0.8**
ARK Arkit 73.78 322 P **P** **19 46 08.1 +0.7**
ARK Arkit 73.78 322 P **P** **19 46 08.1 +0.7**
KASTN Kahler Asten 73.79 7 *e*P **P** **19 46 07.8 +0.6**
comp=Z,34nm,1.1s,baz=355,slow=5.8
KASTN *ep*P **sP** **19 46 25.3 +1.0**
UCC Uccle 73.84 10 *d*P **P** **19 46 07.9 +0.5**
comp=Z,20nm,1.0s
UCC Uccle 73.84 10 P **P** **19 46 08.1 +0.6**
RNPP9 Sopachiv 73.86 356 P **P** **19 46 07.5 0.0**
RNPP8 Varash 73.94 356 P **P** **19 46 08.2 +0.2**
CLL Collm 73.95 4⇑*i*P **P** **19 46 08.5 +0.4**
CLL *e**PP **PcP** **19 46 23.0 -0.3**
CLL pmax pmax
comp=Z,46nm,1.0s
CLL Collm 73.95 4 *e*P **P** **19 46 08.3 +0.2**
comp=Z,39nm,0.9s,baz=355,slow=5.8
CLL Collm 73.95 4 P **P** **19 46 08.3 +0.2**
comp=Z,525nmcomp=Z,48nm,1.0s
CLL Collm 73.95 4⇑*i*P **P** **19 46 08.5 +0.4**
comp=Z,46nm,1.0s
CLL *ep*P **PcP** **19 46 23.0 -0.3**
CLL *i* (sP) **sP** **19 46 27.1 +2.0**
comp=Z,53nm,1.2s
CLL *e*S **S** **19 55 36.0 -0.8**
CLL *e*PS **PnS** **19 56 13.0 -0.5**
CLL *e*x x 19 57 12.0
CLL *e*SS **SS** **20 00 18.0 -2.3**
CLL *e*SSS SSS 20 03 42.0
CLL *e*(SSSS) 20 05 54.0
NEUB Neuenburg 73.99 5 *e*P **P** **19 46 09.2 +0.9**
comp=Z,76nm,0.9s,baz=355,slow=5.8
NEUB Neuenburg 73.99 5 P **P** **19 46 09.3 +1.0**
HDC Heredia 74.01 95 IAMs_20 IAMs_20 20 16 46.5
comp=Z,473nm,22.0s
HGN Heimansgroeve 74.02 9 P **P** **19 46 09.0 +0.5**
RNPP5 Staryi Chortor 74.04 356 P **P** **19 46 08.7 +0.1**
CHM Chimkent 74.14 324 *e*P **P** **19 46 09.7 +0.3**
CHM pmax pmax
comp=Z,42nm,0.9s
CHM Chimkent 74.14 324 *e*P **P** **19 46 09.7 +0.3**
comp=Z,42nm,0.9s
IUG Iuzhnay 74.15 323*c i*P **P** **19 46 09.9 +0.4**
IUG pmax pmax
comp=Z,49nm,1.3s
IUG Iuzhnay 74.15 323⇑*i*P **P** **19 46 10.0 +0.4**
comp=Z,49nm,1.3s
MEM Membach 74.19 9 P **P** **19 46 10.3 +0.8**
MEM Membach 74.19 9 *d*P **P** **19 46 09.3 -0.1**
comp=Z,21nm,1.0s
MEM Membach 74.19 9 P **P** **19 46 10.3 +0.8**
MI28 Mi28,Pidlybu 74.26 355 P **P** **19 46 08.9 -1.0**
UBBA Unterbreizbach 74.28 6 *e*P **P** **19 46 09.8 -0.1**
comp=Z,19nm,1.2s,baz=355,slow=5.8
UBBA Unterbreizbach 74.28 6 P **P** **19 46 10.2 +0.3**
BCLA Clavier 74.31 9 *d*P **P** **19 46 10.1 -0.1**
TRKS Terek-Say 74.31 322 P **P** **19 46 11.4 +0.8**
AK21 Malin Array Si 74.33 354 P **P** **19 46 10.1 -0.2**
AK23 Malin Array Si 74.34 354 P **P** **19 46 10.2 -0.1**
AK22 Malin Array Si 74.34 354 P **P** **19 46 10.2 -0.2**
BMRD Maredsous 74.37 10 *d*P **P** **19 46 11.2 +0.6**
comp=Z,30nm,1.2s
AKASG Malin Array Be 74.39 354 P **P** **19 46 10.3 -0.3**
comp=Z,20nm,0.3s,baz=7.6,slow=5.6,SNR=67
AKASG LR LR 20 19 00.4
comp=Z,908nm,21.9s,baz=12,slow=36
comp=Z,20nm,0.3s
AKASG Malin Array Be 74.39 354 *i* P **P** **19 46 10.3 -0.3**
AKASG pmax pmax
comp=Z,21nm,0.3s
AKASG Malin Array Be 74.39 354 P **P** **19 46 10.1 -0.5**
AKBB Malin Array Si 74.39 354*c i*P **P** **19 46 10.3 -0.4**
AKBB pmax pmax
comp=Z,108nm,0.7s
AKBB Malin Array Si 74.39 354 P **P** **19 46 09.9 -0.8**
KIEV Kiev 74.40 354 ⇓P **P** **19 46 10.3 -0.4**
KIEV Kiev 74.40 354 P **P** **19 46 10.4 -0.4**
KIEV pmax pmax
comp=Z,98nm,0.7s
KIEV MLR MLR
comp=Z,1μm,22.0s
KIEV Kiev 74.40 354 P **P** **19 46 10.3 -0.4**
KIEV Kiev 74.40 354 P **P** **19 46 10.3 -0.4**
comp=Z,5μmcomp=Z,628nm,0.9s
KIEV Kiev 74.40 354 P **P** **19 46 10.5 -0.2**
KIEV Kiev 74.40 354 P **P** **19 46 10.1 -0.6**
AK01 Malin Array Si 74.41 354 P **P** **19 46 10.2 -0.5**

BRG Berggiesshubel 74.42 4 P **P** **19 46 11.6 +0.7**
BRG Berggiesshubel 74.42 4 *e*P **P** **19 46 11.4 +0.6**
comp=Z,44nm,1.0s,baz=355,slow=5.8
BRG Berggiesshubel 74.42 4 P **P** **19 46 11.6 +0.7**
BRG Berggiesshubel 74.42 4 *i* P **P** **19 46 11.4 +0.6**
BRG Amp 19 46 12.8
comp=Z,44nm,1.0s
BRG pP **sP** **19 46 29.4 +1.5**
BRG Amp 19 46 31.8
comp=Z,48nm,1.2s
BRG Berggiesshubel 74.42 4 S **S** **19 55 44.0 +1.9**
QIZ Qiongzhong 74.50 281 P **P** **19 46 11.8 0.0**
QIZ S **S** **19 55 41.0 -2.8**
QIZ pmax pmax
comp=Z,25nm,1.1s
QIZ pmax pmax
comp=Z,270nm,4.5s
QIZ L L
comp=Z,260nm,14.2s
QIZ L L
comp=Z,330nm,15.2s
QIZ L L
comp=Z,350nm,22.0s
KSP Ksiaz 74.53 2 P **P** **19 46 11.8 +0.4**
comp=Z,429nmcomp=Z,46nm,1.0s
MOX Moxa 74.55 5 P **P** **19 46 12.5 +0.9**
MOX Moxa 74.55 5 *e*P **P** **19 46 12.3 +0.7**
comp=Z,76nm,1.1s,baz=355,slow=5.8
MOX *e*L L 20 18 08.9
comp=Z,409nm,22.0s
MOX Moxa 74.55 5 P **P** **19 46 12.5 +0.9**
BAIF Baives 74.56 10 *e*P **P** **19 46 12.0 +0.4**
BAIF pmax pmax
comp=Z,54nm,1.2s
DOU Dourbes 74.56 10 *d*P **P** **19 46 10.6 -1.1**
comp=Z,17nm,1.3s
RCHB Rochefort 74.56 10 *d*P **P** **19 46 12.1 +0.4**
RCHB Rochefort 74.56 10 P **P** **19 46 12.3 +0.7**
GIVF Givet 74.58 10 *e*P **P** **19 46 11.9 +0.2**
GIVF pmax pmax
comp=Z,46nm,1.2s
OHH Osh 74.61 321 P **P** **19 46 11.6 -0.6**
OHH Osh 74.61 321 P **P** **19 46 11.6 -0.6**
JSA Saint Aubin 74.62 15 *e*P **P** **19 46 12.5 +0.5**
JSA IAmb IAmb 19 46 13.6
comp=Z,39nm,0.7s
MSVF Nonsavu 74.70 201 LR LR 20 12 06.8
comp=Z,828nm,21.7s,baz=17,slow=30
PLN Plauen 74.73 5 *e*P **P** **19 46 13.3 +0.6**
comp=Z,9.8nm,0.9s,baz=355,slow=5.8
RICC Richard 74.76 4 *e*P **P** **19 46 14.1 +1.3**
KSH2 Kashi 74.76 318 P **P** **19 46 14.5 +1.3**
KSH2 pmax pmax
comp=Z,170nm,1.0s
KSH2 L L
comp=Z,2μm,21.3s
KSH2 L L
comp=Z,2μm,22.0s
KSH2 L L
comp=Z,3μm,22.7s
TNS Taunus Mts 74.77 7 P **P** **19 46 13.9 +1.0**
TNS Taunus Mts 74.77 7 *e*P **P** **19 46 13.8 +0.8**
comp=Z,62nm,1.2s,baz=355,slow=5.8
TNS Taunus Mts 74.77 7 P **P** **19 46 13.9 +1.0**
CHVC Chvalec 74.77 2 *e*P **P** **19 46 13.9 +1.0**
CHVC MLR MLR
comp=Z,600nm,20.0s
CHVC Chvalec 74.77 2 *e*P **P** **19 46 13.9 +1.0**
CHVC AMS AMS 20 25 00.0
comp=Z,600nm,20.0s
PVCC Panska Ves 74.79 3 *e*P **P** **19 46 14.1 +1.1**
PVCC Panska Ves 74.79 3 *e*P **P** **19 46 14.1 +1.1**
PVCC AMS AMS 20 11 10.0
comp=Z,500nm,28.7s
JAY Jayapura 74.80 242 LR LR 20 13 17.4
comp=Z,176nm,20.8s,baz=318,slow=31
OSTC Ostas 74.81 2 *e*P **P** **19 46 14.0 +0.9**
OSTC MLR MLR
comp=Z,600nm,20.2s
OSTC Ostas 74.81 2 *e*P **P** **19 46 14.0 +0.9**
OSTC AMS AMS 20 25 10.0
comp=Z,600nm,20.2s
TANN Tannenbergstha 74.82 5 *e*P **P** **19 46 13.6 +0.4**
comp=Z,30nm,1.3s,baz=355,slow=5.8
TANN Tannenbergstha 74.82 5 P **P** **19 46 13.8 +0.6**
UPC Upice 74.85 2 *e*P **P** **19 46 14.2 +0.8**
UPC MLR MLR
comp=Z,600nm,19.8s
UPC Upice 74.85 2 *e*P **P** **19 46 14.2 +0.8**
UPC AMS AMS 20 25 10.0
comp=Z,600nm,19.8s
NKC Novy Kostel 75.00 5 *e*P **P** **19 46 15.4 +1.2**
NKC MLR MLR
comp=Z,1μm,50.6s
NKC Novy Kostel 75.00 5 *e*P **P** **19 46 15.4 +1.2**
NKC AMS AMS 20 10 40.0
comp=Z,1μm,50.6s
DPC Dobruska-Polom 75.02 2 *e*P **P** **19 46 15.4 +1.0**
DPC MLR MLR
comp=Z,500nm,19.5s
DPC Dobruska-Polom 75.02 2 *e*P **P** **19 46 15.4 +1.0**
DPC AMS AMS 20 25 10.0
comp=Z,500nm,19.5s
DPC Dobruska-Polom 75.02 2 P **P** **19 46 15.3 +0.9**
comp=Z,825nmcomp=Z,72nm,1.4s
DPC Dobruska-Polom 75.02 2 P **P** **19 46 15.5 +1.0**
DAV Davao City (W) 75.07 261 LR LR 20 16 11.3
comp=Z,158nm,19.8s,baz=50,slow=33
WLF Walferdange 75.13 9 P **P** **19 46 15.3 +0.3**
WLF Walferdange 75.13 9 IAmb IAmb 19 46 17.4
comp=Z,49nm,1.1s
WLF IAMs_20 IAMs_20 20 21 05.8
comp=Z,446nm,20.0s
WLF Walferdange 75.13 9 *d*P **P** **19 46 16.1 +1.2**
comp=Z,24nm,1.2s
WLF Walferdange 75.13 9 *e*P **P** **19 46 15.5 +0.6**
comp=Z,45nm,1.1s,baz=355,slow=5.8
WLF Walferdange 75.13 9 P **P** **19 46 16.4 +1.4**
OJC Ojcow 75.19 360 P **P** **19 46 16.1 +0.8**
OJC Ojcow 75.19 360 P **P** **19 46 15.7 +0.4**
comp=Z,463nmcomp=Z,36nm,0.8s
OJC Ojcow 75.19 360 P **P** **19 46 15.6 +0.3**
BANI BANI 75.19 79 P **P** **19 46 16.3 +0.5**
LUBAR Lubar, Ukraine 75.26 355 P **P** **19 46 14.8 -0.9**
KRLC Kraliky 75.30 2 *e*P **P** **19 46 16.8 +0.8**
KRLC Kraliky 75.30 2 *e*P **P** **19 46 16.8 +0.8**
KRLC AMS AMS 20 11 50.0
comp=Z,500nm,30.4s
PRU Pruhonice 75.33 3 *e*P **P** **19 46 17.1 +1.0**
PRU Pruhonice 75.33 3 *e*P **P** **19 46 17.1 +1.0**
PRU AMS AMS 20 15 40.0
comp=Z,600nm,28.0s
PRU Pruhonice 75.33 3 P **P** **19 46 16.9 +0.7**
GRA3 Grafenberg Arr 75.41 6 P **P** **19 46 18.2 +1.6**
GRA1 Grafenberg Arr 75.48 6 P **P** **19 46 18.2 +1.2**
GRF Grafenberg Arr 75.48 6 *e*P **P** **19 46 17.9 +0.9**
comp=Z,114nm,1.6s,baz=355,slow=5.8
GRF *e*L L 20 18 37.6
comp=Z,449nm,21.6s
GRFO Grafenberg 75.48 6 IAMs_20 IAMs_20 20 18 38.1
comp=Z,458nm,21.0s
GRFO Grafenberg 75.48 6 P **P** **19 46 18.3 +1.3**
LDF La Druitiere 75.49 13 *e*P **P** **19 46 16.9 -0.1**
LDF pmax pmax
comp=Z,98nm,1.4s
GRA2 Grafenberg Arr 75.52 6 P **P** **19 46 18.5 +1.3**
OKC Ostrava-Krasne 75.56 1 *e*P **P** **19 46 18.5 +1.1**
OKC MLR MLR
comp=Z,500nm,22.9s
OKC Ostrava-Krasne 75.56 1 *e*P **P** **19 46 18.5 +1.1**
OKC AMS AMS 20 15 10.0
comp=Z,500nm,22.9s
OKC Ostrava-Krasne 75.56 1 P **P** **19 46 18.3 +0.8**
GRR Gorron 75.59 14 *e*P **P** **19 46 17.8 +0.2**
GRR pmax pmax
comp=Z,28nm,0.8s
MORC Moravsky Berou 75.61 1 ⇓P **P** **19 46 17.8 -0.1**
MORC Moravsky Berou 75.61 1 P **P** **19 46 17.7 -0.1**
MORC Moravsky Berou 75.61 1 IAmb IAmb 19 46 19.6
comp=Z,34nm,0.9s
MORC Moravsky Berou 75.61 1 *e*P **P** **19 46 18.2 +0.4**
MORC Moravsky Berou 75.61 1 P **P** **19 46 18.5 +0.7**
GRB4 Grafenberg Arr 75.72 5 P **P** **19 46 19.5 +1.1**
BTK Batken 75.72 322 P **P** **19 46 19.1 +0.4**
BTK Batken 75.72 322 P **P** **19 46 19.1 +0.4**

KWP Kalwaria Pacla 75.74 358 P **P** **19 46 19.3 +0.8**
KWP Kalwaria Pacla 75.74 358 P **P** **19 46 19.2 +0.8**
comp=Z,1μmcomp=Z,125nm,1.0s
GRB1 Grafenberg Arr 75.80 5 P **P** **19 46 20.0 +1.2**
GRB3 Grafenberg Arr 75.86 5 P **P** **19 46 20.2 +1.1**
ZVC Zvikov 75.87 4 *e*P **P** **19 46 20.2 +1.0**
ZVC AMS AMS 20 16 00.0
comp=Z,600nm,24.4s
RAR Rarotonga 75.87 179 LR LR 20 11 16.4
comp=Z,420nm,20.9s,baz=356,slow=29
LSA Lhasa 75.87 302 P **P** **19 46 21.5 +1.3**
LSA Lhasa 75.87 302 P **P** **19 46 21.5 +1.3**
LSA Lhasa 75.87 302 P **P** **19 46 21.4 +1.3**
DRK Karamyk 75.88 321 P **P** **19 46 20.9 +1.0**
DRK Karamyk 75.88 321 P **P** **19 46 20.9 +1.0**
TNCH TengChong 75.92 293⇑*i*P **P** **19 46 20.8 +0.7**
TNCH S **S** **19 55 58.0 -1.8**
TNCH pmax pmax
comp=Z,99nm,1.3s
TNCH L L
comp=Z,270nm,15.3s
TNCH L L
comp=Z,350nm,15.0s
TNCH L L
comp=Z,680nm,21.9s
GRB2 Grafenberg Arr 75.92 5 P **P** **19 46 20.0 +0.5**
SLVN Son La 75.98 287 P **P** **19 46 22.0 +1.7**
STHS Stebnicka Huta 75.98 359 *e*P **P** **19 46 20.3 +0.4**
STHS pmax pmax
comp=Z,80nm,0.9s
STHS Stebnicka Huta 75.98 359 *e*P **P** **19 46 20.3 +0.4**
NIE Niedzica 75.98 360 P **P** **19 46 21.0 +1.1**
comp=Z,219nmcomp=Z,18nm,1.1s
TREC Trest 76.05 3 *e*P **P** **19 46 21.2 +0.9**
TREC MLR MLR
comp=Z,600nm,25.9s
TREC Trest 76.05 3 *e*P **P** **19 46 21.2 +0.9**
TREC AMS AMS 20 16 20.0
comp=Z,600nm,25.9s
VRAC Vranov 76.07 2⇑P **P** **19 46 20.7 +0.3**
VRAC Vranov 76.07 2 P **P** **19 46 20.6 +0.3**
VRAC Vranov 76.07 2 *e*P **P** **19 46 20.9 +0.6**
VRAC Vranov 76.07 2 P **P** **19 46 21.3 +0.9**
GRB5 Grafenberg Arr 76.08 5 P **P** **19 46 21.3 +0.9**
GRC4 Grafenberg Arr 76.10 5 P **P** **19 46 21.4 +0.9**
WET Wettzell 76.11 5 P **P** **19 46 21.8 +1.2**
WET Wettzell 76.11 5 *e*P **P** **19 46 21.6 +1.0**
comp=Z,33nm,1.1s,baz=355,slow=5.8
WET Wettzell 76.11 5 P **P** **19 46 21.8 +1.2**
KHC Kasperske Hory 76.15 4 P **P** **19 46 22.1 +1.2**
KHC *e* 19 46 40.0
KHC MLR MLR
comp=Z,600nm,25.8s
KHC Kasperske Hory 76.15 4 *e*P **P** **19 46 22.1 +1.2**
KHC x x 19 46 40.0
KHC AMS AMS 20 16 40.0
comp=Z,600nm,25.8s
KHC Kasperske Hory 76.15 4 P **P** **19 46 21.9 +1.0**
comp=Z,787nmcomp=Z,55nm,1.2s
GRC1 Grafenberg Arr 76.19 5 P **P** **19 46 22.1 +1.0**
LANS Liptovska Anna 76.25 0 *e*P **P** **19 46 22.6 +1.1**
LANS pmax pmax
comp=Z,28nm,0.8s
LANS Liptovska Anna 76.25 0 *e*P **P** **19 46 22.5 +1.1**
STU Stuttgart 76.27 7 P **P** **19 46 22.2 +0.7**
STU Stuttgart 76.27 7 IAmb IAmb 19 46 23.9
comp=Z,62nm,1.3s
STU Stuttgart 76.27 7 *e*P **P** **19 46 22.2 +0.7**
comp=Z,150nm,1.3s,baz=355,slow=5.8
STU Stuttgart 76.27 7 P **P** **19 46 22.3 +0.9**
GRC3 Grafenberg Arr 76.30 5 P **P** **19 46 22.4 +0.8**
GRC2 Grafenberg Arr 76.31 6 P **P** **19 46 23.0 +1.3**
KRUC Moravsky 76.31 2 P **P** **19 46 22.2 +0.5**
KRUC Moravsky 76.31 2 *e*P **P** **19 46 22.1 +0.4**
KRUC Moravsky 76.31 2 P **P** **19 46 22.5 +0.8**
CLF Chambon-Foret 76.35 12 P **P** **19 46 23.3 +1.4**
GEC2 GERESS Array S 76.44 4 *e*P **P** **19 46 23.2 +0.6**
baz=355,slow=5.8
GERES GERESS Array B 76.44 4 P **P** **19 46 23.2 +0.6**
comp=Z,20nm,1.0s,baz=343,slow=4.2,SNR=107
GERES PKPPKP **P'P'df** **20 13 37.9 -4.6**
comp=Z,0.2nm,0.3s,baz=210,slow=3.2,SNR=4.5
comp=Z,20nm,1.0s
GERES GERESS Array B 76.44 4 P **P** **19 46 23.0 +0.4**
KOLS Kolonicke sedl 76.45 358 *e*P **P** **19 46 23.6 +1.0**
KOLS pmax pmax
comp=Z,35nm,0.9s
KOLS Kolonicke sedl 76.45 358 P **P** **19 46 23.7 +1.2**
KOLS Kolonicke sedl 76.45 358 *e*P **P** **19 46 23.5 +1.0**
CDF Champ du Feu 76.47 8 *e*P **P** **19 46 23.0 +0.2**
CDF pmax pmax
comp=Z,20nm,0.8s
CKRC Cesky Krumlov 76.49 4 *e*P **P** **19 46 23.4 +0.6**
CKRC MLR MLR
comp=Z,600nm,18.4s
CKRC Cesky Krumlov 76.49 4 *e*P **P** **19 46 23.4 +0.6**
CKRC AMS AMS 20 26 40.0
comp=Z,600nm,18.4s
JAVC Velka Javorina 76.53 1 *e*P **P** **19 46 24.6 +1.5**
JAVC Velka Javorina 76.53 1 P **P** **19 46 25.0 +2.0**
BFO Black Forest 76.64 8 P **P** **19 46 24.7 +1.1**
BFO Black Forest 76.64 8 *e*P **P** **19 46 24.1 +0.4**
comp=Z,35nm,1.4s,baz=355,slow=5.8
ECH Echery 76.66 9 P **P** **19 46 24.6 +0.9**
ECH Echery 76.66 9 IAmb IAmb 19 46 26.8
comp=Z,42nm,1.0s
ECH Echery 76.66 9 P **P** **19 46 24.6 +0.9**
KMPD K-Podol'skiy 76.68 355 P **P** **19 46 23.3 -0.5**
UZHM Uzhgorod 76.75 358 P **P** **19 46 25.2 +1.0**
HAU Haudompre 76.80 9 *e*P **P** **19 46 24.7 +0.2**
HAU pmax pmax
comp=Z,37nm,1.0s
GAR Garm 76.84 322 P **P** **19 46 25.6 +0.6**
SMOL Smolenice 76.88 1 *e*P **P** **19 46 26.2 +1.3**
SMOL pmax pmax
comp=Z,16nm,0.9s
VYHS Vyhne 76.91 1 *e*P **P** **19 46 26.4 +1.3**
VYHS pmax pmax
comp=Z,62nm,1.1s
VYHS Vyhne 76.91 1 P **P** **19 46 26.3 +1.1**
VYHS Vyhne 76.91 1 *e*P **P** **19 46 26.4 +1.3**
KECS Kecovo 76.92 359 *e*P **P** **19 46 26.4 +1.2**
KECS pmax pmax
comp=Z,44nm,0.8s
KECS Kecovo 76.92 359 P **P** **19 46 26.7 +1.5**
KECS Kecovo 76.92 359 *e*P **P** **19 46 26.4 +1.2**
FUR Furstenfeldbru 77.00 6 P **P** **19 46 26.9 +1.2**
FUR Furstenfeldbru 77.00 6 *e*P **P** **19 46 26.8 +1.2**
comp=Z,49nm,1.1s,baz=355,slow=5.8
FUR Furstenfeldbru 77.00 6 P **P** **19 46 26.9 +1.2**
SORM Soroca 77.01 354⇑P **P** **19 46 25.6 -0.1**
SORM Soroca 77.01 354 P **P** **19 46 25.5 -0.1**
SORM Soroca 77.01 354 P **P** **19 46 25.3 -0.3**
comp=Z,1μmcomp=Z,118nm,1.1s
MODS Modra-Piesok 77.01 2 *e*P **P** **19 46 27.6 +1.8**
MODS pmax pmax
comp=Z,147nm,1.0s
MODS Modra-Piesok 77.01 2 P **P** **19 46 27.2 +1.5**
MODS Modra-Piesok 77.01 2 *e*P **P** **19 46 27.5 +1.8**
HINF Hinteralfeld 77.03 9 *e*P **P** **19 46 25.8 -0.1**
HINF pmax pmax
comp=Z,20nm,1.0s
ABAH Abaujker 77.10 359 P **P** **19 46 27.4 +1.2**
BAL3X Bal3x, Balta 77.12 353 P **P** **19 46 26.1 -0.2**
SLE Schleitheim 77.22 8 P **P** **19 46 27.4 +0.5**
SLE Schleitheim 77.22 8 P **P** **19 46 27.4 +0.5**
TRPA Tarpa 77.25 358 P **P** **19 46 28.1 +1.1**
WINA Alland / Wiene 77.26 2 *i* P **P** **19 46 28.0 +0.9**
SNR=18
LOR Lormes 77.28 11 *e*P **P** **19 46 27.3 +0.1**
LOR pmax pmax
comp=Z,54nm,1.2s
CONA Conrad Observa 77.43 3 *i* P **P** **19 46 29.1 +1.0**
comp=Z,46nm,1.4s,SNR=40
CONA *e*PcP **sP** **19 46 44.8 -0.5**
comp=Z,54nm,1.3s
MFF Saint Martin d 77.44 14 *e*P **P** **19 46 28.5 +0.4**
MFF pmax pmax
comp=Z,192nm,0.8s
MOA Molln 77.46 4 *i* P **P** **19 46 28.7 +0.5**
comp=Z,31nm,1.4s,SNR=15
MOA Molln 77.46 4 P **P** **19 46 29.0 +0.8**
BOURR Bourrignon 77.48 9 P **P** **19 46 29.8 +1.4**
PSZ Piszkesteto 77.49 360⇑P **P** **19 46 29.3 +0.8**

PSZ	Piszkesteto	77.49	360		P	P	19 46 29.2	+0.8
PSZ	Piszkesteto	77.49	360		IAmb	IAmb	19 46 30.9	
	comp=Z,57nm,1.0s							
PSZ	Piszkesteto	77.49	360		P	P	19 46 29.9	+1.4
RJOB	Jochberg	77.51	5		P	P	19 46 29.6	+1.0
CHGR	Chuyangaron	77.56	322	*c*	*i*P	P	19 46 29.3	+0.3
CHGR					pmax	pmax		
	comp=Z,312nm,0.7s							
SRO	Srobarova	77.59	1		*e*P	P	19 46 29.7	+0.8
SRO					pmax	pmax		
	comp=Z,37nm,1.3s							
SRO	Srobarova	77.59	1		P	P	19 46 30.4	+1.5
SRO	Srobarova	77.59	1		*e*P	P	19 46 29.7	+0.8
BIOA	Bad Ischl, Aus	77.59	4		*i*P	P	19 46 29.6	+0.6
	comp=Z,40nm,1.3s,SNR=19							
BIOA					*e*PcP	sP	19 46 45.3	-0.8
	comp=Z,11nm,1.3s							
PMG	Port Moresby	77.62	233		LR	LR	20 17 48.4	
	comp=Z,190nm,18.6s,baz=12,slow=33							
RETA	Reutte	77.65	6	*i*	P	P	19 46 30.0	+0.7
	comp=Z,36nm,1.4s,SNR=12							
RETA					*e*PcP	sP	19 46 45.6	-0.9
	comp=Z,45nm,1.6s							
RONA	Rosalia, Austr	77.67	2	*i*	P	P	19 46 30.4	+1.0
	comp=Z,30nm,1.2s,SNR=16							
RONA					*e*PcP	sP	19 46 46.2	-0.3
	comp=Z,113nm,2.3s							
BMR	Baia Mare	77.68	357	⇑	P	P	19 46 30.4	+1.0
BMR	Baia Mare	77.68	357		P	P	19 46 30.4	+1.0
BMR	Baia Mare	77.68	357		P	P	19 46 30.4	+1.0
BURAR	Bucovina Array	77.68	356	⇓	P	P	19 46 30.0	+0.4
BURAR	Bucovina Array	77.68	356		P	P	19 46 30.0	+0.4
SOP	Sopron	77.69	2		P	P	19 46 30.0	+0.5
SOP	Sopron	77.69	2		P	P	19 46 31.0	+1.5
AVF	Avril sur Loir	77.69	11		*e*P	P	19 46 29.5	0.0
AVF					pmax	pmax		
	comp=Z,55nm,1.2s							
SJG	San Juan	77.78	76		LR	LR	20 21 21.7	
	comp=Z,400nm,19.5s,baz=276,slow=36							
SJG	San Juan	77.78	76		IAMs_20	IAMs_20	20 20 50.8	
	comp=Z,596nm,21.0s							
DAVA	Damuels	77.79	7		*e*P	P	19 46 30.9	+0.6
	comp=Z,117nm,2.6s							
DAVA	Damuels	77.79	7		P	P	19 46 31.2	+0.9
MOTA	Moosalm	77.81	6	*i*	P	P	19 46 31.0	+0.6
	comp=Z,64nm,1.7s,SNR=40							
LESA	Schwarzleotal	77.82	5	*i*	P	P	19 46 31.1	+0.8
	comp=Z,63nm,1.5s,SNR=19							
LESA					*e*PcP	sP	19 46 47.0	-0.4
	comp=Z,0.1nm,0.3s							
WATA	Walderalm	77.85	6	*i*	P	P	19 46 31.4	+0.8
	comp=Z,41nm,1.3s,SNR=33							
BGF	Bois d'Agland	77.86	12		*e*P	P	19 46 30.6	+0.1
BGF					pmax	pmax		
	comp=Z,31nm,0.9s							
SMF	Signal de Mont	77.89	11		*e*P	P	19 46 30.6	0.0
SMF					pmax	pmax		
	comp=Z,48nm,1.1s							
PRAR	RASCA	77.89	355	⇑	P	P	19 46 30.4	-0.3
BUD	Budapest	77.92	0		P	P	19 46 32.0	+1.2
BUD	Budapest	77.92	0		P	P	19 46 32.1	+1.4
WTTA	Wattenberg	77.92	6		P	P	19 46 32.2	+1.2
WTTA	Wattenberg	77.92	6	*i*	P	P	19 46 32.0	+0.9
	comp=Z,48nm,1.2s,SNR=30							
WTTA	Wattenberg	77.92	6		P	P	19 46 32.2	+1.2
SQTA	Sankt Quirin	77.94	6	*i*	P	P	19 46 32.0	+0.9
	comp=Z,67nm,1.5s,SNR=57							
LTVH	Ltavrtes, Hu	78.00	358		P	P	19 46 33.0	+1.8
ARSA	Arzberg	78.10	3	*i*	P	P	19 46 32.8	+1.0
	comp=Z,47nm,1.2s,SNR=19							
ARSA					*e*PcP	sP	19 46 48.5	-0.4
	comp=Z,47nm,1.9s							
ARSA	Arzberg	78.10	3		P	P	19 46 33.1	+1.3
BNALP	Bannalp	78.10	8		P	P	19 46 33.2	+1.2
BSZH	Besenyszg	78.11	360	⇑	P	P	19 46 32.5	+0.7
BSZH	Besenyszg	78.11	360		P	P	19 46 33.5	+1.8
KIS	Kishinev	78.11	354	⇓	P	P	19 46 31.7	-0.1
KIS	Kishinev	78.11	354		P	P	19 46 31.7	-0.1
KIS	Kishinev	78.11	354		P	P	19 46 31.9	+0.1
	comp=Z,39nm,0.5s							
FETA	Feichten	78.11	6	*i*	P	P	19 46 33.0	+0.9
	comp=Z,46nm,1.2s,SNR=30							
ERBR	Yeremizino-Bor	78.14	345		*e*P	P	19 46 32.1	+0.1
ERBR					*e**PP	sP	19 46 48.5	-0.6
ERBR					*e*S	S	19 56 22.5	-0.5
ERBR					pmax	pmax		
	comp=Z,156nm,0.8s							
ERBR					MLR	MLR		
	comp=N,2μm,22.0s							
ERBR					MLR	MLR		
	comp=Z,1μm,20.0s							
KBA	Koelnbreinsper	78.19	4		P	P	19 46 33.9	+1.4
KBA	Koelnbreinsper	78.19	4	*i*	P	P	19 46 33.7	+1.1
	comp=Z,105nm,1.3s,SNR=75							
KBA	Koelnbreinsper	78.19	4		P	P	19 46 33.9	+1.4
SESA	Seetaler Alpe,	78.20	3	*i*	P	P	19 46 33.7	+1.1
	comp=Z,130nm,1.6s,SNR=16							
SESA					*e*PcP	sP	19 46 49.8	0.0
	comp=Z,17nm,1.0s							
MESR	Meseseni	78.22	358	⇑	P	P	19 46 33.4	+1.0
MPLH	Magyarpolny	78.22	1		P	P	19 46 33.7	+1.2
	comp=Z,2μmcomp=Z,134nm,1.2s							
MPLH	Magyarpolny	78.22	1		P	P	19 46 33.9	+1.4
ARCR	ARCALIA	78.24	357	⇑	P	P	19 46 33.4	+0.8
GIMEL	St. Georges /	78.25	9		P	P	19 46 33.9	+1.1
GIRR	Girov	78.28	355	⇑	P	P	19 46 33.0	+0.2
DAVOX	Davos/Dischmat	78.30	7		LR	LR	20 22 11.9	
	comp=Z,296nm,21.9s,baz=1.5,slow=36							
BORR	Bors	78.30	358	⇑	P	P	19 46 33.8	+0.9
BIZ	Bicaz	78.32	355	⇑	P	P	19 46 33.4	+0.4
GOF	Gofitskoye	78.38	343	*c*	*i*P	P	19 46 34.1	+0.7
SWI	Sorong	78.42	252		P	P	19 46 34.0	+0.1
	comp=Z,62nm,1.1s							
SIJI	Sorong	78.42	252		LR	LR	20 17 10.6	
	comp=Z,119nm,20.0s,baz=38,slow=33							
SIJI	Sorong	78.42	252		P	P	19 46 33.5	-0.5
	comp=Z,51nm,1.1s							
FUORN	Ofenpass-Fuorn	78.48	7		IAMs_20	IAMs_20	20 20 45.5	
	comp=Z,546nm,22.0s							
FUORN	Ofenpass-Fuorn	78.48	7		P	P	19 46 35.6	+1.4
ABTA	Abfaltersbach	78.48	5	*i*	P	P	19 46 34.8	+0.8
	comp=Z,27nm,1.5s,SNR=29							
PURM	Purcari	78.50	353	⇓	P	P	19 46 33.9	-0.1
PURM	Purcari	78.50	353		P	P	19 46 34.3	+0.3
	comp=Z,85nm,1.1s							
VASR	Vaslui	78.53	354	⇑	P	P	19 46 35.3	+1.2
TUE	Stuetta	78.56	7		IAmb	IAmb	19 46 55.6	
	comp=Z,27nm,1.0s							
TUE					IAMs_20	IAMs_20	20 20 05.8	
	comp=Z,415nm,21.0s							
TUE	Stuetta	78.56	7		P	P	19 46 35.6	+1.0
	comp=Z,2μmcomp=Z,143nm,1.3s							
TUE	Stuetta	78.56	7		P	P	19 46 36.0	+1.3
DRGR		78.58	358	⇑	P	P	19 46 34.5	0.0
DRGR		78.58	358		P	P	19 46 34.5	0.0
DRGR		78.58	358		P	P	19 46 35.2	+0.6
CJR	Cluj-Napoca	78.64	357	⇓	P	P	19 46 34.9	+0.1
CJR	Cluj-Napoca	78.64	357		P	P	19 46 34.9	+0.1
MYKA	Terra Mystica	78.65	4	*i*	P	P	19 46 35.3	+0.4
	comp=Z,29nm,1.3s,SNR=15							
SOKA	Soboth	78.66	3	*i*	P	P	19 46 35.6	+0.6
	comp=Z,88nm,1.3s,SNR=89							
SOKA					*e*PcP	sP	19 46 51.5	-0.6
	comp=Z,2.4nm,0.7s							
MARR	Marisel-Cluj	78.69	358	⇑	P	P	19 46 34.7	-0.4
PERS	Pernice	78.70	3		*e*P	P	19 46 35.9	+0.7
TESR	Tescani	78.72	355	⇓	P	P	19 46 35.3	+0.1
TESR	Tescani	78.72	355		P	P	19 46 35.2	0.0
	comp=Z,677nmcomp=Z,45nm,1.6s							
TESR	Tescani	78.72	355		P	P	19 46 35.5	+0.3
ACOM	Acomizza, Ital	78.73	4		P	P	19 46 36.0	+0.5
MORE	Moreh	78.77	296		IAMs_20	IAMs_20	20 23 20.1	
	comp=Z,596nm,21.0s							
TGMR	Targu Mures	78.79	357	⇑	P	P	19 46 36.1	+0.5
OBKA	Obir	78.81	4	*i*	P	P	19 46 36.6	+0.8
	comp=Z,84nm,1.1s,SNR=73							
OBKA	Obir	78.81	4		P	P	19 46 36.8	+1.0
GROS	Grobnik	78.89	3	*i*	P	P	19 46 36.8	+0.6
ONER	Baraj Valea Uz	78.91	355	⇓	P	P	19 46 36.5	+0.2
BEHE	Becsehely	78.91	2	⇑	*i*P	P	19 46 37.4	+1.2
BEHE	Becsehely	78.91	2		P	P	19 46 37.8	+1.6
SHL	Shillong	78.91	299		P	P	19 46 36.1	-0.8
SHL	Shillong	78.91	299		*e*P	P	19 46 36.0	-0.8
SHL					IAmb	IAmb	19 46 42.7	
	comp=Z,26nm,0.4s							
RJF	Les Rejaudoux	78.93	13		*e*P	P	19 46 37.7	+1.3
RJF					pmax	pmax		
	comp=Z,80nm,0.9s							
AMBH	Ambrzfalva	79.05	359	⇑	P	P	19 46 37.6	+0.6
AMBH	Ambrzfalva	79.05	359		P	P	19 46 38.5	+1.5
CADS	Cadrg	79.06	4	*i*	P	P	19 46 37.0	-0.1
SIRR	Siria	79.12	359	⇑	P	P	19 46 37.7	+0.2
GHRR		79.13	354	⇓	P	P	19 46 38.4	+1.0
GHRR		79.13	354		P	P	19 46 38.5	+1.0
GHRR		79.13	354		P	P	19 46 38.7	+1.2
LABN	Labinsk	79.15	345		*e*P	P	19 46 37.4	-0.2
LABN					*e**PP	sP	19 46 52.9	-1.9
LABN					*e*S	S	19 56 32.3	-1.6
LABN					pmax	pmax		
	comp=Z,65nm,0.9s							
LABN					MLR	MLR		
	comp=Z,667nm,20.0s							
LABN					MLR	MLR		
	comp=N,953nm,17.0s							
LABN					MLR	MLR		
	comp=E,332nm,17.0s							
OZUR		79.17	356	⇑	P	P	19 46 38.4	+0.7
MDB	Medias	79.18	357	⇑	P	P	19 46 38.8	+1.0
MDB	Medias	79.18	357		P	P	19 46 38.8	+1.0
MORH	Mrgy, Hungar	79.19	1	⇑	P	P	19 46 38.2	+0.5
MORH	Mrgy, Hungar	79.19	1	⇑	*i*P	P	19 46 38.1	+0.3
MORH	Mrgy, Hungar	79.19	1		P	P	19 46 38.2	+0.5
	comp=E,281nmcomp=E,19nm,1.2s							
MORH	Mrgy, Hungar	79.19	1		P	P	19 46 38.4	+0.6
BOSR	Bodos	79.20	356	⇓	P	P	19 46 39.0	+1.1
TURR	Turia	79.20	355	⇑	P	P	19 46 39.3	+1.4
TNTI	Ternate	79.22	256		P	P	19 46 44.0	+5.6
TNTI	Ternate	79.22	256		P	P	19 46 38.1	-0.3
	comp=E,29nm,1.1s							
TNTI	Ternate	79.22	256		P	P	19 46 38.8	+0.4
VARL	Varlezi	79.26	354	⇓	P	P	19 46 38.6	+0.5
LPL	La Plagne	79.30	9		*e*P	P	19 46 39.7	+1.0
LPL					pmax	pmax		
	comp=Z,9.0nm,0.8s							
VLDR	Vladesti	79.31	354	⇑	P	P	19 46 38.6	+0.2
SSB	Saint Sauveur	79.32	11		P	P	19 46 39.5	+0.9
SSB	Saint Sauveur	79.32	11		IAMs_20	IAMs_20	20 21 44.4	
	comp=Z,457nm,20.0s							
SSB	Saint Sauveur	79.32	11		P	P	19 46 39.4	+0.9
DOPR	Dopca	79.32	356	⇑	P	P	19 46 39.6	+1.1
LPG	La Plagne	79.32	9		*e*P	P	19 46 40.0	+1.1
LPG					pmax	pmax		
	comp=Z,18nm,1.1s							
PANC	Panciu	79.33	355	⇑	P	P	19 46 38.9	+0.4
VRI	Vrincioaia	79.36	355	⇑	P	P	19 46 39.5	+0.7
VRI	Vrincioaia	79.36	355		P	P	19 46 39.4	+0.7
VRI	Vrincioaia	79.36	355		P	P	19 46 39.2	+0.5
	comp=Z,571nmcomp=Z,26nm,1.1s							
VRI	Vrincioaia	79.36	355		P	P	19 46 39.4	+0.7
PLOR	Plostina	79.38	355	⇑	P	P	19 46 39.5	+0.6
PLOR	Plostina	79.38	355		P	P	19 46 39.5	+0.6
COVR	Voineasa-Covas	79.41	355	⇓	P	P	19 46 39.8	+0.8
EVN	Everest	79.42	304		P	P	19 46 41.0	+0.8
ODBI	Odobesti	79.44	355	⇑	P	P	19 46 40.2	+1.0
ANN	Anapa	79.46	347		*e*P	P	19 46 38.1	-1.1
ANN					*e**PP	pP	19 46 52.9	+1.2
ANN					*e*S	S	19 56 34.0	-3.0
ANN					pmax	pmax		
	comp=Z,40nm,1.0s							
ANN					MLR	MLR		
	comp=E,404nm,20.0s							
ANN					MLR	MLR		
	comp=N,2μm,19.0s							
ANN					MLR	MLR		
	comp=Z,313nm,20.0s							
DEV	Deva	79.48	358	⇑	P	P	19 46 40.4	+1.0
DEV	Deva	79.48	358		P	P	19 46 40.3	+1.0
DEV	Deva	79.48	358		P	P	19 46 40.3	+0.9
SAHR	Sahastru	79.50	355	⇓	P	P	19 46 40.6	+1.0
KVAR	Kislovodsk Arr	79.51	343		LR	LR	20 25 39.0	
	comp=Z,841nm,21.9s,baz=258,slow=38							
KIV	Kislovodsk	79.51	343	⇑	P	P	19 46 40.5	+0.8
KIV	Kislovodsk	79.51	343	*i*	P	P	19 46 40.5	+0.8
KIV					pmax	pmax		
	comp=Z,104nm,0.8s							
KIV	Kislovodsk	79.51	343		IAMs_20	IAMs_20	20 25 33.3	
	comp=Z,813nm,21.0s							
KIV	Kislovodsk	79.51	343		P	P	19 46 40.5	+0.8
	comp=Z,900nmcomp=Z,102nm,0.9s							
KIV	Kislovodsk	79.51	343		P	P	19 46 40.7	+1.0
KIV	Kislovodsk	79.51	343		P	P	19 46 40.8	+1.0
KIV					PcP	PcP	19 46 48.6	+1.0
TATR	Tatarca	79.55	354	⇓	P	P	19 46 40.0	+0.3
TUDR		79.58	354	⇓	P	P	19 46 40.2	+0.3
MAK	Makhachkala	79.59	340		*e*P	P	19 46 38.5	-1.5
MAK					*e**PP	pP	19 46 54.2	+1.8
MAK					*e*		19 49 41.5	
MAK					*e*PPP	PPP	19 51 32.8	
MAK					*e*S	S	19 56 34.6	-3.8
MAK					*e**SS	ScS	19 56 59.9	-0.2
MAK					*e*SS	SS	20 01 43.6	-2.0
MAK					*e*SSS	SSS	20 05 11.6	
MAK					pmax	pmax		
	comp=Z,228nm,1.0s							
MAK					MLR	MLR		
	comp=Z,2μm,17.0s							
NEGRR	Negrea	79.62	354	⇑	P	P	19 46 40.8	+0.6
IZVR	Izvoarele	79.62	354	⇑	P	P	19 46 39.8	-0.3
SCHL	Schela	79.66	354	⇑	P	P	19 46 41.1	+0.8
TNR	Turnu Rosu	79.68	357	⇑	P	P	19 46 40.8	+0.3
TNR	Turnu Rosu	79.68	357		P	P	19 46 40.7	+0.3
SCHLR	Schela	79.69	354	⇑	P	P	19 46 41.6	+1.1
KBZ	Khabaz	79.70	343		P	P	19 46 41.7	+1.2
	comp=Z,68nm,0.9s,baz=328,slow=3.1,SNR=89							
KBZ					LR	LR	20 25 41.5	
	comp=Z,736nm,21.6s,baz=0.5,slow=38							
	comp=Z,68nm,0.9s							
KBZ	Khabaz	79.70	343	*i*	P	P	19 46 41.8	+1.2
KBZ					pmax	pmax		
	comp=Z,83nm,1.0s							
SIM	Simferopol'	79.70	350		*e*P	P	19 46 40.2	-0.4
SIM					*e*		19 46 49.0	
SIM					*e*S	S	19 56 34.0	-5.6
SIM					pmax	pmax		
	comp=Z,60nm,0.9s							
SHA1	Shidzhatmaz	79.73	343	*c*	*i*P	P	19 46 42.0	+0.9
MLR	Muntele Rosu	79.77	355		LR	LR	20 27 32.9	
	comp=Z,548nm,18.2s,baz=16,slow=40							
MLR	Muntele Rosu	79.77	355	⇑	P	P	19 46 41.8	+0.6
MLR	Muntele Rosu	79.77	355		P	P	19 46 42.1	+1.0
MLR	Muntele Rosu	79.77	355		P	P	19 46 42.7	+1.5
	comp=Z,521nmcomp=Z,41nm,1.5s							
MLR	Muntele Rosu	79.77	355		P	P	19 46 42.6	+1.5
BZS	Buzias	79.78	359	⇑	P	P	19 46 41.0	0.0
BZS	Buzias	79.78	359		P	P	19 46 40.9	0.0
BZS	Buzias	79.78	359		P	P	19 46 41.6	+0.6
NCK	Nalchik	79.80	342	*c*	*i*P	P	19 46 42.8	+1.6
NCK					pmax	pmax		
	comp=Z,183nm,0.8s							
NEHR	Nehoiu	79.82	355	⇑	P	P	19 46 41.0	-0.3
GRER		79.83	355	⇓	P	P	19 46 42.1	+0.8
VOIR		79.86	356	⇑	P	P	19 46 41.4	-0.2
VOIR		79.86	356		P	P	19 46 41.3	-0.2
VOIR		79.86	356		P	P	19 46 42.5	+0.9
	comp=Z,462nmcomp=Z,26nm,1.1s							
VOIR		79.86	356		P	P	19 46 42.3	+0.7
TSSL	Sulina	79.88	353	⇑	P	P	19 46 41.2	-0.3
LOT	Lotru	79.90	357	⇑	P	P	19 46 41.4	-0.4
LOT	Lotru	79.90	357		P	P	19 46 41.8	0.0
TLCR		79.91	353	⇓	P	P	19 46 41.8	0.0
TLCR		79.91	353		P	P	19 46 41.7	0.0
ARR	Arges	79.95	356	⇑	P	P	19 46 42.1	+0.1
ARR	Arges	79.95	356		P	P	19 46 43.0	+0.9
CFR	Carcaliu	79.97	354	⇓	P	P	19 46 42.1	+0.1
CFR	Carcaliu	79.97	354		P	P	19 46 42.1	+0.1
GZR	Gura Zlata	79.98	358	⇑	P	P	19 46 41.9	-0.2
GZR	Gura Zlata	79.98	358		P	P	19 46 41.9	-0.2
TSSA	Tissa	80.01	314		*e*P	P	19 46 43.7	+0.9
BANR	Banloc	80.02	359	⇑	P	P	19 46 43.3	+1.1
SEUS	St. Eustatius	80.04	74		IAMs_20	IAMs_20	20 25 17.7	
	comp=Z,591nm,19.0s							
ISR	Istrita	80.11	355	⇓	P	P	19 46 43.6	+0.7
ISR	Istrita	80.11	355		P	P	19 46 43.6	+0.7
FRGS	Fruska Gora	80.25	360	⇑	*i*P	P	19 46 43.9	+0.3
KLP	Kalpa	80.26	312		*e*P	P	19 46 44.7	+0.4
TPGR	Topolog	80.27	354	⇑	P	P	19 46 44.1	+0.4
PGOR	Pogoanele	80.30	355	⇓	P	P	19 46 43.5	-0.3
SOC	Sochi	80.34	345		*e*P	P	19 46 43.6	-0.4
SOC					*e*		19 49 53.0	
SOC					*e*PPP	PPP	19 51 39.8	
SOC					*e*S	S	19 56 44.6	-1.8
SOC					*e*SS	SS	20 01 56.7	-0.1
SOC					*e*SSS	SSS	20 05 19.5	
SOC					pmax	pmax		
	comp=Z,65nm,0.8s							
SOC					MLR	MLR		
	comp=Z,884nm,22.0s							
VSLR	Vesyoloye	80.41	345	*c*	*i*P	P	19 46 45.2	+0.7
VSLR					pmax	pmax		
	comp=Z,84nm,1.1s							
NIL	Nilore	80.47	317		P	P	19 46 46.2	+1.2
NIL	Nilore	80.47	317		P	P	19 46 46.1	+1.1
HERR	Herculane	80.50	358	⇑	P	P	19 46 44.7	-0.2
PGAV	Gavieira, Arco	80.56	21		*e*P	P	19 46 46.7	+1.3
PGAV					*i* IAmb	IAmb	19 47 06.8	
	comp=Z,72nm,1.2s							
PGAV					*e*S	S	19 56 54.2	+5.2
PGAV					*e*LR	LR	20 13 38.9	
PGAV					*i* IAMs_20	IAMs_20	20 22 07.6	
	comp=Z,595nm,22.0s							
SULR		80.57	355	⇓	P	P	19 46 46.0	+0.8
SULR		80.57	355		P	P	19 46 45.9	+0.6
AMRR	Amara	80.58	354	⇑	P	P	19 46 45.9	+0.5
AMRR	Amara	80.58	354		P	P	19 46 45.8	+0.5
TLBR	Topalu	80.60	354	⇓	P	P	19 46 46.0	+0.6
MDVR	Moldovita	80.61	358	⇑	P	P	19 46 46.4	+0.8
BLY	Banja Luka	80.64	2	⇓	P	P	19 46 45.9	+0.2
BLY	Banja Luka	80.64	2	⇑	*i*P	P	19 46 45.9	+0.2
BLY	Banja Luka	80.64	2		P	P	19 46 46.3	+0.7
ISO	Isola	80.65	9		P	P	19 46 47.3	+1.5
ISO	Isola	80.65	9		P	P	19 46 47.3	+1.5
MYLDM	Lahad Datu	80.66	266		P	P	19 46 50.0	+3.8
MYLDM	Lahad Datu	80.66	266		P	P	19 46 48.2	+2.0
	comp=Z,1μmcomp=Z,61nm,1.1s							
MYLDM	Lahad Datu	80.66	266		P	P	19 46 48.4	+2.2
SRE	Strehaia	80.70	357	⇑	P	P	19 46 46.6	+0.6
SRE	Strehaia	80.70	357		P	P	19 46 46.6	+0.6
CHTO	Chiang Mai	80.73	289		P	P	19 46 46.9	+0.3
CHTO	Chiang Mai	80.73	289		P	P	19 46 46.5	0.0
CHTO	Chiang Mai	80.73	289		P	P	19 46 46.2	-0.3
	comp=Z,624nmcomp=Z,56nm,1.1s							
CHTO	Chiang Mai	80.73	289		P	P	19 46 46.5	0.0
RUSF	Rustrel	80.74	10		P	P	19 46 44.0	-2.3
LEHL	Lehliu	80.74	355	⇓	P	P	19 46 47.0	+0.8
HUMR	Humele	80.77	356	⇑	P	P	19 46 46.5	+0.1
HUMR	Humele	80.77	356		P	P	19 46 46.4	0.0
ATE	Arette	80.80	15		P	P	19 46 48.2	+1.6
PCAB	Cabril	80.85	21		*e*P	P	19 46 48.7	+1.8
TEKS	Tekeris	80.86	0	⇑	*i*P	P	19 46 47.2	+0.3
ECAL	Calabor	80.89	20		P	P	19 46 49.2	+2.0
VLC	Villacollemand	80.94	7		P	P	19 46 48.2	+0.9
AKT	Akhty	80.97	339		*e*P	P	19 46 48.3	+0.7
AKT					*e**PP	sP	19 47 03.4	-1.3
AKT					pmax	pmax		
	comp=Z,146nm,0.9s							
AKT					MLR	MLR		
	comp=Z,1μm,23.0s							
PBRG	Braganca	81.02	20		*e*P	P	19 46 49.3	+1.5
PBRG					*i* IAmb	IAmb	19 47 09.0	
	comp=Z,44nm,1.5s							
CRAR	CRAIOVA	81.02	357	⇓	P	P	19 46 48.8	+1.1
CRAR	CRAIOVA	81.02	357		P	P	19 46 48.7	+1.1
CMAR	Chiang Mai Arr	81.02	289		P	P	19 46 48.5	+0.3
	comp=Z,68nm,0.8s,baz=16,slow=5.4,SNR=342							
CMAR					PKPPKP	P'P'df	20 13 25.6	-6.1
	comp=Z,0.3nm,0.4s,baz=167,slow=5.9,SNR=4.2							
CMAR					LR	LR	20 26 07.0	
	comp=Z,314nm,19.5s,baz=35,slow=38							
	comp=Z,68nm,0.8s							
CMAR	Chiang Mai Arr	81.02	289		P	P	19 46 48.3	+0.2
ESCA	l'Escarene	81.03	9		P	P	19 46 47.6	-0.2
SGRR	Singureni	81.03	355	⇑	P	P	19 46 47.6	-0.1
ICOR	Ion Corvin	81.04	354	⇓	P	P	19 46 48.2	+0.4
CALF	Calern	81.07	9		P	P	19 46 49.5	+1.4
SMLA	Simla	81.07	313		*e*P	P	19 46 48.5	+0.4
PUNG	Punghina	81.09	358	⇑	P	P	19 46 48.2	+0.2
PTH	Pithoragarh	81.09	310		*e*P	P	19 46 48.6	0.0
PT

comp=Z,55nm,0.9s
GNI Garni 82.84 341 IAMs_20 IAMs_20 20 30 23.5
comp=Z,734nm,20.0s
GNI Garni 82.84 341 P **P** **19 46 59.1 +1.6**
comp=Z,823nmcomp=Z,71nm,1.0s
GNI Garni 82.84 341 P **P** **19 46 59.5 +2.0**
PSARD Sardoal 82.85 21 *eP* **P** **19 46 58.5 +1.0**
PSARD *etx* tx 19 47 13.0
PSARD *i* IAmb IAmb 19 47 19.3
comp=Z,109nm,1.2s
AQU L'Aquila 82.91 5 P **P** **19 46 58.8 +1.0**
AQU L'Aquila 82.91 5⇑ *iP* **P** **19 46 58.7 +1.0**
AQU L'Aquila 82.91 5 P **P** **19 46 58.9 +1.2**
comp=Z,347nmcomp=Z,32nm,0.9s
AQU L'Aquila 82.91 5 P **P** **19 46 58.9 +1.2**
HCY Herceg Novi 82.95 1⇑ *iP* **P** **19 46 56.8 -1.1**
PDG Podgorica 82.98 0⇓ P **P** **19 46 58.1 +0.2**
PDG Podgorica 82.98 0 IAMs_20 IAMs_20 20 23 08.5
comp=Z,461nm,22.0s
PDG Podgorica 82.98 0⇑ *iP* **P** **19 46 58.3 +0.3**
PDG Podgorica 82.98 0 P **P** **19 46 58.5 +0.6**
UCM Universidad Co 83.11 17 P **P** **19 47 00.2 +1.4**
NDI New Delhi 83.17 312 *eP* **P** **19 46 59.1 -0.1**
NDI *i* pP **PcP** **19 47 06.0 +2.3**
NDI *ex* x 19 47 14.1
PMRV Marv??o 83.18 21 *eP* **P** **19 47 00.1 +1.0**
PMRV *i* IAmb IAmb 19 47 02.2
comp=Z,69nm,1.6s
PMRV *eS* **S** **19 57 22.5 +6.6**
PMRV *eLR* LR 20 15 02.7
PMRV *i* IAMs_20 IAMs_20 20 22 23.9
comp=Z,426nm,22.0s
DRME Dracevica, Mon 83.22 0⇑ *iP* **P** **19 46 59.7 +0.4**
FDFM Morne la Roset 83.29 74 IAMs_20 IAMs_20 20 24 03.8
comp=Z,445nm,20.0s
LUWI Luwuk 83.29 259 P **P** **19 47 04.4 +4.4**
LUWI Luwuk 83.29 259 P **P** **19 46 59.4 -0.5**
PMTG Montargil 83.35 21 *eP* **P** **19 47 00.7 +0.7**
PMTG *etx* tx 19 47 14.9
PMTG *i* IAmb IAmb 19 47 20.8
comp=Z,62nm,1.4s
BOK Bokaro 83.37 302 *eP* **P** **19 47 00.9 +0.5**
BOK IAmb IAmb 19 47 02.5
comp=Z,29nm,0.6s
LKRN Lenkeran, Azer 83.40 337 P **P** **19 46 57.2 -3.0**
COEN Coen 83.46 234 P P 19 47 07.0 +6.3
comp=Z,17nm,1.3s
ESDC Sonseca Array 83.60 18 P **P** **19 47 02.3 +1.0**
comp=Z,28nm,0.8s,baz=341,slow=4.7,SNR=199
ESDC PP **PP** **19 50 10.5 -2.8**
comp=Z,3.4nm,1.1s,baz=350,slow=8.2,SNR=5.7
ESDC PKKPbc **PKKPbc** **20 05 17.3 +1.1**
comp=Z,0.2nm,0.3s,baz=166,slow=3.4,SNR=2.2
ESDC PKPPKP P'P'df 20 13 18.7 -10
comp=Z,1.0nm,1.1s,baz=208,slow=2.5,SNR=4.5
ESDC LR LR 20 26 05.4
comp=Z,401nm,19.4s,baz=346,slow=37
comp=Z,28nm,0.8s
ESDC Sonseca Array 83.60 18 P **P** **19 47 02.2 +0.9**
SONA Sohna 83.62 312 *eP* **P** **19 47 01.3 -0.2**
PARRA Arraiolos 83.63 21 *eP* **P** **19 47 02.4 +0.9**
PARRA *etx* tx 19 47 16.9
PARRA *i* IAmb IAmb 19 47 22.4
comp=Z,64nm,1.3s
NAX Nakhchivan 83.64 340 P **P** **19 47 00.3 -1.3**
CTYL Yalikoy Yolu 83.64 353 P **P** **19 47 02.4 +1.0**
comp=Z,43nm,1.1s
PESTR Estremoz 83.68 21 *eP* **P** **19 47 03.0 +1.2**
PESTR *etx* tx 19 47 17.2
PESTR *i* IAmb IAmb 19 47 22.8
comp=Z,64nm,1.4s
PESTR Estremoz 83.68 21 P **P** **19 47 02.9 +1.2**
PHP Peshkopia 83.72 359 P **P** **19 47 02.5 +0.6**
PHP Peshkopia 83.72 359 P **P** **19 47 02.5 +0.6**
KELT Kelkit 83.77 345 P **P** **19 47 03.8 +1.4**
KLYT Kilyos 83.81 353 P **P** **19 47 03.3 +1.0**
comp=Z,1µmcomp=Z,107nm,1.2s
ROSC El Rosal 83.82 90 LR LR 20 26 00.1
comp=Z,126nm,21.9s,baz=11,slow=37
MOE Montemor 83.85 22 *eP* **P** **19 47 03.7 +1.1**
MOE *etx* tx 19 47 18.2
MOE *i* IAmb IAmb 19 47 19.5
comp=Z,107nm,1.6s
EVO Evora 83.91 21 *eP* **P** **19 47 04.0 +1.2**
EVO *etx* tx 19 47 18.2
EVO *i* IAmb IAmb 19 47 24.1
comp=Z,72nm,1.2s
VAY Valandovo 84.05 358⇓ *iP* **P** **19 47 05.0 +1.5**
SAHE Sakarya_HENDEK 84.07 351⇑ P **P** **19 47 04.0 +0.3**
RDO Rodhopi 84.12 355 P **P** **19 47 05.0 +1.2**
KNT Kendrikon 84.20 357 P **P** **19 47 07.3 +3.0**
KNT Kendrikon 84.20 357 P **P** **19 47 07.3 +3.0**
SRS Serrai 84.23 357 P **P** **19 47 05.3 +0.9**
OHR Ohrid 84.29 359⇓ *iP* **P** **19 47 06.4 +1.6**
PLOUS Minas do Lousa 84.31 22 *eP* **P** **19 47 06.2 +1.4**
PLOUS *etx* tx 19 47 19.9
PLOUS *i* IAmb IAmb 19 47 26.2
comp=Z,92nm,1.4s
ALN Alexandroupoli 84.35 355 P **P** **19 47 05.9 +0.9**
ALN Alexandroupoli 84.35 355 P **P** **19 47 05.9 +0.9**
GRG Griva 84.42 358 P **P** **19 47 06.8 +1.3**
GRG Griva 84.42 358 P **P** **19 47 06.8 +1.3**
PBEJ Beja 84.43 21 *eP* **P** **19 47 07.1 +1.6**
PBEJ *i* IAmb IAmb 19 47 27.4
comp=Z,50nm,1.5s
PBAR Barrancos 84.46 21 *eP* **P** **19 47 06.8 +1.1**
PBAR *etx* tx 19 47 21.4
PBAR *i* IAmb IAmb 19 47 27.6
comp=Z,114nm,1.4s
SOH Sokhos 84.53 357 P **P** **19 47 06.8 +0.8**
SOH Sokhos 84.53 357 P **P** **19 47 06.8 +0.8**
MESJ Messejana 84.53 22 *eP* **P** **19 47 06.8 +0.7**
MESJ IAMs_20 IAMs_20 20 22 05.4
comp=Z,1µm,25.3s
MESJ Messejana 84.53 22 *eP* **P** **19 47 07.8 +1.7**
MESJ Messejana 84.53 22 *eP* **P** **19 47 06.8 +0.7**
CAVK Edirne/Enez-Ca 84.55 355⇑ P **P** **19 47 05.9 -0.1**
MATE Matera 84.72 2⇑ P **P** **19 47 07.8 +0.9**
MATE Matera 84.72 2 P **P** **19 47 08.0 +1.1**
HORT Hortiatis 84.76 357 P **P** **19 47 06.1 -1.1**
BAND Balkesir-Ban 84.77 353⇑ P **P** **19 47 07.7 +0.5**
PCVE Castro Verde 84.77 22 *eP* **P** **19 47 08.9 +1.7**
PCVE *i* IAmb IAmb 19 47 10.4
comp=Z,63nm,1.5s
PCVE *etx* tx 19 47 22.5
KBN Korca 84.78 359 P **P** **19 47 08.2 +0.9**
KBN Korca 84.78 359 P **P** **19 47 08.2 +0.9**
PCI Palu 84.85 261 P **P** **19 47 08.0 +0.1**
comp=Z,81nm,1.6s
BR106 Keskin Array S 84.91 349 P **P** **19 47 08.9 +0.8**
comp=Z,266nmcomp=Z,36nm,1.1s
BR131 Keskin Array S 84.91 349 *iP* **P** **19 47 08.7 +0.6**
BRTR Keskin Array B 84.91 349 P **P** **19 47 08.8 +0.7**
comp=Z,36nm,1.1s,baz=29,slow=2.8,SNR=106
BRTR PKKPbc **PKKPbc** **20 05 14.6 +1.4**
comp=Z,1.3nm,0.8s,baz=172,slow=4.6,SNR=7.3
BRTR PKPPKP **P'P'df** **20 13 22.9 -4.1**
comp=Z,0.5nm,0.8s,baz=160,slow=4.6,SNR=2.8
BRTR LR LR 20 30 21.2
comp=Z,422nm,20.3s,baz=12,slow=39
comp=Z,36nm,1.1s
BRTR Keskin Array B 84.91 349 *i* P **P** **19 47 08.8 +0.7**
BRTR pmax pmax
comp=Z,37nm,1.0s
BRTR Keskin Array B 84.91 349 P **P** **19 47 08.7 +0.6**
BR105 Keskin Array S 84.92 349 P **P** **19 47 09.3 +1.1**
comp=Z,335nmcomp=Z,45nm,1.2s
BR104 Keskin Array S 84.93 349 P **P** **19 47 09.2 +1.0**
comp=Z,314nmcomp=Z,44nm,1.0s
ARPR Arapgir-MALATY 84.94 345 IAMs_20 IAMs_20 20 30 57.8
comp=Z,504nm,22.0s
ARPR Arapgir-MALATY 84.94 345 P **P** **19 47 10.1 +1.8**
MORF Marmelete 84.95 22 *eP* **P** **19 47 09.1 +0.9**
MORF IAMs_20 IAMs_20 20 22 52.7
comp=Z,1µm,24.1s
MORF Marmelete 84.95 22 *eP* **P** **19 47 09.1 +0.9**
MARCO Tramutola 85.05 3 P **P** **19 47 09.7 +1.0**
PVAQ Vaqueiros 85.06 22 *eP* **P** **19 47 10.5 +1.8**
PVAQ *eS* **S** **19 57 38.1 +3.4**
PVAQ *eLR* LR 20 15 45.9
PVAQ *i* IAMs_20 IAMs_20 20 23 01.5
comp=Z,684nm,22.0s
PFVI Vila Bisbo 85.08 22 *eP* **P** **19 47 10.2 +1.4**
PFVI *etx* tx 19 47 24.1

PBDV Barranco-do-Ve 85.17 22 *etx* tx 19 47 25.4
OTAV Otavalo 85.18 96 P **P** **19 47 13.0 +2.9**
OTAV Otavalo 85.18 96 *eP* **P** **19 47 12.4 +2.3**
OTAV Otavalo 85.18 96 P **P** **19 47 11.1 +0.9**
LIT Litokhoron 85.27 358 P **P** **19 47 10.2 +0.5**
LIT Litokhoron 85.27 358 P **P** **19 47 10.2 +0.5**
JHNI Jhansi 85.36 309 *eP* **P** **19 47 09.8 -0.6**
JHNI IAmb IAmb 19 47 10.2
comp=Z,47nm,0.8s
JHNI *i* x x 19 47 16.0
EZN Ezine 85.40 355 P **P** **19 47 10.4 +0.1**
comp=Z,47nm,1.1s
PAIG Paliouri 85.41 357 P **P** **19 47 10.5 +0.1**
PAIG Paliouri 85.41 357 P **P** **19 47 10.5 +0.1**
BALY Balya 85.41 354 P **P** **19 47 11.1 +0.7**
KIRS Kirsehir-Merke 85.47 349⇑ P **P** **19 47 12.0 +1.1**
VSL Villasalto 85.50 8 P **P** **19 47 11.2 +0.3**
KKUL Konya-Kulu 85.54 350 P **P** **19 47 12.6 +1.4**
HAKT HAKKARI 85.55 341 P **P** **19 47 12.3 +0.9**
KEK Kerkira 85.69 360 P **P** **19 47 12.1 +0.3**
XOR Xorichti 85.99 357 P **P** **19 47 13.5 +0.2**
TIP Timpagrande 86.19 2⇑ P **P** **19 47 15.2 +0.9**
TIP Timpagrande 86.19 2 IAMs_20 IAMs_20 20 29 17.6
comp=Z,411nm,21.0s
TIP Timpagrande 86.19 2 P **P** **19 47 15.0 +0.6**
comp=Z,458nmcomp=Z,36nm,1.6s
TIP Timpagrande 86.19 2 P **P** **19 47 15.3 +0.9**
AJM Ajmer 86.25 313 *eP* **P** **19 47 14.2 -0.6**
EMAL Malaga-Limoner 86.34 19 P **P** **19 47 16.1 +1.1**
AGG Agios Georgios 86.35 358 P **P** **19 47 14.9 -0.2**
AGG Agios Georgios 86.35 358 P **P** **19 47 14.9 -0.2**
BWNR Bhubaneshwar 86.39 301 *eP* **P** **19 47 16.2 +0.7**
KKSI Kolaka, Sulawe 86.49 258 P **P** **19 47 16.4 +0.4**
comp=Z,36nm,1.4s
MTSU Mount Surprise 86.58 232 P **P** **19 47 17.7 +1.4**
comp=Z,9.4nm,1.2s
LKD2 Lefkada island 86.61 359 P **P** **19 47 17.4 +1.0**
ANDN Andirin 86.70 347 P **P** **19 47 18.4 +1.5**
PMOZ Porto Moniz, M 87.03 30 *eLR* LR 20 17 52.9
PMOZ *i* IAMs_20 IAMs_20 20 24 29.8
comp=Z,258nm,22.0s
PMPST Porto Santo, M 87.03 30 *etx* tx 19 47 33.6
CEL Celeste 87.09 3 P **P** **19 47 17.9 -0.9**
SPSI Sidrap Palu 87.39 259 P **P** **19 47 17.8 -2.6**
comp=Z,22nm,1.3s
CTA Charters Tower 87.44 229 LR LR 20 20 27.9
comp=Z,136nm,21.9s,baz=46,slow=32
CTA Charters Tower 87.44 229 P **P** **19 47 21.4 +0.9**
comp=Z,8.0nm,0.9s
CTA Charters Tower 87.44 229 P **P** **19 47 21.3 +0.9**
CTAO Charters Tower 87.44 229 P P 19 47 28.3 +7.9
CTAO Charters Tower 87.44 229 P **P** **19 47 21.3 +0.9**
CTAO Charters Tower 87.44 229 P **P** **19 47 21.4 +0.9**
AYDN Tasoluk 87.47 353 P **P** **19 47 21.4 +0.8**
CLTB Caltabellotta 87.66 5 P **P** **19 47 21.8 +0.3**
BHPL Bhopal 87.81 309 *eP* **P** **19 47 22.2 -0.3**
BHPL IAmb IAmb 19 47 22.7
comp=Z,58nm,0.8s
BHPL *i* x x 19 47 28.9
ITM Ithomi 88.20 358 P **P** **19 47 24.4 +0.3**
KAPI Kappang 88.25 259 LR LR 20 34 16.6
comp=Z,55nm,18.1s,baz=36,slow=41
KAPI Kappang 88.25 259 P P 19 47 29.4 +4.9
KAPI Kappang 88.25 259 P **P** **19 47 26.1 +1.6**
NRDN NARMADA NAGAR 88.38 309 *ex* x 19 47 27.9
NRDN *i* x x 19 47 34.7
RAGD RAYAGADA 88.41 302 *eP* **P** **19 47 25.7 +0.5**
RAGD *i* x x 19 47 32.6
RAGD *ex* x 19 47 39.8
DGPR DIGLIPUR 88.62 291 *i* x x 19 45 59.8
DGPR *ex* x 19 46 07.4
NGP Nagpur 88.86 306 *eP* **P** **19 47 27.2 -0.2**
NGP *i* pP **PcP** **19 47 33.7 +4.8**
NGP *ex* x 19 47 41.5
ARG Arkhangelos 88.89 353 P **P** **19 47 26.9 -0.4**
ARG Arkhangelos 88.89 353 P **P** **19 47 26.9 -0.4**
AVE Averroes 89.08 22 IAMs_20 IAMs_20 20 25 09.6
comp=Z,528nm,22.0s
KEST Kesra 89.24 8 P **P** **19 47 29.5 +0.5**
comp=Z,7.0nm,0.9s,baz=7.1,slow=5.1,SNR=8.5
KEST LR LR 20 29 39.9
comp=Z,292nm,20.7s,baz=10,slow=37
comp=Z,7.0nm,0.9s
KEST Kesra 89.24 8 IAmb IAmb 19 47 45.8
comp=Z,16nm,0.9s
IFR Ifrane 89.35 20 P **P** **19 47 30.1 +0.4**
KARP Karpathos 89.61 354 IAMs_20 IAMs_20 20 34 11.2
comp=Z,674nm,21.0s
CSS Mathiatis 89.66 349 P **P** **19 47 31.9 +1.0**
comp=Z,480nmcomp=Z,32nm,1.8s
CSS Mathiatis 89.66 349 P **P** **19 47 31.8 +0.8**
VIS Vishakhapatnam 89.77 301 IAmb IAmb 19 46 50.4
comp=Z,14nm,1.3s
VIS *i* x x 19 47 36.8
VIS *eP* P 19 47 46.2 +15
IMMV Iera Moni Meta 89.86 356 P **P** **19 47 32.3 +0.5**
PBA Port Blair 89.98 290 P **P** **19 47 34.0 +1.3**
IDI Anoyia 89.99 356 LR LR 20 31 55.5
comp=Z,186nm,20.0s,baz=344,slow=38
KULM Kulim 90.82 280 P **P** **19 47 38.0 +1.4**
KULM Kulim 90.82 280 P **P** **19 47 36.9 +0.3**
QIS Mount Isa 90.85 234 P **P** **19 47 36.2 -0.3**
comp=Z,16nm,1.3s
TIO Tiouine 91.39 23 P **P** **19 47 40.2 +1.0**
ASF Jabal al Asfar 91.94 345 LR LR 20 35 35.3
comp=Z,226nm,18.8s,baz=26,slow=40
HYB Hyderabad 92.34 305 *eP* **P** **19 47 43.9 +0.3**
HYB Hyderabad 92.34 305 *eP* **P** **19 47 44.5 +0.9**
HYB *e*PKiKP **PKiKP** **19 52 32.1 -0.6**
HYB *e*SKSac **SKSac** **19 58 14.3 +0.5**
RPN Rapa Nui 92.73 136 LR LR 20 19 05.2
comp=Z,277nm,20.4s,baz=329,slow=29
WRAB Tennant Creek 92.84 239 P P 19 47 53.2 +7.5
WRA Warramunga Arr 92.86 239 P **P** **19 47 45.3 -0.5**
comp=Z,4.2nm,0.9s,baz=39,slow=5.4,SNR=16
comp=Z,4.2nm,0.9s
WRA Warramunga Arr 92.86 239 *i* P **P** **19 47 45.5 -0.3**
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 92.86 239 P **P** **19 47 45.7 -0.1**
GHAJ Ghor Haditha 92.99 346 IAMs_20 IAMs_20 20 35 03.8
comp=Z,407nm,22.0s
PSI Prapat 93.84 280 P **P** **19 47 54.2 +3.5**
PSI Prapat 93.84 280 P **P** **19 47 51.0 +0.3**
PSI Prapat 93.84 280 P **P** **19 47 50.0 -0.7**
QLP Quilpie 94.02 228 P **P** **19 47 52.5 +1.6**
comp=Z,33nm,1.9s
UOSS Minazif 94.44 327 IAMs_20 IAMs_20 20 37 11.4
comp=Z,580nm,20.0s
EIL Elat 94.68 347 LR LR 20 35 57.3
comp=Z,205nm,20.3s,baz=16,slow=39
URZ Urewera 94.84 198 LR LR 20 24 10.2
comp=Z,624nm,20.9s,baz=32,slow=31
CZSB Cruzeiro do Su 94.95 96 *eP* **P** **19 47 56.1 +0.6**
FITZ Fitzroy Crossi 95.77 247 LR LR 20 26 41.2
comp=Z,153nm,21.5s,baz=42,slow=33
FITZ Fitzroy Crossi 95.77 247 P P 19 48 05.6 +6.5
comp=Z,3.2nm,1.0s
MDP Montagnes des 95.92 72 LR LR 20 30 24.6
comp=Z,363nm,21.2s,baz=347,slow=35
NNA Nana 96.05 102 LR LR 20 27 37.7
comp=Z,132nm,21.3s,baz=344,slow=33
AS17 Alice Springs 96.18 237 P **P** **19 48 00.0 -1.0**
comp=Z,5.8nm,1.1s
ASAR Alice Springs 96.22 237 P **P** **19 48 00.6 -0.6**
comp=Z,1.9nm,0.9s,baz=32,slow=4.5,SNR=12
ASAR PKKPbc **PKKPdf** **20 04 47.5 +0.5**
comp=Z,0.7nm,0.5s,baz=209,slow=2.7,SNR=15
ASAR LR LR 20 28 54.5
comp=Z,278nm,20.1s,baz=31,slow=34
comp=Z,1.9nm,0.9s
LEM Lembang 96.67 268 LR LR 20 31 36.4
comp=Z,85nm,21.6s,baz=348,slow=35
MACA Manacapuru-AM 98.17 84 *eP* Pdif 19 48 11.8 +1.6
RAYN Ar Rayn 98.73 336 P Pdif 19 48 13.3 +0.6
STKA Stephens Creek 99.75 227 LR LR 20 29 21.1
comp=Z,492nm,20.2s,baz=27,slow=33
PALK Pallekele 100.00 298 LR LR 20 38 10.6
comp=Z,280nm,21.7s,baz=358,slow=38
TAM Tamanrasset 101.63 13 IAMs_20 IAMs_20 20 37 51.1
comp=Z,357nm,21.0s
PB16 IPOC Station P 105.31 100 IAMs_20 IAMs_20 20 33 21.3
comp=Z,448nm,21.0s
TORD Torodi Ar. Bea 110.48 19 PKKPbc PKKPbc 20 04 02.3 -0.5
comp=Z,1.2nm,0.5s,baz=169,slow=1.8,SNR=10
H03N2 Juan Fernandez 112.13 117 T T 21 54 29.2
baz=323,slow=77,SNR=30
H03N1 Juan Fernandez 112.14 117 T T 21 54 31.2
baz=323,slow=77,SNR=30
H03N3 Juan Fernandez 112.15 117 T T 21 54 21.3
baz=323,slow=77,SNR=57
AC02 Maricunga 112.23 105 IAMs_20 IAMs_20 20 28 47.6
comp=Z,394nm,21.0s
EDA Edea 120.94 11 IAMs_20 IAMs_20 20 52 21.9
comp=Z,294nm,18.0s
PLCA Paso Flores 122.01 116 PKP **PKPdf** **19 53 26.6 -0.2**
comp=Z,2.7nm,0.7s,baz=253,slow=4.0,SNR=7.0
VNDA Vanda 134.28 191 PKP **PKPdf** **19 53 47.2 -1.8**
comp=Z,0.9nm,0.9s,baz=347,slow=2.4,SNR=4.3
VNDA Vanda 134.28 191 PKIKP **PKiKP** **19 53 50.1 -0.2**
VNDA Vanda 134.28 191 **PKiKP** **19 53 50.1 -0.2**
QSPA South Pole Qui 144.74 180 PKP **PKPab** **19 54 07.1 -0.2**
comp=Z,38nm,0.7s,baz=347,slow=0.7,SNR=146
WIN Windhoek 147.59 4 PKP2 **PKPbc** **19 54 18.1 +0.7**
LEPH Lephalale, Lim 148.34 346 *eP* **PKiKP** **19 54 20.4 -0.5**
LBTB Lobatse 149.75 349 *eP* **PKiKP** **19 54 23.6 -0.1**
WDLM Western Deep L 150.91 345 *eP* **PKPbc** **19 54 25.6 0.0**
SNKL Senekal, Frees 152.68 344 *eP* **PKPbc** **19 54 29.7 +0.1**
BOSA Boshof 153.35 349 PKP **PKPdf** **19 54 23.2 -0.2**
comp=Z,2.6nm,0.8s,baz=233,slow=5.1,SNR=3.4
BOSA PKPbc **PKPbc** **19 54 30.6 -0.3**
comp=Z,6.3nm,0.5s,baz=353,slow=2.2,SNR=20
BOSA Boshof 153.35 349 **PKiKP** **19 54 31.2 +0.1**
BOSA Boshof 153.35 349 *eP* **PKPbc** **19 54 30.5 -0.5**
UPI Upington 153.39 357 *eP* **PKiKP** **19 54 31.7 +0.6**
MAW Mawson 156.28 221 PKP **PKPdf** **19 54 25.8 -0.2**
comp=Z,2.1nm,0.8s,baz=180,slow=3.0,SNR=5.1
FRAZ Fraserburg 156.94 356 *eP* PKPdf 19 54 40.9 +13
ROOI Rooidraai Farm 157.36 351 *eP* PKPdf 19 54 41.4 +13
MERW Merweville 157.67 356 *eP* PKPdf 19 54 41.6 +13
VNA1 Neumayer--Stat 160.09 153 PKPdf **PKPdf** **19 54 32.3 +1.7**
comp=Z,14nm,1.0s
VNA2 Neumayer--Watz 160.14 154⇑ PKPdf **PKPdf** **19 54 27.9 -2.7**
comp=Z,17nm,0.7s,baz=280,slow=1.9
SNAA Sanae 160.68 159 PKPab **PKPab** **19 55 13.6 +0.1**
comp=Z,3.5nm,0.9s,baz=214,slow=5.7,SNR=3.8
NVL N'lazarevskaya 163.78 171 *e*PKP2 PKPab 19 55 40.3 +13
NVL pmax pmax
comp=Z,12nm,0.9s

SDD ***27*** *19:42:25.4±0.5, 17.97N×71.38W, h17km±17km, MD3.1, ML2.1, MW3.2, Presumed earthquake*
OSPL ***27*** *19:42:25.1±0.7, 18.17N×71.19W, h36km±10km, ML2.2, Presumed earthquake*
ISC 27 19:42:27.4±1.2, 18.09N±0.04×71.27W±0.07, h11km±12km, n7, σ1.8§46/12, 3C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
LOVI	**El Cajuil, Ovi**	**0.30**	**197**	*i* P	**Pg**	**19 42 33.4**	**-0.1**
LOVI				*e*S	**Sb**	**19 42 40.2**	**+0.4**
LOVI				IAML		19 42 42.6	
	comp=Z,110nm,2.5s						
LODU1	**El Espartillar**	**0.32**	**324**	*i* P	**Pg**	**19 42 33.1**	**-0.8**
LODU1				*e*S	**Sg**	**19 42 38.1**	**-0.1**
LODU1				IAML		19 42 39.4	
	comp=Z,217nm,0.3s						
LOBH	**Bahia de las A**	**0.41**	**237**	*i* P	**Pg**	**19 42 35.2**	**-0.4**
LOBH				*e*S	**Sb**	**19 42 42.8**	**-0.3**
LOBH				IAML		19 42 46.5	
	comp=Z,150nm,1.3s						
NEDR	**Neiba UASD**	**0.41**	**341**⇑	*e*Pg	**Pg**	**19 42 34.6**	**-0.9**
NEDR				⇓*e*Sg	**Sg**	**19 42 41.9**	**+0.8**
NEDR				IAML		19 42 42.3	
	comp=E,257nm,0.6s						
NEDR				IAML		19 42 42.5	
	comp=N,189nm,0.3s						
BANI	**BANI**	**0.92**	**71**⇓	*e*Pg	**Pb**	**19 42 44.2**	**-1.3**
BANI				IAML		19 43 02.1	
	comp=N,44nm,0.0s						
BANI				IAML		19 43 04.4	
	comp=E,63nm,0.6s						
REDR	**Restauracion**	**1.08**	**354**⇓	*e*Pg	**Pn**	**19 42 48.8**	**+0.4**
REDR				⇑*e*Sg	**Sg**	**19 43 05.7**	**+3.5**
REDR				IAML		19 43 08.2	
	comp=E,24nm,0.3s						
REDR				IAML		19 43 12.1	
	comp=N,23nm,0.2s						
HATOM	**Hato Mayor del**	**1.93**	**69**⇑	*e*Pg	**Pn**	**19 43 00.7**	**+0.5**
HATOM				IAML		19 43 30.6	
	comp=N,12nm,0.6s						

IDC 27 19:51:55.6±2.2, 3.57N×127.17E, h0km, mb3.4/3, mbtmp3.4/3, MS3.9/2, Error ellipse: s-maj=159.9km s-min=28.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
BATI	**Baumata**	**14.12**	**194**	LR	LR	20 02 33.2	
	comp=Z,498nm,18.0s,baz=255,slow=45						
WRA	**Warramunga Arr**	**24.41**	**163**	P	P	19 57 16.1	+0.1
	0.6nm,0.6s,baz=344,slow=10,SNR=8.9						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**27.86**	**167**	P	P	19 57 47.0	-0.1
	0.6nm,1.0s,baz=345,slow=8.9,SNR=1.8						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**57.93**	**325**	P	P	20 01 49.7	-0.1
	0.2nm,0.5s,baz=123,slow=7.5,SNR=4.0						
	0.2nm,0.5s						
RPZ	**Rata Peaks**	**61.38**	**145**	LR	LR	20 28 56.8	
	comp=Z,98nm,20.0s,baz=350,slow=36						

DJA ***27*** *20:05:21.4±0.3, 5.1N±2.12.5E±, h10km, M4.7/20, mb4.7/18, mB5.1/9, MLv4.8/20, Mw(mB)4.5/9*
MAN ***27*** *20:05:23.0, 4.80N×124.26E, h110km, MS4.6*
IDC ***27*** *20:05:24.4±3.1, 4.52N×124.46E, h51km±30km, mb3.9/12, mbtmp4.2/14, ML4.1/2, Error ellipse: s-maj=33.5km s-min=9.4km az=78.0*
NEIC ***27*** *20:05:25.1±1.5, 4.51N±0.06×124.43E±0.07, h52km±7km, mb4.5/25, Error ellipse: s-maj=10.2km s-min=8.2km az=82.0*
ISC 27 20:05:22.4±1.0, 4.60N±0.03×124.43E±0.05, h32km±7km, n70, σ1.66/92, mb4.5/24, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SGSI	**Sangihe**	**1.42**	**130**	P	**Pn**	**20 05 44.7**	**-1.3**
SGSI				S	**Sn**	**20 06 01.7**	**-1.9**
GSPH	**General Santos**	**1.56**	**19**	*i* P	**Pb**	**20 05 53.8**	**+3.0**
GSPH				*i* S	**Sn**	**20 06 07.0**	**-0.3**
DDMP	**Don Marcelino,**	**1.96**	**40**	*i* P	**Pn**	**20 05 53.0**	**-0.5**
DDMP				*i* S	**Sn**	**20 06 15.5**	**-1.5**
KCP	**Kidapawan**	**2.48**	**15**	*i* P	**Pn**	**20 06 01.3**	**+0.6**
KCP				*i* S	**Sn**	**20 06 30.5**	**+0.7**
CTBH	**Cotabato--PC H**	**2.61**	**356**	*e*P	**Pn**	**20 06 01.0**	**-1.4**
CTBH				*i* S	**Sn**	**20 06 31.7**	**-1.2**
DMPH	**Davao City--Mi**	**2.69**	**23**	*e*P	**Pn**	**20 06 05.0**	**+1.5**
DMPH				*i* S	**Sn**	**20 06 36.4**	**+1.5**
DAV	**Davao City (W)**	**2.71**	**25**	P	**Pn**	**20 06 05.2**	**+1.5**
	59nm,0.3s,baz=97,slow=1.2,SNR=7.3						
DAV				S	**Sb**	**20 06 39.3**	**-3.6**
	516nm,0.6s,baz=294,slow=23,SNR=14						
	296nm,0.5s						
DAV	**Davao City (W)**	**2.71**	**25**		**Sb**	**20 06 41.7**	**-1.3**
DAV	**Davao City (W)**	**2.71**	**25**	P	**Pn**	**20 06 05.0**	**+1.3**
DAV				S	**Sb**	**20 06 38.5**	**-4.5**
MNI	**Manado**	**3.16**	**173**	P	**Pn**	**20 06 10.4**	**+0.4**
MNI				S	**Sn**	**20 06 44.6**	**-2.0**
ZCP	**Zamboanga City**	**3.29**	**315**	*i* P	**Pn**	**20 06 11.1**	**-0.7**
ZCP				*i* s	**Sn**	**20 06 45.8**	**-4.0**
BUKP	**Musuan**	**3.32**	**11**	*e*P	**Pn**	**20 06 12.0**	**-0.1**
BUKP				*e*S	**Sn**	**20 06 50.9**	**+0.4**
PAGZ	**Pagadian**	**3.39**	**342**	*e*P	**Pn**	**20 06 11.6**	**-1.5**
PAGZ				*i* S	**Sn**	**20 06 48.8**	**-3.4**
CDOP	**Cateel, Davao**	**3.74**	**32**	*e*P	**Pn**	**20 06 18.0**	**+0.1**
CDOP				*i* S	**Sn**	**20 06 55.9**	**-4.9**
CGP	**Cagayan de Oro**	**3.84**	**4**	*e*P	**Pn**	**20 06 21.1**	**+1.8**
CGP				*e*S	**Sn**	**20 07 04.9**	**+1.6**
BIPH	**Bislig**	**4.04**	**28**	*e*P	**Pn**	**20 06 21.5**	**-0.6**
BIPH				*e*S	**Sn**	**20 07 07.3**	**-1.0**
DCPH	**Dipolog City**	**4.10**	**345**	*i* P	**Pn**	**20 06 23.0**	**+0.2**
TSSP	**Tandag City**	**4.75**	**22**	*e*P	**Pn**	**20 06 32.5**	**+0.7**
TSSP				*e*S	**Sn**	**20 07 20.6**	**-5.2**
TNTI	**Ternate**	**4.80**	**142**		**Pn**	**20 06 33.6**	**+1.0**

TNTI	Ternate	4.80	142	P		Pn	20 06 33.3	+0.8
TOLI2	Tolitoli	5.03	227			Pn	20 06 34.1	-1.5
LUWI	Luwuk	5.84	197	Pn		Pn	20 06 47.4	+0.5
LUWI	Luwuk	5.84	197	P		Pn	20 06 50.0	+3.2
	1.4nm1μm83nm,0.9s							
LUWI				S		Sn	20 07 56.1	+3.3
	1.4nm1μm83nm,0.9s							
MYLDM	Lahad Datu	5.94	276			Pn	20 06 49.4	+1.2
MYLDM	Lahad Datu	5.94	276	P		Pn	20 06 49.2	+1.1
	52nm,0.9s							
APSI	Ampana	6.14	207	P		Pn	20 06 51.9	+1.0
PLP	Palo	6.54	5	eP		Pn	20 07 00.6	+4.2
PCI	Palu	7.14	220	P		Pn	20 07 06.7	+2.0
	0.3nm33nm,0.8s							
SIJI	Sorong	8.73	128	P		Pn	20 07 27.3	+0.9
	1.4nm,0.3s,baz=346,slow=19,SNR=5.4							
SIJI				S		Sn	20 09 02.5	-1.3
	4.2nm,0.6s,baz=165,slow=20,SNR=2.0							
	3.0nm,0.3s							
SIJI	Sorong	8.73	128	P		Pn	20 07 26.9	+0.4
FAKI	Fak Fak	10.81	134	Pn		Pn	20 07 57.6	+2.6
BATI	Baumata	14.73	183	P		P	20 08 52.0	-2.3
	56nm,0.6s,baz=9.5,slow=2.8,SNR=10.0							
BBJI	Bungbulang	20.59	234	P		P	20 09 59.0	0.0
BBJI				IAmb		IAmb	20 10 03.9	
	comp=Z,20nm,0.9s							
FITZ	Fitzroy Crossi	22.59	177	P		P	20 10 19.5	-0.8
	comp=Z,18nm,0.7s,baz=0.7,slow=7.4,SNR=40							
	comp=Z,18nm,0.7s							
MBWA	Marble Bar	26.01	190	P		P	20 10 53.2	+0.5
MBWA				IAmb		IAmb	20 11 23.7	
	comp=Z,30nm,1.4s							
WB0	Warramunga Arr	26.12	158			P	20 10 52.8	-0.8
WB0				IAmb		IAmb	20 10 55.4	
	comp=Z,13nm,0.8s							
COEN	Coen	26.19	135	P		P	20 10 53.3	-1.0
WRAB	Tennant Creek	26.26	159	P		P	20 10 54.2	-0.7
WRAB				IAmb		IAmb	20 10 55.0	
	comp=Z,28nm,1.2s							
WRA	Warramunga Arr	26.26	159	P		P	20 10 54.1	-0.8
	comp=Z,9.7nm,0.5s,baz=331,slow=11,SNR=121							
	comp=Z,9.7nm,0.5s							
WR8	Warramunga Arr	26.33	158			P	20 10 54.9	-0.7
WR8				IAmb		IAmb	20 10 55.8	
	comp=Z,17nm,1.2s							
AS31	Alice Springs	29.57	162			P	20 11 24.1	-0.4
ASAR	Alice Springs	29.58	162	P		P	20 11 24.2	-0.3
	comp=Z,2.4nm,0.6s,baz=342,slow=7.7,SNR=57							
ASAR				PcP		PcP	20 14 28.6	-0.6
	comp=Z,0.5nm,0.6s,baz=339,slow=2.1,SNR=5.2							
	comp=Z,2.4nm,0.6s							
ASAR	Alice Springs	29.58	162	P		P	20 11 24.1	-0.5
MJAR	Matsushiro Arr	34.22	20	P		P	20 12 07.0	+1.8
	comp=Z,0.6nm,0.6s,baz=204,slow=9.2,SNR=2.1							
	comp=Z,0.6nm,0.6s							
BBOO	Buckleboo	38.81	164	P		P	20 12 44.1	-0.2
EIDS	Eidsvold	39.46	140	P		P	20 12 49.4	-0.5
EIDS				IAmb		IAmb	20 13 13.3	
	comp=Z,12nm,1.4s							
STKA	Stephens Creek	39.79	157	P		P	20 12 52.8	+0.2
	comp=Z,7.5nm,0.7s,baz=342,slow=7.1,SNR=14							
	comp=Z,7.5nm,0.7s							
SONM	Songino Array	45.77	343	P		P	20 13 41.6	+0.6
	comp=Z,0.4nm,0.6s,baz=163,slow=6.9,SNR=2.7							
SONM				PcP		PcP	20 15 17.6	-0.7
	comp=Z,0.2nm,0.4s,baz=166,slow=4.9,SNR=3.8							
	comp=Z,0.4nm,0.6s							
MKAR	Makanchi Array	55.55	326	P		P	20 14 55.4	+0.7
	comp=Z,1.5nm,0.7s,baz=120,slow=7.9,SNR=27							
MKAR				PcP		PcP	20 15 53.5	-0.8
	comp=Z,0.4nm,0.7s,baz=98,slow=3.9,SNR=1.4							
	comp=Z,1.5nm,0.7s							
MAKZ	Makanchi	55.73	326	P		P	20 14 56.7	+0.8
MAKZ				IAmb		IAmb	20 14 58.5	
	comp=Z,7.0nm,1.4s							
YAK	Yakutsk	57.44	3	P		P	20 15 08.3	+0.5
ZALV	Zalesovo Beam	58.79	334	P		P	20 15 17.5	+0.1
	comp=Z,0.7nm,0.6s,baz=152,slow=6.7,SNR=4.3							
	comp=Z,0.7nm,0.6s							
KURBB	Kurchatov Arra	59.78	328	P		P	20 15 24.9	+0.6
	comp=Z,4.9nm,0.6s,baz=126,slow=6.2,SNR=37							
	comp=Z,4.9nm,0.6s							
KURK	Kurchatov	59.79	328	P		P	20 15 24.8	+0.4
KKAR	Karatay Array	61.04	317	P		P	20 15 33.6	+0.4
KKAR				pP		pwP	20 15 47.0	-1.3
DCZ	Deep Cove	62.69	147	P		P	20 15 44.0	0.0
LBZ	Lake Benmore	63.70	145	P		P	20 15 51.0	+0.2
RTZ	Ruatahuna	64.83	137	P		P	20 15 58.5	+0.1
BVAR	Borovoye Array	65.35	327	P		P	20 16 01.7	+0.2
	comp=Z,4.4nm,0.9s,baz=126,slow=7.5,SNR=7.2							
	comp=Z,4.4nm,0.9s							
AB31	Akbulak array	70.03	321	P		P	20 16 30.9	-0.1
AB31				IAmb		IAmb	20 16 45.1	
	comp=Z,4.5nm,0.8s							
ABKAR	Akbulak array	70.03	321	P		P	20 16 30.9	-0.1
CASY	Casey	71.42	186	P		P	20 16 39.4	+0.3
CASY				IAmb		IAmb	20 16 58.9	
	comp=Z,12nm,1.4s							
O16K	Kokwok River B	79.72	30	P		P	20 17 26.8	-0.1
L18K	Granite Mounta	80.77	28	P		P	20 17 32.6	+0.1
L18K				IAmb		IAmb	20 17 53.7	
	comp=Z,5.3nm,1.3s							
J20K	Nowinta River	82.14	26	P		P	20 17 40.2	+0.5
J20K				IAmb		IAmb	20 18 00.0	
	comp=Z,7.5nm,1.4s							
CAST	Castle Rocks	82.99	27	P		P	20 17 44.2	0.0
CAST				IAmb		IAmb	20 18 22.5	
	comp=Z,5.4nm,1.5s							
VNDA	Vanda	84.58	172	P		P	20 17 51.6	-0.3
	comp=Z,0.6nm,0.8s,baz=300,slow=6.2,SNR=3.8							
	comp=Z,0.6nm,0.8s							
F24K	Squaw Lake	84.89	23	P		P	20 17 55.1	+1.2
F24K				IAmb		IAmb	20 18 30.0	
	comp=Z,5.2nm,1.3s							
ILAR	Eielson Array	85.31	25	P		P	20 17 54.5	-1.4
	comp=Z,0.3nm,0.5s,baz=274,slow=5.1,SNR=4.4							
	comp=Z,0.3nm,0.5s							
TORD	Torodi Ar. Bea	120.47	288	PKP		PKPdf	20 24 10.8	-0.9
	comp=Z,0.5nm,0.6s,baz=55,slow=2.3,SNR=2.8							

*IDC **27** 20:30:53.0±9.3, 4.°64S×103.°58E, h0km, mb3.5/3, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=253.8km s-min=115.4km az=9.0*
*DJA **27** 20:31:11.4±0.2, 6.°5±2.°×10.°4E±.°, h10km, M4.0/30, mb4.6/3, MLv3.8/30*
*NEIC **27** 20:31:14.5±1.4, 5.°5S±0.°2×105.°0E±0.°1, h57km±9km, mb4.6/6, Error ellipse: s-maj=26.3km s-min=8.8km az=212.0*

ISC 27 20:31:09.1±1.0, 6.°32S±0.°07×104.°48E±0.°07, h10km, n37, σ2§24/32, mb4.0/5, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.79	2	P	Pb	20 31 25.3	+0.4
KASI				S	Sb	20 31 34.6	-1.0
BLSI	Bandar Lampung	1.21	39	P	Pb	20 31 32.5	+0.3
BLSI				S	Sb	20 31 47.3	-0.7
CGJI	Cibinong	1.25	104	P	Pn	20 31 33.1	+0.5
KLI	Kotabumi	1.49	15	P	Pb	20 31 37.8	+0.8
SBJI	Serang	1.66	83	P	Pn	20 31 40.4	+2.1
MDSI	Maura Dua	1.84	351	P	Pb	20 31 43.3	+0.4
SKJI	Sukabumi	2.18	108	P	Pn	20 31 48.5	+3.0
DBJI	Dramaga	2.27	96	P	Pn	20 31 50.0	+3.2
CBJI	Citeko	2.36	93	P	Pb	20 31 52.9	+1.1
MNAI	Manna	2.46	322	Pn	Pn	20 31 49.9	+0.5
MNAI				Sn	Sn	20 32 17.6	-1.9
MNAI	Manna	2.46	322	P	Pn	20 31 50.5	+1.1
LHSI	Lahat	2.65	339	P	Pn	20 31 54.9	+3.0
LEM	Lembang	3.16	99	Pn	Pn	20 32 03.6	+4.5
	8.4nm,0.3s,baz=334,slow=16,SNR=6.7						
	30nm,0.5s						
KSI	Kapahiang	3.24	325	P	Pn	20 32 03.0	+2.8
BBJI	Bungbulang	3.35	110		Pn	20 32 03.3	+1.6
BBJI				Sn	Sn	20 32 40.0	-1.6
BBJI	Bungbulang	3.35	110	P	Pn	20 32 02.6	+0.9
MASI	Maura Aman, Be	3.86	325	P	Pn	20 32 10.4	+1.7
KPJI	Karang Pucung	4.54	103	P	Pn	20 32 21.4	+3.5
UGM	Wanagama	6.21	105	P	Pn	20 32 45.0	+4.1
	150nm,1.8s						
JAGI	Jajag, Banyuwa	9.83	103	Pn	Pn	20 33 29.6	-1.1
LUWI	Luwuk	18.99	75	P	P	20 35 23.1	-7.9
LUWI				IAmb	IAmb	20 35 55.8	
	comp=Z,38nm,0.6s						
SOEI	Soe	19.89	101	P	P	20 35 36.7	-4.4
SOEI				IAmb	IAmb	20 36 13.0	
	comp=Z,31nm,1.1s						
H08S2	Diego Garcia H	31.77	266	T	T	21 11 08.5	
	baz=89,slow=76,SNR=21						
H08S3	Diego Garcia H	31.78	266	T	T	21 11 12.6	
	baz=89,slow=76,SNR=24						
H08S1	Diego Garcia H	31.79	266	T	T	21 11 09.0	
	baz=89,slow=76,SNR=7.1						
WRA	Warramunga Arr	32.00	118	P	P	20 37 35.2	-0.8
	comp=Z,0.1nm,0.3s,baz=294,slow=9.0,SNR=9.5						
	comp=Z,0.1nm,0.3s						
WRA	Warramunga Arr	32.00	118	P	P	20 37 34.4	-1.6
WRAB	Tennant Creek	32.01	118	P	P	20 37 33.9	-2.2
WRAB				IAmb	IAmb	20 37 59.4	
	comp=Z,9.1nm,1.2s						
WR8	Warramunga Arr	32.15	118	P	P	20 37 36.0	-1.3
WR8				IAmb	IAmb	20 37 57.8	
	comp=Z,17nm,1.4s						
ASAR	Alice Springs	33.13	124	P	P	20 37 45.8	-0.1
	comp=Z,0.3nm,0.8s,baz=300,slow=8.2,SNR=6.5						
	comp=Z,0.3nm,0.8s						
BBOO	Buckleboo	39.47	136	P	P	20 38 42.6	+2.8
STKA	Stephens Creek	42.97	131	P	P	20 39 08.5	-0.2
	comp=Z,1.6nm,0.6s,baz=304,slow=8.7,SNR=5.6						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	56.43	342	P	P	20 40 44.6	-6.3
H04N2	CROZET ISLANDS	60.17	220	T	T	21 46 56.9	
	baz=65,slow=75,SNR=23						
H04N1	CROZET ISLANDS	60.18	220	T	T	21 46 57.0	
	baz=65,slow=75,SNR=21						
H04N3	CROZET ISLANDS	60.19	220	T	T	21 46 55.7	
	baz=65,slow=75,SNR=21						
ABKAR	Akbulak array	67.56	330	P	P	20 42 02.3	-3.5

IDC 27 20:59:59.6±6.7, 13.°27N×51.°30E, h0km, mb3.5/4, mbtmp3.5/4, MS3.8/1, Error ellipse: s-maj=144.0km s-min=46.9km az=31.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.34	32	P	P	21 07 55.7	+0.3
	0.2nm,0.5s,baz=219,slow=8.7,SNR=4.1						
	0.2nm,0.5s						
CMAR	Chiang Mai Arr	46.02	77	P	P	21 08 25.3	0.0
	0.5nm,0.6s,baz=270,slow=8.7,SNR=4.9						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	48.41	26	P	P	21 08 42.6	-0.8
	0.4nm,0.5s,baz=222,slow=7.8,SNR=2.2						
	0.4nm,0.5s						
FINES	FINESS Array B	51.45	345	P	P	21 09 06.3	0.0
	1.5nm,1.0s,baz=134,slow=8.2,SNR=3.9						
	1.5nm,1.0s						
LZDM	Lanzhou Array	52.02	55	LR	LR	21 31 45.7	
	comp=Z,99nm,20.9s,baz=345,slow=37						

*IDC **27** 21:05:05.8±1.0, 56.°52S×143.°35W, h0km, mb3.9/5, mbtmp3.9/5, MS4.0/32, Error ellipse: s-maj=38.6km s-min=27.9km az=2.0*
*GCMT **27** 21:05:07.0±0.2, 56.°51S±0.°01×142.°80W±0.°02, h16km±1km, MW5.0/98, Moment Tensor Solution. s49,c58; s98,c146; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.56±.12; Mθθ3.53±.14; Mϕϕ-2.97±.12; Mrθ0.72±.33; Mϕϕ2.32±.09; Mrϕ0.71±.31; Best double couple: Mo4.10800×10^16 NP1:ϕs118.00000°, δ77.00000°, λ1.00000°. NP2: ϕs27.00000°, δ89.00000°, λ167.00000°. Principal axes: T 4.4360, Plg10.0000°, Azm342.0000°; N -0.6600, Plg77.0000°, Azm202.0000°; P -3.7810, Plg8.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 27 21:05:07.0±1.1, 56.°6S±0.°2×143.°3W±0.°2, h10km, n53, σ1§12/10, mb4.2/6, MS4.1/32, 1C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	Rata Peaks	31.36	275	LR	LR	21 21 14.1	
	comp=Z,78nm,20.6s,baz=82,slow=31						
URZ	Urewera	31.88	288	LR	LR	21 21 18.7	
	comp=Z,294nm,21.0s,baz=262,slow=31						
QSPA	South Pole Qui	33.57	180	P	P	21 11 47.8	+0.9
	3.1nm,0.9s,baz=69,slow=3.3,SNR=6.2						
QSPA				LR	LR	21 23 25.7	
	comp=Z,176nm,20.7s,baz=238,slow=33						
	3.1nm,0.9s						
PMSA	Palmer Station	37.16	136	LR	LR	21 23 55.8	
	comp=Z,324nm,18.2s,baz=214,slow=30						
RAR	Rarotonga	37.38	334	LR	LR	21 23 18.6	
	comp=Z,225nm,20.6s,baz=134,slow=29						
RPN	Rapa Nui	38.10	54	LR	LR	21 24 05.8	
	comp=Z,117nm,21.5s,baz=192,slow=30						
PPT	Papeete	39.24	350	LR	LR	21 24 30.8	
	comp=Z,219nm,20.5s,baz=184,slow=30						
AFI	Afiamalu	47.85	321	LR	LR	21 27 59.4	
	comp=Z,133nm,20.9s,baz=136,slow=29						
MSVF	Nonsavu	48.41	307	LR	LR	21 29 27.4	
	comp=Z,116nm,21.1s,baz=176,slow=30						
H03S2	Juan Fernandez	48.62	90	T	T	22 06 04.3	
	baz=220,slow=74,SNR=130						
H03S1	Juan Fernandez	48.62	91	T	T	22 06 05.6	
	baz=220,slow=74,SNR=118						
H03S3	Juan Fernandez	48.63	90	T	T	22 06 02.7	
H03N3	Juan Fernandez	48.90	90	T	T	22 06 06.6	
	baz=224,slow=72,SNR=135						
H03N2	Juan Fernandez	48.91	90	T	T	22 06 04.5	
	baz=224,slow=72,SNR=117						
H03N1	Juan Fernandez	48.92	90	T	T	22 06 06.3	
	baz=224,slow=72,SNR=150						
VNA2	Neumayer--Watz	48.99	162	⇑P	P	21 13 50.7	-2.4
	comp=Z,2.8nm,0.8s,baz=198,slow=6.5						
SNAA	Sanae	49.06	165	P	P	21 13 54.4	+0.8
	comp=Z,1.4nm,0.4s,baz=225,slow=5.7,SNR=4.9						
	comp=Z,1.4nm,0.4s						
MAW	Mawson	54.61	192	LR	LR	21 36 18.3	
	comp=Z,155nm,18.0s,baz=252,slow=34						
STKA	Stephens Creek	56.05	262	LR	LR	21 33 39.1	
	comp=Z,181nm,21.6s,baz=198,slow=31						
CPUP	Villa Florida	66.25	102	LR	LR	21 41 26.6	
	comp=Z,68nm,20.0s,baz=76,slow=33						
ASAR	Alice Springs	66.68	262	P	P	21 15 57.0	-1.0
	comp=Z,0.9nm,0.9s,baz=134,slow=6.5,SNR=5.9						
ASAR				LR	LR	21 40 44.8	
	comp=Z,138nm,21.5s,baz=168,slow=32						
	comp=Z,0.9nm,0.9s						
NNA	Nana	67.14	77	LR	LR	21 38 00.1	
	comp=Z,123nm,19.4s,baz=181,slow=29						
H01W1	Cape Leeuwin H	67.96	240	T	T	22 31 05.2	
	baz=144,slow=75,SNR=119						
H01W2	Cape Leeuwin H	67.96	240	T	T	22 31 05.7	
	baz=144,slow=75,SNR=180						
H01W3	Cape Leeuwin H	67.97	240	T	T	22 31 22.1	
	baz=144,slow=75,SNR=112						
NWAO	Narrogin (SRO)	68.05	243	LR	LR	21 40 28.0	
	comp=Z,135nm,18.0s,baz=60,slow=31						
LPAZ	La Paz	68.38	87	P	P	21 16 09.6	+0.1
	comp=Z,0.9nm,0.7s,baz=189,slow=6.2,SNR=3.9						
LPAZ				LR	LR	21 39 48.1	
	comp=Z,71nm,21.5s,baz=107,slow=30						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	69.43	265	P	P	21 16 15.9	+0.6
	comp=Z,0.7nm,1.0s,baz=139,slow=6.1,SNR=2.7						
	comp=Z,0.7nm,1.0s						
ATAH	Atahualpa	70.37	73	LR	LR	21 40 01.4	
	comp=Z,77nm,20.8s,baz=170,slow=30						
KRVT	Keravat (AS076	72.67	289	LR	LR	21 43 32.2	
	comp=Z,23nm,19.9s,baz=161,slow=32						
FITZ	Fitzroy Crossi	75.69	259	LR	LR	21 47 22.8	
	comp=Z,147nm,18.7s,baz=182,slow=34						
JTS	Las Juntas de	82.06	58	LR	LR	21 46 08.1	
	comp=Z,53nm,20.9s,baz=181,slow=30						
BATI	Baumata	83.25	262	LR	LR	21 52 57.2	
	comp=Z,369nm,19.8s,baz=251,slow=34						
LPIG	La Paz	85.07	30	LR	LR	21 46 28.1	
	comp=Z,81nm,18.9s,baz=242,slow=29						
SIJI	Sorong	86.78	273	LR	LR	21 55 10.8	
	comp=Z,70nm,19.1s,baz=188,slow=35						
KAPI	Kappang	89.69	261	LR	LR	21 55 49.9	
	comp=Z,165nm,19.9s,baz=164,slow=34						
SUR	Sutherland	90.36	167	LR	LR	21 55 08.2	
	comp=Z,50nm,18.7s,baz=160,slow=33						
PFO	Pinyon Flats O	92.69	22	LR	LR	21 51 18.2	
	comp=Z,98nm,18.3s,baz=190,slow=30						
BOSA	Boshof	94.58	170	LR	LR	21 55 15.1	
	comp=Z,109nm,21.7s,baz=184,slow=32						
ANMO	Albuquerque	96.38	30	LR	LR	21 52 52.6	
	comp=Z,75nm,21.6s,baz=203,slow=30						
NVAR	Mina Array Bea	96.99	20	LR	LR	21 52 17.3	
	comp=Z,93nm,21.3s,baz=155,slow=29						
SJG	San Juan	98.05	69	LR	LR	21 58 24.6	
	comp=Z,26nm,20.1s,baz=107,slow=33						
LBTB	Lobatse	98.17	170	LR	LR	22 00 32.7	
	comp=Z,58nm,18.1s,baz=175,slow=34						
YBH	Yreka Blue Hor	99.48	15	LR	LR	21 53 16.0	
	comp=Z,107nm,20.8s,baz=180,slow=29						
H10S3	ASCENSION HYDR	102.25	128	T	T	23 14 14.9	
	baz=13,slow=74,SNR=9.0						
H10S2	ASCENSION HYDR	102.26	128	T	T	23 13 58.4	
	baz=207,slow=74,SNR=7.0						
H10N3	ASCENSION HYDR	103.31	127	T	T	23 15 27.5	
	baz=206,slow=74,SNR=4.1						
H10N1	ASCENSION HYDR	103.32	127	T	T	23 15 27.2	
	baz=206,slow=74,SNR=5.4						
H10N2	ASCENSION HYDR	103.33	127	T	T	23 15 17.4	
	baz=206,slow=74,SNR=5.7						
ESDC	Sonseca Array	148.59	105	PKPbc	PKPbc	21 24 53.7	+0.2
	comp=Z,0.4nm,0.9s,baz=238,slow=2.2,SNR=2.6						
MKAR	Makanchi Array	150.62	270	PKPbc	PKiKP	21 24 59.2	+0.3
	comp=Z,2.3nm,0.9s,baz=105,slow=4.3,SNR=13						
ZALV	Zalesovo Beam	152.92	285	PKPab	PKPab	21 25 14.1	-0.3
	comp=Z,0.7nm,0.8s,baz=104,slow=3.0,SNR=4.8						
KURBB	Kurchatov Arra	154.81	274	PKPbc	PKiKP	21 25 07.7	+0.4
	comp=Z,0.3nm,0.7s,baz=139,slow=1.8,SNR=4.4						

*RSNC **27** 21:10:57.5±0.0, 7.°NL1.°×7.°3W±.°, h148km±1km, M3.1, ML2.8*
*FUNV **27** 21:10:59.0, 7.°12N×73.°26W, h4km, MW3.4, Presumed earthquake*

ISC 27 21:10:55.6±1.3, 6.°85N±0.°03×73.°14W±0.°04, h157km±8km, n30, σ1§37/59, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	190	P	Pn	21 11 17.7	+0.5
BARC				S	Sn	21 11 32.9	-0.7
BRJC	Barrancabermej	0.62	282	P	Pn	21 11 19.4	+1.1
BRJC				S	Sn	21 11 36.3	+0.7
PAMC	Pamplona, Colo	0.65	42	P	Pn	21 11 20.5	+1.3
PAMC				S	Sn	21 11 37.5	+0.4
RUSC	La Rusia	0.95	177	P	Pn	21 11 21.5	+0.3
RUSC				S	Sn	21 11 40.1	-0.7
RUSC	La Rusia	0.95	177	eP	Pn	21 11 21.7	+0.5
RUSC				eS	Sn	21 11 38.2	-2.6
PTBC	PUERTO BERRIO,	1.35	257	P	Pn	21 11 23.9	-0.3
PTBC				S	Sn	21 11 45.2	-0.8
OCAC	Ocana	1.40	353	P	Pn	21 11 25.8	+1.0
OCAC				S	Sn	21 11 47.0	-0.3
SPBC	San Pablo de B	1.51	218	P	Pn	21 11 26.4	+0.5
SPBC				S	Sn	21 11 48.1	-1.0
NORC	Norcasia	2.14	234	P	Pn	21 11 33.6	+0.7
NORC				S	Sn	21 12 00.3	-1.3
CHIC	Chingaza	2.28	195	P	Pn	21 11 35.5	+0.6
CHIC				S	Sn	21 12 04.7	-0.5
ROSC	El Rosal	2.31	211	P	Pn	21 11 36.7	+1.4
ROSC				S	Sn	21 12 06.0	+0.2
HELC	Santa Helena	2.46	255	P	Pn	21 11 38.0	+1.0
HELC				S	Sn	21 12 09.7	+0.8
HELC	Santa Helena	2.46	255	eP	Pn	21 11 40.2	+3.1
HELC				eS	Sn	21 12 08.6	-0.3
CVER	Cruz Verde, Cu	2.49	202	P	Pn	21 11 39.0	+1.5
CVER				S	Sn	21 12 09.8	+0.1
UREC	San Jos de Ur	2.54	291	P	Pn	21 11 37.5	-0.1
UREC				S	Sn	21 12 12.2	+2.2
GUY2C	Guyana, Caldas	2.74	234	P	Pn	21 11 41.6	+1.1
GUY2C				S	Sn	21 12 16.0	+0.9
VILC	Villavicencio,	2.77	192	P	Pn	21 11 40.8	+0.2
VILC				S	Sn	21 12 15.4	0.0
CBOC	Ciudad Bolivar	3.02	251	P	Pn	21 11 44.9	+1.2
CBOC				S	Sn	21 12 19.2	-1.7
DBBC	Dabeiba	3.06	273	P	Pn	21 11 44.9	+0.8
DBBC				S	Sn	21 12 20.3	-1.2
ARGC	Ariguani, Magd	3.19	340	P	Pn	21 11 48.1	+2.4
ARGC				S	Sn	21 12 24.7	+0.2
SDV	Santo Domingo	3.20	51	eP	Pn	21 11 48.3	+2.3
SDV				eS	Sn	21 12 25.0	-0.1
PRAC	Prado	3.57	209	P	Pn	21 11 50.6	0.0
PRAC				S	Sn	21 12 32.8	-0.4
APAC	Apartado, Choc	3.57	287	P	Pn	21 11 51.3	+0.7
APAC				S	Sn	21 12 33.8	+0.6
ORTC	Ortega, Tolima	3.59	216	P	Pn	21 11 51.4	+0.5
ORTC				S	Sn	21 12 35.0	+1.1
SJCC	San Jacinto, C	3.64	326	P	Pn	21 11 51.4	-0.1
SJCC				S	Sn	21 12 32.3	-2.7
GUVC	San Jose del G	4.30	173	P	Pn	21 12 00.0	-0.1
GUVC				S	Sn	21 12 40.3	-2.0
SMRC	Santa Marta, M	4.42	346	P	Pn	21 12 01.2	-0.4
SMRC				S	Sn	21 12 50.5	-2.6
MACC	Macarena, Meta	4.72	189	P	Pn	21 12 04.4	-1.2
MACC				S	Sn	21 12 56.8	-3.4
URIC	Uribia, Colomb	4.96	13	P	Pn	21 12 08.0	-0.6
URIC	Uribia, Colomb	4.96	13	eP	Pn	21 12 08.5	-0.1
URIC				eS	Sn	21 13 02.4	-3.2

IDC 27 21:17:16.4±7.3, 14.°90S×71.°48W, h171km±52km, mb3.6/3, mbtmp3.9/4, MS4.6/1, Error ellipse: s-maj=76.0km s-min=37.9km az=121.0, Central Peru

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

VNFG	Fog Glacier, M	1.45	17			Pn		21 20 36.5	+1.1
BPBCA	Veniaminof	1.99	31			Pn		21 20 44.5	+1.8
SSLS	Shishaldin Sou	2.15	266			Pn		21 20 46.3	+1.5
AZAC	Aniakchak	2.32	29			Pn		21 20 48.1	+1.0
ANNE	Aniakchak Nort	2.38	31			Pn		21 20 49.0	+1.0
ANNW	Aniakchak Nort	2.38	29			Pn		21 20 49.2	+1.1
AKSA	Akutan Strait	3.23	258			Pn		21 21 01.2	+1.6
AKUT	Akutan	3.28	259		P	Pn		21 21 01.8	+1.6
AKUT	Akutan	3.28	259		Pn	Pn		21 21 01.4	+1.2
AHB	Akutan Harbor	3.31	258			Pn		21 21 02.1	+1.4
AKBBA	Akutan Broad B	3.38	259			Pn		21 21 03.0	+1.3
AKV	Akutan Volcano	3.39	259			Pn		21 21 03.2	+1.4
ZRO	Akutan Zero	3.41	259			Pn		21 21 03.4	+1.4
LVA	Lava Point	3.42	260		Pn	Pn		21 21 03.5	+1.3
LVA	comp=E,101nm,0.6s				IAML			21 22 03.3	
LVA	comp=N,201nm,0.6s				IAML			21 22 12.2	
AKMO	Akutan Morgan	3.42	259			Pn		21 21 03.8	+1.5
AKRB	Akutan Reef Bi	3.45	259			Pn		21 21 04.1	+1.5
R17L	Mt. Peulik Vol	3.51	37			Pn		21 21 05.3	+1.9
PLK1	Peulik 1	3.56	34			Pn		21 21 05.8	+1.7
PLK2	Peulik 2	3.63	36			Pn		21 21 07.2	+2.1
PLK5	Peulik 5	3.64	30			Pn		21 21 06.8	+1.6
UNV	Unalaska Valle	3.78	256		P	Pn		21 21 07.6	+0.5
UNV	Unalaska Valle	3.78	256		Pn	Pn		21 21 07.6	+0.5
UNV	comp=N,57nm,0.6s				IAML			21 22 10.5	
MREP	Makushin Rep't	3.92	256			Pn		21 21 10.2	+1.0
KJL	Kejulik	4.11	38			Pn		21 21 13.1	+1.5
Q17K	Contact Creek	4.16	34			Pn		21 21 13.7	+1.2
O15K	Ungalikthiuk R	4.29	3		Pn	Pn		21 21 14.1	-0.1
O15K	comp=E,39nm,0.7s				IAML			21 22 04.9	
ACHA	Angle Creek He	4.31	38		Pn	Pn		21 21 16.0	+1.5
MGLS	Mageik Landsli	4.32	39			Pn		21 21 15.8	+1.3
P16K	Nushagak River	4.33	16		Pn	Pn		21 21 15.4	+0.8
P16K	comp=N,111nm,0.7s				IAML			21 22 39.7	
P16K	comp=E,97nm,0.9s				IAML			21 22 42.1	
KABU	Katmai Buttres	4.37	37			Pn		21 21 16.9	+1.6
O14K	Tigyukauivet M	4.39	354		Pn	Pn		21 21 15.5	-0.1
O14K	comp=N,57nm,0.9s				IAML			21 22 06.4	
O14K	comp=E,36nm,0.8s				IAML			21 22 33.0	
KAKN	Katmai Knife C	4.47	38			Pn		21 21 17.9	+1.3
OHAK	Old Harbor	4.57	57			Pn		21 21 18.0	+0.1
OHAK	Old Harbor	4.57	57		IAML			21 22 39.7	
KAWH	comp=N,38nm,1.1s Katmai	4.63	39			Pn		21 21 19.7	+0.9
OKFG	Magazine Ridge	4.71	255			Pn		21 21 21.0	+1.1
KARR	Katmai Rainbow	4.75	38			Pn		21 21 21.9	+1.5
Q18K	Katmai Hardscr	4.75	36			Pn		21 21 22.1	+1.6
OKER	Okmok East Rim	4.78	255			Pn		21 21 21.4	+0.6
OKTU	Okmok Mt. Tuli	4.79	255			Pn		21 21 21.9	+0.8
P17K	Kvichak River	4.79	25		Pn	Pn		21 21 22.3	+1.3
KAHG	Katmai Hook Gl	4.80	39			Pn		21 21 22.6	+1.4
OKNC	Okmok New Cone	4.81	256			Pn		21 21 22.2	+0.8
O16K	Kokwok River B	4.86	13		Pn	Pn		21 21 21.9	0.0
N14K	Kuskokwak Cree	5.09	352		Pn	Pn		21 21 25.2	+0.1
N14K	comp=N,45nm,1.1s				IAML			21 23 03.2	
KDAK	Kodiak Island	5.18	53		Pn	Pn		21 21 25.9	-0.4
KDAK	comp=N,1.4nm,0.3s,baz=243,slow=12,SNR=28				Sn	Sn		21 22 23.1	-1.4
KDAK	comp=N,1.5nm,0.3s,baz=250,slow=6.9,SNR=4.3 comp=N,3.0nm,0.3s Kodiak Island	5.18	53		Pn	Pn		21 21 26.2	0.0
KDAK	comp=N,39nm,0.6s				IAML			21 22 49.2	
KDAK	comp=N,36nm,0.9s				IAML			21 22 52.3	
O17K	Koliganek Bris	5.18	18			Pn		21 21 26.9	+0.6
P18K	Big Mountain,	5.28	29			Pn		21 21 29.0	+1.2
N15K	Kwethluk River	5.28	1		Pn	Pn		21 21 28.2	+0.5
N15K	comp=E,37nm,0.7s				IAML			21 23 02.8	
N15K	comp=N,39nm,0.7s				IAML			21 23 14.7	
Q19K	Cape Douglas,	5.44	39		Pn	Pn		21 21 31.0	+1.1
O18K	Koktuh Hills	5.68	27		Pn	Pn		21 21 34.9	+1.8
M13K	Dall Lake	5.76	345		Pn	Pn		21 21 34.8	+0.5
N17K	Nushagak Hills	5.88	15		Pn	Pn		21 21 36.6	+0.7
M14K	Bethel	5.93	352		Pn	Pn		21 21 36.6	0.0
CLCO	Concord Point,	5.96	253			Pn		21 21 38.2	+1.1
SPIA	Saint Paul Isl	6.02	296		P	Pn		21 21 39.1	+1.3
SPIA	Saint Paul Isl	6.02	296		Pn	Pn		21 21 38.7	+0.8
M16K	Timber Creek	6.18	6		Pn	Pn		21 21 40.3	+0.3
N18K	Kilae Creek	6.26	20		Pn	Pn		21 21 41.6	+0.5
M11K	Mekoryuk	6.34	332		Pn	Pn		21 21 41.6	-0.6
ILSW	Iliamna Southw	6.39	34		Pn	Pn		21 21 45.4	+2.4
L14K	Kuka Creek	6.58	350			Pn		21 21 45.5	+0.1
N19K	Bonanza Creek	6.69	25		Pn	Pn		21 21 48.6	+1.5
M17K	Holitna River	6.69	12		Pn	Pn		21 21 47.4	+0.4
CNPM	China Poot	6.76	43		Pn	Pn		21 21 49.3	+1.3
L15K	Ungalak Mounta	6.83	355			Pn		21 21 48.3	-0.5
L16K	Owhat River	6.84	3		Pn	Pn		21 21 49.3	+0.2
RED	Redoubt Volcan	6.85	33		Pn	Pn		21 21 52.3	+3.0
M18K	Stony River	7.02	18			Pn		21 21 52.0	+0.5
RDT	Redoubt	7.08	33			Pn		21 21 53.8	+1.3
BRSE	Bradley Lake S	7.09	43			Pn		21 21 53.1	+0.6
K13K	Kusilvak Mount	7.41	344		Pn	Pn		21 21 57.3	+0.4
K15K	Wolf Creek Mou	7.44	356		Pn	Pn		21 21 58.0	+0.7
L18K	Granite Mounta	7.58	13		Pn	Pn		21 21 59.5	+0.3
M19K	Big River Lodg	7.68	21		Pn	Pn		21 22 01.8	+1.3
SLKM	Skilak Lake	7.79	40		Pn	Pn		21 22 04.0	+1.9
SEW	Seward	7.83	44			Pn		21 22 03.5	+1.0
L19K	White Mountain	7.84	19		Pn	Pn		21 22 03.6	+0.9
K17K	Iditarod	7.91	7		Pn	Pn		21 22 03.5	-0.2
M20K	Styx River	7.95	25		Pn	Pn		21 22 06.6	+2.3
J14K	Nanvaranak Lak	8.05	349		Pn	Pn		21 22 05.8	+0.2
J16K	Anvik River	8.41	359		Pn	Pn		21 22 10.5	0.0
SKT	Skwentna	8.45	29		Pn	Pn		21 22 14.0	+2.8
J17K	VABM Dome	8.54	4		Pn	Pn		21 22 11.9	-0.5
KOFP	Korovin Flat P	8.62	258			Pn		21 22 14.6	+1.1
P23K	Montague Islan	8.62	48		Pn	Pn		21 22 13.9	+0.5
ATKA	Atka Island	8.70	258		P	Pn		21 22 15.6	+1.0
ATKA	Atka Island	8.70	258		Pn	Pn		21 22 15.5	+1.0
PWL	Port Wells	8.73	42		Pn	Pn		21 22 15.2	+0.3
J18K	Innoko River	8.78	11		Pn	Pn		21 22 16.0	+0.4
KNK	Knik Glacier	9.04	39			Pn		21 22 19.5	+0.4
PPLA	Purkeypile	9.04	24		Pn	Pn		21 22 21.9	+2.6
L22K	Petersville	9.10	29		Pn	Pn		21 22 22.8	+2.7
HIN	Hinchinbrook I	9.21	48		Pn	Pn		21 22 21.8	+0.2
GLI	Glacier Island	9.23	44		Pn	Pn		21 22 21.4	-0.3
FID	Port Fidalgo	9.41	46		Pn	Pn		21 22 23.7	-0.5
J19K	Poorman	9.43	13		Pn	Pn		21 22 23.9	-0.5
CAST	Castle Rocks	9.52	23		Pn	Pn		21 22 27.4	+1.7
SCM	Sheep Creek Mo	9.72	39		Pn	Pn		21 22 28.2	-0.3
GSIG	Igitkin Island	9.77	259			Pn		21 22 29.5	+0.4
GSTR	Great Sitkin T	9.80	260		Pn	Pn		21 22 31.3	+1.7
J20K	Nowinta River	9.81	16		Pn	Pn		21 22 30.4	+0.7
GSTD	Great Sitkin T	9.86	260			Pn		21 22 30.6	+0.1
KAIM	Kayak Island	9.93	53		Pn	Pn		21 22 33.0	+1.7
TRF	Thorofare Moun	9.98	27		Pn	Pn		21 22 32.7	+0.6
RAGM	Ragged Mountai	10.01	50		Pn	Pn		21 22 32.8	+0.4
ANM	Nome	10.02	347		Pn	Pn		21 22 32.1	-0.5
KLU	Klutina	10.05	43		Pn	Pn		21 22 33.2	+0.2
H17K	Granite Mounta	10.07	1		Pn	Pn		21 22 32.3	-0.9
ADK	Adak	10.24	260		P	Pn		21 22 36.4	+0.9
ADK	Adak	10.24	260		Pn	Pn		21 22 36.3	+0.8
BMRM	Bremner River	10.31	48		Pn	Pn		21 22 37.6	+1.0
I20K	Naaghedeneel	10.34	14		Pn	Pn		21 22 35.2	-1.7
KIWB	Kanaga Island	10.52	260		Pn	Pn		21 22 40.1	+0.8
G16K	Koyuk River	10.58	355		Pn	Pn		21 22 40.7	+0.6
VRDI	Verde Repeater	10.93	48		Pn	Pn		21 22 45.5	+0.4
TGL	Tana Glacier	10.99	51		Pn	Pn		21 22 47.0	+1.1
I21K	Tanana	11.11	18		Pn	Pn		21 22 48.4	+1.1
TNA	Tin City	11.33	344		Pn	Pn		21 22 49.5	-0.9
G19K	Purcell Mounta	11.39	7		Pn	Pn		21 21 51.8	+0.6
H21K	Melozitna Rive	11.40	16		Pn	Pn		21 21 51.8	+0.4
GRNC	Granite Creek	11.46	52		Pn	Pn		21 22 53.6	+1.1
K24K	Donnelly Dome	11.57	34		Pn	Pn		21 22 54.0	+0.3
RIDG	Independent Ri	11.83	35		Pn	Pn		21 22 57.7	+0.4
H22K	Ishtalitna Cre	11.86	18		Pn	Pn		21 22 57.2	-0.5
IL31		11.95	29		Pn	Pn		21 22 59.6	+0.9
ILAR	Eielson Array baz=218,slow=14,SNR=1.4	11.95	29		Pn	Pn		21 22 55.6	-3.2
F19K	Shaleruckik Mo	12.04	5		Pn	Pn		21 23 00.4	+0.4
G21K	Allakaket	12.11	13		Pn	Pn		21 23 01.3	+0.3
M27K	Edge Creek, AK	12.13	45		Pn	Pn		21 23 02.5	+1.1
J25K	Salcha River,	12.27	32		Pn	Pn		21 23 03.7	+0.4
F20K	Avaraart Lake	12.38	8		Pn	Pn		21 23 05.9	+1.2
BCAR	Beaver Creek A	12.53	42		Pn	Pn		21 23 07.0	+0.2
F21K	Alatna River	12.78	12		Pn	Pn		21 23 09.6	-0.7
M29M	Somme Creek	13.59	47		Pn	Pn		21 23 21.1	-0.3
L29M	L29M	14.01	45		Pn	Pn		21 23 27.8	+0.8
I27K	Kandik River	14.11	33		Pn	Pn		21 23 29.3	+1.0
C19K	Lookout Ridge	14.26	1		Pn	Pn		21 23 29.9	-0.4
M30M	Minto, Yukon	14.35	48		P	P		21 23 39.6	+2.2
I28M	Miner Creek	14.56	35		Pn	Pn		21 23 32.8	-1.5
K29M	Barlow Dome	14.58	43		Pn	Pn		21 23 34.6	0.0
D23K	Nanushuk River	14.79	14		Pn	Pn		21 23 36.7	-0.5
G27K	Doyon Strip	14.91	29		P	P		21 23 42.4	-1.1
J30M	Hart River	15.38	41		P	P		21 23 51.9	+3.0
J30M	comp=Z,4.7nm,0.8s				IAmb	IAmb		21 24 07.8	
H29M	Whitestone	15.54	34			P		21 23 49.9	-0.5
H29M	comp=Z,5.7nm,0.9s				IAmb	IAmb		21 24 17.4	
C23K	Itkillik River	15.61	13		Pn	Pn		21 23 47.2	-0.6
C23K	comp=Z,8.8nm,1.1s				IAmb	IAmb		21 24 08.0	
G29M	Pine Creek	16.07	33			P		21 23 56.0	-0.3
G29M	comp=Z,5.6nm,0.8s				IAmb	IAmb		21 24 12.3	
H31M	Peel River	16.70	39			P		21 24 03.7	+0.3
H31M	comp=Z,4.0nm,0.8s				IAmb	IAmb		21 24 23.2	
MMPY	Sheldon Lake,	16.80	51			P		21 24 04.9	+0.3
F30M	Barrier River	17.18	33			Pn		21 24 08.1	+0.4
F30M	comp=Z,4.6nm,0.7s				IAmb	IAmb		21 24 25.0	
G31M	Satah River	17.29	36		Pn	Pn		21 24 08.6	-0.3
INK	Inuvik	18.28	32		P	P		21 24 19.2	-1.5
	comp=Z,0.3nm,0.3s,baz=219,slow=14,SNR=6.0 comp=Z,1.1nm,0.4s								
INK	Inuvik	18.28	32		P	P		21 24 19.7	-1.0
PEA0B	Petropavlovsk-	24.48	283		P	P		21 25 26.0	+0.4
PETK	Petropavlovsk-	24.48	283		P	P		21 25 24.7	-0.9
	comp=Z,2.3nm,0.4s,baz=77,slow=13,SNR=14 comp=Z,2.3nm,0.4s								
PETK	Petropavlovsk-	24.48	283		P	P		21 25 25.9	+0.2
SONM	Songino Array	54.49	304		P	P		21 29 32.6	-1.2
	comp=Z,0.5nm,0.6s,baz=34,slow=7.3,SNR=3.7 comp=Z,0.5nm,0.6s								
SONM	Songino Array	54.49	304		P	P		21 29 34.2	+0.3
SONM	comp=Z,1.2nm,1.2s				IAmb	IAmb		21 29 35.9	
ARCES	ARCESS Array B	55.80	358		P	P		21 29 41.8	-1.0
	comp=Z,1.7nm,0.9s,baz=32,slow=7.5,SNR=4.6 comp=Z,1.7nm,0.9s								
ARCES	ARCESS Array B	55.80	358		P	P		21 29 41.6	-1.2
FINES	FINESS Array B	63.89	357		P	P		21 30 37.8	-0.6
	comp=Z,0.9nm,0.4s,baz=19,slow=7.5,SNR=26 comp=Z,0.9nm,0.4s								
KURBB	Kurchatov Arra	63.97	323		P	P		21 30 36.4	-2.6
	comp=Z,0.1nm,0.6s,baz=26,slow=6.5,SNR=2.2 comp=Z,0.1nm,0.6s								
BVAR	Borovoye Array	64.56	329		P	P		21 30 42.8	-0.2
	comp=Z,0.9nm,0.5s,baz=32,slow=8.7,SNR=7.4 comp=Z,0.9nm,0.5s								
HFS	Hagfors	65.21	3		P	P		21 30 46.8	-0.3
	comp=Z,2.5nm,0.8s,baz=20,slow=4.7,SNR=6.1 comp=Z,2.5nm,0.8s								
MKAR	Makanchi Array	65.76	318		P	P		21 30 50.1	-0.8
	comp=Z,0.2nm,0.5s,baz=45,slow=5.8,SNR=4.2 comp=Z,0.2nm,0.5s								
MKAR	Makanchi Array	65.76	318		P	P		21 30 49.7	-1.2
AKASG	Malin Array Be	74.47	354		P	P		21 31 43.6	-0.4
	comp=Z,0.8nm,0.4s,baz=11,slow=6.3,SNR=4.5 comp=Z,0.8nm,0.4s								
CMAR	Chiang Mai Arr	81.11	289		P	P		21 32 21.8	+0.4
	comp=Z,1.3nm,0.8s,baz=18,slow=5.5,SNR=9.7 comp=Z,1.3nm,0.8s								
ESDC	Sonseca Array	83.64	18		P	P		21 32 35.6	+1.2
	comp=Z,0.5nm,0.6s,baz=339,slow=5.3,SNR=7.2 comp=Z,0.5nm,0.6s								
ESDC	Sonseca Array	83.64	18		P	P		21 32 35.2	+0.8

MOS ***27*** *21:34:18.5±2.0, 45°.22N×150°.26E, h55km, mb4.3/5, Error ellipse: s-maj=12.0km s-min=8.5km az=138.8*
SKHL ***27*** *21:34:18.9±0.7, 45°.50N×150°.30E, h55km±6km, mb5.0/4*
JMA ***27*** *21:34:23.1±1.2, 45°.5N±5°.5×15°.0E±°, h30km, MV4.5/16, KURILE ISLANDS REGION*
IDC ***27*** *21:34:24.8±2.8, 45°.42N×150°.00E, h91km±24km, mb3.3/10, mbtmp3.7/14, MS3.3/4, Error ellipse: s-maj=22.6km s-min=18.0km az=135.0*
ISC 27 21:34:20.1±0.7, 45°.28N±0°.07×150°.25E±0°.07, h61km, n69, σ2s12/74, mb3.6/12, 1C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
REI	Reidovoe	1.58	270	*e*P			Pn	21 34 44.4	-1.4
REI					AMB		AMB	21 34 45.9	
	230nm,0.2s								
REI				e	S		Sn	21 35 02.8	-2.4
REI					A		A	21 35 04.8	
	360nm,0.2s								
REI					A		A	21 35 04.8	
	190nm,0.2s								
KUR	Kuril'sk	1.68	269	*d*	PN		Pn	21 34 46.1	-1.1
KUR				e	S		Sn	21 35 05.9	-1.8
KUR					pmax		pmax		
	comp=Z,834nm,0.4s								
KUR					pmax		pmax		
	comp=E,188nm,0.2s								
KUR					pmax		pmax		
	comp=N,265nm,0.3s								
KUR					smax		smax		
	comp=N,991nm,0.5s								
KUR					smax		smax		
	comp=E,550nm,0.5s								
KUR	Kuril'sk	1.68	269	*i*	P		Pn	21 34 46.3	-0.9
KUR					AMB		AMB	21 34 47.4	
	comp=E,830nm,0.4s								
KUR				*i*	S		Sn	21 35 06.5	-1.2
KUR					A		A	21 35 07.8	
	comp=E,1μm,0.3s								
KUR					A		A	21 35 07.8	
	comp=E,850nm,0.3s								
SHO	Shikotan	2.82	241	e	P		Pn	21 35 15.1	+12
SHO					AMB		AMB	21 35 18.0	
	comp=E,90nm,0.3s								
SHO				e	S		Sn	21 35 47.4	+12
SHO					A		A	21 35 53.8	
	comp=E,360nm,0.5s								
SHO					A		A	21 35 53.8	
	comp=E,300nm,0.5s								
YUK	Yuzh-Kuril'sk	3.37	250	e	PN		Pn	21 35 11.4	+1.2
YUK				e	S		Sn	21 35 51.6	+2.7
YUK					pmax		pmax		
	comp=Z,401nm,0.2s								
YUK					smax		smax		
	comp=E,656nm,0.6s								
YUK					smax		smax		
	comp=N,208nm,0.3s								
YUK	Yuzh-Kuril'sk	3.37	250	e	P		Pn	21 35 10.7	+0.5
YUK					AMB		AMB	21 35 12.9	
	comp=N,390nm,0.4s								
YUK				e	S		Sn	21 35 50.1	+1.2
YUK					A		A	21 35 55.3	
	comp=N,630nm,0.5s								
YUK					A		A	21 35 55.3	
	comp=N,1μm,0.5s								
RUSJ	Misakicho	3.75	254	e	PN		Pn	21 35 16.6	+1.1
RUSJ				e	S		Sn	21 36 04.0	+5.6
NEM2	Nemuro 2	3.76	241		P		Pn	21 35 13.4	-2.1
NEM2				e	S		Sn	21 35 53.2	-5.3
NMR	Nemuro--Hokkai	3.77	241	‖	PN		Pn	21 35 13.5	-2.1
NMR				*i*	S		Sn	21 35 54.5	-4.1
NMR	Nemuro--Hokkai	3.77	241	*i*	P		Pn	21 35 14.5	-1.1
NMR				*i*	S		Sn	21 35 55.7	-2.9
JRA	Rausu	3.90	252		P		Pn	21 35 18.2	+0.8
JRA					S		Sn	21 35 57.3	-4.6
JNK	Nakash	4.31	249	*i*	P		Pn	21 35 23.4	+0.4
AKK	Akkeshi	4.50	242	e	P		Pn	21 35 24.4	-1.3
JAK	Akkeshi	4.60	242		P		Pn	21 35 25.7	-1.3
JTKR	Abashiri--Toko	4.71	256	e	P		Pn	21 35 27.2	-1.3
JAR	Ashorobuto	5.06	249	*i*	P		Pn	21 35 34.5	+1.2
JOB	Onbets	5.20	245		P		Pn	21 35 35.2	0.0
JOB				e	S		Sn	21 36 26.9	-6.8
YSS	Yuzhno-Sakhali	5.47	290	*e*	PN		Pn	21 35 37.2	-1.8
YSS	comp=Z,10.0nm,0.5s				pmax		pmax		
YSS	comp=Z,100nm,14.0s				MLR		MLR		
YSS	comp=E,100nm,13.0s				MLR		MLR		
YSS	Yuzhno-Sakhali	5.47	290	*e*	P		Pn	21 35 37.7	-1.3
YSS				e	S		Sn	21 36 38.5	-2.0
JKK2	Kamakawa 2	5.54	258	e	P		Pn	21 35 41.5	+1.6
JKA	Kamikawa-asahi	5.58	261	e	P		Pn	21 35 42.8	+2.4
ASAJ	Asahikawa comp=E,7.7nm,0.4s,baz=70,slow=21,SNR=12	5.58	261		P		Pn	21 35 42.8	+2.4
ASAJ					S		Sn	21 36 52.9	+10
ASAJ	comp=E,7.4nm,0.6s,baz=170,slow=13,SNR=1.3				LR		LR	21 37 58.2	
JCH	comp=E,82nm,21.3s,baz=78,slow=39 Churui	5.64	244		P		Pn	21 35 40.6	-0.6
JAB	Ashibetsu	6.02	256	*e*	P		Pn	21 35 49.5	+3.0
ERM	Erimo	6.09	240	*d*	PN		Pn	21 35 48.8	+1.4
JNBK	Urakawa-nobuka	6.20	244		P		Pn	21 35 48.0	-0.9
SKR	Severo-Kuril's	6.69	34	e	PN		Pn	21 35 53.0	-2.5
SKR	Severo-Kuril's	6.69	34	e	P		Pn	21 35 53.0	-2.5
TYV	Tymovskoe	7.55	320	e	P		Pn	21 36 06.7	-0.7
JANG	Nango	8.07	236	e	S		Sn	21 37 34.7	-10
PETK	Petropavlovsk- comp=E,4.7nm,0.9s,baz=219,slow=11,SNR=2.9	9.22	29		P		Pn	21 36 35.6	+5.3
PET	Petropavlovsk	9.50	32	*e*	P		Pn	21 36 31.0	-3.0
MJA0	Matsu Arr-Jizo	12.58	230	e	PN		Pn	21 37 14.9	-1.3
MJAR	Matsushiro Arr comp=E,0.9nm,0.5s,baz=34,slow=14,SNR=5.0	12.60	230		P		Pn	21 37 13.7	-2.8
MJAR	Matsushiro Arr	12.60	230	e	PN		Pn	21 37 14.9	-1.6
USRK	Usuriysk Ar. comp=E,1.6nm,0.5s,baz=92,slow=13,SNR=2.0	13.03	272		P		Pn	21 37 24.5	+2.3
KSRS	Korea Array	18.45	253		P		Pn	21 38 32.1	+0.7
	comp=E,1.1nm,0.6s,baz=58,slow=11,SNR=7.4								
KSRS	Korea Array	18.45	253	*e*	P		Pn	21 38 32.4	+1.0
KSRS	Korea Array	18.45	253	e	P		Pn	21 38 32.4	+1.0
YAK	Yakutsk comp=E,19nm,0.8s,baz=330,slow=5.5,SNR=11	20.58	332		P		Pn	21 38 59.2	+2.8
YAK					LR		LR	21 47 23.8	
YAK	comp=E,63nm,18.6s,baz=140,slow=38 Yakutsk	20.58	332	*e*	P		Pn	21 38 58.9	+2.6
YAK					pmax		pmax		
YAK	comp=Z,30nm,1.3s				pmax		pmax		
YAK	comp=N,6.0nm,1.4s				pmax		pmax		
YAK	comp=E,4.0nm,1.4s								
YAK	Yakutsk	20.58	332	*e*	P		Pn	21 38 55.5	-0.8
HILR	Hailar Array B comp=E,198nm,19.8s,baz=350,slow=38	21.00	293		LR		LR	21 47 26.5	
H11N2	WAKE ISLAND Hy baz=336,slow=76,SNR=444	28.97	146		T		T	22 10 47.0	
H11N1	WAKE ISLAND Hy baz=336,slow=76,SNR=326	28.98	146		T		T	22 10 58.9	
H11N3	WAKE ISLAND Hy baz=336,slow=76,SNR=282	28.99	146		T		T	22 10 59.6	
H11S1	WAKE ISLAND Hy baz=337,slow=76,SNR=327	30.00	147		T		T	22 12 18.4	
H11S3	WAKE ISLAND Hy baz=337,slow=76,SNR=301	30.01	148		T		T	22 12 15.8	
H11S2	WAKE ISLAND Hy baz=337,slow=76,SNR=312	30.02	148		T		T	22 12 19.4	
ILAR	Eielson Array comp=E,0.2nm,0.6s,baz=276,slow=7.5,SNR=2.4 comp=E,0.2nm,0.6s	38.94	37		P		P	21 41 40.7	+1.1
ZALV	Zalesovo Beam comp=E,0.7nm,0.7s,baz=116,slow=3.4,SNR=4.0	41.86	306		PcP		PcP	21 43 59.2	+0.7
MK31	Makanchi Array	45.84	297	‖	*e*P		P	21 42 39.2	+3.3
MKAR	Makanchi Array comp=E,0.2nm,0.5s,baz=74,slow=6.6,SNR=4.8	45.84	297		P		P	21 42 35.9	0.0
MKAR					PcP		PcP	21 44 13.4	+1.2
	comp=E,0.3nm,0.5s,baz=238,slow=2.0,SNR=4.3 comp=E,0.2nm,0.5s								
MKAR	Makanchi Array	45.84	297	*e*	P		P	21 42 36.5	+0.6
KURK	Kurchatov	46.52	304	‖	*e*P		P	21 42 41.2	+0.1
KURK	comp=Z,6.0nm,3.0s				pmax		pmax		
KURK	Kurchatov	46.52	304	*e*	P		P	21 42 41.2	+0.1
KURBB	Kurchatov Arra comp=Z,0.4nm,0.6s,baz=76,slow=8.4,SNR=4.5

H11N2 WAKE ISLAND Hy 28.76 132 T T 22 18 14.6
baz=324,slow=74,SNR=9.9
H11N1 WAKE ISLAND Hy 28.77 132 T T 22 18 24.3
baz=324,slow=74,SNR=7.0
H11N3 WAKE ISLAND Hy 28.78 132 T T 22 18 17.1
baz=324,slow=74,SNR=9.1
H11S1 WAKE ISLAND Hy 29.64 134 T T 22 19 31.7
baz=325
H11S3 WAKE ISLAND Hy 29.64 134 T T 22 19 28.8
baz=325
H11S2 WAKE ISLAND Hy 29.66 134 T T 22 19 30.4
baz=325
MKAR Makanchi Array 44.03 299 P **P 21 50 23.9 +0.8**
0.4nm,0.6s,baz=90,slow=8.6,SNR=3.0
0.4nm,0.6s
KURBB Kurchatov Arra 45.38 305 P **P 21 50 34.7 +0.9**
0.2nm,0.4s,baz=81,slow=9.5,SNR=4.5
0.2nm,0.4s
BVAR Borovoye Array 49.54 310 P **P 21 51 07.2 +1.0**
0.3nm,0.3s,baz=72,slow=9.4,SNR=2.2
0.3nm,0.3s
FINES FINESS Array B 66.07 332 P **P 21 53 03.3 +1.1**
0.6nm,0.5s,baz=42,slow=7.0,SNR=13
0.6nm,0.5s

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*ECX **27** 21:43:04.7±0.4,31°.28N×115°.71W,h11km±2km,MD3.3, ML3.5*
*MEX **27** 21:43:05.4±0.3,31°.23N×115°.63W,h19km±5km,MD3.4*
ISC 27 21:43:03.5±1.0,31°.27N±0°.04×115°.71W±0°.04,h15km±7km, n13,σ072/25,7C-5D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.14**	**331**	⇓*iP*	**Pg**	**21 43 07.6**	**+0.2**
VTX				*eS*	**Sg**	**21 43 10.0**	**0.0**
VTX				IAML		21 43 10.4	
	comp=E,22μm,0.1s						
VTX				⇑*e*		21 43 10.4	
SV2X	**San Vicente**	**0.46**	**279**	⇑*iP*	**Pg**	**21 43 12.9**	**+0.1**
SV2X				*eS*	**Sg**	**21 43 19.1**	**+0.1**
SJX	**San Joaquin**	**0.54**	**336**	⇓*iP*	**Pn**	**21 43 18.0**	**+1.4**
SJX				*eS*	**Sn**	**21 43 28.0**	**+2.7**
SJX				*e*		21 43 28.8	
SJX				IAML		21 43 28.8	
	comp=E,1μm,0.1s						
ECBX	**El Chinero**	**0.59**	**70**	⇑*iP*	**Pg**	**21 43 15.5**	**+0.3**
ECBX				*eS*	**Sg**	**21 43 23.2**	**0.0**
ECBX				IAML		21 43 23.3	
	comp=N,1μm,0.2s						
SQX	**San Quintin**	**0.71**	**192**	⇓*eP*	**Pg**	**21 43 17.3**	**0.0**
SQX				*eS*	**Sg**	**21 43 26.9**	**+0.2**
SQX				⇑*e*		21 43 27.6	
SQX				IAML		21 43 27.6	
	comp=N,2μm,0.2s						
ALAMX	**Rancho Alamar**	**0.73**	**360**	⇓*iP*	**Pg**	**21 43 17.7**	**-0.1**
ALAMX				*eS*	**Sg**	**21 43 27.5**	**-0.1**
ALAMX				⇑*e*		21 43 28.2	
ALAMX				IAML		21 43 28.2	
	comp=E,3μm,0.1s						
ALAMX				IAML		21 43 30.8	
	comp=N,4μm,0.2s						
ALAMX				⇓*e*		21 43 30.8	
PBX	**Punta Banda**	**0.99**	**299**	*eP*	**Pb**	**21 43 21.9**	**-0.5**
PBX				*eS*	**Sb**	**21 43 35.1**	**-0.1**
PBX				IAML		21 43 37.0	
	comp=N,821nm,0.2s						
PBX				*e*		21 43 37.0	
CCX	**Cicese**	**1.01**	**306**	*eP*	**Pb**	**21 43 22.1**	**-0.6**
CCX				*eS*	**Sb**	**21 43 35.3**	**-0.5**
CCX				⇑*e*		21 43 38.9	
CCX				IAML		21 43 38.9	
	comp=E,1μm,0.4s						
MBIG	**Mexicali**	**1.21**	**21**	*eP*	**Pn**	**21 43 25.5**	**-0.4**
MBIG				*eS*	**Sb**	**21 43 41.0**	**-0.6**
CBX	**Cerro Bola**	**1.32**	**322**	*eP*	**Pn**	**21 43 27.2**	**-0.3**
CBX				*eS*	**Sn**	**21 43 45.0**	**0.0**
CBX				⇑*e*		21 43 49.5	
CBX				IAML		21 43 49.5	
	comp=N,655nm,0.5s						
CBX	**Cerro Bola**	**1.32**	**322**	*eP*	**Pn**	**21 43 27.6**	**0.0**
CBX				*eS*	**Sn**	**21 43 44.8**	**-0.2**
TJIG	**Tijuana**	**1.42**	**325**	*eP*	**Pn**	**21 43 28.7**	**-0.2**
TJIG	**Tijuana**	**1.42**	**325**	*eP*	**Pn**	**21 43 28.9**	**0.0**
TJIG				*eS*	**Sn**	**21 43 47.0**	**-0.3**

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*AEIC **27** 21:44:12.2±1.3,54°.92N±0°.02×159°.15W±0°.06,h35km±6km, Error ellipse: s-maj=5.8km s-min=2.3km az=66.0*
NEIC 27 21:44:13.7±1.6,55°.06N±0°.05×159°.34W±0°.08,h24km±9km, mb3.5/3,ML3.1/36,ML3.1(AEIC),Error ellipse: s-maj=7.5km s-min=5.7km az=138.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.28**	**211**		Pb	21 44 19.2	-1.0
CNBA					Sb	21 44 24.5	-0.2
CNBA				IAML		21 44 25.4	
	comp=E,3μm,0.4s						
CNBA				IAML		21 44 26.1	
	comp=N,4μm,0.3s						
SDPT	**Sand Point**	**0.71**	**295**		Pb	21 44 27.5	0.0
SDPT				Sg	Sb	21 44 35.1	-1.7
SDPT				IAML		21 44 36.4	
	comp=E,706nm,0.5s						
VNKR	**Veniaminof 5**	**0.98**	**359**		Pb	21 44 31.6	-0.4
VNSW	**Veniaminof 7**	**1.02**	**353**		Pn	21 44 32.7	0.0
VNSG	**Veniaminof 6**	**1.08**	**8**		Pn	21 44 33.0	-0.5
VNWF	**Veniaminof 8**	**1.10**	**354**		Pn	21 44 34.0	+0.1
VNWF					Sn	21 44 50.5	+2.2
VNSS	**Veniaminof 8**	**1.17**	**357**		Pn	21 44 35.1	+0.2
VNFG	**Fog Glacier, M**	**1.24**	**355**	Pn	Pn	21 44 36.0	+0.3
VNFG				Sn	Sb	21 44 52.5	+0.5
VNFG	**Fog Glacier, M**	**1.24**	**355**		Pb	21 44 36.3	-0.2
PS1A	**Pavlof South-1**	**1.42**	**286**		Pn	21 44 38.6	+0.6
DOL	**Dolgoi Island**	**1.45**	**275**		Pn	21 44 38.5	0.0
DOL					Sb	21 44 58.3	+0.2
PS4A	**Pavlof South-4**	**1.47**	**282**		Sb	21 45 00.7	+2.1
HAG	**Hague Volcano**	**1.49**	**281**		Pn	21 44 39.8	+0.7
PN7A	**Pavlof North-7**	**1.57**	**285**		Pb	21 44 41.2	-0.9
DTNA	**Dutton South F**	**1.68**	**274**		Pn	21 44 41.7	+0.2
DTNA					Sb	21 45 04.6	+0.1
DT1	**Dutton Round H**	**1.69**	**273**		Pn	21 44 41.5	-0.2
DT1					Pn	21 44 41.9	+0.1
DT1					Sb	21 45 04.5	-0.4
ANPB	**Aniakchak Plen**	**1.85**	**18**		Pn	21 44 43.5	-0.5
AZAC	**Aniakchak**	**1.95**	**18**		Pn	21 44 45.0	-0.4
ANNE	**Aniakchak Nort**	**2.00**	**21**		Pn	21 44 45.8	-0.2
ISNN	**Isanotski Nort**	**2.57**	**267**		Pn	21 44 54.9	+1.0
SSLS	**Shishaldin Sou**	**2.71**	**265**		Pn	21 44 56.5	+0.6
SSBA	**Shishaldin**	**2.78**	**266**		Pn	21 44 57.4	+0.7
PLBL	**Peulik Blue Cr**	**3.00**	**27**		Pn	21 44 59.3	-0.5
R17L	**Mt. Peulik Vol**	**3.07**	**32**		Sn	21 45 37.4	+0.8
PLK1	**Peulik 1**	**3.14**	**28**		Pn	21 45 01.4	-0.3
PLK5	**Peulik 5**	**3.25**	**24**		Pn	21 45 02.9	-0.2
PLK5					Pn	21 45 03.2	+0.1
KJL	**Kejulik**	**3.66**	**33**		Pn	21 45 08.1	-0.7
Q17K	**Contact Creek**	**3.74**	**29**		Pn	21 45 09.3	-0.7
Q17K					Pn	21 45 09.4	-0.5
ANCK	**Angle Creek**	**3.80**	**32**		Pn	21 45 10.2	-0.6
AKSA	**Akutan Strait**	**3.81**	**259**		Pn	21 45 11.5	+0.6
AKSA					Sn	21 45 56.5	+1.6
AKUT	**Akutan**	**3.85**	**259**	Pn	Pn	21 45 11.4	-0.1
AKUT				IAML		21 46 24.6	
	comp=N,40nm,0.8s						
AKUT				IAML		21 46 26.1	
	comp=E,27nm,0.8s						
MGLS	**Mageik Landsli**	**3.85**	**35**		Pn	21 45 10.8	-0.8
ACHA	**Angle Creek He**	**3.86**	**33**	Pn	Pn	21 45 12.0	+0.3
AHB	**Akutan Harbor**	**3.88**	**259**		Pn	21 45 11.9	0.0
AHB					Pn	21 45 12.4	+0.5
KABU	**Katmai Buttres**	**3.92**	**33**		Pn	21 45 12.0	-0.6
KABU					Pn	21 45 12.1	-0.4
AKLV	**Akutan Long Va**	**3.95**	**260**		Pn	21 45 12.8	-0.1
AKBBA	**Akutan Broad B**	**3.95**	**259**		Pn	21 45 13.2	+0.3
AKGG	**Akutan Green G**	**3.96**	**260**		Pn	21 45 13.2	+0.3
ZRO	**Akutan Zero**	**3.98**	**259**		Pn	21 45 13.5	+0.3
LVA	**Lava Point**	**3.99**	**260**	Pn	Pn	21 45 12.8	-0.6
LVA				IAML		21 46 26.1	
	comp=E,29nm,1.0s						
KAKN	**Katmai Knife C**	**4.01**	**34**		Pn	21 45 13.5	-0.3
OHAK	**Old Harbor**	**4.02**	**55**		Pn	21 45 10.7	-3.1
OHAK	**Old Harbor**	**4.02**	**55**	IAML		21 46 21.4	
	comp=N,29nm,1.4s						
OHAK				IAML		21 46 33.2	
	comp=E,24nm,1.3s						
P16K	**Nushagak River**	**4.05**	**10**	Pn	Pn	21 45 14.3	+0.1
P16K				IAML		21 46 23.7	
	comp=N,42nm,0.7s						
O15K	**Ungalikthiuk R**	**4.14**	**357**	Pn	Pn	21 45 15.1	-0.3
O15K				IAML		21 46 06.6	
	comp=E,16nm,0.5s						
O15K				IAML		21 46 44.2	
	comp=N,17nm,0.7s						
Q18K	**Katmai Hardscr**	**4.32**	**32**		Pn	21 45 17.0	-0.9
O14K	**Tigyukauivet M**	**4.34**	**347**	Pn	Pn	21 45 18.5	+0.4
O14K				IAML		21 46 43.2	
	comp=E,15nm,1.1s						
O14K				IAML		21 46 54.2	
	comp=N,15nm,0.8s						
UNV	**Unalaska Valle**	**4.35**	**257**	Pn	Pn	21 45 17.9	-0.4
P17K	**Kvichak River**	**4.44**	**20**	Pn	Pn	21 45 19.7	+0.2
MREP	**Makushin Rep't**	**4.50**	**257**		Pn	21 45 20.1	-0.3
MGOD	**Makushin Gods**	**4.58**	**257**		Pn	21 45 21.1	-0.3
O16K	**Kokwok River B**	**4.60**	**8**	Pn	Pn	21 45 21.8	+0.1
KDAK	**Kodiak Island**	**4.64**	**51**	Pn	Pn	21 45 18.7	-3.6
KDAK				IAML		21 46 47.6	
	comp=N,16nm,0.8s						
KDAK				IAML		21 46 52.6	
	comp=N,15nm,0.9s						
O17K	**Koliganek Bris**	**4.88**	**13**		Pn	21 45 25.2	-0.3
P18K	**Big Mountain,**	**4.89**	**26**		Pn	21 45 24.6	-1.1
P18K					Pn	21 45 24.8	-0.9
Q19K	**Cape Douglas,**	**4.98**	**36**	Pn	Pn	21 45 26.0	-1.0
N14K	**Kuskokwak Cree**	**5.04**	**346**	Pn	Pn	21 45 27.6	-0.1
N14K				IAML		21 47 08.9	
	comp=E,19nm,1.5s						
N15K	**Kwethluk River**	**5.14**	**356**	Pn	Pn	21 45 29.8	+0.6
N15K				IAML		21 47 02.4	
	comp=N,17nm,0.8s						
N15K				IAML		21 47 11.3	
	comp=E,17nm,0.8s						
O18K	**Koktuh Hills**	**5.30**	**23**	Pn	Pn	21 45 29.7	-1.6
OKTU	**Okmok Mt. Tuli**	**5.37**	**255**		Pn	21 45 32.4	0.0
OKNC	**Okmok New Cone**	**5.39**	**256**		Pn	21 45 32.2	-0.4
N16K	**Nishlik Lake**	**5.44**	**3**		Pn	21 45 33.5	+0.2
N17K	**Nushagak Hills**	**5.61**	**11**	Pn	Pn	21 45 34.6	-0.9
M15K	**Kasigluk River**	**5.70**	**353**		Pn	21 45 37.2	+0.4
M15K					Pn	21 45 37.6	+0.8
M13K	**Dall Lake**	**5.78**	**340**	Pn	Pn	21 45 38.0	+0.1
M14K	**Bethel**	**5.88**	**347**	Pn	Pn	21 45 39.1	-0.1
N18K	**Kilae Creek**	**5.93**	**17**	Pn	Pn	21 45 40.6	+0.6
ILSW	**Iliamna Southw**	**5.96**	**32**	Pn	Pn	21 45 41.6	+1.1
M16K	**Timber Creek**	**5.99**	**2**	Pn	Pn	21 45 41.0	+0.3
N19K	**Bonanza Creek**	**6.32**	**22**	Pn	Pn	21 45 45.8	+0.4
M17K	**Holitna River**	**6.44**	**8**	Pn	Pn	21 45 47.1	+0.1
SPIA	**Saint Paul Isl**	**6.46**	**294**	Pn	Pn	21 45 48.0	+0.7
M11K	**Mekoryuk**	**6.48**	**328**	Pn	Pn	21 45 48.5	+1.0
L14K	**Kuka Creek**	**6.54**	**346**		Pn	21 45 48.9	+0.5
L16K	**Owhat River**	**6.67**	**359**	Pn	Pn	21 45 49.8	-0.3
M18K	**Stony River**	**6.71**	**15**		Pn	21 45 50.7	0.0
L15K	**Ungalak Mounta**	**6.74**	**351**		Pn	21 45 50.8	-0.2
L17K	**Donlin**	**7.12**	**4**		Pn	21 45 55.8	-0.5
L18K	**Granite Mounta**	**7.32**	**10**	Pn	Pn	21 45 58.3	-0.7
M19K	**Big River Lodg**	**7.34**	**19**	Pn	Pn	21 45 59.6	+0.3
K15K	**Wolf Creek Mou**	**7.35**	**352**	Pn	Pn	21 46 00.7	+1.3
K13K	**Kusilvak Mount**	**7.43**	**340**	Pn	Pn	21 46 01.3	+0.7
L19K	**White Mountain**	**7.52**	**16**	Pn	Pn	21 46 01.6	-0.1
M20K	**Styx River**	**7.58**	**23**	Pn	Pn	21 46 04.1	+1.5
K17K	**Iditarod**	**7.70**	**4**	Pn	Pn	21 46 04.1	-0.1
J16K	**Anvik River**	**8.28**	**356**	Pn	Pn	21 46 12.1	0.0
J17K	**VABM Dome**	**8.37**	**1**	Pn	Pn	21 46 13.2	-0.2
J18K	**Innoko River**	**8.54**	**8**	Pn	Pn	21 46 16.6	+0.8
HIN	**Hinchinbrook I**	**8.70**	**47**		Pn	21 46 15.4	-2.6
FID	**Port Fidalgo**	**8.90**	**45**		Pn	21 46 17.3	-3.5
J19K	**Poorman**	**9.16**	**10**	Pn	Pn	21 46 24.4	+0.2
KOFP	**Korovin Flat P**	**9.19**	**258**		Pn	21 46 23.6	-1.2
ATKA	**Atka Island**	**9.28**	**258**	Pn	Pn	21 46 24.9	-1.0
J20K	**Nowinta River**	**9.52**	**14**	Pn	Pn	21 46 29.9	+0.8
H17K	**Granite Mounta**	**9.92**	**359**	Pn	Pn	21 46 35.1	+0.5
GLB	**Gilahina Butte**	**10.37**	**46**	Pn	Pn	21 46 44.0	+3.2
ADK	**Adak**	**10.81**	**260**	Pn	Pn	21 46 46.1	-0.7
KIWB	**Kanaga Island**	**11.09**	**261**	Pn	Pn	21 46 49.9	-0.7
G19K	**Purcell Mounta**	**11.18**	**5**	Pn	Pn	21 46 51.1	-0.7
G21K	**Allakaket**	**11.84**	**11**	Pn	Pn	21 47 00.4	-0.5
BCAR	**Beaver Creek A**	**12.05**	**41**	Pn	Pn	21 47 05.2	+1.4
I28M	**Miner Creek**	**14.11**	**35**	P	P	21 47 39.4	0.0
I29M	**Ogilvie Camp,**	**14.60**	**37**	P	P	21 47 44.5	-0.3
H29M	**Whitestone**	**15.10**	**34**	P	P	21 47 49.2	-1.0
H29M				IAmb	IAmb	21 48 24.5	
	comp=E,2.8nm,1.0s						
I30M	**Mount Dempster**	**15.21**	**39**	P	P	21 47 52.0	+0.4
I30M				IAmb	IAmb	21 47 56.4	
	comp=E,2.1nm,0.8s						
H31M	**Peel River**	**16.23**	**39**		P	21 48 01.8	-1.1
H31M				IAmb	IAmb	21 48 16.0	
	comp=E,3.5nm,1.1s						

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*SKHL **27** 21:44:39.2±0.1,46°.40N×152°.90E,h106km±6km,mb5.0/4, msh5.7/3*
*IDC **27** 21:44:41.2±2.3,46°.89N×152°.80E,h93km±20km,mb3.4/15, mbtmp3.8/19,MS3.7/1,Error ellipse: s-maj=21.5km s-min=12.7km az=132.0*
*MOS **27** 21:44:41.2±1.5,46°.84N×152°.63E,h105km,mb4.2/11, Error ellipse: s-maj=12.2km s-min=7.8km az=64.6*
*NEIC **27** 21:44:41.3±1.5,47°.0N±0°.1×152°.7E±0°.1,h88km±8km, mb4.3/17,Error ellipse: s-maj=22.8km s-min=2.1km az=145.0*
ISC 27 21:44:40.4±0.7,46°.56N±0°.09×152°.85E±0°.08,h100km,n92, σ1ş53/91,mb4.0/26,4C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**3.61**	**251**	*eP*	**Pn**	**21 45 33.3**	**-1.0**
REI				AMB	AMB	21 45 34.3	
	120nm,0.3s						
REI				*eS*	**Sn**	**21 46 13.9**	**-2.1**
REI				A	A	21 46 17.9	
	60nm,0.2s						
REI				A	A	21 46 17.9	
	50nm,0.2s						
KUR	**Kuril'sk**	**3.72**	**251**	PN	**Pn**	**21 45 35.1**	**-0.7**
KUR				S	**Sn**	**21 46 18.1**	**-0.5**
KUR				pmax	pmax		
	comp=Z,98nm,0.4s						
KUR				smax	smax		
	comp=N,225nm,0.6s						
KUR				smax	smax		
	comp=E,177nm,0.5s						
KUR	**Kuril'sk**	**3.72**	**251**	*eP*	**Pn**	**21 45 35.3**	**-0.5**
KUR				AMB	AMB	21 45 35.9	
	comp=E,90nm,0.4s						
KUR				*eS*	**Sn**	**21 46 17.3**	**-1.3**
KUR				A	A	21 46 26.7	
	comp=E,240nm,0.3s						
KUR				A	A	21 46 26.7	
	comp=E,160nm,0.3s						
SKR	**Severo-Kuril's**	**4.66**	**27**	⇑*eP*N	**Pn**	**21 45 48.9**	**+0.5**
SKR	**Severo-Kuril's**	**4.66**	**27**	*eP*	**Pn**	**21 45 49.0**	**+0.5**
SKR				*eS*	**Sn**	**21 46 41.9**	**+0.6**
SHO	**Shikotan**	**5.03**	**240**	*eP*	Pn	21 46 03.5	+10
SHO				AMB	AMB	21 46 07.6	
	comp=E,30nm,0.3s						
SHO				*eS*	Sn	21 46 59.1	+8.8
SHO				A	A	21 47 08.5	
	comp=E,120nm,0.4s						
SHO				A	A	21 47 08.5	
	comp=E,160nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.54**	**245**	*eP*	**Pn**	**21 45 59.1**	**-1.2**
YUK				*eS*	**Sn**	**21 46 59.5**	**-3.1**
NMR	**Nemuro--Hokkai**	**5.97**	**240**	*eP*	**Pn**	**21 46 03.1**	**-3.2**
NMR				*eS*	**Sn**	**21 47 08.4**	**-4.8**
AKK	**Akkeshi**	**6.71**	**241**	*eP*	**Pn**	**21 46 12.8**	**-3.4**
YSS	**Yuzhno-Sakhali**	**6.94**	**277**	*eP*N	**Pn**	**21 46 20.4**	**+1.0**
YSS				*eS*	**Sn**	**21 47 37.0**	**+0.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				smax	smax		
	comp=N,20nm,0.3s						
YSS				smax	smax		
	comp=E,10.0nm,0.4s						
YSS	**Yuzhno-Sakhali**	**6.94**	**277**	Pn	**Pn**	**21 46 19.6**	**+0.2**
YSS	**Yuzhno-Sakhali**	**6.94**	**277**	*eP*	**Pn**	**21 46 20.4**	**+1.0**
PEA0B	**Petropavlovsk-**	**7.26**	**24**	⇑*eP*N	**Pn**	**21 46 23.1**	**-0.7**
PEA0B	**Petropavlovsk-**	**7.26**	**24**	Pn	**Pn**	**21 46 20.0**	**-3.8**
PETK	**Petropavlovsk-**	**7.26**	**24**	P	**Pn**	**21 46 20.0**	**-3.8**
	comp=E,6.6nm,0.8s,baz=193,slow=12,SNR=7.1						
PETK				S	**Sn**	**21 47 40.4**	**-4.2**
	comp=E,1.1nm,0.4s,baz=77,slow=22,SNR=1.4						
PETK	**Petropavlovsk-**	**7.26**	**24**	*e*PN	**Pn**	**21 46 22.9**	**-0.9**
PETK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PETK	**Petropavlovsk-**	**7.26**	**24**	Pn	**Pn**	**21 46 19.7**	**-4.1**
JKA	**Kamikawa-asahi**	**7.62**	**255**	Pn	**Pn**	**21 46 28.6**	**-0.1**
JKA	**Kamikawa-asahi**	**7.62**	**255**	*e*P	**Pn**	**21 46 29.9**	**+1.2**
ASAJ	**Asahikawa**	**7.62**	**255**	P	**Pn**	**21 46 29.9**	**+1.2**
	comp=Z,19nm,0.8s,baz=72,slow=18,SNR=7.3						
ERM	**Erimo**	**8.30**	**240**	PN	**Pn**	**21 46 36.6**	**-1.3**
ERM	**Erimo**	**8.30**	**240**	Pn	**Pn**	**21 46 36.6**	**-1.3**
MJAR	**Matsushiro Arr**	**14.82**	**233**	P	**P**	**21 48 09.5**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=28,slow=7.8,SNR=5.4						
MJB9	**Matsu-Tunnel**	**14.82**	**233**	P	**P**	**21 48 10.3**	**+2.2**
MAJO	**Matsushiro**	**14.82**	**233**	P	**P**	**21 48 10.0**	**+1.9**
MAJO	**Matsushiro**	**14.82**	**233**	P	**P**	**21 48 10.0**	**+1.9**
USRK	**Ussuriysk Ar.**	**14.84**	**268**	P	**Pn**	**21 48 05.5**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=72,slow=13,SNR=4.4						
HEH	**HeiHe**	**17.25**	**292**	*eP*	**Pn**	**21 48 35.0**	**+0.1**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSRS	**Korea Array**	**20.56**	**253**	P	Pn	21 49 14.6	+0.5
	comp=Z,1.2nm,0.7s,baz=57,slow=9.3,SNR=7.5						
	comp=Z,1.2nm,0.7s						
H11N2	**WAKE ISLAND Hy 29.14 152**			T	T	22 21 44.4	
	baz=340,slow=75,SNR=212						
H11N1	**WAKE ISLAND Hy 29.15 152**			T	T	22 22 05.3	
	baz=340,slow=75,SNR=129						
H11N3	**WAKE ISLAND Hy 29.15 152**			T	T	22 21 46.8	
	baz=340,slow=75,SNR=139						
H11S1	**WAKE ISLAND Hy 30.22 153**			T	T	22 23 00.5	
	baz=341,slow=76,SNR=172						
H11S3	**WAKE ISLAND Hy 30.23 153**			T	T	22 23 00.7	
	baz=341,slow=76,SNR=178						
H11S2	**WAKE ISLAND Hy 30.24 153**			T	T	22 23 01.9	
	baz=341,slow=76,SNR=177						
G18K	**Tagagawik**	**32.04**	**35**	P	**P**	**21 50 57.2**	**+0.1**
G18K				IAmb	IAmb	21 51 22.5	
	comp=Z,8.2nm,1.3s						
E19K	**Redstone River**	**32.95**	**33**	P	**P**	**21 51 05.0**	**0.0**
E19K				IAmb	IAmb	21 51 38.5	
	comp=Z,5.8nm,1.1s						
J19K	**Poorman**	**32.98**	**39**	P	**P**	**21 51 05.7**	**+0.5**
J19K				IAmb	IAmb	21 51 14.6	
	comp=Z,9.3nm,1.5s						
H21K	**Melozitna Rive**	**34.37**	**37**	P	**P**	**21 51 16.1**	**-1.2**
H21K				IAmb	IAmb	21 51 18.7	
	comp=Z,4.2nm,1.1s						
E22K	**Anaktuvuk Pass**	**35.11**	**32**	P	**P**	**21 51 23.5**	**-0.2**
E22K				IAmb	IAmb	21 51 53.1	
	comp=Z,3.5nm,1.1s						
COLA	**College**	**36.40**	**38**	⇓*eP*	**P**	**21 51 35.7**	**+1.0**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.9s						
F24K	**Squaw Lake**	**36.51**	**34**	P	**P**	**21 51 35.6**	**0.0**
F24K				IAmb	IAmb	21 51 38.9	
	comp=Z,3.2nm,1.2s						
ILAR	**Eielson Array**	**36.81**	**38**	P	**P**	**21 51 36.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=278,slow=8.3,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**36.81**	**38**	*eP*	**P**	**21 51 40.9**	**+2.7**
BCAR	**Beaver Creek A**	**39.16**	**41**	P	**P**	**21 51 58.4**	**+0.4**
I30M	**Mount Dempster**	**41.23**	**37**	P	**P**	**21 52 15.6**	**+0.5**
MK31	**Makanchi Array**	**46.86**	**297**	⇓*eP*	**P**	**21 53 00.0**	**-0.3**
MKAR	**Makanchi Array**	**46.86**	**297**	P	**P**	**21 53 00.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=58,slow=6.7,SNR=4.9						
MKAR				PcP	**PcP**	**21 54 33.0**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=90,slow=1.9,SNR=2.6						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**46.86**	**297**	P	**P**	**21 52 59.6**	**-0.7**
KURK	**Kurchatov**	**47.31**	**304**	*ce*P	**P**	**21 53 02.2**	**-1.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,2.2s						
KURK	**Kurchatov**	**47.31**	**304**	P	**P**	**21 53 03.2**	**-0.4**
KURK	**Kurchatov**	**47.31**	**304**	*eP*	**P**	**21 53 02.2**	**-1.4**
KURBB	**Kurchatov Arra**	**47.41**	**304**	P	**P**	**21 53 03.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=70,slow=8.3,SNR=4.1						
	comp=Z,0.6nm,0.7s						
BVAR	**Borovoye Array**	**50.84**	**309**	P	**P**	**21 53 30.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=78,slow=5.9,SNR=4.1						
BVAR				PcP	**PcP**	**21 54 46.8**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=116,slow=3.3,SNR=4.1						
	comp=Z,0.3nm,0.4s						
RES	**Resolute Bay**	**51.07**	**18**	LR	LR	22 17 59.3	
	comp=Z,78nm,18.7s,baz=283,slow=39						
CMAR	**Chiang Mai Arr**	**52.15**	**256**	P	**P**	**21 53 42.5**	**+1.9**
	comp=Z,1.0nm,0.8s,baz=34,slow=7.3,SNR=8.6						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.15**	**256**	*eP*	**P**	**21 53 43.6**	**+2.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SHL	**Shillong**

comp=Z,0.1nm,0.5s,baz=325,slow=7.0,SNR=2.4
comp=Z,0.1nm,0.5s

TXAR	**Lajitas Array**	**77.75**	**60**	P	**P**	**21 56 26.9 +0.3**
TXAR	**Lajitas Array**	**77.75**	**60**	P	**P**	**21 56 26.9 +0.3**
GERES	**GERESS Array B**	**78.54**	**334**	P	**P**	**21 56 30.6 0.0**

comp=Z,0.3nm,0.6s,baz=81,slow=4.2,SNR=3.8
comp=Z,0.3nm,0.6s

GERES	**GERESS Array B**	**78.54**	**334**	*e*P	**P**	**21 56 29.5 -1.1**

JMA **27** *21:57:08.7±0.5,22°N±2°×12°3E±°, h41km, MV3.4/12, FAR S OFF ISHIGAKIJIMA*
MAN **27** *21:57:09.0,21°.61N×122°.42E, h33km, MS3.2*
TAP **27** *21:57:09.8,21°.77N×122°.68E, h32km±1km, ML3.6, D*
ISC 27 21:57:05.2±1.7**,21°.67N**±0°.04×**122°.79E**±0°.04**, h15**km±12km**, n106,σ1°71/183,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**1.16**	**287**	*i* P		**Pg**	**21 57 28.4**	**+0.7**
LYUB				*i* S		**Sb**	**21 57 42.1**	**+0.1**
LAY	**Lan-yu**	**1.20**	**288**	P		**Pn**	**21 57 28.1**	**+0.5**
LAY				S		**Sb**	**21 57 42.7**	**-0.5**
TSEB	**Hengchuen, Pin**	**1.77**	**278**	P		**Pg**	**21 57 38.9**	**-0.3**
TSEB				*e*S		**Sb**	**21 58 00.2**	**+0.8**
SMST	**Manzhou Townsh**	**1.84**	**281**	P		**Pb**	**21 57 38.8**	**+0.1**
SMST				*i* S		**Sn**	**21 57 59.7**	**+0.2**
TWKBT	**Hengchun**	**1.85**	**279**	P		**Pb**	**21 57 39.4**	**+0.6**
TWKBT				*e*S		**Sn**	**21 58 01.0**	**+1.2**
TWK1	**Hengchun**	**1.86**	**279**	*e*P		**Pb**	**21 57 39.2**	**+0.2**
TAW	**Tawu**	**1.88**	**292**	*e*P		**Pn**	**21 57 38.1**	**+1.2**
TAW				*e*S		**Sn**	**21 57 59.7**	**-0.8**
EAST	**Anshuo**	**1.93**	**292**	P		**Pn**	**21 57 39.2**	**+1.5**
EAST				*i* S		**Sn**	**21 58 01.7**	**-0.1**
ECL	**Taimali**	**1.93**	**299**	*e*P		**Pn**	**21 57 38.9**	**+1.3**
ECL				S		**Sn**	**21 58 00.6**	**-1.1**
HEN	**Hengchun**	**1.93**	**280**	P		**Pb**	**21 57 41.0**	**+0.8**
HEN				S		**Sn**	**21 58 03.0**	**+1.4**
CHKT	**Chengkung**	**1.94**	**317**	P		**Pn**	**21 57 37.9**	**+0.3**
CHKT				S		**Sn**	**21 57 59.8**	**-2.2**
TWGBT	**Beinan**	**1.95**	**306**	P		**Sn**	**21 57 39.7**	**+1.8**
TWGBT	**Beinan**	**1.95**	**306**	P		**Sn**	**21 58 00.4**	**-1.7**
TWGBT	**Beinan**	**1.95**	**306**	P		**Sn**	**21 57 39.5**	**+1.7**
TWGBT				*i* S		**Sn**	**21 58 01.7**	**-0.4**
TWG	**Pinlang**	**1.96**	**306**	*e*P		**Pn**	**21 57 39.5**	**+1.6**
TWG				*i* S		**Sn**	**21 58 01.6**	**-0.7**
CHKH	**Chenggong**	**1.98**	**320**	P		**Pn**	**21 57 39.0**	**+0.7**
CHKH				S		**Sn**	**21 58 01.4**	**-1.5**
ECS	**Chishang**	**2.03**	**315**	*e*P		**Pn**	**21 57 40.1**	**+1.2**
ECS				*e*S		**Sn**	**21 58 04.1**	**+0.1**
ECBN	**Changbin**	**2.05**	**323**	P		**Pn**	**21 57 40.0**	**+0.8**
ECBN				*e*S		**Sn**	**21 58 02.5**	**-2.1**
FULB	**Fuli**	**2.05**	**318**	P		**Pn**	**21 57 39.9**	**+0.6**
FULB				*e*S		**Sn**	**21 58 03.1**	**-1.6**
EHD	**Haiduan**	**2.07**	**315**	*e*P		**Pn**	**21 57 40.8**	**+1.2**
EHD				*e*S		**Sn**	**21 58 04.4**	**-0.8**
SCZT	**Fangliau**	**2.13**	**289**	*e*P		**Pb**	**21 57 42.5**	**-1.0**
YULB	**Yu-li**	**2.20**	**321**	P		**Pn**	**21 57 42.1**	**+0.8**
YULB	**Yu-li**	**2.20**	**321**	P		**Sn**	**21 58 04.5**	**-3.7**
YULB	**Yu-li**	**2.20**	**321**	*i* P		**Pn**	**21 57 42.5**	**+1.2**
YULB				*e*S		**Sn**	**21 58 07.4**	**-0.8**
MASBT	**Mashibuluo**	**2.20**	**295**	*e*P		**Pb**	**21 57 43.8**	**-1.1**
HGSD	**Ruisui**	**2.21**	**325**	P		**Pn**	**21 57 42.2**	**+0.8**
HGSD				S		**Sn**	**21 58 05.8**	**-2.6**
ELDTW	**Lidau**	**2.23**	**313**	*e*P		**Pn**	**21 57 43.3**	**+1.5**
ELDTW				S		**Sn**	**21 58 07.8**	**-1.3**
EHYH	**Wanrong**	**2.25**	**324**	*i* P		**Pn**	**21 57 43.1**	**+1.2**
EHYH				*e*S		**Sn**	**21 58 08.5**	**-1.0**
SSD	**Sandimen**	**2.26**	**299**	*e*P		**Pb**	**21 57 44.7**	**-1.2**
EHY	**Hungye**	**2.27**	**324**	P		**Pb**	**21 57 44.8**	**-1.2**
EHY				S		**Sn**	**21 58 10.1**	**0.0**
TEGC	**Jichi Village**	**2.33**	**331**	*e*P		**Pn**	**21 57 45.6**	**+2.5**
TEGC				*e*S		**Sn**	**21 58 10.3**	**-1.2**
SLGT	**Liugui**	**2.38**	**304**	*e*P		**Pb**	**21 57 46.9**	**-0.9**
STYH	**Taoyuan**	**2.38**	**309**	*e*P		**Pn**	**21 57 45.7**	**+1.9**
SHUL	**Shoufeng**	**2.39**	**332**	*e*P		**Pn**	**21 57 45.5**	**+1.6**
SHUL				S		**Sn**	**21 58 11.4**	**-1.5**
WARBT	**Fenglin Townsh**	**2.41**	**328**	*e*P		**Pn**	**21 57 45.6**	**+1.3**
WARBT				*e*S		**Sn**	**21 58 12.6**	**-1.0**
TEYL	**Yanliau Villag**	**2.44**	**334**	*e*P		**Pn**	**21 57 46.8**	**+2.1**
TEYL				*e*S		**Sn**	**21 58 15.1**	**+0.7**
ESL	**Shilin**	**2.47**	**330**	*e*P		**Pn**	**21 57 46.2**	**+1.1**
ESL				S		**Sn**	**21 58 13.5**	**-1.5**
EOS4	**EOS4**	**2.47**	**350**	*e*P		**Pn**	**21 57 47.4**	**+2.6**
EOS4				*i* S		**Sn**	**21 58 14.5**	**-0.1**
SGST	**Jiashian**	**2.48**	**305**	*e*P		**Pb**	**21 57 48.3**	**-1.2**
SGST				S		**Sn**	**21 58 17.1**	**+2.0**
WTP	**Ta-pu**	**2.55**	**308**	*i* P		**Pb**	**21 57 50.4**	**-0.3**
WTP				*e*S		**Sb**	**21 58 20.6**	**-1.4**
HATJ	**Hateruma jima**	**2.55**	**21**	*i* P		**Pn**	**21 57 48.1**	**+1.9**
HATJ				S		**Sn**	**21 58 16.5**	**-0.5**
VWDT	**VWDT**	**2.57**	**324**	*e*P		**Pn**	**21 57 48.2**	**+1.8**
TPUB	**Ta-pu**	**2.57**	**309**	P		**Pb**	**21 57 49.8**	**-1.3**
TPUB	**Ta-pu**	**2.57**	**309**	*e*P		**Pb**	**21 57 49.4**	**-1.7**
TPUB				*e*S		**Sn**	**21 58 20.2**	**+2.7**
CHN1	**Nanshi**	**2.58**	**306**	*e*P		**Pb**	**21 57 50.6**	**-0.6**
CHN1				*e*S		**Sb**	**21 58 21.2**	**-1.5**
ETM	**Tongmen**	**2.58**	**333**	*e*P		**Pn**	**21 57 47.4**	**+0.9**
ETM				*e*S		**Sn**	**21 58 15.7**	**-1.9**
ALS	**Alishan**	**2.59**	**315**	P		**Pn**	**21 57 49.7**	**+2.7**
ALS				*e*S		**Sn**	**21 58 19.7**	**+1.4**
CHN4	**Tsaushan**	**2.63**	**310**	P		**Pb**	**21 57 51.2**	**-0.8**
CHN4				S		**Sb**	**21 58 22.7**	**-1.5**
EOS3	**EOS3**	**2.64**	**351**	*e*P		**Pb**	**21 57 50.8**	**-1.4**
EOS3				*e*S		**Sn**	**21 58 19.6**	**+0.7**
TWK	**Hsinying**	**2.65**	**307**	*i* P		**Pb**	**21 57 51.9**	**-0.6**
TWK				*e*S		**Sn**	**21 58 22.2**	**+2.7**
LXIB	**Xiulin Townshi**	**2.66**	**332**	P		**Pn**	**21 57 49.3**	**+1.5**
LXIB				S		**Sn**	**21 58 18.7**	**-1.1**
WCKO	**Fanlu**	**2.67**	**311**	P		**Pb**	**21 57 52.4**	**-0.5**
WCKO				*e*S		**Sb**	**21 58 24.1**	**-1.5**
WHYT	**Xinyi Township**	**2.69**	**319**	P		**Pb**	**21 57 51.4**	**-1.7**
WHYT				*e*S		**Sn**	**21 58 22.7**	**+2.2**
ETL	**Fush Village**	**2.70**	**337**	*e*P		**Pn**	**21 57 49.8**	**+1.6**
ETL				*e*S		**Sn**	**21 58 19.1**	**-1.5**
SSLB	**Suanglung**	**2.70**	**322**	P		**Pn**	**21 57 50.7**	**+2.5**
SSLB	**Suanglung**	**2.70**	**322**	*e*P		**Pn**	**21 57 50.4**	**+2.2**
OWD	**Renai**	**2.71**	**327**	*e*P		**Pn**	**21 57 50.5**	**+2.0**
OWD				*e*S		**Sn**	**21 58 19.9**	**-1.3**
NACB	**Ninganchiao**	**2.72**	**336**	P		**Pn**	**21 57 49.4**	**+0.9**
NACB	**Ninganchiao**	**2.72**	**336**	S		**Sn**	**21 58 16.9**	**-4.3**
NACB	**Ninganchiao**	**2.72**	**336**	P		**Pn**	**21 57 49.9**	**+1.4**
NACB				*e*S		**Sn**	**21 58 19.9**	**-1.3**
CHN5	**Tsauling**	**2.73**	**315**	*e*P		**Pb**	**21 57 52.9**	**-1.0**
JYNG	**Yonagunijimaku**	**2.77**	**3**	*e*S		**Sn**	**21 58 23.7**	**+1.3**
WUSB	**Renai**	**2.77**	**327**	*e*P		**Pn**	**21 57 51.6**	**+2.3**
WUSB				*e*S		**Sn**	**21 58 21.0**	**-1.7**
EOS2	**EOS2**	**2.78**	**350**	*e*P		**Pn**	**21 57 52.7**	**+2.8**
EOS2				*e*S		**Sn**	**21 58 23.7**	**+1.2**
YOJ	**Yonaguni jima**	**2.78**	**4**	P		**Pn**	**21 57 52.4**	**+3.1**
YOJ	**Yonaguni jima**	**2.78**	**4**	*e*P		**Pn**	**21 57 52.0**	**+2.7**
YOJ				*e*S		**Sn**	**21 58 24.5**	**+1.8**
IRIF	**Iriomote-Funau**	**2.79**	**18**	P		**Pn**	**21 57 51.6**	**+2.2**
IRIF				*e*S		**Sn**	**21 58 23.8**	**+1.0**
JKRS	**Kuro-shima**	**2.79**	**24**	P		**Pn**	**21 57 51.3**	**+1.9**
JKRS				*e*S		**Sn**	**21 58 22.9**	**0.0**
ETLH	**Xiulin Townshi**	**2.79**	**335**	*i* P		**Pn**	**21 57 51.2**	**+1.6**
ETLH				S		**Sn**	**21 58 22.4**	**-0.7**
SMLT	**Sun Moon Lake**	**2.81**	**322**	*e*P		**Pb**	**21 57 53.7**	**-1.5**
SMLT				*e*S		**Sn**	**21 58 24.3**	**+0.9**
WHF	**Hehuan Shan**	**2.83**	**331**	*e*P		**Pn**	**21 57 52.1**	**+1.7**
WHF				*e*S		**Sn**	**21 58 23.2**	**-1.3**
CHY	**Chiayi**	**2.84**	**310**	*e*P		**Pb**	**21 57 54.2**	**-1.4**
TYC	**Yuchr**	**2.85**	**322**	*e*P		**Pb**	**21 57 53.8**	**-2.0**
TYC				*e*S		**Sn**	**21 58 26.1**	**+1.8**
WJS	**Zhushan**	**2.86**	**319**	*e*P		**Pb**	**21 57 54.8**	**-1.2**
WDLH	**Douliu**	**2.89**	**314**	*e*P		**Pb**	**21 57 54.6**	**-1.9**
ENA	**Nanau**	**2.91**	**341**	*e*P		**Pn**	**21 57 51.4**	**+0.3**
ENA				*e*S		**Sn**	**21 58 23.8**	**-2.0**
EWUT	**Wuta**	**2.91**	**342**	*e*P		**Pn**	**21 57 51.7**	**+0.6**
WCS	**Beigang Elemen**	**2.94**	**324**	*e*P		**Pb**	**21 57 55.0**	**-2.4**
JIJ	**Ishigaki jima**	**2.96**	**25**	P		**Pn**	**21 57 53.1**	**+1.4**
JIJ				S		**Sn**	**21 58 25.6**	**-1.3**
TWT	**Tachien**	**2.97**	**330**	*e*P		**Pn**	**21 57 55.5**	**+3.4**
TWT				S		**Sn**	**21 58 27.4**	**-0.1**
TDCB	**Techi**	**2.97**	**330**	*e*P		**Pn**	**21 57 55.1**	**+3.0**
TDCB				*e*S		**Sn**	**21 58 27.0**	**-0.6**
NNSB	**Datong**	**3.03**	**335**	P		**Pn**	**21 57 55.3**	**+2.4**
NNSB				S		**Sn**	**21 58 28.7**	**-0.3**
NNS	**Nan Shan**	**3.05**	**335**	P		**Pn**	**21 57 56.0**	**+2.9**
NNS				S		**Sn**	**21 58 29.0**	**-0.4**
TWC	**Suao**	**3.05**	**344**	*e*P		**Pn**	**21 57 55.4**	**+2.4**
TWC				*e*S		**Sn**	**21 58 30.1**	**+0.9**
LATG	**Datong**	**3.08**	**338**	P		**Pn**	**21 57 56.2**	**+2.7**
LATG				*e*S		**Sn**	**21 58 29.7**	**-0.4**
WHP	**Taichung City**	**3.10**	**327**	*e*P		**Pb**	**21 57 57.9**	**-2.3**
WHP				*e*S		**Sn**	**21 58 32.1**	**+1.5**
NDS	**Dongshan**	**3.11**	**342**	*e*P		**Pn**	**21 57 56.8**	**+3.0**
NDS				*e*S		**Sn**	**21 58 30.8**	**+0.1**
NDT	**Datong Townshi**	**3.14**	**338**	*e*P		**Pn**	**21 57 57.9**	**+3.6**
NDT				*e*S		**Sn**	**21 58 31.6**	**0.0**
JISG	**Ishigakijimahi**	**3.22**	**26**	P		**Pn**	**21 57 56.9**	**+1.5**
JISG				S		**Sn**	**21 58 32.4**	**-1.1**
YHNB	**Yeheng**	**3.25**	**337**	P		**Pn**	**21 57 58.2**	**+2.3**
YHNB	**Yeheng**	**3.25**	**337**	*e*P		**Pn**	**21 57 58.9**	**+3.1**
YHNB				S		**Sn**	**21 58 35.0**	**+0.6**
FUSB	**Fushanzhiwuyua**	**3.26**	**340**	*e*P		**Pn**	**21 57 59.4**	**+3.4**
FUSB				*e*S		**Sn**	**21 58 36.1**	**+1.4**
NSK	**Sanguang**	**3.27**	**337**	*e*P		**Pn**	**21 57 58.6**	**+2.5**
NSK				*e*S		**Sn**	**21 58 34.6**	**-0.1**
WDGT	**Dungji**	**3.29**	**299**	P		**Pn**	**21 57 58.6**	**+2.2**
WDGT				S		**Sn**	**21 58 35.0**	**-0.3**
NWLT	**Wulai**	**3.31**	**339**	*e*P		**Pn**	**21 58 00.1**	**+3.5**
NWLT				S		**Sn**	**21 58 36.5**	**+0.9**
NFF	**Wufeng Townshi**	**3.32**	**333**	*e*P		**Pb**	**21 58 01.6**	**-2.3**
NFF				*e*S		**Sn**	**21 58 36.1**	**0.0**
NSTT	**Nanjuang**	**3.37**	**331**	*e*P		**Pb**	**21 58 01.8**	**-2.9**
NSTT				*e*S		**Sn**	**21 58 38.2**	**+1.0**
LIOB	**Emei**	**3.38**	**331**	*e*P		**Pb**	**21 58 02.5**	**-2.4**
TIPB	**Shuangxi**	**3.40**	**345**	*e*P		**Pn**	**21 58 01.4**	**+3.6**
TIPB				*e*S		**Sn**	**21 58 39.0**	**+1.0**
VCHM	**Qimei**	**3.46**	**297**	P		**Pn**	**21 58 00.5**	**+1.4**
VCHM				S		**Sn**	**21 58 39.2**	**-0.2**
PACPP	**Pamplona Cagay**	**3.47**	**203**	*i* S		**Sn**	**21 58 36.9**	**-2.8**
PACPP	**Pamplona Cagay**	**3.47**	**203**	*i* P		**Pn**	**21 57 59.4**	**+0.6**
SXI1	**Grass Mountain**	**3.51**	**346**	*e*P		**Pn**	**21 58 00.9**	**+1.5**
SXI1				*e*S		**Sn**	**21 58 40.9**	**+0.2**
PNG	**Penghu**	**3.53**	**303**	*e*P		**Pn**	**21 58 00.5**	**+0.9**
ZUZH	**Zhuzihu**	**3.66**	**342**	*e*P		**Pn**	**21 58 04.8**	**+3.4**
ZUZH				*e*S		**Sn**	**21 58 45.2**	**+0.9**
VWUC	**VWUC**	**4.51**	**318**	*e*P		**Pn**	**21 58 14.7**	**+1.7**
VWUC				*e*S		**Sn**	**21 59 03.1**	**-2.1**

JMA 27 22:08:13.8±0.2**,25°N**±1°×**123°.4E**±0°.3**, h25**km**, MV1.4**/10**,**
NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.58**	**218**	P		**Pb**	**22 08 25.0**	**-0.3**
YOJ	**Yonaguni jima**	**0.58**	**218**	*e*P		**Pb**	**22 08 25.0**	**-0.3**
IRIF	**Iriomote-Funau**	**0.66**	**152**	P		**Pb**	**22 08 26.4**	**-0.3**
JIJ	**Ishigaki jima**	**0.88**	**129**	P		**Pb**	**22 08 29.8**	**-0.6**
JIJ				*e*S		**Sb**	**22 08 40.6**	**-1.1**
JKRS	**Kuro-shima**	**0.88**	**141**	*e*P		**Pb**	**22 08 30.2**	**-0.2**
JKRS				*e*S		**Sb**	**22 08 41.8**	**0.0**
JISG	**Ishigakijimahi**	**0.90**	**112**	*e*P		**Pb**	**22 08 30.2**	**-0.5**
JISG				*e*S		**Sb**	**22 08 41.8**	**-0.5**
HATJ	**Hateruma jima**	**0.94**	**157**	*e*P		**Pn**	**22 08 31.1**	**-0.4**
JMJ2	**Miyako jima3**	**1.76**	**95**	S		**Sb**	**22 09 06.5**	**-0.7**
JOGS	**Gusukube**	**1.83**	**95**	*e*S		**Sb**	**22 09 07.9**	**-1.3**

IDC **27** *22:07:58.3±1.6,25°.00N×121°.78E, h0km, mb3.6/8, mbtmp3.6/8, MS3.6/2, Error ellipse: s-maj=143.3km s-min=18.6km az=64.0*
JMA **27** *22:08:14.8±0.2,24°.9N±0°.8×121°.7E±0°.6, h132km±1km, MV3.5/14, TAIWAN REGION*
TAP **27** *22:08:14.6,25°.04N×121°.67E, h137km, ML4.3, B*
ISC 27 22:08:14.2±0.8**,25°.06N**±0°.03×**121°.69E**±0°.03**, h137**km±4km**, n164,σ0°80/272,mb3.4/8,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WFSB	**Wu-fen Shan**	**0.09**	**85**	P		**Pn**	**22 08 33.1**	**+0.4**
WFSB				*i* S		**Sn**	**22 08 46.9**	**+0.2**
NHY	**Taipei**	**0.11**	**257**	*e*P		**Pn**	**22 08 33.2**	**+0.5**
NHY				*e*S		**Sn**	**22 08 46.9**	**+0.2**
TNOU	**National Taiwa**	**0.12**	**43**	*i* P		**Pn**	**22 08 33.0**	**+0.3**
TNOU				S		**Sn**	**22 08 46.1**	**-0.7**
TIPB	**Shuangxi**	**0.16**	**126**	P		**Pn**	**22 08 33.1**	**+0.2**
TIPB				*i* S		**Sn**	**22 08 46.6**	**-0.4**
ZUZH	**Zhuzihu**	**0.16**	**308**	*i* P		**Pn**	**22 08 33.0**	**+0.2**
TAP	**Taipei**	**0.16**	**261**	*e*P		**Pn**	**22 08 32.9**	**+0.1**
TAP				*i* S		**Sn**	**22 08 46.2**	**-0.6**
SXI1	**Grass Mountain**	**0.17**	**80**	*e*P		**Pn**	**22 08 33.2**	**+0.2**
SXI1				*i* S		**Sn**	**22 08 47.6**	**+0.5**
NHDH	**Xindian Distri**	**0.18**	**235**	*e*P		**Pn**	**22 08 33.0**	**+0.1**
NHDH				S		**Sn**	**22 08 46.4**	**-0.5**
ANP	**Anpu**	**0.19**	**309**	*i* P		**Pn**	**22 08 33.2**	**+0.2**
ANP				S		**Sn**	**22 08 46.8**	**-0.5**
TATO	**Taipei**	**0.20**	**244**	P		**Pn**	**22 08 32.8**	**-0.1**
TATO	**Taipei**	**0.20**	**244**	S		**Sn**	**22 08 46.4**	**-0.6**
TWY	**Chenhua**	**0.23**	**340**	*i* P		**Pn**	**22 08 33.4**	**+0.4**
TWY				*i* S		**Sn**	**22 08 47.3**	**+0.1**
NTST	**Danshui**	**0.24**	**295**	*e*P		**Pn**	**22 08 33.4**	**+0.4**
TWS1	**Kuangyinshan**	**0.24**	**279**	*i* P		**Pn**	**22 08 33.4**	**+0.4**
TWS1				*i* S		**Sn**	**22 08 47.0**	**-0.3**
NTC	**Toucheng**	**0.25**	**148**	*e*P		**Pn**	**22 08 33.6**	**+0.6**
NTC				*e*S		**Sn**	**22 08 47.8**	**+0.5**
TWB1	**Santiao Chiao**	**0.28**	**101**	*e*P		**Pn**	**22 08 33.8**	**+0.7**
TWB1				S		**Sn**	**22 08 47.9**	**+0.5**
ILA	**Ilan**	**0.30**	**169**	*e*P		**Pn**	**22 08 33.7**	**+0.5**
ILA				*e*S		**Sn**	**22 08 47.6**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.32**	**196**	*i* P		**Pn**	**22 08 33.3**	**-0.1**
FUSB				S		**Sn**	**22 08 46.9**	**-1.0**
NWLT	**Wulai**	**0.33**	**210**	*i* P		**Pn**	**22 08 33.2**	**-0.2**
NWLT				S		**Sn**	**22 08 46.8**	**-1.0**
NDS	**Dongshan**	**0.43**	**176**	*e*P		**Pn**	**22 08 34.1**	**+0.3**
NDS				*i* S		**Sn**	**22 08 48.5**	**0.0**
NCUH	**Zhongli**	**0.46**	**258**	*i* P		**Pn**	**22 08 34.2**	**+0.4**
TWC	**Suao**	**0.48**	**162**	*i* P		**Pn**	**22 08 34.6**	**+0.6**
TWC				*e*S		**Sn**	**22 08 50.0**	**+1.1**
YHNB	**Yeheng**	**0.48**	**216**	P		**Pn**	**22 08 33.9**	**-0.2**
YHNB	**Yeheng**	**0.48**	**216**	S		**Sn**	**22 08 48.0**	**-1.1**
YHNB	**Yeheng**	**0.48**	**216**	*i* P		**Pn**	**22 08 34.0**	**-0.2**
YHNB				S		**Sn**	**22 08 47.8**	**-1.3**
NDT	**Datong Townshi**	**0.48**	**199**	*e*P		**Pn**	**22 08 34.2**	**+0.1**
NDT				*i* S		**Sn**	**22 08 48.6**	**-0.4**
NSK	**Sanguang**	**0.49**	**218**	*i* P		**Pn**	**22 08 34.0**	**-0.1**
NSK				*i* S		**Sn**	**22 08 47.8**	**-1.3**
KSHI	**Guanxi Townshi**	**0.54**	**238**	P		**Pn**	**22 08 34.7**	**+0.4**
KSHI				*i* S		**Sn**	**22 08 49.8**	**+0.3**
LATG	**Datong**	**0.55**	**195**	*i* P		**Pn**	**22 08 34.8**	**+0.3**
LATG				*e*S		**Sn**	**22 08 48.6**	**-1.2**
EWUT	**Wuta**	**0.62**	**172**	P		**Pn**	**22 08 35.4**	**+0.6**
EWUT				S		**Sn**	**22 08 51.8**	**+1.4**
ENA	**Nanau**	**0.64**	**175**	*e*P		**Pn**	**22 08 33.5**	**-1.4**
PCYT	**Pengchaiyu**	**0.66**	**32**	*i* P		**Pn**	**22 08 35.8**	**+0.7**
PCYT				*e*S		**Sn**	**22 08 51.6**	**+0.6**
NFF	**Wufeng Townshi**	**0.67**	**230**	*e*P		**Pn**	**22 08 35.3**	**0.0**
NFF				*i* S		**Sn**	**22 08 50.0**	**-1.1**
NNS	**Nan Shan**	**0.68**	**205**	P		**Pn**	**22 08 35.5**	**+0.1**
NNS				*e*S		**Sn**	**22 08 50.9**	**-0.5**
NNSB	**Datong**	**0.69**	**204**	P		**Pn**	**22 08 35.5**	**+0.1**
NNSB				S		**Sn**	**22 08 50.6**	**-0.9**
SBCB	**Hsinchu**	**0.69**	**247**	*i* P		**Pn**	**22 08 35.9**	**+0.7**
SBCB				S		**Sn**	**22 08 51.1**	**-0.1**
HSN	**Hsinchu**	**0.70**	**248**	*i* P		**Pn**	**22 08 35.5**	**+0.2**
HSN				*i* S		**Sn**	**22 08 50.6**	**-0.7**
LIOB	**Emei**	**0.74**	**236**	*i* P		**Pn**	**22 08 36.0**	**+0.3**
LIOB				*e*S		**Sn**	**22 08 50.7**	**-1.2**
NSTT	**Nanjuang**	**0.76**	**235**	*i* P		**Pn**	**22 08 36.0**	**+0.3**
NSTT				S		**Sn**	**22 08 51.1**	**-1.0**
EOS2	**EOS2**	**0.81**	**142**	*e*P		**Pn**	**22 08 36.9**	**+0.9**
EOS2				*e*S		**Sn**	**22 08 53.2**	**+0.7**
ETLH	**Xiulin Townshi**	**0.87**	**192**	*e*P		**Pn**	**22 08 37.1**	**+0.3**
ETLH				S		**Sn**	**22 08 54.0**	**+0.1**
NACB	**Ninganchiao**	**0.89**	**185**	P		**Pn**	**22 08 36.0**	**-0.8**
NACB	**Ninganchiao**	**0.89**	**185**	P		**Pn**	**22 08 36.4**	**-0.4**
NACB	**Ninganchiao**	**0.89**	**185**	P		**Sn**	**22 08 52.9**	**-1.1**
NACB	**Ninganchiao**	**0.89**	**185**	*i* P		**Pn**	**22 08 36.1**	**-0.7**
NACB				*i* S		**Sn**	**22 08 52.5**	**-1.5**
ETL	**Fush Village**	**0.90**	**184**	*e*P		**Pn**	**22 08 36.6**	**-0.4**
ETL				*e*S		**Sn**	**22 08 53.2**	**-1.0**
TWT	**Tachien**	**0.93**	**210**	P		**Pn**	**22 08 38.3**	**+0.9**
TWT				*i* S		**Sn**	**22 08 54.7**	**-0.3**
TDCB	**Techi**	**0.94**	**211**	*i* P		**Pn**	**22 08 38.1**	**+0.7**
TDCB				*e*S		**Sn**	**22 08 55.1**	**+0.1**
EOS3	**EOS3**	**0.96**	**143**	P		**Pn**	**22 08 38.3**	**+1.0**
EOS3				*e*S		**Sn**	**22 08 56.0**	**+1.3**
WHF	**Hehuan Shan**	**0.99**	**203**	*i* P		**Pn**	**22 08 39.0**	**+0.8**
WHF				S		**Sn**	**22 08 56.5**	**+0.1**
WHP	**Taichung City**	**1.03**	**221**	*i* P		**Pn**	**22 08 38.7**	**+0.5**
WHP				*i* S		**Sn**	**22 08 55.7**	**-0.6**
LXIB	**Xiulin Townshi**	**1.07**	**193**	*i* P		**Pn**	**22 08 38.2**	**-0.4**
LXIB				*i* S		**Sn**	**22 08 56.2**	**-0.8**
HWA	**Hwalien**	**1.08**	**184**	*e*P		**Pn**	**22 08 38.3**	**-0.2**
HWA				*e*S		**Sn**	**22 08 57.6**	**+0.6**
TWQ1	**Liyutan**	**1.09**	**230**	P		**Pn**	**22 08 39.1**	**+0.5**
TWQ1				S		**Sn**	**22 08 57.0**	**-0.2**
EOS4	**EOS4**	**1.10**	**148**	P		**Pn**	**22 08 38.4**	**+0.1**
EOS4				*e*S		**Sn**	**22 08 56.7**	**+0.1**
ETM	**Tongmen**	**1.11**	**189**	*e*P		**Pn**	**22 08 38.5**	**-0.3**
ETM				*e*S		**Sn**	**22 08 55.9**	**-1.6**
WUSB	**Renai**	**1.19**	**206**	*i* P		**Pn**	**22 08 40.4**	**+0.7**
WUSB				S		**Sn**	**22 09 00.1**	**+1.0**
WDJ	**Dajia District**	**1.19**	**233**	*e*P		**Pn**	**22 08 39.8**	**+0.3**
WDJ				*e*S		**Sn**	**22 08 59.5**	**+0.7**
TEYL	**Yanliau Villag**	**1.19**	**184**	*e*P		**Pn**	**22 08 39.7**	**0.0**
TEYL				*e*S		**Sn**	**22 08 59.9**	**+1.0**
OWD	**Renai**	**1.20**	**203**	P		**Pn**	**22 08 40.5**	**+0.7**
OWD				S		**Sn**	**22 08 58.7**	**-0.6**
WCS	**Beigang Elemen**	**1.23**	**215**	*i* P		**Pn**	**22 08 40.6**	**+0.7**
WCS				*e*S		**Sn**	**22 08 59.9**	**+0.4**
ESL	**Shilin**	**1.27**	**191**	*e*P		**Pn**	**22 08 39.3**	**-1.0**
ESL				S		**Sn**	**22 08 58.8**	**-1.4**
SHUL	**Shoufeng**	**1.28**	**185**	*e*P		**Pn**	**22 08 40.2**	**-0.2**
SHUL

JTJ				S	Sn	22 09 32.5	+0.5	
EAST	**Anshuo**	**2.78**	**196**	*e*P	Pn	22 08 59.4	+1.1	
EAST				*e*S	Sn	22 09 33.3	+1.1	
TAW	**Tawu**	**2.79**	**195**	*e*P	Pn	22 09 00.6	+2.2	
SCZT	**Fangliau**	**2.85**	**200**	*e*P	Pn	22 08 59.6	+0.4	
SCZT				*e*S	Sn	22 09 33.5	-0.4	
TWP	**Hsiaoliuchiu**	**2.96**	**204**	*e*S	Sn	22 09 39.5	+3.1	
LAY	**Lan-yu**	**3.01**	**182**	*e*P	Pn	22 09 00.5	-0.9	
LYUB	**Lan-yu**	**3.05**	**182**	*i* P	Pn	22 09 01.0	-0.8	
LYUB				*e*S	Sn	22 09 35.9	-2.6	
KNMB	**Chin-men Tao**	**3.06**	**259**	*e*P	Pn	22 09 01.7	-0.1	
SMST	**Manzhou Townsh**	**3.13**	**195**	*i* P	Pn	22 09 03.1	+0.3	
SMST				*e*S	Sn	22 09 39.8	-0.4	
TWK1	**Hengchun**	**3.21**	**195**	P	Pn	22 09 03.8	0.0	
TWK1				S	Sn	22 09 41.9	-0.3	
TWKBT	**Hengchun**	**3.21**	**195**	*e*P	Pn	22 09 04.1	+0.3	
TWKBT				*e*S	Sn	22 09 41.6	-0.6	
TSEB	**Hengchuen, Pin**	**3.23**	**193**	*e*P	Pn	22 09 05.5	+1.4	
AXDP	**Jialang**	**3.38**	**268**	P	Pn	22 09 06.1	+0.2	
ZPLA	**Ao Xicun**	**3.76**	**253**	*e*P	Pn	22 09 10.1	-0.9	
SXFK	**Yanhouchang**	**3.88**	**291**	*e*P	Pn	22 09 12.2	-0.3	
SONM	**Songino Array**	**25.75**	**336**	P	P	22 13 32.9	+0.8	
	0.5nm,0.5s,baz=159,slow=11,SNR=4.2 0.5nm,0.5s							
MKAR	**Makanchi Array**	**38.03**	**315**	P	P	22 15 19.4	+0.3	
	0.5nm,0.6s,baz=101,slow=11,SNR=5.1 0.5nm,0.6s							
ZALV	**Zalesovo Beam**	**39.76**	**326**	P	P	22 15 32.9	-0.5	
	0.6nm,0.6s,baz=108,slow=9.6,SNR=3.7 0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**41.74**	**319**	P	P	22 15 49.7	+0.1	
	0.3nm,0.5s,baz=111,slow=9.6,SNR=2.2 0.3nm,0.5s							
WRA	**Warramunga Arr**	**46.40**	**163**	P	P	22 16 26.2	-0.9	
	0.8nm,0.6s,baz=346,slow=8.6,SNR=8.2 0.8nm,0.6s							
BVAR	**Borovoye Array**	**47.29**	**320**	P	P	22 16 34.0	+0.3	
	0.3nm,0.5s,baz=111,slow=8.4,SNR=4.0 0.3nm,0.5s							
ASAR	**Alice Springs**	**49.87**	**165**	P	P	22 16 52.8	-0.9	
	0.4nm,0.8s,baz=351,slow=12,SNR=5.2 0.4nm,0.8s							
STKA	**Stephens Creek**	**59.73**	**160**	LR	LR	22 46 18.5		
	comp=Z,48nm,19.5s,baz=208,slow=39							
FINES	**FINESS Array B**	**70.92**	**330**	P	P	22 19 16.8	+0.6	
	0.9nm,0.4s,baz=51,slow=6.0,SNR=29 0.9nm,0.4s							
SFJD	**Kangerlussuaq**	**88.04**	**357**	LR	LR	23 04 44.3		
	comp=Z,23nm,18.3s,baz=360,slow=39							

*JMA **27** 22:11:34.5±0.2,28°N±2°×14°0E±°, h559km, MV3.8/28, W OFF OGASAWARA*
*IDC **27** 22:11:35.5±0.9,27.92N×139.25E, h528km±15km, mb2.9/10, mbtmp3.9/16, Error ellipse: s-maj=38.1km s-min=10.6km az=75.0*
ISC 27 22:11:35.5±0.8, 27.93N±0.08×139.6E±0.1, h550km, n27, σ1§40/32, mb3.4/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.48**	**109**	*e*P	**P**	**22 12 47.8**	**+0.3**
CBIJ				*e*S	**S**	**22 13 44.0**	**-2.1**
JCJ	**Chichijima**	**2.48**	**109**	P	**P**	**22 12 46.5**	**-1.0**
	43nm,0.4s,baz=285,slow=20,SNR=5.1						
JCJ				S	**S**	**22 13 42.5**	**-3.6**
	82nm,0.3s,baz=92,slow=23,SNR=12						
JHH2	**Haha-jima-NKT2**	**2.66**	**118**	*e*P	**P**	**22 12 48.7**	**+0.2**
JHH2				*e*S	**S**	**22 13 48.0**	**+0.1**
JAOM	**Aogashimamukai**	**4.53**	**2**	*e*P	**P**	**22 13 01.8**	**+0.5**
JHJ2	**Mitsune**	**5.17**	**2**	*e*P	**P**	**22 13 07.8**	**+1.2**
JHJ	**Hachijo jima 2**	**5.18**	**2**	P	**P**	**22 13 07.2**	**+0.5**
	34nm,0.4s,baz=66,slow=20,SNR=6.3						
JHJ				S	**S**	**22 14 19.1**	**-2.3**
	21nm,0.3s,baz=239,slow=22,SNR=7.1						
JTNC	**Tanabenakahech**	**6.78**	**331**	*e*P	**P**	**22 13 21.6**	**+0.4**
BSO1	**Boso 1**	**6.82**	**10**	*e*S	**S**	**22 14 47.4**	**-0.1**
JIE	**Ise**	**6.89**	**340**	*e*P	**P**	**22 13 23.3**	**+1.1**
JMN	**Monobe**	**7.57**	**321**	*e*P	**P**	**22 13 29.0**	**+0.1**
JAO	**Obara**	**7.58**	**346**	*e*P	**P**	**22 13 30.1**	**+1.2**
JTO	**Toyashimizu**	**7.63**	**312**	*e*P	**P**	**22 13 28.8**	**-0.6**
MJAR	**Matsushiro Arr**	**8.67**	**353**	P	**P**	**22 13 38.4**	**-1.3**
	4.3nm,0.4s,baz=176,slow=11,SNR=18						
JHO	**Hitachi**	**8.70**	**5**	*e*P	**P**	**22 13 40.8**	**+0.7**
JHO				*e*S	**S**	**22 15 19.9**	**-2.5**
JNU	**Nakatsue**	**9.10**	**307**	P	**P**	**22 13 42.1**	**-2.0**
	7.6nm,0.7s,baz=282,slow=3.3,SNR=4.8						
KSRS	**Korea Array**	**13.63**	**317**	P	**P**	**22 14 28.5**	**-2.3**
	0.4nm,0.3s,baz=141,slow=12,SNR=2.0						
USRK	**Ussuriysk Ar.**	**17.34**	**341**	P	**P**	**22 15 08.6**	**+1.5**
	5.5nm,0.6s,baz=159,slow=9.7,SNR=11						
SONM	**Songino Array**	**32.51**	**317**	P	**P**	**22 17 21.1**	**-0.2**
	0.2nm,0.4s,baz=100,slow=4.4,SNR=1.3 0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**47.33**	**319**	P	**P**	**22 19 18.9**	**-0.7**
	0.4nm,0.3s,baz=118,slow=9.8,SNR=2.2 0.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**47.70**	**198**	P	**P**	**22 19 23.4**	**+0.8**
	2.0nm,0.7s,baz=34,slow=9.9,SNR=1.6 2.0nm,0.7s						
WRA	**Warramunga Arr**	**47.85**	**187**	P	**P**	**22 19 24.8**	**+0.9**
	1.3nm,0.5s,baz=1.9,slow=7.8,SNR=29 1.3nm,0.5s						
MKAR	**Makanchi Array**	**48.15**	**309**	P	**P**	**22 19 25.7**	**-0.1**
	0.2nm,0.7s,baz=87,slow=9.2,SNR=1.2 0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**50.79**	**314**	P	**P**	**22 19 45.2**	**+0.1**
	0.9nm,0.4s,baz=91,slow=7.9,SNR=23 0.9nm,0.4s						
ASAR	**Alice Springs**	**51.58**	**187**	P	**P**	**22 19 52.6**	**+1.4**
	0.4nm,0.5s,baz=19,slow=13,SNR=12 0.4nm,0.5s						
BVAR	**Borovoye Array**	**55.85**	**317**	P	**P**	**22 20 21.1**	**+0.1**
	1.4nm,0.4s,baz=91,slow=7.9,SNR=18 1.4nm,0.4s						
ARCES	**ARCESS Array B**	**71.98**	**340**	P	**P**	**22 22 04.9**	**+1.6**
	0.3nm,0.4s,baz=64,slow=8.5,SNR=4.7 0.3nm,0.4s						
FINES	**FINESS Array B**	**76.16**	**333**	P	**P**	**22 22 27.9**	**+0.9**
	0.5nm,0.3s,baz=47,slow=5.1,SNR=9.6 0.5nm,0.3s						

*IDC **27** 22:16:47.7±2.2, 14°35N×124°62E, h0km, mb3.4/5, mbtmp3.4/5, MS3.6/1, Error ellipse: s-maj=218.9km s-min=22.8km az=66.0*
*MAN **27** 22:16:50.0, 13°97N×123°33E, h1km, MS3.6*
ISC 27 22:16:51.4±1.0, 13°9N±0°1×123°36E±0°08, h10km, n16, σ1§64/13, mb3.5/5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**0.89**	**270**	*e*P	**Pg**	**22 17 07.6**	**-0.9**
GQP				*i* S	**Sb**	**22 17 20.5**	**-0.2**
LQP	**Lukban**	**1.78**	**277**	*e*P	**Pb**	**22 17 23.2**	**-1.0**
LQP				*e*S	**Sb**	**22 17 46.5**	**-0.2**
PCPS	**Palayan City**	**2.35**	**289**	*e*P	**Pg**	**22 17 36.0**	**-0.5**
PCPS				*e*S	**Sg**	**22 18 10.9**	**+4.0**
PLP	**Palo**	**3.16**	**150**	*e*P	**Pn**	**22 17 42.2**	**+1.1**
PLP				*e*S	**Sb**	**22 18 27.8**	**+1.6**
WRA	**Warramunga Arr**	**35.34**	**162**	P	**P**	**22 23 45.1**	**-2.0**
	0.7nm,1.0s,baz=346,slow=9.0,SNR=5.3 0.7nm,1.0s						
ASAR	**Alice Springs**	**38.75**	**164**	P	**P**	**22 24 15.0**	**-1.1**
	0.1nm,0.3s,baz=348,slow=9.1,SNR=1.6 0.1nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**41.78**	**78**	T	T	23 08 39.2	
	baz=272,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hy**	**41.80**	**78**	T	T	23 08 40.2	
	baz=272						
H11S2	**WAKE ISLAND Hy**	**41.80**	**78**	T	T	23 08 50.2	
	baz=272,slow=74						
H11N1	**WAKE ISLAND Hy**	**41.98**	**76**	T	T	23 08 47.7	
	baz=267,slow=74,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**41.99**	**76**	T	T	23 08 57.5	
	baz=267,slow=74,SNR=2.9						
H11N3	**WAKE ISLAND Hy**	**42.00**	**76**	T	T	23 08 36.1	
	baz=267,slow=74,SNR=6.5						
MKAR	**Makanchi Array**	**47.42**	**322**	P	**P**	**22 25 26.5**	**+0.4**
	0.4nm,0.8s,baz=123,slow=10,SNR=2.4 0.4nm,0.8s						
YAK	**Yakutsk**	**48.26**	**4**	LR	LR	22 47 49.0	
	comp=Z,66nm,18.0s,baz=260,slow=39						
KURBB	**Kurchatov Arra**	**51.48**	**325**	P	**P**	**22 25 57.3**	**+0.4**
	0.5nm,0.7s,baz=121,slow=8.1,SNR=4.7 0.5nm,0.7s						

FINES	**FINESS Array B**	**81.35**	**331**	P	**P**	**22 29 07.8**	**-0.2**
	0.5nm,0.6s,baz=73,slow=6.4,SNR=4.5 0.5nm,0.6s						

*DJA **27** 22:37:06.0±0.5,2°N±3°×12°7E±°, h121km±5km, M3.7/11, mb4.2/1, MLv3.5/11*
ISC 27 22:37:06.3±1.7, 1.64N±0.08×127.2E±0.2, h103km, n6, σ2§21/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.89**	**167**	P	Pn	22 37 27.1	+1.3
TNTI				S	**Sn**	**22 37 43.1**	**+2.6**
MNI	**Manado**	**2.34**	**265**	P	**Pn**	**22 37 43.3**	**-0.1**
SGSI	**Sangihe**	**2.61**	**321**	P	**Pn**	**22 37 47.9**	**+0.9**
SGSI				S	**Sn**	**22 38 20.3**	**+2.1**
SANI	**Sanana**	**3.85**	**198**	P	**Pn**	**22 38 02.9**	**-0.7**
DDMP	**Don Marcelino,**	**4.67**	**342**	*e*P	**Pn**	**22 38 14.3**	**-0.3**
DDMP				*e*S	**Sn**	**22 39 04.9**	**-2.7**
NLAI	**Namlea**	**4.85**	**181**	P	**Pn**	**22 38 15.0**	**-2.1**

*SJA **27** 23:25:10.6±0.7, 23°94S×66°94W, h209km±6km, ML4.4, MW4.1*
*NEIC **27** 23:25:11.0±2.2, 23°97S±0°06×66°86W±0°09, h187km±6km, mb4.4/58, ML4.5(GUC), Error ellipse: s-maj=11.7km s-min=9.0km az=88.0*
*IDC **27** 23:25:11.0±1.7, 23°92S×66°79W, h185km±16km, mb3.6/10, mbtmp4.1/16, Error ellipse: s-maj=16.9km s-min=14.2km az=66.0*
*GUC **27** 23:25:11.7±0.6, 23°93S×66°98W, h203km±9km, ML4.5*
*GFZ **27** 23:25:11.1±0.3, 24°S±3°×6°7W±°, h192km, M4.4/12, mb4.4/12*
ISC 27 23:25:11.2±0.6, 23°96S±0°04×66°95W±0°04, h192km±6km, n176, σ1§46/199, mb4.3/35, 11C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.62**	**116**	*e*P	**Pn**	**23 25 39.8**	**+1.2**
SALTA		**0.62**	**116**	P	**Pn**	**23 25 39.0**	**+0.5**
AF01	**San Pedro de A**	**1.50**	**311**	*e*P	**Pn**	**23 25 47.0**	**+2.3**
AF01				*e*S	Sn	23 25 57.7	-13
AF01	**San Pedro de A**	**1.50**	**311**	⇑*e*P	**Pn**	**23 25 46.8**	**+2.2**
AF01	**San Pedro de A**	**1.50**	**311**		**Pn**	**23 25 46.8**	**+2.2**
SLA	**San Lorenzo**	**1.52**	**120**	*e*P	**Pn**	**23 25 46.3**	**+1.7**
SLA				*e*S	**Sn**	**23 26 09.4**	**-1.2**
SLA	**San Lorenzo**	**1.52**	**120**	⇓*e*P	**Pn**	**23 25 46.0**	**+1.4**
HJA	**Humahuaca**	**1.60**	**63**	*e*P	**Pn**	**23 25 46.5**	**+0.8**
HJA				*e*S	**Sn**	**23 26 16.3**	**+4.1**
YJA	**Yavi**	**2.21**	**37**	*e*P	**Pn**	**23 25 53.4**	**+1.5**
YJA				*e*S	**Sn**	**23 26 19.1**	**-4.4**
YJA	**Yavi**	**2.21**	**37**	⇓*e*P	**Pn**	**23 25 52.9**	**+0.9**
FSA	**Cafayete**	**2.32**	**158**	*e*P	**Pn**	**23 25 53.9**	**+1.0**
FSA				*e*S	**Sn**	**23 26 26.3**	**+1.0**
PB06	**IPOC Station P**	**2.71**	**297**	*e*P	**Pn**	**23 25 58.5**	**+1.3**
PB06				*e*S	**Sn**	**23 26 34.0**	**+0.9**
PB06				IAML		23 26 35.7	
	comp=Z,702nm,0.1s						
PB06	**IPOC Station P**	**2.71**	**297**	⇑*i* P	**Pn**	**23 25 58.5**	**+1.3**
PB06				*i* S	**Sn**	**23 26 32.8**	**-0.2**
PB06	**IPOC Station P**	**2.71**	**297**		**Pn**	**23 25 58.3**	**+1.1**
PB06	**IPOC Station P**	**2.71**	**297**	P	**Pn**	**23 25 58.7**	**+1.4**
PB09	**IPOC Station P**	**3.01**	**315**	*e*P	**Pn**	**23 26 02.2**	**+1.4**
PB09				*e*S	**Sn**	**23 26 41.2**	**+1.7**
PB09				IAML		23 26 41.9	
	comp=Z,358nm,0.2s						
PB09	**IPOC Station P**	**3.01**	**315**	⇑*i* P	**Pn**	**23 26 02.1**	**+1.2**
PB09				*i* S	**Sn**	**23 26 39.7**	**+0.2**
PB09				IAML		23 26 42.0	
	comp=N,599nm,0.2s						
PB09	**IPOC Station P**	**3.01**	**315**		**Pn**	**23 26 02.1**	**+1.2**
PB09				Sn	**Sn**	**23 26 40.0**	**+0.5**
PB09	**IPOC Station P**	**3.01**	**315**	P	**Pn**	**23 26 02.4**	**+1.6**
AHML	**Horco Molle**	**3.17**	**153**	*e*P	**Pn**	**23 26 03.3**	**+0.7**
AHML				*e*S	**Sn**	**23 26 38.0**	**-4.8**
PB05	**IPOC Station P**	**3.18**	**290**	*e*P	**Pn**	**23 26 03.7**	**+0.9**
PB05				*e*S	**Sn**	**23 26 42.6**	**-0.4**
PB05				IAML		23 26 46.7	
	comp=Z,335nm,0.5s						
PB05	**IPOC Station P**	**3.18**	**290**	⇑*i* P	**Pn**	**23 26 03.3**	**+0.5**
PB05				*i* S	**Sn**	**23 26 41.6**	**-1.4**
PB05				IAML		23 26 45.0	
	comp=E,540nm,0.2s						
PB05	**IPOC Station P**	**3.18**	**290**		**Pn**	**23 26 03.3**	**+0.5**
PB05	**IPOC Station P**	**3.18**	**290**	P	**Pn**	**23 26 03.6**	**+0.9**
PB03	**IPOC Station P**	**3.20**	**306**	*e*P	**Pn**	**23 26 03.9**	**+0.8**
PB03				*e*S	**Sn**	**23 26 43.5**	**-0.1**
PB03				IAML		23 26 44.7	
	comp=Z,570nm,0.2s						
PB03	**IPOC Station P**	**3.20**	**306**	*e*P	**Pn**	**23 26 03.8**	**+0.8**
PB03				*i* S	**Sn**	**23 26 42.5**	**-1.1**
PB03				IAML		23 26 46.6	
	comp=N,862nm,0.4s						
PB03	**IPOC Station P**	**3.20**	**306**		**Pn**	**23 26 03.7**	**+0.6**
PB03				Sn	**Sn**	**23 26 42.7**	**-0.9**
PB03	**IPOC Station P**	**3.20**	**306**	P	**Pn**	**23 26 04.0**	**+0.8**
PB14	**IPOC Station P**	**3.22**	**257**	*e*P	**Pn**	**23 26 04.4**	**+1.0**
PB14				*e*S	**Sn**	**23 26 44.1**	**0.0**
PB14				IAML		23 26 46.4	
	comp=Z,843nm,0.4s						
PB14	**IPOC Station P**	**3.22**	**257**	⇑*i* P	**Pn**	**23 26 04.2**	**+0.8**
PB14				*i* S	**Sn**	**23 26 42.9**	**-1.3**
PB14				IAML		23 26 45.7	
	comp=E,530nm,0.3s						
PB14	**IPOC Station P**	**3.22**	**257**		**Pn**	**23 26 04.1**	**+0.7**
PB14				Sn	**Sn**	**23 26 43.6**	**-0.6**
PB14	**IPOC Station P**	**3.22**	**257**	P	**Pn**	**23 26 04.3**	**+1.0**
AC02	**Maricunga**	**3.48**	**214**	*e*P	**Pn**	**23 26 08.3**	**+1.6**
AC02				*e*S	**Sn**	**23 26 50.4**	**+0.2**
AC02	**Maricunga**	**3.48**	**214**	⇑*e*P	**Pn**	**23 26 08.1**	**+1.4**
AC02	**Maricunga**	**3.48**	**214**		**Pn**	**23 26 07.9**	**+1.2**
AC02	**Maricunga**	**3.48**	**214**	P	**Pn**	**23 26 08.3**	**+1.6**
PB07	**IPOC Station P**	**3.50**	**309**	*e*P	**Pn**	**23 26 07.4**	**+0.7**
PB07				*e*S	**Sn**	**23 26 49.2**	**-0.9**
PB07				IAML		23 26 51.9	
	comp=Z,558nm,0.2s						
PB07	**IPOC Station P**	**3.50**	**309**	*e*P	**Pn**	**23 26 07.2**	**+0.5**
PB07				*i* S	**Sn**	**23 26 48.1**	**-2.0**
PB07	**IPOC Station P**	**3.50**	**309**		**Pn**	**23 26 07.2**	**+0.5**
PB07				Sn	**Sn**	**23 26 48.6**	**-1.5**
PB07	**IPOC Station P**	**3.50**	**309**	P	**Pn**	**23 26 07.4**	**+0.7**
PB02	**IPOC Station P**	**3.78**	**313**	*e*P	**Pn**	**23 26 10.5**	**+0.3**
PB02				IAML		23 26 59.8	
	comp=Z,773nm,0.2s						
PB02	**IPOC Station P**	**3.78**	**313**	⇑*i* P	**Pn**	**23 26 10.2**	**0.0**
PB02				*e*S	**Sn**	**23 26 53.4**	**-2.8**
PB02	**IPOC Station P**	**3.78**	**313**		**Pn**	**23 26 10.2**	**0.0**
PB02				Sn	**Sn**	**23 26 54.4**	**-1.9**
PB02	**IPOC Station P**	**3.78**	**313**	P	**Pn**	**23 26 10.4**	**+0.3**
AC01	**Pan de Azucar**	**3.96**	**236**	*e*P	**Pn**	**23 26 12.2**	**-0.1**
AC01				*e*S	**Sn**	**23 26 59.1**	**-1.0**
AC01				IAML		23 26 59.5	
	comp=Z,262nm,0.5s						
AC01	**Pan de Azucar**	**3.96**	**236**	⇑*e*P	**Pn**	**23 26 12.0**	**-0.2**
AC01	**Pan de Azucar**	**3.96**	**236**		**Pn**	**23 26 12.2**	**-0.1**
AC01	**Pan de Azucar**	**3.96**	**236**	P	**Pn**	**23 26 12.2**	**-0.1**
TINO	**Tinogasta**	**4.13**	**188**	*e*P	**Pn**	**23 26 16.3**	**+1.9**
TINO				*e*S	**Sn**	**23 27 12.2**	**+8.0**
PB08	**IPOC Station P**	**4.31**	**331**	*e*P	**Pn**	**23 26 17.9**	**+0.8**
PB08				IAML		23 27 12.4	
	comp=Z,215nm,0.3s						
PB08	**IPOC Station P**	**4.31**	**331**	⇑*e*P	**Pn**	**23 26 17.8**	**+0.7**
PB08	**IPOC Station P**	**4.31**	**331**		**Pn**	**23 26 17.7**	**+0.6**
PB08	**IPOC Station P**	**4.31**	**331**	P	**Pn**	**23 26 17.4**	**+0.3**
GO03	**Copiapo**	**4.68**	**219**	*e*P	**Pn**	**23 26 21.2**	**-0.2**
GO03				*e*S	**Sn**	**23 27 15.2**	**-1.4**
GO03				IAML		23 27 19.0	
	comp=Z,249nm,0.6s						
GO03	**Copiapo**	**4.68**	**219**	*e*P	**Pn**	**23 26 21.0**	**-0.4**
GO03	**Copiapo**	**4.68**	**219**		**Pn**	**23 26 20.8**	**-0.6**
GO03	**Copiapo**	**4.68**	**219**	P	**Pn**	**23 26 20.9**	**-0.4**
TA02	**Huaiquique**	**4.71**	**321**	P	**Pn**	**23 26 20.6**	**-1.2**
GO01	**Chusmiza**	**4.75**	**334**	*e*P	**Pn**	**23 26 23.1**	**+0.4**
GO01				IAML		23 27 21.6	
	comp=Z,168nm,0.2s						
GO01	**Chusmiza**	**4.75**	**334**		**Pn**	**23 26 22.8**	**+0.1**
GO01	**Chusmiza**	**4.75**	**334**	P	**Pn**	**23 26 23.0**	**+0.2**
PB11	**IPOC Station P**	**4.87**	**328**	*e*P	**Pn**	**23 26 23.4**	**-0.7**
PB11				IAML		23 27 21.5	
	comp=Z,328nm,0.5s						

PB11	**IPOC Station P**	**4.87**	**328**		**Pn**	**23 26 23.0**	**-1.1**
PB11	**IPOC Station P**	**4.87**	**328**	P	**Pn**	**23 26 23.3**	**-0.7**
VCA	**Vinchina**	**4.89**	**193**	*e*S	**Sn**	**23 27 19.6**	**-2.0**
PSGCX	**Pisagua**	**5.24**	**325**	*e*P	**Pn**	**23 26 26.8**	**-2.0**
PSGCX				IAML		23 27 28.7	
	comp=Z,188nm,0.3s						
PSGCX	**Pisagua**	**5.24**	**325**		**Pn**	**23 26 26.8**	**-2.0**
PSGCX	**Pisagua**	**5.24**	**325**	P	**Pn**	**23 26 28.7**	**-0.1**
AC04	**Llanos de Chal**	**5.62**	**220**		**Pn**	**23 26 32.1**	**-1.4**
AC05	**El Transito**	**5.70**	**211**		**Pn**	**23 26 34.1**	**-0.5**
AC05	**El Transito**	**5.70**	**211**	P	**Pn**	**23 26 34.5**	**-0.1**
LCO	**Las Campanas**	**6.05**	**213**		**Pn**	**23 26 37.9**	**-1.4**
PB16	**IPOC Station P**	**6.08**	**336**		**Pn**	**23 26 39.5**	**-0.5**
PB16	**IPOC Station P**	**6.08**	**336**	P	**Pn**	**23 26 40.1**	**+0.1**
PB12	**IPOC Station P**	**6.18**	**329**		**Pn**	**23 26 38.9**	**-2.0**
PB12	**IPOC Station P**	**6.18**	**329**	P	**Pn**	**23 26 40.3**	**-0.6**
AP01	**Chacalluta**	**6.39**	**330**	Pn	**Pn**	**23 26 42.5**	**-1.0**
PB18	**Visviri**	**6.76**	**339**		**Pn**	**23 26 48.8**	**-0.1**
PB18	**Visviri**	**6.76**	**339**	P	**Pn**	**23 26 49.5**	**+0.6**
GO04	**Tololo Observa**	**7.08**	**208**	Pn	**Pn**	**23 26 51.2**	**-1.4**
CO03	**El Pedregal**	**7.62**	**205**	Pn	**Pn**	**23 26 58.3**	**-1.2**
CFA	**Coronel Fontan**	**7.70**	**188**	P	**Pn**	**23 27 00.5**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=353,slow=10.0,SNR=32						
CFA				S	**Sn**	**23 28 21.5**	**-6.0**
	comp=Z,12nm,0.3s,baz=179,slow=18,SNR=23						
LPAZ	**La Paz**	**7.71**	**352**	P	**Pn**	**23 27 01.1**	**-0.2**
	comp=Z,4.3nm,0.3s,baz=182,slow=9.3,SNR=17						
LPAZ				S	**Sn**	**23 28 25.7**	**-3.0**
	comp=Z,3.6nm,0.6s,baz=153,slow=6.1,SNR=1.7						
LPAZ	**La Paz**	**7.71**	**352**		**Pn**	**23 26 58.3**	**-3.0**
LPAZ	**La Paz**	**7.71**	**352**	P	**Pn**	**23 27 00.9**	**-0.5**
ZON	**Zonda**	**7.71**	**191**	Pn	**Pn**	**23 27 00.4**	**-0.4**
CO02	**Combarbal**	**8.06**	**206**	Pn	**Pn**	**23 27 03.8**	**-1.6**
CO04	**Los Peladeros**	**8.80**	**203**	Pn	**Pn**	**23 27 13.3**	**-1.9**
CPUP	**Villa Florida**	**9.04**	**107**	P	**Pn**	**23 27 16.2**	**-1.8**
	comp=Z,3.2nm,0.7s,baz=296,slow=13,SNR=12						
CPUP	**Villa Florida**	**9.04**	**107**		**Pn**	**23 27 15.8**	**-2.2**
CPUP	**Villa Florida**	**9.04**	**107**	P	**Pn**	**23 27 15.8**	**-2.2**
VA03	**San Esteban**	**9.33**	**199**	Pn	**Pn**	**23 27 21.1**	**-0.8**
SIV	**San Ignacio**	**9.66**	**36**	P	**Pn**	**23 27 24.4**	**-2.0**
	comp=Z,3.8nm,0.3s,baz=237,slow=9.9,SNR=33						
SIV				S	Sn	23 28 60.0	-14
	comp=Z,1.3nm,0.7s,baz=235,slow=15,SNR=1.3						
MT08	**Bocatoma Ro**	**9.83**	**195**	Pn	**Pn**	**23 27 29.7**	**+1.2**
MT02	**Curacav**	**9.97**	**201**	Pn	**Pn**	**23 27 27.0**	**-3.1**
TRQA	**Tornquist**	**14.68**	**164**		**Pn**	**23 28 28.8**	**-1.0**
GO06	**Curarrehue**	**16.04**	**193**		**Pn**	**23 28 46.6**	**+0.1**
GO06				IAmb	IAmb	23 28 50.4	
	comp=Z,16nm,1.4s						
PLCA	**Paso Flores**	**17.00**	**189**	P	**Pn**	**23 28 57.8**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=9.6,slow=12,SNR=3.4						
PLCA	**Paso Flores**	**17.00**	**189**	Pn	**Pn**	**23 28 58.0**	**+0.1**
BDFB	**Brasilia**	**19.63**	**69**	P	**P**	**23 29 24.6**	**-0.8**
	comp=Z,20nm,0.7s,baz=238,slow=12,SNR=30						
BDFB	**Brasilia**	**19.63**	**69**		**P**	**23 29 25.4**	**-0.1**
ATAH	**Atahualpa**	**20.01**	**325**	LR	LR	23 37 29.2	
	comp=Z,45nm,21.4s,baz=181,slow=37						
MTO3	**Montecristo**	**43.96**	**328**		**P**	**23 33 01.6**	**+1.8**
MTO3				IAmb	IAmb	23 33 02.2	
	comp=Z,6.4nm,0.7s						
VNA1	**Neumayer--Stat**	**57.38**	**160**	⇑P	**P**	**23 34 40.6**	**+1.6**
	comp=Z,3.9nm,0.9s						
VNA2	**Neumayer--Watz**	**57.74**	**160**	⇑P	**P**	**23 34 42.7**	**+1.1**
	comp=Z,2.3nm,0.5s,baz=280,slow=5.7						
Y52A	**Lilburn**	**59.76**	**344**	P	**P**	**23 34 55.5**	**-0.4**
Y52A				IAmb	IAmb	23 34 56.5	
	comp=Z,8.8nm,1.0s						

comp=Z,6.8nm,1.0s
TORD Torodi Ar. Bea 76.51 69 P **P 23 36 39.5 -1.1**
comp=Z,1.2nm,0.6s,baz=253,slow=5.6,SNR=19
comp=Z,1.2nm,0.6s
TORD Torodi Ar. Bea 76.51 69 P **P 23 36 36.2 -4.4**
PDAR Pinedale Array 77.13 329 P **P 23 36 44.6 +0.9**
comp=Z,0.6nm,0.6s,baz=123,slow=7.4,SNR=9.2
comp=Z,0.6nm,0.6s
ULM Lac du Bonnet 78.20 342 P **P 23 36 49.4 +0.3**
comp=Z,3.3nm,0.5s,baz=138,slow=5.4,SNR=9.0
comp=Z,3.3nm,0.5s
ULM Lac du Bonnet 78.20 342 IAmb IAmb 23 36 50.1
comp=Z,3.5nm,0.6s
NVAR Mina Array Bea 78.53 321 P **P 23 36 52.8 +1.3**
comp=Z,0.5nm,0.5s,baz=95,slow=3.7,SNR=2.7
comp=Z,0.5nm,0.5s
KVN Kaiserville 78.84 322 P 23 36 55.1 +2.0
HLID Hailey 80.08 327 P **P 23 37 00.6 +0.9**
BOSA Boshof 80.71 117 P **P 23 37 03.7 +0.2**
comp=Z,1.2nm,0.6s,baz=248,slow=6.3,SNR=1.9
comp=Z,1.2nm,0.6s
PLID Pearl Lake 81.96 327 IAmb IAmb 23 37 12.1
comp=Z,3.5nm,0.8s
ESDC Sonseca Array 86.34 44 P **P 23 37 32.7 +1.0**
comp=Z,0.4nm,0.8s,baz=246,slow=4.4,SNR=2.6
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 94.10 340 P **P 23 38 07.7 +0.4**
comp=Z,1.3nm,0.5s,baz=136,slow=4.9,SNR=6.9
comp=Z,1.3nm,0.5s
ASAR Alice Springs 128.51 205 PKP **PKiKP 23 43 56.2 -0.4**
comp=Z,0.9nm,0.8s,baz=152,slow=2.5,SNR=5.8
WRA Warramunga Arr 131.68 207 PKP **PKiKP 23 44 02.6 -0.4**
comp=Z,0.5nm,0.6s,baz=161,slow=1.7,SNR=6.5
KURK Kurchatov 142.32 36 PKPdf 23 44 18.8 -1.8
KURBB Kurchatov Arra 142.32 36 PKP **PKPdf 23 44 18.8 -1.8**
comp=Z,0.3nm,0.6s,baz=299,slow=2.3,SNR=5.2
ZALV Zalesovo Beam 143.34 28 PKP PKPbc 23 44 20.5 +0.6
comp=Z,1.2nm,0.5s,baz=292,slow=3.7,SNR=10
ZALV Zalesovo Beam 143.34 28 PKPbc 23 44 20.4 +0.4
MAKZ Makanchi 146.27 40 PKPab 23 44 30.1 -0.1
MKAR Makanchi Array 146.46 39 PKPbc **PKPbc 23 44 29.0 -0.7**
comp=Z,2.6nm,0.6s,baz=295,slow=3.6,SNR=25
MKAR Makanchi Array 146.46 39 PKPbc 23 44 30.1 +0.4
SONM Songino Array 155.59 11 PKPab **PKPab 23 45 09.1 +0.2**
comp=Z,0.7nm,0.8s,baz=322,slow=4.7,SNR=5.0

IDC 27 23:28:21.9s±1.7, **13.01S×71.09W, h0**km, **mb3.4**/2, **mbtmp3.7**/4, **ML3.9**/2, **Error ellipse: s-maj=62.1km s-min=28.0km az=30.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.34**	**139**	Pn	Pn	23 29 30.6	+0.8
	3.2nm,0.3s,baz=298,slow=8.6,SNR=12						
LPAZ				Sn	Sn	23 30 18.7	-2.8
	0.5nm,0.3s,baz=212,slow=16,SNR=1.6						
	8.8nm,0.4s						
NNA	**Nana**	**5.71**	**280**	Pn	Pn	23 29 46.9	-1.1
	7.8nm,0.3s,baz=138,slow=15,SNR=8.4						
NNA				Sn	Sn	23 30 47.6	-6.8
	7.3nm,0.3s,baz=293,slow=16,SNR=5.9						
	17nm,0.3s						
TXAR	**Lajitas Array**	**52.54**	**324**	P	P	23 37 38.1	+0.7
	0.2nm,0.5s,baz=144,slow=8.5,SNR=4.1						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.68**	**73**	P	P	23 40 14.9	-0.6
	0.5nm,0.7s,baz=260,slow=5.4,SNR=3.5						
	0.5nm,0.7s						

BJI ***27*** *23:36:55.6, 6.°84S×69.°69E, h10km, mB5.4/45, mb5.0/69, Ms5.1/69, Ms7 4.8/67*
MOS ***27*** *23:37:02.2±0.9, 6.°02S×70.°23E, h10km, mb5.5/75, MS4.6/7, Error ellipse: s-maj=6.2km s-min=4.0km az=100.3*
NEIC ***27*** *23:37:02.3, 6.°15S×70.°33E, h12km, Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^17 Nm; Mrr=0.07; Mθθ=0.96; Mϕϕ=-0.89; Mrθ=-0.37; Mθϕ=0.34; Mϕr=0.36; Fault plane solution: M0 1.12000×10^17 NP1: ϕs=216.29000°, δ=62.56000°, λ=-174.56000°. NP2: ϕs=123.78000°, δ=85.18000°, λ=-27.55000°. Principal axes: T 1.1046, Plg15.0000°, Azm173.0000°; N 0.0219, Plg62.0000°, Azm295.0000°; P -1.1265, Plg23.0000°, Azm77.0000°;*
IDC ***27*** *23:37:02.5±0.4, 6.°05S×70.°14E, h0km, mb4.6/32, mbtmp4.7/33, ML5.3/1, MS4.4/68 Error ellipse: s-maj=13.8km s-min=11.4km az=89.0*
NEIC ***27*** *23:37:04.6±2.1, 6.°14S±0.°07×70.°33E±0.°07, h10km±1km, mb5.2/161, Mww5.3/15, Error ellipse: s-maj=11.9km s-min=10.0km az=221.0*
NEIC ***27*** *23:37:04.6, 6.°15S×70.°33E, h10km*
GFZ ***27*** *23:37:05.4±0.3, 6.°5S×7.°0E±.°, h10km, M5.2/23, mb5.1/23*
GFZ ***27*** *23:37:05.7, 6.°10S×70.°35E, h15km, Mw5.4/58, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.31; Mθθ=1.44; Mϕϕ=-1.12; Mrθ=0.12; Mθϕ=0.23; Mϕr=0.27; Fault plane solution: M0 1.36096×10^17 NP1: ϕs=129.03861°, δ=75.59222°, λ=-8.14651°. NP2: ϕs=221.07854°, δ=82.11136°, λ=-165.45155°. Principal axes: T 1.4690, Plg4.5250°, Azm354.4381°; N -0.2510, Plg73.4911°, Azm248.9509°; P -1.2180, Plg15.8424°, Azm85.7249°;*
GCMT ***27*** *23:37:07.6±0.1, 6.°20S±0.°01×70.°17E±0.°01, h21km, MW5.4/146, Moment Tensor Solution. s118,c190; s146,c284; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr=0.17±.02; Mθθ=1.86±.02; Mϕϕ=-1.69±.02; Mrθ=0.31±.04; Mθϕ=0.26±.02; Mϕr=0.01±.04; Best double couple: M0=1.81700×10^17 NP1: ϕs=40.00000°, δ=84.00000°, λ=174.00000°. NP2: ϕs=131.00000°, δ=84.00000°, λ=6.00000°. Principal axes: T 1.9250, Plg8.0000°, Azm356.0000°; N -0.2190, Plg82.0000°, Azm173.0000°; P -1.7090, Plg0.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 23:37:04.7±0.4, **6.17S**±0.°04×**70.28E**±0.°04, **h14**km±2km, **h14**km:**pP-P, n735,** σ1s**31**/735, **mb5.1**/230, **MS4.5**/98, **55C-37D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**2.49**	**120**	*d* iP	**Pn**	**23 37 45.5**	**+0.7**
DGAR	**Diego Garcia**	**2.49**	**120**	P	**Pn**	**23 37 45.7**	**+0.9**
DGAR	**Diego Garcia**	**2.49**	**120**		**Pn**	**23 37 44.7**	**-0.1**
DGAR				Sn	Sn	23 38 14.6	-0.3
DGAR	**Diego Garcia**	**2.49**	**120**	P	**Pn**	**23 37 45.8**	**+0.9**
H08S3	**Diego Garcia H**	**2.62**	**124**	Pn	**Pn**	**23 37 46.4**	**0.0**
	baz=321,slow=20						
H08S3				Sn	**Sn**	**23 38 17.2**	**-0.8**
H08S1	**Diego Garcia H**	**2.63**	**124**	Pn	**Pn**	**23 37 46.7**	**+0.3**
	baz=321,slow=20						
H08S1				Sn	**Sn**	**23 38 16.7**	**-1.4**
H08S2	**Diego Garcia H**	**2.64**	**124**	Pn	**Pn**	**23 37 45.4**	**-1.3**
	baz=321,slow=20						
H08S2				Sn	**Sn**	**23 38 18.0**	**-0.4**
KAAM	**Kaadhehdhoo**	**7.16**	**22**	P	**Pn**	**23 38 48.5**	**-0.6**
KAAM	**Kaadhehdhoo**	**7.16**	**22**		**Pn**	**23 38 48.4**	**-0.6**
KAAM	**Kaadhehdhoo**	**7.16**	**22**	P	**Pn**	**23 38 48.4**	**-0.6**
	1.8nm139nm,0.6s						
HMDM	**Hanimaadhoo**	**13.18**	**13**	P	**Pn**	**23 40 12.5**	**+0.8**
	SNR=5.2						
HMDM	**Hanimaadhoo**	**13.18**	**13**		**Pn**	**23 40 10.4**	**-1.3**
HMDM	**Hanimaadhoo**	**13.18**	**13**	P	**Pn**	**23 40 12.9**	**+1.2**
	8μm330nm,2.2s						
HMDM	**Hanimaadhoo**	**13.18**	**13**	P	**Pn**	**23 40 12.9**	**+1.2**
MSEY	**Mahe Island**	**14.81**	**275**	P	**Pn**	**23 40 34.6**	**+0.7**
MSEY	**Mahe Island**	**14.81**	**275**	P	**Pn**	**23 40 35.1**	**+1.2**
MSEY	**Mahe Island**	**14.81**	**275**		**Pn**	**23 40 34.6**	**+0.7**
MSEY	**Mahe Island**	**14.81**	**275**	P	**Pn**	**23 40 36.4**	**+2.4**
ROCAM	**Rodrigues Isla**	**15.08**	**206**	Pn	**Pn**	**23 40 37.2**	**-0.2**
HALK	**Hakmana**	**16.01**	**41**	P	**P**	**23 40 51.5**	**-1.6**
PALK	**Pallekele**	**16.93**	**38**	Pn	**P**	**23 41 02.9**	**-0.5**
	11nm,0.3s,baz=228,slow=12,SNR=60						
PALK				Sn	Sn	23 43 56.4	-13
	0.9nm,0.3s,baz=146,slow=5.7,SNR=1.5						
PALK				LR	LR	23 45 50.6	
	comp=Z,1μm,18.6s,baz=217,slow=31						
	39nm,0.5s						
PALK	**Pallekele**	**16.93**	**38**	P	**Pn**	**23 40 59.4**	**-2.0**
PALK				pmax	pmax		
	comp=Z,157nm,1.4s						
PALK	**Pallekele**	**16.93**	**38**	P	**P**	**23 41 02.4**	**-0.9**
PALK	**Pallekele**	**16.93**	**38**		**Pn**	**23 41 00.0**	**-1.4**
PALK	**Pallekele**	**16.93**	**38**	P	**P**	**23 41 03.5**	**+0.1**
	comp=Z,40nm,0.7s						
PALK	**Pallekele**	**16.93**	**38**	P	**P**	**23 41 02.7**	**-0.6**
MALK	**Mahakanadarawa**	**17.73**	**35**	P	**P**	**23 41 13.5**	**+1.3**
KOD	**Kodaikanal**	**17.80**	**24**	*e*P	**Pn**	**23 41 11.7**	**-0.9**
KOD				IAmb	IAmb	23 41 16.1	
	comp=Z,384nm,2.4s						
SALM	**Salem**	**19.37**	**24**	*e*P	**Pn**	**23 41 31.0**	**-0.3**
SALM				IAmb	IAmb	23 41 34.0	
	comp=Z,78nm,1.6s						
SALM				*i* x	x	23 47 02.5	
MDRS	**Chennai**	**21.53**	**27**	*e*P	**P**	**23 41 52.9**	**-0.7**
KAD	**Karad**	**23.65**	**9**	*e*P	**P**	**23 42 18.9**	**+3.1**
KAD				IAmb	IAmb	23 42 21.3	
	comp=Z,171nm,1.8s						
POO	**Poona**	**24.80**	**8**	*i* x	x	23 50 23.2	
HYB	**Hyderabad**	**24.82**	**19**	*e*P	**P**	**23 42 28.0**	**+1.3**
HYB				*i* x	x	23 49 54.9	
HYB	**Hyderabad**	**24.82**	**19**	*e*P	**P**	**23 42 26.4**	**-0.4**
HYB				*e*S	**S**	**23 46 50.1**	**+0.8**
ABPO	**Ambohimpanom**	**25.82**	**238**	P	**P**	**23 42 35.9**	**-0.1**
ABPO				pmax	pmax		
	comp=Z,49nm,1.2s						
ABPO	**Ambohimpanom**	**25.82**	**238**		**P**	**23 42 35.9**	**-0.1**
ABPO				IAmb	IAmb	23 42 47.9	
	comp=Z,49nm,1.2s						
ABPO	**Ambohimpanom**	**25.82**	**238**	P	**P**	**23 42 37.9**	**+1.9**
COCO	**West Island**	**26.88**	**105**	P	**P**	**23 42 45.2**	**-0.2**
VIS	**Vishakhapatnam**	**27.02**	**28**	*e*P	**P**	**23 42 49.4**	**+2.8**
VIS				*i* x	x	23 50 31.3	
VOI	**Vohitsoka**	**27.57**	**233**	P	**P**	**23 42 53.0**	**+1.3**
VOI	**Vohitsoka**	**27.57**	**233**		**P**	**23 42 51.2**	**-0.5**
VOI				IAmb	IAmb	23 43 02.5	
	comp=Z,52nm,1.4s						
NGP	**Nagpur**	**28.51**	**17**	*i* x	x	23 52 42.1	
KCSI	**Kotacane, Aceh**	**29.09**	**71**	P	**P**	**23 43 06.3**	**+1.0**
	comp=Z,50nm,1.3s						
FOMA	**Nahampoana Res**	**29.11**	**228**	P	**P**	**23 43 04.5**	**-0.8**
FOMA				IAmb	IAmb	23 43 25.8	
	comp=Z,37nm,1.0s						
RPSI	**Rantau Prapat**	**29.93**	**74**	P	**P**	**23 43 11.1**	**-1.6**
PSI	**Prapat**	**29.96**	**73**	P	**P**	**23 43 11.1**	**-2.0**
PSI				pmax	pmax		
	comp=Z,30nm,1.3s						
BHPL	**Bhopal**	**30.06**	**13**	*e*P	**P**	**23 43 14.5**	**+0.8**
BHPL				*i* x	x	23 53 25.1	
MNSI	**Mandailing Nat**	**30.06**	**78**	P	**P**	**23 43 16.9**	**+3.1**
	comp=Z,60nm,1.4s						
PPI	**Padang Panjang**	**30.59**	**80**	P	**P**	**23 43 21.9**	**+3.4**
	comp=Z,42nm,1.2s						
KRJI	**Kerinci**	**31.36**	**84**	P	**P**	**23 43 26.7**	**+1.3**
WSAR	**Wadi Sarin**	**31.37**	**339**	LR	LR	23 53 10.8	
	comp=Z,6.6nm,20.9s,baz=136,slow=31						
BSY	**Bisya**	**31.46**	**336**	P	**P**	**23 43 26.1**	**+0.1**
BSY				P	**P**	**23 43 26.1**	**+0.1**
SDSI	**Sungai Dareh**	**31.51**	**82**	P	**P**	**23 43 28.8**	**+2.2**
	comp=Z,33nm,1.5s						
HOQ	**Hoqain**	**32.17**	**337**	P	**P**	**23 43 32.0**	**-0.3**
KIBK	**Kibwezi**	**32.36**	**275**	P	**P**	**23 43 33.7**	**-0.5**
	SNR=5.3						
KIBK	**Kibwezi**	**32.36**	**275**	P	**P**	**23 43 33.8**	**-0.5**
KIBK				IAmb	IAmb	23 43 41.2	
	comp=Z,44nm,1.1s						
KIBK	**Kibwezi**	**32.36**	**275**	P	**P**	**23 43 35.0**	**+0.8**
KULM	**Kulim**	**32.39**	**70**		**P**	**23 43 34.0**	**-0.3**
KULM				IAmb	IAmb	23 43 36.6	
	comp=Z,47nm,1.1s						
KULM	**Kulim**	**32.39**	**70**	P	**P**	**23 43 35.9**	**+1.6**
	comp=Z,47nm,1.3s						
KULM	**Kulim**	**32.39**	**70**	P	**P**	**23 43 36.0**	**+1.7**
SOHO	**SOHO**	**32.97**	**336**	P	**P**	**23 43 38.3**	**-1.0**
LHSI	**Lahat**	**33.20**	**88**	P	**P**	**23 43 43.9**	**+2.5**
	comp=Z,4μmcomp=Z,104nm,1.2s						
ALNE	**Al Ain**	**33.22**	**335**	P	**P**	**23 43 40.6**	**-0.9**
ALNE				P	**P**	**23 43 40.6**	**-0.9**
KMBO	**Kilima Mbogo**	**33.33**	**277**	LR	LR	23 54 24.2	
	comp=Z,468nm,21.5s,baz=110,slow=31						
KMBO	**Kilima Mbogo**	**33.33**	**277**	*d* iP	**P**	**23 43 43.2**	**+0.3**
ASHO	**Ashiyiah**	**33.65**	**336**	P	**P**	**23 43 45.1**	**-0.1**
HATD	**Hatta, Dubai**	**33.75**	**336**	P	**P**	**23 43 45.8**	**-0.3**
HATD				P	**P**	**23 43 45.8**	**-0.3**
MDSI	**Maura Dua**	**33.79**	**89**	P	**P**	**23 43 48.4**	**+1.8**
	comp=Z,40nm,1.7s						
UOSS	**Minazif**	**33.83**	**337**	P	**P**	**23 43 46.1**	**-0.6**
UOSS				P	**P**	**23 43 46.1**	**-0.6**
UOSS	**Minazif**	**33.83**	**337**	P	**P**	**23 43 45.4**	**-1.4**
UOSS				IAmb	IAmb	23 43 47.5	
	comp=Z,30nm,1.1s						
UOSS	**Minazif**	**33.83**	**337**	P	**P**	**23 43 46.3**	**-0.5**
ASUD	**Al Ashush, Dub**	**33.90**	**335**	P	**P**	**23 43 47.4**	**0.0**
NAZ	**Nazwa, Dubai**	**34.09**	**336**	P	**P**	**23 43 48.7**	**-0.3**
NAZ				P	**P**	**23 43 48.7**	**-0.3**
MASF	**Masafi**	**34.23**	**337**	P	**P**	**23 43 49.9**	**-0.4**
LKN	**LUCKNOW**	**34.32**	**17**	*i* x	x	23 55 28.8	
MYKOM	**Kota Tinggi**	**34.44**	**78**	P	**P**	**23 43 52.2**	**0.0**
MYKOM				IAmb	IAmb	23 43 54.5	
	comp=Z,38nm,0.9s						
MYKOM	**Kota Tinggi**	**34.44**	**78**	P	**P**	**23 43 52.6**	**+0.3**
	comp=Z,1μmcomp=Z,63nm,1.9s						
MYKOM	**Kota Tinggi**	**34.44**	**78**	P	**P**	**23 43 54.1**	**+1.8**
BANOM	**Banah**	**34.67**	**338**	P	**P**	**23 43 54.9**	**+0.8**
SHME	**Shamm**	**34.85**	**337**	P	**P**	**23 43 54.5**	**-1.1**
FURI	**Furi**	**34.88**	**295**	P	**P**	**23 43 56.6**	**+0.2**
FURI	**Furi**	**34.88**	**295**	P	**P**	**23 43 58.5**	**+2.1**
TPRI	**Tanjung Pinang**	**34.91**	**80**	P	**P**	**23 43 57.4**	**+1.1**
	comp=Z,68nm,1.1s						
SLWR	**Sila**	**35.10**	**330**	P	**P**	**23 43 56.8**	**-1.0**
NDI	**New Delhi**	**35.30**	**11**	*e*P	**P**	**23 44 01.7**	**+2.3**
BRDH	**Baadhala**	**35.49**	**35**	LR	LR	23 58 30.4	
	comp=Z,1μm,20.0s,baz=16,slow=36						
LODK	**Lodwar**	**36.14**	**284**	P	**P**	**23 44 08.3**	**+1.3**
	SNR=16						
LODK	**Lodwar**	**36.14**	**284**		**P**	**23 44 07.3**	**+0.3**
LODK				IAmb	IAmb	23 44 13.6	
	comp=Z,29nm,1.1s						
LODK	**Lodwar**	**36.14**	**284**	P	**P**	**23 44 08.3**	**+1.3**
NPW	**Naypyitaw**	**36.23**	**44**	P	**P**	**23 44 08.9**	**+1.3**
DBJI	**Dramaga**	**36.24**	**93**	P	**P**	**23 44 09.3**	**+1.5**
	comp=Z,117nm,1.4s						
PTH	**Pitoragarh**	**36.81**	**15**	*e*P	**P**	**23 44 13.0**	**+0.4**
LEM	**Lembang**	**37.10**	**93**	LR	LR	23 57 08.7	
	comp=Z,930nm,20.2s,baz=208,slow=32						
CM31	**Chiang Mai Arr**	**37.40**	**49**	P	**P**	**23 44 19.2**	**+1.7**
	SNR=9.4						
CM31	**Chiang Mai Arr**	**37.40**	**49**	P	**P**	**23 44 17.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**37.40**	**49**	P	**P**	**23 44 18.8**	**+1.3**
	comp=Z,14nm,1.0s,baz=242,slow=9.6,SNR=55						
	comp=Z,14nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.40**	**49**	P	**P**	**23 44 17.5**	**0.0**
EVN	**Everest**	**37.50**	**24**	P	**P**	**23 44 18.6**	**-0.4**
CHTO	**Chiang Mai**	**37.62**	**48**	P	**P**	**23 44 19.1**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,60nm,1.5s						
CHTO	**Chiang Mai**	**37.62**	**48**	P	**P**	**23 44 20.4**	**+1.0**
CHTO	**Chiang Mai**	**37.62**	**48**	P	**P**	**23 44 19.1**	**-0.3**
CHTO				IAmb	IAmb	23 44 21.8	
	comp=Z,60nm,1.5s						
CHTO	**Chiang Mai**	**37.62**	**48**	P	**P**	**23 44 19.4**	**0.0**
	comp=Z,25nm,1.1s						
CHTO				pP	**sP**	**23 44 23.8**	**-0.1**
	comp=Z,25nm,1.1s						
CHTO	**Chiang Mai**	**37.62**	**48**	P	**P**	**23 44 20.6**	**+1.3**
SMLA	**Simla**	**37.67**	**10**	*e*P	**P**	**23 44 17.1**	**-2.5**
SMLA				*i* x	x	23 56 51.1	
SHL	**Shillong**	**37.90**	**33**	P	**P**	**23 44 21.5**	**-0.4**
SHL				pmax	pmax		
	comp=Z,35nm,0.8s						
SHL	**Shillong**	**37.90**	**33**	P	**P**	**23 44 23.1**	**+1.2**
	SNR=16						
SHL	**Shillong**	**37.90**	**33**	P	**P**	**23 44 21.5**	**-0.4**
SHL				IAmb	IAmb	23 44 23.7	
	comp=Z,35nm,0.8s						
SHL	**Shillong**	**37.90**	**33**	*e*P	**P**	**23 44 22.0**	**+0.1**
RAYN	**Ar Rayn**	**38.16**	**322**	P	**P**	**23 44 23.3**	**-0.7**
RAYN	**Ar Rayn**	**38.16**	**322**	P	**P**	**23 44 23.9**	**-0.1**
RAYN	**Ar Rayn**	**38.16**	**322**		**P**	**23 44 22.8**	**-1.2**
RAYN	**Ar Rayn**	**38.16**	**322**	P	**P**	**23 44 23.5**	**-0.6**
MORE	**Moreh**	**38.24**	**37**	P	**P**	**23 44 25.2**	**+0.6**
MORE				IAmb	IAmb	23 44 38.3	
	comp=Z,53nm,1.1s						
KLP	**Kalpa**	**38.26**	**11**	*e*P	**P**	**23 44 26.3**	**+1.3**
KLP				IAmb	IAmb	23 44 28.3	
	comp=Z,23nm,1.0s						
KLP				*i* x	x	23 57 21.0	
TSSA	**Tissa**	**39.19**	**8**	*e*P	**P**	**23 44 33.2**	**+0.5**
NIL	**Nilore**	**39.71**	**4**	P	**P**	**23 44 36.3**	**-0.4**
NIL				pmax	pmax		
	comp=Z,32nm,0.9s						
NIL	**Nilore**	**39.71**	**4**	P	**P**	**23 44 36.9**	**+0.1**
NIL	**Nilore**	**39.71**	**4**	P	**P**	**23 44 36.3**	**-0.4**
NIL	**Nilore**	**39.71**	**4**	P	**P**	**23 44 37.1**	**+0.4**
MBAR	**Mbarara**	**39.84**	**276**	LR	LR	23 59 34.9	
	comp=Z,252nm,18.0s,baz=101,slow=34						
MBAR	**Mbarara**	**39.84**	**276**	*d* iP		**23 44 39.1**	**+0.7**
MBAR				pmax	pmax		
	comp=Z,66nm,1.6s						
MBAR	**Mbarara**	**39.84**	**276**	P	**P**	**23 44 37.6**	**-0.7**
MBAR	**Mbarara**	**39.84**	**276**	P	**P**	**23 44 38.7**	**+0.3**
MBAR				IAmb	IAmb	23 44 50.2	
	comp=Z,96nm,1.6s						
MBAR	**Mbarara**	**39.84**	**276**	P	**P**	**23 44 39.0**	**+0.6**
MBAR	**Mbarara**	**39.84**	**276**	P	**P**	**23 44 39.4**	**+1.0**
SMRI	**Semarang**	**39.90**	**94**	P	**P**	**23 44 37.4**	**-1.3**
KBL	**Kabul**	**40.51**	**358**	P	**P**	**23 44 43.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,67nm,1.3s						
KBL	**Kabul**	**40.51**	**358**	P	**P**	**23 44 44.6**	**+1.0**
	SNR=18						
KBL	**Kabul**	**40.51**	**358**	P	**P**	**23 44 43.7**	**0.0**
KBL				IAmb	IAmb	23 45 05.2	
	comp=Z,67nm,1.2s						
KBL	**Kabul**	**40.51**	**358**	P	**P**	**23 44 44.4**	**+0.8**
LSA	**Lhasa**	**40.92**	**28**	P	**P**	**23 44 47.4**	**0.0**
HRA	**Herat**	**41.05**	**350**	P	**P**	**23 44 46.4**	**-1.7**
TNCH	**TengChong**	**41.44**	**40**	P	**P**	**23 44 53.3**	**+1.9**
TNCH				S	**S**	**23 51 09.0**	**+2.5**
TNCH				pmax	pmax		
	comp=Z,49nm,0.6s						
TNCH				L	L		
	comp=Z,370nm,11.1s						
TNCH				L	L		
	comp=Z,270nm,9.2s						
TNCH				L	L		
	comp=Z,940nm,22.5s						
LSZ	**Lusaka**	**42.26**	**254**	LR	LR	23 59 32.9	
	comp=Z,1μm,18.9s,baz=96,slow=32						
LSZ	**Lusaka**	**42.26**	**254**	P	**P**	**23 44 57.8**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,56nm,1.2s						
LSZ	**Lusaka**	**42.26**	**254**	P	**P**	**23 44 58.3**	**0.0**
LSZ				P	**P**	**23 44 58.3**	**0.0**
LSZ	**Lusaka**	**42.26**	**254**	P	**P**	**23 44 57.8**	**-0.4**
LSZ				IAmb	IAmb	23 45 05.1	
	comp=Z,56nm,1.2s						
LSZ	**Lusaka**	**42.26**	**254**	P	**P**	**23 44 58.2**	**0.0**
LSZ	**Lusaka**	**42.26**	**254**	P	**P**	**23 44 58.2**	**0.0**
SLVN	**Son La**	**42.84**	**49**	P	**P**	**23 45 03.4**	**+0.6**
MATP	**Matopo**	**42.91**	**247**	LR	LR	23 59 27.9	
	comp=Z,1μm,21.1s,baz=88,slow=31						
H04N2	**CROZET ISLANDS**	**42.93**	**199**	T	T	00 30 04.4	
	baz=30,slow=75,SNR=306						
H04N1	**CROZET ISLANDS**	**42.93**	**199**	T	T	00 30 05.8	
	baz=30,slow=75,SNR=230						
H04N3	**CROZET ISLANDS**	**42.94**	**199**	T	T	00 30 04.5	
	baz=30,slow=75,SNR=179						
MANEM	**Manem**	**43.51**	**2**	P	**P**	**23 45 07.8**	**-0.4**
MANEM				IAmb	IAmb	23 46 06.3	
	comp=Z,89nm,1.2s						
JAGI	**Jajag, Banyuwa**	**43.56**	**96**	P	**P**	**23 45 08.0**	**-0.7**
JAGI				IAmb	IAmb	23 45 19.8	
	comp=Z,66nm,1.0s						
BROLN	**Tlhalogang**	**44.12**	**246**	P	**P**	**23 45 12.9**	**-0.3**
KMI2	**Kunming**	**44.35**	**44**	P	**P**	**23 45 15.8**	**+0.7**
KMI2				S	**S**	**23 51 50.0**	**+0.6**
KMI2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI2				pmax	pmax		
	comp=Z,350nm,6.1s						
KMI2				L	L		
	comp=Z,550nm,16.6s						
KMI2				L	L		
	comp=Z,570nm,14.1s						
KMI2				L	L		
	comp=Z,650nm,17.3s						
PZH	**PanZhiHua**	**44.56**	**42**	P	**P**	**23 45 18.5**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SRBI	**Singaraja**	**44.61**	**95**	P	**P**	**23 45 17.2**	**+0.1**
	comp=Z,115nm,1.2s						
CHGR	**Chuyangaron**	**44.61**	**359**	⇓*e*P	**P**	**23 45 16.7**	**-0.1**
CHGR				pmax	pmax		
	comp=Z,19nm,1.1s						
CHGR	**Chuyangaron**	**44.61**	**359**	P	**P**	**23 45 15.9**	**-0.9**
DZET	**Dzherino**	**44.77**	**358**	P	**P**	**23 45 18.7**	**+0.6**
GAR	**Garm**	**44.95**	**0**	P	**P**	**23 45 18.2**	**-1.2**
GAR	**Garm**	**44.95**	**0**	P	**P**	**23 45 18.7**	**-0.8**
KSH2	**Kashi**	**45.35**	**6**	P	**P**	**23 45 22.5**	**-0.3**
KSH2				pP	pwP	23 45 32.0	+0.9
KSH2				S	**S**	**23 52 00.5**	**-2.9**
KSH2				pmax	pmax		
	comp=Z,11nm,1.3s						
KSH2				pmax	pmax		
	comp=Z,420nm,5.8s						
KSH2				L	L		
	comp=Z,880nm,18.9s						
KSH2				L	L		
	comp=Z,4μm,14.1s						
KSH2				L	L		
	comp=Z,2μm,14.4s						
KSANE	**Kasane**	**45.50**	**251**	P	**P**	**23 45 23.3**	**-1.0**
KSANE	**Kasane**	**45

CHM Chimkent 48.26 359 *e*P **P 23 45 44.9 -0.5**
comp=Z,21nm,1.6s
GMARE Gumare 48.56 250 P **P 23 45 48.4 +0.2**
AAK Ala-Archa 48.73 4 LR LR 00 05 49.4
comp=Z,1μm,18.1s,baz=186,slow=36
AAK Ala-Archa 48.73 4*ce*P **P 23 45 49.3 +0.2**
AAK pmax pmax
comp=Z,23nm,1.3s
AAK Ala-Archa 48.73 4 P **P 23 45 48.8 -0.3**
AAK IAmb IAmb 23 46 04.8
comp=Z,23nm,1.2s
AAK Ala-Archa 48.73 4 P **P 23 45 49.9 +0.8**
MORW Morawa 48.79 124 P P 23 46 00.6 +11
comp=Z,26nm,1.3s
GRHM Grahamstown, E 48.81 231 P **P 23 45 49.3 -0.5**
CD2 Chengdu 48.84 39 P **P 23 45 49.5 -0.5**
CD2 S **S 23 52 52.0 -1.2**
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,490nm,5.1s
CD2 L L
comp=Z,780nm,15.9s
CD2 L L
comp=Z,1μm,17.1s
CD2 L L
comp=Z,770nm,18.4s
DZA Taraz 48.84 1 *e*P **P 23 45 49.2 -0.6**
DZA Taraz 48.84 1 *e*P **P 23 45 49.2 -0.6**
FRU1 Bishkek 48.91 4 P **P 23 45 50.7 +0.3**
FRU1 pmax pmax
comp=Z,31nm,1.2s
FRU1 Bishkek 48.91 4 P **P 23 45 50.7 +0.3**
FRU1 IAmb IAmb 23 46 32.9
comp=Z,31nm,1.2s
LKRN Lenkeran, Azer 48.91 338 P **P 23 45 53.1 +2.8**
BRLS Borolday 48.97 360 *e*P **P 23 45 48.0 -2.7**
BRLS Borolday 48.97 360 *e*P **P 23 45 48.1 -2.7**
KK31 Karatay Array 49.05 0 P **P 23 45 50.4 -0.9**
KK31 pmax pmax
comp=Z,12nm,1.1s
KK31 Karatay Array 49.05 0 P **P 23 45 50.4 -0.9**
KKAR Karatay Array 49.05 0 P **P 23 45 50.8 -0.5**
KKAR Karatay Array 49.05 0 P **P 23 45 50.8 -0.5**
EIL Elat 49.20 318 LR LR 00 01 55.4
comp=Z,655nm,21.0s,baz=140,slow=30
KAPI Kappang 49.24 91 LR LR 00 04 31.4
comp=Z,805nm,21.4s,baz=264,slow=33
TNSS Tian-Shan 49.35 6 *e*P **P 23 45 53.1 -1.0**
TNSS Tian-Shan 49.35 6 *e*P **P 23 45 53.2 -1.0**
H01W3 Cape Leeuwin H 49.44 131 T T 00 37 29.8
baz=295,slow=75,SNR=72
MYLDM Lahad Datu 49.45 78 P **P 23 45 54.1 -0.8**
MYLDM IAmb IAmb 23 46 00.7
comp=Z,48nm,1.3s
MYLDM Lahad Datu 49.45 78 P **P 23 45 54.7 -0.2**
comp=Z,25nm,1.4s
H01W2 Cape Leeuwin H 49.45 131 T T 00 37 30.0
baz=295,slow=75,SNR=156
H01W1 Cape Leeuwin H 49.46 131 T T 00 37 31.1
baz=295,slow=75,SNR=112
MDOK Medeo 49.49 7 *e*P **P 23 45 54.2 -0.7**
MDOK Medeo 49.49 7 *e*P **P 23 45 54.2 -0.7**
AAA Alma-Ata 49.52 6 *e*P **P 23 45 54.5 -0.5**
AAA pmax pmax
comp=Z,21nm,1.3s
AAA Alma-Ata 49.52 6 *e*P **P 23 45 54.5 -0.5**
comp=Z,21nm,1.3s
SGDS Sogindy 49.55 4 *e*P **P 23 45 54.8 -0.5**
SATY Saty 49.55 8*c i*P **P 23 45 54.8 -0.6**
SATY pmax pmax
comp=Z,15nm,1.1s
SATY Saty 49.55 8⇑ *i*P **P 23 45 54.8 -0.6**
comp=Z,15nm,1.1s
ASF Jabal al Asfar 49.65 322 LR LR 00 03 44.7
comp=Z,755nm,18.4s,baz=206,slow=32
PCI Palu 49.72 86 P **P 23 45 57.4 +0.4**
comp=Z,6μmcomp=Z,106nm,1.4s
UZB Uzynbulak 49.73 8*c i*P **P 23 45 56.1 -0.6**
UZB Uzynbulak 49.73 8⇑ *i*P **P 23 45 56.1 -0.6**
GRTLG Ghanzi 49.76 247 P **P 23 45 57.2 -0.2**
GRTLG IAmb IAmb 23 46 03.5
comp=Z,39nm,1.6s
SHLS Shalkode 49.80 9 *e*P **P 23 45 57.1 -0.1**
SHLS pmax pmax
comp=Z,27nm,1.7s
SHLS Shalkode 49.80 9 *e*P **P 23 45 57.1 -0.1**
comp=Z,27nm,1.7s
GHAJ Ghor Haditha 49.88 320 P **P 23 45 57.3 -0.6**
GHAJ IAmb IAmb 23 46 08.4
comp=Z,55nm,1.4s
GHAJ Ghor Haditha 49.88 320 P **P 23 45 57.8 -0.1**
BSSI Bau Bau, Buton 49.91 93 P **P 23 45 57.4 -1.0**
comp=Z,130nm,1.6s
PDGK Podgornoye 49.97 9 P **P 23 45 58.1 -0.4**
PDGK Podgornoye 49.97 9 P **P 23 45 58.1 -0.4**
KPKS Kokpek 49.99 8 *e*P **P 23 45 57.8 -0.8**
KPKS Kokpek 49.99 8 *e*P **P 23 45 57.9 -0.8**
KUU Kurty 50.13 6 *e*P **P 23 45 59.1 -0.5**
KUU Kurty 50.13 6 *e*P **P 23 45 59.1 -0.5**
LKGWB Lokgwabe 50.30 244 P **P 23 45 57.9 -3.5**
NAX Nakhchivan 50.62 335 P **P 23 46 05.4 +1.9**
TOLI2 Tolitoli 50.94 84 P **P 23 46 05.6 -0.6**
GEVA Gevas 50.98 332 P **P 23 46 05.7 -0.6**
KOOLE Kule 50.99 245 P **P 23 46 06.0 -0.7**
KOOLE IAmb IAmb 23 46 18.6
comp=Z,39nm,0.9s
KOOLE Kule 50.99 245 P **P 23 46 06.5 -0.2**
BTLS Baital 51.09 3 *e*P **P 23 46 06.3 -0.5**
BTLS Baital 51.09 3 *e*P **P 23 46 06.3 -0.5**
MNGR Mingechevir, A 51.35 337 P **P 23 46 11.0 +2.2**
GANJ Ganja 51.53 337 P **P 23 46 12.5 +2.3**
MMRI Maumere 51.55 96 P **P 23 46 09.6 -1.2**
MMRI Maumere 51.55 96 P **P 23 46 09.8 -1.1**
comp=Z,120nm,1.2s
GURO Guroymak-BITLI 51.65 332 P **P 23 46 10.6 -0.7**
SEKA Sheki 51.68 338 P **P 23 46 13.2 +1.8**
AKT Akhty 51.72 338 *e*P **P 23 46 11.5 -0.2**
AKT *e* 23 47 24.1
AKT *e*PPP PPP 23 49 07.4
AKT *e*S **S 23 53 35.1 +2.0**
AKT pmax pmax
comp=Z,33nm,1.1s
GNI Garni 51.75 335 LR LR 00 07 21.9
comp=Z,637nm,19.3s,baz=146,slow=35
GNI Garni 51.75 335*c i*P **P 23 46 11.4 -0.7**
GNI pmax pmax
comp=Z,61nm,1.2s
GNI Garni 51.75 335 P **P 23 46 12.4 +0.4**
GNI P **P 23 46 12.4 +0.4**
GNI Garni 51.75 335 P **P 23 46 11.8 -0.3**
GNI IAmb IAmb 23 46 23.5
comp=Z,49nm,1.1s
GNI Garni 51.75 335 P **P 23 46 12.1 0.0**
comp=Z,810nmcomp=Z,41nm,1.0s
BBSI Bau Bau 52.01 92 P **P 23 46 15.3 +1.0**
comp=Z,74nm,1.1s
WMQ Urumqi 52.20 16 *e*P **P 23 46 16.3 +1.1**
WMQ PcP **PcP 23 47 25.8 -0.9**
WMQ S **S 23 53 37.5 -2.0**
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ pmax pmax
comp=Z,260nm,3.7s
WMQ L L
comp=Z,840nm,17.1s
WMQ L L
comp=Z,1μm,13.3s
WMQ L L
comp=Z,390nm,15.7s
LZDM Lanzhou Array 52.35 34 P **P 23 46 16.7 -0.1**
comp=Z,12nm,0.7s,baz=218,slow=9.4,SNR=12
LZDM LR LR 00 07 57.6
comp=Z,366nm,21.8s,baz=240,slow=36
comp=Z,12nm,0.7s
LZH Lanzhou 52.52 34 P **P 23 46 18.5 +0.6**
LZH sP pwP 23 46 27.0 +0.8
LZH S **S 23 53 43.5 -1.0**
LZH SS **SS 23 57 24.5 +1.6**
LZH pmax pmax
comp=Z,33nm,1.3s
LZH pmax pmax
comp=Z,290nm,4.0s
LZH L L
comp=Z,580nm,12.7s
LZH L L
comp=Z,800nm,14.8s
LZH L L
comp=Z,540nm,15.8s
CY604 RAF Akrotiri, 52.58 322 P **P 23 46 16.9 -0.9**
CY604 IAmb IAmb 23 46 56.4
comp=Z,51nm,1.5s
LUWI Luwuk 52.61 87 **P 23 46 16.8 -1.9**
TSUM Tsumeb 52.81 251 LR LR 00 05 32.6
comp=Z,764nm,20.9s,baz=88,slow=32
TSUM Tsumeb 52.81 251 P **P 23 46 19.8 -0.5**
TSUM IAmb IAmb 23 46 26.8
comp=Z,40nm,1.5s
SUR Sutherland 52.87 234 LR LR 00 04 50.9
comp=Z,442nm,19.4s,baz=70,slow=32
SUR Sutherland 52.87 234 P **P 23 46 20.5 -0.1**
SUR IAmb IAmb 23 46 27.3
comp=Z,58nm,1.4s
GTA2 Gaotai 52.98 28 P **P 23 46 21.0 -0.1**
GTA2 pP sP 23 46 26.8 +1.1
GTA2 S **S 23 53 50.3 -0.1**
GTA2 SS **SS 23 57 29.5 -0.4**
GTA2 pmax pmax
comp=Z,22nm,1.1s
GTA2 pmax pmax
comp=Z,230nm,4.1s
GTA2 L L
comp=Z,540nm,21.9s
GTA2 L L
comp=Z,570nm,19.7s
GTA2 L L
comp=Z,910nm,20.9s
GAZ Gaziantep 53.04 327 P **P 23 46 21.6 0.0**
GAZ IAmb IAmb 23 46 32.2
comp=Z,44nm,1.4s
MAK Makhachkala 53.10 339 *e*P P 23 46 15.7 -6.0
MAK *e* 23 48 20.0
MAK *e*PPP PPP 23 49 26.9
MAK *e*S S 23 53 42.3 -9.3
MAK *e*SS **SS 23 57 32.2 +0.9**
MAK pmax pmax
comp=Z,240nm,1.1s
TRLG Trialeti 53.18 336 P **P 23 46 18.7 -3.9**
CNSH ChangSha 53.46 48 P **P 23 46 25.0 +0.3**
CNSH S **S 23 53 57.5 +0.4**
CNSH pmax pmax
comp=Z,25nm,1.2s
CNSH L L
comp=Z,480nm,25.2s
CNSH L L
comp=Z,420nm,23.3s
CNSH L L
comp=Z,240nm,24.3s
KOPT Kop Dagi 53.54 332 P **P 23 46 25.8 +0.3**
SOEI Soe 53.54 98 P **P 23 46 25.0 -0.7**
SOEI Soe 53.54 98 P **P 23 46 26.2 +0.5**
WIN Windhoek 53.73 247 P **P 23 46 25.7 -1.4**
WIN pmax pmax
comp=Z,21nm,1.2s
WIN Windhoek 53.73 247 P **P 23 46 25.7 -1.4**
WIN IAmb IAmb 23 46 33.6
comp=Z,21nm,1.2s
MAKZ Makanchi 53.76 10 P **P 23 46 24.1 -2.6**
MAKZ pmax pmax
comp=Z,17nm,1.3s
MAKZ Makanchi 53.76 10 P **P 23 46 24.1 -2.6**
MK31 Makanchi Array 53.80 10*d i*P **P 23 46 26.2 -0.7**
MKAR Makanchi Array 53.80 10 P **P 23 46 26.1 -0.9**
comp=Z,1.2nm,0.6s,baz=189,slow=6.7,SNR=11
MKAR LR LR 00 09 47.4
comp=Z,674nm,18.2s,baz=188,slow=37
comp=Z,1.2nm,0.6s
MKAR Makanchi Array 53.80 10 *i* P **P 23 46 26.2 -0.7**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 53.80 10 P **P 23 46 25.9 -1.0**
ARPR Arapgir-MALATY 53.88 329 P **P 23 46 27.1 -0.7**
ARPR IAmb IAmb 23 46 48.8
comp=Z,18nm,1.0s
BATM Batumi 54.26 334 ⇑P **P 23 46 29.7 -0.7**
BATM Batumi 54.26 334 P **P 23 46 29.6 -0.7**
ZSN Zaisan 54.93 12 *e*P **P 23 46 34.9 -0.2**
ZSN Zaisan 54.93 12 *e*P **P 23 46 35.0 -0.2**
BNN Bunyan 55.00 327 P **P 23 46 35.1 -0.8**
BNN IAmb IAmb 23 46 46.7
comp=Z,21nm,1.1s
NCK Nalchik 55.02 336⇓ *e*P **P 23 46 35.9 0.0**
NCK pmax pmax
comp=Z,20nm,1.2s
FITZ Fitzroy Crossi 55.22 108 LR LR 00 09 30.0
comp=Z,470nm,18.8s,baz=280,slow=35
KBZ Khabaz 55.50 336 P **P 23 46 38.2 -1.0**
comp=Z,10nm,1.0s,baz=164,slow=5.4,SNR=17
KBZ LR LR 00 10 40.6
comp=Z,526nm,19.6s,baz=158,slow=36
comp=Z,10nm,1.0s
KBZ Khabaz 55.50 336*c i*P **P 23 46 38.1 -1.1**
KBZ pmax pmax
comp=Z,27nm,1.0s
SHA1 Shidzhatmaz 55.60 336*c i*P **P 23 46 39.1 -1.2**
TOKA Tokat 55.75 329 P **P 23 46 40.6 -0.6**
TOKA IAmb IAmb 23 46 54.5
comp=Z,24nm,1.0s
KVAR Kislovodsk Arr 55.77 336 LR LR 00 10 35.1
comp=Z,274nm,18.6s,baz=80,slow=36
KIV Kislovodsk 55.77 336 ⇑P **P 23 46 40.7 -0.6**
KIV Kislovodsk 55.77 336 *e*P **P 23 46 40.3 -1.0**
KIV *e*S **S 23 54 26.2 -1.7**
KIV *e*SS **SS 23 58 14.4 +0.7**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,322nm,17.0s
KIV Kislovodsk 55.77 336 P **P 23 46 40.5 -0.8**
KIV IAmb IAmb 23 46 52.3
comp=Z,51nm,1.6s
KIV Kislovodsk 55.77 336 P **P 23 46 40.6 -0.7**
comp=Z,296nmcomp=Z,16nm,1.8s
WHN Wuhan 55.79 47 ⇓P **P 23 46 41.5 -0.1**
WHN S **S 23 54 27.5 -0.8**
WHN L L
comp=Z,2μm,16.0s
WHN L L
comp=Z,2μm,16.1s
WHN L L
comp=Z,2μm,20.9s
AB31 Akbulak array 55.93 352 P **P 23 46 40.7 -1.5**
AB31 IAmb IAmb 23 47 08.3
comp=Z,34nm,1.1s
ABKAR Akbulak array 55.93 352 P **P 23 46 40.6 -1.7**
KIRS Kirsehir-Merke 56.25 326 ⇑P **P 23 46 44.0 -0.9**
VSLR Vesyoloye 56.48 334*de*P **P 23 46 45.1 -1.2**
VSLR pmax pmax
comp=Z,26nm,1.5s
GOF Gofitskoye 56.55 337*ce*P P 23 46 40.2 -6.6
GOF *e*S **S 23 54 42.9 +4.9**
SOC Sochi 56.72 334 *e*P **P 23 46 51.4 +3.4**
SOC *e* 23 48 54.4
SOC *e*PPP PPP 23 50 05.4
SOC *e*S **S 23 54 47.9 +7.6**
SOC pmax pmax
comp=Z,10.0nm,0.6s
SOC MLR MLR
comp=Z,353nm,16.0s
DAV Davao City (W) 56.72 77 LR LR 00 09 34.3
comp=Z,396nm,21.8s,baz=250,slow=34
LYN LuoYang 56.79 41 P **P 23 46 49.5 +0.8**
LYN S **S 23 54 40.5 -1.0**
LYN pmax pmax
comp=Z,26nm,1.2s
LYN pmax pmax
comp=Z,430nm,4.8s
LYN L L
comp=Z,1μm,16.8s
LYN L L
comp=Z,640nm,17.2s
LYN L L
comp=Z,1μm,17.2s
BR131 Keskin Array S 56.82 327⇓ *i*P **P 23 46 47.9 -1.1**
BR131 Keskin Array S 56.82 327 P **P 23 46 48.2 -0.7**
SNR=5.5
BR131 P **P 23 46 48.2 -0.7**
SNR=5.5
BR131 Keskin Array S 56.82 327 P **P 23 46 47.5 -1.4**
BRTR Keskin Array B 56.82 327 P **P 23 46 47.6 -1.5**
comp=Z,1.6nm,0.8s,baz=134,slow=8.9,SNR=12
BRTR LR LR 00 10 52.7
comp=Z,600nm,18.9s,baz=126,slow=36
comp=Z,1.6nm,0.8s
BRTR Keskin Array B 56.82 327 *i* P **P 23 46 47.9 -1.1**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 56.82 327 P **P 23 46 47.3 -1.6**
ELL Elmali 56.99 322 P **P 23 46 49.5 -0.7**
ELL pmax pmax
comp=Z,20nm,1.1s
ELL Elmali 56.99 322 P **P 23 46 49.5 -0.7**
ELL IAmb IAmb 23 47 06.7
comp=Z,20nm,1.1s
KURBB Kurchatov Arra 57.02 6 P **P 23 46 49.0 -0.9**
comp=Z,6.2nm,1.0s,baz=202,slow=7.3,SNR=27
KURBB LR LR 00 09 48.1
comp=Z,412nm,20.0s,baz=165,slow=34
comp=Z,6.2nm,1.0s
KURK Kurchatov 57.12 6*c i*P **P 23 46 49.8 -0.8**
KURK pmax pmax
comp=Z,23nm,1.3s
KURK Kurchatov 57.12 6 P **P 23 46 49.9 -0.8**
KURK Kurchatov 57.12 6 P **P 23 46 49.3 -1.4**
LABN Labinsk 57.14 335 *e*P **P 23 46 49.5 -1.4**
LABN *e**PP **pP 23 46 53.0 -1.2**
LABN *e*S **S 23 54 44.8 -1.0**
LABN pmax pmax
comp=Z,18nm,1.0s
AKTO Aktyubinsk 57.37 351 LR LR 00 11 09.6
comp=Z,176nm,21.1s,baz=198,slow=36
TNTI Ternate 57.40 85 P **P 23 46 53.3 -0.2**
TNTI Ternate 57.40 85 P **P 23 46 53.2 -0.2**
comp=Z,1μmcomp=Z,81nm,1.8s
TWG Pinlang 57.41 58 P **P 23 46 54.3 +1.0**
TWG IAmb IAmb 23 47 20.1
comp=Z,40nm,1.2s
DGZ Jazzator, Alta 57.61 13⇑ *e*P **P 23 46 54.1 -0.3**
DGZ pmax pmax
comp=Z,13nm,0.9s
SNOP Sinop 57.65 330 P **P 23 46 52.1 -2.4**
SNOP IAmb IAmb 23 48 56.1
comp=Z,13nm,0.6s
SSLB Suanglung 57.70 57 P **P 23 46 54.6 -0.7**
SSLB IAmb IAmb 23 46 58.2
comp=Z,44nm,1.8s
YULB Yu-li 57.83 58 P **P 23 46 56.2 -0.1**
YULB IAmb IAmb 23 46 59.5
comp=Z,25nm,1.1s
KNRA Kununurra 58.04 105 P **P 23 46 59.2 +1.4**
comp=Z,27nm,1.2s
ERBR Yeremizino-Bor 58.11 336 *e*P **P 23 46 56.2 -1.6**
ERBR *e**PP **pP 23 46 59.3 -1.8**
ERBR *e*S **S 23 54 58.6 +0.1**
ERBR pmax pmax
comp=Z,19nm,1.1s
NACB Ninganchiao 58.40 57 P **P 23 47 00.8 +0.6**
WRKA Warakurna 58.49 116 P **P 23 47 01.4 +0.4**
comp=Z,13nm,1.9s
TATO Taipei 58.64 56 P **P 23 47 02.3 +0.5**
MDUB Mudurnu 58.69 326 P **P 23 47 01.5 -0.5**
ANN Anapa 58.69 333 *e*P **P 23 46 59.6 -2.2**
ANN *e**PP **pP 23 47 03.5 -1.6**
ANN *e*S **S 23 55 03.5 -2.5**
ANN *e*SS **SS 23 58 59.2 -0.2**
ANN pmax pmax
comp=Z,34nm,1.3s
MANT Manisa 58.92 322 P **P 23 47 03.7 -0.2**
MANT IAmb IAmb 23 47 20.3
comp=Z,18nm,1.2s
BVAR Borovoye Array 58.97 0 P **P 23 47 02.7 -0.9**
comp=Z,1.3nm,0.7s,baz=160,slow=9.0,SNR=13
comp=Z,1.3nm,0.7s
IDI Anoyia 59.35 317 P **P 23 47 06.3 -0.4**
NJ2 Nanjing 59.85 47 *e*P **P 23 47 10.0 -0.1**
NJ2 pmax pmax
comp=Z,52nm,0.8s
HNS HongShan 59.94 40 ⇑P **P 23 47 11.3 +0.7**
HNS pmax pmax
comp=Z,34nm,1.2s
HNS L L
comp=Z,370nm,12.5s
HNS L L
comp=Z,400nm,12.6s
HNS L L
comp=Z,340nm,16.5s
HHC Hu-ho-hao-te 60.19 35 *e*P **P 23 47 13.3 +0.9**
HHC S **S 23 55 25.3 -0.6**
HHC SS **SS 23 59 26.0 +2.6**
HHC pmax pmax
comp=Z,15nm,0.9s
HHC pmax pmax
comp=Z,290nm,4.3s
HHC L L
comp=Z,370nm,15.0s
HHC L L
comp=Z,430nm,15.1s
HHC L L
comp=Z,380nm,17.2s
MTN Manton Dam 60.27 101 P **P 23 47 14.5 +1.1**
comp=Z,17nm,1.4s
EDA Edea 60.84 278 P **P 23 47 16.9 -0.3**
EDA IAmb IAmb 23 47 32.9
comp=Z,22nm,1.0s
TIA Tai'an 60.85 42 P **P 23 47 16.5 -0.4**
TIA S **S 23 55 35.0 +0.7**
TIA pmax pmax
comp=Z,22nm,1.2s
TIA L L
comp=Z,480nm,24.4s
TIA L L
comp=Z,760nm,21.4s
TIA L L
comp=Z,420nm,17.8s
SWI Sorong 61.06 88 P **P 23 47 19.1 +0.3**
comp=Z,1μmcomp=Z,62nm,1.4s
SIJI Sorong 61.07 88 LR LR 00 12 58.8
comp=Z,174nm,20.6s,baz=166,slow=35
SIJI Sorong 61.07 88 P **P 23 47 19.3 +0.5**
comp=Z,673nmcomp=Z,52nm,1.5s
ZAA0 Zalesovo Array 61.14 10 P **P 23 47 17.2 -1.3**
ZAA0 IAmb IAmb 23 47 24.3
comp=Z,19nm,1.1s
ZALV Zalesovo Beam 61.14 10 P **P 23 47 17.5 -0.9**
comp=Z,5.5nm,0.7s,baz=214,slow=7.2,SNR=27
ZALV LR LR 00 12 21.0
comp=Z,395nm,21.8s,baz=200,slow=35
comp=Z,5.5nm,0.7s
ZALV Zalesovo Beam 61.14 10 P **P 23 47 16.9 -1.5**
KNGR Kungurtug, Tuv 61.25 19⇑ *e*P **P 23 47 19.9 +0.4**
KNGR pmax pmax
comp=Z,29nm,1.4s
BELG Belogornoye 61.45 344 LR LR 00 15 02.9
comp=Z,201nm,18.4s,baz=185,slow=37
BELG Belogornoye 61.45 344 *i* P **P 23 47 18.7 -1.9**
BELG pmax pmax
comp=Z,7.0nm,1.3s
MAW Mawson 61.54 183 P **P 23 47 21.9 +1.0**
comp=Z,19nm,1.1s,baz=11,slow=8.0,SNR=27
MAW LR LR 00 07 41.8
comp=Z,392nm,19.8s,baz=356,slow=30
comp=Z,19nm,1.1s
MAW Mawson 61.54 183 P **P 23 47 22.0 +1.0**
MAW Mawson 61.54 183 P **P 23 47 21.6 +0.5**
KDU Kakadu 61.58 101 P **P 23 47 23.5 +1.3**
comp=Z,32nm,1.3s
FAKI Fak Fak 61.83 90 P **P 23 47 23.3 -0.7**
FAKI Fak Fak 61.83 90 P **P 23 47 24.5 +0.5**
ALN Alexandroupoli 61.94 323 P **P 23 47 23.5 -0.7**
ALN pmax pmax
comp=Z,7.0nm,1.0s
ALN Alexandroupoli 61.94 323 P **P 23 47 23.5 -0.7**
VRH Novokhopyorsk 62.20 340 *e*P **P 23 47 23.7 -2.0**
VRH pmax pmax
comp=Z,31nm,1.5s
RDO Rodhopi 62.40 323 P **P 23 47 27.3 +0.1**
RDO IAmb IAmb 23 47 43.8
comp=Z,16nm,1.1s
BJI2 Beijing 62.42 38 P **P 23 47 28.0 +0.6**
BJI2 sP **sP 23 47 32.3 +0.3**
BJI2 pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 62.47 27 P **P 23 47 28.1 +0.4**
comp=Z,14nm,0.9s,baz=218,slow=7.0,SNR=80
SONM LR LR 00 14 06.7
comp=Z,781nm,18.2s,baz=214,slow=36

comp=Z,14nm,0.9s
SONM Songino Array 62.47 27 P **P** **23 47 27.6 -0.2**
SONM IAmb IAmb 23 47 29.4
comp=Z,31nm,1.2s
ULN Ulaanbaatar 62.79 27*d iP* **P** **23 47 29.8 -0.2**
ULN pmax pmax
comp=Z,23nm,1.8s
ULN Ulaanbaatar 62.79 27 P **P** **23 47 29.9 0.0**
ULN IAmb IAmb 23 47 43.4
comp=Z,19nm,1.2s
ULN Ulaanbaatar 62.79 27 P **P** **23 47 29.7 -0.2**
comp=Z,1μmcomp=Z,48nm,1.7s
OUR Ouranopolis 62.85 322 P **P** **23 47 29.7 -0.6**
VORD Divnogorie 62.85 339 *eP* **P** **23 47 25.5 -4.6**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 63.11 339 *eP* **P** **23 47 29.4 -2.3**
VSR pmax pmax
comp=Z,9.0nm,0.6s
ARTI Arti 63.11 353 LR LR 00 15 11.0
comp=Z,192nm,18.2s,baz=172,slow=36
ARTI Arti 63.11 353*c iP* **P** **23 47 30.2 -1.4**
ARTI 23 48 06.7
ARTI 23 49 44.5
ARTI S **S** **23 56 01.5 -0.6**
ARTI SS **SS** **00 00 04.9 -3.4**
ARTI pmax pmax
comp=Z,8.0nm,0.8s
ARTI MLR MLR
comp=Z,250nm,14.0s
ARTI Arti 63.11 353 P **P** **23 47 30.2 -1.4**
ARTI IAmb IAmb 23 48 01.4
comp=Z,18nm,0.8s
ZAK Zakamensk 63.14 23 *eP* **P** **23 47 31.8 -0.4**
ZAK pmax pmax
comp=Z,15nm,1.5s
SVE Sverdlovsk 63.28 354 *eP* **P** **23 47 32.1 -0.7**
SVE *eS* **S** **23 56 05.5 +1.3**
SVE pmax pmax
comp=Z,27nm,1.4s
MOY Mondy 63.34 21 *eP* **P** **23 47 33.2 -0.2**
MOY pmax pmax
comp=Z,27nm,1.7s
ASAR Alice Springs 63.41 113 P **P** **23 47 35.1 +0.7**
comp=Z,9.5nm,0.8s,baz=282,slow=6.2,SNR=58
ASAR LR LR 00 13 43.5
comp=Z,244nm,19.8s,baz=274,slow=35
comp=Z,9.5nm,0.8s
ASAR Alice Springs 63.41 113 P **P** **23 47 34.4 -0.1**
AS31 Alice Springs 63.41 113 P **P** **23 47 33.6 -0.9**
VORR Voronezh 63.46 339 *eP* **P** **23 47 32.0 -2.1**
VORR pmax pmax
comp=Z,11nm,0.3s
CFR Carcaliu 63.52 328 ⇑P **P** **23 47 34.0 -0.6**
CFR Carcaliu 63.52 328 P **P** **23 47 34.0 -0.6**
WRA Warramunga Arr 63.55 109 P **P** **23 47 36.2 +0.8**
comp=Z,24nm,0.9s,baz=284,slow=6.4,SNR=75
WRA LR LR 00 14 24.6
comp=Z,235nm,19.7s,baz=330,slow=35
comp=Z,24nm,0.9s
WRA Warramunga Arr 63.55 109 P **P** **23 47 35.4 0.0**
WRAB Tennant Creek 63.56 109⇓*iP* **P** **23 47 36.4 +0.9**
WRAB pmax pmax
comp=Z,68nm,1.5s
WRAB Tennant Creek 63.56 109 P **P** **23 47 33.5 -1.9**
LIT Litokhoron 63.65 321 P **P** **23 47 35.2 -0.4**
LIT pmax pmax
comp=Z,49nm,1.4s
LIT Litokhoron 63.65 321 P **P** **23 47 35.2 -0.4**
WR8 Warramunga Arr 63.70 109 P **P** **23 47 36.4 0.0**
PLVB Pleven 64.31 325 ⇑P **P** **23 47 38.3 -1.5**
TLY Talaya 64.32 22 LR LR 00 13 28.1
comp=Z,302nm,21.0s,baz=215,slow=34
TLY Talaya 64.32 22*d iP* **P** **23 47 40.5 +0.7**
TLY pmax pmax
comp=Z,28nm,1.4s
TLY Talaya 64.32 22 P **P** **23 47 41.3 +1.5**
TLY Talaya 64.32 22 P **P** **23 47 40.0 +0.3**
LPSR Galich'ya Gora 64.33 339 *eP* **P** **23 47 37.9 -1.8**
LPSR pmax pmax
comp=Z,15nm,0.7s
ISR Istrita 64.33 327 ⇑P **P** **23 47 39.9 -0.2**
ISR Istrita 64.33 327 P **P** **23 47 39.8 -0.2**
SAHR Sahastru 64.65 328 ⇑P **P** **23 47 42.2 +0.1**
XLT XiLinHaoTe 64.71 35 *eP* **P** **23 47 42.5 -0.1**
XLT pmax pmax
comp=Z,8.0nm,0.9s
XLT pmax pmax
comp=Z,190nm,5.6s
XLT L L
comp=Z,320nm,16.5s
XLT L L
comp=Z,210nm,24.1s
VRI Vrincioaia 64.72 328 ⇑P **P** **23 47 42.0 -0.6**
VRI Vrincioaia 64.72 328 P **P** **23 47 41.9 -0.6**
VRI Vrincioaia 64.72 328 P **P** **23 47 41.7 -0.8**
comp=Z,496nmcomp=Z,53nm,1.2s
PLOR Plostina 64.75 328 ⇑P **P** **23 47 42.1 -0.6**
PLOR Plostina 64.75 328 P **P** **23 47 42.1 -0.6**
VLAD Vladila 64.81 325 ⇓P **P** **23 47 41.9 -1.2**
MLR Muntele Rosu 64.89 327 LR LR 00 14 25.2
comp=Z,584nm,21.9s,baz=144,slow=35
MLR Muntele Rosu 64.89 327 ⇑P **P** **23 47 43.3 -0.6**
MLR Muntele Rosu 64.89 327 P **P** **23 47 43.2 -0.6**
MLR Muntele Rosu 64.89 327 IAmb IAmb 23 48 07.7
comp=Z,25nm,1.2s
MLR Muntele Rosu 64.89 327 P **P** **23 47 43.0 -0.8**
comp=Z,18nm,1.4s
COVR Voineasa-Covas 64.98 328 ⇓P **P** **23 47 42.9 -1.3**
JOW Kunigami 64.98 57 LR LR 00 15 05.0
comp=Z,336nm,19.6s,baz=183,slow=35
IRK Irkutsk 65.00 22 *eP* **P** **23 47 41.6 -2.6**
IRK pmax pmax
comp=Z,42nm,3.3s
TESR Tescani 65.18 328 ⇑P **P** **23 47 43.8 -1.6**
TESR Tescani 65.18 328 P **P** **23 47 44.2 -1.3**
comp=Z,24nm,1.1s
TURR Turia 65.22 328 ⇓P **P** **23 47 44.4 -1.4**
DL2 Dalian 65.31 42 *eP* **P** **23 47 43.0 -3.5**
DL2 S **S** **23 56 28.5 -1.5**
DL2 pmax pmax
comp=Z,29nm,0.9s
DL2 pmax pmax
comp=Z,200nm,5.8s
DL2 L L
comp=Z,390nm,17.0s
DL2 L L
comp=Z,640nm,16.3s
DL2 L L
comp=Z,670nm,19.7s
VOIR 65.34 327 ⇓P **P** **23 47 45.1 -1.6**
VOIR 65.34 327 P **P** **23 47 45.0 -1.6**
OZUR 65.36 328 ⇓P **P** **23 47 45.0 -1.7**
SORM Soroca 65.40 331 ⇑P **P** **23 47 44.7 -2.2**
SORM Soroca 65.40 331 P **P** **23 47 44.6 -2.2**
BOSR Bodos 65.42 327 ⇑P **P** **23 47 45.4 -1.7**
ARR Arges 65.53 326 ⇑P **P** **23 47 45.9 -1.9**
GIRR Girov 65.55 329 ⇑P **P** **23 47 46.8 -1.1**
BIZ Bicaz 65.74 328 ⇓P **P** **23 47 47.3 -1.8**
SYO Syowa Base 65.94 192⇑*eP* P 23 47 43.0 -7.0
SYO Syowa Base 65.94 192⇑*iP* **P** **23 47 52.3 +2.3**
SYO Syowa Base 65.94 192⇓*iP* **P** **23 47 49.5 -0.5**
PRAR RASCA 65.95 329 ⇑P **P** **23 47 48.8 -1.7**
LOT Lotru 66.06 326 ⇑P **P** **23 47 49.9 -1.4**
CASY Casey 66.13 163 P **P** **23 47 52.1 +0.8**
BOVS Bovan 66.16 323 ⇑P **P** **23 47 51.7 -0.1**
HERR Herculane 66.48 325 ⇑P **P** **23 47 52.8 -1.1**
GZR Gura Zlata 66.58 326 ⇑P **P** **23 47 53.5 -1.1**
GZR Gura Zlata 66.58 326 P **P** **23 47 53.5 -1.1**
BURAR Bucovina Array 66.64 329 ⇑P **P** **23 47 54.6 -0.5**
BURAR Bucovina Array 66.64 329 P **P** **23 47 54.5 -0.5**
BURAR Bucovina Array 66.64 329 **P** **23 47 54.0 -1.0**
BUR08 Bucovina Ar. S 66.67 329 IAmb IAmb 23 48 11.5
comp=Z,17nm,1.4s
AK09 Malin Array Si 66.69 333 P **P** **23 47 53.2 -1.9**
AK10 Malin Array Si 66.69 333 P **P** **23 47 53.2 -1.9**
KIRV Kirov 66.69 348 LR LR 00 16 24.5
comp=Z,316nm,20.4s,baz=150,slow=36
KIRV Kirov 66.69 348*d iP* **P** **23 47 54.3 -0.6**
ARCR ARCALIA 66.76 328 ⇓P **P** **23 47 54.3 -1.3**
AKASG Malin Array Be 66.78 333 P **P** **23 47 53.6 -2.0**
AKASG LR LR 00 18 35.1
comp=Z,213nm,19.5s,baz=146,slow=37
comp=Z,1.3nm,0.5s
AKASG Malin Array Be 66.78 333*i* P **P** **23 47 53.5 -2.1**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 66.78 333 P **P** **23 47 54.7 -1.0**
AKBB Malin Array Si 66.78 333*c iP* **P** **23 47 53.6 -2.0**
AKBB pmax pmax
comp=Z,15nm,1.6s
AKBB Malin Array Si 66.78 333 IAmb IAmb 23 48 07.1
comp=Z,33nm,1.4s
KIEV Kiev 66.78 333 ⇑P **P** **23 47 53.8 -1.8**
KIEV Kiev 66.78 333 P **P** **23 47 54.0 -1.6**
KIEV Kiev 66.78 333 **P** **23 47 54.0 -1.6**
KIEV Kiev 66.78 333 P **P** **23 47 54.0 -1.6**
comp=Z,1μmcomp=Z,69nm,1.2s
DEV Deva 66.80 326 ⇑P **P** **23 47 55.8 -0.2**
DEV Deva 66.80 326 P **P** **23 47 55.7 -0.2**
MDVR Moldovita 66.82 324 ⇑P **P** **23 47 55.1 -1.0**
TIP Timpagrande 66.91 317 P **P** **23 47 56.7 -0.1**
PDG Podgorica 66.97 321 P **P** **23 47 57.5 +0.5**
PDG IAmb IAmb 23 48 13.6
comp=Z,28nm,1.3s
MARR Marisel-Cluj 67.17 327 ⇓P **P** **23 47 57.5 -0.9**
OBN Obninsk 67.19 340 ⇑P **P** **23 47 56.8 -1.4**
OBN Obninsk 67.19 340*c iP* **P** **23 47 56.6 -1.5**
OBN *e**PP **pP** **23 48 01.5 0.0**
OBN *e* 23 48 25.9
OBN *e* 23 50 21.4
OBN pmax pmax
comp=Z,22nm,0.9s
OBN Obninsk 67.19 340 P **P** **23 47 56.7 -1.4**
MOS Moscow 67.33 341 *eP* **P** **23 47 58.5 -0.6**
MOS *e* 23 48 25.3
MOS *e* 23 50 30.0
MOS *eS* **S** **23 56 53.4 -0.5**
MOS pmax pmax
comp=Z,57nm,1.1s
MOS pmax pmax
comp=Z,100nm,2.0s
MOS MLR MLR
comp=Z,300nm,17.0s
BZS Buzias 67.37 325 ⇑P **P** **23 47 58.7 -0.8**
BZS Buzias 67.37 325 P **P** **23 47 58.7 -0.8**
DRGR 67.46 327 ⇓P **P** **23 47 59.6 -0.6**
DRGR 67.46 327 P **P** **23 47 59.6 -0.6**
BANR Banloc 67.50 325 ⇑P **P** **23 48 00.2 -0.1**
BMR Baia Mare 67.58 328 ⇓P **P** **23 47 59.6 -1.2**
BMR Baia Mare 67.58 328 P **P** **23 47 59.6 -1.2**
RAFF Raffo Rosso 67.64 314 P **P** **23 47 60.0 -1.5**
VAE Valguarnera 67.72 315 LR LR 00 13 14.8
comp=Z,196nm,20.6s,baz=140,slow=32
SIRR Siria 67.73 326 ⇑P **P** **23 48 00.5 -1.3**
QIS Mount Isa 68.52 110 P **P** **23 48 08.5 +1.1**
comp=Z,73nm,0.9s
RNPP5 Staryi Chortor 68.67 332 P **P** **23 48 08.8 +1.2**
UZHM Uzhgorod 68.80 328 P **P** **23 48 09.2 +0.7**
SGRT San Giovanni R 68.85 319 P **P** **23 48 08.5 -0.6**
SGRT IAmb IAmb 23 48 19.4
comp=Z,24nm,0.9s
KSAR Wonju Array Be 68.94 46 P **P** **23 48 08.2 -1.4**
KSAR Wonju Array Be 68.94 46 P **P** **23 48 08.2 -1.4**
KSRS Korea Array 68.98 46 P **P** **23 48 09.3 -0.4**
comp=Z,4.1nm,0.7s,baz=244,slow=7.0,SNR=18
KSRS LR LR 00 18 14.5
comp=Z,303nm,19.7s,baz=230,slow=36
comp=Z,4.1nm,0.7s
KOLS Kolonicke sedl 69.00 328 *eP* P 23 48 18.7 +9.0
PAOL Paolisi 69.27 318 P **P** **23 48 11.2 -0.4**
PAOL IAmb IAmb 23 48 30.5
comp=Z,24nm,1.3s
MORH Mrgy, Hungar 69.41 324 ⇑P **P** **23 48 11.3 -1.0**
JNU Nakatsue 69.42 51 LR LR 00 18 25.8
comp=Z,307nm,18.1s,baz=245,slow=36
BLY Banja Luka 69.48 323 P **P** **23 48 11.3 -1.5**
TAM Tamanrasset 69.50 297 P **P** **23 48 12.8 -0.8**
TAM pmax pmax
comp=Z,7.0nm,0.8s
TAM Tamanrasset 69.50 297 P **P** **23 48 12.8 -0.8**
PSZ Piszkesteto 69.67 326 P **P** **23 48 12.4 -1.6**
PSZ pmax pmax
comp=Z,19nm,1.5s
PSZ Piszkesteto 69.67 326 P **P** **23 48 12.4 -1.6**
GENI Genyem 69.74 90 P **P** **23 48 14.5 -0.5**
comp=Z,31nm,0.7s
MNK Minsk 70.03 335*i* P **P** **23 48 15.9 0.0**
comp=E,10.0nm,0.9s
MNK *i* P **P** **23 48 15.9 0.0**
comp=N,11nm,1.0s
MNK *i* P **P** **23 48 15.9 0.0**
comp=Z,10.0nm,1.0s,baz=134
MNK *i* PcP **PcP** **23 48 38.0 0.0**
MNK *i* PP **PP** **23 50 50.3 -0.7**
MNK *i* PPP PPP 23 52 31.9
MNK *i* S **S** **23 57 26.6 +0.6**
MNK *i* ScS **ScS** **23 58 18.0 +0.2**
MNK *i* SS **SS** **00 01 56.6 +0.8**
MNK *i* SSS SSS 00 05 14.5
MNK Minsk 70.03 335*i* P **P** **23 48 15.9 0.0**
MNK *i* 23 48 38.0
MNK *i* 23 50 50.3
MNK *i* PPP PPP 23 52 31.9
MNK *i* S **S** **23 57 26.6 +0.6**
MNK *i* 23 58 17.9
MNK *i* SS **SS** **00 01 56.6 +0.8**
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,1.0s
MNK pmax pmax
comp=N,11nm,1.0s
HILR Hailar Array B 70.14 32 P **P** **23 48 17.0 +0.2**
comp=N,21nm,0.8s,baz=213,slow=7.1,SNR=20
comp=N,21nm,0.8s
INTR Introdacqua 70.18 319 P **P** **23 48 16.1 -1.1**
INTR IAmb IAmb 23 48 27.1
comp=Z,17nm,1.1s
CN2 Changchun 70.28 39 P **P** **23 48 17.3 -0.4**
CN2 S **S** **23 57 27.8 -1.6**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 L L
comp=Z,390nm,17.0s
CN2 L L
comp=Z,340nm,17.0s
CN2 L L
comp=Z,470nm,15.0s
VYHS Vyhne 70.58 327*eP* P 23 48 24.8 +5.3
LANS Liptovska Anna 70.61 327*eP* P 23 48 28.2 +8.5
BEHE Becsehely 70.64 324 P **P** **23 48 18.9 -0.9**
AQU L'Aquila 70.67 319 P **P** **23 48 19.1 -1.1**
AQU pmax pmax
comp=Z,21nm,1.1s
AQU L'Aquila 70.67 319 P **P** **23 48 19.1 -1.1**
AQU IAmb IAmb 23 48 45.7
comp=Z,21nm,1.1s
KEST Kesra 70.67 311 P **P** **23 48 22.6 +2.1**
comp=Z,5.0nm,0.9s,baz=355,slow=13,SNR=3.9
KEST LR LR 00 17 01.2
comp=Z,259nm,21.6s,baz=43,slow=34
KEST Kesra 70.67 311 P **P** **23 48 19.6 -0.8**
KEST IAmb IAmb 23 48 54.4
comp=Z,44nm,1.8s
TORD Torodi Ar. Bea 70.76 286 P **P** **23 48 20.4 -0.8**
comp=Z,9.5nm,1.2s,baz=114,slow=5.7,SNR=7.6
TORD LR LR 00 18 30.5
comp=Z,216nm,18.9s,baz=106,slow=35
comp=Z,9.5nm,1.2s
TORD Torodi Ar. Bea 70.76 286 P **P** **23 48 20.5 -0.8**
STKA Stephens Creek 70.91 121 P **P** **23 48 22.4 +0.5**
comp=Z,6.3nm,0.7s,baz=299,slow=4.5,SNR=12
comp=Z,6.3nm,0.7s
KLMR Klimovskoe 71.03 345 *eP* **P** **23 48 20.2 -1.7**
KLMR pmax pmax
comp=Z,65nm,1.3s
KLMR MLR MLR
comp=Z,312nm,16.0s
GUMA Gualdo di Mace 71.05 319 P **P** **23 48 22.2 -0.2**
GUMA IAmb IAmb 23 49 04.4
comp=Z,23nm,1.0s
OJC Ojcow 71.06 328 P **P** **23 48 21.5 -0.9**
OJC Ojcow 71.06 328 P **P** **23 48 21.5 -0.9**
FDMO Fiordimonte 71.19 319 IAmb IAmb 23 48 52.9
comp=Z,20nm,1.0s
CESX Cesi 71.33 319 P **P** **23 48 22.7 -1.4**
MODS Modra-Piesok 71.38 326 *eP* P 23 48 30.8 +6.5
MODS pmax pmax
comp=Z,8.0nm,0.8s
MODS Modra-Piesok 71.38 326 *eP* P 23 48 30.8 +6.5
JAVC Velka Javorina 71.42 326 *eP* **P** **23 48 23.6 -1.1**
RONA Rosalia, Austr 71.57 325 *eP* **P** **23 48 24.2 -1.3**
comp=Z,8.8nm,1.7s
OKC Ostrava-Krasne 71.71 327 *eS* **S** **23 57 49.4 +3.6**
SUW Suwalki 71.75 333 P **P** **23 48 25.4 -0.9**
SUW Suwalki 71.75 333 P **P** **23 48 25.4 -0.9**
ELIB Princess Elisa 71.75 194 *dP* **P** **23 48 27.2 +0.9**
comp=Z,15nm,1.0s
ELIB *d*PP **PP** **23 50 58.9 -6.7**
SOKA Soboth 71.77 323 *eP* **P** **23 48 25.1 -1.7**
comp=Z,0.1nm,0.8s
ARSA Arzberg 71.78 324 P **P** **23 48 26.0 -0.8**
ARSA Arzberg 71.78 324 *eP* **P** **23 48 25.8 -1.0**
comp=Z,4.5nm,1.1s
CONA Conrad Observa 71.94 325 *eP* **P** **23 48 26.0 -1.8**
comp=Z,5.4nm,1.2s
OBKA Obir 71.97 323 *eP* **P** **23 48 26.5 -1.6**
comp=Z,121nm,4.4s
MORC Moravsky Berou 72.00 327 P **P** **23 48 27.6 -0.5**
MORC pmax pmax
comp=Z,24nm,1.6s
MORC Moravsky Berou 72.00 327 P **P** **23 48 27.6 -0.5**
MORC IAmb IAmb 23 48 37.3
comp=Z,24nm,1.6s
MORC Moravsky Berou 72.00 327 *eP* **P** **23 48 27.2 -0.9**
TRI Trieste 72.05 322 P **P** **23 48 27.6 -0.8**
TRI Trieste 72.05 322 P **P** **23 48 27.6 -0.8**
VSL Villasalto 72.15 315 P **P** **23 48 29.5 +0.3**
VSL IAmb IAmb 23 48 39.8
comp=Z,18nm,1.0s
KRUC Moravsky 72.24 326 *eP* **P** **23 48 27.7 -1.8**
KRUC *e* 23 48 37.5
VRAC Vranov 72.26 326 LR LR 00 21 12.9
comp=Z,58nm,18.9s,baz=122,slow=37
SESA Seetaler Alpe, 72.27 324 *eP* **P** **23 48 28.5 -1.4**
comp=Z,43nm,1.5s
SABO M.te Sabotino 72.28 322 P **P** **23 48 30.5 +0.6**
BNX BinXian 72.44 38 ⇓P **P** **23 48 30.0 -0.7**
BNX sP **sP** **23 48 34.8 -0.6**
BNX PP **PP** **23 51 11.3 -0.7**
BNX S **S** **23 57 53.3 -1.0**
BNX pmax pmax
comp=Z,21nm,1.1s
BNX pmax pmax
comp=Z,220nm,5.2s
BNX L L
comp=Z,330nm,19.0s
BNX L L
comp=Z,430nm,18.4s
BNX L L
comp=Z,330nm,18.8s
CASP Castiglione de 72.53 318 P **P** **23 48 31.1 -0.3**
CASP IAmb IAmb 23 48 41.2
comp=Z,21nm,1.1s
KRLC Kraliky 72.58 327 *eP* **P** **23 48 36.3 +4.8**
KRLC Kraliky 72.58 327 *eP* **P** **23 48 36.3 +4.8**
MOA Molln 72.82 324 *eP* **P** **23 48 31.4 -1.6**
comp=Z,31nm,3.8s
QLP Quilpie 72.93 116 P **P** **23 48 35.6 +1.6**
comp=Z,89nm,1.4s
MTSU Mount Surprise 72.96 107 P **P** **23 48 36.0 +1.6**
comp=Z,28nm,0.8s
STAL STALIGIAL 72.96 322 P **P** **23 48 33.8 -0.1**
DPC Dobruska-Polom 72.98 327 *eP* P 23 48 39.1 +5.2
DPC Dobruska-Polom 72.98 327 *eP* P 23 48 39.1 +5.2
ZCCA Zocca 73.16 320 P **P** **23 48 34.8 -0.4**
TEOL Teolo 73.18 321 P **P** **23 48 34.7 -0.4**
TEOL IAmb IAmb 23 48 45.5
comp=Z,25nm,1.0s
VSU Vasula 73.27 338⇓*iP* **P** **23 48 33.5 -1.8**
VSU pmax pmax
comp=Z,40nm,1.5s
CKRC Cesky Krumlov 73.28 325 *eS* **SKiKP** **23 58 06.4 -0.9**
MDJ Mudanjiang 73.29 40 P **P** **23 48 36.5 +0.7**
MDJ S **SKiKP** **23 58 07.5 +0.1**
MDJ pmax pmax
comp=Z,59nm,1.0s
MDJ L L
comp=Z,200nm,13.6s
MDJ L L
comp=Z,430nm,16.7s
MDJ L L
comp=Z,280nm,12.7s
ABTA Abfaltersbach 73.31 323 *eP* **P** **23 48 34.4 -1.7**
comp=Z,44nm,3.0s
LESA Schwarzleotal 73.54 323 *eP* **P** **23 48 35.5 -1.8**
comp=Z,100nm,4.1s
GEC2 GERESS Array S 73.64 325 P **P** **23 48 36.9 -1.0**
GERES GERESS Array B 73.64 325 P **P** **23 48 37.3 -0.7**
comp=Z,0.3nm,0.6s,baz=138,slow=8.6,SNR=3.0
GERES LR LR 00 22 22.0
comp=Z,106nm,18.2s,baz=126,slow=37
GERES GERESS Array B 73.64 325 P **P** **23 48 37.5 -0.5**
GERES GERESS Array B 73.64 325 P **P** **23 48 37.5 -0.5**
PRU Pruhonice 73.76 326 *eS* **S** **23 58 12.6 +3.5**
PRMA PARMA 73.77 320 P **P** **23 48 37.7 -0.9**
KHC Kasperske Hory 73.86 325 *eP* **P** **23 48 39.5 +0.4**
KHC *e* 23 48 47.0
KHC *eS* **S** **23 58 11.6 +1.2**
KHC Kasperske Hory 73.86 325 *eP* **P** **23 48 39.5 +0.4**
KHC x x 23 48 47.0
KHC *eS* **S** **23 58 11.6 +1.2**
SALO Salr 74.01 321 P **P** **23 48 40.3 +0.2**
SALO IAmb IAmb 23 48 52.0
comp=Z,17nm,0.9s
PVCC Panska Ves 74.02 327 *eP* **P** **23 48 43.2 +3.2**
PVCC Panska Ves 74.02 327 *eP* **P** **23 48 43.2 +3.2**
WTTA Wattenberg 74.09 323 *eP* **P** **23 48 39.0 -1.7**
comp=Z,31nm,1.2s
VLA Vladivostok 74.13 42⇓*eP* **P** **23 48 41.1 +0.3**
VLA pmax pmax
comp=Z,69nm,1.6s
NVL N'lazarevskaya 74.14 197 *eP* **P** **23 48 41.3 +0.9**
NVL pmax pmax
comp=Z,24nm,0.8s
WATA Walderalm 74.16 323 *eP* **P** **23 48 39.3 -1.7**
comp=Z,29nm,1.7s
SQTA Sankt Quirin 74.32 323 *eP* **P** **23 48 40.4 -1.6**
comp=Z,6.6nm,0.7s
CMSA Cobar Meteorol 74.37 121 P **P** **23 48 44.0 +1.5**
comp=Z,32nm,1.0s
MOTA Moosalm 74.44 323 *eP* **P** **23 48 40.9 -1.8**
comp=Z,18nm,0.9s
FETA Feichten 74.52 322 *eP* **P** **23 48 41.9 -1.3**
comp=Z,9.2nm,1.1s
BRG Berggiesshubel 74.54 327 *eP* P 23 48 49.4 +6.4
BRG Amp 23 48 53.8
comp=Z,5.1nm,0.8s
BRG Berggiesshubel 74.54 327 SS SS 00 03 01.0 -4.0
FUORN Ofenpass-Fuorn 74.63 322 P **P** **23 48 44.5 +0.6**
FUORN IAmb IAmb 23 48 54.6
comp=Z,19nm,0.9s
USA0B Ussuriysk Arra 74.65 41*d iP* **P** **23 48 43.0 -0.8**
USA0B Ussuriysk Arra 74.65 41 P **P** **23 48 42.8 -1.0**
USA0B IAmb IAmb 23 48 44.2
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 74.65 41 P **P** **23 48 43.6 -0.2**
comp=Z,11nm,0.8s,baz=242,slow=4.1,SNR=15
USRK LR LR 00 23 54.5
comp=Z,105nm,18.1s,baz=230,slow=38
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 74.65 41 P **P** **23 48 43.2 -0.6**
HEH HeiHe 74.67 34 *eP* **P** **23 48 42.5 -1.2**
HEH pmax pmax
comp=Z,12nm,0.8s
HEH L L
comp=Z,470nm,14.2s
HEH L L
comp=Z,290nm,16.0s
HEH L L
comp=Z,650nm,17.9s
RETA Reutte 74.72 323 *eP* **P** **23 48 42.7 -1.5**
comp=Z,13nm,1.4s
CTA Charters Tower 74.76 109 LR LR 00 21 24.6
comp=Z,353nm,18.9s,baz=241,slow=36
CTAO Charters Tower 74.76 109 P **P** **23 48 44.5 -0.5**
CTAO pmax pmax
comp=Z,42nm,1.0s
CTAO Charters Tower 74.76 109 P **P** **23 48 44.5 -0.5**
DAVOX Davos/Dischmat 74.93 322 LR LR 00 22 00.3
comp=Z,152nm,21.3s,baz=102,slow=36

NKC	Novy Kostel	75.04	326	*e*P		P		23 48 45.4	-0.6
NKC	Novy Kostel	75.04	326	*e*P		P		23 48 45.4	-0.6
TUE	Stuetta	75.13	321	P		P		23 48 47.4	+0.7
DAVA	Damuels	75.16	322	*e*P		P		23 48 45.7	-1.2
	comp=Z,29nm,0.9s								
CLL	Collm	75.27	327	*i* P		P		23 48 46.5	-0.7
CLL				*e*				23 48 53.0	
CLL				*e*S		S		23 58 31.0	+5.0
CLL				pmax	pmax				
	comp=Z,27nm,1.2s								
CLL	Collm	75.27	327	lAmb	lAmb			23 48 58.2	
	comp=Z,36nm,1.3s								
CLL	Collm	75.27	327	*i* P		P		23 48 46.5	-0.7
	comp=Z,27nm,1.2s								
CLL				*ex*		x		23 48 53.0	
	comp=Z,17nm,1.1s								
CLL				*i* x		x		23 48 56.5	
	comp=Z,27nm,1.2s								
CLL				*e*S		S		23 58 31.0	+5.0
CLL				*e*PS		PnS		23 59 03.0	+0.9
CLL				*e*SS		SS		00 03 15.0	-1.1
CLL				*e*SSS		SSS		00 07 00.0	
CLL				*e*SSSS				00 08 30.0	
GRA1	Grafenberg Arr	75.48	325	P		P		23 48 48.2	-0.2
GRF	Grafenberg Arr	75.48	325	P		P		23 48 48.2	-0.2
GRF				pmax	pmax				
	comp=Z,47nm,1.2s								
FIA1	FINESS Array S	75.59	340	P		P		23 48 48.8	0.0
FINES	FINESS Array B	75.59	340	P		P		23 48 47.3	-1.5
	comp=Z,2.7nm,0.8s,baz=123,slow=7.0,SNR=14								
FINES				LR		LR		00 24 15.6	
	comp=Z,334nm,19.5s,baz=152,slow=38								
	comp=Z,2.7nm,0.8s								
FINES	FINESS Array B	75.59	340	*i* P		P		23 48 47.7	-1.1
FINES				pmax	pmax				
	comp=Z,3.0nm,0.8s								
FINES	FINESS Array B	75.59	340	P		P		23 48 48.1	-0.7
DBIC	Dimbokro	76.05	278	P		P		23 48 51.4	-1.1
	comp=Z,6.1nm,0.8s,baz=118,slow=7.7,SNR=5.3								
	comp=Z,6.1nm,0.8s								
DBIC	Dimbokro	76.05	278	lAmb	lAmb			23 49 09.3	
	comp=Z,47nm,1.6s								
PMG	Port Moresby	76.11	98	LR	LR			00 19 47.8	
	comp=Z,135nm,21.7s,baz=300,slow=34								
PMG	Port Moresby	76.11	98*d*	*i* P		P		23 48 54.0	+1.2
PMG				pmax	pmax				
	comp=Z,71nm,0.9s								
PMG	Port Moresby	76.11	98	P		P		23 48 51.4	-1.4
PMG	Port Moresby	76.11	98	P		P		23 48 53.1	+0.3
STU	Stuttgart	76.23	323	P		P		23 48 52.4	-0.4
STU				pmax	pmax				
	comp=Z,25nm,1.1s								
STU	Stuttgart	76.23	323	P		P		23 48 52.4	-0.4
STU				lAmb	lAmb			23 49 03.0	
	comp=Z,25nm,1.1s								
MAJO	Matsushiro	76.26	50*d*	*i* P		P		23 48 53.0	-0.2
MAJO				pmax	pmax				
	comp=Z,13nm,1.1s								
MAJO	Matsushiro	76.26	50	P		P		23 48 51.6	-1.6
MJAR	Matsushiro Arr	76.26	50	P		P		23 48 53.3	+0.1
	comp=Z,6.1nm,0.8s,baz=249,slow=6.3,SNR=16								
MJAR				LR		LR		00 20 58.9	
	comp=Z,207nm,21.3s,baz=246,slow=35								
	comp=Z,6.1nm,0.8s								
MJAR	Matsushiro Arr	76.26	50	P		P		23 48 52.7	-0.5
MJAR				lAmb	lAmb			23 48 54.8	
	comp=Z,64nm,1.9s								
MJAR						PcP		23 49 04.0	-1.2
NRIK	Noril'sk	76.29	6	P		P		23 48 51.5	-1.1
	comp=Z,1.3nm,0.4s,baz=210,slow=5.9,SNR=6.8								
NRIK				LR		LR		00 21 19.3	
	comp=Z,351nm,19.4s,baz=188,slow=35								
	comp=Z,1.3nm,0.4s								
NRIK	Noril'sk	76.29	6*c*	*i* P		P		23 48 52.0	-0.6
NRIK				pmax	pmax				
	comp=Z,14nm,1.3s								
NRIK	Noril'sk	76.29	6	P		P		23 48 52.1	-0.6
ZEA	Zeya	76.35	31	*e*P		P		23 48 52.9	-0.4
ZEA				pmax	pmax				
	comp=Z,20nm,0.9s								
SENIN	Lac Senin/Sane	76.36	321	lAmb	lAmb			23 49 04.0	
	comp=Z,13nm,0.7s								
DRV	Dumont d'Urvil	76.40	157	P		P		23 48 53.9	+0.5
BFO	Black Forest	76.56	323	P		P		23 48 54.8	+0.1
BFO				pmax	pmax				
	comp=Z,10.0nm,1.0s								
BFO	Black Forest	76.56	323	P		P		23 48 54.8	+0.1
GUMO	Guam	76.59	75	LR	LR			00 20 04.6	
	comp=Z,132nm,21.9s,baz=256,slow=34								
JCJ	Chichijima	76.89	60	LR	LR			00 22 54.2	
	comp=Z,83nm,18.0s,baz=131,slow=36								
ECH	Echery	77.22	322	P		P		23 48 58.1	-0.3
ECH				pmax	pmax				
	comp=Z,26nm,1.5s								
ECH	Echery	77.22	322	P		P		23 48 58.1	-0.3
ECH				lAmb	lAmb			23 49 08.1	
	comp=Z,26nm,1.5s								
CAN	Canberra	77.26	125	P		P		23 48 58.6	-0.4
CAN				pmax	pmax				
	comp=Z,114nm,1.6s								
CAN	Canberra	77.26	125	P		P		23 48 58.6	-0.4
TROLL	Troll, Antarti	77.38	197	⇑P		P		23 49 00.4	+1.4
	comp=Z,894nm,1.1s								
SSB	Saint Sauveur	77.71	319	P		P		23 49 01.7	+0.4
SSB				pmax	pmax				
	comp=Z,14nm,0.9s								
SSB	Saint Sauveur	77.71	319	P		P		23 49 01.7	+0.4
SSB				lAmb	lAmb			23 49 12.1	
	comp=Z,14nm,0.9s								
LVZ	Lovozero	78.06	347	P		P		23 49 06.6	+3.9
APA	Apatity	78.08	346	*e*P		P		23 49 04.8	+2.1
APA				*e*				23 49 10.8	
APA				*e*				23 52 00.5	
APA				*e*S		S		23 58 56.2	+0.1
APA				MLR	MLR				
	comp=Z,367nm,14.0s								
BTNL	Ternell	78.81	324	*d*P		P		23 49 07.0	-0.2
	comp=Z,5.8nm,0.8s								
SNAA	Sanae	78.89	198	⇑P		P		23 49 08.5	+1.1
	comp=Z,379nm,0.9s								
SNAA	Sanae	78.89	198	P		P		23 49 08.2	+0.9
	comp=Z,15nm,0.8s,baz=84,slow=3.3,SNR=31								
SNAA				LR		LR		00 18 45.8	
	comp=Z,161nm,18.2s,baz=60,slow=32								
	comp=Z,15nm,0.8s								
SNAA	Sanae	78.89	198*d*	*i* P		P		23 49 07.6	+0.2
SNAA				pmax	pmax				
	comp=Z,22nm,1.0s								
SNAA	Sanae	78.89	198	P		P		23 49 07.6	+0.2
SNAA				lAmb	lAmb			23 49 09.6	
	comp=Z,18nm,0.9s								
HFS	Hagfors	79.54	335	P		P		23 49 10.0	-0.9
	comp=Z,2.2nm,0.5s,baz=149,slow=6.1,SNR=12								
HFS				LR		LR		00 25 50.3	
	comp=Z,184nm,18.6s,baz=133,slow=37								
	comp=Z,2.2nm,0.5s								
HFS	Hagfors	79.54	335	P		P		23 49 10.0	-0.9
GRNR	Gornyy	80.05	36	⇓*i* P		P		23 49 13.4	-0.5
GRNR				pmax	pmax				
	comp=Z,20nm,1.2s								
GRNR				MLR	MLR				
	comp=Z,310nm,14.0s								
VNA2	Neumayer--Watz	80.17	199	⇑P		P		23 49 15.5	+1.3
	comp=Z,36nm,0.7s,baz=68,slow=5.5								
VNA1	Neumayer--Stat	80.41	199	⇑P		P		23 49 17.1	+1.6
	comp=Z,36nm,0.9s								
MDT	Midelt	80.75	305	LR	LR			00 25 53.9	
	comp=Z,158nm,18.6s,baz=92,slow=36								
MD01	Midelt array s	80.89	305	P		P		23 49 22.8	+3.8
NOA	NORSAR Array B	81.06	335	P		P		23 49 18.8	-0.4
	comp=Z,0.6nm,0.6s,baz=83,slow=9.0,SNR=2.0								
NOA				LR		LR		00 26 38.1	
	comp=Z,156nm,19.3s,baz=120,slow=37								
	comp=Z,0.6nm,0.6s								
KEV	Kevo	81.27	346	P		P		23 49 19.3	-0.7
KEV				pmax	pmax				
	comp=Z,8.0nm,0.9s								
KEV	Kevo	81.27	346	P		P		23 49 19.3	-0.7
KRVT	Keravat (AS076	81.36	93	LR	LR			00 26 58.8	
	comp=Z,20nm,20.9s,baz=151,slow=37								
ARCES	ARCESS Array B	81.47	345	P		P		23 49 20.9	-0.3
	comp=Z,4.9nm,0.9s,baz=148,slow=5.5,SNR=7.2								
ARCES				LR		LR		00 25 37.5	
	comp=Z,205nm,21.8s,baz=136,slow=36								
	comp=Z,4.9nm,0.9s								
ARCES	ARCESS Array B	81.47	345	P		P		23 49 20.0	-1.1

YAK	Yakutsk	81.70	24	LR		LR		00 26 40.0	
	comp=Z,464nm,18.0s,baz=234,slow=36								
YAK	Yakutsk	81.70	24	*e*P		P		23 49 21.7	-0.7
YAK				pmax	pmax				
	comp=Z,12nm,0.9s								
YAK				pmax	pmax				
	comp=N,3.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,5.0nm,1.4s								
ASAJ	Asahikawa	81.76	44	LR		LR		00 25 46.6	
	comp=E,193nm,19.3s,baz=172,slow=36								
ESBB	Sonseca Array	81.92	311	P		P		23 49 24.4	+0.1
ESBB				lAmb	lAmb			23 49 34.7	
	comp=Z,22nm,1.4s								
ESDC	Sonseca Array	81.92	311	P		P		23 49 23.9	-0.4
	comp=Z,5.1nm,0.9s,baz=92,slow=4.3,SNR=22								
ESDC				LR		LR		00 24 45.3	
	comp=Z,105nm,19.6s,baz=104,slow=35								
	comp=Z,5.1nm,0.9s								
ESDC	Sonseca Array	81.92	311	P		P		23 49 23.5	-0.7
YSS	Yuzhno-Sakhali	82.69	41	*e*P		P		23 49 27.4	-0.6
YSS				*e*S		S		23 59 41.8	-3.5
YSS				*e*SSS		SSS		00 08 33.5	
YSS				pmax	pmax				
	comp=Z,100nm,5.2s								
YSS				pmax	pmax				
	comp=Z,20nm,0.8s								
YSS				smax	smax				
	comp=N,200nm,4.4s								
YSS				smax	smax				
	comp=E,100nm,6.5s								
YSS				MLR	MLR				
	comp=Z,300nm,16.0s								
YSS				MLR	MLR				
	comp=N,200nm,14.0s								
YSS	Yuzhno-Sakhali	82.69	41	P		P		23 49 26.7	-1.2
QSPA	South Pole Qui	83.85	180	P		P		23 49 34.7	+0.9
	comp=N,9.5nm,0.7s,baz=270,slow=1.5,SNR=40								
	comp=N,9.5nm,0.7s								
QSPA	South Pole Qui	83.85	180	P		P		23 49 34.2	+0.4
VNDA	Vanda	84.36	167	P		P		23 49 37.3	+1.3
	comp=N,3.9nm,0.8s,baz=286,slow=6.4,SNR=20								
	comp=N,3.9nm,0.8s								
VNDA	Vanda	84.36	167	lAmb	lAmb			23 49 50.4	
	comp=Z,33nm,1.8s								
SBA	Scott Base	85.37	168	P		P		23 49 42.4	+1.2
SBA				pmax	pmax				
	comp=Z,25nm,1.3s								
SBA	Scott Base	85.37	168	P		P		23 49 42.4	+1.2
SBA				lAmb	lAmb			23 49 54.3	
	comp=Z,25nm,1.2s								
EKA	Eskdalemuir Ar	85.74	327	P		P		23 49 42.7	-0.6
	comp=Z,3.5nm,1.0s,baz=145,slow=7.6,SNR=1.8								
EKA				LR		LR		00 30 36.5	
	comp=Z,103nm,18.4s,baz=92,slow=38								
	comp=Z,3.5nm,1.0s								
TIXI	Tiksi	86.40	16	LR		LR		00 28 44.1	
	comp=Z,456nm,21.0s,baz=224,slow=36								
TIXI	Tiksi	86.40	16⇑	*e*P		P		23 49 44.3	-1.9
TIXI				pmax	pmax				
	comp=Z,20nm,1.1s								
TIXI	Tiksi	86.40	16	P		P		23 49 45.2	-1.0
TIXI				lAmb	lAmb			23 50 00.2	
	comp=Z,20nm,1.1s								
BELA	Belgrano 2	87.11	192	P		P		23 49 49.8	0.0
HNR	Honiara	88.68	99	LR		LR		00 28 22.0	
	comp=Z,5.3nm,19.4s,baz=336,slow=35								
SPITS	Spitsbergen Ar	89.07	350	P		P		23 49 59.2	+0.2
	comp=Z,5.8nm,0.9s,baz=93,slow=14,SNR=2.1								
	comp=Z,5.8nm,0.9s								
SEY	Seymchan	91.86	27*de*	P		P		23 50 11.1	-1.1
SEY				pmax	pmax				
	comp=Z,17nm,1.7s								
JMIC	Jan Mayen	92.15	341	LR		LR		00 33 05.1	
	comp=Z,83nm,19.6s,baz=62,slow=37								
PETK	Petropavlovsk-	93.34	37	LR		LR		00 34 38.6	
	comp=Z,179nm,19.7s,baz=263,slow=37								
RPZ	Rata Peaks	93.51	134	LR		LR		00 25 47.6	
	comp=Z,38nm,19.3s,baz=242,slow=31								
BORG	Borgarnes	96.23	334	LR		LR		00 34 09.2	
	comp=Z,115nm,21.9s,baz=100,slow=36								
ILAR	Eielson Array	115.86	17	PKP		PKPdf		23 55 47.8	+1.1
	comp=Z,0.6nm,1.0s,baz=320,slow=3.8,SNR=4.6								
PTLB	Pontes e Lacer	125.48	246	*e*P		PKPdf		23 56 06.2	-0.4
TBI	Tubuai	131.34	128	*e*SS		SS		00 16 03.8	-4.3
	comp=Z,922nm,26.8s								
TBI				*e*LQ		LQ		00 31 16.3	
	comp=Z,2μm,39.8s								
TBI				*e*LR		LR		00 37 44.7	
	comp=Z,819nm,34.0s								
TBI				*e*LR		LR		00 37 52.7	
	comp=Z,2μm,31.2s								
LPAZ	La Paz	133.19	241	PKP		PKPdf		23 56 22.1	+0.1
	comp=Z,0.7nm,0.5s,baz=301,slow=2.8,SNR=4.4								
LPAZ	La Paz	133.19	241	PKIKP		PKPdf		23 56 22.2	+0.2
LPAZ	La Paz	133.19	241			PKPdf		23 56 22.2	+0.2
LPAZ	La Paz	133.19	241	*e*P		PKPdf		23 56 19.9	-2.1
PPT2	Papeete2	134.10	122	*e*SS		SS		00 16 46.3	+4.0
	comp=Z,368nm,29.8s								
PPT2				*e*LR		LR		00 39 14.1	
	comp=Z,158nm,26.2s								
PPT2				*e*LR		LR		00 39 15.6	
	comp=Z,119nm,42.5s								
R61A	Willards	135.34	321			PKPdf		23 56 22.8	-1.9
RSSD	Black Hills	141.88	353			PKiKP		23 56 43.4	+3.8
PDAR	Pinedale Array	143.56	360	PKP		PKPbc		23 56 37.5	+0.5
	comp=Z,0.8nm,0.6s,baz=90,slow=1.5,SNR=11								
PDAR	Pinedale Array	143.56	360			PKPdf		23 56 38.7	-1.1
CCM	Cathedral Cave	144.10	335	PKIKP		PKPbc		23 56 38.6	+0.1
CCM	Cathedral Cave	144.10	335			PKPbc		23 56 38.6	+0.1
O03E	Paynes Creek	144.34	16	PKPdf		PKPbc		23 56 39.2	0.0
ROSC	El Rosal	144.74	270	PKP		PKPab		23 56 41.6	0.0
	comp=Z,16nm,0.7s,baz=102,slow=9.2,SNR=5.2								
FARB	Farallon Islan	146.37	19	PKPbc		PKPab		23 56 46.3	-0.1
KVN	Kaiserville	146.41	12	PKP2		PKPbc		23 56 45.4	-0.6
KVN	Kaiserville	146.41	12	PKPbc		PKPbc		23 56 45.4	-0.6
Z47A	Carrollton	146.41	326	PKPdf		PKPdf		23 56 43.3	-1.3
WAKR	Walker	146.63	14			PKPab		23 56 47.4	-0.3
KSCO	Kaye Shedlock'	146.69	350	PKPbc		PKPbc		23 56 47.1	+0.4
P17A	Butcher Ranch,	146.84	1	PKPbc		PKPab		23 56 47.9	-0.5
NVAR	Mina Array Bea	146.96	12	PKPbc		PKPbc		23 56 47.0	-0.7
	comp=Z,5.1nm,0.8s,baz=309,slow=1.2,SNR=17								
NVAR	Mina Array Bea	146.96	12			PKPdf		23 56 46.4	+0.6
NV11	Mina Array Sit	146.99	12	PKPdf		PKPdf		23 56 45.0	-0.7
LHV	Little Huntoon	147.09	13	PKPbc		PKPbc		23 56 48.0	+0.3
MHC	Mount Hamilton	147.13	18	PKP2		PKPdf		23 56 45.3	-0.6
MHC	Mount Hamilton	147.13	18	PKPdf		PKPdf		23 56 45.3	-0.6
SRU	San Rafael Swe	147.20	1	PKIKP		PKPdf		23 56 45.2	-0.9
SRU	San Rafael Swe	147.20	1	PKPdf		PKPdf		23 56 45.2	-0.9
RLO	Rose Lookout	147.25	338			PKPdf		23 56 45.5	-0.5
KAN01	Argonia South	147.29	342	PKPdf		PKPdf		23 56 44.8	-1.2
BRAL	Brewton	147.29	322	PKPdf		PKPdf		23 56 45.6	-0.6
UALR	University of	147.33	333			PKPdf		23 56 46.3	+0.2
Q16A	Castle Valley	147.38	2	PKPdf		PKPdf		23 56 45.1	-1.3
146A	Union	147.38	326	PKPdf		PKPdf		23 56 45.5	-0.8
BLOK	Blackwell	147.48	341			PKPdf		23 56 45.8	-0.6
TPH	Tonopah	147.52	11	PKP2		PKPdf		23 56 46.9	+0.2
TPH	Tonopah	147.52	11			PKPdf		23 56 46.9	+0.2
MDPB	Devils Postpil	147.55	14	PKPdf		PKPdf		23 56 45.8	-1.0
OK051	E0350 and S346	147.59	340	PKPdf		PKPdf		23 56 46.6	+0.1
TCRU	Three Creeks R	147.62	4	PKPbc		PKPbc		23 56 50.2	+0.7
OK048	Pawnee Station	147.70	340	PKPbc		PKPbc		23 56 48.9	-0.6
SAO	San Andreas Ge	147.72	18	PKIKP		PKPdf		23 56 46.5	-0.2
SAO	San Andreas Ge	147.72	18	PKPdf		PKPdf		23 56 46.5	-0.2
CCAR	Cane Creek	147.77	331	PKPdf		PKPdf		23 56 46.8	-0.1
PV22	Blue Mesa, Par	147.77	359	PKPdf		PKPdf		23 56 45.7	-1.4
QUOK	Quay	147.85	340	PKPdf		PKPdf		23 56 47.2	+0.2
PV23	Carpenter Ridg	147.86	359			PKPbc		23 56 49.5	-0.7
PV07	Paradox Valley	147.87	358	PKPdf		PKPdf		23 56 46.2	-1.0
PV04	Paradox Valley	147.92	359			PKPbc		23 56 49.2	-1.0
PV15	Paradox Valley	147.96	358			PKPbc		23 56 49.7	-0.7
BBGB	Big Mountain B	148.01	17	PKPdf		PKPdf		23 56 46.7	-0.6
SLOR	San Lorenzo -	148.08	259	PKPbc		PKPbc		23 56 51.9	+0.1
SLOR				PKPab		pPKPab		23 56 57.7	-0.3
NOKA	Waynoka	148.11	343			PKPdf		23 56 48.1	+0.7
PV13	Radium Mtn., P	148.15	359			PKPbc		23 56 50.5	-0.4
OTAV	Otavalo	148.24	260	PKP2		PKiKP		23 56 53.7	-0.2
OTAV	Otavalo	148.24	260			PKiKP		23 56 53.7	-0.2
OTAV	Otavalo	148.24	260	*e*P		PKPdf		23 56 48.9	+0.1
TIN	Tinemaha, Big	148.30	13	PKIKP		PKPdf		23 56 47.1	-0.7
TIN	Tinemaha, Big	148.30	13	PKPdf		PKPdf		23 56 47.1	-0.7
ANMO	Albuquerque	151.21	354	PKIKP		PKPbc		23 56 58.2	-0.3
ANMO	Albuquerque	151.21	354			PKPbc		23 56 58.2	-0.3
PFO	Pinyon Flats O	151.99	12			PKiKP		23 57 02.0	+1.3

HKT	Hockley	152.97	333			PKiKP		23 57 03.9	+1.4
TUC	Tucson	153.98	2			PKiKP		23 57 05.3	+0.6
TXAR	Lajitas Array	156.26	347	PKP		PKPdf		23 57 00.3	+0.4
	comp=Z,1.0nm,1.0s,baz=50,slow=2.0,SNR=4.5								
TXAR				PKPbc		sPKPdf		23 57 09.4	+4.8
	comp=Z,1.4nm,0.9s,baz=81,slow=2.8,SNR=7.9								
TXAR	Lajitas Array	156.26	347			PKPdf		23 57 06.2	+6.3

SJA ***27*** *23:39:38.8±0.8,21°.94S×68°.76W,h28km±3km, ML3.7, MW3.7*
IDC ***27*** *23:39:41.1±2.4,22°.06S×68°.32W,h104km±21km,mb3.8/2, mbtmp3.9/7,MS4.3/1,Error ellipse: s-maj=38.1km s-min=20.6km az=103.0*
GUC ***27*** *23:39:42.8±0.9,21°.95S×68°.67W,h112km±5km, ML3.9*
ISC 27 23:39:41.2±0.8,21°.98S±0°.03×68°.77W±0°.05,h130km±7km, n44,σ1^{s}97/61,10C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.48	292	*e*S		Sn		23 40 14.9	+0.1
PB09	IPOC Station P	0.48	292⇑	*i* P		Pn		23 40 00.3	-0.1
PB09				*e*S		Sn		23 40 14.0	-0.8
PB09				lAML				23 40 15.7	
	comp=N,3μm,0.4s								
PB03	IPOC Station P	0.92	266	*e*P		Pn		23 39 57.4	-6.1
PB03				*e*S		Sn		23 40 21.8	+1.3
PB03				lAML				23 40 23.8	
	comp=Z,2μm,0.2s								
PB03	IPOC Station P	0.92	266⇑	*i* P		Pn		23 40 04.0	+0.4
PB03				*e*S		Sn		23 40 20.4	0.0
PB03				lAML				23 40 22.6	
	comp=N,2μm,0.2s								
PB06	IPOC Station P	1.04	226	*e*P		Pn		23 39 59.5	-5.2
PB06				*e*S		Sn		23 40 23.7	+1.2
PB06				lAML				23 40 26.8	
	comp=Z,2μm,0.3s								
PB06	IPOC Station P	1.04	226⇑	*i* P		Pn		23 40 05.3	+0.6
PB06				*i* S		Sn		23 40 23.2	+0.8
PB06				lAML				23 40 24.3	
	comp=N,3μm,0.5s								
PB07	IPOC Station P	1.07	283	*e*S		Sn		23 40 05.9	-17
PB07				lAML				23 40 06.9	
	comp=Z,3μm,0.2s								
PB07	IPOC Station P	1.07	283⇑	*i* P		Pn		23 40 05.7	+0.7
PB07				*i* S		Sn		23 40 24.0	+1.0
PB07				lAML				23 40 27.3	
	comp=E,2μm,0.2s								
AF01	San Pedro de A	1.11	151	*e*P		Pn		23 39 59.9	-5.6
AF01				lAML				23 40 39.4	
	comp=Z,1μm,1.2s								
AF01	San Pedro de A	1.11	151⇓	*i* P		Pn		23 40 04.6	-0.9
AF01				*i* S		Sn		23 40 22.6	-1.3
AF01				lAML				23 40 42.8	
	comp=E,2μm,0.6s								
PB02	IPOC Station P	1.24	302	*e*P		Pn		23 40 07.4	+0.7
PB02				lAML				23 40 31.6	
	comp=Z,2μm,0.3s								
PB02	IPOC Station P	1.24	302⇑	*i* P		Pn		23 40 07.1	+0.5
PB02				*e*S		Sn		23 40 25.2	-0.7
PB02				lAML				23 40 30.3	
	comp=E,2μm,0.2s								
PB05	IPOC Station P	1.59	237	*e*P		Pn		23 40 11.2	+0.7
PB05				*e*S		Sn		23 40 28.6	-4.1
PB05				lAML				23 40 43.9	
	comp=Z,783nm,0.4s								
PB05	IPOC Station P	1.59	237⇑	*i* P		Pn		23 40 11.2	+0.7
PB05				*i* S		Sn		23 40 33.4	+0.7
PB05				lAML				23 40 40.0	
	comp=N,1μm,0.4s								
PB08	IPOC Station P	1.87	349	*e*P		Pn		23 40 15.0	+1.0
PB08				*e*S		Sn		23 40 34.8	-4.2
PB08				lAML				23 40 40.4	
	comp=Z,620nm,0.7s								
PB08	IPOC Station P	1.87	349⇑	*i* P		Pn		23 40 14.7	+0.7
PB08				*i* S		Sn		23 40 39.0	0.0
PB08				lAML				23 40 41.3	
	comp=E,2μm,0.8s								
TA02	Huaiquique	2.13	323	*e*P		Pn		23 40 16.7	-0.1
TA02				*e*S		Sn		23 40 39.0	-5.0
TA02				lAML				23 40 52.6	
	comp=Z,644nm,0.5s								
TA02	Huaiquique	2.13	323	*e*P		Pn		23 40 16.4	-0.3
TA02				*e*S		Sn		23 40 43.9	-0.1
TA02				lAML				23

*FUNV **28** 00:35:38.3, 10˚.27N×62˚.71W, h20km, MW3.1, Presumed earthquake*
ISC 28 00:35:36.1±2.4, 10˚.30N±0˚.09×62˚.74W±0˚.05, h17km±17km, n11, σ1§08/21, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**1.23**	**71**	*eP*		**Pn**	**00 35 58.3**	**-0.2**
DMDM				*eS*		**Sb**	**00 36 14.0**	**-0.4**
PSMG	**Mucurapo Girls**	**1.24**	**73**	*eP*		**Pn**	**00 35 58.8**	**+0.1**
PSMG				*eS*		**Sb**	**00 36 14.4**	**-0.3**
TRN	**Trinidad (W)**	**1.35**	**75**	*eP*		**Pb**	**00 36 01.9**	**+0.9**
TRN				*eS*		**Sg**	**00 36 18.8**	**-1.2**
TRN	**Trinidad (W)**	**1.35**	**75**	*eP*		**Pn**	**00 36 00.8**	**+0.6**
TRN				*eS*		**Sn**	**00 36 18.2**	**+0.5**
GRGR	**Grenville**	**2.11**	**30**	*eP*		**Pn**	**00 36 11.4**	**+0.7**
GRGR				*eS*		**Sn**	**00 36 37.6**	**+1.2**
GRGR	**Grenville**	**2.11**	**30**	*eP*		**Pn**	**00 36 11.3**	**+0.7**
GRGR				*eS*		**Sn**	**00 36 36.1**	**-0.3**
GRSS	**Sisters**	**2.27**	**29**	*eP*		**Pn**	**00 36 13.4**	**+0.6**
GRSS				*eS*		**Sn**	**00 36 39.2**	**-1.2**
GCMP	**Grenada, Carri**	**2.52**	**30**	*eP*		**Pn**	**00 36 16.4**	**+0.1**
GCMP				*eS*		**Sn**	**00 36 44.6**	**-2.0**
GCMP	**Grenada, Carri**	**2.52**	**30**	*eP*		**Pn**	**00 36 16.8**	**+0.5**
GCMP				*eS*		**Sn**	**00 36 46.3**	**-0.4**
SLBI	**Saint Lucia, B**	**4.08**	**25**	*eP*		**Pn**	**00 36 38.6**	**+0.8**
TACV	**Tcata**	**4.23**	**268**	*eP*		**Pn**	**00 36 41.1**	**+1.2**
TACV				*eS*		**Sn**	**00 37 26.5**	**-2.3**

*AZER **28** 00:37:31.3, 38˚.45N×47˚.02E, h5km, ml2.6*
*TEH **28** 00:37:32.8, 38˚.40N×46˚.96E, h14km±28km, ML2.7, Presumed earthquake*
ISC 28 00:37:33.4±0.9, 38˚.39N±0˚.03×46˚.94E±0˚.02, h10km±8km, n33, σ1§07/58, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.11**	**130**	Pg		**Pg**	**00 37 36.5**	**+0.1**
IHRS				Sg		**Sg**	**00 37 38.9**	**+0.4**
ITBZ	**Tabriz**	**0.64**	**256**	Pg		**Pg**	**00 37 44.9**	**-0.9**
ISRB	**Sarab**	**0.81**	**134**	Pg		**Pb**	**00 37 48.5**	**-1.1**
GRMI	**Germi**	**0.86**	**61**	Pg		**Pg**	**00 37 49.0**	**-0.9**
ORD	**Ordubad**	**0.91**	**306**	P		**Pg**	**00 37 49.5**	**-1.5**
ORD				S		**Sg**	**00 38 02.4**	**-0.5**
IMRD	**Marand**	**1.02**	**289**	Pg		**Pg**	**00 37 52.1**	**-0.9**
IAZR	**Azarshahr**	**1.04**	**227**	Pg		**Pg**	**00 37 53.2**	**-0.2**
ISHB	**Shabestar**	**1.04**	**265**	Pg		**Pb**	**00 37 54.1**	**+0.5**
QRD	**Qoradiz**	**1.11**	**16**	P		**Pg**	**00 37 53.8**	**-1.0**
QRD				S		**Sg**	**00 38 09.2**	**0.0**
IHSH	**Hashtrud**	**1.11**	**166**	Pg		**Pg**	**00 37 53.6**	**-1.3**
LRK	**Lerik**	**1.13**	**77**	P		**Pg**	**00 37 54.1**	**-1.0**
LRK				S		**Sb**	**00 38 10.1**	**+0.2**
YRD	**Yardimli**	**1.15**	**62**	P		**Pg**	**00 37 54.4**	**-1.2**
YRD				S		**Sb**	**00 38 10.5**	**0.0**
NAX	**Nakhchivan**	**1.37**	**305**	P		**Pn**	**00 37 58.6**	**0.0**
NAX				S		**Sb**	**00 38 17.6**	**+0.8**
BLQ	**Beylaqan**	**1.42**	**20**	P		**Pn**	**00 37 59.0**	**-0.2**
BLQ				S		**Sg**	**00 38 19.9**	**+0.9**
GLBA	**Clilabad**	**1.42**	**53**	P		**Pg**	**00 38 00.1**	**-0.6**
GLBA				S		**Sg**	**00 38 19.7**	**+0.5**
ASTR	**Astara**	**1.47**	**83**	P		**Pg**	**00 38 00.8**	**-0.8**
ASTR				S		**Sg**	**00 38 21.7**	**+1.2**
SBZ	**Shahbuz**	**1.48**	**313**	P		**Pn**	**00 37 59.8**	**-0.3**
SBZ				S		**Sn**	**00 38 20.5**	**+1.0**
LKRN	**Lenkeran, Azer**	**1.48**	**77**	P		**Pb**	**00 38 00.4**	**-0.5**
LKRN				S		**Sg**	**00 38 21.6**	**+0.6**
AGDM	**Agdam**	**1.72**	**4**	P		**Pn**	**00 38 04.5**	**+1.1**
AGDM				S		**Sg**	**00 38 29.2**	**+0.4**
BRDA	**Brd**	**1.88**	**6**	P		**Pb**	**00 38 08.0**	**+0.3**
BRDA				S		**Sg**	**00 38 33.7**	**-0.1**
ZRD	**Zardab**	**1.97**	**17**	P		**Pb**	**00 38 08.6**	**-0.7**
ZRD				S		**Sg**	**00 38 37.8**	**+1.0**
HYR	**Heyderabad**	**2.10**	**310**	P		**Pb**	**00 38 11.0**	**-0.5**
HYR				S		**Sb**	**00 38 39.6**	**+2.0**
KDMR	**Kurdemir**	**2.21**	**26**	S		**Sb**	**00 38 41.6**	**+0.9**
GANJ	**Ganja**	**2.30**	**348**	P		**Pn**	**00 38 12.4**	**+1.0**
GANJ				S		**Sb**	**00 38 43.2**	**-0.4**
GDB	**GEDABAY**	**2.50**	**339**	P		**Pn**	**00 38 16.0**	**+1.7**
GDB				S		**Sb**	**00 38 49.3**	**-0.1**
IML	**Ismayilli**	**2.59**	**21**	P		**Pn**	**00 38 16.6**	**+1.3**
IML				S		**Sb**	**00 38 50.9**	**-0.8**
QBL	**Gabala**	**2.65**	**15**	P		**Pn**	**00 38 18.0**	**+1.9**
QBL				S		**Sb**	**00 38 53.5**	**0.0**
HAKT	**HAKKARI**	**2.68**	**253**	P		**Pb**	**00 38 20.0**	**-1.6**
HAKT				S		**Sb**	**00 38 54.5**	**-0.2**
PQL	**Pirkuli**	**2.72**	**28**	P		**Pn**	**00 38 18.6**	**+1.4**
PQL				S		**Sb**	**00 38 54.5**	**-1.0**
SEKA	**Sheki**	**2.82**	**4**	P		**Pn**	**00 38 19.4**	**+0.8**
SEKA				S		**Sb**	**00 38 57.7**	**-0.9**
QZX	**Qazax, Azerbai**	**2.92**	**336**	P		**Pn**	**00 38 22.1**	**+2.2**
QZX				S		**Sb**	**00 39 00.6**	**-0.9**
XNQ	**Khinaliq**	**2.93**	**18**	P		**Pn**	**00 38 22.1**	**+1.9**
XNQ				S		**Sb**	**00 38 59.6**	**-2.1**
SIZA	**Siyzn**	**3.08**	**29**	P		**Pn**	**00 38 23.1**	**+1.0**
SIZA				S		**Sb**	**00 39 03.7**	**-2.3**

*SJA **28** 00:40:01.8±0.9, 34˚.78S×71˚.82W, h23km±2km, ML4.3, MW4.3*
*GFZ **28** 00:40:04.1±0.2, 35˚S±2˚×7˚2W±˚, h40km, M4.5/19, mb4.5/19*
*GUC **28** 00:40:04.4±0.7, 34˚.79S×71˚.71W, h46km±2km, ML4.4*
*NEIC **28** 00:40:04.3±1.8, 34˚.76S±0˚.03×71˚.78W±0˚.05, h43km±4km, mb4.5/33, Mwr4.2(GUC), Error ellipse: s-maj=5.5km s-min=4.5km az=106.0*
*VAO **28** 00:40:06.4±0.9, 34˚.69S×71˚.58W, h67km±8km, mb4.6, Presumed earthquake*
*IDC **28** 00:40:07.1±2.5, 34˚.77S×71˚.76W, h76km±20km, mb3.9/11, mbtmp4.2/15, MS3.3/3, Error ellipse: s-maj=23.5km s-min=12.8km az=102.0*
ISC 28 00:40:03.9±0.5, 34˚.82S±0˚.02×71˚.76W±0˚.03, h47km±4km, n225, σ1§51/269, mb4.4/22, 9C-16D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.24**	**216**	*eP*		Pn	00 40 02.5	-10
GO05				*eS*		**Pn**	**00 40 12.9**	**+0.6**
GO05	**Hualane**	**0.24**	**216**	*eP*		**Pn**	**00 40 12.8**	**+0.6**
GO05				*eS*		**Sn**	**00 40 19.3**	**+1.1**
GO05	**Hualane**	**0.24**	**216**			**Pn**	**00 40 12.6**	**+0.4**
GO05						**Sn**	**00 40 19.6**	**+1.3**
GO05	**Hualane**	**0.24**	**216**	P		**Pn**	**00 40 13.0**	**+0.6**
BO03	**Pichilemu**	**0.36**	**332**	*eP*		**Pn**	**00 40 13.4**	**+0.1**
BO03				*i* S		**Sn**	**00 40 20.2**	**+0.1**
BO03				IAML			00 40 21.0	
	comp=N,17μm,0.3s							
BO03	**Pichilemu**	**0.36**	**332**	P		**Pn**	**00 40 13.6**	**+0.3**
BO01	**Tunca**	**0.70**	**53**	*eP*		**Pn**	**00 40 17.3**	**-0.2**
BO01				*eS*		**Sn**	**00 40 26.7**	**-0.7**
BO01				IAML			00 40 27.2	
	comp=Z,9μm,0.3s							
BO01	**Tunca**	**0.70**	**53**	⇓*iP*		**Pn**	**00 40 17.3**	**-0.2**
BO01				*i* S		**Sn**	**00 40 26.7**	**-0.7**
BO01				IAML			00 40 27.1	
	comp=N,14μm,0.3s							
BO01	**Tunca**	**0.70**	**53**			**Pn**	**00 40 17.2**	**-0.2**
BO01						**Sn**	**00 40 26.2**	**-1.2**
BO01	**Tunca**	**0.70**	**53**	P		**Pn**	**00 40 17.4**	**-0.2**
BO02	**Sierra Bellavi**	**0.81**	**89**	*eP*		**Pn**	**00 40 18.6**	**-0.4**
BO02				*eS*		**Sn**	**00 40 31.2**	**+1.2**
BO02				IAML			00 40 31.8	
	comp=Z,16μm,0.1s							
BO02	**Sierra Bellavi**	**0.81**	**89**	⇓*iP*		**Pn**	**00 40 18.9**	**-0.1**
BO02				*i* S		**Sn**	**00 40 29.4**	**-0.6**
BO02				IAML			00 40 30.6	
	comp=N,60μm,0.2s							
BO02	**Sierra Bellavi**	**0.81**	**89**			**Pn**	**00 40 18.8**	**-0.1**
BO02						**Sn**	**00 40 29.6**	**-0.3**
BO02	**Sierra Bellavi**	**0.81**	**89**	P		**Pn**	**00 40 18.9**	**-0.1**
ML02	**Panimavida**	**0.99**	**164**	*eP*		Pn	00 40 17.1	-4.3
ML02				*eS*		Pn	00 40 17.1	-4.3
ML02				*eP*			00 40 22.6	
ML02				IAML			00 40 36.9	
	comp=Z,5μm,0.5s							
ML02	**Panimavida**	**0.99**	**164**	⇓*iP*		**Pn**	**00 40 22.3**	**+0.9**
ML02				*i* S		**Sn**	**00 40 34.8**	**+0.5**
ML02				IAML			00 40 36.8	
	comp=N,10μm,0.4s							
ML02	**Panimavida**	**0.99**	**164**			**Pn**	**00 40 22.3**	**+0.9**
ML02						**Sn**	**00 40 36.0**	**+1.8**
ML02	**Panimavida**	**0.99**	**164**	P		**Pn**	**00 40 22.4**	**+1.0**
MT01	**Popeta**	**1.04**	**24**	*eP*		**Pn**	**00 40 22.0**	**-0.1**
MT01				*eS*		**Sn**	**00 40 35.3**	**-0.1**
MT01				IAML			00 40 37.9	
	comp=Z,10μm,0.4s							
MT01	**Popeta**	**1.04**	**24**	⇓*iP*		**Pn**	**00 40 21.9**	**-0.1**
MT01				*i* S		**Sn**	**00 40 35.0**	**-0.4**
MT01				IAML			00 40 37.1	
	comp=N,12μm,0.2s							
MT01	**Popeta**	**1.04**	**24**			**Pn**	**00 40 22.0**	**-0.1**
MT01						**Sn**	**00 40 34.9**	**-0.6**
VA05	**Santo Domingo**	**1.16**	**6**	*eP*		**Pn**	**00 40 23.0**	**-0.7**
VA05				*i* S		**Sn**	**00 40 37.9**	**-0.5**
VA05				IAML			00 40 46.8	
	comp=E,14μm,0.5s							
VA05	**Santo Domingo**	**1.16**	**6**			**Pn**	**00 40 23.4**	**-0.4**
VA05					Sn	**Sn**	**00 40 37.8**	**-0.6**
VA05	**Santo Domingo**	**1.16**	**6**	P		**Pn**	**00 40 23.6**	**-0.1**
MT09	**Talagante**	**1.22**	**32**	⇓*iP*		**Pn**	**00 40 24.9**	**+0.2**
MT09				*eS*		**Sn**	**00 40 40.1**	**+0.1**
MT09				IAML			00 40 43.1	
	comp=N,21μm,0.2s							
MT09	**Talagante**	**1.22**	**32**			**Pn**	**00 40 24.8**	**+0.2**
MT09					Sn	**Sn**	**00 40 40.5**	**+0.4**
BO04	**La Punta**	**1.26**	**49**	⇓*iP*		**Pn**	**00 40 25.0**	**-0.1**
BO04				*eS*		**Sn**	**00 40 40.7**	**-0.2**
BO04				IAML			00 40 43.2	
	comp=N,15μm,0.2s							
BO04	**La Punta**	**1.26**	**49**			**Pn**	**00 40 25.1**	**-0.1**
BO04					Sn	**Sn**	**00 40 41.0**	**+0.1**
MT12	**Pirque**	**1.47**	**43**	⇓*iP*		**Pn**	**00 40 28.2**	**+0.1**
MT12				*i* S		**Sn**	**00 40 45.2**	**-0.9**
MT12				IAML			00 40 51.0	
	comp=N,24μm,0.5s							
MT15	**Las Vizcachas**	**1.60**	**41**	⇓*eP*		**Pn**	**00 40 30.1**	**+0.4**
MT13	**San Alfonso**	**1.62**	**49**	*eP*		**Pn**	**00 40 30.5**	**+0.3**
MT13				*eS*		**Sn**	**00 40 52.5**	**+2.6**
MT13				IAML			00 40 56.2	
	comp=Z,3μm,0.3s							
MT13	**San Alfonso**	**1.62**	**49**	⇓*eP*		**Pn**	**00 40 30.3**	**+0.1**
MT13				IAML			00 40 53.9	
	comp=E,11μm,0.2s							
MT13	**San Alfonso**	**1.62**	**49**			**Pn**	**00 40 30.3**	**+0.1**
MT13					Sn	**Sn**	**00 40 51.0**	**+1.1**
MT02	**Curacav**	**1.64**	**19**	*eP*		**Pn**	**00 40 30.4**	**+0.2**
MT02				*eP*			00 40 30.5	
MT02				*eS*		**Sn**	**00 40 53.5**	**+3.5**
MT02				IAML			00 40 57.9	
	comp=Z,2μm,0.5s							
MT02	**Curacav**	**1.64**	**19**	⇑*eP*		**Pn**	**00 40 30.4**	**+0.2**
MT02	**Curacav**	**1.64**	**19**			**Pn**	**00 40 30.4**	**+0.2**
MT02					Sn	**Sn**	**00 40 50.5**	**+0.4**
MT05	**Renca**	**1.65**	**31**	*eP*		**Pn**	**00 40 30.9**	**+0.4**
MT05				*eS*		**Sn**	**00 40 53.7**	**+3.1**
MT05				IAML			00 40 57.5	
	comp=Z,4μm,0.8s							
MT05	**Renca**	**1.65**	**31**	⇓*eP*		**Pn**	**00 40 30.8**	**+0.3**
MT05				IAML			00 40 54.4	
	comp=E,10μm,0.3s							
MT05	**Renca**	**1.65**	**31**			**Pn**	**00 40 30.8**	**+0.3**
MT05					Sn	**Sn**	**00 40 51.6**	**+0.9**
MT16	**CCHEN**	**1.72**	**37**	⇓*eP*		**Pn**	**00 40 31.7**	**+0.3**
MT16	**CCHEN**	**1.72**	**37**			**Pn**	**00 40 31.7**	**+0.3**
MT16					Sn	**Sn**	**00 40 53.1**	**+0.8**
MT14	**Cerro Cal¡n**	**1.74**	**36**	⇓*eP*		**Pn**	**00 40 32.0**	**+0.2**
VA01	**Torpederas**	**1.79**	**3**	*eP*		**Pn**	**00 40 32.8**	**+0.5**
VA01	**Torpederas**	**1.79**	**3**	*eP*		**Pn**	**00 40 32.3**	**0.0**
VA01				*i* S		**Sn**	**00 40 53.9**	**+0.1**
VA01				IAML			00 41 01.1	
	comp=E,2μm,0.4s							
VA01	**Torpederas**	**1.79**	**3**			**Pn**	**00 40 32.3**	**0.0**
VA01					Sn	**Sn**	**00 40 54.2**	**+0.4**
VA01	**Torpederas**	**1.79**	**3**	P		**Pn**	**00 40 32.8**	**+0.5**
MT10	**Hacienda Santa**	**1.84**	**34**	⇓*eP*		**Pn**	**00 40 33.6**	**+0.4**
BI02	**San Fabin de**	**1.89**	**168**	*eP*		**Pn**	**00 40 35.6**	**+1.9**
BI02				IAML			00 41 07.5	
	comp=Z,997nm,0.9s							
BI02	**San Fabin de**	**1.89**	**168**	⇓*iP*		**Pn**	**00 40 34.4**	**+0.7**
BI02				*eS*		**Sn**	**00 40 57.9**	**+1.6**
BI02	**San Fabin de**	**1.89**	**168**			**Pn**	**00 40 34.9**	**+1.2**
BI02					Sn	**Sn**	**00 40 58.5**	**+2.1**
BI02	**San Fabin de**	**1.89**	**168**	P		**Pn**	**00 40 35.3**	**+1.6**
PEL	**Peldehue**	**1.89**	**28**	*eP*		Pn	00 40 28.9	-4.8
PEL				*eS*		**Sn**	**00 41 00.5**	**+4.0**
PEL				IAML			00 41 03.5	
	comp=Z,4μm,0.5s							
PEL	**Peldehue**	**1.89**	**28**	⇑*eP*		**Pn**	**00 40 34.2**	**+0.4**
PEL	**Peldehue**	**1.89**	**28**			**Pn**	**00 40 33.6**	**-0.2**
PEL					Sn	**Sn**	**00 40 57.0**	**+0.6**
PEL	**Peldehue**	**1.89**	**28**	P		**Pn**	**00 40 34.4**	**+0.6**
ROCH	**El Roble**	**1.94**	**19**	⇑*eP*		**Pn**	**00 40 35.0**	**+0.4**
ROCH				⇑*eP*		**Pn**	**00 40 35.0**	**+0.4**
MT04	**Ro Olivares**	**1.95**	**44**	*eP*		**Pn**	**00 40 35.4**	**+0.6**
MT04				*eS*		**Sn**	**00 41 00.6**	**+2.5**
MT04				IAML			00 41 04.3	
	comp=Z,2μm,0.8s							
MT04	**Ro Olivares**	**1.95**	**44**	⇓*eP*		**Pn**	**00 40 35.3**	**+0.6**
MT04				IAML			00 41 04.2	
	comp=E,5μm,0.2s							
MT08	**Bocatoma Ro**	**1.99**	**47**	*eP*		**Pn**	**00 40 36.2**	**+0.9**
MT08				*eS*		**Sn**	**00 41 03.1**	**+4.0**
MT08				IAML			00 41 08.2	
	comp=Z,2μm,0.6s							
MT08	**Bocatoma Ro**	**1.99**	**47**	⇓*eP*		**Pn**	**00 40 36.1**	**+0.9**
MT08	**Bocatoma Ro**	**1.99**	**47**			**Pn**	**00 40 35.6**	**+0.3**
MT08					Sn	**Sn**	**00 40 59.8**	**+0.7**
EDS3	**Malargue**	**2.15**	**117**	*eP*		**Pn**	**00 40 40.0**	**+2.5**
EDS3				*eS*		**Sn**	**00 40 55.3**	**-7.7**
BI05	**Punta Hualpn**	**2.25**	**211**	*eP*		**Pn**	**00 40 40.2**	**+1.6**
BI05				IAML			00 41 15.1	
	comp=Z,750nm,0.8s							
BI05	**Punta Hualpn**	**2.25**	**211**	*eP*		**Pn**	**00 40 39.1**	**+0.5**
BI05				*eS*		**Sn**	**00 41 05.4**	**+0.2**
BI05	**Punta Hualpn**	**2.25**	**211**			**Pn**	**00 40 39.7**	**+1.0**
VA03	**San Esteban**	**2.28**	**27**	*eP*		**Pn**	**00 40 39.6**	**+0.5**
VA03				*eS*		**Sn**	**00 41 10.9**	**+4.9**
VA03				IAML			00 41 13.0	
	comp=Z,2μm,0.3s							
VA03	**San Esteban**	**2.28**	**27**			**Pn**	**00 40 39.1**	**0.0**
VA03					Sn	**Sn**	**00 41 08.1**	**+2.0**
VA03	**San Esteban**	**2.28**	**27**	P		**Pn**	**00 40 39.6**	**+0.5**
CO04	**Los Peladeros**	**2.84**	**14**	⇑*eP*		**Pn**	**00 40 46.5**	**-0.5**
CO04	**Los Peladeros**	**2.84**	**14**			**Pn**	**00 40 46.0**	**-1.0**
CO04	**Los Peladeros**	**2.84**	**14**	P		**Pn**	**00 40 46.9**	**-0.1**
AAGR	**Agrelo**	**2.98**	**56**	*eP*		**Pn**	**00 40 51.2**	**+2.3**
AVIZ	**Vizcacheras**	**3.00**	**64**	*eP*		**Pn**	**00 40 46.5**	**-2.6**
ARCO	**CERRO ARCO**	**3.07**	**51**	*eP*		**Pn**	**00 40 53.8**	**+3.8**
ARCO				IAML			00 41 46.8	
	comp=Z,375nm,0.5s							
CANA	**Caviahue**	**3.12**	**170**	*eP*		**Pn**	**00 40 51.3**	**+0.6**
CANA				*eS*		Sn	00 41 46.8	+20
RTLS	**Leoncito**	**3.65**	**35**	*eP*		**Pn**	**00 41 00.2**	**+2.1**
RTLS				*eS*		Sn	00 41 54.7	+15
RTLS				IAML			00 42 03.3	
	comp=Z,1μm,1.2s							
CO02	**Combarbal**	**3.66**	**10**	*eP*		**Pn**	**00 40 57.9**	**-0.2**
CO02				*eS*		**Sn**	**00 41 43.1**	**+3.1**
CO02				IAML			00 42 02.5	
	comp=Z,1μm,0.6s							
CO02	**Combarbal**	**3.66**	**10**	⇑*eP*		**Pn**	**00 40 57.8**	**-0.3**
CO02	**Combarbal**	**3.66**	**10**			**Pn**	**00 40 57.5**	**-0.5**
CO02	**Combarbal**	**3.66**	**10**	P		**Pn**	**00 40 57.5**	**-0.5**
CO03	**El Pedregal**	**4.07**	**13**	*eP*		**Pn**	**00 41 03.9**	**+0.2**
CO03				*eS*		**Sn**	**00 41 50.4**	**+0.3**
CO03				IAML			00 42 02.1	
	comp=Z,424nm,0.5s							
CO03	**El Pedregal**	**4.07**	**13**	⇑*eP*		**Pn**	**00 41 03.6**	**-0.1**
CO03	**El Pedregal**	**4.07**	**13**			**Pn**	**00 41 03.0**	**-0.7**
CO03	**El Pedregal**	**4.07**	**13**	P		**Pn**	**00 41 04.2**	**+0.5**
ZON	**Zonda**	**4.16**	**39**	*eS*		**Sn**	**00 41 57.3**	**+5.0**
ZON				IAML			00 42 23.9	
	comp=Z,266nm,2.9s							
ZON	**Zonda**	**4.16**	**39**			**Pn**	**00 41 05.2**	**+0.3**
ZON	**Zonda**	**4.16**	**39**	P		**Pn**	**00 41 06.2**	**+1.2**
CFA	**Coronel Fontan**	**4.36**	**44**	P		**Pn**	**00 41 08.6**	**+1.0**
	comp=Z,26nm,0.4s,baz=221,slow=11,SNR=83							
CFA					S	**Sn**	**00 42 02.2**	**+5.2**
	comp=Z,83nm,0.4s,baz=270,slow=20,SNR=9.3							
RTLL	**Cerro Villicun**	**4.44**	**39**	*eS*		**Sn**	**00 42 01.5**	**+2.3**
RTLL				IAML			00 42 12.5	
	comp=Z,568nm,0.5s							
GO04	**Tololo Observa**	**4.70**	**10**	*eP*		**Pn**	**00 41 12.0**	**-0.5**
GO04	**Tololo Observa**	**4.70**	**10**			**Pn**	**00 41 11.3**	**-1.2**
GO04	**Tololo Observa**	**4.70**	**10**	P		**Pn**	**00 41 11.8**	**-0.8**
GO06	**Curarrehue**	**4.77**	**177**	*eP*		**Pn**	**00 41 16.0**	**+2.8**
GO06	**Curarrehue**	**4.77**	**177**			**Pn**	**00 41 13.7**	**+0.4**
GO06	**Curarrehue**	**4.77**	**177**	P		**Pn**	**00 41 15.1**	**+1.8**
LR03	**Panguipulli**	**4.83**	**185**			**Pn**	**00 41 14.4**	**+0.4**
AROD	**Rodeo**	**5.02**	**23**	*eS*		**Sn**	**00 42 21.5**	**+7.6**
CO01	**Juntas del Tor**	**5.03**	**17**			**Pn**	**00 41 15.8**	**-1.2**
CO01	**Juntas del Tor**	**5.03**	**17**	P		**Pn**	**00 41 16.8**	**-0.2**
LR04	**Corral**	**5.23**	**194**			**Pn**	**00 41 19.2**	**+0.1**
LR05	**Currie**	**5.41**	**182**			**Pn**	**00 41 23.4**	**+1.4**
LCO	**Las Campanas**	**5.86**	**9**			**Pn**	**00 41 28.1**	**-0.3**
LCO	**Las Campanas**	**5.86**	**9**	P		**Pn**	**00 41 27.7**	**-0.7**
VA04	**Juan Fernndez**	**5.97**	**279**	Pn		**Pn**	**00 41 30.5**	**+0.8**
VA04	**Juan Fernndez**	**5.97**	**279**	P		**Pn**	**00 41 30.0**	**+0.3**
PLCA	**Paso Flores**	**5.99**	**171**	P		**Pn**	**00 41 32.5**	**+2.5**
	comp=Z,7.9nm,0.4s,baz=339,slow=14,SNR=29							
PLCA					LR	LR	00 44 00.3	
	comp=Z,187nm,20.2s,baz=8.5,slow=39							
PLCA	**Paso Flores**	**5.99**	**171**			**Pn**	**00 41 32.2**	**+2.3**
PLCA	**Paso Flores**	**5.99**	**171**	*eP*		**Pn**	**00 41 33.1**	**+3.1**
PLCA	**Paso Flores**	**5.99**	**171**	P		**Pn**	**00 41 32.7**	**+2.7**
H03S1	**Juan Fernandez**	**5.99**	**277**	P		**Pn**	**00 41 29.9**	**+0.2**
	baz=61,slow=14,SNR=14							
H03S1					S	**Sn**	**00 42 33.7**	**-3.2**
H03S1					T	T	00 47 25.3	
	baz=98,slow=75,SNR=2541							
H03S3	**Juan Fernandez**	**6.00**	**277**	P		**Pn**	**00 41 30.1**	**+0.3**
	baz=61,slow=14,SNR=17							
H03S3					S	**Sn**	**00 42 34.1**	**-3.0**
H03S3					T	T	00 47 26.7	
	baz=98,slow=75,SNR=3418							
H03S2	**Juan Fernandez**	**6.01**	**277**	P		**Pn**	**00 41 30.0**	**0.0**
	baz=61,slow=14,SNR=25							
H03S2					S	**Sn**	**00 42 33.8**	**-3.5**
H03S2					T	T	00 47 26.5	
	baz=98,slow=75,SNR=2462							
H03N1	**Juan Fernandez**	**6.09**	**281**	P		**Pn**	**00 41 32.4**	**+1.4**
	baz=132,slow=23,SNR=11							
H03N1					S	**Sn**	**00 42 38.2**	**-1.0**
H03N1					T	T	00 47 37.7	
	baz=108,slow=71,SNR=52							
AC05	**El Transito**	**6.09**	**12**			**Pn**	**00 41 30.6**	**-0.9**
AC05	**El Transito**	**6.09**	**12**	P		**Pn**	**00 41 31.1**	**-0.5**
H03N3	**Juan Fernandez**	**6.09**	**281**	P		**Pn**	**00 41 32.4**	**+1.2**
	baz=132,slow=23,SNR=6.7							
H03N3					S	**Sn**	**00 42 38.2**	**-1.3**
H03N3					T	T	00 47 37.7	
	baz=108,slow=71,SNR=76							
H03N2	**Juan Fernandez**	**6.10**	**281**	P		**Pn**	**00 41 32.6**	**+1.3**
	baz=132,slow=23,SNR=5.8							
H03N2					S	**Sn**	**00 42 38.5**	**-1.1**
H03N2					T	T	00 47 37.7	
	baz=108,slow=71,SNR=68							
AC04	**Llanos de Chal**	**6.62**	**5**	Pn		**Pn**	**00 41 37.4**	**-1.2**
AC04	**Llanos de Chal**	**6.62**	**5**	P		**Pn**	**00 41 36.9**	**-1.7**
LL05	**Los Muermos**	**6.72**	**191**	Pn		**Pn**	**00 41 39.9**	**0.0**
LL05	**Los Muermos**	**6.72**	**191**	P		**Pn**	**00 41 39.9**	**0.0**
TCA	**Tanti**	**6.94**	**62**	*eP*		**Pn**	**00 41 42.7**	**-0.4**
GO03	**Copiapo**	**7.32**	**11**			**Pn**	**00 41 46.4**	**-1.8**
GO03	**Copiapo**	**7.32**	**11**	P		**Pn**	**00 41 46.0**	**-2.2**

W50A	**Signal Mountai**	**70.80**	**348**		IAmb		IAmb	00 51 16.4	
	comp=Z,5.4nm,0.7s								
CPCT	**Cooper Cave**	**70.91**	**349**		P		**P**	**00 51 16.0**	**0.0**
CPCT					IAmb		IAmb	00 51 16.1	
	comp=Z,3.6nm,0.8s								
WVT	**Waverly**	**72.16**	**346**		P		**P**	**00 51 23.2**	**-0.2**
WVT	**Waverly**	**72.16**	**346**		P		**P**	**00 51 23.6**	**+0.2**
MAW	**Mawson**	**72.33**	**163**		P		**P**	**00 51 24.6**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=214,slow=5.5,SNR=7.0								
	comp=Z,2.8nm,0.8s								
MAW	**Mawson**	**72.33**	**163**		IAmb		IAmb	00 51 26.0	
	comp=Z,0.7nm,0.9s								
LCAR	**Lake Charles**	**72.81**	**344**		IAmb		IAmb	00 51 27.7	
	comp=Z,5.8nm,1.1s								
S51A	**Beattyville**	**72.92**	**350**		IAmb		IAmb	00 51 28.7	
	comp=Z,5.6nm,0.8s								
R40A	**Maddies Statio**	**75.19**	**343**		IAmb		IAmb	00 51 42.2	
	comp=Z,4.5nm,0.8s								
DBIC	**Dimbokro**	**75.22**	**71**		P		**P**	**00 51 40.7**	**-1.3**
	comp=Z,5.5nm,0.7s,baz=232,slow=7.3,SNR=4.9								
	comp=Z,5.5nm,0.7s								
DBIC	**Dimbokro**	**75.22**	**71**		IAmb		IAmb	00 51 40.9	
	comp=Z,9.3nm,1.1s								
MVCO	**Mesa Verde**	**79.39**	**331**		P		**P**	**00 52 07.2**	**+2.2**
BOSA	**Boshof**	**79.49**	**117**		P		**P**	**00 52 05.7**	**-0.1**
	comp=Z,9.2nm,0.9s,baz=241,slow=6.1,SNR=21								
	comp=Z,9.2nm,0.9s								
BOSA	**Boshof**	**79.49**	**117**		P		**P**	**00 52 06.2**	**+0.3**
BOSA					IAmb		IAmb	00 52 06.6	
	comp=Z,6.6nm,0.8s								
ECSD	**EROS Data Cent**	**81.39**	**342**		IAmb		IAmb	00 52 16.6	
	comp=Z,3.7nm,0.8s								
LBTB	**Lobatse**	**81.75**	**115**		P		**P**	**00 52 18.1**	**0.0**
LBTB					IAmb		IAmb	00 52 18.6	
	comp=Z,6.7nm,1.0s								
TORD	**Torodi Ar. Bea**	**84.27**	**70**		P		**P**	**00 52 30.3**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=244,slow=4.3,SNR=15								
	comp=Z,3.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**84.27**	**70**		P		**P**	**00 52 30.9**	**-0.1**
TORD					IAmb		IAmb	00 52 31.5	
	comp=Z,3.4nm,0.8s								
PDAR	**Pinedale Array**	**84.59**	**333**		P		**P**	**00 52 32.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=154,slow=3.0,SNR=4.3								
	comp=Z,0.3nm,0.7s								
NVAR	**Mina Array Bea**	**84.68**	**325**		P		**P**	**00 52 32.2**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=134,slow=3.7,SNR=3.1								
	comp=Z,0.5nm,0.8s								
WRA	**Warramunga Arr**	**120.16**	**209**		PKP		**PKPdf**	**00 58 48.4**	**-1.8**
	comp=Z,0.2nm,0.7s,baz=162,slow=2.0,SNR=1.1								
BRTR	**Keskin Array B**	**122.03**	**61**		PKP		**PKPdf**	**00 58 51.7**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=238,slow=2.7,SNR=4.5								
AKASG	**Malin Array Be**	**122.57**	**48**		PKP		**PKPdf**	**00 58 52.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=268,slow=2.5,SNR=1.8								
BVAR	**Borovoye Array**	**147.71**	**44**		PKPbc		**PKPdf**	**00 59 41.9**	**+2.0**
	comp=Z,3.0nm,0.7s,baz=286,slow=3.5,SNR=15								
KURBB	**Kurchatov Arra**	**153.29**	**45**		PKPbc		**PKPbc**	**00 59 56.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=296,slow=2.7,SNR=12								
KURBB					PKPab		**sPKPdf**	**01 00 08.5**	**+0.1**
	comp=Z,2.0nm,0.2s,baz=296,slow=2.9,SNR=15								
KURK	**Kurchatov**	**153.31**	**44**				**PKPbc**	**00 59 56.0**	**-0.2**
KURK							**sPKPdf**	**01 00 08.5**	**+0.1**
KSH2	**Kashi**	**153.62**	**71**		PKPbc		**PKiKP**	**00 59 58.5**	**+0.9**
ZALV	**Zalesovo Beam**	**154.78**	**33**		PKPbc		**PKPbc**	**00 59 59.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=315,slow=0.8,SNR=3.6								
ZALV					PKPab		**pPKPbc**	**01 00 13.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=291,slow=4.6,SNR=4.2								
MKAR	**Makanchi Array**	**157.11**	**51**		PKPab		**PKPab**	**01 00 23.8**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=298,slow=3.1,SNR=4.4								
PZH	**PanZhiHua**	**170.01**	**144**		PKP		**PKPdf**	**01 00 06.5**	**-0.3**
NJ2	**Nanjing**	**170.71**	**256**	*eP*			**PKPdf**	**01 00 08.3**	**+1.5**
NJ2					pmax		pmax		
	comp=Z,15nm,0.5s								
HHC	**Hu-ho-hao-te**	**173.43**	**337**	*eP*			**PKPdf**	**01 00 09.0**	**+1.1**

IDC 28 00:44:09.2±9.4, 17°64S×174°61W, h0km, mb4.1/2, mbtmp4.1/2, MS3.7/3, Error ellipse: s-maj=439.2km s-min=69.3km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**18.36**	**253**	LR	LR	00 53 57.1	
	comp=Z,73nm,19.1s,baz=305,slow=32						
H11S2	**WAKE ISLAND Hy**	**40.33**	**332**	T	T	01 34 19.3	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**40.34**	**332**	T	T	01 34 15.3	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**40.35**	**332**	T	T	01 34 39.1	
	baz=149						
H11N3	**WAKE ISLAND Hy**	**41.32**	**333**	T	T	01 35 36.5	
	baz=156						
H11N1	**WAKE ISLAND Hy**	**41.33**	**333**	T	T	01 35 36.1	
	baz=156						
H11N2	**WAKE ISLAND Hy**	**41.34**	**333**	T	T	01 35 27.0	
	baz=156						
WRA	**Warramunga Arr**	**48.24**	**259**	P	P	00 52 50.6	-1.6
	0.5nm,0.6s,baz=98,slow=8.1,SNR=2.4						
WRA				LR	LR	01 12 00.1	
	comp=Z,239nm,21.7s,baz=352,slow=35						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**48.34**	**254**	P	P	00 52 53.9	+0.8
	2.9nm,0.4s,baz=91,slow=8.0,SNR=40						
	2.9nm,0.4s						
NNA	**Nana**	**93.67**	**104**	LR	LR	01 31 22.4	
	comp=Z,58nm,20.8s,baz=322,slow=30						
BRTR	**Keskin Array B**	**147.09**	**318**	PKPbc	PKPbc	01 03 53.8	-0.9
	0.3nm,0.7s,baz=58,slow=1.6,SNR=2.6						

*SSNC **28** 00:48:31.3±1.7, 19°.27N×79°.15W, h17km±16km, MD3.3, ML3.4, MW3.1, Presumed earthquake*
*JSN **28** 00:48:33.5±0.8, 19°.27N×78°.73W, h0km±19km, MD4.6, Presumed earthquake*

ISC 28 00:48:30.7±2.1, 19°30N±0°.06×79°.16W±0°.06, h34km±5km, n20, σ1°36/18, 5C-3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.95**	**293**	*i* P	**Pb**	**00 48 48.1**	**-0.6**
LCCY				*e*S	**Sn**	**00 48 59.5**	**-0.5**
LCCY				IAML		00 49 00.6	
	comp=N,565nm,0.4s						
LCCY				IAML		00 49 00.6	
	comp=E,363nm,0.3s						
CVJ	**Coleyville**	**1.87**	**124**	⇑*i* P	Pn	00 49 00.5	0.0
CVJ				*i* S	Sn	00 49 20.7	-2.3
MTDJ	**Mount Denham**	**1.87**	**124**	*i* P	Pn	00 49 00.4	-0.1
MTDJ				*i* S	**Sn**	**00 49 21.8**	**-1.2**
MTDJ				IAML		00 49 22.4	
	comp=E,121nm,0.3s						
MTDJ				IAML		00 49 23.3	
	comp=E,136nm,0.4s						
FSCY	**Frank Sound, G**	**1.91**	**271**	*i* P	Pn	00 49 01.6	+0.6
FSCY				*e*S	Sn	00 49 22.5	-1.4
FSCY				IAML		00 49 24.6	
	comp=N,709nm,0.3s						
FSCY				IAML		00 49 24.7	
	comp=E,1μm,0.2s						
MCJ	**Malvern**	**1.95**	**134**	⇑*i* P	**Pn**	**00 49 02.3**	**+0.8**
MCJ				*i* S	**Sn**	**00 49 24.7**	**-0.3**
LMGC	**Las Mercedes**	**2.17**	**69**	*e*P	Pn	00 49 04.3	-0.2
LMGC				*e*S	**Sn**	**00 49 28.9**	**-1.2**
LMGC				IAML		00 49 32.1	
	comp=E,335nm,0.1s						
LMGC				IAML		00 49 33.2	
	comp=N,387nm,0.1s						
BNJ	**Bonny Gate**	**2.31**	**114**	⇑*i* P	Pn	00 49 06.1	-0.3
PCJ	**Portland Cotta**	**2.45**	**129**	⇓*i* P	**Pn**	**00 49 09.4**	**+1.0**
STH	**Stony Hill**	**2.54**	**118**	⇑*i* P	Pn	00 49 09.4	-0.1
STH				⇑*i* P		00 49 09.4	
GWJ	**Greenwich**	**2.60**	**117**	⇓*i* P	Pn	00 49 10.4	-0.2
GWJ				⇓*i* P		00 49 10.5	
CHIV	**Chivirico**	**2.67**	**75**	*e*P	Pn	00 49 10.6	-0.8
CHIV				*e*S	Sn	00 49 37.0	-5.7
YAR	**Yar**	**2.84**	**67**	*i* P	**Pn**	**00 49 14.5**	**+0.7**
YAR				*e*S	**Sn**	**00 49 46.1**	**-0.8**
MGV	**Manicaragua**	**2.90**	**345**	*i* P	Pn	00 49 15.1	+0.5
MGV				*i* S	**Sn**	**00 49 47.3**	**-1.0**
HLGC	**Holguin**	**3.32**	**61**	*e*P	**Pn**	**00 49 22.2**	**+1.9**
RCC	**Rio Carpintero**	**3.34**	**77**	*e*P	Pn	00 49 20.0	-0.6
RCC				*i* S	Sn	00 49 55.8	-3.3
GTBY	**Guantanamo Bay**	**3.87**	**80**	*i* P	**Pn**	**00 49 28.3**	**+0.5**
GTBY	**Guantanamo Bay**	**3.87**	**80**	*e*P	Pn	00 49 27.1	-0.8
GTBY				*e*S	Sn	00 50 05.4	-6.7
NMDO	**Nuevo Mundo**	**4.13**	**72**	*e*P	**Pn**	**00 49 33.3**	**+1.9**
NMDO				*e*S	**Sn**	**00 50 16.2**	**-2.3**
MOAC	**Moa**	**4.18**	**70**	*i* P	**Pn**	**00 49 33.7**	**+1.6**
MOAC				*i* S	**Sn**	**00 50 20.5**	**+0.8**
QMBU	**Quimbuelo**	**4.19**	**77**	*i* P	**Pn**	**00 49 32.7**	**+0.4**
QMBU				*i* S	**Sn**	**00 50 18.7**	**-1.5**

*IDC **28** 01:03:32.5±1.1, 1°.61S×136°.22E, h0km, mb3.6/4, mbtmp3.7/8, ML3.4/4, MS3.5/2, Error ellipse: s-maj=27.7km s-min=21.1km az=58.0*
*DJA **28** 01:03:35.8±0.4, 2°.5±3°×13°.6E±°, h12km±2km, M4.2/8, MLv4.2/8*

ISC 28 01:03:34.2±1.4, 1°.64S±0°.09×136°.29E±0°.05, h17km±9km, n16, σ2°33/19, mb3.6/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.23**	**192**	P	**Pg**	**01 03 39.2**	**-0.3**
SRPI				S	**Sg**	**01 03 42.8**	**-0.4**
BAKI	**Biak**	**0.48**	**338**	P	**Pn**	**01 03 48.1**	**+1.8**
GENI	**Genyem**	**3.99**	**104**	P	**Pn**	**01 04 35.9**	**+1.3**
FAKI	**Fak Fak**	**4.23**	**252**	P	**Pn**	**01 04 39.8**	**+1.9**
FAKI				S	**Sn**	**01 05 27.4**	**+0.4**
JAY	**Jayapura**	**4.50**	**101**	Pn	**Pn**	**01 04 41.0**	**-0.5**
	1.2nm,0.3s,baz=285,slow=12,SNR=4.2						
JAY				Sn	**Sn**	**01 05 30.9**	**-2.7**
	2.1nm,0.3s,baz=282,slow=20,SNR=4.0						
	3.4nm,0.4s						
JAY	**Jayapura**	**4.50**	**101**	P	**Pn**	**01 04 42.1**	**+0.5**
SIJI	**Sorong**	**5.08**	**279**	Pn	**Pn**	**01 04 50.1**	**+0.6**
	0.3nm,0.3s,baz=108,slow=20,SNR=1.3						
SIJI				Pg	**Pb**	**01 05 02.5**	**-0.2**
	2.2nm,0.3s,baz=142,slow=19,SNR=5.4						
SIJI				Sn	**Sn**	**01 05 40.5**	**-7.4**
	1.4nm,0.3s,baz=268,slow=23,SNR=1.5						
SIJI				Lg	Lg	01 06 07.5	
	0.6nm,0.3s,baz=127,slow=20,SNR=1.3						
	3.9nm,0.3s						
PMG	**Port Moresby**	**13.28**	**126**	LR	LR	01 12 47.4	
	comp=Z,118nm,18.8s,baz=258,slow=42						
WRA	**Warramunga Arr**	**18.29**	**186**	P	**Pn**	**01 07 46.6**	**-0.7**
	0.3nm,0.3s,baz=7.9,slow=12,SNR=9.6						
WRA				S	Sn	01 10 54.2	-17
	1.3nm,0.8s,baz=5.1,slow=23,SNR=3.1						
	1.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.41**	**212**	P	**Pn**	**01 08 01.5**	**+0.7**
	0.1nm,0.3s,baz=36,slow=8.7,SNR=2.0						
FITZ				S	Sn	01 11 22.9	-15
	1.5nm,0.7s,baz=269,slow=23,SNR=1.0						
	2.9nm,0.8s						
ASAR	**Alice Springs**	**22.02**	**186**	P	**P**	**01 08 27.7**	**-0.2**
	4.1nm,0.5s,baz=7.3,slow=11,SNR=28						
	4.1nm,0.5s						
MKAR	**Makanchi Array**	**67.48**	**323**	P	**P**	**01 14 29.2**	**0.0**
	0.2nm,0.4s,baz=116,slow=8.2,SNR=2.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**71.47**	**325**	P	**P**	**01 14 53.3**	**-0.6**
	0.3nm,0.8s,baz=110,slow=7.1,SNR=3.5						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**77.06**	**326**	P	**P**	**01 15 28.4**	**+2.0**
	0.4nm,0.7s,baz=99,slow=6.3,SNR=2.4						
	0.4nm,0.7s						
OPO	**Ambohidratompo**	**88.63**	**252**	LR	LR	01 56 54.2	
	comp=Z,44nm,18.7s,baz=92,slow=36						
LPAZ	**La Paz**	**150.02**	**127**	PKPbc	**PKiKP**	**01 23 28.8**	**+2.2**
	1.0nm,0.5s,baz=243,slow=2.3,SNR=7.9						

*IDC **28** 01:26:32.4±1.6, 34°.82N×27°.11E, h0km, mb3.4/4, mbtmp3.3/7, ML2.7/2, MS2.5/1, Error ellipse: s-maj=39.0km s-min=20.3km az=152.0*
*ISK **28** 01:26:35.6, 34°.99N×27°.13E, h9km, ML3.0/23*
*ATH **28** 01:26:37.8±0.3, 35°.02N×27°.29E, h13km, ML3.2/16, Latitude uncertainty: 4 km; Longitude uncertainty: 2 km*

ISC 28 01:26:37.6±1.0, 35°.00N±0°.06×27°.22E±0°.04, h23km, n54, σ1°63/56, mb3.5/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.54**	**355**	Pg	**Pb**	**01 26 46.6**	**-1.9**
KARP				Sg	**Sb**	**01 26 55.4**	**-0.6**
ZKR	**Zakros**	**0.83**	**278**	Pg	Pb	01 26 50.2	-3.2
ZKR				Sg	**Sb**	**01 27 01.9**	**-2.3**
AGNA	**Agios Nikolaos**	**1.25**	**279**	P	**Pn**	**01 27 01.2**	**+1.6**
AGNA				S	**Sn**	**01 27 18.5**	**+2.8**
NPS	**Neapolis**	**1.35**	**281**	P	**Pn**	**01 27 02.1**	**+1.2**
ARG	**Arkhangelos**	**1.42**	**31**	Pn	**Pn**	**01 27 03.8**	**+1.9**
ARG	**Arkhangelos**	**1.42**	**31**	P	**Pn**	**01 27 02.5**	**+0.6**
ARG				S	**Sn**	**01 27 20.7**	**+0.9**
DAT	**Datca**	**1.75**	**9**	Pn	**Pn**	**01 27 07.1**	**+0.5**
IACM	**Heraklion**	**1.79**	**280**	P	**Pn**	**01 27 09.1**	**+2.0**
IDI	**Anoyia**	**1.93**	**279**	Pn	**Pn**	**01 27 09.0**	**-0.1**
IDI	**Anoyia**	**1.93**	**279**	P	**Pn**	**01 27 10.9**	**+1.8**
TURN	**Turunc**	**1.95**	**25**	Pn	**Pn**	**01 27 10.7**	**+1.4**
KLNA	**Kalymnos**	**1.96**	**354**	P	**Pn**	**01 27 10.6**	**+1.2**
SIVA	**Sivas**	**1.98**	**271**	P	**Pn**	**01 27 12.3**	**+2.6**
BODT	**Bodrum**	**2.06**	**2**	Pn	**Pn**	**01 27 11.7**	**+1.0**
YER	**Yerkesik**	**2.29**	**22**	Pn	**Pn**	**01 27 15.1**	**+1.1**
AKAS	**Kas**	**2.29**	**57**	Pn	**Pn**	**01 27 16.0**	**+1.9**
VAM	**Vamos**	**2.51**	**280**	P	**Pn**	**01 27 18.9**	**+2.0**
CAME	**Cameli-Denizli**	**2.57**	**40**	Pn	**Pn**	**01 27 19.5**	**+1.6**
GVD	**Gavdhos**	**2.58**	**267**	Pn	**Pn**	**01 27 17.9**	**-0.1**
GVD	**Gavdhos**	**2.58**	**267**	P	**Pn**	**01 27 20.3**	**+2.3**
CHAN	**Chania**	**2.65**	**282**	P	**Pn**	**01 27 21.4**	**+2.5**
IMMV	**Iera Moni Meta**	**2.69**	**281**	Pn	**Pn**	**01 27 19.3**	**-0.2**
IMMV	**Iera Moni Meta**	**2.69**	**281**	P	**Pn**	**01 27 21.4**	**+1.9**
ELL	**Elmali**	**2.79**	**51**	Pn	**Pn**	**01 27 23.0**	**+2.1**
ELL	**Elmali**	**2.79**	**51**	P	**Pn**	**01 27 21.7**	**+0.8**
KNDR	**Palaiochora Ch**	**2.96**	**275**	P	**Pn**	**01 27 24.7**	**+1.6**
APMY	**Acipayam-Deniz**	**2.98**	**34**	Pn	**Pn**	**01 27 25.3**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**2.98**	**10**	Pn	**Pn**	**01 27 24.9**	**+1.3**
NAZL	**Nazilli-Aydin**	**3.08**	**16**	Pn	**Pn**	**01 27 26.2**	**+1.4**
KORT	**Kouneli**	**3.22**	**51**	Pn	**Pn**	**01 27 29.3**	**+2.4**
ANKY	**Antikythira Is**	**3.32**	**286**	P	**Pn**	**01 27 30.1**	**+2.0**
ODEM	**Odemis-Izmir**	**3.34**	**12**	Pn	**Pn**	**01 27 29.7**	**+1.3**
ANTB	**Antalya**	**3.36**	**55**	Pn	**Pn**	**01 27 31.1**	**+2.4**
KTHA	**Kythira Island**	**3.61**	**291**	Pn	**Pn**	**01 27 32.4**	**+0.3**
KULA	**Kula-Manisa**	**3.69**	**18**	Pn	**Pn**	**01 27 34.9**	**+1.7**
VLI	**Veliai**	**3.88**	**297**	P	**Pn**	**01 27 36.9**	**+1.1**
VLY	**Voula,Athens**	**3.97**	**317**	P	**Pn**	**01 27 38.9**	**+1.9**
GORD	**Gordes-Manisa**	**3.97**	**11**	Pn	**Pn**	**01 27 38.5**	**+1.4**
ATHU	**Athens Univers**	**4.05**	**318**	P	**Pn**	**01 27 39.8**	**+1.6**
DION	**Dionisos Attik**	**4.05**	**320**	P	**Pn**	**01 27 39.7**	**+1.5**
DKL	**Dikili**	**4.07**	**356**	Pn	**Pn**	**01 27 39.4**	**+1.0**
AKMS	**Akamas**	**4.20**	**88**	P	**Pn**	**01 27 40.3**	**+0.2**
NATA	**Nata**	**4.40**	**91**	P	**Pn**	**01 27 43.9**	**+0.9**
KYMI	**Kymi, Euboea I**	**4.40**	**326**	P	**Pn**	**01 27 44.5**	**+1.5**
ALFC	**Alefka**	**4.41**	**86**	P	**Pn**	**01 27 43.4**	**+0.3**
GUR	**Goura**	**4.90**	**308**	P	**Pn**	**01 27 51.9**	**+1.9**
BRTR	**Keskin Array B**	**6.95**	**45**	Pn	**Pn**	**01 28 19.1**	**+1.0**
	0.1nm,0.3s,baz=223,slow=15,SNR=4.7						
BRTR				Sn	**Sn**	**01 29 38.8**	**+2.3**
	baz=225,slow=18,SNR=1.5						
	0.4nm,0.8s						
AKASG	**Malin Array Be**	**15.76**	**5**	Pn	**Pn**	**01 30 18.6**	**+0.7**
	0.3nm,0.4s,baz=193,slow=10,SNR=2.8						
GERES	**GERESS Array B**	**17.07**	**328**	Pn	**Pn**	**01 30 33.7**	**-0.9**
	baz=140,slow=12,SNR=4.2						
	0.4nm,0.7s						
ESDC	**Sonseca Array**	**25.16**	**290**	P	**P**	**01 31 59.4**	**-1.8**
	0.3nm,0.8s,baz=90,slow=9.2,SNR=4.6						
	0.3nm,0.8s						
NOA	**NORSAR Array B**	**28.01**	**343**	LR	LR	01 43 59.6	
	comp=Z,9.0nm,18.1s,baz=80,slow=37						
TORD	**Torodi Ar. Bea**	**31.72**	**233**	P	P	01 32 55.9	-3.8
	0.4nm,0.8s,baz=42,slow=7.3,SNR=2.4						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**39.91**	**51**	P	**P**	**01 34 08.0**	**-1.6**
	0.3nm,0.3s,baz=285,slow=9.3,SNR=2.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**42.45**	**57**	P	**P**	**01 34 31.7**	**+1.1**
	0.6nm,0.5s,baz=275,slow=7.1,SNR=11						
	0.6nm,0.5s						

*BKK **28** 01:26:38.0±1.1, 21°.1N±9°.3×10°.5E±°, h10km, M4.6/13, mB5.3/6, mb4.4/6, Mjma4.5/13, ML5.0/13, MLv4.5/5, Mw(mB)4.7/6*
*IDC **28** 01:26:42.8±1.0, 20°.81N×104°.73E, h0km, mb3.7/9, mbtmp3.6/10, ML3.7/1, MS3.3/9, Error ellipse: s-maj=22.5km s-min=19.0km az=66.0*
*PLV **28** 01:26:43.9±1.4, 20°.90N×104°.72E, h5km±15km, ML4.1, MW4.0, Presumed earthquake*

ISC 28 01:26:42.9±1.6, 20°.91N±0°.06×104°.72E±0°.05, h2km±11km, n32, σ1°77/26, mb3.8/9, MS3.3/8, 2C, Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCVV	**Moc Chau**	**0.13**	**212**	*i* Pg	**Pg**	**01 26 45.8**	**+0.3**
MCVV				*e*Sg	**Sg**	**01 26 47.4**	**+0.2**
HBVN	**Hoa-Binh**	**0.59**	**98**	⇑*i* Pg	**Pg**	**01 26 54.8**	**+0.5**
HBVN				IAML		01 27 06.7	
	comp=N,25μm,0.3s						
HBVN				IAML		01 27 10.8	
	comp=E,23μm,0.3s						
SLVN	**Son La**	**0.87**	**299**	⇑*e*Pg	**Pg**	**01 26 59.6**	**-0.1**
SLVN				*e*Sg	**Sb**	**01 27 12.8**	**-0.1**
SKNT	**Sakolnakorn**	**3.98**	**190**	P	**Pn**	**01 27 47.7**	**+2.8**
UTTA	**Uttaradit**	**5.04**	**232**	P	**Pn**	**01 28 01.4**	**+1.9**
	comp=E,0.4nmcomp=E,0.7nmcomp=E,508nmcomp=E,45nm,0.7s						
LAMP	**Lampang**	**5.35**	**245**	P	**Pb**	**01 28 15.7**	**-1.5**
CMAI	**Chiengmai2**	**5.41**	**261**	P	**Pn**	**01 28 04.9**	**+0.1**
	comp=E,0.6nmcomp=E,0.3nmcomp=E,0.9nmcomp=E,23nm,0.8s						
CHTO	**Chiang Mai**	**5.83**	**250**	P	Pb	01 28 20.9	-4.3
CM09	**Chiang Mai Arr**	**5.93**	**247**	P	**Pb**	**01 28 30.2**	**+3.1**
CM04	**Chiang Mai Arr**	**5.96**	**246**	P	**Pb**	**01 28 25.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**5.97**	**247**	Pn	**Pn**	**01 28 12.1**	**-0.2**
	comp=E,0.5nm,0.3s,baz=63,slow=13,SNR=4.2						
CMAR				Pg	**Pb**	**01 28 31.2**	**+3.5**
	comp=E,0.4nm,0.3s,baz=66,slow=14,SNR=7.0						
CMAR				Lg	Lg	01 29 49.2	
	comp=E,0.6nm,0.3s,baz=74,slow=36,SNR=5.9						
CMAR				LR	LR	01 30 57.7	
	comp=E,250nm,19.1s,baz=65,slow=43						
	comp=E,0.6nm,0.5s						
CM01	**Chiang Mai Arr**	**5.97**	**246**	P	**Pb**	**01 28 28.9**	**+1.2**
CM02	**Chiang Mai Arr**	**5.97**	**247**	P	**Pb**	**01 28 29.4**	**+1.6**
CM05	**Chiang Mai Arr**	**5.99**	**246**	P	Pn	01 28 18.5	+5.9
CM13	**Chiang Mai Arr**	**6.01**	**247**	P	**Pb**	**01 28 27.3**	**-1.2**
DLV	**Lat**	**9.62**	**157**	P	**Pn**	**01 28 59.3**	**-3.3**
DAV	**Davao City (W)**	**24.42**	**121**	LR	LR	01 40 43.1	
	comp=E,72nm,19.1s,baz=191,slow=34						
KSRS	**Korea Array**	**26.01**	**46**	LR	LR	01 42 11.0	
	comp=E,41nm,19.2s,baz=215,slow=36						
SONM	**Songino Array**	**26.90**	**2**	P	**P**	**01 32 24.5**	**-0.8**
	comp=E,0.5nm,0.7s,baz=180,slow=9.6,SNR=3.9						
	comp=E,0.5nm,0.7s						
KAPI	**Kappang**	**29.69**	**149**	LR	LR	01 46 57.6	
	comp=E,19nm,18.8s,baz=47,slow=41						
MKAR	**Makanchi Array**	**31.62**	**330**	P	**P**	**01 33 09.2**	**+2.0**
	comp=E,1.0nm,0.8s,baz=138,slow=11,SNR=6.0						
	comp=E,1.0nm,0.8s						
MJAR	**Matsushiro Arr**	**33.04**	**55**	LR	LR	01 49 12.5	
	comp=E,27nm,18.4s,baz=248,slow=41						
KURBB	**Kurchatov Arra**	**36.11**	**332**	P	**P**	**01 33 47.4**	**+1.3**
	comp=E,0.8nm,0.3s,baz=134,slow=9.4,SNR=8.0						
	comp=E,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**36.31**	**340**	P	**P**	**01 33 48.8**	**+1.0**
	comp=E,0.7nm,0.5s,baz=134,slow=6.2,SNR=5.1						
ZALV				LR	LR	01 49 34.9	
	comp=E,61nm,19.0s,baz=175,slow=38						
	comp=E,0.7nm,0.5s						
BVAR	**Borovoye Array**	**41.49**	**329**	P	**P**	**01 34 32.6**	**+1.4**
	comp=E,0.4nm,0.4s,baz=113,slow=9.8,SNR=4.4						
	comp=E,0.4nm,0.4s						
AKTO	**Aktyubinsk**	**46.94**	**320**	LR	LR	01 57 05.1	
	comp=E,88nm,18.2s,baz=26,slow=39						
NRIK	**Noril'sk**	**49.55**	**352**	LR	LR	01 57 42.3	
	comp=E,51nm,20.7s,baz=20,slow=37						
WRA	**Warramunga Arr**	**49.88**	**143**	P	**P**	**01 35 37.8**	**-0.1**

CARN	**Rivas**	**1.70**	**124**	P	**Pn**	**01 33 03.8**	**-0.1**
CARN				S	**Sn**	**01 33 24.8**	**-0.3**
CARN	**Rivas**	**1.70**	**124**	*eP*	**Pn**	**01 33 03.0**	**-0.9**
CARN				*eS*	**Sn**	**01 33 24.3**	**-0.8**
ACON	**Acoyapa**	**1.75**	**96**	P	**Pn**	**01 33 04.2**	**-0.4**
ACON				S	**Sn**	**01 33 26.2**	**-0.1**
RANC	**El Ranchito**	**1.82**	**315**	P	**Pn**	**01 33 05.6**	**0.0**
RANC				S	**Sn**	**01 33 29.2**	**+1.0**
RANC	**El Ranchito**	**1.82**	**315**	*i* P	**Pn**	**01 33 05.3**	**-0.3**
RANC				*eS*	**Sn**	**01 33 28.9**	**+0.7**
PACA	**Pacayal**	**1.87**	**315**	P	**Pn**	**01 33 06.1**	**-0.2**
PACA	**Pacayal**	**1.87**	**315**	*i* P	**Pn**	**01 33 06.5**	**+0.3**
PACA				*eS*	**Sn**	**01 33 30.4**	**+1.1**
TECA	**Tecapa**	**2.02**	**312**	*i* P	**Pn**	**01 33 08.3**	**+0.1**
LAPC	**Finca la Perla**	**2.03**	**132**	*eP*	**Pn**	**01 33 07.7**	**-0.5**
LAPC				*eS*	**Sn**	**01 33 30.5**	**-2.4**
VRLE	**La Escondida,**	**2.06**	**131**	*eP*	**Pn**	**01 33 08.3**	**-0.5**
ALIBA	**Liberia Airpor**	**2.08**	**138**	*eP*	**Pn**	**01 33 09.0**	**+0.2**
ALIBA				*eS*	**Sn**	**01 33 35.5**	**+1.5**
CLARA	**Aguas Claras**	**2.21**	**128**	*eP*	**Pn**	**01 33 10.2**	**-0.5**
CLARA				*eS*	**Sn**	**01 33 36.2**	**-1.0**
MESS	**Mesas**	**2.22**	**129**	⇓ *iP*	**Pn**	**01 33 10.8**	**-0.1**
MESS				*eS*	**Sn**	**01 33 37.8**	**+0.2**
TECO	**Alcaldia de Te**	**2.25**	**308**	P	**Pn**	**01 33 11.0**	**-0.2**
TECO				S	**Sn**	**01 33 38.0**	**-0.3**
HORNC	**Hornillas**	**2.25**	**129**	*eP*	**Pn**	**01 33 11.1**	**-0.2**
HORNC				*eS*	**Sn**	**01 33 38.2**	**-0.1**
CUI	**Cuipilapa**	**2.30**	**130**	⇓ *iP*	**Pn**	**01 33 11.8**	**-0.1**
CUI				*eS*	**Sn**	**01 33 38.4**	**-1.0**
BAGA	**Bagaces**	**2.31**	**134**	*eP*	**Pn**	**01 33 11.4**	**-0.6**
BAGA				*eS*	**Sn**	**01 33 39.2**	**-0.5**
COEG	**Centro de Oper**	**2.38**	**308**	P	**Pn**	**01 33 12.9**	**-0.1**
COEG	**Centro de Oper**	**2.38**	**308**	*i* P	**Pn**	**01 33 13.1**	**+0.1**
JUD3	**Juan Diaz 3**	**2.41**	**145**	*eP*	**Pn**	**01 33 13.7**	**+0.3**
TENO	**El Achiote**	**2.41**	**126**	*eP*	**Pn**	**01 33 13.6**	**+0.1**
TIMP	**Tierras Morena**	**2.46**	**129**	*eP*	**Pn**	**01 33 13.9**	**-0.1**
SJTE	**Alcalda de S**	**2.47**	**306**	*i* P	**Pn**	**01 33 13.7**	**-0.6**
SJTE				*eS*	**Sn**	**01 33 43.0**	**-0.7**
PAVA	**Las Pavas**	**2.48**	**309**	P	**Pn**	**01 33 14.3**	**-0.1**
LFRS	**El Faro**	**2.52**	**306**	*i* P	**Pn**	**01 33 14.9**	**0.0**
QUEB	**Quebradon, Cot**	**2.53**	**127**	*eP*	**Pn**	**01 33 14.6**	**-0.3**
P5NO	**Presa 5 de nov**	**2.53**	**316**	P	**Pn**	**01 33 14.5**	**-0.4**
COTE	**Lago Cote**	**2.54**	**128**	*eP*	**Pn**	**01 33 15.5**	**+0.4**
CMARA	**Lajas Hojancha**	**2.60**	**144**	P	**Pn**	**01 33 16.3**	**+0.3**
CMARA				S	**Sn**	**01 33 44.9**	**-1.7**
CMARA	**Lajas Hojancha**	**2.60**	**144**	*eP*	**Pn**	**01 33 16.2**	**+0.3**
LOMA	**Loma Larga**	**2.62**	**305**	P	**Pn**	**01 33 16.6**	**+0.3**
LOMA	**Loma Larga**	**2.62**	**305**	*i* P	**Pn**	**01 33 16.1**	**-0.2**
JTS	**Las Juntas de**	**2.70**	**133**	P	**Pn**	**01 33 17.6**	**+0.4**
JTS				S	**Sn**	**01 33 48.2**	**-0.8**
JTS	**Las Juntas de**	**2.70**	**133**	*eP*	**Pn**	**01 33 17.6**	**+0.4**
ARE1	**Arenal 1**	**2.76**	**127**	*eP*	**Pn**	**01 33 18.3**	**+0.2**
VARE2	**V. Arenal**	**2.76**	**127**	*eP*	**Pn**	**01 33 18.3**	**+0.2**
PMON	**Piamonte**	**2.77**	**304**	⇑ P	**Pn**	**01 33 18.7**	**+0.3**
PMON	**Piamonte**	**2.77**	**304**	*i* P	**Pn**	**01 33 18.5**	**+0.1**
JAYA	**Jayaque - finc**	**2.85**	**302**	*i* P	**Pn**	**01 33 17.6**	**-1.9**
JAYA				*eS*	**Sn**	**01 33 52.3**	**-0.7**
COVE	**Coope Vega, Sa**	**2.88**	**119**	P	**Pn**	**01 33 19.5**	**-0.1**
LAFE	**Finca La Fe, P**	**3.07**	**139**	*eP*	**Pn**	**01 33 22.5**	**+0.3**
CEVE	**Cerro Verde**	**3.09**	**303**	P	**Pn**	**01 33 24.3**	**+1.6**
CEVE	**Cerro Verde**	**3.09**	**303**	*i* P	**Pn**	**01 33 23.6**	**+0.8**
MTO3	**Montecristo**	**3.24**	**314**	P	**Pn**	**01 33 24.7**	**+0.1**
FAME	**Alcaldia de Sa**	**3.42**	**300**	P	**Pn**	**01 33 27.0**	**0.0**
FAME				S	**Sn**	**01 34 06.6**	**+0.1**
ALCO	**Alturas Coton,**	**5.15**	**128**	*eP*	**Pn**	**01 33 52.1**	**+1.4**

*NOU **28** 01:55:44.8, 42°.52S × 173°.95E, h1km, MLv3.5/14, South Island, New Zealand*
*WEL **28** 01:55:46.7 ± 0.5, 42°.3S ± 3°.3 × 17°.4E ± °, h5km, M3.0/10, ML2.9/11, MLv3.0/10, Error ellipse: s-maj=5.5km s-min=2.9km azz=132.9*
ISC 28 01:55:44.4 ± 1.2, **42°.47S** ± 0°.03 × **173°.97E** ± 0°.03, **h6**km ± 10km, **n62**, σ1¶**30**/69, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIKS	**Kaikoura**	**0.22**	**283**	P	**Pg**	**01 55 49.7**	**+1.0**
KHZ	**Kahutara**	**0.32**	**280**	P	**Pg**	**01 55 50.9**	**+0.2**
KHZ	**Kahutara**	**0.32**	**280**	P	**Pg**	**01 55 51.2**	**+0.5**
KHZ				S	**Sg**	**01 55 55.0**	**0.0**
CMWZ	**Cape Campbell**	**0.75**	**14**	P	**Pn**	**01 56 02.3**	**+0.9**
BSWZ	**Blackbirch Sta**	**0.76**	**355**	P	**Pn**	**01 56 00.2**	**+0.2**
GVZ	**Greta Valley S**	**0.85**	**234**	P	**Pn**	**01 56 03.8**	**+0.9**
GVZ				S	**Sn**	**01 56 17.2**	**+1.6**
BWRS	**Waikakaho Road**	**1.03**	**357**	P	**Pn**	**01 56 05.1**	**+1.3**
THZ	**Tophouse**	**1.06**	**312**	P	**Pg**	**01 56 04.5**	**-0.3**
THZ				S	**Sg**	**01 56 17.6**	**-1.0**
AMCZ	**Amberley**	**1.20**	**234**	P	**Pg**	**01 56 09.1**	**+1.7**
TCW	**Tory Channel**	**1.28**	**10**	P	**Pg**	**01 56 09.3**	**+0.2**
TCW				S	**Sg**	**01 56 26.2**	**+0.6**
LTZ	**Lake Taylor**	**1.29**	**256**	P	**Pg**	**01 56 09.6**	**+0.4**
LTZ				S	**Sg**	**01 56 26.5**	**+0.6**
PLWZ	**Palliser**	**1.32**	**47**	P	**Pg**	**01 56 10.6**	**+0.8**
NNZ	**Nelson**	**1.33**	**341**	P	**Pb**	**01 56 09.6**	**-0.1**
NNZ				S	**Sb**	**01 56 26.2**	**-0.8**
WEL	**Wellington**	**1.33**	**27**	P	**Pg**	**01 56 10.7**	**+0.8**
MRNZ	**Matariki Terra**	**1.40**	**320**	P	**Pg**	**01 56 11.2**	**-0.1**
OKCZ	**Okains Bay**	**1.42**	**208**	P	**Pg**	**01 56 12.3**	**+0.7**
MSWZ	**Moikau Station**	**1.43**	**43**	P	**Pg**	**01 56 11.8**	**0.0**
MSWZ				S	**Sg**	**01 56 30.1**	**-0.1**
PAWZ	**Paruwai Farm**	**1.54**	**45**	P	**Pb**	**01 56 13.3**	**-0.1**
MQZ	**McQueen's Vall**	**1.56**	**218**	P	**Pb**	**01 56 13.2**	**-0.6**
CAW	**Cannon Point**	**1.59**	**31**	P	**Pb**	**01 56 14.1**	**-0.2**
AKCZ	**Akaroa Harbour**	**1.60**	**209**	P	**Pg**	**01 56 14.6**	**-0.5**
TKNZ	**Takaka Hill**	**1.62**	**332**	P	**Pb**	**01 56 14.5**	**-0.3**
OXZ	**Oxford**	**1.65**	**238**	P	**Pn**	**01 56 14.2**	**+0.2**
DUWZ	**D'Urville Isla**	**1.67**	**359**	P	**Pb**	**01 56 15.4**	**-0.2**
TRWZ	**Traveller**	**1.67**	**51**	P	**Pb**	**01 56 15.3**	**-0.3**
MTW	**Mount Morrison**	**1.74**	**42**	P	**Pb**	**01 56 15.9**	**-1.0**
KIW	**Kapiti Island**	**1.76**	**24**	P	**Pb**	**01 56 16.4**	**-0.6**
DSZ	**Denniston Nort**	**1.77**	**294**	P	**Pb**	**01 56 16.7**	**-0.5**
RACZ	**Rakaia**	**1.83**	**226**	P	**Pn**	**01 56 16.9**	**+0.4**
OGWZ	**Otaki Gorge**	**1.89**	**29**	P	**Pb**	**01 56 18.0**	**-1.2**
HOWZ	**Holdsworth Sta**	**1.96**	**37**	P	**Pb**	**01 56 19.6**	**-0.8**
QRZ	**Quartz Range**	**1.97**	**326**	P	**Pb**	**01 56 19.7**	**-0.9**
QRZ	**Quartz Range**	**1.97**	**326**	S	**Sb**	**01 56 45.5**	**+0.1**
QRZ	**Quartz Range**	**1.97**	**326**	P	**Pb**	**01 56 19.8**	**-0.8**
WACZ	**Wakanui South**	**2.14**	**226**	P	**Pn**	**01 56 21.4**	**+0.7**
MRZ	**Mangatainoka R**	**2.18**	**34**	P	**Pn**	**01 56 21.7**	**+0.6**
RPZ	**Rata Peaks**	**2.47**	**239**	P	**Pn**	**01 56 26.2**	**+1.0**
RPZ	**Rata Peaks**	**2.47**	**239**	P	**Sn**	**01 56 55.5**	**-0.1**
RPZ	**Rata Peaks**	**2.47**	**239**	P	**Pn**	**01 56 25.8**	**+0.7**
BFZ	**Birch Farm**	**2.48**	**44**	P	**Pn**	**01 56 25.5**	**+0.2**
BFZ	**Birch Farm**	**2.48**	**44**	S	**Sb**	**01 56 58.9**	**-1.1**
BFZ	**Birch Farm**	**2.48**	**44**	P	**Pn**	**01 56 25.7**	**+0.4**
ARCZ	**Arundel**	**2.52**	**233**	P	**Pn**	**01 56 26.2**	**+0.4**
GCSZ	**Gaunt Creek Bo**	**2.80**	**251**	P	**Pb**	**01 56 32.0**	**-2.9**
TMZ	**Timaru**	**2.88**	**227**	P	**Pn**	**01 56 31.9**	**+1.1**
KHEZ	**Kahui Hut**	**3.18**	**1**	P	**Pn**	**01 56 36.9**	**+1.9**
KHEZ	**Kahui Hut**	**3.18**	**1**	S	**Sb**	**01 57 16.4**	**-3.8**
KHEZ	**Kahui Hut**	**3.18**	**1**	P	**Pb**	**01 56 40.1**	**-1.2**
NBEZ	**Newall Road No**	**3.20**	**359**	P	**Pn**	**01 56 37.8**	**+2.5**
WNVZ	**Wahianoa**	**3.38**	**22**	P	**Pn**	**01 56 39.3**	**+1.5**
VRZ	**Vera Road**	**3.40**	**10**	P	**Pn**	**01 56 40.5**	**+2.5**
WHVZ	**Whangaehu Hut**	**3.42**	**22**	P	**Pn**	**01 56 40.0**	**+1.6**
FWVZ	**Far West T-bar**	**3.43**	**21**	P	**Pb**	**01 56 44.1**	**-1.6**
ODZ	**Otahua Downs**	**3.52**	**222**	P	**Pn**	**01 56 40.0**	**+0.4**
ODZ	**Otahua Downs**	**3.52**	**222**	S	**Sn**	**01 57 22.7**	**+1.2**
ODZ	**Otahua Downs**	**3.52**	**222**	P	**Pn**	**01 56 40.3**	**+0.7**
OTVZ	**Oturere**	**3.55**	**22**	P	**Pn**	**01 56 41.8**	**+1.7**
ETVZ	**East Tongariro**	**3.59**	**22**	P	**Pb**	**01 56 46.9**	**-1.4**
TMVZ	**Te Maari**	**3.60**	**22**	P	**Pb**	**01 56 44.5**	**-4.1**
BKZ	**Black Stump Fm**	**3.82**	**31**	P	**Pn**	**01 56 45.3**	**+1.5**
HIZ	**Hauiti**	**4.01**	**10**	P	**Pn**	**01 56 48.0**	**+1.6**
HIZ	**Hauiti**	**4.01**	**10**	P	**Pn**	**01 56 49.3**	**+2.9**

*IDC **28** 01:57:06.2 ± 2.8, 24°.26N × 111°.94W, h0km, mb3.6/1, mbtmp3.3/6, ML3.2/3, MS3.1/9, Error ellipse: s-maj=43.0km s-min=13.8km az=22.0*
ISC 28 01:57:04.5 ± 3.3, **23°.9N** ± 0°.3 × **112°.1W** ± 0°.2, **h10**km, **n17**, σ1**09**/7, **MS3.1**/3, **Off west coast of Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.63**	**82**	Pg	**Pn**	**01 57 33.2**	**0.0**
	72nm,0.3s,baz=284,slow=15,SNR=16						
LPIG				Lg	Lg	01 57 53.8	
	36nm,0.3s,baz=143,slow=19,SNR=6.2						

H06N1	**SOCORRO T-PHAS**	**5.10**	**168**	T	T	02 03 54.3	
	SNR=88						
TXAR	**Lajitas Array**	**9.27**	**52**	Pn	**Pn**	**01 59 19.0**	**+0.6**
	0.1nm,0.3s,baz=229,slow=13,SNR=4.2						
TXAR				Lg	Lg	02 01 46.9	
	baz=237,slow=21,SNR=1.0						
	0.3nm,0.6s						
PFO	**Pinon Flats O**	**10.42**	**339**	LR	LR	02 03 13.4	
	comp=Z,114nm,18.0s,baz=185,slow=36						
ANMO	**Albuquerque**	**12.05**	**23**	LR	LR	02 04 13.8	
	comp=Z,58nm,18.5s,baz=208,slow=37						
NVAR	**Mina Array Bea**	**15.44**	**341**	Pn	**Pn**	**02 00 43.6**	**+0.9**
	0.2nm,0.3s,baz=158,slow=9.8,SNR=9.4						
NVAR				LR	LR	02 05 59.4	
	comp=Z,26nm,20.7s,baz=290,slow=35						
	0.2nm,0.3s						
ELK	**Elko**	**17.02**	**352**	Pn	**P**	**02 01 03.9**	**-0.9**
	0.9nm,0.9s,baz=169,slow=10,SNR=2.6						
CMIG	**Matias Romero**	**17.45**	**110**	LR	LR	02 07 22.4	
	comp=Z,53nm,21.3s,baz=357,slow=35						
PDAR	**Pinedale Array**	**18.94**	**6**	P	**Pn**	**02 01 25.6**	**-1.0**
	1.1nm,0.8s,baz=178,slow=11,SNR=9.5						
PDAR				LR	LR	02 09 01.7	
	comp=Z,51nm,19.3s,baz=161,slow=39						
YBH	**Yreka Blue Hor**	**19.89**	**336**	P	**P**	**02 01 35.0**	**-1.1**
	baz=142,slow=12,SNR=4.2						
YBH				LR	LR	02 08 42.4	
	comp=Z,58nm,20.3s,baz=45,slow=36						
	1.4nm,0.8s						
NEW	**Newport**	**24.66**	**352**	LR	LR	02 12 27.2	
	comp=Z,40nm,18.3s,baz=194,slow=38						
DLBC	**Dease Lake**	**36.82**	**344**	LR	LR	02 18 56.2	
	comp=Z,53nm,19.8s,baz=46,slow=36						
YKA	**Yellowknife Ar**	**38.63**	**358**	LR	LR	02 22 40.1	
	comp=Z,31nm,19.1s,baz=351,slow=40						
ILAR	**Eielson Array**	**46.69**	**340**	P	**P**	**02 05 33.9**	**+0.7**
	0.6nm,0.7s,baz=140,slow=8.4,SNR=5.7						
	0.6nm,0.7s						
H03N2	**Juan Fernandez**	**65.16**	**150**	T	T	03 18 58.5	
	baz=329,slow=77,SNR=5.7						
H03N1	**Juan Fernandez**	**65.17**	**150**	T	T	03 18 59.6	
	baz=329,slow=77,SNR=11						
H03N3	**Juan Fernandez**	**65.18**	**150**	T	T	03 18 58.6	
	baz=329,slow=77						

*IDC **28** 02:00:25.2 ± 1.6, 7°.66S × 106°.87E, h0km, mb4.0/7, mbtmp4.0/7, MS3.7/1, Error ellipse: s-maj=121.1km s-min=28.6km az=52.0*
*DJA **28** 02:00:31.7 ± 0.6, 8°.5S ± 3°.3 × 10°.7E ± °, h11km ± 4km, M4.4/36, mb4.9/1, MLv4.2/36*
*NEIC **28** 02:00:33.4 ± 1.3, 7°.5S ± 0°.1 × 107°.07E ± 0°.03, h50km ± 7km, mb4.6/10, Error ellipse: s-maj=17.3km s-min=3.6km az=177.0*
ISC 28 02:00:33.7 ± 0.6, **7°.66S** ± 0°.09 × **107°.11E** ± 0°.05, **h63**km, **n52**, σ1**39**/45, **mb4.3**/13, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBJI	**Bungbulang**	**0.57**	**70**		**Pn**	**02 00 45.7**	**-1.0**
BBJI				Sn	**Sn**	**02 00 54.4**	**-1.8**
BBJI	**Bungbulang**	**0.57**	**70**	P	**Pn**	**02 00 46.4**	**-0.3**
BBJI				S	**Sn**	**02 00 56.4**	**+0.2**
SKJI	**Sukabumi**	**0.85**	**320**	P	**Pn**	**02 00 50.5**	**+0.6**
DBJI	**Dramaga**	**1.15**	**342**	P	**Pn**	**02 00 56.5**	**+2.6**
TNG	**Tangerang**	**1.55**	**343**	P	**Pn**	**02 01 01.3**	**+2.2**
JCJI	**Jatiwangi**	**1.63**	**45**	P	**Pn**	**02 01 01.3**	**+1.1**
CGJI	**Cibinong**	**1.75**	**306**	P	**Pn**	**02 01 01.6**	**-0.2**
SBJI	**Serang**	**1.81**	**327**	P	**Pn**	**02 01 05.1**	**+2.4**
KPJI	**Karang Pucung**	**1.83**	**80**	P	**Pn**	**02 01 05.1**	**+2.2**
SMRI	**Semarang**	**3.36**	**80**		**Pn**	**02 01 23.8**	**+0.1**
SMRI	**Semarang**	**3.36**	**80**	P	**Pn**	**02 01 26.8**	**+3.1**
UGM	**Wanagama**	**3.39**	**95**	Pn	**Pn**	**02 01 23.6**	**-0.7**
UGM	**Wanagama**	**3.39**	**95**	P	**Pn**	**02 01 25.9**	**+1.7**
WOJI	**Wonogiri, Jawa**	**3.78**	**93**	P	**Pn**	**02 01 32.1**	**+2.6**
PCJI	**Pacitan**	**4.06**	**98**	P	**Pn**	**02 01 33.7**	**+0.3**
MDSI	**Maura Dua**	**4.29**	**317**	P	**Pn**	**02 01 38.3**	**+1.7**
SNJI	**Sawahan-Nganju**	**4.61**	**92**	P	**Pn**	**02 01 43.1**	**+2.1**
EGSI	**Enggano, Bengk**	**5.32**	**295**	P	**Pn**	**02 01 51.4**	**+0.8**
JAGI	**Jajag, Banyuwa**	**7.02**	**97**	Pn	**Pn**	**02 02 14.7**	**+0.8**
QIZ	**Qiongzhong**	**26.65**	**6**	P	**P**	**02 06 04.0**	**-2.8**
QIZ				IAmb	IAmb	02 06 05.8	
	comp=Z,58nm,1.5s						
CMAR	**Chiang Mai Arr**	**27.17**	**343**	P	**P**	**02 06 10.6**	**-0.8**
H01W3	**Cape Leeuwin H**	**27.86**	**168**	T	T	02 35 49.9	
	baz=348,slow=76,SNR=9.3						
H01W1	**Cape Leeuwin H**	**27.87**	**168**	T	T	02 35 52.4	
	baz=348,slow=76,SNR=8.2						
H01W2	**Cape Leeuwin H**	**27.87**	**168**	T	T	02 35 51.0	
	baz=348,slow=76,SNR=14						
WB0	**Warramunga Arr**	**29.05**	**117**	P	**P**	**02 06 27.7**	**-0.6**
AS31	**Alice Springs**	**30.22**	**125**	P	**P**	**02 06 40.2**	**+1.5**
H08S2	**Diego Garcia H**	**34.31**	**268**	T	T	02 42 51.5	
	baz=92,slow=75,SNR=9.2						
H08S3	**Diego Garcia H**	**34.32**	**268**	T	T	02 42 48.6	
	baz=92,slow=75,SNR=10						
H08S1	**Diego Carcia H**	**34.32**	**268**	T	T	02 42 51.0	
	baz=92,slow=75,SNR=6.7						
COEN	**Coen**	**35.94**	**103**	P	**P**	**02 07 28.5**	**-0.1**
COEN				IAmb	IAmb	02 07 35.2	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**40.12**	**132**	P	**P**	**02 08 04.5**	**+0.9**
	comp=Z,18nm,0.6s,baz=300,slow=8.1,SNR=3.7						
	comp=Z,1.8nm,0.6s						
CAN	**Canberra**	**47.19**	**132**	P	**P**	**02 09 02.2**	**+1.9**
MKAR	**Makanchi Array**	**58.54**	**340**	P	**P**	**02 10 22.7**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=144,slow=8.7,SNR=5.1						
MKAR				LR	LR	02 38 13.3	
	comp=Z,59nm,18.1s,baz=186,slow=39						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.54**	**340**	P	**P**	**02 10 22.8**	**-0.9**
FOMA	**Nahampoana Res**	**59.77**	**246**	P	**P**	**02 10 32.0**	**-0.6**
H04N2	**CROZET ISLANDS**	**60.84**	**221**	T	T	03 17 06.4	
	baz=68,slow=76,SNR=15						
H04N1	**CROZET ISLANDS**	**60.85**	**221**	T	T	03 16 45.9	
	baz=68,slow=76,SNR=15						
H04N3	**CROZET ISLANDS**	**60.86**	**221**	T	T	03 16 44.6	
	baz=68,slow=76,SNR=14						
KURBB	**Kurchatov Arra**	**63.10**	**340**	P	**P**	**02 10 54.4**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=155,slow=6.1,SNR=8.1						
	comp=Z,1.1nm,0.9s						
KURK	**Kurchatov**	**63.15**	**340**	P	**P**	**02 10 54.9**	**0.0**
KURK				IAmb	IAmb	02 10 56.9	
	comp=Z,3.2nm,1.1s						
BVAR	**Borovoye Array**	**68.01**	**337**	P	**P**	**02 11 25.8**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=134,slow=8.2,SNR=10						
	comp=Z,1.9nm,0.5s						
AB31	**Akbulak array**	**70.03**	**329**		**P**	**02 11 38.9**	**+0.2**
AB31				IAmb	IAmb	02 11 39.9	
	comp=Z,3.8nm,0.8s						
ABKAR	**Akbulak array**	**70.03**	**329**		**P**	**02 11 39.0**	**+0.2**
ARTI	**Arti**	**75.31**	**334**	P	**P**	**02 12 10.4**	**+0.5**
ARTI				IAmb	IAmb	02 12 11.1	
	comp=Z,8.2nm,0.6s						
QSPA	**South Pole Qui**	**82.34**	**180**	P	**P**	**02 12 49.6**	**+1.0**
QSPA				IAmb	IAmb	02 13 03.7	
	comp=Z,9.1nm,1.5s						
BRTR	**Keskin Array B**	**82.34**	**312**	P	**P**	**02 12 48.3**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=104,slow=6.1,SNR=4.0						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**82.34**	**312**	P	**P**	**02 12 49.0**	**-0.2**
AKASG	**Malin Array Be**	**88.28**	**322**	P	**P**	**02 13 18.9**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=92,slow=4.6,SNR=2.1						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**92.40**	**332**	P	**P**	**02 13 35.2**	**-2.0**
	comp=Z,1.8nm,1.1s,baz=116,slow=6.3,SNR=2.0						
	comp=Z,1.8nm,1.1s						
FINES	**FINESS Array B**	**92.40**	**332**	P	**P**	**02 13 37.2**	**0.0**
TXAR	**Lajitas Array**	**143.91**	**49**	PKP	**PKPdf**	**02 20 02.5**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=314,slow=1.7,SNR=3.7						
TXAR	**Lajitas Array**	**143.91**	**49**		**PKPdf**	**02 20 02.2**	**-0.6**

*IDC **28** 02:01:48.9 ± 3.2, 6°.10S × 147°.04E, h0km, mb3.6/2, mbtmp3.6/4, ML3.6/1, MS2.8/1, Error ellipse: s-maj=75.4km s-min=36.2km az=83.0*
ISC 28 02:01:54.8 ± 2.7, **6°.2S** ± 0°.2 × **147°.5E** ± 0°.5, **h77**km, **n7**, σ1**92**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.24**	**185**	Pn	**Pn**	**02 02 41.6**	**-1.7**
	16nm,0.3s,baz=352,slow=15,SNR=7.0						
PMG				Sn	**Sn**	**02 03 21.0**	**+0.2**
	8.8nm,0.3s,baz=38,slow=19,SNR=6.0						

JAY	**Jayapura**	**7.63**	**298**	LR	LR	02 07 19.7	
	comp=Z,67nm,19.1s,baz=180,slow=46						
WRA	**Warramunga Arr**	**18.70**	**222**	P	**P**	**02 06 06.4**	**-0.8**
	0.2nm,0.3s,baz=42,slow=11,SNR=6.7						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**21.74**	**215**	P	**P**	**02 06 40.4**	**+0.3**
	0.8nm,0.5s,baz=40,slow=9.9,SNR=16						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**21.74**	**215**	P	**P**	**02 06 40.7**	**+0.7**
STKA	**Stephens Creek**	**26.16**	**191**	P	**P**	**02 07 25.1**	**+3.1**
	0.5nm,0.3s,baz=7.1,slow=16,SNR=1.4						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**145.56**	**284**	PKPbc	**PKiKP**	**02 21 28.3**	**-1.0**
	0.4nm,0.8s,baz=62,slow=4.6,SNR=2.2						

*TAP **28** 02:36:07.9, 25°.07N × 122°.67E, h142km, ML4.2, D*
*JMA **28** 02:36:07.4 ± 0.3, 25°.N ± 2° × 122°.7E ± 0°.6, h148km ± 2km, MV3.3/17, NW OFF ISHIGAKIJIMA IS*
ISC 28 02:36:06.6 ± 1.4, **25°.00N** ± 0°.04 × **122°.69E** ± 0°.03, **h153**km ± 7km, **n108**, σ1¶**07**/188, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.59**	**157**	P	**Pn**	**02 36 28.9**	**+0.2**
JYNG				*eS*	**Sn**	**02 36 45.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.61**	**151**	P	**Pn**	**02 36 29.1**	**+0.2**
YOJ	**Yonaguni jima**	**0.61**	**151**	*eP*	**Pn**	**02 36 29.1**	**+0.2**
YOJ				S	**Sn**	**02 36 45.8**	**0.0**
YOJ	**Yonaguni jima**	**0.61**	**151**	*eP*	**Pn**	**02 36 29.0**	**+0.2**
TWB1	**Santiao Chiao**	**0.64**	**271**	*i* P	**Pn**	**02 36 29.4**	**+0.4**
TWB1				*eS*	**Sn**	**02 36 45.6**	**-0.5**
EOS2	**EOS2**	**0.71**	**216**	*eP*	**Pn**	**02 36 30.0**	**+0.7**
EOS2				S	**Sn**	**02 36 46.9**	**+0.2**
SXI1	**Grass Mountain**	**0.75**	**278**	P	**Pn**	**02 36 30.3**	**+0.5**
SXI1				*i* S	**Sn**	**02 36 47.1**	**-0.4**
EOS3	**EOS3**	**0.79**	**206**	*eP*	**Pn**	**02 36 30.5**	**+0.6**
EOS3				*eS*	**Sn**	**02 36 48.7**	**+1.1**
TIPB	**Shuangxi**	**0.79**	**268**	P	**Pn**	**02 36 30.5**	**+0.5**
TIPB				S	**Sn**	**02 36 47.3**	**-0.6**
WFSB	**Wu-fen Shan**	**0.83**	**275**	*eP*	**Pn**	**02 36 30.8**	**+0.5**
WFSB				*eS*	**Sn**	**02 36 47.2**	**-1.2**
PCYT	**Pengchaiyu**	**0.84**	**318**	*eP*	**Pn**	**02 36 31.5**	**+1.0**
TNOU	**National Taiwa**	**0.85**	**281**	*eP*	**Pn**	**02 36 30.6**	**+0.2**
TWC	**Suao**	**0.86**	**243**	*eP*	**Pn**	**02 36 30.4**	**-0.1**
TWC				*eS*	**Sn**	**02 36

WNT	**Mingjian**	**2.14**	**239**	*eP*		**Pn**	**02 36 43.8**	**+0.2**
WNT				*eS*		**Sn**	**02 37 12.6**	**+0.6**
WCHH	**Zhanghua**	**2.15**	**245**	*eS*		**Sn**	**02 37 11.7**	**-0.4**
CHKH	**Chenggong**	**2.15**	**214**	*eP*		**Pn**	**02 36 43.7**	**0.0**
CHKH				*eS*		**Sn**	**02 37 10.9**	**-1.4**
FULB	**Fuli**	**2.20**	**216**	*eP*		**Pn**	**02 36 44.9**	**+0.6**
FULB				S		**Sn**	**02 37 13.6**	**+0.2**
CHKT	**Chengkung**	**2.25**	**213**	P		**Pn**	**02 36 44.8**	**0.0**
CHKT				*eS*		**Sn**	**02 37 12.7**	**-1.5**
ALS	**Alishan**	**2.27**	**230**	P		**Pn**	**02 36 47.2**	**+1.8**
ALS				*eS*		**Sn**	**02 37 17.1**	**+1.8**
JIRJ	**Irabujima**	**2.28**	**94**	*eS*		**Sn**	**02 37 14.0**	**-0.9**
EHD	**Haiduan**	**2.29**	**217**	*eP*		**Pn**	**02 36 45.7**	**+0.4**
CHN5	**Tsauling**	**2.31**	**233**	*eP*		**Pn**	**02 36 47.5**	**+1.9**
CHN5				S		**Sn**	**02 37 15.9**	**+0.2**
ELDTW	**Lidau**	**2.36**	**221**	*eP*		**Pn**	**02 36 47.3**	**+1.0**
ELDTW				*eS*		**Sn**	**02 37 16.7**	**-0.2**
WRL	**Guolierlin Hig**	**2.38**	**243**	*eP*		**Pn**	**02 36 49.6**	**+3.2**
WRL				*eS*		**Sn**	**02 37 16.1**	**-0.9**
JMJ2	**Miyako jima3**	**2.41**	**96**	*eP*		**Pn**	**02 36 48.0**	**+1.3**
JMJ2				*eS*		**Sn**	**02 37 17.9**	**+0.3**
WCKO	**Fanlu**	**2.46**	**231**	*eP*		**Pn**	**02 36 49.5**	**+2.1**
WCKO				*eS*		**Sn**	**02 37 21.4**	**+2.6**
JOGS	**Gusukube**	**2.48**	**95**	*eS*		**Sn**	**02 37 19.0**	**-0.1**
CHN4	**Tsaushan**	**2.52**	**230**	*eP*		**Pn**	**02 36 49.7**	**+1.5**
CHN4				*eS*		**Sn**	**02 37 20.5**	**+0.3**
TPUB	**Ta-pu**	**2.53**	**229**	*eP*		**Pn**	**02 36 50.6**	**+2.3**
WTP	**Ta-pu**	**2.58**	**228**	*eP*		**Pn**	**02 36 50.9**	**+2.0**
TWK	**Hsinying**	**2.65**	**230**	*eP*		**Pn**	**02 36 52.1**	**+2.3**
CHN1	**Nanshi**	**2.68**	**228**	*eP*		**Pn**	**02 36 53.5**	**+3.4**
CHN1				*eS*		**Sn**	**02 37 23.7**	**0.0**
WSL	**Shuilin Townsh**	**2.69**	**237**	*eP*		**Pn**	**02 36 51.3**	**+1.1**
WSL				*eS*		**Sn**	**02 37 23.6**	**-0.1**
MATB	**Ma-tsu**	**2.73**	**295**	*eP*		**Pn**	**02 36 50.8**	**+0.1**
VWUC	**VWUC**	**2.94**	**271**	*eP*		**Pn**	**02 36 53.3**	**0.0**
XPSS	**Dashiqiu**	**2.96**	**311**	*eP*		**Pn**	**02 36 53.2**	**-0.3**
MASBT	**Mashibuluo**	**3.03**	**219**	*eP*		**Pn**	**02 36 57.2**	**+2.7**
MASBT				*eS*		**Sn**	**02 37 32.3**	**+0.7**
LYJJ	**Jianjiangzhen**	**3.06**	**301**	*eP*		**Pn**	**02 36 54.6**	**-0.2**
EAST	**Anshuo**	**3.10**	**213**	*eP*		**Pn**	**02 36 58.1**	**+2.6**
LAY	**Lan-yu**	**3.12**	**200**	*eP*		**Pn**	**02 36 55.6**	**-0.1**
LAY				*eS*		**Sn**	**02 37 32.4**	**-1.4**
LYUB	**Lan-yu**	**3.15**	**199**	*eP*		**Pn**	**02 36 55.8**	**-0.2**
LYUB				*eS*		**Sn**	**02 37 31.9**	**-2.4**
PNG	**Penghu**	**3.20**	**244**	*eP*		**Pn**	**02 36 55.9**	**-0.7**
PNG				*eS*		**Sn**	**02 37 32.5**	**-2.8**
PHUB	**P'eng-hu**	**3.21**	**243**	*eP*		**Pn**	**02 36 56.0**	**-0.8**
PHUB				*eS*		**Sn**	**02 37 32.7**	**-2.8**
PTMZ	**Houxiangcun**	**3.24**	**272**	*eP*		**Pn**	**02 36 56.8**	**-0.3**
WDGT	**Dungji**	**3.27**	**239**	*eP*		**Pn**	**02 36 56.7**	**-0.7**
WDGT				*eS*		**Sn**	**02 37 35.0**	**-1.8**
SMST	**Manzhou Townsh**	**3.42**	**210**	*eP*		**Pn**	**02 36 59.5**	**+0.1**

IDC 28 02:37:01.7±1.6,**43˚.75N**×133˚.90E,**h0**km,**mb3.6**/2,
mbtmp3.6/3,**ML2.9**/1,**MS2.9**/1,**Error ellipse:**
s-maj=45.5km s-min=17.2km az=9.0,Primorye

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	**Ussuriysk Ar.**	**1.45**	**289**	Pg	Pn	02 37 27.2	-1.9
	baz=84,slow=15						
USRK				Lg	Lg	02 37 49.6	
	0.4nm,0.3s,baz=80,slow=40,SNR=2.8						
JHJ	**Hachijo jima 2**	**11.57**	**155**	LR	LR	02 44 15.0	
	comp=Z,64nm,21.1s,baz=85,slow=37						
PETK	**Petropavlovsk-**	**18.29**	**51**	P	P	02 41 16.9	+0.1
	0.2nm,0.3s,baz=243,slow=6.0,SNR=1.6						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**47.10**	**35**	P	P	02 45 36.1	+1.1
	0.2nm,0.6s,baz=279,slow=7.3,SNR=2.3						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**60.15**	**328**	P	P	02 47 09.3	-1.2
	0.6nm,0.4s,baz=58,slow=4.9,SNR=10						
	0.6nm,0.4s						
VNDA	**Vanda**	**122.23**	**173**	PKP	PKiKP	02 55 57.2	0.0
	1.5nm,0.6s,baz=321,slow=6.5,SNR=15						

*IDC **28** 03:32:46.8±0.5,30˚.32N×94˚.78E,h0km,mb4.3/24,*
mbtmp4.3/29,ML4.2/5,MS3.5/9,Error ellipse:
s-maj=15.7km s-min=11.9km az=47.0
*MOS **28** 03:32:47.4±0.9,30˚.35N×94˚.86E,h13km,mb5.1/51,Error*
ellipse: s-maj=7.2km s-min=3.3km az=124.3
*BJI **28** 03:32:48.7,30˚.35N×94˚.87E,h10km,mB4.6/11,mb4.4/34,*
ML4.1/8,Ms4.1/27,Ms7 3.9/24
*NEIC **28** 03:32:49.2±1.2,30˚.40N±0˚.07×94˚.71E±0˚.07,h10km±1km,*
mb4.8/139,Error ellipse: s-maj=12.0km s-min=10.8km
az=178.0
*NDI **28** 03:32:49.3±1.7,30˚.48N×94˚.63E,h10km,mb4.3,ML4.0,*
MW4.4,Presumed earthquake
*GFZ **28** 03:32:50.0±0.3,30˚N±3˚×9˚5E±˚,h10km,M4.4/23,*
mb4.7/23

ISC 28 03:32:49.3±0.8,**30˚.31N**±0˚.03×**94˚.73E**±0˚.03,**h14**km±4km,
n691,σ1s21/722,**mb4.8**/161,**MS3.6**/15,**28C-21D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.16**	**260**	P	**Pn**	**03 33 38.2**	**-0.9**
LSA	**Lhasa**	**3.16**	**260**	Pn	**Pn**	**03 33 38.1**	**-0.9**
LSA	**Lhasa**	**3.16**	**260**	*e*Pg	**Pb**	**03 33 44.0**	**-1.6**
LSA				Sg	**Sg**	**03 34 30.3**	**-0.7**
LSA				L	L		
	comp=N,3μm,3.8s						
LSA				L	L		
	comp=E,4μm,4.9s						
LSA				L	L		
	comp=Z,3μm,4.8s						
TAWA	**Tawang**	**3.69**	**224**	*eP*	**Pn**	**03 33 47.5**	**+1.3**
TAWA				*ex*	x	03 34 52.0	
MOKO	**MOKOCHONG**	**3.97**	**183**	*eP*	**Pn**	**03 33 52.6**	**+2.6**
GUWA	**GUWAHATI**	**4.90**	**214**	*e*PN	**Pn**	**03 34 05.4**	**+2.9**
GUWA				*e*PG	**Pg**	**03 34 24.6**	**+1.5**
GUWA				*eS*	**Sn**	**03 34 59.1**	**+0.2**
SHL	**Shillong**	**5.35**	**209**	P	**Pn**	**03 34 10.2**	**+1.3**
SHL	**Shillong**	**5.35**	**209**		**Pn**	**03 34 10.2**	**+1.3**
SHL	**Shillong**	**5.35**	**209**	*eP*	**Pn**	**03 34 10.2**	**+1.3**
SHL				*i* x	x	03 34 28.1	
IMP	**Imphal**	**5.50**	**187**	*eP*	**Pn**	**03 34 13.0**	**+2.1**
GOMU	**GeErMu**	**5.88**	**1**	Pn	**Pn**	**03 34 16.5**	**+0.2**
GOMU				Pg	**Pb**	**03 34 34.3**	**+2.5**
GOMU				Sn	**Sn**	**03 35 25.8**	**+2.1**
GOMU				Sg	**Sb**	**03 35 44.0**	**+1.8**
DHUB	**DHUBRI**	**5.97**	**226**	*eP*	**Pn**	**03 34 18.1**	**+0.8**
MORE	**Moreh**	**6.06**	**184**		**Pn**	**03 34 20.7**	**+2.2**
TNCH	**TengChong**	**6.24**	**147**	Pn	**Pn**	**03 34 20.5**	**-0.6**
TNCH				Sg	**Sg**	**03 36 07.3**	**-2.2**
TNCH				SMN			
	150nm,0.3s						
TNCH				SME			
	390nm,0.5s						
AZL	**Aizawl**	**6.79**	**196**	*ex*	**Sn**	**03 35 45.4**	**-0.4**
PZH	**PanZhiHua**	**7.24**	**120**	P	**Pn**	**03 34 38.5**	**+3.6**
EVN	**Everest**	**7.31**	**253**		**Pn**	**03 34 36.9**	**+0.7**
EVN	**Everest**	**7.31**	**253**	P	**Pn**	**03 34 39.1**	**+2.9**
BRDH	**Bariadhala**	**8.09**	**201**	Pn	**Pn**	**03 34 47.9**	**+1.6**
	17nm,0.3s,baz=67,slow=9.3,SNR=4.4						
	80nm,0.3s						
KMI2	**Kunming**	**8.76**	**124**	P	**Pn**	**03 34 57.5**	**+1.7**
KMI2				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI2				L	L		
	comp=N,490nm,11.1s						
KMI2				L	L		
	comp=E,530nm,9.9s						
KMI2				L	L		
	comp=Z,460nm,11.2s						
LZDM	**Lanzhou Array**	**9.39**	**51**	Pn	**Pn**	**03 35 03.9**	**-0.6**
	baz=232,slow=12						
LZDM				Lg	Lg	03 37 48.2	
	baz=108,slow=27						
	4.6nm,0.4s						
LZH	**Lanzhou**	**9.56**	**51**	*eP*	**Pn**	**03 35 06.5**	**-0.2**
LZH				pP		03 35 09.5	
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				L	L		
	comp=N,630nm,5.8s						
LZH				L	L		
	comp=E,520nm,5.8s						
LZH				L	L		
	comp=Z,590nm,8.9s						

GTA2	**Gaotai**	**10.04**	**23**	*eP*		**Pn**	**03 35 15.5**	**+2.2**
GTA2				pmax	pmax				
	comp=Z,4.0nm,0.8s								
GTA2				L	L				
	comp=N,510nm,9.8s								
GTA2				L	L				
	comp=E,410nm,7.9s								
GTA2				L	L				
	comp=Z,540nm,9.8s								
BOK	**Bokaro**	**10.21**	**233**	*eP*		**Pn**	**03 35 17.2**	**+1.8**
GYA	**Guiyang**	**11.18**	**107**			P	**Pn**	**03 35 29.0**	**+0.1**
GYA				pmax	pmax				
	comp=Z,42nm,0.8s								
CHTO	**Chiang Mai**	**12.06**	**161**	P		**Pn**	**03 35 42.8**	**+1.9**
CHTO	**Chiang Mai**	**12.06**	**161**	P		**Pn**	**03 35 41.8**	**+0.9**
CHTO	**Chiang Mai**	**12.06**	**161**	Pn		**Pn**	**03 35 41.8**	**+0.9**
CHTO	**Chiang Mai**	**12.06**	**161**	P		**Pn**	**03 35 42.5**	**+1.7**
CHTO	**Chiang Mai**	**12.06**	**161**	P		**Pn**	**03 35 42.5**	**+1.7**
CM31	**Chiang Mai Arr**	**12.40**	**161**	Pn		**Pn**	**03 35 46.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**12.40**	**161**	Pn		**Pn**	**03 35 46.5**	**+1.0**
	0.4nm,0.3s,baz=333,slow=13,SNR=30								
	4.9nm,0.9s								
CMAR	**Chiang Mai Arr**	**12.40**	**161**	*i* P		**Pn**	**03 35 48.5**	**+3.0**
CMAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**12.40**	**161**			**Pn**	**03 35 47.0**	**+1.5**
WMQ	**Urumqi**	**14.60**	**339**	*eP*		**Pn**	**03 36 15.8**	**+0.3**
WMQ				sP	P		03 36 23.5	+1.6
WMQ				pmax	pmax				
	comp=Z,12nm,0.9s								
WMQ				L	L				
	comp=Z,230nm,9.7s								
WMQ				L	L				
	comp=Z,280nm,7.3s								
GULI	**GuiLin**	**14.71**	**106**	P	Pn		03 36 10.0	-7.0	
GULI				pmax	pmax				
	comp=Z,20nm,0.8s								
SMLA	**Simla**	**15.13**	**278**	*eP*		**Pn**	**03 36 21.1**	**-1.5**
DHRM	**DHARAMSHALA**	**15.88**	**282**	*eP*		**Pn**	**03 36 28.8**	**-3.8**
DHRM				IAmb	IAmb		03 36 37.7		
	comp=Z,24nm,0.7s								
VIS	**Vishakhapatnam**	**16.28**	**222**	*eP*		**Pn**	**03 36 37.8**	**+0.2**
VIS				IAmb	IAmb		03 36 45.4		
	comp=Z,13nm,1.2s								
WUS	**Wushi**	**16.61**	**315**	Pn		**Pn**	**03 36 41.5**	**-0.3**
WHN	**Wuhan**	**16.93**	**84**	P		**Pn**	**03 36 44.0**	**-1.7**
WHN				L	L				
	comp=Z,1μm,12.7s								
WHN				L	L				
	comp=Z,720nm,13.1s								
WHN				L	L				
	comp=Z,1μm,8.9s								
BHPL	**Bhopal**	**16.97**	**250**	*eP*		**Pn**	**03 36 44.8**	**-1.6**
BHPL				IAmb	IAmb		03 36 51.2		
	comp=Z,36nm,0.8s								
HHC	**Hu-ho-hao-te**	**17.24**	**48**	*eP*		**P**	**03 36 51.0**	**-0.2**
HHC				pmax	pmax				
	comp=Z,15nm,0.7s								
HHC				pmax	pmax				
	comp=Z,100nm,5.2s								
HHC				L	L				
	comp=Z,260nm,10.3s								
HHC				L	L				
	comp=Z,190nm,9.5s								
HHC				L	L				
	comp=Z,280nm,9.9s								
SHLS	**Shalkode**	**17.69**	**321**	*eP*		**Pn**	**03 36 53.1**	**-2.2**
SHLS				*eS*		**Sn**	**03 40 07.9**	**-4.4**
SHLS	**Shalkode**	**17.69**	**321**	*eP*		**Pn**	**03 36 53.2**	**-2.2**
SHLS				*eS*		**Sn**	**03 40 07.9**	**-4.4**
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**Pn**	**03 36 56.9**	**+0.1**
TARG				pmax	pmax				
	comp=Z,48nm,1.1s								
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**Pn**	**03 36 56.9**	**+0.1**
TARG	**Taragay, Kyrgy**	**17.78**	**314**	P		**P**	**03 37 00.5**	**+3.0**
PDGK	**Podgornoye**	**17.79**	**321**	P		**Pn**	**03 36 55.7**	**-0.9**
PDGK	**Podgornoye**	**17.79**	**321**			**Pn**	**03 36 55.7**	**-0.9**
PRZ	**Przheval'sk**	**17.87**	**317**	P		**Pn**	**03 36 57.6**	**0.0**
PRZ				pmax	pmax				
	comp=Z,108nm,1.0s								
PRZ	**Przheval'sk**	**17.87**	**317**			**Pn**	**03 36 57.6**	**0.0**
PRZ				IAmb	IAmb		03 37 04.0		
	comp=Z,108nm,1.0s								
PRZ	**Przheval'sk**	**17.87**	**317**	P		**P**	**03 37 02.3**	**+4.1**
UZB	**Uzynbulak**	**17.93**	**320**	*eP*		**P**	**03 36 58.9**	**+0.1**
UZB				*eS*		**Sn**	**03 40 19.3**	**+1.2**
UZB	**Uzynbulak**	**17.93**	**320**	*eP*		**P**	**03 36 59.0**	**+0.1**
UZB				*eS*		**Sn**	**03 40 19.3**	**+1.2**
HNS	**HongShan**	**18.02**	**62**			P	**P**	**03 37 04.8**	**+5.1**
HNS				pmax	pmax				
	comp=Z,13nm,0.9s								
HNS				LR	LR				
	comp=E,210nm,11.9s								
HNS				LR	LR				
	comp=Z,220nm,10.4s								
KSH2	**Kashi**	**18.03**	**304**	P		**P**	**03 37 00.3**	**+0.3**
KSH2				pmax	pmax				
	comp=Z,8.0nm,1.6s								
SATY	**Saty**	**18.22**	**319**	*eP*		**P**	**03 37 02.7**	**+0.7**
SATY	**Saty**	**18.22**	**319**	*eP*		**P**	**03 37 02.7**	**+0.7**
KPKS	**Kokpek**	**18.32**	**320**	*eP*		**P**	**03 37 03.6**	**+0.4**
KPKS				*eS*		**Sn**	**03 40 28.5**	**+1.0**
KPKS	**Kokpek**	**18.32**	**320**	*eP*		**P**	**03 37 03.7**	**+0.5**
KPKS				*eS*		**Sn**	**03 40 28.6**	**+1.0**
KDJ	**Kajisay**	**18.39**	**315**	P		**P**	**03 37 02.5**	**-1.5**
KDJ				pmax	pmax				
	comp=Z,31nm,1.0s								
KDJ	**Kajisay**	**18.39**	**315**			**P**	**03 37 02.5**	**-1.5**
KDJ	**Kajisay**	**18.39**	**315**	P		**Pn**	**03 37 06.4**	**+2.3**
NIL	**Nilore**	**18.52**	**286**	P		**P**	**03 37 03.7**	**-1.6**
NIL				pmax	pmax				
	comp=Z,262nm,2.0s								
NIL	**Nilore**	**18.52**	**286**	P		**P**	**03 37 03.2**	**-2.2**
NIL	**Nilore**	**18.52**	**286**	P		**P**	**03 37 04.5**	**-0.9**
ZSN	**Zaisan**	**18.74**	**339**	*eP*		**Pn**	**03 37 08.2**	**+0.2**
ZSN	**Zaisan**	**18.74**	**339**	*eP*		**Pn**	**03 37 08.2**	**+0.2**
NRN	**Naryn**	**18.77**	**311**	P		**P**	**03 37 07.9**	**-0.4**
NRN				pmax	pmax				
	comp=Z,17nm,1.2s								
NRN	**Naryn**	**18.77**	**311**	P		**P**	**03 37 07.9**	**-0.4**
TNSS	**Tian-Shan**	**19.05**	**317**	*eP*		**Pn**	**03 37 12.4**	**+0.1**
TNSS	**Tian-Shan**	**19.05**	**317**	*eP*		**Pn**	**03 37 12.4**	**+0.1**
MDOK	**Medeo**	**19.07**	**317**	*eP*		**Pn**	**03 37 12.7**	**+0.5**
MDOK				*eS*		**S**	**03 40 47.1**	**-0.4**
MDOK	**Medeo**	**19.07**	**317**	*eP*		**Pn**	**03 37 12.7**	**+0.5**
MDOK				*eS*		**S**	**03 40 47.2**	**-0.4**
MK31	**Makanchi Array**	**19.08**	**333**	*de*P		**P**	**03 37 10.8**	**-0.6**
MKAR	**Makanchi Array**	**19.08**	**333**	P		**P**	**03 37 10.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=144,slow=14,SNR=28								
MKAR				S		**Sn**	**03 40 40.4**	**-5.3**
	comp=Z,0.1nm,0.4s,baz=163,slow=30,SNR=0.9								
MKAR				PcP		**PcP**	**03 41 34.7**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=159,slow=4.3,SNR=3.3								
MKAR				LR	LR		03 45 02.3		
	comp=Z,56nm,19.0s,baz=170,slow=38								
	comp=Z,4.6nm,0.8s								
MKAR	**Makanchi Array**	**19.08**	**333**	*i* P		**P**	**03 37 11.1**	**-0.3**
MKAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
MKAR	**Makanchi Array**	**19.08**	**333**			**P**	**03 37 09.1**	**-2.3**
MKAR						**PcP**	**03 41 35.1**	**-0.5**
AAA	**Alma-Ata**	**19.18**	**317**	*eP*		**Pn**	**03 37 13.4**	**0.0**
AAA	**Alma-Ata**	**19.18**	**317**	*eP*		**Pn**	**03 37 13.5**	**0.0**
MAKZ	**Makanchi**	**19.22**	**333**	P		**P**	**03 37 12.8**	**-0.1**
MAKZ				pmax	pmax				
	comp=Z,31nm,1.2s								
MAKZ	**Makanchi**	**19.22**	**333**			**P**	**03 37 12.8**	**-0.1**
MAKZ	**Makanchi**	**19.22**	**333**	P		**Pn**	**03 37 13.5**	**-0.4**
BOOM	**Boomskoye usch**	**19.36**	**314**	P		**P**	**03 37 13.8**	**-0.8**
BOOM				pmax	pmax				
	comp=Z,32nm,1.1s								
BOOM	**Boomskoye usch**	**19.36**	**314**	P		**P**	**03 37 13.8**	**-0.8**
BOOM	**Boomskoye usch**	**19.36**	**314**	P		**Pn**	**03 37 17.0**	**+1.2**
TDK	**Taldyqorghan**	**19.50**	**323**	*eP*		**Pn**	**03 37 16.8**	**-0.4**
TDK	**Taldyqorghan**	**19.50**	**323**	*eP*		**Pn**	**03 37 16.8**	**-0.4**
HYB	**Hyderabad**	**19.55**	**233**	*eP*		**P**	**03 37 17.4**	**+0.6**
HYB				*eS*		Sn	03 41 09.1	+12
TIA	**Tai'an**	**19.61**	**67**	P		**Pn**	**03 37 18.3**	**-0.3**
TIA				pmax	pmax				
	comp=Z,10.0nm,1.8s								
SONM	**Songino Array**	**19.67**	**24**	P		**P**	**03 37 17.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=213,slow=11,SNR=40								
	comp=Z,14nm,1.1s								
SONM	**Songino Array**	**19.67**	**24**	P		**P**	**03 37 16.6**	**-1.3**

KUU	**Kurty**	**19.92**	**318**	*eP*		**Pn**	**03 37 21.6**	**-0.6**
KUU	**Kurty**	**19.92**	**318**	*eP*		**Pn**	**03 37 21.7**	**-0.6**
ULN	**Ulaanbaatar**	**19.93**	**25***d*	*i* P		**P**	**03 37 20.7**	**-0.1**
ULN				pmax	pmax				
	comp=Z,10.0nm,1.0s								
ULN	**Ulaanbaatar**	**19.93**	**25**	P		**P**	**03 37 20.8**	**0.0**
ULN	**Ulaanbaatar**	**19.93**	**25**	P		**P**	**03 37 20.7**	**-0.1**
	comp=Z,42nm,0.9s								
ULN	**Ulaanbaatar**	**19.93**	**25**	P		**P**	**03 37 20.2**	**-0.6**
DGZ	**Jazzator, Alta**	**20.14**	**346**‖	*eP*		Pn	03 37 24.2	-0.8	
DGZ				pmax	pmax				
	comp=Z,33nm,1.4s								
AAK	**Ala-Archa**	**20.34**	**313**	P		Pn	03 37 26.9	-0.5	
	comp=Z,37nm,1.1s,baz=128,slow=9.2,SNR=30								
	comp=Z,37nm,1.1s								
AAK	**Ala-Archa**	**20.34**	**313***c*	*i* P		Pn	03 37 28.0	+0.6	
AAK				pmax	pmax				
	comp=Z,77nm,1.3s								
AAK	**Ala-Archa**	**20.34**	**313**	P		**P**	**03 37 24.8**	**-0.6**
AAK				IAmb	IAmb		03 37 32.5		
	comp=Z,70nm,1.2s								
AAK	**Ala-Archa**	**20.34**	**313**	P		Pn	03 37 27.4	0.0	
KNGR	**Kungurtug, Tuv**	**20.39**	**5**‖	*e*P		Pn	03 37 26.8	-0.9	
KNGR				pmax	pmax				
	comp=Z,13nm,1.0s								
MANEM	**Manem**	**20.41**	**297**	P		**P**	**03 37 25.9**	**-0.4**
MANEM				IAmb	IAmb		03 37 31.5		
	comp=Z,111nm,1.3s								
OHH	**Osh**	**20.54**	**306**	P		**P**	**03 37 28.1**	**+0.7**
OHH	**Osh**	**20.54**	**306**	P		**P**	**03 37 28.1**	**+0.7**
SGDS	**Sogindy**	**20.69**	**315**	*eP*		**P**	**03 37 30.1**	**+1.1**
SGDS				*eS*		**S**	**03 41 21.6**	**+1.9**
NJ2	**Nanjing**	**20.71**	**79**	*eP*		**P**	**03 37 30.0**	**+0.8**
NJ2				pmax	pmax				
	comp=Z,20nm,0.6s								
DRK	**Karamyk**	**20.87**	**302**	P		**P**	**03 37 31.3**	**0.0**
DRK				pmax	pmax				
	comp=Z,33nm,0.9s								
DRK	**Karamyk**	**20.87**	**302**	P		**P**	**03 37 31.3**	**0.0**
DRK				IAmb	IAmb		03 37 34.6		
	comp=Z,33nm,0.9s								
ZAK	**Zakamensk**	**21.06**	**15**	*eP*		**P**	**03 37 31.7**	**-1.2**
ZAK				pmax	pmax				
	comp=Z,26nm,1.3s								
XLT	**XiLinHaoTe**	**21.69**	**45**	*eP*		**P**	**03 37 39.5**	**-0.3**
XLT				pmax	pmax				
	comp=Z,14nm,1.2s								
XLT				pmax	pmax				
	comp=Z,79nm,3.8s								
XLT				L	L				
	comp=Z,190nm,9.7s								
XLT				L	L				
	comp=Z,140nm,9.5s								
BTK	**Batken**	**21.78**	**303**	P		**P**	**03 37 39.9**	**-0.8**
BTK				pmax	pmax				
	comp=Z,82nm,1.3s								
BTK	**Batken**	**21.78**	**303**			**P**	**03 37 39.9**	**-0.8**
BTK				IAmb	IAmb		03 37 48.0		
	comp=Z,82nm,1.3s								
BTK	**Batken**	**21.78**	**303**	P		**P**	**03 37 42.6**	**+1.8**
GAR	**Garm**	**21.83**	**300**			**P**	**03 37 40.5**	**-0.8**
GAR	**Garm**	**21.83**	**300**	P		**P**	**03 37 41.6**	**+0.3**
BTLS	**Baital**	**21.92**	**318**	*eP*		**P**	**03 37 43.2**	**+1.1**
BTLS	**Baital**	**21.92**	**318**	*eP*		**P**	**03 37 43.2**	**+1.1**
KBL	**Kabul**	**22.07**	**288**	P		**P**	**03 37 43.7**	**-0.4**
KBL				pmax	pmax				
	comp=Z,134nm,1.2s								
KBL	**Kabul**	**22.07**	**288**	P		**P**	**03 37 43.7**	**-0.4**
KBL	**Kabul**	**22.07**	**288**	P		**P**	**03 37 45.2**	**+1.1**
TRKS	**Terek-Say**	**22.08**	**307**	P		**P**	**03 37 44.0**	**0.0**
TLY	**Talaya**	**22.36**	**15**	LR	LR		03 47 32.3		
	comp=Z,80nm,19.7s,baz=190,slow=40								
TLY	**Talaya**	**22.36**	**15**‖	*eP*		**P**	**03 37 47.6**	**+0.8**
TLY				pmax	pmax				
	comp=Z,8.0nm,0.8s								
DZA	**Taraz**	**22.51**	**310**	*eP*		**P**	**03 37 49.7**	**+1.1**
DZA				pmax	pmax				
	comp=Z,26nm,1.3s								
DZA	**Taraz**	**22.51**	**310**	*eP*		**P**	**03 37 49.7**	**+1.1**
	comp=Z,26nm,1.3s								
CHGR	**Chuyangaron**	**22.61**	**298***de*	P		**P**	**03 37 49.6**	**-0.1**
CHGR				pmax	pmax				
	comp=Z,217nm,1.1s								
CHGR	**Chuyangaron**	**22.61**	**298**			**P**	**03 37 49.1**	**-0.6**
IRK	**Irkutsk**	**23.

BVAR PcP **PcP** **03 41 56.6 +0.3**
comp=Z,1.4nm,0.6s,baz=131,slow=2.6,SNR=5.2
comp=Z,8.5nm,0.9s
JOW Kunigami 29.60 88 LR LR 03 50 12.0
comp=Z,115nm,19.8s,baz=12,slow=35
BNX BinXian 29.75 50 ⇓P **P** **03 38 55.0 -0.2**
BNX pmax pmax
comp=Z,9.0nm,1.6s
HEH HeiHe 31.54 41 *e*P **P** **03 39 11.0 0.0**
HEH L L
comp=Z,230nm,11.6s
HEH L L
comp=Z,160nm,12.6s
HEH L L
comp=Z,220nm,10.6s
VLA Vladivostok 32.15 56⇓*e*P **P** **03 39 14.6 -1.8**
VLA pmax pmax
comp=Z,32nm,0.7s
AB31 Akbulak array 32.37 316 **P** **03 39 17.4 -0.8**
ABKAR Akbulak array 32.37 316 P **P** **03 39 18.0 -0.2**
SVE Sverdlovsk 35.60 328 *e*P **P** **03 39 47.9 +1.7**
SVE pmax pmax
comp=Z,35nm,1.1s
ARTI Arti 36.42 326*d i*P **P** **03 39 54.7 +1.5**
ARTI 03 41 13.6
ARTI 03 42 16.8
ARTI S **S** **03 45 36.4 +2.1**
ARTI SS **SnSn** **03 48 03.4 +1.1**
ARTI pmax pmax
comp=Z,13nm,0.9s
ARTI Arti 36.42 326 **P** **03 39 52.7 -0.6**
ARTI IAmb IAmb 03 39 55.8
comp=Z,10nm,0.7s
ARTI PcP **PcP** **03 42 16.8 -0.4**
LKRN Lenkeran, Azer 38.45 295 P **P** **03 40 12.9 +2.2**
YAK Yakutsk 39.02 25 *e*P **P** **03 40 14.3 -0.8**
YAK *e**PP **pP** **03 40 18.7 -1.9**
YAK *e* 03 41 42.1
YAK *e*PPP PPP 03 42 04.0
YAK *e*S **S** **03 46 12.5 -0.9**
YAK *e**SS **pS** **03 46 20.5 +0.7**
YAK *e*SS **SnSn** **03 48 53.0 -12**
YAK *e* 03 50 20.8
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.6s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK pmax pmax
comp=Z,100nm,3.6s
YAK pmax pmax
comp=N,32nm,3.2s
YAK pmax pmax
comp=E,59nm,8.6s
YAK smax smax
comp=E,65nm,6.9s
YAK smax smax
comp=N,34nm,3.2s
YAK MLR MLR
comp=Z,65nm,20.0s
YAK MLR MLR
comp=N,60nm,19.0s
YAK MLR MLR
comp=E,62nm,24.0s
AKT Akhty 39.24 300 *e*P **P** **03 40 18.9 +1.5**
AKT *e* 03 41 48.9
AKT *e*PPP PPP 03 42 10.5
AKT *e* 03 42 28.0
AKT pmax pmax
comp=Z,29nm,1.2s
NRIK Noril'sk 39.29 356 P **P** **03 40 15.7 -1.6**
comp=Z,1.1nm,0.3s,baz=168,slow=5.7,SNR=8.9
comp=Z,1.1nm,0.3s
NRIK Noril'sk 39.29 356⇑*e*P **P** **03 40 17.0 -0.3**
NRIK pmax pmax
comp=Z,12nm,1.3s
NRIK Noril'sk 39.29 356 **P** **03 40 17.2 -0.1**
MAK Makhachkala 39.46 302 *e*P **P** **03 40 15.7 -3.3**
MAK *e*S **S** **03 46 15.0 -5.6**
MAK pmax pmax
comp=Z,254nm,1.5s
MAK MLR MLR
comp=Z,61nm,15.0s
SEKA Sheki 39.64 299 P **P** **03 40 22.2 +1.5**
MNGR Mingechevir, A 39.73 299 P **P** **03 40 23.5 +2.2**
ASAJ Asahikawa 39.99 56 LR LR 03 57 47.9
comp=Z,71nm,18.3s,baz=340,slow=38
GANJ Ganja 40.31 298 P **P** **03 40 28.9 +2.7**
YSS Yuzhno-Sakhali 40.36 52 P **P** **03 40 29.0 +2.5**
YSS Yuzhno-Sakhali 40.36 52 *e*P **P** **03 40 26.6 +0.1**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,100nm,14.0s
BELG Belogornoye 40.76 317⇑*i*P **P** **03 40 30.6 +0.9**
BELG pmax pmax
comp=Z,4.0nm,1.1s
NAX Nakhchivan 40.99 296 P **P** **03 40 33.9 +2.0**
GNI Garni 41.53 298*ce*P **P** **03 40 36.6 +0.2**
GNI pmax pmax
comp=Z,20nm,1.2s
GNI Garni 41.53 298 P **P** **03 40 38.5 +2.1**
comp=Z,14nm,1.2s
GNI Garni 41.53 298 P **P** **03 40 39.3 +2.9**
KIRV Kirov 41.73 326*c i*P **P** **03 40 38.4 +0.8**
NCK Nalchik 42.33 303⇓*i*P **P** **03 40 44.4 +1.6**
NCK pmax pmax
comp=Z,10.0nm,0.4s
KBZ Khabaz 42.84 303 P **P** **03 40 46.4 -0.4**
comp=Z,1.4nm,0.7s,baz=106,slow=7.4,SNR=4.4
comp=Z,1.4nm,0.7s
KBZ Khabaz 42.84 303⇓*e*P **P** **03 40 49.1 +2.3**
KBZ pmax pmax
comp=Z,6.0nm,1.6s
KIV Kislovodsk 42.99 303 *e*P **P** **03 40 50.0 +1.8**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV Kislovodsk 42.99 303 P **P** **03 40 47.1 -1.1**
KIV IAmb IAmb 03 40 52.6
comp=Z,30nm,1.2s
KIV Kislovodsk 42.99 303 P **P** **03 40 50.3 +2.1**
comp=Z,16nm,1.3s
KIV Kislovodsk 42.99 303 P **P** **03 40 48.3 0.0**
EPOS Posof 43.00 300 P **P** **03 40 51.3 +2.9**
SHA1 Shidzhatmaz 43.01 303⇑*e*P **P** **03 40 50.1 +1.5**
GURO Guroymak-BITLI 43.73 296 P **P** **03 40 54.5 +0.2**
GURO IAmb IAmb 03 40 57.3
comp=Z,20nm,1.3s
VRH Novokhopyorsk 44.14 314 *e*P **P** **03 40 58.0 +0.8**
VRH pmax pmax
comp=Z,16nm,0.9s
LABN Labinsk 44.41 304 *e*P **P** **03 41 01.4 +1.9**
LABN *e*PPP PPP 03 43 20.9
LABN pmax pmax
comp=Z,49nm,0.6s
ERBR Yeremizino-Bor 44.58 306 *e*P **P** **03 41 01.9 +1.0**
ERBR *e* 03 42 43.5
ERBR *e*S **S** **03 47 40.2 +4.0**
ERBR pmax pmax
comp=Z,18nm,1.1s
VSLR Vesyoloye 44.92 303⇓*i*P **P** **03 41 05.3 +1.7**
VSLR pmax pmax
comp=Z,54nm,1.3s
SOC Sochi 45.15 303 *e*P **P** **03 41 06.2 +0.8**
SOC *e* 03 42 51.8
SOC *e*PPP PPP 03 43 28.1
SOC *e*S **S** **03 47 45.8 +1.3**
SOC *e*SS **SS** **03 51 05.2 -1.5**
SOC *e*SSS SSS 03 51 55.7
SOC pmax pmax
comp=Z,24nm,0.9s
SOC MLR MLR
comp=Z,31nm,15.0s
VORD Divnogorie 45.64 313 *e*P **P** **03 41 08.9 -0.3**
VORD pmax pmax
comp=Z,10.0nm,0.9s
KELT Kelkit 45.72 298 P **P** **03 41 12.5 +2.3**
VSR Storozhevoye 45.74 314 *e*P **P** **03 41 10.4 +0.4**
VSR pmax pmax
comp=Z,26nm,1.5s
VORR Voronezh 45.76 314 *e*P **P** **03 41 11.2 +1.1**
VORR pmax pmax
comp=Z,54nm,0.4s
LPSR Galich'ya Gora 46.02 315 *e*P **P** **03 41 12.7 +0.5**

LPSR pmax pmax
comp=Z,28nm,0.9s
ARPR Arapgir-MALATY 46.54 297 P **P** **03 41 17.1 +0.4**
ARPR IAmb IAmb 03 41 21.8
comp=Z,21nm,1.3s
ARPR Arapgir-MALATY 46.54 297 P **P** **03 41 19.1 +2.4**
ANN Anapa 46.75 305 *e*P **P** **03 41 18.1 +0.1**
ANN pmax pmax
comp=Z,58nm,1.0s
MOS Moscow 47.18 320 *e*P **P** **03 41 22.4 +1.2**
MOS pmax pmax
comp=Z,35nm,0.9s
KLMR Klimovskoe 47.21 327 *e*P **P** **03 41 20.6 -0.7**
KLMR *e* 03 43 10.3
KLMR pmax pmax
comp=Z,37nm,1.0s
OBN Obninsk 47.70 319*c i*P **P** **03 41 25.9 +0.7**
OBN *i* 03 43 15.9
OBN pmax pmax
comp=Z,34nm,1.4s
OBN Obninsk 47.70 319 P **P** **03 41 26.4 +1.2**
comp=Z,22nm,1.4s
TOKA Tokat 47.81 299 P **P** **03 41 26.3 -0.2**
TOKA IAmb IAmb 03 41 30.6
comp=Z,15nm,1.1s
ANDN Andirin 48.31 295 P **P** **03 41 32.2 +1.8**
BNN Bunyan 48.50 297 **P** **03 41 31.2 -0.7**
SEY Seymchan 48.84 31⇑*e*P **P** **03 41 32.8 -1.1**
SEY pmax pmax
comp=Z,3.0nm,0.9s
KIRS Kirsehir-Merke 49.94 297 ⇑P **P** **03 41 44.7 +1.8**
BR131 Keskin Array S 50.06 298 ⇑*i*P **P** **03 41 44.6 +0.8**
BR131 Keskin Array S 50.06 298 **P** **03 41 43.3 -0.5**
BRTR Keskin Array B 50.06 298 P **P** **03 41 43.8 0.0**
comp=Z,3.5nm,0.9s,baz=97,slow=5.8,SNR=18
comp=Z,3.5nm,0.9s
BRTR Keskin Array B 50.06 298*ce*P **P** **03 41 44.4 +0.6**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BR106 Keskin Array S 50.07 298 P **P** **03 41 44.8 +0.9**
comp=Z,38nmcomp=Z,5.3nm,1.0s
BR105 Keskin Array S 50.08 298 P **P** **03 41 44.8 +0.9**
comp=Z,50nmcomp=Z,6.6nm,1.1s
PETK Petropavlovsk- 50.39 44 P **P** **03 41 45.1 -0.8**
comp=Z,2.5nm,0.6s,baz=277,slow=6.9,SNR=3.6
PETK LR LR 04 05 10.0
comp=Z,54nm,18.5s,baz=247,slow=39
comp=Z,2.5nm,0.6s
PETK Petropavlovsk- 50.39 44 P **P** **03 41 46.2 +0.2**
PETK Petropavlovsk- 50.39 44 P **P** **03 41 46.2 +0.2**
PET Petropavlovsk 50.97 44 *i* P **P** **03 41 49.7 -0.5**
PET pmax pmax
comp=Z,58nm,1.3s
LVZ Lovozero 51.10 335⇓*e*P **P** **03 41 51.7 +0.6**
LVZ pmax pmax
comp=Z,11nm,1.1s
EIL Elat 51.24 285 LR LR 04 05 52.1
comp=Z,77nm,18.2s,baz=92,slow=39
MDUB Mudurnu 51.78 300 **P** **03 41 56.3 -0.4**
BAL3X Bal3x, Balta 51.96 309 P **P** **03 41 58.4 +0.6**
SAHE Sakarya_HENDEK 51.98 300 ⇑P **P** **03 41 59.4 +1.4**
AK09 Malin Array Si 51.98 313 P **P** **03 41 58.5 +0.6**
AK08 Malin Array Si 52.00 313 P **P** **03 41 58.5 +0.5**
AK10 Malin Array Si 52.00 313 P **P** **03 41 58.4 +0.4**
AKASG Malin Array Be 52.01 313 P **P** **03 41 57.3 -0.8**
comp=Z,9.1nm,1.0s,baz=80,slow=6.5,SNR=23
comp=Z,9.1nm,1.0s
AKASG Malin Array Be 52.01 313*ce*P **P** **03 41 58.2 +0.1**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG Malin Array Be 52.01 313 P **P** **03 41 58.0 -0.2**
AKBB Malin Array Si 52.01 313⇑*e*P **P** **03 41 58.4 +0.3**
AKBB pmax pmax
comp=Z,21nm,1.0s
AKBB Malin Array Si 52.01 313 **P** **03 41 57.5 -0.6**
AKBB IAmb IAmb 03 42 00.8
comp=Z,15nm,0.9s
AKBB Malin Array Si 52.01 313 P **P** **03 41 58.6 +0.5**
KIEV Kiev 52.02 313 ⇑P **P** **03 41 59.1 +0.9**
KIEV Kiev 52.02 313 P **P** **03 41 58.8 +0.6**
KIEV Kiev 52.02 313 P **P** **03 41 58.4 +0.2**
comp=Z,63nm,1.2s
AK04 Malin Array Si 52.05 313 P **P** **03 41 58.7 +0.3**
MNK Minsk 52.69 318 *i* P **P** **03 42 03.6 +0.6**
MNK comp=E,17nm,1.0s *i* P **P** **03 42 03.6 +0.6**
MNK comp=N,17nm,1.0s *i* P **P** **03 42 03.6 +0.6**
MNK comp=Z,17nm,1.2s,baz=88 *i* PP **PP** **03 44 03.9 +1.8**
MNK *i* PPP PPP 03 45 07.4
MNK *i* S **S** **03 49 31.7 +1.5**
MNK *i* SS **SS** **03 53 10.7 +2.3**
MNK *i* SSS SSS 03 54 59.0
MNK *i* LQ LQ 04 01 35.8
MNK *i* LR LR 04 04 45.9
MNK *i* LRM MLR 04 08 05.8
comp=Z,21nm,17.9s
MNK Minsk 52.69 318 *i* P **P** **03 42 03.6 +0.6**
MNK *i* 03 44 03.8
MNK *i* PPP PPP 03 45 07.3
MNK *i* S **S** **03 49 31.7 +1.5**
MNK *i* SS **SS** **03 53 10.6 +2.3**
MNK *i* SSS SSS 03 54 58.9
MNK pmax pmax
comp=N,17nm,1.0s
MNK pmax pmax
comp=Z,17nm,1.2s
MNK pmax pmax
comp=E,17nm,1.0s
MNK MLR MLR
comp=Z,21nm,18.0s
MNK MLR MLR
comp=N,18nm,14.0s
SORM Soroca 52.78 310 ⇓P **P** **03 42 03.8 0.0**
SORM Soroca 52.78 310 P **P** **03 42 03.9 0.0**
comp=N,11nm,1.3s
MI28 Mi28,Pidlybu 52.98 313 P **P** **03 42 05.1 -0.2**
LUBAR Lubar, Ukraine 53.00 312 P **P** **03 42 05.3 -0.2**
VSU Vasula 53.31 323⇓*i*P **P** **03 42 07.7 +0.1**
VSU pmax pmax
comp=Z,22nm,0.9s
NACGM Naroch 53.32 318 *e*P **P** **03 42 08.3 +0.6**
comp=Z,18nm,1.2s,baz=88
ELL Elmali 53.52 295 P **P** **03 42 09.6 -0.1**
ELL pmax pmax
comp=Z,19nm,0.8s
ELL Elmali 53.52 295 **P** **03 42 09.6 -0.1**
FINES FINESS Array B 53.73 326 P **P** **03 42 10.2 -0.5**
comp=Z,1.7nm,0.5s,baz=92,slow=5.6,SNR=19
comp=Z,1.7nm,0.5s
FINES FINESS Array B 53.73 326 *i* P **P** **03 42 10.8 +0.2**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 53.73 326 P **P** **03 42 11.1 +0.5**
KMPD K-Podol'skiy 53.99 310 P **P** **03 42 12.0 -0.7**
RNPP9 Sopachiv 54.06 314 P **P** **03 42 14.0 +0.8**
RNPP5 Staryi Chortor 54.08 314 P **P** **03 42 14.1 +0.7**
VRI Vrincioaia 54.16 307 ⇑P **P** **03 42 15.1 +1.0**
PLOR Plostina 54.22 307 ⇓P **P** **03 42 16.2 +1.7**
ONER Baraj Valea Uz 54.32 308 ⇑P **P** **03 42 16.7 +1.5**
BIZ Bicaz 54.43 308 ⇑P **P** **03 42 17.2 +1.2**
TURR Turia 54.62 307 ⇑P **P** **03 42 19.7 +2.2**
ARCES ARCESS Array B 54.70 336 P **P** **03 42 17.2 -0.4**
comp=Z,1.3nm,0.9s,baz=82,slow=8.7,SNR=5.6
ARCES PcP **PcP** **03 43 21.1 +0.9**
comp=Z,0.8nm,0.8s,baz=77,slow=5.3,SNR=3.8
comp=Z,1.3nm,0.9s
ARCES ARCESS Array B 54.70 336 P **P** **03 42 17.8 +0.2**
ARCES IAmb IAmb 03 42 34.4
comp=Z,20nm,1.9s
ARCES **PcP** **03 43 20.3 +0.1**
MLR Muntele Rosu 54.76 307 ⇑P **P** **03 42 21.0 +2.4**
MLR Muntele Rosu 54.76 307 P **P** **03 42 18.5 -0.1**
MLR pmax pmax
comp=Z,27nm,1.1s
MLR Muntele Rosu 54.76 307 **P** **03 42 18.5 -0.1**
MLR Muntele Rosu 54.76 307 P **P** **03 42 20.2 +1.6**
comp=Z,292nmcomp=Z,26nm,1.3s
PABE Paberze 54.90 319 **P** **03 42 19.2 -0.1**
BURAR Bucovina Array 54.94 309 ⇑P **P** **03 42 21.3 +1.5**
BURAR Bucovina Array 54.94 309 P **P** **03 42 20.2 +0.4**
BURAR Bucovina Array 54.94 309 **P** **03 42 19.2 -0.6**
BUR08 Bucovina Ar. S 54.94 309 P **P** **03 42 19.6 -0.2**

BUR08 IAmb IAmb 03 43 34.9
comp=Z,18nm,1.9s
BILL Bilibino 55.37 26⇑*e*P **P** **03 42 22.5 0.0**
BILL pmax pmax
comp=Z,16nm,1.8s
ALN Alexandroupoli 55.55 301 P **P** **03 42 24.3 +0.2**
ALN pmax pmax
comp=Z,19nm,1.2s
ALN Alexandroupoli 55.55 301 **P** **03 42 24.3 +0.2**
ALN IAmb IAmb 03 42 26.1
comp=Z,19nm,1.2s
ARR Arges 55.69 307 ⇑P **P** **03 42 26.2 +0.9**
RDO Rodhopi 55.87 301 P **P** **03 42 25.7 -0.8**
RDO IAmb IAmb 03 42 28.4
comp=Z,16nm,1.3s
KWP Kalwaria Pacla 56.29 312 *e*P **P** **03 42 30.7 +1.3**
KWP Kalwaria Pacla 56.29 312 P **P** **03 42 30.1 +0.7**
comp=Z,28nm,1.4s
MARR Marisel-Cluj 56.50 308 ⇑P **P** **03 42 32.3 +1.2**
KOLS Kolonicke sedl 56.68 311 *e*P **P** **03 42 33.7 +1.5**
KOLS Kolonicke sedl 56.68 311 *e*P **P** **03 42 33.6 +1.4**
DRGR 56.76 309 ⇑P **P** **03 42 34.3 +1.5**
MDVR Moldovita 57.84 306 ⇑P **P** **03 42 41.6 +1.2**
NIE Niedzica 57.87 312 *e*P **P** **03 42 42.9 +2.3**
NIE Niedzica 57.87 312 P **P** **03 42 42.2 +1.6**
comp=Z,3.2nm,1.4s
OJC Ojcow 58.05 313 *e*P **P** **03 42 43.6 +1.8**
OJC Ojcow 58.05 313 P **P** **03 42 41.1 -0.7**
OJC Ojcow 58.05 313 **P** **03 42 41.1 -0.7**
VYHS Vyhne 59.00 311 *e*P **P** **03 42 48.9 +0.4**
VYHS Vyhne 59.00 311 *e*P **P** **03 42 48.9 +0.4**
MAUC Maruska 59.47 312 *e*P **P** **03 42 54.7 +3.0**
MORC Moravsky Berou 59.56 313 P **P** **03 42 52.0 -0.4**
MORC pmax pmax
comp=Z,20nm,1.7s
MORC Moravsky Berou 59.56 313 **P** **03 42 52.0 -0.4**
MORC IAmb IAmb 03 42 54.7
comp=Z,20nm,1.7s
MORC Moravsky Berou 59.56 313 *e*P **P** **03 42 53.2 +0.8**
MORH Mrgy, Hungar 59.62 309 ⇑P **P** **03 42 53.6 +0.8**
JAVC Velka Javorina 59.67 312 *e*P **P** **03 42 55.0 +1.8**
HFS Hagfors 59.86 325 P **P** **03 42 54.1 -0.1**
comp=Z,5.8nm,1.0s,baz=66,slow=7.0,SNR=5.3
comp=Z,5.8nm,1.0s
KRLC Kraliky 59.98 313 *e*P **P** **03 42 56.8 +1.5**
KRLC Kraliky 59.98 313 *e*P **P** **03 42 56.8 +1.5**
KSP Ksiaz 60.12 314 *e*P **P** **03 42 57.4 +1.2**
KSP Ksiaz 60.12 314 P **P** **03 42 57.4 +1.2**
comp=Z,3.5nm,1.5s
MPLH Magyarpolny 60.14 310 P **P** **03 42 57.4 +1.1**
comp=Z,14nm,0.9s
DPC Dobruska-Polom 60.21 314 *e*P **P** **03 42 58.7 +1.9**
DPC Dobruska-Polom 60.21 314 *e*P **P** **03 42 58.7 +1.9**
DPC Dobruska-Polom 60.21 314 P **P** **03 42 58.2 +1.4**
comp=Z,5.9nm,1.0s
VRAC Vranov 60.27 312 *e*P **P** **03 42 58.4 +1.2**
CHVC Chvalec 60.32 314 *e*P **P** **03 42 59.9 +2.3**
CHVC Chvalec 60.32 314 *e*P **P** **03 42 59.9 +2.3**
KRUC Moravsky 60.45 312 *e*P **P** **03 42 59.7 +1.3**
NORES NORESS Array B 60.81 326 P **P** **03 43 02.3 +1.6**
RONA Rosalia, Austr 60.83 311 *e*P **P** **03 43 01.4 +0.3**
comp=Z,4.3nm,0.7s
NB2 NORSAR Subarra 60.91 326 P **P** **03 43 01.5 +0.1**
comp=Z,12nm,1.2s,baz=80,slow=6.9
NOA NORSAR Array B 60.91 326 P **P** **03 43 01.3 -0.1**
comp=Z,2.8nm,0.8s,baz=80,slow=6.5,SNR=4.5
NOA LR LR 04 11 33.0
comp=Z,34nm,18.4s,baz=95,slow=38
comp=Z,2.8nm,0.8s
CONA Conrad Observa 61.06 311 *i* P **P** **03 43 03.3 +0.6**
comp=Z,13nm,1.0s,SNR=6.2
ARSA Arzberg 61.45 310 *e*P **P** **03 43 05.6 +0.3**
comp=Z,1.4nm,0.6s
BRG Berggiesshubel 61.56 315 *e*P **P** **03 43 06.8 +0.8**
BRG Amp 03 43 08.2
comp=Z,5.7nm,1.1s
GCIS Gornji Cirnik 61.74 309 *e*P **P** **03 43 07.8 +0.5**
ZVC Zvikov 61.76 313 *e*P **P** **03 43 09.1 +1.8**
CKRC Cesky Krumlov 61.84 312 *e*P **P** **03 43 09.5 +1.6**
CKRC Cesky Krumlov 61.84 312 *e*P **P** **03 43 09.5 +1.6**
CRES Cresnjevec Ost 61.87 309 *e*P **P** **03 43 08.6 +0.5**
PERS Pernice 61.88 310 *i* P **P** **03 43 08.8 +0.6**
SOKA Soboth 61.93 310 *i* P **P** **03 43 07.8 -0.8**
comp=Z,4.4nm,0.9s,SNR=6.7
LODK Lodwar 61.99 257 **P** **03 43 09.3 -0.1**
LODK IAmb IAmb 03 43 11.8
comp=Z,4.7nm,0.9s
SESA Seetaler Alpe, 62.12 310 *e*P **P** **03 43 10.0 -0.1**
comp=Z,1.7nm,0.6s
MOA Molln 62.12 311 *e*P **P** **03 43 09.8 0.0**
comp=Z,5.6nm,1.2s
GEC2 GERESS Array S 62.22 312 **P** **03 43 09.9 -0.7**
GERES GERESS Array B 62.22 312 P **P** **03 43 11.0 +0.5**
comp=Z,2.1nm,0.7s,baz=71,slow=5.8,SNR=20
comp=Z,2.1nm,0.7s
GERES GERESS Array B 62.22 312 P **P** **03 43 11.5 +0.9**
GERES GERESS Array B 62.22 312 **P** **03 43 11.5 +0.9**
KHC Kasperske Hory 62.23 313 *e*P **P** **03 43 11.8 +1.3**
KHC Kasperske Hory 62.23 313 *e*P **P** **03 43 11.8 +1.3**
OBKA Obir 62.29 310 *e*P **P** **03 43 11.1 0.0**
comp=Z,4.3nm,1.3s
BIOA Bad Ischl, Aus 62.57 311 *e*P **P** **03 43 13.2 +0.4**
comp=Z,0.5nm,0.2s
WRAB Tennant Creek 62.83 138⇓*e*P **P** **03 43 14.9 +0.1**
WRAB pmax pmax
comp=Z,32nm,3.1s
WRA Warramunga Arr 62.83 138 P **P** **03 43 14.3 -0.5**
comp=Z,2.3nm,0.8s,baz=324,slow=8.2,SNR=15
comp=Z,2.3nm,0.8s
WRA Warramunga Arr 62.83 138 *i* P **P** **03 43 15.1 +0.3**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 62.83 138 P **P** **03 43 15.1 +0.3**
KBA Koelnbreinsper 62.93 311 *e*P **P** **03 43 15.2 -0.2**
comp=Z,3.4nm,0.9s
TRI Trieste 63.04 309 P **P** **03 43 15.9 0.0**
TRI pmax pmax
comp=Z,11nm,1.0s
TRI Trieste 63.04 309 **P** **03 43 15.9 0.0**
TRI IAmb IAmb 03 43 17.1
comp=Z,11nm,1.0s
SABO M.te Sabotino 63.07 309 **P** **03 43 16.2 0.0**
LESA Schwarzleotal 63.27 311 *i* P **P** **03 43 17.4 -0.1**
comp=Z,7.9nm,1.1s,SNR=6.5
ABTA Abfaltersbach 63.57 310 *e*P **P** **03 43 19.0 -0.6**
comp=Z,0.9nm,0.6s
CEL Celeste 63.81 301 **P** **03 43 21.1 -0.1**
CEL Celeste 63.81 301 P **P** **03 43 21.6 +0.4**
comp=Z,29nm,1.1s
WTTA Wattenberg 63.99 311 *e*P **P** **03 43 22.2 -0.3**
comp=Z,7.7nm,1.2s
WATA Walderalm 64.01 311 *e*P **P** **03 43 22.5 0.0**
comp=Z,0.2nm,0.2s
INTR Introdacqua 64.05 305 **P** **03 43 22.6 -0.2**
INTR IAmb IAmb 03 43 31.8
comp=Z,13nm,1.1s
SQTA Sankt Quirin 64.29 311 *e*P **P** **03 43 24.6 +0.3**
comp=Z,0.8nm,0.4s
FDMO Fiordimonte 64.31 306 **P** **03 43 24.1 -0.2**
FDMO IAmb IAmb 03 43 26.1
comp=Z,7.2nm,1.1s
MOTA Moosalm 64.32 311 *e*P **P** **03 43 23.9 -0.7**
comp=Z,0.2nm,0.3s
RETA Reutte 64.50 312 *e*P **P** **03 43 25.4 -0.2**
comp=Z,5.6nm,0.9s
MURB Monte Urbino 64.62 307 P **P** **03 43 26.6 +0.1**
FETA Feichten 64.66 311 *i* P **P** **03 43 26.4 -0.4**
comp=Z,6.7nm,1.1s,SNR=6.3
GAMB Gambell 64.79 29 P **P** **03 43 26.8 -0.3**
baz=288
DAVA Damuels 65.13 312 *e*P **P** **03 43 29.8 0.0**
comp=Z,0.8nm,0.5s
ASAR Alice Springs 65.52 140 P **P** **03 43 31.8 -0.7**
comp=Z,2.5nm,0.7s,baz=324,slow=6.3,SNR=22
comp=Z,2.5nm,0.7s
ASAR Alice Springs 65.52 140 P **P** **03 43 32.6 +0.1**
ASAR Alice Springs 65.52 140 P **P** **03 43 32.5 +0.1**
TUE Stuetta 65.73 311 **P** **03 43 33.3 -0.6**
TUE IAmb IAmb 03 43 46.1
comp=Z,14nm,1.6s
TUE Stuetta 65.73 311 P **P** **03 43 34.2 +0.4**
comp=Z,21nm,1.0s
TNA Tin City 65.76 27 P **P** **03 43 33.2 -0.2**
baz=290
C16K Lisburne Hills 65.76 24 P **P** **03 43 32.9 -0.4**

baz=291
F14K **Arctic Creek** 66.41 27 P P 03 43 36.4 -1.1
baz=291
A19K **Wainwright** 66.44 21 P P 03 43 37.0 -0.6
baz=294
C17K **DeLong Mountai** 66.44 23 P P 03 43 37.4 -0.4
baz=293
RDOG **Red Dog Mine** 66.69 24 P P 03 43 38.4 -0.9
baz=293
D17K **Noatak River** 66.77 24 P P 03 43 38.8 -1.0
baz=293
F15K **North Star Dit** 66.97 26 P P 03 43 39.9 -1.3
baz=293
C18K **Utukok River** 67.03 23 P P 03 43 40.5 -1.1
baz=294
SENIN **Lac Senin/Sane** 67.11 311 P 03 43 42.2 -0.4
SENIN IAmb IAmb 03 43 48.3
comp=Z,6.5nm,0.9s
ANM **Nome** 67.13 27 P P 03 43 41.2 -0.9
baz=292
A21K **Barrow** 67.28 19 P P 03 43 42.5 -0.5
baz=297
C19K **Lookout Ridge** 67.37 22 P P 03 43 42.3 -1.4
baz=296
E17K **Hotham Inlet** 67.47 24 P P 03 43 43.0 -1.2
baz=294
G15K **Niukluk** 67.49 27 P P 03 43 43.3 -1.1
baz=293
SPIA **Saint Paul Isl** 67.67 36 P P 03 43 44.8 -0.9
baz=292
B20K **Meade River** 67.73 21 P P 03 43 44.9 -1.0
baz=297
F17K **Baldwin Pennin** 67.94 25 P P 03 43 46.2 -1.0
baz=295
G16K **Koyuk River** 67.97 26 P P 03 43 46.6 -0.9
baz=295
D19K **Kuna River** 68.12 22 P P 03 43 47.1 -1.3
baz=297
H16K **Elim** 68.34 27 P P 03 43 48.8 -0.9
baz=295
M11K **Mekoryuk** 68.40 32 P P 03 43 49.4 -0.8
baz=293
F18K **Selawik** 68.45 24 P P 03 43 50.0 -0.4
baz=296
K13K **Kusilvak Mount** 68.47 30 P P 03 43 49.8 -0.8
baz=294
D20K **Etivluk River** 68.51 22 P 03 43 50.9 +0.1
D20K **Etivluk River** 68.51 22 P P 03 43 49.5 -1.3
baz=298
G17K **Kiwalik Mounta** 68.57 26 P P 03 43 50.4 -0.8
baz=296
J14K **Nanvaranak Lak** 68.60 29 P P 03 43 50.6 -0.8
baz=295
B22K **Teshekpuk Lake** 68.68 20 P P 03 43 51.5 -0.3
baz=301
B21K **Ikpikpuk River** 68.69 21 P P 03 43 51.3 -0.6
baz=300
E20K **Nigu River** 68.86 22 P P 03 43 52.5 -0.6
baz=299
C21K **Knifeblade Rid** 68.87 21 P P 03 43 52.2 -0.8
baz=300
E19K **Redstone River** 68.90 23 P P 03 43 52.8 -0.5
baz=298
F19K **Shaleruckik Mo** 69.01 24 P P 03 43 53.0 -0.9
baz=298
H17K **Granite Mounta** 69.10 26 P P 03 43 53.3 -1.3
baz=297
G18K **Tagagawik** 69.13 25 P P 03 43 53.7 -1.1
baz=298
I17K **Unalakleet** 69.27 27 P P 03 43 54.2 -1.4
baz=297
E21K **Killik River** 69.48 22 P P 03 43 55.8 -1.1
baz=301
L14K **Kuka Creek** 69.57 30 P P 03 43 56.7 -0.8
baz=296
J16K **Anvik River** 69.58 28 P P 03 43 57.0 -0.5
baz=297
H18K **Honhosa River** 69.59 26 P P 03 43 56.9 -0.6
baz=298
KEST **Kesra** 69.60 300 P P 03 43 57.9 -0.4
comp=Z,8.0nm,1.1s,baz=67,slow=6.5,SNR=7.9
comp=Z,8.0nm,1.1s
KEST **Kesra** 69.60 300 P 03 43 58.1 -0.2
F20K **Avaraart Lake** 69.61 23 P P 03 43 56.8 -0.8
baz=300
K15K **Wolf Creek Mou** 69.64 29 P P 03 43 57.0 -1.0
baz=296
M13K **Dall Lake** 69.68 31 P P 03 43 57.7 -0.5
baz=296
C23K **Itkillik River** 69.77 20 P 03 43 59.0 +0.4
C23K **Itkillik River** 69.77 20 P P 03 43 58.2 -0.3
baz=303
L15K **Ungalak Mounta** 69.94 30 P P 03 43 58.8 -0.9
baz=297
H19K **Roundabout Mou** 70.11 25 P P 03 44 01.0 +0.3
H19K **Roundabout Mou** 70.11 25 P P 03 44 00.4 -0.4
baz=300
J17K **VABM Dome** 70.14 27 P P 03 44 00.9 -0.1
baz=298
M14K **Bethel** 70.15 31 P P 03 44 00.9 -0.1
baz=297
D23K **Nanushuk River** 70.23 20 P 03 44 01.1 -0.3
D23K **Nanushuk River** 70.23 20 P P 03 44 01.3 -0.2
baz=303
F21K **Alatna River** 70.28 23 P P 03 44 01.6 -0.2
F21K IAmb IAmb 03 44 09.3
comp=Z,9.8nm,1.4s
F21K **Alatna River** 70.28 23 P P 03 44 01.3 -0.5
baz=302
E22K **Anaktuvuk Pass** 70.33 21 P P 03 44 01.7 -0.5
baz=303
F22K **John River** 70.55 22 P P 03 44 03.0 -0.4
baz=303
G21K **Allakaket** 70.64 23 P P 03 44 02.9 -1.1
baz=302
N14K **Kuskokwak Cree** 70.64 31 P P 03 44 02.8 -1.3
baz=297
D24K **Happy Valley** 70.67 20 P P 03 44 03.3 -0.8
baz=305
H20K **Anotleneega Mo** 70.69 24 P P 03 44 03.5 -0.9
baz=301
M15K **Kasigluk River** 70.73 30 P P 03 44 04.0 -0.6
baz=298
TOLK **Toolik Lake Re** 70.74 20 P P 03 44 04.0 -0.7
baz=304
L16K **Owhat River** 70.77 29 P P 03 44 03.9 -1.0
baz=298
K17K **Iditarod** 70.77 28 P P 03 44 05.1 +0.2
K17K **Iditarod** 70.77 28 P P 03 44 04.3 -0.5
baz=299
UNV **Unalaska Valle** 70.95 38 P P 03 44 05.7 -0.4
baz=295
J18K **Innoko River** 71.03 27 P 03 44 06.7 +0.2
J18K IAmb IAmb 03 44 07.7
comp=Z,8.3nm,1.1s
J18K **Innoko River** 71.03 27 P P 03 44 05.5 -1.0
baz=300
L17K **Donlin** 71.06 28 P P 03 44 05.4 -1.2
baz=299
E23K **Chandalar** 71.06 21 P P 03 44 04.5 -2.1
baz=305
G22K **Bettles** 71.09 22 P P 03 44 06.1 -0.6
baz=303
J19K **Poorman** 71.19 26 P 03 44 07.6 +0.2
J19K **Poorman** 71.19 26 P P 03 44 06.6 -0.8
baz=301
N15K **Kwethluk River** 71.24 31 P P 03 44 07.0 -0.8
baz=298
D25K **Kavik River** 71.28 19 P P 03 44 07.9 0.0
D25K IAmb IAmb 03 44 09.4
comp=Z,6.9nm,1.1s
D25K **Kavik River** 71.28 19 P P 03 44 07.1 -0.8
baz=307
M16K **Timber Creek** 71.32 30 P P 03 44 07.0 -1.2
baz=299
C26K **Camden Bay** 71.32 18 P P 03 44 07.8 -0.3
baz=308
H21K **Melozitna River** 71.34 24 P P 03 44 08.3 0.0
H21K IAmb IAmb 03 44 09.8
comp=Z,13nm,1.4s
H21K **Melozitna River** 71.34 24 P P 03 44 06.9 -1.3
baz=303,SNR=5.6
COLD **Coldfoot** 71.35 22 P P 03 44 07.3 -1.0
baz=304
E24K **Your Creek** 71.40 21 P P 03 44 08.6 0.0
E24K IAmb IAmb 03 44 10.3
comp=Z,6.7nm,1.0s
E24K **Your Creek** 71.40 21 P P 03 44 08.2 -0.5
baz=306
J20K **Nowinta River** 71.65 25 P 03 44 09.9 -0.2
J20K IAmb IAmb 03 44 12.6
comp=Z,21nm,1.6s
J20K **Nowinta River** 71.65 25 P P 03 44 09.8 -0.3
baz=302,SNR=5.2
N16K **Nishlik Lake** 71.67 30 P P 03 44 09.2 -1.1
baz=299
L18K **Granite Mounta** 71.67 28 P P 03 44 09.7 -0.6
baz=300
G23K **Bananza Creek** 71.70 22 P P 03 44 09.6 -0.8
baz=305
H22K **Ishtalitna Cre** 71.70 23 P 03 44 10.3 -0.2
H22K IAmb IAmb 03 44 12.8
comp=Z,12nm,1.4s
H22K **Ishtalitna Cre** 71.70 23 P P 03 44 10.4 -0.1
baz=304
M17K **Holitna River** 71.78 29 P P 03 44 10.5 -0.5
M17K IAmb IAmb 03 44 16.1
comp=Z,13nm,1.1s
M17K **Holitna River** 71.78 29 P P 03 44 10.1 -0.9
baz=300
O15K **Ungalikthiuk R** 71.83 31 P P 03 44 10.9 -0.4
baz=299
C27K **Jago River** 71.83 18 P P 03 44 11.9 +0.7
C27K IAmb IAmb 03 44 16.1
comp=Z,8.4nm,1.0s
C27K **Jago River** 71.83 18 P P 03 44 10.5 -0.6
baz=305
F24K **Squaw Lake** 71.91 21 P P 03 44 11.5 -0.2
baz=306
K20K **Telida** 72.11 26 P P 03 44 13.2 +0.2
K20K IAmb IAmb 03 44 15.6
comp=Z,15nm,1.4s
K20K **Telida** 72.11 26 P P 03 44 12.5 -0.5
baz=302
E25K **Arctic Village** 72.25 20 P P 03 44 13.5 -0.2
E25K IAmb IAmb 03 44 16.0
comp=Z,16nm,1.6s
E25K **Arctic Village** 72.25 20 P P 03 44 13.3 -0.5
baz=308
N17K **Nushagak Hills** 72.32 30 P P 03 44 13.8 -0.5
N17K IAmb IAmb 03 44 20.2
comp=Z,9.2nm,1.4s
N17K **Nushagak Hills** 72.32 30 P P 03 44 13.9 -0.3
baz=300
H23K **Yukon River** 72.37 23 P P 03 44 14.0 -0.5
baz=305
M18K **Stony River** 72.40 28 P P 03 44 14.4 -0.3
baz=301
O16K **Kokwok River B** 72.40 31 P 03 44 14.2 -0.5
O16K IAmb IAmb 03 44 16.8
comp=Z,16nm,1.4s
O16K **Kokwok River B** 72.40 31 P P 03 44 14.4 -0.3
baz=300
MLY **Manley** 72.41 24 P P 03 44 14.3 -0.5
baz=304
L19K **White Mountain** 72.43 27 P 03 44 15.1 +0.2
L19K IAmb IAmb 03 44 20.2
comp=Z,9.2nm,1.1s
L19K **White Mountain** 72.43 27 P P 03 44 14.4 -0.5
baz=302
CHUM **Lake Minchumin** 72.48 25 P P 03 44 15.1 -0.1
baz=304
SUMG **Summit** 72.52 347 P P 03 44 15.4 -0.3
SUMG pmax pmax
comp=Z,8.0nm,1.2s
SUMG **Summit** 72.52 347 P P 03 44 15.4 -0.3
SUMG IAmb IAmb 03 44 19.0
comp=Z,8.0nm,1.2s
G24K **Hadweenzic Riv** 72.53 22 P P 03 44 14.5 -0.9
baz=307
CEST **Esterri de Car** 72.55 309 P 03 44 15.9 -0.2
CEST IAmb IAmb 03 44 19.1
comp=Z,8.2nm,1.1s
F25K **Christian Rive** 72.55 20 P 03 44 14.7 -0.9
F25K **Christian Rive** 72.55 20 P P 03 44 14.7 -0.9
baz=308,SNR=5.8
P16K **Nushagak River** 72.73 31 P P 03 44 15.9 -0.7
baz=300
O17K **Koliganek Bris** 72.75 30 P P 03 44 16.3 -0.4
baz=301
M19K **Big River Lodg** 72.76 28 P P 03 44 16.3 -0.6
baz=302
N18K **Kilae Creek** 72.79 29 P P 03 44 16.6 -0.5
baz=301
I23K **Minto, Yukon-K** 72.82 23 P P 03 44 16.8 -0.3
baz=306
D27M **Malcolm River** 72.82 18 P P 03 44 16.7 -0.5
baz=312
CAST **Castle Rocks** 72.83 26 P P 03 44 17.7 +0.4
CAST IAmb IAmb 03 44 19.6
comp=Z,14nm,1.4s
CAST **Castle Rocks** 72.83 26 P P 03 44 16.9 -0.4
baz=304,SNR=7.7
H24K **Noodor Dome** 72.91 22 P P 03 44 17.1 -0.6
baz=307
F26K **Sheenjek River** 72.94 20 P P 03 44 17.2 -0.6
baz=309
PPLA **Purkeypile** 73.08 26 P P 03 44 18.9 0.0
PPLA **Purkeypile** 73.08 26 P P 03 44 18.3 -0.6
baz=304,SNR=5.7
NEA2 **Nenana** 73.25 24 P P 03 44 19.7 0.0
NEA2 **Nenana** 73.25 24 P P 03 44 18.7 -1.0
baz=306
M20K **Styx River** 73.28 27 P P 03 44 19.0 -1.0
M20K IAmb IAmb 03 44 26.5
comp=Z,15nm,1.3s
M20K **Styx River** 73.28 27 P P 03 44 19.1 -0.9
baz=303
N19K **Bonanza Creek** 73.31 29 P P 03 44 19.3 -0.9
baz=302
P17K **Kvichak River** 73.33 31 P P 03 44 19.4 -0.9
baz=301
D28M **Stokes Point** 73.35 17 P P 03 44 19.3 -0.8
baz=314
E27K **Coleen River** 73.35 19 P 03 44 20.5 +0.2
E27K IAmb IAmb 03 44 22.0
comp=Z,8.7nm,1.2s
E27K **Coleen River** 73.35 19 P P 03 44 19.9 -0.4
baz=311,SNR=7.4
S14K **Fog Glacier** 73.37 34 P P 03 44 19.5 -1.1
baz=300
SDPT **Sand Point** 73.38 35 P P 03 44 19.3 -1.3
baz=299
TRF **Thorofare Moun** 73.48 25 P P 03 44 19.8 -1.5
baz=305
POKR **Poker Plat Res** 73.50 23 P P 03 44 20.6 -0.6
baz=307
COLA **College** 73.50 23 P P 03 44 23.0 +1.9
COLA **College** 73.50 23 P P 03 44 20.6 -0.5
baz=307
O18K **Koktuh Hills** 73.52 30 P 03 44 21.3 -0.1
O18K IAmb IAmb 03 44 22.9
comp=Z,11nm,1.3s
O18K **Koktuh Hills** 73.52 30 P P 03 44 19.9 -1.5
baz=302
G26K **Porcupine Rive** 73.52 20 P P 03 44 20.8 -0.4
G26K IAmb IAmb 03 44 24.2
comp=Z,11nm,1.3s
G26K **Porcupine Rive** 73.52 20 P P 03 44 20.6 -0.6
baz=310
E28M **Babbage River** 73.64 18 P 03 44 21.9 0.0
E28M IAmb IAmb 03 44 24.1
comp=Z,14nm,1.4s
E28M **Babbage River** 73.64 18 P P 03 44 20.8 -1.1
baz=313,SNR=7.3
P18K **Big Mountain,** 73.76 30 P P 03 44 21.7 -1.1
baz=302
MCK **McKinley** 73.80 25 P P 03 44 21.8 -1.2
baz=306
L22K **Petersville** 73.83 26 P P 03 44 22.7 -0.5
L22K **Petersville** 73.83 26 P P 03 44 22.6 -0.6
baz=305,SNR=8.1
SKT **Skwentna** 73.85 27 P P 03 44 22.8 -0.5
SKT IAmb IAmb 03 44 25.3
comp=Z,15nm,1.4s
SKT **Skwentna** 73.85 27 P P 03 44 22.2 -1.1
baz=305
IL31 73.89 23 P P 03 44 22.8 -0.6
ILAR **Eielson Array** 73.89 23 P P 03 44 22.4 -1.0
comp=Z,2.0nm,0.9s,baz=290,slow=4.2,SNR=15
comp=Z,2.0nm,0.9s
ILAR **Eielson Array** 73.89 23 P P 03 44 23.0 -0.5
ILAR **Eielson Array** 73.89 23 P P 03 44 23.0 -0.5
RND **Reindeer** 74.03 25 P P 03 44 23.8 -0.6
RND pmax pmax 03 44 28.4
comp=Z,14nm,1.6s
RND **Reindeer** 74.03 25 P P 03 44 23.8 -0.6
RND IAmb IAmb 03 44 28.4
comp=Z,14nm,1.6s
Q17K **Contact Creek** 74.07 31 P P 03 44 24.1 -0.6
baz=302
CHNA **Chernabura Isl** 74.08 35 P P 03 44 23.8 -0.9
baz=300
CUT **Chulitna** 74.09 26 P P 03 44 24.1 -0.5
baz=306
HDA **Harding Lake** 74.09 23 P P 03 44 23.6 -1.0
baz=308
E29M **Blow River** 74.22 18 P 03 44 25.8 +0.5
E29M IAmb IAmb 03 44 27.7
comp=Z,18nm,1.5s
E29M **Blow River** 74.22 18 P P 03 44 24.0 -1.3
baz=314,SNR=7.8
F28M **Old Crow** 74.22 19 P P 03 44 26.6 +1.2
F28M **Old Crow** 74.22 19 P P 03 44 24.2 -1.2
baz=313,SNR=5.9
G27K **Doyon Strip** 74.25 20 P P 03 44 26.0 +0.4
G27K **Doyon Strip** 74.25 20 P P 03 44 24.8 -0.7
baz=312,SNR=6.6
Q18K **Katmai Hardscr** 74.25 31 P P 03 44 25.3 -0.5
baz=303
P19K **Oil Pt** 74.47 29 P P 03 44 26.3 -0.6
baz=304
WAT1 **Susitna Watana** 74.48 25 P P 03 44 26.5 -0.5
baz=307
O20K **Slope Mountain** 74.48 29 P P 03 44 26.1 -1.0
baz=304
J25K **Salcha River,** 74.50 23 P P 03 44 25.9 -1.2
J25K IAmb IAmb 03 44 26.2
comp=Z,15nm,1.9s
J25K **Salcha River,** 74.50 23 P P 03 44 26.0 -1.2
baz=309
M22K **Willow** 74.53 27 P P 03 44 26.5 -0.6
baz=306
H27K **Steamboat Moun** 74.68 20 P 03 44 27.6 -0.4
H27K **Steamboat Moun** 74.68 20 P P 03 44 27.7 -0.4
baz=312,SNR=12
CAPN **Captain Cook N** 74.69 28 P P 03 44 28.5 +0.4
baz=305
Q19K **Cape Douglas,** 74.69 30 P P 03 44 27.2 -1.1
baz=304
DHY **Denali Highway** 74.76 25 P 03 44 28.1 -0.7
DHY **Denali Highway** 74.76 25 P P 03 44 27.1 -1.7
baz=308
I26K **Coal Creek Min** 74.78 22 P P 03 44 28.2 -0.4
I26K **Coal Creek Min** 74.78 22 P P 03 44 28.5 -0.1
baz=311
K24K **Donnelly Dome** 74.87 24 P P 03 44 28.1 -1.2
K24K **Donnelly Dome** 74.87 24 P P 03 44 27.9 -1.3
baz=309
WAT6 **Susitna Watana** 74.93 25 P P 03 44 29.0 -0.8
baz=308
PMR **Palmer** 75.00 26 P P 03 44 32.0 +2.1
PMR **Palmer** 75.00 26 P P 03 44 29.5 -0.4
PMR pmax pmax
comp=Z,24nm,1.7s
PMR **Palmer** 75.00 26 P 03 44 29.5 -0.4
PMR IAmb IAmb 03 44 31.1
comp=Z,24nm,1.7s
PMR **Palmer** 75.00 26 P P 03 44 29.3 -0.6
baz=307
RC01 **Rabbit Creek A** 75.07 27 P P 03 44 30.0 -0.3
baz=306
I27K **Kandik River** 75.07 21 P 03 44 30.3 -0.1
I27K **Kandik River** 75.07 21 P P 03 44 30.1 -0.3
baz=312,SNR=14
HOM **Homer** 75.13 29 P P 03 44 30.3 -0.5
baz=305
SML **Sawmill** 75.18 26 P P 03 44 31.0 -0.1
SML IAmb IAmb 03 44 36.1
comp=Z,11nm,1.0s
SML **Sawmill** 75.18 26 P P 03 44 30.0 -1.1
baz=307
G29M **Pine Creek** 75.23 19 P 03 44 31.4 +0.2
G29M IAmb IAmb 03 44 33.5
comp=Z,14nm,1.2s
G29M **Pine Creek** 75.23 19 P P 03 44 30.5 -0.7
baz=315,SNR=6.7
RIDG **Independent Ri** 75.23 23 P P 03 44 30.8 -0.5
RIDG IAmb IAmb 03 44 32.4
comp=Z,7.7nm,1.1s
RIDG **Independent Ri** 75.23 23 P P 03 44 31.6 +0.3
baz=310
F30M **Barrier River** 75.34 18 P 03 44 31.4 -0.4
F30M **Barrier River** 75.34 18 P P 03 44 30.5 -1.3
baz=316,SNR=8.6
INK **Inuvik** 75.40 17 P P 03 44 31.8 -0.3
INK pmax pmax
comp=Z,6.0nm,1.0s
INK **Inuvik** 75.40 17 P 03 44 31.8 -0.3
INK **Inuvik** 75.40 17 P P 03 44 31.4 -0.7
baz=318
M23K **Glacier View** 75.42 26 P P 03 44 32.1 -0.3
baz=308
BRSE **Bradley Lake S** 75.46 28 P P 03 44 32.3 -0.4
baz=306
PAX **Paxson** 75.51 24 P P 03 44 31.9 -1.1
PAX pmax pmax
comp=Z,11nm,1.8s
PAX **Paxson** 75.51 24 P P 03 44 31.9 -1.1
PAX **Paxson** 75.51 24 P P 03 44 32.0 -0.9
baz=309
SCM **Sheep Creek Mo** 75.54 26 P P 03 44 33.2 0.0
baz=308
H29M **Whitestone** 75.62 20 P 03 44 33.0 -0.4
H29M IAmb IAmb 03 44 37.2
comp=Z,12nm,1.2s
H29M **Whitestone** 75.62 20 P P 03 44 32.7 -0.7
baz=314,SNR=8.5
G30M **tAoh Zrail Nji** 75.68 18 P 03 44 32.7 -1.1
G30M IAmb IAmb 03 44 36.0
comp=Z,18nm,1.2s
G30M **tAoh Zrail Nji** 75.68 18 P P 03 44 32.8 -1.0
baz=316,SNR=12
I28M **Miner Creek** 75.69 21 P 03 44 33.4 -0.6
I28M IAmb IAmb 03 44 36.0
comp=Z,12nm,1.6s
I28M **Miner Creek** 75.69 21 P P 03 44 32.9 -1.1
baz=313,SNR=6.4
PWL **Port Wells** 75.75 27 P P 03 44 33.3 -1.1
baz=307
SEW **Seward** 75.77 28 P P 03 44 33.5 -0.9
baz=307
M24K **Tolsona, Glenn** 75.80 25 P P 03 44 34.1 -0.6
baz=309
KDAK **Kodiak Island** 75.80 31 P P 03 44 33.7 -0.9
baz=305
OHAK **Old Harbor** 75.81 31 P P 03 44 33.8 -0.8
baz=304
K27K **Chicken** 75.97 22 P P 03 44 35.1 -0.4
EPYK **Eagle Plains** 75.98 19 P P 03 44 34.4 -1.2
EPYK IAmb IAmb 03 44 35.6
comp=Z,13nm,1.5s
EPYK **Eagle Plains** 75.98 19 P P 03 44 34.4 -1.2
baz=316
F31M **Tsiigehtchic** 76.00 17 P P 03 44 34.1 -1.4
baz=318
STKA **Stephens Creek** 76.16 140 P P 03 44 36.4 -0.5
comp=Z,3.8nm,0.9s,baz=323,slow=5.7,SNR=4.1
comp=Z,3.8nm,0.9s
GLI **Glacier Island** 76.22 26 P P 03 44 36.4 -0.6
baz=308
G31M **Satah River** 76.25 18 P 03 44 36.1 -0.8
G31M IAmb IAmb 03 44 39.0
comp=Z,6.5nm,0.9s
G31M **Satah River** 76.25 18 P P 03 44 36.9 -0.1
baz=318,SNR=6.3
KLU **Klutina** 76.28 25 P P 03 44 36.6 -0.8
KLU IAmb IAmb 03 44 43.3
comp=Z,9.2nm,1.2s
KLU **Klutina** 76.28 25 P P 03 44 36.9 -0.5
baz=309
P23K **Montague Islan** 76.65 27 P P 03 44 39.1 -0.2
baz=308
C36M **Paulatuk** 76.68 13 P 03 44 38.6 -0.8
C36M **Paulatuk** 76.68 13 P P 03 44 38.1 -1.3
baz=326
N25K **Chitina, Valde** 76.69 25 P P 03 44 38.8 -0.9
baz=310
L27K **Beaver Creek,** 76.71 23 P P 03 44 40.3 +0.6
L27K IAmb IAmb 03 44 42.4
comp=Z,11nm,1.4s
L27K **Beaver Creek,** 76.71 23 P P 03 44 39.0 -0.8

	baz=312							
BCAR	Beaver Creek A	76.72	23		P		03 44 40.1	+0.2
M26K	Nabesna, AK	76.75	24	P	P		03 44 38.8	-1.2
	baz=311							
DAWY	Dawson	76.82	21	P	P		03 44 39.8	-0.5
DAWY	Dawson	76.82	21	P	P		03 44 39.5	-0.9
	baz=314,SNR=5.4							
I30M	Mount Dempster	76.91	20		P		03 44 39.9	-1.1
I30M				IAmb	IAmb		03 44 45.3	
	comp=Z,8.2nm,1.1s							
I30M	Mount Dempster	76.91	20	P	P		03 44 40.9	-0.1
	baz=316,SNR=11							
EYAK	Cordova Ski Ar	76.94	26	P	P		03 44 40.6	-0.4
	baz=310							
H31M	Peel River	77.06	19		P		03 44 41.2	-0.5
H31M				IAmb	IAmb		03 44 45.6	
	comp=Z,17nm,1.2s							
H31M	Peel River	77.06	19	P	P		03 44 41.6	0.0
	baz=318,SNR=13							
BMRM	Bremner River	77.11	25	P	P		03 44 41.9	-0.1
	baz=310							
M27K	Edge Creek, AK	77.17	24	P	P		03 44 42.2	-0.2
M27K	Edge Creek, AK	77.17	24	P	P		03 44 42.1	-0.3
	baz=312							
ESDC	Sonseca Array	77.39	309	P	P		03 44 43.8	-0.2
	comp=Z,4.0nm,1.1s,baz=46,slow=4.9,SNR=15							
	comp=Z,4.0nm,1.1s							
ESDC	Sonseca Array	77.39	309		P		03 44 43.9	-0.1
J30M	Hart River	77.39	20		P		03 44 42.8	-0.8
J30M	Hart River	77.39	20	P	P		03 44 43.0	-0.7
	baz=316							
MCARA	McCarthy VSAT	77.41	25	P	P		03 44 43.5	-0.2
	baz=312							
Q23K	Middleton Isla	77.42	27	P	P		03 44 43.6	-0.1
	baz=309							
K29M	Barlow Dome	77.56	21		P		03 44 43.5	-1.1
K29M	Barlow Dome	77.56	21	P	P		03 44 44.0	-0.7
	baz=316							
CRQE	Cirque	77.81	25	P	P		03 44 45.3	-0.8
	baz=312							
KAIM	Kayak Island	77.85	26	P	P		03 44 45.9	-0.3
	baz=311							
L29M	L29M	77.89	22		P		03 44 44.5	-1.9
L29M	L29M	77.89	22	P	P		03 44 46.1	-0.3
	baz=315							
YUK3	Moose Creek	78.05	24	P	P		03 44 47.1	-0.4
	baz=314							
TAM	Tamanrasset	78.20	289	P	P		03 44 47.8	-1.2
TAM				pmax	pmax			
	comp=Z,4.0nm,0.8s							
TAM	Tamanrasset	78.20	289		P		03 44 47.8	-1.2
M29M	Somme Creek	78.26	22	P	P		03 44 47.6	-0.9
M29M				IAmb	IAmb		03 44 52.8	
	comp=Z,10nm,1.6s							
M29M	Somme Creek	78.26	22	P	P		03 44 48.1	-0.4
	baz=315							
LSZ	Lusaka	78.42	245	P	P		03 44 49.8	-0.3
LSZ				pmax	pmax			
	comp=Z,10.0nm,1.0s							
LSZ	Lusaka	78.42	245		P		03 44 49.8	-0.3
LSZ				IAmb	IAmb		03 44 51.4	
	comp=Z,9.7nm,1.0s							
M30M	Minto, Yukon	78.70	22	P	P		03 44 50.2	-0.7
	baz=316							
O28M	Mount Upton	78.84	24	P	P		03 44 51.3	-0.7
	baz=314							
YUK6	Outpost Mounta	79.36	23	P	P		03 44 54.1	-0.6
	baz=315							
N30M	Aishikik Lake	79.42	23	P	P		03 44 54.5	-0.4
	baz=316							
HYT	Haines Junctio	79.74	23		P		03 44 55.9	-0.7
HYT	Haines Junctio	79.74	23	P	P		03 44 56.0	-0.7
	baz=316							
M31M	Drury Creek, Y	79.74	21		P		03 44 55.9	-0.6
M31M	Drury Creek, Y	79.74	21	P	P		03 44 56.0	-0.6
	baz=318							
O29M	Mount Kennedy	79.74	24	P	P		03 44 56.0	-0.7
	baz=315							
N31M	Braeburn, Yuko	79.83	22		P		03 44 57.4	+0.3
N31M				IAmb	IAmb		03 45 01.8	
	comp=Z,17nm,1.4s							
N31M	Braeburn, Yuko	79.83	22	P	P		03 44 56.9	-0.1
	baz=317							
O30N	Mendenhall	80.25	23	P	P		03 44 58.5	-0.9
O30N	Mendenhall	80.25	23	P	P		03 44 59.1	-0.3
	baz=317							
MMPY	Sheldon Lake,	80.36	20		P		03 44 58.2	-1.8
MMPY				IAmb	IAmb		03 45 02.7	
	comp=Z,12nm,1.4s							
MMPY	Sheldon Lake,	80.36	20	P	P		03 44 59.4	-0.5
	baz=321							
P30M	Million Dollar	80.43	23	P	P		03 44 59.5	-0.8
	baz=317							
P29M	Windy Craggy	80.52	24	P	P		03 45 00.6	-0.1
	baz=316							
WHY	Whitehorse	80.74	22	P	P		03 45 01.5	-0.6
	baz=318							
N32M	Quiet Lake	80.94	21	P	P		03 45 02.1	-1.0
	baz=320							
PLBC	Pleasant Camp	81.12	24	P	P		03 45 02.9	-1.1
	baz=317							
MD01	Midelt array s	81.30	303	P	P		03 45 05.2	-0.4
SKAG	Skagway	81.48	23	P	P		03 45 05.2	-0.6
	baz=318							
P33M	Teslin, Yukon	81.75	22	P	P		03 45 06.5	-0.9
	baz=320							
P32M	Atlin	81.93	23	P	P		03 45 07.3	-1.0
	baz=319							
KSANE	Kasane	82.24	244	P	P		03 45 10.3	-0.3
KSANE				IAmb	IAmb		03 45 12.2	
	comp=Z,12nm,1.0s							
SIT	Sitka	83.27	25	P	P		03 45 14.5	-0.7
	baz=318							
DLBC	Dease Lake	84.03	22	LR	LR		04 26 16.1	
	comp=Z,39nm,18.8s,baz=252,slow=38							
DLBC	Dease Lake	84.03	22	P	P		03 45 18.4	-0.8
	baz=322							
S34M	Telegraph Cree	84.08	23	P	P		03 45 19.0	-0.4
	baz=322							
YKA	Yellowknife Ar	84.57	13	P	P		03 45 21.5	-0.2
	comp=Z,1.1nm,0.9s,baz=343,slow=4.6,SNR=4.1							
	comp=Z,1.1nm,0.9s							
YKA	Yellowknife Ar	84.57	13	*ce*P	P		03 45 23.7	+1.9
YKA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
YKA	Yellowknife Ar	84.57	13	P	P		03 45 20.5	-1.3
U33K	Whale Pass	84.79	25	P	P		03 45 22.6	-0.3
	baz=320							
WRAK	Wrangell Islan	84.83	24	P	P		03 45 22.7	-0.4
	baz=321							
T35M	Bob Quinn	85.11	23	P	P		03 45 23.8	-0.9
	baz=322							
TORD	Torodi Ar. Bea	86.05	283	P	P		03 45 30.0	-0.1
	comp=Z,4.7nm,1.0s,baz=50,slow=3.5,SNR=15							
	comp=Z,4.7nm,1.0s							
TORD	Torodi Ar. Bea	86.05	283	P	P		03 45 28.9	-1.1
TORD				IAmb	IAmb		03 45 31.6	
	comp=Z,9.2nm,1.3s							
LBTB	Lobatse	86.08	238	P	P		03 45 30.1	+0.1
LBTB				pmax	pmax			
	comp=Z,34nm,1.5s							
LBTB	Lobatse	86.08	238		P		03 45 30.1	+0.1
MAKGR	Makgori	87.13	238	P	P		03 45 34.9	-0.2
BOSA	Boshof	88.43	235	LR	LR		04 23 09.3	
	comp=Z,31nm,18.0s,baz=40,slow=34							

TEH ***28*** *03:55:58.8, 31.71N×50.81E, h5km, ML3.5, Presumed earthquake*
IDC ***28*** *03:55:59.8±2.2, 31.69N×50.80E, h0km, mb3.9/8, mbtmp4.0/11, ML3.9/3, MS2.9/1, Error ellipse: s-maj=43.0km s-min=21.4km az=158.0*
NEIC ***28*** *03:56:03.0±1.5, 31.78N±0.05×50.7E±0.1, h10km±1km, mb4.2/12, Error ellipse: s-maj=16.8km s-min=3.2km az=58.0*

ISC 28 03:56:02.1±0.6, 31.80N±0.07×50.83E±0.05, h10km, n40, σ1§49/41, mb4.2/12, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ZNGN	Zangian	0.32	3	Pg		Pg	03 56 07.4	-1.2
IBRJ	Brojen	0.38	73	Pg		Pg	03 56 07.9	-1.7
JHBN	Jahan bin	0.45	342	Pg		Pg	03 56 10.0	-1.1
KLNJ	Kolanjah	1.02	140	Pg		Pg	03 56 19.0	-2.8
AMIS	Naft Sefid	1.32	265	Pg		Pn	03 56 26.0	-0.6
AMIS				Sg		Sn	03 56 49.3	+5.0
IZEF	Zefreh	1.67	49	Pg		Pn	03 56 32.1	+0.4
IALM	Almabolaq	3.78	325	Pn		Pn	03 57 02.4	+1.8
ILBA	Ilam Banvizeh	4.30	296	Pn		Pn	03 57 08.5	+0.9
IGHG	Ghaleghazi	4.38	306	Pn		Pn	03 57 10.2	+1.3
SNJK	Sanadaj _Korde	4.79	320	Pn		Pn	03 57 16.2	+1.7
TKDS	Koohdasht(Taba	5.60	69	Pn		Pn	03 57 26.9	+1.3
UOSS	Minazif	8.31	144	Pn		Pn	03 58 03.7	+1.1
RAYN	Ar Rayn	9.50	211			Pn	03 58 18.6	-0.4
ASF	Jabal al Asfar	11.84	275	Pn		Pn	03 58 49.0	-2.0
	1.0nm,0.3s,baz=63,slow=16,SNR=9.6							
ASF				Sn		Sn	04 01 01.1	-2.2
	0.1nm,0.3s,baz=318,slow=22,SNR=1.5							
ASF				Lg		Lg	04 02 19.2	
	0.2nm,0.3s,baz=330,slow=22,SNR=1.3							
	2.4nm,0.4s							
EIL	Elat	13.82	265	Pn		Pn	03 59 16.1	-2.0
	0.5nm,0.3s,baz=75,slow=12,SNR=2.1							
	4.2nm,0.6s							
BR131	Keskin Array S	16.02	304			P	03 59 49.5	-1.6
BRTR	Keskin Array B	16.02	304	Pn		P	03 59 49.7	-1.4
	0.3nm,0.3s,baz=130,slow=13,SNR=13							
	1.7nm,0.6s							
BRTR	Keskin Array B	16.02	304			Pn	03 59 47.2	-0.4
SNOP	Sinop	16.11	314	Pn		Pn	03 59 49.8	+1.2
SNOP				IAmb		IAmb	04 00 23.0	
	comp=Z,10nm,0.8s							
AKAS	Kas	18.14	290	P		P	04 00 14.9	+0.4
IDI	Anoyia	21.88	286	P		P	04 00 55.0	-0.1
	comp=Z,7.7nm,0.8s,baz=219,slow=21,SNR=5.5							
	comp=Z,7.7nm,0.8s							
IDI	Anoyia	21.88	286	P		P	04 00 54.9	-0.3
NRN	Naryn	22.31	57	P		P	04 01 03.4	+3.3
NRN				IAmb		IAmb	04 01 06.3	
	comp=Z,3.6nm,0.8s							
LIT	Litokhoron	24.32	298	P		P	04 01 19.5	-0.4
LIT				IAmb		IAmb	04 01 22.4	
	comp=Z,20nm,1.4s							
ITM	Ithomi	24.37	291	P		P	04 01 19.6	-0.8
ITM				IAmb		IAmb	04 01 52.7	
	comp=Z,8.3nm,1.1s							
AKASG	Malin Array Be	24.75	326	P		P	04 01 23.6	0.0
	comp=Z,0.5nm,0.3s,baz=120,slow=7.5,SNR=11							
	comp=Z,0.5nm,0.3s							
AKASG	Malin Array Be	24.75	326	P		P	04 01 23.4	-0.2
BURAR	Bucovina Array	25.09	316	P		P	04 01 25.6	-1.3
MKAR	Makanchi Array	28.35	49	P		P	04 01 56.5	+0.3
	comp=Z,0.4nm,0.7s,baz=246,slow=11,SNR=2.9							
	comp=Z,0.4nm,0.7s							
MKAR	Makanchi Array	28.35	49	P		P	04 01 57.8	+1.6
FINES	FINESS Array B	33.75	339	P		P	04 02 43.2	-0.4
	comp=Z,0.6nm,0.4s,baz=138,slow=8.6,SNR=8.7							
	comp=Z,0.6nm,0.4s							
FINES	FINESS Array B	33.75	339	P		P	04 02 43.5	-0.1
VSL	Villasalto	34.31	295	P		P	04 02 48.7	0.0
VSL				IAmb		IAmb	04 03 17.8	
	comp=Z,5.8nm,1.2s							
HFS	Hagfors	37.47	330	P		P	04 03 15.2	-0.3
	comp=Z,2.2nm,0.4s,baz=126,slow=7.5,SNR=23							
	comp=Z,2.2nm,0.4s							
NC602	NORSAR Array S	38.69	330	P		P	04 03 26.2	+0.4
NC602				IAmb		IAmb	04 03 58.7	
	comp=Z,6.8nm,1.2s							
NC405	NORSAR Array S	38.81	331	P		P	04 03 26.2	-0.7
NB2	NORSAR Subarra	38.98	330	P		P	04 03 27.3	-0.9
	comp=Z,0.8nm,0.5s,baz=121,slow=8.6							
NOA	NORSAR Array B	38.98	330	P		P	04 03 27.4	-0.9
	comp=Z,0.7nm,0.4s,baz=129,slow=8.5,SNR=5.0							
NOA				LR		LR	04 21 53.3	
	comp=Z,17nm,19.5s,baz=95,slow=40							
	comp=Z,0.7nm,0.4s							
TORD	Torodi Ar. Bea	48.61	259	P		P	04 04 45.0	-1.3
	comp=Z,0.9nm,0.6s,baz=53,slow=8.5,SNR=10							
	comp=Z,0.9nm,0.6s							
SPITS	Spitsbergen Ar	48.86	351	P		P	04 04 48.3	+0.9
	comp=Z,2.6nm,0.7s,baz=144,slow=12,SNR=1.8							
	comp=Z,2.6nm,0.7s							

KOLA 28 04:06:33.0, 67.64N×33.77E, h0km, ML1.5, Error ellipse: s-maj=2.9km s-min=1.5km az=140.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.16	242	P		Pg	04 06 35.8	-0.3
APA0	Apatity Array	0.30	263	P		Pg	04 06 38.2	-0.5
APA0				S		Sg	04 06 42.2	-0.4
LVZ	Lovozero	0.42	52	P		Pg	04 06 40.6	-0.5
LVZ				S		Sg	04 06 46.5	0.0
KVDA	Kovda	1.02	201	P		Pg	04 06 51.6	-0.8
KVDA				S		Sg	04 07 04.6	-1.0
TERR	Teriberka	1.64	17	P		Pn	04 07 02.2	-0.8
TERR				S		Sn	04 07 23.2	-1.7
VADS	Vadso	2.96	329	S		Sn	04 07 56.5	-0.8
ARCES	ARCESS Array B	3.58	306	P		Pn	04 07 28.2	-1.5
ARCES				S		Sn	04 08 11.3	-1.2

NIED ***28*** *04:22:20.8, 39.28N×140.62E, h147km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-1.89; Mθθ0.27; Mφφ1.62; Mrθ-0.73; Mθφ-0.19; Mrφ2.09; Fault plane solution: M0 2.83000×10^15 NP1: φs357.00000°, δs20.00000°, λ-77.00000°. NP2: φs164.00000°, δ71.00000°, λ-95.00000°.*
JMA ***28*** *04:22:20.8±0.1, 39.3N±0.5×140.6E±0.7, h147km±1km, MD4.2/35, MV4.4/35, SOUTHERN AKITA PREF*
JMA Felt II J1 at SOUTHERN AKITA PREF .
IDC ***28*** *04:22:21.0±1.2, 39.30N×140.52E, h151km±12km, mb3.9/23, mbtmp4.3/30, MS2.6/1, Error ellipse: s-maj=11.8km s-min=10.0km az=124.0*
NEIC ***28*** *04:22:21.6±1.2, 39.32N±0.05×140.5E±0.1, h147km±5km, mb4.4/80, Error ellipse: s-maj=13.5km s-min=6.2km az=107.0*

ISC 28 04:22:20.6±0.6, 39.28N±0.04×140.66E±0.05, h148km±5km, n406, σ0§97/412, mb4.3/70, 3C-17D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JRG	Rokugo	0.12	352	*i*P		Pn	04 22 40.9	+0.3
JRG				A		A	04 22 40.9	
	comp=N,30nm,0.5s,comp=E,51nm,0.7s							
JRG				↓S		Sn	04 22 56.1	+0.3
JYK	Kaneyama	0.43	213	*i*P		Pn	04 22 41.6	+0.2
JYK				A		A	04 22 41.6	
	comp=N,6.0nm,0.7s,comp=E,14nm,2.5s							
JYK				↓S		Sn	04 22 57.7	+0.5
JYW	Yuwa	0.43	307	A		A	04 22 41.5	
	comp=N,38nm,0.6s,comp=E,47nm,0.9s							
JSZI	Iwateshizukuis	0.51	26	A		A	04 22 42.1	
	comp=N,14nm,1.6s,comp=E,24nm,1.9s							
JOM	Ohasama	0.53	69	*i*P		Pn	04 22 42.3	+0.4
JOM				A		A	04 22 42.3	
	comp=N,12nm,2.6s,comp=E,20nm,0.9s							
JOM				↓S		Sn	04 22 58.5	+0.4
JMK	Ichinoseki	0.55	127	*i*P		Pn	04 22 42.2	+0.2
JMK				A		A	04 22 42.2	
	comp=N,7.0nm,0.6s,comp=E,24nm,4.0s							
JMK				↓S		Sn	04 22 58.5	+0.3
JOFO	Osakifurukawao	0.71	164	A		A	04 22 43.2	
	comp=N,38nm,0.5s,comp=E,34nm,1.2s							
JKMT	Kesennumamotoy	0.79	126	A		A	04 22 43.9	
	comp=N,20nm,0.5s,comp=E,8.0nm,1.4s							
OFUJ	Ofunato	0.81	104	A		A	04 22 44.1	
	comp=N,9.0nm,0.6s,comp=E,6.0nm,1.9s							
JAH	Hinai	0.91	359	*i*P		Pn	04 22 44.9	+0.5
JAH				A		A	04 22 44.9	
	comp=N,13nm,1.6s,comp=E,17nm,2.3s							
JAH				↓S		Sn	04 23 02.9	+0.3
JOU	Okura	0.92	180	*i*P		Pn	04 22 44.9	+0.3
JOU				A		A	04 22 44.9	
	comp=N,9.0nm,1.5s,comp=E,10.0nm,1.4s							
JOU				*e*S		Sn	04 23 03.4	+0.7
JIO	Ouri	0.99	147	*i*P		Pn	04 22 44.9	-0.2
JIO				↓S		Sn	04 23 03.0	-0.7
JYA	Atsumi	1.01	227	↓P		Pn	04 22 45.2	0.0
JYA				A		A	04 22 45.2	
	comp=N,13nm,0.9s,comp=E,12nm,0.4s							
JYA				↓S		Sn	04 23 03.8	-0.2
JNTW	Noshirotokiwa	1.06	339	A		A	04 22 45.9	
	comp=N,14nm,2.2s,comp=E,14nm,1.2s							
JIKH	Ishinomakikobu	1.16	147	A		A	04 22 47.0	
	comp=N,8.0nm,0.9s,comp=E,11nm,0.6s							
JKEN	Kujiedanarisaw	1.23	41	A		A	04 22 47.8	
	comp=N,18nm,0.4s,comp=E,19nm,0.3s							
JANG	Nango	1.28	31	*i*P		Pn	04 22 48.1	+0.4
JANG				A		A	04 22 48.1	
	comp=N,9.0nm,0.4s,comp=E,9.0nm,0.7s							
JANG				S		Sn	04 23 08.3	-0.2
JAW	Awa shima	1.37	234	↓P		Pn	04 22 48.9	+0.2
JAW				↓S		Sn	04 23 09.7	-0.5
JOG3	Oga3	1.37	298	A		A	04 22 44.6	
	comp=N,13nm,2.7s,comp=E,8.0nm,3.3s							
JHHS	Hirosakihyakuz	1.39	351	A		A	04 22 49.1	
	comp=N,7.0nm,0.9s,comp=E,9.0nm,3.1s							
JIW	Iwasaki	1.40	339	A		A	04 22 49.3	
	comp=N,5.0nm,1.6s,comp=E,4.0nm,2.0s							
JYAR	Yonezawaarcadi	1.42	197	A		A	04 22 49.4	
	comp=N,12nm,1.2s,comp=E,20nm,1.1s							
JTM	Tenmabayashi	1.54	12	P		Pn	04 22 50.2	-0.2
JTM	Tenmabayashi	1.54	12	P		Sn	04 23 13.5	+0.2
JTM	Tenmabayashi	1.54	12			Pn	04 22 50.7	+0.3
JTM				Sn		Sn	04 23 12.1	-1.2
JOT	Ohata	2.12	8	P		Pn	04 22 57.1	+0.2
JOT				S		Sn	04 23 25.0	0.0
ERM	Erimo	3.33	34	P		Pn	04 23 11.5	-0.5
ERM	Erimo	3.33	34			Pn	04 23 11.3	-0.7
JEM	Erimo	3.33	34	P		Pn	04 23 11.4	-0.6
MJB9	Matsu-Tunnel	3.35	216			Pn	04 23 13.6	+1.1
MAJO	Matsushiro	3.35	216	P		Pn	04 23 12.8	+0.4
MAJO	Matsushiro	3.35	216			Pn	04 23 12.6	+0.1
MJAR	Matsushiro Arr	3.35	216	P		Pn	04 23 12.5	0.0
	comp=E,29nm,0.4s,baz=30,slow=11,SNR=73							
MJAR				S		Sn	04 23 52.5	0.0
	comp=E,23nm,0.8s,baz=57,slow=21,SNR=5.0							
MJAR				LR		LR	04 24 34.5	
	comp=E,90nm,21.3s,baz=8.5,slow=40							
MJAR	Matsushiro Arr	3.35	216			Pn	04 23 12.6	+0.2
JGF	Kuroka	4.51	217	P		Pn	04 23 28.3	+0.7
JGF	Kuroka	4.51	217	S		Sn	04 24 21.4	+1.6
JGF	Kuroka	4.51	217			Pn	04 23 28.0	+0.4
INU	Inuyama	4.88	218	P		Pn	04 23 33.0	+0.6
INU	Inuyama	4.88	218	S		Sn	04 24 29.9	+1.6
INU	Inuyama	4.88	218			Pn	04 23 31.7	-0.7
ASAJ	Asahikawa	5.04	16	P		Pn	04 23 33.6	-0.9
	comp=E,27nm,0.3s,baz=226,slow=15,SNR=22							
ASAJ				S		Sn	04 24 29.1	-3.0
	comp=E,90nm,0.8s,baz=261,slow=32,SNR=6.9							
JKA	Kamikawa-asahi	5.04	16			Pn	04 23 32.9	-1.6
JHJ	Hachijo jima 2	6.19	187	P		Pn	04 23 47.7	-2.2
	comp=E,88nm,0.4s,baz=360,slow=23,SNR=14							
JHJ				S		Sn	04 24 54.1	-5.5
	comp=E,180nm,0.3s,baz=56,slow=23,SNR=11							
YSS	Yuzhno-Sakhali	7.82	11	P		Pn	04 24 11.2	-0.3
YSS	Yuzhno-Sakhali	7.82	11			Pn	04 24 10.9	-0.6
USRK	Ussuriysk Ar.	8.13	310	P		Pn	04 24 15.4	-0.2
	comp=E,9.5nm,0.8s,baz=110,slow=13,SNR=7.6							
USRK	Ussuriysk Ar.	8.13	310			Pn	04 24 15.1	-0.6
MDJ	Mudanjiang	9.81	306	P		Pn	04 24 38.1	+0.1
MDJ	Mudanjiang	9.81	306	S		Sn	04 26 27.3	+0.7
JNU	Nakatsue	10.01	235	P		Pn	04 24 39.9	-0.9
	comp=E,12nm,0.8s,baz=55,slow=11,SNR=7.0							
KSRS	Korea Array	10.16	264	P		Pn	04 24 42.7	0.0
	comp=E,6.6nm,1.0s,baz=78,slow=13,SNR=16							
BNX	BinXian	11.71	308	⇑P		Pn	04 25 02.0	-1.0
BNX				pmax	pmax			
	comp=Z,7.0nm,0.9s							
DL2	Dalian	14.79	275	P		Pn	04 25 41.8	-0.5
DL2				pmax	pmax			
	comp=Z,28nm,0.8s							
HILR	Hailar Array B	18.07	311	P		P	04 26 18.9	-1.7
	comp=Z,3.3nm,0.4s,baz=115,slow=14,SNR=5.2							
PETK	Petropavlovsk-	18.11	35	P		Pn	04 26 22.0	-0.6
	comp=Z,3.9nm,0.7s,baz=232,slow=5.4,SNR=6.2							
PETK	Petropavlovsk-	18.11	35	P		Pn	04 26 22.4	-0.2
TIA	Tai'an	18.85	268	P		P	04 26 28.0	-1.2
TIA				pmax	pmax			
	comp=Z,13nm,1.7s							
XLT	XiLinHaoTe	18.93	292	*e*P		P	04 26 27.8	-2.3
XLT				pmax	pmax			
	comp=Z,10.0nm,0.9s							
XLT				pmax	pmax			
	comp=Z,84nm,6.4s							
HNS	HongShan	20.42	273	⇑P		Pn	04 26 48.0	-1.9
HNS				pmax	pmax			
	comp=Z,10.0nm,0.5s							
MA2	Magadan	21.30	14	P		P	04 26 56.7	+1.3
	comp=Z,19nm,0.6s,baz=196,slow=8.2,SNR=5.7							
	comp=Z,19nm,0.6s							
MA2	Magadan	21.30	14	P		P	04 26 55.8	+0.5
HHC	Hu-ho-hao-te	22.28	283	*e*P		P	04 27 06.3	+0.6
HHC				pmax	pmax			
	comp=Z,8.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,87nm,5.1s							
LYN	LuoYang	22.98	267	P		P	04 27 13.8	+1.5
LYN				pmax	pmax			
	comp=Z,24nm,0.6s							
WHN	Wuhan	23.20	256	⇑P		P	04 27 14.3	0.0
WHN				pP		pP	04 27 43.0	+0.5
SONM	Songino Array	26.08	300	P		P	04 27 39.1	-1.3
	comp=Z,1.4nm,0.5s,baz=106,slow=9.6,SNR=9.0							
	comp=Z,1.4nm,0.5s							
SONM	Songino Array	26.08	300	P		P	04 27 40.0	-0.5
ENH	Enshi	27.03	260	P		P	04 27 48.0	-1.0
LZDM	Lanzhou Array	29.33	275	P		P	04 28 09.8	+0.1
	comp=Z,1.5nm,0.3s,baz=71,slow=5.3,SNR=2.1							
	comp=Z,1.5nm,0.3s							
KMI2	Kunming	34.77	258	↓P		P	04 28 52.5	-4.6
KMI2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
PZH	PanZhiHua	34.81	260	P		P	04 28 59.8	+2.4
GAMB	Gambell	37.13	33	P		P	04 29 15.9	-0.6
	baz=252							
M11K	Mekoryuk	38.88	39	P		P	04 29 30.3	-0.8
	baz=262							
TNA

baz=273
RDOG **Red Dog Mine** 41.79 28 P P 04 29 54.6 -0.4
baz=256
C17K **DeLong Mountai** 41.79 27 P P 04 29 54.3 -0.8
baz=256
N15K **Kwethluk River** 41.88 40 P P 04 29 55.4 -0.5
baz=268
I17K **Unalakleet** 41.91 34 P P 04 29 55.2 -0.9
baz=263
E17K **Hotham Inlet** 41.97 30 P P 04 29 56.0 -0.5
baz=258
O15K **Ungalikthiuk R** 41.99 42 P P 04 29 55.9 -0.8
baz=269
F17K **Baldwin Pennin** 42.07 31 P P 04 29 56.8 -0.5
baz=260
G17K **Kiwalik Mounta** 42.16 32 P P 04 29 58.1 0.0
baz=261
S14K **Fog Glacier** 42.17 46 P P 04 29 57.8 -0.5
baz=272
CHNA **Chernabura Isl** 42.23 48 P P 04 29 58.0 -0.7
baz=274
CNBA **Chernabura Isl** 42.23 48 P
CNBA IAmb IAmb 04 29 58.9
comp=Z,8.4nm,0.9s
L16K **Owhat River** 42.27 38 P P 04 29 58.3 -0.7
baz=267
H17K **Granite Mounta** 42.38 33 P P 04 29 59.7 -0.2
baz=263
MKAR **Makanchi Array** 42.45 300 P P 04 30 00.2 -0.5
comp=Z,7.6nm,0.7s,baz=86,slow=9.8,SNR=51
comp=Z,7.6nm,0.7s
M16K **Timber Creek** 42.48 39 P P 04 30 00.4 -0.3
baz=268
C18K **Utukok River** 42.54 27 P P 04 30 00.6 -0.6
baz=257
N16K **Nishlik Lake** 42.55 40 P P 04 30 01.2 -0.2
baz=269
J17K **VABM Dome** 42.58 35 P P 04 30 01.2 -0.2
baz=265
MAKZ **Makanchi** 42.66 300 P
MAKZ IAmb IAmb 04 30 03.2
comp=Z,10nm,0.9s
F18K **Selawik** 42.73 31 P P 04 30 02.8 +0.2
baz=261
L17K **Donlin** 42.85 37 P P 04 30 03.3 -0.4
baz=267
K17K **Iditarod** 42.88 36 P P 04 30 03.8 -0.1
baz=267
O16K **Kokwok River B** 42.88 41 P P 04 30 04.3 +0.4
baz=270
SHL **Shillong** 42.89 266 P
SHL IAmb IAmb 04 30 06.8
comp=Z,6.8nm,0.7s
G18K **Tagagawik** 43.03 32 P P 04 30 05.1 0.0
baz=263
H18K **Honhosa River** 43.06 33 P P 04 30 05.3 0.0
baz=264
C19K **Lookout Ridge** 43.21 27 P P 04 30 07.0 +0.4
baz=258
M17K **Holitna River** 43.23 38 P P 04 30 07.6 +0.9
baz=269
N17K **Nushagak Hills** 43.34 40 P P 04 30 08.3 +0.7
baz=270
O17K **Koliganek Bris** 43.38 41 P P 04 30 07.9 0.0
baz=271
F19K **Shaleruckik Mo** 43.51 30 P P 04 30 10.0 +1.2
F19K **Shaleruckik Mo** 43.51 30 P P 04 30 09.3 +0.5
baz=263
L18K **Granite Mounta** 43.60 37 P P 04 30 10.0 +0.3
baz=269
D19K **Kuna River** 43.62 28 P P 04 30 10.1 +0.3
baz=261
J18K **Innoko River** 43.64 35 P P 04 30 10.5 +0.5
baz=267
G19K **Purcell Mounta** 43.70 31 P
G19K IAmb IAmb 04 30 12.3
comp=Z,7.5nm,0.8s
G19K **Purcell Mounta** 43.70 31 P P 04 30 11.0 +0.5
baz=264
P17K **Kvichak River** 43.73 42 P P 04 30 11.6 +0.9
baz=272
E19K **Redstone River** 43.80 29 P P 04 30 12.6 +1.4
E19K IAmb IAmb 04 30 13.5
comp=Z,8.5nm,0.7s
E19K **Redstone River** 43.80 29 P P 04 30 11.8 +0.6
baz=262,SNR=5.7
R17L **Mt. Peulik Vol** 43.84 44 P P 04 30 12.3 +0.6
baz=274
H19K **Roundabout Mou** 43.90 32 P P 04 30 13.2 +1.3
H19K **Roundabout Mou** 43.90 32 P P 04 30 12.6 +0.6
baz=265
N18K **Kilae Creek** 43.98 39 P P 04 30 13.0 +0.2
baz=271
M18K **Stony River** 44.00 38 P P 04 30 13.2 +0.3
baz=270
Q17K **Contact Creek** 44.06 43 P P 04 30 14.1 +0.6
baz=273
KURK **Kurchatov** 44.10 306 P 04 30 13.5 -0.4
J19K **Poorman** 44.15 35 P 04 30 15.2 +1.1
J19K IAmb IAmb 04 30 16.2
comp=Z,7.9nm,1.0s
J19K **Poorman** 44.15 35 P P 04 30 14.8 +0.7
baz=268,SNR=5.9
KURBB **Kurchatov Arra** 44.17 306 P P 04 30 14.0 -0.4
comp=Z,16nm,0.7s,baz=82,slow=8.4,SNR=130
comp=Z,16nm,0.7s
D20K **Etivluk River** 44.20 28 P P 04 30 15.0 +0.5
baz=262
B20K **Meade River** 44.22 26 P P 04 30 15.3 +0.8
baz=260
E20K **Nigu River** 44.30 28 P P 04 30 15.9 +0.7
baz=263,SNR=6.0
F20K **Avaraart Lake** 44.33 30 P P 04 30 15.7 +0.2
baz=264
O18K **Koktuh Hills** 44.34 41 P P 04 30 16.3 +0.7
baz=272
P18K **Big Mountain,** 44.34 41 P P 04 30 16.1 +0.4
baz=273
L19K **White Mountain** 44.46 37 P P 04 30 17.7 +1.1
baz=270
Q18K **Katmai Hardscr** 44.50 42 P P 04 30 17.7 +0.7
baz=274
H20K **Anotleneega Mo** 44.55 32 P P 04 30 17.8 +0.6
baz=267
N19K **Bonanza Creek** 44.66 39 P P 04 30 19.1 +0.8
baz=272
I20K **Naaghedeneel** 44.68 33 P P 04 30 19.2 +1.0
baz=268
M19K **Big River Lodg** 44.68 38 P P 04 30 18.9 +0.6
baz=271
J20K **Nowinta River** 44.81 34 P P 04 30 20.9 +1.7
J20K **Nowinta River** 44.81 34 P P 04 30 19.5 +0.3
baz=269
K20K **Telida** 44.83 36 P 04 30 20.9 +1.4
K20K **Telida** 44.83 36 P P 04 30 20.1 +0.6
baz=270
C21K **Knifeblade Rid** 44.92 27 P P 04 30 20.7 +0.7
baz=263
B21K **Ikpikpuk River** 45.03 27 P P 04 30 21.5 +0.6
baz=263
IMAR **Indian Mountai** 45.04 32 P P 04 30 22.3 +1.2
E21K **Killik River** 45.13 28 P P 04 30 22.4 +0.6
baz=265
G21K **Allakaket** 45.17 31 P
G21K IAmb IAmb 04 30 24.6
comp=Z,8.1nm,0.9s
G21K **Allakaket** 45.17 31 P P 04 30 22.7 +0.6
baz=267,SNR=5.8
Q19K **Cape Douglas,** 45.19 42 P P 04 30 22.7 +0.3
baz=274
F21K **Alatna River** 45.22 30 P P 04 30 23.2 +0.7
baz=266
PDGK **Podgornoye** 45.23 296 P P 04 30 23.6 +0.6
M20K **Styx River** 45.28 38 P P 04 30 23.3 +0.1
baz=272
P19K **Oil Pt** 45.35 41 P P 04 30 24.3 +0.7
baz=274
H21K **Melozitna Rive** 45.42 32 P P 04 30 24.7 +0.6
baz=269
B22K **Teshekpuk Lake** 45.53 26 P P 04 30 25.7 +0.8
baz=263
OHAK **Old Harbor** 45.54 44 P P 04 30 25.0 -0.1
baz=276
CHUM **Lake Minchumin** 45.61 35 P P 04 30 26.0 +0.4
baz=271
O20K **Slope Mountain** 45.62 40 P P 04 30 26.4 +0.6
baz=274
EVN **Everest** 45.64 273 P 04 30 27.1 0.0

PPLA **Purkeypile** 45.69 36 P P 04 30 27.6 +1.2
baz=272
CAST **Castle Rocks** 45.72 35 P P 04 30 27.7 +1.2
CAST **Castle Rocks** 45.72 35 P P 04 30 27.2 +0.7
baz=271,SNR=5.4
F22K **John River** 45.74 30 P P 04 30 27.9 +1.3
baz=267
KDAK **Kodiak Island** 45.85 43 P P 04 30 27.6 0.0
baz=276
E22K **Anaktuvuk Pass** 45.91 29 P P 04 30 28.3 +0.3
baz=267
G22K **Bettles** 45.98 31 P P 04 30 29.2 +0.8
baz=268
H22K **Ishtalitna Cre** 46.01 32 P P 04 30 29.2 +0.5
baz=270
SKT **Skwentna** 46.03 37 P P 04 30 29.3 +0.3
baz=273
HOM **Homer** 46.15 41 P P 04 30 30.3 +0.4
baz=275
MLY **Manley** 46.28 33 P 04 30 32.8 +1.9
MLY **Manley** 46.28 33 P P 04 30 30.9 +0.1
baz=271
L22K **Petersville** 46.36 37 P P 04 30 32.5 +1.0
L22K IAmb IAmb 04 30 33.1
comp=Z,5.8nm,0.8s
L22K **Petersville** 46.36 37 P P 04 30 31.9 +0.4
baz=273
D23K **Nanushuk River** 46.37 28 P P 04 30 32.0 +0.5
baz=267
C23K **Itkillik River** 46.44 26 P P 04 30 32.8 +0.8
baz=267
COLD **Coldfoot** 46.50 30 P P 04 30 33.2 +0.7
baz=269
TRF **Thorofare Moun** 46.53 35 P P 04 30 33.7 +0.7
baz=273
G23K **Bananza Creek** 46.56 31 P 04 30 34.5 +1.4
G23K **Bananza Creek** 46.56 31 P P 04 30 33.9 +0.9
baz=270,SNR=6.2
BRSE **Bradley Lake S** 46.60 40 P P 04 30 33.9 +0.5
baz=276
E23K **Chandalar** 46.73 29 P 04 30 35.9 +1.5
E23K **Chandalar** 46.73 29 P P 04 30 35.6 +1.2
baz=269,SNR=8.1
TOLK **Toolik Lake Re** 46.76 28 P P 04 30 35.6 +1.0
baz=269
H23K **Yukon River** 46.77 32 P P 04 30 36.8 +2.2
H23K IAmb IAmb 04 30 37.6
comp=Z,8.6nm,1.0s
H23K **Yukon River** 46.77 32 P P 04 30 35.9 +1.2
baz=271
I23K **Minto, Yukon-K** 46.86 33 P P 04 30 36.4 +1.1
baz=272
NEA2 **Nenana** 47.01 34 P P 04 30 38.2 +1.7
NEA2 **Nenana** 47.01 34 P P 04 30 37.2 +0.7
baz=273
D24K **Happy Valley** 47.04 27 P P 04 30 38.2 +1.5
D24K **Happy Valley** 47.04 27 P P 04 30 37.2 +0.5
baz=269
MCK **McKinley** 47.12 35 P P 04 30 37.9 +0.5
baz=274
E24K **Your Creek** 47.16 29 P P 04 30 39.0 +1.4
E24K IAmb IAmb 04 30 40.2
comp=Z,7.1nm,0.8s
E24K **Your Creek** 47.16 29 P P 04 30 38.2 +0.5
baz=270
RND **Reindeer** 47.17 35 P P 04 30 38.7 +0.8
RND IAmb IAmb 04 30 39.3
comp=Z,5.5nm,0.8s
PMR **Palmer** 47.20 38 P P 04 30 38.3 +0.4
baz=276
SEW **Seward** 47.20 40 P P 04 30 38.6 +0.6
baz=277
WAT1 **Susitna Watana** 47.36 36 P P 04 30 39.9 +0.6
baz=275
F24K **Squaw Lake** 47.39 30 P P 04 30 40.3 +0.9
baz=271
H24K **Noodor Dome** 47.45 32 P 04 30 41.9 +1.9
H24K **Noodor Dome** 47.45 32 P P 04 30 40.2 +0.3
baz=273,SNR=5.2
COLA **College** 47.52 33 P P 04 30 41.4 +1.0
baz=274
KNK **Knik Glacier** 47.54 38 P P 04 30 41.1 +0.4
baz=276
SML **Sawmill** 47.56 37 P P 04 30 42.0 +1.2
SML IAmb IAmb 04 30 59.0
comp=Z,16nm,1.4s
SML **Sawmill** 47.56 37 P P 04 30 41.1 +0.3
baz=276
G24K **Hadweenzic Riv** 47.58 31 P P 04 30 42.1 +1.3
G24K **Hadweenzic Riv** 47.58 31 P P 04 30 41.0 +0.1
baz=272,SNR=6.7
PWL **Port Wells** 47.66 39 P P 04 30 42.0 +0.4
baz=277
POKR **Poker Plat Res** 47.68 33 P P 04 30 41.4 -0.2
baz=274
WAT6 **Susitna Watana** 47.75 36 P P 04 30 42.6 +0.1
baz=276
M23K **Glacier View** 47.84 37 P P 04 30 43.5 +0.5
baz=277
DHY **Denali Highway** 47.87 36 P 04 30 44.4 +1.1
DHY **Denali Highway** 47.87 36 P P 04 30 43.7 +0.4
baz=276
D25K **Kavik River** 47.92 27 P P 04 30 44.7 +1.2
D25K IAmb IAmb 04 30 45.5
comp=Z,9.1nm,1.0s
D25K **Kavik River** 47.92 27 P P 04 30 43.9 +0.4
baz=271
IL31 **IL31** 47.93 33 P P 04 30 44.6 +1.0
IL31 IAmb IAmb 04 30 45.0
comp=Z,5.8nm,0.8s
ILAR **Eielson Array** 47.93 33 P P 04 30 44.1 +0.5
comp=Z,3.6nm,0.7s,baz=275,slow=6.4,SNR=44
ILAR PcP PcP 04 32 08.7 -0.8
comp=Z,0.5nm,0.6s,baz=274,slow=3.7,SNR=2.6
comp=Z,3.6nm,0.7s
ILAR **Eielson Array** 47.93 33 P 04 30 44.4 +0.8
ILAR PcP 04 32 09.1 -0.4
HDA **Harding Lake** 47.94 34 P P 04 30 44.1 +0.5
HDA IAmb IAmb 04 30 44.9
comp=Z,6.0nm,0.8s
HDA **Harding Lake** 47.94 34 P P 04 30 44.0 +0.3
baz=275
SCM **Sheep Creek Mo** 48.03 37 P P 04 30 45.6 +1.1
baz=277
G25K **Bearman Lake** 48.12 31 P P 04 30 45.8 +0.8
baz=274
P23K **Montague Islan** 48.23 40 P P 04 30 46.2 +0.2
baz=279
F25K **Christian Rive** 48.25 30 P 04 30 47.9 +1.9
F25K **Christian Rive** 48.25 30 P P 04 30 47.1 +1.1
baz=273,SNR=5.5
E25K **Arctic Village** 48.25 29 P P 04 30 46.8 +0.8
baz=273
GLI **Glacier Island** 48.26 39 P P 04 30 46.8 +0.6
baz=278
K24K **Donnelly Dome** 48.51 35 P P 04 30 48.3 +0.3
baz=276
M24K **Tolsona, Glenn** 48.53 37 P P 04 30 48.4 +0.1
baz=278
J25K **Salcha River,** 48.60 34 P P 04 30 49.6 +0.8
baz=276
BVAR **Borovoye Array** 48.64 311 P P 04 30 49.1 0.0
comp=Z,1.9nm,0.5s,baz=71,slow=7.7,SNR=8.1
comp=Z,1.9nm,0.5s
KLU **Klutina** 48.74 38 P P 04 30 49.9 0.0
baz=278
PAX **Paxson** 48.74 36 P P 04 30 50.4 +0.4
baz=278
F26K **Sheenjek River** 48.81 29 P P 04 30 52.4 +2.1
F26K **Sheenjek River** 48.81 29 P P 04 30 50.9 +0.5
baz=274,SNR=16
C27K **Jago River** 48.85 27 P P 04 30 51.3 +0.8
baz=273
RIDG **Independent Ri** 48.93 35 P P 04 30 51.9 +0.6
RIDG **Independent Ri** 48.93 35 P P 04 30 51.8 +0.5
baz=277
EYAK **Cordova Ski Ar** 48.96 39 P P 04 30 52.2 +0.7
baz=279
HARP **HAARP** 48.97 36 P P 04 30 52.4 +0.8
baz=278
G26K **Porcupine Rive** 49.02 30 P P 04 30 53.6 +1.8
G26K IAmb IAmb 04 30 55.0
comp=Z,8.4nm,1.1s
G26K **Porcupine Rive** 49.02 30 P P 04 30 52.7 +0.8
baz=276
N25K **Chitina, Valde** 49.35 37 P P 04 30 54.9 +0.3
baz=279

KSH2 **Kashi** 49.41 292 P P 04 30 55.0 -0.4
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
BMRM **Bremner River** 49.45 38 P P 04 30 56.0 +0.7
baz=280
I26K **Coal Creek Min** 49.45 32 P P 04 30 55.9 +0.7
baz=278
L26K **Log Cabin Wild** 49.70 35 P P 04 30 58.1 +1.0
L26K IAmb IAmb 04 30 59.6
comp=Z,4.9nm,0.8s
L26K **Log Cabin Wild** 49.70 35 P P 04 30 57.9 +0.8
baz=279
E27K **Coleen River** 49.73 29 P
E27K IAmb IAmb 04 31 00.1
comp=Z,7.1nm,1.1s
E27K **Coleen River** 49.73 29 P P 04 30 57.8 +0.5
baz=276,SNR=5.4
KAIM **Kayak Island** 49.73 40 P P 04 30 58.0 +0.6
baz=281
D27M **Malcolm River** 49.84 27 P P 04 30 59.1 +0.9
baz=276
G27K **Doyon Strip** 49.87 30 P P 04 30 59.9 +1.5
G27K IAmb IAmb 04 31 01.3
comp=Z,7.0nm,1.4s
G27K **Doyon Strip** 49.87 30 P P 04 30 59.1 +0.7
baz=278
M26K **Nabesna, AK** 49.96 36 P 04 31 00.8 +1.7
M26K **Nabesna, AK** 49.96 36 P P 04 31 00.2 +1.0
baz=280
H27K **Steamboat Moun** 50.00 31 P 04 31 01.0 +1.7
H27K **Steamboat Moun** 50.00 31 P P 04 31 00.9 +1.5
baz=278,SNR=7.4
I27K **Kandik River** 50.05 32 P P 04 31 01.5 +1.7
baz=279
K27K **Chicken** 50.10 34 P P 04 31 01.4 +1.3
K27K IAmb IAmb 04 31 02.4
comp=Z,5.5nm,1.0s
MCARA **McCarthy VSAT** 50.13 38 P P 04 31 01.0 +0.6
baz=281
CRQE **Cirque** 50.22 38 P P 04 31 01.1 -0.1
baz=281
L27K **Beaver Creek,** 50.37 35 P P 04 31 03.1 +0.9
baz=280
BCAR **Beaver Creek A** 50.39 35 P 04 31 03.8 +1.4
E28M **Babbage River** 50.43 28 P P 04 31 03.5 +1.0
baz=278
F28M **Old Crow** 50.45 29 P P 04 31 04.5 +1.8
F28M IAmb IAmb 04 31 05.5
comp=Z,6.8nm,0.9s
F28M **Old Crow** 50.45 29 P P 04 31 03.5 +0.9
baz=278,SNR=7.2
M27K **Edge Creek, AK** 50.48 36 P P 04 31 04.6 +1.4
M27K IAmb IAmb 04 31 05.6
comp=Z,6.2nm,0.9s
M27K **Edge Creek, AK** 50.48 36 P P 04 31 03.7 +0.6
baz=281,SNR=7.0
I28M **Miner Creek** 50.77 32 P
I28M IAmb IAmb 04 31 07.8
comp=Z,5.8nm,0.9s
I28M **Miner Creek** 50.77 32 P P 04 31 05.8 +0.6
baz=280,SNR=14
BVCY **Beaver Creek** 50.93 36 P P 04 31 07.0 +0.6
baz=282
E29M **Blow River** 51.06 28 P
E29M IAmb IAmb 04 31 10.1
comp=Z,8.8nm,1.0s
E29M **Blow River** 51.06 28 P P 04 31 07.6 +0.3
baz=280,SNR=7.5
YUK3 **Moose Creek** 51.25 37 P P 04 31 08.9 -0.1
baz=283
DAWY **Dawson** 51.25 34 P P 04 31 08.9 +0.1
baz=282
H29M **Whitestone** 51.26 31 P P 04 31 09.2 +0.4
baz=281
G29M **Pine Creek** 51.27 30 P
G29M IAmb IAmb 04 31 11.5
comp=Z,10nm,1.0s
G29M **Pine Creek** 51.27 30 P P 04 31 10.1 +1.3
baz=281,SNR=7.8
KKAR **Karatay Array** 51.51 298 P 04 31 10.5 -0.5
O28M **Mount Upton** 51.60 38 P P 04 31 11.8 0.0
baz=284
EPYK **Eagle Plains** 51.88 31 P P 04 31 14.8 +1.4
EPYK **Eagle Plains** 51.88 31 P P 04 31 14.1 +0.7
baz=282,SNR=12
G30M **tAoh Zraii Nji** 51.95 30 P 04 31 15.1 +1.2
G30M **tAoh Zraii Nji** 51.95 30 P P 04 31 14.8 +0.9
baz=282,SNR=10
F30M **Barrier River** 51.99 29 P 04 31 15.8 +1.7
F30M **Barrier River** 51.99 29 P P 04 31 15.3 +1.2
baz=282,SNR=9.1
L29M **L29M** 52.01 35 P 04 31 16.2 +1.8
L29M IAmb IAmb 04 31 17.7
comp=Z,7.5nm,1.0s
L29M **L29M** 52.01 35 P P 04 31 15.3 +0.9
baz=283,SNR=7.0
M29M **Somme Creek** 52.02 36 P P 04 31 14.7 +0.1
baz=284
K29M **Barlow Dome** 52.11 34 P
K29M IAmb IAmb 04 31 17.9
comp=Z,5.8nm,0.8s
K29M **Barlow Dome** 52.11 34 P P 04 31 16.0 +0.8
baz=283,SNR=9.9
I30M **Mount Dempster** 52.27 32 P 04 31 17.9 +1.5
I30M **Mount Dempster** 52.27 32 P P 04 31 17.6 +1.1
baz=283,SNR=39
J30M **Hart River** 52.44 33 P 04 31 19.2 +1.5
J30M **Hart River** 52.44 33 P P 04 31 18.6 +0.9
baz=284
O29M **Mount Kennedy** 52.49 38 P P 04 31 18.8 +0.6
baz=285
INK **Inuvik** 52.67 28 P 04 31 20.3 +1.2
INK **Inuvik** 52.67 28 P P 04 31 19.8 +0.7
baz=283,SNR=6.2
G31M **Satah River** 52.71 30 P
G31M IAmb IAmb 04 31 21.2
comp=Z,8.2nm,0.9s
G31M **Satah River** 52.71 30 P P 04 31 19.8 +0.3
baz=284,SNR=7.1
M30M **Minto, Yukon** 52.73 35 P P 04 31 21.9 +2.1
M30M IAmb IAmb 04 31 22.7
comp=Z,7.5nm,1.4s
M30M **Minto, Yukon** 52.73 35 P P 04 31 19.7 0.0
baz=285,SNR=5.2
F31M **Tsiigehtchic** 52.79 29 P P 04 31 20.1 +0.1
baz=284
HYT **Haines Junctio** 52.87 37 P
HYT IAmb IAmb 04 31 24.2
comp=Z,7.5nm,1.0s
HYT **Haines Junctio** 52.87 37 P P 04 31 20.7 -0.2
baz=286,SNR=7.8
N30M **Aishikik Lake** 52.89 37 P P 04 31 21.6 +0.6
baz=286
H31M **Peel River** 52.96 31 P 04 31 22.8 +1.5
H31M **Peel River** 52.96 31 P P 04 31 22.1 +0.8
baz=284,SNR=17
P29M **Windy Craggy** 53.08 39 P P 04 31 23.3 +1.0
baz=286
P30M **Million Dollar** 53.32 38 P P 04 31 25.1 +0.9
baz=287
NIL **Nilore** 53.38 286 P 04 31 25.3 +0.4
N31M **Braeburn, Yuko** 53.49 36 P P 04 31 26.3 +1.0
N31M IAmb IAmb 04 31 28.4
comp=Z,7.8nm,1.1s
N31M **Braeburn, Yuko** 53.49 36 P P 04 31 26.3 +1.0
baz=286
O30N **Mendenhall** 53.55 37 P P 04 31 26.7 +1.0
baz=287
PLBC **Pleasant Camp** 53.80 39 P P 04 31 28.2 +0.7
baz=288
M31M **Drury Creek, Y** 53.91 35 P P 04 31 29.9 +1.5
M31M **Drury Creek, Y** 53.91 35 P P 04 31 29.6 +1.2
baz=287
WHY **Whitehorse** 54.15 37 P P 04 31 31.3 +1.1
baz=288
CHGR **Chuyangaron** 54.19 294 P 04 31 31.7 +0.9
A36M **Sachs Harbour** 54.41 22 P P 04 31 31.9 +0.2
baz=288
P32M **Atlin** 55.04 38 P P 04 31 36.8 +0.3
baz=289
R32K **Eaglecrest** 55.09 40 P P 04 31 37.4 +0.5
baz=290
MMPY **Sheldon Lake,** 55.17 34 P
MMPY IAmb IAmb 04 31 39.8
comp=Z,2.5nm,0.6s
MMPY **Sheldon Lake,** 55.17 34 P P 04 31 37.8 +0.4
baz=289,SNR=5.0

P33M	**Teslin, Yukon**	**55.26**	**37**	P		**P**	**04 31 39.7**	**+1.6**
P33M				IAmb		IAmb	04 31 41.0	
	comp=Z,8.3nm,1.2s							
P33M	**Teslin, Yukon**	**55.26**	**37**	P		**P**	**04 31 39.6**	**+1.5**
	baz=290							
S32K	**Killisnoo**	**55.33**	**41**	P		**P**	**04 31 39.5**	**+0.9**
	baz=290							
SHAA	**Shahritus**	**55.39**	**293**			**P**	**04 31 39.9**	**+0.5**
SHAA				IAmb		IAmb	04 31 43.4	
	comp=Z,24nm,1.3s							
C36M	**Paulatuk**	**55.65**	**25**	P		**P**	**04 31 40.7**	**+0.1**
	baz=291							
Q32M	**Nakina River**	**55.95**	**39**	P		**P**	**04 31 43.8**	**+0.5**
	baz=291							
AB31	**Akbulak array**	**56.05**	**309**			**P**	**04 31 43.6**	**-0.2**
AB31				IAmb		IAmb	04 31 44.5	
	comp=Z,2.9nm,0.8s							
ABKAR	**Akbulak array**	**56.05**	**309**			**P**	**04 31 43.5**	**-0.3**
WRAK	**Wrangell Islan**	**56.85**	**42**	P		**P**	**04 31 49.6**	**+0.2**
	baz=292							
S34M	**Telegraph Cree**	**56.90**	**40**	P		**P**	**04 31 50.6**	**+0.9**
	baz=292							
DLBC	**Dease Lake**	**57.24**	**39**	P		**P**	**04 31 53.5**	**+1.3**
	baz=293							
V35K	**Ketchikan**	**57.65**	**43**	P		**P**	**04 31 56.8**	**+1.8**
	baz=294							
T35M	**Bob Quinn**	**57.70**	**40**	P		**P**	**04 31 57.1**	**+1.7**
	baz=294							
U35K	**Hyder**	**58.24**	**41**	P		**P**	**04 32 00.6**	**+1.5**
	baz=294							
WRGLY	**Wrigley**	**58.25**	**32**	P		**P**	**04 32 00.3**	**+1.3**
	baz=295							
LIRD	**Liard River Hi**	**58.71**	**37**	P		**P**	**04 32 04.0**	**+1.6**
	baz=295							
WRA	**Warramunga Arr**	**59.21**	**187**	P		**P**	**04 32 05.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=2.2,slow=7.5,SNR=10							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**59.21**	**187**	P		**P**	**04 32 05.6**	**-0.6**
ARCES	**ARCESS Array B**	**61.69**	**339**	P		**P**	**04 32 21.0**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=61,slow=8.5,SNR=8.0							
	comp=Z,2.9nm,0.9s							
ARCES	**ARCESS Array B**	**61.69**	**339**	P		**P**	**04 32 22.3**	**-0.1**
ARCES				IAmb		IAmb	04 32 23.1	
	comp=Z,6.4nm,1.1s							
YKA	**Yellowknife Ar**	**62.17**	**31**	P		**P**	**04 32 25.4**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=304,slow=6.4,SNR=14							
YKA				PcP		**PcP**	**04 33 05.3**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=304,slow=4.2,SNR=5.6							
	comp=Z,1.8nm,0.6s							
YKA	**Yellowknife Ar**	**62.17**	**31**	P		**P**	**04 32 25.9**	**+0.1**
ASAR	**Alice Springs**	**62.94**	**187**	P		**P**	**04 32 31.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=0.0,slow=6.7,SNR=5.3							
	comp=Z,0.4nm,0.3s							
ASAR	**Alice Springs**	**62.94**	**187**	P		**P**	**04 32 31.9**	**+0.6**
FINES	**FINESS Array B**	**66.55**	**332**	P		**P**	**04 32 53.7**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=59,slow=7.4,SNR=10.0							
	comp=Z,3.0nm,0.7s							
SUMG	**Summit**	**68.44**	**360**	P		**P**	**04 33 06.7**	**+0.3**
SUMG				IAmb		IAmb	04 33 08.3	
	comp=Z,9.5nm,1.4s							
LNOR	**Lincton Mounta**	**69.69**	**47**	P		**P**	**04 33 15.4**	**+1.3**
K05A	**Summer Lake**	**69.99**	**51**			**P**	**04 33 17.7**	**+1.5**
ORV	**Oroville**	**71.45**	**54**	P		**P**	**04 33 25.9**	**+1.0**
ORV				IAmb		IAmb	04 33 26.2	
	comp=Z,3.9nm,0.7s							
HFS	**Hagfors**	**71.80**	**335**	P		**P**	**04 33 25.8**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=43,slow=8.5,SNR=21							
	comp=Z,1.8nm,0.4s							
NB2	**NORSAR Subarra**	**71.89**	**337**	P		**P**	**04 33 26.3**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=38,slow=6.5							
NOA	**NORSAR Array B**	**71.89**	**337**	P		**P**	**04 33 26.3**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=344,slow=12,SNR=4.4							
	comp=Z,1.3nm,0.8s							
AKASG	**Malin Array Be**	**72.16**	**322**	P		**P**	**04 33 27.7**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=47,slow=5.6,SNR=5.5							
	comp=Z,0.5nm,0.4s							
AKASG	**Malin Array Be**	**72.16**	**322**	P		**P**	**04 33 28.2**	**-0.7**
AK08	**Malin Array Si**	**72.19**	**321**	P		**P**	**04 33 28.9**	**-0.1**
AK15	**Malin Array Si**	**72.21**	**322**	P		**P**	**04 33 27.8**	**-1.4**
AK18	**Malin Array Si**	**72.22**	**322**	P		**P**	**04 33 28.7**	**-0.5**
AK16	**Malin Array Si**	**72.24**	**322**	P		**P**	**04 33 29.6**	**+0.3**
DLMT	**Dillon**	**73.17**	**45**	P		**P**	**04 33 36.5**	**+1.3**
WAKR	**Walker**	**73.37**	**54**	P		**P**	**04 33 37.4**	**+0.9**
BAL3X	**Bal3x, Balta**	**73.79**	**319**	P		**P**	**04 33 39.5**	**+1.0**
NVAR	**Mina Array Bea**	**74.12**	**53**	P		**P**	**04 33 42.1**	**+1.2**
	comp=Z,4.4nm,0.7s,baz=295,slow=5.3,SNR=26							
	comp=Z,4.4nm,0.7s							
NVAR	**Mina Array Bea**	**74.12**	**53**	P		**P**	**04 33 41.1**	**+0.2**
SORM	**Soroca**	**74.28**	**320**	P		**P**	**04 33 40.8**	**-0.5**
	comp=Z,4.8nm,2.4s							
PDAR	**Pinedale Array**	**76.52**	**45**	P		**P**	**04 33 55.0**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=261,slow=1.9,SNR=44							
	comp=Z,3.4nm,0.7s							
PDAR	**Pinedale Array**	**76.52**	**45**			**P**	**04 33 54.5**	**-0.1**
NIE	**Niedzica**	**77.21**	**325**	P		**P**	**04 33 59.0**	**+1.0**
	comp=Z,2.7nm,2.1s							
ISR	**Istrita**	**77.24**	**319**	P		**P**	**04 33 59.5**	**+1.2**
	comp=Z,8.9nm,1.2s							
VOIR		**77.78**	**319**	P		**P**	**04 34 00.8**	**-0.5**
	comp=Z,1.2nm,0.8s							
ULM	**Lac du Bonnet**	**77.95**	**33**	P		**P**	**04 34 01.9**	**-0.2**
	comp=Z,5.1nm,0.7s,baz=312,slow=6.5,SNR=7.4							
	comp=Z,5.1nm,0.7s							
ULM	**Lac du Bonnet**	**77.95**	**33**	P		**P**	**04 34 02.2**	**+0.1**
ULM				IAmb		IAmb	04 34 02.8	
	comp=Z,4.6nm,0.8s							
CTYL	**Yalikoy Yolu**	**78.81**	**315**	P		**P**	**04 34 10.0**	**+3.1**
	comp=Z,2µmcomp=Z,23nm,0.8s							
GERES	**GERESS Array B**	**80.49**	**328**	P		**P**	**04 34 15.5**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=58,slow=2.4,SNR=4.0							
	comp=Z,0.2nm,0.5s							
GERES	**GERESS Array B**	**80.49**	**328**	P		**P**	**04 34 15.8**	**-0.2**
SCHQ	**Schefferville**	**83.34**	**16**	P		**P**	**04 34 30.5**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=342,slow=5.0,SNR=3.8							
	comp=Z,2.4nm,0.7s							
SCHQ	**Schefferville**	**83.34**	**16**	P		**P**	**04 34 31.2**	**+0.5**
SCHQ				IAmb		IAmb	04 35 08.8	
	comp=Z,11nm,1.4s							
TXAR	**Lajitas Array**	**89.22**	**52**	P		**P**	**04 35 00.8**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=300,slow=3.2,SNR=29							
	comp=Z,2.1nm,0.7s							
TXAR	**Lajitas Array**	**89.22**	**52**	P		**P**	**04 35 00.5**	**+0.6**
LPAZ	**La Paz**	**146.00**	**56**	PKPbc		**PKPbc**	**04 41 44.1**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=332,slow=5.4,SNR=9.4							
LPAZ	**La Paz**	**146.00**	**56**			**PKPbc**	**04 41 43.8**	**-0.3**

*SCB **28** 04:33:09.7±1.1, 17.˚88S×63.˚22W, h28km±5km, ML3.4/2, Error ellipse: s-maj=5.3km s-min=3.0km az=0.0*
*VAO **28** 04:33:14.6±0.5, 18.˚02S×62.˚99W, h10km, mb3.7, Presumed earthquake*

ISC 28 04:33:16.7±1.1, 17.˚98S±0.˚07×63.˚11W±0.˚05, h35km, n20, σ2$25/29, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AOEA	**Aiquile**	**2.03**	**264**	Pg		**Pn**	**04 33 46.2**	**-2.5**
AOEA	**Aiquile**	**2.03**	**264**	Pg		**Pn**	**04 33 46.6**	**-2.1**
AOEA				Sg		**Sn**	**04 34 12.8**	**-0.2**
AOEA				IAML			04 34 16.2	
	149nm,0.7s							
BBSD	**Serra de San D**	**2.51**	**72**	Pn		**Pn**	**04 33 54.6**	**-0.5**
BBSD	**Serra de San D**	**2.51**	**72**	*eP*		**Pn**	**04 33 54.2**	**-0.9**
BBSD				*eS*		**Sn**	**04 34 25.4**	**+0.8**
SIV	**San Ignacio**	**2.78**	**45**	Pn		**Pn**	**04 33 57.9**	**-0.9**
MOCB	**Mochara**	**4.03**	**216**	Pn		**Pn**	**04 34 16.1**	**-0.2**
MOCB				Sn		**Sn**	**04 35 04.5**	**+1.9**
MOCB				IAML			04 35 32.4	
	80nm,2.5s							
PTLB	**Pontes e Lacer**	**4.57**	**57**	Pn		**Pn**	**04 34 21.9**	**-1.4**
PTLB	**Pontes e Lacer**	**4.57**	**57**	*eP*		**Pn**	**04 34 21.4**	**-1.9**
PTLB				*eS*		**Sn**	**04 34 59.6**	**-0.6**
SOEO	**Opoqueri**	**4.57**	**262**	Pn		**Pn**	**04 34 22.0**	**-1.9**
BBOJ	**La Paz, Jacaqu**	**4.95**	**281**	Pn		**Pn**	**04 34 26.4**	**-2.7**
LPAZ	**La Paz**	**5.09**	**289**	Pn		**Pn**	**04 34 27.8**	**-3.2**
LPAZ	**La Paz**	**5.09**	**289**	*eP*		**Pn**	**04 34 30.7**	**-0.3**
BBOB	**La Paz, Bander**	**5.14**	**290**	Pn		**Pn**	**04 34 28.5**	**-3.2**
COIM	**Forte Coimbra**	**5.39**	**112**	*eP*		**Pn**	**04 34 33.8**	**-0.9**
COIM				*eS*		**Sn**	**04 35 31.4**	**-4.1**
BBOD	**La Paz, Gloria**	**5.41**	**284**	Pn		**Pn**	**04 34 32.5**	**-2.9**
VILB	**Vilhena**	**5.74**	**30**	*eP*		**Pn**	**04 34 39.3**	**-0.2**
VILB				*eS*		**Sn**	**04 35 49.3**	**+5.2**
MURT	**Porto Murtinho**	**6.34**	**126**	*eP*		**Pn**	**04 34 46.3**	**-1.4**
MURT				*eS*		**Sn**	**04 36 00.3**	**+1.5**
SALV	**Santo Antonio**	**7.39**	**75**	*eP*		**Pn**	**04 35 03.2**	**+0.9**
SALV				*eS*		**Sn**	**04 36 23.2**	**-1.7**
AQDB	**Aquidauana**	**7.43**	**111**	*eS*		**Sn**	**04 36 28.1**	**+2.4**
CLDB	**Colider**	**10.01**	**46**	*eP*		**Pn**	**04 35 41.0**	**+2.9**
CLDB				*eS*		**Sn**	**04 37 27.9**	**-1.3**

*CATAC **28** 04:40:56.2±0.7, 14.˚N±7.˚×9.˚1W±.˚, h35km±12km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=16.8km s-min=4.5km az=33.4, confirmed*
*GCG **28** 04:40:56.3±1.0, 13.˚98N×91.˚42W, h35km±14km, MD4.6, ML4.1, Fault plane solution: NP1:ϕ,λ 170.86000°, δ64.34000°, λ,-56.31000°, Presumed earthquake*
*SNET **28** 04:40:58.1±14.0, 14.˚97N×90.˚68W, h10km, ML3.3, Presumed earthquake*

ISC 28 04:40:54.2±1.8, 13.˚88N±0.˚07×91.˚33W±0.˚05, h1km±11km, n37, σ1$42/50, 5C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.52**	**358**	*i* P		**Pn**	**04 41 09.8**	**+0.8**
STG5				*eS*		**Sb**	**04 41 20.2**	**+5.8**
STG8	**El Palmar, Qui**	**0.57**	**357**	*i* P		**Pn**	**04 41 10.8**	**+1.1**
STG8				*eS*		**Sn**	**04 41 21.9**	**+2.0**
RTAL	**Retalhuleu**	**0.73**	**331**	P		**Pg**	**04 41 08.8**	**+0.4**
RTAL	**Retalhuleu**	**0.73**	**331**	*i* P		**Pg**	**04 41 08.7**	**+0.4**
RTAL				*eS*		**Sg**	**04 41 18.9**	**+1.0**
FG8	**Yepocapa, Chim**	**0.83**	**63**	*i* P		**Pg**	**04 41 09.7**	**-0.6**
FG8				*eS*		**Sg**	**04 41 19.8**	**-1.3**
FG16	**Alotenango, Sa**	**0.88**	**64**	*i* P		**Pg**	**04 41 10.7**	**-0.5**
PCG5	**San Vicente Pa**	**0.98**	**70**	*eP*		**Pg**	**04 41 12.3**	**-0.7**
QUEO	**Labor Ovalle**	**1.00**	**349**	*eP*		**Pg**	**04 41 13.5**	**0.0**
QUEO				*eS*		**Sg**	**04 41 26.0**	**-0.5**
GCG4	**OSOP**	**1.04**	**47**	*eP*		**Pb**	**04 41 15.6**	**+0.3**
FAME	**Alcaldia de Sa**	**1.27**	**92**	P		**Pn**	**04 41 18.0**	**-1.2**
THIG		**1.37**	**318**	*i* P		**Pn**	**04 41 17.2**	**-3.3**
APG	**El Apazote**	**1.39**	**37**	*i* P		**Pn**	**04 41 20.0**	**-1.1**
APG				*eS*		**Sb**	**04 41 38.5**	**-1.2**
HUEH	**Huehuetenango**	**1.44**	**353**	P		**Pn**	**04 41 19.8**	**-1.9**
HUEH	**Huehuetenango**	**1.44**	**353**	*i* P		**Pn**	**04 41 19.9**	**-1.8**
HUEH	**Huehuetenango**	**1.44**	**353**	*i* P		**Pn**	**04 41 19.8**	**-1.9**
HUEH				*eS*		**Sb**	**04 41 38.9**	**-2.1**
LOAL	**Lomas de Alarc**	**1.50**	**85**	P		**Pn**	**04 41 22.7**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.50**	**84**	*eS*		**Sg**	**04 41 44.3**	**+1.7**
JUAM	**Asuncion Mita**	**1.64**	**74**	*eP*		**Pn**	**04 41 23.8**	**-0.5**
CEVE	**Cerro Verde**	**1.65**	**92**	P		**Pn**	**04 41 24.7**	**0.0**
CEVE				S		**Sn**	**04 41 46.9**	**+0.1**
UNIC	**Universidad Ca**	**1.73**	**86**	P		**Pn**	**04 41 25.3**	**-0.3**
UNIC				S		**Sn**	**04 41 47.6**	**-0.7**
JAYA	**Jayaque - finc**	**1.84**	**97**	P		**Pn**	**04 41 26.7**	**-0.4**
JAYA				S		**Sn**	**04 41 49.7**	**-1.5**
JAYA	**Jayaque - finc**	**1.84**	**97**	*eP*		**Pn**	**04 41 26.8**	**-0.4**
JAYA				*i* S		**Sn**	**04 41 50.2**	**-0.9**
JAYA	**Jayaque - finc**	**1.84**	**97**	*i* P		**Pn**	**04 41 26.9**	**-0.2**
JAYA				*eS*		**Sn**	**04 41 50.3**	**-0.9**
PMON	**Piamonte**	**1.96**	**95**	P		**Pn**	**04 41 29.2**	**+0.4**
PMON	**Piamonte**	**1.96**	**95**	*eS*		**Sn**	**04 41 54.1**	**0.0**
MTO3	**Montecristo**	**1.98**	**75**	*eP*		**Pn**	**04 41 28.0**	**-1.1**
LALI	**Alcalda de L**	**1.99**	**101**	P		**Pn**	**04 41 29.2**	**+0.1**
ESQI	**Esquipulas**	**2.04**	**70**	P		**Pn**	**04 41 29.1**	**-0.8**
LOMA	**Loma Larga**	**2.11**	**96**	P		**Pn**	**04 41 30.9**	**+0.1**
PAVA	**Las Pavas**	**2.33**	**94**	P		**Pn**	**04 41 33.7**	**-0.1**
COEG	**Centro de Oper**	**2.39**	**96**	*i* P		**Pn**	**04 41 35.6**	**+0.9**
COEG				*eS*		**Sn**	**04 42 05.5**	**+0.8**
P5NO	**Presa 5 de nov**	**2.49**	**87**	P		**Pn**	**04 41 38.0**	**+1.9**
TECO	**Alcaldia de Te**	**2.50**	**98**	P		**Pn**	**04 41 36.2**	**+0.1**
PACA	**Pacayal**	**2.95**	**98**	P		**Pn**	**04 41 43.2**	**+0.8**
PETF	**Flores**	**3.33**	**25**	P		**Pn**	**04 41 45.8**	**-1.8**
LCND	**La Caada**	**3.39**	**99**	P		**Pn**	**04 41 48.3**	**0.0**
CNCH	**Conchagua**	**3.45**	**100**	P		**Pn**	**04 41 49.1**	**-0.1**

*ASRS **28** 05:15:12.0±1.0, 54.˚30N×86.˚19E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 28 05:15:13.9±2.8, 54.˚34N×86.˚19E, h0km, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=21.3km s-min=12.6km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**245**	I		I	05 20 40.0	
	baz=65,slow=319,SNR=1.5							
ZALV	**Zalesovo Beam**	**0.89**	**245**	Pg		Pg	05 15 29.7	-1.3
	1.1nm,0.3s,baz=64,slow=17,SNR=9.9							
ZALV				Lg		Lg	05 15 43.6	
	2.1nm,0.3s,baz=64,slow=26,SNR=7.7							
KURBB	**Kurchatov Arra**	**5.97**	**235**	Pn		Pn	05 16 45.1	+1.6
	0.2nm,0.3s,baz=51,slow=13,SNR=2.2							
	1.5nm,0.3s							
MKAR	**Makanchi Array**	**7.95**	**200**	Pn		Pn	05 17 11.2	+0.7
	0.3nm,0.3s,baz=23,slow=14,SNR=9.5							
MKAR				Sn		Sn	05 18 40.9	-0.2
	0.1nm,0.3s,baz=24,slow=23,SNR=2.5							
MKAR				Lg		Lg	05 19 29.4	
	0.1nm,0.3s,baz=20,slow=31,SNR=1.8							
	0.9nm,0.5s							

WEL 28 05:35:43.6±1.4, 31.˚5±12.˚×18.˚0E±4.˚4, h12km, M4.3/8, mB4.8/8, ML4.3/8, MLv4.5/8, Mw(mB)4.0/8, Error ellipse: s-maj=57.7km s-min=12.1km az=99.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**7.32**	**188**	P		Pn	05 37 32.3	+2.0
WMGZ				S		Sn	05 38 54.7	+1.3
HAZ	**Te Kaha**	**7.35**	**192**	P		Pn	05 37 32.7	+1.9
HAZ				S		Sn	05 38 57.1	+2.9
RUGZ	**Raukumara Rang**	**7.58**	**192**	P		Pn	05 37 34.2	+0.2
TWGZ	**Tauwhareparae**	**7.73**	**190**	P		Pn	05 37 38.9	+2.8
MWZ	**Matawai**	**7.96**	**192**	P		Pn	05 37 39.8	+0.6
URZ	**Urewera**	**7.97**	**195**	P		Pn	05 37 38.2	-1.1
URZ				S		Sn	05 39 10.1	+0.7
TKGZ	**Te Karaka**	**8.01**	**191**	P		Pn	05 37 39.6	-0.2
RAGZ	**Rawiri**	**8.14**	**193**	P		Pn	05 37 41.7	+0.1
RAGZ				S		Sn	05 39 13.0	-0.7
MUGZ	**Murupara**	**8.26**	**196**	P		Pn	05 37 43.3	0.0
RIGZ	**Rimuhau**	**8.28**	**191**	P		Pn	05 37 42.3	-1.3
RTZ	**Rutahuna**	**8.34**	**195**	P		Pn	05 37 43.0	-1.5
MTHZ	**Maungataniwha**	**8.60**	**195**	P		Pn	05 37 47.2	-0.8
RAHZ	**Arahi**	**8.61**	**194**	P		Pn	05 37 47.1	-1.0
NMHZ	**Naumai**	**8.84**	**195**	P		Pn	05 37 50.2	-1.1
HIZ	**Hauiti**	**8.88**	**205**	P		Pn	05 37 54.9	+3.1
ARHZ	**Aropaoanui**	**8.96**	**194**	P		Pn	05 37 50.8	-2.1
ETVZ	**East Tongariro**	**9.16**	**200**	P		Pn	05 37 53.9	-1.8
MCHZ	**McNeill Hill**	**9.20**	**195**	P		Pn	05 37 53.7	-2.4
OTVZ	**Oturere**	**9.20**	**200**	P		Pn	05 37 54.3	-2.0
SNVZ	**South Ngauruho**	**9.23**	**200**	P		Pn	05 37 54.4	-2.3
KWHZ	**Kaweka Forest**	**9.24**	**196**	P		Pn	05 37 53.6	-3.2
FWVZ	**Far West T-bar**	**9.32**	**200**	P		Pn	05 37 55.7	-2.3
WHVZ	**Whangaehu Hut**	**9.33**	**200**	P		Pn	05 37 54.7	-3.5
WNVZ	**Wahianoa**	**9.37**	**200**	P		Pn	05 37 56.1	-2.5
BHHZ	**Black Hill Sta**	**9.39**	**198**	P		Pn	05 37 55.3	-3.6
KRHZ	**Kereru**	**9.46**	**196**	P		Pn	05 37 55.3	-4.5
KAHZ	**Kahuranaki**	**9.50**	**193**	P		Pn	05 37 56.1	-4.2
PXZ	**Pawanui**	**9.73**	**193**	P		Pn	05 37 58.6	-4.8
PNHZ	**Pukenui**	**9.76**	**196**	P		Pn	05 37 57.7	-6.2
TSZ	**Takapari Road**	**9.96**	**197**	P		Pn	05 38 00.9	-5.7
PRHZ	**Porangahau**	**10.00**	**194**	P		Pn	05 38 02.0	-5.2
ANWZ	**Angora Road**	**10.22**	**194**	P		Pn	05 38 04.3	-5.8
BFZ	**Birch Farm**	**10.48**	**195**	P		Pn	05 38 07.0	-6.7
MRZ	**Mangatainoka R**	**10.62**	**197**	P		Pn	05 38 08.5	-7.1
HOWZ	**Holdsworth Sta**	**10.86**	**197**	P		Pn	05 38 11.1	-7.8
OGWZ	**Otaki Gorge**	**10.88**	**199**	P		Pn	05 38 11.1	-8.0
KIW	**Kapiti Island**	**10.99**	**199**	P		Pn	05 38 12.4	-8.3
TCW	**Tory Channel**	**11.50**	**201**	P		Pn	05 38 17.6	-10

*CATAC **28** 05:49:11.3±0.6, 13.˚N±4.˚×8.˚8W±.˚, h28km±5km, M4.5/41, MLv4.5/41, Error ellipse: s-maj=9.6km s-min=2.4km az=31.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.60; $M_{\theta\theta}$=1.35; $M_{\phi\phi}$ 1.95; $M_{r\theta}$3.29; $M_{\theta\phi}$=-1.11; $M_{\phi r}$=1.40; Fault plane solution: $M_0$4.12650×10^{15} NP1: ϕs299.06881°, δ85.58604°, λ-119.26607°. NP2: ϕs201.24901°, δ29.56790°, λ-8.97280°. Principal axes: T 3.9396, Plg34.0974°, Azm53.7422°; N 0.3514, Plg29.1709°, Azm301.5384°; P -4.2909, Plg42.0240°, Azm181.3369°; confirmed*
*NEIC **28** 05:49:11.5±1.5, 12.˚69N±0.˚06×88.˚32W±0.˚02, h59km±9km, mb4.2/104 Error ellipse: s-maj=8.5km s-min=2.4km az=177.0*
*IDC **28** 05:49:12.1±0.9, 13.˚11N×87.˚97W, h61km±8km, mb3.5/7, mbtmp3.7/9, MS3.0/19, Error ellipse: s-maj=36.4km s-min=9.4km az=40.0*
*SNET **28** 05:49:12.7±1.6, 12.˚86N×88.˚30W, h58km, ML4.1, Presumed earthquake*
*GCG **28** 05:49:13.0±1.3, 12.˚86N×88.˚42W, h22km±12km, MD5.0, Presumed earthquake*
*UCR **28** 05:49:18.5±1.5, 11.˚23N×88.˚43W, h0km±524km, MW4.3, Presumed earthquake*

ISC 28 05:49:11.5±0.4, 12.˚78N±0.˚03×88.˚29W±0.˚02, h63km±3km, n268, σ1$40/276, mb4.2/49, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
INTP	**Intipuca**	**0.47**	**29**	*i* P		**Pn**	**05 49 23.1**	**-0.3**
INTP				*eS*		**Sn**	**05 49 32.5**	**+0.4**
RANC	**El Ranchito**	**0.65**	**360**	P		**Pn**	**05 49 25.9**	**+0.5**
RANC				S		**Sn**	**05 49 37.2**	**+1.6**
LCND	**La Caada**	**0.65**	**36**	P		**Pn**	**05 49 25.7**	**+0.2**
LCND	**La Caada**	**0.65**	**36**	*i* P		**Pn**	**05 49 25.7**	**+0.4**
CNCH	**Conchagua**	**0.66**	**42**	P		**Pn**	**05 49 25.7**	**+0.1**
CNCH	**Conchagua**	**0.66**	**42**	*i* P		**Pn**	**05 49 25.7**	**+0.1**
CNCH				*eS*		**Sn**	**05 49 36.5**	**+0.6**
PACA	**Pacayal**	**0.68**	**357**	P		**Pn**	**05 49 25.7**	**-0.2**
PACA	**Pacayal**	**0.68**	**357**	*i* P		**Pn**	**05 49 26.3**	**+0.4**
PACA				*eS*		**Sn**	**05 49 38.4**	**+2.1**
PQSS	**Presa 15 de Se**	**0.88**	**342**	*eS*		**Sn**	**05 49 41.6**	**+1.3**
TECO	**Alcaldia de Te**	**0.89**	**327**	P		**Pn**	**05 49 28.0**	**-0.3**
TECO				S		**Sn**	**05 49 40.7**	**0.0**
COEG	**Centro de Oper**	**1.01**	**325**	P		**Pn**	**05 49 29.7**	**-0.2**
COEG	**Centro de Oper**	**1.01**	**325**	*i* P		**Pn**	**05 49 29.9**	**0.0**
COEG				*eS*		**Sn**	**05 49 43.8**	**+0.3**
PAVA	**Las Pavas**	**1.12**	**326**	P		**Pn**	**05 49 31.6**	**+0.2**
PAVA				S		**Sn**	**05 49 47.1**	**+1.0**
PANCS	**Alcalda de**	**1.20**	**313**	P		**Pn**	**05 49 31.8**	**-0.5**
PANCS				S		**Sn**	**05 49 47.8**	**0.0**
LBRS	**Las Brisas**	**1.20**	**322**	*i* P		**Pn**	**05 49 32.7**	**+0.3**
CRIN	**San Cristobal**	**1.21**	**94**	P		**Pn**	**05 49 32.8**	**+0.3**
CRIN				S		**Sn**	**05 49 49.8**	**+1.7**
CRIN	**San Cristobal**	**1.21**	**94**			**Pn**	**05 49 33.0**	**+0.5**
CRIN					Sn	**Sn**	**05 49 49.7**	**+1.7**
LOMA	**Loma Larga**	**1.22**	**315**	P		**Pn**	**05 49 32.3**	**-0.3**
LOMA				S		**Sn**	**05 49 48.2**	**-0.2**
LALI	**Alcalda de L**	**1.23**	**305**	P		**Pn**	**05 49 31.8**	**-0.8**
LALI				S		**Sn**	**05 49 47.7**	**-0.7**
LALI	**Alcalda de L**	**1.23**	**305**	*i* P		**Pn**	**05 49 32.1**	**-0.5**
LFU	**La Fuente**	**1.25**	**320**	*i* P		**Pn**	**05 49 33.6**	**+0.6**
LFU				*eS*		**Sn**	**05 49 49.8**	**+0.6**
P5NO	**Presa 5 de nov**	**1.28**	**339**	P		**Pn**	**05 49 33.7**	**+0.3**
P5NO				S		**Sn**	**05 49 51.0**	**+1.3**
P5NO	**Presa 5 de nov**	**1.28**	**339**	*i* P		**Pn**	**05 49 33.6**	**+0.3**
SEMO	**Seminario San**	**1.29**	**315**	P		**Pn**	**05 49 33

HDC	**Heredia**	**4.94**	**124**	*e*P		Pn		05 50 27.7	+4.4
BILN	**Bilwi Airport**	**4.94**	**75**	Pn		**Pn**		**05 50 25.0**	**+1.8**
DOMI	**Santo Domingo**	**4.97**	**124**	*e*P		Pn		05 50 28.3	+4.6
LUJA	**Lujan**	**5.01**	**124**	*e*P		**Pn**		**05 50 28.3**	**+3.9**
LUPE	**Guadalupe**	**5.01**	**124**	*e*P		**Pn**		**05 50 28.4**	**+4.0**
ACOS	**Acosta**	**5.01**	**126**	*e*P		**Pn**		**05 50 26.9**	**+2.5**
ACOS				*e*S		**Sn**		**05 51 20.5**	**-0.6**
SJS	**Escuela Geolog**	**5.02**	**124**	*e*P		**Pn**		**05 50 28.5**	**+4.1**
SJS3	**Mercedes San J**	**5.02**	**124**	*e*P		**Pn**		**05 50 28.4**	**+3.9**
AMPA	**Desamparados**	**5.04**	**124**	*i* P		**Pn**		**05 50 28.3**	**+3.6**
AMPA				*e*S		**Sn**		**05 51 22.9**	**+1.2**
PICV	**PH. Pirrs**	**5.09**	**128**	*e*P		**Pn**		**05 50 27.8**	**+2.4**
ABE2	**San Pablo**	**5.16**	**126**	*e*P		**Pn**		**05 50 28.7**	**+2.3**
VICA	**Volcano Irazu**	**5.17**	**122**	*e*P		Pn		05 50 31.2	+4.5
PITB	**Pirrs, San**	**5.21**	**126**	*e*P		**Pn**		**05 50 29.3**	**+2.3**
RAZU	**San Marcos de**	**5.21**	**126**	*e*P		**Pn**		**05 50 29.5**	**+2.4**
CVTR	**Volcan Turrial**	**5.22**	**121**	*e*P		Pn		05 50 32.2	+4.7
VTR0	**Volcan Turrial**	**5.22**	**121**	*e*P		Pn		05 50 32.5	+5.1
PCAYA	**Pacayas**	**5.23**	**123**	*e*P		**Pn**		**05 50 31.6**	**+4.2**
REPA	**Paraso**	**5.23**	**124**	*e*P		**Pn**		**05 50 30.4**	**+3.0**
ABRB	**Las Abras (San**	**5.26**	**121**	*e*P		Pn		05 50 32.7	+4.9
VTCV	**VTCV, Calle Va**	**5.26**	**121**	*e*P		Pn		05 50 33.1	+5.2
VINA	**Juan Vinas**	**5.30**	**122**	*e*P		Pn		05 50 32.6	+4.4
VERB	**Verbena**	**5.31**	**122**	*e*P		Pn		05 50 33.1	+4.7
IRES	**Siquirres**	**5.39**	**119**	*e*P		**Pn**		**05 50 33.1**	**+3.7**
ZEDO	**Perez Zeledon**	**5.66**	**127**	*e*P		**Pn**		**05 50 36.4**	**+3.3**
EDPE	**Pejibaye, P**	**5.87**	**127**	*e*P		**Pn**		**05 50 37.9**	**+2.0**
EDPE				*e*S		**Sn**		**05 51 40.2**	**-1.7**
BURE	**Buenos Aires**	**6.04**	**126**	*e*P		**Pn**		**05 50 40.0**	**+1.7**
PANP	**Palmar Norte**	**6.08**	**128**	*e*P		**Pn**		**05 50 41.0**	**+2.2**
EDP2	**Potrero Grande**	**6.26**	**126**	*e*P		**Pn**		**05 50 43.5**	**+2.2**
PIRO	**Carate, Puerto**	**6.53**	**131**			**Pn**		**05 50 47.2**	**+2.2**
PIRO	**Carate, Puerto**	**6.53**	**131**	*e*P		**Pn**		**05 50 47.2**	**+2.2**
NELY	**Ciudad Neily**	**6.66**	**128**	*e*P		**Pn**		**05 50 49.1**	**+2.2**
BRU2	**Volcan**	**6.78**	**125**			**Pn**		**05 50 50.6**	**+2.1**
BRU2	**Volcan**	**6.78**	**125**	*e*P		**Pn**		**05 50 49.6**	**+1.1**
BQTLY	**Boquete Panama**	**6.98**	**124**	*e*P		**Pn**		**05 50 53.2**	**+1.8**
PBNVO	**Pueblo Nuevo,**	**7.13**	**122**	*e*P		**Pn**		**05 50 55.2**	**+2.0**
RBALA	**Bur**	**7.17**	**122**	*e*P		**Pn**		**05 50 55.5**	**+1.8**
TEIG	**Tepich**	**7.40**	**0**	Pn		**Pn**		**05 51 00.8**	**+3.9**
KKNTU	**Kakint²**	**7.47**	**121**	*e*P		**Pn**		**05 50 58.8**	**+0.9**
CMIG	**Matias Romero**	**7.68**	**305**	P		**Pn**		**05 51 02.7**	**+1.9**
	comp=Z,10nm,1.3s 2.0nm,0.4s,baz=120,slow=14,SNR=9.4								
CMIG				S		**Sn**		**05 52 30.1**	**+3.7**
	6.1nm,0.4s,baz=65,slow=23,SNR=5.5								
CMIG				LR		LR		05 53 17.6	
	comp=Z,20nm,20.1s,baz=124,slow=32								
TLIG	**Tlapa**	**11.00**	**297**	Pn		**Pn**		**05 51 44.3**	**-2.0**
CHIV	**Chivirico**	**13.44**	**56**	Pn		**Pn**		**05 52 19.3**	**-0.1**
MOIG	**Morelia**	**14.15**	**301**	Pn		**Pn**		**05 52 28.4**	**-0.8**
OTAV	**Otavalo**	**15.83**	**141**	Pn		**Pn**		**05 52 47.4**	**-3.6**
ZAIG	**Zacatecas**	**16.83**	**308**	Pn		**Pn**		**05 53 01.4**	**-1.9**
HBVL	**Hebbronville**	**17.22**	**327**			**Pn**		**05 53 07.8**	**-0.1**
SDDR	**Presa de Saban**	**17.47**	**67**			**Pn**		**05 53 12.0**	**+1.0**
SDDR				IAmb		IAmb		05 53 20.4	
	comp=Z,18nm,1.1s								
456A	**Hilliard**	**18.77**	**17**	P		**P**		**05 53 26.3**	**+0.7**
352A	**Blakely**	**18.86**	**9**	P		**P**		**05 53 26.6**	**0.0**
352A				IAmb		IAmb		05 53 48.1	
	comp=Z,23nm,0.9s								
250A	**Grady**	**19.19**	**5**	P		**P**		**05 53 31.0**	**+0.8**
250A				IAmb		IAmb		05 53 51.0	
	comp=Z,8.3nm,0.7s								
HNDO	**Hondo**	**19.54**	**330**	P		**P**		**05 53 34.1**	**0.0**
LRAL	**Lakeview Retre**	**20.19**	**3**	P		**P**		**05 53 40.5**	**-0.6**
154A	**Montrose**	**20.30**	**13**	P		**P**		**05 53 42.2**	**-0.1**
JCT	**Junction City**	**20.58**	**331**	P		**P**		**05 53 45.2**	**-0.2**
JCT				IAmb		IAmb		05 54 00.7	
	comp=Z,20nm,1.5s								
Z41A	**Richland Creek**	**20.79**	**349**	P		**P**		**05 53 46.4**	**-1.2**
Z41A				IAmb		IAmb		05 54 10.9	
	comp=Z,17nm,1.2s								
WHTX	**Lake Whitney,**	**20.89**	**338**	P		**P**		**05 53 49.2**	**+0.5**
WHTX				IAmb		IAmb		05 54 08.2	
	comp=Z,17nm,1.4s								
BRDY	**Brady**	**20.89**	**333**	P		**P**		**05 53 47.1**	**-1.7**
GOGA	**Godfrey**	**21.00**	**11**	P		**P**		**05 53 50.9**	**+1.1**
GOGA				IAmb		IAmb		05 54 10.8	
	comp=Z,11nm,0.8s								
AGPR	**Aguadilla, PR**	**21.15**	**72**	P		**P**		**05 53 51.0**	**-0.6**
Y52A	**Lilburn**	**21.34**	**10**	P		**P**		**05 53 54.4**	**+1.0**
Y52A				IAmb		IAmb		05 54 14.4	
	comp=Z,9.2nm,0.8s								
SAND	**Sanderson**	**21.36**	**325**	P		**P**		**05 53 53.2**	**-0.6**
CELP	**Cerrillos**	**21.57**	**73**	P		**P**		**05 53 56.4**	**+0.4**
OZNA	**Ozona**	**21.59**	**329**	P		**P**		**05 53 56.0**	**-0.3**
OZNA				IAmb		IAmb		05 54 13.4	
	comp=Z,9.1nm,1.0s								
FPAL	**Fort Paine**	**21.80**	**6**	P		**P**		**05 53 59.0**	**+0.7**
TXAR	**Lajitas Array**	**21.80**	**321**	P		**P**		**05 53 59.9**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=142,slow=10,SNR=31								
TXAR				pP		**pP**		**05 54 13.3**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=129,slow=9.9,SNR=9.6								
TXAR				LR		LR		06 02 59.2	
	comp=Z,29nm,18.9s,baz=154,slow=38								
	comp=Z,1.7nm,0.6s								
TX31	**Lajitas Ar. Si**	**21.80**	**321**			**P**		**05 53 59.8**	**+1.2**
FW06	**Azle**	**21.81**	**339**	P		**P**		**05 53 59.5**	**+1.0**
FW06				IAmb		IAmb		05 54 02.0	
	comp=Z,7.8nm,0.7s								
SJG	**San Juan**	**21.98**	**73**	LR		LR		06 02 28.1	
	comp=Z,30nm,20.6s,baz=270,slow=37								
HODGE	**Hodges**	**22.04**	**13**	P		**P**		**05 54 01.5**	**+0.5**
HODGE				IAmb		IAmb		05 54 21.8	
	comp=Z,9.2nm,0.9s								
ATAH	**Atahualpa**	**22.09**	**153**	LR		LR		06 02 32.9	
	comp=Z,26nm,19.5s,baz=349,slow=36								
MIAR	**Mount Ida**	**22.19**	**348**	P		**P**		**05 54 02.6**	**0.0**
MIAR				IAmb		IAmb		05 54 21.4	
	comp=Z,13nm,1.1s								
Y57A	**Sumter**	**22.33**	**17**	P		**P**		**05 54 04.6**	**+0.6**
Y57A				IAmb		IAmb		05 54 25.2	
	comp=Z,18nm,1.0s								
JSC	**Jenkinsville**	**22.33**	**15**	P		**P**		**05 54 03.9**	**-0.2**
Y58A	**Scranton**	**22.44**	**19**	P		**P**		**05 54 06.5**	**+1.3**
ALPN	**Alpine**	**22.54**	**323**			**P**		**05 54 07.1**	**+0.5**
WHAR	**Wooly Hollow**	**22.70**	**351**	P		**P**		**05 54 08.9**	**+0.9**
PAULI	**Pauline**	**22.71**	**14**	P		**P**		**05 54 09.0**	**+0.8**
PAULI				IAmb		IAmb		05 54 28.9	
	comp=Z,16nm,1.0s								
HBAR	**Harrisburg**	**22.77**	**355**	P		**P**		**05 54 09.2**	**+0.4**
MNHN	**Monahans**	**22.78**	**326**	P		**P**		**05 54 08.6**	**-0.4**
MNHN				IAmb		IAmb		05 54 10.7	
	comp=Z,6.7nm,0.9s								
229A	**Bryant Ranch,**	**22.78**	**329**	P		**P**		**05 54 08.7**	**-0.3**
CPCT	**Cooper Cave**	**22.82**	**8**	P		**P**		**05 54 09.0**	**-0.3**
TPB01	**Permian Basin**	**23.05**	**324**	P		**P**		**05 54 11.8**	**+0.1**
KMSC	**Kings Mountain**	**23.13**	**15**	P		**P**		**05 54 12.9**	**+0.5**
KMSC				IAmb		IAmb		05 54 31.8	
	comp=Z,8.4nm,1.1s								
TKL	**Tuckaleechee C**	**23.14**	**9**	LR		LR		06 02 54.3	
	comp=Z,41nm,20.8s,baz=189,slow=36								
TPB06	**Permian Basin**	**23.26**	**326**	P		**P**		**05 54 13.6**	**-0.2**
TPB06				IAmb		IAmb		05 54 15.1	
	comp=Z,6.9nm,0.7s								
SN07	**Snyder 07**	**23.27**	**332**	P		**P**		**05 54 13.6**	**-0.2**
CLTN	**Cedars of Leba**	**23.27**	**4**	P		**P**		**05 54 13.5**	**-0.3**
ODSA	**Odessa**	**23.28**	**328**	P		**P**		**05 54 13.1**	**-0.9**
ODSA				IAmb		IAmb		05 54 31.9	
	comp=Z,8.3nm,1.1s								
129A	**Stewart Farms,**	**23.35**	**330**			**P**		**05 54 14.1**	**-0.5**
PECS	**Pecos**	**23.41**	**325**	P		**P**		**05 54 15.5**	**+0.3**
POST	**Post**	**23.53**	**331**			**P**		**05 54 17.8**	**+1.5**
POST				IAmb		IAmb		05 54 18.7	
	comp=Z,8.6nm,1.0s								
128A	**Castleberry Fa**	**23.64**	**329**	P		**P**		**05 54 17.6**	**+0.3**
DKNS	**Dickens**	**23.77**	**333**	P		**P**		**05 54 19.2**	**+0.8**
DKNS				IAmb		IAmb		05 54 20.5	
	comp=Z,7.0nm,0.8s								
FNO	**Franklin**	**23.85**	**341**	P		**P**		**05 54 19.7**	**+0.7**
HHAR	**Hobbs**	**23.95**	**349**	P		**P**		**05 54 20.5**	**+0.6**
HHAR				IAmb		IAmb		05 54 39.6	
	comp=Z,8.8nm,1.3s								
TPB28		**24.00**	**324**	P		**P**		**05 54 21.0**	**+0.5**
TPB28				IAmb		IAmb		05 54 22.8	
	comp=Z,3.0nm,0.9s								
ADOK	**Arcadia Dam**	**24.20**	**342**	P		**P**		**05 54 22.3**	**+0.1**
GDL2	**Guadalupe Moun**	**24.32**	**325**	P		**P**		**05 54 24.2**	**+0.7**
OK052	**Battle Ridge R**	**24.35**	**343**	P		**P**		**05 54 23.1**	**-0.5**
OK052				IAmb		IAmb		05 54 42.1	
	comp=Z,4.9nm,0.7s								
S44A	**Carbondale**	**24.82**	**358**	P		**P**		**05 54 26.7**	**-1.2**
S44A				IAmb		IAmb		05 54 45.7	
	comp=Z,10nm,1.3s								
OK051	**E0350 and S346**	**24.84**	**343**	P		**P**		**05 54 27.4**	**-0.7**
OK051				IAmb		IAmb		05 54 31.4	
	comp=Z,6.2nm,0.9s								
SMRT	**St. Maarten**	**24.85**	**75**	P		**P**		**05 54 27.4**	**-0.9**
MSTX	**Muleshoe**	**24.87**	**330**	P		**P**		**05 54 28.1**	**-0.4**
MSTX				IAmb		IAmb		05 54 30.4	
	comp=Z,7.2nm,1.0s								
AMTX	**Amarillo**	**25.13**	**333**	P		**P**		**05 54 29.0**	**-1.8**
AMTX				IAmb		IAmb		05 54 49.3	
	comp=Z,11nm,1.2s								
S39A	**Bolivar**	**25.21**	**351**	IAmb		IAmb		05 54 52.7	
	comp=Z,7.7nm,0.7s								
ANMO	**Albuquerque**	**27.53**	**326**	LR		LR		06 07 51.2	
	comp=Z,17nm,19.7s,baz=100,slow=41								
SADO	**Sadowa**	**32.82**	**12**	P		**P**		**05 55 37.4**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=210,slow=8.1,SNR=1.2								
SADO				LR		LR		06 08 42.6	
	comp=Z,22nm,18.6s,baz=154,slow=36								
	comp=Z,2.2nm,0.6s								
PFO	**Pinyon Flats O**	**32.99**	**314**	LR		LR		06 10 49.8	
	comp=Z,23nm,18.6s,baz=222,slow=39								
QSM	**Queen of Sheba**	**34.56**	**317**	P		**P**		**05 55 55.9**	**+1.6**
DUG	**Dugway, Tooele**	**34.80**	**326**	P		**P**		**05 55 57.4**	**+1.0**
DUG				IAmb		IAmb		05 56 05.1	
	comp=Z,2.4nm,0.9s								
PDAR	**Pinedale Array**	**35.10**	**332**	P		**P**		**05 55 59.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=126,slow=11,SNR=7.6								
PDAR				LR		LR		06 13 09.4	
	comp=Z,16nm,18.2s,baz=58,slow=41								
	comp=Z,0.5nm,0.6s								
AHID	**Auburn Hatcher**	**35.81**	**331**	IAmb		IAmb		05 56 09.0	
	comp=Z,4.0nm,0.8s								
MDP	**Montagnes des**	**35.99**	**99**	LR		LR		06 12 12.7	
	comp=Z,33nm,18.1s,baz=348,slow=39								
LOHW	**Long Hollow**	**36.23**	**332**	IAmb		IAmb		05 56 10.4	
	comp=Z,3.0nm,0.9s								
FXWY	**Fox Creek**	**36.45**	**332**	P		**P**		**05 56 11.4**	**+0.8**
ELK	**Elko**	**36.52**	**325**	LR		LR		06 14 32.5	
	comp=Z,19nm,18.6s,slow=42								
H17A	**Grant Village**	**36.84**	**333**	P		**P**		**05 56 14.1**	**+0.2**
H17A				IAmb		IAmb		05 56 56.6	
	comp=Z,3.5nm,1.3s								
NVAR	**Mina Array Bea**	**36.92**	**319**	P		**P**		**05 56 15.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=124,slow=7.7,SNR=1.6								
NVAR				LR		LR		06 12 39.6	
	comp=Z,23nm,18.4s,baz=356,slow=38								
	comp=Z,0.3nm,0.5s								
NVAR	**Mina Array Bea**	**36.92**	**319**	P		**P**		**05 56 14.2**	**-0.5**
PKD	**Bear Valley Ra**	**37.07**	**314**	P		**P**		**05 56 15.4**	**-0.4**
YNE	**Yellowstone No**	**37.08**	**334**	P		**P**		**05 56 16.6**	**+0.7**
YNE				IAmb		IAmb		05 56 16.9	
	comp=Z,1.8nm,0.7s								
YMR	**Madison River**	**37.22**	**333**	P		**P**		**05 56 18.3**	**+1.1**
YMR				IAmb		IAmb		05 56 19.3	
	comp=Z,4.5nm,1.0s								
VILB	**Vilhena**	**37.81**	**132**			**P**		**05 56 22.2**	**0.0**
ULM	**Lac du Bonnet**	**37.87**	**352**	P		**P**		**05 56 20.5**	**-1.8**
	comp=Z,1.9nm,0.6s,baz=166,slow=9.9,SNR=5.4								
ULM				LR		LR		06 12 45.9	
	comp=Z,32nm,21.5s,baz=166,slow=38								
	comp=Z,1.9nm,0.6s								
MCMT	**McKenzie Canyo**	**38.20**	**331**	P		**P**		**05 56 26.5**	**+1.0**
BOZ	**Bozeman (W)**	**38.24**	**333**	P		**P**		**05 56 26.1**	**+0.4**
BOZ				IAmb		IAmb		05 56 27.3	
	comp=Z,1.6nm,0.6s								
PB02	**IPOC Station P**	**38.40**	**152**	P		**P**		**05 56 25.9**	**-1.3**
DLMT	**Dillon**	**38.49**	**332**	P		**P**		**05 56 28.6**	**+0.8**
DLMT				IAmb		IAmb		05 56 51.0	
	comp=Z,7.4nm,1.5s								
PB07	**IPOC Station P**	**38.76**	**152**	P		**P**		**05 56 28.9**	**-1.4**
LYMT	**Lyon Mountain**	**39.60**	**334**	P		**P**		**05 56 37.9**	**+0.8**
PLID	**Pearl Lake**	**39.92**	**329**	P		**P**		**05 56 40.3**	**+0.5**
NEW	**Newport**	**42.73**	**332**	LR		LR		06 19 10.7	
	comp=Z,13nm,18.7s,baz=126,slow=42								
FFC	**Flin Flon**	**43.21**	**348**	P		**P**		**05 57 06.1**	**-0.1**
FFC				IAmb		IAmb		05 57 23.8	
	comp=Z,7.5nm,1.4s								
D05A	**Enumclaw**	**44.41**	**327**	P		**P**		**05 57 17.3**	**+1.3**
RPN	**Rapa Nui**	**44.63**	**207**	LR		LR		06 11 05.1	
	comp=Z,30nm,20.1s,baz=30,slow=29								
SCHQ	**Schefferville**	**45.20**	**17**	LR		LR		06 17 09.7	
	comp=Z,43nm,18.1s,baz=210,slow=37								
FRB	**Frobisher Bay**	**52.75**	**11**	LR		LR		06 21 44.7	
	comp=Z,33nm,20.0s,baz=78,slow=37								
ITAB	**Concordia**	**53.04**	**139**	P		**P**		**05 58 23.6**	**+1.1**
YKA	**Yellowknife Ar**	**53.08**	**345**	P		**P**		**05 58 20.4**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=145,slow=7.5,SNR=4.6								
YKA				pP		**pP**		**05 58 37.7**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=136,slow=8.7,SNR=6.6								
	comp=Z,0.5nm,0.6s								
T35M	**Bob Quinn**	**54.47**	**333**	P		**P**		**05 58 33.0**	**+0.4**
T35M				IAmb		IAmb		05 58 55.0	
	comp=Z,3.1nm,0.8s								
MMPY	**Sheldon Lake,**	**58.34**	**338**	P		**P**		**05 59 00.4**	**+0.4**
MMPY				IAmb		IAmb		05 59 13.3	
	comp=Z,3.9nm,1.4s								
M29M	**Somme Creek**	**60.98**	**336**	P		**P**		**05 59 18.2**	**0.0**
M29M				IAmb		IAmb		05 59 39.5	
	comp=Z,3.9nm,1.3s								
I30M	**Mount Dempster**	**61.71**	**339**	P		**P**		**05 59 22.7**	**-0.4**
I30M				IAmb		IAmb		05 59 24.8	
	comp=Z,4.0nm,1.5s								
G31M	**Satah River**	**62.01**	**341**	P		**P**		**05 59 24.4**	**-0.5**
M27K	**Edge Creek, AK**	**62.32**	**335**	P		**P**		**05 59 28.0**	**+0.7**
M27K				IAmb		IAmb		06 00 08.8	
	comp=Z,4.5nm,1.3s								
BCAR	**Beaver Creek A**	**62.61**	**336**	P		**P**		**05 59 29.2**	**0.0**
INK	**Inuvik**	**62.65**	**343**	P		**P**		**05 59 28.7**	**-0.4**
INK				IAmb		IAmb		05 59 50.3	
	comp=Z,5.2nm,1.4s								
GLB	**Gilahina Butte**	**62.73**	**334**	P		**P**		**05 59 29.2**	**-0.7**
F30M	**Barrier River**	**62.90**	**342**	P		**P**		**05 59 31.4**	**+0.5**
H29M	**Whitestone**	**62.95**	**340**	P		**P**		**05 59 31.2**	**0.0**
I28M	**Miner Creek**	**63.09**	**338**	P		**P**		**05 59 33.5**	**+1.2**
I28M				IAmb		IAmb		05 59 50.7	
	comp=Z,3.8nm,1.5s								
G29M	**Pine Creek**	**63.21**	**340**	P		**P**		**05 59 32.8**	**-0.2**
RIDG	**Independent Ri**	**64.15**	**336**	P		**P**		**05 59 40.5**	**+1.3**
RIDG				IAmb		IAmb		06 00 19.4	
	comp=Z,3.3nm,1.2s								
F28M	**Old Crow**	**64.20**	**341**	P		**P**		**05 59 40.0**	**+0.5**
F28M				IAmb		IAmb		05 59 59.8	
	comp=Z,3.4nm,0.8s								
E28M	**Babbage River**	**64.62**	**342**	P		**P**		**05 59 43.0**	**+0.8**
E28M				IAmb		IAmb		06 00 01.4	
	comp=Z,3.9nm,1.2s								
IL31		**65.39**	**336**	P		**P**		**05 59 47.9**	**+0.8**
IL31				IAmb		IAmb		06 00 14.4	
	comp=Z,2.5nm,1.2s								
ILAR	**Eielson Array**	**65.39**	**336**	P		**P**		**05 59 45.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=164,slow=4.0,SNR=4.7								
ILAR				pP		**pP**		**06 00 02.5**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=128,slow=5.8,SNR=5.3								
	comp=Z,0.4nm,0.8s								
RND	**Reindeer**	**65.66**	**335**	P		**P**		**05 59 48.9**	**-0.2**
RND				IAmb		IAmb		05 59 49.1	
	comp=Z,2.6nm,0.8s								
I23K	**Minto, Yukon-K**	**66.51**	**336**	P		**P**		**05 59 54.0**	**-0.4**
I23K				IAmb		IAmb		06 00 11.3	
	comp=Z,6.7nm,1.5s								
NOA	**NORSAR Array B**	**83.47**	**29**	LR		LR		06 39 38.8	
	comp=Z,6.6nm,18.1s,baz=115,slow=36								
HHC	**Hu-ho-hao-te**		**123.56**	**342**	*e*P		**PKiKP**	**06 08 04.5**	**+1.8**
WRA	**Warramunga Arr**		**138.58**	**254**	PKP		**PKPdf**	**06 08 33.6**	**+2.5**
	comp=Z,0.2nm,0.6s,baz=91,slow=2.2,SNR=1.2								
WRA					pPKP		**pPKPdf**	**06 08 50.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=89,slow=2.5,SNR=3.0								
ASAR	**Alice Springs**		**138.63**	**249**	PKP		**PKPdf**	**06 08 34.1**	**+2.9**
	comp=Z,0.2nm,0.6s,baz=97,slow=5.6,SNR=1.3								
PZH	**PanZhiHua**		**139.75**	**346**	PKP		**PKPdf**	**06 08 32.3**	**-1.0**

*IDC **28** 06:06:36.2±0.8, 30°.63N×57°.28E, h0km, mb4.2/28, mbtmp4.2/33, ML4.1/5, MS3.5/27, Error ellipse: s-maj=18.5km s-min=11.9km az=2.0*
*TEH **28** 06:06:37.8, 30°.79N×57°.32E, h12km±26km, ML4.8, Presumed earthquake*
*MOS **28** 06:06:37.5±0.9, 30°.80N×57°.14E, h11km, mb4.6/28, Error ellipse: s-maj=6.0km s-min=4.6km az=93.9*
*NEIC **28** 06:06:39.8±1.2, 30°.91N±0°.06×57°.06E±0°.08, h10km±1km, mb4.5/91, Error ellipse: s-maj=12.6km s-min=9.6km az=129.0*
*THR **28** 06:06:39.9±0.3, 30°.78N×57°.41E, h10km, ML4.6,*

Presumed earthquake
*DSN **28** 06:06:40.9±1.3, 30°.44N×58°.63E, h10km, ML3.9/6, Error ellipse: s-maj=100.0km s-min=12.4km az=113.0*
*GFZ **28** 06:06:40.7±0.3, 31°N±4°×5°7E±°, h10km, M4.4/27, mb4.5/27*
ISC 28 06:06:39.0±0.3, 30°.81N±0°.03×57°.27E±0°.03, h10km, n382, σ1§50/374, mb4.4/105, MS3.5/25, 3C-9D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.31**	**180**	Pg	**Pg**	**06 06 44.4**	**-0.9**
ZRDN	**Zarand Kerman**	**0.65**	**284**	Pg	**Pg**	**06 06 51.5**	**-0.2**
KHGB	**Koh Gabri**	**0.81**	**238**	Pg	**Pg**	**06 06 54.1**	**-0.6**
KRBR	**Kerman**	**0.94**	**208**	*e*Pg	**Pn**	**06 06 58.7**	**+0.2**
CHMN	**Cheshme madani**	**0.97**	**166**	Pg	**Pg**	**06 06 56.2**	**-1.7**
NGRK	**Negar Kerman**	**1.25**	**202**	Pg	**Pg**	**06 07 02.3**	**-0.8**
IBAF	**Bafgh**	**1.65**	**298**	Pg	**Pb**	**06 07 09.0**	**-0.7**
KBAM	**BAM**	**1.96**	**148**	Pn	**Pb**	**06 07 12.3**	**-2.6**
BSRN	**Basiran**	**1.96**	**54**	*e*Pn	**Pn**	**06 07 11.2**	**-1.3**
BSRN				IAML		06 07 44.0	
	comp=Z,2μm,1.0s						
BSRN	**Basiran**	**1.96**	**54**	Pn	**Pb**	**06 07 12.6**	**-2.4**
IKOO	**Kooshah**	**2.19**	**42**	Pn	**Pn**	**06 07 15.7**	**0.0**
TPRV	**Parvadeh(Tabas**	**2.27**	**348**	Pn	**Pn**	**06 07 16.9**	**+0.3**
IMEH	**Mehriz**	**2.35**	**285**	Pn	**Pb**	**06 07 19.3**	**-2.3**
ITEG	**Tejag**	**2.43**	**31**	Pn	**Pn**	**06 07 19.5**	**+0.5**
YZKH	**Yazd**	**2.77**	**305**	*e*Pn	**Pn**	**06 07 24.3**	**+0.7**
YZKH				IAML		06 08 16.3	
	comp=Z,2μm,1.0s						
TKDS	**Koohdasht(Taba**	**2.80**	**357**	Pn	**Pn**	**06 07 24.6**	**+0.6**
TAFT	**Taft - Yazd**	**2.80**	**290**	Pn	**Pn**	**06 07 25.5**	**+1.3**
TABS	**Tabas**	**2.83**	**357**	*e*Pn	**Pn**	**06 07 24.7**	**+0.3**
TABS				IAML		06 08 18.7	
	comp=Z,2μm,1.0s						
TSHB	**Tabas_ShorAb**	**2.95**	**347**	Pn	**Pn**	**06 07 26.4**	**+0.4**
TNSJ	**Nastanj**	**3.19**	**350**	Pn	**Pn**	**06 07 30.2**	**+0.8**
ZHSF	**Zahedan**	**3.26**	**111**	*e*Pn	**Pn**	**06 07 27.9**	**-2.5**
ZHSF				IAML		06 08 28.5	
	comp=Z,310nm,1.0s						
BNDS	**Bandar-Abbas**	**3.53**	**196**	*e*Pn	**Pn**	**06 07 36.5**	**+2.4**
BNDS				IAML		06 09 25.3	
	comp=Z,380nm,1.0s						
TAPT	**Tabas- Tapeh t**	**4.06**	**359**	Pn	**Pn**	**06 07 42.5**	**+1.2**
NASN	**Na'in**	**4.28**	**299**	*e*Pn	**Pn**	**06

KIV Kislovodsk 17.47 323 P P 06 10 45.3 +1.3
ARPR Arapgir-MALATY 17.56 303 Pn Pn 06 10 41.6 -2.4
ARPR Arapgir-MALATY 17.56 303 P P 06 10 46.7 +1.6
GAZ Gaziantep 17.79 296 Pn 06 10 45.1 -1.7
HSUJ Al Zarqa 18.03 280 P P 06 10 51.6 +1.4
comp=Z,36nm,0.7s
AAK Ala-Archa 18.12 45 P P 06 10 51.5 +0.2
comp=Z,0.5nm,0.3s,baz=224,slow=11,SNR=6.0
AAK LR LR 06 18 30.5
comp=Z,136nm,20.3s,baz=250,slow=39
comp=Z,1.7nm,0.3s
AAK Ala-Archa 18.12 45 *i* P P 06 10 52.8 +1.4
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 18.12 45 Pn P 06 10 50.5 -0.9
AAK Ala-Archa 18.12 45 P P 06 10 54.8 +3.5
SWQJ Swaqa 18.18 277 P P 06 10 52.9 +0.9
comp=Z,7.1nm,0.8s
NRN Naryn 18.44 50 P Pn 06 10 56.6 +1.6
NRN pmax pmax
comp=Z,10.0nm,1.2s
NRN Naryn 18.44 50 P Pn 06 10 56.6 +1.6
GEM Giv'at Ha'Em 18.48 283 P Pn 06 10 57.7 +2.5
AB31 Akbulak array 18.54 6 Pn 06 10 55.6 -0.1
ABKAR Akbulak array 18.54 6 Pn 06 10 55.3 -0.5
ASAI AK-SAY(Kyrgyzs 18.54 52 P Pn 06 10 59.4 +3.1
QRNJ Al-Qirein 18.55 280 P Pn 06 10 58.4 +2.4
comp=Z,3µm,1.1s
ANDN Andirin 18.56 297 P Pn 06 10 58.5 +2.2
HSNJ Maan 18.60 274 P Pn 06 10 58.7 +1.8
comp=Z,81nm,1.0s
GHAJ Ghor Haditha 18.60 277 P P 06 10 54.6 -1.8
GHAJ IAmb IAmb 06 11 02.2
comp=Z,35nm,0.9s
GHAJ Ghor Haditha 18.60 277 P Pn 06 10 58.8 +2.1
comp=Z,50nm,1.1s
GHAJ Ghor Haditha 18.60 277 P Pn 06 10 58.9 +2.1
UJAP Al Uja 18.65 279 P Pn 06 10 59.7 +2.4
comp=Z,16nm,0.4s
MMLI Mount Malkishu 18.68 281 P P 06 10 53.9 -3.5
LISJ El Lisan 18.68 277 P Pn 06 10 59.9 +2.3
comp=Z,2µmcomp=Z,29nm,1.5s
MSBI Mazada 18.78 277 P Pn 06 11 01.3 +2.5
comp=Z,6.0nm,1.1s
MSBI Mazada 18.78 277 P Pn 06 11 02.0 +3.2
SOC Sochi 18.87 317 *e*P Pn 06 11 01.9 +2.0
SOC MLR MLR
comp=Z,98nm,13.0s
SALP Salfit 18.88 280 P Pn 06 11 02.6 +2.5
comp=Z,26nm,0.8s
BOOM Boomskoye usch 18.93 47 P Pn 06 11 01.6 +0.7
BOOM pmax pmax
comp=Z,14nm,1.5s
BOOM Boomskoye usch 18.93 47 P Pn 06 11 01.6 +0.7
YTIR Yattir 18.98 277 P Pn 06 11 03.7 +2.3
comp=Z,527nmcomp=Z,33nm,1.3s
AMAZ Amatzia 19.14 278 P Pn 06 11 05.6 +2.3
HRFI Mount Harif 19.19 273 P Pn 06 11 05.0 +1.1
comp=Z,40nm,1.3s
HRFI Mount Harif 19.19 273 P Pn 06 11 05.7 +1.8
AQBJ Aqaba 19.22 272 P Pn 06 11 06.1 +1.8
comp=Z,63nm,1.1s
BNN Bunyan 19.30 300 P P 06 11 02.9 -1.4
EIL Elat 19.32 272 P P 06 11 03.3 -1.0
comp=Z,0.6nm,0.3s,baz=81,slow=11,SNR=7.6
EIL LR LR 06 19 51.6
comp=Z,133nm,21.1s,baz=95,slow=41
comp=Z,31nm,1.1s
EIL Elat 19.32 272 P Pn 06 11 06.9 +1.5
comp=Z,21nm,1.1s
EIL Elat 19.32 272 P Pn 06 11 06.6 +1.3
CY604 RAF Akrotiri, 19.49 286 P P 06 11 04.2 -1.7
CY604 IAmb IAmb 06 11 17.1
comp=Z,30nm,1.1s
AKTO Aktyubinsk 19.61 1 P Pn 06 11 07.6 -1.1
comp=Z,1.1nm,0.3s,baz=186,slow=10,SNR=17
AKTO LR LR 06 19 46.5
comp=Z,161nm,22.0s,baz=144,slow=40
comp=Z,5.8nm,0.5s
KZIT Kziot 19.64 276 P Pn 06 11 10.0 +0.8
comp=Z,686nmcomp=Z,45nm,0.9s
KZIT Kziot 19.64 276 P Pn 06 11 10.3 +1.1
TARG Taragay, Kyrgy 19.77 51 P Pn 06 11 10.9 -0.3
TARG pmax pmax
comp=Z,4.0nm,0.7s
TARG Taragay, Kyrgy 19.77 51 P Pn 06 11 10.9 -0.3
TARG Taragay, Kyrgy 19.77 51 P Pn 06 11 16.1 +5.0
WUS Wushi 20.51 54 P Pn 06 11 18.9 -0.7
WUS IAmb IAmb 06 11 28.5
comp=Z,13nm,1.0s
CSS Mathiatis 20.51 288 P P 06 11 16.9 -0.5
comp=Z,26nm,1.2s
CSS Mathiatis 20.51 288 P Pn 06 11 20.2 +0.7
comp=Z,26nm,1.2s
BR104 Keskin Array S 21.19 301 P P 06 11 25.4 +0.6
comp=Z,177nmcomp=Z,22nm,1.1s
BR131 Keskin Array S 21.20 301 *d* *i*P P 06 11 25.6 +0.7
BR131 *i* *PP sP 06 11 28.3 -1.4
BR131 Keskin Array S 21.20 301 P 06 11 23.9 -1.0
BR131 IAmb IAmb 06 11 26.7
comp=Z,35nm,1.2s
BRTR Keskin Array B 21.20 301 P P 06 11 24.5 -0.4
comp=Z,12nm,0.9s,baz=119,slow=13,SNR=64
BRTR LR LR 06 20 33.2
comp=Z,69nm,19.0s,baz=99,slow=39
comp=Z,12nm,0.9s
BRTR Keskin Array B 21.20 301 P P 06 11 25.1 +0.2
BRTR Keskin Array B 21.20 301 P 06 11 25.1 +0.2
BR105 Keskin Array S 21.21 301 P P 06 11 24.9 -0.1
comp=Z,187nmcomp=Z,24nm,1.2s
BR106 Keskin Array S 21.22 301 P P 06 11 25.3 +0.2
comp=Z,179nmcomp=Z,22nm,1.1s
KKUL Konya-Kulu 21.58 299 P P 06 11 30.5 +1.6
PDGK Podgornoye 21.61 49 P P 06 11 31.1 +1.8
PDGK Podgornoye 21.61 49 P P 06 11 31.1 +1.8
BZK Bozkurt 21.72 307 P P 06 11 30.1 -0.2
comp=Z,28nm,1.0s
BELG Belogornoye 22.70 345 P P 06 11 40.4 -0.3
comp=Z,17nm,0.9s,baz=114,slow=20,SNR=9.2
comp=Z,17nm,0.9s
ATD Arta Tunnel 23.38 218 P P 06 11 48.1 0.0
ATD IAmb IAmb 06 12 12.0
comp=Z,16nm,1.0s
VRH Novokhopyorsk 23.42 335 *e*P P 06 11 46.0 -2.0
VRH pmax pmax
comp=Z,10.0nm,1.1s
ELL Elmali 23.46 292 P P 06 11 47.1 -1.7
ELL pmax pmax
comp=Z,29nm,0.8s
ELL Elmali 23.46 292 P P 06 11 47.1 -1.7
HYB Hyderabad 23.51 120 *e*P P 06 11 49.0 -0.3
HYB *e*S S 06 16 07.8 +4.6
BVAR Borovoye Array 24.17 20 P P 06 11 54.7 -0.7
comp=Z,6.6nm,0.7s,baz=204,slow=7.3,SNR=14
comp=Z,6.6nm,0.7s
VORD Divnogorie 24.17 332 *e*P P 06 11 54.6 -0.7
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 24.41 332 *e*P P 06 11 55.5 -2.1
VSR pmax pmax
comp=Z,7.0nm,1.0s
MANT Manisa 24.76 296 P P 06 11 58.4 -2.8
MANT IAmb IAmb 06 12 02.9
comp=Z,12nm,0.9s
ARG Arkhangelos 24.84 290 P P 06 12 00.2 -1.4
ARG pmax pmax
comp=Z,57nm,1.1s
ARG Arkhangelos 24.84 290 P P 06 12 00.2 -1.4
MAKZ Makanchi 24.87 43 P P 06 12 02.6 +0.9
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
MAKZ Makanchi 24.87 43 P 06 12 02.6 +0.9
MAKZ IAmb IAmb 06 12 10.6
comp=Z,8.8nm,1.1s
MK31 Makanchi Array 25.05 43 *d* *i*P P 06 12 03.9 +0.5
MK31 Makanchi Array 25.05 43 P P 06 12 03.9 +0.5
MKAR Makanchi Array 25.05 43 P P 06 12 03.4 0.0
comp=Z,1.4nm,0.6s,baz=233,slow=8.6,SNR=16
comp=Z,1.4nm,0.6s
MKAR Makanchi Array 25.05 43 *i* P P 06 12 03.7 +0.3
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 25.05 43 P 06 12 03.9 +0.6
KURBB Kurchatov Arra 25.36 33 P P 06 12 06.2 +0.1
comp=Z,3.1nm,0.6s,baz=231,slow=9.1,SNR=12
comp=Z,3.1nm,0.6s

KURK Kurchatov 25.47 33 *i* P P 06 12 08.1 +1.0
KURK *i* *PP sP 06 12 10.5 -1.3
KURK pmax pmax
comp=Z,5.0nm,0.8s
KURK Kurchatov 25.47 33 P 06 12 08.1 +1.0
KURK Kurchatov 25.47 33 P P 06 12 08.3 +1.2
BALB Balikesir 25.48 298 P P 06 12 05.9 -1.4
LPSR Galich'ya Gora 25.58 334 *e*P P 06 12 06.8 -1.2
LPSR pmax pmax
comp=Z,10.0nm,0.9s
ARTI Arti 25.58 1 P P 06 12 10.0 +2.0
comp=Z,2.2nm,0.6s,baz=191,slow=10,SNR=4.0
comp=Z,2.2nm,0.6s
ARTI Arti 25.58 1 *c* *i*P P 06 12 10.2 +2.1
ARTI 06 12 47.2
ARTI S S 06 16 39.2 +3.4
ARTI SS SnSn 06 17 29.7 +0.5
ARTI pmax pmax
comp=Z,6.0nm,1.3s
ARTI Arti 25.58 1 P P 06 12 07.4 -0.6
ARTI IAmb IAmb 06 12 16.0
comp=Z,22nm,1.5s
KARP Karpathos 25.59 289 P P 06 12 06.9 -1.5
EVN Everest 25.87 89 P 06 12 12.2 +0.5
EVN IAmb IAmb 06 12 20.8
comp=Z,9.6nm,0.7s
EVN Everest 25.87 89 P P 06 12 12.9 +1.2
BAL3X Bal3x, Balta 27.17 317 P P 06 12 21.3 -1.2
WMQ Urumqi 27.30 53 *e*P P 06 12 30.0 +6.2
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ LR LR
comp=Z,82nm,21.7s
IDI Anoyia 27.43 288 P P 06 12 23.4 -1.8
RDO Rodhopi 27.54 301 P P 06 12 25.5 -0.4
RDO IAmb IAmb 06 12 26.8
comp=Z,8.0nm,1.0s
VRI Vrincioaia 28.07 311 P P 06 12 32.0 +1.4
comp=Z,4.7nm,1.2s
KIRV Kirov 28.29 351 LR LR 06 25 47.1
comp=Z,102nm,20.6s,baz=170,slow=40
KIRV Kirov 28.29 351 *i* P P 06 12 33.4 +1.1
OBN Obninsk 28.41 335 P P 06 12 34.1 +0.6
comp=Z,19nm,0.4s,baz=126,slow=22,SNR=4.7
OBN Obninsk 28.41 335 ⇓ *e*P P 06 12 34.8 +1.3
OBN *e* 06 13 25.5
OBN pmax pmax
comp=Z,17nm,1.2s
OBN MLR MLR
comp=Z,74nm,15.0s
MLR Muntele Rosu 28.45 310 P P 06 12 35.0 +0.8
comp=Z,4.3nm,0.9s,baz=110,slow=9.2,SNR=3.8
MLR LR LR 06 23 50.3
comp=Z,49nm,20.4s,baz=116,slow=36
comp=Z,4.3nm,0.9s
MLR Muntele Rosu 28.45 310 P P 06 12 35.0 +0.8
MLR Muntele Rosu 28.45 310 P P 06 12 33.0 -1.2
MLR IAmb IAmb 06 12 43.0
comp=Z,6.2nm,1.0s
MLR Muntele Rosu 28.45 310 P P 06 12 36.2 +2.0
comp=Z,8.2nm,1.7s
MOS Moscow 28.53 337 *e*P P 06 12 36.4 +1.9
MOS *e* 06 13 26.5
AK08 Malin Array Si 28.76 322 P P 06 12 37.0 +0.3
AK01 Malin Array Si 28.81 322 P P 06 12 37.2 +0.1
AKASG Malin Array Be 28.81 322 P P 06 12 37.2 +0.1
comp=Z,0.8nm,0.4s,baz=125,slow=8.1,SNR=9.8
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 28.81 322 *i* P P 06 12 37.7 +0.6
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 28.81 322 P P 06 12 36.0 -1.2
AKBB Malin Array Si 28.81 322 *c* *i*P P 06 12 37.3 +0.2
AKBB pmax pmax
comp=Z,14nm,1.5s
AKBB Malin Array Si 28.81 322 P P 06 12 36.6 -0.5
AKBB IAmb IAmb 06 12 38.0
comp=Z,5.6nm,0.6s
AKBB Malin Array Si 28.81 322 P P 06 12 37.6 +0.5
KIEV Kiev 28.82 322 P P 06 12 36.5 -0.7
KIEV pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 28.82 322 P P 06 12 36.5 -0.7
KIEV IAmb IAmb 06 12 38.0
comp=Z,5.0nm,0.6s
KIEV Kiev 28.82 322 P P 06 12 37.3 +0.1
comp=Z,36nm,1.4s
KIEV Kiev 28.82 322 P P 06 12 38.0 +0.8
AK12 Malin Array Si 28.82 322 P P 06 12 37.6 +0.4
AK03 Malin Array Si 28.83 322 P P 06 12 37.8 +0.5
LUBAR Lubar, Ukraine 29.21 319 P P 06 12 41.4 +0.7
KMPD K-Podol'skiy 29.33 316 P P 06 12 41.6 -0.1
DGZ Jazzator, Alta 29.47 42 ⇓ *i*P P 06 12 43.5 +0.3
DGZ pmax pmax
comp=Z,2.0nm,0.6s
BURAR Bucovina Array 29.70 314 P P 06 12 43.6 -1.6
BURAR pmax pmax
comp=Z,3.0nm,1.1s
BURAR Bucovina Array 29.70 314 P P 06 12 43.6 -1.6
BUR08 Bucovina Ar. S 29.72 314 P 06 12 43.0 -2.3
BUR08 IAmb IAmb 06 13 07.2
comp=Z,5.5nm,1.2s
ITM Ithomi 29.86 292 P P 06 12 44.7 -2.0
ITM IAmb IAmb 06 13 05.6
comp=Z,13nm,1.0s
ZAA0 Zalesovo Array 30.46 33 P P 06 12 51.9 +0.2
ZAA0 IAmb IAmb 06 12 52.5
comp=Z,6.2nm,0.6s
ZALV Zalesovo Beam 30.46 33 P P 06 12 51.8 +0.1
comp=Z,6.1nm,0.6s,baz=236,slow=9.8,SNR=28
ZALV LR LR 06 25 45.9
comp=Z,52nm,19.8s,baz=246,slow=38
comp=Z,6.1nm,0.6s
SHL Shillong 30.87 91 P P 06 12 57.4 +1.5
SHL pmax pmax
comp=Z,3.0nm,0.8s
SHL Shillong 30.87 91 P P 06 12 57.4 +1.5
SHL IAmb IAmb 06 12 58.6
comp=Z,3.4nm,0.8s
RNPP5 Staryi Chortor 30.89 320 P P 06 12 55.8 +0.2
RNPP9 Sopachiv 30.98 321 P P 06 12 57.0 +0.7
KEK Kerkira 31.67 297 P P 06 13 00.4 -2.2
LTVH Ltavrtes, Hu 31.72 312 P P 06 12 59.1 -3.8
KOLS Kolonicke sedl 32.01 314 *e*P P 06 13 07.6 +2.1
KOLS pmax pmax
comp=Z,19nm,0.9s
KOLS Kolonicke sedl 32.01 314 P P 06 13 07.8 +2.4
KOLS Kolonicke sedl 32.01 314 *e*P P 06 13 07.6 +2.1
KLMR Klimovskoe 32.27 344 *e*P P 06 13 06.0 -1.5
KLMR pmax pmax
comp=Z,17nm,1.1s
NACGM Naroch 32.41 327 *e*P P 06 13 09.2 +0.4
comp=Z,10.0nm,0.9s,baz=126
SUW Suwalki 33.70 323 P P 06 13 18.4 -1.7
SUW Suwalki 33.70 323 P P 06 13 18.4 -1.7
OJC Ojcow 33.98 316 P P 06 13 21.2 -1.5
OJC Ojcow 33.98 316 P 06 13 21.2 -1.5
OJC Ojcow 33.98 316 P P 06 13 23.4 +0.8
comp=Z,306nmcomp=Z,18nm,1.2s
OJC Ojcow 33.98 316 P P 06 13 24.0 +1.4
TIP Timpagrande 33.99 295 P P 06 13 20.8 -2.2
TIP IAmb IAmb 06 13 23.3
comp=Z,10nm,1.2s
TIP Timpagrande 33.99 295 P P 06 13 22.4 -0.6
comp=Z,6.6nm,1.4s
PABE Paberze 34.08 326 P P 06 13 22.4 -1.0
RONA Rosalia, Austr 35.45 310 *e*P P 06 13 35.0 -0.5
comp=Z,0.8nm,0.5s
GTA2 Gaotai 35.53 64 *e*P P 06 13 37.5 +1.1
GTA2 pP sP 06 13 41.3 -0.2
GTA2 pmax pmax
comp=Z,3.0nm,0.8s
VRAC Vranov 35.67 313 P P 06 13 37.6 +0.4
comp=Z,2.4nm,0.5s,baz=100,slow=5.6,SNR=5.0
comp=Z,2.4nm,0.5s
KNGR Kungurtug, Tuv 35.78 45 *i* P P 06 13 38.0 -0.4
CONA Conrad Observa 35.79 310 *e*P P 06 13 37.9 -0.5
comp=Z,3.0nm,1.1s
KSP Ksiaz 36.30 315 P P 06 13 43.6 +1.0
comp=Z,9.5nm,1.0s
GUMA Gualdo di Mace 36.79 302 P P 06 13 45.2 -1.8
GUMA IAmb IAmb 06 14 22.9
comp=Z,8.6nm,0.9s
FIA1 FINESS Array S 36.81 335 P P 06 13 46.5 -0.3
FINES FINESS Array B 36.81 335 P P 06 13 46.9 0.0
comp=Z,4.7nm,0.7s,baz=136,slow=9.6,SNR=24
comp=Z,4.7nm,0.7s
FINES FINESS Array B 36.81 335 *i* P P 06 13 47.4 +0.6
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 36.81 335 P P 06 13 46.3 -0.5
MOA Molln 36.82 310 *e*P P 06 13 47.0 -0.2
comp=Z,0.5nm,0.5s
MOA Molln 36.82 310 P P 06 13 44.7 -2.4
NRCA Norcia 36.93 301 P P 06 13 46.9 -1.4
SABO M.te Sabotino 36.94 307 P P 06 13 46.3 -1.9
SABO IAmb IAmb 06 13 52.4
comp=Z,9.4nm,1.2s
FDMO Fiordimonte 36.97 302 P P 06 13 47.0 -1.5
FDMO IAmb IAmb 06 13 49.2
comp=Z,9.8nm,1.3s
PRED Cave del Predi 37.03 308 P P 06 13 47.1 -2.0
KBA Koelnbreinsper 37.29 309 P P 06 13 51.1 -0.2
KBA Koelnbreinsper 37.29 309 *e*P P 06 13 50.7 -0.6
comp=Z,0.9nm,0.7s
KBA Koelnbreinsper 37.29 309 P P 06 13 51.1 -0.2
CESX Cesi 37.31 301 P P 06 13 50.0 -1.4
CESX IAmb IAmb 06 13 53.4
comp=Z,5.5nm,0.7s
MURB Monte Urbino 37.40 302 P P 06 13 50.4 -1.8
GEC2 GERESS Array S 37.40 311 P P 06 13 52.2 +0.1
GEC2 GERESS Array S 37.40 311 P 06 13 50.8 -1.4
GEC2 IAmb IAmb 06 13 53.1
comp=Z,7.5nm,0.9s
GERES GERESS Array B 37.40 311 P P 06 13 52.4 +0.3
comp=Z,5.6nm,0.9s,baz=113,slow=7.6,SNR=32
comp=Z,5.6nm,0.9s
GERES GERESS Array B 37.40 311 P 06 13 51.5 -0.6
KHC Kasperske Hory 37.54 312 P P 06 13 53.0 -0.3
comp=Z,255nmcomp=Z,11nm,2.2s
STAL STALIGIAL 37.59 307 P P 06 13 51.4 -2.4
STAL IAmb IAmb 06 13 53.7
comp=Z,6.2nm,0.9s
RJOB Jochberg 37.77 309 P P 06 13 55.5 +0.2
LESA Schwarzleotal 37.80 309 *e*P P 06 13 54.4 -1.1
comp=Z,0.6nm,0.6s
ABTA Abfaltersbach 37.80 308 *e*P P 06 13 54.5 -1.1
comp=Z,0.3nm,0.3s
TEOL Teolo 38.20 305 P P 06 13 56.8 -2.0
TEOL IAmb IAmb 06 14 07.4
comp=Z,9.6nm,0.7s
CLL Collm 38.42 315 ⇓ *i*P P 06 14 01.8 +1.2
CLL pmax pmax
comp=Z,16nm,1.0s
CLL Collm 38.42 315 P 06 13 58.1 -2.5
CLL IAmb IAmb 06 14 02.6
comp=Z,14nm,1.0s
CLL Collm 38.42 315 P P 06 14 01.2 +0.6
CLL Collm 38.42 315 ⇓ *i*P P 06 14 01.8 +1.2
comp=Z,16nm,1.0s
WTTA Wattenberg 38.47 308 *e*P P 06 14 00.4 -0.9
comp=Z,7.2nm,0.6s
WATA Walderalm 38.52 309 *e*P P 06 14 00.6 -1.1
comp=Z,2.7nm,0.6s
SQTA Sankt Quirin 38.75 308 *e*P P 06 14 02.8 -0.8
comp=Z,3.5nm,0.5s
MOTA Moosalm 38.84 309 *e*P P 06 14 03.1 -1.2
comp=Z,10nm,1.0s
FETA Feichten 39.05 308 *e*P P 06 14 04.8 -1.3
comp=Z,0.8nm,0.4s
PZH PanZhiHua 39.07 85 P P 06 14 09.5 +3.0
RETA Reutte 39.09 309 *e*P P 06 14 05.0 -1.4
comp=Z,0.4nm,0.5s
MSF Maaselka 39.11 342 P P 06 14 06.9 +0.7
MSF Maaselka 39.11 342 P P 06 14 06.9 +0.7
FUORN Ofenpass-Fuorn 39.32 307 P P 06 14 06.8 -1.7
OUL Oulu 39.39 340 P P 06 14 08.6 +0.1
OUL Oulu 39.39 340 P P 06 14 08.6 +0.1
APA Apatity 39.41 346 *e*P P 06 14 07.3 -0.8
APA *e* 06 15 44.7
APA *e*S S 06 20 08.1 -1.9
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,154nm,4.4s
LVZ Lovozero 39.44 347 P P 06 14 08.6 -0.4
LVZ pmax pmax
comp=Z,8.0nm,1.2s
LVZ Lovozero 39.44 347 P P 06 14 08.6 -0.4
LVZ IAmb IAmb 06 14 14.7
comp=Z,8.2nm,1.2s
CHTO Chiang Mai 39.46 98 P P 06 14 10.2 +0.5
CHTO pmax pmax
comp=Z,5.0nm,0.8s
CHTO Chiang Mai 39.46 98 P 06 14 10.2 +0.5
DAVOX Davos/Dischmat 39.60 307 P P 06 14 10.1 -0.6
comp=Z,3.7nm,0.5s,baz=104,slow=8.3,SNR=6.4
comp=Z,3.7nm,0.5s
CMAR Chiang Mai Arr 39.61 98 P P 06 14 09.7 -1.3
comp=Z,1.1nm,0.3s,baz=287,slow=6.1,SNR=5.9
CMAR LR LR 06 36 11.3
comp=Z,71nm,18.8s,baz=240,slow=45
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 39.61 98 P P 06 14 12.8 +1.8
CMAR Chiang Mai Arr 39.61 98 P P 06 14 12.8 +1.8
DAVA Damuels 39.66 308 *e*P P 06 14 10.0 -1.2
comp=Z,2.4nm,0.7s
DAVA Damuels 39.66 308 P P 06 14 10.5 -0.7
VSL Villasalto 39.71 296 P 06 14 11.0 -0.6
VSL IAmb IAmb 06 14 12.8
comp=Z,12nm,0.9s
TLY Talaya 39.79 45 LR LR 06 33 46.4
comp=Z,65nm,19.3s,baz=220,slow=41
TUE Stuetta 39.93 307 P P 06 14 12.0 -1.6
KEST Kesra 40.06 290 P P 06 14 14.8 +0.2
comp=Z,2.0nm,0.6s,baz=88,slow=11,SNR=4.0
comp=Z,2.0nm,0.6s
KEST Kesra 40.06 290 P P 06 14 13.1 -1.5
KEST IAmb IAmb 06 14 16.6
comp=Z,7.7nm,1.2s
MBAR Mbarara 40.15 224 LR LR 06 32 23.9
comp=Z,79nm,19.4s,baz=5.5,slow=39
MBAR Mbarara 40.15 224 P P 06 14 15.7 +0.1
MBAR pmax pmax
comp=Z,7.0nm,1.0s
MBAR Mbarara 40.15 224 P P 06 14 15.7 +0.1
MBAR IAmb IAmb 06 14 24.5
comp=Z,6.6nm,0.9s
SONM Songino Array 40.89 51 P P 06 14 21.9 +0.5
comp=Z,0.7nm,0.6s,baz=265,slow=7.4,SNR=3.9
SONM LR LR 06 32 08.3
comp=Z,72nm,19.4s,baz=234,slow=37
comp=Z,0.7nm,0.6s
SONM Songino Array 40.89 51 P P 06 14 21.8 +0.3
HFS Hagfors 41.13 328 P P 06 14 22.6 -0.4
comp=Z,1.9nm,0.9s,baz=133,slow=10,SNR=1.6
HFS LR LR 06 33 29.6
comp=Z,52nm,18.6s,baz=56,slow=39
comp=Z,1.9nm,0.9s
SENIN Lac Senin/Sane 41.33 307 P P 06 14 23.2 -2.0
SENIN IAmb IAmb 06 14 34.0
comp=Z,10nm,1.5s
ULN Ulaanbaatar 41.33 51 *d* *i*P P 06 14 25.8 +0.7
ULN pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 41.33 51 P P 06 14 25.5 +0.4
ULN IAmb IAmb 06 14 58.4
comp=Z,2.6nm,0.5s
ECH Echery 41.59 309 P P 06 14 25.7 -1.3
ECH pmax pmax
comp=Z,13nm,1.4s
ECH Echery 41.59 309 P P 06 14 25.7 -1.3
ECH IAmb IAmb 06 14 30.1
comp=Z,13nm,1.4s
NRIK Noril'sk 42.25 15 P P 06 14 32.3 +0.2
comp=Z,1.3nm,0.5s,baz=204,slow=6.6,SNR=3.8
NRIK LR LR 06 34 07.4
comp=Z,56nm,20.0s,baz=194,slow=39
comp=Z,1.3nm,0.5s
NRIK Noril'sk 42.25 15 P P 06 14 31.8 -0.3
WLF Walferdange 42.41 311 P P 06 14 32.1 -1.5
WLF pmax pmax
comp=Z,17nm,1.3s
WLF Walferdange 42.41 311 P P 06 14 32.1 -1.5
WLF IAmb IAmb 06 15 00.5
comp=Z,17nm,1.3s
KEV Kevo 42.57 345 P P 06 14 34.5 -0.1
KEV pmax pmax
comp=Z,10.0nm,1.0s
KEV Kevo 42.57 345 P P 06 14 34.5 -0.1
KEV IAmb IAmb 06 14 40.8

	comp=Z,9.6nm,1.0s								
NB201	**NORSAR Array S**	**42.59**	**329**		P		**P**	06 14 33.9	**-1.1**
NB201					IAmb		IAmb	06 14 49.1	
	comp=Z,14nm,1.1s								
NAO01	**NORSAR Array S**	**42.69**	**328**		P		**P**	**06 14 34.3**	**-1.5**
ARCES	**ARCESS Array B**	**42.74**	**344**		P		**P**	**06 14 36.1**	**0.0**
	comp=Z,2.1nm,0.7s,baz=143,slow=8.3,SNR=8.7								
ARCES					LR		LR	06 32 52.7	
	comp=Z,50nm,19.8s,baz=98,slow=37								
	comp=Z,2.1nm,0.7s								
ARCES	**ARCESS Array B**	**42.74**	**344**		P		**P**	**06 14 34.7**	**-1.4**
NBO00	**NORSAR Array S**	**42.81**	**329**		P		**P**	**06 14 34.9**	**-1.9**
SSB	**Saint Sauveur**	**43.21**	**305**		P		**P**	**06 14 38.2**	**-2.1**
SSB					pmax		pmax		
	comp=Z,10.0nm,1.3s								
SSB	**Saint Sauveur**	**43.21**	**305**		P		**P**	**06 14 38.2**	**-2.1**
SSB					IAmb		IAmb	06 15 17.5	
	comp=Z,10nm,1.3s								
HHC	**Hu-ho-hao-te**	**44.52**	**61**	*eP*			**P**	**06 14 53.8**	**+2.8**
HHC					pmax		pmax		
	comp=Z,8.0nm,0.5s								
HHC					pmax		pmax		
	comp=Z,63nm,5.9s								
HHC					LR		LR		
	comp=N,160nm,16.0s								
HHC					LR		LR		
	comp=E,120nm,15.3s								
HHC					LR		LR		
	comp=Z,88nm,16.0s								
KULM	**Kulim**	**47.98**	**113**		P		**P**	**06 15 20.3**	**+2.0**
EKA	**Eskdalemuir Ar**	**48.63**	**319**		P		**P**	**06 15 22.8**	**0.0**
	comp=Z,0.5nm,0.4s,baz=84,slow=8.6,SNR=3.4								
	comp=Z,0.5nm,0.4s								
ESDC	**Sonseca Array**	**49.94**	**298**		P		**P**	**06 15 32.1**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=66,slow=6.3,SNR=7.2								
	comp=Z,1.1nm,0.8s								
ESDC	**Sonseca Array**	**49.94**	**298**		P		**P**	**06 15 31.6**	**-1.6**
SPITS	**Spitsbergen Ar**	**50.74**	**350**		P		**P**	**06 15 38.2**	**-0.4**
SPITS					pmax		pmax		
	comp=Z,26nm,1.3s								
NJ2	**Nanjing**	**51.91**	**72**	*eP*			**P**	**06 15 48.5**	**+0.5**
NJ2					pmax		pmax		
	comp=Z,24nm,0.5s								
MD01	**Midelt array s**	**52.05**	**290**		P		**P**	**06 15 48.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**53.91**	**264**		P		**P**	**06 16 01.8**	**-1.2**
	comp=Z,8.6nm,0.8s,baz=59,slow=7.3,SNR=48								
	comp=Z,8.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**53.91**	**264**		P		**P**	**06 16 01.6**	**-1.4**
TORD					IAmb		IAmb	06 16 08.3	
	comp=Z,5.9nm,0.8s								
YAK	**Yakutsk**	**55.11**	**33**		LR		LR	06 41 03.2	
	comp=Z,40nm,19.4s,baz=266,slow=37								
TIXI	**Tiksi**	**55.29**	**21**		LR		LR	06 42 14.2	
	comp=Z,47nm,19.9s,baz=188,slow=39								
TIXI	**Tiksi**	**55.29**	**21**		P		**P**	**06 16 12.3**	**+0.1**
TIXI					pmax		pmax		
	comp=Z,16nm,1.1s								
TIXI	**Tiksi**	**55.29**	**21**		P		**P**	**06 16 12.3**	**+0.1**
KSRS	**Korea Array**	**57.63**	**63**		P		**P**	**06 16 28.8**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=281,slow=7.1,SNR=4.3								
	comp=Z,0.5nm,0.4s								
MATP	**Matopo**	**57.96**	**212**		LR		LR	06 42 10.8	
	comp=Z,82nm,18.5s,baz=105,slow=37								
SUMG	**Summit**	**62.60**	**340**		P		**P**	**06 17 03.5**	**+0.1**
SUMG					pmax		pmax		
	comp=Z,7.0nm,1.1s								
SUMG	**Summit**	**62.60**	**340**		P		**P**	**06 17 03.5**	**+0.1**
DBIC	**Dimbokro**	**62.72**	**261**		LR		LR	06 46 11.6	
	comp=Z,9nm,18.6s,baz=360,slow=38								
DBIC	**Dimbokro**	**62.72**	**261**		P		**P**	**06 17 03.7**	**-0.9**
DBIC					pmax		pmax		
	comp=Z,27nm,1.5s								
DBIC	**Dimbokro**	**62.72**	**261**		P		**P**	**06 17 03.7**	**-0.9**
LBTB	**Lobatse**	**63.26**	**212**		LR		LR	06 45 04.6	
	comp=Z,65nm,18.6s,baz=44,slow=37								
BOSA	**Boshof**	**66.51**	**211**		LR		LR	06 46 11.4	
	comp=Z,32nm,19.8s,baz=38,slow=36								
BOSA	**Boshof**	**66.51**	**211**		P		**P**	**06 17 29.4**	**+0.2**
BOSA					pmax		pmax		
	comp=Z,22nm,1.5s								
BOSA	**Boshof**	**66.51**	**211**		P		**P**	**06 17 29.4**	**+0.2**
SUR	**Sutherland**	**71.71**	**212**		LR		LR	06 50 54.8	
	comp=Z,78nm,18.4s,baz=328,slow=37								
RES	**Resolute Bay**	**73.19**	**353**		LR		LR	06 53 12.4	
	comp=Z,23nm,21.9s,baz=24,slow=38								
C19K	**Lookout Ridge**	**76.78**	**13**		P		**P**	**06 18 31.9**	**+1.5**
C18K	**Utukok River**	**76.85**	**14**		P		**P**	**06 18 31.6**	**+0.7**
D23K	**Nanushuk River**	**78.41**	**10**		P		**P**	**06 18 40.6**	**+1.1**
D23K					IAmb		IAmb	06 18 41.2	
	comp=Z,4.3nm,1.1s								
C27K	**Jago River**	**78.69**	**7**		P		**P**	**06 18 41.9**	**+0.9**
E25K	**Arctic Village**	**79.90**	**8**		P		**P**	**06 18 48.4**	**+0.7**
E25K					IAmb		IAmb	06 18 48.9	
	comp=Z,5.8nm,1.4s								
F30M	**Barrier River**	**81.39**	**5**		P		**P**	**06 18 56.2**	**+0.5**
F30M					IAmb		IAmb	06 19 03.4	
	comp=Z,7.8nm,1.1s								
SCHQ	**Schefferville**	**82.15**	**331**		P		**P**	**06 18 58.4**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=35,slow=10,SNR=4.4								
SCHQ					LR		LR	06 56 10.5	
	comp=Z,22nm,19.7s,baz=16,slow=36								
	comp=Z,1.8nm,0.7s								
SCHQ	**Schefferville**	**82.15**	**331**		P		**P**	**06 19 00.2**	**+0.3**
SCHQ					IAmb		IAmb	06 19 04.0	
	comp=Z,4.2nm,1.0s								
G31M	**Satah River**	**82.18**	**5**		P		**P**	**06 18 60.0**	**+0.2**
H29M	**Whitestone**	**82.54**	**6**		P		**P**	**06 19 02.1**	**+0.4**
H29M					IAmb		IAmb	06 19 08.0	
	comp=Z,3.4nm,0.9s								
ILAR	**Eielson Array**	**82.88**	**10**		P		**P**	**06 19 02.5**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=343,slow=5.3,SNR=5.5								
	comp=Z,0.4nm,0.8s								
ILAR	**Eielson Array**	**82.88**	**10**		P		**P**	**06 19 02.1**	**-1.3**
I28M	**Miner Creek**	**83.13**	**7**		P		**P**	**06 19 05.0**	**+0.1**
I28M					IAmb		IAmb	06 19 11.6	
	comp=Z,3.8nm,1.3s								
CAST	**Castle Rocks**	**83.23**	**13**		P		**P**	**06 19 05.7**	**+0.3**
H31M	**Peel River**	**83.28**	**5**		P		**P**	**06 19 06.5**	**+0.9**
H31M					IAmb		IAmb	06 19 12.4	
	comp=Z,3.8nm,1.0s								
YKA	**Yellowknife Ar**	**86.79**	**356**		P		**P**	**06 19 22.7**	**-0.5**
	comp=Z,2.3nm,1.1s,baz=358,slow=4.9,SNR=6.1								
YKA					LR		LR	07 05 03.1	
	comp=Z,28nm,18.3s,baz=328,slow=40								
	comp=Z,2.3nm,1.1s								
YKA	**Yellowknife Ar**	**86.79**	**356**	*i*	P		**P**	**06 19 23.1**	**-0.1**
YKA					pmax		pmax		
	comp=Z,2.0nm,1.0s								
YKA	**Yellowknife Ar**	**86.79**	**356**		P		**P**	**06 19 22.3**	**-0.9**
WRA	**Warramunga Arr**	**89.52**	**114**		P		**P**	**06 19 34.5**	**-2.4**
	comp=Z,1.2nm,1.1s,baz=304,slow=4.7,SNR=1.9								
	comp=Z,1.2nm,1.1s								
WRA	**Warramunga Arr**	**89.52**	**114**		P		**P**	**06 19 37.0**	**+0.1**
WRA	**Warramunga Arr**	**89.52**	**114**		P		**P**	**06 19 37.0**	**+0.1**
ASAR	**Alice Springs**	**91.21**	**117**		P		**P**	**06 19 43.4**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=304,slow=4.3,SNR=5.3								
	comp=Z,0.7nm,0.8s								
ASAR	**Alice Springs**	**91.21**	**117**		P		**P**	**06 19 44.0**	**-0.7**
ASAR	**Alice Springs**	**91.21**	**117**		P		**P**	**06 19 44.0**	**-0.7**
BBB	**Bella Bella**	**97.22**	**3**		LR		LR	07 07 56.9	
	comp=Z,9.3nm,19.9s,baz=196,slow=38								
QSPA	**South Pole Qui**	**120.64**	**180**		PKP		**PKPdf**	**06 25 28.3**	**-2.0**
	comp=Z,2.0nm,1.0s,baz=271,slow=1.0,SNR=4.0								
QSPA	**South Pole Qui**	**120.64**	**180**				**PKPdf**	**06 25 29.1**	**-1.2**

*SNET **28** 06:23:02.8±1.4, 13°.14N×89°.10W, h67km, ML3.7, Presumed earthquake*
*CATAC **28** 06:23:03.2±0.4, 13°.7N±3°×88°.9W±°, h33km±2km, M4.0/20, MLv4.0/20, Error ellipse: s-maj=6.1km s-min=2.9km az=30.2, confirmed*
*GCG **28** 06:23:03.4±0.7, 13°.15N×89°.11W, h60km±4km, MD4.6, Presumed earthquake*
*UCR **28** 06:23:07.1±1.3, 13°.18N×88°.76W, h35km±999km, MW3.6, Presumed earthquake*

ISC 28 06:23:05.0±1.3, 13°.16N±0°.05×89°.07W±0°.03, h50km±9km, n86, σ1§20/118, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.41**	**324**	P		**Pn**	**06 23 14.3**	**-0.9**
LALI	**Alcalda de L**	**0.41**	**324**	*i* P		**Pn**	**06 23 14.5**	**-0.8**
LALI				*eS*		**Sn**	**06 23 22.6**	**0.0**
LALI	**Alcalda de L**	**0.41**	**324**	*i* P		**Pn**	**06 23 14.5**	**-0.8**
LALI				*eS*		**Sn**	**06 23 23.1**	**+0.5**
LFRS	**El Faro**	**0.47**	**1**	*i* P		**Pn**	**06 23 15.3**	**-0.7**
PANCS	**Alcalda de**	**0.47**	**347**	P		**Pn**	**06 23 14.8**	**-1.2**
PANCS				S		**Sn**	**06 23 23.9**	**+0.2**
TECO	**Alcaldia de Te**	**0.47**	**37**	P		**Pn**	**06 23 15.4**	**-0.6**
TECO				S		**Sn**	**06 23 24.7**	**+0.8**
LOMA	**Loma Larga**	**0.49**	**349**	S		**Sn**	**06 23 25.3**	**+0.8**
COEG	**Centro de Oper**	**0.50**	**22**	P		**Pn**	**06 23 15.6**	**-0.8**
COEG				S		**Sn**	**06 23 24.9**	**+0.5**
COEG	**Centro de Oper**	**0.50**	**22**	*i* P		**Pn**	**06 23 15.7**	**-0.7**
COEG				*eS*		**Sn**	**06 23 25.1**	**+0.6**
SEMO	**Seminario San**	**0.56**	**345**	P		**Pn**	**06 23 16.1**	**-1.0**
SEMO				S		**Sn**	**06 23 26.4**	**+0.5**
MAGS	**Ministerio de**	**0.56**	**338**	*i* P		**Pn**	**06 23 16.1**	**-1.1**
MAGS				*eS*		**Sn**	**06 23 26.5**	**+0.5**
PAVA	**Las Pavas**	**0.57**	**13**	P		**Pn**	**06 23 16.7**	**-0.6**
PAVA	**Las Pavas**	**0.57**	**13**	*i* P		**Pn**	**06 23 16.7**	**-0.6**
PAVA				*eS*		**Sn**	**06 23 27.7**	**+1.6**
UEES	**Universidad Ev**	**0.58**	**344**	P		**Pn**	**06 23 16.6**	**-0.8**
UEES				S		**Sn**	**06 23 27.2**	**+0.9**
PMON	**Piamonte**	**0.60**	**337**	P		**Pn**	**06 23 16.7**	**-1.0**
PMON				S		**Sn**	**06 23 27.5**	**+0.8**
BOQS	**Boqueron**	**0.61**	**341**	*i* P		**Pn**	**06 23 17.3**	**-0.6**
JAYA	**Jayaque - finc**	**0.62**	**324**	P		**Pn**	**06 23 16.7**	**-1.2**
JAYA	**Jayaque - finc**	**0.62**	**324**	*i* P		**Pn**	**06 23 16.7**	**-1.2**
JAYA				*eS*		**Sn**	**06 23 26.5**	**-0.7**
JAYA	**Jayaque - finc**	**0.62**	**324**	*i* P		**Pn**	**06 23 16.5**	**-1.4**
JAYA				*eS*		**Sn**	**06 23 26.9**	**-0.3**
TECA	**Tecapa**	**0.65**	**59**	*i* P		**Pn**	**06 23 17.7**	**-0.6**
PQSS	**Presa 15 de Se**	**0.68**	**47**	P		**Pn**	**06 23 18.0**	**-0.6**
PQSS	**Presa 15 de Se**	**0.68**	**47**	*i* P		**Pn**	**06 23 17.7**	**-0.8**
PQSS				*eS*		**Sn**	**06 23 29.7**	**+1.3**
CEDA	**San Andres**	**0.72**	**334**	P		**Pn**	**06 23 17.9**	**-0.9**
CEDA	**San Andres**	**0.72**	**334**	*i* P		**Pn**	**06 23 17.9**	**-1.1**
CEDA				*eS*		**Sn**	**06 23 29.5**	**+0.3**
PACA	**Pacayal**	**0.79**	**67**	P		**Pn**	**06 23 19.5**	**-0.6**
PACA				S		**Sn**	**06 23 33.7**	**+2.6**
RANC	**El Ranchito**	**0.81**	**70**	P		**Pn**	**06 23 19.9**	**-0.5**
RANC				S		**Sn**	**06 23 33.5**	**+1.9**
CEVE	**Cerro Verde**	**0.86**	**321**	P		**Pn**	**06 23 20.1**	**-1.0**
SBLS	**San Blas**	**0.86**	**322**	*i* P		**Pn**	**06 23 20.3**	**-0.9**
SBLS				*eS*		**Sn**	**06 23 34.6**	**+1.7**
SNJE	**San Jose**	**0.88**	**324**	*i* P		**Pn**	**06 23 20.1**	**-1.2**
SNJE				*eS*		**Sn**	**06 23 33.9**	**+0.6**
P5NO	**Presa 5 de nov**	**0.88**	**20**	P		**Pn**	**06 23 20.1**	**-1.1**
P5NO				S		**Sn**	**06 23 33.2**	**+0.2**
P5NO	**Presa 5 de nov**	**0.88**	**20**	*i* P		**Pn**	**06 23 20.3**	**-0.9**
P5NO				*eS*		**Sn**	**06 23 32.9**	**-0.1**
RTR	**El Retiro**	**0.92**	**323**	*i* P		**Pn**	**06 23 20.9**	**-1.0**
UNIC	**Universidad Ca**	**0.94**	**331**	P		**Pn**	**06 23 21.0**	**-1.1**
UNIC				S		**Sn**	**06 23 34.4**	**-0.1**
INTP	**Intipuca**	**0.99**	**87**	*i* P		**Pn**	**06 23 21.9**	**-0.8**
INTP				*eS*		**Sn**	**06 23 36.2**	**+0.6**
LLGN	**La Laguna**	**1.01**	**7**	*i* P		**Pn**	**06 23 21.5**	**-1.5**
LLGN				*eS*		**Sn**	**06 23 36.8**	**+0.6**
LOAL	**Lomas de Alarc**	**1.08**	**321**	P		**Pn**	**06 23 22.8**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.11**	**321**	P		**Pn**	**06 23 22.8**	**-1.5**
SLOZ				S		**Sn**	**06 23 40.0**	**+1.5**
FAME	**Alcaldia de Sa**	**1.14**	**307**	P		**Pn**	**06 23 23.0**	**-1.7**
FAME				S		**Sn**	**06 23 38.5**	**-0.8**
LCND	**La Caada**	**1.16**	**82**	P		**Pn**	**06 23 24.0**	**-1.0**
LCND	**La Caada**	**1.16**	**82**	*i* P		**Pn**	**06 23 24.1**	**-0.9**
LCND				*eS*		**Sn**	**06 23 42.2**	**+2.5**
CNCH	**Conchagua**	**1.21**	**84**	P		**Pn**	**06 23 24.7**	**-1.0**
CNCH				S		**Sn**	**06 23 42.2**	**+1.0**
CNCH	**Conchagua**	**1.21**	**84**	*i* P		**Pn**	**06 23 24.5**	**-1.3**
CNCH				*eS*		**Sn**	**06 23 43.2**	**+2.1**
MTO3	**Montecristo**	**1.27**	**347**	P		**Pn**	**06 23 25.4**	**-1.2**
MTO3				S		**Sn**	**06 23 42.0**	**-0.7**
MTO3	**Montecristo**	**1.27**	**347**	*i* P		**Pn**	**06 23 25.4**	**-1.2**
JUAM	**Asuncion Mita**	**1.32**	**332**	*i* P		**Pn**	**06 23 25.9**	**-1.3**
JUAM				*i* S		**Sn**	**06 23 43.4**	**-0.4**
MARCA	**Marcala la Paz**	**1.42**	**45**	P		**Pn**	**06 23 27.5**	**-1.0**
MARCA	**Marcala la Paz**	**1.42**	**45**	*i* P		**Pn**	**06 23 27.6**	**-1.0**
ESQI	**Esquipulas**	**1.42**	**349**	P		**Pn**	**06 23 27.7**	**-0.9**
ESQI				S		**Sn**	**06 23 46.9**	**+0.7**
ZAFR2	**Estanzuela, Za**	**1.44**	**349**	*i* P		Pn	06 23 33.8	+5.0
SARH	**Santa Rosa de**	**1.64**	**11**	P		**Pn**	**06 23 30.9**	**-0.6**
SARH	**Santa Rosa de**	**1.64**	**11**	*i* P		**Pn**	**06 23 31.1**	**-0.5**
SARH				*eS*		**Sn**	**06 23 51.9**	**+0.4**
FG16	**Alotenango, Sa**	**1.79**	**309**	*eP*		**Pn**	**06 23 37.6**	**+3.9**
TEL3	**Telica 3**	**2.25**	**105**	P		**Pn**	**06 23 39.1**	**-0.7**
HOYN	**Al Sur del Vol**	**2.26**	**104**	P		**Pn**	**06 23 38.7**	**-1.3**
APG	**El Apazote**	**2.28**	**324**	*i* P		**Pn**	**06 23 39.5**	**-1.0**
STG5	**El Palmar, Qui**	**2.54**	**300**	*i* P		**Pn**	**06 23 47.4**	**+3.5**
STG6	**El Palmar, Qui**	**2.56**	**300**	*eP*		**Pn**	**06 23 47.8**	**+3.5**
JAPN	**Al SSO del Vol**	**3.69**	**116**	*eP*		**Pn**	**06 23 58.4**	**-1.3**
LCRUZ	**La Cruz**	**3.95**	**121**	*eP*		**Pn**	**06 24 01.9**	**-1.3**
LCRUZ				*eS*		**Sn**	**06 24 45.3**	**-3.0**
LAPC	**Finca la Perla**	**4.28**	**123**	*eP*		**Pn**	**06 24 06.1**	**-1.6**
ALIBA	**Liberia Airpor**	**4.29**	**126**	*eP*		**Pn**	**06 24 07.8**	**-0.1**
BUAI	**Buenos Aires**	**4.30**	**121**	*eP*		**Pn**	**06 24 09.2**	**+1.1**
VRLE	**La Escondida,**	**4.32**	**123**	*eP*		**Pn**	**06 24 07.4**	**-1.0**
CLARA	**Aguas Claras**	**4.48**	**121**	*eP*		**Pn**	**06 24 09.2**	**-1.4**
MESS	**Mesas**	**4.49**	**122**	*eP*		**Pn**	**06 24 09.6**	**-1.0**
BAGA	**Bagaces**	**4.55**	**125**	*eP*		**Pn**	**06 24 11.6**	**+0.2**
CUI	**Cuipilapa**	**4.56**	**123**	*eP*		**Pn**	**06 24 11.0**	**-0.6**
JUD3	**Juan Diaz 3**	**4.56**	**130**	*eP*		**Pn**	**06 24 10.8**	**-0.8**
NICO	**Nicoya**	**4.65**	**130**	*eP*		**Pn**	**06 24 11.7**	**-1.0**
TENO	**El Achiote**	**4.69**	**121**	*eP*		**Pn**	**06 24 12.2**	**-1.2**
TIMP	**Tierras Morena**	**4.72**	**122**	*eP*		**Pn**	**06 24 12.8**	**-1.0**
CNAS	**Canas**	**4.75**	**124**	*eP*		Pn	06 24 23.6	+10
JTS	**Las Juntas de**	**4.94**	**125**	*eP*		**Pn**	**06 24 15.6**	**-1.1**
JUNT	**Juntas**	**4.94**	**125**	*eP*		**Pn**	**06 24 16.1**	**-0.7**
MTEVE	**Monteverde**	**5.02**	**124**	*eP*		**Pn**	**06 24 16.7**	**-1.4**
ARE1	**Arenal 1**	**5.03**	**122**	*eP*		**Pn**	**06 24 16.7**	**-1.4**
VARE2	**V. Arenal**	**5.03**	**122**	*eP*		**Pn**	**06 24 16.9**	**-1.2**
PAQE	**Paquera**	**5.24**	**129**	*eP*		**Pn**	**06 24 20.7**	**-0.2**
ARZA	**Esparza**	**5.34**	**126**	*eP*		**Pn**	**06 24 22.3**	**0.0**
VPL2	**V. Platanar**	**5.40**	**121**	*eP*		**Pn**	**06 24 22.9**	**-0.3**
ATEO	**Atenas**	**5.58**	**124**	*eP*		**Pn**	**06 24 26.0**	**+0.4**
PURI	**Puriscal**	**5.71**	**125**	*eP*		**Pn**	**06 24 28.2**	**+0.7**
ACOS	**Acosta**	**5.86**	**124**	*eP*		**Pn**	**06 24 29.4**	**-0.1**
ABE2	**San Pablo**	**6.00**	**124**	*eP*		**Pn**	**06 24 31.5**	**0.0**
VICA	**Volcano Irazu**	**6.01**	**121**	*eP*		**Pn**	**06 24 31.8**	**-0.1**
EDPE	**Pejibaye, P**	**6.70**	**126**	*eP*		**Pn**	**06 24 40.9**	**-0.1**

JMA 28 06:24:58.1±0.3, 31°.N±1°×138°.4E±0°.5, h0km, MV3.7/22, NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.67**	**44**	*eP*		Pn	06 25 28.6	0.0
JAOM				*eS*		Sg	06 25 52.0	+0.2
TTO1	**TONANKAI O.B.S**	**2.72**	**330**	P		Pn	06 25 44.3	+1.6
TTO1				*eS*		Sn	06 26 17.7	+1.5
TTO2	**TONANKAI O.B.S**	**2.72**	**335**	P		Pn	06 25 44.5	+1.7
TTO2				*eS*		Sn	06 26 18.0	+1.7
TTO3	**TONANKAI O.B.S**	**2.73**	**342**	*eS*		Sn	06 26 17.8	+1.2
TTO4	**TONANKAI O.B.S**	**2.83**	**345**	P		Pn	06 25 45.5	+1.1
TTO4				S		Sn	06 26 19.5	+0.5
JIE	**Ise**	**3.43**	**336**	*eP*		Pn	06 25 54.1	+1.3
JIE				*eS*		Sn	06 26 33.8	-0.4
JTNC	**Tanabenakahech**	**3.47**	**318**	*eP*		Pn	06 25 55.0	+1.7
JTNC				*eS*		Sn	06 26 34.1	-1.1
JWY	**Kouya**	**3.78**	**322**	*eS*		Sn	06 26 42.5	-0.3
JAI	**Aioi**	**4.18**	**308**	*eP*		Pn	06 26 05.2	+2.1
JAI				*eS*		Sn	06 26 51.6	-1.1
JYN	**Shimodate**	**4.23**	**2**	*eP*		Pn	06 26 06.1	+2.3
JTO	**Tosashimizu**	**5.01**	**290**	*eP*		Pn	06 26 16.9	+2.4

*ASRS **28** 06:35:21.0±0.9, 53°.62N×88°.09E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 28 06:35:13.2±3.2, 53°.65N×88°.43E, h0km, mbtmp2.6/3, ML2.3/3, Error ellipse: s-maj=27.4km s-min=19.8km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.16**	**280**	I		I	06 47 10.0	
	0.2nm,1.0s,baz=96,slow=318,SNR=4.5							
ZALV	**Zalesovo Beam**	**2.16**	**280**	P		Pn	06 35 50.6	+0.2
	1.4nm,0.3s,baz=94,slow=13,SNR=11							
ZALV					Lg	Lg	06 36 21.4	
	4.5nm,0.3s,baz=94,slow=27,SNR=19							
	2.9nm,0.4s							
KURBB	**Kurchatov Arra**	**6.80**	**248**	P		Pn	06 36 55.3	+1.2
	0.1nm,0.3s,baz=60,slow=14,SNR=4.5							
KURBB					Sn	Sn	06 38 12.0	-0.2
	baz=67,slow=24,SNR=1.9							
KURBB					Lg	Lg	06 38 46.6	
	baz=64,slow=31,SNR=5.7							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**7.91**	**212**	Pn		Pn	06 37 09.6	+0.3
	0.1nm,0.3s,baz=26,slow=12,SNR=4.7							
MKAR					Lg	Lg	06 39 26.1	
	baz=26,slow=31,SNR=2.9							
	0.1nm,0.3s							

*SOME **28** 06:35:39.8, 39°.12N×71°.73E, h5km*
*NNC **28** 06:35:42.2±4.4, 39°.22N×71°.66E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=31.1km s-min=19.7km az=4.0*
*KRNET **28** 06:35:45.3±0.1, 39°.16N×71°.34E, h17km, mb3.1*

ISC 28 06:35:44.6±1.2, 39°.24N±0°.04×71°.23E±0°.03, h10km±10km, n18, σ1§82/31, 15C-11D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.50**	**62**	⇓*iP*		**Pg**	**06 35 54.9**	**+0.4**
DRK				⇓*iS*		**Sg**	**06 36 01.5**	**+0.3**
GAR	**Garm**	**0.75**	**251**	⇑*iP*		**Pn**	**06 36 00.8**	**-0.6**
GAR				⇑*iS*		**Sn**	**06 36 11.9**	**-1.0**
BTK	**Batken**	**0.87**	**339**	⇑*iP*		**Pn**	**06 36 04.0**	**+0.9**
BTK				⇑*eS*		**Sn**	**06 36 17.5**	**+1.6**
CHGR	**Chuyangaron**	**1.72**	**251**	⇓*iP*		**Pg**	**06 36 17.8**	**+0.3**
CHGR				⇓*iS*		**Sg**	**06 36 41.6**	**+1.8**
OHH	**Osh**	**1.75**	**43**	⇑*iP*		**Pg**	**06 36 17.5**	**-0.7**
OHH				⇑*iS*		**Sg**	**06 36 41.1**	**+0.1**
SFK	**Sufi-Kurgan**	**1.92**	**66**	⇓*iP*		**Pb**	**06 36 19.7**	**-0.2**
SFK				⇓*iS*		**Sb**	**06 36 44.6**	**+0.6**
TRKS	**Terek-Say**	**2.28**	**358**	⇓*eP*		**Pb**	**06 36 25.5**	**-0.5**
TRKS				⇓*iS*		**Sb**	**06 36 55.0**	**+0.6**
SALK	**Salom-Alik**	**2.58**	**50**	⇑*iP*		**Pb**	**06 36 29.1**	**-2.0**
SALK				⇑*iS*		**Sb**	**06 37 01.1**	**-1.8**
ARK	**Arkit**	**2.61**	**12**	⇑*iP*		**Pb**	**06 36 30.8**	**-0.8**
ARK				⇑*eS*		**Sb**	**06 37 03.9**	**+0.1**
IUG	**Iuzhnay**	**3.04**	**343**	Pg		**Pg**	**06 36 41.5**	**-1.4**
	14nm,0.3s							
IUG					Lg	Lg	06 37 25.6	
	35nm,0.3s							
IUG	**Iuzhnay**	**3.04**	**343**	*eP*		**Pg**	**06 36 41.5**	**-1.4**
	14nm,0.3s							
IUG				*eS*		**Sg**	**06 37 25.6**	**+3.4**
	35nm,0.3s							
MNAS	**Manas**	**3.38**	**16**	⇓*iP*		**Pb**	**06 36 41.4**	**-3.3**
MNAS				⇓*eS*		**Sb**	**06 37 22.2**	**-3.8**
MRKS	**Merke**	**3.81**	**23**	Pg		**Pb**	**06 36 50.4**	**-1.6**
	1.6nm,0.3s							
MRKS					Lg	Lg	06 37 41.3	
	9.3nm,0.5s							
MRKS	**Merke**	**3.81**	**23

KURBB	**Kurchatov Arra**	**6.36**	**246**	Pn	**Pn**	**07 32 12.3**	**-0.3**
	0.1nm,0.3s,baz=63,slow=14,SNR=4.6						
KURBB				Lg	Lg	07 34 00.6	
	baz=64,slow=32,SNR=6.0						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**6.36**	**246**	⇓Pn	**Pn**	**07 32 11.4**	**-1.2**
	1.1nm,0.7s						
KURBB				⇑Lg	Lg	07 33 59.9	
	4.3nm,0.8s						
MK31	**Makanchi Array**	**7.63**	**209**	⇑Pn	**Pn**	**07 32 31.3**	**+1.2**
	0.3nm,0.6s,baz=32,slow=12,SNR=8.2						
MK31				⇓Sn	**Sn**	**07 33 57.9**	**+0.7**
	0.2nm,0.6s,baz=249,slow=22,SNR=2.7						
MK31				⇓Lg	Lg	07 34 40.5	
	0.6nm,0.8s,baz=21,slow=29						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	**Pn**	**07 32 28.8**	**-1.3**
	0.2nm,0.3s,baz=26,slow=13,SNR=8.7						
MKAR				Sn	**Sn**	**07 33 54.5**	**-2.7**
	baz=33,slow=22,SNR=1.7						
MKAR				Lg	Lg	07 34 38.4	
	baz=30,slow=27,SNR=2.1						
	0.3nm,0.4s						
MAKZ	**Makanchi**	**7.71**	**210**	⇓Pn	**Pn**	**07 32 33.4**	**+2.2**
	2.0nm,0.5s						
MAKZ				⇑Lg	Lg	07 34 42.9	
	0.9nm,0.9s						

*IDC **28** 07:41:02.2±3.7, 7°.86S×147°.97E, h93km±25km, mb3.4/7, mbtmp3.8/9, Error ellipse: s-maj=43.6km s-min=25.0km az=78.0*

ISC 28 07:40:55.5±1.3, **7°.5S**±0°.1×**148°.1E**±0°.2, **h35**km, **n11, σ1.85/12, mb3.7/7, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.11**	**207**	P	**Pn**	**07 41 29.6**	**+1.3**
	156nm,0.3s,baz=27,slow=14,SNR=41						
PMG				S	**Sn**	**07 41 53.5**	**+0.2**
	410nm,0.4s,baz=349,slow=4.4,SNR=13						
CTA	**Charters Tower**	**12.62**	**188**	P	**Pn**	**07 43 55.1**	**+2.4**
	2.2nm,0.3s,baz=356,slow=13,SNR=8.6						
WRA	**Warramunga Arr**	**18.20**	**226**	P	**P**	**07 45 04.4**	**-1.2**
	1.0nm,0.4s,baz=52,slow=11,SNR=15						
ASAR	**Alice Springs**	**21.08**	**219**	P	**P**	**07 45 34.8**	**-2.2**
	0.3nm,0.4s,baz=55,slow=9.1,SNR=14						
	0.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.29**	**242**	P	**P**	**07 46 07.4**	**-2.5**
	3.6nm,0.9s,baz=63,slow=9.0,SNR=8.7						
	3.6nm,0.9s						
STKA	**Stephens Creek**	**24.99**	**193**	P	**P**	**07 46 14.7**	**-1.4**
	1.9nm,0.9s,baz=15,slow=12,SNR=1.5						
	1.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.96**	**299**	P	**P**	**07 50 25.3**	**+1.7**
	0.8nm,0.4s,baz=133,slow=6.6,SNR=5.1						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**79.38**	**320**	P	**P**	**07 52 59.5**	**+1.5**
	0.5nm,0.6s,baz=114,slow=6.6,SNR=5.4						
	0.5nm,0.6s						
QSPA	**South Pole Qui**	**82.46**	**180**	P	**P**	**07 53 12.5**	**-1.8**
	1.1nm,0.7s,baz=4.6,slow=5.2,SNR=6.9						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**83.12**	**323**	P	**P**	**07 53 17.9**	**+0.2**
	0.4nm,0.7s,baz=109,slow=5.5,SNR=2.7						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**146.54**	**282**	PKPbc	**PKPdf**	**08 00 32.2**	**-0.6**
	0.5nm,0.5s,baz=87,slow=3.1,SNR=5.4						

KRSC 28 07:48:33.1±1.7, **50°.32N**×**157°.33E, h48**km±25km, **Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.86**	**296**	*e*P	Pn	07 48 49.3	+0.5
SKR				*e*S	Sn	07 49 00.1	-0.2
PAU	**Pauzhetka**	**1.19**	**344**	*e*P	Pn	07 48 55.5	+2.1
PAU				*e*S	Sn	07 49 10.9	+2.4
KDTR	**Khodutka, Kamc**	**1.56**	**17**	*e*P	Pn	07 49 00.5	+2.1
KDTR				*e*S	Sn	07 49 19.7	+2.2
MIPR	**Malaya Ipel'ka**	**1.99**	**350**	*e*P	Pn	07 49 07.0	+2.7
ASAK	**Asacha**	**2.10**	**10**	*e*P	Pn	07 49 08.6	+2.8
MTVR	**Mutnovka**	**2.23**	**14**	*e*P	Pn	07 49 10.4	+2.7
MTVR				*e*S	Sn	07 49 37.2	+3.1
RUS	**Russkaya**	**2.24**	**19**	*e*P	Pn	07 49 09.8	+2.1
RUS				*e*S	Sn	07 49 36.9	+2.7
GRL	**Gorelyy**	**2.28**	**11**	*e*P	Pn	07 49 11.6	+3.2
GRL				*e*S	Sn	07 49 39.1	+3.8
KRMR	**Karymshinskiy**	**2.56**	**11**	*e*P	Pn	07 49 15.8	+3.7
KRMR				*e*S	Sn	07 49 46.8	+4.8
APC	**Apacha**	**2.61**	**358**	*e*P	Pn	07 49 15.3	+2.6
PET	**Petropavlovsk**	**2.83**	**16**	*e*P	Pn	07 49 18.5	+2.7
PET				*e*S	Sn	07 49 52.5	+3.9
DALK	**Dalny**	**2.85**	**18**	*e*P	Pn	07 49 18.9	+2.8
DALK				*e*S	Sn	07 49 52.6	+3.4
UGLR	**Uglovaya**	**3.04**	**17**	*e*P	Pn	07 49 23.1	+4.4
AVH	**Avacha**	**3.08**	**16**	*e*P	Pn	07 49 23.9	+4.7
KOK	**Koryaka**	**3.08**	**15**	*e*P	Pn	07 49 23.9	+4.6
SMAR	**Somma**	**3.08**	**17**	*e*P	Pn	07 49 24.0	+4.5
KRER	**Koryakskii**	**3.12**	**16**	*e*P	Pn	07 49 23.9	+4.0
SDLR	**Sedlovina**	**3.12**	**17**	*e*P	Pn	07 49 23.2	+3.4
NLC	**Nalytchevo**	**3.12**	**23**	*e*S	Sn	07 49 57.0	+1.3
KRX	**Arik**	**3.15**	**15**	*e*P	Pn	07 49 24.4	+4.1
SPN	**Mys Shipunski**	**3.25**	**30**	*e*P	Pn	07 49 25.3	+3.8
GNL	**Ganaly**	**3.40**	**6**	*e*P	Pn	07 49 28.0	+4.3
MKZ	**Mys Kozlova**	**5.02**	**31**	*e*P	Pn	07 49 48.3	+2.4
KBTR	**Krutoberegovo**	**6.75**	**27**	*e*P	Pn	07 50 12.7	+3.2

*IDC **28** 07:50:05.3±3.8, 54°.21N×87°.55E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=34.5km s-min=19.7km az=39.0*

ASRS 28 07:50:06.0±0.9, **54°.13N**×**87°.15E, h0**km, **M2.3**(MOS), **The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**264**	I	I	07 59 20.0	
	baz=79,slow=303,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.38**	**264**	Pg	Pb	07 50 34.2	+1.5
	1.9nm,0.3s,baz=84,slow=16,SNR=27						
ZALV				Lg	Lg	07 50 57.7	
	1.5nm,0.3s,baz=81,slow=27,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.33**	**240**	Pn	Pn	07 51 43.5	+3.0
	baz=55,slow=14,SNR=1.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.96**	**205**	Pn	Pn	07 52 06.1	+3.1
	0.1nm,0.3s,baz=24,slow=14,SNR=5.3						
	0.1nm,0.2s						

*IDC **28** 08:00:16.0±3.5, 53°.55N×87°.93E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=30.7km s-min=18.2km az=54.0*

ASRS 28 08:00:16.0±1.1, **53°.54N**×**87°.67E, h0**km, **M2.4**(MOS), **The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.74**	**285**	Pg	Pg	08 00 50.0	+0.7
	0.6nm,0.3s,baz=105,slow=16,SNR=4.4						
ZALV				Lg	Lg	08 01 16.2	
	1.9nm,0.3s,baz=105,slow=32,SNR=7.9						
I46RU	**ZALESOVO INFRA**	**1.74**	**285**	I	I	08 11 21.5	
	0.2nm,0.8s,baz=99,slow=321,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.34**	**246**	Pn	Pn	08 01 53.0	+2.3
	baz=61,slow=14,SNR=2.0						
KURBB				Lg	Lg	08 03 41.2	
	baz=62,slow=32,SNR=5.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	Pn	08 02 10.5	+2.8
	0.1nm,0.3s,baz=29,slow=14,SNR=2.5						
MKAR				Lg	Lg	08 04 20.0	
	0.1nm,0.3s,baz=33,slow=34,SNR=2.9						
	0.2nm,0.4s						

*MOS **28** 08:03:41.7±0.8, 54°.86N×161°.34W, h36km, mb6.0/115, MS5.8/62, Error ellipse: s-maj=6.9km s-min=3.4km az=94.9*

*BJI **28** 08:03:41.9, 54°.85N×161°.69W, h41km, mB5.9/76, mb5.7/91, Ms6.1/95, Ms7 6.0/89*

*AEIC **28** 08:03:42.7±2.6, 54°.66N±0°.05×161°.11W±0°.05, h27km±3km, Error ellipse: s-maj=7.6km s-min=4.2km az=166.0*

*NEIC **28** 08:03:43.7, 54°.85N×161°.22W, h36km*

*ISC-PP **28** 08:03:43, 54°.79N×161°.20W, h36km, Mwppsm6.3, Moment Tensor Solution. s60 Moment tensor: Scale 10¹⁸Nm; Mrr 0.73±.10; Mθθ -0.56±.12; Mϕϕ -0.12±.13; Mrθ 0.17±.10; Mϕθ 0.20±.12; Mrϕ 0.08±.27; Fault plane solution: M₀ 3.89000×10¹⁸ NP1: ϕs 85.20000°, δ52.60000°, λ73.10000°. NP2: ϕs 291.80000°, δ40.50000°, λ110.80000°.*

*NEIC **28** 08:03:43.2±2.6, 54°.79N±0°.05×161°.20W±0°.03, h35km±3km, mb6.0/954, ML5.9/28, Ms_20 5.9/528, Mwb6.0/261, Mww6.1/163 Error ellipse: s-maj=7.7km s-min=1.5km az=163.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr 0.76; Mθθ -0.29; Mϕϕ -0.48; Mrθ 0.51; Mϕθ -0.47; Mrr 0.47; Fault plane solution: M₀ 1.07000×10¹⁸ NP1: ϕs 45.13000°, δ65.29000°, λ95.31000°. NP2: ϕs 212.59000°, δ25.24000°, λ78.62000°. Principal axes: T 1.0238, Plg69.0000°, Azm326.0000°; N 0.0925, Plg5.0000°, Azm223.0000°; P -1.1163, Plg20.0000°, Azm131.0000°;*

*IDC **28** 08:03:43.0±0.7, 54°.77N×161°.38W, h40km±5km, mb5.4/41, mbtmp5.6/47, ML5.0/6, MS5.6/103 Error ellipse: s-maj=10.7km s-min=8.1km az=172.0*

*NEIC **28** 08:03:43.7, 54°.85N×161°.22W, h36km*

*IPGP **28** 08:03:44.0, 54°.87N×161°.14W, h41km, Mw6.1, Fault plane solution: NP1: ϕs 251.00000°, δ27.00000°, λ106.00000°. NP2: ϕs 52.00000°, δ64.00000°, λ82.00000°.*

*GFZ **28** 08:03:44.0±0.1, 55°.1N±2°.6×16°.1W±1°.1, h39km, M6.0/238, mB6.3/219, mb6.0/238, Mw(mB)6.0/219, MwMwp5.9/184, Mwp6.0/184*

*PMR **28** 08:03:44.0, 54°.78N×161°.16W, h60km*

*GFZ **28** 08:03:44.0, 54°.85N×161°.33W, h42km, Mw6.1/88, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr 0.95; Mθθ -0.77; Mϕϕ -0.18; Mrθ 0.90; Mϕθ -0.54; Mrr 0.83; Fault plane solution: M₀ 1.60086×10¹⁸ NP1: ϕs 49.55727°, δ70.33166°, λ82.37577°. NP2: ϕs 251.24544°, δ21.03969°, λ110.36466°. Principal axes: T 1.5467, Plg63.8912°, Azm307.2485°; N 0.1032, Plg7.1770°, Azm52.1369°; P -1.6500, Plg24.9591°, Azm145.4969°;*

*ANF **28** 08:03:45.3±0.6, 54°.81N×161°.11W, h54km±4km, ML6.2/16 Error ellipse: s-maj=6.1km s-min=2.9km az=19.0*

*GCMT **28** 08:03:47.2±0.1, 54°.57N×161°.03W, h44km, MW6.1/170, Moment Tensor Solution. s163,c396; s170,c600; Duration: 2s7 Moment tensor: Scale 10¹⁸Nm; Mrr 1.16±.01; Mθθ -0.95±.01; Mϕϕ -0.21±.01; Mrθ 0.68±.01; Mϕθ -0.76±.01; Mrr 0.69±.01; Best double couple: M₀ 1.61500×10¹⁸ NP1: ϕs 250.00000°, δ28.00000°, λ108.00000°. NP2: ϕs 49.00000°, δ64.00000°, λ80.00000°. Principal axes: T 1.5010, Plg70.0000°, Azm299.0000°; N 0.2260, Plg9.0000°, Azm53.0000°; P -1.7300, Plg18.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 08:03:54.3, 54°.55N×161°.05W, h46km, Moment Tensor Solution. Duration: 5s9 Moment tensor: Scale 10¹⁸Nm; Mrr 1.32; Mθθ -0.91; Mϕϕ -0.41; Mrθ 0.76; Mϕθ -0.53; Mrr 1.33; Fault plane solution: M₀ 2.00000×10¹⁸ NP1: ϕs 250.92000°, δ22.88000°, λ121.14000°. NP2: ϕs 37.67000°, δ70.56000°, λ77.69000°. Principal axes: T 2.1021, Plg62.0000°, Azm289.0000°; N -0.2261, Plg12.0000°, Azm42.0000°; P -1.8761, Plg25.0000°, Azm137.0000°;*

*BGR **28** 08:03:54.6, 55°.57N×161°.78W, h54km±1km, mb6.0, mB_BB6.3, Ms5.3*

ISC 28 08:03:43.5±0.2, **54°.78N**±0°.02×**161°.23W**±0°.02, **h41**km±1km, **h41**km:**pP-P, n2790, σ1.31**/2492, **mb5.9**/774, **MS5.8**/422, **277C-73D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.52**	**315**		**Pn**	**08 03 55.2**	**+0.7**
DOL					**Sn**	**08 04 05.3**	**+3.1**
PS4A	**Pavlof South-4**	**0.67**	**328**		**Pn**	**08 03 57.8**	**+1.2**
PS4A					**Sn**	**08 04 09.4**	**+3.6**
DT1	**Dutton Round H**	**0.69**	**299**		**Pn**	**08 03 57.4**	**+0.6**
DT1					**Sn**	**08 04 08.9**	**+2.6**
DTNA	**Dutton South F**	**0.69**	**302**		**Pn**	**08 03 57.7**	**+0.9**
DTNA					**Sn**	**08 04 09.5**	**+3.0**
PS1A	**Pavlof South-1**	**0.70**	**335**		**Pn**	**08 03 58.2**	**+1.3**
PS1A					**Sn**	**08 04 10.8**	**+4.1**
SDPT	**Sand Point**	**0.71**	**37**	P	**Pn**	**08 03 58.1**	**+1.0**
SDPT	**Sand Point**	**0.71**	**37**	S	**Sn**	**08 04 07.8**	**+0.9**
SDPT	**Sand Point**	**0.71**	**37**		**Pn**	**08 03 57.2**	**+0.2**
SDPT				IAML		08 04 11.4	
	comp=N,842μm,0.5s						
SDPT				IAML		08 04 11.7	
	comp=E,729μm,0.5s						
SDPT	**Sand Point**	**0.71**	**37**		**Sn**	**08 04 08.8**	**+1.9**
SDPT	**Sand Point**	**0.71**	**37**	P	**Pn**	**08 03 57.3**	**+0.2**
	baz=215,SNR=1000						
SDPT				S	**Sn**	**08 04 08.2**	**+1.3**
	baz=215						
PN7A	**Pavlof North-7**	**0.79**	**326**		**Pn**	**08 03 59.6**	**+1.5**
CHNA	**Chernabura Isl**	**0.95**	**86**	P	**Pn**	**08 04 01.3**	**+1.0**
CHNA	**Chernabura Isl**	**0.95**	**86**	P	**Pn**	**08 03 57.9**	**-2.4**
	baz=267,SNR=1000						
CHNA				S	**Sn**	**08 04 09.4**	**-3.3**
	baz=267						
CNBA	**Chernabura Isl**	**0.95**	**87**		**Sn**	**08 04 09.7**	**-2.9**
CNBA	**Chernabura Isl**	**0.95**	**87**		**Pn**	**08 03 58.3**	**-2.0**
CNBA	**Chernabura Isl**	**0.95**	**87**	IAML		08 04 15.2	
	comp=E,258μm,0.4s						
CNBA				IAML		08 04 16.4	
	comp=N,244μm,0.5s						
ISNN	**Isanotski Nort**	**1.48**	**273**		**Pn**	**08 04 08.9**	**+1.3**
ISNN					**Sn**	**08 04 30.3**	**+4.6**
SSLN	**Shishaldin Nor**	**1.60**	**272**		**Sn**	**08 04 32.8**	**+4.0**
VNKR	**Veniaminof 5**	**1.64**	**40**		**Pn**	**08 04 10.9**	**+1.1**
SSBA	**Shishaldin**	**1.68**	**271**		**Sn**	**08 04 35.3**	**+4.6**
VNSS	**Veniaminof 8**	**1.76**	**34**		**Pn**	**08 04 13.2**	**+1.6**
S14K	**Fog Glacier**	**1.78**	**32**	P	**Pn**	**08 04 13.8**	**+2.0**
	baz=212,SNR=1000						
VNFG	**Fog Glacier, M**	**1.78**	**32**		**Pn**	**08 04 14.1**	**+2.3**
VNFG	**Fog Glacier, M**	**1.78**	**32**		**Pn**	**08 04 14.2**	**+2.3**
VNFG				IAML		08 04 46.2	
	comp=E,331μm,0.8s						
VNFG				IAML		08 04 55.9	
	comp=N,392μm,0.8s						
AKSA	**Akutan Strait**	**2.69**	**258**		**Sn**	**08 04 59.4**	**+4.0**
AKUT	**Akutan**	**2.73**	**258**	P	**Pn**	**08 04 27.2**	**+2.5**
AKUT	**Akutan**	**2.73**	**258**	S	**Sn**	**08 04 58.4**	**+2.0**
AKUT	**Akutan**	**2.73**	**258**		**Pn**	**08 04 26.5**	**+1.8**
AKUT	**Akutan**	**2.73**	**258**	⇑P	**Pn**	**08 04 26.0**	**+1.3**
LVA	**Lava Point**	**2.87**	**259**		**Pn**	**08 04 28.7**	**+2.0**
LVA				IAML		08 05 17.7	
	comp=N,38μm,1.3s						
UNV	**Unalaska Valle**	**3.23**	**255**	P	**Pn**	**08 04 33.3**	**+1.7**
UNV	**Unalaska Valle**	**3.23**	**255**	S	**Sn**	**08 05 11.6**	**+2.8**
UNV	**Unalaska Valle**	**3.23**	**255**		**Pn**	**08 04 32.9**	**+1.3**
UNV	**Unalaska Valle**	**3.23**	**255**	P	**Pn**	**08 04 32.7**	**+1.1**
	baz=71,SNR=1000						
UNV				S	**Sn**	**08 05 08.8**	**0.0**
	baz=71						
MAPS	**Pakushin South**	**3.49**	**256**		**Pn**	**08 04 36.3**	**+1.2**
R17L	**Mt. Peulik Vol**	**3.94**	**42**	P	**Pn**	**08 04 43.2**	**+1.8**
	baz=225,SNR=1000						
O15K	**Ungalikthiuk R**	**4.47**	**9**		**Pn**	**08 04 50.2**	**+1.6**
O15K				IAML		08 06 20.1	
	comp=E,10μm,1.1s						
O15K				IAML		08 06 20.2	
	comp=N,8μm,0.8s						
O15K	**Ungalikthiuk R**	**4.47**	**9**	P	**Pn**	**08 04 50.0**	**+1.3**
	baz=190,SNR=774						
O14K	**Tigyukauivet M**	**4.48**	**360**		**Pn**	**08 04 50.6**	**+1.9**
O14K				IAML		08 06 22.7	
	comp=E,7μm,1.3s						
O14K				IAML		08 06 26.9	
	comp=N,8μm,1.1s						
O14K	**Tigyukauivet M**	**4.48**	**360**	P	**Pn**	**08 04 50.5**	**+1.7**
	baz=179,SNR=676						
O14K				S	**Sn**	**08 05 41.9**	**+2.4**
	baz=179						
KJL	**Kejulik**	**4.54**	**41**		**Pn**	**08 04 50.9**	**+1.3**
Q17K	**Contact Creek**	**4.57**	**38**		**Pn**	**08 04 51.3**	**+1.2**
Q17K	**Contact Creek**	**4.57**	**38**	P	**Pn**	**08 04 51.1**	**+1.0**
	baz=222						
P16K	**Nushagak River**	**4.61**	**21**		**Pn**	**08 04 52.5**	**+1.9**
P16K				IAML		08 06 35.1	
	comp=N,23μm,1.2s						
P16K	**Nushagak River**	**4.61**	**21**	P	**Pn**	**08 04 52.4**	**+1.9**
	baz=204,SNR=206						
Q16K	**King Salmon**	**4.64**	**31**		**Pn**	**08 04 53.1**	**+2.2**
Q16K	**King Salmon**	**4.64**	**31**	P	**Pn**	**08 04 52.7**	**+1.7**
	baz=214,SNR=523						
ACHA	**Angle Creek He**	**4.74**	**41**		**Pn**	**08 04 54.3**	**+1.9**
KAWH	**Katmai**	**5.06**	**42**		**Pn**	**08 04 57.6**	**+0.8**
OHAK	**Old Harbor**	**5.08**	**58**	P	**Pn**	**08 04 57.3**	**+0.3**
OHAK	**Old Harbor**	**5.08**	**58**	S	**Sn**	**08 05 55.9**	**+1.6**
OHAK	**Old Harbor**	**5.08**	**58**		**Pn**	**08 04 56.8**	**-0.2**
OHAK				IAML		08 06 23.5	
	comp=N,13μm,0.8s						
OHAK				IAML		08 06 32.9	
	comp=E,11μm,1.0s						
OHAK	**Old Harbor**	**5.08**	**58**	P	**Pn**	**08 04 56.8**	**-0.2**
	baz=244,SNR=1000						
O16K	**Kokwok River B**	**5.12**	**18**		**Pn**	**08 04 58.4**	**+0.9**
O16K				IAML		08 06 42.3	
	comp=N,5μm,0.8s						
O16K				IAML		08 06 45.8	
	comp=E,7μm,1.9s						
O16K	**Kokwok River B**	**5.12**	**18**	P	**Pn**	**08 04 58.7**	**+1.3**
	baz=200,SNR=1000						
P17K	**Kvichak River**	**5.14**	**29**		**Pn**	**08 04 59.9**	**+2.1**
P17K	**Kvichak River**	**5.14**	**29**	P	**Pn**	**08 04 59.5**	**+1.8**
	baz=212,SNR=638						
N14K	**Kuskokwak Cree**	**5.16**	**357**		**Pn**	**08 04 59.8**	**+1.8**
N14K	**Kuskokwak Cree**	**5.16**	**357**	P	**Pn**	**08 04 59.9**	**+1.8**
	baz=177,SNR=1000						
Q18K	**Katmai Hardscr**	**5.17**	**39**	P	**Pn**	**08 04 59.4**	**+1.1**
	baz=224,SNR=1000						
KAHG	**Katmai Hook Gl**	**5.24**	**42**		**Pn**	**08 04 60.0**	**+0.8**
CLCO	**Concord Point,**	**5.42**	**252**		**Pn**	**08 05 03.0**	**+1.3**
N15K	**Kwethluk River**	**5.43**	**6**		**Pn**	**08 05 03.8**	**+1.9**
N15K	**Kwethluk River**	**5.43**	**6**	P	**Pn**	**08 05 03.4**	**+1.6**
	baz=187,SNR=1000						
O17K	**Koliganek Bris**	**5.48**	**22**		**Pn**	**08 05 03.9**	**+1.5**
O17K	**Koliganek Bris**	**5.48**	**22**	P	**Pn**	**08 05 03.6**	**+1.1**
	baz=206,SNR=1000						
CLES	**Cleveland East**	**5.50**	**253**		**Pn**	**08 05 05.4**	**+2.7**
SPIA	**Saint Paul Isl**	**5.60**	**299**	P	**Pn**	**08 05 04.9**	**+0.8**
SPIA	**Saint Paul Isl**	**5.60**	**299**		**Pn**	**08 05 04.6**	**+2.3**
SPIA	**Saint Paul Isl**	**5.60**	**299**	P	**Pn**	**08 05 06.3**	**+2.1**
	baz=111,SNR=107						
P18K	**Big Mountain,**	**5.66**	**33**		**Pn**	**08 05 07.1**	**+2.1**
P18K	**Big Mountain,**	**5.66**	**33**	P	**Pn**	**08 05 06.3**	**+1.3**
	baz=218,SNR=1000						
KDAK	**Kodiak Island**	**5.68**	**55**	Pn	**Pn**	**08 05 04.3**	**-0.8**
	comp=E,50nm,0.3s,baz=220,slow=5.2,SNR=548						
KDAK				Sn	**Sn**	**08 06 07.7**	**-1.2**
	comp=E,144nm,0.3s,baz=203,slow=6.8,SNR=4.3						
KDAK				LR	LR	08 07 29.1	
	comp=E,76μm,19.8s,baz=224,slow=39						
	comp=E,412nm,0.4s						
KDAK	**Kodiak Island**	**5.68**	**55**	⇑*i*P	**Pn**	**08 05 04.0**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,511nm,0.6s						
KDAK	**Kodiak Island**	**5.68**	**55**		**Pn**	**08 05 05.2**	**0.0**
KDAK	**Kodiak Island**	**5.68**	**55**	⇑P	**Pn**	**08 05 04.1**	**-1.1**
KDAK	**Kodiak Island**	**5.68**	**55**	P	**Pn**	**08 05 05.1**	**0.0**
	baz=241						
KDAK	**Kodiak Island**	**5.68**	**55**	P	**Pn**	**08 05 04.9**	**-0.2**
M13K	**Dall Lake**	**5.76**	**349**		**Pn**	**08 05 08.6**	**+2.4**
M13K	**Dall Lake**	**5.76**	**349**	P	**Pn**	**08 05 08.2**	**+2.0**
	baz=167,SNR=373						
N16K	**Nishlik Lake**	**5.86**	**12**		**Pn**	**08 05 09.7**	**+2.0**
N16K	**Nishlik Lake**	**5.86**	**12**	P	**Pn**	**08 05 09.3**	**+1.6**
	baz=194,SNR=1000						
Q19K	**Cape Douglas,**	**5.88**	**42**		**Pn**	**08 05 09.0**	**+1.1**
Q19K	**Cape Douglas,**	**5.88**	**42**	P	**Pn**	**08 05 08.8**	**+0.8**
	baz=228,SNR=683						
M15K	**Kasigluk River**	**5.94**	**3**		**Pn**	**08 05 09.9**	**+1.2**
M15K	**Kasigluk River**	**5.94**	**3**	P	**Pn**	**08 05 09.5**	**+0.8**
	baz=183,SNR=874						
M14K	**Bethel**	**6.00**	**357**		**Pn**	**08 05 11.3**	**+1.7**
M14K	**Bethel**	**6.00**	**357**	P	**Pn**	**08 05 11.2**	**+1.6**
	baz=176,SNR=1000						
O18K	**Koktuh Hills**	**6.04**	**30**	P	**Pn**	**08 05 12.2**	**+2.0**
	baz=215,SNR=1000						
N17K	**Nushagak Hills**	**6.15**	**19**		**Pn**	**08 05 13.2**	**+1.5**
N17K	**Nushagak Hills**	**6.15**	**19**	P	**Pn**	**08 05 13.5**	**+1.8**
	baz=202,SNR=822						
M11K	**Mekoryuk**	**6.22**	**337**		**Pn**	**08 05 14.7**	**+2.1**
M11K	**Mekoryuk**	**6.22**	**337**	P	**Pn**	**08 05 14.6**	**+2.1**
	baz=152,SNR=67						
AUCH	**Augustine Cone**	**6.25**	**40**		**Pn**	**08 05 15.1**	**+2.0**
M16K	**Timber Creek**	**6.37**	**10**		**Pn**	**08 05 16.4**	**+1.7**
M16K	**Timber Creek**	**6.37**	**10**	P	**Pn**	**08 05 16.4**	**+1.7**
	baz=192,SNR=1000						
P19K	**Oil Pt**	**6.53**	**38**		**Pn**	**08 05 18.8**	**+1.9**
P19K	**Oil Pt**	**6.53**	**38**	P	**Pn**	**08 05 18.5**	**+1.6**
	baz=225						
N18K	**Kilae Creek**	**6.57**	**24**		**Pn**	**08 05 18.8**	**+1.5**
N18K	**Kilae Creek**	**6.57**	**24**	P	**Pn**	**08 05 19.0**	**+1.6**
	baz=208,SNR=397						
O19K	**Port Alsworth**	**6.58**	**32**		**Pn**	**08 05 19.7**	**+2.2**
O19K	**Port Alsworth**	**6.58**	**32**	P	**Pn**	**08 05 19.2**	**+1.7**
	baz=217						
L14K	**Kuka Creek**	**6.62**	**354**		**Pn**	**08 05 20.1**	**+2.0**
L14K	**Kuka Creek**	**6.62**	**354**	P	**Pn**	**08 05 19.6**	**+1.5**
	baz=172,SNR=1000						
ILSW	**Iliamna Southw**	**6.80**	**37**	

J14K	Nanvaranak Lak	8.08	352		P		Pn	08 05 39.7	+1.7
	baz=170,SNR=224								
K17K	Iditarod	8.10	10				Pn	08 05 39.6	+1.3
K17K	Iditarod	8.10	10		P		Pn	08 05 39.4	+1.0
	baz=192,SNR=309								
KOKL	Mount Kliuchef	8.11	258				Pn	08 05 40.7	+2.1
L19K	White Mountain	8.13	22				Pn	08 05 40.1	+1.3
L19K	White Mountain	8.13	22		P		Pn	08 05 39.9	+1.0
	baz=207,SNR=340								
SPCG	Spurr Capps Gl	8.14	33				Pn	08 05 40.4	+1.3
ATKA	Atka Island	8.15	257		P		Pn	08 05 40.8	+1.7
ATKA	Atka Island	8.15	257		S		Sn	08 07 12.6	+2.7
ATKA	Atka Island	8.15	257		⇓P		Pn	08 05 40.2	+1.1
SLKM	Skilak Lake	8.23	41				Pn	08 05 40.0	-0.1
SEW	Seward	8.29	45				Pn	08 05 40.9	0.0
SEW	Seward	8.29	45		P		Pn	08 05 42.0	+1.1
	baz=235,SNR=335								
M20K	Styx River	8.29	28				Pn	08 05 44.0	+3.0
M20K	Styx River	8.29	28		P		Pn	08 05 42.3	+1.2
	baz=214								
STLK	Strandline Lak	8.36	33				Pn	08 05 43.1	+1.1
O22K	Cooper Landing	8.40	43				Pn	08 05 42.8	+0.3
O22K	Cooper Landing	8.40	43		P		Pn	08 05 43.0	+0.5
	baz=232,SNR=168								
J16K	Anvik River	8.53	2				Pn	08 05 45.5	+1.2
J16K	Anvik River	8.53	2		P		Pn	08 05 45.3	+1.0
	baz=182,SNR=258								
J17K	VABM Dome	8.71	6				Pn	08 05 47.2	+0.5
J17K	VABM Dome	8.71	6		P		Pn	08 05 47.2	+0.5
	baz=188,SNR=58								
RC01	Rabbit Creek A	8.78	39				Pn	08 05 48.6	+0.9
RC01	Rabbit Creek A	8.78	39		P		Pn	08 05 47.5	-0.2
	baz=229,SNR=144								
SKT	Skwentna	8.82	31				Pn	08 05 50.0	+1.7
SKT	Skwentna	8.82	31		P		Pn	08 05 49.7	+1.4
	baz=219								
J18K	Innoko River	9.01	13				Pn	08 05 51.8	+1.0
J18K	Innoko River	9.01	13		P		Pn	08 05 52.2	+1.4
	baz=197,SNR=347								
P23K	Montague Islan	9.10	49				Pn	08 05 52.1	0.0
P23K	Montague Islan	9.10	49		P		Pn	08 05 51.9	-0.2
	baz=241,SNR=270								
M22K	Willow	9.10	35				Pn	08 05 52.6	+0.5
M22K	Willow	9.10	35		P		Pn	08 05 52.0	-0.1
	baz=225,SNR=88								
I17K	Unalakleet	9.14	1				Pn	08 05 53.9	+1.4
I17K	Unalakleet	9.14	1		P		Pn	08 05 53.5	+1.0
	baz=182,SNR=43								
PWL	Port Wells	9.18	43				Pn	08 05 53.7	+0.6
PWL	Port Wells	9.18	43		P		Pn	08 05 53.0	-0.1
	baz=234,SNR=806								
GSIG	Igitkin Island	9.22	258				Pn	08 05 54.3	+0.6
GSTR	Great Sitkin T	9.25	259				Pn	08 05 56.0	+1.8
Q23K	Middleton Isla	9.33	54		P		Pn	08 05 55.0	-0.2
	baz=246,SNR=61								
MID	Middleton Isla	9.34	54				Pn	08 05 54.9	-0.4
PMR	Palmer	9.34	38		P		Pn	08 05 56.1	+0.8
PMR	Palmer	9.34	38		S		Sn	08 07 38.5	-0.3
PMR	Palmer	9.34	38		P		Pn	08 05 55.7	+0.5
PMR	Palmer	9.34	38				Pn	08 05 55.7	+0.5
PMR	Palmer	9.34	38		P		Pn	08 05 55.2	-0.1
	baz=228,SNR=163								
GSCK	Great Sitkin C	9.34	259				Pn	08 05 56.0	+0.6
K20K	Telida	9.35	20				Pn	08 05 56.8	+1.3
K20K	Telida	9.35	20		P		Pn	08 05 56.3	+0.8
	baz=206,SNR=440								
PPLA	Purkeypile	9.38	26				Pn	08 05 58.6	+2.6
PPLA	Purkeypile	9.38	26		P		Pn	08 05 57.3	+1.4
	baz=214								
KNK	Knik Glacier	9.47	40				Pn	08 05 57.1	0.0
KNK	Knik Glacier	9.47	40		P		Pn	08 05 57.6	+0.5
	baz=231,SNR=137								
L22K	Petersville	9.47	31				Pn	08 05 58.0	+0.8
L22K	Petersville	9.47	31		P		Pn	08 05 57.9	+0.7
	baz=219,SNR=323								
GHO	Glory Hole Cre	9.53	38				Pn	08 05 58.0	0.0
CUT	Chulitna	9.53	32				Pn	08 05 58.6	+0.7
CUT	Chulitna	9.53	32		P		Pn	08 05 58.0	+0.1
	baz=221,SNR=137								
ETKA	Kagalaska Isla	9.54	258				Pn	08 05 58.3	+0.1
ADAG	Mount Adagdak	9.61	259				Pn	08 06 00.0	+1.0
J19K	Poorman	9.67	15				Pn	08 06 00.3	+0.5
J19K	Poorman	9.67	15		P		Pn	08 06 00.8	+1.0
	baz=199,SNR=261								
GLI	Glacier Island	9.69	45				Pn	08 05 59.5	-0.6
GLI	Glacier Island	9.69	45		P		Pn	08 05 59.7	-0.4
	baz=237,SNR=238								
ADK	Adak	9.69	259		P		Pn	08 06 02.4	+2.2
ADK	Adak	9.69	259		S		Sn	08 07 50.1	+2.5
ADK	Adak	9.69	259		P		Pn	08 06 01.6	+1.5
ADK	Adak	9.69	259				Pn	08 06 01.6	+1.5
ADK	Adak	9.69	259		⇑P		Pn	08 06 01.2	+1.0
ADK	Adak	9.69	259		P		Pn	08 06 01.8	+1.7
HIN	Hinchinbrook I	9.69	49				Pn	08 06 00.2	0.0
SML	Sawmill	9.77	39				Pn	08 06 00.1	-1.1
SML	Sawmill	9.77	39		P		Pn	08 06 00.7	-0.5
	baz=229,SNR=222								
CAST	Castle Rocks	9.84	25				Pn	08 06 01.7	-0.5
CAST	Castle Rocks	9.84	25		P		Pn	08 06 02.5	+0.2
	baz=212,SNR=361								
FID	Port Fidalgo	9.88	47				Pn	08 06 00.7	-2.0
H16K	Elim	9.90	357		P		Pn	08 06 03.8	+0.9
	baz=176,SNR=56								
KIRH	Kanaga Island	9.92	260				Pn	08 06 03.7	+0.4
KIWB	Kanaga Island	9.97	259				Pn	08 06 05.5	+1.6
M23K	Glacier View	9.98	40		P		Pn	08 06 04.2	+0.1
	baz=231,SNR=362								
ANM	Nome	10.03	350		P		Pn	08 06 01.8	-3.0
ANM	Nome	10.03	350		P		Pn	08 06 06.4	+1.6
	baz=166,SNR=27								
J20K	Nowinta River	10.08	18		P		Pn	08 06 06.7	+1.2
	baz=204,SNR=510								
EYAK	Cordova Ski Ar	10.09	49		P		Pn	08 06 05.9	+0.3
EYAK	Cordova Ski Ar	10.09	49		S		Sn	08 07 58.0	+0.7
EYAK	Cordova Ski Ar	10.09	49		P		Pn	08 06 05.5	-0.1
	baz=242,SNR=355								
SCM	Sheep Creek Mo	10.15	40		P		Pn	08 06 07.2	+0.7
	baz=232,SNR=586								
CHUM	Lake Minchumin	10.19	23		P		Pn	08 06 08.4	+1.5
	baz=210,SNR=138								
H17K	Granite Mounta	10.21	3		P		Pn	08 06 08.5	+1.3
	baz=184,SNR=67								
GCSA	Galena City Sc	10.23	11		P		Pn	08 06 08.6	+1.2
	baz=194,SNR=28								
TRF	Thorofare Moun	10.33	28		P		Pn	08 06 09.7	+0.6
	baz=218,SNR=201								
G15K	Niukluk	10.34	353		P		Pn	08 06 11.2	+2.2
	baz=171,SNR=145								
WAT1	Susitna Watana	10.39	34		P		Pn	08 06 09.8	+0.1
	baz=225								
KAIM	Kayak Island	10.43	54		P		Pn	08 06 10.3	+0.1
	baz=248,SNR=318								
GAMB	Gambell	10.47	334		⇑P		Pn	08 06 13.8	+3.0
GAMB	Gambell	10.47	334		P		Pn	08 06 12.0	+1.2
	baz=144								
WAT6	Susitna Watana	10.49	36		P		Pn	08 06 10.4	-0.8
	baz=228,SNR=151								
KLU	Klutina	10.50	44		P		Pn	08 06 10.7	-0.6
	baz=237,SNR=1000								
H18K	Honhosa River	10.50	7		P		Pn	08 06 12.3	+1.1
	baz=189,SNR=31								
I20K	Naaghedeneel	10.60	16		P		Pn	08 06 14.0	+1.6
	baz=202,SNR=68								
G16K	Koyuk River	10.66	357				Pn	08 06 15.0	+1.6
G16K	Koyuk River	10.66	357		P		Pn	08 06 15.2	+1.9
	baz=176,SNR=54								
M24K	Tolsona, Glenn	10.75	41		P		Pn	08 06 15.4	+0.7
	baz=234,SNR=567								
G17K	Kiwalik Mounta	10.76	1		P		Pn	08 06 15.9	+1.2
	baz=182,SNR=59								
BMRM	Bremner River	10.79	48		P		Pn	08 06 15.1	0.0
	baz=242,SNR=356								
MCK	McKinley	10.94	30		P		Pn	08 06 16.6	-0.6
	baz=220,SNR=177								
DHY	Denali Highway	10.95	35		P		Pn	08 06 16.5	-0.9
	baz=227,SNR=363								
F14K	Arctic Creek	11.02	349		P		Pn	08 06 20.6	+2.3
	baz=164,SNR=22								
H19K	Roundabout Mou	11.04	10		P		Pn	08 06 18.9	+0.5
	baz=194,SNR=228								
F15K	North Star Dit	11.09	353				Pn	08 06 21.8	+2.5
F15K	North Star Dit	11.09	353		P		Pn	08 06 21.7	+2.5
	baz=170,SNR=170								
N25K	Chitina, Valde	11.10	45		P		Pn	08 06 19.5	+0.1
	baz=239,SNR=532								
H20K	Anotleneega Mo	11.19	14		P		Pn	08 06 21.4	+0.7
	baz=199,SNR=454								
G18K	Tagagawik	11.22	5		P		Pn	08 06 22.0	+1.0
	baz=188,SNR=288								
TNA	Tin City	11.30	346		⇑P		Pn	08 06 24.6	+2.5
TNA	Tin City	11.30	346		P		Pn	08 06 24.2	+2.0
	baz=160,SNR=23								
HARP	HAARP	11.31	41		P		Pn	08 06 22.6	+0.3
	baz=235,SNR=147								
CRQE	Cirque	11.36	51		P		Pn	08 06 22.5	-0.5
	baz=246,SNR=460								
I21K	Tanana	11.39	20		P		Pn	08 06 25.2	+1.8
	baz=208,SNR=288								
MLY	Manley	11.53	23		P		Pn	08 06 26.6	+1.3
	baz=212,SNR=157								
PAX	Paxson	11.54	38		P		Pn	08 06 24.8	-0.6
	baz=232,SNR=855								
NEA2	Nenana	11.57	27		P		Pn	08 06 25.6	-0.2
	baz=217,SNR=62								
G19K	Purcell Mounta	11.58	8		P		Pn	08 06 27.9	+2.1
	baz=192,SNR=67								
MCARA	McCarthy VSAT	11.66	48		P		Pn	08 06 26.5	-0.5
	baz=243,SNR=133								
H21K	Melozitna Rive	11.67	17		P		Pn	08 06 29.0	+1.9
	baz=205								
F17K	Baldwin Pennin	11.70	360		P		Pn	08 06 28.5	+1.0
	baz=180,SNR=23								
IMAR	Indian Mountai	11.82	15				Pn	08 06 30.3	+1.2
F18K	Selawik	11.88	3		P		Pn	08 06 30.9	+0.9
	baz=184,SNR=42								
I23K	Minto, Yukon-K	11.95	25		P		Pn	08 06 30.2	-0.7
	baz=215,SNR=128								
K24K	Donnelly Dome	11.97	35		P		Pn	08 06 30.6	-0.6
	baz=228,SNR=771								
HDA	Harding Lake	12.03	31		P		Pn	08 06 30.8	-1.3
	baz=223,SNR=287								
COLA	College	12.12	28		P		Pn	08 06 32.4	-0.8
COLA	College	12.12	28	*d*	iP		Pn	08 06 31.2	-2.0
COLA	College	12.12	28				Pn	08 06 31.8	-1.5
COLA	College	12.12	28		⇑P		Pn	08 06 30.5	-2.7
COLA	College	12.12	28		P		Pn	08 06 31.4	-1.8
COLA	College	12.12	28		P		Pn	08 06 31.8	-1.5
	baz=219								
COLA	College	12.12	28		P		Pn	08 06 32.0	-1.2
H22K	Ishtalitna Cre	12.14	20		P		Pn	08 06 35.3	+1.7
	baz=208,SNR=399								
M26K	Nabesna, AK	12.16	44		P		Pn	08 06 33.9	0.0
	baz=239,SNR=473								
AMKA	Amchitka	12.19	262				Pn	08 06 34.7	+0.4
F19K	Shaleruckik Mo	12.21	6		P		Pn	08 06 35.8	+1.4
	baz=189,SNR=109								
RIDG	Independent Ri	12.24	36		P		Pn	08 06 35.0	0.0
	baz=230,SNR=681								
ILAR	Eielson Array	12.31	30		Pn		Pn	08 06 32.1	-3.8
	comp=Z,6.8nm,0.3s,baz=226,slow=14,SNR=137								
ILAR					Sn		Sn	08 08 48.8	-2.7
	baz=208,slow=9.3								
ILAR					LR		LR	08 11 42.1	
	comp=Z,46μm,21.0s,baz=229,slow=39								
	comp=Z,14nm,0.4s								
ILAR	Eielson Array	12.31	30		P		Pn	08 06 34.0	-1.9
ILAR								08 08 48.8	
ILAR	Eielson Array	12.31	30				Pn	08 06 34.0	-1.9
LOGN	Logan Glacier	12.34	52				Pn	08 06 36.4	0.0
E17K	Hotham Inlet	12.35	359		P		Pn	08 06 38.5	+2.1
	baz=178,SNR=19								
G21K	Allakaket	12.35	15		P		Pn	08 06 38.0	+1.5
	baz=201,SNR=251								
L26K	Log Cabin Wild	12.35	41				Pn	08 06 36.8	+0.2
L26K	Log Cabin Wild	12.35	41		P		Pn	08 06 36.0	-0.5
	baz=236,SNR=279								
POKR	Poker Plat Res	12.42	28		P		Pn	08 06 37.2	-0.1
	baz=220								
H23K	Yukon River	12.47	23		P		Pn	08 06 39.5	+1.4
	baz=213								
F20K	Avaraart Lake	12.59	10		P		Pn	08 06 41.3	+1.7
	baz=195								
M27K	Edge Creek, AK	12.59	45		P		Pn	08 06 39.6	-0.2
	baz=242,SNR=306								
J25K	Salcha River,	12.65	33		P		Pn	08 06 38.2	-2.4
	baz=226,SNR=380								
E18K	Tukpahlearik C	12.69	1		P		Pn	08 06 43.0	+2.0
	baz=182								
O28M	Mount Upton	12.69	53		P		Pn	08 06 40.4	-1.0
	baz=251,SNR=344								
E19K	Redstone River	12.86	7		P		Pn	08 06 44.2	+0.8
	baz=190,SNR=80								
H24K	Nodor Dome	12.87	25		P		Pn	08 06 43.2	-0.4
	baz=217,SNR=49								
YUK3	Moose Creek	12.94	49		P		Pn	08 06 44.3	-0.3
	baz=246,SNR=46								
L27K	Beaver Creek,	12.96	42		P		Pn	08 06 44.3	-0.5
	baz=239								
BCAR	Beaver Creek A	12.98	42				Pn	08 06 44.8	-0.3
D17K	Noatak River	12.99	357		P		Pn	08 06 46.2	+1.1
	baz=175,SNR=22								
F21K	Alatna River	13.02	13		P		Pn	08 06 46.7	+1.2
	baz=200,SNR=332								
BVCY	Beaver Creek	13.04	46		P		Pn	08 06 45.7	-0.1
	baz=243,SNR=117								
G22K	Bettles	13.04	17		P		Pn	08 06 47.5	+1.7
	baz=206								
YUK8	Steele Glacier	13.06	51		P		Pn	08 06 46.6	+0.2
	baz=250,SNR=723								
G23K	Bananza Creek	13.13	20		P		Pn	08 06 47.5	+0.5
	baz=210,SNR=285								
PRP	Porcupine Dome	13.25	29		P		Pn	08 06 48.6	-0.3
	baz=223,SNR=9.9								
O29M	Mount Kennedy	13.32	56		P		Pn	08 06 49.7	-0.2
	baz=255,SNR=734								
RDOG	Red Dog Mine	13.34	357		P		Pn	08 06 51.3	+1.3
	baz=176,SNR=78								
BRWY	Burwash Landin	13.42	52		P		Pn	08 06 51.5	+0.3
	baz=250,SNR=45								
F22K	John River	13.47	15		P		Pn	08 06 53.9	+2.2
	baz=203								
COLD	Coldfoot	13.55	19		P		Pn	08 06 53.7	+1.0
	baz=208,SNR=102								
P29M	Windy Craggy	13.59	60		P		Pn	08 06 52.6	-0.7
	baz=259,SNR=262								
YUK4	Talbot Arm	13.59	52		P		Pn	08 06 54.1	+0.5
	baz=251,SNR=161								
YUK6	Outpost Mounta	13.60	54		P		Pn	08 06 52.9	-0.8
	baz=253,SNR=185								
G24K	Hweenzic Riv	13.67	24		P		Pn	08 06 53.2	-1.2
	baz=216,SNR=80								
C16K	Lisburne Hills	13.68	354				Pn	08 06 58.0	+3.5
C16K	Lisburne Hills	13.68	354		P		Pn	08 06 54.5	+0.1
	baz=170								
E20K	Nigu River	13.73	8		P		Pn	08 06 56.7	+1.4
	baz=192,SNR=92								
C17K	DeLong Mountai	13.77	357		P		Pn	08 06 56.9	+1.1
	baz=175,SNR=40								
I26K	Coal Creek Min	13.82	33		P		Pn	08 06 53.4	-3.0
	baz=229								
D19K	Kuna River	13.84	5		P		Pn	08 06 56.9	+0.2
	baz=187,SNR=66								
C18K	Utukok River	13.92	0		P		Pn	08 06 58.4	+0.6
	baz=180								
HYT	Haines Junctio	13.97	55		P		Pn	08 06 58.7	+0.1
	baz=255,SNR=72								
G25K	Bearman Lake	14.05	25		P		Pn	08 06 58.2	-1.3
	baz=218,SNR=17								
M29M	Sonune Creek	14.06	48		P		Pn	08 06 59.6	-0.3
	baz=247,SNR=1000								
P30M	Million Dollar	14.07	58		P		Pn	08 06 59.7	-0.3
	baz=258								
E21K	Killik River	14.12	11		P		Pn	08 07 01.4	+0.9
	baz=197								
D20K	Etivluk River	14.14	7		P		Pn	08 07 02.9	+2.0
	baz=191,SNR=68								
S31K	Pelican	14.18	67		P		Pn	08 07 01.2	-0.1
	baz=208,SNR=265								
PLBC	Pleasant Camp	14.25	61		P		Pn	08 07 02.9	+0.6
	baz=262								
F24K	Squaw Lake	14.25	21		P		Pn	08 07 02.0	-0.4
	baz=213,SNR=57								
N30M	Aishikik Lake	14.34	52		P		Pn	08 07 02.8	-0.7
	baz=253								
E23K	Chandalar	14.39	18		P		Pn	08 07 05.5	+1.2
	baz=208,SNR=192								
C19K	Lookout Ridge	14.39	2		P		Pn	08 07 05.5	+1.3
	baz=184,SNR=37								
DAWY	Dawson	14.41	41		P		Pn	08 07 03.5	-1.0
	baz=240,SNR=200								
R31K	City Hall, Gus	14.46	65		P		Pn	08 07 06.7	+1.5
	baz=266,SNR=80								
L29M	L29M	14.47	46		P		Pn	08 07 05.2	-0.1
	baz=245,SNR=327								
I27K	Kandik River	14.50	34		P		Pn	08 07 04.5	-1.3
	baz=231,SNR=97								
E24K	Your Creek	14.61	19		P		Pn	08 07 06.5	-0.7
	baz=210								
O30N	Mendenhall	14.63	56		P		Pn	08 07 06.8	-0.7
	baz=257,SNR=216								
SIT	Sitka	14.67	71		P		Pn	08 07 08.7	+0.8
SIT	Sitka	14.67	71		P		Pn	08 07 06.9	-1.0
SIT	Sitka	14.67	71				Pn	08 07 06.9	-1.0
SIT	Sitka	14.67	71		P		Pn	08 07 06.6	-1.3
	baz=272,SNR=23								
SHEM	Shemya Is, Ala	14.72	272		Pn		Pn	08 07 07.2	-1.4
	comp=Z,2.4nm,0.3s,baz=39,slow=3.7,SNR=6.8								
SHEM					LR		LR	08 13 28.7	
	comp=Z,31μm,18.8s,baz=74,slow=40								
	comp=Z,48nm,0.6s								
SMY	Shemya	14.72	272		P		Pn	08 07 09.1	+0.5
SMY	Shemya	14.72	272		P		Pn	08 07 09.9	+1.3
SMY	Shemya	14.72	272				Pn	08 07 09.9	+1.3
SMY	Shemya	14.72	272		⇑P		Pn	08 07 07.9	-0.7
C21K	Knifeblade Rid	14.72	9		P		Pn	08 07 09.9	+1.2
	baz=195,SNR=170								
SKAG	Skagway	14.77	61		P		Pn	08 07 10.2	+0.9
SKAG	Skagway	14.77	61		⇑P		Pn	08 07 09.9	+0.6
SKAG	Skagway	14.77	61		P		Pn	08 07 09.9	+0.6
	baz=263,SNR=139								
G26K	Porcupine Rive	14.78	28		P		Pn	08 07 05.4	-4.0
	baz=223								
F25K	Christian Rive	14.81	24		P		Pn	08 07 06.3	-3.6
	baz=217,SNR=55								
M30M	Minto, Yukon	14.83	48		P		Pn	08 07 09.6	-0.6
	baz=249,SNR=116								
TOLK	Toolik Lake Re	14.92	17		P		Pn	08 07 12.5	+1.3
	baz=207,SNR=129								
H27K	Steamboat Moun	14.93	32		P		Pn	08 07 08.6	-2.8
	baz=229,SNR=70								
N31M	Braeburn, Yuko	14.95	53		P		Pn	08 07 11.4	-0.3
	baz=255,SNR=100								
I28M	Miner Creek	14.96	36		P		Pn	08 07 09.8	-2.1
	baz=234,SNR=257								
K29M	Barlow Dome	15.03	43		P		Pn	08 07 12.4	-0.5
	baz=244,SNR=307								
D23K	Nanushuk River	15.04	15		P		Pn	08 07 13.3	+0.6
	baz=204,SNR=168								
J29N	Klondike Camp	15.05	41		P		Pn	08 07 11.9	-1.1
	baz=241,SNR=19								
S32K	Killisnoo	15.06	69		IAmb		IAmb	08 07 17.0	
	comp=Z,277nm,0.5s								
S32K	Killisnoo	15.06	69		P		Pn	08 07 14.3	+1.1
	baz=271,SNR=227								
R32K	Eaglecrest	15.10	66		P		Pn	08 07 14.5	+0.8
	baz=268,SNR=164								
JIS	Juneau Island	15.17	66		P		Pn	08 07 15.6	+1.0
WHY	Whitehorse	15.19	57		IAmb		IAmb	08 07 20.2	
	comp=Z,516nm,0.9s								
WHY	Whitehorse	15.19	57		P		Pn	08 07 14.8	-0.1
	baz=259,SNR=219								
B21K	Ikpikpuk River	15.19	9		P		Pn	08 07 15.6	+0.9
	baz=195,SNR=63								
F26K	Sheenjek River	15.25	25		P		Pn	08 07 14.5	-1.1
	baz=220,SNR=83								
E25K	Arctic Village	15.25	23		P		Pn	08 07 14.0	-1.6
	baz=216,SNR=28								
G27K	Doyon Strip	15.28	30		P		Pn	08 07 13.5	-2.5
	baz=227,SNR=117								
B20K	Meade River	15.39	5		P		Pn	08 07 17.2	-0.2
	baz=189								
A19K	Wainwright	15.48	0		P		Pn	08 07 18.3	-0.2
	baz=180								
I29M	Ogilvie Camp,	15.48	38		P		Pn	08 07 16.5	-2.1
	baz=238,SNR=197								
D24K	Happy Valley	15.50	17		P		Pn	08 07 19.9	+1.2
	baz=208								
P32M	Atlin	15.61	61		P		Pn	08 07 20.3	+0.1
	baz=264,SNR=148								
M31M	Drury Creek, Y	15.78	51		P		Pn	08 07 22.2	-0.3
	baz=254,SNR=59								
J30M	Hart River	15.83	42		P		Pn	08 07 23.2	+0.1
	baz=243,SNR=449								
C23K	Itkillik River	15.85	14		P		Pn	08 07 24.1	+0.8
	baz=203,SNR=194								
H29M	Whitestone	15.94	35		P		Pn	08 07 22.2	-2.2
	baz=235,SNR=78								
U33K	Whale Pass	15.96	74		P		Pn	08 07 25.8	+1.1
	baz=277,SNR=105								
T33K	Petersburg	15.98	71		P		P	08 07 26.6	-1.4
	baz=275,SNR=11								
B22K	Teshekpuk Lake	16.00	10		P		Pn	08 07 26.2	+1.1
	baz=196,SNR=13								
CRAG	Craig	16.05	76		P		Pn	08 07 26.5	+0.6
	baz=279,SNR=23								
D25K	Kavik River	16.08	19		P		Pn	08 07 25.7	-0.6
	baz=212,SNR=175								
I30M	Mount Dempster	16.11	40		IAmb		IAmb	08 07 34.8	
	comp=Z,1μm,0.7s								
I30M	Mount Dempster	16

baz=226,SNR=6.3
HG4B Hotspring 17.96 86 P **P** **08 07 52.1 +2.1**
WTLY Watson Lake, Y 18.12 60 P **Pn** **08 07 53.2 +1.4**
baz=267,SNR=86
F31M Tsiigehtchic 18.14 35 P **P** **08 07 50.4 -1.4**
baz=239,SNR=99
INK Inuvik 18.67 33 P **P** **08 07 56.1 -1.4**
comp=Z,3.9nm,0.3s,baz=233,slow=13,SNR=125
INK LR LR 08 16 10.4
comp=Z,33µm,18.6s,baz=233,slow=40
comp=Z,306nm,0.8s
INK Inuvik 18.67 33 ⇑P **P** **08 07 54.7 -2.9**
INK Inuvik 18.67 33 P **P** **08 07 55.4 -2.2**
baz=237,SNR=488
INK Inuvik 18.67 33 P **P** **08 07 55.8 -1.8**
LIRD Liard River Hi 19.48 62 P **Pn** **08 08 08.8 +0.7**
baz=272,SNR=150
BBB Bella Bella 19.77 84 P **Pn** **08 08 11.8 +0.2**
BBB comp=Z,7.2nm,0.3s,baz=296,slow=13,SNR=52
LR LR 08 14 33.1
comp=Z,33µm,18.9s,baz=294,slow=33
comp=Z,75nm,0.6s
BBB Bella Bella 19.77 84 ⇑P **Pn** **08 08 12.7 +1.2**
BBB Bella Bella 19.77 84 P **Pn** **08 08 13.1 +1.5**
BILL Bilibino 20.11 324*c i*P **P** **08 08 13.7 +0.4**
BILL pmax pmax
comp=Z,90nm,0.9s
BILL MLR MLR
comp=Z,67µm,15.0s
BILL Bilibino 20.11 324 P **P** **08 08 14.4 +1.1**
BILL IAMs_20 IAMs_20 08 16 40.0
comp=Z,49µm,19.0s
KOTAN Kotaneelee Air 20.50 60 P Pn 08 08 19.1 -0.9
baz=271,SNR=111
WRGLY Wrigley 20.91 51 P **P** **08 08 22.8 +0.8**
baz=264,SNR=85
C36M Paulatuk 22.20 35 P **P** **08 08 33.8 -1.9**
C36M IAmb IAmb 08 08 57.5
comp=Z,389nm,0.8s
C36M Paulatuk 22.20 35 P **P** **08 08 33.6 -2.1**
baz=248,SNR=52
A36M Sachs Harbour 23.00 28 P **P** **08 08 44.1 0.0**
A36M Sachs Harbour 23.00 28 P **P** **08 08 43.4 -0.8**
baz=240
PET Petropavlovsk 23.48 282 P **P** **08 08 49.8 +0.7**
PET Petropavlovsk 23.48 282 *eP* **P** **08 08 48.1 -0.9**
PET *e**PP **pP** **08 09 01.6 +1.9**
PET *eS* **S** **08 12 58.2 -1.3**
PET pmax pmax
comp=Z,4µm,7.5s
PET pmax pmax
comp=Z,2µm,12.3s
PET pmax pmax
comp=Z,558nm,0.8s
PET MLR MLR
comp=Z,11µm,19.0s
PET Petropavlovsk 23.48 282 P **P** **08 08 49.4 +0.3**
PET IAmb IAmb 08 08 53.5
comp=Z,393nm,0.8s
PET Petropavlovsk 23.48 282 ⇑P **P** **08 08 47.0 -2.1**
PET Petropavlovsk 23.48 282 P **P** **08 08 49.0 -0.1**
comp=Z,8µmcomp=Z,595nm,1.0s
PET Petropavlovsk 23.48 282 P **P** **08 08 48.2 -0.9**
CLRS Cowichan Lake 23.50 89 IAmb IAmb 08 08 54.2
comp=Z,1µm,1.9s
C03A Quillayute Air 23.68 92 P **P** **08 08 52.3 +1.3**
C03A IAmb IAmb 08 09 13.7
comp=Z,523nm,1.2s
PGC Sidney 23.97 89 IAmb IAmb 08 09 14.7
comp=Z,938nm,1.9s
PEA0B Petropavlovsk- 23.99 283*i*P **P** **08 08 52.9 -1.0**
PEA0B Petropavlovsk- 23.99 283 P **P** **08 08 53.8 -0.1**
PEA0B IAmb IAmb 08 09 20.9
comp=Z,302nm,0.8s
PETK Petropavlovsk- 23.99 283 P **P** **08 08 53.1 -0.8**
comp=Z,150nm,0.5s,baz=77,slow=13,SNR=395
PETK ScP **ScP** **08 16 08.9 -0.6**
comp=Z,6.6nm,0.8s,baz=81,slow=4.7,SNR=4.5
PETK LR LR 08 18 17.6
comp=Z,15µm,20.9s,baz=82,slow=37
comp=Z,150nm,0.5s
PETK Petropavlovsk- 23.99 283 P **P** **08 08 53.7 -0.2**
PETK Petropavlovsk- 23.99 283 P **P** **08 08 53.6 -0.2**
NLWA Neilton Lookou 24.37 92 IAmb IAmb 08 09 19.9
comp=Z,404nm,1.0s
NLWA IAMs_20 IAMs_20 08 16 22.7
comp=Z,40µm,20.0s
NLWA Neilton Lookou 24.37 92 ⇓P **P** **08 09 00.1 +2.7**
A04D Lummi Island 24.37 88 IAmb IAmb 08 09 19.0
comp=Z,459nm,1.1s
A05A Maple Falls 24.59 87 IAmb IAmb 08 09 29.3
comp=Z,581nm,1.3s
SEY Seymchan 24.82 308 LR LR 08 19 41.7
comp=Z,26µm,21.4s,baz=97,slow=39
SEY Seymchan 24.82 308⇑*i*P **P** **08 09 00.4 -0.9**
SEY pmax pmax
comp=Z,43nm,0.6s
SEY MLR MLR
comp=Z,37µm,26.0s
YKA Yellowknife Ar 24.95 53 P **P** **08 09 02.9 +0.4**
comp=Z,41nm,0.5s,baz=271,slow=9.0,SNR=106
YKA ScP **ScP** **08 16 11.6 -0.5**
comp=Z,2.7nm,0.7s,baz=273,slow=3.1,SNR=4.5
YKA LR LR 08 19 22.1
comp=Z,14µm,19.6s,baz=260,slow=37
YKA P3KPbc 08 42 04.2
comp=Z,1.9nm,0.8s,baz=99,slow=5.3,SNR=9.7
comp=Z,41nm,0.5s
YKA Yellowknife Ar 24.95 53 P **P** **08 09 03.2 +0.7**
YKA Yellowknife Ar 24.95 53 P **P** **08 09 03.2 +0.7**
SKR Severo-Kuril's 25.85 279 *eP* **P** **08 09 10.0 -0.7**
SKR pmax pmax
comp=Z,284nm,0.6s
SKR MLR MLR
comp=Z,17µm,19.0s
G03D McMinnville, O 25.92 96 IAmb IAmb 08 09 39.5
comp=Z,665nm,1.2s
MA2 Magadan 25.98 300 LR LR 08 20 18.4
comp=Z,19µm,18.8s,baz=92,slow=38
MA2 Magadan 25.98 300 P **P** **08 09 12.0 +0.1**
MA2 Magadan 25.98 300*c i*P **P** **08 09 11.1 -0.8**
MA2 pmax pmax
comp=Z,89nm,0.8s
MA2 MLR MLR
comp=Z,19µm,19.0s
MA2 Magadan 25.98 300 P **P** **08 09 11.9 +0.1**
MA2 Magadan 25.98 300 ⇑P **P** **08 09 11.6 -0.3**
MA2 Magadan 25.98 300 P **P** **08 09 11.6 -0.3**
comp=Z,4µmcomp=Z,202nm,0.9s
MA2 Magadan 25.98 300 P **P** **08 09 12.1 +0.1**
I02E Swisshome, OR 26.24 98 IAmb IAmb 08 09 37.6
comp=Z,441nm,1.1s
COR Corvallis 26.27 97 P **P** **08 09 16.9 +2.3**
COR pmax pmax
comp=Z,533nm,1.3s
COR Corvallis 26.27 97 P **P** **08 09 16.9 +2.3**
COR IAmb IAmb 08 09 43.1
comp=Z,533nm,1.3s
COR Corvallis 26.27 97 IAMs_20 IAMs_20 08 16 55.2
comp=Z,32µm,21.0s
COR Corvallis 26.27 97 ⇑P **P** **08 09 18.3 +3.7**
COR Corvallis 26.27 97 P **P** **08 09 19.1 +4.5**
LTY Liberty 26.29 90 IAmb IAmb 08 09 50.4
comp=Z,596nm,1.5s
G04A Mulino 26.38 95 IAmb IAmb 08 09 40.3
comp=Z,319nm,1.0s
HOOD Mount Hood Mea 26.79 94 IAmb IAmb 08 09 52.7
comp=Z,405nm,1.1s
H04A Detroit Lake 26.85 96 IAmb IAmb 08 09 48.5
comp=Z,371nm,1.0s
EPH Ephrata 26.86 89 IAmb IAmb 08 09 51.5
comp=Z,337nm,1.4s
G05A Wamic 27.03 94 IAmb IAmb 08 10 01.6
comp=Z,622nm,1.4s
WAH2 Wahluke Slope 27.20 90 IAmb IAmb 08 09 27.1
comp=Z,248nm,0.5s
I04A Tendick Farm, 27.25 98 IAmb IAmb 08 09 49.4
comp=Z,530nm,1.3s
HAWA Hanford 27.41 90 IAMs_20 IAMs_20 08 18 15.2
comp=Z,28µm,20.0s
HAWA Hanford 27.41 90 ⇑P **P** **08 09 26.4 +1.5**
EDM Edmonton 27.76 73 IAmb IAmb 08 10 12.0
comp=Z,450nm,1.4s
J04A Umpqua Nationa 27.77 98 IAmb IAmb 08 10 02.0
comp=Z,323nm,1.1s
NEW Newport 27.82 85 LR LR 08 18 53.2
comp=Z,22µm,21.5s,baz=292,slow=33
NEW Newport 27.82 85 P **P** **08 09 29.6 +1.0**
NEW Newport 27.82 85 IAMs_20 IAMs_20 08 18 30.8
comp=Z,23µm,22.0s
NEW Newport 27.82 85 ⇑P **P** **08 09 29.6 +1.0**
NEW Newport 27.82 85 P **P** **08 09 29.9 +1.2**
JCC Jacoby Creek, 28.24 104 IAMs_20 IAMs_20 08 18 05.6
comp=Z,21µm,19.0s
L04D Klamath Falls 28.30 100 IAmb IAmb 08 10 21.7
comp=Z,253nm,1.2s
KHMM Hoquiam 28.37 104 IAmb IAmb 08 09 38.7
comp=Z,533nm,1.6s
KHMM IAMs_20 IAMs_20 08 18 01.0
comp=Z,33µm,20.0s
YBH Yreka Blue Hor 28.38 101 LR LR 08 18 21.2
comp=Z,38µm,20.6s,baz=316,slow=31
KMPM Mount Pierce 28.46 105 IAmb IAmb 08 09 48.0
comp=Z,231nm,1.1s
M02C Callahan 28.52 102 IAMs_20 IAMs_20 08 18 02.9
comp=Z,32µm,21.0s
K05A Summer Lake 28.79 98 IAmb IAmb 08 09 42.8
comp=Z,271nm,1.3s
KHBM Hayfork Bally 28.80 104 IAMs_20 IAMs_20 08 17 55.4
comp=Z,33µm,22.0s
KCPM Cahto Peak 29.26 105 IAmb IAmb 08 09 46.4
comp=Z,338nm,1.7s
KCPM IAMs_20 IAMs_20 08 18 24.7
comp=Z,20µm,21.0s
O02D Mt. Diablo Mer 29.37 104 IAMs_20 IAMs_20 08 18 25.5
comp=Z,28µm,21.0s
BMO Blue Mountains 29.57 91 P **P** **08 09 46.1 +1.8**
BMO Blue Mountains 29.57 91 IAMs_20 IAMs_20 08 19 32.1
comp=Z,32µm,21.0s
BMO Blue Mountains 29.57 91 ⇑P **P** **08 09 45.5 +1.2**
HATC Hat Creek Radi 29.69 101 IAmb IAmb 08 10 12.8
comp=Z,438nm,1.2s
HATC IAMs_20 IAMs_20 08 18 51.9
comp=Z,31µm,20.0s
O03E Paynes Creek 29.85 103 P **P** **08 09 47.6 +0.9**
O03E IAmb IAmb 08 09 59.3
comp=Z,273nm,1.1s
HOPS Hopland Field 30.03 106 IAmb IAmb 08 09 52.8
comp=Z,393nm,1.4s
HOPS IAMs_20 IAMs_20 08 18 45.9
comp=Z,21µm,21.0s
PLID Pearl Lake 30.19 90 IAMs_20 IAMs_20 08 20 11.4
comp=Z,29µm,20.0s
WVOR Wild Horse Val 30.27 96 P **P** **08 09 52.3 +1.8**
WVOR Wild Horse Val 30.27 96 IAMs_20 IAMs_20 08 20 23.7
comp=Z,20µm,19.0s
WVOR Wild Horse Val 30.27 96 ⇑P **P** **08 09 52.3 +1.8**
WVOR Wild Horse Val 30.27 96 P **P** **08 09 52.5 +2.1**
GDXM Geysers 30.31 106 IAmb IAmb 08 10 04.3
comp=Z,230nm,1.2s
MSO Missoula 30.41 85 ⇑P **P** **08 09 52.0 +0.3**
ORV Oroville 30.52 103 IAMs_20 IAMs_20 08 19 02.9
comp=Z,17µm,21.0s
MCCM Marconi Confer 30.73 107 IAmb IAmb 08 10 20.5
comp=Z,534nm,1.8s
MCCM IAMs_20 IAMs_20 08 19 00.6
comp=Z,18µm,20.0s
MCCM Marconi Confer 30.73 107 ⇓P **P** **08 09 55.8 +1.4**
CVS Carmenet Viney 30.82 106 IAmb IAmb 08 10 10.1
comp=Z,537nm,1.4s
CVS IAMs_20 IAMs_20 08 19 07.0
comp=Z,22µm,21.0s
BEKR Beckworth 30.95 102 IAmb IAmb 08 10 00.8
comp=Z,347nm,1.7s
FARB Farallon Islan 30.98 108 IAmb IAmb 08 10 22.6
comp=Z,305nm,1.4s
FARB IAMs_20 IAMs_20 08 19 06.3
comp=Z,22µm,20.0s
MFID Camas Ranch 31.28 92 IAMs_20 IAMs_20 08 20 13.4
comp=Z,20µm,22.0s
MPK Martis Peak 31.53 102 IAmb IAmb 08 10 14.8
comp=Z,374nm,1.2s
JRSC Jasper Ridge 31.62 107 IAmb IAmb 08 10 14.7
comp=Z,229nm,1.1s
JRSC IAMs_20 IAMs_20 08 19 15.7
comp=Z,23µm,21.0s
PAHR Pah Rah Range 31.62 101 IAmb IAmb 08 10 07.0
comp=Z,497nm,1.6s
WELL Weller Preserv 31.73 104 IAMs_20 IAMs_20 08 19 56.6
comp=Z,23µm,21.0s
PNTR Pine Nut 31.91 102 IAmb IAmb 08 10 21.4
comp=Z,347nm,1.1s
MHC Mount Hamilton 31.99 107 IAmb IAmb 08 10 31.0
comp=Z,458nm,1.8s
MHC IAMs_20 IAMs_20 08 19 38.6
comp=Z,20µm,21.0s
DLMT Dillon 32.01 87 IAmb IAmb 08 10 42.8
comp=Z,183nm,1.2s
HLID Hailey 32.01 91 IAmb IAmb 08 10 32.1
comp=Z,275nm,1.6s
HLID IAMs_20 IAMs_20 08 21 09.6
comp=Z,31µm,21.0s
HLID Hailey 32.01 91 ⇑P **P** **08 10 06.5 +0.6**
HLID Hailey 32.01 91 P **P** **08 10 07.2 +1.4**
RES Resolute Bay 32.04 27 LR LR 08 24 28.8
comp=Z,11µm,21.0s,baz=264,slow=39
RES Resolute Bay 32.04 27 P **P** **08 10 05.3 -0.3**
RES Resolute Bay 32.04 27 ⇑P **P** **08 10 04.0 -1.5**
RES Resolute Bay 32.04 27 P **P** **08 10 05.0 -0.6**
EGMT Eagleton 32.18 80 IAMs_20 IAMs_20 08 21 47.7
comp=Z,19µm,20.0s
EGMT Eagleton 32.18 80 ⇑P **P** **08 10 07.6 +0.4**
CMB Columbia Colle 32.20 104 IAMs_20 IAMs_20 08 20 10.1
comp=Z,22µm,21.0s
BMN Battle Mountai 32.37 98 IAmb IAmb 08 10 13.5
comp=Z,298nm,1.7s
FORD Fort Ord Natur 32.39 108 IAMs_20 IAMs_20 08 20 33.1
comp=Z,18µm,19.0s
WAKR Walker 32.41 103 IAmb IAmb 08 10 22.9
comp=Z,219nm,1.2s
BOZ Bozeman (W) 32.43 86 P **P** **08 10 10.6 +1.1**
SAO San Andreas Ge 32.52 107 P **P** **08 10 12.9 +2.8**
SAO San Andreas Ge 32.52 107 IAMs_20 IAMs_20 08 19 41.5
comp=Z,19µm,21.0s
SAO San Andreas Ge 32.52 107 ⇑P **P** **08 10 11.2 +1.0**
KVN Kaisaville 32.79 101 IAmb IAmb 08 10 17.4
comp=Z,223nm,1.6s
BLKN Baker Lake 32.92 47 IAmb IAmb 08 10 44.2
comp=Z,166nm,1.0s
NVAR Mina Array Bea 33.10 102 P **P** **08 10 16.7 +1.2**
comp=Z,78nm,0.8s,baz=298,slow=6.8,SNR=222
NVAR PcP **PcP** **08 12 57.6 -0.3**
comp=Z,1.8nm,0.5s,baz=313,slow=4.0,SNR=5.4
NVAR ScP **ScP** **08 16 39.3 +0.8**
comp=Z,6.9nm,0.7s,baz=283,slow=3.1,SNR=10
NVAR LR LR 08 21 17.1
comp=Z,23µm,21.6s,baz=314,slow=32
NVAR P3KPbc 08 41 31.2
comp=Z,0.7nm,0.7s,baz=132,slow=5.3,SNR=6.8
comp=Z,78nm,0.8s
NVAR Mina Array Bea 33.10 102 P **P** **08 10 17.0 +1.5**
YHB Horse Butte 33.17 87 IAmb IAmb 08 10 37.3
comp=Z,139nm,1.1s
HULI Fort Hunter Li 33.17 108 IAMs_20 IAMs_20 08 19 57.9
comp=Z,21µm,21.0s
NV11 Mina Array Sit 33.18 101 IAmb IAmb 08 10 20.9
comp=Z,328nm,1.7s
MDPB Devils Postpil 33.22 103 IAmb IAmb 08 10 30.0
comp=Z,146nm,1.0s
TIXI Tiksi 33.26 327 LR LR 08 25 48.0
comp=Z,26µm,18.3s,baz=126,slow=40
TIXI Tiksi 33.26 327*i*⇑*i*P **P** **08 10 14.8 -1.4**
TIXI pmax pmax
comp=Z,17nm,0.9s
TIXI MLR MLR
comp=Z,29µm,16.0s
TIXI Tiksi 33.26 327 P **P** **08 10 15.3 -0.9**
TIXI IAMs_20 IAMs_20 08 25 18.7
comp=Z,26µm,19.0s
PMPB Monarch Peak 33.27 107 IAmb IAmb 08 10 56.8
comp=Z,143nm,1.0s
FFC Flin Flon 33.30 65 P **P** **08 10 16.8 0.0**
FFC pmax pmax
comp=Z,44nm,0.9s
FFC MLR MLR
comp=Z,16µm,20.0s
FFC Flin Flon 33.30 65 P **P** **08 10 16.8 0.0**
FFC Flin Flon 33.30 65 IAMs_20 IAMs_20 08 23 16.8
comp=Z,17µm,20.0s
FFC Flin Flon 33.30 65 ⇑P **P** **08 10 17.1 +0.3**
FFC Flin Flon 33.30 65 P **P** **08 10 17.4 +0.6**
FFC Flin Flon 33.30 65 P **P** **08 10 16.7 0.0**
ELK Elko 33.30 96 LR LR 08 21 47.4
comp=Z,23µm,21.2s,baz=306,slow=32
ELK Elko 33.30 96 P **P** **08 10 18.9 +1.6**
ELK Elko 33.30 96 IAmb IAmb 08 10 21.6
comp=Z,128nm,0.8s
ELK IAMs_20 IAMs_20 08 21 35.9
comp=Z,23µm,22.0s
ELK Elko 33.30 96 ⇑P **P** **08 10 18.8 +1.5**
TYV Tymovskoe 33.36 287 *eP* **P** **08 10 17.5 +0.2**
TYV *eS* **S** **08 15 35.2 +0.1**
TYV pmax pmax
comp=Z,700nm,4.0s
TYV pmax pmax
comp=Z,100nm,1.0s
TYV smax smax
comp=N,800nm,9.1s
TYV smax smax
comp=E,1µm,9.1s
NKL Nikolayevsk 33.37 292 *eP* **P** **08 10 17.3 -0.1**
NKL *eS* **S** **08 15 41.6 +6.4**
NKL pmax pmax
comp=N,165nm,1.0s
NKL pmax pmax
comp=E,87nm,1.0s
NKL pmax pmax
comp=Z,440nm,0.9s
NKL smax smax
comp=N,141nm,4.0s
NKL smax smax
comp=E,482nm,4.0s
NKL MLR MLR
comp=E,29µm,19.0s
NKL MLR MLR
comp=N,22µm,18.0s
NKL MLR MLR
comp=Z,29µm,18.0s
KUR Kuril'sk 33.39 275 *eP* **P** **08 10 14.0 -3.7**
KUR *e* 08 11 29.6
KUR *e*PPP PPP 08 11 41.3
KUR *e* 08 12 58.2
KUR *eS* **S** **08 15 31.1 -4.6**
KUR *e*SS **SnSn** **08 17 43.1 +3.9**
KUR *e*SSS SSS 08 18 03.0
KUR pmax pmax
comp=Z,2µm,8.5s
KUR MLR MLR
comp=Z,3µm,14.0s
KUR MLR MLR
comp=N,4µm,19.0s
KUR MLR MLR
comp=E,3µm,17.0s
KIP Kipapa 33.40 175 *eP* **P** **08 10 18.8 +0.9**
KIP pmax pmax
comp=Z,84nm,1.0s
KIP Kipapa 33.40 175 IAMs_20 IAMs_20 08 21 01.6
comp=Z,23µm,18.0s
YNR Norris Junctio 33.49 86 IAmb IAmb 08 10 55.7
comp=Z,225nm,1.1s
PKD Bear Valley Ra 33.61 107 IAMs_20 IAMs_20 08 20 13.5
comp=Z,18µm,22.0s
H17A Grant Village 33.74 87 IAmb IAmb 08 10 59.5
comp=Z,223nm,1.3s
LKWY Lake 33.74 86 IAmb IAmb 08 10 43.0
comp=Z,147nm,1.1s
LKWY Lake 33.74 86 ⇑P **P** **08 10 22.7 +1.7**
YMP Mirror Lake Pl 33.78 86 IAmb IAmb 08 11 03.1
comp=Z,146nm,1.2s
FLWY Flagg Ranch 33.85 87 IAmb IAmb 08 10 59.7
comp=Z,311nm,1.6s
TPH Tonopah 33.96 101 IAmb IAmb 08 10 36.0
comp=Z,302nm,1.3s
DSP Deep Springs 34.03 103 IAmb IAmb 08 10 37.1
comp=Z,193nm,1.1s
HVU Hansel Valley 34.06 92 IAmb IAmb 08 10 46.5
comp=Z,172nm,1.0s
RLMT Red Lodge 34.07 85 IAmb IAmb 08 10 58.4
comp=Z,198nm,1.4s
RLMT Red Lodge 34.07 85 ⇑P **P** **08 10 24.9 +1.0**
TIN Tinemaha, Big 34.10 103 IAmb IAmb 08 10 55.2
comp=Z,292nm,1.1s
TIN IAMs_20 IAMs_20 08 21 22.4
comp=Z,20µm,21.0s
AHID Auburn Hatcher 34.42 89 IAMs_20 IAMs_20 08 22 59.2
comp=Z,19µm,19.0s
AHID Auburn Hatcher 34.42 89 ⇑P **P** **08 10 28.1 +1.2**
AHID Auburn Hatcher 34.42 89 P **P** **08 10 28.8 +1.9**
BGU Big Grassy Mou 34.46 93 IAmb IAmb 08 10 52.4
comp=Z,215nm,1.2s
GMN Gold Mountain 34.48 102 IAmb IAmb 08 10 32.4
comp=Z,321nm,1.8s
VES Vestal, Richgr 34.50 106 IAMs_20 IAMs_20 08 21 25.9
comp=Z,16µm,20.0s
UGL Uglegorsk 34.59 285 *eP* **P** **08 10 28.5 +0.5**
UGL *e* 08 11 50.0
UGL *e*SS SS 08 18 00.0 -25
UGL pmax pmax
comp=Z,2µm,15.0s
UGL pmax pmax
comp=Z,500nm,1.0s
UGL MLR MLR
comp=E,11µm,20.0s
UGL MLR MLR
comp=N,3µm,15.0s
UGL MLR MLR
comp=Z,10µm,20.0s
CWC Cottonwood Cre 34.63 104 IAmb IAmb 08 10 42.0
comp=Z,139nm,1.2s
CWC IAMs_20 IAMs_20 08 21 11.3
comp=Z,19µm,22.0s
HWUT Hardware Ranch 34.87 91 IAMs_20 IAMs_20 08 22 52.3
comp=Z,19µm,20.0s
HWUT Hardware Ranch 34.87 91 ⇓P **P** **08 10 32.7 +1.9**
HWUT Hardware Ranch 34.87 91 P **P** **08 10 32.9 +2.0**
LAO LASA Array 34.92 80 IAMs_20 IAMs_20 08 23 15.2
comp=Z,20µm,21.0s
LAO LASA Array 34.92 80 ⇑P **P** **08 10 32.2 +1.2**
ISA Isabella, Lake 34.97 105 IAmb IAmb 08 10 44.2
comp=Z,260nm,1.4s
ISA IAMs_20 IAMs_20 08 22 28.3
comp=Z,17µm,18.0s
DUG Dugway, Tooele 35.06 94 P **P** **08 10 34.2 +1.8**
DUG Dugway, Tooele 35.06 94 IAmb IAmb 08 10 49.1
comp=Z,222nm,1.1s
DUG Dugway, Tooele 35.06 94 ⇑P **P** **08 10 33.6 +1.2**
DUG Dugway, Tooele 35.06 94 P **P** **08 10 34.2 +1.8**
DGMT Dagmar 35.09 76 IAMs_20 IAMs_20 08 24 17.6
comp=Z,23µm,19.0s
DGMT Dagmar 35.09 76 IAmb IAmb 08 10 45.8
comp=Z,265nm,1.3s
DGMT Dagmar 35.09 76 ⇑P **P** **08 10 33.2 +0.7**
WCT Wildcat Mounta 35.20 102 IAmb IAmb 08 10 46.8
comp=Z,255nm,1.6s
MPMC Manual Prospec 35.23 104 IAmb IAmb 08 10 47.1
comp=Z,200nm,1.1s
MPMC IAMs_20 IAMs_20 08 21 53.3
comp=Z,17µm,21.0s
POHA Pohakuloa 35.23 171 P P 08 10 38.9 +4.8
POHA Pohakuloa 35.23 171 P **P** **08 10 34.7 +0.6**
POHA IAmb IAmb 08 10 53.9
comp=Z,250nm,0.9s
POHA Pohakuloa 35.23 171 IAMs_20 IAMs_20 08 22 32.2
comp=Z,14µm,20.0s
POHA Pohakuloa 35.23 171 ⇓P **P** **08 10 35.6 +1.5**
POHA Pohakuloa 35.23 171 P **P** **08 10 34.9 +0.8**
YUK Yuzh-Kuril'sk 35.26 275 *eP* **P** **08 10 31.9 -1.9**
YUK *i* S **S** **08 16 02.7 -1.7**
YUK *i* SS **SnSn** **08 18 24.3 0.0**
YUK pmax pmax
comp=Z,465nm,1.2s
YUK pmax pmax
comp=N,132nm,0.7s
YUK pmax pmax
comp=E,210nm,1.1s
YAK Yakutsk 35.28 310 P **P** **08 10 32.6 -1.2**
comp=E,218nm,0.7s,baz=72,slow=5.1,SNR=21
YAK LR LR 08 26 23.6
comp=E,40µm,19.9s,baz=79,slow=39
comp=E,218nm,0.7s
YAK Yakutsk 35.28 310 *eP* **P** **08 10 31.4 -2.4**
YAK *e**PP **pP** **08 10 40.5 -4.6**
YAK *e* 08 11 49.3
YAK *e*PPP PPP 08 12 08.0
YAK *e* 08 13 02.1
YAK *eS* **S** **08 16 02.7 -1.8**
YAK *e**SS **sS** **08 16 18.4 -4.8**
YAK *e*SS **SnSn** **08 18 20.6 -3.9**
YAK *e* 08 20 48.6
YAK pmax pmax

YAK pmax pmax
comp=N,20nm,1.5s
YAK pmax pmax
comp=E,48nm,1.4s
YAK pmax pmax
comp=N,159nm,2.6s
YAK pmax pmax
comp=Z,781nm,4.3s
YAK pmax pmax
comp=E,189nm,1.8s
YAK smax smax
comp=E,1µm,9.9s
YAK smax smax
comp=N,313nm,3.8s
YAK MLR MLR
comp=Z,50µm,27.0s
YAK MLR MLR
comp=N,21µm,27.0s
YAK MLR MLR
comp=E,34µm,25.0s
YAK Yakutsk 35.28 310 P **P** **08 10 32.4 -1.5**
YAK Yakutsk 35.28 310 ⇑P **P** **08 10 32.1 -1.7**
YAK Yakutsk 35.28 310 P **P** **08 10 32.8 -1.0**
YAK Yakutsk 35.28 310 P **P** **08 10 32.5 -1.2**
TPNV Topopah Spring 35.30 102 ⇑P **P** **08 10 34.8 +0.3**
BW06 Boulder Array 35.31 88 ⇑P **P** **08 10 35.3 +0.7**
PDAR Pinedale Array 35.31 88 P **P** **08 10 35.4 +0.8**
comp=E,10.0nm,0.5s,baz=316,slow=4.3,SNR=110
PDAR LR LR 08 24 10.7
comp=E,4µm,18.7s,baz=294,slow=35
PDAR P3KPbc 08 41 21.0
comp=E,1.0nm,0.7s,baz=122,slow=6.4,SNR=9.6
comp=E,10.0nm,0.5s
PDAR Pinedale Array 35.31 88 P **P** **08 10 34.3 -0.3**
YSS Yuzhno-Sakhali 35.35 281 P **P** **08 10 34.9 +0.3**
YSS Yuzhno-Sakhali 35.35 281 *ce*P **P** **08 10 34.1 -0.5**
YSS *e* 08 11 53.5
YSS *e* 08 13 03.5
YSS *e*S **S** **08 16 02.3 -3.5**
YSS pmax pmax
comp=Z,40nm,1.4s
YSS pmax pmax
comp=Z,2µm,6.8s
YSS pmax pmax
comp=N,600nm,6.7s
YSS pmax pmax
comp=E,700nm,6.9s
YSS pmax pmax
comp=Z,3µm,7.9s
YSS pmax pmax
comp=N,1µm,6.4s
YSS pmax pmax
comp=E,2µm,6.8s
YSS smax smax
comp=N,2µm,14.1s
YSS smax smax
comp=E,2µm,15.4s
YSS Yuzhno-Sakhali 35.35 281 P **P** **08 10 34.8 +0.3**
YSS IAms_20 IAms_20 08 24 06.3
comp=Z,15µm,22.0s
YSS Yuzhno-Sakhali 35.35 281 P **P** **08 10 35.5 +0.9**
MLOA Mauna Loa Obse 35.45 171 P **P** **08 10 38.8 +2.6**
LRMC Laurel Mtn Rad 35.54 105 IAmb IAmb 08 10 49.2
comp=Z,170nm,1.3s
LRMC IAms_20 IAms_20 08 23 31.5
comp=Z,12µm,18.0s
OSI Osito Audit: C 35.59 107 IAmb IAmb 08 10 50.0
comp=Z,347nm,1.4s
OSI IAms_20 IAms_20 08 21 35.8
comp=Z,18µm,21.0s
JOKA Jonika Flow 35.61 170 IAmb IAmb 08 10 56.0
comp=Z,216nm,1.0s
FCC Fort Churchill 35.61 56 IAmb IAmb 08 10 54.1
comp=Z,155nm,1.0s
STCH Steam Cracks 35.64 170 IAmb IAmb 08 10 56.6
comp=Z,207nm,1.0s
QSM Queen of Sheba 35.65 103 IAmb IAmb 08 10 50.3
comp=Z,241nm,1.0s
TPO Tropico Hills 35.68 106 IAmb IAmb 08 10 50.4
comp=Z,211nm,1.4s
WOH Wood Valley 35.74 171 P **P** **08 10 39.5 +1.3**
OVEH Oceanview Est 35.81 171 P **P** **08 10 41.1 +2.2**
BSUT Blindstream Ca 36.03 92 IAmb IAmb 08 11 06.9
comp=Z,222nm,1.1s
GSC Goldstone, Bar 36.16 104 IAmb IAmb 08 10 54.8
comp=Z,232nm,1.1s
PASC Pasadena Art C 36.22 107 IAms_20 IAms_20 08 21 55.4
comp=Z,19µm,22.0s
MWC Mount Wilson 36.25 107 IAmb IAmb 08 10 55.7
comp=Z,251nm,1.3s
MWC IAms_20 IAms_20 08 22 18.3
comp=Z,17µm,20.0s
TCRU Three Creeks R 36.33 96 IAmb IAmb 08 11 00.2
comp=Z,138nm,0.9s
BFSC Mount Baldy Ra 36.46 106 IAmb IAmb 08 10 57.4
comp=Z,217nm,1.2s
BFSC IAms_20 IAms_20 08 22 14.9
comp=Z,19µm,21.0s
CCUT Cedar City 36.53 98 IAmb IAmb 08 10 49.7
comp=Z,368nm,1.8s
RDMU Red Mountain 36.70 91 IAmb IAmb 08 11 10.7
comp=Z,242nm,1.1s
MTPC Mountain Pass 36.74 103 IAmb IAmb 08 10 59.8
comp=Z,156nm,1.2s
P17A Butcher Ranch, 36.74 93 IAmb IAmb 08 11 07.1
comp=Z,268nm,1.5s
GRNR Gornyy 36.83 290 ⇑*i*P **P** **08 10 46.9 -0.3**
GRNR pmax pmax
comp=Z,60nm,0.6s
Q16A Castle Valley 36.86 94 IAmb IAmb 08 11 08.5
comp=Z,406nm,1.3s
MTPU Mount Pierson 36.87 96 IAmb IAmb 08 11 08.9
comp=Z,206nm,1.3s
P18A Preston Nutter 36.92 93 IAmb IAmb 08 11 11.7
comp=Z,229nm,1.1s
LCMT Little Creek M 36.97 99 IAmb IAmb 08 10 54.1
comp=Z,124nm,0.9s
ELS Elsinore Mount 37.03 107 IAmb IAmb 08 11 15.6
comp=Z,209nm,1.4s
JKA Kamikawa-asahi 37.09 277 P **P** **08 10 49.3 -0.1**
JKA Kamikawa-asahi 37.09 277 P **P** **08 10 50.1 +0.6**
ASAJ Asahikawa 37.09 277 LR LR 08 27 39.0
comp=Z,7µm,19.8s,baz=58,slow=39
ASAJ Asahikawa 37.09 277 P **P** **08 10 49.3 -0.2**
ASAJ pmax pmax
comp=Z,133nm,1.2s
SRU San Rafael Swe 37.10 94 IAmb IAmb 08 10 54.1
comp=Z,223nm,0.7s
ALE Alert 37.22 12 P **P** **08 10 49.9 -0.3**
ALE Alert 37.22 12 P **P** **08 10 49.9 -0.3**
ALE sP **sP** **08 11 04.8 -1.6**
DNR Dunn Ranch,Anz 37.53 106 IAmb IAmb 08 11 06.3
comp=Z,339nm,1.1s
BELC Belle Mtn. Jos 37.57 105 IAmb IAmb 08 11 06.3
comp=Z,182nm,1.1s
BELC IAms_20 IAms_20 08 24 02.9
comp=Z,16µm,18.0s
PFO Pinyon Flats O 37.60 106 LR LR 08 23 34.0
comp=Z,22µm,20.3s,baz=316,slow=32
PFO Pinyon Flats O 37.60 106 *d*P **P** **08 10 55.5 +1.5**
PFO pmax pmax
comp=Z,65nm,0.8s
PFO Pinyon Flats O 37.60 106 P **P** **08 10 55.5 +1.5**
PFO IAmb IAmb 08 11 06.7
comp=Z,158nm,1.1s
PFO Pinyon Flats O 37.60 106 IAms_20 IAms_20 08 23 22.8
comp=Z,21µm,20.0s
PFO Pinyon Flats O 37.60 106 P **P** **08 10 55.6 +1.6**
PFO pP **pP** **08 11 05.2 -0.2**
PMD Palm Desert 37.62 105 IAmb IAmb 08 11 06.5
comp=Z,193nm,1.1s
RSSD Black Hills 37.67 82 P **P** **08 10 55.1 +0.4**
RSSD pmax pmax
comp=Z,106nm,0.7s
RSSD Black Hills 37.67 82 P **P** **08 10 55.1 +0.4**
RSSD IAmb IAmb 08 10 58.1
comp=Z,106nm,0.7s
RSSD Black Hills 37.67 82 IAms_20 IAms_20 08 24 46.7
comp=Z,19µm,21.0s
RSSD Black Hills 37.67 82 P **P** **08 10 55.4 +0.7**
RSSD Black Hills 37.67 82 P **P** **08 10 55.2 +0.6**
RSSD pP **pP** **08 11 05.8 -0.2**
O20A White River Ci 37.75 90 IAms_20 IAms_20 08 24 47.1
comp=Z,16µm,20.0s
DPP Dos Picos Cty 37.79 107 IAmb IAmb 08 11 08.6
comp=Z,299nm,1.1s

BORC Borrego Spring 37.88 106 IAmb IAmb 08 11 09.3
comp=Z,220nm,1.1s
U15A North Rim 37.92 98 IAmb IAmb 08 11 23.1
comp=Z,323nm,1.3s
W13A Hualapai Mount 37.96 101 IAmb IAmb 08 11 10.2
comp=Z,326nm,1.2s
MDND Maddock 38.01 74 IAMs_20 IAMs_20 08 26 21.4
comp=Z,11µm,19.0s
JEM Erimo 38.06 274 P **P** **08 10 58.0 +0.3**
ERM Erimo 38.06 274 P **P** **08 10 58.0 +0.3**
ERM Erimo 38.06 274 *c i*P **P** **08 10 56.9 -0.8**
ERM pmax pmax
comp=Z,96nm,1.2s
ERM Erimo 38.06 274 P **P** **08 10 57.6 -0.1**
ERM IAmb IAmb 08 11 01.7
comp=Z,299nm,1.4s
ERM Erimo 38.06 274 ⇑P **P** **08 10 56.9 -0.8**
ERM Erimo 38.06 274 P **P** **08 10 57.2 -0.5**
ERM S **S** **08 16 50.5 +3.2**
ERM Erimo 38.06 274 P **P** **08 10 58.1 +0.3**
HAYD Hayden 38.06 89 IAmb IAmb 08 11 23.7
HAYD IAMs_20 IAMs_20 08 25 09.2
comp=Z,12µm,20.0s
SALN Salton City 38.11 105 IAmb IAmb 08 11 11.2
comp=Z,352nm,1.1s
TULEG Thule 38.12 22 P **P** **08 10 56.7 -1.1**
TULEG Thule 38.12 22 ⇑P **P** **08 10 57.3 -0.5**
TULEG Thule 38.12 22 P **P** **08 10 57.6 -0.2**
TULEG Thule 38.12 22 *i*P **P** **08 10 56.7 -1.1**
TULEG IAmb IAmb 08 11 00.7
comp=Z,30nm,0.6s
BC3 Big Chuckawall 38.13 105 IAMs_20 IAMs_20 08 24 29.7
comp=Z,16µm,18.0s
BAR Barrett 38.17 107 IAmb IAmb 08 11 11.9
comp=Z,224nm,1.1s
BAR IAMs_20 IAMs_20 08 22 28.1
comp=Z,13µm,22.0s
PV21 Cone Mtn., Par 38.37 93 IAmb IAmb 08 11 36.5
comp=Z,158nm,0.9s
PV23 Carpenter Ridg 38.42 93 IAmb IAmb 08 11 58.1
comp=Z,453nm,1.3s
JOHN Johnston Islan 38.51 193 P **P** **08 11 04.6 +2.9**
JOHN Johnston Islan 38.51 193 IAMs_20 IAMs_20 08 23 29.2
comp=Z,13µm,20.0s
PV17 East Wray Mesa 38.57 93 IAmb IAmb 08 11 24.6
comp=Z,246nm,1.1s
PV11 David Mesa, Pa 38.60 93 IAmb IAmb 08 11 28.7
comp=Z,246nm,0.8s
PV05 Paradox Valley 38.62 94 IAmb IAmb 08 11 30.8
comp=Z,313nm,1.0s
PV12 Saucer Basin, 38.63 93 IAmb IAmb 08 11 30.7
comp=Z,313nm,1.1s
PV07 Paradox Valley 38.64 93 IAmb IAmb 08 11 24.7
comp=Z,152nm,0.9s
PV03 Paradox Valley 38.65 93 IAmb IAmb 08 11 34.7
comp=Z,162nm,1.0s
ULM Lac du Bonnet 38.73 69 P **P** **08 11 03.8 +0.5**
comp=Z,140nm,0.5s,baz=304,slow=8.2,SNR=124
ULM LR LR 08 27 08.9
comp=Z,20µm,19.0s,baz=303,slow=36
comp=Z,140nm,0.5s
ULM Lac du Bonnet 38.73 69 *c i*P **P** **08 11 03.4 +0.1**
ULM Lac du Bonnet 38.73 69 IAmb IAmb 08 11 06.2
comp=Z,161nm,0.6s
CCX Cicese 38.79 108 IAmb IAmb 08 11 17.1
comp=Z,273nm,1.1s
PV15 Paradox Valley 38.80 93 IAmb IAmb 08 11 26.6
comp=Z,394nm,1.2s
PV01 Paradox Valley 38.89 93 IAmb IAmb 08 11 26.4
comp=Z,251nm,0.8s
GLA Glamis 38.93 105 IAmb IAmb 08 11 18.0
comp=Z,320nm,1.2s
GLA IAMs_20 IAMs_20 08 24 51.9
comp=Z,18µm,18.0s
ESJX Sierra Juarez 39.08 107 IAmb IAmb 08 11 19.7
comp=Z,223nm,1.2s
WUAZ Wupatki 39.09 99 IAmb IAmb 08 11 11.0
comp=Z,177nm,0.8s
WUAZ IAMs_20 IAMs_20 08 24 51.1
comp=Z,19µm,22.0s
WUAZ Wupatki 39.09 99 ⇑P **P** **08 11 08.0 +1.3**
CPBX Cerro Prieto 39.13 106 IAmb IAmb 08 11 36.6
comp=Z,475nm,1.6s
Y14A Wickenburg 39.30 102 IAmb IAmb 08 11 21.1
comp=Z,201nm,1.1s
ISCO Idaho Springs 39.49 89 P **P** **08 11 11.4 +1.3**
ISCO Idaho Springs 39.49 89 IAMs_20 IAMs_20 08 26 08.2
comp=Z,22µm,20.0s
ISCO Idaho Springs 39.49 89 ⇓P **P** **08 11 11.6 +1.5**
ISCO Idaho Springs 39.49 89 P **P** **08 11 11.5 +1.3**
MVCO Mesa Verde 39.56 94 ⇑P **P** **08 11 10.9 +0.3**
MVCO Mesa Verde 39.56 94 P **P** **08 11 11.2 +0.6**
113A Mohawk Valley, 39.73 104 IAmb IAmb 08 11 24.5
comp=Z,260nm,1.3s
AGMN Agassiz Nation 39.83 71 IAmb IAmb 08 11 25.4
comp=Z,343nm,0.9s
AGMN Agassiz Nation 39.83 71 ⇓P **P** **08 11 12.3 -0.1**
AGMN Agassiz Nation 39.83 71 P **P** **08 11 12.6 +0.2**
X16A Lo Mia Camp, P 39.84 100 IAmb IAmb 08 11 26.4
comp=Z,260nm,1.1s
ZEA Zeya 40.11 299 *e*P **P** **08 11 14.4 -0.3**
ZEA *e* 08 12 58.6
ZEA *e*S **S** **08 17 14.1 -3.8**
ZEA pmax pmax
comp=N,30nm,0.7s
ZEA pmax pmax
comp=E,30nm,0.7s
ZEA pmax pmax
comp=Z,100nm,0.6s
ZEA pmax pmax
comp=E,400nm,5.0s
ZEA pmax pmax
comp=Z,900nm,5.2s
ZEA smax smax
comp=N,400nm,10.3s
ZEA smax smax
comp=E,700nm,15.0s
EPLO Experimental L 40.21 68 IAmb IAmb 08 11 18.5
comp=Z,124nm,0.6s
W18A Petrified Fore 40.32 97 IAmb IAmb 08 11 29.7
comp=Z,252nm,1.4s
SUSD Miller 40.37 78 IAMs_20 IAMs_20 08 27 00.0
comp=Z,21µm,20.0s
X18A Snowflake 40.62 98 IAmb IAmb 08 11 32.5
comp=Z,294nm,1.1s
PIX Pinacate 40.81 105 IAmb IAmb 08 11 33.4
comp=Z,410nm,1.4s
OGNE Ogallala 40.81 85 ⇑P **P** **08 11 21.5 +0.7**
SDCO Great Sand Dun 40.93 91 IAMs_20 IAMs_20 08 26 44.4
comp=Z,14µm,20.0s
SDCO Great Sand Dun 40.93 91 ⇑P **P** **08 11 22.8 +0.7**
K30B Basset 41.10 81 IAMs_20 IAMs_20 08 26 58.3
comp=Z,17µm,20.0s
NEEM North Greenlan 41.26 18 ⇑P **P** **08 11 23.4 -0.8**
NEEM North Greenlan 41.26 18 *i*P **P** **08 11 24.0 -0.3**
NEEM IAmb IAmb 08 11 28.5
comp=Z,185nm,0.9s
KULLO Kullorsuaq 41.59 23 ⇑P **P** **08 11 26.6 0.0**
KULLO Kullorsuaq 41.59 23 P **P** **08 11 26.9 +0.2**
KULLO Kullorsuaq 41.59 23 *i*P **P** **08 11 26.0 -0.6**
KULLO IAmb IAmb 08 11 29.8
comp=Z,79nm,0.8s
KSCO Kaye Shedlock' 41.74 87 IAmb IAmb 08 11 54.6
comp=Z,804nm,1.9s
KSCO IAMs_20 IAMs_20 08 27 44.7
comp=Z,11µm,19.0s
TUC Tucson 41.76 101 P **P** **08 11 30.0 +1.4**
TUC pmax pmax
comp=Z,297nm,1.2s
TUC Tucson 41.76 101 P **P** **08 11 30.0 +1.4**
TUC IAmb IAmb 08 11 41.8
comp=Z,297nm,1.1s
TUC Tucson 41.76 101 ⇑P **P** **08 11 29.9 +1.4**
TUC Tucson 41.76 101 P **P** **08 11 30.2 +1.6**
TUC Tucson 41.76 101 P **P** **08 11 31.0 +2.4**
TUC pP **pP** **08 11 41.0 +0.9**
TUC PcP **PcP** **08 13 25.1 +0.8**
HEH HeiHe 41.94 294 *e*P **P** **08 11 28.3 -1.5**
HEH pP **pP** **08 11 40.0 -1.2**
HEH PP **PP** **08 13 08.0 +1.0**
HEH S **S** **08 17 46.0 +1.0**
HEH pmax pmax
comp=Z,200nm,0.9s
HEH pmax pmax
comp=Z,1µm,9.4s

HEH L L
comp=Z,4µm,19.7s
T25A Trinidad 41.98 91 IAmb IAmb 08 11 57.9
comp=Z,167nm,0.9s
T25A IAMs_20 IAMs_20 08 27 19.1
comp=Z,14µm,20.0s
ECSD EROS Data Cent 42.14 77 ⇓P **P** **08 11 30.7 -0.8**
ECSD EROS Data Cent 42.14 77 P **P** **08 11 30.9 -0.6**
TASM ASL Pad, Albuq 42.33 95 IAmb IAmb 08 11 58.1
comp=Z,130nm,1.3s
ANMO Albuquerque 42.33 95 LR LR 08 28 53.8
comp=Z,5µm,18.3s,baz=308,slow=36
ANMO Albuquerque 42.33 95 *d i*P **P** **08 11 34.5 +1.1**
ANMO pmax pmax
comp=Z,47nm,0.9s
ANMO Albuquerque 42.33 95 P **P** **08 11 33.8 +0.4**
ANMO Albuquerque 42.33 95 ⇑P **P** **08 11 33.9 +0.4**
ANMO Albuquerque 42.33 95 P **P** **08 11 34.1 +0.7**
ANMO Albuquerque 42.33 95 P **P** **08 11 34.0 +0.7**
ANMO pP **pP** **08 11 44.3 -0.5**
ANMO PcP **PcP** **08 13 27.1 +0.8**
ALQ Albuquerque 42.33 95 IAmb IAmb 08 11 58.1
comp=Z,124nm,1.3s
ALQ IAMs_20 IAMs_20 08 28 42.6
comp=Z,5µm,18.0s
EYMN Ely 42.41 69 IAMs_20 IAMs_20 08 28 58.6
comp=Z,13µm,19.0s
EYMN Ely 42.41 69 IAmb IAmb 08 11 46.7
comp=Z,343nm,0.9s
EYMN Ely 42.41 69 ⇓P **P** **08 11 33.5 -0.1**
EYMN Ely 42.41 69 P **P** **08 11 33.8 +0.1**
H11N2 WAKE ISLAND Hy 42.53 227 T T 08 56 37.3
baz=27,slow=76,SNR=5487
NOR Nord 42.53 7 P **P** **08 11 34.5 +0.3**
NOR Nord 42.53 7 ⇓P **P** **08 11 34.2 0.0**
NOR Nord 42.53 7 P **P** **08 11 34.5 +0.3**
NOR Nord 42.53 7 *i*P **P** **08 11 34.7 +0.5**
NOR IAmb IAmb 08 11 38.3
comp=Z,87nm,0.8s
NOR IAMs_20 IAMs_20 08 28 23.6
comp=Z,13µm,23.1s
NOR IVMs_BB IVMs_BB 08 28 28.6
comp=Z,4µm,21.6s
H11N3 WAKE ISLAND Hy 42.53 227 T T 08 56 37.7
baz=27,slow=76,SNR=6038
H11N1 WAKE ISLAND Hy 42.55 227 T T 08 56 36.3
baz=27,slow=76,SNR=4122
BGNE Belgrade 42.74 81 IAMs_20 IAMs_20 08 27 48.9
comp=Z,17µm,21.0s
Y22A Socorro 42.76 96 IAmb IAmb 08 11 59.6
comp=Z,298nm,1.0s
UPNV Upernavik 42.84 25 P **P** **08 11 36.8 -0.1**
UPNV Upernavik 42.84 25 *i*P **P** **08 11 36.3 -0.5**
UPNV IAmb IAmb 08 11 41.0
comp=Z,82nm,0.6s
USA0B Ussuriysk Arra 43.07 285 ⇑*i*P **P** **08 11 37.5 -1.5**
USRK Ussuriysk Ar. 43.07 285 P **P** **08 11 37.4 -1.6**
comp=Z,10nm,0.7s,baz=45,slow=8.4,SNR=9.8
USRK PcP **PcP** **08 13 27.5 -0.8**
comp=Z,14nm,0.7s,baz=27,slow=2.1,SNR=6.6
USRK LR LR 08 29 40.7
comp=Z,8µm,21.6s,baz=56,slow=36
comp=Z,10nm,0.7s
E38A The Farm, Brul 43.18 71 IAmb IAmb 08 11 52.6
comp=Z,367nm,0.9s
121A Cookes Peak, D 43.30 98 IAmb IAmb 08 12 01.6
comp=Z,329nm,1.1s
319A Douglas 43.30 101 IAmb IAmb 08 11 54.2
comp=Z,252nm,1.1s
SPMN Marine on St. 43.34 73 IAmb IAmb 08 12 01.5
comp=Z,189nm,1.1s
L34A Svendsen Farm, 43.40 79 IAMs_20 IAMs_20 08 28 42.1
comp=Z,15µm,20.0s
RTBA Rita Blanca 43.43 90 IAmb IAmb 08 12 07.6
comp=Z,782nm,2.0s
CBKS Cedar Bluff 43.55 85 IAmb IAmb 08 11 46.7
comp=Z,620nm,1.7s
CBKS Cedar Bluff 43.55 85 ⇑P **P** **08 11 43.6 +0.6**
H11S1 WAKE ISLAND Hy 43.70 227 T T 08 57 56.6
baz=26,slow=76,SNR=276
H11S2 WAKE ISLAND Hy 43.71 227 T T 08 57 57.6
baz=26,slow=76,SNR=281
H11S3 WAKE ISLAND Hy 43.72 227 T T 08 57 59.3
baz=26,slow=76,SNR=272
VLA Vladivostok 43.81 283 *i*P **P** **08 11 44.2 -0.8**
VLA pmax pmax
comp=Z,114nm,1.4s
VLA MLR MLR
comp=Z,10µm,23.0s
FRB Frobisher Bay 44.11 40 LR LR 08 32 07.2
comp=Z,10nm,18.3s,baz=304,slow=39
FRB Frobisher Bay 44.11 40 P **P** **08 11 47.3 +0.2**
FRB Frobisher Bay 44.11 40 ⇓P **P** **08 11 47.1 0.0**
FRB Frobisher Bay 44.11 40 P **P** **08 11 47.5 +0.5**
HSIG 44.14 105 IAmb IAmb 08 12 00.6
comp=Z,267nm,1.2s
HSIG 44.14 105 ⇓P **P** **08 11 49.3 +1.4**
MDJ Mudanjiang 44.14 287 P **P** **08 11 48.2 +0.5**
MDJ Mudanjiang 44.14 287 IAMs_20 IAMs_20 08 32 16.7
comp=Z,16µm,20.0s
MDJ Mudanjiang 44.14 287 P **P** **08 11 46.5 -1.2**
MDJ pmax pmax
comp=Z,32nm,0.8s
MDJ L L
comp=Z,8µm,19.2s
MDJ L L
comp=Z,13µm,22.0s
MDJ L L
comp=Z,20µm,23.4s
BOD Bodaibo 44.20 310 *e*P **P** **08 11 46.6 -1.4**
BOD pmax pmax
comp=Z,142nm,1.4s
NUUG Nuugaatsiaq 44.31 26 ⇑P **P** **08 11 48.6 0.0**
NUUG Nuugaatsiaq 44.31 26 *i*P **P** **08 11 47.8 -0.8**
NUUG IAmb IAmb 08 11 49.4
comp=Z,60nm,0.4s
N35A Tabor 44.53 80 IAMs_20 IAMs_20 08 28 57.3
comp=Z,19µm,21.0s
MAJO Matsushiro 44.56 272 P **P** **08 11 51.9 +0.8**
MAJO Matsushiro 44.56 272 *c i*P **P** **08 11 51.0 -0.1**
MAJO pmax pmax
comp=Z,425nm,0.8s
MAJO Matsushiro 44.56 272 P **P** **08 11 50.5 -0.6**
MAJO Matsushiro 44.56 272 IAMs_20 IAMs_20 08 28 48.6
comp=Z,10µm,21.0s
MAJO Matsushiro 44.56 272 ⇑P **P** **08 11 51.2 0.0**
MAJO Matsushiro 44.56 272 P **P** **08 11 51.1 -0.1**
MAJO Matsushiro 44.56 272 P **P** **08 11 51.4 +0.3**
MAJO Matsushiro 44.56 272 P **P** **08 11 51.1 0.0**
MAJO sP **pP** **08 12 05.0 +2.4**
MJAR Matsushiro Arr 44.56 272 P **P** **08 11 50.7 -0.5**
comp=Z,141nm,0.8s,baz=42,slow=6.4,SNR=133
MJAR LR LR 08 29 34.8
comp=Z,7µm,21.9s,baz=57,slow=35
comp=Z,141nm,0.8s
MJAR Matsushiro Arr 44.56 272 P **P** **08 11 50.8 -0.3**
MJAR pmax pmax
comp=Z,130nm,0.8s
MJAR Matsushiro Arr 44.56 272 P **P** **08 11 50.8 -0.3**
MJAR IAmb IAmb 08 11 54.9
comp=Z,130nm,0.8s
MJB9 Matsu-Tunnel 44.56 272 P **P** **08 11 51.3 +0.2**
EPT El Paso 44.60 98 IAmb IAmb 08 12 13.7
comp=Z,301nm,1.0s
PH02 Texas Public H 44.62 91 IAmb IAmb 08 12 19.4
comp=Z,234nm,1.0s
BNX BinXian 44.64 289 ⇓P **P** **08 11 50.8 -0.8**
BNX sP **sP** **08 12 11.0 +3.0**
BNX PP **PcP** **08 13 34.8 +1.1**
BNX S **S** **08 18 22.0 -2.7**
BNX sS **sS** **08 18 44.0 +0.1**
BNX pmax pmax
comp=Z,150nm,0.9s
BNX pmax pmax
comp=Z,1µm,7.9s
BNX L L
comp=Z,8µm,20.1s
BNX L L
comp=Z,10µm,19.5s
BNX L L
comp=Z,10µm,21.6s
NIAQ Niaqornat 44.66 27 *i*P **P** **08 11 51.8 +0.4**
NIAQ IAmb IAmb 08 11 53.9
comp=Z,45nm,0.7s
PSTR Posyet 44.72 284 *i*P **P** **08 11 51.5 -0.7**
SRIG Santa Rosalia 44.74 107 IAmb IAmb 08 12 05.2

comp=Z,174nm,1.2s
SRIG Santa Rosalia 44.74 107 P P 08 11 55.1 +2.5
G40A Rib Lake 44.75 72 IAmb IAmb 08 12 05.3
comp=Z,204nm,0.9s
G40A IAMs_20 IAMs_20 08 30 15.7
comp=Z,11µm,20.0s
AMTX Amarillo 45.13 91 IAmb IAmb 08 12 17.7
comp=Z,135nm,0.9s
AMTX IAMs_20 IAMs_20 08 29 19.7
comp=Z,15µm,20.0s
AMTX Amarillo 45.13 91 ⇑P P 08 11 56.4 +0.6
KSU1 Kansas State U 45.15 83 IAMs_20 IAMs_20 08 29 34.8
comp=Z,10µm,20.0s
KSU1 Kansas State U 45.15 83 ⇑P P 08 11 55.5 -0.3
MSTX Muleshoe 45.15 93 IAmb IAmb 08 12 23.6
comp=Z,131nm,1.0s
MSTX IAMs_20 IAMs_20 08 30 05.3
comp=Z,8µm,18.0s
SAATT Saattut 45.17 26 *i* **P P 08 11 55.0 -0.5**
SAATT IAmb IAmb 08 11 59.5
comp=Z,84nm,1.0s
SCIA State Center 45.23 77 ⇑P P 08 11 56.3 0.0
MNTX Cornudas Mount 45.30 97 IAmb IAmb 08 12 19.4
comp=Z,164nm,0.9s
MNTX Cornudas Mount 45.30 97 ⇑P P 08 11 58.0 +1.0
MNTX Cornudas Mount 45.30 97 P P 08 11 58.2 +1.2
I40A Norwalk 45.40 73 IAMs_20 IAMs_20 08 30 31.8
comp=Z,13µm,20.0s
F42A Maple Grove Fa 45.57 70 IAMs_20 IAMs_20 08 30 57.3
comp=Z,8µm,19.0s
SAQQ Saqqaq 45.60 27 *i* **P P 08 11 57.9 -1.0**
SAQQ IAmb IAmb 08 12 00.9
comp=Z,53nm,0.8s
ELIS Ellis County 45.62 88 IAmb IAmb 08 12 26.8
comp=Z,170nm,1.1s
GDH Godhavn 45.66 28 *i* **P P 08 12 00.1 +0.7**
GDH IAmb IAmb 08 12 02.2
comp=Z,57nm,1.0s
JGF Kuroka 45.71 271 P P 08 12 01.4 +1.1
JGF Kuroka 45.71 271 ⇑P P 08 12 00.2 0.0
JGF Kuroka 45.71 271 P P 08 12 00.6 +0.3
OK038 West end E0370 45.72 87 IAMs_20 IAMs_20 08 30 54.9
comp=Z,10µm,22.0s
KAN01 Argonia South 45.82 85 IAmb IAmb 08 12 20.5
comp=Z,325nm,1.7s
TPB28 45.83 96 IAmb IAmb 08 12 29.8
comp=Z,250nm,1.2s
JSG Sagara 45.88 270 P P 08 12 02.9 +1.3
TPB11 China Draw 45.90 96 IAmb IAmb 08 12 29.9
comp=Z,236nm,1.1s
JHJ2 Mitsune 46.06 267 P P 08 12 04.2 +1.2
JHJ2 Mitsune 46.06 267 ⇑P P 08 12 03.8 +0.8
JHJ2 Mitsune 46.06 267 P P 08 12 04.0 +1.1
JHJ Hachijo jima 2 46.07 267 LR LR 08 29 39.8
comp=Z,5µm,22.0s,baz=96,slow=34
INU Inuyama 46.09 271 P P 08 12 02.7 -0.5
INU Inuyama 46.09 271 IAmb IAmb 08 12 08.1
comp=Z,113nm,0.9s
INU Inuyama 46.09 271 ⇑P P 08 12 02.6 -0.5
INU Inuyama 46.09 271 P P 08 12 02.8 -0.4
INU Inuyama 46.09 271 P P 08 12 02.6 -0.5
CROK Carrier 46.14 86 IAmb IAmb 08 12 22.8
comp=Z,504nm,2.0s
JFWS Jewell Farm 46.23 74 IAmb IAmb 08 12 16.3
comp=Z,179nm,0.8s
JFWS Jewell Farm 46.23 74 ⇑P P 08 12 03.4 -0.9
L40A Anamosa 46.25 76 IAmb IAmb 08 12 25.1
comp=Z,171nm,0.9s
TPB13 Reeves - Culbe 46.29 96 IAmb IAmb 08 12 32.3
comp=Z,151nm,0.9s
HILR Hailar Array B 46.34 298 P P 08 12 03.9 -1.1
comp=Z,29nm,0.5s,baz=58,slow=8.4,SNR=43
HILR LR LR 08 33 07.2
comp=Z,12µm,20.1s,baz=70,slow=38
comp=Z,29nm,0.5s
I42A Draeger Farm, 46.34 72 IAMs_20 IAMs_20 08 31 13.7
comp=Z,8µm,20.0s
ILULI Ilulissat 46.35 28 P P 08 12 04.4 -0.4
ILULI pmax pmax
comp=Z,78nm,1.1s
ILULI MLR MLR
comp=Z,7µm,19.0s
ILULI Ilulissat 46.35 28 P P 08 12 04.4 -0.4
ILULI Ilulissat 46.35 28 ⇑P P 08 12 04.6 -0.2
ILULI Ilulissat 46.35 28 *i* **P P 08 12 04.0 -0.8**
ILULI IAmb IAmb 08 12 05.4
comp=Z,25nm,0.6s
PECS Pecos 46.41 96 IAmb IAmb 08 12 34.0
comp=Z,147nm,1.1s
DKNS Dickens 46.44 91 IAmb IAmb 08 12 27.5
comp=Z,92nm,0.8s
KBS Kingsbay 46.48 2 *ce* **P P 08 12 06.5 +0.8**
KBS pmax pmax
comp=Z,103nm,1.0s
KBS Kingsbay 46.48 2 *e* **P P 08 12 06.3 +0.6**
KBS IVmB_BB 08 12 22.2
comp=Z,3µm,3.7s
KBS *e*S **S 08 18 51.1 +0.6**
KBS IVMs_BB IVMs_BB 08 32 09.0
comp=Z,2µm,18.1s
KBS Kingsbay 46.48 2 P P 08 12 06.1 +0.3
KBS IAmb IAmb 08 12 23.0
comp=Z,111nm,0.9s
KBS Kingsbay 46.48 2 ⇑P P 08 12 06.5 +0.8
KBS Kingsbay 46.48 2 P P 08 12 06.9 +1.1
KBS Kingsbay 46.48 2 *i* **P P 08 12 06.0 +0.3**
HIA Hailar 46.52 298 P P 08 12 05.7 -0.8
HIA Hailar 46.52 298 IAMs_20 IAMs_20 08 33 01.1
comp=Z,15µm,20.0s
POST Post 46.54 92 IAmb IAmb 08 12 28.4
comp=Z,210nm,0.9s
NRIK Noril'sk 46.55 333 P P 08 12 06.0 -0.4
comp=Z,42nm,0.5s,baz=60,slow=7.3,SNR=50
NRIK LR LR 08 34 46.5
comp=Z,19µm,19.1s,baz=48,slow=40
comp=Z,42nm,0.5s
NRIK Noril'sk 46.55 333 ⇑*i* **P P 08 12 05.8 -0.6**
NRIK pmax pmax
comp=Z,56nm,0.7s
NRIK MLR MLR
comp=Z,17µm,18.0s
NRIK Noril'sk 46.55 333 P P 08 12 06.0 -0.4
P38A Dawn 46.56 80 IAMs_20 IAMs_20 08 30 31.9
comp=Z,17µm,20.0s
DAG Danmarks Havn 46.58 11 P P 08 12 05.7 -0.9
DAG pmax pmax
comp=Z,274nm,0.9s
DAG Danmarks Havn 46.58 11 ⇑P P 08 12 05.8 -0.7
DAG Danmarks Havn 46.58 11 P P 08 12 06.1 -0.5
DAG Danmarks Havn 46.58 11 *i* **P P 08 12 06.0 -0.5**
DAG IAmb IAmb 08 12 08.2
comp=Z,205nm,0.9s
H43A Windswept, Lux 46.59 71 IAMs_20 IAMs_20 08 31 22.4
comp=Z,8µm,20.0s
ODSA Odessa 46.62 94 IAmb IAmb 08 12 29.0
comp=Z,110nm,0.9s
129A Stewart Farms, 46.64 93 IAmb IAmb 08 12 29.1
comp=Z,124nm,1.0s
T35A Sooner Cattle 46.70 85 IAmb IAmb 08 12 27.2
comp=Z,330nm,1.6s
TPB01 Permian Basin 46.77 96 IAmb IAmb 08 12 35.7
comp=Z,154nm,1.3s
OK048 Pawnee Station 46.80 86 IAmb IAmb 08 12 28.0
comp=Z,303nm,1.5s
OK051 E0350 and S346 46.80 85 IAmb IAmb 08 12 27.9
comp=Z,275nm,1.5s
SN07 Snyder 07 46.87 92 IAmb IAmb 08 12 31.0
comp=Z,139nm,1.1s
WMOK Wichita Mounta 46.92 89 P P 08 12 10.0 +0.2
WMOK Wichita Mounta 46.92 89 IAMs_20 IAMs_20 08 30 16.8
comp=Z,13µm,22.0s
WMOK Wichita Mounta 46.92 89 IAmb IAmb 08 12 12.8
comp=Z,82nm,0.8s
WMOK Wichita Mounta 46.92 89 ⇑P P 08 12 09.8 0.0
WMOK Wichita Mounta 46.92 89 P P 08 12 09.9 +0.2
SUMG Summit 46.94 20 P P 08 12 10.4 +0.5
SUMG Summit 46.94 20 P P 08 12 10.0 +0.1
SUMG pmax pmax
comp=Z,234nm,2.9s
SUMG Summit 46.94 20 IAmb IAmb 08 12 30.2
comp=Z,347nm,1.4s
SUMG IAMs_20 IAMs_20 08 33 56.6
comp=Z,12µm,19.0s
SUMG Summit 46.94 20 ⇑P P 08 12 10.3 +0.5
SUMG Summit 46.94 20 P P 08 12 10.6 +0.7
SUMG Summit 46.94 20 *i* **P P 08 12 10.4 +0.5**

SUMG IAmb IAmb 08 12 14.4
comp=Z,55nm,0.8s
SUMG IVMs_BB IVMs_BB 08 33 56.0
comp=Z,4µm,18.4s
SUMG IAMs_20 IAMs_20 08 34 00.2
comp=Z,12µm,18.3s
OK029 Liberty Lake 46.94 87 IAmb IAmb 08 12 29.2
comp=Z,336nm,1.7s
CN2 Changchun 46.95 288 ⇓P P 08 12 09.0 -0.9
CN2 *ep*P pP 08 12 23.0 +1.5
CN2 *e*S **S 08 18 53.3 -4.7**
CN2 pmax pmax
comp=Z,100nm,0.7s
CN2 pmax pmax
comp=Z,2µm,5.0s
CN2 L L
comp=Z,9µm,20.0s
CN2 L L
comp=Z,11µm,20.0s
CN2 L L
comp=Z,6µm,21.0s
TPB05 Hovey Rd 47.05 96 IAmb IAmb 08 12 37.4
comp=Z,69nm,0.9s
QUOK Quay 47.11 86 IAmb IAmb 08 12 13.6
comp=Z,150nm,0.7s
L42A Oliver, Polo 47.16 75 IAmb IAmb 08 12 22.7
comp=Z,185nm,1.2s
TMB01 Midkiff 47.22 94 IAmb IAmb 08 12 33.7
comp=Z,86nm,0.8s
OKCSW OKLAHOMA CITY 47.22 87 IAmb IAmb 08 12 15.8
comp=Z,142nm,1.1s
SPA0 Spitsbergen Ar 47.29 1 *e*P **P 08 12 12.6 +0.5**
SPA0 *e*S **S 08 19 02.1 0.0**
SPA0 IVMs_BB IVMs_BB 08 29 08.9
comp=Z,2µm,24.7s
SPITS Spitsbergen Ar 47.29 1 P P 08 12 09.9 -2.2
comp=Z,16nm,0.5s,baz=358,slow=8.0,SNR=11
SPITS PcP **PcP 08 13 42.2 -0.2**
comp=Z,12nm,0.5s,baz=4.1,slow=4.0,SNR=1.4
SPITS LR LR 08 33 21.4
comp=Z,4µm,19.0s,baz=358,slow=38
comp=Z,16nm,0.5s
FNO Franklin 47.35 87 IAmb IAmb 08 12 15.9
comp=Z,95nm,0.7s
N41A Harden Midland 47.35 77 IAmb IAmb 08 12 16.5
comp=Z,219nm,1.0s
K43A Burlington 47.44 73 IAMs_20 IAMs_20 08 31 53.7
comp=Z,14µm,20.0s
SGCY Sterling City 47.59 93 IAmb IAmb 08 12 41.6
comp=Z,172nm,0.9s
TUL3 Leonard 47.82 85 IAmb IAmb 08 12 19.1
comp=Z,113nm,0.6s
ABTX Abilene, Hawle 47.94 91 IAmb IAmb 08 12 39.2
comp=Z,155nm,0.8s
ABTX IAMs_20 IAMs_20 08 30 46.8
comp=Z,15µm,21.0s
SFJD Kangerlussuaq 47.98 30 LR LR 08 33 56.7
comp=Z,7µm,19.9s,baz=312,slow=38
SFJD Kangerlussuaq 47.98 30 P P 08 12 17.6 +0.1
SFJD pmax pmax
comp=Z,198nm,1.0s
SFJD MLR MLR
comp=Z,6µm,20.0s
SFJD Kangerlussuaq 47.98 30 P P 08 12 17.6 +0.1
SFJD IAmb IAmb 08 12 31.7
comp=Z,198nm,0.9s
SFJD Kangerlussuaq 47.98 30 ⇑P P 08 12 18.0 +0.5
SFJD Kangerlussuaq 47.98 30 P P 08 12 17.5 0.0
SFJD Kangerlussuaq 47.98 30 P P 08 12 18.0 +0.5
SFJD Kangerlussuaq 47.98 30 *i* **P P 08 12 17.6 +0.1**
SFJD IAmb IAmb 08 12 19.8
comp=Z,124nm,0.8s
S39A Bolivar 48.00 82 IAMs_20 IAMs_20 08 31 03.1
comp=Z,13µm,21.0s
L44A Lake County Fo 48.02 73 IAmb IAmb 08 12 35.8
comp=Z,229nm,1.0s
TX31 Lajitas Ar. Si 48.04 98 IAmb IAmb 08 12 45.9
comp=Z,230nm,1.0s
TXAR Lajitas Array 48.04 98 P P 08 12 19.0 +0.4
comp=Z,27nm,0.6s,baz=303,slow=4.9,SNR=219
TXAR pP **pP 08 12 29.7 -0.5**
comp=Z,104nm,1.0s,baz=323,slow=7.4,SNR=28
TXAR PcP **PcP 08 13 46.1 +0.1**
comp=Z,12nm,0.6s,baz=259,slow=1.3,SNR=3.9
TXAR LR LR 08 31 03.4
comp=Z,15µm,20.9s,baz=309,slow=34
TXAR PKPPKP P'P'df 08 43 20.2 -8.9
comp=Z,0.4nm,0.9s,baz=132,slow=1.9,SNR=4.2
comp=Z,27nm,0.6s
TXAR Lajitas Array 48.04 98 P P 08 12 18.8 +0.2
RLO Rose Lookout 48.08 84 IAmb IAmb 08 12 38.5
comp=Z,133nm,0.9s
R40A Maddies Statio 48.19 80 IAmb IAmb 08 12 20.8
comp=Z,105nm,0.7s
R40A IAMs_20 IAMs_20 08 31 10.0
comp=Z,17µm,21.0s
U38A Gravette 48.26 84 IAmb IAmb 08 12 22.1
comp=Z,114nm,0.7s
U38A IAMs_20 IAMs_20 08 31 20.0
comp=Z,10µm,22.0s
OZNA Ozona 48.32 94 IAmb IAmb 08 12 41.5
comp=Z,77nm,0.8s
HDIL Hopedale 48.33 76 ⇑P P 08 12 19.6 -1.0
LPIG La Paz 48.34 108 LR LR 08 30 26.4
comp=Z,5µm,18.3s,baz=322,slow=33
HHU Hamhung 48.37 283 P P 08 12 20.5 -0.3
HHU S **S 08 19 19.2 +1.1**
HHU AmB
comp=Z,339nm,1.1s
HHU AMS AMS
comp=Z,3µm,18.4s
LOOK Love County 48.38 88 IAmb IAmb 08 12 40.8
comp=Z,304nm,1.4s
SAND Sanderson 48.46 96 IAmb IAmb 08 12 48.5
comp=Z,101nm,1.0s
HSPB Hornsund (broa 48.47 1 *e*P **P 08 12 18.5 -2.7**
HSPB *e*L L 08 29 08.3
comp=Z,10µm,27.2s
DBG Daneborg 48.56 13 ⇓P P 08 12 21.4 -0.5
DBG Daneborg 48.56 13 P P 08 12 21.6 -0.3
DBG Daneborg 48.56 13 *i* **P P 08 12 21.5 -0.5**
DBG IAmb IAmb 08 12 26.3
comp=Z,55nm,0.7s
PLPT Palo Pinto 48.57 90 IAmb IAmb 08 12 48.3
comp=Z,147nm,1.1s
HHAR Hobbs 48.63 83 IAmb IAmb 08 12 41.5
comp=Z,222nm,1.4s
HPIG 48.72 102 IAmb IAmb 08 12 37.5
comp=Z,285nm,1.5s
HPIG 48.72 102 ⇓P P 08 12 26.2 +2.2
HPIG 48.72 102 P P 08 12 26.5 +2.5
Z35A Perchaven, San 48.81 89 IAMs_20 IAMs_20 08 31 38.8
comp=Z,12µm,21.0s
SLBS Sierra La Lagu 48.87 108 P P 08 12 26.8 +1.7
SLBS IAmb IAmb 08 12 37.9
comp=Z,213nm,1.2s
SLBS Sierra La Lagu 48.87 108 ⇓P P 08 12 27.2 +2.2
SLBS Sierra La Lagu 48.87 108 P P 08 12 27.8 +2.7
FW06 Azle 48.89 89 IAmb IAmb 08 12 28.1
comp=Z,263nm,1.6s
HOPEN Hopen 48.91 358 *ep* **P P 08 12 24.1 -0.5**
HOPEN *ep*P **PP 08 14 17.0 -0.7**
HOPEN *e*S **S 08 19 24.0 -0.9**
HOPEN IVMs 08 30 21.0
comp=Z,2µm,22.7s
CCM Cathedral Cave 48.94 80 P P 08 12 23.8 -1.5
CCM pmax pmax
comp=Z,70nm,0.8s
CCM Cathedral Cave 48.94 80 P P 08 12 23.8 -1.5
CCM Cathedral Cave 48.94 80 P P 08 12 23.5 -1.8
CCM pP **pP 08 12 34.5 -2.4**
J47A Sunmer 49.01 70 IAmb IAmb 08 12 38.6
comp=Z,160nm,0.9s
JMN Monobe 49.05 272 P P 08 12 27.4 +1.1
JMN Monobe 49.05 272 ⇑P P 08 12 26.9 +0.7
JMN Monobe 49.05 272 P P 08 12 27.2 +1.0
JCJ Chichijima 49.18 260 LR LR 08 30 03.2
comp=Z,5µm,22.0s,baz=32,slow=32
JCJ Chichijima 49.18 260 P P 08 12 29.4 +2.1
JCJ Chichijima 49.18 260 ⇑P P 08 12 27.4 +0.1
JCJ Chichijima 49.18 260 P P 08 12 27.6 +0.3
BRDY Brady 49.28 92 IAmb IAmb 08 12 55.1
comp=Z,106nm,1.0s
SNY Shenyang 49.29 288 ⇑P P 08 12 28.5 +0.6
SNY S **S 08 19 30.0 -1.0**
SNY pmax pmax
comp=Z,170nm,0.9s
SNY pmax pmax
comp=Z,2µm,10.8s
SNY L L
comp=Z,4µm,19.4s
SNY L L
comp=Z,6µm,19.6s
SNY L L
comp=Z,11µm,19.6s
JCT Junction City 49.41 93 IAMs_20 IAMs_20 08 31 29.1
comp=Z,9µm,22.0s
JCT Junction City 49.41 93 ⇑P P 08 12 28.8 -0.3
FVM French Village 49.45 79 IAmb IAmb 08 12 49.0
comp=Z,303nm,1.4s
NUUK Nuuk 49.60 33 ⇑P P 08 12 30.4 +0.5
NUUK Nuuk 49.60 33 P P 08 12 31.8 +1.8
NUUK Nuuk 49.60 33 *i* **P P 08 12 31.4 +1.5**
NUUK IAmb IAmb 08 12 41.1
comp=Z,81nm,0.9s
Q44A Meyer Farm, Va 49.62 77 IAmb IAmb 08 12 49.8
comp=Z,200nm,0.9s
I49A Point Hope 49.63 68 IAmb IAmb 08 12 44.1
comp=Z,281nm,1.3s
I49A IAMs_20 IAMs_20 08 33 32.4
comp=Z,7µm,18.0s
WHTX Lake Whitney, 49.66 90 IAmb IAmb 08 12 57.1
comp=Z,142nm,0.9s
VLDQ Val d'Or 49.68 61 IAmb IAmb 08 12 51.7
comp=Z,158nm,0.9s
T42A Van Buren 49.73 81 IAMs_20 IAMs_20 08 32 08.0
comp=Z,13µm,21.0s
KS19 Wonju Array Si 49.84 280 P P 08 12 32.5 +0.3
KS19 IAmb IAmb 08 12 36.6
comp=Z,110nm,0.8s
KSRS Korea Array 49.85 280 P P 08 12 32.0 -0.2
comp=Z,114nm,0.9s,baz=48,slow=6.8,SNR=217
KSRS PcP **PcP 08 13 52.3 0.0**
comp=Z,29nm,0.8s,baz=53,slow=4.6,SNR=4.7
KSRS LR LR 08 34 54.0
comp=Z,3µm,19.7s,baz=55,slow=38
comp=Z,114nm,0.9s
KSAR Wonju Array Be 49.88 280 P P 08 12 32.4 0.0
KSAR Wonju Array Be 49.88 280 P P 08 12 32.4 0.0
FCAR Ozark Folk Cen 49.95 82 IAmb IAmb 08 12 59.2
comp=Z,137nm,0.9s
SUJ Sinuiju 49.95 285 P P 08 12 33.0 0.0
SUJ AmB
comp=Z,1µm,2.6s
PYAG Pyongyang 49.97 283 P P 08 12 32.7 -0.4
PYAG pP **sP 08 12 47.4 -2.1**
PYAG S **S 08 19 41.0 +0.4**
PYAG AmB
comp=Z,1µm,2.7s
PYAG AMS AMS
comp=Z,4µm,20.9s
MIAR Mount Ida 50.06 85 IAmb IAmb 08 12 54.0
comp=Z,124nm,0.9s
MIAR Mount Ida 50.06 85 ⇑P P 08 12 33.4 -0.5
MIAR Mount Ida 50.06 85 P P 08 12 33.4 -0.5
P46A Rosedale 50.14 75 IAmb IAmb 08 12 55.7
comp=Z,194nm,1.0s
Z38A Mt. Pleasant 50.17 87 IAMs_20 IAMs_20 08 33 37.9
comp=Z,9µm,19.0s
SCHQ Schefferville 50.27 49 P P 08 12 35.1 -0.1
comp=Z,55nm,0.6s,baz=320,slow=6.8,SNR=64
SCHQ LR LR 08 34 32.2
comp=Z,7µm,19.6s,baz=316,slow=37
comp=Z,55nm,0.6s
WHAR Wooly Hollow 50.27 83 IAmb IAmb 08 12 54.8
comp=Z,453nm,2.0s
AAM Ann Arbor 50.28 70 P P 08 12 36.5 +1.1
AAM Ann Arbor 50.28 70 IAMs_20 IAMs_20 08 33 44.8
comp=Z,10µm,19.0s
PBMO Poplar Bluff 50.29 80 IAmb IAmb 08 12 38.8
comp=Z,85nm,0.7s
435B Jarrell 50.47 91 IAmb IAmb 08 12 55.8
comp=Z,105nm,1.0s
K50A Casco 50.52 69 IAmb IAmb 08 12 49.9
comp=Z,184nm,1.1s
INCN Inchon 50.56 281 P P 08 12 38.4 +0.7
INCN Inchon 50.56 281 P P 08 12 37.7 +0.1
INCN pmax pmax
comp=Z,140nm,1.0s
INCN MLR MLR
comp=Z,4µm,20.0s
INCN Inchon 50.56 281 P P 08 12 37.7 +0.1
INCN IAmb IAmb 08 12 41.5
comp=Z,140nm,0.9s
INCN Inchon 50.56 281 P P 08 12 38.0 +0.3
UALR University of 50.61 84 IAmb IAmb 08 12 40.4
comp=Z,218nm,1.9s
HJU Haeju 50.68 283 P P 08 12 38.5 0.0
HJU S **S 08 19 51.5 +0.9**
HJU AmB
comp=Z,842nm,1.1s
HJU AMS AMS
comp=Z,4µm,18.9s
BLO Bloomington 50.83 75 IAmb IAmb 08 13 00.7
comp=Z,144nm,0.9s
TJN Taejon 50.92 280 P P 08 12 40.7 +0.4
TJN Taejon 50.92 280 *c* **P P 08 12 40.6 +0.3**
TJN pmax pmax
comp=Z,8.0nm,0.9s
N49A Columbus Grove 50.93 72 IAMs_20 IAMs_20 08 34 15.1
comp=Z,6µm,18.0s
BJO1 Bjornoya 51.00 360 *e*P **P 08 12 40.9 +0.6**
BJO1 *e*PP **PP 08 14 35.3 -1.3**
BJO1 *e*S **S 08 19 53.2 -0.7**
BJO1 IVMs 08 37 33.3
comp=Z,2µm,19.4s
SADO Sadowa 51.03 65 LR LR 08 33 47.9
comp=Z,6µm,21.0s,baz=357,slow=35
JTU Tsushima 51.07 277 P P 08 12 42.5 +1.0
JTU Tsushima 51.07 277 ⇓P P 08 12 42.0 +0.6
JTU Tsushima 51.07 277 P P 08 12 42.8 +1.3
GNAR Gosnell 51.10 81 IAmb IAmb 08 13 08.1
comp=Z,127nm,1.0s
M50A Fremont 51.22 71 IAMs_20 IAMs_20 08 34 22.9
comp=Z,14µm,19.0s
JNU Nakatsue 51.23 274 LR LR 08 34 23.5
comp=Z,7µm,22.0s,baz=48,slow=36
833A Chaparral WMA, 51.26 95 IAmb IAmb 08 13 10.8
comp=Z,310nm,1.2s
O49A Covington 51.35 73 IAmb IAmb 08 12 56.1
comp=Z,108nm,0.9s
Z41A Richland Creek 51.44 85 IAmb IAmb 08 13 15.8
comp=Z,129nm,1.1s
NATX Nacogdoches 51.45 88 IAmb IAmb 08 12 47.5
comp=Z,184nm,0.8s
NATX Nacogdoches 51.45 88 ⇑P P 08 12 44.7 +0.3
EF04 Eagle Ford 04 51.52 93 IAmb IAmb 08 13 12.1
comp=Z,211nm,1.0s
WCI Wyandotte Cave 51.62 76 P P 08 12 44.6 -1.0
WCI pmax pmax
comp=Z,80nm,0.7s
WCI Wyandotte Cave 51.62 76 P P 08 12 44.6 -1.0
WCI IAmb IAmb 08 13 10.6
comp=Z,80nm,0.7s
WCI Wyandotte Cave 51.62 76 ⇑P P 08 12 44.6 -1.0
WCI Wyandotte Cave 51.62 76 P P 08 12 44.9 -0.7
SCO Scoresbysund 51.67 16 P P 08 12 46.1 +0.6
SCO Scoresbysund 51.67 16 IAmb IAmb 08 13 11.7
comp=Z,213nm,1.3s
SCO Scoresbysund 51.67 16 ⇑P P 08 12 45.8 +0.3
SCO Scoresbysund 51.67 16 P P 08 12 46.1 +0.6
SCO Scoresbysund 51.67 16 *i* **P P 08 12 46.0 +0.6**
SCO IAmb IAmb 08 12 50.3
comp=Z,26nm,0.7s
735A Kenedy 51.78 93 IAmb IAmb 08 13 15.4
comp=Z,153nm,1.1s
SOEG Soedalen 51.86 21 *i* **P P 08 12 46.9 0.0**
SOEG IAmb IAmb 08 12 48.9
comp=Z,128nm,0.8s
N51A Ashland 51.92 71 IAmb IAmb 08 13 00.6
comp=Z,254nm,1.3s
XLT XiLinHaoTe 51.94 294 *ep* **P P 08 12 48.8 +0.8**
XLT pP pP 08 13 00.5 +0.8
XLT PP **PP 08 14 46.8 +0.9**
XLT PcS **PcS 08 17 57.3 -0.9**
XLT S **S 08 20 05.5 -2.4**
XLT ScS **ScS 08 22 28.0 -6.4**
XLT pmax pmax
comp=Z,190nm,0.7s
XLT pmax pmax
comp=Z,2µm,10.1s
XLT L L

comp=Z,5µm,18.0s
XLT L L
comp=Z,8µm,16.4s
DELO Deloro Mine 52.00 64 IAmb IAmb 08 13 02.0
comp=Z,382nm,1.6s
T47A Sharon Grove 52.03 78 IAmb IAmb 08 13 10.2
comp=Z,263nm,1.0s
M52A Chesterland 52.05 70 IAmb IAmb 08 13 06.4
comp=Z,130nm,0.8s
IRK Irkutsk 52.06 309 *e*P **P** **08 12 48.0 -0.7**
IRK *e* 08 13 06.8
IRK pmax pmax
comp=Z,123nm,2.6s
ACSO Alum Creek Sta 52.06 72 IAmb IAmb 08 12 60.0
comp=Z,249nm,1.4s
ACSO Alum Creek Sta 52.06 72 ⇑P **P** **08 12 48.0 -0.9**
HKT Hockley 52.10 90 P **P** **08 12 49.8 +0.6**
HKT pmax pmax
comp=Z,242nm,1.3s
HKT Hockley 52.10 90 P **P** **08 12 49.8 +0.6**
HKT IAmb IAmb 08 13 02.6
comp=Z,242nm,1.3s
HKT Hockley 52.10 90 IAMs_20 IAMs_20 08 33 47.8
comp=Z,13µm,19.0s
HKT Hockley 52.10 90 ⇑P **P** **08 12 49.6 +0.5**
HKT Hockley 52.10 90 P **P** **08 12 50.0 +0.8**
HKT Hockley 52.10 90 P **P** **08 12 50.0 +0.8**
HKT pP **pP** **08 13 01.1 +0.2**
WVT Waverly 52.23 79 P **P** **08 12 49.0 -1.1**
WVT pmax pmax
comp=Z,210nm,0.6s
WVT Waverly 52.23 79 P **P** **08 12 49.0 -1.1**
WVT Waverly 52.23 79 ⇑P **P** **08 12 49.0 -1.1**
WVT Waverly 52.23 79 P **P** **08 12 49.6 -0.5**
WVT Waverly 52.23 79 P **P** **08 12 49.6 -0.5**
WVT pP **pP** **08 13 00.6 -1.2**
GAC Glen Almond 52.30 62 ⇓P **P** **08 12 49.7 -0.8**
DL2 Dalian 52.38 286 ⇑*i*P **P** **08 12 51.0 -0.2**
DL2 sP **sP** **08 13 06.5 -1.2**
DL2 PP **PP** **08 14 54.3 +4.5**
DL2 S **S** **08 20 12.0 -1.9**
DL2 pmax pmax
comp=Z,240nm,0.9s
DL2 pmax pmax
comp=Z,2µm,5.4s
DL2 L L
comp=Z,6µm,21.3s
DL2 L L
comp=Z,8µm,23.1s
DL2 L L
comp=Z,14µm,25.2s
ERPA Erie 52.39 68 IAmb IAmb 08 13 04.1
comp=Z,142nm,0.9s
ERPA Erie 52.39 68 ⇑P **P** **08 12 50.8 -0.4**
OXF Oxford 52.48 82 IAMs_20 IAMs_20 08 33 51.8
comp=Z,12µm,21.0s
OXF Oxford 52.48 82 ⇓P **P** **08 12 51.1 -0.9**
MEDO Medina 52.49 66 IAmb IAmb 08 13 05.0
comp=Z,187nm,0.9s
ANGG Ammassalik, Gr 52.52 26 IAmb IAmb 08 13 05.1
comp=Z,192nm,1.1s
ANGG Ammassalik, Gr 52.52 26 ⇑P **P** **08 12 51.1 -0.7**
ANGG Ammassalik, Gr 52.52 26 P **P** **08 12 51.4 -0.4**
ANGG Ammassalik, Gr 52.52 26 *i*P **P** **08 12 51.2 -0.7**
ANGG IAmb IAmb 08 12 53.4
comp=Z,102nm,1.1s
P51A Williamsport 52.55 73 IAmb IAmb 08 13 05.3
comp=Z,280nm,1.3s
JSU Suzuyama 52.65 273 P **P** **08 12 53.6 +0.2**
JSU Suzuyama 52.65 273 ⇑P **P** **08 12 53.3 0.0**
JSU Suzuyama 52.65 273 P **P** **08 12 53.5 +0.2**
XMAS Kiritimati 52.66 175 P **P** **08 12 57.2 +3.7**
XMAS Kiritimati 52.66 175 IAMs_20 IAMs_20 08 30 11.0
comp=Z,11µm,21.0s
R50A Paris 52.68 75 IAmb IAmb 08 12 55.7
comp=Z,162nm,0.7s
PECO Prince Edward 52.73 65 IAmb IAmb 08 13 07.4
comp=Z,224nm,1.1s
TLY Talaya 52.73 309 LR LR 08 35 53.8
comp=Z,10µm,21.2s,baz=32,slow=37
TLY Talaya 52.73 309 *e*P **P** **08 12 52.9 -0.7**
TLY pmax pmax
comp=Z,74nm,0.9s
TLY MLR MLR
comp=Z,13µm,20.0s
TLY Talaya 52.73 309 P **P** **08 12 53.5 -0.1**
TLY Talaya 52.73 309 ⇑P **P** **08 12 53.0 -0.7**
TLY Talaya 52.73 309 P **P** **08 12 53.2 -0.4**
TLY Talaya 52.73 309 P **P** **08 12 53.7 +0.1**
O52A Adamsville 52.78 71 IAmb IAmb 08 13 07.0
comp=Z,293nm,1.1s
O52A IAMs_20 IAMs_20 08 35 27.0
comp=Z,9µm,18.0s
N53A Lisbon 52.84 70 IAmb IAmb 08 13 12.1
comp=Z,138nm,0.8s
N53A IAMs_20 IAMs_20 08 35 13.6
comp=Z,8µm,21.0s
LDAQ Lac Daran 52.86 57 IAmb IAmb 08 13 16.8
comp=Z,146nm,1.0s
Y45A Yeager Farm, C 52.87 82 IAmb IAmb 08 12 58.9
comp=Z,170nm,0.7s
Y45A IAMs_20 IAMs_20 08 33 52.1
comp=Z,11µm,22.0s
IVI Ivigtut 52.89 34 IAmb IAmb 08 13 13.6
comp=Z,155nm,0.9s
IVI IAMs_20 IAMs_20 08 34 28.2
comp=Z,7µm,22.0s
IVI Ivigtut 52.89 34 ⇑P **P** **08 12 55.0 +0.4**
IVI Ivigtut 52.89 34 P **P** **08 12 55.5 +0.9**
IVI Ivigtut 52.89 34 *i*P **P** **08 12 55.5 +0.9**
IVI IAmb IAmb 08 12 59.5
comp=Z,107nm,0.7s
PAOC Oil Creek Stat 52.97 69 IAmb IAmb 08 13 08.1
comp=Z,189nm,1.1s
JNW Jan Mayen West 53.00 11 *e*P **P** **08 12 55.6 +0.3**
JNW *e*PP **PP** **08 14 53.6 -1.2**
JNW *e*S **S** **08 20 22.5 +1.0**
JNW IVMs 08 34 17.2
comp=Z,2µm,23.8s
O53A New Philadelph 53.02 71 IAmb IAmb 08 13 13.3
comp=Z,97nm,0.8s
JMIC Jan Mayen 53.03 11 LR LR 08 35 05.6
comp=Z,5µm,21.4s,baz=344,slow=36
JMIC Jan Mayen 53.03 11 *e*P **P** **08 12 55.9 +0.3**
JMIC *e*PP **PP** **08 14 53.6 -1.5**
JMIC *e*S **S** **08 20 22.5 +0.5**
JMIC IVMs 08 34 08.0
comp=Z,2µm,19.8s
441A DeRidder 53.04 88 IAmb IAmb 08 13 19.0
comp=Z,137nm,1.0s
441A IAMs_20 IAMs_20 08 35 37.9
comp=Z,12µm,18.0s
JNE Jan Mayen East 53.05 11 *e*P **P** **08 12 55.9 +0.2**
JNE *e*PP **PP** **08 14 53.6 -1.6**
JNE *e*S **S** **08 20 22.5 +0.3**
JNE IVMs 08 34 19.7
comp=Z,2µm,22.4s
JMI Jan Mayen 53.06 11 *e*P **P** **08 12 56.2 +0.4**
JMI IVMs_BB IVMs_BB 08 13 15.8
comp=Z,3µm,3.7s
V48A Smith Brothers 53.08 79 IAmb IAmb 08 13 21.9
comp=Z,90nm,0.7s
CLTN Cedars of Leba 53.11 78 IAmb IAmb 08 13 08.2
comp=Z,287nm,1.3s
U49A Red Boiling Sp 53.12 77 IAmb IAmb 08 13 17.1
comp=Z,482nm,1.8s
PAMR Moraine State 53.15 69 IAmb IAmb 08 13 09.2
comp=Z,155nm,1.1s
T50A Nancy 53.29 76 IAmb IAmb 08 13 19.0
comp=Z,120nm,0.9s
Q52A Bidwell 53.35 73 IAmb IAmb 08 13 11.0
comp=Z,155nm,1.2s
Q52A IAMs_20 IAMs_20 08 35 45.2
comp=Z,11µm,19.0s
MNTQ Montreal, Queb 53.38 61 IAmb IAmb 08 13 20.1
comp=Z,107nm,1.0s
P53A Whipple 53.46 71 IAmb IAmb 08 13 11.3
comp=Z,307nm,1.5s
LONY Lake Ozonia 53.50 62 IAmb IAmb 08 13 12.6
comp=Z,184nm,1.4s
LONY IAMs_20 IAMs_20 08 35 29.7
comp=Z,11µm,19.0s
LONY Lake Ozonia 53.50 62 ⇑P **P** **08 12 58.4 -1.0**
O54A Avella 53.53 70 IAmb IAmb 08 13 17.1
comp=Z,180nm,0.9s
O54A IAMs_20 IAMs_20 08 35 43.8
comp=Z,13µm,20.0s
S51A Beattyville 53.55 75 IAmb IAmb 08 13 01.9
comp=Z,117nm,0.7s
LMQ La Malbaie 53.60 57 IAmb IAmb 08 13 21.7
comp=Z,157nm,1.1s
J57A Williamstown 53.61 64 IAMs_20 IAMs_20 08 36 14.7
comp=Z,9µm,19.0s
ZAIG Zacatecas 53.72 102 IAmb IAmb 08 13 14.1
comp=Z,109nm,1.1s
ZAIG Zacatecas 53.72 102 P **P** **08 13 02.7 +1.1**
ULN Ulaanbaatar 53.77 303 P **P** **08 13 01.6 0.0**
ULN Ulaanbaatar 53.77 303 P **P** **08 13 01.5 0.0**
ULN Ulaanbaatar 53.77 303 ⇑P **P** **08 13 00.6 -1.0**
ULN Ulaanbaatar 53.77 303 P **P** **08 13 01.2 -0.4**
comp=Z,11µmcomp=Z,6µmcomp=Z,240nm,0.9s
ULN Ulaanbaatar 53.77 303 P **P** **08 13 01.7 0.0**
ULN Ulaanbaatar 53.77 303 P **P** **08 13 01.5 -0.1**
ZAK Zakamensk 53.79 308 *e*P **P** **08 13 01.1 -0.5**
ZAK pmax pmax
comp=Z,39nm,2.0s
NRS Narsarsuaq 53.80 33 P **P** **08 13 01.8 +0.5**
NRS Narsarsuaq 53.80 33 IAMs_20 IAMs_20 08 35 08.2
comp=Z,7µm,22.0s
NRS Narsarsuaq 53.80 33 P **P** **08 13 01.8 +0.5**
NRS Narsarsuaq 53.80 33 *e*P **P** **08 13 01.1 -0.2**
NRS IAmb IAmb 08 13 02.8
comp=Z,48nm,1.0s
NRS IAMs_20 IAMs_20 08 35 12.4
comp=Z,7µm,22.0s
K57A Scipio Center 53.81 65 IAmb IAmb 08 13 15.2
comp=Z,150nm,1.1s
K57A IAMs_20 IAMs_20 08 35 35.0
comp=Z,9µm,22.0s
X48A Hartselle 53.88 80 P **P** **08 13 00.9 -1.4**
X48A IAmb IAmb 08 13 21.9
comp=Z,415nm,1.8s
X48A IAMs_20 IAMs_20 08 34 24.6
comp=Z,12µm,22.0s
MOY Mondy 53.92 310 *e*P **P** **08 13 02.7 +0.2**
MOY pmax pmax
comp=Z,53nm,1.8s
SWET Sewanee 53.96 78 IAmb IAmb 08 13 21.5
comp=Z,316nm,1.7s
146A Union 54.04 83 IAMs_20 IAMs_20 08 35 20.2
comp=Z,8µm,20.0s
SONM Songino Array 54.11 304 P **P** **08 13 03.9 -0.2**
comp=Z,47nm,0.8s,baz=48,slow=7.1,SNR=141
SONM PcP **PcP** **08 14 07.4 -0.9**
comp=Z,15nm,0.6s,baz=67,slow=2.5,SNR=5.1
SONM LR LR 08 38 48.5
comp=Z,15µm,18.4s,baz=42,slow=39
SONM PKPPKP **P'P'df** **08 43 19.1 -5.2**
comp=Z,0.3nm,0.3s,baz=226,slow=3.9,SNR=4.4
SONM P4KPbc 08 50 25.7
comp=Z,0.5nm,0.4s,baz=67,slow=3.6,SNR=3.7
comp=Z,47nm,0.8s
SONM Songino Array 54.11 304 P **P** **08 13 03.4 -0.7**
Q54A Coxs Mills 54.12 72 IAmb IAmb 08 13 23.5
comp=Z,192nm,1.3s
MCWV Mont Chateau 54.19 70 IAmb IAmb 08 13 22.2
comp=Z,167nm,0.9s
MCWV Mont Chateau 54.19 70 ⇑P **P** **08 13 03.7 -0.8**
Z47A Carrollton 54.20 82 IAmb IAmb 08 13 15.5
comp=Z,186nm,0.8s
Z47A IAMs_20 IAMs_20 08 34 55.3
comp=Z,10µm,21.0s
W50A Signal Mountai 54.32 78 IAmb IAmb 08 13 32.9
comp=Z,162nm,0.9s
J59A Piesco 54.35 63 IAMs_20 IAMs_20 08 36 48.2
comp=Z,12µm,19.0s
TZTN Tazewell 54.35 76 IAmb IAmb 08 13 18.5
comp=Z,222nm,1.1s
TZTN Tazewell 54.35 76 ⇑P **P** **08 13 04.8 -1.0**
TZTN Tazewell 54.35 76 P **P** **08 13 05.3 -0.5**
BINY Binghamton 54.46 66 IAMs_20 IAMs_20 08 35 55.3
comp=Z,10µm,21.0s
BINY Binghamton 54.46 66 ⇑P **P** **08 13 06.2 -0.3**
BINY Binghamton 54.46 66 P **P** **08 13 06.5 0.0**
M57A Sunshine Farm, 54.47 67 IAmb IAmb 08 13 20.0
comp=Z,124nm,0.8s
D62A Allapoint, All 54.55 57 IAmb IAmb 08 13 24.6
comp=Z,172nm,1.1s
D62A IAMs_20 IAMs_20 08 37 59.1
comp=Z,10µm,19.0s
CPCT Cooper Cave 54.59 77 IAmb IAmb 08 13 24.6
comp=Z,129nm,1.1s
BJI2 Beijing 54.59 291 P **P** **08 13 07.3 -0.1**
BJI2 pP **pP** **08 13 19.0 -0.2**
BJI2 sP **sP** **08 13 23.8 -0.2**
BJI2 PcP **PcP** **08 14 11.3 +1.2**
BJI2 PP **PP** **08 15 09.5 -0.2**
BJI2 S **S** **08 20 41.8 -2.1**
BJI2 pmax pmax
comp=Z,15nm,0.7s
BJI2 pmax pmax
comp=Z,770nm,6.1s
BJI2 L L
comp=Z,2µm,18.0s
BJI2 L L
comp=Z,4µm,19.6s
BJI2 L L
comp=Z,5µm,19.0s
BJT Baijiatuan 54.59 291 P **P** **08 13 08.1 +0.7**
BJT Baijiatuan 54.59 291 IAMs_20 IAMs_20 08 39 01.2
comp=Z,8µm,20.0s
FPAL Fort Paine 54.63 79 IAmb IAmb 08 13 34.8
comp=Z,91nm,0.9s
Y49A Blount Mountai 54.67 80 IAmb IAmb 08 13 28.4
comp=Z,77nm,0.8s
Y49A IAMs_20 IAMs_20 08 34 59.6
comp=Z,12µm,21.0s
S54A Dingess, Beckl 54.70 73 IAmb IAmb 08 13 27.9
comp=Z,178nm,1.2s
TKL Tuckaleechee C 54.86 76 LR LR 08 36 24.1
comp=Z,16µm,18.9s,baz=330,slow=36
TKL Tuckaleechee C 54.86 76 IAmb IAmb 08 13 20.4
comp=Z,160nm,1.1s
TKL Tuckaleechee C 54.86 76 ⇑P **P** **08 13 08.3 -1.2**
LRAL Lakeview Retre 54.93 81 IAMs_20 IAMs_20 08 35 17.5
comp=Z,9µm,21.0s
LRAL Lakeview Retre 54.93 81 ⇑P **P** **08 13 08.3 -1.7**
Q56A Snyder Ridge, 54.98 70 IAmb IAmb 08 13 29.2
comp=Z,105nm,1.0s
R55A Marlinton 55.01 72 IAmb IAmb 08 13 31.4
comp=Z,227nm,1.3s
R55A IAMs_20 IAMs_20 08 37 40.2
comp=Z,6µm,18.0s
KSPA Keystone Colle 55.03 66 IAmb IAmb 08 13 23.5
comp=Z,124nm,1.0s
N58A Sunbury 55.04 67 IAmb IAmb 08 13 28.8
comp=Z,280nm,1.5s
X51A Calhoun 55.04 78 IAmb IAmb 08 13 43.4
comp=Z,139nm,0.9s
LBNH Lisbon 55.12 61 IAmb IAmb 08 13 28.8
comp=Z,103nm,1.1s
LBNH IAMs_20 IAMs_20 08 36 39.6
comp=Z,11µm,20.0s
LBNH Lisbon 55.12 61 ⇑P **P** **08 13 10.7 -0.6**
G62A West of Eustis 55.13 59 IAmb IAmb 08 13 28.9
comp=Z,306nm,1.3s
G62A IAMs_20 IAMs_20 08 36 43.7
comp=Z,9µm,20.0s
VADS Vadso 55.17 356 *e*P **P** **08 13 10.4 -0.8**
VADS *e*PP **PP** **08 15 11.9 -2.3**
VADS *e*S **S** **08 20 51.7 +1.0**
VADS *e*ScS **ScS** **08 22 56.9 +0.9**
VADS IVMs 08 34 56.2
comp=Z,3µm,24.3s
W52A Murphy 55.18 77 IAmb IAmb 08 13 22.6
comp=Z,125nm,1.1s
H62A Milan 55.28 60 IAmb IAmb 08 13 26.4
comp=Z,152nm,1.0s
H62A IAMs_20 IAMs_20 08 36 45.6
comp=Z,9µm,19.0s
TRY Troy 55.30 64 IAmb IAmb 08 13 26.3
comp=Z,259nm,1.4s
P57A Homestead Farm 55.31 69 IAMs_20 IAMs_20 08 37 14.8
comp=Z,7µm,20.0s
HNH Hanover 55.32 62 IAMs_20 IAMs_20 08 36 35.8
comp=Z,12µm,20.0s
V53A Saluda 55.40 76 IAmb IAmb 08 13 24.7
comp=Z,271nm,1.3s
J61A Chester 55.44 62 IAmb IAmb 08 13 27.3
comp=Z,361nm,1.5s
J61A IAMs_20 IAMs_20 08 36 38.9
comp=Z,12µm,20.0s
BLA Blacksburg 55.62 73 IAmb IAmb 08 13 34.6
comp=Z,218nm,1.2s
BLA Blacksburg 55.62 73 ⇑P **P** **08 13 14.2 -0.7**
KEV Kevo 55.62 357 P **P** **08 13 13.0 -1.4**
KEV pmax pmax
comp=Z,71nm,0.8s
KEV Kevo 55.62 357 P **P** **08 13 13.0 -1.4**
KEV Kevo 55.62 357 ⇑P **P** **08 13 13.3 -1.1**
KEV Kevo 55.62 357 P **P** **08 13 13.4 -1.0**
KEV S **S** **08 20 55.7 -1.2**
KEV Kevo 55.62 357 P **P** **08 13 13.6 -0.8**
KEV Kevo 55.62 357 P **P** **08 13 13.3 -1.1**
I62A Tamworth 55.68 61 IAMs_20 IAMs_20 08 36 57.4
comp=Z,11µm,20.0s
PKME Peaks-Kenny Pk 55.72 59 IAmb IAmb 08 13 33.0
comp=Z,151nm,1.2s
PKME IAMs_20 IAMs_20 08 37 23.1
comp=Z,9µm,21.0s
PKME Peaks-Kenny Pk 55.72 59 ⇑P **P** **08 13 14.7 -0.7**
NPNY Mohonk Preserv 55.75 65 IAmb IAmb 08 13 33.0
comp=Z,107nm,0.8s
F64A Sherman 55.75 58 IAmb IAmb 08 13 33.9
comp=Z,125nm,0.8s
F64A IAMs_20 IAMs_20 08 37 24.0
comp=Z,9µm,20.0s
BG3 Lake Jocassee 55.82 76 IAmb IAmb 08 13 43.9
comp=Z,130nm,1.0s
TRO Tromso 55.89 360 P **P** **08 13 16.0 -0.3**
TRO Tromso 55.89 360 *e*P **P** **08 13 15.7 -0.6**
TRO *e*S **S** **08 20 59.0 -1.4**
TRO *e*SS **SS** **08 24 49.3 +3.7**
TRO IVMs 08 35 23.5
comp=Z,2µm,19.4s
ARA0 ARCESS Array S 55.89 357 *e*P **P** **08 13 15.5 -0.8**
ARA0 *e*S **S** **08 20 59.0 -1.5**
ARA0 IVMs 08 35 34.3
comp=Z,2µm,20.9s
ARCES ARCESS Array B 55.89 357 P **P** **08 13 15.5 -0.9**
comp=Z,17nm,0.5s,baz=28,slow=6.4,SNR=72
ARCES PcP **PcP** **08 14 14.4 -0.2**
comp=Z,34nm,0.8s,baz=352,slow=4.9,SNR=4.4
ARCES LR LR 08 38 32.5
comp=Z,4µm,19.5s,baz=360,slow=37
ARCES PKP2bc P'P'bc 08 43 24.9 -11
comp=Z,1.6nm,0.8s,baz=180,slow=1.2,SNR=4.0
comp=Z,17nm,0.5s
ARCES ARCESS Array B 55.89 357 P **P** **08 13 15.2 -1.2**
I63A Otisfield 55.94 60 IAmb IAmb 08 13 30.9
comp=Z,249nm,1.3s
I63A IAMs_20 IAMs_20 08 36 56.1
comp=Z,9µm,20.0s
JETT Jettan, Norway 55.96 359 *e*P **P** **08 13 16.7 -0.2**
JETT IVmB_BB 08 13 32.5
comp=Z,2µm,3.9s
JETT IVMs_BB IVMs_BB 08 40 32.6
comp=Z,1µm,19.1s
SDMD Soldier's Deli 55.99 68 IAmb IAmb 08 13 30.5
comp=Z,154nm,1.4s
S57A Dark Hollow, R 56.03 71 IAmb IAmb 08 13 30.6
comp=Z,245nm,1.4s
S57A IAMs_20 IAMs_20 08 37 01.1
comp=Z,7µm,19.0s
WVL Waterville 56.03 59 IAmb IAmb 08 13 39.3
comp=Z,132nm,1.2s
WVL IAMs_20 IAMs_20 08 37 21.5
comp=Z,9µm,21.0s
K62A Royalston 56.09 63 IAMs_20 IAMs_20 08 36 59.1
comp=Z,11µm,20.0s
250A Grady 56.13 81 IAmb IAmb 08 13 30.7
comp=Z,233nm,1.1s
250A IAMs_20 IAMs_20 08 35 55.2
comp=Z,11µm,21.0s
V55A Taylorsville 56.16 74 IAmb IAmb 08 13 46.7
comp=Z,124nm,1.0s
KNGR Kungurtug, Tuv 56.21 311 ⇑*i*P **P** **08 13 19.5 +0.5**
KNGR pmax pmax
comp=Z,125nm,0.8s
KNGR MLR MLR
comp=Z,11µm,22.0s
U56A King 56.26 73 IAmb IAmb 08 13 32.1
comp=Z,213nm,1.2s
BRAL Brewton 56.28 83 IAMs_20 IAMs_20 08 36 42.2
comp=Z,10µm,20.0s
PAL Palisades 56.41 65 IAmb IAmb 08 13 34.1
comp=Z,323nm,1.6s
PAL IAMs_20 IAMs_20 08 37 14.7
comp=Z,8µm,21.0s
HHC Hu-ho-hao-te 56.46 295 *e*P **P** **08 13 21.5 +0.5**
HHC pP pP 08 13 33.5 +0.7
HHC S **S** **08 21 03.3 -5.7**
HHC sS sS 08 21 26.0 -2.7
HHC pmax pmax
comp=Z,41nm,0.8s
HHC pmax pmax
comp=Z,2µm,5.6s
HHC L L
comp=Z,6µm,22.2s
HHC L L
comp=Z,5µm,20.6s
HHC L L
comp=Z,12µm,20.6s
R58B Mineral 56.47 70 IAmb IAmb 08 13 34.6
comp=Z,210nm,1.2s
KTK1 Kautokeino 56.47 358 *e*P **P** **08 13 19.5 -1.0**
KTK1 IVmB_BB 08 13 35.3
comp=Z,1µm,4.0s
KTK1 *e*S **S** **08 21 06.3 -1.8**
KTK1 IVMs_BB IVMs_BB 08 34 11.2
comp=Z,1µm,25.2s
UNH University of 56.48 61 IAmb IAmb 08 13 35.1
comp=Z,105nm,1.1s
152A Waverly Hall 56.50 80 IAMs_20 IAMs_20 08 36 09.1
comp=Z,13µm,22.0s
CPNY Central Park 56.53 65 IAmb IAmb 08 13 35.1
comp=Z,312nm,1.4s
HRV Adam Dziewonsk 56.55 62 P **P** **08 13 21.9 +0.5**
HRV Adam Dziewonsk 56.55 62 P **P** **08 13 21.3 -0.2**
HRV IAmb IAmb 08 13 35.2
comp=Z,173nm,1.4s
HRV Adam Dziewonsk 56.55 62 IAMs_20 IAMs_20 08 37 22.3
comp=Z,11µm,20.0s
CBN Corbin Frederi 56.57 70 IAmb IAmb 08 13 42.1
comp=Z,152nm,0.9s
KMSC Kings Mountain 56.61 75 IAmb IAmb 08 13 32.8
comp=Z,160nm,1.0s
G65A Princeton 56.61 58 IAmb IAmb 08 13 43.5
comp=Z,160nm,1.2s
G65A IAMs_20 IAMs_20 08 38 00.8
comp=Z,9µm,19.0s
GOGA Godfrey 56.67 78 P **P** **08 13 20.8 -1.6**
GOGA Godfrey 56.67 78 ⇑P **P** **08 13 20.6 -1.8**
GOGA Godfrey 56.67 78 P **P** **08 13 20.9 -1.6**
N62A Caumsett State 56.69 65 IAmb IAmb 08 13 34.1
comp=Z,275nm,1.2s
N62A IAMs_20 IAMs_20 08 37 37.3
comp=Z,6µm,22.0s
HODGE Hodges 56.75 77 IAmb IAmb 08 13 24.6
comp=Z,103nm,0.7s
WES Weston 56.76 62 IAmb IAmb 08 13 36.5
comp=Z,321nm,1.4s
WES IAMs_20 IAMs_20 08 37 28.9
comp=Z,11µm,19.0s
TIA Tai'an 56.80 287 P **P** **08 13 23.0 -0.3**
TIA sP **sP** **08 13 38.8 -1.1**
TIA S **S** **08 21 11.3 -2.1**
TIA pmax pmax
comp=Z,39nm,1.1s
TIA pmax pmax
comp=Z,2µm,8.9s
TIA L L
comp=Z,8µm,23.4s
TIA L L
comp=Z,4µm,21.9s
TIA L L
comp=Z,12µm,22.8s
BCX Boston College 56.87 62 IAMs_20 IAMs_20 08 37 32.9
comp=Z,11µm,20.0s
BORG Borgarnes 56.89 19 LR LR 08 40 52.8
comp=Z,6µm,19.2s,baz=333,slow=39
BORG Borgarnes 56.89 19 P **P** **08 13 23.9 +0.4**
BORG pmax pmax
comp=Z,226nm,1.4s
BORG MLR MLR
comp=Z,6µm,19.0s
BORG Borgarnes 56.89 19 P **P** **08 13 23.9 +0.4**
BORG IAmb IAmb 08 13 44.4
comp=Z,226nm,1.4s
BORG Borgarnes 56.89 19 IAMs_20 IAMs_20 08 40 40.6

comp=Z,6µm,19.0s
BORG Borgarnes 56.89 19 ⇑P **P** **08 13 24.8 +1.3**
BORG Borgarnes 56.89 19 P **P** **08 13 25.1 +1.6**
EMMW East Machias 57.02 58 IAmb IAmb 08 13 46.2
comp=Z,150nm,1.0s
EMMW IAMs_20 IAMs_20 08 38 12.6
comp=Z,8µm,20.0s
GGN Saint George 57.02 57 IAmb IAmb 08 13 42.9
comp=Z,80nm,0.7s
LVZ Lovozero 57.07 353 *i*P **P** **08 13 24.1 -0.7**
LVZ pmax pmax
comp=Z,127nm,1.0s
LVZ MLR MLR
comp=Z,8µm,19.0s
LVZ Lovozero 57.07 353 P **P** **08 13 23.6 -1.2**
LVZ IAmb IAmb 08 13 26.8
comp=Z,115nm,1.0s
LVZ IAMs_20 IAMs_20 08 39 24.1
comp=Z,8µm,20.0s
LVZ Lovozero 57.07 353 P **P** **08 13 23.8 -1.0**
comp=Z,3µmcomp=Z,146nm,0.9s
LVZ Lovozero 57.07 353 P **P** **08 13 24.4 -0.4**
LVZ Lovozero 57.07 353 P **P** **08 13 23.8 -1.0**
352A Blakely 57.26 81 IAmb IAmb 08 13 45.0
comp=Z,173nm,0.8s
352A IAMs_20 IAMs_20 08 36 30.3
comp=Z,10µm,22.0s
HNS HongShan 57.27 290 ⇑P **P** **08 13 26.5 -0.1**
HNS pP **pP** **08 13 40.3 +1.9**
HNS sP **sP** **08 13 44.5 +1.3**
HNS S **S** **08 21 20.0 +0.5**
HNS pmax pmax
comp=Z,190nm,0.8s
HNS L L
comp=Z,6µm,18.6s
HNS L L
comp=Z,10µm,19.4s
HNS L L
comp=Z,11µm,22.4s
JSC Jenkinsville 57.28 76 IAmb IAmb 08 13 37.5
comp=Z,102nm,1.0s
TARA Tarawa 57.30 211 P **P** **08 13 29.8 +2.9**
TARA Tarawa 57.30 211 IAMs_20 IAMs_20 08 32 23.6
comp=Z,8µm,21.0s
TARA Tarawa 57.30 211 P **P** **08 13 29.2 +2.2**
L64A Middleborough 57.33 62 IAMs_20 IAMs_20 08 37 46.0
comp=Z,11µm,20.0s
LOF Lofoten 57.34 2 *e*P **P** **08 13 25.2 -1.4**
LOF IVmB_BB 08 13 41.6
comp=Z,2µm,3.4s
LOF *e*PP **PP** **08 15 33.8 +0.2**
LOF *e*S **S** **08 21 20.9 +1.4**
LOF IVMs_BB IVMs_BB 08 32 46.4
comp=Z,1µm,30.4s
V58A Windy Hill, Pi 57.37 73 IAmb IAmb 08 13 39.9
comp=Z,163nm,1.0s
T59A Double "B" Far 57.37 71 IAMs_20 IAMs_20 08 37 51.5
comp=Z,9µm,19.0s
JOW Kunigami 57.40 271 LR LR 08 36 32.2
comp=Z,3µm,21.9s,baz=36,slow=34
JOW Kunigami 57.40 271 P **P** **08 13 29.9 +2.2**
JOW Kunigami 57.40 271 ⇑P **P** **08 13 27.9 +0.3**
JOW Kunigami 57.40 271 P **P** **08 13 28.1 +0.4**
BTO2 Baotou 57.42 296 *e*P **P** **08 13 27.8 0.0**
BTO2 pP **sP** **08 13 43.8 -0.6**
BTO2 S **S** **08 21 18.0 -3.7**
BTO2 SS **SS** **08 25 06.0 -5.0**
BTO2 pmax pmax
comp=Z,74nm,0.9s
BTO2 pmax pmax
comp=Z,3µm,10.6s
BTO2 L L
comp=Z,12µm,20.9s
BTO2 L L
comp=Z,22µm,24.1s
451A Vernon 57.43 82 IAMs_20 IAMs_20 08 37 07.9
comp=Z,8µm,21.0s
154A Montrose 57.46 78 IAmb IAmb 08 13 54.7
comp=Z,173nm,0.9s
APA Apatity 57.48 353 *e*P **P** **08 13 24.5 -3.1**
APA *e* 08 14 19.6
APA *e* 08 15 34.1
APA *e*S **S** **08 21 19.6 -1.8**
APA *e* 08 23 10.8
APA pmax pmax
comp=Z,20nm,0.9s
APA MLR MLR
comp=Z,8µm,20.7s
STEI Steigen 57.58 2 *e*P **P** **08 13 27.8 -0.5**
STEI IVmB_BB 08 13 43.7
comp=Z,2µm,3.1s
STEI *e*PP **PP** **08 15 33.8 -1.9**
STEI *e*S **S** **08 21 20.9 -1.7**
STEI *e*ScS **ScS** **08 23 14.2 +0.7**
STEI IVMs_BB IVMs_BB 08 34 07.0
comp=Z,2µm,24.4s
R61A Willards 57.58 68 IAMs_20 IAMs_20 08 37 34.0
comp=Z,7µm,22.0s
M65A Busby, Falmout 57.70 63 IAMs_20 IAMs_20 08 37 57.1
comp=Z,11µm,20.0s
PATS Pohnpei 57.72 230 P **P** **08 13 30.8 +0.9**
comp=Z,157nm,2.1s
PATS Pohnpei 57.72 230 P **P** **08 13 31.0 +1.0**
PATS IAmb IAmb 08 14 03.1
comp=Z,294nm,1.4s
S61A Accomac 57.87 69 IAMs_20 IAMs_20 08 38 40.8
comp=Z,10µm,19.0s
SGF Sodankyl 57.95 356 P **P** **08 13 30.2 -0.8**
SGF pmax pmax
comp=Z,170nm,0.7s
SGF Sodankyl 57.95 356 P **P** **08 13 30.7 -0.3**
Y57A Sumter 57.96 75 IAmb IAmb 08 13 52.1
comp=Z,125nm,0.8s
TIGA Tifton 58.06 80 IAmb IAmb 08 13 50.3
comp=Z,176nm,1.4s
TIGA IAMs_20 IAMs_20 08 36 56.2
comp=Z,11µm,22.0s
FAUS Fauske 58.12 2 *e*P **P** **08 13 30.9 -1.3**
FAUS IVmB_BB 08 13 47.5
comp=Z,2µm,3.4s
FAUS *e*PP **PP** **08 15 41.1 +0.6**
FAUS *e*ScP **ScP** **08 18 21.9 +2.0**
FAUS *e*S **S** **08 21 31.9 +2.1**
FAUS *e*ScS **ScS** **08 23 17.9 +0.3**
FAUS IVMs_BB IVMs_BB 08 34 21.4
comp=Z,2µm,25.7s
X58A Rowland 58.15 74 IAmb IAmb 08 13 45.4
comp=Z,76nm,0.8s
W59A Clinton 58.20 73 IAmb IAmb 08 14 01.2
comp=Z,102nm,1.0s
TIY Taiyuan 58.27 291 *e*P **P** **08 13 34.5 +0.8**
TIY S **S** **08 21 34.5 +1.7**
TIY pmax pmax
comp=Z,76nm,0.5s
TIY pmax pmax
comp=Z,1µm,5.1s
TIY L L
comp=Z,7µm,18.7s
TIY L L
comp=Z,2µm,14.7s
TIY L L
comp=Z,8µm,24.9s
DRLN Deer Lake 58.28 48 IAmb IAmb 08 13 36.4
comp=Z,104nm,0.8s
DRLN Deer Lake 58.28 48 ⇑P **P** **08 13 33.0 -0.5**
SSE Sheshan 58.28 280 P **P** **08 13 33.8 0.0**
SSE pP **pP** **08 13 46.8 +1.2**
SSE sP **sP** **08 13 53.8 +3.4**
SSE S **S** **08 21 31.0 -1.9**
SSE pmax pmax
comp=Z,43nm,1.0s
SSE pmax pmax
comp=Z,1.0nm,2.7s
UNM Universidad Na 58.36 102 IAMs_20 IAMs_20 08 36 28.8
comp=Z,9µm,20.0s
553A Crawfordville 58.51 81 IAMs_20 IAMs_20 08 37 28.6
comp=Z,9µm,21.0s
GUMO Guam 58.52 247 P **P** **08 13 33.4 -2.2**
comp=Z,90nm,0.5s,baz=18,slow=6.4,SNR=6.1
GUMO LR LR 08 34 28.4
comp=Z,990nm,19.5s,baz=38,slow=32
comp=Z,90nm,0.5s
GUMO Guam 58.52 247 P **P** **08 13 36.7 +1.1**
GUMO Guam 58.52 247 P **P** **08 13 33.2 -2.4**
GUMO Guam 58.52 247 ⇑P **P** **08 13 33.5 -2.0**
GUMO Guam 58.52 247 P **P** **08 13 33.8 -1.8**

VAGH Vaagaholmen 58.74 3 *e*P **P** **08 13 36.1 -0.3**
VAGH IVmB_BB 08 13 53.7
comp=Z,1µm,3.3s
VAGH *e*PP **PP** **08 15 48.4 +2.5**
VAGH *e*S **S** **08 21 39.2 +1.4**
VAGH *e*ScS **ScS** **08 23 25.2 +3.1**
VAGH *e*SS **SS** **08 25 33.1 +2.9**
VAGH IVMs_BB IVMs_BB 08 33 07.6
comp=Z,1µm,36.0s
NHSC New Hope 58.75 76 ⇑P **P** **08 13 36.4 -0.6**
ZALV Zalesovo Beam 58.77 321 P **P** **08 13 36.3 -0.6**
comp=Z,11nm,0.3s,baz=39,slow=6.7,SNR=61
ZALV PcP **PcP** **08 14 26.5 +0.3**
comp=Z,36nm,0.8s,baz=36,slow=5.5,SNR=6.6
ZALV LR LR 08 41 20.2
comp=Z,27µm,18.8s,baz=37,slow=38
comp=Z,11nm,0.3s
ZALV Zalesovo Beam 58.77 321 *i*P **P** **08 13 36.7 -0.1**
ZALV pmax pmax
comp=Z,11nm,0.3s
ZALV Zalesovo Beam 58.77 321 P **P** **08 13 36.5 -0.3**
NJ2 Nanjing 58.90 282 ⇑*i*P **P** **08 13 37.5 -0.5**
NJ2 pP **pP** **08 13 50.8 +0.9**
NJ2 S **S** **08 21 37.3 -3.5**
NJ2 pmax pmax
comp=Z,100nm,0.7s
NJ2 L L
comp=Z,7µm,24.2s
NJ2 L L
comp=Z,12µm,22.7s
KONS Konsvik 58.97 3 *e*P **P** **08 13 37.4 -0.6**
KONS IVmB_BB 08 13 53.6
comp=Z,2µm,3.2s
KONS *e*PP **PP** **08 15 48.4 +0.4**
KONS IVMs_BB IVMs_BB 08 32 55.9
comp=Z,1µm,35.8s
RAUS Rausandaksla 59.05 2 *e*P **P** **08 13 38.0 -0.6**
RAUS IVmB_BB 08 13 55.9
comp=Z,2µm,3.4s
RAUS *e*PP **PP** **08 15 48.4 -0.4**
RAUS *e*S **S** **08 21 42.9 +0.9**
RAUS *e*ScS **ScS** **08 23 25.2 +0.7**
RAUS *e*SS **SS** **08 25 40.4 +5.2**
RAUS IVMs_BB IVMs_BB 08 33 35.0
comp=Z,2µm,25.8s
STOK Stokkvaagen 59.13 3 *e*P **P** **08 13 38.5 -0.6**
STOK IVmB_BB 08 13 54.8
comp=Z,2µm,3.7s
STOK *e*PP **PP** **08 15 48.4 -1.0**
STOK *e*S **S** **08 21 42.9 0.0**
STOK *e*ScS **ScS** **08 23 25.2 +0.2**
STOK *e*SS **SS** **08 25 40.4 +4.0**
STOK IVMs_BB IVMs_BB 08 43 06.9
comp=Z,1µm,20.7s
Y60A Bolivia 59.18 74 IAmb IAmb 08 13 42.2
comp=Z,138nm,0.7s
MOR8 Moi Rana 59.33 2 *e*P **P** **08 13 38.9 -1.7**
MOR8 IVmB_BB 08 13 54.8
comp=Z,2µm,3.4s
MOR8 *e*PP **PP** **08 15 52.1 +0.8**
MOR8 *e*S **S** **08 21 42.9 -2.7**
MOR8 *e*ScS **ScS** **08 23 25.2 -1.4**
MOR8 *e*SS **SS** **08 25 40.4 +0.8**
MOR8 IVMs_BB IVMs_BB 08 34 53.0
comp=Z,2µm,26.0s
LEIR Leirfjorden 59.35 3 *e*P **P** **08 13 40.4 -0.3**
LEIR IVmB_BB 08 13 56.4
comp=Z,2µm,3.9s
LEIR *e*PP **PP** **08 15 52.1 +0.6**
LEIR *e*S **S** **08 21 46.5 +0.7**
LEIR *e*ScS **ScS** **08 23 28.9 +2.2**
LEIR IVMs_BB IVMs_BB 08 33 23.7
comp=Z,1µm,39.5s
MSF Maaselka 59.38 355 P **P** **08 13 40.7 -0.2**
MSF Maaselka 59.38 355 P **P** **08 13 40.7 -0.2**
456A Hilliard 59.48 79 IAmb IAmb 08 14 09.1
comp=Z,107nm,1.0s
TLIG Tlapa 60.12 102 IAmb IAmb 08 13 59.0
comp=Z,159nm,1.1s
656A Willston 60.21 81 IAmb IAmb 08 14 06.8
comp=Z,218nm,1.3s
656A IAMs_20 IAMs_20 08 38 12.6
comp=Z,9µm,22.0s
OUL Oulu 60.34 357 P **P** **08 13 46.5 -0.9**
OUL pmax pmax
comp=Z,109nm,0.7s
OUL Oulu 60.34 357 P **P** **08 13 46.9 -0.5**
LYN LuoYang 60.59 289 ⇑P **P** **08 13 49.8 +0.1**
LYN pP pP 08 14 03.0 +1.4
LYN S **S** **08 22 00.8 -1.8**
LYN SS **SS** **08 25 59.3 -1.5**
LYN pmax pmax
comp=Z,170nm,0.6s
LYN pmax pmax
comp=Z,3µm,11.3s
LYN L L
comp=Z,7µm,18.6s
ADZR Andozero 60.66 350 *e*P **P** **08 13 48.0 -1.7**
ADZR S **S** **08 22 01.8 -0.8**
ADZR pmax pmax
comp=Z,86nm,0.6s
ADZR MLR MLR
comp=Z,10µm,20.0s
NSS Namsos 60.90 3 *e*P **P** **08 13 50.6 -0.7**
NSS IVmB_BB 08 14 06.8
comp=Z,2µm,3.7s
NSS *e*PP **PP** **08 16 06.7 +1.6**
NSS IVMs_BB IVMs_BB 08 43 08.3
comp=Z,2µm,19.2s
DGZ Jazzator, Alta 61.11 316*c i*P **P** **08 13 52.9 -0.3**
DGZ pmax pmax
comp=Z,37nm,0.6s
DGZ MLR MLR
comp=Z,8µm,18.0s
DWPF Disney Wildern 61.79 81 P **P** **08 13 57.1 -0.7**
DWPF Disney Wildern 61.79 81 IAMs_20 IAMs_20 08 39 23.5
comp=Z,6µm,21.0s
DWPF Disney Wildern 61.79 81 ⇑P **P** **08 13 57.3 -0.5**
DWPF Disney Wildern 61.79 81 P **P** **08 13 58.6 +0.8**
YOJ Yonaguni jima 62.26 274 P **P** **08 14 01.2 +0.2**
VAF Yiistaro 62.47 358 P **P** **08 14 00.9 -1.0**
VAF pmax pmax
comp=Z,90nm,0.9s
WHN Wuhan 62.56 285 ⇑P **P** **08 14 02.5 -0.5**
WHN pP **pP** **08 14 16.0 +1.0**
WHN sP **sP** **08 14 22.5 +2.8**
WHN PP **PP** **08 16 19.3 -1.3**
WHN S **S** **08 22 30.0 +2.3**
WHN pmax pmax
comp=Z,300nm,1.0s
WHN pmax pmax
comp=Z,4µm,9.7s
WHN L L
comp=Z,10µm,19.3s
WHN L L
comp=Z,17µm,21.4s
CMIG Matias Romero 62.59 99 LR LR 08 39 28.8
comp=Z,6µm,20.9s,baz=310,slow=34
MOL Molde 62.66 6 *e*P **P** **08 14 03.1 0.0**
MOL IVmB_BB 08 14 18.9
comp=Z,3µm,3.8s
XAN Xi'an 62.91 291 ⇑P **P** **08 14 05.3 0.0**
XAN pP pP 08 14 12.8 -4.5
XAN S **S** **08 22 26.8 -5.2**
XAN pmax pmax
comp=Z,110nm,1.1s
XAN L L
comp=Z,10µm,20.5s
XAN L L
comp=Z,16µm,20.6s
XAN Xi'an 62.91 291 P **P** **08 14 05.2 -0.2**
AKN Aaknes 63.01 6 *e*P **P** **08 14 05.9 +0.4**
AKN IVmB_BB 08 14 23.7
comp=Z,3µm,2.7s
AKN *e*S **S** **08 22 34.0 +1.5**
AKN *e*SKSac **ScS** **08 23 54.5 0.0**
YHNB Yeheng 63.04 275 P **P** **08 14 07.7 +1.3**
YHNB Yeheng 63.04 275 IAmb IAmb 08 14 23.1
comp=Z,69nm,0.9s
YHNB IAMs_20 IAMs_20 08 39 19.9
comp=Z,7µm,22.0s
YHNB Yeheng 63.04 275 P **P** **08 14 05.1 -1.3**
060A Indiantown 63.22 81 IAMs_20 IAMs_20 08 40 18.3
comp=Z,9µm,22.0s
DOMB Dombas 63.27 5 *e*P **P** **08 14 06.9 -0.4**

DOMB IVmB_BB 08 14 22.8
comp=Z,3µm,3.6s
DOMB *e*S **S** **08 22 34.0 -1.7**
NACB Ninganchiao 63.30 275 P **P** **08 14 08.9 +0.9**
NACB Ninganchiao 63.30 275 P **P** **08 14 06.6 -1.3**
NACB IAmb IAmb 08 14 25.3
comp=Z,209nm,1.1s
NACB Ninganchiao 63.30 275 P **P** **08 14 07.3 -0.7**
FOO Floro 63.46 7 *e*P **P** **08 14 08.1 -0.3**
FOO IVmB_BB 08 14 13.3
comp=Z,3µm,4.2s
FOO *e*S **S** **08 22 37.7 -0.2**
FOO IVMs_BB IVMs_BB 08 37 03.4
comp=Z,2µm,4.1s
GTA2 Gaotai 63.51 301 P **P** **08 14 08.5 -0.9**
GTA2 S **S** **08 22 35.8 -3.8**
GTA2 SS **SS** **08 26 45.0 -1.4**
GTA2 pmax pmax
comp=Z,62nm,1.1s
GTA2 pmax pmax
comp=Z,2µm,5.7s
GTA2 L L
comp=Z,10µm,22.2s
GTA2 L L
comp=Z,9µm,19.7s
GTA2 L L
comp=Z,17µm,20.9s
KLMR Klimovskoe 63.54 349 *e*P **P** **08 14 07.6 -1.4**
KLMR pmax pmax
comp=Z,112nm,0.7s
KLMR MLR MLR
comp=Z,5µm,19.0s
KURK Kurchatov 63.62 322 ⇑*i*P **P** **08 14 09.1 -0.6**
KURK pmax pmax
comp=Z,124nm,2.7s
KURK MLR MLR
comp=Z,22µm,16.0s
KURK Kurchatov 63.62 322 P **P** **08 14 09.2 -0.5**
KURK IAmb IAmb 08 14 49.0
comp=Z,53nm,0.7s
KURK Kurchatov 63.62 322 P **P** **08 14 09.4 -0.4**
SVE Sverdlovsk 63.66 336*de*P **P** **08 14 09.9 0.0**
SVE *e*S **S** **08 22 40.4 -0.2**
SVE pmax pmax
comp=Z,200nm,1.2s
SVE MLR MLR
comp=Z,8µm,17.0s
KURBB Kurchatov Arra 63.73 322 P **P** **08 14 09.8 -0.6**
comp=Z,17nm,0.7s,baz=20,slow=6.8,SNR=97
KURBB PKPPKP **P'P'df** **08 43 06.3 -3.6**
comp=Z,1.0nm,1.0s,baz=236,slow=4.2,SNR=8.4
KURBB LR LR 08 44 18.1
comp=Z,24µm,19.0s,baz=35,slow=38
comp=Z,17nm,0.7s
061Z Ochoppi 63.80 82 IAMs_20 IAMs_20 08 41 04.7
comp=Z,9µm,21.0s
TEIG Tepich 63.92 92 P **P** **08 14 11.2 -0.9**
TEIG IAmb IAmb 08 14 24.3
comp=Z,237nm,1.2s
TEIG Tepich 63.92 92 ⇑P **P** **08 14 11.2 -0.9**
TEIG Tepich 63.92 92 P **P** **08 14 12.3 +0.3**
ZSN Zaisan 63.94 316 *e*P **P** **08 14 11.9 0.0**
ZSN *e*S **S** **08 22 48.0 +3.6**
ZSN pmax pmax
comp=Z,33nm,0.7s
ZSN Zaisan 63.94 316 *e*P **P** **08 14 11.1 -0.8**
comp=Z,33nm,0.7s
ZSN *e*S **S** **08 22 48.1 +3.6**
HYA Hoyanger 63.97 7 *e*P **P** **08 14 11.8 0.0**
HYA IVmB_BB 08 14 31.9
comp=Z,2µm,3.6s
HYA *e*S **S** **08 22 45.0 +0.7**
HYA *e*SKSac **ScS** **08 24 01.8 +0.2**
HYA IVMs_BB IVMs_BB 08 47 01.3
comp=Z,2µm,3.8s
SSLB Suanglung 63.97 275 P **P** **08 14 12.2 -0.2**
SSLB Suanglung 63.97 275 P **P** **08 14 11.8 -0.7**
SSLB Suanglung 63.97 275 P **P** **08 14 12.0 -0.4**
SUE Sulen 63.97 8 *e*P **P** **08 14 12.4 +0.6**
SUE IVmB_BB 08 14 23.9
comp=Z,2µm,2.6s
SUE *e*S **S** **08 22 45.0 +0.7**
SUE *e*SKSac **SKKSac** **08 23 58.1 -3.5**
SUE IVMs_BB IVMs_BB 08 33 38.5
comp=Z,4µm,3.8s
FIA1 FINESS Array S 63.97 356 P **P** **08 14 10.8 -1.0**
FINES FINESS Array B 63.97 356 P **P** **08 14 10.9 -0.9**
comp=Z,50nm,0.5s,baz=19,slow=7.5,SNR=398
FINES PKPPKP **P'P'df** **08 43 06.6 -3.6**
comp=Z,1.4nm,0.7s,baz=150,slow=8.1,SNR=4.0
FINES LR LR 08 43 22.6
comp=Z,2µm,19.6s,baz=7.5,slow=37
comp=Z,50nm,0.5s
FINES FINESS Array B 63.97 356 *i*P **P** **08 14 10.8 -1.0**
FINES pmax pmax
comp=Z,50nm,0.5s
FINES FINESS Array B 63.97 356 P **P** **08 14 10.6 -1.2**
LZH Lanzhou 64.04 296 P **P** **08 14 13.3 +0.4**
LZH pP pP 08 14 26.0 +1.1
LZH S **S** **08 22 42.0 -4.4**
LZH pmax pmax
comp=Z,150nm,1.1s
LZH pmax pmax
comp=Z,1µm,4.6s
LZH L L
comp=Z,11µm,16.8s
LZH L L
comp=Z,15µm,18.9s
YULB Yu-li 64.07 274 P **P** **08 14 14.3 +1.2**
YULB Yu-li 64.07 274 P **P** **08 14 12.0 -1.1**
YULB Yu-li 64.07 274 P **P** **08 14 12.9 -0.2**
NC303 NORSAR Array S 64.19 4 IAmb IAmb 08 14 31.8
comp=Z,151nm,0.9s
LZDM Lanzhou Array 64.22 296 P **P** **08 14 13.7 -0.6**
comp=Z,35nm,0.5s,baz=36,slow=6.7,SNR=30
LZDM LR LR 08 45 25.5
comp=Z,9µm,20.0s,baz=40,slow=39
comp=Z,35nm,0.5s
NC405 NORSAR Array S 64.31 4 IAmb IAmb 08 14 32.6
comp=Z,159nm,0.8s
KIRV Kirov 64.32 343 LR LR 08 48 15.8
comp=Z,6µm,18.4s,baz=22,slow=42
KIRV Kirov 64.32 343 ⇓*i*P **P** **08 14 13.5 -0.6**
LRW Lerwick 64.33 11 *e*P **P** **08 14 14.2 0.0**
LRW IAmb IAmb 08 14 16.9
comp=Z,139nm,0.8s
NBO00 NORSAR Array S 64.36 4 IAmb IAmb 08 14 32.8
comp=Z,127nm,0.9s
NB2 NORSAR Subarra 64.37 4 P **P** **08 14 14.2 -0.3**
comp=Z,206nm,1.1s,baz=357,slow=6.5
NB2 NORSAR Subarra 64.37 4 P **P** **08 14 14.2 -0.3**
NOA NORSAR Array B 64.37 4 P **P** **08 14 14.5 -0.1**
comp=Z,77nm,0.9s,baz=356,slow=6.6,SNR=109
NOA pP **pP** **08 14 27.0 +0.5**
comp=Z,82nm,0.9s,baz=355,slow=6.6,SNR=8.6
NOA LR LR 08 41 03.5
comp=Z,2µm,21.6s,baz=15,slow=35
comp=Z,77nm,0.9s
BVAR Borovoye Array 64.38 328 P **P** **08 14 14.6 -0.1**
comp=Z,56nm,0.6s,baz=36,slow=6.0,SNR=109
BVAR S **S** **08 22 51.3 +1.5**
comp=Z,3.1nm,1.0s,baz=34,slow=16,SNR=3.7
BVAR PKPPKP 08 43 00.0
comp=Z,1.3nm,0.5s,baz=204,slow=3.3,SNR=4.0
comp=Z,56nm,0.6s
QZH2 Quanzhou 64.43 277 ⇑*i*P **P** **08 14 15.0 -0.4**
QZH2 pP **pP** **08 14 28.5 +1.1**
QZH2 S **S** **08 22 51.3 +0.3**
QZH2 pmax pmax
comp=Z,170nm,1.4s
QZH2 pmax pmax
comp=Z,2µm,4.8s
QZH2 L L
comp=Z,3µm,21.0s
QZH2 L L
comp=Z,2µm,19.6s
QZH2 L L
comp=Z,3µm,24.7s
TPUB Ta-pu 64.53 275 P **P** **08 14 17.3 +1.2**
TPUB Ta-pu 64.53 275 IAmb IAmb 08 14 44.3
comp=Z,106nm,1.0s
TPUB Ta-pu 64.53 275 P **P** **08 14 15.2 -0.9**
NAO01 NORSAR Array S 64.55 4 IAmb IAmb 08 14 33.9
comp=Z,102nm,0.9s
NAO01 NORSAR Array S 64.55 4 P **P** **08 14 15.6 0.0**
ASK Askoy 64.57 7 *e*P **P** **08 14 16.2 +0.4**

ASK IVmB_BB 08 14 49.5
comp=Z,4μm,3.9s
ARTI Arti 64.58 337 LR LR 08 47 17.6
comp=Z,8μm,18.1s,baz=18,slow=40
ARTI Arti 64.58 337*c i*P **P 08 14 15.6 -0.3**
ARTI 08 14 50.5
ARTI 08 16 39.9
ARTI PPP PPP 08 18 11.6
ARTI S **S 08 22 53.5 +1.5**
ARTI SS **SS 08 27 04.2 +2.3**
ARTI pmax pmax
comp=Z,151nm,0.8s
ARTI MLR MLR
comp=Z,8μm,16.0s
ARTI Arti 64.58 337 P **P 08 14 15.5 -0.3**
ARTI IAMs_20 IAMs_20 08 47 06.2
comp=Z,9μm,18.0s
ARTI Arti 64.58 337 P **P 08 14 15.7 -0.2**
SKAR Skarslia 64.58 6*eP* **P 08 14 15.9 0.0**
SKAR IVmB_BB 08 14 31.9
comp=Z,3μm,3.8s
SKAR *e*S **S 08 22 52.3 +0.2**
SKAR *e*SKSac **SKSac 08 24 05.4 -1.0**
SKAR *e*SS **SS 08 27 04.5 +2.6**
TWGBT Beinan 64.64 274 P **P 08 14 17.6 +0.8**
TWG Pinlang 64.65 274 P **P 08 14 18.3 +1.4**
BER Bergen 64.68 7*eP* **P 08 14 16.5 0.0**
BER IVmB_BB 08 14 31.1
comp=Z,2μm,6.4s
NC602 NORSAR Array S 64.68 4*eP* **P 08 14 16.0 -0.5**
NC602 IVmB_BB 08 14 32.2
comp=Z,2μm,3.7s
NC602 NORSAR Array S 64.68 4 IAmb IAmb 08 14 33.0
comp=Z,201nm,1.4s
SOR Soroa 64.97 86 P **P 08 14 19.0 0.0**
SOR pmax pmax
comp=Z,164nm,1.2s
SOR Soroa 64.97 86 P **P 08 14 19.0 0.0**
SOR IAmb IAmb 08 14 30.3
comp=Z,164nm,1.2s
SOR Soroa 64.97 86 P **P 08 14 18.8 -0.1**
CNSH ChangSha 65.16 284 ⇑P **P 08 14 20.0 -0.1**
CNSH S **S 08 22 57.5 -2.5**
CNSH pmax pmax
comp=Z,2μm,5.5s
CNSH L L
comp=Z,3μm,21.8s
CNSH L L
comp=Z,3μm,19.9s
CNSH L L
comp=Z,4μm,22.4s
ODD1 Odda 65.24 7*eP* **P 08 14 20.5 +0.2**
ODD1 IVmB_BB 08 14 36.3
comp=Z,5μm,3.8s
HFS Hagfors 65.36 3 P **P 08 14 20.5 -0.4**
comp=Z,115nm,0.6s,baz=11,slow=3.0,SNR=395
comp=Z,115nm,0.6s
PUL Pulkovo 65.42 354*i* P **P 08 14 21.2 -0.1**
PUL pmax pmax
comp=Z,107nm,0.8s
PUL MLR MLR
comp=Z,9μm,24.0s
OSL Oslo 65.45 4*eP* **P 08 14 21.9 +0.4**
OSL IVmB_BB 08 14 37.6
comp=Z,2μm,3.5s
ENH Enshi 65.47 288 P **P 08 14 23.0 +0.8**
ENH Enshi 65.47 288 IAmb IAmb 08 14 38.6
comp=Z,167nm,1.2s
MK31 Makanchi Array 65.49 317*i* P **P 08 14 21.3 -0.8**
MK31 pmax pmax
comp=Z,29nm,0.8s
MKAR Makanchi Array 65.49 317 P **P 08 14 20.9 -1.1**
comp=Z,46nm,0.7s,baz=46,slow=6.7,SNR=330
MKAR PKPPKP **P'P'df 08 43 01.3 -5.5**
comp=Z,1.9nm,1.1s,baz=239,slow=6.9,SNR=6.3
MKAR LR LR 08 44 53.6
comp=Z,21μm,20.5s,baz=24,slow=38
comp=Z,46nm,0.7s
MKAR Makanchi Array 65.49 317*i* P **P 08 14 20.8 -1.3**
MKAR pmax pmax
comp=Z,47nm,0.7s
MKAR Makanchi Array 65.49 317 P **P 08 14 21.2 -0.8**
MAKZ Makanchi 65.60 318 P **P 08 14 22.4 -0.4**
MAKZ Makanchi 65.60 318 P **P 08 14 22.0 -0.8**
MAKZ IAmb IAmb 08 14 24.2
comp=Z,69nm,0.6s
MAKZ Makanchi 65.60 318 P **P 08 14 21.7 -1.0**
PETF Flores 65.61 95 IAmb IAmb 08 14 35.1
comp=Z,128nm,1.2s
KONO Kongsberg 65.68 5 P **P 08 14 23.6 +0.6**
KONO Kongsberg 65.68 5 P **P 08 14 23.2 +0.2**
KONO IAmb IAmb 08 14 41.9
comp=Z,173nm,0.8s
KONO Kongsberg 65.68 5 ⇑P **P 08 14 23.4 +0.4**
KONO Kongsberg 65.68 5 P **P 08 14 23.8 +0.8**
WMQ Urumqi 65.69 312 ⇑P **P 08 14 24.0 +0.6**
WMQ PcP **PcP 08 14 55.0 +0.5**
WMQ S **S 08 23 01.5 -4.7**
WMQ pmax pmax
comp=Z,89nm,0.9s
WMQ pmax pmax
comp=Z,2μm,6.5s
WMQ L L
comp=Z,9μm,24.0s
WMQ L L
comp=Z,4μm,24.2s
WMQ L L
comp=Z,13μm,24.9s
KMY Karmoy 65.84 8*eP* **P 08 14 24.7 +0.7**
KMY IVmB_BB 08 14 46.5
comp=Z,3μm,3.9s
ARBE Arbavere 65.98 356 P **P 08 14 24.8 -0.1**
STRU Stroemstad 66.37 4*i* P **P 08 14 27.2 -0.2**
RTAL Retalhuleu 66.47 98 IAmb IAmb 08 14 40.2
comp=Z,163nm,1.1s
KPL Plockton 66.49 14*eP* **P 08 14 28.1 -0.1**
KPL IAmb IAmb 08 14 32.2
comp=Z,70nm,0.8s
MCD Coleburn Disti 66.58 13*eP* **P 08 14 28.7 0.0**
MCD IAmb IAmb 08 14 31.7
comp=Z,240nm,0.7s
MTSE Matsula 66.78 357 P **P 08 14 30.0 0.0**
APG El Apazote 66.79 97 LR LR 08 42 11.8
comp=Z,350nm,21.9s,baz=70,slow=34
SNART Snartemo 66.85 7*eP* **P 08 14 31.1 +0.6**
SNART IVmB_BB 08 14 31.8
comp=Z,306nm,6.9s
SNART Snartemo 66.85 7*i* P **P 08 14 30.9 +0.5**
VSU Vasula 66.93 355*c i*P **P 08 14 29.8 -1.1**
VSU pmax pmax
comp=Z,116nm,0.7s
VSU MLR MLR
comp=Z,8μm,22.0s
VSU Vasula 66.93 355 P **P 08 14 29.8 -1.1**
HOMB Homborsund 67.00 6*eP* **P 08 14 32.1 +0.7**
HOMB IVmB_BB 08 14 49.6
comp=Z,4μm,2.8s
HOMB Homborsund 67.00 6*i* P **P 08 14 31.4 0.0**
DRUM Mains of Drumt 67.33 12*eP* **P 08 14 33.4 -0.2**
DRUM IAmb IAmb 08 14 37.5
comp=Z,425nm,0.7s
TJOU Tjoern 67.39 4*i* P **P 08 14 33.7 -0.2**
LAWE Loch Awe, Argy 67.57 14*eP* **P 08 14 35.0 -0.1**
LAWE IAmb IAmb 08 14 39.2
comp=Z,133nm,0.7s
INVG Invergeldie, C 67.60 13*eP* **P 08 14 34.9 -0.3**
INVG IAmb IAmb 08 14 37.8
comp=Z,94nm,0.8s
BBSR BB Station 67.75 65 P **P 08 14 37.0 +0.4**
BBSR IAmb IAmb 08 14 56.8
comp=Z,285nm,1.7s
BBSR BB Station 67.75 65 IAMs_20 IAMs_20 08 43 10.1
comp=Z,6μm,21.0s
EAB Aberfoyle 67.79 14*eP* **P 08 14 36.1 -0.4**
EAB IAmb IAmb 08 14 39.3
comp=Z,134nm,0.8s
ESQI Esquipulas 67.79 96 IAmb IAmb 08 14 53.8
comp=Z,180nm,1.2s
SLIT Slitere, Latvi 67.91 358 P **P 08 14 36.9 -0.2**
ONAU Onsala 68.04 4*i* P **P 08 14 37.2 -0.8**
CD2 Chengdu 68.09 293 P **P 08 14 39.3 +0.4**
CD2 pP pP 08 14 52.5 +1.6
CD2 S **S 08 23 34.5 -1.0**
CD2 pmax pmax
comp=Z,150nm,0.8s
CD2 L L
comp=Z,4μm,19.0s
CD2 L L
comp=Z,6μm,22.8s
CD2 L L
comp=Z,8μm,23.5s
PGBU Glenifferbraes 68.14 14*eP* **P 08 14 38.3 -0.4**
PGBU IAmb IAmb 08 14 42.7
comp=Z,189nm,0.7s
EDI Edinburgh 68.20 13*eP* **P 08 14 38.5 -0.5**
EDI IAmb IAmb 08 14 43.1
comp=Z,87nm,0.9s
GZH2 Guangzhou 68.26 280 P **P 08 14 40.3 +0.4**
GZH2 sP **sP 08 14 58.0 +1.3**
GZH2 S **S 08 23 38.3 +0.8**
GZH2 L L
comp=Z,3μm,22.0s
GZH2 L L
comp=Z,3μm,22.5s
GZH2 L L
comp=Z,5μm,23.5s
IDGL Inch Island, C 68.40 16 P **P 08 14 40.6 +0.3**
IDGL Inch Island, C 68.40 16 P **P 08 14 40.9 +0.5**
IDGL Inch Island, C 68.40 16*eP* **P 08 14 40.1 -0.2**
FABU Falkenberg 68.47 4*i* P **P 08 14 40.3 -0.3**
TDK Taldyqorghan 68.49 319*c i*P **P 08 14 41.3 +0.2**
TDK pmax pmax
comp=Z,48nm,0.5s
TDK MLR MLR
comp=Z,11μm,19.0s
TDK Taldyqorghan 68.49 319⇑*i*P **P 08 14 41.3 +0.2**
comp=Z,48nm,0.5s
TDK LR LR 08 45 11.3
comp=Z,11μm,18.6s
GOMU GeErMu 68.51 302 P **P 08 14 41.0 -0.8**
GOMU S **S 08 23 41.3 +0.3**
GOMU pmax pmax
comp=Z,11nm,0.6s
GOMU L L
comp=Z,6μm,19.8s
CLGH Cloghs, Cushen 68.61 15*eP* **P 08 14 41.9 +0.2**
CLGH IAmb IAmb 08 14 46.3
comp=Z,35nm,0.7s
MOS Moscow 68.76 349*eP* **P 08 14 42.2 -0.4**
MOS *e* 08 17 13.8
MOS *e*PPP PPP 08 18 53.4
MOS *e*S **S 08 23 45.2 +2.6**
MOS pmax pmax
comp=Z,160nm,0.6s
MOS MLR MLR
comp=Z,5μm,22.0s
EKA Eskdalemuir Ar 68.78 13 P **P 08 14 42.9 +0.1**
comp=Z,91nm,0.7s,baz=338,slow=4.7,SNR=165
EKA LR LR 08 45 16.8
comp=Z,4μm,21.8s,baz=344,slow=36
comp=Z,91nm,0.7s
ESK Eskdalemuir 68.79 13 P **P 08 14 43.5 +0.8**
ESK pmax pmax
comp=Z,146nm,0.7s
ESK Eskdalemuir 68.79 13 P **P 08 14 43.5 +0.8**
ESK IAmb IAmb 08 15 01.6
comp=Z,146nm,0.7s
ESK Eskdalemuir 68.79 13 IAMs_20 IAMs_20 08 43 24.0
comp=Z,7μm,22.0s
ESK Eskdalemuir 68.79 13 P **P 08 14 43.6 +0.8**
ESK Eskdalemuir 68.79 13*eP* **P 08 14 42.2 -0.5**
ESK IAmb IAmb 08 14 46.9
comp=Z,118nm,0.8s
GULI GuiLin 68.84 284 ⇑P **P 08 14 40.8 -2.8**
GULI S **S 08 23 41.5 -2.9**
GULI pmax pmax
comp=Z,79nm,0.7s
GULI pmax pmax
comp=Z,2μm,5.1s
GULI L L
comp=Z,2μm,20.0s
GULI L L
comp=Z,3μm,23.3s
GULI L L
comp=Z,4μm,23.5s
MUD Monsted U'grnd 68.84 6*i* P **P 08 14 43.5 +0.4**
MUD IAmb IAmb 08 14 45.5
comp=Z,105nm,0.9s
MUD IAMs_20 IAMs_20 08 41 53.5
comp=Z,3μm,22.5s
NEWG New Galloway 68.84 14*eP* **P 08 14 42.5 -0.5**
NEWG IAmb IAmb 08 14 47.1
comp=Z,41nm,0.7s
AFI Afiamalu 69.01 191 LR LR 08 38 38.6
comp=Z,7μm,20.8s,baz=354,slow=30
AFI Afiamalu 69.01 191 IAMs_20 IAMs_20 08 39 38.3
comp=Z,6μm,20.0s
GAL1 Galloway 69.02 14*eP* **P 08 14 43.8 -0.3**
GAL1 IAmb IAmb 08 14 48.2
comp=Z,104nm,0.8s
DEL Delary 69.03 3*i* P **P 08 14 44.2 0.0**
HKPS Hong Kong Po S 69.06 279 P **P 08 14 45.0 0.0**
SZP Santa 69.13 271 P **P 08 14 48.4 +3.0**
BLEU Blekinge 69.25 2*i* P **P 08 14 44.9 -0.6**
TGUH Tegucigalpa,Un 69.38 95 IAMs_20 IAMs_20 08 42 26.1
comp=Z,5μm,22.0s
BJUU Bjuv 69.40 3*i* P **P 08 14 46.5 0.0**
EDMD Edmundbyers 69.43 13 P **P 08 14 47.5 +0.8**
EDMD Edmundbyers 69.43 13*eP* **P 08 14 46.0 -0.7**
EDMD IAmb IAmb 08 14 50.9
comp=Z,61nm,0.8s
KAVG Kavieng 69.45 232 P **P 08 14 49.6 +2.3**
OBN Obninsk 69.49 349 LR LR 08 51 14.1
comp=Z,5μm,18.6s,baz=21,slow=41
OBN Obninsk 69.49 349⇑P **P 08 14 46.5 -0.5**
OBN Obninsk 69.49 349*c i*P **P 08 14 46.4 -0.7**
OBN *e* 08 15 13.3
OBN *e* 08 17 18.1
OBN *i*S **S 08 23 46.4 -4.8**
OBN pmax pmax
comp=Z,117nm,0.6s
OBN MLR MLR
comp=Z,8μm,24.0s
OBN Obninsk 69.49 349 P **P 08 14 46.1 -1.0**
OBN IAMs_20 IAMs_20 08 48 41.9
comp=Z,7μm,21.0s
OBN Obninsk 69.49 349 P **P 08 14 45.5 -1.6**
comp=Z,3μmcomp=Z,215nm,0.7s
OBN Obninsk 69.49 349 P **P 08 14 46.4 -0.7**
KESW Keswick, Cumbr 69.51 13 P **P 08 14 48.0 +0.7**
KESW Keswick, Cumbr 69.51 13*eP* **P 08 14 46.5 -0.7**
KESW IAmb IAmb 08 14 51.0
comp=Z,65nm,0.7s
PBUR Paburge 69.52 358 P **P 08 14 45.4 -1.8**
ILTH Belurgan, Co L 69.59 15 P **P 08 14 48.0 +0.3**
ILTH Belurgan, Co L 69.59 15 P **P 08 14 48.2 +0.5**
ILTH Belurgan, Co L 69.59 15*eP* **P 08 14 47.2 -0.5**
IOMK Kirk Michael 69.63 14 P **P 08 14 48.5 +0.5**
SHLS Shalkode 69.63 317*c i*P **P 08 14 47.4 -1.0**
SHLS pmax pmax
comp=Z,62nm,1.2s
SHLS Shalkode 69.63 317⇑*i*P **P 08 14 47.4 -1.0**
comp=Z,62nm,1.2s
KPKS Kokpek 69.68 318*eP* **P 08 14 48.9 +0.3**
KPKS *e*S **S 08 23 58.0 +4.0**
KPKS Kokpek 69.68 318*eP* **P 08 14 48.9 +0.3**
KPKS *e*S **S 08 23 58.0 +4.0**
IGLA Glengowla, Co 69.68 18 P **P 08 14 48.4 +0.2**
IGLA Glengowla, Co 69.68 18 P **P 08 14 48.7 +0.4**
IGLA Glengowla, Co 69.68 18*eP* **P 08 14 48.1 -0.2**
COP Copenhagen 69.77 4 P **P 08 14 49.5 +0.7**
COP Copenhagen 69.77 4 P **P 08 14 49.5 +0.7**
COP Copenhagen 69.77 4*i* P **P 08 14 49.0 +0.2**
COP IAmb IAmb 08 14 50.5
comp=Z,195nm,0.7s
UZB Uzunbulak 69.81 317*c i*P **P 08 14 49.5 0.0**
UZB Uzunbulak 69.81 317⇑*i*P **P 08 14 49.6 0.0**
LUNU Lund 69.86 3*i* P **P 08 14 48.9 -0.5**
PABE Paberze 69.99 357 IAMs_20 IAMs_20 08 49 51.9
comp=Z,6μm,21.0s
PABE Paberze 69.99 357 P **P 08 14 50.0 -0.1**
GYA Guiyang 69.99 288 ⇑P **P 08 14 51.0 +0.2**
GYA S **S 08 23 54.0 -4.2**
GYA pmax pmax
comp=Z,91nm,0.8s
GYA pmax pmax
comp=Z,2μm,5.2s
GYA L L
comp=Z,4μm,20.0s
GYA L L
comp=Z,5μm,21.8s
GYA L L
comp=Z,7μm,23.0s
BTLS Baital 70.07 322*eP* **P 08 14 51.1 +0.3**
BTLS *e*S **S 08 24 01.8 +3.5**
BTLS Baital 70.07 322*eP* **P 08 14 51.1 +0.3**
BTLS *e*S **S 08 24 01.8 +3.5**
LLD Lille Linde 70.11 4*i* P **P 08 14 50.6 -0.3**
LLD IAmb IAmb 08 14 51.7
comp=Z,123nm,0.7s
SATY Saty 70.13 318*eP* **P 08 14 51.5 +0.1**
SATY *e*S **S 08 24 02.8 +3.4**
SATY pmax pmax
comp=Z,53nm,1.0s
SATY Saty 70.13 318*eP* **P 08 14 51.5 +0.1**
comp=Z,53nm,1.0s
SATY *e*S **S 08 24 02.9 +3.5**
AKTO Aktyubinsk 70.14 335 LR LR 08 48 47.7
comp=Z,7μm,21.9s,baz=24,slow=39
KUU Kurty 70.21 320*eP* **P 08 14 51.9 +0.2**
KUU MLR MLR
comp=Z,5μm,19.0s
KUU Kurty 70.21 320*eP* **P 08 14 52.0 +0.2**
KUU LR LR 08 46 12.4
comp=Z,5μm,19.3s
HPK Haverah Park 70.32 13*eP* **P 08 14 52.7 +0.5**
HPK IAmb IAmb 08 14 55.8
comp=Z,52nm,0.8s
DSB Dublin 70.34 16 P **P 08 14 52.6 +0.3**
DSB Dublin 70.34 16 P **P 08 14 52.8 +0.4**
DSB Dublin 70.34 16 P **P 08 14 52.5 +0.2**
DSB Dublin 70.34 16 P **P 08 14 53.3 +1.0**
BSD Bornholm Skovb 70.42 2*i* P **P 08 14 52.3 -0.5**
BSD IAmb IAmb 08 14 54.4
comp=Z,47nm,0.6s
BSD IAMs_20 IAMs_20 08 54 30.5
comp=Z,3μm,17.8s
KRVT Keravat (AS076 70.43 230 LR LR 08 41 35.3
comp=Z,676nm,20.5s,baz=300,slow=32
BELG Belogornoye 70.53 342 LR LR 08 51 22.4
comp=Z,6μm,18.0s,baz=23,slow=40
BELG Belogornoye 70.53 342*c i*P **P 08 14 52.5 -1.0**
BELG pmax pmax
comp=Z,48nm,0.8s
MDOK Medeo 70.56 319*eP* **P 08 14 54.2 +0.1**
MDOK *e*S **S 08 24 07.7 +3.2**
MDOK Medeo 70.56 319*eP* **P 08 14 54.2 +0.1**
MDOK *e*S **S 08 24 07.7 +3.2**
MDOK LR LR 08 46 25.0
AAA Alma-Ata 70.58 319*eP* **P 08 14 54.3 +0.2**
AAA pmax pmax
comp=Z,64nm,0.9s
AAA MLR MLR
comp=Z,12μm,18.0s
AAA Alma-Ata 70.58 319*eP* **P 08 14 54.3 +0.2**
comp=Z,64nm,0.9s
AAA LR LR 08 46 28.6
comp=Z,12μm,17.9s
PRZ Przheval'sk 70.62 317 P **P 08 14 55.8 +1.3**
PRZ Przheval'sk 70.62 317 IAmb IAmb 08 15 28.3
comp=Z,230nm,1.4s
TNSS Tian-Shan 70.71 319*eP* **P 08 14 55.1 -0.2**
TNSS Tian-Shan 70.71 319*eP* **P 08 14 55.1 -0.2**
AB31 Akbulak array 70.72 333*i* P **P 08 14 54.7 -0.1**
AB31 pmax pmax
comp=Z,67nm,0.8s
AB31 Akbulak array 70.72 333 IAmb IAmb 08 15 34.7
comp=Z,85nm,0.8s
ABKAR Akbulak array 70.72 333 P **P 08 14 54.9 +0.1**
MNK Minsk 70.82 354*i* P **P 08 14 54.8 -0.4**
comp=E,135nm,0.9s
MNK *i* P **P 08 14 54.8 -0.4**
comp=N,51nm,0.8s
MNK *i* P **P 08 14 54.8 -0.4**
comp=Z,314nm,0.9s,baz=5.6
MNK *i* PP **PP 08 17 32.6 +0.9**
MNK *i* PPP PPP 08 19 15.0
MNK *i*S **S 08 24 09.6 +2.8**
MNK *i*SS **SS 08 28 43.0 +4.7**
MNK *i*SSS SSS 08 32 03.2
MNK *i*LQ LQ 08 39 39.3
MNK Minsk 70.82 354*i* P **P 08 14 54.8 -0.4**
MNK *i* 08 17 32.6
MNK *i* PPP PPP 08 19 14.9
MNK *i*S **S 08 24 09.5 +2.8**
MNK *i*SS **SS 08 28 42.9 +4.7**
MNK pmax pmax
comp=Z,314nm,0.9s
MNK pmax pmax
comp=E,135nm,0.9s
MNK pmax pmax
comp=N,51nm,0.8s
VAL Valentia 70.94 19 P **P 08 14 56.6 +0.7**
VAL Valentia 70.94 19 P **P 08 14 56.7 +0.7**
VAL Valentia 70.94 19 P **P 08 14 56.8 +0.8**
RGN Rugen 70.94 3*eP* **P 08 14 57.1 +1.1**
comp=N,445nm,1.1s,baz=356,slow=5.8
LMK Market Rasen 70.97 12*eP* **P 08 14 56.0 -0.2**
HLG Helgoland 71.03 7*eP* **P 08 14 57.2 +0.7**
comp=N,285nm,0.9s,baz=356,slow=5.8
STNC Stoke 71.09 13 P **P 08 14 58.0 +1.1**
STNC Stoke 71.09 13*eP* **P 08 14 57.3 +0.4**
STNC IAmb IAmb 08 14 59.6
comp=Z,111nm,0.8s
SIUN Universidad Ur 71.10 93 IAmb IAmb 08 15 09.7
comp=Z,114nm,1.1s
IWEX Carrickbyrne, 71.12 16 P **P 08 14 57.3 +0.2**
IWEX Carrickbyrne, 71.12 16 P **P 08 14 57.0 -0.1**
FOEL Foel Wylfa 71.16 14 P **P 08 14 57.9 +0.6**
FOEL Foel Wylfa 71.16 14*eP* **P 08 14 57.4 +0.1**
FOEL IAmb IAmb 08 15 01.7
comp=Z,129nm,0.8s
SGDS Sogindy 71.22 320⇑*i*P **P 08 14 58.2 +0.2**
SGDS *e*S **S 08 24 15.8 +3.8**
TKM2 Tokmak 2 71.32 320 P **P 08 14 59.5 +0.7**
SNR=45
WUS Wushi 71.38 316 IAmb IAmb 08 15 00.5
comp=Z,85nm,0.7s
WUS IAMs_20 IAMs_20 08 49 14.9
comp=Z,4μm,19.0s
WUS Wushi 71.38 316 P **P 08 14 59.5 +0.5**
WUS pP **pP 08 15 09.6 -1.6**
KDJ Kajisay 71.39 318 P **P 08 14 59.9 +0.7**
BSEG Bad Segeberg 71.42 5 P **P 08 14 59.9 +1.0**
BSEG Bad Segeberg 71.42 5*eP* **P 08 14 59.8 +0.9**
comp=Z,132nm,1.1s,baz=356,slow=5.8
BSEG *ep*P **sP 08 15 15.2 -0.4**
BSEG Bad Segeberg 71.42 5 P **P 08 14 59.9 +1.0**
USP Ospenovka 71.43 320 P **P 08 14 59.9 +0.6**
SNR=38
TARG Taragay, Kyrgy 71.49 317 P **P 08 15 00.7 +0.6**
TARG Taragay, Kyrgy 71.49 317 P **P 08 15 00.7 +0.6**
SUW Suwalki 71.51 357*eP* **P 08 14 58.9 -0.5**
SUW *e*L L 08 42 04.7
comp=Z,5μm,27.9s
CWF Charnwood Fore 71.56 13*eP* **P 08 15 00.1 +0.4**
CWF IAmb IAmb 08 15 02.1
comp=Z,50nm,0.9s
BOOM Boomskoye usch 71.56 319 IAmb IAmb 08 15 01.9
comp=Z,127nm,0.6s
BOOM Boomskoye usch 71.56 319 P **P 08 15 01.1 +0.9**
HLM1 Long Mynd 71.56 14*eP* **P 08 14 59.2 -0.6**
HLM1 IAmb IAmb 08 15 03.6
comp=Z,21nm,0.7s
CHMS Chumysh 71.57 320 P **P 08 15 00.8 +0.7**
SNR=41
BOAB BOACO BROADBAN 71.60 94 P **P 08 14 60.0 -0.5**
ULHL Ulahol 71.66 319 P **P 08 15 01.5 +0.7**
SNR=44
LPSR Galich'ya Gora 71.68 347*eP* **P 08 14 59.4 -1.1**
LPSR pmax pmax
comp=Z,174nm,0.7s
CVJ Coleyville 71.71 84*i* P **P 08 15 00.6 -0.6**
FRU1 Bishkek 71.78 320 IAmb IAmb 08 15 04.3
comp=Z,228nm,1.0s
HNR Honiara 71.79 221 LR LR 08 43 21.9
comp=Z,127nm,19.3s,baz=96,slow=33
KBK Karagaybulak 71.79 320 P **P 08 15 02.5 +0.9**
SNR=41
WACR West Acre 71.81 12 P **P 08 15 02.1 +0.9**
WACR West Acre 71.81 12*eP* **P 08 15 01.5 +0.3**
WACR IAmb IAmb 08 15 03.8
comp=Z,268nm,0.9s
RSBS Rosebush, Pemb 71.85 15*eP* **P 08 15 01.0 -0.5**

RSBS IAmb IAmb 08 15 05.7
comp=Z,61nm,0.7s
MCJ Malvern 71.86 85 *i* P **P** **08 14 59.5 -2.6**
BNJ Bonny Gate 71.97 84 ⇓*i* P **P** **08 15 04.8 +2.0**
AAK Ala-Archa 71.98 320 LR LR 08 49 24.3
comp=Z,21µm,18.5s,baz=34,slow=38
AAK Ala-Archa 71.98 320 P **P** **08 15 03.4 +0.7**
SNR=56
AAK Ala-Archa 71.98 320 P **P** **08 15 02.7 +0.1**
AAK Ala-Archa 71.98 320 *i* P **P** **08 15 03.0 +0.3**
AAK pmax pmax
comp=Z,107nm,0.9s
AAK MLR MLR
comp=Z,18µm,17.0s
AAK Ala-Archa 71.98 320 P **P** **08 15 03.3 +0.7**
AAK IAmb IAmb 08 15 05.2
comp=Z,90nm,0.8s
AAK Ala-Archa 71.98 320 P **P** **08 15 02.7 +0.1**
AAK S **S** **08 24 23.4 +2.5**
AAK Ala-Archa 71.98 320 P **P** **08 15 03.5 +0.7**
AAK Ala-Archa 71.98 320 P **P** **08 15 03.5 +0.9**
LNIZ Loeckhnitz 72.02 3 P **P** **08 15 01.9 -0.5**
MCH1 Michaelchurch 72.06 14 *eP* **P** **08 15 02.7 0.0**
MCH1 IAmb IAmb 08 15 05.1
comp=Z,41nm,0.8s
MASC Masc 72.06 80 P **P** **08 15 03.5 +0.3**
EKS2 Erkin-Say 72.22 321 P **P** **08 15 04.9 +0.8**
SNR=63
MONM Monmouth 72.24 14 *eP* **P** **08 15 03.4 -0.4**
MONM IAmb IAmb 08 15 09.1
comp=Z,38nm,0.8s
STH Stony Hill 72.24 84 ⇓*i* P **P** **08 15 04.2 -0.2**
STH ⇑*i* P **P** **08 15 04.4 0.0**
GWJ Greenwich 72.29 84 ⇓*i* P **P** **08 15 04.4 -0.4**
GWJ *i* P **P** **08 15 04.7 -0.1**
UCH Uchtor 72.32 320 P **P** **08 15 07.9 +2.8**
SNR=11
STRD Stroud 72.39 13 *eP* **P** **08 15 04.9 +0.2**
STRD IAmb IAmb 08 15 06.3
comp=Z,86nm,0.6s
GORT1 Trebel 72.42 5 *eP* **P** **08 15 05.8 +1.0**
comp=Z,151nm,1.1s,baz=356,slow=5.8
NRN Naryn 72.44 318 IAmb IAmb 08 15 08.6
comp=Z,98nm,0.8s
VORR Voronezh 72.56 347 *eP* **P** **08 15 04.5 -1.2**
VORR pmax pmax
comp=Z,108nm,0.4s
RETH Rethem/Aller, 72.56 6 *eP* **P** **08 15 06.5 +0.8**
comp=Z,162nm,1.3s,baz=356,slow=5.8
RETH Rethem/Aller, 72.56 6 P **P** **08 15 06.7 +1.0**
DGTI Dogotuki 72.63 199 P **P** **08 15 09.0 +2.5**
PZH PanZhiHua 72.65 291 P **P** **08 15 06.8 0.0**
PZH pP **pP** **08 15 20.0 +1.0**
PZH PP **PP** **08 17 47.5 -0.8**
PZH S **S** **08 24 26.8 -2.1**
PZH sS **sS** **08 24 48.8 -0.4**
PZH pmax pmax
comp=Z,90nm,1.0s
PZH pmax pmax
comp=Z,2µm,5.4s
PZH L L
comp=Z,4µm,20.2s
PZH L L
comp=Z,3µm,20.0s
PZH L L
comp=Z,6µm,20.4s
VRH Novokhopyorsk 72.66 345 *eP* **P** **08 15 05.1 -1.2**
VRH pmax pmax
comp=Z,157nm,0.6s
ASAI AK-SAY(Kyrgyzs 72.69 318 P **P** **08 15 07.6 +0.5**
PPT Papeete 72.74 168 LR LR 08 39 55.5
comp=Z,7µm,21.8s,baz=357,slow=30
PPTF Pamatai, Papee 72.77 168 IAMs_20 IAMs_20 08 38 59.8
comp=Z,8µm,22.0s
HTL Hartland 72.82 15 P **P** **08 15 08.4 +1.2**
IBBN Ibbenburen 72.89 7 *eP* **P** **08 15 08.5 +0.9**
comp=Z,236nm,1.0s,baz=356,slow=5.8
IBBN Ibbenburen 72.89 7 P **P** **08 15 08.5 +0.9**
DZA Taraz 72.90 322 *eP* **P** **08 15 08.1 +0.1**
DZA Taraz 72.90 322 *eP* **P** **08 15 08.1 +0.1**
WOL Wolverton 72.97 13 *eP* **P** **08 15 08.2 +0.1**
WOL IAmb IAmb 08 15 10.7
comp=Z,78nm,0.8s
KKAR Karatay Array 73.00 323 P **P** **08 15 08.5 -0.1**
KKAR Karatay Array 73.00 323 P **P** **08 15 08.5 -0.1**
VSR Storozhevoye 73.01 347 *eP* **P** **08 15 07.4 -1.0**
VSR pmax pmax
comp=Z,170nm,0.5s
VSR pmax pmax
comp=Z,160nm,0.4s
VSR MLR MLR
comp=Z,10µm,21.0s
RUE Ruedersdorf 73.02 3 *eP* **P** **08 15 09.3 +0.8**
comp=Z,283nm,1.1s,baz=356,slow=5.8
RUE Ruedersdorf 73.02 3 P **P** **08 15 09.3 +0.8**
BLUN Bluefields 73.05 93 P **P** **08 15 09.4 +0.2**
FLTG Flechtingen 73.07 5 *eP* **P** **08 15 08.5 -0.3**
comp=Z,134nm,1.1s,baz=356,slow=5.8
WTSB Winterswijk 73.15 8 P **P** **08 15 09.9 +0.6**
KMI2 Kunming 73.18 290 ⇑P **P** **08 15 10.0 -0.1**
KMI2 pP pP 08 15 23.3 +1.0
KMI2 PP **PP** **08 17 52.5 -0.5**
KMI2 S **S** **08 24 29.5 -5.7**
KMI2 pmax pmax
comp=Z,35nm,0.9s
KMI2 pmax pmax
comp=Z,2µm,9.9s
KMI2 L L
comp=Z,4µm,20.9s
KMI2 L L
comp=Z,5µm,20.0s
KMI2 L L
comp=Z,6µm,22.8s
VORD Divnogorie 73.23 347 *eP* **P** **08 15 08.1 -1.6**
VORD pmax pmax
comp=Z,230nm,0.7s
VORD pmax pmax
comp=Z,160nm,0.5s
VORD MLR MLR
comp=Z,3µm,18.0s
ASSE Asse, Remlinge 73.24 5 *eP* **P** **08 15 10.4 +0.7**
comp=Z,163nm,1.2s,baz=356,slow=5.8
ASSE Asse, Remlinge 73.24 5 P **P** **08 15 10.4 +0.7**
BRLS Boroldav 73.30 323 *eP* **P** **08 15 11.8 +1.4**
BRLS Boroldav 73.30 323 *eP* **P** **08 15 11.8 +1.4**
R9F13 Warsaw-Wawer 73.35 358 *eP* **P** **08 15 10.7 +0.3**
R9F13 *ep*P **PcP** **08 15 24.9 -1.6**
R9F13 *eS* **S** **08 24 35.7 -0.1**
DYA Yadsworthy 73.44 15 *eP* **P** **08 15 10.9 -0.1**
DYA IAmb IAmb 08 15 13.2
comp=Z,66nm,0.9s
OPLO Oploo 73.45 8 P **P** **08 15 12.2 +1.2**
CCA1 Carnmenellis 73.49 16 P **P** **08 15 11.5 +0.3**
CCA1 P **P** **08 15 11.5 +0.3**
CCA1 Carnmenellis 73.49 16 *eP* **P** **08 15 11.3 0.0**
CCA1 IAmb IAmb 08 15 15.1
comp=Z,62nm,0.7s
JUD3 Juan Diaz 3 73.51 96 IAmb IAmb 08 15 23.9
comp=Z,182nm,1.6s
CLZ Clausthal 73.51 5 *eP* **P** **08 15 12.4 +0.9**
comp=Z,197nm,1.0s,baz=356,slow=5.8
CLZ Clausthal 73.51 5 P **P** **08 15 12.5 +1.0**
HMNX Herstmonceux 73.60 12 P **P** **08 15 13.0 +1.1**
ARK Arkit 73.63 321 P **P** **08 15 12.9 +0.5**
BUG Bochum--Univer 73.71 7 P **P** **08 15 13.0 +0.5**
BUG Bochum--Univer 73.71 7 *eP* **P** **08 15 13.0 +0.5**
comp=Z,172nm,0.9s,baz=356,slow=5.8
BUG Bochum--Univer 73.71 7 P **P** **08 15 13.0 +0.5**
BEL Belsk 73.74 359 *eP* **P** **08 15 12.4 -0.3**
BEL *eL* L 08 44 24.3
comp=Z,7µm,25.7s
BEL Belsk 73.74 359 P **P** **08 15 13.4 +0.7**
JTS Las Juntas de 73.74 95 LR LR 08 48 39.9
comp=Z,2µm,21.1s,baz=330,slow=36
JTS Las Juntas de 73.74 95 P **P** **08 15 17.2 +3.9**
JTS Las Juntas de 73.74 95 P **P** **08 15 17.2 +3.9**
GTTG Gottingen 73.79 6 *eP* **P** **08 15 13.7 +0.8**
comp=Z,224nm,0.9s,baz=356,slow=5.8
GTTG Gottingen 73.79 6 P **P** **08 15 13.8 +0.8**
WIMM Wimmelburg 73.89 5 P **P** **08 15 14.0 +0.4**
RNPP9 Sopachiv 74.01 355 P **P** **08 15 13.7 -0.6**
CHM Chimkent 74.01 323 *eP* **P** **08 15 14.6 +0.1**
CHM pmax pmax
comp=Z,62nm,0.7s
CHM MLR MLR
comp=Z,4µm,15.0s
CHM Chimkent 74.01 323 *eP* **P** **08 15 14.7 +0.1**
comp=Z,62nm,0.7s
CHM LR LR 08 48 29.2
comp=Z,4µm,15.4s
IUG Iuzhnay 74.02 323*c i*P **P** **08 15 14.8 +0.1**
IUG pmax pmax
comp=Z,81nm,0.9s
IUG Iuzhnay 74.02 323 ⇑*i* P **P** **08 15 14.9 +0.2**
comp=Z,81nm,0.9s
KASTN Kahler Asten 74.03 7 *eP* **P** **08 15 14.9 +0.5**
comp=Z,82nm,1.0s,baz=356,slow=5.8
QIZ Qiongzhong 74.07 280 P **P** **08 15 15.9 +0.7**
QIZ Qiongzhong 74.07 280 P **P** **08 15 15.5 +0.3**
QIZ S **S** **08 24 45.0 +0.1**
QIZ pmax pmax
comp=Z,84nm,0.9s
QIZ pmax pmax
comp=Z,1µm,5.1s
QIZ L L
comp=Z,2µm,20.6s
QIZ L L
comp=Z,2µm,20.6s
QIZ L L
comp=Z,4µm,22.0s
RNPP8 Varash 74.08 355 P **P** **08 15 14.4 -0.3**
RNPP2 Kostyukhnivka 74.09 355 P **P** **08 15 14.4 -0.4**
UCC Uccle 74.10 9 P **P** **08 15 15.2 +0.4**
UCC Uccle 74.10 9 IAmb IAmb 08 15 33.5
comp=Z,85nm,0.8s
UCC Uccle 74.10 9 *dP* **P** **08 15 14.9 +0.1**
comp=Z,80nm,0.9s
UCC Uccle 74.10 9 P **P** **08 15 15.2 +0.4**
CLL Collm 74.17 4 *i* P **P** **08 15 15.0 -0.2**
CLL *i* *PP **PcP** **08 15 30.4 +0.3**
CLL *eS* **S** **08 24 45.0 -0.1**
CLL pmax pmax
comp=Z,86nm,0.9s
CLL Collm 74.17 4 IAmb IAmb 08 15 32.1
comp=Z,165nm,1.3s
CLL Collm 74.17 4 *eP* **P** **08 15 15.4 +0.2**
comp=Z,131nm,1.2s,baz=356,slow=5.8
CLL Collm 74.17 4 P **P** **08 15 14.7 -0.5**
comp=Z,2µmcomp=Z,93nm,0.9s
CLL Collm 74.17 4 *i* P **P** **08 15 15.0 -0.2**
comp=Z,86nm,0.9s
CLL *i* sP **PcP** **08 15 30.4 +0.3**
comp=Z,117nm,1.1s
CLL *eP*P **PP** **08 18 03.0 +2.7**
CLL *eS* **S** **08 24 45.0 -0.1**
CLL *eP*S 08 25 26.0
CLL *eSS* SS 08 29 42.0 +13
CLL *eSSS* SSS 08 33 06.0
CLL *ex* x 08 33 48.0
CLL *eSSSS* 08 34 42.0
RNPP5 Staryi Chortor 74.19 355 P **P** **08 15 14.6 -0.7**
NEUB Neuenburg 74.22 5 *eP* **P** **08 15 15.9 +0.5**
comp=Z,168nm,0.8s,baz=356,slow=5.8
NEUB Neuenburg 74.22 5 P **P** **08 15 16.0 +0.5**
HGN Heimansgroeve 74.28 8 P **P** **08 15 16.4 +0.6**
JAY Jayapura 74.30 242 P **P** **08 15 15.8 -0.7**
comp=Z,68nm,0.9s,baz=23,slow=5.3,SNR=16
JAY LR LR 08 46 40.8
comp=Z,1µm,18.8s,baz=20,slow=35
comp=Z,68nm,0.9s
MSVF Nonsavu 74.36 200 LR LR 08 41 21.7
comp=Z,8µm,21.4s,baz=14,slow=30
MSVF Nonsavu 74.36 200 P **P** **08 15 19.7 +3.0**
MSVF Nonsavu 74.36 200 IAMs_20 IAMs_20 08 40 27.5
comp=Z,9µm,22.0s
MI28 Mi28,Pidlybu 74.39 354 P **P** **08 15 14.9 -1.6**
BSTI Sart Tilman 74.42 9 *dP* **P** **08 15 17.3 +0.6**
comp=Z,29nm,0.6s
MEM Membach 74.44 8 *dP* **P** **08 15 16.9 +0.1**
comp=Z,104nm,1.0s
MEM Membach 74.44 8 P **P** **08 15 17.4 +0.6**
AK21 Malin Array Si 74.46 353 P **P** **08 15 15.9 -1.0**
HDC Heredia 74.46 95 *eP* **P** **08 15 18.0 +0.4**
AK23 Malin Array Si 74.47 353 P **P** **08 15 15.9 -1.1**
BTNL Ternell 74.47 8 *dP* **P** **08 15 17.4 +0.4**
comp=Z,62nm,1.1s
AK22 Malin Array Si 74.47 353 P **P** **08 15 16.0 -1.0**
UBBA Unterbreizbach 74.51 6 *eP* **P** **08 15 17.2 +0.1**
comp=Z,194nm,1.7s,baz=356,slow=5.8
UBBA Unterbreizbach 74.51 6 P **P** **08 15 17.6 +0.4**
AKASG Malin Array Be 74.52 353 P **P** **08 15 16.8 -0.5**
comp=Z,102nm,0.5s,baz=11,slow=5.9,SNR=134
AKASG LR LR 08 48 12.5
comp=Z,6µm,21.8s,baz=18,slow=36
comp=Z,102nm,0.5s
AKASG Malin Array Be 74.52 353 *i* P **P** **08 15 16.2 -1.1**
AKASG pmax pmax
comp=Z,106nm,0.4s
AKASG Malin Array Be 74.52 353 P **P** **08 15 16.5 -0.8**
AKASG IAmb IAmb 08 15 33.2
comp=Z,229nm,0.9s
AKBB Malin Array Si 74.52 353*c i*P **P** **08 15 16.1 -1.2**
AKBB pmax pmax
comp=Z,190nm,0.6s
KIEV Kiev 74.53 353 ⇓P **P** **08 15 16.8 -0.6**
KIEV Kiev 74.53 353 P **P** **08 15 16.1 -1.2**
KIEV Kiev 74.53 353 P **P** **08 15 16.7 -0.6**
KIEV Kiev 74.53 353 P **P** **08 15 16.7 -0.6**
KIEV Kiev 74.53 353 IAMs_20 IAMs_20 08 53 46.8
comp=Z,7µm,19.0s
KIEV Kiev 74.53 353 P **P** **08 15 16.2 -1.2**
comp=Z,15µmcomp=Z,1µm,0.9s
KIEV Kiev 74.53 353 P **P** **08 15 16.4 -0.9**
KIEV Kiev 74.53 353 P **P** **08 15 16.4 -0.9**
AK01 Malin Array Si 74.53 353 P **P** **08 15 16.3 -1.0**
AK15 Malin Array Si 74.54 353 P **P** **08 15 16.5 -0.9**
BCLA Clavier 74.56 9 *dP* **P** **08 15 17.6 +0.1**
comp=Z,53nm,0.8s
KHAM Kharkiv 74.57 348 P **P** **08 15 17.0 -0.6**
BGES Gesves 74.58 9 *dP* **P** **08 15 17.8 +0.2**
comp=Z,90nm,0.8s
DAV Davao City (W) 74.58 260 LR LR 08 43 18.7
comp=Z,1µm,21.2s,baz=41,slow=32
DAV Davao City (W) 74.58 260 P **P** **08 15 17.0 -1.1**
KSH2 Kashi 74.58 318 P **P** **08 15 18.8 +0.7**
KSH2 PcP **sP** **08 15 33.8 -1.1**
KSH2 S **S** **08 24 45.5 -5.0**
KSH2 pmax pmax
comp=Z,220nm,0.8s
KSH2 pmax pmax
comp=Z,2µm,7.7s
BMRD Maredsous 74.63 9 *dP* **P** **08 15 18.3 +0.4**
comp=Z,84nm,1.2s
BRG Berggiesshubel 74.64 3 P **P** **08 15 18.2 +0.2**
BRG Berggiesshubel 74.64 3 *eP* **P** **08 15 18.2 +0.2**
comp=Z,129nm,1.2s,baz=356,slow=5.8
BRG Berggiesshubel 74.64 3 P **P** **08 15 18.2 +0.2**
BRG Berggiesshubel 74.64 3 ⇑*i* P **P** **08 15 18.3 +0.2**
BRG Amp 08 15 20.9
comp=Z,83nm,1.0s
BRG pP **sP** **08 15 34.0 -0.8**
BRG Amp 08 15 36.5
comp=Z,130nm,1.2s
BRG Berggiesshubel 74.64 3 PP PP 08 18 07.0 +2.7
BRG Berggiesshubel 74.64 3 S **S** **08 24 52.0 +1.6**
BRG Berggiesshubel 74.64 3 SS SS 08 29 37.0 +0.4
GENI Genyem 74.64 242 P **P** **08 15 20.5 +2.1**
GENI Genyem 74.64 242 P **P** **08 15 19.9 +1.5**
comp=Z,6µmcomp=Z,5µmcomp=Z,150nm,0.8s
GENI Genyem 74.64 242 P **P** **08 15 19.5 +1.1**
SC01 Santiago de lo 74.65 78 IAmb IAmb 08 15 31.8
comp=Z,293nm,1.1s
AK07 Malin Array Si 74.67 353 P **P** **08 15 17.1 -1.1**
SDDR Presa de Saban 74.69 79 IAmb IAmb 08 15 31.0
comp=Z,170nm,1.0s
SDDR IAMs_20 IAMs_20 08 47 20.6
comp=Z,8µm,21.0s
SDDR Presa de Saban 74.69 79 *i* P **P** **08 15 18.4 -0.4**
SDDR Presa de Saban 74.69 79 P **P** **08 15 18.8 0.0**
BHOU Houvegnez 74.69 8 *dP* **P** **08 15 18.8 +0.5**
comp=Z,40nm,1.0s
KSP Ksiaz 74.72 2 *eP* **P** **08 15 18.7 +0.2**
KSP *eL* L 08 43 53.5
comp=Z,3µm,29.6s
KSP Ksiaz 74.72 2 P **P** **08 15 18.1 -0.4**
comp=Z,2µmcomp=Z,94nm,0.9s
MOX Moxa 74.77 5 P **P** **08 15 19.2 +0.4**
MOX Moxa 74.77 5 *eP* **P** **08 15 19.0 +0.2**
comp=Z,141nm,0.9s,baz=356,slow=5.8
MOX *eL* L 08 57 29.6
comp=Z,2µm,21.1s
MOX Moxa 74.77 5 P **P** **08 15 19.2 +0.4**
BAIF Baives 74.82 10 *eP* **P** **08 15 19.5 +0.5**
BAIF pmax pmax
comp=Z,57nm,0.9s
DOU Dourbes 74.82 9 *dP* **P** **08 15 19.1 0.0**
comp=Z,58nm,1.1s
RCHB Rochefort 74.82 9 *dP* **P** **08 15 19.1 +0.2**
comp=Z,79nm,0.8s
RCHB Rochefort 74.82 9 P **P** **08 15 19.2 +0.2**
GIVF Givet 74.83 9 *eP* **P** **08 15 19.3 +0.2**
GIVF pmax pmax
comp=Z,16nm,0.8s
JSA Saint Aubin 74.92 14 *eP* **P** **08 15 19.1 -0.4**
JSA IAmb IAmb 08 15 20.9
comp=Z,67nm,0.7s
PLN Plauen 74.96 4 *eP* **P** **08 15 20.3 +0.5**
comp=Z,20nm,0.9s,baz=356,slow=5.8
RICC Richard 74.97 3 *eP* **P** **08 15 20.8 +0.9**
CHVC Chvalec 74.97 2 *eP* **P** **08 15 20.4 +0.4**
CHVC Chvalec 74.97 2 *eP* **P** **08 15 20.4 +0.4**
PVCC Panska Ves 75.00 3 *eP* **P** **08 15 20.9 +0.8**
PVCC Panska Ves 75.00 3 *eP* **P** **08 15 20.9 +0.8**
TNS Taunus Mts 75.01 7 P **P** **08 15 20.9 +0.7**
TNS Taunus Mts 75.01 7 *eP* **P** **08 15 20.8 +0.6**
comp=Z,133nm,1.0s,baz=356,slow=5.8
TNS Taunus Mts 75.01 7 P **P** **08 15 20.9 +0.7**
OSTC Ostas 75.01 2 *eP* **P** **08 15 20.7 +0.5**
OSTC MLR MLR
comp=Z,4µm,18.4s
OSTC Ostas 75.01 2 *eP* **P** **08 15 20.7 +0.5**
OSTC AMS AMS 08 55 00.0
comp=Z,4µm,18.4s
TANN Tannenbergstha 75.04 4 *eP* **P** **08 15 20.9 +0.5**
comp=Z,167nm,1.5s,baz=356,slow=5.8
TANN Tannenbergstha 75.04 4 P **P** **08 15 20.7 +0.4**
UPC Upice 75.06 2 *eP* **P** **08 15 21.0 +0.6**
UPC MLR MLR
comp=Z,6µm,19.9s
UPC Upice 75.06 2 *eP* **P** **08 15 21.0 +0.6**
UPC AMS AMS 08 58 00.0
comp=Z,6µm,19.9s
DPC Dobruska-Polom 75.22 2 *eP* **P** **08 15 22.0 +0.6**
DPC *eS* **S** **08 24 54.3 -2.7**
DPC MLR MLR
comp=Z,4µm,17.7s
DPC Dobruska-Polom 75.22 2 *eP* **P** **08 15 22.0 +0.6**
DPC *eS* **S** **08 24 54.3 -2.7**
DPC *ex* x 08 30 21.5
DPC AMS AMS 08 55 00.0
comp=Z,4µm,17.7s
DPC Dobruska-Polom 75.22 2 P **P** **08 15 21.5 +0.1**
comp=Z,2µmcomp=Z,106nm,1.0s
DPC Dobruska-Polom 75.22 2 P **P** **08 15 21.7 +0.3**
NKC Novy Kostel 75.22 4 *eP* **P** **08 15 21.9 +0.5**
NKC Novy Kostel 75.22 4 *eP* **P** **08 15 21.9 +0.5**
OJC Ojcow 75.36 359 *eP* **P** **08 15 21.9 -0.3**
OJC *eL* L 08 45 25.2
comp=Z,6µm,25.5s
OJC Ojcow 75.36 359 P **P** **08 15 22.6 +0.4**
OJC Ojcow 75.36 359 P **P** **08 15 22.6 +0.4**
WLF Walferdange 75.39 8 P **P** **08 15 23.3 +1.0**
WLF Walferdange 75.39 8 IAmb IAmb 08 15 40.0
comp=Z,167nm,1.0s
WLF IAMs_20 IAMs_20 08 51 51.4
comp=Z,4µm,21.0s
WLF Walferdange 75.39 8 *dP* **P** **08 15 23.2 +1.0**
comp=Z,102nm,1.0s
WLF Walferdange 75.39 8 *eP* **P** **08 15 23.3 +1.0**
comp=Z,178nm,1.0s,baz=356,slow=5.8
WLF Walferdange 75.39 8 P **P** **08 15 23.4 +1.1**
LUBAR Lubar, Ukraine 75.40 354 P **P** **08 15 21.4 -0.9**
KRLC Kraliky 75.50 1 *eP* **P** **08 15 23.2 +0.2**
KRLC Kraliky 75.50 1 *eP* **P** **08 15 23.2 +0.2**
PRU Pruhonice 75.54 3 *eP* **P** **08 15 23.7 +0.5**
PRU *eS* **S** **08 25 01.5 +1.1**
PRU pmax pmax
comp=Z,28nm,0.7s
PRU MLR MLR
comp=Z,5µm,18.7s
PRU Pruhonice 75.54 3 *eP* **P** **08 15 23.7 +0.5**
comp=Z,28nm,0.7s
PRU *eS* **S** **08 25 01.5 +1.1**
PRU *ex* x 08 30 34.3
PRU AMS AMS 08 54 40.0
comp=Z,5µm,18.7s
PRU Pruhonice 75.54 3 P **P** **08 15 23.6 +0.4**
TNCH TengChong 75.56 293 P **P** **08 15 24.5 +0.6**
TNCH sP sP 08 15 42.0 +1.2
TNCH S **S** **08 25 04.3 +2.6**
TNCH pmax pmax
comp=Z,64nm,0.2s
TNCH pmax pmax
comp=Z,880nm,2.7s
TNCH L L
comp=Z,4µm,21.0s
TNCH L L
comp=Z,3µm,17.3s
TNCH L L
comp=Z,9µm,20.3s
FLN La Foliniere 75.56 13 *eP* **P** **08 15 23.3 0.0**
FLN pmax pmax
comp=Z,52nm,0.9s
LSA Lhasa 75.57 301 IAmb IAmb 08 15 29.0
comp=Z,165nm,0.9s
LSA Lhasa 75.57 301 ⇑*i* P **P** **08 15 24.0 -0.3**
LSA S **S** **08 24 54.3 -8.0**
LSA pmax pmax
comp=Z,150nm,0.7s
LSA L L
comp=Z,7µm,18.0s
LSA L L
comp=Z,4µm,18.0s
LSA L L
comp=Z,10µm,17.6s
LSA Lhasa 75.57 301 P **P** **08 15 25.4 +1.1**
BAKI Biak 75.58 246 P **P** **08 15 25.3 +1.5**
comp=Z,7µmcomp=Z,3µmcomp=Z,106nm,1.3s
BTK Batken 75.58 321 IAmb IAmb 08 16 00.7
comp=Z,93nm,0.9s
SLVN Son La 75.58 286 P **P** **08 15 24.3 +0.4**
SLVN Son La 75.58 286 IAmb IAmb 08 15 41.1
comp=Z,131nm,0.9s
SLVN IAMs_20 IAMs_20 08 50 04.5
comp=Z,4µm,20.0s
ROSF Rostrenen 75.59 15 *eP* **P** **08 15 24.0 +0.5**
ROSF pmax pmax
comp=Z,41nm,0.8s
GRA3 Grafenberg Arr 75.64 5 P **P** **08 15 24.5 +0.8**
STEB Steborice 75.65 1 *eP* **P** **08 15 24.2 +0.4**
RAR Rarotonga 75.69 179 LR LR 08 42 12.6
comp=Z,3µm,20.4s,baz=352,slow=30
GRA1 Grafenberg Arr 75.70 5 IAmb IAmb 08 15 41.8
comp=Z,160nm,1.0s
GRA1 Grafenberg Arr 75.70 5 P **P** **08 15 25.2 +1.0**
GRF Grafenberg Arr 75.70 5 P **P** **08 15 25.2 +1.0**
GRF Grafenberg Arr 75.70 5 *eP* **P** **08 15 25.0 +0.8**
comp=Z,88nm,1.2s,baz=356,slow=5.8
GRF *eL* L 08 48 01.0
comp=Z,2µm,21.9s
GRFO Grafenberg 75.70 5 P **P** **08 15 25.1 +1.0**
GRFO Grafenberg 75.70 5 P **P** **08 15 25.1 +1.0**
GRFO Grafenberg 75.70 5 P **P** **08 15 25.2 +1.0**
DRK Karamyk 75.72 320 IAmb IAmb 08 15 29.3
comp=Z,142nm,0.8s
GRA2 Grafenberg Arr 75.75 5 P **P** **08 15 25.4 +1.0**
OKC Ostrava-Krasne 75.75 0 *eP* **P** **08 15 24.8 +0.4**
OKC Ostrava-Krasne 75.75 0 *eP* **P** **08 15 24.8 +0.4**
OKC Ostrava-Krasne 75.75 0 P **P** **08 15 24.9 +0.4**
MORC Moravsky Berou 75.81 1 ⇑P **P** **08 15 25.2 +0.4**
MORC Moravsky Berou 75.81 1 P **P** **08 15 25.1 +0.4**
MORC Moravsky Berou 75.81 1 IAmb IAmb 08 16 34.1
comp=Z,107nm,0.7s
MORC Moravsky Berou 75.81 1 *eP* **P** **08 15 24.7 -0.1**
MORC *ep*P **sP** **08 15 40.5 -1.2**
MORC *eS* **S** **08 25 03.4 -0.1**
MORC Moravsky Berou 75.81 1 P **P** **08 15 25.1 +0.3**
GRR Gorron 75.88 13 *eP* **P** **08 15 24.8 -0.3**
GRR pmax pmax
comp=Z,35nm,0.5s
GRB4 Grafenberg Arr 75.94 5 P **P** **08 15 26.2 +0.7**
QUIF Quistinic 76.01 15 *eP* **P** **08 15 26.2 +0.3**
QUIF pmax pmax
comp=Z,58nm,1.3s

GRB1 Grafenberg Arr 76.02 5 P **P 08 15 26.0 0.0**
GRB1 Grafenberg Arr 76.02 5 P **P 08 15 27.0 +1.0**
ZVC Zvikov 76.08 3 *eP* **P 08 15 26.9 +0.6**
ZVC *eS* **S 08 25 03.4 -3.0**
ZVC AMS AMS 08 55 40.0
comp=Z,6µm,20.7s
GRB3 Grafenberg Arr 76.08 5 P **P 08 15 27.2 +0.9**
GRB2 Grafenberg Arr 76.15 5 P **P 08 15 27.5 +0.8**
STHS Stebnicka Huta 76.15 358 *eP* **P 08 15 26.8 +0.1**
STHS pmax pmax
comp=Z,82nm,0.7s
STHS Stebnicka Huta 76.15 358 *eP* **P 08 15 26.8 +0.1**
NIE Niedzica 76.16 359 *eP* **P 08 15 27.6 +0.8**
NIE *eL* L 08 46 01.4
comp=Z,3µm,25.5s
NIE Niedzica 76.16 359 P **P 08 15 27.2 +0.4**
comp=Z,794nmcomp=Z,36nm,1.1s
MAUC Maruska 76.22 1 *eP* **P 08 15 27.7 +0.6**
BRU2 Volcan 76.26 94 IAmb IAmb 08 15 40.5
comp=Z,263nm,1.5s
BRU2 Volcan 76.26 94 P **P 08 15 28.5 +0.6**
TREC Trest 76.26 2 P **P 08 15 27.1 -0.2**
VRAC Vranov 76.26 1 ⇓P **P 08 15 27.5 +0.1**
VRAC Vranov 76.26 1 P **P 08 15 27.6 +0.2**
VRAC Vranov 76.26 1 *eP* **P 08 15 27.6 +0.2**
VRAC *ep*P **sP 08 15 43.2 -1.1**
VRAC *eS* **S 08 25 08.8 +0.3**
VRAC Vranov 76.26 1 P **P 08 15 27.9 +0.5**
GRB5 Grafenberg Arr 76.31 5 P **P 08 15 28.3 +0.7**
GRC4 Grafenberg Arr 76.32 5 P **P 08 15 28.4 +0.7**
WET Wettzell 76.33 4 P **P 08 15 28.5 +0.8**
WET Wettzell 76.33 4 *eP* **P 08 15 28.5 +0.8**
comp=Z,189nm,1.4s,baz=356,slow=5.8
WET Wettzell 76.33 4 P **P 08 15 28.5 +0.8**
KHC Kasperske Hory 76.37 4 *eP* **P 08 15 28.7 +0.7**
KHC *e* 08 15 44.0
KHC *eS* **S 08 25 10.4 +0.7**
KHC pmax pmax
comp=Z,30nm,0.6s
KHC MLR MLR
comp=Z,7µm,23.2s
KHC Kasperske Hory 76.37 4 *eP* **P 08 15 28.7 +0.7**
comp=Z,30nm,0.6s
KHC *ex* x 08 15 44.0
KHC *eS* **S 08 25 10.4 +0.7**
KHC *ex* x 08 30 36.1
KHC AMS AMS 08 55 30.0
comp=Z,7µm,23.2s
KHC Kasperske Hory 76.37 4 P **P 08 15 28.3 +0.3**
comp=Z,3µmcomp=Z,152nm,1.1s
GRC1 Grafenberg Arr 76.41 5 P **P 08 15 28.8 +0.6**
GRC1 Grafenberg Arr 76.41 5 P **P 08 15 28.8 +0.6**
LANS Liptovska Anna 76.44 360 *eP* **P 08 15 29.0 +0.6**
LANS pmax pmax
comp=Z,38nm,0.7s
LANS Liptovska Anna 76.44 360 *eP* **P 08 15 29.0 +0.6**
STU Stuttgart 76.50 6 P **P 08 15 29.1 +0.4**
STU pmax pmax
comp=Z,369nm,1.1s
STU Stuttgart 76.50 6 IAmb IAmb 08 15 45.9
comp=Z,146nm,1.0s
STU Stuttgart 76.50 6 *eP* **P 08 15 29.1 +0.4**
comp=Z,328nm,1.0s,baz=356,slow=5.8
STU Stuttgart 76.50 6 P **P 08 15 29.3 +0.6**
KRUC Moravsky 76.51 2 P **P 08 15 28.7 0.0**
KRUC Moravsky 76.51 2 *eP* **P 08 15 28.9 +0.2**
KRUC *ep*P **sP 08 15 44.2 -1.4**
KRUC *eS* **S 08 25 10.8 -0.3**
KRUC Moravsky 76.51 2 P **P 08 15 29.1 +0.3**
GRC3 Grafenberg Arr 76.52 5 P **P 08 15 29.5 +0.7**
GRC2 Grafenberg Arr 76.53 5 P **P 08 15 29.5 +0.6**
KOLS Kolonicke sedl 76.61 358 *eP* **P 08 15 29.9 +0.6**
KOLS pmax pmax
comp=Z,31nm,0.9s
KOLS Kolonicke sedl 76.61 358 P **P 08 15 30.2 +0.9**
KOLS Kolonicke sedl 76.61 358 *eP* **P 08 15 29.9 +0.6**
MOKO MOKOCHONG 76.62 297⇑*iP* **P 08 15 30.4 +0.6**
CLF Chambon-Foret 76.62 11 IAMs_20 IAMs_20 08 51 00.1
comp=Z,4µm,21.0s
CLF Chambon-Foret 76.62 11 P **P 08 15 30.5 +1.2**
GEC2 GERESS Array S 76.66 3 P **P 08 15 30.1 +0.5**
GEC2 GERESS Array S 76.66 3 *eP* **P 08 15 30.2 +0.5**
comp=Z,91nm,1.1s,baz=356,slow=5.8
GERES GERESS Array B 76.66 3 P **P 08 15 29.6 -0.1**
comp=Z,57nm,0.9s,baz=347,slow=4.1,SNR=104
comp=Z,57nm,0.9s
GERES GERESS Array B 76.66 3 P **P 08 15 30.4 +0.7**
GERES GERESS Array B 76.66 3 P **P 08 15 30.4 +0.7**
CKRC Cesky Krumlov 76.70 3 *eP* **P 08 15 29.8 0.0**
CKRC MLR MLR
comp=Z,6µm,20.0s
CKRC Cesky Krumlov 76.70 3 *eP* **P 08 15 29.8 0.0**
CKRC AMS AMS 08 56 20.0
comp=Z,6µm,20.0s
CDF Champ du Feu 76.72 8 *eP* **P 08 15 30.3 +0.2**
CDF pmax pmax
comp=Z,48nm,0.9s
JAVC Velka Javorina 76.73 1 *eP* **P 08 15 31.3 +1.3**
JAVC *ep*P **sP 08 15 46.9 0.0**
JAVC Velka Javorina 76.73 1 P **P 08 15 31.6 +1.6**
KMPD K-Podol'skiy 76.82 355 P **P 08 15 29.2 -1.3**
BFO Black Forest 76.88 7 P **P 08 15 31.0 +0.1**
BFO pmax pmax
comp=Z,62nm,0.6s
BFO Black Forest 76.88 7 P **P 08 15 31.0 +0.1**
BFO IAmb IAmb 08 15 49.3
comp=Z,62nm,0.6s
BFO Black Forest 76.88 7 *eP* **P 08 15 31.3 +0.4**
comp=Z,67nm,1.0s,baz=356,slow=5.8
ECH Echery 76.91 8 P **P 08 15 31.4 +0.4**
ECH Echery 76.91 8 IAmb IAmb 08 15 48.8
comp=Z,126nm,0.8s
ECH Echery 76.91 8 P **P 08 15 31.4 +0.4**
UZHM Uzhgorod 76.92 358 P **P 08 15 31.0 0.0**
HAU Haudompre 77.05 9 *eP* **P 08 15 32.0 +0.2**
HAU pmax pmax
comp=Z,79nm,0.8s
SMOL Smolenice 77.07 1 *eP* **P 08 15 33.4 +1.5**
SMOL pmax pmax
comp=Z,30nm,0.8s
VYHS Vyhne 77.09 360 *eP* **P 08 15 32.6 +0.5**
VYHS pmax pmax
comp=Z,77nm,0.9s
VYHS Vyhne 77.09 360 P **P 08 15 32.8 +0.7**
VYHS Vyhne 77.09 360 *eP* **P 08 15 32.6 +0.5**
KECS Kecovo 77.10 359 P **P 08 15 33.0 +0.9**
SORM Soroca 77.14 353⇑P **P 08 15 32.0 -0.3**
SORM Soroca 77.14 353 P **P 08 15 31.9 -0.3**
SORM Soroca 77.14 353 P **P 08 15 31.1 -1.1**
comp=Z,17µmcomp=Z,306nm,0.6s
PMG Port Moresby 77.14 232 LR LR 08 45 59.9
comp=Z,2µm,20.3s,baz=16,slow=33
PMG Port Moresby 77.14 232 P **P 08 15 33.7 +1.1**
PMG Port Moresby 77.14 232 P **P 08 15 34.5 +1.9**
PMG Port Moresby 77.14 232 P **P 08 15 32.9 +0.3**
PMG pmax pmax
comp=Z,222nm,1.3s
PMG Port Moresby 77.14 232 P **P 08 15 32.9 +0.3**
PMG IAmb IAmb 08 15 47.8
comp=Z,222nm,1.2s
PMG Port Moresby 77.14 232 P **P 08 15 34.7 +2.1**
comp=Z,5µmcomp=Z,3µmcomp=Z,147nm,1.1s
PMG Port Moresby 77.14 232 P **P 08 15 32.9 +0.3**
MODS Modra-Piesok 77.21 1 *eP* **P 08 15 33.7 +1.0**
MODS pmax pmax
comp=Z,171nm,0.9s
MODS Modra-Piesok 77.21 1 P **P 08 15 33.8 +1.0**
MODS Modra-Piesok 77.21 1 *eP* **P 08 15 33.7 +1.0**
FUR Furstenfeldbru 77.23 5 P **P 08 15 33.6 +0.8**
FUR Furstenfeldbru 77.23 5 *eP* **P 08 15 33.5 +0.7**
comp=Z,166nm,1.0s,baz=356,slow=5.8
FUR *ep*P **sP 08 15 48.2 -1.6**
FUR Furstenfeldbru 77.23 5 P **P 08 15 33.6 +0.8**
BAL3X Bal3x, Balta 77.25 353 P **P 08 15 32.3 -0.6**
TEZP TEZPUR 77.26 298⇑*iP* **P 08 15 32.4 -0.9**
ABAH Abaujker 77.27 358 P **P 08 15 34.1 +1.1**
HINF Hinteralfeld 77.28 8 *eP* **P 08 15 33.2 +0.1**
HINF pmax pmax
comp=Z,22nm,0.7s
TRPA Tarpa 77.41 357 P **P 08 15 34.1 +0.4**
WINA Alland / Wiene 77.46 2 *i* P **P 08 15 34.3 +0.2**
SNR=43
SLE Schleitheim 77.46 7 P **P 08 15 34.3 +0.2**

SLE Schleitheim 77.46 7 P **P 08 15 34.1 0.0**
MANEM Manem 77.47 319 IAmb IAmb 08 16 10.7
comp=Z,374nm,1.0s
LOR Lormes 77.54 10 *eP* **P 08 15 34.8 +0.2**
LOR pmax pmax
comp=Z,42nm,0.9s
BCIP Isla Barro Col 77.61 92 P **P 08 15 33.2 -2.1**
comp=Z,4µmcomp=Z,954nmcomp=Z,146nm,1.3s
BCIP Isla Barro Col 77.61 92 P **P 08 15 35.0 -0.4**
CONA Conrad Observa 77.63 2 *i* P **P 08 15 35.3 +0.1**
comp=Z,141nm,0.9s,SNR=72
CONA *es*P **sP 08 15 51.3 -0.8**
comp=Z,294nm,1.8s
PRSN Puerto Rico Se 77.64 76 IAmb IAmb 08 15 59.7
comp=Z,137nm,1.2s
PSZ Piszkesteto 77.67 359⇓P **P 08 15 36.2 +0.8**
PSZ Piszkesteto 77.67 359 P **P 08 15 36.1 +0.8**
PSZ Piszkesteto 77.67 359 IAmb IAmb 08 15 38.5
comp=Z,119nm,0.9s
PSZ Piszkesteto 77.67 359 P **P 08 15 36.3 +1.0**
MOA Molln 77.67 3 *i* P **P 08 15 34.9 -0.3**
comp=Z,83nm,1.1s,SNR=27
MOA *es*P **sP 08 15 51.5 -0.7**
comp=Z,345nm,2.6s
MOA Molln 77.67 3 P **P 08 15 35.9 +0.6**
MFF Saint Martin d 77.73 13 *eP* **P 08 15 36.1 +0.5**
MFF pmax pmax
comp=Z,263nm,0.6s
BOURR Bourrignon 77.73 8 P **P 08 15 36.4 +0.7**
AOPR Arecibo Observ 77.75 76 IAmb IAmb 08 16 00.8
comp=Z,246nm,1.2s
SRO Srobarova 77.78 0 *eP* **P 08 15 36.4 +0.6**
SRO pmax pmax
comp=Z,51nm,0.9s
SRO Srobarova 77.78 0 P **P 08 15 37.3 +1.5**
SRO Srobarova 77.78 0 *eP* **P 08 15 36.4 +0.6**
BIOA Bad Ischl, Aus 77.81 4 *i* P **P 08 15 35.8 -0.3**
comp=Z,92nm,1.2s,SNR=9.4
BIOA *es*P **sP 08 15 52.3 -0.7**
comp=Z,176nm,1.1s
CRPR Cabo Rojo, PR 77.83 76 IAmb IAmb 08 16 02.3
comp=Z,160nm,1.1s
BURAR Bucovina Array 77.83 356⇓P **P 08 15 36.3 0.0**
BURAR Bucovina Array 77.83 356 P **P 08 15 36.3 0.0**
BURAR Bucovina Array 77.83 356 P **P 08 15 36.5 +0.3**
BURAR IAmb IAmb 08 15 39.1
comp=Z,76nm,0.8s
BMR Baia Mare 77.84 357⇓P **P 08 15 37.0 +0.8**
BMR Baia Mare 77.84 357 P **P 08 15 37.0 +0.8**
BMR Baia Mare 77.84 357 P **P 08 15 37.1 +0.8**
UUPR Utuado, UPR, P 77.85 76 IAmb IAmb 08 15 54.9
comp=Z,302nm,1.4s
RONA Rosalia, Austr 77.87 2 *i* P **P 08 15 36.6 +0.2**
comp=Z,1.9nm,0.3s,SNR=36
RONA *es*P **sP 08 15 52.5 -0.9**
comp=Z,409nm,2.0s
RETA Reutte 77.88 6 *i* P **P 08 15 36.4 -0.2**
comp=Z,117nm,1.3s,SNR=15
RETA *es*P **sP 08 15 52.1 -1.4**
comp=Z,295nm,1.6s
SOP Sopron 77.89 2 P **P 08 15 37.1 +0.6**
SOP Sopron 77.89 2 P **P 08 15 37.1 +0.6**
SWI Sorong 77.92 251 P **P 08 15 37.0 0.0**
comp=Z,7µmcomp=Z,3µmcomp=Z,171nm,1.2s
SIJI Sorong 77.92 251 P **P 08 15 37.1 +0.1**
comp=Z,59nm,0.6s,baz=24,slow=6.8,SNR=24
SIJI LR LR 08 45 21.2
comp=Z,775nm,21.5s,baz=38,slow=32
comp=Z,59nm,0.6s
SIJI Sorong 77.92 251 P **P 08 15 36.9 -0.2**
comp=Z,6µmcomp=Z,2µmcomp=Z,127nm,1.2s
GMAL Guarumal, Vera 77.93 94 P **P 08 15 35.9 -1.3**
comp=Z,2nm,1.1s
AVF Avril sur Loir 77.96 11 *eP* **P 08 15 37.0 +0.1**
AVF pmax pmax
comp=Z,31nm,0.5s
ECPR Experimental S 78.00 75 IAmb IAmb 08 15 58.5
comp=Z,115nm,1.0s
DAVA Damuels 78.03 6 *i* P **P 08 15 37.1 -0.4**
comp=Z,63nm,1.2s,SNR=15
DAVA *es*P **sP 08 15 52.9 -1.5**
comp=Z,320nm,2.1s
DAVA Damuels 78.03 6 P **P 08 15 38.0 +0.6**
LESA Schwarzleotal 78.04 4 *i* P **P 08 15 37.3 -0.1**
comp=Z,103nm,1.1s,SNR=27
LESA *es*P **sP 08 15 53.4 -0.9**
comp=Z,524nm,2.1s
MOTA Moosalm 78.04 5 *i* P **P 08 15 37.4 -0.2**
comp=Z,155nm,1.1s,SNR=42
MOTA *es*P **sP 08 15 53.6 -0.8**
comp=Z,370nm,1.2s
CELP Cerrillos 78.07 76 IAmb IAmb 08 15 56.4
comp=Z,160nm,1.0s
WATA Walderalm 78.07 5 *i* P **P 08 15 37.7 0.0**
comp=Z,117nm,0.8s,SNR=20
WATA *es*P **sP 08 15 53.8 -0.8**
comp=Z,352nm,1.1s
BUD Budapest 78.11 360 P **P 08 15 37.9 +0.2**
BUD Budapest 78.11 360 P **P 08 15 37.9 +0.2**
IMP Imphal 78.13 296⇑*iP* **P 08 15 37.9 -0.4**
BGF Bois d'Agland 78.14 11 *eP* **P 08 15 38.0 +0.1**
BGF pmax pmax
comp=Z,27nm,0.7s
WTTA Wattenberg 78.15 5 P **P 08 15 38.8 +0.6**
WTTA Wattenberg 78.15 5 *i* P **P 08 15 38.2 0.0**
comp=Z,162nm,0.9s,SNR=54
WTTA *es*P **sP 08 15 54.5 -0.6**
comp=Z,442nm,1.3s
WTTA Wattenberg 78.15 5 P **P 08 15 38.8 +0.6**
SMF Signal de Mont 78.16 10 *eP* **P 08 15 38.1 +0.1**
SMF pmax pmax
comp=Z,60nm,0.9s
SQTA Sankt Quirin 78.17 5 *i* P **P 08 15 38.3 +0.1**
comp=Z,160nm,0.9s,SNR=51
SQTA *es*P **sP 08 15 54.4 -0.7**
comp=Z,471nm,1.3s
GUWA GUWAHATI 78.17 299⇑*iP* **P 08 15 37.2 -1.2**
GUWA *i* pP **sP 08 15 54.8 -0.5**
ERBR Yeremizino-Bor 78.20 345 *eP* **P 08 15 38.9 +0.7**
ERBR pmax pmax
comp=Z,228nm,0.8s
ERBR MLR MLR
comp=Z,7µm,21.0s
SJG San Juan 78.28 75 LR LR 08 50 30.5
comp=Z,4µm,19.8s,baz=298,slow=36
SJG San Juan 78.28 75 P **P 08 15 38.9 -0.1**
SJG pmax pmax
comp=Z,101nm,1.0s
SJG MLR MLR
comp=Z,6µm,21.0s
SJG San Juan 78.28 75 P **P 08 15 38.9 -0.1**
SJG IAmb IAmb 08 15 53.4
comp=Z,100nm,0.9s
SJG San Juan 78.28 75 IAMs_20 IAMs_20 08 50 08.7
comp=Z,7µm,21.0s
SJG San Juan 78.28 75 *eP* **P 08 15 36.0 -3.1**
SJG x x 08 25 31.4
SJG San Juan 78.28 75 P **P 08 15 39.7 +0.7**
BSZH Besenyszg 78.28 359 P **P 08 15 40.9 +2.2**
ARSA Arzberg 78.30 2 IAmb IAmb 08 15 41.8
comp=Z,89nm,0.9s
ARSA Arzberg 78.30 2 *i* P **P 08 15 39.2 +0.4**
comp=Z,22nm,0.6s,SNR=38
ARSA *es*P **sP 08 15 55.1 -0.7**
comp=Z,247nm,1.6s
ARSA Arzberg 78.30 2 P **P 08 15 39.8 +0.9**
FETA Feichten 78.34 6 *i* P **P 08 15 39.3 +0.1**
comp=Z,112nm,1.0s,SNR=96
FETA *es*P **sP 08 15 55.4 -0.8**
comp=Z,312nm,1.3s
BNALP Bannalp 78.34 7 P **P 08 15 40.1 +0.9**
MESR Meseseni 78.38 357⇑P **P 08 15 39.7 +0.5**
ARCR ARCALIA 78.39 356⇑P **P 08 15 39.9 +0.6**
KBA Koelnbreinsper 78.41 4 P **P 08 15 40.2 +0.6**
KBA Koelnbreinsper 78.41 4 *i* P **P 08 15 40.0 +0.5**
comp=Z,199nm,1.0s,SNR=110
KBA *es*P **sP 08 15 55.8 -0.7**
comp=Z,147nm,1.1s
KBA Koelnbreinsper 78.41 4 P **P 08 15 40.2 +0.6**
CABF La Chapelle 78.41 9 *eP* **P 08 15 40.1 +0.6**
CABF pmax pmax
comp=Z,63nm,0.8s
MPLH Magyarpolny 78.42 1 P **P 08 15 40.6 +1.2**
SESA Seetaler Alpe, 78.42 3 *i* P **P 08 15 40.0 +0.3**
comp=Z,304nm,1.0s,SNR=12
SESA *es*P **sP 08 15 55.9 -0.7**

comp=Z,1µm,2.0s
GOF Gofitskoye 78.42 343*c iP* **P 08 15 40.0 +0.6**
HUMP Col San Antoni 78.42 75 IAmb IAmb 08 15 58.6
comp=Z,114nm,1.0s
MORE Moreh 78.43 296 IAmb IAmb 08 16 02.3
comp=Z,92nm,0.7s
AZU Azuero 78.46 93 P **P 08 15 38.2 -1.9**
comp=Z,1µmcomp=Z,57nm,0.6s
BIZ Bicaz 78.46 355⇑P **P 08 15 39.7 +0.1**
CACAO El Cacao, Vera 78.48 94 P **P 08 15 39.3 -0.9**
comp=Z,1µmcomp=Z,147nm,1.1s
GIMEL St. Georges / 78.50 9 P **P 08 15 41.0 +0.9**
DAVOX Davos/Dischmat 78.53 6 LR LR 08 53 59.1
comp=Z,1µm,19.6s,baz=2.5,slow=38
ROSA Rosais 78.53 36 P **P 08 15 41.5 +1.3**
SHL Shillong 78.59 298 P **P 08 15 39.3 -1.6**
SHL pmax pmax
comp=Z,122nm,0.6s
SHL Shillong 78.59 298 IAmb IAmb 08 15 55.7
comp=Z,130nm,1.1s
SHL Shillong 78.59 298 *eP* **P 08 15 39.7 -1.2**
SHL *i* x x 08 15 55.1
HNLY HANLEY 78.66 312⇑*iP* **P 08 15 41.9 +0.2**
VASR Vaslui 78.66 354⇑P **P 08 15 40.8 +0.1**
ABTA Abfaltersbach 78.70 4 *i* P **P 08 15 40.7 -0.4**
comp=Z,357nm,3.1s,SNR=35
ABTA *es*P **sP 08 15 57.2 -0.8**
comp=Z,42nm,0.7s
FUORN Ofenpass-Fuorn 78.71 6 IAmb IAmb 08 16 00.5
comp=Z,114nm,0.8s
FUORN Ofenpass-Fuorn 78.71 6 P **P 08 15 42.4 +1.0**
DRGR 78.74 357⇑P **P 08 15 41.7 +0.4**
DRGR 78.74 357 P **P 08 15 41.7 +0.4**
DRGR 78.74 357 P **P 08 15 41.8 +0.5**
SHAA Shahritus 78.76 322 IAmb IAmb 08 16 13.4
comp=Z,545nm,1.1s
SILR SILCHAR 78.76 297⇑*iP* **P 08 15 41.9 +0.3**
CJR Cluj-Napoca 78.80 357⇓P **P 08 15 42.3 +0.7**
CJR Cluj-Napoca 78.80 357 P **P 08 15 42.2 +0.7**
TUE Stuetta 78.80 7 P **P 08 15 42.9 +1.1**
MARR Marisel-Cluj 78.85 357⇑P **P 08 15 42.2 +0.2**
TESR Tescani 78.86 354⇑P **P 08 15 41.7 -0.1**
TESR Tescani 78.86 354 P **P 08 15 41.3 -0.6**
TESR Tescani 78.86 354 P **P 08 15 41.6 -0.2**
SOKA Soboth 78.86 3 *i* P **P 08 15 42.0 0.0**
comp=Z,222nm,1.4s,SNR=116
SOKA *es*P **sP 08 15 57.8 -1.1**
comp=Z,645nm,1.7s
MYKA Terra Mystica 78.87 4 *i* P **P 08 15 41.4 -0.6**
comp=Z,171nm,1.8s,SNR=21
MYKA *es*P **sP 08 15 57.5 -1.4**
comp=Z,229nm,1.6s
PERS Pernice 78.91 3 *i* P **P 08 15 42.9 +0.7**
PERS *i* pP **sP 08 15 58.2 -0.9**
TGMR Targu Mures 78.94 356⇓P **P 08 15 43.2 +0.9**
OBKA Obir 79.02 3 *i* P **P 08 15 43.0 +0.2**
comp=Z,256nm,0.9s,SNR=190
OBKA Obir 79.02 3 P **P 08 15 43.1 +0.2**
BIR Birlad 79.05 354⇑P **P 08 15 43.8 +1.0**
BIR Birlad 79.05 354 P **P 08 15 43.8 +1.0**
ONER Baraj Valea Uz 79.05 355⇓P **P 08 15 43.5 +0.6**
PRED Cave del Predi 79.05 4 IAmb IAmb 08 15 59.9
comp=Z,129nm,1.2s
BEHE Becsehely 79.11 1⇑*iP* **P 08 15 44.1 +0.9**
BEHE Becsehely 79.11 1 P **P 08 15 44.5 +1.3**
EVN Everest 79.13 303 P **P 08 15 44.8 +0.4**
DHUB DHUBRI 79.17 300⇑*iP* **P 08 15 42.6 -1.3**
DHUB IAmb IAmb 08 15 45.0
comp=Z,39nm,0.5s
LABN Labinsk 79.21 344 *eP* **P 08 15 44.3 +0.5**
LABN *eS* **S 08 25 42.3 +2.0**
LABN pmax pmax
comp=Z,78nm,0.7s
LABN MLR MLR
comp=Z,6µm,21.0s
COBR COOCHBEHAR 79.21 300⇑*iP* **P 08 15 44.2 +0.1**
RJF Les Rejaudoux 79.22 12 *eP* **P 08 15 43.9 +0.1**
RJF pmax pmax
comp=Z,188nm,1.1s
GHRR 79.26 354⇑P **P 08 15 45.0 +1.0**
GHRR 79.26 354 P **P 08 15 44.5 +0.4**
GHRR 79.26 354 P **P 08 15 45.0 +1.0**
CADS Cadrg 79.27 4 *i* P **P 08 15 43.2 -0.9**
CADS *i* pP **sP 08 15 59.5 -1.7**
SIRR Siria 79.29 358⇑P **P 08 15 44.9 +0.6**
OZUR 79.32 355⇓P **P 08 15 44.7 +0.3**
MDB Medias 79.34 356⇓P **P 08 15 45.2 +0.7**
MDB Medias 79.34 356 P **P 08 15 45.1 +0.7**
BOSR Bodos 79.35 355⇓P **P 08 15 45.4 +0.8**
TURR Turia 79.35 355⇓P **P 08 15 45.2 +0.6**
MORH Mrgy, Hungar 79.38 0⇑P **P 08 15 44.7 0.0**
MORH Mrgy, Hungar 79.38 0⇑*iP* **P 08 15 44.8 +0.2**
MORH Mrgy, Hungar 79.38 0 P **P 08 15 44.9 +0.2**
VLDR Vladesti 79.44 353⇑P **P 08 15 45.6 +0.6**
DOPR Dopca 79.47 355⇓P **P 08 15 46.0 +0.7**
LFF La Frestale 79.48 13 *eP* **P 08 15 45.6 +0.4**
LFF pmax pmax
comp=Z,143nm,0.6s
LJU Ljubljana 79.48 3 *i* P **P 08 15 45.3 +0.1**
LJU *ep*P **sP 08 16 00.6 -1.6**
VRI Vrincioaia 79.50 354⇑P **P 08 15 45.7 +0.3**
VRI Vrincioaia 79.50 354 P **P 08 15 45.7 +0.3**
VRI Vrincioaia 79.50 354 P **P 08 15 45.8 +0.4**
SABO M.te Sabotino 79.52 4 IAmb IAmb 08 16 02.2
comp=Z,113nm,0.9s
PLOR Plostina 79.52 354⇓P **P 08 15 45.6 +0.1**
PLOR Plostina 79.52 354 P **P 08 15 45.7 +0.2**
ANN Anapa 79.53 347 *eP* **P 08 15 45.1 -0.4**
ANN *eS* **S 08 25 46.5 +2.8**
ANN pmax pmax
comp=Z,61nm,0.9s
GOLS Golise 79.55 2 *i* P **P 08 15 45.9 +0.3**
GOLS *ep*P **sP 08 16 01.3 -1.3**
COVR Voineasa-Covas 79.55 355⇓P **P 08 15 46.5 +0.8**
KVAR Kislovodsk Arr 79.55 343 LR LR 08 53 46.3
comp=Z,2µm,21.7s,baz=255,slow=38
KIV Kislovodsk 79.55 343⇑P **P 08 15 45.9 +0.1**
KIV Kislovodsk 79.55 343 P **P 08 15 46.3 +0.5**
KIV Kislovodsk 79.55 343 *eP* **P 08 15 45.7 -0.1**
KIV *e* 08 18 44.0
KIV *e*PPP PPP 08 20 34.3
KIV *eS* **S 08 25 47.6 +3.4**
KIV *e*SS **SS 08 30 55.8 +4.7**
KIV pmax pmax
comp=Z,200nm,1.0s
KIV pmax pmax
comp=Z,339nm,3.8s
KIV MLR MLR
comp=Z,3µm,19.0s
KIV Kislovodsk 79.55 343 P **P 08 15 46.0 +0.2**
KIV Kislovodsk 79.55 343 P **P 08 15 45.4 -0.4**
KIV S **S 08 25 44.3 +0.1**
KIV Kislovodsk 79.55 343 P **P 08 15 46.4 +0.5**
KIV Kislovodsk 79.55 343 P **P 08 15 46.3 +0.5**
LPL La Plagne 79.55 9 *eP* **P 08 15 47.0 +1.1**
LPL pmax pmax
comp=Z,22nm,0.7s
LPG La Plagne 79.57 9 *eP* **P 08 15 47.3 +1.2**
LPG pmax pmax
comp=Z,23nm,0.8s
ODBI Odobesti 79.58 354⇓P **P 08 15 46.8 +1.0**
SSB Saint Sauveur 79.58 10 P **P 08 15 46.3 +0.4**
SSB Saint Sauveur 79.58 10 P **P 08 15 46.5 +0.7**
MAK Makhachkala 79.59 339*d iP* **P 08 15 44.4 -1.5**
MAK *e**PP **pP 08 15 58.9 +0.7**
MAK *e* 08 18 44.7
MAK *e*PPP PPP 08 20 31.9
MAK *eS* **S 08 25 41.2 -3.2**
MAK *e**SS **ScS 08 26 06.8 +0.7**
MAK *eSS **SS 08 30 49.0 -2.6**
MAK pmax pmax
comp=Z,251nm,0.8s
MAK MLR MLR
comp=Z,12µm,21.0s
SCTR Scanteiesti 79.61 353⇑P **P 08 15 46.4 +0.4**
SAHR Sahastru 79.64 354⇑P **P 08 15 47.1 +0.9**
DEV Deva 79.65 357 P **P 08 15 46.8 +0.6**
DEV Deva 79.65 357 P **P 08 15 46.8 +0.6**
GCIS Gornji Cirnik 79.69 2 *i* S **S 08 25 46.6 +1.2**
GCIS *e* 08 31 36.1
SJCC San Jacinto, C 79.72 87 P **P 08 15 46.2 -0.8**
comp=Z,6µmcomp=Z,1µmcomp=Z,140nm,1.3s
SALO Salr 79.73 6 IAmb IAmb 08 16 03.5

comp=Z,125nm,0.9s
KBZ Khabaz 79.73 342 P **P** **08 15 47.0 +0.4**
comp=Z,181nm,0.9s,baz=12,slow=5.3,SNR=158
KBZ LR LR 08 57 40.9
comp=Z,3µm,19.5s,baz=4.0,slow=41
comp=Z,181nm,0.9s
KBZ Khabaz 79.73 342 *i* P **P** **08 15 47.3 +0.7**
KBZ pmax pmax
comp=Z,181nm,0.9s
KBZ MLR MLR
comp=Z,4µm,23.0s
ZAG Zagreb 79.74 2 P **P** **08 15 48.1 +1.5**
NEGRR Negrea 79.75 354 ⇑P **P** **08 15 47.2 +0.5**
IZVR Izvoarele 79.76 354 ⇓P **P** **08 15 47.3 +0.6**
SHA1 Shidzhatmaz 79.77 343*c i*P **P** **08 15 47.0 -0.1**
SIM Simferopol' 79.79 349 *e*P **P** **08 15 47.6 +0.7**
SIM *e*S **S** **08 25 43.2 -3.3**
SIM pmax pmax
comp=Z,94nm,0.8s
SCHL Schela 79.79 354 ⇓P **P** **08 15 47.4 +0.5**
TSSA Tissa 79.80 314 *e*P **P** **08 15 47.9 +0.4**
SCHLR Schela 79.83 354 ⇑P **P** **08 15 47.7 +0.6**
TNR Turnu Rosu 79.83 356 ⇓P **P** **08 15 47.9 +0.7**
TNR Turnu Rosu 79.83 356 P **P** **08 15 48.1 +0.9**
NCK Nalchik 79.83 342 *i* P **P** **08 15 47.1 -0.2**
NCK pmax pmax
comp=Z,249nm,1.0s
MLR Muntele Rosu 79.91 355 LR LR 08 52 06.2
comp=Z,5µm,21.5s,baz=16,slow=36
MLR Muntele Rosu 79.91 355 ⇑P **P** **08 15 48.7 +0.8**
MLR Muntele Rosu 79.91 355 P **P** **08 15 48.6 +0.8**
MLR Muntele Rosu 79.91 355 IAMs_20 IAMs_20 08 56 51.5
comp=Z,6µm,20.0s
MLR Muntele Rosu 79.91 355 P **P** **08 15 48.2 +0.4**
BZS Buzias 79.94 358 ⇑P **P** **08 15 48.2 +0.5**
BZS Buzias 79.94 358 P **P** **08 15 48.3 +0.5**
BZS Buzias 79.94 358 P **P** **08 15 48.0 +0.2**
VOIR 80.01 356 ⇓P **P** **08 15 48.6 +0.3**
VOIR 80.01 356 P **P** **08 15 48.5 +0.3**
VOIR 80.01 356 P **P** **08 15 48.3 +0.1**
KLP Kalpa 80.04 312 *e*P **P** **08 15 48.8 -0.2**
BOJS Bojanci 80.04 3 *e*P **P** **08 15 48.0 -0.3**
BOJS *e*S **S** **08 25 48.2 -1.0**
BOJS *e* 08 31 40.1
SMRT St. Maarten 80.04 73 IAMs_20 IAMs_20 08 50 35.2
comp=Z,4µm,21.0s
SMRT St. Maarten 80.04 73 *e*P **P** **08 15 47.6 -1.1**
SMRT x x 08 29 09.5
LOT Lotru 80.05 356 ⇓P **P** **08 15 48.3 -0.2**
LOT Lotru 80.05 356 P **P** **08 15 48.4 -0.2**
CFR Carcaliu 80.09 353 ⇑P **P** **08 15 48.6 +0.1**
CFR Carcaliu 80.09 353 P **P** **08 15 48.6 +0.1**
ARR Arges 80.10 356 ⇓P **P** **08 15 49.5 +0.8**
ARR Arges 80.10 356 P **P** **08 15 49.7 +0.9**
URIC Uribia, Colomb 80.11 84 P **P** **08 15 48.2 -0.9**
comp=Z,4µmcomp=Z,1µmcomp=Z,133nm,1.3s
GZR Gura Zlata 80.14 357 ⇑P **P** **08 15 49.4 +0.5**
GZR Gura Zlata 80.14 357 P **P** **08 15 49.4 +0.5**
MYLDM Lahad Datu 80.18 265 P **P** **08 15 51.9 +2.5**
MYLDM Lahad Datu 80.18 265 IAmb IAmb 08 16 31.1
comp=Z,342nm,1.6s
MYLDM Lahad Datu 80.18 265 P **P** **08 15 50.9 +1.5**
MYLDM Lahad Datu 80.18 265 P **P** **08 15 51.0 +1.5**
MTUR Matau 80.22 355 ⇑P **P** **08 15 50.1 +0.7**
MTUR Matau 80.22 355 P **P** **08 15 50.1 +0.7**
DHRM DHARAMSHALA 80.25 314 *e*P **P** **08 15 49.9 0.0**
DHRM IAmb IAmb 08 15 52.5
comp=Z,198nm,0.7s
DHRM *i* pP **sP** **08 16 07.1 +0.2**
NIL Nilore 80.28 316 P **P** **08 15 50.5 +0.6**
NIL pmax pmax
comp=Z,271nm,0.7s
NIL MLR MLR
comp=Z,14µm,21.0s
NIL Nilore 80.28 316 P **P** **08 15 50.5 +0.6**
NIL Nilore 80.28 316 P **P** **08 15 50.2 +0.4**
ARGC Ariguani, Magd 80.29 87 P **P** **08 15 49.9 -0.2**
comp=Z,5µmcomp=Z,1µmcomp=Z,60nm,0.7s
SABA Saba 80.30 73 IAMs_20 IAMs_20 08 53 34.9
comp=Z,6µm,21.0s
SABA Saba 80.30 73 *e*P **P** **08 15 48.8 -1.3**
SABA x x 08 25 02.9
JOSI Joshimath 80.30 310 *e*P **P** **08 15 49.6 -0.7**
JOSI IAmb IAmb 08 15 52.1
comp=Z,236nm,0.9s
THN Thein Dam 80.31 314⇑*i*P **P** **08 15 50.2 +0.2**
THN *i* x x 08 16 07.7
CHTO Chiang Mai 80.35 289 P **P** **08 15 50.2 -0.2**
CHTO Chiang Mai 80.35 289 P **P** **08 15 49.9 -0.5**
CHTO pmax pmax
comp=Z,71nm,0.9s
CHTO MLR MLR
comp=Z,4µm,20.0s
CHTO Chiang Mai 80.35 289 P **P** **08 15 49.9 -0.5**
CHTO IAMs_20 IAMs_20 08 54 53.4
comp=Z,4µm,20.0s
CHTO Chiang Mai 80.35 289 P **P** **08 15 49.4 -1.0**
comp=Z,9µmcomp=Z,2µmcomp=Z,101nm,1.0s
CHTO Chiang Mai 80.35 289 P **P** **08 15 49.9 -0.5**
CHTO S **S** **08 25 52.3 -0.8**
CHTO Chiang Mai 80.35 289 P **P** **08 15 49.9 -0.5**
SOC Sochi 80.39 345 *e*P **P** **08 15 49.4 -0.8**
SOC *e*PPP PPP 08 20 42.6
SOC *e*S **S** **08 25 53.6 +0.7**
SOC *e*SS **SS** **08 31 04.4 +0.9**
SOC *e*SSS SSS 08 34 31.6
SOC pmax pmax
comp=Z,117nm,0.8s
SOC MLR MLR
comp=Z,5µm,22.0s
TPGR Topolog 80.40 353 ⇑P **P** **08 15 50.5 +0.3**
JMU Jammu 80.40 315 *i* P **P** **08 15 51.2 +0.7**
PTAC Punta Ardita, 80.41 91 P **P** **08 15 49.9 -0.8**
comp=Z,3µmcomp=Z,184nm,1.4s
FRGS Fruska Gora 80.43 359⇑*i*P **P** **08 15 50.3 -0.1**
PGOR Pogoanele 80.44 354 ⇑P **P** **08 15 50.7 +0.3**
JURR Jurilovca 80.45 353 ⇓P **P** **08 15 50.5 0.0**
VSLR Vesyoloye 80.47 344 *i* P **P** **08 15 50.5 -0.1**
APAC Apartado, Choc 80.51 90 P **P** **08 15 51.4 +0.1**
comp=Z,6µmcomp=Z,1µmcomp=Z,200nm,1.3s
SEUS St. Eustatius 80.55 73 IAMs_20 IAMs_20 08 53 42.5
comp=Z,6µm,21.0s
SEUS St. Eustatius 80.55 73 *e*P **P** **08 15 48.8 -2.6**
SEUS x x 08 23 49.6
CM31 Chiang Mai Arr 80.64 289 IAmb IAmb 08 15 55.7
comp=Z,151nm,0.8s
CMAR Chiang Mai Arr 80.64 289 P **P** **08 15 51.5 -0.4**
comp=Z,139nm,0.9s,baz=20,slow=5.3,SNR=289
CMAR PKKPbc **PKKPbc** **08 34 29.4 +0.9**
comp=Z,1.0nm,0.3s,baz=228,slow=4.4,SNR=5.2
CMAR LR LR 08 55 41.1
comp=Z,2µm,19.2s,baz=35,slow=39
comp=Z,139nm,0.9s
UTK UTTARKASHI 80.64 311 *e*P **P** **08 15 51.8 -0.2**
HERR Herculane 80.66 357 ⇑P **P** **08 15 51.8 +0.1**
SULR 80.71 355 P **P** **08 15 52.1 +0.2**
TLBR Topalu 80.73 353 ⇓P **P** **08 15 52.3 +0.3**
MDVR Moldovita 80.78 358 ⇑P **P** **08 15 52.6 +0.2**
TIRR Tirgusor 80.79 353 P **P** **08 15 52.2 -0.1**
TIRR pmax pmax
comp=Z,173nm,0.8s
TIRR Tirgusor 80.79 353 IAmb IAmb 08 15 53.6
comp=Z,126nm,0.9s
TIRR IAMs_20 IAMs_20 08 58 02.7
comp=Z,5µm,18.0s
BLY Banja Luka 80.83 1 ⇑P **P** **08 15 53.0 +0.4**
BLY Banja Luka 80.83 1⇑*i*P **P** **08 15 52.2 -0.4**
BLY Banja Luka 80.83 1 P **P** **08 15 52.8 +0.2**
PTH Pithoragarh 80.84 309 *e*P **P** **08 15 52.7 -0.4**
SMLA Simla 80.85 312 *e*P **P** **08 15 52.6 -0.3**
SMLA IAmb IAmb 08 15 53.9
comp=Z,873nm,0.3s
SMLA *i* x x 08 15 56.2
SRE Strehaia 80.86 357 ⇑P **P** **08 15 53.3 +0.6**
SRE Strehaia 80.86 357 P **P** **08 15 53.3 +0.6**
LEHL Lehliu 80.88 354 ⇑P **P** **08 15 52.8 0.0**
PGAV Gavieira, Arco 80.89 20⇑*i*P **P** **08 15 53.8 +0.8**
PGAV *i* IAmb IAmb 08 15 56.8
comp=Z,122nm,2.4s
PGAV *e*sP **sP** **08 16 10.1 +0.1**
PGAV *e*PP **PP** **08 18 57.9 +0.9**
PGAV *e*S **S** **08 26 01.1 +2.7**
PGAV *e*SS **SS** **08 31 17.6 +6.3**
PGAV *e*LQ LQ 08 39 38.8
PGAV *e*LR LR 08 43 26.9
PGAV *i* IAMs_20 IAMs_20 08 51 23.0
comp=Z,3µm,20.0s
ISO Isola 80.90 9 P **P** **08 15 54.4 +1.3**
HUMR Humele 80.92 356 ⇓P **P** **08 15 52.9 -0.1**
HUMR Humele 80.92 356 P **P** **08 15 52.7 -0.3**
CVDA Cernavoda 80.94 353 ⇑P **P** **08 15 53.8 +0.7**
BHK Bhakra 80.96 313⇑*i*P **P** **08 15 53.8 +0.3**
BHK IAmb IAmb 08 15 55.5
comp=Z,202nm,1.0s
AKT Akhty 80.96 338 *e*P **P** **08 15 53.3 -0.2**
AKT *e* 08 15 59.5
AKT *e* 08 18 56.0
AKT *e*PPP PPP 08 20 49.7
AKT *e*S **S** **08 25 59.0 -0.2**
AKT *e*SS **SS** **08 31 20.4 +8.0**
AKT pmax pmax
comp=Z,203nm,0.8s
RUSF Rustrel 81.00 10 P **P** **08 15 55.2 +1.7**
SHBG Sahibganj 81.00 301 *e*P **P** **08 15 53.5 -0.3**
SHBG IAmb IAmb 08 15 55.3
comp=Z,128nm,0.2s
TEKS Tekeris 81.04 359⇑*i*P **P** **08 15 53.8 +0.1**
ANWB Willy Bob 81.07 72 *e*P **P** **08 15 51.6 -2.6**
ANWB x x 08 25 57.5
BRDH Bariadhala 81.09 297 LR LR 08 56 07.3
comp=Z,6µm,20.5s,baz=26,slow=39
NPW Naypyitaw 81.09 292 P **P** **08 15 54.2 -0.1**
ATE Arette 81.10 14 P **P** **08 15 54.2 +0.1**
KBL Kabul 81.11 320 P **P** **08 15 53.7 -0.8**
KBL pmax pmax
comp=Z,194nm,0.9s
KBL Kabul 81.11 320 P **P** **08 15 53.7 -0.8**
KBL IAmb IAmb 08 15 57.2
comp=Z,194nm,0.8s
KBL Kabul 81.11 320 P **P** **08 15 53.1 -1.5**
EFOR EFORIE 81.15 353 ⇑P **P** **08 15 54.9 +0.6**
VLC Villacollemand 81.17 6 P **P** **08 15 54.9 +0.5**
VLC Villacollemand 81.17 6 P **P** **08 15 55.0 +0.5**
ICOR Ion Corvin 81.17 353 ⇑P **P** **08 15 55.1 +0.8**
SGRR Singureni 81.18 355 ⇑P **P** **08 15 54.1 -0.3**
PCAB Cabril 81.19 20⇑*i*P **P** **08 15 55.4 +0.8**
PCAB *e*sP **sP** **08 16 12.2 +0.7**
PCAB *i* IAmb IAmb 08 16 13.5
comp=Z,97nm,1.9s
ECAL Calabor 81.21 19 P **P** **08 15 55.7 +1.0**
ECAL Calabor 81.21 19 P **P** **08 15 55.9 +1.2**
UREC San Jos de Ur 81.24 89 P **P** **08 15 53.6 -1.6**
comp=Z,5µmcomp=Z,642nmcomp=Z,93nm,1.2s
PUNG Punghina 81.25 357 ⇓P **P** **08 15 54.8 0.0**
ESCA l'Escarene 81.28 8 P **P** **08 15 55.3 +0.3**
EPF Esparros 81.30 14 *e*P **P** **08 15 54.8 -0.3**
EPF pmax pmax
comp=Z,13nm,0.7s
CALF Calern 81.32 9 P **P** **08 15 55.9 +0.6**
PBRG Braganca 81.34 19 *e*P **P** **08 15 56.1 +0.7**
PBRG *i* IAmb IAmb 08 16 29.9
comp=Z,90nm,1.7s
CGRH CHANDIGARH 81.36 312⇑*e*P **P** **08 15 55.6 0.0**
MON Monaco 81.39 8 P **P** **08 15 57.2 +1.7**
DZM Mont Dzumac 81.40 210 LR LR 08 46 29.3
comp=Z,6µm,20.1s,baz=25,slow=32
MANR Mangalia 81.42 353 ⇓P **P** **08 15 56.2 +0.6**
ARBF Arbois 81.43 10 P **P** **08 15 56.5 +0.8**
NOUC Port Laguerre 81.47 210 P **P** **08 15 58.7 +2.7**
POLO Lamas de Olo 81.56 20⇑*i*P **P** **08 15 56.8 +0.2**
POLO *e*sP **sP** **08 16 13.8 +0.3**
POLO *i* IAmb IAmb 08 16 15.6
comp=Z,78nm,1.9s
ONTNC Ouen Toro 81.62 210 IAMs_20 IAMs_20 08 45 53.7
comp=Z,6µm,21.0s
PTO Porto 81.62 21⇑*i*P **P** **08 15 57.4 +0.6**
PTO *e*sP **sP** **08 16 14.4 +0.7**
PTO *i* IAmb IAmb 08 16 15.1
comp=Z,198nm,1.2s
PTO *e*PP **PP** **08 19 04.4 +1.6**
PVRL Vila Real 81.67 20⇑*e*P **P** **08 15 58.1 +1.0**
PVRL *e*sP **sP** **08 16 14.9 +0.8**
PVRL *i* IAmb IAmb 08 16 21.9
comp=Z,163nm,1.9s
BBLS Lazi&#263i 81.72 360⇑*i*P **P** **08 15 57.8 +0.4**
GKPR Gorakhpur 81.77 305⇑*i*P **P** **08 15 57.9 +0.1**
SANI Sanana 81.81 255 P **P** **08 15 59.9 +1.8**
SANI Sanana 81.81 255 P **P** **08 15 57.1 -1.0**
SANI Sanana 81.81 255 P **P** **08 15 56.7 -1.4**
comp=Z,6µmcomp=Z,2µmcomp=Z,119nm,0.9s
SANI Sanana 81.81 255 P **P** **08 15 57.1 -1.0**
TKRD Thakurdwara 81.82 310 *e*P **P** **08 15 57.7 -0.3**
CEST Esterri de Car 81.84 13 IAmb IAmb 08 16 17.2
comp=Z,96nm,1.0s
MVO Moncorvo 81.91 19⇑*i*P **P** **08 15 59.2 +0.8**
MVO *e*sP **sP** **08 16 16.2 +0.8**
MVO *i* IAmb IAmb 08 16 23.0
comp=Z,158nm,2.2s
MVO *e*PP **PP** **08 19 06.7 +1.4**
EPOS Posof 81.92 342 P **P** **08 15 59.5 +0.9**
BOVS Bovan 81.92 358 ⇑P **P** **08 15 58.7 +0.3**
BATM Batumi 82.00 343 ⇑P **P** **08 15 58.8 0.0**
BATM Batumi 82.00 343 P **P** **08 15 58.8 0.0**
PLVB Pleven 82.08 356 ⇑P **P** **08 15 59.2 +0.1**
OCAC Ocana 82.13 87 P **P** **08 15 58.9 -1.1**
comp=Z,4µmcomp=Z,1µmcomp=Z,205nm,0.8s
SZH Strazhitsa 82.13 355 P **P** **08 15 59.3 -0.1**
SJAF Saint Jean de 82.16 12 P **P** **08 16 00.3 +0.6**
TOLI2 Tolitoli 82.17 261 P **P** **08 16 01.4 +1.4**
TOLI2 Tolitoli 82.17 261 IAmb IAmb 08 16 45.9
comp=Z,139nm,1.5s
TOLI2 Tolitoli 82.17 261 P **P** **08 15 59.1 -1.0**
PVIS Viseu 82.17 20⇑*i*P **P** **08 16 00.6 +0.8**
PVIS *e*sP **sP** **08 16 16.9 +0.2**
PVIS *e*PP **PP** **08 19 08.6 +1.1**
NLAI Namlea 82.18 253 P **P** **08 16 01.9 +1.9**
comp=Z,4µmcomp=Z,137nm,1.0s
EJON La Jonquera 82.20 12 P **P** **08 16 00.4 +0.5**
EJON La Jonquera 82.20 12 P **P** **08 15 59.3 -0.6**
ABD La Joyeuse, An 82.20 73 IAMs_20 IAMs_20 08 54 59.2
comp=Z,4µm,20.0s
DHSZ Broadband at M 82.21 73 *e*P **P** **08 16 00.2 0.0**
DHSZ x x 08 26 14.5
GDHS Morne Mazeau, 82.21 73 IAMs_20 IAMs_20 08 52 15.2
comp=Z,4µm,21.0s
PLE Pljevlja 82.26 360⇑*i*P **P** **08 16 00.8 +0.5**
SJES Sjenica 82.32 359⇑*i*P **P** **08 16 00.9 +0.3**
UPM Unac-Piva 82.39 360 *e*P **P** **08 16 01.1 +0.1**
UPM Unac-Piva 82.39 360⇑*i*P **P** **08 16 00.6 -0.4**
GUMA Gualdo di Mace 82.42 4 IAmb IAmb 08 16 20.6
comp=Z,178nm,0.9s
KLINJ Klinje 82.42 0 *e*P **P** **08 16 00.6 -0.5**
FDMO Fiordimonte 82.43 4 IAmb IAmb 08 16 20.6
comp=Z,71nm,0.6s
MMLZ Guadeloupe Bro 82.45 73 *e*P **P** **08 15 56.7 -4.8**
MMLZ x x 08 26 20.9
CBOC Ciudad Bolivar 82.48 91 P **P** **08 16 01.2 -0.7**
comp=Z,724nmcomp=Z,88nm,1.2s
GAYA Gaya 82.54 303⇑*i*P **P** **08 16 00.8 -1.1**
MTE Manteigas 82.55 20⇑*i*P **P** **08 16 02.6 +0.9**
MTE *e*sP **sP** **08 16 18.9 +0.1**
MTE *e*PP **PP** **08 19 11.6 +1.0**
MTE *e*S **S** **08 26 16.3 +0.9**
MTE *e*SS **SS** **08 31 43.2 +7.4**
MTE *e*LQ LQ 08 42 04.0
MTE *e*LR LR 08 44 26.0
MTE *i* IAMs_20 IAMs_20 08 52 09.4
comp=Z,3µm,22.0s
MTE Manteigas 82.55 20 P **P** **08 16 02.8 +1.0**
DSDZ La Diserade, G 82.56 72 *e*P **P** **08 16 00.4 -1.6**
DSDZ x x 08 26 17.5
GDSD La Dsirade Is 82.56 72 IAMs_20 IAMs_20 08 55 11.9
comp=Z,4µm,21.0s
TBG Guadaloupe-3 82.62 73 *e*P P 08 15 55.5 -6.8
NRCA Norcia 82.64 4 IAmb IAmb 08 16 28.0
comp=Z,113nm,0.9s
PGF Pioggiola 82.68 7 *e*P **P** **08 16 02.1 -0.4**
PGF pmax pmax
comp=Z,69nm,0.7s
BRY Bratogost 82.69 0 *e*P **P** **08 16 02.4 -0.2**
BRY Bratogost 82.69 0⇑*i*P **P** **08 16 01.9 -0.7**
PCAS Casmilo, Conde 82.69 21⇑*i*P **P** **08 16 02.9 +0.5**
PCAS *e*sP **sP** **08 16 19.5 +0.1**
PCAS *i* IAmb IAmb 08 16 20.9
comp=Z,390nm,1.2s
IVA Berane 82.71 359⇑*i*P **P** **08 16 02.5 -0.1**
KOME Kolasin 82.74 359⇑*i*P **P** **08 16 02.4 -0.3**
MAGL Barre de l'ile 82.74 73 IAMs_20 IAMs_20 08 55 20.6
comp=Z,5µm,19.0s
LUWI Luwuk 82.80 258 P **P** **08 16 04.7 +1.4**
LUWI Luwuk 82.80 258 P **P** **08 16 01.8 -1.5**
LUWI Luwuk 82.80 258 P **P** **08 16 01.7 -1.5**
LUWI Luwuk 82.80 258 P **P** **08 16 02.1 -1.2**
comp=Z,3µmcomp=Z,202nm,1.3s
LUWI Luwuk 82.80 258 P **P** **08 16 02.6 -0.7**
NKME Niksic 82.82 360⇑*i*P **P** **08 16 02.4 -0.7**
CESX Cesi 82.84 5 IAmb IAmb 08 16 21.4
comp=Z,71nm,0.8s
GNI Garni 82.86 340 LR LR 09 00 02.2
comp=Z,6µm,19.0s,baz=29,slow=41
GNI Garni 82.86 340 P **P** **08 16 03.9 +0.4**
GNI Garni 82.86 340*c i*P **P** **08 16 05.0 +1.5**
GNI pmax pmax
comp=Z,83nm,0.7s
GNI Garni 82.86 340 P **P** **08 16 03.9 +0.4**
GNI IAmb IAmb 08 16 50.9
comp=Z,159nm,0.9s
GNI Garni 82.86 340 P **P** **08 16 05.3 +1.8**
DIGO Kars 82.86 341 P **P** **08 16 05.1 +1.4**
TREB Trebinje 82.87 0 *e*P **P** **08 16 02.8 -0.5**
JMB Yambol 82.87 354 P **P** **08 16 03.6 +0.3**
VTS Vitosha 82.90 357 P **P** **08 16 03.5 -0.1**
NDI New Delhi 82.94 311⇑*i*P **P** **08 16 03.4 -0.6**
UGON Onchagaon 82.96 310 *e*P **P** **08 16 02.3 -1.7**
COEN Coen 82.97 234 P **P** **08 16 06.2 +2.2**
comp=Z,34nm,1.4s
PVY Plav 82.99 359⇑*i*P **P** **08 16 04.2 +0.1**
CEME Cevo 83.04 360⇑*i*P **P** **08 16 03.7 -0.6**
BOK Bokaro 83.07 302⇑*i*P **P** **08 16 04.3 -0.3**
BOK IAmb IAmb 08 16 08.0
comp=Z,71nm,0.8s
BOK *i* x x 08 16 18.0
DSLB Salisbury 83.08 73 *e*P P 08 15 59.8 -5.0
DSLB x x 08 26 25.2
PCBR Castelo Branco 83.10 20⇑*i*P **P** **08 16 05.0 +0.5**
PCBR *e*sP **sP** **08 16 21.9 +0.3**
AQU L'Aquila 83.13 4 P **P** **08 16 05.4 +0.6**
AQU L'Aquila 83.13 4 P **P** **08 16 06.2 +1.5**
AQU pmax pmax
comp=Z,91nm,1.3s
AQU L'Aquila 83.13 4 IAmb IAmb 08 16 53.8
comp=Z,151nm,1.1s
AQU L'Aquila 83.13 4⇑*i*P **P** **08 16 05.3 +0.6**
AQU L'Aquila 83.13 4 P **P** **08 16 05.7 +1.0**
HCY Herceg Novi 83.14 0⇑*i*P **P** **08 16 04.3 -0.4**
HCY Herceg Novi 83.14 0⇑*i*P **P** **08 16 03.9 -0.8**
PSBE So Bento 83.14 21⇑*i*P **P** **08 16 05.7 +0.9**
PSBE *e*sP **sP** **08 16 21.9 +0.1**
AYAN Aya Nagar 83.16 311⇑*i*P **P** **08 16 04.5 -0.5**
SDV Santo Domingo 83.16 84 LR LR 08 55 08.3
comp=Z,3µm,20.0s,baz=341,slow=37
SDV Santo Domingo 83.16 84 P **P** **08 16 05.1 -0.3**
SDV IAmb IAmb 08 16 17.2
comp=Z,239nm,1.4s
SDV Santo Domingo 83.16 84 P **P** **08 16 04.5 -1.0**
SDV S **S** **08 26 20.5 -2.1**
SDV Santo Domingo 83.16 84 *e*P **P** **08 16 03.9 -1.5**
PDG Podgorica 83.16 360 ⇓P **P** **08 16 04.9 +0.1**
PDG Podgorica 83.16 360 IAMs_20 IAMs_20 08 52 55.3
comp=Z,4µm,22.0s
PDG Podgorica 83.16 360 P **P** **08 16 04.9 +0.1**
PDG Podgorica 83.16 360⇑*i*P **P** **08 16 04.0 -0.8**
PSARD Sardoal 83.19 21⇑*i*P **P** **08 16 05.7 +0.6**
PSARD *e*sP **sP** **08 16 21.9 -0.2**
PSARD *i* IAmb IAmb 08 16 23.2
comp=Z,370nm,1.3s
PAMC Pamplona, Colo 83.21 87 P **P** **08 16 05.2 -0.9**
SRGN SRI GANGA NAGA 83.28 314⇑*i*P **P** **08 16 04.7 -1.0**
BUM Brajici-Budva 83.29 360⇑*i*P **P** **08 16 04.9 -0.7**
MPSI Mapaga 83.31 261 P **P** **08 16 05.3 -0.6**
comp=Z,7µmcomp=Z,3µmcomp=Z,76nm,1.3s
PLD Plovdiv 83.31 356 P **P** **08 16 05.7 +0.1**
APSI Ampana 83.33 259 P **P** **08 16 05.6 -0.4**
APSI Ampana 83.33 259 P **P** **08 16 04.8 -1.2**
comp=Z,54nm,1.0s
DIM Dimitrovgrad 83.37 355 P **P** **08 16 06.0 +0.1**
GUY2C Guyana, Caldas 83.38 90 P **P** **08 16 06.1 -0.8**
comp=Z,5µmcomp=Z,975nmcomp=Z,174nm,1.2s
SONA Sohna 83.39 311 *e*P **P** **08 16 05.4 -0.8**
DRME Dracevica, Mon 83.40 360⇑*i*P **P** **08 16 06.3 +0.2**
DRME Dracevica, Mon 83.40 360⇑*i*P **P** **08 16 06.4 +0.3**
UCM Universidad Co 83.42 17 P **P** **08 16 07.3 +1.0**
UCM Universidad Co 83.42 17 P **P** **08 16 07.1 +0.8**
INTR Introdacgua 83.49 4 IAmb IAmb 08 16 25.2
comp=Z,85nm,0.7s
PMRV Marv??o 83.51 20 *e*P **P** **08 16 06.5 -0.2**
PMRV *i* IAmb IAmb 08 16 25.4
comp=Z,216nm,1.3s
PMRV *e*PP **PP** **08 19 21.8 +3.4**
PMRV *e*S **SKSac** **08 26 26.4 +0.6**
PMRV *e*SS **SS** **08 31 53.3 +3.2**
PMRV *e*LQ LQ 08 42 40.2
PMRV *e*LR LR 08 44 56.3
PMRV *i* IAMs_20 IAMs_20 08 52 13.8
comp=Z,3µm,22.0s
PMAFR Mafra 83.58 22 P **P** **08 16 08.1 +1.1**
PMAFR Mafra 83.58 22⇑*i*P **P** **08 16 07.7 +0.7**
PMAFR *e*sP **sP** **08 16 24.0 0.0**
PMAFR *e*PP **PP** **08 19 20.3 +1.4**
SKO Skopje 83.59 358 *e*P **P** **08 16 08.0 +1.0**
ULC Ulcinj 83.62 360⇑*i*P **P** **08 16 06.7 -0.6**
HRA Herat 83.65 325 IAmb IAmb 08 16 09.1
comp=Z,63nm,0.8s
KKB Krupnik 83.68 357 P **P** **08 16 07.8 +0.2**
PMTG Montargil 83.69 21⇑*i*P **P** **08 16 08.1 +0.5**
PMTG *e*sP **sP** **08 16 24.1 -0.5**
PMTG *e*PP **PP** **08 19 22.3 +2.5**
SVN Savane Anatole 83.71 73 IAMs_20 IAMs_20 08 52 37.3
comp=Z,4µm,21.0s
SVN Savane Anatole 83.71 73 *e*P **P** **08 16 07.7 -0.3**
SVN x x 08 26 29.7
KUDL Kundal 83.73 311 *e*P **P** **08 16 07.5 -0.4**
ALBI Allahabad 83.75 306⇑*i*P **P** **08 16 07.1 -1.0**
ALBI IAmb IAmb 08 16 07.8
comp=Z,177nm,0.8s
KOPT Kop Dagi 83.75 343 IAmb IAmb 08 16 29.1
comp=Z,114nm,1.0s
RZN Rozhen 83.76 356 P **P** **08 16 08.6 +0.5**
SPBC San Pablo de B 83.78 89 P **P** **08 16 07.1 -1.4**
comp=Z,4µmcomp=Z,952nmcomp=Z,108nm,1.1s
KDZ Kurdzhali 83.80 355 P **P** **08 16 08.4 +0.3**
FDFM Morne la Roset 83.80 73 IAMs_20 IAMs_20 08 52 50.6
comp=Z,4µm,20.0s
SGRT San Giovanni R 83.80 2 IAmb IAmb 08 16 25.5
comp=Z,99nm,1.1s
KELT Kelkit 83.82 344 P **P** **08 16 09.2 +0.7**
LIS Lisbon 83.83 22 *e*P **P** **08 16 08.8 +0.5**
LIS *e*SKSac **SKSac** **08 26 27.7 -0.1**
LIS IAMs_20 IAMs_20 08 51 25.8
comp=N,9µm,29.4s
LIS Lisbon 83.83 22⇑*i*P **P** **08 16 09.0 +0.7**
LIS *e*sP **sP** **08 16 26.1 +0.8**
LIS *i* IAmb IAmb 08 16 31.9
comp=N,329nm,2.1s
LIS Lisbon 83.83 22 *e*P **P** **08 16 08.8 +0.5**
LIS *e* 08 26 27.7
AGRA Agra 83.88 310⇑*i*P **P** **08 16 08.6 -0.1**
AGRA *i* x x 08 16 25.8
PHP Peshkopia 83.89 359 P **P** **08 16 08.9 +0.2**
PHP Peshkopia 83.89 359 P **P** **08 16 08.8 +0.1**
PHP Peshkopia 83.89 359 P **P** **08 16 08.8 +0.1**
PTCN Pitcairn Islan 83.91 152 IAMs_20 IAMs_20 08 46 28.8
comp=Z,6µm,20.0s
ESBB Sonseca Array 83.91 17 IAmb IAmb 08 16 27.3
comp=Z,116nm,0.9s
ESDC Sonseca Array 83.92 17 P **P** **08 16 09.2 +0.4**
comp=Z,88nm,0.8s,baz=343,slow=4.7,SNR=336
ESDC PKKPbc **PKKPbc** **08 34 21.8 +0.5**
comp=Z,0.6nm,0.8s,baz=159,slow=1.4,SNR=4.1
ESDC LR LR 08 55 22.1
comp=Z,2µm,20.1s,baz=342,slow=37
comp=Z,88nm,0.8s
ESDC Sonseca Array 83.92 17 P **P** **08 16 09.1 +0.3**
PARRA Arraiolos 83.97 21⇑*i*P **P** **08 16 09.3 +0.3**
PARRA *e*sP **sP** **08 16 26.9 +0.9**
PARRA *i* IAmb IAmb 08 16 33.2
comp=Z,223nm,1.8s
KNTI KHUNTI 83.98 302 *e*P **P** **08 16 07.7 -1.8**
SILT Sile 83.98 352 ⇑P **P** **08 16 09.3 +0.3**

PESTR **Estremoz** 84.02 20 P P 08 16 09.8 +0.5
PESTR **Estremoz** 84.02 20 IAmb IAmb 08 16 27.2
comp=Z,204nm,1.4s
PESTR **Estremoz** 84.02 20 P P 08 16 10.0 +0.7
BIM **Bigot** 84.02 73 IAMs_20 IAMs_20 08 52 46.7
comp=Z,5µm,22.0s
BIM **Bigot** 84.02 73 *e*P P 08 16 06.9 -2.8
BIM x x 08 26 25.6
TOKA **Tokat** 84.06 346 IAmb IAmb 08 16 12.9
comp=Z,102nm,0.8s
NVR **Nevrokopi** 84.14 356 P P 08 16 10.5 +0.5
RUSC **La Rusia** 84.16 88 P P 08 16 09.7 -1.2
comp=Z,5µmcomp=Z,2µmcomp=Z,422nm,1.3s
SAHE **Sakarya_HENDEK** 84.18 351 ⇑P P 08 16 10.4 +0.3
MOE **Montemor** 84.19 21 *i*P P 08 16 10.6 +0.4
MOE *es*P **sP** 08 16 27.9 +0.7
MOE *i* IAmb IAmb 08 16 34.6
comp=Z,344nm,1.8s
MOE *e*PP **PP** 08 19 26.4 +2.4
MPOM **Morne Pois Mar** 84.20 73 IAMs_20 IAMs_20 08 52 52.3
comp=Z,5µm,21.0s
VAY **Valandovo** 84.21 357 *e*P P 08 16 10.8 +0.6
EBAD **Badajoz** 84.24 20 P P 08 16 10.8 +0.4
JAMC **Jamundi, Valle** 84.24 93 P P 08 16 10.3 -0.7
comp=Z,4µmcomp=Z,1µmcomp=Z,204nm,1.2s
EVO **Evora** 84.25 21 P P 08 16 11.1 +0.6
EVO **Evora** 84.25 21 ⇑*i*P P 08 16 10.8 +0.3
EVO *es*P **sP** 08 16 27.6 +0.1
EVO *i* IAmb IAmb 08 16 30.1
comp=Z,159nm,1.4s
RDO **Rodhopi** 84.27 355 P P 08 16 11.0 +0.5
RDO **Rodhopi** 84.27 355 P P 08 16 10.8 +0.3
ROSC **El Rosal** 84.29 90 P P 08 16 11.3 -0.2
comp=Z,19nm,0.6s,baz=328,slow=7.5,SNR=9.1
ROSC LR LR 08 57 37.3
comp=Z,2µm,18.5s,baz=353,slow=38
comp=Z,19nm,0.6s
ROSC **El Rosal** 84.29 90 IAmb IAmb 08 16 48.6
comp=Z,177nm,1.4s
ROSC **El Rosal** 84.29 90 P P 08 16 11.0 -0.5
comp=Z,4µmcomp=Z,871nmcomp=Z,54nm,1.2s
PCI **Palu** 84.36 260 P P 08 16 14.4 +3.1
comp=Z,93nm,0.8s
KNT **Kendrikon** 84.36 357 P P 08 16 13.3 +2.3
KNT **Kendrikon** 84.36 357 P P 08 16 13.3 +2.3
KNT **Kendrikon** 84.36 357 P P 08 16 13.3 +2.3
SRS **Serrai** 84.38 356 P P 08 16 11.5 +0.3
OHR **Ohrid** 84.46 358 *e*P P 08 16 12.2 +0.6
KAVA **Kavala** 84.47 356 P P 08 16 11.8 +0.3
SLBI **Saint Lucia, B** 84.48 74 *e*P P 08 16 13.9 +2.0
SLBI x x 08 26 35.5
ECHE **Chera** 84.48 15 P P 08 16 12.4 +0.7
ALN **Alexandroupoli** 84.49 354 P P 08 16 11.8 +0.2
ALN **Alexandroupoli** 84.49 354 P P 08 16 11.0 -0.6
ALN **Alexandroupoli** 84.49 354 IAmb IAmb 08 16 14.0
comp=Z,120nm,0.9s
ALN **Alexandroupoli** 84.49 354 P P 08 16 12.0 +0.4
PAOL **Paolisi** 84.49 3 IAmb IAmb 08 16 28.9
comp=Z,176nm,1.2s
MDUB **Mudurnu** 84.52 351 IAmb IAmb 08 16 43.4
comp=Z,167nm,1.0s
GRG **Griva** 84.58 357 P P 08 16 13.0 +0.8
GRG **Griva** 84.58 357 P P 08 16 12.7 +0.5
GRG **Griva** 84.58 357 P P 08 16 12.7 +0.5
SLAC **Saint Lucia, A** 84.63 74 *e*P P 08 16 04.7 -8.0
PLOUS **Minas do Lousa** 84.65 21 ⇑*i*P P 08 16 12.8 +0.3
PLOUS *es*P **sP** 08 16 30.5 +1.0
PLOUS *i* IAmb IAmb 08 16 36.9
comp=Z,225nm,1.8s
CAVK **Edirne/Enez-Ca** 84.69 354 ⇓P P 08 16 12.8 +0.2
SOH **Sokhos** 84.69 357 P P 08 16 13.3 +0.6
SOH **Sokhos** 84.69 357 P P 08 16 13.3 +0.6
CVER **Cruz Verde, Cu** 84.69 90 P P 08 16 12.8 -0.8
comp=Z,1µmcomp=Z,152nm,1.2s
PBEJ **Beja** 84.77 21 ⇑*e*P P 08 16 13.5 +0.4
PBEJ *es*P **sP** 08 16 30.8 +0.7
POPC **Popayan, Colom** 84.79 93 P P 08 16 12.5 -1.3
comp=Z,5µmcomp=Z,584nmcomp=Z,87nm,1.4s
PBAR **Barrancos** 84.79 20 P P 08 16 13.7 +0.5
PBAR **Barrancos** 84.79 20 ⇑*i*P P 08 16 13.3 +0.1
PBAR *es*P **sP** 08 16 31.1 +0.8
PBAR *e*PP **PP** 08 19 32.9 +4.0
CHIC **Chingaza** 84.80 89 P P 08 16 12.8 -1.3
comp=Z,4µmcomp=Z,605nmcomp=Z,123nm,1.4s
ETOS **Mallorca** 84.83 12 P P 08 16 14.0 +0.6
THAS **Thassos island** 84.85 355 P P 08 16 13.5 +0.1
MAHO **Mahon** 84.88 11 P P 08 16 14.2 +0.7
PRAC **Prado** 84.88 91 P P 08 16 12.8 -1.2
comp=Z,4µmcomp=Z,856nmcomp=Z,132nm,0.8s
MESJ **Messejana** 84.88 21 *e*P P 08 16 13.9 +0.3
MESJ *e*SKSac **SKSac** 08 26 34.5 -0.1
MESJ IAMs_20 IAMs_20 08 51 43.4
comp=Z,6µm,21.0s
MESJ **Messejana** 84.88 21 ⇑*i*P P 08 16 13.9 +0.3
MESJ *es*P **sP** 08 16 31.9 +1.2
MESJ *i* IAmb IAmb 08 16 37.8
comp=Z,121nm,2.1s
MESJ **Messejana** 84.88 21 *e*P P 08 16 13.9 +0.3
MESJ *e* 08 26 34.5
MESJ **Messejana** 84.88 21 IAmb IAmb 08 16 31.6
comp=Z,121nm,1.5s
BBAC **Balboa, Cauca** 84.88 94 P P 08 16 13.4 -0.8
comp=Z,4µmcomp=Z,607nmcomp=Z,35nm,1.3s
THE **Thessaloniki** 84.89 357 P P 08 16 14.3 +0.7
THE **Thessaloniki** 84.89 357 P P 08 16 14.3 +0.7
BAND **Balkesir-Ban** 84.90 353 ⇑P P 08 16 14.1 +0.4
RAO **Raoul Island** 84.92 195 LR LR 08 47 44.2
comp=Z,2µm,21.9s,baz=76,slow=31
HORT **Hortiatis** 84.92 357 P P 08 16 12.4 -1.5
HORT **Hortiatis** 84.92 357 P P 08 16 12.7 -1.2
MATE **Matera** 84.92 2 ⇑P P 08 16 14.7 +0.9
MATE **Matera** 84.92 2 P P 08 16 14.7 +0.9
SMTH **Samothraki Isl** 84.94 355 P P 08 16 13.7 -0.2
KBN **Korca** 84.95 358 P P 08 16 14.7 +0.6
KBN **Korca** 84.95 358 P P 08 16 14.7 +0.6
ARPR **Arapgir-MALATY** 85.00 345 IAmb IAmb 08 16 32.1
comp=Z,153nm,1.1s
ARPR **Arapgir-MALATY** 85.00 345 P P 08 16 15.8 +1.4
BR131 **Keskin Array S** 85.00 349 *i*P P 08 16 14.1 -0.3
BR131 **Keskin Array S** 85.00 349 IAmb IAmb 08 16 31.9
comp=Z,169nm,1.1s
BRTR **Keskin Array B** 85.00 349 P P 08 16 14.7 +0.2
comp=Z,72nm,0.8s,baz=36,slow=2.5,SNR=278
BRTR pP **pP** 08 16 25.0 -1.8
comp=Z,34nm,0.9s,baz=9.3,slow=3.0,SNR=2.6
BRTR PKKPbc **PKKPbc** 08 34 18.3 -0.6
comp=Z,1.1nm,0.6s,baz=164,slow=5.0,SNR=5.3
BRTR PKPPKP **P'P'df** 08 42 28.6 -4.1
comp=Z,0.7nm,0.6s,baz=216,slow=1.1,SNR=3.8
BRTR LR LR 08 59 32.1
comp=Z,3µm,19.3s,baz=20,slow=39
comp=Z,72nm,0.8s
BRTR **Keskin Array B** 85.00 349 *i*P P 08 16 14.6 +0.2
BRTR pmax pmax
comp=Z,74nm,0.8s
BRTR **Keskin Array B** 85.00 349 P P 08 16 14.8 +0.3
PTEO **Sao Teotonio** 85.05 22 ⇑*i*P P 08 16 15.0 +0.5
PTEO *es*P **sP** 08 16 32.8 +1.3
PTEO *i* IAmb IAmb 08 16 34.9
comp=Z,267nm,1.4s
JHNI **Jhansi** 85.10 308 ⇑*i*P P 08 16 13.7 -1.3
PCVE **Castro Verde** 85.11 21 P P 08 16 15.4 +0.5
PCVE **Castro Verde** 85.11 21 ⇑*i*P P 08 16 15.0 +0.2
PCVE *es*P **sP** 08 16 33.5 +1.6
PCVE *i* IAmb IAmb 08 16 38.4
comp=Z,119nm,1.9s
PLG **Polygyros** 85.13 356 P P 08 16 14.8 -0.1
OUR **Ouranopolis** 85.15 356 P P 08 16 14.9 -0.1
GADA **Gvkgeada** 85.20 355 P P 08 16 15.2 0.0
BKNR **BIKÂNER** 85.20 314 *e*P P 08 16 14.8 -0.7
ECAB **El Cabril** 85.20 19 P P 08 16 15.6 +0.3
VILC **Villavicencio,** 85.24 90 P P 08 16 17.0 +1.1
KZN **Kozani** 85.25 358 P P 08 16 15.6 0.0
MARCO **Tramutola** 85.26 2 P P 08 16 16.4 +0.7
EMIN **Mina Concepcio** 85.26 20 P P 08 16 16.0 +0.4
EADA **Adamuz** 85.27 18 P P 08 16 16.2 +0.5
KDI **Kendari** 85.27 256 P P 08 16 17.5 +1.6
KDI **Kendari** 85.27 256 P P 08 16 15.7 -0.2
MORF **Marmelete** 85.30 22 *e*P P 08 16 16.1 +0.3
MORF *e*SKSac **SKSac** 08 26 37.5 +0.1
MORF IAMs_20 IAMs_20 08 52 06.4
comp=Z,9µm,18.1s
MORF **Marmelete** 85.30 22 *e*P P 08 16 16.1 +0.3
MORF *e* 08 26 37.5
ETOB **Tobarra** 85.32 16 P P 08 16 16.5 +0.5
EGRO **El Granado** 85.32 21 P P 08 16 16.5 +0.6
EIBI **Ibiza** 85.37 14 P P 08 16 16.6 +0.5
PENT **Pentalofos** 85.37 358 P P 08 16 16.5 +0.3
PVAQ **Vaqueiros** 85.40 21 ⇑*i*P P 08 16 16.6 +0.3
PVAQ *es*P **sP** 08 16 34.4 +1.1
PVAQ *i* IAmb IAmb 08 16 40.8
comp=Z,187nm,1.9s
PVAQ *e*S **S** 08 26 44.5 +0.5
PVAQ *e*SS **SS** 08 32 23.7 +5.8
PVAQ *e*LQ LQ 08 42 33.0
PVAQ *e*LR LR 08 45 55.4
PVAQ *i* IAMs_20 IAMs_20 08 52 52.4
comp=Z,4µm,22.0s
PVAQ **Vaqueiros** 85.40 21 IAmb IAmb 08 16 34.6
comp=Z,221nm,1.6s
PVAQ **Vaqueiros** 85.40 21 P P 08 16 17.1 +0.9
PAC1 **Pacto, Paraso** 85.41 96 P P 08 16 16.2 -0.6
comp=Z,738nmcomp=Z,54nm,1.5s
PFVI **Vila Bisbo** 85.43 22 P P 08 16 17.0 +0.6
PFVI **Vila Bisbo** 85.43 22 ⇑*i*P P 08 16 16.7 +0.3
PFVI *es*P **sP** 08 16 34.5 +1.1
PFVI **Vila Bisbo** 85.43 22 IAmb IAmb 08 16 49.4
comp=Z,90nm,1.0s
LIT **Litokhoron** 85.43 357 P P 08 16 16.4 0.0
LIT **Litokhoron** 85.43 357 P P 08 16 16.7 +0.3
LIT **Litokhoron** 85.43 357 IAmb IAmb 08 16 18.5
comp=Z,133nm,1.0s
LIT **Litokhoron** 85.43 357 P P 08 16 16.7 +0.3
PBDV **Barranco-do-Ve** 85.51 21 P P 08 16 17.8 +0.9
PBDV **Barranco-do-Ve** 85.51 21 ⇑*i*P P 08 16 17.1 +0.3
PBDV *es*P **sP** 08 16 35.1 +1.2
LIA **Limnos Island** 85.53 355 P P 08 16 16.9 +0.1
EZN **Ezine** 85.54 354 P P 08 16 16.9 0.0
BALY **Balya** 85.54 353 P P 08 16 17.1 +0.1
KIRS **Kirsehir-Merke** 85.56 348 ⇓P P 08 16 17.6 +0.5
HAKT **HAKKARI** 85.56 340 P P 08 16 17.8 +0.4
PAIG **Paliouri** 85.57 356 P P 08 16 16.7 -0.4
PAIG **Paliouri** 85.57 356 P P 08 16 16.9 -0.2
KPRO **Kipourio** 85.61 358 P P 08 16 17.5 +0.1
TULM **Tulcn-Chalpat** 85.62 95 P P 08 16 18.8 +0.5
comp=Z,1µmcomp=Z,101nm,1.3s
OTAV **Otavalo** 85.63 96 P P 08 16 18.5 +0.2
OTAV **Otavalo** 85.63 96 P P 08 16 18.2 0.0
OTAV **Otavalo** 85.63 96 P P 08 16 18.4 +0.2
comp=Z,5µmcomp=Z,692nmcomp=Z,53nm,1.2s
OTAV **Otavalo** 85.63 96 P P 08 16 18.3 0.0
OTAV **Otavalo** 85.63 96 *e*P P 08 16 18.3 0.0
OTAV **Otavalo** 85.63 96 P P 08 16 18.4 +0.2
GRGR **Grenville** 85.64 75 IAMs_20 IAMs_20 08 54 37.6
comp=Z,4µm,21.0s
SRN **Sarande** 85.70 359 P P 08 16 17.9 +0.2
SRN **Sarande** 85.70 359 P P 08 16 18.0 +0.2
VSL **Villasalto** 85.75 7 IAmb IAmb 08 16 35.6
comp=Z,152nm,1.1s
VSL **Villasalto** 85.75 7 P P 08 16 18.7 +0.7
GARC **Garzon, Huila** 85.76 92 P P 08 16 18.3 -0.3
comp=Z,6µmcomp=Z,906nmcomp=Z,88nm,1.4s
TYRN **Tyrnavos** 85.83 357 P P 08 16 18.1 -0.2
KEK **Kerkira** 85.87 359 P P 08 16 18.0 -0.5
KEK **Kerkira** 85.87 359 P P 08 16 18.2 -0.4
JAN **Janina** 85.91 358 P P 08 16 19.5 +0.7
THL **Klokotos Trika** 85.98 357 P P 08 16 18.5 -0.6
AJM **Ajmer** 86.03 312 ⇑*i*P P 08 16 18.4 -1.2
PRMD **Pramanda** 86.04 358 P P 08 16 20.4 +0.9
IGT **Igoumenitsa** 86.05 359 P P 08 16 19.8 +0.3
BWNR **Bhubaneshwar** 86.08 300 ⇑*i*P P 08 16 20.2 +0.3
BWNR *ex* x 08 16 35.5
MTSU **Mount Surprise** 86.10 231 P P 08 16 20.1 +0.3
comp=Z,39nm,0.8s
PRK **Paraskevi** 86.12 354 P P 08 16 19.6 -0.2
XOR **Xorichti** 86.14 357 P P 08 16 19.5 -0.4
XOR **Xorichti** 86.14 357 P P 08 16 19.6 -0.3
FLOC **Florencia** 86.16 93 P P 08 16 19.9 -0.4
comp=Z,5µmcomp=Z,1µmcomp=Z,159nm,1.6s
NEO **Neokhori** 86.20 357 P P 08 16 20.2 0.0
TETR **Tetrakomo, Epi** 86.22 358 P P 08 16 20.8 +0.4
TLOR **Lorca, Murcia** 86.26 16 P P 08 16 21.6 +1.0
ESPR **Espera** 86.29 20 P P 08 16 21.2 +0.5
BLSP **Bilaspur** 86.31 304 *e*P P 08 16 20.1 -0.9
BLSP *i* x x 08 16 37.0
EGOR **Sierra Gorda,** 86.38 18 P P 08 16 22.0 +0.7
TIP **Timpagrande** 86.39 2 ⇑P P 08 16 21.7 +0.4
TIP **Timpagrande** 86.39 2 IAMs_20 IAMs_20 09 01 26.9
comp=Z,4µm,20.0s
TIP **Timpagrande** 86.39 2 P P 08 16 21.6 +0.3
EQTA **Presa de Quent** 86.41 18 P P 08 16 21.9 +0.5
CART **Cartagena** 86.44 16 P P 08 16 21.9 +0.5
AGG **Agios Georgios** 86.51 357 P P 08 16 21.0 -0.8
AGG **Agios Georgios** 86.51 357 P P 08 16 21.4 -0.4
AGG **Agios Georgios** 86.51 357 P P 08 16 21.4 -0.4
EVR **Evrytania** 86.63 358 P P 08 16 22.7 +0.3
AMPL **Ampelaki** 86.64 359 P P 08 16 22.4 +0.1
EMAL **Malaga-Limoner** 86.66 18 P P 08 16 23.0 +0.5
EMAL **Malaga-Limoner** 86.66 18 P P 08 16 23.2 +0.7
ELGU **Los Guajares,** 86.70 18 P P 08 16 23.0 +0.2
CNIL **Conil** 86.73 20 P P 08 16 24.1 +1.3
PIAT **Ana Tenorio** 86.74 96 P P 08 16 23.9 +0.3
comp=Z,4µmcomp=Z,565nmcomp=Z,43nm,1.3s
MACC **Macarena, Meta** 86.75 91 P P 08 16 21.5 -1.7
comp=Z,739nmcomp=Z,124nm,1.0s
TSLK **Tsoukalades, L** 86.75 359 P P 08 16 22.9 0.0
LKD2 **Lefkada island** 86.78 359 P P 08 16 23.2 +0.1
LKD2 **Lefkada island** 86.78 359 P P 08 16 23.2 +0.1
EMIJ **Mijas** 86.79 19 P P 08 16 23.3 +0.1
EBER **Berja** 86.81 17 P P 08 16 23.5 0.0
ATAL **Atalanti** 86.82 357 P P 08 16 22.8 -0.8
KYMI **Kymi, Euboea I** 86.84 356 P P 08 16 22.7 -0.6
ENIJ **Nijar** 86.85 17 P P 08 16 23.4 0.0
NYDR **Nydri-Lefkada** 86.86 358 P P 08 16 23.2 -0.2
LKR **Lokris** 86.86 357 P P 08 16 22.3 -1.1
DRAG **Dragano-Lefkad** 86.89 359 P P 08 16 23.6 0.0
SPSI **Sidrap Palu** 86.89 259 P P 08 16 22.2 -1.6
BLCB **Balcova** 86.93 354 P P 08 16 23.3 -0.4
PVO **Paravola** 86.94 358 P P 08 16 24.0 +0.1
EVGI **Lefkada island** 86.95 359 P P 08 16 23.9 0.0
ANX **Ano Chora** 86.95 358 P P 08 16 24.0 0.0
CTA **Charters Tower** 86.96 228 P P 08 16 23.4 -0.6
comp=Z,62nm,0.8s,baz=28,slow=6.0,SNR=23
CTA LR LR 08 48 56.5
comp=Z,991nm,21.7s,baz=25,slow=31
comp=Z,62nm,0.8s
CTA **Charters Tower** 86.96 228 P P 08 16 23.9 -0.1
comp=Z,42nm,0.9s
CTAO **Charters Tower** 86.96 228 P P 08 16 24.6 +0.6
CTAO **Charters Tower** 86.96 228 P P 08 16 23.7 -0.3
CTAO pmax pmax
comp=Z,64nm,0.8s
CTAO **Charters Tower** 86.96 228 P P 08 16 23.7 -0.3
CTAO IAmb IAmb 08 16 27.3
comp=Z,64nm,0.8s
CTAO **Charters Tower** 86.96 228 P P 08 16 24.2 +0.2
PDO **Prodromos** 86.96 358 P P 08 16 24.0 +0.1
CHOS **Chios island** 86.99 354 P P 08 16 23.9 -0.2
CHOS **Chios island** 86.99 354 P P 08 16 24.2 +0.1
TRN **Trinidad (W)** 86.99 76 *e*P P 08 16 19.7 -4.7
TRN x x 08 26 48.5
GAZ **Gaziantep** 87.05 345 IAmb IAmb 08 16 42.6
comp=Z,94nm,1.0s
FSK **Fiskardo** 87.11 359 P P 08 16 24.5 -0.2
EFP **Efpalio** 87.12 358 P P 08 16 25.3 +0.7
VVK **Vomvokou** 87.13 358 P P 08 16 25.2 +0.4
SERG **Sergoula** 87.13 357 P P 08 16 24.7 -0.1
PLEV **Plevrona-Mesol** 87.15 358 P P 08 16 25.0 +0.2
KALE **Kalithea** 87.15 357 P P 08 16 24.6 -0.3
VSK1 **VASILIKIADES** 87.16 359 P P 08 16 24.3 -0.6
KDU **Kakadu** 87.17 243 P P 08 16 24.6 -0.5
comp=Z,35nm,1.3s
CEL **Celeste** 87.29 2 P P 08 16 24.1 -1.5
DMLN **Damoulianata-K** 87.34 359 P P 08 16 27.4 +1.6
VILL **Villia** 87.34 356 P P 08 16 24.7 -1.1
AXS **Araxos** 87.36 358 P P 08 16 26.0 +0.1
VLS **Valsamata** 87.39 359 P P 08 16 26.1 +0.1
DION **Dionisos Attik** 87.40 356 P P 08 16 25.4 -0.7
PMOZ **Porto Moniz, M** 87.42 30 P P 08 16 27.6 +1.2
PMOZ **Porto Moniz, M** 87.42 30 ⇑*e*P P 08 16 26.9 +0.5
PMOZ *i* IAmb IAmb 08 17 06.9
comp=Z,262nm,1.5s
PMOZ *e*PP **PP** 08 19 51.9 +1.5
PMOZ *e*S **S** 08 27 08.4 +4.4
PMOZ *e*LR LR 08 48 41.7
PMOZ *i* IAMs_20 IAMs_20 08 54 05.2
PMPST **Porto Santo, M** 87.42 29 ⇑*i*P P 08 16 26.0 -0.3
PMPST *es*P **sP** 08 16 44.7 +1.3
PMPST *i* IAmb IAmb 08 16 54.5
comp=Z,196nm,1.8s
PTL **Penteli** 87.43 356 P P 08 16 25.6 -0.7
LTK **Loutraki** 87.49 357 P P 08 16 25.4 -1.2
RTZL **Ratzakli, Kefa** 87.49 358 P P 08 16 26.3 -0.2
KLV **Kalavryta, Ach** 87.50 357 P P 08 16 26.3 -0.3
RLS **Riolos of Patr** 87.50 358 P P 08 16 26.7 +0.2
ATHU **Athens Univers** 87.52 356 P P 08 16 25.7 -1.0
BHPL **Bhopal** 87.56 308 ⇑*i*P P 08 16 26.1 -1.0
BHPL IAmb IAmb 08 16 28.0
comp=Z,167nm,0.9s
BHPL *i* x x 08 16 39.0
PMAR **Madeira** 87.59 29 ⇑*e*P P 08 16 27.9 +0.6
PMAR *i* IAmb IAmb 08 16 58.0
comp=Z,232nm,1.4s
DRO **Drossia** 87.60 358 P P 08 16 27.3 +0.3
GUR **Goura** 87.60 357 P P 08 16 27.0 -0.2
ORTH **Orthonies,Zaky** 87.72 358 P P 08 16 27.3 -0.3
KAPI **Kappang** 87.76 258 P P 08 16 27.1 -0.9
comp=Z,18nm,0.5s,baz=323,slow=2.4,SNR=9.3
KAPI LR LR 08 51 24.8
comp=Z,1µm,21.8s,baz=40,slow=33
comp=Z,18nm,0.5s
KAPI **Kappang** 87.76 258 P P 08 16 29.1 +1.1
KAPI **Kappang** 87.76 258 P P 08 16 28.2 +0.2
KAPI pmax pmax
comp=Z,129nm,1.3s
KAPI **Kappang** 87.76 258 P P 08 16 28.1 +0.2
KAPI IAmb IAmb 08 17 14.4
comp=Z,129nm,1.2s
KAPI **Kappang** 87.76 258 P P 08 16 30.3 +2.3
KAPI **Kappang** 87.76 258 P P 08 16 27.8 -0.3
KAPI S S 08 27 08.0 +0.7
PTLC **Puerto Leguiza** 87.80 93 P P 08 16 29.8 +1.5
comp=Z,4µmcomp=Z,1µmcomp=Z,169nm,1.4s
LTHK **Lithakia** 87.86 358 P P 08 16 27.8 -0.4
MTN **Manton Dam** 88.00 244 P P 08 16 28.8 -0.3
comp=Z,30nm,1.2s
VAE **Valguarnera** 88.03 3 LR LR 08 57 00.8
comp=Z,2µm,21.3s,baz=3.5,slow=36
UDPR **Udaipur** 88.04 312 *e*P P 08 16 29.9 +0.5
AUNRC **North Rockhamp** 88.09 223 P P 08 16 30.0 +0.7
RAGD **RAYAGADA** 88.10 301 *e*P P 08 16 29.2 -0.5
NRDN **NARMADA NAGAR** 88.12 308 ⇑*i*x x 08 16 31.7
NRDN IAmb IAmb 08 16 36.2
comp=Z,75nm,0.3s
RAFF **Raffo Rosso** 88.28 4 IAmb IAmb 08 17 26.2
comp=Z,67nm,1.0s
ELL **Elmali** 88.33 351 IAmb IAmb 08 16 47.7
comp=Z,86nm,1.0s
ITM **Ithomi** 88.36 357 P P 08 16 30.2 -0.5
MCRA **Macar, Loja** 88.51 100 P P 08 16 30.9 -0.8
comp=Z,4µmcomp=Z,685nmcomp=Z,90nm,1.5s
NGP **Nagpur** 88.59 306 ⇑*i*P P 08 16 31.5 -0.5
VLI **Veliai** 88.79 357 P P 08 16 31.9 -0.8
ARG **Arkhangelos** 89.01 352 P P 08 16 33.2 -0.5
AVE **Averroes** 89.42 22 P P 08 16 36.2 +0.5
AVE **Averroes** 89.42 22 IAmb IAmb 08 16 37.6
comp=Z,78nm,0.8s
AVE IAMs_20 IAMs_20 08 54 23.6
comp=Z,4µm,22.0s
VIS **Vishakhapatnam** 89.46 301 ⇑*i*P P 08 16 36.0 -0.1
VIS *ex* x 08 16 49.5
KEST **Kesra** 89.48 8 P P 08 16 35.8 -0.3
comp=Z,24nm,0.8s,baz=0.9,slow=4.1,SNR=20
KEST LR LR 08 58 22.5
comp=Z,1µm,21.8s,baz=4.5,slow=37
comp=Z,24nm,0.8s
KEST **Kesra** 89.48 8 IAmb IAmb 08 17 01.5
comp=Z,45nm,0.9s
IFR **Ifrane** 89.68 20 P P 08 16 37.1 -0.1
EIDS **Eidsvold** 89.69 222 P P 08 16 37.5 +0.7
comp=Z,35nm,1.6s
CSS **Mathiatis** 89.74 348 IAmb IAmb 08 16 54.3
comp=Z,134nm,1.2s
CSS **Mathiatis** 89.74 348 P P 08 16 36.9 -0.4
KARP **Karpathos** 89.74 353 IAMs_20 IAMs_20 09 01 21.7
comp=Z,4µm,22.0s
BATI **Baumata** 89.83 252 LR LR 08 57 13.0
comp=Z,318nm,18.0s,baz=32,slow=36
IMMV **Iera Moni Meta** 90.01 356 P P 08 16 38.5 +0.1
IDI **Anoyia** 90.14 355 LR LR 09 01 16.8
comp=Z,1µm,20.2s,baz=359,slow=38
IDI **Anoyia** 90.14 355 IAmb IAmb 08 16 57.7
comp=Z,121nm,1.3s
CY604 **RAF Akrotiri,** 90.21 347 P P 08 16 39.0 0.0
CY604 IAmb IAmb 08 16 56.7
comp=Z,67nm,0.9s
AUBSH **Beerwah State** 90.33 220 P P 08 16 41.3 +1.6
QIS **Mount Isa** 90.36 234 P P 08 16 39.5 -0.6
comp=Z,43nm,1.4s
MD01 **Midelt array s** 90.38 20 P P 08 16 40.4 0.0
KULM **Kulim** 90.39 280 P P 08 16 41.2 +0.7
KULM **Kulim** 90.39 280 P P 08 16 42.5 +2.0
comp=Z,6µmcomp=Z,2µmcomp=Z,59nm,1.0s
KULM **Kulim** 90.39 280 P P 08 16 40.3 -0.2
MDT **Midelt** 90.46 20 LR LR 09 01 14.5
comp=Z,811nm,19.0s,baz=358,slow=38
AUTOO **Toowoomba Stat** 91.32 220 P P 08 16 47.0 +2.6
KNRA **Kununurra** 91.61 245 P P 08 16 45.3 -0.7
comp=Z,17nm,1.1s
TIO **Tiouine** 91.74 22 P P 08 16 47.1 +0.4
ASF **Jabal al Asfar** 92.00 345 LR LR 09 05 15.8
comp=Z,1µm,18.4s,baz=25,slow=40
HYB **Hyderabad** 92.05 304 *e*P P 08 16 47.6 -0.6
HYB **Hyderabad** 92.05 304 *e*P P 08 16 47.0 -1.2
HYB *es*P **sP** 08 17 04.1 -1.2
HYB *e*PKiKP **PKiKP** 08 21 38.5 +0.4
HYB *e*S **S** 08 27 47.5 +0.3
WRAB **Tennant Creek** 92.35 238 P P 08 16 50.0 +0.7
WRAB **Tennant Creek** 92.35 238 P P 08 16 48.8 -0.5
WRAB pmax pmax
comp=Z,27nm,1.0s
WRAB **Tennant Creek** 92.35 238 P P 08 16 48.8 -0.5
WRAB **Tennant Creek** 92.35 238 P P 08 16 48.9 -0.4
WRA **Warramunga Arr** 92.36 238 P P 08 16 47.9 -1.5
comp=Z,17nm,0.8s,baz=39,slow=5.4,SNR=37
WRA PKiKP **PKiKP** 08 21 38.1 -0.3
comp=Z,1.5nm,0.8s,baz=2.6,slow=1.8,SNR=7.2
WRA LR LR 08 56 46.9
comp=Z,670nm,18.9s,baz=358,slow=34
comp=Z,17nm,0.8s
WRA **Warramunga Arr** 92.36 238 *i*P P 08 16 48.4 -1.0
WRA pmax pmax
comp=Z,18nm,0.8s
WRA **Warramunga Arr** 92.36 238 P P 08 16 47.9 -1.5
RPN **Rapa Nui** 92.93 135 LR LR 08 50 43.1
comp=Z,3µm,18.8s,baz=329,slow=30
POO **Poona** 93.28 309 *e*P P 08 16 53.4 -0.4
POO *i* x x 08 17 09.5
SHME **Shamm** 93.33 327 P P 08 16 51.8 -2.1
PSI **Prapat** 93.41 280 P P 08 16 54.8 +0.2
RPSI **Rantau Prapat** 93.49 280 IAmb IAmb 08 16 59.7
comp=Z,29nm,0.8s
QLP **Quilpie** 93.55 227 P P 08 16 55.6 +0.9
comp=Z,155nm,1.3s
MXZ **Matakaoa Point** 93.64 196 IAMs_20 IAMs_20 08 52 24.1
comp=Z,4µm,21.0s
MSFE **Esma-Masafi** 93.97 327 P P 08 16 55.4 -1.5
MDH **Madha** 93.98 326 P P 08 16 53.6 -3.4
ARMA **Armidale** 94.03 219 P P 08 17 00.3 +3.4
BOAV **Boa Vista** 94.22 80 P P 08 16 57.4 -0.8
BOAV **Boa Vista** 94.22 80 *e*P P 08 16 57.0 -1.2
TOZ **Tahuroa Road** 94.29 198 IAMs_20 IAMs_20 08 51 24.2
comp=Z,4µm,22.0s
UOSS **Minazif** 94.34 326 P P 08 16 56.6 -2.0
UOSS **Minazif** 94.34 326 P P 08 16 57.6 -1.0
NAZ **Nazwa, Dubai** 94.47 327 P P 08 16 57.6 -1.6
HATD **Hatta, Dubai** 94.47 326 P P 08 16 57.4 -1.8
URZ **Urewera** 94.52 197 LR LR 08 53 05.1
comp=Z,4µm,21.1s,baz=30,slow=31
AULRC **Lightning Ridg** 94.53 223 P P 08 16 59.8 +0.7
FAQ **Al Faqa, Dubai** 94.72 327 P P 08 16 58.7 -1.6
EIL **Elat** 94.75 346 LR LR 09 03 15.1
comp=Z,2µm,21.5s,baz=22,slow=38
RTZ **Ruatahuna** 94.89 197 IAMs_20 IAMs_20 08 53 15.1
comp=Z,5µm,22.0s
ASUD **Al Ashush, Dub** 94.92 327 P P 08 17 00.5 -0.7
AUPHS **Peel High Scho** 94.92 220 P P 08 17 03.5 +2.6
MDRS **Chennai** 94.96 301 *e*P P 08 17 00.8 -0.7

MDRS				*i* x		x		08 17 18.8	
SOHO	**SOHO**	**94.99**	**326**	P		**P**		**08 16 59.8**	**-1.8**
SDSI	**Sungai Dareh** comp=Z,20nm,1.1s	**95.00**	**275**	P		**P**		**08 17 03.8**	**+2.1**
WSAR	**Wadi Sarin** comp=Z,33nm,21.6s,baz=56,slow=39	**95.12**	**324**	LR		LR		09 05 23.8	
HIZ	**Hauiti** comp=Z,3μm,22.0s	**95.17**	**199**	IAMs_20		IAMs_20		08 51 43.4	
FITZ	**Fitzroy Crossi** comp=Z,946nm,19.1s,baz=20,slow=36	**95.27**	**246**	LR		LR		09 01 11.0	
CZSB	**Cruzeiro do Su**	**95.40**	**96**	P		**P**		**08 17 02.6**	**-0.9**
CZSB	**Cruzeiro do Su**	**95.40**	**96**	P		**P**		**08 17 02.8**	**-0.7**
CZSB	**Cruzeiro do Su**	**95.40**	**96**	*e*P		**P**		**08 17 02.8**	**-0.7**
AS17	**Alice Springs** comp=Z,36nm,0.9s	**95.68**	**236**	P		**P**		**08 17 04.0**	**-0.6**
AS15	**Alice Springs** comp=Z,24nm,1.0s	**95.70**	**237**	P		**P**		**08 17 04.5**	**-0.2**
AS31	**Alice Springs** comp=Z,5.2nm,0.7s	**95.73**	**237**	P		**P**		**08 17 04.7**	**-0.1**
ASAR	**Alice Springs** comp=Z,11nm,0.8s,baz=34,slow=4.8,SNR=31	**95.73**	**237**	P		**P**		**08 17 03.8**	**-1.0**
ASAR	comp=Z,1.4nm,0.5s,baz=202,slow=2.2,SNR=13			PKKPbc		**PKKPbc**		**08 33 52.9**	**0.0**
ASAR	comp=Z,2μm,19.9s,baz=32,slow=34 comp=Z,11nm,0.8s			LR		LR		08 57 45.0	
ASAR	**Alice Springs**	**95.73**	**237**	P		**P**		**08 17 04.0**	**-0.8**
ASAR	**Alice Springs**	**95.73**	**237**	P		**P**		**08 17 04.0**	**-0.8**
AS09	**Alice Springs** comp=Z,23nm,0.9s	**95.74**	**236**	P		**P**		**08 17 04.7**	**-0.2**
AUALC	**St Philip's Co**	**95.76**	**237**	P		**P**		**08 17 06.3**	**+1.4**
LEM	**Lembang** comp=Z,878nm,21.7s,baz=30,slow=33	**96.19**	**267**	LR		LR		08 56 11.4	
WAZ	**Wanganui** comp=Z,3μm,21.0s	**96.35**	**198**	IAMs_20		IAMs_20		08 57 01.3	
MDP	**Montagnes des** comp=Z,3μm,21.7s,baz=328,slow=35	**96.42**	**72**	LR		LR		08 59 33.1	
NNA	**Nana** comp=Z,1μm,19.6s,baz=334,slow=33	**96.47**	**101**	LR		LR		08 57 11.8	
BFZ	**Birch Farm** comp=Z,4μm,22.0s	**97.03**	**197**	IAMs_20		IAMs_20		08 52 31.7	
MRZ	**Mangatainoka R** comp=Z,3μm,21.0s	**97.12**	**198**	IAMs_20		IAMs_20		08 55 35.2	
QRZ	**Quartz Range** comp=Z,5μm,21.0s	**97.85**	**200**	IAMs_20		IAMs_20		08 56 25.4	
SNZO	**South Karori** comp=Z,5μm,21.0s	**97.91**	**198**	IAMs_20		IAMs_20		08 56 04.0	
MACA	**Manacapuru-AM** comp=Z,32nm,1.0s	**98.66**	**83**	IAmb		IAmb		08 17 29.2	
MACA	**Manacapuru-AM**	**98.66**	**83**	P		**P**		**08 17 17.0**	**-1.2**
MACA	**Manacapuru-AM**	**98.66**	**83**	*e*P		**P**		**08 17 16.6**	**-1.7**
THZ	**Tophouse** comp=Z,5μm,22.0s	**98.68**	**199**	IAMs_20		IAMs_20		08 54 04.4	
RAYN	**Ar Rayn**	**98.71**	**335**	P		**P**		**08 17 18.4**	**-0.1**
RAYN	**Ar Rayn**	**98.71**	**335**	P		Pdif		08 17 18.8	+0.3
RAYN	comp=Z,80nm,1.1s			pmax		pmax			
RAYN	**Ar Rayn**	**98.71**	**335**	P		Pdif		08 17 18.8	+0.3
RAYN	**Ar Rayn** comp=Z,5μm,20.0s	**98.71**	**335**	IAMs_20		IAMs_20		09 09 41.6	
RAYN	**Ar Rayn**	**98.71**	**335**	P		Pdif		08 17 18.6	+0.1
DSZ	**Denniston Nort** comp=Z,4μm,20.0s	**98.88**	**200**	IAMs_20		IAMs_20		08 54 22.7	
CTZ	**Chatham Island** comp=Z,5μm,20.0s	**99.02**	**191**	IAMs_20		IAMs_20		08 54 15.3	
KHZ	**Kahutara** comp=Z,4μm,19.0s	**99.19**	**199**	IAMs_20		IAMs_20		09 02 17.0	
STKA	**Stephens Creek** comp=Z,2.8nm,0.7s,baz=27,slow=4.5,SNR=4.2	**99.28**	**226**	P		**Pdif**		**08 17 20.4**	**-0.1**
STKA	comp=Z,1.6nm,0.7s,baz=42,slow=1.9,SNR=2.9			PKiKP		**PKiKP**		**08 21 50.2**	**+0.1**
STKA	comp=Z,4μm,20.6s,baz=23,slow=33 comp=Z,2.8nm,0.7s			LR		LR		08 58 12.7	
PALK	**Pallekele** comp=Z,1μm,18.0s,baz=5.0,slow=41	**99.67**	**297**	LR		LR		09 11 21.4	
PALK	**Pallekele** comp=Z,3μm,20.0s	**99.67**	**297**	IAMs_20		IAMs_20		09 09 50.6	
LTZ	**Lake Taylor** comp=Z,5μm,20.0s	**99.79**	**199**	IAMs_20		IAMs_20		08 57 54.7	
GVZ	**Greta Valley S** comp=Z,5μm,22.0s	**99.82**	**199**	IAMs_20		IAMs_20		08 53 54.6	
INZ	**Inchbonnie** comp=Z,5μm,20.0s	**99.89**	**200**	IAMs_20		IAMs_20		08 58 15.5	
OXZ	**Oxford** comp=Z,3μm,20.0s	**100.36**	**199**	IAMs_20		IAMs_20		08 58 02.8	
MQZ	**McQueen's Vall** comp=Z,4μm,20.0s	**100.61**	**199**	IAMs_20		IAMs_20		08 55 25.4	
FOZ	**Fox Glacier** comp=Z,4μm,22.0s	**101.00**	**201**	IAMs_20		IAMs_20		08 55 15.8	
LBZ	**Lake Benmore** comp=Z,3μm,20.0s	**101.74**	**201**	IAMs_20		IAMs_20		08 57 15.5	
ODZ	**Otahua Downs** comp=Z,3μm,20.0s	**102.28**	**200**	IAMs_20		IAMs_20		08 58 50.7	
ITTB	**Itaituba**	**102.47**	**80**	P		**Pdif**		**08 17 36.1**	**+0.9**
ITTB	**Itaituba**	**102.47**	**80**	*e*P		**Pdif**		**08 17 31.9**	**-3.3**
LPAZ	**La Paz** comp=Z,9.6nm,1.3s,baz=303,slow=5.0,SNR=5.6	**104.91**	**97**	Pdiff		**Pdif**		**08 17 48.0**	**+1.3**
LPAZ	**La Paz**	**104.91**	**97**	*e*P		**Pdif**		**08 17 46.5**	**-0.2**
VILB	**Vilhena**	**106.83**	**89**	P		**Pdif**		**08 17 54.0**	**-0.5**
VILB	**Vilhena**	**106.83**	**89**	*e*P		**Pdif**		**08 17 53.2**	**-1.4**
CLDB	**Colider**	**107.71**	**84**	*e*P		**Pdif**		**08 17 56.6**	**-1.9**
PTLB	**Pontes e Lacer**	**109.44**	**89**	*e*P		**Pdif**		**08 18 05.6**	**-0.4**
TORD	**Torodi Ar. Bea** comp=Z,1.3nm,0.7s,baz=341,slow=2.7,SNR=4.2	**110.80**	**18**	PKiKP		**PKiKP**		**08 22 10.7**	**-1.2**
TORD	comp=Z,2.3nm,0.6s,baz=148,slow=2.0,SNR=11			PKKPbc		**PKKPbc**		**08 33 06.9**	**-0.7**
AC01	**Pan de Azucar** comp=Z,2μm,21.0s	**111.28**	**105**	IAMs_20		IAMs_20		08 59 14.3	
H03N2	**Juan Fernandez** baz=312,slow=76	**112.47**	**116**	T		T		10 24 26.4	
H03N1	**Juan Fernandez** baz=312,slow=76	**112.48**	**116**	T		T		10 24 23.0	
H03N3	**Juan Fernandez** baz=312	**112.48**	**116**	T		T		10 24 25.2	
GO03	**Copiapo** comp=Z,3μm,20.0s	**112.61**	**106**	IAMs_20		IAMs_20		08 58 59.5	
AC04	**Llanos de Chal** comp=Z,3μm,20.0s	**112.62**	**107**	IAMs_20		IAMs_20		08 59 23.7	
LCO	**Las Campanas** comp=Z,3μm,20.0s	**113.45**	**107**	IAMs_20		IAMs_20		09 00 50.8	
AC05	**El Transito** comp=Z,4μm,22.0s	**113.55**	**107**	IAMs_20		IAMs_20		08 58 53.4	
FURI	**Furi** comp=Z,4μm,22.0s	**114.39**	**338**	IAMs_20		IAMs_20		09 16 55.0	
RCBR	**Riachuelo** comp=Z,2μm,19.0s	**114.55**	**63**	IAMs_20		IAMs_20		09 11 50.9	
DBIC	**Dimbokro** comp=Z,2.9nm,0.6s,baz=194,slow=5.9,SNR=4.0	**115.66**	**26**	PKKPbc		PKKPbc		08 32 55.1	+3.7
VA05	**Santo Domingo** comp=Z,3μm,21.0s	**116.51**	**111**	IAMs_20		IAMs_20		09 00 22.0	
CFA	**Coronel Fontan** comp=Z,3.5nm,0.7s,baz=236,slow=0.3,SNR=8.9	**116.80**	**107**	PKKPbc		PKKPbc		08 32 49.2	+1.5
MT01	**Popeta** comp=Z,3μm,21.0s	**116.87**	**111**	IAMs_20		IAMs_20		09 00 33.4	
MT09	**Talagante** comp=Z,4μm,21.0s	**116.94**	**111**	IAMs_20		IAMs_20		09 00 37.3	
BO04	**La Punta** comp=Z,3μm,19.0s	**117.31**	**111**	IAMs_20		IAMs_20		09 01 36.0	
GO05	**Hualane** comp=Z,3μm,20.0s	**117.37**	**112**	IAMs_20		IAMs_20		09 01 00.7	
BO02	**Sierra Bellavi** comp=Z,3μm,22.0s	**117.82**	**111**	IAMs_20		IAMs_20		09 00 59.7	
BI05	**Punta Hualpn** comp=Z,3μm,20.0s	**118.01**	**115**	IAMs_20		IAMs_20		09 03 55.8	
ML02	**Panimavida** comp=Z,2μm,21.0s	**118.21**	**113**	IAMs_20		IAMs_20		09 01 04.0	
BI02	**San Fabin de** comp=Z,3μm,21.0s	**118.96**	**113**	IAMs_20		IAMs_20		09 02 34.9	
CPUP	**Villa Florida** comp=Z,2.3nm,0.8s,baz=321,slow=2.0,SNR=4.7	**118.98**	**95**	PKP		**PKPdf**		**08 22 25.8**	**-1.4**
CPUP	comp=Z,2.6nm,0.8s,baz=120,slow=5.4,SNR=7.8			PKKPbc		**PKKPab**		**08 32 42.1**	**-0.9**
CPUP	**Villa Florida**	**118.98**	**95**	*e*P		**PKPdf**		**08 22 25.9**	**-1.2**
LR04	**Corral** comp=Z,3μm,20.0s	**120.23**	**117**	IAMs_20		IAMs_20		09 01 37.6	
DIAM	**Diamantina, MG**	**120.59**	**78**	PKP		**PKPdf**		**08 22 29.2**	**-1.5**
CANS	**Sao Roque de M**	**120.62**	**82**	*e*P		**PKPdf**		**08 22 29.3**	**-1.4**
PTGB	**Pitanga**	**120.79**	**90**	PKP		**PKPdf**		**08 22 29.2**	**-1.7**
PTGB	**Pitanga**	**120.79**	**90**	*e*P		**PKPdf**		**08 22 30.3**	**-0.6**
GO06	**Curarrehue** comp=Z,3μm,20.0s	**121.03**	**116**	IAMs_20		IAMs_20		09 04 15.6	
FRTB	**Fartura**	**121.18**	**87**	*e*P		**PKPdf**		**08 22 29.5**	**-2.1**
LR05	**Currie** comp=Z,3μm,19.0s	**121.22**	**116**	IAMs_20		IAMs_20		09 04 43.9	
LL05	**Los Muermos** comp=Z,3μm,21.0s	**121.33**	**118**	IAMs_20		IAMs_20		09 02 09.7	
LL03	**Petrohue** comp=Z,2μm,20.0s	**121.69**	**117**	IAMs_20		IAMs_20		09 02 45.1	
BSCB	**Bom Sucesso**	**122.11**	**81**	PKP		**PKPdf**		**08 22 32.9**	**-0.6**
SJMB	**Sao Joao De Ma**	**122.32**	**76**	PKP		**PKPdf**		**08 22 32.5**	**-1.3**
PLCA	**Paso Flores** comp=Z,9.0nm,0.9s,baz=299,slow=2.3,SNR=22	**122.35**	**116**	PKP		**PKPdf**		**08 22 32.1**	**-1.2**
PLCA	comp=Z,2.4nm,0.9s,baz=218,slow=1.0,SNR=4.0			PKKPbc		**PKKPbc**		**08 32 29.2**	**+1.7**
PLCA	**Paso Flores**	**122.35**	**116**	PKP		**PKPdf**		**08 22 32.4**	**-0.9**
PLCA	**Paso Flores**	**122.35**	**116**	*e*P		**PKPdf**		**08 22 32.7**	**-0.7**
SPB	**Sao Paulo** comp=Z,2μm,22.0s	**122.60**	**85**	IAMs_20		IAMs_20		09 16 34.1	
LL02	**Futaleuf** comp=Z,2μm,21.0s	**123.46**	**119**	IAMs_20		IAMs_20		09 02 33.0	
CPSB	**Cacapava Do Su**	**124.29**	**95**			**PKPdf**		**08 22 36.5**	**-0.8**
CPSB	**Cacapava Do Su**	**124.29**	**95**	*e*P		**PKPdf**		**08 22 36.4**	**-0.9**
KMBO	**Kilima Mbogo**	**124.42**	**337**	PKP		**PKPdf**		**08 22 38.2**	**-0.2**
TRQA	**Tornquist**	**125.02**	**108**	PKiKP		**PKPdf**		**08 22 37.2**	**-1.3**
TRQA	**Tornquist**	**125.02**	**108**			**PKPdf**		**08 22 37.1**	**-1.3**
AY03	**Cochrane**	**125.97**	**123**			**PKPdf**		**08 22 39.8**	**-0.2**
SBA	**Scott Base**	**133.84**	**189**	PKiKP		**PKiKP**		**08 22 55.0**	**-0.3**
SBA	**Scott Base**	**133.84**	**189**			**PKiKP**		**08 22 55.0**	**-0.3**
SBA	**Scott Base** comp=Z,3μm,20.0s	**133.84**	**189**	IAMs_20		IAMs_20		09 13 24.6	
VNDA	**Vanda** comp=Z,1.6nm,0.7s,baz=104,slow=4.1,SNR=6.6	**134.02**	**190**	PKP		**PKPdf**		**08 22 54.3**	**-0.1**
VNDA	comp=Z,2.9nm,0.9s,baz=49,slow=1.7,SNR=4.1			SKPbc		**SKPbc**		**08 26 18.1**	**-1.8**
VNDA	**Vanda**	**134.02**	**190**	PKiKP		**PKiKP**		**08 22 55.9**	**+0.2**
VNDA	**Vanda**	**134.02**	**190**			**PKiKP**		**08 22 55.9**	**+0.2**
CASY	**Casey** comp=Z,2μm,20.0s	**137.58**	**217**	IAMs_20		IAMs_20		09 14 45.5	
ABPO	**Ambohimpanom** comp=Z,2μm,22.0s	**138.23**	**317**	IAMs_20		IAMs_20		09 31 52.9	
LSZ	**Lusaka**	**139.90**	**346**	PKiKP		**PKPdf**		**08 23 04.2**	**-3.0**
LSZ	**Lusaka**	**139.90**	**346**			**PKPdf**		**08 23 04.2**	**-3.0**
TSUM	**Tsumeb**	**144.47**	**2**			**PKPab**		**08 23 13.3**	**-0.3**
TSUM	**Tsumeb**	**144.47**	**2**	*i* P		PKPbc		08 23 14.4	+0.6
TSUM	**Tsumeb**	**144.47**	**2**	*e*P		**PKPdf**		**08 23 15.0**	**-0.3**
TSUM	**Tsumeb**	**144.47**	**2**	P		**PKPab**		**08 23 13.1**	**-0.5**
QSPA	**South Pole Qui** comp=Z,66nm,0.8s,baz=43,slow=1.4,SNR=80	**144.56**	**180**	PKP		**PKPab**		**08 23 11.7**	**-0.8**
QSPA	comp=Z,25nm,0.9s,baz=25,slow=1.9,SNR=3.7			SKPbc		**SKPbc**		**08 26 48.0**	**-1.4**
QSPA	**South Pole Qui**	**144.56**	**180**			**PKPab**		**08 23 12.0**	**-0.5**
BLWY	**Bulawayo**	**144.62**	**344**	*i* P		PKPbc		08 23 14.9	+0.6
MATP	**Matopo**	**144.91**	**344**	*i* P		**PKPab**		**08 23 15.0**	**-0.2**
SOOWA	**Sowa**	**145.37**	**348**	P		**PKPab**		**08 23 17.1**	**+0.2**
BROLN	**Tlhalogang**	**145.75**	**346**	P		**PKPdf**		**08 23 17.6**	**+0.2**
CKGRV	**CKGRV**	**146.46**	**352**	P		**PKPbc**		**08 23 19.9**	**-0.1**
MUSN	**Musina, Limpop**	**146.50**	**341**	*i* P		**PKPab**		**08 23 20.6**	**-0.4**
MUSN	**Musina, Limpop**	**146.50**	**341**	*e*P		**PKPbc**		**08 23 20.3**	**+0.3**
GRTLG	**Ghanzi**	**146.58**	**356**	P		**PKPbc**		**08 23 19.9**	**-0.5**
MOPA	**Mopani**	**147.38**	**338**	*e*P		**PKPbc**		**08 23 21.7**	**-0.7**
WIN	**Windhoek**	**147.81**	**3**	PKP2		**PKPbc**		**08 23 23.9**	**+0.1**
WIN	**Windhoek**	**147.81**	**3**			**PKPbc**		**08 23 23.9**	**+0.1**
WIN	**Windhoek**	**147.81**	**3**	P		**PKPbc**		**08 23 23.7**	**-0.1**
KOOLE	**Kule**	**148.24**	**358**	P		**PKPbc**		**08 23 25.2**	**+0.3**
LEPH	**Lephalale, Lim**	**148.39**	**344**	*e*P		**PKPbc**		**08 23 25.1**	**-0.1**
PAF	**Port-aux-Franc**	**148.52**	**258**	PKP2		**PKPbc**		**08 23 23.3**	**-1.3**
PAF	**Port-aux-Franc**	**148.52**	**258**			**PKPbc**		**08 23 23.3**	**-1.3**
PILG	**Pilgrimsrest,**	**148.90**	**339**	*e*P		**PKPbc**		**08 23 26.3**	**-0.4**
LKGWB	**Lokgwabe**	**149.31**	**356**	P		**PKPbc**		**08 23 27.6**	**-0.1**
SKOMA	**Skoma**	**149.53**	**351**	P		**PKPbc**		**08 23 28.2**	**+0.1**
LBTB	**Lobatse**	**149.84**	**348**	*i* P		**PKiKP**		**08 23 29.9**	**0.0**
LBTB	**Lobatse**	**149.84**	**348**	*e*P		**PKPbc**		**08 23 28.5**	**-0.3**
LBTB	**Lobatse**	**149.84**	**348**	P		**PKPbc**		**08 23 28.6**	**-0.3**
HRAO	**HartRAO**	**150.40**	**344**	*e*P		**PKPbc**		**08 23 29.2**	**-1.1**
TEMBE	**Tembe Elephant**	**150.54**	**335**	*e*P		**PKPdf**		**08 23 27.5**	**+2.6**
MAKGR	**Makgori**	**150.72**	**349**	P		**PKPbc**		**08 23 31.0**	**+0.1**
POGA	**Pongola**	**151.00**	**336**	P		**PKPbc**		**08 23 28.8**	**-2.7**
SNKL	**Senekal, Frees**	**152.72**	**342**	*e*P		**PKPbc**		**08 23 34.2**	**-1.3**
PMBG	**Pietermaritzbu**	**153.36**	**337**	*e*P		**PKPbc**		**08 23 35.5**	**-1.3**
BOSA	**Boshof** comp=Z,3.7nm,0.9s,baz=12,slow=1.3,SNR=4.8	**153.43**	**347**	PKP		**PKPdf**		**08 23 28.1**	**-1.3**
BOSA	comp=Z,23nm,0.7s,baz=14,slow=1.3,SNR=19			PKPbc		**PKPbc**		**08 23 36.5**	**-0.6**
BOSA	**Boshof**	**153.43**	**347**	*e*P		**PKPbc**		**08 23 33.7**	**-3.3**
BOSA	**Boshof**	**153.43**	**347**	P		**PKPbc**		**08 23 35.5**	**-1.5**
MAW	**Mawson** comp=Z,4.0nm,0.8s,baz=105,slow=1.6,SNR=9.9	**155.83**	**221**	PKP		**PKPdf**		**08 23 29.7**	**-1.5**
MAW	comp=Z,29nm,0.8s,baz=88,slow=3.6,SNR=7.9			PKPab		sPKPbc		08 23 57.5	-0.5
MAW	**Mawson**	**155.83**	**221**	PKiKP		**PKPdf**		**08 23 31.0**	**-0.3**
MAW	**Mawson**	**155.83**	**221**			**PKPdf**		**08 23 31.0**	**-0.3**
BRAK	**Brakfontein**	**156.82**	**351**	*e*P		**PKPdf**		**08 23 40.3**	**+6.4**
FRAZ	**Fraserburg**	**157.08**	**354**	*e*P		PKPdf		08 23 42.9	+8.7
VNA1	**Neumayer--Stat** comp=Z,22nm,1.0s	**160.14**	**154**	PKPdf		**PKPdf**		**08 23 33.3**	**-3.1**
VNA1	comp=Z,22nm,1.0s			⇓PKPab		**PKPab**		**08 24 18.6**	**+1.7**
VNA2	**Neumayer--Watz** comp=Z,32nm,0.6s,baz=304,slow=1.8	**160.18**	**155**	⇑PKPdf		**PKPdf**		**08 23 32.6**	**-3.9**
SNAA	**Sanae** comp=Z,316nm,0.7s	**160.68**	**159**	⇑PKPdf		**PKPdf**		**08 23 35.8**	**-1.4**
SNAA	**Sanae** comp=Z,6.0nm,0.8s,baz=210,slow=1.1,SNR=14	**160.68**	**159**	PKP		**PKPdf**		**08 23 36.4**	**-0.8**
SNAA	comp=Z,6.8nm,0.7s,baz=202,slow=3.7,SNR=5.7			PKPab		**PKPab**		**08 24 16.8**	**-2.6**
TROLL	**Troll, Antarti** comp=Z,1μm,0.9s	**161.37**	**164**	⇑PKPdf		**PKPdf**		**08 23 35.4**	**-2.6**
TROLL	comp=Z,1μm,0.9s			⇓PKPab		**PKPab**		**08 24 24.6**	**+2.1**
ELIB	**Princess Elisa**	**162.66**	**185**	*d*PKPdf		**PKPdf**		**08 23 39.0**	**-0.3**
NVL	**N'lazarevskaya**	**163.67**	**172**	*e*PKP2		PKPab		08 24 42.5	+10
NVL				*e*				08 28 19.8	
NVL				*e*SS		SS		08 49 50.2	+68
NVL	comp=Z,16nm,0.6s			pmax		pmax			

*AEIC **28** 08:15:02.0±1.6,54°.68N±0°.03×161°.03W±0°.03,h13km±5km, Error ellipse: s-maj=4.8km s-min=2.1km az=171.0*
NEIC 28 08:15:04.9±2.2,54°.73N±0°.06×161°.12W±0°.05,h35km±2km, ML2.8/12,ML2.6(AEIC),Error ellipse: s-maj=10.7km s-min=4.5km az=174.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.60**	**314**		Pn	08 15 15.3	-1.7
DOL					Sn	08 15 25.2	-0.3
SDPT	**Sand Point**	**0.72**	**31**		Pn	08 15 16.8	-1.7
SDPT	**Sand Point**	**0.72**	**31**		Sn	08 15 27.5	-0.8
PS4A	**Pavlof South-4**	**0.75**	**325**		Pn	08 15 17.9	-1.1
PS4A					Sn	08 15 30.1	+1.0
DT1	**Dutton Round H**	**0.77**	**300**		Pn	08 15 17.4	-1.9
DT1					Sn	08 15 28.9	-0.8
DTNA	**Dutton South F**	**0.78**	**303**		Pn	08 15 17.8	-1.6
DTNA					Sn	08 15 29.6	-0.2
PS1A	**Pavlof South-1**	**0.78**	**333**		Pn	08 15 18.6	-0.9
PS1A					Sn	08 15 30.9	+1.0
PN7A	**Pavlof North-7**	**0.86**	**324**		Pn	08 15 20.5	-0.2
CNBA	**Chernabura Isl**	**0.89**	**84**		Pn	08 15 16.5	-4.4
ISNN	**Isanotski Nort**	**1.55**	**275**		Pn	08 15 30.2	+0.2
ISNN					Sn	08 15 51.5	+2.7
VNKR	**Veniaminof 5**	**1.64**	**37**		Pn	08 15 31.3	0.0
SSLN	**Shishaldin Nor**	**1.67**	**274**		Pn	08 15 32.2	+0.5
SSLS	**Shishaldin Sou**	**1.67**	**270**		Pn	08 15 31.7	0.0
SSBA	**Shishaldin**	**1.75**	**273**		Pn	08 15 33.5	+0.7
VNFG	**Fog Glacier, M**	**1.79**	**29**	Pn	Pn	08 15 35.1	+1.7
VNFG	comp=E,70nm,0.8s			IAML		08 16 25.9	
AKUT	**Akutan**	**2.79**	**259**	Pn	Pn	08 15 47.8	+0.9
AKUT	comp=N,43nm,1.5s			IAML		08 16 08.6	
AKUT	comp=E,25nm,1.2s			IAML		08 16 34.3	
O15K	**Ungalikthiuk R**	**4.51**	**8**	Pn	Pn	08 16 11.3	+0.7
O14K	**Tigyukauivet M**	**4.53**	**359**	Pn	Pn	08 16 11.4	+0.4
O14K	comp=N,9.0nm,1.2s			IAML		08 19 10.3	
O14K	comp=E,7.7nm,0.9s			IAML		08 19 14.2	
M16K	**Timber Creek**	**6.41**	**9**	Pn	Pn	08 16 37.1	+0.4
L14K	**Kuka Creek**	**6.68**	**353**	Pn	Pn	08 16 40.8	+0.5
M17K	**Holitna River**	**6.96**	**15**	Pn	Pn	08 16 44.4	+0.1

*IDC **28** 08:27:20.3±4.0,54°.93N×160°.62W,h0km,mb4.0/6, mbtmp3.8/9,ML3.0/3,Error ellipse: s-maj=97.4km s-min=20.2km az=152.0*
*NEIC **28** 08:27:25.9±1.3,54°.78N±0°.08×160°.31W±0°.04,h42km±7km, ML3.5/30,ML3.4(AEIC),Error ellipse: s-maj=11.3km s-min=1.2km az=166.0*
*AEIC **28** 08:27:25.7±1.8,54°.86N±0°.05×160°.32W±0°.04,h21km±6km, Error ellipse: s-maj=7.5km s-min=2.6km az=162.0*
ISC 28 08:27:25.6±1.1,54°.81N±0°.07×160°.30W±0°.04, h44km±10km,n88,σ1°22/97,mb4.0/6,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.41**	**89**	Pn	**Pn**	**08 27 34.9**	**-0.5**
CNBA	comp=N,2μm,0.5s			IAML		08 27 45.4	
CNBA	comp=E,2μm,0.5s			IAML		08 27 47.6	
CNBA	**Chernabura Isl**	**0.41**	**89**		**Sn**	**08 27 41.4**	**-0.9**
SDPT	**Sand Point**	**0.55**	**349**	Pn	**Pn**	**08 27 36.3**	**-0.7**
SDPT	comp=E,3μm,0.9s			IAML	**Sn**	**08 27 44.3**	**-1.0**
SDPT					**Sn**	**08 27 44.3**	**-1.0**
DOL	**Dolgoi Island**	**0.96**	**291**		**Pn**	**08 27 42.6**	**0.0**
DOL					**Sn**	**08 27 55.3**	**+0.1**
PS1A	**Pavlof South-1**	**1.03**	**307**		**Pn**	**08 27 43.5**	**-0.1**
PS1A					**Sn**	**08 27 56.6**	**-0.2**
PS4A	**Pavlof South-4**	**1.04**	**301**		**Pn**	**08 27 44.2**	**+0.5**
PS4A					**Sn**	**08 27 57.6**	**+0.5**
PN7A	**Pavlof North-7**	**1.16**	**303**		**Pn**	**08 27 46.3**	**+0.9**
PN7A					**Sn**	**08 28 01.6**	**+1.5**
DTNA	**Dutton South F**	**1.18**	**287**		**Pn**	**08 27 46.0**	**+0.5**
DT1	**Dutton Round H**	**1.18**	**285**		**Pn**	**08 27 45.9**	**+0.3**
DT1					**Sn**	**08 28 00.8**	**+0.3**
VNKR	**Veniaminof 5**	**1.33**	**23**		**Pn**	**08 27 48.3**	**+0.6**
VNKR					**Sn**	**08 28 04.9**	**+0.6**
VNSS	**Veniaminof 8**	**1.50**	**18**		**Pn**	**08 27 51.0**	**+0.9**
VNFG	**Fog Glacier, M**	**1.53**	**16**	Pn	**Pn**	**08 27 51.8**	**+1.3**
VNFG				Sn	**Sn**	**08 28 10.8**	**+1.5**
VNFG	**Fog Glacier, M**	**1.53**	**16**		**Pn**	**08 27 51.5**	**+0.9**
SSLN	**Shishaldin Nor**	**2.14**	**271**		**Pn**	**08 28 00.5**	**+1.7**
ANNE	**Aniakchak Nort**	**2.45**	**30**		**Pn**	**08 28 04.3**	**+1.2**
ANNW	**Aniakchak Nort**	**2.46**	**28**		**Pn**	**08 28 04.8**	**+1.6**
AKSA	**Akutan Strait**	**3.22**	**260**		**Pn**	**08 28 16.0**	**+2.4**
AKUT	**Akutan**	**3.27**	**260**	Pn	**Pn**	**08 28 15.7**	**+1.5**
AKUT	comp=E,115nm,0.6s			IAML		08 29 12.9	
AKUT	comp=N,104nm,0.6s			IAML		08 29 13.4	
AHB	**Akutan Harbor**	**3.29**	**260**		**Pn**	**08 28 16.8**	**+2.2**
AKBBA	**Akutan Broad B**	**3.37**	**260**		**Pn**	**08 28 17.7**	**+2.1**
AKV	**Akutan Volcano**	**3.38**	**261**		**Pn**	**08 28 18.0**	**+2.2**
LVA	**Lava Point**	**3.41**	**261**	Pn	**Pn**	**08 28 16.1**	**-0.1**
LVA	comp=E,84nm,0.6s			IAML		08 29 12.8	
LVA	comp=N,161nm,0.7s			IAML		08 29 18.3	
R17L	**Mt. Peulik Vol**	**3.58**	**36**		**Pn**	**08 28 20.3**	**+1.7**
PLK1	**Peulik 1**	**3.63**	**33**		**Pn**	**08 28 20.9**	**+1.7**
PLK5	**Peulik 5**	**3.71**	**29**		**Pn**	**08 28 21.6**	**+1.3**
UNV	**Unalaska Valle**	**3.76**	**258**	Pn	**Pn**	**08 28 22.4**	**+1.4**
MGOD	**Makushin Gods**	**3.98**	**258**		**Pn**	**08 28 25.9**	**+1.7

az=158.0

ISC 28 08:28:27.7±0.7, **45°22N**±0.07°×**137°18E**±0.07, **h350**km, **n33**, σ1§**68**/39, **mb3.4/8, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRBN	**Rebuntou**	**2.75**	**84**	P	**Pn**	**08 29 25.3**	**+0.5**
JSK	**Shakotan**	**3.02**	**127**	P	**Pn**	**08 29 28.3**	**+1.1**
JYG	**Yagishiri**	**3.13**	**103**	*e*P	**Pn**	**08 29 28.9**	**+0.8**
JSH	**Shimam**	**3.31**	**140**	P	**Pn**	**08 29 30.8**	**+0.9**
JSS	**Shosan**	**3.43**	**102**	P	**Pn**	**08 29 32.5**	**+1.5**
JHR	**Hokuryu**	**3.58**	**113**	*e*P	**Pn**	**08 29 33.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**3.84**	**256**	P	**Pn**	**08 29 36.0**	**+0.9**
	8.2nm,0.5s,baz=66,slow=11,SNR=18						
JSE	**Soyaes**	**3.84**	**92**	*e*P	**Pn**	**08 29 36.1**	**+1.2**
ASAJ	**Asahikawa**	**4.02**	**104**	P	**Pn**	**08 29 38.0**	**+1.1**
	29nm,0.4s,baz=276,slow=5.2,SNR=55						
JKK2	**Kamakawa 2**	**4.21**	**107**	P	**Pn**	**08 29 40.0**	**+1.2**
JKK2				*e*S	**S**	**08 30 39.1**	**+2.9**
JKB	**Kayabe**	**4.35**	**139**	P	**Pn**	**08 29 42.1**	**+1.7**
JOT	**Ohata**	**4.77**	**142**	*e*P	**Pn**	**08 29 46.3**	**+1.5**
JOT				*e*S	**S**	**08 30 50.7**	**+3.6**
JTKR	**Abashiri--Toko**	**4.97**	**102**	P	**Pn**	**08 29 47.9**	**+1.0**
JNBK	**Urakawa-nobuka**	**5.00**	**124**	*e*P	**Pn**	**08 29 48.6**	**+1.3**
JIW	**Iwasaki**	**5.07**	**155**	*e*P	**Pn**	**08 29 49.3**	**+1.1**
JAR	**Ashorobuto**	**5.11**	**110**	P	**Pn**	**08 29 49.3**	**+0.8**
JCH	**Churui**	**5.17**	**118**	P	**Pn**	**08 29 48.6**	**-0.6**
JCH				*e*S	**S**	**08 30 50.5**	**-4.6**
JANG	**Nango**	**5.80**	**145**	P	**Pn**	**08 29 56.2**	**-0.1**
JANG				*e*S	**S**	**08 31 04.2**	**-3.9**
JRA	**Rausu**	**5.82**	**100**	*e*P	**Pn**	**08 29 58.1**	**+1.7**
JOM	**Ohasama**	**6.50**	**151**	P	**Pn**	**08 30 04.9**	**+0.5**
JOM				*e*S	**S**	**08 31 20.5**	**-2.3**
JMK	**Ichinoseki**	**6.95**	**153**	*e*P	**Pn**	**08 30 09.8**	**+0.3**
JMK				*e*S	**S**	**08 31 30.0**	**-2.3**
MJAR	**Matsushiro Arr**	**8.71**	**175**	P	**Pn**	**08 30 31.5**	**+1.2**
	2.9nm,0.8s,baz=354,slow=11,SNR=4.9						
KSRS	**Korea Array**	**10.42**	**225**	P	**P**	**08 30 53.1**	**+1.4**
	1.7nm,0.5s,baz=37,slow=11,SNR=8.7						
HILR	**Hailar Array B**	**12.57**	**296**	P	**Pn**	**08 31 16.2**	**+0.1**
	2.1nm,0.5s,baz=105,slow=9.3,SNR=4.2						
SEY	**Seymchan**	**19.76**	**21**	P	**P**	**08 32 32.2**	**-0.7**
	3.2nm,0.5s,baz=207,slow=9.3,SNR=14						
SONM	**Songino Array**	**21.27**	**288**	P	**P**	**08 32 46.5**	**-0.7**
	2.5nm,0.8s,baz=82,slow=8.1,SNR=11						
	2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**34.33**	**304**	P	**P**	**08 34 41.3**	**-1.0**
	2.6nm,0.5s,baz=94,slow=10,SNR=1.8						
	2.6nm,0.5s						
MKAR	**Makanchi Array**	**37.50**	**293**	P	**P**	**08 35 08.7**	**-0.3**
	0.7nm,0.7s,baz=85,slow=8.1,SNR=5.7						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**38.77**	**300**	P	**P**	**08 35 18.9**	**-0.5**
	0.9nm,0.3s,baz=77,slow=9.0,SNR=10						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**42.94**	**305**	P	**P**	**08 35 52.6**	**-0.4**
	1.1nm,0.5s,baz=73,slow=8.9,SNR=3.6						
	1.1nm,0.5s						
ILAR	**Eielson Array**	**44.54**	**36**	P	**P**	**08 36 04.3**	**-1.1**
	0.3nm,0.6s,baz=261,slow=5.9,SNR=5.6						
	0.3nm,0.6s						
INK	**Inuvik**	**48.70**	**30**	P	**P**	**08 36 36.8**	**-0.5**
	0.7nm,0.3s,baz=307,slow=9.4,SNR=10						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**64.90**	**183**	P	**P**	**08 38 31.9**	**+1.4**
	0.3nm,0.7s,baz=0.4,slow=7.0,SNR=5.0						
	0.3nm,0.7s						

*AEIC **28** 08:50:56.7±1.1, 55°13N±0.06°×159°5W±0.1°, h40km±7km, Error ellipse: s-maj=11.3km s-min=5.7km az=138.0*
*NEIC **28** 08:50:57.3±1.3, 55°10N±0.06°×159°49W±0.09°, h35km±2km, ML3.1/36, ML3.1(AEIC), Error ellipse: s-maj=12.2km s-min=5.0km az=141.0*

ISC 28 08:50:57.5±2.4, **55°09N**±0.09°×**159°48W**±0.05, **h36**km±3km, **n106**, σ0§**83**/105, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.27**	**193**	P	**Pn**	**08 51 05.2**	**-0.2**
CHNA	**Chernabura Isl**	**0.27**	**193**	S	**Sn**	**08 51 11.7**	**+0.1**
CNBA	**Chernabura Isl**	**0.28**	**193**		**Pn**	**08 51 05.5**	**+0.1**
CNBA					**Sn**	**08 51 11.5**	**-0.2**
CNBA	**Chernabura Isl**	**0.28**	**193**	IAML		08 51 11.8	
	comp=E,2μm,0.3s						
CNBA				IAML		08 51 12.2	
	comp=N,2μm,0.2s						
SDPT	**Sand Point**	**0.63**	**295**	P	**Pn**	**08 51 08.7**	**-1.2**
SDPT	**Sand Point**	**0.63**	**295**	S	**Sn**	**08 51 17.4**	**-1.2**
SDPT	**Sand Point**	**0.63**	**295**		**Pn**	**08 51 08.9**	**-1.0**
SDPT				IAML		08 51 18.1	
	comp=N,1μm,0.9s						
SDPT				IAML		08 51 18.1	
	comp=E,694nm,0.7s						
SDPT	**Sand Point**	**0.63**	**295**		**Sn**	**08 51 17.7**	**-1.0**
VNKR	**Veniaminof 5**	**0.94**	**4**		**Pn**	**08 51 13.0**	**-1.3**
VNWF	**Veniaminof 8**	**1.06**	**358**		**Pn**	**08 51 15.2**	**-0.8**
VNSS	**Veniaminof 8**	**1.14**	**1**		**Pn**	**08 51 16.5**	**-0.5**
VNFG	**Fog Glacier, M**	**1.20**	**358**		**Pn**	**08 51 17.6**	**-0.1**
VNFG	**Fog Glacier, M**	**1.20**	**358**		**Pn**	**08 51 17.4**	**-0.3**
VNFG					**Sn**	**08 51 34.7**	**+1.9**
PS1A	**Pavlof South-1**	**1.34**	**285**		**Pn**	**08 51 19.1**	**-0.5**
PS1A					**Sn**	**08 51 37.6**	**+1.5**
DOL	**Dolgoi Island**	**1.37**	**273**		**Pn**	**08 51 19.7**	**-0.4**
DOL					**Sn**	**08 51 37.5**	**+0.5**
PS4A	**Pavlof South-4**	**1.39**	**281**		**Pn**	**08 51 19.7**	**-0.5**
PS4A					**Sn**	**08 51 38.6**	**+1.2**
PN7A	**Pavlof North-7**	**1.48**	**284**		**Pn**	**08 51 21.3**	**-0.3**
DTNA	**Dutton South F**	**1.59**	**273**		**Pn**	**08 51 23.0**	**-0.2**
DTNA					**Sn**	**08 51 42.9**	**+0.4**
DT1	**Dutton Round H**	**1.61**	**272**		**Pn**	**08 51 22.9**	**-0.4**
DT1					**Sn**	**08 51 44.4**	**+1.5**
ANPB	**Aniakchak Plen**	**1.84**	**21**		**Pn**	**08 51 26.2**	**-0.4**
ANNW	**Aniakchak Nort**	**2.01**	**20**		**Pn**	**08 51 28.7**	**-0.2**
ISNN	**Isanotski Nort**	**2.49**	**266**		**Pn**	**08 51 36.3**	**+0.8**
SSLN	**Shishaldin Nor**	**2.62**	**266**		**Pn**	**08 51 38.2**	**+1.0**
SSBA	**Shishaldin**	**2.70**	**265**		**Pn**	**08 51 39.0**	**+0.6**
R17L	**Mt. Peulik Vol**	**3.08**	**33**		**Pn**	**08 51 44.1**	**+0.5**
PLK1	**Peulik 1**	**3.15**	**29**		**Pn**	**08 51 44.6**	**+0.1**
PLK5	**Peulik 5**	**3.25**	**25**		**Pn**	**08 51 45.9**	**+0.1**
AKSA	**Akutan Strait**	**3.74**	**258**		**Pn**	**08 51 54.2**	**+1.6**
Q17K	**Contact Creek**	**3.75**	**30**		**Pn**	**08 51 52.4**	**-0.3**
CAHL	**Cahill**	**3.76**	**36**		**Pn**	**08 51 53.0**	**0.0**
AKUT	**Akutan**	**3.78**	**258**	P	**Pn**	**08 51 54.9**	**+1.7**
AKUT	**Akutan**	**3.78**	**258**	Pn	**Pn**	**08 51 54.5**	**+1.3**
AKUT				IAML		08 52 54.9	
	comp=E,42nm,0.7s						
AKUT				IAML		08 52 56.8	
	comp=N,37nm,1.3s						
ANCK	**Angle Creek**	**3.81**	**34**		**Pn**	**08 51 53.6**	**-0.1**
AHB	**Akutan Harbor**	**3.81**	**258**		**Pn**	**08 51 54.2**	**+0.5**
ACHA	**Angle Creek He**	**3.88**	**35**		**Pn**	**08 51 55.0**	**+0.4**
LVA	**Lava Point**	**3.92**	**259**	Pn	**Pn**	**08 51 56.4**	**+1.2**
LVA				IAML		08 53 11.0	
	comp=E,33nm,0.6s						
KABU	**Katmai Buttres**	**3.94**	**34**		**Pn**	**08 51 55.5**	**+0.1**
P16K	**Nushagak River**	**4.03**	**11**		**Pn**	**08 51 55.7**	**-0.9**
P16K	**Nushagak River**	**4.03**	**11**	IAML		08 53 15.7	
	comp=N,49nm,1.2s						
OHAK	**Old Harbor**	**4.07**	**56**	P	**Pn**	**08 51 56.4**	**-0.7**
OHAK	**Old Harbor**	**4.07**	**56**		**Pn**	**08 51 55.8**	**-1.3**
O15K	**Ungalikthiuk R**	**4.10**	**358**		**Pn**	**08 51 56.4**	**-1.2**
KAWH	**Katmai**	**4.18**	**36**		**Pn**	**08 51 58.6**	**-0.2**
O14K	**Tigyukauivet M**	**4.28**	**348**	IAML		08 53 20.1	
	comp=N,15nm,0.8s						
UNV	**Unalaska Valle**	**4.29**	**256**	P	**Pn**	**08 52 01.9**	**+1.8**
UNV	**Unalaska Valle**	**4.29**	**256**		**Pn**	**08 52 00.5**	**+0.4**
UNV	**Unalaska Valle**	**4.29**	**256**	IAML		08 53 10.2	
	comp=N,19nm,1.1s						
UNV				IAML		08 53 10.8	
	comp=E,19nm,0.7s						
KARR	**Katmai Rainbow**	**4.30**	**36**		**Pn**	**08 52 00.3**	**-0.1**
Q18K	**Katmai Hardscr**	**4.33**	**33**		**Pn**	**08 52 00.8**	**0.0**
MNAT	**Makushin Natee**	**4.37**	**257**		**Pn**	**08 52 01.8**	**+0.5**
P17K	**Kvichak River**	**4.43**	**21**		**Pn**	**08 52 02.2**	**+0.1**
MGOD	**Makushin Gods**	**4.51**	**256**		**Pn**	**08 52 03.7**	**+0.5**
O16K	**Kokwok River B**	**4.57**	**9**		**Pn**	**08 52 03.4**	**-0.6**
O16K	**Kokwok River B**	**4.57**	**9**	IAML		08 53 24.5	
	comp=E,12nm,0.8s						
KDAK	**Kodiak Island**	**4.68**	**52**		**Pn**	**08 52 05.1**	**-0.4**
KDAK	**Kodiak Island**	**4.68**	**52**	IAML		08 53 22.1	
	comp=E,15nm,0.9s						
KDAK				IAML		08 53 27.7	
	comp=E,14nm,1.2s						
O17K	**Koliganek Bris**	**4.87**	**14**		**Pn**	**08 52 07.4**	**-0.6**
P18K	**Big Mountain,**	**4.89**	**26**		**Pn**	**08 52 08.1**	**-0.3**
N14K	**Kuskokwak Cree**	**4.99**	**347**		**Pn**	**08 52 09.0**	**-0.7**
N14K				IAML		08 53 52.0	
	comp=N,20nm,1.3s						
Q19K	**Cape Douglas,**	**4.99**	**37**		**Pn**	**08 52 09.8**	**-0.1**
N15K	**Kwethluk River**	**5.10**	**357**		**Pn**	**08 52 10.8**	**-0.5**
N15K	**Kwethluk River**	**5.10**	**357**	IAML		08 53 42.9	
	comp=N,13nm,0.9s						
N15K				IAML		08 53 57.5	
	comp=E,17nm,0.9s						
O18K	**Koktuh Hills**	**5.30**	**24**		**Pn**	**08 52 14.4**	**+0.4**
O18K	**Koktuh Hills**	**5.30**	**24**	IAML		08 53 24.1	
	comp=N,9.0nm,1.1s						
N16K	**Nishlik Lake**	**5.41**	**4**		**Pn**	**08 52 15.3**	**-0.2**
N17K	**Nushagak Hills**	**5.58**	**12**		**Pn**	**08 52 17.3**	**-0.6**
M15K	**Kasigluk River**	**5.65**	**354**		**Pn**	**08 52 18.0**	**-0.9**
M13K	**Dall Lake**	**5.72**	**340**		**Pn**	**08 52 19.3**	**-0.5**
M14K	**Bethel**	**5.83**	**348**		**Pn**	**08 52 20.1**	**-1.1**
N18K	**Kilae Creek**	**5.92**	**17**		**Pn**	**08 52 22.3**	**-0.2**
M16K	**Timber Creek**	**5.95**	**2**		**Pn**	**08 52 22.4**	**-0.6**
CNPM	**China Poot**	**6.30**	**42**	Pn	**Pn**	**08 52 27.7**	**-0.1**
N19K	**Bonanza Creek**	**6.32**	**23**		**Pn**	**08 52 28.4**	**+0.3**
SPIA	**Saint Paul Isl**	**6.37**	**294**	P	**Pn**	**08 52 30.1**	**+1.4**
SPIA	**Saint Paul Isl**	**6.37**	**294**	Pn	**Pn**	**08 52 29.5**	**+0.8**
M17K	**Holitna River**	**6.42**	**9**		**Pn**	**08 52 29.5**	**-0.2**
L14K	**Kuka Creek**	**6.49**	**346**		**Pn**	**08 52 29.3**	**-1.0**
L16K	**Owhat River**	**6.64**	**0**		**Pn**	**08 52 31.2**	**-1.1**
L15K	**Ungalak Mounta**	**6.69**	**352**		**Pn**	**08 52 31.8**	**-1.3**
M18K	**Stony River**	**6.70**	**15**		**Pn**	**08 52 32.4**	**-0.8**
L17K	**Donlin**	**7.09**	**5**		**Pn**	**08 52 37.4**	**-1.2**
L18K	**Granite Mounta**	**7.29**	**10**		**Pn**	**08 52 40.7**	**-0.7**
K15K	**Wolf Creek Mou**	**7.30**	**352**		**Pn**	**08 52 40.5**	**-0.9**
M19K	**Big River Lodg**	**7.33**	**19**		**Pn**	**08 52 42.0**	**+0.1**
SLKM	**Skilak Lake**	**7.34**	**39**	Pn	**Pn**	**08 52 42.4**	**+0.4**
SEW	**Seward**	**7.36**	**43**	Pn	**Pn**	**08 52 41.8**	**-0.4**
K13K	**Kusilvak Mount**	**7.37**	**341**		**Pn**	**08 52 41.6**	**-0.8**
L19K	**White Mountain**	**7.50**	**17**		**Pn**	**08 52 43.9**	**-0.4**
RC01	**Rabbit Creek A**	**7.92**	**37**	Pn	**Pn**	**08 52 49.7**	**-0.2**
SKT	**Skwentna**	**8.05**	**28**	Pn	**Pn**	**08 52 51.6**	**-0.2**
J16K	**Anvik River**	**8.24**	**356**		**Pn**	**08 52 53.0**	**-1.2**
PWL	**Port Wells**	**8.27**	**41**		**Pn**	**08 52 53.9**	**-0.9**
J17K	**VABM Dome**	**8.33**	**1**		**Pn**	**08 52 54.4**	**-1.2**
HIN	**Hinchinbrook I**	**8.73**	**47**		**Pn**	**08 52 59.5**	**-1.6**
FID	**Port Fidalgo**	**8.94**	**45**	Pn	**Pn**	**08 53 02.2**	**-1.7**
EYAK	**Cordova Ski Ar**	**9.13**	**48**	P	**Pn**	**08 53 05.2**	**-1.3**
EYAK	**Cordova Ski Ar**	**9.13**	**48**	Pn	**Pn**	**08 53 05.7**	**-0.8**
J19K	**Poorman**	**9.14**	**11**	Pn	**Pn**	**08 53 06.4**	**-0.2**
CAST	**Castle Rocks**	**9.16**	**21**	Pn	**Pn**	**08 53 07.5**	**+0.5**
SCM	**Sheep Creek Mo**	**9.27**	**38**	Pn	**Pn**	**08 53 07.5**	**-1.0**
J20K	**Nowinta River**	**9.50**	**14**	Pn	**Pn**	**08 53 12.3**	**+0.7**
KLU	**Klutina**	**9.58**	**43**	Pn	**Pn**	**08 53 12.1**	**-0.7**
H19K	**Roundabout Mou**	**10.57**	**7**	Pn	**Pn**	**08 53 25.8**	**-0.5**
IMAR	**Indian Mountai**	**11.28**	**12**	Pn	**Pn**	**08 53 35.5**	**-0.4**
F19K	**Shaleruckik Mo**	**11.81**	**3**	Pn	**Pn**	**08 53 43.0**	**-0.1**
F20K	**Avaraart Lake**	**12.13**	**7**	Pn	**Pn**	**08 53 47.5**	**0.0**

*IDC **28** 08:51:26.4±1.1, 5°76S×151°01E, h0km, mb4.0/6, mbtmp4.0/7, ML1.9/1, Error ellipse: s-maj=51.3km s-min=26.0km az=121.0*

ISC 28 08:51:33.0±1.0, **5°8S**±0°2×**150°9E**±0°3, **h43**km, **n8**, σ1§**54**/12, **mb3.9/6, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.16**	**225**	Pn	**Pn**	**08 52 47.8**	**+0.1**
	3.0nm,0.3s,baz=48,slow=14,SNR=5.0						
PMG				Sn	**Sn**	**08 53 46.0**	**-0.1**
	5.4nm,0.3s,baz=82,slow=19,SNR=8.2						
	21nm,0.7s						
WRA	**Warramunga Arr**	**21.38**	**227**	P	**P**	**08 56 16.3**	**-0.8**
	3.9nm,0.5s,baz=52,slow=10.0,SNR=54						
WRA				PcP	**PcP**	**09 00 20.8**	**+0.9**
	1.0nm,0.6s,baz=42,slow=1.7,SNR=7.5						
	3.9nm,0.5s						
ASAR	**Alice Springs**	**24.16**	**221**	P	**P**	**08 56 45.0**	**-0.4**
	2.5nm,0.7s,baz=56,slow=9.1,SNR=37						
ASAR				PcP	**PcP**	**09 00 27.0**	**+1.4**
	0.5nm,1.0s,baz=40,slow=2.6,SNR=4.2						
ASAR				ScP	**ScP**	**09 04 04.8**	**+3.8**
	0.7nm,0.9s,baz=46,slow=2.1,SNR=5.5						
	2.5nm,0.7s						
STKA	**Stephens Creek**	**27.40**	**197**	P	**P**	**08 57 13.4**	**-1.1**
	3.2nm,1.2s,baz=32,slow=13,SNR=3.2						
	3.2nm,1.2s						
VNDA	**Vandenberg**	**71.96**	**178**	P	**P**	**09 02 52.0**	**+0.5**
	0.8nm,0.8s,baz=336,slow=5.8,SNR=4.2						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**83.77**	**22**	P	**P**	**09 03 56.1**	**-1.3**
	0.3nm,0.8s,baz=256,slow=5.5,SNR=2.9						
	0.3nm,0.8s						
QSPA	**South Pole Qui**	**84.21**	**180**	P	**P**	**09 03 59.3**	**-0.5**
	3.2nm,0.8s,baz=7.9,slow=5.1,SNR=22						
	3.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.74**	**286**	PKPbc	**PKPbc**	**09 11 16.8**	**0.0**
	3.3nm,0.5s,baz=83,slow=2.5,SNR=18						

*ISK **28** 09:05:43.5, 36°83N×35°09E, h17km, ML3.4/36*
*AFAD **28** 09:05:44.9, 36°86N×34°97E, h34km±1km, MW3.6*
*NIC **28** 09:05:46.4, 36°49N×34°89E, h15km±24km, Ml2.7/9*

ISC 28 09:05:45.1±1.1, **36°80N**±0°02×**35°03E**±0°02, **h35**km±3km, **n67**, σ1§**35**/93, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAYT	**Sariam**	**0.43**	**32**	P	**Pb**	**09 05 54.3**	**-0.5**
CAYT				S	**Sb**	**09 06 01.9**	**+0.5**
GULE	**Gulek**	**0.52**	**337**	P	**Pb**	**09 05 55.3**	**-1.0**
GULE				S	**Sb**	**09 06 02.9**	**-1.1**
KIZK	**Mersin**	**0.79**	**246**	Pg	**Pn**	**09 06 00.3**	**+0.6**
KIZK				Sg	**Sb**	**09 06 12.2**	**+1.4**
KIZK	**Mersin**	**0.79**	**246**	P	**Pn**	**09 06 00.4**	**+0.7**
KIZK				S	**Sb**	**09 06 12.0**	**+1.2**
CMRD	**Camardi-Nigde**	**0.86**	**358**	Pg	**Pn**	**09 06 00.2**	**-0.7**
CMRD				Sg	**Sn**	**09 06 12.1**	**-0.2**
KOZT	**Kozan**	**0.93**	**43**	Pg	**Pn**	**09 06 00.9**	**-0.8**
KERG	**Konya-Eregli**	**0.95**	**310**	P	**Pn**	**09 06 02.3**	**+0.2**
KERG				S	**Sn**	**09 06 14.3**	**-0.3**
SLFK	**Silifke-Mersin**	**0.97**	**245**	Pg	**Pb**	**09 06 03.5**	**+0.1**
SILI	**Silifke-Mersin**	**0.99**	**244**	Pg	**Pn**	**09 06 03.6**	**+1.0**
TAHT	**Tahtakopru-Hat**	**1.02**	**114**	Pg	**Pn**	**09 06 03.0**	**+0.1**
TAHT				Sg	**Sb**	**09 06 17.5**	**0.0**
KEBE	**Keben-Mersin**	**1.12**	**252**	Pn	**Pn**	**09 06 05.5**	**+1.1**
YAYL	**Yayladag**	**1.16**	**131**	P	**Pn**	**09 06 06.3**	**+1.3**
YAYL				S	**Sb**	**09 06 22.8**	**+1.3**
HASA	**Hatay-Hassa-Ha**	**1.17**	**92**	P	**Pn**	**09 06 05.8**	**+0.7**
HASA				S	**Sn**	**09 06 21.0**	**+1.2**
NIDE	**Nigde/Merkez-G**	**1.21**	**350**	P	**Pn**	**09 06 06.9**	**+1.2**
NIDE				S	**Sn**	**09 06 21.9**	**+0.9**
IKL	**Isikli**	**1.22**	**243**	Pn	**Pn**	**09 06 07.0**	**+1.3**
KARG	**Kargicak-Mersi**	**1.22**	**241**	Pn	**Pn**	**09 06 07.1**	**+1.3**
TISA	**Tisan-Mersin**	**1.27**	**240**	Pn	**Pn**	**09 06 07.1**	**+0.8**
YESI	**Yesilovacik-Me**	**1.27**	**242**	Pn	**Pn**	**09 06 07.5**	**+1.1**
ANDN	**Andirin**	**1.30**	**53**	P	**Pn**	**09 06 06.0**	**-1.0**
ANDN				S	**Sn**	**09 06 22.1**	**-1.2**
YAHY	**KAYSERI_Yahyal**	**1.32**	**11**	P	**Pn**	**09 06 07.8**	**+0.6**
YAHY				S	**Sb**	**09 06 26.1**	**0.0**
TEPK	**Tepekoy-MERSIN**	**1.33**	**245**	Pn	**Pn**	**09 06 08.5**	**+1.2**
TEVE	**Tevekalti-Mers**	**1.33**	**255**	Pn	**Pn**	**09 06 08.7**	**+1.4**
GULN	**MERSIN_Gulnar**	**1.35**	**243**	P	**Pn**	**09 06 08.0**	**+0.5**
GULN				S	**Sn**	**09 06 25.6**	**+1.4**
BECE	**Buyukeceli-Mer**	**1.35**	**242**	Pn	**Pn**	**09 06 08.7**	**+1.2**
BECE	**Buyukeceli-Mer**	**1.35**	**242**	Pn	**Pn**	**09 06 08.9**	**+1.4**
AKK2	**Akkuyu-Mersin**	**1.37**	**241**	Pn	**Pn**	**09 06 08.9**	**+1.2**
AKK1	**Akkuyu-Mersin**	**1.37**	**242**	Pn	**Pn**	**09 06 09.4**	**+1.6**
OREN	**Orenkoy-Mersin**	**1.40**	**245**	Pn	**Pn**	**09 06 09.6**	**+1.4**
YESY	**Yesilyurt**	**1.42**	**314**	Pn	**Pn**	**09 06 09.7**	**+1.1**
SAIM	**ADANA**	**1.44**	**35**	P	**Pn**	**09 06 08.3**	**-0.5**
EREN	**Erenkoy**	**1.45**	**209**	Pn	**Pn**	**09 06 09.4**	**+0.6**
EREN	**Erenkoy**	**1.45**	**209**	P	**Pn**	**09 06 08.7**	**-0.2**
EREN				S	**Sn**	**09 06 27.5**	**+0.9**
YORU	**Yoruktepe-Mers**	**1.46**	**244**	Pn	**Pn**	**09 06 10.6**	**+1.5**
KRMN	**Karaman**	**1.47**	**285**	Pn	**Pn**	**09 06 10.0**	**+0.8**
BERE	**Bereket-Mersin**	**1.53**	**253**	Pn	**Pn**	**09 06 11.6**	**+1.5**
BSIR	**Belisirma, Guz**	**1.58**	**338**	P	**Pn**	**09 06 12.7**	**+2.0**
BSIR				S	**Sb**	**09 06 33.2**	**-0.3**
KUZU	**Kuzuini**	**1.64**	**90**	P	**Pn**	**09 06 12.2**	**+0.7**
KUZU				S	**Sn**	**09 06 32.0**	**+0.6**
KMRS	**Kahramanmaras**	**1.65**	**64**	Pn	**Pn**	**09 06 11.7**	**+0.1**
GULA	**Gulagac**	**1.67**	**338**	Pn	**Pn**	**09 06 12.9**	**+1.0**
TEKE	**Tekeli-Mersin**	**1.68**	**248**	Pn	**Pn**	**09 06 13.6**	**+1.6**
KKBE	**Karaman, Kazim**	**1.73**	**285**	P	**Pn**	**09 06 15.1**	**+2.3**
KKBE				S	**Sb**	**09 06 37.0**	**-0.7**
GAZ	**Gaziantep**	**1.78**	**77**	Pn	**Pn**	**09 06 13.6**	**+0.1**
GAZ	**Gaziantep**	**1.78**	**77**	P	**Pb**	**09 06 17.0**	**-0.2**
GAZ				S	**Sn**	**09 06 35.5**	**+0.5**
GAZ				AML	AML	09 06 39.2	
	0.2nm,0.5s						
GAZ				AML	AML	09 06 40.5	
	0.2nm,0.5s						
BOZY	**Bozyazi-Mersin**	**1.80**	**248**	Pn	**Pn**	**09 06 15.3**	**+1.7**
SARI	**SarD1z-Kayseri**	**1.94**	**34**	Pn	**Pn**	**09 06 16.0**	**+0.2**
LFK	**Lefkose**	**1.95**	**219**	Pn	**Pn**	**09 06 17.4**	**+1.6**
PARAL	**Paralimni**	**1.98**	**204**	P	**Pn**	**09 06 14.9**	**-1.2**
PARAL				S	**Sn**	**09 06 37.0**	**-2.6**
PARAL				AML	AML	09 06 45.7	
	0.3nm,1.0s						
PARAL				AML	AML	09 06 50.7	
	0.2nm,0.6s						
AVNS	**Nevsehir-Avano**	**2.01**	**356**	P	**Pb**	**09 06 20.4**	**-0.6**
AVNS				S	**Sb**	**09 06 46.1**	**+0.4**
HDMB	**Hadim**	**2.05**	**275**	Pn	**Pn**	**09 06 18.9**	**+1.6**
MVOU	**Mavrovouni**	**2.12**	**213**	P	**Pn**	**09 06 16.4**	**-1.6**
MVOU				S	**Sn**	**09 06 39.9**	**-3.2**
MVOU				AML	AML	09 06 46.6	
	0.1nm,0.2s						
MVOU				AML	AML	09 06 48.2	
	0.2nm,0.5s						
ATHAL	**Athalassa**	**2.12**	**219**	S	**Sn**	**09 06 41.3**	**-2.0**
ATHAL				AML	AML	09 06 47.1	
	0.4nm,0.5s						
ATHAL				AML	AML	09 06 50.3	
	0.6nm,0.4s						
GAZI	**Gazipasa**	**2.26**	**256**	Pn	**Pn**	**09 06 21.9**	**+1.9**
CSS	**Mathiatis**	**2.30**	**217**	Pn	**Pn**	**09 06 22.4**	**+1.8**
CSS	**Mathiatis**	**2.30**	**217**	P	**Pn**	**09 06 18.6**	**-1.9**
CSS				S	**Sn**	**09 06 44.6**	**-3.1**
CSS				AML	AML	09 06 44.9	
	0.2nm,0.3s						
CSS				AML	AML	09 06 48.8	
	0.1nm,0.2s						
XYLS	**Xyliatos**	**2.40**	**223**	P	**Pn**	**09 06 20.6**	**-1.4**
XYLS				S	**Sn**	**09 06 47.8**	**-2.5**
XYLS				AML	AML	09 06 52.0	
	0.2nm,0.2s						
XYLS				AML	AML	09 06 52.5	
	0.2nm,0.2s						
KONT	**Konya--Tatoy**	**2.42**	**299**	Pn	**Pn**	**09 06 23.8**	**+1.6**
SERE	**Sereflikochisa**	**2.44**	**332**	Pn	**Pn**	**09 06 23.8**	**+1.3**
BEIL	**Beino**	**2.44**	**157**	*e*P	**Pn**	**09 06 24.7**	**+2.2**
LADK	**Ladik

O16K	Kokwok River B	4.92	13			Pn		09 15 47.7	+0.3
O16K	Kokwok River B	4.92	13	IAML				09 17 32.3	
	comp=E,85nm,0.8s								
N14K	Kuskokwak Cree	5.16	352			Pn		09 15 51.0	+0.4
N14K	Kuskokwak Cree	5.16	352	IAML				09 17 49.3	
	comp=N,148nm,1.4s								
KDAK	Kodiak Island	5.21	52	Pn		Pn		09 15 52.0	+0.6
KDAK	comp=N,2.7nm,0.3s,baz=58,slow=1.3,SNR=132			Sn		Sn		09 16 47.8	-2.4
	comp=N,1.7nm,0.3s,baz=132,slow=22,SNR=1.1								
	comp=N,7.8nm,0.3s								
KDAK	Kodiak Island	5.21	52	Pn		Pn		09 15 51.5	+0.1
KDAK				IAML				09 17 15.4	
	comp=N,110nm,0.7s								
KDAK				IAML				09 17 22.5	
	comp=N,117nm,0.6s								
N15K	Kwethluk River	5.35	1			Pn		09 15 53.7	+0.4
N15K				IAML				09 17 41.3	
	comp=E,129nm,0.7s								
N15K				IAML				09 17 42.2	
	comp=N,84nm,0.9s								
Q19K	Cape Douglas,	5.49	39	Pn		Pn		09 15 56.6	+1.3
N16K	Nishlik Lake	5.72	8			Pn		09 15 59.1	+0.8
M15K	Kasigluk River	5.88	358			Pn		09 16 00.5	-0.1
N17K	Nushagak Hills	5.95	15			Pn		09 16 01.9	+0.4
CLCO	Concord Point,	5.95	254			Pn		09 16 03.0	+1.5
M14K	Bethel	6.00	352			Pn		09 16 02.4	+0.2
SPIA	Saint Paul Isl	6.06	297	P		Pn		09 16 04.4	+1.4
SPIA	Saint Paul Isl	6.06	297			Pn		09 16 04.4	+1.4
M16K	Timber Creek	6.25	6			Pn		09 16 06.2	+0.6
O19K	Port Alsworth	6.27	28			Pn		09 16 07.5	+1.7
N18K	Kilae Creek	6.32	20			Pn		09 16 07.1	+0.5
M11K	Mekoryuk	6.41	333			Pn		09 16 07.9	+0.2
ILSW	Iliamna Southw	6.45	34	Pn		Pn		09 16 10.4	+1.9
L14K	Kuka Creek	6.65	350			Pn		09 16 11.1	0.0
N19K	Bonanza Creek	6.75	25			Pn		09 16 14.4	+1.8
M17K	Holitna River	6.76	12			Pn		09 16 12.4	-0.2
CNPM	China Poot	6.81	43			Pn		09 16 13.6	+0.3
L15K	Ungalak Mounta	6.89	355			Pn		09 16 14.0	-0.4
L16K	Owhat River	6.91	3			Pn		09 16 14.6	0.0
RDSO	Redoubt South	6.94	33			Pn		09 16 18.0	+2.8
M18K	Stony River	7.08	18			Pn		09 16 17.1	+0.1
BRSE	Bradley Lake S	7.14	43			Pn		09 16 17.7	-0.1
L17K	Donlin	7.40	7			Pn		09 16 21.1	-0.2
K13K	Kusilvak Mount	7.48	344			Pn		09 16 22.6	+0.2
K15K	Wolf Creek Mou	7.51	356			Pn		09 16 23.1	+0.1
L18K	Granite Mounta	7.64	13			Pn		09 16 24.9	+0.2
SPNN	North Nagishla	7.69	28			Pn		09 16 27.3	+1.9
M19K	Big River Lodg	7.74	21			Pn		09 16 27.2	+1.2
SLKM	Skilak Lake	7.84	39			Pn		09 16 28.7	+1.3
SEW	Seward	7.87	43			Pn		09 16 28.8	+0.9
L19K	White Mountain	7.90	19			Pn		09 16 28.7	+0.4
K17K	Iditarod	7.98	7			Pn		09 16 29.4	+0.1
STLK	Strandline Lak	8.04	30			Pn		09 16 32.7	+2.5
J14K	Nanvaranak Lak	8.12	349			Pn		09 16 31.2	+0.1
J16K	Anvik River	8.48	359			Pn		09 16 35.9	-0.2
SKT	Skwentna	8.51	29			Pn		09 16 38.9	+2.4
KOFP	Korovin Flat P	8.61	258			Pn		09 16 40.0	+2.0
J17K	VABM Dome	8.61	4			Pn		09 16 37.6	-0.4
P23K	Montague Islan	8.66	48			Pn		09 16 39.2	+0.6
ATKA	Atka Island	8.69	258	P		Pn		09 16 40.4	+1.3
ATKA	Atka Island	8.69	258	Pn		Pn		09 16 40.5	+1.5
PWL	Port Wells	8.78	42			Pn		09 16 40.6	+0.4
J18K	Innoko River	8.85	10			Pn		09 16 41.7	+0.5
PMR	Palmer	8.97	36	P		Pn		09 16 46.4	+3.6
I17K	Unalakleet	9.09	359			Pn		09 16 44.7	+0.3
K20K	Telida	9.13	18			Pn		09 16 46.2	+1.2
HIN	Hinchinbrook I	9.26	47			Pn		09 16 45.9	+0.1
GLI	Glacier Island	9.28	44			Pn		09 16 46.7	-0.3
SML	Sawmill	9.39	37			Pn		09 16 48.6	-0.2
FID	Port Fidalgo	9.45	46			Pn		09 16 48.4	-1.1
J19K	Poorman	9.49	13			Pn		09 16 50.2	+0.2
EYAK	Cordova Ski Ar	9.65	48			Pn		09 16 52.4	+0.2
GSIG	Igitkin Island	9.76	259			Pn		09 16 54.0	+0.3
J20K	Nowinta River	9.88	16			Pn		09 16 55.9	+0.7
H16K	Elim	9.89	355			Pn		09 16 55.6	+0.2
ADK	Adak	10.23	260	P		Pn		09 17 01.8	+1.7
KIWB	Kanaga Island	10.51	260			Pn		09 17 05.3	+1.3
VRDI	Verde Repeater	10.97	47	Pn		Pn		09 17 11.7	+1.3
IMAR	Indian Mountai	11.64	13			Pn		09 17 20.2	+0.9
COLA	College	11.83	27	P		Pn		09 17 25.5	+3.7
ILAR	Eielson Array	12.00	29	Pn		Pn		09 17 19.1	-5.2
	comp=N,0.2nm,0.3s,baz=214,slow=14,SNR=10								
	comp=N,0.2nm,0.6s								
ILAR	Eielson Array	12.00	29	Pn		Pn		09 17 24.8	+0.5
BCAR	Beaver Creek A	12.58	42			Pn		09 17 32.8	+0.6
H24K	Noodor Dome	12.60	24			Pn		09 17 32.7	+0.2
M29M	Somme Creek	13.63	47			Pn		09 17 47.1	+0.5
I27K	Kandik River	14.16	33	Pn		Pn		09 17 53.1	-0.6
JIS	Juneau Island	14.66	66	P		P		09 18 04.1	-1.7
I29M	Ogilvie Camp,	15.12	37	IAmb		IAmb		09 18 22.8	
	comp=Z,13nm,0.7s								
J30M	Hart River	15.43	41	IAmb		IAmb		09 18 21.6	
	comp=Z,11nm,0.6s								
H29M	Whitestone	15.59	34	IAmb		IAmb		09 18 32.5	
	comp=Z,10nm,0.6s								
G29M	Pine Creek	16.12	33	IAmb		IAmb		09 18 22.9	
	comp=Z,12nm,0.8s								
EPYK	Eagle Plains	16.22	35	IAmb		IAmb		09 18 35.6	
	comp=Z,19nm,0.6s								
G30M	tAoh Zraii Nji	16.73	34	IAmb		IAmb		09 18 40.8	
	comp=Z,9.2nm,0.5s								
H31M	Peel River	16.75	39	IAmb		IAmb		09 18 49.7	
	comp=Z,25nm,1.1s								
DLBC	Dease Lake	16.96	65	Pn		P		09 18 31.9	+0.5
	baz=241,slow=19,SNR=1.9								
	comp=Z,0.7nm,0.7s								
INK	Inuvik	18.34	32	P		P		09 18 44.4	-2.0
	comp=Z,0.5nm,0.3s,baz=234,slow=14,SNR=12								
	comp=Z,1.3nm,0.4s								
YKA	Yellowknife Ar	24.49	53	P		P		09 19 52.0	+1.2
	comp=Z,0.8nm,0.5s,baz=273,slow=9.4,SNR=6.3								
	comp=Z,0.8nm,0.5s								
YKA	Yellowknife Ar	24.49	53	P		P		09 19 52.0	+1.2
PETK	Petropavlovsk-	24.50	283	P		P		09 19 51.3	+0.2
	comp=Z,7.7nm,0.5s,baz=77,slow=13,SNR=33								
	comp=Z,7.7nm,0.5s								
PETK	Petropavlovsk-	24.50	283	P		P		09 19 50.3	-0.8
BMN	Battle Mountai	31.84	99	P		P		09 20 56.7	-0.1
BMN				IAmb		IAmb		09 21 02.0	
	comp=Z,6.6nm,0.8s								
NVAR	Mina Array Bea	32.58	103	P		P		09 21 10.5	+7.0
	comp=Z,0.2nm,0.3s,baz=286,slow=7.2,SNR=4.1								
	comp=Z,0.2nm,0.3s								
PDAR	Pinedale Array	34.77	89	P		P		09 21 29.4	+6.9
	comp=Z,0.3nm,0.6s,baz=320,slow=3.9,SNR=3.8								
JKA	Kamikawa-asahi	37.62	278	P		P		09 21 46.6	+0.2
ASAJ	Asahikawa	37.62	278	P		P		09 21 46.3	-0.2
	comp=Z,4.9nm,0.8s,baz=209,slow=5.0,SNR=3.9								
	comp=Z,4.9nm,0.8s								
MJAR	Matsushiro Arr	45.10	272	P		P		09 22 48.3	+0.4
	comp=Z,1.2nm,0.5s,baz=33,slow=8.4,SNR=3.1								
	comp=Z,1.2nm,0.5s								
NRIK	Noril'sk	46.76	333	P		P		09 22 59.3	-1.1
	comp=Z,2.6nm,0.6s,baz=98,slow=6.0,SNR=3.7								
	comp=Z,2.6nm,0.6s								
NRIK	Noril'sk	46.76	333	P		P		09 22 59.6	-0.8
NRIK				IAmb		IAmb		09 23 01.5	
	comp=Z,2.6nm,0.6s								
TXAR	Lajitas Array	47.51	99	P		P		09 23 13.0	+6.0
	comp=Z,0.4nm,0.7s,baz=307,slow=6.2,SNR=7.1								
TXAR	Lajitas Array	47.51	99	P		P		09 23 08.0	+1.0
KS19	Wonju Array Si	50.37	281	P		P		09 23 27.1	-1.5
KSRS	Korea Array	50.37	281	P		P		09 23 28.5	-0.1
	comp=Z,1.8nm,0.9s,baz=49,slow=7.2,SNR=9.2								
	comp=Z,1.8nm,0.9s								
KSAR	Wonju Array Be	50.40	281	P		P		09 23 27.8	-1.1
SONM	Songino Array	54.53	304	P		P		09 23 59.4	-0.2
	comp=Z,1.7nm,0.7s,baz=50,slow=6.5,SNR=6.7								
SONM				PcP		PcP		09 25 02.9	+0.5
	comp=Z,0.8nm,0.5s,baz=82,slow=3.2,SNR=2.5								
	comp=Z,1.7nm,0.7s								
SONM	Songino Array	54.53	304	P		P		09 23 59.5	0.0
SONM						PcP		09 25 02.0	-0.4
ARCES	ARCESS Array B	55.87	358	P		P		09 24 06.5	-2.2
	comp=Z,0.8nm,0.4s,baz=24,slow=9.3,SNR=8.2								
	comp=Z,0.8nm,0.4s								
ARCES	ARCESS Array B	55.87	358	P		P		09 24 06.6	-2.1
ARCES				IAmb		IAmb		09 24 24.5	
	comp=Z,9.0nm,1.4s								
HHC	Hu-ho-hao-te	56.93	295	*eP*		P		09 24 17.8	+1.0
HHC				pmax		pmax			
	comp=Z,7.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,190nm,5.9s								
KURK	Kurchatov	63.91	323	P		P		09 25 03.6	-0.5
KURK				IAmb		IAmb		09 25 05.0	
	comp=Z,1.1nm,0.6s								
GTA2	Gaotai	63.94	302	*eP*		P		09 25 04.5	-0.2
GTA2				pmax		pmax			
	comp=Z,3.0nm,1.1s								
FINES	FINESS Array B	63.96	357	P		P		09 25 03.4	-0.8
	comp=Z,2.3nm,0.5s,baz=18,slow=7.6,SNR=29								
KURK	comp=Z,2.3nm,0.5s								
FINES	FINESS Array B	63.96	357	P		P		09 25 03.7	-0.5
KURBB	Kurchatov Arra	64.02	323	P		P		09 25 03.1	-1.8
	comp=Z,0.8nm,0.8s,baz=26,slow=6.4,SNR=5.5								
	comp=Z,0.8nm,0.8s								
NC303	NORSAR Array S	64.10	4	P		P		09 25 04.9	-0.3
NB2	NORSAR Subarra	64.28	5	P		P		09 25 06.6	+0.2
	comp=Z,0.8nm,0.6s,baz=356,slow=6.2								
NOA	NORSAR Array B	64.28	5	P		P		09 25 05.9	-0.5
	comp=Z,1.8nm,0.8s,baz=356,slow=6.4,SNR=3.3								
	comp=Z,1.8nm,0.8s								
BVAR	Borovoye Array	64.62	329	P		P		09 25 08.7	0.0
	comp=Z,4.3nm,0.6s,baz=39,slow=7.1,SNR=17								
	comp=Z,4.3nm,0.6s								
HFS	Hagfors	65.28	3	P		P		09 25 12.8	-0.1
	comp=Z,3.3nm,0.6s,baz=28,slow=6.7,SNR=8.0								
	comp=Z,3.3nm,0.6s								
MKAR	Makanchi Array	65.82	318	P		P		09 25 16.1	-0.6
	comp=Z,0.6nm,0.5s,baz=46,slow=4.7,SNR=8.4								
	comp=Z,0.6nm,0.5s								
MKAR	Makanchi Array	65.82	318	P		P		09 25 16.5	-0.1
EKA	Eskdalemuir Ar	68.61	14	P		P		09 25 34.5	+0.5
	comp=Z,2.2nm,0.6s,baz=342,slow=4.8,SNR=7.0								
EKA				pP		pP		09 25 46.9	+0.4
	comp=Z,1.5nm,0.6s,baz=331,slow=5.0,SNR=2.0								
	comp=Z,2.2nm,0.6s								
AB31	Akbulak array	70.92	333	P		P		09 25 48.5	0.0
AB31				IAmb		IAmb		09 25 49.0	
	comp=Z,4.6nm,0.7s								
ABKAR	Akbulak array	70.92	333	P		P		09 25 48.5	+0.1
BOOM	Boomskoye usch	71.88	320	P		P		09 25 54.8	+0.2
PZH	PanZhiHua	73.13	292	P		P		09 26 03.5	+1.3
KK31	Karatay Array	73.29	324	P		P		09 26 01.9	-0.8
KK31				IAmb		IAmb		09 26 03.2	
	comp=Z,2.6nm,0.8s								
KKAR	Karatay Array	73.29	324	P		P		09 26 02.5	-0.2
AKASG	Malin Array Be	74.54	354	P		P		09 26 09.0	-0.8
	comp=Z,2.9nm,0.6s,baz=5.9,slow=5.4,SNR=12								
AKASG				pP		pP		09 26 20.7	-1.6
	comp=Z,1.3nm,0.4s,baz=10.0,slow=5.9,SNR=2.1								
	comp=Z,2.9nm,0.6s								
KSH2	Kashi	74.91	318	P		P		09 26 13.0	+0.6
KSH2				pmax		pmax			
	comp=Z,8.0nm,0.8s								
GERES	GERESS Array B	76.57	4	P		P		09 26 22.1	+0.5
	comp=Z,0.3nm,0.3s,baz=4.3,slow=5.4,SNR=5.1								
	comp=Z,0.3nm,0.3s								
GERES	GERESS Array B	76.57	4	P		P		09 26 22.0	+0.4
BUR08	Bucovina Ar. S	77.79	356	P		P		09 26 28.3	-0.2
BUR08				IAmb		IAmb		09 26 30.0	
	comp=Z,2.2nm,0.9s								
BURAR	Bucovina Array	77.82	356	P		P		09 26 28.7	0.0
EVN	Everest	79.55	304	P		P		09 26 39.0	-0.3
KBZ	Khabaz	79.85	343	P		P		09 26 40.2	+0.5
	comp=Z,3.5nm,0.9s,baz=349,slow=6.6,SNR=8.2								
	comp=Z,3.5nm,0.9s								
CM31	Chiang Mai Arr	81.13	289	P		P		09 26 47.6	+0.5
CMAR	Chiang Mai Arr	81.13	289	P		P		09 26 47.1	+0.1
	comp=Z,4.7nm,0.9s,baz=16,slow=5.4,SNR=25								
	comp=Z,4.7nm,0.9s								
CMAR	Chiang Mai Arr	81.13	289	P		P		09 26 47.3	+0.3
ESDC	Sonseca Array	83.70	18	P		P		09 27 01.3	+1.1
	comp=Z,1.4nm,0.7s,baz=340,slow=4.7,SNR=11								
ESDC				pP		pP		09 27 12.8	-0.1
	comp=Z,1.4nm,0.7s,baz=337,slow=4.7,SNR=6.8								
	comp=Z,1.4nm,0.7s								
ESDC	Sonseca Array	83.70	18	P		P		09 27 01.1	+0.9
ESDC				IAmb		IAmb		09 27 13.7	
	comp=Z,5.0nm,1.0s								
BR131	Keskin Array S	85.06	349	P		P		09 27 07.2	0.0
BR131				IAmb		IAmb		09 27 08.5	
	comp=Z,4.1nm,1.2s								
BRTR	Keskin Array B	85.06	349	P		P		09 27 07.8	+0.6
	comp=Z,1.0nm,0.7s,baz=5.7,slow=3.7,SNR=5.6								
	comp=Z,1.0nm,0.7s								
BRTR	Keskin Array B	85.06	349	P		P		09 27 07.4	+0.2
BNN	Bunyan	85.66	347	P		P		09 27 11.1	+0.9

*IDC **28** 09:41:02.8±3.3,36˚51N×71˚38E,h156km±30km,mb3.9/18, mbtmp4.4/24,Error ellipse: s-maj=21.2km s-min=12.7km az=18.0*

*BJI **28** 09:41:05.5,36˚72N×71˚29E,h196km,mb4.5/8*

*MOS **28** 09:41:06.1±0.9,36˚75N×71˚30E,h193km,mb4.5/12,Error ellipse: s-maj=7.1km s-min=3.7km az=81.7*

*NEIC **28** 09:41:07.1±1.9,36˚73N±0˚05×71˚28E±0˚09,h193km±6km, mb4.4/20,Error ellipse: s-maj=10.1km s-min=7.6km az=73.0*

*GFZ **28** 09:41:07.5±0.3,37˚N±3˚×7˚1E±˚,h186km±3km,M4.3/12, mb4.3/12*

*NNC **28** 09:41:10.2±3.5,37˚06N×71˚18E,h170km±44km,mb3.9, mpv4.5,Error ellipse: s-maj=33.3km s-min=23.2km az=43.0*

ISC 28 09:41:05.9±0.5,36˚70N±0˚04×71˚32E±0˚04,h182km±5km, h182km:pP-P,n246,σ1º45/275,mb4.3/49,11C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANEM	Manem	0.88	19		Pn	09 41 35.4	+2.1
MANEM					Sn	09 41 57.3	+2.6
GAR	Garm	2.43	341		Pn	09 41 49.2	+1.3
GAR	Garm	2.43	341	P	Pn	09 41 49.3	+1.3
CHGR	Chuyangaron	2.60	319	*de*PN	Pn	09 41 50.6	+0.7
CHGR	Chuyangaron	2.60	319		Pn	09 41 50.7	+0.7
CHGR	Chuyangaron	2.60	319	P	Pn	09 41 50.8	+0.8
SHAA	Shahritus	2.70	289		Pn	09 41 52.1	+1.0
DRK	Karamyk	2.80	8	PN	Pn	09 41 53.9	+1.4
DRK	Karamyk	2.80	8		Pn	09 41 53.9	+1.4
DRK	Karamyk	2.80	8	P	Pn	09 41 54.1	+1.6
KBL	Kabul	2.85	221	PN	Pn	09 41 54.7	+1.6
KBL	Kabul	2.85	221		Pn	09 41 54.7	+1.6
KBL	Kabul	2.85	221	P	Pn	09 41 54.6	+1.6
BTK	Batken	3.37	353	PN	Pn	09 42 01.1	+1.8
BTK	Batken	3.37	353		Pn	09 42 01.1	+1.8
BTK	Batken	3.37	353	P	Pn	09 42 01.2	+2.0
NIL	Nilore	3.43	152	PN	Pn	09 42 02.3	+2.3
NIL	Nilore	3.43	152		Pn	09 42 02.3	+2.3
NIL	Nilore	3.43	152	P	Pn	09 42 02.4	+2.3
OHH	Osh	3.98	16	PN	Pn	09 42 06.2	-0.7
OHH	Osh	3.98	16	P	Pn	09 42 06.2	-0.7
KSH2	Kashi	4.15	53	P	Pn	09 42 11.0	+1.9
KSH2				S	Sn	09 42 57.0	-1.6
KSH2				SMN			
	500nm,0.7s						
KSH2				SME			
	500nm,0.7s						
ARSB	Arslanbob	4.79	15	PN	Pn	09 42 17.3	0.0
ARSB	Arslanbob	4.79	15	Pn	Pn	09 42 17.3	0.0
TRKS	Terek-Say	4.82	358	PN	Pn	09 42 17.6	-0.1
JMU	Jammu	4.86	143	*e*P	Pn	09 42 19.6	+1.4
JMU				*e*S	Sn	09 43 14.6	-0.4
ARK	Arkit	5.11	5	PN	Pn	09 42 21.6	+0.2
ARK	Arkit	5.11	5	P	Pn	09 42 21.6	+0.2
IUG	luzhnay	5.53	350	*e*PN	Pn	09 42 27.4	+0.6
IUG	luzhnay	5.53	350	*e*P	Pn	09 42 27.5	+0.6
TSSA	Tissa	5.54	133	*e*P	Pn	09 42 27.8	+0.7
TSSA				*e*S	Sn	09 43 28.6	-2.4
TSSA				IAML		09 43 32.1	
	comp=E,520nm,0.3s						
TSSA				IAML		09 43 32.6	
	comp=N,496nm,0.6s						
THN	Thein Dam	5.61	138	*e*P	Pn	09 42 28.9	+1.0
THN				*e*S	Sn	09 43 30.7	-1.7
THN				IAML		09 43 33.9	
	comp=E,585nm,0.1s						
THN				IAML		09 43 34.2	
	comp=N,337nm,0.3s						
CHM	Chimkent	5.76	347	*e*PN	Pn	09 42 30.6	+0.8
CHM	Chimkent	5.76	347	*e*P	Pn	09 42 30.6	+0.8
ASAI	AK-SAY(Kyrgyzs	5.85	42	P	Pn	09 42 31.7	+0.5
NRN	Naryn	5.96	36	PN	Pn	09 42 31.7	-1.0
NRN	Naryn	5.96	36		Pn	09 42 31.7	-1.0
UCH	Uchtor	6.04	23	P	Pn	09 42 34.2	+0.3
	SNR=36						
DHRM	DHARAMSHALA	6.05	136	*e*P	Pn	09 42 34.8	+0.9
DHRM				*e*S	Sn	09 43 41.1	-2.0
DHRM				IAML		09 43 43.3	
	comp=E,491nm,0.3s						
DHRM				IAML		09 43 45.9	
	comp=E,580nm,0.4s						
DZA	Taraz	6.18	0	*e*PN	Pn	09 42 35.9	+0.6
DZA	Taraz	6.18	0	*e*P	Pn	09 42 35.9	+0.6
EKS2	Erkin-Say	6.24	17	P	Pn	09 42 36.8	+0.6
	SNR=36						
AAK	Ala-Archa	6.41	21	P	Pn	09 42 39.0	+0.6
	comp=E,42nm,0.3s,baz=89,slow=5.1,SNR=61						
AAK				S	Sn	09 43 48.8	-2.5
	comp=E,40nm,0.5s,baz=143,slow=23,SNR=25						
AAK	Ala-Archa	6.41	21	P	Pn	09 42 39.0	+0.6
	SNR=41						
AAK	Ala-Archa	6.41	21	⇑P	Pn	09 42 39.0	+0.6
	comp=E,10nm,0.4s						
AAK				⇑S	Sn	09 43 48.6	-2.7
	comp=E,82nm,0.7s						
AAK	Ala-Archa	6.41	21	*c i*PN	Pn	09 42 38.9	+0.6
AAK				pmax	pmax		
	comp=Z,38nm,0.3s						
AAK	Ala-Archa	6.41	21		Pn	09 42 39.0	+0.6
AAK	Ala-Archa	6.41	21	P	Pn	09 42 39.1	+0.7
KK31	Karatay Array	6.42	355	⇓P	Pn	09 42 38.5	+0.2
	comp=Z,34nm,0.3s,baz=172,slow=12,SNR=471						
KK31				⇑S	Sn	09 43 47.4	-4.0
	comp=Z,187nm,0.7s,baz=183,slow=22,SNR=7.9						
KK31	Karatay Array	6.42	355	PN	Pn	09 42 38.6	+0.2
KK31	Karatay Array	6.42	355		Pn	09 42 38.6	+0.2
KKAR	Karatay Array	6.42	355	PN	Pn	09 42 38.5	+0.1
KKAR	Karatay Array	6.42	355		Pn	09 42 38.5	+0.1
KBK	Karagaybulak	6.57	24	P	Pn	09 42 41.8	+1.3
	SNR=6.6						
FRU1	Bishkek	6.61	22	PN	Pn	09 42 42.4	+1.5
FRU1	Bishkek	6.61	22	Pn	Pn	09 42 42.4	+1.5
BHK	Bhakra	6.76	140	*ex*	Pn	09 42 44.2	+1.3
BHK				*ex*	Sn	09 43 56.5	-2.9
CHMS	Chumysh	6.82	22	P	Pn	09 42 44.5	+0.9
	SNR=8.2						
USP	Ospennovka	6.99	19	P	Pn	09 42 46.8	+0.8
	SNR=8.7						
TKM2	Tokmak 2	7.03	27	P	Pn	09 42 46.6	+0.1
	SNR=18						
KDJ	Kajisay	7.06	38	PN	Pn	09 42 48.2	+1.2
KDJ	Kajisay	7.06	38		Pn	09 42 48.2	+1.2
KDJ	Kajisay	7.06	38	P	Pn	09 42 47.9	+0.9
TARG	Taragay, Kyrgy	7.11	43	PN	Pn	09 42 48.1	+0.3
TARG	Taragay, Kyrgy	7.11	43		Pn	09 42 48.1	+0.3
TARG	Taragay, Kyrgy	7.11	43	P	Pn	09 42 48.0	+0.3
SMLA	Simla	7.38	137	*e*P	Pn	09 42 51.2	+0.2
SMLA				*e*S	Sn	09 44 09.8	-4.5
SMLA				IAML		09 44 13.5	
	comp=N,229nm,0.3s						
SMLA				IAML		09 44 13.9	
	comp=E,312nm,0.2s						
HNLY	HANLEY	7.41	120	*e*P	Pn	09 42 51.8	-0.3
HNLY				*e*S	Sn	09 44 14.7	-1.1
WUS	Wushi	7.61	51	P	Pn	09 42 55.1	+0.9
TNSS	Tian-Shan	7.66	33	*e*PN	Pn	09 42 55.4	+0.4
TNSS	Tian-Shan	7.66	33	*e*P	Pn	09 42 55.4	+0.4
KLP	Kalpa	7.72	130	*e*P	Pn	09 42 56.1	+0.2
KLP				*e*S	Sn	09 44 17.6	-5.2
HRA	Herat	7.75	255	Pn	Pn	09 42 56.1	-0.1
AAA	Alma-Ata	7.79	32	*e*PN	Pn	09 42 57.1	+0.8
AAA	Alma-Ata	7.79	32	*e*P	Pn	09 42 57.2	+0.8
MDOK	Medeo	7.81	33	*e*PN	Pn	09 42 57.5	+0.8
MDOK				*e*S	Sn	09 44 26.2	+1.8
MDOK	Medeo	7.81	33	*e*P	Pn	09 42 57.6	+0.8
MDOK				*e*S	Sn	09 44 26.3	+1.8
PRZ	Przheval'sk	7.95	41	PN	Pn	09 42 59.6	+1.0
PRZ	Przheval'sk	7

	comp=Z,5.0nm,0.4s							
GNI	**Garni**	**21.08 288**		P		**P**	**09 45 39.8**	**+3.6**
ARTI	**Arti**	**21.54 340**		P		**P**	**09 45 41.2**	**+0.6**
	comp=Z,7.9nm,0.4s,baz=155,slow=6.8,SNR=12							
	comp=Z,7.9nm,0.4s							
KBZ	**Khabaz**	**22.74 297**		P		**P**	**09 45 53.0**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=134,slow=8.0,SNR=5.3							
	comp=Z,1.8nm,0.6s							
KBZ	**Khabaz**	**22.74 297**	*i*	P		**P**	**09 45 53.2**	**+0.9**
KBZ			*i*	*PP		**pP**	**09 46 26.6**	**+1.3**
KBZ				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BELG	**Belogornoye**	**22.89 321**		P		**P**	**09 45 54.3**	**+0.8**
	comp=Z,20nm,0.5s,baz=341,slow=2.3,SNR=11							
	comp=Z,20nm,0.5s							
BELG	**Belogornoye**	**22.89 321**	*i*	P		**P**	**09 45 54.5**	**+0.9**
BELG				pmax		pmax		
	comp=Z,4.0nm,0.7s							
SHA1	**Shidzhatmaz**	**22.91 297**⇑	*i*	P		**P**	**09 45 55.7**	**+1.5**
SHA1			*i*	*PP		**pP**	**09 46 27.2**	**-0.3**
KIV	**Kislovodsk**	**22.92 297**	*e*	P		**P**	**09 45 53.2**	**-0.9**
KIV			*e*	S		**S**	**09 49 49.4**	**-0.8**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.0s							
KNGR	**Kungurtug, Tuv**	**23.34 45**	*i*	P		**P**	**09 45 58.4**	**+0.5**
KNGR				pmax		pmax		
	comp=Z,5.0nm,0.3s							
RAYN	**Ar Rayn**	**25.82 247**		P		**P**	**09 46 20.3**	**-0.1**
RAYN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
RAYN	**Ar Rayn**	**25.82 247**		P		**P**	**09 46 20.3**	**-0.1**
RAYN				IAmb		IAmb	09 46 26.8	
	comp=Z,5.8nm,0.8s							
RAYN	**Ar Rayn**	**25.82 247**		P		**P**	**09 46 20.4**	**-0.1**
KIRV	**Kirov**	**26.17 334**	*i*	P		**P**	**09 46 23.5**	**+0.4**
PZH	**PanZhiHua**	**27.73 103**		P		**P**	**09 46 39.3**	**+1.7**
BR131	**Keskin Array S**	**29.62 287**	*i*	P		**P**	**09 46 54.4**	**+0.2**
BRTR	**Keskin Array B**	**29.62 287**		P		**P**	**09 46 55.6**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=91,slow=8.7,SNR=4.1							
	comp=Z,0.7nm,0.6s							
OBN	**Obninsk**	**29.95 319**⇑	*e*	P		**P**	**09 46 58.0**	**+1.3**
OBN			*e*	*PP		**pP**	**09 47 35.0**	**+0.2**
OBN			*e*				09 48 03.3	
OBN				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KLMR	**Klimovskoe**	**31.43 330**	*e*	P		**P**	**09 47 09.1**	**-0.6**
KLMR			*e*				09 48 19.1	
KLMR				pmax		pmax		
	comp=Z,5.0nm,0.7s							
HHC	**Hu-ho-hao-te**	**31.45 70**	*e*	P		**P**	**09 47 11.5**	**+1.2**
HHC				pmax		pmax		
	comp=Z,15nm,0.5s							
YLV	**Yalova**	**32.77 290**		P		**P**	**09 47 24.0**	**+2.3**
	comp=Z,7.0nm,0.9s							
AK09	**Malin Array Si**	**32.97 308**		P		**P**	**09 47 24.1**	**+0.9**
AK10	**Malin Array Si**	**32.99 308**		P		**P**	**09 47 24.1**	**+0.7**
AK08	**Malin Array Si**	**32.99 308**		P		**P**	**09 47 23.9**	**+0.5**
AK08				pP		**pP**	**09 48 03.0**	**+1.3**
AK07	**Malin Array Si**	**33.01 308**		P		**P**	**09 47 24.5**	**+0.9**
AK06	**Malin Array Si**	**33.02 308**		P		**P**	**09 47 24.6**	**+0.9**
AKASG	**Malin Array Be**	**33.02 309**		P		**P**	**09 47 24.4**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=82,slow=6.9,SNR=17							
AKASG				PP		**PnPn**	**09 48 38.5**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=97,slow=12,SNR=4.5							
	comp=Z,2.4nm,0.5s							
AKASG	**Malin Array Be**	**33.02 309**	*ce*	P		**P**	**09 47 24.3**	**+0.6**
AKASG				pmax		pmax		
	comp=Z,4.0nm,0.6s							
AKASG	**Malin Array Be**	**33.02 309**		P		**P**	**09 47 24.3**	**+0.6**
AKBB	**Malin Array Si**	**33.02 309**	*d*	*P		**P**	**09 47 24.3**	**+0.6**
AKBB				pmax		pmax		
	comp=Z,4.0nm,0.5s							
AKBB	**Malin Array Si**	**33.02 309**		P		**P**	**09 47 23.9**	**+0.3**
AKBB				IAmb		IAmb	09 47 25.4	
	comp=Z,6.1nm,0.5s							
AKBB	**Malin Array Si**	**33.02 309**		P		**P**	**09 47 24.3**	**+0.6**
AK05	**Malin Array Si**	**33.02 308**		P		**P**	**09 47 24.1**	**+0.4**
AK01	**Malin Array Si**	**33.03 309**		P		**P**	**09 47 24.4**	**+0.7**
AK02	**Malin Array Si**	**33.03 308**		P		**P**	**09 47 24.4**	**+0.7**
AK03	**Malin Array Si**	**33.03 309**		P		**P**	**09 47 24.4**	**+0.7**
AK03				pP		**pP**	**09 48 03.3**	**+1.3**
KIEV	**Kiev**	**33.03 309**		P		**P**	**09 47 24.4**	**+0.7**
	comp=Z,27nm,0.6s							
AK12	**Malin Array Si**	**33.06 308**		P		**P**	**09 47 24.8**	**+0.8**
AK04	**Malin Array Si**	**33.06 309**		P		**P**	**09 47 24.5**	**+0.5**
AK18	**Malin Array Si**	**33.12 309**		P		**P**	**09 47 24.8**	**+0.2**
AK17	**Malin Array Si**	**33.12 308**		P		**P**	**09 47 25.1**	**+0.5**
AK22	**Malin Array Si**	**33.13 309**		P		**P**	**09 47 25.0**	**+0.4**
AK19	**Malin Array Si**	**33.16 309**		P		**P**	**09 47 25.2**	**+0.3**
SORM	**Soroca**	**33.31 304**		P		**P**	**09 47 26.8**	**+0.6**
CTYL	**Yalikoy Yolu**	**33.48 292**		P		**P**	**09 47 28.5**	**+0.7**
	comp=Z,4µmcomp=Z,17nm,1.1s							
LUBAR	**Lubar, Ukraine**	**33.85 307**		P		**P**	**09 47 31.8**	**+0.9**
NRIK	**Noril'sk**	**33.88 10***d*	*i*	P		**P**	**09 47 32.2**	**+1.3**
NRIK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
MI28	**Mi28,Pidlybu**	**34.03 309**		P		**P**	**09 47 32.1**	**-0.3**
TESR	**Tescani**	**34.40 301**		P		**P**	**09 47 37.1**	**+1.4**
	comp=Z,5.0nm,1.4s							
KMPD	**K-Podol'skiy**	**34.59 304**		P		**P**	**09 47 37.4**	**+0.2**
MLR	**Muntele Rosu**	**34.91 299**		P		**P**	**09 47 42.0**	**+1.8**
	comp=Z,3.7nm,0.7s,baz=199,slow=15,SNR=5.0							
	comp=Z,3.7nm,0.7s							
MLR	**Muntele Rosu**	**34.91 299**		P		**P**	**09 47 42.0**	**+1.8**
RNPP5	**Staryi Chortor**	**35.18 309**		P		**P**	**09 47 43.1**	**+0.8**
RNPP8	**Varash**	**35.21 309**		P		**P**	**09 47 43.6**	**+1.1**
NACGM	**Naroch**	**35.25 315**	*e*	P		**P**	**09 47 44.1**	**+1.3**
	comp=Z,12nm,0.8s,baz=103							
BURAR	**Bucovina Array**	**35.39 303**		P		**P**	**09 47 46.1**	**+1.9**
BURAR	**Bucovina Array**	**35.39 303**		P		**P**	**09 47 46.1**	**+1.9**
BUR08	**Bucovina Ar. S**	**35.41 303**		P		**P**	**09 47 46.1**	**+1.7**
LVZ	**Lovozero**	**37.37 338**		P		**P**	**09 48 01.2**	**+0.6**
	comp=Z,514nmcomp=Z,9.4nm,1.6s							
FIA1	**FINESS Array S**	**37.46 326**		P		**P**	**09 48 02.6**	**+1.2**
FINES	**FINESS Array B**	**37.46 326**		P		**P**	**09 48 02.3**	**+0.9**
	comp=Z,4.9nm,0.6s,baz=115,slow=9.2,SNR=32							
	comp=Z,4.9nm,0.6s							
FINES	**FINESS Array B**	**37.46 326**		P		**P**	**09 48 02.4**	**+1.0**
MTSE	**Matsula**	**37.73 321**		P		**P**	**09 48 04.7**	**+1.0**
NIE	**Niedzica**	**38.67 306**		P		**P**	**09 48 13.3**	**+1.6**
	comp=Z,3.4nm,0.9s							
VADS	**Vadso**	**40.22 339**	*e*	P		**P**	**09 48 25.5**	**+1.4**
VADS				IAmb		IAmb	09 48 26.1	
	comp=Z,6.4nm,0.8s							
KEV	**Kevo**	**40.71 338**		P		**P**	**09 48 29.4**	**+1.2**
KEV				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KEV	**Kevo**	**40.71 338**		P		**P**	**09 48 29.4**	**+1.2**
ARA0	**ARCESS Array S**	**41.06 337**	*e*	P		**P**	**09 48 32.4**	**+1.3**
ARA0				IAmb		IAmb	09 48 32.8	
	comp=Z,6.4nm,0.7s							
ARCES	**ARCESS Array B**	**41.06 337**		P		**P**	**09 48 32.2**	**+1.1**
	comp=Z,6.8nm,0.6s,baz=113,slow=8.3,SNR=52							
	comp=Z,6.8nm,0.6s							
ARCES	**ARCESS Array B**	**41.06 337**		P		**P**	**09 48 32.2**	**+1.1**
ARCES				IAmb		IAmb	09 48 33.0	
	comp=Z,5.5nm,0.8s							
KTK1	**Kautokeino**	**41.53 336**	*e*	P		**P**	**09 48 35.6**	**+0.6**
KTK1				IAmb		IAmb	09 48 36.1	
	comp=Z,9.1nm,0.6s							
TIP	**Timpagrande**	**42.56 291**	⇑	P		**P**	**09 48 44.8**	**+1.1**
JETT	**Jettan, Norway**	**42.68 336**	*e*	P		**P**	**09 48 45.2**	**+0.9**
JETT				IAmb		IAmb	09 48 45.7	
	comp=Z,7.1nm,0.9s							
HFS	**Hagfors**	**43.07 322**		P		**P**	**09 48 48.2**	**+0.8**
	comp=Z,11nm,0.6s,baz=99,slow=9.2,SNR=37							
	comp=Z,11nm,0.6s							
TRO	**Tromso**	**43.19 336**	*e*	P		**P**	**09 48 49.4**	**+1.1**
TRO				IAmb		IAmb	09 48 49.5	
	comp=Z,3.3nm,0.5s							
FAUS	**Fauske**	**43.74 332**	*e*	P		**P**	**09 48 53.7**	**+0.9**
FAUS				IAmb		IAmb	09 48 54.2	
	comp=Z,6.8nm,0.7s							
MOR8	**Moi Rana**	**43.77 331**	*e*	P		**P**	**09 48 53.3**	**+0.3**
MOR8				IAmb		IAmb	09 48 53.6	
	comp=Z,14nm,0.7s							
STEI	**Steigen**	**43.91 333**	*e*	P		**P**	**09 48 55.1**	**+1.1**
STEI				IAmb		IAmb	09 48 55.4	
	comp=Z,9.8nm,0.9s							
RAUS	**Rausandaksla**	**43.98 331**	*e*	P		**P**	**09 48 56.3**	**+1.6**
RAUS				IAmb		IAmb	09 48 56.5	
	comp=Z,7.0nm,0.6s							
NC602	**NORSAR Array S**	**44.19 322**	*e*	P		**P**	**09 48 56.4**	**0.0**
LEIR	**Leirfjorden**	**44.28 330**	*e*	P		**P**	**09 48 57.7**	**+0.7**
VAGH	**Vaagaholmen**	**44.35 331**	*e*	P		**P**	**09 48 59.4**	**+1.9**
KONS	**Konsvik**	**44.36 331**	*e*	P		**P**	**09 48 58.6**	**+1.0**
NB2	**NORSAR Subarra**	**44.37 323**		P		**P**	**09 48 58.0**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=95,slow=8.6							
NB2	**NORSAR Subarra**	**44.37 323**		P		**P**	**09 48 58.0**	**+0.1**
NOA	**NORSAR Array B**	**44.37 323**		P		**P**	**09 48 58.2**	**+0.3**
	comp=Z,4.6nm,0.6s,baz=96,slow=7.7,SNR=13							
	comp=Z,4.6nm,0.6s							
KSRS	**Korea Array**	**44.57 71**		P		**P**	**09 49 00.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=298,slow=5.3,SNR=4.2							
	comp=Z,0.7nm,0.8s							
NBO00	**NORSAR Array S**	**44.59 323**		P		**P**	**09 49 00.1**	**+0.5**
NBO00				IAmb		IAmb	09 49 09.6	
	comp=Z,33nm,1.5s							
NC204	**NORSAR Array S**	**44.61 323**		P		**P**	**09 49 00.6**	**+0.8**
NC204				IAmb		IAmb	09 49 00.9	
	comp=Z,7.0nm,0.6s							
TIXI	**Tiksi**	**45.49 22**	*i*	P		**P**	**09 49 06.3**	**-0.2**
TIXI				pmax		pmax		
	comp=Z,12nm,0.9s							
TIXI	**Tiksi**	**45.49 22**		P		**P**	**09 49 06.5**	**0.0**
TIXI				IAmb		IAmb	09 49 18.6	
	comp=Z,14nm,1.1s							
SPITS	**Spitsbergen Ar**	**47.35 347**		P		**P**	**09 49 22.0**	**+1.1**
	comp=Z,3.1nm,0.7s,baz=122,slow=7.4,SNR=2.0							
	comp=Z,3.1nm,0.7s							
BMRD	**Maredsous**	**48.57 308**	*d*	P		**P**	**09 49 28.3**	**-2.3**
DOU	**Dourbes**	**48.72 308**	*d*	P		**P**	**09 49 31.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**52.32 316**		P		**P**	**09 49 58.6**	**0.0**
	comp=Z,2.6nm,0.8s,baz=85,slow=8.0,SNR=3.4							
	comp=Z,2.6nm,0.8s							
SEY	**Seymchan**	**54.10 34**	*i*	P		**P**	**09 50 11.0**	**-0.5**
SEY				pmax		pmax		
	comp=Z,4.0nm,1.4s							
SUMG	**Summit**	**60.95 341**		P		**P**	**09 51 00.8**	**+1.1**
SUMG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
SUMG	**Summit**	**60.95 341**		P		**P**	**09 51 00.8**	**+1.1**
SUMG				IAmb		IAmb	09 51 03.0	
	comp=Z,5.0nm,0.9s							
SUMG	**Summit**	**60.95 341**		P		**P**	**09 50 58.7**	**-0.9**
VOI	**Vohitsoka**	**62.73 206**		P		**P**	**09 51 11.8**	**0.0**
TORD	**Torodi Ar. Bea**	**65.98 269**		P		**P**	**09 51 31.4**	**-1.6**
	comp=Z,3.8nm,0.6s,baz=45,slow=6.1,SNR=16							
	comp=Z,3.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**65.98 269**		P		**P**	**09 51 31.8**	**-1.2**
TORD				IAmb		IAmb	09 51 32.2	
	comp=Z,2.8nm,0.7s							
C19K	**Lookout Ridge**	**68.06 17**		P		**P**	**09 51 46.3**	**+1.0**
IMAR	**Indian Mountai**	**71.90 18**		P		**P**	**09 52 08.9**	**+0.2**
BCAR	**Beaver Creek A**	**77.10 15**		P		**P**	**09 52 39.9**	**+1.1**
BOSA	**Boshof**	**78.07 220**		P		**P**	**09 52 43.7**	**-0.9**
	comp=Z,3.3nm,0.9s,baz=20,slow=6.7,SNR=3.1							
	comp=Z,3.3nm,0.9s							
YKA	**Yellowknife Ar**	**81.03 3**		P		**P**	**09 53 00.6**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=353,slow=5.3,SNR=9.8							
	comp=Z,0.6nm,0.4s							
WRA	**Warramunga Arr**	**81.88 122**		P		**P**	**09 53 03.8**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=325,slow=4.9,SNR=5.7							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**81.88 122**	*i*	P		**P**	**09 53 03.7**	**-1.4**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
WR8	**Warramunga Arr**	**82.00 122**		P		**P**	**09 53 04.5**	**-1.2**
WR8				IAmb		IAmb	09 53 09.4	
	comp=Z,7.2nm,1.2s							
AS31	**Alice Springs**	**84.16 125**		P		**P**	**09 53 15.8**	**-1.0**
ASAR	**Alice Springs**	**84.16 125**		P		**P**	**09 53 15.7**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=310,slow=5.0,SNR=26							
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**84.16 125**		P		**P**	**09 53 15.9**	**-0.9**
ASAR	**Alice Springs**	**84.16 125**		P		**P**	**09 53 15.9**	**-0.9**

VIE 28 09:46:29.2±0.1, **47.44N**×15.15E, **h12**km±1km, **mb1.3**/6, **ml1.7**/10, **Error ellipse: s-maj=0.8km s-min=0.5km az=148.0 7 km NE of Leoben, Austria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARSA	**Arzberg**	**0.31**	**126**	*i* Pg		Pg	09 46 35.5	0.0
	2.4nm,0.1s							
ARSA				*i* Sg		Sg	09 46 40.5	+0.7
	0.3nm,0.0s							
SESA	**Seetaler Alpe,**	**0.51**	**231**	*i* Pg		Pg	09 46 39.6	+0.4
SESA				*i* Sg		Sb	09 46 47.3	-0.4
	0.5nm,0.0s							
CONA	**Conrad Observa**	**0.69**	**44**	*e*Pg		Pg	09 46 42.4	-0.1
	1.1nm,0.1s							
CONA				*i* Sg		Sb	09 46 52.4	-0.2
	0.3nm,0.1s							
MOA	**Molln**	**0.73**	**305**	*i* Pg		Pg	09 46 43.5	+0.2
	0.4nm,0.1s							
MOA				*e*Sg		Sb	09 46 53.7	-0.1
	1.4nm,0.2s							
SOKA	**Soboth**	**0.76**	**186**	*e*Pg		Pg	09 46 44.1	+0.2
	0.8nm,0.3s							
SOKA				*i* Sg		Sg	09 46 54.3	+0.4
	0.1nm,0.1s							
RONA	**Rosalia, Austr**	**0.82**	**71**	*e*Pg		Pg	09 46 45.0	0.0
	0.3nm,0.1s							
RONA				*e*Sg		Sb	09 46 56.7	+0.4
	0.1nm,0.0s							
WINA	**Alland / Wiene**	**0.92**	**42**	*i* Pg		Pg	09 46 46.8	-0.1
	1.1nm,0.1s							
WINA				*e*Sg		Sb	09 46 59.3	+0.2
OBKA	**Obir**	**1.01**	**204**	*i* Pg		Pb	09 46 48.8	0.0
	0.3nm,0.1s							
OBKA				*e*Sg		Sb	09 47 02.6	+0.6
	0.1nm,0.1s							
BIOA	**Bad Ischl, Aus**	**1.06**	**285**	*i* Pg		Pg	09 46 49.7	+0.1
	0.2nm,0.1s							
BIOA				*e*Sg		Sg	09 47 03.7	+0.4
	6.5nm,0.2s							
KBA	**Koelnbreinsper**	**1.28**	**254**	*e*Pn		Pn	09 46 53.1	0.0
	0.4nm,0.2s							
KBA				*e*Sn		Sg	09 47 11.1	+0.6
	0.5nm,0.1s							
KRUC	**Moravsky**	**1.83**	**27**	*e*SG		Sb	09 47 25.3	-0.1
VRAC	**Vranov**	**2.11**	**27**	*e*SG		Sb	09 47 33.5	+0.1

*SOF **28** 09:47:22.4, 40°.70N±0°.02×22°.44E±0°.03, h10km±2km, MD3.8/6*
*ATH **28** 09:47:24.6, 40°.76N×22°.58E, h14km±1km, ML3.4/26, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*SKO **28** 09:47:24.2, 40°.74N×22°.56E, h15km, ML3.2*
*THE **28** 09:47:25.1, 40°.8N±0°.8×22°.6E±0°.9, h3km±2km, M3.3/22, MLh3.3/22*
*BEO **28** 09:47:27.5±0.8, 40°.87N×22°.48E, h12km±5km, ML3.1/11*

ISC 28 09:47:24.8±0.9, **40.75N**±0°.02×**22°.58E**±0°.02, **h13**km±7km, **n119**, σ0**9**7/142, **14C-12D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.25**	**327**	P		**Pg**	**09 47 29.9**	**-0.3**
GRG				S		**Sg**	**09 47 33.2**	**-0.5**
GRG	**Griva**	**0.25**	**327**	P		**Pg**	**09 47 29.8**	**-0.3**
GRG				S		**Sg**	**09 47 33.4**	**-0.3**
THE	**Thessaloniki**	**0.31**	**112**	P		**Pg**	**09 47 31.4**	**+0.2**
THE				S		**Sg**	**09 47 35.2**	**-0.3**
THE	**Thessaloniki**	**0.31**	**112**	P		**Pg**	**09 47 31.2**	**0.0**
THE				S		**Sg**	**09 47 36.0**	**+0.5**
NASA	**Naoussa**	**0.41**	**253**	P		**Pb**	**09 47 33.7**	**-0.2**
NASA				S		**Sg**	**09 47 38.8**	**+0.3**
HORT	**Hortiatis**	**0.42**	**111**	P		**Pg**	**09 47 31.9**	**-1.3**
HORT	**Hortiatis**	**0.42**	**111**	P		**Pg**	**09 47 32.5**	**-0.7**
HORT				S		**Sg**	**09 47 38.8**	**-0.1**
KNT	**Kendrikon**	**0.48**	**30**	P		**Pb**	**09 47 36.1**	**+1.0**
KNT				S		**Sg**	**09 47 40.9**	**+0.3**
KNT	**Kendrikon**	**0.48**	**30**	P		**Pb**	**09 47 36.1**	**+1.0**
KNT				S		**Sg**	**09 47 40.8**	**+0.2**
VAY	**Valandovo**	**0.57**	**359**⇑	*i* Pg		**Pg**	**09 47 35.5**	**-0.5**
VAY				*i* Sg		**Sg**	**09 47 43.9**	**+0.3**
VAY				*e*Lg		Lg	09 47 47.9	
	comp=E,1µm,0.4s							
VAY				*e*Lg		Lg	09 47 48.6	
	comp=N,1µm,0.6s							
SOH	**Sokhos**	**0.59**	**83**	P		**Pg**	**09 47 36.4**	**0.0**
SOH				S		**Sg**	**09 47 44.4**	**+0.2**
SOH	**Sokhos**	**0.59**	**83**	P		**Pg**	**09 47 36.4**	**0.0**
SOH				S		**Sg**	**09 47 44.4**	**+0.2**
LIT	**Litokhoron**	**0.65**	**186**	P		**Pb**	**09 47 37.9**	**-0.1**
LIT	**Litokhoron**	**0.65**	**186**	P		**Pg**	**09 47 37.6**	**+0.1**
LIT				S		**Sb**	**09 47 47.5**	**+0.5**
PLG	**Polygyros**	**0.76**	**119**	P		**Pg**	**09 47 39.5**	**0.0**
PLG				S		**Sb**	**09 47 50.4**	**+0.4**
PLG	**Polygyros**	**0.76**	**119**	P		**Pg**	**09 47 39.6**	**0.0**
PLG				S		**Sb**	**09 47 50.0**	**-0.1**
KZN	**Kozani**	**0.76**	**235**	P		**Pg**	**09 47 39.1**	**-0.5**
KZN	**Kozani**	**0.76**	**235**	P		**Pg**	**09 47 39.4**	**-0.2**
KZN				S		**Sb**	**09 47 50.3**	**+0.1**
TYRN	**Tyrnavos**	**1.07**	**195**	P		**Pg**	**09 47 45.3**	**-0.1**
TYRN				S		**Sn**	**09 48 00.8**	**+0.6**
TYRN	**Tyrnavos**	**1.07**	**195**	P		**Pg**	**09 47 45.3**	**-0.1**
NVR	**Nevrokopi**	**1.14**	**58**	P		**Pb**	**09 47 46.2**	**-0.2**
NVR	**Nevrokopi**	**1.14**	**58**	P		**Pb**	**09 47 46.1**	**-0.3**
NVR				S		**Sb**	**09 48 00.9**	**-0.2**
OUR	**Ouranopolis**	**1.14**	**111**	P		**Pn**	**09 47 46.5**	**0.0**
OUR	**Ouranopolis**	**1.14**	**111**	P		**Pn**	**09 47 46.5**	**0.0**
KKB	**Krupnik**	**1.17**	**20**	*i* P		**Pb**	**09 47 46.7**	**-0.2**
KKB				*i* S		**Sn**	**09 48 03.7**	**+1.0**
KKB	**Krupnik**	**1.17**	**20**	P		**Pb**	**09 47 46.2**	**-0.7**
PAIG	**Paliouri**	**1.17**	**134**	P		**Pn**	**09 47 46.8**	**-0.1**
KPRO	**Kipourio**	**1.22**	**230**	P		**Pb**	**09 47 47.7**	**-0.1**
KPRO	**Kipourio**	**1.22**	**230**	P		**Pb**	**09 47 47.7**	**-0.1**
PENT	**Pentalofos**	**1.23**	**244**	P		**Pg**	**09 47 48.7**	**+0.1**
PENT	**Pentalofos**	**1.23**	**244**	P		**Pg**	**09 47 48.5**	**0.0**
THL	**Klokotos Trika**	**1.26**	**200**	P		**Pg**	**09 47 48.8**	**-0.2**
THL	**Klokotos Trika**	**1.26**	**200**	P		**Pg**	**09 47 48.8**	**-0.2**
TRKA	**Trikala**	**1.35**	**208**	P		**Pn**	**09 47 49.0**	**-0.3**
OHR	**Ohrid**	**1.40**	**286**	*e*Pn		**Pg**	**09 47 51.3**	**-0.4**
OHR				*e*Sn		**Sg**	**09 48 10.4**	**+0.5**
OHR				*e*Lg		Lg	09 48 19.3	
	comp=N,269nm,0.8s							
OHR				*e*Lg		Lg	09 48 19.8	
	comp=E,207nm,0.5s							
SOFA	**Sofades**	**1.46**	**195**	P		**Pn**	**09 47 50.6**	**-0.2**
XOR	**Xorichti**	**1.46**	**161**	P		**Pn**	**09 47 50.6**	**-0.2**
XOR	**Xorichti**	**1.46**	**161**	P		**Pn**	**09 47 50.3**	**-0.5**
XOR				S		**Sn**	**09 48 09.1**	**-0.8**
KAVA	**Kavala**	**1.49**	**80**	P		**Pb**	**09 47 51.8**	**-0.4**
KAVA	**Kavala**	**1.49**	**80**	P		**Pb**	**09 47 52.1**	**-0.1**
KAVA				S		**Sb**	**09 48 11.2**	**+0.1**
SKO	**Skopje**	**1.50**	**325**	*e*Pn		**Pb**	**09 47 52.0**	**-0.5**
NEO	**Neokhori**	**1.52**	**161**	P		**Pn**	**09 47 51.6**	**-0.2**
NEO	**Neokhori**	**1.52**	**161**	P		**Pn**	**09 47 51.4**	**-0.3**
NEO				S		**Sn**	**09 48 10.7**	**-0.7**
THAS	**Thassos island**	**1.63**	**94**	P		**Pn**	**09 47 53.3**	**+0.1**
PRMD	**Pramanda**	**1.67**	**224**	P		**Pb**	**09 47 55.3**	**-0.1**
TETR	**Tetrakomo, Epi**	**1.73**	**216**	P		**Pb**	**09 47 56.0**	**-0.4**
AGG	**Agios Georgios**	**1.73**	**186**	P		**Pn**	**09 47 55.5**	**+0.3**
BOSS	**Bosilegrad**	**1.75**	**358**	*e*Pn		**Pg**	**09 47 55.5**	**+0.6**
BOSS				*e*Sg		**Sg**	**09 48 20.4**	**-0.6**
PLNA	**Plana**	**1.84**	**20**	*i* P		**Pn**	**09 47 57.0**	**+0.8**
AOS	**Alonnisos**	**1.86**	**147**	P		**Pn**	**09 47 56.5**	**0.0**
RZN	**Rozhen**	**1.88**	**59**	*i* P		**Pb**	**09 47 58.0**	**-1.1**
RZN	**Rozhen**	**1.88**	**59**	P		**Pn**	**09 47 57.8**	**+1.0**
VTS	**Vitosha**	**1.93**	**14**	*i* P		**Pn**	**09 47 57.7**	**+0.2**
VTS				*i* S		**Sn**	**09 48 22.7**	**+1.0**
VTS	**Vitosha**	**1.93**	**14**	*e*Pn		**Pn**	**09 47 57.7**	**+0.2**
VTS				*e*Sn		**Sb**	**09 48 23.0**	**-1.0**
ATAL	**Atalanti**	**2.08**	**170**	P		**Pn**	**09 47 59.3**	**-0.1**
AMPL	**Ampelaki**	**2.11**	**210**	P		**Pn**	**09 47 59.7**	**-0.1**
IGT	**Igoumenitsa**	**2.11**	**236**	*e*Pn		**Pb**	**09 48 03.5**	**+0.6**
IGT	**Igoumenitsa**	**2.11**	**236**	P		**Pn**	**09 47 60.0**

PB06					*e*S	**S**	**10 05 34.5**	**+2.3**
PB06					IAML		10 05 37.6	
	comp=Z,220nm,0.3s							
PB06	**IPOC Station P**	**3.20**	**265**	Pn		**Pn**	**10 04 50.8**	**+2.0**
PB06					Sn	**S**	**10 05 33.6**	**+1.4**
PB03	**IPOC Station P**	**3.39**	**277**	*e*P		**Pn**	**10 04 53.1**	**+2.2**
PB03					*e*S	**S**	**10 05 35.7**	**-0.4**
PB03					IAML		10 05 37.9	
	comp=Z,361nm,0.3s							
PB03	**IPOC Station P**	**3.39**	**277**			**Pn**	**10 04 52.9**	**+1.9**
PB07	**IPOC Station P**	**3.57**	**281**	*e*P		**Pn**	**10 04 55.2**	**+2.2**
PB07					*e*S	**S**	**10 05 40.2**	**+0.4**
PB07					IAML		10 05 40.9	
	comp=Z,277nm,0.2s							
PB07	**IPOC Station P**	**3.57**	**281**			**Pn**	**10 04 54.9**	**+1.9**
FSA	**Cafayete**	**3.62**	**178**	*e*P		**Pn**	**10 04 56.3**	**+2.8**
PB08	**IPOC Station P**	**3.66**	**309**	*e*P		**Pn**	**10 04 56.8**	**+2.5**
PB08					*e*S	**S**	**10 05 44.1**	**+2.1**
PB08					IAML		10 05 44.9	
	comp=Z,116nm,0.3s							
PB08	**IPOC Station P**	**3.66**	**309**			**Pn**	**10 04 56.6**	**+2.4**
PB02	**IPOC Station P**	**3.69**	**287**	*e*P		**Pn**	**10 04 56.1**	**+1.9**
PB02					*e*S	**S**	**10 05 41.9**	**-0.2**
PB02					IAML		10 05 46.8	
	comp=Z,519nm,0.3s							
PB02	**IPOC Station P**	**3.69**	**287**			**Pn**	**10 04 55.7**	**+1.4**
PB05	**IPOC Station P**	**3.79**	**264**	*e*P		**Pn**	**10 04 57.4**	**+2.0**
PB05					*e*S	**S**	**10 05 44.3**	**+0.1**
PB05					IAML		10 05 46.1	
	comp=Z,139nm,0.4s							
PB05	**IPOC Station P**	**3.79**	**264**			**Pn**	**10 04 56.5**	**+1.1**
GO01	**Chusmiza**	**4.01**	**314**	*e*P		**Pn**	**10 05 00.6**	**+2.2**
GO01					*e*S	**S**	**10 05 52.8**	**+3.3**
GO01					IAML		10 05 55.8	
	comp=Z,89nm,0.7s							
GO01	**Chusmiza**	**4.01**	**314**			**Pn**	**10 05 00.2**	**+1.8**
PB11	**IPOC Station P**	**4.27**	**309**	*e*P		**Pn**	**10 05 02.2**	**+1.1**
PB11					*e*S	**S**	**10 05 53.8**	**-0.6**
PB11					IAML		10 05 55.8	
	comp=Z,188nm,0.5s							
PB11	**IPOC Station P**	**4.27**	**309**			**Pn**	**10 05 02.0**	**+0.9**
TA02	**Huaiquique**	**4.34**	**300**	*e*P		**Pn**	**10 05 03.0**	**+1.3**
TA02					*e*S	**S**	**10 05 54.9**	**-0.7**
TA02					IAML		10 05 57.3	
	comp=Z,215nm,0.3s							
AHML	**Horco Molle**	**4.35**	**171**	*e*P		**Pn**	**10 05 05.1**	**+3.3**
PB14	**IPOC Station P**	**4.47**	**241**	*e*P		**Pn**	**10 05 05.6**	**+2.0**
PB14					*e*S	**S**	**10 05 59.0**	**-0.1**
PB14	**IPOC Station P**	**4.47**	**241**			**Pn**	**10 05 05.1**	**+1.4**
PSGCX	**Pisagua**	**4.71**	**307**	*e*P		**Pn**	**10 05 06.6**	**+0.2**
PSGCX					*e*S	**S**	**10 06 02.1**	**-1.9**
PSGCX					IAML		10 06 04.5	
	comp=Z,110nm,0.8s							
PSGCX	**Pisagua**	**4.71**	**307**			**Pn**	**10 05 06.2**	**-0.1**
AC02	**Maricunga**	**5.13**	**212**	*e*P		**Pn**	**10 05 14.3**	**+2.5**
AC02					*e*S	**S**	**10 06 13.5**	**-0.3**
AC02					IAML		10 06 23.3	
	comp=Z,44nm,0.5s							
AC02	**Maricunga**	**5.13**	**212**			**Pn**	**10 05 14.2**	**+2.5**
PB16	**IPOC Station P**	**5.20**	**322**	*e*P		**Pn**	**10 05 14.6**	**+1.8**
PB16					*e*S	**S**	**10 06 16.5**	**+0.8**
PB16					IAML		10 06 18.9	
	comp=Z,56nm,0.6s							
PB16	**IPOC Station P**	**5.20**	**322**			**Pn**	**10 05 14.7**	**+1.8**
AC01	**Pan de Azucar**	**5.48**	**227**			**Pn**	**10 05 16.4**	**+0.8**
PB12	**IPOC Station P**	**5.51**	**314**			**Pn**	**10 05 16.1**	**0.0**
PB18	**Visviri**	**5.80**	**326**			**Pn**	**10 05 22.6**	**+2.5**
GO03	**Copiapo**	**6.31**	**215**	Pn		**Pn**	**10 05 26.9**	**+0.9**
LPAZ	**La Paz**	**6.44**	**343**	P		**Pn**	**10 05 29.3**	**+1.1**
	comp=Z,10.0nm,0.4s,baz=143,slow=6.2,SNR=89							
LPAZ					S	**S**	**10 06 41.4**	**-2.3**
	comp=Z,3.3nm,0.8s,baz=347,slow=21,SNR=1.5							
LPAZ	**La Paz**	**6.44**	**343**			**Pn**	**10 05 29.4**	**+1.2**
LPAZ	**La Paz**	**6.44**	**343**	*e*P		Pn	10 05 22.6	-5.6
AC04	**Llanos de Chal**	**7.25**	**217**	Pn		**Pn**	**10 05 37.7**	**0.0**
AC05	**El Transito**	**7.36**	**210**	Pn		**Pn**	**10 05 40.4**	**+1.3**
BBSD	**Serra de San D**	**7.39**	**46**	*e*P		**Pn**	**10 05 39.0**	**-0.5**
LCO	**Las Campanas**	**7.71**	**211**	Pn		**Pn**	**10 05 44.2**	**+0.5**
MURT	**Porto Murtinho**	**7.94**	**86**	*e*P		Pn	10 05 40.7	-5.7
SIV	**San Ignacio**	**8.02**	**37**	P		**Pn**	**10 05 46.6**	**-0.9**
	comp=Z,5.4nm,0.4s,baz=221,slow=10.0,SNR=49							
COIM	**Forte Coimbra**	**8.18**	**73**	*e*P		**Pn**	**10 05 46.0**	**-3.5**
GO04	**Tololo Observa**	**8.74**	**208**	Pn		**Pn**	**10 05 57.1**	**+0.4**
CO03	**El Pedregal**	**9.28**	**205**	Pn		**Pn**	**10 06 03.9**	**+0.5**
CFA	**Coronel Fontan**	**9.29**	**191**	P		**Pn**	**10 06 03.3**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=332,slow=9.3,SNR=90							
CFA					S	**S**	**10 07 42.3**	**-5.9**
	comp=Z,7.5nm,0.2s,baz=260,slow=18,SNR=16							
PTLB	**Pontes e Lacer**	**9.62**	**45**			**Pn**	**10 06 07.2**	**-0.5**
PTLB	**Pontes e Lacer**	**9.62**	**45**	*e*P		**Pn**	**10 06 06.8**	**-0.8**
AQDB	**Aquidauana**	**9.90**	**80**	*e*P		**Pn**	**10 06 08.4**	**-2.9**
MT02	**Curacav**	**11.62**	**201**	Pn		**Pn**	**10 06 33.9**	**+1.3**
SALV	**Santo Antonio**	**11.82**	**58**	*e*P		**Pn**	**10 06 34.9**	**-0.4**
MT01	**Popeta**	**12.21**	**201**	Pn		**Pn**	**10 06 40.8**	**+0.8**
ARAG	**Araguaiana, MT**	**15.10**	**66**	*e*P		**Pn**	**10 07 15.4**	**0.0**
CLDB	**Colider**	**15.19**	**42**	*e*P		**Pn**	**10 07 17.3**	**+0.9**
TRQA	**Tornquist**	**15.93**	**168**	P		**P**	**10 07 22.5**	**-1.3**
TRQA					IAmb	IAmb	10 07 57.7	
	comp=Z,15nm,1.4s							
CZSB	**Cruzeiro do Su**	**15.97**	**336**	P		**P**	**10 07 23.5**	**-1.0**
CZSB					IAmb	IAmb	10 07 25.5	
	comp=Z,7.2nm,0.6s							
CZSB	**Cruzeiro do Su**	**15.97**	**336**	*e*P		**P**	**10 07 23.4**	**-1.1**
IPMB	**Ipameri, GO**	**17.39**	**78**	*e*P		**P**	**10 07 39.6**	**-0.4**
SNDB	**Serra Nova Dou**	**17.58**	**56**	*e*P		**P**	**10 07 41.7**	**-0.4**
BDFB	**Brasilia**	**18.41**	**71**	P		**P**	**10 07 51.3**	**+0.2**
	comp=Z,6.6nm,0.9s,baz=228,slow=14,SNR=4.7							
BDFB	**Brasilia**	**18.41**	**71**	P		**P**	**10 07 49.7**	**-1.3**
BDFB					IAmb	IAmb	10 07 52.8	
	comp=Z,16nm,1.4s							
JANB	**Januaria**	**21.91**	**74**	*e*P		**P**	**10 08 26.3**	**-0.9**
SDBA	**SAO DESIDERIO**	**22.55**	**67**	*e*P		**P**	**10 08 31.7**	**-1.4**
CELP	**Cerrillos**	**40.31**	**359**	P		**P**	**10 11 06.5**	**-0.6**
TEIG	**Tepich**	**47.64**	**331**	P		**P**	**10 12 05.5**	**+0.3**
Y49A	**Blount Mountai**	**59.26**	**340**	P		**P**	**10 13 28.2**	**-1.0**
Y49A					IAmb	IAmb	10 13 31.9	
	comp=Z,9.5nm,1.4s							
FPAL	**Fort Paine**	**59.65**	**341**	P		**P**	**10 13 31.4**	**-0.5**
V55A	**Taylorsville**	**59.75**	**346**	P		**P**	**10 13 33.2**	**+0.7**
V55A					IAmb	IAmb	10 13 33.8	
	comp=Z,7.0nm,1.0s							
W50A	**Signal Mountai**	**60.18**	**342**	P		**P**	**10 13 35.2**	**-0.3**
V48A	**Smith Brothers**	**61.13**	**341**	P		**P**	**10 13 41.4**	**-0.5**
WVT	**Waverly**	**61.80**	**340**	P		**P**	**10 13 45.5**	**-0.8**
WVT					IAmb	IAmb	10 13 46.2	
	comp=Z,6.3nm,0.8s							
TXAR	**Lajitas Array**	**62.93**	**323**	P		**P**	**10 13 54.6**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=144,slow=7.3,SNR=2.4							
	comp=Z,0.2nm,0.6s							
CCM	**Cathedral Cave**	**64.68**	**338**	P		**P**	**10 14 04.9**	**-0.2**
CCM					IAmb	IAmb	10 14 05.4	
	comp=Z,4.2nm,0.7s							
VHRN	**Van Horn**	**64.78**	**323**	P		**P**	**10 14 06.5**	**+0.5**
DBIC	**Dimbokro**	**66.56**	**72**	P		**P**	**10 14 17.0**	**-0.6**
P38A	**Dawn**	**66.88**	**337**	P		**P**	**10 14 18.7**	**-0.3**
QSPA	**South Pole Qui**	**67.72**	**180**	P		**P**	**10 14 26.1**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=251,slow=7.6,SNR=2.0							
	comp=Z,0.7nm,0.6s							
QSPA	**South Pole Qui**	**67.72**	**180**	P		**P**	**10 14 26.1**	**+1.9**
QSPA					IAmb	IAmb	10 15 09.2	
	comp=Z,7.5nm,1.5s							
K43A	**Burlington**	**68.02**	**343**	P		**P**	**10 14 25.9**	**-0.2**
I42A	**Draeger Farm,**	**69.28**	**343**	P		**P**	**10 14 33.6**	**-0.2**
I42A					IAmb	IAmb	10 15 09.6	
	comp=Z,13nm,1.3s							
TORD	**Torodi Ar. Bea**	**75.27**	**69**	P		**P**	**10 15 08.8**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=252,slow=5.4,SNR=25							
	comp=Z,1.6nm,0.4s							
PDAR	**Pinedale Array**	**76.27**	**329**	P		**P**	**10 15 14.8**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=134,slow=11,SNR=3.9							
	comp=Z,0.3nm,0.7s							
ULM	**Lac du Bonnet**	**77.05**	**341**	P		**P**	**10 15 19.0**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=160,slow=10,SNR=5.0							
	comp=Z,1.8nm,0.6s							
ULM	**Lac du Bonnet**	**77.05**	**341**	P		**P**	**10 15 19.5**	**+0.4**
YKA	**Yellowknife Ar**	**92.98**	**340**	P		**P**	**10 16 38.9**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=131,slow=4.9,SNR=6.3							
	comp=Z,0.7nm,0.6s							
MKAR	**Makanchi Array**	**144.84**	**39**	PKP		**PKPdf**	**10 23 01.1**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=320,slow=3.3,SNR=15							

*IDC **28** 10:07:32.0±6.3,36°.35N×70°.96E,h172km±49km, mb3.4/7, mbtmp3.9/11,Error ellipse: s-maj=48.6km s-min=23.5km az=31.0*

*NEIC **28** 10:07:35.3±1.9,36°.55N±0°.07×70°.88E±0°.04, h203km±8km, mb4.1/8,Error ellipse: s-maj=10.4km s-min=3.9km az=169.0*

*NNC **28** 10:07:37.6±5.8,36°.83N×70°.81E, h175km±103km, mb2.9, mpv3.6,Error ellipse: s-maj=60.1km s-min=36.2km az=37.0*

ISC 28 10:07:33.5±0.6,36°.47N±0°.05×70°.95E±0°.06,h188km,n52, σ1ᵍ96/66,mb3.8/8,5C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANEM	**Manem**	**1.22**	**29**			**Pn**	**10 08 07.2**	**+3.3**
KBL	**Kabul**	**2.48**	**219**			**Pn**	**10 08 19.6**	**+2.9**
SHAA	**Shahritus**	**2.51**	**297**			**Pn**	**10 08 18.4**	**+1.6**
GAR	**Garm**	**2.57**	**349**			**Pn**	**10 08 19.0**	**+1.5**
CHGR	**Chuyangaron**	**2.60**	**327**			**Pn**	**10 08 19.1**	**+1.3**
NIL	**Nilore**	**3.39**	**145**			**Pn**	**10 08 30.9**	**+3.6**
BTK	**Batken**	**3.58**	**358**	Pn		**Pn**	**10 08 31.6**	**+2.0**
KSH2	**Kashi**	**4.53**	**53**	Pn		**Pn**	**10 08 44.5**	**+2.9**
KSH2				Sn		**Sn**	**10 09 35.3**	**+0.1**
KSH2				smax	smax			
	comp=N,48nm,0.6s							
KSH2				smax	smax			
	comp=E,34nm,0.5s							
JMU	**Jammu**	**4.88**	**138**	*e*P		**Pn**	**10 08 45.8**	**-0.4**
JMU				*e*S		**Sn**	**10 09 41.5**	**-1.7**
JMU				IAML			10 09 46.6	
	comp=E,100nm,0.5s							
JMU				IAML			10 09 47.4	
	comp=N,157nm,0.6s							
ARSB	**Arslanbob**	**5.10**	**18**	Pn		**Pn**	**10 08 49.0**	**+0.1**
TSSA	**Tissa**	**5.62**	**129**	*e*P		**Pn**	**10 08 57.6**	**+1.8**
TSSA				*e*S		**Sn**	**10 09 59.4**	**-1.3**
TSSA				IAML			10 10 01.2	
	comp=E,181nm,0.3s							
TSSA				IAML			10 10 01.4	
	comp=N,201nm,0.5s							
THN	**Thein Dam**	**5.66**	**134**	*e*P		**Pn**	**10 08 58.2**	**+2.0**
THN				*e*S		**Sn**	**10 10 01.4**	**+0.1**
DHRM	**DHARAMSHALA**	**6.11**	**132**	*e*P		**Pn**	**10 09 04.0**	**+1.7**
DHRM				*e*S		**Sn**	**10 10 13.2**	**+1.0**
DHRM				IAML			10 10 13.2	
	comp=E,166nm,0.5s							
DHRM				IAML			10 10 14.7	
	comp=E,125nm,0.2s							
KK31	**Karatay Array**	**6.63**	**357**	⇑P		**Pn**	**10 09 08.6**	**-0.1**
	comp=E,4.1nm,0.3s,baz=186,slow=13,SNR=64							
KK31				⇑S		**Sn**	**10 10 19.3**	**-4.7**
	comp=E,16nm,0.4s,baz=189,slow=23,SNR=8.3							
KK31	**Karatay Array**	**6.63**	**357**			**Pn**	**10 09 08.8**	**+0.1**
KKAR	**Karatay Array**	**6.63**	**357**			**Pn**	**10 09 08.7**	**0.0**
AAK	**Ala-Archa**	**6.74**	**23**	P		**Pn**	**10 09 11.2**	**+1.0**
	comp=E,3.3nm,0.3s,baz=268,slow=2.5,SNR=5.5							
AAK				S		**Sn**	**10 10 25.9**	**-1.0**
	comp=E,5.5nm,0.4s,baz=201,slow=23,SNR=10							
AAK	**Ala-Archa**	**6.74**	**23**	⇑P		**Pn**	**10 09 10.4**	**+0.1**
	comp=E,1.3nm,0.5s							
AAK				⇑S		**Sn**	**10 10 24.2**	**-2.7**
	comp=E,4.1nm,0.6s							
BHK	**Bhakra**	**6.79**	**137**	*e*P		**Pn**	**10 09 12.7**	**+1.8**
BHK				*e*S		**Sn**	**10 10 27.4**	**-0.5**
BHK				IAML			10 10 29.7	
	comp=E,53nm,0.2s							
BHK				IAML			10 10 31.4	
	comp=N,46nm,0.5s							
SMLA	**Simla**	**7.43**	**134**	*e*S		**Sn**	**10 10 39.5**	**-3.6**
SMLA				IAML			10 10 43.9	
	comp=N,38nm,0.2s							
SMLA				IAML			10 10 43.9	
	comp=E,49nm,0.3s							
HNLY	**HANLEY**	**7.57**	**117**	*e*P		**Pn**	**10 09 22.3**	**+0.6**
HNLY				*e*S		**Sn**	**10 10 46.7**	**-0.6**
KLP	**Kalpa**	**7.81**	**127**	*e*P		**Pn**	**10 09 26.0**	**+1.4**
KLP				*e*S		**Sn**	**10 10 49.8**	**-3.0**
KLP				IAML			10 10 50.8	
	comp=E,69nm,0.6s							
KLP				IAML			10 10 52.6	
	comp=N,63nm,0.8s							
KUDL	**Kundal**	**9.54**	**149**	*e*P		**Pn**	**10 09 47.2**	**+0.3**
KUDL				*e*S		**Sn**	**10 11 26.8**	**-6.5**
PTH	**Pithoragarh**	**10.37**	**129**	*e*P		**Pn**	**10 09 58.8**	**+0.9**
PTH				*e*S		**Sn**	**10 11 47.2**	**-6.2**
PTH				IAML			10 11 55.2	
	comp=N,7.4nm,0.4s							
PTH				IAML			10 11 55.5	
	comp=E,8.7nm,0.6s							
MAKZ	**Makanchi**	**13.20**	**35**	Pn		**Pn**	**10 10 34.3**	**+0.5**
MKAR	**Makanchi Array**	**13.34**	**36**	P		**P**	**10 10 37.7**	**-0.9**
	comp=E,1.2nm,0.8s,baz=222,slow=8.9,SNR=7.4							
MKAR	**Makanchi Array**	**13.34**	**36**	Pn		**Pn**	**10 10 36.1**	**+0.6**
AB31	**Akbulak array**	**15.09**	**331**	⇑P		**Pn**	**10 10 55.8**	**-1.3**
	comp=E,4.0nm,0.7s,baz=145,slow=12,SNR=58							
AB31				⇓S		**S**	**10 13 42.7**	**-2.9**
	comp=E,1.3nm,0.6s,baz=174,slow=37,SNR=4.1							
AB31	**Akbulak array**	**15.09**	**331**			**Pn**	**10 10 55.9**	**-1.2**
ABKAR	**Akbulak array**	**15.09**	**331**			**Pn**	**10 10 56.4**	**-0.7**
KURBB	**Kurchatov Arra**	**15.16**	**19**	P		**Pn**	**10 10 58.1**	**+0.2**
	comp=E,0.3nm,0.5s,baz=209,slow=11,SNR=3.6							
KURK	**Kurchatov**	**15.27**	**19**	P		**Pn**	**10 10 58.5**	**-0.8**
EVN	**Everest**	**15.88**	**118**	P		**Pn**	**10 11 08.1**	**+0.5**
EVN				IAmb		IAmb	10 11 12.4	
	comp=Z,4.5nm,0.7s							
BVAR	**Borovoye Array**	**16.55**	**359**	P		**P**	**10 11 15.1**	**+1.0**
	comp=Z,2.2nm,0.5s,baz=170,slow=11,SNR=9.4							
ZALV	**Zalesovo Beam**	**19.96**	**25**	P		**P**	**10 11 51.3**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=188,slow=9.9,SNR=3.1							
	comp=Z,2.1nm,0.4s							
ZALV	**Zalesovo Beam**	**19.96**	**25**	P		**P**	**10 11 50.6**	**-0.4**
SHL	**Shillong**	**20.94**	**115**			**P**	**10 12 02.8**	**+0.9**
SHL				IAmb		IAmb	10 12 05.7	
	comp=Z,12nm,1.3s							
PZH	**PanZhiHua**	**27.98**	**102**	P		**P**	**10 13 09.3**	**+2.5**
SONM	**Songino Array**	**28.39**	**55**	P		**P**	**10 13 12.0**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=289,slow=11,SNR=2.0							
	comp=Z,0.5nm,0.4s							
SONM	**Songino Array**	**28.39**	**55**	P		**P**	**10 13 10.3**	**+0.1**
HHC	**Hu-ho-hao-te**	**31.81**	**70**	*e*P		**P**	**10 13 41.5**	**+1.0**
HHC				pmax	pmax			
	comp=Z,17nm,0.5s							
HHC				pmax	pmax			
	comp=Z,75nm,5.0s							
FINES	**FINESS Array B**	**37.48**	**326**	P		**P**	**10 14 29.4**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=93,slow=7.8,SNR=3.8							
	comp=Z,0.7nm,0.5s							
FINES	**FINESS Array B**	**37.48**	**326**	P		**P**	**10 14 29.2**	**+0.6**
ARCES	**ARCESS Array B**	**41.15**	**338**	P		**P**	**10 14 59.8**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=116,slow=8.2,SNR=7.3							
	comp=Z,0.8nm,0.6s							
ARCES	**ARCESS Array B**	**41.15**	**338**	P		**P**	**10 14 60.0**	**+1.1**
ARCES				IAmb		IAmb	10 15 38.6	
	comp=Z,6.5nm,1.4s							
HFS	**Hagfors**	**43.06**	**322**	P		**P**	**10 15 15.4**	**+1.1**
	comp=Z,3.6nm,0.9s,baz=71,slow=14,SNR=2.2							
	comp=Z,3.6nm,0.9s							
SOEI	**Soe**	**67.98**	**121**	P		**P**	**10 18 12.6**	**0.0**
C19K	**Lookout Ridge**	**68.37**	**17**	P		**P**	**10 18 14.8**	**+0.6**
F21K	**Alatna River**	**71.27**	**17**	P		**P**	**10 18 32.6**	**+0.7**
F21K				IAmb		IAmb	10 18 41.4	
	comp=Z,4.1nm,1.3s							
YKA	**Yellowknife Ar**	**81.27**	**3**	P		**P**	**10 19 28.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=353,slow=5.0,SNR=5.8							
	comp=Z,0.3nm,0.3s							
YKA	**Yellowknife Ar**	**81.27**	**3**	P		**P**	**10 19 29.0**	**+0.9**
ASAR	**Alice Springs**	**84.28**	**125**	P		**P**	**10 19 43.4**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=307,slow=5.5,SNR=5.4							
	comp=Z,1.4nm,0.6s							

IDC 28 10:12:28.9±1.7,6°.95S×128°.88E,h0km,mb3.9/2, mbtmp3.8/4,ML3.8/2,MS4.8/1,Error ellipse: s-maj=119.5km s-min=29.2km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.97**	**158**	Pn		Pn	10 15 46.8	-1.5
	0.5nm,0.3s,baz=337,slow=13,SNR=17							
WRA				Sn		Sn	10 18 10.0	-14
	1.1nm,0.3s,baz=334,slow=22,SNR=9.0							
	1.5nm,0.8s							
ASAR	**Alice Springs**	**17.31**	**164**	P		P	10 16 33.4	-0.4
	0.3nm,0.3s,baz=340,slow=11,SNR=42							
ASAR				S		Sn	10 19 33.6	-12
	0.6nm,0.5s,baz=352,slow=27,SNR=6.7							
	1.7nm,0.6s							
JCJ	**Chichijima**	**36.21**	**20**	LR		LR	10 32 17.4	
	comp=Z,1μm,22.0s,baz=119,slow=33							
MKAR	**Makanchi Array**	**67.57**	**327**	P		P	10 23 27.7	+0.4
	0.6nm,0.5s,baz=119,slow=8.0,SNR=8.5							
	0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**71.88**	**329**	P		P	10 23 53.5	-0.3
	0.6nm,0.5s,baz=125,slow=5.1,SNR=11							
	0.6nm,0.5s							

*NIED **28** 10:31:07.5,26°.21N×143°.28E,h0km,MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.24; Mθθ1.17; Mϕϕ-2.41; Mrθ1.07; Mrϕ-0.73; Mθϕ4.55; Fault plane solution: M₀5.04000×10¹⁵ NP1: ϕs184.00000°,δ11.00000°,λ81.00000°. NP2:ϕs14.00000°, δ79.00000°,λ92.00000°.*

*JMA **28** 10:31:07.5±0.6,26°.1N±2°.2×14°.3E±°.1,h0km,MD4.7/10, MV4.6/10,NEAR CHICHIJIMA ISLAND*

*BJI **28** 10:31:10.3,26°.07N×142°.42E,h8km,mB4.7/10,mb4.6/32, Ms4.0/6,Ms7 4.0/6*

*IDC **28** 10:31:10.2±0.6,26°.08N×142°.58E,h0km,mb4.2/29, mbtmp4.2/32,ML3.4/3,MS3.6/4, Error ellipse: s-maj=16.5km s-min=13.0km az=64.0*

*NEIC **28** 10:31:12.0±1.0,26°.08N±0°.07×142°.6E±0°.1,h10km±1km, mb4.6/57,Error ellipse: s-maj=21.3km s-min=11.0km az=257.0*

ISC 28 10:31:15.2±0.5,26°.07N±0°.06×142°.65E±0°.08,h36km,n147, σ1ᵍ35/141,mb4.6/69,MS3.9/6,2D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**0.70**	**323**	*e*P		**Pn**	**10 31 28.2**	**-0.5**
JHH2				A		A	10 31 28.2	
	comp=N,42nm,2.4s,comp=E,28nm,4.0s							
JHH2				*e*S		**Sn**	**10 31 43.5**	**+5.2**
CBIJ	**Chichi jima**	**1.10**	**338**	*e*P		**Pn**	**10 31 32.7**	**-1.4**
CBIJ				A		A	10 31 32.7	
	comp=N,14nm,1.1s,comp=E,20nm,1.8s							
CBIJ				*e*S		**Sn**	**10 31 51.6**	**+3.5**
JCJ	**Chichijima**	**1.10**	**338**	Pn		**Pn**	**10 31 32.1**	**-2.1**
	comp=E,192nm,0.3s,baz=99,slow=23,SNR=81							
JCJ				Sn		**Sn**	**10 31 49.6**	**+1.5**
	comp=E,573nm,0.3s,baz=288,slow=23,SNR=9.2							
JCJ	**Chichijima**	**1.10**	**338**			**Pn**	**10 31 33.0**	**-1.1**
JHO	**Hitachi**	**10.66**	**351**	*e*P		**Pn**	**10 33 42.2**	**-3.1**
JHO				*e*S		**Sn**	**10 35 37.9**	**-5.4**
MJAR	**Matsushiro Arr**	**11.11**	**341**	Pn		**Pn**	**10 33 50.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=6.0							
	comp=E,1.5nm,0.5s							
MAJO	**Matsushiro**	**11.11**	**341**	Pn		**Pn**	**10 33 49.5**	**-2.0**
MJB9	**Matsu-Tunnel**	**11.11**	**341**	Pn		**Pn**	**10 33 50.0**	**-1.6**
JNU	**Nakatsue**	**12.42**	**307**	Pn		**Pn**	**10 34 10.7**	**+1.2**
	comp=E,0.1nm,0.3s,baz=104,slow=6.1,SNR=7.1							
JNU				LR		LR	10 37 41.9	
	comp=E,180nm,21.7s,baz=174,slow=32							
KSRS	**Korea Array**	**16.88**	**316**	Pn		**Pn**	**10 35 07.8**	**-0.9**
	comp=E,0.1nm,0.3s,baz=132,slow=11,SNR=12							
	comp=E,1.4nm,0.8s							
ASAJ	**Asahikawa**	**18.00**	**360**	P		**P**	**10 35 22.8**	**0.0**
	comp=E,0.4nm,0.3s,baz=147,slow=26,SNR=4.6							
	comp=E,3.0nm,0.6s							
JKA	**Kamikawa-asahi**	**18.00**	**360**			**Pn**	**10 35 22.3**	**-0.2**
USRK	**Ussuriysk Ar.**	**20.05**	**337**	P		**P**	**10 35 44.7**	**-0.5**
	comp=E,1.0nm,0.5s,baz=153,slow=9.8,SNR=6.3							
USRK				LR		LR	10 42 40.6	
	comp=E,191nm

ZALV Zalesovo Beam 50.54 320 P **P** 10 40 09.1 -0.7
comp=Z,0.7nm,0.3s,baz=94,slow=8.9,SNR=4.0
comp=Z,0.7nm,0.3s
ZALV Zalesovo Beam 50.54 320 P **P** 10 40 08.7 -1.1
ZALV PcP **PcP** 10 41 27.4 +0.1
CNBA Chernabura Isl 50.64 39 P **P** 10 40 10.7 +0.1
CNBA IAmb IAmb 10 40 18.1
comp=Z,3.8nm,0.8s
MKAR Makanchi Array 51.45 310 P **P** 10 40 16.8 -0.1
comp=Z,1.8nm,0.9s,baz=89,slow=9.8,SNR=11
MKAR PcP **PcP** 10 41 31.6 +0.7
comp=Z,0.9nm,0.7s,baz=54,slow=2.5,SNR=4.1
comp=Z,1.8nm,0.9s
MKAR Makanchi Array 51.45 310 **P** 10 40 16.4 -0.4
K15K Wolf Creek Mou 51.49 30 P **P** 10 40 18.3 +1.4
K15K IAmb IAmb 10 40 30.0
comp=Z,20nm,1.4s
MAKZ Makanchi 51.67 310 P **P** 10 40 18.7 +0.2
PDGK Podgornoye 53.48 306 P **P** 10 40 31.3 -0.8
NRIK Noril'sk 53.75 339 P **P** 10 40 34.5 +1.0
comp=Z,11nm,1.0s,baz=110,slow=7.9,SNR=9.7
comp=Z,11nm,1.0s
NRIK Noril'sk 53.75 339 **P** 10 40 33.6 +0.1
NRIK IAmb IAmb 10 40 36.3
comp=Z,10nm,0.9s
KURK Kurchatov 54.00 315 **P** 10 40 34.6 -1.0
KURK IAmb IAmb 10 40 36.8
comp=Z,6.8nm,0.9s
KURBB Kurchatov Arra 54.06 315 P **P** 10 40 35.5 -0.5
comp=Z,5.2nm,0.7s,baz=92,slow=7.5,SNR=60
comp=Z,5.2nm,0.7s
KSH2 Kashi 56.83 301 P **P** 10 40 57.5 +1.1
KSH2 pmax pmax
comp=Z,5.0nm,0.8s
PMR Palmer 57.08 32 P **P** 10 40 58.0 +0.4
PMR IAmb IAmb 10 41 08.6
comp=Z,6.8nm,1.2s
GHO Glory Hole Cre 57.19 32 P **P** 10 41 00.8 +2.3
GHO IAmb IAmb 10 41 05.2
comp=Z,7.1nm,1.0s
G23K Bananza Creek 57.39 26 P **P** 10 41 01.1 +1.4
G23K IAmb IAmb 10 41 12.7
comp=Z,7.1nm,1.1s
SCM Sheep Creek Mo 57.95 32 P **P** 10 41 04.1 +0.3
IL31 58.41 28 P **P** 10 41 06.7 -0.1
ILAR Eielson Array 58.41 28 P **P** 10 41 07.2 +0.3
comp=Z,0.6nm,0.8s,baz=254,slow=5.6,SNR=5.4
comp=Z,0.6nm,0.8s
COCO West Island 58.59 235 P **P** 10 41 08.1 -0.6
BVAR Borovoye Array 59.08 318 P **P** 10 41 12.0 +0.3
comp=Z,3.2nm,0.4s,baz=88,slow=7.6,SNR=18
comp=Z,3.2nm,0.4s
NIL Nilore 59.67 295 P **P** 10 41 15.4 -0.7
NIL IAmb IAmb 10 41 28.2
comp=Z,4.6nm,0.7s
KK31 Karatay Array 60.02 306 IAmb IAmb 10 41 19.7
comp=Z,5.0nm,0.8s
KKAR Karatay Array 60.02 306 **P** 10 41 18.1 -0.3
BCAR Beaver Creek A 60.58 30 P **P** 10 41 22.8 +0.9
H27K Steamboat Moun 60.73 27 P **P** 10 41 24.3 +1.4
H27K IAmb IAmb 10 41 42.6
comp=Z,5.5nm,1.1s
E28M Babbage River 61.56 24 IAmb IAmb 10 41 39.2
comp=Z,3.4nm,0.9s
I29M Ogilvie Camp, 62.06 28 IAmb IAmb 10 41 51.5
comp=Z,6.4nm,1.4s
L29M L29M 62.24 30 IAmb IAmb 10 42 11.2
comp=Z,9.2nm,1.4s
K29M Barlow Dome 62.47 29 IAmb IAmb 10 42 14.6
comp=Z,3.1nm,1.1s
EPYK Eagle Plains 62.67 27 IAmb IAmb 10 41 57.3
comp=Z,6.7nm,1.1s
G30M tAoh Zraii Nji 62.84 26 P **P** 10 41 38.1 +1.0
G30M IAmb IAmb 10 41 56.7
comp=Z,6.7nm,1.1s
G31M Satah River 63.61 26 P **P** 10 41 42.6 +0.5
G31M IAmb IAmb 10 41 43.9
comp=Z,6.5nm,1.1s
ARTI Arti 65.59 323 P **P** 10 41 55.2 +0.1
comp=Z,11nm,0.8s,baz=106,slow=3.9,SNR=12
comp=Z,11nm,0.8s
ARTI Arti 65.59 323 P **P** 10 41 55.3 +0.1
AB31 Akbulak array 66.11 315 **P** 10 41 58.5 -0.2
ABKAR Akbulak array 66.11 315 P **P** 10 41 58.5 -0.2
DLBC Dease Lake 66.81 35 P **P** 10 42 03.0 0.0
comp=Z,1.0nm,0.7s,baz=288,slow=5.0,SNR=3.8
comp=Z,1.0nm,0.7s
AKTO Aktyubinsk 67.06 316 P **P** 10 42 04.0 -0.7
comp=Z,4.4nm,0.7s,baz=76,slow=12,SNR=3.8
comp=Z,4.4nm,0.7s
YKAW3 Yellowknife Wh 72.81 28 P **P** 10 42 39.9 +0.1
YKA Yellowknife Ar 72.84 28 P **P** 10 42 40.8 +0.8
comp=Z,1.1nm,0.8s,baz=291,slow=5.3,SNR=4.6
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 72.84 28 P **P** 10 42 40.0 0.0
KEV Kevo 74.08 341 P **P** 10 42 46.7 -0.5
KEV IAmb IAmb 10 42 51.1
comp=Z,9.5nm,0.9s
ARCES ARCESS Array B 74.64 341 P **P** 10 42 51.4 +1.0
comp=Z,3.1nm,0.8s,baz=46,slow=10,SNR=6.1
comp=Z,3.1nm,0.8s
ARCES ARCESS Array B 74.64 341 P **P** 10 42 50.4 -0.1
ARCES IAmb IAmb 10 42 54.9
comp=Z,5.0nm,1.0s
B08A Colville Reser 75.99 43 IAmb IAmb 10 43 03.9
comp=Z,3.3nm,1.0s
YBH Yreka Blue Hor 76.38 50 P **P** 10 43 02.0 +0.9
comp=Z,1.8nm,0.9s,baz=285,slow=3.4,SNR=3.7
comp=Z,1.8nm,0.8s
BMO Blue Mountains 78.72 46 IAmb IAmb 10 43 26.6
comp=Z,4.5nm,1.2s
BEKR Beckworth 78.76 51 P **P** 10 43 15.2 +0.7
KBZ Khabaz 79.01 313 P **P** 10 43 16.1 +0.6
comp=Z,4.7nm,0.9s,baz=88,slow=3.6,SNR=9.0
comp=Z,4.7nm,0.9s
FIA1 FINESS Array S 79.05 334 P **P** 10 43 15.7 +0.4
FINES FINESS Array B 79.05 334 P **P** 10 43 15.7 +0.3
comp=Z,3.4nm,0.4s,baz=68,slow=5.6,SNR=29
comp=Z,3.4nm,0.4s
FINES FINESS Array B 79.05 334 P **P** 10 43 15.8 +0.5
KIV Kislovodsk 79.05 314 P **P** 10 43 15.0 -0.9
comp=Z,8.1nm,0.5s
CMB Columbia Colle 79.51 53 P **P** 10 43 18.7 +0.2
NVAR Mina Array Bea 80.82 52 P **P** 10 43 26.7 +1.0
comp=Z,1.5nm,0.9s,baz=274,slow=5.9,SNR=9.6
comp=Z,1.5nm,0.9s
NVAR Mina Array Bea 80.82 52 P **P** 10 43 25.5 -0.2
ELK Elko 81.90 49 P **P** 10 43 32.2 +0.8
comp=Z,1.0nm,0.8s,baz=317,slow=6.0,SNR=3.7
comp=Z,1.0nm,0.8s
MNK Minsk 82.23 328 *i* P **P** 10 43 33.2 +0.6
comp=E,25nm,0.9s
MNK *i* P **P** 10 43 33.2 +0.6
comp=N,9.0nm,0.7s
MNK *i* P **P** 10 43 33.2 +0.6
comp=Z,9.0nm,0.7s,baz=56
MNK *i* PP **PP** 10 46 42.9 +2.3
MNK *i* PPP PPP 10 48 33.3
MNK *i* S **S** 10 53 49.3 +4.2
MNK *i* SS **SS** 10 59 10.3 +5.7
MNK *i* SSS SSS 11 02 38.5
MNK *i* LQ LQ 11 14 56.8
MNK *i* LR LR 11 20 59.7
MNK *i* LRM MLR 11 22 47.2
comp=Z,80nm,18.0s
MNK *i* LRM MLR 11 23 11.6
comp=E,79nm,19.0s
GWY Greenwater Val 82.99 53 P **P** 10 43 37.8 +0.7
GWY IAmb IAmb 10 43 38.7
comp=Z,2.1nm,0.8s
AK03 Malin Array Si 83.68 324 P **P** 10 43 40.4 +0.3
AKASG Malin Array Be 83.69 324 P **P** 10 43 40.1 -0.1
comp=Z,0.3nm,0.3s,baz=50,slow=5.6,SNR=8.6
comp=Z,0.3nm,0.3s
AKBB Malin Array Si 83.69 324 P **P** 10 43 40.1 -0.1
AKBB pP **pP** 10 43 47.7 -2.9
AK04 Malin Array Si 83.71 324 P **P** 10 43 39.9 -0.4
AK02 Malin Array Si 83.72 324 P **P** 10 43 40.6 +0.2
AK11 Malin Array Si 83.73 324 P **P** 10 43 40.7 +0.3
AK22 Malin Array Si 83.74 324 P **P** 10 43 39.6 -0.8
AK21 Malin Array Si 83.74 324 P **P** 10 43 39.8 -0.7
AK21 pP **pP** 10 43 48.2 -2.7
AK18 Malin Array Si 83.76 324 P **P** 10 43 40.3 -0.2
AK16 Malin Array Si 83.77 324 P **P** 10 43 40.7 +0.1
AK19 Malin Array Si 83.79 324 P **P** 10 43 40.2 -0.5
MI28 Mi28,Pidlybu 84.37 325 P **P** 10 43 43.1 -0.6

HFS Hagfors 84.53 337 P **P** 10 43 45.4 +1.1
comp=Z,7.1nm,1.0s,baz=116,slow=3.4,SNR=9.8
comp=Z,7.1nm,1.0s
PDAR Pinedale Array 84.64 45 P **P** 10 43 46.2 +0.7
comp=Z,0.8nm,0.9s,baz=224,slow=4.1,SNR=5.3
comp=Z,0.8nm,0.9s
PDAR Pinedale Array 84.64 45 P **P** 10 43 45.5 0.0
NB2 NORSAR Subarra 84.71 339 P **P** 10 43 44.5 -0.8
comp=Z,1.0nm,0.8s,baz=45,slow=5.3
NOA NORSAR Array B 84.71 339 **P** 10 43 45.7 +0.4
comp=Z,2.7nm,0.9s,baz=39,slow=5.1,SNR=4.4
comp=Z,2.7nm,0.9s
LUBAR Lubar, Ukraine 84.91 324 P **P** 10 43 45.6 -0.8
RNPP8 Varash 85.06 326 P **P** 10 43 47.3 +0.2
RNPP5 Staryi Chortor 85.11 326 P **P** 10 43 47.1 -0.3
KNB Kanab 85.33 51 IAmb IAmb 10 43 54.8
comp=Z,4.2nm,1.0s
SRU San Rafael Swe 85.87 48 IAmb IAmb 10 43 56.1
comp=Z,4.0nm,1.1s
RAYN Ar Rayn 85.94 294 P **P** 10 43 51.8 -0.3
HMU Henry Mountain 86.31 49 IAmb IAmb 10 44 02.8
comp=Z,2.8nm,0.7s
KMPD K-Podol'skiy 86.39 323 P **P** 10 43 53.0 -0.8
Y14A Wickenburg 86.69 54 IAmb IAmb 10 44 01.1
comp=Z,3.6nm,1.1s
BRTR Keskin Array B 87.00 313 P **P** 10 43 56.7 -0.5
comp=Z,0.7nm,0.7s,baz=197,slow=3.9,SNR=4.1
comp=Z,0.7nm,0.7s
PV19 Morning Glory 87.31 48 P **P** 10 43 58.4 -0.4
CTYL Yalikoy Yolu 89.45 317 P **P** 10 44 08.2 -0.3
comp=Z,3μmcomp=Z,30nm,1.0s
CSS Mathiatis 89.72 309 P **P** 10 44 09.0 -1.0
comp=Z,12nm,0.9s
MORH Mrgy, Hungar 91.99 325 P **P** 10 44 19.2 -1.1
GERES GERESS Array B 92.60 329 P **P** 10 44 22.6 -0.6
comp=Z,0.2nm,0.4s,baz=339,slow=3.3,SNR=4.1
comp=Z,0.2nm,0.4s
GERES GERESS Array B 92.60 329 P **P** 10 44 22.9 -0.3
TXAR Lajitas Array 95.88 54 P **P** 10 44 40.3 +1.7
comp=Z,0.3nm,0.8s,baz=202,slow=0.7,SNR=4.5
comp=Z,0.3nm,0.8s
TXAR Lajitas Array 95.88 54 P **P** 10 44 39.6 +1.0
PLCA Paso Flores 148.87 126 PKPbc **PKPbc** 10 50 60.0 +0.7
comp=Z,2.9nm,0.7s,baz=218,slow=5.3,SNR=7.2
LPAZ La Paz 149.76 77 PKPbc **PKiKP** 10 51 03.5 -0.3
comp=Z,2.2nm,0.8s,baz=232,slow=1.6,SNR=6.1

IDC 28 10:39:43.4±328.0, 57.60N×29.53E, h0km, Error ellipse: s-maj=128.5km s-min=91.7km az=98.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.28**	**99**	I	I	11 07 50.0	
	baz=281,slow=309,SNR=3.8						
I37NO	**I37NO**	**12.49**	**342**	I	I	11 47 40.0	
	baz=148,slow=308,SNR=0.9						
I26DE	**FREYUNG INFRAS**	**12.87**	**234**	I	I	12 01 10.0	
	baz=40,slow=327,SNR=0.9						

*WEL **28** 10:45:13.4, 41.25S×175.04E, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.62; Mθθ-3.25; Mφφ-0.97; Mrθ0.43; Mθφ-0.48; Mφr0.78; Fault plane solution: M₀2.64000×10¹⁴ NP1:φs48.00000°, δ66.00000°, λ50.00000°. NP2:φs292.00000°, δ45.00000°, λ145.00000°. Principal axes: T 1.6170, Plg52.0000°, Azm271.0000°; N 0.2400, Plg36.0000°, Azm66.0000°; P -1.8570, Plg12.0000°, Azm165.0000°; Stations used: BFZ MRZ NNZ TSZ WAZ WEL REVERSE FAULTING*

WEL 28 10:45:13.4±0.3, 41°S±2'×175°5E±', h8km±2km, M3.6/29, ML3.6/28, MLv3.6/29 Error ellipse: s-maj=2.5km s-min=1.8km az=155.9, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAW	**Cannon Point**	**0.15**	**8**	P	Pg	10 45 17.7	+1.1
CAW				S	Sg	10 45 20.8	+2.1
WEL	**Wellington**	**0.21**	**261**	P	Pg	10 45 18.7	+1.0
WEL				S	Sg	10 45 22.3	+1.8
MSWZ	**Moikau Station**	**0.23**	**136**	P	Pg	10 45 18.8	+0.8
MSWZ				S	Sg	10 45 22.7	+1.6
PAWZ	**Paruwai Farm**	**0.32**	**114**	P	Pg	10 45 20.4	+0.7
PAWZ				S	Sb	10 45 25.5	-1.2
PLWZ	**Palliser**	**0.35**	**153**	P	Pg	10 45 21.1	+0.7
PLWZ				S	Sb	10 45 26.5	-1.3
MTW	**Mount Morrison**	**0.36**	**75**	P	Pg	10 45 21.2	+0.7
MTW				S	Sb	10 45 27.0	-0.9
KIW	**Kapiti Island**	**0.40**	**346**	P	Pb	10 45 22.1	-0.7
KIW				S	Sg	10 45 27.8	+1.2
OGWZ	**Otaki Gorge**	**0.45**	**13**	P	Pg	10 45 22.5	+0.4
OGWZ				S	Sg	10 45 28.7	+0.8
HOWZ	**Holdsworth Sta**	**0.51**	**45**	P	Pg	10 45 23.4	+0.2
HOWZ				S	Sg	10 45 30.5	+0.7
TRWZ	**Traveller**	**0.51**	**107**	P	Pb	10 45 24.1	-0.5
TRWZ				S	Sb	10 45 32.3	+0.1
TCW	**Tory Channel**	**0.58**	**274**	P	Pb	10 45 25.2	-0.6
TCW				S	Sg	10 45 32.3	+0.2
TMWZ	**Te Maipa**	**0.66**	**77**	P	Pg	10 45 26.6	+0.5
TMWZ				S	Sb	10 45 37.4	+1.0
MRZ	**Mangatainoka R**	**0.72**	**35**	P	Pg	10 45 27.0	-0.2
MRZ				S	Sg	10 45 37.1	+0.5
CMWZ	**Cape Campbell**	**0.80**	**231**	P	Pb	10 45 29.7	+0.2
TIWZ	**Tintock**	**0.80**	**54**	P	Pb	10 45 29.2	-0.4
TIWZ				S	Sb	10 45 41.6	+1.1
TUWZ	**Tuamarina**	**0.84**	**258**	P	Pb	10 45 30.1	-0.2
TUWZ				S	Sb	10 45 41.3	-0.5
CPWZ	**Castlepoint**	**0.94**	**69**	P	Pg	10 45 31.5	0.0
DUWZ	**D'Urville Isla**	**0.96**	**298**	P	Pb	10 45 32.1	-0.2
DUWZ				S	Sb	10 45 45.2	0.0
BSWZ	**Blackbirch Sta**	**0.99**	**242**	P	Pb	10 45 32.7	-0.2
BSWZ				S	Sn	10 45 47.2	-0.6
PRWZ	**Pori Road**	**0.99**	**46**	P	Pg	10 45 32.6	+0.1
POWZ	**Post Office Ro**	**1.02**	**33**	P	Pg	10 45 32.8	-0.2
POWZ				S	Sn	10 45 48.1	-0.4
OHWZ	**Ohakea**	**1.07**	**11**	P	Pb	10 45 34.1	0.0
OHWZ				S	Sn	10 45 49.3	-0.3
BFZ	**Birch Farm**	**1.08**	**58**	P	Pg	10 45 32.9	-1.1
BFZ				S	Sb	10 45 48.5	0.0
NNZ	**Nelson**	**1.25**	**271**	P	Pn	10 45 36.7	-0.6
NNZ				S	Sn	10 45 54.8	+0.6
DVHZ	**Dannevirke**	**1.28**	**42**	P	Pn	10 45 36.0	-1.6
DVHZ				S	Sn	10 45 55.6	+0.6
ANWZ	**Angora Road**	**1.35**	**54**	P	Pn	10 45 36.6	-1.9
TSZ	**Takapari Road**	**1.38**	**31**	P	Pn	10 45 38.3	-0.7
TSZ				S	Sb	10 45 57.4	0.0
WAZ	**Wanganui**	**1.50**	**358**	P	Pg	10 45 42.0	-0.1
WAZ				S	Sg	10 46 02.8	+1.3
PRHZ	**Porangahau**	**1.56**	**51**	P	Pn	10 45 39.5	-2.0
TKNZ	**Takaka Hill**	**1.59**	**277**	P	Pn	10 45 41.6	-0.2
TKNZ				S	Sg	10 46 04.7	+0.3
WPHZ	**Waipukurau**	**1.59**	**42**	P	Pn	10 45 41.0	-0.9
PNHZ	**Pukenui**	**1.60**	**34**	P	Pn	10 45 41.0	-1.1
PNHZ				S	Sn	10 46 03.1	+0.2
KHZ	**Kahutara**	**1.62**	**224**	P	Pn	10 45 40.4	-1.8
THZ	**Tophouse**	**1.68**	**252**	P	Pn	10 45 42.0	-1.2
MRNZ	**Matariki Terra**	**1.73**	**264**	P	Pn	10 45 43.4	-0.4
PXZ	**Pawanui**	**1.85**	**49**	P	Pn	10 45 43.0	-2.4
LREZ	**Lake Rotokare**	**1.86**	**345**	P	Pb	10 45 47.6	0.0
MTVZ	**Mangateitei**	**1.90**	**10**	P	Pb	10 45 47.6	-0.7
KRHZ	**Kereru**	**1.90**	**33**	P	Pn	10 45 45.1	-1.1
MOVZ	**Moawhango**	**1.92**	**17**	P	Pn	10 45 47.0	+0.5
BHHZ	**Black Hill Sta**	**1.93**	**24**	P	Pn	10 45 46.1	-0.5
QRZ	**Quartz Range**	**1.95**	**282**	P	Pn	10 45 47.1	+0.3
WNVZ	**Wahianoa**	**1.97**	**13**	P	Pn	10 45 48.2	+1.0
PKVZ	**Pokaka**	**1.98**	**7**	P	Pb	10 45 48.6	-1.0
TRVZ	**Turoa**	**1.99**	**11**	P	Pb	10 45 50.2	+0.2
WHVZ	**Whangaehu Hut**	**2.01**	**12**	P	Pn	10 45 48.4	+0.5
KAHZ	**Kahuranaki**	**2.02**	**44**	P	Pn	10 45 45.8	-2.0
MAVZ	**Matarangi**	**2.02**	**12**	P	Pb	10 45 49.4	-1.2
PREZ	**Palmer Road**	**2.02**	**340**	P	Pb	10 45 50.1	-0.4
FWVZ	**Far West T-bar**	**2.03**	**11**	P	Pn	10 45 48.8	+0.6
TUVZ	**Tukino**	**2.04**	**14**	P	Pn	10 45 48.6	+0.5
NMEZ	**Namu Road**	**2.04**	**334**	P	Pb	10 45 50.6	-0.2
COVZ	**Chateau Observ**	**2.09**	**11**	P	Pb	10 45 51.3	-0.3
KHEZ	**Kahui Hut**	**2.11**	**338**	P	Pb	10 45 51.4	-0.5
NEZ	**North Egmont**	**2.11**	**340**	P	Pb	10 45 51.3	-0.6
KWHZ	**Kaweka Forest**	**2.11**	**30**	P	Pn	10 45 48.8	-0.3
SNVZ	**South Ngauruho**	**2.12**	**13**	P	Pn	10 45 50.0	+0.8
NGZ	**Ngauruhoe**	**2.12**	**12**	P	Pb	10 45 50.9	-1.3
VRZ	**Vera Road**	**2.14**	**354**	P	Pb	10 45 51.6	-0.8
OTVZ	**Oturere**	**2.14**	**13**	P	Pn	10 45 50.1	+0.5
DREZ	**Durham Road**	**2.16**	**342**	P	Pb	10 45 52.1	-0.7
ETVZ	**East Tongariro**	**2.18**	**14**	P	Pn	10 45 51.0	+1.0
NBEZ	**Newall Road No**	**2.18**	**335**	P	Pb	10 45 52.8	-0.2
WTVZ	**West Tongariro**	**2.18**	**11**	P	Pn	10 45 50.9	+0.9
TMVZ	**Te Maari**	**2.19**	**14**	P	Pn	10 45 51.2	+0.9
TWVZ	**Taurewa**	**2.20**	**8**	P	Pb	10 45 52.7	-0.8
KRVZ	**Karewarewa**	**2.20**	**12**	P	Pb	10 45 53.3	-0.3
MCHZ	**McNeill Hill**	**2.21**	**36**	P	Pb	10 45 53.6	0.0
NTVZ	**North Tongarir**	**2.21**	**13**	P	Pn	10 45 50.9	+0.4
PKE	**Pukeiti**	**2.21**	**338**	P	Pb	10 45 53.4	-0.3
GVZ	**Greta Valley S**	**2.27**	**220**	P	Pn	10 45 49.0	-2.2
KATZ	**Kakaramea**	**2.33**	**13**	P	Pb	10 45 55.2	-0.6
RITZ	**Rihia Road**	**2.36**	**16**	P	Pb	10 45 56.3	+0.1
RATZ	**Rangitukua**	**2.45**	**13**	P	Pb	10 45 57.4	-0.3
DSZ	**Denniston Nort**	**2.48**	**258**	P	Pn	10 45 53.2	-1.0
ARHZ	**Aropaoanui**	**2.49**	**38**	P	Pn	10 45 53.7	-0.5
NMHZ	**Naumai**	**2.54**	**33**	P	Pb	10 45 58.6	-0.8
LTZ	**Lake Taylor**	**2.57**	**233**	P	Pn	10 45 53.3	-2.1
WATZ	**Wairara**	**2.60**	**12**	P	Pb	10 46 01.0	+0.8
AMCZ	**Amberley**	**2.62**	**222**	P	Pn	10 45 53.3	-2.6
MRHZ	**Matea Rd**	**2.64**	**24**	P	Pb	10 45 59.7	-1.2
HIZ	**Hauiti**	**2.74**	**357**	P	Pb	10 46 00.6	-2.0
MTHZ	**Maungataniwha**	**2.77**	**31**	P	Pn	10 45 59.3	+1.3
RAHZ	**Arahi**	**2.81**	**35**	P	Pn	10 45 59.1	+0.4
KUTZ	**Kaahu Road**	**2.83**	**13**	P	Pb	10 46 04.0	-0.1
ALRZ	**Allen Road**	**2.87**	**21**	P	Pb	10 46 05.7	+0.8
OKCZ	**Okains Bay**	**2.87**	**210**	P	Pn	10 45 56.4	-3.1
PRRZ	**Plateau Road**	**2.94**	**21**	P	Pb	10 46 06.4	+0.3
TLZ	**Tolley Road**	**2.94**	**8**	P	Pb	10 46 03.6	-2.6
MQZ	**McQueen's Vall**	**3.02**	**215**	P	Pn	10 45 57.8	-3.7
RTZ	**Ruatahuna**	**3.03**	**30**	P	Pn	10 45 59.6	-2.1
OXZ	**Oxford**	**3.04**	**226**	P	Pn	10 45 58.5	-3.3
AKCZ	**Akaroa Harbour**	**3.06**	**210**	P	Pn	10 45 58.7	-3.3
INZ	**Inchbonnie**	**3.06**	**240**	P	Pn	10 46 00.2	-1.9
MUGZ	**Murupara**	**3.08**	**26**	P	Pb	10 46 08.9	+0.6
TARZ	**Mount Tarawera**	**3.22**	**21**	P	Pn	10 46 06.7	+2.3
RACZ	**Rakaia**	**3.27**	**220**	P	Pn	10 46 01.4	-3.6
RAGZ	**Rawiri**	**3.31**	**34**	P	Pn	10 46 07.4	+1.9
URZ	**Urewera**	**3.39**	**29**	P	Pn	10 46 07.7	+1.2
MHCZ	**Mount Hutt**	**3.44**	**227**	P	Pn	10 46 03.9	-3.4
TOZ	**Tahuroa Road**	**3.54**	**6**	P	Pb	10 46 13.3	-2.9
WACZ	**Wakanui South**	**3.58**	**220**	P	Pn	10 46 06.0	-3.2
WVZ	**Waitaha Valley**	**3.68**	**239**	P	Pn	10 46 08.4	-2.1
RPZ	**Rata Peaks**	**3.84**	**229**	P	Pn	10 46 09.8	-3.0
ARCZ	**Arundel**	**3.92**	**225**	P	Pn	10 46 10.9	-3.0
GCSZ	**Gaunt Creek Bo**	**4.06**	**238**	P	Pn	10 46 14.0	-1.8
MKAZ	**Moumakai**	**4.14**	**1**	P	Pn	10 46 20.4	+3.4
AWAZ	**Awhitu Peninsu**	**4.20**	**356**	P	Pn	10 46 20.8	+3.2
TMZ	**Timaru**	**4.31**	**222**	P	Pn	10 46 16.1	-3.1
FOZ	**Fox Glacier**	**4.49**	**238**	P	Pn	10 46 19.4	-2.3
RVAZ	**Riverhead Bore**	**4.49**	**355**	P	Pn	10 46 25.4	+3.7
LBZ	**Lake Benmore**	**4.75**	**227**	P	Pn	10 46 23.4	-1.9
ODZ	**Otahua Downs**	**4.97**	**219**	P	Pn	10 46 24.9	-3.4
JCZ	**Jackson Bay**	**5.41**	**236**	P	Pn	10 46 32.3	-2.1
HHSZ	**Highcliff Hill**	**5.64**	**213**	P	Pn	10 46 34.6	-3.0
EAZ	**Earnscleugh**	**5.77**	**225**	P	Pn	10 46 36.6	-2.7
TUZ	**Tuapeka**	**6.12**	**218**	P	Pn	10 46 41.1	-3.0
CTZ	**Chatham Island**	**6.65**	**115**	P	Pn	10 46 47.9	-3.4

IDC 28 10:45:37.9±3.3, 11.47N×140.21E, h158km±35km, mb3.4/8, mbtmp3.9/9, Error ellipse: s-maj=27.9km s-min=17.4km az=94.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.01**	**65**	P	Pn	10 46 51.8	+0.1
	43nm,0.6s,baz=195,slow=16,SNR=5.2						
WRA	**Warramunga Arr**	**31.75**	**191**	P	P	10 51 48.0	+0.7
	0.6nm,0.8s,baz=6.2,slow=8.6,SNR=2.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**35.46**	**190**	P	P	10 52 18.6	-0.7
	0.3nm,0.9s,baz=3.2,slow=7.0,SNR=9.0						
	0.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.39**	**285**	P	P	10 53 01.2	+0.4
	1.3nm,0.5s,baz=86,slow=5.9,SNR=8.2						
	1.3nm,0.5s						
SONM	**Songino Array**	**45.99**	**329**	P	P	10 53 44.4	-1.1
	0.4nm,0.4s,baz=146,slow=8.0,SNR=2.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**59.91**	**318**	P	P	10 55 27.6	+0.3
	0.7nm,0.7s,baz=102,slow=11,SNR=2.3						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**63.34**	**321**	P	P	10 55 49.5	-0.6
	2.8nm,0.8s,baz=102,slow=7.1,SNR=11						
	2.8nm,0.8s						
BVAR	**Borovoye Array**	**68.79**	**323**	P	P	10 56 25.6	+0.7
	1.8nm,0.7s,baz=101,slow=7.7,SNR=5.4						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**72.42**	**25**	P	P	10 56 46.9	+0.3
	0.9nm,0.7s,baz=256,slow=5.6,SNR=9.3						
	0.9nm,0.7s						

*IDC **28** 10:46:30.4±3.0, 38.97N×142.14E, h60km±23km, mb3.8/9, mbtmp4.0/14, ML3.5/5, MS4.0/1, Error ellipse: s-maj=36.5km s-min=16.9km az=80.0*
*JMA **28** 10:46:30.7±0.1, 38.9N±0.3×141.9E±0.7, h51km, MD3.9/40, MV3.9/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
*NEIC **28** 10:46:31.8±0.4, 38.94N±0.08×142.0E±0.2, h66km±11km, mb4.4/7, Error ellipse: s-maj=19.2km s-min=10.3km az=106.0*

ISC 28 10:46:30.2±1.2, 38.90N±0.06×141.98E±0.09, h53km±7km, n51,σ1s16/48, mb4.2/14, 12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.30**	**306**	⇓P	**Pn**	**10 46 39.7**	**+0.1**
OFUJ				A	A	10 46 39.7	
	comp=N,6.0nm,0.7s,comp=E,27nm,0.2s						
OFUJ				⇓S	**Sn**	**10 46 45.9**	**-0.5**
JKMT	**Kesennumamotoy**	**0.41**	**258**	⇓*i*P	**Pn**	**10 46 40.6**	**+0.1**
JKMT				A	A	10 46 40.6	
	comp=N,6.0nm,1.0s,comp=E,12nm,2.6s						
JKMT				⇓S	**Sn**	**10 46 47.4**	**-0.7**
JMK	**Ichinoseki**	**0.60**	**275**	⇓*i*P	**Pn**	**10 46 42.8**	**0.0**
JMK				⇓S	**Sn**	**10 46 51.2**	**-0.6**
JIO	**Ouri**	**0.67**	**228**	⇓*i*P	**Pn**	**10 46 43.6**	**+0.1**
JIO				⇓S	**Sn**	**10 46 52.4**	**-0.9**
JOM	**

baz=317,slow=76,SNR=177
H11S1 WAKE ISLAND Hy 29.55 126 T T 11 23 47.6
baz=319,slow=76,SNR=51
H11S3 WAKE ISLAND Hy 29.55 126 T T 11 23 53.8
baz=319,slow=76,SNR=40
H11S2 WAKE ISLAND Hy 29.57 126 T T 11 23 54.9
baz=319,slow=76,SNR=36
ZAA0 Zalesovo Array 41.01 311 P **P** **10 54 07.5 -0.3**
ZAA0 IAmb IAmb 10 54 09.2
comp=Z,2.8nm,0.8s
ZALV Zalesovo Beam 41.01 311 P **P** **10 54 07.5 -0.4**
comp=Z,2.0nm,0.5s,baz=80,slow=8.0,SNR=8.6
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 43.53 301 P **P** **10 54 28.8 +0.3**
comp=Z,2.6nm,0.7s,baz=86,slow=9.7,SNR=23
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 43.53 301 P **P** **10 54 28.6 +0.1**
KURBB Kurchatov Arra 45.23 307 P **P** **10 54 41.9 0.0**
comp=Z,3.0nm,0.6s,baz=81,slow=8.3,SNR=25
comp=Z,3.0nm,0.6s
ILAR Eielson Array 47.68 33 LR LR 11 16 17.3
comp=Z,166nm,21.9s,baz=266,slow=38
BVAR Borovoye Array 49.67 311 P **P** **10 55 16.8 +0.4**
comp=Z,1.9nm,0.4s,baz=68,slow=8.1,SNR=6.7
comp=Z,1.9nm,0.4s
KK31 Karatay Array 52.60 299 P **P** **10 55 38.5 0.0**
KK31 IAmb IAmb 10 55 57.9
comp=Z,1.9nm,0.8s
KKAR Karatay Array 52.60 299 P **P** **10 55 38.5 0.0**
ARTI Arti 55.38 318 P **P** **10 55 57.9 -0.6**
comp=Z,4.8nm,0.4s,baz=114,slow=7.0,SNR=4.3
comp=Z,4.8nm,0.4s
ARTI Arti 55.38 318 P **P** **10 55 58.2 -0.3**
AB31 Akbulak array 57.09 309 IAmb IAmb 10 56 11.2
comp=Z,2.1nm,0.6s
ABKAR Akbulak array 57.09 309 P **P** **10 56 10.8 0.0**
WB0 Warramunga Arr 58.79 188 P **P** **10 56 23.1 +0.2**
WB0 IAmb IAmb 10 56 59.2
comp=Z,6.1nm,1.1s
WR8 Warramunga Arr 58.96 188 P **P** **10 56 24.4 +0.2**
WR8 IAmb IAmb 10 56 55.0
comp=Z,16nm,1.4s
WRA Warramunga Arr 58.97 188 P **P** **10 56 23.6 -0.7**
comp=Z,1.3nm,0.8s,baz=7.8,slow=7.7,SNR=7.5
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 58.97 188 P **P** **10 56 22.7 -1.5**
ASAR Alice Springs 62.70 188 P **P** **10 56 50.0 +0.6**
comp=Z,0.3nm,0.6s,baz=358,slow=5.1,SNR=5.8
comp=Z,0.3nm,0.6s
FINES FINESS Array B 67.38 332 P **P** **10 57 19.5 0.0**
comp=Z,1.2nm,0.6s,baz=20,slow=8.3,SNR=5.3
comp=Z,1.2nm,0.6s
AKASG Malin Array Be 73.10 322 P **P** **10 57 53.3 -1.3**
comp=Z,0.5nm,0.4s,baz=46,slow=6.7,SNR=4.9
comp=Z,0.5nm,0.4s

IDC 28 10:49:58.5±330.0, 57°49N×29°39E, h0km, Error ellipse: s-maj=129.5km s-min=93.2km az=96.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.34**	**97**	I	I	11 18 40.0	
	baz=279,slow=294,SNR=2.2						
I37NO	**I37NO**	**12.57**	**342**	I	I	11 58 00.0	
	baz=148,slow=310,SNR=2.1						
I26DE	**FREYUNG INFRAS**	**12.75**	**234**	I	I	12 10 30.0	
	baz=40,slow=327,SNR=0.7						

IDC 28 11:00:15.6±3.0, 17°86S×178°24W, h537km±26km, mb3.1/4, mbtmp3.9/5, Error ellipse: s-maj=133.6km s-min=27.8km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.53**	**271**	P	P	11 01 33.2	0.0
	8.6nm,0.5s,baz=293,slow=23,SNR=5.7						
STKA	**Stephens Creek**	**38.79**	**241**	P	P	11 06 54.3	0.0
	1.6nm,0.6s,baz=83,slow=11,SNR=3.5						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**44.80**	**259**	P	P	11 07 41.3	-0.6
	0.7nm,0.6s,baz=96,slow=6.7,SNR=8.3						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**44.95**	**254**	P	P	11 07 43.1	+0.1
	6.2nm,0.7s,baz=89,slow=8.4,SNR=133						
	6.2nm,0.7s						
TXAR	**Lajitas Array**	**85.84**	**58**	P	P	11 11 58.8	0.0
	0.4nm,0.9s,baz=236,slow=4.6,SNR=4.4						
	0.4nm,0.9s						

*IDC **28** 11:03:05.8±1.5, 3°35S×4°62W, h0km, mb4.1/6, mbtmp4.1/8, ML3.9/2, MS2.6/1, Error ellipse: s-maj=96.3km s-min=25.1km az=100.0*

ISC 28 11:03:07.0±1.1, 3°14S±0°09×5°0W±0°4, h10km, n17, σ1s92/13, mb4.3/8, 3C, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**9.74**	**1**	Pn	**Pn**	**11 05 29.4**	**+2.1**
	0.9nm,0.3s,baz=174,slow=13,SNR=7.0						
DBIC				Sn	**Sn**	**11 07 13.1**	**-3.8**
	2.4nm,0.3s,baz=85,slow=21,SNR=8.9						
DBIC				LR	LR	11 09 00.2	
	comp=Z,35nm,18.3s,baz=158,slow=36						
	2.3nm,0.4s						
H10N2	**ASCENSION HYDR**	**10.54**	**243**	T	T	11 16 44.9	
	baz=67,slow=75,SNR=7.9						
H10N1	**ASCENSION HYDR**	**10.54**	**243**	T	T	11 16 44.9	
	baz=67,slow=75,SNR=10						
H10N3	**ASCENSION HYDR**	**10.56**	**243**	T	T	11 16 46.2	
	baz=67,slow=75,SNR=6.5						
H10S2	**ASCENSION HYDR**	**11.21**	**239**	T	T	11 17 32.3	
	baz=157,slow=74,SNR=3.7						
H10S3	**ASCENSION HYDR**	**11.22**	**239**	T	T	11 17 40.5	
	baz=63,slow=74,SNR=4.0						
TORD	**Torodi Ar. Bea**	**17.48**	**22**	P	**Pn**	**11 07 10.3**	**-0.8**
	0.5nm,0.3s,baz=205,slow=12,SNR=22						
	2.7nm,0.5s						
GERES	**GERESS Array B**	**54.27**	**15**	P	**P**	**11 12 35.0**	**+1.7**
	1.5nm,0.7s,baz=197,slow=8.2,SNR=11						
	1.5nm,0.7s						
BRTR	**Keskin Array B**	**55.46**	**36**	P	**P**	**11 12 42.6**	**+0.5**
	1.1nm,0.8s,baz=194,slow=4.6,SNR=4.6						
	1.1nm,0.8s						
KBZ	**Khabaz**	**63.38**	**37**	P	**P**	**11 13 38.0**	**+1.3**
	2.5nm,0.9s,baz=202,slow=0.8,SNR=4.2						
	2.5nm,0.9s						
VNA1	**Neumayer--Stat**	**67.45**	**181**	⇑P	**P**	**11 14 02.8**	**+0.3**
	comp=Z,3.2nm,0.9s						
VNA2	**Neumayer--Watz**	**67.71**	**181**	⇑P	**P**	**11 14 03.3**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=347,slow=7.8						
FINES	**FINESS Array B**	**68.70**	**15**	P	**P**	**11 14 11.7**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=197,slow=6.0,SNR=5.0						
	comp=Z,1.2nm,0.8s						
TROLL	**Troll, Antarti**	**68.94**	**178**	⇑P	**P**	**11 14 11.5**	**-0.6**
	comp=Z,69nm,0.7s						
QSPA	**South Pole Qui**	**86.95**	**180**	P	**P**	**11 15 52.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=252,slow=1.5,SNR=22						
	comp=Z,2.9nm,0.7s						
MKAR	**Makanchi Array**	**90.39**	**43**	P	**P**	**11 16 07.5**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=270,slow=2.4,SNR=3.8						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**131.92**	**126**	PKP	**PKPdf**	**11 22 18.9**	**-2.7**
	comp=Z,0.4nm,0.9s,baz=253,slow=1.2,SNR=5.8						

*PLV **28** 11:08:05.2±0.6, 20°92N×104°71E, h7km±2km, ML3.4, MW3.5, Presumed earthquake*
*BKK **28** 11:08:06.1±0.6, 21°N±6°×10°5E±°, h10km, M3.6/16, mB4.5/2, mb3.4/8, Mjma3.4/16, ML3.9/12, MLv3.7/13, Mw(mB)3.6/2*

ISC 28 11:08:05.4±1.0, 20°90N±0°04×104°72E±0°04, h10km, n16, σ1s15/18, Laos

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCVV	**Moc Chau**	**0.12**	**214**	*i* Pg	**Pg**	**11 08 07.4**	**-0.8**
MCVV				*e*Sg	**Sg**	**11 08 09.1**	**-1.3**
MCVV				IAML		11 08 09.2	
	comp=N,37μm,0.1s						
MCVV				IAML		11 08 09.2	
	comp=E,63μm,0.2s						
HBVN	**Hoa-Binh**	**0.59**	**97**	*i* Pg	**Pg**	**11 08 16.4**	**-0.5**
HBVN				IAML		11 08 29.6	
	comp=N,3μm,0.3s						
HBVN				IAML		11 08 32.7	
	comp=E,4μm,0.3s						
SLVN	**Son La**	**0.88**	**300**	*e*Pg	**Pg**	**11 08 21.1**	**-1.2**
MLVB	**It Ong**	**0.88**	**313**	*e*Pg	**Sn**	**11 08 39.6**	**+2.8**
MLVB				IAML		11 09 08.9	
	comp=N,252nm,0.8s						
MLVB				IAML		11 09 09.4	
	comp=E,229nm,0.4s						
VTVB	**Vinh Tuy**	**1.36**	**7**	*e*Pg	**Pb**	**11 08 30.4**	**-0.5**
VTVB				IAML		11 08 51.6	
	comp=N,570nm,0.2s						
VTVB				IAML		11 08 51.6	
	comp=E,651nm,0.6s						
PLV	**Phu-Lien**	**1.79**	**93**	*e*Pg	**Pg**	**11 08 39.2**	**-0.4**
CCVB	**Con Cuong**	**1.84**	**175**	*e*Pg	**Pg**	**11 08 40.2**	**-0.6**
CCVB				IAML		11 09 09.2	
	comp=E,194nm,0.4s						
CCVB				IAML		11 09 10.2	
	comp=N,175nm,0.5s						
HGVB	**Ha Giang**	**1.95**	**7**	*e*Pg	**Pb**	**11 08 41.0**	**+0.1**
HGVB				*e*Sg	**Sg**	**11 09 06.7**	**-1.3**
HGVB				IAML		11 09 08.4	
	comp=E,392nm,0.7s						
HGVB				IAML		11 09 12.9	
	comp=N,199nm,0.6s						
UTTA	**Uttaradit**	**5.03**	**232**	P	**Pn**	**11 09 21.8**	**+0.9**
CMAI	**Chiengmai2**	**5.41**	**261**	P	**Pn**	**11 09 26.5**	**+0.2**
	comp=N,0.1nmcomp=N,0.1nmcomp=N,0.2nmcomp=N,729nm						
	comp=N,5.1nm,0.6s						
CM09	**Chiang Mai Arr**	**5.92**	**247**	P	**Pn**	**11 09 34.0**	**+0.7**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,2.4nm,0.8s						
CM04	**Chiang Mai Arr**	**5.95**	**246**	P	**Pn**	**11 09 34.2**	**+0.5**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,3.3nm,1.1s						
CM01	**Chiang Mai Arr**	**5.96**	**247**	P	**Pn**	**11 09 34.8**	**+1.0**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,3.4nm,0.6s						
CM02	**Chiang Mai Arr**	**5.97**	**247**	P	**Pn**	**11 09 34.8**	**+1.0**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,2.6nm,0.9s						
CM05	**Chiang Mai Arr**	**5.98**	**246**	P	**Pn**	**11 09 33.4**	**-0.6**
	comp=N,0.0nmcomp=N,2.5nm,0.8s						
CM13	**Chiang Mai Arr**	**6.01**	**247**	P	**Pn**	**11 09 35.6**	**+1.2**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,1.7nm,1.2s						

*MDD **28** 11:10:34.3±0.7, 36°65N×11°40W, h33km±18km, Mb4.2/13, M_mb3.5/13, Error ellipse: s-maj=8.7km s-min=4.1km az=72.0*
*IGIL **28** 11:10:36.3, 36°65N×11°26W, h28km, ML2.3*
*INMG **28** 11:10:37.1±1.2, 36°65N×11°26W, h35km, ML2.5, Error ellipse: s-maj=4.7km s-min=2.7km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

ISC 28 11:10:34.8±2.4, 36.70N±0°07×11°2W±0°1, h35km, n61, σ1s55/108, 13C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.97**	**77**	Pn	**Pn**	**11 11 07.1**	**+1.4**
PFVI				Sn	**Sn**	**11 11 28.0**	**-0.3**
PFVI	**Vila Bisbo**	**1.97**	**77**	⇑*e*P	**Pn**	**11 11 07.1**	**+1.4**
PFVI				*e*S	**Sn**	**11 11 29.4**	**+0.2**
PFVI				*i* IAML		11 11 30.6	
PFVI				*i* IAML		11 11 30.7	
PFVI				*i* IAML		11 11 30.9	
MORF	**Marmelete**	**2.15**	**73**	*e*P	**Pn**	**11 11 09.6**	**+1.4**
MORF				*e*S	**Sn**	**11 11 33.8**	**+0.2**
MORF				IAML		11 11 34.5	
	comp=E,29nm,0.1s						
MORF	**Marmelete**	**2.15**	**73**	*e*P	**Pn**	**11 11 09.6**	**+1.4**
MORF				*e*S	**Sn**	**11 11 33.9**	**+0.2**
MORF				*i* IAML		11 11 36.1	
MORF				*i* IAML		11 11 36.3	
MORF				*i* IAML		11 11 36.5	
PTEO	**Sao Teotonio**	**2.17**	**66**	*e*P	**Pn**	**11 11 10.1**	**+1.7**
PTEO				*e*S	**Sn**	**11 11 35.0**	**+0.9**
PTEO				*i* IAML		11 11 35.4	
PTEO				*i* IAML		11 11 35.7	
PTEO				*i* IAML		11 11 40.9	
PLOUS	**Minas do Lousa**	**2.60**	**58**	*e*P	**Pn**	**11 11 15.6**	**+1.3**
PLOUS				*e*S	**Sn**	**11 11 45.5**	**+0.8**
PLOUS				*i* IAML		11 11 48.6	
PLOUS				*i* IAML		11 11 48.7	
PLOUS				*i* IAML		11 11 51.2	
MESJ	**Messejana**	**2.66**	**64**	*e*P	**Pn**	**11 11 16.6**	**+1.5**
MESJ				*e*S	**Sn**	**11 11 46.0**	**-0.1**
MESJ				IAML		11 11 50.0	
	comp=E,7.4nm,0.2s						
MESJ	**Messejana**	**2.66**	**64**	*e*P	**Pn**	**11 11 16.6**	**+1.5**
MESJ				*e*S	**Sn**	**11 11 46.8**	**+0.7**
MESJ				*i* IAML		11 11 51.0	
MESJ				*i* IAML		11 11 52.0	
MESJ				*i* IAML		11 11 55.0	
PBDV	**Barranco-do-Ve**	**2.70**	**77**	Sn	**Sn**	**11 11 47.0**	**-0.1**
PBDV	**Barranco-do-Ve**	**2.70**	**77**	*e*P	**Pn**	**11 11 17.5**	**+1.9**
PBDV				*e*S	**Sn**	**11 11 47.0**	**-0.1**
PBDV				*i* IAML		11 11 50.3	
PBDV				*i* IAML		11 11 51.9	
PBDV				*i* IAML		11 11 53.2	
PCVE	**Castro Verde**	**2.71**	**69**	Pn	**Pn**	**11 11 17.5**	**+1.6**
PCVE				Sn	**Sn**	**11 11 47.1**	**-0.4**
PCVE	**Castro Verde**	**2.71**	**69**	*e*P	**Pn**	**11 11 17.4**	**+1.6**
PCVE				*e*S	**Sn**	**11 11 48.3**	**+0.8**
PCVE				*i* IAML		11 11 49.0	
PCVE				*i* IAML		11 11 52.1	
PCVE				*i* IAML		11 11 52.2	
PMAFR	**Mafra**	**2.73**	**34**	Pn	**Pn**	**11 11 17.3**	**+1.2**
PMAFR	**Mafra**	**2.73**	**34**	*e*P	**Pn**	**11 11 17.5**	**+1.4**
PMAFR				*e*S	**Sn**	**11 11 48.5**	**+0.6**
PMAFR				*i* IAML		11 11 49.6	
PMAFR				*i* IAML		11 11 49.7	
PMAFR				*i* IAML		11 11 49.8	
PVAQ	**Vaqueiros**	**2.90**	**75**	*e*P	**Pn**	**11 11 20.1**	**+1.7**
PVAQ				*e*S	**Sn**	**11 11 51.9**	**-0.1**
PVAQ				*i* IAML		11 11 52.7	
PVAQ				*i* IAML		11 11 52.7	
PVAQ				*i* IAML		11 11 56.5	
MOE	**Montemor**	**2.92**	**51**	*e*P	**Pn**	**11 11 20.2**	**+1.4**
MOE				*e*S	**Sn**	**11 11 53.1**	**+0.5**
MOE				*i* IAML		11 11 54.4	
MOE				*i* IAML		11 11 54.5	
MOE				*i* IAML		11 11 55.0	
PBEJ	**Beja**	**2.99**	**63**	*e*P	**Pn**	**11 11 22.0**	**+2.3**
PBEJ				*e*S	**Sn**	**11 11 54.1**	**-0.1**
PBEJ				*i* IAML		11 11 57.4	
PBEJ				*i* IAML		11 11 58.0	
PBEJ				*i* IAML		11 12 00.0	
EGRO	**El Granado**	**3.11**	**73**	Pn	**Pn**	**11 11 22.8**	**+1.5**
EGRO				Sn	**Sn**	**11 11 56.7**	**-0.5**
EGRO	**El Granado**	**3.11**	**73**	P	**Pn**	**11 11 22.8**	**+1.5**
EGRO				⇑*i*Vmb_VC		11 11 28.0	
	comp=E,225nm,SNR=2.5						
EGRO				S	**Sn**	**11 11 56.8**	**-0.5**
EVO	**Evora**	**3.14**	**53**	Pn	**Pn**	**11 11 21.8**	**0.0**
EVO				Sn	**Sn**	**11 11 57.5**	**-0.5**
EVO	**Evora**	**3.14**	**53**	*e*S	**Sn**	**11 11 58.2**	**+0.2**
EVO				*i* IAML		11 12 00.0	
EVO				*i* IAML		11 12 00.7	
EVO				*i* IAML		11 12 01.1	
PARRA	**Arraiolos**	**3.29**	**49**	*e*P	**Pn**	**11 11 25.3**	**+1.4**
PARRA				*e*S	**Sn**	**11 12 02.1**	**+0.3**
PARRA				*i* IAML		11 12 04.8	
PARRA				*i* IAML		11 12 05.2	
PARRA				*i* IAML		11 12 05.8	
PMTG	**Montargil**	**3.35**	**44**	*e*P	**Pn**	**11 11 25.6**	**+0.9**
PMTG				*e*S	**Sn**	**11 12 03.1**	**-0.2**
PMTG				*i* IAML		11 12 05.8	
PMTG				*i* IAML		11 12 07.0	
PMTG				*i* IAML		11 12 07.9	
PESTR	**Estremoz**	**3.60**	**52**	Pn	**Pn**	**11 11 30.7**	**+2.5**
PESTR	**Estremoz**	**3.60**	**52**	*e*P	**Pn**	**11 11 30.8**	**+2.7**
PESTR				*e*S	**Sn**	**11 12 09.8**	**+0.3**
PESTR				*i* IAML		11 12 11.5	
PESTR				*i* IAML		11 12 13.4	
PESTR				*i* IAML		11 12 19.6	
PBAR	**Barrancos**	**3.65**	**65**	Pn	**Pn**	**11 11 30.4**	**+1.8**
PBAR				Sn	**Sn**	**11 12 10.0**	**-0.5**
PBAR	**Barrancos**	**3.65**	**65**	*e*P	**Pn**	**11 11 30.4**	**+1.8**
PBAR				*e*S	**Sn**	**11 12 10.0**	**-0.5**
PBAR				*i* IAML		11 12 13.3	
PBAR				*i* IAML		11 12 14.7	
PBAR				*i* IAML		11 12 14.8	
PSARD	**Sardoal**	**3.77**	**39**	*e*P	**Pn**	**11 11 32.0**	**+1.6**
PSARD				*e*S	**Sn**	**11 12 13.3**	**-0.4**
PSARD				*i* IAML		11 12 14.5	
PSARD				*i* IAML		11 12 15.4	
PSARD				*i* IAML		11 12 16.5	
EMIN	**Mina Concepcio**	**3.79**	**72**	Pn	**Pn**	**11 11 31.8**	**+1.2**
EMIN				Sn	**Sn**	**11 12 13.8**	**-0.2**
EMIN	**Mina Concepcio**	**3.79**	**72**	P	**Pn**	**11 11 31.9**	**+1.3**
EMIN				⇑*i*Vmb_VC		11 11 35.8	
	comp=E,123nm,SNR=2.4						
EMIN				S	**Sn**	**11 12 13.7**	**-0.3**
EBAD	**Badajoz**	**3.92**	**57**	Pn	**Pn**	**11 11 34.3**	**+1.8**
EBAD				Sn	**Sn**	**11 12 16.4**	**-0.9**
EBAD	**Badajoz**	**3.92**	**57**	P	**Pn**	**11 11 32.9**	**+0.5**
EBAD				⇑*i*Vmb_VC		11 11 36.4	
	comp=E,192nm,SNR=3.6						
EBAD				S	**Sn**	**11 12 16.8**	**-0.5**
PCAS	**Casmilo, Conde**	**3.98**	**32**	*e*P	**Pn**	**11 11 34.6**	**+1.4**
PCAS				*e*S	**Sn**	**11 12 18.7**	**0.0**
PCAS				*i* IAML		11 12 22.3	
PCAS				*i* IAML		11 12 22.4	
PCAS				*i* IAML		11 12 22.6	
PMRV	**Marv??o**	**4.07**	**47**	*e*P	**Pn**	**11 11 35.5**	**+0.9**
PMRV				*e*S	**Sn**	**11 12 20.0**	**-1.0**
PMRV				*i* IAML		11 12 21.7	
PMRV				*i* IAML		11 12 23.2	
PMRV				*i* IAML		11 12 23.8	
PCBR	**Castelo Branco**	**4.31**	**42**	*e*P	**Pn**	**11 11 39.3**	**+1.6**
PCBR				*e*S	**Sn**	**11 12 27.2**	**+0.4**
PCBR				*i* IAML		11 12 27.4	
PCBR				*i* IAML		11 12 27.4	
PCBR				*i* IAML		11 12 27.5	
ESPR	**Espera**	**4.32**	**86**	Pn	**Pn**	**11 11 39.5**	**+1.7**
ESPR	**Espera**	**4.32**	**86**	P	**Pn**	**11 11 39.6**	**+1.7**
ESPR				⇑*i*Vmb_VC		11 11 41.9	
	comp=E,261nm,SNR=4.2						
ESPR				S	**Sn**	**11 12 26.5**	**-0.4**
AVE	**Averroes**	**4.62**	**136**	Pn	**Pn**	**11 11 42.4**	**+0.3**
PVIS	**Viseu**	**4.78**	**32**	*e*P	**Pn**	**11 11 46.0**	**+1.6**
PVIS				*e*S	**Sn**	**11 12 37.8**	**-0.8**
ECAB	**El Cabril**	**4.83**	**72**	Pn	**Pn**	**11 11 46.3**	**+1.4**
ECAB				Sn	**Sn**	**11 12 37.8**	**-1.8**
ECAB	**El Cabril**	**4.83**	**72**	P	**Pn**	**11 11 46.3**	**+1.4**
ECAB				⇑*i*Vmb_VC		11 11 47.8	
	comp=E,99nm,SNR=2.4						
ECAB				S	**Sn**	**11 12 37.8**	**-1.8**
EPLA	**Plasencia**	**5.26**	**49**	P	**Pn**	**11 11 51.2**	**+0.3**
EPLA				⇑*i*Vmb_VC		11 11 54.7	
	comp=E,207nm,SNR=2.1						
EPLA				S	**Sn**	**11 12 48.2**	**-2.1**
POLO	**Lamas de Olo**	**5.38**	**29**	*e*S	**Sn**	**11 12 50.7**	**-2.6**
POLO				*i* IAML		11 12 51.8	
POLO				*i* IAML		11 12 52.7	
POLO				*i* IAML		11 12 56.1	
EADA	**Adamuz**	**5.49**	**73**	Pn	**Pn**	**11 11 55.6**	**+1.5**
EADA	**Adamuz**	**5.49**	**73**	P	**Pn**	**11 11 55.7**	**+1.5**
EADA				⇑*i*Vmb_VC		11 11 57.5	
	comp=E,79nm,SNR=1.8						
EADA				S	**Sn**	**11 12 54.0**	**-2.1**
MVO	**Moncorvo**	**5.53**	**35**	*e*S	**Sn**	**11 12 54.9**	**-2.1**
MVO				*i* IAML		11 12 57.3	
MVO				*i* IAML		11 12 57.6	
MVO				*i* IAML		11 12 58.3	
PCAB	**Cabril**	**5.59**	**25**	*e*P	**Pn**	**11 11 57.2**	**+1.8**
PCAB				*e*S	**Sn**	**11 12 56.2**	**-2.2**
PCAB				*i* IAML		11 12 57.5	
PCAB				*i* IAML		11 12 58.0	
PCAB				*i* IAML		11 13 00.1	
ELOB	**Lobios**	**5.72**	**24**	P	**Pn**	**11 11 57.6**	**+0.4**
ELOB				⇑*i*Vmb_VC		11 12 07.4	
	comp=E,120nm,SNR=1.1						
ELOB				S	**Sn**	**11 12 58.7**	**-3.0**
EGOR	**Sierra Gorda,**	**5.72**	**84**	P	**Pn**	**11 11 58.0**	**+0.7**
EGOR				S	**Sn**	**11 12 59.7**	**-2.1**
PGAV	**Gavieira, Arco**	**5.74**	**23**	*e*P	**Pn**	**11 11 59.1**	**+1.6**
PGAV				*e*S	**Sn**	**11 12 59.5**	**-2.7**
PGAV				*i* IAML		11 13 03.1	
PGAV				*i* IAML		11 13 03.3	
PGAV				*i* IAML		11 13 04.3	
IFR	**Ifrane**	**5.92**	**121**	Pn	**Pn**	**11 11 59.5**	**-0.7**
IFR				Sn	Sn	11 13 00.1	-6.8
ELGU	**Los Guajares,**	**6.10**	**86**	⇑*i*Vmb_VC		11 12 03.9	
	comp=E,110nm,SNR=2.3						
ELGU				P	**Pn**	**11 12 04.1**	**+1.6**
ELGU				S	**Sn**	**11 13 10.4**	**-0.7**
PAB	**San Pablo**	**6.12**	**60**	P	**Pn**	**11 12 02.8**	**0.0**
PAB				⇑*i*Vmb_VC		11 12 07.6	
	comp=E,68nm,SNR=1.8						
PAB				S	**Sn**	**11 13 09.1**	**-2.6**
ECAL	**Calabor**	**6.29**	**32**	P	Pn	11 11 58.8	-6.3
ECAL				S	**Sn**	**11 13 13.4**	**-2.3**
PSIM	**Granatula de C**	**6.29**	**68**	P	**Pn**	**11 12 05.8**	**+0.8**
PSIM				S	**Sn**	**11 13 13.7**	**-2.0**
EMAZ	**Mazaricos**	**6.48**	**15**	S	Sn	11 13 14.7	-5.6
EAGO	**Agolada(Pontev**	**6.56**	**21**	P	**Pn**	**11 12 10.2**	**+1.4**
EAGO				S	**Sn**	**11 13 18.6**	**-3.7**
EQES	**Quesada**	**6.60**	**78**	S	**Sn**	**11 13 21.9**	**-1.6**
TIO	**Tiouine**	**6.63**	**149**	Pn	**Pn**	**11 12 10.0**	**+0.1**
TIO				Sn	**Sn**	**11 13 18.8**	**-5.6**
GUD	**Guadarrama**	**6.79**	**52**	P	**Pn**	**11 12 12.0**	**0.0**
GUD				⇑*i*Vmb_VC		11 12 15.6	
	comp=E,62nm,SNR=2.1						
GUD				S	**Sn**	**11 13 26.1**	**-2.1**
EPON	**Pontenova**	**7.32**	**24**	P	**Pn**	**11 12 20.1**	**+0.9**
EPON				⇑*i*Vmb_VC		11 12 21.8	
	comp=E,235nm,SNR=1.3						
EPON				S	**Sn**	**11 13 37.0**	**-4.0**

*DJA **28** 11:14:09.7±0.6, 2°N±5°×12°8E±°, h23km±11km, M3.6/8, MLv3.6/8*

IDC 28 11:14:06.5±3.5, 2°47N×128°05E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=335.3km s-min=23.8km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.82**	**202**	P	Pn	11 14 35.4	-3.7
SGSI	**Sangihe**	**2.80**	**296**	P	Pn	11 14 50.3	-2.3
WRA	**Warramunga Arr**	**23.11**	**165**	P	P	11 19 13.2	-1.1
	0.7nm,0.8s,baz=342,slow=10.0,SNR=2.8						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**26.59**	**168**	P	P	11 19 47.5	+0.8
	0.4nm,0.9s,baz=352,slow=9.8,SNR=2.5						
	0.4nm,0.9

SGSI	**Sangihe**	**2.14**	**198**	P	**Pn**	**11 27 46.0**	**+1.4**
SGSI				S	**Sn**	**11 28 14.9**	**+3.4**
BUKP	**Musuan**	**2.41**	**332**	*i* P	**Pn**	**11 27 49.4**	**+1.3**
BUKP				*i* S	**Sn**	**11 28 20.6**	**+3.0**
CTBH	**Cotabato--PC H**	**2.44**	**307**	*i* P	**Pn**	**11 27 47.9**	**-0.5**
BIPH	**Bislig**	**2.44**	**4**	*e*P	**Pn**	**11 27 48.2**	**-0.1**
BIPH				*e*S	**Sn**	**11 28 20.2**	**+2.1**
CGP	**Cagayan de Oro**	**3.08**	**331**	*e*P	**Pn**	**11 27 59.6**	**+2.8**
CGP				*e*S	**Sn**	**11 28 38.6**	**+5.3**
BUTP	**Butuan**	**3.26**	**350**	*e*P	**Pn**	**11 28 01.5**	**+2.3**
BUTP				*e*S	**Sn**	**11 28 41.5**	**+4.0**
TSSP	**Tandag City**	**3.28**	**0**	*e*P	**Pn**	**11 27 59.9**	**+0.4**
TSSP				*e*S	**Sn**	**11 28 34.1**	**-3.9**
PAGZ	**Pagadian**	**3.49**	**307**	*i* P	**Pn**	**11 28 01.9**	**-0.3**
PAGZ				*e*S	**Sn**	**11 28 40.8**	**-2.2**
LLP	**Lapu-Lapu**	**5.06**	**334**	*e*P	**Pn**	**11 28 24.6**	**+1.3**
LLP				*e*S	**Sn**	**11 29 24.6**	**+3.9**
TNTI	**Ternate**	**5.07**	**167**	Pn	**Pn**	**11 28 24.1**	**+0.6**
TNTI	**Ternate**	**5.07**	**167**	P	**Pn**	**11 28 23.9**	**+0.4**
PLP	**Palo**	**5.53**	**347**	*e*P	**Pn**	**11 28 33.3**	**+3.7**
PLP				*e*S	**Sn**	**11 29 36.8**	**+4.9**
TOLI2	**Tolitoli**	**7.09**	**230**		**Pn**	**11 28 51.1**	**+0.2**
LUWI	**Luwuk**	**7.55**	**207**		**Pn**	**11 29 01.1**	**+4.0**
LUWI	**Luwuk**	**7.55**	**207**	P	**Pn**	**11 29 01.6**	**+4.5**
MYLDM	**Lahad Datu**	**7.68**	**266**		**Pn**	**11 28 58.7**	**-0.1**
MYLDM	**Lahad Datu**	**7.68**	**266**	P	**Pn**	**11 29 01.4**	**+2.6**
SANI	**Sanana**	**7.74**	**182**	P	**Pn**	**11 28 56.5**	**-3.1**
APSI	**Ampana**	**8.02**	**215**	P	Pn	11 29 08.4	+5.1
	75nm,1.0s						
NLAI	**Namlea**	**8.96**	**174**	P	**Pn**	**11 29 17.8**	**+1.6**
	2µm35nm,0.7s						
KNRA	**Kununurra**	**21.43**	**173**	P	**P**	**11 31 49.1**	**+0.4**
KNRA				IAmb	IAmb	11 31 50.2	
	comp=Z,3.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.69**	**181**	P	**P**	**11 32 11.4**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=357,slow=11,SNR=11						
	comp=Z,2.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.69**	**181**	P	**P**	**11 32 11.3**	**+0.3**
WB0	**Warramunga Arr**	**26.60**	**163**	P	**P**	**11 32 36.9**	**-0.4**
WB0				IAmb	IAmb	11 33 09.1	
	comp=Z,6.2nm,1.0s						
WRA	**Warramunga Arr**	**26.75**	**163**	P	**P**	**11 32 39.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=341,slow=10,SNR=5.3						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**26.75**	**163**	P	**P**	**11 32 38.1**	**-0.7**
WR8	**Warramunga Arr**	**26.81**	**162**	P	**P**	**11 32 38.9**	**-0.4**
JNU	**Nakatsue**	**27.59**	**9**	LR	LR	11 43 46.8	
	comp=Z,64nm,19.3s,baz=66,slow=36						
AS31	**Alice Springs**	**30.18**	**166**	P	**P**	**11 33 09.1**	**-0.1**
ASAR	**Alice Springs**	**30.18**	**166**	P	**P**	**11 33 09.5**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=346,slow=7.3,SNR=33						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**30.18**	**166**	P	**P**	**11 33 09.2**	**0.0**
BBOO	**Buckleboo**	**39.47**	**167**	P	**P**	**11 34 29.9**	**+1.1**
STKA	**Stephens Creek**	**40.18**	**160**	P	**P**	**11 34 35.0**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=334,slow=9.6,SNR=5.3						
	comp=Z,1.5nm,0.5s						
MK31	**Makanchi Array**	**55.62**	**325**	P	**P**	**11 36 32.2**	**-1.4**
MK31				IAmb	IAmb	11 36 33.4	
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**55.62**	**325**	P	**P**	**11 36 32.7**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=129,slow=8.6,SNR=11						
MKAR				PcP	**PcP**	**11 37 31.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=116,slow=4.9,SNR=4.9						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**55.62**	**325**	P	**P**	**11 36 32.2**	**-1.4**
MKAR				PcP	**PcP**	**11 37 31.1**	**-0.8**
MAKZ	**Makanchi**	**55.80**	**325**	P	**P**	**11 36 33.5**	**-1.4**
MAKZ				IAmb	IAmb	11 36 34.7	
	comp=Z,3.2nm,1.1s						
KURBB	**Kurchatov Arra**	**59.77**	**327**	P	**P**	**11 37 01.5**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=123,slow=6.8,SNR=18						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**59.77**	**327**	P	**P**	**11 37 01.7**	**-0.9**
KKAR	**Karatay Array**	**61.41**	**316**	P	**P**	**11 37 12.6**	**-1.3**
BVAR	**Borovoye Array**	**65.36**	**327**	P	**P**	**11 37 38.3**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=129,slow=11,SNR=3.7						
	comp=Z,0.9nm,0.6s						
AB31	**Akbulak array**	**70.27**	**320**	P	**P**	**11 38 07.8**	**-2.8**
AB31				IAmb	IAmb	11 38 31.4	
	comp=Z,1.1nm,1.0s						
ABKAR	**Akbulak array**	**70.27**	**320**	P	**P**	**11 38 08.2**	**-2.4**
IMAR	**Indian Mountai**	**80.74**	**24**	P	**P**	**11 39 09.4**	**-0.6**
KBZ	**Khabaz**	**81.22**	**313**	P	**P**	**11 39 13.7**	**+0.7**
	comp=Z,3.0nm,1.0s,baz=98,slow=3.6,SNR=3.5						
	comp=Z,3.0nm,1.0s						
L22K	**Petersville**	**81.72**	**28**	P	**P**	**11 39 16.3**	**+1.0**
L22K				IAmb	IAmb	11 39 17.3	
	comp=Z,2.9nm,1.0s						
ILAR	**Eielson Array**	**83.53**	**26**	P	**P**	**11 39 23.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=272,slow=7.3,SNR=2.4						
	comp=Z,0.2nm,0.5s						
VNDA	**Vanda**	**85.47**	**173**	P	**P**	**11 39 33.7**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=330,slow=6.5,SNR=5.7						
	comp=Z,0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**121.78**	**289**	PKP	**PKPdf**	**11 45 50.0**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=38,slow=2.2,SNR=4.2						

*IDC **28** 11:50:21.8±2.0, 0°.48S×127°.84E, h0km, mb3.7/3, mbtmp3.8/3, Error ellipse: s-maj=163.2km s-min=24.4km az=67.0*

*NEIC **28** 11:50:22.3±1.4, 0°.51S±0°.06×127°.87E±0°.04, h10km±1km, mb4.1/9, Error ellipse: s-maj=11.1km s-min=6.1km az=160.0*

*DJA **28** 11:50:26.1±0.2, 1°S±2°×12°7E±°, h10km, M4.1/13, mB5.7/1, mb4.6/4, MLv3.8/13, Mw(mB)5.3/1*

ISC 28 11:50:23.0±0.8, **0°.47S**±0°.06×**127°.58E**±0°.10, **h10**km, **n25, σ1°89/24, mb4.2/5, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**350**	Pn	**Pn**	**11 50 46.9**	**+0.2**
TNTI	**Ternate**	**1.25**	**350**	P	**Pn**	**11 50 50.2**	**+3.6**
SANI	**Sanana**	**2.23**	**225**	P	**Pn**	**11 51 01.2**	**+1.1**
NLAI	**Namlea**	**2.79**	**190**	P	**Pn**	**11 51 10.7**	**+2.9**
LUWI	**Luwuk**	**4.84**	**263**	Pn	**Pn**	**11 51 37.5**	**+1.5**
LUWI	**Luwuk**	**4.84**	**263**	P	**Pn**	**11 51 37.1**	**+1.1**
FAKI	**Fak Fak**	**5.26**	**118**	Pn	Pn	11 51 35.9	-5.9
FAKI	**Fak Fak**	**5.26**	**118**	P	**Pn**	**11 51 44.2**	**+2.4**
	47nm,1.3s						
TOLI2	**Tolitoli**	**6.98**	**283**	Pn	**Pn**	**11 52 06.4**	**+1.0**
SPSI	**Sidrap Palu**	**8.54**	**246**	P	**Pn**	**11 52 29.5**	**+2.6**
	4µm84nm,0.4s						
WB0	**Warramunga Arr**	**20.30**	**161**	P	**P**	**11 54 56.8**	**-2.5**
WB0				IAmb	IAmb	11 55 02.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**20.45**	**162**	P	**P**	**11 55 00.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=341,slow=11,SNR=14						
	comp=Z,1.1nm,0.6s						
WR8	**Warramunga Arr**	**20.51**	**161**	P	**P**	**11 54 59.2**	**-2.3**
WR8				IAmb	IAmb	11 55 28.0	
	comp=Z,9.1nm,1.3s						
WR0	**Warramunga Arr**	**20.53**	**161**	P	**P**	**11 54 58.5**	**-3.3**
AS31	**Alice Springs**	**23.86**	**166**	P	**P**	**11 55 34.0**	**-2.8**
ASAR	**Alice Springs**	**23.86**	**166**	P	**P**	**11 55 36.5**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=345,slow=12,SNR=36						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**23.86**	**166**	P	**P**	**11 55 35.8**	**-1.0**
MK31	**Makanchi Array**	**61.48**	**326**	P	**P**	**12 00 40.2**	**+0.1**
MK31				IAmb	IAmb	12 00 47.4	
	comp=Z,2.8nm,1.5s						
MKAR	**Makanchi Array**	**61.48**	**326**	P	**P**	**12 00 41.4**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=119,slow=7.5,SNR=10						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**61.48**	**326**	P	**P**	**12 00 40.2**	**+0.1**
KURK	**Kurchatov**	**65.73**	**328**	P	**P**	**12 01 08.0**	**+0.1**
KURK				IAmb	IAmb	12 01 12.6	
	comp=Z,1.6nm,0.9s						
CASY	**Casey**	**66.78**	**187**	P	**P**	**12 01 14.1**	**-0.3**
AB31	**Akbulak array**	**75.93**	**321**	P	**P**	**12 02 08.9**	**-1.2**
AB31				IAmb	IAmb	12 02 18.2	
	comp=Z,3.0nm,1.2s						
ABKAR	**Akbulak array**	**75.93**	**321**	P	**P**	**12 02 09.9**	**-0.2**
QSPA	**South Pole Qui**	**89.46**	**180**	P	**P**	**12 03 19.7**	**-0.5**

*IDC **28** 12:15:17.8±4.5, 4°.07S×102°.62E, h0km, mb3.4/4, mbtmp3.4/4, MS3.3/1, Error ellipse: s-maj=188.0km s-min=26.4km az=55.0*

*DJA **28** 12:15:25.1±0.4, 4°S±3°×10°2E±°, h33km±5km, M3.5/16, MLv3.5/16*

ISC 28 12:15:24.5±1.1, **4°29S**±0°.06×**102°37E**±0°.08, **h56**km, **n12, σ0°76/13, mb3.5/4, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UBSI	**University, Be**	**0.53**	**350**	P	**Pn**	**12 15 37.4**	**+0.8**
MNAI	**Manna**	**0.59**	**97**	P	**Pn**	**12 15 37.5**	**+0.3**
MNAI				S	**Sn**	**12 15 47.1**	**+0.7**
KSI	**Kapahiang**	**0.67**	**20**	P	**Pn**	**12 15 38.7**	**+0.4**
KSI				S	**Sn**	**12 15 49.2**	**+0.9**
EGSI	**Enggano, Bengk**	**1.06**	**185**	P	**Pn**	**12 15 44.1**	**+0.9**
LHSI	**Lahat**	**1.24**	**68**	P	**Pn**	**12 15 46.4**	**+0.8**
MDSI	**Maura Dua**	**1.82**	**96**	P	**Pn**	**12 15 53.8**	**+0.4**
KASI	**Kota Agung**	**2.45**	**120**	P	**Pn**	**12 16 02.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**31.70**	**156**	LR	LR	12 34 10.6	
	comp=Z,56nm,19.1s,baz=67,slow=36						
WRA	**Warramunga Arr**	**34.81**	**119**	P	**P**	**12 22 09.5**	**-0.7**
	0.3nm,0.7s,baz=300,slow=8.1,SNR=0.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**36.01**	**125**	P	**P**	**12 22 20.1**	**-0.4**
	0.2nm,0.4s,baz=301,slow=8.4,SNR=5.3						
	0.2nm,0.4s						
SONM	**Songino Array**	**52.02**	**3**	P	**P**	**12 24 28.3**	**-0.2**
	0.3nm,0.3s,baz=199,slow=7.6,SNR=2.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**53.88**	**343**	P	**P**	**12 24 41.2**	**-0.8**
	0.4nm,0.6s,baz=144,slow=8.3,SNR=4.2						
	0.4nm,0.6s						

*IDC **28** 12:24:35.5±0.8, 28°.86S×61°.93E, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=29.7km s-min=21.5km az=75.0*

ISC 28 12:24:37.1±0.8, **28°.9S**±0°.2×**61°.9E**±0°.2, **h10**km, **n14, σ0°62/11, mb4.0/9, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**19.01**	**202**	T	T	12 48 27.9	
	baz=28,slow=75,SNR=30						
H04N1	**CROZET ISLANDS**	**19.02**	**202**	T	T	12 48 28.9	
	baz=28,slow=75,SNR=31						
H04N3	**CROZET ISLANDS**	**19.03**	**202**	T	T	12 48 27.6	
	baz=28,slow=75,SNR=34						
CMAR	**Chiang Mai Arr**	**59.10**	**42**	P	**P**	**12 34 37.8**	**-0.1**
	0.4nm,0.3s,baz=218,slow=7.1,SNR=4.6						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**61.29**	**180**	P	**P**	**12 34 52.7**	**+0.2**
	2.7nm,0.9s,baz=251,slow=1.7,SNR=13						
	2.7nm,0.9s						
ASAR	**Alice Springs**	**63.87**	**104**	P	**P**	**12 35 10.3**	**0.0**
	0.9nm,0.8s,baz=244,slow=6.3,SNR=11						
	0.9nm,0.8s						
VNDA	**Vanda**	**64.16**	**166**	P	**P**	**12 35 11.6**	**+0.3**
	0.8nm,0.7s,baz=274,slow=6.4,SNR=8.3						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**65.67**	**100**	P	**P**	**12 35 21.2**	**-0.8**
	0.4nm,0.5s,baz=249,slow=5.8,SNR=6.1						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**71.59**	**297**	P	**P**	**12 35 58.3**	**-0.7**
	0.6nm,0.8s,baz=165,slow=6.0,SNR=2.4						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**80.49**	**11**	P	**P**	**12 36 49.8**	**+0.9**
	0.4nm,0.7s,baz=206,slow=4.8,SNR=2.6						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**81.88**	**5**	P	**P**	**12 36 57.2**	**+0.9**
	0.6nm,0.4s,baz=195,slow=10,SNR=2.1						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**84.82**	**13**	P	**P**	**12 37 11.1**	**-0.2**
	0.9nm,0.4s,baz=211,slow=5.2,SNR=5.0						
	0.9nm,0.4s						
ESDC	**Sonseca Array**	**91.65**	**315**	P	**P**	**12 37 44.7**	**+0.2**
	0.5nm,0.9s,baz=114,slow=1.8,SNR=4.2						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**146.29**	**357**	PKPbc	**PKPdf**	**12 44 15.9**	**-0.2**
	1.8nm,0.9s,baz=359,slow=3.6,SNR=6.4						

*NEIC **28** 12:27:06.6±1.9, 19°.11N±0°.04×68°.77W±0°.03, h14km±8km, ML3.2/39, Md3.8/9(RSPR), Error ellipse: s-maj=6.0km s-min=2.4km az=211.0*

*RSPR **28** 12:27:08.0, 19°.06N×68°.86W, h8km±2km, MD3.8/9*

*SDD **28** 12:27:09.2±2.6, 19°.06N×68°.82W, h0km±6km, MD3.1, ML2.9, MW3.0, Presumed earthquake*

*OSPL **28** 12:27:09.0±2.2, 19°.04N×68°.80W, h0km±24km, ML3.1, Presumed earthquake*

ISC 28 12:27:04.8±1.1, **19°.16N**±0°.03×**68°.72W**±0°.02, **h8**km±9km, **n84, σ1°11/117, 14C-7D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMDR	**Samana, DR**	**0.46**	**286**		**Pb**	**12 27 15.4**	**+0.3**
SMDR					**Sg**	**12 27 20.1**	**+0.2**
SMDR	**Samana, DR**	**0.46**	**286**	*i* P	**Pb**	**12 27 15.2**	**0.0**
SMDR				*i* S	**Sb**	**12 27 22.6**	**+0.4**
SMDR				IAML		12 27 24.7	
	comp=N,385nm,0.3s						
SMDR	**Samana, DR**	**0.46**	**286**	*e*P	**Pb**	**12 27 15.4**	**+0.3**
SMDR				*e*S	**Sg**	**12 27 20.1**	**+0.2**
HIDR	**Higuey Centro**	**0.57**	**180**	*i* P	**Pb**	**12 27 17.0**	**0.0**
HIDR				*i* S	**Sg**	**12 27 24.5**	**+1.3**
HIDR				IAML		12 27 25.0	
	comp=N,8µm,0.2s						
HIDR	**Higuey Centro**	**0.57**	**180**	*e*P	**Pb**	**12 27 17.0**	**0.0**
HIDR				*e*S	**Sg**	**12 27 23.6**	**+0.4**
PCDR	**Punta Cana, DR**	**0.72**	**154**		**Sb**	**12 27 30.1**	**+0.5**
PCDR	**Punta Cana, DR**	**0.72**	**154**		**Pb**	**12 27 20.0**	**+0.5**
PCDR				IAML		12 27 32.0	
	comp=N,868nm,0.5s						
PCDR	**Punta Cana, DR**	**0.72**	**154**	*i* P	**Pb**	**12 27 20.1**	**+0.5**
PCDR				*i* S	**Sb**	**12 27 30.4**	**+0.9**
PCDR				IAML		12 27 33.5	
	comp=N,476nm,0.6s						
PCDR	**Punta Cana, DR**	**0.72**	**154**	*i* P	**Pb**	**12 27 20.0**	**+0.5**
PCDR				*e*S	**Sb**	**12 27 30.1**	**+0.5**
PCDR				IAML		12 27 32.6	
	comp=Z,261nm,0.1s						
PCDR	**Punta Cana, DR**	**0.72**	**154**	*e*P	**Pb**	**12 27 20.0**	**+0.5**
PCDR				*e*S	**Sb**	**12 27 30.1**	**+0.5**
DR12	**Loma Pena Alta**	**0.73**	**239**		**Pg**	**12 27 18.9**	**+0.1**
HATOM	**Hato Mayor del**	**0.73**	**239**	*i* P	**Pg**	**12 27 18.9**	**0.0**
HATOM				*i* S	**Sg**	**12 27 28.1**	**-0.4**
HATOM				IAML		12 27 28.3	
	comp=N,315nm,0.3s						
CADR	**Cabrera**	**1.26**	**294**	*i* P	**Pg**	**12 27 29.6**	**+0.7**
CADR				*i* S	**Sn**	**12 27 47.7**	**+1.9**
CADR				IAML		12 27 48.0	
	comp=N,471nm,0.6s						
SDD	**Santo Domingo**	**1.33**	**238**		**Pn**	**12 27 29.0**	**-0.7**
SDD					**Sb**	**12 27 46.1**	**-1.1**
SDD				IAML		12 27 46.8	
	comp=E,389nm,0.3s						
SDD				IAML		12 27 47.2	
	comp=N,624nm,0.3s						
SDD	**Santo Domingo**	**1.33**	**238**	*i* P	**Pb**	**12 27 30.0**	**-0.1**
SDD				*e*S	**Sb**	**12 27 46.2**	**-1.1**
SDD	**Santo Domingo**	**1.33**	**238**	*e*P	**Pn**	**12 27 28.0**	**-1.7**
SDD				*e*S	**Sb**	**12 27 42.8**	**-4.5**
IDE	**Isla Desecheo**	**1.41**	**123**		**Pb**	**12 27 31.1**	**-0.2**
IDE					**Sb**	**12 27 49.0**	**-0.4**
IDE	**Isla Desecheo**	**1.41**	**123**	*e*P	**Pb**	**12 27 31.1**	**-0.2**
IDE				*e*S	**Sb**	**12 27 49.0**	**-0.4**
SFDR	**San Fco. de Ma**	**1.45**	**275**	*i* P	**Pg**	**12 27 32.7**	**+0.1**
SFDR				*i* S	**Sg**	**12 27 52.8**	**+1.4**
SFDR				IAML		12 27 53.0	
	comp=N,729nm,0.2s						
AGPR	**Aguadilla, PR**	**1.67**	**114**		**Pg**	**12 27 36.5**	**-0.3**
AGPR	**Aguadilla, PR**	**1.67**	**114**	IAML		12 28 06.5	
	comp=N,307nm,0.6s						
AGPR				IAML		12 28 06.8	
	comp=N,234nm,0.3s						
AGPR	**Aguadilla, PR**	**1.67**	**114**	*i* P	**Pg**	**12 27 38.3**	**+1.5**
AGPR				*i* S	**Sg**	**12 28 00.2**	**+1.7**
AGPR				IAML		12 28 05.8	
	comp=N,136nm,0.3s						
AGPR	**Aguadilla, PR**	**1.67**	**114**	*e*P	**Pg**	**12 27 36.5**	**-0.3**
BANI	**BANI**	**1.73**	**244**	Pn	**Pn**	**12 27 35.5**	**+0.2**
BANI	**BANI**	**1.73**	**244**	*i* P	**Pg**	**12 27 38.5**	**+0.4**
BANI				*i* S	**Sn**	**12 27 56.5**	**-1.2**
BANI				IAML		12 28 03.4	
	comp=N,324nm,0.2s						
PRSN	**Puerto Rico Se**	**1.76**	**122**		**Pb**	**12 27 37.0**	**-0.4**
PRSN					**Sb**	**12 27 59.6**	**0.0**
PRSN	**Puerto Rico Se**	**1.76**	**122**	*i* P	**Pg**	**12 27 38.6**	**0.0**
PRSN				*i* S	**Sg**	**12 28 03.2**	**+1.8**
PRSN				IAML		12 28 11.5	
	comp=N,467nm,0.2s						
PRSN	**Puerto Rico Se**	**1.76**	**122**	*e*P	**Pb**	**12 27 37.0**	**-0.4**
LSP	**Las Mesas**	**1.83**	**122**		**Pb**	**12 27 37.6**	**-0.9**
LSP					**Sb**	**12 28 00.8**	**-0.9**
LSP	**Las Mesas**	**1.83**	**122**	*e*P	**Pb**	**12 27 37.6**	**-0.9**
LSP				*e*S	**Sb**	**12 28 00.8**	**-0.9**
ABDR	**Alto Bandera**	**1.84**	**259**	*i* P	**Pg**	**12 27 39.8**	**-0.3**
ABDR				IAML		12 28 19.2	
	comp=N,0.3nm,0.6s						
SODR	**Sosua Marina B**	**1.85**	**289**	*i* P	**Pg**	**12 27 40.1**	**-0.1**
SODR				*i* S	**Sb**	**12 28 03.0**	**+0.8**
SODR				IAML		12 28 25.7	
	comp=N,221nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.91**	**127**		**Pn**	**12 27 38.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.91**	**127**		**Sb**	**12 28 02.8**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.91**	**127**	*e*P	**Pb**	**12 27 39.4**	**-0.4**
SC01	**Santiago de Io**	**1.92**	**278**	Pn	**Pn**	**12 27 37.4**	**-0.3**
SC01				IAML		12 28 15.1	
	comp=E,253nm,0.3s						
SC01				IAML		12 28 19.6	
	comp=N,285nm,0.5s						
SC01	**Santiago de Io**	**1.92**	**278**	*i* P	**Pb**	**12 27 40.5**	**+0.4**
SC01				IAML		12 28 17.6	
	comp=Z,174nm,0.7s						
MLPR	**Magueyes Islan**	**1.98**	**127**		**Pb**	**12 27 39.8**	**-1.3**
MLPR	**Magueyes Islan**	**1.98**	**127**		**Sn**	**12 28 04.1**	**+0.5**
MLPR	**Magueyes Islan**	**1.98**	**127**	*i* P	**Pg**	**12 27 42.4**	**-0.4**
MLPR				*i* S	**Sg**	**12 28 08.0**	**-0.4**
MLPR				IAML		12 28 14.6	
	comp=N,28nm,0.5s						
MLPR	**Magueyes Islan**	**1.98**	**127**	*e*P	**Pb**	**12 27 40.5**	**-0.6**
AOPR	**Arecibo Observ**	**2.03**	**113**		**Pb**	**12 27 41.6**	**-0.3**
AOPR	**Arecibo Observ**	**2.03**	**113**		**Sb**	**12 28 07.3**	**0.0**
AOPR	**Arecibo Observ**	**2.03**	**113**	*i* P	**Pg**	**12 27 42.5**	**-1.2**
AOPR				*i* S	**Sg**	**12 28 09.5**	**-0.5**
AOPR				IAML		12 28 17.4	
	comp=N,380nm,0.4s						
AOPR	**Arecibo Observ**	**2.03**	**113**	*e*P	**Pg**	**12 27 42.4**	**-1.3**
UUPR	**Utuado, UPR, P**	**2.10**	**115**		**Sn**	**12 28 07.2**	**+0.7**
UUPR	**Utuado, UPR, P**	**2.10**	**115**	Pn	**Pg**	**12 27 43.8**	**-1.2**
UUPR	**Utuado, UPR, P**	**2.10**	**115**	IAML		12 28 16.7	
	comp=N,3µm,0.3s						
UUPR				IAML		12 28 23.8	
	comp=N,2µm,0.3s						
UUPR	**Utuado, UPR, P**	**2.10**	**115**	*e*P	**Pb**	**12 27 42.5**	**-0.6**
GBPR	**Guanica, Bosqu**	**2.10**	**124**		**Pb**	**12 27 42.4**	**-0.8**
GBPR					**Sn**	**12 28 07.1**	**+0.4**
GBPR	**Guanica, Bosqu**	**2.10**	**124**	*e*P	**Pb**	**12 27 42.4**	**-0.8**
GBPR				*e*S	**Sn**	**12 28 07.1**	**+0.4**
EMPR	**Esperanza - Ma**	**2.18**	**108**		**Pb**	**12 27 42.8**	**-1.6**
EMPR					**Sb**	**12 28 10.9**	**-0.8**
EMPR	**Esperanza - Ma**	**2.18**	**108**	*e*P	**Pb**	**12 27 42.8**	**-1.6**
EMPR				*e*S	**Sb**	**12 28 10.9**	**-0.8**
LUDR	**Luperon**	**2.23**	**289**	*i* P	**Pn**	**12 27 43.3**	**+1.3**
LUDR				*i* S	**Sb**	**12 28 11.4**	**-1.8**
OBIP	**Obispado Ponce**	**2.29**	**119**		**Pb**	**12 27 45.9**	**-0.5**
OBIP					**Sb**	**12 28 14.2**	**-0.6**
OBIP	**Obispado Ponce**	**2.29**	**119**	*i* P	**Pb**	**12 27 46.4**	**+0.1**
OBIP				IAML		12 28 22.6	
	comp=Z,444nm,0.2s						
OBIP	**Obispado Ponce**	**2.29**	**119**	*e*P	**Pb**	**12 27 45.9**	**-0.5**
OBIP				*e*S	**Sb**	**12 28 14.2**	**-0.6**
CELP	**Cerrillos**	**2.30**	**118**		**Sb**	**12 28 14.6**	**-0.4**
CELP	**Cerrillos**	**2.30**	**118**	Pn	**Pb**	**12 27 45.1**	**-1.4**
CELP	**Cerrillos**	**2.30**	**118**	IAML		12 28 22.1	
	comp=Z,168nm,0.5s						
CELP				IAML		12 28 22.8	
	comp=Z,184nm,0.7s						
CELP	**Cerrillos**	**2.30**	**118**	*i* P	**Pb**	**12 27 46.8**	**+0.4**
CELP				*i* S	**Sb**	**12 28 14.2**	**-0.9**
CELP				IAML		12 28 22.6	
	comp=N,64nm,0.6s						
CELP	**Cerrillos**	**2.30**	**118**	*e*P	**Pb**	**12 27 46.0**	**-0.5**
ECPR	**Experimental S**	**2.38**	**110**		**Sn**	**12 28 14.9**	**+1.3**
ECPR	**Experimental S**	**2.38**	**110**	Pn	**Pb**	**12 27 45.9**	**-2.1**
**ECP

M_{rr}3.07±.12; $M_{\theta\theta}$-3.14±.10; $M_{\phi\phi}$0.07±.09; $M_{r\theta}$1.76±.09; $M_{\theta\phi}$-1.34±.07; $M_{\phi r}$1.16±.06; Best double couple: M_{w3}9.96300×10^{16} NP1:ϕ_s260.00000°,δ30.00000°, λ106.00000°. NP2:ϕ_s62.00000°,δ61.00000°,λ81.00000°. Principal axes: T 3.7180, Plg72.0000°, Azm311.0000°; N 0.4900, Plg8.0000°, Azm66.0000°; P -4.2070, Plg16.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

GFZ ***28*** *12:42:56.8±0.2,56.1°N±4.4°×16.1°W±.1°, h34km, M5.0/96, mb5.1/96, mB5.5/36, Mw(mB)5.0/36*

NEIC ***28*** *12:42:58.4, 54.92°N×160.68°W, h46km, Moment Tensor Solution. Duration: 19.7 Moment tensor: Scale 10^{16}Nm; M_{rr}3.74; $M_{\theta\theta}$-3.21; $M_{\phi\phi}$-0.53; $M_{r\theta}$1.46; $M_{\theta\phi}$-1.53; $M_{\phi r}$1.22; Fault plane solution: M_o4.27000×10^{16} NP1: ϕ_s252.93000°,δ32.59000°,λ102.13000°. NP2: ϕ_s58.62000°,δ58.22000°,λ82.35000°. Principal axes: T 4.2172, Plg75.0000°, Azm307.0000°; N 0.1046, Plg6.0000°, Azm63.0000°; P -4.3217, Plg13.0000°, Azm154.0000°;*

ISC 28 12:42:51.4±0.3,54°89'N±0°05'×160°37'W±0°03,h41km±2km, h41km:pP-P,n1094,σ1§02/1023,mb5.0/285,MS4.2/109, 34C-31D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHNA	**Chernabura Isl**	**0.46**	**97**	**P**	**Pn**		**12 43 01.2**	**-0.3**
	baz=280,SNR=1000							
CHNA				S	Sn		12 43 08.4	-0.4
	baz=280							
CNBA	**Chernabura Isl**	**0.46**	**99**		**Pn**		**12 43 01.4**	**-0.2**
CNBA					Sn		12 43 08.4	-0.4
CNBA				IAML			12 43 08.8	
	comp=N,108μm,0.4s							
CNBA				IAML			12 43 09.2	
	comp=E,131μm,0.6s							
SDPT	**Sand Point**	**0.46**	**353**		**Pn**		**12 43 01.4**	**-0.2**
SDPT					Sn		12 43 08.6	-0.2
SDPT				IAML			12 43 10.5	
	comp=E,60μm,0.9s							
SDPT	**Sand Point**	**0.46**	**353**	P	**Pn**		**12 43 01.4**	**-0.2**
	baz=168,SNR=1000							
SDPT				S	Sn		12 43 08.3	-0.6
	baz=168							
DOL	**Dolgoi Island**	**0.90**	**287**		**Pn**		**12 43 07.8**	**+0.2**
DOL					Sn		12 43 20.3	+1.0
PS1A	**Pavlof South-1**	**0.95**	**305**		**Pn**		**12 43 08.5**	**+0.3**
PS1A					Sn		12 43 21.9	+1.4
PS4A	**Pavlof South-4**	**0.97**	**299**		**Pn**		**12 43 08.8**	**+0.4**
PS4A					Sn		12 43 22.3	+1.3
PN7A	**Pavlof North-7**	**1.08**	**301**		**Pn**		**12 43 10.8**	**+0.7**
PN7A					Sn		12 43 26.1	+2.2
DTNA	**Dutton South F**	**1.11**	**284**		**Pn**		**12 43 10.9**	**+0.4**
DT1	**Dutton Round H**	**1.12**	**282**		**Pn**		**12 43 10.9**	**+0.3**
DT1					Sn		12 43 26.6	+1.8
VNKR	**Veniaminof 5**	**1.28**	**26**		**Pn**		**12 43 13.1**	**+0.3**
VNSS	**Veniaminof 8**	**1.44**	**21**		**Pn**		**12 43 15.7**	**+0.6**
S14K	**Fog Glacier**	**1.47**	**18**	P	**Pn**		**12 43 16.2**	**+0.7**
	baz=198,SNR=853							
VNFG	**Fog Glacier, M**	**1.47**	**18**		**Pn**		**12 43 16.5**	**+1.0**
ISNN	**Isanotski Nort**	**1.97**	**270**		**Pn**		**12 43 24.2**	**+2.0**
SSBA	**Shishaldin**	**2.17**	**268**		**Pn**		**12 43 26.7**	**+1.7**
AKSA	**Akutan Strait**	**3.19**	**258**		**Pn**		**12 43 40.8**	**+1.8**
AKUT	**Akutan**	**3.24**	**259**		**Pn**		**12 43 41.2**	**+1.6**
AKUT				IAML			12 44 35.3	
	comp=E,4μm,0.8s							
AKUT				IAML			12 44 38.4	
	comp=N,2μm,1.0s							
AHB	**Akutan Harbor**	**3.27**	**258**		**Pn**		**12 43 41.5**	**+1.5**
AKV	**Akutan Volcano**	**3.35**	**259**		**Pn**		**12 43 42.7**	**+1.5**
LVA	**Lava Point**	**3.38**	**260**		**Pn**		**12 43 43.1**	**+1.5**
LVA				IAML			12 44 45.6	
	comp=E,2μm,0.8s							
R17L	**Mt. Peulik Vol**	**3.54**	**38**	P	**Pn**		**12 43 45.1**	**+1.2**
	baz=220,SNR=306							
UNV	**Unalaska Valle**	**3.74**	**256**		**Pn**		**12 43 47.6**	**+1.2**
UNV	**Unalaska Valle**	**3.74**	**256**	P	**Pn**		**12 43 47.3**	**+0.9**
	baz=71,SNR=121							
KJL	**Kejulik**	**4.14**	**38**		**Pn**		**12 43 52.8**	**+0.8**
Q17K	**Contact Creek**	**4.19**	**34**		**Pn**		**12 43 53.7**	**+0.9**
Q17K	**Contact Creek**	**4.19**	**34**	P	**Pn**		**12 43 53.3**	**+0.4**
	baz=218							
CAHL	**Cahill**	**4.24**	**40**		**Pn**		**12 43 54.3**	**+0.9**
O15K	**Ungalikthiuk R**	**4.31**	**4**		**Pn**		**12 43 54.7**	**+0.4**
O15K	**Ungalikthiuk R**	**4.31**	**4**	IAML			12 45 19.8	
	comp=E,868nm,0.7s							
O15K	**Ungalikthiuk R**	**4.31**	**4**	P	**Pn**		**12 43 54.3**	**0.0**
	baz=184,SNR=135							
Q16K	**King Salmon**	**4.31**	**27**	P	**Pn**		**12 43 54.9**	**+0.6**
	baz=210,SNR=139							
ACHA	**Angle Creek He**	**4.34**	**38**		**Pn**		**12 43 55.9**	**+1.0**
P16K	**Nushagak River**	**4.35**	**16**		**Pn**		**12 43 55.5**	**+0.7**
P16K				IAML			12 45 48.7	
	comp=N,2μm,0.9s							
P16K	**Nushagak River**	**4.35**	**16**	P	**Pn**		**12 43 55.2**	**+0.4**
	baz=198,SNR=65							
O14K	**Tigyukauivet M**	**4.40**	**354**	Pn	**Pn**		**12 43 55.9**	**+0.3**
O14K	**Tigyukauivet M**	**4.40**	**354**	P	**Pn**		**12 43 55.3**	**-0.2**
	baz=173,SNR=104							
KAKN	**Katmai Knife C**	**4.50**	**39**		**Pn**		**12 43 58.2**	**+1.2**
OHAK	**Old Harbor**	**4.61**	**57**		**Pn**		**12 43 58.0**	**-0.4**
OHAK	**Old Harbor**	**4.61**	**57**	IAML			12 45 13.5	
	comp=N,929nm,1.1s							
OHAK	**Old Harbor**	**4.61**	**57**	P	**Pn**		**12 43 58.2**	**-0.2**
	baz=242,SNR=29							
KAWH	**Katmai**	**4.66**	**39**		**Pn**		**12 43 60.0**	**+0.8**
OKFG	**Magazine Ridge**	**4.67**	**255**		**Pn**		**12 44 00.5**	**+1.2**
OKTU	**Okmok Mt. Tuli**	**4.76**	**255**		**Pn**		**12 44 01.8**	**+1.3**
OKNC	**Okmok New Cone**	**4.78**	**256**		**Pn**		**12 44 02.0**	**+1.2**
KARR	**Katmai Rainbow**	**4.78**	**39**		**Pn**		**12 44 01.7**	**+0.9**
Q18K	**Katmai Hardscr**	**4.78**	**36**		**Pn**		**12 44 01.7**	**+0.8**
Q18K	**Katmai Hardscr**	**4.78**	**36**	P	**Pn**		**12 44 01.8**	**+0.9**
	baz=220,SNR=161							
P17K	**Kvichak River**	**4.82**	**25**		**Pn**		**12 44 02.6**	**+1.3**
P17K	**Kvichak River**	**4.82**	**25**	P	**Pn**		**12 44 01.7**	**+0.5**
	baz=208,SNR=62							
KAHG	**Katmai Hook Gl**	**4.83**	**39**		**Pn**		**12 44 02.4**	**+0.9**
O16K	**Kokwok River B**	**4.87**	**14**		**Pn**		**12 44 02.3**	**+0.2**
O16K	**Kokwok River B**	**4.87**	**14**	IAML			12 45 35.4	
	comp=N,598nm,0.8s							
O16K				IAML			12 45 41.4	
	comp=E,686nm,0.8s							
O16K	**Kokwok River B**	**4.87**	**14**	P	**Pn**		**12 44 02.1**	**+0.1**
	baz=195,SNR=78							
N14K	**Kuskokwak Cree**	**5.09**	**353**		**Pn**		**12 44 05.1**	**+0.1**
N14K	**Kuskokwak Cree**	**5.09**	**353**	IAML			12 46 07.9	
	comp=N,1μm,1.5s							
N14K	**Kuskokwak Cree**	**5.09**	**353**	P	**Pn**		**12 44 04.9**	**-0.1**
	baz=171,SNR=123							
O17K	**Koliganek Bris**	**5.21**	**19**	P	**Pn**		**12 44 06.6**	**0.0**
	baz=201,SNR=59							
KDAK	**Kodiak Island**	**5.21**	**53**	Pn	**Pn**		**12 44 07.1**	**+0.4**
	comp=N,4.9nm,0.3s,baz=235,slow=0.1,SNR=142							
KDAK					Sn	Sn	**12 45 02.4**	**-3.0**
	comp=N,13nm,0.3s,baz=196,slow=16,SNR=3.9							
KDAK					LR	LR	12 46 22.3	
	comp=N,3μm,20.0s,baz=229,slow=40 comp=N,43nm,0.5s							
KDAK	**Kodiak Island**	**5.21**	**53**	i/P	**Pn**		**12 44 06.5**	**-0.2**
KDAK	**Kodiak Island**	**5.21**	**53**		**Pn**		**12 44 06.8**	**+0.2**
KDAK				IAML			12 45 34.7	
	comp=N,545nm,0.9s							
KDAK				IAML			12 45 46.4	
	comp=N,536nm,1.1s							
KDAK	**Kodiak Island**	**5.21**	**53**	P	**Pn**		**12 44 07.0**	**+0.4**
	baz=239							
KDAK	**Kodiak Island**	**5.21**	**53**	P	**Pn**		**12 44 08.6**	**+1.9**
N15K	**Kwethluk River**	**5.29**	**2**		**Pn**		**12 44 07.8**	**-0.1**
N15K	**Kwethluk River**	**5.29**	**2**	IAML			12 45 49.1	
	comp=N,641nm,0.9s							
N15K				IAML			12 46 03.8	
	comp=E,1μm,1.1s							
N15K	**Kwethluk River**	**5.29**	**2**	P	**Pn**		**12 44 07.6**	**-0.2**
	baz=181,SNR=210							
P18K	**Big Mountain,**	**5.31**	**30**		**Pn**		**12 44 08.7**	**+0.6**
P18K	**Big Mountain,**	**5.31**	**30**	P	**Pn**		**12 44 08.3**	**+0.2**
	baz=214,SNR=49							
Q19K	**Cape Douglas,**	**5.47**	**40**		**Pn**		**12 44 11.1**	**+0.8**
Q19K	**Cape Douglas,**	**5.47**	**40**	P	**Pn**		**12 44 10.6**	**+0.3**
	baz=225,SNR=24							
N16K	**Nishlik Lake**	**5.66**	**8**		**Pn**		**12 44 13.2**	**+0.3**
N16K	**Nishlik Lake**	**5.66**	**8**	P	**Pn**		**12 44 13.0**	**+0.1**
	baz=189,SNR=257							
O18K	**Koktuh Hills**	**5.71**	**27**	P	**Pn**		**12 44 13.8**	**+0.3**
	baz=211,SNR=158							
M13K	**Dall Lake**	**5.76**	**345**		**Pn**		**12 44 14.6**	**+0.4**
M13K	**Dall Lake**	**5.76**	**345**	P	**Pn**		**12 44 14.3**	**+0.1**
	baz=162,SNR=18							
M15K	**Kasigluk River**	**5.82**	**358**		**Pn**		**12 44 14.8**	**-0.2**
M15K	**Kasigluk River**	**5.82**	**358**	P	**Pn**		**12 44 14.4**	**-0.7**
	baz=178,SNR=54							
N17K	**Nushagak Hills**	**5.90**	**16**	P	**Pn**		**12 44 16.4**	**+0.3**
	baz=198,SNR=76							
M14K	**Bethel**	**5.94**	**352**		**Pn**		**12 44 16.4**	**-0.2**
M14K	**Bethel**	**5.94**	**352**	P	**Pn**		**12 44 16.4**	**-0.2**
	baz=171,SNR=151							
SPIA	**Saint Paul Isl**	**5.99**	**296**		**Pn**		**12 44 18.8**	**+1.4**
SPIA	**Saint Paul Isl**	**5.99**	**296**	P	**Pn**		**12 44 18.2**	**+0.9**
	baz=108,SNR=18							
P19K	**Oil Pt**	**6.14**	**36**	P	**Pn**		**12 44 20.8**	**+1.3**
	baz=222							
M16K	**Timber Creek**	**6.19**	**6**		**Pn**		**12 44 20.4**	**+0.2**
M16K	**Timber Creek**	**6.19**	**6**	P	**Pn**		**12 44 20.4**	**+0.2**
	baz=187,SNR=53							
O19K	**Port Alsworth**	**6.23**	**29**		**Pn**		**12 44 22.1**	**+1.5**
O19K	**Port Alsworth**	**6.23**	**29**	P	**Pn**		**12 44 21.3**	**+0.6**
	baz=214,SNR=59							
N18K	**Kilae Creek**	**6.28**	**21**	P	**Pn**		**12 44 21.7**	**+0.4**
	baz=204,SNR=24							
M11K	**Mekoryuk**	**6.33**	**333**	P	**Pn**		**12 44 22.1**	**+0.1**
	baz=148							
ILSW	**Iliamna Southw**	**6.42**	**34**	Pn	**Pn**		**12 44 25.1**	**+1.7**
ILS	**Iliamna Low So**	**6.43**	**35**		**Pn**		**12 44 25.1**	**+1.7**
IVE	**Iliamna Volcan**	**6.49**	**35**		**Pn**		**12 44 25.5**	**+1.1**
L14K	**Kuka Creek**	**6.58**	**350**		**Pn**		**12 44 25.1**	**-0.3**
L14K	**Kuka Creek**	**6.58**	**350**	P	**Pn**		**12 44 25.4**	**-0.1**
	baz=168,SNR=59							
O20K	**Slope Mountain**	**6.67**	**36**	P	**Pn**		**12 44 26.7**	**-0.1**
	baz=222,SNR=8.9							
M17K	**Holitna River**	**6.71**	**12**		**Pn**		**12 44 27.5**	**+0.3**
M17K	**Holitna River**	**6.71**	**12**	P	**Pn**		**12 44 27.4**	**+0.1**
	baz=194,SNR=63							
N19K	**Bonanza Creek**	**6.71**	**25**	P	**Pn**		**12 44 28.8**	**+1.4**
	baz=210,SNR=126							
CNPM	**China Poot**	**6.79**	**43**		**Pn**		**12 44 29.4**	**+0.9**
L15K	**Ungalak Mounta**	**6.83**	**356**		**Pn**		**12 44 27.9**	**-1.0**
L15K	**Ungalak Mounta**	**6.83**	**356**	P	**Pn**		**12 44 27.9**	**-1.0**
	baz=174,SNR=28							
L16K	**Owhat River**	**6.86**	**4**		**Pn**		**12 44 29.4**	**+0.2**
L16K	**Owhat River**	**6.86**	**4**	P	**Pn**		**12 44 29.1**	**-0.1**
	baz=184,SNR=36							
RED	**Redoubt Volcan**	**6.88**	**33**		**Pn**		**12 44 31.5**	**+1.9**
NCT	**North Crescent**	**6.94**	**32**		**Pn**		**12 44 32.7**	**+2.2**
M18K	**Stony River**	**7.04**	**18**	P	**Pn**		**12 44 31.9**	**+0.2**
	baz=202,SNR=122							
BRLK	**Bradley Lake**	**7.08**	**43**		**Pn**		**12 44 32.7**	**+0.3**
RDT	**Redoubt**	**7.11**	**34**		**Pn**		**12 44 33.8**	**+1.0**
BRSE	**Bradley Lake S**	**7.13**	**43**		**Pn**		**12 44 33.5**	**+0.5**
BRSE	**Bradley Lake S**	**7.13**	**43**	P	**Pn**		**12 44 33.0**	**+0.1**
	baz=231,SNR=18							
L17K	**Donlin**	**7.34**	**8**		**Pn**		**12 44 35.3**	**-0.7**
L17K	**Donlin**	**7.34**	**8**	P	**Pn**		**12 44 35.7**	**-0.2**
	baz=189,SNR=25							
K13K	**Kusilvak Mount**	**7.41**	**344**		**Pn**		**12 44 36.5**	**-0.3**
K13K	**Kusilvak Mount**	**7.41**	**344**	P	**Pn**		**12 44 36.3**	**-0.5**
	baz=198,SNR=39							
K15K	**Wolf Creek Mou**	**7.45**	**356**		**Pn**		**12 44 37.5**	**+0.2**
K15K	**Wolf Creek Mou**	**7.45**	**356**	P	**Pn**		**12 44 37.1**	**-0.2**
	baz=175,SNR=23							
L18K	**Granite Mounta**	**7.60**	**13**		**Pn**		**12 44 39.5**	**+0.1**
L18K	**Granite Mounta**	**7.60**	**13**	P	**Pn**		**12 44 39.5**	**+0.1**
	baz=196,SNR=32							
SPNN	**North Nagishla**	**7.65**	**29**		**Pn**		**12 44 42.3**	**+1.9**
SPCR	**Spurr Chakacha**	**7.66**	**31**	P	**Pn**		**12 44 39.2**	**-1.1**
	baz=218							
M19K	**Big River Lodg**	**7.70**	**22**		**Pn**		**12 44 42.3**	**+1.5**
M19K	**Big River Lodg**	**7.70**	**22**	P	**Pn**		**12 44 40.7**	**-0.1**
	baz=206							
SLKM	**Skilak Lake**	**7.82**	**40**		**Pn**		**12 44 43.8**	**+1.3**
L19K	**White Mountain**	**7.86**	**19**		**Pn**		**12 44 43.3**	**+0.3**
L19K	**White Mountain**	**7.86**	**19**	P	**Pn**		**12 44 43.1**	**+0.1**
	baz=204,SNR=69							
SEW	**Seward**	**7.86**	**44**		**Pn**		**12 44 43.6**	**+0.6**
SEW	**Seward**	**7.86**	**44**	P	**Pn**		**12 44 43.3**	**+0.3**
	baz=233,SNR=11							
K17K	**Iditarod**	**7.92**	**7**		**Pn**		**12 44 44.3**	**+0.5**
K17K	**Iditarod**	**7.92**	**7**	P	**Pn**		**12 44 44.0**	**+0.2**
	baz=188							
M20K	**Styx River**	**7.97**	**26**		**Pn**		**12 44 46.1**	**+1.6**
M20K	**Styx River**	**7.97**	**26**	P	**Pn**		**12 44 44.7**	**+0.1**
	baz=211,SNR=67							
O22K	**Cooper Landing**	**7.99**	**41**	P	**Pn**		**12 44 44.6**	**-0.2**
	baz=230,SNR=21							
J14K	**Nanvaranak Lak**	**8.05**	**349**		**Pn**		**12 44 45.5**	**-0.1**
J14K	**Nanvaranak Lak**	**8.05**	**349**	P	**Pn**		**12 44 45.3**	**-0.2**
	baz=166,SNR=18							
RC01	**Rabbit Creek A**	**8.39**	**38**	P	**Pn**		**12 44 50.3**	**+0.1**
	baz=227							
J16K	**Anvik River**	**8.42**	**359**		**Pn**		**12 44 50.4**	**-0.3**
J16K	**Anvik River**	**8.42**	**359**	P	**Pn**		**12 44 50.3**	**-0.3**
	baz=179,SNR=24							
SKT	**Skwentna**	**8.48**	**29**		**Pn**		**12 44 52.6**	**+1.1**
SKT	**Skwentna**	**8.48**	**29**	P	**Pn**		**12 44 53.4**	**+1.9**
	baz=217,SNR=23							
J17K	**VABM Dome**	**8.56**	**4**		**Pn**		**12 44 51.8**	**-0.7**
J17K	**VABM Dome**	**8.56**	**4**	P	**Pn**		**12 44 52.3**	**-0.3**
	baz=185,SNR=10							
KOFP	**Korovin Flat P**	**8.58**	**258**		**Pn**		**12 44 54.0**	**+1.2**
P23K	**Montague Islan**	**8.66**	**49**		**Pn**		**12 44 54.1**	**+0.1**
P23K	**Montague Islan**	**8.66**	**49**	P	**Pn**		**12 44 54.0**	**+0.1**
	baz=239							
ATKA	**Atka Island**	**8.66**	**258**		**Pn**		**12 44 55.0**	**+1.0**
M22K	**Willow**	**8.73**	**34**	P	**Pn**		**12 44 54.7**	**-0.2**
	baz=222,SNR=24							
PWL	**Port Wells**	**8.76**	**42**		**Pn**		**12 44 55.2**	**-0.1**
PWL	**Port Wells**	**8.76**	**42**	P	**Pn**		**12 44 55.6**	**+0.3**
	baz=232,SNR=37							
J18K	**Innoko River**	**8.80**	**11**		**Pn**		**12 44 55.9**	**0.0**
J18K	**Innoko River**	**8.80**	**11**	P	**Pn**		**12 44 56.1**	**+0.3**
	baz=194,SNR=24							
Q23K	**Middleton Isla**	**8.87**	**53**	P	**Pn**		**12 44 57.4**	**+0.7**
	baz=245							
MID	**Middleton Isla**	**8.87**	**53**		**Pn**		**12 44 57.4**	**+0.6**
PMR	**Palmer**	**8.95**	**37**	P	**Pn**		**12 44 57.3**	**-0.6**
	baz=226,SNR=10.0							
I17K	**Unalakleet**	**9.02**	**359**		**Pn**		**12 44 59.1**	**+0.2**
I17K	**Unalakleet**	**9.02**	**359**	P	**Pn**		**12 44 58.2**	**-0.7**
	baz=179							
KNK	**Knik Glacier**	**9.07**	**39**	P	**Pn**		**12 44 59.6**	**0.0**
	baz=229,SNR=9.8							
PPLA	**Purkeypile**	**9.07**	**24**	P	**Pn**		**12 44 59.4**	**-0.2**
	baz=211,SNR=24							
K20K	**Telida**	**9.08**	**18**		**Pn**		**12 44 59.6**	**-0.1**
K20K	**Telida**	**9.08**	**18**	P	**Pn**		**12 44 59.5**	**-0.2**
	baz=204							
L22K	**Petersville**	**9.13**	**29**		**Pn**		**12 45 00.7**	**+0.3**
L22K	**Petersville**	**9.13**	**29**	P	**Pn**		**12 45 00.1**	**-0.3**
	baz=217,SNR=20							
CUT	**Chulitna**	**9.18**	**31**	P	**Pn**		**12 45 00.8**	**-0.3**
	baz=219							
HIN	**Hinchinbrook I**	**9.25**	**48**		**Pn**		**12 45 01.5**	**-0.6**
GLI	**Glacier Island**	**9.26**	**44**		**Pn**		**12 45 01.6**	**-0.6**
GLI	**Glacier Island**	**9.26**	**44**	P	**Pn**		**12 45 02.1**	**-0.1**
	baz=235,SNR=8.4							
SML	**Sawmill**	**9.37**	**37**		**Pn**		**12 45 03.4**	**-0.4**
SML	**Sawmill**	**9.37**	**37**	P	**Pn**		**12 45 03.6**	**-0.1**
	baz=228							
J19K	**Poorman**	**9.44**	**13**		**Pn**		**12 45 04.7**	**0.0**
J19K	**Poorman**	**9.44**	**13**	P	**Pn**		**12 45 04.5**	**-0.2**
	baz=197,SNR=37							
FID	**Port Fidalgo**	**9.44**	**46**		**Pn**		**12 45 03.4**	**-1.3**
CAST	**Castle Rocks**	**9.54**	**23**		**Pn**		**12 45 07.5**	**+1.5**
CAST	**Castle Rocks**	**9.54**	**23**	P	**Pn**		**12 45 05.9**	**-0.1**
	baz=210,SNR=31							
M23K	**Glacier View**	**9.58**	**39**		**Pn**		**12 45 06.2**	**-0.4**
M23K	**Glacier View**	**9.58**	**39**	P	**Pn**		**12 45 06.2**	**-0.4**
	baz=229,SNR=12							
EYAK	**Cordova Ski Ar**	**9.65**	**48**		**Pn**		**12 45 07.2**	**-0.3**
EYAK	**Cordova Ski Ar**	**9.65**	**48**	P	**Pn**		**12 45 07.6**	**+0.2**
	baz=240,SNR=20							
SCM	**Sheep Creek Mo**	**9.75**	**39**	P	**Pn**		**12 45 08.9**	**-0.1**
	baz=230,SNR=22							
H16K	**Elim**	**9.82**	**355**	P	**Pn**		**12 45 08.5**	**-1.3**
	baz=174							
J20K	**Nowinta River**	**9.83**	**16**		**Pn**		**12 45 09.6**	**-0.4**
J20K	**Nowinta River**	**9.83**	**16**	P	**Pn**		**12 45 09.6**	**-0.4**
	baz=201,SNR=24							
CHUM	**Lake Minchumin**	**9.90**	**21**	P	**Pn**		**12 45 10.9**	**0.0**
	baz=208							
KAIM	**Kayak Island**	**9.96**	**53**		**Pn**		**12 45 12.0**	**+0.2**
KAIM	**Kayak Island**	**9.96**	**53**	P	**Pn**		**12 45 11.8**	**0.0**
	baz=246,SNR=8.4							
TRF	**Thorofare Moun**	**10.01**	**27**	P	**Pn**		**12 45 12.0**	**-0.6**
	baz=215,SNR=49							
ANM	**Nome**	**10.02**	**348**	P	**Pn**		**12 45 12.3**	**-0.2**
	baz=163							
WAT1	**Susitna Watana**	**10.02**	**33**	P	**Pn**		**12 45 13.0**	**+0.3**
	baz=223							
GCSA	**Galena City Sc**	**10.04**	**9**	P	**Pn**		**12 45 13.4**	**+0.7**
	baz=191							
KLU	**Klutina**	**10.08**	**43**		**Pn**		**12 45 12.9**	**-0.6**
KLU	**Klutina**	**10.08**	**43**	P	**Pn**		**12 45 13.0**	**-0.4**
	baz=235,SNR=119							
H17K	**Granite Mounta**	**10.08**	**1**	P	**Pn**		**12 45 12.8**	**-0.5**
	baz=181,SNR=6.4							
WAT6	**Susitna Watana**	**10.11**	**35**	P	**Pn**		**12 45 13.6**	**-0.3**
	baz=226							
ADK	**Adak**	**10.20**	**260**	P	**Pn**		**12 45 16.0**	**+1.0**
ADK	**Adak**	**10.20**	**260**		**Pn**		**12 45 16.0**	**+1.0**
ADK	**Adak**	**10.20**	**260**	P	**Pn**		**12 45 17.0**	**+2.0**
G15K	**Niukluk**	**10.30**	**351**	P	**Pn**		**12 45 15.9**	**-0.4**
	baz=168,SNR=7.2							
H18K	**Honhosa River**	**10.34**	**5**	P	**Pn**		**12 45 17.2**	**+0.2**
	baz=186							
BMRM	**Bremner River**	**10.34**	**48**	P	**Pn**		**12 45 16.7**	**-0.4**
	baz=241,SNR=23							
M24K	**Tolsona, Glenn**	**10.35**	**40**	P	**Pn**		**12 45 16.6**	**-0.5**
	baz=232,SNR=47							
I20K	**Naaghedeneel**	**10.36**	**14**	P	**Pn**		**12 45 16.9**	**-0.3**
	baz=199							
KIWB	**Kanaga Island**	**10.47**	**260**	Pn	**Pn**		**12 45 20.2**	**+1.4**
DHY	**Denali Highway**	**10.57**	**34**	P	**Pn**		**12 45 19.6**	**-0.6**
	baz=225,SNR=24							
G16K	**Koyuk River**	**10.58**	**355**		**Pn**		**12 45 20.4**	**+0.2**
G16K	**Koyuk River**	**10.58**	**355**	P	**Pn**		**12 45 20.1**	**-0.1**
	baz=174							
MCK	**McKinley**	**10.60**	**29**	P	**Pn**		**12 45 19.9**	**-0.6**
	baz=218,SNR=18							
G17K	**Kiwalik Mounta**	**10.64**	**359**	P	**Pn**		**12 45 20.5**	**-0.6**
	baz=179							
N25K	**Chitina, Valde**	**10.67**	**45**	P	**Pn**		**12 45 20.8**	**-0.8**
	baz=238,SNR=27							
H19K	**Roundabout Mou**	**10.84**	**9**	P	**Pn**		**12 45 23.2**	**-0.6**
	baz=192,SNR=23							
HARP	**HAARP**	**10.90**	**40**	P	**Pn**		**12 45 24.1**	**-0.6**
	baz=233							
CRQE	**Cirque**	**10.91**	**50**	P	**Pn**		**12 45 24.6**	**-0.2**
	baz=245,SNR=12							
H20K	**Anotleneega Mo**	**10.97**	**12**	P	**Pn**		**12 45 24.9**	**-0.7**
	baz=197,SNR=28							
F14K	**Arctic Creek**	**11.02**	**347**	P	**Pn**		**12 45 25.8**	**-0.3**
	baz=162							
F15K	**North Star Dit**	**11.05**	**351**		**Pn**		**12 45 28.0**	**+1.4**
F15K	**North Star Dit**	**11.05**	**351**	P	**Pn**		**12 45 27.1**	**+0.5**
	baz=167,SNR=8.4							
G18K	**Tagagawik**	**11.07**	**4**	P	**Pn**		**12 45 27.9**	**+1.0**
	baz=185,SNR=21							
PAX	**Paxson**	**11.15**	**37**	P	**Pn**		**12 45 27.4**	**-0.7**
	baz=230,SNR=63							
MCARA	**McCarthy VSAT**	**11.22**	**48**	P	**Pn**		**12 45 28.4**	**-0.5**
	baz=242							
MLY	**Manley**	**11.24**	**21**	P	**Pn**		**12 45 28.3**	**-1.0**
	baz=210,SNR=9.3							
NEA2	**Nenana**	**11.25**	**26**	P	**Pn**		**12 45

C16K Lisburne Hills 13.63 352 P Pn 12 46 02.1 +0.4
baz=168
S31K Pelican 13.68 67 P Pn 12 46 03.8 +1.3
baz=267
D19K Kuna River 13.69 4 P Pn 12 46 04.3 +1.7
baz=185
C17K DeLong Mountai 13.70 356 P Pn 12 46 03.7 +1.0
baz=173
PLBC Pleasant Camp 13.76 61 P Pn 12 46 04.8 +1.2
baz=261
C18K Utukok River 13.81 359 P Pn 12 46 05.5 +1.2
baz=178,SNR=7.5
E22K Anaktuvuk Pass 13.88 13 P Pn 12 46 06.9 +1.7
baz=201
N30M Aishikik Lake 13.88 52 P Pn 12 46 05.6 +0.3
baz=252
E21K Killik River 13.92 10 P Pn 12 46 07.0 +1.2
baz=195
F24K Squaw Lake 13.98 20 P Pn 12 46 06.5 -0.1
baz=211
D20K Etivluk River 13.98 6 P Pn 12 46 08.3 +1.7
baz=189
DAWY Dawson 14.00 41 P Pn 12 46 06.8 -0.2
baz=239,SNR=17
L29M L29M 14.04 45 P Pn 12 46 06.9 -0.6
baz=244,SNR=12
I27K Kandik River 14.14 33 P Pn 12 46 07.6 -1.1
baz=229,SNR=10.0
E23K Chandalar 14.14 17 P Pn 12 46 08.1 -0.7
baz=206,SNR=14
O30N Mendenhall 14.16 56 P Pn 12 46 08.7 -0.3
baz=256,SNR=10
SIT Sitka 14.16 71 P Pn 12 46 09.0 -0.1
baz=272
C19K Lookout Ridge 14.27 1 P Pn 12 46 09.8 -0.7
baz=182
SKAG Skagway 14.29 61 P Pn 12 46 09.9 -0.9
baz=262
E24K Your Creek 14.35 18 P Pn 12 46 11.8 +0.2
baz=209
M30M Minto, Yukon 14.39 48 P Pn 12 46 11.4 -0.7
baz=248,SNR=23
G26K Porcupine Rive 14.46 27 P Pn 12 46 12.2 -0.8
baz=221,SNR=12
N31M Braeburn, Yuko 14.49 53 P Pn 12 46 13.1 -0.4
baz=254,SNR=10
F25K Christian Rive 14.52 23 P Pn 12 46 13.0 -0.8
baz=216,SNR=15
C21K Knifeblade Rid 14.54 8 P Pn 12 46 13.5 -0.6
baz=193,SNR=16
S32K Killisnoo 14.56 69 P Pn 12 46 14.8 +0.4
baz=271,SNR=14
H27K Steamboat Moun 14.58 31 P Pn 12 46 13.8 -0.9
baz=228,SNR=12
I28M Miner Creek 14.59 35 P Pn 12 46 13.6 -1.3
baz=233,SNR=30
R32K Eaglecrest 14.60 66 P Pn 12 46 14.2 -0.8
baz=268,SNR=17
K29M Barlow Dome 14.62 43 P Pn 12 46 14.3 -0.9
baz=243,SNR=130
TOLK Toolik Lake Re 14.67 16 P Pn 12 46 15.0 -0.9
baz=205,SNR=7.6
WHY Whitehorse 14.71 57 P Pn 12 46 16.2 -0.4
baz=258,SNR=8.7
D23K Nanushuk River 14.81 14 P Pn 12 46 16.8 -0.9
baz=202,SNR=8.7
G27K Doyon Strip 14.94 30 P Pn 12 46 18.2 -1.3
baz=226,SNR=18
F26K Sheenjek River 14.94 24 P Pn 12 46 18.9 -0.6
baz=219
E25K Arctic Village 14.96 22 P Pn 12 46 19.0 -0.8
baz=215,SNR=22
B21K Ikpikpuk River 15.01 8 P Pn 12 46 19.4 -0.9
baz=193
I29M Ogilvie Camp, 15.09 37 P Pn 12 46 21.4 -0.1
baz=236,SNR=18
P32M Atlin 15.12 61 P Pn 12 46 22.0 +0.1
baz=264,SNR=6.9
SHEM Shemya Is, Ala 15.21 272 LR LR 12 52 49.9
comp=E,665nm,19.4s,baz=82,slow=40
B20K Meade River 15.24 4 P Pn 12 46 23.0 -0.3
baz=187
D24K Happy Valley 15.25 16 P Pn 12 46 22.9 -0.6
baz=206
M31M Drury Creek, Y 15.32 51 P Pn 12 46 24.5 0.0
baz=253,SNR=18
J30M Hart River 15.41 41 Pn 12 46 26.5 +0.7
J30M Hart River 15.41 41 P Pn 12 46 25.1 -0.7
baz=242,SNR=55
U33K Whale Pass 15.45 74 P Pn 12 46 26.2 +0.1
baz=277
H29M Whitestone 15.56 34 P Pn 12 46 25.9 -1.7
baz=234,SNR=48
C23K Itkillik River 15.63 13 Pn Pn 12 46 28.4 0.0
C23K Itkillik River 15.63 13 P Pn 12 46 28.4 0.0
baz=201,SNR=19
P33M Teslin, Yukon 15.65 59 P Pn 12 46 28.7 -0.1
baz=262,SNR=12
N32M Quiet Lake 15.67 55 P Pn 12 46 29.1 0.0
baz=259,SNR=5.2
I30M Mount Dempster 15.71 39 IAmb IAmb 12 46 36.0
comp=Z,76nm,0.8s
I30M Mount Dempster 15.71 39 P Pn 12 46 29.5 -0.1
baz=240,SNR=106
Q32M Nakina River 15.81 64 P Pn 12 46 31.4 +0.4
baz=267,SNR=10
B22K Teshekpuk Lake 15.81 9 P Pn 12 46 29.9 -0.8
baz=195
D25K Kavik River 15.82 18 P Pn 12 46 30.3 -0.5
baz=211,SNR=10
WRAK Wrangell Islan 15.85 73 P Pn 12 46 31.7 +0.5
baz=276
E27K Coleen River 15.95 26 P Pn 12 46 31.6 -0.9
baz=222
F28M Old Crow 16.00 29 P Pn 12 46 33.6 +0.4
baz=227,SNR=12
G29M Pine Creek 16.09 33 IAmb IAmb 12 46 38.6
comp=Z,80nm,0.8s
G29M Pine Creek 16.09 33 P Pn 12 46 34.5 +0.1
baz=232,SNR=74
EPYK Eagle Plains 16.20 35 P Pn 12 46 36.1 +0.4
baz=236,SNR=58
A22K Sinclair Lake 16.34 6 P Pn 12 46 37.7 +0.3
baz=191
S34M Telegraph Cree 16.40 67 P Pn 12 46 38.6 +0.3
baz=272,SNR=8.8
V35K Ketchikan 16.41 77 P Pn 12 46 38.8 +0.3
baz=280,SNR=9.1
H02S1 DAWSON INLET T 16.43 84 T T 13 03 08.8
SNR=6.6
H02S2 DAWSON INLET T 16.43 84 T T 13 03 09.4
SNR=6.5
C27K Jago River 16.59 21 P Pn 12 46 40.6 0.0
baz=215
C26K Camden Bay 16.60 19 P Pn 12 46 40.3 -0.3
baz=212
G30M tAoh Zraii Nji 16.71 34 P Pn 12 46 41.9 -0.2
baz=235,SNR=30
H31M Peel River 16.74 39 P Pn 12 46 42.4 -0.1
baz=242,SNR=56
E28M Babbage River 16.78 27 P Pn 12 46 42.7 -0.2
baz=225
MMPY Sheldon Lake, 16.84 51 P Pn 12 46 43.7 -0.1
baz=256,SNR=34
D27M Malcolm River 16.89 24 P Pn 12 46 44.0 -0.4
baz=221,SNR=6.3
T35M Bob Quinn 16.94 71 P Pn 12 46 45.3 +0.2
baz=276
DLBC Dease Lake 16.97 66 P Pn 12 46 46.1 +0.6
comp=Z,0.2nm,0.3s,baz=237,slow=12,SNR=10
DLBC LR LR 12 52 31.3
comp=Z,514nm,21.1s,baz=264,slow=34
comp=Z,4.2nm,0.9s
DLBC Dease Lake 16.97 66 P Pn 12 46 44.9 -0.6
baz=271
E29M Blow River 17.07 29 P Pn 12 46 45.8 -0.8
baz=229,SNR=12
F30M Barrier River 17.21 33 P Pn 12 46 47.8 -0.5
baz=234,SNR=25
G31M Satah River 17.32 36 P Pn 12 46 48.4 -1.3
baz=238,SNR=52
D28M Stokes Point 17.50 26 P Pn 12 46 51.2 -0.6
baz=225
WTLY Watson Lake, Y 17.64 60 P Pn 12 46 53.6 -0.2
baz=267,SNR=7.9
F31M Tsiigehtchic 17.77 35 P Pn 12 46 53.6 -1.6
baz=238,SNR=11
INK Inuvik 18.31 32 P P 12 47 00.2 -1.4
comp=Z,1.5nm,0.3s,baz=245,slow=11,SNR=40
INK LR LR 12 55 05.0
comp=Z,1μm,18.9s,baz=232,slow=40
comp=Z,14nm,0.8s
INK Inuvik 18.31 32 P P 12 47 00.2 -1.4
baz=236,SNR=15
INK Inuvik 18.31 32 P P 12 46 58.9 -2.6
LIRD Liard River Hi 18.99 62 P P 12 47 08.8 -0.4
baz=271,SNR=5.8
BBB Bella Bella 19.27 85 LR LR 12 53 18.5
comp=Z,707nm,19.8s,baz=296,slow=32
BILL Bilibino 20.31 323 *i* P P 12 47 23.9 +0.4
BILL Bilibino 20.31 323 P P 12 47 23.1 -0.3
WRGLY Wrigley 20.46 51 IAmb IAmb 12 47 31.7
comp=Z,90nm,0.9s
WRGLY Wrigley 20.46 51 P P 12 47 24.5 -0.5
baz=263,SNR=18
C36M Paulatuk 21.82 34 P P 12 47 39.0 -0.7
C36M IAmb IAmb 12 47 54.6
comp=Z,55nm,0.7s
C36M Paulatuk 21.82 34 P P 12 47 38.3 -1.4
baz=247
PET Petropavlovsk 23.94 283 *e*P P 12 48 00.6 -0.7
PET *e*S S 12 52 14.7 -0.1
PET pmax pmax
comp=Z,300nm,2.2s
PET pmax pmax
comp=Z,100nm,8.6s
PET pmax pmax
comp=Z,128nm,1.2s
PET MLR MLR
comp=Z,200nm,16.0s
PET MLR MLR
comp=Z,300nm,15.0s
PET Petropavlovsk 23.94 283 P P 12 48 00.8 -0.5
PET Petropavlovsk 23.94 283 P P 12 48 00.9 -0.5
comp=Z,1μmcomp=Z,111nm,1.1s
PET Petropavlovsk 23.94 283 P P 12 48 00.6 -0.7
PEA0B Petropavlovsk- 24.45 283 *d* iP P 12 48 05.7 -0.3
PEA0B Petropavlovsk- 24.45 283 IAmb IAmb 12 48 08.2
comp=Z,36nm,0.7s
PETK Petropavlovsk- 24.45 283 P P 12 48 05.5 -0.5
comp=Z,23nm,0.5s,baz=76,slow=12,SNR=75
PETK LR LR 12 56 57.1
comp=Z,274nm,21.9s,baz=85,slow=35
comp=Z,23nm,0.5s
PETK Petropavlovsk- 24.45 283 P P 12 48 05.2 -0.8
YKAW3 Yellowknife Wh 24.48 53 P P 12 48 07.2 +1.0
YKA Yellowknife Ar 24.49 53 P P 12 48 05.8 -0.5
comp=Z,6.2nm,0.8s,baz=268,slow=7.4,SNR=34
YKA PcP PcP 12 51 43.4 -0.2
comp=Z,2.6nm,0.7s,baz=296,slow=2.0,SNR=5.4
YKA pPcP 12 51 56.2
comp=Z,1.5nm,0.5s,baz=272,slow=2.0,SNR=7.0
YKA LR LR 12 58 15.1
comp=Z,376nm,20.4s,baz=238,slow=38
comp=Z,6.2nm,0.8s
YKA Yellowknife Ar 24.49 53 P P 12 48 06.7 +0.4
YKA Yellowknife Ar 24.49 53 P P 12 48 06.7 +0.4
YKAW1 Yellowknife Wh 24.55 53 P P 12 48 08.1 +1.3
SEY Seymchan 25.14 308 LR LR 12 59 13.6
comp=Z,1μm,18.7s,baz=92,slow=39
SEY Seymchan 25.14 308 ⇓ *i* P P 12 48 10.9 -1.3
SEY pmax pmax
comp=Z,7.0nm,0.9s
MA2 Magadan 26.35 300 LR LR 13 00 01.9
comp=Z,358nm,19.3s,baz=91,slow=39
MA2 Magadan 26.35 300 *i* P P 12 48 24.5 +1.3
MA2 pmax pmax
comp=Z,19nm,1.1s
NEW Newport 27.32 86 LR LR 12 57 48.3
comp=Z,512nm,21.3s,baz=294,slow=33
NEW Newport 27.32 86 P P 12 48 33.2 +1.1
NEW pmax pmax
comp=Z,9.0nm,0.7s
NEW Newport 27.32 86 P P 12 48 33.2 +1.1
NEW Newport 27.32 86 P pP 12 48 42.8 -0.3
YBH Yreka Blue Hor 27.92 102 LR LR 12 57 19.9
comp=Z,965nm,21.4s,baz=312,slow=31
WVOR Wild Horse Val 29.79 97 P pP 12 49 06.6 +1.3
HLID Hailey 31.52 92 P pP 12 49 20.0 -0.7
RES Resolute Bay 31.72 27 LR LR 13 03 12.5
comp=Z,331nm,20.6s,baz=240,slow=39
NVAR Mina Array Bea 32.64 103 P P 12 49 22.9 +3.5
comp=Z,0.6nm,0.7s,baz=306,slow=8.0,SNR=8.4
NVAR PcP PcP 12 52 05.7 +1.1
comp=Z,2.1nm,0.7s,baz=301,slow=2.4,SNR=5.5
NVAR pPcP 12 52 18.2
comp=Z,2.5nm,0.6s,baz=296,slow=2.2,SNR=5.6
NVAR LR LR 13 00 15.7
comp=Z,576nm,21.8s,baz=322,slow=32
NVAR Mina Array Bea 32.64 103 P P 12 49 19.9 +0.5
ELK Elko 32.82 97 LR LR 13 00 54.7
comp=Z,567nm,20.6s,baz=304,slow=33
ELK Elko 32.82 97 IAmb IAmb 12 49 35.2
comp=Z,20nm,1.2s
TIXI Tiksi 33.43 327 LR LR 13 04 53.9
comp=Z,351nm,18.1s,baz=99,slow=40
TIXI Tiksi 33.43 327 ⇓ *i* P P 12 49 26.0 +0.3
TIXI pmax pmax
comp=Z,14nm,1.1s
TYV Tymovskoe 33.80 287 *e*P P 12 49 28.6 -0.5
TYV *e*S S 12 54 49.6 -0.3
TYV pmax pmax
comp=Z,50nm,0.9s
TYV pmax pmax
comp=Z,100nm,5.8s
TYV smax smax
comp=E,5.0nm,0.9s
TYV smax smax
comp=N,300nm,9.9s
TYV smax smax
comp=E,400nm,9.9s
AHID Auburn Hatcher 33.92 90 P pP 12 49 42.6 +0.9
HWUT Hardware Ranch 34.38 92 P pP 12 49 45.9 +0.1
DUG Dugway, Tooele 34.58 95 P pP 12 49 49.1 +1.7
PDAR Pinedale Array 34.81 89 P P 12 49 40.0 +1.8
comp=E,1.5nm,0.6s,baz=292,slow=4.0,SNR=14
PDAR pP pP 12 49 50.4 +0.9
comp=E,1.4nm,0.6s,baz=308,slow=7.9,SNR=11
PDAR LR LR 13 03 26.9
comp=E,81nm,18.6s,baz=298,slow=35
TPNV Topopah Spring 34.84 102 P P 12 49 40.0 +1.5
TPNV pmax pmax
comp=Z,34nm,1.1s
TPNV Topopah Spring 34.84 102 P P 12 49 40.0 +1.5
TPNV IAmb IAmb 12 49 52.8
comp=Z,34nm,1.1s
UGL Uglegorsk 35.04 285 *e*P P 12 49 40.7 +0.9
UGL *e*S S 12 55 06.7 -2.3
UGL pmax pmax
comp=Z,200nm,0.9s
YAK Yakutsk 35.59 310 LR LR 13 05 26.5
comp=Z,901nm,21.0s,baz=75,slow=38
YAK Yakutsk 35.59 310 *e*P P 12 49 41.6 -2.8
YAK *e*PPP PPP 12 51 07.8
YAK *e* 12 52 12.8
YAK *e*S S 12 55 10.7 -6.4
YAK *e*SSS SSS 12 57 37.8
YAK pmax pmax
comp=Z,22nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=Z,101nm,4.7s
YAK pmax pmax
comp=N,101nm,7.4s
YAK pmax pmax
comp=E,60nm,6.0s
YAK smax smax
comp=N,51nm,4.2s
YAK smax smax
comp=E,29nm,4.5s
YAK MLR MLR
comp=N,198nm,23.0s
YAK Yakutsk 35.59 310 P P 12 49 40.9 -3.5
YSS Yuzhno-Sakhali 35.81 281 *e*P P 12 49 46.5 0.0
YSS *e*S S 12 55 20.7 -0.2
YSS pmax pmax
comp=Z,20nm,0.8s
YSS pmax pmax
comp=Z,100nm,3.6s
YSS MLR MLR
comp=Z,200nm,13.0s
YSS Yuzhno-Sakhali 35.81 281 P P 12 49 46.5 0.0
YSS IAmb IAmb 12 49 48.9
comp=Z,18nm,0.8s
YSS Yuzhno-Sakhali 35.81 281 P P 12 49 46.8 +0.3
ILON Igloolik, Nuna 36.49 36 P P 12 49 52.1 +0.1
PFO Pinyon Flats O 37.15 107 LR LR 13 02 34.3
comp=Z,353nm,21.1s,baz=316,slow=32
RSSD Black Hills 37.16 83 P P 12 49 59.5 +1.1
RSSD pmax pmax
comp=Z,9.0nm,0.7s
RSSD Black Hills 37.16 83 P P 12 49 59.5 +1.1
O20A White River Ci 37.26 91 IAmb IAmb 12 50 12.4
comp=Z,24nm,0.8s
JKA Kamikawa-asahi 37.56 278 P P 12 50 00.7 -0.7
JKA IAmb IAmb 12 50 02.8
comp=Z,23nm,0.9s
JKA Kamikawa-asahi 37.56 278 P P 12 50 01.1 -0.4
ASAJ Asahikawa 37.56 278 LR LR 13 07 10.2
comp=Z,163nm,18.9s,baz=60,slow=39
ASAJ Asahikawa 37.56 278 P P 12 50 00.7 -0.7
ASAJ pmax pmax
comp=Z,23nm,0.9s
E28A Huff 37.62 77 IAmb IAmb 12 50 15.3
comp=Z,30nm,0.9s
PV18 Skein Mesa, Pa 38.13 94 IAmb IAmb 12 50 20.3
comp=Z,21nm,0.7s
ULM Lac du Bonnet 38.23 69 P P 12 50 07.0 0.0
comp=Z,7.6nm,0.8s,baz=300,slow=7.8,SNR=12
ULM LR LR 13 06 03.1
comp=Z,438nm,18.7s,baz=324,slow=36
comp=Z,7.6nm,0.8s
ULM Lac du Bonnet 38.23 69 *c* iP P 12 50 08.3 +1.3
PV13 Radium Mtn., P 38.24 94 IAmb IAmb 12 50 20.7
comp=Z,27nm,0.7s
PV01 Paradox Valley 38.40 94 IAmb IAmb 12 50 23.0
comp=Z,14nm,0.7s
MVCO Mesa Verde 39.08 95 P pP 12 50 27.0 +1.1
AGMN Agassiz Nation 39.32 72 IAmb IAmb 12 50 28.5
comp=Z,28nm,1.0s
EPLO Experimental L 39.71 69 IAmb IAmb 12 50 32.5
comp=Z,25nm,1.2s
ZEA Zeya 40.49 299 *e*P P 12 50 25.0 -0.8
ZEA pmax pmax
comp=Z,10.0nm,0.6s
NEEM North Greenlan 41.00 18 *i* P P 12 50 29.8 -0.3
NEEM IAmb IAmb 12 50 30.8
comp=Z,26nm,1.0s
KULLO Kullorsuaq 41.30 23 *i* P P 12 50 32.0 -0.1
KULLO IAmb IAmb 12 50 33.1
comp=Z,16nm,0.9s
TUC Tucson 41.30 102 P pP 12 50 44.7 +0.6
ECSD EROS Data Cent 41.63 78 P pP 12 50 44.3 -2.4
ANMO Albuquerque 41.84 96 LR LR 13 06 52.7
comp=Z,183nm,19.5s,baz=310,slow=34
ANMO Albuquerque 41.84 96 *i* P P 12 50 40.3 +2.9
ANMO *i* *PP pP 12 50 49.8 +1.0
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO Albuquerque 41.84 96 P pP 12 50 48.9 +0.1
EYMN Ely 41.91 70 P P 12 50 38.3 +0.8
EYMN IAmb IAmb 12 50 50.0
comp=Z,27nm,0.9s
HEH HeiHe 42.34 295 *e*P P 12 50 38.5 -2.5
HEH sP sP 12 50 56.3 -0.9
HEH PcP PcP 12 52 32.8 -0.9
HEH pmax pmax
comp=Z,10.0nm,0.9s
HEH L L
comp=Z,100nm,15.1s
HEH L L
comp=Z,250nm,15.1s
HEH L L
comp=Z,310nm,16.2s
NOR Nord 42.36 7 P P 12 50 39.0 -1.8
NOR Nord 42.36 7 P P 12 50 39.0 -1.8
NOR Nord 42.36 7 *i* P P 12 50 40.6 -0.2
NOR IAmb IAmb 12 50 42.0
comp=Z,14nm,0.8s
UPNV Upernavik 42.53 25 *i* P P 12 50 40.6 -1.6
UPNV IAmb IAmb 12 50 43.5
comp=Z,11nm,0.6s
E38A The Farm, Brul 42.68 71 IAmb IAmb 12 50 56.5
comp=Z,28nm,0.7s
H11N2 WAKE ISLAND Hy 42.97 228 T T 13 36 45.0
baz=28,slow=76,SNR=369
H11N3 WAKE ISLAND Hy 42.98 228 T T 13 36 54.5
baz=28,slow=76,SNR=383
H11N1 WAKE ISLAND Hy 42.99 228 T T 13 36 48.8
baz=28,slow=76,SNR=333
USA0B Ussuriysk Arra 43.52 285 *i* P P 12 50 49.1 -1.5
USRK Ussuriysk Ar. 43.52 285 P P 12 50 48.3 -2.3
comp=Z,3.6nm,0.8s,baz=80,slow=7.6,SNR=5.2
USRK LR LR 13 10 36.2
comp=Z,182nm,18.9s,baz=47,slow=38
comp=Z,3.6nm,0.8s
FRB Frobisher Bay 43.71 40 LR LR 13 10 36.7
comp=Z,73nm,21.7s,baz=304,slow=38
FRB Frobisher Bay 43.71 40 P P 12 50 51.9 +0.1
FRB AP pP 12 51 03.3 0.0
FRB Frobisher Bay 43.71 40 P P 12 50 52.0 +0.1
FRB pP pP 12 51 03.3 0.0
N35A Tabor 44.03 81 IAmb IAmb 12 51 07.6
comp=Z,41nm,0.8s
H11S1 WAKE ISLAND Hy 44.14 228 T T 13 38 17.2
baz=28,slow=76,SNR=134
H11S2 WAKE ISLAND Hy 44.15 228 T T 13 38 16.9
baz=28,slow=76,SNR=156
H11S3 WAKE ISLAND Hy 44.15 228 T T 13 38 21.4
baz=28,slow=76,SNR=85
MNTX Cornudas Mount 44.82 98 P pP 12 51 13.7 +1.1
MJAR Matsushiro Arr 45.05 272 P P 12 51 01.8 -1.2
comp=Z,9.4nm,0.7s,baz=31,slow=6.1,SNR=23
MJAR LR LR 13 08 45.4
comp=Z,192nm,21.8s,baz=48,slow=35
comp=Z,9.4nm,0.7s
MJAR Matsushiro Arr 45.05 272 P P 12 51 02.8 -0.1
MJAR pmax pmax
comp=Z,27nm,1.5s
MJAR Matsushiro Arr 45.05 272 P P 12 51 02.8 -0.1
MJAR IAmb IAmb 12 51 04.4
comp=Z,27nm,1.5s
MAJO Matsushiro 45.05 272 ⇓ *i* P P 12 51 02.6 -0.4
MAJO pmax pmax
comp=Z,36nm,0.9s
MAJO Matsushiro 45.05 272 P P 12 51 02.6 -0.4
MAJO IAmb IAmb 12 51 05.1
comp=Z,36nm,0.9s
MAJO Matsushiro 45.05 272 P P 12 51 02.7 -0.3
MAJO Matsushiro 45.05 272 P P 12 51 02.4 -0.6
MJB9 Matsu-Tunnel 45.05 272 IAmb IAmb 12 51 06.1
comp=Z,34nm,0.9s
BNX BinXian 45.08 290 ⇓ P P 12 51 01.3 -1.7
BNX pmax pmax
comp=Z,16nm,0.9s
L40A Anamosa 45.74 76 IAmb IAmb 12 51 20.1
comp=Z,21nm,1.0s
I42A Draeger Farm, 45.84 73 IAmb IAmb 12 51 21.4
comp=Z,21nm,0.7s
P38A Dawn 46.05 80 IAmb IAmb 12 51 22.8
comp=Z,21nm,0.6s
JGF Kuroka 46.20 272 P P 12 51 12.2 +0.1
JGF Kuroka 46.20 272 P P 12 51 13.8 +1.7
KBS Kingsbay 46.36 2 *c* eP P 12 51 12.7 0.0
KBS pmax pmax
comp=Z,25nm,0.9s
KBS Kingsbay 46.36 2 P P 12 51 13.1 +0.4
KBS IAmb IAmb 12 51 14.7
comp=Z,27nm,0.9s
KBS Kingsbay 46.36 2 P P 12 51 13.5 +0.8
DAG Danmarks Havn 46.38 11 P P 12 51 11.2 -1.7
DAG Danmarks Havn 46.38 11 P P 12 51 12.0 -0.9
DAG Danmarks Havn 46.38 11 *i* P P 12 51 11.0 -1.9
DAG IAmb IAmb 12 51 13.6
comp=Z,38nm,1.0s
WMOK Wichita Mounta 46.42 89 P P 12 51 14.4 +0.6
WMOK pmax pmax
comp=Z,6.0nm,0.7s
WMOK Wichita Mounta 46.42 89 P P 12 51 14.3 +0.6
WMOK Wichita Mounta 46.42 89 P pP 12 51 25.4 +0.1
SUMG Summit 46.66 21 P P 12 51 15.7 +0.1
SUMG pmax pmax
comp=Z,44nm,1.6s
SUMG Summit 46.66 21 P P 12 51 15.7 +0.1
SUMG IAmb IAmb 12 51 17.6
comp=Z,44nm,1.6s
SUMG Summit 46.66 21 P P 12 51 14.3 -1.3

SUMG Summit 46.66 21 *i* P **P** **12 51 15.4 -0.3**
SUMG IAmb IAmb 12 51 17.8
comp=Z,7.7nm,0.8s
NRIK Noril'sk 46.68 333 P **P** **12 51 14.2 -1.2**
comp=Z,7.2nm,0.5s,baz=55,slow=8.0,SNR=11
NRIK LR LR 13 13 19.8
comp=Z,442nm,20.8s,baz=52,slow=39
comp=Z,7.2nm,0.5s
NRIK Noril'sk 46.68 333*c* P **P** **12 51 15.0 -0.3**
NRIK pmax pmax
comp=Z,9.0nm,0.8s
NRIK Noril'sk 46.68 333 P **P** **12 51 15.4 0.0**
NRIK IAmb IAmb 12 51 34.3
comp=Z,9.4nm,0.7s
HILR Hailar Array B 46.72 298 P **P** **12 51 14.8 -1.2**
comp=Z,0.6nm,0.3s,baz=56,slow=9.1,SNR=5.3
comp=Z,0.6nm,0.3s
E46A Sault Ste Mari 46.75 67 IAmb IAmb 12 51 28.6
comp=Z,24nm,1.0s
N41A Harden Midland 46.84 77 IAmb IAmb 12 51 29.4
comp=Z,17nm,0.7s
P40A Paris 46.96 80 IAmb IAmb 12 51 29.8
comp=Z,18nm,0.8s
SPITS Spitsbergen Ar 47.17 1 P **P** **12 51 17.9 -1.2**
comp=Z,18nm,1.0s,baz=15,slow=3.5,SNR=4.9
SPITS LR LR 13 13 51.6
comp=Z,127nm,18.3s,baz=356,slow=40
comp=Z,18nm,1.0s
SPITS Spitsbergen Ar 47.17 1 P **P** **12 51 18.0 -1.2**
CN2 Changchun 47.39 289 ⇑P **P** **12 51 21.3 +0.1**
CN2 *ep*P pP 12 51 33.0 +0.3
CN2 *e*S **S** **12 58 10.0 -2.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,100nm,6.0s
CN2 L L
comp=Z,200nm,19.0s
CN2 L L
comp=Z,200nm,19.0s
CN2 L L
comp=Z,200nm,21.0s
TX31 Lajitas Ar. Si 47.56 99 IAmb IAmb 12 51 36.6
comp=Z,58nm,1.9s
TXAR Lajitas Array 47.57 99 P **P** **12 51 25.1 +2.2**
comp=Z,0.8nm,0.6s,baz=302,slow=6.6,SNR=13
TXAR pP **pP** **12 51 35.6 +1.2**
comp=Z,4.2nm,0.7s,baz=302,slow=5.7,SNR=29
TXAR LR LR 13 10 01.2
comp=Z,406nm,20.8s,baz=308,slow=34
comp=Z,0.8nm,0.6s
SFJD Kangerlussuaq 47.64 30 LR LR 13 13 01.0
comp=Z,168nm,20.7s,baz=312,slow=38
SFJD Kangerlussuaq 47.64 30 P **P** **12 51 23.0 +0.2**
SFJD pmax pmax
comp=Z,33nm,0.8s
SFJD Kangerlussuaq 47.64 30 P **P** **12 51 23.0 +0.2**
SFJD Kangerlussuaq 47.64 30 P **P** **12 51 23.1 +0.2**
SFJD Kangerlussuaq 47.64 30 *i* P **P** **12 51 23.0 +0.2**
SFJD IAmb IAmb 12 51 24.5
comp=Z,35nm,0.8s
R40A Maddies Statio 47.68 81 IAmb IAmb 12 51 34.5
comp=Z,7.5nm,0.6s
LPIG La Paz 47.91 109 LR LR 13 09 26.1
comp=Z,103nm,19.5s,baz=344,slow=33
DBG Daneborg 48.34 13 *i* P **P** **12 51 26.2 -1.9**
DBG IAmb IAmb 12 51 28.9
comp=Z,17nm,0.8s
VLDQ Val d'Or 49.19 61 IAmb IAmb 12 51 45.5
comp=Z,20nm,1.0s
FCAR Ozark Folk Cen 49.44 83 IAmb IAmb 12 51 48.1
comp=Z,19nm,1.0s
MIAR Mount Ida 49.56 85 P **P** **12 51 38.3 +0.3**
MIAR pmax pmax
comp=Z,14nm,1.2s
MIAR Mount Ida 49.56 85 P **P** **12 51 38.3 +0.3**
MIAR IAmb IAmb 12 51 50.4
comp=Z,14nm,1.1s
MIAR Mount Ida 49.56 85 P pP 12 51 49.4 -0.2
JCJ Chichijima 49.69 260 LR LR 13 09 25.2
comp=Z,74nm,21.8s,baz=40,slow=32
SNY Shenyang 49.73 288 ⇓P **P** **12 51 40.0 +0.8**
SNY pmax pmax
comp=Z,27nm,0.9s
SCHQ Schefferville 49.83 49 P **P** **12 51 39.4 -0.4**
comp=Z,5.5nm,0.8s,baz=332,slow=7.3,SNR=6.5
SCHQ pP **pP** **12 51 50.5 -0.9**
comp=Z,8.5nm,0.6s,baz=305,slow=7.1,SNR=6.9
SCHQ LR LR 13 13 34.4
comp=Z,182nm,19.3s,baz=314,slow=37
comp=Z,5.5nm,0.8s
BUKO Buck Lake 49.95 65 IAmb IAmb 12 51 53.1
comp=Z,24nm,0.9s
KS19 Wonju Array Si 50.31 281 IAmb IAmb 12 51 45.7
comp=Z,22nm,1.1s
KSRS Korea Array 50.31 281 P **P** **12 51 43.3 -0.4**
comp=Z,111nm,0.9s,baz=51,slow=6.9,SNR=58
comp=Z,111nm,0.9s
O48B Farmland 50.34 74 P **P** **12 51 43.9 0.0**
KSAR Wonju Array Be 50.34 281 P **P** **12 51 42.9 -1.0**
KSAR Wonju Array Be 50.34 281 P **P** **12 51 42.9 -1.0**
SADO Sadowa 50.53 66 LR LR 13 13 40.7
comp=Z,144nm,19.8s,baz=62,slow=36
TJN Taejon 51.39 280 *e*P **P** **12 51 52.4 +0.6**
TJN pmax pmax
comp=Z,1.0nm,1.0s
SCO Scoresbysund 51.43 17 IAmb IAmb 12 52 08.8
comp=Z,56nm,1.8s
SCO Scoresbysund 51.43 17 *i* P **P** **12 51 52.1 +0.5**
SCO IAmb IAmb 12 51 52.6
comp=Z,6.8nm,0.8s
SOEG Soedalen 51.58 22 *i* P **P** **12 51 53.6 +0.9**
SOEG IAmb IAmb 12 51 54.5
comp=Z,18nm,0.8s
TRQ Mont Tremblant 51.92 62 P **P** **12 51 56.1 +0.3**
OXF Oxford 51.98 82 P **P** **12 51 56.6 +0.4**
OXF pmax pmax
comp=Z,58nm,1.2s
OXF Oxford 51.98 82 P **P** **12 51 56.6 +0.4**
R50A Paris 52.18 75 IAmb IAmb 12 52 09.7
comp=Z,17nm,0.8s
N53A Lisbon 52.34 71 IAmb IAmb 12 51 59.9
comp=Z,17nm,0.9s
XLT XiLinHaoTe 52.34 295 *e*P **P** **12 51 58.5 -0.4**
XLT sP sP 12 52 15.8 +0.5
XLT pmax pmax
comp=Z,22nm,0.9s
XLT L L
comp=Z,200nm,16.5s
XLT L L
comp=Z,250nm,20.9s
WBO Williamsburg 52.39 63 IAmb IAmb 12 52 11.1
comp=Z,18nm,0.7s
IVI Ivigtut 52.52 34 *i* P **P** **12 52 01.0 +1.2**
IVI IAmb IAmb 12 52 02.1
comp=Z,16nm,1.0s
CLTN Cedars of Leba 52.60 79 IAmb IAmb 12 52 14.0
comp=Z,23nm,1.1s
DL2 Dalian 52.82 287 *e*P **P** **12 52 03.3 +0.9**
DL2 sP **sP** **12 52 17.3 -1.5**
DL2 S **S** **12 59 26.0 -1.9**
DL2 pmax pmax
comp=Z,14nm,0.6s
DL2 pmax pmax
comp=Z,100nm,8.1s
DL2 L L
comp=Z,190nm,19.8s
DL2 L L
comp=Z,330nm,19.2s
DL2 L L
comp=Z,430nm,20.7s
S51A Beattyville 53.04 75 IAmb IAmb 12 52 15.9
comp=Z,13nm,0.8s
TLY Talaya 53.04 309*d* *i* P **P** **12 52 03.1 -0.8**
TLY pmax pmax
comp=Z,14nm,0.9s
CFNY Clifton-Fine, 53.08 64 IAmb IAmb 12 52 16.6
comp=Z,19nm,0.7s
NCB Newcomb 53.65 63 IAmb IAmb 12 52 20.8
comp=Z,32nm,1.4s
TZTN Tazewell 53.85 76 IAmb IAmb 12 52 22.1
comp=Z,12nm,0.9s
J59A Piesco 53.86 64 IAmb IAmb 12 52 22.1
comp=Z,11nm,0.7s
BINY Binghamton 53.97 66 IAmb IAmb 12 52 23.4
comp=Z,26nm,1.0s
M57A Sunshine Farm, 53.97 68 IAmb IAmb 12 52 28.3
comp=Z,33nm,1.3s
ZAK Zakamensk 54.12 308 *e*P **P** **12 52 10.9 -1.0**
ZAK pmax pmax
comp=Z,5.0nm,2.0s
ULN Ulaanbaatar 54.13 304 *e*P **P** **12 52 10.8 -1.3**
ULN pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 54.13 304 P **P** **12 52 11.6 -0.4**
ULN Ulaanbaatar 54.13 304 P **P** **12 52 11.0 -1.1**
TKL Tuckaleechee C 54.36 77 LR LR 13 15 09.1
comp=Z,376nm,19.5s,baz=331,slow=36
TKL Tuckaleechee C 54.36 77 IAmb IAmb 12 52 25.5
comp=Z,16nm,1.1s
SONM Songino Array 54.46 304 P **P** **12 52 13.2 -1.3**
comp=Z,9.4nm,0.8s,baz=48,slow=6.6,SNR=35
SONM PcP **PcP** **12 53 17.9 +0.3**
comp=Z,6.1nm,0.7s,baz=43,slow=2.5,SNR=7.1
SONM pPcP 12 53 30.5
comp=Z,9.3nm,0.7s,baz=50,slow=1.7,SNR=7.9
comp=Z,9.4nm,0.8s
SONM Songino Array 54.46 304 P **P** **12 52 13.8 -0.7**
SONM 12 53 18.4
SONM pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 54.46 304 P **P** **12 52 13.8 -0.7**
SONM PcP **PcP** **12 53 18.4 +0.8**
SONM IAmb IAmb 12 53 31.8
comp=Z,9.7nm,0.8s
L59A Walton 54.47 66 IAmb IAmb 12 52 27.2
comp=Z,27nm,1.0s
N58A Sunbury 54.54 68 IAmb IAmb 12 52 16.4
comp=Z,13nm,0.9s
P57A Homestead Farm 54.80 70 IAmb IAmb 12 52 29.0
comp=Z,20nm,0.9s
VADS Vadso 55.09 356 *e*P **P** **12 52 18.1 -0.4**
VADS IAmb IAmb 12 52 18.8
comp=Z,23nm,0.8s
VADS IAMs_20 IAMs_20 13 14 02.9
comp=Z,424nm,21.3s
NPNY Mohonk Preserv 55.25 65 IAmb IAmb 12 52 32.7
comp=Z,18nm,0.8s
BATG Bathurst New B 55.38 56 IAmb IAmb 12 52 33.1
comp=Z,25nm,0.9s
KEV Kevo 55.54 357 P **P** **12 52 20.1 -1.7**
KEV pmax pmax
comp=Z,23nm,0.7s
KEV Kevo 55.54 357 P **P** **12 52 20.1 -1.7**
KEV Kevo 55.54 357 P **P** **12 52 20.0 -1.8**
KEV Kevo 55.54 357 P **P** **12 52 19.9 -1.8**
KEV pP **pP** **12 52 34.6 +1.1**
KEV sP **sP** **12 52 39.9 +1.6**
TRO Tromso 55.78 0 P **P** **12 52 23.6 +0.2**
TRO Tromso 55.78 0 *e*P **P** **12 52 23.7 +0.2**
TRO IAmb IAmb 12 52 24.1
comp=Z,18nm,0.8s
TRO IAMs_20 IAMs_20 13 13 32.6
comp=Z,276nm,20.4s
ARA0 ARCESS Array S 55.81 358 *e*P **P** **12 52 22.4 -1.3**
ARA0 IAmb IAmb 12 52 23.8
comp=Z,13nm,0.8s
ARA0 IAMs_20 IAMs_20 13 13 40.9
comp=Z,394nm,30.0s
ARCES ARCESS Array B 55.81 358 P **P** **12 52 22.3 -1.4**
comp=Z,9.3nm,0.7s,baz=21,slow=6.6,SNR=28
ARCES PcP **PcP** **12 53 22.4 +0.1**
comp=Z,4.1nm,0.7s,baz=31,slow=5.4,SNR=4.5
ARCES LR LR 13 19 57.2
comp=Z,84nm,18.2s,baz=312,slow=40
comp=Z,9.3nm,0.7s
ARCES ARCESS Array B 55.81 358 P **P** **12 52 22.3 -1.4**
ARCES IAmb IAmb 12 52 24.0
comp=Z,12nm,0.8s
JETT Jettan, Norway 55.86 360 *e*P **P** **12 52 24.9 +0.8**
JETT IAmb IAmb 12 52 25.0
comp=Z,19nm,0.8s
KTK1 Kautokeino 56.38 358 *e*P **P** **12 52 27.3 -0.5**
KTK1 IAmb IAmb 12 52 27.9
comp=Z,11nm,0.8s
KTK1 IAMs_20 IAMs_20 13 13 03.2
comp=Z,258nm,30.5s
KNGR Kungurtug, Tuv 56.51 312 *i* P **P** **12 52 29.6 +0.5**
KNGR pmax pmax
comp=Z,12nm,0.9s
BORG Borgarnes 56.62 20 LR LR 13 19 39.4
comp=Z,120nm,19.4s,baz=340,slow=39
V58A Windy Hill, Pi 56.86 74 IAmb IAmb 12 52 43.8
comp=Z,15nm,1.0s
HHC Hu-ho-hao-te 56.86 295 *e*P **P** **12 52 31.8 0.0**
HHC pmax pmax
comp=Z,11nm,0.5s
HHC pmax pmax
comp=Z,80nm,4.2s
HHC L L
comp=Z,200nm,17.6s
HHC L L
comp=Z,89nm,16.0s
HHC L L
comp=Z,280nm,18.3s
T59A Double "B" Far 56.86 72 IAmb IAmb 12 52 44.0
comp=Z,18nm,0.7s
LVZ Lovozero 57.02 353*c* *i* P **P** **12 52 31.8 -0.6**
LVZ pmax pmax
comp=Z,31nm,1.0s
LVZ Lovozero 57.02 353 P **P** **12 52 31.1 -1.3**
LVZ IAmb IAmb 12 52 32.9
comp=Z,25nm,1.0s
LVZ Lovozero 57.02 353 P **P** **12 52 32.0 -0.4**
comp=Z,32nm,1.0s
LVZ Lovozero 57.02 353 P **P** **12 52 32.2 -0.2**
LVZ Lovozero 57.02 353 P **P** **12 52 31.1 -1.3**
LVZ pP **pP** **12 52 45.3 +1.2**
M65A Busby, Falmout 57.21 63 P **P** **12 52 32.9 -1.2**
baz=317
STEI Steigen 57.45 2 *e*P **P** **12 52 35.2 -0.1**
STEI IAmb IAmb 12 52 36.0
comp=Z,8.3nm,0.7s
STEI IAMs_20 IAMs_20 13 10 33.4
comp=Z,309nm,34.0s
HNS HongShan 57.70 290 ⇑P **P** **12 52 38.3 +0.8**
HNS L L
comp=Z,180nm,15.9s
HNS L L
comp=Z,230nm,18.8s
HNS L L
comp=Z,350nm,15.9s
BTO2 Baotou 57.82 296 *e*P **P** **12 52 38.5 0.0**
BTO2 pP **pP** **12 52 51.3 +1.0**
BTO2 pmax pmax
comp=Z,10.0nm,0.4s
BTO2 pmax pmax
comp=Z,190nm,4.0s
SGF Sodankyl 57.87 357 P **P** **12 52 37.1 -1.2**
SGF Sodankyl 57.87 357 P **P** **12 52 37.1 -1.2**
JOW Kunigami 57.89 272 LR LR 13 14 32.8
comp=Z,36nm,21.5s,baz=317,slow=33
FAUS Fauske 58.00 2 *e*P **P** **12 52 38.4 -0.8**
FAUS IAmb IAmb 12 52 39.3
comp=Z,13nm,0.9s
FAUS IAMs_20 IAMs_20 13 13 42.5
comp=Z,276nm,23.4s
VAGH Vaagaholmen 58.60 3 *e*P **P** **12 52 43.0 -0.4**
VAGH IAmb IAmb 12 52 43.9
comp=Z,14nm,1.1s
RAUS Rausandaksla 58.92 3 *e*P **P** **12 52 44.9 -0.7**
RAUS IAmb IAmb 12 52 45.8
comp=Z,13nm,0.8s
RAUS IAMs_20 IAMs_20 13 12 24.8
comp=Z,154nm,16.2s
ZALV Zalesovo Beam 58.99 321 P **P** **12 52 45.6 -0.7**
comp=Z,0.7nm,0.3s,baz=23,slow=8.0,SNR=7.4
ZALV LR LR 13 20 19.8
comp=Z,650nm,19.2s,baz=40,slow=38
comp=Z,0.7nm,0.3s
ZALV Zalesovo Beam 58.99 321 *i* P **P** **12 52 46.2 -0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
MOR8 Moi Rana 59.20 2 *e*P **P** **12 52 46.1 -1.5**
MOR8 IAmb IAmb 12 52 46.5
comp=Z,10nm,0.8s
LEIR Leirfjorden 59.22 3 *e*P **P** **12 52 47.9 +0.2**
MSF Maaselka 59.31 356 P **P** **12 52 47.4 -1.0**
MSF Maaselka 59.31 356 P **P** **12 52 47.4 -1.0**
NJ2 Nanjing 59.35 283 *e*P **P** **12 52 49.0 -0.1**
NJ2 pmax pmax
comp=Z,24nm,0.6s
OUL Oulu 60.26 357 P **P** **12 52 53.3 -1.5**
OUL Oulu 60.26 357 P **P** **12 52 53.3 -1.5**
LYN LuoYang 61.02 290 P **P** **12 53 01.0 +0.5**
LYN sP sP 12 53 16.8 -0.3
LYN pmax pmax
comp=Z,47nm,0.8s
LYN L L
comp=Z,460nm,21.3s
LYN L L
comp=Z,290nm,17.2s
LYN L L
comp=Z,450nm,21.1s
DGZ Jazzator, Alta 61.38 317 *e*P **P** **12 53 02.9 0.0**
DGZ pmax pmax
comp=Z,6.0nm,1.0s
CMIG Matias Romero 62.12 100 LR LR 13 18 39.1
comp=Z,127nm,21.9s,baz=322,slow=34
AKN Aaknes 62.85 7 *e*P **P** **12 53 11.6 -0.8**
WHN Wuhan 63.01 285 P **P** **12 53 12.0 -1.9**
WHN sP **sP** **12 53 29.8 -0.7**
KLMR Klimovskoe 63.52 349 *e*P **P** **12 53 14.3 -2.5**
KLMR *e**PP **pP** **12 53 29.2 +0.4**
KLMR pmax pmax
comp=Z,37nm,1.1s
KLMR MLR MLR
comp=Z,158nm,14.0s
KURK Kurchatov 63.84 323*c* *i* P **P** **12 53 19.2 +0.1**
KURK pmax pmax
comp=Z,10.0nm,0.9s
KURK Kurchatov 63.84 323 P **P** **12 53 19.0 -0.1**
GTA2 Gaotai 63.87 302 *e*P **P** **12 53 19.0 -0.7**
GTA2 sP sP 12 53 36.5 +0.2
GTA2 pmax pmax
comp=Z,22nm,1.1s
GTA2 L L
comp=Z,290nm,17.5s
GTA2 L L
comp=Z,240nm,17.5s
GTA2 L L
comp=Z,480nm,17.8s
KURBB Kurchatov Arra 63.95 323 P **P** **12 53 18.9 -0.9**
comp=Z,6.0nm,1.0s,baz=20,slow=6.5,SNR=29
KURBB LR LR 13 23 26.7
comp=Z,537nm,18.3s,baz=27,slow=38
comp=Z,6.0nm,1.0s
NC204 NORSAR Array S 63.96 5 P **P** **12 53 20.1 +0.2**
NC204 IAmb IAmb 12 53 38.5
comp=Z,24nm,1.0s
NC303 NORSAR Array S 64.04 4 P **P** **12 53 20.4 +0.2**
NC405 NORSAR Array S 64.17 4 IAmb IAmb 12 53 38.8
comp=Z,32nm,1.1s
ZSN Zaisan 64.20 317 *e*P **P** **12 53 21.5 0.0**
ZSN pmax pmax
comp=Z,9.0nm,0.8s
ZSN Zaisan 64.20 317 *e*P **P** **12 53 21.6 0.0**
comp=Z,8.8nm,0.8s
NBO00 NORSAR Array S 64.21 5 IAmb IAmb 12 53 22.5
comp=Z,25nm,1.0s
NB2 NORSAR Subarra 64.22 5 P **P** **12 53 20.1 -1.4**
comp=Z,6.3nm,0.8s,baz=355,slow=6.5
NB2 NORSAR Subarra 64.22 5 P **P** **12 53 20.1 -1.4**
NOA NORSAR Array B 64.22 5 P **P** **12 53 19.9 -1.6**
comp=Z,9.3nm,0.8s,baz=355,slow=6.5,SNR=19
NOA pP **pP** **12 53 32.2 -1.2**
comp=Z,2.6nm,0.6s,baz=355,slow=6.6,SNR=4.7
NOA LR LR 13 21 23.0
comp=Z,50nm,20.9s,baz=340,slow=36
comp=Z,9.3nm,0.8s
KIRV Kirov 64.36 343 LR LR 13 25 26.5
comp=Z,155nm,20.1s,baz=12,slow=40
KIRV Kirov 64.36 343 *e*P **P** **12 53 21.0 -1.3**
SKAR Skarslia 64.42 6 *e*P **P** **12 53 23.7 +0.9**
SKAR IAmb IAmb 12 53 24.3
comp=Z,28nm,1.0s
LZH Lanzhou 64.44 297 *e*P **P** **12 53 23.3 -0.2**
LZH pP pP 12 53 35.0 -0.4
LZH sP sP 12 53 40.0 -0.1
LZH pmax pmax
comp=Z,24nm,1.0s
LZH L L
comp=Z,270nm,16.5s
LZH L L
comp=Z,190nm,15.6s
LZH L L
comp=Z,350nm,19.1s
SSLB Suanglung 64.45 275 P **P** **12 53 23.8 +0.2**
SSLB Suanglung 64.45 275 P **P** **12 53 23.2 -0.4**
NORES NORESS Array B 64.54 4 P **P** **12 53 25.2 +1.7**
NORES pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 64.55 329 P **P** **12 53 22.6 -1.1**
comp=Z,26nm,0.8s,baz=37,slow=6.4,SNR=64
comp=Z,26nm,0.8s
LZDM Lanzhou Array 64.61 297 P **P** **12 53 24.5 -0.3**
comp=Z,3.1nm,0.4s,baz=67,slow=8.2,SNR=4.1
comp=Z,3.1nm,0.4s
ARTI Arti 64.67 337 LR LR 13 25 36.6
comp=Z,214nm,18.6s,baz=24,slow=40
ARTI Arti 64.67 337*d* *i* P **P** **12 53 23.2 -1.2**
ARTI *PP **pP** **12 53 37.0 +0.6**
ARTI 12 53 56.5
ARTI S **S** **13 01 59.3 -1.8**
ARTI pmax pmax
comp=Z,33nm,0.7s
ARTI Arti 64.67 337 P **P** **12 53 23.3 -1.2**
HFS Hagfors 65.22 3 P **P** **12 53 26.7 -1.3**
comp=Z,19nm,0.7s,baz=25,slow=3.9,SNR=26
comp=Z,19nm,0.7s
KONO Kongsberg 65.53 6 *e*P **P** **12 53 31.0 +1.0**
BLS5 Blasjo 65.55 7 *e*P **P** **12 53 31.1 +0.9**
BLS5 IAmb IAmb 12 53 31.7
comp=Z,25nm,0.9s
MK31 Makanchi Array 65.74 318*c* *i* P **P** **12 53 30.8 -0.8**
MKAR Makanchi Array 65.74 318 P **P** **12 53 30.0 -1.6**
comp=Z,3.3nm,0.7s,baz=42,slow=5.7,SNR=33
MKAR LR LR 13 24 06.1
comp=Z,411nm,21.4s,baz=24,slow=38
comp=Z,3.3nm,0.7s
MKAR Makanchi Array 65.74 318 P **P** **12 53 30.7 -0.9**
MKAR Makanchi Array 65.74 318 P **P** **12 53 30.7 -0.9**
MAKZ Makanchi 65.85 318 *i* P **P** **12 53 30.6 -1.7**
MAKZ pmax pmax
comp=Z,4.0nm,0.6s
ARBE Arbavere 65.91 356 P **P** **12 53 31.3 -1.1**
ENH Enshi 65.91 289 P **P** **12 53 31.8 -1.1**
WMQ Urumqi 65.98 313 *e*P **P** **12 53 34.0 +0.7**
WMQ pP pP 12 53 47.5 +2.3
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ L L
comp=Z,260nm,20.3s
WMQ L L
comp=Z,250nm,21.7s
WMQ L L
comp=Z,300nm,24.0s
VSU Vasula 66.85 356 P **P** **12 53 36.3 -2.1**
SLIT Slitere, Latvi 67.81 358 P **P** **12 53 41.7 -2.8**
CD2 Chengdu 68.50 293 P **P** **12 53 49.5 +0.1**
CD2 sP sP 12 54 05.0 -1.1
CD2 pmax pmax
comp=Z,70nm,0.8s
EKA Eskdalemuir Ar 68.56 14 P **P** **12 53 48.9 -0.4**
comp=Z,13nm,0.7s,baz=337,slow=4.6,SNR=21
EKA LR LR 13 24 24.0
comp=Z,133nm,21.2s,baz=2.0,slow=36
comp=Z,13nm,0.7s
TDK Taldyqorghan 68.73 319 *e*P **P** **12 53 50.5 0.0**
TDK pmax pmax
comp=Z,14nm,0.8s
TDK Taldyqorghan 68.73 319 *e*P **P** **12 53 50.5 0.0**
comp=Z,14nm,0.8s
MOS Moscow 68.75 349 *e*P **P** **12 53 50.8 +0.4**
GOMU GeErMu 68.87 303 P **P** **12 53 50.8 -1.2**
GOMU sP pP 12 53 58.8 -5.2
GOMU S **S** **13 02 54.0 +0.8**
GOMU pmax pmax
comp=Z,6.0nm,0.6s
GOMU L L
comp=Z,370nm,15.5s
GOMU L L
comp=Z,190nm,15.9s
GOMU L L
comp=Z,360nm,15.6s
AFI Afiamalu 69.21 192 LR LR 13 17 35.8
comp=Z,176nm,21.3s,baz=353,slow=30

OBN **Obninsk** 69.48 350 LR LR 13 27 58.1
comp=Z,188nm,21.9s,baz=9.5,slow=39
OBN **Obninsk** 69.48 350⇑ *eP* **P** **12 53 54.5 -0.4**
OBN *e* 12 54 10.6
OBN *e* 12 56 26.0
OBN pmax pmax
comp=Z,18nm,1.1s
OBN MLR MLR
comp=Z,263nm,22.0s
PDGK Podgornoye 69.73 318 P **P** **12 53 56.6 -0.3**
PDGK Podgornoye 69.73 318 P **P** **12 53 56.6 -0.3**
SHLS Shalkode 69.89 318 *eP* **P** **12 53 56.7 -1.1**
SHLS pmax pmax
comp=Z,14nm,0.8s
SHLS Shalkode 69.89 318 *eP* **P** **12 53 56.7 -1.1**
comp=Z,14nm,0.8s
PABE Paberze 69.91 357 P **P** **12 53 58.0 +0.5**
KPKS Kokpek 69.92 318 *eP* **P** **12 53 58.2 +0.1**
KPKS Kokpek 69.92 318 *eP* **P** **12 53 58.2 +0.1**
UZB Uzynbulak 70.06 318 *eP* **P** **12 53 59.0 0.0**
UZB Uzynbulak 70.06 318 *eP* **P** **12 53 59.0 0.0**
AKTO Aktyubinsk 70.25 335 LR LR 13 29 02.1
comp=Z,161nm,19.9s,baz=13,slow=40
AKTO Aktyubinsk 70.25 335 *i* P **P** **12 53 58.8 -1.0**
AKTO pmax pmax
comp=Z,23nm,0.8s
BTLS Baital 70.28 322 *eP* **P** **12 54 00.2 +0.1**
BTLS Baital 70.28 322 *eP* **P** **12 54 00.2 +0.1**
SATY Saty 70.38 318 *eP* **P** **12 54 00.8 -0.1**
SATY Saty 70.38 318 *eP* **P** **12 54 00.8 -0.1**
GYA Guiyang 70.43 288 ⇓P **P** **12 54 02.3 +0.9**
GYA pmax pmax
comp=Z,30nm,0.8s
KUU Kurty 70.44 320 *eP* **P** **12 54 01.1 0.0**
KUU Kurty 70.44 320 *eP* **P** **12 54 01.1 0.0**
BELG Belogornoye 70.58 342 LR LR 13 29 51.4
comp=Z,243nm,18.9s,baz=55,slow=40
BELG Belogornoye 70.58 342 *c iP* **P** **12 54 01.4 -0.3**
BELG pmax pmax
comp=Z,9.0nm,1.3s
MNK Minsk 70.76 355 *i* P **P** **12 54 02.0 -0.8**
comp=E,30nm,0.8s
MNK *i* P **P** **12 54 02.0 -0.8**
comp=N,16nm,1.0s
MNK *i* P **P** **12 54 02.0 -0.8**
comp=Z,34nm,0.8s,baz=5.2
MNK *i* pP **pP** **12 54 15.9 +0.9**
MNK *i* PP **PP** **12 56 37.7 -1.4**
MNK *i* PPP PPP 12 58 22.1
MNK *i* S **S** **13 03 13.5 -0.5**
MNK *i* SS **SS** **13 07 47.4 +2.1**
MNK *i* SSS SSS 13 11 05.9
MNK *i* LQ LQ 13 21 40.3
MNK *i* LR LR 13 26 10.9
MNK *i* LRM MLR 13 28 31.7
comp=Z,105nm,19.9s
MNK Minsk 70.76 355 *i* P **P** **12 54 02.0 -0.8**
MNK *i* *PP **pP** **12 54 15.8 +0.9**
MNK *i* 12 56 37.6
MNK *i* PPP PPP 12 58 22.0
MNK *i* S **S** **13 03 13.5 -0.5**
MNK *i* SS **SS** **13 07 47.3 +2.1**
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=Z,34nm,0.8s
MNK pmax pmax
comp=E,30nm,0.8s
MNK MLR MLR
comp=Z,105nm,20.0s
MNK MLR MLR
comp=N,694nm,22.0s
MDOK Medeo 70.81 319 *eP* **P** **12 54 03.6 +0.1**
MDOK Medeo 70.81 319 *eP* **P** **12 54 03.6 +0.1**
AAA Alma-Ata 70.82 319 *eP* **P** **12 54 03.3 -0.1**
AAA pmax pmax
comp=Z,26nm,1.1s
AAA Alma-Ata 70.82 319 *eP* **P** **12 54 03.4 -0.1**
comp=Z,26nm,1.1s
AB31 Akbulak array 70.85 333 *i* P **P** **12 54 02.6 -0.9**
AB31 pmax pmax
comp=Z,16nm,0.6s
AB31 Akbulak array 70.85 333 IAmb IAmb 12 54 04.7
comp=Z,25nm,0.8s
ABKAR Akbulak array 70.85 333 P **P** **12 54 02.3 -1.2**
KRVT Keravat (AS076 70.88 231 LR LR 13 20 24.4
comp=Z,20nm,19.5s,baz=330,slow=32
TNSS Tian-Shan 70.95 319 *eP* **P** **12 54 04.5 -0.2**
TNSS Tian-Shan 70.95 319 *eP* **P** **12 54 04.5 -0.2**
SGDS Sogindy 71.45 321 *eP* **P** **12 54 07.7 +0.3**
KDJ Kajisay 71.64 319 P **P** **12 54 09.4 +0.8**
KDJ Kajisay 71.64 319 IAmb IAmb 12 54 10.3
comp=Z,14nm,0.9s
KDJ Kajisay 71.64 319 P **P** **12 54 09.4 +0.8**
WUS Wushi 71.64 317 IAmb IAmb 12 54 10.1
comp=Z,16nm,0.8s
WUS Wushi 71.64 317 P **P** **12 54 09.2 +0.7**
LPSR Galich'ya Gora 71.68 348 *eP* **P** **12 54 07.7 -0.7**
LPSR pmax pmax
comp=Z,23nm,0.7s
TARG Taragay, Kyrgy 71.74 318 P **P** **12 54 09.1 -0.5**
TARG Taragay, Kyrgy 71.74 318 P **P** **12 54 09.1 -0.5**
BOOM Boomskoye usch 71.80 320 P **P** **12 54 08.2 -1.4**
BOOM Boomskoye usch 71.80 320 IAmb IAmb 12 54 11.2
comp=Z,26nm,0.8s
BOOM Boomskoye usch 71.80 320 P **P** **12 54 08.2 -1.4**
AAK Ala-Archa 72.21 321 LR LR 13 28 33.2
comp=Z,595nm,18.3s,baz=32,slow=38
AAK Ala-Archa 72.21 321 *c iP* **P** **12 54 12.6 +0.6**
AAK pmax pmax
comp=Z,16nm,1.0s
AAK Ala-Archa 72.21 321 P **P** **12 54 12.0 0.0**
AAK IAmb IAmb 12 54 13.6
comp=Z,12nm,0.8s
AAK Ala-Archa 72.21 321 P **P** **12 54 11.4 -0.6**
VORR Voronezh 72.56 347 *eP* **P** **12 54 15.1 +1.4**
VORR pmax pmax
comp=Z,50nm,0.4s
VRH Novokhopyorsk 72.68 346 *eP* **P** **12 54 13.5 -0.9**
VRH pmax pmax
comp=Z,11nm,0.7s
NRN Naryn 72.69 319 IAmb IAmb 12 54 17.1
comp=Z,22nm,1.1s
PPT Papeete 72.75 169 LR LR 13 17 47.4
comp=Z,234nm,20.2s,baz=350,slow=29
ASAI AK-SAY(Kyrgyzs 72.94 318 P **P** **12 54 16.8 +0.2**
VSR Storozhevoye 73.01 347 *eP* **P** **12 54 15.9 -0.5**
VSR pmax pmax
comp=Z,18nm,0.5s
PZH PanZhiHua 73.06 292 P **P** **12 54 18.5 +1.2**
DZA Taraz 73.12 323 *eP* **P** **12 54 17.1 -0.1**
DZA pmax pmax
comp=Z,4.0nm,0.4s
DZA Taraz 73.12 323 *eP* **P** **12 54 17.2 0.0**
comp=Z,4.4nm,0.4s
KK31 Karatay Array 73.21 324 *i* P **P** **12 54 17.6 -0.2**
KK31 pmax pmax
comp=Z,10.0nm,0.6s
KK31 Karatay Array 73.21 324 IAmb IAmb 12 54 18.9
comp=Z,18nm,0.8s
KKAR Karatay Array 73.21 324 P **P** **12 54 16.8 -1.0**
KKAR Karatay Array 73.21 324 P **P** **12 54 16.8 -1.0**
VORD Divnogorie 73.24 347 *eP* **P** **12 54 14.7 -3.0**
VORD pmax pmax
comp=Z,10.0nm,0.9s
JTS Las Juntas de 73.26 96 LR LR 13 28 19.4
comp=Z,45nm,20.4s,baz=331,slow=37
CLZ Clausthal 73.36 6 P **P** **12 54 20.1 +1.6**
BRLS Boroldai 73.51 324 *eP* **P** **12 54 21.0 +1.5**
BRLS Boroldai 73.51 324 *eP* **P** **12 54 21.1 +1.5**
KMI2 Kunming 73.61 290 ⇓P **P** **12 54 21.5 +0.9**
KMI2 sP sP 12 54 37.0 -0.4
KMI2 S **S** **13 03 49.5 +1.5**
KMI2 pmax pmax
comp=Z,10.0nm,1.2s
KMI2 pmax pmax
comp=Z,140nm,8.1s
KMI2 L L
comp=Z,230nm,18.7s
KMI2 L L
comp=Z,190nm,16.0s
KMI2 L L
comp=Z,270nm,24.7s
WIMM Wimmelburg 73.74 5 P **P** **12 54 21.5 +0.8**

ARK Arkit 73.86 322 P **P** **12 54 22.3 +0.6**
ARK Arkit 73.86 322 P **P** **12 54 22.3 +0.6**
RNPP9 Sopachiv 73.94 356 P **P** **12 54 21.7 -0.1**
CLL Collm 74.03 4 *i* P **P** **12 54 22.5 +0.2**
CLL *e**PP **pP** **12 54 34.0 -0.5**
CLL *i* *SP **sP** **12 54 38.8 -0.3**
CLL pmax pmax
comp=Z,13nm,0.8s
CLL Collm 74.03 4 IAmb IAmb 12 54 23.7
comp=Z,11nm,0.8s
CLL Collm 74.03 4 P **P** **12 54 22.5 +0.2**
comp=Z,16nm,0.9s
CLL Collm 74.03 4 *i* P **P** **12 54 22.5 +0.2**
comp=Z,13nm,0.8s
CLL *e*pP **pP** **12 54 34.0 -0.5**
CLL *i* sP **sP** **12 54 38.8 -0.3**
CLL comp=Z,26nm,1.4s
CLL *e*S **S** **13 03 54.0 +2.6**
CLL *e*SS **SS** **13 08 42.0 +6.8**
CLL *e*SSS SSS 13 12 12.0
CLL *ex* x 13 13 00.0
CLL *e*(SSSS) 13 14 06.0
CLL AMS AMS 17 34 00.0
comp=Z,100nm,21.5s
RNPP5 Staryi Chortor 74.12 356 P **P** **12 54 22.7 -0.2**
CHM Chimkent 74.22 324 *eP* **P** **12 54 23.7 +0.1**
CHM pmax pmax
comp=Z,17nm,0.8s
CHM Chimkent 74.22 324 *eP* **P** **12 54 23.7 +0.1**
comp=Z,17nm,0.8s
IUG luzhnay 74.22 323 *eP* **P** **12 54 24.0 +0.2**
IUG pmax pmax
comp=Z,20nm,1.3s
IUG luzhnay 74.22 323 *eP* **P** **12 54 24.1 +0.2**
comp=Z,20nm,1.3s
MEM Membach 74.25 9 *dP* **P** **12 54 24.0 +0.3**
MI28 Mi28,Pidlybu 74.33 355 P **P** **12 54 23.0 -1.1**
TRKS Terek-Say 74.38 322 P **P** **12 54 24.7 -0.1**
AK21 Malin Array Si 74.41 354 P **P** **12 54 23.0 -1.6**
AK21 pP **pP** **12 54 36.3 -0.4**
AK23 Malin Array Si 74.42 354 P **P** **12 54 23.2 -1.4**
AK22 Malin Array Si 74.42 354 P **P** **12 54 23.1 -1.5**
BMRD Maredsous 74.44 10 *dP* **P** **12 54 25.4 +0.7**
comp=Z,7.2nm,1.2s
AK20 Malin Array Si 74.44 354 P **P** **12 54 23.2 -1.6**
AK20 pP **pP** **12 54 36.7 -0.2**
AK03 Malin Array Si 74.45 354 P **P** **12 54 23.1 -1.7**
AK04 Malin Array Si 74.45 354 P **P** **12 54 23.2 -1.6**
AK18 Malin Array Si 74.46 354 P **P** **12 54 23.2 -1.7**
AK19 Malin Array Si 74.46 354 P **P** **12 54 23.3 -1.6**
AKASG Malin Array Be 74.47 354 P **P** **12 54 23.3 -1.6**
comp=Z,18nm,0.6s,baz=8.5,slow=5.6,SNR=61
AKASG pP **pP** **12 54 36.4 -0.7**
comp=Z,6.4nm,0.3s,baz=10,slow=6.0,SNR=10
AKASG LR LR 13 27 24.9
comp=Z,154nm,21.7s,baz=20,slow=36
comp=Z,18nm,0.6s
AKASG Malin Array Be 74.47 354 P **P** **12 54 23.4 -1.5**
AKASG **pP** **12 54 37.0 -0.1**
AKASG IAmb IAmb 12 54 41.6
comp=Z,42nm,1.9s
AKBB Malin Array Si 74.47 354⇑ *iP* **P** **12 54 23.3 -1.6**
AKBB pmax pmax
comp=Z,32nm,0.8s
KIEV Kiev 74.48 354 P **P** **12 54 23.5 -1.5**
KIEV Kiev 74.48 354 P **P** **12 54 23.5 -1.5**
KIEV Kiev 74.48 354 P **P** **12 54 23.3 -1.7**
comp=Z,2µmcomp=Z,170nm,0.8s
KIEV Kiev 74.48 354 P **P** **12 54 23.4 -1.5**
KIEV pP **pP** **12 54 36.9 -0.2**
KIEV Kiev 74.48 354 P **P** **12 54 23.2 -1.7**
AK01 Malin Array Si 74.48 354 P **P** **12 54 23.4 -1.6**
BRG Berggiesshubel 74.50 4 P **P** **12 54 25.0 -0.1**
BRG AP **pP** **12 54 36.8 -0.4**
BRG Berggiesshubel 74.50 4 P **P** **12 54 26.0 +0.9**
BRG pP **pP** **12 54 36.8 -0.4**
BRG Berggiesshubel 74.50 4 *eP* **P** **12 54 26.0 +0.9**
BRG Amp 12 54 27.3
comp=Z,12nm,1.0s
BRG pP **pP** **12 54 38.2 +1.0**
BRG Amp 12 54 38.5
comp=Z,3.3nm,0.5s
BRG sP **sP** **12 54 41.8 -0.1**
BRG Amp 12 54 43.5
comp=Z,6.2nm,0.8s
AK02 Malin Array Si 74.52 354 P **P** **12 54 23.5 -1.7**
KSP Ksiaz 74.60 2 *eP* **P** **12 54 26.3 +0.6**
KSP Ksiaz 74.60 2 P **P** **12 54 25.8 +0.1**
comp=Z,15nm,0.9s
MOX Moxa 74.62 5 P **P** **12 54 26.7 +0.9**
MOX Moxa 74.62 5 P **P** **12 54 26.7 +0.9**
BAIF Baives 74.62 10 *eP* **P** **12 54 25.8 0.0**
BAIF pmax pmax
comp=Z,9.0nm,0.9s
DOU Dourbes 74.63 10 *dP* **P** **12 54 26.7 +0.8**
comp=Z,5.9nm,1.1s
MSVF Nonsavu 74.64 201 LR LR 13 21 22.7
comp=Z,165nm,20.6s,baz=123,slow=31
HSKC Hora Svate Kat 74.74 4 P **P** **12 54 27.5 +0.9**
KSH2 Kashi 74.83 318 P **P** **12 54 27.5 0.0**
KSH2 PcP **sP** **12 54 45.3 +1.0**
KSH2 pmax pmax
comp=Z,46nm,0.9s
KSH2 L L
comp=Z,450nm,23.0s
KSH2 L L
comp=Z,300nm,19.9s
KSH2 L L
comp=Z,650nm,21.3s
CHVC Chvalec 74.85 2 *eP* **P** **12 54 27.9 +0.7**
CHVC Chvalec 74.85 2 *eP* **P** **12 54 27.9 +0.7**
PVCC Panska Ves 74.86 3 *eP* **P** **12 54 27.4 +0.2**
PVCC Panska Ves 74.86 3 *eP* **P** **12 54 27.4 +0.2**
TANN Tannenbergstha 74.89 5 P **P** **12 54 27.3 -0.1**
DAV Davao City (W) 75.08 261 LR LR 13 21 05.8
comp=Z,74nm,21.6s,baz=20,slow=31
DPC Dobruska-Polom 75.09 2 *eP* **P** **12 54 28.6 0.0**
DPC MLR MLR
comp=Z,100nm,21.5s
DPC Dobruska-Polom 75.09 2 *eP* **P** **12 54 28.6 0.0**
DPC AMS AMS 13 33 30.0
comp=Z,100nm,21.5s
DPC Dobruska-Polom 75.09 2 P **P** **12 54 29.2 +0.6**
comp=Z,274nmcomp=Z,19nm,0.9s
DPC Dobruska-Polom 75.09 2 P **P** **12 54 28.8 +0.1**
WLF Walferdange 75.20 9 *dP* **P** **12 54 30.2 +1.0**
OJC Ojcow 75.26 360 *eP* **P** **12 54 30.3 +0.8**
OJC Ojcow 75.26 360 P **P** **12 54 30.1 +0.6**
OJC Ojcow 75.26 360 P **P** **12 54 29.7 +0.2**
comp=Z,10nm,1.1s
OJC Ojcow 75.26 360 P **P** **12 54 30.1 +0.6**
KRLC Kraliky 75.38 2 *eP* **P** **12 54 30.2 -0.1**
KRLC Kraliky 75.38 2 *eP* **P** **12 54 30.2 -0.1**
PRU Pruhonice 75.40 3 *eP* **P** **12 54 30.4 +0.1**
PRU Pruhonice 75.40 3 *eP* **P** **12 54 30.4 +0.1**
PRU Pruhonice 75.40 3 P **P** **12 54 30.6 +0.3**
SGMF Saint Gilles 75.54 15 *eP* **P** **12 54 31.2 +0.1**
SGMF pmax pmax
comp=Z,153nm,2.2s
LDF La Druitiere 75.56 13 *eP* **P** **12 54 30.8 -0.4**
LDF pmax pmax
comp=Z,27nm,1.4s
OKC Ostrava-Krasne 75.63 1 P **P** **12 54 30.2 -1.5**
GRR Gorron 75.66 14 *eP* **P** **12 54 31.5 -0.3**
GRR pmax pmax
comp=Z,14nm,1.0s
MORC Moravsky Berou 75.69 1⇑P **P** **12 54 32.0 0.0**
MORC Moravsky Berou 75.69 1 P **P** **12 54 32.0 0.0**
MORC Moravsky Berou 75.69 1 P **P** **12 54 31.2 -0.8**
MORC Moravsky Berou 75.69 1 *eP* **P** **12 54 31.2 -0.8**
MORC *e* 12 54 48.5
MORC Moravsky Berou 75.69 1 P **P** **12 54 31.7 -0.3**
MORC pP **PcP** **12 54 44.5 -0.1**
RAR Rarotonga 75.80 179 LR LR 13 21 58.5
comp=Z,139nm,18.5s,baz=30,slow=31
BTK Batken 75.80 322 P **P** **12 54 31.9 -1.0**
BTK Batken 75.80 322 IAmb IAmb 12 54 34.2
comp=Z,18nm,1.0s
BTK Batken 75.80 322 P **P** **12 54 31.9 -1.0**
LSA Lhasa 75.93 302 P **P** **12 54 34.8 +0.5**
LSA Lhasa 75.93 302 *eP* **P** **12 54 32.8 -1.5**
LSA Lhasa 75.93 302 P **P** **12 54 34.8 +0.5**
DRK Karamyk 75.95 321 P **P** **12 54 33.6 -0.5**

DRK Karamyk 75.95 321 IAmb IAmb 12 54 35.8
comp=Z,23nm,1.0s
DRK Karamyk 75.95 321 P **P** **12 54 33.6 -0.5**
SLVN Son La 76.02 287 IAmb IAmb 12 54 52.4
comp=Z,21nm,0.8s
STHS Stebnicka Huta 76.05 359 *eP* **P** **12 54 32.5 -1.6**
STHS pmax pmax
comp=Z,6.0nm,0.7s
STHS Stebnicka Huta 76.05 359 *eP* **P** **12 54 32.5 -1.6**
NIE Niedzica 76.06 360 *eP* **P** **12 54 35.5 +1.4**
NIE Niedzica 76.06 360 P **P** **12 54 35.3 +1.1**
comp=Z,4.2nm,1.0s
MAUC Maruska 76.10 1 *eP* **P** **12 54 34.4 0.0**
VRAC Vranov 76.14 2 ⇓P **P** **12 54 35.2 +0.6**
VRAC Vranov 76.14 2 P **P** **12 54 35.2 +0.6**
VRAC Vranov 76.14 2 *eP* **P** **12 54 34.2 -0.4**
VRAC *e* 12 54 51.1
VRAC Vranov 76.14 2 P **P** **12 54 35.5 +1.0**
WET Wettzell 76.18 5 P **P** **12 54 36.3 +1.5**
WET Wettzell 76.18 5 P **P** **12 54 36.3 +1.5**
KHC Kasperske Hory 76.22 4 *eP* **P** **12 54 35.9 +0.8**
KHC MLR MLR
comp=Z,200nm,21.4s
KHC Kasperske Hory 76.22 4 *eP* **P** **12 54 35.9 +0.8**
KHC AMS AMS 13 25 10.0
comp=Z,200nm,21.4s
KHC Kasperske Hory 76.22 4 P **P** **12 54 36.1 +1.0**
comp=Z,303nmcomp=Z,16nm,1.1s
LANS Liptovska Anna 76.33 0 *eP* **P** **12 54 36.4 +0.7**
LANS pmax pmax
comp=Z,2.0nm,0.5s
LANS Liptovska Anna 76.33 0 *eP* **P** **12 54 36.4 +0.7**
KRUC Moravsky 76.38 2 P **P** **12 54 36.9 +1.0**
KRUC Moravsky 76.38 2 *eP* **P** **12 54 35.4 -0.5**
KRUC *e* 12 54 52.5
KRUC Moravsky 76.38 2 P **P** **12 54 37.1 +1.1**
GEC2 GERESS Array S 76.52 4 IAmb IAmb 12 54 54.5
comp=Z,35nm,1.8s
GERES GERESS Array B 76.52 4 P **P** **12 54 36.3 -0.5**
comp=Z,4.1nm,0.8s,baz=345,slow=4.1,SNR=21
comp=Z,4.1nm,0.8s
GERES GERESS Array B 76.52 4 P **P** **12 54 37.1 +0.3**
GERES GERESS Array B 76.52 4 P **P** **12 54 37.1 +0.3**
KOLS Kolonicke sedl 76.52 358 *eP* **P** **12 54 37.5 +0.7**
KOLS pmax pmax
comp=Z,2.0nm,0.4s
KOLS Kolonicke sedl 76.52 358 P **P** **12 54 38.1 +1.4**
KOLS Kolonicke sedl 76.52 358 *eP* **P** **12 54 37.5 +0.7**
CDF Champ du Feu 76.54 8 *eP* **P** **12 54 36.9 -0.1**
CDF pmax pmax
comp=Z,10.0nm,1.1s
CKRC Cesky Krumlov 76.56 4 *eP* **P** **12 54 38.1 +1.1**
CKRC MLR MLR
comp=Z,200nm,25.8s
CKRC Cesky Krumlov 76.56 4 *eP* **P** **12 54 38.1 +1.1**
CKRC AMS AMS 13 24 40.0
comp=Z,200nm,25.8s
JAVC Velka Javorina 76.61 1 *eP* **P** **12 54 38.0 +0.7**
JAVC *e* 12 54 55.2
JAVC Velka Javorina 76.61 1 P **P** **12 54 38.3 +1.0**
ECH Echery 76.73 9 P **P** **12 54 38.0 0.0**
ECH Echery 76.73 9 IAmb IAmb 12 54 55.8
comp=Z,14nm,1.1s
KMPD K-Podol'skiy 76.76 355 P **P** **12 54 37.4 -0.6**
HAU Haudompre 76.86 9 *eP* **P** **12 54 38.5 -0.2**
HAU pmax pmax
comp=Z,7.0nm,0.8s
GAR Garm 76.91 322 P **P** **12 54 38.4 -0.9**
SMOL Smolenice 76.95 2 *eP* **P** **12 54 40.6 +1.4**
SMOL pmax pmax
comp=Z,2.0nm,0.5s
VYHS Vyhne 76.98 1 *eP* **P** **12 54 39.6 +0.2**
VYHS pmax pmax
comp=Z,18nm,2.1s
VYHS Vyhne 76.98 1 P **P** **12 54 40.5 +1.2**
VYHS Vyhne 76.98 1 *eP* **P** **12 54 39.6 +0.2**
MOKO MOKOCHONG 77.01 297 *eP* **P** **12 54 40.1 +0.1**
SORM Soroca 77.08 354 ⇓P **P** **12 54 40.0 +0.2**
SORM Soroca 77.08 354 P **P** **12 54 40.0 +0.2**
SORM Soroca 77.08 354 P **P** **12 54 39.5 -0.4**
comp=Z,32nm,1.0s
MODS Modra-Piesok 77.09 2 *eP* **P** **12 54 40.6 +0.6**
MODS pmax pmax
comp=Z,19nm,1.7s
MODS Modra-Piesok 77.09 2 P **P** **12 54 41.9 +1.9**
MODS Modra-Piesok 77.09 2 *eP* **P** **12 54 40.6 +0.6**
HINF Hinteralfeld 77.10 9 *eP* **P** **12 54 41.0 +0.9**
HINF pmax pmax
comp=Z,9.0nm,1.2s
ABAH Abaujker 77.17 359 P **P** **12 54 41.0 +0.6**
BAL3X Bal3x, Balta 77.20 353 P **P** **12 54 39.9 -0.6**
TRPA Tarpa 77.32 358 P **P** **12 54 41.1 -0.1**
WINA Alland / Wiene 77.33 2 *i* P **P** **12 54 41.4 +0.1**
comp=Z,11nm,0.8s
WINA *es*P **sP** **12 54 58.3 +0.1**
comp=Z,23nm,1.6s
LOR Lormes 77.34 11 *eP* **P** **12 54 41.1 -0.3**
LOR pmax pmax
comp=Z,5.0nm,0.8s
CONA Conrad Observa 77.50 3 *i* P **P** **12 54 42.1 -0.3**
comp=Z,11nm,0.8s
CONA *es*P **sP** **12 54 58.9 -0.3**
comp=Z,8.5nm,0.8s
MFF Saint Martin d 77.50 14 *eP* **P** **12 54 42.4 +0.1**
MFF pmax pmax
comp=Z,90nm,0.9s
MOA Molln 77.53 4 *eP* **P** **12 54 42.0 -0.5**
comp=Z,8.1nm,1.2s
MOA *es*P **sP** **12 54 59.2 -0.1**
comp=Z,12nm,1.5s
MOA Molln 77.53 4 P **P** **12 54 42.9 +0.4**
PSZ Piszkesteto 77.56 360⇑P **P** **12 54 43.4 +0.7**
PSZ Piszkesteto 77.56 360 P **P** **12 54 43.4 +0.7**
PSZ Piszkesteto 77.56 360 IAmb IAmb 12 54 45.0
comp=Z,14nm,1.0s
PSZ Piszkesteto 77.56 360 P **P** **12 54 43.6 +0.9**
PMG Port Moresby 77.60 233 LR LR 13 24 40.1
comp=Z,59nm,21.5s,baz=360,slow=32
CHGR Chuyangaron 77.63 322⇑ *iP* **P** **12 54 42.0 -1.3**
CHGR pmax pmax
comp=Z,104nm,0.8s
CHGR Chuyangaron 77.63 322 P **P** **12 54 42.3 -1.0**
MANEM Manem 77.71 320 IAmb IAmb 12 55 02.9
comp=Z,40nm,1.0s
RONA Rosalia, Austr 77.74 2 *eP* **P** **12 54 43.6 0.0**
comp=Z,6.5nm,1.0s
RONA *es*P **sP** **12 55 00.6 +0.1**
comp=Z,4.6nm,0.8s
BURAR Bucovina Array 77.76 356⇑P **P** **12 54 44.3 +0.4**
BURAR Bucovina Array 77.76 356 P **P** **12 54 44.2 +0.4**
BURAR Bucovina Array 77.76 356 P **P** **12 54 43.4 -0.5**
BURAR IAmb IAmb 12 54 45.7
comp=Z,11nm,0.8s
AVF Avril sur Loir 77.76 11 *eP* **P** **12 54 43.3 -0.4**
AVF pmax pmax
comp=Z,5.0nm,0.7s
MOTA Moosalm 77.88 6 *i* P **P** **12 54 45.0 +0.4**
comp=Z,12nm,1.0s,SNR=6.0
MOTA *es*P **sP** **12 55 01.6 +0.1**
comp=Z,23nm,1.3s
LESA Schwarzleotal 77.89 5 *eP* **P** **12 54 44.0 -0.5**
comp=Z,4.2nm,0.9s
LESA *es*P **sP** **12 55 01.3 0.0**
comp=Z,8.8nm,1.1s
WATA Walderalm 77.92 6 *eP* **P** **12 54 45.6 +0.8**
comp=Z,24nm,1.2s
BGF Bois d'Agland 77.93 12 *eP* **P** **12 54 44.4 -0.3**
BGF pmax pmax
comp=Z,6.0nm,0.6s
WTTA Wattenberg 77.99 6 P **P** **12 54 46.4 +1.2**
WTTA Wattenberg 77.99 6 *eP* **P** **12 54 46.2 +0.9**
comp=Z,6.0nm,0.7s
WTTA *es*P **sP** **12 55 02.5 +0.4**
comp=Z,10nm,0.8s
WTTA Wattenberg 77.99 6 P **P** **12 54 46.4 +1.2**
SQTA Sankt Quirin 78.01 6 *iP* **P** **12 54 45.8 +0.5**
comp=Z,20nm,1.0s,SNR=5.9
SQTA *es*P **sP** **12 55 02.4 +0.3**
comp=Z,12nm,0.9s
BNALP Bannalp 78.17 8 P **P** **12 54 47.6 +1.4**
ARSA Arzberg 78.17 3 IAmb IAmb 12 55 04.4
comp=Z,23nm,1.4s
ARSA Arzberg 78.17 3 *eP* **P** **12 54 46.1 +0.1**
comp=Z,6.1nm,0.8s
ARSA *es*P **sP** **12 55 03.0 +0.1**

	comp=Z,16nm,1.4s									
ARSA	**Arzberg**	**78.17**	**3**	P		**P**		**12 54 46.5**	**+0.4**
FETA	**Feichten**	**78.18**	**6**	*e*P		**P**		**12 54 46.8**	**+0.6**
	comp=Z,8.8nm,1.1s,SNR=5.1									
FETA				*es*P		**sP**		**12 55 03.5**	**+0.3**
	comp=Z,14nm,1.2s									
ERBR	**Yeremizino-Bor**	**78.22**	**345**	*e*P		**P**		**12 54 46.8**	**+0.5**
ERBR				*e**PP		**pP**		**12 54 58.6**	**+0.1**
ERBR				pmax	pmax					
	comp=Z,37nm,0.9s									
CABF	**La Chapelle**	**78.22**	**9**	*e*P		**P**		**12 54 47.6**	**+1.2**
CABF				pmax	pmax					
	comp=Z,67nm,2.0s									
KBA	**Koelnbreinsper**	**78.26**	**4**	P		**P**		**12 54 47.3**	**+0.5**
KBA	**Koelnbreinsper**	**78.26**	**4**	*e*P		**P**		**12 54 46.9**	**+0.2**
	comp=Z,23nm,1.1s,SNR=11									
KBA				*es*P		**sP**		**12 55 04.2**	**+0.6**
	comp=Z,44nm,1.6s									
KBA	**Koelnbreinsper**	**78.26**	**4**	P		**P**		**12 54 47.3**	**+0.5**
MPLH	**Magyarpolny**	**78.30**	**1**	P		**P**		**12 54 47.3**	**+0.6**
DAVOX	**Davos/Dischmat**	**78.37**	**7**	LR		LR		13 30 25.3	
	comp=Z,63nm,21.6s,baz=54,slow=36									
BIZ	**Bicaz**	**78.39**	**355**	⇑P		**P**		**12 54 48.2**	**+0.9**
SIJI	**Sorong**	**78.42**	**252**	LR		LR		13 24 52.7	
	comp=Z,39nm,19.1s,baz=222,slow=32									
IMP	**Imphal**	**78.52**	**297**	*e*P		**P**		**12 54 47.9**	**-0.5**
FUORN	**Ofenpass-Fuorn**	**78.55**	**7**	IAmb		IAmb		12 55 06.8	
	comp=Z,51nm,1.6s									
FUORN	**Ofenpass-Fuorn**	**78.55**	**7**	P		**P**		**12 54 49.9**	**+1.4**
ABTA	**Abfaltersbach**	**78.56**	**5**	*e*P		**P**		**12 54 48.1**	**-0.1**
	comp=Z,11nm,1.1s									
ABTA				*es*P		**sP**		**12 55 05.2**	**+0.1**
	comp=Z,8.5nm,1.0s									
TUE	**Stuetta**	**78.64**	**7**	P		**P**		**12 54 47.1**	**-1.7**
MYKA	**Terra Mystica**	**78.72**	**4**	*e*P		**P**		**12 54 49.1**	**0.0**
	comp=Z,4.9nm,0.9s									
SOKA	**Soboth**	**78.73**	**3**	*e*P		**P**		**12 54 48.9**	**-0.3**
	comp=Z,8.9nm,0.6s,SNR=13									
SOKA				*es*P		**sP**		**12 55 05.8**	**-0.2**
	comp=Z,38nm,1.4s									
MARR	**Marisel-Cluj**	**78.76**	**358**	⇓P		**P**		**12 54 50.3**	**+0.9**
MORE	**Moreh**	**78.83**	**296**	IAmb		IAmb		12 55 09.5	
	comp=Z,36nm,1.2s									
OBKA	**Obir**	**78.88**	**4**	*e*P		**P**		**12 54 49.3**	**-0.7**
	comp=Z,29nm,1.0s,SNR=18									
OBKA	**Obir**	**78.88**	**4**	P		**P**		**12 54 50.0**	**0.0**
SHL	**Shillong**	**78.97**	**299**	P		**P**		**12 54 50.1**	**-0.9**
SHAA	**Shahritus**	**78.97**	**323**	IAmb		IAmb		12 54 52.3	
	comp=Z,46nm,1.0s									
ONER	**Baraj Valea Uz**	**78.98**	**355**	⇓P		**P**		**12 54 51.8**	**+1.3**
LABN	**Labinsk**	**79.23**	**345**	*e*P		**P**		**12 54 52.5**	**+0.6**
LABN				*e**PP		**pP**		**12 55 04.6**	**+0.5**
LABN				pmax	pmax					
	comp=Z,23nm,0.6s									
MORH	**Mrgy, Hungar**	**79.26**	**1**	⇑P		**P**		**12 54 52.7**	**+0.6**
MORH	**Mrgy, Hungar**	**79.26**	**1**	P		**P**		**12 54 52.4**	**+0.4**
	comp=Z,8.0nm,1.3s									
MORH	**Mrgy, Hungar**	**79.26**	**1**	P		**P**		**12 54 52.6**	**+0.6**
TURR	**Turia**	**79.28**	**355**	⇓P		**P**		**12 54 53.5**	**+1.4**
DOPR	**Dopca**	**79.39**	**356**	⇑P		**P**		**12 54 54.0**	**+1.2**
VRI	**Vrincioaia**	**79.44**	**355**	⇑P		**P**		**12 54 53.5**	**+0.5**
VRI	**Vrincioaia**	**79.44**	**355**	P		**P**		**12 54 53.5**	**+0.5**
CAF	**Calviac**	**79.44**	**13**	*e*P		**P**		**12 54 53.7**	**+0.6**
CAF				pmax	pmax					
	comp=Z,12nm,1.2s									
PLOR	**Plostina**	**79.45**	**355**	⇓P		**P**		**12 54 54.0**	**+0.9**
PLOR	**Plostina**	**79.45**	**355**	P		**P**		**12 54 54.0**	**+0.9**
COVR	**Voineasa-Covas**	**79.48**	**355**	⇑P		**P**		**12 54 53.8**	**+0.5**
EVN	**Everest**	**79.48**	**304**	IAmb		IAmb		12 54 55.9	
	comp=Z,35nm,1.0s									
EVN	**Everest**	**79.48**	**304**	P		**P**		**12 54 53.7**	**-0.6**
ANN	**Anapa**	**79.54**	**347**	*e*P		**P**		**12 54 49.4**	**-4.1**
ANN				*e**PP		**pP**		**12 55 05.2**	**-0.5**
ANN				pmax	pmax					
	comp=Z,42nm,1.0s									
DHUB	**DHUBRI**	**79.54**	**300**	*ex*		x		12 52 42.7		
SAHR	**Sahastru**	**79.58**	**355**	⇑P		**P**		**12 54 54.9**	**+1.1**
KIV	**Kislovodsk**	**79.59**	**343**	⇑P		**P**		**12 54 54.7**	**+0.8**
KIV	**Kislovodsk**	**79.59**	**343**	*e*P		**P**		**12 54 53.9**	**0.0**
KIV				pmax	pmax					
	comp=Z,29nm,1.0s									
KIV				MLR	MLR					
	comp=Z,100nm,19.0s									
KIV	**Kislovodsk**	**79.59**	**343**	P		**P**		**12 54 54.1**	**+0.2**
KIV	**Kislovodsk**	**79.59**	**343**	P		**P**		**12 54 53.7**	**-0.3**
	comp=Z,285nmcomp=Z,33nm,0.8s									
KIV	**Kislovodsk**	**79.59**	**343**	P		**P**		**12 54 53.9**	**0.0**
MAK	**Makhachkala**	**79.67**	**340**	*e*P		**P**		**12 54 55.1**	**+0.9**
MAK				*e*				12 57 56.9		
MAK				*e*PPP		PPP		12 59 47.7		
MAK				*e*S		**S**		**13 04 55.5**	**+2.4**
MAK				*e*SS		**SS**		**13 10 08.7**	**+8.1**
MAK				pmax	pmax					
	comp=Z,268nm,1.2s									
MAK				MLR	MLR					
	comp=Z,462nm,14.0s									
KBZ	**Khabaz**	**79.78**	**343**	P		**P**		**12 54 55.0**	**+0.2**
	comp=Z,20nm,0.8s,baz=342,slow=4.8,SNR=34									
KBZ				LR		LR		13 33 54.7		
	comp=Z,152nm,21.6s,baz=3.0,slow=38									
	comp=Z,20nm,0.8s									
KBZ	**Khabaz**	**79.78**	**343**	⇓*i*P		**P**		**12 54 54.8**	**0.0**
KBZ				pmax	pmax					
	comp=Z,19nm,0.9s									
SHA1	**Shidzhatmaz**	**79.81**	**343**	*d i*P		**P**		**12 54 55.0**	**-0.3**
VIVF	**Saint-Julien-l**	**79.82**	**11**	*e*P		**P**		**12 54 55.1**	**0.0**
VIVF				pmax	pmax					
	comp=Z,5.0nm,0.8s									
MLR	**Muntele Rosu**	**79.85**	**355**	LR		LR		13 35 55.6		
	comp=Z,121nm,18.1s,baz=21,slow=40									
MLR	**Muntele Rosu**	**79.85**	**355**	⇓P		**P**		**12 54 55.9**	**+0.5**
MLR	**Muntele Rosu**	**79.85**	**355**	P		**P**		**12 54 55.9**	**+0.5**
BZS	**Buzias**	**79.85**	**359**	⇑P		**P**		**12 54 55.9**	**+0.6**
BZS	**Buzias**	**79.85**	**359**	P		**P**		**12 54 55.8**	**+0.6**
BZS	**Buzias**	**79.85**	**359**	P		**P**		**12 54 54.3**	**-0.9**
VOIR		**79.94**	**356**	⇓P		**P**		**12 54 56.9**	**+1.1**
VOIR		**79.94**	**356**	P		**P**		**12 54 56.9**	**+1.1**
VOIR		**79.94**	**356**	P		**P**		**12 54 56.3**	**+0.5**
	comp=Z,7.8nm,0.9s									
VOIR		**79.94**	**356**	P		**P**		**12 54 57.1**	**+1.3**
ARR	**Arges**	**80.02**	**356**	P		**P**		**12 54 57.8**	**+1.5**
CFR	**Carcaliu**	**80.04**	**354**	⇓P		**P**		**12 54 56.8**	**+0.6**
CFR	**Carcaliu**	**80.04**	**354**	P		**P**		**12 54 56.8**	**+0.6**
GZR	**Gura Zlata**	**80.05**	**358**	⇑P		**P**		**12 54 56.3**	**-0.1**
GZR	**Gura Zlata**	**80.05**	**358**	P		**P**		**12 54 56.3**	**-0.1**
MBDF	**Montbardon**	**80.16**	**9**	*e*P		**P**		**12 54 58.0**	**+0.9**
MBDF				pmax	pmax					
	comp=Z,4.0nm,0.7s									
KLP	**Kalpa**	**80.33**	**312**	*e*P		**P**		**12 54 57.7**	**-0.8**
KLP				IAmb		IAmb		12 55 02.3		
	comp=Z,30nm,0.9s									
TPGR	**Topolog**	**80.34**	**354**	⇑P		**P**		**12 54 59.0**	**+1.1**
SOC	**Sochi**	**80.42**	**345**	*e*P		**P**		**12 54 58.5**	**+0.2**
SOC				*e*				12 57 57.9		
SOC				*e*PPP		PPP		12 59 49.7		
SOC				*e*S		**S**		**13 05 00.8**	**-0.3**
SOC				*e*SS		**SS**		**13 10 15.8**	**+4.0**
SOC				*e*SSS		SSS		13 13 41.6		
SOC				pmax	pmax					
	comp=Z,29nm,0.9s									
SOC				MLR	MLR					
	comp=Z,296nm,24.0s									
DHRM	**DHARAMSHALA**	**80.53**	**314**	*e*P		**P**		**12 54 59.0**	**-0.4**
DHRM				IAmb		IAmb		12 55 00.4		
	comp=Z,40nm,0.5s									
NIL	**Nilore**	**80.54**	**317**	P		**P**		**12 54 58.8**	**-0.3**
NIL				pmax	pmax					
	comp=Z,62nm,0.9s									
NIL	**Nilore**	**80.54**	**317**	P		**P**		**12 54 58.8**	**-0.3**
NIL	**Nilore**	**80.54**	**317**	P		**P**		**12 54 58.9**	**-0.3**
HERR	**Herculane**	**80.57**	**358**	⇑P		**P**		**12 54 59.6**	**+0.5**
PGAV	**Gavieira, Arco**	**80.62**	**21**	eLR		LR		13 23 56.2	
PGAV				*i* IAMs_20		IAMs_20		13 30 20.5		
	comp=Z,128nm,22.0s									
MYLDM	**Lahad Datu**	**80.68**	**266**	P		**P**		**12 55 02.5**	**+2.4**
MDVR	**Moldovita**	**80.68**	**358**	⇑P		**P**		**12 55 00.3**	**+0.5**
ISO	**Isola**	**80.72**	**9**	P		**P**		**12 55 01.4**	**+1.4**
ISO	**Isola**	**80.72**	**9**	P		**P**		**12 55 01.4**	**+1.4**
TIRR	**Tirgusor**	**80.74**	**354**	⇑P		**P**		**12 55 00.4**	**+0.4**
TIRR	**Tirgusor**	**80.74**	**354**	P		**P**		**12 55 00.4**	**+0.4**
TIRR	**Tirgusor**	**80.74**	**354**	IAmb		IAmb		12 55 01.4	
	comp=Z,15nm,0.8s									
TIRR	**Tirgusor**	**80.74**	**354**	P		**P**		**12 54 59.8**	**-0.2**
	comp=Z,19nm,0.9s									
TIRR	**Tirgusor**	**80.74**	**354**	P		**P**		**12 54 59.5**	**-0.5**
CHTO	**Chiang Mai**	**80.78**	**289**	P		**P**		**12 55 00.5**	**-0.1**
CHTO				pmax	pmax					
	comp=Z,53nm,1.5s									
CHTO	**Chiang Mai**	**80.78**	**289**	P		**P**		**12 55 00.5**	**-0.1**
CHTO	**Chiang Mai**	**80.78**	**289**	P		**P**		**12 54 59.7**	**-0.9**
MTLF	**Montolieu**	**81.02**	**13**	*e*P		**P**		**12 55 01.5**	**0.0**
MTLF				pmax	pmax					
	comp=Z,13nm,1.1s									
AKT	**Akhty**	**81.04**	**339**	*e*P		**P**		**12 55 01.6**	**-0.2**
AKT				*e*				12 55 08.2		
AKT				*e**PP		**pP**		**12 55 14.7**	**+0.6**
AKT				*e*PPP		PPP		12 59 58.6		
AKT				pmax	pmax					
	comp=Z,37nm,0.8s									
AKT				MLR	MLR					
	comp=Z,293nm,22.0s									
CMAR	**Chiang Mai Arr**	**81.07**	**289**	P		**P**		**12 55 01.4**	**-0.8**
	comp=Z,29nm,0.9s,baz=19,slow=5.5,SNR=101									
CMAR				LR		LR		13 34 30.2		
	comp=Z,62nm,19.2s,baz=45,slow=38									
	comp=Z,29nm,0.9s									
CMAR	**Chiang Mai Arr**	**81.07**	**289**	*i* P		**P**		**12 55 01.3**	**-0.9**
CMAR				pmax	pmax					
	comp=Z,30nm,0.9s									
CMAR	**Chiang Mai Arr**	**81.07**	**289**	P		**P**		**12 55 01.3**	**-0.9**
SBF	**Sospel**	**81.07**	**9**	*e*P		**P**		**12 55 01.7**	**-0.2**
SBF				pmax	pmax					
	comp=Z,10.0nm,0.9s									
ETSF	**Etsaut**	**81.07**	**15**	*e*P		**P**		**12 55 02.4**	**+0.5**
ETSF				pmax	pmax					
	comp=Z,8.0nm,0.9s									
EPF	**Esparros**	**81.07**	**14**	*e*P		**P**		**12 55 02.3**	**+0.4**
EPF				pmax	pmax					
	comp=Z,3.0nm,0.5s									
PBRG	**Braganca**	**81.08**	**20**	*e*P		**P**		**12 55 03.3**	**+1.4**
SMLA	**Simla**	**81.14**	**313**	*e*P		**P**		**12 55 01.1**	**-1.2**
SMLA				IAmb		IAmb		12 55 04.2		
	comp=Z,66nm,0.9s									
POLO	**Lamas de Olo**	**81.28**	**21**	*e*P		**P**		**12 55 04.8**	**+1.7**
POLO				*i* IAmb		IAmb		12 55 22.6		
	comp=Z,15nm,1.6s									
KBL	**Kabul**	**81.35**	**321**	P		**P**		**12 55 02.6**	**-1.1**
KBL				pmax	pmax					
	comp=Z,20nm,0.9s									
KBL	**Kabul**	**81.35**	**321**	P		**P**		**12 55 02.6**	**-1.1**
KBL				IAmb		IAmb		12 55 03.7		
	comp=Z,20nm,0.8s									
KBL	**Kabul**	**81.35**	**321**	P		**P**		**12 55 01.6**	**-2.1**
PVRL	**Vila Real**	**81.39**	**20**	*e*P		**P**		**12 55 04.5**	**+0.8**
SEKA	**Sheki**	**81.41**	**339**	P		**P**		**12 55 03.4**	**-0.3**
BRDH	**Bariadhala**	**81.48**	**297**	LR		LR		13 35 46.8	
	comp=Z,177nm,18.0s,baz=116,slow=39									
NPW	**Naypyitaw**	**81.51**	**292**	P		**P**		**12 55 04.7**	**+0.2**
MVO	**Moncorvo**	**81.64**	**20**	*e*P		**P**		**12 55 05.2**	**+0.2**
MVO				*i* IAmb		IAmb		12 55 36.0		
	comp=Z,28nm,2.3s									
MVO				eLR		LR		13 25 22.0		
MVO				*i* IAMs_20		IAMs_20		13 30 51.9		
	comp=Z,137nm,22.0s									
DZM	**Mont Dzumac**	**81.75**	**211**	LR		LR		13 24 06.5		
	comp=Z,144nm,19.8s,baz=58,slow=30									
BOVS	**Bovan**	**81.83**	**358**	⇓P		**P**		**12 55 06.6**	**+0.8**
PVIS	**Viseu**	**81.90**	**21**	*e*P		**P**		**12 55 07.3**	**+1.0**
EPOS	**Posof**	**81.97**	**343**	P		**P**		**12 55 06.8**	**+0.1**
PLVB	**Pleven**	**82.00**	**356**	⇑P		**P**		**12 55 07.6**	**+0.9**
MURB	**Monte Urbino**	**82.03**	**5**	IAmb		IAmb		12 55 26.9		
	comp=Z,38nm,1.3s									
GANJ	**Ganja**	**82.13**	**340**	P		**P**		**12 55 08.4**	**+0.9**
MTE	**Manteigas**	**82.27**	**21**	*e*P		**P**		**12 55 09.9**	**+1.7**
MTE				*i* IAmb		IAmb		12 55 23.1		
	comp=Z,27nm,1.3s									
MTE				eLR		LR		13 25 02.7		
MTE				*i* IAMs_20		IAMs_20		13 30 21.7		
	comp=Z,102nm,22.0s									
PCAS	**Casmilo, Conde**	**82.41**	**21**	*e*P		**P**		**12 55 10.5**	**+1.6**
PCAS				*i* IAmb		IAmb		12 55 29.3		
	comp=Z,37nm,1.6s									
NRCA	**Norcia**	**82.49**	**5**	IAmb		IAmb		12 55 27.7		
	comp=Z,11nm,0.8s									
PGF	**Pioggiola**	**82.51**	**8**	*e*P		**P**		**12 55 09.5**	**0.0**
PGF				pmax	pmax					
	comp=Z,9.0nm,0.9s									
SDV	**Santo Domingo**	**82.65**	**85**	LR		LR		13 33 52.5		
	comp=Z,103nm,19.7s,baz=286,slow=37									
PCBR	**Castelo Branco**	**82.83**	**21**	*e*P		**P**		**12 55 11.8**	**+0.7**
PCBR				*i* IAmb		IAmb		12 55 13.4		
	comp=Z,26nm,1.7s									
PSARD	**Sardoal**	**82.91**	**21**	*e*P		**P**		**12 55 12.5**	**+0.9**
PSARD				*i* IAmb		IAmb		12 55 26.1		
	comp=Z,45nm,1.4s									
GNI	**Garni**	**82.92**	**341**	LR		LR		13 39 15.6		
	comp=Z,119nm,18.1s,baz=6.0,slow=41									
PDG	**Podgorica**	**83.05**	**0**	⇓P		**P**		**12 55 12.9**	**+0.8**
PDG	**Podgorica**	**83.05**	**0**	IAmb		IAmb		12 55 29.7		
	comp=Z,11nm,0.7s									
PDG	**Podgorica**	**83.05**	**0**	P		**P**		**12 55 11.8**	**-0.4**
PMRV	**Marv??o**	**83.24**	**21**	*e*P		**P**		**12 55 14.4**	**+1.2**
PMRV				eLR		LR		13 23 58.5		
PMRV				*i* IAMs_20		IAMs_20		13 30 36.3		
	comp=Z,88nm,24.0s									
PMTG	**Montargil**	**83.41**	**21**	*e*P		**P**		**12 55 14.2**	**+0.1**
PMTG				*i* IAmb		IAmb		12 55 31.9		
	comp=Z,23nm,1.2s									
ESBB	**Sonseca Array**	**83.66**	**18**	IAmb		IAmb		12 55 29.3		
	comp=Z,12nm,0.8s									
ESDC	**Sonseca Array**	**83.66**	**18**	P		**P**		**12 55 14.7**	**-0.8**
	comp=Z,10nm,0.7s,baz=341,slow=4.5,SNR=63									
ESDC				pP		**pP**		**12 55 27.5**	**-0.3**
	comp=Z,11nm,0.7s,baz=338,slow=4.5,SNR=17									
ESDC				LR		LR		13 34 18.0		
	comp=Z,77nm,19.4s,baz=347,slow=37									
	comp=Z,10nm,0.7s									
ESDC	**Sonseca Array**	**83.66**	**18**	P		**P**		**12 55 15.6**	**+0.2**
PARRA	**Arraiolos**	**83.69**	**21**	*e*P		**P**		**12 55 16.3**	**+0.7**
PARRA				*i* IAmb		IAmb		12 55 29.3		
	comp=Z,24nm,1.0s									
PESTR	**Estremoz**	**83.74**	**21**	*e*P		**P**		**12 55 17.2**	**+1.4**
PESTR				*i* IAmb		IAmb		12 55 35.0		
	comp=Z,22nm,1.5s									
PHP	**Peshkopia**	**83.79**	**359**	P		**P**		**12 55 16.0**	**-0.1**
PHP	**Peshkopia**	**83.79**	**359**	P		**P**		**12 55 17.0**	**+0.9**
ROSC	**El Rosal**	**83.80**	**90**	LR		LR		13 38 32.5		
	comp=Z,24nm,18.9s,baz=110,slow=40									
HRA	**Herat**	**83.84**	**326**	IAmb		IAmb		12 55 34.4		
	comp=Z,17nm,1.0s									
KELT	**Kelkit**	**83.85**	**345**	P		**P**		**12 55 18.1**	**+1.5**
MOE	**Montemor**	**83.91**	**22**	*e*P		**P**		**12 55 17.4**	**+0.7**
MOE				*i* IAmb		IAmb		12 55 30.6		
	comp=Z,33nm,1.2s									
EVO	**Evora**	**83.97**	**21**	*e*P		**P**		**12 55 17.5**	**+0.5**
EVO				*i* IAmb		IAmb		12 55 31.5		
	comp=Z,18nm,1.6s									
KUDL	**Kundal**	**84.02**	**312**	*e*P		**P**		**12 55 16.1**	**-1.3**
KUDL				IAmb		IAmb		12 55 18.0		
	comp=Z,26nm,0.6s									
KUDL				*i* pP		**pP**		**12 55 29.6**	**-0.1**
KUDL				*ex*		x		12 55 33.9		
ALBI	**Allahabad**	**84.09**	**306**	*e*P		**P**		**12 55 16.6**	**-1.1**
ALBI				IAmb		IAmb		12 55 18.5		
	comp=Z,19nm,1.0s									
ALBI				*i* pP		**pP**		**12 55 28.9**	**-1.1**
ALBI				*ex*		x		12 55 33.5		
RDO	**Rodhopi**	**84.20**	**356**	IAmb		IAmb		12 55 20.0		
	comp=Z,23nm,0.9s									
RDO	**Rodhopi**	**84.20**	**356**	P		**P**		**12 55 17.9**	**-0.1**
KNT	**Kendrikon**	**84.28**	**358**	P		**P**		**12 55 20.7**	**+2.2**
KNT	**Kendrikon**	**84.28**	**358**	P		**P**		**12 55 20.7**	**+2.2**
SRS	**Serrai**	**84.30**	**357**	P		**P**		**12 55 18.8**	**+0.1**
SRS	**Serrai**	**84.30**	**357**	P		**P**		**12 55 18.8**	**+0.1**
ALN	**Alexandroupoli**	**84.42**	**355**	P		**P**		**12 55 19.9**	**+0.7**
ALN	**Alexandroupoli**	**84.42**	**355**	IAmb		IAmb		12 55 20.9		
	comp=Z,25nm,1.1s									
ALN	**Alexandroupoli**	**84.42**	**355**	P		**P**		**12 55 19.9**	**+0.7**
GRG	**Griva**	**84.49**	**358**	P		**P**		**12 55 20.9**	**+1.2**
GRG	**Griva**	**84.49**	**358**	P		**P**		**12 55 20.9**	**+1.2**
MDUB	**Mudumu**	**84.49**	**351**	IAmb		IAmb		12 55 21.6		
	comp=Z,18nm,1.0s									
PBAR	**Barrancos**	**84.52**	**21**	*e*P		**P**		**12 55 21.2**	**+1.5**
PBAR				*i* IAmb		IAmb		12 55 33.9		
	comp=Z,25nm,1.0s									
YLV	**Yalova**	**84.55**	**353**	P		**P**		**12 55 20.2**	**+0.2**
	comp=Z,18nm,1.2s									
SOH	**Sokhos**	**84.60**	**357**	P		**P**		**12 55 21.5**	**+1.3**
SOH	**Sokhos**	**84.60**	**357**	P		**P**		**12 55 21.5**	**+1.3**
BR106	**Keskin Array S**	**84.98**	**349**	P		**P**		**12 55 22.8**	**+0.5**
	comp=Z,85nmcomp=Z,10nm,1.0s									
BR131	**Keskin Array S**	**84.99**	**349**	*e*P		**P**		**12 55 22.1**	**-0.2**
BR131				*i* *PP		**pP**		**12 55 35.0**	**+0.3**
BRTR	**Keskin Array B**	**84.99**	**349**	P		**P**		**12 55 21.8**	**-0.5**
	comp=Z,8.1nm,0.9s,baz=19,slow=2.0,SNR=31									
BRTR				LR		LR		13 40 42.2		
	comp=Z,82nm,18.9s,baz=25,slow=41									
	comp=Z,8.1nm,0.9s									
BR105	**Keskin Array S**	**85.00**	**349**	P		**P**		**12 55 22.8**	**+0.4**
	comp=Z,104nmcomp=Z,13nm,1.2s									
BR104	**Keskin Array S**	**85.01**	**349**	P		**P**		**12 55 22.9**	**+0.5**
	comp=Z,86nmcomp=Z,12nm,1.1s									
ARPR	**Arapgir-MALATY**	**85.02**	**345**	IAmb		IAmb		12 55 25.2		
	comp=Z,17nm,0.9s									
ARPR	**Arapgir-MALATY**	**85.02**	**345**	P		**P**		**12 55 24.4**	**+1.9**
PVAQ	**Vaqueiros**	**85.12**	**22**	*e*P		**P**		**12 55 24.6**	**+1.8**
PVAQ				*i* IAmb		IAmb		12 55 42.5		
	comp=Z,29nm,1.6s									
PVAQ				eLR		LR		13 26 59.9		
PVAQ				*i* IAMs_20		IAMs_20		13 31 15.6		
	comp=Z,138nm,22.0s									
MARCO	**Tramutola**	**85.12**	**3**	P		**P**		**12 55 23.6**	**+0.7**
LIT	**Litokhoron**	**85.35**	**358**	P		**P**		**12 55 24.8**	**+0.9**
LIT	**Litokhoron**	**85.35**	**358**	IAmb		IAmb		12 55 41.5	
	comp=Z,17nm,1.0s									
LIT	**Litokhoron**	**85.35**	**358**	P		**P**		**12 55 24.8**	**+0.9**
KIRS	**Kirsehir-Merke**	**85.55**	**349**	⇑P		**P**		**12 55 26.4**	**+1.4**
VSL	**Villasalto**	**85.57**	**8**	IAmb		IAmb		12 55 38.6	
	comp=Z,9.4nm,0.8s									
KKUL	**Konya-Kulu**	**85.61**	**350**	P		**P**		**12 55 27.2**	**+1.8**
HAKT	**HAKKARI**	**85.62**	**341**	P		**P**		**12 55 26.0**	**+0.4**
TIP	**Timpagrande**	**86.27**	**2**	⇑P		**P**		**12 55 29.1**	**+0.5**
TIP	**Timpagrande**	**86.27**	**2**	IAmb		IAmb		12 55 29.8	
	comp=Z,10nm,0.8s									
TIP	**Timpagrande**	**86.27**	**2**	P		**P**		**12 55 28.8**	**+0.2**
	comp=Z,14nm,0.8s									
ANDN	**Andirin**	**86.78**	**347**	P		**P**		**12 55 32.6**	**+1.5**
CTA	**Charters Tower**	**87.41**	**229**	LR		LR		13 32 16.4		
	comp=Z,55nm,18.5s,baz=34,slow=34									
BHPL	**Bhopal**	**87.87**	**309**	*e*P		**P**		**12 55 35.6**	**-0.9**
BHPL				IAmb		IAmb		12 55 37.6		
	comp=Z,16nm,0.8s									
BHPL				*i* x		x		12 55 43.0		
BHPL				*ex*		x		12 55 48.6		
KAPI	**Kappang**	**88.26**	**259**	LR		LR		13 46 18.2		
	comp=Z,32nm,18.0s,baz=101,slow=43									
KEST	**Kesra**	**89.31**	**8**	P		**P**		**12 55 43.5**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=34,slow=4.2,SNR=3.5									
KEST				LR		LR		13 39 44.8		
	comp=Z,61nm,18.7s,baz=359,slow=38									
	comp=Z,3.3nm,0.8s									
IDI	**Anoyia**	**90.07**	**356**	LR		LR		13 40 58.7		
	comp=Z,59nm,18.4s,baz=86,slow=39									
**

	0.2nm,0.3s,baz=327,slow=11,SNR=1.5							
	2.7nm,0.7s							
I42PT	**GRACIOSA ISLAN**	**21.19**	**324**	I	I	14 52 00.0		
	baz=140,slow=314,SNR=2.7							
ASAR	**Alice Springs**	**148.96**	**99**	PKPbc	PKPbc	13 04 01.2	-0.5	
	0.3nm,0.9s,baz=286,slow=2.4,SNR=2.0							

*AFAD **28** 12:53:22.5, 38°.85N×27°.56E, h7km±3km, ML1.8*
ISK 28 12:53:20.7, 38.80N×27.66E, h7km, ML2.2/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMA	**Golmarmara-Man**	**0.22**	**114**	Pg	Pg	12 53 25.5	+0.4
GOMA				Sg	Sg	12 53 29.2	+1.1
SOMA	**Soma-Manisa**	**0.37**	**345**	Pg	Pg	12 53 28.4	+0.5
GORD	**Gordes-Manisa**	**0.42**	**75**	Pg	Pg	12 53 29.3	+0.5
STEP	**BALIKESIR_Sava**	**0.58**	**4**	P	Pb	12 53 33.3	+0.1
STEP				S	Sb	12 53 41.4	-0.2
STEP				IAML		12 53 42.0	
	comp=N,72nm,0.7s						
STEP				IAML		12 53 42.0	
	comp=E,44nm,0.6s						
ODEM	**Odemis-Izmir**	**0.61**	**148**	Pg	Pg	12 53 33.1	+0.5
BLCB	**Balcova**	**0.64**	**230**	Pg	Pg	12 53 33.3	+0.3
DKL	**Dikili**	**0.65**	**295**	Pg	Pb	12 53 33.8	-0.5
FOCM	**Foa**	**0.73**	**264**	Pg	Pg	12 53 35.1	+0.3
KULA	**Kula-Manisa**	**0.83**	**110**	Pg	Pg	12 53 37.1	+0.4
BUHA	**Balikesir, Bur**	**0.83**	**327**	P	Pb	12 53 37.6	+0.1
BUHA				S	Sg	12 53 48.0	+0.4
BUHA				IAML		12 53 51.0	
	comp=E,41nm,0.6s						
BUHA				IAML		12 53 53.0	
	comp=N,28nm,0.5s						
BALB	**Balikesir**	**0.86**	**11**	Pg	Pb	12 53 37.9	0.0
AYDB	**Zeytinkoy-Aydi**	**0.87**	**168**	Pg	Pb	12 53 38.1	-0.1
BALY	**Balya**	**0.94**	**358**	P	Pb	12 53 39.4	0.0
BALY				IAML		12 53 52.0	
	comp=E,46nm,0.3s						
BALY				S	Sb	12 53 52.2	+0.1
BALY				IAML		12 53 55.0	
	comp=N,72nm,0.6s						
BKES	**Balkesir-Mer**	**0.96**	**13**	P	Pb	12 53 39.5	-0.1
BKES				S	Sb	12 53 53.0	+0.6
BKES				IAML		12 53 54.0	
	comp=E,33nm,0.2s						
BKES				IAML		12 54 21.0	
	comp=N,21nm,1.4s						
NAZL	**Nazilli-Aydin**	**0.97**	**149**	Pg	Pb	12 53 39.7	-0.1
SUSR	**Susurluk-Balik**	**1.21**	**16**	Pn	Pn	12 53 44.2	+0.2
CMHT	**Manyas**	**1.23**	**11**	P	Pb	12 53 44.2	-0.1
CMHT				S	Sg	12 53 59.7	-0.7
CHOS	**Chios island**	**1.32**	**252**	Pn	Pg	12 53 46.4	+0.3
TVSB	**Tavsanli**	**1.54**	**65**	Pn	Pn	12 53 49.2	+0.5

*IDC **28** 12:54:33.2±1.0, 54°.83N×160°.59W, h39km±6km, mb3.7/12, mbtmp3.9/15, ML3.5/3, MS3.2/1, Error ellipse: s-maj=26.7km s-min=15.7km az=167.0*
*NEIC **28** 12:54:34.2±0.9, 54°.83N±0°.07×160°.28W±0°.07, h40km±8km, mb4.0/15, ML3.7/32, ML3.5(AEIC), Error ellipse: s-maj=11.1km s-min=5.2km az=164.0*
*AEIC **28** 12:54:34.2±1.2, 54°.85N±0°.06×160°.31W±0°.06, h30km±5km, Error ellipse: s-maj=8.3km s-min=5.4km az=186.0*
ISC 28 12:54:33.7±0.7, 54°.86N±0°.07×160°.27W±0°.04, h43km±5km, n142, σ1§42/142, mb4.1/14, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.39**	**96**		**Pn**	**12 54 43.5**	**+0.3**
CNBA					**Sn**	**12 54 50.0**	**0.0**
CNBA				IAML		12 54 50.5	
	comp=N,3µm,0.3s						
SDPT	**Sand Point**	**0.51**	**346**		**Pn**	**12 54 44.8**	**+0.1**
SDPT	**Sand Point**	**0.51**	**346**		**Sn**	**12 54 52.4**	**0.0**
SDPT				IAML		12 54 52.6	
	comp=E,5µm,0.2s						
SDPT				IAML		12 54 52.6	
	comp=N,14µm,0.7s						
DOL	**Dolgoi Island**	**0.96**	**288**		**Pn**	**12 54 50.9**	**+0.1**
DOL					**Sn**	**12 55 03.6**	**+0.2**
PS1A	**Pavlof South-1**	**1.02**	**304**		**Pn**	**12 54 52.1**	**+0.6**
PS1A					**Sn**	**12 55 05.3**	**+0.7**
PS4A	**Pavlof South-4**	**1.04**	**299**		**Pn**	**12 54 52.2**	**+0.4**
PS4A					**Sn**	**12 55 06.0**	**+0.9**
HAG	**Hague Volcano**	**1.05**	**297**		**Pn**	**12 54 52.6**	**+0.6**
HAG					**Sn**	**12 55 07.2**	**+1.7**
PN7A	**Pavlof North-7**	**1.15**	**301**		**Pn**	**12 54 54.3**	**+0.9**
DTNA	**Dutton South F**	**1.18**	**285**		**Pn**	**12 54 54.3**	**+0.5**
DTNA					**Sn**	**12 55 09.2**	**+0.6**
DT1	**Dutton Round H**	**1.19**	**283**		**Pn**	**12 54 54.1**	**+0.2**
DT1					**Sn**	**12 55 08.9**	**+0.1**
VNKR	**Veniaminof 5**	**1.28**	**23**		**Pn**	**12 54 56.6**	**+1.4**
VNKR					**Sn**	**12 55 13.5**	**+2.4**
VNSS	**Veniaminof 8**	**1.45**	**18**		**Pn**	**12 54 59.2**	**+1.6**
VNFG	**Fog Glacier, M**	**1.48**	**16**	Pn	**Pn**	**12 55 00.0**	**+2.0**
VNFG	**Fog Glacier, M**	**1.48**	**16**		**Pn**	**12 55 00.0**	**+2.0**
ISNN	**Isanotski Nort**	**2.03**	**271**		**Pn**	**12 55 07.4**	**+2.0**
ISNN					**Sn**	**12 55 32.2**	**+2.6**
SSLS	**Shishaldin Sou**	**2.17**	**268**		**Pn**	**12 55 09.1**	**+1.7**
SSBA	**Shishaldin**	**2.23**	**269**		**Pn**	**12 55 09.5**	**+1.2**
ANPB	**Aniakchak Plen**	**2.25**	**29**		**Pn**	**12 55 10.2**	**+1.8**
AZAC	**Aniakchak**	**2.34**	**29**		**Pn**	**12 55 11.6**	**+1.8**
ANNW	**Aniakchak Nort**	**2.41**	**28**		**Pn**	**12 55 12.5**	**+1.9**
AKSA	**Akutan Strait**	**3.25**	**259**		**Pn**	**12 55 24.2**	**+2.1**
AKUT	**Akutan**	**3.29**	**259**	Pn	**Pn**	**12 55 23.6**	**+0.9**
AKUT				IAML		12 56 20.7	
	comp=N,121nm,1.2s						
AHB	**Akutan Harbor**	**3.32**	**259**		**Pn**	**12 55 25.0**	**+1.9**
AKBBA	**Akutan Broad B**	**3.39**	**259**		**Pn**	**12 55 26.0**	**+1.9**
ZRO	**Akutan Zero**	**3.42**	**259**		**Pn**	**12 55 26.4**	**+1.9**
PLBL	**Peulik Blue Cr**	**3.43**	**33**		**Pn**	**12 55 26.9**	**+2.2**
LVA	**Lava Point**	**3.44**	**261**	Pn	**Pn**	**12 55 26.0**	**+1.3**
LVA				IAML		12 56 28.4	
	comp=E,99nm,0.8s						
LVA				IAML		12 56 38.5	
	comp=N,160nm,0.7s						
R17L	**Mt. Peulik Vol**	**3.53**	**37**		**Pn**	**12 55 28.7**	**+2.7**
PLK1	**Peulik 1**	**3.58**	**33**		**Pn**	**12 55 29.1**	**+2.5**
PLK5	**Peulik 5**	**3.67**	**29**		**Pn**	**12 55 29.8**	**+2.0**
UNV	**Unalaska Valle**	**3.79**	**257**		**Pn**	**12 55 30.0**	**+0.5**
MNAT	**Makushin Natee**	**3.88**	**258**		**Pn**	**12 55 32.1**	**+1.3**
MGOD	**Makushin Gods**	**4.01**	**257**		**Pn**	**12 55 34.1**	**+1.4**
KJL	**Kejulik**	**4.13**	**37**		**Pn**	**12 55 36.3**	**+2.0**
Q17K	**Contact Creek**	**4.18**	**34**		**Pn**	**12 55 37.0**	**+1.9**
ANCK	**Angle Creek**	**4.26**	**36**		**Pn**	**12 55 38.5**	**+2.3**
Q16K	**King Salmon**	**4.31**	**26**		**Pn**	**12 55 38.7**	**+2.0**
ACHA	**Angle Creek He**	**4.33**	**37**		**Pn**	**12 55 38.4**	**+1.4**
MGLS	**Mageik Landsli**	**4.33**	**39**		**Pn**	**12 55 39.0**	**+2.0**
O15K	**Ungalikthiuk R**	**4.33**	**3**		**Pn**	**12 55 37.9**	**+0.9**
O15K	**Ungalikthiuk R**	**4.33**	**3**	IAML		12 56 57.4	
	comp=E,55nm,0.8s						
P16K	**Nushagak River**	**4.36**	**16**		**Pn**	**12 55 39.0**	**+1.6**
P16K	**Nushagak River**	**4.36**	**16**	IAML		12 57 06.1	
	comp=N,124nm,1.4s						
KABU	**Katmai Buttres**	**4.39**	**37**		**Pn**	**12 55 40.3**	**+2.5**
O14K	**Tigyukauivet M**	**4.44**	**353**		**Pn**	**12 55 39.6**	**+1.2**
O14K				IAML		12 56 30.8	
	comp=N,53nm,0.8s						
O14K				IAML		12 57 02.9	
	comp=E,49nm,0.8s						
OHAK	**Old Harbor**	**4.57**	**56**	Pn	**Pn**	**12 55 41.1**	**+0.8**
OHAK				IAML		12 56 53.0	
	comp=N,63nm,1.2s						
OHAK				IAML		12 57 08.1	
	comp=E,46nm,1.1s						
KARR	**Katmai Rainbow**	**4.76**	**38**		**Pn**	**12 55 45.1**	**+2.1**
Q18K	**Katmai Hardscr**	**4.77**	**35**		**Pn**	**12 55 45.4**	**+2.2**
OKTU	**Okmok Mt. Tuli**	**4.81**	**255**		**Pn**	**12 55 45.2**	**+1.7**
KAHG	**Katmai Hook Gl**	**4.82**	**39**		**Pn**	**12 55 45.9**	**+2.2**
P17K	**Kvichak River**	**4.82**	**24**	Pn	**Pn**	**12 55 44.3**	**+0.6**
O16K	**Kokwok River B**	**4.89**	**13**	Pn	**Pn**	**12 55 45.9**	**+1.2**
O16K				IAML		12 57 30.2	
	comp=E,38nm,0.9s						
N14K	**Kuskokwak Cree**	**5.13**	**352**		**Pn**	**12 55 48.6**	**+0.6**
N14K				IAML		12 57 56.8	
	comp=N,74nm,1.6s						
KDAK	**Kodiak Island**	**5.18**	**52**	Pn	**Pn**	**12 55 48.8**	**+0.1**
	comp=N,2.3nm,0.3s,baz=66,slow=2.3,SNR=52						
KDAK				Sn	**Sn**	**12 56 45.2**	**-1.9**
	comp=N,3.1nm,0.3s,baz=335,slow=21,SNR=5.6						
	comp=N,5.1nm,0.4s						
KDAK	**Kodiak Island**	**5.18**	**52**	Pn	**Pn**	**12 55 49.2**	**+0.6**
KDAK				IAML		12 57 18.9	
	comp=N,78nm,0.8s						
O17K	**Koliganek Bris**	**5.22**	**18**		**Pn**	**12 55 50.5**	**+1.4**
P18K	**Big Mountain,**	**5.31**	**29**		**Pn**	**12 55 52.1**	**+1.7**
N15K	**Kwethluk River**	**5.32**	**1**		**Pn**	**12 55 51.5**	**+0.9**
N15K				IAML		12 57 30.2	
	comp=E,58nm,1.1s						
N15K				IAML		12 57 38.2	
	comp=N,53nm,0.9s						
Q19K	**Cape Douglas,**	**5.46**	**39**	Pn	**Pn**	**12 55 54.5**	**+2.0**
O18K	**Koktuh Hills**	**5.71**	**27**		**Pn**	**12 55 58.3**	**+2.5**
M13K	**Dall Lake**	**5.81**	**345**		**Pn**	**12 55 58.5**	**+1.3**
M15K	**Kasigluk River**	**5.86**	**358**		**Pn**	**12 55 58.3**	**+0.5**
M14K	**Bethel**	**5.98**	**352**		**Pn**	**12 56 00.2**	**+0.7**
SPIA	**Saint Paul Isl**	**6.06**	**297**	Pn	**Pn**	**12 56 01.6**	**+1.0**
M16K	**Timber Creek**	**6.22**	**6**		**Pn**	**12 56 04.0**	**+1.2**
N18K	**Kilae Creek**	**6.29**	**20**		**Pn**	**12 56 05.3**	**+1.5**
L14K	**Kuka Creek**	**6.62**	**350**		**Pn**	**12 56 09.1**	**+0.7**
N19K	**Bonanza Creek**	**6.72**	**25**		**Pn**	**12 56 12.1**	**+2.3**
M17K	**Holitna River**	**6.73**	**12**		**Pn**	**12 56 10.8**	**+1.0**
L15K	**Ungalak Mounta**	**6.87**	**355**		**Pn**	**12 56 12.0**	**+0.2**
L16K	**Owhat River**	**6.88**	**3**		**Pn**	**12 56 12.7**	**+0.8**
RDSO	**Redoubt South**	**6.91**	**33**		**Pn**	**12 56 16.1**	**+3.7**
M18K	**Stony River**	**7.05**	**18**		**Pn**	**12 56 15.6**	**+1.3**
L17K	**Donlin**	**7.37**	**7**		**Pn**	**12 56 19.2**	**+0.6**
K13K	**Kusilvak Mount**	**7.46**	**344**		**Pn**	**12 56 20.8**	**+1.0**
K15K	**Wolf Creek Mou**	**7.49**	**355**		**Pn**	**12 56 21.3**	**+1.1**
L18K	**Granite Mounta**	**7.61**	**13**		**Pn**	**12 56 23.1**	**+1.1**
SPNN	**North Nagishla**	**7.65**	**28**		**Pn**	**12 56 26.0**	**+3.4**
M19K	**Big River Lodg**	**7.71**	**21**		**Pn**	**12 56 25.4**	**+2.2**
SEW	**Seward**	**7.84**	**44**		**Pn**	**12 56 26.8**	**+1.7**
L19K	**White Mountain**	**7.87**	**19**		**Pn**	**12 56 26.8**	**+1.3**
K17K	**Iditarod**	**7.95**	**7**		**Pn**	**12 56 27.6**	**+1.1**
M20K	**Styx River**	**7.97**	**25**		**Pn**	**12 56 29.7**	**+2.7**
J14K	**Nanvaranak Lak**	**8.09**	**349**	Pn	**Pn**	**12 56 29.6**	**+1.1**
J16K	**Anvik River**	**8.45**	**359**		**Pn**	**12 56 34.4**	**+0.9**
J17K	**VABM Dome**	**8.59**	**4**		**Pn**	**12 56 36.1**	**+0.9**
P23K	**Montague Islan**	**8.63**	**48**		**Pn**	**12 56 37.0**	**+1.1**
ATKA	**Atka Island**	**8.71**	**258**		**Pn**	**12 56 38.8**	**+1.7**
PWL	**Port Wells**	**8.74**	**42**		**Pn**	**12 56 38.2**	**+0.7**
HIN	**Hinchinbrook I**	**9.22**	**47**		**Pn**	**12 56 45.0**	**+0.9**
GLI	**Glacier Island**	**9.24**	**44**		**Pn**	**12 56 44.9**	**+0.6**
FID	**Port Fidalgo**	**9.42**	**46**		**Pn**	**12 56 46.5**	**-0.2**
J19K	**Poorman**	**9.46**	**13**		**Pn**	**12 56 48.1**	**+0.9**
EYAK	**Cordova Ski Ar**	**9.62**	**48**		**Pn**	**12 56 50.2**	**+0.8**
SCM	**Sheep Creek Mo**	**9.74**	**39**		**Pn**	**12 56 51.5**	**+0.4**
KLU	**Klutina**	**10.06**	**43**		**Pn**	**12 56 56.3**	**+0.7**
DHY	**Denali Highway**	**10.57**	**34**	Pn	**Pn**	**12 57 03.9**	**+1.3**
G16K	**Koyuk River**	**10.62**	**355**	Pn	**Pn**	**12 57 03.9**	**+0.8**
H19K	**Roundabout Mou**	**10.87**	**8**		**Pn**	**12 57 07.3**	**+0.8**
GRNC	**Granite Creek**	**11.47**	**52**		**Pn**	**12 57 15.8**	**+0.9**
ILAR	**Eielson Array**	**11.97**	**29**	Pn	**Pn**	**12 57 18.5**	**-3.0**
	comp=N,0.2nm,0.3s,baz=220,slow=13,SNR=7.0						
	comp=N,0.6nm,0.7s						
ILAR	**Eielson Array**	**11.97**	**29**	Pn	**Pn**	**12 57 22.0**	**+0.4**
I30M	**Mount Dempster**	**15.70**	**39**	IAmb	IAmb	12 58 33.1	
	comp=Z,14nm,0.8s						
G29M	**Pine Creek**	**16.09**	**33**	IAmb	IAmb	12 58 21.6	
	comp=Z,7.6nm,0.8s						
EPYK	**Eagle Plains**	**16.19**	**35**	IAmb	IAmb	12 58 32.5	
	comp=Z,7.7nm,0.7s						
G30M	**tAoh Zraii Nji**	**16.70**	**34**	IAmb	IAmb	12 58 28.3	
	comp=Z,5.0nm,0.7s						
MMPY	**Sheldon Lake,**	**16.81**	**51**	Pn	**Pn**	**12 58 26.7**	**+1.0**
F30M	**Barrier River**	**17.20**	**32**		**P**	**12 58 31.7**	**0.0**
F30M				IAmb	IAmb	12 58 34.3	
	comp=Z,4.5nm,0.8s						
G31M	**Satah River**	**17.31**	**35**	IAmb	IAmb	12 58 36.1	
	comp=Z,4.9nm,0.7s						
F31M	**Tsiigehtchic**	**17.76**	**34**	P	**P**	**12 58 38.1**	**+0.4**
INK	**Inuvik**	**18.30**	**32**	P	**P**	**12 58 43.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=177,slow=7.0,SNR=1.9						
	comp=Z,1.2nm,0.4s						
INK	**Inuvik**	**18.30**	**32**	P	**P**	**12 58 43.4**	**-0.4**
PET	**Petropavlovsk**	**24.01**	**283**	P	**P**	**12 59 44.7**	**+0.6**
YKA	**Yellowknife Ar**	**24.46**	**53**	P	**P**	**12 59 49.6**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=277,slow=7.6,SNR=4.2						
	comp=Z,0.4nm,0.5s						
PETK	**Petropavlovsk-**	**24.52**	**283**	P	**P**	**12 59 46.4**	**-2.4**
	comp=Z,2.2nm,0.4s,baz=72,slow=9.6,SNR=5.3						
	comp=Z,2.2nm,0.4s						
YBH	**Yreka Blue Hor**	**27.85**	**102**	LR	LR	13 09 36.1	
	comp=Z,41nm,18.1s,baz=319,slow=32						
H11N2	**WAKE ISLAND Hy**	**42.99**	**229**	T	T	13 48 36.2	
	baz=29,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**43.00**	**228**	T	T	13 48 39.6	
	baz=29						
H11N1	**WAKE ISLAND Hy**	**43.01**	**229**	T	T	13 48 32.5	
	baz=29						
H11S1	**WAKE ISLAND Hy**	**44.16**	**228**	T	T	13 50 20.5	
	baz=33						
H11S2	**WAKE ISLAND Hy**	**44.17**	**228**	T	T	13 50 21.6	
	baz=33,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**44.18**	**228**	T	T	13 50 21.4	
	baz=33						
TXAR	**Lajitas Array**	**47.50**	**99**	P	**P**	**13 03 05.3**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=277,slow=4.1,SNR=2.3						
TXAR				pP	**pP**	**13 03 16.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=314,slow=2.9,SNR=3.8						
	comp=Z,0.3nm,0.9s						
SONM	**Songino Array**	**54.53**	**304**	P	**P**	**13 03 55.6**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=34,slow=7.3,SNR=3.5						
	comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**54.53**	**304**	P	**P**	**13 03 56.5**	**-0.6**
SONM				IAmb	IAmb	13 04 12.7	
	comp=Z,2.0nm,1.2s						
ARCES	**ARCESS Array B**	**55.84**	**358**	P	**P**	**13 04 05.1**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=17,slow=8.9,SNR=5.4						
	comp=Z,1.6nm,0.8s						
ARCES	**ARCESS Array B**	**55.84**	**358**	P	**P**	**13 04 05.1**	**-1.0**
BVAR	**Borovoye Array**	**64.61**	**329**	P	**P**	**13 05 05.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=26,slow=7.2,SNR=7.8						
BVAR				pP	**pP**	**13 05 17.2**	**-1.5**
	comp=Z,0.7nm,0.2s,baz=278,slow=29,SNR=1.4						
	comp=Z,1.9nm,0.6s						
ARTI	**Arti**	**64.72**	**337**	P	**P**	**13 05 06.6**	**-0.4**
HFS	**Hagfors**	**65.25**	**3**	P	**P**	**13 05 10.0**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=18,slow=5.0,SNR=4.9						
	comp=Z,2.9nm,0.7s						
MKAR	**Makanchi Array**	**65.81**	**318**	P	**P**	**13 05 13.4**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=38,slow=7.3,SNR=2.2						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**65.81**	**318**	P	**P**	**13 05 13.8**	**-0.4**
AB31	**Akbulak array**	**70.91**	**333**	P	**P**	**13 05 46.4**	**+0.4**
AB31				IAmb	IAmb	13 05 46.9	
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**70.91**	**333**	P	**P**	**13 05 46.3**	**+0.4**
KK31	**Karatay Array**	**73.28**	**324**	P	**P**	**13 06 00.5**	**+0.3**
KK31				IAmb	IAmb	13 06 00.6	
	comp=Z,4.1nm,1.4s						
KKAR	**Karatay Array**	**73.28**	**324**	P	**P**	**13 06 00.2**	**-0.1**
AKASG	**Malin Array Be**	**74.51**	**354**	P	**P**	**13 06 07.1**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=11,slow=6.4,SNR=7.2						
	comp=Z,1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**81.14**	**289**	P	**P**	**13 06 44.3**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=14,slow=5.3,SNR=12						
CMAR				pP	**pP**	**13 06 55.7**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=16,slow=6.2,SNR=4.1						
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**81.14**	**289**	P	**P**	**13 06 45.1**	**+0.4**
ESDC	**Sonseca Array**	**83.67**	**18**	P	**P**	**13 06 58.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=344,slow=5.2,SNR=7.2						
ESDC				pP	**pP**	**13 07 10.0**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=354,slow=5.3,SNR=2.7						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**85.03**	**349**	P	**P**	**13 07 04.8**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=4.1,slow=1.7,SNR=3.6						
	comp=Z,0.6nm,0.6s						
QSPA	**South Pole Qui**	**144.64**	**180**	PKP	**PKPdf**	**13 14 03.8**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=90,slow=1.7,SNR=6.2						

*IDC **28** 12:58:13.2±1.0, 18°.87N×145°.63E, h0km, mb3.7/7, mbtmp3.7/7, MS3.6/3, Error ellipse: s-maj=37.4km s-min=21.3km az=94.0*
*NEIC **28** 12:58:33.8±0.7, 18°.8N±0°.1×145°.5E±0°.2, h170km±7km, mb4.0/12, Error ellipse: s-maj=21.7km s-min=14.0km az=106.0*
ISC 28 12:58:35.7±0.7, 18°.59N±0°.08×145°.6E±0°.2, h200km, n28, σ1§03/27, mb3.8/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.34**	**176**	Pn	**Pn**	**12 59 29.4**	**0.0**
DPSS				Sn	**Sn**	**13 00 09.0**	**-2.5**
GUMO	**Guam**	**5.02**	**188**	Pn	**Pn**	**12 59 49.7**	**-0.7**
GUMO				Sn	**Sn**	**13 00 50.0**	**+0.7**
JHJ	**Hachijo jima 2**	**15.37**	**341**	LR	LR	13 06 22.4	
	comp=Z,163nm,21.0s,baz=52,slow=32						
KNRA	**Kununurra**	**37.87**	**207**	P	**P**	**13 05 35.3**	**+1.9**
KNRA				IAmb	IAmb	13 06 02.5	
	comp=Z,3.9nm,1.1s						
WB0	**Warramunga Arr**	**39.67**	**197**	P	**P**	**13 05 49.8**	**+1.4**
WRA	**Warramunga Arr**	**39.85**	**197**	P	**P**	**13 05 50.8**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=12,slow=8.3,SNR=29						
	comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**39.85**	**197**	P	**P**	**13 05 49.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.39**	**209**	P	**P**	**13 06 03.6**	**+1.0**
AS31	**Alice Springs**	**43.52**	**196**	P	**P**	**13 06 21.1**	**+1.5**
ASAR	**Alice Springs**	**43.52**	**196**	P	**P**	**13 06 21.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=12,slow=6.3,SNR=8.6						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**43.52**	**196**	P	**P**	**13 06 20.9**	**+1.2**
O15K	**Ungalikthiuk R**	**56.32**	**30**	P	**P**	**13 07 55.4**	**-0.1**
MKAR	**Makanchi Array**	**58.45**	**314**	P	**P**	**13 08 10.4**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=96,slow=8.3,SNR=2.5						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.45**	**314**	P	**P**	**13 08 09.9**	**-0.7**
K20K	**Telida**	**60.37**	**27**	P	**P**	**13 08 24.7**	**+1.3**
K20K				IAmb	IAmb	13 08 45.2	
	comp=Z,6.6nm,1.4s						
KURBB	**Kurchatov Array**	**61.32**	**318**	P	**P**	**13 08 29.5**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=97,slow=7.3,SNR=7.4						
	comp=Z,0.5nm,0.6s						
D20K	**Etivluk River**	**61.34**	**21**	P	**P**	**13 08 30.2**	**+0.3**
ILAR	**Eielson Array**	**63.79**	**26**	P	**P**	**13 08 45.4**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=256,slow=5.5,SNR=3.9						
	comp=Z,0.4nm,0.8s						
D25K	**Kavik River**	**65.03**	**21**	P	**P**	**13 08 54.9**	**+0.8**
D25K				IAmb	IAmb	13 09 08.5	
	comp=Z,4.2nm,1.4s						
BCAR	**Beaver Creek A**	**65.73**	**28**	P	**P**	**13 08 59.3**	**+0.6**
RPZ	**Rata Peaks**	**66.26**	**160**	LR	LR	13 37 39.2	
	comp=Z,22nm,18.9s,baz=36,slow=36						
BVAR	**Borovoye Array**	**66.48**	**320**	P	**P**	**13 09 03.5**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=88,slow=7.9,SNR=5.5						
	comp=Z,1.5nm,0.5s						
D27M	**Malcolm River**	**66.90**	**22**	P	**P**	**13 09 06.5**	**+0.5**
D27M				IAmb	IAmb	13 09 26.6	
	comp=Z,2.4nm,1.1s						
G31M	**Satah River**	**69.19**	**25**	P	**P**	**13 09 20.2**	**0.0**
G31M				IAmb	IAmb	13 09 39.2	
	comp=Z,3.6nm,1.2s						
AB31	**Akbulak array**	**73.34**	**317**	P	**P**	**13 09 44.7**	**-0.7**
AB31				IAmb	IAmb	13 09 51.2	
	comp=Z,3.0nm,1.4s						
ABKAR	**Akbulak array**	**73.34**	**317**	P	**P**	**13 09 44.6**	**-0.9**
NVAR	**Mina Array Bea**	**83.30**	**52**	P	**P**	**13 10 40.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=266,slow=5.6,SNR=6.1						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**96.39**	**176**	LR	LR	13 52 56.0	
	comp=Z,81nm,19.9s,baz=356,slow=34						

*AZER **28** 13:01:30.1, 38°.38N×44°.55E, h13km, ml2.7*
*AFAD **28** 13:01:30.8, 38°.45N×44°.49E, h7km±2km, ML2.5*
*TEH **28** 13:01:31.0, 38°.46N×44°.45E, h18km±999km, ML2.7, Presumed earthquake*
ISC 28 13:01:31.7±1.1, 38°.39N±0°.03×44°.47E±0°.02, h13km±9km, n22, σ1§40/37, Turkey-Iran border region

| Code | Station Name |

MLVB					IAML			13 29 21.7	
	comp=N,226nm,0.7s								
MLVB					IAML			13 29 29.6	
	comp=E,210nm,0.4s								
VTVB	**Vinh Tuy**	**1.33**	**7**	*e*Pg		**Pn**	**13 28 42.6**	**-0.1**	
VTVB					IAML			13 29 04.0	
	comp=E,643nm,0.7s								
VTVB					IAML			13 29 05.6	
	comp=N,647nm,0.4s								
DBV	**Dienbien**	**1.65**	**287**	*e*Pg		**Pb**	**13 28 48.1**	**-0.4**	
DBV					IAML			13 29 17.2	
	comp=E,549nm,0.5s								
DBV					IAML			13 29 18.5	
	comp=N,654nm,0.6s								
PLV	**Phu-Lien**	**1.79**	**93**	*e*Pg		**Pg**	**13 28 51.4**	**-0.8**	
CCVB	**Con Cuong**	**1.87**	**176**	*e*Pg		**Pb**	**13 28 52.3**	**+0.1**	
HGVB	**Ha Giang**	**1.92**	**7**	*e*Pg		**Pb**	**13 28 53.1**	**+0.1**	
HGVB				*e*Sg		**Sg**	**13 29 18.7**	**-0.9**	
HGVB					IAML			13 29 21.0	
	comp=E,320nm,0.9s								
HGVB					IAML			13 29 21.8	
	comp=N,171nm,0.7s								
SKNT	**Sakolnakorn**	**3.99**	**190**	P		**Pn**	**13 29 20.7**	**+1.5**	
UTTA	**Uttaradit**	**5.05**	**232**	P		**Pn**	**13 29 35.3**	**+1.5**	
	comp=N,0.2nmcomp=N,0.1nmcomp=N,7.8nm,0.5s								
LAMP	**Lampang**	**5.36**	**244**	P		**Pn**	**13 29 39.3**	**+1.3**	
	comp=N,0.1nmcomp=N,0.3nmcomp=N,3.0nm,0.7s								
CMAI	**Chiengmai2**	**5.42**	**260**	P		**Pn**	**13 29 39.3**	**+0.3**	
	comp=N,0.1nmcomp=N,0.3nmcomp=N,3.8nm,0.7s								
CHTO	**Chiang Mai**	**5.83**	**250**	P		**Pn**	**13 29 45.5**	**+1.0**	
CM09	**Chiang Mai Arr**	**5.94**	**246**	P		**Pn**	**13 29 46.5**	**+0.5**	
	comp=N,0.0nmcomp=N,4.4nm,0.6s								
CM04	**Chiang Mai Arr**	**5.97**	**246**	P		**Pn**	**13 29 46.8**	**+0.4**	
	comp=N,0.0nmcomp=N,0.0nmcomp=N,3.1nm,1.0s								
CM01	**Chiang Mai Arr**	**5.97**	**246**	P		**Pn**	**13 29 47.3**	**+0.8**	
	comp=N,0.0nmcomp=N,0.0nmcomp=N,4.2nm,0.9s								
CM02	**Chiang Mai Arr**	**5.98**	**247**	P		**Pn**	**13 29 49.0**	**+2.4**	
CM13	**Chiang Mai Arr**	**6.02**	**247**	P		**Pn**	**13 29 47.6**	**+0.5**	
	comp=N,0.0nmcomp=N,2.7nm,0.9s								

NEIC ***28*** *14:20:21.9±1.3, 48.86N±0.08×158.0E±0.1, h10km±1km, mb4.4/26, Error ellipse: s-maj=17.1km s-min=12.1km az=127.0*
MOS ***28*** *14:20:24.4±0.8, 48.93N×157.90E, h53km, mb4.5/9, Error ellipse: s-maj=12.6km s-min=3.8km az=86.3*
SKHL ***28*** *14:20:24.1±0.8, 48.80N×157.90E, h55km±4km, mb5.3/5*
KRSC ***28*** *14:20:25.3±1.4, 49.16N×158.24E, h41km±34km, Ml4.6*
IDC ***28*** *14:20:26.5±2.4, 48.94N×157.87E, h50km±22km, mb3.5/12, mbtmp3.9/15, ML3.9/2, MS3.1/5, Error ellipse: s-maj=19.9km s-min=13.9km az=138.0*

ISC 28 14:20:24.6±0.6, 48°88N±0°.06×157°.92E±0°.05, h35km, n154, σ1§40/175, mb4.1/27, MS3.1/3, 4D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.15**	**328**	*i* P		**Pn**	**Pn**	**14 20 58.2**	**+0.2**
SKR				*e*S		**Sn**	**Sn**	**14 21 22.0**	**-1.3**
SKR				pmax	pmax				
	comp=Z,2μm,0.6s								
SKR				smax	smax				
	comp=E,5μm,0.6s								
SKR				smax	smax				
	comp=N,5μm,0.7s								
SKR	**Severo-Kuril's**	**2.15**	**328**	*e*P		**Pn**	**Pn**	**14 20 58.1**	**+0.2**
SKR				*e*S		**Sn**	**Sn**	**14 21 22.4**	**-0.9**
SKR	**Severo-Kuril's**	**2.15**	**328**	*i* P		**Pn**	**Pn**	**14 20 58.1**	**+0.2**
SKR				AMB	AMB			14 20 58.8	
	comp=N,2μm,0.5s								
SKR				*e*S		**Sn**	**Sn**	**14 21 22.9**	**-0.4**
SKR				A	A			14 21 23.5	
	comp=N,2μm,0.6s								
SKR				A	A			14 21 23.5	
	comp=N,4μm,0.6s								
PAU	**Pauzhetka**	**2.69**	**345**	PN		**Pn**	**Pn**	**14 21 06.1**	**+0.8**
PAU				S		**Sn**	**Sn**	**14 21 36.2**	**-0.3**
PAU	**Pauzhetka**	**2.69**	**345**	*e*P		**Pn**	**Pn**	**14 21 06.1**	**+0.8**
PAU				*e*S		**Sn**	**Sn**	**14 21 36.3**	**-0.3**
PAU	**Pauzhetka**	**2.69**	**345**	*e*P		**Pn**	**Pn**	**14 21 06.1**	**+0.8**
PAU				*e*S		**Sn**	**Sn**	**14 21 36.2**	**-0.3**
KDTR	**Khodutka, Kamc**	**2.93**	**2**	PN		**Pn**	**Pn**	**14 21 08.9**	**+0.2**
KDTR				S		**Sn**	**Sn**	**14 21 40.4**	**-2.2**
KDTR	**Khodutka, Kamc**	**2.93**	**2**	*e*P		**Pn**	**Pn**	**14 21 09.0**	**+0.2**
KDTR				*e*S		**Sn**	**Sn**	**14 21 40.4**	**-2.2**
KDTR	**Khodutka, Kamc**	**2.93**	**2**	*e*P		**Pn**	**Pn**	**14 21 08.9**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.48**	**348**	PN		**Pn**	**Pn**	**14 21 17.0**	**+0.8**
MIPR	**Malaya Ipel'ka**	**3.48**	**348**	*e*P		**Pn**	**Pn**	**14 21 17.0**	**+0.8**
ASAK	**Asacha**	**3.50**	**360**	PN		**Pn**	**Pn**	**14 21 17.5**	**+0.9**
ASAK	**Asacha**	**3.50**	**360**	*e*P		**Pn**	**Pn**	**14 21 17.6**	**+0.9**
RUS	**Russkaya**	**3.58**	**6**	PN		**Pn**	**Pn**	**14 21 17.8**	**+0.3**
RUS				S		**Sn**	**Sn**	**14 21 56.4**	**-2.0**
RUS	**Russkaya**	**3.58**	**6**	*e*P		**Pn**	**Pn**	**14 21 17.8**	**+0.3**
RUS				*e*S		**Sn**	**Sn**	**14 21 56.5**	**-2.0**
RUS	**Russkaya**	**3.58**	**6**	*e*P		**Pn**	**Pn**	**14 21 17.8**	**+0.3**
RUS				*e*S		**Sn**	**Sn**	**14 21 56.4**	**-2.0**
MTVR	**Mutnovka**	**3.61**	**3**	PN		**Pn**	**Pn**	**14 21 18.7**	**+0.6**
MTVR				S		**Sn**	**Sn**	**14 21 57.3**	**-2.2**
MTVR	**Mutnovka**	**3.61**	**3**	*e*P		**Pn**	**Pn**	**14 21 18.8**	**+0.6**
MTVR				*e*S		**Sn**	**Sn**	**14 21 57.4**	**-2.2**
GRL	**Gorelyy**	**3.68**	**1**	PN		**Pn**	**Pn**	**14 21 19.9**	**+0.9**
GRL				S		**Sn**	**Sn**	**14 22 00.0**	**-1.1**
GRL	**Gorelyy**	**3.68**	**1**	*e*P		**Pn**	**Pn**	**14 21 19.9**	**+0.9**
GRL				*e*S		**Sn**	**Sn**	**14 22 00.1**	**-1.1**
KRMR	**Karymshinskiy**	**3.96**	**2**	PN		**Pn**	**Pn**	**14 21 23.7**	**+1.0**
KRMR				S		**Sn**	**Sn**	**14 22 07.0**	**-0.8**
KRMR	**Karymshinskiy**	**3.96**	**2**	*e*P		**Pn**	**Pn**	**14 21 23.7**	**+1.0**
KRMR				*e*S		**Sn**	**Sn**	**14 22 07.1**	**-0.8**
KRMR	**Karymshinskiy**	**3.96**	**2**	*e*P		**Pn**	**Pn**	**14 21 23.7**	**+1.0**
APC	**Apacha**	**4.08**	**353**	PN		**Pn**	**Pn**	**14 21 25.1**	**+0.7**
APC				S		**Sn**	**Sn**	**14 22 11.7**	**+0.9**
APC	**Apacha**	**4.08**	**353**	*e*P		**Pn**	**Pn**	**14 21 25.1**	**+0.7**
APC				*e*S		**Sn**	**Sn**	**14 22 11.7**	**+0.9**
PET	**Petropavlovsk**	**4.17**	**6**	*e*PN		**Pn**	**Pn**	**14 21 26.4**	**+0.7**
PET				*e*S		**Sn**	**Sn**	**14 22 10.9**	**-2.3**
PET				pmax	pmax				
	comp=Z,23nm,0.3s								
PET				smax	smax				
	comp=N,215nm,0.5s								
PET	**Petropavlovsk**	**4.17**	**6**			**Pn**	**Pn**	**14 21 26.3**	**+0.7**
PET	**Petropavlovsk**	**4.17**	**6**	*e*P		**Pn**	**Pn**	**14 21 26.5**	**+0.7**
PET				*e*S		**Sn**	**Sn**	**14 22 11.2**	**-2.0**
PET	**Petropavlovsk**	**4.17**	**6**	*i* P		**Pn**	**Pn**	**14 21 26.4**	**+0.7**
PET				AMB	AMB			14 21 27.3	
	comp=N,30nm,0.2s								
PET				*i* S		**Sn**	**Sn**	**14 22 13.1**	**-0.1**
PET				A	A			14 22 14.1	
	comp=N,160nm,0.2s								
PET				A	A			14 22 14.1	
	comp=N,150nm,0.2s								
DALK	**Dalny**	**4.19**	**7**	PN		**Pn**	**Pn**	**14 21 26.6**	**+0.7**
DALK	**Dalny**	**4.19**	**7**	*e*P		**Pn**	**Pn**	**14 21 26.6**	**+0.7**
DALK	**Dalny**	**4.19**	**7**	*e*P		**Pn**	**Pn**	**14 21 26.6**	**+0.7**
INSR	**Institute**	**4.21**	**6**	*e*S		**Sn**	**Sn**	**14 22 12.4**	**-1.8**
PEA0B	**Petropavlovsk-**	**4.23**	**358**	*i* PN		**Pn**	**Pn**	**14 21 27.8**	**+1.2**
PEA0B	**Petropavlovsk-**	**4.23**	**358**			**Pn**	**Pn**	**14 21 27.5**	**+0.9**
PETK	**Petropavlovsk-**	**4.23**	**358**	P		**Pn**	**Pn**	**14 21 27.0**	**+0.4**
	comp=N,8.1nm,0.6s,baz=186,slow=16,SNR=52								
PETK				S		**Sn**	**Sn**	**14 22 16.2**	**+1.4**
	comp=N,20nm,0.8s,baz=161,slow=14,SNR=5.1								
PETK				LR		LR	LR	14 23 26.2	
	comp=N,156nm,21.1s,baz=150,slow=43								
PETK	**Petropavlovsk-**	**4.23**	**358**			**Pn**	**Pn**	**14 21 27.6**	**+1.0**
UGLR	**Uglovaya**	**4.37**	**7**	PN		**Pn**	**Pn**	**14 21 29.4**	**+0.9**
UGLR	**Uglovaya**	**4.37**	**7**	*e*P		**Pn**	**Pn**	**14 21 29.5**	**+0.9**
NLC	**Nalytchevo**	**4.39**	**11**	*e*S		**Sn**	**Sn**	**14 22 15.1**	**-3.4**
AVH	**Avacha**	**4.42**	**6**	PN		**Pn**	**Pn**	**14 21 30.7**	**+1.5**
AVH	**Avacha**	**4.42**	**6**	*e*P		**Pn**	**Pn**	**14 21 30.8**	**+1.5**
AVH	**Avacha**	**4.42**	**6**	*e*P		**Pn**	**Pn**	**14 21 30.7**	**+1.5**
SMAR	**Somma**	**4.42**	**7**	PN		**Pn**	**Pn**	**14 21 30.9**	**+1.5**
SMAR	**Somma**	**4.42**	**7**	*e*P		**Pn**	**Pn**	**14 21 30.9**	**+1.5**
SPN	**Mys Shipunski**	**4.42**	**17**	PN		**Pn**	**Pn**	**14 21 30.3**	**+1.1**
SPN				S		**Sn**	**Sn**	**14 22 17.6**	**-1.8**
SPN	**Mys Shipunski**	**4.42**	**17**	*e*P		**Pn**	**Pn**	**14 21 30.3**	**+1.1**
SPN				*e*S		**Sn**	**Sn**	**14 22 17.7**	**-1.8**
SPN	**Mys Shipunski**	**4.42**	**17**	*e*P		**Pn**	**Pn**	**14 21 30.3**	**+1.1**
KOK	**Koryaka**	**4.44**	**6**	PN		**Pn**	**Pn**	**14 21 31.2**	**+1.7**
KOK	**Koryaka**	**4.44**	**6**	*e*P		**Pn**	**Pn**	**14 21 31.2**	**+1.7**
KOK	**Koryaka**	**4.44**	**6**	*e*P		**Pn**	**Pn**	**14 21 31.2**	**+1.7**
SDLR	**Sedlovina**	**4.44**	**7**	PN		**Pn**	**Pn**	**14 21 29.2**	**-0.3**
SDLR	**Sedlovina**	**4.44**	**7**	*e*P		**Pn**	**Pn**	**14 21 29.3**	**-0.3**
KRER	**Koryakskii**	**4.46**	**6**	PN		**Pn**	**Pn**	**14 21 31.6**	**+1.8**
KRER	**Koryakskii**	**4.46**	**6**	*e*P		**Pn**	**Pn**	**14 21 31.6**	**+1.8**
KRX	**Arik**	**4.51**	**6**	PN		**Pn**	**Pn**	**14 21 31.7**	**+1.3**
KRX	**Arik**	**4.51**	**6**	*e*P		**Pn**	**Pn**	**14 21 31.8**	**+1.3**
GNL	**Ganaly**	**4.82**	**0**	PN		**Pn**	**Pn**	**14 21 36.3**	**+1.6**
GNL	**Ganaly**	**4.82**	**0**	*e*P		**Pn**	**Pn**	**14 21 36.4**	**+1.6**
MKZ	**Mys Kozlova**	**6.15**	**21**	PN		**Pn**	**Pn**	**14 21 52.8**	**-0.1**
MKZ	**Mys Kozlova**	**6.15**	**21**	*e*P		**Pn**	**Pn**	**14 21 52.9**	**-0.1**
MKZ	**Mys Kozlova**	**6.15**	**21**	*e*P		**Pn**	**Pn**	**14 21 52.8**	**-0.1**
TUMR	**Tumrok**	**6.55**	**11**	PN		**Pn**	**Pn**	**14 22 00.9**	**+2.4**
TUMR	**Tumrok**	**6.55**	**11**	*e*P		**Pn**	**Pn**	**14 22 01.0**	**+2.4**
KMNR	**Kamenistaya**	**7.03**	**11**	PN		**Pn**	**Pn**	**14 22 07.1**	**+2.1**
KMNR	**Kamenistaya**	**7.03**	**11**	*e*P		**Pn**	**Pn**	**14 22 07.1**	**+2.1**
REI	**Reidovoe**	**7.67**	**246**	*e*P		**Pn**	**Pn**	**14 22 14.6**	**+0.9**
REI				AMB	AMB			14 22 16.9	
	comp=N,40nm,0.2s								
REI				*e*S		**Sn**	**Sn**	**14 23 36.0**	**-3.3**
REI				A	A			14 23 39.5	
	comp=N,20nm,0.2s								
REI				A	A			14 23 39.5	
	comp=N,30nm,0.2s								
KUR	**Kuril'sk**	**7.78**	**246**	*e*PN		**Pn**	**Pn**	**14 22 16.5**	**+1.3**
KUR				pmax	pmax				
	comp=Z,36nm,0.7s								
KUR	**Kuril'sk**	**7.78**	**246**	*e*P		**Pn**	**Pn**	**14 22 16.5**	**+1.3**
KUR				AMB	AMB			14 22 22.4	
	comp=Z,50nm,0.3s								
KUR				*i* S		**Sn**	**Sn**	**14 23 39.1**	**-2.9**
KUR				A	A			14 23 44.4	
	comp=Z,80nm,0.6s								
KUR				A	A			14 23 44.4	
	comp=Z,130nm,0.6s								
KBTR	**Krutoberegovo**	**7.92**	**20**	PN		**Pn**	**Pn**	**14 22 17.7**	**+0.6**
KBTR	**Krutoberegovo**	**7.92**	**20**	*e*P		**Pn**	**Pn**	**14 22 17.7**	**+0.6**
BKI	**Bering**	**8.04**	**35**	PN		**Pn**	**Pn**	**14 22 18.7**	**0.0**
BKI	**Bering**	**8.04**	**35**	*e*P		**Pn**	**Pn**	**14 22 18.8**	**0.0**
BKI	**Bering**	**8.04**	**35**	*e*P		**Pn**	**Pn**	**14 22 18.7**	**0.0**
YUK	**Yuzh-Kuril'sk**	**9.63**	**244**	*e*PN		**Pn**	**Pn**	**14 22 39.7**	**-0.9**
YUK				pmax	pmax				
	comp=N,67nm,0.5s								
YUK				pmax	pmax				
	comp=Z,59nm,0.5s								
YUK				pmax	pmax				
	comp=E,19nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**9.63**	**244**	*e*P		**Pn**	**Pn**	**14 22 40.2**	**-0.4**
YUK				AMB	AMB			14 22 47.0	
	comp=E,60nm,0.5s								
YUK				*e*S		**Sn**	**Sn**	**14 24 23.9**	**-3.6**
YUK				A	A			14 24 26.7	
	comp=E,120nm,0.6s								
YUK				A	A			14 24 26.7	
	comp=E,140nm,0.6s								
RUSJ	**Misakicho**	**9.96**	**246**	*e*PN		**Pn**	**Pn**	**14 22 44.8**	**-0.3**
TYV	**Tymovskoe**	**10.06**	**287**	*e*P		**Pn**	**Pn**	**14 22 48.2**	**+1.8**
NMR	**Nemuro--Hokkai**	**10.10**	**241**	*e*PN		**Pn**	**Pn**	**14 22 44.1**	**-2.9**
NMR	**Nemuro--Hokkai**	**10.10**	**241**	*e*P		**Pn**	**Pn**	**14 22 44.1**	**-2.9**
YSS	**Yuzhno-Sakhali**	**10.37**	**265**	*ke*PN		**Pn**	**Pn**	**14 22 53.4**	**+2.7**
YSS				pmax	pmax				
	comp=Z,30nm,0.7s								
YSS	**Yuzhno-Sakhali**	**10.37**	**265**			**Pn**	**Pn**	**14 22 51.3**	**+0.6**
YSS	**Yuzhno-Sakhali**	**10.37**	**265**	*e*P		**Pn**	**Pn**	**14 22 52.1**	**+1.4**
YSS				AMB	AMB			14 22 54.1	
	comp=Z,20nm,0.5s								
YSS				*e*S		**Sn**	**Sn**	**14 24 42.7**	**-2.8**
AKK	**Akkeshi**	**10.83**	**242**	*e*P		**Pn**	**Pn**	**14 22 54.4**	**-2.6**
SHEM	**Shemya Is, Ala**	**10.93**	**63**	P		**Pn**	**Pn**	**14 22 59.2**	**+0.8**
	comp=Z,2.6nm,0.3s,baz=106,slow=2.2,SNR=6.3								
SHEM				S		**Sn**	**Sn**	**14 24 54.8**	**-4.6**
	comp=Z,21nm,0.6s,baz=226,slow=19,SNR=5.7								
SHEM				LR		LR	LR	14 26 25.3	
	comp=Z,58nm,21.9s,baz=242,slow=33								
	comp=Z,36nm,0.9s								
JKA	**Kamikawa-asahi**	**11.58**	**251**			**Pn**	**Pn**	**14 23 08.1**	**+0.8**
JKA	**Kamikawa-asahi**	**11.58**	**251**	*e*P		**Pn**	**Pn**	**14 23 08.8**	**+1.4**
ASAJ	**Asahikawa**	**11.59**	**251**	P		**Pn**	**Pn**	**14 23 08.8**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=85,slow=14,SNR=16								
	comp=Z,7.1nm,0.7s								
USA0B	**Ussuriysk Arra**	**18.41**	**265**	*i* P		**Pn**	**Pn**	**14 24 38.6**	**+1.8**
MAJO	**Matsushiro**	**18.96**	**237**	P		**Pn**	**Pn**	**14 24 43.5**	**-0.1**
MAJO				pmax	pmax				
	comp=Z,11nm,1.2s								
MAJO	**Matsushiro**	**18.96**	**237**	P		**Pn**	**Pn**	**14 24 43.5**	**-0.1**
BILL	**Bilibino**	**19.67**	**9**	*i* P		**P**	**P**	**14 24 50.6**	**+0.4**
BILL				pmax	pmax				
	comp=Z,4.0nm,0.9s								
BILL	**Bilibino**	**19.67**	**9**	Pn		**Pn**	**Pn**	**14 24 52.6**	**+0.8**
BILL				IAmb	IAmb			14 25 17.2	
	comp=Z,12nm,1.0s								
MDJ	**Mudanjiang**	**19.82**	**268**	P		**P**	**P**	**14 24 52.7**	**+0.7**
INU	**Inuyama**	**20.49**	**236**	P		Pn	**Pn**	14 25 00.4	**-1.3**
INU				IAmb	IAmb			14 25 35.4	
	comp=Z,24nm,1.3s								
YAK	**Yakutsk**	**20.51**	**320**	*e*P		**P**	**P**	**14 24 57.4**	**-2.0**
YAK				pmax	pmax				
	comp=Z,13nm,0.7s								
YAK				pmax	pmax				
	comp=N,2.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.5s								
YAK	**Yakutsk**	**20.51**	**320**	*i* P		**P**	**P**	**14 24 59.6**	**+0.2**
AKUT	**Akutan**	**23.02**	**63**	P		**P**	**P**	**14 25 26.5**	**+0.3**
AKUT				IAmb	IAmb			14 26 09.4	
	comp=Z,17nm,1.1s								
KSRS	**Korea Array**	**24.52**	**253**	P		**P**	**P**	**14 25 42.5**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=44,slow=11,SNR=6.3								
	comp=Z,1.2nm,0.9s								
KSRS	**Korea Array**	**24.52**	**253**	*e*P		**P**	**P**	**14 25 44.0**	**+3.4**
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.8s								
JCJ	**Chichijima**	**24.94**	**215**	LR		LR	LR	14 36 33.0	
	comp=Z,14nm,18.1s,baz=80,slow=39								
TIXI	**Tiksi**	**26.46**	**340**	LR		LR	LR	14 38 22.5	
	comp=Z,49nm,18.5s,baz=168,slow=41								
N17K	**Nushagak Hills**	**27.85**	**48**	P		**P**	**P**	**14 26 11.1**	**+0.6**
N17K				IAmb	IAmb			14 26 27.5	
	comp=Z,5.2nm,1.1s								
C18K	**Utukok River**	**28.14**	**31**	P		**P**	**P**	**14 26 13.6**	**+0.5**
C19K	**Lookout Ridge**	**28.86**	**30**	P		**P**	**P**	**14 26 20.2**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**29.97**	**163**	T		T	T	14 59 28.1	
	baz=345								
H11N1	**WAKE ISLAND Hy**	**29.98**	**163**	T		T	T	14 59 05.7	
	baz=345,SNR=3.4								
H11N3	**WAKE ISLAND Hy**	**29.98**	**163**	T		T	T	14 59 37.8	
	baz=345								
E21K	**Kilik River**	**30.58**	**33**	P		**P**	**P**	**14 26 35.5**	**+0.8**
E21K				IAmb	IAmb			14 26 37.1	
	comp=Z,7.1nm,0.8s								
H11S1	**WAKE ISLAND Hy**	**31.12**	**164**	T		T	T	15 00 30.4	
	baz=353,slow=77,SNR=8.4								
H11S3	**WAKE ISLAND Hy**	**31.13**	**164**	T		T	T	15 00 32.0	
	baz=353,slow=77,SNR=10								
H11S2	**WAKE ISLAND Hy**	**31.14**	**164**	T		T	T	15 00 32.4	
	baz=353,slow=77,SNR=11								
E22K	**Anaktuvuk Pass**	**31.29**	**34**	P		**P**	**P**	**14 26 41.6**	**+0.7**
ILAR	**Eielson Array**	**32.84**	**40**	P		**P**	**P**	**14 26 54.8**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=236,slow=7.5,SNR=5.2								
	comp=Z,0.2nm,0.6s								
C27K	**Jago River**	**34.43**	**32**	P		**P**	**P**	**14 27 09.2**	**+0.9**
C27K				IAmb	IAmb			14 27 09.6	
	comp=Z,4.4nm,0.7s								
L27K	**Beaver Creek,**	**35.12**	**43**	P		**P**	**P**	**14 27 15.5**	**+1.1**
L27K				IAmb	IAmb			14 27 46.2	
	comp=Z,3.1nm,0.9s								
H29M	**Whitestone**	**36.37**	**38**				**P**	**14 27 25.1**	**+0.1**
H29M				IAmb	IAmb			14 27 35.7	
	comp=Z,4.0nm,0.8s								
INK	**Inuvik**	**38.09**	**34**	P		**P**	**P**	**14 27 40.5**	**+1.1**
INK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
INK	**Inuvik**	**38.09**	**34**	P		**P**	**P**	**14 27 40.5**	**+1.1**
NRIK	**Noril'sk**	**38.65**	**328**	*i* P		**P**	**P**	**14 27 43.8**	**-0.4**
NRIK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
YKA	**Yellowknife Ar**	**47.25**	**39**	P		**P**	**P**	**14 28 54.3**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=296,slow=7.0,SNR=3.6								
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**48.83**	**298**	P		**P**	**P**	**14 29 06.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=56,slow=7.8,SNR=4.1								
	comp=Z,0.5nm,0.7s								
KURK	**Kurchatov**	**48.87**	**304**	*i* P		**P**	**P**	**14 29 06.5**	**0.0**
KURK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
KURK	**Kurchatov**	**48.87**	**304**	P		**P**	**P**	**14 29 06.0**	**-0.5**
KURK	**Kurchatov**	**48.87**	**304**	IAmb	IAmb			14 29 20.1	
	comp=Z,2.0nm,0.6s								
KURK	**Kurchatov**	**48.87**	**304**	*e*P		**P**	**P**	**14 29 06.5**	**0.0**
KURBB	**Kurchatov Arra**	**48.97**	**304**	P		**P**	**P**	**14 29 06.0**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=64,slow=8.1,SNR=7.4								
	comp=Z,1.4nm,0.7s								
BVAR	**Borovoye Array**	**51.99**	**310**	P		**P**	**P**	**14 29 29.4**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=52,slow=9.6,SNR=4.5								
	comp=Z,1.1nm,0.5s								
BLKN	**Baker Lake**	**53.38**	**31**	P		**P**	**P**	**14 29 40.6**	**+0.5**
BLKN				IAmb	IAmb			14 29 40.7	
	comp=Z,6.0nm,0.9s								
ARTI	**Arti**	**55.71**	**318**	*d* P		**P**	**P**	**14 29 57.4**	**+0.3**
ARTI								14 32 01.9	
ARTI				S		**S**	**S**	**14 37 40.7**	**-0.1**
ARTI				SS		**SS**	**SS**	**14 41 20.0**	**-5.6**
ARTI				pmax	pmax				
	comp=Z,2.0nm,0.9s								
BCYI	**Bear Canyon**	**57.73**	**58**	P		**P**	**P**	**14 30 12.2**	**+0.3**
NVAR	**Mina Array Bea**	**58.59**	**66**	P		**P**	**P**	**14 30 18.4**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=313,slow=7.2,SNR=2.8								
	comp=Z,0.5nm,0.5s								
AB31	**Akbulak array**	**59.51**	**311**	P		**P**	**P**	**14 30 23.6**	**-0.3**
AB31				IAmb	IAmb			14 30 24.1	
	comp=Z,1.4nm,0.8s								
ABKAR	**Akbulak array**	**59.51**	**311**	P		**P**	**P**	**14 30 23.8**	**-0.1**
PDAR	**Pinedale Array**	**60.87**	**57**	P		**P**	**P**	**14 30 34.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=298,slow=3.2,SNR=6.1								
	comp=Z,0.3nm,0.3s								
CHGR	**Chuyangaron**	**61.42**	**297**	*i* P		**P**	**P**	**14 30 39.6**	**+2.3**
CHGR				pmax	pmax				
	comp=Z,5.0nm,1.0s								
PV20	**West Nyswonger**	**64.16**	**61**	P		**P**	**P**	**14 30 56.3**	**+0.7**
PV20				IAmb	IAmb			14 31 33.9	
	comp=Z,5.2nm,1.2s								
VSU	**Vasula**	**65.76**	**334**	*i* P		**P**	**P**	**14 31 04.4**	**-1.0**
VSU				pmax	pmax				
	comp=Z,7.0nm,1.1s								
NC204	**NORSAR Array S**	**67.06**	**343**	P		**P**	**P**	**14 31 14.0**	**+0.2**
NB2	**NORSAR Subarra**	**67.19**	**343**	P		**P**	**P**	**14 31 14.6**	**0.0**
	comp=Z,1.2nm,0.9s,baz=22,slow=6.5								
NOA	**NORSAR Array B**	**67.19**	**343**	P		**P**	**P**	**14 31 14.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=23,slow=6.5,

C18K	**Utukok River** baz=327	20.01	81	P	Pn	14 26 19.3 +0.1
SPITS	**Spitsbergen Ar** baz=70,slow=19 comp=Z,13nm,1.1s	20.08	327	P	**P**	**14 26 15.0 -3.1**
RDOG	**Red Dog Mine** baz=328	20.15	83	P	Pn	14 26 21.0 +0.1
B22K	**Teshekpuk Lake** baz=325	20.17	72	P	**P**	**14 26 20.0 +0.9**
D17K	**Noatak River** baz=328	20.42	84	P	Pn	14 26 24.0 +0.1
B21K	**Ikpikpuk River** baz=326	20.53	74	P	**P**	**14 26 24.3 +1.4**
D19K	**Kuna River** baz=327	20.76	78	P	**P**	**14 26 27.0 +1.3**
C21K	**Knifeblade Rid** baz=327,SNR=5.7	20.88	75	P	**P**	**14 26 28.3 +1.4**
D20K	**Etivluk River**	20.88	77	P	**P**	**14 26 27.3 +0.4**
D20K	**Etivluk River** baz=327	20.88	77	P	**P**	**14 26 28.2 +1.3**
C23K	**Itkillik River** baz=327	21.13	70	P	**P**	**14 26 30.6 +1.0**
E18K	**Tukpahlearik C**	21.16	82	P	**P**	**14 26 31.7 +1.8**
E18K	comp=Z,11nm,0.9s			IAmb	IAmb	14 26 32.8
E18K	**Tukpahlearik C** baz=329	21.16	82	P	**P**	**14 26 32.0 +2.1**
E17K	**Hotham Inlet** baz=329	21.20	84	P	**P**	**14 26 32.5 +2.2**
TNA	**Tin City** baz=331	21.25	92	P	**P**	**14 26 33.5 +2.7**
E20K	**Nigu River** baz=328	21.35	77	P	**P**	**14 26 33.6 +1.6**
E21K	**Killik River** baz=328	21.64	75	P	**P**	**14 26 36.2 +1.2**
F14K	**Arctic Creek** baz=331	21.66	90	P	**P**	**14 26 38.1 +2.9**
F15K	**North Star Dit** baz=331	21.80	88	P	**P**	**14 26 38.9 +2.1**
E19K	**Redstone River**	21.82	79	P	**P**	**14 26 38.6 +1.6**
E19K	**Redstone River** baz=329	21.82	79	P	**P**	**14 26 38.6 +1.6**
D23K	**Nanushuk River**	21.85	71		**P**	**14 26 38.0 +0.7**
D23K	comp=Z,15nm,0.9s			IAmb	IAmb	14 26 43.5
D23K	**Nanushuk River** baz=328,SNR=10	21.85	71	P	**P**	**14 26 38.8 +1.5**
F17K	**Baldwin Pennin** baz=330	21.87	84	P	**P**	**14 26 38.8 +1.3**
GAMB	**Gambell** baz=333	22.05	98	P	**P**	**14 26 42.0 +2.6**
D24K	**Happy Valley** baz=328	22.05	70	P	**P**	**14 26 40.5 +1.0**
F18K	**Selawik** baz=330	22.06	83	P	**P**	**14 26 41.3 +1.7**
C26K	**Camden Bay** baz=328	22.16	66	P	**P**	**14 26 41.2 +0.6**
F19K	**Shaleruckik Mo** baz=330	22.25	81	P	**P**	**14 26 43.4 +1.9**
E22K	**Anaktuvuk Pass** baz=329	22.33	74	P	**P**	**14 26 43.3 +0.8**
TOLK	**Toolik Lake Re** baz=328,SNR=7.4	22.34	71	P	**P**	**14 26 43.6 +1.0**
D25K	**Kavik River**	22.38	68	P	**P**	**14 26 42.8 -0.3**
D25K	comp=Z,13nm,1.0s			IAmb	IAmb	14 26 49.8
D25K	**Kavik River** baz=328,SNR=7.6	22.38	68	P	**P**	**14 26 43.3 +0.3**
F20K	**Avaraart Lake**	22.48	78	P	**P**	**14 26 44.3 +0.3**
F20K	**Avaraart Lake** baz=330,SNR=7.1	22.48	78	P	**P**	**14 26 44.8 +0.9**
G16K	**Koyuk River** baz=331	22.55	87	P	**P**	**14 26 46.3 +1.5**
G15K	**Niukluk** baz=332	22.55	89	P	**P**	**14 26 46.1 +1.2**
C27K	**Jago River**	22.63	65	P	**P**	**14 26 45.0 -0.6**
C27K	comp=Z,15nm,1.2s			IAmb	IAmb	14 26 49.7
C27K	**Jago River** baz=328,SNR=8.9	22.63	65	P	**P**	**14 26 45.8 +0.2**
ANM	**Nome** baz=332	22.66	91	P	**P**	**14 26 47.0 +1.1**
F21K	**Alatna River** baz=330,SNR=10	22.78	76	P	**P**	**14 26 47.9 +0.7**
F22K	**John River** baz=329	22.80	75	P	**P**	**14 26 48.2 +0.8**
G17K	**Kiwalik Mounta** baz=331	22.81	85	P	**P**	**14 26 49.0 +1.5**
E23K	**Chandalar** baz=329	22.83	72	P	**P**	**14 26 48.3 +0.4**
E23K	**Chandalar**	22.83	72	P	**P**	**14 26 48.5 +0.7**
G18K	**Tagagawik** baz=331	22.88	83	P	**P**	**14 26 49.4 +1.1**
G19K	**Purcell Mounta** baz=330	22.98	81	P	**P**	**14 26 50.5 +1.2**
E24K	**Your Creek**	23.04	71	P	**P**	**14 26 50.4 +0.4**
E24K	comp=Z,12nm,0.9s			IAmb	IAmb	14 27 07.5
E24K	**Your Creek** baz=329	23.04	71	P	**P**	**14 26 50.4 +0.4**
H16K	**Elim** baz=332	23.24	88	P	**P**	**14 26 53.4 +1.5**
G21K	**Allakaket** baz=330	23.39	77	P	**P**	**14 26 54.9 +1.4**
COLD	**Coldfoot** baz=330	23.43	73	P	**P**	**14 26 55.7 +1.9**
G22K	**Bettles** baz=330	23.43	75	P	**P**	**14 26 55.4 +1.5**
D27M	**Malcolm River**	23.47	63	P	**P**	**14 26 54.2 -0.1**
D27M	**Malcolm River** baz=329	23.47	63	P	**P**	**14 26 55.2 +0.9**
E25K	**Arctic Village**	23.57	68	P	**P**	**14 26 55.9 +0.6**
E25K	comp=Z,6.3nm,0.9s			IAmb	IAmb	14 27 22.2
E25K	**Arctic Village** baz=330	23.57	68	P	**P**	**14 26 56.0 +0.8**
F24K	**Squaw Lake** comp=Z,13nm,1.4s	23.64	71	IAmb	IAmb	14 27 09.4
F24K	**Squaw Lake** baz=330	23.64	71	P	**P**	**14 26 57.0 +1.1**
H19K	**Roundabout Mou** baz=331	23.65	81	P	**P**	**14 26 57.9 +1.9**
IMAR	**Indian Mountai**	23.80	78	P	**P**	**14 26 58.5 +1.0**
G23K	**Bananza Creek**	23.91	74		**P**	**14 26 58.9 +0.3**
G23K	**Bananza Creek** baz=331,SNR=5.4	23.91	74	P	**P**	**14 26 59.7 +1.0**
H20K	**Anotleneega Mo** baz=331	24.00	80	P	**P**	**14 27 01.2 +1.7**
F25K	**Christian Rive** baz=330	24.01	69	P	**P**	**14 27 00.9 +1.4**
F26K	**Sheenjek River** baz=330	24.21	68	P	**P**	**14 27 02.6 +1.3**
I17K	**Unalakleet** baz=333	24.22	87	P	**P**	**14 27 03.1 +1.7**
E27K	**Coleen River** baz=330	24.26	65	P	**P**	**14 27 03.0 +1.1**
H21K	**Melozitna Rive** comp=Z,8.0nm,0.8s	24.28	78	IAmb	IAmb	14 27 04.9
H21K	**Melozitna Rive** baz=331	24.28	78	P	**P**	**14 27 03.6 +1.6**
E28M	**Babbage River** comp=Z,6.0nm,0.7s	24.28	63	IAmb	IAmb	14 27 05.4
E28M	**Babbage River** baz=330,SNR=8.5	24.28	63	P	**P**	**14 27 02.9 +0.9**
G24K	**Hadweenzic Riv** baz=331	24.43	72	P	**P**	**14 27 04.7 +1.4**
G25K	**Bearman Lake** baz=331	24.64	71	P	**P**	**14 27 06.6 +1.4**
J14K	**Nanvaranak Lak** baz=334	24.65	91	P	**P**	**14 27 08.1 +2.8**
E29M	**Blow River** baz=331,SNR=10	24.77	62	P	**P**	**14 27 07.1 +0.7**
J16K	**Anvik River** baz=333	24.78	88	P	**P**	**14 27 09.2 +2.7**
H23K	**Yukon River** comp=Z,8.4nm,1.2s	24.78	75	IAmb	IAmb	14 27 34.5
H23K	**Yukon River** baz=332	24.78	75	P	**P**	**14 27 08.4 +1.8**
G26K	**Porcupine Rive** comp=Z,5.8nm,0.9s	24.93	68	IAmb	IAmb	14 27 08.7
G26K	**Porcupine Rive** baz=331	24.93	68	P	**P**	**14 27 08.9 +1.1**
J17K	**VABM Dome** baz=333	24.99	86	P	**P**	**14 27 10.4 +2.0**
F28M	**Old Crow** baz=331	25.09	65	P	**P**	**14 27 10.6 +1.3**
H24K	**Noodor Dome** baz=332,SNR=5.2	25.10	73	P	**P**	**14 27 10.9 +1.4**
RES	**Resolute Bay** comp=Z,31nm,21.4s,baz=20,slow=37	25.14	27	LR	LR	14 36 58.4
K13K	**Kusilvak Mount** baz=335	25.15	93	P	**P**	**14 27 12.1 +2.2**
J19K	**Poorman**	25.17	82		**P**	**14 27 11.2 +1.2**
J19K	comp=Z,7.7nm,0.8s			IAmb	IAmb	14 27 14.9
J19K	**Poorman** baz=333,SNR=5.9	25.17	82	P	**P**	**14 27 12.4 +2.4**
MLY	**Manley** baz=332	25.25	77	P	**P**	**14 27 12.5 +1.8**
J20K	**Nowinta River**	25.31	81		**P**	**14 27 11.9 +0.6**
J20K	comp=Z,6.5nm,1.0s			IAmb	IAmb	14 27 15.9
J20K	**Nowinta River** baz=333	25.31	81	P	**P**	**14 27 13.2 +1.9**
I23K	**Minto, Yukon-K** comp=Z,8.2nm,1.2s	25.42	75	IAmb	IAmb	14 27 30.1
I23K	**Minto, Yukon-K** baz=332	25.42	75	P	**P**	**14 27 14.2 +2.0**
J18K	**Innoko River** baz=333	25.42	84	P	**P**	**14 27 14.8 +2.5**
G27K	**Doyon Strip** baz=332	25.46	67	P	**P**	**14 27 14.1 +1.5**
K15K	**Wolf Creek Mou** baz=334	25.48	89	P	**P**	**14 27 15.3 +2.5**
INK	**Inuvik** baz=332	25.63	59	P	**P**	**14 27 16.2 +2.0**
K17K	**Iditarod** baz=334	25.76	86	P	**P**	**14 27 18.2 +2.8**
POKR	**Poker Plat Res** baz=333	25.83	74	P	**P**	**14 27 18.3 +2.3**
F30M	**Barrier River**	25.84	61		**P**	**14 27 16.1 0.0**
F30M	**Barrier River** baz=332,SNR=6.5	25.84	61	P	**P**	**14 27 17.7 +1.6**
CHUM	**Lake Minchumin** baz=333	25.95	79	P	**P**	**14 27 19.2 +2.2**
KEV	**Kevo**	25.95	310	P	**P**	**14 27 15.8 -1.2**
NEA2	**Nenana** baz=333	25.97	76	P	**P**	**14 27 20.1 +2.8**
H27K	**Steamboat Moun** baz=332	25.99	67	P	**P**	**14 27 19.8 +2.3**
L15K	**Ungalak Mounta** baz=335	26.04	90	P	**P**	**14 27 21.7 +3.8**
G29M	**Pine Creek** baz=332,SNR=6.8	26.05	64	P	**P**	**14 27 20.0 +1.9**
K20K	**Telida** baz=334	26.06	81	P	**P**	**14 27 21.0 +2.9**
L14K	**Kuka Creek** baz=335	26.10	92	P	**P**	**14 27 21.8 +3.4**
M11K	**Mekoryuk** baz=336	26.24	96	P	**P**	**14 27 23.6 +3.9**
IL31	comp=Z,7.0nm,1.3s	26.25	73	IAmb	IAmb	14 27 26.0
ILAR	**Eielson Array** comp=Z,3nm,1.0s,baz=332,slow=9.2,SNR=18 comp=Z,2.3nm,1.0s	26.25	73	P	**P**	**14 27 21.1 +1.4**
L17K	**Donlin** baz=334	26.29	87	P	**P**	**14 27 22.8 +2.7**
C36M	**Paulatuk** baz=334	26.30	51	P	**P**	**14 27 22.2 +2.0**
G30M	**tAoh Zraii Nji** comp=Z,11nm,1.2s	26.32	62	IAmb	IAmb	14 27 33.5
G30M	**tAoh Zraii Nji** baz=333	26.32	62	P	**P**	**14 27 22.8 +2.3**
F31M	**Tsiigehtchic** baz=333,SNR=16	26.36	60	P	**P**	**14 27 22.7 +2.0**
ARCES	**ARCESS Array B** comp=Z,4.5nm,0.7s,baz=30,slow=10,SNR=12 comp=Z,4.5nm,0.7s	26.39	310	P	**P**	**14 27 19.9 -1.1**
ARCES	**ARCESS Array B**	26.39	310	P	**P**	**14 27 20.1 -0.9**
ARCES	comp=Z,4.7nm,0.8s			IAmb	IAmb	14 27 22.5
CAST	**Castle Rocks** baz=334	26.41	79	P	**P**	**14 27 24.1 +2.8**
L16K	**Owhat River** baz=335	26.43	88	P	**P**	**14 27 24.8 +3.4**
I26K	**Coal Creek Min** comp=Z,9.2nm,1.1s	26.50	70	IAmb	IAmb	14 27 28.1
I26K	**Coal Creek Min** baz=333	26.50	70	P	**P**	**14 27 24.0 +1.9**
I27K	**Kandik River** comp=Z,7.7nm,1.5s	26.53	68	IAmb	IAmb	14 27 35.4
I27K	**Kandik River** baz=333	26.53	68	P	**P**	**14 27 24.3 +1.8**
L18K	**Granite Mounta** baz=334	26.54	85	P	**P**	**14 27 25.1 +2.6**
HDA	**Harding Lake** comp=Z,6.2nm,1.0s	26.55	74	IAmb	IAmb	14 27 28.5
HDA	**Harding Lake** baz=333	26.55	74	P	**P**	**14 27 25.0 +2.4**
H29M	**Whitestone** baz=333	26.60	65	P	**P**	**14 27 24.5 +1.6**
J25K	**Salcha River,** baz=333	26.69	72	P	**P**	**14 27 25.8 +2.0**
G31M	**Satah River** comp=Z,6.8nm,0.9s	26.73	61	IAmb	IAmb	14 27 39.8
G31M	**Satah River** baz=333	26.73	61	P	**P**	**14 27 25.6 +1.6**
TRF	**Thorofare Moun** baz=334	26.74	78	P	**P**	**14 27 26.6 +2.1**
MCK	**McKinley** baz=334	26.76	76	P	**P**	**14 27 27.0 +2.5**
EPYK	**Eagle Plains** comp=Z,8.0nm,0.9s	26.77	63	IAmb	IAmb	14 27 27.6
EPYK	**Eagle Plains** baz=333	26.77	63	P	**P**	**14 27 26.6 +2.0**
M14K	**Bethel** baz=336	26.78	91	P	**P**	**14 27 27.5 +2.9**
M13K	**Dall Lake** baz=336	26.80	93	P	**P**	**14 27 28.1 +3.3**
PPLA	**Purkeypile** baz=334	26.86	80	P	**P**	**14 27 28.2 +2.8**
L19K	**White Mountain** baz=335	26.95	83	P	**P**	**14 27 28.9 +2.7**
I28M	**Miner Creek** baz=333	26.99	67	P	**P**	**14 27 28.7 +2.1**
M15K	**Kasigluk River** baz=336	27.10	90	P	**P**	**14 27 30.4 +2.9**
M17K	**Holitna River** baz=335	27.13	86	P	**P**	**14 27 30.8 +3.1**
M16K	**Timber Creek** baz=335	27.16	88	P	**P**	**14 27 30.9 +2.9**
K24K	**Donnelly Dome** baz=334	27.33	74	P	**P**	**14 27 32.1 +2.5**
M18K	**Stony River** baz=335	27.38	85	P	**P**	**14 27 32.9 +2.9**
I29M	**Ogilvie Camp,** baz=334	27.38	66	P	**P**	**14 27 32.4 +2.4**
RIDG	**Independent Ri** baz=334	27.57	73	P	**P**	**14 27 34.1 +2.3**
M20K	**Styx River** baz=335	27.58	82	P	**P**	**14 27 34.5 +2.6**
N14K	**Kuskokwak Cree** baz=336	27.59	92	P	**P**	**14 27 35.1 +3.3**
WAT1	**Susitna Watana** baz=334	27.65	77	P	**P**	**14 27 34.7 +2.2**
DHY	**Denali Highway** baz=334	27.67	76	P	**P**	**14 27 35.0 +2.2**
CUT	**Chulitna** baz=335	27.69	79	P	**P**	**14 27 35.3 +2.6**
N16K	**Nishlik Lake** baz=336	27.70	89	P	**P**	**14 27 36.0 +3.1**
N15K	**Kwethluk River** baz=336	27.70	90	P	**P**	**14 27 35.9 +3.0**
H31M	**Peel River** baz=334	27.72	62	P	**P**	**14 27 34.8 +1.7**
SKT	**Skwentna** baz=335	27.82	80	P	**P**	**14 27 37.0 +3.1**
I30M	**Mount Dempster**	27.87	64		**P**	**14 27 34.2 -0.3**
I30M	comp=Z,4.2nm,0.8s			IAmb	IAmb	14 27 40.4
I30M	**Mount Dempster** baz=334	27.87	64	P	**P**	**14 27 36.5 +2.0**
N17K	**Nushagak Hills** baz=336	27.97	87	P	**P**	**14 27 38.6 +3.3**
WAT6	**Susitna Watana** baz=335	28.04	76	P	**P**	**14 27 38.9 +2.8**
N18K	**Kilae Creek** baz=336	28.10	86	P	**P**	**14 27 39.0 +2.6**
PAX	**Paxson** baz=335	28.14	74	P	**P**	**14 27 39.2 +2.3**
N19K	**Bonanza Creek** baz=336	28.27	84	P	**P**	**14 27 41.1 +3.0**
O14K	**Tigyukauivet M** baz=337	28.30	92	P	**P**	**14 27 41.3 +3.1**
TLY	**Talaya** comp=Z,47nm,18.7s,baz=100,slow=41	28.42	218	LR	LR	14 41 10.4
J30M	**Hart River** baz=335	28.46	65	P	**P**	**14 27 41.1 +1.3**
SML	**Sawmill** baz=335	28.62	78	P	**P**	**14 27 44.0 +2.8**
O16K	**Kokwok River B** baz=337	28.64	89	P	**P**	**14 27 44.7 +3.5**
PMR	**Palmer** baz=336	28.66	79	P	**P**	**14 27 44.0 +2.6**
O15K	**Ungalikthiuk R** baz=337	28.66	91	P	**P**	**14 27 44.5 +3.0**
O17K	**Koliganek Bris** baz=336	28.68	88	P	**P**	**14 27 44.6 +3.0**
HARP	**HAARP** baz=335	28.72	74	P	**P**	**14 27 44.8 +2.8**
M23K	**Glacier View** baz=335	28.76	77	P	**P**	**14 27 44.6 +2.3**
L27K	**Beaver Creek,** baz=335	28.78	71	P	**P**	**14 27 44.7 +2.2**
M24K	**Tolsona, Glenn** baz=335	28.78	75	P	**P**	**14 27 44.8 +2.2**
SCM	**Sheep Creek Mo** baz=335	28.80	77	P	**P**	**14 27 44.7 +2.0**
O19K	**Port Alsworth** baz=336	28.87	85	P	**P**	**14 27 46.3 +3.0**
K29M	**Barlow Dome** baz=335	28.90	66	P	**P**	**14 27 45.8 +2.1**
KNK	**Knik Glacier** baz=336	28.95	78	P	**P**	**14 27 46.9 +2.9**
RC01	**Rabbit Creek A** baz=336	28.99	80	P	**P**	**14 27 47.2 +2.9**
CAPN	**Captain Cook N** baz=336	28.99	81	P	**P**	**14 27 47.0 +2.7**
O18K	**Koktuh Hills** baz=336	29.00	86	P	**P**	**14 27 47.2 +2.8**
ZALV	**Zalesovo Beam** comp=Z,58nm,18.0s,baz=220,slow=41	29.19	242	LR	LR	14 41 52.9
P17K	**Kvichak River** baz=337	29.35	87	P	**P**	**14 27 50.2 +2.7**
KLU	**Klutina** baz=336	29.39	76	P	**P**	**14 27 50.0 +1.9**
M27K	**Edge Creek, AK** baz=336	29.41	71	P	**P**	**14 27 50.0 +1.8**
P18K	**Big Mountain,** baz=337	29.42	86	P	**P**	**14 27 50.5 +2.3**
L29M	**L29M** baz=336	29.45	68	P	**P**	**14 27 49.7 +1.2**
PWL	**Port Wells**	29.48	78	P	**P**	**14 27 49.9 +1.2**
PWL	comp=Z,4.0nm,0.6s			IAmb	IAmb	14 27 51.5
PWL	**Port Wells** baz=336	29.48	78	P	**P**	**14 27 51.1 +2.3**
BVCY	**Beaver Creek** baz=336	29.55	71	P	**P**	**14 27 51.3 +1.9**
N25K	**Chitina, Valde** baz=336	29.55	74	P	**P**	**14 27 51.3 +1.9**
P19K	**Oil Pt** baz=337	29.59	84	P	**P**	**14 27 52.3 +2.6**
SHEM	**Shemya Is, Ala** comp=Z,22nm,18.4s,baz=112,slow=38	29.63	124	LR	LR	14 40 41.8
SEW	**Seward** baz=336	29.95	80	P	**P**	**14 27 54.6 +1.8**
BRSE	**Bradley Lake S** baz=337	30.02	82	P	**P**	**14 27 55.3 +1.8**
MCARA	**McCarthy VSAT** baz=336	30.07	73	P	**P**	**14 27 55.4 +1.5**
BMRM	**Bremner River** baz=336	30.14	75	P	**P**	**14 27 56.0 +1.4**
Q18K	**Katmai Hardscr** baz=337	30.15	86	P	**P**	**14 27 56.6 +1.9**
Q19K	**Cape Douglas,** baz=337	30.17	85	P	**P**	**14 27 57.3 +2.5**
M30M	**Minto, Yukon** baz=336	30.19	67	P	**P**	**14 27 56.5 +1.5**
EYAK	**Cordova Ski Ar** baz=336	30.29	76	P	**P**	**14 27 57.9 +2.1**
Q17K	**Contact Creek** baz=338	30.32	88	P	**P**	**14 27 58.9 +2.6**
P23K	**Montague Islan** baz=337	30.46	78	P	**P**	**14 28 00.2 +2.8**
YUK8	**Steele Glacier** baz=337	30.80	71	P	**P**	**14 28 02.6 +1.9**
R17L	**Mt. Peulik Vol** baz=338	30.81	89	P	**P**	**14 28 03.0 +2.5**
BRWY	**Burwash Landin** baz=337	30.87	70	P	**P**	**14 28 03.1 +2.1**
YUK4	**Talbot Arm** baz=337	30.96	70	P	**P**	**14 28 03.6 +1.5**
KAIM	**Kayak Island** baz=337	31.13	76	P	**P**	**14 28 05.2 +2.0**
N30M	**Aishikik Lake** baz=337	31.16	68	P	**P**	**14 28 06.0 +2.4**
MMPY	**Sheldon Lake,** comp=Z,4.3nm,1.0s	31.18	62	IAmb	IAmb	14 28 16.6
MMPY	**Sheldon Lake,** baz=337	31.18	62	P	**P**	**14 28 05.7 +1.9**
Q23K	**Middleton Isla** baz=337	31.20	78	P	**P**	**14 28 06.2 +2.4**
N31M	**Braeburn, Yuko** baz=337	31.39	67	P	**P**	**14 28 07.9 +2.3**
YUK6	**Outpost Mounta** baz=337	31.39	70	P	**P**	**14 28 06.8 +1.0**
KDAK	**Kodiak Island** baz=338	31.45	85	P	**P**	**14 28 07.7 +1.7**
HYT	**Haines Junctio** baz=337	31.66	69	P	**P**	**14 28 09.3 +1.2**
OHAK	**Old Harbor** baz=338	31.82	86	P	**P**	**14 28 11.3 +2.0**
O29M	**Mount Kennedy** baz=338	31.94	70	P	**P**	**14 28 12.1 +1.6**
O30N	**Mendenhall** baz=338	31.99	68	P	**P**	**14 28 12.1 +1.2**
WHY	**Whitehorse** baz=338	32.32	67	P	**P**	**14 28 14.9 +1.1**
P30M	**Million Dollar** baz=338	32.42	69	P	**P**	**14 28 15.9 +1.2**
P29M	**Windy Craggy** baz=338	32.72	70	P	**P**	**14 28 18.7 +1.4**
BVAR	**Borovoye Array** comp=Z,1.3nm,0.6s,baz=37,slow=7.9,SNR=6.6	32.85	257	P	**P**	**14 28 20.2 +1.7**
BVAR	comp=Z,1.1nm,0.5s,baz=347,slow=2.0,SNR=4.2 comp=Z,1.3nm,0.6s			PcP	**PcP**	**14 31 04.2 +1.5**
P33M	**Teslin, Yukon** baz=338	33.12	65	P	**P**	**14 28 22.5 +1.6**
PLBC	**Pleasant Camp** baz=338	33.15	69	P	**P**	**14 28 22.7 +1.8**
SKAG	**Skagway** baz=338	33.35	68	P	**P**	**14 28 24.1 +1.4**
KURK	**Kurchatov**	33.43	247	P	**P**	**14 28 25.1 +1.6**
P32M	**Atlin** baz=339	33.53	67	P	**P**	**14 28 26.0 +1.6**
KURBB	**Kurchatov Arra** comp=Z,1.8nm,0.8s,baz=21,slow=8.6,SNR=7.4 comp=Z,1.8nm,0.8s	33.54	247	P	**P**	**14 28 26.2 +1.8**
YKA	**Yellowknife Ar** comp=Z,1.3nm,0.9s,baz=340,slow=8.4,SNR=3.8 comp=Z,1.3nm,0.9s	34.14	49	P	**P**	**14 28 29.2 -0.4**
Q32M	**Nakina River** baz=339	34.40	66	P	**P**	**14 28 32.2 +0.2**
ASAJ	**Asahikawa** comp=Z,68nm,18.1s,baz=9.0,slow=40	34.42	166	LR	LR	14 44 52.4
S31K	**Pelican** baz=339	34.57	70	P	**P**	**14 28 34.1 +0.9**
R32K	**Eaglecrest** baz=339	34.61	68	P	**P**	**14 28 35.1 +1.4**
KOTAN	**Kotaneelee Air** baz=340	34.80	58	P	**P**	**14 28 35.9 +0.6**
DLBC	**Dease Lake** comp=Z,21nm,18.4s,baz=313,slow=43	35.30	64	LR	LR	14 46 43.7
DLBC	**Dease Lake** baz=340	35.30	64	P	**P**	**14 28 40.8 +1.1**
S32K	**Killisnoo** baz=340	35.35	69	P	**P**	**14 28 41.3 +1.3**
NB2	**NORSAR Subarra** comp=Z,4.1nm,0.8s,baz=17,slow=8.6	36.50	315	P	**P**	**14 28 48.5 -1.4**
NOA	**NORSAR Array B** comp=Z,2.0nm,0.7s,baz=17,slow=8.6,SNR=4.4	36.50	315	P	**P**	**14 28 48.9 -1.0**
NOA	comp=Z,12nm,19.0s,baz=95,slow=41 comp=Z,2.0nm,0.7s			LR	LR	14 46 30.1
MKAR	**Makanchi Array** comp=Z,0.4nm,0.6s,baz=9.0,slow=7.6,SNR=5.4 comp=Z,0.4nm,0.6s	36.52	241	P	**P**	**14 28 52.6 +2.4**
MKAR	**Makanchi Array**	36.52	241	P	**P**	**14 28 51.8 +1.6**
FRB	**Frobisher Bay** comp=Z,31nm,18.8s,baz=24,slow=35	37.83	14	LR	LR	14 43 41.2
AB31	**Akbulak array**	38.56	266	P	**P**	**14 29 07.5 +0.1**
ABKAR	**Akbulak array**	38.56	266	P	**P**	**14 29 07.5 +0.1**

EKA Eskdalemuir Ar 43.96 324 P P 14 29 49.6 -2.0
comp=Z,2.3nm,0.6s,baz=11,slow=8.3,SNR=5.4
comp=Z,2.3nm,0.6s
ESK Eskdalemuir 43.98 324 P P 14 29 50.5 -1.3
SCHQ Schefferville 46.81 14 LR LR 14 49 27.9
comp=Z,22nm,18.9s,baz=204,slow=36
NEW Newport 47.35 58 LR LR 14 53 03.5
comp=Z,16nm,18.4s,baz=18,slow=40
KBZ Khabaz 47.35 280 P P 14 30 19.8 +1.3
comp=Z,3.3nm,1.0s,baz=297,slow=3.8,SNR=4.1
comp=Z,3.3nm,1.0s
ULM Lac du Bonnet 48.68 39 LR LR 14 53 02.4
comp=Z,38nm,18.2s,baz=91,slow=39
BCYI Bear Canyon 51.82 56 P P 14 30 53.2 +0.2
YBH Yreka Blue Hor 52.65 65 LR LR 14 56 35.8
comp=Z,24nm,18.7s,baz=309,slow=40
BRTR Keskin Array B 53.06 287 P P 14 31 03.1 +1.0
comp=Z,1.2nm,0.7s,baz=0.0,slow=3.0,SNR=5.8
comp=Z,1.2nm,0.7s
BUKO Buck Lake 55.26 26 P P 14 31 17.3 -0.5
ESDC Sonseca Array 59.45 321 P P 14 31 46.3 -1.2
comp=Z,0.8nm,0.7s,baz=1.7,slow=7.7,SNR=6.5
comp=Z,0.8nm,0.7s
O48B Farmland 59.81 32 P P 14 31 49.0 -1.0
Y45A Yeager Farm, C 65.61 37 P P 14 32 28.5 -0.2
TXAR Lajitas Array 68.06 51 P P 14 32 45.4 +0.9
comp=Z,0.7nm,0.8s,baz=5.2,slow=4.1,SNR=4.3
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 68.06 51 P P 14 32 44.8 +0.3
TORD Torodi Ar. Bea 84.72 311 P P 14 34 18.2 -0.8
comp=Z,1.1nm,0.6s,baz=360,slow=6.2,SNR=8.9
comp=Z,1.1nm,0.6s

*IDC **28** 14:38:15.2±1.0, 33.°10N×86.°78E, h0km, mb4.0/16, mbtmp4.0/18, ML3.3/2, Error ellipse: s-maj=24.7km s-min=16.3km az=16.0*
*BJI **28** 14:38:17.3, 33.°25N×86.°84E, h10km, mB4.3/3, mb4.4/17, ML3.8/2, Ms3.6/4, Ms7 3.6/3*
*NEIC **28** 14:38:18.6±1.9, 33.°21N±0.°08×86.°86E±0.°10, h10km±1km, mb4.3/17, Error ellipse: s-maj=15.6km s-min=12.1km az=222.0*
*NDI **28** 14:38:19.3±2.4, 33.°09N×86.°89E, h10km, ML3.7, MW3.6, Presumed earthquake*
ISC 28 14:38:17.8±0.4, 33.°17N±0.°05×86.°73E±0.°04, h10km, n64, σ2s00/69, mb4.2/19, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.12**	**131**		**Pn**	**14 39 34.8**	**-0.3**
LSA				Sn	**Sn**	**14 40 31.7**	**-2.7**
LSA	**Lhasa**	**5.12**	**131**	*i*/Pn	**Pn**	**14 39 38.3**	**+3.3**
LSA				Sn	**Sn**	**14 40 28.8**	**-5.6**
LSA	70nm,0.8s			SMN			
LSA	47nm,0.9s			SME			
EVN	**Everest**	**5.19**	**179**		**Pn**	**14 39 37.8**	**+1.6**
EVN				Sn	**Sn**	**14 40 39.7**	**+3.2**
PTH	**Pithoragarh**	**6.62**	**239**	*eP*	**Pn**	**14 39 58.0**	**+2.6**
PTH				*ex*	x	14 40 51.8	
COBR	**COOCHBEHAR**	**7.25**	**160**	*ex*	**Pn**	**14 40 00.2**	**-3.6**
COBR				IAML		14 40 45.5	
COBR	comp=Z,260nm,0.5s			*ex*	x	14 40 52.6	
COBR				IAML		14 40 56.6	
GOMU	**GeErMu**	**7.32**	**63**	Pn	**Pn**	**14 40 06.5**	**+1.4**
SMLA	**Simla**	**8.36**	**259**	*eP*	**Pn**	**14 40 20.5**	**+1.4**
SMLA				*eS*	**Sn**	**14 41 50.2**	**-3.3**
SMLA				IAML		14 42 07.5	
DHRM	**DHARAMSHALA**	**8.84**	**267**	*eP*	**Pn**	**14 40 29.6**	**+3.7**
DHRM				*eS*	**Sn**	**14 42 02.7**	**-2.9**
DHRM				IAML		14 42 12.2	
ALBI	**Allahabad**	**8.93**	**210**	*eP*	**Pn**	**14 40 28.2**	**+1.3**
AYAN	**Aya Nagar**	**9.48**	**243**	*eP*	**Pn**	**14 40 38.2**	**+3.7**
AYAN				*eS*	**Sn**	**14 42 16.7**	**-4.5**
KUDL	**Kundal**	**10.14**	**243**	*eP*	**Pn**	**14 40 45.4**	**+1.9**
KUDL				*eS*	Sn	14 42 31.7	-5.5
KUDL				IAML		14 42 42.2	
WMQ	**Urumqi**	**10.67**	**4**	*eP*	**Pn**	**14 40 51.3**	**+0.6**
WMQ				pmax	pmax		
WMQ	comp=N,8.0nm,0.9s			L	L		
WMQ	comp=N,460nm,23.9s			L	L		
WMQ	comp=N,380nm,23.7s			L	L		
KSH2	**Kashi**	**10.81**	**307**	P	Pn	14 40 58.5	+5.6
KSH2	comp=N,680nm,24.9s			pmax	pmax		
TARG	**Taragay, Kyrgy**	**11.10**	**323**		**Pn**	**14 40 58.8**	**+1.7**
NIL	**Nilore**	**11.28**	**276**		**Pn**	**14 40 59.0**	**-0.1**
PDGK	**Podgornoye**	**11.63**	**333**		**Pn**	**14 41 04.7**	**+0.8**
GUNA	**GUNA**	**11.82**	**227**	*eP*	**Pn**	**14 41 06.3**	**-0.2**
AJM	**Ajmer**	**12.47**	**241**	*eP*	**Pn**	**14 41 14.6**	**-0.8**
MKAR	**Makanchi Array**	**14.03**	**347**	Pn	**Pn**	**14 41 35.2**	**-1.4**
MKAR	**Makanchi Array**	**14.03**	**347**	Pn	**Pn**	**14 41 37.6**	**+1.0**
LZH	**Lanzhou**	**14.39**	**74**	*eP*	**Pn**	**14 41 44.5**	**+2.7**
LZH				pP	P	14 41 49.3	+0.5
LZH	comp=N,23nm,1.1s			pmax	pmax		
GAR	**Garm**	**14.49**	**298**	Pn	**Pn**	**14 41 45.4**	**+2.4**
GAR					**P**	**14 41 51.3**	**+1.5**
BTK	**Batken**	**14.50**	**303**		**P**	**14 41 51.1**	**+1.2**
PZH	**PanZhiHua**	**14.62**	**113**	P	**P**	**14 41 54.0**	**+2.7**
PZH	**PanZhiHua**	**14.62**	**113**	P	**Pn**	**14 41 47.3**	**+2.4**
CHGR	**Chuyangaron**	**15.25**	**296**		**P**	**14 41 59.2**	**+0.9**
SHAA	**Shahritus**	**15.80**	**291**		**Pn**	**14 42 02.7**	**+2.3**
SHAA	comp=Z,27nm,0.8s			IAmb	IAmb	14 42 06.3	
KKAR	**Karatay Array**	**16.14**	**313**	Pn	**Pn**	**14 42 06.5**	**+1.7**
KURBB	**Kurchatov Arra**	**18.46**	**343**	P	**P**	**14 42 31.6**	**-2.0**
KURK	**Kurchatov**	**18.52**	**344**	P	**P**	**14 42 33.9**	**-0.4**
ZALV	**Zalesovo Beam**	**20.82**	**357**	P	**P**	**14 42 58.3**	**-1.0**
SONM	**Songino Array**	**20.85**	**40**	P	**P**	**14 42 59.5**	**-0.4**
SONM	**Songino Array**	**20.85**	**40**		**P**	**14 42 59.7**	**-0.2**
HHC	**Hu-ho-hao-te**	**21.22**	**62**	*eP*	**P**	**14 43 04.0**	**+0.1**
HHC				S	**S**	**14 46 54.8**	**-5.0**
HHC	comp=Z,15nm,0.5s			pmax	pmax		
HHC	comp=Z,73nm,5.9s			pmax	pmax		
ULN	**Ulaanbaatar**	**21.22**	**40**		**P**	**14 43 03.1**	**-0.8**
BVAR	**Borovoye Array**	**23.06**	**334**	P	**P**	**14 43 22.8**	**-0.5**
WHN	**Wuhan**	**23.58**	**89**	P	**P**	**14 43 28.3**	**-0.4**
AB31	**Akbulak array**	**25.59**	**317**		**P**	**14 43 47.6**	**+0.6**
AB31	comp=Z,5.4nm,0.7s			IAmb	IAmb	14 43 50.3	
ABKAR	**Akbulak array**	**25.59**	**317**		**P**	**14 43 47.3**	**+0.3**
SSE	**Sheshan**	**29.18**	**85**	P	**P**	**14 44 21.8**	**+2.4**
SSE	comp=Z,10.0nm,0.7s			pmax	pmax		
SSE	comp=Z,34nm,4.2s			pmax	pmax		
SSE	comp=Z,540nm,14.6s			L	L		
HILR	**Hailar Array B**	**29.40**	**46**	P	**P**	**14 44 20.4**	**-0.9**
KSRS	**Korea Array**	**33.70**	**71**	P	**P**	**14 44 58.1**	**-1.0**
NRIK	**Noril'sk**	**36.23**	**0**	P	**P**	**14 45 19.6**	**-1.0**
NRIK	**Noril'sk**	**36.23**	**0**	P	**P**	**14 45 19.7**	**-0.9**
NRIK	comp=Z,4.2nm,0.7s			IAmb	IAmb	14 45 21.0	
MJAR	**Matsushiro Arr**	**41.97**	**70**	P	**P**	**14 46 07.8**	**-1.3**
	comp=Z,5.7nm,1.1s,baz=286,slow=9.5,SNR=5.4						
MJAR	**Matsushiro Arr**	**41.97**	**70**	P	**P**	**14 46 08.8**	**-0.3**
MJAR				IAmb	IAmb	14 46 45.2	
BRTR	**Keskin Array B**	**42.69**	**295**	P	**P**	**14 46 15.1**	**0.0**
AKASG	**Malin Array Be**	**45.03**	**311**	P	**P**	**14 46 34.0**	**+0.5**
AKASG	**Malin Array Be**	**45.03**	**311**	IAmb	IAmb	14 46 37.8	
MLR	**Muntele Rosu**	**47.55**	**304**		**P**	**14 46 54.9**	**+1.3**
BURAR	**Bucovina Array**	**47.81**	**307**	P	**P**	**14 46 57.0**	**+1.4**
BURAR				IAmb	IAmb	14 46 57.8	
ARCES	**ARCESS Array B**	**49.33**	**336**	P	**P**	**14 47 06.0**	**-0.8**
ARCES	**ARCESS Array B**	**49.33**	**336**	IAmb	IAmb	14 47 06.1	
HFS	**Hagfors**	**53.57**	**323**	P	**P**	**14 47 37.7**	**-1.0**
NB2	**NORSAR Subarra**	**54.71**	**325**	P	**P**	**14 47 46.4**	**-0.6**
NOA	**NORSAR Array B**	**54.71**	**325**	P	**P**	**14 47 46.3**	**-0.7**
GERES	**GERESS Array B**	**55.22**	**310**	P	**P**	**14 47 51.3**	**+0.4**
GERES	**GERESS Array B**	**55.22**	**310**	P	**P**	**14 47 51.5**	**+0.5**
WRA	**Warramunga Arr**	**69.67**	**132**	P	**P**	**14 49 26.3**	**-1.6**
L19K	**White Mountain**	**72.93**	**26**	P	**P**	**14 49 47.7**	**+0.6**
L19K				IAmb	IAmb	14 49 50.9	
M20K	**Styx River**	**73.74**	**25**	P	**P**	**14 49 52.7**	**+0.8**
M20K				IAmb	IAmb	14 49 53.9	
ILAR	**Eielson Array**	**73.82**	**21**	P	**P**	**14 49 51.1**	**-1.1**
MCARA	**McCarthy VSAT**	**77.51**	**22**	P	**P**	**14 50 14.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**78.83**	**278**	P	**P**	**14 50 19.6**	**-1.8**
	comp=Z,2.1nm,0.9s,baz=52,slow=4.9,SNR=7.3						
	comp=Z,2.1nm,0.9s						

*BJI **28** 14:38:47.8, 23.°26N×93.°21E, h13km, mB4.8/11, mb4.6/43, ML3.9/2, Ms4.6/48, Ms7 4.3/46*
*IDC **28** 14:38:47.8±0.6, 23.°21N×93.°45E, h0km, mb4.3/25, mbtmp4.3/27, ML4.4/2, MS4.0/57, Error ellipse: s-maj=13.4km s-min=10.9km az=179.0*
*NDI **28** 14:38:49.2±2.8, 23.°16N×93.°42E, h10km, mb4.5, ML4.2, MW4.5, Presumed earthquake*
*NEIC **28** 14:38:50.0±1.5, 23.°26N±0.°03×93.°34E±0.°05, h10km±1km, mb4.8/97, Error ellipse: s-maj=8.0km s-min=5.3km az=63.0*
*BKK **28** 14:38:49.9±0.6, 23.°N±4.°×9.°3E±.°, h10km, M4.3/24, mB4.7/16, mb4.8/19, Mjma4.5/24, ML5.0/16, MLv4.6/11, Mw(mB)4.0/16*
*GCMT **28** 14:38:50.0±0.3, 23.°10N±0.°02×93.°36E±0.°02, h20km±1km, MW4.7/88, Moment Tensor Solution. s7,c7; s88,c128; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.00±.07; Mθθ0.74±.05; Mϕϕ-0.74±.05; Mrθ0.03±.11; Mθϕ1.24±.05; Mϕr-0.14±.10; Best double couple: M0 1.45200×10^16 NP1:ϕ285.00000°, δ85.00000°, λ-3.00000°. NP2: ϕ16.00000°, δ87.00000°, λ-175.00000°. Principal axes: T 1.4480, Plg2.0000°, Azm150.0000°; N 0.0100, Plg84.0000°, Azm43.0000°; P -1.4570, Plg6.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GFZ **28** 14:38:51.3±0.2, 23.°N±4.°×9.°3E±.°, h10km, M4.6/20, mb4.8/20*
ISC 28 14:38:49.7±0.3, 23.°23N±0.°04×93.°27E±0.°04, h10km, n251, σ1s96/207, mb4.7/89, MS4.1/62, 1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.38**	**43**		**Pn**	**14 39 14.2**	**-0.9**
BRDH	**Bariadhala**	**1.60**	**250**	Pg	**Pn**	**14 39 19.4**	**+1.4**
BRDH	398nm,0.3s,baz=75,slow=11,SNR=87			Lg	Lg	14 39 44.0	
BRDH	969nm,0.3s,baz=252,slow=20,SNR=12			LR	LR	14 40 07.2	
SILR	**SILCHAR**	**1.61**	**345**	*eP*	**Pb**	**14 39 20.0**	**+0.5**
SILR				*eS*	**Sg**	**14 39 42.4**	**+0.9**
SILR	comp=E,6μm,1.1s			IAML		14 39 51.8	
SILR	comp=N,5μm,0.9s			IAML		14 39 59.0	
IMP	**Imphal**	**1.71**	**21**	*eP*	**Pb**	**14 39 20.3**	**-1.1**
IMP				*eS*	**Sg**	**14 39 43.6**	**-1.2**
SHL	**Shillong**	**2.65**	**332**		**Pn**	**14 39 31.8**	**-0.9**
SHL	**Shillong**	**2.65**	**332**	*eP*	**Pn**	**14 39 32.0**	**-0.8**
SHL				*eS*	**Sn**	**14 40 07.0**	**+2.0**
MOKO	**MOKOCHONG**	**3.28**	**20**	*eP*	**Pn**	**14 39 41.7**	**+0.4**
MOKO				*eS*	**Sn**	**14 40 20.7**	**+0.1**
MOKO	comp=E,784nm,1.0s			IAML		14 40 28.6	
MOKO	comp=N,1μm,0.8s			IAML		14 40 34.9	
GUWA	**GUWAHATI**	**3.29**	**334**	*eP*	**Pn**	**14 39 40.6**	**-0.7**
GUWA				*eS*	**Sn**	**14 40 22.1**	**+1.7**
TEZP	**TEZPUR**	**3.40**	**353**	*eP*	**Pn**	**14 39 41.4**	**-1.4**
TEZP				*eS*	**Sn**	**14 40 22.7**	**-0.6**
DHUB	**DHUBRI**	**4.08**	**314**	*eP*	**Pn**	**14 39 52.5**	**+0.4**
NPW	**Naypyitaw**	**4.35**	**142**	P	**Pn**	**14 39 56.6**	**+0.7**
TAWA	**Tawang**	**4.53**	**344**	*eP*	**Pn**	**14 39 58.9**	**+0.2**
TAWA				*eS*	**Sn**	**14 40 50.2**	**-1.4**
LKP	**Lekhapani**	**4.71**	**29**	*ex*	x	14 39 48.5	
LKP	comp=E,493nm,1.6s			IAML		14 41 22.1	
LKP	comp=N,420nm,1.6s			IAML		14 41 33.2	
TNCH	**TengChong**	**5.12**	**68**	Pn	**Pn**	**14 40 08.3**	**+1.6**
TNCH				Sn	**Sn**	**14 40 59.5**	**-6.5**
TNCH	comp=N,4μm,6.8s			L	L		
TNCH	comp=N,3μm,5.8s			L	L		
TNCH	comp=N,2μm,7.3s			L	L		
CMAI	**Chiengmai2**	**6.29**	**120**	P	**Pn**	**14 40 22.7**	**-0.1**
BOK	**Bokaro**	**6.80**	**276**	*eP*	**Pn**	**14 40 28.9**	**-0.8**
BOK				*eS*	**Sn**	**14 41 44.7**	**-2.4**
CHTO	**Chiang Mai**	**6.88**	**129**	P	**Pn**	**14 40 30.4**	**-0.3**
CHTO	**Chiang Mai**	**6.88**	**129**		**Pn**	**14 40 30.5**	**-0.3**
CHTO	**Chiang Mai**	**6.88**	**129**	P	**Pn**	**14 40 32.1**	**+1.4**
CHTO	**Chiang Mai**	**6.88**	**129**	P	**Pn**	**14 40 32.8**	**+2.0**
CM15	**Chiang Mai Arr**	**7.11**	**131**	P	**Pn**	**14 40 35.7**	**+1.9**
CM13	**Chiang Mai Arr**	**7.12**	**131**	P	**Pn**	**14 40 34.8**	**+0.8**
CM31	**Chiang Mai Arr**	**7.12**	**131**	P	**Pn**	**14 40 35.9**	**+1.9**
CM31	**Chiang Mai Arr**	**7.12**	**131**		**Pn**	**14 40 33.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**7.12**	**131**	Pn	**Pn**	**14 40 32.7**	**-1.3**
CMAR				LR	LR	14 43 13.2	
CMAR	**Chiang Mai Arr**	**7.12**	**131**		**Pn**	**14 40 33.3**	**-0.6**
CM02	**Chiang Mai Arr**	**7.13**	**131**	P	**Pn**	**14 40 36.0**	**+1.8**
CM05	**Chiang Mai Arr**	**7.16**	**131**	P	**Pn**	**14 40 35.2**	**+0.7**
CM09	**Chiang Mai Arr**	**7.16**	**131**	P	**Pn**	**14 40 35.3**	**+0.7**
CM04	**Chiang Mai Arr**	**7.18**	**131**	P	**Pn**	**14 40 35.6**	**+0.7**
EVN	**Everest**	**7.49**	**310**	P	**Pn**	**14 40 40.5**	**+0.8**
GAYA	**Gaya**	**7.51**	**284**	*i* x	x	14 40 38.3	
BWNR	**Bhubaneshwar**	**7.53**	**248**	*eP*	**Pn**	**14 40 40.6**	**+1.0**
BWNR				*eS*	**Sn**	**14 42 02.6**	**-2.5**
LAMP	**Lampang**	**7.57**	**127**	P	**Pn**	**14 40 41.7**	**+1.5**
	comp=N,0.6nmcomp=N,1.8nmcomp=N,506nmcomp=N,33nm,0.8s						
UTTA	**Uttaradit**	**8.74**	**127**	P	**Pn**	**14 40 55.9**	**-0.3**
	comp=N,0.3nmcomp=N,528nmcomp=N,35nm,0.7s						
KMI2	**Kunming**	**8.86**	**76**	P	**Pn**	**14 41 02.0**	**+3.9**
KMI2				S	**Sn**	**14 42 44.5**	**+6.3**
KMI2				SMN			
KMI2	comp=N,27nm,1.6s			SME			
KMI2	comp=N,18nm,1.4s			L	L		
KMI2	comp=N,3μm,15.1s			L	L		
KMI2	comp=N,1μm,10.1s			L	L		
KMI2	comp=N,1μm,14.0s			L	L		
UTHA	**Uthaitani**	**9.60**	**142**	P	**Pn**	**14 41 06.8**	**-1.2**
RAGD	**RAYAGADA**	**9.97**	**248**	*eP*	**Pn**	**14 41 13.0**	**-0.2**
RAGD				*eS*	**Sn**	**14 42 59.4**	**-5.7**
BLSP	**Bilaspur**	**10.30**	**266**	*i* x	x	14 41 17.7	
BLSP				*eS*	**Sn**	**14 43 06.9**	**-6.5**
ALBI	**Allahabad**	**10.66**	**284**	*ex*	x	14 41 20.9	
ALBI				*eS*	**Sn**	**14 43 17.4**	**-4.6**
VIS	**Vishakhapatnam**	**10.80**	**241**	*eP*	**Pn**	**14 41 25.2**	**+0.7**
PBA	**Port Blair**	**11.52**	**183**	Pn	**Pn**	**14 41 35.4**	**+1.1**
GOMU	**GeErMu**	**13.00**	**6**	P	**Pn**	**14 41 54.0**	**-0.8**
GOMU				pP		14 41 57.0	
GOMU				sP		14 42 01.8	
GOMU				S	**Sn**	**14 44 21.3**	**+1.6**
GOMU	comp=N,23nm,0.8s			pmax	pmax		
GOMU	comp=N,2μm,14.7s			L	L		
GOMU	comp=N,430nm,14.7s			L	L		
GOMU	comp=N,2μm,14.0s			L	L		
NGP	**Nagpur**	**13.33**	**264**	*i* x	**Pn**	**14 41 59.8**	**+0.7**
BHPL	**Bhopal**	**14.57**	**273**	*eP*	**Pn**	**14 42 15.2**	**-0.9**
BHPL	comp=Z,12nm,0.6s			IAmb	IAmb	14 42 19.9	
BHPL				*eS*	Sn	14 44 45.4	-12
HYB	**Hyderabad**	**14.96**	**250**	*ex*	**Pn**	**14 42 18.1**	**-3.3**
HYB	comp=Z,18nm,1.0s			IAmb	IAmb	14 42 25.4	
LZDM	**Lanzhou Array** baz=193,slow=12	**15.58**	**33**	Pn	**Pn**	**14 42 29.5**	**-0.3**
LZDM	comp=Z,1μm,19.0s,baz=5.0,slow=41 comp=Z,5.7nm,0.5s			LR	LR	14 49 19.5	
LZH	**Lanzhou**	**15.76**	**33**	*eP*	**P**	**14 42 34.3**	**-1.6**
LZH				pP	pP	14 42 38.8	-0.2
LZH	comp=Z,62nm,1.2s			pmax	pmax		
LZH	comp=Z,3μm,12.2s			L	L		
LZH	comp=Z,2μm,10.8s			L	L		
LZH	comp=Z,2μm,15.5s			L	L		
QIZ	**Qiongzhong**	**16.02**	**102**	P	**P**	**14 42 38.6**	**-0.1**
QIZ	**Qiongzhong**	**16.02**	**102**	P	**Pn**	**14 42 35.8**	**+0.6**
QIZ				S	**Sn**	**14 45 32.8**	**-0.1**
QIZ	comp=Z,1μm,14.3s			L	L		
QIZ	comp=Z,630nm,16.5s			L	L		
QIZ	comp=Z,580nm,9.8s			L	L		
ENH	**Enshi**	**16.09**	**61**	Pn	**Pn**	**14 42 35.7**	**-0.4**
GTA2	**Gaotai**	**17.12**	**17**	*eP*	**P**	**14 42 50.0**	**-1.0**
GTA2	comp=Z,8.0nm,1.2s			pmax	pmax		
GTA2	comp=Z,2μm,17.1s			L	L		
GTA2	comp=Z,2μm,16.2s			L	L		
GTA2	comp=Z,2μm,17.5s			L	L		
AJM	**Ajmer**	**17.22**	**284**	*ex*	**Pn**	**14 42 48.6**	**-1.9**
AJM	comp=Z,46nm,1.5s			IAmb	IAmb	14 42 52.0	
DLV	**Lat**	**18.32**	**125**	P	**Pn**	**14 43 04.2**	**-0.1**
PALK	**Pallekele**	**19.94**	**219**	LR	LR	14 53 23.7	
	comp=Z,267nm,18.1s,baz=40,slow=44						
KCSI	**Kotacane, Aceh**	**20.07**	**167**	P	**P**	**14 43 23.1**	**-0.3**
	comp=Z,46nm,1.2s						
NIL	**Nilore**	**20.40**	**305**		**P**	**14 43 26.8**	**-0.2**
NIL	comp=Z,70nm,0.9s			IAmb	IAmb	14 43 37.2	
NIL	**Nilore**	**20.40**	**305**	P	**P**	**14 43 27.2**	**+0.2**
WMQ	**Urumqi**	**21.05**	**349**	*eP*	**P**	**14 43 34.5**	**+0.6**
WMQ				S	**S**	**14 47 23.3**	**-5.0**
WMQ				PcS	**PcS**	**14 51 22.0**	**+3.5**
WMQ	comp=Z,27nm,1.1s			pmax	pmax		
WMQ	comp=Z,100nm,3.6s			pmax	pmax		
WMQ	comp=Z,430nm,22.1s			L	L		
WMQ	comp=Z,390nm,24.1s			L	L		
WMQ	comp=Z,670nm,23.1s			L	L		
RPSI	**Rantau Prapat**	**21.13**	**164**	P	**P**	**14 43 35.5**	**+0.6**
WUS	**Wushi**	**21.45**	**330**	P	**P**	**14 43 38.1**	**-0.3**
KSH2	**Kashi**	**21.87**	**321**	P	**P**	**14 43 44.3**	**+1.4**
KSH2				pP	pP	14 43 46.8	+0.8
KSH2				PcP	**PcP**	**14 47 47.5**	**+5.1**
KSH2	comp=Z,19nm,1.2s			pmax	pmax		
KSH2	comp=Z,540nm,13.1s			L	L		
KSH2	comp=Z,580nm,13.4s			L	L		
KSH2	comp=Z,1μm,16.8s			L	L		
BTO2	**Baotou**	**22.37**	**35**	*eP*	**P**	**14 43 45.8**	**-2.4**
BTO2				S	**S**	**14 47 48.8**	**-5.4**
BTO2				sS	**pS**	**14 47 54.5**	**-4.1**
BTO2				SS	**SnSn**	**14 48 30.5**	**+8.4**
BTO2	comp=Z,49nm,0.8s			pmax	pmax		
BTO2	comp=Z,300nm,4.6s			pmax	pmax		
BTO2	comp=Z,3μm,16.4s			L	L		
BTO2	comp=Z,3μm,13.8s			L	L		
BTO2	comp=Z,4μm,15.9s			L	L		
TARG	**Taragay, Kyrgy**	**22.53**	**329**		**P**	**14 43 49.5**	**-0.8**
TARG	comp=Z,51nm,1.1s			IAmb	IAmb	14 44 01.7	
TARG	**Taragay, Kyrgy**	**22.53**	**329**	P	**P**	**14 43 52.5**	**+2.3**
SHLS	**Shalkode**	**22.93**	**333**	*eP*	**P**	**14 43 53.7**	**-0.5**
PDGK	**Podgornoye**	**23.06**	**334**	P	**P**	**14 43 55.3**	**-0.2**
UZB	**Uzynbulak**	**23.11**	**333**	*eP*	**P**	**14 43 57.2**	**+1.2**
KDJ	**Kajisay**	**23.14**	**328**	P	**P**	**14 43 55.0**	**-1.4**
KDJ	comp=Z,37nm,1.1s			IAmb	IAmb	14 44 05.0	
KDJ	**Kajisay**	**23.14**	**328**	P	**P**	**14 43 59.2**	**+2.8**
NRN	**Naryn**	**23.21**	**326**	P	**P**	**14 43 55.4**	**-1.9**
SATY	**Saty**	**23.30**	**332**	*eP*	**P**	**14 43 59.6**	**+1.7**
SATY	comp=Z,20nm,0.9s			*eS*	**S**	**14 48 13.4**	**+2.9**
HHC	**Hu-ho-hao-te**	**23.36**	**37**	*eP*	**P**	**14 44 00.0**	**+1.6**
HHC				S	**S**	**14 48 04.3**	**-7.1**
HHC	comp=Z,15nm,0.6s			pmax	pmax		
HHC	comp=Z,73nm,4.1s			pmax	pmax		
HHC	comp=Z,1μm,13.0s			L	L		
HHC	comp=Z,750nm,13.0s			L	L		
HHC	comp=Z,1μm,13.0s			L	L		
MANEM	**Manem**	**23.39**	**313**		**P**	**14 43 59.6**	**+0.6**
MANEM	comp=Z,117nm,1.0s			IAmb	IAmb	14 44 09.4	
KPKS	**Kokpek**	**23.51**	**333**	*eP*	**P**	**14 44 01.4**	**+1.5**

KPKS eS S 14 48 16.5 +2.7
TNSS Tian-Shan 23.94 329 eP P 14 44 05.8 +1.3
KBL Kabul 23.96 303 P 14 44 05.2 +0.6
KBL IAmb IAmb 14 44 21.1
comp=Z,30nm,1.0s
KBL Kabul 23.96 303 P P 14 44 07.0 +2.4
MDOK Medeo 24.00 330 eP P 14 44 06.3 +1.6
BOOM Boomskoye usch 24.02 327 P 14 44 05.5 +0.5
BOOM IAmb IAmb 14 44 08.8
comp=Z,68nm,1.6s
BOOM Boomskoye usch 24.02 327 P P 14 44 07.5 +2.5
AAA Alma-Ata 24.09 330 eP P 14 44 07.2 +1.7
NJ2 Nanjing 24.26 63 eP P 14 44 06.8 -0.3
NJ2 pmax pmax
comp=Z,16nm,0.5s
TIA Tai'an 24.35 52 P P 14 44 06.5 -1.4
TIA pmax pmax
comp=Z,13nm,0.9s
TIA L L
comp=Z,1μm,18.4s
TIA L L
comp=Z,760nm,16.1s
TIA L L
comp=Z,720nm,23.9s
OHH Osh 24.40 320 P P 14 44 09.9 +1.5
AAK Ala-Archa 24.86 326 P P 14 44 14.1 +1.5
comp=Z,4.1nm,0.5s,baz=138,slow=7.0,SNR=11
AAK LR LR 14 55 52.5
comp=Z,455nm,18.6s,baz=127,slow=41
comp=Z,4.1nm,0.5s
AAK Ala-Archa 24.86 326 P 14 44 13.2 +0.6
AAK IAmb IAmb 14 44 33.0
comp=Z,47nm,1.6s
AAK Ala-Archa 24.86 326 P P 14 44 15.8 +3.2
KUU Kurty 24.89 330 eP P 14 44 14.5 +1.8
comp=Z,10nm,1.4s
TDK Taldyqorghan 24.89 334 eP P 14 44 14.5 +1.8
comp=Z,22nm,1.4s
GAR Garm 25.07 314 P 14 44 14.3 -0.2
GAR Garm 25.07 314 P P 14 44 14.7 +0.2
ZSN Zaisan 25.09 346 eP P 14 44 16.2 +1.7
comp=Z,8.6nm,0.9s
MKAR Makanchi Array 25.12 342 P P 14 44 15.2 +0.4
comp=Z,9.7nm,0.7s,baz=167,slow=9.9,SNR=45
comp=Z,9.7nm,0.7s
MKAR Makanchi Array 25.12 342 P 14 44 15.0 +0.2
MAKZ Makanchi 25.23 342 P P 14 44 16.1 +0.4
MAKZ Makanchi 25.23 342 P P 14 44 17.1 +1.4
BTK Batken 25.32 317 P P 14 44 18.4 +1.6
SGDS Sogindy 25.38 327 eP P 14 44 19.0 +1.8
CHGR Chuyangaron 25.67 312 P 14 44 19.5 -0.4
CHGR Chuyangaron 25.67 312 P P 14 44 20.2 +0.3
ARK Arkit 25.68 321 P P 14 44 22.7 +2.6
SHAA Shahritus 25.87 309 IAmb IAmb 14 44 57.4
comp=Z,83nm,1.0s
SONM Songino Array 26.70 20 P P 14 44 29.3 +0.1
comp=Z,4.6nm,0.7s,baz=199,slow=9.8,SNR=13
SONM LR LR 14 56 31.4
comp=Z,743nm,20.4s,baz=207,slow=40
comp=Z,4.6nm,0.7s
SONM Songino Array 26.70 20 P P 14 44 29.4 +0.2
SONM IAmb IAmb 14 44 37.1
comp=Z,30nm,2.0s
DZA Taraz 26.75 322 eP P 14 44 31.4 +1.9
BTLS Baital 26.83 329 eP P 14 44 32.0 +1.8
ULN Ulaanbaatar 26.94 21 P P 14 44 30.6 -0.7
ULN Ulaanbaatar 26.94 21 P P 14 44 34.3 +2.9
IUG Iuzhnay 27.03 320 eP P 14 44 33.9 +1.7
comp=Z,16nm,1.2s
KKAR Karatay Array 27.34 322 P P 14 44 35.1 +0.2
CHM Chimkent 27.39 320 eP P 14 44 37.2 +1.9
comp=Z,11nm,0.9s
BRLS Boroldaу 27.68 321 eP P 14 44 39.2 +1.3
XLT XiLinHaoTe 27.88 37 eP P 14 44 40.5 +0.7
XLT pP pP 14 44 42.5 -0.7
XLT pmax pmax
comp=Z,7.0nm,0.8s
XLT L L
comp=Z,1μm,13.6s
XLT L L
comp=Z,2μm,14.0s
DL2 Dalian 28.73 50 P P 14 44 48.3 +1.0
DL2 eS S 14 49 40.5 +3.9
DL2 pmax pmax
comp=Z,21nm,0.9s
DL2 L L
comp=Z,700nm,17.9s
DL2 L L
comp=Z,610nm,16.4s
DL2 L L
comp=Z,710nm,18.1s
TLY Talaya 29.51 13 LR LR 14 58 17.4
comp=Z,1μm,18.0s,baz=190,slow=40
KURBB Kurchatov Arra 29.66 341 P P 14 44 55.1 -0.3
comp=Z,3.3nm,0.8s,baz=154,slow=8.5,SNR=14
KURBB PcP **PcP** 14 47 59.9 +0.3
comp=Z,0.6nm,0.5s,baz=163,slow=2.2,SNR=4.3
KURBB LR LR 14 59 11.7
comp=Z,337nm,19.6s,baz=144,slow=41
comp=Z,3.3nm,0.8s
KURK Kurchatov 29.72 341 P 14 44 55.3 -0.6
KURK Kurchatov 29.72 341 P P 14 44 57.3 +1.4
ZAA0 Zalesovo Array 31.34 350 IAmb IAmb 14 45 12.5
comp=Z,13nm,1.3s
ZALV Zalesovo Beam 31.34 350 P P 14 45 10.2 0.0
comp=Z,2.9nm,0.5s,baz=168,slow=8.2,SNR=8.1
ZALV LR LR 14 59 33.8
comp=Z,243nm,21.1s,baz=170,slow=40
comp=Z,2.9nm,0.5s
ZALV Zalesovo Beam 31.34 350 P 14 45 09.9 -0.3
JOW Kunigami 31.86 76 LR LR 15 00 35.7
comp=Z,246nm,21.0s,baz=196,slow=41
HIA Hailar 33.31 32 P 14 45 26.7 -0.9
HIA IAmb IAmb 14 45 29.8
comp=Z,9.3nm,0.8s
HILR Hailar Array B 33.51 32 P P 14 45 28.8 -0.6
comp=Z,10nm,0.6s,baz=212,slow=8.8,SNR=28
HILR LR LR 15 00 47.4
comp=Z,888nm,19.2s,baz=115,slow=40
comp=Z,10nm,0.6s
BVAR Borovoye Array 34.47 335 P P 14 45 38.0 +0.4
comp=Z,2.5nm,0.6s,baz=143,slow=9.4,SNR=12
comp=Z,2.5nm,0.6s
DAV Davao City (W) 34.95 112 LR LR 15 02 17.6
comp=Z,100nm,18.4s,baz=304,slow=40
BNX BinXian 35.59 42 ||P P 14 45 46.3 -1.1
BNX pmax pmax
comp=Z,8.0nm,1.1s
AB31 Akbulak array 36.88 323 IAmb IAmb 14 46 01.2
comp=Z,9.3nm,0.8s
ABKAR Akbulak array 36.88 323 P 14 45 58.0 -0.4
HEH HeiHe 37.87 36 eP P 14 46 05.5 -1.2
HEH pmax pmax
comp=Z,14nm,0.9s
HEH L L
comp=Z,810nm,13.5s
HEH L L
comp=Z,1μm,15.1s
HEH L L
comp=Z,2μm,14.5s
USRK Ussuriysk Ar. 37.94 47 LR LR 15 04 20.6
comp=Z,218nm,19.2s,baz=257,slow=40
AKTO Aktyubinsk 38.57 324 LR LR 15 04 07.4
comp=Z,384nm,21.0s,baz=128,slow=39
MJAR Matsushiro Arr 40.81 61 P P 14 46 28.9 -2.6
comp=Z,2.6nm,0.8s,baz=276,slow=9.0,SNR=4.0
comp=Z,2.6nm,0.8s
ARTI Arti 41.79 331 LR LR 15 06 32.0
comp=Z,368nm,19.1s,baz=136,slow=40
ARTI Arti 41.79 331 P 14 46 38.9 -0.4
ARTI IAmb IAmb 14 46 41.3
comp=Z,10nm,0.5s
JHJ Hachijo jima 2 41.88 66 LR LR 15 04 36.3
comp=Z,334nm,21.3s,baz=102,slow=37
RAYN Ar Rayn 43.68 280 P 14 46 55.1 -0.1
JCJ Chichijima 44.23 74 LR LR 15 07 25.9
comp=Z,111nm,18.1s,baz=270,slow=39
KBZ Khabaz 45.94 309 P P 14 47 14.5 +1.7
comp=Z,2.6nm,0.9s,baz=140,slow=8.3,SNR=4.2
comp=Z,2.6nm,0.9s
YAK Yakutsk 45.99 23 LR LR 15 08 19.3
comp=Z,441nm,19.7s,baz=223,slow=39
YAK Yakutsk 45.99 23 P P 14 47 13.8 +0.9
YAK IAmb IAmb 14 47 19.0
comp=Z,14nm,0.7s
YAK Yakutsk 45.99 23 P P 14 47 14.0 +1.2

NRIK Noril'sk 46.25 357 P P 14 47 15.6 +0.7
comp=Z,4.9nm,0.7s,baz=148,slow=4.4,SNR=6.6
NRIK LR LR 15 08 41.6
comp=Z,246nm,19.4s,baz=180,slow=39
comp=Z,4.9nm,0.7s
NRIK Noril'sk 46.25 357 P 14 47 15.7 +0.7
NRIK IAmb IAmb 14 47 18.5
comp=Z,6.5nm,0.8s
KIRV Kirov 47.04 330 LR LR 15 10 15.6
comp=Z,281nm,19.7s,baz=128,slow=40
GUMO Guam 49.67 92 LR LR 15 08 18.5
comp=Z,32nm,20.9s,baz=300,slow=36
ANDN Andirin 50.43 300 P P 14 47 49.7 +1.9
FITZ Fitzroy Crossi 51.84 140 LR LR 15 13 39.0
comp=Z,154nm,18.5s,baz=332,slow=40
KNRA Kununurra 51.96 135 P P 14 47 57.0 -2.2
KNRA IAmb IAmb 14 48 07.5
comp=Z,20nm,1.3s
EIL Elat 52.15 290 LR LR 15 12 54.2
comp=Z,123nm,18.7s,baz=88,slow=39
OBN Obninsk 52.33 323 LR LR 15 14 02.8
comp=Z,169nm,20.2s,baz=183,slow=40
GENI Genyem 52.39 113 P P 14 48 04.3 +1.8
TIXI Tiksi 52.49 13 LR LR 15 13 10.2
comp=Z,135nm,20.7s,baz=206,slow=39
TIXI Tiksi 52.49 13 P P 14 48 01.3 -1.2
TIXI IAmb IAmb 14 48 08.8
comp=Z,19nm,1.0s
BRTR Keskin Array B 52.53 303 P P 14 48 03.0 -0.6
comp=Z,1.1nm,1.0s,baz=116,slow=8.4,SNR=4.9
comp=Z,1.1nm,1.0s
BR105 Keskin Array S 52.55 303 P P 14 48 04.0 +0.4
comp=Z,2.6nm,0.9s
MA2 Magadan 53.91 32 LR LR 15 13 31.1
comp=Z,635nm,20.0s,baz=248,slow=39
SEY Seymchan 55.62 28 LR LR 15 14 48.5
comp=Z,436nm,20.6s,baz=298,slow=39
AK09 Malin Array Si 55.99 316 P P 14 48 29.3 +1.0
AK10 Malin Array Si 56.01 316 P P 14 48 28.9 +0.4
AKASG Malin Array Be 56.04 316 P P 14 48 28.7 0.0
comp=Z,1.1nm,0.6s,baz=78,slow=6.2,SNR=8.9
AKASG LR LR 15 16 20.2
comp=Z,128nm,21.3s,baz=75,slow=40
comp=Z,1.1nm,0.6s
AK02 Malin Array Si 56.05 316 P P 14 48 29.2 +0.5
KIEV Kiev 56.05 316 P P 14 48 29.0 +0.3
comp=Z,20nm,1.0s
KIEV pP **sP** 14 48 36.6 +3.0
comp=Z,20nm,1.0s
AK04 Malin Array Si 56.08 316 P P 14 48 29.7 +0.8
AK12 Malin Array Si 56.08 316 P P 14 48 29.6 +0.7
PETK Petropavlovsk- 56.48 41 LR LR 15 15 52.3
comp=Z,155nm,18.1s,baz=261,slow=40
MI29 MI29, Kamyanyy 56.90 316 P P 14 48 35.3 +0.5
comp=Z,54nm,0.7s
LUBAR Lubar, Ukraine 56.93 315 P P 14 48 35.3 +0.3
VRI Vrincioaia 57.56 311 P P 14 48 39.8 +0.2
comp=Z,11nm,1.2s
KMPD K-Podol'skiy 57.74 314 P P 14 48 41.4 +0.6
NACGM Naroch 57.85 321 eP P 14 48 43.8 +2.3
comp=Z,13nm,0.9s,baz=95
MLR Muntele Rosu 58.12 310 LR LR 15 18 38.5
comp=Z,210nm,19.4s,baz=54,slow=41
MLR Muntele Rosu 58.12 310 P P 14 48 43.0 -0.6
MLR IAmb IAmb 14 48 47.0
comp=Z,11nm,0.9s
MLR Muntele Rosu 58.12 310 P P 14 48 45.9 +2.2
comp=Z,13nm,0.9s
RNPP5 Staryi Chortor 58.17 317 P P 14 48 44.4 +0.6
RNPP9 Sopachiv 58.18 317 P P 14 48 44.7 +0.9
WB0 Warramunga Arr 58.61 133 IAmb IAmb 14 48 55.5
comp=Z,16nm,1.2s
RDO Rodhopi 58.65 305 P P 14 48 47.5 +0.2
RDO IAmb IAmb 14 48 49.8
comp=Z,9.4nm,1.2s
WRA Warramunga Arr 58.70 134 P P 14 48 45.7 -2.1
comp=Z,2.1nm,0.3s,baz=320,slow=7.4,SNR=116
comp=Z,2.1nm,0.3s
WRA Warramunga Arr 58.70 134 P P 14 48 45.1 -2.7
WRAB Tennant Creek 58.70 134 P P 14 48 45.2 -2.6
WR8 Warramunga Arr 58.82 134 P P 14 48 46.5 -2.2
WR8 IAmb IAmb 14 48 52.4
comp=Z,14nm,0.9s
FINES FINESS Array B 58.99 329 LR LR 15 16 34.1
comp=Z,180nm,20.1s,baz=104,slow=38
ARCES ARCESS Array B 60.69 338 P P 14 49 00.2 -0.6
comp=Z,1.2nm,0.6s,baz=105,slow=9.3,SNR=6.0
ARCES LR LR 15 18 13.7
comp=Z,149nm,19.4s,baz=99,slow=39
comp=Z,1.2nm,0.6s
ARCES ARCESS Array B 60.69 338 IAmb IAmb 14 50 24.1
comp=Z,19nm,1.7s
LIT Litokhoron 61.06 304 P P 14 49 03.6 -0.3
LIT IAmb IAmb 14 49 07.9
comp=Z,12nm,1.2s
AS31 Alice Springs 61.08 137 P P 14 49 02.2 -2.0
AS31 IAmb IAmb 14 49 10.3
comp=Z,3.2nm,0.6s
ASAR Alice Springs 61.08 137 P P 14 49 02.5 -1.7
comp=Z,6.2nm,0.4s,baz=318,slow=6.9,SNR=246
ASAR LR LR 15 19 12.1
comp=Z,123nm,19.6s,baz=302,slow=40
comp=Z,6.2nm,0.4s
ASAR Alice Springs 61.08 137 P P 14 49 02.3 -1.9
NIE Niedzica 61.78 315 P P 14 49 10.8 +2.2
VRAC Vranov 64.20 315 LR LR 15 22 21.4
comp=Z,88nm,18.7s,baz=76,slow=41
SPITS Spitsbergen Ar 64.74 347 LR LR 15 23 42.7
comp=Z,212nm,18.3s,baz=102,slow=42
HFS Hagfors 64.99 327 P P 14 49 28.2 -1.4
comp=Z,4.7nm,0.6s,baz=100,slow=4.5,SNR=9.1
HFS LR LR 15 18 28.1
comp=Z,89nm,19.7s,baz=96,slow=37
comp=Z,4.7nm,0.6s
NB2 NORSAR Subarra 66.14 328 P P 14 49 35.9 -1.3
comp=Z,4.3nm,0.8s,baz=85,slow=6.5
NOA NORSAR Array B 66.14 328 P P 14 49 36.1 -1.0
comp=Z,3.6nm,0.9s,baz=85,slow=6.6,SNR=6.3
NOA LR LR 15 21 20.3
comp=Z,151nm,19.8s,baz=90,slow=38
comp=Z,3.6nm,0.9s
GEC2 GERESS Array S 66.15 315 IAmb IAmb 14 49 44.8
comp=Z,3.7nm,0.8s
GERES GERESS Array B 66.15 315 P P 14 49 36.5 -0.9
comp=Z,2.4nm,0.7s,baz=84,slow=5.5,SNR=16
comp=Z,2.4nm,0.7s
GERES GERESS Array B 66.15 315 P P 14 49 36.7 -0.8
SHEM Shemya Is, Ala 66.39 41 LR LR 15 20 01.4
comp=Z,67nm,21.2s,baz=278,slow=37
CEL Celeste 66.42 303 P P 14 49 38.3 -1.1
FDMO Fiordimonte 67.56 309 IAmb IAmb 14 49 53.6
comp=Z,6.1nm,0.8s
VAE Valguarnera 67.73 302 LR LR 15 23 28.6
comp=Z,55nm,18.7s,baz=343,slow=40
DAVOX Davos/Dischmat 69.05 313 LR LR 15 24 32.7
comp=Z,121nm,18.5s,baz=85,slow=40
STKA Stephens Creek 71.68 138 P P 14 50 12.1 +0.2
comp=Z,1.2nm,0.5s,baz=326,slow=9.8,SNR=3.3
STKA LR LR 15 25 10.6
comp=Z,135nm,19.6s,baz=288,slow=39
comp=Z,1.2nm,0.5s
KEST Kesra 72.11 302 P P 14 50 16.4 +1.7
comp=Z,3.4nm,0.9s,baz=42,slow=6.4,SNR=3.7
KEST LR LR 15 26 34.2
comp=Z,70nm,19.5s,baz=18,slow=40
comp=Z,3.4nm,0.9s
KEST Kesra 72.11 302 P 14 50 14.5 -0.2
KEST IAmb IAmb 14 50 39.1
comp=Z,18nm,1.4s
EKA Eskdalemuir Ar 74.75 324 P P 14 50 31.4 +1.6
comp=Z,1.9nm,0.6s,baz=78,slow=6.3,SNR=4.7
EKA LR LR 15 26 10.5
comp=Z,83nm,21.8s,baz=154,slow=38
comp=Z,1.9nm,0.6s
F19K Shaleruckik Mo 76.00 23 IAmb IAmb 14 50 38.2
comp=Z,5.3nm,0.7s
F20K Avaraart Lake 76.62 22 IAmb IAmb 14 51 03.5
comp=Z,29nm,2.0s
H19K Roundabout Mou 77.08 24 IAmb IAmb 14 50 47.1
comp=Z,13nm,1.1s
F21K Katna River 77.30 22 IAmb IAmb 14 50 46.5
comp=Z,11nm,1.0s
J19K Poorman 78.12 25 P 14 50 48.9 +0.1
E23K Chandalar 78.12 20 IAmb IAmb 14 50 51.0
comp=Z,4.4nm,0.8s
H21K Melozitna Rive 78.33 23 IAmb IAmb 14 50 52.1
comp=Z,11nm,0.7s
D25K Kavik River 78.38 18 IAmb IAmb 14 50 52.5
comp=Z,5.3nm,0.7s
H22K Ishtalitna Cre 78.71 22 P 14 50 51.9 -0.1
H22K IAmb IAmb 14 50 54.3
comp=Z,5.2nm,0.7s
C27K Jago River 78.94 17 IAmb IAmb 14 51 07.2
comp=Z,9.7nm,1.1s
BORG Borgarnes 79.05 337 LR LR 15 27 23.2
comp=Z,68nm,20.2s,baz=55,slow=37
MLY Manley 79.40 23 IAmb IAmb 14 50 57.9
comp=Z,7.1nm,0.7s
F25K Christian Rive 79.63 19 IAmb IAmb 14 51 00.0
comp=Z,6.8nm,0.8s
CAST Castle Rocks 79.77 25 IAmb IAmb 14 50 59.9
comp=Z,6.8nm,0.7s
TRF Thorofare Moun 80.43 24 IAmb IAmb 14 52 31.5
comp=Z,16nm,1.7s
G26K Porcupine Rive 80.59 20 IAmb IAmb 14 51 05.0
comp=Z,8.2nm,0.8s
SKT Skwentna 80.75 26 IAmb IAmb 14 51 04.2
comp=Z,6.3nm,0.8s
L22K Petersville 80.76 25 IAmb IAmb 14 51 04.5
comp=Z,6.3nm,0.7s
MCK McKinley 80.78 24 IAmb IAmb 14 51 04.8
comp=Z,7.4nm,0.7s
ESDC Sonseca Array 80.80 309 P P 14 51 05.1 +1.2
comp=Z,1.1nm,1.0s,baz=40,slow=4.1,SNR=6.0
ESDC LR LR 15 33 16.2
comp=Z,48nm,19.4s,baz=322,slow=40
comp=Z,1.1nm,1.0s
ILAR Eielson Array 80.90 22 P P 14 51 03.4 -0.5
comp=Z,2.5nm,0.7s,baz=308,slow=5.6,SNR=8.3
ILAR LR LR 15 31 02.7
comp=Z,232nm,18.5s,baz=273,slow=39
comp=Z,2.5nm,0.7s
J25K Salcha River, 81.52 22 IAmb IAmb 14 51 16.2
comp=Z,6.5nm,1.0s
RC01 Rabbit Creek A 81.96 26 IAmb IAmb 14 51 20.7
comp=Z,7.5nm,0.8s
SML Sawmill 82.11 25 IAmb IAmb 14 51 12.0
comp=Z,1.1nm,0.8s
RES Resolute Bay 82.18 2 LR LR 15 29 48.6
comp=Z,64nm,20.5s,baz=30,slow=37
PAX Paxson 82.49 23 IAmb IAmb 14 51 16.1
comp=Z,5.5nm,1.0s
INK Inuvik 82.54 16 LR LR 15 32 57.2
comp=Z,88nm,19.0s,baz=281,slow=39
INK Inuvik 82.54 16 IAmb IAmb 14 51 20.0
comp=Z,5.3nm,0.8s
KDAK Kodiak Island 82.56 30 LR LR 15 31 24.2
comp=Z,149nm,19.3s,baz=296,slow=38
G30M tAoh Zraii Nji 82.79 18 IAmb IAmb 14 51 15.2
comp=Z,7.9nm,0.8s
GLB Gilahina Butte 84.05 24 IAmb IAmb 14 51 22.5
comp=Z,4.5nm,0.9s
SFJD Kangerlussuaq 86.07 347 LR LR 15 34 09.8
comp=Z,142nm,19.9s,baz=26,slow=39
TORD Torodi Ar. Bea 86.33 283 P P 14 51 34.0 +1.3
comp=Z,0.9nm,0.7s,baz=62,slow=3.1,SNR=4.0
comp=Z,0.9nm,0.7s
DLBC Dease Lake 91.07 21 LR LR 15 37 17.3
comp=Z,111nm,18.0s,baz=277,slow=39
YKA Yellowknife Ar 91.73 13 P P 14 51 57.4 +0.1
comp=Z,1.8nm,0.9s,baz=337,slow=4.9,SNR=5.9
YKA LR LR 15 39 51.4
comp=Z,35nm,18.3s,baz=316,slow=40
comp=Z,1.8nm,0.9s
YKA Yellowknife Ar 91.73 13 P P 14 51 56.6 -0.7
FRB Frobisher Bay 92.15 352 LR LR 15 37 15.6
comp=Z,107nm,20.2s,baz=37,slow=38
MAW Mawson 93.33 191 LR LR 15 27 59.2
comp=Z,27nm,20.7s,baz=326,slow=32
BBB Bella Bella 96.66 24 LR LR 15 38 34.0
comp=Z,110nm,21.8s,baz=305,slow=37
RPZ Rata Peaks 97.41 134 LR LR 15 39 31.4
comp=Z,25nm,19.5s,baz=228,slow=38
URZ Urewera 99.45 127 LR LR 15 40 53.1
comp=Z,39nm,19.9s,baz=251,slow=38
AFI Afiamalu 99.83 101 LR LR 15 36 10.1
comp=Z,17nm,21.4s,baz=269,slow=34
TXAR Lajitas Array 125.26 18 PKP **PKiKP** 14 57 52.0 +0.2
comp=Z,0.4nm,0.8s,baz=206,slow=3.7,SNR=3.7

IDC 28 14:40:04.8±17.0, 8°15S×153°79E, h0km, mb3.7/3, mbtmp3.7/3, MS3.4/6, Error ellipse: s-maj=280.5km s-min=99.1km az=26.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**13.94**	**211**	LR	LR	14 47 39.6	
	comp=Z,88nm,18.7s,baz=46,slow=33						
DZM	**Mont Dzumac**	**18.44**	**140**	LR	LR	14 50 52.1	
	comp=Z,175nm,18.0s,baz=258,slow=35						
WRA	**Warramunga Arr**	**22.19**	**236**	P	P	14 45 01.9	-0.9
	1.5nm,0.8s,baz=63,slow=10,SNR=6.9						
	1.5nm,0.8s						
GUMO	**Guam**	**23.34**	**338**	LR	LR	14 53 28.5	
	comp=Z,28nm,19.4s,baz=120,slow=34						
ASAR	**Alice Springs**	**24.52**	**229**	P	P	14 45 26.6	+0.3
	1.0nm,0.6s,baz=65,slow=8.8,SNR=19						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**26.20**	**204**	P	P	14 45 41.5	+0.3
	1.7nm,0.7s,baz=30,slow=8.1,SNR=3.2						
STKA				LR	LR	14 54 56.8	
	comp=Z,95nm,19.7s,baz=12,slow=34						
	1.7nm,0.7s						
URZ	**Urewera**	**36.63**	**149**	LR	LR	15 00 46.1	
	comp=Z,82nm,18.5s,baz=252,slow=34						
SONM	**Songino Array**	**69.67**	**328**	LR	LR	15 21 52.2	
	comp=Z,53nm,19.5s,baz=199,slow=36						

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*IDC **28** 14:50:22.0±8.1, 25°99S×28°88E, h0km, mbtmp2.6/1, ML2.5/1, Error ellipse: s-maj=85.1km s-min=54.4km az=140.0*
*PRE **28** 14:50:21.7±1.0, 26°04S×29°20E, h0km, ML2.6, Suspected explosion*
*BUL **28** 14:50:24.8±1.4, 26°09S×29°36E, h10km, MD3.5, Presumed earthquake*
*BGSI **28** 14:50:31.0±2.1, 25°56S×29°10E, h0km±56km, ML2.8, Presumed earthquake*

ISC 28 14:50:21.9±1.0, 26°04S±0°04×29°09E±0°05, h0km, n26, σ2°34/43, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PILG	**Pilgrimsrest,**	**1.83**	**53**	eP	Pn	14 50 53.9	-1.0
PILG				eS	Sn	14 51 18.1	-0.9
PILG				IAML		14 51 19.3	
	comp=Z,194nm,0.4s						
MOPA	**Mopani**	**3.27**	**40**	*i* P	Pn	14 51 14.0	-0.5
MOPA				*i* S	Sn	14 51 50.8	-3.4
MOPA	**Mopani**	**3.27**	**40**	eP	Pn	14 51 13.8	-0.7
MOPA				eS	Sn	14 51 52.6	-1.6
MOPA				IAML		14 52 02.8	
	comp=Z,112nm,0.3s						
LBTB	**Lobatse**	**3.31**	**287**	*i* P	Pb	14 51 20.5	-1.1
LBTB	**Lobatse**	**3.31**	**287**	eP	Pn	14 51 17.6	+2.4
LBTB				eS	Sn	14 51 57.8	+2.5
LBTB				IAML		14 52 09.6	
	comp=Z,42nm,0.3s						
PMBG	**Pietermaritzbu**	**3.68**	**160**	eP	Pn	14 51 21.0	+0.9
PMBG				eS	Sn	14 52 02.8	-1.5
PMBG				IAML		14 52 16.5	
	comp=Z,40nm,0.3s						
MUSN	**Musina, Limpop**	**3.80**	**11**	*i* P	Pn	14 51 23.1	+1.4
MUSN				*i* S	Sn	14 52 06.5	-0.7
MAKGR	**Makgori**	**3.87**	**272**	*i* P	Pb	14 51 31.1	0.0
MAKGR				IAML		14 52 26.7	
	comp=N,173nm,0.5s						
LPHEP	**Lephephe**	**3.96**	**312**	*i* P	Pn	14 51 26.4	+2.4
LPHEP				*i* S	Sn	14 52 09.7	-1.7
LPHEP				IAML		14 52 33.5	
	comp=N,15nm,0.4s						
BOSA	**Boshof**	**4.26**	**232**	Pn	Pn	14 51 26.4	-1.8
	comp=N,0.2nm,0.3s,baz=60,slow=11,SNR=2.1						
BOSA				Pg	Pb	14 51 38.9	+1.0
	comp=N,0.9nm,0.3s,baz=54,slow=18,SNR=8.3						
BOSA				Sn	Sn	14 52 14.7	-4.1
	comp=N,1.6nm,0.3s,baz=358,slow=14,SNR=5.5						
BOSA				Lg	Lg	14 52 34.1	
	comp=N,11nm,0.3s,baz=145,slow=21,SNR=20						
	comp=N,1.3nm,0.7s						
BOSA	**Boshof**	**4.26**	**232**	*i* P	Pn	14 51 31.8	+3.6
BOSA				*i* S	Sn	14 52 20.7	+1.9
BOSA	**Boshof**	**4.26**	**232**	eP	Pn	14 51 29.1	+0.9

BOSA				*e*S	**Sn**	14 52 20.6	**+1.8**	
BOSA				IAML		14 52 36.7		
	comp=Z,30nm,0.4s							
I47ZA	**BOSHOF INFRASO**	**4.28**	**232**	I	I	15 16 20.0		
	baz=50,slow=326,SNR=1.1							
KSTD	**Kokstad**	**4.56**	**178**	*e*P	**Pn**	14 51 34.0	**+1.6**	
KSTD				*e*S	**Sn**	14 52 25.6	**-0.7**	
KSTD				IAML		14 52 47.2		
	comp=Z,13nm,0.4s							
KDWAN	**Kaudwane**	**4.82**	**302**	*i* P	**Pn**	14 51 39.9	**+4.0**	
KDWAN				IAML		14 53 04.1		
	comp=E,26nm,0.6s							
SKOMA	**Sekoma**	**4.91**	**287**	*i* P	Pn	14 51 43.4	+6.4	
SKOMA				*i* S	**Sn**	14 52 34.4	**-0.2**	
SKOMA				IAML		14 53 08.8		
	comp=N,28nm,0.4s							
BROLN	**Tlhalogang**	**5.17**	**342**	*i* P	**Pn**	14 51 40.6	**-0.1**	
BROLN				*i* S	**Sn**	14 52 34.4	**-6.8**	
BROLN				IAML		14 53 08.8		
	comp=E,20nm,0.6s							
MATP	**Matopo**	**5.61**	**354**	*i* P	**Pn**	14 51 46.6	**-0.2**	
MATP				*i* S	**Sn**	14 52 49.9	**-2.2**	
BLWY	**Bulawayo**	**5.89**	**356**	*i* P	**Pn**	14 51 53.2	**+2.7**	
BLWY				*i* S	**Sn**	14 52 57.0	**-1.9**	
LKGWB	**Lokgwabe**	**7.39**	**283**	IAML		14 54 08.2		
	comp=N,30nm,0.8s							
GRAF	**Camdeboo Natio**	**7.40**	**212**	*e*P	**Pn**	14 52 12.8	**+1.5**	
GRAF				*e*S	**Sn**	14 53 34.0	**-2.0**	
GRAF				IAML		14 53 52.6		
	comp=Z,2.5nm,0.3s							
BRAK	**Brakfontein**	**7.88**	**222**	*e*P	**Pn**	14 52 19.3	**+1.4**	
BRAK				*e*S	**Sn**	14 53 45.2	**-2.7**	
BRAK				IAML		14 53 46.4		
	comp=Z,2.7nm,0.3s							
GRAN	**Grantham**	**8.69**	**222**	*e*P	**Pn**	14 52 30.9	**+2.0**	
GRAN				*e*S	**Sn**	14 54 04.6	**-3.0**	
GRAN				IAML		14 54 21.5		
	comp=Z,1.8nm,0.3s							
FRAZ	**Fraserburg**	**8.92**	**227**	*e*P	**Pn**	14 52 34.0	**+1.8**	
FRAZ				*e*S	**Sn**	14 54 10.7	**-2.8**	
FRAZ				IAML		14 54 13.2		
	comp=Z,2.1nm,0.4s							
SUR	**Sutherland**	**9.60**	**227**	*e*P	**Pn**	14 52 43.2	**+1.7**	
SUR				*e*S	**Sn**	14 54 27.2	**-3.1**	
SUR				IAML		14 54 45.5		
	comp=Z,2.5nm,0.8s							
I35NA	**TSUMEB INFRASO**	**12.62**	**300**	I	I	16 10 00.0		
	baz=124,slow=318,SNR=4.9							

IDC 28 14:59:57.2±3.7, 17°.00N×46°.53W, h0km, mb3.6/4, mbtmp3.6/4, MS3.3/18, Error ellipse: s-maj=106.9km s-min=38.4km az=94.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**13.26**	**208**	LR	LR	15 07 14.8	
	comp=Z,63nm,21.4s,baz=346,slow=33						
SJG	**San Juan**	**18.75**	**276**	LR	LR	15 10 15.4	
	comp=Z,88nm,21.6s,baz=96,slow=33						
SDV	**Santo Domingo**	**24.82**	**254**	LR	LR	15 14 22.6	
	comp=Z,51nm,20.7s,baz=76,slow=35						
ROSC	**El Rosal**	**29.79**	**249**	LR	LR	15 20 01.0	
	comp=Z,101nm,18.4s,baz=351,slow=40						
BDFB	**Brasília**	**32.47**	**183**	LR	LR	15 19 09.1	
	comp=Z,38nm,21.6s,baz=97,slow=36						
JTS	**Las Juntas de**	**37.88**	**265**	LR	LR	15 24 00.8	
	comp=Z,20nm,19.1s,baz=83,slow=38						
TKL	**Tuckaleechee C**	**37.91**	**307**	LR	LR	15 20 00.8	
	comp=Z,38nm,21.5s,baz=203,slow=32						
SADO	**Sadowa**	**38.92**	**322**	LR	LR	15 19 46.2	
	comp=Z,40nm,21.5s,baz=187,slow=31						
LPAZ	**La Paz**	**39.34**	**214**	P	P	15 07 29.1	**-0.1**
	1.3nm,0.8s,baz=31,slow=7.4,SNR=3.7						
LPAZ				LR	LR	15 23 04.5	
	comp=Z,34nm,19.6s,baz=55,slow=35						
	1.3nm,0.8s						
ATAH	**Atahualpa**	**39.60**	**235**	LR	LR	15 23 22.8	
	comp=Z,60nm,20.5s,baz=65,slow=36						
H10N3	**ASCENSION HYDR**	**40.15**	**125**	T	T	15 50 10.5	
	baz=308,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**40.15**	**125**	T	T	15 50 10.8	
	baz=308,slow=75,SNR=23						
H10N1	**ASCENSION HYDR**	**40.17**	**125**	T	T	15 50 12.0	
	baz=308,slow=75,SNR=26						
H10S3	**ASCENSION HYDR**	**40.72**	**127**	T	T	15 50 47.8	
	baz=306,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**40.73**	**127**	T	T	15 50 50.2	
	baz=274,slow=74,SNR=13						
DBIC	**Dimbokro**	**41.97**	**99**	LR	LR	15 22 28.7	
	comp=Z,56nm,19.0s,baz=75,slow=32						
CMIG	**Matias Romero**	**46.13**	**278**	LR	LR	15 27 06.5	
	comp=Z,20nm,19.0s,baz=139,slow=35						
TXAR	**Lajitas Array**	**53.49**	**294**	P	P	15 09 19.5	**-0.3**
	0.8nm,0.9s,baz=118,slow=7.2,SNR=4.3						
TXAR				LR	LR	15 33 34.8	
	comp=Z,23nm,18.5s,baz=339,slow=38						
	0.8nm,0.9s						
ANMO	**Albuquerque**	**55.98**	**301**	LR	LR	15 31 55.5	
	comp=Z,41nm,19.8s,baz=358,slow=34						
PDAR	**Pinedale Array**	**58.92**	**310**	P	P	15 09 59.0	**+0.3**
	0.5nm,0.9s,baz=104,slow=5.0,SNR=2.2						
	0.5nm,0.9s						
MLR	**Muntele Rosu**	**65.84**	**47**	LR	LR	15 36 53.4	
	comp=Z,35nm,19.8s,baz=191,slow=34						
EIL	**Elat**	**74.54**	**63**	LR	LR	15 44 57.7	
	comp=Z,28nm,19.2s,baz=274,slow=36						
KIRV	**Kirov**	**78.72**	**32**	LR	LR	15 44 37.4	
	comp=Z,39nm,18.0s,baz=72,slow=34						
ILAR	**Eielson Array**	**79.12**	**335**	P	P	15 12 03.4	**-0.1**
	0.6nm,1.0s,baz=79,slow=6.3,SNR=6.3						
	0.6nm,1.0s						
GNI	**Garni**	**80.19**	**51**	LR	LR	15 46 23.4	
	comp=Z,22nm,18.8s,baz=360,slow=35						

*CATAC **28** 15:03:31.5±0.1, 13°.N±1°.×87°.4W±0°.9, h3km, M3.9/31, MLv3.9/31, Error ellipse: s-maj=3.2km s-min=1.2km az=29.9, confirmed*
*SNET **28** 15:03:31.8±2.6, 13°.04N×87°.39W, h10km, ML3.8, Presumed earthquake*
ISC 28 15:03:30.5±0.9, 13°.01N±0°.03×87°.42W±0°.02, h11km±7km, n46, σ0s68/75, 8C-7D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.14**	**258**	⇑P	**Pg**	**15 03 34.1**	**+0.3**
CSGN				S	**Sg**	**15 03 35.7**	**-0.6**
CRIN	**San Cristobal**	**0.47**	**130**	⇓P	**Pb**	**15 03 41.4**	**+0.5**
CRIN				S	**Sb**	**15 03 49.6**	**+1.6**
CNCH	**Conchagua**	**0.48**	**304**	P	**Pb**	**15 03 41.1**	**0.0**
CNCH	**Conchagua**	**0.48**	**304**	*e*P	**Pb**	**15 03 41.0**	**0.0**
CNCH				*e*S	**Sb**	**15 03 48.9**	**+0.7**
LCND	**La Caada**	**0.55**	**304**	⇓P	**Pb**	**15 03 42.2**	**+0.1**
LCND				S	**Sb**	**15 03 50.0**	**0.0**
LCND	**La Caada**	**0.55**	**304**	*e*P	**Pb**	**15 03 42.2**	**+0.1**
PKGN	**Cerro Pekin**	**0.55**	**127**	⇑P	**Pb**	**15 03 42.5**	**+0.4**
PKGN				S	**Sb**	**15 03 50.5**	**+0.5**
QUEN	**Al S del Volca**	**0.69**	**126**	S	**Sg**	**15 03 52.9**	**-0.2**
HERN	**Volcan Telica**	**0.70**	**124**	⇑P	**Pb**	**15 03 44.7**	**0.0**
TELN	**Telica**	**0.70**	**125**	S	**Sg**	**15 03 53.6**	**+0.2**
HOYN	**Al Sur del Vol**	**0.71**	**125**	⇑P	**Pb**	**15 03 44.9**	**0.0**
PLRN	**Geotermica Pol**	**0.76**	**123**	P	**Pb**	**15 03 45.8**	**-0.1**
ILCN	**San Idelfonso**	**0.82**	**121**	⇓P	**Pg**	**15 03 46.5**	**+0.1**
ILCN				S	**Sb**	**15 03 57.8**	**-0.1**
CNGN	**Cerro Negro**	**0.87**	**125**	⇓P	**Pb**	**15 03 47.5**	**-0.2**
CNGN				S	**Sb**	**15 03 59.6**	**+0.3**
CNGA	**Al SSO del Vol**	**0.87**	**126**	⇑P	**Pb**	**15 03 47.7**	**0.0**
CNGA				S	**Sb**	**15 04 00.2**	**+0.9**
AESN	**El Sauce Leon**	**0.87**	**98**	P	**Pn**	**15 03 48.3**	**-0.3**
AESN				S	**Sn**	**15 03 59.5**	**-1.8**
BLLM	**Bellamira**	**0.91**	**299**	*e*P	**Pn**	**15 03 48.7**	**-0.6**
MACN	**El Madrono**	**0.91**	**126**	⇑P	**Pg**	**15 03 48.1**	**+0.1**
LCY	**Lacayo**	**0.94**	**296**	*e*P	**Pb**	**15 03 49.2**	**+0.2**
RANC	**El Ranchito**	**0.94**	**297**	⇑P	**Pb**	**15 03 49.1**	**+0.1**
RANC				S	**Sb**	**15 04 02.3**	**+0.7**
LEVN	**Ruinas Leon Vi**	**0.99**	**127**	P	**Pg**	**15 03 49.9**	**+0.3**
LEVN				S	**Sb**	**15 04 03.4**	**+0.7**
PACA	**Pacayal**	**0.99**	**298**	⇑P	**Pb**	**15 03 49.7**	**-0.1**
PACA				S	**Sn**	**15 04 03.9**	**-0.6**
PACA	**Pacayal**	**0.99**	**298**	*e*P	**Pb**	**15 03 49.8**	**0.0**
LIMN	**Finca el Limon**	**1.03**	**87**	⇓P	**Pn**	**15 03 50.1**	**-0.9**
LIMN				S	**Sn**	**15 04 06.4**	**+1.0**
MOMN	**Momotombo**	**1.05**	**124**	P	**Pb**	**15 03 50.6**	**-0.1**
MOMN				S	**Sn**	**15 04 05.3**	**-0.4**
MOM2	**El Cardon**	**1.08**	**122**	⇓P	**Pg**	**15 03 51.2**	**-0.1**
MOM2				S	**Sn**	**15 04 06.0**	**-0.4**
OCON	**Estacion meteo**	**1.11**	**56**	P	**Pn**	**15 03 52.3**	**+0.3**
OCON				S	**Sn**	**15 04 07.8**	**+0.4**
TECA	**Tecapa**	**1.16**	**295**	*e*P	**Pn**	**15 03 52.7**	**-0.2**
MARCA	**Marcala la Paz**	**1.29**	**333**	⇓P	**Pg**	**15 03 55.1**	**-0.3**
MARCA				S	**Sg**	**15 04 13.5**	**+1.3**
APYN	**Apoyeque**	**1.30**	**126**	P	**Pb**	**15 03 54.9**	**0.0**
APYN				S	**Sg**	**15 04 12.4**	**0.0**
RCON	**San Juan de Ri**	**1.32**	**69**	P	**Pg**	**15 03 56.2**	**+0.2**
RCON				S	**Sg**	**15 04 14.8**	**+1.6**
RCVN	**Varillal2**	**1.33**	**64**	P	**Pg**	**15 03 55.3**	**-0.8**
RCVN				S	**Sg**	**15 04 14.0**	**+0.7**
MATN	**Matagalpa**	**1.46**	**93**	P	**Pg**	**15 03 57.7**	**-0.9**
MATN				S	**Sg**	**15 04 17.2**	**-0.5**
WILN	**Americas 2**	**1.47**	**125**	P	**Pn**	**15 03 57.3**	**+0.4**
WILN				S	**Sg**	**15 04 18.3**	**+0.4**
COEG	**Centro de Oper**	**1.54**	**293**	P	**Pn**	**15 03 58.4**	**+0.3**
COEG				S	**Sg**	**15 04 20.2**	**-0.1**
MAS3	**Al N del Volca**	**1.56**	**129**	P	**Pb**	**15 03 59.1**	**-0.3**
MAS3				S	**Sg**	**15 04 20.7**	**-0.1**
MASN	**Masaya**	**1.60**	**129**	P	**Pb**	**15 03 59.6**	**-0.5**
MASN				S	**Sb**	**15 04 21.5**	**+1.1**
SABN	**Sabanita**	**1.61**	**130**	S	**Sb**	**15 04 21.5**	**+0.7**
P5NO	**Presa 5 de nov**	**1.62**	**307**	S	**Sg**	**15 04 22.4**	**-0.5**
PAVA	**Las Pavas**	**1.63**	**296**	P	**Pg**	**15 04 02.5**	**+0.6**
NANN	**Nandasmo**	**1.66**	**130**	P	**Pg**	**15 04 02.2**	**-0.1**
NANN				S	**Sg**	**15 04 24.0**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.80**	**108**	P	**Pb**	**15 04 02.4**	**-1.1**
BOAB				S	**Sg**	**15 04 27.1**	**-1.4**
LOMA	**Loma Larga**	**1.82**	**291**	P	**Pb**	**15 04 04.4**	**+0.5**
JAYA	**Jayaque - finc**	**2.08**	**288**	P	**Pb**	**15 04 07.6**	**-0.7**
JAYA				S	**Sb**	**15 04 35.6**	**+1.5**
JAYA	**Jayaque - finc**	**2.08**	**288**	*e*P	**Pb**	**15 04 08.1**	**-0.2**
JAYA				*e*S	**Sg**	**15 04 36.1**	**-1.2**
MTO3	**Montecristo**	**2.34**	**307**	S	**Sg**	**15 04 44.2**	**-1.6**

*IDC **28** 15:04:52.5±0.9, 8°.55S×158°.86E, h159km±11km, mb3.4/10, mbtmp3.9/12, Error ellipse: s-maj=20.6km s-min=16.1km az=105.0*
*NEIC **28** 15:04:53.5±0.8, 8°.62S±0°.08×158°.9E±0°.1, h159km±6km, mb4.2/27, Error ellipse: s-maj=15.5km s-min=11.4km az=100.0*
ISC 28 15:04:52.2±0.5, 8°.57S±0°.08×158°.81E±0°.09, h150km, n45, σ0s91/46, mb4.0/23, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.41**	**127**	P	**Pn**	**15 05 21.8**	**+0.9**
	16nm,0.3s,baz=280,slow=3.0,SNR=67						
HNR				S	**Sn**	**15 05 43.9**	**+1.1**
	29nm,0.5s,baz=118,slow=23,SNR=19						
HNR	**Honiara**	**1.41**	**127**		**Pn**	**15 05 21.6**	**+0.8**
HNR					**Sn**	**15 05 43.3**	**+0.5**
OUENC	**Ouen Island, N**	**15.79**	**152**	P	**Pn**	**15 08 26.4**	**0.0**
CTA	**Charters Tower**	**16.69**	**225**	P	**P**	**15 08 38.3**	**+1.0**
	2.4nm,0.6s,baz=40,slow=9.8,SNR=7.1						
JAY	**Jayapura**	**18.99**	**287**	P	**P**	**15 09 03.1**	**+0.6**
	9.1nm,0.8s,baz=20,slow=20,SNR=3.7						
ARMA	**Armidale**	**22.75**	**196**	P	**P**	**15 09 42.1**	**+0.3**
ARMA				IAmb	IAmb	15 10 18.2	
	comp=Z,10nm,1.1s						
LHI	**Lord Howe Isla**	**22.84**	**179**	P	**P**	**15 09 43.0**	**+0.5**
INKA	**Innaminka**	**25.59**	**220**	P	**P**	**15 10 07.9**	**+0.3**
WR8	**Warramunga Arr**	**26.10**	**242**	P	**P**	**15 10 12.1**	**-0.2**
WR8				IAmb	IAmb	15 10 41.0	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**26.12**	**242**	P	**P**	**15 10 12.2**	**-0.3**
WB0				IAmb	IAmb	15 10 21.8	
	comp=Z,7.5nm,1.2s						
WRAB	**Tennant Creek**	**26.22**	**242**	P	**P**	**15 10 13.5**	**+0.1**
WRAB				IAmb	IAmb	15 10 55.3	
	comp=Z,5.9nm,1.1s						
WRA	**Warramunga Arr**	**26.23**	**242**	P	**P**	**15 10 13.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=66,slow=9.1,SNR=15						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**26.23**	**242**	P	**P**	**15 10 12.4**	**-1.1**
AS31	**Alice Springs**	**28.17**	**235**	P	**P**	**15 10 30.2**	**-0.6**
ASAR	**Alice Springs**	**28.17**	**235**	P	**P**	**15 10 30.3**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=63,slow=10,SNR=39						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**28.17**	**235**	P	**P**	**15 10 30.2**	**-0.6**
STKA	**Stephens Creek**	**28.18**	**212**	P	**P**	**15 10 30.4**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=44,slow=15,SNR=6.9						
	comp=Z,1.6nm,0.4s						
KNRA	**Kununurra**	**30.19**	**254**	P	**P**	**15 10 48.7**	**+0.1**
KNRA				IAmb	IAmb	15 11 21.7	
	comp=Z,10nm,1.3s						
BBOO	**Buckleboo**	**32.02**	**218**	P	**P**	**15 11 04.4**	**-0.2**
NIUE	**Niue**	**32.05**	**112**	P	**P**	**15 11 03.6**	**-1.3**
FORT	**Forrest**	**36.21**	**228**	P	**P**	**15 11 40.6**	**-0.1**
FORT				IAmb	IAmb	15 11 43.4	
	comp=Z,9.5nm,1.2s						
JOW	**Kunigami**	**46.00**	**321**	P	**P**	**15 13 01.9**	**+1.1**
TJN	**Taejon**	**53.60**	**328**	P	**P**	**15 13 58.4**	**+0.5**
KSRS	**Korea Array**	**54.14**	**330**	P	**P**	**15 14 02.4**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=146,slow=7.2,SNR=4.5						
	comp=Z,0.7nm,0.8s						
KIWB	**Kanaga Island**	**63.64**	**16**	P	**P**	**15 15 07.6**	**+0.5**
VNDA	**Vanda**	**68.94**	**179**	P	**P**	**15 15 41.0**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=90,slow=0.4,SNR=13						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**68.94**	**179**	P	**P**	**15 15 40.7**	**+0.1**
SONM	**Songino Array**	**72.72**	**326**	P	**P**	**15 16 04.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=147,slow=6.8,SNR=6.8						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**72.72**	**326**	P	**P**	**15 16 04.3**	**+0.3**
M16K	**Timber Creek**	**76.86**	**20**	P	**P**	**15 16 27.6**	**+0.2**
M16K				IAmb	IAmb	15 16 42.0	
	comp=Z,9.8nm,1.3s						
L18K	**Granite Mounta**	**78.48**	**20**	P	**P**	**15 16 37.0**	**+0.6**
L18K				IAmb	IAmb	15 17 01.6	
	comp=Z,6.9nm,1.4s						
QSPA	**South Pole Qui**	**81.42**	**180**	P	**P**	**15 16 51.0**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=305,slow=8.3,SNR=1.2						
	comp=Z,0.6nm,0.9s						
QSPA	**South Pole Qui**	**81.42**	**180**	P	**P**	**15 16 50.9**	**-1.4**
C18K	**Utukok River**	**81.97**	**14**	P	**P**	**15 16 54.7**	**-0.2**
C18K				IAmb	IAmb	15 17 27.3	
	comp=Z,24nm,1.5s						
C19K	**Lookout Ridge**	**82.70**	**14**	P	**P**	**15 16 59.0**	**+0.2**
ILAR	**Eielson Array**	**83.48**	**21**	P	**P**	**15 17 01.0**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=252,slow=5.0,SNR=7.7						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**83.48**	**21**	P	**P**	**15 17 03.3**	**+0.6**
J25K	**Salcha River,**	**83.92**	**21**	P	**P**	**15 17 04.9**	**-0.2**
J25K				IAmb	IAmb	15 17 05.3	
	comp=Z,3.1nm,1.3s						
D23K	**Nanushuk River**	**84.89**	**16**	P	**P**	**15 17 10.7**	**+0.9**
D23K				IAmb	IAmb	15 17 34.3	
	comp=Z,5.7nm,1.2s						
I27K	**Kandik River**	**85.79**	**21**	P	**P**	**15 17 14.8**	**+0.4**
I27K				IAmb	IAmb	15 17 46.8	
	comp=Z,3.6nm,1.4s						
MKAR	**Makanchi Array**	**87.09**	**318**	P	**P**	**15 17 19.6**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=90,slow=8.6,SNR=1.8						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**87.09**	**318**	P	**P**	**15 17 20.3**	**-0.8**
KURK	**Kurchatov**	**90.41**	**321**	P	**P**	**15 17 34.2**	**-2.4**
KURK	**Kurchatov**	**90.41**	**321**	IAmb	IAmb	15 17 44.0	
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**90.45**	**321**	P	**P**	**15 17 34.2**	**-2.6**
	comp=Z,0.2nm,0.5s,baz=100,slow=4.8,SNR=1.8						
	comp=Z,0.2nm,0.5s						

*NNC **28** 15:25:37.4±1.1, 39°.64N×75°.83E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=7.8km s-min=5.3km az=169.0*
*KRNET **28** 15:25:45.3±0.1, 39°.85N×75°.78E, h7km, mb3.3*
*SOME **28** 15:25:45.7, 39°.85N×75°.87E, h15km*
ISC 28 15:25:45.1±1.6, 39°.97N±0°.05×75°.87E±0°.03, h1km±12km, n51, σ1s68/81, 23C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.47**	**4**	⇑P	**Pg**	**15 26 14.5**	**+1.3**
NRN				⇑S	**Sg**	**15 26 36.0**	**+3.8**
SALK	**Salom-Alik**	**1.81**	**301**	⇓eP	**Pg**	**15 26 19.1**	**-0.6**
SALK				⇓eS	**Sg**	**15 26 43.7**	**+0.6**
SFK	**Sufi-Kurgan**	**1.81**	**272**	⇑P	**Pb**	**15 26 18.1**	**-1.1**
SFK				⇑*i*S	**Sb**	**15 26 42.0**	**-0.6**
TARG	**Taragay, Kyrgy**	**2.29**	**39**	⇓*i*P	**Pg**	**15 26 28.1**	**-0.9**
TARG				⇓*i*S	**Sg**	**15 26 59.4**	**+0.7**
ULHL	**Ulahol**	**2.29**	**7**	P	**Pg**	**15 26 29.6**	**+0.6**
	SNR=21						
ULHL	**Ulahol**	**2.29**	**7**	⇑*i*P	**Pg**	**15 26 27.8**	**-1.2**
ULHL				⇑*i*S	**Sg**	**15 26 58.8**	**+0.1**
KDJ	**Kajisay**	**2.38**	**24**	⇑*i*P	**Pg**	**15 26 29.0**	**-1.6**
KDJ				⇑*i*S	**Sg**	**15 27 01.2**	**-0.2**
OHH	**Osh**	**2.42**	**284**	⇑*i*P	**Pb**	**15 26 27.6**	**-1.9**
OHH				⇑*i*S	**Sb**	**15 26 58.1**	**-1.8**
UCH	**Uchtor**	**2.48**	**336**	P	**Pg**	**15 26 32.9**	**+0.4**
	SNR=7.6						
BOOM	**Boomskoye usch**	**2.52**	**1**	⇑*e*P	**Pb**	**15 26 30.8**	**-0.4**
BOOM				⇑*i*S	**Sg**	**15 27 04.3**	**-1.7**
KBK	**Karagaybulak**	**2.77**	**346**	P	**Pg**	**15 26 38.8**	**+0.6**
	SNR=7.4						
AAK	**Ala-Archa**	**2.86**	**339**	P	**Pb**	**15 26 36.3**	**-0.6**
	SNR=8.4						
AAK	**Ala-Archa**	**2.86**	**339**	⇑Pg	**Pb**	**15 26 35.9**	**-1.1**
	7.2nm,0.7s						
AAK				⇑Lg	Lg	15 27 17.4	
	27nm,1.1s						
AAK	**Ala-Archa**	**2.86**	**339**	⇓*i*P	**Pb**	**15 26 35.2**	**-1.8**
AAK				⇓*i*S	**Sb**	**15 27 11.4**	**-1.1**
TKM2	**Tokmak 2**	**2.96**	**356**	P	**Pb**	**15 26 37.6**	**-1.1**
	SNR=7.0						
FRU1	**Bishkek**	**2.99**	**342**	⇓*i*P	**Pb**	**15 26 37.3**	**-1.8**
FRU1				⇓*i*S	**Sb**	**15 27 15.3**	**-0.8**
KST	**Kastek**	**3.07**	**1**	*e*P	**Pg**	**15 26 44.6**	**+0.7**
	3.8nm,0.6s						
KST				*e*S	**Sg**	**15 27 26.7**	**+3.0**
	27nm,0.6s						
IZV	**Izvestkoviy**	**3.12**	**10**	Pg	**Pb**	**15 26 40.1**	**-1.3**
	2.2nm,0.3s						
IZV				Lg	Lg	15 27 28.0	
	28nm,0.5s						
IZV	**Izvestkoviy**	**3.12**	**10**	*e*P	**Pg**	**15 26 45.7**	**+0.9**
	8.0nm,0.9s						
IZV				*e*S	**Sg**	**15 27 28.3**	**+3.2**
	28nm,0.5s						
ANVS	**Anan'yevo**	**3.12**	**25**	⇑*e*P	**Pb**	**15 26 39.4**	**-2.1**
ANVS				⇑eS	**Sb**	**15 27 18.9**	**-1.2**
CHMS	**Chumysh**	**3.14**	**345**	⇑*i*P	**Pb**	**15 26 38.9**	**-2.8**
CHMS				⇑*i*S	**Sb**	**15 27 18.2**	**-2.3**
TNSS	**Tian-Shan**	**3.17**	**14**	Pg	**Pb**	**15 26 40.7**	**-1.8**
	1.1nm,0.3s						
TNSS				Lg	Lg	15 27 29.4	
	2.7nm,0.6s						
TNSS	**Tian-Shan**	**3.17**	**14**	*e*P	**Pb**	**15 26 43.5**	**+1.0**
	0.8nm,0.5s						
TNSS				*e*S	**Sg**	**15 27 24.4**	**-2.5**
	2.7nm,0.6s						
DRK	**Karamyk**	**3.17**	**262**	⇑*e*P	**Pn**	**15 26 37.3**	**+0.9**
DRK				⇑eS	**Sn**	**15 27 14.8**	**-0.2**
MTBS	**Maitube**	**3.19**	**7**	Pg	**Pb**	**15 26 41.3**	**-1.2**
	4.5nm,0.2s						
MTBS				Lg	Lg	15 27 29.7	
	30nm,0.5s						
MTBS	**Maitube**	**3.19**	**7**	*e*P	**Pg**	**15 26 46.8**	**+0.7**
	6.9nm,0.2s						
MTBS				*e*S	**Sg**	**15 27 30.1**	**+2.6**
	30nm,0.5s						
DGS	**Degeres**	**3.27**	**359**	Pg	**Pb**	**15 26 42.3**	**-1.7**
	9.4nm,0.4s						
DGS				Lg	Lg	15 27 32.2	
	12nm,0.5s						
DGS	**Degeres**	**3.27**	**359**	*e*P	**Pg**	**15 26 47.6**	**-0.1**
	7.3nm,0.7s						
DGS				*e*S	**Sg**	**15 27 32.1**	**+2.0**
	12nm,0.5s						
MDOK	**Medeo**	**3.31**	**15**	Pg	**Pb**	**15 26 43.3**	**-1.5**
	4.0nm,0.5s						
MDOK				Lg	Lg	15 27 33.1	
	20nm,0.5s						
MDOK	**Medeo**	**3.31**	**15**	*e*P	**Pg**	**15 26 47.2**	**-1.3**
	1.6nm,0.8s						
MDOK				*e*S	**Sg**	**15 27 31.2**	**-0.3**
	20nm,0.5s						
MRKS	**Merke**	**3.41**	**325**	Pg	**Pb**	**15 26 43.6**	**-2.7**
	3.8nm,0.3s						
MRKS				Lg	Lg	15 27 33.9	
	9.7nm,0.6s						
MRKS	**Merke**	**3.41**	**325**	*e*P	**Pg**	**15 26 49

az=194.0
*DJA **28** 15:35:13.9±0.2,9˚S×3˚×12˚1E±˚, h167km±4km, M4.3/19, mB4.5/1, mb4.5/10, MLv4.2/19, Mw(mB)3.7/1*
ISC 28 15:35:12.9±0.6,**8˚50S**±0˚05×**121˚11E**±0˚04, **h178**km±6km, **n64**,σ1º**92**/74, **mb3.9**/5, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.12**	**97**	P	**Pn**	**15 35 42.2**	**+0.9**
MMRI	**Maumere**	**1.12**	**97**	S	**Sn**	**15 36 04.1**	**+0.8**
MMRI	**Maumere**	**1.12**	**97**		**Pn**	**15 35 42.2**	**+0.9**
MMRI				Sn	**Sn**	**15 36 03.8**	**+0.5**
MMRI	**Maumere**	**1.12**	**97**	P	**Pn**	**15 35 42.0**	**+0.7**
MMRI				S	**Sn**	**15 36 03.8**	**+0.5**
WSI	**Waingapu**	**1.41**	**215**	P	**Pn**	**15 35 43.4**	**-0.5**
WSI				S	**Sn**	**15 36 06.8**	**-1.2**
WBSI	**Waikabubak, Su**	**2.04**	**236**	P	**Pn**	**15 35 50.2**	**-0.2**
WBSI				S	**Sn**	**15 36 17.2**	**-2.3**
BSSI	**Bau Bau, Buton**	**2.42**	**345**	P	**Pn**	**15 35 54.9**	**+0.3**
DBNI	**Kabupaten Domp**	**2.77**	**270**	P	**Pn**	**15 35 59.3**	**+0.6**
DBNI				S	**Sn**	**15 36 33.0**	**-1.3**
BATI	**Baumata**	**3.03**	**124**	P	**Pn**	**15 35 59.5**	**-2.4**
	99nm,0.5s,baz=292,slow=5.7,SNR=50						
BATI				S	**Sn**	**15 36 34.0**	**-6.1**
	67nm,0.3s,baz=240,slow=8.1,SNR=4.9						
BATI	**Baumata**	**3.03**	**124**	P	**Pn**	**15 35 59.4**	**-2.5**
PLAI	**Plampang**	**3.31**	**264**	P	**Pn**	**15 36 06.0**	**+0.7**
PLAI	**Plampang**	**3.31**	**264**	P	**Pn**	**15 36 06.1**	**+0.7**
PLAI				S	**Sn**	**15 36 44.6**	**-1.6**
BBSI	**Bau Bau**	**3.32**	**26**	P	**Pn**	**15 36 07.0**	**+1.5**
SOEI	**Soe**	**3.35**	**112**	P	**Pn**	**15 36 07.0**	**+1.0**
SOEI	**Soe**	**3.35**	**112**	S	**Sn**	**15 36 47.7**	**+0.4**
SOEI	**Soe**	**3.35**	**112**		**Pn**	**15 36 06.9**	**+1.0**
SOEI	**Soe**	**3.35**	**112**	P	**Pn**	**15 36 06.9**	**+1.0**
TWSI	**Taliwang, Sumb**	**4.19**	**266**	P	**Pn**	**15 36 16.9**	**+0.5**
KDI	**Kendari**	**4.75**	**18**	P	**Pn**	**15 36 24.8**	**+1.1**
KHKI	**Kahang-Kahang**	**5.45**	**271**	P	**Pn**	**15 36 31.6**	**-1.1**
	0.3nm38nm,1.1s						
DNP	**Denpasar**	**5.84**	**268**	P	**Pn**	**15 36 40.4**	**+2.6**
JAGI	**Jajag, Banyuwa**	**6.89**	**270**	P	**Pn**	**15 36 53.7**	**+2.1**
JAGI	**Jajag, Banyuwa**	**6.89**	**270**	Pn	**Pn**	**15 36 50.8**	**-0.8**
JAGI	**Jajag, Banyuwa**	**6.89**	**270**	P	**Pn**	**15 36 51.4**	**-0.2**
	0.4nm51nm,1.7s						
SJI	**Sawahan**	**9.29**	**274**	P	**Pn**	**15 37 25.3**	**+2.1**
	39nm,0.4s						
SNJI	**Sawahan-Nganju**	**9.29**	**274**	P	**Pn**	**15 37 24.5**	**+1.1**
	29nm,1.8s						
KNRA	**Kununurra**	**10.33**	**134**		**Pn**	**15 37 36.0**	**-0.9**
DRS	**Darwin Rock St**	**10.39**	**113**	P	**Pn**	**15 37 37.9**	**+0.3**
UGM	**Wanagama**	**10.50**	**272**	P	**Pn**	**15 37 39.2**	**+0.1**
UGM	**Wanagama**	**10.50**	**272**	Pn	**Pn**	**15 37 38.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**10.51**	**156**	P	**Pn**	**15 37 40.0**	**+0.9**
	2.0nm,0.5s,baz=330,slow=9.6,SNR=21						
FITZ				S	Sn	15 39 29.5	-6.4
	8.1nm,0.4s,baz=0.0,slow=13,SNR=7.2						
FITZ	**Fitzroy Crossi**	**10.51**	**156**		**Pn**	**15 37 39.9**	**+0.8**
FITZ					**Sn**	**15 39 32.5**	**-3.5**
MTN	**Manton Dam**	**10.75**	**115**		**Pn**	**15 37 41.9**	**-0.5**
FAKI	**Fak Fak**	**12.39**	**64**	P	**P**	**15 38 05.3**	**-3.0**
FAKI	**Fak Fak**	**12.39**	**64**	Pn	**Pn**	**15 38 02.6**	**-0.8**
SIJI	**Sorong**	**12.64**	**54**	P	**P**	**15 38 08.7**	**-2.4**
	15nm,0.6s,baz=258,slow=9.3,SNR=6.6						
MBWA	**Marble Bar**	**12.66**	**186**	Pn	**Pn**	**15 38 08.6**	**+1.8**
BBJI	**Bungbulang**	**13.37**	**273**	P	**P**	**15 38 18.4**	**-0.9**
BBJI	**Bungbulang**	**13.37**	**273**	Pn	**Pn**	**15 38 13.7**	**-2.3**
GIRL	**Giralia**	**15.54**	**204**		**P**	**15 38 44.7**	**+1.5**
WB0	**Warramunga Arr**	**17.05**	**132**	P	**P**	**15 39 01.1**	**+1.1**
WRA	**Warramunga Arr**	**17.12**	**133**	P	**P**	**15 39 01.7**	**+1.0**
	1.3nm,0.4s,baz=314,slow=12,SNR=65						
WRA				S	**S**	**15 42 03.3**	**-6.8**
	1.2nm,0.5s,baz=300,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**17.12**	**133**	P	**P**	**15 39 01.1**	**+0.4**
WRAB	**Tennant Creek**	**17.12**	**133**	P	**P**	**15 39 01.8**	**+1.1**
WRAB	**Tennant Creek**	**17.12**	**133**	S	**S**	**15 42 10.2**	**+0.1**
WRAB	**Tennant Creek**	**17.12**	**133**	P	**P**	**15 39 02.1**	**+1.4**
WRAB				IAmb	IAmb	15 39 07.7	
	comp=Z,5.9nm,0.6s						
WR8	**Warramunga Arr**	**17.25**	**133**		**P**	**15 39 03.5**	**+1.4**
WR8				IAmb	IAmb	15 39 05.4	
	comp=Z,21nm,1.5s						
MEEK	**Meekatharra**	**18.20**	**187**	P	**P**	**15 39 14.8**	**+2.4**
MEEK	**Meekatharra**	**18.20**	**187**	S	**S**	**15 42 32.9**	**+1.5**
AS31	**Alice Springs**	**19.43**	**142**		**P**	**15 39 27.5**	**+1.7**
AS31				IAmb	IAmb	15 39 28.7	
	comp=Z,3.2nm,0.3s						
ASAR	**Alice Springs**	**19.43**	**142**	P	**P**	**15 39 27.9**	**+2.0**
	comp=Z,6.7nm,0.8s,baz=330,slow=12,SNR=92						
ASAR				S	**S**	**15 43 00.3**	**+4.3**
	comp=Z,1.7nm,0.6s,baz=314,slow=24,SNR=6.2						
ASAR	**Alice Springs**	**19.43**	**142**	P	**P**	**15 39 27.7**	**+1.9**
AS01	**Alice Springs**	**19.46**	**142**	P	**P**	**15 39 27.6**	**+1.5**
QIS	**Mount Isa**	**21.51**	**126**	P	**P**	**15 39 48.8**	**+0.7**
COEN	**Coen**	**22.30**	**106**	P	**P**	**15 39 56.8**	**+0.9**
FORT	**Forrest**	**23.10**	**165**	P	**P**	**15 40 04.9**	**+1.9**
FORT				IAmb	IAmb	15 40 35.5	
	comp=Z,12nm,1.3s						
BBOO	**Buckleboo**	**27.87**	**152**	P	**P**	**15 40 47.6**	**+1.6**
BBOO				IAmb	IAmb	15 41 28.4	
	comp=Z,24nm,1.5s						
STKA	**Stephens Creek**	**30.06**	**144**	P	**P**	**15 41 07.2**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=318,slow=8.9,SNR=5.7						
	comp=Z,0.8nm,0.3s						
ONTNC	**Ouen Toro**	**45.63**	**113**	P	**P**	**15 43 15.1**	**-0.7**
LBZ	**Lake Benmore**	**55.46**	**139**	P	**P**	**15 44 30.1**	**+1.0**
MKAR	**Makanchi Array**	**64.99**	**332**	P	**P**	**15 45 32.2**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=138,slow=6.8,SNR=6.9						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**64.99**	**332**	P	**P**	**15 45 32.0**	**-1.7**
PETK	**Petropavlovsk-**	**68.80**	**23**	P	**P**	**15 45 55.6**	**-2.0**
ZALV	**Zalesovo Beam**	**69.34**	**338**	P	**P**	**15 45 58.0**	**-2.9**
	comp=Z,0.4nm,0.3s,baz=142,slow=6.0,SNR=2.3						
	comp=Z,0.4nm,0.3s						

*IDC **28** 15:46:44.5±0.7, 10˚.69N×62˚.77W, h0km, mb4.0/13, mbtmp4.1/16, ML3.5/3, MS3.4/28, Error ellipse: s-maj=19.7km s-min=17.5km az=16.0*
*NEIC **28** 15:46:47.7±2.2, 10˚.54N±0˚.06×62˚.65W±0˚.04, h10km±1km, mb4.6/57, Error ellipse: s-maj=10.2km s-min=6.7km az=178.0*
*TRN **28** 15:46:47.4, 10˚.34N×62˚.76W, h58km, MD5.0, Near Eastern coast of Venezuela. Felt in Trinidad MMI IV.*
*FUNV **28** 15:46:48.8, 10˚.47N×62˚.61W, h17km, MW4.3, Presumed earthquake*
ISC 28 15:46:48.4±1.4,**10˚52N**±0˚.04×**62˚71W**±0˚.04, **h24**km±10km, **n139**,σ1º**25**/125, **mb4.4**/38, **MS3.4**/24, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**1.15**	**81**	*eP*	**Pn**	**15 47 07.8**	**-1.3**
DMDM				*eS*	**Sn**	**15 47 23.8**	**-0.3**
PSMG	**Mucurapo Girls**	**1.17**	**82**	*eP*	**Pn**	**15 47 08.4**	**-0.8**
PSMG				*eS*	**Sb**	**15 47 24.8**	**+0.1**
PSKH	**Kent House, Po**	**1.18**	**82**	*eP*	**Pn**	**15 47 08.6**	**-0.8**
PSKH				*eS*	**Sb**	**15 47 24.7**	**-0.2**
TPP	**Pointe-a-Pierr**	**1.25**	**99**	*eP*	**Pb**	**15 47 11.3**	**-0.1**
TRN	**Trinidad (W)**	**1.29**	**84**	*eP*	**Pn**	**15 47 11.2**	**+0.3**
TRN				*eS*	**Sn**	**15 47 26.4**	**-1.0**
TRN	**Trinidad (W)**	**1.29**	**84**	*eP*	**Pn**	**15 47 10.3**	**-0.6**
TRN				*eS*	**Sn**	**15 47 27.6**	**+0.1**
GRGR	**Grenville**	**1.91**	**33**		**Pn**	**15 47 18.9**	**-0.6**
GRGR	**Grenville**	**1.91**	**33**	*eP*	**Pn**	**15 47 19.7**	**+0.2**
GRGR				*eS*	**Sn**	**15 47 42.7**	**-0.1**
GRGR	**Grenville**	**1.91**	**33**	*eP*	**Pn**	**15 47 19.7**	**+0.2**
GRGR				*eS*	**Sb**	**15 47 45.7**	**-0.4**
GRSS	**Sisters**	**2.07**	**31**	*eP*	**Pn**	**15 47 21.6**	**0.0**
GRSS				*eS*	**Sb**	**15 47 48.8**	**-1.9**
SLAC	**Saint Lucia, A**	**3.80**	**28**	*eP*	**Pn**	**15 47 46.7**	**+1.2**
SLAC				*eS*	**Sn**	**15 48 28.6**	**-0.8**
SLBI	**Saint Lucia, B**	**3.87**	**26**	*eP*	**Pn**	**15 47 47.6**	**+1.1**
SLBI				*eS*	**Sn**	**15 48 31.2**	**0.0**
FUNV	**FUNVISIS**	**4.03**	**270**	*eP*	**Pn**	**15 47 50.2**	**+1.4**
FUNV				*eS*	**Sn**	**15 48 35.4**	**+0.1**
BBGH	**Gun Hill**	**4.04**	**49**	*eP*	**Pn**	**15 47 47.4**	**-1.4**
TACV	**Tcata**	**4.26**	**265**	*eP*	**Pn**	**15 47 52.8**	**+0.8**
TACV				*eS*	**Sn**	**15 48 40.6**	**-0.4**
BIM	**Bigot**	**4.28**	**22**		**Pn**	**15 47 52.3**	**+0.1**
BIM	**Bigot**	**4.28**	**22**	*eP*	**Pn**	**15 47 52.8**	**+0.6**
BIM				*eS*	**Sn**	**15 48 39.2**	**-2.3**
BIM	**Bigot**	**4.28**	**22**	*eP*	**Pn**	**15 47 52.8**	**+0.6**
BIM				*eS*	**Sn**	**15 48 41.9**	**+0.4**
H05S1	**Guadeloupe/Mar**	**4.29**	**25**	Pn	**Pn**	**15 47 51.4**	**-0.9**
H05S1				Sn	**Sn**	**15 48 41.4**	**-0.2**
MPOM	**Morne Pois Mar**	**4.30**	**25**		**Pn**	**15 47 52.9**	**+0.5**
FDFM	**Morne la Roset**	**4.46**	**20**		**Pn**	**15 47 55.3**	**+0.8**
CXM	**Morne La Croix**	**4.52**	**19**		**Pn**	**15 47 55.6**	**0.0**
SVN	**Savane Anatole**	**4.55**	**19**		**Pn**	**15 47 56.5**	**+0.6**
SVN	**Savane Anatole**	**4.55**	**19**	*eP*	**Pn**	**15 47 57.4**	**+1.5**
SVN				*eS*	**Sn**	**15 48 46.9**	**-1.2**
ILAM	**Ilet Lapin Mar**	**4.59**	**23**		**Pn**	**15 47 57.5**	**+1.0**
ILAM	**Ilet Lapin Mar**	**4.59**	**23**	*eP*	**Pn**	**15 47 58.9**	**+2.5**
ILAM				*eS*	**Sn**	**15 48 49.3**	**+0.3**
DSLB	**Salisbury**	**5.05**	**14**	*eP*	**Pn**	**15 48 03.5**	**+0.8**
DSLB				*eS*	**Sn**	**15 48 59.4**	**-0.9**
DWS	**Wesley**	**5.20**	**15**	*eP*	**Pn**	**15 48 06.0**	**+1.2**
DWS				*eS*	**Sn**	**15 49 04.1**	**+0.1**
TDBA	**Terre de Bas,**	**5.40**	**11**		**Pn**	**15 48 08.9**	**+1.4**
TBG	**Guadaloupe-3**	**5.40**	**11**	*eP*	**Pn**	**15 48 09.5**	**+1.9**
TBG				*eS*	**Sn**	**15 49 08.8**	**-0.1**
MAGL	**Barre de l'ile**	**5.57**	**14**	Pn	**Pn**	**15 48 11.2**	**+1.3**
MMLZ	**Guadeloupe Bro**	**5.59**	**10**	*eP*	**Pn**	**15 48 11.5**	**+1.5**
MMLZ				*eS*	**Sn**	**15 49 12.6**	**-0.9**
CBE	**Ff, Capester**	**5.62**	**11**		**Pn**	**15 48 11.3**	**+0.7**
DHSZ	**Broadband at M**	**5.79**	**9**	*eP*	**Pn**	**15 48 14.3**	**+1.4**
GDHS	**Morne Mazeau,**	**5.79**	**9**		**Pn**	**15 48 14.2**	**+1.2**
DSDZ	**La Diserade, G**	**5.98**	**15**	*eP*	**Pn**	**15 48 16.6**	**+1.1**
DSDZ				*eS*	**Sn**	**15 49 20.9**	**-2.3**
GDSD	**La Dsirade Is**	**5.98**	**15**		**Pn**	**15 48 15.7**	**+0.2**
H05N1	**Guadeloupe/Mar**	**5.98**	**15**	Pn	**Pn**	**15 48 14.7**	**-0.9**
H05N1				Sn	**Sn**	**15 49 20.6**	**-2.8**
MBWH	**Windy Hill**	**6.21**	**5**	*eP*	**Pn**	**15 48 18.1**	**-0.6**
SABA	**Saba**	**7.08**	**356**	x	x	15 48 28.9	
SDV	**Santo Domingo**	**7.98**	**259**	Pn	**Pn**	**15 48 41.3**	**-1.9**
	7.9nm,0.3s,baz=78,slow=9.4,SNR=8.2						
SDV				Sn	**Sn**	**15 50 08.8**	**-3.9**
	8.5nm,0.3s,baz=15,slow=21,SNR=3.5						
SDV				LR	LR	15 52 53.1	
	comp=Z,344nm,21.1s,baz=56,slow=46						
	21nm,0.4s						
SDV	**Santo Domingo**	**7.98**	**259**		**Pn**	**15 48 43.4**	**+0.3**
SDV	**Santo Domingo**	**7.98**	**259**	*eP*	**Pn**	**15 48 42.3**	**-0.8**
SJG	**San Juan**	**8.25**	**337**	LR	LR	15 52 20.2	
	comp=Z,196nm,19.0s,baz=100,slow=42						
BOAV	**Boa Vista**	**8.36**	**165**		**Pn**	**15 48 48.1**	**0.0**
AOPR	**Arecibo Observ**	**8.71**	**334**		**Pn**	**15 48 53.9**	**+0.9**
URIC	**Uribia, Colomb**	**9.19**	**278**	*eP*	**Pn**	**15 48 58.5**	**-1.0**
DR12	**Loma Pena Alta**	**10.45**	**323**		**Pn**	**15 49 17.5**	**+0.6**
BANI	**BANI**	**10.77**	**317**	Pn	**Pn**	**15 49 22.8**	**+1.4**
RUSC	**La Rusia**	**11.25**	**247**	*eP*	**Pn**	**15 49 26.8**	**-1.5**
MDP	**Montagnes des**	**11.33**	**118**	Pn	**Pn**	**15 49 27.7**	**-1.2**
	1.7nm,0.3s,baz=309,slow=15,SNR=9.3						
MDP				Sn	Sn	15 51 23.4	-12
	5.5nm,0.3s,baz=52,slow=18,SNR=8.8						
MDP				LR	LR	15 54 21.2	
	comp=Z,193nm,20.2s,baz=228,slow=40						
	10nm,0.6s						
SDDR	**Presa de Saban**	**11.81**	**316**		**Pn**	**15 49 36.9**	**+1.3**
SDDR	**Presa de Saban**	**11.81**	**316**	*e*	**Pn**	**15 49 36.9**	**+1.3**
SJCC	**San Jacinto, C**	**12.29**	**268**	*eP*	**Pn**	**15 49 40.5**	**-1.6**
ROSC	**El Rosal**	**12.81**	**245**	Pn	**Pn**	**15 49 49.2**	**-0.3**
	1.7nm,0.3s,baz=145,slow=21,SNR=1.5						
ROSC				LR	LR	15 55 05.1	
	comp=Z,911nm,20.7s,baz=46,slow=39						
	5.4nm,0.3s						
OTAV	**Otavalo**	**18.69**	**238**	P	**Pn**	**15 51 07.5**	**+1.4**
JTS	**Las Juntas de**	**21.88**	**271**	LR	LR	16 01 18.7	
	comp=Z,89nm,21.2s,baz=69,slow=40						
MTO3	**Montecristo**	**26.30**	**281**	P	**P**	**15 52 24.1**	**+1.4**
SIV	**San Ignacio**	**26.39**	**176**	LR	LR	16 03 07.5	
	comp=Z,226nm,19.2s,baz=329,slow=37						
LPAZ	**La Paz**	**27.17**	**191**	P	**P**	**15 52 32.3**	**+1.4**
	1.4nm,0.9s,baz=41,slow=4.4,SNR=6.4						
LPAZ				LR	LR	16 03 50.3	
	comp=Z,180nm,18.9s,baz=1.0,slow=38						
	1.4nm,0.9s						
LPAZ	**La Paz**	**27.17**	**191**	P	**P**	**15 52 30.4**	**-0.5**
W59A	**Clinton**	**28.42**	**332**	P	**P**	**15 52 43.4**	**+2.2**
JSC	**Jenkinsville**	**29.11**	**327**	P	**P**	**15 52 49.6**	**+2.2**
PB16	**IPOC Station P**	**29.45**	**193**	P	**P**	**15 52 51.8**	**+0.6**
PB16				IAmb	IAmb	15 53 00.6	
	comp=Z,8.2nm,1.3s						
BDFB	**Brasilia**	**29.79**	**151**	LR	LR	16 05 04.3	
	comp=Z,188nm,19.4s,baz=350,slow=37						
PSGCX	**Pisagua**	**30.80**	**194**	P	**P**	**15 53 02.9**	**+0.3**
PSGCX				IAmb	IAmb	15 53 45.1	
	comp=Z,7.5nm,1.0s						
RCBR	**Riachuelo**	**31.25**	**120**	LR	LR	16 06 19.7	
	comp=Z,36nm,20.9s,baz=251,slow=37						
CMIG	**Matias Romero**	**31.89**	**285**	LR	LR	16 06 57.5	
	comp=Z,77nm,19.9s,baz=30,slow=38						
PB02	**IPOC Station P**	**32.42**	**193**	P	**P**	**15 53 18.0**	**+1.2**
PB07	**IPOC Station P**	**32.81**	**192**	P	**P**	**15 53 21.1**	**+0.8**
PB07				IAmb	IAmb	15 53 56.3	
	comp=Z,16nm,1.3s						
T50A	**Nancy**	**33.09**	**326**	P	**P**	**15 53 23.8**	**+1.3**
T50A				IAmb	IAmb	15 53 25.7	
	comp=Z,4.8nm,0.8s						
OXF	**Oxford**	**34.13**	**319**	P	**P**	**15 53 33.6**	**+2.1**
SADO	**Sadowa**	**36.95**	**340**	LR	LR	16 11 33.0	
	comp=Z,37nm,18.4s,baz=216,slow=40						
I49A	**Point Hope**	**37.58**	**336**	P	**P**	**15 54 03.1**	**+2.1**
HBVL	**Hebbronville**	**37.64**	**301**		**P**	**15 54 02.5**	**+0.8**
BRDY	**Brady**	**39.44**	**307**		**P**	**15 54 17.2**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**40.11**	**314**	P	**P**	**15 54 24.2**	**+1.9**
SAND	**Sanderson**	**41.45**	**304**	IAmb	IAmb	15 54 40.3	
	comp=Z,9.6nm,1.1s						
POST	**Post**	**42.09**	**308**	IAmb	IAmb	15 54 48.3	
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**42.53**	**302**	P	**P**	**15 54 42.0**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=126,slow=8.2,SNR=14						
	comp=Z,1.2nm,0.6s						
ALPN	**Alpine**	**42.83**	**304**	IAmb	IAmb	15 54 52.2	
	comp=Z,9.1nm,1.3s						
MSTX	**Muleshoe**	**43.42**	**309**	IAmb	IAmb	15 54 57.6	
	comp=Z,10nm,1.2s						
VHRN	**Van Horn**	**44.06**	**304**	IAmb	IAmb	15 55 02.0	
	comp=Z,9.7nm,1.2s						
SCHQ	**Schefferville**	**44.32**	**357**	LR	LR	16 10 40.6	
	comp=Z,22nm,20.1s,baz=227,slow=32						
RTBA	**Rita Blanca**	**44.40**	**312**	IAmb	IAmb	15 55 04.3	
	comp=Z,11nm,1.2s						
MNTX	**Cornudas Mount**	**44.67**	**305**	P	**P**	**15 54 59.8**	**+0.3**
ALQ	**Albuquerque**	**46.60**	**309**	IAmb	IAmb	15 55 21.3	
	comp=Z,1.9nm,0.7s						
ANMO	**Albuquerque**	**46.61**	**309**	LR	LR	16 17 58.3	
	comp=Z,32nm,19.0s,baz=96,slow=40						
ULM	**Lac du Bonnet**	**48.12**	**332**	P	**P**	**15 55 25.3**	**-1.0**
	comp=Z,2.1nm,0.4s,baz=127,slow=9.9,SNR=4.5						
ULM				LR	LR	16 16 17.7	
	comp=Z,24nm,19.6s,baz=159,slow=37						
	comp=Z,2.1nm,0.4s						
ULM	**Lac du Bonnet**	**48.12**	**332**	P	**P**	**15 55 26.1**	**-0.2**
ULM				IAmb	IAmb	15 55 33.7	
	comp=Z,5.9nm,1.0s						
PV02	**Paradox Valley**	**49.49**	**312**	P	**P**	**15 55 38.5**	**+1.1**
PV02				IAmb	IAmb	15 56 02.0	
	comp=Z,6.8nm,1.0s						
P18A	**Preston Nutter**	**51.10**	**313**	IAmb	IAmb	15 56 11.4	
	comp=Z,5.7nm,1.0s						
H10N3	**ASCENSION HYDR**	**51.34**	**109**	T	T	16 51 04.2	
	baz=293,slow=75,SNR=4.2						
H10N2	**ASCENSION HYDR**	**51.34**	**109**	T	T	16 50 58.4	
	baz=293,slow=75,SNR=5.1						
H10N1	**ASCENSION HYDR**	**51.36**	**109**	T	T	16 50 55.6	
	baz=293,slow=75,SNR=4.0						
PLCA	**Paso Flores**	**51.51**	**188**	P	**P**	**15 55 53.2**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=38,slow=9.5,SNR=3.7						
PLCA				LR	LR	16 18 03.5	
	comp=Z,94nm,19.6s,baz=15,slow=36						
	comp=Z,0.7nm,0.6s						
PLCA	**Paso Flores**	**51.51**	**188**	P	**P**	**15 55 54.0**	**+1.8**
PLCA				IAmb	IAmb	15 55 59.1	
	comp=Z,7.2nm,1.2s						
H10S3	**ASCENSION HYDR**	**51.57**	**110**	T	T	16 51 21.3	
	baz=284						
H10S2	**ASCENSION HYDR**	**51.59**	**110**	T	T	16 51 21.9	
	baz=296						
BW06	**Boulder Array**	**51.83**	**317**	P	**P**	**15 55 53.9**	**-1.1**
PDAR	**Pinedale Array**	**51.83**	**317**	P	**P**	**15 55 53.4**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=114,slow=9.3,SNR=12						
PDAR				LR	LR	16 18 42.3	
	comp=Z,31nm,21.4s,baz=100,slow=37						
	comp=Z,1.1nm,0.6s						
PDAR	**Pinedale Array**	**51.83**	**317**	P	**P**	**15 55 53.7**	**-1.3**
YHL	**Hebgen Lake**	**53.76**	**319**	P	**P**	**15 56 09.2**	**-0.1**
YHL				IAmb	IAmb	15 56 18.9	
	comp=Z,7.2nm,1.1s						
ELK	**Elko**	**55.08**	**313**	LR	LR	16 21 40.5	
	comp=Z,45nm,20.3s,baz=98,slow=38						
NVAR	**Mina Array Bea**	**56.72**	**309**	P	**P**	**15 56 28.4**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=95,slow=3.6,SNR=4.0						
NVAR				LR	LR	16 21 53.2	
	comp=Z,35nm,21.3s,baz=122,slow=37						
	comp=Z,0.4nm,0.6s						
SFJD	**Kangerlussuaq**	**56.99**	**6**	LR	LR	16 19 02.3	
	comp=Z,18nm,20.5s,baz=200,slow=34						
DBIC	**Dimbokro**	**57.27**	**89**	LR	LR	16 19 44.4	
	comp=Z,18nm,18.4s,baz=270,slow=34						
MD01	**Midelt array s**	**57.51**	**58**		**P**	**15 56 36.8**	**+0.6**
NEW	**Newport**	**58.85**	**321**	LR	LR	16 22 18.3	
	comp=Z,48nm,20.6s,baz=122,slow=36						
ESDC	**Sonseca Array**	**59.40**	**50**	P	**P**	**15 56 48.3**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=254,slow=7.4,SNR=6.8						
ESDC				LR	LR	16 18 01.5	
	comp=Z,22nm,18.1s,baz=220,slow=32						
	comp=Z,0.7nm,0.8s						
YBH	**Yreka Blue Hor**	**60.77**	**312**	LR	LR	16 25 52.8	
	comp=Z,33nm,19.4s,baz=102,slow=39						
BORG	**Borgarnes**	**61.29**	**19**	LR	LR	16 21 47.9	
	comp=Z,19nm,18.9s,baz=233,slow=34						
TORD	**Torodi Ar. Bea**	**62.94**	**81**	P	**P**	**15 57 13.8**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=280,slow=5.9,SNR=7.9						
	comp=Z,1.7nm,0.7s						
YKA	**Yellowknife Ar**	**63.74**	**336**	P	**P**	**15 57 16.3**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=114,slow=7.2,SNR=4.9						
YKA				LR	LR	16 25 17.1	
	comp=Z,40nm,20.1s,baz=90,slow=36						
	comp=Z,0.8nm,0.7s						
Q32M	**Nakina River**	**70.54**	**329**	P	**P**	**15 58 02.1**	**+0.6**
Q32M				IAmb	IAmb	15 58 08.1	
	comp=Z,3.7nm,0.9s						
SALO	**Salr**	**70.83**	**45**	P	**P**	**15 58 04.3**	**+1.0**
NC204	**NORSAR Array S**	**72.91**	**29**	P	**P**	**15 58 16.9**	**+1.4**
NOA	**NORSAR Array B**	**73.08**	**29**	P	**P**	**15 58 16.7**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=221,slow=5.4,SNR=2.1						
NOA				LR	LR	16 26 11.9	
	comp=Z,16nm,20.3s,baz=115,slow=32						
	comp=Z,1.0nm,0.9s						
L29M	**L29M**	**74.09**	**333**	IAmb	IAmb	15 58 28.7	
	comp=Z,2.9nm,0.8s						
HFS	**Hagfors**	**74.17**	**30**	P	**P**	**15 58 23.5**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=263,slow=5.8,SNR=4.2						
	comp=Z,3.6nm,0.9s						
I29M	**Ogilvie Camp,**	**74.50**	**335**	IAmb	IAmb	15 58 30.3	
	comp=Z,5.0nm,1.3s						
G29M	**Pine Creek**	**74.63**	**337**	IAmb	IAmb	15 58 30.8	
	comp=Z,5.2nm,0.6s						
BCAR	**Beaver Creek A**	**75.74**	**333**	P	**P**	**15 58 31.2**	**-0.7**
I27K	**Kandik River**	**75.90**	**335**	IAmb	IAmb	15 58 38.9	
	comp=Z,4.2nm,1.2s						
L26K	**Log Cabin Wild**	**76.45**	**332**	IAmb	IAm

SIJI				Sn	Sn	16 15 57.7	+1.1	
	1.8nm,0.3s,baz=296,slow=23,SNR=11							
SIJI				LR	LR	16 16 38.5		
	comp=Z,148nm,18.6s,baz=128,slow=36 6.8nm,0.4s							
CDOP	**Cateel, Davao**	**5.00**	**339**	*i* P	**Pb**	**16 15 08.2**	**-4.2**	
CDOP				*eS*	**Sb**	**16 16 15.2**	**+2.5**	
TSSP	**Tandag City**	**6.25**	**341**	*eP*	**Pn**	**16 15 20.0**	**+2.8**	
TSSP				*eS*	Sn	16 16 07.3	-21	
WRA	**Warramunga Arr**	**23.66**	**166**	P	**P**	**16 18 56.2**	**-0.4**	
	1.0nm,0.3s,baz=345,slow=9.3,SNR=37 1.0nm,0.3s							
ASAR	**Alice Springs**	**27.16**	**169**	P	**P**	**16 19 29.7**	**+1.2**	
	0.3nm,0.7s,baz=358,slow=10,SNR=8.0 0.3nm,0.7s							
MKAR	**Makanchi Array**	**58.95**	**325**	P	**P**	**16 23 45.6**	**+1.2**	
	0.4nm,0.3s,baz=105,slow=8.5,SNR=8.6 0.4nm,0.3s							
ZALV	**Zalesovo Beam**	**61.85**	**333**	P	**P**	**16 24 01.8**	**-2.2**	
	0.4nm,0.4s,baz=120,slow=8.7,SNR=3.8 0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.10**	**327**	P	**P**	**16 24 12.3**	**-0.1**	
	0.5nm,0.5s,baz=122,slow=5.9,SNR=8.7 0.5nm,0.5s							
BVAR	**Borovoye Array**	**68.69**	**327**	P	**P**	**16 24 49.7**	**+1.3**	
	0.7nm,0.7s,baz=106,slow=7.8,SNR=3.5 0.7nm,0.7s							

*UPA **28** 16:39:59.9±0.9,8˚.57N×83˚.31W,h12km±4km,ML2.6, Presumed earthquake*
*UCR **28** 16:40:01.1±0.7,8˚.47N×83˚.27W,h16km±4km,MW3.5, Presumed earthquake*
ISC 28 16:40:00.5±1.1,**8˚.50N**±0˚.06×**83˚.25W**±0˚.04,**h14**km±11km, **n24,σ0°48/30,2C-2D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PIRO	**Carate, Puerto**	**0.13**	**222**	⇑*iP*		**Pg**	**16 40 04.3**	**+0.2**
PIRO	**Carate, Puerto**	**0.13**	**222**	*iP*		**Pg**	**16 40 04.0**	**-0.1**
FITO	**Golfito**	**0.15**	**37**	⇓*iP*		**Pb**	**16 40 05.2**	**0.0**
FITO				*eS*		**Sb**	**16 40 08.6**	**+0.3**
NELY	**Ciudad Neily**	**0.33**	**63**	*eP*		**Pb**	**16 40 08.4**	**+0.2**
NELY				*eS*		**Sb**	**16 40 14.4**	**+1.0**
NELY	**Ciudad Neily**	**0.33**	**63**	*eS*		**Sb**	**16 40 13.7**	**+0.3**
VITO	**San Vito**	**0.42**	**41**	*eP*		**Pb**	**16 40 10.4**	**+0.7**
PTPA	**Petro Terminal**	**0.48**	**128**	⇑*iP*		**Pb**	**16 40 11.1**	**+0.4**
EDP2	**Potrero Grande**	**0.52**	**8**	*eP*		**Pb**	**16 40 11.8**	**+0.4**
ALCO	**Alturas Coton,**	**0.61**	**42**	⇓*iP*		**Pb**	**16 40 13.2**	**+0.2**
BRU2	**Volcan**	**0.62**	**62**	*eP*		**Pb**	**16 40 13.5**	**+0.3**
BRU2	**Volcan**	**0.62**	**62**	*iP*		**Pb**	**16 40 13.5**	**+0.3**
CLLRA	**Cordillera,**	**0.67**	**69**	*iP*		**Pb**	**16 40 14.3**	**+0.2**
EDPE	**Pejibaye, P**	**0.73**	**334**	*eP*		**Pb**	**16 40 15.1**	**+0.1**
BQTLY	**Boquete Panama**	**0.82**	**72**	*eP*		**Pg**	**16 40 16.5**	**+0.1**
BQTLY	**Boquete Panama**	**0.82**	**72**	*iP*		**Pg**	**16 40 16.4**	**0.0**
BQTLY				*eS*		Sn	**16 40 30.2**	**+0.5**
SAJE	**San Jernim**	**0.88**	**343**	*eP*		**Pb**	**16 40 17.4**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**1.11**	**70**	*eP*		**Pb**	**16 40 21.3**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**1.11**	**70**	*iP*		**Pb**	**16 40 20.7**	**-0.9**
PBNVO				*eS*		**Sb**	**16 40 35.2**	**-0.7**
PBNVO				IAML			16 40 38.3	
	comp=Z,105nm,0.6s							
RBALA	**Bur**	**1.15**	**71**	*eP*		**Pn**	**16 40 21.6**	**-0.5**
RBALA	**Bur**	**1.15**	**71**	*iP*		**Pn**	**16 40 20.9**	**-1.2**
RBALA				*eS*		**Sb**	**16 40 36.7**	**-0.2**
KKNTU	**Kakint²**	**1.47**	**77**	*eP*		**Pn**	**16 40 26.5**	**0.0**
KKNTU	**Kakint²**	**1.47**	**77**	*iP*		**Pn**	**16 40 26.3**	**-0.2**
KKNTU				*eS*		**Sn**	**16 40 45.7**	**+0.3**
VTR0	**Volcan Turrial**	**1.59**	**342**	*eP*		**Pn**	**16 40 28.0**	**-0.6**
CVTR	**Volcan Turrial**	**1.59**	**342**	*eP*		**Pn**	**16 40 28.6**	**0.0**

*GUC **28** 16:40:05.3±0.3, 16˚.73S×72˚.52W,h78km±83km,ML5.2*
*NEIC **28** 16:40:06.6±1.7, 16˚.81S±0˚.04×72˚.46W±0˚.08,h78km±4km, mb5.0/307,Mww4.9/29,Mwr4.8(GUC),Error ellipse: s-maj=11.7km s-min=5.7km az=104.0*
*IDC **28** 16:40:06.8±0.3,16˚.68S×72˚.22W,h82km±2km,mb4.6/20, mbtmp4.8/25,MS3.7/42,Error ellipse: s-maj=13.4km s-min=9.3km az=61.0*
*GFZ **28** 16:40:06.7±0.1,17˚S±2˚×7˚2W±˚,h80km,M5.2/53, mb5.1/53*
*GFZ **28** 16:40:06.8, 16˚.73S×72˚.36W,h94km,Mw4.9/66,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.47; Mθθ1.79; Mϕϕ-0.33; Mrθ2.09; Mθϕ-0.20; Mϕr0.59; Fault plane solution: M₀2.73737×10¹⁶ NP1: ϕs115.92258°,δ22.01067°,λ-54.01991°. NP2: ϕs257.85852°,δ72.34533°,λ-103.35991°. Principal axes: T 2.8158, Plg26.1752°, Azm358.3483°; N -0.1642, Plg12.7199°, Azm261.9783°; P -2.6515, Plg60.4609°, Azm148.5044°;*
*GCMT **28** 16:40:08.5±0.2, 16˚.74S±0˚.01×72˚.35W±0˚.02,h108km±1km, MW5.0/118,Moment Tensor Solution. s74,c93; s118,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.97±.09; Mθθ2.99±.10; Mϕϕ-0.01±.12; Mrθ2.20±.07; Mθϕ-0.43±.13; Mϕr-0.22±.08; Best double couple: M₀3.73500×10¹⁶ NP1:ϕs99.00000°,δ27.00000°, λ-88.00000°. NP2:ϕs277.00000°,δ63.00000°, λ-91.00000°. Principal axes: T 3.7750, Plg18.0000°, Azm8.0000°; N -0.0760, Plg1.0000°, Azm277.0000°; P -3.6960, Plg72.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **28** 16:40:08.7±0.3, 16˚.63S×72˚.13W,h95km, mb5.0, Presumed earthquake*
ISC 28 16:40:06.2±0.3,**16.72S**±0˚.04×**72˚.31W**±0˚.05,**h79**km±2km, **h79**km:**pP-P,n499,**σ1s**30**/369,**mb5.0**/180,**7C-4D,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AP01	**Chacalluta**	**2.50**	**131**	*eP*		**Pn**	**16 40 45.0**	**+0.2**
AP01	**Chacalluta**	**2.50**	**131**			**Pn**	**16 40 45.6**	**+0.9**
AP01	**Chacalluta**	**2.50**	**131**	P		**Pn**	**16 40 45.8**	**+1.0**
PB12	**IPOC Station P**	**2.67**	**135**	⇑*iP*		**Pn**	**16 40 47.5**	**+0.3**
PB12				IAML			16 41 20.1	
	comp=N,11μm,0.3s							
PB12	**IPOC Station P**	**2.67**	**135**			**Pn**	**16 40 47.5**	**+0.3**
PB12	**IPOC Station P**	**2.67**	**135**	P		**Pn**	**16 40 47.6**	**+0.4**
PB18	**Visviri**	**2.84**	**108**	⇑*eP*		**Pn**	**16 40 53.8**	**+3.8**
PB18				IAML			16 41 47.9	
	comp=E,3μm,0.6s							
PB18	**Visviri**	**2.84**	**108**			**Pn**	**16 40 53.1**	**+3.1**
PX02	**IPOC Station P**	**3.01**	**138**	*eP*		**Pn**	**16 40 50.7**	**-1.1**
PX02				IAML			16 41 24.7	
	comp=N,5μm,0.3s							
PB16	**IPOC Station P**	**3.12**	**121**	⇑*eP*		**Pn**	**16 40 55.0**	**+1.3**
PB16				IAML			16 41 35.0	
	comp=N,4μm,0.7s							
PB16	**IPOC Station P**	**3.12**	**121**			**Pn**	**16 40 55.1**	**+1.3**
PB16	**IPOC Station P**	**3.12**	**121**	P		**Pn**	**16 40 55.0**	**+1.3**
PSGCX	**Pisagua**	**3.54**	**144**	⇑*iP*		**Pn**	**16 40 58.6**	**-0.4**
PSGCX				*eS*		**Sn**	**16 41 37.8**	**-2.0**
PSGCX	**Pisagua**	**3.54**	**144**			**Pn**	**16 40 58.6**	**-0.4**
PSGCX	**Pisagua**	**3.54**	**144**	P		**Pn**	**16 40 58.8**	**-0.2**
PB11	**IPOC Station P**	**3.94**	**141**	⇑*eP*		**Pn**	**16 41 04.5**	**-0.1**
PB11	**IPOC Station P**	**3.94**	**141**			**Pn**	**16 41 04.4**	**-0.1**
PB11	**IPOC Station P**	**3.94**	**141**	P		**Pn**	**16 41 04.6**	**+0.1**
LPAZ	**La Paz**	**4.04**	**84**	P		**Pn**	**16 41 10.1**	**+3.9**
	comp=N,94nm,0.3s,baz=298,slow=7.7,SNR=367							
LPAZ				S		Sn	16 41 35.4	-17
	comp=N,289nm,0.6s,baz=244,slow=2.1,SNR=9.8							
LPAZ	**La Paz**	**4.04**	**84**			**Pn**	**16 41 10.5**	**+4.3**
LPAZ	**La Paz**	**4.04**	**84**	*eP*		**Pn**	**16 41 07.1**	**+0.9**
TA02	**Huaiquique**	**4.09**	**150**	*eP*		**Pn**	**16 41 06.0**	**-0.4**
TA02	**Huaiquique**	**4.09**	**150**	P		**Pn**	**16 41 06.1**	**-0.4**
GO01	**Chusmiza**	**4.17**	**135**			**Pn**	**16 41 08.5**	**+0.6**
GO01	**Chusmiza**	**4.17**	**135**	P		**Pn**	**16 41 08.8**	**+0.9**
PB08	**IPOC Station P**	**4.54**	**139**	⇑*eP*		**Pn**	**16 41 13.1**	**+0.2**
PB08	**IPOC Station P**	**4.54**	**139**			**Pn**	**16 41 13.1**	**+0.2**
PB08	**IPOC Station P**	**4.54**	**139**	P		**Pn**	**16 41 13.3**	**+0.4**
PB02	**IPOC Station P**	**5.12**	**154**			**Pn**	**16 41 19.6**	**-0.9**
PB02	**IPOC Station P**	**5.12**	**154**	P		**Pn**	**16 41 19.9**	**-0.6**
PB07	**IPOC Station P**	**5.48**	**156**			**Pn**	**16 41 24.2**	**-1.3**
PB07	**IPOC Station P**	**5.48**	**156**	P		**Pn**	**16 41 24.6**	**-1.0**
PB09	**IPOC Station P**	**5.82**	**151**			**Pn**	**16 41 29.9**	**-0.3**
PB09	**IPOC Station P**	**5.82**	**151**	P		**Pn**	**16 41 30.4**	**+0.2**
PB03	**IPOC Station P**	**5.83**	**156**			**Pn**	**16 41 29.1**	**-1.2**
PB03	**IPOC Station P**	**5.83**	**156**	P		**Pn**	**16 41 29.3**	**-1.0**
PB05	**IPOC Station P**	**6.42**	**162**			**Pn**	**16 41 36.2**	**-2.0**
PB05	**IPOC Station P**	**6.42**	**162**	P		**Pn**	**16 41 36.4**	**-1.9**
NNA	**Nana**	**6.43**	**316**	P		**Pn**	**16 41 38.7**	**+0.3**
	comp=N,65nm,0.4s,baz=119,slow=15,SNR=20							
NNA				S		**Sn**	**16 42 44.9**	**-5.6**
	comp=N,83nm,0.3s,baz=168,slow=6.2,SNR=1.7							
NNA	**Nana**	**6.43**	**316**	P		**Pn**	**16 41 39.0**	**+0.5**
PB06	**IPOC Station P**	**6.49**	**157**			**Pn**	**16 41 38.2**	**-1.1**
PB06	**IPOC Station P**	**6.49**	**157**	P		**Pn**	**16 41 38.5**	**-0.8**
PB14	**IPOC Station P**	**8.07**	**168**			**Pn**	**16 41 58.3**	**-2.7**
PB14	**IPOC Station P**	**8.07**	**168**	P		**Pn**	**16 41 58.8**	**-2.1**
CZSB	**Cruzeiro do Su**	**8.94**	**358**			**Pn**	**16 42 09.1**	**-3.6**
CZSB	**Cruzeiro do Su**	**8.94**	**358**	P		Pn	16 42 05.8	-6.9
	comp=N,2μmcomp=N,144nm,0.4s							
SALTA		**9.33**	**144**	P		**Pn**	**16 42 18.0**	**-0.4**
AC01	**Pan de Azucar**	**9.52**	**171**	P		**Pn**	**16 42 18.3**	**-2.2**
AC02	**Maricunga**	**10.49**	**164**			**Pn**	**16 42 33.3**	**-0.9**
AC02	**Maricunga**	**10.49**	**164**	P		**Pn**	**16 42 34.3**	**+0.1**
SIV	**San Ignacio**	**10.82**	**88**	P		**Pn**	**16 42 37.3**	**-1.0**
	comp=N,10nm,0.7s,baz=269,slow=11,SNR=20							
SIV				LR		LR	16 47 41.3	
	comp=N,581nm,21.6s,baz=288,slow=42							
BBSD	**Serra de San D**	**11.21**	**94**	*eP*		**Pn**	**16 42 42.2**	**-1.5**
ATAH	**Atahualpa**	**11.23**	**327**	P		**Pn**	**16 42 44.8**	**+0.6**
	comp=N,12nm,0.8s,baz=158,slow=16,SNR=6.0							
ATAH				S		**Sn**	**16 44 48.7**	**+0.5**
	comp=N,11nm,0.8s,baz=306,slow=21,SNR=1.4							
AC05	**El Transito**	**12.21**	**172**	P		**Pn**	**16 42 55.2**	**-2.0**
VILB	**Vilhena**	**12.30**	**74**			**Pn**	**16 42 57.6**	**-0.8**
VILB	**Vilhena**	**12.30**	**74**	*eP*		**Pn**	**16 42 55.8**	**-2.6**
PTLB	**Pontes e Lacer**	**12.73**	**86**	*eP*		**Pn**	**16 43 05.0**	**+0.8**
CO01	**Juntas del Tor**	**13.35**	**172**	P		**Pn**	**16 43 13.4**	**+0.7**
GO04	**Tololo Observa**	**13.46**	**174**			**Pn**	**16 43 13.0**	**-1.2**
GO04	**Tololo Observa**	**13.46**	**174**	P		**Pn**	**16 43 13.6**	**-0.6**
CO03	**El Pedregal**	**14.13**	**174**			**Pn**	**16 43 22.2**	**-0.6**
CO03	**El Pedregal**	**14.13**	**174**	P		**Pn**	**16 43 22.5**	**-0.3**
COIM	**Forte Coimbra**	**14.15**	**105**	*eP*		**Pn**	**16 43 21.6**	**-1.4**
MCRA	**Macar, Loja**	**14.38**	**358**	P		**Pn**	**16 43 25.5**	**-0.6**
	comp=N,2μmcomp=N,160nm,0.8s							
CO02	**Combarbal**	**14.47**	**175**	Pn		**Pn**	**16 43 26.8**	**-0.3**
CO02	**Combarbal**	**14.47**	**175**	P		**Pn**	**16 43 26.9**	**-0.3**
MURT	**Porto Murtinho**	**14.73**	**112**	*eP*		**Pn**	**16 43 28.5**	**-2.0**
ZON	**Zonda**	**15.13**	**168**			**P**	**16 43 40.4**	**+1.4**
TEFE	**Tefe**	**15.14**	**31**	*eP*		**Pn**	**16 43 34.7**	**-1.1**
CFA	**Coronel Fontan**	**15.28**	**167**	P		**Pn**	**16 43 38.5**	**+1.0**
	comp=N,29nm,0.8s,baz=351,slow=13,SNR=15							
CFA				S		**Sn**	**16 46 15.8**	**-10**
	comp=N,1.2nm,0.3s,baz=335,slow=17,SNR=1.1							
CO04	**Los Peladeros**	**15.30**	**176**	Pn		**Pn**	**16 43 36.6**	**-1.4**
CO04	**Los Peladeros**	**15.30**	**176**	P		**Pn**	**16 43 38.7**	**+0.6**
SALV	**Santo Antonio**	**15.98**	**89**	*eP*		**Pn**	**16 43 46.0**	**-0.4**
VA03	**San Esteban**	**16.05**	**175**	Pn		**Pn**	**16 43 46.2**	**-1.2**
VA03	**San Esteban**	**16.05**	**175**	P		**P**	**16 43 48.8**	**-0.5**
AQDB	**Aquidauana**	**16.19**	**106**	*eP*		**Pn**	**16 43 49.4**	**+0.4**
PEL	**Peldehue**	**16.42**	**175**	P		**Pn**	**16 43 51.9**	**+0.1**
MT02	**Curacav**	**16.50**	**177**			**Pn**	**16 43 53.2**	**+0.4**
PIAT	**Ana Tenorio**	**16.68**	**339**	P		**P**	**16 43 56.3**	**-0.4**
	comp=N,674nmcomp=N,41nm,0.6s							
PP1B	**Ponte de Pedra**	**16.68**	**96**	*eP*		**Pn**	**16 43 54.8**	**-0.4**
CPUP	**Villa Florida**	**16.89**	**127**	P		**Pn**	**16 43 58.0**	**+0.4**
	comp=N,6.8nm,1.0s,baz=296,slow=12,SNR=9.6							
CPUP	**Villa Florida**	**16.89**	**127**			**P**	**16 43 59.4**	**+0.9**
CPUP	**Villa Florida**	**16.89**	**127**	*eP*		**P**	**16 43 59.0**	**+0.5**
CPUP	**Villa Florida**	**16.89**	**127**	P		**Pn**	**16 43 56.9**	**-0.8**
PTLC	**Puerto Leguiza**	**16.96**	**351**	P		**Pn**	**16 43 53.4**	**-5.2**
	comp=N,4μmcomp=N,418nm,1.1s							
CLDB	**Colider**	**17.06**	**72**	*eP*		**P**	**16 44 00.3**	**-0.2**
CLDB	**Colider**	**17.06**	**72**	P		**Pn**	**16 43 59.2**	**-0.6**
SJPY	**San Joaquin**	**17.23**	**121**	*eP*		**P**	**16 44 02.2**	**-0.1**
SGC2	**Sao Gabriel da**	**17.28**	**18**	P		**Pn**	**16 43 57.9**	**-4.7**
	comp=N,1μmcomp=N,143nm,1.3s							
MACA	**Manacapuru-AM**	**17.67**	**42**	*eP*		**P**	**16 44 04.7**	**-2.4**
H03N1	**Juan Fernandez**	**17.68**	**198**	P		**Pn**	**16 44 07.0**	**0.0**
	baz=108,slow=13,SNR=13							
H03N1				T		T	17 02 21.7	
	baz=22,slow=73,SNR=925							
H03N2	**Juan Fernandez**	**17.69**	**198**	P		**P**	**16 44 06.9**	**0.0**
	baz=108,slow=13,SNR=10							
H03N2				T		T	17 02 24.6	
	baz=22,slow=73,SNR=914							
H03N3	**Juan Fernandez**	**17.70**	**198**	P		**P**	**16 44 06.8**	**-0.3**
	baz=108,slow=13,SNR=14							
H03N3				T		T	17 02 20.5	
	baz=22,slow=73,SNR=1076							
BO03	**Pichilemu**	**17.71**	**179**	P		**Pn**	**16 44 08.1**	**+0.5**
OTAV	**Otavalo**	**17.90**	**340**	P		**P**	**16 44 08.8**	**-1.4**
OTAV	**Otavalo**	**17.90**	**340**	*eP*		**Pn**	**16 44 10.5**	**0.0**
OTAV	**Otavalo**	**17.90**	**340**	P		**P**	**16 44 10.3**	**+0.1**
H03S3	**Juan Fernandez**	**18.04**	**198**	P		**Pn**	**16 44 12.2**	**+0.8**
	baz=242,slow=75,SNR=8.2							
BO02	**Sierra Bellavi**	**18.05**	**176**	P		**P**	**16 44 10.6**	**-0.7**
H03S2	**Juan Fernandez**	**18.05**	**198**	P		**Pn**	**16 44 12.3**	**+0.8**
	baz=242,slow=75,SNR=14							
H03S1	**Juan Fernandez**	**18.05**	**198**	P		**Pn**	**16 44 12.1**	**+0.6**
	baz=242,slow=75,SNR=7.0							
GO05	**Hualane**	**18.22**	**179**	P		**Pn**	**16 44 14.0**	**+0.2**
FLOC	**Florencia**	**18.48**	**349**	P		**Pn**	**16 44 17.0**	**-0.1**
	comp=N,1μmcomp=N,94nm,0.9s							
ML02	**Panimavida**	**18.98**	**178**	P		**Pn**	**16 44 22.7**	**-0.2**
GARC	**Garzon, Huila**	**19.05**	**350**	P		**P**	**16 44 23.1**	**+0.6**
	comp=N,2μmcomp=N,197nm,0.8s							
NPGB	**Novo Progresso**	**19.16**	**62**	*eP*		**P**	**16 44 22.7**	**-0.9**
BBAC	**Balboa, Cauca**	**19.25**	**345**	P		**Pn**	**16 44 26.1**	**-0.3**
	comp=N,881nmcomp=N,82nm,0.9s							
TRCB	**Terra Rica**	**19.48**	**111**	P		**P**	**16 44 28.0**	**+1.0**
TRCB	**Terra Rica**	**19.48**	**111**	*eP*		**P**	**16 44 26.9**	**-0.1**
PSAL	**Palomas, Salto**	**19.59**	**139**	*eP*		**Pn**	**16 44 29.4**	**-0.7**
POPC	**Popayan, Colom**	**19.62**	**347**	P		**Pn**	**16 44 30.3**	**-0.5**
	comp=N,1μmcomp=N,69nm,1.1s							
ARAG	**Araguaiana, MT**	**19.71**	**90**	*eP*		**P**	**16 44 30.4**	**+0.8**
BI02	**San Fabin de**	**19.89**	**178**	P		**Pn**	**16 44 33.0**	**-0.6**
BI05	**Punta Hualpn**	**19.96**	**182**	Pn		**P**	**16 44 33.2**	**+1.1**
JAMC	**Jamundi, Valle**	**20.27**	**347**	P		**P**	**16 44 35.7**	**-0.1**
	comp=N,1μmcomp=N,122nm,1.1s							
ITTB	**Itaituba**	**20.38**	**55**	*eP*		**P**	**16 44 36.0**	**-0.8**
PRAC	**Prado**	**20.46**	**353**	P		**P**	**16 44 39.0**	**+1.3**
	comp=N,3μmcomp=N,190nm,1.3s							
PTGB	**Pitanga**	**20.53**	**116**	*eP*		**P**	**16 44 39.3**	**+0.9**
ORTC	**Ortega, Tolima**	**20.70**	**352**	P		**P**	**16 44 41.6**	**+1.3**
	comp=N,1μmcomp=N,653nm,1.1s							
VILC	**Villavicencio,**	**20.74**	**356**	P		**P**	**16 44 40.7**	**-0.1**
SNDB	**Serra Nova Dou**	**20.90**	**80**	*eP*		**P**	**16 44 42.7**	**+0.3**
SNDB				*ep*	P	**pP**	**16 45 00.2**	**+1.2**
LDASE	**Londrina, Braz**	**20.98**	**112**	*eP*		**P**	**16 44 42.9**	**-0.3**
ITAB	**Concordia**	**21.41**	**123**	P		**P**	**16 44 47.6**	**-0.1**
ITAB	**Concordia**	**21.41**	**123**	*eP*		**P**	**16 44 47.9**	**+0.1**
ITAB	**Concordia**	**21.41**	**123**	P		**P**	**16 44 48.1**	**+0.3**
ROSC	**El Rosal**	**21.51**	**355**	P		**P**	**16 44 51.0**	**+1.7**
	comp=N,123nm,0.8s,baz=155,slow=8.3,SNR=26 comp=N,123nm,0.8s							
ROSC	**El Rosal**	**21.51**	**355**	P		**P**	**16 44 51.4**	**+2.1**
ROSC	**El Rosal**	**21.51**	**355**	P		**P**	**16 44 51.1**	**+1.8**
	comp=N,2μmcomp=N,136nm,1.1s							
ANCO	**Parque Anchore**	**21.71**	**146**	*eP*		**P**	**16 44 51.9**	**+1.1**
ANCO				*ep*	P	**pP**	**16 45 11.5**	**+4.7**
CPSB	**Cacapava Do Su**	**21.98**	**132**	P		**P**	**16 44 52.8**	**-0.9**
CPSB	**Cacapava Do Su**	**21.98**	**132**	*eP*		**P**	**16 44 52.7**	**-1.1**
CPSB	**Cacapava Do Su**	**21.98**	**132**	P		**P**	**16 44 53.0**	**-0.7**
GUY2C	**Guyana, Caldas**	**22.01**	**352**	P		**P**	**16 44 56.2**	**+1.5**
	comp=N,3μmcomp=N,233nm,0.6s							
BOAV	**Boa Vista**	**22.28**	**33**	P		**P**	**16 44 56.9**	**-0.2**
BOAV	**Boa Vista**	**22.28**	**33**	P		**P**	**16 44 56.6**	**-0.5**
	comp=N,1μmcomp=N,113nm,1.2s							
BOAV	**Boa Vista**	**22.28**	**33**	*eP*		**P**	**16 44 56.7**	**-0.5**
FRTB	**Fartura**	**22.35**	**111**	*eP*		**P**	**16 44 56.9**	**-1.0**
CBOC	**Ciudad Bolivar**	**22.73**	**350**	P		**P**	**16 45 01.9**	**-0.2**
	comp=N,1μmcomp=N,175nm,0.8s							
GO06	**Curarrehue**	**22.79**	**178**		IAmb	IAmb	16 45 04.4	
	comp=Z,73nm,1.1s							
GO06	**Curarrehue**	**22.79**	**178**	P		**P**	**16 45 02.8**	**+0.3**
BB19B	**Bebedouro**	**22.91**	**105**	*eP*		**P**	**16 45 01.9**	**-1.9**
HELC	**Santa Helena**	**22.98**	**352**	P		**P**	**16 45 05.4**	**+0.5**
	comp=Z,1μmcomp=Z,184nm,0.7s							
IPMB	**Ipameri, GO**	**23.04**	**97**	*eP*		**P**	**16 45 03.3**	**-1.8**
LR04	**Corral**	**23.10**	**182**		IAmb	IAmb	16 45 04.9	
	comp=Z,81nm,0.9s							
BDFB	**Brasilia**	**23.36**	**91**	P		**P**	**16 45 06.7**	**-1.5**
	comp=Z,4.6nm,0.5s,baz=254,slow=12,SNR=7.5							
BDFB				LR		LR	16 55 26.2	
	comp=Z,129nm,18.9s,baz=248,slow=40 comp=Z,4.6nm,0.5s							
BDFB	**Brasilia**	**23.36**	**91**	P		**P**	**16 45 07.2**	**-1.1**
LR05	**Currie**	**23.43**	**179**	P		**P**	**16 45 07.8**	**-0.6**
DBBC	**Dabeiba**	**23.90**	**350**	P		**P**	**16 45 14.9**	**+2.0**
PAMC	**Pamplona, Colo**	**23.91**	**359**	P		**P**	**16 45 13.6**	**+0.1**
PLCA	**Paso Flores**	**23.98**	**177**	P		**P**	**16 45 13.7**	**+0.2**
	comp=Z,40nm,0.8s,baz=358,slow=9.1,SNR=95							
PLCA				PcP		**PcP**	**16 48 53.8**	**0.0**
	comp=Z,3.2nm,0.8s,baz=354,slow=2.0,SNR=2.8 comp=Z,40nm,0.8s							
PLCA	**Paso Flores**	**23.98**	**177**	P		**P**	**16 45 13.4**	**0.0**
PLCA				IAmb		IAmb	16 45 15.4	
	comp=Z,49nm,0.8s							
PLCA	**Paso Flores**	**23.98**	**177**	*eP*		**P**	**16 45 13.9**	**+0.5**
PLCA	**Paso Flores**	**23.98**	**177**	P		**P**	**16 45 13.9**	**+0.5**
RCLB	**Rio Claro- Sao**	**24.01**	**108**	*eP*		**P**	**16 45 15.0**	**+1.0**
SPB	**Sao Paulo**	**24.32**	**110**	P		**P**	**16 45 17.6**	**+1.0**
SPB				IAmb		IAmb	16 45 45.5	
	comp=Z,44nm,1.0s							
SPB	**Sao Paulo**	**24.32**	**110**	*eP*		**P**	**16 45 16.6**	**0.0**
SPB	**Sao Paulo**	**24.32**	**110**	P		**P**	**16 45 14.8**	**-1.8**
LL03	**Petrohue**	**24.33**	**180**	P		**P**	**16 45 17.0**	**+0.4**
PRPB	**Parauapebas**	**24.39**	**67**	*eP*		**P**	**16 45 17.9**	**+0.6**
UREC	**San Jos de Ur**	**24.52**	**352**	P		**P**	**16 45 18.4**	**-0.1**
	comp=Z,744nmcomp=Z,40nm,0.7s							
LL05	**Los Muermos**	**24.62**	**182**		IAmb	IAmb	16 45 21.6	
	comp=Z,38nm,0.7s							
PMNB	**Patos De Minas**	**24.72**	**98**	P		**P**	**16 45 20.6**	**+0.1**
APAC	**Apartado, Choc**	**24.82**	**350**	P		**P**	**16 45 24.0**	**+2.8**
	comp=Z,2μmcomp=Z,179nm,1.3s							
SMTB	**Santa Maria do**	**25.32**	**75**	*eP*		**P**	**16 45 26.4**	**+0.4**
SDV	**Santo Domingo**	**25.50**	**4**	P		**P**	**16 45 26.7**	**-0.9**
SDV				IAmb		IAmb	16 45 33.3	
	comp=Z,96nm,1.1s							
SDV	**Santo Domingo**	**25.50**	**4**	*eP*		**P**	**16 45 27.4**	**-0.2**
AZU	**Azuero**	**25.59**	**341**	P		**P**	**16 45 30.4**	**+2.1**
	comp=Z,921nmcomp=Z,53nm,1.0s							
LL02	**Futaleuf**	**26.39**	**179**	P		**P**	**16 45 33.9**	**-1.3**
LL02	**Futaleuf**	**26.39**	**179**	P		**P**	**16 45 34.0**	**-1.2**
BSCB	**Bom Sucesso**	**26.39**	**104**	*eP*		**P**	**16 45 34.6**	**-1.0**
BSCB	**Bom Sucesso**	**26.39**	**104**	P		**P**	**16 45 35.2**	**-0.4**

comp=Z,17nm,0.9s
VHRN Van Horn 56.73 326 lAmb lAmb 16 50 03.4
comp=Z,13nm,1.1s
RLO Rose Lookout 56.82 338 lAmb lAmb 16 50 05.0
comp=Z,18nm,1.0s
POST Post 56.82 331 lAmb lAmb 16 50 04.3
comp=Z,20nm,0.9s
WMOK Wichita Mounta 57.02 334 lAmb lAmb 16 50 06.1
comp=Z,8.1nm,1.1s
TPB28 57.17 327 lAmb lAmb 16 50 09.0
comp=Z,7.1nm,0.8s
O53A New Philadelph 57.28 352 lAmb lAmb 16 49 50.9
comp=Z,10nm,0.8s
CCM Cathedral Cave 57.31 342 P **P** **16 49 47.3 +1.4**
N58A Sunbury 57.41 356 lAmb lAmb 16 49 48.7
comp=Z,13nm,0.8s
S39A Bolivar 57.62 340 lAmb lAmb 16 50 09.4
comp=Z,11nm,0.8s
MNTX Cornudas Mount 57.66 327 lAmb lAmb 16 50 09.7
comp=Z,10nm,1.1s
MNTX Cornudas Mount 57.66 327 P **P** **16 49 48.0 -0.5**
R40A Maddies Statio 57.84 342 lAmb lAmb 16 50 10.6
comp=Z,11nm,0.7s
M57A Sunshine Farm, 57.93 356 lAmb lAmb 16 49 54.1
comp=Z,13nm,0.7s
P43A Skaggs, Pawnee 58.32 344 lAmb lAmb 16 50 00.3
comp=Z,16nm,0.7s
N49A Columbus Grove 58.40 349 lAmb lAmb 16 50 00.5
comp=Z,13nm,0.7s
L59A Walton 58.67 358 lAmb lAmb 16 49 59.3
comp=Z,18nm,0.8s
BINY Binghamton 58.72 357 P **P** **16 49 56.5 +0.8**
L56A Greenwood 58.76 355 lAmb lAmb 16 49 59.5
comp=Z,16nm,0.7s
TRY Troy 59.17 359 lAmb lAmb 16 50 02.1
comp=Z,13nm,0.7s
P38A Dawn 59.45 341 lAmb lAmb 16 50 21.4
comp=Z,24nm,1.5s
319A Douglas 59.55 323 lAmb lAmb 16 50 03.9
comp=Z,14nm,0.6s
121A Cookes Peak, D 59.59 325 lAmb lAmb 16 50 24.3
comp=Z,14nm,1.1s
J59A Piesco 59.92 358 lAmb lAmb 16 50 53.4
comp=Z,19nm,0.9s
CFNY Clifton-Fine, 60.64 358 lAmb lAmb 16 50 12.0
comp=Z,11nm,0.7s
ALQ Albuquerque 60.76 328 lAmb lAmb 16 50 31.8
comp=Z,5.3nm,0.8s
ANMO Albuquerque 60.76 328 P **P** **16 50 10.4 +0.3**
ANMO Albuquerque 60.76 328 P **P** **16 50 10.6 +0.4**
ANMO Albuquerque 60.76 328 P **P** **16 50 10.5 +0.3**
ANMO pP **pP** **16 50 31.3 +0.7**
TASM ASL Pad, Albuq 60.76 328 P **P** **16 50 10.4 +0.3**
TASM ASL Pad, Albuq 60.76 328 P **P** **16 50 10.4 +0.3**
TASM lAmb lAmb 16 50 31.9
comp=Z,6.0nm,0.9s
WBO Williamsburg 61.48 358 lAmb lAmb 16 50 17.4
comp=Z,11nm,0.7s
SADO Sadowa 61.51 354 LR LR 17 20 31.5
comp=Z,38nm,19.2s,baz=204,slow=39
T25A Trinidad 61.52 331 lAmb lAmb 16 50 37.2
comp=Z,12nm,1.0s
PKME Peaks-Kenny Pk 61.75 2 P **P** **16 50 17.2 +0.9**
G65A Princeton 61.77 4 P **P** **16 50 17.3 +0.8**
BUKO Buck Lake 62.20 354 lAmb lAmb 16 50 23.0
comp=Z,16nm,0.8s
SDCO Great Sand Dun 62.52 331 lAmb lAmb 16 50 44.1
comp=Z,12nm,0.9s
TRQ Mont Tremblant 62.68 358 lAmb lAmb 16 50 25.7
comp=Z,13nm,0.8s
X16A Lo Mia Camp, P 63.02 324 lAmb lAmb 16 50 47.8
comp=Z,10nm,0.9s
D62A Allapoint, All 63.57 2 P **P** **16 50 28.9 +0.5**
WUAZ Wupatki 63.79 325 lAmb lAmb 16 50 53.5
comp=Z,12nm,0.8s
BELA Belgrano 2 63.91 172 P **P** **16 50 30.9 +0.6**
ECSD EROS Data Cent 64.14 341 lAmb lAmb 16 50 54.1
comp=Z,47nm,1.4s
ECSD EROS Data Cent 64.14 341 P **P** **16 50 32.4 +0.1**
PV01 Paradox Valley 64.31 329 lAmb lAmb 16 50 56.1
comp=Z,14nm,1.2s
PV15 Paradox Valley 64.43 329 lAmb lAmb 16 50 57.0
comp=Z,19nm,1.2s
PV02 Paradox Valley 64.45 329 lAmb lAmb 16 50 56.8
comp=Z,23nm,1.1s
PV05 Paradox Valley 64.53 328 lAmb lAmb 16 50 57.0
comp=Z,21nm,1.5s
PV12 Saucer Basin, 64.57 329 lAmb lAmb 16 51 15.1
comp=Z,25nm,1.3s
BAR Barrett 64.90 319 P **P** **16 50 37.8 +0.3**
BAR lAmb lAmb 16 51 00.0
comp=Z,15nm,1.0s
BORC Borrego Spring 65.14 320 lAmb lAmb 16 51 01.7
comp=Z,12nm,1.0s
HMU Henry Mountain 65.26 327 lAmb lAmb 16 51 02.6
comp=Z,17nm,1.3s
PFO Pinyon Flats O 65.40 320 LR LR 17 16 29.5
comp=Z,37nm,18.9s,baz=74,slow=33
KNB Kanab 65.69 325 lAmb lAmb 16 51 05.7
comp=Z,17nm,0.8s
PKCU Pink Cliffs 65.72 326 lAmb lAmb 16 51 06.0
comp=Z,16nm,1.2s
VNA1 Neumayer--Stat 65.84 161 ⇓P **P** **16 50 43.7 +0.8**
comp=Z,29nm,1.0s
F33A 5 Mile Ranch, 65.94 342 lAmb lAmb 16 50 44.5
comp=Z,17nm,0.7s
VNA2 Neumayer--Watz 66.20 161 ⇓P **P** **16 50 45.5 +0.3**
comp=Z,20nm,0.6s,baz=283,slow=7.4
VNA2 Neumayer--Watz 66.20 161 P **P** **16 50 46.1 +0.8**
P17A Butcher Ranch, 66.42 328 lAmb lAmb 16 50 48.8
comp=Z,8.0nm,0.7s
RSSD Black Hills 67.13 336 P **P** **16 50 52.1 +0.4**
RSSD Black Hills 67.13 336 P **P** **16 50 52.4 +0.7**
RSSD Black Hills 67.13 336 P **P** **16 50 52.4 +0.7**
RSSD pP **pP** **16 51 11.9 -0.6**
CCCA Chr Cany lake 67.24 321 lAmb lAmb 16 51 15.4
comp=Z,16nm,0.9s
FURC Furnace Creek, 67.59 322 lAmb lAmb 16 50 56.8
comp=Z,17nm,0.8s
WCT Wildcat Mounta 67.67 323 lAmb lAmb 16 51 18.4
comp=Z,12nm,0.8s
SNAA Sanae 67.82 161 ⇓P **P** **16 50 55.9 +0.3**
comp=Z,862nm,0.6s
SNAA Sanae 67.82 161 P **P** **16 50 55.8 +0.2**
comp=Z,34nm,0.6s,baz=278,slow=6.3,SNR=97
SNAA LR LR 17 21 41.9
comp=Z,35nm,18.1s,baz=280,slow=37
comp=Z,34nm,0.6s
SNAA Sanae 67.82 161 P **P** **16 50 56.2 +0.6**
TCUT Toone Canyon 68.00 329 lAmb lAmb 16 50 59.9
comp=Z,9.2nm,0.8s
DUG Dugway, Tooele 68.02 328 P **P** **16 50 58.6 +1.2**
DUG pP **pP** **16 51 18.6 +0.4**
AGMN Agassiz Nation 68.05 343 lAmb lAmb 16 50 57.9
comp=Z,12nm,0.8s
AGMN Agassiz Nation 68.05 343 P **P** **16 50 57.2 0.0**
AGMN pP **pP** **16 51 17.4 -0.7**
PDAR Pinedale Array 68.39 331 P **P** **16 50 59.6 -0.2**
comp=Z,0.9nm,0.9s,baz=153,slow=7.8,SNR=7.2
PDAR pP **pP** **16 51 21.5 +0.9**
comp=Z,1.3nm,0.7s,baz=128,slow=4.3,SNR=4.2
PDAR LR LR 17 23 06.5
comp=Z,29nm,21.2s,baz=128,slow=38
PDAR Pinedale Array 68.39 331 P **P** **16 50 59.0 -0.7**
PDAR pP **pP** **16 51 19.6 -0.9**
HWUT Hardware Ranch 68.45 329 P **P** **16 50 59.5 -0.6**
EPLO Experimental L 68.76 345 lAmb lAmb 16 51 23.5
comp=Z,12nm,0.8s
TROLL Troll, Antarti 69.54 161 ⇓P **P** **16 51 06.9 +0.6**
comp=Z,794nm,0.6s
MDPB Devils Postpil 69.68 322 lAmb lAmb 16 51 30.7
comp=Z,9.8nm,0.9s
ELK Elko 69.68 327 LR LR 17 20 51.8
comp=Z,61nm,19.7s,baz=133,slow=35
LHV Little Huntoon 69.76 323 lAmb lAmb 16 51 10.7
comp=Z,13nm,1.0s
NVAR Mina Array Bea 69.76 323 P **P** **16 51 09.0 +0.7**
comp=Z,3.4nm,0.8s,baz=151,slow=7.0,SNR=17
NVAR pP **PcP** **16 51 30.6 0.0**
comp=Z,3.9nm,0.8s,baz=156,slow=6.2,SNR=9.2
NVAR LR LR 17 22 05.9
comp=Z,26nm,20.9s,baz=121,slow=36
comp=Z,3.4nm,0.8s
NVAR Mina Array Bea 69.76 323 P **P** **16 51 08.1 -0.2**
NVAR **PcP** **16 51 30.5 0.0**
ULM Lac du Bonnet 69.84 344 P **P** **16 51 07.5 -0.7**
comp=Z,6.5nm,0.5s,baz=154,slow=6.3,SNR=11
ULM pP **pP** **16 51 28.6 -0.6**
comp=Z,12nm,0.6s,baz=143,slow=7.2,SNR=9.2
ULM LR LR 17 23 49.5
comp=Z,68nm,21.6s,baz=118,slow=38
comp=Z,6.5nm,0.5s
ULM Lac du Bonnet 69.84 344 lAmb lAmb 16 51 29.9
comp=Z,16nm,0.8s
YNE Yellowstone No 70.34 333 lAmb lAmb 16 51 34.8
comp=Z,26nm,0.9s
DBIC Dimbokro 70.61 77 P **P** **16 51 12.9 -0.8**
comp=Z,23nm,0.6s,baz=247,slow=6.7,SNR=27
DBIC pP **PcP** **16 51 34.2 -0.2**
comp=Z,23nm,0.8s,baz=281,slow=4.4,SNR=7.6
DBIC LR LR 17 21 23.2
comp=Z,137nm,18.4s,baz=252,slow=35
comp=Z,23nm,0.6s
DBIC Dimbokro 70.61 77 P **P** **16 51 13.0 -0.7**
DBIC **PcP** **16 51 34.4 -0.1**
DBIC lAmb lAmb 16 51 35.9
comp=Z,36nm,1.0s
DBIC Dimbokro 70.61 77 P **P** **16 51 13.4 -0.4**
DBIC pP **PcP** **16 51 33.7 -0.8**
DBIC Dimbokro 70.61 77 P **P** **16 51 13.1 -0.7**
DBIC pP **PcP** **16 51 34.1 -0.4**
YHB Horse Butte 70.68 332 lAmb lAmb 16 51 29.8
comp=Z,14nm,0.5s
YHL Hebgen Lake 70.75 332 lAmb lAmb 16 51 39.0
comp=Z,14nm,1.2s
DGMT Dagmar 70.85 338 lAmb lAmb 16 51 16.3
comp=Z,23nm,0.8s
PNTR Pine Nut 70.95 323 lAmb lAmb 16 51 39.4
comp=Z,14nm,0.8s
MHC Mount Hamilton 71.03 320 lAmb lAmb 16 51 39.2
comp=Z,9.8nm,0.8s
PAHR Pah Rah Range 71.24 323 lAmb lAmb 16 51 41.1
comp=Z,20nm,0.8s
HLID Hailey 71.31 329 P **P** **16 51 18.8 +1.3**
HLID pP **pP** **16 51 39.0 +0.4**
SCHQ Schefferville 71.42 3 P **P** **16 51 18.7 +0.9**
comp=Z,5.7nm,0.8s,baz=222,slow=7.8,SNR=5.4
SCHQ pP **pP** **16 51 38.2 -0.6**
comp=Z,6.5nm,0.7s,baz=175,slow=2.3,SNR=5.2
SCHQ LR LR 17 23 33.6
comp=Z,32nm,21.6s,baz=259,slow=36
comp=Z,5.7nm,0.8s
SCHQ Schefferville 71.42 3 lAmb lAmb 16 51 49.6
comp=Z,17nm,1.2s
ORV Orroville 72.37 322 lAmb lAmb 16 51 47.2
comp=Z,19nm,0.9s
EGMT Eagleton 72.61 335 lAmb lAmb 16 51 27.1
comp=Z,25nm,1.4s
QSPA South Pole Qui 73.44 180 P **P** **16 51 30.6 +0.7**
comp=Z,31nm,0.5s,baz=169,slow=1.1,SNR=363
comp=Z,31nm,0.5s
QSPA South Pole Qui 73.44 180 P **P** **16 51 30.4 +0.4**
QSPA South Pole Qui 73.44 180 P **P** **16 51 30.9 +1.0**
QSPA South Pole Qui 73.44 180 P **P** **16 51 30.7 +0.7**
M03C McCloud 73.84 323 lAmb lAmb 16 51 54.9
comp=Z,13nm,0.9s
KHBM Hayfork Bally 74.09 322 lAmb lAmb 16 51 57.3
comp=Z,18nm,0.9s
K05A Summer Lake 74.11 325 lAmb lAmb 16 51 36.9
comp=Z,13nm,1.0s
PINE Pine Mountain 74.84 326 lAmb lAmb 16 52 01.9
comp=Z,14nm,0.9s
NEW Newport 76.02 331 LR LR 17 27 10.2
comp=Z,30nm,20.0s,baz=142,slow=37
BUCK Buck Mountain 76.22 325 lAmb lAmb 16 51 48.0
comp=Z,19nm,1.0s
TORD Torodi Ar. Bea 78.90 73 P **P** **16 52 00.9 -0.7**
comp=Z,52nm,0.7s,baz=254,slow=5.1,SNR=159
TORD pP **pP** **16 52 21.7 -1.3**
comp=Z,33nm,0.7s,baz=257,slow=4.5,SNR=12
comp=Z,52nm,0.7s
SBA Scott Base 79.92 191 P **P** **16 52 07.2 +1.2**
SBA lAmb lAmb 16 52 09.4
comp=Z,38nm,1.4s
SBA Scott Base 79.92 191 P **P** **16 52 07.9 +1.8**
PFVI Vila Bisbo 80.21 47 *ep*P **pP** **16 52 31.5 +1.8**
PFVI *i* lAmb lAmb 16 52 51.9
comp=Z,76nm,1.6s
FRB Frobisher Bay 80.26 2 LR LR 17 29 47.2
comp=Z,49nm,20.4s,baz=135,slow=37
MORF Marmelete 80.42 46 *ep*P pP 16 52 31.7 +0.8
PTEO Sao Teotonio 80.49 46 *ep*P **pP** **16 52 31.8 +0.7**
PTEO *i* lAmb lAmb 16 52 35.1
comp=Z,104nm,1.7s
PBDV Barranco-do-Ve 80.89 47 *ep*P pP 16 52 35.0 +1.6
PLOUS Minas do Lousa 80.93 46 *ep*P pP 16 52 34.8 +1.3
VNDA Vanda 80.97 190 P **P** **16 52 13.4 +1.7**
comp=Z,14nm,0.8s,baz=128,slow=5.6,SNR=84
VNDA LR LR 17 23 49.5
comp=Z,17nm,20.7s,baz=144,slow=32
comp=Z,14nm,0.8s
VNDA Vanda 80.97 190 lAmb lAmb 16 52 14.7
comp=Z,20nm,0.9s
VNDA Vanda 80.97 190 P **P** **16 52 13.2 +1.5**
MESJ Messejana 80.98 46 *ep*P pP 16 52 34.5 +0.7
MESJ Messejana 80.98 46 *ep*P pP 16 52 34.5 +0.7
PCVE Castro Verde 81.00 46 *ep*P pP 16 52 35.5 +1.5
PVAQ Vaqueiros 81.12 47 *ep*P pP 16 52 35.8 +1.2
MOE Montemor 81.22 45 *ep*P pP 16 52 36.5 +1.4
MDT Midelt 81.26 52 P **P** **16 52 14.6 +0.5**
comp=Z,6.5nm,1.2s,baz=293,slow=5.7,SNR=2.8
MDT pP **pP** **16 52 36.2 +0.6**
comp=Z,3.8nm,0.8s,baz=258,slow=5.5,SNR=4.4
comp=Z,6.5nm,1.2s
PBEJ Beja 81.31 46 *ep*P pP 16 52 36.8 +1.2
EVO Evora 81.46 46 *ep*P pP 16 52 37.6 +1.2
PMTG Montargil 81.58 45 *ep*P **pP** **16 52 38.3 +1.4**
PMTG *i* lAmb lAmb 16 53 15.0
comp=Z,28nm,1.7s
PARRA Arraiolos 81.58 45 *ep*P pP 16 52 38.2 +1.2
PSARD Sardoal 81.88 45 *ep*P **pP** **16 52 39.7 +1.1**
PSARD *i* lAmb lAmb 16 52 40.3
comp=Z,25nm,0.9s
PBAR Barrancos 81.96 46 *ep*P pP 16 52 40.3 +1.2
PMRV Marv??o 82.32 45 *ep*P pP 16 52 41.2 +0.3
PCBR Castelo Branco 82.46 45 *ep*P pP 16 52 42.5 +0.9
BLKN Baker Lake 82.82 350 lAmb lAmb 16 52 21.9
comp=Z,17nm,1.4s
POLO Lamas de Olo 82.99 43 *ep*P pP 16 52 45.3 +0.8
EMAL Malaga-Limoner 83.15 49 P **P** **16 52 23.4 -0.3**
WIN Windhoek 83.22 111 lAmb lAmb 16 52 26.8
comp=Z,16nm,0.9s
MVO Moncorvo 83.40 44 *e*P **P** **16 52 26.4 +1.4**
MVO *ep*P **pP** **16 52 47.6 +1.0**
MVO *i* lAmb lAmb 16 52 48.2
comp=Z,21nm,1.3s
SUR Sutherland 83.79 122 LR LR 17 27 57.5
comp=Z,39nm,18.5s,baz=261,slow=34
PBRG Braganca 83.89 43 *ep*P **pP** **16 52 49.4 +0.3**
PBRG *i* lAmb lAmb 16 52 51.7
comp=Z,37nm,1.5s
TSUM Tsumeb 84.54 108 P **P** **16 52 32.0 +0.6**
TSUM lAmb lAmb 16 52 33.6
comp=Z,24nm,0.8s
TSUM Tsumeb 84.54 108 P **P** **16 52 32.9 +1.4**
TSUM pP **pP** **16 52 53.2 +0.1**
TSUM Tsumeb 84.54 108 P **P** **16 52 32.2 +0.7**
TSUM pP **pP** **16 52 53.3 +0.1**
ESDC Sonseca Array 84.78 46 P **P** **16 52 32.8 +0.7**
comp=Z,3.3nm,0.7s,baz=257,slow=5.0,SNR=25
ESDC pP **pP** **16 52 54.4 +0.7**
comp=Z,13nm,0.8s,baz=256,slow=5.1,SNR=24
ESDC LR LR 17 26 41.8
comp=Z,71nm,21.2s,baz=239,slow=33
comp=Z,3.3nm,0.7s
ESDC Sonseca Array 84.78 46 P **P** **16 52 32.8 +0.7**
ESDC pP **16 52 55.0 +1.3**
SFJD Kangerlussuaq 85.01 8 LR LR 17 30 11.6
comp=Z,34nm,21.3s,baz=212,slow=35
YKAW1 Yellowknife Wh 85.60 342 lAmb lAmb 16 52 36.5
comp=Z,18nm,0.8s
TAM Tamanrasset 85.63 65 P **P** **16 52 37.8 +1.0**
TAM Tamanrasset 85.63 65 P **P** **16 52 39.3 +2.5**
TAM pP **pP** **16 52 59.7 +1.3**
YKA Yellowknife Ar 85.65 342 P **P** **16 52 35.6 -0.1**
comp=Z,13nm,0.6s,baz=136,slow=5.4,SNR=93
YKA pP **pP** **16 52 57.5 +0.1**
comp=Z,12nm,0.7s,baz=139,slow=5.4,SNR=9.5
YKA LR LR 17 33 03.6
comp=Z,43nm,21.6s,baz=106,slow=37
comp=Z,13nm,0.6s
YKA Yellowknife Ar 85.65 342 P **P** **16 52 35.2 -0.5**
YKAW3 Yellowknife Wh 85.70 342 lAmb lAmb 16 52 37.0
comp=Z,11nm,0.8s
KOOLE Kule 85.85 113 P **P** **16 52 37.4 -0.6**
GRTLG Ghanzi 87.22 111 lAmb lAmb 16 52 46.4
comp=Z,17nm,0.8s
T35M Bob Quinn 87.75 332 lAmb lAmb 16 53 11.0
comp=Z,7.5nm,0.8s
CCD Concordia, Ant 87.85 184 P **P** **16 52 48.0 +1.0**
DLBC Dease Lake 88.51 334 LR LR 17 36 37.6
comp=Z,41nm,18.0s,baz=89,slow=38
BOSA Boshof 88.56 119 P **P** **16 52 50.5 -0.5**
BOSA LR LR 17 32 16.8
comp=Z,8.5nm,0.8s,baz=280,slow=3.5,SNR=11
comp=Z,17nm,19.7s,baz=192,slow=35
comp=Z,8.5nm,0.8s
BOSA Boshof 88.56 119 lAmb lAmb 16 52 51.9
comp=Z,16nm,1.1s
S34M Telegraph Cree 88.68 333 lAmb lAmb 16 52 52.5
comp=Z,15nm,1.3s
POIN Pond Inlet 89.28 358 lAmb lAmb 16 52 54.9
comp=Z,9.1nm,0.8s
Q32M Nakina River 89.77 333 lAmb lAmb 16 53 20.3
comp=Z,6.1nm,0.9s
MAW Mawson 89.79 164 P **P** **16 52 56.0 +0.3**
comp=Z,12nm,0.9s,baz=216,slow=5.7,SNR=16
MAW pP **pP** **16 53 18.6 +1.6**
comp=Z,4.9nm,0.7s,baz=201,slow=5.6,SNR=4.5
MAW LR LR 17 32 56.1
comp=Z,50nm,18.8s,baz=256,slow=35
comp=Z,12nm,0.9s
MAW Mawson 89.79 164 P **P** **16 52 56.8 +1.1**
MAW pP **pP** **16 53 18.6 +1.6**
LBTB Lobatse 89.97 116 LR LR 17 30 41.6
comp=Z,50nm,18.3s,baz=220,slow=34
LBTB Lobatse 89.97 116 P **P** **16 52 57.3 -0.3**
LBTB lAmb lAmb 16 52 59.1
comp=Z,12nm,1.0s
BORG Borgarnes 89.97 19 LR LR 17 30 16.0
comp=Z,46nm,21.7s,baz=237,slow=34
KHLH Kahului Airpor 90.54 292 P **P** **16 52 58.7 -1.3**
MMPY Sheldon Lake, 91.43 337 lAmb lAmb 16 53 56.8
comp=Z,12nm,1.7s
SUMG Summit 91.89 10 P **P** **16 53 07.8 +2.2**
SUMG pP **pP** **16 53 28.9 +1.5**
EKA Eskdalemuir Ar 92.28 32 LR LR 17 32 38.8
comp=Z,33nm,18.2s,baz=186,slow=34
RES Resolute Bay 92.32 354 LR LR 17 36 51.5
comp=Z,64nm,21.7s,baz=38,slow=37
O30N Mendenhall 92.37 334 lAmb lAmb 16 53 35.9
comp=Z,12nm,1.6s
KEST Kesra 93.05 54 LR LR 17 36 32.9
comp=Z,18nm,19.5s,baz=260,slow=36
N30M Aishikik Lake 93.13 334 lAmb lAmb 16 53 34.9
comp=Z,10nm,1.5s
MATP Matopo 93.98 113 LR LR 17 32 19.4
comp=Z,36nm,21.2s,baz=281,slow=33
M29M Somme Creek 94.18 335 lAmb lAmb 16 53 17.3
comp=Z,4.4nm,0.8s
H31M Peel River 94.32 339 lAmb lAmb 16 53 17.8
comp=Z,4.2nm,0.9s
J30M Hart River 94.40 337 lAmb lAmb 16 53 41.2
comp=Z,17nm,1.9s
K29M Barlow Dome 94.48 336 lAmb lAmb 16 53 40.0
comp=Z,5.0nm,1.0s
I30M Mount Dempster 94.74 338 lAmb lAmb 16 53 41.4
comp=Z,6.8nm,1.2s
AFI Afiamalu 94.86 254 LR LR 17 26 02.2
comp=Z,22nm,21.9s,baz=170,slow=29
INK Inuvik 95.39 341 LR LR 17 39 35.2
comp=Z,45nm,21.1s,baz=85,slow=37
INK Inuvik 95.39 341 lAmb lAmb 16 53 21.9
comp=Z,4.2nm,0.8s
I29M Ogilvie Camp, 95.52 337 lAmb lAmb 16 53 22.5
comp=Z,4.2nm,1.0s
BCAR Beaver Creek A 95.83 335 P **P** **16 53 23.4 -0.1**
L27K Beaver Creek, 95.84 335 lAmb lAmb 16 53 24.2
comp=Z,3.1nm,0.9s
DAVOX Davos/Dischmat 96.79 43 P **P** **16 53 28.9 +0.4**
comp=Z,0.8nm,0.3s,baz=328,slow=18,SNR=3.5
DAVOX pP **pP** **16 53 49.7 -0.6**
comp=Z,7.8nm,0.9s,baz=276,slow=4.6,SNR=9.2
DAVOX LR LR 17 35 36.3
comp=Z,61nm,19.5s,baz=257,slow=34
comp=Z,0.8nm,0.3s
DAVA Damuels 96.94 43 *ep*P pP 16 53 51.8 +0.8
comp=Z,8.5nm,1.0s
KLU Klutina 96.96 332 lAmb lAmb 16 53 28.8
comp=Z,3.6nm,0.7s
FETA Feichten 97.42 43 *ep*P pP 16 53 54.0 +0.8
comp=Z,4.4nm,0.9s
VAE Valguarnera 97.45 53 LR LR 17 39 14.4
comp=Z,33nm,18.4s,baz=313,slow=36
RETA Reutte 97.57 43 *ep*P pP 16 53 54.2 +0.5
comp=Z,4.1nm,0.8s
MOTA Moosalm 97.75 43 *ep*P pP 16 53 54.8 +0.2
comp=Z,11nm,1.1s
SQTA Sankt Quirin 97.79 43 *ep*P pP 16 53 55.6 +0.8
comp=Z,4.0nm,0.7s
WATA Walderalm 98.06 43 *ep*P pP 16 53 56.1 0.0
comp=Z,5.4nm,1.1s
WTTA Wattenberg 98.08 43 *ep*P pP 16 53 56.6 +0.5
comp=Z,5.6nm,0.8s
ABTA Abfaltersbach 98.52 44 *ep*Pdiff pP 16 53 58.6 +0.6
comp=Z,5.4nm,1.1s
ILAR Eielson Array 98.57 335 P **P** **16 53 35.0 -0.8**
comp=Z,0.5nm,0.7s,baz=141,slow=2.5,SNR=4.8
ILAR pP **pP** **16 53 57.4 -0.3**
comp=Z,0.8nm,0.7s,baz=157,slow=2.1,SNR=4.2
ILAR LR LR 17 45 37.0
comp=Z,29nm,18.2s,baz=70,slow=40
comp=Z,0.5nm,0.7s
LESA Schwarzleo/al 98.81 43 *ep*Pdiff pP 16 53 59.4 +0.1
comp=Z,4.0nm,0.8s
KBA Koelnbreinsper 99.16 44 *ep*Pdiff pP 16 54 00.8 -0.2
comp=Z,2.0nm,0.7s
MYKA Terra Mystica 99.24 44 *ep*Pdiff pP 16 54 01.4 +0.1
comp=Z,2.3nm,0.7s
OBKA Obir 99.82 44 *ep*Pdiff pP 16 54 04.0 +0.1
comp=Z,1.4nm,0.6s
GERES GERESS Array B 99.83 42 P **Pdif** **16 53 41.4 -0.5**
comp=Z,0.2nm,0.3s,baz=253,slow=13,SNR=2.0
GERES pP **pP** **16 54 04.0 +0.2**
comp=Z,1.8nm,0.8s,baz=250,slow=3.8,SNR=8.6
GERES LR LR 17 36 27.3
comp=Z,41nm,20.3s,baz=199,slow=34
comp=Z,0.2nm,0.3s
MOA Molln 99.95 43 *ep*Pdiff pP 16 54 04.4 +0.1
comp=Z,4.7nm,0.9s
FINES FINESS Array B 108.54 30 PKKPbc PKKPbc 17 09 35.6 -2.0
comp=Z,1.4nm,0.6s,baz=111,slow=4.3,SNR=8.0
BRTR Keskin Array B 112.65 53 PKKPbc PKKPbc 17 09 21.9 -1.7
comp=Z,0.2nm,0.4s,baz=337,slow=14,SNR=2.1
BRTR PKKPab **PKKPab** **17 09 30.3 +0.1**
comp=Z,0.7nm,0.7s,baz=91,slow=4.9,SNR=3.9
KBZ Khabaz 119.53 49 PKP **PKiKP** **16 58 47.5 +0.5**
comp=Z,2.6nm,0.7s,baz=225,slow=1.4,SNR=4.9
KBZ pPKP **pPKPdf** **16 59 09.8 +0.2**
comp=Z,6.1nm,0.9s,baz=163,slow=1.3,SNR=6.2
STKA Stephens Creek 121.76 214 PKP **PKPdf** **16 58 50.6 -1.1**
comp=Z,2.2nm,0.7s,baz=350,slow=2.3,SNR=4.5
STKA pPKP **pPKPdf** **16 59 14.4 +0.5**
comp=Z,1.0nm,0.6s,baz=110,slow=1.8,SNR=1.9
H11N3 WAKE ISLAND Hyl 123.91 283 T T 19 14 47.4
baz=98,slow=74,SNR=29
H11N2 WAKE ISLAND Hyl 123.92 283 T T 19 14 46.8
baz=98,slow=74,SNR=28
H11N1 WAKE ISLAND Hyl 123.92 283 T T 19 14 39.4
baz=98,slow=74,SNR=30
H11S2 WAKE ISLAND Hyl 123.93 281 T T 19 14 46.2
baz=99,slow=75,SNR=244
H11S1 WAKE ISLAND Hyl 123.94 281 T T 19 14 41.2
baz=99,slow=75,SNR=173
H11S3 WAKE ISLAND Hyl 123.95 281 T T 19 14 44.8
baz=99,slow=75,SNR=138
ARTI Arti 125.81 31 PKP **PKPdf** **16 58 58.2 -0.4**
comp=Z,2.9nm,0.6s,baz=89,slow=4.6,SNR=5.2
ARTI pPKP **pPKPdf** **16 59 22.1 +0.9**
comp=Z,8.6nm,0.6s,baz=125,slow=0.0,SNR=10
PETK Petropavlovsk- 126.82 325 PKP **PKiKP** **16 59 01.2 0.0**
comp=Z,3.8nm,0.6s,baz=49,slow=2.6,SNR=18
PETK pPKP **pPKPdf** **16 59 23.8 +0.6**
comp=Z,1.6nm,0.6s,baz=73,slow=2.1,SNR=2.5
CTA Charters Tower 127.34 227 PKP **PKPdf** **16 59 02.9 +0.2**
comp=Z,2.5nm,0.8s,baz=278,slow=5.2,SNR=3.5
AKTO Aktyubinsk 128.06 38 PKP **PKiKP** **16 59 03.6 -0.1**
comp=Z,2.2nm,0.7s,baz=262,slow=3.2,SNR=7.5
AKTO pPKP **pPKPdf** **16 59 26.4 +0.8**
comp=Z,4.7nm,0.8s,baz=263,slow=2.2,SNR=6.6
ASAR Alice Springs 132.38 213 PKhKP PKPpre 16 58 55.5

	comp=Z,0.7nm,0.8s,baz=138,slow=1.9,SNR=8.9								
ASAR				PKP	**PKPdf**	16 59 11.7	**-0.6**		
	comp=Z,1.4nm,0.6s,baz=116,slow=1.8,SNR=4.2								
ASAR				pPKP	pPKPdf	16 59 35.2	+0.7		
	comp=Z,0.9nm,0.6s,baz=142,slow=1.5,SNR=2.8								
BVAR	**Borovoye Array**	**133.50**	**30**	PKP	**PKiKP**	**16 59 14.1**	**-0.5**		
	comp=Z,1.8nm,0.6s,baz=270,slow=1.5,SNR=11								
BVAR				pPKP	**pPKPdf**	**16 59 36.9**	**+1.0**		
	comp=Z,4.7nm,0.6s,baz=268,slow=2.6,SNR=12								
WRA	**Warramunga Arr**	**135.13**	**217**	PKhKP	PKPpre	16 59 01.0			
	comp=Z,0.6nm,0.7s,baz=136,slow=3.6,SNR=7.8								
WRA				PKP	**PKPdf**	**16 59 16.8**	**-0.7**		
	comp=Z,6.7nm,0.7s,baz=133,slow=1.6,SNR=32								
WRA				pPKP	pPKPdf	16 59 41.0	+1.3		
	comp=Z,2.3nm,0.8s,baz=147,slow=1.9,SNR=2.7								
ZALV	**Zalesovo Beam**	**138.81**	**20**	PKhKP	PKPpre	16 59 13.7			
	comp=Z,0.4nm,0.5s,baz=320,slow=3.6,SNR=2.1								
ZALV				PKP	**PKPdf**	**16 59 22.9**	**-0.3**		
	comp=Z,9.6nm,0.7s,baz=286,slow=2.1,SNR=32								
ZALV				pPKP	pPKPdf	16 59 45.8	+0.1		
	comp=Z,13nm,0.7s,baz=296,slow=2.3,SNR=12								
KURK	**Kurchatov**	**138.87**	**28**		**PKPdf**	**16 59 22.9**	**-0.5**		
KURBB	**Kurchatov Arra**	**138.89**	**28**	PKhKP	PKPpre	16 59 15.0			
	comp=Z,0.4nm,0.6s,baz=307,slow=3.1,SNR=4.9								
KURBB				PKP	**PKPdf**	**16 59 22.9**	**-0.5**		
	comp=Z,1.7nm,0.6s,baz=318,slow=2.1,SNR=13								
KURBB				pPKP	pPKPdf	16 59 47.5	+1.5		
	comp=Z,5.1nm,0.6s,baz=307,slow=2.7,SNR=16								
FITZ	**Fitzroy Crossi**	**141.15**	**208**	PKhKP	PKPpre	16 59 21.2			
	comp=Z,3.2nm,0.5s,baz=185,slow=5.7,SNR=16								
FITZ				PKP	**PKPdf**	**16 59 28.4**	**-0.1**		
	comp=Z,4.4nm,0.8s,baz=215,slow=3.8,SNR=5.5								
HEH	**HeiHe**	**142.97**	**339**	PKP	**PKPdf**	**16 59 26.5**	**-4.3**		
HEH				pPKP	**pPKPdf**	**16 59 49.8**	**-3.5**		
MKAR	**Makanchi Array**	**143.37**	**30**	PKP	PKPbc	16 59 29.1	+0.1		
	comp=Z,4.5nm,0.7s,baz=316,slow=2.8,SNR=37								
MKAR				pPKP	pPKPdf	16 59 51.6	-2.7		
	comp=Z,5.8nm,0.8s,baz=310,slow=2.9,SNR=11								
KSH2	**Kashi**	**144.18**	**45**	PKP	**PKPdf**	**16 59 33.5**	**0.0**		
KSH2				pPKP	pPKPdf	16 59 55.3	-0.8		
USRK	**Ussuriysk Ar.**	**145.77**	**328**	PKPbc	**PKPbc**	**16 59 36.4**	**0.0**		
	comp=Z,8.7nm,0.7s,baz=36,slow=2.7,SNR=40								
USRK				pPKPbc	**pPKPdf**	**16 59 58.0**	**-0.5**		
	comp=Z,4.7nm,0.6s,baz=22,slow=4.7,SNR=6.4								
USRK	**Ussuriysk Ar.**	**145.77**	**328**	PKPdf	**PKPdf**	**16 59 35.4**	**-0.4**		
HILR	**Hailar Array B**	**145.82**	**346**	PKPbc	**PKPbc**	**16 59 36.4**	**-0.1**		
	comp=Z,39nm,0.7s,baz=57,slow=2.7,SNR=94								
HILR				pPKPbc	pPKPbc	16 59 58.9	+0.1		
	comp=Z,34nm,0.7s,baz=47,slow=2.7,SNR=10								
MJAR	**Matsushiro Arr**	**146.54**	**312**	PKPbc	**PKPbc**	**16 59 38.1**	**+0.7**		
	comp=Z,26nm,0.9s,baz=82,slow=0.8,SNR=54								
MJAR				pPKPbc	pPKPab	17 00 01.8	-0.2		
	comp=Z,19nm,1.0s,baz=79,slow=0.9,SNR=7.8								
BNX	**BinXian**	**146.70**	**335**	⇑P	**PKPdf**	**16 59 37.5**	**+0.1**		
BNX				pP	pPKPbc	17 00 01.5	+0.1		
BNX				pmax	pmax				
	comp=Z,19nm,0.9s								
THN	**Thein Dam**	**147.18**	**56**	*eP*	**PKPbc**	**16 59 41.6**	**+0.7**		
THN				*i* x	x	17 00 04.6			
TSSA	**Tissa**	**147.34**	**55**	*eP*	**PKPbc**	**16 59 41.5**	**-0.1**		
WMQ	**Urumqi**	**148.11**	**28**	*e*PKPbc	**PKPdf**	**16 59 41.5**	**+1.6**		
WMQ				pPKP	pPKPdf	17 00 00.8	-1.7		
WMQ				sPKP	sPKPdf	17 00 06.8	-4.1		
SMLA	**Simla**	**148.76**	**57**	*eP*	**PKPdf**	**16 59 43.0**	**+1.8**		
BATI	**Baumata**	**148.93**	**212**	PKPbc	**PKPdf**	**16 59 43.4**	**+1.4**		
	comp=Z,31nm,0.6s,baz=243,slow=2.0,SNR=12								
SONM	**Songino Array**	**148.95**	**2**	PKPbc	**PKPdf**	**16 59 42.3**	**+1.1**		
	comp=Z,15nm,0.7s,baz=314,slow=1.3,SNR=15								
SONM				pPKPbc	**pPKPbc**	**17 00 08.3**	**+0.6**		
	comp=Z,26nm,0.9s,baz=322,slow=1.6,SNR=14								
KUDL	**Kundal**	**149.09**	**63**	*eP*	**PKPbc**	**16 59 46.4**	**+0.3**		
KUDL				*i* x	x	17 00 09.0			
KLP	**Kalpa**	**149.48**	**56**	*eP*	**PKiKP**	**16 59 48.5**	**0.0**		
KLP				*i* x	x	17 00 11.5			
KOD	**Kodaikanal**	**149.94**	**99**	*eP*	**PKPbc**	**16 59 49.3**	**+0.4**		
BHPL	**Bhopal**	**150.87**	**72**	*eP*	**PKPbc**	**16 59 50.8**	**+0.3**		
BHPL				*i* pP	**pPKPbc**	**17 00 13.4**	**+0.3**		
SIJI	**Sorong**	**150.91**	**235**	PKPbc	**PKPbc**	**16 59 50.7**	**-0.2**		
	comp=Z,24nm,0.7s,baz=104,slow=3.5,SNR=18								
PTH	**Pithoragarh**	**151.76**	**58**	*eP*	**PKPbc**	**16 59 51.5**	**-1.2**		
PTH				*i* pP	**pPKPbc**	**17 00 13.8**	**-1.3**		
XLT	**XiLinHaoTe**	**151.99**	**347**	*e*PKPbc	**PKiKP**	**16 59 53.0**	**+0.1**		
XLT				PKPab	**pPKPbc**	**17 00 15.8**	**+0.8**		
KSRS	**Korea Array**	**152.70**	**323**	PKP	**PKPdf**	**16 59 47.3**	**+0.2**		
	comp=Z,4.3nm,1.0s,baz=42,slow=1.1,SNR=20								
KSRS				PKPbc	**PKiKP**	**16 59 54.9**	**+0.4**		
	comp=Z,8.8nm,0.7s,baz=357,slow=2.4,SNR=36								
KSRS				pPKPbc	**pPKPbc**	**17 00 16.9**	**+0.1**		
	comp=Z,3.1nm,0.6s,baz=12,slow=1.8,SNR=4.5								
KAPI	**Kappang**	**155.33**	**210**	PKPab	**PKPab**	**17 00 17.6**	**+0.7**		
	comp=Z,20nm,0.7s,baz=145,slow=4.0,SNR=7.1								
HHC	**Hu-ho-hao-te**	**155.72**	**353**	*eP*	**PKPdf**	**16 59 48.5**	**-2.9**		
GTA2	**Gaotai**	**156.29**	**15**	*e*PKP	**PKPdf**	**16 59 53.3**	**+1.1**		
GTA2				sPKP	sPKPab	17 00 42.5	-8.4		
BOK	**Bokaro**	**158.39**	**67**	*ex*	x	16 59 55.9			
LZH	**Lanzhou**	**160.41**	**9**	*e*PKP	PKPdf	17 00 05.3	+7.9		
LZH				sPKP	sPKPdf	17 00 19.8	-8.6		
NJ2	**Nanjing**	**161.68**	**328**	*eP*	**PKPdf**	**16 59 58.8**	**+0.2**		
NJ2				pmax	pmax				
	comp=Z,19nm,0.5s								
PZH	**PanZhiHua**	**168.81**	**29**	PKP	**PKPdf**	**17 00 03.5**	**-1.4**		
CMAR	**Chiang Mai Arr**	**171.49**	**77**	PKP	**PKPdf**	**17 00 07.0**	**+0.5**		
	comp=Z,1.9nm,0.8s,baz=292,slow=1.9,SNR=16								
CMAR				pPKP	**pPKPdf**	**17 00 29.4**	**+0.3**		
	comp=Z,0.7nm,0.4s,baz=290,slow=2.2,SNR=3.2								
CMAR				PKPab	**PKPab**	**17 01 27.8**	**-0.1**		
	comp=Z,2.5nm,0.7s,baz=281,slow=6.2,SNR=16								
CMAR				pPKPab	**pPKPab**	**17 01 49.2**	**-0.5**		
	comp=Z,1.2nm,0.6s,baz=284,slow=6.5,SNR=4.0								

*IDC **28** 16:57:48.8±1.5,6°.31S×147°.44E,h92km±13km,mb3.8/16, mbtmp4.2/21,MS3.2/8,Error ellipse: s-maj=18.2km s-min=9.2km az=89.0*

*NEIC **28** 16:57:49.4±0.9,6°.30S±0°.05×147°.47E±0°.07,h89km±4km, mb4.3/31,Error ellipse: s-maj=10.8km s-min=6.8km az=75.0*

ISC 28 16:57:46.1±0.5,**6°.27S**±0°.05×**147°.52E**±0°.08,**h63**km,**n69,** σ1§**26**/65,**mb4.3**/29,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.14**	**187**	P	**Pn**	**16 58 35.0**	**+1.8**
	92nm,0.3s,baz=7.7,slow=5.5,SNR=133						
PMG				S	**Sn**	**16 59 11.7**	**+2.2**
	179nm,0.5s,baz=18,slow=19,SNR=7.7						
MANU	**Manus Island**	**4.20**	**358**	Pn	**Pn**	**16 58 51.4**	**+3.7**
KRVT	**Keravat (AS076**	**4.89**	**67**	LR	LR	17 00 24.7	
	comp=Z,17nm,20.2s,baz=112,slow=31						
RABL	**Rabaul**	**5.06**	**66**		Pn	16 59 03.7	+4.2
JAY	**Jayapura**	**7.75**	**298**	P	**Pn**	**16 59 38.4**	**+2.0**
	4.7nm,0.5s,baz=165,slow=18,SNR=10						
JAY				S	**Sn**	**17 01 05.3**	**+2.5**
	5.0nm,0.8s,baz=254,slow=18,SNR=1.2						
JAY				LR	LR	17 03 30.6	
	comp=Z,56nm,19.6s,baz=180,slow=44						
COEN	**Coen**	**8.76**	**209**	Pn	**Pn**	**16 59 50.9**	**+0.7**
CTA	**Charters Tower**	**13.79**	**185**	P	**Pn**	**17 01 01.8**	**+3.0**
	3.4nm,0.6s,baz=356,slow=13,SNR=6.8						
CTAO	**Charters Tower**	**13.79**	**185**	Pn	**Pn**	**17 01 00.8**	**+2.0**
SIJI	**Sorong**	**17.08**	**288**	P	**P**	**17 01 42.4**	**+0.6**
	2.1nm,0.3s,baz=76,slow=12,SNR=1.6						
SIJI				LR	LR	17 08 59.4	
	comp=Z,70nm,19.6s,baz=48,slow=39						
MTN	**Manton Dam**	**17.43**	**247**	P	**Pn**	**17 01 45.5**	**+0.4**
WB0	**Warramunga Arr**	**18.52**	**222**	P	**P**	**17 01 57.5**	**-0.1**
WR8	**Warramunga Arr**	**18.58**	**222**	P	**P**	**17 01 58.3**	**0.0**
WR8				IAmb	IAmb	17 02 07.5	
	comp=Z,20nm,1.4s						
WRAB	**Tennant Creek**	**18.66**	**222**	P	**P**	**17 01 59.4**	**+0.2**
WRA	**Warramunga Arr**	**18.68**	**222**	P	**P**	**17 01 58.8**	**-0.6**
	comp=Z,4.4nm,0.7s,baz=50,slow=11,SNR=30						
WRA	**Warramunga Arr**	**18.68**	**222**	P	**P**	**17 01 57.6**	**-1.7**
GUMO	**Guam**	**19.90**	**352**	LR	LR	17 10 08.5	
	comp=Z,28nm,18.1s,baz=169,slow=37						
KNRA	**Kununurra**	**20.64**	**242**	P	**P**	**17 02 20.4**	**-0.3**
KNRA				IAmb	IAmb	17 02 40.1	
	comp=Z,14nm,1.5s						
AS31	**Alice Springs**	**21.70**	**216**	P	**P**	**17 02 32.0**	**-0.1**
ASAR	**Alice Springs**	**21.70**	**216**	P	**P**	**17 02 32.7**	**+0.6**
	comp=Z,4.1nm,0.5s,baz=52,slow=8.4,SNR=94						
ASAR				S	**S**	**17 06 26.0**	**-3.0**
	comp=Z,1.5nm,0.9s,baz=36,slow=19,SNR=4.9						
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**21.70**	**216**	P	**P**	**17 02 31.9**	**-0.1**
INKA	**Innaminka**	**22.31**	**196**		**P**	**17 02 38.5**	**0.0**
INKA				IAmb	IAmb	17 02 42.8	
	comp=Z,8.6nm,0.9s						
BATI	**Baumata**	**23.93**	**259**	P	**P**	**17 02 52.8**	**-1.8**
	comp=Z,25nm,1.0s,baz=113,slow=15,SNR=1.8						
	comp=Z,25nm,1.0s						
ARMA	**Armidale**	**24.33**	**171**	P	**P**	**17 02 58.5**	**+0.3**
ARMA				IAmb	IAmb	17 03 01.4	
	comp=Z,22nm,1.0s						
FITZ	**Fitzroy Crossi**	**24.37**	**239**	P	**P**	**17 02 59.0**	**+0.4**
	comp=Z,23nm,0.7s,baz=55,slow=9.1,SNR=49						
FITZ				LR	LR	17 12 56.7	
	comp=Z,107nm,18.4s,baz=6.5,slow=37						
	comp=Z,23nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.37**	**239**	P	**P**	**17 02 58.8**	**+0.2**
STKA	**Stephens Creek**	**26.07**	**192**	P	**P**	**17 03 14.0**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=2.0,slow=6.5,SNR=12						
	comp=Z,5.0nm,0.7s						
TOLI2	**Tolitoli**	**27.68**	**284**	P	**P**	**17 03 28.2**	**-0.4**
TOLI2				IAmb	IAmb	17 03 49.2	
	comp=Z,12nm,1.4s						
BBOO	**Buckleboo**	**28.49**	**201**	P	**P**	**17 03 35.4**	**-0.1**
BBOO				IAmb	IAmb	17 04 05.8	
	comp=Z,31nm,1.4s						
FORT	**Forrest**	**30.47**	**214**	P	**P**	**17 03 53.4**	**+0.3**
FORT				IAmb	IAmb	17 04 14.6	
	comp=Z,7.8nm,1.1s						
TOO	**Toolangi**	**31.21**	**183**	P	**P**	**17 03 59.5**	**-0.1**
TOO				IAmb	IAmb	17 04 39.5	
	comp=Z,9.3nm,1.4s						
JCJ	**Chichijima**	**33.57**	**351**	LR	LR	17 17 40.2	
	comp=Z,15nm,18.6s,baz=159,slow=36						
MORW	**Morawa**	**37.39**	**229**	P	**P**	**17 04 53.3**	**+0.2**
BFZ	**Birch Farm**	**42.83**	**147**	P	**P**	**17 05 38.8**	**+0.8**
MYKOM	**Kota Tinggi**	**44.33**	**279**	P	**P**	**17 05 50.4**	**-0.1**
MYKOM				IAmb	IAmb	17 06 19.7	
	comp=Z,19nm,1.3s						
KSRS	**Korea Array**	**47.19**	**339**	P	**P**	**17 06 12.2**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=148,slow=8.4,SNR=6.1						
KSRS				LR	LR	17 24 53.3	
	comp=Z,16nm,20.3s,baz=145,slow=34						
	comp=Z,0.7nm,0.5s						
KULM	**Kulim**	**48.18**	**283**	P	**P**	**17 06 19.8**	**-0.9**
MCQ	**Macquarie Isla**	**48.97**	**171**	P	**P**	**17 06 24.6**	**-1.5**
GSI	**Gunungsitoli**	**50.43**	**277**	P	**P**	**17 06 37.2**	**-0.6**
USA0B	**Ussuriysk Arra**	**52.15**	**346**	P	**P**	**17 06 50.6**	**+0.4**
USA0B				IAmb	IAmb	17 07 26.2	
	comp=Z,3.5nm,0.9s						
USRK	**Ussuriysk Ar.**	**52.15**	**346**	P	**P**	**17 06 51.4**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=134,slow=4.2,SNR=3.1						
	comp=Z,1.5nm,0.6s						
PEA0B	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**17 07 45.1**	**+0.6**
PETK	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**17 07 45.4**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=168,slow=5.7,SNR=12						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**17 07 45.3**	**+0.7**
HILR	**Hailar Array B**	**60.63**	**340**	P	**P**	**17 07 50.0**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=126,slow=9.9,SNR=6.3						
	comp=Z,1.8nm,0.6s						
WOH	**Wood Valley**	**61.55**	**64**	P	**P**	**17 07 56.3**	**-1.1**
SONM	**Songino Array**	**64.89**	**331**	P	**P**	**17 08 18.2**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=142,slow=7.5,SNR=4.6						
	comp=Z,1.1nm,1.0s						
CASY	**Casey**	**65.14**	**196**	P	**P**	**17 08 20.3**	**+0.2**
CASY				IAmb	IAmb	17 08 22.1	
	comp=Z,3.3nm,0.7s						
MA2	**Magadan**	**65.68**	**2**	P	**P**	**17 08 24.3**	**+0.6**
VNDA	**Vanda**	**71.62**	**177**	P	**P**	**17 08 59.5**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=344,slow=7.6,SNR=8.7						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**71.62**	**177**	P	**P**	**17 09 00.4**	**0.0**
VNDA				IAmb	IAmb	17 09 21.5	
	comp=Z,3.1nm,1.4s						
MKAR	**Makanchi Array**	**78.03**	**320**	P	**P**	**17 09 36.2**	**-1.9**
	comp=Z,0.3nm,0.4s,baz=95,slow=9.0,SNR=6.0						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**78.03**	**320**	P	**P**	**17 09 37.6**	**-0.4**
ZALV	**Zalesovo Beam**	**79.51**	**328**	P	**P**	**17 09 44.4**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=106,slow=5.8,SNR=6.2						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**79.51**	**328**	P	**P**	**17 09 44.0**	**-1.9**
KURK	**Kurchatov**	**81.73**	**323**	P	**P**	**17 09 56.6**	**-1.3**
KURK	**Kurchatov**	**81.73**	**323**	IAmb	IAmb	17 10 04.7	
	comp=Z,3.4nm,1.4s						
KURBB	**Kurchatov Arra**	**81.76**	**323**	P	**P**	**17 09 56.6**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=120,slow=3.4,SNR=4.9						
	comp=Z,0.4nm,0.8s						
H19K	**Roundabout Mou**	**82.37**	**20**	P	**P**	**17 10 01.6**	**+0.7**
H19K				IAmb	IAmb	17 10 25.6	
	comp=Z,6.0nm,1.1s						
QSPA	**South Pole Qui**	**83.70**	**180**	P	**P**	**17 10 07.8**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=298,slow=1.4,SNR=14						
	comp=Z,2.0nm,0.7s						
QSPA	**South Pole Qui**	**83.70**	**180**	P	**P**	**17 10 08.5**	**+0.4**
QSPA				IAmb	IAmb	17 10 27.6	
	comp=Z,10nm,1.4s						
ILAR	**Eielson Array**	**85.52**	**23**	P	**P**	**17 10 15.2**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=250,slow=5.4,SNR=4.5						
	comp=Z,0.5nm,0.7s						
J25K	**Salcha River,**	**86.05**	**23**	P	**P**	**17 10 19.6**	**-0.2**
J25K				IAmb	IAmb	17 10 21.9	
	comp=Z,1.4nm,0.8s						
I26K	**Coal Creek Min**	**87.19**	**23**	P	**P**	**17 10 25.1**	**0.0**
I26K				IAmb	IAmb	17 10 43.0	
	comp=Z,4.7nm,1.4s						
BVAR	**Borovoye Array**	**87.29**	**324**	P	**P**	**17 10 23.9**	**-2.0**
	comp=Z,0.7nm,0.4s,baz=100,slow=6.2,SNR=6.1						
	comp=Z,0.7nm,0.4s						
ABKAR	**Akbulak array**	**93.12**	**319**	P	**P**	**17 10 51.5**	**-1.8**
AKTO	**Aktyubinsk**	**94.47**	**320**	LR	LR	17 52 39.2	
	comp=Z,31nm,21.0s,baz=264,slow=35						
ARTI	**Arti**	**94.69**	**326**	LR	LR	17 52 39.4	
	comp=Z,61nm,20.4s,baz=292,slow=35						
GERES	**GERESS Array B**	**122.42**	**326**	PKP	**PKPdf**	**17 16 33.6**	**-0.9**
	comp=Z,2.0nm,0.4s,baz=92,slow=2.9,SNR=3.0						
TORD	**Torodi Ar. Bea**	**145.66**	**284**	PKPbc	**PKPab**	**17 17 19.0**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=90,slow=3.0,SNR=32						

*AEIC **28** 17:02:21.6±1.6,54°.89N±0°.05×160°.35W±0°.05,h29km±7km, Error ellipse: s-maj=6.9km s-min=4.2km az=175.0*

NEIC 28 17:02:21.4±1.5,**54°.88N**±0°.03×**160°.37W**±0°.04,
h29km±10km,**ML3.5**/32,**ML3.2**(AEIC),**Error ellipse: s-maj=5.2km s-min=2.1km az=215.0,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.46**	**97**		Pb	17 02 31.3	+0.3
CNBA					Sb	17 02 38.2	+0.6
SDPT	**Sand Point**	**0.47**	**353**		Pb	17 02 31.6	+0.2
SDPT					Sb	17 02 38.7	+0.6
SDPT				IAML		17 02 39.3	
	comp=N,3μm,0.6s						
DOL	**Dolgoi Island**	**0.90**	**288**		Pn	17 02 37.8	-0.4
DOL					Sb	17 02 50.1	0.0
PS1A	**Pavlof South-1**	**0.96**	**305**		Pn	17 02 38.8	-0.2
PS1A					Pb	17 02 39.3	-0.1
PS1A					Sb	17 02 52.0	+0.2
PS4A	**Pavlof South-4**	**0.97**	**299**		Pn	17 02 39.0	-0.1
PS4A					Sb	17 02 52.7	+0.5
PN7A	**Pavlof North-7**	**1.09**	**301**		Pn	17 02 41.1	+0.3
PN7A					Sb	17 02 55.6	+0.2
DTNA	**Dutton South F**	**1.12**	**285**		Pn	17 02 41.2	+0.1
DT1	**Dutton Round H**	**1.12**	**283**		Pn	17 02 41.0	-0.2
DT1					Sn	17 02 55.6	-0.1
VNKR	**Veniaminof 5**	**1.29**	**26**		Pn	17 02 43.5	0.0
VNKR					Sn	17 03 00.0	+0.2
VNSS	**Veniaminof 8**	**1.45**	**21**		Pn	17 02 46.1	+0.2
VNFG	**Fog Glacier, M**	**1.48**	**18**		Pn	17 02 46.6	+0.3
VNFG				IAML		17 03 14.6	
	comp=N,473nm,0.5s						
VNFG				IAML		17 03 20.4	
	comp=E,431nm,0.7s						
VNFG	**Fog Glacier, M**	**1.48**	**18**		Pn	17 02 46.7	+0.4
ISNN	**Isanotski Nort**	**1.97**	**270**		Pn	17 02 54.3	+1.4
SSBA	**Shishaldin**	**2.17**	**269**		Pn	17 02 55.8	+0.1
SSBA					Pb	17 02 57.0	-3.1
SSBA					Sb	17 03 25.5	-1.2
ANPB	**Aniakchak Plen**	**2.26**	**31**		Pn	17 02 57.2	+0.3
ANNE	**Aniakchak Nort**	**2.42**	**32**		Pn	17 02 59.3	+0.2
AKSA	**Akutan Strait**	**3.19**	**259**		Pn	17 03 11.0	+1.3
AKSA					Pb	17 03 11.2	-6.2
AKUT	**Akutan**	**3.24**	**259**	Pn	Pn	17 03 09.2	-1.0
AHB	**Akutan Harbor**	**3.27**	**259**		Pn	17 03 12.1	+1.4
ZRO	**Akutan Zero**	**3.37**	**259**		Pn	17 03 13.3	+1.3
LVA	**Lava Point**	**3.38**	**260**	Pn	Pn	17 03 12.4	+0.1
R17L	**Mt. Peulik Vol**	**3.55**	**37**		Pn	17 03 15.5	+0.8
PLK1	**Peulik 1**	**3.60**	**34**		Pn	17 03 16.1	+0.8
UNV	**Unalaska Valle**	**3.74**	**256**		Pn	17 03 16.9	-0.2
UNV				IAML		17 05 44.3	
	comp=E,54nm,0.9s						
UNV				IAML		17 05 45.3	
	comp=N,80nm,0.6s						
MNAT	**Makushin Natee**	**3.82**	**257**		Pn	17 03 19.1	+0.8
SII	**Sitkinak Islan**	**3.88**	**62**	Pn	Pn	17 03 18.4	-0.8
SII				IAML		17 05 57.0	
	comp=E,88nm,0.9s						
MGOD	**Makushin Gods**	**3.96**	**257**		Pn	17 03 21.0	+0.8
Q17K	**Contact Creek**	**4.20**	**34**		Pn	17 03 24.2	+0.6
O15K	**Ungalikthiuk R**	**4.32**	**4**		Pn	17 03 24.4	-0.7
O15K				IAML		17 06 20.7	
	comp=E,38nm,0.8s						
ACHA	**Angle Creek He**	**4.35**	**38**	Pn	Pn	17 03 26.1	+0.4
P16K	**Nushagak River**	**4.36**	**16**	Pn	Pn	17 03 25.0	-0.7
O14K	**Tigyukauivet M**	**4.41**	**354**		Pn	17 03 26.0	-0.4
O14K	**Tigyukauivet M**	**4.41**	**354**	IAML		17 05 51.5	
	comp=N,44nm,0.8s						
O14K				IAML		17 06 21.5	
	comp=E,37nm,1.5s						
OHAK	**Old Harbor**	**4.61**	**57**		Pn	17 03 28.2	-0.9
P17K	**Kvichak River**	**4.83**	**25**	Pn	Pn	17 03 31.6	-0.5
O16K	**Kokwok River B**	**4.89**	**14**	Pn	Pn	17 03 31.6	-1.3
O16K				IAML		17 06 40.1	
	comp=N,29nm,0.8s						
O16K				IAML		17 06 40.5	
	comp=E,34nm,0.8s						
N14K	**Kuskokwak Cree**	**5.11**	**353**		Pn	17 03 35.3	-0.7
KDAK	**Kodiak Island**	**5.22**	**53**	Pn	Pn	17 03 37.2	-0.2
O17K	**Koliganek Bris**	**5.22**	**19**		Pn	17 03 37.1	-0.3
N15K	**Kwethluk River**	**5.31**	**1**		Pn	17 03 38.6	-0.1
Q19K	**Cape Douglas,**	**5.48**	**39**	Pn	Pn	17 03 42.4	+1.3
N16K	**Nishlik Lake**	**5.68**	**8**		Pn	17 03 43.6	-0.2
O18K	**Koktuh Hills**	**5.72**	**27**	Pn	Pn	17 03 44.9	+0.6
M13K	**Dall Lake**	**5.78**	**345**		Pn	17 03 44.5	-0.6
M15K	**Kasigluk River**	**5.83**	**358**		Pn	17 03 45.1	-0.8
N17K	**Nushagak Hills**	**5.92**	**15**		Pn	17 03 46.6	-0.4
M14K	**Bethel**	**5.95**	**352**		Pn	17 03 46.9	-0.5
SPIA	**Saint Paul Isl**	**6.00**	**297**		Pn	17 03 47.5	-0.6
M16K	**Timber Creek**	**6.21**	**6**		Pn	17 03 50.4	-0.6
N18K	**Kilae Creek**	**6.29**	**21**	Pn	Pn	17 03 51.5	-0.7
M11K	**Mekoryuk**	**6.34**	**333**	Pn	Pn	17 03 53.8	+0.9
ILSW	**Iliamna Southw**	**6.43**	**34**	Pn	Pn	17 03 52.9	-1.3
L14K	**Kuka Creek**	**6.60**	**350**		Pn	17 03 55.3

comp=N,47nm,0.9s
OHAK IAML 17 06 27.6
comp=E,44nm,1.1s
P17K Kvichak River 4.81 24 Pn Pn 17 05 04.9 -0.5
O16K Kokwok River B 4.88 13 Pn Pn 17 05 05.6 -0.8
N14K Kuskokwak Cree 5.12 352 Pn Pn 17 05 10.0 +0.2
N14K IAML 17 06 41.9
comp=N,75nm,1.4s
N14K IAML 17 07 06.5
comp=E,62nm,1.2s
KDAK Kodiak Island 5.17 53 Sn Sn 17 06 08.2 -0.4
comp=E,0.3nm,0.3s,baz=156,slow=22,SNR=1.1
KDAK LR LR 17 06 58.5
comp=E,25nm,20.4s,baz=209,slow=35
KDAK Kodiak Island 5.17 53 Pn Pn 17 05 11.2 +0.8
KDAK IAML 17 06 35.0
comp=E,48nm,0.7s
KDAK IAML 17 06 35.7
comp=E,40nm,1.0s
O17K Koliganek Bris 5.20 18 Pn Pn 17 05 12.2 +1.3
N15K Kwethluk River 5.31 1 Pn Pn 17 05 12.0 -0.4
N15K IAML 17 06 51.6
comp=N,44nm,1.1s
N15K IAML 17 06 57.8
comp=E,53nm,0.9s
Q19K Cape Douglas, 5.45 39 Pn Pn 17 05 14.1 -0.1
O18K Koktuh Hills 5.69 27 Pn 17 05 17.6 0.0
M13K Dall Lake 5.80 345 Pn Pn 17 05 19.4 +0.4
M15K Kasigluk River 5.84 358 Pn 17 05 20.3 +0.6
N17K Nushagak Hills 5.90 15 Pn 17 05 19.8 -0.7
M14K Bethel 5.97 352 Pn 17 05 21.1 -0.2
SPIA Saint Paul Isl 6.06 296 Pn Pn 17 05 21.6 -1.0
CLES Cleveland East 6.07 254 Pn Pn 17 05 21.0 -1.7
M16K Timber Creek 6.21 6 Pn 17 05 24.6 0.0
N18K Kilae Creek 6.27 20 Pn 17 05 25.4 -0.2
M11K Mekoryuk 6.38 332 Pn Pn 17 05 26.0 -1.0
ILSW Iliamna Southw 6.40 34 Pn Pn 17 05 27.2 -0.2
L14K Kuka Creek 6.62 350 Pn 17 05 29.1 -1.1
N19K Bonanza Creek 6.71 25 Pn 17 05 31.7 +0.2
M17K Holitna River 6.71 12 Pn 17 05 32.3 +0.7
RED Redoubt Volcan 6.86 33 Pn Pn 17 05 32.6 -1.1
L15K Ungalak Mounta 6.86 355 Pn 17 05 33.7 +0.2
L16K Owhat River 6.87 3 Pn Pn 17 05 34.4 +0.7
BRLK Bradley Lake 7.05 42 Pn Pn 17 05 36.9 +0.7
L17K Donlin 7.36 7 Pn 17 05 40.8 +0.5
K13K Kusilvak Mount 7.45 344 Pn 17 05 41.2 -0.4
K15K Wolf Creek Mou 7.47 355 Pn 17 05 41.3 -0.7
L18K Granite Mounta 7.60 13 Pn 17 05 43.3 -0.5
M19K Big River Lodg 7.69 21 Pn 17 05 46.2 +1.3
SLKM Skilak Lake 7.79 39 Pn Pn 17 05 47.0 +0.6
L19K White Mountain 7.85 19 Pn 17 05 47.0 -0.2
K17K Iditarod 7.93 7 Pn Pn 17 05 48.8 +0.5
M20K Styx River 7.96 25 Pn 17 05 48.1 -0.6
O22K Cooper Landing 7.96 41 Pn Pn 17 05 49.8 +1.2
J14K Nanvaranak Lak 8.08 349 Pn Pn 17 05 50.5 +0.2
J16K Anvik River 8.44 359 Pn 17 05 55.1 -0.1
J17K VABM Dome 8.57 4 Pn Pn 17 05 56.8 -0.2
KOFP Korovin Flat P 8.64 258 Pn Pn 17 05 59.8 +1.8
ATKA Atka Island 8.72 258 Pn Pn 17 05 59.0 -0.2
PWL Port Wells 8.73 42 Pn 17 05 59.6 +0.4
J18K Innoko River 8.81 10 Pn Pn 17 06 01.2 +1.0
I17K Unalakleet 9.05 359 Pn Pn 17 06 03.9 +0.4
J19K Poorman 9.45 13 Pn 17 06 09.4 +0.5
SCM Sheep Creek Mo 9.72 39 Pn Pn 17 06 12.5 -0.4
J20K Nowinta River 9.83 16 Pn 17 06 14.3 +0.1
KLU Klutina 10.05 43 Pn 17 06 17.5 +0.3
ANM Nome 10.06 347 Pn Pn 17 06 17.9 +0.6
ADK Adak 10.26 260 Pn Pn 17 06 20.4 +0.3
KIWB Kanaga Island 10.54 260 Pn Pn 17 06 24.2 +0.3
G16K Koyuk River 10.61 355 Pn Pn 17 06 25.4 +0.6
H19K Roundabout Mou 10.86 8 Pn Pn 17 06 28.9 +0.8
F15K North Star Dit 11.09 351 Pn Pn 17 06 31.6 +0.2
TNA Tin City 11.37 344 Pn Pn 17 06 34.7 -0.5
GRNC Granite Creek 11.46 52 Pn 17 06 36.3 -0.4
BARN Barnard Glacie 11.63 50 Pn Pn 17 06 38.7 -0.3
ILAR Eielson Array 11.96 29 Pn Pn 17 06 39.5 -3.8
baz=220,slow=13,SNR=2.1
comp=E,0.2nm,0.4s
F19K Shaleruckik Mo 12.06 5 Pn Pn 17 06 44.8 +0.2
G21K Allakaket 12.13 13 Pn Pn 17 06 45.9 +0.3
BCAR Beaver Creek A 12.53 42 Pn Pn 17 06 51.6 +0.5
AMKA Amchitka 12.76 262 Pn Pn 17 06 53.7 -0.5
M29M Somme Creek 13.59 47 17 07 05.1 -0.5
S31K Pelican 13.63 67 Pn Pn 17 07 07.0 +1.0
C16K Lisburne Hills 13.66 352 Pn 17 07 08.6 +2.2
D20K Etivluk River 13.99 6 Pn Pn 17 07 10.2 -0.8
L29M L29M 14.01 45 Pn 17 07 11.5 +0.3
C19K Lookout Ridge 14.29 1 Pn Pn 17 07 14.1 -0.8
I28M Miner Creek 14.56 35 Pn 17 07 17.1 -1.6
K29M Barlow Dome 14.58 43 Pn 17 07 18.0 -1.0
I29M Ogilvie Camp, 15.07 37 Pn 17 07 24.5 -0.7
I29M IAmb IAmb 17 07 44.6
comp=Z,5.6nm,1.2s
J30M Hart River 15.38 41 Pn 17 07 27.1 -2.4
J30M IAmb IAmb 17 07 40.6
comp=Z,5.2nm,0.7s
U33K Whale Pass 15.39 74 Pn Pn 17 07 27.5 -1.9
U33K IAmb IAmb 17 07 38.3
comp=Z,14nm,1.4s
H29M Whitestone 15.54 34 Pn 17 07 30.0 -1.3
I30M Mount Dempster 15.68 39 Pn 17 07 31.9 -1.4
I30M IAmb IAmb 17 07 55.8
comp=Z,13nm,0.8s
F28M Old Crow 15.98 29 Pn Pn 17 07 35.0 -2.0
G29M Pine Creek 16.07 33 Pn 17 07 35.9 -2.2
G29M IAmb IAmb 17 07 58.1
comp=Z,5.1nm,0.8s
C27K Jago River 16.58 20 Pn Pn 17 07 43.8 -0.7
C27K IAmb IAmb 17 07 58.8
comp=Z,8.9nm,1.5s
H31M Peel River 16.71 39 Pn 17 07 45.7 -0.5
H31M IAmb IAmb 17 08 06.7
comp=Z,6.3nm,0.9s
MMPY Sheldon Lake, 16.80 51 P Pn 17 07 47.0 -0.3
E29M Blow River 17.06 29 P Pn 17 07 48.5 -1.9
F30M Barrier River 17.19 32 P Pn 17 07 50.5 -1.6
F30M IAmb IAmb 17 08 23.6
comp=Z,7.3nm,1.3s
G31M Satah River 17.30 36 P Pn 17 07 53.1 -0.3
G31M IAmb IAmb 17 08 03.3
comp=Z,8.2nm,1.4s
INK Inuvik 18.29 32 P P 17 08 05.0 -0.2
comp=Z,0.2nm,0.3s,baz=222,slow=13,SNR=5.6
comp=Z,1.0nm,0.7s
INK Inuvik 18.29 32 P P 17 08 04.9 -0.3
PET Petropavlovsk 24.01 283 P P 17 09 05.2 -0.5
YKA Yellowknife Ar 24.45 53 P P 17 09 11.7 +2.1
comp=Z,0.2nm,0.4s,baz=273,slow=8.6,SNR=2.4
comp=Z,0.2nm,0.4s
YKA Yellowknife Ar 24.45 53 P P 17 09 09.0 -0.6
PEA0B Petropavlovsk- 24.52 283 P P 17 09 09.9 -0.4
PETK Petropavlovsk- 24.52 283 P P 17 09 09.8 -0.6
comp=Z,3.0nm,0.5s,baz=79,slow=13,SNR=33
comp=Z,3.0nm,0.5s
PETK Petropavlovsk- 24.52 283 P P 17 09 09.9 -0.4
H11N2 WAKE ISLAND Hy 43.01 229 T T 17 57 52.9
baz=28,slow=74
H11N3 WAKE ISLAND Hy 43.01 228 T T 17 57 56.0
baz=28,slow=74
H11N1 WAKE ISLAND Hy 43.02 229 T T 17 57 37.9
baz=28
H11S1 WAKE ISLAND Hy 44.17 228 T T 17 59 36.2
baz=24
H11S2 WAKE ISLAND Hy 44.19 228 T T 17 59 36.5
baz=24
H11S3 WAKE ISLAND Hy 44.19 228 T T 17 58 53.9
baz=24
MJAR Matsushiro Arr 45.12 272 P P 17 12 05.2 -2.0
comp=Z,1.1nm,0.6s,baz=33,slow=8.3,SNR=4.7
comp=Z,1.1nm,0.6s
KSRS Korea Array 50.38 281 P P 17 12 47.4 -0.4
comp=Z,0.9nm,0.9s,baz=57,slow=7.4,SNR=4.6
comp=Z,0.9nm,0.9s
SONM Songino Array 54.53 304 P P 17 13 18.4 -0.2
comp=Z,0.9nm,0.7s,baz=41,slow=8.2,SNR=4.5
comp=Z,0.9nm,0.7s
SONM Songino Array 54.53 304 IAmb IAmb 17 13 19.7
comp=Z,0.8nm,0.9s
ARCES ARCESS Array B 55.83 358 LR LR 17 37 53.5
comp=Z,50nm,21.8s,baz=274,slow=37
KURK Kurchatov 63.90 323 P P 17 14 22.6 -0.5
KURK IAmb IAmb 17 14 24.5
comp=Z,0.8nm,0.7s
FIA1 FINESS Array S 63.92 357 P P 17 14 22.7 -0.4
FINES FINESS Array B 63.92 357 P P 17 14 23.0 0.0
comp=Z,0.9nm,0.5s,baz=28,slow=8.4,SNR=11
comp=Z,0.9nm,0.5s
FINES FINESS Array B 63.92 357 P P 17 14 22.5 -0.5
NOA NORSAR Array B 64.24 5 P P 17 14 24.8 -0.4
comp=Z,1.3nm,0.9s,baz=355,slow=6.6,SNR=3.5
comp=Z,1.3nm,0.9s
BVAR Borovoye Array 64.60 329 P P 17 14 28.2 +0.5
comp=Z,1.0nm,0.6s,baz=38,slow=8.2,SNR=6.2
comp=Z,1.0nm,0.6s
ARTI Arti 64.72 337 P P 17 14 27.9 -0.5
HFS Hagfors 65.24 3 P P 17 14 32.1 +0.4
comp=Z,1.6nm,0.6s,baz=14,slow=6.7,SNR=5.9
comp=Z,1.6nm,0.6s
MKAR Makanchi Array 65.81 318 P P 17 14 35.4 -0.2
comp=Z,0.4nm,0.7s,baz=72,slow=5.5,SNR=3.5
comp=Z,0.4nm,0.7s
MKAR Makanchi Array 65.81 318 P P 17 14 35.2 -0.4
EKA Eskdalemuir Ar 68.56 14 P P 17 14 54.5 +1.6
comp=Z,0.7nm,0.5s,baz=104,slow=24,SNR=1.5
comp=Z,0.7nm,0.5s
AB31 Akbulak array 70.90 333 P P 17 15 06.9 -0.4
AB31 IAmb IAmb 17 15 08.3
comp=Z,1.5nm,0.6s
ABKAR Akbulak array 70.90 333 P P 17 15 07.9 +0.5
AKASG Malin Array Be 74.50 354 P P 17 15 29.0 +0.3
comp=Z,0.8nm,0.4s,baz=9.4,slow=5.9,SNR=4.9
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 74.50 354 IAmb IAmb 17 15 37.4
comp=Z,2.6nm,1.1s
MLPR Magueyes Islan 77.32 77 P P 17 15 44.1 -1.2
CMAR Chiang Mai Arr 81.14 289 P P 17 16 06.2 +0.1
comp=Z,1.6nm,0.7s,baz=18,slow=5.6,SNR=9.3
comp=Z,1.6nm,0.7s
ESDC Sonseca Array 83.66 18 P P 17 16 20.5 +1.5
comp=Z,0.6nm,0.6s,baz=332,slow=5.7,SNR=4.9
comp=Z,0.6nm,0.6s
ATAH Atahualpa 91.11 101 LR LR 17 56 09.2
comp=Z,22nm,18.8s,baz=16,slow=34
STKA Stephens Creek 99.75 227 P Pdif 17 17 34.0 -0.1
comp=Z,0.7nm,0.6s,baz=38,slow=10,SNR=2.8
PALK Pallekele 100.12 298 LR LR 18 11 03.4
comp=Z,8nm,18.0s,baz=151,slow=40
QSPA South Pole Qui 144.65 180 PKP PKPdf 17 23 25.9 +0.4
comp=Z,1.1nm,0.7s,baz=131,slow=0.8,SNR=8.6

*IDC **28** 17:21:51.2±0.6,4.7°S×122.95E, h0km, mb4.0/13, mbtmp4.1/18, ML4.2/5, MS3.4/10, Error ellipse: s-maj=22.2km s-min=12.7km az=70.0*
*DJA **28** 17:21:53.7±0.2,5.5°S×122.3°E±.1°, h10km, M4.7/40, mB5.3/8, mb5.1/16, MLv4.5/40, Mw(mB)4.7/8*
*GFZ **28** 17:21:54.0±0.9,5.2°S×122.3°E±.1°, h21km±7km, M4.2/16, mb4.7/16, Error ellipse: s-maj=5.3km s-min=4.3km az=84.1, confirmed*
*NEIC **28** 17:21:55.4±1.3,4.72°S±0.05°×122.87°E±0.07°, h25km±5km, mb4.5/37, Error ellipse: s-maj=9.4km s-min=7.6km az=72.0*

ISC 28 17:21:52.8±0.3,**4.71S**±0.03°×**122.95E**±0.05,**h10**km,**n137,**
σ1°**09**/136,**mb4.5**/33,**MS3.5**/6,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KDI	**Kendari**	**0.82**	**336**	P	P	**Pg**	**17 22 07.8**	**-0.8**
KDI				S	S	**Sg**	**17 22 19.3**	**0.0**
BBSI	**Bau Bau**	**0.86**	**206**	P	P	**Pg**	**17 22 09.6**	**+0.2**
BBSI	**Bau Bau**	**0.86**	**206**	P	P	**Pg**	**17 22 09.5**	**0.0**
KKSI	**Kolaka, Sulawe**	**1.40**	**292**	P	P	**Pn**	**17 22 16.8**	**-1.7**
KKSI	**Kolaka, Sulawe**	**1.40**	**292**	P	P	**Pn**	**17 22 17.3**	**-1.1**
BSSI	**Bau Bau, Buton**	**2.83**	**240**	P	P	**Pn**	**17 22 37.1**	**-1.1**
BSSI	**Bau Bau, Buton**	**2.83**	**240**	P	P	**Pn**	**17 22 36.8**	**-1.4**
KAPI	**Kappang**	**3.20**	**264**	Pn	P	**Pn**	**17 22 43.7**	**+0.4**
	20nm,0.3s,baz=93,slow=5.8,SNR=42							
KAPI				Sn	S	**Sn**	**17 23 22.4**	**+0.9**
	27nm,0.3s,baz=232,slow=21,SNR=5.8							
KAPI				LR	LR		17 24 06.4	
	comp=Z,697nm,18.7s,baz=74,slow=42							
	124nm,0.5s							
KAPI	**Kappang**	**3.20**	**264**			**Pn**	**17 22 42.9**	**-0.4**
KAPI				Sn	S	**Sn**	**17 23 22.1**	**+0.6**
KAPI	**Kappang**	**3.20**	**264**	P	P	**Pn**	**17 22 43.3**	**+0.1**
KAPI	**Kappang**	**3.20**	**264**	P	P	**Pn**	**17 22 43.5**	**+0.2**
SPSI	**Sidrap Palu**	**3.26**	**283**	P	P	**Pn**	**17 22 44.2**	**+0.2**
SPSI	**Sidrap Palu**	**3.26**	**283**	P	P	**Pn**	**17 22 44.0**	**0.0**
MKS	**Makassar**	**3.50**	**262**	P	P	**Pn**	**17 22 49.5**	**+2.1**
LUWI	**Luwuk**	**3.65**	**357**			**Pn**	**17 22 49.5**	**+0.1**
LUWI	**Luwuk**	**3.65**	**357**	P	P	**Pn**	**17 22 49.6**	**+0.2**
LUWI	**Luwuk**	**3.65**	**357**	P	P	**Pn**	**17 22 49.2**	**-0.2**
MMRI	**Maumere**	**3.96**	**190**			**Pn**	**17 22 54.0**	**+0.2**
MMRI	**Maumere**	**3.96**	**190**	P	P	**Pn**	**17 22 53.6**	**-0.2**
MMRI	**Maumere**	**3.96**	**190**	P	P	**Pn**	**17 22 53.7**	**-0.1**
APSI	**Ampana**	**3.99**	**341**	P	P	**Pn**	**17 22 54.4**	**+0.3**
APSI	**Ampana**	**3.99**	**341**	P	P	**Pn**	**17 22 53.6**	**-0.5**
SANI	**Sanana**	**4.02**	**49**	P	P	**Pn**	**17 22 54.2**	**-0.3**
SANI	**Sanana**	**4.02**	**49**	P	P	**Pn**	**17 22 54.2**	**-0.3**
PMSI	**Majene**	**4.20**	**286**	P	P	**Pn**	**17 22 57.6**	**+0.6**
SOEI	**Soe**	**5.18**	**165**			**Pn**	**17 23 12.9**	**+2.3**
SOEI				Sn	Sn		**17 24 08.7**	**-1.9**
SOEI	**Soe**	**5.18**	**165**	P	P	**Pn**	**17 23 13.5**	**+2.9**
	0.7nm2µm242nm,0.8s							
BATI	**Baumata**	**5.51**	**173**	Pn	Pn	**Pn**	**17 23 15.9**	**+0.9**
	16nm,0.3s,baz=357,slow=2.2,SNR=28							
	74nm,0.5s							
BATI	**Baumata**	**5.51**	**173**	P	P	**Pn**	**17 23 15.6**	**+0.6**
	0.4nm95nm,0.6s							
BATI	**Baumata**	**5.51**	**173**	P	P	**Pn**	**17 23 15.8**	**+0.8**
WSI	**Waingapu**	**5.59**	**208**	P	P	**Pn**	**17 23 16.7**	**+0.6**
	0.7nm77nm,0.8s							
DBNI	**Kabupaten Domp**	**5.95**	**230**	P	P	**Pn**	**17 23 22.1**	**+1.0**
	0.2nm33nm,0.8s							
WBSI	**Waikabubak, Su**	**6.04**	**216**	P	P	**Pn**	**17 23 24.7**	**+2.4**
	0.3nm83nm,0.9s							
TOLI2	**Tolitoli**	**6.17**	**339**			**Pn**	**17 23 24.8**	**+0.6**
TOLI2				Sn	Sn	**Sn**	**17 24 34.1**	**-0.8**
TOLI2	**Tolitoli**	**6.17**	**339**	P	P	**Pn**	**17 23 25.5**	**+1.4**
BKB	**Balikpapan**	**6.95**	**299**	Pn	Pn	**Pn**	**17 23 34.8**	**0.0**
TNTI	**Ternate**	**7.01**	**39**			**Pn**	**17 23 36.4**	**+0.8**
TNTI	**Ternate**	**7.01**	**39**	P	P	**Pn**	**17 23 36.7**	**+1.1**
	0.4nm1µm100nm,0.5s							
TNTI	**Ternate**	**7.01**	**39**	P	P	**Pn**	**17 23 36.4**	**+0.8**
SGSI	**Sangihe**	**8.73**	**17**	P	P	**Pn**	**17 23 58.1**	**-1.2**
SWI	**Sorong**	**9.14**	**66**	P	P	**Pn**	**17 24 07.9**	**+3.1**
SWI	**Sorong**	**9.14**	**66**	P	P	**Pn**	**17 24 06.2**	**+1.3**
SIJI	**Sorong**	**9.14**	**66**	Pn	Pn	**Pn**	**17 24 06.7**	**+1.8**
	1.9nm,0.3s,baz=230,slow=9.0,SNR=12							
SIJI				LR	LR		17 27 40.9	
	comp=Z,57nm,19.8s,baz=246,slow=38							
	6.7nm,0.4s							
SIJI	**Sorong**	**9.14**	**66**	P	P	**Pn**	**17 24 05.7**	**+0.8**
FAKI	**Fak Fak**	**9.45**	**79**	Pn	Pn	**Pn**	**17 24 10.1**	**+1.0**
MYLDM	**Lahad Datu**	**10.78**	**336**			**Pn**	**17 24 27.7**	**+0.3**
MYLDM	**Lahad Datu**	**10.78**	**336**	P	Pn	**Pn**	**17 24 28.1**	**+0.7**
MTN	**Manton Dam**	**11.43**	**136**			**Pn**	**17 24 36.8**	**+0.5**
MTN	**Manton Dam**	**11.43**	**136**	P	Pn	**Pn**	**17 24 36.0**	**-0.3**
KNRA	**Kununurra**	**12.30**	**153**	Pn	Pn		17 24 45.3	-2.9
FITZ	**Fitzroy Crossi**	**13.56**	**169**	Pn	Pn	**Pn**	**17 25 04.4**	**-1.0**
	0.4nm,0.3s,baz=6.1,slow=8.3,SNR=13							
FITZ				LR	LR		17 30 29.4	
	comp=Z,82nm,20.2s,baz=1.5,slow=38							
	3.6nm,0.7s							
FITZ	**Fitzroy Crossi**	**13.56**	**169**			**Pn**	**17 25 04.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**13.56**	**169**	P	Pn	**Pn**	**17 25 05.5**	**+0.1**
LEM	**Lembang**	**15.40**	**261**	LR	LR		17 32 46.0	
	comp=Z,137nm,18.2s,baz=44,slow=42							
BBJI	**Bungbulang**	**15.46**	**259**			**Pn**	**17 25 31.7**	**+0.5**
BBJI				IAmb	IAmb		17 25 54.6	
	comp=Z,15nm,1.0s							
MBWA	**Marble Bar**	**16.65**	**191**	P	P	**Pn**	**17 25 46.8**	**+0.3**
GENI	**Genyem**	**17.31**	**84**	P	P	**Pn**	**17 25 55.2**	**+0.4**
JAY	**Jayapura**	**17.85**	**84**	P	P	**Pn**	**17 26 03.6**	**+2.0**
	comp=Z,9.0nm,0.8s,baz=295,slow=18,SNR=4.0							
PMBI	**Palembang**	**18.22**	**275**	P	P	**Pn**	**17 26 05.8**	**-0.3**
WB0	**Warramunga Arr**	**18.66**	**144**		P	**P**	**17 26 09.2**	**-2.0**
WRAB	**Tennant Creek**	**18.77**	**145**	P	P	**P**	**17 26 09.8**	**-2.5**
WRAB				IAmb	IAmb		17 26 15.9	
	comp=Z,15nm,1.1s							
WRAB	**Tennant Creek**	**18.77**	**145**	P	P	**P**	**17 26 11.1**	**-1.2**
WRA	**Warramunga Arr**	**18.77**	**145**	P	P	**P**	**17 26 11.2**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=315,slow=13,SNR=22							
	comp=Z,5.0nm,0.6s							
WRA	**Warramunga Arr**	**18.77**	**145**	P	P	**P**	**17 26 10.4**	**-1.9**
WR8	**Warramunga Arr**	**18.87**	**144**		P	**P**	**17 26 12.2**	**-1.3**
AS31	**Alice Springs**	**21.61**	**152**		P	**P**	**17 26 42.8**	**-0.4**
ASAR	**Alice Springs**	**21.61**	**152**	P	P	**P**	**17 26 43.9**	**+0.7**
	comp=Z,15nm,0.9s,baz=347,slow=16,SNR=105							
ASAR				LR	LR		17 35 21.1	
	comp=Z,72nm,20.3s,baz=320,slow=38							
	comp=Z,15nm,0.9s							
ASAR	**Alice Springs**	**21.61**	**152**			**P**	**17 26 43.6**	**+0.4**
COEN	**Coen**	**21.95**	**116**	P		**P**	**17 26 48.3**	**+1.4**
COEN				IAmb	IAmb		17 26 51.6	
	comp=Z,14nm,1.4s							
MEEK	**Meekatharra**	**22.20**	**190**	P	P		**17 26 49.9**	**+0.4**
QIS	**Mount Isa**	**22.59**	**136**	P	P		**17 26 52.6**	**-1.2**
MNSI	**Mandailing Nat**	**23.98**	**283**	P	P		**17 27 07.8**	**0.0**
PBSI	**Pulau Batu**	**25.07**	**280**	P	P		**17 27 17.4**	**-0.4**
MORW	**Morawa**	**25.10**	**194**	P	P		**17 27 17.9**	**0.0**
MORW				IAmb	IAmb		17 27 24.6	
	comp=Z,22nm,1.4s							
GSI	**Gunungsitoli**	**26.05**	**283**	P	P		**17 27 24.3**	**-2.4**
FORT	**Forrest**	**26.38**	**170**	P	P		**17 27 29.9**	**+0.5**
FORT				IAmb	IAmb		17 28 10.8	
	comp=Z,6.5nm,0.8s							
CTA	**Charters Tower**	**27.35**	**126**	LR	LR		17 38 50.0	
	comp=Z,103nm,18.6s,baz=275,slow=37							
HKPS	**Hong Kong Po S**	**28.17**	**343**	P	P		**17 27 45.2**	**-0.4**
QLP	**Quilpie**	**29.78**	**139**	P	P		**17 28 00.1**	**+0.1**
BBOO	**Buckleboo**	**30.52**	**158**	P	P		**17 28 05.4**	**-1.0**
BBOO				IAmb	IAmb		17 28 11.5	
	comp=Z,18nm,1.4s							
BBOO	**Buckleboo**	**30.52**	**158**	P	P		**17 28 04.8**	**-1.6**
JOW	**Kunigami**	**31.78**	**9**	P	P		**17 28 16.7**	**-0.8**
STKA	**Stephens Creek**	**32.19**	**149**	P	P		**17 28 20.1**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=336,slow=11,SNR=4.6							
STKA				LR	LR		17 43 40.4	
	comp=Z,147nm,18.7s,baz=158,slow=41							
	comp=Z,2.0nm,0.6s							
STKA	**Stephens Creek**	**32.19**	**149**	P	P		**17 28 21.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**33.02**	**315**	P	P		**17 28 29.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=124,slow=7.1,SNR=5.1							
CMAR				LR	LR		17 44 50.6	
	comp=Z,56nm,19.8s,baz=205,slow=42							
	comp=Z,0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**33.02**	**315**	P	P		**17 28 27.4**	**-1.1**
CHTO	**Chiang Mai**	**33.25**	**315**	P	P		**17 28 30.1**	**-0.5**
CMSA	**Cobar Meteorol**	**34.18**	**144**	P	P		**17 28 38.1**	**-0.4**
NJ2	**Nanjing**	**36.76**	**354**	*e*P	P		**17 29 02.8**	**+2.1**
NJ2				pmax	pmax			
	comp=Z,14nm,0.5s							
HNR	**Honiara**	**37.00**	**99**	P	P		**17 29 02.5**	**-0.5**
KSRS	**Korea Array**	**42.20**	**6**	P	P		**17 29 46.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=184,slow=12,SNR=4.6							
	comp=Z,0.5nm,0.7s							
MJAR	**Matsushiro Arr**	**43.45**	**18**	P	P		**17 29 55.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=191,slow=8.1,SNR=4.5							
	comp=Z,1.3nm,0.8s							
MJAR	**Matsushiro Arr**	**43.45**	**18**	IAmb	IAmb		17 30 00.9	
	comp=Z,3.2nm,1.2s							
LZH	**Lanzhou**	**44.36**	**338**	*e*P	P		**17 30 07.5**	**+3.9**
LZH				pP	sP		17 30 12.5	+4.5
LZH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
HHC	**Hu-ho-hao-te**	**46.52**	**348**	*e*P	P		**17 30 24.0**	**+3.3**
HHC				pmax	pmax			
	comp=Z,14nm,0.5s							
HHC				pmax	pmax			
	comp=Z,92nm,4.8s							
XLT	**XiLinHaoTe**	**48.78**	**353**	*e*P	P		**17 30 38.3**	**+0.2**
XLT				pmax	pmax			
	comp=Z,10.0nm,0.7s							
XLT				pmax	pmax			
	comp=Z,85nm,8.0s							
GTA2	**Gaotai**	**48.91**	**336**	*e*P	P		**17 30 40.5**	**+1.3**
GTA2				pP	sP		17 30 45.5	+1.8
GTA2				pmax	pmax			
	comp=Z,3.0nm,1.0s							
USA0B	**Ussuriysk Arra**	**49.36**	**9**	P	P		**17 30 42.1**	**-0.3**
USA0B				IAmb	IAmb		17 30 57.5	
	comp=Z,7.6nm,1.0s							
USRK	**Ussuriysk Ar.**	**49.36**	**9**	P	P		**17 30 42.7**	**+0.2**
	comp=Z,3.4nm,0.6s,baz=194,slow=5.8,SNR=5.7							
	comp=Z,3.4nm,0.6s							
USRK	**Ussuriysk Ar.**	**49.36**	**9**	P	P		**17 30 42.0**	**-0.5**
JKA	**Kamikawa-asahi**	**51.72**	**18**	P	P		**17 31 00.9**	**+0.6**
HIA	**Hailar**	**53.83**	**357**	P	P		**17 31 15.4**	**-0.5**
HIA				IAmb	IAmb		17 31 17.3	
	comp=Z,5.0nm,1.1s							
ULN	**Ulaanbaatar**	**54.19**	**347**		P		**17 31 19.4**	**+0.7**
ULN				IAmb	IAmb		17 31 20.6	
	comp=Z,7.7nm,1.1s							
SONM	**Songino Array**	**54.31**	**346**	P	P		**17 31 19.3**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=164,slow=9.3,SNR=15							
	comp=Z,3.1nm,0.8s							
SONM	**Songino Array**	**54.31**	**346**	P	P		**17 31 19.6**	**0.0**
SONM				IAmb	IAmb		17 31 21.4	
	comp=Z,3.9nm,1.0s							
HEH	**HeiHe**	**54.88**	**4**	*e*P	P		**17 31 21.5**	**-1.9**
HEH				pmax	pmax			
	comp=Z,4.0nm,1.0s							
RPZ	**Rata Peaks**	**57.40**	**140**	LR	LR		17 58 42.6	
	comp=Z,33nm,18.0s,baz=232,slow=38							
RPZ	**Rata Peaks**	**57.40**	**140**	P	P		**17 31 42.3**	**+0.6**
KHZ	**Kahutara**	**58.44**	**138**	P	P		**17 31 49.0**	**+0.1**
URZ	**Urewera**	**59.36**	**132**	LR	LR		17 57 37.5	
	comp=Z,68nm,18.6s,baz=227,slow=36							
KSH2	**Kashi**	**61.74**	**319**	P	P		**17 32 12.3**	**+0.4**
KSH2				pmax	pmax			
	comp=Z,3.0nm,0.6s							
PDGK	**Podgornoye**	**61.83**	**325**		P		**17 32 12.1**	**-0.3**
MKAR	**Makanchi Array**	**62.60**	**330**	P	P		**17 32 17.8**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=130,slow=6.9,SNR=27							
	comp=Z,2.4nm,0.6s							
MKAR	**Makanchi Array**	**62.60**	**330**		P		**17 32 17.4**	**+0.1**
MAKZ	**Makanchi**	**62.77**	**330**	P	P		**17 32 18.1**	**-0.3**
MAKZ				IAmb	IAmb		17 32 22.4	
	comp=Z,3.6nm,1.1s							
BOOM	**Boomskoye usch**	**63.40**	**323**	P	P		**17 32 22.4**	**-0.5**
BOOM			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.20**	**265**	Pn	**Pn**	**17 25 21.4**	**-0.8**
	24nm,0.3s,baz=84,slow=10,SNR=4.9						
KAPI				Sn	**Sn**	**17 25 59.7**	**+0.4**
	2.3nm,0.3s,baz=61,slow=22,SNR=1.0						
	37nm,0.5s						
BATI	**Baumata**	**5.47**	**173**	Pn	**Pn**	**17 25 54.2**	**+0.7**
	3.7nm,0.3s,baz=348,slow=2.3,SNR=4.3						
	28nm,0.6s						
SIJI	**Sorong**	**9.15**	**65**	Pn	**Pn**	**17 26 43.8**	**-0.2**
	0.4nm,0.3s,baz=275,slow=13,SNR=2.4						
	1.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.53**	**169**	Pn	**Pn**	**17 27 44.0**	**+0.2**
	0.5nm,0.3s,baz=354,slow=18,SNR=5.8						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	**18.74**	**145**	P	**P**	**17 28 49.3**	**-1.0**
	0.3nm,0.3s,baz=322,slow=12,SNR=7.7						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**21.57**	**152**	P	**P**	**17 29 21.3**	**+0.1**
	5.5nm,1.0s,baz=328,slow=11,SNR=13						
	5.5nm,1.0s						
HILR	**Hailar Array B**	**54.15**	**357**	P	**P**	**17 33 56.6**	**+0.4**
	0.4nm,0.3s,baz=184,slow=6.5,SNR=1.8						
	0.4nm,0.3s						
SONM	**Songino Array**	**54.35**	**346**	P	**P**	**17 33 57.9**	**+0.2**
	0.6nm,0.5s,baz=171,slow=10,SNR=5.1						
	0.6nm,0.5s						
TLY	**Talaya**	**58.58**	**346**	LR	LR	18 01 30.7	
	comp=Z,41nm,19.2s,baz=345,slow=38						
MKAR	**Makanchi Array**	**62.63**	**330**	P	**P**	**17 34 55.9**	**+0.5**
	1.0nm,0.8s,baz=133,slow=6.8,SNR=5.5						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**66.61**	**337**	P	**P**	**17 35 21.3**	**+0.2**
	0.8nm,0.7s,baz=115,slow=6.8,SNR=1.6						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**67.05**	**331**	P	**P**	**17 35 24.0**	**0.0**
	0.8nm,0.9s,baz=133,slow=6.7,SNR=5.1						
	0.8nm,0.9s						
BVAR	**Borovoye Array**	**72.52**	**330**	P	**P**	**17 35 56.9**	**-0.7**
	0.2nm,0.4s,baz=114,slow=9.6,SNR=1.5						
	0.2nm,0.4s						

*IDC **28** 17:49:32.8±1.9, 1.°02N×126.°92E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=188.6km s-min=21.1km az=67.0*

*DJA **28** 17:49:37.1±1.0, 1.°N±5.°×12.°6E±.°, h17km±10km, M3.4/9, MLv3.4/9*

ISC 28 17:49:39.5±1.1, 0.°5N±0.°1×126.°16E±0.°07, h44km, n7, σ1°12/10, mb3.5/4, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**79**	P	**Pn**	**17 49 59.2**	**-1.1**
TNTI				S	**Sn**	**17 50 16.4**	**+0.6**
MNI	**Manado**	**1.60**	**305**	P	**Pn**	**17 50 04.5**	**-0.9**
MNI				S	**Sn**	**17 50 25.1**	**+0.2**
SGSI	**Sangihe**	**3.20**	**349**	P	**Pn**	**17 50 26.8**	**-0.6**
SGSI				S	**Sn**	**17 51 05.7**	**+1.4**
WRA	**Warramunga Arr**	**21.87**	**159**	P	**P**	**17 54 29.0**	**+0.2**
	0.9nm,0.7s,baz=340,slow=10,SNR=7.9						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**25.20**	**163**	P	**P**	**17 55 03.1**	**+1.9**
	0.5nm,0.7s,baz=346,slow=11,SNR=23						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.87**	**327**	P	**P**	**17 59 40.8**	**-0.1**
	0.3nm,0.4s,baz=113,slow=7.0,SNR=6.2						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**64.13**	**328**	P	**P**	**18 00 08.6**	**-0.7**
	0.7nm,0.8s,baz=125,slow=6.6,SNR=7.9						
	0.7nm,0.8s						

IDC 28 18:00:00.9±351.0, 54.°31N×41.°61E, h0km, Error ellipse: s-maj=143.7km s-min=76.6km az=138.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.48**	**316**	I	I	18 20 40.0	
	0.2nm,0.8s,baz=132,slow=312,SNR=6.7						
I31KZ	**AKTYUBINSK INF**	**10.77**	**105**	I	I	19 05 10.0	
	baz=293,slow=313,SNR=1.5						
I26DE	**FREYUNG INFRAS**	**18.11**	**264**	I	I	19 51 00.0	
	baz=63,slow=322,SNR=0.9						

*IDC **28** 18:10:41.6±0.9, 77.°99N×126.°54E, h0km, mb3.8/9, mbtmp3.8/10, ML3.9/1, MS3.1/24, Error ellipse: s-maj=24.6km s-min=18.8km az=161.0*

*NEIC **28** 18:10:43.0±1.6, 77.°80N±0.°09×126.°8E±0.°5, h10km±1km, mb4.3/33, Error ellipse: s-maj=18.5km s-min=13.8km az=295.0*

*YARS **28** 18:10:53.9, 76.°13N×117.°97E, h6km, ML3.7/5*

ISC 28 18:10:42.8±0.6, 77.°71N±0.°06×126.°78E±0.°07, h10km, n72, σ1°82/62, mb4.3/24, MS3.1/21, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.24**	**299**	*e*P	Pn	18 12 05.7	+4.7
SVZ				*e*S	**Sn**	**18 13 00.4**	**-0.9**
	56nm,0.6s						
TIXI	**Tiksi**	**6.12**	**174**	Pn	**Pn**	**18 12 14.8**	**+1.7**
	1.8nm,0.3s,baz=4.2,slow=13,SNR=14						
TIXI				Sn	**Sn**	**18 13 21.6**	**-1.4**
	5.0nm,0.3s,baz=122,slow=18,SNR=9.9						
TIXI				LR	LR	18 14 20.8	
	comp=Z,40nm,20.0s,baz=16,slow=34						
	6.8nm,0.5s						
TIXI	**Tiksi**	**6.12**	**174**		**Pn**	**18 12 14.4**	**+1.3**
TIXI				Sn	**Sn**	**18 13 20.9**	**-2.2**
TIXI	**Tiksi**	**6.12**	**174**	*e*P	**Pn**	**18 12 14.4**	**+1.3**
	0.6nm,0.4s						
TIXI				*e*S	**Sn**	**18 13 18.1**	**-4.9**
	27nm,0.2s						
TIXI				*e*S	**Sn**	**18 13 18.1**	**-4.9**
	37nm,0.2s						
Y451		**6.20**	**173**	*e*P	**Pn**	**18 12 15.5**	**+1.3**
	12nm,0.5s						
Y451				*e*P	Pb	18 12 16.8	-14
Y451				*e*S	**Sn**	**18 13 21.5**	**-3.4**
	24nm,0.2s						
Y451				*e*S	**Sn**	**18 13 21.5**	**-3.4**
	24nm,0.1s						
Y457		**6.20**	**173**	*e*P	**Pn**	**18 12 16.4**	**+2.2**
	22nm,0.4s						
Y457				*e*S	**Sn**	**18 13 21.8**	**-3.3**
	31nm,0.3s						
Y457				*e*S	**Sn**	**18 13 21.8**	**-3.3**
	51nm,0.1s						
Y458		**6.38**	**172**	*e*P	**Pn**	**18 12 19.2**	**+2.5**
	16nm,0.1s						
Y458				*e*S	**Sn**	**18 13 26.8**	**-2.7**
	30nm,0.3s						
Y458				*e*S	**Sn**	**18 13 26.8**	**-2.7**
	44nm,0.2s						
NRIK	**Noril'sk**	**13.57**	**253**	LR	LR	18 20 24.6	
	comp=Z,85nm,18.2s,baz=26,slow=43						
YAK	**Yakutsk**	**15.79**	**175**	Pn	**Pn**	**18 14 27.2**	**+2.4**
	0.6nm,0.3s,baz=28,slow=4.7,SNR=2.3						
MA2	**Magadan**	**19.88**	**143**	LR	LR	18 23 00.9	
	comp=Z,55nm,19.2s,baz=346,slow=37						
C16K	**Lisburne Hills**	**20.51**	**80**	P	**P**	**18 15 21.5**	**+0.9**
C16K				IAmb	IAmb	18 15 27.2	
	comp=Z,29nm,1.4s						
B20K	**Meade River**	**20.78**	**70**	P	**P**	**18 15 23.7**	**+0.3**
C19K	**Lookout Ridge**	**21.02**	**74**	P	**P**	**18 15 27.9**	**+1.7**
C19K				IAmb	IAmb	18 15 31.9	
	comp=Z,17nm,0.9s						
C18K	**Utukok River**	**21.07**	**76**	P	**P**	**18 15 27.4**	**+0.7**
C18K				IAmb	IAmb	18 15 37.8	
	comp=Z,20nm,1.2s						
D19K	**Kuna River**	**21.83**	**73**		**P**	**18 15 34.8**	**-0.1**
D20K	**Etivluk River**	**21.96**	**72**	P	**P**	**18 15 35.4**	**-0.8**
D20K				IAmb	IAmb	18 15 47.2	
	comp=Z,14nm,1.0s						
E18K	**Tukpahlearik C**	**22.22**	**77**	P	**P**	**18 15 38.4**	**-0.5**
E18K				IAmb	IAmb	18 15 45.9	
	comp=Z,8.3nm,0.9s						
E21K	**Killik River**	**22.72**	**70**	P	**P**	**18 15 44.3**	**-0.1**
E21K				IAmb	IAmb	18 15 56.0	
	comp=Z,22nm,1.3s						
E19K	**Redstone River**	**22.89**	**74**	P	**P**	**18 15 45.9**	**-0.2**
D23K	**Nanushuk River**	**22.93**	**67**	P	**P**	**18 15 45.9**	**-0.6**
D23K				IAmb	IAmb	18 15 59.0	
	comp=Z,11nm,1.0s						
F19K	**Shaleruckik Mo**	**23.31**	**75**		**P**	**18 15 50.4**	**0.0**
F19K				IAmb	IAmb	18 16 01.6	
	comp=Z,16nm,1.4s						
E22K	**Anaktuvuk Pass**	**23.41**	**69**	P	**P**	**18 15 51.6**	**+0.2**
D25K	**Kavik River**	**23.47**	**63**	P	**P**	**18 15 52.3**	**+0.3**
D25K				IAmb	IAmb	18 16 04.7	
	comp=Z,10.0nm,1.1s						
C27K	**Jago River**	**23.71**	**61**	P	**P**	**18 15 52.5**	**-1.9**
C27K				IAmb	IAmb	18 16 06.3	
	comp=Z,15nm,1.4s						
E24K	**Your Creek**	**24.12**	**66**	P	**P**	**18 15 58.6**	**+0.3**
IMAR	**Indian Mountai**	**24.87**	**73**	P	**P**	**18 16 03.9**	**-1.2**
E28M	**Babbage River**	**25.36**	**59**	P	**P**	**18 16 08.3**	**-1.2**
E28M				IAmb	IAmb	18 16 20.0	
	comp=Z,4.7nm,0.8s						
KEV	**Kevo**	**25.44**	**307**	P	**P**	**18 16 08.8**	**-1.3**
E29M	**Blow River**	**25.85**	**58**	P	**P**	**18 16 11.9**	**-2.0**
E29M				IAmb	IAmb	18 16 24.5	
	comp=Z,7.5nm,0.9s						
ARCES	**ARCESS Array B**	**25.89**	**308**	P	**P**	**18 16 11.6**	**-2.7**
	comp=Z,5.9nm,0.9s,baz=24,slow=11,SNR=8.5						
ARCES				LR	LR	18 26 24.8	
	comp=Z,32nm,20.0s,baz=104,slow=37						
	comp=Z,5.9nm,0.9s						
ARCES	**ARCESS Array B**	**25.89**	**308**		**P**	**18 16 13.3**	**-1.0**
ARCES				IAmb	IAmb	18 16 15.0	
	comp=Z,8.6nm,1.0s						
RES	**Resolute Bay**	**25.95**	**24**	LR	LR	18 26 52.3	
	comp=Z,33nm,18.9s,baz=26,slow=38						
G27K	**Doyon Strip**	**26.54**	**62**	P	**P**	**18 16 19.5**	**-0.7**
PETK	**Petropavlovsk-**	**27.11**	**137**	LR	LR	18 28 17.9	
	comp=Z,43nm,18.7s,baz=77,slow=39						
ILAR	**Eielson Array**	**27.33**	**69**	P	**P**	**18 16 27.9**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=329,slow=8.4,SNR=14						
ILAR				LR	LR	18 30 37.8	
	comp=Z,34nm,18.2s,baz=282,slow=44						
	comp=Z,0.4nm,0.9s						
G31M	**Satah River**	**27.80**	**57**	P	**P**	**18 16 31.2**	**-0.2**
G31M				IAmb	IAmb	18 16 40.7	
	comp=Z,7.0nm,1.4s						
ZALV	**Zalesovo Beam**	**28.11**	**237**	LR	LR	18 28 37.2	
	comp=Z,45nm,18.1s,baz=26,slow=38						
SONM	**Songino Array**	**31.01**	**207**	P	**P**	**18 17 01.8**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=8.9,slow=10,SNR=1.9						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**31.01**	**207**	P	**P**	**18 17 00.7**	**+0.5**
BVAR	**Borovoye Array**	**31.78**	**253**	P	**P**	**18 17 08.8**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=27,slow=10,SNR=1.8						
	comp=Z,0.7nm,0.8s						
MMPY	**Sheldon Lake,**	**32.26**	**58**		**P**	**18 17 10.9**	**-0.1**
MMPY				IAmb	IAmb	18 17 22.5	
	comp=Z,5.2nm,1.0s						
KURK	**Kurchatov**	**32.34**	**242**	P	**P**	**18 17 12.8**	**+1.1**
KURBB	**Kurchatov Arra**	**32.45**	**242**	P	**P**	**18 17 14.6**	**+1.9**
	comp=Z,0.5nm,0.2s,baz=24,slow=9.2,SNR=2.5						
	comp=Z,0.5nm,0.2s						
KDAK	**Kodiak Island**	**32.49**	**80**	LR	LR	18 30 23.7	
	comp=Z,51nm,20.5s,baz=350,slow=36						
SDPT	**Sand Point**	**33.06**	**89**	P	**P**	**18 17 18.8**	**+0.8**
FIA1	**FINESS Array S**	**33.12**	**300**	P	**P**	**18 17 18.9**	**+0.5**
FINES	**FINESS Array B**	**33.12**	**300**	LR	LR	18 34 30.5	
	comp=Z,40nm,19.0s,baz=18,slow=43						
FINES	**FINESS Array B**	**33.12**	**300**	P	**P**	**18 17 18.4**	**0.0**
YKA	**Yellowknife Ar**	**35.17**	**45**	LR	LR	18 32 38.1	
	comp=Z,9.4nm,19.0s,baz=308,slow=38						
NC405	**NORSAR Array S**	**35.92**	**311**	P	**P**	**18 17 41.9**	**-0.8**
NOA	**NORSAR Array B**	**36.07**	**312**	P	**P**	**18 17 42.7**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=18,slow=8.5,SNR=3.6						
NOA				LR	LR	18 34 24.5	
	comp=Z,12nm,18.6s,baz=10.0,slow=40						
	comp=Z,1.8nm,0.9s						
DLBC	**Dease Lake**	**36.39**	**60**	LR	LR	18 33 48.6	
	comp=Z,17nm,19.6s,baz=244,slow=38						
AKTO	**Aktyubinsk**	**36.82**	**264**	LR	LR	18 36 28.5	
	comp=Z,41nm,18.4s,baz=299,slow=42						
KSRS	**Korea Array**	**40.36**	**179**	LR	LR	18 37 30.7	
	comp=Z,6.0nm,18.2s,baz=195,slow=40						
AKASG	**Malin Array Be**	**42.61**	**291**	LR	LR	18 36 51.8	
	comp=Z,35nm,18.2s,baz=14,slow=37						
VRAC	**Vranov**	**46.36**	**302**	LR	LR	18 42 37.8	
	comp=Z,20nm,18.3s,baz=33,slow=42						
KBZ	**Khabaz**	**46.42**	**276**	P	**P**	**18 19 09.9**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=327,slow=6.6,SNR=3.5						
	comp=Z,2.4nm,0.8s						
GERES	**GERESS Array B**	**47.33**	**304**	P	**P**	**18 19 13.5**	**-2.7**
	comp=Z,0.2nm,0.6s,baz=6.8,slow=9.1,SNR=4.3						
	comp=Z,0.2nm,0.6s						
GERES	**GERESS Array B**	**47.33**	**304**	P	**P**	**18 19 14.7**	**-1.5**
MLR	**Muntele Rosu**	**48.24**	**292**	LR	LR	18 40 36.2	
	comp=Z,38nm,18.3s,baz=70,slow=37						
NEW	**Newport**	**48.41**	**53**	LR	LR	18 42 20.2	
	comp=Z,26nm,18.6s,baz=310,slow=39						
GNI	**Garni**	**49.45**	**273**	LR	LR	18 45 21.3	
	comp=Z,20nm,18.1s,baz=58,slow=42						
ULM	**Lac du Bonnet**	**49.63**	**35**	LR	LR	18 40 28.0	
	comp=Z,14nm,18.3s,baz=16,slow=36						
MCMT	**McKenzie Canyo**	**52.47**	**51**	P	**P**	**18 19 55.6**	**+0.1**
BCYI	**Bear Canyon**	**52.88**	**51**	P	**P**	**18 19 58.1**	**-0.4**
BCYI				IAmb	IAmb	18 20 09.5	
	comp=Z,3.5nm,1.0s						
YBH	**Yreka Blue Hor**	**53.73**	**60**	LR	LR	18 45 46.3	
	comp=Z,13nm,18.2s,baz=344,slow=39						
INTR	**Introdacqua**	**53.90**	**302**	P	**P**	**18 20 05.3**	**-0.6**
FXWY	**Fox Creek**	**53.92**	**49**	P	**P**	**18 20 06.3**	**+0.1**
FXWY				IAmb	IAmb	18 20 31.7	
	comp=Z,2.2nm,1.0s						
HATC	**Hat Creek Radi**	**54.85**	**60**	P	**P**	**18 20 12.5**	**-0.3**
NVAR	**Mina Array Bea**	**57.74**	**57**	LR	LR	18 47 59.7	
	comp=Z,19nm,18.1s,baz=220,slow=39						
TKL	**Tuckaleechee C**	**65.38**	**27**	LR	LR	18 49 14.5	
	comp=Z,20nm,19.9s,baz=86,slow=36						
TXAR	**Lajitas Array**	**69.09**	**46**	P	**P**	**18 21 47.8**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=353,slow=4.2,SNR=15						
	comp=Z,1.6nm,0.8s						

*IDC **28** 18:14:57.5±1.2, 34.°13S×58.°44E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=34.8km s-min=31.9km az=162.0*

*NEIC **28** 18:14:58.7±1.1, 34.°2S±0.°1×58.°5E±0.°1, h10km±1km, mb4.2/8, Error ellipse: s-maj=24.5km s-min=15.5km az=27.0*

ISC 28 18:14:58.8±0.8, 34.°2S±0.°1×58.°4E±0.°2, h10km, n22, σ0°55/16, mb3.9/7, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**13.01**	**201**	T	T	18 31 27.2	
	baz=24,slow=72,SNR=78						
H04N1	**CROZET ISLANDS**	**13.02**	**201**	T	T	18 31 41.6	
	baz=24,slow=72,SNR=109						
H04N3	**CROZET ISLANDS**	**13.03**	**201**	T	T	18 31 32.1	
	baz=24,slow=72,SNR=78						
RER	**Riviere de l'E**	**13.17**	**349**	Pn	**Pn**	**18 18 05.7**	**-0.2**
VOI	**Vohitsoka**	**15.94**	**317**	Pn	**Pn**	**18 18 43.9**	**+0.6**
VOI				IAmb	IAmb	18 19 04.6	
	comp=Z,24nm,1.3s						
ABPO	**Ambohimpanom**	**18.08**	**324**		**P**	**18 19 11.8**	**+1.0**
ABPO				IAmb	IAmb	18 19 16.9	
	comp=Z,20nm,1.4s						
H08S1	**Diego Carcia H**	**29.39**	**29**	T	T	18 51 54.9	
	baz=205						
H08S2	**Diego Garcia H**	**29.40**	**29**	T	T	18 51 55.0	
	baz=205						
H08S3	**Diego Garcia H**	**29.41**	**29**	T	T	18 51 56.0	
	baz=205						
LSZ	**Lusaka**	**33.10**	**297**	P	**P**	**18 21 34.4**	**-0.8**
LSZ				IAmb	IAmb	18 22 11.4	
	comp=Z,5.3nm,0.9s						
SNAA	**Sanae**	**48.98**	**202**	P	**P**	**18 23 45.3**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=84,slow=7.0,SNR=3.8						
	comp=Z,1.3nm,0.6s						
SNAA	**Sanae**	**48.98**	**202**	P	**P**	**18 23 44.5**	**-0.6**
QSPA	**South Pole Qui**	**56.02**	**180**	P	**P**	**18 24 37.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=260,slow=2.3,SNR=7.0						
	comp=Z,0.8nm,0.7s						
QSPA	**South Pole Qui**	**56.02**	**180**	P	**P**	**18 24 37.2**	**-0.3**
VNDA	**Vanda**	**59.76**	**166**	P	**P**	**18 25 03.9**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=275,slow=12,SNR=2.0						
	comp=Z,0.4nm,0.8s						
VNDA	**Vanda**	**59.76**	**166**	P	**P**	**18 25 03.3**	**0.0**
VNDA				IAmb	IAmb	18 25 05.6	
	comp=Z,1.9nm,1.5s						
ASAR	**Alice Springs**	**65.56**	**103**	P	**P**	**18 25 43.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=232,slow=6.1,SNR=8.4						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**65.56**	**103**	P	**P**	**18 25 42.9**	**-0.1**
WRA	**Warramunga Arr**	**67.70**	**100**	P	**P**	**18 25 56.2**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=241,slow=6.6,SNR=1.8						
	comp=Z,0.3nm,0.6s						
DBIC	**Dimbokro**	**72.20**	**291**	P	**P**	**18 26 24.5**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=154,slow=8.9,SNR=1.8						
	comp=Z,2.7nm,0.7s						
DBIC	**Dimbokro**	**72.20**	**291**	P	**P**	**18 26 23.9**	**-0.4**
ILAR	**Eielson Array**	**145.71**	**19**	PKPbc	**PKPdf**	**18 34 36.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=316,slow=3.8,SNR=1.8						

*SJA **28** 18:26:24.9±0.7, 31.°92S×72.°21W, h22km, ML3.4, MW3.7*

*GUC **28** 18:26:24.7±0.7, 31.°91S×72.°41W, h26km±7km, ML3.3*

ISC 28 18:26:23.2±2.3, 31.°87S±0.°03×72.°39W±0.°09, h11km±12km, n37, σ1°49/51, 4C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**1.21**	**98**	↑*i*P	**Pg**	**18 26 46.6**	**0.0**
CO04				*e*S	**Sb**	**18 27 02.0**	**-0.2**
CO04				IAML		18 27 23.3	
	comp=N,1μm,0.2s						
VA01	**Torpederas**	**1.31**	**152**	*e*P	**Pn**	**18 26 46.6**	**-0.8**
VA01				*i* S	**Sb**	**18 27 03.7**	**-0.8**
CO06	**Fray Jorge**	**1.36**	**29**	↑*i*P	**Pn**	**18 26 48.6**	**+0.5**
CO06				*i* S	**Sb**	**18 27 05.6**	**-0.4**
CO06				IAML		18 27 19.4	
	comp=E,360nm,0.2s						
CO02	**Combarbal**	**1.36**	**61**	*e*P	**Pn**	**18 26 49.1**	**+0.8**
CO02				*e*S	**Sb**	**18 27 06.4**	**+0.2**
CO02				IAML		18 27 27.9	
	comp=Z,1μm,0.4s						
CO02	**Combarbal**	**1.36**	**61**	↑*i*P	**Pn**	**18 26 48.8**	**+0.5**
CO02				*i* S	**Sg**	**18 27 06.9**	**-0.1**
CO02				IAML		18 27 11.9	
	comp=N,2μm,0.3s						
ROCH	**El Roble**	**1.60**	**134**	↑*i*P	**Pn**	**18 26 52.4**	**+0.7**
ROCH				*i* S	**Sn**	**18 27 12.3**	**-0.1**
ROCH				IAML		18 27 36.2	
	comp=N,747nm,0.5s						
MT02	**Curacav**	**1.74**	**143**	*e*P	**Pn**	**18 26 54.5**	**+1.1**
MT02				*e*S	**Sn**	**18 27 15.4**	**-0.2**
MT02	**Curacav**	**1.74**	**143**	*e*P	**Pn**	**18 26 54.3**	**+0.9**
MT02				*e*S	**Sn**	**18 27 14.3**	**-1.3**
CO03	**El Pedregal**	**1.78**	**55**	*e*P	**Pn**	**18 26 55.7**	**+1.6**
CO03				*e*S	Sg	18 27 33.2	+13
CO03				IAML		18 27 43.3	
	comp=Z,433nm,0.4s						
CO03	**El Pedregal**	**1.78**	**55**	*e*P	**Pn**	**18 26 55.5**	**+1.5**
CO03				*i* S	**Sn**	**18 27 17.4**	**+0.7**
CO03				IAML		18 27 40.5	
	comp=E,624nm,0.5s						
VA03	**San Esteban**	**1.79**	**120**	*e*P	**Pn**	**18 26 54.9**	**+0.7**
VA03				*e*S	Sn	18 27 02.7	-14
VA03				IAML		18 27 24.1	
	comp=Z,619nm,0.8s						
VA03	**San Esteban**	**1.79**	**120**	*e*P	**Pn**	**18 26 55.1**	**+0.9**
PEL	**Peldehue**	**1.92**	**132**	*e*P	**Pn**	**18 26 56.9**	**+1.0**
MT05	**Renca**	**2.06**	**138**	*e*P	**Pn**	**18 26 58.3**	**+0.5**
MT05				*e*S	**Sn**	**18 27 23.9**	**+0.4**
MT05				IAML		18 27 52.8	
	comp=Z,195nm,0.7s						
MT05	**Renca**	**2.06**	**138**	*e*P	**Pn**	**18 26 59.0**	**+1.2**
MT10	**Hacienda Santa**	**2.10**	**132**	*e*P	**Pn**	**18 26 59.9**	**+1.4**
GO04	**Tololo Observa**	**2.17**	**39**	*e*P	**Pn**	**18 27 01.9**	**+2.4**
GO04				*e*S	**Sn**	**18 27 22.7**	**-3.9**
GO04				IAML		18 27 54.9	
	comp=Z,428nm,1.1s						
MT14	**Cerro Calan**	**2.18**	**135**	*e*P	**Pn**	**18 27 01.1**	**+1.6**
MT01	**Popeta**	**2.21**	**155**	*e*P	**Pn**	**18 27 01.2**	**+1.4**
MT01				*e*S	Sg	18 27 43.4	+9.2
MT01				IAML		18 27 59.9	
	comp=Z,130nm,0.4s						
MT01	**Popeta**	**2.21**	**155**	*e*P	**Pn**	**18 27 00.8**	**+1.0**
MT16	**CCHEN**	**2.21**	**135**	*e*P	**Pn**	**18 27 01.9**	**+2.0**
MT09	**Talagante**	**2.23**	**149**	*e*P	**Pn**	**18 27 02.3**	**+2.0**
MT03	**Universidad Ad**	**2.26**	**136**	*e*P	**Pn**	**18 27 01.2**	**+0.5**
MT03				*e*S	**Sb**	**18 27 33.2**	**+0.9**
MT03				IAML		18 27 40.6	
	comp=Z,225nm,0.4s						
MT03	**Universidad Ad**	**2.26**	**136**	*e*P	**Pn**	**18 27 02.0**	**+1.3**
MT15	**Las Vizcachas**	**2.34**	**138**	*e*P	**Pn**	**18 27 03.5**	**+1.8**
MT12	**Pirque**	**2.42**	**141**	*e*P	**Pn**	**18 27 04.5**	**+1.8**
MT04	**Ro Olivares**	**2.44**	**129**	*e*P	**Pn**	**18 27 05.5**	**+2.3**
MT08	**Bocatoma Ro**	**2.54**	**129**	*e*P	**Pn**	**18 27 05.7**	**+1.1**
MT08				*e*S	**Sg**	**18 27 45.2**	**+0.2**
MT08				IAML		18 28 03.8	
	comp=Z,90nm,0.9s						
MT08	**Bocatoma Ro**	**2.54**	**129**	*e*P	**Pn**	**18 27 06.9**	**+2.3**
MT13	**San Alfonso**	**2.57**	**137**	*e*P	**Pn**	**18 27 06.5**	**+1.6**
RTLS	**Leoncito**	**2.63**	**89**	*e*P	**Pb**	**18 27 09.7**	**-0.9**
RTLS				*e*S	**Sb**	**18 27 42.7**	**-0.4**
RTLS				IAML		18 28 12.5	
	comp=Z,271nm,0.7s						
CO01	**Juntas del Tor**	**2.73**	**47**	*e*P	**Pn**	**18 27 09.9**	**+2.6**
CO01				*e*S	Sn	18 27 31.3	-9.1
CO01				IAML		18 28 07.8	
	comp=Z,132nm,0.8s						
AROD	**

*IDC **28** 18:34:16.4±0.7, 11°.38N×125°.66E, h0km, mb4.0/15, mbtmp4.0/15, MS2.7/3, Error ellipse: s-maj=41.4km s-min=14.0km az=69.0*
*NEIC **28** 18:34:19.2±1.7, 11°.35N±0°.07×125°.5E±0°.1, h10km±1km, mb4.3/28, Error ellipse: s-maj=20.1km s-min=12.6km az=85.0*
*MAN **28** 18:34:25.0, 11°.37N×125°.43E, h29km, MS4.1*
MAN INTENSITY III - MAYDOLONG BALANGKAYAN LLORENTE GENERAL MACARTHUR SALCEDO AND BALANGIGA EASTERN SAMAR; . INTENSITY II - LAWAAN EASTERN SAMAR.

ISC 28 18:34:18.8±1.5, 11°.42N±0°.03×125°.50E±0°.05, h13km±9km, n88, σ1§91/94, mb4.2/27, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.57**	**244**	*i* P			**Pn**	**18 34 36.4**	**+3.7**
PLP				*eS*			**Sn**	**18 34 45.1**	**+3.2**
SCPH	**Surigao**	**1.63**	**181**	*i* S			Sn	18 34 56.0	-12
SCPH	**Surigao**	**1.63**	**181**	*eP*			Pn	18 34 38.1	-9.1
LLP	**Lapu-Lapu**	**1.87**	**234**	*eP*			**Pg**	**18 34 54.3**	**-0.4**
LLP				*i* S			**Sg**	**18 35 20.8**	**+1.9**
MMPH	**Masbate**	**2.06**	**297**	*i* P			**Pg**	**18 34 58.4**	**0.0**
MMPH				*i* S			**Sg**	**18 35 26.4**	**+1.3**
TBP	**Tagbilaran**	**2.36**	**223**	*eP*			**Pb**	**18 35 01.6**	**+0.4**
TBP				*i* S			**Sg**	**18 35 38.0**	**+3.3**
TSSP	**Tandag City**	**2.46**	**164**	*eP*			**Pb**	**18 35 02.2**	**-0.7**
TSSP				*eS*			**Sb**	**18 35 31.1**	**-2.0**
LSIP	**Lazi, Siquijor**	**2.93**	**219**	*i* P			**Pb**	**18 35 09.7**	**-1.2**
LSIP				*eS*			**Sn**	**18 35 42.2**	**+2.0**
GUIM	**Jordan**	**2.97**	**255**	*i* P			**Pb**	**18 35 09.8**	**-1.7**
GUIM				*eS*			**Sb**	**18 35 45.4**	**-2.4**
CGP	**Cagayan de Oro**	**3.06**	**195**	*i* P			**Pb**	**18 35 11.8**	**-1.2**
CGP				*i* S			**Sb**	**18 35 46.5**	**-3.8**
IBAJ	**Ibajay, Aklan**	**3.29**	**277**	*eP*			**Pb**	**18 35 15.4**	**-1.6**
BIPH	**Bislig**	**3.33**	**165**	*eP*			**Pn**	**18 35 13.0**	**+2.5**
BIPH				*eS*			**Sn**	**18 35 47.6**	**-2.3**
DCPH	**Dipolog City**	**3.53**	**217**	*i* P			**Pb**	**18 35 17.2**	**-3.9**
BUKP	**Musuan**	**3.55**	**187**	*eP*			**Pb**	**18 35 19.8**	**-1.7**
BUKP				*eS*			**Sb**	**18 36 00.4**	**-4.1**
JAP	**San Jose, Anti**	**3.56**	**259**	*eP*			**Pb**	**18 35 20.2**	**-1.4**
CDOP	**Cateel, Davao**	**3.73**	**166**	*eP*			**Pn**	**18 35 18.6**	**+2.5**
CDOP				*i* S			**Sn**	**18 36 03.1**	**+3.2**
GQP	**Guinayangan**	**3.87**	**310**	*eP*			**Pb**	**18 35 24.1**	**-2.8**
PAGZ	**Pagadian**	**4.12**	**211**	*i* P			**Pb**	**18 35 26.8**	**-4.5**
PAGZ				*i* S			**Sn**	**18 36 11.1**	**+1.5**
DAV	**Davao City (W)**	**4.33**	**179**	LR			LR	18 37 36.1	
	comp=Z,145nm,19.8s,baz=11,slow=47								
DAV	**Davao City (W)**	**4.33**	**179**	Pn			**Pn**	**18 35 23.1**	**-1.2**
CTBH	**Cotabato--PC H**	**4.36**	**197**	*i* P			**Pn**	**18 35 24.5**	**-0.2**
KCP	**Kidapawan**	**4.41**	**185**	*eP*			**Pb**	**18 35 38.4**	**+2.3**
KCP				*eS*			**Sg**	**18 36 36.1**	**-4.2**
LQP	**Lukban**	**4.70**	**305**	*eP*			Pb	18 35 36.1	-5.1
PCPS	**Palayan City**	**5.39**	**307**	*eP*			**Pb**	**18 35 50.0**	**-2.8**
PCPS				*eS*			**Sb**	**18 36 54.3**	**-3.3**
PALP	**Palanan**	**6.35**	**332**	*eP*			**Pn**	**18 35 55.6**	**+3.5**
PALP				*i* S			**Sn**	**18 36 58.1**	**-6.4**
PACPP	**Pamplona Cagay**	**8.06**	**331**	*eP*			Pn	18 36 20.9	+5.3
MYLDM	**Lahad Datu**	**9.30**	**229**	Pn			**Pn**	**18 36 32.0**	**-0.6**
YULB	**Yu-li**	**12.56**	**342**	Pn			**Pn**	**18 37 18.9**	**+1.6**
JOW	**Kunigami**	**15.55**	**9**				**P**	**18 38 03.6**	**+1.5**
KAPI	**Kappang**	**17.30**	**200**	P			**P**	**18 38 22.3**	**+0.6**
KAPI				IAmb			IAmb	18 38 26.0	
	comp=Z,24nm,1.4s								
GUMO	**Guam**	**19.03**	**81**	LR			LR	18 45 05.4	
	comp=Z,21nm,20.7s,baz=186,slow=34								
MMRI	**Maumere**	**20.19**	**189**	P			**P**	**18 38 53.2**	**-0.2**
SOEI	**Soe**	**21.08**	**183**	P			**P**	**18 39 02.4**	**-0.7**
JCJ	**Chichijima**	**22.12**	**43**	LR			LR	18 46 13.2	
	comp=Z,18nm,20.9s,baz=67,slow=32								
KULM	**Kulim**	**25.32**	**258**	P			**P**	**18 39 46.8**	**+1.3**
KSRS	**Korea Array**	**26.01**	**4**	P			**P**	**18 39 50.5**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=182,slow=10.0,SNR=5.0								
	comp=Z,0.6nm,0.8s								
CM31	**Chiang Mai Arr**	**26.58**	**288**	P			**P**	**18 39 56.2**	**-0.7**
CM31				IAmb			IAmb	18 39 58.9	
	comp=Z,4.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**26.58**	**288**	P			**P**	**18 39 58.1**	**+1.2**
	comp=Z,2.0nm,0.9s,baz=99,slow=7.5,SNR=13								
	comp=Z,2.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**26.58**	**288**	P			**P**	**18 39 56.6**	**-0.3**
CHTO	**Chiang Mai**	**26.65**	**289**	P			**P**	**18 39 57.8**	**+0.2**
KNRA	**Kununurra**	**27.12**	**173**	P			**P**	**18 40 01.2**	**-0.4**
KNRA				IAmb			IAmb	18 40 38.7	
	comp=Z,8.9nm,1.3s								
FITZ	**Fitzroy Crossi**	**29.33**	**180**	P			**P**	**18 40 20.9**	**-0.5**
WB0	**Warramunga Arr**	**32.21**	**164**	P			**P**	**18 40 45.7**	**-1.1**
WRA	**Warramunga Arr**	**32.36**	**164**	P			**P**	**18 40 47.0**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=345,slow=7.7,SNR=6.3								
WRA				PcP			**PcP**	**18 43 33.5**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=340,slow=2.7,SNR=1.9								
	comp=Z,0.4nm,0.9s								
WRA	**Warramunga Arr**	**32.36**	**164**	P			**P**	**18 40 46.3**	**-1.8**
WR8	**Warramunga Arr**	**32.41**	**164**	P			**P**	**18 40 48.4**	**-0.2**
WR8				IAmb			IAmb	18 41 15.8	
	comp=Z,6.2nm,1.2s								
SHL	**Shillong**	**34.73**	**299**	P			**P**	**18 41 09.4**	**+0.3**
AS31	**Alice Springs**	**35.83**	**167**	P			**P**	**18 41 18.1**	**-0.1**
ASAR	**Alice Springs**	**35.83**	**167**	P			**P**	**18 41 17.8**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=350,slow=8.1,SNR=26								
ASAR				PcP			**PcP**	**18 43 45.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=350,slow=3.9,SNR=2.0								
	comp=Z,0.7nm,0.5s								
ASAR	**Alice Springs**	**35.83**	**167**	P			**P**	**18 41 17.6**	**-0.7**
ASAR							**PcP**	**18 43 43.6**	**-2.2**
GTA2	**Gaotai**	**36.09**	**325**	*eP*			**P**	**18 41 22.8**	**+2.3**
GTA2				pmax			pmax		
	comp=Z,4.0nm,0.8s								
HILR	**Hailar Array B**	**38.32**	**354**	P			**P**	**18 41 40.9**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=2.4								
	comp=Z,0.3nm,0.3s								
ULN	**Ulaanbaatar**	**39.49**	**340**	P			**P**	**18 41 50.2**	**+1.0**
ULN				IAmb			IAmb	18 41 52.3	
	comp=Z,4.4nm,0.7s								
SONM	**Songino Array**	**39.68**	**340**	P			**P**	**18 41 52.5**	**+1.8**
	comp=Z,2.5nm,0.7s,baz=161,slow=10,SNR=14								
	comp=Z,2.5nm,0.7s								
SONM	**Songino Array**	**39.68**	**340**	P			**P**	**18 41 51.2**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**40.33**	**75**	T			T	19 25 06.6	
	baz=269,slow=73,SNR=64								
H11S1	**WAKE ISLAND Hy**	**40.35**	**75**	T			T	19 25 04.6	
	baz=269,slow=73,SNR=30								
H11S2	**WAKE ISLAND Hy**	**40.35**	**75**	T			T	19 25 02.1	
	baz=269,slow=73,SNR=40								
H11N1	**WAKE ISLAND Hy**	**40.62**	**73**	T			T	19 25 23.3	
	baz=265,slow=75,SNR=219								
H11N2	**WAKE ISLAND Hy**	**40.63**	**73**	T			T	19 25 22.0	
	baz=265,slow=75,SNR=208								
H11N3	**WAKE ISLAND Hy**	**40.64**	**73**	T			T	19 25 24.6	
	baz=265,slow=75,SNR=228								
INKA	**Innaminka**	**41.64**	**159**	P			**P**	**18 42 06.8**	**-0.1**
FORT	**Forrest**	**42.03**	**177**	P			**P**	**18 42 09.8**	**-0.3**
FORT				IAmb			IAmb	18 42 34.5	
	comp=Z,6.2nm,0.9s								
BBOO	**Buckleboo**	**45.12**	**167**	P			**P**	**18 42 34.8**	**-0.2**
STKA	**Stephens Creek**	**45.73**	**161**	P			**P**	**18 42 39.6**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=337,slow=10,SNR=5.1								
	comp=Z,1.2nm,0.5s								
MKAR	**Makanchi Array**	**50.66**	**323**	P			**P**	**18 43 19.1**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=118,slow=8.0,SNR=29								
	comp=Z,1.0nm,0.3s								
MKAR	**Makanchi Array**	**50.66**	**323**	P			**P**	**18 43 18.6**	**+0.8**
MKAR				PcP			**PcP**	**18 44 34.2**	**-1.0**
MAKZ	**Makanchi**	**50.85**	**322**	P			**P**	**18 43 20.2**	**+0.9**
MAKZ				IAmb			IAmb	18 43 21.0	
	comp=Z,1.8nm,0.5s								
ZAA0	**Zalesovo Array**	**53.26**	**331**	P			**P**	**18 43 37.2**	**+0.1**
ZAA0				IAmb			IAmb	18 43 38.5	
	comp=Z,1.8nm,0.8s								
ZALV	**Zalesovo Beam**	**53.26**	**331**	P			**P**	**18 43 37.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=110,slow=7.7,SNR=8.0								
	comp=Z,1.1nm,0.5s								
ZALV	**Zalesovo Beam**	**53.26**	**331**	P			**P**	**18 43 36.9**	**-0.1**
KURK	**Kurchatov**	**54.70**	**325**	P			**P**	**18 43 47.8**	**+0.2**
KURK				IAmb			IAmb	18 43 49.5	
	comp=Z,3.2nm,0.8s								
KURBB	**Kurchatov Arra**	**54.70**	**325**	P			**P**	**18 43 48.2**	**+0.6**
	comp=Z,1.1nm,0.2s,baz=128,slow=7.1,SNR=6.8								
	comp=Z,1.1nm,0.2s								
KKAR	**Karatay Array**	**56.91**	**314**	P			**P**	**18 44 04.0**	**+0.4**
BVAR	**Borovoye Array**	**60.30**	**325**	P			**P**	**18 44 27.7**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=128,slow=9.6,SNR=7.8								
	comp=Z,1.6nm,0.7s								

AB31	**Akbulak array**	**65.52**	**319**	P			**P**	**18 45 01.9**	**0.0**
AB31				IAmb			IAmb	18 45 03.0	
	comp=Z,1.6nm,1.0s								
ABKAR	**Akbulak array**	**65.52**	**319**	P			**P**	**18 45 01.6**	**-0.3**
B20K	**Meade River**	**75.01**	**20**	P			**P**	**18 46 01.5**	**+1.9**
IMAR	**Indian Mountai**	**75.87**	**25**	P			**P**	**18 46 06.2**	**+1.5**
F24K	**Squaw Lake**	**78.23**	**23**	P			**P**	**18 46 19.6**	**+1.7**
F24K				IAmb			IAmb	18 46 40.5	
	comp=Z,1.3nm,0.7s								
D25K	**Kavik River**	**78.73**	**21**	P			**P**	**18 46 21.9**	**+1.2**
D25K				IAmb			IAmb	18 46 24.3	
	comp=Z,5.3nm,1.4s								
ARCES	**ARCESS Array B**	**82.86**	**340**	P			**P**	**18 46 43.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=69,slow=6.6,SNR=5.5								
	comp=Z,1.2nm,0.7s								
ARCES	**ARCESS Array B**	**82.86**	**340**	P			**P**	**18 46 42.5**	**-0.2**
FINES	**FINESS Array B**	**84.53**	**332**	P			**P**	**18 46 51.2**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=67,slow=4.1,SNR=18								
	comp=Z,0.9nm,0.4s								
FINES	**FINESS Array B**	**84.53**	**332**	P			**P**	**18 46 50.6**	**-0.8**
AKASG	**Malin Array Be**	**85.20**	**321**	P			**P**	**18 46 53.8**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=66,slow=4.6,SNR=3.8								
	comp=Z,0.5nm,0.4s								
AKASG	**Malin Array Be**	**85.20**	**321**	P			**P**	**18 46 54.4**	**-0.6**
AKASG				IAmb			IAmb	18 47 19.3	
	comp=Z,3.1nm,1.2s								
HFS	**Hagfors**	**90.69**	**332**	P			**P**	**18 47 20.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=45,slow=0.2,SNR=1.2								
	comp=Z,0.8nm,0.6s								

WEL 28 19:06:40.8±1.3, 34°S±3°0×177°9E±3°2, h279km±42km, M3.7/7, mB4.1/1, ML3.6/7, MLv3.7/7, Mw(mB)3.1/1, Error ellipse: s-maj=53.9km s-min=19.6km az=132.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.51**	**187**	P			Pn	19 07 41.0	+0.6
MXZ				S			S	19 08 28.7	+0.7
WMGZ	**Waiomatatini S**	**3.75**	**185**	P			Pn	19 07 43.5	+0.4
WMGZ				S			S	19 08 33.7	+0.8
PKGZ	**Pakihiroa**	**3.84**	**189**	P			Pn	19 07 44.1	0.0
PKGZ				S			S	19 08 35.9	+1.3
RUGZ	**Raukumara Rang**	**4.00**	**193**	P			Pn	19 07 46.4	+0.4
PUZ	**Puketiti**	**4.02**	**187**	P			Pn	19 07 45.6	-0.6
PUZ				S			S	19 08 37.5	-0.8
MWZ	**Matawai**	**4.38**	**194**	P			Pn	19 07 51.3	+1.0
MWZ				S			S	19 08 47.2	+1.3
URZ	**Urewera**	**4.41**	**198**	P			Pn	19 07 49.6	-0.9
URZ				S			S	19 08 46.5	+0.2
MUGZ	**Murupara**	**4.71**	**200**	P			Pn	19 07 53.9	-0.1
MUGZ				S			S	19 08 53.9	+1.3
RTZ	**Ruatahuna**	**4.78**	**198**	P			Pn	19 07 54.7	-0.3
RTZ				S			S	19 08 54.9	+0.6
RAHZ	**Arahi**	**5.04**	**196**	P			Pn	19 07 57.4	-0.6
ARHZ	**Aropaoanui**	**5.39**	**196**	P			Pn	19 08 02.3	+0.2
OTVZ	**Oturere**	**5.69**	**206**	P			Pn	19 08 05.6	-0.4

*MOS **28** 19:07:30.1±1.2, 77°.97N×126°.27E, h8km, mb4.4/26, Error ellipse: s-maj=29.0km s-min=8.3km az=89.2*
*IDC **28** 19:07:30.4±0.5, 77°.92N×126°.48E, h0km, mb3.9/22, mbtmp3.9/26, ML4.1/4, MS3.5/45, Error ellipse: s-maj=15.3km s-min=11.6km az=151.0*
*NEIC **28** 19:07:31.4±1.4, 77°.77N±0°.09×126°.5E±0°.4, h10km±1km, mb4.4/82, Error ellipse: s-maj=16.0km s-min=14.1km az=291.0*
*YARS **28** 19:07:33.2, 76°.12N×136°.02E, h20km, ML3.6/4*

ISC 28 19:07:31.4±0.4, 77°.68N±0°.05×126°.51E±0°.05, h10km, n212, σ1§60/177, mb4.3/76, MS3.5/44, 9C-2D, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.20**	**300**	*eP*			Pn	19 08 53.3	+4.1
SVZ				*eS*			**Sn**	**19 09 48.0**	**-1.0**
	98nm,2.0s								
TIXI	**Tiksi**	**6.09**	**173**	Pn			**Pn**	**19 09 02.3**	**+1.0**
	5.2nm,0.3s,baz=28,slow=12,SNR=39								
TIXI				Sn			**Sn**	**19 10 07.8**	**-3.1**
	6.6nm,0.3s,baz=109,slow=19,SNR=7.3								
TIXI				LR			LR	19 11 53.6	
	comp=Z,252nm,19.7s,baz=1.5,slow=41								
	11nm,0.3s								
TIXI	**Tiksi**	**6.09**	**173**	*d* P			**Pn**	**19 09 02.1**	**+0.8**
TIXI	**Tiksi**	**6.09**	**173**				**Pn**	**19 08 59.8**	**-1.5**
TIXI				Sn			**Sn**	**19 10 07.2**	**-3.7**
TIXI	**Tiksi**	**6.09**	**173**	*e*Pg			**Pn**	**19 09 01.6**	**+0.2**
	83nm,0.5s								
TIXI				*e*Sg			**Sn**	**19 10 06.8**	**-4.2**
	52nm,0.6s								
TIXI				*e*Sg			**Sn**	**19 10 06.8**	**-4.2**
	115nm,0.4s								
Y451		**6.17**	**172**	*e*Pg			**Pn**	**19 09 02.9**	**+0.5**
	35nm,0.5s								
Y451				*i* Sg			**Sn**	**19 10 08.6**	**-4.3**
	48nm,0.1s								
Y451				*i* Sg			**Sn**	**19 10 08.6**	**-4.3**
	45nm,0.2s								
Y457		**6.17**	**172**	*e*Pg			**Pn**	**19 09 02.7**	**+0.2**
	35nm,0.6s								
Y457				*e*Sg			**Sn**	**19 10 07.9**	**-5.1**
	77nm,0.2s								
Y457				*e*Sg			**Sn**	**19 10 07.9**	**-5.1**
	62nm,0.2s								
Y458		**6.36**	**172**	*e*Pg			**Pn**	**19 09 05.1**	**+0.1**
	52nm,0.6s								
Y458				*i* Sg			**Sn**	**19 10 12.2**	**-5.2**
	116nm,0.2s								
NRIK	**Noril'sk**	**13.50**	**253**	LR			LR	19 16 57.4	
	comp=Z,197nm,18.9s,baz=40,slow=42								
NRIK	**Noril'sk**	**13.50**	**253**	*i* P			**Pn**	**19 10 43.4**	**+0.7**
NRIK	**Noril'sk**	**13.50**	**253**	Pn			**Pn**	**19 10 40.3**	**-2.4**
BILL	**Bilibino**	**14.75**	**109**	*ce*P			**Pn**	**19 11 03.4**	**+3.7**
BILL				pmax			pmax		
	comp=Z,7.0nm,0.9s								
BILL	**Bilibino**	**14.75**	**109**				**Pn**	**19 11 01.7**	**+2.0**
YAK	**Yakutsk**	**15.76**	**174**	Pn			**Pn**	**19 11 12.3**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=166,slow=23,SNR=5.1								
YAK				LR			LR	19 18 44.9	
	comp=Z,244nm,19.5s,baz=0.5,slow=42								
	comp=Z,2.9nm,0.6s								
YAK	**Yakutsk**	**15.76**	**174**	*e*P			**P**	**19 11 17.4**	**+0.5**
YAK				pmax			pmax		
	comp=Z,8.0nm,1.3s								
YAK				pmax			pmax		
	comp=N,8.0nm,1.2s								
YAK				pmax			pmax		
	comp=E,2.0nm,1.3s								
YAK	**Yakutsk**	**15.76**	**174**				**Pn**	**19 11 12.3**	**-0.7**
SEY	**Seymchan**	**16.88**	**137**	P			**Pn**	**19 11 30.7**	**+1.2**
	comp=E,0.3nm,0.3s,baz=333,slow=9.6,SNR=8.7								
	comp=E,2.4nm,0.6s								
SEY	**Seymchan**	**16.88**	**137**	*ce*P			**P**	**19 11 33.1**	**+3.7**
SEY				pmax			pmax		
	comp=Z,8.0nm,1.3s								
KBS	**Kingsbay**	**19.79**	**329**	P			**P**	**19 11 59.7**	**-1.5**
KBS				pmax			pmax		
	comp=Z,36nm,1.5s								
KBS	**Kingsbay**	**19.79**	**329**	P			**P**	**19 11 59.7**	**-1.5**
KBS				IAmb			IAmb	19 12 11.6	
	comp=Z,36nm,1.5s								
SPITS	**Spitsbergen Ar**	**19.88**	**325**	P			**P**	**19 12 00.5**	**-1.8**
	baz=24,slow=15								
	comp=Z,4.5nm,0.8s								
SPB2	**Spitsbergen Ar**	**19.88**	**325**	P			**P**	**19 12 01.4**	**-0.9**
SPB2				IAmb			IAmb	19 12 13.6	
	comp=Z,15nm,1.0s								
MA2	**Magadan**	**19.88**	**142**	P			**Pn**	**19 12 06.1**	**+2.1**
	comp=Z,11nm,0.9s,baz=1.5,slow=14,SNR=4.1								
MA2				LR			LR	19 20 49.9	
	comp=Z,112nm,19.9s,baz=348,slow=40								
	comp=Z,11nm,0.9s								
MA2	**Magadan**	**19.88**	**142**	*ce*P			**P**	**19 12 02.3**	**-0.1**
MA2				pmax			pmax		
	comp=Z,24nm,1.7s								
MA2	**Magadan**	**19.88**	**142**	P			**P**	**19 12 04.1**	**+1.7**
MA2				IAmb			IAmb	19 12 08.6	
	comp=Z,18nm,1.0s								
C16K	**Lisburne Hills**	**20.57**	**80**				**P**	**19 12 09.7**	**-0.1**
C16K	**Lisburne Hills**	**20.57**	**80**	P			**P**	**19 12 10.7**	**+0.9**
	baz=326								
B20K	**Meade River**	**20.85**	**70**				**P**	**19 12 12.2**	**-0.6**
C17K	**DeLong Mountai**	**20.86**	**77**	P			**P**	**19 12 14.0**	**+1.0**
	baz=326								

C19K	**Lookout Ridge**	**21.09**	**73**	P			**P**	**19 12 14.9**	**-0.6**
C18K	**Utukok River**	**21.14**	**75**				**P**	**19 12 16.2**	**+0.2**
C18K	**Utukok River**	**21.14**	**75**	P			**P**	**19 12 17.2**	**+1.2**
	baz=326								
D17K	**Noatak River**	**21.53**	**78**	P			**P**	**19 12 21.1**	**+1.0**
	baz=327								
B21K	**Ikpikpuk River**	**21.68**	**69**	P			**P**	**19 12 21.5**	**-0.2**
B21K	**Ikpikpuk River**	**21.68**	**69**	P			**P**	**19 12 22.7**	**+1.1**
	baz=325								
D19K	**Kuna River**	**21.90**	**73**	P			**P**	**19 12 24.1**	**0.0**
D19K	**Kuna River**	**21.90**	**73**	P			**P**	**19 12 24.9**	**+0.7**
	baz=326								
D20K	**Etivluk River**	**22.02**	**71**				**P**	**19 12 25.0**	**-0.5**
D20K	**Etivluk River**	**22.02**	**71**	P			**P**	**19 12 26.3**	**+0.9**
	baz=326								
C21K	**Knifeblade Rid**	**22.02**	**69**	P			**P**	**19 12 26.5**	**+1.1**
	baz=326								
E18K	**Tukpahlearik C**	**22.28**	**77**	P			**P**	**19 12 27.7**	**-0.5**
E18K				IAmb			IAmb	19 12 34.8	
	comp=Z,17nm,0.8s								
E18K	**Tukpahlearik C**	**22.28**	**77**	P			**P**	**19 12 28.9**	**+0.7**
	baz=327								
E20K	**Nigu River**	**22.49**	**72**	P			**P**	**19 12 30.9**	**+0.3**
	baz=327								
E21K	**Killik River**	**22.79**	**70**	P			**P**	**19 12 33.4**	**-0.3**
E21K				IAmb			IAmb	19 12 36.0	
	comp=Z,17nm,1.2s								
E19K	**Redstone River**	**22.95**	**74**				**P**	**19 12 35.4**	**0.0**
E19K				IAmb			IAmb	19 12 41.7	
	comp=Z,9.0nm,0.8s								
E19K	**Redstone River**	**22.95**	**74**	P			**P**	**19 12 35.5**	**+0.1**
	baz=328								
D23K	**Nanushuk River**	**23.00**	**66**				**P**	**19 12 36.1**	**+0.3**
D23K				IAmb			IAmb	19 12 38.4	
	comp=Z,10.0nm,0.8s								
F19K	**Shaleruckik Mo**	**23.37**	**75**	P			**P**	**19 12 38.9**	**-0.7**
F19K				IAmb			IAmb	19 12 40.8	
	comp=Z,16nm,1.1s								
F19K	**Shaleruckik Mo**	**23.37**	**75**	P			**P**	**19 12 39.7**	**+0.1**
	baz=328								
E22K	**Anaktuvuk Pass**	**23.48**	**68**	IAmb			IAmb	19 12 42.9	
	comp=Z,10nm,1.1s								
F20K	**Avaraart Lake**	**23.61**	**73**	P			**P**	**19 12 40.8**	**-1.2**
F20K				IAmb			IAmb	19 13 03.0	
	comp=Z,6.5nm,0.9s								
C27K	**Jago River**	**23.78**	**60**	P			**P**	**19 12 42.9**	**-0.7**
F21K	**Alatna River**	**23.92**	**71**	P			**P**	**19 12 44.4**	**-0.6**
F21K				IAmb			IAmb	19 13 04.8	
	comp=Z,8.0nm,1.1s								
G21K	**Allakaket**	**24.53**	**72**	IAmb			IAmb	19 13 00.4	
	comp=Z,17nm,1.5s								
G21K	**Allakaket**	**24.53**	**72**	P			**P**	**19 12 50.4**	**-0.1**
	baz=329								
D27M	**Malcolm River**	**24.62**	**59**				**P**	**19 12 51.2**	**-0.2**
D27M	**Malcolm River**	**24.62**	**59**	P			**P**	**19 12 51.8**	**+0.3**
	baz=329								
H18K	**Honhosa River**	**24.70**	**78**	P			**P**	**19 12 52.7**	**+0.6**
	baz=330								
H19K	**Roundabout Mou**	**24.78**	**76**	P			**P**	**19 12 53.4**	**+0.7**
	baz=330								
F24K	**Squaw Lake**	**24.79**	**66**				**P**	**19 12 52.3**	**-0.6**
F24K	**Squaw Lake**	**24.79**	**66**	P			**P**	**19 12 53.0**	**+0.1**
	baz=329								
IMAR	**Indian Mountai**	**24.94**	**73**	P			**P**	**19 12 53.5**	**-0.7**
G23K	**Bananza Creek**	**25.06**	**69**				**P**	**19 12 54.5**	**-0.9**
G23K				IAmb			IAmb	19 12 57.4	
	comp=Z,9.1nm,1.1s								
G23K	**Bananza Creek**	**25.06**	**69**	P			**P**	**19 12 55.8**	**+0.4**

ARTI pmax pmax
comp=Z,7.0nm,2.1s
M30M Minto, Yukon 31.34 62 P **P** **19 13 51.1 -0.4**
DGZ Jazzator, Alta 31.67 231 *i* P **P** **19 13 56.8 +2.1**
DGZ pmax pmax
comp=Z,8.0nm,2.2s
BVAR Borovoye Array 31.71 253 P **P** **19 13 56.2 +1.4**
comp=Z,1.2nm,0.7s,baz=30,slow=9.1,SNR=7.7
comp=Z,1.2nm,0.7s
KURK Kurchatov 32.28 242 *i* P **P** **19 14 01.9 +2.2**
KURK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 32.28 242 **PcP** **19 16 47.8 +0.4**
KURK Kurchatov 32.28 242 P **P** **19 14 00.8 +1.0**
MMPY Sheldon Lake, 32.33 58 **P**
MMPY IAmb IAmb 19 14 02.5
comp=Z,6.4nm,1.1s
KURBB Kurchatov Arra 32.38 242 P **P** **19 14 02.3 +1.6**
comp=Z,0.8nm,0.8s,baz=27,slow=8.4,SNR=5.9
KURBB PcP **PcP** **19 16 47.8 +0.1**
comp=Z,0.2nm,0.8s,baz=24,slow=2.0,SNR=4.3
KURBB LR LR 19 29 14.8
comp=Z,167nm,18.9s,baz=192,slow=40
comp=Z,0.8nm,0.8s
VNFG Fog Glacier, M 32.45 87 P **P** **19 14 01.1 -0.2**
KDAK Kodiak Island 32.55 79 LR LR 19 27 14.3
comp=Z,84nm,20.9s,baz=340,slow=36
FINES FINESS Array B 33.09 300 LR LR 19 29 41.8
comp=Z,112nm,18.7s,baz=21,slow=40
CNBA Chernabura Isl 33.80 88 P **P** **19 14 12.2 -0.8**
CNBA IAmb IAmb 19 14 47.8
comp=Z,8.7nm,1.5s
YKA Yellowknife Ar 35.23 45 P **P** **19 14 23.9 -1.4**
comp=Z,1.3nm,0.8s,baz=345,slow=7.3,SNR=6.8
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 35.23 45 *ce* P **P** **19 14 25.2 -0.1**
YKA pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 35.37 236 P **P** **19 14 28.1 +1.4**
comp=Z,0.4nm,0.6s,baz=343,slow=9.6,SNR=5.0
MKAR PcP **PcP** **19 16 56.4 0.0**
comp=Z,0.3nm,0.5s,baz=29,slow=3.3,SNR=2.5
MKAR LR LR 19 30 57.8
comp=Z,149nm,18.0s,baz=355,slow=40
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 35.37 236 *i* P **P** **19 14 29.2 +2.5**
MKAR Makanchi Array 35.37 236 P **P** **19 14 26.9 +0.2**
MAKZ Makanchi 35.41 236 P **P** **19 14 27.1 0.0**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
MAKZ Makanchi 35.41 236 **P** **19 14 27.1 0.0**
MAKZ IAmb IAmb 19 14 29.7
comp=Z,5.2nm,1.0s
SFJD Kangerlussuaq 35.54 358 LR LR 19 27 27.2
comp=Z,52nm,18.8s,baz=355,slow=34
VSU Vasula 35.74 298 *i* P **P** **19 14 29.9 +0.2**
VSU pmax pmax
comp=Z,12nm,1.2s
NB201 NORSAR Array S 36.03 312 P **P** **19 14 30.6 -1.6**
NOA NORSAR Array B 36.05 312 P **P** **19 14 31.2 -1.2**
comp=Z,1.1nm,0.7s,baz=312,slow=14,SNR=3.8
comp=Z,1.1nm,0.7s
MOS Moscow 36.12 286 *e* P **P** **19 14 31.8 -1.1**
MOS *e* 19 15 53.5
DLBC Dease Lake 36.45 59 P **P** **19 14 35.9 0.0**
comp=Z,1.1nm,0.6s,baz=278,slow=7.4,SNR=3.9
comp=Z,1.1nm,0.6s
HFS Hagfors 36.50 309 P **P** **19 14 34.7 -1.5**
comp=Z,1.5nm,0.6s,baz=12,slow=7.9,SNR=7.3
comp=Z,1.5nm,0.6s
ANGG Ammassalik, Gr 36.61 349 P **P** **19 14 34.8 -2.2**
AKTO Aktyubinsk 36.76 264 LR LR 19 31 22.1
comp=Z,71nm,19.0s,baz=166,slow=39
OBN Obninsk 36.92 287 LR LR 19 31 37.8
comp=Z,60nm,20.4s,baz=188,slow=39
OBN Obninsk 36.92 287 || *eP* **P** **19 14 41.5 +1.8**
OBN *e* 19 16 05.2
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,88nm,16.0s
BELG Belogornoye 37.14 275 *i* P **P** **19 14 43.5 +1.8**
BELG pmax pmax
comp=Z,2.0nm,0.9s
WMQ Urumqi 37.34 228 *e* P **P** **19 14 43.5 -0.1**
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ LR LR
comp=N,200nm,17.9s
WMQ LR LR
comp=E,260nm,22.7s
WMQ LR LR
comp=Z,110nm,21.5s
HHC Hu-ho-hao-te 37.46 199 *e* P **P** **19 14 43.5 -1.2**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,73nm,5.4s
HHC LR LR
comp=N,210nm,15.3s
HHC LR LR
comp=E,150nm,16.0s
HHC LR LR
comp=Z,100nm,15.3s
AB31 Akbulak array 37.46 261 **P** **19 14 44.4 -0.1**
ABKAR Akbulak array 37.46 261 **P** **19 14 44.8 +0.4**
FRB Frobisher Bay 38.51 11 LR LR 19 30 40.2
comp=Z,30nm,18.6s,baz=114,slow=36
PDGK Podgornoye 39.23 238 P **P** **19 14 59.6 +0.1**
PDGK Podgornoye 39.23 238 P **P** **19 14 59.6 +0.1**
KSRS Korea Array 40.33 178 LR LR 19 35 06.7
comp=Z,49nm,18.4s,baz=155,slow=41
BOOM Boomskoye usch 40.70 241 P **P** **19 15 11.1 -0.7**
BOOM pmax pmax
comp=Z,5.0nm,1.2s
BOOM Boomskoye usch 40.70 241 P **P** **19 15 11.1 -0.7**
AAK Ala-Archa 40.83 243 LR LR 19 34 05.1
comp=Z,160nm,19.6s,baz=23,slow=39
AAK Ala-Archa 40.83 243 *ce* P **P** **19 15 15.3 +2.4**
AAK pmax pmax
comp=Z,5.0nm,1.7s
TARG Taragay, Kyrgy 41.08 239 P **P** **19 15 14.7 -0.6**
TARG pmax pmax
comp=Z,4.0nm,1.1s
TARG Taragay, Kyrgy 41.08 239 P **P** **19 15 14.7 -0.6**
AKASG Malin Array Be 42.57 291 P **P** **19 15 26.6 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.7s,baz=21,slow=8.9,SNR=5.4
AKASG LR LR 19 35 38.5
comp=Z,90nm,19.1s,baz=6.5,slow=40
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 42.57 291 *ce* P **P** **19 15 27.2 +0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 42.57 291 IAmb IAmb 19 15 36.0
comp=Z,4.7nm,1.4s
AKBB Malin Array Si 42.57 291 *i* P **P** **19 15 27.0 +0.2**
AKBB pmax pmax
comp=Z,3.0nm,0.6s
BBB Bella Bella 42.73 61 LR LR 19 35 38.5
comp=Z,35nm,18.8s,baz=244,slow=40
KSH2 Kashi 44.00 240 P **P** **19 15 41.8 +3.1**
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
BTK Batken 44.03 246 P **P** **19 15 39.8 +1.0**
BTK pmax pmax
comp=Z,6.0nm,0.9s
BTK Batken 44.03 246 **P** **19 15 39.8 +1.0**
BTK IAmb IAmb 19 15 42.6
comp=Z,6.2nm,0.9s
CLL Collm 45.05 306 *eP* **P** **19 15 47.0 +0.3**
GAR Garm 45.15 246 **P** **19 15 48.4 +0.6**
CHGR Chuyangaron 45.71 247 *i* P **P** **19 15 54.1 +1.9**
CHGR pmax pmax
comp=Z,6.0nm,0.8s
CHGR Chuyangaron 45.71 247 P **P** **19 15 53.2 +1.0**
KIV Kislovodsk 46.20 276 *eP* **P** **19 15 57.4 +1.4**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,54nm,16.0s
VRAC Vranov 46.33 302 LR LR 19 39 37.9
comp=Z,105nm,18.1s,baz=20,slow=42
KBZ Khabaz 46.37 275 P **P** **19 15 58.5 +1.4**
comp=Z,2.9nm,0.9s,baz=16,slow=3.5,SNR=4.2
KBZ LR LR 19 38 30.6
comp=Z,67nm,18.4s,baz=5.0,slow=40
comp=Z,2.9nm,0.9s

KBZ Khabaz 46.37 275 *ce* P **P** **19 16 00.0 +2.8**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
SHA1 Shidzhatmaz 46.41 276 *i* P **P** **19 15 59.3 +1.5**
GERES GERESS Array B 47.30 304 P **P** **19 16 04.7 +0.1**
comp=Z,0.3nm,0.5s,baz=2.9,slow=8.0,SNR=3.7
comp=Z,0.3nm,0.5s
SCHQ Schefferville 47.49 10 LR LR 19 35 31.7
comp=Z,44nm,18.5s,baz=82,slow=36
MLR Muntele Rosu 48.20 292 LR LR 19 38 39.8
comp=Z,53nm,18.4s,baz=40,slow=39
NEW Newport 48.48 53 P **P** **19 16 12.7 -0.9**
comp=Z,1.7nm,0.5s,baz=355,slow=5.7,SNR=5.4
comp=Z,1.7nm,0.5s
GNI Garni 49.40 272 LR LR 19 40 43.4
comp=Z,62nm,18.4s,baz=46,slow=40
JTMT Jette 49.46 51 P **P** **19 16 21.5 +0.2**
ULM Lac du Bonnet 49.69 35 P **P** **19 16 20.5 -2.3**
comp=Z,2.0nm,0.6s,baz=293,slow=7.7,SNR=3.0
comp=Z,2.0nm,0.6s
ULM Lac du Bonnet 49.69 35 IAmb IAmb 19 16 31.5
comp=Z,6.8nm,1.3s
DAVOX Davos/Dischmat 49.96 307 LR LR 19 39 25.5
comp=Z,53nm,19.8s,baz=83,slow=38
PLID Pearl Lake 51.75 53 **P** **19 16 39.4 +0.7**
PLID IAmb IAmb 19 16 40.2
comp=Z,4.5nm,1.1s
BMO Blue Mountains 51.75 54 P **P** **19 16 38.2 -0.4**
BMO pmax pmax
comp=Z,5.0nm,1.1s
BMO Blue Mountains 51.75 54 P **P** **19 16 38.2 -0.4**
BMO IAmb IAmb 19 16 41.0
comp=Z,4.7nm,1.1s
BRTR Keskin Array B 52.16 283 P **P** **19 16 41.8 0.0**
comp=Z,0.5nm,0.8s,baz=15,slow=6.0,SNR=2.9
BRTR LR LR 19 43 24.4
comp=Z,42nm,18.7s,baz=348,slow=41
comp=Z,0.5nm,0.8s
MCMT McKenzie Canyo 52.53 50 P **P** **19 16 44.7 +0.1**
PZH PanZhiHua 52.53 208 P **P** **19 16 45.0 +0.4**
BCYI Bear Canyon 52.94 51 IAmb IAmb 19 16 49.1
comp=Z,5.3nm,1.1s
J08A Circle Bar Ran 52.99 56 **P** **19 16 48.8 +0.9**
J08A IAmb IAmb 19 16 50.1
comp=Z,6.0nm,1.2s
EVN Everest 53.01 225 **P** **19 16 46.6 -2.1**
YBH Yreka Blue Hor 53.80 60 LR LR 19 41 11.4
comp=Z,32nm,20.5s,baz=352,slow=38
PDAR Pinedale Array 55.08 48 P **P** **19 17 02.7 -0.6**
comp=Z,0.4nm,0.5s,baz=358,slow=6.9,SNR=3.1
PDAR LR LR 19 44 02.9
comp=Z,17nm,18.0s,baz=339,slow=40
comp=Z,0.4nm,0.5s
BEKR Beckworth 56.04 59 IAmb IAmb 19 17 11.7
comp=Z,3.5nm,0.9s
PAHR Pah Rah Range 56.37 58 IAmb IAmb 19 17 14.3
comp=Z,4.0nm,1.0s
SADO Sadowa 56.80 22 LR LR 19 41 42.9
comp=Z,45nm,18.5s,baz=172,slow=36
NVAR Mina Array Bea 57.81 57 P **P** **19 17 23.1 +0.5**
comp=Z,1.3nm,0.7s,baz=353,slow=5.1,SNR=7.7
comp=Z,1.3nm,0.7s
VAE Valguarnera 58.17 300 LR LR 19 48 11.0
comp=Z,65nm,18.1s,baz=164,slow=42
ASF Jabal al Asfar 58.75 277 LR LR 19 45 46.5
comp=Z,27nm,19.5s,baz=25,slow=39
DSP Deep Springs 58.90 57 IAmb IAmb 19 17 32.8
comp=Z,5.3nm,1.2s
ESDC Sonseca Array 59.11 317 LR LR 19 46 57.7
comp=Z,22nm,18.2s,baz=25,slow=40
PV01 Paradox Valley 59.76 48 IAmb IAmb 19 17 46.7
comp=Z,3.5nm,0.9s
MPMC Manual Prospec 60.26 57 P **P** **19 17 40.1 +0.4**
MPMC IAmb IAmb 19 17 41.9
comp=Z,3.2nm,0.8s
GWY Greenwater Val 60.28 56 **P** **19 17 40.1 +0.3**
GWY IAmb IAmb 19 17 41.8
comp=Z,4.0nm,0.9s
SDCO Great Sand Dun 60.62 46 P **P** **19 17 42.5 +0.2**
SDCO IAmb IAmb 19 17 52.8
comp=Z,1.3nm,0.7s
CMAR Chiang Mai Arr 60.78 210 P **P** **19 17 44.7 +1.5**
comp=Z,0.2nm,0.5s,baz=4.7,slow=8.3,SNR=2.1
comp=Z,0.2nm,0.5s
EIL Elat 61.58 278 LR LR 19 45 44.8
comp=Z,59nm,19.1s,baz=50,slow=37
ANMO Albuquerque 63.22 47 P **P** **19 17 58.8 -0.8**
comp=Z,0.7nm,0.3s,baz=331,slow=9.9,SNR=3.6
ANMO LR LR 19 46 37.0
comp=Z,39nm,20.2s,baz=354,slow=37
comp=Z,0.7nm,0.3s
ANMO Albuquerque 63.22 47 *ce* P **P** **19 17 59.0 -0.6**
ANMO pmax pmax
comp=Z,1.0nm,0.7s
TKL Tuckaleechee C 65.43 27 LR LR 19 46 11.5
comp=Z,59nm,20.9s,baz=90,slow=36
TXAR Lajitas Array 69.15 46 P **P** **19 18 36.9 -0.7**
comp=Z,3.1nm,1.0s,baz=355,slow=3.1,SNR=14
comp=Z,3.1nm,1.0s
LPIG La Paz 73.19 53 LR LR 19 54 52.9
comp=Z,19nm,18.1s,baz=137,slow=39
PALK Palekelei 74.22 228 LR LR 19 57 27.0
comp=Z,124nm,18.2s,baz=36,slow=40
DBIC Dimbokro 91.62 312 LR LR 20 04 43.7
comp=Z,17nm,19.0s,baz=130,slow=38
MBAR Mbarara 91.82 276 LR LR 20 03 44.6
comp=Z,31nm,18.4s,baz=82,slow=37
SDV Santo Domingo 93.04 17 LR LR 20 03 59.6
comp=Z,13nm,18.8s,baz=282,slow=36

*BJI **28** 19:11:53.3, 18°.55S×177°.37W, h544km, mB4.7/7, mb4.8/29*
*IDC **28** 19:11:54.8±0.9, 18°.63S×177°.84W, h534km±9km, mb4.1/24, mbtmp5.0/27, Error ellipse: s-maj=11.9km s-min=9.6km az=123.0*
*NEIC **28** 19:11:54.1±1.9, 18°.74S±0°.08×177°.71W±0°.09, h529km±5km, mb4.9/547, Error ellipse: s-maj=13.3km s-min=11.7km az=115.0*
*NOU **28** 19:11:56.7, 18°.57S×177°.82W, h550km, mb4.8/66, Fiji Islands Region*
*GFZ **28** 19:11:56.5±0.3, 19°.5±4°×17°.8W±°, h550km±4km, M4.7/22, mb4.9/22*

ISC 28 19:11:55.0±0.3, 18°.70S±0°.04×177°.75W±0°.04, h544km±3km, h544km:pP-P, n1065, σ1s02/867, mb4.9/283, 69C-36D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**1.11**	**294**	P	**P**		**19 13 03.0**	**+2.0**
LKBA	**Tubou, Lakemba**	**1.11**	**294**	S	**S**		**19 13 57.1**	**+2.6**
TAVE	**Taveuni**	**2.85**	**314**	P	**P**		**19 13 10.2**	**+1.5**
TAVE	**Taveuni**	**2.85**	**314**	S	**S**		**19 14 10.4**	**+1.8**
DGTI	**Dogotuki**	**3.38**	**314**	P	**P**		**19 13 12.9**	**+0.8**
DGTI	**Dogotuki**	**3.38**	**314**	S	**S**		**19 14 16.2**	**+1.4**
MSVF	**Nonsavu**	**4.11**	**283**	P	**P**		**19 13 18.8**	**+1.4**
	137nm,0.5s,baz=326,slow=23,SNR=103							
MSVF				S	**S**		**19 14 25.4**	**+0.9**
	171nm,1.0s,baz=172,slow=17,SNR=7.5							
MSVF	**Nonsavu**	**4.11**	**283**	P	**P**		**19 13 19.0**	**+1.6**
MSVF	**Nonsavu**	**4.11**	**283**	S	**S**		**19 14 26.7**	**+2.2**
MSVF	**Nonsavu**	**4.11**	**283**	P	**P**		**19 13 19.4**	**+2.0**
FUTU	**Fugatoga**	**4.38**	**355**	P	**P**		**19 13 21.1**	**+1.6**
FUTU	**Fugatoga**	**4.38**	**355**		**P**		**19 13 19.2**	**-0.3**
FUTU	**Fugatoga**	**4.38**	**355**	P	**P**		**19 13 21.9**	**+2.4**
NIUE	**Niue**	**7.41**	**94**	P	**P**		**19 13 48.5**	**+1.7**
NIUE	**Niue**	**7.41**	**94**	P	**S**		**19 15 22.9**	**+4.5**
NIUE	**Niue**	**7.41**	**94**		**P**		**19 13 47.1**	**+0.3**
NIUE	**Niue**	**7.41**	**94**	P	**P**		**19 13 47.9**	**+1.1**
NIUE	**Niue**	**7.41**	**94**	P	**P**		**19 13 48.5**	**+1.7**
AFI	**Afiamalu**	**7.45**	**51**	P	**P**		**19 13 46.1**	**-1.2**
	106nm,0.5s,baz=44,slow=1.2,SNR=23							
AFI				S	**S**		**19 15 11.4**	**-7.8**
	100nm,0.5s,baz=184,slow=23,SNR=6.4							
AFI	**Afiamalu**	**7.45**	**51**		**P**		**19 13 45.4**	**-1.9**
RAO	**Raoul Island**	**10.51**	**181**	S	**S**		**19 16 13.3**	**-2.2**
	211nm,0.4s,baz=248,slow=22,SNR=5.6							
RAO	**Raoul Island**	**10.51**	**181**	P	**P**		**19 14 17.2**	**-0.8**
GLKZ	**Green Lake**	**10.52**	**181**	P	**P**		**19 14 16.9**	**-1.1**
GLKZ				S	**S**		**19 16 07.6**	**-8.1**
FUNA	**Funafuti**	**10.54**	**343**	P	**P**		**19 14 19.0**	**+0.5**
FUNA	**Funafuti**	**10.54**	**343**	P	**P**		**19 14 17.7**	**-0.9**
FUNA	**Funafuti**	**10.54**	**343**	P	**P**		**19 14 19.7**	**+1.1**
DVP	**Devils Point**	**13.40**	**272**	P	**P**		**19 14 49.5**	**+1.4**
MARNC	**Mare, Loyalty**	**13.64**	**256**	P	**P**		**19 14 49.3**	**-1.3**

OUENC Ouen Island, N 14.90 253 P **P** **19 15 03.4 -0.1**
DZM Mont Dzumac 15.20 255 P **P** **19 15 05.7 -1.0**
56nm,0.7s,baz=86,slow=17
ONTNC Ouen Toro 15.23 254 P **P** **19 15 05.8 -1.2**
NOUC Port Laguerre 15.33 255 P **P** **19 15 09.4 +1.4**
KOUNC Koumac, New Ca 17.03 261 **P** **19 15 23.4 -0.9**
RAR Rarotonga 17.08 101 P **P** **19 15 26.1 +1.2**
82nm,0.9s,baz=263,slow=7.9,SNR=7.7
RAR Rarotonga 17.08 101 P **P** **19 15 23.5 -1.3**
OUZ Omahuta 18.16 203 P **P** **19 15 36.7 +2.2**
GRZ Great Barrier 18.48 198 P **P** **19 15 38.9 +1.5**
WCZ Waipu Caves 18.54 201 P **P** **19 15 39.4 +1.5**
WIAZ Waiheke Island 19.08 198 P **P** **19 15 44.6 +1.7**
MXZ Matakaoa Point 19.11 190 P **P** **19 15 41.5 -1.6**
MXZ Matakaoa Point 19.11 190 P **P** **19 15 42.1 -1.0**
MBAZ Motutapu North 19.13 198 P **P** **19 15 46.2 +2.9**
MYRZ Mayor Island 19.25 195 P **P** **19 15 45.8 +1.3**
ETAZ East Tamaki Re 19.29 198 P **P** **19 15 46.4 +1.6**
WMGZ Waiomatatini S 19.34 189 P **P** **19 15 45.5 +0.2**
MKAZ Moumakai 19.36 197 P **P** **19 15 47.0 +1.6**
WTAZ Waiatarua 19.38 199 P **P** **19 15 46.9 +1.3**
PKGZ Pakihiroa 19.44 190 P **P** **19 15 45.9 -0.3**
AWAZ Awhitu Peninsu 19.48 199 P **P** **19 15 48.2 +1.7**
RUGZ Raukumara Rang 19.61 191 P **P** **19 15 46.8 -1.0**
PUZ Puketiti 19.62 189 P **P** **19 15 48.2 +0.5**
TWGZ Tauwhareparae 19.76 190 P **P** **19 15 50.0 +0.9**
TOZ Tahuroa Road 19.86 196 **P** **19 15 49.6 -0.4**
LIRZ Lichensteins R 19.91 194 P **P** **19 15 53.3 +2.9**
MWZ Matawai 19.99 191 P **P** **19 15 49.7 -1.6**
URZ Urewera 20.00 192 P **P** **19 15 48.4 -2.8**
20nm,0.3s,baz=290,slow=2.5,SNR=30
URZ Urewera 20.00 192 P **P** **19 15 48.8 -2.4**
URZ Urewera 20.00 192 P **P** **19 15 49.9 -1.3**
TARZ Mount Tarawera 20.10 193 P **P** **19 15 52.3 +0.1**
RAGZ Rawiri 20.17 191 P **P** **19 15 51.6 -1.2**
RIGZ Rimuhau 20.32 190 P **P** **19 15 54.0 -0.1**
RTZ Ruatahuna 20.37 192 **P** **19 15 53.0 -1.8**
RTZ Ruatahuna 20.37 192 P **P** **19 15 52.9 -1.8**
PRGZ Paritu Road 20.51 190 P **P** **19 15 58.2 +2.4**
MTHZ Maungataniwha 20.63 192 P **P** **19 15 55.9 -1.1**
RAHZ Arahi 20.64 191 P **P** **19 15 56.1 -1.0**
MHGZ Mahia Peninsul 20.73 190 P **P** **19 15 58.9 +1.1**
NMHZ Naumai 20.87 192 P **P** **19 15 57.9 -1.3**
NTVZ North Tongarir 21.11 194 P **P** **19 16 02.1 +0.7**
TMVZ Te Maari 21.12 194 P **P** **19 16 00.8 -0.8**
ETVZ East Tongariro 21.14 194 P **P** **19 16 01.6 -0.1**
TWVZ Taurewa 21.14 195 P **P** **19 16 01.6 -0.1**
OTVZ Oturere 21.18 194 P **P** **19 16 00.6 -1.5**
SNVZ South Ngauruho 21.21 194 P **P** **19 16 01.8 -0.5**
MCHZ McNeill Hill 21.23 192 P **P** **19 16 02.3 0.0**
KWHZ Kaweka Forest 21.26 193 P **P** **19 16 01.1 -1.6**
FWVZ Far West T-bar 21.29 194 P **P** **19 16 02.4 -0.8**
WHVZ Whangaehu Hut 21.31 194 P **P** **19 16 02.2 -1.2**
WNVZ Wahianoa 21.35 194 P **P** **19 16 02.5 -1.2**
VRZ Vera Road 21.37 196 P **P** **19 16 05.9 +2.3**
MOVZ Moawhango 21.39 194 P **P** **19 16 03.0 -0.9**
BHHZ Black Hill Sta 21.40 193 P **P** **19 16 02.1 -1.8**
KRHZ Kereru 21.48 192 P **P** **19 16 03.6 -1.0**
KAHZ Kahuranaki 21.53 191 P **P** **19 16 04.8 -0.3**
NEZ North Egmont 21.68 197 P **P** **19 16 10.2 +3.7**
PNHZ Pukenui 21.78 193 P **P** **19 16 05.9 -1.4**
TSZ Takapari Road 21.97 193 P **P** **19 16 08.4 -0.6**
PRHZ Porangahau 22.03 192 P **P** **19 16 08.9 -0.7**
DVHZ Dannevirke 22.16 192 P **P** **19 16 09.8 -0.8**
ANWZ Angora Road 22.25 192 P **P** **19 16 11.5 0.0**
BFZ Birch Farm 22.51 192 P **P** **19 16 12.8 -1.0**
MRZ Mangatainoka R 22.63 193 P **P** **19 16 13.1 -1.8**
MRZ Mangatainoka R 22.63 193 P **P** **19 16 13.6 -1.3**
TIWZ Tintock 22.67 193 P **P** **19 16 16.1 +0.8**
HOWZ Holdsworth Sta 22.87 193 P **P** **19 16 15.3 -1.7**
OGWZ Otaki Gorge 22.87 194 P **P** **19 16 15.5 -1.4**
DUWZ D'Urville Isla 23.16 196 P **P** **19 16 18.2 -1.4**
TRWZ Traveller 23.31 193 P **P** **19 16 20.9 0.0**
PAWZ Paruwai Farm 23.35 193 P **P** **19 16 20.2 -1.1**
MSWZ Moikau Station 23.42 193 P **P** **19 16 21.2 -0.7**
TCW Tory Channel 23.45 195 P **P** **19 16 20.7 -1.5**
HNR Honiara 23.49 290 P **P** **19 16 22.6 -0.3**
PLWZ Palliser 23.57 193 P **P** **19 16 22.1 -1.1**
QRZ Quartz Range 23.58 199 P **P** **19 16 23.3 -0.1**
TKNZ Takaka Hill 23.64 198 P **P** **19 16 22.2 -1.7**
TKNZ Takaka Hill 23.64 198 P **P** **19 16 22.5 -1.4**
NNZ Nelson 23.70 197 P **P** **19 16 23.2 -1.1**
TUWZ Tuamarina 23.75 196 P **P** **19 16 24.0 -0.8**
TUWZ Tuamarina 23.75 196 P **P** **19 16 24.2 -0.5**
MRNZ Matariki Terra 24.04 198 P **P** **19 16 26.5 -0.9**
TATA Tatamba Isabel 24.08 292 P **P** **19 16 28.7 +0.6**
THZ Tophouse 24.33 197 P **P** **19 16 29.1 -1.0**
DSZ Denniston Nort 24.64 199 P **P** **19 16 32.5 -0.3**
KHZ Kahutara 24.77 196 P **P** **19 16 32.7 -1.2**
GVZ Greta Valley S 25.42 196 P **P** **19 16 38.2 -1.5**
LTZ Lake Taylor 25.45 197 P **P** **19 16 38.1 -1.8**
OKCZ Okains Bay 26.12 195 P **P** **19 16 45.0 -0.8**
WVZ Waitaha Valley 26.18 199 P **P** **19 16 45.5 -0.8**
RACZ Rakaia 26.37 197 P **P** **19 16 47.1 -0.8**
WACZ Wakanui South 26.65 197 P **P** **19 16 49.6 -0.8**
RPZ Rata Peaks 26.66 198 P **P** **19 16 50.8 +0.3**
ARUZ Arundel 26.84 198 P **P** **19 16 51.2 -0.9**
FOZ Fox Glacier 26.89 200 P **P** **19 16 52.2 -0.3**
TMZ Timaru 27.29 198 P **P** **19 16 55.9 -0.2**
LBZ Lake Benmore 27.54 199 P **P** **19 16 56.2 -2.0**
LBZ Lake Benmore 27.54 199 P **P** **19 16 56.6 -1.6**
JCZ Jackson Bay 27.71 201 P **P** **19 16 59.7 -0.2**
WKZ Wanaka 28.30 200 P **P** **19 17 04.3 -0.6**
MSZ Milford Sound 28.53 202 P **P** **19 17 07.5 +0.6**
MLZ Mavora Lakes 29.07 201 P **P** **19 17 12.4 +0.7**
TUZ Tuapeka 29.12 198 P **P** **19 17 12.4 +0.5**
TW1H Toowoomba 1 Ha 29.14 247 P **P** **19 17 13.9 +1.3**
DCZ Deep Cove 29.49 202 P **P** **19 17 15.2 0.0**
WHZ Wether Hill Ro 29.59 200 P **P** **19 17 15.9 -0.2**
WHZ Wether Hill Ro 29.59 200 P **P** **19 17 16.4 +0.3**
AUNRC North Rockhamp 29.93 256 P **P** **19 17 20.4 +1.0**
ARMA Armidale 30.10 241 **P** **19 17 21.1 +0.2**
ARMA IAmb IAmb 19 17 22.2
comp=Z,19nm,0.9s
APZ The Paps 30.41 200 P **P** **19 17 24.0 +0.8**
AUPHS Peel High Scho 30.90 240 P **P** **19 17 28.9 +1.3**
RABL Rabaul 32.74 292 P **P** **19 17 43.6 +0.1**
AUAYR Ayr State High 32.90 263 P **P** **19 17 45.8 +1.1**
AULRC Lightning Ridg 32.96 245 P **P** **19 17 46.2 +1.1**
AUDCS Dubbo College 33.06 239 P **P** **19 17 47.2 +1.2**
CAN Canberra 33.74 234 P **P** **19 17 51.6 0.0**
CAN IAmb IAmb 19 19 18.9
comp=Z,81nm,1.8s
CTA Charters Tower 33.95 262 P **P** **19 17 53.5 0.0**
CTAO Charters Tower 33.95 262 P **P** **19 17 53.6 0.0**
CTAO Charters Tower 33.95 262 P **P** **19 17 53.1 -0.5**
CTAO IAmb IAmb 19 17 54.3
comp=Z,43nm,0.8s
CTAO Charters Tower 33.95 262 P **P** **19 17 53.7 0.0**
CTAO Charters Tower 33.95 262 P **P** **19 17 53.5 -0.1**
PMG Port Moresby 35.21 280 **P** **19 18 04.4 +0.2**
PMG Port Moresby 35.21 280 P **P** **19 18 04.6 +0.4**
comp=Z,121nm,0.9s
PMG Port Moresby 35.21 280 P **P** **19 18 04.9 +0.7**
CMSA Cobar Meteorol 35.32 242 P **P** **19 18 05.4 +0.5**
CMSA Cobar Meteorol 35.32 242 P **P** **19 18 04.4 -0.5**
QLP Quilpie 35.85 250 P **P** **19 18 09.4 0.0**
MTSU Mount Surprise 35.95 265 P **P** **19 18 10.4 0.0**
MTSU Mount Surprise 35.95 265 P **P** **19 18 10.2 -0.1**
TOO Toolangi 37.17 232 **P** **19 18 20.5 +0.4**
CORO Coronation Par 37.53 225 P **P** **19 18 24.4 +1.5**
COEN Coen 37.74 271 P **P** **19 18 25.3 +0.2**
COEN Coen 37.74 271 P **P** **19 18 25.1 +0.1**
COEN IAmb IAmb 19 18 26.1
comp=Z,33nm,0.7s
COEN Coen 37.74 271 P **P** **19 18 25.4 +0.4**
MANU Manus Island 37.97 292 P **P** **19 18 26.7 -0.2**
MANU IAmb IAmb 19 18 27.9
comp=Z,18nm,0.8s
STKA Stephens Creek 38.81 242 P **P** **19 18 34.1 +0.6**
comp=Z,35nm,0.8s,baz=86,slow=8.4,SNR=52
STKA ScP **ScP** **19 23 29.9 +2.2**
comp=Z,3.2nm,0.9s,baz=9.8,slow=6.5,SNR=3.7
comp=Z,35nm,0.8s
STKA Stephens Creek 38.81 242 P **P** **19 18 34.6 +1.1**
STKA Stephens Creek 38.81 242 P **P** **19 18 34.3 +0.8**
INKA Innaminka 39.04 249 P **P** **19 18 36.0 +0.6**
QIS Mount Isa 40.13 260 P **P** **19 18 44.1 -0.2**
WAKE Wake Island 40.73 337 P **P** **19 18 48.7 -0.3**
WAKE Wake Island 40.73 337 P **P** **19 18 48.8 -0.1**

HTT	**Hallett**	41.30	240	P		**P**	19 18 54.5	+1.1	
AUMBR	**Murray Bridge**	41.32	238	P		**P**	19 18 54.7	+1.2	
AUJCS	**Jamestown Cent**	41.52	241	P		**P**	19 18 56.4	+1.3	
OVEH	**Oceanview Est**	43.37	31	P		**P**	19 19 09.0	-0.9	
BBOO	**Buckleboo**	43.58	242	P		**P**	19 19 11.5	+0.2	
BBOO	**Buckleboo**	43.58	242	P		**P**	19 19 11.5	+0.2	
BBOO				IAmb	IAmb		19 19 12.3		
	comp=Z,25nm,0.8s								
KHLU	**Kahalu`u**	43.68	31	P		**P**	19 19 13.2	+0.9	
JAY	**Jayapura**	43.73	287	P		**P**	19 19 12.9	+0.1	
	comp=Z,558nmcomp=Z,57nm,0.7s								
MLH	**Mauna Loa**	43.84	31	P		**P**	19 19 15.1	+1.4	
GENI	**Genyem**	44.19	286	P		**P**	19 19 16.5	+0.2	
GENI	**Genyem**	44.19	286	P		**P**	19 19 16.4	+0.2	
GENI	**Genyem**	44.19	286	P		**P**	19 19 17.0	+0.7	
WR8	**Warramunga Arr**	44.96	260	P		**P**	19 19 21.3	-0.8	
WB0	**Warramunga Arr**	45.08	260	IAmb	IAmb		19 19 23.1		
	comp=Z,29nm,0.7s								
WRAB	**Tennant Creek**	45.10	260	P		**P**	19 19 23.2	0.0	
WRAB	**Tennant Creek**	45.10	260	P		**P**	19 19 22.3	-1.0	
WRAB				IAmb	IAmb		19 19 23.2		
	comp=Z,22nm,0.6s								
WRAB	**Tennant Creek**	45.10	260	P		**P**	19 19 22.5	-0.8	
WRAB	**Tennant Creek**	45.10	260	P		**P**	19 19 22.3	-1.0	
WRAB				sP		**sP**	19 22 00.3	-1.1	
WRA	**Warramunga Arr**	45.11	260	P		**P**	19 19 22.6	-0.7	
	comp=Z,16nm,0.5s,baz=98,slow=6.7,SNR=641								
WRA				PcP		**PcP**	19 20 52.0	-0.4	
	comp=Z,2.0nm,0.5s,baz=91,slow=3.2,SNR=4.8								
WRA				ScP		**ScP**	19 23 55.6	+2.3	
	comp=Z,2.0nm,0.9s,baz=91,slow=4.1,SNR=5.2								
WRA				S		**S**	19 25 18.8	-4.5	
	comp=Z,4.6nm,0.9s,baz=98,slow=13,SNR=7.5								
WRA				PKiKP		**PKiKP**	19 27 47.0	-1.7	
	comp=Z,0.5nm,1.0s,baz=87,slow=0.7,SNR=4.5								
	comp=Z,16nm,0.5s								
WRA	**Warramunga Arr**	45.11	260			**P**	19 19 21.7	-1.6	
AS31	**Alice Springs**	45.19	255	P		**P**	19 19 23.8	-0.1	
AS31				IAmb	IAmb		19 19 24.8		
	comp=Z,19nm,0.6s								
ASAR	**Alice Springs**	45.19	255	P		**P**	19 19 23.6	-0.2	
	comp=Z,53nm,0.6s,baz=89,slow=8.8,SNR=841								
ASAR				ScP		**ScP**	19 23 55.7	+2.1	
	comp=Z,3.1nm,0.9s,baz=101,slow=4.3,SNR=7.2								
ASAR				S		**S**	19 25 22.1	-2.3	
	comp=Z,12nm,0.9s,baz=90,slow=15,SNR=32								
ASAR				PKiKP		**PKiKP**	19 27 47.4	-1.3	
	comp=Z,0.2nm,0.5s,baz=106,slow=1.7,SNR=1.5								
	comp=Z,53nm,0.6s								
ASAR	**Alice Springs**	45.19	255	P		**P**	19 19 24.0	+0.1	
AUALC	**St Philip's Co**	45.20	255	P		**P**	19 19 24.4	+0.4	
GUMO	**Guam**	48.86	308	P		**P**	19 19 51.2	-0.3	
MTN	**Manton Dam**	49.41	269	P		**P**	19 19 54.5	-1.1	
FORT	**Forrest**	50.24	245	P		**P**	19 20 00.8	-0.7	
KNRA	**Kununurra**	51.04	265	P		**P**	19 20 07.1	-0.4	
FAKI	**Fak Fak**	51.35	282	P		**P**	19 20 09.3	-0.5	
FAKI				IAmb	IAmb		19 20 57.5		
	comp=Z,82nm,1.2s								
SIJI	**Sorong**	53.03	283	P		**P**	19 20 21.7	-0.2	
	comp=Z,36nm,0.8s								
SWI	**Sorong**	53.04	283	P		**P**	19 20 22.0	+0.1	
	comp=Z,47nm,0.8s								
FITZ	**Fitzroy Crossi**	53.52	261	P		**P**	19 20 25.1	-0.2	
SOEI	**Soe**	56.70	270	P		**P**	19 20 49.1	+1.4	
SOEI				IAmb	IAmb		19 20 49.8		
	comp=Z,49nm,1.2s								
MBWA	**Marble Bar**	58.49	256	P		**P**	19 20 59.0	-0.6	
MMRI	**Maumere**	58.94	271	P		**P**	19 21 01.4	-1.3	
MMRI				IAmb	IAmb		19 21 28.2		
	comp=Z,59nm,1.1s								
NWAO	**Narrogin (SRO)**	59.40	242	P		**P**	19 21 04.3	-1.3	
NWAO				IAmb	IAmb		19 21 46.3		
	comp=Z,148nm,1.9s								
SBA	**Scott Base**	59.67	184	P		**P**	19 21 09.5	+2.9	
SBA				PcP		**PcP**	19 21 47.5	+0.8	
SBA	**Scott Base**	59.67	184	P		**P**	19 21 09.4	+2.9	
SBA				PcP		**PcP**	19 21 48.2	+1.6	
SBA				pP		**pwP**	19 22 54.9	-1.5	
VNDA	**Vanda**	59.72	185	P		**P**	19 21 08.1	+1.2	
	comp=Z,1.9nm,0.6s,baz=15,slow=7.7,SNR=27								
VNDA				ScP		**ScP**	19 24 57.9	+2.3	
	comp=Z,1.0nm,0.7s,baz=326,slow=4.4,SNR=5.4								
	comp=Z,1.9nm,0.6s								
VNDA	**Vanda**	59.72	185	P		**P**	19 21 08.6	+1.8	
VNDA	**Vanda**	59.72	185	P		**P**	19 21 08.6	+1.8	
VNDA				PcP		**PcP**	19 21 47.8	+0.9	
VNDA				pP		**pwP**	19 22 57.0	+0.6	
TOLI2	**Tolitoli**	63.48	281	P		**P**	19 21 32.6	+0.1	
CCD	**Concordia, Ant**	64.26	194	P		**P**	19 21 37.6	+0.7	
CCD				pP		**pP**	19 23 28.3	+2.3	
JHJ2	**Mitsune**	65.55	322	P		**P**	19 21 44.8	-0.4	
CASY	**Casey**	65.69	205	P		**P**	19 21 45.4	-0.1	
CASY	**Casey**	65.69	205	P		**P**	19 21 43.7	-1.8	
CASY	**Casey**	65.69	205	P		**P**	19 21 45.5	+0.1	
CASY				pP		**pwP**	19 23 39.2	+1.5	
JAGI	**Jajag, Banyuwa**	66.65	269	P		**P**	19 21 50.5	-2.0	
MJAR	**Matsushiro Arr**	68.91	323	P		**P**	19 22 05.4	-0.3	
	comp=Z,9.5nm,0.7s,baz=160,slow=6.2,SNR=32								
	comp=Z,9.5nm,0.7s								
MJAR	**Matsushiro Arr**	68.91	323			**P**	19 22 04.9	-0.9	
MAJO	**Matsushiro**	68.91	323	P		**P**	19 22 06.4	+0.6	
MAJO	**Matsushiro**	68.91	323	P		**P**	19 22 05.2	-0.5	
MJB9	**Matsu-Tunnel**	68.92	323	P		**P**	19 22 06.3	+0.6	
JMN	**Monobe**	69.60	318	P		**P**	19 22 10.4	+0.5	
JMN	**Monobe**	69.60	318	IAmb	IAmb		19 22 11.1		
	comp=Z,33nm,1.1s								
AMKA	**Amchitka**	69.82	358	P		**P**	19 22 10.2	-0.6	
AMKA				IAmb	IAmb		19 22 11.1		
	comp=Z,36nm,0.8s								
UGM	**Wanagama**	70.25	268	P		**P**	19 22 13.6	-0.6	
KIWB	**Kanaga Island**	70.25	0	P		**P**	19 22 13.3	0.0	
ADK	**Adak**	70.28	1	P		**P**	19 22 13.6	+0.1	
ADK	**Adak**	70.28	1	P		**P**	19 22 13.1	-0.4	
ADK	**Adak**	70.28	1	P		**P**	19 22 13.2	-0.4	
ADK	**Adak**	70.28	1	P		**P**	19 22 13.2	-0.4	
ADK				pP		**pP**	19 24 02.5	-2.8	
ADK				sP		**sP**	19 25 00.4	-1.1	
GSTR	**Great Sitkin T**	70.50	1	P		**P**	19 22 14.5	-0.3	
ATKA	**Atka Island**	70.67	2	P		**P**	19 22 15.6	-0.1	
QSPA	**South Pole Qui**	71.36	180	P		**P**	19 22 21.3	+1.3	
	comp=Z,8.8nm,0.6s,baz=36,slow=2.9,SNR=70								
	comp=Z,8.8nm,0.6s								
QSPA	**South Pole Qui**	71.36	180	P		**P**	19 22 20.3	+0.3	
QSPA	**South Pole Qui**	71.36	180	P		**P**	19 22 21.2	+1.3	
QSPA				pP		**pwP**	19 24 15.1	-0.1	
SMY	**Shemya**	71.48	355	P		**P**	19 22 20.1	-0.4	
CLES	**Cleveland East**	71.55	5	P		**P**	19 22 21.3	+0.4	
JKA	**Kamikawa-asahi**	72.27	331	IAmb	IAmb		19 22 27.9		
	comp=Z,87nm,1.8s								
UNV	**Unalaska Valle**	72.89	7	P		**P**	19 22 28.5	-0.1	
UNV	**Unalaska Valle**	72.89	7	P		**P**	19 22 27.7	-1.0	
	baz=191								
SSLB	**Suanglung**	73.19	303	IAmb	IAmb		19 22 31.0		
	comp=Z,20nm,0.5s								
TPUB	**Ta-pu**	73.21	302	IAmb	IAmb		19 22 31.0		
	comp=Z,40nm,0.7s								
TPUB	**Ta-pu**	73.21	302	P		**P**	19 22 29.9	-1.4	
AKUT	**Akutan**	73.26	7	P		**P**	19 22 30.3	-0.5	
AKUT	**Akutan**	73.26	7	IAmb	IAmb		19 22 32.0		
	comp=Z,44nm,0.8s								
PET	**Petropavlovsk**	74.29	345	P		**P**	19 22 36.0	-0.6	
	comp=Z,28nm,1.5s								
YSS	**Yuzhno-Sakhali**	74.40	333			**P**	19 22 37.7	+0.3	
YSS				IAmb	IAmb		19 22 39.3		
	comp=Z,30nm,1.1s								
YSS	**Yuzhno-Sakhali**	74.40	333	P		**P**	19 22 38.4	+0.9	
PEA0B	**Petropavlovsk-**	74.60	345	IAmb	IAmb		19 22 39.5		
	comp=Z,74nm,1.2s								
PETK	**Petropavlovsk-**	74.60	345	P		**P**	19 22 38.3	-0.1	
	comp=Z,24nm,0.7s,baz=121,slow=6.4,SNR=41								
	comp=Z,24nm,0.7s								
PETK	**Petropavlovsk-**	74.60	345			**P**	19 22 37.8	-0.6	
CNBA	**Chernabura Isl**	74.85	11	IAmb	IAmb		19 22 40.3		
	comp=Z,44nm,1.2s								
CHNA	**Chernabura Isl**	74.86	11	P		**P**	19 22 39.4	-0.4	
CHNA	**Chernabura Isl**	74.86	11	P		**P**	19 22 39.1	-0.6	
	baz=198,SNR=15								
SDPT	**Sand Point**	75.20	10	P		**P**	19 22 41.6	-0.1	
SDPT	**Sand Point**	75.20	10	P		**P**	19 22 41.0	-0.6	
	baz=197,SNR=25								
KSRS	**Korea Array**	75.71	318	P		**P**	19 22 45.6	+0.7	
	comp=Z,2.6nm,0.8s,baz=134,slow=6.4,SNR=18								
	comp=Z,2.6nm,0.8s								
KSAR	**Wonju Array Be**	75.72	318			**P**	19 22 45.1	0.0	
SPIA	**Saint Paul Isl**	75.84	4	P		**P**	19 22 45.1	-0.2	
	baz=187								
FARB	**Farallon Islan**	76.12	42	IAmb	IAmb		19 22 49.9		
	comp=Z,38nm,0.8s								
S14K	**Fog Glacier**	76.25	10	P		**P**	19 22 47.8	+0.2	
	baz=198,SNR=23								
HULI	**Fort Hunter Li**	76.27	44	IAmb	IAmb		19 22 51.3		
	comp=Z,31nm,1.2s								
JRSC	**Jaspar Ridge**	76.43	42	IAmb	IAmb		19 22 51.8		
	comp=Z,37nm,1.1s								
SAO	**San Andreas Ge**	76.56	43	IAmb	IAmb		19 22 52.6		
	comp=Z,28nm,0.9s								
PMPB	**Monarch Peak**	76.67	44	IAmb	IAmb		19 22 53.4		
	comp=Z,68nm,1.5s								
BBGB	**Big Mountain B**	76.72	44	IAmb	IAmb		19 22 54.9		
	comp=Z,50nm,1.3s								
KCPM	**Cahto Peak**	76.97	40	IAmb	IAmb		19 22 55.0		
	comp=Z,38nm,1.2s								
KMPM	**Mount Pierce**	77.09	39	IAmb	IAmb		19 22 55.8		
	comp=Z,43nm,1.0s								
KMRM	**Mail Ridge**	77.22	39			**P**	19 22 54.6	+1.3	
KMRM				IAmb	IAmb		19 22 56.5		
	comp=Z,54nm,0.9s								
PASC	**Pasadena Art C**	77.29	47	IAmb	IAmb		19 22 56.2		
	comp=Z,27nm,0.8s								
MWC	**Mount Wilson**	77.41	47	IAmb	IAmb		19 22 57.0		
	comp=Z,31nm,0.8s								
DPP	**Dos Picos Cty**	77.54	49	IAmb	IAmb		19 22 57.7		
	comp=Z,32nm,0.8s								
SII	**Sitkinak Islan**	77.55	13	P		**P**	19 22 55.1	+0.5	
	baz=203								
KHMM	**Horse Mountain**	77.61	39	IAmb	IAmb		19 22 58.8		
	comp=Z,44nm,1.3s								
USRK	**Ussuriysk Ar.**	77.62	326	P		**P**	19 22 56.2	+0.9	
	comp=Z,3.7nm,0.8s,baz=124,slow=3.4,SNR=10								
	comp=Z,3.7nm,0.8s								
USRK	**Ussuriysk Ar.**	77.62	326	P		**P**	19 22 56.0	+0.8	
TPO	**Tropico Hills**	77.65	46	IAmb	IAmb		19 22 58.6		
	comp=Z,38nm,0.9s								
O02D	**Mt. Diablo Mer**	77.75	40	IAmb	IAmb		19 22 59.5		
	comp=Z,34nm,1.0s								
ISA	**Isabella, Lake**	77.91	46	IAmb	IAmb		19 23 00.0		
	comp=Z,30nm,0.9s								
BORC	**Borrego Spring**	78.05	49	IAmb	IAmb		19 23 00.8		
	comp=Z,34nm,1.0s								
DNR	**Dunn Ranch,Anz**	78.06	48	IAmb	IAmb		19 23 01.0		
	comp=Z,38nm,1.1s								
R17L	**Mt. Peulik Vol**	78.10	12	P		**P**	19 22 57.9	+0.3	
	baz=201,SNR=20								
PFO	**Pinyon Flats O**	78.20	48	P		**P**	19 22 59.9	+1.0	
PFO	**Pinyon Flats O**	78.20	48	P		**P**	19 23 00.8	+1.9	
PFO				pP		**pP**	19 24 54.0	+0.3	
OHAK	**Old Harbor**	78.35	13	P		**P**	19 22 59.6	+0.8	
OHAK	**Old Harbor**	78.35	13	IAmb	IAmb		19 23 00.2		
	comp=Z,54nm,0.8s								
OHAK	**Old Harbor**	78.35	13	P		**P**	19 22 59.1	+0.2	
	baz=204								
SLBS	**Sierra La Lagu**	78.41	60			**P**	19 23 01.9	+1.8	
SLBS	**Sierra La Lagu**	78.41	60	P		**P**	19 23 02.8	+2.7	
O03E	**Paynes Creek**	78.42	40	IAmb	IAmb		19 23 02.2		
	comp=Z,36nm,1.1s								
CCCA	**Chr Cany lake**	78.59	46	IAmb	IAmb		19 25 07.0		
	comp=Z,26nm,0.4s								
MDPB	**Devils Postpil**	78.61	44	IAmb	IAmb		19 23 03.7		
	comp=Z,30nm,0.9s								
Q17K	**Contact Creek**	78.79	12	P		**P**	19 23 00.9	-0.4	
	baz=201								
M03C	**McCloud**	78.81	39			**P**	19 23 03.3	+1.4	
M03C				IAmb	IAmb		19 23 04.6		
	comp=Z,56nm,0.9s								
O14K	**Tigyukauivet M**	78.84	9	P		**P**	19 23 01.3	-0.1	
	baz=196								
WAKR	**Walker**	78.87	43	IAmb	IAmb		19 23 05.3		
	comp=Z,37nm,0.9s								
NJ2	**Nanjing**	78.92	309	*e*P		**P**	19 23 03.5	+1.0	
NJ2				pmax	pmax				
	comp=Z,21nm,0.5s								
HATC	**Hat Creek Radi**	78.94	40	IAmb	IAmb		19 23 05.4		
	comp=Z,45nm,0.8s								
O15K	**Ungalikthiuk R**	78.97	9	P		**P**	19 23 01.8	-0.4	
	baz=197								
KDAK	**Kodiak Island**	79.02	13			**P**	19 23 02.5	+0.1	
KDAK				IAmb	IAmb		19 23 04.7		
	comp=Z,51nm,0.9s								
KDAK	**Kodiak Island**	79.02	13	P		**P**	19 23 02.9	+0.5	
	baz=204								
KDAK	**Kodiak Island**	79.02	13	P		**P**	19 23 03.1	+0.7	
KDAK	**Kodiak Island**	79.02	13	P		**P**	19 23 03.0	+0.5	
KDAK				pP		**pP**	19 24 57.3	-0.3	
Q16K	**King Salmon**	79.03	11	P		**P**	19 23 02.6	+0.2	
	baz=200,SNR=7.0								
GLA	**Glamis**	79.08	50	IAmb	IAmb		19 23 06.8		
	comp=Z,30nm,0.9s								
PNTR	**Pine Nut**	79.09	42	IAmb	IAmb		19 23 06.4		
	comp=Z,68nm,0.9s								
P16K	**Nushagak River**	79.13	10	P		**P**	19 23 03.2	+0.2	
	baz=199								
MDJ	**Mudanjiang**	79.19	325	P		**P**	19 23 04.5	+0.8	
MDJ	**Mudanjiang**	79.19	325	P		**P**	19 23 05.0	+1.3	
MDJ				pmax	pmax				
	comp=Z,36nm,0.9s								
L04D	**Klamath Falls**	79.28	39	IAmb	IAmb		19 23 06.9		
	comp=Z,43nm,0.8s								
Q18K	**Katmai Hardscr**	79.31	12	P		**P**	19 23 04.1	0.0	
	baz=202,SNR=41								
LHV	**Little Huntoon**	79.33	44	IAmb	IAmb		19 23 07.7		
	comp=Z,36nm,0.9s								
M11K	**Mekoryuk**	79.36	6	P		**P**	19 23 05.3	+1.2	
	baz=191								
N14K	**Kuskokwak Cree**	79.43	8	P		**P**	19 23 05.1	+0.6	
	baz=196,SNR=24								
P17K	**Kvichak River**	79.56	11	P		**P**	19 23 05.4	+0.2	
	baz=200,SNR=34								
NVAR	**Mina Array Bea**	79.56	43	P		**P**	19 23 07.8	+1.7	
	comp=Z,17nm,0.7s,baz=223,slow=8.9,SNR=57								
	comp=Z,17nm,0.7s								
NVAR	**Mina Array Bea**	79.56	43	P		**P**	19 23 07.2	+1.1	
I03D	**Drain, OR**	79.58	37	IAmb	IAmb		19 23 08.3		
	comp=Z,25nm,0.8s								
O16K	**Kokwok River B**	79.65	10	IAmb	IAmb		19 23 06.0		
	comp=Z,36nm,0.8s								
O16K	**Kokwok River B**	79.65	10	P		**P**	19 23 05.1	-0.6	
	baz=199,SNR=27								
M13K	**Dall Lake**	79.69	7	IAmb	IAmb		19 23 09.4		
	comp=Z,29nm,0.8s								
M13K	**Dall Lake**	79.69	7	P		**P**	19 23 06.9	+1.0	
	baz=194								
Q19K	**Cape Douglas,**	79.85	12	P		**P**	19 23 06.9	+0.1	
	baz=203								
N15K	**Kwethluk River**	79.89	9	IAmb	IAmb		19 23 08.8		
	comp=Z,70nm,1.2s								
N15K	**Kwethluk River**	79.89	9	P		**P**	19 23 07.6	+0.6	
	baz=197,SNR=13								
P18K	**Big Mountain,**	79.96	11	P		**P**	19 23 07.2	-0.3	
	baz=202,SNR=22								
O17K	**Koliganek Bris**	79.99	10	P		**P**	19 23 07.2	-0.3	
	baz=200,SNR=15								
BUCK	**Buck Mountain**	80.10	37	IAmb	IAmb		19 23 11.3		
	comp=Z,45nm,1.0s								
M14K	**Bethel**	80.19	8	IAmb	IAmb		19 23 10.9		
	comp=Z,35nm,0.8s								
M14K	**Bethel**	80.19	8	P		**P**	19 23 09.2	+0.7	
	baz=195,SNR=8.4								
SMAI	**San Martin Ant**	80.20	159	P		**P**	19 23 08.6	0.0	
M15K	**Kasigluk River**	80.31	8	P		**P**	19 23 09.9	+0.8	
	baz=196,SNR=22								
N16K	**Nishlik Lake**	80.38	9	P		**P**	19 23 10.3	+0.8	
	baz=198,SNR=26								
O18K	**Koktuh Hills**	80.40	11	P		**P**	19 23 09.7	0.0	
	baz=202,SNR=41								
K05A	**Summer Lake**	80.42	39	IAmb	IAmb		19 23 13.4		
	comp=Z,66nm,1.0s								
H04D	**Lebanon**	80.44	36	IAmb	IAmb		19 23 13.0		
	comp=Z,53nm,1.1s								
G03D	**McMinnville, O**	80.57	36	IAmb	IAmb		19 23 13.5		
	comp=Z,37nm,0.9s								
L14K	**Kuka Creek**	80.67	7	IAmb	IAmb		19 23 12.9		
	comp=Z,35nm,0.9s								
L14K	**Kuka Creek**	80.67	7	P		**P**	19 23 11.7	+0.8	
	baz=194,SNR=8.3								
WIFE	**Three Sisters-**	80.68	37	IAmb	IAmb		19 23 14.4		
	comp=Z,33nm,0.9s								
N17K	**Nushagak Hills**	80.68	10	P		**P**	19 23 11.4	+0.3	
	baz=200,SNR=15								
S11A	**Rachel**	80.83	45	IAmb	IAmb		19 23 15.3		
	comp=Z,33nm,0.8s								
H04A	**Detroit Lake**	80.85	37	IAmb	IAmb		19 23 14.5		
	comp=Z,36nm,0.9s								
F03A	**Seaside**	80.86	35	P		**P**	19 23 13.3	+1.0	
M16K	**Timber Creek**	80.87	9	P		**P**	19 23 13.6	+1.5	
	baz=198,SNR=53								
O19K	**Port Alsworth**	80.88	12	P		**P**	19 23 12.0	-0.1	
	baz=202								
CNPM	**China Poot**	80.90	13	IAmb	IAmb		19 23 13.6		
	comp=Z,34nm,0.7s								
HOM	**Homer**	80.93	13	P		**P**	19 23 13.0	+0.6	
	baz=205								
CN2	**Changchun**	81.03	322	⇑P		**P**	19 23 14.3	+1.0	
CN2				*e*pP		pP	19 25 12.0	+2.3	
CN2				*e*S		**SKSac**	19 32 40.0	-0.3	
CN2				pmax	pmax				
	comp=Z,20nm,1.1s								
CN2				pmax	pmax				
	comp=Z,100nm,4.0s								
K13K	**Kusilvak Mount**	81.03	6	P		**P**	19 23 13.1	+0.3	
	baz=193								
N18K	**Kilae Creek**	81.05	11	P		**P**	19 23 12.9	-0.1	
	baz=201,SNR=7.3								
BNX	**BinXian**	81.10	325	⇓P		**P**	19 23 13.8	+0.2	
BNX				pmax	pmax				
	comp=Z,27nm,1.0s								
O20K	**Slope Mountain**	81.11	12	P		**P**	19 23 13.2	-0.3	
	baz=204,SNR=6.6								
I05D	**Terrebonne, OR**	81.12	37	IAmb	IAmb		19 23 16.5		
	comp=Z,40nm,0.9s								
L15K	**Ungalak Mounta**	81.15	8	P		**P**	19 23 14.0	+0.5	
	baz=196,SNR=17								
PRN	**Pahroc Range**	81.17	46	IAmb	IAmb		19 23 17.5		
	comp=Z,38nm,0.9s								
BRSE	**Bradley Lake S**	81.20	13	P		**P**	19 23 14.1	+0.3	
	baz=206								
BELA	**Belgrano 2**	81.31	173	P		**P**	19 23 13.8	-0.5	
BMN	**Battle Mountai**	81.36	42	IAmb	IAmb		19 23 18.0		
	comp=Z,44nm,1.0s								
RED	**Redoubt Volcan**	81.39	12	IAmb	IAmb		19 23 15.3		
	comp=Z,46nm,0.9s								
N19K	**Bonanza Creek**	81.43	11	IAmb	IAmb		19 23 15.7		
	comp=Z,39nm,1.0s								
N19K	**Bonanza Creek**	81.43	11	P		**P**	19 23 14.7	-0.4	
	baz=202,SNR=14								
L16K	**Owhat River**	81.45	9	P		**P**	19 23 16.2	+1.2	
	baz=198,SNR=29								
M17K	**Holitna River**	81.47	10	P		**P**	19 23 16.6	+1.5	
	baz=199,SNR=41								
HOOD	**Mount Hood Mea**	81.54	36	IAmb	IAmb		19 23 18.3		
	comp=Z,46nm,1.0s								
DIB	**Dawson Inlet,**	81.56	26	IAmb	IAmb		19 23 18.2		
	comp=Z,42nm,1.2s								
WHN	**Wuhan**	81.58	306	⇓P		**P**	19 23 17.0	+0.6	
WVOR	**Wild Horse Val**	81.60	40	IAmb	IAmb		19 23 19.2		
	comp=Z,43nm,0.9s								
NLWA	**Neilton Lookou**	81.61	34	IAmb	IAmb		19 23 18.9		
	comp=Z,34nm,0.9s								
G05A	**Wamic**	81.68	37	IAmb	IAmb		19 23 19.1		
	comp=Z,34nm,0.9s								
TUC	**Tucson**	81.69	52	P		**P**	19 23 19.8	+2.7	
K15K	**Wolf Creek Mou**	81.74	8	P		**P**	19 23 17.9	+1.4	
	baz=196								
M18K	**Stony River**	81.82	10	P		**P**	19 23 17.5	+0.6	
	baz=201,SNR=13								
SEW	**Seward**	81.82	14	IAmb	IAmb		19 23 17.8		
	comp=Z,35nm,0.9s								
SEW	**Seward**	81.82	14	P		**P**	19 23 16.9	0.0	
	baz=207,SNR=13								
J14K	**Nanwaranak Lak**	81.95	7	P		**P**	19 23 18.1	+0.6	
	baz=194								
Q23K	**Middleton Isla**	81.97	16	P		**P**	19 23 18.1	+0.5	
	baz=210								
L17K	**Donlin**	82.03

EYAK	Cordova Ski Ar comp=Z,35nm,0.8s	83.09	15	IAmb	IAmb	19 23 24.5		
EYAK	Cordova Ski Ar baz=210,SNR=10	83.09	15	P	P	19 23 23.4	+0.1	
J17K	VABM Dome comp=Z,32nm,0.8s	83.12	8	IAmb	IAmb	19 23 25.3		
J17K	VABM Dome baz=198,SNR=9.6	83.12	8	P	P	19 23 24.2	+0.8	
M22K	Willow baz=206,SNR=13	83.15	13	P	P	19 23 23.5	-0.1	
KNK	Knik Glacier baz=208,SNR=22	83.21	14	P	P	19 23 24.0	0.0	
PMR	Palmer	83.22	13	P	P	19 23 24.2	+0.3	
PMR	Palmer baz=207,SNR=12	83.22	13	P	P	19 23 23.8	-0.1	
RAGM	Ragged Mountai comp=Z,39nm,0.9s	83.23	16	IAmb	IAmb	19 23 26.1		
E07A	Sunnyside comp=Z,34nm,0.7s	83.28	36	IAmb	IAmb	19 23 27.2		
MAW	Mawson comp=Z,1.6nm,0.4s,baz=167,slow=2.7,SNR=13 comp=Z,1.6nm,0.4s	83.33	200	P	P	19 23 25.4	+0.8	
HAWA	Hanford comp=Z,34nm,0.9s	83.36	36	IAmb	IAmb	19 23 27.6		
SIT	Sitka	83.37	22	P	P	19 23 25.2	+0.4	
SIT	Sitka baz=220	83.37	22	P	P	19 23 25.6	+0.8	
MTPU	Mount Pierson comp=Z,25nm,0.8s	83.45	46	IAmb	IAmb	19 23 29.7		
U33K	Whale Pass comp=Z,28nm,0.9s	83.46	23	IAmb	IAmb	19 23 27.6		
U33K	Whale Pass baz=222,SNR=7.7	83.46	23	P	P	19 23 26.4	+1.1	
V35K	Ketchikan baz=223,SNR=5.5	83.46	24	P	P	19 23 26.3	+1.0	
J18K	Innoko River baz=200,SNR=43	83.53	9	P	P	19 23 26.1	+0.6	
ANM	Nome baz=192	83.55	5	P	P	19 23 26.3	+0.8	
SML	Sawmill comp=Z,22nm,0.8s	83.59	14	IAmb	IAmb	19 23 40.3		
SML	Sawmill baz=208,SNR=14	83.59	14	P	P	19 23 25.8	-0.1	
E08A	Dider Farm, El comp=Z,22nm,0.7s	83.69	36	IAmb	IAmb	19 23 29.1		
CUT	Chulitna baz=206,SNR=15	83.71	12	P	P	19 23 25.8	-0.5	
M23K	Glacier View baz=208,SNR=15	83.71	14	P	P	19 23 25.8	-0.6	
L22K	Petersville baz=206,SNR=55	83.72	12	P	P	19 23 25.9	-0.6	
BMRM	Bremner River baz=211,SNR=50	83.74	16	P	P	19 23 26.8	+0.2	
S31K	Pelican comp=Z,32nm,0.9s	83.76	21	IAmb	IAmb	19 23 28.8		
S31K	Pelican baz=219,SNR=12	83.76	21	P	P	19 23 27.5	+0.8	
PPLA	Purkeypile baz=204	83.78	11	P	P	19 23 27.6	+0.7	
SCM	Sheep Creek Mo baz=209,SNR=62	83.84	14	P	P	19 23 27.2	+0.1	
K20K	Telida baz=202,SNR=42	83.86	10	P	P	19 23 27.2	+0.1	
MFID	Camas Ranch comp=Z,23nm,0.9s	83.86	40	IAmb	IAmb	19 23 30.3		
KLU	Klutina comp=Z,36nm,1.1s	83.87	15	IAmb	IAmb	19 23 28.5		
KLU	Klutina baz=210,SNR=22	83.87	15	P	P	19 23 27.5	+0.2	
EPH	Ephrata comp=Z,32nm,1.0s	83.89	36	IAmb	IAmb	19 23 29.9		
HEH HEH	HeiHe comp=Z,10.0nm,1.2s	83.91	328	*e*P pmax	P pmax	19 23 27.8	+0.1	
H16K	Elim baz=195	83.93	7	P	P	19 23 27.7	+0.3	
S32K	Killisnoo comp=Z,33nm,1.6s	83.95	22	IAmb	IAmb	19 23 29.7		
S32K	Killisnoo baz=221,SNR=6.8	83.95	22	P	P	19 23 28.4	+0.8	
CRQE	Cirque baz=213,SNR=38	83.95	16	P	P	19 23 28.2	+0.3	
WRAK	Wrangell Islan comp=Z,22nm,0.8s	83.98	23	IAmb	IAmb	19 23 30.0		
WRAK	Wrangell Islan baz=223,SNR=11	83.98	23	P	P	19 23 28.8	+1.0	
G15K	Niukluk baz=193	84.09	6	P	P	19 23 27.7	-0.5	
D08A	Wollman Farm, comp=Z,28nm,1.0s	84.09	36	IAmb	IAmb	19 23 31.1		
DUG	Dugway, Tooele	84.10	44	P	P	19 23 30.5	+1.4	
J19K	Poorman baz=201,SNR=15	84.20	10	P	P	19 23 29.5	+0.7	
E09A	Wood Farm, Sta comp=Z,41nm,1.4s	84.22	37	IAmb	IAmb	19 23 31.5		
CAST	Castle Rocks	84.27	11		P	19 23 27.5	-1.7	
CAST	Castle Rocks baz=204,SNR=81	84.27	11	P	P	19 23 28.0	-1.2	
N25K	Chitina, Valde baz=211,SNR=104	84.29	15	P	P	19 23 29.9	+0.5	
TNA	Tin City baz=189	84.33	4	P	P	19 23 30.2	+0.9	
M24K	Tolsona, Glenn baz=210,SNR=32	84.34	14	P	P	19 23 30.4	+0.8	
F14K	Arctic Creek baz=191	84.36	5	P	P	19 23 30.2	+0.6	
HMU	Henry Mountain comp=Z,42nm,1.7s	84.39	47	IAmb	IAmb	19 23 33.2		
WAT6	Susitna Watana baz=208,SNR=49	84.40	13	P	P	19 23 30.0	0.0	
F10A	Beach Ranch, E comp=Z,44nm,0.9s	84.44	38	IAmb	IAmb	19 23 32.5		
WAT1	Susitna Watana baz=208	84.45	13	P	P	19 23 30.0	-0.1	
H17K	Granite Mounta baz=197	84.49	8	P	P	19 23 31.3	+1.2	
MCARA	McCarthy VSAT comp=Z,46nm,1.0s	84.50	16	IAmb	IAmb	19 23 31.9		
MCARA	McCarthy VSAT baz=213,SNR=14	84.50	16	P	P	19 23 30.9	+0.5	
HNS HNS	HongShan comp=Z,11nm,0.9s	84.51	312	⇑P pmax	P pmax	19 23 32.0	+1.1	
P29M	Windy Craggy baz=218,SNR=29	84.58	19	P	P	19 23 31.9	+1.1	
R32K	Eaglecrest baz=221	84.58	21	P	P	19 23 31.3	+0.5	
J20K	Nowinta River comp=Z,28nm,0.7s	84.61	10	IAmb	IAmb	19 23 32.2		
J20K	Nowinta River baz=202,SNR=22	84.61	10	P	P	19 23 31.2	+0.4	
B08A	Colville Reser comp=Z,29nm,0.8s	84.62	35	IAmb	IAmb	19 23 32.9		
JIS	Juneau Island	84.63	21	P	P	19 23 32.0	+1.0	
TRF	Thorofare Moun baz=206,SNR=100	84.65	12	P	P	19 23 30.7	-0.5	
G16K	Koyuk River baz=195	84.65	6	P	P	19 23 30.3	-0.6	
CHUM	Lake Minchumin baz=204,SNR=5.1	84.66	11	P	P	19 23 30.4	-0.6	
PLID	Pearl Lake comp=Z,15nm,0.8s	84.67	39	IAmb	IAmb	19 23 33.9		
EPT	El Paso comp=Z,28nm,0.9s	84.68	54	IAmb	IAmb	19 23 35.3		
BESE	Bessie Mountai comp=Z,30nm,0.9s	84.70	21	IAmb	IAmb	19 23 33.6		
GCSA	Galena City Sc baz=200	84.72	9	P	P	19 23 31.6	+0.3	
F15K	North Star Dit baz=192	84.73	5	P	P	19 23 31.4	0.0	
O28M	Mount Upton baz=215,SNR=32	84.77	17	P	P	19 23 32.5	+0.5	
BJT	Baijiatuau	84.78	315	P	P	19 23 32.6	+0.4	
LYN LYN	LuoYang comp=Z,37nm,0.9s	84.81	309	P pmax	P pmax	19 23 33.8	+1.3	
HLID	Hailey comp=Z,18nm,0.8s	84.81	41	IAmb	IAmb	19 23 35.3		
HLID	Hailey	84.81	41	P	P	19 23 34.3	+1.8	
HARP	HAARP baz=211,SNR=10	84.84	15	P	P	19 23 32.2	+0.2	
O29M	Mount Kennedy comp=Z,20nm,0.8s	84.86	18	IAmb	IAmb	19 23 34.2		
O29M	Mount Kennedy baz=217,SNR=15	84.86	18	P	P	19 23 33.2	+0.9	
PLBC	Pleasant Camp baz=219,SNR=27	84.88	20	P	P	19 23 33.3	+1.1	
DHY	Denali Highway comp=Z,37nm,1.1s	84.92	13	IAmb	IAmb	19 23 33.5		
DHY	Denali Highway baz=209,SNR=31	84.92	13	P	P	19 23 32.4	-0.1	
G17K	Kiwalik Mounta baz=196	84.94	7	P	P	19 23 32.3	0.0	
SRU	San Rafael Swe comp=Z,18nm,0.7s	85.11	46	IAmb	IAmb	19 23 36.4		
I20K	Naagheheneel baz=202	85.13	10	P	P	19 23 33.4	+0.1	
SBM	South Baldy	85.13	52	P	P	19 23 36.2	+1.6	
MCK	McKinley baz=207,SNR=20	85.17	12	P	P	19 23 33.4	-0.2	
T35M	Bob Quinn baz=224,SNR=6.9	85.18	24	P	P	19 23 35.1	+1.4	
P30M	Million Dollar baz=218	85.21	19	P	P	19 23 35.0	+1.1	
SKAG	Skagway	85.22	20	P	P	19 23 34.7	+0.9	
SKAG	Skagway comp=Z,26nm,1.1s	85.22	20	IAmb	IAmb	19 23 36.4		
SKAG	Skagway baz=220,SNR=7.9	85.22	20	P	P	19 23 35.2	+1.4	
ENH	Enshi	85.23	304	P	P	19 23 35.1	+0.4	
ENH	Enshi comp=Z,23nm,0.8s	85.23	304	IAmb	IAmb	19 23 36.4		
PAX	Paxson comp=Z,22nm,0.9s	85.26	14	IAmb	IAmb	19 23 34.8		
PAX	Paxson baz=210,SNR=28	85.26	14	P	P	19 23 33.8	-0.3	
Y22A	Socorro comp=Z,17nm,0.9s	85.28	52	IAmb	IAmb	19 23 37.9		
YUK8	Steele Glacier baz=216,SNR=46	85.31	17	P	P	19 23 35.3	+0.7	
M26K	Nabesna, AK baz=213,SNR=42	85.37	15	P	P	19 23 35.0	+0.4	
YUK6	Outpost Mounta baz=217	85.44	18	P	P	19 23 35.7	+0.5	
VHRN	Van Horn comp=Z,24nm,0.8s	85.44	56	IAmb	IAmb	19 23 39.3		
H19K	Roundabout Mou comp=Z,54nm,1.7s	85.52	9	IAmb	IAmb	19 23 36.6		
H19K	Roundabout Mou baz=200	85.52	9	P	P	19 23 35.5	+0.4	
YUK3	Moose Creek baz=215,SNR=45	85.52	17	P	P	19 23 36.2	+0.7	
MNTX	Cornudas Mount comp=Z,23nm,1.1s	85.52	55	IAmb	IAmb	19 23 39.2		
MNTX	Cornudas Mount	85.52	55	P	P	19 23 38.2	+2.2	
S34M	Telegraph Cree baz=224	85.52	23	P	P	19 23 36.8	+1.4	
G18K	Tagagawik baz=198	85.56	8	P	P	19 23 35.5	+0.1	
BRWY	Burwash Landin baz=216,SNR=14	85.59	18	P	P	19 23 36.4	+0.7	
HYT	Haines Junctio comp=Z,26nm,0.9s	85.60	19	IAmb	IAmb	19 23 37.8		
HYT	Haines Junctio baz=218,SNR=31	85.60	19	P	P	19 23 36.7	+0.8	
PV05	Paradox Valley comp=Z,16nm,0.8s	85.61	47	IAmb	IAmb	19 23 39.3		
M27K	Edge Creek, AK baz=214,SNR=61	85.62	16	P	P	19 23 36.9	+1.0	
HWUT	Hardware Ranch	85.63	43	P	P	19 23 37.5	+0.9	
MENT	Mentasta	85.65	15	P	P	19 23 36.9	+1.0	
MENT	Mentasta comp=Z,20nm,0.8s	85.65	15	IAmb	IAmb	19 23 37.4		
YUK4	Talbot Arm baz=217,SNR=7.4	85.68	18	P	P	19 23 37.5	+1.2	
H20K	Anotleneega Mo baz=202,SNR=9.7	85.72	9	P	P	19 23 36.6	+0.5	
F17K	Baldwin Pennin comp=Z,16nm,0.9s	85.78	7	IAmb	IAmb	19 23 37.6		
F17K	Baldwin Pennin baz=196	85.78	7	P	P	19 23 36.4	0.0	
PV10	Paradox Valley comp=Z,26nm,0.8s	85.78	47	IAmb	IAmb	19 23 41.2		
PV19	Morning Glory comp=Z,24nm,0.9s	85.79	47	IAmb	IAmb	19 23 39.6		
L26K	Log Cabin Wild comp=Z,18nm,0.8s	85.81	15	IAmb	IAmb	19 23 38.2		
L26K	Log Cabin Wild baz=212,SNR=11	85.81	15	P	P	19 23 37.2	+0.6	
PV18	Skein Mesa, Pa comp=Z,20nm,1.0s	85.81	47	IAmb	IAmb	19 23 39.7		
PV20	West Newsonger comp=Z,25nm,0.9s	85.82	47	IAmb	IAmb	19 23 39.8		
BCYI	Bear Canyon comp=Z,40nm,1.5s	85.83	40	IAmb	IAmb	19 23 40.1		
P32M	Atlin comp=Z,18nm,0.8s	85.85	21	IAmb	IAmb	19 23 39.0		
P32M	Atlin baz=221	85.85	21	P	P	19 23 37.7	+0.7	
Q32M	Nakina River comp=Z,20nm,0.7s	85.88	22	IAmb	IAmb	19 23 39.5		
Q32M	Nakina River baz=223	85.88	22	P	P	19 23 38.4	+1.1	
PV04	Paradox Valley comp=Z,15nm,0.8s	85.89	47	IAmb	IAmb	19 23 40.0		
TXAR	Lajitas Array comp=Z,28nm,0.7s,baz=219,slow=6.2,SNR=272 comp=Z,28nm,0.7s	85.89	57	P	P	19 23 40.5	+2.6	
TXAR	Lajitas Array	85.89	57		P	19 23 40.0	+2.0	
I21K	Tanana baz=204	85.90	11	P	P	19 23 37.0	0.0	
K24K	Donnelly Dome baz=210,SNR=32	85.91	14	P	P	19 23 37.2	+0.1	
NEA2	Nenana baz=207	85.91	12	P	P	19 23 36.2	-0.9	
PV21	Cone Mtn., Par comp=Z,14nm,0.7s	85.92	47	IAmb	IAmb	19 23 40.4		
PV02	Paradox Valley comp=Z,19nm,0.9s	85.92	48	IAmb	IAmb	19 23 40.2		
PV12	Sauer Basin, comp=Z,21nm,0.8s	85.92	47	IAmb	IAmb	19 23 40.4		
BVCY	Beaver Creek baz=215,SNR=63	85.93	16	P	P	19 23 38.0	+0.8	
O30N	Mendenhall comp=Z,32nm,0.9s	85.99	19	IAmb	IAmb	19 23 39.6		
O30N	Mendenhall baz=219,SNR=28	85.99	19	P	P	19 23 38.6	+1.0	
MLY	Manley comp=Z,51nm,1.5s	85.99	11	IAmb	IAmb	19 23 38.5		
MLY	Manley baz=206,SNR=5.7	85.99	11	P	P	19 23 37.0	-0.5	
PV01	Paradox Valley comp=Z,14nm,0.9s	86.00	48	IAmb	IAmb	19 23 40.5		
G19K	Purcell Mounta comp=Z,12nm,0.8s	86.01	8	IAmb	IAmb	19 23 38.7		
G19K	Purcell Mounta baz=200,SNR=7.9	86.01	8	P	P	19 23 37.5	0.0	
RIDG	Independent Ri comp=Z,31nm,1.0s	86.06	14	IAmb	IAmb	19 23 39.1		
RIDG	Independent Ri baz=211,SNR=26	86.06	14	P	P	19 23 38.0	+0.1	
ALQ	Albuquerque comp=Z,18nm,1.1s	86.09	51	IAmb	IAmb	19 23 42.0		
ALQ	Albuquerque comp=Z,17nm,1.0s	86.09	51	IAmb	IAmb	19 23 42.0		
TASM	ASL Pad, Albuq comp=Z,17nm,1.1s	86.09	51	IAmb	IAmb	19 23 42.0		
TASM	ASL Pad, Albuq comp=Z,18nm,1.1s	86.09	51	IAmb	IAmb	19 23 42.0		
ANMO	Albuquerque	86.10	51		P	19 23 39.8	+0.9	
ANMO ANMO	comp=Z,15nm,1.0s			IAmb	IAmb	19 23 42.5		
ANMO	Albuquerque	86.10	51	P	P	19 23 40.4	+1.5	
F18K	Selawik baz=197	86.12	7	P	P	19 23 37.8	-0.1	
HDA	Harding Lake baz=209	86.18	13	P	P	19 23 38.2	-0.2	
TPB28	comp=Z,19nm,1.3s	86.19	55	IAmb	IAmb	19 23 42.7		
H21K	Melozitna Rive comp=Z,41nm,1.5s	86.20	10	IAmb	IAmb	19 23 40.8		
H21K	Melozitna Rive baz=204	86.20	10	P	P	19 23 38.5	0.0	
L27K	Beaver Creek, comp=Z,13nm,0.8s	86.22	16	IAmb	IAmb	19 23 40.2		
L27K	Beaver Creek, baz=214	86.22	16	P	P	19 23 38.9	+0.2	
N30M	Aishikik Lake baz=218,SNR=13	86.22	18	P	P	19 23 39.3	+0.6	
BCAR	Beaver Creek A	86.23	16		P	19 23 38.8	+0.1	
WHY	Whitehorse baz=220,SNR=15	86.28	20	P	P	19 23 40.0	+0.9	
DLBC	Dease Lake comp=Z,8.8nm,0.9s,baz=200,slow=7.0,SNR=19 comp=Z,8.8nm,0.9s	86.31	23	P	P	19 23 39.9	+0.7	
DLBC	Dease Lake	86.31	23	P	P	19 23 40.3	+1.1	
E17K	Hotham Inlet baz=195	86.34	6	P	P	19 23 39.3	+0.3	
IMAR	Indian Mountai	86.35	10	P	P	19 23 39.2	+0.1	
I23K	Minto, Yukon-K baz=207,SNR=13	86.35	12	P	P	19 23 38.4	-0.7	
COLA	College	86.41	12	P	P	19 23 38.8	-0.5	
COLA	College	86.41	12	P	P	19 23 39.3	-0.1	
COLA	College baz=208	86.41	12	P	P	19 23 39.2	-0.1	
TPB01	Permian Basin comp=Z,35nm,0.9s	86.45	56	IAmb	IAmb	19 23 43.6		
AHID	Auburn Hatcher comp=Z,22nm,1.2s	86.50	43	IAmb	IAmb	19 23 43.2		
AHID	Auburn Hatcher	86.50	43	P	P	19 23 40.3	-0.3	
IL31	comp=Z,39nm,1.1s	86.51	13	IAmb	IAmb	19 23 40.6		
ILAR	Eielson Array comp=Z,11nm,0.4s,baz=218,slow=4.9,SNR=176	86.51	13	P	P	19 23 39.4	-0.6	
ILAR	comp=Z,1.3nm,1.1s,baz=223,slow=7.1,SNR=4.3 comp=Z,11nm,0.4s			PP	PP	19 27 12.0	0.0	
ILAR	Eielson Array	86.51	13	P	P	19 23 38.6	-1.3	
F19K	Shaleruckik Mo comp=Z,15nm,0.7s	86.57	8	IAmb	IAmb	19 23 41.7		
F19K	Shaleruckik Mo baz=199,SNR=17	86.57	8	P	P	19 23 39.9	-0.2	
M29M	Somme Creek comp=Z,24nm,0.9s	86.61	17	IAmb	IAmb	19 23 42.4		
M29M	Somme Creek baz=217,SNR=37	86.61	17	P	P	19 23 41.3	+0.7	
P33M	Teslin, Yukon comp=Z,14nm,0.9s	86.62	21	IAmb	IAmb	19 23 42.4		
P33M	Teslin, Yukon baz=222	86.62	21	P	P	19 23 41.3	+0.7	
N31M	Braeburn, Yuko comp=Z,39nm,1.0s	86.64	19	IAmb	IAmb	19 23 42.6		
N31M	Braeburn, Yuko baz=219,SNR=21	86.64	19	P	P	19 23 41.5	+0.9	
H22K	Ishtalitna Cre comp=Z,28nm,0.9s	86.66	11	IAmb	IAmb	19 23 41.8		
H22K	Ishtalitna Cre baz=205,SNR=28	86.66	11	P	P	19 23 40.8	+0.2	
J25K	Salcha River, baz=210	86.70	13	P	P	19 23 40.8	0.0	
POKR	Poker Plat Res baz=209	86.70	12	P	P	19 23 40.1	-0.7	
XLT XLT	XiLinHaoTe comp=Z,12nm,0.9s	86.75	319	*e*P pmax	P pmax	19 23 42.3	+0.6	
E18K	Tukpahlearik C comp=Z,15nm,0.8s	86.80	7	IAmb	IAmb	19 23 42.4		
E18K	Tukpahlearik C baz=196	86.80	7	P	P	19 23 41.4	+0.2	
TPB05	Hovey Rd comp=Z,43nm,1.0s	86.80	56	IAmb	IAmb	19 23 45.7		
D17K	Noatak River baz=194	86.82	6	P	P	19 23 41.9	+0.7	
G21K	Allakaket comp=Z,24nm,0.8s	86.88	9	IAmb	IAmb	19 23 42.9		
G21K	Allakaket baz=203,SNR=15	86.88	9	P	P	19 23 42.0	+0.3	
H23K	Yukon River baz=207	86.93	11	P	P	19 23 41.0	-0.8	
K27K	Chicken comp=Z,25nm,1.1s	86.97	15	IAmb	IAmb	19 23 44.1		
FXWY	Fox Creek comp=Z,54nm,1.8s	86.97	42	IAmb	IAmb	19 23 45.6		
F20K F20K	Avaraart Lake comp=Z,16nm,0.9s	87.05	8	P IAmb	P IAmb	19 23 42.1 19 23 43.6	-0.3	
F20K	Avaraart Lake baz=201	87.05	8	P	P	19 23 42.9	+0.5	
S22A	4UR Ranch, Cre comp=Z,16nm,0.9s	87.05	49	IAmb	IAmb	19 23 46.2		
SNOW	Snow King Moun comp=Z,28nm,0.8s	87.06	42	IAmb	IAmb	19 23 46.1		
O20A	White River Ci comp=Z,21nm,1.3s	87.14	46	IAmb	IAmb	19 23 47.4		
RDOG	Red Dog Mine baz=194	87.18	6	P	P	19 23 43.5	+0.5	
M30M	Minto, Yukon baz=218,SNR=58	87.19	18	P	P	19 23 43.7	+0.5	
BUT	Butte comp=Z,26nm,0.8s	87.21	39	IAmb	IAmb	19 23 46.0		
LOHW	Long Hollow comp=Z,68nm,1.8s	87.23	42	IAmb	IAmb	19 23 46.6		
E19K	Redstone River comp=Z,25nm,0.7s	87.23	8	IAmb	IAmb	19 23 44.5		
E19K	Redstone River baz=199	87.23	8	P	P	19 23 43.7	+0.4	
N32M	Quiet Lake baz=222	87.23	20	P	P	19 23 44.4	+0.9	
L29M	L29M baz=217	87.24	17	P	P	19 23 44.3	+0.9	
H24K	Noodor Dome baz=208,SNR=5.7	87.25	12	P	P	19 23 42.1	-1.3	
SAND	Sanderson comp=Z,25nm,0.9s	87.37	57	IAmb	IAmb	19 23 47.6		
MNHN	Monahans comp=Z,20nm,0.9s	87.41	56	IAmb	IAmb	19 23 47.7		
YPP	Pitchstone Pla comp=Z,25nm,1.8s	87.42	41	IAmb	IAmb	19 23 48.3		
PRP	Porcupine Dome baz=210	87.45	13	P	P	19 23 44.0	-0.5	
BW06	Boulder Array comp=Z,16nm,0.8s	87.49	43	IAmb	IAmb	19 23 47.3		
PD31	Pinedale Array comp=Z,15nm,0.8s	87.49	43	IAmb	IAmb	19 23 47.3		
PDAR	Pinedale Array comp=Z,14nm,0.8s,baz=218,slow=2.8,SNR=78 comp=Z,14nm,0.8s	87.49	43	P	P	19 23 46.3	+0.9	
PDAR	Pinedale Array	87.49	43		P	19 23 45.6	+0.2	
HILR	Hailar Array B comp=Z,3.7nm,0.6s,baz=126,slow=7.5,SNR=18 comp=Z,3.7nm,0.6s	87.53	325	P	P	19 23 45.3	+0.2	
F21K	Alatna River comp=Z,12nm,0.8s	87.54	9	IAmb	IAmb	19 23 45.7		
F21K	Alatna River baz=203	87.54	9	P	P	19 23 44.9	+0.1	
BOZ	Bozeman (W) comp=Z,32nm,1.1s	87.56	40	IAmb	IAmb	19 23 48.2		
C17K	DeLong Mountai baz=194	87.57	5	P	P	19 23 45.4	+0.6	
G22K	Bettles baz=205	87.58	10	P	P	19 23 45.7	+0.9	
M31M	Drury Creek, Y comp=Z,22nm,1.1s	87.61	19	IAmb	IAmb	19 23 46.5		
M31M	Drury Creek, Y baz=221,SNR=7.0	87.61	19	P	P	19 23 45.6	+0.4	
G23K	Bananza Creek comp=Z,14nm,0.9s	87.64	11	IAmb	IAmb	19 23 47.1		
G23K	Bananza Creek baz=206	87.64	11	P	P	19 23 45.5	+0.3	
DAWY	Dawson baz=216,SNR=42	87.67	16	P	P	19 23 46.0	+0.6	
I26K	Coal Creek Min comp=Z,22nm,1.0s	87.79	14	IAmb	IAmb	19 23 47.4		
I26K	Coal Creek Min baz=213	87.79	14	P	P	19 23 46.3	+0.4	
WTLY	Watson Lake, Y baz=226	87.94	22	P	P	19 23 48.0	+1.3	
K29M	Barlow Dome baz=218	87.99	17	P	P	19 23 47.6	+0.6	
F22K	John River baz=204	88.00	10	P	P	19 23 47.3	+0.5	
COLD	Coldfoot baz=206	88.07	10	P	P	19 23 47.9	+0.7	
TMB01	Midkiff comp=Z,14nm,1.0s	88.07	56	IAmb	IAmb	19 23 50.8		
G24K	Hadweenzic Riv comp=Z,12nm,0.7s	88.09	12	IAmb	IAmb	19 23 48.2		
G24K	Hadweenzic Riv baz=209	88.09	12	P	P	19 23 47.3	0.0	
D19K	Kuna River comp=Z,19nm,0.8s	88.11	7	IAmb	IAmb	19 23 48.5		
D19K	Kuna River baz=199	88.11	7	P	P	19 23 47.5	+0.1	
E20K	Nigu River baz=200	88.12	8	P	P	19 23 47.9	+0.4	
128A	Castleberry Fa comp=Z,21nm,0.7s	88.14	55	IAmb	IAmb	19 23 51.0		
HHC HHC	Hu-ho-hao-te comp=Z,17nm,0.5s	88.27	314	*e*P pmax	P pmax	19 23 49.3	+0.4	
HHC	comp=Z,85nm,6.1s			pmax	pmax			
J29N	Klondike Camp	88.29	16	P	P	19 23 49.3	+0.9	

baz=217
I27K Kandik River 88.39 14 IAmb IAmb 19 23 50.1
comp=Z,12nm,0.9s
I27K Kandik River 88.39 14 P **P** **19 23 49.0 +0.3**
baz=214,SNR=18
229A Bryant Ranch, 88.40 56 IAmb IAmb 19 23 52.3
comp=Z,20nm,0.9s
G25K Bearman Lake 88.42 12 P **P** **19 23 49.5 +0.8**
baz=210
ELIB Princess Elisa 88.45 186 *d*P **P** **19 23 49.2 -0.1**
comp=Z,12nm,0.7s
ELIB *d*pP **pwP** **19 25 49.8 -0.3**
LIRD Liard River Hi 88.45 24 P **P** **19 23 50.0 +0.9**
baz=228,SNR=8.7
D20K Etivluk River 88.50 8 P **P** **19 23 49.3 +0.1**
baz=200
C19K Lookout Ridge 88.53 6 P **P** **19 23 49.6 +0.3**
baz=197
T25A Trinidad 88.53 50 IAmb IAmb 19 23 53.6
comp=Z,9.1nm,0.8s
OZNA Ozona 88.54 57 IAmb IAmb 19 23 52.9
comp=Z,22nm,0.8s
E21K Killik River 88.60 9 IAmb IAmb 19 23 50.7
comp=Z,28nm,1.0s
E21K Killik River 88.60 9 P **P** **19 23 49.7 +0.1**
baz=202
129A Stewart Farms, 88.62 55 IAmb IAmb 19 23 53.2
comp=Z,21nm,0.9s
E22K Anaktuvuk Pass 88.63 9 P **P** **19 23 50.2 +0.4**
baz=204
I28M Miner Creek 88.66 15 IAmb IAmb 19 23 51.3
comp=Z,21nm,0.8s
I28M Miner Creek 88.66 15 P **P** **19 23 50.2 +0.1**
baz=216,SNR=19
F24K Squaw Lake 88.74 11 P **P** **19 23 50.9 +0.6**
baz=208
KMI2 Kunming 88.75 297 P **P** **19 23 52.8 +1.2**
KMI2 pmax pmax
comp=Z,12nm,0.8s
RLMT Red Lodge 88.79 41 IAmb IAmb 19 23 54.2
comp=Z,24nm,0.9s
J30M Hart River 88.89 17 IAmb IAmb 19 23 52.9
comp=Z,25nm,1.3s
J30M Hart River 88.89 17 P **P** **19 23 51.6 +0.4**
baz=219
MMPY Sheldon Lake, 88.90 20 P **P** **19 23 52.0 +0.8**
baz=223,SNR=58
E23K Chandalar 88.92 10 **P** **19 23 51.0 -0.2**
E23K IAmb IAmb 19 23 52.7
comp=Z,23nm,0.8s
E23K Chandalar 88.92 10 P **P** **19 23 51.8 +0.5**
baz=206
H27K Steamboat Moun 88.93 14 P **P** **19 23 51.6 +0.4**
baz=214
833A Chaparral WMA, 88.95 60 P **P** **19 23 52.9 +0.7**
833A IAmb IAmb 19 23 55.1
comp=Z,22nm,1.1s
I29M Ogilvie Camp, 88.99 15 IAmb IAmb 19 23 52.6
comp=Z,19nm,0.8s
I29M Ogilvie Camp, 88.99 15 P **P** **19 23 51.8 +0.3**
baz=217,SNR=16
G26K Porcupine Rive 89.05 13 P **P** **19 23 52.3 +0.7**
baz=212
HBVL Hebbronville 89.09 61 **P** **19 23 55.3 +2.4**
HBVL IAmb IAmb 19 23 56.9
comp=Z,22nm,0.9s
E24K Your Creek 89.13 11 IAmb IAmb 19 23 53.6
comp=Z,9.9nm,0.7s
E24K Your Creek 89.13 11 P **P** **19 23 52.3 +0.1**
baz=208
C21K Knifeblade Rid 89.15 8 P **P** **19 23 52.8 +0.7**
baz=202
F25K Christian Rive 89.23 12 IAmb IAmb 19 23 54.4
comp=Z,12nm,0.9s
F25K Christian Rive 89.23 12 P **P** **19 23 53.4 +0.8**
baz=210
I30M Mount Dempster 89.38 16 P **P** **19 23 53.9 +0.5**
baz=219
G27K Doyon Strip 89.39 13 P **P** **19 23 53.8 +0.4**
baz=214
JCT Junction City 89.42 58 IAmb IAmb 19 23 56.6
comp=Z,12nm,0.7s
A19K Wainwright 89.44 6 P **P** **19 23 52.9 -0.5**
baz=196
TOLK Toolik Lake Re 89.45 10 P **P** **19 23 53.8 +0.2**
baz=207,SNR=11
HNDO Hondo 89.49 59 **P** **19 23 56.7 +2.0**
TROLL Troll, Antarti 89.52 180 ⇑P **P** **19 23 54.4 +0.2**
comp=Z,177nm,0.4s
TROLL pP **pwP** **19 25 55.1 -0.9**
comp=Z,181nm,0.9s
SN07 Snyder 07 89.55 55 IAmb IAmb 19 23 56.8
comp=Z,17nm,0.9s
D23K Nanushuk River 89.57 9 P **P** **19 23 55.0 +0.9**
baz=206
B21K Ikpikpuk River 89.61 8 IAmb IAmb 19 23 55.5
comp=Z,21nm,0.8s
B21K Ikpikpuk River 89.61 8 P **P** **19 23 54.6 +0.4**
baz=202
F26K Sheenjek River 89.61 12 IAmb IAmb 19 23 56.4
comp=Z,14nm,0.9s
F26K Sheenjek River 89.61 12 P **P** **19 23 55.3 +0.9**
baz=212
PH02 Texas Public H 89.64 52 IAmb IAmb 19 23 58.3
comp=Z,14nm,0.7s
AMTX Amarillo 89.64 53 IAmb IAmb 19 23 57.5
comp=Z,18nm,0.8s
B20K Meade River 89.66 7 P **P** **19 23 54.9 +0.5**
baz=200
H29M Whitestone 89.67 15 P **P** **19 23 55.2 +0.6**
baz=217
E25K Arctic Village 89.70 12 IAmb IAmb 19 23 57.1
comp=Z,25nm,1.4s
E25K Arctic Village 89.70 12 P **P** **19 23 55.4 +0.7**
baz=210,SNR=11
KOTAN Kotaneelee Air 89.71 24 P **P** **19 23 55.8 +0.8**
baz=230
CMAR Chiang Mai Arr 89.74 289 P **P** **19 23 57.0 +0.9**
comp=Z,3.8nm,0.9s,baz=111,slow=2.6,SNR=24
CMAR PP **PP** **19 27 39.6 +1.2**
comp=Z,1.1nm,1.0s,baz=131,slow=6.1,SNR=4.3
CMAR PKKPbc **PKKPbc** **19 41 26.9 +1.1**
comp=Z,0.8nm,0.7s,baz=285,slow=4.5,SNR=5.1
comp=Z,3.8nm,0.9s
CMAR Chiang Mai Arr 89.74 289 **P** **19 23 55.7 -0.3**
DKNS Dickens 89.75 54 IAmb IAmb 19 23 57.9
comp=Z,10nm,0.9s
SNAA Sanae 89.80 178 ⇑P **P** **19 23 55.4 0.0**
comp=Z,51nm,0.6s
SNAA SKSac **SKSac** **19 33 34.8 +0.9**
comp=N,83nm,1.0s
SNAA Sanae 89.80 178 P **P** **19 23 55.0 -0.4**
comp=N,2.2nm,0.7s,baz=206,slow=3.9,SNR=6.7
comp=N,2.2nm,0.7s
SNAA Sanae 89.80 178 IAmb IAmb 19 27 15.0
comp=Z,24nm,2.0s
CHTO Chiang Mai 89.86 290 P **P** **19 23 57.5 +0.9**
CHTO Chiang Mai 89.86 290 P **P** **19 23 57.7 +1.1**
comp=Z,8.2nm,0.9s
EGMT Eagleton 89.87 38 IAmb IAmb 19 23 58.3
comp=Z,14nm,1.2s
D24K Happy Valley 90.03 10 IAmb IAmb 19 23 57.8
comp=Z,19nm,0.8s
D24K Happy Valley 90.03 10 P **P** **19 23 57.0 +0.8**
baz=207
PZH PanZhiHua 90.08 298 P **P** **19 23 58.8 +1.2**
EPYK Eagle Plains 90.19 15 P **P** **19 23 57.5 +0.4**
baz=218,SNR=34
G29M Pine Creek 90.30 15 P **P** **19 23 57.7 +0.2**
baz=217,SNR=16
PLCA Paso Flores 90.33 133 P **P** **19 23 59.7 +1.1**
comp=Z,2.0nm,0.7s,baz=207,slow=1.5,SNR=4.9
comp=Z,2.0nm,0.7s
VNA2 Neumayer--Watz 90.36 177 ⇑P **P** **19 23 58.2 +0.2**
comp=Z,9.0nm,0.6s,baz=180,slow=4.7
VNA2 ⇓pP **pwP** **19 25 58.5 -1.6**
comp=Z,2.2nm,0.8s,baz=157,slow=2.5
VNA2 ⇓SKSac **SKSac** **19 33 37.3 +0.3**
comp=N,2.3nm,1.0s,baz=244,slow=8.7
BRDY Brady 90.36 57 **P** **19 23 59.6 +0.9**
BRDY IAmb IAmb 19 24 01.0
comp=Z,18nm,1.2s
C23K Itkillik River 90.37 9 P **P** **19 23 58.5 +0.7**
baz=206
H31M Peel River 90.37 16 IAmb IAmb 19 23 59.5
comp=Z,16nm,0.8s
H31M Peel River 90.37 16 P **P** **19 23 57.9 0.0**
baz=221

B22K Teshekpuk Lake 90.43 8 P **P** **19 23 59.2 +1.2**
baz=203
F28M Old Crow 90.44 14 IAmb IAmb 19 23 59.7
comp=Z,16nm,1.1s
F28M Old Crow 90.44 14 P **P** **19 23 58.6 +0.4**
baz=216
E27K Coleen River 90.55 13 IAmb IAmb 19 24 02.1
comp=Z,15nm,1.1s
E27K Coleen River 90.55 13 P **P** **19 23 59.0 +0.3**
baz=214
VNA1 Neumayer--Stat 90.58 177 ⇑P **P** **19 23 59.7 +0.8**
comp=Z,9.0nm,0.8s
D25K Kavik River 90.60 11 IAmb IAmb 19 23 59.7
comp=Z,10nm,1.1s
D25K Kavik River 90.60 11 P **P** **19 23 58.7 -0.2**
baz=210
G30M tAoh Zraii Nji 90.80 15 P **P** **19 23 60.0 +0.1**
baz=219,SNR=28
A22K Sinclair Lake 90.85 7 P **P** **19 24 00.2 +0.2**
baz=202
A21K Barrow 90.96 7 P **P** **19 24 00.6 +0.2**
baz=200
G31M Satah River 91.24 16 P **P** **19 24 02.0 +0.1**
baz=221
E28M Babbage River 91.33 13 P **P** **19 24 02.6 +0.3**
baz=216
C27K Jago River 91.34 11 P **P** **19 24 02.6 +0.3**
baz=212
C26K Camden Bay 91.37 11 P **P** **19 24 02.9 +0.6**
baz=211
F30M Barrier River 91.39 15 IAmb IAmb 19 24 05.0
comp=Z,18nm,0.9s
F30M Barrier River 91.39 15 P **P** **19 24 02.6 +0.1**
baz=219
E29M Blow River 91.51 14 IAmb IAmb 19 24 04.8
comp=Z,20nm,1.6s
E29M Blow River 91.51 14 P **P** **19 24 03.0 -0.1**
baz=217
D27M Malcolm River 91.55 12 IAmb IAmb 19 24 05.2
comp=Z,15nm,1.2s
D27M Malcolm River 91.55 12 P **P** **19 24 03.9 +0.5**
baz=215
RSSD Black Hills 91.70 44 P **P** **19 24 05.2 +0.4**
F31M Tsiigehtchic 91.77 16 P **P** **19 24 04.5 +0.2**
baz=221,SNR=14
LZH Lanzhou 91.87 307 *e*P **P** **19 24 01.0 -4.7**
LZH pP pP 19 26 01.5 -3.8
LZH sP sP 19 26 52.0 -7.5
LZH pmax pmax
comp=Z,30nm,1.0s
WRGLY Wrigley 91.92 22 IAmb IAmb 19 24 06.5
comp=Z,6.8nm,0.8s
WRGLY Wrigley 91.92 22 P **P** **19 24 04.8 -0.2**
baz=230
D28M Stokes Point 92.08 13 P **P** **19 24 05.5 -0.1**
baz=217
NOKA Waynoka 92.38 52 IAmb IAmb 19 24 10.0
comp=Z,14nm,0.9s
X34A Smith Ranch, M 92.48 54 IAmb IAmb 19 24 11.1
comp=Z,14nm,0.9s
INK Inuvik 92.48 15 P **P** **19 24 07.6 +0.1**
baz=221
W35A Tecumseh 93.41 54 IAmb IAmb 19 24 15.0
comp=Z,14nm,1.0s
ULN Ulaanbaatar 94.16 319 **P** **19 24 15.3 -0.6**
ULN Ulaanbaatar 94.16 319 P **P** **19 24 16.6 +0.7**
T35A Sooner Cattle 94.29 53 IAmb IAmb 19 24 20.8
comp=Z,7.5nm,0.8s
SONM Songino Array 94.56 319 P **P** **19 24 17.9 +0.2**
comp=Z,0.8nm,0.6s,baz=131,slow=4.1,SNR=7.3
comp=Z,0.8nm,0.6s
SONM Songino Array 94.56 319 P **P** **19 24 17.1 -0.5**
YKA Yellowknife Ar 94.78 25 P **P** **19 24 18.6 +0.5**
comp=Z,6.6nm,0.7s,baz=244,slow=4.4,SNR=36
comp=Z,6.6nm,0.7s
YKA Yellowknife Ar 94.78 25 P **P** **19 24 17.6 -0.5**
YKAW3 Yellowknife Wh 94.82 25 IAmb IAmb 19 24 19.4
comp=Z,3.6nm,0.7s
YKAW1 Yellowknife Wh 94.83 25 IAmb IAmb 19 24 19.5
comp=Z,4.7nm,0.8s
GTA2 Gaotai 96.08 310 *e*P **P** **19 24 25.3 +0.5**
GTA2 pmax pmax
comp=Z,3.0nm,0.8s
ECSD EROS Data Cent 96.52 46 IAmb IAmb 19 24 27.9
comp=Z,5.7nm,0.7s
S39A Bolivar 96.95 53 IAmb IAmb 19 24 31.3
comp=Z,4.3nm,0.8s
A36M Sachs Harbour 97.08 14 P **P** **19 24 28.6 +0.3**
baz=229
F33A 5 Mile Ranch, 97.44 44 IAmb IAmb 19 24 32.9
comp=Z,5.8nm,1.0s
ULM Lac du Bonnet 99.11 40 P **Pdif** **19 24 37.3 -0.5**
comp=Z,1.9nm,0.8s,baz=242,slow=6.7,SNR=3.3
comp=Z,1.9nm,0.8s
ZALV Zalesovo Beam 109.24 322 PKiKP **PKiKP** **19 29 22.2 -0.9**
comp=Z,1.6nm,0.6s,baz=44,slow=0.9,SNR=11
MKAR Makanchi Array 110.13 314 PKiKP **PKiKP** **19 29 24.2 -0.9**
comp=Z,2.1nm,0.4s,baz=87,slow=1.4,SNR=59
MKAR PKKPbc **PKKPbc** **19 40 29.1 -0.2**
comp=Z,0.4nm,0.7s,baz=298,slow=2.6,SNR=3.8
KURBB Kurchatov Arra 112.88 318 PKiKP **PKiKP** **19 29 29.1 -1.0**
comp=Z,2.5nm,0.6s,baz=96,slow=1.8,SNR=35
KURBB SKP **SKPdf** **19 32 14.8 +0.7**
comp=Z,0.7nm,0.8s,baz=94,slow=1.8,SNR=5.5
BVAR Borovoye Array 117.85 321 PKP **PKPdf** **19 29 39.1 -0.5**
comp=Z,4.0nm,0.4s,baz=112,slow=1.9,SNR=35
BVAR SKP **SKPdf** **19 32 24.3 +0.7**
comp=Z,0.3nm,0.4s,baz=39,slow=0.9,SNR=4.8
KKAR Karatay Array 118.30 309 **PKPdf** **19 29 39.9 -0.9**
SPITS Spitsbergen Ar 120.09 357 PKP **PKPdf** **19 29 43.1 -0.2**
comp=Z,6.0nm,0.7s,baz=64,slow=3.8,SNR=6.6
SUMG Summit 121.35 13 **PKPdf** **19 29 46.1 -0.2**
SUMG **PP** **19 31 22.3 -4.5**
ARTI Arti 123.96 326 **PKPdf** **19 29 50.5 -0.7**
ABKAR Akbulak array 124.94 318 **PKPdf** **19 29 52.5 -0.8**
SCO Scoresbysund 126.20 10 **PKPdf** **19 29 55.2 0.0**
ARCES ARCESS Array B 127.20 350 PKP **PKPdf** **19 29 57.1 0.0**
comp=Z,4.5nm,0.4s,baz=17,slow=1.2,SNR=77
ARCES ARCESS Array B 127.20 350 **PKPdf** **19 29 56.7 -0.4**
BOSA Boshof 127.97 206 PKP **PKiKP** **19 30 00.3 -0.4**
comp=Z,1.4nm,0.6s,baz=3.1,slow=3.9,SNR=4.6
BOSA Boshof 127.97 206 **PKPdf** **19 29 58.2 -1.8**
FINES FINESS Array B 134.12 344 PKhKP PKPpre 19 30 03.5
comp=Z,0.9nm,0.3s,baz=56,slow=4.8,SNR=9.3
FINES PKP **PKiKP** **19 30 11.0 -0.8**
comp=Z,1.0nm,0.3s,baz=44,slow=3.1,SNR=3.8
FINES SKPbc **SKPbc** **19 32 48.9 -0.1**
comp=Z,1.1nm,0.7s,baz=98,slow=2.7,SNR=3.8
FINES FINESS Array B 134.12 344 **PKPdf** **19 30 09.8 -0.5**
NB2 NORSAR Subarra 137.23 354 PKP PKPpre 19 30 07.1
comp=Z,1.0nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 137.23 354 PKhKP PKPpre 19 30 07.8
comp=Z,1.7nm,0.8s,baz=20,slow=3.8,SNR=5.9
NOA PKP **PKiKP** **19 30 17.5 -0.7**
comp=Z,1.1nm,0.5s,baz=16,slow=4.1,SNR=6.9
HFS Hagfors 137.80 351 PKhKP PKPpre 19 30 06.1
comp=Z,3.2nm,0.5s,baz=72,slow=4.8,SNR=11
HFS PKP **PKPdf** **19 30 17.6 +0.4**
comp=Z,1.1nm,0.4s,baz=116,slow=3.4,SNR=6.5
STRU Stroemstad 139.19 353 *i* P PKPpre 19 30 12.6
RAYN Ar Rayn 139.48 285 **PKPdf** **19 30 20.3 -1.2**
TJOU Tjoern 140.12 352 *i* P PKPpre 19 30 13.8
ONAU Onsala 140.70 352 *i* P PKPpre 19 30 16.4
BLEU Blekinge 141.09 348 *i* P PKPpre 19 30 16.5
DEL Delary 141.29 350 *i* P PKPpre 19 30 17.9
AKASG Malin Array Be 141.55 332 PKhKP PKPpre 19 30 19.1
comp=Z,3.9nm,0.3s,baz=44,slow=4.1,SNR=46
AKASG Malin Array Be 141.55 332 PKPpre 19 30 19.5
KIEV Kiev 141.56 332 ⇓P PKPpre 19 30 19.5
KIEV Kiev 141.56 332 PKPpre 19 30 19.5
BJUU Bjuv 141.81 350 *i* P PKPpre 19 30 20.4
INVG Invergeldie, C 142.03 6 *e*P PKPpre 19 30 21.2
LAWE Loch Awe, Argy 142.06 7 *e*P PKPpre 19 30 21.3
LUNU Lund 142.16 350 *i* P PKPpre 19 30 20.8
BSD Bornholm Skovb 142.39 348 *i* P PKPpre 19 30 23.3
PGBU Glenifferbraes 142.60 6 *e*P PKPpre 19 30 23.1
ARPR Arapgir-MALATY 142.77 311 PKPpre 19 30 25.5
CLGH Cloghs, Cushen 143.12 8 *e*P PKPbc 19 30 25.6 +0.5
EKA Eskdalemuir Ar 143.20 5 PKP PKPab 19 30 24.9 -0.1
comp=Z,15nm,0.8s,baz=349,slow=2.7,SNR=19
ESK Eskdalemuir 143.21 5 *e*P PKPab 19 30 24.7 -0.3
R9F13 Warsaw-Wawer 143.41 340 *e*PKP PKPbc 19 30 26.6 +0.5
GAL1 Galloway 143.50 7 *e*P PKPab 19 30 25.9 -0.2
GKP Gorka Klasztor 143.59 345 *e*PKP **PKPdf** **19 30 27.3 -0.5**
SORM Soroca 143.78 330 ⇑P PKPbc 19 30 27.1 -0.3
EDMD Edmundbyers 143.79 4 *e*P PKPab 19 30 27.2 0.0

BEL Belsk 143.85 340 *e*PKP **PKPdf** **19 30 28.2 -0.2**
KESW Keswick, Cumbr 143.94 5 *e*P PKPbc 19 30 27.6 -0.1
IOMK Kirk Michael 144.12 7 *e*P PKPbc 19 30 27.7 -0.5
ILTH Belurgan, Co L 144.12 9 *e*P PKPbc 19 30 27.4 -0.8
PURM Purcari 144.13 327 ⇑P **PKPdf** **19 30 29.1 +0.2**
PURM Purcari 144.13 327 PKP **PKPdf** **19 30 28.9 -0.1**
IGLA Glengowla, Co 144.19 12 *e*P PKPbc 19 30 28.3 -0.1
GDLE Glaisdale, N Y 144.26 3 *e*P PKPbc 19 30 28.7 0.0
KMPD K-Podol'skiy 144.34 332 PKP PKPbc 19 30 28.6 -0.5
DRBR Darabani 144.54 332 ⇑P **PKPdf** **19 30 29.4 -0.3**
HPK Haverah Park 144.68 4 *e*P **PKPab** **19 30 30.3 -0.3**
KWP Kalwaria Pacla 145.04 337 *e*PKP **PKPab** **19 30 31.9 -0.3**
KWP Kalwaria Pacla 145.04 337 PKP **PKPbc** **19 30 31.6 +0.3**
WLF1 Llynfaes 145.09 7 *e*P **PKPab** **19 30 31.1 -0.1**
VASR Vasilui 145.11 329 ⇓P **PKPab** **19 30 32.6 +0.1**
BIR Birlad 145.45 328 ⇑P **PKPab** **19 30 34.2 +0.3**
GIRR Girov 145.50 330 ⇑P **PKPab** **19 30 33.3 -0.8**
VLDR Vladesti 145.51 327 ⇓P **PKPab** **19 30 33.6 -0.5**
OJC Ojcow 145.57 340 *e*PKP **PKPab** **19 30 33.5 -0.7**
OJC Ojcow 145.57 340 PKP **PKPbc** **19 30 32.9 +0.1**
VARL Varlezi 145.59 328 ⇑P **PKPab** **19 30 33.9 -0.5**
BURAR Bucovina Array 145.60 332 ⇑P **PKPab** **19 30 33.9 -0.7**
BURAR Bucovina Array 145.60 332 **PKPbc** **19 30 32.3 -0.8**
FOEL Foel Wylfa 145.61 6 *e*P **PKPbc** **19 30 32.8 0.0**
SCTR Scanteiesti 145.67 327 ⇑P **PKPab** **19 30 34.1 -0.7**
BIZ Bicaz 145.70 331 ⇑P **PKPab** **19 30 34.5 -0.4**
GHRR 145.70 328 ⇑P **PKPab** **19 30 34.9 +0.1**
TESR Tescani 145.75 330 ⇑P **PKPbc** **19 30 33.7 +0.3**
TESR Tescani 145.75 330 PKP **PKPbc** **19 30 33.6 +0.2**
KOLS Kolonicke sedl 145.78 336 *e*PKP **PKPab** **19 30 34.3 -0.8**
BRTR Keskin Array B 145.78 314 PKPbc **PKPbc** **19 30 33.8 -0.2**
comp=Z,8.1nm,0.6s,baz=132,slow=4.5,SNR=49
BRTR SKPbc **SKiKP** **19 33 21.1 -0.3**
comp=Z,1.6nm,0.8s,baz=98,slow=3.7,SNR=4.6
BR104 Keskin Array S 145.79 314 PKP **PKPbc** **19 30 33.8 -0.1**
BR106 Keskin Array S 145.79 314 PKP **PKPbc** **19 30 33.8 -0.1**
BR105 Keskin Array S 145.80 314 PKP **PKPbc** **19 30 33.8 -0.2**
JURR Jurilovca 145.82 325 ⇑P **PKPab** **19 30 34.8 -0.5**
NEGRR Negrea 145.83 327 ⇑P **PKPab** **19 30 35.1 -0.3**
KIRS Kirsehir-Merke 145.87 313 ⇓P **PKPbc** **19 30 34.1 0.0**
IZVR Izvoarele 145.88 327 ⇓P **PKiKP** **19 30 36.3 -0.1**
TUDR 145.90 327 ⇑P **PKiKP** **19 30 36.5 +0.1**
CWF Charnwood Fore 145.91 4 *e*P **PKPbc** **19 30 33.6 -0.1**
CFR Carcaliu 145.94 327 ⇓P **PKPbc** **19 30 34.3 +0.3**
PANC Panciu 145.96 328 ⇑P **PKPab** **19 30 34.9 -1.0**
BEI Beino 146.00 305 *e*P **PKPbc** **19 30 34.8 +0.2**
TPGR Topolog 146.00 326 ⇑P **PKPab** **19 30 35.0 +0.8**
ONER Baraj Valea Uz 146.00 330 ⇑P **PKPab** **19 30 35.4 -0.7**
HLM1 Long Mynd 146.01 6 *e*P **PKPbc** **19 30 33.9 0.0**
UZHM Uzhgorod 146.02 336 PKP **PKPbc** **19 30 34.5 +0.4**
WACR West Acre 146.02 2 *e*P **PKPbc** **19 30 34.1 +0.2**
KSP Ksiaz 146.04 344 *e*PKP **PKPab** **19 30 35.1 -0.9**
KSP Ksiaz 146.04 344 PKP **PKPbc** **19 30 34.8 +0.7**
MBAR Mbarara 146.07 239 **PKPbc** **19 30 35.1 -0.4**
NIE Niedzica 146.09 339 *e*PKP **PKPab** **19 30 35.3 -1.1**
NIE Niedzica 146.09 339 PKP **PKPbc** **19 30 35.0 +0.7**
ODBI Odobesti 146.09 328 ⇑P **PKPab** **19 30 35.9 -0.5**
VRI Vrincioaia 146.18 329 ⇑P **PKPbc** **19 30 35.0 +0.3**
VRI Vrincioaia 146.18 329 PKP **PKPbc** **19 30 34.8 +0.1**
PLOR Plostina 146.23 329 ⇑P **PKPbc** **19 30 35.1 +0.3**
TIRR Tirgusor 146.27 325 ⇑P **PKPbc** **19 30 35.1 +0.2**
HWQ Hawqa 146.27 304 *e*P **PKPbc** **19 30 35.0 -0.5**
SAHR Sahastru 146.30 329 ⇑P **PKPbc** **19 30 35.7 +0.6**
BMR Baia Mare 146.30 334 ⇓P **PKPbc** **19 30 35.6 +0.7**
OSTC Astas 146.32 344 ⇑*e*PKP **PKPbc** **19 30 35.8 +0.9**
CHVC Chvalec 146.33 344 ⇑*e*PKP **PKPbc** **19 30 35.9 +0.9**
CLL Collm 146.37 348 PKP **PKPbc** **19 30 35.2 +0.3**
CLL Collm 146.37 348 ⇓ *i* PKPbc **PKPbc** **19 30 35.3 +0.3**
comp=Z,68nm,1.0s
CLL *i* (PKPab) **PKPab** **19 30 37.2 -0.1**
ARCR ARCALIA 146.39 332 ⇑P **PKiKP** **19 30 36.2 -1.2**
TURR Turia 146.39 330 ⇑P **PKiKP** **19 30 36.3 -1.2**
GRER 146.40 328 ⇓P **PKiKP** **19 30 36.7 -0.8**
EFOR EFORIE 146.40 325 ⇑P **PKiKP** **19 30 37.4 -0.1**
TLBR Topalu 146.41 326 ⇑P **PKPbc** **19 30 36.1 +0.8**
UPC Upice 146.42 344 ⇑*e*PKP **PKPbc** **19 30 35.9 +0.7**
STEB Steborice 146.45 342 ⇑*e*PKP **PKPbc** **19 30 35.9 +0.7**
COVR Voineasa-Covas 146.45 329 ⇓P **PKPbc** **19 30 35.6 +0.2**
ZAHL Zahle 146.45 303 *e*P **PKPbc** **19 30 36.4 +0.4**
OZUR 146.47 330 ⇑P **PKPbc** **19 30 36.3 +0.9**
DPC Dobruska-Polom 146.48 344 ⇑*e*PKP **PKiKP** **19 30 36.4 -1.2**
MCH1 Michaelchurch 146.51 6 *e*P **PKPbc** **19 30 35.2 -0.1**
BRG Berggiesshubel 146.58 347 ⇓ *e*PKPf 19 30 33.6
BRG Amp 19 30 34.6
comp=Z,7.6nm,1.3s
BRG ⇑PKPb 19 30 36.4
BRG Amp 19 30 36.7
comp=Z,17nm,0.6s
BRG PKPab **PKPab** **19 30 38.5 +0.3**
BRG Amp 19 30 39.2
comp=Z,12nm,0.8s
MANR Mangalia 146.59 324 ⇑P **PKiKP** **19 30 37.3 -0.7**
LANS Liptovska Anna 146.60 339 *e*PKP **PKiKP** **19 30 36.8 -1.1**
KRLC Kraliky 146.60 343 ⇑*e*PKP **PKPbc** **19 30 36.5 +0.8**
RCY Rachaya 146.60 303 *e*P **PKPbc** **19 30 36.6 +0.2**
BHL Bhannes 146.62 304 *e*P **PKPbc** **19 30 36.3 -0.1**
MORC Moravsky Berou 146.65 342 ⇑P **PKPbc** **19 30 36.7 +0.8**
MORC Moravsky Berou 146.65 342 *e*PKP **PKPbc** **19 30 36.2 +0.3**
MONM Monmouth 146.69 6 *e*P **PKPbc** **19 30 35.5 -0.3**
NEHR Nehoiu 146.70 328 ⇑P **PKPbc** **19 30 35.8 -0.3**
QRWL Qaraoun 146.71 303 *e*P **PKPbc** **19 30 36.9 +0.3**
SHBL Chebaa 146.72 303 *e*P **PKPbc** **19 30 37.2 +0.4**
DOPR Dopca 146.75 330 ⇑P **PKiKP** **19 30 37.4 -0.9**
DQRL Deir Qamar 146.75 303 *e*P **PKPbc** **19 30 36.5 -0.2**
ISR Istrita 146.80 328 ⇓P **PKPbc** **19 30 37.0 +0.6**
ICOR Ion Corvin 146.83 325 ⇑P **PKiKP** **19 30 37.4 -1.0**
MLR Muntele Rosu 146.83 329 ⇑P **PKPbc** **19 30 36.9 +0.3**
MAUC Maruska 146.93 341 ⇑*e*PKP **PKiKP** **19 30 37.6 -0.9**
MESR Meseseni 146.94 324 ⇓P **PKiKP** **19 30 38.1 -0.5**
HSKC Hora Svate Kat 146.94 347 ⇑*e*PKP **PKPbc** **19 30 37.3 +0.7**
CJR Cluj-Napoca 147.00 333 ⇑P **PKiKP** **19 30 37.8 -0.9**
SAHE Sakarya_HENDEK 147.03 318 ⇓P **PKPbc** **19 30 37.6 +0.5**
LEHL Lehliu 147.10 327 ⇑P **PKPbc** **19 30 37.9 +0.8**
CICN Ciocanesti 147.18 326 ⇓P **PKPbc** **19 30 37.6 +0.2**
MARR Marisel-Cluj 147.24 333 ⇑P **PKPbc** **19 30 38.1 +0.5**
PRU Pruhonice 147.27 345 ⇑*e*PKP **PKPbc** **19 30 38.1 +0.7**
VOIR 147.30 330 ⇑P **PKPbc** **19 30 38.1 +0.3**
DRGR 147.32 334 ⇓P **PKiKP** **19 30 38.6 -0.8**
VRAC Vranov 147.35 343 ⇑P **PKiKP** **19 30 38.5 -0.9**
VRAC Vranov 147.35 343 *e*PKP **PKPbc** **19 30 38.0 +0.3**
CY604 RAF Akrotiri, 147.37 305 **PKPdf** **19 30 33.3 -1.2**
VYHS Vyhne 147.38 339 *e*PKP **PKiKP** **19 30 38.7 -0.7**
JAVC Velka Javorina 147.43 341 *e*PKP **PKiKP** **19 30 39.3 -0.3**
PSZ Piszkesteto 147.50 338 ⇑P **PKPbc** **19 30 38.8 +0.6**
PSZ Piszkesteto 147.50 338 **PKPbc** **19 30 37.3 -0.9**
ARR Arges 147.55 330 ⇑P **PKPbc** **19 30 39.8 -0.2**
KRUC Moravsky 147.63 343 *e*PKP **PKPbc** **19 30 38.6 +0.2**
PRD Provadia 147.67 324 *i* P **PKPbc** **19 30 39.1 -0.4**
NEF NEVSHA 147.68 325 *i* P **PKiKP** **19 30 39.4 -0.8**
SBD Saint Breward 147.73 8 *e*P **PKPbc** **19 30 38.0 -0.6**
ZVC Zvikov 147.86 345 ⇑*e*PKP **PKiKP** **19 30 39.7 -0.7**
ZVC *e*PKPAB **PKPab** **19 30 44.4 +1.0**
LOT Lotru 147.90 331 ⇑P **PKPbc** **19 30 39.2 -0.2**
UCC Uccle 147.93 357 *d*PKP **PKPbc** **19 30 39.4 +0.4**
MODS Modra-Piesok 147.98 341 *e*PKP **PKiKP** **19 30 40.3 -0.4**
MEM Membach 148.02 355 *d*PKP **PKPbc** **19 30 39.8 +0.5**
BTNL Ternell 148.03 355 *d*PKP **PKPbc** **19 30 39.2 -0.2**
CSS Mathiatis 148.05 307 **PKPbc** **19 30 38.9 -1.1**
BSTI Sart Tilman 148.08 356 *d*PKP **PKiKP** **19 30 40.2 -0.5**
SIRR Siria 148.18 334 ⇑P **PKiKP** **19 30 40.6 -0.5**
BCLA Clavier 148.26 356 *d*PKPab **PKPab** **19 30 44.8 -0.2**
BHOU Houvegnez 148.28 355 *d*PKP **PKiKP** **19 30 40.8 -0.4**
KHC Kasperske Hory 148.29 346 ⇑*e*PKP **PKiKP** **19 30 41.0 -0.3**
KHC *e*PKPAB **PKPab** **19 30 45.8 +0.5**
BGES Gesves 148.31 357 *d*PKP **PKiKP** **19 30 41.9 +0.6**
BGES *d*PKPab **PKPab** **19 30 45.2 0.0**
GZR Gura Zlata 148.39 332 ⇓P **PKPbc** **19 30 40.5 0.0**
BMRD Maredsous 148.40 357 *d*PKP **PKiKP** **19 30 40.8 -0.6**
CKRC Cesky Krumlov 148.41 345 ⇑*e*PKP **PKiKP** **19 30 40.9 -0.7**
RCHB Rochefort 148.53 356 *d*PKP **PKPbc** **19 30 40.9 +0.3**
GERES GERESS Array B 148.53 345 PKPbc **PKPbc** **19 30 40.8 0.0**
comp=Z,12nm,0.8s,baz=48,slow=2.0,SNR=40
GERES GERESS Array B 148.53 345 **PKPbc** **19 30 40.0 -0.8**
WINA Alland / Wiene 148.58 342 *i* PKiKP **PKiKP** **19 30 42.1 +0.1**
comp=Z,16nm,0.9s,SNR=6.6
DOU Dourbes 148.62 357 *d*PKP **PKPbc** **19 30 41.1 +0.3**
BZS Buzias 148.72 333 ⇓P **PKPbc** **19 30 41.5 +0.3**
SRE Strehaia 148.75 331

comp=Z,12nm,1.4s
FITZ Fitzroy Crossi 57.27 259 LR LR 20 06 45.6
comp=Z,61nm,18.9s,baz=6.5,slow=36
FITZ Fitzroy Crossi 57.27 259 P **P** **19 41 37.0 -2.0**
FITZ IAmb IAmb 19 42 03.6
comp=Z,3.1nm,1.4s
QSPA South Pole Qui 73.03 180 P **P** **19 43 20.6 +0.5**
comp=Z,0.7nm,0.7s,baz=326,slow=0.3,SNR=5.1
comp=Z,0.7nm,0.7s
QSPA South Pole Qui 73.03 180 P **P** **19 43 20.0 -0.1**
QSPA IAmb IAmb 19 43 59.7
comp=Z,4.5nm,1.4s
TXAR Lajitas Array 82.03 56 LR LR 20 12 16.4
comp=Z,16nm,19.6s,baz=312,slow=29

*FCIAR **28** 19:34:45.0, 79.°11N×4.°62E, h10km, station OMEGA has station magnitude of 3.40*
*NAO **28** 19:34:47.2≈1.0, 79.°47N×3.°32E, h10km, ML3.1*
*BER **28** 19:34:49.6≈2.6, 79.°49N×3.°29E, h10km, Mw3.9, ML3.1(NAO), Confirmed Earthquake*
*IDC **28** 19:34:49.1≈1.5, 79.°54N×3.°10E, h0km, mb3.7/3, mbtmp3.6/9, ML2.7/4, MS3.1/6, Error ellipse: s-maj=26.8km s-min=23.1km az=49.0*
*DNK **28** 19:34:50.0±3.1, 79.°35N×3.°57E, h30km±27km, ML2.1, Presumed earthquake*
*KOLA **28** 19:34:51.9, 79.°59N×5.°33E, h0km, ML2.5, Error ellipse: s-maj=67.1km s-min=29.5km az=40.0, Greenland sea, Knipovich ridge, north*

ISC 28 19:34:48.2±3.0, 79.°45N±0.°06×4.°03E±0.°06, h2km±21km, n50, σ≥21°/67, mb3.6/3, MS3.2/4, 2C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.58**	**105**	P	**Pn**	**19 35 17.6**	**-0.5**
KBS				Sn	**Sn**	**19 35 36.4**	**-1.9**
KBS	**Kingsbay**	**1.58**	**105**	*i* P	**Pn**	**19 35 17.5**	**+0.2**
KBS				*e*S	**Sn**	**19 35 36.9**	**-1.3**
KBS				IAML		19 35 44.9	
	comp=Z,82nm,0.4s						
KBS	**Kingsbay**	**1.58**	**105**	P	**Pn**	**19 35 17.1**	**0.0**
KBS				S	**Sn**	**19 35 34.6**	**-3.7**
KBS	**Kingsbay**	**1.58**	**105**	*i* P	**Pn**	**19 35 17.2**	**0.0**
KBS				*i* S	**Sn**	**19 35 36.2**	**-2.1**
BRBB	**Barentsburg B**	**2.41**	**119**	Pn	**Pb**	**19 35 30.4**	**-1.8**
BRBB				Sn	**Sn**	**19 35 57.9**	**-0.8**
BRBB	**Barentsburg B**	**2.41**	**119**	*e*P	**Pb**	**19 35 30.4**	**-1.8**
BRBB				IAML		19 35 32.1	
	comp=Z,26nm,0.3s						
BRBB				*e*S	**Sn**	**19 35 57.4**	**-1.2**
BRBB	**Barentsburg B**	**2.41**	**119**	P	**Pn**	**19 35 29.7**	**+1.1**
BRBB				S	**Sn**	**19 35 58.2**	**-0.4**
BRBA	**Barentsburg A**	**2.44**	**120**	*e*P	**Pn**	**19 35 30.6**	**+1.7**
BRBA				IAML		19 35 33.4	
	comp=Z,36nm,0.3s						
BRBA				*e*S	**Sn**	**19 35 57.8**	**-1.5**
SPA0	**Spitsbergen Ar**	**2.72**	**112**	Pn	**Pn**	**19 35 34.3**	**+1.4**
	baz=304,slow=8.6						
SPA0				Sn	**Sn**	**19 36 05.5**	**-0.9**
	baz=301,slow=16						
SPA0	**Spitsbergen Ar**	**2.72**	**112**	Pn	**Pn**	**19 35 34.3**	**+1.4**
SPA0				Sn	**Sn**	**19 36 05.5**	**-0.9**
SPA0	**Spitsbergen Ar**	**2.72**	**112**	*e*P	**Pn**	**19 35 32.8**	**-0.1**
SPA0				*e*S	**Sn**	**19 36 04.2**	**-2.1**
SPITS	**Spitsbergen Ar**	**2.72**	**112**	Pn	**Pn**	**19 35 34.2**	**+1.4**
	comp=Z,19nm,0.3s,baz=308,slow=7.1,SNR=331						
SPITS				Sn	**Sn**	**19 36 06.8**	**+0.5**
	baz=343,slow=14						
SPITS	**Spitsbergen Ar**	**2.72**	**112**	P	**Pn**	**19 35 34.0**	**+1.2**
SPITS				S	**Sn**	**19 36 05.6**	**-0.7**
HSPB	**Hornsund (broa**	**3.40**	**130**	Pn	**Pn**	**19 35 43.3**	**+1.2**
HSPB				Sn	**Sn**	**19 36 20.7**	**-2.3**
HSPB	**Hornsund (broa**	**3.40**	**130**	*e*P	**Pn**	**19 35 43.5**	**+1.3**
HSPB				IAML		19 36 23.0	
	comp=Z,27nm,0.4s						
HSPB	**Hornsund (broa**	**3.40**	**130**	*e*P	**Pn**	**19 35 42.3**	**+0.2**
HSPB				*e*S	**Sn**	**19 36 20.0**	**-3.1**
NOR	**Nord**	**4.02**	**312**	Pn	**Pn**	**19 35 47.6**	**-3.1**
NOR	**Nord**	**4.02**	**312**	*e*P	**Pn**	**19 35 47.5**	**-3.2**
NOR	**Nord**	**4.02**	**312**	*i* P	**Pn**	**19 35 47.5**	**-3.2**
NOR				IAML		19 36 35.7	
	comp=Z,4.3nm,0.4s						
HOPEN	**Hopen**	**5.25**	**113**	Pn	**Pn**	**19 36 08.1**	**+0.5**
HOPEN				Sn	**Sn**	**19 37 05.5**	**-3.1**
HOPEN	**Hopen**	**5.25**	**113**	*e*P	**Pn**	**19 36 08.2**	**+0.6**
HOPEN				IAML		19 36 09.0	
	comp=Z,8.5nm,0.3s						
HOPEN				*e*S	**Sn**	**19 37 04.9**	**-3.7**
HOPEN	**Hopen**	**5.25**	**113**	*e*P	**Pn**	**19 36 07.1**	**-0.5**
HOPEN				*e*S	**Sn**	**19 37 06.1**	**-2.5**
DAG	**Danmarks Havn**	**5.37**	**252**	*i* P	**Pn**	**19 36 05.7**	**-3.5**
DAG				*e*S	Sn	19 37 00.6	-11
DAG	**Danmarks Havn**	**5.37**	**252**	*i* P	**Pn**	**19 36 05.7**	**-3.5**
DAG				*i* S	Sn	19 37 00.1	-11
DAG				IAML		19 37 05.6	
	comp=Z,14nm,0.7s						
BJO1	**Bjornoya**	**5.99**	**138**	Pn	**Pn**	**19 36 19.8**	**+2.1**
BJO1				Sn	**Sn**	**19 37 23.6**	**-3.0**
BJO1	**Bjornoya**	**5.99**	**138**	*e*P	**Pn**	**19 36 19.5**	**+1.9**
BJO1				IAML		19 36 20.5	
	comp=Z,18nm,0.4s						
BJO1	**Bjornoya**	**5.99**	**138**	*e*P	**Pn**	**19 36 18.5**	**+0.9**
BJO1				*e*S	**Sn**	**19 37 24.2**	**-2.4**
BEAR	**Bear Island, N**	**5.99**	**138**	Pn	**Pn**	**19 36 19.9**	**+2.2**
	baz=341,slow=18						
BEAR				Sn	**Sn**	**19 37 23.9**	**-2.9**
	baz=341,slow=37						
DBG	**Daneborg**	**7.47**	**239**	Pn	**Pn**	**19 36 35.3**	**-2.7**
DBG				Sn	**Sn**	19 37 50.8	-12
DBG	**Daneborg**	**7.47**	**239**	*e*P	**Pn**	**19 36 35.3**	**-2.7**
DBG				*e*S	Sn	19 37 50.8	-12
DBG	**Daneborg**	**7.47**	**239**	*i* P	**Pn**	**19 36 35.4**	**-2.7**
DBG				*i* S	Sn	19 37 49.6	-14
DBG				IAML		19 37 53.7	
	comp=Z,5.1nm,0.3s						
OMEGA	**Omega**	**7.48**	**59**	*e*P	**Pn**	**19 36 35.2**	**-2.9**
OMEGA				*e*S	**Sn**	**19 38 01.4**	**-2.0**
	comp=Z,10nm,0.3s						
JNW	**Jan Mayen West**	**9.00**	**207**	*e*P	**Pn**	**19 36 58.3**	**-0.7**
JMIC	**Jan Mayen**	**9.05**	**207**	Pn	**Pn**	**19 36 58.9**	**-0.7**
	comp=Z,3.3nm,0.3s,baz=62,slow=5.4,SNR=1.7						
NEEM	**North Greenlan**	**10.85**	**288**	*i* P	Pn	19 37 18.1	-6.4
NEEM				*i* S	Sn	19 39 10.8	-16
NEEM				IAML		19 39 16.3	
	comp=Z,4.5nm,0.6s						
ARA0	**ARCESS Array S**	**11.36**	**139**	Pn	**Pn**	**19 37 31.8**	**+0.5**
	baz=349,slow=14						
ARA0	**ARCESS Array S**	**11.36**	**139**	Pn	**Pn**	**19 37 31.8**	**+0.5**
ARCES	**ARCESS Array B**	**11.36**	**139**	Pn	**Pn**	**19 37 33.1**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=6.1						
ARCES				Sn	**Sn**	**19 39 32.2**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=350,slow=14,SNR=1.6						
ARCES				LR	LR	19 41 39.8	
	comp=Z,42nm,20.1s,baz=46,slow=36						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**18.63**	**169**	P	**Pn**	**19 39 10.1**	**+3.2**
	baz=350,slow=8.1,SNR=3.4						
	comp=Z,1.2nm,0.9s						
SFJD	**Kangerlussuaq**	**18.97**	**260**	LR	LR	19 46 52.4	
	comp=Z,30nm,18.6s,baz=17,slow=38						
FINES	**FINESS Array B**	**19.26**	**147**	P	**Pn**	**19 39 16.7**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=354,slow=11,SNR=5.2						
	comp=Z,1.8nm,0.8s						
HFS	**Hagfors**	**19.64**	**166**	P	**Pn**	**19 39 20.5**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=354,slow=14,SNR=0.9						
	comp=Z,0.5nm,0.5s						
RES	**Resolute Bay**	**19.96**	**310**	P	**P**	**19 39 20.8**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=28,slow=14,SNR=4.1						
NRIK	**Noril'sk**	**22.14**	**69**	LR	LR	19 51 14.2	
	comp=Z,87nm,18.7s,baz=118,slow=44						
FRB	**Frobisher Bay**	**25.19**	**275**	LR	LR	19 50 13.5	
	comp=Z,37nm,18.7s,baz=86,slow=37						
OBN	**Obninsk**	**26.65**	**136**	LR	LR	19 51 57.5	
	comp=Z,75nm,20.4s,baz=266,slow=38						
KURBB	**Kurchatov Array**	**37.90**	**92**	P	**P**	**19 42 09.7**	**+3.5**
	comp=Z,1.2nm,0.9s,baz=349,slow=7.6,SNR=8.6						
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**42.28**	**90**	P	**P**	**19 42 45.0**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=334,slow=7.5,SNR=7.0						
	comp=Z,0.6nm,0.6s						
YBH	**Yreka Blue Hor**	**55.30**	**313**	LR	LR	20 09 24.1	
	comp=Z,25nm,18.3s,baz=358,slow=38						
CMAR	**Chiang Mai Arr**	**72.88**	**82**	P	**P**	**19 46 19.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=341,slow=6.5,SNR=4.4						
	comp=Z,0.4nm,0.7s						

*IDC **28** 19:32:04.2≈4.3, 16.°90S×174.°17W, h131km±60km, mb3.8/5, mbtmp4.2/6, MS3.0/3, Error ellipse: s-maj=44.8km s-min=34.1km az=28.0*
*NEIC **28** 19:32:04.5±2.2, 16.°95S±0.°10×174.°00W±0.°08, h135km±14km, mb4.3/11, Error ellipse: s-maj=17.0km s-min=6.5km az=217.0*

ISC 28 19:32:03.8±0.7, 17.°02S±0.°07×174.°05W±0.°08, h124km±n25, σ1°≤14°/25, mb4.2/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.79**	**36**	P	**Pn**	**19 33 02.3**	**+1.5**
	15nm,0.4s,baz=204,slow=14,SNR=1.9						
AFI				S	**Sn**	**19 33 44.9**	**0.0**
	175nm,0.6s,baz=119,slow=19,SNR=19						
AFI				LR	LR	19 34 18.7	
	comp=Z,28nm,20.7s,baz=360,slow=36						
AFI	**Afiamalu**	**3.79**	**36**		**Pn**	**19 33 00.4**	**-0.4**
AFI				Sn	**Sn**	**19 33 44.6**	**-0.4**
NIUE	**Niue**	**4.43**	**118**	Pn	**Pn**	**19 33 09.8**	**+0.7**
NIUE				Sn	**Sn**	**19 33 59.5**	**-0.4**
MSVF	**Nonsavu**	**7.57**	**263**	P	Pn	19 33 57.3	+5.7
	12nm,0.8s,baz=146,slow=17,SNR=4.2						
MSVF	**Nonsavu**	**7.57**	**263**		**Pn**	**19 33 53.6**	**+2.0**
URZ	**Urewera**	**22.53**	**198**	P	**P**	**19 36 53.5**	**+0.1**
	3.9nm,0.5s,baz=54,slow=8.7,SNR=2.1						
	3.9nm,0.5s						
TCW	**Tory Channel**	**26.12**	**200**	P	**P**	**19 37 27.3**	**+1.1**
QRZ	**Quartz Range**	**26.40**	**203**	P	**P**	**19 37 29.5**	**+0.7**
ARMA	**Armidale**	**33.98**	**241**	P	**P**	**19 38 35.3**	**-0.6**
STKA	**Stephens Creek**	**42.70**	**241**	P	**P**	**19 39 47.7**	**-1.0**
	1.4nm,0.4s,baz=70,slow=8.6,SNR=9.0						
	1.4nm,0.4s						
INKA	**Innaminka**	**42.92**	**247**	P	**P**	**19 39 50.8**	**+0.3**
BBOO	**Buckleboo**	**47.47**	**241**	P	**P**	**19 40 25.4**	**-1.0**
WR8	**Warramunga Arr**	**48.73**	**258**	P	**P**	**19 40 34.5**	**-1.7**
WR8				IAmb	IAmb	19 41 14.8	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**48.88**	**258**	P	**P**	**19 40 36.1**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=95,slow=7.0,SNR=40						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**48.88**	**258**	P	**P**	**19 40 35.7**	**-1.7**
AS31	**Alice Springs**	**49.03**	**253**	P	**P**	**19 40 37.3**	**-1.2**
AS31				IAmb	IAmb	19 40 38.5	
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**49.03**	**253**	P	**P**	**19 40 37.6**	**-0.9**
	comp=Z,7.4nm,0.5s,baz=88,slow=8.7,SNR=179						
	comp=Z,7.4nm,0.5s						
ASAR	**Alice Springs**	**49.03**	**253**	P	**P**	**19 40 36.8**	**-1.7**
MTN	**Manton Dam**	**52.99**	**267**	P	**P**	**19 41 07.8**	**-0.4**
MTN				IAmb	IAmb	19 41 27.5	
	comp=Z,6.8nm,1.1s						
KNRA	**Kununurra**	**54.72**	**263**	P	**P**	**19 41 20.4**	**-0.4**
KNRA				IAmb	IAmb	19 42 02.0	

*IDC **28** 20:15:16.5±1.6, 6.°24S×127.°97E, h338km±22km, mb2.4/1, mbtmp3.4/5, Error ellipse: s-maj=28.0km s-min=18.7km az=103.0*

ISC 28 20:15:16.2±0.9, 6.°27S±0.°07×128.°1E±0.°1, h353km±n6, σ≥25°/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.86**	**228**	P	**Pn**	**20 16 44.5**	**-1.1**
	43nm,0.4s,baz=64,slow=2.5,SNR=25						
BATI				S	**S**	**20 17 56.1**	**-1.9**
	26nm,0.9s,baz=309,slow=16,SNR=1.3						
SIJI	**Sorong**	**6.24**	**31**	P	**Pn**	**20 16 50.9**	**+0.9**
	1.9nm,0.2s,baz=180,slow=19,SNR=1.8						
SIJI				S	**S**	**20 18 03.9**	**-2.2**
	5.6nm,0.2s,baz=78,slow=23,SNR=11						
FITZ	**Fitzroy Crossi**	**11.99**	**191**	P	**Pn**	**20 17 58.9**	**+1.1**
	1.7nm,0.7s,baz=12,slow=14,SNR=1.6						
FITZ				S	**S**	**20 20 13.2**	**+2.2**
	3.0nm,0.9s,baz=223,slow=7.5,SNR=1.4						
WRA	**Warramunga Arr**	**14.89**	**156**	P	**P**	**20 18 30.4**	**+0.9**
	0.3nm,0.4s,baz=337,slow=11,SNR=20						
WRA				S	**S**	**20 21 06.7**	**-3.2**
	0.2nm,0.5s,baz=326,slow=22,SNR=1.0						
ASAR	**Alice Springs**	**18.18**	**163**	P	**P**	**20 19 06.7**	**+1.7**
	0.3nm,0.3s,baz=345,slow=12,SNR=7.5						
ASAR				S	**S**	**20 22 11.7**	**-3.0**
	0.2nm,0.6s,baz=354,slow=24,SNR=1.6						
MKAR	**Makanchi Array**	**66.58**	**328**	P	**P**	**20 25 30.6**	**+1.1**
	0.1nm,0.5s,baz=130,slow=6.4,SNR=1.4						
	0.1nm,0.5s						

*IDC **28** 20:16:24.1±0.6, 32.°73N×131.°27E, h98km±3km, mb3.4/10, mbtmp3.8/15, Error ellipse: s-maj=18.7km s-min=11.8km az=63.0*
*JMA **28** 20:16:24.9±0.1, 32.°8N±0.°4×131.°4E±0.°5, h96km±1km, MV3.8/39, NORTHERN MIYAZAKI PREF*
JMA Felt II J1 at NORTHERN MIYAZAKI PREF .
*NEIC **28** 20:16:24.6±1.2, 32.°76N±0.°05×131.°39E±0.°07, h101km±5km, mb4.2/17, Error ellipse: s-maj=8.0km s-min=7.8km az=113.0*

ISC 28 20:16:24.3±0.7, 32.°77N±0.°05×131.°44E±0.°04, h103km±5km, n69, σ1°≤29°/81, mb3.9/17, 6D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKIT	**Kitakata**	**0.15**	**174**	⇓ *i* P	**Pn**	**20 16 38.8**	**0.0**
JKIT				⇓S	**Sn**	**20 16 48.6**	**-0.8**
JIU3	**Izumi3**	**0.57**	**247**	⇓ *i* P	**Pn**	**20 16 40.6**	**-0.3**
JIU3				⇓S	**Sn**	**20 16 52.2**	**-1.2**
JNU	**Nakatsue**	**0.58**	**307**	P	**Pn**	**20 16 41.0**	**-0.1**
	309nm,0.3s,baz=360,slow=18,SNR=2284						
JNU				S	**Sn**	**20 16 53.2**	**-0.4**
	4μm,0.5s,baz=259,slow=10,SNR=101						
JNU	**Nakatsue**	**0.58**	**307**	Sn	**Sn**	**20 16 52.8**	**-0.8**
JTZ	**Takazaki**	**0.92**	**199**	⇓ *i* P	**Pn**	**20 16 44.1**	**0.0**
JTZ				⇓S	**Sn**	**20 16 59.0**	**+0.1**
UWA2	**Uwa jima 2**	**1.09**	**66**	*i* P	**Pn**	**20 16 45.7**	**-0.3**
UWA2				S	**Sn**	**20 17 01.9**	**-0.4**
JTO	**Tosashimizu**	**1.16**	**85**	*i* P	**Pn**	**20 16 46.1**	**-0.5**
JTO				S	**Sn**	**20 17 02.6**	**-0.9**
JNA	**Nagahama**	**1.18**	**48**	*i* P	**Pn**	**20 16 46.8**	**-0.1**
JNA				S	**Sn**	**20 17 03.4**	**-0.5**
JSU	**Suzuyama**	**1.51**	**214**	P	**Pn**	**20 16 50.4**	**-0.5**
JSU	**Suzuyama**	**1.51**	**214**	S	**Sn**	**20 17 09.4**	**-1.6**
JSU	**Suzuyama**	**1.51**	**214**		**Pn**	**20 16 50.4**	**-0.5**
JMN	**Monobe**	**2.26**	**64**	P	**Pn**	**20 17 01.0**	**+0.5**
JMN	**Monobe**	**2.26**	**64**		**Pn**	**20 17 00.9**	**+0.5**
JMN				Sn	**Sn**	**20 17 26.2**	**-1.8**
JTU	**Tsushima**	**2.44**	**316**	P	Pn	20 16 55.6	-7.1
INU	**Inuyama**	**5.30**	**59**	P	**Pn**	**20 17 43.0**	**+1.9**
INU	**Inuyama**	**5.30**	**59**		**Pn**	**20 17 42.9**	**+1.9**
KSRS	**Korea Array**	**5.49**	**329**	P	**Pn**	**20 17 43.6**	**0.0**
	1.5nm,0.6s,baz=145,slow=14,SNR=9.8						
KSRS				S	**Sn**	**20 18 44.2**	**-1.2**
	1.2nm,0.6s,baz=148,slow=24,SNR=3.6						
JGF	**Kuroka**	**5.66**	**58**	P	**Pn**	**20 17 47.7**	**+1.6**
JGF	**Kuroka**	**5.66**	**58**		**Pn**	**20 17 47.0**	**+0.9**
JSG	**Sagara**	**5.94**	**70**	Pn	**Pn**	**20 17 54.6**	**+4.9**
JOW	**Kunigami**	**6.52**	**206**	Pn	**Pn**	**20 17 56.9**	**-0.9**
MAJO	**Matsushiro**	**6.73**	**54**	P	**Pn**	**20 18 03.1**	**+2.6**
MAJO	**Matsushiro**	**6.73**	**54**		**Pn**	**20 18 00.9**	**+0.3**
MJB9	**Matsu-Tunnel**	**6.73**	**54**		**Pn**	**20 18 01.1**	**+0.6**
MJAR	**Matsushiro Arr**	**6.73**	**54**	P	**Pn**	**20 18 02.9**	**+2.3**
	9.2nm,0.4s,baz=243,slow=14,SNR=51						
MJAR				S	**Sn**	**20 19 09.4**	**-6.3**
	3.1nm,0.5s,baz=214,slow=16,SNR=5.3						
MJAR	**Matsushiro Arr**	**6.73**	**54**		**Pn**	**20 18 02.1**	**+1.5**
JMZ	**Minamidaito 2**	**6.93**	**182**	Pn	**Pn**	**20 18 01.4**	**-1.9**
JHJ	**Hachijo jima 2**	**7.03**	**85**	P	**Pn**	**20 18 05.8**	**+1.2**
	110nm,0.4s,baz=65,slow=17,SNR=14						
JHJ				S	**Sn**	**20 19 23.4**	**+0.4**
	59nm,0.8s,baz=66,slow=20,SNR=1.0						
JHJ2	**Mitsune**	**7.05**	**85**	Pn	**Pn**	**20 18 05.3**	**+0.3**
JYT	**Yasato**	**8.01**	**62**	Pn	**Pn**	**20 18 16.1**	**-1.8**
JTM	**Tenmabayashi**	**11.11**	**41**	Pn	**Pn**	**20 18 59.7**	**-0.3**
ASAJ	**Asahikawa**	**14.29**	**34**	P	**Pn**	**20 19 43.7**	**+1.9**
	2.7nm,0.7s,baz=234,slow=19,SNR=4.9						
JKA	**Kamikawa-asahi**	**14.29**	**34**	P	**Pn**	**20 19 43.3**	**+1.5**
HILR	**Hailar Array B**	**18.90**	**336**	P	**P**	**20 20 37.6**	**+0.9**
	0.7nm,0.5s,baz=128,slow=12,SNR=4.3						
SONM	**Songino Array**	**24.17**	**316**	P	**P**	**20 21 31.2**	**+0.1**
	0.8nm,0.6s,baz=130,slow=9.9,SNR=6.6						
	0.8nm,0.6s						
SONM	**Songino Array**	**24.17**	**316**	P	**P**	**20 21 30.5**	**-0.5**
PETK	**Petropavlovsk-**	**27.71**	**35**	P	**P**	**20 22 04.7**	**+2.0**

SJA 28 19:44:32.9±0.7, 23.°39S×66.°75W, h235km, ML3.5, MW3.4, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.91**	**156**	*e*P	Pn	19 45 06.3	-0.2
HJA	**Humahuaca**	**1.24**	**82**	*e*P	Pn	19 45 08.0	-0.4
HJA				*e*S	S	19 45 36.4	+0.3
SLA	**San Lorenzo**	**1.74**	**140**	*e*P	Pn	19 45 10.6	-1.4
PB06	**IPOC Station P**	**2.69**	**284**	*e*P	Pn	19 45 22.0	+0.7
PB06				*e*S	S	19 45 57.7	-1.5
PB06				IAML		19 46 02.4	
	comp=Z,108nm,0.1s						
FSA	**Cafayete**	**2.79**	**166**	*e*P	Pn	19 45 23.9	+1.5
PB09	**IPOC Station P**	**2.80**	**304**	*e*P	Pn	19 45 23.4	+0.9
PB09				*e*S	S	19 46 00.4	-1.0
PB03	**IPOC Station P**	**3.08**	**295**	*e*P	Pn	19 45 25.9	+0.3
PB03				*e*S	S	19 46 04.3	-2.6
PB03				IAML		19 46 05.9	
	comp=Z,146nm,0.2s						
PB05	**IPOC Station P**	**3.23**	**279**	*e*P	Pn	19 45 27.7	+0.6
PB05				*e*S	S	19 46 08.2	-1.6
PB07	**IPOC Station P**	**3.34**	**299**	*e*P	Pn	19 45 28.8	+0.2
PB07				IAML		19 46 12.6	
	comp=Z,65nm,0.2s						
PB14	**IPOC Station P**	**3.56**	**249**	*e*P	Pn	19 45 32.1	+1.0
PB14				*e*S	S	19 46 15.1	-2.0
PB14				IAML		19 46 18.8	
	comp=Z,54nm,0.2s						
PB02	**IPOC Station P**	**3.57**	**305**	*e*P	Pn	19 45 31.2	+0.1
PB02				IAML		19 46 17.6	
	comp=Z,130nm,0.1s						
AC02	**Maricunga**	**4.05**	**212**	*e*P	Pn	19 45 38.5	+1.4
AC02				*e*S	S	19 46 33.1	+5.2
AC01	**Pan de Azucar**	**4.45**	**231**	*e*P	Pn	19 45 41.6	+0.2
AC01				*e*S	S	19 46 33.8	-1.9
AC01				IAML		19 46 37.2	
	comp=Z,16nm,1.4s						
PB11	**IPOC Station P**	**4.51**	**323**	*e*P	Pn	19 45 42.5	0.0
PB11				*e*S	S	19 46 34.8	-2.8
PB11				IAML		19 46 40.1	
	comp=Z,24nm,0.8s						
TINO	**Tinogasta**	**4.71**	**189**	*e*P	Pn	19 45 47.1	+2.4
PSGCX	**Pisagua**	**4.91**	**320**	*e*P	Pn	19 45 47.2	-0.1
PSGCX				*e*S	S	19 46 42.0	-4.4
PSGCX				IAML		19 46 44.6	
	comp=Z,18nm,0.3s						
GO03	**Copiapo**	**5.24**	**216**	*e*P	Pn	19 45 51.6	+0.4
GO03				*e*P		19 45 51.9	
GO03				*e*S	S	19 46 51.6	-1.8

TIXI	Tiksi	38.96	359	P	P	20 23 38.6	-1.3
MKAR	Makanchi Array	39.64	305	P	P	20 23 46.2	+0.2
	0.2nm,0.6s,baz=89,slow=7.9,SNR=2.5						
MKAR				PcP	PcP	20 25 50.5	-0.5
	0.3nm,0.4s,baz=74,slow=5.1,SNR=7.1						
MKAR				ScP	ScP	20 29 29.0	-1.4
	0.3nm,0.6s,baz=69,slow=5.2,SNR=4.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	39.64	305	P	P	20 23 45.6	-0.3
MAKZ	Makanchi	39.85	305	P	P	20 23 47.1	-0.7
MAKZ				IAmb	IAmb	20 24 27.1	
	comp=Z,2.6nm,1.4s						
PDGK	Podgornoye	41.64	300	P	P	20 24 01.6	-1.0
KURK	Kurchatov	42.31	311	P	P	20 24 07.3	-0.4
KURK	Kurchatov	42.31	311		PcP	20 25 58.7	-0.8
KURBB	Kurchatov Arra	42.36	311	P	P	20 24 07.7	-0.4
	comp=Z,0.2nm,0.3s,baz=98,slow=9.0,SNR=5.1						
KURBB				PcP	PcP	20 25 58.7	-0.9
	comp=Z,0.2nm,0.3s,baz=93,slow=4.3,SNR=4.0						
	comp=Z,0.2nm,0.3s						
BVAR	Borovoye Array	47.49	314	P	P	20 24 48.3	-0.5
	comp=Z,1.0nm,0.5s,baz=101,slow=8.7,SNR=11						
BVAR				PcP	PcP	20 26 17.2	-0.2
	comp=Z,0.6nm,0.4s,baz=121,slow=2.5,SNR=5.5						
	comp=Z,1.0nm,0.5s						
KKAR	Karatay Array	48.19	301		P	20 24 54.0	-0.3
FITZ	Fitzroy Crossi	50.88	187	P	P	20 25 14.8	-0.2
	comp=Z,1.8nm,0.5s,baz=357,slow=8.3,SNR=8.1						
	comp=Z,1.8nm,0.5s						
FITZ	Fitzroy Crossi	50.88	187	IAmb	IAmb	20 25 54.8	
	comp=Z,1.6nm,1.4s						
WRA	Warramunga Arr	52.49	177	P	P	20 25 26.3	-0.5
	comp=Z,0.3nm,0.5s,baz=357,slow=7.8,SNR=2.7						
	comp=Z,0.3nm,0.5s						
WR8	Warramunga Arr	52.51	176	P	P	20 25 26.6	-0.4
N17K	Nushagak Hills	53.04	36	P	P	20 25 32.7	+2.2
N17K				IAmb	IAmb	20 26 04.5	
	comp=Z,8.1nm,1.4s						
E21K	Killik River	54.32	26	P	P	20 25 41.3	+1.6
AB31	Akbulak array	54.39	310	P	P	20 25 40.1	-0.4
AB31				IAmb	IAmb	20 25 59.7	
	comp=Z,2.4nm,1.4s						
ABKAR	Akbulak array	54.39	310	P	P	20 25 40.2	-0.3
KDAK	Kodiak Island	55.65	39	P	P	20 25 50.7	+1.3
AS31	Alice Springs	56.17	177	P	P	20 25 53.7	+0.2
AS31				IAmb	IAmb	20 26 08.5	
	comp=Z,1.2nm,1.2s						
ASAR	Alice Springs	56.17	177	P	P	20 25 53.8	+0.2
	comp=Z,0.5nm,0.6s,baz=11,slow=14,SNR=11						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	56.17	177	P	P	20 25 53.3	-0.3
E24K	Your Creek	56.37	26	P	P	20 25 56.5	+2.0
E24K				IAmb	IAmb	20 26 19.3	
	comp=Z,3.8nm,1.4s						
D25K	Kavik River	57.03	25	P	P	20 26 00.9	+1.8
D25K				IAmb	IAmb	20 26 17.4	
	comp=Z,7.5nm,1.4s						
ILAR	Eielson Array	57.38	30	P	P	20 26 02.6	+1.0
	comp=Z,0.6nm,0.7s,baz=272,slow=7.3,SNR=8.2						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	57.38	30	P	P	20 26 01.6	-0.1
SPB2	Spitsbergen Ar	63.03	348	P	P	20 26 42.1	+2.1
MORW	Morawa	63.21	195	P	P	20 26 41.9	+0.2
FORT	Forrest	63.29	183	P	P	20 26 42.0	-0.1
FORT				IAmb	IAmb	20 26 45.0	
	comp=Z,4.8nm,0.9s						
STKA	Stephens Creek	65.01	170	P	P	20 26 53.7	+0.3
	comp=Z,1.3nm,0.7s,baz=350,slow=6.1,SNR=2.2						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	68.58	330	P	P	20 27 15.6	-0.1
	comp=Z,1.8nm,0.9s,baz=79,slow=4.1,SNR=6.6						
	comp=Z,1.8nm,0.9s						
FINES	FINESS Array B	68.58	330	P	P	20 27 15.3	-0.4

*IDC **28** 20:33:20.3±0.6,35°.96N×140°.99E, h0km, mb4.0/20, mbtmp4.0/27, ML3.6/6, MS3.3/7, Error ellipse: s-maj=14.7km s-min=8.4km az=112.0*
*JMA **28** 20:33:23.4±0.1,35°.9N±0°.3×140°.8E±0°.6, h20km±1km, MD4.5/35, MV4.7/35, NEAR CHOSHI CITY*
JMA Felt III J1 at NEAR CHOSHI CITY .
*NIED **28** 20:33:23.4, 35°.93N×140°.82E, h20km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-0.80; Mθθ-0.63; Mφφ1.42; Mrθ0.43; Mθφ0.40; Mφr0.31; Fault plane solution: M0 1.36000×10^15 NP1: φs=336.00000°, δ49.00000°, λ-145.00000°. NP2: φs=221.00000°, δ65.00000°, λ-47.00000°.*
*NEIC **28** 20:33:26.1±1.9, 35°.88N±0°.04×140°.71E±0°.02, h34km±5km, mb4.6/60 Error ellipse: s-maj=6.7km s-min=1.0km az=200.0*

ISC 28 20:33:23.7±0.4, 35°.90N±0°.03×140°.78E±0°.05, h20km±2km, n175, σ1§15/130, mb4.5/56, MS3.4/10, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCAJ	Choshiashikaji	0.20	160	A	A	A	20 33 28.6	
	comp=N,125nm,0.4s,comp=E,123nm,0.6s							
JIHU	Itakohorinouch	0.21	287	*i* P	Pb		20 33 29.6	+0.1
JIHU				A	A		20 33 29.6	
	comp=N,255nm,0.6s,comp=E,339nm,0.9s							
JIHU				S	Sb		20 33 33.7	+0.3
JSMT	Sammumatsuo	0.37	226	*i* P	Pb		20 33 32.6	+1.1
JSMT				A	A		20 33 32.6	
	comp=N,79nm,0.8s,comp=E,137nm,0.4s							
JSMT				*e*S	Sn		20 33 39.1	-1.4
JHYU	Hitachinakayam	0.46	341	‖ *i* P	Pb		20 33 32.8	-0.3
JHYU				A	A		20 33 32.8	
	comp=N,80nm,0.8s,comp=E,67nm,0.6s							
JHYU				‖S	Sb		20 33 39.0	-0.5
JYT	Yasato	0.57	305	P	Pb		20 33 34.6	-0.5
JYT				A	A		20 33 34.6	
	comp=N,73nm,0.2s,comp=E,65nm,0.3s							
JYT				S	Sb		20 33 42.8	0.0
JCCN	Chibachonan	0.68	220	A	A	A	20 33 37.1	
	comp=N,60nm,0.6s,comp=E,76nm,0.5s							
I30JP	ISUMI INFRASON	0.70	212	Pg		Pn	20 33 38.4	-0.1
	baz=42,slow=15							
I30JP				Lg		Lg	20 33 49.9	
	baz=42,slow=15							
JHO	Hitachi	0.72	347	P		Pb	20 33 36.7	-1.0
JHO				A		A	20 33 36.7	
	comp=N,32nm,0.3s,comp=E,43nm,1.0s							
JHO				S		Sb	20 33 46.5	-0.7
TOK	Tokyo	0.86	256	A		A	20 33 40.1	
	comp=N,59nm,0.3s,comp=E,56nm,0.6s							
JKUC	kamogawauchiur	0.88	213	A		A	20 33 40.5	
	comp=N,17nm,0.6s,comp=E,22nm,1.0s							
JYO	Yokosk	1.13	233	A		A	20 33 44.6	
	comp=N,19nm,0.6s,comp=E,20nm,0.6s							
TATJ	Tateyama 2	1.13	220	A		A	20 33 44.6	
	comp=N,19nm,2.3s,comp=E,21nm,1.5s							
JAG	Ashikaga	1.19	296	A		A	20 33 45.2	
	comp=N,5.0nm,1.1s,comp=E,6.0nm,0.5s							
JFFD	Fukushimafurud	1.20	352	A		A	20 33 44.6	
	comp=N,11nm,0.3s,comp=E,13nm,0.5s							
JSB	Shiboa	1.27	327	A		A	20 33 46.0	
	comp=N,15nm,1.8s,comp=E,20nm,0.7s							
JSGW	Sagamiharawaka	1.31	257	A		A	20 33 47.4	
	comp=N,10.0nm,1.2s,comp=E,6.0nm,1.0s							
JKT	Katashina	1.50	305	A		A	20 33 49.9	
	comp=N,16nm,0.4s,comp=E,14nm,0.3s							
JIM2	Oshima 3	1.62	223	A		A	20 33 52.0	
	comp=N,8.0nm,1.6s,comp=E,9.0nm,1.2s							
JOTO	OTAMA OYAMA	1.69	348	A		A	20 33 52.2	
	comp=N,23nm,1.3s,comp=E,24nm,1.7s							
JHTM	Izuhatsuma	1.72	237	A		A	20 33 53.6	
	comp=N,11nm,1.0s,comp=E,13nm,0.7s							
JMST	Minamisoumatoc	1.82	3	A		A	20 33 53.9	
	comp=N,4.0nm,1.8s,comp=E,5.0nm,1.8s							
JGK	Kuni	1.85	291	A		A	20 33 55.2	
	comp=N,4.0nm,0.6s,comp=E,4.0nm,1.0s							
JYAR	Yonezawaarcadi	2.07	346	A		A	20 33 57.7	
	comp=N,8.0nm,1.0s,comp=E,9.0nm,1.3s							
MJAR	Matsushiro Arr	2.17	288	Pn		Pn	20 33 57.8	-0.9
MJAR				Sn		Sb	20 34 29.8	+1.0
	comp=E,12nm,0.3s,baz=88,slow=24,SNR=2.9							
	comp=E,76nm,0.3s							
MJAR	Matsushiro Arr	2.17	288			Pn	20 33 58.6	-0.1
MAJO	Matsushiro	2.17	288			Pn	20 33 58.8	+0.1
MJB9	Matsu-Tunnel	2.18	288			Pn	20 33 59.6	+0.8
JIZZ	Izumozaki	2.32	315	A		A	20 34 01.8	
	comp=N,8.0nm,1.9s,comp=E,9.0nm,1.7s							
JJN	Nakama	2.42	300	A		A	20 34 03.4	
	comp=N,4.0nm,1.0s,comp=E,4.0nm,1.3s							
JSG	Sagara	2.45	241			Pn	20 34 04.5	+2.0
JOU	Okura	2.46	358	A		A	20 34 03.3	
	comp=N,7.0nm,0.7s,comp=E,7.0nm,0.7s							
JOFO	Osakifurukawao	2.69	2	A		A	20 34 06.6	
	comp=N,12nm,1.6s,comp=E,14nm,1.6s							
JGF	Kuroka	2.80	265			Pn	20 34 08.9	+1.5
JYA	Atsumi	2.81	343	A		A	20 34 08.5	
	comp=N,4.0nm,2.1s,comp=E,6.0nm,0.7s							
JHJ2	Mitsune	2.90	196	Pn		Pn	20 34 08.6	0.0
JHJ	Hachijo jima 2	2.90	197	Pn		Pn	20 34 08.4	-0.3
	comp=E,54nm,0.3s,baz=310,slow=21,SNR=16							
JHJ				Sn		Sn	20 34 40.9	-2.0
	comp=E,71nm,0.3s,baz=88,slow=20,SNR=6.3							
	comp=E,104nm,0.3s							
INU	Inuyama	3.11	261			Pn	20 34 12.6	+1.0
JTM	Tenmabayashi	4.88	3			Pn	20 34 37.4	+1.5
JMN	Monobe	6.07	251	Pn		Pn	20 34 46.2	-6.2
ERM	Erimo	6.38	16			Pn	20 34 54.0	-2.4
ASAJ	Asahikawa	8.32	9	Pn		Pn	20 35 22.1	-1.0
	comp=E,2.2nm,0.3s,baz=195,slow=14,SNR=18							
ASAJ				Sn		Sn	20 36 56.6	+0.2
	comp=E,0.4nm,0.3s,baz=189,slow=19,SNR=1.4							
	comp=E,5.5nm,0.3s							
JKA	Kamikawa-asahi	8.32	9			Pn	20 35 21.4	-1.7
JKA	Kamikawa-asahi	8.32	9			Sn	20 36 56.6	+0.2
JNU	Nakatsue	8.63	254	Pn		Pn	20 35 27.4	0.0
	comp=E,0.3nm,0.3s,baz=73,slow=11,SNR=2.6							
	comp=E,1.1nm,0.4s							
JCJ	Chichijima	8.86	172	Pn		Pn	20 35 28.3	-2.3
	comp=E,29nm,0.3s,baz=288,slow=20,SNR=2.1							
JCJ	Chichijima	8.86	172	Pn		Pn	20 35 30.1	-0.6
JSU	Suzuyama	9.65	246	Pn		Pn	20 35 39.5	-1.9
KSRS	Korea Array	10.44	282	Pn		Pn	20 35 53.2	+1.1
	comp=E,0.2nm,0.3s,baz=94,slow=14,SNR=8.0							
	comp=E,0.5nm,0.5s							
USRK	Ussuriysk Ar.	10.67	324	Pn		Pn	20 35 54.6	-0.7
	comp=E,0.4nm,0.3s,baz=120,slow=12,SNR=5.1							
	comp=E,1.0nm,0.6s							
NJ2	Nanjing	18.58	264	*e*P		Pn	20 37 39.3	-0.4
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
HILR	Hailar Array B	20.52	318	P		P	20 37 58.1	-2.4
	comp=Z,0.8nm,0.4s,baz=117,slow=12,SNR=5.5							
HNS	HongShan	20.95	282	‖P		Pn	20 38 13.8	+5.9
HHC	Hu-ho-hao-te	23.37	291	*e*P		P	20 38 30.0	-1.0
HHC				pmax		pmax		
	comp=Z,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,63nm,5.0s							
MA2	Magadan	24.56	12	P		P	20 38 43.0	+1.0
MA2				IAmb		IAmb	20 38 46.4	
	comp=Z,41nm,1.5s							
ENH	Enshi	26.74	267			P	20 39 00.8	-1.2
ENH				IAmb		IAmb	20 39 06.7	
	comp=Z,11nm,0.9s							
HKPS	Hong Kong Po S	26.84	247	P		P	20 39 02.1	-0.7
YAK	Yakutsk	27.07	348	LR		LR	20 49 52.4	
	comp=Z,50nm,20.1s,baz=166,slow=37							
YAK	Yakutsk	27.07	348			P	20 39 04.0	-0.5
YAK				IAmb		IAmb	20 39 10.1	
	comp=Z,14nm,0.9s							
ULN	Ulaanbaatar	27.58	306			P	20 39 07.6	-2.0
SONM	Songino Array	28.01	306	P		P	20 39 13.4	+0.1
	comp=Z,1.3nm,0.6s,baz=118,slow=8.6,SNR=9.6							
SONM				LR		LR	20 49 36.3	
	comp=Z,53nm,20.4s,baz=136,slow=35							
	comp=Z,1.3nm,0.6s							
SONM	Songino Array	28.01	306	P		P	20 39 12.6	-0.7
H11N2	WAKE ISLAND Hy	28.04	118	T		T	21 08 14.4	
	baz=311,slow=75,SNR=398							
H11N1	WAKE ISLAND Hy	28.05	118	T		T	21 08 20.4	
	baz=311,slow=75,SNR=395							
H11N3	WAKE ISLAND Hy	28.06	118	T		T	21 08 21.2	
	baz=311,slow=75,SNR=582							
H11S1	WAKE ISLAND Hy	28.71	120	T		T	21 09 05.4	
	baz=313,slow=75,SNR=643							
H11S3	WAKE ISLAND Hy	28.71	120	T		T	21 09 09.6	
	baz=313,slow=75,SNR=397							
H11S2	WAKE ISLAND Hy	28.72	120	T		T	21 09 06.6	
	baz=313,slow=75,SNR=478							
LZH	Lanzhou	29.77	281	*e*P		P	20 39 23.0	-6.1
LZH				sP		pP	20 39 35.0	-0.3
LZH				pmax		pmax		
	comp=Z,19nm,1.1s							
LZH				LR		LR		
	comp=N,180nm,14.3s							
LZH				LR		LR		
	comp=E,140nm,13.6s							
LZH				LR		LR		
	comp=Z,130nm,14.6s							
TLY	Talaya	30.70	313	LR		LR	20 52 11.0	
	comp=Z,69nm,18.4s,baz=128,slow=37							
GTA2	Gaotai	32.45	289	*e*P		P	20 39 52.5	-0.2
GTA2				sP		sP	20 40 10.5	+9.0
GTA2				pmax		pmax		
	comp=Z,1.0nm,0.9s							
GTA2				LR		LR		
	comp=N,110nm,12.1s							
GTA2				LR		LR		
	comp=E,53nm,13.0s							
GTA2				LR		LR		
	comp=Z,120nm,16.2s							
PZH	PanZhiHua	34.49	265	P		P	20 40 10.8	+0.3
TIXI	Tiksi	36.35	354	P		P	20 40 26.9	+1.0
TIXI				IAmb		IAmb	20 40 32.4	
	comp=Z,6.9nm,0.9s							
LUWI	Luwuk	40.41	208	P		P	20 41 01.0	+0.4
WMQ	Urumqi	40.90	298	*e*P		P	20 41 05.0	+0.5
WMQ				pmax		pmax		
	comp=Z,9.0nm,0.9s							
WMQ				LR		LR		
	comp=Z,38nm,20.1s							
ZAA0	Zalesovo Array	42.30	313			P	20 41 15.1	-0.7
ZAA0				IAmb		IAmb	20 41 22.6	
	comp=Z,6.6nm,0.7s							
ZALV	Zalesovo Beam	42.30	313	P		P	20 41 16.0	+0.3
	comp=Z,2.4nm,0.6s,baz=102,slow=6.5,SNR=11							
	comp=Z,2.4nm,0.6s							
ZALV	Zalesovo Beam	42.30	313			P	20 41 15.1	-0.7
K13K	Kusilvak Mount	42.52	35	P		P	20 41 18.7	+1.3
K13K				IAmb		IAmb	20 41 36.3	
	comp=Z,24nm,1.4s							
M13K	Dall Lake	42.87	37	P		P	20 41 21.4	+1.2
K15K	Wolf Creek Mou	44.03	35	P		P	20 41 31.7	+2.1
K15K				IAmb		IAmb	20 42 06.1	
	comp=Z,9.7nm,1.1s							
NRIK	Noril'sk	44.08	336	LR		LR	21 01 01.2	
	comp=Z,49nm,18.1s,baz=102,slow=38							
MKAR	Makanchi Array	44.29	303	P		P	20 41 32.1	+0.1
	comp=Z,2.7nm,0.6s,baz=89,slow=9.4,SNR=24							
	comp=Z,2.7nm,0.6s							
N15K	Kwethluk River	44.45	38	P		P	20 41 34.1	+1.1
N15K				IAmb		IAmb	20 41 36.0	
	comp=Z,8.8nm,1.1s							
CNBA	Chernabura Isl	44.47	45	P		P	20 41 34.7	+1.6
CNBA				IAmb		IAmb	20 42 16.1	
	comp=Z,9.3nm,1.2s							
O15K	Ungalikthiuk R	44.49	39	P		P	20 41 34.8	+1.5
O15K				IAmb		IAmb	20 41 45.7	
	comp=Z,11nm,1.2s							
MAKZ	Makanchi	44.50	303			P	20 41 33.7	+0.1
SAUI	Saumlaki	44.55	193	P		P	20 41 34.4	+0.2
J16K	Anvik River	44.61	33	P		P	20 41 35.6	+1.4
K17K	Iditarod	45.57	34	P		P	20 41 43.4	+1.5
K17K				IAmb		IAmb	20 41 52.2	
	comp=Z,15nm,1.4s							
M17K	Holitna River	45.85	36	P		P	20 41 45.8	+1.7
M17K				IAmb		IAmb	20 42 03.7	
	comp=Z,15nm,1.4s							
C19K	Lookout Ridge	46.20	25	P		P	20 41 48.9	+2.1
KURK	Kurchatov	46.23	309			P	20 41 47.2	0.0
KURBB	Kurchatov Arra	46.30	309	P		P	20 41 47.8	+0.1
	comp=Z,3.6nm,0.4s,baz=84,slow=8.1,SNR=33							
	comp=Z,3.6nm,0.4s							
E19K	Redstone River	46.71	28	P		P	20 41 51.7	+0.9
E19K				IAmb		IAmb	20 41 58.9	
	comp=Z,5.9nm,0.8s							
H19K	Roundabout Mou	46.73	31	P		P	20 41 52.6	+1.7
PDGK	Podgornoye	46.86	299			P	20 41 52.5	+0.1
WUS	Wushi	47.55	296	P		P	20 41 58.9	+0.9
WUS				IAmb		IAmb	20 42 09.6	
	comp=Z,7.8nm,0.8s							
TARG	Taragay, Kyrgy	48.45	297			P	20 42 04.8	-0.3
TARG				IAmb		IAmb	20 42 15.8	
	comp=Z,6.9nm,0.9s							
HNR	Honiara	48.58	154	P		P	20 42 06.5	+0.7
KDJ	Kajisay	48.79	298	P		P	20 42 06.8	-0.8
KDJ				IAmb		IAmb	20 42 26.5	
	comp=Z,13nm,1.3s							
BOOM	Boomskoye usch	49.59	298	P		P	20 42 11.5	-2.1
COEN	Coen	49.64	177	P		P	20 42 13.6	-0.3
NRN	Naryn	49.83	297	P		P	20 42 14.4	-1.2
NRN				IAmb		IAmb	20 42 28.5	
	comp=Z,2.8nm,0.6s							
FRU1	Bishkek	50.44	299	P		P	20 42 18.0	-1.9
FRU1				IAmb		IAmb	20 42 23.7	
	comp=Z,4.8nm,0.6s							
SCM	Sheep Creek Mo	50.68	36	P		P	20 42 21.9	+0.5
SCM				IAmb		IAmb	20 42 36.2	
	comp=Z,7.0nm,1.2s							
IL31		50.72	32	P		P	20 42 21.6	+0.1
ILAR	Eielson Array	50.72	32	P		P	20 42 21.5	-0.1
	comp=Z,0.7nm,0.6s,baz=259,slow=5.8,SNR=8.3							
ILAR				LR		LR	21 05 24.5	
	comp=Z,14nm,18.6s,baz=238,slow=38							
	comp=Z,0.7nm,0.6s							
ILAR	Eielson Array	50.72	32	P		P	20 42 22.0	+0.4
KSH2	Kashi	50.82	294	P		P	20 42 26.0	+3.1
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.5s							
RPSI	Rantau Prapat	50.85	239	P		P	20 42 21.8	-1.5
RPSI				IAmb		IAmb	20 42 54.2	
	comp=Z,14nm,1.2s							
D25K	Kavik River	50.89	26	P		P	20 42 22.6	-0.3
BVAR	Borovoye Array	50.96	313	P		P	20 42 24.4	+0.8
	comp=Z,1.7nm,0.5s,baz=79,slow=7.7,SNR=10							
	comp=Z,1.7nm,0.5s							
F26K	Sheenjek River	51.73	28	P		P	20 42 30.4	+1.3
ARSB	Arslanbob	52.04	298	P		P	20 42 30.9	-1.2
ARSB				IAmb		IAmb	20 42 40.5	
	comp=Z,4.8nm,0.8s							
KNRA	Kununurra	52.55	195	P		P	20 42 35.3	-0.4
KNRA				IAmb		IAmb	20 43 04.0	
	comp=Z,10nm,1.3s							
VRDI	Verde Repeater	52.59	36	P		P	20 42 36.4	+0.5
E27K	Coleen River	52.66	27	P		P	20 42 37.1	+1.0
BCAR	Beaver Creek A	53.12	34	P		P	20 42 40.6	+1.0
KKAR	Karatay Array	53.25	301			P	20 42 39.0	-1.8
I30M	Mount Dempster	55.10	31	P		P	20 42 55.5	+1.4
I30M				IAmb		IAmb	20 43 02.4	
	comp=Z,5.2nm,1.0s							
FITZ	Fitzroy Crossi	55.59	198	P		P	20 42 58.2	+0.3
	comp=Z,3.6nm,0.8s,baz=43,slow=6.1,SNR=6.0							
	comp=Z,3.6nm,0.8s							
FITZ	Fitzroy Crossi	55.59	198	P		P	20 42 57.3	-0.5
CHGR	Chuyangaron	55.69	296	P		P	20 42 57.5	-1.2
WRAB	Tennant Creek	55.87	187	P		P	20 42 59.4	-0.5
WRAB				IAmb		IAmb	20 43 21.2	
	comp=Z,7.4nm,1.1s							
WR8	Warramunga Arr	55.87	187	P		P	20 43 00.1	+0.2
WR8				IAmb		IAmb	20 43 43.3	
	comp=Z,7.5nm,1.0s							
WRA	Warramunga Arr	55.88	187	P		P	20 42 59.6	-0.4
	comp=Z,1.1nm,0.4s,baz=2.0,slow=7.6,SNR=29							
	comp=Z,1.1nm,0.4s							
WRA	Warramunga Arr	55.88	187	P		P	20 42 58.6	-1.4
ARTI	Arti	56.98	319			P	20 43 06.5	-1.0
R32K	Eaglecrest	57.64	39			P	20 43 13.0	+0.9
AB31	Akbulak array	58.28	310			P	20 43 16.0	-0.7
AB31				IAmb		IAmb	20 43 23.4	
	comp=Z,2.9nm,0.7s							
ABKAR	Akbulak array	58.28	310			P	20 43 16.2	-0.6
U33K	Whale Pass	59.03	41	P		P	20 43 20.8	-1.0
AS31	Alice Springs	59.60	187	P		P	20 43 26.6	+0.5
ASAR	Alice Springs	59.60	187	P		P	20 43 25.9	-0.2
	comp=Z,0.8nm,0.6s,baz=4.0,slow=7.1,SNR=11							
	comp=Z,0.8nm,0.6s							
ASAR	Alice Springs	59.60	187	P		P	20 43 26.4	+0.3
ARCES	ARCESS Array B	64.87	339	P		P	20 44 01.2	+0.3
	comp=Z,1.1nm,0.7s,baz=51,slow=8.4,SNR=9.0							
	comp=Z,1.1nm,0.7s							
ARCES	ARCESS Array B	64.87	339	P		P	20 44 01.3	+0.4
ARCES				IAmb		IAmb	20 44 07.3	
	comp=Z,6.3nm,1.2s							
STKA	Stephens Creek	67.43	179	P		P	20 44 16.7	-1.0
	comp=Z,1.7nm,1.0s,baz=9.2,slow=19,SNR=3.1							
	comp=Z,1.7nm,1.0s							
FIA1	FINESS Array S	69.57	332	P		P	20 44 31.0	+0.2
FINES	FINESS Array B	69.57	332	P		P	20 44 31.0	+0.2
	comp=Z,1.0nm,0.4s,baz=52,slow=6.6,SNR=17							
FINES				PcP		PcP	20 44 58.5	+4.7
	comp=Z,0.8nm,0.5s,baz=104,slow=8.0,SNR=3.5							
	comp=Z,1.0nm,0.4s							
FINES	FINESS Array B	69.57	332	P		P	20 44 30.7	-0.1
KBZ	Khabaz	71.25	311	P		P	20 44 42.3	+1.0
	comp=Z,2.4nm,0.8s,baz=359,slow=8.0,SNR=4.0							
	comp=Z,2.4nm,0.8s							
GNI	Garni	71.97	307	P		P	20 44 50.7	+4.7
	comp=Z,6.3nm,0.8s							
NC405	NORSAR Array S	74.81	337	P		P	20 45 02.7	+0.5
NC405				IAmb		IAmb	20 45 13.8	
	comp=Z,11nm,1.1s							
AK03	Malin Array Si	74.86	322	P		P	20 45 08.7	+6.1

*DJA **28** 20:42:23.1±0.3,10˚S±3˚×10˚8E±˚,h10km,M5.3/48, mb5.2/18,mB5.8/6,MLv5.2/48,Mw(mB)5.4/6*

ISC 28 20:42:20.5±0.4,**10˚65S**±0˙05×**108˚08E**±0˙05,**h13**km,**n196,** σ1**170**/187,**mb4.5**/52,**MS3.6**/12,**1C-2D,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time h m s	Res ISC
				Op	ISC		
BBJI	**Bungbulang**	**3.19**	**352**		**Pn**	**20 43 09.8**	**-0.7**
BBJI				Sn	**Sn**	**20 43 43.5**	**-5.0**
BBJI	**Bungbulang**	**3.19**	**352**	P	**Pn**	**20 43 09.8**	**-0.7**
BBJI				S	**Sn**	**20 43 43.8**	**-4.7**
BBJI	**Bungbulang**	**3.19**	**352**	P	**Pn**	**20 43 10.3**	**-0.2**
KPJI	**Karang Pucung**	**3.40**	**14**	P	**Pn**	**20 43 14.7**	**+1.4**
YOGI	**Yogyakarta**	**3.56**	**38**	P	**Pn**	**20 43 16.4**	**+0.9**
UGM	**Wanagama**	**3.63**	**42**		**Pn**	**20 43 16.5**	**0.0**
UGM				Sn	**Sn**	**20 43 55.0**	**-4.3**
UGM	**Wanagama**	**3.63**	**42**	P	**Pn**	**20 43 17.5**	**+1.0**
UGM				S	**Sn**	**20 43 55.8**	**-3.5**
UGM	**Wanagama**	**3.63**	**42**	P	**Pn**	**20 43 17.4**	**+0.8**
LEM	**Lembang**	**3.82**	**353**	Pn	**Pn**	**20 43 20.9**	**+1.6**
	49nm,0.3s,baz=140,slow=9.0,SNR=53						
LEM				Sn	**Sn**	**20 44 04.6**	**+0.4**
	49nm,0.3s,baz=72,slow=20,SNR=13						
LEM				LR	LR	20 45 02.5	
	comp=Z,466nm,20.9s,baz=214,slow=44 524nm,0.8s						
LEM	**Lembang**	**3.82**	**353**	P	**Pn**	**20 43 20.1**	**+0.9**
SKJI	**Sukabumi**	**3.92**	**337**	P	**Pn**	**20 43 21.4**	**+1.0**
SKJI	**Sukabumi**	**3.92**	**337**	P	**Pn**	**20 43 20.7**	**+0.3**
WOJI	**Wonogiri, Jawa**	**3.96**	**45**	P	**Pn**	**20 43 22.6**	**+1.6**
WOJI	**Wonogiri, Jawa**	**3.96**	**45**	P	**Pn**	**20 43 21.3**	**+0.4**
SMRI	**Semarang**	**4.27**	**33**		**Pn**	**20 43 25.1**	**-0.1**
SMRI					**Sn**	**20 44 12.9**	**-2.0**
SMRI	**Semarang**	**4.27**	**33**	P	**Pn**	**20 43 27.7**	**+2.4**
SMRI	**Semarang**	**4.27**	**33**	P	**Pn**	**20 43 27.4**	**+2.2**
DBJI	**Dramaga**	**4.27**	**342**	P	**Pn**	**20 43 26.6**	**+1.3**
SNJI	**Sawahan-Nganju**	**4.61**	**52**	P	**Pn**	**20 43 33.6**	**+3.4**
SJI	**Sawahan**	**4.65**	**52**	P	**Pn**	**20 43 33.1**	**+2.5**
CGJI	**Cibinong**	**4.65**	**329**	P	**Pn**	**20 43 32.0**	**+1.5**
NGJI	**Ngawi**	**4.66**	**46**	P	Pn	20 43 35.7	+5.0
NGJI	**Ngawi**	**4.66**	**46**	P	**Pn**	**20 43 31.6**	**+0.9**
SBJI	**Serang**	**4.89**	**337**	P	**Pn**	**20 43 34.5**	**+0.6**
BLJI	**Banyuglugur**	**6.16**	**63**	P	**Pn**	**20 43 54.0**	**+2.7**
	2.6nm6µm178nm,0.7s						
BLJI	**Banyuglugur**	**6.16**	**63**	P	**Pn**	**20 43 53.6**	**+2.4**
KASI	**Kota Agung**	**6.20**	**325**	P	**Pn**	**20 43 52.4**	**+0.5**
JAGI	**Jajag, Banyuwa**	**6.37**	**71**		**Pn**	**20 43 55.5**	**+1.4**
JAGI				Sn	**Sn**	**20 44 59.9**	**-6.8**
JAGI	**Jajag, Banyuwa**	**6.37**	**71**	P	**Pn**	**20 43 55.8**	**+1.7**
	1.9nm8µm312nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.37**	**71**	P	**Pn**	**20 43 55.8**	**+1.7**
ABJI	**Asem Bagus**	**6.70**	**66**	P	**Pn**	**20 44 01.8**	**+3.1**
	1.6nm332nm,0.6s						
ABJI	**Asem Bagus**	**6.70**	**66**	P	**Pn**	**20 44 00.6**	**+1.9**
RTBI	**Rangdo, Negare**	**7.11**	**73**	P	**Pn**	**20 44 06.8**	**+2.5**
	5µm342nm,0.9s						
RTBI	**Rangdo, Negare**	**7.11**	**73**	P	**Pn**	**20 44 06.2**	**+1.9**
MDSI	**Maura Dua**	**7.24**	**327**	P	**Pn**	**20 44 06.5**	**+0.4**
DNP	**Denpasar**	**7.30**	**75**	P	Pn	20 44 12.6	+5.7
DNP	**Denpasar**	**7.30**	**75**	P	**Pn**	**20 44 09.4**	**+2.5**
SRBI	**Singaraja**	**7.48**	**71**	P	**Pn**	**20 44 11.1**	**+1.7**
	1.0nm234nm,0.7s						
SRBI	**Singaraja**	**7.48**	**71**	P	**Pn**	**20 44 10.2**	**+0.8**
KHKI	**Kahang-Kahang**	**7.76**	**74**	P	**Pn**	**20 44 16.0**	**+2.7**
	1.0nm100nm,0.8s						
MNAI	**Manna**	**8.05**	**320**	Pn	**Pn**	**20 44 15.2**	**-2.0**
MNAI				Sn	Sn	20 45 37.5	-11
TWSI	**Taliwang, Sumb**	**8.88**	**78**	P	**Pn**	**20 44 30.9**	**+2.2**
PLAI	**Plampang**	**9.73**	**80**	P	**Pn**	**20 44 41.5**	**+1.2**
DSRI	**Dabo**	**10.68**	**341**	P	**Pn**	**20 44 53.4**	**0.0**
KAPI	**Kappang**	**12.84**	**65**	Pn	**Pn**	**20 45 20.4**	**-2.5**
	2.3nm,0.3s,baz=231,slow=19,SNR=4.0						
KAPI				LR	LR	20 51 04.0	
	comp=Z,100nm,21.6s,baz=252,slow=41						
KAPI	**Kappang**	**12.84**	**65**	P	**Pn**	**20 45 24.1**	**+1.1**
MYKOM	**Kota Tinggi**	**13.05**	**341**	P	**Pn**	**20 45 24.9**	**-0.9**
GIRL	**Giralia**	**13.30**	**155**	Pn	**Pn**	**20 45 26.3**	**-2.9**
MMRI	**Maumere**	**14.10**	**83**	Pn	**Pn**	**20 45 36.8**	**-3.3**
MBWA	**Marble Bar**	**15.31**	**134**		**Pn**	**20 45 52.4**	**-4.1**
MBWA				IAmb	IAmb	20 45 56.5	
	comp=Z,20nm,0.7s						
MBWA	**Marble Bar**	**15.31**	**134**	P	**Pn**	**20 45 54.1**	**-2.4**
BATI	**Baumata**	**15.33**	**90**	Pn	**Pn**	**20 45 53.9**	**-2.9**
	comp=Z,2.7nm,0.3s,baz=161,slow=2.2,SNR=4.7						
BATI				Sn	Sn	20 48 31.1	-16
	comp=Z,1.1nm,0.3s,baz=119,slow=10,SNR=1.9						
BATI	**Baumata**	**15.33**	**90**	P	**Pn**	**20 45 56.5**	**-0.4**
GSI	**Gunungsitoli**	**15.82**	**318**	Pn	**Pn**	**20 45 58.6**	**-4.5**
GSI				IAmb	IAmb	20 46 15.0	
	comp=Z,47nm,1.0s						
SOEI	**Soe**	**15.96**	**88**	Pn	**Pn**	**20 46 05.0**	**-0.1**
SOEI				IAmb	IAmb	20 46 46.6	
	comp=Z,41nm,0.9s						
MPSI	**Mapaga**	**16.04**	**48**	P	**P**	**20 46 08.5**	**-0.8**
TOLI2	**Tolitoli**	**17.21**	**48**		**Pn**	**20 46 20.4**	**-0.4**
TOLI2	**Tolitoli**	**17.21**	**48**	P	**P**	**20 46 22.8**	**+0.5**
KCSI	**Kotacane, Aceh**	**17.42**	**323**	P	**P**	**20 46 27.7**	**-1.0**
LUWI	**Luwuk**	**17.44**	**58**	Pn	**Pn**	**20 46 22.9**	**-0.8**
LUWI				IAmb	IAmb	20 46 53.0	
	comp=Z,81nm,1.1s						
KULM	**Kulim**	**17.48**	**335**		**Pn**	**20 46 23.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.54**	**116**	P	**Pn**	**20 46 38.9**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=309,slow=12,SNR=18						
FITZ				Sn	Sn	20 49 46.6	-18
	comp=Z,0.8nm,0.3s,baz=179,slow=20,SNR=7.4						
FITZ				LR	LR	20 54 29.8	
	comp=Z,166nm,18.1s,baz=349,slow=39 comp=Z,2.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**18.54**	**116**		**P**	**20 46 36.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**18.54**	**116**	P	**Pn**	**20 46 37.8**	**+0.5**
MLSI	**Meulaboh, Aceh**	**18.83**	**321**	P	**P**	**20 46 37.7**	**-2.6**
MYLDM	**Lahad Datu**	**18.84**	**34**		**P**	**20 46 39.4**	**-0.9**
MYLDM				IAmb	IAmb	20 46 54.7	
	comp=Z,28nm,1.0s						
MYLDM	**Lahad Datu**	**18.84**	**34**	P	**Pn**	**20 46 41.8**	**+1.0**
LHMI	**Lhok Sumawe**	**19.28**	**324**	P	**P**	**20 46 44.5**	**-0.7**
KNRA	**Kununurra**	**20.74**	**106**		**P**	**20 47 01.3**	**+0.1**
MTN	**Manton Dam**	**22.67**	**98**	P	**P**	**20 47 20.0**	**-2.0**
MTN	**Manton Dam**	**22.67**	**98**	P	**P**	**20 47 23.7**	**+1.8**
H01W3	**Cape Leeuwin H**	**24.75**	**168**	T	T	21 12 57.4	
	baz=343,slow=75						
DAV	**Davao City (W)**	**24.76**	**45**	LR	LR	20 58 43.0	
	comp=Z,46nm,19.8s,baz=174,slow=40						
H01W1	**Cape Leeuwin H**	**24.76**	**168**	T	T	21 12 59.0	
	baz=343,slow=75						
H01W2	**Cape Leeuwin H**	**24.77**	**168**	T	T	21 13 03.6	
	baz=343,slow=75						
SWI	**Sorong**	**25.00**	**69**	P	**P**	**20 47 44.7**	**+0.3**
SIJI	**Sorong**	**25.00**	**69**	LR	LR	20 57 24.4	
	comp=Z,50nm,21.9s,baz=158,slow=36						
SIJI	**Sorong**	**25.00**	**69**	P	**P**	**20 47 44.6**	**+0.2**
WB0	**Warramunga Arr**	**26.93**	**113**		**P**	**20 48 00.7**	**-1.1**
WB0				IAmb	IAmb	20 48 34.0	
	comp=Z,8.2nm,0.8s						
WRA	**Warramunga Arr**	**26.93**	**113**	P	**P**	**20 48 04.0**	**+2.2**
	comp=Z,2.7nm,0.8s,baz=285,slow=11,SNR=10						
WRA				PcP	**PcP**	**20 51 24.7**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=297,slow=2.8,SNR=3.3 comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**26.93**	**113**		**P**	**20 48 00.7**	**-1.1**
FORT	**Forrest**	**27.30**	**140**	P	**P**	**20 48 05.8**	**+0.8**
FORT				IAmb	IAmb	20 48 42.4	
	comp=Z,8.0nm,1.0s						
ASAR	**Alice Springs**	**27.80**	**121**	P	**P**	**20 48 11.9**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=297,slow=8.4,SNR=11						
ASAR				PcP	**PcP**	**20 51 28.5**	**+2.5**
	comp=Z,0.6nm,0.6s,baz=297,slow=2.7,SNR=5.4						
ASAR				LR	LR	21 00 06.8	
	comp=Z,124nm,18.4s,baz=298,slow=38 comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**27.80**	**121**	P	**P**	**20 48 09.7**	**0.0**
AS31	**Alice Springs**	**27.80**	**121**	P	**P**	**20 48 10.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**30.29**	**343**	P	**P**	**20 48 33.8**	**+2.1**
	comp=Z,1.1nm,0.5s,baz=162,slow=8.7,SNR=3.5						
CMAR				LR	LR	21 03 35.7	
	comp=Z,63nm,19.4s,baz=180,slow=42 comp=Z,1.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.29**	**343**		**P**	**20 48 30.6**	**-1.1**
CHTO	**Chiang Mai**	**30.63**	**343**		**P**	**20 48 33.4**	**-1.3**
CHTO	**Chiang Mai**	**30.63**	**343**	P	**P**	**20 48 33.3**	**-1.4**
NPW	**Naypyitaw**	**32.44**	**339**	P	**P**	**20 48 51.5**	**+0.9**
PALK	**Pallekele**	**32.55**	**302**	P	**P**	**20 48 51.7**	**-0.1**
BBOO	**Buckleboo**	**33.90**	**135**	P	**P**	**20 49 03.2**	**-0.1**
BBOO				IAmb	IAmb	20 49 18.8	
	comp=Z,14nm,1.2s						
H08S2	**Diego Garcia H**	**35.25**	**272**	T	T	21 25 52.1	
	baz=99,slow=74						
H08S3	**Diego Garcia H**	**35.26**	**272**	T	T	21 25 44.7	
	baz=99,slow=74						
H08S1	**Diego Garcia H**	**35.27**	**272**	T	T	21 25 48.5	
	baz=99						
SSLB	**Suanglung**	**36.46**	**20**	P	**P**	**20 49 25.2**	**-0.3**
SSLB				IAmb	IAmb	20 49 29.6	
	comp=Z,7.7nm,0.8s						
BRDH	**Bariadhala**	**36.83**	**334**	LR	LR	21 06 25.1	
	comp=Z,211nm,19.0s,baz=145,slow=39						
MORE	**Moreh**	**37.19**	**339**		**P**	**20 49 30.7**	**-0.9**
MORE				IAmb	IAmb	20 49 36.8	
	comp=Z,11nm,1.1s						
PZH	**PanZhiHua**	**37.44**	**351**	P	**P**	**20 49 36.3**	**+2.5**
STKA	**Stephens Creek**	**37.46**	**129**	P	**P**	**20 49 36.6**	**+2.7**
	comp=Z,6.2nm,1.0s,baz=320,slow=12,SNR=4.7						
STKA				LR	LR	21 05 41.0	
	comp=Z,81nm,19.2s,baz=353,slow=37 comp=Z,6.2nm,1.0s						
IMP	**Imphal**	**37.86**	**339**	*e*P	**P**	**20 49 38.7**	**+1.3**
IMP				IAmb	IAmb	20 49 43.0	
	comp=Z,6.0nm,1.1s						
BOK	**Bokaro**	**40.53**	**328**	*e*P	**P**	**20 50 01.1**	**+1.5**
BOK				IAmb	IAmb	20 50 05.7	
	comp=Z,7.9nm,0.8s						
JMZ	**Minamidaito 2**	**42.68**	**32**	P	**P**	**20 50 16.6**	**-0.6**
LSA	**Lhasa**	**43.30**	**338**	⇑*i*P	**P**	**20 50 24.3**	**+1.5**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**43.30**	**338**		**P**	**20 50 21.7**	**-1.1**
LSA				IAmb	IAmb	20 50 29.7	
	comp=Z,7.8nm,0.8s						
LSA	**Lhasa**	**43.30**	**338**	P	**P**	**20 50 23.5**	**+0.7**
EVN	**Everest**	**43.55**	**332**		**P**	**20 50 24.6**	**-0.4**
EVN	**Everest**	**43.55**	**332**	P	**P**	**20 50 25.6**	**+0.6**
NJ2	**Nanjing**	**43.69**	**13**	*e*P	**P**	**20 50 26.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
GUMO	**Guam**	**43.73**	**57**	LR	LR	21 10 44.5	
	comp=Z,19nm,18.4s,baz=202,slow=39						
XAN	**Xi'an**	**44.45**	**1**	⇓P	**P**	**20 50 35.5**	**+4.1**
XAN				pP	pwP	20 50 40.8	-0.4
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
LYN	**LuoYang**	**45.14**	**5**	P	P	20 50 42.0	+5.1
LYN				pmax	pmax		
	comp=Z,23nm,0.6s						
LZH	**Lanzhou**	**46.65**	**355**	*e*P	P	20 50 54.3	+5.3
LZH				sP	pwP	20 50 59.8	+0.9
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PTH	**Pithoragarh**	**48.19**	**327**	*e*P	**P**	**20 51 02.1**	**+1.0**
PTH				IAmb	IAmb	20 51 03.3	
	comp=Z,78nm,0.1s						
PTH				*i* x	x	20 51 07.8	
GTA2	**Gaotai**	**50.47**	**352**	P	**P**	**20 51 21.5**	**+3.2**
GTA2				pP	pwP	20 51 26.5	-1.7
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SMLA	**Simla**	**51.04**	**325**	*e*P	**P**	**20 51 23.8**	**+1.2**
SMLA				IAmb	IAmb	20 51 31.0	
	comp=Z,11nm,1.0s						
HHC	**Hu-ho-hao-te**	**51.34**	**3**	*e*P	**P**	**20 51 26.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,23nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC				LR	LR		
	comp=N,100nm,13.8s						
HHC				LR	LR		
	comp=E,100nm,14.5s						
HHC				LR	LR		
	comp=Z,90nm,13.0s						
KSRS	**Korea Array**	**51.34**	**20**	P	**P**	**20 51 25.2**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=205,slow=8.9,SNR=2.3 comp=Z,0.3nm,0.4s						
NIL	**Nilore**	**55.12**	**324**		**P**	**20 51 53.3**	**+0.6**
NIL	**Nilore**	**55.12**	**324**	P	**P**	**20 51 53.5**	**+0.8**
WMQ	**Urumqi**	**57.30**	**343**	*e*P	**P**	**20 52 11.0**	**+2.9**
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				LR	LR		
	comp=Z,63nm,21.9s						
WUS	**Wushi**	**58.05**	**335**	P	**P**	**20 52 15.1**	**+1.6**
WUS				IAmb	IAmb	20 52 22.6	
	comp=Z,6.5nm,0.7s						
WUS	**Wushi**	**58.05**	**335**	P	**P**	**20 52 14.0**	**+0.5**
KSH2	**Kashi**	**58.05**	**330**	P	**P**	**20 52 14.3**	**+0.7**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBL	**Kabul**	**58.22**	**322**	P	**P**	**20 52 15.5**	**+0.5**
KBL				IAmb	IAmb	20 52 17.0	
	comp=Z,4.3nm,1.1s						
SONM	**Songino Array**	**58.24**	**359**	P	**P**	**20 52 16.2**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=182,slow=6.8,SNR=9.5						
SONM				LR	LR	21 18 19.9	
	comp=Z,63nm,20.1s,baz=166,slow=37 comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	**58.24**	**359**	P	**P**	**20 52 14.8**	**+0.1**
SONM				IAmb	IAmb	20 52 27.2	
	comp=Z,6.2nm,1.4s						
ULN	**Ulaanbaatar**	**58.26**	**359**	P	**P**	**20 52 14.6**	**-0.2**
ULN				IAmb	IAmb	20 52 22.9	
	comp=Z,4.5nm,0.9s						
USA0B	**Ussuriysk Arra**	**58.74**	**20**	P	**P**	**20 52 17.5**	**-0.6**
BNX	**BinXian**	**58.76**	**16**	⇓P	**P**	**20 52 19.5**	**+1.3**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MANEM	**Manem**	**58.83**	**327**		**P**	**20 52 18.9**	**-0.3**
MANEM				IAmb	IAmb	20 52 22.1	
	comp=Z,26nm,0.9s						
TARG	**Taragay, Kyrgy**	**59.09**	**334**	P	**P**	**20 52 20.5**	**-0.6**
TARG				IAmb	IAmb	20 52 40.9	
	comp=Z,3.5nm,1.0s						
TARG	**Taragay, Kyrgy**	**59.09**	**334**	P	**P**	**20 52 21.2**	**+0.1**
MCQ	**Macquarie Isla**	**59.28**	**148**	P	**P**	**20 52 20.7**	**-1.1**
NRN	**Naryn**	**59.65**	**332**	P	**P**	**20 52 23.9**	**-1.0**
NRN				IAmb	IAmb	20 52 36.4	
	comp=Z,3.5nm,1.0s						
KDJ	**Kajisay**	**59.68**	**334**	P	**P**	**20 52 23.2**	**-1.7**
PDGK	**Podgornoye**	**59.71**	**336**	P	**P**	**20 52 25.3**	**+0.2**
DRK	**Karamyk**	**60.19**	**328**	P	**P**	**20 52 27.8**	**-0.9**
BOOM	**Boomskoye usch**	**60.52**	**333**	P	**P**	**20 52 29.0**	**-1.7**
BOOM				IAmb	IAmb	20 52 52.5	
	comp=Z,5.0nm,1.2s						
GAR	**Garm**	**60.63**	**327**	P	**P**	**20 52 30.0**	**-1.4**
GAR	**Garm**	**60.63**	**327**	P	**P**	**20 52 31.9**	**+0.5**
HILR	**Hailar Array B**	**60.81**	**9**	P	**P**	**20 52 32.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=201,slow=10,SNR=3.8 comp=Z,0.3nm,0.3s						
SHAA	**Shahritus**	**60.83**	**324**	P	**P**	**20 52 31.6**	**-1.2**
SHAA				IAmb	IAmb	20 52 33.6	
	comp=Z,14nm,1.1s						
ARSB	**Arslanbob**	**60.99**	**330**	P	**P**	**20 52 32.7**	**-1.1**
ARSB				IAmb	IAmb	20 52 44.0	
	comp=Z,7.5nm,1.2s						
BTK	**Batken**	**61.13**	**328**	P	**P**	**20 52 33.3**	**-1.5**
BTK				IAmb	IAmb	20 52 48.7	
	comp=Z,5.8nm,1.0s						
BTK	**Batken**	**61.13**	**328**	P	**P**	**20 52 36.4**	**+1.6**
MKAR	**Makanchi Array**	**61.66**	**340**	P	**P**	**20 52 40.0**	**+1.9**
	comp=Z,3.1nm,0.8s,baz=141,slow=7.8,SNR=13 comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**61.66**	**340**		**P**	**20 52 37.6**	**-0.5**
MAKZ	**Makanchi**	**61.77**	**340**	P	**P**	**20 52 38.6**	**-0.3**
TLY	**Talaya**	**62.19**	**357**	LR	LR	21 22 18.0	
	comp=Z,42nm,18.1s,baz=152,slow=39						
HRA	**Herat**	**62.41**	**318**	P	**P**	**20 52 43.3**	**-0.3**
HEH	**HeiHe**	**62.95**	**14**	*e*P	P	20 52 53.0	+6.3
KKAR	**Karatay Array**	**63.53**	**330**	P	**P**	**20 52 49.4**	**-1.3**
MAW	**Mawson**	**64.22**	**198**	P	**P**	**20 52 53.9**	**-0.9**
KURBB	**Kurchatov Arra**	**66.22**	**340**	P	**P**	**20 53 09.2**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=155,slow=5.5,SNR=9.0 comp=Z,1.6nm,0.7s						
KURK	**Kurchatov**	**66.27**	**340**		**P**	**20 53 07.7**	**-0.7**
KURK				IAmb	IAmb	20 53 11.1	
	comp=Z,3.4nm,0.8s						
KURK	**Kurchatov**	**66.27**	**340**	P	**P**	**20 53 08.2**	**-0.2**
RTZ	**Ruatahuna**	**66.96**	**127**	P	**P**	**20 53 11.8**	**-1.4**
URZ	**Urewera**	**67.04**	**127**	LR	LR	21 24 19.8	
	comp=Z,72nm,18.1s,baz=244,slow=38						
ZAA0	**Zalesovo Array**	**67.31**	**345**	P	**P**	**20 53 14.4**	**-0.5**
ZAA0				IAmb	IAmb	20 53 21.6	
	comp=Z,2.6nm,1.0s						
ZALV	**Zalesovo Beam**	**67.31**	**345**	P	**P**	**20 53 15.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=116,slow=6.8,SNR=6.3 comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**67.31**	**345**		**P**	**20 53 14.3**	**-0.6**
MXZ	**Matakaoa Point**	**67.93**	**126**	P	**P**	**20 53 18.6**	**-0.7**
KIBK	**Kibwezi**	**69.95**	**271**	P	**P**	**20 53 31.0**	**-1.4**
RAYN	**Ar Rayn**	**69.96**	**300**	P	**P**	**20 53 30.9**	**-1.3**
RAYN				IAmb	IAmb	20 53 38.4	
	comp=Z,3.0nm,1.1s						
BVAR	**Borovoye Array**	**71.12**	**337**	P	**P**	**20 53 39.9**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=157,slow=8.0,SNR=11 comp=Z,1.6nm,0.7s						
VNDA	**Vanda**	**72.21**	**169**	P	**P**	**20 53 47.2**	**+2.4**
	comp=Z,1.2nm,0.9s,baz=304,slow=7.5,SNR=6.3 comp=Z,1.2nm,0.9s						
VNDA	**Vanda**	**72.21**	**169**	P	**P**	**20 53 45.5**	**+0.6**
AB31	**Akbulak array**	**73.07**	**329**		**P**	**20 53 50.5**	**+0.1**
AB31				IAmb	IAmb	20 53 53.1	
	comp=Z,3.7nm,0.9s						
ABKAR	**Akbulak array**	**73.07**	**329**		**P**	**20 53 50.9**	**+0.6**
LODK	**Lodwar**	**73.70**	**277**	P	**P**	**20 53 53.9**	**-1.1**
YAK	**Yakutsk**	**74.39**	**10**	P	**P**	**20 53 57.7**	**-0.1**
MBAR	**Mbarara**	**77.45**	**272**	P	**P**	**20 54 15.9**	**-0.7**
MBAR				IAmb	IAmb	20 54 31.1	
	comp=Z,4.2nm,0.6s						
ARTI	**Arti**	**78.40**	**334**		**P**	**20 54 20.9**	**+0.3**
ARTI				IAmb	IAmb	20 54 23.3	
	comp=Z,5.8nm,0.7s						
GURO	**Guroymak-BITLI**	**78.52**	**313**	P	**P**	**20 54 21.6**	**-0.3**
GURO				IAmb	IAmb	20 54 52.8	
	comp=Z,3.2nm,0.7s						
LBTB	**Lobatse**	**78.82**	**246**	P	**P**	**20 54 21.9**	**-2.0**
LBTB				IAmb	IAmb	20 55 03.8	
	comp=Z,7.3nm,1.4s						
QSPA	**South Pole Qui**	**79.37**	**180**	P	**P**	**20 54 28.8**	**+2.7**
	comp=Z,1.7nm,1.1s,baz=349,slow=1.0,SNR=5.1 comp=Z,1.7nm,1.1s						
QSPA	**South Pole Qui**	**79.37**	**180**	P	**P**	**20 54 25.8**	**-0.3**
KBZ	**Khabaz**	**80.06**	**318**	P	**P**	**20 54 32.3**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=128,slow=2.8,SNR=4.2 comp=Z,2.5nm,0.9s						
ANDN	**Andirin**	**82.34**	**310**	P	**P**	**20 54 41.7**	**-0.8**
CY604	**RAF Akrotiri,**	**82.70**	**307**	P	**P**	**20 54 43.0**	**-1.0**
TIXI	**Tiksi**	**83.28**	**6**	P	**P**	**20 54 46.4**	**0.0**
CSS	**Mathiatis**	**83.82**	**307**	P	**P**	**20 54 48.3**	**-1.8**
BR131	**Keskin Array S**	**85.04**	**312**		**P**	**20 54 55.3**	**-1.0**
BR131				IAmb	IAmb	20 54 59.2	
	comp=Z,5.5nm,0.9s						
BRTR	**Keskin Array B**	**85.04**	**312**	P	**P**	**20 54 58.0**	**+1.7**
	comp=Z,2.6nm,0.8s,baz=138,slow=6.2,SNR=14 comp=Z,2.6nm,0.8s						
BRTR	**Keskin Array B**	**85.04**	**312**		**P**	**20 54 55.0**	**-1.3**
KKUL	**Konya-Kulu**	**85.40**	**311**	P	**P**	**20 54 58.7**	**+0.6**
ALN	**Alexandroupoli**	**90.94**	**311**	P	**P**	**20 55 23.4**	**-1.0**
AKASG	**Malin Array Be**	**91.19**	**321**	P	**P**	**20 55 26.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=91,slow=4.1,SNR=4.7 comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**91.19**	**321**	IAmb	IAmb	20 55 27.4	
	comp=Z,2.2nm,0.9s						
MLR	**Muntele Rosu**	**92.06**	**316**	P	**P**	**20 55 30.5**	**+0.8**
BURAR	**Bucovina Array**	**93.01**	**318**	P	**P**	**20 55 34.9**	**+0.9**
BUR08	**Bucovina Ar. S**	**93.03**	**318**	P	**P**	**20 55 34.8**	**+0.8**
BUR08				IAmb	IAmb	20 56 13.6	
	comp=Z,4.2nm,1.4s						
YKA	**Yellowknife Ar**	**119.87**	**21**	PKP	**PKiKP**	**21 01 12.2**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=332,slow=1.3,SNR=4.2						
TXAR	**Lajitas Array**	**145.02**	**53**	PKP	**PKPdf**	**21 01 59.3**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=264,slow=2.5,SNR=14						
SIV	**San Ignacio**	**151.44**	**202**	PKPbc	**PKiKP**	**21 02 16.8**	**+1.0**
	comp=

comp=N,44nm,20.6s,baz=151,slow=33
PFO Pinyon Flats O 28.88 317 LR LR 21 07 45.9
comp=N,21nm,18.9s,baz=130,slow=39
NVAR Mina Array Bea 33.09 323 P **P 20 55 30.9 +1.6**
comp=N,1.3nm,0.7s,baz=124,slow=7.8,SNR=6.2
comp=N,1.3nm,0.7s
ULM Lac du Bonnet 36.44 357 LR LR 21 11 55.5
comp=N,19nm,21.1s,baz=188,slow=38
MDP Montagnes des 40.94 98 LR LR 21 13 16.1
comp=N,22nm,20.0s,baz=116,slow=36
YKA Yellowknife Ar 50.98 347 P **P 20 57 55.2 +0.7**
comp=N,0.6nm,0.6s,baz=154,slow=8.0,SNR=2.8
comp=N,0.6nm,0.6s
ILAR Eielson Array 62.57 337 P **P 20 59 17.9 +1.1**
comp=N,0.5nm,0.8s,baz=135,slow=4.6,SNR=6.7
comp=N,0.5nm,0.8s
CMAR Chiang Mai Arr 145.79 339 PKPbc **PKPdf 21 08 33.6 +0.8**
comp=N,1.9nm,1.0s,baz=340,slow=4.9,SNR=8.0

*NEIC **28** 20:51:26.1,23°.97S×70°.99W,h15km*
*SJA **28** 20:51:26.8±1.0,24°.02S×70°.66W,h33km,ML4.3,MW4.2*
*GFZ **28** 20:51:28.6±0.3,24°.5±2°×7°.1W±°,h32km,M4.5/12,*
mb4.5/12
*NEIC **28** 20:51:29.2±1.8,24°.00S±0°.03×70°.81W±0°.09,h44km±5km,*
mb4.5/17,Mwr4.2/35,Mwr4.4(GUC),Error ellipse:
s-maj=11.8km s-min=3.8km az=91.0,Moment Tensor
Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.63;
$M_{\theta\theta}$=1.42; $M_{\phi\phi}$=0.79; $M_{r\theta}$=-1.16; $M_{r\phi}$=0.05; $M_{\theta\phi}$=-1.52; Fault
plane solution: M_o=2.28000×10^{15} NP1:ϕs304.61000°,
δ31.72000°,λ=-17.02000°. NP2:ϕs49.21000°,δ81.15000°,
λ=-120.58000°. Principal axes: T 2.0976, Plg30.0000°,
Azm164.0000°; N 0.3281, Plg30.0000°, Azm54.0000°; P
-2.4257, Plg45.0000°, Azm288.0000°;
*GUC **28** 20:51:30.1±0.8,23°.99S×70°.70W,h36km±8km,ML4.3*
*IDC **28** 20:51:31.9±2.6,23°.91S×70°.31W,h65km±23km,mb3.8/6,*
mbtmp4.1/11,MS3.1/5,Error ellipse: s-maj=32.4km
s-min=13.1km az=89.0
ISC 28 20:51:27.0±1.4,23°.96S±0°.03×71°.02W±0°.06,h31km±10km,
n143,σ1s56/154,mb4.3/10,4C-1D,Off coast of northern
Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**0.87**	**140**	*i* P	**Pb**	**20 51 43.8**	**0.0**
PB14				*e*S	**Sn**	**20 51 53.4**	**-1.8**
PB14	**IPOC Station P**	**0.87**	**140**		**Pn**	**20 51 43.5**	**+0.2**
PB14					**Sn**	**20 51 53.3**	**-1.8**
PB14	**IPOC Station P**	**0.87**	**140**	P	**Pb**	**20 51 43.8**	**0.0**
PB05	**IPOC Station P**	**1.34**	**34**	*e*P	**Pb**	**20 51 50.9**	**-0.7**
PB05				*e*S	**Sn**	**20 52 06.4**	**0.0**
PB05				IAML		20 52 07.0	
	comp=Z,3μm,0.2s						
PB05	**IPOC Station P**	**1.34**	**34**	⇑*i*P	**Pb**	**20 51 51.2**	**-0.3**
PB05				*e*S	**Sn**	**20 52 06.1**	**-0.3**
PB05				IAML		20 52 07.7	
	comp=E,9μm,0.8s						
PB05	**IPOC Station P**	**1.34**	**34**		**Pn**	**20 51 50.4**	**+0.8**
PB05				Sn	**Sn**	**20 52 05.8**	**-0.6**
PB05	**IPOC Station P**	**1.34**	**34**	P	**Pb**	**20 51 51.3**	**-0.3**
PB06	**IPOC Station P**	**1.83**	**47**	*e*P	**Pn**	**20 51 56.7**	**+0.3**
PB06				*e*S	**Sn**	**20 52 16.9**	**-1.7**
PB06				IAML		20 52 17.7	
	comp=Z,4μm,0.4s						
PB06	**IPOC Station P**	**1.83**	**47**	⇑*i*P	**Pn**	**20 51 57.1**	**+0.7**
PB06				*e*S	**Sn**	**20 52 16.8**	**-1.7**
PB06				IAML		20 52 17.3	
	comp=N,4μm,0.2s						
PB06	**IPOC Station P**	**1.83**	**47**		**Pn**	**20 51 56.8**	**+0.4**
PB06				Sn	**Sn**	**20 52 16.0**	**-2.6**
PB06	**IPOC Station P**	**1.83**	**47**	P	**Pn**	**20 51 57.2**	**+0.7**
AC01	**Pan de Azucar**	**2.21**	**170**	*e*P	**Pn**	**20 52 02.5**	**+1.0**
AC01				*e*S	**Sn**	**20 52 28.2**	**+0.4**
AC01	**Pan de Azucar**	**2.21**	**170**	*e*P	**Pn**	**20 52 02.6**	**+1.0**
AC01	**Pan de Azucar**	**2.21**	**170**		**Pn**	**20 52 02.5**	**+1.0**
AC01				Sn	**Sn**	**20 52 26.6**	**-1.2**
AC01	**Pan de Azucar**	**2.21**	**170**	P	**Pn**	**20 52 02.7**	**+1.1**
PB03	**IPOC Station P**	**2.24**	**32**	*e*P	**Pn**	**20 52 03.4**	**+1.4**
PB03				*e*S	**Sn**	**20 52 28.0**	**-0.7**
PB03				IAML		20 52 42.2	
	comp=Z,2μm,0.8s						
PB03	**IPOC Station P**	**2.24**	**32**	⇑*i*P	**Pn**	**20 52 03.4**	**+1.4**
PB03				*e*S	**Sn**	**20 52 27.9**	**-0.7**
PB03				IAML		20 52 29.8	
	comp=E,2μm,0.5s						
PB03	**IPOC Station P**	**2.24**	**32**		**Pn**	**20 52 03.2**	**+1.2**
PB03				Sn	**Sn**	**20 52 26.6**	**-2.1**
PB03	**IPOC Station P**	**2.24**	**32**	P	**Pn**	**20 52 03.5**	**+1.5**
PB07	**IPOC Station P**	**2.46**	**25**	*e*P	**Pn**	**20 52 06.7**	**+1.6**
PB07				*e*S	**Sn**	**20 52 35.1**	**+0.8**
PB07				IAML		20 52 51.7	
	comp=Z,2μm,0.8s						
PB07	**IPOC Station P**	**2.46**	**25**	⇑*i*P	**Pn**	**20 52 06.8**	**+1.6**
PB07				*e*S	**Sn**	**20 52 33.7**	**-0.6**
PB07	**IPOC Station P**	**2.46**	**25**		**Pn**	**20 52 06.5**	**+1.3**
PB07				Sn	**Sn**	**20 52 31.2**	**-3.0**
PB07	**IPOC Station P**	**2.46**	**25**	P	**Pn**	**20 52 06.9**	**+1.8**
PB09	**IPOC Station P**	**2.71**	**38**	*e*P	**Pn**	**20 52 10.3**	**+1.8**
PB09				*e*S	**Sn**	**20 52 39.6**	**-0.8**
PB09				IAML		20 52 56.7	
	comp=Z,1μm,0.5s						
PB09	**IPOC Station P**	**2.71**	**38**	*i* P	**Pn**	**20 52 10.3**	**+1.8**
PB09	**IPOC Station P**	**2.71**	**38**		**Pn**	**20 52 10.2**	**+1.6**
PB09				Sn	**Sn**	**20 52 38.5**	**-1.9**
PB09	**IPOC Station P**	**2.71**	**38**	P	**Pn**	**20 52 10.5**	**+1.9**
AF01	**San Pedro de A**	**2.80**	**69**	*e*P	**Pn**	**20 52 11.2**	**+1.3**
AF01				*e*S	**Sn**	**20 52 41.5**	**-1.2**
AF01				IAML		20 52 42.5	
	comp=N,3μm,0.6s						
AF01	**San Pedro de A**	**2.80**	**69**		**Pn**	**20 52 10.1**	**+0.2**
AF01				Sn	**Sn**	**20 52 40.8**	**-1.9**
PB02	**IPOC Station P**	**2.83**	**22**	*e*P	**Pn**	**20 52 11.7**	**+1.5**
PB02				*e*S	**Sn**	**20 52 43.1**	**-0.1**
PB02				IAML		20 52 47.1	
	comp=Z,2μm,0.3s						
PB02	**IPOC Station P**	**2.83**	**22**	*i* P	**Pn**	**20 52 11.8**	**+1.5**
PB02				*e*S	**Sn**	**20 52 42.6**	**-0.6**
PB02				IAML		20 52 47.6	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**2.83**	**22**		**Pn**	**20 52 11.6**	**+1.5**
PB02				Sn	**Sn**	**20 52 40.9**	**-2.4**
PB02	**IPOC Station P**	**2.83**	**22**	P	**Pn**	**20 52 11.9**	**+1.7**
AC02	**Maricunga**	**3.33**	**149**	*e*P	**Pn**	**20 52 26.1**	**+1.7**
AC02				*e*S	**Sn**	**20 52 56.6**	**+0.4**
AC02				IAML		20 53 13.7	
	comp=Z,592nm,1.5s						
AC02	**Maricunga**	**3.33**	**149**	*i* P	**Pn**	**20 52 19.1**	**+1.7**
AC02	**Maricunga**	**3.33**	**149**		**Pn**	**20 52 19.1**	**+1.7**
AC02				Sn	**Sn**	**20 52 55.3**	**-0.9**
AC02	**Maricunga**	**3.33**	**149**	P	**Pn**	**20 52 17.7**	**+0.3**
GO03	**Copiapo**	**3.69**	**169**	*e*P	**Pn**	**20 52 23.0**	**+1.2**
GO03				*e*S	**Sn**	**20 52 59.2**	**-5.0**
GO03				IAML		20 53 24.3	
	comp=Z,303nm,0.7s						
GO03	**Copiapo**	**3.69**	**169**	*e*P	**Pn**	**20 52 22.7**	**+0.8**
GO03	**Copiapo**	**3.69**	**169**		**Pn**	**20 52 22.4**	**+0.5**
GO03	**Copiapo**	**3.69**	**169**	P	**Pn**	**20 52 22.6**	**+0.8**
TA02	**Huaiquique**	**3.77**	**13**	*e*P	**Pn**	**20 52 24.9**	**+2.0**
TA02	**Huaiquique**	**3.77**	**13**	P	**Pn**	**20 52 24.7**	**+1.8**
PB08	**IPOC Station P**	**4.18**	**25**	*e*P	**Pn**	**20 52 30.7**	**+1.8**
PB08	**IPOC Station P**	**4.18**	**25**		**Pn**	**20 52 30.3**	**+1.4**
PB08	**IPOC Station P**	**4.18**	**25**	P	**Pn**	**20 52 30.8**	**+1.8**
AC04	**Llanos de Chal**	**4.22**	**181**		**Pn**	**20 52 28.9**	**-0.3**
AC04	**Llanos de Chal**	**4.22**	**181**	P	**Pn**	**20 52 29.3**	**+0.1**
SALTA		**4.29**	**94**	*e*P	**Pb**	**20 52 41.7**	**-0.2**
SALTA				*e*S	**Sb**	**20 53 36.7**	**+3.3**
SALTA		**4.29**	**94**	P	**Pn**	**20 52 31.2**	**+0.6**
PB11	**IPOC Station P**	**4.37**	**17**		**Pn**	**20 52 32.4**	**+1.0**
PB11	**IPOC Station P**	**4.37**	**17**	P	**Pn**	**20 52 32.6**	**+1.2**
PSGCX	**Pisagua**	**4.42**	**11**		**Pn**	**20 52 33.1**	**+1.0**
PSGCX	**Pisagua**	**4.42**	**11**	P	**Pn**	**20 52 33.6**	**+1.6**
GO01	**Chusmiza**	**4.60**	**22**		**Pn**	**20 52 36.3**	**+1.5**
GO01	**Chusmiza**	**4.60**	**22**	P	**Pn**	**20 52 36.5**	**+1.6**
AC05	**El Transito**	**4.90**	**172**	*e*P	**Pn**	**20 52 40.0**	**+1.4**
AC05				*e*S	**Sb**	**20 53 49.2**	**-1.5**
AC05				IAML		20 54 08.8	
	comp=Z,185nm,0.9s						
AC05	**El Transito**	**4.90**	**172**		**Pn**	**20 52 39.1**	**+0.5**
AC05	**El Transito**	**4.90**	**172**	P	**Pn**	**20 52 40.0**	**+1.4**
LCO	**Las Campanas**	**5.04**	**177**		**Pn**	**20 52 40.6**	**-0.1**
LCO	**Las Campanas**	**5.04**	**177**	P	**Pn**	**20 52 41.2**	**+0.6**
SLA	**San Lorenzo**	**5.09**	**100**	*e*P	**Pn**	**20 52 43.0**	**+1.7**
PB12	**IPOC Station P**	**5.36**	**7**		**Pn**	**20 52 46.0**	**+1.0**
PB12	**IPOC Station P**	**5.36**	**7**	P	**Pn**	**20 52 46.6**	**+1.6**
AP01	**Chacalluta**	**5.60**	**7**	Pn	**Pn**	**20 52 50.0**	**+1.9**
AP01	**Chacalluta**	**5.60**	**7**	P	**Pn**	**20 52 50.1**	**+1.9**
PB16	**IPOC Station P**	**5.78**	**14**		**Pn**	**20 52 52.7**	**+1.6**
PB16	**IPOC Station P**	**5.78**	**14**	P	**Pn**	**20 52 53.2**	**+2.1**
CO01	**Juntas del Tor**	**6.05**	**172**		**Pn**	**20 52 55.3**	**+0.8**
CO01	**Juntas del Tor**	**6.05**	**172**	P	**Pn**	**20 52 55.5**	**+1.0**
GO04	**Tololo Observa**	**6.19**	**178**		**Pn**	**20 52 56.7**	**+0.3**
GO04	**Tololo Observa**	**6.19**	**178**	P	**Pn**	**20 52 57.2**	**+0.8**
PB18	**Visviri**	**6.50**	**13**		**Pn**	**20 53 00.5**	**-0.5**
PB18	**Visviri**	**6.50**	**13**	P	**Pn**	**20 53 03.6**	**+2.6**
CO06	**Fray Jorge**	**6.71**	**185**	Pn	**Pn**	**20 53 02.4**	**-0.9**
CO03	**El Pedregal**	**6.86**	**178**		**Pn**	**20 53 05.4**	**0.0**
CO03	**El Pedregal**	**6.86**	**178**	P	**Pn**	**20 53 05.2**	**-0.3**
CO02	**Combarbal**	**7.21**	**180**	Pn	**Pn**	**20 53 09.5**	**-0.9**
CO02	**Combarbal**	**7.21**	**180**	P	**Pn**	**20 53 10.5**	**+0.1**
ZON	**Zonda**	**7.83**	**165**		**Pn**	**20 53 19.0**	**+0.2**
ZON	**Zonda**	**7.83**	**165**	P	**Pn**	**20 53 19.8**	**+0.9**
CFA	**Coronel Fontan**	**8.00**	**163**	P	**Pn**	**20 53 22.3**	**+1.2**
	comp=Z,3.1nm,0.3s,baz=243,slow=18,SNR=1.2						
CFA				S	**Sn**	**20 54 53.6**	**+3.0**
	comp=Z,4.3nm,0.4s,baz=236,slow=18,SNR=1.1						
CO04	**Los Peladeros**	**8.05**	**180**	Pn	**Pn**	**20 53 21.1**	**-0.9**
CO04	**Los Peladeros**	**8.05**	**180**	P	**Pn**	**20 53 21.9**	**-0.1**
LPAZ	**La Paz**	**8.10**	**20**	P	**Pn**	**20 53 25.8**	**+2.7**
	comp=Z,14nm,0.6s,baz=168,slow=2.5,SNR=42						
LPAZ				S	**Sn**	**20 54 52.0**	**-2.1**
	comp=Z,5.7nm,1.0s,baz=230,slow=17,SNR=1.4						
LPAZ				LR	LR	20 57 17.6	
	comp=Z,39nm,20.9s,baz=218,slow=44						
LPAZ	**La Paz**	**8.10**	**20**		**Pn**	**20 53 25.6**	**+2.5**
LPAZ	**La Paz**	**8.10**	**20**	P	**Pn**	**20 53 25.3**	**+2.2**
VA03	**San Esteban**	**8.78**	**177**	Pn	**Pn**	**20 53 32.9**	**+1.1**
VA03	**San Esteban**	**8.78**	**177**	P	**Pn**	**20 53 32.3**	**+0.5**
MT02	**Curacav**	**9.26**	**181**	Pn	**Pn**	**20 53 36.8**	**-1.6**
MT08	**Bocatoma Ro**	**9.49**	**175**	Pn	**Pn**	**20 53 41.1**	**-0.6**
MT03	**Universidad Ad**	**9.51**	**177**	Pn	**Pn**	**20 53 41.6**	**-0.2**
MT09	**Talagante**	**9.78**	**180**	Pn	**Pn**	**20 53 41.9**	**-3.7**
MT01	**Popeta**	**9.87**	**181**	Pn	**Pn**	**20 53 42.6**	**-4.1**
H03N1	**Juan Fernandez**	**11.70**	**214**	T	T	21 06 38.5	
	baz=41,slow=72						
H03N2	**Juan Fernandez**	**11.71**	**215**	T	T	21 06 41.6	
	baz=41,slow=72						
H03N3	**Juan Fernandez**	**11.72**	**214**	T	T	21 06 39.7	
	baz=41,slow=72						
SIV	**San Ignacio**	**12.26**	**52**	P	**Pn**	**20 54 15.8**	**-3.8**
	comp=Z,3.2nm,0.4s,baz=243,slow=9.2,SNR=11						
SIV				S	Sn	20 56 22.8	-12
	comp=Z,0.8nm,0.4s,baz=146,slow=15,SNR=1.5						
CPUP	**Villa Florida**	**12.63**	**104**	P	Pn	20 54 19.4	-5.1
	comp=Z,0.7nm,0.3s,baz=249,slow=20,SNR=2.9						
CPUP				LR	LR	20 59 22.4	
	comp=Z,89nm,20.8s,baz=251,slow=39						
BI02	**San Fabin de**	**12.66**	**181**		**Pn**	**20 54 23.7**	**-1.3**
BI02	**San Fabin de**	**12.66**	**181**	P	**Pn**	**20 54 26.4**	**+1.4**
GO06	**Curarrehue**	**15.58**	**181**	Pn	**Pn**	**20 55 04.8**	**+0.4**
TRQA	**Tornquist**	**16.03**	**153**	IAmb	IAmb	20 55 13.6	
	comp=Z,17nm,0.9s						
LR05	**Currie**	**16.24**	**183**	Pn	**Pn**	**20 55 13.4**	**+0.6**
LR05				IAmb	IAmb	20 55 18.8	
	comp=Z,43nm,1.5s						
PLCA	**Paso Flores**	**16.73**	**179**	P	**P**	**20 55 22.8**	**+1.7**
	comp=Z,15nm,1.2s,baz=356,slow=13,SNR=7.2						
PLCA				LR	LR	21 02 04.1	
	comp=Z,64nm,21.0s,baz=6.5,slow=38						
PLCA	**Paso Flores**	**16.73**	**179**	P	**Pn**	**20 55 18.5**	**-0.5**
PLCA	**Paso Flores**	**16.73**	**179**	P	**Pn**	**20 55 19.6**	**+0.5**
ITAB	**Concordia**	**17.35**	**105**	Pn	**Pn**	**20 55 24.7**	**-2.1**
BDFB	**Brasilia**	**23.15**	**73**	P	**P**	**20 56 26.8**	**-4.2**
	comp=Z,2.6nm,0.6s,baz=235,slow=12,SNR=5.5						
	comp=Z,3.6nm,0.6s						
ROSC	**El Rosal**	**28.81**	**353**	LR	LR	21 09 23.6	
	comp=Z,83nm,19.5s,baz=61,slow=37						
SDV	**Santo Domingo**	**32.65**	**1**	LR	LR	21 12 24.1	
	comp=Z,54nm,18.2s,baz=101,slow=38						
VNA2	**Neumayer--Watz**	**59.00**	**160**	P	**P**	**21 01 23.3**	**0.0**
	comp=Z,2.6nm,0.6s,baz=282,slow=8.1						
SNAA	**Sanae**	**60.61**	**160**	⇓P	**P**	**21 01 34.8**	**+0.3**
	comp=Z,48nm,0.6s						
SNAA	**Sanae**	**60.61**	**160**	P	**P**	**21 01 34.0**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=275,slow=6.8,SNR=6.8						
	comp=Z,1.7nm,0.6s						
SNAA	**Sanae**	**60.61**	**160**	P	**P**	**21 01 34.3**	**-0.1**
SNAA				IAmb	IAmb	21 01 35.3	
	comp=Z,2.0nm,0.7s						
TXAR	**Lajitas Array**	**61.59**	**328**	P	**P**	**21 01 45.2**	**+3.6**
	comp=Z,0.7nm,0.7s,baz=161,slow=8.0,SNR=5.1						
	comp=Z,0.7nm,0.7s						
WVT	**Waverly**	**61.84**	**345**	P	**P**	**21 01 43.1**	**+0.1**
R61A	**Willards**	**62.10**	**356**	P	**P**	**21 01 42.8**	**-1.9**
TROLL	**Troll, Antarti**	**62.33**	**160**	P	**P**	**21 01 46.5**	**+0.4**
	comp=Z,129nm,1.0s						
WTFS	**Witchita Falls**	**63.07**	**334**	P	**P**	**21 01 51.6**	**+0.3**
DKNS	**Dickens**	**63.99**	**332**	P	**P**	**21 02 00.0**	**+2.5**
WMOK	**Wichita Mounta**	**64.05**	**335**	P	**P**	**21 02 00.7**	**+2.9**
WMOK				IAmb	IAmb	21 02 03.9	
	comp=Z,4.1nm,1.0s						
QUOK	**Quay**	**64.55**	**337**	P	**P**	**21 02 01.0**	**0.0**
QUOK				IAmb	IAmb	21 02 04.9	
	comp=Z,16nm,1.0s						
R40A	**Maddies Statio**	**65.06**	**342**	P	**P**	**21 02 05.2**	**+0.9**
R40A				IAmb	IAmb	21 02 06.5	
	comp=Z,14nm,1.1s						
QSPA	**South Pole Qui**	**66.24**	**180**	P	**P**	**21 02 13.2**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=179,slow=0.5,SNR=7.4						
	comp=Z,1.6nm,0.9s						
QSPA	**South Pole Qui**	**66.24**	**180**	IAmb	IAmb	21 02 25.8	
	comp=Z,6.7nm,1.4s						
ULM	**Lac du Bonnet**	**77.10**	**344**	P	**P**	**21 03 17.5**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=127,slow=5.1,SNR=2.1						
	comp=Z,1.2nm,0.6s						
ULM	**Lac du Bonnet**	**77.10**	**344**	IAmb	IAmb	21 03 26.1	
	comp=Z,4.8nm,1.3s						
YKA	**Yellowknife Ar**	**92.87**	**341**	P	**P**	**21 04 37.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=140,slow=4.6,SNR=4.3						
	comp=Z,0.7nm,0.6s						
H11S2	**WAKE ISLAND Hyl**	**26.22**	**276**	T	T	23 30 03.7	
	baz=107,slow=75						
H11S1	**WAKE ISLAND Hyl**	**26.23**	**276**	T	T	23 29 53.3	
	baz=107,slow=75						
H11S3	**WAKE ISLAND Hyl**	**26.24**	**276**	T	T	23 30 05.4	
	baz=107,slow=75						
H11N3	**WAKE ISLAND Hyl**	**26.37**	**277**	T	T	23 30 06.5	
	baz=106,slow=75						
H11N2	**WAKE ISLAND Hyl**	**26.39**	**277**	T	T	23 30 07.2	
	baz=106,slow=75						
H11N1	**WAKE ISLAND Hyl**	**26.39**	**277**	T	T	23 30 14.1	
	baz=106,slow=75						
ASAR	**Alice Springs**	**126.83**	**209**	PKP	**PKiKP**	**21 10 29.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=157,slow=2.5,SNR=5.9						
WRA	**Warramunga Arr**	**129.85**	**212**	PKP	**PKiKP**	**21 10 35.4**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=148,slow=1.7,SNR=7.2						
KURK	**Kurchatov**	**144.45**	**34**		PKPbc	21 10 59.2	+0.7
KURBB	**Kurchatov Arra**	**144.46**	**34**	PKP	PKPbc	21 10 59.2	+0.7
	comp=Z,0.3nm,0.2s,baz=301,slow=3.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**145.00**	**25**	PKP	PKPbc	21 10 59.3	-0.8
	comp=Z,3.0nm,0.8s,baz=330,slow=5.0,SNR=14						
ZALV	**Zalesovo Beam**	**145.00**	**25**		PKPbc	21 10 59.1	-1.0
MKAR	**Makanchi Array**	**148.76**	**37**	PKPbc	**PKPbc**	**21 11 11.1**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=322,slow=2.8,SNR=13						
MKAR	**Makanchi Array**	**148.76**	**37**		**PKPbc**	**21 11 09.9**	**-1.3**

*IDC **28** 20:52:16.1±1.2,15°.52S×174°.79W,h268km±13km,mb3.7/9,*
mbtmp4.3/10,Error ellipse: s-maj=47.5km s-min=12.9km
az=147.0
*NEIC **28** 20:52:17.1±1.5,15°.57S±0°.09×174°.72W±0°.09,*
h277km±4km,mb4.2/35,Error ellipse: s-maj=13.9km
s-min=12.0km az=144.0
ISC 28 20:52:15.5±0.4,15°.55S±0°.08×174°.77W±0°.06,h262km,
n102,σ0s87/99,mb4.1/24,11C-7D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.32**	**61**	P	**Pn**	**20 53 14.1**	**+1.8**
	92nm,0.5s,baz=11,slow=1.4,SNR=12						
AFI				S	**S**	**20 53 58.9**	**+1.4**
	122nm,0.4s,baz=58,slow=22,SNR=7.7						
AFI	**Afiamalu**	**3.32**	**61**		**Pn**	**20 53 14.4**	**+2.1**
AFI				Sn	**S**	**20 53 58.1**	**+0.7**
NIUE	**Niue**	**5.81**	**128**	Pn	**Pn**	**20 53 41.8**	**+0.3**
NIUE				Sn	**S**	**20 54 52.7**	**+2.3**

MSVF Nonsavu 7.22 251 P **Pn 20 54 03.3 +4.2**
28nm,0.8s,baz=82,slow=15,SNR=6.5
MSVF Nonsavu 7.22 251 **Pn 20 54 01.1 +2.0**
RAR Rarotonga 15.30 114 **P 20 55 37.5 -0.6**
KOUNC Koumac, New Ca 20.52 253 P **P 20 56 35.0 +0.6**
HNR Honiara 25.41 281 P **P 20 57 18.3 -1.2**
BFZ Birch Farm 26.23 196 P **P 20 57 25.1 -1.5**
QRZ Quartz Range 27.50 201 P **P 20 57 37.2 -0.7**
WHZ Wether Hill Ro 33.55 202 P **P 20 58 31.4 +0.6**
ARMA Armidale 34.14 238 P **P 20 58 36.5 +0.3**
ARMA IAmb IAmb 20 58 38.4
comp=Z,16nm,1.5s
COEN Coen 40.65 267 P **P 20 59 31.7 +0.9**
COEN IAmb IAmb 20 59 48.1
comp=Z,10nm,1.2s
STKA Stephens Creek 42.82 240 P **P 20 59 48.4 +0.3**
comp=Z,2.0nm,0.9s,baz=104,slow=8.5,SNR=5.3
comp=Z,2.0nm,0.9s
BBOO Buckleboo 47.60 240 P **P 21 00 25.2 -0.3**
BBOO IAmb IAmb 21 00 32.7
comp=Z,21nm,1.4s
WR8 Warramunga Arr 48.37 257 P **P 21 00 31.1 -0.5**
WRA Warramunga Arr 48.52 257 P **P 21 00 32.5 -0.3**
comp=Z,1.1nm,0.4s,baz=97,slow=7.8,SNR=8.2
WRA PcP **PcP 21 01 53.7 -0.7**
comp=Z,0.8nm,1.0s,baz=98,slow=3.0,SNR=2.4
comp=Z,1.1nm,0.4s
WRA Warramunga Arr 48.52 257 P **P 21 00 32.2 -0.5**
AS31 Alice Springs 48.81 252 P **P 21 00 34.8 -0.1**
ASAR Alice Springs 48.81 252 P **P 21 00 34.6 -0.2**
comp=Z,6.3nm,0.3s,baz=90,slow=7.6,SNR=133
ASAR PcP **PcP 21 01 54.5 -1.0**
comp=Z,0.3nm,0.4s,baz=86,slow=3.4,SNR=2.3
comp=Z,6.3nm,0.3s
ASAR Alice Springs 48.81 252 P **P 21 00 34.3 -0.6**
FORT Forrest 54.17 243 P **P 21 01 13.6 -0.7**
KNRA Kununurra 54.24 262 P **P 21 01 14.6 -0.4**
KNRA IAmb IAmb 21 01 22.5
comp=Z,8.6nm,1.2s
FITZ Fitzroy Crossi 56.88 258 P **P 21 01 33.1 -0.6**
SAO San Andreas Ge 72.33 43 P **P 21 03 11.4 -1.5**
SAO IAmb IAmb 21 03 28.5
comp=Z,4.5nm,1.0s
PEA0B Petropavlovsk- 72.38 343 P **P 21 03 12.1 -0.7**
PETK Petropavlovsk- 72.38 343 P **P 21 03 12.7 -0.1**
comp=Z,3.8nm,0.7s,baz=115,slow=5.9,SNR=6.1
comp=Z,3.8nm,0.7s
PETK Petropavlovsk- 72.38 343 P **P 21 03 12.6 -0.2**
M02C Callahan 74.22 38 P **P 21 03 25.4 +1.4**
M02C IAmb IAmb 21 03 29.9
comp=Z,5.2nm,1.1s
QSPA South Pole Qui 74.50 180 P **P 21 03 24.2 -1.1**
K02D Willamette Mer 74.56 37 P **P 21 03 25.8 -0.1**
L04D Klamath Falls 75.06 38 P **P 21 03 27.8 -0.9**
GWY Greenwater Val 75.20 45 P **P 21 03 28.6 -1.2**
GWY IAmb IAmb 21 03 35.5
comp=Z,3.4nm,1.1s
NVAR Mina Array Bea 75.33 43 P **P 21 03 31.0 +0.5**
comp=Z,2.1nm,0.7s,baz=228,slow=9.2,SNR=9.5
comp=Z,2.1nm,0.7s
NVAR Mina Array Bea 75.33 43 P **P 21 03 30.3 -0.2**
GMN Gold Mountain 75.40 44 P **P 21 03 31.3 +0.4**
NV11 Mina Array Sit 75.42 43 P **P 21 03 31.1 +0.2**
NV11 IAmb IAmb 21 03 32.0
comp=Z,2.6nm,0.8s
KVN Kaiserville 75.81 42 P **P 21 03 33.0 -0.1**
TPH Tonopah 75.84 43 P **P 21 03 33.0 -0.4**
TPH IAmb IAmb 21 03 34.9
comp=Z,3.1nm,0.8s
TPNV Topopah Spring 75.89 45 P **P 21 03 33.2 -0.5**
TPNV IAmb IAmb 21 03 34.8
comp=Z,2.7nm,0.8s
M16K Timber Creek 77.35 8 P **P 21 03 41.5 +0.4**
N19K Bonanza Creek 77.82 10 P **P 21 03 42.7 -1.0**
N19K IAmb IAmb 21 03 59.8
comp=Z,6.0nm,1.4s
M17K Holitna River 77.92 8 P **P 21 03 44.6 +0.4**
M17K IAmb IAmb 21 04 01.9
comp=Z,8.2nm,1.3s
L18K Granite Mounta 78.81 9 P **P 21 03 49.0 0.0**
L18K IAmb IAmb 21 03 58.4
comp=Z,8.4nm,1.5s
GLI Glacier Island 79.33 13 P **P 21 03 51.5 -0.3**
GLI IAmb IAmb 21 04 08.8
comp=Z,4.9nm,1.0s
J16K Anvik River 79.35 6 P **P 21 03 52.5 +0.6**
SCM Sheep Creek Mo 80.13 13 P **P 21 03 55.2 -1.0**
SCM IAmb IAmb 21 03 56.5
comp=Z,3.8nm,0.8s
TXAR Lajitas Array 81.79 57 P **P

*NNC **28** 21:51:30.5±1.3,42°.89N×78°.21E,h0km,mb1.6,mpv2.6, Error ellipse: s-maj=9.7km s-min=5.4km az=6.0*
*KRNET **28** 21:51:31.6±0.1,42°.94N×78°.11E,h30km,mb2.1*
*SOME **28** 21:51:31.9,42°.95N×78°.22E,h15km*

ISC 28 21:51:31.2±1.0,42°.93N±0°.03×78°.15E±0°.02,h6km±9km, n26,σ1ş40/52,6C-10D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.23**	**56**	P	**Pg**	**21 51 35.8**	**0.0**
	15nm,0.1s						
SATY				S	**Sg**	**21 51 38.5**	**-0.3**
	103nm,0.1s						
SATY	**Saty**	**0.23**	**56**	*e*P	**Pg**	**21 51 35.8**	**0.0**
	15nm,0.1s						
SATY				*e*S	**Sg**	**21 51 38.5**	**-0.3**
	103nm,0.1s						
ANVS	**Anan'yevo**	**0.38**	**247**	⇑*i*P	**Pg**	**21 51 39.7**	**+1.0**
ANVS				⇑*i*S	**Sg**	**21 51 45.9**	**+2.2**
PRZ	**Przheval'sk**	**0.49**	**157**	⇑*i*P	**Pb**	**21 51 41.8**	**-0.4**
PRZ				⇑*i*S	**Sb**	**21 51 49.2**	**-0.5**
KURS	**Kuram**	**0.56**	**2**	*e*P	**Pg**	**21 51 42.6**	**+0.7**
	0.8nm,0.3s						
KURS				*e*S	**Sg**	**21 51 50.2**	**+1.0**
	2.7nm,0.3s						
KPKS	**Kokpek**	**0.66**	**36**	P	**Pg**	**21 51 43.4**	**-0.5**
	0.1nm,0.1s						
KPKS				S	**Sg**	**21 51 51.4**	**-1.2**
	2.7nm,0.2s						
KPKS	**Kokpek**	**0.66**	**36**	*e*P	**Pg**	**21 51 43.4**	**-0.5**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**21 51 51.4**	**-1.2**
	2.7nm,0.2s						
UZB	**Uzynbulak**	**0.68**	**71**	P	**Pg**	**21 51 43.9**	**-0.3**
	1.0nm,0.1s						
UZB				S	**Sg**	**21 51 52.5**	**-0.6**
	1.6nm,0.1s						
UZB	**Uzynbulak**	**0.68**	**71**	*e*P	**Pg**	**21 51 43.9**	**-0.3**
UZB				*e*S	**Sg**	**21 51 52.5**	**-0.6**
MDOK	**Medeo**	**0.84**	**286**	*e*P	**Pn**	**21 51 49.3**	**-0.3**
	1.3nm,0.3s						
MDOK				*e*S	**Sn**	**21 52 01.6**	**-0.8**
	1.8nm,0.3s						
SHLS	**Shalkode**	**0.99**	**76**	P	**Pn**	**21 51 54.4**	**+2.6**
	1.6nm,0.2s						
SHLS				S	**Sn**	**21 52 10.7**	**+4.5**
	2.1nm,0.2s						
SHLS	**Shalkode**	**0.99**	**76**	*e*P	**Pn**	**21 51 54.4**	**+2.6**
	1.6nm,0.2s						
SHLS				*e*S	**Sn**	**21 52 10.7**	**+4.5**
	2.1nm,0.2s						
PDGK	**Podgornoye**	**1.06**	**68**	⇑P	**Pb**	**21 51 50.1**	**-1.9**
	1.4nm,0.7s						
PDGK				⇑S	**Sb**	**21 52 03.6**	**-2.7**
	2.4nm,0.6s						
KDJ	**Kajisay**	**1.07**	**222**	⇓*i*P	**Pb**	**21 51 51.2**	**-1.1**
KDJ				⇓*i*S	**Sb**	**21 52 05.5**	**-1.1**
BLB	**Baldybastay**	**1.19**	**12**	P	**Pg**	**21 51 54.3**	**+0.3**
	0.7nm,0.1s						
BLB				S	**Sg**	**21 52 10.2**	**+0.7**
	1.7nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.23**	**192**	⇓*i*P	**Pn**	**21 51 54.3**	**-1.0**
TARG				⇓*i*S	**Sb**	**21 52 10.8**	**-0.5**
ARXS	**Arharly**	**1.30**	**350**	*e*P	**Pb**	**21 51 56.1**	**0.0**
	0.8nm,0.4s						
ARXS				*e*S	**Sn**	**21 52 13.2**	**-0.5**
	2.7nm,0.3s						
KTBS	**Karatobe**	**1.32**	**307**	P	**Pn**	**21 51 56.3**	**+0.1**
	0.7nm,0.1s						
KTBS				S	**Sn**	**21 52 13.8**	**-0.4**
	1.7nm,0.1s						
KTBS	**Karatobe**	**1.32**	**307**	*e*P	**Pn**	**21 51 56.3**	**+0.1**
	0.7nm,0.1s						
KTBS				*e*S	**Sn**	**21 52 13.8**	**-0.4**
	1.7nm,0.1s						
ULHL	**Ulahol**	**1.56**	**245**	⇓*i*P	**Pn**	**21 51 59.5**	**-0.2**
ULHL				⇓*i*S	**Sn**	**21 52 19.6**	**-0.8**
BOOM	**Boomskoye usch**	**1.68**	**256**	⇓*i*P	**Pn**	**21 52 01.1**	**-0.2**
BOOM				⇓*i*S	**Sn**	**21 52 22.3**	**-1.0**
DGS	**Degeres**	**1.77**	**281**	*e*P	**Pg**	**21 52 05.9**	**+0.9**
	1.0nm,0.4s						
DGS				*e*S	**Sg**	**21 52 30.1**	**+2.2**
	1.1nm,0.2s						
DJR	**Jarkent**	**1.84**	**40**	P	**Pb**	**21 52 05.3**	**+0.1**
	0.9nm,0.1s						
DJR				S	**Sg**	**21 52 29.4**	**-0.9**
	2.7nm,0.2s						
DJR	**Jarkent**	**1.84**	**40**	*e*P	**Pb**	**21 52 05.3**	**+0.1**
	0.9nm,0.1s						
DJR				*e*S	**Sg**	**21 52 29.4**	**-0.9**
	2.7nm,0.2s						
TKM2	**Tokmak 2**	**1.87**	**271**	⇓*i*P	**Pn**	**21 52 03.7**	**-0.2**
TKM2				⇓*i*S	**Sn**	**21 52 26.8**	**-1.2**
KRBS	**Karabastau**	**1.96**	**294**	*e*P	**Pb**	**21 52 08.2**	**+0.9**
	1.0nm,0.4s						
KRBS				*e*S	**Sg**	**21 52 34.4**	**+0.3**
	0.7nm,0.7s						

TRN 28 22:09:58.7,16°.39N×61°.73W,h19km,MD3.5,Near North of Guadeloupe. Double event.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHSZ	**Broadband at M**	**0.12**	**197**	*e*P	Pg	22 10 04.2	+1.5
DHSZ				x	x	22 10 06.1	
DHSZ				*e*S	Sg	22 10 08.5	+3.0
DHSZ	**Broadband at M**	**0.12**	**197**	*e*	Pg	22 10 06.1	+3.3
DHSZ				*e*S	Sg	22 10 08.5	+3.0
MMLZ	**Guadeloupe Bro**	**0.35**	**171**	*e*P	Pn	22 10 07.7	-1.0
MMLZ				*e*S	Sn	22 10 14.9	-0.3
TBG	**Guadaloupe-3**	**0.54**	**172**	*e*P	Pn	22 10 10.8	-0.6
TBG				*e*S	Sn	22 10 20.3	+0.3
MBWH	**Windy Hill**	**0.56**	**308**	*e*P	Pn	22 10 11.3	-0.4
MBWH				x	x	22 10 13.4	
MBWH				*e*S	Sn	22 10 20.5	-0.1
MBWH	**Windy Hill**	**0.56**	**308**	*e*	Pn	22 10 13.4	+1.6
MBWH				*e*S	Sn	22 10 20.5	-0.1
DSDZ	**La Diserade, G**	**0.64**	**97**	*e*P	Pn	22 10 13.5	+0.8
DSDZ				x	x	22 10 16.3	
DSDZ				*e*S	Sn	22 10 24.3	+1.9
DSDZ	**La Diserade, G**	**0.64**	**97**	*e*	Pn	22 10 16.3	+3.5
DSDZ				*e*S	Sn	22 10 24.3	+1.9
DWS	**Wesley**	**0.91**	**154**	*e*P	Pn	22 10 18.1	+1.6
DWS				x	x	22 10 20.2	
DWS				*e*S	Sn	22 10 31.4	+2.3
DWS	**Wesley**	**0.91**	**154**	*e*	Pn	22 10 20.2	+3.7
DWS				*e*S	Sn	22 10 31.4	+2.3
DSLB	**Salisbury**	**0.99**	**163**	*e*P	Pg	22 10 18.9	+0.9
DSLB				x	x	22 10 20.9	
DSLB				*e*S	Sn	22 10 33.4	+2.2
DSLB	**Salisbury**	**0.99**	**163**	*e*	Pg	22 10 20.9	+2.8
DSLB				*e*S	Sn	22 10 33.4	+2.2
ANWB	**Willy Bob**	**1.27**	**358**	*e*P	Pg	22 10 22.9	-0.4
ANWB				x	x	22 10 25.6	
ANWB				*e*S	Sg	22 10 41.2	+1.3
ANWB	**Willy Bob**	**1.27**	**358**	*e*	Pg	22 10 25.6	+2.3
ANWB				*e*S	Sg	22 10 41.2	+1.3
SKI	**Saint Kitts**	**1.35**	**314**	*e*P	Pg	22 10 25.0	+0.2
SKI				*e*S	Sg	22 10 44.2	+1.9
BIM	**Bigot**	**1.97**	**161**	*e*P	Pb	22 10 33.2	-0.8
BIM				*e*S	Sb	22 10 59.9	+1.7

*IDC **28** 22:29:46.5±0.4,17°.32N×94°.25W,h133km±7km,mb3.6/12, mbtmp4.0/14,MS2.8/2,Error ellipse: s-maj=25.5km s-min=9.7km az=36.0*
*NEIC **28** 22:29:47.2±2.6,17°.21N±0°.06×94°.38W±0°.05,h143km±5km, mb4.4/42,Md4.6/117(MEX),Error ellipse: s-maj=8.8km s-min=6.5km az=205.0*
*MEX **28** 22:29:48.5±0.8,17°.22N×94°.45W,h149km±6km,MD4.6*
*GCG **28** 22:30:07.6±2.8,16°.62N×92°.87W,h23km±154km,MD5.1, Presumed earthquake*

ISC 28 22:29:46.9±0.6,17°.19N±0°.04×94°.44W±0°.04,h150km±6km, n184,σ1ş61/276,mb4.2/21,Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.44**	**257**	P	**Pn**	**22 30 08.2**	**+0.3**
	310nm,0.4s,baz=76,slow=3.4,SNR=1673						
CMIG				S	**Sn**	**22 30 23.2**	**-0.7**
	3μm,0.3s,baz=306,slow=19,SNR=47						
CMIG	**Matias Romero**	**0.44**	**257**	*i* P	**Pn**	**22 30 08.3**	**+0.3**
CMIG				*i* S	**Sn**	**22 30 23.2**	**-0.7**
MIHL	**Minatitlan**	**0.80**	**353**	*e*P	**Pn**	**22 30 10.7**	**+0.6**
MIHL				*e*S	**Sn**	**22 30 27.5**	**-0.4**
MIHL	**Minatitlan**	**0.80**	**353**		**Pn**	**22 30 10.7**	**+0.6**
MIHL					**Sn**	**22 30 27.5**	**-0.4**
CARR	**Arriaga**	**1.07**	**152**	*i* P	**Pn**	**22 30 13.1**	**+0.8**
CARR				*e*S	**Sn**	**22 30 31.6**	**0.0**
TGIG		**1.33**	**108**	*e*P	**Pn**	**22 30 14.9**	**+0.1**
TGIG				*e*S	**Sn**	**22 30 34.5**	**-1.6**
TGIG		**1.33**	**108**		**Pn**	**22 30 14.9**	**+0.1**
TGIG					**Sn**	**22 30 34.5**	**-1.6**
TGIG		**1.33**	**108**	*e*P	**Pn**	**22 30 14.6**	**-0.2**
TGIG				*e*S		22 30 27.7	-8.4
NEUV	**Arroyo Zacate**	**1.40**	**292**	*i* P	**Pn**	**22 30 15.5**	**+0.1**
NEUV				*i* S	**Sn**	**22 30 36.2**	**-1.1**
NEUV	**Arroyo Zacate**	**1.40**	**292**		**Pn**	**22 30 15.5**	**+0.1**
NEUV					**Sn**	**22 30 36.2**	**-1.1**
HUIG	**Huatulco**	**2.14**	**229**	*e*P	**Pn**	**22 30 22.4**	**-1.3**
HUIG				*e*S	**Sn**	**22 30 51.4**	**-0.5**
HUIG	**Huatulco**	**2.14**	**229**		**Pn**	**22 30 22.4**	**-1.3**
HUIG					**Sn**	**22 30 51.4**	**-0.5**
HUIG	**Huatulco**	**2.14**	**229**	*e*P	**Pn**	**22 30 21.9**	**-1.8**
OXIG	**Oaxaca**	**2.19**	**267**		**Pn**	**22 30 25.8**	**+1.2**
OXIG					**Sn**	**22 30 54.0**	**+0.6**
VHO	**Vista Hermosa**	**2.19**	**267**	*e*P	**Pn**	**22 30 25.8**	**+1.2**
VHO				*e*S	**Sn**	**22 30 54.0**	**+0.6**
TOIG	**Toxpalan**	**2.66**	**290**	*e*P	**Pn**	**22 30 31.0**	**+0.9**
TOIG				*e*S	**Sn**	**22 31 02.7**	**-0.7**
TOIG	**Toxpalan**	**2.66**	**290**		**Pn**	**22 30 31.0**	**+0.9**
TOIG					**Sn**	**22 31 02.7**	**-0.7**
PEIG	**Puerto Escondi**	**2.85**	**246**	*e*P	**Pn**	**22 30 31.1**	**-1.4**
PEIG				*e*S	**Sn**	**22 31 05.2**	**-2.5**
PEIG	**Puerto Escondi**	**2.85**	**246**		**Pn**	**22 30 31.1**	**-1.4**
PEIG					**Sn**	**22 31 05.2**	**-2.5**
PAVE	**Pavencul**	**2.95**	**132**	*e*P	**Pn**	**22 30 34.6**	**+0.7**
PAVE				*e*S	**Sn**	**22 31 10.2**	**0.0**
PAVE	**Pavencul**	**2.95**	**132**		**Pn**	**22 30 34.6**	**+0.7**
PAVE					**Sn**	**22 31 10.2**	**0.0**
PATR	**El Naranjo**	**2.96**	**134**	*e*P	**Pn**	**22 30 34.6**	**+0.5**
PATR				*e*S	**Sn**	**22 31 09.5**	**-0.9**
PATR	**El Naranjo**	**2.96**	**134**		**Pn**	**22 30 34.6**	**+0.5**
PATR					**Sn**	**22 31 09.5**	**-0.9**
YOIG	**Yosondua**	**2.99**	**264**	*e*P	**Pn**	**22 30 34.7**	**+0.3**
YOIG				*e*S	**Sn**	**22 31 10.6**	**-0.6**
YOIG	**Yosondua**	**2.99**	**264**		**Pn**	**22 30 34.7**	**+0.3**
YOIG					**Sn**	**22 31 10.6**	**-0.6**
TPIG	**Tehuac#an**	**3.04**	**294**	*e*P	**Pn**	**22 30 35.1**	**+0.2**
TPIG				*e*S	**Sn**	**22 31 10.8**	**-1.3**
TPIG	**Tehuac#an**	**3.04**	**294**		**Pn**	**22 30 35.1**	**+0.2**
TPIG					**Sn**	**22 31 10.8**	**-1.3**
CHUJ	**Union Juarez**	**3.06**	**133**	*e*P	**Pn**	**22 30 36.0**	**+0.6**
CHUJ				*e*S	**Sn**	**22 31 12.9**	**+0.1**
THIG		**3.09**	**137**	*e*P	**Pn**	**22 30 36.2**	**+0.7**
THIG				*e*S	**Sn**	**22 31 13.1**	**+0.1**
THIG		**3.09**	**137**		**Pn**	**22 30 36.2**	**+0.7**
THIG					**Sn**	**22 31 13.1**	**+0.1**
THIG		**3.09**	**137**	*e*P	**Pn**	**22 30 37.3**	**+1.8**
LVIG	**Laguna Verde**	**3.14**	**324**	*e*P	**Pn**	**22 30 35.3**	**-0.8**
LVIG				*e*S	**Sn**	**22 31 11.0**	**-3.1**
LVIG	**Laguna Verde**	**3.14**	**324**		**Pn**	**22 30 35.3**	**-0.8**
LVIG					**Sn**	**22 31 11.0**	**-3.1**
TXIG	**Tlaxiaco**	**3.18**	**272**	*e*P	**Pn**	**22 30 37.6**	**+0.7**
TXIG				*e*S	**Sn**	**22 31 13.3**	**-2.1**
TXIG	**Tlaxiaco**	**3.18**	**272**		**Pn**	**22 30 37.6**	**+0.7**
TXIG					**Sn**	**22 31 13.3**	**-2.1**
HLIG	**Huajuapan de L**	**3.27**	**282**	*e*P	**Pn**	**22 30 38.4**	**+0.5**
HLIG				*e*S	**Sn**	**22 31 11.2**	**-6.3**
HLIG	**Huajuapan de L**	**3.27**	**282**		**Pn**	**22 30 38.4**	**+0.5**
HLIG					**Sn**	**22 31 11.2**	**-6.3**
HUEH	**Huehuetenango**	**3.38**	**123**		**Pn**	**22 30 39.2**	**-0.2**
HUEH	**Huehuetenango**	**3.38**	**123**	*e*P	**Pn**	**22 30 39.5**	**0.0**
SCIG	**Sabancuy**	**3.56**	**60**	*e*P	**Pn**	**22 30 40.2**	**-1.2**
SCIG				*e*		22 31 20.2	
SCIG	**Sabancuy**	**3.56**	**60**		**Pn**	**22 30 40.2**	**-1.2**
SCIG	**Sabancuy**	**3.56**	**60**	*i* P	**Pn**	**22 30 40.3**	**-1.2**
FTIG	**Fresnillo de T**	**3.59**	**282**	*e*P	**Pn**	**22 30 43.1**	**+1.1**
FTIG				*e*S	**Sn**	**22 31 20.4**	**-4.3**
FTIG	**Fresnillo de T**	**3.59**	**282**		**Pn**	**22 30 43.1**	**+1.1**
FTIG					**Sn**	**22 31 20.4**	**-4.3**
RTAL	**Retalhuleu**	**3.75**	**135**	Pn	**Pn**	**22 30 45.0**	**+1.1**
TLIG	**Tlapa**	**3.96**	**276**	*e*P	**Pn**	**22 30 47.6**	**+0.8**
TLIG				*e*S	**Sn**	**22 31 30.9**	**-2.3**
TLIG	**Tlapa**	**3.96**	**276**	Pn	**Pn**	**22 30 47.8**	**+1.0**
TLIG	**Tlapa**	**3.96**	**276**		**Sn**	**22 31 30.9**	**-2.3**
PHPU	**Puebla**	**3.99**	**298**	*e*P	Pn	22 30 41.2	-6.2
PHPU				*e*S	**Sn**	**22 31 33.0**	**-1.3**
PHPU	**Puebla**	**3.99**	**298**		Pn	22 30 41.2	-6.2
PHPU					**Sn**	**22 31 33.0**	**-1.3**
MGIG	**Malinaltepec**	**4.01**	**271**	*e*P	**Pn**	**22 30 48.2**	**+0.7**
MGIG				*e*S	**Sn**	**22 31 32.2**	**-2.3**
MGIG	**Malinaltepec**	**4.01**	**271**		**Pn**	**22 30 48.2**	**+0.7**
MGIG					**Sn**	**22 31 32.2**	**-2.3**
STG8	**El Palmar, Qui**	**4.04**	**132**	*e*P	Pn	22 30 43.7	-4.2
PPAX	**Atlixo**	**4.16**	**295**	*e*P	**Pn**	**22 30 51.0**	**+1.5**
PPAX				*e*S	**Sn**	**22 31 37.0**	**-1.0**
PBCV	**Popocatepetl**	**4.30**	**295**	*e*P	**Pn**	**22 30 52.9**	**+1.4**
PBCV				*e*S	**Sn**	**22 31 40.6**	**-1.0**
PPCU	**Popocatapetl**	**4.37**	**295**	*e*P	**Pn**	**22 30 52.4**	**-0.1**
PPCU				*e*S	**Sn**	**22 31 41.2**	**-2.2**
PETF	**Flores**	**4.38**	**93**	Pn	**Pn**	**22 30 51.3**	**-0.9**
PETF	**Flores**	**4.38**	**93**	*e*P	**Pn**	**22 30 52.3**	**0.0**
PBPN	**Popocatepetl**	**4.39**	**295**	*e*P	**Pn**	**22 30 55.5**	**+2.8**
PBPN				*e*S	**Sn**	**22 31 43.7**	**-0.2**
PPMI	**Popocatepetl**	**4.39**	**296**	*e*P	**Pn**	**22 30 54.9**	**+2.1**
PPMI				*e*S	**Sn**	**22 31 41.6**	**-2.5**
PPIG	**Popocatepetl**	**4.40**	**296**		**Pn**	**22 30 54.9**	**+2.1**
PPIG					**Sn**	**22 31 41.6**	**-2.5**
PBXN	**Popocatepetl**	**4.40**	**295**	*e*P	**Pn**	**22 30 52.8**	**-0.1**
PBXN				*e*		22 31 36.7	
APG	**El Apazote**	**4.40**	**119**	P	**Pn**	**22 30 51.4**	**-1.3**
	0.9nm,0.2s,baz=84,slow=16,SNR=21						
APG				S	**Sn**	**22 31 40.5**	**-3.2**
	4.9nm,0.4s,baz=213,slow=16,SNR=8.5						
APG	**El Apazote**	**4.40**	**119**	*e*P	**Pn**	**22 30 51.7**	**-0.9**
CRIG	**Cruz Grande**	**4.51**	**265**	*e*P	**Pn**	**22 30 53.3**	**-0.6**
CRIG				*e*S	**Sn**	**22 31 43.1**	**-0.8**
CRIG	**Cruz Grande**	**4.51**	**265**		**Pn**	**22 30 53.3**	**-0.6**
CRIG					**Sn**	**22 31 45.2**	**-0.8**
YAIG	**Yautepec**	**4.70**	**291**	*e*P	**Pn**	**22 30 57.7**	**+1.1**
YAIG				*e*S	**Sn**	**22 31 48.7**	**-2.1**
YAIG	**Yautepec**	**4.70**	**291**		**Pn**	**22 30 57.7**	**+1.1**
YAIG					**Sn**	**22 31 48.7**	**-2.1**
MPVM	**San Francisco**	**4.78**	**295**	*e*P	**Pn**	**22 30 57.9**	**+0.2**
MPVM				*e*S	**Sn**	**22 31 50.9**	**-1.9**
MPVM	**San Francisco**	**4.78**	**295**		**Pn**	**22 30 57.9**	**+0.2**
MPVM					**Sn**	**22 31 50.9**	**-1.9**
XCVM	**Xochimilco**	**4.89**	**295**	*e*P	**Pn**	**22 30 59.1**	**-0.1**
XCVM				*e*S	**Sn**	**22 31 54.0**	**-1.5**
XCVM	**Xochimilco**	**4.89**	**295**		**Pn**	**22 30 59.1**	**-0.1**
XCVM					**Sn**	**22 31 54.0**	**-1.5**
TLVM	**San Miguel Top**	**4.91**	**295**	*e*P	**Pn**	**22 31 01.8**	**+2.3**
TLVM				*e*S	**Sn**	**22 31 53.4**	**-2.5**
TLVM	**San Miguel Top**	**4.91**	**295**		**Pn**	**22 31 01.8**	**+2.3**
TLVM					**Sn**	**22 31 53.4**	**-2.5**
MZVM		**4.97**	**294**	*e*P	**Pn**	**22 31 01.8**	**+1.9**
MZVM				*e*S	**Sn**	**22 31 56.4**	**-0.4**
MZVM		**4.97**	**294**		**Pn**	**22 31 01.8**	**+1.9**
MZVM					**Sn**	**22 31 56.4**	**-0.4**
PLIG	**Platanillo**	**4.97**	**285**	*e*P	**Pn**	**22 31 01.9**	**+1.9**
PLIG				*e*S	**Sn**	**22 31 53.0**	**-4.0**
PLIG	**Platanillo**	**4.97**	**285**		**Pn**	**22 31 01.9**	**+1.9**
PLIG					**Sn**	**22 31 53.0**	**-4.0**
DAIG	**Los Arroyos**	**4.99**	**269**	*e*P	**Pn**	**22 30 59.4**	**-0.8**
DAIG				*e*S	**Sn**	**22 31 55.2**	**-2.1**
DAIG	**Los Arroyos**	**4.99**	**269**		**Pn**	**22 30 59.4**	**-0.8**
DAIG					**Sn**	**22 31 55.2**	**-2.1**
MEIG	**Mezcala**	**4.99**	**279**	*e*P	**Pn**	**22 31 01.0**	**+0.6**
MEIG				*e*S	**Sn**	**22 31 54.3**	**-3.4**
MEIG	**Mezcala**	**4.99**	**279**		**Pn**	**22 31 01.0**	**+0.6**
MEIG					**Sn**	**22 31 54.3**	**-3.4**
PTVM	**Pico Tres Padr**	**5.04**	**299**	*e*P	**Pn**	**22 31 02.3**	**+1.2**
PTVM				*e*S	**Sn**	**22 31 57.4**	**-1.5**
PTVM	**Pico Tres Padr**	**5.04**	**299**		**Pn**	**22 31 02.3**	**+1.2**
PTVM					**Sn**	**22 31 57.4**	**-1.5**
AOVM	**Tlapan**	**5.08**	**295**	*e*P	**Pn**	**22 31 03.3**	**+1.4**
AOVM				*e*S	**Sn**	**22 31 58.0**	**-2.2**
AOVM	**Tlapan**	**5.08**	**295**		**Pn**	**22 31 03.3**	**+1.4**
AOVM					**Sn**	**22 31 58.0**	**-2.2**
MAVM	**Malinalco, Edo**	**5.12**	**291**	*e*P	**Pn**	**22 31 03.0**	**+0.8**
MAVM				*e*S	**Sn**	**22 31 59.5**	**-1.2**
MAVM	**Malinalco, Edo**	**5.12**	**291**		**Pn**	**22 31 03.0**	**+0.8**
MAVM					**Sn**	**22 31 59.5**	**-1.2**
DEIG	**Demacu**	**5.34**	**306**	*e*P	**Pn**	**22 31 07.0**	**+1.9**
DEIG				*e*S	**Sn**	**22 32 03.9**	**-2.2**
DHIG	**Demacu**	**5.34**	**306**		**Pn**	**22 31 07.0**	**+1.9**
DHIG					**Sn**	**22 32 03.9**	**-2.2**
ESQI	**Esquipulas**	**5.56**	**117**	Pn	**Pn**	**22 31 09.1**	**+1.1**
CAIG	**El Cayaco**	**5.57**	**269**	*e*P	**Pn**	**22 31 08.0**	**+0.1**
CAIG				*e*S	**Sn**	**22 32 09.5**	**-1.8**
CAIG	**El Cayaco**	**5.57**	**269**		**Pn**	**22 31 08.0**	**+0.1**
CAIG					**Sn**	**22 32 09.5**	**-1.8**
MTO3	**Montecristo**	**5.62**	**119**	*e*P	**Pn**	**22 31 07.6**	**-1.3**
TEIG	**Tepich**	**6.57**	**62**	Pn	**Pn**	**22 31 19.0**	**-2.3**
ZIIG	**Zihuatanejo**	**6.72**	**275**	*e*P	**Pn**	**22 31 23.7**	**+0.4**
ZIIG				*e*S	**Sn**	**22 32 37.2**	**-1.5**
ZIIG	**Zihuatanejo**	**6.72**	**275**		**Pn**	**22 31 23.7**	**+0.4**
ZIIG					**Sn**	**22 32 37.2**	**-1.5**
MOIG	**Morelia**	**6.87**	**292**	*e*P	**Pn**	**22 31 25.7**	**+0.3**
MOIG				*e*S	**Sn**	**22 32 41.6**	**-1.0**
MOIG	**Morelia**	**6.87**	**292**	Pn	**Pn**	**22 31 28.1**	**+2.6**
MOIG	**Morelia**	**6.87**	**292**		**Sn**	**22 32 41.6**	**-1.0**
RPIG	**Rio Verde**	**7.01**	**313**	*e*P	**Pn**	**22 31 28.1**	**+0.9**
RPIG				*e*S	**Sn**	**22 32 44.4**	**-1.4**
RPIG	**Rio Verde**	**7.01**	**313**		**Pn**	**22 31 28.1**	**+0.9**
RPIG					**Sn**	**22 32 44.4**	**-1.4**
MMIG	**Aquila**	**8.55**	**279**	*e*P	**Pn**	**22 31 49.2**	**+1.4**
MMIG				*e*S	**Sn**	**22 33 20.9**	**-2.0**
MMIG	**Aquila**	**8.55**	**279**		**Pn**	**22 31 49.2**	**+1.4**
MMIG					**Sn**	**22 33 20.9**	**-2.0**
INCO	**Volcan de Coli**	**9.01**	**286**	*e*P	**Pn**	**22 31 56.4**	**+2.3**
INCO				*e*S	**Sn**	**22 33 33.8**	**-0.6**
CEGR	**Campo Tres**	**9.21**	**285**	*e*P	**Pn**	**22 31 58.5**	**+1.8**
CEGR				*e*S	**Sn**	**22 33 36.4**	**-2.6**
CEGR	**Campo Tres**	**9.21**	**285**		**Pn**	**22 31 58.5**	**+1.8**
CEGR					**Sn**	**22 33 36.4**	**-2.6**
CDAR	**Ciudad de Arme**	**9.27**	**282**	*e*P	**Pn**	**22 31 57.8**	**+0.5**
CDAR				*e*S	**Sn**	**22 33 38.7**	**-1.4**
CIHU	**Emiliano Zapat**	**10.00**	**283**	*e*P	**Pn**	**22 32 08.2**	**+1.2**
CIHU				*e*P		22 32 08.6	
CIHU				*e*S	**Sn**	**22 33 56.4**	**-1.4**
CIHU				*e*S		22 33 56.7	
CIHU	**Emiliano Zapat**	**10.00**	**283**		**Pn**	**22 32 08.2**	**+1.2**
CIHU					**Sn**	**22 33 56.7**	**-1.0**
CJM	**Chamela**	**10.33**	**284**	*e*P	**Pn**	**22 32 14.6**	**+3.3**
CJM				*e*S	**Sn**	**22 34 01.6**	**-4.1**
ESTA	**Talpa de Allen**	**10.36**	**290**	*e*P	**Pn**	**22 32 12.0**	**+0.2**
ESTA				*e*S	**Sn**	**22 34 08.1**	**+1.5**
ESTA	**Talpa de Allen**	**10.36**	**290**		**Pn**	**22 32 12.0**	**+0.2**
ESTA					**Sn**	**22 34 08.1**	**+1.5**
TOMAT	**Tomatlan**	**10.60**	**287**	*e*P	**Pn**	**22 32 18.4**	**+3.5**
TOMAT				*e*S	**Sn**	**22 34 11.0**	**-1.3**
YELA	**Yelapa**	**10.93**	**289**	*e*P	**Pn**	**22 32 22.2**	**+2.8**
YELA				*e*P	**P**	**22 32 23.7**	**+4.3**
YELA				*e*S	**Sn**	**22 34 18.0**	**-2.4**
YELA				*e*S	**Sn**	**22 34 19.3**	**-1.0**
YELA	**Yelapa**	**10.93**	**289**		**Pn**	**22 32 22.2**	**+2.8**
YELA					**Sn**	**22 34 19.3**	**-1.0**
JTS	**Las Juntas de**	**11.49**	**125**	P	**Pn**	**22 32 27.2**	**+0.5**
	5.4nm,0.3s,baz=321,slow=18,SNR=5.7						
JTS				S	**Sn**	**22 34 32.6**	**-1.2**
	2.1nm,0.3s,baz=41,slow=19,SNR=1.8						
HNDO	**Hondo**	**13.05**	**341**	P	**P**	**22 32 51.5**	**0.0**
TXAR	**Lajitas Array**	**14.75**	**327**	P	**P**	**22 33 10.6**	**+0.1**
	1.0nm,0.7s,baz=146,slow=13,SNR=12						
TXAR	**Lajitas Array**

EKA	**Eskdalemuir Ar**	**76.77**	**36**	P		**P**	**22 41 21.7**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=281,slow=5.5,SNR=6.2							
	comp=Z,1.5nm,0.6s							
ESDC	**Sonseca Array**	**79.59**	**52**	P		**P**	**22 41 37.9**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=303,slow=6.8,SNR=6.9							
	comp=Z,1.2nm,0.9s							
ESDC	**Sonseca Array**	**79.59**	**52**	P		**P**	**22 41 38.2**	**+0.5**
NB2	**NORSAR Subarra**	**82.47**	**28**	P		**P**	**22 41 53.5**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=290,slow=5.1							
NOA	**NORSAR Array B**	**82.47**	**28**	P		**P**	**22 41 53.0**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=294,slow=5.2,SNR=6.4							
	comp=Z,1.7nm,0.8s							
ARCES	**ARCESS Array B**	**83.85**	**18**	P		**P**	**22 41 60.0**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=302,slow=4.9,SNR=13							
	comp=Z,3.4nm,0.7s							
ARCES	**ARCESS Array B**	**83.85**	**18**	P		**P**	**22 42 00.3**	**+0.9**
ARCES				IAmb		IAmb	22 42 25.7	
	comp=Z,9.7nm,1.3s							
HFS	**Hagfors**	**83.95**	**29**	LR		LR	23 19 02.6	
	comp=Z,9.0nm,18.1s,baz=64,slow=35							
FINES	**FINESS Array B**	**88.60**	**24**	P		**P**	**22 42 22.8**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=289,slow=4.3,SNR=5.7							
	comp=Z,1.2nm,0.9s							
FINES	**FINESS Array B**	**88.60**	**24**	P		**P**	**22 42 22.1**	**-0.6**
ZCCA	**Zocca**	**88.72**	**44**	P		**P**	**22 42 24.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**91.90**	**76**	P		**P**	**22 42 38.0**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=280,slow=4.2,SNR=2.3							
	comp=Z,0.5nm,0.8s							
HHC	**Hu-ho-hao-te**	**117.41**	**338**	*e*P		**PKiKP**	**22 48 14.0**	**-1.2**
WRA	**Warramunga Arr**	**133.80**	**259**	PKP		**PKiKP**	**22 48 47.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=84,slow=2.7,SNR=12							
WRA	**Warramunga Arr**	**133.80**	**259**			**PKiKP**	**22 48 48.0**	**-0.2**
PZH	**PanZhiHua**	**133.81**	**340**	PKP		**PKiKP**	**22 48 47.3**	**-1.0**
ASAR	**Alice Springs**	**134.41**	**254**	PKP		**PKiKP**	**22 48 48.9**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=84,slow=2.5,SNR=5.5							
MBWA	**Marble Bar**	**147.52**	**258**	PKPbc		**PKiKP**	**22 49 15.1**	**-1.1**

*IDC **28** 22:37:14.9±2.7,31°.89N×140°.45E,h58km±21km,mb3.3/6, mbtmp3.5/8,ML3.2/2,Error ellipse: s-maj=39.0km s-min=20.1km az=79.0*
*JMA **28** 22:37:16.4±0.2,32°.1N±0°.8×140°.7E±0°.8,h27km,MV4.5/32, E OFF HACHIJOJIMA ISLAND*
ISC 28 22:37:13.8±2.3,31°.9N±0°.1×140°.7E±0°.1,h54km±19km**,n26,** σ1°.**39**/32**,mb3.6/6,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**0.98**	**309**	P	**Pn**	**22 37 32.9**	**+1.6**
JHCJ	**Hachijojimakas**	**1.42**	**329**	P	**Pn**	**22 37 38.1**	**+0.8**
JHCJ				S	**Sn**	22 37 53.6	-1.2
JHJ2	**Mitsune**	**1.44**	**330**	*e*P	**Pn**	**22 37 38.6**	**+1.1**
JHJ2				*e*S	**Sn**	22 37 54.4	-1.0
JHJ	**Hachijo jima 2**	**1.46**	**330**	P	**Pn**	**22 37 38.7**	**+0.8**
	144nm,0.3s,baz=60,slow=22,SNR=45						
JHJ				S	**Sn**	22 37 53.7	-2.3
	684nm,0.2s,baz=201,slow=22,SNR=18						
JMKN	**Mikurajimanish**	**2.22**	**336**	*e*P	**Pn**	**22 37 49.3**	**+1.1**
JMKN				S	**Sn**	22 38 13.4	-1.0
JMYK	**Miyake Tsubota**	**2.39**	**337**	P	**Pn**	**22 37 52.5**	**+2.0**
JMYK				*e*S	**Sn**	22 38 18.4	-0.2
JKO	**Kozu shima**	**2.66**	**331**	*e*P	**Pn**	**22 37 56.2**	**+2.1**
JKO				*e*S	**Sn**	22 38 25.8	+0.7
BSO1	**Boso 1**	**2.80**	**5**	*e*P	**Pn**	**22 37 56.2**	**+0.6**
BSO1				*e*S	**Sn**	22 38 25.7	-2.2
BSO3	**Boso 3**	**2.94**	**357**	*e*P	**Pn**	**22 37 57.4**	**-0.4**
BSO3				S	**Sn**	22 38 29.7	-2.0
BSO4	**Boso 4**	**3.14**	**355**	*e*P	**Pn**	**22 38 02.2**	**+1.6**
BSO4				*e*S	**Sn**	22 38 36.4	-0.4
JOD2	**Odawara 2**	**3.65**	**339**	*e*P	**Pn**	**22 38 09.5**	**+1.8**
JHMK	**Hamakita**	**3.83**	**321**	*e*P	**Pn**	**22 38 12.9**	**+2.8**
MJAR	**Matsushiro Arr**	**5.10**	**337**	P	**Pn**	**22 38 27.7**	**+0.1**
	0.3nm,0.3s,baz=161,slow=11,SNR=8.2						
MJAR				S	**Sn**	**22 39 24.8**	**-0.3**
	5.4nm,0.6s,baz=154,slow=22,SNR=5.8						
	0.9nm,0.3s						
JNU	**Nakatsue**	**8.37**	**281**	P	**Pn**	**22 39 11.0**	**-1.4**
	0.4nm,0.3s,baz=117,slow=18,SNR=4.7						
	1.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**26.45**	**111**	T	T	23 11 42.7	
	baz=304,slow=75						
H11N1	**WAKE ISLAND Hy**	**26.45**	**111**	T	T	23 11 54.4	
	baz=304,slow=75						
H11N3	**WAKE ISLAND Hy**	**26.47**	**111**	T	T	23 11 52.9	
	baz=304,slow=75						
H11S3	**WAKE ISLAND Hy**	**26.96**	**113**	T	T	23 11 28.5	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**26.96**	**113**	T	T	23 11 28.9	
	baz=304,slow=74						
H11S2	**WAKE ISLAND Hy**	**26.98**	**113**	T	T	23 11 29.2	
	baz=304,slow=74,SNR=5.7						
MKAR	**Makanchi Array**	**46.51**	**306**	P	**P**	**22 45 35.3**	**-0.4**
	0.2nm,0.3s,baz=87,slow=9.1,SNR=4.7						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**48.84**	**312**	P	**P**	**22 45 53.5**	**-0.1**
	0.3nm,0.6s,baz=89,slow=7.1,SNR=3.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**51.86**	**188**	P	**P**	**22 46 16.3**	**-0.4**
	0.3nm,0.4s,baz=5.1,slow=7.5,SNR=5.4						
WRA				PcP	**PcP**	**22 47 30.6**	**+1.7**
	0.4nm,0.6s,baz=4.9,slow=4.5,SNR=2.1						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**53.70**	**315**	P	**P**	**22 46 28.9**	**-1.0**
	0.5nm,0.6s,baz=90,slow=5.9,SNR=3.5						
BVAR				PcP	**PcP**	**22 47 36.0**	**+0.5**
	0.2nm,0.4s,baz=90,slow=1.4,SNR=1.8						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**73.11**	**333**	P	**P**	**22 48 37.6**	**-0.4**
	1.3nm,0.8s,baz=48,slow=2.3,SNR=2.3						
	1.3nm,0.8s						
TXAR	**Lajitas Array**	**93.78**	**52**	P	**P**	**22 50 26.1**	**+0.8**
	0.2nm,0.8s,baz=318,slow=4.6,SNR=1.8						
	0.2nm,0.8s						

*IDC **28** 22:58:55.6±1.2,33°.03S×178°.09W,h0km,mb4.3/3, mbtmp4.3/4,ML4.4/1,Error ellipse: s-maj=36.0km s-min=26.1km az=97.0*
*WEL **28** 22:58:55.1±0.6,33°.5S±5°×17°.8W±1°.2,h12km,M4.3/25, mB4.8/17,ML4.9/25,MLv5.0/25,Mw(mB)4.0/17,Error ellipse: s-maj=16.8km s-min=3.2km az=109.5*
*NEIC **28** 22:58:57.6±1.5,33°.1S±0°.1×178°.1W±0°.2,h10km±1km, mb4.5/11,Error ellipse: s-maj=32.9km s-min=17.0km az=89.0*
ISC 28 22:58:56.1±0.8,33°.24S±0°.06×178°.2W±0°.1,h10km**,n79,** σ1°.**61**/75**,mb4.5/8,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.97**	**3**	P	**Pn**	**22 59 55.6**	**-1.4**
GLKZ				S	**Sn**	23 00 42.7	-0.9
RAO	**Raoul Island**	**3.98**	**3**	Pn	**Pn**	**22 59 56.7**	**-0.4**
	30nm,0.3s,baz=105,slow=20,SNR=1.2						
RAO				Sn	**Sn**	**23 00 41.8**	**-2.0**
	190nm,0.3s,baz=74,slow=19,SNR=5.3						
	109nm,0.3s						
RAO	**Raoul Island**	**3.98**	**3**		**Pn**	**22 59 56.4**	**-0.8**
RIZ	**Raoul Island**	**3.98**	**3**	P	**Pn**	**22 59 56.4**	**-0.8**
RIZ				S	**Sn**	23 00 43.2	-0.8
MXZ	**Matakaoa Point**	**5.20**	**213**	Pn	**Pn**	**23 00 12.6**	**-1.3**
MXZ	**Matakaoa Point**	**5.20**	**213**	P	**Pn**	**23 00 12.7**	**-1.3**
MXZ				S	**Sn**	23 01 12.2	-1.8
WMGZ	**Waiomatatini S**	**5.37**	**211**	P	**Pn**	**23 00 15.3**	**-0.9**
WMGZ				S	**Sn**	23 01 17.7	-0.3
HAZ	**Te Kaha**	**5.60**	**215**	P	**Pn**	**23 00 20.3**	**+0.8**
HAZ				S	**Sn**	23 01 25.0	+1.2
PUZ	**Puketiti**	**5.64**	**210**	P	**Pn**	23 00 18.1	-1.9
PUZ				S	**Sn**	**23 01 22.8**	**-2.2**
RUGZ	**Raukumara Rang**	**5.82**	**215**	P	**Pn**	**23 00 22.2**	**-0.4**
TWGZ	**Tauwhareparae**	**5.85**	**211**	P	**Pn**	**23 00 22.2**	**-0.8**
TWGZ				S	**Sn**	23 01 29.3	-0.8
CNGZ	**Carnagh Statio**	**6.02**	**208**	P	**Pn**	**23 00 23.5**	**-1.6**
CNGZ				S	**Sn**	23 01 33.3	-0.8
TKGZ	**Te Karaka**	**6.13**	**211**	P	**Pn**	**23 00 27.9**	**+1.2**
TKGZ				S	**Sn**	23 01 34.8	-2.0
MWZ	**Matawai**	**6.18**	**213**	P	**Pn**	**23 00 26.9**	**-0.6**
MWZ				S	**Sn**	23 01 36.1	-2.2
URZ	**Urewera**	**6.32**	**216**	Pn	**Pn**	**23 00 28.1**	**-1.3**
	1.3nm,0.3s,baz=264,slow=4.3,SNR=16						
URZ				Sn	**Sn**	**23 01 39.3**	**-2.4**
	23nm,0.3s,baz=211,slow=22,SNR=22						
URZ	**Urewera**	**6.32**	**216**	P	**Pn**	**23 00 28.5**	**-0.9**
URZ				S	**Sn**	23 01 39.9	-1.8
RAGZ	**Rawiri**	**6.37**	**213**	P	**Pn**	**23 00 28.8**	**-1.3**
RAGZ				S	**Sn**	**23 01 40.2**	**-2.7**
PRGZ	**Paritu Road**	**6.52**	**208**	P	Pn	23 00 29.8	-2.4
KNZ	**Kokohu**	**6.69**	**209**	P	Pn	23 00 31.9	-2.5
MHGZ	**Mahia Peninsul**	**6.71**	**207**	P	Pn	23 00 32.2	-2.5
TOZ	**Tahuroa Road**	**6.85**	**227**	Pn	**Pn**	**23 00 35.3**	**-1.4**
RAHZ	**Arahi**	**6.86**	**213**	P	**Pn**	**23 00 37.0**	**+0.2**
RAHZ				S	**Sn**	**23 01 52.2**	**-2.7**
MTHZ	**Maungataniwha**	**6.92**	**214**	P	**Pn**	**23 00 37.1**	**-0.5**
MTHZ				S	**Sn**	**23 01 54.4**	**-2.1**
OUZ	**Omahuta**	**7.12**	**252**	P	Pn	23 00 47.4	+7.1
ARHZ	**Aropaoanui**	**7.18**	**212**	P	**Pn**	**23 00 40.1**	**-1.0**
ARHZ				S	**Sn**	**23 01 60.0**	**-2.8**
CKHZ	**Cape Kidnapper**	**7.47**	**210**	P	**Pn**	**23 00 44.4**	**-0.8**
CKHZ				S	Sn	23 02 04.9	-5.1
KWHZ	**Kaweka Forest**	**7.57**	**214**	P	**Pn**	**23 00 46.0**	**-0.6**
KAHZ	**Kahuranaki**	**7.67**	**210**	P	Pn	23 00 44.3	-3.7
TMVZ	**Te Maari**	**7.69**	**219**	P	**Pn**	**23 00 50.1**	**+1.8**
NTVZ	**North Tongarir**	**7.69**	**219**	P	**Pn**	**23 00 48.1**	**-0.2**
ETVZ	**East Tongariro**	**7.70**	**218**	P	**Pn**	**23 00 48.9**	**+0.5**
OTVZ	**Oturere**	**7.75**	**218**	P	**Pn**	**23 00 50.0**	**+0.9**
SNVZ	**South Ngauruho**	**7.78**	**218**	P	**Pn**	**23 00 49.5**	**+0.1**
NGZ	**Ngauruhoe**	**7.79**	**219**	P	**Pn**	**23 00 53.6**	**+4.0**
TUVZ	**Tukino**	**7.83**	**218**	P	**Pn**	**23 00 54.4**	**+4.2**
WNVZ	**Wahianoa**	**7.90**	**218**	P	**Pn**	**23 00 50.3**	**-0.9**
PNHZ	**Pukenui**	**8.07**	**213**	P	Pn	23 00 50.7	-2.7
PRHZ	**Porangahau**	**8.17**	**209**	P	Pn	23 00 51.1	-3.7
BFZ	**Birch Farm**	**8.68**	**210**	Pn	**Pn**	**23 01 02.0**	**+0.3**
BFZ	**Birch Farm**	**8.68**	**210**	P	Pn	23 00 57.6	-4.1
MRZ	**Mangatainoka R**	**8.95**	**212**	P	Pn	23 01 01.6	-3.8
OGWZ	**Otaki Gorge**	**9.26**	**213**	P	Pn	23 01 07.7	-2.0
KIW	**Kapiti Island**	**9.42**	**214**	P	Pn	23 01 09.1	-2.7
PAWZ	**Paruwai Farm**	**9.61**	**210**	P	Pn	23 01 11.1	-3.3
MSWZ	**Moikau Station**	**9.71**	**211**	P	Pn	23 01 13.7	-2.1
DUWZ	**D'Urville Isla**	**9.86**	**218**	P	**Pn**	**23 01 17.9**	**+0.1**
TCW	**Tory Channel**	**9.99**	**215**	P	Pn	23 01 17.0	-2.6
CTZ	**Chatham Island**	**10.55**	**174**	P	**Pn**	**23 01 25.3**	**-2.1**
MRNZ	**Matariki Terra**	**10.90**	**219**	P	Pn	23 01 30.1	-2.0
THZ	**Tophouse**	**11.08**	**217**	P	**Pn**	**23 01 33.7**	**-1.0**
KHZ	**Kahutara**	**11.27**	**213**	P	**Pn**	**23 01 36.3**	**-0.9**
GVZ	**Greta Valley S**	**11.94**	**213**	P	**Pn**	**23 01 44.5**	**-1.8**
LTZ	**Lake Taylor**	**12.15**	**216**	P	Pn	23 01 45.8	-3.5
RPZ	**Rata Peaks**	**13.44**	**216**	Pn	Pn	23 02 04.1	-2.7
	0.4nm,0.3s,baz=68,slow=4.7,SNR=5.8						
RPZ				Sn	Sn	23 04 21.3	-15
	0.6nm,0.3s,baz=124,slow=22,SNR=9.2						
RPZ	**Rata Peaks**	**13.44**	**216**	Pn	Pn	23 02 04.3	-2.6
ARCZ	**Arundel**	**13.55**	**215**	P	Pn	23 02 05.3	-3.1
TMZ	**Timaru**	**13.96**	**214**	P	Pn	23 02 10.0	-4.1
LBZ	**Lake Benmore**	**14.36**	**216**	P	**Pn**	**23 02 17.8**	**-1.6**
WHZ	**Wether Hill Ro**	**16.54**	**216**	Pn	**Pn**	**23 02 44.9**	**-3.3**
WHZ				IAmb	IAmb	23 02 48.1	
	comp=Z,33nm,1.4s						
AS31	**Alice Springs**	**42.91**	**270**	P	**P**	**23 06 56.8**	**+1.7**
ASAR	**Alice Springs**	**42.91**	**270**	P	**P**	**23 06 56.9**	**+1.7**
	comp=Z,1.3nm,0.4s,baz=111,slow=7.2,SNR=19						
	comp=Z,1.3nm,0.4s						
WR8	**Warramunga Arr**	**44.01**	**275**	P	**P**	**23 07 05.4**	**+1.3**
WR8				IAmb	IAmb	23 07 22.9	
	comp=Z,8.5nm,1.2s						
WRAB	**Tennant Creek**	**44.15**	**275**	P	**P**	**23 07 05.6**	**+0.5**
WRAB				IAmb	IAmb	23 07 26.4	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**44.15**	**275**	P	**P**	**23 07 06.8**	**+1.6**
	comp=Z,2.3nm,0.4s,baz=116,slow=7.7,SNR=47						
	comp=Z,2.3nm,0.4s						
WRA	**Warramunga Arr**	**44.15**	**275**	P	**P**	**23 07 06.3**	**+1.2**
WB0	**Warramunga Arr**	**44.19**	**275**	P	**P**	**23 07 06.8**	**+1.3**
FORT	**Forrest**	**45.27**	**258**	P	**P**	**23 07 14.5**	**+0.6**
FORT				IAmb	IAmb	23 07 26.4	
	comp=Z,8.1nm,1.1s						
KNRA	**Kununurra**	**50.85**	**277**	P	**P**	**23 07 59.7**	**+2.4**
FITZ	**Fitzroy Crossi**	**52.29**	**272**	P	**P**	**23 08 09.3**	**+1.3**
FITZ				IAmb	IAmb	23 08 17.2	
	comp=Z,1.6nm,1.1s						
CASY	**Casey**	**52.59**	**209**	P	**P**	**23 08 10.9**	**+1.2**
CASY				IAmb	IAmb	23 08 17.0	
	comp=Z,8.3nm,1.4s						
QSPA	**South Pole Qui**	**56.88**	**180**	P	**P**	**23 08 44.1**	**+3.1**
	comp=Z,3.4nm,0.9s,baz=27,slow=4.5,SNR=6.7						
	comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	**56.88**	**180**	P	**P**	**23 08 42.9**	**+2.0**
QSPA				IAmb	IAmb	23 08 47.5	
	comp=Z,9.2nm,1.4s						
FINES	**FINESS Array B**	**147.74**	**338**	PKPbc	**PKPbc**	**23 18 40.9**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=35,slow=3.4,SNR=13						
FINES	**FINESS Array B**	**147.74**	**338**		**PKPbc**	**23 18 40.4**	**+0.1**
NB2	**NORSAR Subarra**	**151.52**	**350**	PKP	**PKPbc**	**23 18 50.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.52**	**350**	PKPbc	**PKPbc**	**23 18 50.2**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=14,slow=2.5,SNR=4.0						
HFS	**Hagfors**	**151.98**	**347**	PKPbc	**PKPbc**	**23 18 50.4**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=14,slow=3.0,SNR=2.1						
BRTR	**Keskin Array B**	**153.73**	**293**	PKPab	**PKPab**	**23 19 07.0**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=101,slow=2.9,SNR=6.9						
BRTR	**Keskin Array B**	**153.73**	**293**		**PKPab**	**23 19 06.5**	**-1.9**

*GCG **28** 22:59:34.3±3.4,15°.10N×94°.27W,h50km±999km,MD4.4, Presumed earthquake*
*MEX **28** 22:59:35.6±0.6,15°.14N×94°.25W,h26km±12km,MD4.2*
ISC 28 22:59:31.4±1.9,15°.15N±0°.06×94°.27W±0°.03,h13km±12km**, n28,** σ1°.**72**/50**,1C,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CARR	**Arriaga**	**1.15**	**17**	*e*P	**Pg**	**22 59 53.5**	**-0.1**
CARR				*e*S	**Sg**	23 00 06.8	-1.6
HUIG	**Huatulco**	**1.88**	**289**	*e*P	**Pn**	**23 00 04.0**	**+0.8**
HUIG				*e*S	**Sn**	23 00 24.2	-2.6
HUIG	**Huatulco**	**1.88**	**289**	*e*P	**Pn**	**23 00 04.1**	**+0.9**
THIG		**1.95**	**97**	*e*P	**Pn**	**23 00 04.9**	**+0.7**
THIG				*e*S	**Sn**	23 00 26.4	-2.2
TGIG		**1.96**	**34**	*e*P	**Pn**	**23 00 05.8**	**+1.4**
TGIG				*e*S	**Sn**	23 00 28.3	-0.7
TGIG		**1.96**	**34**	*i*P	**Pn**	**23 00 05.8**	**+1.4**
PATR	**El Naranjo**	**1.97**	**91**	*e*P	**Pn**	**23 00 04.9**	**+0.2**
PATR				*e*S	**Sn**	23 00 27.5	-1.9
CMIG	**Matias Romero**	**2.02**	**343**	*e*P	**Pn**	**23 00 06.5**	**+1.3**
CMIG				*e*S	**Sn**	23 00 29.3	-1.0
PAVE	**Pavencul**	**2.02**	**88**	*e*P	**Pn**	**23 00 05.9**	**+0.5**
PAVE				*e*S	**Sn**	23 00 29.3	-1.4
CHUJ	**Union Juarez**	**2.09**	**91**	*e*P	**Pn**	**23 00 06.8**	**+0.4**
CHUJ				*e*S	**Sn**	23 00 30.8	-1.6
RTAL	**Retalhuleu**	**2.57**	**104**	*e*P	**Pn**	**23 00 14.9**	**+2.2**
RTAL				*e*S	**Sn**	23 00 42.4	-1.4
HUEH	**Huehuetenango**	**2.68**	**86**	*e*P	**Pn**	**23 00 16.4**	**+1.9**
HUEH				*e*S	**Sn**	23 00 47.0	+0.1
PEIG	**Puerto Escondi**	**2.90**	**287**	*e*P	**Pn**	**23 00 19.1**	**+1.8**
PEIG				*e*S	**Sn**	23 00 48.3	-3.7
STG8	**El Palmar, Qui**	**2.91**	**103**	*i*P	Pn	23 00 14.6	-3.0
STG8				*e*S	Sn	23 00 41.8	-11
STG5	**El Palmar, Qui**	**2.92**	**104**	⇑*i*P	Pn	23 00 14.8	-2.9
STG5				*e*S	Sn	23 00 43.8	-8.9
NEUV	**Arroyo Zacate**	**2.94**	**330**	*e*P	**Pn**	**23 00 18.9**	**+1.0**
NEUV				*e*S	**Sn**	23 00 50.9	-2.3
VHO	**Vista Hermosa**	**3.04**	**309**	*e*P	**Pn**	**23 00 21.1**	**+1.6**
VHO				*e*S	**Sn**	23 00 55.0	-0.9
YOIG	**Yosondua**	**3.58**	**299**	*e*P	**Pn**	**23 00 29.3**	**+2.4**
YOIG				*e*S	**Sn**	23 01 07.9	-1.3
TXIG	**Tlaxiaco**	**3.96**	**302**	*e*P	**Pn**	**23 00 34.5**	**+2.4**
TXIG				*e*S	**Sn**	23 01 17.6	-1.0
TOIG	**Toxpalan**	**3.97**	**318**	*e*P	**Pn**	**23 00 33.7**	**+1.6**
TOIG				*e*S	**Sn**	23 01 18.3	-0.4
HLIG	**Huajuapan de L**	**4.31**	**309**	*e*P	**Pn**	**23 00 38.4**	**+1.5**
HLIG				*e*S	**Sn**	23 01 25.6	-1.6
TPIG	**Tehuac#an**	**4.40**	**318**	*e*P	**Pn**	**23 00 39.7**	**+1.6**
TPIG				*e*S	**Sn**	23 01 28.8	-0.5
PETF	**Flores**	**4.59**	**67**	*e*P	**Pn**	**23 00 42.6**	**+2.2**
PETF				*e*S	**Sn**	23 01 34.4	+0.7
FTIG	**Fresnillo de T**	**4.61**	**307**	*e*P	**Pn**	**23 00 44.1**	**+3.2**
FTIG				*e*S	**Sn**	**23 01 34.5**	**+0.1**
MGIG	**Malinaltepec**	**4.68**	**297**	*e*P	**Pn**	**23 00 44.0**	**+2.1**
MGIG				*e*S	**Sn**	23 01 35.3	-0.9
SCIG	**Sabancuy**	**4.81**	**37**	*e*P	**Pn**	**23 00 44.8**	**+1.3**
SCIG				*e*S	**Sn**	23 01 38.3	-0.9
JAUV	**Jalcomulco**	**4.84**	**330**	*e*P	**Pn**	**23 00 44.6**	**+0.6**
JAUV				*e*S	**Sn**	23 01 37.3	-2.8
CXUV	**Coxquihui**	**5.92**	**328**	*e*P	**Pn**	23 01 01.9	+3.1
CXUV				*e*S	**Sn**	23 02 05.7	-0.8

*ISK **28** 23:09:15.2,34°.25N×33°.05E,h9km,ML2.6/15*
*NIC **28** 23:09:18.9,34°.46N×33°.15E,h2km±31km,MI1.6/10*
*GII **28** 23:09:19.5±0.0,34°.481N±0°.002×33°.287E±0°.002,h0km, Mws2.7,confirmed*
*AFAD **28** 23:09:20.3,34°.52N×32°.99E,h6km±4km,ML2.2*
ISC 28 23:09:19.6±1.1,34°.47N±0°.02×33°.17E±0°.03,h9km±9km**, n46,** σ0°.**90**/74**,2C,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	**Asgata**	**0.32**	**11**	P	**Pg**	**23 09 25.4**	**-0.6**
ASGA				S	**Sg**	**23 09 31.9**	**-1.0**
ASGA				AML	AML	23 09 32.5	
	0.6nm,0.2s						
ASGA				AML	AML	23 09 33.3	
	0.2nm,0.1s						
APOL	**The Sanctuary**	**0.32**	**308**	P	**Pg**	**23 09 25.5**	**-0.6**
APOL				S	**Sg**	**23 09 30.6**	**+0.2**
APOL				AML	AML	23 09 34.7	
	0.4nm,0.2s						
APOL				AML	AML	23 09 35.8	
	0.6nm,0.1s						
CSS	**Mathiatis**	**0.51**	**15**	Pg	**Pg**	**23 09 28.7**	**-0.8**
CSS	**Mathiatis**	**0.51**	**15**	P	**Pg**	**23 09 28.9**	**-0.6**
CSS				S	**Sb**	**23 09 39.1**	**+0.7**
CSS				AML	AML	23 09 40.9	
CSS				AML	AML	23 09 43.3	
	0.1nm,0.1s						
CSS	**Mathiatis**	**0.51**	**15**	P	**Pg**	**23 09 28.5**	**-1.0**
CSS				S	**Sg**	**23 09 37.1**	**+0.8**
TROD	**Troodos**	**0.54**	**332**	P	**Pg**	**23 09 29.4**	**-0.8**
TROD				S	**Sb**	**23 09 39.1**	**-0.3**
TROD				AML	AML	23 09 40.2	
	0.1nm,0.3s						
TROD				AML	AML	23 09 42.8	
	0.2nm,0.2s						
XYLS	**Xyliatos**	**0.55**	**350**	P	**Pg**	**23 09 29.0**	**-1.3**
XYLS				S	**Sb**	**23 09 39.5**	**-0.1**
XYLS				AML	AML	23 09 41.3	
	0.4nm,0.2s						
XYLS				AML	AML	23 09 42.2	
	0.4nm,0.1s						
NATA	**Nata**	**0.58**	**302**	P	**Pg**	**23 09 31.1**	**+0.1**
NATA				S	**Sb**	**23 09 41.3**	**+0.9**
NATA				AML	AML	23 09 46.5	
	0.3nm,0.3s						
NATA				AML	AML	23 09 48.9	
	0.5nm,0.2s						
MVOU	**Mavrovouni**	**0.66**	**35**	P	**Pb**	**23 09 33.5**	**+0.1**
MVOU				S	**Sb**	**23 09 43.5**	**+0.7**
MVOU				AML	AML	23 09 48.7	
	0.1nm,0.3s						
MVOU				AML	AML	23 09 49.0	
	0.1nm,0.2s						
ATHAL	**Athalassa**	**0.69**	**15**	P	**Pg**	**23 09 33.5**	**+0.4**
ATHAL				S	**Sb**	**23 09 45.1**	**+1.5**
ATHAL				AML	AML	23 09 51.1	
	0.1nm,0.2s						
ATHAL				AML	AML	23 09 53.8	
	0.2nm,0.3s						
ALFC	**Alefka**	**0.83**	**326**	P	**Pg**	**23 09 35.1**	**-0.5**
ALFC				S	**Sn**	**23 09 49.3**	**-0.7**
ALFC				AML	AML	23 09 50.9	
	0.2nm,0.2s						
ALFC				AML	AML	23 09 52.2	
	0.1nm,0.1s						
LFK	**Lefkose**	**0.86**	**20**	Pn	**Pb**	**23 09 36

MSFE	Esma-Masafi	3.34	133	P	Pn	23 11 16.6	-0.1	
ASUD	Al Ashush, Dub	3.46	150	P	Pn	23 11 19.9	+1.5	
MDH	Madha	3.47	132	P	Pn	23 11 18.3	-0.2	
NGRK	Negar Kerman	3.49	55	Pn	Pn	23 11 20.0	+0.8	
UOSS	Minazif	3.66	137	P	Pn	23 11 21.6	+0.4	
UOSS	Minazif	3.66	137	Pn	Pn	23 11 22.0	+0.8	
HATD	Hatta, Dubai	3.71	139	P	Pn	23 11 22.9	+1.1	
KLNJ	Kolanjah	3.71	334	Pn	Pn	23 11 24.0	+1.9	
ASHO	Ashiyiah	3.78	141	P	Pn	23 11 24.1	+1.4	
KHGB	Koh Gabri	3.79	44	Pn	Pn	23 11 23.2	+0.1	
IMEH	Mehriz	3.85	15	Pn	Pn	23 11 25.5	+1.6	
TAFT	Taft - Yazd	4.10	9	Pn	Pn	23 11 28.8	+1.5	
ZRDN	Zarand Kerman	4.25	39	Pn	Pn	23 11 30.0	+0.5	
IBAF	Bafgh	4.33	25	Pn	Pn	23 11 31.7	+1.3	
DOBD	Dorbid, Yazd	4.41	12	Pn	Pn	23 11 32.9	+1.3	
SOHO	SOHO	4.48	141	P	Pn	23 11 33.4	+1.1	
MZR	Muzera	4.64	180	P	Pn	23 11 34.5	-0.1	
KBAM	BAM	4.64	70	Pn	Pn	23 11 35.0	+0.3	
TPRV	Parvadeh(Tabas	6.04	27	Pn	Pn	23 11 54.6	+0.8	
GNI	Garni	14.39	332	LR	LR	23 20 13.7		
	comp=Z,40nm,19.8s,baz=102,slow=42							
BRTR	Keskin Array B	20.36	311	P	Pn	23 15 10.2	+7.0	
	0.9nm,0.9s,baz=130,slow=8.3,SNR=4.4							
	0.9nm,0.9s							
AAK	Ala-Archa	22.70	43	LR	LR	23 25 11.8		
	comp=Z,29nm,20.6s,baz=228,slow=41							
BVAR	Borovoye Array	28.29	22	P	P	23 16 17.8	+0.2	
	2.1nm,0.7s,baz=210,slow=7.8,SNR=9.7							
	2.1nm,0.7s							
ARTI	Arti	28.93	6	LR	LR	23 28 36.9		
	comp=Z,46nm,18.9s,baz=166,slow=39							
MKAR	Makanchi Array	29.61	42	P	P	23 16 29.2	-0.4	
	0.4nm,0.6s,baz=230,slow=9.6,SNR=5.5							
	0.4nm,0.6s							
KURBB	Kurchatov Arra	29.81	33	P	P	23 16 31.2	+0.1	
	0.3nm,0.6s,baz=233,slow=9.2,SNR=5.9							
	0.3nm,0.6s							
PALK	Pallekele	32.82	123	LR	LR	23 31 35.6		
	comp=Z,67nm,18.8s,baz=8.0,slow=39							
ZALV	Zalesovo Beam	34.90	33	P	P	23 17 14.8	-0.9	
	1.5nm,0.6s,baz=241,slow=9.0,SNR=9.7							
ZALV				LR	LR	23 33 42.7		
	comp=Z,18nm,18.1s,baz=120,slow=41							
	1.5nm,0.6s							
MBAR	Mbarara	35.58	222	LR	LR	23 32 29.6		
	comp=Z,35nm,19.1s,baz=98,slow=36							
BIOA	Bad Ischl, Aus	36.80	314	*i* pP	P	23 17 32.6	+0.5	
	1.0nm,0.4s							
LESA	Schwarzleotal	37.34	313	*i* P	P	23 17 36.9	+0.1	
	0.9nm,0.4s							
WTTA	Wattenberg	37.97	312	*e*P	P	23 17 41.3	-1.0	
	1.0nm,0.4s							
WATA	Walderalm	38.03	313	*e*P	P	23 17 41.3	-1.4	
	0.3nm,0.2s							
SQTA	Sankt Quirin	38.24	312	*e*P	P	23 17 43.5	-1.0	
	1.0nm,0.2s							
FINES	FINESS Array B	38.42	339	P	P	23 17 48.7	+3.1	
	1.0nm,0.8s,baz=126,slow=10,SNR=3.4							
	1.0nm,0.8s							
FETA	Feichten	38.50	312	*e*P	P	23 17 46.2	-0.5	
	1.2nm,0.5s							
DAVA	Damuels	39.13	312	*e*P	P	23 17 50.8	-1.2	
	6.4nm,0.5s							
BBB	Bella Bella	100.49	1	LR	LR	00 17 45.4		
	comp=Z,24nm,18.4s,baz=240,slow=40							

WEL 28 23:28:04.8±1.3, 35°S±26″×177°9E±3″3, h217km±24km, M3.1/7, mB4.0/1, ML3.0/10, MLv3.1/7, Mw(mB)3.0/1, Error ellipse: s-maj=52.7km s-min=15.4km az=126.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.40	192	P	Pn	23 28 48.2	-0.4
MXZ				S	S	23 29 23.2	+0.4
WMGZ	Waiomatatini S	2.64	189	P	Pn	23 28 51.4	+0.3
WMGZ				S	S	23 29 27.4	+0.1
HAZ	Te Kaha	2.71	200	P	Pn	23 28 52.0	+0.1
HAZ				S	S	23 29 30.5	+1.8
PUZ	Puketiti	2.91	191	P	Pn	23 28 54.0	-0.2
PUZ				S	S	23 29 34.6	+1.7
RUGZ	Raukumara Rang	2.93	200	P	Pn	23 28 54.8	+0.1
RUGZ				S	S	23 29 32.0	-1.5
TWGZ	Tauwhareparae	3.06	195	P	Pn	23 28 56.3	+0.3
CNGZ	Carnagh Statio	3.32	190	P	Pn	23 28 59.0	+0.1
CNGZ				S	S	23 29 45.0	+3.7
MWZ	Matawai	3.32	200	P	Pn	23 28 59.4	+0.5
MWZ				S	S	23 29 42.5	+1.1
URZ	Urewera	3.38	205	P	Pn	23 29 00.0	+0.4
URZ				S	S	23 29 45.5	+2.9
RAGZ	Rawiri	3.50	200	P	Pn	23 29 01.5	+0.4
MTHZ	Maungataniwha	4.01	204	P	Pn	23 29 07.3	0.0
MTHZ				S	S	23 29 57.6	+1.3
PNHZ	Pukenui	5.18	204	P	Pn	23 29 20.6	-1.2
PNHZ				S	S	23 30 22.9	+0.2

*NEIC **28** 23:31:50.4±1.9, 12°.07N±0°.08×140°.2E±0°.1, h10km±1km, mb4.6/19, Error ellipse: s-maj=24.3km s-min=14.2km az=88.0*
*IDC **28** 23:32:02.3±5.9, 11°.96N×140°.04E, h119km±55km, mb3.5/13, mbtmp3.9/14, MS3.4/27, Error ellipse: s-maj=29.9km s-min=13.9km az=76.0*

ISC 28 23:31:53.4±0.7, 12°.01N±0°.08×140°.1E±0°.1, h35km, n62, σ0s89/41, mb4.3/24, MS3.4/24, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	14.44	178	P	P	23 35 22.4	+0.6
	9.5nm,0.6s,baz=345,slow=6.8,SNR=7.4						
JCJ	Chichijima	15.13	7	LR	LR	23 39 51.9	
	comp=Z,108nm,21.9s,baz=138,slow=31						
DAV	Davao City (W)	15.17	252	LR	LR	23 39 54.1	
	comp=Z,62nm,20.6s,baz=89,slow=31						
SIJI	Sorong	15.53	215	LR	LR	23 40 11.3	
	comp=Z,276nm,20.3s,baz=315,slow=32						
TNTI	Ternate	16.89	230	Pn	Pn	23 35 47.3	+0.1
JOW	Kunigami	18.49	325	LR	LR	23 41 34.5	
	comp=Z,142nm,20.6s,baz=166,slow=31						
KRVT	Keravat (AS076	20.06	143	LR	LR	23 42 58.0	
	comp=Z,55nm,19.2s,baz=231,slow=33						
YULB	Yu-li	21.19	305	P	P	23 36 37.3	+1.3
YULB				IAmb	IAmb	23 36 54.9	
	comp=Z,25nm,0.9s						
SSLB	Suanglung	21.66	305	P	P	23 36 42.2	+1.1
TPUB	Ta-pu	21.69	304	P	P	23 36 42.3	+0.9
TPUB				IAmb	IAmb	23 36 51.8	
	comp=Z,51nm,1.0s						
YHNB	Yeheng	21.77	308	P	P	23 36 43.0	+0.7
YHNB				IAmb	IAmb	23 36 53.0	
	comp=Z,28nm,0.9s						
TOLI2	Tolitoli	22.04	242	P	P	23 36 45.2	0.0
TOLI2				IAmb	IAmb	23 37 05.6	
	comp=Z,18nm,1.1s						
MYLDM	Lahad Datu	22.43	254	P	P	23 36 48.2	-1.2
MJAR	Matsushiro Arr	24.49	356	P	P	23 37 11.0	+1.6
	comp=Z,2.5nm,1.0s,baz=190,slow=11,SNR=4.1						
	comp=Z,2.5nm,1.0s						
KAPI	Kappang	26.40	231	LR	LR	23 46 32.9	
	comp=Z,77nm,18.3s,baz=76,slow=33						
BATI	Baumata	27.48	217	LR	LR	23 46 56.2	
	comp=Z,349nm,19.5s,baz=178,slow=33						
KSRS	Korea Array	27.60	339	P	P	23 37 38.6	+1.1
	comp=Z,0.4nm,0.5s,baz=154,slow=9.6,SNR=4.1						
	comp=Z,0.4nm,0.5s						
HNR	Honiara	29.01	136	LR	LR	23 47 52.8	
	comp=Z,4.8nm,19.9s,baz=54,slow=33						
ASAJ	Asahikawa	32.07	3	LR	LR	23 50 53.8	
	comp=Z,46nm,21.1s,baz=174,slow=35						
WB0	Warramunga Arr	32.08	190	P	P	23 38 18.7	+1.4
WB0				IAmb	IAmb	23 38 48.2	
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	32.26	190	P	P	23 38 18.0	-0.9
	comp=Z,0.6nm,0.9s,baz=1.4,slow=9.3,SNR=7.3						
	comp=Z,0.6nm,0.9s						
WRA	Warramunga Arr	32.26	190	P	P	23 38 17.3	-1.6
FITZ	Fitzroy Crossi	33.16	206	LR	LR	23 51 54.3	
	comp=Z,46nm,19.4s,baz=3.5,slow=36						
ASAR	Alice Springs	35.97	190	P	P	23 38 51.0	-0.2
	comp=Z,0.3nm,0.6s,baz=18,slow=12,SNR=6.7						
ASAR				LR	LR	23 53 54.6	
	comp=Z,102nm,18.2s,baz=342,slow=36						
	comp=Z,0.3nm,0.6s						
HEH	HeiHe	39.54	347	*e*P	P	23 39 22.0	+1.1

CMAR	Chiang Mai Arr	40.19	284	P	P	23 39 26.3	-0.5	
	comp=Z,0.5nm,0.3s,baz=88,slow=6.5,SNR=5.8							
CMAR				LR	LR	23 54 49.6		
	comp=Z,44nm,20.7s,baz=200,slow=34							
	comp=Z,0.5nm,0.3s							
CMAR	Chiang Mai Arr	40.19	284	P	P	23 39 26.8	0.0	
STKA	Stephens Creek	43.66	178	P	P	23 39 55.6	+0.8	
	comp=Z,1.6nm,0.7s,baz=335,slow=7.1,SNR=3.2							
STKA				LR	LR	23 58 50.5		
	comp=Z,118nm,18.6s,baz=24,slow=37							
	comp=Z,1.6nm,0.7s							
FORT	Forrest	44.09	195	P	P	23 39 58.2	-0.2	
FORT				IAmb	IAmb	23 40 23.3		
	comp=Z,5.9nm,0.9s							
ULN	Ulaanbaatar	45.19	329	P	P	23 40 06.4	-0.7	
SONM	Songino Array	45.50	328	P	P	23 40 09.1	-0.4	
	comp=Z,0.6nm,0.7s,baz=150,slow=7.6,SNR=4.8							
SONM				LR	LR	00 00 15.7		
	comp=Z,49nm,18.7s,baz=132,slow=37							
	comp=Z,0.6nm,0.7s							
SONM	Songino Array	45.50	328	P	P	23 40 08.6	-1.0	
BRDH	Bariadhala	47.30	290	LR	LR	00 00 54.2		
	comp=Z,182nm,18.1s,baz=163,slow=37							
MA2	Magadan	48.14	7	LR	LR	00 00 45.0		
	comp=Z,14nm,20.0s,baz=175,slow=36							
SHEM	Shemya Is, Ala	48.88	27	LR	LR	23 58 31.5		
	comp=Z,54nm,21.5s,baz=85,slow=32							
TLY	Talaya	49.35	331	LR	LR	00 03 22.1		
	comp=Z,32nm,19.6s,baz=128,slow=38							
YAK	Yakutsk	50.51	354	LR	LR	00 01 20.1		
	comp=Z,30nm,18.2s,baz=185,slow=35							
AFI	Afiamalu	54.18	117	LR	LR	23 59 32.3		
	comp=Z,34nm,21.1s,baz=158,slow=30							
MKAR	Makanchi Array	59.47	318	P	P	23 41 53.0	0.0	
	comp=Z,0.8nm,0.8s,baz=98,slow=7.7,SNR=6.8							
MKAR				LR	LR	00 08 07.5		
	comp=Z,31nm,19.8s,baz=98,slow=36							
	comp=Z,0.8nm,0.8s							
TIXI	Tiksi	60.00	356	LR	LR	00 06 59.4		
	comp=Z,16nm,20.7s,baz=156,slow=35							
ZAA0	Zalesovo Array	60.28	326	P	P	23 41 58.4	0.0	
ZAA0				IAmb	IAmb	23 42 11.8		
	comp=Z,2.2nm,0.8s							
ZALV	Zalesovo Beam	60.28	326	P	P	23 41 57.8	-0.5	
	comp=Z,0.4nm,0.4s,baz=96,slow=9.0,SNR=6.3							
ZALV				LR	LR	00 09 45.8		
	comp=Z,34nm,18.5s,baz=114,slow=38							
	comp=Z,0.4nm,0.4s							
ZALV	Zalesovo Beam	60.28	326	P	P	23 41 57.5	-0.8	
RPZ	Rata Peaks	62.21	155	LR	LR	00 09 48.4		
	comp=Z,15nm,18.2s,baz=261,slow=36							
KURK	Kurchatov	62.86	321	P	P	23 42 14.2	-1.6	
KURK				IAmb	IAmb	23 42 24.6		
	comp=Z,6.4nm,0.8s							
KURBB	Kurchatov Arra	62.89	321	P	P	23 42 15.9	-0.1	
	comp=Z,2.0nm,0.7s,baz=105,slow=6.8,SNR=19							
	comp=Z,2.0nm,0.7s							
MANEM	Manem	65.73	306	P	P	23 42 35.9	+0.7	
MANEM				IAmb	IAmb	23 42 49.3		
	comp=Z,13nm,0.5s							
KKAR	Karatay Array	67.03	312	P	P	23 42 43.3	+0.2	
KDAK	Kodiak Island	67.86	32	LR	LR	00 11 14.4		
	comp=Z,23nm,19.6s,baz=242,slow=35							
BVAR	Borovoye Array	68.33	322	P	P	23 42 51.1	0.0	
	comp=Z,2.0nm,0.8s,baz=106,slow=7.1,SNR=11							
	comp=Z,2.0nm,0.8s							
SHAA	Shahritus	68.56	306	P	P	23 42 53.1	+0.2	
SHAA				IAmb	IAmb	23 43 03.4		
	comp=Z,27nm,1.5s							
ILAR	Eielson Array	71.97	26	P	P	23 43 12.6	-0.7	
	comp=Z,0.9nm,0.7s,baz=249,slow=5.8,SNR=8.6							
ILAR				LR	LR	00 11 08.3		
	comp=Z,28nm,22.0s,baz=284,slow=33							
	comp=Z,0.9nm,0.7s							
ILAR	Eielson Array	71.97	26	P	P	23 43 13.0	-0.2	
PAX	Paxson	72.30	28	P	P	23 43 14.2	-1.1	
PAX				IAmb	IAmb	23 43 36.4		
	comp=Z,2.2nm,0.8s							
F28M	Old Crow	75.16	23	P	P	23 43 31.4	-0.6	
F28M				IAmb	IAmb	23 43 43.0		
	comp=Z,3.5nm,0.8s							
ARTI	Arti	75.53	325	LR	LR	00 18 35.4		
	comp=Z,75nm,19.5s,baz=108,slow=37							
K29M	Barlow Dome	75.93	27	P	P	23 43 36.0	-0.6	
K29M				IAmb	IAmb	23 44 10.1		
	comp=Z,4.0nm,1.1s							
FINES	FINESS Array B	90.59	334	P	P	23 44 50.0	-1.9	
	comp=Z,1.3nm,0.8s,baz=64,slow=3.2,SNR=3.9							
	comp=Z,1.3nm,0.8s							
FINES	FINESS Array B	90.59	334	P	P	23 44 51.5	-0.5	
NOA	NORSAR Array B	96.81	338	LR	LR	00 32 34.4		
	comp=Z,26nm,19.2s,baz=90,slow=38							
LPAZ	La Paz	152.28	102	PKPbc	PKPbc	23 51 46.8	-0.5	
	comp=Z,1.3nm,0.6s,baz=310,slow=3.8,SNR=6.7							
LPAZ	La Paz	152.28	102		PKPdf	23 51 41.3	+0.7	

*SJA **29** 00:08:30.5±0.9, 19°.92S×70°.65W, h241km±11km, ML4.3, MW3.9*
*GUC **29** 00:08:48.2±0.8, 18°.75S×69°.49W, h104km±3km, ML3.8*
*IDC **29** 00:08:49.5±2.1, 18°.63S×69°.30W, h126km±22km, mb3.5/5, mbtmp3.9/8, Error ellipse: s-maj=32.0km s-min=16.8km az=87.0*
*VAO **29** 00:08:52.4±0.7, 18°.60S×68°.92W, h124km, mb4.2, Presumed earthquake*

ISC 29 00:08:46.9±0.6, 18°.74S±0°.03×69°.45W±0°.05, h111km±6km, n63, σ2s05/69, mb3.9/4, 5C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.41	352	*e*P	Pn	00 09 05.1	+1.1
PB16				IAML		00 09 33.7	
	comp=Z,573nm,0.8s						
PB16	IPOC Station P	0.41	352	⇓*i*P	Pn	00 09 05.1	+1.1
PB16				*i* S	Sn	00 09 17.8	+1.1
PB16				IAML		00 09 19.5	
	comp=N,7μm,0.6s						
PX02	IPOC Station P	0.74	253	⇑*e*P	Pn	00 09 05.7	0.0
PX02				*i* S	Sn	00 09 19.9	-0.2
PX02				IAML		00 09 20.4	
	comp=N,3μm,0.3s						
PB12	IPOC Station P	0.84	279	*e*P	Pn	00 09 07.3	+0.7
PB12				*e*S	Sn	00 09 22.9	+1.3
PB12				IAML		00 09 23.3	
	comp=Z,2μm,0.2s						
PB12	IPOC Station P	0.84	279	⇑*i*P	Pn	00 09 07.4	+0.7
PB12				*i* S	Sn	00 09 22.1	+0.5
PB12				IAML		00 09 23.1	
	comp=E,5μm,0.7s						
AP01	Chacalluta	0.93	293	*e*P	Pn	00 09 08.4	+1.1
AP01				*e*S	Sn	00 09 24.5	+1.7
AP01				IAML		00 09 25.9	
	comp=Z,4μm,0.2s						
AP01	Chacalluta	0.93	293	⇑*i*P	Pn	00 09 08.3	+0.9
AP01				*e*S	Sn	00 09 23.9	+1.1
GO01	Chusmiza	0.95	165	*e*P	Pn	00 09 10.2	+2.0
GO01				*e*S	Sn	00 09 37.2	+13
GO01	Chusmiza	0.95	165	*e*P	Pn	00 09 09.9	+1.7
GO01				*i* S	Sn	00 09 26.6	+2.4
GO01				IAML		00 09 32.0	
	comp=E,5μm,0.1s						
PB11	IPOC Station P	1.03	191	*e*P	Pn	00 09 04.3	-4.3
PB11				*e*S	Sn	00 09 27.9	+2.8
PB11				IAML		00 09 29.7	
	comp=Z,1μm,0.2s						
PB11	IPOC Station P	1.03	191	⇑*i*P	Pn	00 09 09.9	+1.3
PB11				*i* S	Sn	00 09 26.2	+1.2
PB11				IAML		00 09 27.1	
	comp=E,4μm,0.2s						
PSGCX	Pisagua	1.06	217	*e*P	Pn	00 09 00.9	-8.0
PSGCX				*e*S	Sn	00 09 26.9	+1.4
PSGCX				IAML		00 09 27.9	
	comp=Z,1μm,0.2s						
PSGCX	Pisagua	1.06	217	⇑*i*P	Pn	00 09 09.7	+0.8
PSGCX				*i* S	Sn	00 09 26.5	+1.0
PB18	Visviri	1.15	358	*i* P	Pn	00 09 12.7	+2.4
PB18				*e*S	Sn	00 09 30.6	+2.7
PB08	IPOC Station P	1.42	169	*e*P	Pn	00 09 09.4	-3.7
PB08				*e*S	Sn	00 09 36.0	+2.9
PB08	IPOC Station P	1.42	169	*e*P	Pn	00 09 15.1	+2.0
PB08				*i* S	Sn	00 09 35.1	+2.1
PB08				IAML		00 09 36.5	
	comp=E,1μm,0.2s						
TA02	Huaiquique	1.65	203	*e*P	Pn	00 09 17.8	+2.3
TA02	Huaiquique	1.65	203	*e*P	Pn	00 09 17.4	+1.8

PB02	IPOC Station P	2.60	189	*e*P	Pn	00 09 10.6	-17	
PB02				*e*S	Sn	00 09 56.1	-2.9	
PB02				IAML		00 10 05.8		
	comp=Z,613nm,0.3s							
PB02	IPOC Station P	2.60	189	*e*P	Pn	00 09 29.2	+1.5	
LPAZ	La Paz	2.75	27	P	Pn	00 09 32.7	+2.6	
	comp=Z,33nm,0.3s,baz=262,slow=3.5,SNR=250							
LPAZ				S	Sn	00 10 03.6	+0.3	
	comp=Z,28nm,0.6s,baz=218,slow=5.0,SNR=5.7							
LPAZ	La Paz	2.75	27	*e*P	Pn	00 09 32.9	+2.7	
LPAZ	La Paz	2.75	27	*e*P	Pn	00 09 32.1	+2.0	
PB09	IPOC Station P	3.04	176	*e*P	Pn	00 09 36.5	+2.9	
PB03	IPOC Station P	3.30	185	*e*P	Pn	00 09 39.7	+2.6	
PB06	IPOC Station P	3.94	182	*e*P	Pn	00 09 46.7	+1.1	
SIV	San Ignacio	8.45	72	P	Pn	00 10 45.0	-1.5	
	comp=Z,11nm,0.4s,baz=262,slow=10,SNR=92							
BBSD	Serra de San D	8.55	81	*e*P	Pn	00 10 46.3	-1.6	
NNA	Nana	9.79	312	S	Sn	00 12 47.2	-5.8	
	comp=Z,3.6nm,0.4s,baz=36,slow=14,SNR=1.8							
PTLB	Pontes e Lacer	10.39	73	*e*P	Pn	00 11 10.7	-2.1	
PTLB				*e*S	Sn	00 13 00.9	-6.4	
VILB	Vilhena	10.60	58	*e*P	Pn	00 11 14.9	-0.8	
COIM	Forte Coimbra	11.07	98	*e*P	Pn	00 11 19.7	-2.3	
CFA	Coronel Fontan	12.85	175	P	Pn	00 11 47.8	+2.3	
	comp=Z,0.7nm,0.4s,baz=324,slow=7.1,SNR=4.5							
SALV	Santo Antonio	13.43	80	*e*P	Pn	00 11 51.6	-1.6	
CLDB	Colider	15.34	61	*e*P	Pn	00 12 16.5	-0.9	
H03N1	Juan Fernandez	16.91	208	T	T	00 30 27.8		
	baz=29,slow=73,SNR=10							
H03N2	Juan Fernandez	16.92	208	T	T	00 30 26.8		
	baz=29,slow=73,SNR=14							
H03N3	Juan Fernandez	16.93	208	T	T	00 30 28.9		
	baz=29,slow=73,SNR=12							
PTGB	Pitanga	17.20	113	*e*P	Pn	00 12 40.5	0.0	
MACA	Manacapuru-AM	17.70	30	*e*P	P	00 12 45.0	-0.8	
SNDB	Serra Nova Dou	18.75	72	*e*P	P	00 12 56.0	-1.3	
FRTB	Fartura	19.11	107	*e*P	P	00 13 01.4	+0.1	
ITTB	Itaituba	19.59	45	*e*P	P	00 13 05.1	-1.3	
BB19B	Bebedouro	19.81	100	*e*P	P	00 13 08.6	-0.2	
IPMB	Ipameri, GO	20.17	91	*e*P	P	00 13 12.4	-0.4	
BDFB	Brasilia	20.70	85	P	P	00 13 19.1	+0.5	
	comp=Z,4.7nm,0.5s,baz=262,slow=9.1,SNR=7.5							
	comp=Z,4.7nm,0.5s							
CANS	Sao Roque de M	21.78	98	*e*P	P	00 13 29.3	-0.8	
PMNB	Patos De Minas	21.80	93	*e*P	P	00 13 29.3	-1.0	
PLCA	Paso Flores	21.94	182	P	P	00 13 34.2	+2.8	
	comp=Z,4.9nm,0.9s,baz=347,slow=10,SNR=7.8							
	comp=Z,4.9nm,0.9s							
SMTB	Santa Maria do	23.36	68	*e*P	P	00 13 46.0	+0.2	
JANB	Januaria	24.32	85	*e*P	P	00 13 54.3	-0.2	
DIAM	Diamantina, MG	24.44	93	*e*P	P	00 13 55.6	0.0	
SDBA	SAO DESIDERIO	24.45	79	*e*P	P	00 13 55.3	-0.3	
TXAR	Lajitas Array	58.09	325	P	P	00 18 29.0	+0.1	
	comp=Z,0.1nm,0.5s,baz=144,slow=7.3,SNR=1.8							
	comp=Z,0.1nm,0.5s							
QSPA	South Pole Qui	71.43	180	P	P	00 19 57.1	+2.1	
	comp=Z,0.9nm,0.4s,baz=145,slow=0.7,SNR=14							
	comp=Z,0.9nm,0.4s							
YKA	Yellowknife Ar	88.43	341	P	P	00 21 26.7	+0.6	
	comp=Z,0.5nm,0.5s,baz=138,slow=4.5,SNR=5.3							
	comp=Z,0.5nm,0.5s							
H11S2	WAKE ISLAND Hyl	26.98	279	T	T	02 47 03.5		
	baz=100,slow=75,SNR=12							
H11S1	WAKE ISLAND Hyl	26.99	279	T	T	02 47 01.9		
	baz=100,slow=75,SNR=5.8							
H11N3	WAKE ISLAND Hyl	26.99	281	T	T	02 47 04.7		
	baz=100,slow=74							
H11S3	WAKE ISLAND Hyl	27.00	279	T	T	02 47 03.4		
	baz=100,slow=75,SNR=5.8							
H11N2	WAKE ISLAND Hyl	27.01	281	T	T	02 47 14.4		
	baz=100,slow=74							
H11N1	WAKE ISLAND Hyl	27.01	281	T	T	02 47 04.2		
	baz=100							
WRA	Warramunga Arr	135.03	212	PKP	PKiKP	00 27 55.0	-0.4	
	comp=Z,0.4nm,0.7s,baz=136,slow=1.9,SNR=1.9							

*IDC **29** 00:15:56.4±1.3, 1°.08N×126°.84E, h0km, mb3.7/4, mbtmp3.8/5, ML4.3/1, Error ellipse: s-maj=67.8km s-min=21.9km az=63.0*
*DJA **29** 00:16:03.7±0.7, 1°.1N±3°×12°7E±°, h22km±6km, M3.6/8, MLv3.6/8*

ISC 29 00:16:04.4±1.1, 1°.07N±0°.08×126°.96E±0°.10, h72km, n8, σ1s14/10, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.50	126	P	Pn	00 16 17.5	+0.1
TNTI				S	Sn	00 16 27.4	+0.5
GAMI	Galela, Maluku	1.13	47	P	Pn	00 16 24.5	-0.1
GAMI				S	Sn	00 16 41.0	+1.3
SGSI	Sangihe	2.97	331	P	Pn	00 16 48.4	-0.9
JAY	Jayapura	14.19	105	Pn	Pn	00 19 20.0	-2.0
	1.4nm,0.3s,baz=320,slow=3.5,SNR=8.4							
	3.9n

CHIC	**Chingaza**	**2.29**	**194**	P	**Pn**	**00 28 40.8**	**+0.7**
CHIC				S	**Sn**	**00 29 10.0**	**-0.5**
ROSC	**El Rosal**	**2.31**	**210**	P	**Pn**	**00 28 42.6**	**+2.2**
	125nm,0.3s,baz=64,slow=19,SNR=90						
ROSC				S	**Sn**	**00 29 12.4**	**+1.5**
	279nm,0.3s,baz=195,slow=22,SNR=7.2						
ROSC	**El Rosal**	**2.31**	**210**	P	**Pn**	**00 28 42.4**	**+2.0**
ROSC				S	**Sn**	**00 29 09.3**	**-1.7**
HELC	**Santa Helena**	**2.44**	**254**	P	**Pn**	**00 28 43.8**	**+1.9**
HELC				S	**Sn**	**00 29 14.1**	**+0.5**
HELC	**Santa Helena**	**2.44**	**254**	P	**Pn**	**00 28 42.9**	**+1.0**
HELC				S	**Sn**	**00 29 12.2**	**-1.4**
HELC	**Santa Helena**	**2.44**	**254**	*e*P	**Sn**	**00 28 44.3**	**+2.4**
HELC				*e*S	**Sn**	**00 29 12.7**	**-1.0**
CVER	**Cruz Verde, Cu**	**2.50**	**201**	P	**Pn**	**00 28 44.3**	**+1.6**
CVER				S	**Sn**	**00 29 15.4**	**+0.4**
UREC	**San Jos de Ur**	**2.51**	**291**	P	**Pn**	**00 28 42.5**	**+0.1**
UREC				S	**Sn**	**00 29 13.1**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.73**	**234**	P	**Pn**	**00 28 46.6**	**+1.1**
GUY2C				S	**Sn**	**00 29 18.8**	**-1.2**
VILC	**Villavicencio,**	**2.78**	**191**	P	**Pn**	**00 28 46.2**	**+0.3**
VILC				S	**Sn**	**00 29 19.7**	**-1.1**
CBOC	**Ciudad Bolivar**	**3.00**	**251**	P	**Pn**	**00 28 50.7**	**+2.1**
CBOC				S	**Sn**	**00 29 25.8**	**+0.2**
DBBC	**Dabeiba**	**3.03**	**273**	P	**Pn**	**00 28 50.2**	**+1.3**
DBBC				S	**Sn**	**00 29 25.0**	**-1.1**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P	**Pn**	**00 28 52.9**	**+2.4**
ARGC				S	**Sn**	**00 29 31.5**	**+2.4**
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**00 28 53.1**	**+1.8**
	12nm,0.2s,baz=225,slow=14,SNR=4.5						
SDV				S	**Sn**	**00 29 29.9**	**-0.6**
	57nm,0.4s,baz=259,slow=23,SNR=30						
SDV	**Santo Domingo**	**3.21**	**51**	*e*P	**Pn**	**00 28 53.1**	**+1.8**
SDV				*e*S	**Sn**	**00 29 28.9**	**-1.5**
APAC	**Apartado, Choc**	**3.54**	**287**	P	**Pn**	**00 28 56.5**	**+1.2**
APAC				S	**Sn**	**00 29 37.0**	**-0.7**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**00 28 56.7**	**+1.0**
PRAC				S	**Sn**	**00 29 38.4**	**0.0**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**00 28 56.1**	**+0.4**
PRAC				S	**Sn**	**00 29 37.5**	**-0.9**
ORTC	**Ortega, Tolima**	**3.59**	**215**	P	**Pn**	**00 28 56.6**	**+0.6**
ORTC				S	**Sn**	**00 29 39.0**	**+0.1**
SJCC	**San Jacinto, C**	**3.62**	**327**	P	**Pn**	**00 28 56.6**	**+0.3**
SJCC				S	**Sn**	**00 29 39.2**	**-0.3**
SJCC	**San Jacinto, C**	**3.62**	**327**	P	**Pn**	**00 28 56.4**	**+0.1**
SJCC				S	**Sn**	**00 29 37.9**	**-1.6**
SJCC	**San Jacinto, C**	**3.62**	**327**	*e*P	**Pn**	**00 28 56.8**	**+0.5**
SJCC				*e*S	**Sn**	**00 29 33.7**	**-5.9**
LCBC	**Los crdobas,**	**3.74**	**302**	P	**Pn**	**00 28 58.8**	**+0.9**
LCBC				S	**Sn**	**00 29 40.8**	**-1.5**
PTAC	**Punta Ardita,**	**4.62**	**274**	P	**Pn**	**00 29 09.3**	**0.0**
MACC	**Macarena, Meta**	**4.74**	**188**	P	**Pn**	**00 29 09.9**	**-1.0**
MACC				S	**Sn**	**00 30 00.2**	**-5.4**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**00 29 13.6**	**0.0**
URIC				S	**Sn**	**00 30 07.6**	**-2.9**
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P	**Pn**	**00 29 13.4**	**-0.3**
URIC				*e*S	**Sn**	**00 30 05.2**	**-5.3**
JAMC	**Jamundi, Valle**	**5.04**	**224**	P	**Pn**	**00 29 15.2**	**+0.2**
JAMC				S	**Sn**	**00 30 13.1**	**+0.1**
POPC	**Popayan, Colom**	**5.54**	**219**	P	**Pn**	**00 29 23.1**	**+1.4**
	7.0nm,0.7s						
POPC				S	**Sn**	**00 30 25.1**	**+0.1**
	7.0nm,0.7s						
FLOC	**Florencia**	**5.80**	**205**	P	**Pn**	**00 29 25.9**	**+0.9**
FLOC				S	**Sn**	**00 30 29.3**	**-1.6**
FLOC	**Florencia**	**5.80**	**205**	P	**Pn**	**00 29 25.3**	**+0.3**
	12nm,0.6s						
FLOC				S	**Sn**	**00 30 30.4**	**-0.5**
	12nm,0.6s						
BBAC	**Balboa, Cauca**	**6.30**	**220**	P	**Pn**	**00 29 34.1**	**+2.3**
	9.5nm,0.6s						
BBAC				S	**Sn**	**00 30 42.6**	**-0.5**
	9.5nm,0.6s						
BCIP	**Isla Barro Col**	**7.00**	**290**	P	**Pn**	**00 29 40.7**	**-0.1**
TXAR	**Lajitas Array**	**36.41**	**312**	P	**P**	**00 34 49.0**	**-1.4**
	0.1nm,0.4s,baz=120,slow=4.7,SNR=6.7						
	0.1nm,0.4s						
SCHQ	**Schefferville**	**48.10**	**5**	P	**P**	**00 36 24.4**	**-0.1**
	1.4nm,0.5s,baz=189,slow=5.7,SNR=4.1						
	1.4nm,0.5s						
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**00 38 13.4**	**+1.4**
	0.4nm,0.6s,baz=148,slow=5.8,SNR=3.6						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**150.32**	**241**	PKPbc	**PKPbc**	**00 47 34.8**	**+0.3**
	0.2nm,0.4s,baz=110,slow=2.4,SNR=5.9						

NEIC ***29*** *00:28:31.6±2.2, 0°.52N±0°.09×123°.70E±0°.07, h250km±3km, mb4.2/11, Error ellipse: s-maj=13.8km s-min=10.5km az=193.0*

DJA ***29*** *00:28:32.5±0.4, 0°.N±4°×12°.4E±°, h239km±4km, M4.4/13, MLv4.4/13*

IDC ***29*** *00:28:35.7±2.4, 0°.46N×123°.59E, h301km±24km, mb3.3/10, mbtmp4.0/12, Error ellipse: s-maj=37.2km s-min=9.4km az=67.0*

ISC 29 00:28:31.7±0.6, 0°.45N±0°.06×123°.65E±0°.05, h264km, n45, σ1s73/52, mb3.8/14, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.54**	**50**	P	**Pn**	**00 29 11.0**	**-0.7**
LUWI	**Luwuk**	**1.72**	**211**	P	**Pn**	**00 29 12.3**	**-0.7**
LUWI	**Luwuk**	**1.72**	**211**		**Pn**	**00 29 12.1**	**-0.9**
LUWI				Sn	**S**	**00 29 42.0**	**-3.7**
LUWI	**Luwuk**	**1.72**	**211**	P	**Pn**	**00 29 12.3**	**-0.7**
LUWI				S	**S**	**00 29 42.2**	**-3.5**
APSI	**Ampana**	**2.42**	**236**	P	**Pn**	**00 29 19.0**	**-0.1**
TOLI2	**Tolitoli**	**2.95**	**283**	P	**Pn**	**00 29 24.5**	**0.0**
TOLI2	**Tolitoli**	**2.95**	**283**	S	**S**	**00 30 04.8**	**-1.6**
TOLI2	**Tolitoli**	**2.95**	**283**	Pn	**Pn**	**00 29 24.0**	**-0.5**
TOLI2				Sn	**S**	**00 30 03.2**	**-3.2**
SANI	**Sanana**	**3.41**	**137**	P	**Pn**	**00 29 27.7**	**-1.7**
SANI	**Sanana**	**3.41**	**137**	P	**Pn**	**00 29 27.6**	**-1.8**
TNTI	**Ternate**	**3.73**	**85**	P	**Pn**	**00 29 31.9**	**-1.1**
TNTI	**Ternate**	**3.73**	**85**	Pn	**Pn**	**00 29 31.6**	**-1.4**
TNTI				Sn	**S**	**00 30 15.9**	**-5.9**
TNTI	**Ternate**	**3.73**	**85**	P	**Pn**	**00 29 31.8**	**-1.2**
GAMI	**Galela, Maluku**	**4.36**	**71**	P	**Pn**	**00 29 39.3**	**-1.0**
SIJI	**Sorong**	**7.72**	**100**	P	**Pn**	**00 30 25.6**	**+3.9**
	6.5nm,0.4s,baz=200,slow=23,SNR=2.1						
MTN	**Manton Dam**	**15.15**	**151**		**Pn**	**00 31 54.0**	**+0.8**
MTN				IAmb	IAmb	00 31 55.3	
	comp=Z,6.5nm,0.7s						
KNRA	**Kununurra**	**16.80**	**163**	P	**Pn**	**00 32 12.4**	**-0.2**
KNRA				IAmb	IAmb	00 32 15.1	
	comp=Z,5.2nm,0.8s						
BBJI	**Bungbulang**	**17.79**	**243**	P	**P**	**00 32 20.1**	**-1.3**
BBJI				IAmb	IAmb	00 32 40.5	
	comp=Z,10nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.53**	**174**	P	**P**	**00 32 29.9**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=354,slow=9.1,SNR=11						
FITZ	**Fitzroy Crossi**	**18.53**	**174**	P	**P**	**00 32 30.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**18.53**	**174**	P	**P**	**00 32 29.8**	**+0.6**
WB0	**Warramunga Arr**	**22.68**	**153**	P	**P**	**00 33 11.7**	**+0.8**
WRAB	**Tennant Creek**	**22.81**	**153**	P	**P**	**00 33 13.5**	**+1.5**
WRA	**Warramunga Arr**	**22.81**	**153**	P	**P**	**00 33 14.1**	**+2.0**
	comp=Z,8.2nm,0.8s,baz=335,slow=10,SNR=71						
WRA				S	**S**	**00 36 59.5**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=335,slow=16,SNR=4.5						
	comp=Z,8.2nm,0.8s						
WRA	**Warramunga Arr**	**22.81**	**153**	P	**P**	**00 33 11.7**	**-0.4**
WR8	**Warramunga Arr**	**22.89**	**153**	P	**P**	**00 33 14.0**	**+1.2**
COEN	**Coen**	**24.05**	**127**	P	**P**	**00 33 25.2**	**+1.8**
COEN	**Coen**	**24.05**	**127**	P	**P**	**00 33 24.4**	**+1.0**
COEN				IAmb	IAmb	00 33 36.4	
	comp=Z,12nm,1.1s						
ASAR	**Alice Springs**	**25.96**	**158**	P	**P**	**00 33 42.6**	**+2.1**
	comp=Z,0.9nm,0.5s,baz=339,slow=13,SNR=8.3						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**25.96**	**158**	P	**P**	**00 33 42.4**	**+1.9**
QIS	**Mount Isa**	**26.07**	**144**	P	**P**	**00 33 43.6**	**+2.1**
FORT	**Forrest**	**31.34**	**173**	P	**P**	**00 34 28.8**	**+0.9**
FORT				IAmb	IAmb	00 34 38.4	
	comp=Z,5.4nm,1.1s						
BBOO	**Buckleboo**	**35.09**	**162**	P	**P**	**00 35 01.4**	**+1.3**
BBOO				IAmb	IAmb	00 35 30.2	
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	**36.36**	**154**	P	**P**	**00 35 12.6**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=318,slow=12,SNR=4.1						
	comp=Z,1.1nm,0.4s						
HILR	**Hailar Array B**	**49.04**	**357**	P	**P**	**00 36 52.8**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=187,slow=9.3,SNR=5.5						
	comp=Z,1.5nm,0.4s						

SONM	**Songino Array**	**49.52**	**345**	P	**P**	**00 36 55.8**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=150,slow=7.1,SNR=4.8						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**58.58**	**328**	P	**P**	**00 38 01.3**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=127,slow=8.3,SNR=20						
MKAR				PcP	**PcP**	**00 38 48.9**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=135,slow=3.2,SNR=6.1						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**58.58**	**328**	P	**P**	**00 38 00.7**	**-0.4**
ZALV	**Zalesovo Beam**	**62.18**	**335**	P	**P**	**00 38 24.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=148,slow=8.5,SNR=1.9						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**62.91**	**330**	P	**P**	**00 38 29.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=141,slow=6.3,SNR=8.1						
KURBB				PcP	**PcP**	**00 39 05.7**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=117,slow=3.8,SNR=2.4						
	comp=Z,1.1nm,0.8s						
KURK	**Kurchatov**	**62.92**	**330**	P	**P**	**00 38 29.9**	**-0.2**
KURK				IAmb	IAmb	00 38 32.8	
	comp=Z,2.1nm,0.8s						
BVAR	**Borovoye Array**	**68.44**	**329**	P	**P**	**00 39 04.4**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=126,slow=7.5,SNR=4.8						
	comp=Z,0.6nm,0.5s						
AB31	**Akbulak array**	**72.78**	**322**	P	**P**	**00 39 32.8**	**+1.4**
ABKAR	**Akbulak array**	**72.78**	**322**	P	**P**	**00 39 30.5**	**-0.9**
ILAR	**Eielson Array**	**89.37**	**25**	P	**P**	**00 40 58.4**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=270,slow=7.5,SNR=2.4						
	comp=Z,0.3nm,0.7s						

IDC ***29*** *00:51:14.7±0.9, 12°.1N×0°.1×140°.8E±0°.2, h34km, n28, σ0s76/13, mb3.7/12, MS3.3/16, Western Caroline Islands*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**14.54**	**180**	LR	LR	00 59 12.6	
	comp=Z,138nm,20.2s,baz=144,slow=33						
JCJ	**Chichijima**	**14.95**	**5**	LR	LR	00 59 20.6	
	comp=Z,108nm,21.2s,baz=104,slow=32						
KRVT	**Keravat (AS076**	**19.79**	**145**	LR	LR	01 02 26.8	
	comp=Z,40nm,18.8s,baz=227,slow=34						
KSRS	**Korea Array**	**27.73**	**338**	P	**P**	**00 57 04.7**	**-0.3**
	0.3nm,0.4s,baz=167,slow=13,SNR=2.1						
	0.3nm,0.4s						
ASAJ	**Asahikawa**	**31.92**	**2**	LR	LR	01 09 37.9	
	comp=Z,46nm,21.2s,baz=182,slow=35						
CTA	**Charters Tower**	**32.46**	**170**	LR	LR	01 11 49.7	
	comp=Z,48nm,18.5s,baz=34,slow=38						
WRA	**Warramunga Arr**	**32.49**	**191**	P	**P**	**00 57 46.3**	**-1.1**
	0.6nm,0.9s,baz=5.6,slow=9.7,SNR=4.8						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**36.20**	**191**	P	**P**	**00 58 19.6**	**+0.1**
	0.3nm,0.6s,baz=19,slow=12,SNR=6.2						
ASAR				LR	LR	01 12 46.8	
	comp=Z,98nm,18.2s,baz=307,slow=36						
	0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.77**	**284**	P	**P**	**00 58 58.2**	**+0.2**
	0.7nm,0.4s,baz=86,slow=6.1,SNR=11						
CMAR				LR	LR	01 13 36.5	
	comp=Z,37nm,21.5s,baz=90,slow=33						
	0.7nm,0.4s						
PETK	**Petropavlovsk-**	**43.06**	**15**	LR	LR	01 14 22.9	
	comp=Z,24nm,21.6s,baz=179,slow=32						
STKA	**Stephens Creek**	**43.76**	**179**	P	**P**	**00 59 22.6**	**+0.5**
	4.2nm,1.0s,baz=8.1,slow=7.1,SNR=3.4						
STKA				LR	LR	01 17 00.7	
	comp=Z,51nm,19.2s,baz=19,slow=35						
	4.2nm,1.0s						
SONM	**Songino Array**	**45.73**	**328**	P	**P**	**00 59 38.7**	**+0.8**
	0.4nm,0.4s,baz=139,slow=7.7,SNR=1.5						
	0.4nm,0.4s						
MA2	**Magadan**	**47.95**	**7**	LR	LR	01 18 45.1	
	comp=Z,24nm,21.6s,baz=132,slow=34						
SHEM	**Shemya Is, Ala**	**48.50**	**26**	LR	LR	01 17 38.3	
	comp=Z,35nm,21.2s,baz=125,slow=33						
AFI	**Afiamalu**	**53.67**	**117**	LR	LR	01 19 12.2	
	comp=Z,18nm,20.8s,baz=178,slow=31						
MKAR	**Makanchi Array**	**59.81**	**317**	P	**P**	**01 01 22.9**	**+1.1**
	0.3nm,0.8s,baz=97,slow=8.8,SNR=6.0						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**60.53**	**326**	P	**P**	**01 01 25.7**	**-0.8**
	0.4nm,0.5s,baz=101,slow=7.6,SNR=2.2						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.19**	**321**	P	**P**	**01 01 44.3**	**-0.2**
	0.8nm,0.7s,baz=105,slow=7.0,SNR=10						
	0.8nm,0.7s						
KDAK	**Kodiak Island**	**67.42**	**32**	LR	LR	01 27 36.1	
	comp=Z,17nm,21.6s,baz=241,slow=32						
BVAR	**Borovoye Array**	**68.62**	**322**	P	**P**	**01 02 18.8**	**-0.6**
	0.8nm,0.6s,baz=91,slow=10,SNR=5.7						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**71.60**	**25**	P	**P**	**01 02 37.4**	**-0.1**
	0.3nm,0.7s,baz=254,slow=6.8,SNR=4.4						
ILAR				LR	LR	01 29 50.5	
	comp=Z,15nm,22.0s,baz=276,slow=32						
	0.3nm,0.7s						
ARTI	**Arti**	**75.79**	**325**	LR	LR	01 38 41.7	
	comp=Z,65nm,18.8s,baz=100,slow=38						
BBB	**Bella Bella**	**81.21**	**39**	LR	LR	01 35 34.4	
	comp=Z,15nm,18.7s,baz=176,slow=33						
SPITS	**Spitsbergen Ar**	**84.82**	**350**	LR	LR	01 43 09.7	
	comp=Z,36nm,18.1s,baz=70,slow=37						
ARCES	**ARCESS Array B**	**87.22**	**341**	LR	LR	01 48 29.5	
	comp=Z,33nm,18.9s,baz=70,slow=39						
FINES	**FINESS Array B**	**90.76**	**334**	P	**P**	**01 04 18.4**	**-0.8**
	1.4nm,0.8s,baz=8.5,slow=2.8,SNR=7.3						
	1.4nm,0.8s						
NOA	**NORSAR Array B**	**96.94**	**338**	LR	LR	01 49 57.1	
	comp=Z,19nm,21.4s,baz=100,slow=36						
LPAZ	**La Paz**	**151.69**	**102**	PKPbc	**PKiKP**	**01 11 13.7**	**+0.8**
	1.7nm,0.6s,baz=233,slow=4.1,SNR=11						

IDC ***29*** *01:03:16.8±1.0, 54°.86N×161°.36W, h0km, mb4.2/22, mbtmp4.2/24, ML3.9/2, MS3.0/8, Error ellipse: s-maj=27.9km s-min=13.5km az=169.0*

AEIC ***29*** *01:03:22.2±2.5, 54°.67N±0°.05×161°.08W±0°.07, h28km±4km, Error ellipse: s-maj=7.3km s-min=5.7km az=151.0*

NEIC ***29*** *01:03:23.2±1.8, 54°.73N±0°.05×161°.10W±0°.04, h45km±5km, mb4.4/45, ML4.1/28, Mwr4.0/42, ML3.9(AEIC), Error ellipse: s-maj=7.9km s-min=3.5km az=181.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.32; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$0.12; $M_{r\theta}$0.76; $M_{\theta\phi}$0.36; $M_{r\phi}$0.57; Fault plane solution: $M_0$1.09000×10^{15} NP1:ϕ_s67.98000°, δ81.97000°, λ63.08000°. NP2:ϕ_s322.59000°, δ28.00000°, λ162.69000°. Principal axes: T 1.2104, Plg46.0000°, Azm310.0000°; N -0.2968, Plg27.0000°, Azm72.0000°; P -0.9136, Plg32.0000°, Azm180.0000°;*

NEIC ***29*** *01:03:23.2, 54°.69N×161°.08W, h36km*

ISC 29 01:03:23.0±0.9, 54°.76N±0°.06×161°.04W±0°.03, h48km±8km, n282, σ1s13/288, mb4.3/48, MS3.3/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.61**	**310**		**Pn**	**01 03 34.9**	**-0.7**
DOL					**Sn**	**01 03 44.1**	**-0.6**
SDPT	**Sand Point**	**0.68**	**28**	P	**Pn**	**01 03 37.2**	**+0.8**
SDPT	**Sand Point**	**0.68**	**28**	S	**Sn**	**01 03 47.9**	**+1.9**
SDPT	**Sand Point**	**0.68**	**28**		**Pn**	**01 03 37.2**	**+0.8**
SDPT					**Sn**	**01 03 47.6**	**+1.6**
HAG	**Hague Volcano**	**0.75**	**319**		**Pn**	**01 03 37.4**	**0.0**
PS4A	**Pavlof South-4**	**0.75**	**322**		**Pn**	**01 03 37.3**	**-0.1**
PS4A					**Sn**	**01 03 48.4**	**+0.6**
PVV	**Pavlof Volcano**	**0.75**	**326**		**Pn**	**01 03 37.4**	**0.0**
PS1A	**Pavlof South-1**	**0.78**	**329**		**Pn**	**01 03 37.9**	**+0.2**
PS1A					**Sn**	**01 03 49.4**	**+0.9**
DT1	**Dutton Round H**	**0.80**	**297**		**Pn**	**01 03 36.9**	**-1.0**
DT1					**Sn**	**01 03 47.8**	**-1.0**
DTNA	**Dutton South F**	**0.80**	**300**		**Pn**	**01 03 37.4**	**-0.6**
DTNA					**Sn**	**01 03 48.3**	**-0.6**
CHNA	**Chernabura Isl**	**0.84**	**84**	P	**Pn**	**01 03 38.1**	**-0.5**
CHNA	**Chernabura Isl**	**0.84**	**84**	S	**Sn**	**01 03 49.2**	**-0.7**
CNBA	**Chernabura Isl**	**0.84**	**85**		**Pn**	**01 03 38.0**	**-0.6**
CNBA					**Sn**	**01 03 48.6**	**-1.4**
PN7A	**Pavlof North-7**	**0.87**	**321**		**Pn**	**01 03 39.2**	**+0.2**
ISNN	**Isanotski Nort**	**1.59**	**274**		**Pn**	**01 03 48.7**	**0.0**
ISNN					**Sn**	**01 04 08.7**	**+0.7**
VNKR	**Veniaminof 5**	**1.60**	**36**		**Pn**	**01 03 50.1**	**+1.3**
SSLS	**Shishaldin Sou**	**1.71**	**270**		**Pn**	**01 03 50.2**	**-0.2**
SSLS					**Sn**	**01 04 12.6**	**+1.4**
VNSS	**Veniaminof 8**	**1.73**	**31**		**Pn**	**01 03 52.7**	**+2.0**
VNFG	**Fog Glacier, M**	**1.75**	**28**		**Pn**	**01 03 53.2**	**+2.2**

VNFG	**Fog Glacier, M**	**1.75**	**28**		**Pn**	**01 03 52.9**	**+1.9**
VNSG	**Veniaminof 6**	**1.77**	**38**		**Pn**	**01 03 53.1**	**+1.9**
SSBA	**Shishaldin**	**1.79**	**272**		**Pn**	**01 03 51.4**	**0.0**
VNHG	**Veniaminof 1**	**1.82**	**35**		**Pn**	**01 03 54.0**	**+2.2**
VNNF	**Veniaminof 3**	**1.82**	**32**		**Pn**	**01 03 54.2**	**+2.2**
AZAC	**Aniakchak**	**2.67**	**35**		**Pn**	**01 04 05.6**	**+2.1**
ANNW	**Aniakchak Nort**	**2.73**	**35**		**Pn**	**01 04 06.7**	**+2.3**
ANNE	**Aniakchak Nort**	**2.74**	**37**		**Pn**	**01 04 06.5**	**+2.0**
AKSA	**Akutan Strait**	**2.79**	**259**		**Pn**	**01 04 05.7**	**+0.6**
AKSA					**Sn**	**01 04 38.2**	**+0.7**
AKSA					LR	01 04 38.8	
AKUT	**Akutan**	**2.83**	**259**	P	**Pn**	**01 04 05.9**	**+0.3**
AKUT	**Akutan**	**2.83**	**259**	S	**Sn**	**01 04 39.7**	**+1.2**
AKUT	**Akutan**	**2.83**	**259**		**Pn**	**01 04 05.6**	**0.0**
AKUT				IAML		01 04 44.9	
	comp=N,366nm,0.9s						
AKUT				IAML		01 04 52.4	
	comp=E,401nm,0.7s						
AHB	**Akutan Harbor**	**2.86**	**259**		**Pn**	**01 04 06.5**	**+0.3**
AHB					**Sn**	**01 04 40.5**	**+1.2**
AHB					LR	01 04 41.7	
AKLV	**Akutan Long Va**	**2.93**	**260**		**Pn**	**01 04 06.8**	**-0.3**
AKBBA	**Akutan Broad B**	**2.93**	**259**		**Pn**	**01 04 06.8**	**-0.2**
AKGG	**Akutan Green G**	**2.94**	**261**		**Pn**	**01 04 07.1**	**-0.1**
AKV	**Akutan Volcano**	**2.94**	**260**		**Pn**	**01 04 07.4**	**+0.1**
ZRO	**Akutan Zero**	**2.96**	**259**		**Pn**	**01 04 07.4**	**-0.1**
LVA	**Lava Point**	**2.97**	**260**		**Pn**	**01 04 08.2**	**+0.5**
LVA				IAML		01 04 54.9	
	comp=N,706nm,0.7s						
LVA				IAML		01 04 55.2	
	comp=E,499nm,0.6s						
AKMO	**Akutan Morgan**	**2.98**	**259**		**Pn**	**01 04 07.8**	**+0.1**
AKRB	**Akutan Reef Bi**	**3.00**	**260**		**Pn**	**01 04 07.8**	**-0.3**
UNV	**Unalaska Valle**	**3.33**	**256**	P	**Pn**	**01 04 12.0**	**-0.5**
UNV	**Unalaska Valle**	**3.33**	**256**	S	**Sn**	**01 04 51.7**	**+1.0**
UNV	**Unalaska Valle**	**3.33**	**256**		**Pn**	**01 04 12.2**	**-0.3**
UNV					**Sn**	**01 04 49.3**	**-1.4**
UNV				IAML		01 05 01.1	
	comp=E,223nm,0.5s						
MNAT	**Makushin Natee**	**3.42**	**257**		**Pn**	**01 04 13.6**	**-0.2**
MREP	**Makushin Rep't**	**3.47**	**257**		**Pn**	**01 04 14.2**	**-0.4**
MGOD	**Makushin Gods**	**3.55**	**257**		**Sn**	**01 04 56.4**	**+0.1**
PLBL	**Peulik Blue Cr**	**3.78**	**37**		**Pn**	**01 04 20.7**	**+2.1**
R17L	**Mt. Peulik Vol**	**3.89**	**40**		**Pn**	**01 04 22.9**	**+2.6**
PLK5	**Peulik 5**	**3.99**	**34**		**Pn**	**01 04 24.0**	**+2.5**
SII	**Sitkinak Islan**	**4.28**	**62**		**Pn**	**01 04 26.5**	**+0.9**
SII				IAML		01 05 50.0	
	comp=E,357nm,1.1s						
OKTU	**Okmok Mt. Tuli**	**4.34**	**254**		**Pn**	**01 04 26.9**	**+0.4**
OKCE	**Okmok Cone E**	**4.40**	**255**		**Pn**	**01 04 27.6**	**+0.4**
O15K	**Ungalikthiuk R**	**4.48**	**8**	Pn	**Pn**	**01 04 29.1**	**+0.8**
O15K				IAML		01 05 48.5	
	comp=E,97nm,1.1s						
O14K	**Tigyukauivet M**	**4.51**	**359**		**Pn**	**01 04 29.8**	**+1.2**
P16K	**Nushagak River**	**4.60**	**20**		**Pn**	**01 04 31.3**	**+1.4**
P16K				IAML		01 06 01.2	
	comp=N,198nm,0.8s						
P16K				IAML		01 06 04.4	
	comp=E,254nm,0.9s						
ANCK	**Angle Creek**	**4.62**	**39**		**Pn**	**01 04 32.4**	**+2.1**
ACHA	**Angle Creek He**	**4.69**	**40**		**Pn**	**01 04 33.5**	**+2.2**
KABU	**Katmai Buttres**	**4.75**	**40**		**Pn**	**01 04 34.5**	**+2.4**
KAKN	**Katmai Knife C**	**4.85**	**41**		**Pn**	**01 04 36.1**	**+2.6**
OHAK	**Old Harbor**	**5.01**	**57**	P	**Pn**	**01 04 35.5**	**0.0**
OHAK	**Old Harbor**	**5.01**

TNA **Tin City** 11.36 345 Pn **Pn** 01 06 02.8 +0.5
F17K **Baldwin Pennin** 11.73 360 Pn **Pn** 01 06 07.9 +0.6
IMAR **Indian Mountai** 11.82 15 **Pn** 01 06 09.4 +0.8
GRNC **Granite Creek** 11.89 52 **Pn** 01 06 10.8 +0.9
K24K **Donnelly Dome** 11.93 34 **Pn** 01 06 11.4 +1.2
BARN **Barnard Glacie** 12.06 51 **Pn** 01 06 13.1 +1.0
H22K **Ishtalitna Cre** 12.13 19 **Pn** 01 06 13.8 +0.8
F19K **Shaleruckik Mo** 12.22 6 **Pn** 01 06 14.5 +0.4
IL31 12.28 30 **Pn** 01 06 13.3 -1.6
ILAR **Eielson Array** 12.28 30 Pn **Pn** 01 06 12.2 -2.7
comp=N,0.3nm,0.3s,baz=221,slow=13,SNR=9.9
ILAR Sn **Sn** 01 08 25.2 -4.9
comp=N,0.1nm,0.3s,baz=212,slow=24,SNR=2.0
ILAR LR LR 01 11 28.1
comp=N,44nm,18.8s,baz=158,slow=40
ILAR **Eielson Array** 12.28 30 **Pn** 01 06 12.7 -2.3
G21K **Allakaket** 12.35 14 **Pn** 01 06 16.4 +0.5
F20K **Avaraart Lake** 12.60 10 **Pn** 01 06 20.1 +0.9
E18K **Tukpahlearik C** 12.71 1 Pn **Pn** 01 06 21.0 +0.2
E19K **Redstone River** 12.87 7 Pn **Pn** 01 06 24.5 +1.5
BCAR **Beaver Creek A** 12.93 42 **Pn** 01 06 24.4 +0.6
O29M **Mount Kennedy** 13.25 56 **Pn** 01 06 29.6 +1.2
P29M **Windy Craggy** 13.51 59 **Pn** 01 06 33.1 +1.3
C16K **Lisburne Hills** 13.71 353 Pn **Pn** 01 06 35.7 +1.3
M29M **Somme Creek** 14.00 48 **Pn** 01 06 39.1 +0.6
S31K **Pelican** 14.09 67 Pn **Pn** 01 06 39.3 -0.3
E22K **Anaktuvuk Pass** 14.10 14 **Pn** 01 06 41.2 +1.4
E21K **Killik River** 14.12 11 Pn **Pn** 01 06 42.0 +2.0
DAWY **Dawson** 14.36 41 **Pn** 01 06 42.6 -0.6
I27K **Kandik River** 14.46 34 **Pn** 01 06 43.0 -1.6
E24K **Your Creek** 14.60 19 **Pn** 01 06 45.9 -0.6
M30M **Minto, Yukon** 14.77 48 **Pn** 01 06 48.7 +0.1
F25K **Christian Rive** 14.79 23 **Pn** 01 06 49.1 +0.2
N31M **Braeburn, Yuko** 14.88 53 **Pn** 01 06 50.5 +0.4
H27K **Steamboat Moun** 14.90 32 **Pn** 01 06 49.3 -1.1
S32K **Killisnoo** 14.97 69 Pn **Pn** 01 06 52.2 +1.0
K29M **Barlow Dome** 14.98 43 **Pn** 01 06 51.9 +0.5
K29M IAmb IAmb 01 07 04.6
comp=Z,18nm,1.4s
D23K **Nanushuk River** 15.04 14 Pn **Pn** 01 06 52.8 +0.8
D23K IAmb IAmb 01 07 15.3
comp=Z,14nm,1.4s
WHY **Whitehorse** 15.11 56 Pn **Pn** 01 06 54.0 +0.8
I30M **Mount Dempster** 16.06 39 **Pn** 01 07 05.7 +0.4
I30M IAmb IAmb 01 07 25.4
comp=Z,18nm,0.7s
D25K **Kavik River** 16.07 19 Pn **Pn** 01 07 05.2 -0.2
Q32M **Nakina River** 16.22 63 Pn **Pn** 01 07 08.0 +0.6
G29M **Pine Creek** 16.42 33 **Pn** 01 07 09.9 +0.1
EPYK **Eagle Plains** 16.54 36 **Pn** 01 07 11.0 -0.3
C27K **Jago River** 16.86 21 **Pn** 01 07 15.2 0.0
H31M **Peel River** 17.09 39 **Pn** 01 07 17.2 -0.9
DLBC **Dease Lake** 17.38 65 LR LR 01 13 15.6
comp=Z,18nm,20.7s,baz=270,slow=34
F30M **Barrier River** 17.54 33 P **Pn** 01 07 23.6 0.0
G31M **Satah River** 17.66 36 **Pn** 01 07 23.9 -1.1
INK **Inuvik** 18.63 33 P **P** 01 07 35.9 -0.3
comp=Z,0.3nm,0.3s,baz=267,slow=11,SNR=12
INK LR LR 01 15 38.4
comp=Z,42nm,19.4s,baz=212,slow=40
comp=Z,1.1nm,0.3s
INK **Inuvik** 18.63 33 P **P** 01 07 35.3 -0.9
WRGLY **Wrigley** 20.85 51 P **P** 01 08 00.8 +0.5
WRGLY IAmb IAmb 01 08 17.1
comp=Z,9.8nm,0.9s
PEA0B **Petropavlovsk-** 24.10 283 P **P** 01 08 33.1 -0.6
PEA0B IAmb IAmb 01 08 35.8
comp=Z,28nm,1.4s
PETK **Petropavlovsk-** 24.10 283 P **P** 01 08 32.9 -0.9
comp=Z,5.0nm,0.4s,baz=77,slow=13,SNR=17
comp=Z,5.0nm,0.4s
PETK **Petropavlovsk-** 24.10 283 P **P** 01 08 33.0 -0.8
YKA **Yellowknife Ar** 24.88 53 P **P** 01 08 42.1 +1.4
comp=Z,0.5nm,0.5s,baz=273,slow=9.1,SNR=7.2
comp=Z,0.5nm,0.5s
YKA **Yellowknife Ar** 24.88 53 P **P** 01 08 41.5 +0.7
YBH **Yreka Blue Hor** 28.27 101 LR LR 01 17 50.5
comp=Z,33nm,21.6s,baz=324,slow=31
YAK **Yakutsk** 35.38 310 LR LR 01 25 59.5
comp=Z,71nm,18.0s,baz=136,slow=39
ILON **Igloolik, Nuna** 36.83 36 P **P** 01 10 26.6 +0.8
ILON IAmb IAmb 01 10 27.3
comp=Z,5.2nm,0.6s
ULM **Lac du Bonnet** 38.64 69 P **P** 01 10 42.5 +1.2
comp=Z,1.2nm,0.3s,baz=315,slow=7.1,SNR=2.7
comp=Z,1.2nm,0.3s
ULM **Lac du Bonnet** 38.64 69 P **P** 01 10 41.9 +0.5
ULM IAmb IAmb 01 11 14.3
comp=Z,8.1nm,1.4s
H11N2 **WAKE ISLAND Hy** 42.59 228 T T 01 56 11.0
baz=27,slow=76,SNR=19
H11N3 **WAKE ISLAND Hy** 42.59 228 T T 01 56 13.5
baz=27,slow=76,SNR=18
H11N1 **WAKE ISLAND Hy** 42.61 228 T T 01 56 12.4
baz=27,slow=76,SNR=21
H11S1 **WAKE ISLAND Hy** 43.76 227 T T 01 57 43.3
baz=26,slow=76,SNR=15
H11S2 **WAKE ISLAND Hy** 43.77 227 T T 01 57 45.3
baz=26,slow=76,SNR=11
H11S3 **WAKE ISLAND Hy** 43.78 227 T T 01 57 39.1
baz=26,slow=76,SNR=6.4
MJAR **Matsushiro Arr** 44.67 272 P **P** 01 11 29.9 -0.9
comp=Z,1.4nm,0.4s,baz=39,slow=6.5,SNR=4.1
comp=Z,1.4nm,0.4s
JGF **Kuroka** 45.82 272 P **P** 01 11 39.2 -0.8
HILR **Hailar Array B** 46.44 298 P **P** 01 11 42.8 -1.9
comp=Z,0.9nm,0.4s,baz=47,slow=10,SNR=2.4
comp=Z,0.9nm,0.4s
TXAR **Lajitas Array** 47.93 98 P **P** 01 11 59.0 +2.4
comp=Z,0.1nm,0.5s,baz=331,slow=7.7,SNR=2.4
TXAR PcP **PcP** 01 13 25.2 +0.9
comp=Z,0.3nm,0.5s,baz=210,slow=1.8,SNR=6.3
KSRS **Korea Array** 49.96 281 P **P** 01 12 10.7 -1.1
comp=Z,1.4nm,0.5s,baz=47,slow=7.3,SNR=10
comp=Z,1.4nm,0.5s
SCHQ **Schefferville** 50.21 49 P **P** 01 12 13.6 +0.1
comp=Z,1.7nm,0.7s,baz=319,slow=9.3,SNR=1.8
comp=Z,1.7nm,0.7s
SCHQ **Schefferville** 50.21 49 P **P** 01 12 13.8 +0.3
SONM **Songino Array** 54.22 304 P **P** 01 12 43.1 -0.4
comp=Z,0.7nm,0.5s,baz=50,slow=6.2,SNR=5.3
SONM PcP **PcP** 01 13 47.6 +0.2
comp=Z,0.6nm,0.5s,baz=46,slow=4.2,SNR=2.6
comp=Z,0.7nm,0.5s
SONM **Songino Array** 54.22 304 P **P** 01 12 42.6 -0.9
SONM IAmb IAmb 01 12 44.7
comp=Z,1.9nm,1.1s
F64A **Sherman** 55.68 58 P **P** 01 12 53.9 0.0
BATG **Bathurst New B** 55.77 55 P **P** 01 12 54.6 0.0
ARCES **ARCESS Array B** 55.92 357 P **P** 01 12 55.5 +0.1
comp=Z,2.8nm,0.8s,baz=14,slow=8.4,SNR=4.8
comp=Z,2.8nm,0.8s
ARCES **ARCESS Array B** 55.92 357 P **P** 01 12 55.3 -0.1
ARCES IAmb IAmb 01 13 09.4
comp=Z,6.7nm,1.2s
HHC **Hu-ho-hao-te** 56.57 295 *e*P **P** 01 13 02.0 +1.5
HHC pmax pmax
comp=Z,10.0nm,0.8s
BORG **Borgarnes** 56.88 19 LR LR 01 40 30.1
comp=Z,19nm,18.4s,baz=346,slow=39
ZALV **Zalesovo Beam** 58.86 321 P **P** 01 13 14.3 -1.9
comp=Z,0.4nm,0.3s,baz=45,slow=13,SNR=3.7
ZALV PcP **PcP** 01 14 05.4 +0.3
comp=Z,0.8nm,0.8s,baz=5.7,slow=1.4,SNR=2.1
comp=Z,0.4nm,0.3s
ZALV **Zalesovo Beam** 58.86 321 P **P** 01 13 15.9 -0.3
KURBB **Kurchatov Arra** 63.82 322 P **P** 01 13 48.7 -1.0
comp=Z,0.7nm,0.3s,baz=27,slow=6.2,SNR=1.9
comp=Z,0.7nm,0.3s
FIA1 **FINESS Array S** 64.01 356 P **P** 01 13 49.9 -0.9
FINES **FINESS Array B** 64.01 356 P **P** 01 13 50.5 -0.4
comp=Z,1.6nm,0.5s,baz=16,slow=7.2,SNR=26
comp=Z,1.6nm,0.5s
FINES **FINESS Array B** 64.01 356 P **P** 01 13 50.3 -0.6
NC204 **NORSAR Array S** 64.13 4 P **P** 01 13 51.8 0.0
NB2 **NORSAR Subarra** 64.39 4 P **P** 01 13 53.5 +0.1
comp=Z,7.8nm,1.1s,baz=356,slow=6.5
NOA **NORSAR Array B** 64.39 4 P **P** 01 13 52.4 -1.0
comp=Z,1.3nm,0.8s,baz=355,slow=6.5,SNR=5.6
comp=Z,1.3nm,0.8s
ARTI **Arti** 64.64 337 P **P** 01 13 54.4 -0.7
HFS **Hagfors** 65.38 3 P **P** 01 13 59.8 -0.1
comp=Z,2.5nm,0.4s,baz=5.2,slow=3.3,SNR=30
comp=Z,2.5nm,0.4s
MKAR **Makanchi Array** 65.58 318 P **P** 01 14 00.6 -0.9
comp=Z,0.8nm,0.5s,baz=43,slow=6.0,SNR=11
comp=Z,0.8nm,0.5s
MKAR **Makanchi Array** 65.58 318 P **P** 01 14 00.7 -0.7
MAKZ **Makanchi** 65.70 318 P **P** 01 14 01.3 -0.8
MAKZ IAmb IAmb 01 14 01.9
comp=Z,2.1nm,0.5s
EKA **Eskdalemuir Ar** 68.78 13 P **P** 01 14 21.9 +0.4
comp=Z,2.2nm,0.6s,baz=343,slow=5.4,SNR=7.7
comp=Z,2.2nm,0.6s
PDGK **Podgornoye** 69.57 317 P **P** 01 14 26.6 -0.2
PABE **Paberze** 70.02 357 P **P** 01 14 29.3 +0.3
AB31 **Akbulak array** 70.80 333 P **P** 01 14 33.9 0.0
AB31 IAmb IAmb 01 14 34.8
comp=Z,1.7nm,0.9s
ABKAR **Akbulak array** 70.80 333 P **P** 01 14 34.1 +0.1
BOOM **Boomskoye usch** 71.65 319 P **P** 01 14 39.0 -0.5
BOOM IAmb IAmb 01 14 40.6
comp=Z,3.0nm,0.8s
PZH **PanZhiHua** 72.75 291 P **P** 01 14 48.0 +1.8
KK31 **Karatay Array** 73.09 323 P **P** 01 14 47.4 -0.4
KK31 IAmb IAmb 01 14 48.8
comp=Z,1.5nm,0.8s
KKAR **Karatay Array** 73.09 323 P **P** 01 14 47.4 -0.4
CLL **Collm** 74.19 4 *e*P **P** 01 14 54.0 -0.1
AKASG **Malin Array Be** 74.56 353 P **P** 01 14 55.8 -0.5
comp=Z,4.3nm,0.4s,baz=10,slow=5.8,SNR=15
AKASG LR LR 01 47 49.8
comp=Z,26nm,21.9s,baz=5.0,slow=36
comp=Z,4.3nm,0.4s
AKASG **Malin Array Be** 74.56 353 P **P** 01 14 55.5 -0.7
AKASG IAmb IAmb 01 14 57.4
comp=Z,3.6nm,1.1s
AKBB **Malin Array Si** 74.56 353 P **P** 01 14 55.9 -0.4
AKBB IAmb IAmb 01 14 56.5
comp=Z,9.8nm,1.1s
KSH2 **Kashi** 74.68 318 P **P** 01 14 58.0 +0.7
KSH2 pmax pmax
comp=Z,5.0nm,0.7s
LANS **Liptovska Anna** 76.47 360 *e*P **P** 01 15 08.7 +1.4
GERES **GERESS Array B** 76.68 4 P **P** 01 15 09.0 +0.5
comp=Z,0.8nm,0.7s,baz=345,slow=4.7,SNR=9.0
comp=Z,0.8nm,0.7s
GERES **GERESS Array B** 76.68 4 P **P** 01 15 08.6 0.0
MODS **Modra-Piesok** 77.23 1 *e*P **P** 01 15 12.7 +1.1
WINA **Alland / Wiene** 77.48 2 *e*P **P** 01 15 13.4 +0.5
comp=Z,1.1nm,0.5s
CONA **Conrad Observa** 77.66 2 *i* P **P** 01 15 14.6 +0.6
comp=Z,1.0nm,0.4s
BUR08 **Bucovina Ar. S** 77.84 356 P **P** 01 15 15.2 +0.1
BUR08 IAmb IAmb 01 15 17.5
comp=Z,3.0nm,1.1s
BURAR **Bucovina Array** 77.87 356 P **P** 01 15 15.2 0.0
BURAR IAmb IAmb 01 15 16.3
comp=Z,1.1nm,0.7s
MOTA **Moosalm** 78.06 5 *e*P **P** 01 15 17.3 +0.9
comp=Z,0.3nm,0.1s
WATA **Walderalm** 78.09 5 *i* P **P** 01 15 17.1 +0.6
comp=Z,1.4nm,0.5s
WTTA **Wattenberg** 78.17 5 *i* P **P** 01 15 17.6 +0.6
comp=Z,1.5nm,0.5s
SQTA **Sankt Quirin** 78.19 5 *i* P **P** 01 15 17.7 +0.7
comp=Z,1.6nm,0.5s
FETA **Feichten** 78.36 6 *e*P **P** 01 15 18.3 +0.3
comp=Z,1.0nm,0.4s
FUORN **Ofenpass-Fuorn** 78.73 6 P **P** 01 15 20.8 +0.6
FUORN IAmb IAmb 01 15 21.9
comp=Z,5.2nm,1.2s
SOKA **Soboth** 78.89 3 *e*P **P** 01 15 21.4 +0.6
comp=Z,0.6nm,0.4s
OBKA **Obir** 79.04 3 *i* P **P** 01 15 22.7 +1.0
comp=Z,2.1nm,0.3s
EVN **Everest** 79.24 303 P **P** 01 15 23.3 -0.4
EVN IAmb IAmb 01 15 24.6
comp=Z,7.7nm,0.9s
KBZ **Khabaz** 79.79 343 P **P** 01 15 26.8 +1.1
comp=Z,2.9nm,0.9s,baz=90,slow=1.0,SNR=5.6
comp=Z,2.9nm,0.9s
NIL **Nilore** 80.37 317 P **P** 01 15 29.1 +0.1
CMAR **Chiang Mai Arr** 80.75 289 P **P** 01 15 31.1 -0.2
comp=Z,2.3nm,0.5s,baz=20,slow=5.8,SNR=9.4
comp=Z,2.3nm,0.5s
CMAR **Chiang Mai Arr** 80.75 289 P **P** 01 15 30.7 -0.5
PDG **Podgorica** 83.19 360 P **P** 01 15 43.5 -0.1
PDG IAmb IAmb 01 15 45.2
comp=Z,3.6nm,0.8s
ESDC **Sonseca Array** 83.91 18 P **P** 01 15 48.5 +1.0
comp=Z,1.8nm,0.8s,baz=343,slow=4.3,SNR=12
comp=Z,1.8nm,0.8s
ESDC **Sonseca Array** 83.91 18 P **P** 01 15 47.5 -0.1
RDO **Rodhopi** 84.30 355 P **P** 01 15 49.9 +0.6
BR131 **Keskin Array S** 85.05 349 P **P** 01 15 54.1 +0.7
BR131 IAmb IAmb 01 15 56.3
comp=Z,7.3nm,1.5s
BRTR **Keskin Array B** 85.05 349 P **P** 01 15 54.0 +0.6
comp=Z,2.0nm,0.8s,baz=31,slow=1.9,SNR=12
comp=Z,2.0nm,0.8s
BRTR **Keskin Array B** 85.05 349 P **P** 01 15 53.4 0.0
BNN **Bunyan** 85.64 347 P **P** 01 15 56.7 +0.4
VSL **Villasalto** 85.76 7 P **P** 01 15 57.1 +0.4
VSL IAmb IAmb 01 16 25.9
comp=Z,5.0nm,1.1s
TIP **Timpagrande** 86.42 2 P **P** 01 16 00.3 +0.3
TIP IAmb IAmb 01 16 04.1
comp=Z,6.0nm,1.4s
QSPA **South Pole Qui** 144.53 180 PKP PKPbc 01 22 51.1 -0.2
comp=Z,1.8nm,0.8s,baz=131,slow=2.4,SNR=8.1
GRTLG **Ghanzi** 146.61 356 PKPbc **PKPbc** 01 22 59.1 -0.1
KOOLE **Kule** 148.27 358 PKPbc **PKPbc** 01 23 03.0 -0.7
MAKGR **Makgori** 150.77 349 PKPbc **PKPbc** 01 23 09.1 -0.7

*IDC **29** 01:09:50.8±6.0, 4°.77S×145°.39E, h79km±51km, mb3.4/4, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=44.2km s-min=33.4km az=127.0*

ISC 29 01:09:45.9±1.4, 4°.6S±0°.1×145°.2E±0°.2, h35km, n7, σ1s46/8, mb3.6/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	5.20	158	P	**Pn**	01 11 03.5	+2.2
	14nm,0.4s,baz=354,slow=10,SNR=4.1						
PMG				S	**Sn**	01 11 58.2	-1.8
	29nm,0.5s,baz=82,slow=22,SNR=8.5						
CTA	**Charters Tower**	15.47	176	P	**Pn**	01 13 21.6	0.0
	0.2nm,0.3s,baz=342,slow=16,SNR=1.1						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	18.58	214	P	**P**	01 14 00.4	+0.2
	0.4nm,0.3s,baz=40,slow=11,SNR=15						
	4.0nm,0.9s						
ASAR	**Alice Springs**	21.89	209	P	**P**	01 14 36.5	+0.4
	1.9nm,0.8s,baz=40,slow=9.5,SNR=14						
	1.9nm,0.8s						
STKA	**Stephens Creek**	27.38	187	P	**P**	01 15 28.1	0.0
	1.1nm,0.8s,baz=349,slow=10,SNR=3.9						
	1.1nm,0.3s						
VNDA	**Vanda**	73.45	176	P	**P**	01 21 12.8	-1.5
	0.6nm,0.9s,baz=322,slow=4.7,SNR=3.0						
	0.6nm,0.9s						
ILAR	**Eielson Array**	84.89	24	P	**P**	01 22 16.8	-0.1
	0.3nm,0.6s,baz=273,slow=6.1,SNR=3.2						
	0.3nm,0.6s						

*IDC **29** 01:18:51.3±4.0, 15°.01N×55°.63E, h0km, mb3.7/7, mbtmp3.7/7, MS3.2/2, Error ellipse: s-maj=104.3km s-min=27.7km az=158.0*

ISC 29 01:18:52.7±3.3, 15°.0N±0°.6×55°.6E±0°.3, h10km, n12, σ0s41/7, mb3.9/6, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	38.72	30	P	**P**	01 26 16.9	-0.1
	0.6nm,0.8s,baz=210,slow=10,SNR=2.8						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	40.07	23	P	**P**	01 26 28.2	0.0
	0.8nm,0.9s,baz=221,slow=8.5,SNR=6.7						
	0.8nm,0.9s						
LSZ	**Lusaka**	40.50	223	LR	LR	01 43 50.9	
	comp=Z,44nm,18.2s,baz=150,slow=37						
ZALV	**Zalesovo Beam**	45.08	24	P	**P**	01 27 08.2	-0.6
	1.0nm,0.7s,baz=232,slow=9.0,SNR=5.2						
	1.0nm,0.7s						
TSUM	**Tsumeb**	50.57	229	LR	LR	01 47 52.0	
	comp=Z,14nm,19.7s,baz=154,slow=34						
FINES	**FINESS Array B**	51.00	342	P	**P**	01 27 54.9	+0.3
	2.0nm,1.0s,baz=145,slow=8.2,SNR=3.4						
	2.0nm,1.0s						
TORD	**Torodi Ar. Bea**	52.25	275	P	**P**	01 28 04.7	+0.1
	0.3nm,0.5s,baz=64,slow=5.9,SNR=2.4						
	0.3nm,0.5s						
SONM	**Songino Array**	53.00	41	P	**P**	01 28 10.1	+0.2
	0.7nm,0.3s,baz=256,slow=5.8,SNR=3.7						
	0.7nm,0.3s						
ESDC	**Sonseca Array**	57.26	308	P	**P**	01 28 40.5	-0.2
	0.9nm,0.8s,baz=78,slow=6.9,SNR=6.9						
	0.9nm,0.8s						
H01W3	**Cape Leeuwin H**	74.41	133	T	T	02 51 17.9	
	baz=302						
H01W2	**Cape Leeuwin H**	74.41	133	T	T	02 51 17.5	
	baz=302						
H01W1	**Cape Leeuwin H**	74.42	133	T	T	02 51 13.7	
	baz=302						

*IDC **29** 01:27:46.5±0.7, 6°.63S×153°.53E, h0km, mb4.1/15, mbtmp4.1/16, ML2.3/1, MS3.3/12, Error ellipse: s-maj=26.6km s-min=15.8km az=101.0*

*NEIC **29** 01:27:48.9±1.4, 6°.53S±0°.08×153°.5E±0°.1, h10km±1km, mb4.6/23, Error ellipse: s-maj=21.1km s-min=12.7km az=86.0*

ISC 29 01:27:51.1±0.6, 6°.57S±0°.07×153°.5E±0°.1, h29km, n62, σ0s91/56, mb4.4/26, MS3.3/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	2.66	327	LR	LR	01 29 07.6	
	comp=Z,13nm,20.9s,baz=92,slow=30						
RABL	**Rabaul**	2.69	331	Pn	**Pn**	01 28 32.3	-0.2
RABL				Sn	**Sn**	01 29 02.9	-1.3
PMG	**Port Moresby**	6.85	245	Pn	**Pn**	01 29 30.6	+1.0
	3.6nm,0.3s,baz=66,slow=10.0,SNR=6.5						
PMG				Sn	**Sn**	01 30 47.9	+1.2
	4.8nm,0.3s,baz=285,slow=21,SNR=4.6						
PMG				LR	LR	01 32 07.8	
	comp=Z,168nm,20.7s,baz=40,slow=38						
	39nm,0.8s						
PMG	**Port Moresby**	6.85	245		**Pn**	01 29 31.0	+1.3
CTA	**Charters Tower**	15.15	207	Pn	**P**	01 31 25.5	-2.6
	0.4nm,0.3s,baz=42,slow=16,SNR=1.3						
CTA				LR	LR	01 37 09.2	
	comp=Z,86nm,18.7s,baz=36,slow=37						
WB0	**Warramunga Arr**	22.70	233	P	**P**	01 32 50.5	-0.2
WRA	**Warramunga Arr**	22.84	233	P	**P**	01 32 51.0	-1.1
	3.2nm,1.0s,baz=57,slow=11,SNR=7.6						
WRA				PcP	**PcP**	01 36 43.4	+0.5
	0.8nm,1.0s,baz=58,slow=2.5,SNR=2.7						
	3.2nm,1.0s						
WRA	**Warramunga Arr**	22.84	233	P	**P**	01 32 51.7	-0.4
INKA	**Innaminka**	24.27	208	P	**P**	01 33 04.1	-1.8
INKA				IAmb	IAmb	01 33 09.8	
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	25.35	226	P	**P**	01 33 15.4	-0.4
ASAR	**Alice Springs**	25.35	226	P	**P**	01 33 15.0	-0.8
	comp=Z,1.9nm,0.9s,baz=61,slow=9.2,SNR=16						
ASAR				PcP	**PcP**	01 36 48.4	+0.1
	comp=Z,0.3nm,0.3s,baz=96,slow=0.9,SNR=1.2						
ASAR				LR	LR	01 42 30.7	
	comp=Z,147nm,18.9s,baz=72,slow=35						
	comp=Z,1.9nm,0.9s						
ASAR	**Alice Springs**	25.35	226	P	**P**	01 33 14.7	-1.1
STKA	**Stephens Creek**	27.51	202	P	**P**	01 33 34.6	-0.6
	comp=Z,1.6nm,0.9s,baz=26,slow=8.9,SNR=3.4						
STKA				LR	LR	01 44 08.9	
	comp=Z,103nm,18.1s,baz=23,slow=36						
	comp=Z,1.6nm,0.9s						
FITZ	**Fitzroy Crossi**	29.45	245	LR	LR	01 44 22.2	
	comp=Z,73nm,21.6s,baz=18,slow=34						
FITZ	**Fitzroy Crossi**	29.45	245	P	**P**	01 33 51.0	-1.7
MJAR	**Matsushiro Arr**	45.20	343	LR	LR	01 55 17.5	
	comp=Z,20nm,18.7s,baz=186,slow=36						
KSRS	**Korea Array**	49.86	333	P	**P**	01 36 42.5	+0.7
	comp=Z,1.0nm,0.6s,baz=145,slow=8.2,SNR=6.3						
	comp=Z,1.0nm,0.6s						
KSAR	**Wonju Array Be**	49.87	333	P	**P**	01 36 41.7	-0.2
ASAJ	**Asahikawa**	51.39	350	LR	LR	01 57 53.3	
	comp=Z,14nm,18.6s,baz=165,slow=35						
CMAR	**Chiang Mai Arr**	59.23	296	P	**P**	01 37 49.5	-0.7
	comp=Z,2.6nm,0.6s,baz=99,slow=9.0,SNR=0.7						
	comp=Z,2.6nm,0.6s						
PETK	**Petropavlovsk-**	59.55	3	P	**P**	01 37 52.0	+0.2
	comp=Z,1.6nm,0.6s,baz=189,slow=8.3,SNR=2.7						
	comp=Z,1.6nm,0.6s						
PETK	**Petropavlovsk-**	59.55	3	P	**P**	01 37 52.7	+0.9
HILR	**Hailar Array B**	63.13	336	P	**P**	01 38 17.1	+1.0
	comp=Z,1.2nm,0.5s,baz=151,slow=3.3,SNR=3.6						
	comp=Z,1.2nm,0.5s						
SHL	**Shillong**	67.77	301	P	**P**	01 38 46.9	+0.1
SONM	**Songino Array**	68.16	328	P	**P**	01 38 50.8	+2.0
	comp=Z,1.7nm,0.8s,baz=124,slow=5.2,SNR=6.3						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	68.16	328	P	**P**	01 38 49.4	+0.6
SONM				IAmb	IAmb	01 38 51.8	
	comp=Z,3.1nm,1.2s						
VNDA	**Vanda**	71.05	178	P	**P**	01 39 06.6	+0.6
	comp=Z,0.6nm,0.8s,baz=341,slow=6.2,SNR=4.1						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	71.05	178	P	**P**	01 39 06.8	+0.8
EVN	**Everest**	72.82	302	P	**P**	01 39 17.6	-0.6
EVN				IAmb	IAmb	01 39 20.5	
	comp=Z,8.7nm,1.0s						
KDAK	**Kodiak Island**	77.45	26	LR	LR	02 07 05.4	
	comp=Z,23nm,21.9s,baz=237,slow=30						
L19K	**White Mountain**	79.12	22	P	**P**	01 39 53.7	+0.9
L19K				IAmb	IAmb	01 39 57.5	
	comp=Z,11nm,1.3s						
H19K	**Roundabout Mou**	80.66	19	P	**P**	01 40 01.8	+0.9
H19K				IAmb	IAmb	01 40 06.9	
	comp=Z,12nm,1.5s						
E19K	**Redstone River**	81.67	17		**P**	01 40 06.4	+0.1
E19K				IAmb	IAmb	01 40 09.8	
	comp=Z,5.2nm,0.8s						
IMAR	**Indian Mountai**	81.82	19	P	**P**	01 40 08.0	+0.9
MKAR	**Makanchi Array**	82.08	319	P	**P**	01 40 09.6	+0.6
	comp=Z,1.0nm,0.9s,baz=110,slow=5.6,SNR=4.3						
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	82.08	319	P	**P**	01 40 09.4	+0.5
C19K	**Lookout Ridge**	82.11	15	P	**P**	01 40 09.4	+0.8
MAKZ	**Makanchi**	82.29	319	P	**P**	01 40 10.4	+0.4
MAKZ				IAmb	IAmb	01 40 14.2	
	comp=Z,4.0nm,1.1s						
ZALV	**Zalesovo Beam**	82.98	326	P	**P**	01 40 13.7	+0.3
	comp=Z,1.8nm,0.6s,baz=120,slow=5.6,SNR=8.4						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	82.98	326	P	**P**	01 40 13.1	-0.3
QSPA	**South Pole Qui**	83.41	180	P	**P**	01 40 15.8	+0.3
	comp=Z,2.9nm,0.8s,baz=6.8,slow=0.1,SNR=15						
	comp=Z,2.9nm,0.8s						
QSPA	**South Pole Qui**	83.41	180	P	**P**	01 40 15.9	+0.3
QSPA				IAmb	IAmb	01 40 16.9	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	83.54	22	P	**P**	01 40 15.8	-0.3
	comp=Z,1.5nm,0.7s,baz=250,slow=5.6,SNR=12						
ILAR				LR	LR	02 11 49.0	
	comp=Z,14nm,21.4s,baz=42,slow=32						
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	83.54	22	P	**P**	01 40 16.1	0.0
J25K	**Salcha River,**	84.03	22		**P**	01 40 19.2	+0.5
J25K				IAmb	IAmb	01 40 21.2	
	comp=Z,3.8nm,0.6s						
KDJ	**Kajisay**	84.30	313	P	**P**	01 40 19.8	-0.9
D23K	**Nanushuk River**	84.53	17	P	**P**	01 40 22.5	+1.4
BOOM	**Boomskoye usch**	85.28	314	P	**P**	01 40 25.2	-0.4
BOOM				IAmb	IAmb	01 40 28.2	
	comp=Z,4.3nm,0.8s						
KURK	**Kurchatov**	85.56	322	P	**P**	01 40 26.3	-0.2
KURK				IAmb	IAmb	01 40 28.5	
	comp=Z,8.2nm,1.4s						
KURBB	**Kurchatov Arra**	85.59	322	P	**P**	01 40 26.9	+0.1
	comp=Z,0.4nm,0.5s,baz

PFO	**Pinyon Flats O**	**93.65**	**57**	LR	LR	02 19 03.5		
	comp=Z,9.3nm,18.3s,baz=194,slow=33							
ELK	**Elko**	**95.22**	**50**	LR	LR	02 23 24.6		
	comp=Z,14nm,18.4s,slow=35							
PDAR	**Pinedale Array**	**99.54**	**48**	LR	LR	02 19 44.1		
	comp=Z,10nm,22.0s,baz=287,slow=31							
BDFB	**Brasilia**	**149.35**	**136**	PKPbc	**PKPbc**	**01 47 36.8**	**-1.6**	
	comp=Z,3.2nm,0.8s,baz=108,slow=3.2,SNR=4.5							
TORD	**Torodi Ar. Bea**	**151.44**	**285**	PKPbc	**PKPbc**	**01 47 43.2**	**-0.1**	
	comp=Z,4.4nm,0.7s,baz=65,slow=2.4,SNR=21							

*OSPL **29** 01:46:59.9±1.4, 18°.55N×69°.69W, h103km±7km, ML2.7, Presumed earthquake*
*SDD **29** 01:47:08.5±1.6, 18°.55N×69°.63W, h50km±9km, MD2.5, ML2.0, MW2.7, Presumed earthquake*

ISC 29 01:46:57.9±2.1, 18°.52N±0°.08×69°.70W±0°.06, h115km±12km, n15, σ2921/21, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
SDD	**Santo Domingo**	**0.21**	**253**	*i* P		**Pn**	**01**	**47**	**17.5**	**+3.5**
SDD				*i* S		**Sn**	**01**	**47**	**23.2**	**-2.7**
SDD				IAML			01	47	53.0	
	comp=N,54nm,3.4s									
SDD	**Santo Domingo**	**0.21**	**253**	*i* P		**Pn**	**01**	**47**	**13.6**	**-0.3**
SDD				*e*S		**Sn**	**01**	**47**	**23.6**	**-2.4**
SDD				IAML			01	47	26.5	
	comp=Z,1μm,0.1s									
LOSC1	**San Cristbal**	**0.40**	**254**	*e*S		**Sn**	**01**	**47**	**26.7**	**-0.7**
HATOM	**Hato Mayor del**	**0.40**	**49**	*i* P		**Pn**	**01**	**47**	**18.1**	**+3.3**
HATOM				*i* S		**Sn**	**01**	**47**	**23.7**	**-3.8**
HATOM				IAML			01	47	24.1	
	comp=N,49nm,0.2s									
BANI	**BANI**	**0.64**	**259**	*i* P		Pn	01	47	22.4	+6.0
BANI				*i* S		**Sn**	**01**	**47**	**30.4**	**+0.1**
BANI				IAML			01	47	30.6	
	comp=N,141nm,1.0s									
SMDR	**Samana, DR**	**0.91**	**32**	*i* P		Pn	01	47	24.0	+5.4
SMDR				*i* S		**Sn**	**01**	**47**	**33.7**	**-0.6**
SMDR				IAML			01	47	36.1	
	comp=N,64nm,0.3s									
HIDR	**Higuey Centro**	**0.94**	**86**	*i* P		Pn	01	47	23.5	+4.6
HIDR				*i* S		**Sn**	**01**	**47**	**33.8**	**-1.0**
HIDR				IAML			01	47	37.2	
	comp=N,38nm,0.9s									
PCDR	**Punta Cana, DR**	**1.25**	**90**	*i* P		**Pn**	**01**	**47**	**22.9**	**+0.8**
PCDR				IAML			01	47	42.0	
	comp=Z,53nm,1.0s									
SC01	**Santiago de lo**	**1.32**	**313**	*i* P		**Pn**	**01**	**47**	**23.0**	**0.0**
SC01				IAML			01	47	42.9	
	comp=Z,44nm,1.6s									
SDDR	**Presa de Saban**	**1.57**	**287**	*i* P		Pn	01	47	34.2	+8.3
SDDR				*i* S		**Sn**	**01**	**47**	**52.0**	**+4.8**
SDDR				IAML			01	47	53.1	
	comp=N,24nm,0.6s									
SDDR	**Presa de Saban**	**1.57**	**287**	*i* P		**Pn**	**01**	**47**	**26.3**	**+0.3**
SDDR				IAML			01	47	55.4	
	comp=Z,290nm,0.1s									
LODU1	**El Espartillar**	**1.69**	**265**	*i* P		**Pn**	**01**	**47**	**28.0**	**+0.7**
LODU1				IAML			01	47	54.5	
	comp=Z,26nm,1.1s									
LOVI	**El Cajuil, Ovi**	**1.74**	**246**	*i* P		**Pn**	**01**	**47**	**27.8**	**-0.1**
LOVI				*e*S		**Sn**	**01**	**47**	**49.3**	**-1.4**
LOVI				IAML			01	47	52.2	
	comp=Z,58nm,1.9s									
LOPP1	**Punta Rusia, P**	**1.94**	**313**	*i* P		**Pn**	**01**	**47**	**29.7**	**-0.7**
LOPP1				*e*S		**Sn**	**01**	**47**	**53.6**	**-1.6**
LOPP1				IAML			01	47	55.1	
	comp=Z,55nm,1.6s									
LOBH	**Bahia de las A**	**1.96**	**251**	*i* P		**Pn**	**01**	**47**	**31.1**	**+0.5**
LOBH				*e*S		**Sn**	**01**	**47**	**54.7**	**-0.8**
LOBH				IAML			01	47	58.5	
	comp=Z,40nm,3.2s									

*IDC **29** 01:49:55.4±0.8, 14°.58N×55°.82E, h0km, mb3.9/15, mbtmp3.9/15, MS3.4/18, Error ellipse: s-maj=21.5km s-min=19.5km az=168.0*
*NEIC **29** 01:49:57.7±1.4, 14°.7N±0°.1×55°.85E±0°.08, h10km±1km, mb4.4/25, Error ellipse: s-maj=20.5km s-min=12.8km az=181.0*

ISC 29 01:49:58.2±0.7, 14°.7N±0°.1×55°.82E±0°.09, h18km, n65, σ0876/46, mb4.2/26, MS3.3/18, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
ATD	**Arta Tunnel**	**13.02**	**258**	LR		LR	01	56	43.3	
	comp=Z,6.1nm,19.4s,baz=150,slow=31									
RAYN	**Ar Rayn**	**13.12**	**314**			**Pn**	**01**	**53**	**02.4**	**-1.4**
HRA	**Herat**	**20.45**	**15**	P		**P**	**01**	**54**	**35.8**	**+0.8**
KBL	**Kabul**	**23.09**	**29**	P		**P**	**01**	**55**	**02.0**	**-1.2**
EIL	**Elat**	**24.35**	**311**	LR		LR	02	05	40.2	
	comp=Z,42nm,19.8s,baz=94,slow=39									
ASF	**Jabal al Asfar**	**24.52**	**318**	LR		LR	02	04	54.7	
	comp=Z,35nm,18.6s,baz=207,slow=37									
SHAA	**Shahritus**	**25.27**	**23**	P		**P**	**01**	**55**	**22.3**	**-1.2**
SHAA				IAmb		IAmb	01	55	34.9	
	comp=Z,19nm,1.1s									
GEVA	**Gevas**	**26.10**	**337**			**P**	**01**	**55**	**31.7**	**+0.5**
CHGR	**Chuyangaron**	**26.62**	**24**	P		**P**	**01**	**55**	**35.8**	**0.0**
CHGR				IAmb		IAmb	01	55	42.9	
	comp=Z,6.0nm,0.6s									
GURO	**Guroymak-BITLI**	**26.71**	**335**	P		**P**	**01**	**55**	**36.2**	**-0.5**
GURO				IAmb		IAmb	01	55	59.1	
	comp=Z,5.9nm,1.0s									
GNI	**Garni**	**27.16**	**341**	LR		LR	02	08	23.3	
	comp=Z,81nm,19.9s,baz=155,slow=41									
GNI	**Garni**	**27.16**	**341**	P		**P**	**01**	**55**	**40.5**	**-0.2**
GNI				IAmb		IAmb	01	55	51.6	
	comp=Z,9.2nm,0.8s									
BTK	**Batken**	**28.48**	**25**	P		**P**	**01**	**55**	**51.5**	**-1.0**
BTK				IAmb		IAmb	01	55	56.3	
	comp=Z,6.0nm,1.1s									
KBZ	**Khabaz**	**30.98**	**342**	LR		LR	02	11	39.0	
	comp=Z,43nm,18.7s,baz=158,slow=42									
BRTR	**Keskin Array B**	**31.62**	**326**	LR		LR	02	10	59.4	
	comp=Z,35nm,18.2s,baz=89,slow=40									
AAK	**Ala-Archa**	**32.16**	**26**	LR		LR	02	11	51.3	
	comp=Z,47nm,18.5s,baz=216,slow=41									
AB31	**Akbulak array**	**34.63**	**5**			**P**	**01**	**56**	**46.9**	**+0.5**
AB31				IAmb		IAmb	01	56	53.7	
	comp=Z,4.5nm,0.9s									
ABKAR	**Akbulak array**	**34.63**	**5**			**P**	**01**	**56**	**46.7**	**+0.3**
PDGK	**Podgornoye**	**35.01**	**31**	P		**P**	**01**	**56**	**50.0**	**+0.2**
SHL	**Shillong**	**35.44**	**66**	P		**P**	**01**	**56**	**53.9**	**+0.1**
SHL				IAmb		IAmb	01	57	00.8	
	comp=Z,3.9nm,0.8s									
AKTO	**Aktyubinsk**	**35.70**	**2**	LR		LR	02	13	06.7	
	comp=Z,44nm,20.5s,baz=46,slow=39									
MKAR	**Makanchi Array**	**38.89**	**29**	P		**P**	**01**	**57**	**24.0**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=237,slow=8.5,SNR=5.2									
	comp=Z,1.0nm,0.8s									
MKAR	**Makanchi Array**	**38.89**	**29**	P		**P**	**01**	**57**	**22.7**	**0.0**
BVAR	**Borovoye Array**	**39.95**	**14**	P		**P**	**01**	**57**	**32.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=189,slow=3.9,SNR=3.6									
	comp=Z,0.6nm,0.4s									
KURBB	**Kurchatov Arra**	**40.28**	**22**	P		**P**	**01**	**57**	**35.0**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=220,slow=8.5,SNR=14									
KURBB				LR		LR	02	14	05.6	
	comp=Z,48nm,19.5s,baz=174,slow=36									
	comp=Z,1.2nm,0.9s									
KURK	**Kurchatov**	**40.39**	**22**	P		**P**	**01**	**57**	**35.2**	**+0.1**
LSZ	**Lusaka**	**40.41**	**224**	LR		LR	02	13	27.7	
	comp=Z,72nm,20.2s,baz=304,slow=35									
CMAR	**Chiang Mai Arr**	**41.43**	**79**	P		**P**	**01**	**57**	**45.4**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=276,slow=9.8,SNR=5.7									
	comp=Z,0.8nm,0.3s									
CMAR	**Chiang Mai Arr**	**41.43**	**79**	P		**P**	**01**	**57**	**43.1**	**-0.9**
ARTI	**Arti**	**41.66**	**2**	LR		LR	02	18	10.9	
	comp=Z,49nm,18.5s,baz=162,slow=41									
BLY	**Banja Luka**	**44.32**	**320**	P		**P**	**01**	**58**	**07.8**	**+0.7**
BLY				IAmb		IAmb	01	58	15.2	
	comp=Z,3.6nm,0.8s									
ZAA0	**Zalesovo Array**	**45.28**	**24**			**P**	**01**	**58**	**14.3**	**-0.4**
ZALV	**Zalesovo Beam**	**45.28**	**24**	P		**P**	**01**	**58**	**15.4**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=232,slow=7.3,SNR=9.4									
ZALV				LR		LR	02	18	23.5	
	comp=Z,37nm,18.9s,baz=218,slow=38									
	comp=Z,2.1nm,0.7s									
ZALV	**Zalesovo Beam**	**45.28**	**24**			**P**	**01**	**58**	**14.6**	**-0.1**
GUMA	**Gualdo di Mace**	**46.02**	**317**	P		**P**	**01**	**58**	**21.7**	**+1.0**
GUMA				IAmb		IAmb	01	58	37.5	
	comp=Z,9.1nm,1.2s									

FDMO	**Fiordimonte**	**46.17**	**316**	P		**P**	**01**	**58**	**21.8**	**-0.1**
FDMO				IAmb		IAmb	01	58	33.6	
	comp=Z,3.4nm,1.0s									
CASP	**Castiglione de**	**47.57**	**315**	P		**P**	**01**	**58**	**32.4**	**-0.5**
CASP				IAmb		IAmb	01	58	49.2	
	comp=Z,7.2nm,1.1s									
STAL	**STALIGIAL**	**47.81**	**320**	P		**P**	**01**	**58**	**35.2**	**+0.5**
STAL				IAmb		IAmb	01	58	51.7	
	comp=Z,3.5nm,1.0s									
GERES	**GERESS Array B**	**48.44**	**324**	P		**P**	**01**	**58**	**39.3**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=149,slow=7.8,SNR=1.8									
	comp=Z,0.1nm,0.5s									
TSUM	**Tsumeb**	**50.51**	**229**	LR		LR	02	20	34.2	
	comp=Z,107nm,18.0s,baz=36,slow=36									
FINES	**FINESS Array B**	**51.34**	**342**	P		**P**	**01**	**59**	**01.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=180,slow=7.6,SNR=5.2									
	comp=Z,1.0nm,0.7s									
FINES	**FINESS Array B**	**51.34**	**342**	P		**P**	**01**	**59**	**01.3**	**+0.1**
BOSA	**Boshof**	**52.23**	**214**	P		**P**	**01**	**59**	**09.2**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=16,slow=7.7,SNR=4.2									
	comp=Z,2.5nm,0.8s									
BOSA	**Boshof**	**52.23**	**214**	P		**P**	**01**	**59**	**08.6**	**+0.1**
BOSA				IAmb		IAmb	01	59	32.1	
	comp=Z,12nm,1.5s									
TORD	**Torodi Ar. Bea**	**52.46**	**275**	P		**P**	**01**	**59**	**11.2**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=82,slow=9.6,SNR=3.1									
	comp=Z,0.6nm,0.9s									
TLY	**Talaya**	**53.00**	**35**	LR		LR	02	24	36.5	
	comp=Z,35nm,18.5s,baz=216,slow=39									
SONM	**Songino Array**	**53.11**	**41**	P		**P**	**01**	**59**	**16.7**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=237,slow=7.4,SNR=5.9									
	comp=Z,1.0nm,0.8s									
SONM	**Songino Array**	**53.11**	**41**	P		**P**	**01**	**59**	**15.0**	**+0.1**
HFS	**Hagfors**	**54.73**	**336**	LR		LR	02	25	28.0	
	comp=Z,22nm,18.8s,baz=113,slow=39									
NOA	**NORSAR Array B**	**56.26**	**336**	LR		LR	02	28	45.6	
	comp=Z,16nm,19.2s,baz=80,slow=41									
ESDC	**Sonseca Array**	**57.58**	**308**	P		**P**	**01**	**59**	**47.2**	**0.0**
	comp=Z,2.2nm,0.8s,baz=80,slow=6.7,SNR=17									
	comp=Z,2.2nm,0.8s									
ESDC	**Sonseca Array**	**57.58**	**308**	P		**P**	**01**	**59**	**47.0**	**-0.1**
ARCES	**ARCESS Array B**	**58.02**	**348**	P		**P**	**01**	**59**	**50.1**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=133,slow=8.1,SNR=4.0									
ARCES				LR		LR	02	26	21.2	
	comp=Z,28nm,18.8s,baz=134,slow=38									
	comp=Z,1.8nm,0.9s									
ARCES	**ARCESS Array B**	**58.02**	**348**	P		**P**	**01**	**59**	**48.8**	**-0.9**
NRIK	**Noril'sk**	**58.15**	**13**	LR		LR	02	27	00.0	
	comp=Z,17nm,18.3s,baz=192,slow=38									
SPB2	**Spitsbergen Ar**	**66.38**	**352**	P		**P**	**02**	**00**	**45.7**	**+0.1**
KSRS	**Korea Array**	**67.09**	**55**	P		**P**	**02**	**00**	**50.3**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=279,slow=6.8,SNR=4.9									
	comp=Z,0.5nm,0.4s									
H01W3	**Cape Leeuwin H**	**74.07**	**133**	T		T	03	22	31.0	
	baz=302,slow=75,SNR=8.6									
H01W2	**Cape Leeuwin H**	**74.08**	**133**	T		T	03	22	25.1	
	baz=302,slow=75,SNR=8.9									
H01W1	**Cape Leeuwin H**	**74.09**	**133**	T		T	03	22	26.3	
	baz=302,slow=75,SNR=13									
NWAO	**Narrogin (SRO)**	**75.34**	**130**	LR		LR	02	27	46.3	
	comp=Z,91nm,19.2s,baz=302,slow=30									
WRA	**Warramunga Arr**	**84.50**	**112**	P		**P**	**02**	**02**	**29.0**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=296,slow=4.5,SNR=7.3									
	comp=Z,1.2nm,0.8s									
WRA	**Warramunga Arr**	**84.50**	**112**	P		**P**	**02**	**02**	**30.0**	**-0.7**
ASAR	**Alice Springs**	**85.26**	**116**	P		**P**	**02**	**02**	**33.7**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=295,slow=5.3,SNR=6.4									
	comp=Z,0.8nm,0.8s									
NVAR	**Mina Array Bea**	**126.88**	**354**	PKP		**PKiKP**	**02**	**09**	**02.0**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=355,slow=5.1,SNR=2.0									

*GCG **29** 02:30:10.7±2.7, 17°.20N×94°.97W, h200km±27km, MD5.0, Presumed earthquake*
*IDC **29** 02:30:12.0±0.4, 17°.36N×94°.69W, h117km±7km, mb3.5/11, mbtmp3.9/14, Error ellipse: s-maj=23.7km s-min=10.7km az=44.0*
*NEIC **29** 02:30:12.7±2.0, 17°.30N±0°.06×94°.92W±0°.06, h131km±6km, mb4.3/41, Md4.6/24(MEX), Error ellipse: s-maj=10.2km s-min=5.9km az=225.0*
*MEX **29** 02:30:13.7±0.5, 17°.12N×95°.05W, h133km±5km, MD4.6*

ISC 29 02:30:11.6±0.6, 17°.20N±0°.04×94°.97W±0°.04, h133km±6km, n158, σ1940/223, mb4.0/13, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
CMIG	**Matias Romero**	**0.14**	**143**	P		**Pn**	**02**	**30**	**30.6**	**+0.9**
	2μm,0.4s,baz=356,slow=1.9,SNR=3811									
CMIG				S		**Sn**	**02**	**30**	**42.7**	**-0.8**
	2μm,0.3s,baz=317,slow=24,SNR=35									
CMIG	**Matias Romero**	**0.14**	**143**	*e*P		**Pn**	**02**	**30**	**30.5**	**+0.7**
CMIG				*e*S		**Sn**	**02**	**30**	**43.3**	**-0.2**
CMIG	**Matias Romero**	**0.14**	**143**			**Pn**	**02**	**30**	**30.5**	**+0.7**
CMIG						**Sn**	**02**	**30**	**43.3**	**-0.2**
NEUV	**Arroyo Zacate**	**0.94**	**303**	*e*P		**Pn**	**02**	**30**	**35.0**	**+0.7**
NEUV				*e*S		**Sn**	**02**	**30**	**51.3**	**-0.2**
NEUV	**Arroyo Zacate**	**0.94**	**303**			**Pn**	**02**	**30**	**35.0**	**+0.7**
NEUV						**Sn**	**02**	**30**	**51.3**	**-0.2**
CARR	**Arriaga**	**1.39**	**133**	*e*P		**Pn**	**02**	**30**	**39.8**	**+1.1**
CARR				*e*S		**Sn**	**02**	**30**	**59.5**	**+0.2**
VHO	**Vista Hermosa**	**1.69**	**266**	*e*P		**Pn**	**02**	**30**	**44.2**	**+1.9**
VHO				*e*S		**Sn**	**02**	**31**	**05.2**	**-0.5**
HUIG	**Huatulco**	**1.79**	**218**	*i* P		**Pn**	**02**	**30**	**42.7**	**-0.7**
HUIG				*e*S		**Sn**	**02**	**31**	**06.7**	**-0.9**
HUIG	**Huatulco**	**1.79**	**218**	*i* P		**Pn**	**02**	**30**	**42.6**	**-0.7**
HUIG				*i* S		**Sn**	**02**	**31**	**06.9**	**-0.7**
TGIG		**1.82**	**103**	*e*P		**Pn**	**02**	**30**	**44.4**	**+0.8**
TGIG				*e*S		**Sn**	**02**	**31**	**06.8**	**-1.4**
TGIG		**1.82**	**103**			**Pn**	**02**	**30**	**44.4**	**+0.8**
TGIG						**Sn**	**02**	**31**	**06.8**	**-1.4**
TGIG		**1.82**	**103**	*i* P		**Pn**	**02**	**30**	**44.5**	**+0.8**
TGIG				*i* S		**Sn**	**02**	**31**	**06.3**	**-1.9**
TOIG	**Toxpalan**	**2.18**	**294**	*e*P		**Pn**	**02**	**30**	**49.4**	**+1.3**
TOIG				*e*S		**Sn**	**02**	**31**	**16.3**	**+0.2**
PEIG	**Puerto Escondi**	**2.41**	**240**	*e*P		**Pn**	**02**	**30**	**49.8**	**-1.0**
PEIG				*e*S		**Sn**	**02**	**31**	**19.7**	**-1.2**
PEIG	**Puerto Escondi**	**2.41**	**240**			**Pn**	**02**	**30**	**49.8**	**-1.0**
YOIG	**Yosondua**	**2.49**	**262**	*e*P		**Pn**	**02**	**30**	**52.5**	**+0.5**
YOIG				*e*S		**Sn**	**02**	**31**	**22.6**	**-0.5**
TPIG	**Tehuac#an**	**2.58**	**298**	*e*P		**Pn**	**02**	**30**	**54.1**	**+1.0**
TPIG				*e*S		**Sn**	**02**	**31**	**24.8**	**-0.2**
TXIG	**Tlaxiaco**	**2.67**	**271**	*e*P		**Pn**	**02**	**30**	**55.4**	**+1.0**
TXIG				*e*S		**Sn**	**02**	**31**	**26.2**	**-1.1**
JAUV	**Jalcomulco**	**2.77**	**321**	*e*P		**Pn**	**02**	**30**	**55.9**	**+0.5**
JAUV				*e*S		**Sn**	**02**	**31**	**28.2**	**-1.0**
HLIG	**Huajuapan de L**	**2.77**	**283**	*e*P		**Pn**	**02**	**30**	**57.5**	**+1.9**
HLIG				*e*S		**Sn**	**02**	**31**	**29.4**	**-0.1**
HLIG	**Huajuapan de L**	**2.77**	**283**			**Pn**	**02**	**30**	**57.5**	**+1.9**
HLIG						**Sn**	**02**	**31**	**29.4**	**-0.1**
LVIG	**Laguna Verde**	**2.86**	**332**	*e*P		**Pn**	**02**	**30**	**55.5**	**-0.9**
LVIG				*e*			02	31	29.0	
FTIG	**Fresnillo de T**	**3.10**	**284**	*e*P		**Pn**	**02**	**31**	**02.2**	**+2.5**
FTIG				*e*S		**Sn**	**02**	**31**	**36.4**	**-0.4**
FTIG	**Fresnillo de T**	**3.10**	**284**			**Pn**	**02**	**31**	**02.2**	**+2.5**
FTIG						**Sn**	**02**	**31**	**36.4**	**-0.4**
PAVE	**Pavencul**	**3.35**	**126**	*e*P		**Pn**	**02**	**31**	**04.4**	**+1.4**
PAVE				*e*S		**Sn**	**02**	**31**	**42.7**	**-0.2**
PAVE	**Pavencul**	**3.35**	**126**			**Pn**	**02**	**31**	**04.4**	**+1.4**
PAVE						**Sn**	**02**	**31**	**42.7**	**-0.2**
PATR	**El Naranjo**	**3.35**	**128**	*e*P		**Pn**	**02**	**31**	**04.4**	**+1.3**
PATR				*e*S		**Sn**	**02**	**31**	**43.1**	**+0.1**
PATR	**El Naranjo**	**3.35**	**128**			**Pn**	**02**	**31**	**04.4**	**+1.3**
PATR						**Sn**	**02**	**31**	**43.1**	**+0.1**
TLIG	**Tlapa**	**3.45**	**276**	*e*P		**Pn**	**02**	**31**	**04.5**	**+0.2**
TLIG				*e*S		**Sn**	**02**	**31**	**44.1**	**-0.9**
TLIG	**Tlapa**	**3.45**	**276**			**Pn**	**02**	**31**	**06.4**	**+2.1**
TLIG					Sn	**Sn**	**02**	**31**	**44.0**	**-1.1**
CHUJ	**Union Juarez**	**3.46**	**127**	*e*P		**Pn**	**02**	**31**	**05.9**	**+1.3**
CHUJ				*e*S		**Sn**	**02**	**31**	**46.2**	**+0.7**
THIG		**3.46**	**131**	*e*P		**Pn**	**02**	**31**	**05.0**	**+0.6**
THIG				*e*S		**Sn**	**02**	**31**	**45.0**	**-0.2**
THIG		**3.46**	**131**	*i* P		**Pn**	**02**	**31**	**05.9**	**+1.5**
MGIG	**Malinaltepec**	**3.50**	**271**	*e*P		**Pn**	**02**	**31**	**06.6**	**+1.6**
MGIG				*e*S		**Sn**	**02**	**31**	**42.5**	**-3.8**
MGIG	**Malinaltepec**	**3.50**	**271**			**Pn**	**02**	**31**	**06.6**	**+1.6**
HUEH	**Huehuetenango**	**3.82**	**119**	*e*P		**Pn**	**02**	**31**	**10.2**	**+0.8**
HUEH				*e*S		**Sn**	**02**	**31**	**52.1**	**-1.9**
HUEH	**Huehuetenango**	**3.82**	**119**			**Pn**	**02**	**31**	**09.7**	**+0.4**
HUEH					Sn	**Sn**	**02**	**31**	**52.6**	**-1.4**
HUEH	**Huehuetenango**	**3.82**	**119**	*i* P		**Pn**	**02**	**31**	**09.0**	**-0.3**
CXUV	**Coxquihui**	**3.86**	**320**	*e*P		**Pn**	**02**	**31**	**10.9**	**+1.3**
CXUV				*e*S		**Sn**	**02**	**31**	**53.4**	**-1.2**
PPM	**Popocatepetl**	**3.94**	**299**	*e*P		**Pn**	**02**	**31**	**12.8**	**+1.7**

PPM				*e*S		**Sn**	**02**	**31**	**56.6**	**-0.6**
CRIG	**Cruz Grande**	**4.01**	**264**	*e*P		**Pn**	**02**	**31**	**11.7**	**+0.1**
CRIG				*e*S		**Sn**	**02**	**31**	**56.0**	**-2.0**
SCIG	**Sabancuy**	**4.01**	**63**	*e*P		**Pn**	**02**	**31**	**11.2**	**-0.3**
SCIG				*e*			02	31	52.7	
SCIG	**Sabancuy**	**4.01**	**63**	*i* P		**Pn**	**02**	**31**	**11.2**	**-0.3**
QUEO	**Labor Ovalle**	**4.05**	**124**	*i* P		**Pn**	**02**	**31**	**14.4**	**+1.9**
RTAL	**Retalhuleu**	**4.13**	**130**	*e*P		**Pn**	**02**	**31**	**15.1**	**+1.9**
RTAL				*e*S		**Sn**	**02**	**32**	**01.1**	**+0.1**
RTAL	**Retalhuleu**	**4.13**	**130**			**Pn**	**02**	**31**	**15.1**	**+1.9**
YAIG	**Yautepec**	**4.23**	**294**	*e*P		**Pn**	**02**	**31**	**17.3**	**+2.7**
YAIG				*e*S		**Sn**	**02**	**32**	**02.4**	**-1.2**
MPVM	**San Francisco**	**4.32**	**298**	*e*P		**Pn**	**02**	**31**	**17.8**	**+1.9**
MPVM				*e*S		**Sn**	**02**	**32**	**04.3**	**-1.6**
STG8	**El Palmar, Qui**	**4.43**	**128**	*i* P		**Pn**	**02**	**31**	**13.7**	**-3.7**
XCVM	**Xochimilco**	**4.43**	**298**	*e*P		**Pn**	**02**	**31**	**18.4**	**+0.9**
XCVM				*e*S		**Sn**	**02**	**32**	**08.0**	**-0.6**
TLVM	**San Miguel Top**	**4.45**	**297**	*e*P		**Pn**	**02**	**31**	**17.7**	**0.0**
TLVM				*e*S		**Sn**	**02**	**32**	**06.6**	**-2.4**
STG5	**El Palmar, Qui**	**4.46**	**128**	*i* P		**Pn**	**02**	**31**	**14.0**	**-3.7**
PLIG	**Platanillo**	**4.47**	**286**	*e*P		**Pn**	**02**	**31**	**20.3**	**+2.5**
PLIG				*e*S		**Sn**	**02**	**32**	**08.3**	**-0.9**
DAIG	**Los Arroyos**	**4.48**	**268**	*e*P		**Pn**	**02**	**31**	**18.2**	**+0.4**
DAIG				*e*S		**Sn**	**02**	**32**	**07.5**	**-1.8**
MEIG	**Mezcala**	**4.49**	**280**	*e*P		**Pn**	**02**	**31**	**20.2**	**+2.1**
MEIG				*e*S		**Sn**	**02**	**32**	**08.2**	**-1.5**
MZVM		**4.50**	**297**	*e*P		**Pn**	**02**	**31**	**19.6**	**+1.5**
MZVM				*e*S		**Sn**	**02**	**32**	**09.9**	**+0.1**
MHVM	**Bosque de Chap**	**4.58**	**299**	*e*P		**Pn**	**02**	**31**	**19.7**	**+0.2**
MHVM				*e*S		**Sn**	**02**	**32**	**10.4**	**-1.7**
PTVM	**Pico Tres Padr**	**4.59**	**302**	*e*P		**Pn**	**02**	**31**	**20.8**	**+1.2**
PTVM				*e*			02	32	00.3	
AOVM	**Tlapan**	**4.62**	**297**	*e*P		**Pn**	**02**	**31**	**21.9**	**+1.8**
A

comp=Z,10nm,0.6s
TKL Tuckaleechee C 20.91 26 P **P 02 34 43.2 -0.3**
comp=Z,2.7nm,0.6s,baz=206,slow=13,SNR=6.1
comp=Z,2.7nm,0.6s
TKL Tuckaleechee C 20.91 26 P **P 02 34 43.0 -0.5**
TKL IAmb IAmb 02 34 48.8
comp=Z,9.3nm,1.2s
CCM Cathedral Cave 21.03 8 P **P 02 34 44.7 -0.1**
CCM IAmb IAmb 02 34 47.0
comp=Z,7.2nm,0.5s
V53A Saluda 21.34 28 P **P 02 34 47.9 -0.2**
TZTN Tazewell 21.76 25 P **P 02 34 51.4 -1.2**
V55A Taylorsville 22.24 31 P **P 02 34 56.9 -0.6**
V55A IAmb IAmb 02 34 58.2
comp=Z,6.0nm,0.5s
WCI Wyandotte Cave 22.29 18 P **P 02 34 57.4 -0.6**
U54A Nelsons Funny 22.49 29 P **P 02 34 59.6 -0.5**
U54A IAmb IAmb 02 35 00.9
comp=Z,12nm,0.8s
R50A Paris 22.98 22 P **P 02 35 03.4 -1.2**
R50A IAmb IAmb 02 35 05.0
comp=Z,7.8nm,0.5s
BLO Bloomington 23.10 17 P **P 02 35 05.1 -0.6**
NVAR Mina Array Bea 29.39 321 P **P 02 36 04.3 +1.7**
comp=Z,0.1nm,0.3s,baz=127,slow=8.1,SNR=4.3
comp=Z,0.1nm,0.3s
NVAR Mina Array Bea 29.39 321 P **P 02 36 01.6 -1.0**
ULM Lac du Bonnet 32.97 359 P **P 02 36 33.5 0.0**
comp=Z,0.7nm,0.4s,baz=236,slow=3.6,SNR=3.2
comp=Z,0.7nm,0.4s
ULM Lac du Bonnet 32.97 359 P **P 02 36 33.2 -0.3**
ULM IAmb IAmb 02 36 35.1
comp=Z,6.5nm,1.4s
LPAZ La Paz 42.51 140 P **P 02 37 55.9 +1.1**
comp=Z,1.5nm,0.6s,baz=341,slow=10,SNR=6.9
comp=Z,1.5nm,0.6s
LPAZ La Paz 42.51 140 P **P 02 37 56.6 +1.8**
SCHQ Schefferville 43.33 23 P **P 02 37 59.7 -0.6**
comp=Z,1.9nm,0.8s,baz=242,slow=15,SNR=1.7
comp=Z,1.9nm,0.8s
YKA Yellowknife Ar 47.29 348 P **P 02 38 33.1 +1.9**
comp=Z,0.9nm,0.9s,baz=143,slow=7.9,SNR=2.8
comp=Z,0.9nm,0.9s
CFA Coronel Fontan 54.90 152 P **P 02 39 31.1 +2.6**
comp=Z,2.6nm,0.8s,baz=297,slow=6.8,SNR=6.6
comp=Z,2.6nm,0.8s
EKA Eskdalemuir Ar 77.06 36 P **P 02 41 48.9 -1.0**
comp=Z,0.9nm,0.5s,baz=277,slow=5.3,SNR=6.8
comp=Z,0.9nm,0.5s
ESDC Sonseca Array 79.98 52 P **P 02 42 07.4 +1.1**
comp=Z,1.7nm,0.8s,baz=293,slow=5.8,SNR=9.4
comp=Z,1.7nm,0.8s
ESDC Sonseca Array 79.98 52 P **P 02 42 06.9 +0.6**
ESDC IAmb IAmb 02 42 14.2
comp=Z,7.2nm,1.4s
NOA NORSAR Array B 82.70 28 P **P 02 42 20.5 +0.3**
comp=Z,0.4nm,0.7s,baz=294,slow=5.4,SNR=1.7
comp=Z,0.4nm,0.7s

*NIED **29** 02:35:24.6, 34.57N×136.10E, h374km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 0.41; Mθθ -0.02; Mφφ -0.39; Mrθ 0.30; Mθφ 0.21; Mφr -1.76; Fault plane solution: M0 1.84000×10^15 NP1: φ=319.00000°, δ 8.00000°, λ 59.00000°. NP2: φ=170.00000°, δ 83.00000°, λ 94.00000°.*
*IDC **29** 02:35:24.1±0.6, 34.45N×136.17E, h372km±5km, mb3.4/17, mbtmp4.1/24 Error ellipse: s-maj=10.1km s-min=8.5km az=6.0*
*JMA **29** 02:35:24.6±0.1, 34.6N±0.7×136.1E±0.6, h374km±1km, MV3.8/38, NORTHERN MIE PREF*
*NEIC **29** 02:35:24.5±1.1, 34.52N±0.08×136.12E±0.09, h375km±6km, mb4.1/50, Error ellipse: s-maj=12.1km s-min=10.2km az=135.0*
ISC 29 02:35:24.1±0.5, 34.50N±0.05×136.13E±0.04, h375km±5km, n325, σ 1§05/343, mb4.0/46, 1C-9D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**0.49**	**103**	⇓P	**Pn**	**02 36 12.0**	**+0.9**
JIE				⇓*e*S	**S**	**02 36 49.0**	**+0.2**
JWY	**Kouya**	**0.53**	**238**	P	**Pn**	**02 36 12.1**	**+0.8**
JWY				S	**S**	**02 36 48.5**	**-0.7**
JTNC	**Tanabenakahech**	**0.81**	**212**	P	**Pn**	**02 36 12.6**	**+0.6**
JTNC				S	**S**	**02 36 50.3**	**-0.1**
JWT	**Wachi**	**0.98**	**322**	P	**Pn**	**02 36 12.8**	**+0.5**
JWT				*e*S	**S**	**02 36 50.2**	**-1.1**
TTO1	**TONANKAI O.B.S**	**1.03**	**148**	*e*P	**Pn**	**02 36 13.8**	**+1.5**
INU	**Inuyama**	**1.11**	**41**	P	**Pn**	**02 36 13.3**	**+0.5**
INU	**Inuyama**	**1.11**	**41**	S	**S**	**02 36 52.0**	**-0.1**
INU	**Inuyama**	**1.11**	**41**		**Pn**	**02 36 13.4**	**+0.5**
INU				Sn	**S**	**02 36 51.4**	**-0.8**
JYTA	**Yamagatataniai**	**1.19**	**24**	⇓*i*P	**Pn**	**02 36 14.0**	**+0.8**
JYTA				⇓*e*S	**S**	**02 36 52.7**	**-0.1**
JGF	**Kuroka**	**1.48**	**42**	P	**Pn**	**02 36 14.8**	**+0.2**
JGF	**Kuroka**	**1.48**	**42**	S	**S**	**02 36 54.7**	**-0.7**
JGF	**Kuroka**	**1.48**	**42**		**Pn**	**02 36 15.0**	**+0.3**
JGF				Sn	**S**	**02 36 54.2**	**-1.2**
JAI	**Aioi**	**1.56**	**243**	*i*P	**Pn**	**02 36 15.7**	**+0.6**
JAI				*e*S	**S**	**02 36 56.0**	**-0.1**
JSG	**Sagara**	**1.70**	**84**	P	**Pn**	**02 36 17.3**	**+1.5**
JSG	**Sagara**	**1.70**	**84**	S	**S**	**02 36 57.5**	**0.0**
JSG	**Sagara**	**1.70**	**84**		**Pn**	**02 36 16.7**	**+0.9**
JKG	**Kaga**	**1.78**	**5**	⇓*i*P	**Pn**	**02 36 16.5**	**+0.3**
JKG				⇓S	**S**	**02 36 57.5**	**-0.6**
JMN	**Monobe**	**2.02**	**248**	P	**Pn**	**02 36 18.5**	**+0.6**
JMN	**Monobe**	**2.02**	**248**		**Pn**	**02 36 18.5**	**+0.6**
JMN	**Monobe**	**2.02**	**248**	P	**Pn**	**02 36 18.7**	**+0.7**
JYN	**Shimob**	**2.21**	**63**	⇓*i*P	**Pn**	**02 36 19.4**	**+0.2**
JHS	**Saijyo**	**2.53**	**282**	*i*P	**Pn**	**02 36 22.3**	**+0.7**
JOD2	**Odawara 2**	**2.54**	**72**	P	**Pn**	**02 36 21.9**	**+0.3**
MAJO	**Matsushiro**	**2.65**	**39**	P	**Pn**	**02 36 22.7**	**+0.4**
MAJO	**Matsushiro**	**2.65**	**39**		**Pn**	**02 36 22.5**	**+0.1**
MAT	**Matsushiro**	**2.65**	**39**	P	**Pn**	**02 36 22.5**	**+0.2**
MAT				*e*S	**S**	**02 37 08.7**	**-0.7**
MJAR	**Matsushiro Arr**	**2.65**	**39**	P	**Pn**	**02 36 22.7**	**+0.3**
MJAR	107nm,0.6s,baz=209,slow=7.9,SNR=214			S	**S**	**02 37 09.2**	**-0.2**
	5.5nm,0.5s,baz=225,slow=14,SNR=1.1						
MJB9	**Matsu-Tunnel**	**2.65**	**39**		**Pn**	**02 36 23.4**	**+1.0**
JRY	**Ryogami san**	**2.72**	**56**	⇓*i*P	**Pn**	**02 36 23.5**	**+0.5**
JRY				⇓*e*S	**S**	**02 37 10.9**	**+0.3**
JOI	**OKI**	**2.96**	**308**	P	**Pn**	**02 36 25.2**	**+0.4**
JGT2	**ShimaneMisato**	**3.04**	**282**	P	**Pn**	**02 36 25.7**	**+0.1**
JHT	**Toyohira**	**3.07**	**274**	P	**Pn**	**02 36 26.4**	**+0.5**
JSZ	**Suzu**	**3.10**	**18**	P	**Pn**	**02 36 26.5**	**+0.4**
JTO	**Tosashimizu**	**3.23**	**240**	P	**Pn**	**02 36 27.9**	**+0.6**
JHJ	**Hachijo jima 2**	**3.34**	**113**	P	**Pn**	**02 36 29.4**	**+1.0**
JHJ	230nm,0.4s,baz=230,slow=23,SNR=20			S	**S**	**02 37 18.9**	**-1.3**
	158nm,0.9s,baz=342,slow=7.6,SNR=1.6						
JHJ2	**Mitsune**	**3.37**	**113**	P	**Pn**	**02 36 29.5**	**+0.9**
JHJ2	**Mitsune**	**3.37**	**113**	Pn	**Pn**	**02 36 28.8**	**+0.2**
JHJ2	**Mitsune**	**3.37**	**113**	P	**Pn**	**02 36 29.4**	**+0.9**
BSO1	**Boso 1**	**4.00**	**86**	P	**Pn**	**02 36 32.7**	**-1.2**
BSO1				S	**S**	**02 37 29.2**	**-1.4**
JNU	**Nakatsue**	**4.59**	**254**	P	**Pn**	**02 36 41.4**	**+0.7**
JNU	106nm,0.7s,baz=64,slow=5.4,SNR=95			S	**S**	**02 37 42.0**	**-0.6**
	17nm,0.8s,baz=257,slow=17,SNR=1.6						
JTU	**Tsushima**	**5.56**	**272**	P	**Pn**	**02 36 51.3**	**+0.4**
JSU	**Suzuyama**	**5.63**	**239**		**Pn**	**02 36 51.8**	**0.0**
KSRS	**Korea Array**	**7.28**	**296**	P	**P**	**02 37 11.4**	**+0.2**
KSRS	21nm,0.7s,baz=111,slow=12,SNR=86			S	**S**	**02 38 38.5**	**+1.7**
	6.8nm,1.1s,baz=108,slow=22,SNR=10						
KSAR	**Wonju Array Be**	**7.30**	**296**		**Pn**	**02 37 09.5**	**-1.0**
KS19	**Wonju Array Si**	**7.34**	**296**		**Pn**	**02 37 10.7**	**-0.2**
JTM	**Tenmabayashi**	**7.39**	**31**	P	**Pn**	**02 37 11.0**	**-0.4**
JTM	**Tenmabayashi**	**7.39**	**31**	Pn	**Pn**	**02 37 10.4**	**-1.1**
TJN	**Taejon**	**7.40**	**287**		**Pn**	**02 37 11.3**	**-0.3**
JCJ	**Chichijima**	**9.03**	**143**	S	S	02 39 03.1	-12
	55nm,0.3s,baz=297,slow=22,SNR=11						
ERM	**Erimo**	**9.31**	**34**	P	**Pn**	**02 37 32.5**	**-1.3**
ERM	**Erimo**	**9.31**	**34**		**Pn**	**02 37 32.6**	**-1.2**
JEM	**Erimo**	**9.31**	**34**	P	**Pn**	**02 37 32.5**	**-1.3**
USA0B	**Ussuriysk Arra**	**10.20**	**343**		**Pn**	**02 37 43.7**	**-0.5**
USRK	**Ussuriysk Ar.**	**10.20**	**343**	P	**P**	**02 37 44.7**	**+0.2**
	8.3nm,0.7s,baz=164,slow=12,SNR=19						
USRK	**Ussuriysk Ar.**	**10.20**	**343**		**Pn**	**02 37 43.7**	**-0.5**
ASAJ	**Asahikawa**	**10.82**	**26**	P	**Pn**	**02 37 51.8**	**+0.3**
	9.3nm,0.4s,baz=232,slow=12,SNR=11						
ASAJ				S	**S**	**02 39 45.0**	**-7.3**
	12nm,0.6s,baz=346,slow=28,SNR=5.7						
JKA	**Kamikawa-asahi**	**10.82**	**26**	P	**P**	**02 37 49.8**	**-1.7**
DL2	**Dalian**	**12.44**	**295**	P	**P**	**02 38 09.8**	**+0.4**
DL2				pmax	pmax		
	comp=Z,23nm,0.6s						
YSS	**Yuzhno-Sakhali**	**13.40**	**20**		**P**	**02 38 20.2**	**+0.3**
TIA	**Tai'an**	**15.61**	**282**	P	**P**	**02 38 44.5**	**+0.4**
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
SSLB	**Suanglung**	**17.00**	**235**	P	**P**	**02 38 57.7**	**-1.6**
SSLB				IAmb	IAmb	02 39 03.8	
	comp=Z,8.9nm,0.9s						
XLT	**XiLinHaoTe**	**18.12**	**307**	*e*P	**P**	**02 39 14.0**	**+3.0**
XLT				pmax	pmax		
	comp=Z,16nm,0.5s						
XLT				pmax	pmax		
	comp=Z,50nm,4.8s						
WHN	**Wuhan**	**18.78**	**264**	⇑P	**P**	**02 39 18.0**	**-0.1**
WHN				pmax	pmax		
	comp=Z,84nm,1.0s						
HILR	**Hailar Array B**	**19.28**	**326**	P	**P**	**02 39 24.1**	**+0.9**
	comp=Z,5.0nm,0.6s,baz=128,slow=11,SNR=10						
HHC	**Hu-ho-hao-te**	**20.42**	**295**	*e*P	**P**	**02 39 33.8**	**-0.4**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN	**Xi'an**	**22.47**	**277**	P	**P**	**02 39 52.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
PEA0B	**Petropavlovsk-**	**24.09**	**33**	P	**P**	**02 40 06.8**	**-0.3**
PEA0B				IAmb	IAmb	02 40 15.7	
	comp=Z,15nm,1.2s						
PETK	**Petropavlovsk-**	**24.09**	**33**	P	**P**	**02 40 08.3**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=217,slow=8.6,SNR=4.2						
	comp=Z,3.8nm,0.9s						
PETK	**Petropavlovsk-**	**24.09**	**33**	P	**P**	**02 40 06.6**	**-0.6**
ULN	**Ulaanbaatar**	**25.46**	**310**	P	**P**	**02 40 19.6**	**0.0**
ULN				IAmb	IAmb	02 40 22.1	
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**25.86**	**310**	P	**P**	**02 40 24.5**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=124,slow=9.1,SNR=13						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**25.86**	**310**	P	**P**	**02 40 23.3**	**+0.1**
CD2	**Chengdu**	**27.41**	**272**	P	**P**	**02 40 36.3**	**-0.8**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
KMI2	**Kunming**	**30.31**	**261**	P	**P**	**02 41 02.8**	**0.0**
KMI2				pmax	pmax		
	comp=Z,14nm,0.9s						
SLVN	**Son La**	**31.21**	**254**	P	**P**	**02 41 09.9**	**-0.5**
GOMU	**GeErMu**	**33.56**	**285**	P	**P**	**02 41 30.0**	**-0.9**
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**36.69**	**254**	P	**P**	**02 41 57.2**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=51,slow=7.5,SNR=7.3						
CMAR				ScP	**ScP**	**02 47 21.2**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=40,slow=5.5,SNR=5.4						
	comp=Z,1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.69**	**254**	P	**P**	**02 41 56.2**	**-0.8**
FAKI	**Fak Fak**	**37.40**	**186**	P	**P**	**02 42 02.6**	**-0.4**
KIWB	**Kanaga Island**	**37.49**	**48**	P	**P**	**02 42 03.5**	**+0.3**
BILL	**Bilibino**	**37.71**	**18**	P	**P**	**02 42 05.9**	**+1.0**
ADK	**Adak**	**37.78**	**48**	P	**P**	**02 42 05.5**	**-0.1**
GSTR	**Great Sitkin T**	**38.19**	**48**	P	**P**	**02 42 09.0**	**0.0**
ATKA	**Atka Island**	**39.34**	**48**	P	**P**	**02 42 18.2**	**-0.2**
ZALV	**Zalesovo Beam**	**40.54**	**315**	P	**P**	**02 42 30.6**	**+2.4**
	comp=Z,1.1nm,0.4s,baz=108,slow=9.8,SNR=5.2						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**40.54**	**315**	P	**P**	**02 42 28.2**	**0.0**
MKAR	**Makanchi Array**	**41.88**	**304**	P	**P**	**02 42 39.6**	**+0.5**
	comp=Z,2.3nm,0.4s,baz=85,slow=10,SNR=42						
MKAR				ScP	**ScP**	**02 47 38.3**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=64,slow=6.7,SNR=2.8						
	comp=Z,2.3nm,0.4s						
MKAR	**Makanchi Array**	**41.88**	**304**	P	**P**	**02 42 39.5**	**+0.3**
MAKZ	**Makanchi**	**42.10**	**304**	P	**P**	**02 42 41.0**	**+0.1**
MAKZ				IAmb	IAmb	02 42 41.9	
	comp=Z,4.2nm,0.4s						
KAPI	**Kappang**	**42.24**	**205**	P	**P**	**02 42 41.5**	**-0.8**
UNV	**Unalaska Valle**	**44.10**	**46**	P	**P**	**02 42 57.1**	**+0.6**
	baz=268						
KURK	**Kurchatov**	**44.17**	**310**		**P**	**02 42 56.8**	**-0.4**
KURK				IAmb	IAmb	02 42 57.8	
	comp=Z,4.5nm,0.5s						
PDGK	**Podgornoye**	**44.20**	**299**		**P**	**02 42 57.1**	**-0.6**
KURBB	**Kurchatov Arra**	**44.23**	**310**	P	**P**	**02 42 57.6**	**0.0**
	comp=Z,1.3nm,0.4s,baz=84,slow=6.8,SNR=20						
	comp=Z,1.3nm,0.4s						
TARG	**Taragay, Kyrgy**	**45.69**	**297**		**P**	**02 43 09.5**	**-0.2**
J14K	**Nanvaranak Lak**	**46.46**	**33**	P	**P**	**02 43 15.5**	**+0.8**
	baz=262						
F15K	**North Star Dit**	**46.51**	**29**	P	**P**	**02 43 15.6**	**+0.6**
	baz=258						
G15K	**Niukluk**	**46.62**	**30**	P	**P**	**02 43 16.5**	**+0.6**
	baz=259						
C16K	**Lisburne Hills**	**46.85**	**26**	P	**P**	**02 43 17.9**	**+0.3**
C16K				IAmb	IAmb	02 43 19.8	
	comp=Z,15nm,1.0s						
C16K	**Lisburne Hills**	**46.85**	**26**	P	**P**	**02 43 18.4**	**+0.8**
	baz=255						
M14K	**Bethel**	**46.98**	**36**	P	**P**	**02 43 19.2**	**+0.5**
	baz=265						
N14K	**Kuskokwak Cree**	**47.06**	**37**	P	**P**	**02 43 19.5**	**+0.2**
	baz=266						
L15K	**Ungalak Mounta**	**47.30**	**35**	P	**P**	**02 43 22.0**	**+0.9**
	baz=265						
MTN	**Manton Dam**	**47.33**	**187**	P	**P**	**02 43 21.1**	**-0.8**
MTN				IAmb	IAmb	02 43 43.7	
	comp=Z,18nm,1.4s						
K15K	**Wolf Creek Mou**	**47.34**	**34**	P	**P**	**02 43 22.0**	**+0.6**
	baz=264						
G16K	**Koyuk River**	**47.39**	**30**	P	**P**	**02 43 22.6**	**+0.9**
	baz=260						
D17K	**Noatak River**	**47.54**	**27**	P	**P**	**02 43 24.0**	**+1.1**
	baz=258						
N15K	**Kwethluk River**	**47.87**	**37**	P	**P**	**02 43 26.4**	**+0.9**
N15K				IAmb	IAmb	02 43 41.7	
	comp=Z,8.4nm,1.1s						
N15K	**Kwethluk River**	**47.87**	**37**	P	**P**	**02 43 26.6**	**+1.0**
	baz=267						
E17K	**Hotham Inlet**	**47.90**	**28**	P	**P**	**02 43 26.8**	**+1.2**
	baz=260						
KSH2	**Kashi**	**47.92**	**294**	P	**P**	**02 43 25.0**	**-1.5**
KSH2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
O15K	**Ungalikthiuk R**	**47.97**	**39**	P	**P**	**02 43 26.4**	**+0.2**
O15K				IAmb	IAmb	02 43 28.6	
	comp=Z,9.3nm,1.0s						
O15K	**Ungalikthiuk R**	**47.97**	**39**	P	**P**	**02 43 27.4**	**+1.2**
	baz=268						
F17K	**Baldwin Pennin**	**48.01**	**29**	P	**P**	**02 43 27.7**	**+1.3**
F17K				IAmb	IAmb	02 43 32.1	
	comp=Z,20nm,1.4s						
F17K	**Baldwin Pennin**	**48.01**	**29**	P	**P**	**02 43 27.6**	**+1.2**
	baz=261						
L16K	**Owhat River**	**48.25**	**35**	P	**P**	**02 43 29.3**	**+1.0**
	baz=267						
H17K	**Granite Mounta**	**48.35**	**31**	P	**P**	**02 43 30.0**	**+1.0**
	baz=263						
E18K	**Tukpahlearik C**	**48.42**	**27**	P	**P**	**02 43 30.4**	**+0.8**
	baz=260						
N16K	**Nishlik Lake**	**48.54**	**37**	P	**P**	**02 43 31.5**	**+0.9**
	baz=268						
J17K	**VABM Dome**	**48.56**	**33**	P	**P**	**02 43 31.5**	**+0.9**
	baz=265						
F18K	**Selawik**	**48.67**	**29**	P	**P**	**02 43 32.1**	**+0.7**
	baz=262						
A19K	**Wainwright**	**48.79**	**24**	P	**P**	**02 43 32.7**	**+0.4**
	baz=258						
L17K	**Donlin**	**48.83**	**35**	P	**P**	**02 43 33.6**	**+0.9**
	baz=267						
K17K	**Iditarod**	**48.86**	**34**	P	**P**	**02 43 33.8**	**+0.9**
	baz=267						
O16K	**Kokwok River B**	**48.86**	**38**	P	**P**	**02 43 33.6**	**+0.7**
	baz=270						
G18K	**Tagagawik**	**48.98**	**30**	P	**P**	**02 43 34.3**	**+0.5**
G18K	**Tagagawik**	**48.98**	**30**	P	**P**	**02 43 34.6**	**+0.8**
	baz=264						
H18K	**Honhosa River**	**49.02**	**31**	P	**P**	**02 43 34.9**	**+0.8**
	baz=265						
C19K	**Lookout Ridge**	**49.09**	**25**	P	**P**	**02 43 35.3**	**+0.7**
	baz=260						
BVAR	**Borovoye Array**	**49.13**	**313**	P	**P**	**02 43 35.3**	**+0.2**
	comp=Z,2.2nm,0.3s,baz=100,slow=8.4,SNR=14						
	comp=Z,2.2nm,0.3s						
M17K	**Holitna River**	**49.22**	**36**	P	**P**	**02 43 36.6**	**+0.9**
	baz=269						
N17K	**Nushagak Hills**	**49.32**	**37**	P	**P**	**02 43 37.5**	**+1.0**
	baz=270						
O17K	**Koliganek Bris**	**49.37**	**38**	P	**P**	**02 43 37.5**	**+0.8**
	baz=270						
F19K	**Shaleruckik Mo**	**49.44**	**28**	P	**P**	**02 43 38.0**	**+0.8**
	baz=264						
D19K	**Kuna River**	**49.52**	**26**	P	**P**	**02 43 38.7**	**+0.9**
	baz=262						
L18K	**Granite Mounta**	**49.59**	**35**	P	**P**	**02 43 39.5**	**+1.1**
	baz=269						
Q16K	**King Salmon**	**49.61**	**39**	P	**P**	**02 43 39.6**	**+1.0**
	baz=272						
G19K	**Purcell Mounta**	**49.64**	**29**	P	**P**	**02 43 39.8**	**+1.0**
	baz=265						
E19K	**Redstone River**	**49.72**	**28**	P	**P**	**02 43 40.5**	**+1.2**
	baz=264						
H19K	**Roundabout Mou**	**49.85**	**30**	P	**P**	**02 43 41.5**	**+1.2**
	baz=266						
M18K	**Stony River**	**49.99**	**36**	P	**P**	**02 43 42.1**	**+0.8**
	baz=270						
B20K	**Meade River**	**50.07**	**24**	P	**P**	**02 43 43.1**	**+1.2**
	baz=262						
D20K	**Etivluk River**	**50.09**	**26**	P	**P**	**02 43 43.4**	**+1.3**
	baz=263						
J19K	**Poorman**	**50.13**	**32**	P	**P**	**02 43 43.6**	**+1.2**
	baz=268						
E20K	**Nigu River**	**50.20**	**27**	P	**P**	**02 43 44.5**	**+1.6**
	baz=264						
F20K	**Avaraart Lake**	**50.26**	**28**	P	**P**	**02 43 44.5**	**+1.2**
	baz=265						
O18K	**Koktuh Hills**	**50.32**	**38**	P	**P**	**02 43 45.0**	**+1.1**
	baz=272						
P18K	**Big Mountain,**	**50.33**	**38**	P	**P**	**02 43 45.0**	**+1.0**
	baz=272						
L19K	**White Mountain**	**50.45**	**35**	P	**P**	**02 43 45.7**	**+0.8**
	baz=270						
A21K	**Barrow**	**50.45**	**23**	P	**P**	**02 43 45.7**	**+1.1**
	baz=261						
Q18K	**Katmai Hardscr**	**50.48**	**39**	P	**P**	**02 43 46.0**	**+0.8**
	baz=273						
H20K	**Anotleneega Mo**	**50.51**	**30**	P	**P**	**02 43 46.2**	**+1.1**
	baz=268						
N19K	**Bonanza Creek**	**50.65**	**36**	P	**P**	**02 43 47.5**	**+1.1**
	baz=272						
M19K	**Big River Lodg**	**50.67**	**35**	P	**P**	**02 43 47.6**	**+1.1**
	baz=271						
KK31	**Karatay Array**	**50.68**	**300**		**P**	**02 43 46.7**	**-0.1**
KK31				IAmb	IAmb	02 43 47.7	
	comp=Z,3.4nm,0.5s						
KKAR	**Karatay Array**	**50.68**	**300**	P	**P**	**02 43 46.9**	**0.0**
J20K	**Nowinta River**	**50.78**	**32**	P	**P**	**02 43 48.5**	**+1.3**
	baz=269						
C21K	**Knifeblade Rid**	**50.80**	**26**	P	**P**	**02 43 48.5**	**+1.2**
	baz=265						
K20K	**Telida**	**50.81**	**33**	P	**P**	**02 43 48.7**	**+1.3**
	baz=270						
B21K	**Ikpikpuk River**	**50.90**	**25**	P	**P**	**02 43 49.1**	**+1.1**
	baz=264						
IMAR	**Indian Mountai**	**50.99**	**30**	P	**P**	**02 43 49.5**	**+0.8**
E21K	**Killik River**	**51.03**	**27**	P	**P**	**02 43 49.9**	**+0.9**
	baz=266						
G21K	**Allakaket**	**51.11**	**29**	P	**P**	**02 43 50.6**	**+1.0**
	baz=268						
F21K	**Alatna River**	**51.15**	**28**	P	**P**	**02 43 50.9**	**+1.0**
	baz=267						
M20K	**Styx River**	**51.27**	**35**	P	**P**	**02 43 51.6**	**+0.6**
	baz=272						
NIL	**Nilore**	**51.32**	**288**	P	**P**	**02 43 51.3**	**-0.4**
P19K	**Oil Pt**	**51.33**	**38**	P	**P**	**02 43 52.4**	**+1.0**
	baz=274						
H21K	**Melozitna Rive**	**51.37**	**30**	P	**P**	**02 43 52.5**	**+1.0**
	baz=269						
B22K	**Teshekpuk Lake**	**51.38**	**24**	P	**P**	**02 43 52.6**	**+1.1**
	baz=265						
OHAK	**Old Harbor**	**51.50**	**41**	P	**P**	**02 43 53.1**	**+0.6**
	baz=276						
CHUM	**Lake Minchumin**	**51.59**	**32**	P	**P**	**02 43 54.1**	**+1.0**
	baz=271						
O20K	**Slope Mountain**	**51.61**	**37**	P	**P**	**02 43 54.6**	**+1.2**
	baz=274						
F22K	**John River**	**51.66**	**28**	P	**P**	**02 43 54.9**	**+1.3**
	baz=268						
PPLA	**Purkeypile**	**51.67**	**34**	P	**P**	**02 43 55.1**	**+1.1**
	baz=272						
CAST	**Castle Rocks**	**51.70**	**33**	P	**P**	**02 43 55.1**	**+1.1**
	baz=272						
E22K	**Anaktuvuk Pass**	**51.82**	**27**	P	**P**	**02 43 55.6**	**+0.8**
	baz=268						
KDAK	**Kodiak Island**	**51.82**	**40**	P	**P**	**02 43 55.4**	**+0.5**
KDAK	**Kodiak Island**	**51.82**	**40**	P	**P**	**02 43 55.9**	**+1.0**
	baz=276						
G22K	**Bettles**	**51.91**	**29**	P	**P**	**02 43 56.3**	**+0.9**
	baz=270						
H22K	**Ishtalitna Cre**	**51.96**	**30**	P	**P**	**02 43 57.1**	**+1.2**
	baz=270						
SKT	**Skwentna**	**52.02**	**35**	P	**P**	**02 43 57.3**	**+0.9**
	baz=273						
MLY	**Manley**	**52.24**	**31**	P	**P**	**02 43 58.9**	**+0.9**
	baz=272						
D23K	**Nanushuk River**	**52.26**	**26**	P	**P**	**02 43 58.9**	**+1.0**
	baz=269						
CAPN	**Captain Cook N**	**52.28**	**36**	P	**P**	**02 43 59.2**	**+1.0**
	baz=275						
C23K	**Itkillik River**	**52.31**	**25**	P	**P**	**02 43 59.2**	**+0.9**
	baz=268						
L22K	**Petersville**	**52.34**	**34**	P	**P**	**02 43 59.3**	**+0.6**
	baz=274,SNR=6.2						
G23K	**Bananza Creek**	**52.50**	**29**	P	**P**	**02 44 01.0**	**+1.2**
	baz=271						
TRF	**Thorofare Moun**	**52.51**	**33**	P	**P**	**02 44 01.0**	**+1.0**
	baz=273			

SCM IAmb IAmb 02 44 12.6
comp=Z,5.3nm,0.7s
SCM Sheep Creek Mo 54.01 35 P **P** **02 44 11.9 +1.1**
baz=277
G25K Bearman Lake 54.05 29 P **P** **02 44 12.1 +1.2**
baz=274
E25K Arctic Village 54.16 27 P **P** **02 44 12.8 +1.2**
baz=274
F25K Christian Rive 54.17 28 P **P** **02 44 13.0 +1.2**
baz=274
WRA Warramunga Arr 54.17 182 P **P** **02 44 11.8 -0.5**
comp=Z,0.8nm,0.4s,baz=0.2,slow=7.6,SNR=18
comp=Z,0.8nm,0.4s
WRA Warramunga Arr 54.17 182 P **P** **02 44 11.4 -1.0**
WR0 Warramunga Arr 54.18 182 P **P** **02 44 11.7 -0.7**
WR0 IAmb IAmb 02 44 14.4
comp=Z,11nm,1.4s
P23K Montague Islan 54.22 37 P **P** **02 44 13.0 +0.9**
baz=278
GLI Glacier Island 54.25 36 P **P** **02 44 13.3 +0.9**
baz=278
PRP Porcupine Dome 54.40 30 P **P** **02 44 14.3 +0.8**
baz=276
K24K Donnelly Dome 54.48 32 P **P** **02 44 14.8 +0.7**
baz=277
M24K Tolsona, Glenn 54.52 34 P **P** **02 44 15.3 +0.9**
baz=278
J25K Salcha River, 54.56 31 P **P** **02 44 15.9 +1.2**
baz=277
C27K Jago River 54.72 25 P **P** **02 44 17.1 +1.5**
baz=275
KLU Klutina 54.73 35 P **P** **02 44 17.0 +1.1**
baz=278
PAX Paxson 54.73 33 P **P** **02 44 16.6 +0.7**
baz=278
F26K Sheenjek River 54.73 27 P **P** **02 44 17.8 +2.1**
baz=276,SNR=6.1
RIDG Independent Ri 54.90 32 P **P** **02 44 17.4 +0.3**
baz=278,SNR=6.8
G26K Porcupine Rive 54.95 28 P **P** **02 44 18.2 +1.0**
baz=276
N25K Chitina, Valde 55.33 35 P **P** **02 44 21.3 +1.2**
baz=280
I26K Coal Creek Min 55.41 30 P **P** **02 44 21.1 +0.6**
baz=278
BMRM Bremner River 55.44 36 P **P** **02 44 21.5 +0.7**
BMRM IAmb IAmb 02 44 22.9
comp=Z,7.6nm,0.6s
BMRM Bremner River 55.44 36 P **P** **02 44 22.0 +1.1**
baz=280,SNR=5.8
E27K Coleen River 55.63 27 P **P** **02 44 23.6 +1.5**
baz=278,SNR=5.3
L26K Log Cabin Wild 55.68 33 P **P** **02 44 24.1 +1.6**
baz=280
D27M Malcolm River 55.72 25 P **P** **02 44 24.4 +1.6**
baz=277
G27K Doyon Strip 55.80 28 P **P** **02 44 25.0 +1.7**
baz=278
H27K Steamboat Moun 55.94 29 P **P** **02 44 26.1 +1.8**
baz=279,SNR=5.0
VRDI Verde Repeater 55.94 35 P **P** **02 44 25.5 +0.9**
VRDI IAmb IAmb 02 44 26.2
comp=Z,4.0nm,0.7s
M26K Nabesna, AK 55.94 34 P **P** **02 44 25.9 +1.5**
baz=280,SNR=8.9
I27K Kandik River 56.00 30 P **P** **02 44 26.3 +1.6**
baz=279
K27K Chicken 56.07 32 P **P** **02 44 26.1 +0.9**
MCARA McCarthy VSAT 56.12 35 P **P** **02 44 27.1 +1.5**
baz=281
CRQE Cirque 56.20 36 P **P** **02 44 27.6 +1.3**
baz=281
AB31 Akbulak array 56.28 310 **P** **02 44 26.5 -0.4**
ABKAR Akbulak array 56.28 310 P **P** **02 44 26.7 -0.2**
E28M Babbage River 56.33 26 P **P** **02 44 28.5 +1.6**
baz=279
L27K Beaver Creek, 56.35 33 P **P** **02 44 28.6 +1.3**
baz=281,SNR=7.9
F28M Old Crow 56.36 27 P **P** **02 44 28.8 +1.6**
baz=280
BCAR Beaver Creek A 56.37 33 **P** **02 44 28.2 +0.8**
M27K Edge Creek, AK 56.46 34 P **P** **02 44 29.5 +1.4**
baz=281,SNR=8.6
I28M Miner Creek 56.72 30 P **P** **02 44 31.4 +1.5**
baz=280,SNR=5.5
BVCY Beaver Creek 56.92 33 P **P** **02 44 32.6 +1.4**
baz=282
E29M Blow River 56.96 26 P **P** **02 44 32.9 +1.6**
baz=281
G29M Pine Creek 57.20 28 P **P** **02 44 34.8 +1.8**
baz=282,SNR=5.0
H29M Whitestone 57.20 29 P **P** **02 44 34.7 +1.6**
baz=282
DAWY Dawson 57.22 31 P **P** **02 44 34.4 +1.2**
baz=282
YUK3 Moose Creek 57.24 34 P **P** **02 44 34.7 +1.1**
baz=283
I29M Ogilvie Camp, 57.40 30 P **P** **02 44 35.8 +1.3**
baz=282,SNR=5.1
YUK8 Steele Glacier 57.67 35 P **P** **02 44 37.8 +1.1**
baz=284
EPYK Eagle Plains 57.82 28 P **P** **02 44 38.6 +1.2**
baz=283,SNR=6.9
G30M tAoh Zraii Nji 57.87 28 P **P** **02 44 38.7 +0.9**
baz=283
ASAR Alice Springs 57.89 182 P **P** **02 44 38.8 +0.4**
comp=Z,0.3nm,0.3s,baz=12,slow=13,SNR=5.4
comp=Z,0.3nm,0.3s
ASAR Alice Springs 57.89 182 P **P** **02 44 38.1 -0.2**
F30M Barrier River 57.90 27 P **P** **02 44 39.2 +1.4**
baz=283
L29M L29M 57.99 32 P **P** **02 44 40.3 +1.7**
baz=284,SNR=6.2
BRWY Burwash Landin 57.99 34 P **P** **02 44 40.1 +1.4**
baz=284
M29M Somme Creek 58.00 33 P **P** **02 44 40.3 +1.6**
baz=284,SNR=6.3
K29M Barlow Dome 58.08 31 P **P** **02 44 40.6 +1.4**
baz=284
I30M Mount Dempster 58.22 30 **P** **02 44 41.1 +0.9**
I30M IAmb IAmb 02 44 42.7
comp=Z,4.8nm,0.8s
I30M Mount Dempster 58.22 30 P **P** **02 44 41.5 +1.3**
baz=284,SNR=8.6
J30M Hart River 58.40 30 P **P** **02 44 42.4 +0.9**
baz=284
O29M Mount Kennedy 58.48 36 P **P** **02 44 42.7 +0.7**
baz=285
INK Inuvik 58.56 26 P **P** **02 44 43.0 +0.7**
baz=285
G31M Satah River 58.63 27 P **P** **02 44 43.3 +0.5**
baz=285
M30M Minto, Yukon 58.71 33 P **P** **02 44 45.2 +1.7**
baz=285
HYT Haines Junctio 58.85 35 P **P** **02 44 45.9 +1.3**
HYT Haines Junctio 58.85 35 P **P** **02 44 45.8 +1.3**
baz=286
N30M Aishikik Lake 58.88 34 P **P** **02 44 46.0 +1.4**
baz=286
H31M Peel River 58.90 29 P **P** **02 44 45.9 +1.2**
baz=285,SNR=5.4
P29M Windy Craggy 59.07 36 P **P** **02 44 47.4 +1.4**
baz=286
P30M Million Dollar 59.31 36 P **P** **02 44 48.9 +1.3**
baz=286
N31M Braeburn, Yuko 59.47 34 P **P** **02 44 49.9 +1.2**
baz=287
O30N Mendenhall 59.53 35 P **P** **02 44 50.2 +1.1**
baz=287
PLBC Pleasant Camp 59.79 36 P **P** **02 44 52.3 +1.5**
baz=287
M31M Drury Creek, Y 59.89 33 P **P** **02 44 52.8 +1.3**
baz=287
WHY Whitehorse 60.14 35 P **P** **02 44 54.5 +1.2**
baz=288
A36M Sachs Harbour 60.17 21 P **P** **02 44 54.1 +1.0**
baz=290
S31K Pelican 60.31 38 P **P** **02 44 55.3 +1.0**
baz=288
N32M Quiet Lake 60.81 34 P **P** **02 44 58.2 +0.5**
baz=289
P32M Atlin 61.03 36 P **P** **02 45 00.3 +1.2**
baz=289
MMPY Sheldon Lake, 61.14 32 P **P** **02 45 01.4 +1.6**
baz=290
P33M Teslin, Yukon 61.25 35 P **P** **02 45 02.1 +1.4**
baz=290
S32K Killisnoo 61.31 38 P **P** **02 45 02.5 +1.6**
baz=290
C36M Paulatuk 61.49 23 P **P** **02 45 02.5 +0.6**
baz=292
Q32M Nakina River 61.94 36 P **P** **02 45 06.8 +1.4**
baz=291
DLBC Dease Lake 63.23 36 P **P** **02 45 15.2 +1.6**
baz=293
T35M Bob Quinn 63.68 38 P **P** **02 45 18.4 +1.9**
baz=293
RES Resolute Bay 66.07 13 P **P** **02 45 31.8 +0.3**
RES IAmb IAmb 02 45 34.6
comp=Z,3.4nm,0.8s
YKA Yellowknife Ar 68.10 28 P **P** **02 45 44.7 +0.4**
comp=Z,0.6nm,0.4s,baz=303,slow=5.9,SNR=9.4
comp=Z,0.6nm,0.4s
FINES FINESS Array B 69.00 331 P **P** **02 45 49.5 -0.3**
comp=Z,1.5nm,0.8s,baz=47,slow=8.4,SNR=8.4
comp=Z,1.5nm,0.8s
KBZ Khabaz 69.23 309 P **P** **02 45 51.7 +0.2**
comp=Z,2.3nm,0.8s,baz=41,slow=4.6,SNR=5.5
comp=Z,2.3nm,0.8s
PINE Pine Mountain 75.22 47 **P** **02 46 28.0 +1.1**
J08A Circle Bar Ran 76.95 46 **P** **02 46 36.6 +0.2**
J08A IAmb IAmb 02 46 39.2
comp=Z,4.3nm,1.0s
BRTR Keskin Array B 77.22 309 P **P** **02 46 38.4 +0.4**
comp=Z,1.2nm,0.9s,baz=27,slow=3.0,SNR=4.9
comp=Z,1.2nm,0.9s
RAYN Ar Rayn 77.56 290 P **P** **02 46 39.4 -0.6**
RAYN IAmb IAmb 02 46 40.7
comp=Z,3.4nm,0.9s
BEKR Beckworth 77.79 50 P **P** **02 46 41.4 +0.2**
BEKR IAmb IAmb 02 46 42.9
comp=Z,3.4nm,0.8s
NVAR Mina Array Bea 79.92 50 P **P** **02 46 52.7 0.0**
comp=Z,1.0nm,0.6s,baz=294,slow=4.9,SNR=8.9
comp=Z,1.0nm,0.6s
NVAR Mina Array Bea 79.92 50 P **P** **02 46 52.5 -0.2**
TPH Tonopah 80.82 50 P **P** **02 46 57.5 +0.1**
TPH IAmb IAmb 02 46 59.5
comp=Z,4.2nm,0.9s
TPNV Topopah Spring 82.11 50 **P** **02 47 04.7 +0.6**
GWY Greenwater Val 82.30 51 P **P** **02 47 05.3 +0.2**
GWY IAmb IAmb 02 47 06.8
comp=Z,2.5nm,0.8s
PDAR Pinedale Array 82.46 43 P **P** **02 47 06.1 +0.2**
comp=Z,0.4nm,0.8s,baz=333,slow=1.7,SNR=4.7
comp=Z,0.4nm,0.8s
MTPU Mount Pierson 83.97 48 P **P** **02 47 14.4 +0.6**
MTPU IAmb IAmb 02 47 16.4
comp=Z,2.8nm,0.8s
TXAR Lajitas Array 95.04 49 P **P** **02 48 06.9 +1.3**
comp=Z,0.4nm,0.5s,baz=290,slow=3.3,SNR=9.6
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 95.04 49 P **P** **02 48 06.0 +0.4**
LPAZ La Paz 151.67 56 PKPbc **PKPbc** **02 54 35.9 -0.1**
comp=Z,0.5nm,0.4s,baz=248,slow=6.8,SNR=4.5

*IDC **29** 02:50:30.6±2.5,7.°12S×128.°96E,h53km±25km,mb3.7/5, mbtmp3.9/9,ML3.7/4,MS2.6/1,Error ellipse: s-maj=34.0km s-min=21.4km az=85.0*

ISC 29 02:50:29.2±0.8,7.°18S±0.°08×128.°9E±0.°1,h35km,n12, σ3°00/13,mb4.0/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.99**	**239**	P	**Pn**	**02 51 58.5**	**+3.0**
	214nm,0.3s,baz=78,slow=2.2,SNR=17						
BATI				S	**Sn**	**02 52 59.8**	**-3.1**
	44nm,0.6s,baz=81,slow=9.8,SNR=5.9						
SIJI	**Sorong**	**6.70**	**21**	P	**Pn**	**02 52 03.9**	**-1.3**
	0.9nm,0.3s,baz=240,slow=22,SNR=1.4						
	2.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**11.31**	**196**	P	**Pn**	**02 53 09.7**	**+1.3**
	1.0nm,0.3s,baz=9.3,slow=12,SNR=21						
FITZ				S	Sn	02 55 05.2	-8.5
	3.8nm,0.3s,baz=106,slow=22,SNR=3.6						
	3.9nm,0.5s						
JAY	**Jayapura**	**12.64**	**69**	LR	LR	02 59 14.9	
	comp=Z,25nm,18.9s,baz=324,slow=42						
WRA	**Warramunga Arr**	**13.74**	**158**	P	**Pn**	**02 53 43.8**	**+2.1**
	0.4nm,0.3s,baz=329,slow=14,SNR=16						
WRA				S	Sn	02 56 05.0	-8.2
	2.2nm,0.4s,baz=336,slow=23,SNR=9.2						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.08**	**164**	P	**Pn**	**02 54 27.8**	**+2.3**
	0.2nm,0.3s,baz=344,slow=12,SNR=9.4						
ASAR				S	**Sn**	**02 57 28.5**	**-6.0**
	0.9nm,0.6s,baz=321,slow=14,SNR=7.7						
	0.6nm,0.4s						
SONM	**Songino Array**	**58.27**	**342**	P	**P**	**03 00 20.2**	**-0.3**
	0.4nm,0.6s,baz=147,slow=6.4,SNR=1.6						
	0.4nm,0.6s						
PETK	**Petropavlovsk-**	**64.84**	**19**	P	**P**	**03 01 04.7**	**+0.1**
	8.1nm,1.2s,baz=232,slow=6.8,SNR=2.3						
	8.1nm,1.2s						
MKAR	**Makanchi Array**	**67.78**	**327**	P	**P**	**03 01 23.1**	**-0.5**
	0.6nm,0.5s,baz=121,slow=8.2,SNR=5.1						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**72.10**	**329**	P	**P**	**03 01 49.3**	**-0.6**
	1.8nm,0.9s,baz=129,slow=5.2,SNR=17						
	1.8nm,0.9s						
BVAR	**Borovoye Array**	**77.64**	**328**	P	**P**	**03 02 20.0**	**-1.9**
	0.7nm,0.5s,baz=123,slow=7.1,SNR=3.6						
	0.7nm,0.5s						
LPAZ	**La Paz**	**151.23**	**144**	PKPbc	**PKPdf**	**03 10 19.1**	**+4.2**
	0.6nm,0.3s,baz=191,slow=5.2,SNR=10						

DJA 29 02:57:20.4±1.1,10.°5S±5.°×11.°8E±.°,h11km±12km,M3.5/6, MLv3.5/6,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.03**	**330**	P	Pg	02 57 40.3	-0.1
PLAI				S	Sg	02 57 53.8	0.0
PLAI	**Plampang**	**1.03**	**330**	P	Pg	02 57 40.3	-0.1
WBSI	**Waikabubak, Su**	**1.08**	**85**	P	Pb	02 57 40.6	-0.5
DBNI	**Kabupaten Domp**	**1.22**	**1**	P	Pg	02 57 44.1	+0.2
DBNI				S	Sb	02 57 59.5	+0.2
DBNI	**Kabupaten Domp**	**1.22**	**1**	P	Pg	02 57 44.0	+0.1
TWSI	**Taliwang, Sumb**	**1.71**	**305**	P	Pn	02 57 49.7	-0.5
TWSI				S	Sn	02 58 07.5	-4.6
TWSI	**Taliwang, Sumb**	**1.71**	**305**	P	Pn	02 57 49.5	-0.7
TWSI				S	Sn	02 58 07.5	-4.6

*IDC **29** 03:25:55.6±1.2,33.°06N×86.°86E,h0km,mb3.7/11, mbtmp3.7/13,ML3.2/1,MS3.2/8,Error ellipse: s-maj=30.4km s-min=21.3km az=18.0*

ISC 29 03:26:01.1±1.1,33.°2N±0.°2×86.°9E±0.°1,h35km,n19, σ0°71/13,mb3.8/8,MS3.4/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.58**	**318**	LR	LR	03 34 56.7	
	comp=Z,67nm,18.5s,baz=138,slow=40						
MKAR	**Makanchi Array**	**14.05**	**347**	Pn	**Pn**	**03 29 17.1**	**-0.5**
	0.1nm,0.3s,baz=182,slow=14,SNR=1.1						
MKAR				LR	LR	03 35 02.4	
	comp=Z,32nm,19.0s,baz=174,slow=39						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.21**	**141**	LR	LR	03 38 43.2	
	comp=Z,33nm,19.7s,baz=260,slow=42						
KURBB	**Kurchatov Arra**	**18.49**	**343**	P	**Pn**	**03 30 14.7**	**+0.3**
	1.6nm,0.2s,baz=158,slow=11,SNR=2.3						
SONM	**Songino Array**	**20.77**	**39**	P	**P**	**03 30 40.4**	**+1.3**
	0.6nm,0.4s,baz=228,slow=12,SNR=3.7						
SONM				LR	LR	03 38 35.0	
	comp=Z,60nm,18.6s,baz=252,slow=36						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**20.83**	**357**	P	**P**	**03 30 39.0**	**-0.4**
	1.5nm,0.6s,baz=191,slow=6.9,SNR=4.4						
	1.5nm,0.6s						
KSRS	**Korea Array**	**33.58**	**71**	P	**P**	**03 32 37.2**	**-0.7**
	0.8nm,0.6s,baz=275,slow=9.6,SNR=5.4						
	0.8nm,0.6s						
EIL	**Elat**	**44.08**	**280**	LR	LR	03 53 26.2	
	comp=Z,39nm,18.1s,baz=104,slow=37						
AKASG	**Malin Array Be**	**45.12**	**311**	P	**P**	**03 34 14.2**	**+0.3**
	0.8nm,0.6s,baz=81,slow=7.3,SNR=5.1						
	0.8nm,0.6s						
IDI	**Anoyia**	**50.54**	**291**	LR	LR	03 59 50.6	
	comp=Z,97nm,21.2s,baz=124,slow=40						
PETK	**Petropavlovsk-**	**53.09**	**45**	P	**P**	**03 35 15.1**	**+0.2**
	0.8nm,0.5s,baz=227,slow=6.1,SNR=2.0						
	0.8nm,0.5s						
VRAC	**Vranov**	**53.35**	**310**	LR	LR	04 01 00.1	
	comp=Z,13nm,19.8s,baz=40,slow=39						
HFS	**Hagfors**	**53.64**	**323**	P	**P**	**03 35 19.4**	**+0.6**
	1.7nm,0.7s,baz=119,slow=8.4,SNR=2.3						
	1.7nm,0.7s						
NOA	**NORSAR Array B**	**54.77**	**325**	P	**P**	**03 35 26.8**	**-0.3**
	0.6nm,0.7s,baz=85,slow=7.2,SNR=2.7						
	0.6nm,0.7s						
GERES	**GERESS Array B**	**55.30**	**310**	P	**P**	**03 35 32.0**	**+0.8**
	0.8nm,0.7s,baz=64,slow=6.1,SNR=7.4						
	0.8nm,0.7s						
DAVOX	**Davos/Dischmat**	**58.31**	**308**	LR	LR	04 02 27.9	
	comp=Z,28nm,20.5s,baz=80,slow=38						
WRA	**Warramunga Arr**	**69.59**	**132**	P	**P**	**03 37 07.2**	**+0.3**
	0.4nm,0.8s,baz=319,slow=6.2,SNR=1.9						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**73.77**	**21**	P	**P**	**03 37 30.8**	**-0.6**
	0.3nm,0.8s,baz=284,slow=4.7,SNR=4.9						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.94**	**278**	P	**P**	**03 38 00.7**	**-0.9**
	0.3nm,0.7s,baz=61,slow=3.8,SNR=2.1						
	0.3nm,0.7s						

*IDC **29** 03:41:42.7±3.5,71.°92N×76.°96W,h0km,mb3.1/2, mbtmp3.4/6,ML3.3/4,MS2.8/1,Error ellipse: s-maj=80.7km s-min=13.4km az=52.0*
*OTT **29** 03:41:42.6±0.2,72.°32N×75.°70W,h18km,MN3.8/6,88km southeast from Pond Inlet, Nu Eastern Arctic Background Seismic Zone.*
*DNK **29** 03:41:44.2±3.2,72.°28N×75.°64W,h15km±17km,ML2.3, Presumed earthquake*

ISC 29 03:41:38.4±0.7,72.°19N±0.°05×75.°98W±0.°04,h10km,n25, σ3°06/40,Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POIN	**Pond Inlet**	**0.79**	**311**	PG	**Pn**	**03 41 57.2**	**+1.7**
POIN				SG	**Sn**	**03 42 07.3**	**-0.1**
POIN				Trac		03 42 12.8	
	comp=Z,269nm,0.1s						
CLRN	**Clyde River**	**2.94**	**122**	PN	**Pn**	**03 42 28.5**	**+3.5**
CLRN				SN	**Sn**	**03 43 01.7**	**+1.4**
CLRN				LG	Lg	03 43 12.5	
CLRN				Trac		03 43 13.6	
	comp=Z,92nm,0.2s						
ILON	**Igloolik, Nuna**	**3.43**	**217**	PN	**Pb**	**03 42 36.5**	**-2.6**
ILON				SN	**Sb**	**03 43 16.7**	**-4.1**
ILON				LG	Lg	03 43 30.8	
ILON				Trac		03 43 33.6	
	comp=Z,148nm,0.3s						
TULEG	**Thule**	**4.77**	**21**	*i* P	**Pn**	**03 42 51.8**	**+1.6**
TULEG				*i* S	**Sn**	**03 43 42.5**	**-2.9**
TULEG				IAML		03 43 46.6	
	comp=Z,26nm,0.5s						
KULLO	**Kullorsuaq**	**5.87**	**57**	*i* P	**Pn**	**03 43 07.5**	**+2.2**
KULLO				*i* S	**Sn**	**03 44 09.7**	**-2.9**
KULLO				IAML		03 44 13.7	
	comp=Z,12nm,0.5s						
RES	**Resolute Bay**	**5.94**	**304**	Pn	**Pn**	**03 43 09.6**	**+3.4**
	comp=Z,0.5nm,0.3s,baz=106,slow=7.9,SNR=13						
RES				Pg	**Pg**	**03 43 29.4**	**-2.6**
	comp=Z,1.6nm,0.3s,baz=81,slow=7.6,SNR=6.8						
RES				Sn	**Sn**	**03 44 14.1**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=129,slow=13,SNR=1.7						
RES				Lg	Lg	03 44 47.8	
	comp=Z,5.4nm,0.3s,baz=170,slow=12,SNR=20						
	comp=Z,2.5nm,0.7s						
RES	**Resolute Bay**	**5.94**	**304**	PN	**Pn**	**03 43 09.7**	**+3.4**
RES				SN	**Sn**	**03 44 13.7**	**-0.5**
RES				LG	Lg	03 44 49.4	
RES				Trac		03 45 03.9	
	comp=Z,102nm,0.9s						
RES	**Resolute Bay**	**5.94**	**304**	*i* P	Pn	03 43 13.7	+7.5
RES				*i* S	**Sn**	**03 44 15.9**	**+1.7**
UPNV	**Upernavik**	**6.01**	**75**	*i* P	**Pn**	**03 43 09.4**	**+2.2**
UPNV				*i* S	**Sn**	**03 44 12.9**	**-3.0**
UPNV				IAML		03 44 17.5	
	comp=Z,7.1nm,0.4s						
NUUG	**Nuugaatsiaq**	**7.12**	**84**	*i* P	**Pn**	**03 43 25.0**	**+2.6**
NIAQ	**Niaqornat**	**7.22**	**90**	*i* P	**Pn**	**03 43 27.5**	**+3.7**
NIAQ				*i* S	**Sn**	**03 44 41.6**	**-4.1**
NIAQ				IAML		03 44 57.0	
	comp=Z,23nm,2.0s						
SAATT	**Saattut**	**7.84**	**88**	*i* P	**Pn**	**03 43 34.3**	**+2.0**
SAATT				*i* S	**Sn**	**03 44 56.5**	**-4.3**
SAATT				IAML		03 45 02.0	
	comp=Z,3.9nm,0.6s						
GDH	**Godhavn**	**7.96**	**101**	*i* P	**Pn**	**03 43 35.4**	**+1.5**
GDH				*i* S	**Sn**	**03 44 58.8**	**-5.1**
GDH				IAML		03 45 10.4	
	comp=Z,8.4nm,0.8s						
NEEM	**North Greenlan**	**8.31**	**40**	*i* P	**Pn**	**03 43 41.9**	**+2.8**
NEEM				*i* S	**Sn**	**03 45 07.5**	**-5.5**
NEEM				IAML		03 45 12.4	
	comp=Z,6.9nm,0.7s						
FRB	**Frobisher Bay**	**8.92**	**158**	Pn	**Pn**	**03 43 48.4**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=348,slow=15,SNR=11						
FRB				Sn	**Sn**	**03 45 23.3**	**-4.2**
	comp=Z,2.0nm,0.3s,baz=88,slow=13,SNR=5.3						
FRB				Lg	Lg	03 46 12.4	
	comp=Z,5.3nm,0.3s,baz=74,slow=20,SNR=12						
	comp=Z,3.0nm,0.5s						
FRB	**Frobisher Bay**	**8.92**	**158**	PN	**Pn**	**03 43 50.4**	**+3.3**
FRB				SN	**Sn**	**03 45 24.6**	**-2.8**
FRB				LG	Lg	03 46 20.4	
FRB				Trac		03 46 26.0	
	comp=Z,19nm,0.3s						
FRB	**Frobisher Bay**	**8.92**	**158**	*i* P	**Pn**	**03 43 50.0**	**+2.9**
FRB				*i* S	**Sn**	**03 45 26.2**	**-1.2**
SFJD	**Kangerlussuaq**	**10.20**	**108**	Lg	Lg	03 47 09.6	
	comp=Z,0.5nm,0.3s,baz=87,slow=17,SNR=1.5						
BLKN	**Baker Lake**	**10.77**	**233**	PN	**Pn**	**03 44 15.6**	**+3.2**
BLKN				SN	**Sn**	**03 46 11.5**	**-1.4**
BLKN				LG	Lg	03 47 23.8	
BLKN				Trac		03 47 32.9	
	comp=Z,22nm,0.3s						
SUMG	**Summit**	**11.25**	**70**	*i* P	**Pn**	**03 44 20.3**	**+1.0**
SUMG				*i* S	Sn	03 46 12.7	-12
SUMG				IAML		03 46 22.8	
	comp=Z,4.0nm,0.5s						
YKA	**Yellowknife Ar**	**17.39**	**256**	Pn	**Pn**	**03 45 36.2**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=35,slow=11,SNR=4.8						
YKA				Lg	Lg	03 50 20.1	
	comp=Z,0.2nm,0.3s,baz=38,slow=30,SNR=4.3						
	comp=Z,0.6nm,0.8s						
SCHQ	**Schefferville**	**17.86**	**163**	Pn	**Pn**	**03 45 45.8**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=324,slow=7.9,SNR=7.6						
SCHQ				Sn	Sn	03 48 52.0	-13
	comp=Z,0.2nm,0.3s,baz=324,slow=12,SNR=1.3						
SCHQ				Lg	Lg	03 50 46.2	
	comp=Z,0.4nm,0.3s,baz=110,slow=14,SNR=7.5						
	comp=Z,1.4nm,0.5s						
INK	**Inuvik**	**19.15**	**287**	LR	LR	03 52 32.3	
	comp=Z,25nm,19.2s,baz=58,slow=34						
ILAR	**Eielson Array**	**25.47**	**290**	P	**P**	**03 47 10.0**	**+3.9**
	comp=Z,0.2nm,0.5s,baz=41,slow=8.6,SNR=4.3						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**45.44**	**215**	P	**P**	**03 50 00.3**	**+3.1**
	comp=Z,0.2nm,0.6s,baz=3.1,slow=6.5,SNR=4.3						
	comp=Z,0.2nm,0.6s						

*IDC **29** 03:48:29.8±4.9,6.°85S×126.°69E,h428km±61km,mb2.9/2, mbtmp4.0/6,Error ellipse: s-maj=106.7km s-min=22.0km az=53.0*
*NEIC **29** 03:48:31.7±1.8,7.°1S±0.°1×126.°3E±0.°1,h458km±10km, mb4.3/11,Error ellipse: s-maj=20.5km s-min=14.2km az=48.0*

ISC 29 03:48:30.7±0.7,7.°12S±0.°08×126.°4E±0.°1,h450km,n25, σ1°45/27,mb4.1/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.39**	**219**	P	**P**	**03 49 42.5**	**+1.6**
BATI	**Baumata**	**4.12**	**222**	P	**P**	**03 49 47.4**	**+0.4**
	115nm,0.5s,baz=90,slow=6.1,SNR=8.4						
BATI				S	**S**	**03 50 48.2**	**-0.7**
	25nm,0.3s,baz=113,slow=5.2,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.94**	**184**	P	**P**	**03 51 01.5**	**+3.4**
	3.5nm,0.9s,baz=350,slow=12,SNR=2.5						
FITZ	**Fitzroy Crossi**	**10.94**	**184**	P	**P**	**03 50 57.5**	**-0.6**
WB0	**Warramunga Arr**	**14.76**	**149**	P	**P**	**03 51 40.6**	**+1.2**
WRA	**Warramunga Arr**	**14.88**	**150**	P	**P**	**03 51 42.0**	**+1.3**
	2.0nm,0.5s,baz=329,slow=11,SNR=32						

WRA				S		**S**	**03 54 17.6**	**+0.1**
	1.0nm,0.7s,baz=328,slow=21,SNR=4.3								
WRA	**Warramunga Arr**	**14.88**	**150**	P		**P**	**03 51 40.9**	**+0.3**
WR8	**Warramunga Arr**	**14.97**	**149**	P		**P**	**03 51 43.0**	**+1.4**
WR8				IAmb		IAmb	03 51 44.0	
	comp=Z,6.2nm,0.8s								
AS31	**Alice Springs**	**17.95**	**157**	P		**P**	**03 52 13.5**	**+0.5**
ASAR	**Alice Springs**	**17.95**	**157**	P		**P**	**03 52 14.9**	**+1.9**
	comp=Z,1.9nm,0.3s,baz=333,slow=9.5,SNR=20								
ASAR				S		**S**	**03 55 13.1**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=345,slow=21,SNR=1.3								
ASAR	**Alice Springs**	**17.95**	**157**	P		**P**	**03 52 14.5**	**+1.5**
STKA	**Stephens Creek**	**28.41**	**152**	P		**P**	**03 53 47.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=314,slow=11,SNR=3.4								
	comp=Z,0.9nm,0.5s								
MAJO	**Matsushiro**	**44.81**	**13**	P		**P**	**03 56 01.5**	**-1.6**
MAJO				IAmb		IAmb	03 56 45.4		
	comp=Z,8.0nm,1.1s								
MJB9	**Matsu-Tunnel**	**44.81**	**13**	P		**P**	**03 56 02.4**	**-0.7**
MJB9				IAmb		IAmb	03 56 03.9		
	comp=Z,11nm,1.2s								
MCQ	**Macquarie Isla**	**53.98**	**157**	P		**P**	**03 57 09.1**	**-1.8**
MQZ	**McQueen's Vall**	**54.36**	**140**	P		**P**	**03 57 13.1**	**-0.6**
MQZ				IAmb		IAmb	03 57 42.6		
	comp=Z,26nm,1.4s								
MSWZ	**Moikau Station**	**55.06**	**136**	P		**P**	**03 57 19.0**	**+0.2**
PEA0B	**Petropavlovsk-**	**65.59**	**20**	P		**P**	**03 58 29.7**	**+1.0**
PEA0B				IAmb		IAmb	03 59 10.2		
	comp=Z,27nm,1.5s								
PETK	**Petropavlovsk-**	**65.59**	**20**	P		**P**	**03 58 29.8**	**+1.1**
KURBB	**Kurchatov Arra**	**70.80**	**330**	P		**P**	**03 59 01.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=144,slow=4.4,SNR=6.3								
	comp=Z,0.4nm,0.6s								
MAW	**Mawson**	**73.56**	**201**	P		**P**	**03 59 14.0**	**-2.3**
ADK	**Adak**	**76.14**	**32**	P		P	03 59 32.7	+1.5
ADK				IAmb		IAmb	04 00 08.3		
	comp=Z,16nm,1.1s								
QSPA	**South Pole Qui**	**82.86**	**180**	P		**P**	**04 00 08.7**	**+1.9**
QSPA				IAmb		IAmb	04 00 39.6		
	comp=Z,6.3nm,1.4s								
AKUT	**Akutan**	**83.04**	**33**	P		**P**	**04 00 07.2**	**-0.4**
ILULI	**Ilulissat**	**117.97**	**359**			**PKiKP**	**04 06 24.9**	**+0.1**

*GUC **29** 03:52:57.1±0.8, 17°.40S×69°.81W, h10km±15km, ML3.1*
*NEIC **29** 03:53:00.6±1.3, 17°.61S±0°.03×69°.78W±0°.05, h10km±2km, mb4.1/6, Mwr3.6/15, Mwr3.8(GUC), Error ellipse: s-maj=10.1km s-min=3.0km az=120.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.97; $M_{\theta\theta}$0.82; $M_{r\theta}$-0.23; $M_{\theta\phi}$-0.15; $M_{\phi r}$-2.48; Fault plane solution: M_o2.66000×10^{14} NP1:ϕ_s4.10000°, δ80.27000°, λ-85.53000°. NP2:ϕ_s159.30000°, δ10.70000°, λ-114.42000°. Principal axes: T 2.5636, Plg35.0000°, Azm90.0000°; N 0.1815, Plg4.0000°, Azm183.0000°; P -2.7451, Plg55.0000°, Azm280.0000°;*
*NEIC **29** 03:53:00.6, 17°.61S×69°.78W, h10km*
ISC 29 03:52:57.4±1.8, 17°.49S±0°.05×69°.82W±0°.05, h4km±13km, n30, σ1§14/37, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB18	**Visviri**	**0.34**	**107**	⇑*i* P		**Pb**	**03 53 05.1**	**-1.2**
PB18				*e*S		**Sb**	**03 53 10.2**	**-2.1**
PB18				IAML			03 53 25.8	
	comp=E,3μm,0.6s							
PB18	**Visviri**	**0.34**	**107**	Pg		**Pb**	**03 53 05.3**	**-1.0**
PB18				Sg		**Sb**	**03 53 10.4**	**-1.8**
PB16	**IPOC Station P**	**0.89**	**161**	*e*P		**Pg**	**03 53 14.7**	**+0.1**
PB16				*e*S		**Sg**	**03 53 26.9**	**+0.7**
PB16	**IPOC Station P**	**0.89**	**161**			**Pg**	**03 53 14.6**	**+0.1**
PB16				Sg		**Sg**	**03 53 25.9**	**-0.2**
AP01	**Chacalluta**	**1.01**	**210**	*e*P		**Pb**	**03 53 15.9**	**-1.6**
AP01				*e*S		**Sb**	**03 53 30.5**	**-0.7**
AP01				IAML			03 53 31.7	
	comp=E,972nm,0.3s							
AP01	**Chacalluta**	**1.01**	**210**	Pg		**Pb**	**03 53 17.1**	**-0.4**
PB12	**IPOC Station P**	**1.22**	**203**	*i* P		**Pn**	**03 53 19.9**	**-1.5**
PB12				*e*S		**Sb**	**03 53 36.5**	**-0.8**
PB12				IAML			03 53 37.8	
	comp=N,242nm,0.3s							
PB12	**IPOC Station P**	**1.22**	**203**	Pn		**Pn**	**03 53 20.1**	**-1.3**
LPAZ	**La Paz**	**2.01**	**54**	Pg		**Pg**	**03 53 36.3**	**+0.4**
PSGCX	**Pisagua**	**2.12**	**188**	*i* P		**Pn**	**03 53 34.9**	**+1.1**
PSGCX	**Pisagua**	**2.12**	**188**	Pn		**Pn**	**03 53 34.5**	**+0.7**
GO01	**Chusmiza**	**2.25**	**165**	*e*P		**Pb**	**03 53 39.5**	**+0.6**
GO01	**Chusmiza**	**2.25**	**165**	Pn		**Pn**	**03 53 36.2**	**+0.4**
PB11	**IPOC Station P**	**2.26**	**176**	*e*P		**Pb**	**03 53 37.5**	**-1.5**
PB11				*e*S		**Sb**	**03 54 08.7**	**+1.3**
PB11				IAML			03 54 11.2	
	comp=E,171nm,0.4s							
PB11	**IPOC Station P**	**2.26**	**176**			**Pn**	**03 53 36.8**	**+1.0**
PB08	**IPOC Station P**	**2.71**	**167**	*e*P		**Pb**	**03 53 46.5**	**-0.3**
PB08				IAML			03 54 27.3	
	comp=E,57nm,0.2s							
PB08	**IPOC Station P**	**2.71**	**167**	Pn		**Pn**	**03 53 43.1**	**+1.0**
PB02	**IPOC Station P**	**3.81**	**181**			**Pn**	**03 53 57.6**	**+0.5**
PB07	**IPOC Station P**	**4.22**	**181**	Pn		**Pn**	**03 54 04.2**	**+1.5**
PB03	**IPOC Station P**	**4.32**	**173**	Pn		**Pn**	**03 54 05.5**	**+1.4**
PB03	**IPOC Station P**	**4.54**	**179**			**Pn**	**03 54 07.6**	**+0.6**
PB06	**IPOC Station P**	**5.19**	**178**	Pn		**Pn**	**03 54 16.0**	**-0.1**
PB05	**IPOC Station P**	**5.35**	**184**	Pn		**Pn**	**03 54 18.9**	**+0.6**
PB14	**IPOC Station P**	**7.12**	**184**	Pn		**Pn**	**03 54 44.3**	**+1.6**
VA03	**San Esteban**	**15.22**	**182**			**P**	**03 56 37.4**	**-1.1**
VA03				IAmb		IAmb	03 56 50.0	
	comp=Z,11nm,0.9s							
PEL	**Peldehue**	**15.61**	**183**	Pn		**Pn**	**03 56 39.1**	**+0.7**
MT09	**Talagante**	**16.25**	**183**	Pn		**Pn**	**03 56 46.9**	**0.0**
MT09				IAmb		IAmb	03 57 15.7	
	comp=Z,31nm,1.4s							
BO02	**Sierra Bellavi**	**17.25**	**183**			**P**	**03 57 00.5**	**-0.5**
BO02				IAmb		IAmb	03 57 16.5	
	comp=Z,10nm,1.1s							
TRQA	**Tornquist**	**21.61**	**163**	P		**P**	**03 57 47.5**	**-1.0**
TRQA				IAmb		IAmb	03 57 56.5	
	comp=Z,10nm,1.3s							
BOAV	**Boa Vista**	**21.78**	**26**	P		**P**	**03 57 52.9**	**+2.4**

*TEH **29** 04:19:23.4, 36°.13N×45°.66E, h7km±93km, ML2.9, Presumed earthquake*
*AFAD **29** 04:19:27.5, 36°.13N×45°.44E, h6km±3km, ML2.7*
ISC 29 04:19:26.4±1.2, 36°.15N±0°.05×45°.66E±0°.06, h10km, n14, σ1§89/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MAHB	**Mahabad**	**0.62**	**3**	Pg		**Pg**	**04 19 36.9**	**-1.4**
MAHB				Sg		**Sg**	**04 19 47.0**	**+0.5**
SNJK	**Sanadaj _Korde**	**1.36**	**122**	Pg		**Pn**	**04 19 51.0**	**-0.7**
IAZR	**Azarshahr**	**1.55**	**9**	Pg		**Pn**	**04 19 54.0**	**-0.2**
IDHR	**Dehrash**	**1.56**	**158**	Pg		Pn	04 19 52.6	-1.8
IHSH	**Hashtrud**	**1.73**	**48**	Pg		**Pn**	**04 19 57.4**	**+0.6**
YOVA	**Hakkari_Yksek**	**1.81**	**323**	P		**Pn**	**04 19 57.3**	**-0.5**
YOVA				S		**Sn**	**04 20 22.6**	**+1.7**
IGHG	**Ghaleghazi**	**1.96**	**158**	Pn		**Pn**	**04 19 60.0**	**0.0**
CUKT	**Cukurca**	**1.98**	**304**	P		**Pn**	**04 19 59.1**	**-1.0**
CUKT				S		**Sn**	**04 20 24.6**	**-0.5**
CUKT				IAML			04 20 39.0	
	comp=N,90nm,1.0s							
SNQR	**Sonqor, Kerman**	**2.06**	**128**	Pn		**Pn**	**04 20 01.9**	**+0.6**
HAKT	**HAKKARI**	**2.11**	**312**	P		**Pn**	**04 20 02.8**	**+0.9**
HAKT				S		**Sn**	**04 20 26.7**	**-1.6**
HAKT				IAML			04 20 32.0	
	comp=E,89nm,0.4s							
HAKT				IAML			04 20 34.0	
	comp=N,56nm,0.5s							
ISHB	**Shabestar**	**2.13**	**359**	Pn		**Pn**	**04 20 03.4**	**+1.2**
ILBA	**Ilam Banvizeh**	**2.56**	**170**	Pn		**Pn**	**04 20 08.4**	**+0.4**
PERV	**Siirt/Pervari-**	**3.07**	**307**	P		**Pn**	**04 20 14.8**	**-0.3**
PERV				S		**Sn**	**04 20 49.9**	**-2.1**
PERV				IAML			04 21 17.0	
	comp=E,17nm,0.7s							
SRTM	**Siirt_Merkez**	**3.51**	**303**	P		Pn	04 20 27.8	+6.7
SRTM				S		**Sn**	**04 21 08.8**	**+6.0**

*SJA **29** 04:20:33.9±0.5, 33°.70S×71°.20W, h52km±3km, ML3.3, MW3.5*
*GUC **29** 04:20:34.4±0.8, 33°.69S×71°.14W, h47km±3km, ML3.5*
ISC 29 04:20:36.2±1.2, 33°.68S±0°.03×71°.21W±0°.04, h41km±7km, n45, σ1§14/69, 2C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MT01	**Popeta**	**0.18**	**190**	*e*P		**Pn**	**04 20 42.7**	**-0.8**
MT01				IAML			04 20 49.9	
	comp=Z,8μm,0.1s							
MT01	**Popeta**	**0.18**	**190**	*i* P		**Pn**	**04 20 42.9**	**-0.6**
MT01				*e*S		**Sn**	**04 20 49.2**	**+0.6**
MT01				IAML			04 20 49.8	
	comp=N,7μm,0.2s							
MT09	**Talagante**	**0.21**	**117**	*i* P		**Pn**	**04 20 43.2**	**-0.6**
MT09				*e*S		**Sn**	**04 20 49.9**	**+0.8**
MT02	**Curacav**	**0.43**	**8**	*e*P		**Pn**	**04 20 45.5**	**-0.6**
MT02				*e*S		**Sn**	**04 20 53.7**	**+0.8**
MT02				IAML			04 20 55.8	
	comp=Z,688nm,0.4s							
MT02	**Curacav**	**0.43**	**8**	*e*P		**Pn**	**04 20 45.4**	**-0.6**
MT02				*e*S		**Sn**	**04 20 53.1**	**+0.2**
MT05	**Renca**	**0.49**	**54**	*e*P		**Pn**	**04 20 46.1**	**-0.8**
MT05				*e*S		**Sn**	**04 20 55.0**	**+0.6**
MT05				IAML			04 20 55.7	
	comp=Z,2μm,0.2s							
MT05	**Renca**	**0.49**	**54**	*i* P		**Pn**	**04 20 46.1**	**-0.8**
MT05				*e*S		**Sn**	**04 20 54.5**	**0.0**
MT05				IAML			04 20 55.0	
	comp=E,5μm,0.3s							
MT12	**Pirque**	**0.56**	**95**	⇓*i* P		**Pn**	**04 20 46.7**	**-1.0**
MT12				*e*S		**Sn**	**04 20 55.6**	**-0.3**
MT12				IAML			04 20 56.1	
	comp=E,4μm,0.1s							
BO04	**La Punta**	**0.59**	**121**	*i* P		**Pn**	**04 20 47.1**	**-1.1**
MT15	**Las Vizcachas**	**0.59**	**82**	*e*P		**Pn**	**04 20 47.0**	**-1.3**
MT15				*e*S		**Sn**	**04 20 56.2**	**-0.7**
MT15				IAML			04 20 57.2	
	comp=E,10μm,0.2s							
MT03	**Universidad Ad**	**0.61**	**72**	*e*P		**Pn**	**04 20 47.5**	**-1.1**
MT03				*e*S		**Sn**	**04 20 57.6**	**+0.2**
MT03				IAML			04 20 58.0	
	comp=Z,3μm,0.1s							
MT03	**Universidad Ad**	**0.61**	**72**	⇓*i* P		**Pn**	**04 20 47.5**	**-1.1**
MT03				*e*S		**Sn**	**04 20 56.8**	**-0.6**
MT03				IAML			04 20 57.8	
	comp=E,8μm,0.2s							
MT16	**CCHEN**	**0.63**	**66**	⇓*i* P		**Pn**	**04 20 47.8**	**-1.0**
MT16				*e*S		**Sn**	**04 20 57.2**	**-0.5**
MT16				IAML			04 20 58.3	
	comp=N,1μm,0.3s							
MT14	**Cerro Cal¡n**	**0.63**	**63**	⇓*i* P		**Pn**	**04 20 47.9**	**-0.9**
MT14				*e*S		**Sn**	**04 20 57.5**	**-0.3**
MT14				IAML			04 20 58.6	
	comp=E,4μm,0.3s							
PEL	**Peldehue**	**0.69**	**39**	*e*P		**Pn**	**04 20 48.5**	**-1.1**
PEL				IAML			04 21 03.5	
	comp=Z,812nm,0.2s							
PEL	**Peldehue**	**0.69**	**39**	*e*P		**Pn**	**04 20 48.2**	**-1.4**
PEL				IAML			04 21 04.5	
	comp=N,2μm,0.2s							
MT10	**Hacienda Santa**	**0.70**	**54**	⇓*i* P		**Pn**	**04 20 48.7**	**-1.0**
MT10				*e*S		**Sn**	**04 20 59.2**	**-0.2**
MT10				IAML			04 21 00.4	
	comp=E,10μm,0.3s							
BO01	**Tunca**	**0.71**	**172**	⇑*i* P		**Pn**	**04 20 48.6**	**-1.3**
BO01				IAML			04 21 03.5	
	comp=E,2μm,0.3s							
ROCH	**El Roble**	**0.73**	**13**	*e*P		**Pn**	**04 20 49.0**	**-1.3**
ROCH				IAML			04 21 01.6	
	comp=N,3μm,0.3s							
VA01	**Torpederas**	**0.75**	**331**	*e*P		**Pn**	**04 20 49.6**	**-0.7**
VA01				IAML			04 21 02.7	
	comp=Z,685nm,0.4s							
VA01	**Torpederas**	**0.75**	**331**	*e*P		**Pn**	**04 20 49.6**	**-0.7**
VA01				IAML			04 21 03.0	
	comp=E,10μm,0.1s							
MT13	**San Alfonso**	**0.77**	**95**	*e*P		**Pn**	**04 20 49.6**	**-1.2**
MT13				*e*P		**Pn**	**04 20 49.6**	**-1.2**
MT13				*e*S		**Sn**	**04 21 01.2**	**-0.1**
MT13				IAML			04 21 01.6	
	comp=Z,2μm,0.1s							
MT13	**San Alfonso**	**0.77**	**95**	⇓*i* P		**Pn**	**04 20 49.6**	**-1.2**
MT13				*e*S		**Sn**	**04 21 00.8**	**-0.5**
MT13				IAML			04 21 01.5	
	comp=N,4μm,0.3s							
LMEL	**Las Melosas**	**0.86**	**101**	⇓*i* P		**Pn**	**04 20 50.8**	**-1.1**
LMEL				*e*S		**Sn**	**04 21 02.7**	**-0.7**
LMEL				IAML			04 21 03.5	
	comp=N,4μm,0.2s							
MT04	**Ro Olivares**	**0.94**	**73**	*e*P		**Pn**	**04 20 51.9**	**-1.2**
MT04				*e*S		**Sn**	**04 21 05.7**	**+0.2**
MT04				IAML			04 21 07.4	
	comp=Z,426nm,0.1s							
MT04	**Ro Olivares**	**0.94**	**73**	*i* P		**Pn**	**04 20 51.8**	**-1.3**
MT04				*e*S		**Sn**	**04 21 04.6**	**-0.9**
MT04				IAML			04 21 06.1	
	comp=E,927nm,0.2s							
BO03	**Pichilemu**	**1.02**	**217**	⇑*i* P		**Pn**	**04 20 52.4**	**-1.6**
MT08	**Bocatoma Ro**	**1.02**	**77**	*e*P		**Pn**	**04 20 53.3**	**-1.0**
MT08				*e*S		**Sn**	**04 21 08.1**	**+0.4**
MT08	**Bocatoma Ro**	**1.02**	**77**	⇓*i* P		**Pn**	**04 20 53.2**	**-1.0**
VA03	**San Esteban**	**1.07**	**31**	*e*P		**Pn**	**04 20 53.6**	**-1.2**
VA03				*e*S		**Sn**	**04 21 07.8**	**-0.7**
VA03				IAML			04 21 11.7	
	comp=Z,762nm,0.1s							
VA03	**San Esteban**	**1.07**	**31**	*e*P		**Pn**	**04 20 53.5**	**-1.4**
VA03				IAML			04 21 11.3	
	comp=E,1μm,0.2s							
BO02	**Sierra Bellavi**	**1.16**	**162**	*e*P		**Pn**	**04 20 54.8**	**-1.3**
BO02				*e*S		**Sn**	**04 21 10.4**	**-0.3**
BO02				IAML			04 21 14.8	
	comp=Z,2μm,0.1s							
BO02	**Sierra Bellavi**	**1.16**	**162**	*e*P		**Pn**	**04 20 54.8**	**-1.3**
GO05	**Hualane**	**1.45**	**204**	*e*P		**Pn**	**04 20 59.1**	**-0.8**
GO05				*e*S		**Sn**	**04 21 18.0**	**+0.2**
GO05				IAML			04 21 24.0	
	comp=Z,339nm,0.2s							
GO05	**Hualane**	**1.45**	**204**	*e*P		**Pn**	**04 20 58.7**	**-1.3**
GO05				IAML			04 21 23.3	
	comp=N,664nm,0.1s							
AAGR	**Agrelo**	**2.08**	**74**	*e*P		**Pn**	**04 21 09.8**	**+1.1**
AAGR				IAML			04 21 44.0	
	comp=Z,42nm,0.4s							
ML02	**Panimavida**	**2.08**	**185**	*e*P		**Pn**	**04 21 07.8**	**-0.8**
ML02				*e*S		**Sn**	**04 21 33.4**	**+0.1**
ML02				IAML			04 21 37.4	
	comp=Z,140nm,0.2s							
ARCO	**CERRO ARCO**	**2.09**	**67**	*e*P		**Pn**	**04 21 10.3**	**+1.5**
ARCO				IAML			04 21 47.0	
	comp=Z,46nm,0.5s							
AVIZ	**Vizcacheras**	**2.26**	**85**	*e*P		Pn	04 21 07.8	-3.4
RTLS	**Leoncito**	**2.48**	**41**	*e*P		**Pn**	**04 21 16.3**	**+2.0**
RTLS				IAML			04 21 54.2	
	comp=Z,204nm,0.5s							
CO02	**Combarbal**	**2.48**	**4**	*e*P		**Pn**	**04 21 13.3**	**-0.9**
CO02				*e*S		Sn	04 21 29.0	-14
CO02				IAML			04 21 50.6	
	comp=Z,189nm,0.2s							
EDS3	**Malargue**	**2.56**	**145**	*e*P		Pn	04 21 25.1	+10
EDS3				*e*S		**Sn**	**04 21 50.1**	**+4.8**
CO03	**El Pedregal**	**2.87**	**9**	*e*P		**Pn**	**04 21 19.4**	**-0.2**
CO03				*e*S		**Sn**	**04 21 54.2**	**+1.4**
CO03				IAML			04 22 02.5	
	comp=Z,103nm,0.3s							
BI02	**San Fabin de**	**2.97**	**181**	*e*P		**Pn**	**04 21 21.8**	**+0.9**
BI02				IAML			04 22 08.5	
	comp=Z,53nm,0.3s							
ZON	**Zonda**	**3.02**	**46**	*e*P		**Pn**	**04 21 22.7**	**+1.2**
ZON				*e*S		Sn	04 22 07.1	+11

*BJI **29** 04:23:35.5, 14°.10N×144°.94E, h201km, mB4.6/11, mb4.7/36*
*NEIC **29** 04:23:36.8±1.5, 14°.07N±0°.07×144°.65E±0°.09, h192km±4km, mb4.6/212, Error ellipse: s-maj=13.0km s-min=10.2km az=92.0*
*IDC **29** 04:23:36.2±0.2, 14°.02N×144°.75E, h191km±1km, mb4.1/23, mbtmp4.6/26, MS3.7/29, Error ellipse: s-maj=12.5km s-min=6.6km az=77.0*
*DJA **29** 04:23:37.6±0.5, 14°N±6°×14°5E±°, h180km±7km, M4.5/9, mb4.9/9, mB5.2/4, MLv4.3/1, Mw(mB)4.7/4, MwMwp4.8/1, Mwp5.2/1*
*GFZ **29** 04:23:37.2±0.4, 14°N±3°×14°5E±°, h194km±4km, M4.6/24, mb4.8/24*
*GCMT **29** 04:23:37.8±0.2, 13°.83N±0°.01×144°.71E±0°.01, h197km±1km, MW5.1/118, Moment Tensor Solution. s61,c77; s118,c191; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.04±.11; $M_{\theta\theta}$2.24±.14; $M_{\phi\phi}$0.79±.14; $M_{r\theta}$2.39±.10; $M_{\theta\phi}$-4.57±.11; $M_{\phi r}$1.31±.10; Best double couple: M_o5.95800×10^{16} NP1:ϕ_s166.00000°, δ55.00000°, λ-31.00000°. NP2:ϕ_s276.00000°, δ65.00000°, λ-140.00000°. Principal axes: T 6.2530, Plg6.0000°, Azm39.0000°; N -0.5950, Plg44.0000°, Azm302.0000°; P -5.6630, Plg45.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 04:23:36.8±0.3, 14°.04N±0°.04×144°.70E±0°.06, h197km±2km, h198km: pP-P, n330, σ0§98/307, mb4.6/132, 6C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**0.47**	**160**	P		**Pn**	**04 24 03.3**	**-0.2**
	3μm,0.3s,baz=0.0,slow=3.0,SNR=205							
GUMO				S		**Sn**	**04 24 23.3**	**-0.9**
	8μm,0.3s,baz=74,slow=20,SNR=19							
GUMO	**Guam**	**0.47**	**160**	P		**Pn**	**04 24 03.4**	**-0.2**
GUMO	**Guam**	**0.47**	**160**	S		**Sn**	**04 24 23.1**	**-1.1**
GUMO	**Guam**	**0.47**	**160**			**Pn**	**04 24 03.3**	**-0.2**
GUMO				Sn		**Sn**	**04 24 22.8**	**-1.4**
GUMO	**Guam**	**0.47**	**160**	P		**Pn**	**04 24 03.4**	**-0.2**
DPSS	**Saipan**	**1.60**	**41**			**Pn**	**04 24 11.8**	**+0.6**
JCJ	**Chichijima**	**13.21**	**350**	P		**Pn**	**04 26 37.2**	**+0.2**
	151nm,0.6s,baz=231,slow=6.6,SNR=9.0							
JCJ	**Chichijima**	**13.21**	**350**	P		**P**	**04 26 38.5**	**-1.5**
JCJ	**Chichijima**	**13.21**	**350**			**Pn**	**04 26 37.5**	**+0.5**
JCJ	**Chichijima**	**13.21**	**350**	P		**P**	**04 26 38.9**	**-1.1**
PATS	**Pohnpei**	**15.17**	**117**	P		**P**	**04 27 03.4**	**+1.5**
PATS	**Pohnpei**	**15.17**	**117**	S		**Sn**	**04 29 52.3**	**+0.9**
PATS	**Pohnpei**	**15.17**	**117**			**P**	**04 27 03.2**	**+1.3**
PATS	**Pohnpei**	**15.17**	**117**	P		**P**	**04 27 05.7**	**+3.8**
MANU	**Manus Island**	**16.19**	**170**	P		**Pn**	**04 27 14.0**	**+0.3**
JAY	**Jayapura**	**16.91**	**194**	P		**Pn**	**04 27 21.9**	**-0.4**
	27nm,0.9s,baz=351,slow=6.5							
JAY				S		**S**	**04 30 27.9**	**+0.3**
	3.7nm,0.2s,baz=319,slow=22,SNR=1.5							
JAY	**Jayapura**	**16.91**	**194**	P		**Pn**	**04 27 23.0**	**+0.6**
BAKI	**Biak**	**17.36**	**210**	P		**Pn**	**04 27 29.1**	**+1.5**
	2μm121nm,1.2s							
JHJ	**Hachijo jima 2**	**19.52**	**348**	S		**S**	**04 31 16.9**	**-2.0**
	72nm,0.6s,baz=136,slow=23,SNR=8.4							
RABL	**Rabaul**	**19.56**	**157**	P		**P**	**04 27 51.1**	**+1.2**
SWI	**Sorong**	**19.91**	**223**	P		**P**	**04 27 54.8**	**+1.2**
	53nm,0.9s							
SIJI	**Sorong**	**19.91**	**223**	P		**P**	**04 27 54.7**	**+1.1**
	19nm,0.5s,baz=43,slow=10,SNR=11							
SIJI				S		**S**	**04 31 25.5**	**-1.4**
	2.6nm,0.3s,baz=180,slow=23,SNR=1.3							
SIJI	**Sorong**	**19.91**	**223**	P		**P**	**04 27 55.1**	**+1.5**
	1μm41nm,1.0s							
JOW	**Kunigami**	**19.95**	**312**	P		**P**	**04 27 53.8**	**-0.1**
GAMI	**Kalela, Maluku**	**20.65**	**236**	P		Pn	04 28 10.0	+3.0
FAKI	**Fak Fak**	**20.89**	**217**			**P**	**04 28 04.1**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**21.56**	**75**	T		T	04 51 38.4	
	baz=259,slow=75,SNR=19							
H11S1	**WAKE ISLAND Hy**	**21.58**	**75**	T		T	04 51 34.6	
	baz=259,slow=75,SNR=20							
H11S2	**WAKE ISLAND Hy**	**21.58**	**75**	T		T	04 51 34.6	
	baz=259,slow=75,SNR=16							
JSU	**Suzuyama**	**21.75**	**325**	P		**P**	**04 28 13.6**	**+0.8**
JSU	**Suzuyama**	**21.75**	**325**			**P**	**04 28 13.1**	**+0.2**
JSU	**Suzuyama**	**21.75**	**325**	P		**P**	**04 28 13.7**	**+0.8**
JMN	**Monobe**	**21.93**	**335**	P		**P**	**04 28 15.3**	**+0.7**
JMN	**Monobe**	**21.93**	**335**			**P**	**04 28 15.2**	**+0.7**
JMN	**Monobe**	**21.93**	**335**	P		**P**	**04 28 14.8**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**21.96**	**72**	T		T	04 52 07.9	
	baz=256,slow=75,SNR=17							
H11N2	**WAKE ISLAND Hy**	**21.97**	**72**	T		T	04 52 08.8	
	baz=256,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hy**	**21.98**	**72**	T		T	04 51 50.3	
	baz=256,slow=75,SNR=18							
INU	**Inuyama**	**22.32**	**343**	P		**P**	**04 28 19.8**	**+1.6**
INU	**Inuyama**	**22.32**	**343**			**P**	**04 28 18.6**	**+0.4**
INU	**Inuyama**	**22.32**	**343**	P		**P**	**04 28 19.4**	**+1.1**
JGF	**Kuroka**	**22.47**	**344**	P		**P**	**04 28 21.1**	**+1.5**
JGF	**Kuroka**	**22.47**	**344**			**P**	**04 28 19.8**	**+0.2**
JGF	**Kuroka**	**22.47**	**344**	P		**P**	**04 28 20.3**	**+0.7**
JNU	**Nakatsue**	**22.79**	**329**	LR		LR	04 35 43.3	
	comp=Z,101nm,21.8s,baz

WRAB Tennant Creek 35.26 197 P **P** 04 30 12.8 0.0
WRAB Tennant Creek 35.26 197 P **P** 04 30 12.6 -0.2
WRAB IAmb IAmb 04 30 13.8
comp=Z,13nm,0.6s
WRA Warramunga Arr 35.27 197 P **P** 04 30 12.1 -0.9
comp=Z,7.8nm,0.6s,baz=19,slow=9.6,SNR=114
WRA pP **pP** 04 30 51.6 -1.8
comp=Z,12nm,0.8s,baz=20,slow=9.4,SNR=5.9
WRA S **S** 04 35 28.2 -3.9
comp=Z,2.5nm,1.0s,baz=19,slow=16,SNR=5.8
WRA ScP **ScP** 04 36 05.3 -1.0
comp=Z,3.0nm,0.8s,baz=14,slow=3.9,SNR=8.0
comp=Z,7.8nm,0.6s
WRA Warramunga Arr 35.27 197 **P** 04 30 11.5 -1.4
HNS HongShan 35.40 317 ⇑P **P** 04 30 15.0 +1.2
HNS pP **pP** 04 30 55.0 +1.2
HNS S **S** 04 35 33.8 +0.1
HNS pmax pmax
comp=Z,30nm,0.7s
HNS L L
comp=Z,170nm,15.9s
HNS L L
comp=Z,200nm,13.3s
LYN LuoYang 35.54 311 P **P** 04 30 16.5 +1.3
LYN pP pP 04 30 56.3 +1.1
LYN PP **PnPn** 04 31 44.3 +2.6
LYN S **S** 04 35 36.3 +0.2
LYN pmax pmax
comp=Z,25nm,0.7s
LYN pmax pmax
comp=Z,210nm,6.3s
BJI2 Beijing 35.98 321 P **P** 04 30 19.8 +1.0
BJI2 pmax pmax
comp=Z,5.0nm,0.7s
BJT Baijiatuau 35.99 321 P **P** 04 30 19.7 +0.9
BJT Baijiatuau 35.99 321 **P** 04 30 18.2 -0.6
BJT IAmb IAmb 04 31 00.7
comp=Z,20nm,1.2s
FITZ Fitzroy Crossi 37.05 211 P **P** 04 30 28.2 +0.2
FITZ Fitzroy Crossi 37.05 211 **P** 04 30 27.5 -0.6
HEH HeiHe 38.77 342 *eP* **P** 04 30 42.3 +0.2
HEH pP **pP** 04 31 23.3 +0.7
HEH ScP **ScP** 04 36 17.3 -1.6
HEH S **S** 04 36 21.5 -2.9
HEH sS **sS** 04 37 39.3 +2.4
HEH pmax pmax
comp=Z,44nm,0.9s
AS01 Alice Springs 38.92 196 P **P** 04 30 44.4 +0.8
AS31 Alice Springs 38.93 196 **P** 04 30 43.5 -0.2
ASAR Alice Springs 38.93 196 P **P** 04 30 42.9 -0.8
comp=Z,3.7nm,0.7s,baz=18,slow=11,SNR=43
ASAR pP **pP** 04 31 24.6 -0.2
comp=Z,2.9nm,0.8s,baz=12,slow=9.6,SNR=3.9
ASAR ScP **ScP** 04 36 18.5 -1.5
comp=Z,4.2nm,1.1s,baz=18,slow=3.2,SNR=6.3
ASAR S **S** 04 36 25.0 -2.4
comp=Z,4.7nm,1.0s,baz=24,slow=23,SNR=11
comp=Z,3.7nm,0.7s
ASAR Alice Springs 38.93 196 **P** 04 30 43.2 -0.6
ASAR **ScP** 04 36 17.8 -2.1
HHC Hu-ho-hao-te 39.33 319 *eP* **P** 04 30 49.8 +2.8
HHC pmax pmax
comp=Z,11nm,0.6s
KOUNC Koumac, New Ca 39.40 150 P **P** 04 30 48.9 +1.3
KOUNC Koumac, New Ca 39.40 150 **P** 04 30 48.1 +0.5
EIDS Eidsvold 39.66 171 P **P** 04 30 49.8 +0.1
EIDS Eidsvold 39.66 171 **P** 04 30 49.7 0.0
EIDS IAmb IAmb 04 30 50.3
comp=Z,12nm,0.8s
EIDS Eidsvold 39.66 171 P **P** 04 30 50.0 +0.3
PETK Petropavlovsk- 40.32 12 PcP **PcP** 04 32 53.8 -0.5
comp=Z,5.4nm,0.7s,baz=183,slow=2.7,SNR=6.0
PETK Petropavlovsk- 40.32 12 P **P** 04 30 54.4 -0.5
BTO2 Baotou 40.36 318 *eP* **P** 04 30 56.0 +0.5
BTO2 pP **pP** 04 31 37.0 +0.7
BTO2 sP **sP** 04 31 58.5 +0.3
BTO2 S **S** 04 36 50.5 +1.9
BTO2 sS **sS** 04 38 02.5 +1.0
BTO2 pmax pmax
comp=Z,26nm,1.0s
BTO2 pmax pmax
comp=Z,140nm,6.7s
BTO2 L L
comp=Z,380nm,15.2s
BTO2 L L
comp=Z,340nm,17.1s
BTO2 L L
comp=Z,280nm,16.5s
QLP Quilpie 40.38 181 P **P** 04 30 55.9 +0.3
QLP Quilpie 40.38 181 P **P** 04 30 54.9 -0.6
HIA Hailar 40.67 335 P **P** 04 30 59.1 +1.3
HILR Hailar Array B 40.89 335 P **P** 04 31 00.5 +0.9
comp=Z,4.7nm,0.7s,baz=134,slow=11,SNR=9.3
HILR pP **pP** 04 31 40.3 -0.1
comp=Z,5.6nm,0.9s,baz=151,slow=6.4,SNR=2.1
comp=Z,4.7nm,0.7s
NOUC Port Laguerre 41.70 149 P **P** 04 31 07.8 +1.4
INKA Innaminka 41.70 185 **P** 04 31 05.6 -0.7
INKA IAmb IAmb 04 31 06.8
comp=Z,15nm,1.1s
DZM Mont Dzumac 41.74 149 LR LR 04 48 03.6
comp=Z,72nm,18.1s,baz=288,slow=35
TW1H Toowoomba 1 Ha 41.93 170 P **P** 04 31 08.8 +0.5
PZH PanZhiHua 41.97 294 P **P** 04 31 10.0 +1.1
LZH Lanzhou 42.62 309 *eP* **P** 04 31 15.3 +1.3
LZH pP pwP 04 31 57.5 -2.1
LZH sP sP 04 32 16.0 -1.1
LZH pmax pmax
comp=Z,18nm,1.3s
LZH L L
comp=Z,200nm,18.9s
LZH L L
comp=Z,130nm,18.5s
LZH L L
comp=Z,200nm,19.9s
LZDM Lanzhou Array 42.68 308 P **P** 04 31 15.2 +0.5
comp=Z,2.3nm,0.4s,baz=124,slow=7.2,SNR=1.8
comp=Z,2.3nm,0.4s
AULRC Lightning Ridg 43.33 176 P **P** 04 31 19.9 +0.5
CMAR Chiang Mai Arr 44.06 282 P **P** 04 31 26.2 +0.6
comp=Z,1.3nm,0.3s,baz=86,slow=5.8,SNR=9.7
CMAR pP **pP** 04 32 07.6 +0.8
comp=Z,1.7nm,0.4s,baz=81,slow=6.2,SNR=2.7
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 44.06 282 P **P** 04 31 25.3 -0.3
ARMA Armidale 44.70 171 P **P** 04 31 31.1 +0.7
ARMA Armidale 44.70 171 IAmb IAmb 04 31 32.2
comp=Z,35nm,1.1s
ARMA Armidale 44.70 171 P **P** 04 31 31.0 +0.6
CMSA Cobar Meteorol 45.32 179 P **P** 04 31 35.9 +0.7
CMSA Cobar Meteorol 45.32 179 P **P** 04 31 35.4 +0.2
MSVF Nonsavu 45.60 133 **P** 04 31 38.5 +0.8
STKA Stephens Creek 45.75 184 P **P** 04 31 37.1 -1.4
comp=Z,10nm,0.6s,baz=350,slow=8.4,SNR=20
comp=Z,10nm,0.6s
STKA Stephens Creek 45.75 184 P **P** 04 31 38.5 0.0
STKA Stephens Creek 45.75 184 P **P** 04 31 38.2 -0.4
ULN Ulaanbaatar 45.92 325 P **P** 04 31 39.5 -0.5
ULN Ulaanbaatar 45.92 325 P **P** 04 31 41.1 +1.1
AUDCS Dubbo College 46.16 175 P **P** 04 31 42.4 +0.7
SONM Songino Array 46.27 325 P **P** 04 31 43.9 +1.2
comp=Z,3.5nm,0.7s,baz=142,slow=8.4,SNR=13
SONM pP **pP** 04 32 25.0 +0.6
comp=Z,3.4nm,0.9s,baz=137,slow=8.7,SNR=3.8
SONM LR LR 04 52 03.6
comp=Z,125nm,19.0s,baz=114,slow=37
comp=Z,3.5nm,0.7s
SONM Songino Array 46.27 325 **P** 04 31 42.7 0.0
SONM **pP** 04 32 23.1 -1.3
GTA2 Gaotai 46.82 311 P **P** 04 31 48.3 +1.2
GTA2 pP pP 04 32 30.5 +1.4
GTA2 S **S** 04 38 22.8 +0.3
GTA2 pmax pmax
comp=Z,7.0nm,0.6s
GTA2 L L
comp=Z,120nm,15.9s
GTA2 L L
comp=Z,100nm,14.9s
GTA2 L L
comp=Z,150nm,16.5s
BBOO Buckleboo 47.31 190 P **P** 04 31 51.3 +0.7
BBOO Buckleboo 47.31 190 **P** 04 31 50.6 0.0
BBOO IAmb IAmb 04 31 50.7
comp=Z,22nm,0.8s
BBOO Buckleboo 47.31 190 P **P** 04 31 48.5 -2.1

FORT Forrest 47.34 200 **P** 04 31 50.5 -0.4
FORT IAmb IAmb 04 31 51.6
comp=Z,27nm,0.9s
AUMBR Murray Bridge 49.17 186 P **P** 04 32 05.6 +0.8
TLY Talaya 49.89 328 LR LR 04 53 08.5
comp=Z,95nm,20.3s,baz=117,slow=36
TLY Talaya 49.89 328 **P** 04 32 08.8 -1.3
TLY pP **pP** 04 32 51.3 -1.2
TLY Talaya 49.89 328 P **P** 04 32 11.2 +1.0
SHL Shillong 50.71 292 P **P** 04 32 15.6 -1.4
SHL IAmb IAmb 04 32 17.1
comp=Z,8.4nm,0.5s
TOO Toolangi 51.34 179 IAmb IAmb 04 32 23.6
comp=Z,31nm,1.1s
AUKSC Keysborough Se 51.73 180 P **P** 04 32 24.9 +1.0
GLAD Gladstone 54.83 177 P **P** 04 32 47.4 +1.0
EVN Everest 55.33 294 P **P** 04 32 49.2 -2.0
EVN IAmb IAmb 04 32 52.2
comp=Z,5.2nm,0.7s
TAU Tasmania Unive 56.71 178 P **P** 04 33 00.2 +0.4
WMQ Urumqi 56.71 313 *eP* **P** 04 33 02.3 +2.2
WMQ pP pP 04 33 44.3 +0.8
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ L L
comp=Z,67nm,21.7s
HIZ Hauiti 59.41 153 **P** 04 33 19.0 +0.4
URZ Urewera 60.24 151 P **P** 04 33 24.9 +0.6
BKZ Black Stump Fm 60.68 152 P **P** 04 33 28.7 +1.4
BKZ Black Stump Fm 60.68 152 P **P** 04 33 27.6 +0.3
MKAR Makanchi Array 61.06 316 P **P** 04 33 30.8 +0.9
comp=Z,3.2nm,0.7s,baz=93,slow=8.7,SNR=20
MKAR pP **pP** 04 34 14.6 +0.8
comp=Z,5.5nm,0.9s,baz=94,slow=9.8,SNR=6.0
MKAR LR LR 05 02 07.3
comp=Z,96nm,18.5s,baz=104,slow=38
MKAR PKPPKP **P'P'df** **05 02 44.7 -0.7**
comp=Z,1.1nm,1.0s,baz=297,slow=6.3,SNR=4.7
comp=Z,3.2nm,0.7s
MKAR Makanchi Array 61.06 316 **P** 04 33 29.9 +0.1
MKAR pP **pP** 04 34 13.0 -0.8
ZALV Zalesovo Beam 61.17 324 P **P** 04 33 30.6 +0.3
comp=Z,2.1nm,0.5s,baz=108,slow=7.5,SNR=6.2
ZALV pP **pP** 04 34 14.3 -0.2
comp=Z,2.3nm,0.7s,baz=94,slow=6.7,SNR=3.3
ZALV LR LR 04 59 47.9
comp=Z,63nm,18.5s,baz=132,slow=36
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 61.17 324 P **P** 04 33 30.0 -0.4
ZALV **PcP** 04 34 11.6 +0.4
MAKZ Makanchi 61.27 316 P **P** 04 33 31.2 -0.1
MAKZ pP **pP** 04 34 14.3 -0.9
MAKZ IAmb IAmb 04 34 16.9
comp=Z,15nm,1.0s
TCW Tony Channel 61.40 155 P **P** 04 33 32.4 +0.4
TUWZ Tuamarina 61.45 155 P **P** 04 33 32.4 +0.1
BFZ Birch Farm 61.80 153 P **P** 04 33 35.6 +0.9
BFZ Birch Farm 61.80 153 P **P** 04 33 35.2 +0.4
KHZ Kahutara 62.12 156 **P** 04 33 35.9 -0.9
RPZ Rata Peaks 62.31 159 LR LR 04 57 15.4
comp=Z,22nm,21.7s,baz=236,slow=32
KDAK Kodiak Island 63.78 32 LR LR 05 03 04.1
comp=Z,36nm,18.3s,baz=252,slow=37
KURK Kurchatov 64.14 320 **P** 04 33 50.2 +0.1
KURK IAmb IAmb 04 33 51.2
comp=Z,6.9nm,0.7s
KURK Kurchatov 64.14 320 P **P** 04 33 50.6 +0.5
KURBB Kurchatov Arra 64.18 320 P **P** 04 33 50.8 +0.4
comp=Z,6.4nm,0.6s,baz=102,slow=6.7,SNR=67
KURBB pP **pP** 04 34 34.2 -0.6
comp=Z,10nm,0.8s,baz=102,slow=6.5,SNR=7.8
KURBB PKPPKP **P'P'df** **05 02 37.7 -2.5**
comp=Z,1.5nm,0.2s,baz=279,slow=2.7,SNR=6.5
KURBB LR LR 05 02 52.0
comp=Z,91nm,21.1s,baz=179,slow=37
comp=Z,6.4nm,0.6s
NRIK Noril'sk 65.66 341 P **P** 04 33 59.6 +0.1
comp=Z,4.4nm,0.8s,baz=91,slow=9.0,SNR=4.4
NRIK LR LR 05 01 59.1
comp=Z,104nm,18.8s,baz=118,slow=35
comp=Z,4.4nm,0.8s
NRIK Noril'sk 65.66 341 P **P** 04 33 59.1 -0.4
NRIK pP **pP** 04 34 43.2 -1.0
PMR Palmer 66.47 28 P **P** 04 34 04.3 -0.5
GHO Glory Hole Cre 66.61 28 IAmb IAmb 04 34 25.5
comp=Z,12nm,1.5s
PWL Port Wells 66.67 29 P **P** 04 34 05.3 -0.9
PWL IAmb IAmb 04 34 08.6
comp=Z,12nm,0.7s
SML Sawmill 66.89 28 IAmb IAmb 04 34 07.7
comp=Z,7.5nm,0.8s
SCM Sheep Creek Mo 67.36 28 IAmb IAmb 04 34 11.0
comp=Z,9.5nm,1.0s
FID Port Fidalgo 67.53 30 IAmb IAmb 04 34 13.6
comp=Z,6.6nm,0.7s
ILAR Eielson Array 68.24 25 P **P** 04 34 14.0 -1.9
comp=Z,1.8nm,0.6s,baz=250,slow=5.6,SNR=23
ILAR pP **pP** 04 35 00.7 -0.9
comp=Z,0.6nm,0.4s,baz=255,slow=6.3,SNR=2.1
comp=Z,1.8nm,0.6s
ILAR Eielson Array 68.24 25 P **P** 04 34 14.2 -1.7
ILAR **pP** 04 34 59.4 -2.2
CRQM Cirque 69.15 30 IAmb IAmb 04 34 25.9
comp=Z,5.3nm,0.6s
MENT Mentasta 69.23 28 P **P** 04 34 24.5 +2.4
BVAR Borovoye Array 69.48 322 P **P** 04 34 24.1 +0.4
comp=Z,6.9nm,0.6s,baz=100,slow=7.9,SNR=23
BVAR pP **pP** 04 35 09.1 +0.1
comp=Z,12nm,0.9s,baz=95,slow=7.4,SNR=4.1
comp=Z,6.9nm,0.6s
GRNC Granite Creek 69.82 30 IAmb IAmb 04 34 28.5
comp=Z,6.0nm,0.7s
LOGN Logan Glacier 70.20 30 IAmb IAmb 04 34 30.6
comp=Z,5.0nm,0.7s
O28M Mount Upton 70.59 30 IAmb IAmb 04 34 31.7
comp=Z,5.8nm,0.8s
M30M Minto, Yukon 72.35 28 P **P** 04 34 40.9 0.0
ARTI Arti 76.41 325 LR LR 05 11 47.0
comp=Z,46nm,18.7s,baz=96,slow=38
AKTO Aktyubinsk 77.22 319 LR LR 05 10 44.4
comp=Z,89nm,18.8s,baz=145,slow=37
KIRV Kirov 80.88 328 LR LR 05 11 29.2
comp=Z,100nm,21.5s,baz=76,slow=36
GNW Green Mountain 81.43 43 IAmb IAmb 04 35 33.9
comp=Z,7.7nm,0.9s
H04A Detroit Lake 82.46 46 IAmb IAmb 04 35 38.7
comp=Z,8.4nm,1.1s
YKA Yellowknife Ar 82.54 27 P **P** 04 35 36.5 -0.8
comp=Z,1.5nm,0.6s,baz=288,slow=5.1,SNR=9.4
YKA pP **pP** 04 36 22.3 -2.3
comp=Z,1.7nm,0.7s,baz=287,slow=5.1,SNR=1.9
YKA LR LR 05 08 55.7
comp=Z,26nm,21.9s,baz=332,slow=33
comp=Z,1.5nm,0.6s
YKA Yellowknife Ar 82.54 27 P **P** 04 35 36.9 -0.4
KHBM Hayfork Bally 82.55 50 IAmb IAmb 04 35 40.8
comp=Z,11nm,1.1s
M02C Callahan 82.67 49 **P** 04 35 39.2 +0.7
M02C IAmb IAmb 04 35 40.9
comp=Z,8.0nm,0.8s
YBH Yreka Blue Hor 82.70 49 **P** 04 35 38.7 0.0
YBH IAmb IAmb 04 35 40.8
comp=Z,9.2nm,0.9s
J04A Umpqua Nationa 82.82 47 IAmb IAmb 04 35 41.2
comp=Z,14nm,0.9s
WIFE Three Sisters- 82.85 46 IAmb IAmb 04 35 41.3
comp=Z,12nm,0.9s
L04D Klamath Falls 82.90 48 IAmb IAmb 04 35 41.9
comp=Z,11nm,1.1s
LTY Liberty 82.93 43 P **P** 04 35 39.8 +0.1
LTY IAmb IAmb 04 35 41.0
comp=Z,14nm,1.5s
O02D Mt. Diablo Mer 82.98 50 P **P** 04 35 39.9 -0.3
M03C McCloud 83.23 49 **P** 04 35 41.6 +0.2
PINE Pine Mountain 83.52 47 **P** 04 35 43.6 +0.5
PINE IAmb IAmb 04 35 45.0
comp=Z,17nm,0.9s
B08A Colville Reser 83.55 42 P **P** 04 35 42.8 -0.1
B08A IAmb IAmb 04 35 44.0
comp=Z,7.2nm,0.9s
SPITS Spitsbergen Ar 83.59 351 LR LR 05 15 15.9
comp=Z,25nm,18.4s,baz=45,slow=37
EPH Ephrata 83.62 43 **P** 04 35 43.0 -0.2
O03E Paynes Creek 83.69 50 P **P** 04 35 42.8 -0.9
O03E IAmb IAmb 04 35 45.6
comp=Z,13nm,0.9s

K05A Summer Lake 83.80 48 P **P** 04 35 45.9 +1.4
K05A IAmb IAmb 04 35 46.4
comp=Z,9.0nm,0.9s
CASY Casey 84.00 193 **P** 04 35 44.7 +0.2
CASY Casey 84.00 193 P **P** 04 35 45.1 +0.6
ORV Oroville 84.08 51 P **P** 04 35 45.3 -0.4
D08A Wollman Farm, 84.14 43 P **P** 04 35 45.5 -0.3
RES Resolute Bay 84.16 13 LR LR 05 13 33.1
comp=Z,19nm,21.1s,baz=327,slow=36
MHC Mount Hamilton 84.48 53 P **P** 04 35 47.3 -0.6
MHC IAmb IAmb 04 35 49.8
comp=Z,8.0nm,0.8s
AFDM Forest Hills D 84.62 51 **P** 04 35 48.5 0.0
E09A Wood Farm, Sta 84.79 43 P **P** 04 35 49.2 +0.2
E09A IAmb IAmb 04 35 50.8
comp=Z,17nm,1.4s
BEKR Beckworth 84.86 50 **P** 04 35 49.6 -0.2
BEKR IAmb IAmb 04 35 51.2
comp=Z,10nm,0.8s
NEW Newport 85.00 42 **P** 04 35 49.9 -0.3
NEW IAmb IAmb 04 35 52.2
comp=Z,12nm,0.9s
NEW Newport 85.00 42 P **P** 04 35 50.4 +0.2
CMB Columbia Colle 85.28 52 **P** 04 35 52.0 +0.2
CMB IAmb IAmb 04 35 53.9
comp=Z,6.3nm,0.8s
J08A Circle Bar Ran 85.37 47 **P** 04 35 52.1 0.0
J08A IAmb IAmb 04 35 53.9
comp=Z,7.7nm,1.1s
WVOR Wild Horse Val 85.49 48 P **P** 04 35 52.7 -0.1
WVOR IAmb IAmb 04 35 54.5
comp=Z,6.4nm,1.0s
WVOR Wild Horse Val 85.49 48 P **P** 04 35 54.0 +1.1
PNTR Pine Nut 85.62 51 P **P** 04 35 54.3 +0.6
PNTR IAmb IAmb 04 35 55.6
comp=Z,8.3nm,0.8s
PAHR Pah Rah Range 85.63 50 **P** 04 35 54.1 +0.5
PKD Bear Valley Ra 85.67 54 **P** 04 35 54.3 +0.6
BMO Blue Mountains 85.79 45 P **P** 04 35 53.8 -0.5
BMO IAmb IAmb 04 35 56.2
comp=Z,14nm,0.9s
EDM Edmonton 85.89 36 **P** 04 35 53.7 -0.7
EDM IAmb IAmb 04 35 56.1
comp=Z,19nm,1.2s
LDM Libby Dam 86.11 41 IAmb IAmb 04 35 57.3
comp=Z,6.1nm,0.9s
MDPB Devils Postpil 86.39 52 **P** 04 35 57.5 0.0
ARCES ARCESS Array B 86.61 342 P **P** 04 35 58.5 +0.9
comp=Z,2.8nm,0.9s,baz=57,slow=4.5,SNR=4.2
ARCES pP **pP** 04 36 44.1 -0.7
comp=Z,3.8nm,0.9s,baz=100,slow=3.7,SNR=2.8
ARCES LR LR 05 18 37.3
comp=Z,28nm,18.4s,baz=83,slow=38
comp=Z,2.8nm,0.9s
ARCES ARCESS Array B 86.61 342 P **P** 04 35 57.5 0.0
ARCES **pP** 04 36 43.8 -1.0
PLID Pearl Lake 86.62 44 IAmb IAmb 04 35 59.2
comp=Z,8.1nm,0.9s
LHV Little Huntoon 86.67 52 IAmb IAmb 04 36 02.3
comp=Z,7.0nm,0.9s
NVAR Mina Array Bea 86.77 51 P **P** 04 36 00.5 +1.2
comp=Z,7.9nm,0.7s,baz=262,slow=6.3,SNR=60
comp=Z,7.9nm,0.7s
NV11 Mina Array Sit 86.88 51 IAmb IAmb 04 36 02.1
comp=Z,6.7nm,0.8s
JTMT Jette 86.98 42 P **P** 04 36 00.3 +0.3
DSP Deep Springs 87.31 52 IAmb IAmb 04 36 03.9
comp=Z,6.7nm,1.0s
TPO Tropico Hills 87.77 55 IAmb IAmb 04 36 06.1
comp=Z,13nm,1.0s
GMN Gold Mountain 87.87 52 P **P** 04 36 05.1 +0.5
GMN IAmb IAmb 04 36 06.8
comp=Z,7.8nm,0.9s
MPMC Manual Prospec 88.03 53 IAmb IAmb 04 36 07.7
comp=Z,9.0nm,0.8s
LRMC Laurel Mtn Rad 88.04 54 IAmb IAmb 04 36 07.6
comp=Z,7.6nm,0.7s
HLID Hailey 88.15 46 IAmb IAmb 04 36 08.0
comp=Z,9.8nm,0.9s
CCCA Chr Cany lake 88.27 54 IAmb IAmb 04 36 08.8
comp=Z,11nm,0.8s
FURC Furnace Creek, 88.41 53 P **P** 04 36 07.4 +0.6
QSM Queen of Sheba 88.54 53 IAmb IAmb 04 36 09.8
comp=Z,10nm,0.8s
BCYI Bear Canyon 88.61 45 IAmb IAmb 04 36 09.9
comp=Z,5.3nm,0.9s
GWY Greenwater Val 88.63 53 IAmb IAmb 04 36 10.3
comp=Z,7.7nm,0.8s
OBN Obninsk 88.64 327 LR LR 05 16 13.6
comp=Z,105nm,21.9s,baz=256,slow=36
TPNV Topopah Spring 88.74 52 **P** 04 36 08.5 -0.1
KVAR Kislovodsk Arr 88.80 315 LR LR 05 18 33.1
comp=Z,29nm,21.2s,baz=320,slow=37
DLMT Dillon 88.83 43 IAmb IAmb 04 36 10.3
comp=Z,7.3nm,1.2s
DPP Dos Picos Cty 89.31 56 IAmb IAmb 04 36 13.2
comp=Z,10nm,0.9s
PFO Pinyon Flats O 89.52 56 P **P** 04 36 13.1 +0.8
PFO IAmb IAmb 04 36 14.7
comp=Z,13nm,1.4s
PRN Pahroc Range 89.53 52 IAmb IAmb 04 36 14.9
comp=Z,5.2nm,1.0s
PMD Palm Desert 89.58 55 IAmb IAmb 04 36 14.6
comp=Z,9.8nm,1.1s
MTPC Mountain Pass 89.70 54 IAmb IAmb 04 36 15.5
comp=Z,7.7nm,0.8s
QLMT Earthquake Lak 89.78 44 P **P** 04 36 14.2 +0.8
HVU Hansel Valley 89.85 47 P **P** 04 36 13.7 0.0
HVU IAmb IAmb 04 36 15.8
comp=Z,7.8nm,1.0s
YHL Hebgen Lake 89.94 44 IAmb IAmb 04 36 16.6
comp=Z,11nm,1.2s
YHB Horse Butte 89.97 44 IAmb IAmb 04 36 16.6
comp=Z,8.1nm,1.1s
PSUT Pine Spring 90.09 50 **P** 04 36 14.8 -0.2
PSUT IAmb IAmb 04 36 17.2
comp=Z,5.6nm,0.9s
YHH Holmes Hill 90.19 44 P **P** 04 36 14.9 -0.4
YUH Yuha Desert 90.23 56 IAmb IAmb 04 36 17.7
comp=Z,7.6nm,0.9s
BC3 Big Chuckawall 90.31 55 IAmb IAmb 04 36 18.4
comp=Z,7.0nm,0.9s
DUG Dugway, Tooele 90.33 48 IAmb IAmb 04 36 17.7
comp=Z,6.9nm,0.9s
DUG Dugway, Tooele 90.33 48 P **P** 04 36 16.2 +0.3
ESJX Sierra Juarez 90.39 57 P **P** 04 36 16.9 +0.5
ESJX IAmb IAmb 04 36 19.0
comp=Z,7.7nm,0.8s
IRM Iron Mountain 90.41 55 P **P** 04 36 16.3 0.0
IRM IAmb IAmb 04 36 18.8
comp=Z,8.1nm,0.9s
FINES FINESS Array B 90.69 335 P **P** 04 36 15.5 -1.4
comp=Z,1.3nm,0.7s,baz=67,slow=5.0,SNR=7.7
FINES pP **pP** 04 37 03.3 -1.3
comp=Z,4.5nm,0.9s,baz=98,slow=3.9,SNR=4.0
FINES LR LR 05 19 35.1
comp=Z,58nm,18.3s,baz=60,slow=37
comp=Z,1.3nm,0.7s
FINES FINESS Array B 90.69 335 P **P** 04 36 15.9 -1.0
FINES **pP** 04 37 03.6 -1.0
AHID Auburn Hatcher 90.70 46 IAmb IAmb 04 36 19.3
comp=Z,8.4nm,1.1s
HWUT Hardware Ranch 90.77 47 IAmb IAmb 04 36 20.0
comp=Z,7.3nm,0.8s
LCMT Little Creek M 91.02 52 P **P** 04 36 20.2 +1.0
LCMT IAmb IAmb 04 36 21.3
comp=Z,4.1nm,0.9s
TCUT Toone Canyon 91.04 47 IAmb IAmb 04 36 21.1
comp=Z,6.2nm,0.8s
W13A Hualapai Mount 91.12 54 IAmb IAmb 04 36 22.3
comp=Z,5.2nm,0.7s
RLMT Red Lodge 91.12 43 IAmb IAmb 04 36 21.8
comp=Z,6.2nm,1.1s
KNB Kanab 91.34 51 P **P** 04 36 20.1 -0.6
KNB IAmb IAmb 04 36 23.6
comp=Z,6.9nm,0.8s
PDAR Pinedale Array 91.77 45 P **P** 04 36 22.6 -0.1
comp=Z,0.9nm,0.7s,baz=247,slow=3.4,SNR=10
comp=Z,0.9nm,0.7s
VNDA Vanda 91.92 176 P **P** 04 36 22.5 +0.3
comp=Z,3.4nm,0.9s,baz=314,slow=5.6,SNR=17
comp=Z,3.4nm,0.9s
VNDA Vanda 91.92 176 **P** 04 36 22.8 +0.6
VNDA IAmb IAmb 04 36 23.4
comp=Z,5.2nm,1.1s
113A Mohawk Valley, 91.93 56 IAmb IAmb 04 36 25.6

	comp=Z,3.9nm,0.7s							
U15A	**North Rim**	**91.93**	**52**	IAmb	IAmb	04 36 26.2		
	comp=Z,4.3nm,0.8s							
SRU	**San Rafael Swe**	**92.36**	**49**	IAmb	IAmb	04 36 26.6		
	comp=Z,3.6nm,0.8s							
SBA	**Scott Base**	**92.58**	**175**	P	**P**	**04 36 25.4**	**+0.2**	
SBA				IAmb	IAmb	04 36 28.3		
	comp=Z,7.5nm,1.1s							
HMU	**Henry Mountain**	**92.60**	**50**	IAmb	IAmb	04 36 28.1		
	comp=Z,3.4nm,0.8s							
PV04	**Paradox Valley**	**93.80**	**49**	IAmb	IAmb	04 36 35.1		
	comp=Z,4.3nm,0.8s							
PV18	**Skein Mesa, Pa**	**93.84**	**49**	P	**P**	**04 36 32.4**	**+0.1**	
PV18				IAmb	IAmb	04 36 33.7		
	comp=Z,5.8nm,0.7s							
PV03	**Paradox Valley**	**93.89**	**49**	IAmb	IAmb	04 36 33.5		
	comp=Z,3.6nm,0.9s							
AKASG	**Malin Array Be**	**94.56**	**325**	LR	LR	05 20 31.2		
	comp=Z,100nm,21.6s,baz=24,slow=36							
HFS	**Hagfors**	**96.32**	**338**	LR	LR	05 20 25.2		
	comp=Z,48nm,21.2s,baz=34,slow=35							
NOA	**NORSAR Array B**	**96.58**	**339**	LR	LR	05 23 24.0		
	comp=Z,33nm,18.3s,baz=25,slow=37							
BRTR	**Keskin Array B**	**96.64**	**314**	P	P	04 36 40.1	-4.8	
NAO01	**NORSAR Array S**	**96.83**	**339**	P	**P**	**04 36 44.3**	**-0.8**	
ULM	**Lac du Bonnet**	**96.97**	**34**	LR	LR	05 20 31.6		
	comp=Z,26nm,18.3s,baz=350,slow=35							
ASF	**Jabal al Asfar**	**97.12**	**306**	LR	LR	05 26 34.8		
	comp=Z,26nm,18.2s,baz=26,slow=39							
LPIG	**La Paz**	**97.56**	**63**	LR	LR	05 14 01.5		
	comp=Z,24nm,19.4s,baz=304,slow=31							
SFJD	**Kangerlussuaq**	**98.41**	**6**	LR	LR	05 24 15.6		
	comp=Z,15nm,18.7s,baz=346,slow=37							
MNTX	**Cornudas Mount**	**98.96**	**54**	P	**P**	**04 36 55.2**	**-0.1**	
MNTX				IAmb	IAmb	04 37 35.0		
	comp=Z,2.5nm,1.4s							
TXAR	**Lajitas Array**	**101.24**	**56**	P	**Pdif**	**04 37 05.7**	**+0.1**	
TXAR				PP	**PP**	**04 41 14.7**	**-2.2**	
	comp=Z,0.4nm,0.8s,baz=283,slow=5.0,SNR=5.3							
	comp=Z,0.3nm,0.9s,baz=317,slow=7.7,SNR=3.6							
QSPA	**South Pole Qui**	**103.87**	**180**	Pdiff	**Pdif**	**04 37 19.5**	**+3.1**	
	comp=Z,1.2nm,1.0s,baz=301,slow=5.9,SNR=2.5							
TROLL	**Troll, Antarti**	**117.86**	**192**	⇑PKPdf	**PKiKP**	**04 41 59.5**	**+0.2**	
	comp=Z,61nm,0.5s							
LSZ	**Lusaka**	**118.77**	**260**	PKP	**PKPdf**	**04 42 02.3**	**-0.3**	
	comp=Z,2.2nm,0.6s,baz=14,slow=0.5,SNR=7.7							
LSZ	**Lusaka**	**118.77**	**260**	PKPdf	**PKPdf**	**04 42 02.4**	**-0.2**	
MATP	**Matopo**	**119.05**	**254**	PKP	**PKPdf**	**04 42 01.9**	**-1.2**	
	comp=Z,1.4nm,0.7s,baz=63,slow=2.3,SNR=3.0							
SNAA	**Sanae**	**119.19**	**191**	⇑PKPdf	**PKPdf**	**04 42 01.5**	**-0.3**	
	comp=Z,78nm,1.0s							
SNAA	**Sanae**	**119.19**	**191**	PKP	**PKPdf**	**04 42 01.1**	**-0.7**	
	comp=Z,1.7nm,0.6s,baz=149,slow=5.0,SNR=5.1							
SNAA	**Sanae**	**119.19**	**191**		**PKiKP**	**04 42 01.8**	**0.0**	
VNA2	**Neumayer--Watz**	**120.64**	**190**	⇑PKPdf	**PKiKP**	**04 42 04.6**	**0.0**	
	comp=Z,7.0nm,0.7s,baz=152,slow=1.4							
SOR	**Soroa**	**120.65**	**53**	PKPdf	**PKPdf**	**04 42 05.3**	**-0.6**	
VNA1	**Neumayer--Stat**	**121.02**	**190**	⇑PKPdf	**PKiKP**	**04 42 05.4**	**+0.1**	
	comp=Z,3.0nm,0.8s							
LBTB	**Lobatse**	**121.98**	**249**	PKP	**PKPdf**	**04 42 08.0**	**-0.5**	
	comp=Z,2.6nm,0.7s,baz=171,slow=3.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**134.48**	**305**	PKP	**PKPdf**	**04 42 33.1**	**+0.6**	
	comp=Z,1.2nm,1.2s,baz=129,slow=1.8,SNR=5.2							
TORD				SKPbc	**SKPbc**	**04 45 42.3**	**-1.6**	
	comp=Z,2.5nm,1.0s,baz=62,slow=2.6,SNR=7.6							
SJG	**San Juan**	**135.89**	**44**	PKPdf	**PKPdf**	**04 42 34.7**	**-0.3**	
PLCA	**Paso Flores**	**139.37**	**138**	PKP	**PKPdf**	**04 42 40.8**	**-0.1**	
	comp=Z,4.0nm,0.9s,baz=204,slow=6.3,SNR=6.1							
PLCA				SKPbc	**SKPbc**	**04 45 58.5**	**+0.7**	
	comp=Z,4.8nm,1.0s,baz=220,slow=4.9,SNR=6.2							
DBIC	**Dimbokro**	**143.45**	**302**	PKP	PKPbc	04 42 46.3	-0.3	
	comp=Z,2.7nm,0.7s,baz=65,slow=6.2,SNR=4.7							
DBIC	**Dimbokro**	**143.45**	**302**		PKPbc	04 42 47.1	+0.5	
GO03	**Copiapo**	**144.80**	**118**	PKPbc	**PKPab**	**04 42 50.6**	**+0.1**	
CFA	**Coronel Fontan**	**145.15**	**126**	PKPbc	**PKPab**	**04 42 52.0**	**+0.4**	
	comp=Z,17nm,0.7s,baz=264,slow=2.9,SNR=55							
PB11	**IPOC Station P**	**146.68**	**105**	PKPdf	**PKPdf**	**04 42 54.6**	**+0.2**	
PB08	**IPOC Station P**	**147.12**	**105**		**PKPdf**	**04 42 55.6**	**+0.2**	
GO01	**Chusmiza**	**147.12**	**105**		**PKPdf**	**04 42 55.8**	**+0.3**	
LPAZ	**La Paz**	**148.25**	**98**	PKPbc	**PKiKP**	**04 43 02.5**	**-0.3**	
	comp=Z,11nm,0.8s,baz=13,slow=4.4,SNR=9.9							
LPAZ	**La Paz**	**148.25**	**98**	PKPdf	**PKPdf**	**04 42 57.0**	**-0.6**	
BOAV	**Boa Vista**	**150.14**	**59**	PKPdf	**PKPdf**	**04 42 59.1**	**-0.9**	
SIV	**San Ignacio**	**155.03**	**98**	PKP	**PKPdf**	**04 43 07.3**	**+0.1**	
	comp=Z,2.4nm,1.1s,baz=268,slow=4.2,SNR=5.2							
SIV				PKPab	**PKPab**	**04 43 32.4**	**-0.2**	
	comp=Z,2.3nm,1.0s,baz=273,slow=4.0,SNR=4.8							
VILB	**Vilhena**	**155.76**	**90**	PKPab	**PKPab**	**04 43 34.5**	**-1.3**	
CPUP	**Villa Florida**	**156.02**	**124**	PKPab	**PKPab**	**04 43 36.9**	**+0.4**	
	comp=Z,5.0nm,1.0s,baz=225,slow=7.7,SNR=5.7							
CPUP	**Villa Florida**	**156.02**	**124**	PKPab	**PKPab**	**04 43 36.1**	**-0.3**	

*IDC **29** 04:30:03.9±0.9, 33.80S×77.84E, h0km, mb3.9/8, mbtmp3.9/8, MS3.7/13, Error ellipse: s-maj=27.9km s-min=24.7km az=37.0*
*NEIC **29** 04:30:05.1±1.2, 33.8S±0.1×77.91E±0.05, h10km±1km, mb4.6/10, Error ellipse: s-maj=25.2km s-min=4.9km az=190.0*
ISC 29 04:30:05.0±0.7, 33°8S±0.1×77°9E±0.1, h10km, n45, σ1°17/21, mb4.2/12, MS3.8/13, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**23.40**	**230**	T	T	04 59 47.7	
	baz=68,slow=74						
H04N1	**CROZET ISLANDS**	**23.41**	**230**	T	T	04 59 47.4	
	baz=68,slow=74						
H04N3	**CROZET ISLANDS**	**23.42**	**230**	T	T	04 59 44.4	
	baz=68,slow=74						
H04S1	**CROZET ISLANDS**	**23.60**	**229**	T	T	04 59 59.6	
	baz=65,slow=75						
H04S3	**CROZET ISLANDS**	**23.61**	**229**	T	T	04 59 59.0	
	baz=65,slow=75						
H04S2	**CROZET ISLANDS**	**23.62**	**229**	T	T	04 59 58.6	
	baz=65,slow=75						
H08S2	**Diego Garcia H**	**26.46**	**348**	T	T	05 02 43.3	
	baz=170,slow=76						
H08S1	**Diego Carcia H**	**26.47**	**348**	T	T	05 02 43.7	
	baz=170,slow=76						
H08S3	**Diego Garcia H**	**26.48**	**348**	T	T	05 02 44.9	
	baz=170,slow=76						
H01W2	**Cape Leeuwin H**	**29.86**	**103**	T	T	05 07 27.2	
	baz=262,slow=74						
H01W3	**Cape Leeuwin H**	**29.86**	**102**	T	T	05 07 29.7	
	baz=262,slow=74						
H01W1	**Cape Leeuwin H**	**29.88**	**102**	T	T	05 07 33.6	
	baz=262,slow=74						
NWAO	**Narrogin (SRO)**	**32.75**	**100**	LR	LR	04 45 50.4	
	comp=Z,221nm,21.8s,baz=198,slow=29						
GIRL	**Giralia**	**33.74**	**80**	P	**P**	**04 36 45.8**	**-0.9**
PALK	**Pallekele**	**40.90**	**4**	LR	LR	04 52 01.0	
	comp=Z,110nm,18.3s,baz=120,slow=32						
BOSA	**Boshof**	**44.92**	**262**	LR	LR	04 52 48.4	
	comp=Z,66nm,21.7s,baz=174,slow=30						
FITZ	**Fitzroy Crossi**	**45.29**	**82**	LR	LR	04 55 06.9	
	comp=Z,133nm,19.8s,baz=6.5,slow=33						
MATP	**Matopo**	**45.53**	**274**	LR	LR	04 52 56.9	
	comp=Z,84nm,21.3s,baz=127,slow=30						
LBTB	**Lobatse**	**45.98**	**267**	LR	LR	04 53 40.5	
	comp=Z,38nm,18.6s,baz=135,slow=31						
LBTB	**Lobatse**	**45.98**	**267**	P	**P**	**04 38 27.8**	**-0.9**
LBTB				IAmb	IAmb	04 38 52.9	
	comp=Z,8.7nm,1.4s						
BBOO	**Buckleboo**	**48.07**	**106**	P	**P**	**04 38 44.0**	**-0.7**
LSZ	**Lusaka**	**48.33**	**280**	P	**P**	**04 38 46.0**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=129,slow=6.5,SNR=5.7						
LSZ				LR	LR	04 57 05.1	
	comp=Z,63nm,18.0s,baz=180,slow=34						
	comp=Z,3.3nm,0.7s						
LSZ	**Lusaka**	**48.33**	**280**	P	**P**	**04 38 46.9**	**-0.2**
LSZ				IAmb	IAmb	04 38 55.3	
	comp=Z,12nm,1.4s						
ASAR	**Alice Springs**	**49.63**	**94**	P	**P**	**04 38 56.9**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=245,slow=7.5,SNR=9.3						
	comp=Z,1.2nm,0.7s						
WRA	**Warramunga Arr**	**51.64**	**90**	P	**P**	**04 39 11.6**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=245,slow=7.5,SNR=7.3						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**51.64**	**90**	P	**P**	**04 39 12.2**	**+0.1**
WB0	**Warramunga Arr**	**51.76**	**89**	P	**P**	**04 39 11.5**	**-1.5**
WB0				IAmb	IAmb	04 39 32.3	
	comp=Z,7.5nm,1.2s						
WR8	**Warramunga Arr**	**51.77**	**90**		**P**	**04 39 12.0**	**-1.1**
WR8				IAmb	IAmb	04 39 28.3	
	comp=Z,9.1nm,1.3s						
WR0	**Warramunga Arr**	**51.80**	**90**	P	**P**	**04 39 12.7**	**-0.6**
WR0				IAmb	IAmb	04 39 28.6	
	comp=Z,18nm,1.5s						
TSUM	**Tsumeb**	**55.19**	**269**	LR	LR	04 59 52.2	
	comp=Z,89nm,18.3s,baz=145,slow=32						
CMAR	**Chiang Mai Arr**	**55.68**	**24**	P	**P**	**04 39 43.8**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=213,slow=5.8,SNR=1.7						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**55.68**	**24**	P	**P**	**04 39 40.7**	**-0.9**
VNDA	**Vanda**	**56.02**	**165**	P	**P**	**04 39 44.5**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=264,slow=8.9,SNR=2.1						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**56.02**	**165**	P	**P**	**04 39 44.7**	**+1.4**
QSPA	**South Pole Qui**	**56.39**	**180**	P	**P**	**04 39 47.2**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=356,slow=2.4,SNR=5.1						
	comp=Z,2.7nm,1.0s						
QSPA	**South Pole Qui**	**56.39**	**180**	P	**P**	**04 39 45.8**	**-0.5**
QSPA				IAmb	IAmb	04 39 52.4	
	comp=Z,3.6nm,1.0s						
DAV	**Davao City (W)**	**60.73**	**57**	LR	LR	05 07 41.3	
	comp=Z,28nm,18.0s,baz=354,slow=37						
CTA	**Charters Tower**	**61.48**	**96**	LR	LR	05 04 27.3	
	comp=Z,64nm,18.9s,baz=230,slow=34						
MKAR	**Makanchi Array**	**80.28**	**3**	P	**P**	**04 42 18.2**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=194,slow=9.8,SNR=3.1						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**80.28**	**3**	P	**P**	**04 42 16.5**	**+0.8**
BRTR	**Keskin Array B**	**83.79**	**327**	P	**P**	**04 42 34.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=129,slow=5.9,SNR=4.2						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**83.79**	**327**	P	**P**	**04 42 33.9**	**-0.6**
DBIC	**Dimbokro**	**87.67**	**280**	LR	LR	05 18 23.0	
	comp=Z,24nm,21.5s,baz=112,slow=33						
TLY	**Talaya**	**88.04**	**16**	LR	LR	05 24 03.7	
	comp=Z,31nm,18.3s,baz=194,slow=37						
VRAC	**Vranov**	**98.99**	**324**	LR	LR	05 26 40.0	
	comp=Z,40nm,20.2s,baz=54,slow=34						

*CATAC **29** 05:24:04.4±1.1, 47°N×87°W, h29km±15km, M4.4/11, mb4.7/8, mB4.9/7, MLv4.5/11, Mw(mB)4.2/7, MwMwp3.6/1, Mwp4.2/1, Error ellipse: s-maj=17.3km s-min=7.3km az=27.0, confirmed*
*UCR **29** 05:24:07.0±1.7, 47.30N×82.79W, h0km±39km, MW3.8, Presumed earthquake*
*RSNC **29** 05:24:08.1±0.7, 47°N±4°×82°W, h0km, M3.9, mB4.8, mb4.5, ML3.4, Mw(mB)4.1*
ISC 29 05:24:06.3±1.3, 3°95N±0°06×82°82W±0°07, h35km, n65, σ2°37/80, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	**3.90**	**30**	P	**Pn**	**05 25 02.6**	**-1.1**
CACAO				S	**Sn**	**05 25 42.8**	**-5.4**
PIRO	**Carate, Puerto**	**4.46**	**353**	P	**Pn**	**05 25 09.8**	**-1.6**
PIRO				S	**Sn**	**05 26 04.3**	**+2.3**
AZU	**Azuero**	**4.58**	**33**	P	**Pn**	**05 25 12.8**	**-0.3**
AZU				S	**Sn**	**05 26 00.8**	**-4.3**
CDITO	**Canoas**	**4.59**	**359**	P	**Pn**	**05 25 12.6**	**-0.7**
CDITO				S	**Sn**	**05 26 11.3**	**+5.8**
GR1C	**Gorgona, Isla**	**4.74**	**101**	P	**Pn**	**05 25 13.8**	**-1.5**
GR1C				S	**Sn**	**05 26 02.6**	**-6.4**
BRU2	**Volcan**	**4.81**	**1**	P	**Pn**	**05 25 15.8**	**-0.7**
BRU2				S	**Sn**	**05 26 12.4**	**+1.3**
PAC1	**Pacto, Paraso**	**5.44**	**132**	P	**Pn**	**05 25 24.1**	**-0.9**
PAC1				S	**Sn**	**05 26 23.9**	**-2.6**
PIZC	**Pizarro, Choco**	**5.53**	**79**	P	**Pn**	**05 25 25.3**	**-0.9**
	197nm,1.2s						
PIZC				S	**Sn**	**05 26 25.8**	**-2.9**
	197nm,1.2s						
ZANG	**Zanguenga, Cho**	**5.77**	**30**	*eP*	**Pn**	**05 25 30.9**	**+1.3**
PITB	**Pirrs, San**	**5.80**	**348**	*eP*	**Pn**	**05 25 30.1**	**0.0**
PITB				*eS*	**Sn**	**05 26 35.4**	**-0.1**
BBAC	**Balboa, Cauca**	**5.88**	**109**	P	**Pn**	**05 25 30.9**	**-0.3**
	304nm12nm,0.5s						
BBAC				S	**Sn**	**05 26 30.6**	**-7.0**
	304nm12nm,0.5s						
REPA	**Paraso**	**5.93**	**350**	*eP*	**Pn**	**05 25 31.9**	**+0.1**
ACOS	**Acosta**	**5.96**	**347**	*eP*	**Pn**	**05 25 31.3**	**-0.9**
BCIP	**Isla Barro Col**	**5.97**	**30**	P	**Pn**	**05 25 33.8**	**+1.6**
BCIP				S	Sn	05 26 46.6	+7.2
BCIP	**Isla Barro Col**	**5.97**	**30**	P	**Pn**	**05 25 32.9**	**+0.7**
	3μm100nn,0.6s						
BCIP				S	**Sn**	**05 26 35.4**	**-4.0**
	3μm100nn,0.6s						
BCIP	**Isla Barro Col**	**5.97**	**30**	*eP*	**Pn**	**05 25 33.0**	**+0.7**
VINA	**Juan Vinas**	**5.98**	**351**	*eP*	**Pn**	**05 25 32.8**	**+0.3**
VERB	**Verbena**	**6.02**	**352**	*eP*	**Pn**	**05 25 33.3**	**+0.3**
VTCV	**VTCV, Calle Va**	**6.06**	**351**	*eP*	**Pn**	**05 25 33.6**	**-0.1**
LUJA	**Lujan**	**6.07**	**348**	*eP*	**Pn**	**05 25 33.5**	**-0.2**
VICA	**Volcano Irazu**	**6.08**	**350**	*eP*	**Pn**	**05 25 34.3**	**+0.1**
ABRB	**Las Abras (San**	**6.08**	**352**	*eP*	**Pn**	**05 25 33.8**	**-0.2**
RESJ	**San Isidro (Tu**	**6.10**	**352**	*eP*	**Pn**	**05 25 34.8**	**+0.7**
SANTA	**Santa Ana**	**6.10**	**347**	*eP*	**Pn**	**05 25 33.7**	**-0.4**
VTR0	**Volcan Turrial**	**6.10**	**351**	*eP*	**Pn**	**05 25 34.5**	**+0.1**
CVTR	**Volcan Turrial**	**6.10**	**351**	*eP*	**Pn**	**05 25 35.0**	**+0.5**
DOMI	**Santo Domingo**	**6.13**	**348**	*eP*	**Pn**	**05 25 33.9**	**-0.6**
CVIMO	**Finca Echandi**	**6.14**	**350**	*eP*	**Pn**	**05 25 39.1**	**+4.4**
BELE	**Belen**	**6.14**	**347**	*eP*	**Pn**	**05 25 34.5**	**-0.2**
TRB2	**Turrubares**	**6.14**	**345**	S	**Sn**	**05 26 45.9**	**+2.2**
HEME	**Heredia, Merce**	**6.15**	**348**	*eP*	**Pn**	**05 25 35.5**	**+0.7**
HDC	**Heredia**	**6.15**	**348**	*eP*	**Pn**	**05 25 34.6**	**-0.2**
HDC				*eS*	**Sn**	**05 26 45.0**	**+1.0**
JAMC	**Jamundi, Valle**	**6.17**	**97**	P	**Pn**	**05 25 35.4**	**+0.1**
	310nm13nm,0.8s						
JAMC				S	**Sn**	**05 26 37.7**	**-7.1**
	310nm13nm,0.8s						
LAFE	**Finca La Fe, P**	**6.18**	**340**	*eP*	Pn	05 25 31.7	-3.4
ATEO	**Atenas**	**6.19**	**346**	*eP*	**Pn**	**05 25 34.8**	**-0.5**
VBV1	**V. Barva**	**6.25**	**348**	*eP*	**Pn**	**05 25 36.5**	**+0.1**
POPC	**Popayan, Colom**	**6.29**	**103**	P	**Pn**	**05 25 36.2**	**-0.6**
	12nm,0.8s						
POPC				S	**Sn**	**05 26 42.3**	**-5.3**
	12nm,0.8s						
CRUC	**La Cruz**	**6.32**	**112**	P	**Pn**	**05 25 38.9**	**+1.6**
CRUC				S	**Sn**	**05 26 46.1**	**-2.4**
CMARA	**Lajas Hojancha**	**6.56**	**337**	P	**Pn**	**05 25 41.2**	**+0.8**
CMARA				S	**Sn**	**05 26 54.4**	**+0.3**
CMARA	**Lajas Hojancha**	**6.56**	**337**	*eP*	**Pn**	**05 25 40.4**	**0.0**
JTS	**Las Juntas de**	**6.65**	**342**	P	**Pn**	**05 25 40.2**	**-1.3**
JTS				S	**Sn**	**05 26 58.5**	**+2.3**
JTS	**Las Juntas de**	**6.65**	**342**	P	**Pn**	**05 25 41.8**	**+0.2**
JTS	**Las Juntas de**	**6.65**	**342**	*eP*	**Pn**	**05 25 41.7**	**+0.1**
ARE1	**Arenal 1**	**6.74**	**344**	*eP*	**Pn**	**05 25 45.2**	**+2.4**
VARE2	**V. Arenal**	**6.74**	**344**	*eP*	**Pn**	**05 25 45.3**	**+2.4**
JUD3	**Juan Diaz 3**	**6.74**	**337**	*eP*	**Pn**	**05 25 43.6**	**+0.7**
TABAC	**Tabacon**	**6.79**	**344**	*eP*	**Pn**	**05 25 44.7**	**+1.2**
COTE	**Lago Cote**	**6.91**	**343**	*eP*	**Pn**	**05 25 47.3**	**+2.2**
CBOC	**Ciudad Bolivar**	**7.04**	**74**	P	**Pn**	**05 25 47.0**	**-0.1**
	690nm29nm,0.5s						
CUI	**Cuipilapa**	**7.06**	**341**	*eP*	**Pn**	**05 25 48.8**	**+1.6**
ALIBA	**Liberia Airpor**	**7.13**	**338**	*eP*	**Pn**	**05 25 49.7**	**+1.4**
MESS	**Mesas**	**7.15**	**341**	*eP*	**Pn**	**05 25 50.4**	**+1.9**
MESS				*eS*	**Sn**	**05 27 09.3**	**+0.8**
LAPC	**Finca la Perla**	**7.25**	**339**	*eP*	**Pn**	**05 25 50.5**	**+0.6**
GARC	**Garzon, Huila**	**7.52**	**103**	P	**Pn**	**05 25 55.7**	**+1.9**
FLOC	**Florencia**	**7.53**	**108**	P	**Pn**	**05 25 54.9**	**+1.2**
GUY2C	**Guyana, Caldas**	**7.54**	**80**	P	**Pn**	**05 25 55.4**	**+1.2**
PRAC	**Prado**	**7.92**	**91**	P	**Pn**	**05 26 00.1**	**+1.1**
PRAC				S	**Sn**	**05 27 24.3**	**-3.2**
PRAC	**Prado**	**7.92**	**91**	P	**Pn**	**05 26 01.4**	**+2.4**
PTBC	**PUERTO BERRIO,**	**8.71**	**72**	P	**Pn**	**05 26 12.6**	**+2.6**
MCRA	**Macar, Loja**	**8.74**	**161**	P	**Pn**	**05 26 11.8**	**+1.4**
SPBC	**San Pablo de B**	**8.88**	**79**	P	Pn	05 26 16.7	+4.4
CHIC	**Chingaza**	**9.09**	**85**	P	Pn	05 26 19.8	+4.4
MACN	**El Madrono**	**9.28**	**336**	P	**Pn**	**05 26 22.1**	**+4.3**
RUSC	**La Rusia**	**9.89**	**78**	P	Pn	05 26 31.2	+4.7
BARC	**Barichara**	**9.95**	**74**	P	**Pn**	**05 26 29.9**	**+2.8**

*IDC **29** 05:25:55.5±1.3, 30.06N×97.37E, h0km, mb3.4/5, mbtmp3.5/7, ML3.6/1, MS3.2/1, Error ellipse: s-maj=40.5km s-min=21.1km az=65.0*
ISC 29 05:25:60.0±1.2, 30°1N±0°1×97°4E±0°2, h35km, n8, σ1°35/7, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.63**	**172**	Pn	**Pn**	**05 28 42.8**	**-0.8**
	0.1nm,0.3s,baz=358,slow=14,SNR=1.3						
	0.6nm,0.3s						
SONM	**Songino Array**	**19.08**	**19**	P	**P**	**05 30 17.7**	**-1.9**
	0.3nm,0.4s,baz=209,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**20.40**	**329**	P	**P**	**05 30 34.0**	**+0.2**
	0.4nm,0.7s,baz=140,slow=8.5,SNR=3.7						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**24.93**	**331**	P	**P**	**05 31 20.6**	**+0.9**
	1.1nm,0.7s,baz=139,slow=11,SNR=11						
	1.1nm,0.7s						
KSRS	**Korea Array**	**26.39**	**66**	P	**P**	**05 31 34.0**	**+1.0**
	0.7nm,0.6s,baz=258,slow=9.2,SNR=5.1						
	0.7nm,0.6s						
PETK	**Petropavlovsk-**	**49.00**	**44**	LR	LR	05 55 46.8	
	comp=Z,26nm,19.2s,baz=56,slow=37						
WRA	**Warramunga Arr**	**61.14**	**140**	P	**P**	**05 36 11.1**	**+0.1**
	0.5nm,0.8s,baz=320,slow=7.6,SNR=2.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**63.91**	**143**	P	**P**	**05 36 30.7**	**+1.2**
	0.3nm,0.5s,baz=321,slow=6.0,SNR=1.5						
	0.3nm,0.5s						

*SNET **29** 05:30:35.4±1.3, 12°90N×89°07W, h60km, ML3.3, Presumed earthquake*
*CATAC **29** 05:30:35.8±0.4, 13°N±2°×8°9W±°, h35km±4km, M3.3/23, MLv3.3/23, Error ellipse: s-maj=5.8km s-min=2.3km az=30.4, confirmed*
*GCG **29** 05:30:37.5±0.4, 13°10N×89°03W, h59km±7km, MD3.8, Presumed earthquake*
ISC 29 05:30:35.9±1.5, 12°92N±0°07×89°04W±0°04, h59km±13km, n52, σ0°60/82, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.63**	**334**	P	**Pn**	**05 30 49.0**	**-0.3**
LALI				S	**Sn**	**05 30 58.9**	**-0.1**
LALI	**Alcalda de L**	**0.63**	**334**	*i* P	**Pn**	**05 30 49.1**	**-0.2**
TECO	**Alcaldia de Te**	**0.66**	**22**	P	**Pn**	**05 30 49.4**	**-0.3**
TECO	**Alcaldia de Te**	**0.66**	**22**	*i* P	**Pn**	**05 30 49.5**	**-0.3**
TECO				*eS*	**Sn**	**05 31 00.0**	**+0.2**
LFRS	**El Faro**	**0.70**	**358**	*eP*	**Pn**	**05 30 50.0**	**-0.3**
COEG	**Centro de Oper**	**0.71**	**13**	P	**Pn**	**05 30 49.8**	**-0.6**
COEG				S	**Sn**	**05 31 00.6**	**-0.3**
LOMA	**Loma Larga**	**0.73**	**350**	P	**Pn**	**05 30 50.7**	**0.0**
LOMA				S	**Sn**	**05 31 01.1**	**-0.3**
LOMA	**Loma Larga**	**0.73**	**350**	*eP*	**Pn**	**05 30 50.5**	**-0.2**
TECA	**Tecapa**	**0.77**	**43**	*eP*	**Pn**	**05 30 51.4**	**+0.1**
PAVA	**Las Pavas**	**0.79**	**7**	P	**Pn**	**05 30 51.3**	**-0.1**
PAVA	**Las Pavas**	**0.79**	**7**	*eP*	**Pn**	**05 30 51.5**	**+0.1**
PAVA				*eS*	**Sn**	**05 31 03.7**	**+0.9**
SEMO	**Seminario San**	**0.80**	**347**	P	**Pn**	**05 30 50.7**	**-0.8**
SEMO				S	**Sn**	**05 31 03.0**	**+0.2**
LBRS	**Las Brisas**	**0.81**	**360**	*eP*	**Pn**	**05 30 51.8**	**+0.1**
UERS	**Universidad Ev**	**0.81**	**346**	P	**Pn**	**05 30 51.1**	**-0.6**
JAYA	**Jayaque - finc**	**0.83**	**331**	P	**Pn**	**05 30 51.6**	**-0.4**
JAYA	**Jayaque - finc**	**0.83**	**331**	*i* P	**Pn**	**05 30 51.7**	**-0.3**
JAYA				*i* S	**Sn**	**05 31 02.2**	**-1.5**
JAYA	**Jayaque - finc**	**0.83**	**331**	*i* P	**Pn**	**05 30 51.7**	**-0.3**
JAYA				*eS*	**Sn**	**05 31 03.5**	**-

MTDJ	**Mount Denham**	**1.01**	**266**	*e*P		**Pn**	**06 01 27.7**	**0.0**
MTDJ				*e*S		**Sb**	**06 01 39.4**	**-1.1**
MTDJ				IAML			06 01 41.4	
	comp=Z,15nm,0.2s							
MTDJ				IAML			06 01 41.5	
	14nm,0.3s							
MCJ	**Malvern**	**1.22**	**252**	*i* P		Pn	06 01 35.8	+5.3
CHIV	**Chivirico**	**1.66**	**2**	*e*P		**Pg**	**06 01 39.5**	**-0.5**
CHIV				*e*S		**Sb**	**06 01 59.7**	**+0.6**
LMGC	**Las Mercedes**	**1.82**	**344**	*e*P		**Pn**	**06 01 40.4**	**-0.6**
LMGC				*e*S		**Sn**	**06 02 02.5**	**+0.9**
LMGC				*e*Sg		**Sb**	**06 02 04.2**	**+0.5**
LMGC				IAML			06 02 04.9	
	comp=N,8.3nm,0.1s							
LMGC				IAML			06 02 05.1	
	comp=E,5.9nm,0.1s							
RCC	**Rio Carpintero**	**1.83**	**23**	*e*P		**Pg**	**06 01 43.4**	**+0.1**
YAR	**Yar**	**2.06**	**3**	*e*P		**Pb**	**06 01 45.1**	**0.0**

*IDC **29** 06:07:41.3±0.7, 0.°88S×134.°38E, h0km, mb4.2/12, mbtmp4.2/15, ML4.3/3, MS3.2/10, Error ellipse: s-maj=29.2km s-min=13.8km az=69.0*
*DJA **29** 06:07:44.7±1.2, 1.°5S×13.°4E±.°, h16km±9km, M4.7/15, mB4.9/3, mb4.8/7, MLv4.7/15, Mw(mB)4.1/3*
*NEIC **29** 06:07:46.9±1.8, 0.°89S±0.°09×134.°36E±0.°09, h33km±5km, mb4.2/21, Error ellipse: s-maj=14.7km s-min=11.4km az=53.0*

ISC 29 06:07:45.5±0.6, 0.°86S±0.°06×134.°37E±0.°04, h27km, n64, σ1s34/63, mb4.2/16, MS3.2/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.77**	**101**	P		**Pn**	**06 08 15.3**	**+0.9**
BAKI				S		**Sb**	**06 08 39.3**	**+0.2**
KMPI	**Kaimana, Papua**	**2.86**	**193**	P		**Pn**	**06 08 31.8**	**+2.4**
FAKI	**Fak Fak**	**2.95**	**226**			**Pn**	**06 08 30.5**	**-0.1**
FAKI	**Fak Fak**	**2.95**	**226**	P		**Pn**	**06 08 30.3**	**-0.3**
SIJI	**Sorong**	**3.10**	**270**	Pn		**Pn**	**06 08 31.9**	**-0.8**
	29nm,0.3s,baz=45,slow=23,SNR=40							
SIJI				Sn		**Sn**	**06 09 11.4**	**+2.4**
	28nm,0.3s,baz=274,slow=22,SNR=9.1							
SIJI				LR		LR	06 10 06.7	
	comp=Z,962nm,18.2s,baz=119,slow=47 53nm,0.3s							
SIJI	**Sorong**	**3.10**	**270**	P		**Pn**	**06 08 32.2**	**-0.6**
SWI	**Sorong**	**3.11**	**270**	P		**Pn**	**06 08 32.3**	**-0.5**
SMPI	**Sarmi**	**4.48**	**105**	P		**Pn**	**06 08 53.7**	**+2.0**
BNDI	**Bandanaira**	**5.76**	**231**	P		**Pn**	**06 09 09.4**	**+0.2**
JAY	**Jayapura**	**6.54**	**105**	LR		LR	06 11 47.6	
	comp=Z,154nm,21.6s,baz=20,slow=38							
AAI	**Ambon**	**6.78**	**245**	P		**Pn**	**06 09 24.4**	**+1.1**
	0.4nm3µm113nm,0.9s							
AUDHS	**Darwin High Sc**	**12.03**	**197**	S		**Sn**	**06 12 52.3**	**+3.6**
MTN	**Manton Dam**	**12.33**	**195**			**Pn**	**06 10 39.0**	**-0.5**
COEN	**Coen**	**15.66**	**147**	Pn		**Pn**	**06 11 21.9**	**-2.6**
COEN				IAmb		IAmb	06 11 29.3	
	comp=Z,16nm,1.1s							
KNRA	**Kununurra**	**15.73**	**200**			**Pn**	**06 11 23.9**	**-1.5**
KNRA				IAmb		IAmb	06 11 59.3	
	comp=Z,12nm,0.9s							
KAVG	**Kavieng**	**16.52**	**96**	S		**S**	**06 14 45.9**	**-3.6**
GUMO	**Guam**	**17.73**	**36**	LR		LR	06 18 39.1	
	comp=Z,40nm,19.8s,baz=110,slow=37							
KRVT	**Keravat (AS076**	**17.97**	**101**	LR		LR	06 17 34.8	
	comp=Z,33nm,19.2s,baz=126,slow=33							
WB0	**Warramunga Arr**	**18.79**	**180**			**P**	**06 12 01.9**	**-1.1**
WRAB	**Tennant Creek**	**18.96**	**180**	P		**P**	**06 12 01.3**	**-3.5**
WRAB				IAmb		IAmb	06 12 06.5	
	comp=Z,12nm,0.8s							
WB2	**Warramunga Arr**	**18.97**	**180**	P		**P**	**06 12 03.9**	**-1.0**
WB2				IAmb		IAmb	06 12 08.4	
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**18.97**	**180**	P		**P**	**06 12 03.6**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=360,slow=11,SNR=58							
WRA				S		**Sn**	**06 15 35.2**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=5.3,slow=21,SNR=3.0							
	comp=Z,9.0nm,0.7s							
WRA	**Warramunga Arr**	**18.97**	**180**			**P**	**06 12 03.5**	**-1.5**
WR8	**Warramunga Arr**	**18.98**	**180**			**P**	**06 12 03.9**	**-1.2**
WR8				IAmb		IAmb	06 12 08.4	
	comp=Z,11nm,0.7s							
WR0	**Warramunga Arr**	**18.99**	**180**	P		**P**	**06 12 04.1**	**-1.0**
WR0				IAmb		IAmb	06 12 34.0	
	comp=Z,15nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.16**	**206**	P		**P**	**06 12 06.0**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=55,slow=9.8,SNR=11							
FITZ				S		Sn	06 15 24.0	-18
	comp=Z,7.5nm,0.8s,baz=185,slow=14,SNR=4.3							
FITZ				LR		LR	06 21 51.3	
	comp=Z,121nm,19.9s,baz=14,slow=44							
	comp=Z,2.7nm,0.5s							
FITZ	**Fitzroy Crossi**	**19.16**	**206**	P		**P**	**06 12 06.5**	**-0.5**
FITZ						Sn	06 15 23.4	-19
MTSU	**Mount Surprise**	**19.75**	**151**	P		**Pn**	**06 12 15.8**	**+0.6**
QIS	**Mount Isa**	**20.24**	**166**	P		**P**	**06 12 19.9**	**+1.1**
CTA	**Charters Tower**	**22.37**	**149**	P		**P**	**06 12 41.5**	**-0.3**
	comp=Z,32nm,0.6s,baz=326,slow=10,SNR=32							
	comp=Z,32nm,0.6s							
CTAO	**Charters Tower**	**22.37**	**149**	P		**P**	**06 12 44.5**	**+2.7**
CTAO	**Charters Tower**	**22.37**	**149**			**P**	**06 12 42.4**	**+0.5**
AS01	**Alice Springs**	**22.68**	**181**	P		**P**	**06 12 44.7**	**-0.3**
AS31	**Alice Springs**	**22.68**	**181**			**P**	**06 12 44.6**	**-0.5**
AS31				IAmb		IAmb	06 12 54.5	
	comp=Z,4.8nm,0.6s							
ASAR	**Alice Springs**	**22.68**	**181**	P		**P**	**06 12 44.1**	**-0.9**
	comp=Z,7.2nm,0.5s,baz=8.3,slow=11,SNR=51							
ASAR				S		**S**	**06 16 50.1**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=2.6,slow=24,SNR=5.0							
ASAR				LR		LR	06 23 14.6	
	comp=Z,93nm,21.1s,baz=340,slow=41							
	comp=Z,7.2nm,0.5s							
ASAR	**Alice Springs**	**22.68**	**181**			**P**	**06 12 44.6**	**-0.5**
ASAR						**S**	**06 16 50.7**	**-1.2**
QLP	**Quilpie**	**27.28**	**160**	P		**P**	**06 13 28.1**	**+0.2**
INKA	**Innaminka**	**27.42**	**168**	P		**P**	**06 13 30.7**	**+1.6**
EIDS	**Eidsvold**	**29.23**	**148**			**P**	**06 13 45.0**	**-0.3**
EIDS				IAmb		IAmb	06 13 51.0	
	comp=Z,9.5nm,0.8s							
FORT	**Forrest**	**30.36**	**191**	P		**P**	**06 13 54.9**	**-0.2**
FORT				IAmb		IAmb	06 13 57.7	
	comp=Z,3.8nm,0.8s							
STKA	**Stephens Creek**	**31.60**	**168**	P		**P**	**06 14 05.1**	**-1.0**
	comp=Z,3.2nm,0.5s,baz=339,slow=9.1,SNR=11							
STKA				LR		LR	06 29 31.2	
	comp=Z,106nm,19.5s,baz=2.2,slow=42							
	comp=Z,3.2nm,0.5s							
BBOO	**Buckleboo**	**31.82**	**177**	P		**P**	**06 14 07.5**	**-0.6**
ARMA	**Armidale**	**33.66**	**152**	P		**P**	**06 14 24.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**39.76**	**301**	P		**P**	**06 15 17.1**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=122,slow=6.1,SNR=9.5							
	comp=Z,0.8nm,0.3s							
ASAJ	**Asahikawa**	**45.38**	**8**	LR		LR	06 31 44.6	
	comp=Z,31nm,21.4s,baz=164,slow=32							
SHEM	**Shemya Is, Ala**	**62.88**	**26**	LR		LR	06 40 52.1	
	comp=Z,12nm,21.0s,baz=163,slow=32							
MKAR	**Makanchi Array**	**65.71**	**324**	P		**P**	**06 18 28.2**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=111,slow=6.9,SNR=8.9							
	comp=Z,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**68.19**	**331**	P		**P**	**06 18 43.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=86,slow=6.4,SNR=1.5							
	comp=Z,0.3nm,0.3s							
KURK	**Kurchatov**	**69.74**	**326**	P		**P**	**06 18 52.9**	**-0.2**
KURK	**Kurchatov**	**69.74**	**326**	IAmb		IAmb	06 18 54.4	
	comp=Z,2.3nm,0.7s							
KURBB	**Kurchatov Arra**	**69.75**	**326**	P		**P**	**06 18 52.9**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=114,slow=5.9,SNR=5.2							
	comp=Z,0.9nm,0.8s							
BVAR	**Borovoye Array**	**75.34**	**326**	P		**P**	**06 19 26.3**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=111,slow=8.1,SNR=4.0							
	comp=Z,0.6nm,0.3s							
VNDA	**Vanda**	**78.03**	**174**	P		**P**	**06 19 41.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=319,slow=5.9,SNR=16							
	comp=Z,2.1nm,0.8s							
VNDA	**Vanda**	**78.03**	**174**	P		**P**	**06 19 41.8**	**+0.6**
VNDA				IAmb		IAmb	06 19 42.6	
	comp=Z,3.0nm,0.8s							
ABKAR	**Akbulak array**	**80.52**	**320**	P		**P**	**06 19 55.6**	**+0.3**
MAW	**Mawson**	**82.22**	**202**	P		**P**	**06 20 03.9**	**0.0**
	comp=Z,2.2nm,0.9s,baz=98,slow=3.8,SNR=3.6							
	comp=Z,2.2nm,0.9s							
RND	**Reindeer**	**84.86**	**26**	P		**P**	**06 20 18.9**	**+1.2**
ILAR	**Eielson Array**	**85.97**	**25**	P		**P**	**06 20 22.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=259,slow=4.3,SNR=6.9							
ILAR				LR		LR	06 54 11.3	
	comp=Z,15nm,20.3s,baz=318,slow=32							
	comp=Z,0.7nm,0.8s							
QSPA	**South Pole Qui**	**89.08**	**180**	P		**P**	**06 20 38.4**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=307,slow=0.9,SNR=22							
	comp=Z,2.7nm,0.7s							
QSPA	**South Pole Qui**	**89.08**	**180**	P		**P**	**06 20 38.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**131.57**	**287**	PKP		**PKPdf**	**06 26 55.7**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=69,slow=3.4,SNR=1.1							
CPUP	**Villa Florida**	**150.71**	**158**	PKPbc		**PKPbc**	**06 27 36.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=232,slow=2.1,SNR=6.4							
LPAZ	**La Paz**	**152.01**	**128**	PKPbc		**PKiKP**	**06 27 41.2**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=281,slow=1.7,SNR=9.6							
LPAZ	**La Paz**	**152.01**	**128**			**PKiKP**	**06 27 41.9**	**+1.5**

NDI 29 06:07:59.5±2.5, 26.°46N×95.°84E, h45km±91km, ML3.5, MW3.2, Presumed earthquake, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**0.87**	**0**	*e*P		Pn	06 08 11.2	-4.2
LKP				*e*S		Sn	06 08 26.9	-0.1
IMP	**Imphal**	**2.35**	**227**	*e*P		Pn	06 08 36.3	+0.5
IMP				*e*S		Sn	06 09 01.8	-1.7
IMP				IAML			06 09 04.1	
	comp=E,165nm,0.4s							
TEZP	**TEZPUR**	**2.73**	**274**	*e*P		Pn	06 08 40.5	-0.3
TEZP				*e*S		Sn	06 09 11.1	-1.5
SHL	**Shillong**	**3.67**	**257**	*e*P		Pn	06 08 53.6	-0.3
SHL				*e*S		Sn	06 09 30.1	-6.0
SHL				IAML			06 09 31.8	
	comp=E,346nm,0.2s							
SHL				IAML			06 09 31.9	
	comp=N,162nm,0.1s							
TAWA	**Tawang**	**3.72**	**289**	*e*P		Pn	06 08 52.8	-2.0
TAWA				*e*S		Sn	06 09 35.5	-2.0
TAWA				IAML			06 09 40.9	
	comp=N,284nm,0.2s							
TAWA				IAML			06 09 41.2	
	comp=E,327nm,0.2s							
GUWA	**GUWAHATI**	**3.73**	**267**	*e*P		Pn	06 08 55.0	+0.4
GUWA				*e*S		Sn	06 09 32.8	-4.5
GUWA				IAML			06 09 35.0	
	comp=N,100nm,0.1s							
GUWA				IAML			06 09 35.1	
	comp=E,132nm,0.1s							
DHUB	**DHUBRI**	**5.27**	**267**	*ex*		Sn	06 10 10.9	-4.2

IDC 29 06:08:00.1±5.0, 17.°75S×174.°72W, h233km±29km, mb3.3/3, mbtmp3.9/5, Error ellipse: s-maj=130.6km s-min=18.2km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.75**	**37**	P		Pn	06 09 14.3	+1.9
	10nm,0.2s,baz=208,slow=15,SNR=10							
AFI				S		S	06 10 08.8	-0.8
	57nm,0.4s,baz=49,slow=20,SNR=14							
MSVF	**Nonsavu**	**6.89**	**269**	P		Pn	06 09 40.2	+0.8
	15nm,0.8s,baz=90,slow=21,SNR=5.4							
WRA	**Warramunga Arr**	**48.12**	**259**	P		P	06 16 16.0	-1.1
	0.9nm,0.8s,baz=100,slow=7.5,SNR=2.9							
	0.9nm,0.8s							
ASAR	**Alice Springs**	**48.22**	**254**	P		P	06 16 17.6	-0.3
	3.4nm,0.6s,baz=88,slow=8.6,SNR=21							
	3.4nm,0.6s							
ILAR	**Eielson Array**	**84.98**	**12**	P		P	06 20 09.5	+0.7
	0.2nm,0.6s,baz=200,slow=4.7,SNR=5.2							
	0.2nm,0.6s							

*JSN **29** 06:23:51.5±0.6, 18.°18N×76.°60W, h11km±5km, MD2.5, Confirmed Earthquake*
*SSNC **29** 06:23:53.0±1.3, 18.°35N×76.°67W, h9km±13km, MD2.6, ML1.4, Presumed earthquake*

ISC 29 06:23:47.3±1.4, 18.°32N±0.°07×76.°5W±0.°1, h11km±13km, n11, σ0s35/19, 6C, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.32**	**218**	⇑*i*P		**Pb**	**06 23 55.2**	**+0.1**
GWJ				⇑*i*P		**Pb**	**06 23 55.2**	**+0.1**
GWJ				⇑*i*S		**Sg**	**06 23 58.3**	**+0.3**
STH	**Stony Hill**	**0.37**	**228**	⇑*i*P		**Pb**	**06 23 56.0**	**+0.1**
STH				*i* P		**Pb**	**06 23 56.0**	**+0.1**
STH				*i* S		**Sg**	**06 23 59.6**	**0.0**
HOJ	**Hope**	**0.38**	**214**	*i* P		**Pb**	**06 23 56.1**	**-0.1**
BNJ	**Bonny Gate**	**0.41**	**270**	⇑*i*P		**Pn**	**06 23 58.8**	**-0.4**
PCJ	**Portland Cotta**	**0.84**	**226**	*i* P		**Pb**	**06 24 04.0**	**+0.2**
CVJ	**Coleyville**	**0.97**	**264**	*i* P		**Pn**	**06 24 07.0**	**+0.1**
MTDJ	**Mount Denham**	**0.97**	**264**	*e*P		**Pn**	**06 24 06.7**	**-0.2**
MTDJ				*e*S		**Sb**	**06 24 18.6**	**-0.4**
MTDJ				IAML			06 24 20.6	
	comp=Z,11nm,0.1s							
MTDJ				IAML			06 24 20.7	
	12nm,0.2s							
MCJ	**Malvern**	**1.18**	**250**	⇑*i*P		Pn	06 24 14.7	+4.9
LMGC	**Las Mercedes**	**1.79**	**345**	*e*P		**Pb**	**06 24 20.2**	**0.0**
LMGC				*e*S		**Sn**	**06 24 40.9**	**-0.1**
LMGC				*e*Sg		**Sb**	**06 24 43.0**	**+0.3**
LMGC				IAML			06 24 43.5	
	comp=N,9.2nm,0.1s							
LMGC				IAML			06 24 44.2	
	comp=E,6.4nm,0.1s							
RCC	**Rio Carpintero**	**1.84**	**25**	*e*P		**Pg**	**06 24 22.6**	**0.0**
RCC				*e*S		**Sg**	**06 24 45.6**	**-0.8**
YAR	**Yar**	**2.04**	**4**	*e*P		**Pb**	**06 24 24.9**	**+0.5**
YAR				*e*S		**Sn**	**06 24 47.8**	**+0.6**
YAR				IAML			06 24 51.5	
	comp=N,0.8nm,0.1s							

IDC 29 06:25:15.5±9.1, 21.°88S×118.°60E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=110.2km s-min=67.6km az=5.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**14.23**	**100**	Pn		Pn	06 28 37.4	-1.1
	0.1nm,0.3s,baz=272,slow=12,SNR=4.2							
ASAR				Sn		Sn	06 31 02.0	-15
	0.1nm,0.3s,baz=281,slow=22,SNR=3.0							
ASAR				Lg		Lg	06 32 46.1	
	baz=290,slow=25							
	0.3nm,0.7s							
I07AU	**WARRAMUNGA INF**	**14.83**	**85**	I		I	07 58 30.0	
	baz=255,slow=318,SNR=1.5							
WRA	**Warramunga Arr**	**14.83**	**85**	Pn		Pn	06 28 48.4	+1.7
	0.1nm,0.3s,baz=263,slow=13,SNR=2.2							
WRA				Sn		Sn	06 31 21.6	-10
	0.1nm,0.3s,baz=262,slow=23,SNR=1.5							
WRA				Lg		Lg	06 33 06.9	
	baz=262,slow=34							
	0.8nm,1.0s							

*SJA **29** 07:59:39.3±0.7, 33.°78S×72.°21W, h24km±2km, ML3.1, MW3.5*
*GUC **29** 07:59:41.7±0.8, 33.°76S×72.°13W, h26km±40km, ML3.1*

ISC 29 07:59:41.1±1.3, 33.°77S±0.°02×72.°16W±0.°04, h24km±13km, n51, σ1s29/90, 12C-8D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.74**	**167**	⇑*e*P		**Pb**	**07 59 55.4**	**0.0**
BO03				*e*S		**Sb**	**08 00 05.5**	**+0.4**
BO03				IAML			08 00 07.9	
	comp=E,814nm,0.4s							
MT01	**Popeta**	**0.76**	**98**	*e*P		**Pb**	**07 59 55.2**	**-0.4**
MT01				IAML			08 00 07.7	
	comp=Z,944nm,0.7s							
MT01	**Popeta**	**0.76**	**98**	⇓*e*P		**Pb**	**07 59 55.4**	**-0.3**
MT01				*e*S		**Sb**	**08 00 05.9**	**+0.2**
MT01				IAML			08 00 07.6	
	comp=N,2µm,0.3s							
VA01	**Torpederas**	**0.86**	**30**	*e*P		**Pb**	**07 59 56.9**	**-0.4**
VA01	**Torpederas**	**0.86**	**30**	⇑*e*P		**Pb**	**07 59 56.6**	**-0.7**
VA01				*e*S		**Sb**	**08 00 08.4**	**+0.1**
VA01				IAML			08 00 09.5	
	comp=E,610nm,0.2s							
MT09	**Talagante**	**0.97**	**91**	⇓*e*P		**Pn**	**07 59 58.8**	**-0.6**
MT09				*e*S		**Sb**	**08 00 12.2**	**+0.3**
MT09				IAML			08 00 15.0	
	comp=N,2µm,0.3s							
MT02	**Curacav**	**0.99**	**60**	*e*P		**Pn**	**07 59 58.9**	**-0.5**
MT02				IAML			08 00 14.2	
	comp=Z,460nm,0.3s							
MT02	**Curacav**	**0.99**	**60**	⇓*e*P		**Pn**	**07 59 58.9**	**-0.5**
MT02				*e*S		**Sb**	**08 00 12.0**	**-0.3**
MT02				IAML			08 00 13.9	
	comp=N,596nm,0.2s							
BO01	**Tunca**	**1.09**	**125**	*e*P		**Pn**	**08 00 00.8**	**+0.1**
BO01	**Tunca**	**1.09**	**125**	⇑*e*P		**Pn**	**08 00 00.7**	**-0.1**
BO01				*e*S		**Sn**	**08 00 14.9**	**-0.2**
BO01				IAML			08 00 15.8	
	comp=N,174nm,0.2s							
MT05	**Renca**	**1.24**	**73**	*e*P		**Pn**	**08 00 03.2**	**+0.2**
MT05				*e*S		**Sn**	**08 00 16.4**	**-2.6**
MT05				IAML			08 00 30.5	
	comp=Z,200nm,0.3s							
MT05	**Renca**	**1.24**	**73**	*i* P		**Pn**	**08 00 03.2**	**+0.2**
MT05				*e*S		**Sb**	**08 00 19.3**	**-0.2**
MT05				IAML			08 00 28.1	
	comp=E,609nm,0.2s							
ROCH	**El Roble**	**1.25**	**51**	⇓*e*P		**Pn**	**08 00 03.1**	**-0.1**
ROCH				⇑*e*P		**Pn**	**08 00 03.0**	**-0.1**
ROCH				*e*S		**Sn**	**08 00 19.1**	**-0.1**
ROCH				*e*S		**Sn**	**08 00 19.2**	**-0.1**
ROCH				IAML			08 00 27.3	
	comp=E,416nm,0.6s							
ROCH				IAML			08 00 27.4	
	comp=N,344nm,0.4s							
GO05	**Hualane**	**1.25**	**171**	*e*P		**Pn**	**08 00 03.3**	**+0.2**
GO05				*e*S		**Sb**	**08 00 20.7**	**+0.9**
GO05				IAML			08 00 25.7	
	comp=Z,156nm,0.3s							
GO05	**Hualane**	**1.25**	**171**	⇑*e*P		**Pn**	**08 00 03.2**	**+0.2**
GO05				*e*S		**Sn**	**08 00 19.8**	**+0.6**
GO05				IAML			08 00 22.7	
	comp=E,320nm,0.3s							
BO04	**La Punta**	**1.31**	**100**	*e*P		**Pn**	**08 00 04.2**	**+0.4**
BO04				*e*S		**Sb**	**08 00 21.3**	**-0.1**
BO04				IAML			08 00 23.7	
	comp=N,3µm,0.3s							
PEL	**Peldehue**	**1.38**	**64**	*e*P		**Pn**	**08 00 05.6**	**+0.8**
PEL				*e*S		**Sb**	**08 00 26.2**	**+2.8**
PEL				IAML			08 00 35.1	
	comp=Z,269nm,0.4s							
PEL	**Peldehue**	**1.38**	**64**	⇑*e*P		**Pn**	**08 00 05.5**	**+0.6**
PEL				*e*S		**Sn**	**08 00 22.8**	**+0.5**
PEL				IAML			08 00 31.2	
	comp=E,598nm,0.2s							
MT15	**Las Vizcachas**	**1.39**	**83**	⇓*e*P		**Pn**	**08 00 05.2**	**+0.2**
MT15				*e*S		**Sb**	**08 00 23.4**	**-0.3**
MT15				IAML			08 00 25.7	
	comp=N,1µm,0.2s							
MT03	**Universidad Ad**	**1.40**	**79**	*e*P		**Pn**	**08 00 05.7**	**+0.5**
MT03				*e*S		**Sb**	**08 00 26.0**	**+1.9**
MT03				IAML			08 00 31.6	
	comp=Z,385nm,0.2s							
MT03	**Universidad Ad**	**1.40**	**79**	⇑*e*P		**Pn**	**08 00 05.4**	**+0.2**
MT03				*e*S		**Sn**	**08 00 23.2**	**+0.2**
MT03				IAML			08 00 31.9	
	comp=N,971nm,0.2s							
MT03				IAML			08 00 32.0	
	comp=E,981nm,0.2s							
MT14	**Cerro Cal¡n**	**1.40**	**75**	*e*P		**Pn**	**08 00 05.6**	**+0.4**
MT14				*e*S		**Sn**	**08 00 23.5**	**+0.5**
MT14				IAML			08 00 34.7	
	comp=E,618nm,0.4s							
MT16	**CCHEN**	**1.41**	**77**	⇓*e*P		**Pn**	**08 00 05.7**	**+0.5**
MT16				*e*S		**Sb**	**08 00 23.9**	**-0.3**
MT16				IAML			08 00 26.7	
	comp=N,248nm,0.6s							
MT10	**Hacienda Santa**	**1.44**	**70**	*e*P		**Pn**	**08 00 06.3**	**+0.5**
MT10				*e*S		**Sn**	**08 00 23.9**	**-0.1**
MT10				IAML			08 00 34.6	
	comp=N,1µm,0.4s							
BO02	**Sierra Bellavi**	**1.53**	**132**	*e*P		**Pn**	**08 00 07.7**	**+0.8**
BO02				IAML			08 00 37.1	
	comp=Z,447nm,0.4s							
BO02	**Sierra Bellavi**	**1.53**	**132**	⇑*e*P		**Pn**	**08 00 07.5**	**+0.5**
BO02				*e*S		**Sb**	**08 00 27.4**	**-0.4**
BO02				IAML			08 00 37.5	
	comp=N,836nm,0.2s							
MT13	**San Alfonso**	**1.56**	**90**	*e*P		**Pn**	**08 00 08.2**	**+0.9**
MT13				*e*S		**Sb**	**08 00 29.7**	**+1.0**
MT13				IAML			08 00 31.6	
	comp=Z,218nm,0.3s							
MT13	**San Alfonso**	**1.56**	**90**	⇓*e*P		**Pn**	**08 00 08.1**	**+0.7**
MT13				*e*S		**Sb**	**08 00 28.2**	**-0.5**
MT13				IAML			08 00 31.3	
	comp=E,1µm,0.3s							
LMEL	**Las Melosas**	**1.63**	**93**	⇑*e*P		**Pn**	**08 00 09.1**	**+0.7**
LMEL				*e*S		**Sb**	**08 00 30.6**	**-0.2**
LMEL				IAML			08 00 35.4	
	comp=N,539nm,0.2s							
VA03	**San Esteban**	**1.68**	**54**	*e*P		**Pn**	**08 00 09.7**	**+0.7**
VA03				IAML			08 00 39.8	
	comp=Z,369nm,0.3s							
VA03	**San Esteban**	**1.68**	**54**	⇑*e*P		**Pn**	**08 00 09.6**	**+0.6**
VA03				*e*S		**Sn**	**08 00 30.9**	**+1.1**
VA03				IAML			08 00 39.7	
	com

comp=Z,12nm,2.4s

*IDC **29** 08:00:28.1±0.9,37.°35N×141.°56E,h0km,mb3.9/12, mbtmp3.9/17,ML3.2/4,MS2.0/1,Error ellipse: s-maj=21.4km s-min=19.4km az=147.0*
*NIED **29** 08:00:31.7,37.°31N×141.°55E,h32km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.98; $M_{\theta\theta}$2.75; $M_{\phi\phi}$0.22; $M_{r\theta}$-0.83; $M_{\theta\phi}$ 1.22; $M_{\phi r}$-1.40; Fault plane solution: M_o3.52000×10^{14} NP1: ϕ_s264.00000°,δ36.00000°,λ-63.00000°. NP2:ϕ_s52.00000°, δ58.00000°,λ-108.00000°.*
*JMA **29** 08:00:31.7±0.2,37.°3N±0.°3×141.°6E±0.°8,h32km±1km, MD3.9/40,MV4.0/40,E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
ISC 29 08:00:32.5±1.6,37.°32N±0.°04×141.°48E±0.°08,h31km±10km, n37,σ0°78/40,mb4.0/12,6D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JFK	**Kawauchi**	**0.48**	**276**	*i* P		**Pb**	**08 00 42.5**	**-0.1**
JFK				A		A	08 00 42.5	
	comp=N,3.0nm,0.5s,comp=E,8.0nm,0.4s							
JFK				⇓S		**Sb**	**08 00 50.1**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.58**	**248**	*i* P		**Pb**	**08 00 43.9**	**-0.5**
ONAJ				A		A	08 00 43.9	
	comp=N,9.0nm,0.3s,comp=E,10.0nm,0.3s							
JMST	**Minamisoumatoc**	**0.62**	**311**	*i* P		**Pn**	**08 00 44.4**	**-0.7**
JMST				A		A	08 00 44.4	
	comp=N,5.0nm,0.3s,comp=E,7.0nm,0.8s							
JMST				S		**Sb**	**08 00 53.4**	**+0.1**
JFFD	**Fukushimafurud**	**0.77**	**253**	⇓*i* P		**Pn**	**08 00 46.7**	**-0.5**
JMM	**Marumori**	**0.77**	**315**	⇓*i* P		**Pn**	**08 00 46.7**	**-0.5**
JMM				⇓S		**Sn**	**08 00 57.4**	**-0.4**
JOTO	**OTAMA OYAMA**	**0.94**	**285**	*i* P		**Pb**	**08 00 50.3**	**0.0**
JOTO				S		**Sb**	**08 01 03.4**	**+1.0**
JHO	**Hitachi**	**1.01**	**226**	*i* P		**Pn**	**08 00 49.9**	**-0.7**
JHO				S		**Sn**	**08 01 03.1**	**-0.7**
JIO	**Ouri**	**1.14**	**355**	*i* P		**Sn**	**08 01 06.2**	**-0.6**
JIO				S		**Sn**	**08 01 53.7**	
JYAR	**Yonezawaarcadi**	**1.21**	**300**	A		A	08 00 53.7	
	comp=N,7.0nm,0.6s,comp=E,9.0nm,1.1s							
JOU	**Okura**	**1.23**	**329**	*i* P		**Pb**	**08 00 54.4**	**-0.6**
JOU				A		A	08 00 54.4	
	comp=N,8.0nm,0.9s,comp=E,5.0nm,0.6s							
JOU				S		**Sb**	**08 01 10.6**	**+0.1**
JSB	**Shiboa**	**1.29**	**255**	A		A	08 00 54.9	
	comp=N,5.0nm,1.1s,comp=E,5.0nm,1.9s							
JOFO	**Osakifurukawao**	**1.35**	**341**	A		A	08 00 55.5	
	comp=N,14nm,1.4s,comp=E,10.0nm,2.9s							
JFY	**Yanaizu**	**1.41**	**274**	P		**Pb**	**08 00 57.5**	**-0.7**
JFY				S		**Sb**	**08 01 16.8**	**+0.9**
JYS	**Shirataka**	**1.44**	**309**	P		**Pb**	**08 00 58.4**	**-0.1**
JYS				S		**Sb**	**08 01 17.8**	**+1.3**
MJAR	**Matsushiro Arr**	**2.73**	**254**	Pn		**Pn**	**08 01 14.5**	**+0.3**
	comp=E,1.1nm,0.3s,baz=97,slow=30,SNR=18							
MJAR				Sn		**Sb**	**08 01 53.0**	**-0.7**
	comp=E,2.1nm,0.3s,baz=101,slow=19,SNR=6.3							
MJAR				LR		LR	08 02 18.4	
	comp=E,25nm,19.3s,baz=8.0,slow=39 comp=E,5.8nm,0.4s							
JHJ	**Hachijo jima 2**	**4.42**	**199**	Pn		**Pn**	**08 01 38.0**	**+0.7**
	comp=E,9.5nm,0.3s,baz=144,slow=22,SNR=13							
JHJ				Sn		**Sn**	**08 02 26.6**	**-1.1**
	comp=E,14nm,0.3s,baz=271,slow=23,SNR=2.8 comp=E,39nm,0.2s							
ASAJ	**Asahikawa**	**6.84**	**7**	Pn		**Pn**	**08 02 10.1**	**-0.6**
	comp=E,0.7nm,0.3s,baz=215,slow=16,SNR=4.1							
ASAJ				Sn		**Sn**	**08 03 28.1**	**+0.7**
	comp=E,0.4nm,0.3s,baz=308,slow=33,SNR=3.8 comp=E,1.6nm,0.3s							
KSRS	**Korea Array**	**10.79**	**275**	Pn		**Pn**	**08 03 05.7**	**+1.0**
	comp=E,0.1nm,0.3s,baz=81,slow=13,SNR=4.3 comp=E,0.3nm,0.4s							
HILR	**Hailar Array B**	**19.88**	**315**	P		**P**	**08 04 59.7**	**-1.4**
	comp=E,2.6nm,0.5s,baz=110,slow=11,SNR=2.9							
SONM	**Songino Array**	**27.67**	**303**	P		**P**	**08 06 16.4**	**-1.2**
	comp=E,1.2nm,0.3s,baz=94,slow=8.4,SNR=3.6 comp=E,1.2nm,0.3s							
H11N2	**WAKE ISLAND Hy 28.25**	**121**		T		T	08 35 46.2	
	baz=314,slow=75,SNR=102							
H11N1	**WAKE ISLAND Hy 28.26**	**121**		T		T	08 35 46.7	
	baz=314,slow=75,SNR=132							
H11N3	**WAKE ISLAND Hy 28.27**	**121**		T		T	08 35 47.6	
	baz=314,slow=75,SNR=87							
H11S1	**WAKE ISLAND Hy 28.97**	**123**		T		T	08 36 40.8	
	baz=316,slow=76,SNR=64							
H11S3	**WAKE ISLAND Hy 28.98**	**123**		T		T	08 36 40.9	
	baz=316,slow=76,SNR=51							
H11S2	**WAKE ISLAND Hy 28.99**	**123**		T		T	08 36 42.1	
	baz=316,slow=76,SNR=38							
ZALV	**Zalesovo Beam**	**41.76**	**312**	P		**P**	**08 08 19.0**	**+0.4**
	comp=E,1.9nm,0.7s,baz=86,slow=7.6,SNR=7.6 comp=E,1.9nm,0.7s							
MKAR	**Makanchi Array**	**44.01**	**302**	P		**P**	**08 08 38.4**	**+1.3**
	comp=E,2.4nm,0.8s,baz=80,slow=10,SNR=16 comp=E,2.4nm,0.8s							
KURBB	**Kurchatov Arra**	**45.87**	**308**	P		**P**	**08 08 52.6**	**+0.9**
	comp=E,2.9nm,0.6s,baz=84,slow=8.3,SNR=26 comp=E,2.9nm,0.6s							
ILAR	**Eielson Array**	**49.23**	**32**	P		**P**	**08 09 18.5**	**+0.9**
	comp=E,0.3nm,0.8s,baz=277,slow=7.9,SNR=5.5 comp=E,0.3nm,0.8s							
BVAR	**Borovoye Array**	**50.42**	**312**	P		**P**	**08 09 28.1**	**+1.3**
	comp=E,0.8nm,0.4s,baz=52,slow=7.5,SNR=3.1 comp=E,0.8nm,0.4s							
WRA	**Warramunga Arr**	**57.35**	**188**	P		**P**	**08 10 17.8**	**0.0**
	comp=E,0.6nm,0.9s,baz=6.4,slow=7.2,SNR=4.7 comp=E,0.6nm,0.9s							
FINES	**FINESS Array B**	**68.58**	**332**	P		**P**	**08 11 32.3**	**+0.4**
	comp=E,1.5nm,0.8s,baz=28,slow=6.7,SNR=5.3 comp=E,1.5nm,0.8s							
HFS	**Hagfors**	**73.85**	**336**	P		**P**	**08 12 03.2**	**-0.6**
	comp=E,1.9nm,0.8s,baz=9.5,slow=4.5,SNR=5.3 comp=E,1.9nm,0.8s							
AKASG	**Malin Array Be**	**74.10**	**322**	P		**P**	**08 12 05.5**	**+0.1**
	comp=E,1.0nm,0.4s,baz=47,slow=6.2,SNR=8.2 comp=E,1.0nm,0.4s							
NVAR	**Mina Array Bea**	**74.78**	**53**	P		**P**	**08 12 09.5**	**-0.4**
	comp=E,0.2nm,0.6s,baz=297,slow=6.5,SNR=3.7 comp=E,0.2nm,0.6s							
PDAR	**Pinedale Array**	**77.43**	**46**	P		**P**	**08 12 25.4**	**+0.4**
	comp=E,0.2nm,0.6s,baz=281,slow=4.0,SNR=3.7 comp=E,0.2nm,0.6s							

*IDC **29** 08:03:46.3±1.5,14.°76S×166.°55E,h0km,mb3.8/5, mbtmp4.0/6,ML4.7/1,MS2.7/2,Error ellipse: s-maj=36.6km s-min=31.4km az=138.0*
*NOU **29** 08:03:50.4,14.°98S×166.°52E,h0km,MLv5.0/14,Vanuatu Islands*
ISC 29 08:03:52.9±1.1,14.°98S±0.°09×166.°5E±0.°1,h36km,n17, σ1°49/16,mb3.7/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVP	**Devils Point**	**3.16**	**150**	P		**Pn**	**08 04 41.7**	**+1.6**
KOUNC	**Koumac, New Ca**	**5.94**	**201**	P		**Pn**	**08 05 20.1**	**+1.8**
MARNC	**Mare, Loyalty**	**6.62**	**168**	P		**Pn**	**08 05 29.7**	**+2.0**
YATNC	**Mamie plateau,**	**7.05**	**177**	P		**Pn**	**08 05 33.8**	**+0.2**
DZM	**Mont Dzumac**	**7.05**	**181**	Pn		**Pn**	**08 05 34.0**	**+0.3**
	13nm,0.3s,baz=186,slow=19,SNR=12							
DZM				Sn		**Sn**	**08 06 51.2**	**-1.5**
	baz=277,slow=23 28nm,0.3s							
NOUC	**Port Laguerre**	**7.09**	**182**	P		**Pn**	**08 05 35.5**	**+1.4**
NGOA	**Tingoa Renbel**	**7.16**	**298**	P		**Pn**	**08 05 35.6**	**+0.4**
ONTNC	**Ouen Toro**	**7.29**	**181**	P		**Pn**	**08 05 37.8**	**+0.9**
OUENC	**Ouen Island, N**	**7.40**	**178**	P		**Pn**	**08 05 40.2**	**+1.7**
TATA	**Tatamba Isabel**	**9.29**	**314**	P		**Pn**	**08 06 06.1**	**+1.7**
CTA	**Charters Tower**	**19.99**	**252**	P		**P**	**08 08 23.1**	**+0.6**
	3.2nm,0.5s,baz=73,slow=13,SNR=3.6 3.2nm,0.5s							
RPZ	**Rata Peaks**	**28.90**	**173**	LR		LR	08 18 53.4	
	comp=Z,5.4nm,20.4s,baz=200,slow=31							
WRA	**Warramunga Arr**	**31.07**	**256**	P		**P**	**08 10 06.7**	**-1.2**
	1.6nm,1.2s,baz=88,slow=10,SNR=5.1 1.6nm,1.2s							
ASAR	**Alice Springs**	**31.92**	**249**	P		**P**	**08 10 13.9**	**-1.4**
	0.6nm,0.7s,baz=72,slow=10.0,SNR=9.6 0.6nm,0.7s							
ASAJ	**Asahikawa**	**62.74**	**341**	LR		LR	08 37 14.6	
	comp=Z,16nm,21.7s,baz=178,slow=32							
QSPA	**South Pole Qui**	**75.05**	**180**	P		**P**	**08 15 31.0**	**+0.3**

1.2nm,0.9s,baz=13,slow=2.0,SNR=6.3 1.2nm,0.9s

ILAR	**Eielson Array**	**86.98**	**18**	P		**P**	**08 16 32.1**	**-1.9**
	0.5nm,0.8s,baz=232,slow=5.3,SNR=6.2 0.5nm,0.8s							

*IDC **29** 08:04:17.7±0.8,6.°74N×72.°95W,h162km±9km,mb3.3/7, mbtmp3.9/10,Error ellipse: s-maj=26.9km s-min=8.1km az=131.0*
*CATAC **29** 08:04:17.3±0.5,7.°N±2.°×7.°3W±.°,h158km±5km,M4.2/10, mB4.6/2,mb4.2/3,MLv4.2/10,Mw(mB)3.8/2,Error ellipse: s-maj=7.8km s-min=4.1km az=93.0,confirmed*
*RSNC **29** 08:04:18.9±0.0,7.°N±1.°×7.°3W±.°,h148km±1km,M3.9, mB4.7,mb4.3,ML3.6,MLv4.3,Mw(mB)3.9*
*NEIC **29** 08:04:19.1±1.4,6.°85N±0.°09×73.°05W±0.°09,h154km±9km, mb4.3/24,Error ellipse: s-maj=17.9km s-min=5.3km az=132.0*
ISC 29 08:04:18.0±0.6,6.°86N±0.°03×73.°20W±0.°04,h152km±5km, n84,σ1°39/125,mb4.2/16,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.26**	**177**	P		**Pn**	**08 04 39.2**	**+0.2**
BARC				S		**Sn**	**08 04 54.3**	**-0.6**
BRJC	**Barrancabermej**	**0.56**	**282**	P		**Pn**	**08 04 40.9**	**+1.1**
BRJC				S		**Sn**	**08 04 57.8**	**+1.4**
PAMC	**Pamplona, Colo**	**0.69**	**46**	P		**Pn**	**08 04 42.1**	**+0.9**
PAMC				S		**Sn**	**08 04 58.8**	**-0.1**
RUSC	**La Rusia**	**0.96**	**173**	P		**Pn**	**08 04 43.2**	**0.0**
RUSC				S		**Sn**	**08 05 02.0**	**-0.4**
RUSC	**La Rusia**	**0.96**	**173**	P		**Pn**	**08 04 43.1**	**-0.1**
RUSC				S		**Sn**	**08 05 01.8**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.29**	**256**	P		**Pn**	**08 04 45.6**	**0.0**
PTBC				S		**Sn**	**08 05 07.0**	**+0.3**
OCAC	**Ocana**	**1.38**	**355**	P		**Pn**	**08 04 47.9**	**+0.6**
OCAC				S		**Sn**	**08 05 09.0**	**+0.3**
SPBC	**San Pablo de B**	**1.48**	**216**	P		**Pn**	**08 04 48.0**	**+0.4**
SPBC				S		**Sn**	**08 05 10.5**	**+0.2**
CHIC	**Chingaza**	**2.27**	**194**	P		**Pn**	**08 04 57.0**	**+0.1**
CHIC				S		**Sn**	**08 05 26.6**	**-0.2**
ROSC	**El Rosal**	**2.29**	**209**	P		**Pn**	**08 04 59.0**	**+1.9**
	270nm,0.3s,baz=75,slow=9.6,SNR=120							
ROSC				S		**Sn**	**08 05 28.8**	**+1.6**
	1μm,0.5s,baz=65,slow=17,SNR=7.5							
ROSC	**El Rosal**	**2.29**	**209**	P		**Pn**	**08 04 58.8**	**+1.7**
ROSC				S		**Sn**	**08 05 28.1**	**+0.9**
MEDEC	**Medelln, Ant**	**2.44**	**257**	P		**Pn**	**08 04 59.4**	**+0.7**
MEDEC				S		**Sn**	**08 05 31.0**	**+0.9**
CVER	**Cruz Verde, Cu**	**2.48**	**201**	P		**Pn**	**08 05 00.6**	**+1.2**
CVER				S		**Sn**	**08 05 31.0**	**-0.3**
UREC	**San Jos de Ur**	**2.48**	**291**	P		**Pn**	**08 04 59.0**	**0.0**
UREC				S		**Sn**	**08 05 29.9**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.70**	**233**	P		**Pn**	**08 05 03.1**	**+1.0**
GUY2C				S		**Sn**	**08 05 36.5**	**+0.4**
VILC	**Villavicencio,**	**2.77**	**190**	P		**Pn**	**08 05 02.4**	**-0.3**
VILC				S		**Sn**	**08 05 36.5**	**-0.8**
CMAN1	**Manizales, Cal**	**2.92**	**233**	P		**Pn**	**08 05 05.5**	**+0.8**
CMAN1				S		**Sn**	**08 05 41.0**	**+0.3**
CBOC	**Ciudad Bolivar**	**2.97**	**251**	P		**Pn**	**08 05 06.7**	**+1.5**
CBOC				S		**Sn**	**08 05 42.4**	**+0.8**
ARGC	**Ariguani, Magd**	**3.16**	**341**	P		**Pn**	**08 05 09.2**	**+1.7**
ARGC				S		**Sn**	**08 05 47.9**	**+2.0**
SDV	**Santo Domingo**	**3.24**	**51**	P		**Pn**	**08 05 08.4**	**-0.4**
	188nm,0.4s,baz=194,slow=3.4,SNR=56							
SDV				S		**Sn**	**08 05 46.0**	**-2.1**
	87nm,0.4s,baz=76,slow=23,SNR=9.1							
SDV	**Santo Domingo**	**3.24**	**51**			**Pn**	**08 05 08.7**	**-0.1**
ARMEC	**Armenia, Quind**	**3.35**	**227**	P		**Pn**	**08 05 12.3**	**+2.2**
ARMEC				S		**Sn**	**08 05 53.1**	**+2.6**
APAC	**Apartado, Choc**	**3.51**	**287**	P		**Pn**	**08 05 13.0**	**+1.0**
APAC				S		**Sn**	**08 05 54.5**	**+0.6**
PRAC	**Prado**	**3.54**	**208**	P		**Pn**	**08 05 12.9**	**+0.4**
PRAC				S		**Sn**	**08 05 55.7**	**+1.0**
PRAC	**Prado**	**3.54**	**208**	P		**Pn**	**08 05 12.3**	**-0.2**
PRAC				S		**Sn**	**08 05 54.3**	**-0.5**
SJCC	**San Jacinto, C**	**3.60**	**327**	P		**Pn**	**08 05 13.0**	**-0.2**
SJCC				S		**Sn**	**08 05 54.8**	**-1.3**
SJCC	**San Jacinto, C**	**3.60**	**327**	P		**Pn**	**08 05 12.8**	**-0.4**
SJCC				S		**Sn**	**08 05 54.2**	**-1.9**
LCBC	**Los crdobas,**	**3.72**	**303**	P		**Pn**	**08 05 16.8**	**+2.1**
LCBC				S		**Sn**	**08 05 59.0**	**+0.3**
URMC	**La Uribe, Meta**	**3.77**	**198**	P		**Pn**	**08 05 16.1**	**+0.6**
URMC				S		**Sn**	**08 05 59.7**	**-0.4**
SOLC	**Bahia Solano**	**4.23**	**262**	P		**Pn**	**08 05 22.5**	**+1.2**
SOLC				S		**Sn**	**08 06 09.4**	**-1.2**
PIZC	**Pizarro, Choco**	**4.55**	**246**	P		**Pn**	**08 05 27.6**	**+2.1**
PIZC				S		**Sn**	**08 06 17.3**	**-0.8**
PTAC	**Punta Ardita,**	**4.59**	**274**	P		**Pn**	**08 05 25.9**	**-0.1**
PTAC				S		**Sn**	**08 06 17.4**	**-1.6**
MACC	**Macarena, Meta**	**4.72**	**188**	P		**Pn**	**08 05 25.9**	**-2.0**
MACC				S		**Sn**	**08 06 17.4**	**-4.9**
URI	**Uribia**	**4.96**	**14**	P		**Pn**	**08 05 29.6**	**-1.4**
URI				S		**Sn**	**08 06 25.6**	**-2.3**
URIC	**Uribia, Colomb**	**4.96**	**14**	P		**Pn**	**08 05 29.5**	**-1.5**
URIC				S		**Sn**	**08 06 22.7**	**-5.2**
JAMC	**Jamundi, Valle**	**5.01**	**224**	P		**Pn**	**08 05 31.7**	**-0.1**
	2nm2μm33nm,0.4s							
UPD2	**Meteti**	**5.06**	**290**	P		**Pn**	**08 05 31.3**	**-1.0**
UPD2				S		**Sn**	**08 06 28.9**	**-1.4**
GARC	**Garzon, Huila**	**5.17**	**206**	P		**Pn**	**08 05 33.1**	**-0.9**
POPC	**Popayan, Colom**	**5.51**	**219**	P		**Pn**	**08 05 38.6**	**+0.1**
	356nm25nm,0.6s							
POPC				S		**Sn**	**08 06 40.0**	**-1.4**
	356nm25nm,0.6s							
FLOC	**Florencia**	**5.78**	**205**	P		**Pn**	**08 05 41.5**	**-0.4**
FLOC				S		**Sn**	**08 06 48.1**	**+0.5**
FLOC	**Florencia**	**5.78**	**205**	P		**Pn**	**08 05 41.2**	**-0.7**
	884nm32nm,0.8s							
FLOC				S		**Sn**	**08 06 45.6**	**-1.9**
	884nm32nm,0.8s							
BBAC	**Balboa, Cauca**	**6.27**	**220**	P		**Pn**	**08 05 48.6**	**0.0**
	1μm43nm,0.6s							
BBAC				S		**Sn**	**08 06 59.2**	**-0.3**
	1μm43nm,0.6s							
CRUC	**La Cruz**	**6.45**	**216**	P		**Pn**	**08 05 54.2**	**+3.1**
BCIP	**Isla Barro Col**	**6.96**	**290**	P		**Pn**	**08 05 57.8**	**+0.1**
BCIP				S		**Sn**	**08 07 15.6**	**-0.2**
BCIP	**Isla Barro Col**	**6.96**	**290**	P		**Pn**	**08 05 57.0**	**-0.6**
	21nm,1.6s							
BCIP				S		**Sn**	**08 07 13.2**	**-2.6**
	21nm,1.6s							
AZU	**Azuero**	**7.08**	**278**	P		**Pn**	**08 05 59.4**	**+0.2**
	16nm,1.6s							
AZU				S		**Sn**	**08 07 14.5**	**-4.1**
	16nm,1.6s							
OTAV	**Otavalo**	**8.41**	**219**			**Pn**	**08 06 18.3**	**+0.9**
OTAV	**Otavalo**	**8.41**	**219**	P		**Pn**	**08 06 14.6**	**-2.7**
OTAV				S		**Sn**	**08 07 48.3**	**-2.9**
PAC1	**Pacto, Paraso**	**8.60**	**221**	P		**Pn**	**08 06 20.4**	**+0.8**
MTDJ	**Mount Denham**	**12.07**	**340**	Pn		**Pn**	**08 07 07.6**	**+2.3**
JTS	**Las Juntas de**	**12.12**	**287**	P		**P**	**08 07 10.0**	**-2.1**
	1.1nm,0.4s,baz=108,slow=20,SNR=4.8							
SIUN	**Universidad Ur**	**13.27**	**302**	Pn		**Pn**	**08 07 22.0**	**+1.3**
BOAV	**Boa Vista**	**13.38**	**109**	Pn		**Pn**	**08 07 22.5**	**+0.3**
TEIG	**Tepich**	**19.76**	**314**	P		**Pn**	**08 08 38.2**	**-1.3**
V48A	**Smith Brothers**	**31.35**	**338**	P		**P**	**08 10 26.0**	**+1.7**
V48A					IAmb	IAmb	08 10 26.9	
	comp=Z,5.8nm,1.0s							
WVT	**Waverly**	**32.07**	**337**	P		**P**	**08 10 31.8**	**+1.2**
WVT					IAmb	IAmb	08 10 32.4	
	comp=Z,8.9nm,1.4s							
WHAR	**Wooly Hollow**	**33.30**	**331**	P		**P**	**08 10 42.1**	**+0.8**
WHAR					IAmb	IAmb	08 11 16.2	
	comp=Z,9.3nm,1.4s							
CCM	**Cathedral Cave**	**35.11**	**335**	P		**P**	**08 10 57.5**	**+0.7**
SFIN	**Lafayette**	**35.63**	**342**	P		**P**	**08 11 02.0**	**+0.8**
SFIN					IAmb	IAmb	08 11 02.5	
	comp=Z,7.3nm,1.0s							
R40A	**Maddies Statio**	**35.74**	**334**	P		**P**	**08 11 03.0**	**+0.7**
R40A					IAmb	IAmb	08 11 03.3	
	comp=Z,2.4nm,0.5s							
TXAR	**Lajitas Array**	**36.38**	**312**	P		**P**	**08 11 08.4**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=126,slow=8.8,SNR=13 comp=Z,0.4nm,0.4s							
TX31	**Lajitas Ar. Si**	**36.38**	**312**	P		**P**	**08 11 09.0**	**+1.0**
MNTX	**Cornudas Mount**	**38.89**	**314**	P		**P**	**08 11 29.7**	**+0.8**
JFWS	**Jewell Farm**	**38.94**	**340**	P		**P**	**08 11 29.2**	**+0.1**
LMN	**Caledonia Moun**	**39.52**	**9**	P		**P**	**08 11 33.9**	**0.0**
D62A	**Allapoint, All**	**40.24**	**4**	P		**P**	**08 11 40.4**	**+0.7**
D62A					IAmb	IAmb	08 12 03.4	
	comp=Z,11nm,1.3s							

E46A	**Sault Ste Mari**	**40.52**	**348**	P		**P**	**08 11 43.0**	**+1.0**
E46A					IAmb	IAmb	08 12 11.8	
	comp=Z,12nm,1.1s							
BATG	**Bathurst New B**	**40.74**	**7**	P		**P**	**08 11 44.1**	**+0.2**
BATG					IAmb	IAmb	08 12 12.8	
	comp=Z,6.3nm,1.1s							
SDCO	**Great Sand Dun**	**42.48**	**321**	P		**P**	**08 12 00.2**	**+1.7**
K30B	**Basset**	**42.62**	**331**	P		**P**	**08 11 59.6**	**+0.3**
EYMN	**Ely**	**43.81**	**342**	P		**P**	**08 12 09.1**	**+0.3**
EYMN					IAmb	IAmb	08 12 09.5	
	comp=Z,4.6nm,0.7s							
PV02	**Paradox Valley**	**44.80**	**319**	P		**P**	**08 12 18.1**	**+1.0**
PV13	**Radium Mtn., P**	**44.83**	**319**	P		**P**	**08 12 17.8**	**+0.5**
ULM	**Lac du Bonnet**	**47.23**	**340**	P		**P**	**08 12 35.4**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=132,slow=7.7,SNR=13 comp=Z,2.3nm,0.5s							
ULM	**Lac du Bonnet**	**47.23**	**340**	IAmb		IAmb	08 12 36.1	
	comp=Z,2.8nm,0.5s							
PDAR	**Pinedale Array**	**48.01**	**324**	P		**P**	**08 12 42.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=133,slow=8.7,SNR=5.0 comp=Z,0.4nm,0.5s							
SCHQ	**Schefferville**	**48.11**	**5**	P		**P**	**08 12 42.4**	**0.0**
	comp=Z,1.2nm,0.5s,baz=187,slow=7.3,SNR=5.5 comp=Z,1.2nm,0.5s							
SCHQ	**Schefferville**	**48.11**	**5**	IAmb		IAmb	08 12 60.0	
	comp=Z,9.2nm,1.4s							
CCCA	**Chr Cany lake**	**49.49**	**312**	P		**P**	**08 12 54.6**	**+1.4**
NVAR	**Mina Array Bea**	**51.41**	**315**	P		**P**	**08 13 08.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=121,slow=7.3,SNR=3.7 comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**63.21**	**340**	P		**P**	**08 14 29.6**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=135,slow=6.5,SNR=15 comp=Z,1.3nm,0.5s							
ILAR	**Eielson Array**	**76.90**	**335**	P		**P**	**08 15 52.8**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=80,slow=5.7,SNR=2.7 comp=Z,0.2nm,0.7s							
ASAR	**Alice Springs**	**149.07**	**234**	PKPbc		**PKPbc**	**08 23 47.2**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=121,slow=3.7,SNR=4.5							
WRA	**Warramunga Arr**	**150.29**	**241**	PKPbc		**PKPbc**	**08 23 50.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=107,slow=2.8,SNR=11							

*VAO **29** 08:19:37.7±0.3,15.°02S×38.°07W,h0km,mbR3.9, Presumed earthquake*
*OSUNB **29** 08:19:40.9±0.3,15.°01S×38.°18W,h10km,mR3.7/25,Error ellipse: s-maj=1.7km s-min=2.5km az=0.0*
ISC 29 08:19:39.1±1.2,15.°05S±0.°05×38.°01W±0.°08,h10km,n61, σ2°34/87,Brazil

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMC01	**Camacan, BA**	**1.49**	**258**	P		**Pb**	**08 20 08.3**	**+1.4**
CMC01	**Camacan, BA**	**1.49**	**258**	*eP*		**Pb**	**08 20 08.3**	**+1.4**
CMC01				*eS*		**Sn**	**08 20 25.7**	**+0.2**
GUA01	**Guaratinga, BA**	**2.31**	**228**	P		**Pn**	**08 20 20.2**	**+3.0**
GUA01				S		**Sn**	**08 20 46.5**	**+0.8**
GUA01	**Guaratinga, BA**	**2.31**	**228**	*eP*		**Pn**	**08 20 20.3**	**+3.0**
GUA01				*eS*		**Sn**	**08 20 46.6**	**+0.8**
NBLA	**Lagarto - SE**	**4.03**	**3**	P		**Pn**	**08 20 41.8**	**+0.8**
ARCA	**Araşuai, MG**	**4.20**	**244**	P		**Pn**	**08 20 46.4**	**+3.1**
ARCA				S		**Sn**	**08 21 30.4**	**-2.1**
ARCA	**Araşuai, MG**	**4.20**	**244**	*eP*		**Pn**	**08 20 46.1**	**+2.8**
ARCA				*eS*		**Sn**	**08 21 30.4**	**-2.1**
BSFB	**Barra de Sao F**	**4.64**	**215**	P		**Pn**	**08 20 51.1**	**+1.7**
BSFB				S		**Sn**	**08 21 41.1**	**-2.2**
BSFB	**Barra de Sao F**	**4.64**	**215**	*eP*		**Pn**	**08 20 50.9**	**+1.5**
BSFB				*eS*		**Sn**	**08 21 40.0**	**-3.3**
NBPN	**Ponto Novo - B**	**4.69**	**333**	P		**Pn**	**08 20 52.0**	**+2.0**
NBPN				S		**Sn**	**08 21 40.7**	**-3.9**
NBPN	**Ponto Novo - B**	**4.69**	**333**	*eP*		**Pn**	**08 20 52.1**	**+2.0**
NBPN				*eS*	

BSO1	**Boso 1**	**1.99**	**36**	*eP*		**Pn**	**08 21 46.6**	**+1.1**
BSO1				*eS*		**Sn**	**08 22 14.8**	**+0.3**
JOD2	**Odawara 2**	**2.23**	**350**	*eP*		**Pn**	**08 21 48.8**	**+0.1**
SHZ3	**Shizuoka 3**	**2.29**	**331**	*eP*		**Pn**	**08 21 49.6**	**+0.2**
JYN	**Shimob**	**2.57**	**341**	*eP*		**Pn**	**08 21 52.8**	**+0.3**
JIE	**Ise**	**2.71**	**300**	*eP*		**Pn**	**08 21 53.7**	**-0.5**
JIE				*eS*		**Sn**	**08 22 27.4**	**-2.6**
JRY	**Ryogami san**	**3.00**	**350**	*eP*		**Pn**	**08 21 57.7**	**+0.2**
JRY				*eS*		**Sn**	**08 22 34.0**	**-2.1**
JAG	**Ashikaga**	**3.36**	**359**	*eP*		**Pn**	**08 22 00.6**	**-1.2**
JYTA	**Yamagatataniai**	**3.44**	**318**	*eP*		**Pn**	**08 22 02.7**	**0.0**
MJAR	**Matsushiro Arr**	**3.65**	**343**	P		**Pn**	**08 22 05.1**	**-0.3**
	3.8nm,0.5s,baz=158,slow=12,SNR=16							
MJAR				S		**Sn**	**08 22 48.9**	**-1.3**
	2.6nm,0.6s,baz=124,slow=21,SNR=4.6							
JCJ	**Chichijima**	**6.37**	**158**	P		**Pn**	**08 22 38.2**	**-2.1**
	20nm,0.3s,baz=348,slow=20,SNR=8.1							
JCJ				S		**Sn**	**08 23 48.4**	**-4.7**
	39nm,0.4s,baz=294,slow=22,SNR=2.6							
JNU	**Nakatsue**	**7.28**	**273**	P		**Pn**	**08 22 55.2**	**+3.1**
	2.0nm,0.6s,baz=126,slow=10,SNR=2.3							
KURBB	**Kurchatov Arra**	**47.33**	**311**	P		**P**	**08 29 23.3**	**+0.6**
	0.2nm,0.4s,baz=89,slow=9.1,SNR=3.5							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**52.94**	**186**	P		**P**	**08 30 05.8**	**+0.7**
	0.2nm,0.4s,baz=0.9,slow=7.6,SNR=9.3							
	0.2nm,0.4s							
ILAR	**Eielson Array**	**53.68**	**31**	P		**P**	**08 30 09.6**	**-0.3**
	0.3nm,0.9s,baz=266,slow=6.2,SNR=3.2							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**56.66**	**186**	P		**P**	**08 30 32.5**	**+0.7**
	0.1nm,0.3s,baz=357,slow=6.0,SNR=2.1							
	0.1nm,0.3s							
TXAR	**Lajitas Array**	**93.78**	**51**	P		**P**	**08 34 04.8**	**+0.8**
	0.2nm,0.5s,baz=311,slow=7.2,SNR=3.8							
	0.2nm,0.5s							

*IDC **29** 08:32:30.0±1.2,4°.70S×122°.96E, h0km, mb3.6/4, mbtmp3.7/7, ML3.7/3, MS2.9/1, Error ellipse: s-maj=34.8km s-min=20.3km az=55.0*
*DJA **29** 08:32:32.4±1.2,5°.5S×4°.1E±1°.1, h10km, M3.6/6, MLv3.6/6*
ISC 29 08:32:31.4±1.0, 4°.67S±0°.06×123°.0E±0°.1, h10km, n12, σ0°53/12, mb3.7/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.80**	**333**	P	P	**Pg**	**08 32 46.7**	**0.0**
BBSI	**Bau Bau**	**0.91**	**207**	P	P	**Pg**	**08 32 49.4**	**+0.5**
KKSI	**Kolaka, Sulawe**	**1.42**	**290**	P	P	Pn	08 32 54.8	-2.4
BSSI	**Bau Bau, Buton**	**2.88**	**239**	P	P	**Pn**	**08 33 16.2**	**-1.2**
KAPI	**Kappang**	**3.24**	**264**	Pn	P	**Pn**	**08 33 22.1**	**-0.2**
	5.9nm,0.3s,baz=111,slow=10,SNR=11							
KAPI				Sn		**Sn**	**08 34 00.9**	**+0.1**
	6.8nm,0.3s,baz=40,slow=23,SNR=1.7							
KAPI				LR		LR	08 34 45.3	
	comp=Z,180nm,19.0s,baz=124,slow=42							
	27nm,0.4s							
KAPI	**Kappang**	**3.24**	**264**	P		**Pn**	**08 33 22.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**13.60**	**169**	Pn		**Pn**	**08 35 44.3**	**-0.1**
	0.4nm,0.3s,baz=333,slow=6.8,SNR=8.3							
	2.0nm,1.0s							
WRA	**Warramunga Arr**	**18.78**	**145**	P		**P**	**08 36 50.4**	**-0.7**
	0.2nm,0.3s,baz=315,slow=13,SNR=9.3							
	1.0nm,0.6s							
ASAR	**Alice Springs**	**21.63**	**152**	P		**P**	**08 37 22.1**	**+0.2**
	4.1nm,0.9s,baz=344,slow=16,SNR=28							
	4.1nm,0.9s							
SONM	**Songino Array**	**54.28**	**346**	P		**P**	**08 41 58.4**	**+0.5**
	0.2nm,0.3s,baz=163,slow=10,SNR=2.3							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**62.58**	**330**	P		**P**	**08 42 56.1**	**+0.4**
	0.2nm,0.4s,baz=137,slow=7.0,SNR=3.1							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**66.99**	**331**	P		**P**	**08 43 24.4**	**0.0**
	0.4nm,0.6s,baz=129,slow=6.3,SNR=4.3							
	0.4nm,0.6s							

*NEIC **29** 08:45:53.9±1.3, 17°.77N±0°.03×66°.94W±0°.01, h10km±2km, ML4.4/43, ML3.8/21(RSPR), Error ellipse: s-maj=4.6km s-min=2.9km az=10.0*
*SDD **29** 08:45:55.8±1.6, 17°.90N×66°.92W, h20km±7km, MD3.2, ML3.9, MW3.7, Presumed earthquake*
*RSPR **29** 08:45:56.0, 17°.93N×66°.91W, h14km, MD3.5/21*
*OSPL **29** 08:45:56.1±1.6, 17°.83N×66°.89W, h11km±11km, ML3.8, Presumed earthquake*
*PTWC **29** 08:45:56, 17°.90N×66°.90W, Ml4.3/15*
ISC 29 08:45:55.0±1.0, 17°.89N±0°.04×66°.93W±0°.02, h20km±3km, n97, σ0°96/108, 11C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**30**			**Pb**	**08 45 58.7**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.10**	**30**	⇑*iP*		**Pb**	**08 45 58.7**	**-0.2**
MLPR	**Magueyes Islan**	**0.13**	**306**			**Pb**	**08 45 59.4**	**-0.4**
MLPR				IAML			08 46 02.4	
	42μm,0.3s							
MLPR				IAML			08 46 02.6	
	48μm,0.4s							
MLPR	**Magueyes Islan**	**0.13**	**306**	P		**Pb**	**08 45 59.5**	**-0.4**
MLPR	**Magueyes Islan**	**0.13**	**306**	*eP*		**Pb**	**08 45 59.4**	**-0.4**
MLPR				*eS*		**Sb**	**08 46 02.3**	**-1.0**
MLPR				IAML			08 46 02.3	
	comp=N,13μm,0.2s							
MLPR	**Magueyes Islan**	**0.13**	**306**	⇑*eP*		**Pb**	**08 45 59.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.20**	**304**			**Pb**	**08 46 00.5**	**+0.1**
CRPR						**Sb**	**08 46 04.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.20**	**304**	IAML			08 46 04.7	
	comp=N,16μm,0.4s							
CRPR				IAML			08 46 04.7	
	comp=N,18μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.20**	**304**	P		**Pb**	**08 46 00.5**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.20**	**304**	*eP*		**Pb**	**08 46 00.5**	**+0.1**
LSP	**Las Mesas**	**0.32**	**333**			**Pb**	**08 46 02.1**	**+0.1**
LSP	**Las Mesas**	**0.32**	**333**	⇓*eP*		**Pb**	**08 46 02.1**	**+0.1**
OBIP	**Obispado Ponce**	**0.34**	**64**			**Pb**	**08 46 02.0**	**-0.3**
OBIP	**Obispado Ponce**	**0.34**	**64**			**Sb**	**08 46 07.2**	**-0.2**
OBIP	**Obispado Ponce**	**0.34**	**64**	P		**Pb**	**08 46 02.2**	**-0.2**
OBIP	**Obispado Ponce**	**0.34**	**64**	*i* P		**Pb**	**08 46 02.2**	**-0.2**
OBIP				*eS*		**Sb**	**08 46 07.1**	**-0.3**
OBIP				IAML			08 46 07.8	
	comp=Z,116μm,0.2s							
OBIP	**Obispado Ponce**	**0.34**	**64**	⇓*eP*		**Pb**	**08 46 02.3**	**-0.1**
OBIP				*eS*		**Sb**	**08 46 07.2**	**-0.2**
CELP	**Cerrillos**	**0.38**	**61**			**Pb**	**08 46 02.8**	**-0.1**
CELP				IAML			08 46 08.4	
	comp=Z,37μm,0.5s							
CELP				IAML			08 46 08.6	
	comp=Z,21μm,0.6s							
CELP	**Cerrillos**	**0.38**	**61**			**Sb**	**08 46 08.2**	**-0.3**
CELP	**Cerrillos**	**0.38**	**61**	P		**Pb**	**08 46 02.9**	**-0.1**
CELP	**Cerrillos**	**0.38**	**61**	*eP*		**Pb**	**08 46 02.9**	**-0.1**
CELP				⇓*eS*		**Sb**	**08 46 08.2**	**-0.3**
CELP				IAML			08 46 08.3	
	comp=N,13μm,0.4s							
CELP	**Cerrillos**	**0.38**	**61**	⇓*eP*		**Pb**	**08 46 02.9**	**-0.1**
PRSN	**Puerto Rico Se**	**0.38**	**328**			**Pb**	**08 46 03.1**	**+0.1**
PRSN				IAML			08 46 09.7	
	comp=N,40μm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**328**			**Sb**	**08 46 09.2**	**+0.7**
PRSN	**Puerto Rico Se**	**0.38**	**328**	P		**Pb**	**08 46 03.1**	**+0.1**
PRSN	**Puerto Rico Se**	**0.38**	**328**	*ePg*		**Pb**	**08 46 03.1**	**+0.1**
PRSN				⇓*eS*		**Sb**	**08 46 09.4**	**+0.9**
PRSN				IAML			08 46 09.7	
	comp=N,29μm,0.2s							
PRSN	**Puerto Rico Se**	**0.38**	**328**	⇑*eP*		**Pb**	**08 46 03.1**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.41**	**29**			**Pb**	**08 46 03.0**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.41**	**29**			**Sb**	**08 46 08.5**	**-0.9**
UUPR	**Utuado, UPR, P**	**0.41**	**29**	P		**Pb**	**08 46 03.1**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.41**	**29**	⇓*eP*		**Pb**	**08 46 03.1**	**-0.5**
AOPR	**Arecibo Observ**	**0.48**	**20**			**Pb**	**08 46 04.3**	**-0.5**
AOPR				IAML			08 46 11.8	
	comp=N,18μm,0.6s							
AOPR	**Arecibo Observ**	**0.48**	**20**			**Sb**	**08 46 10.7**	**-0.8**
AOPR	**Arecibo Observ**	**0.48**	**20**	P		**Pb**	**08 46 04.3**	**-0.5**
AOPR	**Arecibo Observ**	**0.48**	**20**	⇓*ePg*		**Pb**	**08 46 04.3**	**-0.5**
AOPR				⇓*eSg*		**Sb**	**08 46 10.8**	**-0.8**
AOPR				IAML			08 46 11.6	
	comp=N,15μm,0.6s							
AOPR	**Arecibo Observ**	**0.48**	**20**	⇓*eP*		**Pb**	**08 46 04.3**	**-0.5**
AGPR	**Aguadilla, PR**	**0.60**	**343**			**Pb**	**08 46 06.6**	**-0.2**
AGPR				IAML			08 46 14.8	
	comp=N,14μm,0.4s							
AGPR	**Aguadilla, PR**	**0.60**	**343**			**Sb**	**08 46 14.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.60**	**343**	P		**Pb**	**08 46 06.7**	**-0.2**
AGPR	**Aguadilla, PR**	**0.60**	**343**	⇑*ePg*		**Pb**	**08 46 06.6**	**-0.2**
AGPR				⇑*eSg*		**Sb**	**08 46 14.6**	**-0.3**
AGPR				IAML			08 46 14.8	
	comp=N,10μm,0.4s							
AGPR	**Aguadilla, PR**	**0.60**	**343**	⇑*eP*		**Pb**	**08 46 06.6**	**-0.2**
ECPR	**Experimental S**	**0.69**	**52**			**Pb**	**08 46 07.7**	**-0.6**
ECPR				IAML			08 46 17.6	
	comp=N,16μm,0.3s							
ECPR				IAML			08 46 19.1	
	comp=N,17μm,0.3s							
ECPR	**Experimental S**	**0.69**	**52**	P		**Pb**	**08 46 07.7**	**-0.6**
ECPR	**Experimental S**	**0.69**	**52**	⇓*eP*		**Pb**	**08 46 07.8**	**-0.6**
EMPR	**Esperanza - Ma**	**0.70**	**33**			**Pb**	**08 46 08.4**	**-0.1**
EMPR						**Sb**	**08 46 18.6**	**+0.9**
EMPR	**Esperanza - Ma**	**0.70**	**33**	P		**Pb**	**08 46 08.4**	**-0.1**
EMPR	**Esperanza - Ma**	**0.70**	**33**	⇓*eP*		**Pb**	**08 46 08.4**	**-0.1**
EMPR				*eS*		**Sb**	**08 46 18.6**	**+0.9**
IDE	**Isla Desecheo**	**0.71**	**314**			**Pb**	**08 46 08.7**	**-0.1**
IDE						**Sb**	**08 46 18.4**	**+0.2**
IDE	**Isla Desecheo**	**0.71**	**314**	⇓*eP*		**Pb**	**08 46 08.7**	**-0.1**
IDE				*eS*		**Sb**	**08 46 18.4**	**+0.2**
SJG	**San Juan**	**0.78**	**73**			**Pb**	**08 46 09.5**	**-0.3**
SJG				IAML			08 46 20.8	
	comp=N,17μm,0.4s							
SJG				IAML			08 46 21.1	
	comp=N,9μm,0.3s							
SJG	**San Juan**	**0.78**	**73**	P		**Pb**	**08 46 09.5**	**-0.3**
SJG	**San Juan**	**0.78**	**73**	*ePg*		**Pb**	**08 46 09.5**	**-0.3**
SJG				*eSg*		**Sb**	**08 46 20.0**	**+0.1**
SJG	**San Juan**	**0.78**	**73**	*i* P		**Pb**	**08 46 09.5**	**-0.3**
SJG				*eS*		**Sb**	**08 46 19.8**	**-0.1**
SJG	**San Juan**	**0.78**	**73**	⇓*eP*		**Pb**	**08 46 09.7**	**-0.1**
IGPR	**InterUniversit**	**0.79**	**84**			**Pb**	**08 46 10.0**	**0.0**
IGPR						**Sb**	**08 46 21.1**	**+0.9**
IGPR	**InterUniversit**	**0.79**	**84**	P		**Pb**	**08 46 09.9**	**-0.1**
IGPR	**InterUniversit**	**0.79**	**84**	⇑*eP*		**Pb**	**08 46 10.0**	**0.0**
PDPR	**Patillas Dam,**	**0.87**	**82**			**Pb**	**08 46 11.3**	**-0.2**
PDPR	**Patillas Dam,**	**0.87**	**82**			**Sb**	**08 46 23.2**	**+0.5**
PDPR	**Patillas Dam,**	**0.87**	**82**	P		**Pb**	**08 46 11.4**	**-0.1**
PDPR	**Patillas Dam,**	**0.87**	**82**	⇑*eP*		**Pb**	**08 46 11.2**	**-0.2**
HUMP	**Col San Antoni**	**1.06**	**76**			**Pb**	**08 46 14.1**	**-0.5**
HUMP						**Sb**	**08 46 27.5**	**-0.5**
HUMP	**Col San Antoni**	**1.06**	**76**	IAML			08 46 28.7	
	comp=N,4μm,0.2s							
HUMP				IAML			08 46 31.5	
	comp=N,8μm,0.4s							
HUMP	**Col San Antoni**	**1.06**	**76**	P		**Pb**	**08 46 14.1**	**-0.5**
HUMP	**Col San Antoni**	**1.06**	**76**	⇑*eP*		**Pb**	**08 46 14.1**	**-0.5**
PCDR	**Punta Cana, DR**	**1.51**	**294**			**Pb**	**08 46 22.3**	**0.0**
PCDR	**Punta Cana, DR**	**1.51**	**294**	*ePg*		**Pb**	**08 46 22.4**	**0.0**
PCDR				IAML			08 46 54.9	
	comp=N,701nm,0.6s							
PCDR	**Punta Cana, DR**	**1.51**	**294**	*i* P		**Pb**	**08 46 22.4**	**0.0**
PCDR				IAML			08 46 51.0	
	comp=Z,432nm,0.5s							
PCDR	**Punta Cana, DR**	**1.51**	**294**	⇓*eP*		**Pb**	**08 46 22.2**	**0.0**
HIDR	**Higuey Centro**	**1.83**	**293**	*ePg*		**Pb**	**08 46 27.0**	**-0.8**
HIDR				IAML			08 47 01.6	
	comp=N,595nm,0.2s							
HIDR	**Higuey Centro**	**1.83**	**293**	⇑*eP*		**Pb**	**08 46 27.0**	**-0.8**
DR12	**Loma Pena Alta**	**2.49**	**291**			**Pn**	**08 46 35.8**	**+1.3**
HATOM	**Hato Mayor del**	**2.49**	**291**	*ePg*		**Pb**	**08 46 37.4**	**-1.7**
HATOM				IAML			08 47 19.6	
	comp=N,171nm,0.6s							
SMDR	**Samana, DR**	**2.55**	**303**			**Pb**	**08 46 39.8**	**-0.3**
SMDR						**Sb**	**08 47 15.1**	**+4.0**
SMDR	**Samana, DR**	**2.55**	**303**	P		**Pb**	**08 46 40.8**	**+0.7**
SMDR	**Samana, DR**	**2.55**	**303**	*ePg*		**Pb**	**08 46 39.7**	**-0.3**
SMDR				IAML			08 47 23.6	
	comp=N,315nm,0.7s							
SMDR	**Samana, DR**	**2.55**	**303**	⇑*eP*		**Pb**	**08 46 39.8**	**-0.3**
SMDR				*eS*		**Sb**	**08 47 15.1**	**+4.0**
SDD	**Santo Domingo**	**2.89**	**282**	P		**Pb**	**08 46 44.1**	**-1.8**
SDD	**Santo Domingo**	**2.89**	**282**	IAML			08 47 39.5	
	comp=N,109nm,0.5s							
BANI	**BANI**	**3.30**	**279**			**Pn**	**08 46 46.9**	**+1.3**
BANI	**BANI**	**3.30**	**279**	*ePg*		**Pb**	**08 46 49.4**	**-3.5**
CADR	**Cabrera**	**3.35**	**302**	IAML			08 47 54.4	
	comp=N,482nm,1.6s							
SABA	**Saba**	**3.52**	**94**			**Pn**	**08 46 49.8**	**+1.1**
SABA				IAML			08 47 52.3	
	comp=E,812nm,0.7s							
SABA	**Saba**	**3.52**	**94**	P		**Pn**	**08 46 50.8**	**+2.2**
SC01	**Santiago de lo**	**3.91**	**294**	*ePg*		**Pb**	**08 47 00.7**	**-2.6**
SC01				IAML			08 48 04.9	
	comp=N,287nm,0.4s							
SODR	**Sosua Marina B**	**3.92**	**299**	IAML			08 48 20.7	
	comp=N,417nm,1.2s							
LOVI	**El Cajuil, Ovi**	**4.23**	**269**	*i* P		**Pn**	**08 46 58.8**	**+0.5**
LOVI				*eS*		**Sn**	**08 47 45.1**	**-1.9**
LOVI				IAML			08 47 49.0	
	comp=Z,113nm,0.7s							
SDDR	**Presa de Saban**	**4.28**	**285**	Pn		Pn	08 47 04.1	+5.1
SDDR	**Presa de Saban**	**4.28**	**285**	IAML			08 48 23.3	
	comp=N,100nm,0.6s							
LODU1	**El Espartillar**	**4.34**	**277**	*i* P		**Pn**	**08 47 02.6**	**+2.7**
LODU1				IAML			08 48 01.3	
	comp=Z,72nm,0.4s							
REDR	**Restauracion**	**4.42**	**287**	IAML			08 48 28.8	
	comp=N,62nm,1.4s							
LOBH	**Bahia de las A**	**4.48**	**270**	*i* P		**Pn**	**08 47 02.7**	**+0.9**
LOBH				IAML			08 48 00.8	
	comp=Z,68nm,0.9s							
GDHS	**Morne Mazeau,**	**5.20**	**107**	Pn		**Pn**	**08 47 11.3**	**-0.4**
GDHS				IAML			08 48 16.2	
	comp=E,299nm,0.5s							
GDHS				IAML			08 48 19.7	
	comp=N,306nm,0.6s							
GRTK	**Grand Turk**	**5.35**	**313**	*i* P		**Pn**	**08 47 14.9**	**+1.2**
GRTK				IAML			08 48 21.4	
	comp=Z,86nm,0.9s							
CBE	**Ff, Capester**	**5.41**	**109**	Pn		**Pn**	**08 47 14.7**	**+0.1**
CBE				IAML			08 48 20.9	
	comp=N,281nm,0.5s							
CBE				IAML			08 48 51.4	
	comp=E,172nm,1.4s							
FDFM	**Morne la Roset**	**6.37**	**119**	Pn		**Pn**	**08 47 27.1**	**-0.7**
BIM	**Bigot**	**6.55**	**120**	Pn		**Pn**	**08 47 29.6**	**-0.7**

*NEIC **29** 08:46:33.4±2.2, 18°.13S±0°.09×178°.1W±0°.1, h499km±6km, mb4.2/49, Error ellipse: s-maj=17.1km s-min=11.0km az=118.0*
*IDC **29** 08:46:33.9±1.7, 18°.18S×178°.25W, h510km±18km, mb3.5/18, mbtmp4.3/19, Error ellipse: s-maj=16.9km s-min=12.6km az=116.0*
ISC 29 08:46:32.8±0.4, 18°.11S±0°.09×178°.10W±0°.08, h500km, n108, σ1°23/105, mb4.1/42, 3C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.68**	**275**	P	P	**P**	**08 47 50.6**	**+1.8**
	33nm,0.8s,baz=132,slow=6.5,SNR=12							
MSVF				S		**S**	**08 48 53.9**	**+3.2**
	1.4nm,0.2s,baz=142,slow=23,SNR=0.5							
AFI	**Afiamalu**	**7.37**	**56**	P	P	**P**	**08 48 20.5**	**-2.4**
	46nm,1.0s,baz=33,slow=23,SNR=2.3							
AFI				S		**S**	**08 49 49.1**	**-4.0**
	44nm,0.8s,baz=47,slow=22,SNR=4.0							
AFI	**Afiamalu**	**7.37**	**56**	P	P	**P**	**08 48 22.9**	**0.0**
MARNC	**Mare, Loyalty**	**13.48**	**253**	P	P	**P**	**08 49 26.8**	**-0.2**
MXZ	**Matakaoa Point**	**19.64**	**189**	P	P	**P**	**08 50 28.6**	**+0.7**
TOZ	**Tahuroa Road**	**20.34**	**195**	P	P	**P**	**08 50 35.2**	**+0.9**
URZ	**Urewera**	**20.51**	**191**	P	P	**P**	**08 50 34.2**	**-1.7**
	9.2nm,0.6s,baz=55,slow=3.1,SNR=13							
	9.2nm,0.6s							
BFZ	**Birch Farm**	**23.02**	**191**	P	P	**P**	**08 50 57.0**	**-1.5**
QRZ	**Quartz Range**	**24.04**	**198**	P	P	**P**	**08 51 07.6**	**+0.1**
KHZ	**Kahutara**	**25.26**	**195**	P	P	**P**	**08 51 16.6**	**-1.7**
MLZ	**Mavora Lakes**	**29.51**	**200**	P	P	**P**	**08 51 56.3**	**+0.6**
CTA	**Charters Tower**	**33.70**	**261**	P	P	**P**	**08 52 30.9**	**-1.1**
	2.7nm,0.4s,baz=90,slow=11,SNR=7.1							
	2.7nm,0.4s							
CTAO	**Charters Tower**	**33.70**	**261**	P	P	**P**	**08 52 31.5**	**-0.5**
TOO	**Toolangi**	**37.27**	**231**	P	P	**P**	**08 53 02.1**	**+0.6**
TOO				IAmb	IAmb	IAmb	08 53 23.9	
	comp=Z,6.5nm,1.2s							
COEN	**Coen**	**37.40**	**271**	P	P	**P**	**08 53 02.6**	**-0.2**
COEN				IAmb	IAmb	IAmb	08 53 03.6	
	comp=Z,11nm,1.1s							

STKA	**Stephens Creek**	**38.79**	**241**	P		**P**	**08 53 13.7**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=128,slow=19,SNR=4.6							
	comp=Z,1.4nm,0.3s							
BBOO	**Buckleboo**	**43.57**	**241**	P		**P**	**08 53 51.5**	**-0.5**
BBOO				IAmb		IAmb	08 54 16.7	
	comp=Z,13nm,1.2s							
WR8	**Warramunga Arr**	**44.73**	**260**	P		**P**	**08 54 00.1**	**-1.1**
WR8				IAmb		IAmb	08 54 01.4	
	comp=Z,6.6nm,1.1s							
WB0	**Warramunga Arr**	**44.85**	**260**	P		**P**	**08 54 00.2**	**-2.0**
WB0				IAmb		IAmb	08 54 19.8	
	comp=Z,13nm,1.3s							
WRA	**Warramunga Arr**	**44.88**	**260**	P		**P**	**08 54 01.2**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=95,slow=6.9,SNR=59							
WRA				PcP		**PcP**	**08 55 33.2**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=87,slow=3.7,SNR=1.7							
	comp=Z,1.5nm,0.4s							
WRA	**Warramunga Arr**	**44.88**	**260**	P		**P**	**08 54 00.9**	**-1.5**
AS31	**Alice Springs**	**45.02**	**254**			**P**	**08 54 02.9**	**-0.6**
AS31				IAmb		IAmb	08 54 03.4	
	comp=Z,4.8nm,0.6s							
ASAR	**Alice Springs**	**45.02**	**254**	P		**P**	**08 54 02.8**	**-0.7**
	comp=Z,14nm,0.5s,baz=89,slow=8.4,SNR=343							
ASAR				PcP		**PcP**	**08 55 33.1**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=89,slow=4.4,SNR=1.4							
ASAR				S		**S**	**09 00 00.7**	**-4.7**
	comp=Z,1.3nm,1.0s,baz=86,slow=16,SNR=6.5							
	comp=Z,14nm,0.5s							
ASAR	**Alice Springs**	**45.02**	**254**			**P**	**08 54 03.0**	**-0.5**
MTN	**Manton Dam**	**49.09**	**269**	P		**P**	**08 54 33.6**	**-0.6**
MTN				IAmb		IAmb	08 55 13.7	
	comp=Z,12nm,1.4s							
FORT	**Forrest**	**50.19**	**245**	P		**P**	**08 54 41.3**	**-0.8**
FORT				IAmb		IAmb	08 55 22.1	
	comp=Z,8.3nm,1.4s							
KNRA	**Kununurra**	**50.76**	**264**	P		**P**	**08 54 46.1**	**-0.4**
KNRA				IAmb		IAmb	08 54 46.4	
	comp=Z,6.1nm,0.6s							
FITZ	**Fitzroy Crossi**	**53.28**	**261**	P		**P**	**08 55 04.8**	**+0.1**
LUWI	**Luwuk**	**60.43**	**279**	P		**P**	**08 55 51.8**	**-2.1**
MJAR	**Matsushiro Arr**	**68.24**	**323**	P		**P**	**08 56 42.6**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=159,slow=5.3,SNR=4.4							
	comp=Z,0.9nm,0.4s							
MJAR	**Matsushiro Arr**	**68.24**	**323**	IAmb		IAmb	08 56 44.3	
	comp=Z,3.3nm,1.3s							
SHEM	**Shemya Is, Ala**	**70.86**	**355**	P		**P**	**08 56 57.7**	**-0.6**
	comp=Z,20nm,0.8s,baz=80,slow=2.4,SNR=5.1							
	comp=Z,20nm,0.8s							
JKA	**Kamikawa-asahi**	**71.59**	**331**	P		**P**	**08 57 04.6**	**+1.7**
JKA				IAmb		IAmb	08 57 05.5	
	comp=Z,6.3nm,0.8s							
ASAJ	**Asahikawa**	**71.59**	**331**	P		**P**	**08 57 03.5**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=212,slow=7.9,SNR=7.5							
	comp=Z,4.2nm,0.5s							
QSPA	**South Pole Qui**	**71.95**	**180**	P		**P**	**08 57 05.5**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=81,slow=4.5,SNR=13							
	comp=Z,1.8nm,0.6s							
QSPA	**South Pole Qui**	**71.95**	**180**	P		**P**	**08 57 05.7**	**+0.8**
QSPA				IAmb		IAmb	08 57 40.7	
	comp=Z,8.6nm,1.4s							
PETK	**Petropavlovsk-**	**73.94**	**345**	P		**P**	**08 57 16.7**	**+0.4**
	comp=Z,6.9nm,0.7s,baz=126,slow=7.5,SNR=8.5							
	comp=Z,6.9nm,0.7s							
PETK	**Petropavlovsk-**	**73.94**	**345**	P		**P**	**08 57 16.9**	**+0.6**
KSRS	**Korea Array**	**75.04**	**318**	P		**P**	**08 57

comp=Z,0.5nm,0.3s,baz=92,slow=2.4,SNR=5.5
comp=Z,0.5nm,0.3s
TROLL Troll, Antarti 90.11 180 ⇑P **P 08 58 39.2 +0.4**
comp=Z,40nm,0.7s
VNA2 Neumayer--Watz 90.97 177 ⇑P **P 08 58 43.3 +0.7**
comp=Z,1.3nm,0.6s,baz=187,slow=3.9
INK Inuvik 92.00 15 P **P 08 58 47.5 +0.4**
comp=Z,0.8nm,0.5s,baz=213,slow=2.5,SNR=1.9
comp=Z,0.8nm,0.5s
INK Inuvik 92.00 15 IAmb IAmb 08 58 56.9
comp=Z,2.5nm,1.1s
YKA Yellowknife Ar 94.39 25 P **P 08 58 58.7 +0.5**
comp=Z,0.4nm,0.5s,baz=240,slow=4.7,SNR=2.3
comp=Z,0.4nm,0.5s
ARCES ARCESS Array B 126.56 350 PKP **PKPdf 09 04 35.6 -2.5**
comp=Z,1.5nm,0.8s,baz=101,slow=1.9,SNR=4.1
NOA NORSAR Array B 136.60 353 PKP **PKPdf 09 04 55.4 -1.9**
comp=Z,0.3nm,0.8s,baz=24,slow=2.1,SNR=1.3
BRTR Keskin Array B 145.13 315 PKPbc **PKPbc 09 05 14.4 +0.3**
comp=Z,0.9nm,0.5s,baz=106,slow=3.1,SNR=5.0
CLL Collm 145.72 348 PKPdf **PKPbc 09 05 15.2 -0.1**
CLL Collm 145.72 348 ⇑*i*PKPbc **PKPbc 09 05 16.0 +0.8**
comp=Z,15nm,0.9s
CLL *i* PKiKP **PKiKP 09 05 19.0 +0.9**
BRG Berggiesshubel 145.93 346 *e*PKP **PKPbc 09 05 16.9 +1.0**
BRG Amp 09 05 17.5
comp=Z,4.1nm,0.7s
MORC Moravsky Berou 145.99 342 *e*PKP **PKPbc 09 05 16.8 +0.6**
VRAC Vranov 146.69 342 *e*PKP **PKPbc 09 05 19.0 +0.9**
JAVC Velka Javorina 146.76 341 *e*PKP **PKPbc 09 05 18.9 +0.6**
KRUC Moravsky 146.97 342 *e*PKP **PKPbc 09 05 18.4 -0.4**
BCLA Clavier 147.65 356 *d*PKPdf **PKPdf 09 05 15.0 -2.0**
BMRD Maredsous 147.80 357 *d*PKP **PKPbc 09 05 21.3 +0.4**
GERES GERESS Array B 147.88 345 PKPbc **PKPbc 09 05 22.1 +0.8**
comp=Z,1.9nm,0.6s,baz=349,slow=2.7,SNR=13
WLF Walferdange 148.33 355 *d*PKP **PKiKP 09 05 23.7 +0.2**
ESDC Sonseca Array 157.91 12 PKPab **PKPab 09 06 08.0 -0.3**
comp=Z,2.0nm,1.3s,baz=333,slow=4.8,SNR=4.5

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*AEIC **29** 08:47:40.0±1.9,54.88N±0.04×160.29W±0.07, h34km±4km, Error ellipse: s-maj=6.7km s-min=5.2km az=210.0*
*IDC **29** 08:47:40.5±4.2,55.23N×160.54W, h36km±35km, mb4.0/23, mbtmp4.2/26, ML3.9/3, MS2.9/8, Error ellipse: s-maj=22.2km s-min=13.8km az=175.0*
*NEIC **29** 08:47:40.2±1.8,54.88N±0.07×160.27W±0.03, h41km±5km, mb4.2/26, ML4.0/32, ML3.9(AEIC), Error ellipse: s-maj=10.1km s-min=2.6km az=179.0*
ISC 29 08:47:40.2±0.9, 54.94N±0.06×160.26W±0.04, h46km±8km, n202, σ1§31/181, mb4.3/28, MS2.8/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNBA	**Chernabura Isl**	**0.41**	**107**			**Pn**	**08 47 49.2**	**-0.9**
CNBA					IAML		08 47 56.2	
	comp=N,11μm,0.4s							
CNBA					IAML		08 47 56.6	
	comp=E,8μm,0.4s							
CNBA	**Chernabura Isl**	**0.41**	**107**			**Sn**	**08 47 55.8**	**-1.3**
SDPT	**Sand Point**	**0.42**	**343**			**Sn**	**08 47 57.6**	**+0.2**
SDPT	**Sand Point**	**0.42**	**343**			**Pn**	**08 47 50.3**	**0.0**
SDPT	**Sand Point**	**0.42**	**343**		IAML		08 47 58.0	
	comp=N,24μm,0.8s							
SDPT					IAML		08 47 58.1	
	comp=E,14μm,0.6s							
DOL	**Dolgoi Island**	**0.94**	**283**			**Pn**	**08 47 56.9**	**-0.2**
DOL						**Sn**	**08 48 09.6**	**+0.2**
PS1A	**Pavlof South-1**	**0.97**	**300**			**Pn**	**08 47 57.8**	**+0.3**
PS1A						**Sn**	**08 48 11.4**	**+1.2**
PVV	**Pavlof Volcano**	**0.98**	**297**			**Pn**	**08 47 57.7**	**+0.2**
PS4A	**Pavlof South-4**	**1.00**	**294**			**Pn**	**08 47 58.1**	**+0.2**
PS4A						**Sn**	**08 48 11.7**	**+0.9**
HAG	**Hague Volcano**	**1.01**	**292**			**Pn**	**08 47 58.5**	**+0.4**
PN7A	**Pavlof North-7**	**1.11**	**297**			**Pn**	**08 48 00.1**	**+0.7**
PN7A						**Sn**	**08 48 15.8**	**+2.2**
DTNA	**Dutton South F**	**1.16**	**281**			**Pn**	**08 48 00.3**	**+0.2**
DTNA						**Sn**	**08 48 15.2**	**+0.4**
DT1	**Dutton Round H**	**1.17**	**279**			**Sn**	**08 48 15.0**	**0.0**
VNKR	**Veniaminof 5**	**1.20**	**25**			**Pn**	**08 48 01.8**	**+1.1**
VNSG	**Veniaminof 6**	**1.36**	**29**			**Pn**	**08 48 04.2**	**+1.4**
VNSS	**Veniaminof 8**	**1.36**	**19**			**Pn**	**08 48 04.4**	**+1.4**
VNFG	**Fog Glacier, M**	**1.40**	**16**			**Pn**	**08 48 05.1**	**+1.7**
VNFG	**Fog Glacier, M**	**1.40**	**16**			**Sn**	**08 48 24.5**	**+3.7**
VNFG	**Fog Glacier, M**	**1.40**	**16**			**Pn**	**08 48 05.1**	**+1.7**
BPBCA	**Veniaminof**	**1.94**	**31**			**Pn**	**08 48 12.7**	**+1.9**
ISNN	**Isanotski Nort**	**2.04**	**268**			**Pn**	**08 48 13.2**	**+1.2**
ISNN						**Sn**	**08 48 37.9**	**+1.7**
SSLN	**Shishaldin Nor**	**2.16**	**268**			**Pn**	**08 48 15.2**	**+1.5**
SSLS	**Shishaldin Sou**	**2.17**	**265**			**Pn**	**08 48 15.0**	**+1.0**
SSLS						**Sn**	**08 48 41.4**	**+1.7**
AZAC	**Aniakchak**	**2.27**	**29**			**Pn**	**08 48 16.6**	**+1.4**
AKSA	**Akutan Strait**	**3.27**	**258**			**Pn**	**08 48 30.1**	**+1.2**
AKUT	**Akutan**	**3.31**	**258**			**Pn**	**08 48 30.7**	**+1.3**
AKUT					IAML		08 49 22.6	
	comp=E,279nm,0.8s							
AKUT					IAML		08 49 28.6	
	comp=N,319nm,0.6s							
AKBBA	**Akutan Broad B**	**3.41**	**258**			**Pn**	**08 48 32.1**	**+1.3**
AKGG	**Akutan Green G**	**3.42**	**260**			**Pn**	**08 48 32.1**	**+1.2**
ZRO	**Akutan Zero**	**3.44**	**258**			**Pn**	**08 48 32.4**	**+1.1**
LVA	**Lava Point**	**3.45**	**259**			**Pn**	**08 48 32.7**	**+1.2**
LVA					IAML		08 49 33.1	
	comp=E,311nm,1.0s							
LVA					IAML		08 49 34.5	
	comp=N,491nm,0.6s							
PLK1	**Peulik 1**	**3.51**	**34**			**Pn**	**08 48 34.2**	**+2.0**
PLK2	**Peulik 2**	**3.58**	**36**			**Pn**	**08 48 35.4**	**+2.3**
UNV	**Unalaska Valle**	**3.81**	**256**			**Pn**	**08 48 37.1**	**+0.8**
MNAT	**Makushin Natee**	**3.90**	**257**			**Pn**	**08 48 38.3**	**+0.8**
MREP	**Makushin Rep't**	**3.96**	**256**			**Pn**	**08 48 39.2**	**+0.8**
MGOD	**Makushin Gods**	**4.04**	**256**			**Pn**	**08 48 40.3**	**+0.9**
Q17K	**Contact Creek**	**4.11**	**34**			**Pn**	**08 48 42.1**	**+1.6**
Q16K	**King Salmon**	**4.24**	**26**			**Pn**	**08 48 43.9**	**+1.8**
O15K	**Ungalikthiuk R**	**4.25**	**3**			**Pn**	**08 48 43.5**	**+1.2**
O15K					IAML		08 49 59.8	
	comp=E,116nm,0.9s							
ACHA	**Angle Creek He**	**4.26**	**38**			**Pn**	**08 48 44.2**	**+1.6**
P16K	**Nushagak River**	**4.28**	**16**			**Pn**	**08 48 44.4**	**+1.6**
O14K	**Tigyukauivet M**	**4.36**	**353**			**Pn**	**08 48 44.4**	**+0.7**
O14K					IAML		08 50 05.7	
	comp=E,115nm,0.8s							
KAKN	**Katmai Knife C**	**4.42**	**38**			**Pn**	**08 48 46.6**	**+1.8**
OHAK	**Old Harbor**	**4.53**	**57**			**Pn**	**08 48 46.3**	**+0.2**
OHAK					IAML		08 49 59.7	
	comp=N,153nm,0.7s							
OHAK					IAML		08 50 10.8	
	comp=E,104nm,1.1s							
KARR	**Katmai Rainbow**	**4.70**	**38**			**Pn**	**08 48 49.7**	**+1.2**
Q18K	**Katmai Hardscr**	**4.70**	**36**			**Pn**	**08 48 50.3**	**+1.6**
P17K	**Kvichak River**	**4.75**	**25**			**Pn**	**08 48 51.1**	**+2.0**
KAHG	**Katmai Hook Gl**	**4.75**	**39**			**Pn**	**08 48 50.8**	**+1.6**
O16K	**Kokwok River B**	**4.81**	**13**			**Pn**	**08 48 51.2**	**+1.2**
N14K	**Kuskokwak Cree**	**5.05**	**352**			**Pn**	**08 48 54.1**	**+0.9**
N14K					IAML		08 50 26.2	
	comp=N,130nm,1.2s							
KDAK	**Kodiak Island**	**5.13**	**53**	Pn		**Pn**	**08 48 53.7**	**-0.6**
	comp=N,3.7nm,0.3s,baz=70,slow=0.3,SNR=97							
KDAK				Sn		**Sn**	**08 49 51.3**	**-0.9**
	comp=N,7.1nm,0.3s,baz=125,slow=20,SNR=5.9							
KDAK				LR		LR	08 51 11.5	
	comp=N,106nm,19.9s,baz=230,slow=41							
	comp=N,10.0nm,0.4s							
KDAK	**Kodiak Island**	**5.13**	**53**			**Pn**	**08 48 54.8**	**+0.4**
KDAK					IAML		08 50 27.4	
	comp=N,124nm,0.6s							
KDAK					IAML		08 50 27.8	
	comp=N,122nm,0.6s							
P18K	**Big Mountain,**	**5.23**	**29**			**Pn**	**08 48 57.5**	**+1.6**
N15K	**Kwethluk River**	**5.24**	**1**			**Pn**	**08 48 57.1**	**+1.2**
N15K					IAML		08 50 39.9	
	comp=E,117nm,0.8s							
N15K					IAML		08 50 49.1	
	comp=N,89nm,0.6s							
Q19K	**Cape Douglas,**	**5.39**	**40**			**Pn**	**08 48 59.5**	**+1.5**
N17K	**Nushagak Hills**	**5.83**	**15**			**Pn**	**08 49 05.0**	**+1.0**
SPIA	**Saint Paul Isl**	**6.03**	**296**			**Pn**	**08 49 07.5**	**+0.8**
P19K	**Oil Pt**	**6.06**	**36**			**Pn**	**08 49 08.3**	**+1.0**
O19K	**Port Alsworth**	**6.16**	**29**			**Pn**	**08 49 09.3**	**+0.9**
N18K	**Kilae Creek**	**6.21**	**20**			**Pn**	**08 49 10.1**	**+1.0**
ILSW	**Iliamna Southw**	**6.34**	**34**			**Pn**	**08 49 12.3**	**+1.2**
IVE	**Iliamna Volcan**	**6.41**	**35**			**Pn**	**08 49 12.6**	**+0.5**
L14K	**Kuka Creek**	**6.54**	**350**			**Pn**	**08 49 14.3**	**+0.6**
O20K	**Slope Mountain**	**6.59**	**35**			**Pn**	**08 49 16.0**	**+1.5**
CNPM	**China Poot**	**6.71**	**43**			**Pn**	**08 49 17.8**	**+1.6**
RED	**Redoubt Volcan**	**6.80**	**33**			**Pn**	**08 49 18.9**	**+1.5**
L16K	**Owhat River**	**6.80**	**3**			**Pn**	**08 49 18.3**	**+1.1**
RDSO	**Redoubt South**	**6.83**	**33**			**Pn**	**08 49 20.1**	**+2.2**
NCT	**North Crescent**	**6.86**	**32**			**Pn**	**08 49 20.9**	**+2.7**
REF	**Redoubt East F**	**6.87**	**33**			**Pn**	**08 49 21.1**	**+2.6**
DFR	**Drift River**	**6.96**	**32**			**Pn**	**08 49 21.8**	**+2.2**
M18K	**Stony River**	**6.97**	**18**			**Pn**	**08 49 21.1**	**+1.5**
RDT	**Redoubt**	**7.03**	**33**			**Pn**	**08 49 21.9**	**+1.4**
BRSE	**Bradley Lake S**	**7.04**	**43**			**Pn**	**08 49 20.9**	**+0.3**
K13K	**Kusilvak Mount**	**7.38**	**344**			**Pn**	**08 49 26.0**	**+0.8**
K15K	**Wolf Creek Mou**	**7.40**	**355**			**Pn**	**08 49 26.4**	**+0.8**
SPWE	**Spurr West**	**7.54**	**30**			**Pn**	**08 49 29.0**	**+1.5**
CKL	**Chakachamna La**	**7.54**	**31**			**Pn**	**08 49 29.4**	**+1.9**
SPNN	**North Nagishla**	**7.58**	**29**			**Pn**	**08 49 30.0**	**+1.9**
SPU	**Mount Spurr**	**7.61**	**31**			**Pn**	**08 49 30.8**	**+2.3**
M19K	**Big River Lodg**	**7.63**	**21**			**Pn**	**08 49 30.7**	**+2.1**
SLKM	**Skilak Lake**	**7.74**	**40**			**Pn**	**08 49 32.1**	**+1.9**
SEW	**Seward**	**7.78**	**44**			**Pn**	**08 49 31.4**	**+0.7**
K17K	**Iditarod**	**7.86**	**7**			**Pn**	**08 49 32.2**	**+0.4**
M20K	**Styx River**	**7.90**	**25**			**Pn**	**08 49 35.1**	**+2.7**
O22K	**Cooper Landing**	**7.91**	**41**			**Pn**	**08 49 33.3**	**+0.8**
STLK	**Strandline Lak**	**7.93**	**31**			**Pn**	**08 49 35.6**	**+2.7**
RC01	**Rabbit Creek A**	**8.31**	**38**			**Pn**	**08 49 39.0**	**+1.1**
J16K	**Anvik River**	**8.37**	**359**			**Pn**	**08 49 39.0**	**+0.2**
SKT	**Skwentna**	**8.40**	**29**			**Pn**	**08 49 40.8**	**+1.5**
J17K	**VABM Dome**	**8.50**	**4**			**Pn**	**08 49 40.7**	**+0.2**
P23K	**Montague Islan**	**8.58**	**49**			**Pn**	**08 49 42.1**	**+0.5**
PWL	**Port Wells**	**8.68**	**42**			**Pn**	**08 49 43.2**	**+0.2**
ATKA	**Atka Island**	**8.73**	**257**			**Pn**	**08 49 43.5**	**-0.2**
J18K	**Innoko River**	**8.74**	**11**			**Pn**	**08 49 44.5**	**+0.7**
PMR	**Palmer**	**8.87**	**37**			**Pn**	**08 49 46.1**	**+0.5**
I17K	**Unalakleet**	**8.97**	**359**			**Pn**	**08 49 47.6**	**+0.7**
KNK	**Knik Glacier**	**8.98**	**39**			**Pn**	**08 49 48.6**	**+1.4**
K20K	**Telida**	**9.01**	**18**			**Pn**	**08 49 48.8**	**+1.2**
L22K	**Petersville**	**9.05**	**29**			**Pn**	**08 49 49.2**	**+1.0**
GHO	**Glory Hole Cre**	**9.06**	**36**			**Pn**	**08 49 48.7**	**+0.3**
HIN	**Hinchinbrook I**	**9.17**	**48**			**Pn**	**08 49 49.3**	**-0.4**
GLI	**Glacier Island**	**9.18**	**44**			**Pn**	**08 49 49.5**	**-0.4**
SML	**Sawmill**	**9.29**	**37**			**Pn**	**08 49 51.1**	**-0.3**
FID	**Port Fidalgo**	**9.36**	**46**			**Pn**	**08 49 51.4**	**-1.0**
M23K	**Glacier View**	**9.50**	**39**			**Pn**	**08 49 54.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**9.57**	**48**			**Pn**	**08 49 55.3**	**+0.1**
SCM	**Sheep Creek Mo**	**9.67**	**39**			**Pn**	**08 49 56.9**	**+0.2**
J20K	**Nowinta River**	**9.76**	**16**			**Pn**	**08 49 58.5**	**+0.8**
H16K	**Elim**	**9.78**	**355**			**Pn**	**08 49 58.7**	**+0.7**
WAT7	**Susitna Watana**	**9.86**	**32**			**Pn**	**08 49 58.9**	**-0.3**
DIV	**Divide**	**9.86**	**45**			**Pn**	**08 49 58.6**	**-0.6**
KAIM	**Kayak Island**	**9.88**	**53**			**Pn**	**08 50 00.7**	**+1.2**
TRF	**Thorofare Moun**	**9.93**	**27**			**Pn**	**08 50 02.5**	**+2.2**
WAT1	**Susitna Watana**	**9.95**	**33**			**Pn**	**08 50 00.5**	**+0.1**
RAGM	**Ragged Mountai**	**9.96**	**50**			**Pn**	**08 50 00.4**	**-0.2**
ANM	**Nome**	**9.98**	**347**	Pn		**Pn**	**08 50 02.2**	**+1.3**
KLU	**Klutina**	**10.00**	**43**			**Pn**	**08 50 01.0**	**-0.1**
GOAT	**Goat Mountain**	**10.03**	**49**			**Pn**	**08 50 01.5**	**0.0**
WAT6	**Susitna Watana**	**10.03**	**35**			**Pn**	**08 50 00.2**	**-1.4**
ETKA	**Kagalaska Isla**	**10.12**	**259**			**Pn**	**08 50 02.2**	**-0.6**
RND	**Reindeer**	**10.29**	**30**			**Pn**	**08 50 05.5**	**+0.4**
MCK	**McKinley**	**10.52**	**29**			**Pn**	**08 50 09.0**	**+0.8**
H19K	**Roundabout Mou**	**10.78**	**9**			**Pn**	**08 50 12.5**	**+0.7**
VRDI	**Verde Repeater**	**10.88**	**48**			**Pn**	**08 50 14.0**	**+0.8**
F15K	**North Star Dit**	**11.01**	**350**			**Pn**	**08 50 16.9**	**+2.0**
G18K	**Tagagawik**	**11.02**	**3**			**Pn**	**08 50 16.9**	**+1.9**
I21K	**Tanana**	**11.06**	**18**			**Pn**	**08 50 16.7**	**+1.2**
IMAR	**Indian Mountai**	**11.52**	**13**			**Pn**	**08 50 23.3**	**+1.4**
M26K	**Nabesna, AK**	**11.65**	**43**			**Pn**	**08 50 24.2**	**+0.4**
H22K	**Ishtalitna Cre**	**11.81**	**18**			**Pn**	**08 50 26.5**	**+0.7**
ILAR	**Eielson Array**	**11.90**	**29**	Pn		**Pn**	**08 50 23.9**	**-3.0**
	comp=N,0.3nm,0.3s,baz=226,slow=12,SNR=18							
ILAR						Sn	**Sn**	
	comp=N,0.1nm,0.3s,baz=215,slow=23,SNR=1.5							
ILAR						LR	LR	08 55 24.0
	comp=N,63nm,19.1s,baz=252,slow=40							
BCAR	**Beaver Creek A**	**12.48**	**42**			**Pn**	**08 50 34.7**	**-0.3**
H24K	**Noodor Dome**	**12.49**	**24**			**Pn**	**08 50 34.2**	**-0.9**
S31K	**Pelican**	**13.60**	**67**			**Pn**	**08 50 51.4**	**+1.2**
I27K	**Kandik River**	**14.06**	**33**			**Pn**	**08 50 56.9**	**+0.4**
I29M	**Ogilvie Camp,**	**15.01**	**37**	IAmb		IAmb	08 51 31.4	
	comp=Z,17nm,0.9s							
D24K	**Happy Valley**	**15.19**	**16**	IAmb		IAmb	08 51 33.0	
	comp=Z,22nm,1.2s							
M31M	**Drury Creek, Y**	**15.24**	**51**	IAmb		IAmb	08 51 20.2	
	comp=Z,8.6nm,0.8s							
SHEM	**Shemya Is, Ala**	**15.27**	**272**	LR		LR	08 56 10.3	
	comp=Z,32nm,18.3s,baz=318,slow=34							
J30M	**Hart River**	**15.33**	**41**	IAmb		IAmb	08 51 21.6	
	comp=Z,16nm,0.7s							
H29M	**Whitestone**	**15.49**	**34**	IAmb		IAmb	08 51 20.9	
	comp=Z,11nm,0.8s							
C23K	**Itkillik River**	**15.56**	**13**	IAmb		IAmb	08 51 36.0	
	comp=Z,13nm,0.9s							
G29M	**Pine Creek**	**16.02**	**33**	IAmb		IAmb	08 51 25.9	
	comp=Z,15nm,0.7s							
EPYK	**Eagle Plains**	**16.12**	**35**	IAmb		IAmb	08 51 44.7	
	comp=Z,17nm,0.7s							
G30M	**tAoh Zraii Nji**	**16.63**	**34**	IAmb		IAmb	08 51 33.5	
	comp=Z,10nm,0.5s							
H31M	**Peel River**	**16.66**	**39**	IAmb		IAmb	08 51 53.0	
	comp=Z,31nm,1.2s							
DLBC	**Dease Lake**	**16.89**	**66**	Pn		**Pn**	**08 51 33.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=194,slow=13,SNR=3.1							
DLBC						LR	LR	08 56 54.2
	comp=Z,27nm,18.4s,baz=216,slow=33							
	comp=Z,1.0nm,0.9s							
INK	**Inuvik**	**18.23**	**32**	P		**P**	**08 51 47.4**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=233,slow=11,SNR=20							
	comp=Z,2.3nm,0.4s							
BBB	**Bella Bella**	**19.20**	**85**	LR		LR	08 57 45.5	
	comp=Z,41nm,19.9s,baz=214,slow=31							
C36M	**Paulatuk**	**21.75**	**34**	P		**P**	**08 52 26.5**	**-0.7**
YKA	**Yellowknife Ar**	**24.41**	**53**	P		**P**	**08 52 55.0**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=275,slow=8.6,SNR=11							
YKA				PcP		**PcP**	**08 56 32.2**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=268,slow=2.2,SNR=5.8							
	comp=Z,1.1nm,0.5s							
PETK	**Petropavlovsk-**	**24.50**	**283**	P		**P**	**08 52 54.1**	**-0.8**
	comp=Z,4.8nm,0.4s,baz=79,slow=13,SNR=36							
PETK						LR	LR	09 03 00.2
	comp=Z,17nm,18.8s,baz=73,slow=38							
	comp=Z,4.8nm,0.4s							
MA2	**Magadan**	**26.38**	**300**	LR		LR	09 03 12.6	
	comp=Z,28nm,18.9s,baz=12,slow=36							
YBH	**Yreka Blue Hor**	**27.87**	**103**	LR		LR	09 01 56.0	
	comp=Z,53nm,20.0s,baz=297,slow=30							
PDAR	**Pinedale Array**	**34.75**	**89**	P		**P**	**08 54 28.9**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=294,slow=10,SNR=1.7							
ILON	**Igloolik, Nuna**	**36.41**	**36**	P		**P**	**08 54 40.8**	**+1.1**
JKA	**Kamikawa-asahi**	**37.62**	**278**	P		**P**	**08 54 49.7**	**-0.5**
JKA	**Kamikawa-asahi**	**37.62**	**278**	IAmb		IAmb	08 54 51.2	
	comp=Z,6.2nm,1.1s							
ASAJ	**Asahikawa**	**37.62**	**278**	P		**P**	**08 54 49.7**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=36,slow=14,SNR=3.8							
	comp=Z,1.6nm,0.3s							
NEEM	**North Greenlan**	**40.93**	**18**	*i* P		**P**	**08 55 18.3**	**+0.5**
NEEM					IAmb	IAmb	08 55 20.3	
	comp=Z,3.8nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**43.05**	**228**	T		T	09 41 52.6	
	baz=29							
H11N3	**WAKE ISLAND Hy**	**43.06**	**228**	T		T	09 41 55.8	
	baz=29,SNR=7.5							
H11N1	**WAKE ISLAND Hy**	**43.07**	**228**	T		T	09 41 58.6	
	baz=29							
H11S1	**WAKE ISLAND Hy**	**44.22**	**228**	T		T	09 43 21.8	
	baz=27,slow=74,SNR=4.3							
H11S2	**WAKE ISLAND Hy**	**44.23**	**228**	T		T	09 43 21.7	
	baz=27,slow=74,SNR=2.7							
H11S3	**WAKE ISLAND Hy**	**44.24**	**228**	T		T	09 43 23.7	
	baz=27							
MJAR	**Matsushiro Arr**	**45.11**	**272**	P		**P**	**08 55 51.1**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=31,slow=7.3,SNR=4.7							
	comp=Z,1.2nm,0.5s							
MJAR	**Mashiro Arr**	**45.11**	**272**	IAmb		IAmb	08 55 53.5	
	comp=Z,2.8nm,1.1s							
DAG	**Danmarks Havn**	**46.32**	**11**	*i* P		**P**	**08 56 00.3**	**-0.4**
DAG					IAmb	IAmb	08 56 01.5	
	comp=Z,5.9nm,0.9s							
NRIK	**Noril'sk**	**46.66**	**333**	P		**P**	**08 56 02.5**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=16,slow=7.4,SNR=4.1							
	comp=Z,1.9nm,0.5s							
NRIK	**Noril'sk**	**46.66**	**333**	IAmb		IAmb	08 56 04.5	
	comp=Z,2.1nm,0.6s							
TXAR	**Lajitas Array**	**47.51**	**99**	P		**P**	**08 56 13.6**	**+2.9**
	comp=Z,0.3nm,0.6s,baz=323,slow=7.4,SNR=5.3							
DBG	**Daneborg**	**48.27**	**14**	*i* P		**P**	**08 56 16.2**	**+0.2**
DBG					IAmb	IAmb	08 56 17.1	
	comp=Z,4.1nm,0.9s							
KSRS	**Korea Array**	**50.37**	**281**	P		**P**	**08 56 32.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=54,slow=6.4,SNR=4.4							
	comp=Z,0.5nm,0.4s							
TLY	**Talaya**	**53.06**	**309**	P		**P**	**08 56 51.9**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=33,slow=17,SNR=4.1							
	comp=Z,1.5nm,0.5s							
TLY	**Talaya**	**53.06**	**309**	IAmb		IAmb	08 56 52.8	
	comp=Z,1.4nm,0.7s							
SONM	**Songino Array**	**54.49**	**304**	P		**P**	**08 57 02.7**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=49,slow=7.4,SNR=7.6							
	comp=Z,1.4nm,0.5s							
SONM	**Songino Array**	**54.49**	**304**	IAmb		IAmb	08 57 03.5	
	comp=Z,1.1nm,0.7s							
ARCES	**ARCESS Array B**	**55.76**	**358**	P		**P**	**08 57 10.8**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=19,slow=7.7,SNR=11							
	comp=Z,0.9nm,0.4s							
FINES	**FINESS Array B**	**63.85**	**357**	P		**P**	**08 58 06.7**	**-0.5**
	comp=Z,2.3nm,0.4s,baz=19,slow=7.6,SNR=34							
	comp=Z,2.3nm,0.4s							
NB2	**NORSAR Subarra**	**64.16**	**5**	P		**P**	**08 58 09.1**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=355,slow=6.5							
NOA	**NORSAR Array B**	**64.16**	**5**	P		**P**	**08 58 09.0**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=356,slow=6.6,SNR=5.5							
	comp=Z,2.5nm,0.9s							
BVAR	**Borovoye Array**	**64.53**	**329**	P		**P**	**08 58 11.6**	**-0.4**
	comp=Z,3.9nm,0.5s,baz=40,slow=7.1,SNR=13							
	comp=Z,3.9nm,0.5s							
ARTI	**Arti**	**64.65**	**337**	P		**P**	**08 58 11.4**	**-1.2**
	comp=Z,2.8nm,0.3s,baz=36,slow=1.9,SNR=6.6							
	comp=Z,2.8nm,0.3s							
ARTI	**Arti**	**64.65**	**337**			**P**	**08 58 12.0**	**-0.6**
HFS	**Hagfors**	**65.17**	**3**	P		**P**	**08 58 15.5**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=24,slow=4.8,SNR=9.3							
	comp=Z,4.2nm,0.7s							
MKAR	**Makanchi Array**	**65.75**	**318**	P		**P**	**08 58 18.4**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=52,slow=8.5,SNR=5.3							
	comp=Z,0.4nm,0.5s							
EKA	**Eskdalemuir Ar**	**68.49**	**14**	P		**P**	**08 58 37.1**	**0.0**
	comp=Z,1.3nm,0.5s,baz=346,slow=4.4,SNR=7.9							
	comp=Z,1.3nm,0.5s							
AKTO	**Aktyubinsk**	**70.23**	**335**	P		**P**	**08 58 47.0**	**-0.9**
	comp=Z,5.0nm,0.7s,baz=34,slow=3.3,SNR=18							
	comp=Z,5.0nm,0.7s							
AKASG	**Malin Array Be**	**74.43**	**354**	P		**P**	**08 59 12.5**	**-0.5**
	comp=Z,4.1nm,0.6s,baz=11,slow=6.2,SNR=12							
	comp=Z,4.1nm,0.6s				

EMPR	**Esperanza - Ma**	**0.66**	**32**	P		**Pb**	**08 50 19.9**	**-0.1**
EMPR	**Esperanza - Ma**	**0.66**	**32**	*i*P		**Pb**	**08 50 20.1**	**+0.1**
EMPR				*e*S		**Sb**	**08 50 29.4**	**+0.5**
IDE	**Isla Desecheo**	**0.72**	**311**			**Pb**	**08 50 20.5**	**-0.5**
IDE				*e*S		**Sb**	**08 50 30.3**	**-0.2**
IDE	**Isla Desecheo**	**0.72**	**311**	*e*P		**Pb**	**08 50 20.5**	**-0.5**
IDE				*e*S		**Sb**	**08 50 30.3**	**-0.2**
SJG	**San Juan**	**0.74**	**75**			**Pb**	**08 50 21.2**	**-0.2**
SJG	**San Juan**	**0.74**	**75**	IAML			08 50 32.3	
	comp=Z,5μm,0.4s							
SJG	**San Juan**	**0.74**	**75**	P		**Pb**	**08 50 21.2**	**-0.2**
SJG	**San Juan**	**0.74**	**75**	*i* P		**Pb**	**08 50 21.1**	**-0.3**
SJG				eS		**Sb**	**08 50 31.2**	**0.0**
SJG	**San Juan**	**0.74**	**75**	*e*P		**Pb**	**08 50 21.2**	**-0.2**
IGPR	**InterUniversit**	**0.76**	**86**			**Pb**	**08 50 21.4**	**-0.3**
IGPR						**Sg**	**08 50 32.4**	**+0.4**
IGPR	**InterUniversit**	**0.76**	**86**	P		**Pb**	**08 50 21.4**	**-0.3**
IGPR	**InterUniversit**	**0.76**	**86**	*e*P		**Pb**	**08 50 21.4**	**-0.3**
PDPR	**Patillas Dam,**	**0.84**	**83**			**Pb**	**08 50 22.7**	**-0.5**
PDPR	**Patillas Dam,**	**0.84**	**83**			**Sg**	**08 50 34.8**	**+0.1**
PDPR	**Patillas Dam,**	**0.84**	**83**	IAML			08 50 35.7	
	comp=Z,1μm,0.5s							
PDPR				IAML			08 50 37.7	
	comp=Z,940nm,0.6s							
PDPR	**Patillas Dam,**	**0.84**	**83**	P		**Pb**	**08 50 22.8**	**-0.4**
PDPR	**Patillas Dam,**	**0.84**	**83**	*e*P		**Pb**	**08 50 22.8**	**-0.4**
HUMP	**Col San Antoni**	**1.03**	**77**			**Pb**	**08 50 25.7**	**-0.5**
HUMP	**Col San Antoni**	**1.03**	**77**			**Sb**	**08 50 39.6**	**+0.1**
HUMP	**Col San Antoni**	**1.03**	**77**	IAML			08 50 42.9	
	comp=Z,2μm,0.4s							
HUMP				IAML			08 50 43.8	
	comp=Z,1μm,0.3s							
HUMP	**Col San Antoni**	**1.03**	**77**	P		**Pb**	**08 50 25.6**	**-0.7**
HUMP	**Col San Antoni**	**1.03**	**77**	*e*P		**Pb**	**08 50 25.8**	**-0.5**
PCDR	**Punta Cana, DR**	**1.53**	**293**			**Pn**	**08 50 33.9**	**+0.4**
PCDR	**Punta Cana, DR**	**1.53**	**293**	*i* P		**Pn**	**08 50 33.8**	**+0.4**
PCDR				IAML			08 51 00.5	
	comp=Z,290nm,1.2s							
DR12	**Loma Pena Alta**	**2.51**	**291**			**Pn**	**08 50 49.0**	**+2.1**
BANI	**BANI**	**3.32**	**279**	Pn		**Pn**	**08 50 58.6**	**+0.4**
SABA	**Saba**	**3.50**	**94**	Pn		**Pn**	**08 51 01.3**	**+0.7**
SABA				IAML			08 52 18.9	
	comp=N,256nm,1.5s							
SC01	**Santiago de lo**	**3.92**	**293**			**Pn**	**08 51 08.2**	**+1.8**
LOVI	**El Cajuil, Ovi**	**4.25**	**269**	*i* P		**Pn**	**08 51 10.6**	**-0.4**
LOVI				IAML			08 52 02.9	
	comp=Z,75nm,0.3s							
LOBH	**Bahia de las A**	**4.51**	**270**	*i* P		**Pn**	**08 51 14.7**	**+0.2**
LOBH				IAML			08 52 09.3	
	comp=Z,55nm,1.1s							
GRTK	**Grand Turk**	**5.35**	**313**	Pn		**Pn**	**08 51 27.2**	**+1.1**
BIM	**Bigot**	**6.54**	**120**	Pn		**Pn**	**08 51 41.7**	**-0.8**

TEH ***29*** *08:52:16.3, 34.60N×45.79E, h10km±97km, ML2.8, Presumed earthquake*

ISN ***29*** *08:52:20.4±2.2, 34.60N×45.79E, h10km, ML2.9, Presumed earthquake*

ISC 29 08:52:18.2±1.1, 34°53N±0°07×45°90E±0°06, h10km, n7, σ0s89/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.43**	**67**	Pg	**Pg**	**08 52 26.4**	**-0.4**
IDHR				Sg	**Sb**	**08 52 33.9**	**-0.8**
IGHG	**Ghaleghazi**	**0.59**	**110**	Pg	**Pg**	**08 52 30.2**	**+0.5**
ILBA	**Ilam Banvizeh**	**0.94**	**164**	Pg	**Pg**	**08 52 35.9**	**-0.5**
KCHF	**Cheshme Sefid,**	**0.97**	**105**	Pg	**Pg**	**08 52 37.7**	**+0.7**
SNJK	**Sanadaj _Korde**	**1.32**	**47**	Pg	**Pn**	**08 52 42.2**	**-0.7**
SNQR	**Sonqor, Kerman**	**1.46**	**77**	Pg	**Pb**	**08 52 46.1**	**+0.5**
IKRK	**Kirkuk**	**1.55**	**304**	*i* P	**Pn**	**08 52 45.2**	**-0.7**
	baz=124						
IKRK				*i* S	**Sn**	**08 53 07.4**	**+1.3**
IKRK				IAML		08 53 07.9	
	comp=N,211nm,0.2s						
IKRK				IAML		08 53 08.1	
	comp=E,166nm,0.5s						

NNC 29 09:10:51.6±8.3, 37°10N×70°31E, h0km, mb4.1, mpv3.9, 1C-2D, Error ellipse: s-maj=67.8km s-min=51.5km az=164.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.00**	**1**	P	Pn	09 12 22.2	+0.6
	8.5nm,0.2s,baz=178,slow=13,SNR=130						
KK31				⇓S	Sn	09 13 32.9	+1.8
	1.6nm,0.2s,baz=186,slow=26						
AAK	**Ala-Archa**	**6.40**	**29**	⇓P	Pn	09 12 26.4	-0.9
	1.5nm,0.5s						
AAK				⇑S	Sn	09 13 41.2	+0.1
	5.8nm,1.1s						
AB31	**Akbulak array**	**14.29**	**331**	P	Pn	09 14 16.6	+1.5
	0.7nm,0.3s,baz=158,slow=11,SNR=39						

BJI ***29*** *09:12:14.2, 55.12N×160.86W, h39km, mB5.3/69, mb5.6/89, Ms5.5/90, Ms7 5.2/86*

MOS ***29*** *09:12:15.1±0.9, 55.19N×160.49W, h32km, mb5.9/130, MS5.1/45, Error ellipse: s-maj=7.1km s-min=3.9km az=93.6*

IDC ***29*** *09:12:15.8±1.1, 55.02N×160.55W, h39km±8km, mb5.2/40, mbtmp5.4/45, ML4.6/6, MS4.8/100, Error ellipse: s-maj=9.9km s-min=6.3km az=166.0*

ISC-PP ***29*** *09:12:16, 54.94N×160.33W, h36km, Mwppsm5.9, Moment Tensor Solution. s58 Moment tensor: Scale 10¹⁷Nm; Mrr0.86±.12; Mθθ0.13±.16; Mϕϕ-0.17±.11; Mrθ-0.14±.07; Mrϕ0.29±.19; Mθϕ0.03±.08; Fault plane solution: M₀9.12000×10¹⁷ NP1:φs344.90000°, δ60.60000°, λ82.80000°. NP2:φs179.30000°, δ30.20000°, λ102.50000°.*

NEIC ***29*** *09:12:16.4±2.2, 54.94N×160.05×160.33W±0.05, h39km±1km, mb5.7/289, ML5.6/34, Ms_20 5.1/391, Mwb5.6/174, Mwr5.5/18, Mww5.6/101, ML5.4(AEIC) Error ellipse: s-maj=9.2km s-min=4.8km az=172.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.81; Mθθ-2.19; Mϕϕ-0.62; Mrθ1.77; Mrϕ-0.82; Mθϕ0.89; Fault plane solution: M₀3.34000×10¹⁷ NP1:φs64.88000°, δ63.25000°, λ88.44000°. NP2:φs248.35000°, δ26.80000°, λ93.10000°. Principal axes: T 3.4685, Plg72.0000°, Azm331.0000°; N -0.2741, Plg1.0000°, Azm66.0000°; P -3.1944, Plg18.0000°, Azm156.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr1.58; Mθθ-1.33; Mϕϕ-0.25; Mrθ1.65; Mϕθ-0.58; Mϕr1.08; Fault plane solution: M₀2.53000×10¹⁷ NP1:φs59.05000°, δ70.78000°, λ85.08000°. NP2:φs253.70000°, δ19.82000°, λ103.81000°. Principal axes: T 2.5382, Plg64.0000°, Azm321.0000°; N -0.0246, Plg5.0000°, Azm61.0000°; P -2.5136, Plg26.0000°, Azm153.0000°;*

GFZ ***29*** *09:12:16.9±0.2, 55°N±3°×16°1W±°, h42km±2km, M5.5/229, mb5.7/229, mB5.9/185, Mw(mB)5.5/185, MwMwp5.4/72, Mwp5.6/72 Error ellipse: s-maj=5.5km s-min=3.5km az=172.1, confirmed*

GFZ ***29*** *09:12:16.9, 55.08N×160.53W, h47km, Mw5.5/18, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.76; Mθθ-1.85; Mϕϕ0.09; Mrθ1.16; Mθϕ-0.64; Mϕr0.72; Fault plane solution: M₀2.35457×10¹⁷ NP1:φs63.71112°, δ63.07643°, λ80.12002°. NP2:φs264.75011°, δ28.55147°, λ108.66845°. Principal axes: T 2.2335, Plg70.2699°, Azm312.6479°; N 0.2258, Plg8.8001°, Azm68.2203°; P -2.4593, Plg17.5138°, Azm161.0205°;*

NEIC ***29*** *09:12:16.5, 54.95N×160.31W, h42km*

AEIC ***29*** *09:12:16.1±2.5, 54.93N±0.04×160.33W±0.04, h36km±4km, Error ellipse: s-maj=6.9km s-min=0.3km az=150.0*

NEIC ***29*** *09:12:16.5, 54.95N×160.31W, h42km*

IPGP ***29*** *09:12:16.0, 54.97N×160.33W, h45km, Mw5.6, Fault plane solution: NP1:φs247.00000°, δ29.00000°, λ92.00000°. NP2:φs65.00000°, δ61.00000°, λ89.00000°.*

NEIC ***29*** *09:12:16.4, 54.94N×160.27W, h36km*

ANF ***29*** *09:12:16.9±0.4, 54.98N×160.23W, h55km±3km, ML5.8/21, Error ellipse: s-maj=4.9km s-min=2.6km az=35.0*

BGR ***29*** *09:12:17.4, 55.10N×160.83W, h60km±5km, mb5.8, Ms4.8*

PMR ***29*** *09:12:17.0, 55.00N×160.33W, h60km*

GCMT ***29*** *09:12:19.5±0.1, 54.90N±0.01×160.21W±0.01, h54km, MW5.6/158, Moment Tensor Solution. s145, c278; s158, c313; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr2.22±.03; Mθθ-2.03±.03; Mϕϕ-0.19±.03; Mrθ1.44±.03; Mθϕ-1.23±.02; Mϕr0.64±.02; Best double couple: M₀2.89800×10¹⁷ NP1:φs241.00000°, δ29.00000°, λ87.00000°. NP2:φs65.00000°, δ61.00000°, λ92.00000°. Principal axes: T 2.6860, Plg73.0000°, Azm340.0000°; N 0.4230, Plg2.0000°, Azm244.0000°; P -3.1100, Plg16.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *09:12:23.8, 54.94N×160.61W, h50km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10¹⁷Nm; Mrr2.60; Mθθ-2.25; Mϕϕ-0.35; Mrθ1.20; Mθϕ-0.97; Mϕr0.91; Fault plane solution: M₀3.03000×10¹⁷ NP1:φs254.34000°, δ30.86000°, λ102.21000°. NP2:φs60.19000°, δ59.91000°, λ82.80000°. Principal axes: T 3.0193, Plg74.0000°, Azm311.0000°; N 0.0133, Plg6.0000°, Azm64.0000°; P -3.0326, Plg15.0000°, Azm155.0000°;*

ISC 29 09:12:16.3±0.2, 55°00N±0°03×160°42W±0°02, h45km±1km, h44km; pP-P, n2155, σ1s18/2200, mb5.7/494, MS5.0/367, 95C-50D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.35**	**355**	P	**Pn**	**09 12 24.6**	**-0.9**
SDPT	**Sand Point**	**0.35**	**355**	S	**Sn**	**09 12 33.4**	**+1.4**
SDPT	**Sand Point**	**0.35**	**355**		**Pn**	**09 12 25.6**	**+0.1**
SDPT				Sn	**Sn**	**09 12 33.0**	**+1.0**
SDPT				IAML		09 12 35.3	
	comp=E,509μm,0.8s						
SDPT	**Sand Point**	**0.35**	**355**	P	**Pn**	**09 12 25.8**	**+0.4**
	baz=166,SNR=1000						
SDPT				S	**Sn**	**09 12 33.3**	**+1.3**
	baz=166						
CHNA	**Chernabura Isl**	**0.51**	**109**	P	**Pn**	**09 12 26.7**	**-0.7**
CHNA	**Chernabura Isl**	**0.51**	**109**	S	**Sn**	**09 12 35.3**	**+0.1**
CHNA	**Chernabura Isl**	**0.51**	**109**	P	**Pn**	**09 12 24.9**	**-2.5**
	baz=292,SNR=1000						
CHNA				S	**Sn**	**09 12 34.3**	**-0.9**
	baz=292						
CNBA	**Chernabura Isl**	**0.52**	**110**		**Pn**	**09 12 24.5**	**-2.9**
CNBA	**Chernabura Isl**	**0.52**	**110**		**Sn**	**09 12 33.9**	**-1.5**
DOL	**Dolgoi Island**	**0.84**	**281**		**Pn**	**09 12 32.5**	**+0.7**
DOL					**Sn**	**09 12 45.5**	**+2.5**
PS1A	**Pavlof South-1**	**0.86**	**300**		**Pn**	**09 12 33.3**	**+1.2**
PS1A					**Sn**	**09 12 46.4**	**+2.8**
PVV	**Pavlof Volcano**	**0.87**	**296**		**Pn**	**09 12 33.2**	**+1.1**
PS4A	**Pavlof South-4**	**0.89**	**293**		**Pn**	**09 12 33.7**	**+1.2**
PS4A					**Sn**	**09 12 47.7**	**+3.4**
HAG	**Hague Volcano**	**0.91**	**291**	P	**Pn**	**09 12 34.0**	**+1.3**
HAG	**Hague Volcano**	**0.91**	**291**		**Pn**	**09 12 34.0**	**+1.3**
PN7A	**Pavlof North-7**	**1.00**	**296**		**Pn**	**09 12 35.6**	**+1.7**
DTNA	**Dutton South F**	**1.06**	**279**		**Pn**	**09 12 35.8**	**+1.1**
DTNA					**Sn**	**09 12 51.6**	**+3.2**
DT1	**Dutton Round H**	**1.07**	**276**		**Pn**	**09 12 35.7**	**+0.8**
DT1					**Sn**	**09 12 51.7**	**+3.0**
VNKR	**Veniaminof 5**	**1.20**	**30**		**Pn**	**09 12 37.3**	**+0.7**
VNWF	**Veniaminof 8**	**1.25**	**23**		**Pn**	**09 12 38.5**	**+1.1**
VNSS	**Veniaminof 8**	**1.35**	**24**		**Pn**	**09 12 40.0**	**+1.2**
VNSG	**Veniaminof 6**	**1.36**	**33**		**Pn**	**09 12 39.7**	**+0.8**
S14K	**Fog Glacier**	**1.38**	**21**	P	**Pn**	**09 12 40.6**	**+1.4**
	baz=199,SNR=1000						
VNFG	**Fog Glacier, M**	**1.38**	**21**		**Pn**	**09 12 40.3**	**+1.1**
VNFG				IAML		09 13 05.0	
	comp=N,122μm,0.7s						
VNFG				IAML		09 13 22.6	
	comp=E,131μm,0.8s						
VNFG	**Fog Glacier, M**	**1.38**	**21**		**Pn**	**09 12 40.7**	**+1.5**
BPBCA	**Veniaminof**	**1.94**	**34**		**Pn**	**09 12 48.3**	**+1.4**
ISNN	**Isanotski Nort**	**1.94**	**266**		**Pn**	**09 12 49.2**	**+2.4**
ISNN					**Sn**	**09 13 13.8**	**+3.8**
SSLN	**Shishaldin Nor**	**2.07**	**266**		**Pn**	**09 12 50.7**	**+2.1**
SSLN					**Sn**	**09 13 16.6**	**+3.5**
SSLS	**Shishaldin Sou**	**2.09**	**263**		**Pn**	**09 12 50.8**	**+1.9**
SSBA	**Shishaldin**	**2.15**	**265**		**Pn**	**09 12 51.9**	**+2.2**
ANPB	**Aniakchak Plen**	**2.17**	**33**		**Pn**	**09 12 51.3**	**+1.3**
AZAC	**Aniakchak**	**2.27**	**32**		**Pn**	**09 12 52.4**	**+1.0**
ANNW	**Aniakchak Nort**	**2.33**	**31**		**Pn**	**09 12 53.4**	**+1.2**
ANNE	**Aniakchak Nort**	**2.33**	**34**		**Pn**	**09 12 53.3**	**+1.1**
AKSA	**Akutan Strait**	**3.19**	**256**		**Pn**	**09 13 06.0**	**+2.1**
AKSA					**Sn**	**09 13 42.3**	**+1.7**
AKUT	**Akutan**	**3.23**	**257**	P	**Pn**	**09 13 04.8**	**+0.3**
AKUT	**Akutan**	**3.23**	**257**	S	**Sn**	**09 13 43.2**	**+1.6**
AKUT	**Akutan**	**3.23**	**257**		**Pn**	**09 13 05.9**	**+1.4**
AKUT				IAML		09 14 00.1	
	comp=N,11μm,0.9s						
AKUT				IAML		09 14 01.8	
	comp=E,10μm,0.9s						
AHB	**Akutan Harbor**	**3.26**	**256**		**Pn**	**09 13 06.9**	**+2.0**
AKLV	**Akutan Long Va**	**3.33**	**258**		**Pn**	**09 13 07.7**	**+1.9**
AKBBA	**Akutan Broad B**	**3.33**	**257**		**Pn**	**09 13 07.8**	**+1.9**
AKGG	**Akutan Green G**	**3.34**	**258**		**Pn**	**09 13 07.9**	**+2.0**
AKV	**Akutan Volcano**	**3.34**	**257**		**Pn**	**09 13 07.7**	**+1.7**
ZRO	**Akutan Zero**	**3.36**	**257**		**Pn**	**09 13 08.1**	**+1.8**
PLBL	**Peulik Blue Cr**	**3.37**	**35**		**Pn**	**09 13 07.9**	**+1.5**
PLBL					**Sn**	**09 13 47.4**	**+2.4**
LVA	**Lava Point**	**3.37**	**258**		**Pn**	**09 13 07.6**	**+1.2**
LVA				IAML		09 14 05.1	
	comp=E,10μm,0.7s						
AKRB	**Akutan Reef Bi**	**3.40**	**257**		**Pn**	**09 13 08.6**	**+1.8**
R17L	**Mt. Peulik Vol**	**3.48**	**39**		**Pn**	**09 13 09.4**	**+1.6**
R17L	**Mt. Peulik Vol**	**3.48**	**39**	P	**Pn**	**09 13 08.9**	**+1.1**
	baz=222,SNR=1000						
PLK1	**Peulik 1**	**3.52**	**35**		**Pn**	**09 13 09.8**	**+1.4**
PLK2	**Peulik 2**	**3.59**	**38**		**Pn**	**09 13 11.0**	**+1.7**
PLK5	**Peulik 5**	**3.59**	**32**		**Pn**	**09 13 10.9**	**+1.6**
UNV	**Unalaska Valle**	**3.74**	**254**	P	**Pn**	**09 13 12.6**	**+1.2**
UNV	**Unalaska Valle**	**3.74**	**254**	S	**Sn**	**09 13 56.0**	**+2.0**
UNV	**Unalaska Valle**	**3.74**	**254**		**Pn**	**09 13 12.5**	**+1.2**
UNV				IAML		09 14 13.1	
	comp=E,7μm,0.9s						
UNV	**Unalaska Valle**	**3.74**	**254**	P	**Pn**	**09 13 12.5**	**+1.2**
	baz=70,SNR=89						
MNAT	**Makushin Natee**	**3.82**	**256**		**Pn**	**09 13 13.9**	**+1.3**
SII	**Sitkinak Islan**	**3.85**	**64**		**Pn**	**09 13 12.9**	**-0.1**
SII	**Sitkinak Islan**	**3.85**	**64**	IAML		09 14 21.4	
	comp=N,15μm,0.8s						
SII	**Sitkinak Islan**	**3.85**	**64**	P	**Pn**	**09 13 12.6**	**-0.5**
	baz=248						
MREP	**Makushin Rep't**	**3.88**	**255**		**Pn**	**09 13 14.8**	**+1.4**
MGOD	**Makushin Gods**	**3.96**	**255**		**Pn**	**09 13 15.9**	**+1.4**
MAPS	**Pakushin South**	**3.99**	**255**		**Pn**	**09 13 15.9**	**+1.0**
Q17K	**Contact Creek**	**4.12**	**36**		**Pn**	**09 13 17.8**	**+1.0**
Q17K	**Contact Creek**	**4.12**	**36**	P	**Pn**	**09 13 17.7**	**+1.0**
	baz=219						
O15K	**Ungalikthiuk R**	**4.20**	**4**		**Pn**	**09 13 18.6**	**+0.8**
O15K				IAML		09 14 40.7	
	comp=E,4μm,1.0s						
O15K	**Ungalikthiuk R**	**4.20**	**4**	P	**Pn**	**09 13 18.4**	**+0.6**
	baz=184,SNR=1000						
O15K				S	**Sn**	**09 14 06.2**	**+0.7**
	baz=184						
ANCK	**Angle Creek**	**4.21**	**38**		**Pn**	**09 13 19.1**	**+1.2**
Q16K	**King Salmon**	**4.23**	**28**		**Pn**	**09 13 19.4**	**+1.3**
Q16K	**King Salmon**	**4.23**	**28**	P	**Pn**	**09 13 19.3**	**+1.3**
	baz=210,SNR=604						
Q16K				S	**Sn**	**09 14 07.2**	**+1.1**
	baz=210						
P16K	**Nushagak River**	**4.25**	**17**		**Pn**	**09 13 19.6**	**+1.1**
P16K				IAML		09 14 49.8	
	comp=E,12μm,1.0s						
P16K	**Nushagak River**	**4.25**	**17**	P	**Pn**	**09 13 19.3**	**+0.8**
	baz=198,SNR=261						
ACHA	**Angle Creek He**	**4.28**	**39**		**Pn**	**09 13 19.2**	**+0.4**
MGLS	**Mageik Landsli**	**4.28**	**41**		**Pn**	**09 13 19.8**	**+0.9**
O14K	**Tigyukauivet M**	**4.29**	**354**		**Pn**	**09 13 19.9**	**+1.0**
O14K				IAML		09 14 11.7	
	comp=N,5μm,1.1s						
O14K				IAML		09 14 43.8	
	comp=E,4μm,1.0s						
O14K	**Tigyukauivet M**	**4.29**	**354**	P	**Pn**	**09 13 20.0**	**+1.0**
	baz=173,SNR=1000						
O14K				S	**Sn**	**09 14 08.7**	**+1.0**
	baz=173						
KABU	**Katmai Buttres**	**4.34**	**39**		**Pn**	**09 13 21.0**	**+1.3**
KAKN	**Katmai Knife C**	**4.44**	**40**		**Pn**	**09 13 22.5**	**+1.4**
OHAK	**Old Harbor**	**4.57**	**58**	P	**Pn**	**09 13 21.8**	**-1.0**
OHAK	**Old Harbor**	**4.57**	**58**		**Pn**	**09 13 22.8**	**-0.1**
OHAK				IAML		09 14 38.4	
	comp=N,6μm,0.7s						
OHAK				IAML		09 14 39.5	
	comp=E,4μm,0.9s						
OHAK	**Old Harbor**	**4.57**	**58**	P	**Pn**	**09 13 21.8**	**-1.0**
	baz=244,SNR=114						
KAWH	**Katmai**	**4.59**	**40**		**Pn**	**09 13 24.0**	**+0.8**
KARR	**Katmai Rainbow**	**4.71**	**40**		**Pn**	**09 13 26.1**	**+1.3**
Q18K	**Katmai Hardscr**	**4.71**	**37**		**Pn**	**09 13 26.1**	**+1.2**
Q18K	**Katmai Hardscr**	**4.71**	**37**	P	**Pn**	**09 13 25.7**	**+0.8**
	baz=221,SNR=324						
P17K	**Kvichak River**	**4.73**	**26**		**Pn**	**09 13 26.4**	**+1.3**
P17K	**Kvichak River**	**4.73**	**26**	P	**Pn**	**09 13 26.5**	**+1.4**
	baz=208						
OKTU	**Okmok Mt. Tuli**	**4.76**	**253**		**Pn**	**09 13 27.1**	**+1.6**
KAHG	**Katmai Hook Gl**	**4.77**	**40**		**Pn**	**09 13 26.7**	**+1.1**
OKNC	**Okmok New Cone**	**4.78**	**254**		**Pn**	**09 13 27.0**	**+1.4**
O16K	**Kokwok River B**	**4.78**	**14**		**Pn**	**09 13 25.6**	**0.0**
O16K	**Kokwok River B**	**4.78**	**14**	P	**Pn**	**09 13 26.1**	**+0.5**
	baz=196,SNR=825						
OKWE	**Okmok W'ng Wal**	**4.83**	**255**		**Pn**	**09 13 27.4**	**+0.9**
N14K	**Kuskokwak Cree**	**4.98**	**353**		**Pn**	**09 13 29.6**	**+1.2**
N14K	**Kuskokwak Cree**	**4.98**	**353**	P	**Pn**	**09 13 29.5**	**+1.1**
	baz=171,SNR=1000						
N14K				S	**Sn**	**09 14 26.0**	**+1.3**
	baz=171						
O17K	**Koliganek Bris**	**5.11**	**19**		**Pn**	**09 13 31.1**	**+0.9**
O17K	**Koliganek Bris**	**5.11**	**19**	P	**Pn**	**09 13 31.2**	**+0.9**
	baz=202,SNR=779						
O17K				S	**Sn**	**09 14 28.5**	**+0.6**
	baz=202						
KDAK	**Kodiak Island**	**5.17**	**54**	Pn	**Pn**	**09 13 29.8**	**-1.3**
	comp=E,22nm,0.3s,baz=225,slow=7.8,SNR=224						
KDAK				Sn	**Sn**	**09 14 27.7**	**-1.6**
	comp=E,74nm,0.3s,baz=246,slow=11,SNR=4.0						
KDAK				LR	LR	09 15 47.6	
	comp=E,19μm,19.9s,baz=229,slow=41						
	comp=E,152nm,0.5s						
KDAK	**Kodiak Island**	**5.17**	**54**	*c i*P	**Pn**	**09 13 30.3**	**-0.8**
KDAK	**Kodiak Island**	**5.17**	**54**		**Pn**	**09 13 30.0**	**-1.0**
KDAK				IAML		09 14 55.1	
	comp=E,4μm,0.7s						
KDAK				IAML		09 14 56.7	
	comp=E,6μm,0.8s						
KDAK	**Kodiak Island**	**5.17**	**54**	P	**Pn**	**09 13 30.3**	**-0.8**
	baz=240						
KDAK	**Kodiak Island**	**5.17**	**54**	P	**Pn**	**09 13 31.5**	**+0.5**
N15K	**Kwethluk River**	**5.19**	**2**		**Pn**	**09 13 32.1**	**+0.8**
N15K				IAML		09 15 18.7	
	comp=N,4μm,1.1s						
N15K				IAML		09 15 37.8	
	comp=E,4μm,1.2s						
N15K	**Kwethluk River**	**5.19**	**2**	P	**Pn**	**09 13 32.3**	**+1.0**
	baz=182,SNR=1000						
P18K	**Big Mountain,**	**5.23**	**31**		**Pn**	**09 13 33.4**	**+1.4**
P18K	**Big Mountain,**	**5.23**	**31**	P	**Pn**	**09 13 32.3**	**+0.4**
	baz=214,SNR=321						
Q19K	**Cape Douglas,**	**5.41**	**41**		**Pn**	**09 13 34.7**	**+0.3**
Q19K	**Cape Douglas,**	**5.41**	**41**	P	**Pn**	**09 13 35.2**	**+0.9**
	baz=226,SNR=110						
N16K	**Nishlik Lake**	**5.56**	**8**		**Pn**	**09 13 37.6**	**+1.2**
N16K	**Nishlik Lake**	**5.56**	**8**	P	**Pn**	**09 13 37.8**	**+1.3**
	baz=189,SNR=1000						
O18K	**Koktuh Hills**	**5.62**	**28**		**Pn**	**09 13 38.5**	**+1.2**
O18K	**Koktuh Hills**	**5.62**	**28**	P	**Pn**	**09 13 38.1**	**+0.8**
	baz=212,SNR=1000						
M13K	**Dall Lake**	**5.65**	**345**		**Pn**	**09 13 38.8**	**+1.3**
M13K	**Dall Lake**	**5.65**	**345**	P	**Pn**	**09 13 39.3**	**+1.7**
	baz=162,SNR=352						
M15K	**Kasigluk River**	**5.71**	**359**		**Pn**	**09 13 39.1**	**+0.6**
M15K	**Kasigluk River**	**5.71**	**359**	P	**Pn**	**09 13 39.1**	**+0.6**
	baz=178,SNR=740						
AUCH	**Augustine Cone**	**5.79**	**38**		**Pn**	**09 13 40.8**	**+1.2**
N17K	**Nushagak Hills**	**5.81**	**16**		**Pn**	**09 13 41.2**	**+1.5**
N17K	**Nushagak Hills**	**5.81**	**16**	P	**Pn**	**09 13 40.2**	**+0.5**
	baz=198,SNR=619						
M14K	**Bethel**	**5.83**	**353**		**Pn**	**09 13 40.9**	**+0.9**
M14K	**Bethel**	**5.83**	**353**	P	**Pn**	**09 13 40.9**	**+0.9**
	baz=171,SNR=1000						
SPIA	**Saint Paul Isl**	**5.92**	**296**		**Pn**	**09 13 43.3**	**+2.1**
SPIA	**Saint Paul Isl**	**5.92**	**296**	P	**Pn**	**09 13 42.8**	**+1.5**
	baz=107,SNR=106						
CLCO	**Concord Point,**	**5.93**	**252**		**Pn**	**09 13 43.2**	**+1.7**
P19K	**Oil Pt**	**6.07**	**37**	P	**Pn**	**09 13 43.8**	**+0.3**
	baz=222						
M16K	**Timber Creek**	**6.09**	**7**		**Pn**	**09 13 44.2**	**+0.6**
M16K	**Timber Creek**	**6.09**	**7**	P	**Pn**	**09 13 44.7**	**+1.0**
	baz=188,SNR=557						
O19K	**Port Alsworth**	**6.15**	**30**		**Pn**	**09 13 46.0**	**+1.5**
O19K	**Port Alsworth**	**6.15**	**30**	P	**Pn**	**09 13 46.1**	**+1.5**
	baz=214,SNR=333						
N18K	**Kilae Creek**	**6.19**	**21**		**Pn**	**09 13 45.8**	**+0.7**
N18K	**Kilae Creek**	**6.19**	**21**	P	**Pn**	**

M20K	Styx River	7.89	26	P		Pn	09 14 09.1	+0.8	
	baz=212,SNR=307								
O22K	Cooper Landing	7.93	42	Pn		Pn	09 14 10.1	+1.3	
O22K	Cooper Landing	7.93	42	P		Pn	09 14 09.3	+0.5	
	baz=230,SNR=46								
STLK	Strandline Lak	7.93	31			Pn	09 14 10.6	+1.6	
J14K	Nanvaranak Lak	7.94	350	Pn		Pn	09 14 10.1	+1.1	
J14K	Nanvaranak Lak	7.94	350	P		Pn	09 14 10.0	+1.0	
	baz=166,SNR=262								
J16K	Anvik River	8.31	359	P		Pn	09 14 15.1	+1.0	
	baz=179,SNR=307								
RC01	Rabbit Creek A	8.32	39			Pn	09 14 14.2	-0.1	
RC01	Rabbit Creek A	8.32	39	P		Pn	09 14 14.1	-0.1	
	baz=227,SNR=32								
SKT	Skwentna	8.40	30			Pn	09 14 16.5	+1.2	
SKT	Skwentna	8.40	30	P		Pn	09 14 15.9	+0.6	
	baz=217,SNR=230								
J17K	VABM Dome	8.45	4			Pn	09 14 16.0	0.0	
J17K	VABM Dome	8.45	4	P		Pn	09 14 16.5	+0.5	
	baz=185,SNR=118								
KOSE	Korovin Southe	8.52	257			Pn	09 14 18.3	+1.4	
KONE	Korovin Northe	8.54	258			Pn	09 14 19.2	+2.0	
KOFP	Korovin Flat P	8.57	257			Pn	09 14 19.4	+1.7	
KONW	Korovin Northw	8.58	258			Pn	09 14 19.5	+1.6	
P23K	Montague Islan	8.61	49			Pn	09 14 18.0	-0.2	
P23K	Montague Islan	8.61	49	P		Pn	09 14 17.8	-0.3	
	baz=240,SNR=48								
KOKL	Mount Kliuchef	8.61	258			Pn	09 14 20.1	+1.8	
KOWE	Korovin West	8.62	258			Pn	09 14 20.1	+1.7	
ATKA	Atka Island	8.66	257			Pn	09 14 20.1	+1.2	
M22K	Willow	8.66	34			Pn	09 14 19.3	+0.5	
M22K	Willow	8.66	34	P		Pn	09 14 18.4	-0.4	
	baz=223,SNR=78								
J18K	Innoko River	8.70	11			Pn	09 14 20.4	+1.0	
J18K	Innoko River	8.70	11	P		Pn	09 14 19.9	+0.5	
	baz=194,SNR=283								
PWL	Port Wells	8.70	43			Pn	09 14 19.2	-0.3	
PWL	Port Wells	8.70	43	P		Pn	09 14 18.3	-1.1	
	baz=233,SNR=187								
Q23K	Middleton Isla	8.83	54	P		Pn	09 14 20.3	-0.8	
	baz=246,SNR=6.4								
MID	Middleton Isla	8.83	54			Pn	09 14 20.5	-0.7	
PMR	Palmer	8.88	37	P		Pn	09 14 21.8	0.0	
PMR	Palmer	8.88	37	P		Pn	09 14 21.9	+0.1	
PMR	Palmer	8.88	37			Pn	09 14 21.9	+0.1	
PMR	Palmer	8.88	37	P		Pn	09 14 21.7	-0.1	
	baz=227,SNR=34								
I17K	Unalakleet	8.92	359			Pn	09 14 23.3	+1.0	
I17K	Unalakleet	8.92	359	P		Pn	09 14 22.9	+0.6	
	baz=179,SNR=38								
PPLA	Purkeypile	8.98	25			Pn	09 14 25.8	+2.4	
PPLA	Purkeypile	8.98	25	P		Pn	09 14 25.3	+1.9	
	baz=212,SNR=158								
K20K	Telida	8.99	19			Pn	09 14 23.9	+0.5	
K20K	Telida	8.99	19	P		Pn	09 14 23.9	+0.5	
	baz=204,SNR=318								
KNK	Knik Glacier	9.00	40			Pn	09 14 23.7	+0.2	
KNK	Knik Glacier	9.00	40	P		Pn	09 14 23.5	-0.1	
	baz=230,SNR=38								
L22K	Petersville	9.05	30			Pn	09 14 24.8	+0.5	
L22K	Petersville	9.05	30	P		Pn	09 14 24.3	0.0	
	baz=218,SNR=54								
GHO	Glory Hole Cre	9.07	37			Pn	09 14 23.8	-0.8	
CUT	Chulitna	9.10	31			Pn	09 14 25.6	+0.8	
CUT	Chulitna	9.10	31	P		Pn	09 14 25.1	+0.2	
	baz=220,SNR=28								
HIN	Hinchinbrook I	9.20	48			Pn	09 14 26.1	-0.2	
GLI	Glacier Island	9.21	45			Pn	09 14 26.0	-0.3	
GLI	Glacier Island	9.21	45	P		Pn	09 14 24.7	-1.6	
	baz=236,SNR=36								
SML	Sawmill	9.31	38	P		Pn	09 14 27.6	-0.1	
SML	Sawmill	9.31	38			Pn	09 14 27.6	-0.1	
SML	Sawmill	9.31	38	P		Pn	09 14 25.3	-2.4	
	baz=228,SNR=24								
J19K	Poorman	9.34	13			Pn	09 14 29.1	+0.9	
J19K	Poorman	9.34	13	P		Pn	09 14 28.7	+0.6	
	baz=197,SNR=302								
FID	Port Fidalgo	9.39	47			Pn	09 14 27.7	-1.2	
CAST	Castle Rocks	9.46	23			Pn	09 14 30.6	+0.9	
CAST	Castle Rocks	9.46	23	P		Pn	09 14 29.7	0.0	
	baz=210								
M23K	Glacier View	9.52	39			Pn	09 14 29.7	-0.8	
M23K	Glacier View	9.52	39	P		Pn	09 14 28.8	-1.8	
	baz=230,SNR=105								
EYAK	Cordova Ski Ar	9.60	49	P		Pn	09 14 30.6	-1.1	
EYAK	Cordova Ski Ar	9.60	49	S		Sn	09 16 19.7	+1.7	
EYAK	Cordova Ski Ar	9.60	49			Pn	09 14 30.8	-0.8	
EYAK	Cordova Ski Ar	9.60	49	P		Pn	09 14 29.7	-1.9	
	baz=241,SNR=132								
SCM	Sheep Creek Mo	9.69	40	P		Pn	09 14 32.3	-0.7	
SCM	Sheep Creek Mo	9.69	40			Pn	09 14 32.3	-0.7	
SCM	Sheep Creek Mo	9.69	40	P		Pn	09 14 31.1	-1.9	
	baz=231,SNR=100								
H16K	Elim	9.71	355			Pn	09 14 34.5	+1.3	
H16K	Elim	9.71	355	P		Pn	09 14 34.0	+0.8	
	baz=174,SNR=36								
GSIG	Igitkin Island	9.72	258			Pn	09 14 34.0	+0.6	
J20K	Nowinta River	9.73	16			Pn	09 14 34.5	+1.0	
J20K	Nowinta River	9.73	16	P		Pn	09 14 33.9	+0.4	
	baz=202,SNR=376								
GSTR	Great Sitkin T	9.75	259			Pn	09 14 35.3	+1.5	
GSMY	Great Sitkin M	9.77	259			Pn	09 14 35.2	+1.1	
CHUM	Lake Minchumin	9.81	21			Pn	09 14 35.6	+1.1	
CHUM	Lake Minchumin	9.81	21	P		Pn	09 14 35.1	+0.5	
	baz=208,SNR=63								
GSTD	Great Sitkin T	9.81	259			Pn	09 14 36.2	+1.4	
KTH	Kantishna Hill	9.85	26			Pn	09 14 38.8	+3.7	
WAT7	Susitna Watana	9.86	33			Pn	09 14 35.0	-0.4	
DIV	Divide	9.88	46			Pn	09 14 35.5	-0.2	
ANM	Nome	9.91	347	P		Pn	09 14 37.1	+1.2	
ANM	Nome	9.91	347			Pn	09 14 37.1	+1.2	
ANM	Nome	9.91	347	P		Pn	09 14 37.2	+1.2	
	baz=163,SNR=37								
KAIM	Kayak Island	9.92	54			Pn	09 14 36.4	+0.3	
KAIM	Kayak Island	9.92	54	P		Pn	09 14 36.0	-0.2	
	baz=247,SNR=50								
TRF	Thorofare Moun	9.92	27			Pn	09 14 36.8	+0.5	
TRF	Thorofare Moun	9.92	27	P		Pn	09 14 36.0	-0.3	
	baz=216,SNR=162								
GCSA	Galena City Sc	9.94	9			Pn	09 14 36.7	+0.5	
GCSA	Galena City Sc	9.94	9	P		Pn	09 14 36.9	+0.6	
	baz=192,SNR=22								
WAT1	Susitna Watana	9.95	33			Pn	09 14 35.1	-1.4	
WAT1	Susitna Watana	9.95	33	P		Pn	09 14 35.3	-1.3	
	baz=223								
H17K	Granite Mounta	9.97	1			Pn	09 14 37.3	+0.5	
H17K	Granite Mounta	9.97	1	P		Pn	09 14 37.0	+0.2	
	baz=181,SNR=102								
RAGM	Ragged Mountai	10.00	51			Pn	09 14 37.0	-0.2	
KLU	Klutina	10.02	44			Pn	09 14 37.2	-0.3	
KLU	Klutina	10.02	44	P		Pn	09 14 37.0	-0.6	
	baz=236,SNR=307								
WAT6	Susitna Watana	10.04	36	P		Pn	09 14 36.1	-1.7	
	baz=226,SNR=40								
G15K	Niukluk	10.19	351	P		Pn	09 14 40.4	+0.8	
	baz=168,SNR=127								
ADK	Adak	10.19	259	P		Pn	09 14 41.0	+1.2	
ADK	Adak	10.19	259			Pn	09 14 41.0	+1.2	
ADK	Adak	10.19	259	P		Pn	09 14 40.1	+0.4	
H18K	Honhosa River	10.24	5			Pn	09 14 41.1	+0.7	
H18K	Honhosa River	10.24	5	P		Pn	09 14 40.9	+0.5	
	baz=186,SNR=90								
I20K	Naaghedeneel	10.26	14			Pn	09 14 42.7	+1.9	
I20K	Naaghedeneel	10.26	14	P		Pn	09 14 41.9	+1.1	
	baz=199,SNR=33								
M24K	Tolsona, Glenn	10.28	40			Pn	09 14 41.2	0.0	
M24K	Tolsona, Glenn	10.28	40	P		Pn	09 14 40.8	-0.3	
	baz=232,SNR=72								
RND	Reindeer	10.29	30	P		Pn	09 14 40.5	-0.7	
RND	Reindeer	10.29	30			Pn	09 14 40.5	-0.7	
BMRM	Bremner River	10.29	48			Pn	09 14 41.2	-0.1	
BMRM	Bremner River	10.29	48	P		Pn	09 14 40.4	-0.8	
	baz=241,SNR=72								
BERG	Berg Lake	10.44	52			Pn	09 14 42.8	-0.4	
KIWB	Kanaga Island	10.46	259			Pn	09 14 44.8	+1.2	
G16K	Koyuk River	10.47	356			Pn	09 14 44.7	+1.1	
G16K	Koyuk River	10.47	356	P		Pn	09 14 44.3	+0.8	
	baz=174,SNR=66								
GAMB	Gambell	10.49	332			Pn	09 14 45.3	+1.4	
GAMB	Gambell	10.49	332	P		Pn	09 14 45.3	+1.4	
	baz=142,SNR=14								
DHY	Denali Highway	10.50	34			Pn	09 14 43.6	-0.5	
DHY	Denali Highway	10.50	34	P		Pn	09 14 42.9	-1.3	
	baz=225,SNR=71								
MCK	McKinley	10.52	29		P	Pn	09 14 44.1	-0.2	
MCK	McKinley	10.52	29			Pn	09 14 44.1	-0.2	
MCK	McKinley	10.52	29	P		Pn	09 14 43.9	-0.3	
	baz=219,SNR=27								
G17K	Kiwalik Mounta	10.54	359	P		Pn	09 14 45.0	+0.5	
	baz=179,SNR=75								
N25K	Chitina, Valde	10.62	45	P		Pn	09 14 45.2	-0.4	
	baz=238,SNR=135								
H19K	Roundabout Mou	10.74	9	P		Pn	09 14 47.8	+0.6	
	baz=192,SNR=220								
CRQM	Cirque	10.84	51			Pn	09 14 48.8	0.0	
HARP	HAARP	10.84	41			Pn	09 14 48.3	-0.4	
HARP	HAARP	10.84	41	P		Pn	09 14 48.2	-0.5	
	baz=234,SNR=33								
CRQE	Cirque	10.86	51	P		Pn	09 14 48.1	-0.9	
	baz=245,SNR=47								
GLB	Gilahina Butte	10.86	47			Pn	09 14 48.3	-0.7	
H20K	Anotleneega Mo	10.87	12	P		Pn	09 14 49.6	+0.5	
	baz=197,SNR=305								
F14K	Arctic Creek	10.90	347	P		Pn	09 14 50.9	+1.4	
	baz=162,SNR=35								
VRDI	Verde Repeater	10.91	48			Pn	09 14 49.9	+0.1	
F15K	North Star Dit	10.94	351	P		Pn	09 14 51.1	+1.1	
	baz=167,SNR=86								
G18K	Tagagawik	10.97	4			Pn	09 14 51.4	+1.0	
G18K	Tagagawik	10.97	4	P		Pn	09 14 51.4	+1.0	
	baz=185,SNR=309								
TGL	Tana Glacier	10.98	51			Pn	09 14 50.1	-0.6	
I21K	Tanana	11.03	19	P		Pn	09 14 51.9	+0.6	
	baz=206,SNR=110								
PAX	Paxson	11.08	38	P		Pn	09 14 51.3	-0.7	
PAX	Paxson	11.08	38			Pn	09 14 51.3	-0.7	
PAX	Paxson	11.08	38	P		Pn	09 14 51.2	-0.7	
	baz=230,SNR=213								
MLY	Manley	11.15	22	P		Pn	09 14 53.2	+0.3	
	baz=210,SNR=111								
MCARA	McCarthy VSAT	11.17	48			Pn	09 14 53.6	+0.5	
MCARA	McCarthy VSAT	11.17	48	P		Pn	09 14 52.2	-0.9	
	baz=243,SNR=44								
NEA2	Nenana	11.17	26	P		Pn	09 14 52.3	-0.8	
	baz=216,SNR=57								
TNA	Tin City	11.22	344	P		Pn	09 14 54.8	+1.1	
	baz=157,SNR=44								
G19K	Purcell Mounta	11.30	7	P		Pn	09 14 55.1	+0.2	
	baz=190,SNR=61								
H21K	Melozitna Rive	11.32	16			Pn	09 14 56.6	+1.3	
H21K	Melozitna Rive	11.32	16	P		Pn	09 14 56.0	+0.7	
	baz=203,SNR=298								
F17K	Baldwin Pennin	11.49	358	P		Pn	09 14 57.8	+0.4	
	baz=177,SNR=28								
IMAR	Indian Mountai	11.49	14			Pn	09 14 59.1	+1.6	
K24K	Donnelly Dome	11.53	34	P		Pn	09 14 57.6	-0.4	
	baz=227,SNR=66								
I23K	Minto, Yukon-K	11.56	24	P		Pn	09 14 56.7	-1.6	
	baz=213,SNR=78								
HDA	Harding Lake	11.60	30			Pn	09 14 56.8	-2.2	
HDA	Harding Lake	11.60	30	P		Pn	09 14 57.0	-2.1	
	baz=222,SNR=99								
F18K	Selawik	11.65	2	P		Pn	09 15 00.9	+1.3	
	baz=182,SNR=52								
M26K	Nasna, AK	11.68	44	P		Pn	09 14 58.6	-1.6	
	baz=238,SNR=123								
MENT	Mentasta	11.70	40	P		Pn	09 15 00.1	-0.3	
COLA	College	11.71	27	P		Pn	09 14 59.3	-1.2	
COLA	College	11.71	27	*i* P		Pn	09 14 58.9	-1.6	
COLA	College	11.71	27	P		Pn	09 14 59.2	-1.3	
	baz=218								
COLA	College	11.71	27	P		Pn	09 14 59.6	-0.9	
H22K	Ishtalitna Cre	11.79	18			Pn	09 15 02.9	+1.4	
H22K	Ishtalitna Cre	11.79	18	P		Pn	09 15 02.4	+0.9	
	baz=206,SNR=216								
RIDG	Independent Ri	11.79	36	P		Pn	09 15 00.7	-0.9	
	baz=229,SNR=61								
L26K	Log Cabin Wild	11.88	41	P		Pn	09 15 03.1	+0.1	
	baz=235,SNR=54								
ILAR	Eielson Array	11.89	29	Pn		Pn	09 14 59.1	-3.9	
	comp=E,4.0nm,0.3s,baz=207,slow=13,SNR=74								
ILAR				Sn		Sn	09 17 04.4	-10	
	comp=E,3.2nm,0.3s,baz=215,slow=6.9,SNR=0.8								
ILAR				LR		LR	09 20 00.6		
	comp=E,10µm,20.0s,baz=232,slow=39								
	comp=E,8.6nm,0.4s								
F19K	Shaleruckik Mo	11.94	5	P		Pn	09 15 04.5	+0.9	
	baz=187,SNR=213								
POKR	Poker Plat Res	12.01	27	P		Pn	09 15 04.4	-0.3	
	baz=218								
G21K	Allakaket	12.03	13			Pn	09 15 05.8	+1.0	
G21K	Allakaket	12.03	13	P		Pn	09 15 05.7	+0.8	
	baz=199,SNR=168								
H23K	Yukon River	12.09	22			Pn	09 15 04.5	-1.3	
H23K	Yukon River	12.09	22	P		Pn	09 15 04.8	-0.9	
	baz=211								
M27K	Edge Creek, AK	12.11	45			Pn	09 15 06.0	0.0	
M27K	Edge Creek, AK	12.11	45	P		Pn	09 15 05.6	-0.5	
	baz=241								
E17K	Hotham Inlet	12.14	357	P		Pn	09 15 07.4	+1.0	
	baz=176,SNR=36								
O28M	Mount Upton	12.19	53	P		Pn	09 15 06.7	-0.6	
	baz=250,SNR=33								
J25K	Salcha River,	12.22	32	P		Pn	09 15 05.7	-1.8	
	baz=225,SNR=49								
F20K	Avaraart Lake	12.30	9			Pn	09 15 09.8	+1.4	
F20K	Avaraart Lake	12.30	9	P		Pn	09 15 09.4	+1.0	
	baz=192,SNR=276								
YUK3	Moose Creek	12.44	49	P		Pn	09 15 10.2	-0.5	
	baz=246,SNR=73								
E18K	Tukpahlearik C	12.46	360	P		Pn	09 15 11.8	+1.1	
	baz=179,SNR=56								
H24K	Noodor Dome	12.48	24	P		Pn	09 15 09.7	-1.3	
	baz=215,SNR=119								
L27K	Beaver Creek,	12.48	42			Pn	09 15 10.5	-0.6	
L27K	Beaver Creek,	12.48	42	P		Pn	09 15 09.3	-1.8	
	baz=238,SNR=82								
BCAR	Beaver Creek A	12.50	42			Pn	09 15 11.2	-0.2	
BVCY	Beaver Creek	12.55	46	P		Pn	09 15 11.2	-0.8	
	baz=242,SNR=48								
YUK8	Steele Glacier	12.56	52	P		Pn	09 15 11.8	-0.6	
	baz=249,SNR=46								
E19K	Redstone River	12.59	6			Pn	09 15 14.2	+1.6	
E19K	Redstone River	12.59	6	P		Pn	09 15 13.5	+1.0	
	baz=188,SNR=160								
AMKA	Amchitka	12.68	262			Pn	09 15 13.8	+0.1	
G22K	Bettles	12.70	16	P		Pn	09 15 14.5	+0.5	
	baz=204								
F21K	Alatna River	12.70	12			Pn	09 15 15.7	+1.6	
F21K	Alatna River	12.70	12	P		Pn	09 15 14.8	+0.8	
	baz=198,SNR=212								
G23K	Bananza Creek	12.77	19			Pn	09 15 16.1	+1.1	
G23K	Bananza Creek	12.77	19	P		Pn	09 15 15.5	+0.5	
	baz=208,SNR=90								
D17K	Noatak River	12.80	355	P		Pn	09 15 17.2	+1.8	
	baz=173,SNR=19								
O29M	Mount Kennedy	12.81	57	P		Pn	09 15 15.4	-0.3	
	baz=255,SNR=67								
PRP	Porcupine Dome	12.84	29	Pn		Pn	09 15 16.5	+0.5	
PRP	Porcupine Dome	12.84	29	P		Pn	09 15 15.3	-0.7	
	baz=222								
BRWY	Burwash Landin	12.92	52	P		Pn	09 15 17.6	+0.5	
	baz=250								
P29M	Windy Craggy	13.08	60	P		Pn	09 15 19.0	-0.2	
	baz=259								
YUK4	Talbot Arm	13.09	52	P		Pn	09 15 20.2	+0.6	
	baz=250								
YUK6	Outpost Mounta	13.09	54	P		Pn	09 15 19.5	-0.1	
	baz=253								
F22K	John River	13.14	14	P		Pn	09 15 21.7	+1.7	
	baz=201								
RDOG	Red Dog Mine	13.15	356			Pn	09 15 22.4	+2.2	
RDOG	Red Dog Mine	13.15	356	P		Pn	09 15 22.4	+2.2	
	baz=174,SNR=84								
COLD	Coldfoot	13.20	18	P		Pn	09 15 21.4	+0.6	
	baz=206,SNR=84								
G24K	Hadweenzic Riv	13.28	23	P		Pn	09 15 21.8	-0.2	
	baz=214,SNR=63								
I26K	Coal Creek Min	13.38	33	P		Pn	09 15 20.0	-3.4	
	baz=227								
E20K	Nigu River	13.45	7	P		Pn	09 15 25.5	+1.2	
	baz=190,SNR=141								
HYT	Haines Junctio	13.46	55	Pn		Pn	09 15 25.3	+0.7	
HYT	Haines Junctio	13.46	55	P		Pn	09 15 24.0	-0.6	
	baz=254								
C16K	Lisburne Hills	13.52	352	Pn		Pn	09 15 28.3	+3.2	
C16K	Lisburne Hills	13.52	352	P		Pn	09 15 27.2	+2.1	
	baz=168								
P30M	Million Dollar	13.56	58	P		Pn	09 15 25.2	-0.6	
	baz=258								
M29M	Somme Creek	13.57	48	P		Pn	09 15 25.5	-0.6	
	baz=246								
C17K	DeLong Mountai	13.58	356	P		Pn	09 15 27.4	+1.3	
	baz=173,SNR=27								
D19K	Kuna River	13.59	4			Pn	09 15 29.0	+2.9	
D19K	Kuna River	13.59	4	P		Pn	09 15 27.1	+1.0	
	baz=185								
G25K	Bearman Lake	13.65	25	P		Pn	09 15 24.1	-2.9	
	baz=217								
S31K	Pelican	13.67	68	Pn		Pn	09 15 27.2	-0.1	
S31K	Pelican	13.67	68	P		Pn	09 15 26.7	-0.5	
	baz=268,SNR=34								
C18K	Utukok River	13.70	359	Pn		Pn	09 15 30.0	+2.3	
C18K	Utukok River	13.70	359	P		Pn	09 15 29.1	+1.4	
	baz=178,SNR=80								
FYU	Fort Yukon	13.71	26			Pn	09 15 31.4	+3.7	
PLBC	Pleasant Camp	13.74	61	P		Pn	09 15 28.4	+0.2	
	baz=261,SNR=43								
E21K	Killik River	13.82	10			Pn	09 15 31.2	+1.9	
E21K	Killik River	13.82	10	P		Pn	09 15 30.3	+1.0	
	baz=196								
N30M	Aishikik Lake	13.84	53	P		Pn	09 15 29.3	-0.3	
	baz=252								
D20K	Etivluk River	13.88	6	Pn		Pn	09 15 31.6	+1.6	
D20K	Etivluk River	13.88	6	P		Pn	09 15 31.1	+1.1	
	baz=189,SNR=37								
F24K	Squaw Lake	13.89	20	P		Pn	09 15 29.0	-1.2	
	baz=211,SNR=22								
DAWY	Dawson	13.94	41			Pn	09 15 30.5	-0.5	
DAWY	Dawson	13.94	41	P		Pn	09 15 30.0	-1.0	
	baz=239,SNR=56								
R31K	City Hall, Gus	13.95	66	P		Pn	09 15 29.1	-1.9	
	baz=266								
L29M	L29M	13.99	46	P		Pn	09 15 30.5	-1.1	
	baz=245								
E23K	Chandalar	14.04	17	P		Pn	09 15 32.7	+0.4	
	baz=206								
I27K	Kandik River	14.06	33	P		Pn	09 15 31.0	-1.6	
	baz=230								
O30N	Mendenhall	14.12	56	P		Pn	09 15 33.0	-0.4	
	baz=256								
SIT	Sitka	14.16	71	P		Pn	09 15 34.3	+0.4	
SIT	Sitka	14.16	71	P		Pn	09 15 33.4	-0.5	
SIT	Sitka	14.16	71			Pn	09 15 33.4	-0.5	
SIT	Sitka	14.16	71	P		Pn	09 15 32.5	-1.4	
	baz=272								
C19K	Lookout Ridge	14.16	1	Pn		Pn	09 15 36.4	+2.5	
C19K	Lookout Ridge	14.16	1	P		Pn	09 15 35.0	+1.1	
	baz=182								
E24K	Your Creek	14.26	18			Pn	09 15 34.4	-0.8	
E24K	Your Creek	14.26	18	P		Pn	09 15 35.8	+0.6	
	baz=209								
SKAG	Skagway	14.26	62	P		Pn	09 15 36.7	+1.5	
SKAG	Skagway	14.26	62	Pn		Pn	09 15 35.0	-0.3	
SKAG	Skagway	14.26	62	P		Pn	09 15 34.0	-1.3	
	baz=263,SNR=10								
M30M	Minto, Yukon	14.34	49			Pn	09 15 37.6	+1.2	
M30M	Minto, Yukon	14.34	49	P		Pn	09 15 36.0	-0.4	
	baz=249,SNR=5.8								
G26K	Porcupine Rive	14.38	27	P		Pn	09 15 32.9	-3.8	
	baz=221								
F25K	Christian Rive	14.43	23	P		Pn	09 15 37.1	-0.4	
	baz=216								
C21K	Knifeblade Rid	14.44	8	P		Pn	09 15 38.6	+0.9	
	baz=193,SNR=102								
N31M	Braeburn, Yuko	14.45	53	P		Pn	09 15 36.7	-1.1	
	baz=254								
H27K	Steamboat Moun	14.50	32	P		Pn	09 15 35.4	-3.1	
	baz=228								
I28M	Miner Creek	14.52	36			Pn	09 15 38.2	-0.5	
I28M	Miner Creek	14.52	36	P		Pn	09 15 36.2	-2.5	
	baz=233								
S32K	Killisnoo	14.55	70	P		Pn	09 15 38.3	-0.8	
	baz=271								
K29M	Barlow Dome	14.56	43	P		Pn	09 15 38.8	-0.4	
	baz=243								
TOLK	Toolik Lake Re	14.58	16	P		Pn	09 15 40.2	+0.7	
	baz=205								
R32K	Eaglecrest	14.59	66	Pn		Pn	09 15 39.7	+0.1	
R32K	Eaglecrest	14.59	66	P		Pn	09 15 38.8	-0.8	
	baz=268,SNR=12								
WHY	Whitehorse	14.68	57	P		Pn	09 15 40.7	-0.3	
	baz=258,SNR=24								
D23K	Nanushuk River	14.71	14			Pn	09 15 42.2	+1.0	
D23K	Nanushuk River	14.71	14	P		Pn	09 15 41.6	+0.4	
	baz=202								
F26K	Sheen

C26K	**Camden Bay**	**16.50**	**19**	P		**Pn**	**09 16 03.6**	**-0.7**	
	baz=213,SNR=24								
G30M	**tAoh Zraii Nji**	**16.64**	**34**	P		**Pn**	**09 16 03.9**	**-2.0**	
	baz=235,SNR=202								
H31M	**Peel River**	**16.67**	**39**			**Pn**	**09 16 05.6**	**-0.8**	
H31M				IAmb		IAmb	09 16 11.7		
	comp=Z,382nm,0.8s								
H31M	**Peel River**	**16.67**	**39**	P		**Pn**	**09 16 04.7**	**-1.7**	
	baz=242,SNR=324								
E28M	**Babbage River**	**16.70**	**27**			**Pn**	**09 16 06.9**	**+0.2**	
E28M	**Babbage River**	**16.70**	**27**	P		**Pn**	**09 16 05.2**	**-1.5**	
	baz=226								
MOBC	**Moresby Island**	**16.75**	**85**	P		**Pn**	**09 16 06.8**	**-0.8**	
MMPY	**Sheldon Lake,**	**16.79**	**51**	P		**Pn**	**09 16 06.4**	**-1.6**	
	baz=256,SNR=31								
D27M	**Malcolm River**	**16.80**	**24**			**P**	**09 16 09.3**	**-0.4**	
D27M	**Malcolm River**	**16.80**	**24**	P		**Pn**	**09 16 07.1**	**-1.0**	
	baz=221								
T35M	**Bob Quinn**	**16.93**	**71**	P		**Pn**	**09 16 08.1**	**-1.6**	
	baz=276,SNR=11								
DLBC	**Dease Lake**	**16.95**	**66**	Pn		**P**	**09 16 10.8**	**-0.6**	
	comp=Z,0.4nm,0.3s,baz=243,slow=12,SNR=5.4								
DLBC				Sn		**Sn**	**09 19 10.1**	**-7.2**	
	comp=Z,0.2nm,0.3s,baz=33,slow=17,SNR=1.3								
DLBC				LR		LR	09 22 25.5		
	comp=Z,3µm,18.5s,baz=265,slow=36								
	comp=Z,15nm,0.8s								
DLBC	**Dease Lake**	**16.95**	**66**	P		**Pn**	**09 16 08.9**	**-1.2**	
	baz=271,SNR=21								
E29M	**Blow River**	**16.99**	**29**			**Pn**	**09 16 09.2**	**-1.1**	
E29M	**Blow River**	**16.99**	**29**	P		**Pn**	**09 16 07.9**	**-2.5**	
	baz=229,SNR=57								
F30M	**Barrier River**	**17.14**	**33**			**Pn**	**09 16 12.4**	**+0.2**	
F30M	**Barrier River**	**17.14**	**33**	P		**Pn**	**09 16 10.4**	**-1.8**	
	baz=234,SNR=82								
G31M	**Satah River**	**17.25**	**36**	P		**Pn**	**09 16 11.6**	**-1.9**	
	baz=239,SNR=89								
RUBB	**Prince Rupert**	**17.41**	**80**	P		**Pn**	**09 16 15.8**	**+0.2**	
D28M	**Stokes Point**	**17.41**	**26**	P		**Pn**	**09 16 13.6**	**-1.9**	
	baz=225,SNR=9.8								
WTLY	**Watson Lake, Y**	**17.61**	**60**	P		**Pn**	**09 16 17.8**	**-0.3**	
	baz=267,SNR=21								
F31M	**Tsiigehtchic**	**17.70**	**35**	P		**Pn**	**09 16 16.5**	**-2.6**	
	baz=238,SNR=28								
INK	**Inuvik**	**18.23**	**33**	P		**P**	**09 16 24.1**	**-1.3**	
	comp=Z,9.1nm,0.3s,baz=224,slow=14,SNR=79								
INK				S		**Sn**	**09 19 46.7**	**-1.2**	
	comp=Z,19nm,0.9s,baz=47,slow=31,SNR=1.4								
INK				LR		LR	09 24 29.7		
	comp=Z,8µm,19.2s,baz=232,slow=40								
	comp=Z,50nm,0.4s								
INK	**Inuvik**	**18.23**	**33**	P		**P**	**09 16 23.2**	**-2.2**	
	baz=236,SNR=95								
INK	**Inuvik**	**18.23**	**33**	P		**P**	**09 16 23.7**	**-1.7**	
LIRD	**Liard River Hi**	**18.97**	**63**	P		**P**	**09 16 33.4**	**-0.2**	
	baz=272,SNR=24								
BBB	**Bella Bella**	**19.29**	**85**	P		**Pn**	**09 16 39.0**	**+0.6**	
	comp=Z,0.5nm,0.3s,baz=277,slow=12,SNR=9.5								
BBB				S		**Sn**	**09 20 15.5**	**+2.0**	
	comp=Z,5.2nm,1.0s,baz=81,slow=15,SNR=1.5								
BBB				LR		LR	09 22 53.4		
	comp=Z,5µm,18.8s,baz=296,slow=33								
BBB	**Bella Bella**	**19.29**	**85**	P		**Pn**	**09 16 39.9**	**+1.4**	
KOTAN	**Kotaneelee Air**	**19.98**	**60**	P		**Pn**	**09 16 46.1**	**-0.5**	
	baz=271,SNR=22								
BILL	**Bilibino**	**20.21**	**323**	*i* P		**P**	**09 16 45.4**	**-1.6**	
BILL				pmax		pmax			
	comp=Z,69nm,0.9s								
BILL	**Bilibino**	**20.21**	**323**	IAMs_20		IAMs_20	09 25 12.8		
	comp=Z,6µm,19.0s								
WRGLY	**Wrigley**	**20.41**	**51**			**P**	**09 16 49.1**	**-0.1**	
WRGLY				IAmb		IAmb	09 16 56.7		
	comp=Z,432nm,1.0s								
WRGLY	**Wrigley**	**20.41**	**51**	P		**P**	**09 16 49.0**	**-0.2**	
	baz=263,SNR=46								
C36M	**Paulatuk**	**21.75**	**35**	P		**P**	**09 17 02.2**	**-1.3**	
C36M				IAmb		IAmb	09 17 19.9		
	comp=Z,394nm,1.3s								
C36M	**Paulatuk**	**21.75**	**35**	P		**P**	**09 17 01.5**	**-2.0**	
	baz=247,SNR=50								
A36M	**Sachs Harbour**	**22.59**	**28**	P		**P**	**09 17 10.6**	**-1.9**	
A36M				IAmb		IAmb	09 17 29.1		
	comp=Z,273nm,0.8s								
A36M	**Sachs Harbour**	**22.59**	**28**	P		**P**	**09 17 10.0**	**-2.5**	
	baz=240								
PET	**Petropavlovsk**	**23.89**	**282**	P		**P**	**09 17 25.8**	**+0.4**	
PET	**Petropavlovsk**	**23.89**	**282**	*e*P		**P**	**09 17 24.7**	**-0.7**	
PET				*e*S		**S**	**09 21 32.4**	**-5.9**	
PET				pmax		pmax			
	comp=Z,400nm,5.5s								
PET				pmax		pmax			
	comp=Z,1µm,3.0s								
PET				pmax		pmax			
	comp=Z,556nm,1.0s								
PET				MLR		MLR			
	comp=Z,900nm,19.0s								
PET	**Petropavlovsk**	**23.89**	**282**	P		**P**	**09 17 26.2**	**+0.8**	
PET	**Petropavlovsk**	**23.89**	**282**	P		**P**	**09 17 24.0**	**-1.4**	
	comp=Z,4µmcomp=Z,488nm,1.0s								
PET				pP		**pP**	**09 17 34.4**	**-2.7**	
	comp=Z,4µmcomp=Z,488nm,1.0s								
PET	**Petropavlovsk**	**23.89**	**282**	P		**P**	**09 17 24.4**	**-1.0**	
NLWA	**Neilton Lookou**	**23.91**	**93**	IAMs_20		IAMs_20	09 24 44.5		
	comp=Z,6µm,20.0s								
PEA0B	**Petropavlovsk-**	**24.39**	**283**	*i* P		**P**	**09 17 29.8**	**-0.3**	
PEA0B	**Petropavlovsk-**	**24.39**	**283**	P		**P**	**09 17 30.2**	**+0.1**	
PEA0B				IAmb		IAmb	09 17 32.2		
	comp=Z,473nm,1.4s								
PETK	**Petropavlovsk-**	**24.39**	**283**	P		**P**	**09 17 29.9**	**-0.2**	
	comp=Z,141nm,0.5s,baz=76,slow=12,SNR=225								
PETK				PcP		**PcP**	**09 21 08.5**	**+0.4**	
	comp=Z,15nm,0.9s,baz=90,slow=3.8,SNR=4.8								
PETK				ScP		**ScP**	**09 24 41.6**	**-1.1**	
	comp=Z,3.7nm,0.8s,baz=66,slow=7.2,SNR=5.1								
PETK				LR		LR	09 26 21.8		
	comp=Z,2µm,21.9s,baz=85,slow=35								
	comp=Z,141nm,0.5s								
PETK	**Petropavlovsk-**	**24.39**	**283**	P		**P**	**09 17 30.1**	**0.0**	
YKAW3	**Yellowknife Wh**	**24.44**	**53**	P		**P**	**09 17 30.4**	**-0.1**	
YKA	**Yellowknife Ar**	**24.45**	**54**	P		**P**	**09 17 30.7**	**+0.2**	
	comp=Z,19nm,0.6s,baz=273,slow=8.9,SNR=69								
YKA				PcP		**PcP**	**09 21 07.8**	**-0.1**	
	comp=Z,12nm,0.7s,baz=281,slow=1.8,SNR=7.2								
YKA				S		**S**	**09 21 50.0**	**+2.9**	
	comp=Z,1.8nm,0.8s,baz=280,slow=19,SNR=1.0								
YKA				ScP		**ScP**	**09 24 43.3**	**+0.6**	
	comp=Z,1.4nm,0.7s,baz=281,slow=3.2,SNR=4.2								
YKA				LR		LR	09 27 40.7		
	comp=Z,2µm,20.3s,baz=258,slow=38								
	comp=Z,19nm,0.6s								
SEY	**Seymchan**	**25.05**	**308**	P		**P**	**09 17 34.9**	**-1.1**	
	comp=Z,62nm,0.9s,baz=97,slow=9.0,SNR=62								
SEY				PcP		**PcP**	**09 21 09.4**	**+0.2**	
	comp=Z,27nm,0.8s,baz=99,slow=2.8,SNR=7.6								
SEY				ScP		**ScP**	**09 24 46.4**	**+2.1**	
	comp=Z,6.4nm,0.8s,baz=125,slow=3.5,SNR=6.7								
SEY				LR		LR	09 28 38.1		
	comp=Z,7µm,19.3s,baz=90,slow=39								
	comp=Z,62nm,0.9s								
SEY	**Seymchan**	**25.05**	**308**	*i* P		**P**	**09 17 34.7**	**-1.3**	
COR	**Corvallis**	**25.83**	**98**	IAMs_20		IAMs_20	09 25 28.3		
	comp=Z,5µm,20.0s								
COR	**Corvallis**	**25.83**	**98**	P		**P**	**09 17 44.9**	**+1.7**	
MA2	**Magadan**	**26.27**	**300**	P		**P**	**09 17 47.0**	**-0.1**	
	comp=Z,84nm,0.9s,baz=81,slow=10,SNR=42								
MA2				PcP		**PcP**	**09 21 11.9**	**-0.2**	
	comp=Z,11nm,0.6s,baz=68,slow=4.0,SNR=4.6								
MA2				LR		LR	09 29 26.7		
	comp=Z,3µm,19.0s,baz=90,slow=39								
	comp=Z,84nm,0.9s								
MA2	**Magadan**	**26.27**	**300**	*i* P		**P**	**09 17 47.1**	**0.0**	
MA2				pmax		pmax			
	comp=Z,101nm,1.0s								
MA2	**Magadan**	**26.27**	**300**	P		**P**	**09 17 48.5**	**+1.4**	
MA2	**Magadan**	**26.27**	**300**	P		**P**	**09 17 44.6**	**-2.5**	
	comp=Z,1µmcomp=Z,117nm,0.9s								
MA2	**Magadan**	**26.27**	**300**	P		**P**	**09 17 46.4**	**-0.7**	
SKR	**Severo-Kuril's**	**26.27**	**279**	*e*P		**P**	**09 17 46.8**	**-0.3**	
SKR							09 23 42.8		
SKR				pmax		pmax			
	comp=Z,800nm,5.7s								
SKR				pmax		pmax			
	comp=Z,289nm,1.0s								
HAWA	**Hanford**	**26.95**	**91**	IAMs_20		IAMs_20	09 26 54.8		
	comp=Z,4µm,19.0s								
NEW	**Newport**	**27.34**	**86**	LR		LR	09 27 13.8		
	comp=Z,3µm,21.2s,baz=292,slow=33								
NEW	**Newport**	**27.34**	**86**	P		**P**	**09 17 59.2**	**+2.4**	
NEW	**Newport**	**27.34**	**86**	P		**P**	**09 17 59.3**	**+2.4**	
YBH	**Yreka Blue Hor**	**27.97**	**103**	LR		LR	09 26 45.6		
	comp=Z,6µm,20.9s,baz=313,slow=31								
KHMM	**Horse Mountain**	**27.98**	**105**	IAMs_20		IAMs_20	09 26 26.0		
	comp=Z,5µm,20.0s								
M02C	**Callahan**	**28.12**	**103**	IAMs_20		IAMs_20	09 26 26.8		
	comp=Z,5µm,21.0s								
KHBM	**Hayfork Bally**	**28.41**	**105**	IAMs_20		IAMs_20	09 26 20.4		
	comp=Z,5µm,22.0s								
O02D	**Mt. Diablo Mer**	**28.98**	**105**	IAMs_20		IAMs_20	09 26 50.5		
	comp=Z,4µm,20.0s								
BMO	**Blue Mountains**	**29.11**	**92**	P		**P**	**09 18 16.1**	**+3.4**	
BMO	**Blue Mountains**	**29.11**	**92**	IAMs_20		IAMs_20	09 27 53.2		
	comp=Z,5µm,20.0s								
HATC	**Hat Creek Radi**	**29.29**	**103**	IAMs_20		IAMs_20	09 27 05.7		
	comp=Z,6µm,22.0s								
PLID	**Pearl Lake**	**29.73**	**91**	IAMs_20		IAMs_20	09 28 42.3		
	comp=Z,4µm,20.0s								
WVOR	**Wild Horse Val**	**29.83**	**97**	P		**P**	**09 18 23.3**	**+4.2**	
WVOR	**Wild Horse Val**	**29.83**	**97**	IAMs_20		IAMs_20	09 28 01.1		
	comp=Z,4µm,21.0s								
WVOR	**Wild Horse Val**	**29.83**	**97**	P		**P**	**09 18 21.1**	**+2.0**	
MFID	**Camas Ranch**	**30.83**	**93**	IAMs_20		IAMs_20	09 28 56.5		
	comp=Z,3µm,20.0s								
AFDM	**Forest Hills D**	**30.84**	**105**	P		**P**	**09 18 28.9**	**+1.0**	
JRSC	**Jasper Ridge**	**31.24**	**108**	IAMs_20		IAMs_20	09 27 42.4		
	comp=Z,3µm,21.0s								
WELL	**Weller Preserv**	**31.34**	**105**	IAMs_20		IAMs_20	09 28 21.9		
	comp=Z,3µm,20.0s								
HLID	**Hailey**	**31.55**	**92**	IAMs_20		IAMs_20	09 29 40.7		
	comp=Z,5µm,20.0s								
HLID	**Hailey**	**31.55**	**92**	P		**P**	**09 18 35.9**	**+1.6**	
RES	**Resolute Bay**	**31.64**	**27**	LR		LR	09 32 37.3		
	comp=Z,3µm,20.5s,baz=268,slow=39								
RES	**Resolute Bay**	**31.64**	**27**	P		**P**	**09 18 33.9**	**-0.6**	
RES	**Resolute Bay**	**31.64**	**27**	P		**P**	**09 18 33.8**	**-0.7**	
EGMT	**Eagleton**	**31.69**	**81**	IAMs_20		IAMs_20	09 30 08.3		
	comp=Z,3µm,20.0s								
CMB	**Columbia Colle**	**31.81**	**105**	IAMs_20		IAMs_20	09 28 36.5		
	comp=Z,3µm,21.0s								
BLKN	**Baker Lake**	**32.43**	**47**	P		**P**	**09 18 41.5**	**-0.1**	
BLKN				IAmb		IAmb	09 18 43.8		
	comp=Z,60nm,0.7s								
NVAR	**Mina Array Bea**	**32.69**	**103**	P		**P**	**09 18 45.2**	**+0.8**	
	comp=Z,2.4nm,0.7s,baz=316,slow=8.3,SNR=10								
NVAR				PcP		**PcP**	**09 21 29.8**	**+0.6**	
	comp=Z,8.5nm,0.7s,baz=293,slow=2.5,SNR=9.1								
NVAR				LR		LR	09 29 41.3		
	comp=Z,4µm,21.4s,baz=313,slow=32								
NVAR				P3KPbc			09 50 02.8		
	comp=Z,1.0nm,0.8s,baz=134,slow=5.1,SNR=4.3								
NVAR	**Mina Array Bea**	**32.69**	**103**	P		**P**	**09 18 44.3**	**-0.1**	
YHB	**Horse Butte**	**32.69**	**87**	P		**P**	**09 18 45.2**	**+0.8**	
FFC	**Flin Flon**	**32.79**	**66**	P		**P**	**09 18 44.8**	**0.0**	
FFC				pmax		pmax			
	comp=Z,19nm,1.0s								
FFC				MLR		MLR			
	comp=Z,3µm,20.0s								
FFC	**Flin Flon**	**32.79**	**66**	P		**P**	**09 18 44.8**	**0.0**	
FFC	**Flin Flon**	**32.79**	**66**	IAMs_20		IAMs_20	09 31 35.6		
	comp=Z,3µm,20.0s								
FFC	**Flin Flon**	**32.79**	**66**	P		**P**	**09 18 45.6**	**+0.7**	
HULI	**Fort Hunter Li**	**32.80**	**109**	IAMs_20		IAMs_20	09 28 24.7		
	comp=Z,3µm,22.0s								
MDPB	**Devils Postpil**	**32.82**	**105**	P		**P**	**09 18 46.2**	**+0.6**	
ELK	**Elko**	**32.87**	**97**	LR		LR	09 30 20.5		
	comp=Z,4µm,20.3s,baz=302,slow=33								
ELK	**Elko**	**32.87**	**97**	P		**P**	**09 18 49.5**	**+3.6**	
ELK	**Elko**	**32.87**	**97**	IAMs_20		IAMs_20	09 30 09.4		
	comp=Z,4µm,20.0s								
YNE	**Yellowstone No**	**33.23**	**86**	P		**P**	**09 18 50.1**	**+1.1**	
TIXI	**Tiksi**	**33.33**	**327**	LR		LR	09 34 18.3		
	comp=Z,3µm,18.2s,baz=105,slow=40								
TIXI	**Tiksi**	**33.33**	**327**	*e*P		**P**	**09 18 48.4**	**-0.9**	
TIXI				pmax		pmax			
	comp=Z,69nm,0.9s								
TIXI	**Tiksi**	**33.33**	**327**	P		**P**	**09 18 48.5**	**-0.8**	
TIXI				IAmb		IAmb	09 18 51.0		
	comp=Z,77nm,1.1s								
TIXI				IAMs_20		IAMs_20	09 34 16.1		
	comp=Z,4µm,18.0s								
KIP	**Kipapa**	**33.58**	**176**	IAMs_20		IAMs_20	09 29 54.2		
	comp=Z,4µm,20.0s								
RLMT	**Red Lodge**	**33.59**	**85**	P		**P**	**09 18 53.1**	**+1.0**	
RLMT				IAmb		IAmb	09 19 07.4		
	comp=Z,88nm,1.3s								
TIN	**Tinemaha, Big**	**33.71**	**104**	IAMs_20		IAMs_20	09 29 58.4		
	comp=Z,3µm,21.0s								
NKL	**Nikolayevsk**	**33.72**	**292**	*e*P		**P**	**09 18 53.4**	**+0.5**	
NKL				*e*S		**S**	**09 24 14.3**	**+1.4**	
NKL				pmax		pmax			
	comp=N,159nm,0.9s								
NKL				pmax		pmax			
	comp=E,66nm,1.0s								
NKL				smax		smax			
	comp=N,227nm,4.4s								
NKL				smax		smax			
	comp=E,191nm,4.4s								
NKL				MLR		MLR			
	comp=Z,7µm,17.0s								
TYV	**Tymovskoe**	**33.74**	**287**	*e*P		**P**	**09 18 54.0**	**+0.8**	
TYV				*e*S		**S**	**09 24 14.4**	**+1.2**	
TYV				pmax		pmax			
	comp=Z,289nm,0.9s								
TYV				pmax		pmax			
	comp=Z,200nm,3.9s								
TYV				smax		smax			
	comp=N,12nm,1.3s								
TYV				smax		smax			
	comp=N,300nm,7.9s								
TYV				smax		smax			
	comp=E,700nm,7.9s								
AHID	**Auburn Hatcher**	**33.95**	**90**	IAMs_20		IAMs_20	09 31 19.9		
	comp=Z,2µm,19.0s								
AHID	**Auburn Hatcher**	**33.95**	**90**	P		**P**	**09 18 56.0**	**+0.6**	
HWUT	**Hardware Ranch**	**34.42**	**92**	IAMs_20		IAMs_20	09 31 14.2		
	comp=Z,3µm,20.0s								
HWUT	**Hardware Ranch**	**34.42**	**92**	P		**P**	**09 18 59.8**	**+0.4**	
LAO	**LASA Array**	**34.43**	**81**	P		**P**	**09 19 00.5**	**+1.3**	
LAO				IAmb		IAmb	09 19 14.4		
	comp=Z,61nm,1.0s								
LAO				IAMs_20		IAMs_20	09 31 45.5		
	comp=Z,3µm,20.0s								
DGMT	**Dagmar**	**34.59**	**77**	P		**P**	**09 19 01.1**	**+0.5**	
DGMT	**Dagmar**	**34.59**	**77**	IAMs_20		IAMs_20	09 32 37.9		
	comp=Z,3µm,18.0s								
DUG	**Dugway, Tooele**	**34.62**	**95**	P		**P**	**09 19 02.0**	**+1.0**	
DUG				pmax		pmax			
	comp=Z,59nm,1.0s								
DUG	**Dugway, Tooele**	**34.62**	**95**	P		**P**	**09 19 02.0**	**+1.0**	
DUG				IAmb		IAmb	09 19 16.3		
	comp=Z,59nm,1.0s								
DUG	**Dugway, Tooele**	**34.62**	**95**	P		**P**	**09 19 03.2**	**+2.1**	
MPMC	**Manual Prospec**	**34.84**	**105**	IAMs_20		IAMs_20	09 30 19.4		
	comp=Z,2µm,22.0s								
BW06	**Boulder Array**	**34.84**	**89**	P		**P**	**09 19 04.0**	**+1.0**	
PDAR	**Pinedale Array**	**34.84**	**89**	P		**P**	**09 19 03.4**	**+0.4**	
	comp=Z,1.1nm,0.5s,baz=313,slow=4.4,SNR=12								
PDAR				LR		LR	09 32 52.8		
	comp=Z,602nm,18.1s,baz=298,slow=35								
PDAR				P3KPbc			09 49 56.0		
	comp=Z,0.9nm,0.8s,baz=120,slow=5.6,SNR=4.1								
TPNV	**Topopah Spring**	**34.89**	**103**	IAMs_20		IAMs_20	09 30 36.8		
	comp=Z,5µm,22.0s								
UGL	**Uglegorsk**	**34.98**	**285**	*e*P		**P**	**09 19 04.4**	**+0.5**	
UGL				*e*S		**S**	**09 24 38.4**	**+6.0**	
UGL				pmax		pmax			
	comp=Z,1µm,0.9s								
UGL				pmax		pmax			
	comp=Z,1µm,0.9s								
UGL				MLR		MLR			
	comp=E,1µm,19.0s								
UGL				MLR		MLR			
	comp=N,600nm,12.0s								
UGL				MLR		MLR			
	comp=Z,2µm,19.0s								
FCC	**Fort Churchill**	**35.11**	**56**	P		**P**	**09 19 05.2**	**+0.3**	
FCC				pmax		pmax			
	comp=Z,73nm,1.1s								
FCC	**Fort Churchill**	**35.11**	**56**	P		**P**	**09 19 05.2**	**+0.3**	
FCC				IAmb		IAmb	09 19 29.1		
	comp=Z,73nm,1.1s								
LRMC	**Laurel Mtn Rad**	**35.15**	**106**	P		**P**	**09 19 06.8**	**+1.1**	
OSI	**Osito Audit: C**	**35.22**	**108**	IAMs_20		IAMs_20	09 30 02.4		
	comp=Z,2µm,22.0s								
POHA	**Pohakuloa**	**35.38**	**172**	IAMs_20		IAMs_20	09 30 20.7		
	comp=Z,3µm,20.0s								
YAK	**Yakutsk**	**35.49**	**310**	P		**P**	**09 19 06.3**	**-1.8**	
	comp=Z,169nm,0.8s,baz=77,slow=5.6,SNR=39								
YAK				PcP		**PcP**	**09 21 36.5**	**+0.1**	
	comp=Z,93nm,0.9s,baz=45,slow=3.4,SNR=6.1								
YAK				LR		LR	09 35 00.9		
	comp=Z,6µm,20.3s,baz=74,slow=38								
	comp=Z,169nm,0.8s								
YAK	**Yakutsk**	**35.49**	**310**	*e*P		**P**	**09 19 06.7**	**-1.4**	
YAK				*e*			09 20 22.8		
YAK				*e*PPP		PPP	09 20 49.2		
YAK				*e*			09 21 36.7		
YAK				*e*S		**S**	**09 24 38.1**	**-1.9**	
YAK				*e*SS		**SnSn**	**09 26 53.5**	**-8.8**	
YAK				*e*			09 29 28.6		
YAK				pmax		pmax			
	comp=N,13nm,1.3s								
YAK				pmax		pmax			
	comp=Z,204nm,1.5s								
YAK				pmax		pmax			
	comp=E,31nm,1.2s								
YAK				pmax		pmax			
	comp=Z,35nm,1.0s								
YAK				pmax		pmax			
	comp=N,39nm,1.8s								
YAK				pmax		pmax			
	comp=E,36nm,1.5s								
YAK				smax		smax			
	comp=E,85nm,2.3s								
YAK				smax		smax			
	comp=N,65nm,2.0s								
YAK				MLR		MLR			
	comp=Z,7µm,25.0s								
YAK				MLR		MLR			
	comp=N,2µm,22.0s								
YAK				MLR		MLR			
	comp=E,5µm,22.0s								
YAK	**Yakutsk**	**35.49**	**310**	P		**P**	**09 19 06.7**	**-1.4**	
YAK	**Yakutsk**	**35.49**	**310**	P		**P**	**09 19 06.8**	**-1.3**	
YAK	**Yakutsk**	**35.49**	**310**	P		**P**	**09 19 07.1**	**-1.1**	
YAK				PcP		**PcP**	**09 21 37.7**	**+1.3**	
YSS	**Yuzhno-Sakhali**	**35.76**	**281**	*e*P		**P**	**09 19 10.5**	**-0.1**	
YSS				*e*SP		**sP**	**09 19 27.9**	**0.0**	
YSS				*e*			09 20 26.6		
YSS				*e*PPP		PPP	09 20 46.1		
YSS				*e*			09 21 37.3		
YSS				*e*S		**S**	**09 24 41.3**	**-3.1**	
YSS				pmax		pmax			
	comp=Z,400nm,3.9s								
YSS				pmax		pmax			
	comp=N,200nm,4.0s								
YSS				pmax		pmax			
	comp=E,200nm,3.7s								
YSS				pmax		pmax			
	comp=Z,120nm,0.9s								
YSS				pmax		pmax			
	comp=N,60nm,0.6s								
YSS				pmax		pmax			
	comp=E,90nm,0.6s								
YSS				pmax		pmax			
	comp=Z,200nm,5.3s								
YSS				pmax		pmax			
	comp=N,100nm,5.6s								
YSS				pmax		pmax			
	comp=E,100nm,5.5s								
YSS				smax		smax			
	comp=N,100nm,4.9s								
YSS				smax		smax			
	comp=E,200nm,4.5s								
YSS				MLR		MLR			
	comp=N,400nm,15.0s								
YSS	**Yuzhno-Sakhali**	**35.76**	**281**	P		**P**	**09 19 10.2**	**-0.4**	
YSS				IAmb		IAmb	09 19 13.9		
	comp=Z,114nm,0.9s								
YSS	**Yuzhno-Sakhali**	**35.76**	**281**	P		**P**	**09 19 10.9**	**+0.3**	
YSS	**Yuzhno-Sakhali**	**35.76**	**281**	P		**P**	**09 19 11.2**	**+0.6**	
YSS				sP		**sP**	**09 19 28.9**	**+1.0**	
YSS				PcP		**PcP**	**09 21 37.9**	**+0.4**	
PASC	**Pasadena Art C**	**35.84**	**108**	IAMs_20		IAMs_20	09 30 33.0		
	comp=Z,2µm,20.0s								
MWC	**Mount Wilson**	**35.87**	**108**	IAMs_20		IAMs_20	09 30 33.8		
	comp=Z,2µm,20.0s								
BFSC	**Mount Baldy Ra**	**36.08**	**107**	IAMs_20		IAMs_20	09 30 42.3		
	comp=Z,2µm,21.0s								
ILON	**Igloolik, Nuna**	**36.42**	**36**	P		**P**	**09 19 15.8**	**-0.2**	
ALE	**Alert**	**36.91**	**13**	P		**P**	**09 19 19.9**	**-0.1**	
ALE				PcP		**PcP**	**09 21 41.8**	**+1.3**	
RSSD	**Black Hills**	**37.18**	**83**	P		**P**	**09 19 23.8**	**+0.8**	
RSSD				pmax		pmax			
	comp=Z,29nm,0.7s								
RSSD	**Black Hills**	**37.18**	**83**	IAMs_20		IAMs_20	09 33 18.3		
	comp=Z,3µm,20.0s						

ZEA MLR MLR
comp=E,200nm,14.9s
comp=E,500nm,16.0s
SDCO Great Sand Dun 40.47 92 IAMs_20 IAMs_20 09 35 04.5
comp=Z,2µm,20.0s
JTM Tenmabayashi 40.50 274 P **P** **09 19 51.0 +0.4**
JTM Tenmabayashi 40.50 274 P **P** **09 19 50.1 -0.5**
JTM IAmb IAmb 09 19 51.6
comp=Z,87nm,1.0s
K30B Basset 40.60 82 IAMs_20 IAMs_20 09 35 47.9
comp=Z,3µm,19.0s
NEEM North Greenlan 40.91 18 *i* P **P** **09 19 53.4 -0.4**
NEEM IAmb IAmb 09 19 56.0
comp=Z,139nm,0.8s
KULLO Kullorsuaq 41.21 23 P **P** **09 19 56.2 +0.3**
KULLO Kullorsuaq 41.21 23 *i* P **P** **09 19 55.9 -0.1**
KULLO IAmb IAmb 09 19 58.3
comp=Z,82nm,0.8s
KSCO Kaye Shedlock' 41.27 88 IAMs_20 IAMs_20 09 36 07.5
comp=Z,2µm,19.0s
TUC Tucson 41.35 102 P **P** **09 20 01.2 +3.5**
TUC Tucson 41.35 102 P **P** **09 19 59.2 +1.5**
TUC pP **pP** **09 20 11.7 +1.8**
T25A Trinidad 41.52 92 P **P** **09 20 00.6 +1.3**
T25A IAMs_20 IAMs_20 09 35 30.2
comp=Z,2µm,21.0s
ECSD EROS Data Cent 41.64 78 P **P** **09 19 59.4 -0.6**
ECSD EROS Data Cent 41.64 78 IAMs_20 IAMs_20 09 36 25.3
comp=Z,3µm,20.0s
ECSD EROS Data Cent 41.64 78 P **P** **09 19 59.8 -0.1**
ECSD pP **pP** **09 20 12.6 +0.5**
ANMO Albuquerque 41.88 96 LR LR 09 36 28.1
comp=Z,1µm,18.8s,baz=310,slow=35
ANMO Albuquerque 41.88 96 *i* P **P** **09 20 02.9 +0.6**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 41.88 96 P **P** **09 20 04.0 +1.8**
ALQ Albuquerque 41.89 96 IAMs_20 IAMs_20 09 36 07.9
comp=Z,1µm,19.0s
EYMN Ely 41.90 70 P **P** **09 20 02.0 0.0**
EYMN IAmb IAmb 09 20 16.1
comp=Z,114nm,0.7s
EYMN Ely 41.90 70 P **P** **09 20 02.3 +0.3**
BGNE Belgrade 42.25 82 IAMs_20 IAMs_20 09 36 19.6
comp=Z,3µm,21.0s
NOR Nord 42.26 7 P **P** **09 20 04.4 -0.1**
NOR Nord 42.26 7 *i* P **P** **09 20 04.9 +0.4**
NOR IAmb IAmb 09 20 06.7
comp=Z,108nm,0.9s
HEH HeiHe 42.27 295 *e*P **P** **09 20 03.5 -1.4**
HEH PP **PP** **09 21 42.3 -0.9**
HEH PcP **PcP** **09 21 58.3 +0.3**
HEH ScP **ScP** **09 25 43.8 -0.8**
HEH PcS **PcS** **09 25 47.8 -1.8**
HEH S **S** **09 26 23.0 +0.9**
HEH pmax pmax
comp=Z,42nm,0.8s
HEH L L
comp=Z,770nm,21.0s
HEH L L
comp=Z,1µm,21.2s
HEH L L
comp=Z,2µm,21.8s
UPNV Upernavik 42.45 25 P **P** **09 20 06.3 +0.2**
UPNV Upernavik 42.45 25 *i* P **P** **09 20 05.8 -0.3**
UPNV IAmb IAmb 09 20 10.4
comp=Z,51nm,0.8s
L34A Svendsen Farm, 42.90 80 IAMs_20 IAMs_20 09 37 12.7
comp=Z,2µm,19.0s
H11N2 WAKE ISLAND Hy 43.02 228 T T 10 05 58.2
baz=28,slow=76,SNR=416
H11N3 WAKE ISLAND Hy 43.02 228 T T 10 05 58.6
baz=28,slow=76,SNR=642
H11N1 WAKE ISLAND Hy 43.04 228 T T 10 06 20.9
baz=28,slow=76,SNR=445
I37A Lemond, Waseca 43.26 76 P **P** **09 20 13.1 -0.1**
I37A IAmb IAmb 09 20 27.8
comp=Z,184nm,0.9s
USA0B Ussuriysk Arra 43.46 285 *i* P **P** **09 20 13.3 -1.4**
USA0B Ussuriysk Arra 43.46 285 P **P** **09 20 13.1 -1.6**
USRK Ussuriysk Ar. 43.46 285 P **P** **09 20 13.1 -1.5**
comp=Z,23nm,0.8s,baz=56,slow=8.2,SNR=24
USRK PcP **PcP** **09 22 02.4 +0.4**
comp=Z,3.3nm,0.4s,baz=35,slow=2.6,SNR=12
USRK LR LR 09 40 11.6
comp=Z,1µm,19.6s,baz=57,slow=39
comp=Z,23nm,0.8s
FRB Frobisher Bay 43.64 40 LR LR 09 40 01.1
comp=Z,728nm,18.7s,baz=306,slow=38
FRB Frobisher Bay 43.64 40 P **P** **09 20 16.2 +0.4**
FRB Frobisher Bay 43.64 40 P **P** **09 20 16.2 +0.4**
NUUG Nuugaatsiaq 43.91 26 *i* P **P** **09 20 17.6 -0.3**
NUUG IAmb IAmb 09 20 19.5
comp=Z,51nm,0.7s
N35A Tabor 44.04 81 P **P** **09 20 19.4 0.0**
N35A IAmb IAmb 09 20 34.2
comp=Z,155nm,0.8s
N35A IAMs_20 IAMs_20 09 37 27.9
comp=Z,3µm,21.0s
H11S1 WAKE ISLAND Hy 44.19 228 T T 10 06 51.5
baz=26,slow=76,SNR=132
H11S2 WAKE ISLAND Hy 44.20 228 T T 10 06 52.5
baz=26,slow=76,SNR=112
H11S3 WAKE ISLAND Hy 44.20 228 T T 10 06 46.4
baz=26,slow=76,SNR=113
NIAQ Niaqornat 44.25 27 *i* P **P** **09 20 21.1 +0.4**
NIAQ IAmb IAmb 09 20 22.9
comp=Z,72nm,1.0s
BOD Bodaibo 44.42 310 *e*P **P** **09 20 20.3 -1.9**
BOD pmax pmax
comp=Z,50nm,0.9s
MDJ Mudanjiang 44.52 287 **P** **09 20 22.0 -1.2**
MDJ IAMs_20 IAMs_20 09 37 48.8
comp=Z,3µm,22.0s
MDJ Mudanjiang 44.52 287 P **P** **09 20 21.8 -1.4**
MDJ sP sP 09 20 40.3 -0.4
MDJ S **S** **09 26 57.8 +2.6**
MDJ pmax pmax
comp=Z,27nm,1.0s
MDJ pmax pmax
comp=Z,280nm,5.6s
MDJ L L
comp=Z,990nm,21.7s
MDJ L L
comp=Z,1µm,22.0s
MDJ L L
comp=Z,3µm,23.6s
KSU1 Kansas State U 44.66 83 P **P** **09 20 24.6 +0.2**
KSU1 Kansas State U 44.66 83 IAMs_20 IAMs_20 09 37 35.4
comp=Z,1µm,20.0s
AMTX Amarillo 44.67 92 IAMs_20 IAMs_20 09 37 20.7
comp=Z,2µm,20.0s
MSTX Muleshoe 44.70 94 IAMs_20 IAMs_20 09 37 18.4
comp=Z,2µm,22.0s
SCIA State Center 44.73 78 P **P** **09 20 24.6 -0.2**
SCIA IAmb IAmb 09 20 38.9
comp=Z,96nm,0.9s
SAATT Saattut 44.77 26 *i* P **P** **09 20 25.2 +0.5**
SAATT IAmb IAmb 09 20 26.3
comp=Z,35nm,0.8s
MNTX Cornudas Mount 44.86 98 P **P** **09 20 27.6 +1.5**
MNTX pP **pP** **09 20 40.0 +1.6**
I40A Norwalk 44.89 74 IAMs_20 IAMs_20 09 38 53.4
comp=Z,1µm,19.0s
BNX BinXian 45.01 289 ⇑P **P** **09 20 26.3 -0.7**
BNX pP **pP** **09 20 39.8 +0.5**
BNX PP **PP** **09 22 11.5 -1.0**
BNX S **S** **09 27 00.0 -2.2**
BNX sS **sS** **09 27 22.8 +0.1**
BNX pmax pmax
comp=Z,74nm,0.9s
BNX pmax pmax
comp=Z,220nm,6.2s
BNX L L
comp=Z,1µm,21.1s
BNX L L
comp=Z,1µm,18.4s
BNX L L
comp=Z,1µm,17.5s
MAJO Matsushiro 45.02 272 P **P** **09 20 27.7 +0.5**
MAJO Matsushiro 45.02 272 ⇑*i*P **P** **09 20 27.0 -0.2**
MAJO pmax pmax
comp=Z,268nm,1.0s
MAJO Matsushiro 45.02 272 P **P** **09 20 27.1 -0.1**
MAJO Matsushiro 45.02 272 P **P** **09 20 27.3 +0.1**

MAJO Matsushiro 45.02 272 P **P** **09 20 27.5 +0.3**
MAJO sP **sP** **09 20 44.2 -0.6**
MJAR Matsushiro Arr 45.02 272 P **P** **09 20 26.4 -0.8**
comp=Z,76nm,0.8s,baz=47,slow=6.4,SNR=142
MJAR ScP **ScP** **09 25 57.2 +1.2**
comp=Z,2.1nm,0.9s,baz=46,slow=3.5,SNR=3.7
MJAR LR LR 09 39 17.6
comp=Z,407nm,21.8s,baz=50,slow=36
comp=Z,76nm,0.8s
MJAR Matsushiro Arr 45.02 272 P **P** **09 20 27.1 -0.1**
MJAR pmax pmax
comp=Z,62nm,0.8s
MJAR Matsushiro Arr 45.02 272 P **P** **09 20 27.1 -0.1**
MJAR IAmb IAmb 09 20 30.7
comp=Z,62nm,0.8s
MJB9 Matsu-Tunnel 45.02 272 P **P** **09 20 27.9 +0.7**
SAQQ Saqqaq 45.19 27 *i* P **P** **09 20 28.2 +0.1**
SAQQ IAmb IAmb 09 20 30.0
comp=Z,52nm,0.8s
OK038 West end E0370 45.24 88 IAMs_20 IAMs_20 09 39 06.8
comp=Z,1µm,18.0s
GDH Godhavn 45.25 29 *i* P **P** **09 20 29.0 +0.4**
GDH IAmb IAmb 09 20 29.9
comp=Z,22nm,0.8s
N38A Joes South For 45.45 79 IAMs_20 IAMs_20 09 38 44.2
comp=Z,3µm,20.0s
I42A Draeger Farm, 45.83 73 IAMs_20 IAMs_20 09 39 44.3
comp=Z,2µm,20.0s
ILULI Ilulissat 45.94 28 IAMs_20 IAMs_20 09 43 32.6
comp=Z,2µm,19.0s
ILULI Ilulissat 45.94 28 P **P** **09 20 33.7 -0.3**
ILULI Ilulissat 45.94 28 *i* P **P** **09 20 33.8 -0.3**
ILULI IAmb IAmb 09 20 34.8
comp=Z,28nm,1.0s
P38A Dawn 46.07 81 IAMs_20 IAMs_20 09 38 51.5
comp=Z,3µm,20.0s
JGF Kuroka 46.17 272 P **P** **09 20 36.9 +0.5**
JGF Kuroka 46.17 272 P **P** **09 20 37.5 +1.1**
KBS Kingsbay 46.25 2*c* *i*P **P** **09 20 36.6 +0.2**
KBS pmax pmax
comp=Z,138nm,1.0s
KBS Kingsbay 46.25 2 *e*P **P** **09 20 37.2 +0.9**
KBS IAmb IAmb 09 20 38.7
comp=Z,135nm,1.0s
KBS *e*S **S** **09 27 17.8 -1.5**
KBS Kingsbay 46.25 2 P **P** **09 20 37.3 +0.9**
KBS IAmb IAmb 09 20 39.1
comp=Z,123nm,0.9s
KBS Kingsbay 46.25 2 P **P** **09 20 37.1 +0.7**
KBS Kingsbay 46.25 2 P **P** **09 20 37.4 +0.9**
KBS sP **sP** **09 20 54.0 +0.1**
KBS PcP **PcP** **09 22 12.4 +1.3**
KBS ScP **ScP** **09 26 01.6 +1.2**
KBS Kingsbay 46.25 2 *i* P **P** **09 20 37.3 +0.9**
DAG Danmarks Havn 46.28 11 *i* P **P** **09 20 36.1 -0.5**
DAG Danmarks Havn 46.28 11 *i* P **P** **09 20 36.3 -0.3**
DAG IAmb IAmb 09 20 38.3
comp=Z,273nm,0.9s
OK048 Pawnee Station 46.32 86 P **P** **09 20 39.4 +1.9**
WMOK Wichita Mounta 46.45 89 IAMs_20 IAMs_20 09 38 49.7
comp=Z,2µm,20.0s
WMOK Wichita Mounta 46.45 89 P **P** **09 20 39.2 +0.6**
JHJ2 Mitsune 46.53 267 P **P** **09 20 39.9 +0.7**
INU Inuyama 46.54 272 P **P** **09 20 40.0 +0.8**
INU Inuyama 46.54 272 P **P** **09 20 38.1 -1.2**
INU IAmb IAmb 09 20 58.2
comp=Z,70nm,0.9s
INU Inuyama 46.54 272 P **P** **09 20 38.8 -0.4**
INU Inuyama 46.54 272 P **P** **09 20 38.3 -1.0**
INU sP **sP** **09 20 55.4 -1.4**
JHJ Hachijo jima 2 46.55 267 LR LR 09 38 36.6
comp=Z,834nm,21.6s,baz=66,slow=34
NRIK Noril'sk 46.57 333 P **P** **09 20 38.4 -0.6**
comp=Z,59nm,0.7s,baz=55,slow=7.7,SNR=65
NRIK LR LR 09 43 04.8
comp=Z,3µm,20.4s,baz=52,slow=40
comp=Z,59nm,0.7s
NRIK Noril'sk 46.57 333*c* *i*P **P** **09 20 38.2 -0.8**
NRIK pmax pmax
comp=Z,57nm,0.8s
NRIK Noril'sk 46.57 333 P **P** **09 20 38.4 -0.6**
NRIK IAmb IAmb 09 20 42.0
comp=Z,57nm,0.8s
SUMG Summit 46.57 21 IAMs_20 IAMs_20 09 42 36.5
comp=Z,3µm,19.0s
SUMG Summit 46.57 21 P **P** **09 20 39.5 +0.1**
SUMG Summit 46.57 21 *i* P **P** **09 20 39.6 +0.1**
SUMG IAmb IAmb 09 20 44.4
comp=Z,54nm,0.8s
HILR Hailar Array B 46.64 298 P **P** **09 20 38.9 -1.0**
comp=Z,4.6nm,0.5s,baz=87,slow=9.1,SNR=6.4
HILR PcP **PcP** **09 22 13.1 0.0**
comp=Z,6.5nm,0.6s,baz=93,slow=5.9,SNR=4.7
HILR LR LR 09 42 06.4
comp=Z,1µm,18.1s,baz=60,slow=38
comp=Z,4.6nm,0.5s
L42A Oliver, Polo 46.65 75 P **P** **09 20 39.3 -0.7**
L42A IAmb IAmb 09 20 53.0
comp=Z,60nm,0.9s
OK052 Battle Ridge R 46.70 87 P **P** **09 20 40.5 +0.1**
OK052 IAmb IAmb 09 20 54.2
comp=Z,68nm,0.7s
HIA Hailar 46.83 298 IAMs_20 IAMs_20 09 41 41.5
comp=Z,2µm,20.0s
K43A Burlington 46.93 74 IAMs_20 IAMs_20 09 40 15.3
comp=Z,2µm,18.0s
P40A Paris 46.97 80 IAMs_20 IAMs_20 09 39 41.5
comp=Z,3µm,20.0s
SPA0 Spitsbergen Ar 47.07 1 *e*P **P** **09 20 42.4 -0.4**
SPA0 IAmb IAmb 09 20 47.4
comp=Z,88nm,1.0s
SPA0 *e*S **S** **09 27 32.4 +1.4**
SPITS Spitsbergen Ar 47.07 1 P **P** **09 20 41.9 -0.9**
comp=Z,27nm,0.7s,baz=24,slow=6.4,SNR=34
SPITS PcP **PcP** **09 22 14.0 0.0**
comp=Z,23nm,0.7s,baz=83,slow=4.5,SNR=5.6
SPITS LR LR 09 39 08.8
comp=Z,991nm,21.8s,baz=2.0,slow=34
comp=Z,27nm,0.7s
CN2 Changchun 47.33 289 P **P** **09 20 44.5 -0.7**
CN2 sP sP 09 21 02.0 -0.8
CN2 PP **PP** **09 22 34.3 -2.1**
CN2 S **S** **09 27 33.0 -2.5**
CN2 pmax pmax
comp=Z,90nm,0.8s
CN2 pmax pmax
comp=Z,400nm,4.0s
CN2 L L
comp=Z,1µm,19.0s
CN2 L L
comp=Z,900nm,19.0s
CN2 L L
comp=Z,2µm,19.0s
L44A Lake County Fo 47.51 74 P **P** **09 20 47.9 +1.2**
L44A IAmb IAmb 09 21 00.7
comp=Z,93nm,0.9s
S39A Bolivar 47.51 82 P **P** **09 20 45.7 -1.1**
S39A IAMs_20 IAMs_20 09 39 33.7
comp=Z,2µm,20.0s
SFJD Kangerlussuaq 47.56 30 LR LR 09 42 25.8
comp=Z,1µm,20.6s,baz=312,slow=38
SFJD Kangerlussuaq 47.56 30 P **P** **09 20 47.6 +0.9**
SFJD pmax pmax
comp=Z,152nm,0.8s
SFJD MLR MLR
comp=Z,1µm,20.0s
SFJD Kangerlussuaq 47.56 30 P **P** **09 20 47.6 +0.9**
SFJD Kangerlussuaq 47.56 30 P **P** **09 20 47.7 +0.9**
SFJD Kangerlussuaq 47.56 30 P **P** **09 20 47.4 +0.7**
SFJD sP **sP** **09 21 04.4 +0.1**
SFJD Kangerlussuaq 47.56 30 *i* P **P** **09 20 47.5 +0.9**
SFJD IAmb IAmb 09 20 49.3
comp=Z,148nm,0.8s
RLO Rose Lookout 47.60 85 P **P** **09 20 47.5 0.0**
RLO IAmb IAmb 09 21 00.9
comp=Z,41nm,0.7s
TX31 Lajitas Ar. Si 47.61 99 P **P** **09 20 48.9 +1.1**
TX31 IAmb IAmb 09 21 02.7
comp=Z,52nm,1.0s
TXAR Lajitas Array 47.61 99 P **P** **09 20 48.7 +1.0**
comp=Z,4.1nm,0.9s,baz=306,slow=5.4,SNR=29
TXAR PcP **PcP** **09 22 17.4 +0.5**
comp=Z,6.5nm,0.7s,baz=244,slow=1.1,SNR=4.1
TXAR ScP **ScP** **09 26 08.0 +0.9**
comp=Z,1.6nm,1.0s,baz=324,slow=0.8,SNR=3.6
TXAR S **S** **09 27 40.9 +0.8**
comp=Z,0.5nm,1.0s,baz=256,slow=5.0,SNR=1.4
TXAR LR LR 09 39 37.0
comp=Z,3µm,20.1s,baz=310,slow=34
R40A Maddies Statio 47.70 81 P **P** **09 20 47.0 -1.2**
R40A IAmb IAmb 09 21 00.6
comp=Z,32nm,0.7s
R40A IAMs_20 IAMs_20 09 39 40.6
comp=Z,3µm,20.0s
U38A Gravette 47.77 84 P **P** **09 20 48.3 -0.6**
U38A IAmb IAmb 09 21 02.0
comp=Z,40nm,0.7s
U38A IAMs_20 IAMs_20 09 39 29.7
comp=Z,1µm,21.0s
HDIL Hopedale 47.83 77 P **P** **09 20 49.0 -0.2**
HDIL IAMs_20 IAMs_20 09 40 56.2
comp=Z,3µm,19.0s
OZNA Ozona 47.88 95 P **P** **09 20 51.4 +1.6**
LPIG La Paz 47.97 109 LR LR 09 38 52.2
comp=Z,681nm,19.5s,baz=321,slow=33
HSPB Hornsund (broa 48.24 1 *e*P **P** **09 20 54.2 +2.3**
HSPB Hornsund (broa 48.24 1 P **P** **09 20 52.0 +0.1**
DBG Daneborg 48.24 14 P **P** **09 20 51.5 -0.5**
DBG Daneborg 48.24 14 *i* P **P** **09 20 51.6 -0.3**
DBG IAmb IAmb 09 20 53.5
comp=Z,134nm,0.9s
HPIG 48.31 102 P **P** **09 20 56.2 +2.9**
Z35A Perchaven, San 48.34 90 IAMs_20 IAMs_20 09 39 59.8
comp=Z,2µm,21.0s
CCM Cathedral Cave 48.44 80 P **P** **09 20 53.7 -0.3**
CCM pmax pmax
comp=Z,27nm,0.8s
CCM Cathedral Cave 48.44 80 IAMs_20 IAMs_20 09 40 26.3
comp=Z,3µm,20.0s
HOPEN Hopen 48.71 358 *e*P **P** **09 20 55.8 +0.3**
HOPEN IAmb IAmb 09 20 57.3
comp=Z,133nm,0.9s
HOPEN *e*PP **PP** **09 22 51.0 +2.7**
HOPEN IAMs_20 IAMs_20 09 38 25.4
comp=Z,2µm,28.1s
JCT Junction City 48.97 94 IAMs_20 IAMs_20 09 39 53.4
comp=Z,2µm,22.0s
NUUK Nuuk 49.16 33 P **P** **09 21 00.5 +1.4**
NUUK Nuuk 49.16 33 *i* P **P** **09 21 00.2 +1.1**
NUUK IAmb IAmb 09 21 01.8
comp=Z,84nm,0.9s
T42A Van Buren 49.24 81 P **P** **09 20 58.6 -1.5**
T42A IAMs_20 IAMs_20 09 40 37.6
comp=Z,2µm,20.0s
FCAR Ozark Folk Cen 49.46 83 P **P** **09 21 00.4 -1.3**
FCAR IAmb IAmb 09 21 14.8
comp=Z,58nm,1.1s
JMN Monobe 49.51 273 P **P** **09 21 03.0 +0.8**
JMN IAmb IAmb 09 21 09.6
comp=Z,68nm,0.9s
JMN Monobe 49.51 273 P **P** **09 21 03.3 +1.1**
MIAR Mount Ida 49.58 85 P **P** **09 21 02.7 0.0**
MIAR pmax pmax
comp=Z,41nm,1.0s
MIAR Mount Ida 49.58 85 P **P** **09 21 02.7 0.0**
MIAR Mount Ida 49.58 85 P **P** **09 21 02.9 +0.1**
N47A Urbana 49.61 74 P **P** **09 21 02.3 -0.6**
P46A Rosedale 49.64 76 P **P** **09 21 03.1 0.0**
P46A IAmb IAmb 09 21 16.9
comp=Z,104nm,0.9s
SNY Shenyang 49.67 288 P **P** **09 21 03.8 +0.5**
SNY S **S** **09 28 07.5 -1.0**
SNY pmax pmax
comp=Z,97nm,0.9s
SNY L L
comp=Z,820nm,17.4s
SNY L L
comp=Z,830nm,20.7s
SNY L L
comp=Z,2µm,22.4s
JCJ Chichijima 49.68 260 P **P** **09 21 01.4 -2.1**
comp=Z,352nm,0.8s,baz=68,slow=2.3,SNR=17
JCJ LR LR 09 38 48.9
comp=Z,544nm,21.8s,baz=37,slow=32
comp=Z,352nm,0.8s
JCJ Chichijima 49.68 260 P **P** **09 21 02.9 -0.7**
JCJ Chichijima 49.68 260 P **P** **09 21 02.6 -0.9**
Z38A Mt. Pleasant 49.70 88 IAMs_20 IAMs_20 09 42 09.7
comp=Z,1µm,18.0s
AAM Ann Arbor 49.77 71 IAMs_20 IAMs_20 09 42 05.4
comp=Z,1µm,20.0s
SCHQ Schefferville 49.78 49 P **P** **09 21 03.7 -0.3**
comp=Z,46nm,0.9s,baz=320,slow=7.9,SNR=43
SCHQ LR LR 09 42 59.3
comp=Z,1µm,19.2s,baz=318,slow=37
comp=Z,46nm,0.9s
SCHQ Schefferville 49.78 49 P **P** **09 21 04.0 0.0**
SCHQ IAmb IAmb 09 21 17.9
comp=Z,72nm,0.8s
WHAR Wooly Hollow 49.79 84 P **P** **09 21 04.5 +0.2**
K50A Casco 50.01 70 IAMs_20 IAMs_20 09 42 25.8
comp=Z,1µm,20.0s
KS19 Wonju Array Si 50.26 281 P **P** **09 21 08.5 +0.7**
KS19 IAmb IAmb 09 21 10.3
comp=Z,71nm,0.9s
KSRS Korea Array 50.26 281 P **P** **09 21 08.5 +0.7**
comp=Z,59nm,0.9s,baz=52,slow=6.8,SNR=196
KSRS PcP **PcP** **09 22 26.8 +0.5**
comp=Z,14nm,0.8s,baz=46,slow=3.4,SNR=7.6
KSRS ScP **ScP** **09 26 19.3 +1.2**
comp=Z,1.8nm,0.9s,baz=63,slow=4.0,SNR=4.9
KSRS LR LR 09 43 29.9
comp=Z,662nm,19.7s,baz=65,slow=37
comp=Z,59nm,0.9s
KSAR Wonju Array Be 50.29 281 P **P** **09 21 08.3 +0.2**
KSAR Wonju Array Be 50.29 281 P **P** **09 21 08.3 +0.2**
O48B Farmland 50.34 74 P **P** **09 21 07.3 -1.2**
N49A Columbus Grove 50.42 73 P **P** **09 21 08.3 -0.7**
N49A IAmb IAmb 09 21 22.4
comp=Z,99nm,0.9s
SADO Sadowa 50.52 66 LR LR 09 43 05.7
comp=Z,1µm,19.4s,baz=352,slow=37
SADO Sadowa 50.52 66 P **P** **09 21 09.1 -0.6**
SADO IAmb IAmb 09 21 23.3
comp=Z,60nm,0.9s
M50A Fremont 50.71 72 IAMs_20 IAMs_20 09 42 43.5
comp=Z,2µm,20.0s
BJO1 Bjornoya 50.78 0 *e*P **P** **09 21 12.7 +1.5**
BJO1 IAmb IAmb 09 21 12.8
comp=Z,91nm,0.9s
BJO1 *e*PP **PP** **09 23 09.3 +2.2**
BJO1 IAMs_20 IAMs_20 09 38 60.0
comp=Z,1µm,21.4s
O49A Covington 50.84 74 IAMs_20 IAMs_20 09 43 00.9
comp=Z,2µm,18.0s
INCN Inchon 50.97 282 P **P** **09 21 13.6 +0.4**
INCN pmax pmax
comp=Z,82nm,1.1s
INCN MLR MLR
comp=Z,300nm,18.0s
INCN Inchon 50.97 282 P **P** **09 21 13.6 +0.4**
INCN IAmb IAmb 09 21 15.1
comp=Z,82nm,1.1s
INCN Inchon 50.97 282 P **P** **09 21 13.7 +0.4**
NATX Nacogdoches 50.98 89 IAMs_20 IAMs_20 09 42 23.6
comp=Z,2µm,19.0s
CCAR Cane Creek 51.07 85 P **P** **09 21 14.5 +0.5**
CCAR IAmb IAmb 09 21 28.2
comp=Z,92nm,0.9s
WCI Wyandotte Cave 51.12 77 P **P** **09 21 14.4 +0.1**
WCI pmax pmax
comp=Z,32nm,1.0s
WCI MLR MLR
comp=Z,3µm,19.0s
WCI Wyandotte Cave 51.12 77 P **P** **09 21 14.3 +0.1**
WCI Wyandotte Cave 51.12 77 P **P** **09 21 13.9 -0.4**
HNVL Huntsville, TX 51.26 90 P **P** **09 21 14.6 -0.7**
HNVL IAmb IAmb 09 21 30.6
comp=Z,121nm,1.1s
735A Kenedy 51.33 94 IAMs_20 IAMs_20 09 41 03.9
comp=Z,1µm,22.0s
SCO Scoresbysund 51.33 17 IAMs_20 IAMs_20 09 47 10.4
comp=Z,1µm,19.0s
SCO Scoresbysund 51.33 17 P **P** **09 21 15.3 -0.1**
SCO Scoresbysund 51.33 17 *i* P **P** **09 21 15.8 +0.4**
SCO IAmb IAmb 09 21 17.4
comp=Z,22nm,0.8s
TJN Taejon 51.34 280*c* *i*P **P** **09 21 16.0 0.0**
TJN pmax pmax
comp=Z,5.0nm,0.9s
TJN Taejon 51.34 280 P **P** **09 21 16.4 +0.5**
N51A Ashland 51.41 72 IAMs_20 IAMs_20 09 43 05.0

comp=Z,2µm,20.0s
DELO Deloro Mine 51.48 65 P P 09 21 17.1 +0.1
DELO IAmb IAmb 09 21 31.0
comp=Z,116nm,1.4s
SOEG Soedalen 51.49 22 *i* P P 09 21 16.7 +0.1
SOEG IAmb IAmb 09 21 18.3
comp=Z,97nm,0.9s
JTU Tsushima 51.51 277 P P 09 21 18.5 +1.3
JTU Tsushima 51.51 277 P P 09 21 18.2 +1.0
T47A Sharon Grove 51.53 78 P P 09 21 17.3 -0.1
T47A IAmb IAmb 09 21 31.2
comp=Z,75nm,0.8s
M52A Chesterland 51.54 70 P P 09 21 18.7 +1.3
M52A IAmb IAmb 09 21 30.9
comp=Z,67nm,0.8s
ACSO Alum Creek Sta 51.56 73 P P 09 21 16.6 -1.0
ACSO IAmb IAmb 09 21 31.0
comp=Z,58nm,0.9s
JNU Nakatsue 51.67 275 LR LR 09 42 58.5
comp=Z,709nm,21.9s,baz=50,slow=36
WVT Waverly 51.73 80 P P 09 21 18.9 0.0
WVT pmax pmax
comp=Z,89nm,0.7s
WVT Waverly 51.73 80 P P 09 21 18.9 0.0
WVT Waverly 51.73 80 P P 09 21 18.8 0.0
WVT Waverly 51.73 80 P P 09 21 18.6 -0.3
WVT pP **pP** 09 21 31.6 +0.2
ISOG Isortoq, Green 51.83 27 P P 09 21 18.3 -0.9
ISOG Isortoq, Green 51.83 27 *i* P P 09 21 18.6 -0.5
ISOG IAmb IAmb 09 21 20.3
comp=Z,109nm,0.9s
H06N1 SOCORRO T-PHAS 51.87 114 T T 10 16 41.5
SNR=24
ERPA Erie 51.88 69 P P 09 21 19.9 0.0
ERPA IAmb IAmb 09 21 33.8
comp=Z,38nm,0.7s
TRQ Mont Tremblant 51.90 62 P P 09 21 19.6 -0.5
OXF Oxford 51.99 82 IAMs_20 IAMs_20 09 42 01.4
comp=Z,2µm,22.0s
P51A Williamsport 52.04 73 P P 09 21 20.5 -0.7
P51A IAmb IAmb 09 21 34.4
comp=Z,106nm,1.3s
ANGG Ammassalik, Gr 52.12 26 IAMs_20 IAMs_20 09 46 51.9
comp=Z,2µm,20.0s
ANGG Ammassalik, Gr 52.12 26 P P 09 21 20.6 -0.8
ANGG Ammassalik, Gr 52.12 26 *i* P P 09 21 20.5 -0.8
ANGG IAmb IAmb 09 21 22.2
comp=Z,98nm,0.9s
O52A Adamsville 52.27 72 IAMs_20 IAMs_20 09 43 38.6
comp=Z,2µm,20.0s
XLT XiLinHaoTe 52.27 295 *e*P P 09 21 23.3 +0.4
XLT pP pP 09 21 34.8 -0.6
XLT sP sP 09 21 42.5 +1.9
XLT PcP **PcP** **09 22 35.5 +1.8**
XLT S **S** **09 28 44.3 -0.3**
XLT sS sS 09 29 02.8 -2.7
XLT ScS **ScS** **09 31 08.3 -0.4**
XLT pmax pmax
comp=Z,51nm,0.8s
XLT pmax pmax
comp=Z,480nm,10.1s
XLT L L
comp=Z,1µm,20.2s
XLT L L
comp=Z,2µm,21.2s
IRK Irkutsk 52.28 309 *e*P P 09 21 21.9 -0.9
IRK pmax pmax
comp=Z,55nm,2.4s
Y45A Yeager Farm, C 52.38 83 IAMs_20 IAMs_20 09 42 23.8
comp=Z,2µm,21.0s
IVI Ivigtut 52.45 34 IAMs_20 IAMs_20 09 46 43.5
comp=Z,1µm,18.0s
IVI Ivigtut 52.45 34 P P 09 21 24.6 +0.8
IVI Ivigtut 52.45 34 *i* P P 09 21 24.4 +0.5
IVI IAmb IAmb 09 21 29.3
comp=Z,39nm,0.8s
441A DeRidder 52.57 88 IAMs_20 IAMs_20 09 44 00.8
comp=Z,2µm,18.0s
JNW Jan Mayen West 52.70 11 *e*P P 09 21 26.6 +1.1
JNW *e*S **S** **09 28 49.2 -0.4**
JNW IAMs_20 IAMs_20 09 42 47.4
comp=Z,2µm,21.7s
JMIC Jan Mayen 52.73 11 LR LR 09 43 28.2
comp=Z,1µm,21.6s,baz=340,slow=36
JMIC Jan Mayen 52.73 11 *e*P P 09 21 27.0 +1.2
JMIC *e*S **S** **09 28 52.8 +2.8**
JMIC IAMs_20 IAMs_20 09 42 36.4
comp=Z,2µm,25.2s
JNE Jan Mayen East 52.75 11 *e*P P 09 21 27.3 +1.4
JNE IAmb IAmb 09 21 45.8
comp=Z,747nm,2.5s
JNE *e*S **S** **09 28 52.8 +2.6**
JNE IAMs_20 IAMs_20 09 42 37.4
comp=Z,2µm,20.5s
JMI Jan Mayen 52.76 11 *e*P P 09 21 27.6 +1.6
JMI IAmb IAmb 09 21 46.1
comp=Z,1µm,2.5s
JMI IAMs_20 IAMs_20 09 42 48.9
comp=Z,2µm,23.8s
DL2 Dalian 52.76 287 P P 09 21 27.0 +0.5
DL2 pP **pP** **09 21 39.5 +0.5**
DL2 sP **sP** **09 21 44.3 +0.1**
DL2 PcP **PcP** **09 22 35.8 +0.3**
DL2 S **S** **09 28 50.3 -1.0**
DL2 pmax pmax
comp=Z,160nm,0.5s
DL2 pmax pmax
comp=Z,200nm,6.3s
DL2 L L
comp=Z,500nm,21.3s
DL2 L L
comp=Z,1µm,22.7s
DL2 L L
comp=Z,2µm,26.0s
Q52A Bidwell 52.84 73 IAMs_20 IAMs_20 09 44 04.8
comp=Z,2µm,18.0s
TLY Talaya 52.95 309 LR LR 09 44 10.4
comp=Z,2µm,21.9s,baz=35,slow=36
TLY Talaya 52.95 309*c* *i* P P 09 21 27.5 -0.3
TLY pmax pmax
comp=Z,67nm,0.8s
TLY Talaya 52.95 309 P P 09 21 28.1 +0.3
TLY Talaya 52.95 309 P P 09 21 27.8 0.0
TLY sP **sP** **09 21 45.1 -0.3**
LONY Lake Ozonia 52.99 63 IAMs_20 IAMs_20 09 43 48.6
comp=Z,2µm,20.0s
O54A Avella 53.02 71 IAMs_20 IAMs_20 09 44 06.4
comp=Z,2µm,20.0s
J57A Williamstown 53.10 65 IAMs_20 IAMs_20 09 44 24.5
comp=Z,2µm,20.0s
JSU Suzuyama 53.10 274 P P 09 21 30.0 +0.9
JSU Suzuyama 53.10 274 P P 09 21 28.7 -0.4
JSU IAmb IAmb 09 21 48.9
comp=Z,207nm,1.7s
JSU Suzuyama 53.10 274 P P 09 21 28.9 -0.2
L56A Greenwood 53.16 67 IAMs_20 IAMs_20 09 43 50.3
comp=Z,2µm,18.0s
NRS Narsarsuaq 53.36 33 IAMs_20 IAMs_20 09 47 34.7
comp=Z,1µm,19.0s
NRS Narsarsuaq 53.36 33 P P 09 21 32.1 +1.6
NRS Narsarsuaq 53.36 33 *i* P P 09 21 30.8 +0.2
X48A Hartselle 53.38 81 IAMs_20 IAMs_20 09 43 26.2
comp=Z,2µm,20.0s
146A Union 53.56 84 IAMs_20 IAMs_20 09 43 00.8
comp=Z,1µm,21.0s
MCWV Mont Chateau 53.67 71 P P 09 21 32.6 -0.6
MCWV IAmb IAmb 09 21 46.8
comp=Z,89nm,0.8s
Z47A Carrollton 53.71 82 IAMs_20 IAMs_20 09 43 04.9
comp=Z,2µm,21.0s
TZTN Tazewell 53.85 76 P P 09 21 34.3 -0.3
TZTN IAmb IAmb 09 21 48.3
comp=Z,63nm,0.9s
TZTN Tazewell 53.85 76 P P 09 21 34.1 -0.4
BINY Binghamton 53.95 66 IAMs_20 IAMs_20 09 43 53.1
comp=Z,1µm,22.0s
BINY Binghamton 53.95 66 P P 09 21 35.3 0.0
ZAK Zakamensk 54.02 308 *e*P P 09 21 35.2 -0.6
ZAK pmax pmax
comp=Z,14nm,1.2s
D62A Allapoint, All 54.04 58 IAMs_20 IAMs_20 09 45 06.4
comp=Z,1µm,18.0s
SSPA Standing Stone 54.04 69 P P 09 21 35.3 -0.6
SSPA pP **pP** **09 21 47.7 -0.7**
ULN Ulaanbaatar 54.04 304*c* *i* P P 09 21 35.6 -0.4
ULN pmax pmax
comp=Z,62nm,0.9s
ULN Ulaanbaatar 54.04 304 P P 09 21 35.6 -0.4
ULN Ulaanbaatar 54.04 304 P P 09 21 35.9 -0.1
MOY Mondy 54.13 311 *e*P P 09 21 36.9 +0.4
MOY pmax pmax
comp=Z,25nm,1.1s
Y49A Blount Mountai 54.17 81 IAMs_20 IAMs_20 09 44 00.2
comp=Z,2µm,20.0s
TKL Tuckaleechee C 54.36 77 LR LR 09 44 44.3
comp=Z,2µm,19.1s,baz=329,slow=36
SONM Songino Array 54.38 304 P P 09 21 38.6 +0.2
comp=Z,70nm,0.8s,baz=47,slow=7.2,SNR=183
SONM PcP **PcP** **09 22 42.1 +0.4**
comp=Z,22nm,0.8s,baz=107,slow=2.7,SNR=6.6
SONM ScP **ScP** **09 26 37.5 +1.5**
comp=Z,1.9nm,0.9s,baz=63,slow=4.3,SNR=2.4
SONM LR LR 09 47 15.9
comp=Z,4µm,18.2s,baz=44,slow=39
comp=Z,70nm,0.8s
SONM Songino Array 54.38 304 P P 09 21 38.4 0.0
SONM IAmb IAmb 09 21 40.7
comp=Z,75nm,0.8s
LRAL Lakeview Retre 54.44 82 IAMs_20 IAMs_20 09 44 33.2
comp=Z,1µm,19.0s
Q56A Snyder Ridge, 54.47 71 IAMs_20 IAMs_20 09 44 60.0
comp=Z,2µm,18.0s
R55A Marlinton 54.51 72 IAMs_20 IAMs_20 09 45 57.8
comp=Z,1µm,18.0s
KSPA Keystone Colle 54.52 67 P P 09 21 39.4 0.0
KSPA IAmb IAmb 09 21 53.4
comp=Z,87nm,1.0s
LBNH Lisbon 54.61 62 IAMs_20 IAMs_20 09 44 58.6
comp=Z,2µm,20.0s
G62A West of Eustis 54.62 60 IAMs_20 IAMs_20 09 45 12.9
comp=Z,1µm,21.0s
H62A Milan 54.77 61 IAMs_20 IAMs_20 09 45 04.7
comp=Z,1µm,20.0s
P57A Homestead Farm 54.79 70 IAMs_20 IAMs_20 09 46 31.5
comp=Z,1µm,19.0s
HNH Hanover 54.81 62 IAMs_20 IAMs_20 09 44 54.8
comp=Z,2µm,20.0s
J61A Chester 54.92 63 IAMs_20 IAMs_20 09 44 57.9
comp=Z,2µm,20.0s
BJI2 Beijing 54.95 291 P P 09 21 42.5 0.0
BJI2 sP **sP** **09 21 58.0 -2.2**
BJI2 PcP **PcP** **09 22 43.0 -0.8**
BJI2 pP **pP** **09 23 46.0 +0.6**
BJI2 S **S** **09 29 20.3 -0.5**
BJI2 sS **sS** **09 29 40.8 -1.0**
BJI2 ScS **ScS** **09 31 28.5 +1.0**
BJI2 pmax pmax
comp=Z,140nm,9.3s
BJI2 L L
comp=Z,320nm,17.5s
BJI2 L L
comp=Z,600nm,17.5s
BJI2 L L
comp=Z,890nm,20.0s
BJT Baijiatuau 54.95 291 P P 09 21 42.6 +0.1
BJT pmax pmax
comp=Z,12nm,0.7s
BJT MLR MLR
comp=Z,2µm,20.0s
BJT Baijiatuau 54.95 291 P 09 21 42.6 +0.1
BJT Baijiatuau 54.95 291 IAMs_20 IAMs_20 09 47 06.7
comp=Z,2µm,20.0s
PAGS Pennsylvania G 54.96 68 P P 09 21 42.1 -0.4
PAGS IAmb IAmb 09 21 56.1
comp=Z,113nm,1.0s
VADS Vadso 54.98 356 *e*P P 09 21 41.7 -0.6
VADS IAmb IAmb 09 21 43.1
comp=Z,131nm,0.9s
VADS IAMs_20 IAMs_20 09 43 27.5
comp=Z,3µm,23.4s
BLA Blacksburg 55.11 73 P P 09 21 43.5 -0.2
BLA pmax pmax
comp=Z,59nm,0.9s
BLA MLR MLR
comp=Z,2µm,18.0s
BLA Blacksburg 55.11 73 P P 09 21 43.5 -0.2
BLA IAmb IAmb 09 21 57.5
comp=Z,59nm,0.8s
I62A Tamworth 55.17 62 IAMs_20 IAMs_20 09 45 16.4
comp=Z,2µm,19.0s
PKME Peaks-Kenny Pk 55.21 59 IAMs_20 IAMs_20 09 45 30.3
comp=Z,1µm,20.0s
F64A Sherman 55.24 58 IAMs_20 IAMs_20 09 45 52.3
comp=Z,2µm,20.0s
I63A Otisfield 55.43 61 IAMs_20 IAMs_20 09 45 35.2
comp=Z,1µm,20.0s
KEV Kevo 55.43 357 P P 09 21 44.8 -0.7
L61B Northampton 55.50 64 IAMs_20 IAMs_20 09 45 16.1
comp=Z,2µm,20.0s
S57A Dark Hollow, R 55.52 72 P P 09 21 46.5 -0.1
S57A IAmb IAmb 09 22 00.5
comp=Z,75nm,1.2s
S57A IAMs_20 IAMs_20 09 45 19.7
comp=Z,1µm,19.0s
WVL Waterville 55.52 60 IAMs_20 IAMs_20 09 45 39.7
comp=Z,1µm,22.0s
K62A Royalston 55.58 63 IAMs_20 IAMs_20 09 45 17.1
comp=Z,2µm,20.0s
TRO Tromso 55.67 0 *e*P P 09 21 47.2 0.0
TRO IAmb IAmb 09 21 48.5
comp=Z,124nm,0.9s
TRO *e*PP **PP** **09 23 53.2 +1.9**
TRO *e*S **S** **09 29 29.4 -0.3**
TRO IAMs_20 IAMs_20 09 42 55.8
comp=Z,2µm,25.2s
ARA0 ARCESS Array S 55.70 357 *e*P P 09 21 46.5 -1.0
ARA0 IAmb IAmb 09 21 48.5
comp=Z,99nm,0.9s
ARA0 IAMs_20 IAMs_20 09 43 18.7
comp=Z,2µm,23.2s
ARCES ARCESS Array B 55.70 357 P P 09 21 46.4 -1.0
comp=Z,94nm,0.9s,baz=12,slow=6.6,SNR=93
ARCES PcP **PcP** **09 22 46.6 +0.3**
comp=Z,25nm,0.9s,baz=18,slow=4.3,SNR=4.2
ARCES LR LR 09 49 30.6
comp=Z,631nm,18.1s,baz=334,slow=40
comp=Z,94nm,0.9s
ARCES ARCESS Array B 55.70 357 P P 09 21 46.6 -0.9
ARCES pmax pmax
comp=Z,89nm,0.9s
ARCES ARCESS Array B 55.70 357 P P 09 21 46.6 -0.9
ARCES IAmb IAmb 09 21 48.8
comp=Z,89nm,0.8s
JETT Jettan, Norway 55.75 360 *e*P P 09 21 47.7 -0.1
JETT IAmb IAmb 09 21 49.7
comp=Z,139nm,0.9s
BRAL Brewton 55.79 83 IAMs_20 IAMs_20 09 44 31.9
comp=Z,2µm,21.0s
R58B Mineral 55.96 71 P P 09 21 50.2 +0.5
R58B IAmb IAmb 09 22 03.8
comp=Z,145nm,1.5s
152A Waverly Hall 56.01 80 IAMs_20 IAMs_20 09 44 39.7
comp=Z,2µm,20.0s
HRV Adam Dziewonsk 56.04 63 P P 09 21 52.9 +2.7
HRV pmax pmax
comp=Z,5.0nm,1.9s
HRV Adam Dziewonsk 56.04 63 IAMs_20 IAMs_20 09 45 31.4
comp=Z,2µm,20.0s
HRV Adam Dziewonsk 56.04 63 P P 09 21 50.4 +0.2
CBN Corbin Frederi 56.06 70 IAMs_20 IAMs_20 09 46 00.1
comp=Z,2µm,20.0s
WSPT Westport, CT 56.08 65 P P 09 21 50.6 0.0
WSPT IAMs_20 IAMs_20 09 46 15.6
comp=Z,1µm,20.0s
G65A Princeton 56.10 58 P P 09 21 50.5 -0.1
G65A IAmb IAmb 09 22 04.9
comp=Z,69nm,1.1s
G65A IAMs_20 IAMs_20 09 46 19.2
comp=Z,2µm,18.0s
GOGA Godfrey 56.17 79 P P 09 21 50.4 -0.9
GOGA Godfrey 56.17 79 P P 09 21 50.6 -0.7
WES Weston 56.24 63 IAMs_20 IAMs_20 09 45 47.9
comp=Z,2µm,20.0s
KTK1 Kautokeino 56.27 358 *e*P P 09 21 51.1 -0.4
KTK1 IAmb IAmb 09 21 52.6
comp=Z,73nm,0.9s
KTK1 IAMs_20 IAMs_20 09 44 57.3
comp=Z,3373µm,99.9s
BCX Boston College 56.36 63 IAMs_20 IAMs_20 09 45 51.0
comp=Z,2µm,22.0s
KNGR Kungurtug, Tuv 56.41 312 ⇓ *i* P P 09 21 53.9 +0.9
KNGR pmax pmax
comp=Z,62nm,0.9s
GGN Saint George 56.52 58 P P 09 21 53.0 -0.6
GGN IAmb IAmb 09 22 07.1
comp=Z,59nm,0.8s
BORG Borgarnes 56.53 20 LR LR 09 49 04.1
comp=Z,936nm,19.5s,baz=335,slow=39
BORG Borgarnes 56.53 20 P P 09 21 54.3 +0.9
BORG pmax pmax
comp=Z,40nm,0.9s
BORG MLR MLR
comp=Z,1µm,21.0s
BORG Borgarnes 56.53 20 P P 09 21 54.3 +0.9
BORG IAmb IAmb 09 21 56.5
comp=Z,40nm,0.9s
BORG Borgarnes 56.53 20 IAMs_20 IAMs_20 09 46 50.9
comp=Z,1µm,21.0s
BORG Borgarnes 56.53 20 P P 09 21 55.1 +1.7
352A Blakely 56.77 81 IAMs_20 IAMs_20 09 46 05.9
comp=Z,1µm,19.0s
HHC Hu-ho-hao-te 56.79 295 ⇓ *i* P P 09 21 56.3 +0.5
HHC sP sP 09 22 15.3 +1.8
HHC S **S** **09 29 43.0 -2.5**
HHC SS **SS** **09 33 28.5 -4.8**
HHC pmax pmax
comp=Z,36nm,0.8s
HHC pmax pmax
comp=Z,340nm,10.4s
HHC L L
comp=Z,970nm,20.0s
HHC L L
comp=Z,750nm,18.2s
HHC L L
comp=Z,2µm,20.5s
L64A Middleborough 56.82 63 IAMs_20 IAMs_20 09 46 05.1
comp=Z,2µm,20.0s
T59A Double "B" Far 56.86 72 IAMs_20 IAMs_20 09 46 20.2
comp=Z,2µm,19.0s
LVZ Lovozero 56.91 353*c* *i* P P 09 21 55.2 -0.9
LVZ pmax pmax
comp=Z,202nm,0.9s
LVZ Lovozero 56.91 353 P P 09 21 55.5 -0.6
LVZ IAMs_20 IAMs_20 09 46 29.6
comp=Z,2µm,21.0s
LVZ Lovozero 56.91 353 P P 09 21 55.5 -0.6
comp=Z,2µmcomp=Z,250nm,1.0s
LVZ Lovozero 56.91 353 P P 09 21 55.9 -0.2
LVZ Lovozero 56.91 353 P P 09 21 55.6 -0.5
LVZ sP **sP** **09 22 12.9 -1.0**
451A Vernon 56.95 83 IAMs_20 IAMs_20 09 45 16.5
comp=Z,2µm,21.0s
BIRD Birdtown, Kers 56.95 76 P P 09 21 56.9 +0.1
R61A Willards 57.07 69 IAMs_20 IAMs_20 09 47 29.7
comp=Z,1µm,18.0s
LOF Lofoten 57.10 3 *e*P P 09 21 56.6 -0.8
LOF IAmb IAmb 09 22 00.3
comp=Z,36nm,0.8s
LOF IAMs_20 IAMs_20 09 40 04.8
comp=Z,2µm,44.4s
TIA Tai'an 57.18 287 P P 09 21 58.0 -0.5
TIA sP **sP** **09 22 15.5 -0.8**
TIA S **S** **09 29 50.3 -0.3**
TIA pmax pmax
comp=Z,9.0nm,0.6s
TIA pmax pmax
comp=Z,330nm,5.1s
TIA L L
comp=Z,960nm,21.0s
TIA L L
comp=Z,860nm,20.8s
TIA L L
comp=Z,2µm,21.6s
M65A Busby, Falmout 57.19 63 IAMs_20 IAMs_20 09 46 15.9
comp=Z,2µm,20.0s
APA Apatity 57.31 354 *e*P P 09 21 57.1 -1.8
APA *e* 09 22 50.5
APA *e* 09 24 06.3
APA *e*S **S** **09 29 53.5 +2.1**
APA pmax pmax
comp=Z,41nm,0.9s
APA MLR MLR
comp=Z,2µm,21.8s
STEI Steigen 57.34 2 *e*P P 09 21 58.5 -0.6
STEI IAmb IAmb 09 22 00.0
comp=Z,60nm,0.8s
S61A Accomac 57.36 70 IAMs_20 IAMs_20 09 47 00.5
comp=Z,1µm,18.0s
TIGA Tifton 57.56 80 IAMs_20 IAMs_20 09 45 37.8
comp=Z,1µm,20.0s
HNS HongShan 57.63 290 ⇑ P P 09 22 01.8 +0.2
HNS sP **sP** **09 22 21.0 +1.6**
HNS S **S** **09 29 51.5 -4.9**
HNS pmax pmax
comp=Z,100nm,0.9s
HNS L L
comp=Z,1µm,16.9s
HNS L L
comp=Z,1µm,17.3s
HNS L L
comp=Z,2µm,17.8s
X58A Rowland 57.65 75 P P 09 22 02.4 +0.7
TARA Tarawa 57.73 212 IAMs_20 IAMs_20 09 40 48.8
comp=Z,2µm,21.0s
BTO2 Baotou 57.74 296 *e*P P 09 22 01.5 -1.0
BTO2 pP **pP** **09 22 14.3 -0.9**
BTO2 sP **sP** **09 22 19.5 -0.8**
BTO2 S **S** **09 29 55.0 -3.1**
BTO2 sS **sS** **09 30 17.3 -1.9**
BTO2 SS **SS** **09 33 48.5 +0.2**
BTO2 pmax pmax
comp=Z,33nm,1.0s
BTO2 pmax pmax
comp=Z,640nm,5.5s
BTO2 L L
comp=Z,3µm,24.7s
BTO2 L L
comp=Z,3µm,18.4s
BTO2 L L
comp=Z,3µm,20.9s
SGF Sodankyl 57.77 357 P P 09 22 01.5 -0.6
SGF pmax pmax
comp=Z,270nm,0.9s
SGF Sodankyl 57.77 357 P P 09 22 01.8 -0.2
JOW Kunigami 57.86 272 LR LR 09 45 18.7
comp=Z,282nm,21.6s,baz=22,slow=34
JOW Kunigami 57.86 272 P P 09 22 04.2 +0.8
FAUS Fauske 57.89 2 *e*P P 09 22 02.3 -0.6
FAUS IAmb IAmb 09 22 04.0
comp=Z,63nm,0.9s
FAUS *e*S **S** **09 30 02.3 +3.3**
FAUS IAMs_20 IAMs_20 09 42 40.1
comp=Z,2µm,25.3s
UNM Universidad Na 57.95 102 IAMs_20 IAMs_20 09 44 54.4
comp=Z,1µm,21.0s
553A Crawfordville 58.02 82 IAMs_20 IAMs_20 09 46 00.9
comp=Z,1µm,21.0s
V61A Roper 58.26 72 IAMs_20 IAMs_20 09 47 02.2
comp=Z,1µm,18.0s
VAGH Vaagaholmen 58.50 3 *e*P P 09 22 06.7 -0.5
VAGH IAmb IAmb 09 22 08.2
comp=Z,55nm,0.8s
VAGH *e*PP **PP** **09 24 18.8 +2.4**
VAGH *e*S **S** **09 30 05.9 -0.9**
VAGH IAMs_20 IAMs_20 09 41 06.6
comp=Z,2µm,39.9s
TIY Taiyuan 58.62 292 P P 09 22 08.5 -0.1
TIY PP **PP** **09 24 21.5 +3.2**
TIY S **S** **09 30 05.8 -3.7**
TIY SS **SS** **09 33 58.0 -4.2**
TIY pmax pmax
comp=Z,280nm,5.9s
TIY L L
comp=Z,460nm,12.5s
TIY L L
comp=Z,830nm,15.8s
TIY L L
comp=Z,890nm,21.0s
SSE Sheshan 58.70 280 P P 09 22 09.0 -0.1
SSE S **S** **09 30 07.3 -3.2**
SSE pmax pmax
comp=Z,18nm,0.5s
SSE pmax pmax
comp=Z,250nm,4.6s
SSE L L
comp=Z,230nm,22.8s
SSE L L

comp=Z,150nm,22.7s
KONS Konsvik 58.72 3 *e*P **P** **09 22 08.5 -0.3**
KONS IAmb IAmb 09 22 09.9
comp=Z,58nm,0.8s
KONS *e*PP **PP** **09 24 18.8 +0.4**
KONS IAMs_20 IAMs_20 09 41 11.6
comp=Z,2μm,38.9s
RAUS Rausandaksla 58.81 3 *e*P **P** **09 22 09.1 -0.3**
RAUS IAmb IAmb 09 22 10.5
comp=Z,112nm,0.9s
RAUS IAMs_20 IAMs_20 09 41 50.9
comp=Z,1μm,28.6s
STOK Stokkvaagen 58.89 3 *e*P **P** **09 22 09.7 -0.3**
STOK IAmb IAmb 09 22 11.2
comp=Z,70nm,0.9s
STOK IAMs_20 IAMs_20 09 41 16.4
comp=Z,2μm,39.6s
ZALV Zalesovo Beam 58.89 321 P **P** **09 22 09.8 -0.4**
comp=Z,7.2nm,0.5s,baz=54,slow=7.5,SNR=14
ZALV PcP **PcP** **09 22 58.9 -0.2**
comp=Z,16nm,0.8s,baz=36,slow=2.8,SNR=7.5
ZALV ScP **ScP** **09 26 57.1 +1.5**
comp=Z,1.6nm,0.8s,baz=28,slow=3.4,SNR=2.1
ZALV LR LR 09 49 44.1
comp=Z,5μm,19.6s,baz=39,slow=38
comp=Z,7.2nm,0.5s
ZALV Zalesovo Beam 58.89 321 P **P** **09 22 09.8 -0.4**
ZALV **PcP** **09 22 59.3 +0.2**
GUMO Guam 59.04 248 P **P** **09 22 09.4 -2.2**
comp=Z,52nm,0.6s,baz=38,slow=14,SNR=3.1
GUMO LR LR 09 44 33.8
comp=Z,335nm,21.7s,baz=40,slow=33
comp=Z,52nm,0.6s
MOR8 Moi Rana 59.09 2 *e*P **P** **09 22 09.7 -1.7**
MOR8 IAmb IAmb 09 22 11.3
comp=Z,64nm,0.9s
MOR8 *e*S **S** **09 30 16.9 +2.2**
MOR8 IAMs_20 IAMs_20 09 42 09.2
comp=Z,2μm,33.0s
LEIR Leirfjorden 59.11 3 *e*P **P** **09 22 11.3 -0.2**
LEIR IAmb IAmb 09 22 12.5
comp=Z,47nm,0.7s
LEIR IAMs_20 IAMs_20 09 41 22.3
comp=Z,2μm,38.9s
MSF Maaselka 59.20 355 P **P** **09 22 11.7 -0.4**
MSF Maaselka 59.20 355 P **P** **09 22 12.2 +0.1**
NJ2 Nanjing 59.30 283 ⇓P **P** **09 22 13.0 -0.3**
NJ2 sP **sP** **09 22 30.0 -1.1**
NJ2 pmax pmax
comp=Z,150nm,0.9s
NJ2 L L
comp=Z,2μm,22.7s
NJ2 L L
comp=Z,2μm,24.6s
656A Willston 59.71 81 IAMs_20 IAMs_20 09 46 32.9
comp=Z,1μm,22.0s
OUL Oulu 60.15 357 P **P** **09 22 17.7 -0.9**
OUL pmax pmax
comp=Z,211nm,1.0s
OUL Oulu 60.15 357 P **P** **09 22 18.0 -0.5**
ADZR Andozero 60.52 351 *e*P **P** **09 22 20.3 -0.9**
ADZR e*PP **sP** **09 22 37.9 -1.1**
ADZR pmax pmax
comp=Z,165nm,0.8s
NSS Namsos 60.66 4 *e*P **P** **09 22 21.7 -0.4**
NSS IAmb IAmb 09 22 23.2
comp=Z,60nm,0.9s
NSS IAMs_20 IAMs_20 09 41 45.9
comp=Z,2μm,37.0s
LYN LuoYang 60.96 289 ⇑P **P** **09 22 24.5 -0.1**
LYN pP pP 09 22 37.8 +0.4
LYN S **S** **09 30 39.5 0.0**
LYN pmax pmax
comp=Z,220nm,0.9s
LYN pmax pmax
comp=Z,690nm,3.6s
LYN L L
comp=Z,1μm,19.4s
LYN L L
comp=Z,2μm,20.6s
LYN L L
comp=Z,3μm,21.6s
DGZ Jazzator, Alta 61.28 317 ⇓*i*P **P** **09 22 27.2 +0.4**
DGZ pmax pmax
comp=Z,27nm,1.0s
DWPF Disney Wildern 61.30 81 IAMs_20 IAMs_20 09 49 05.8
comp=Z,989nm,20.0s
CMIG Matias Romero 62.17 100 LR LR 09 47 54.0
comp=Z,962nm,22.0s,baz=310,slow=34
VAF Ylistaro 62.27 358 P **P** **09 22 32.4 -0.6**
VAF pmax pmax
comp=Z,112nm,0.8s
MOL Molde 62.39 6 *e*P **P** **09 22 33.6 -0.2**
MOL IAmb IAmb 09 22 41.4
comp=Z,58nm,1.1s
MOL IAMs_20 IAMs_20 09 46 35.8
comp=Z,1μm,29.8s
YOJ Yonaguni jima 62.71 274 P **P** **09 22 37.2 +0.7**
YOJ Yonaguni jima 62.71 274 P **P** **09 22 36.4 -0.1**
YOJ pmax pmax
comp=Z,121nm,0.8s
060A Indiantown 62.73 81 IAMs_20 IAMs_20 09 48 48.7
comp=Z,1μm,21.0s
AKN Aaknes 62.74 7 *e*P **P** **09 22 36.5 +0.2**
AKN IAmb IAmb 09 22 38.1
comp=Z,106nm,0.9s
AKN IAMs_20 IAMs_20 09 48 18.9
comp=Z,1μm,22.8s
WHN Wuhan 62.96 285 ⇓P **P** **09 22 37.8 -0.3**
WHN sP **sP** **09 22 55.3 -0.7**
WHN S **S** **09 31 06.5 +1.8**
WHN pmax pmax
comp=Z,240nm,0.9s
WHN pmax pmax
comp=Z,1μm,4.3s
WHN L L
comp=Z,2μm,19.0s
WHN L L
comp=Z,3μm,20.2s
WHN L L
comp=Z,2μm,24.2s
DOMB Dombas 63.01 6 *e*P **P** **09 22 37.7 -0.3**
DOMB IAmb IAmb 09 22 39.1
comp=Z,49nm,0.8s
DOMB IAMs_20 IAMs_20 09 46 58.5
comp=Z,1μm,22.5s
FOO Floro 63.18 8 *e*P **P** **09 22 38.7 -0.4**
FOO IAmb IAmb 09 22 44.4
comp=Z,129nm,1.8s
FOO *e*S **S** **09 31 08.0 +1.4**
FOO IAMs_20 IAMs_20 09 45 06.0
comp=Z,884nm,24.0s
TATO Taipei 63.18 276 IAMs_20 IAMs_20 09 48 31.2
comp=Z,1μm,22.0s
XAN Xi'an 63.26 292 ⇓P **P** **09 22 40.0 -0.1**
XAN pP pP 09 22 49.0 -3.9
XAN S **S** **09 31 06.5 -2.1**
XAN pmax pmax
comp=Z,130nm,0.8s
XAN pmax pmax
comp=Z,640nm,5.6s
XAN L L
comp=Z,2μm,17.2s
XAN L L
comp=Z,1μm,16.6s
XAN L L
comp=Z,2μm,20.6s
KLMR Klimovskoe 63.41 349 *e*P **P** **09 22 39.7 -0.9**
KLMR pmax pmax
comp=Z,188nm,0.9s
KLMR MLR MLR
comp=Z,769nm,15.0s
YHNB Yeheng 63.48 276 P **P** **09 22 40.7 -1.0**
YHNB IAmb IAmb 09 22 43.2
comp=Z,32nm,0.8s
YHNB Yeheng 63.48 276 P **P** **09 22 40.6 -1.1**
SVE Sverdlovsk 63.65 336 *e*P **P** **09 22 42.3 +0.1**
SVE *e*S **S** **09 31 15.7 +3.1**
SVE pmax pmax
comp=Z,160nm,0.9s
SVE MLR MLR
comp=Z,2μm,18.0s
HYA Hoyanger 63.69 7 *e*P **P** **09 22 42.7 +0.2**
HYA IAmb IAmb 09 22 44.4
comp=Z,24nm,0.9s
HYA *e*PP **PP** **09 25 02.6 +0.4**
HYA *e*S **S** **09 31 11.7 -1.3**
HYA IAMs_20 IAMs_20 09 51 31.4
comp=Z,624nm,23.4s
SUE Sulen 63.69 8 *e*P **P** **09 22 43.7 +1.3**
SUE IAmb IAmb 09 23 22.3
comp=Z,849nm,3.0s
KURK Kurchatov 63.73 323 *c i*P **P** **09 22 42.2 -0.7**
KURK pmax pmax
comp=Z,38nm,0.8s
KURK Kurchatov 63.73 323 P **P** **09 22 42.5 -0.5**
KURK IAmb IAmb 09 22 45.5
comp=Z,42nm,0.9s
KURK Kurchatov 63.73 323 P **P** **09 22 42.5 -0.5**
KURK Kurchatov 63.73 323 P **P** **09 22 42.8 -0.2**
KURK sP **sP** **09 23 00.3 -0.5**
NACB Ninganchiao 63.74 275 P **P** **09 22 43.4 0.0**
NACB Ninganchiao 63.74 275 P **P** **09 22 43.2 -0.2**
NACB IAmb IAmb 09 22 49.4
comp=Z,62nm,0.9s
NACB Ninganchiao 63.74 275 P **P** **09 22 43.3 0.0**
FIA1 FINESS Array S 63.78 357 P **P** **09 22 42.5 -0.5**
FINES FINESS Array B 63.78 357 P **P** **09 22 42.1 -0.9**
comp=Z,91nm,0.5s,baz=24,slow=6.4,SNR=236
FINES PKPPKP P'P'bc 09 51 34.5 -15
comp=Z,2.4nm,0.7s,baz=163,slow=8.0,SNR=4.8
FINES LR LR 09 54 29.5
comp=Z,448nm,18.2s,baz=10,slow=40
comp=Z,91nm,0.5s
FINES FINESS Array B 63.78 357 P **P** **09 22 42.7 -0.4**
FINES FINESS Array B 63.78 357 P **P** **09 22 42.7 -0.4**
GTA2 Gaotai 63.79 302 P **P** **09 22 42.8 -0.9**
GTA2 sP sP 09 23 00.5 -1.1
GTA2 S **S** **09 31 08.3 -7.0**
GTA2 pmax pmax
comp=Z,140nm,1.0s
GTA2 pmax pmax
comp=Z,540nm,4.8s
GTA2 L L
comp=Z,2μm,17.8s
GTA2 L L
comp=Z,2μm,17.8s
GTA2 L L
comp=Z,3μm,20.9s
KURBB Kurchatov Arra 63.84 323 P **P** **09 22 43.2 -0.4**
comp=Z,36nm,0.9s,baz=20,slow=6.9,SNR=91
KURBB PKPPKP P'P'bc 09 51 37.3 -11
comp=Z,0.3nm,0.5s,baz=237,slow=3.2,SNR=5.2
KURBB LR LR 09 52 51.1
comp=Z,4μm,18.6s,baz=9.5,slow=38
comp=Z,36nm,0.9s
NC204 NORSAR Array S 63.86 5 P **P** **09 22 43.8 +0.1**
NC303 NORSAR Array S 63.94 4 P **P** **09 22 44.2 +0.1**
LRW Lerwick 64.02 11 *e*P **P** **09 22 45.4 +0.7**
LRW IAmb IAmb 09 22 47.6
comp=Z,124nm,0.8s
NC405 NORSAR Array S 64.06 4 P **P** **09 22 45.1 +0.2**
ZSN Zaisan 64.10 317 *e*P **P** **09 22 45.3 -0.1**
ZSN pmax pmax
comp=Z,40nm,0.8s
ZSN Zaisan 64.10 317 *e*P **P** **09 22 45.4 -0.1**
comp=Z,40nm,0.8s
NBO00 NORSAR Array S 64.10 5 P **P** **09 22 45.1 -0.1**
NBO00 IAmb IAmb 09 22 46.8
comp=Z,82nm,0.9s
NB201 NORSAR Array S 64.11 4 P **P** **09 22 45.3 0.0**
NB201 IAmb IAmb 09 22 47.0
comp=Z,96nm,0.9s
NB2 NORSAR Subarra 64.11 5 P **P** **09 22 45.0 -0.3**
comp=Z,68nm,0.8s,baz=355,slow=6.9
NB2 P'P' **P'P'df** **09 51 37.6 -4.6**
comp=Z,1.3nm,0.8s,baz=140,slow=3.3
NB2 NORSAR Subarra 64.11 5 P **P** **09 22 45.0 -0.3**
NOA NORSAR Array B 64.11 5 P **P** **09 22 44.9 -0.5**
comp=Z,68nm,0.9s,baz=355,slow=6.5,SNR=131
NOA LR LR 09 50 47.3
comp=Z,338nm,20.7s,baz=345,slow=36
NOA PKP2bc P'P'bc 09 51 36.8 -11
comp=Z,0.9nm,0.7s,baz=189,slow=4.5,SNR=3.6
comp=Z,68nm,0.9s
KIRV Kirov 64.25 343 LR LR 09 54 51.5
comp=Z,907nm,20.8s,baz=15,slow=40
KIRV Kirov 64.25 343 *c i*P **P** **09 22 45.2 -0.9**
NAO01 NORSAR Array S 64.30 5 P **P** **09 22 46.7 +0.2**
NAO01 IAmb IAmb 09 22 47.9
comp=Z,46nm,0.8s
NAO01 NORSAR Array S 64.30 5 P **P** **09 22 46.3 -0.1**
ASK Askoy 64.30 8 *e*P **P** **09 22 47.7 +1.3**
ASK IAmb IAmb 09 23 05.8
comp=Z,60nm,1.0s
SKAR Skarslia 64.32 6 *e*P **P** **09 22 46.8 +0.1**
SKAR IAmb IAmb 09 22 48.2
comp=Z,71nm,0.8s
SKAR *e*PP **PP** **09 25 09.9 +2.1**
SKAR IAMs_20 IAMs_20 09 47 50.6
comp=Z,1μm,22.6s
LZH Lanzhou 64.36 297 *e*P **P** **09 22 47.0 -0.5**
LZH pP pP 09 23 01.0 +0.7
LZH pmax pmax
comp=Z,92nm,1.0s
LZH pmax pmax
comp=Z,450nm,4.5s
LZH L L
comp=Z,2μm,17.0s
LZH L L
comp=Z,970nm,17.4s
LZH L L
comp=Z,2μm,18.2s
BER Bergen 64.41 8 *e*P **P** **09 22 48.4 +1.3**
SSLB Suanglung 64.41 275 P **P** **09 22 48.4 +0.6**
SSLB Suanglung 64.41 275 P **P** **09 22 47.0 -0.8**
SSLB Suanglung 64.41 275 P **P** **09 22 47.6 -0.2**
NC602 NORSAR Array S 64.43 4 *e*P **P** **09 22 47.0 -0.3**
NC602 IAmb IAmb 09 22 48.1
comp=Z,26nm,0.8s
NC602 *e*S **S** **09 31 22.7 +0.4**
NC602 IAMs_20 IAMs_20 09 44 14.9
comp=Z,997nm,29.1s
NC602 NORSAR Array S 64.43 4 P **P** **09 22 47.2 -0.2**
NC602 IAmb IAmb 09 23 06.4
comp=Z,130nm,1.6s
NORES NORESS Array B 64.43 4 P **P** **09 22 46.7 -0.7**
NORES pmax pmax
comp=Z,3.0nm,0.3s
BVAR Borovoye Array 64.44 329 P **P** **09 22 47.2 -0.3**
comp=Z,156nm,0.9s,baz=44,slow=6.6,SNR=240
BVAR PKPPKP **P'P'df** **09 51 36.4 -4.8**
comp=Z,2.5nm,0.8s,baz=217,slow=1.5,SNR=5.0
comp=Z,156nm,0.9s
YULB Yu-li 64.52 275 P **P** **09 22 49.9 +1.4**
YULB Yu-li 64.52 275 P **P** **09 22 48.0 -0.5**
YULB IAmb IAmb 09 23 00.4
comp=Z,52nm,0.9s
YULB Yu-li 64.52 275 P **P** **09 22 48.3 -0.2**
LZDM Lanzhou Array 64.54 297 P **P** **09 22 49.0 +0.1**
comp=Z,12nm,0.4s,baz=63,slow=0.3,SNR=15
LZDM LR LR 09 52 39.9
comp=Z,1μm,21.9s,baz=40,slow=38
comp=Z,12nm,0.4s
ARTI Arti 64.56 337 LR LR 09 55 10.5
comp=Z,1μm,18.6s,baz=14,slow=40
ARTI Arti 64.56 337 *c i*P **P** **09 22 47.5 -0.7**
ARTI *PP **pP** **09 23 01.6 +0.5**
ARTI 09 23 21.1
ARTI 09 25 10.9
ARTI PPP PPP 09 26 42.3
ARTI S **S** **09 31 23.7 -0.2**
ARTI 09 32 40.4
ARTI SS **SS** **09 35 29.3 -4.5**
ARTI pmax pmax
comp=Z,227nm,0.9s
ARTI MLR MLR
comp=Z,2μm,18.0s
ARTI Arti 64.56 337 P **P** **09 22 47.9 -0.4**
QZH2 Quanzhou 64.86 278 *e*P **P** **09 22 50.3 -0.3**
QZH2 S **S** **09 31 25.8 -2.7**
QZH2 pmax pmax
comp=Z,55nm,0.8s
QZH2 pmax pmax
comp=Z,380nm,10.0s
QZH2 L L
comp=Z,410nm,17.5s
QZH2 L L
comp=Z,510nm,20.3s
QZH2 L L
comp=Z,610nm,30.2s
ODD1 Odda 64.97 7 *e*P **P** **09 22 51.1 +0.2**
ODD1 IAmb IAmb 09 22 53.0
comp=Z,62nm,1.0s
TPUB Ta-pu 64.97 275 P **P** **09 22 51.7 +0.2**
TWG Pinlang 65.09 275 P **P** **09 22 52.3 +0.1**
TWG IAmb IAmb 09 22 54.6
comp=Z,30nm,0.6s
TWG Pinlang 65.09 275 P **P** **09 22 52.9 +0.7**
HFS Hagfors 65.12 3 P **P** **09 22 51.3 -0.5**
comp=Z,72nm,0.5s,baz=20,slow=4.7,SNR=166
comp=Z,72nm,0.5s
OSL Oslo 65.19 5 *e*P **P** **09 22 53.6 +1.3**
PUL Pulkovo 65.25 354 *ce*P **P** **09 22 53.2 +0.5**
PUL pmax pmax
comp=Z,194nm,0.9s
KNMB Chin-men Tao 65.35 278 P **P** **09 22 54.1 +0.3**
KNMB IAmb IAmb 09 22 55.2
comp=Z,43nm,0.8s
KONO Kongsberg 65.42 6 *ce*P **P** **09 22 54.9 +1.1**
KONO pmax pmax
comp=Z,66nm,0.7s
KONO Kongsberg 65.42 6 *e*P **P** **09 22 54.6 +0.9**
KONO IAmb IAmb 09 22 55.7
comp=Z,75nm,0.8s
KONO *e*S **S** **09 31 37.3 +2.9**
KONO IAMs_20 IAMs_20 09 48 20.5
comp=Z,2μm,28.9s
KONO Kongsberg 65.42 6 P **P** **09 22 54.0 +0.2**
KONO IAmb IAmb 09 22 55.9
comp=Z,74nm,0.8s
KONO Kongsberg 65.42 6 P **P** **09 22 53.5 -0.3**
BLS5 Blasjo 65.44 7 *e*P **P** **09 22 54.1 +0.2**
BLS5 IAmb IAmb 09 22 55.5
comp=Z,94nm,1.0s
CNSH ChangSha 65.56 285 P **P** **09 22 54.5 -0.6**
CNSH S **S** **09 31 34.0 -3.0**
CNSH pmax pmax
comp=Z,100nm,0.9s
CNSH L L
comp=Z,410nm,17.9s
CNSH L L
comp=Z,310nm,17.5s
CNSH L L
comp=Z,540nm,22.6s
KMY Karmoy 65.56 8 *e*P **P** **09 22 56.0 +1.4**
KMY *e*S **S** **09 31 37.3 +1.2**
MK31 Makanchi Array 65.64 318 ⇓*i*P **P** **09 22 54.7 -0.8**
MK31 Makanchi Array 65.64 318 P **P** **09 22 54.9 -0.6**
MKAR Makanchi Array 65.64 318 P **P** **09 22 54.8 -0.7**
comp=Z,9.2nm,0.5s,baz=49,slow=5.5,SNR=90
MKAR PKPPKP 09 51 32.4
comp=Z,1.0nm,0.8s,baz=232,slow=2.9,SNR=5.1
MKAR LR LR 09 53 30.1
comp=Z,3μm,21.3s,baz=24,slow=38
comp=Z,9.2nm,0.5s
MKAR Makanchi Array 65.64 318 *i*P **P** **09 22 54.7 -0.8**
MKAR pmax pmax
comp=Z,9.0nm,0.4s
MAKZ Makanchi 65.75 318 P **P** **09 22 55.7 -0.5**
MAKZ pmax pmax
comp=Z,23nm,0.8s
MAKZ MLR MLR
comp=Z,2μm,22.0s
MAKZ Makanchi 65.75 318 P **P** **09 22 55.7 -0.5**
MAKZ Makanchi 65.75 318 P **P** **09 22 55.8 -0.5**
MAKZ Makanchi 65.75 318 P **P** **09 22 55.6 -0.6**
MAKZ sP **sP** **09 23 12.8 -1.4**
ARBE Arbavere 65.80 356 P **P** **09 22 55.9 -0.2**
ENH Enshi 65.85 289 P **P** **09 22 56.8 -0.2**
ENH IAMs_20 IAMs_20 09 51 22.1
comp=Z,925nm,21.0s
WMQ Urumqi 65.89 313 ⇑P **P** **09 22 57.0 -0.2**
WMQ pP pP 09 23 12.0 +2.0
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,340nm,4.7s
WMQ L L
comp=Z,2μm,24.7s
WMQ L L
comp=Z,730nm,18.9s
WMQ L L
comp=Z,2μm,23.3s
WMQ Urumqi 65.89 313 P **P** **09 22 57.8 +0.7**
STRU Stroemstad 66.12 5 *i*P **P** **09 22 58.4 +0.2**
KPL Plockton 66.16 15 *e*P **P** **09 22 58.8 +0.3**
KPL IAmb IAmb 09 23 01.4
comp=Z,55nm,0.8s
MCD Coleburn Disti 66.26 13 *e*P **P** **09 22 59.6 +0.4**
MCD IAmb IAmb 09 23 02.2
comp=Z,217nm,0.8s
SNART Snartemo 66.58 7 *e*P **P** **09 23 03.2 +2.0**
SNART IAmb IAmb 09 23 03.5
comp=Z,10nm,1.1s
SNART Snartemo 66.58 7 *i*P **P** **09 23 02.8 +1.6**
MTSE Matsula 66.59 358 P **P** **09 23 01.3 +0.1**
HOMB Homborsund 66.73 6 *e*P **P** **09 23 03.7 +1.5**
HOMB IAmb IAmb 09 23 04.0
comp=Z,96nm,0.9s
HOMB Homborsund 66.73 6 *i*P **P** **09 23 03.1 +1.0**
VSU Vasula 66.74 356 P **P** **09 23 00.9 -1.3**
VSU pmax pmax
comp=Z,271nm,0.8s
VSU Vasula 66.74 356 P **P** **09 23 01.0 -1.3**
DRUM Mains of Drumt 67.01 13 P **P** **09 23 04.7 +0.7**
DRUM Mains of Drumt 67.01 13 *e*P **P** **09 23 04.3 +0.3**
DRUM IAmb IAmb 09 23 06.7
comp=Z,409nm,0.8s
TJOU Tjoern 67.14 5 *i*P **P** **09 23 05.2 +0.4**
LAWE Loch Awe, Argy 67.24 15 *e*P **P** **09 23 05.7 +0.2**
LAWE IAmb IAmb 09 23 07.9
comp=Z,86nm,0.8s
INVG Invergeldie, C 67.28 14 *e*P **P** **09 23 05.8 +0.1**
INVG IAmb IAmb 09 23 08.4
comp=Z,87nm,0.8s
EAB Aberfoyle 67.47 14 *e*P **P** **09 23 07.4 +0.5**
EAB IAmb IAmb 09 23 09.4
comp=Z,127nm,0.8s
SLIT Slitere, Latvi 67.70 358 P **P** **09 23 08.3 0.0**
ONAU Onsala 67.79 4 *i*P **P** **09 23 08.8 -0.1**
PGBU Glenifferbraes 67.81 14 *e*P **P** **09 23 09.7 +0.6**
PGBU IAmb IAmb 09 23 11.4
comp=Z,182nm,0.9s
EDI Edinburgh 67.88 14 *e*P **P** **09 23 10.1 +0.6**
EDI IAmb IAmb 09 23 12.3
comp=Z,83nm,0.8s
GOET G??ttrup 68.00 6 *i*P **P** **09 23 11.0 +0.8**
GOET IAmb IAmb 09 23 15.5
comp=Z,300nm,1.1s
IDGL Inch Island, C 68.06 16 P **P** **09 23 11.1 +0.4**
IDGL Inch Island, C 68.06 16 P **P** **09 23 11.6 +0.9**
IDGL Inch Island, C 68.06 16 *e*P **P** **09 23 11.0 +0.4**
IDGL IAmb IAmb 09 23 13.3
comp=Z,51nm,0.8s
FABU Falkenberg 68.22 4 *i*P **P** **09 23 11.7 +0.1**
CLGH Cloghs, Cushen 68.27 16 *e*P **P** **09 23 12.1 +0.2**
CLGH IAmb IAmb 09 23 14.4
comp=Z,25nm,0.6s
CD2 Chengdu 68.43 293 ⇑P **P** **09 23 13.5 0.0**
CD2 sP sP 09 23 31.0 -0.4
CD2 S **S** **09 32 11.0 -0.7**
CD2 pmax pmax
comp=Z,430nm,0.9s
CD2 pmax pmax
comp=Z,860nm,3.5s
CD2 L L
comp=Z,1μm,22.8s
CD2 L L
comp=Z,1μm,18.4s
CD2 L L
comp=Z,1μm,23.5s
EKA Eskdalemuir Ar 68.46 14 P **P** **09 23 13.5 +0.3**
comp=Z,107nm,0.8s,baz=341,slow=4.7,SNR=97
EKA PKP2bc P'P'bc 09 51 26.4 -9.2
comp=Z,3.9nm,0.9s,baz=137,slow=1.6,SNR=3.9
EKA LR LR 09 53 48.6
comp=Z,1μm,21.2s,baz=340,slow=36
comp=Z,107nm,0.8s
ESK Eskdalemuir 68.47 14 P **P** **09 23 13.2 0.0**
ESK pmax pmax
comp=Z,119nm,0.9s
ESK Eskdalemuir 68.47 14 P **P** **09 23 13.2 0.0**
ESK Eskdalemuir 68.47 14 IAMs_20 IAMs_20 09 51 33.7
comp=Z,1μm,21.0s
ESK Eskdalemuir 68.47 14 P **P** **09 23 14.4 +1.2**
ESK Eskdalemuir 68.47 14 *e*P **P** **09 23 13.6 +0.3**

ESK IAmb IAmb 09 23 15.7
comp=Z,84nm,0.8s
NEWG New Galloway 68.52 14 *e*P **P 09 23 13.1 -0.4**
NEWG IAmb IAmb 09 23 15.8
comp=Z,40nm,0.8s
MUD Monsted U'grnd 68.58 6 *i* P **P 09 23 15.0 +1.1**
MUD IAmb IAmb 09 23 16.4
comp=Z,84nm,0.8s
TDK Taldyqorghan 68.63 319 *e*P **P 09 23 14.4 0.0**
TDK pmax pmax
comp=Z,54nm,0.8s
TDK MLR MLR
comp=Z,2µm,21.0s
TDK Taldyqorghan 68.63 319 *e*P **P 09 23 14.4 0.0**
comp=Z,54nm,0.8s
TDK LR LR 09 53 54.8
comp=Z,2µm,20.6s
MOS Moscow 68.64 349 *e*P **P 09 23 13.8 -0.4**
MOS *e*PP **pP 09 23 25.5 -1.6**
MOS *e*S **S 09 32 09.4 -3.8**
MOS pmax pmax
comp=Z,74nm,0.7s
MOS MLR MLR
comp=Z,2µm,23.0s
GZH2 Guangzhou 68.68 281 P **P 09 23 15.5 +0.5**
GZH2 sP **sP 09 23 33.0 0.0**
GZH2 S **S 09 32 15.8 +1.2**
GZH2 pmax pmax
comp=Z,110nm,0.8s
GZH2 L L
comp=Z,430nm,18.2s
GZH2 L L
comp=Z,960nm,19.5s
GZH2 L L
comp=Z,820nm,14.9s
GAL1 Galloway 68.69 15 *e*P **P 09 23 14.7 +0.1**
GAL1 IAmb IAmb 09 23 16.9
comp=Z,99nm,0.9s
GOMU GeErMu 68.79 303 P **P 09 23 15.5 -0.5**
GOMU S **S 09 32 15.8 -0.6**
GOMU pmax pmax
comp=Z,35nm,0.8s
GOMU L L
comp=Z,2µm,17.4s
GOMU L L
comp=Z,720nm,17.4s
GOMU L L
comp=Z,2µm,17.3s
DEL Delary 68.79 3 *i* P **P 09 23 15.2 0.0**
TGUH Tegucigalpa,Un 68.94 96 IAMs_20 IAMs_20 09 50 50.9
comp=Z,869nm,22.0s
BLEU Blekinge 69.01 2 *i* P **P 09 23 16.2 -0.3**
EDMD Edmundbyers 69.11 13 P **P 09 23 17.6 +0.4**
EDMD Edmundbyers 69.11 13 *e*P **P 09 23 17.5 +0.4**
EDMD IAmb IAmb 09 23 20.2
comp=Z,72nm,1.0s
BJUU Bjuv 69.16 4 *i* P **P 09 23 17.6 +0.2**
KESW Keswick, Cumbr 69.19 14 P **P 09 23 18.5 +0.8**
KESW Keswick, Cumbr 69.19 14 *e*P **P 09 23 17.6 -0.1**
KESW IAmb IAmb 09 23 20.2
comp=Z,64nm,0.8s
GULI GuiLin 69.24 285 ⇑P **P 09 23 15.3 -3.2**
GULI S **S 09 32 15.8 -5.5**
GULI pmax pmax
comp=Z,140nm,0.9s
GULI pmax pmax
comp=Z,500nm,4.3s
GULI L L
comp=Z,560nm,17.3s
GULI L L
comp=Z,500nm,21.7s
GULI L L
comp=Z,620nm,23.9s
ILTH Belurgan, Co L 69.26 16 P **P 09 23 18.2 +0.1**
ILTH Belurgan, Co L 69.26 16 P **P 09 23 18.7 +0.6**
ILTH Belurgan, Co L 69.26 16 *e*P **P 09 23 18.2 +0.1**
ILTH IAmb IAmb 09 23 20.4
comp=Z,83nm,0.9s
AFI Afiamalu 69.31 192 LR LR 09 47 02.0
comp=Z,1µm,21.7s,baz=21,slow=30
IGLA Glengowla, Co 69.33 18 P **P 09 23 18.9 +0.3**
IGLA Glengowla, Co 69.33 18 P **P 09 23 19.3 +0.8**
IGLA Glengowla, Co 69.33 18 *e*P **P 09 23 18.8 +0.3**
IGLA IAmb IAmb 09 23 21.0
comp=Z,87nm,0.8s
OBN Obninsk 69.36 350 ⇑P **P 09 23 17.8 -0.9**
OBN Obninsk 69.36 350 LR LR 09 57 33.0
comp=Z,1µm,21.1s,baz=2.0,slow=39
OBN Obninsk 69.36 350 ⇑*i*P **P 09 23 17.8 -0.9**
OBN *i* 09 23 35.4
OBN pmax pmax
comp=Z,111nm,1.0s
OBN MLR MLR
comp=Z,2µm,22.0s
OBN Obninsk 69.36 350 P **P 09 23 17.7 -1.0**
OBN Obninsk 69.36 350 P **P 09 23 18.2 -0.5**
comp=Z,1µmcomp=Z,140nm,0.9s
OBN Obninsk 69.36 350 P **P 09 23 17.8 -0.9**
HKPS Hong Kong Po S 69.48 280 P **P 09 23 20.8 +0.8**
HKPS IAmb IAmb 09 23 21.7
comp=Z,37nm,0.8s
SSRD Sdr. Stenderup 69.58 6 *i* P **P 09 23 20.5 +0.5**
SSRD IAmb IAmb 09 23 22.3
comp=Z,324nm,1.1s
SZP Santa 69.59 272 P **P 09 23 21.8 +1.2**
LUNU Lund 69.61 4 *i* P **P 09 23 20.2 -0.1**
PDGK Podgornoye 69.63 318 P **P 09 23 20.8 0.0**
PDGK Podgornoye 69.63 318 P **P 09 23 20.8 0.0**
GDLE Glaisdale, N Y 69.66 13 *e*P **P 09 23 21.8 +1.2**
GDLE IAmb IAmb 09 23 23.5
comp=Z,88nm,0.9s
SHLS Shalkode 69.79 318*c* *i*P **P 09 23 20.6 -1.1**
SHLS pmax pmax
comp=Z,79nm,0.9s
SHLS Shalkode 69.79 318 ⇑*i*P **P 09 23 20.6 -1.1**
comp=Z,79nm,0.9s
PABE Paberze 69.80 357 P **P 09 23 20.9 -0.5**
PABE IAMs_20 IAMs_20 09 52 10.2
comp=Z,1µm,21.0s
PABE Paberze 69.80 357 P **P 09 23 21.1 -0.2**
KPKS Kokpek 69.82 318 *e*P **P 09 23 22.0 +0.1**
KPKS Kokpek 69.82 318 *e*P **P 09 23 22.0 +0.1**
LLD Lille Linde 69.86 4 *i* P **P 09 23 20.5 -1.2**
LLD IAmb IAmb 09 23 24.0
comp=Z,111nm,0.8s
UZB Uzynbulak 69.97 318*c* *i*P **P 09 23 22.7 -0.2**
UZB Uzynbulak 69.97 318 ⇑*i*P **P 09 23 22.7 -0.2**
DSB Dublin 70.00 16 P **P 09 23 23.0 +0.3**
DSB Dublin 70.00 16 P **P 09 23 23.4 +0.7**
AKTO Aktyubinsk 70.14 335 LR LR 09 58 15.7
comp=Z,1µm,20.7s,baz=38,slow=39
BSD Bornholm Skovb 70.18 3 *i* P **P 09 23 24.0 +0.2**
BSD IAmb IAmb 09 23 25.6
comp=Z,58nm,0.8s
SATY Saty 70.28 318*c* *i*P **P 09 23 24.6 -0.1**
SATY Saty 70.28 318 ⇑*i*P **P 09 23 24.7 -0.1**
KUU Kurty 70.34 320 *e*P **P 09 23 25.0 0.0**
KUU Kurty 70.34 320 *e*P **P 09 23 25.0 0.0**
KUU LR LR 09 54 50.3
GYA Guiyang 70.37 288 P **P 09 23 25.5 -0.1**
GYA S **S 09 32 34.0 -0.7**
GYA pmax pmax
comp=Z,190nm,0.9s
BELG Belogornoye 70.47 342 LR LR 09 58 56.3
comp=Z,2µm,19.9s,baz=19,slow=40
BELG Belogornoye 70.47 342*c* *i*P **P 09 23 24.9 -0.7**
BELG pmax pmax
comp=Z,41nm,0.9s
CHIV Chivirico 70.48 83 P **P 09 23 27.2 +1.1**
CHIV IAmb IAmb 09 23 40.4
comp=Z,74nm,1.0s
LBWR Ladybower, Pea 70.54 13 P **P 09 23 27.8 +1.7**
LBWR Ladybower, Pea 70.54 13 *e*P **P 09 23 26.1 +0.1**
LBWR IAmb IAmb 09 23 29.0
comp=Z,77nm,1.0s
VAL Valentia 70.58 19 P **P 09 23 26.5 +0.2**
MNK Minsk 70.65 355 *i* P **P 09 23 27.0 +0.4**
comp=E,54nm,0.9s
MNK *i* P **P 09 23 27.0 +0.4**
comp=N,24nm,1.0s
MNK *i* P **P 09 23 27.0 +0.4**
comp=Z,187nm,0.9s,baz=5.1
MNK *i* PP **PP 09 26 03.4 +0.7**
MNK *i* PPP PPP 09 27 46.3
MNK *i* S **S 09 32 38.3 +1.4**
MNK *i* SS SS 09 37 23.7 +16
MNK *i* SSS SSS 09 40 30.2
MNK *i* LQ LQ 09 49 20.3
MNK *i* LR LR 09 55 00.9
MNK *i* LRM MLR 09 57 34.5
comp=Z,920nm,22.1s
MNK *i* LRM MLR 09 57 52.0
comp=E,383nm,19.7s
MNK *i* LRM MLR 09 57 55.9
comp=N,583nm,19.8s
MNK Minsk 70.65 355 *i* P **P 09 23 27.0 +0.4**
MNK *i* 09 26 03.4
MNK *i* PPP PPP 09 27 46.3
MNK *i* S **S 09 32 38.3 +1.4**
MNK pmax pmax
comp=E,54nm,0.9s
MNK pmax pmax
comp=Z,187nm,0.9s
MNK pmax pmax
comp=N,24nm,1.0s
MNK MLR MLR
comp=Z,920nm,22.0s
MNK MLR MLR
comp=E,383nm,20.0s
MNK MLR MLR
comp=N,583nm,20.0s
SIUN Universidad Ur 70.65 94 P **P 09 23 28.6 +1.4**
RGN Rugen 70.69 4 P **P 09 23 28.3 +1.4**
RGN Rugen 70.69 4 *e*P **P 09 23 28.6 +1.7**
comp=N,258nm,0.8s,baz=355,slow=5.8
RGN Rugen 70.69 4 P **P 09 23 28.2 +1.4**
MDOK Medeo 70.70 319 *e*P **P 09 23 27.2 -0.2**
MDOK Medeo 70.70 319 *e*P **P 09 23 27.3 -0.2**
MDOK LR LR 09 55 02.7
AAA Alma-Ata 70.72 319 *e*P **P 09 23 27.3 -0.1**
AAA pmax pmax
comp=Z,76nm,1.0s
AAA Alma-Ata 70.72 319 *e*P **P 09 23 27.3 -0.1**
comp=Z,76nm,1.0s
AAA LR LR 09 55 02.7
AB31 Akbulak array 70.74 333 *i* P **P 09 23 27.0 -0.3**
AB31 pmax pmax
comp=Z,196nm,0.9s
AB31 Akbulak array 70.74 333 P **P 09 23 27.4 +0.1**
ABKAR Akbulak array 70.74 333 P **P 09 23 27.4 0.0**
PRZ Przheval'sk 70.77 318 P **P 09 23 28.4 +0.5**
PRZ Przheval'sk 70.77 318 P **P 09 23 28.4 +0.5**
PRZ Przheval'sk 70.77 318 P **P 09 23 29.2 +1.4**
STNC Stoke 70.78 14 P **P 09 23 28.6 +1.2**
IWEX Carrickbyrne, 70.78 17 P **P 09 23 27.9 +0.4**
IWEX Carrickbyrne, 70.78 17 P **P 09 23 27.7 +0.2**
IWEX Carrickbyrne, 70.78 17 *e*P **P 09 23 27.8 +0.4**
IWEX IAmb IAmb 09 23 30.1
comp=Z,38nm,0.8s
FOEL Foel Wylfa 70.83 14 P **P 09 23 28.8 +0.9**
FOEL Foel Wylfa 70.83 14 *e*P **P 09 23 28.4 +0.5**
FOEL IAmb IAmb 09 23 30.5
comp=Z,114nm,0.9s
NMDO Nuevo Mundo 70.84 81 P **P 09 23 28.7 +0.4**
NMDO IAmb IAmb 09 23 42.6
comp=Z,57nm,1.0s
TNSS Tian-Shan 70.85 319 *e*P **P 09 23 28.1 -0.5**
TNSS Tian-Shan 70.85 319 *e*P **P 09 23 28.2 -0.5**
KRVT Keravat (AS076 70.92 231 LR LR 09 50 22.8
comp=Z,160nm,20.3s,baz=321,slow=32
MANU Manus Island 71.10 237 P **P 09 23 30.3 +0.4**
BOAB BOACO BROADBAN 71.15 95 IAMs_20 IAMs_20 09 56 03.1
comp=Z,1µm,20.0s
BOAB BOACO BROADBAN 71.15 95 P **P 09 23 30.7 +0.4**
BSEG Bad Segeberg 71.16 6 *e*P **P 09 23 30.5 +0.8**
comp=Z,61nm,0.8s,baz=355,slow=5.8
BSEG Bad Segeberg 71.16 6 P **P 09 23 30.8 +1.1**
HLM1 Long Mynd 71.24 14 *e*P **P 09 23 30.7 +0.4**
HLM1 IAmb IAmb 09 23 32.4
comp=Z,26nm,0.9s
CWF Charnwood Fore 71.24 13 P **P 09 23 31.1 +0.8**
CWF Charnwood Fore 71.24 13 *e*P **P 09 23 30.7 +0.5**
CWF IAmb IAmb 09 23 34.9
comp=Z,43nm,0.9s
SUW Suwalki 71.31 358 P **P 09 23 30.0 -0.6**
SUW MLR MLR
comp=Z,700nm,21.0s
SUW Suwalki 71.31 358 P **P 09 23 30.0 -0.6**
SUW IAMs_20 IAMs_20 09 58 48.2
comp=Z,744nm,21.0s
GQP Guinayangan 71.35 268 *e*P **P 09 23 31.9 +0.5**
SGDS Sogindy 71.35 321 ⇑*i*P **P 09 23 31.2 0.0**
TATA Tatamba Isabel 71.35 222 P **P 09 23 32.5 +1.1**
TKM2 Tokmak 2 71.45 320 P **P 09 23 32.2 +0.2**
SNR=36
WACR West Acre 71.50 12 P **P 09 23 32.4 +0.6**
WACR West Acre 71.50 12 *e*P **P 09 23 32.3 +0.6**
WACR IAmb IAmb 09 23 34.6
comp=Z,327nm,0.8s
RSBS Rosebush, Pemb 71.51 16 *e*P **P 09 23 32.4 +0.5**
RSBS IAmb IAmb 09 23 34.4
comp=Z,64nm,0.8s
KDJ Kajisay 71.54 319 P **P 09 23 32.7 +0.2**
KDJ pmax pmax
comp=Z,69nm,0.9s
KDJ Kajisay 71.54 319 P **P 09 23 32.7 +0.2**
KDJ IAmb IAmb 09 23 34.6
comp=Z,69nm,0.9s
KDJ Kajisay 71.54 319 P **P 09 23 32.8 +0.2**
WUS Wushi 71.54 317 P **P 09 23 32.4 -0.1**
WUS IAmb IAmb 09 23 34.5
comp=Z,66nm,0.8s
WUS IAMs_20 IAMs_20 09 57 14.4
comp=Z,1µm,20.0s
USP Ospenovka 71.56 321 P **P 09 23 33.2 +0.7**
SNR=10
LPSR Galich'ya Gora 71.57 348 *e*P **P 09 23 31.1 -1.1**
LPSR pmax pmax
comp=Z,145nm,0.8s
TARG Taragay, Kyrgy 71.64 318 P **P 09 23 33.7 +0.3**
TARG pmax pmax
comp=Z,41nm,0.9s
TARG Taragay, Kyrgy 71.64 318 P **P 09 23 33.7 +0.3**
TARG Taragay, Kyrgy 71.64 318 P **P 09 23 34.1 +0.7**
BOOM Boomskoye usch 71.70 320 P **P 09 23 33.9 +0.5**
BOOM pmax pmax
comp=Z,103nm,0.9s
BOOM Boomskoye usch 71.70 320 P **P 09 23 33.9 +0.5**
BOOM IAmb IAmb 09 23 35.7
comp=Z,103nm,0.9s
BOOM Boomskoye usch 71.70 320 P **P 09 23 34.0 +0.5**
CHMS Chumysh 71.70 321 P **P 09 23 34.1 +0.9**
SNR=20
LQP Lukban 71.71 269 *e*P **P 09 23 33.9 0.0**
MCH1 Michaelchurch 71.73 14 *e*P **P 09 23 33.5 +0.2**
MCH1 IAmb IAmb 09 23 35.8
comp=Z,47nm,1.0s
ULHL Ulahol 71.80 319 P **P 09 23 34.8 +0.7**
SNR=6.2
FRU1 Bishkek 71.91 321 P **P 09 23 35.3 +0.7**
FRU1 pmax pmax
comp=Z,116nm,0.8s
FRU1 Bishkek 71.91 321 P **P 09 23 35.3 +0.7**
KBK Karagaybulak 71.92 320 P **P 09 23 35.7 +0.9**
SNR=36
PLP Palo 72.10 264 *e*P **P 09 23 35.4 -0.5**
AAK Ala-Archa 72.11 321 LR LR 09 57 57.6
comp=Z,4µm,18.6s,baz=28,slow=38
AAK Ala-Archa 72.11 321 P **P 09 23 36.4 +0.6**
SNR=30
AAK Ala-Archa 72.11 321 *i* P **P 09 23 36.5 +0.6**
SNR=9.6
AAK Ala-Archa 72.11 321*c* *i*P **P 09 23 36.1 +0.2**
AAK pmax pmax
comp=Z,68nm,0.9s
AAK Ala-Archa 72.11 321 P **P 09 23 36.1 +0.2**
AAK IAmb IAmb 09 23 38.1
comp=Z,67nm,0.9s
AAK Ala-Archa 72.11 321 P **P 09 23 36.1 +0.2**
GORT1 Trebel 72.16 5 *e*P **P 09 23 36.5 +0.9**
comp=Z,54nm,1.1s,baz=355,slow=5.8
GORT1 *e*pP **sP 09 23 52.8 -1.0**
HNR Honiara 72.26 221 LR LR 09 49 28.6
comp=Z,27nm,21.5s,baz=100,slow=31
RETH Rethem/Aller, 72.30 6 *e*P **P 09 23 37.4 +0.9**
comp=Z,46nm,0.9s,baz=355,slow=5.8
RETH Rethem/Aller, 72.30 6 P **P 09 23 37.6 +1.1**
EKS2 Erkin-Say 72.35 321 P **P 09 23 37.7 +0.5**
SNR=53
VORR Voronezh 72.45 347 *e*P **P 09 23 37.0 -0.5**
VORR pmax pmax
comp=Z,80nm,0.4s
HTL Hartland 72.48 16 P **P 09 23 38.5 +0.8**
HTL Hartland 72.48 16 *e*P **P 09 23 38.5 +0.8**
HTL IAmb IAmb 09 23 40.4
comp=Z,43nm,0.8s
VRH Novokhopyorsk 72.57 346 *e*P **P 09 23 36.7 -1.5**
VRH pmax pmax
comp=Z,89nm,0.7s
NRN Naryn 72.59 319 P **P 09 23 40.0 +1.0**
NRN pmax pmax
comp=Z,88nm,0.9s
NRN Naryn 72.59 319 P **P 09 23 40.0 +1.0**
NRN IAmb IAmb 09 23 41.6
comp=Z,88nm,0.9s
IBBN Ibbenburen 72.61 8 *e*P **P 09 23 39.0 +0.6**
comp=Z,93nm,0.9s,baz=355,slow=5.8
IBBN Ibbenburen 72.61 8 P **P 09 23 39.1 +0.6**
RUE Ruedersdorf 72.78 4 *e*P **P 09 23 40.2 +0.7**
comp=Z,193nm,0.9s,baz=355,slow=5.8
RUE Ruedersdorf 72.78 4 P **P 09 23 40.4 +1.0**
FLTG Flechtingen 72.81 5 *e*P **P 09 23 39.4 -0.2**
comp=Z,77nm,0.8s,baz=355,slow=5.8
ASAI AK-SAY(Kyrgyzs 72.83 318 P **P 09 23 41.0 +0.5**
PPT Papeete 72.87 169 LR LR 09 48 12.9
comp=Z,863nm,21.6s,baz=1.5,slow=30
WTSB Winterswijk 72.87 8 P **P 09 23 40.7 +0.7**
VSR Storozhevoye 72.90 347 *e*P **P 09 23 39.4 -0.8**
VSR pmax pmax
comp=Z,96nm,0.5s
ASSE Asse, Remlinge 72.98 6 *e*P **P 09 23 41.1 +0.6**
comp=Z,59nm,0.9s,baz=355,slow=5.8
ASSE Asse, Remlinge 72.98 6 P **P 09 23 41.4 +0.8**
PZH PanZhiHua 73.00 292 P **P 09 23 41.3 -0.1**
PZH sP **PcP 09 23 58.5 +0.4**
PZH pmax pmax
comp=Z,150nm,0.9s
PZH pmax pmax
comp=Z,480nm,4.4s
PZH L L
comp=Z,570nm,20.2s
PZH L L
comp=Z,560nm,18.4s
PZH L L
comp=Z,950nm,22.9s
DZA Taraz 73.01 323 *e*P **P 09 23 41.1 0.0**
DZA Taraz 73.01 323 *e*P **P 09 23 41.1 0.0**
JUD3 Juan Diaz 3 73.07 97 P **P 09 23 42.8 +1.0**
KK31 Karatay Array 73.11 324 P **P 09 23 41.7 +0.1**
KK31 pmax pmax
comp=Z,88nm,0.9s
KK31 Karatay Array 73.11 324 P **P 09 23 41.7 +0.1**
KK31 IAmb IAmb 09 23 43.3
comp=Z,88nm,0.8s
KKAR Karatay Array 73.11 324 P **P 09 23 41.4 -0.2**
KKAR Karatay Array 73.11 324 P **P 09 23 41.4 -0.2**
DYA Yadsworthy 73.11 15 *e*P **P 09 23 41.7 +0.2**
DYA IAmb IAmb 09 23 43.8
comp=Z,53nm,0.9s
VORD Divnogorie 73.13 347 *e*P **P 09 23 39.9 -1.6**
VORD pmax pmax
comp=Z,120nm,0.8s
CCA1 Carnmenellis 73.15 16 P **P 09 23 42.6 +0.9**
CCA1 Carnmenellis 73.15 16 *e*P **P 09 23 42.1 +0.4**
CCA1 IAmb IAmb 09 23 44.3
comp=Z,58nm,0.7s
CLZ Clausthal 73.25 6 *e*P **P 09 23 43.3 +1.0**
comp=Z,84nm,0.9s,baz=355,slow=5.8
CLZ Clausthal 73.25 6 P **P 09 23 43.4 +1.1**
JTS Las Juntas de 73.30 96 LR LR 09 57 45.7
comp=Z,359nm,20.5s,baz=337,slow=37
BRLS Boroldaу 73.40 324 *e*P **P 09 23 40.6 -2.8**
BRLS pmax pmax
comp=Z,2.0nm,0.4s
BUG Bochum--Univer 73.43 8 *e*P **P 09 23 43.5 +0.2**
comp=Z,97nm,0.8s,baz=355,slow=5.8
BUG Bochum--Univer 73.43 8 P **P 09 23 43.5 +0.2**
GTTG Gottingen 73.52 6 *e*P **P 09 23 44.8 +0.9**
comp=Z,148nm,0.9s,baz=355,slow=5.8
GTTG Gottingen 73.52 6 P **P 09 23 45.0 +1.1**
KMI2 Kunming 73.54 290 ⇑P **P 09 23 44.3 -0.4**
KMI2 pP PcP 09 24 00.0 -0.5
KMI2 sP sP 09 24 03.3 +0.5
KMI2 S **S 09 33 14.5 +3.1**
KMI2 sS pS 09 33 27.5 +0.1
KMI2 pmax pmax
comp=Z,27nm,0.9s
KMI2 pmax pmax
comp=Z,290nm,3.5s
KMI2 L L
comp=Z,870nm,16.9s
KMI2 L L
comp=Z,540nm,22.3s
KMI2 L L
comp=Z,1µm,23.7s
WIMM Wimmelburg 73.63 5 P **P 09 23 44.8 +0.3**
KASTN Kahler Asten 73.76 7 *e*P **P 09 23 45.8 +0.5**
comp=Z,52nm,0.9s,baz=355,slow=5.8
ARSB Arslanbob 73.80 321 P **P 09 23 46.1 +0.2**
ARSB pmax pmax
comp=Z,84nm,1.0s
ARSB Arslanbob 73.80 321 P **P 09 23 46.1 +0.2**
ARSB IAmb IAmb 09 23 48.4
comp=Z,84nm,1.0s
UCC Uccle 73.81 10 P **P 09 23 45.8 +0.3**
UCC pmax pmax
comp=Z,38nm,0.9s
UCC Uccle 73.81 10 P **P 09 23 45.8 +0.3**
UCC Uccle 73.81 10 *d*P **P 09 23 45.7 +0.1**
comp=Z,30nm,0.9s
UCC Uccle 73.81 10 P **P 09 23 45.0 -0.5**
RNPP9 Sopachiv 73.83 356 P **P 09 23 45.5 -0.2**
RNPP8 Varash 73.90 356 P **P 09 23 45.9 -0.2**
RNPP2 Kostyukhnivka 73.91 356 P **P 09 23 46.5 +0.3**
CLL Collm 73.92 4 *i* P **P 09 23 46.0 -0.2**
CLL *i* *PP **PcP 09 24 01.1 -0.3**
CLL *e*S **S 09 33 14.0 -0.4**
CLL pmax pmax
comp=Z,89nm,0.9s
CLL Collm 73.92 4 P **P 09 23 46.0 -0.2**
CLL IAmb IAmb 09 23 48.4
comp=Z,81nm,0.8s
CLL Collm 73.92 4 *e*P **P 09 23 46.0 -0.2**
comp=Z,82nm,0.8s,baz=355,slow=5.8
CLL Collm 73.92 4 P **P 09 23 46.3 +0.1**
comp=Z,836nmcomp=Z,104nm,0.9s
CLL Collm 73.92 4 *i* P **P 09 23 46.0 -0.2**
comp=Z,89nm,0.9s
CLL *i* pP **PcP 09 24 01.1 -0.3**
CLL *i* sP **sP 09 24 04.4 +0.1**
CLL *e*PP **PP 09 26 30.0 -0.7**
CLL *e*S **S 09 33 14.0 -0.4**
CLL *e*PS **PnS 09 33 56.0 +4.3**
CLL *e*SS **SS 09 38 00.0 +2.1**
CLL *e*SSS SSS 09 41 30.0
CLL *e*SSSS 09 43 12.0
TBP Tagbilaran 73.93 264 *e*P **P 09 23 46.0 -0.8**
NEUB Neuenburg 73.96 5 *e*P **P 09 23 47.1 +0.7**
comp=Z,158nm,0.8s,baz=355,slow=5.8
NEUB Neuenburg 73.96 5 P **P 09 23 46.5 0.0**
HGN Heimansgroeve 73.99 9 P **P 09 23 47.3 +0.7**
RNPP5 Staryi Chortor 74.01 356 P **P 09 23 46.6 -0.1**
CHM Chimkent 74.11 324 *e*P **P 09 23 47.5 0.0**
CHM pmax pmax
comp=Z,70nm,0.8s
CHM MLR MLR
comp=Z,2µm,18.0s
CHM Chimkent 74.11 324 *e*P **P 09 23 47.6 0.0**
comp=Z,70nm,0.8s
CHM LR LR 09 57 08.1
comp=Z,2µm,18.0s
IUG Iuzhnay 74.12 323*c* *i*P **P 09 23 47.6 -0.1**
IUG pmax pmax
comp=Z,47nm,0.5s
IUG Iuzhnay 74.12 323 ⇑*i*P **P 09 23 47.7 -0.1**
comp=Z,47nm,0.5s
BSTI Sart Tilman 74.14 9 *d*P **P 09 23 47.9 +0.5**
comp=Z,14nm,0.7s
MEM Membach 74.15 9 *d*P **P 09 23 47.9 +0.3**
comp=Z,56nm,1.0s
MEM Membach 74.15 9 P **P 09 23 48.2 +0.6**
BTNL Ternell 74.19 9 *d*P **P 09 23 47.8 -0.1**
comp=Z,29nm,1.0s
SDDR Presa de Saban 74.19 80 P **P 09 23 48.3 0.0**
SDDR Presa de Saban 74.19 80 P **P 09 23 46.3 -2.0**

comp=Z,49nm,0.8s
SDDR Presa de Saban 74.19 80 P **P** **09 23 48.8 +0.4**
MI28 Mi28,Pidlybu 74.22 355 P **P** **09 23 47.1 -0.9**
UBBA Unterbreizbach 74.25 6 P **P** **09 23 48.2 +0.2**
BCLA Clavier 74.27 9 *dP* **P** **09 23 48.3 0.0**
comp=Z,17nm,0.9s
AK21 Malin Array Si 74.30 354 P **P** **09 23 48.0 -0.4**
AK23 Malin Array Si 74.31 354 P **P** **09 23 48.0 -0.5**
AK22 Malin Array Si 74.31 354 P **P** **09 23 48.0 -0.5**
AK20 Malin Array Si 74.33 354 P **P** **09 23 48.2 -0.4**
AK03 Malin Array Si 74.33 354 P **P** **09 23 48.2 -0.4**
BMRD Maredsous 74.34 10 *dP* **P** **09 23 49.0 +0.3**
comp=Z,46nm,1.0s
AK04 Malin Array Si 74.34 354 P **P** **09 23 48.2 -0.5**
AK18 Malin Array Si 74.35 354 P **P** **09 23 48.3 -0.4**
AK19 Malin Array Si 74.35 354 P **P** **09 23 48.3 -0.4**
AKASG Malin Array Be 74.36 354 P **P** **09 23 47.8 -1.0**
comp=Z,24nm,0.3s,baz=9.0,slow=5.7,SNR=222
AKASG LR LR 09 56 38.0
comp=Z,1µm,21.9s,baz=15,slow=36
comp=Z,24nm,0.3s
AKASG Malin Array Be 74.36 354 P **P** **09 23 47.8 -1.0**
AKBB Malin Array Si 74.36 354 *c iP* **P** **09 23 47.7 -1.1**
AKBB pmax pmax
comp=Z,162nm,0.8s
AKBB Malin Array Si 74.36 354 P **P** **09 23 47.9 -0.8**
AKBB Malin Array Si 74.36 354 P **P** **09 23 48.3 -0.5**
KIEV Kiev 74.37 354 ⇓P **P** **09 23 48.4 -0.5**
KIEV Kiev 74.37 354 *i* P **P** **09 23 48.0 -0.8**
SNR=121
KIEV Kiev 74.37 354 P **P** **09 23 48.3 -0.5**
KIEV Kiev 74.37 354 P **P** **09 23 48.2 -0.7**
KIEV Kiev 74.37 354 P **P** **09 23 48.3 -0.5**
comp=Z,7µmcomp=Z,807nm,0.8s
KIEV Kiev 74.37 354 P **P** **09 23 48.1 -0.8**
KIEV Kiev 74.37 354 P **P** **09 23 48.1 -0.7**
KIEV sP **sP** **09 24 06.8 -0.2**
AK01 Malin Array Si 74.37 354 P **P** **09 23 48.4 -0.4**
AK15 Malin Array Si 74.37 354 P **P** **09 23 48.4 -0.5**
AK11 Malin Array Si 74.39 354 P **P** **09 23 48.5 -0.4**
AK17 Malin Array Si 74.39 354 P **P** **09 23 48.6 -0.3**
BRG Berggiesshubel 74.39 4 *eP* **P** **09 23 48.8 -0.2**
comp=Z,69nm,0.9s,baz=355,slow=5.8
BRG Berggiesshubel 74.39 4 P **P** **09 23 49.1 +0.1**
BRG Berggiesshubel 74.39 4 ⇑*iP* **P** **09 23 49.0 +0.1**
BRG Amp 09 23 51.6
comp=Z,69nm,0.9s
BRG Berggiesshubel 74.39 4 P P 09 23 55.8 +6.8
BRG Amp 09 23 57.3
comp=Z,22nm,0.9s
BRG sP sP 09 24 09.3 +2.2
BRG Amp 09 24 10.2
comp=Z,43nm,1.1s
BRG Berggiesshubel 74.39 4 S **S** **09 33 17.0 -2.7**
AK16 Malin Array Si 74.40 354 P **P** **09 23 48.6 -0.4**
AK02 Malin Array Si 74.41 354 P **P** **09 23 48.6 -0.4**
AK12 Malin Array Si 74.42 354 P **P** **09 23 48.7 -0.4**
AK08 Malin Array Si 74.42 354 P **P** **09 23 48.7 -0.5**
AK14 Malin Array Si 74.44 354 P **P** **09 23 48.7 -0.5**
AK09 Malin Array Si 74.44 354 P **P** **09 23 48.7 -0.6**
AK05 Malin Array Si 74.44 354 P **P** **09 23 48.7 -0.6**
KHAM Kharkiv 74.44 349 P **P** **09 23 49.4 0.0**
AK13 Malin Array Si 74.46 354 P **P** **09 23 48.8 -0.6**
AK10 Malin Array Si 74.46 354 P **P** **09 23 48.8 -0.6**
AK06 Malin Array Si 74.48 354 P **P** **09 23 48.9 -0.6**
QIZ Qiongzhong 74.49 281 P **P** **09 23 50.5 +0.5**
QIZ IAmb IAmb 09 23 52.7
comp=Z,54nm,0.9s
QIZ Qiongzhong 74.49 281 P **P** **09 23 50.5 +0.5**
QIZ pP **pP** **09 24 03.5 +0.4**
QIZ sP **sP** **09 24 08.5 +0.4**
QIZ S **S** **09 33 22.3 +0.6**
QIZ pmax pmax
comp=Z,66nm,0.8s
QIZ pmax pmax
comp=Z,310nm,5.0s
QIZ L L
comp=Z,250nm,17.6s
QIZ L L
comp=Z,580nm,18.6s
QIZ L L
comp=Z,490nm,21.6s
QIZ Qiongzhong 74.49 281 P **P** **09 23 50.5 +0.5**
QIZ sP **sP** **09 24 09.4 +1.3**
KSP Ksiaz 74.49 2 P **P** **09 23 49.7 +0.1**
comp=Z,726nmcomp=Z,86nm,0.9s
AK07 Malin Array Si 74.51 354 P **P** **09 23 49.0 -0.7**
MOX Moxa 74.52 5 *eP* **P** **09 23 50.0 +0.3**
comp=Z,115nm,0.9s,baz=355,slow=5.8
MOX *eL* L 09 55 57.4
comp=Z,505nm,21.8s
MOX Moxa 74.52 5 P **P** **09 23 50.1 +0.3**
BAIF Baives 74.52 10 *eP* **P** **09 23 49.9 +0.2**
BAIF pmax pmax
comp=Z,52nm,0.9s
DOU Dourbes 74.53 10 *dP* **P** **09 23 49.8 +0.1**
comp=Z,25nm,0.9s
RCHB Rochefort 74.53 10 *dP* **P** **09 23 49.9 +0.2**
comp=Z,33nm,0.8s
RCHB Rochefort 74.53 10 P **P** **09 23 50.0 +0.3**
GIVF Givet 74.54 10 *eP* **P** **09 23 49.8 -0.1**
GIVF pmax pmax
comp=Z,53nm,1.2s
OHH Osh 74.57 321 P **P** **09 23 49.7 -0.7**
HSKC Hora Svate Kat 74.64 4 *eP* **P** **09 23 51.1 +0.6**
HSKC AMS AMS 09 58 40.0
comp=Z,500nm,20.5s
HSKC Hora Svate Kat 74.64 4 P **P** **09 23 50.8 +0.3**
PLN Plauen 74.70 5 *eP* **P** **09 23 51.0 +0.2**
comp=Z,21nm,0.8s,baz=355,slow=5.8
RICC Richard 74.73 4 *eP* **P** **09 23 52.0 +1.1**
MSVF Nonsavu 74.73 201 LR LR 09 49 46.1
comp=Z,1µm,22.0s,baz=0.4,slow=30
KSH2 Kashi 74.73 318 P **P** **09 23 51.8 +0.4**
KSH2 PcP **sP** **09 24 07.8 -1.7**
KSH2 S **S** **09 33 20.5 -3.8**
KSH2 pmax pmax
comp=Z,240nm,0.9s
KSH2 L L
comp=Z,2µm,19.9s
KSH2 L L
comp=Z,2µm,21.0s
KSH2 L L
comp=Z,5µm,21.3s
TNS Taunus Mts 74.73 7 *eP* **P** **09 23 51.3 +0.2**
comp=Z,66nm,0.8s,baz=355,slow=5.8
TNS Taunus Mts 74.73 7 P **P** **09 23 51.5 +0.4**
CHVC Chvalec 74.74 2 *eP* **P** **09 23 51.4 +0.3**
CHVC MLR MLR
comp=Z,800nm,20.0s
CHVC Chvalec 74.74 2 *eP* **P** **09 23 51.4 +0.3**
CHVC AMS AMS 10 02 40.0
comp=Z,800nm,20.0s
PVCC Panska Ves 74.76 3 *eP* **P** **09 23 51.9 +0.8**
PVCC MLR MLR
comp=Z,500nm,21.1s
PVCC Panska Ves 74.76 3 *eP* **P** **09 23 51.9 +0.8**
PVCC AMS AMS 10 03 40.0
comp=Z,500nm,21.1s
OSTC Ostas 74.78 2 *eP* **P** **09 23 52.1 +0.8**
OSTC MLR MLR
comp=Z,800nm,19.6s
OSTC Ostas 74.78 2 *eP* **P** **09 23 52.1 +0.8**
OSTC AMS AMS 10 02 50.0
comp=Z,800nm,19.6s
TANN Tannenbergstha 74.79 5 *eP* **P** **09 23 51.8 +0.5**
comp=Z,22nm,0.8s,baz=355,slow=5.8
TANN *epP* **sP** **09 24 09.5 0.0**
TANN Tannenbergstha 74.79 5 P **P** **09 23 51.7 +0.3**
UPC Upice 74.82 2 *eP* **P** **09 23 52.1 +0.6**
UPC *eS* **S** **09 33 18.3 -6.3**
UPC MLR MLR
comp=Z,900nm,19.3s
UPC Upice 74.82 2 *eP* **P** **09 23 52.1 +0.6**
UPC *eS* **S** **09 33 18.3 -6.3**
UPC AMS AMS 10 02 30.0
comp=Z,900nm,19.3s
DPC Dobruska-Polom 74.98 2 *eP* **P** **09 23 53.0 +0.5**
DPC *eS* **S** **09 33 23.9 -2.6**
DPC pmax pmax
comp=Z,41nm,0.7s
DPC MLR MLR
comp=Z,700nm,18.4s
DPC Dobruska-Polom 74.98 2 *eP* **P** **09 23 53.0 +0.5**
comp=Z,41nm,0.7s
DPC *eS* **S** **09 33 23.9 -2.6**
DPC AMS AMS 10 02 50.0
comp=Z,700nm,18.4s
DPC Dobruska-Polom 74.98 2 P **P** **09 23 52.7 +0.2**
comp=Z,1µmcomp=Z,115nm,0.9s
DPC Dobruska-Polom 74.98 2 P **P** **09 23 52.9 +0.5**
DAV Davao City (W) 75.07 261 LR LR 09 53 39.1
comp=Z,212nm,21.2s,baz=354,slow=33
WLF Walferdange 75.10 9 P **P** **09 23 53.6 +0.5**
WLF pmax pmax
comp=Z,83nm,1.0s
WLF MLR MLR
comp=Z,700nm,20.0s
WLF Walferdange 75.10 9 P **P** **09 23 53.5 +0.5**
WLF IAmb IAmb 09 23 55.8
comp=Z,83nm,1.0s
WLF IAMs_20 IAMs_20 09 59 05.2
comp=Z,693nm,20.0s
WLF Walferdange 75.10 9 *dP* **P** **09 23 53.8 +0.7**
comp=Z,59nm,1.0s
WLF Walferdange 75.10 9 *eP* **P** **09 23 53.5 +0.5**
comp=Z,74nm,0.9s,baz=355,slow=5.8
WLF Walferdange 75.10 9 P **P** **09 23 54.3 +1.2**
OJC Ojcow 75.15 360 P **P** **09 23 52.8 -0.6**
OJC Ojcow 75.15 360 P **P** **09 23 52.8 -0.6**
OJC Ojcow 75.15 360 P **P** **09 23 53.5 +0.1**
comp=Z,812nmcomp=Z,71nm,0.9s
OJC Ojcow 75.15 360 P **P** **09 23 53.4 +0.1**
BANI BANI 75.19 79 P **P** **09 23 55.7 +1.5**
LUBAR Lubar, Ukraine 75.22 355 P **P** **09 23 52.7 -1.1**
FLN La Foliniere 75.24 14 *eP* **P** **09 23 53.6 -0.3**
FLN pmax pmax
comp=Z,47nm,0.8s
ROSF Rostrenen 75.25 16 *eP* **P** **09 23 54.1 +0.1**
ROSF pmax pmax
comp=Z,23nm,0.7s
KRLC Kraliky 75.27 2 *eP* **P** **09 23 54.7 +0.6**
KRLC MLR MLR
comp=Z,600nm,17.1s
KRLC Kraliky 75.27 2 *eP* **P** **09 23 54.7 +0.6**
KRLC AMS AMS 10 06 30.0
comp=Z,600nm,17.1s
PRU Pruhonice 75.30 3 *eP* **P** **09 23 54.6 +0.4**
PRU *eS* **S** **09 33 28.4 -1.5**
PRU pmax pmax
comp=Z,26nm,0.7s
PRU MLR MLR
comp=Z,600nm,19.8s
PRU Pruhonice 75.30 3 *eP* **P** **09 23 54.6 +0.4**
comp=Z,26nm,0.7s
PRU *eS* **S** **09 33 28.4 -1.5**
PRU AMS AMS 10 03 40.0
comp=Z,600nm,19.8s
PRU Pruhonice 75.30 3 P **P** **09 23 54.3 +0.1**
GRA3 Grafenberg Arr 75.38 6 P **P** **09 23 55.8 +1.1**
STEB Steborice 75.42 1 *eP* **P** **09 23 55.5 +0.5**
GRA1 Grafenberg Arr 75.44 6 P **P** **09 23 56.0 +0.9**
GRA1 IAmb IAmb 09 23 57.6
comp=Z,60nm,0.7s
GRA1 Grafenberg Arr 75.44 6 P **P** **09 23 56.1 +1.0**
GRF Grafenberg Arr 75.44 6 P **P** **09 23 56.0 +0.9**
GRF pmax pmax
comp=Z,60nm,0.7s
GRF Grafenberg Arr 75.44 6 *eP* **P** **09 23 55.9 +0.9**
comp=Z,61nm,0.8s,baz=355,slow=5.8
GRF *epP* **sP** **09 24 12.9 -0.3**
GRF *eL* L 09 55 40.9
comp=Z,468nm,21.8s
SGMF Saint Gilles 75.44 15 *eP* **P** **09 23 55.2 +0.1**
SGMF pmax pmax
comp=Z,60nm,1.0s
GRFO Grafenberg 75.44 6 IAMs_20 IAMs_20 09 56 15.4
comp=Z,695nm,22.0s
GRFO Grafenberg 75.44 6 P **P** **09 23 56.1 +1.0**
LDF La Druitiere 75.46 13 *eP* **P** **09 23 54.9 -0.3**
LDF pmax pmax
comp=Z,38nm,0.9s
GRA2 Grafenberg Arr 75.49 6 P **P** **09 23 56.4 +1.1**
OKC Ostrava-Krasne 75.53 1 *eP* **P** **09 23 56.0 +0.5**
OKC MLR MLR
comp=Z,500nm,23.2s
OKC Ostrava-Krasne 75.53 1 *eP* **P** **09 23 56.0 +0.5**
OKC AMS AMS 09 56 00.0
comp=Z,500nm,23.2s
OKC Ostrava-Krasne 75.53 1 P **P** **09 23 56.0 +0.5**
GRR Gorron 75.56 14 *eP* **P** **09 23 55.6 -0.1**
GRR pmax pmax
comp=Z,37nm,0.8s
MORC Moravsky Berou 75.58 1 ⇑P **P** **09 23 55.7 -0.2**
MORC Moravsky Berou 75.58 1 P **P** **09 23 56.3 +0.4**
MORC pmax pmax
comp=Z,56nm,0.8s
MORC Moravsky Berou 75.58 1 P **P** **09 23 56.3 +0.4**
MORC IAmb IAmb 09 23 57.9
comp=Z,56nm,0.8s
MORC Moravsky Berou 75.58 1 *eP* **P** **09 23 55.6 -0.3**
MORC Moravsky Berou 75.58 1 P **P** **09 23 56.1 +0.2**
QUIF Quistinic 75.68 16 *eP* **P** **09 23 56.5 +0.1**
QUIF pmax pmax
comp=Z,21nm,0.9s
GRB4 Grafenberg Arr 75.69 5 P **P** **09 23 57.4 +0.9**
BTK Batken 75.69 322 P **P** **09 23 56.6 -0.2**
BTK pmax pmax
comp=Z,77nm,0.9s
BTK Batken 75.69 322 P **P** **09 23 56.6 -0.2**
BTK IAmb IAmb 09 23 58.6
comp=Z,77nm,0.9s
BTK Batken 75.69 322 P **P** **09 23 56.8 0.0**
KWP Kalwaria Pacla 75.71 358 P **P** **09 23 57.1 +0.5**
comp=Z,285nm,0.9s
GRB1 Grafenberg Arr 75.77 5 P **P** **09 23 57.9 +0.9**
GRB3 Grafenberg Arr 75.82 5 P **P** **09 23 57.9 +0.6**
ZVC Zvikov 75.83 4 *eP* **P** **09 23 58.3 +1.0**
LSA Lhasa 75.85 302 *i* P **P** **09 23 59.1 +0.7**
SNR=15
LSA Lhasa 75.85 302 P **P** **09 23 59.4 +1.1**
LSA pmax pmax
comp=Z,176nm,0.9s
LSA MLR MLR
comp=Z,2µm,18.0s
LSA Lhasa 75.85 302 **P** **09 23 59.4 +1.1**
LSA Lhasa 75.85 302 ⇓*iP* **P** **09 23 57.0 -1.3**
LSA pmax pmax
comp=Z,140nm,0.9s
LSA L L
comp=Z,1µm,16.9s
LSA L L
comp=Z,800nm,17.3s
LSA L L
comp=Z,2µm,18.0s
DRK Karamyk 75.85 321 P **P** **09 23 58.8 +0.8**
DRK pmax pmax
comp=Z,142nm,0.9s
DRK Karamyk 75.85 321 P **P** **09 23 58.8 +0.8**
DRK Karamyk 75.85 321 P **P** **09 23 58.6 +0.6**
GRB2 Grafenberg Arr 75.89 5 P **P** **09 23 58.5 +0.8**
TNCH TengChong 75.90 293 P **P** **09 23 57.8 -0.5**
TNCH sP sP 09 24 14.3 -2.1
TNCH PP **PP** **09 26 50.0 +1.5**
TNCH S **S** **09 33 35.3 -2.3**
TNCH pmax pmax
comp=Z,220nm,0.6s
TNCH pmax pmax
comp=Z,540nm,4.0s
TNCH L L
comp=Z,1µm,15.0s
TNCH L L
comp=Z,1µm,18.4s
TNCH L L
comp=Z,1µm,20.4s
RAR Rarotonga 75.90 179 LR LR 09 48 55.7
comp=Z,641nm,21.8s,baz=354,slow=29
STHS Stebnicka Huta 75.94 359 *eP* **P** **09 23 58.4 +0.4**
STHS pmax pmax
comp=Z,47nm,0.7s
STHS Stebnicka Huta 75.94 359 *eP* **P** **09 23 58.4 +0.4**
SLVN Son La 75.96 287 P **P** **09 24 00.0 +1.4**
SLVN Son La 75.96 287 P **P** **09 23 59.0 +0.5**
SLVN IAmb IAmb 09 24 00.8
comp=Z,74nm,0.8s
SLVN IAMs_20 IAMs_20 09 59 47.7
comp=Z,671nm,22.0s
MAUC Maruska 76.00 1 *eP* **P** **09 23 59.0 +0.7**
TREC Trest 76.02 3 *eP* **P** **09 23 59.1 +0.7**
TREC MLR MLR
comp=Z,600nm,15.2s
TREC Trest 76.02 3 *eP* **P** **09 23 59.1 +0.7**
TREC AMS AMS 10 07 20.0
comp=Z,600nm,15.2s
VRAC Vranov 76.03 2 ⇓P **P** **09 23 58.4 -0.1**
VRAC Vranov 76.03 2 P **P** **09 23 58.3 -0.1**
VRAC Vranov 76.03 2 *eP* **P** **09 23 58.5 0.0**
VRAC Vranov 76.03 2 P **P** **09 23 58.7 +0.3**
GRB5 Grafenberg Arr 76.05 5 P **P** **09 23 59.3 +0.8**
GRC4 Grafenberg Arr 76.06 5 P **P** **09 23 59.4 +0.7**
WET Wettzell 76.08 5 *eP* **P** **09 23 59.2 +0.4**
comp=Z,32nm,0.9s,baz=355,slow=5.8
WET Wettzell 76.08 5 P **P** **09 23 59.4 +0.6**
KHC Kasperske Hory 76.12 4 *eP* **P** **09 23 59.7 +0.7**
KHC *eS* **S** **09 33 39.6 +0.6**
KHC pmax pmax
comp=Z,44nm,0.8s
KHC MLR MLR
comp=Z,600nm,17.9s
KHC Kasperske Hory 76.12 4 *eP* **P** **09 23 59.7 +0.7**
comp=Z,44nm,0.8s
KHC *ex* P 09 24 04.0 +5.0
KHC *eS* **S** **09 33 39.6 +0.6**
KHC AMS AMS 10 03 20.0
comp=Z,600nm,17.9s
KHC Kasperske Hory 76.12 4 P **P** **09 23 59.5 +0.5**
comp=Z,1µmcomp=Z,100nm,1.0s
GRC1 Grafenberg Arr 76.15 5 P **P** **09 23 59.9 +0.7**
LANS Liptovska Anna 76.22 0 *eP* **P** **09 24 01.4 +1.8**
LANS pmax pmax
comp=Z,52nm,0.9s
LANS Liptovska Anna 76.22 0 *eP* **P** **09 24 01.4 +1.8**
STU Stuttgart 76.23 7 P **P** **09 24 00.3 +0.7**
STU pmax pmax
comp=Z,73nm,1.0s
STU Stuttgart 76.23 7 P **P** **09 24 00.3 +0.7**
STU IAmb IAmb 09 24 02.2
comp=Z,73nm,1.0s
STU Stuttgart 76.23 7 *eP* **P** **09 24 00.0 +0.5**
comp=Z,148nm,0.9s,baz=355,slow=5.8
STU *epP* **sP** **09 24 15.4 -2.4**
STU Stuttgart 76.23 7 P **P** **09 24 00.4 +0.8**
GRC3 Grafenberg Arr 76.26 5 P **P** **09 24 00.5 +0.7**
GRC2 Grafenberg Arr 76.27 6 P **P** **09 24 00.6 +0.7**
KRUC Moravsky 76.28 2 P **P** **09 23 59.8 0.0**
KRUC Moravsky 76.28 2 *eP* **P** **09 23 59.6 -0.2**
KRUC Moravsky 76.28 2 P **P** **09 23 59.9 +0.1**
CLF Chambon-Foret 76.31 12 P **P** **09 24 00.9 +0.9**
CLF IAMs_20 IAMs_20 09 59 41.3
comp=Z,800nm,20.0s
CLF Chambon-Foret 76.31 12 P **P** **09 24 01.2 +1.2**
GEC2 GERESS Array S 76.41 4 P **P** **09 24 01.2 +0.4**
GEC2 IAmb IAmb 09 24 03.2
comp=Z,49nm,0.8s
GEC2 GERESS Array S 76.41 4 *eP* **P** **09 24 01.1 +0.4**
comp=Z,49nm,0.8s,baz=355,slow=5.8
GERES GERESS Array B 76.41 4 P **P** **09 24 01.1 +0.4**
comp=Z,38nm,0.8s,baz=345,slow=4.1,SNR=120
GERES LR LR 09 56 06.8
comp=Z,364nm,21.7s,baz=12,slow=34
comp=Z,38nm,0.8s
GERES GERESS Array B 76.41 4 P **P** **09 24 01.2 +0.5**
KOLS Kolonicke sedl 76.41 358 *eP* **P** **09 24 01.2 +0.6**
KOLS pmax pmax
comp=Z,26nm,1.1s
KOLS Kolonicke sedl 76.41 358 P **P** **09 24 01.5 +0.9**
KOLS Kolonicke sedl 76.41 358 *eP* **P** **09 24 01.2 +0.6**
CDF Champ du Feu 76.44 8 *eP* **P** **09 24 00.8 -0.1**
CDF pmax pmax
comp=Z,47nm,0.9s
CKRC Cesky Krumlov 76.46 4 *eP* **P** **09 24 01.6 +0.7**
CKRC *eS* **S** **09 33 37.1 -5.6**
CKRC MLR MLR
comp=Z,800nm,20.6s
CKRC Cesky Krumlov 76.46 4 *eP* **P** **09 24 01.6 +0.7**
CKRC *eS* **S** **09 33 37.1 -5.6**
CKRC AMS AMS 10 04 20.0
comp=Z,800nm,20.6s
JAVC Velka Javorina 76.50 1 *eP* **P** **09 24 02.1 +0.9**
JAVC Velka Javorina 76.50 1 P **P** **09 24 02.5 +1.3**
BFO Black Forest 76.61 8 P **P** **09 24 02.2 +0.4**
BFO pmax pmax
comp=Z,32nm,0.9s
BFO Black Forest 76.61 8 P **P** **09 24 02.1 +0.4**
BFO Black Forest 76.61 8 *eP* **P** **09 24 02.1 +0.3**
comp=Z,27nm,0.8s,baz=355,slow=5.8
ECH Echery 76.63 9 P **P** **09 24 02.0 +0.2**
ECH pmax pmax
comp=Z,76nm,0.9s
ECH Echery 76.63 9 P **P** **09 24 02.0 +0.2**
ECH IAmb IAmb 09 24 04.5
comp=Z,76nm,0.9s
ECH Echery 76.63 9 P **P** **09 24 02.0 +0.2**
ECH Echery 76.63 9 sP sP 09 24 20.0 0.0
KMPD K-Podol'skiy 76.65 355 P **P** **09 24 01.5 -0.4**
HAU Haudompre 76.76 9 *eP* **P** **09 24 02.5 -0.1**
HAU pmax pmax
comp=Z,59nm,0.9s
GAR Garm 76.81 322 P **P** **09 24 03.3 +0.1**
GAR Garm 76.81 322 P **P** **09 24 03.2 0.0**
SMOL Smolenice 76.84 1 *eP* **P** **09 24 04.7 +1.6**
SMOL pmax pmax
comp=Z,11nm,0.9s
VYHS Vyhne 76.88 1 *eP* **P** **09 24 03.7 +0.4**
VYHS pmax pmax
comp=Z,27nm,0.9s
VYHS Vyhne 76.88 1 P **P** **09 24 03.8 +0.6**
VYHS Vyhne 76.88 1 *eP* **P** **09 24 03.7 +0.4**
KECS Kecovo 76.89 359 *eP* **P** **09 24 05.1 +1.8**
KECS pmax pmax
comp=Z,56nm,1.2s
KECS Kecovo 76.89 359 P **P** **09 24 04.6 +1.3**
KECS Kecovo 76.89 359 *eP* **P** **09 24 05.1 +1.8**
FUR Furstenfeldbru 76.97 6 *eP* **P** **09 24 04.3 +0.5**
comp=Z,57nm,0.7s,baz=355,slow=5.8
FUR Furstenfeldbru 76.97 6 P **P** **09 24 04.3 +0.5**
SORM Soroca 76.97 354 ⇓P **P** **09 24 03.3 -0.4**
SORM Soroca 76.97 354 P **P** **09 24 03.3 -0.4**
SORM Soroca 76.97 354 P **P** **09 24 03.4 -0.4**
MODS Modra-Piesok 76.98 2 *eP* **P** **09 24 05.1 +1.2**
MODS pmax pmax
comp=Z,124nm,1.2s
MODS Modra-Piesok 76.98 2 P **P** **09 24 04.8 +1.0**
MODS Modra-Piesok 76.98 2 *eP* **P** **09 24 05.1 +1.2**
ABAH Abaujker 77.07 359 P **P** **09 24 05.4 +1.1**
SLE Schleitheim 77.18 8 P **P** **09 24 05.0 0.0**
TRPA Tarpa 77.21 358 P **P** **09 24 05.6 +0.5**
WINA Alland / Wiene 77.22 2 *i* P **P** **09 24 05.6 +0.4**
comp=Z,70nm,0.8s,SNR=34
WINA *epP* **sP** **09 24 23.3 -0.1**
comp=Z,90nm,1.9s
LOR Lormes 77.24 11 *eP* **P** **09 24 05.2 -0.2**
LOR pmax pmax
comp=Z,36nm,1.0s
CONA Conrad Observa 77.40 3 *i* P **P** **09 24 06.6 +0.3**
comp=Z,81nm,0.8s,SNR=60
CONA *epP* **sP** **09 24 24.0 -0.4**
comp=Z,46nm,1.2s
MFF Saint Martin d 77.41 14 *eP* **P** **09 24 06.4 +0.2**
MFF pmax pmax
comp=Z,337nm,0.8s
MOA Molln 77.42 4 *i* P **P** **09 24 06.4 0.0**
comp=Z,24nm,0.9s,SNR=21
MOA *epP* **sP** **09 24 24.1 -0.4**
comp=Z,23nm,1.3s
MOA Molln 77.42 4 P **P** **09 24 06.6 +0.2**
BOURR Bourrignon 77.45 9 P **P** **09 24 07.0 +0.5**
PSZ Piszkesteto 77.45 360 ⇑P **P** **09 24 07.0 +0.5**
PSZ Piszkesteto 77.45 360 P **P** **09 24 07.4 +0.9**
PSZ pmax pmax
comp=Z,99nm,0.9s
PSZ MLR MLR
comp=Z,800nm,22.0s
PSZ Piszkesteto 77.45 360 P **P** **09 24 07.4 +0.9**
PSZ IAmb IAmb 09 24 09.8
comp=Z,99nm,0.9s
PSZ IAMs_20 IAMs_20 09 58 10.6
comp=Z,757nm,22.0s
PSZ Piszkesteto 77.45 360 P **P** **09 24 07.5 +0.9**
RJOB Jochberg 77.47 5 P **P** **09 24 07.2 +0.5**
ECPR Experimental S 77.49 76 P **P** **09 24 08.5 +1.4**
ECPR IAmb IAmb 09 24 21.5
comp=Z,115nm,1.3s

CHGR Chuyangaron 77.53 322 *c iP* **P 09 24 06.7 -0.5**
CHGR pmax pmax
comp=Z,560nm,0.8s
CHGR Chuyangaron 77.53 322 P **P 09 24 07.0 -0.2**
CHGR Chuyangaron 77.53 322 P **P 09 24 07.0 -0.2**
SRO Srobarova 77.55 1 P **P 09 24 08.8 +1.8**
BIOA Bad Ischl, Aus 77.56 4 *eP* **P 09 24 07.3 +0.1**
comp=Z,31nm,1.0s,SNR=9.2
BIOA *ep*P **sP 09 24 25.3 0.0**
comp=Z,37nm,1.3s
TEZP TEZPUR 77.56 299 *eP* **P 09 24 06.4 -1.0**
CELP Cerrillos 77.57 76 P **P 09 24 08.6 +1.1**
CELP IAmb IAmb 09 24 22.3
comp=Z,101nm,1.2s
OBIP Obispado Ponce 77.58 76 P **P 09 24 09.6 +2.0**
MANEM Manem 77.61 320 P **P 09 24 08.3 +0.5**
MANEM IAmb IAmb 09 24 11.5
comp=Z,184nm,1.0s
RETA Reutte 77.61 6 *i* P **P 09 24 07.7 +0.2**
comp=Z,24nm,0.8s,SNR=10.0
RETA *ep*P **sP 09 24 25.5 -0.1**
comp=Z,12nm,0.5s
BUR08 Bucovina Ar. S 77.62 356 P **P 09 24 07.9 +0.4**
BUR08 IAmb IAmb 09 24 09.6
comp=Z,48nm,0.8s
RONA Rosalia, Austr 77.64 2 *i* P **P 09 24 08.3 +0.7**
comp=Z,40nm,0.8s,SNR=26
RONA *ep*P **sP 09 24 25.8 0.0**
comp=Z,35nm,1.4s
PMG Port Moresby 77.64 233 P **P 09 24 07.6 -0.2**
comp=Z,26nm,0.9s,baz=341,slow=10,SNR=3.0
PMG LR LR 09 55 37.3
comp=Z,267nm,19.5s,baz=48,slow=34
comp=Z,26nm,0.9s
PMG Port Moresby 77.64 233 IAmb IAmb 09 24 22.7
comp=Z,134nm,1.4s
PMG Port Moresby 77.64 233 P P 09 24 22.9 +15
BMR Baia Mare 77.64 357 ⇓P **P 09 24 08.4 +0.9**
BMR Baia Mare 77.64 357 P **P 09 24 08.4 +0.9**
BMR Baia Mare 77.64 357 P **P 09 24 08.5 +0.9**
BURAR Bucovina Array 77.65 356 ⇓P **P 09 24 07.5 -0.3**
BURAR Bucovina Array 77.65 356 P **P 09 24 07.4 -0.3**
BURAR Bucovina Array 77.65 356 P **P 09 24 08.1 +0.4**
BURAR IAmb IAmb 09 24 10.0
comp=Z,74nm,0.8s
SOP Sopron 77.66 2 P **P 09 24 08.2 +0.6**
SOP Sopron 77.66 2 P **P 09 24 09.0 +1.3**
AVF Avril sur Loir 77.66 11 *eP* **P 09 24 07.4 -0.2**
AVF pmax pmax
comp=Z,42nm,1.0s
DAVA Damuels 77.76 7 *i* P **P 09 24 08.6 +0.2**
comp=Z,18nm,1.0s,SNR=10
DAVA *ep*P **sP 09 24 26.8 +0.2**
comp=Z,23nm,0.9s
DAVA Damuels 77.76 7 P **P 09 24 08.2 -0.2**
MOTA Moosalm 77.78 6 *i* P **P 09 24 08.6 +0.1**
comp=Z,59nm,1.0s,SNR=42
MOTA *ep*P **sP 09 24 26.0 -0.7**
comp=Z,62nm,1.0s
SJG San Juan 77.78 76 LR LR 09 59 09.8
comp=Z,530nm,19.4s,baz=286,slow=36
SJG San Juan 77.78 76 IAMs_20 IAMs_20 09 58 29.8
comp=Z,787nm,21.0s
LESA Schwarzleotal 77.78 5 *eP* **P 09 24 08.7 +0.2**
comp=Z,28nm,1.1s,SNR=15
LESA *ep*P **sP 09 24 26.2 -0.4**
comp=Z,24nm,1.0s
WATA Walderalm 77.81 6 *eP* **P 09 24 08.9 +0.2**
comp=Z,91nm,0.9s,SNR=26
BGF Bois d'Agland 77.83 12 *eP* **P 09 24 08.4 -0.2**
BGF pmax pmax
comp=Z,13nm,0.6s
SMF Signal de Mont 77.86 11 *eP* **P 09 24 07.5 -1.3**
SMF pmax pmax
comp=Z,45nm,1.0s
BUD Budapest 77.89 0 P **P 09 24 09.1 +0.2**
BUD Budapest 77.89 0 P **P 09 24 10.2 +1.4**
WTTA Wattenberg 77.89 6 *i* P **P 09 24 09.4 +0.3**
comp=Z,113nm,0.9s,SNR=40
WTTA *ep*P **sP 09 24 26.9 -0.4**
comp=Z,90nm,1.0s
WTTA Wattenberg 77.89 6 P **P 09 24 09.7 +0.6**
SQTA Sankt Quirin 77.91 6 *i* P **P 09 24 09.4 +0.2**
comp=Z,140nm,1.0s,SNR=48
SQTA *ep*P **sP 09 24 27.1 -0.3**
comp=Z,76nm,1.6s
CACAO El Cacao, Vera 78.03 94 P **P 09 24 10.8 +0.6**
comp=Z,63nm,1.1s
ARSA Arzberg 78.06 3 P **P 09 24 10.9 +1.0**
ARSA IAmb IAmb 09 24 13.1
comp=Z,61nm,0.8s
ARSA Arzberg 78.06 3 *i* P **P 09 24 10.3 +0.4**
comp=Z,58nm,0.8s,SNR=35
ARSA *ep*P **sP 09 24 29.0 +0.9**
comp=Z,51nm,1.7s
ARSA Arzberg 78.06 3 P **P 09 24 10.6 +0.6**
BNALP Bannalp 78.06 8 P **P 09 24 10.7 +0.5**
FETA Feichten 78.08 6 *eP* **P 09 24 10.4 +0.2**
comp=Z,93nm,0.9s,SNR=39
FETA *ep*P **sP 09 24 28.3 -0.1**
comp=Z,50nm,1.2s
ERBR Yeremizino-Bor 78.11 345 *eP* **P 09 24 10.5 +0.3**
ERBR *e**PP **sP 09 24 28.3 0.0**
ERBR pmax pmax
comp=Z,258nm,0.8s
CABF La Chapelle 78.12 9 *eP* **P 09 24 10.6 +0.3**
CABF pmax pmax
comp=Z,47nm,0.9s
KBA Koelnbreinsper 78.16 4 *i* P **P 09 24 11.3 +0.7**
comp=Z,124nm,1.0s,SNR=102
KBA *ep*P **sP 09 24 29.0 +0.2**
comp=Z,127nm,1.2s
KBA Koelnbreinsper 78.16 4 P **P 09 24 11.4 +0.7**
SESA Seetaler Alpe, 78.17 3 *i* P **P 09 24 11.2 +0.4**
comp=Z,99nm,0.8s,SNR=24
SESA *ep*P **sP 09 24 28.7 -0.2**
comp=Z,74nm,1.1s
MPLH Magyarpolny 78.19 1 P **P 09 24 11.6 +1.0**
ARCR ARCALIA 78.21 357 ⇓P **P 09 24 11.5 +0.8**
GIMEL St. Georges / 78.21 9 P **P 09 24 11.5 +0.6**
DAVOX Davos/Dischmat 78.26 7 LR LR 09 57 21.6
comp=Z,405nm,21.9s,baz=44,slow=35
BIZ Bicaz 78.28 355 ⇑P **P 09 24 11.4 +0.3**
GOF Gofitskoye 78.35 343 *c iP* **P 09 24 11.6 +0.1**
SIJI Sorong 78.43 252 P **P 09 24 12.4 +0.1**
comp=Z,95nm,0.8s,baz=35,slow=6.7,SNR=25
SIJI LR LR 09 54 49.3
comp=Z,187nm,20.6s,baz=48,slow=33
comp=Z,95nm,0.8s
SIJI Sorong 78.43 252 P **P 09 24 12.6 +0.3**
comp=Z,103nm,0.8s
IMP Imphal 78.44 297 *eP* **P 09 24 11.8 -0.6**
FUORN Ofenpass-Fuorn 78.45 7 P **P 09 24 13.4 +1.0**
FUORN IAmb IAmb 09 24 15.6
comp=Z,88nm,1.2s
FUORN IAMs_20 IAMs_20 09 58 12.6
comp=Z,745nm,22.0s
FUORN Ofenpass-Fuorn 78.45 7 P **P 09 24 13.4 +1.0**
ABTA Abfaltersbach 78.45 5 *i* P **P 09 24 12.2 +0.1**
comp=Z,73nm,1.0s,SNR=27
GUWA GUWAHATI 78.47 299 *eP* **P 09 24 11.8 -0.6**
SENIN Lac Senin/Sane 78.48 9 P **P 09 24 12.9 +0.5**
SENIN IAMs_20 IAMs_20 10 01 09.4
comp=Z,683nm,22.0s
VASR Vaslui 78.49 354 ⇑P **P 09 24 12.3 0.0**
TUE Stuetta 78.53 7 P **P 09 24 13.5 +0.7**
TUE Stuetta 78.53 7 P **P 09 24 13.3 +0.6**
CJR Cluj-Napoca 78.60 357 ⇑P **P 09 24 13.3 +0.4**
CJR Cluj-Napoca 78.60 357 P **P 09 24 13.3 +0.4**
MYKA Terra Mystica 78.62 4 *eP* **P 09 24 12.9 -0.2**
comp=Z,26nm,1.0s,SNR=14
MYKA *ep*P **sP 09 24 30.6 -0.7**
comp=Z,55nm,1.6s
SOKA Soboth 78.62 3 *eP* **P 09 24 13.4 +0.3**
comp=Z,105nm,1.1s,SNR=65
SOKA *ep*P **sP 09 24 31.0 -0.3**
comp=Z,140nm,1.8s
MARR Marisel-Cluj 78.65 358 ⇑P **P 09 24 13.6 +0.3**
PERS Pernice 78.67 3 *i* P **P 09 24 13.6 +0.3**
TESR Tescani 78.68 355 ⇓P **P 09 24 13.0 -0.4**
TESR Tescani 78.68 355 P **P 09 24 13.1 -0.2**
MORE Moreno 78.75 296 P **P 09 24 13.6 -0.5**
MORE IAMs_20 IAMs_20 10 00 46.9
comp=Z,809nm,21.0s
OBKA Obir 78.77 4 *eP* **P 09 24 14.1 +0.1**
comp=Z,173nm,1.0s,SNR=137
OBKA *ep*P **sP 09 24 31.8 -0.4**
comp=Z,75nm,1.0s
OBKA Obir 78.77 4 P **P 09 24 14.3 +0.4**
PRED Cave del Predi 78.80 4 P **P 09 24 14.2 +0.1**
HNLY HANLEY 78.86 312 *eP* **P 09 24 15.7 +0.5**
HNLY IAmb IAmb 09 24 18.0
comp=Z,71nm,0.8s
SHAA Shahritus 78.87 323 P **P 09 24 14.8 +0.2**
SHAA IAmb IAmb 09 24 16.7
comp=Z,200nm,0.9s
ONER Baraj Valea Uz 78.87 355 ⇓P **P 09 24 15.2 +0.8**
BEHE Becsehely 78.88 2 P **P 09 24 16.1 +1.8**
BEHE Becsehely 78.88 2 ⇑*iP* **P 09 24 15.0 +0.6**
BEHE Becsehely 78.88 2 P **P 09 24 15.8 +1.4**
SHL Shillong 78.89 299 P **P 09 24 14.0 -1.0**
SHL pmax pmax
comp=Z,51nm,0.8s
SHL Shillong 78.89 299 P **P 09 24 14.0 -1.0**
SHL IAmb IAmb 09 24 15.6
comp=Z,51nm,0.8s
SHL Shillong 78.89 299 *eP* **P 09 24 13.7 -1.3**
SHL IAmb IAmb 09 24 15.3
comp=Z,40nm,0.9s
SHL *i* x **sP 09 24 37.0 +3.8**
RJF Les Rejaudoux 78.90 13 *eP* **P 09 24 14.3 -0.3**
RJF pmax pmax
comp=Z,92nm,0.8s
STAL STALIGIAL 78.94 5 P **P 09 24 14.4 -0.4**
SIRR Siria 79.09 359 ⇑P **P 09 24 16.0 +0.4**
GHRR 79.09 354 ⇓P **P 09 24 16.5 +0.9**
GHRR 79.09 354 P **P 09 24 16.5 +0.9**
LABN Labinsk 79.12 345 *eP* **P 09 24 14.9 -0.8**
LABN *e**PP **sP 09 24 33.9 0.0**
LABN *eS* **S 09 34 10.5 -1.0**
LABN pmax pmax
comp=Z,52nm,0.7s
LABN MLR MLR
comp=Z,871nm,19.0s
OZUR 79.14 356 ⇑P **P 09 24 16.5 +0.6**
MORH Mrgy, Hungar 79.16 1 ⇑P **P 09 24 16.5 +0.6**
MORH Mrgy, Hungar 79.16 1 ⇑*iP* **P 09 24 15.8 -0.1**
MORH Mrgy, Hungar 79.16 1 P **P 09 24 16.0 +0.1**
LFF La Frestale 79.16 14 *eP* **P 09 24 15.8 -0.1**
LFF pmax pmax
comp=Z,215nm,0.7s
TURR Turia 79.17 355 ⇑P **P 09 24 16.6 +0.6**
LPL La Plagne 79.27 9 *eP* **P 09 24 17.6 +0.8**
LPL pmax pmax
comp=Z,18nm,0.7s
SABO M.te Sabotino 79.27 4 P **P 09 24 16.5 -0.1**
SABO IAmb IAmb 09 24 18.1
comp=Z,53nm,0.9s
VLDR Vladesti 79.27 354 ⇓P **P 09 24 17.2 +0.6**
SSB Saint Sauveur 79.28 11 P **P 09 24 16.3 -0.4**
SSB pmax pmax
comp=Z,16nm,0.9s
SSB MLR MLR
comp=Z,700nm,22.0s
SSB Saint Sauveur 79.28 11 P **P 09 24 16.2 -0.4**
SSB Saint Sauveur 79.28 11 IAMs_20 IAMs_20 09 59 32.6
comp=Z,710nm,22.0s
SSB Saint Sauveur 79.28 11 P **P 09 24 16.9 +0.2**
DOPR Dopca 79.28 356 ⇑P **P 09 24 17.3 +0.7**
LPG La Plagne 79.29 9 *eP* **P 09 24 18.0 +1.0**
LPG pmax pmax
comp=Z,32nm,1.2s
PANC Panciu 79.30 355 ⇓P **P 09 24 17.3 +0.6**
VRI Vrincioaia 79.33 355 ⇓P **P 09 24 16.9 0.0**
VRI Vrincioaia 79.33 355 P **P 09 24 16.9 0.0**
VRI Vrincioaia 79.33 355 P **P 09 24 17.4 +0.5**
CAF Calviac 79.34 13 *eP* **P 09 24 17.0 0.0**
CAF pmax pmax
comp=Z,21nm,0.9s
PLOR Plostina 79.34 355 ⇓P **P 09 24 17.3 +0.2**
PLOR Plostina 79.34 355 P **P 09 24 17.2 +0.2**
COVR Voineasa-Covas 79.37 355 ⇑P **P 09 24 17.7 +0.6**
EVN Everest 79.40 304 P **P 09 24 18.4 0.0**
EVN Everest 79.40 304 P **P 09 24 18.5 +0.2**
ODBI Odobesti 79.41 355 ⇓P **P 09 24 18.1 +0.8**
ANN Anapa 79.42 347 *eP* **P 09 24 16.8 -0.6**
ANN *eS* **S 09 34 11.5 -3.2**
ANN pmax pmax
comp=Z,66nm,0.9s
ANN MLR MLR
comp=Z,2μm,25.0s
SCTR Scanteiesti 79.44 354 ⇑P **P 09 24 18.0 +0.5**
SALO Salr 79.46 6 P **P 09 24 18.7 +1.1**
SALO IAmb IAmb 09 24 19.8
comp=Z,49nm,0.9s
SAHR Sahastru 79.47 355 ⇓P **P 09 24 18.3 +0.6**
KVAR Kislovodsk Arr 79.47 343 LR LR 10 03 27.3
comp=Z,1μm,21.5s,baz=254,slow=39
KIV Kislovodsk 79.48 343 ⇑P **P 09 24 17.7 -0.1**
KIV Kislovodsk 79.48 343 *i* P **P 09 24 18.0 +0.2**
SNR=14
KIV Kislovodsk 79.48 343 *eP* **P 09 24 17.9 +0.1**
KIV *eS* **S 09 34 16.0 +0.4**
KIV *eSS* **SS 09 39 24.3 +2.1**
KIV pmax pmax
comp=Z,211nm,1.1s
KIV pmax pmax
comp=Z,80nm,3.8s
KIV MLR MLR
comp=Z,759nm,19.0s
KIV Kislovodsk 79.48 343 P **P 09 24 18.3 +0.5**
KIV IAMs_20 IAMs_20 10 03 10.0
comp=Z,1μm,21.0s
KIV Kislovodsk 79.48 343 P **P 09 24 18.4 +0.5**
KIV Kislovodsk 79.48 343 P **P 09 24 18.3 +0.5**
KIV sP **sP 09 24 36.4 +0.4**
TRI Trieste 79.54 4 P **P 09 24 17.9 -0.1**
TRI pmax pmax
comp=Z,28nm,0.8s
TRI Trieste 79.54 4 P **P 09 24 17.9 -0.1**
MAK Makhachkala 79.55 340 *eP* **P 09 24 17.6 -0.5**
MAK *e**PP **pP 09 24 31.8 +0.5**
MAK *e**SP **sP 09 24 38.2 +1.9**
MAK *e* 09 27 16.0
MAK *e*PPP PPP 09 29 04.8
MAK *eS* **S 09 34 15.7 -0.4**
MAK *e**SS **sS 09 34 38.5 +0.3**
MAK pmax pmax
comp=Z,170nm,0.7s
MAK MLR MLR
comp=Z,3μm,20.0s
IZVR Izvoarele 79.59 354 ⇑P **P 09 24 19.2 +1.0**
NEGRR Negrea 79.59 354 ⇑P **P 09 24 18.1 -0.2**
FAKI Fak Fak 79.60 250 P **P 09 24 19.5 +0.8**
FAKI Fak Fak 79.60 250 P **P 09 24 19.2 +0.4**
TNR Turnu Rosu 79.64 357 ⇓P **P 09 24 19.2 +0.6**
TNR Turnu Rosu 79.64 357 P **P 09 24 19.2 +0.6**
SCHLR Schela 79.66 354 ⇓P **P 09 24 19.4 +0.8**
SIM Simferopol' 79.66 350 *eP* **P 09 24 19.6 +0.9**
SIM S **S 09 34 21.0 +3.7**
SIM pmax pmax
comp=Z,104nm,0.9s
SIM smax smax
comp=E,270nm,11.0s
KBZ Khabaz 79.66 343 P **P 09 24 19.6 +1.0**
comp=E,165nm,0.9s,baz=344,slow=3.2,SNR=160
KBZ PKKPbc **PKKPbc 09 43 04.0 +0.8**
comp=E,1.2nm,1.0s,baz=169,slow=12,SNR=3.8
KBZ LR LR 10 03 19.2
comp=E,1μm,21.9s,baz=1.0,slow=38
KBZ Khabaz 79.66 343 *c iP* **P 09 24 18.7 0.0**
KBZ pmax pmax
comp=Z,165nm,0.9s
SHA1 Shidzhatmaz 79.69 343 *c iP* **P 09 24 19.3 +0.1**
VIVF Saint-Julien-l 79.72 11 *eP* **P 09 24 19.2 +0.2**
VIVF pmax pmax
comp=Z,24nm,0.9s
MLR Muntele Rosu 79.74 355 ⇑P **P 09 24 20.2 +1.0**
MLR Muntele Rosu 79.74 355 LR LR 10 05 19.4
comp=Z,770nm,18.0s,baz=14,slow=40
MLR Muntele Rosu 79.74 355 P **P 09 24 20.3 +1.0**
MLR pmax pmax
comp=Z,49nm,1.0s
MLR MLR MLR
comp=Z,1μm,22.0s
MLR Muntele Rosu 79.74 355 P **P 09 24 20.3 +1.0**
MLR Muntele Rosu 79.74 355 P **P 09 24 20.2 +1.0**
BZS Buzias 79.74 359 ⇓P **P 09 24 18.8 -0.3**
BZS Buzias 79.74 359 P **P 09 24 18.8 -0.3**
BZS Buzias 79.74 359 P **P 09 24 19.3 +0.2**
KNDS Knezji Dol 79.75 4 *i* P **P 09 24 18.7 -0.6**
NCK Nalchik 79.77 342 ⇓*iP* **P 09 24 20.5 +1.2**
NCK pmax pmax
comp=Z,319nm,0.8s
ORIF Oris-en-Rattie 79.78 10 *eP* **P 09 24 21.1 +1.6**
ORIF pmax pmax
comp=Z,19nm,0.9s
TEOL Teolo 79.79 6 P **P 09 24 19.9 +0.5**
BOJS Bojanci 79.80 3 *i* P **P 09 24 19.2 -0.2**
VOIR 79.83 356 ⇓P **P 09 24 20.2 +0.5**
VOIR 79.83 356 P **P 09 24 20.2 +0.5**
VOIR 79.83 356 P **P 09 24 20.0 +0.3**
LOT Lotru 79.86 357 ⇑P **P 09 24 20.0 +0.1**
LOT Lotru 79.86 357 P **P 09 24 19.4 -0.6**
ARR Arges 79.91 356 ⇑P **P 09 24 21.1 +1.0**
ARR Arges 79.91 356 P **P 09 24 21.2 +1.0**
CFR Carcaliu 79.93 354 ⇑P **P 09 24 19.8 -0.3**
CFR Carcaliu 79.93 354 P **P 09 24 19.8 -0.3**
GZR Gura Zlata 79.94 358 ⇓P **P 09 24 20.6 +0.3**
GZR Gura Zlata 79.94 358 P **P 09 24 20.6 +0.3**
TSSA Tissa 79.98 314 *eP* **P 09 24 21.6 +0.6**
APAC Apartado, Choc 80.05 90 P **P 09 24 20.6 -0.6**
comp=Z,665nmcomp=Z,47nm,0.9s
MBDF Montbardon 80.05 9 *eP* **P 09 24 22.0 +1.0**
MBDF pmax pmax
comp=Z,40nm,0.8s
ISR Istrita 80.08 355 ⇓P **P 09 24 21.2 +0.2**
ISR Istrita 80.08 355 P **P 09 24 21.2 +0.2**
FRGS Fruska Gora 80.22 360 ⇑*iP* **P 09 24 21.7 0.0**
TPGR Topolog 80.23 354 ⇑P **P 09 24 21.9 +0.1**
KLP Kalpa 80.24 312 *eP* **P 09 24 22.2 -0.2**
SOC Sochi 80.30 345 *c iP* **P 09 24 22.0 -0.2**
SOC *e* 09 27 24.5
SOC *e*PPP PPP 09 29 13.7
SOC *eS* **S 09 34 24.5 +0.5**
SOC *eSS* **SS 09 39 36.0 +1.6**
SOC pmax pmax
comp=Z,140nm,0.8s
SOC MLR MLR
comp=Z,1μm,22.0s
DHRM DHARAMSHALA 80.43 314 *eP* **P 09 24 23.3 -0.1**
DHRM IAmb IAmb 09 24 25.6
comp=Z,245nm,0.9s
NIL Nilore 80.44 317 P **P 09 24 23.5 +0.4**
NIL pmax pmax
comp=Z,321nm,0.9s
NIL MLR MLR
comp=Z,3μm,21.0s
NIL Nilore 80.44 317 P **P 09 24 23.5 +0.4**
NIL Nilore 80.44 317 P **P 09 24 23.6 +0.4**
HERR Herculane 80.46 358 ⇑P **P 09 24 23.0 0.0**
THN Thein Dam 80.49 315 *eP* **P 09 24 23.9 +0.5**
THN IAmb IAmb 09 24 26.1
comp=Z,105nm,0.8s
JOSI Joshimath 80.51 311 *eP* **P 09 24 23.9 +0.1**
PGAV Gavieira, Arco 80.53 21 *eP* **P 09 24 24.3 +0.7**
PGAV *i* IAmb IAmb 09 24 40.4
comp=Z,88nm,1.4s
PGAV *e*PP PP 09 27 08.0 -18
PGAV *eS* **S 09 34 30.1 +3.4**
PGAV *e*LQ LQ 09 47 16.1
PGAV *e*LR LR 09 51 09.0
PGAV *i* IAMs_20 IAMs_20 09 59 44.3
comp=Z,822nm,22.0s
MDVR Moldovita 80.58 358 ⇓P **P 09 24 24.1 +0.4**
BLY Banja Luka 80.60 2 ⇑P **P 09 24 24.6 +0.8**
BLY Banja Luka 80.60 2 P **P 09 24 24.2 +0.4**
BLY Banja Luka 80.60 2 ⇑*iP* **P 09 24 23.5 -0.3**
BLY Banja Luka 80.60 2 P **P 09 24 24.3 +0.5**
ISO Isola 80.62 9 P **P 09 24 25.0 +1.0**
TIRR Tirgusor 80.63 354 ⇑P **P 09 24 23.7 -0.2**
TIRR Tirgusor 80.63 354 P **P 09 24 23.6 -0.2**
TIRR Tirgusor 80.63 354 P **P 09 24 23.1 -0.7**
TIRR IAmb IAmb 09 24 25.8
comp=Z,106nm,0.8s
TIRR Tirgusor 80.63 354 P **P 09 24 23.9 +0.1**
MYLDM Lahad Datu 80.66 266 P **P 09 24 25.5 +1.0**
MYLDM IAmb IAmb 09 24 41.5
comp=Z,96nm,1.1s
MYLDM Lahad Datu 80.66 266 P **P 09 24 25.2 +0.7**
comp=Z,2μmcomp=Z,1μmcomp=Z,91nm,1.2s
MYLDM Lahad Datu 80.66 266 P **P 09 24 26.2 +1.7**
SRE Strehaia 80.66 357 ⇑P **P 09 24 24.2 +0.1**
SRE Strehaia 80.66 357 P **P 09 24 24.2 +0.1**
RUSF Rustrel 80.70 10 P **P 09 24 25.6 +1.3**
CHTO Chiang Mai 80.72 289 P **P 09 24 24.6 -0.2**
CHTO Chiang Mai 80.72 289 P **P 09 24 24.6 -0.2**
CHTO IAmb IAmb 09 24 26.0
comp=Z,52nm,0.8s
CHTO IAMs_20 IAMs_20 09 57 39.9
comp=Z,626nm,19.0s
CHTO Chiang Mai 80.72 289 P **P 09 24 24.4 -0.4**
CHTO sP **sP 09 24 43.3 +0.3**
HUMR Humele 80.74 356 ⇓P **P 09 24 24.8 +0.3**
HUMR Humele 80.74 356 P **P 09 24 24.8 +0.3**
ZCCA Zocca 80.75 6 P **P 09 24 26.1 +1.5**
ZCCA IAmb IAmb 09 24 47.0
comp=Z,72nm,1.1s
ATE Arette 80.77 15 P **P 09 24 26.8 +2.1**
TEKS Tekeris 80.82 0 ⇑*iP* **P 09 24 24.8 -0.2**
UTK UTTARKASHI 80.84 312 *eP* **P 09 24 26.1 +0.6**
ECAL Calabor 80.85 20 P **P 09 24 26.2 +0.9**
VLC Villacollemand 80.91 7 P **P 09 24 26.1 +0.7**
MTLF Montolieu 80.92 13 *eP* **P 09 24 25.6 +0.1**
MTLF pmax pmax
comp=Z,35nm,0.9s
AKT Akhty 80.93 339 *i* P **P 09 24 25.5 -0.2**
AKT *e**SP **sP 09 24 45.6 +1.6**
AKT *e* 09 27 25.6
AKT *e*PPP PPP 09 29 24.7
AKT *eS* **S 09 34 30.4 -0.5**
AKT pmax pmax
comp=Z,278nm,0.8s
AKT MLR MLR
comp=Z,2μm,22.0s
DLV Lat 80.95 278 P **P 09 24 25.9 -0.3**
DLV IAmb IAmb 09 24 47.3
comp=Z,88nm,1.1s
DLV Lat 80.95 278 P **P 09 24 27.1 +0.8**
SBF Sospel 80.97 9 *eP* **P 09 24 25.8 0.0**
SBF pmax pmax
comp=Z,43nm,0.8s
EPF Esparros 80.98 14 *eP* **P 09 24 25.3 -0.6**
EPF pmax pmax
comp=Z,12nm,0.8s
ETSF Etsaut 80.98 15 *eP* **P 09 24 26.4 +0.5**
ETSF pmax pmax
comp=Z,29nm,0.7s
PBRG Braganca 80.98 20 *eP* **P 09 24 26.7 +0.8**
PBRG *i* IAmb IAmb 09 24 47.6
comp=Z,49nm,1.7s
ESCA l'Escarene 81.00 9 P **P 09 24 26.7 +0.8**
SGRR Singureni 81.00 355 ⇓P **P 09 24 26.0 +0.1**
CM31 Chiang Mai Arr 81.01 289 P **P 09 24 26.6 +0.2**
CMAR Chiang Mai Arr 81.01 289 P **P 09 24 26.1 -0.2**
comp=Z,197nm,0.8s,baz=17,slow=5.5,SNR=297
CMAR LR LR 10 03 45.4
comp=Z,442nm,19.5s,baz=35,slow=38
CMAR Chiang Mai Arr 81.01 289 P **P 09 24 26.4 +0.1**
CMAR Chiang Mai Arr 81.01 289 P **P 09 24 26.4 +0.1**
ICOR Ion Corvin 81.01 354 ⇑P **P 09 24 26.6 +0.7**
SMLA Simla 81.05 313 *eP* **P 09 24 26.1 -0.3**
SMLA IAmb IAmb 09 24 28.7
comp=Z,433nm,0.7s
SMLA *i* pP **sP 09 24 45.3 +0.8**
PTH Pithoragarh 81.06 310 *eP* **P 09 24 26.1 -0.6**
ARBF Arbois 81.13 10 P **P 09 24 27.6 +1.0**
POLO Lamas de Olo 81.19 20 *eP* **P 09 24 28.1 +0.9**
POLO *i* IAmb IAmb 09 24 48.7
comp=Z,45nm,1.5s
KBL Kabul 81.24 321 P **P 09 24 26.6 -1.1**
KBL pmax pmax
comp=Z,159nm,0.9s
KBL Kabul 81.24 321 P **P 09 24 26.6 -1.1**
KBL Kabul 81.24 321 P **P 09 24 26.4 -1.3**
LGTI Lohaghat 81.28 310 *eP* **P 09 24 27.1 -0.7**
TBLG Delisi 81.28 341 P **P 09 24 27.8 +0.4**
SHBG Sahibganj 81.28 302 *eP* **P 09 24 27.9 +0.2**
BRDH Bariadhala 81.40 297 LR LR 10 06 35.3
comp=Z,581nm,18.4s,baz=22,slow=40
NPW Naypyitaw 81.44 292 P **P 09 24 28.4 -0.2**
PSN Preselentsi 81.47 354 *i* P **P 09 24 28.8 +0.4**

BBLS Lazi&#263i 81.51 0⇑ *i*P **P** 09 24 29.1 +0.4
CEST Esterri de Car 81.53 14 P **P** 09 24 30.3 +1.4
CEST IAmb IAmb 09 24 50.2
comp=Z,64nm,1.3s
MVO Moncorvo 81.55 20 *e*P **P** 09 24 29.7 +0.7
MVO *i* IAmb IAmb 09 24 45.5
comp=Z,58nm,1.0s
MVO *e*PP PP 09 27 23.1 -12
MVO *e*LR LR 09 50 27.8
MVO *i* IAMs_20 IAMs_20 09 59 27.1
comp=Z,792nm,24.0s
TRLG Trialeti 81.58 342 P **P** 09 24 30.8 +1.6
VALD Valchedram 81.63 357 *i*P **P** 09 24 29.0 -0.2
BOVS Bovan 81.72 358 ⇓P **P** 09 24 29.8 +0.1
DZM Mont Dzumac 81.83 211 P **P** 09 24 30.4 -0.1
comp=Z,30nm,1.1s,baz=115,slow=3.5,SNR=4.7
comp=Z,30nm,1.1s
EPOS Posof 81.86 343 P **P** 09 24 31.9 +1.3
NEF NEVSHA 81.89 354 *i*P **P** 09 24 30.9 +0.3
PLVB Pleven 81.89 356 ⇑P **P** 09 24 30.7 +0.1
MURB Monte Urbino 81.92 5 P **P** 09 24 32.1 +1.2
MURB IAmb IAmb 09 24 35.1
comp=Z,114nm,1.0s
MPEP Malo Peshtene 81.95 357 *i*P **P** 09 24 30.5 -0.5
SZH Strazhitsa 81.96 355 *i*P **P** 09 24 30.4 -0.6
PRD Provadia 81.98 354 *i*P **P** 09 24 31.6 +0.5
PLE Pljevlja 82.04 0⇑*i*P **P** 09 24 32.3 +0.7
SJES Sjenica 82.11 360⇑*i*P **P** 09 24 32.5 +0.6
GUMA Gualdo di Mace 82.17 5 P **P** 09 24 33.0 +0.9
GUMA IAmb IAmb 09 24 56.3
comp=Z,61nm,0.9s
FDMO Fiordimonte 82.18 5 P **P** 09 24 32.2 0.0
MTE Manteigas 82.18 21 *e*P **P** 09 24 33.1 +0.8
MTE *i* IAmb IAmb 09 24 49.0
comp=Z,116nm,1.3s
MTE *e*PP **PP** 09 27 39.8 -0.3
MTE *e*S **S** 09 34 46.5 +2.7
MTE *e*LQ LQ 09 46 36.5
MTE *e*LR LR 09 52 01.7
MTE *i* IAMs_20 IAMs_20 09 59 32.4
comp=Z,663nm,24.0s
MTE Manteigas 82.18 21 P **P** 09 24 33.4 +1.1
MTE IAmb IAmb 09 24 35.6
comp=Z,78nm,0.9s
MTE IAMs_20 IAMs_20 10 00 10.1
comp=Z,843nm,22.0s
MTE Manteigas 82.18 21 P **P** 09 24 33.2 +0.9
KLINJ Klinje 82.20 1 *e*P **P** 09 24 32.8 +0.4
PCAS Casmilo, Conde 82.32 21 *e*P **P** 09 24 33.8 +0.9
PCAS *i* IAmb IAmb 09 24 54.9
comp=Z,147nm,1.3s
SANI Sanana 82.32 255 P **P** 09 24 33.8 +0.6
comp=Z,68nm,0.9s
NRCA Norcia 82.38 5 P **P** 09 24 33.6 +0.3
NRCA IAmb IAmb 09 24 53.8
comp=Z,49nm,1.1s
PGF Pioggiola 82.41 8 *e*P **P** 09 24 33.6 +0.1
PGF pmax pmax
comp=Z,36nm,0.8s
BLSH Balsha 82.46 357 *i*P **P** 09 24 33.3 -0.4
BRY Bratogost 82.47 1 *e*P **P** 09 24 33.7 -0.1
BRY Bratogost 82.47 1⇑*i*P **P** 09 24 33.8 -0.1
IVA Berane 82.50 360⇓*i*P **P** 09 24 33.9 0.0
KOME Kolasin 82.52 0⇑*i*P **P** 09 24 34.1 0.0
CESX Cesi 82.58 5 P **P** 09 24 34.4 +0.2
NKME Niksic 82.60 0⇓*i*P **P** 09 24 33.2 -1.2
TREB Trebinje 82.65 1 *e*P **P** 09 24 33.8 -0.8
TOLI2 Tolitoli 82.66 261 P **P** 09 24 35.6 +0.6
TOLI2 Tolitoli 82.66 261 P **P** 09 24 35.1 +0.1
TOLI2 IAmb IAmb 09 24 54.4
comp=Z,178nm,1.9s
TOLI2 Tolitoli 82.66 261 P **P** 09 24 35.0 -0.1
SDV Santo Domingo 82.67 85 LR LR 10 03 18.1
comp=Z,637nm,20.0s,baz=326,slow=37
SDV Santo Domingo 82.67 85 P **P** 09 24 34.5 -0.8
SDV Santo Domingo 82.67 85 *e*P **P** 09 24 35.6 +0.3
NLAI Namlea 82.68 254 P P 09 24 40.0 +4.9
JMB Yambol 82.70 355 *i*P **P** 09 24 34.8 -0.1
VTS Vitosha 82.70 357 *i*P **P** 09 24 34.9 -0.2
PAMC Pamplona, Colo 82.74 88 P **P** 09 24 36.0 0.0
PSBE So Bento 82.77 22 *e*P **P** 09 24 36.2 +0.9
PSBE *i* IAmb IAmb 09 24 52.1
comp=Z,152nm,1.3s
DIGO Kars 82.80 342 P **P** 09 24 37.0 +1.2
GNI Garni 82.81 341 LR LR 10 08 49.2
comp=Z,859nm,18.2s,baz=3.0,slow=41
GNI Garni 82.81 341 P **P** 09 24 36.7 +1.1
GNI Garni 82.81 341*c i*P **P** 09 24 36.9 +1.2
GNI pmax pmax
comp=Z,88nm,0.9s
GNI Garni 82.81 341 P **P** 09 24 36.8 +1.1
GNI IAmb IAmb 09 24 39.3
comp=Z,85nm,0.8s
GNI Garni 82.81 341 IAMs_20 IAMs_20 10 08 01.3
comp=Z,1μm,21.0s
GNI Garni 82.81 341 P **P** 09 24 37.2 +1.5
GAYA Gaya 82.81 303 *e*P **P** 09 24 34.8 -0.9
PSARD Sardoal 82.82 21 *e*P **P** 09 24 36.1 +0.5
PSARD *i* IAmb IAmb 09 24 57.1
comp=Z,152nm,1.3s
CEME Cevo 82.82 0⇑*i*P **P** 09 24 34.9 -0.7
PLNA Plana 82.84 357 *i*P **P** 09 24 35.7 -0.1
AQU L'Aquila 82.88 5 P **P** 09 24 37.1 +1.2
AQU pmax pmax
comp=Z,52nm,1.0s
AQU L'Aquila 82.88 5 P **P** 09 24 37.1 +1.2
AQU IAmb IAmb 09 25 19.8
comp=Z,52nm,1.0s
AQU L'Aquila 82.88 5 *e*P **P** 09 24 34.5 -1.4
AQU L'Aquila 82.88 5 P **P** 09 24 36.3 +0.5
HCY Herceg Novi 82.92 1 *e*P **P** 09 24 35.3 -0.7
HCY Herceg Novi 82.92 1⇑*i*P **P** 09 24 35.6 -0.4
PDG Podgorica 82.94 0⇑P **P** 09 24 36.0 -0.1
PDG Podgorica 82.94 0 P **P** 09 24 36.0 -0.1
PDG IAMs_20 IAMs_20 10 00 45.8
comp=Z,648nm,21.0s
PDG Podgorica 82.94 0⇑*i*P **P** 09 24 36.0 -0.1
PDG Podgorica 82.94 0 P **P** 09 24 36.1 0.0
PDG Podgorica 82.94 0⇑*i*P **P** 09 24 35.8 -0.3
BUM Brajici-Budva 83.07 1⇑*i*P **P** 09 24 36.7 -0.2
UCM Universidad Co 83.08 17 P **P** 09 24 38.2 +1.3
NDI New Delhi 83.15 312 *e*P **P** 09 24 37.0 -0.4
PMRV Marv??o 83.15 21 *e*P **P** 09 24 38.6 +1.4
PMRV *i* IAmb IAmb 09 24 58.8
comp=Z,116nm,1.5s
PMRV *e*PP **PP** 09 27 44.5 -3.4
PMRV *e*S **S** 09 34 54.6 +1.1
PMRV *e*LR LR 09 52 33.7
PMRV *i* IAMs_20 IAMs_20 09 59 59.4
comp=Z,619nm,22.0s
DRME Dracevica, Mon 83.19 0 *e*P **P** 09 24 37.2 -0.2
DRME Dracevica, Mon 83.19 0⇑*i*P **P** 09 24 37.1 -0.3
INTR Introdacqua 83.24 4 P **P** 09 24 39.1 +1.4
PMTG Montargil 83.32 21 *e*P **P** 09 24 38.7 +0.6
PMTG *i* IAmb IAmb 09 24 54.4
comp=Z,71nm,1.3s
BOK Bokaro 83.35 302 *e*P **P** 09 24 38.4 -0.1
BOK IAmb IAmb 09 24 39.9
comp=Z,41nm,0.8s
BOK *i* x **sP** 09 24 57.8 +1.0
ULC Ulcinj 83.41 0⇑*i*P **P** 09 24 38.3 -0.3
COEN Coen 83.47 234 P **P** 09 24 40.2 +1.1
KKB Krupnik 83.48 357 *e*P **P** 09 24 37.2 -1.7
PEHC Pehcevo 83.55 357 *i*P **P** 09 24 41.2 +1.8
SGRT San Giovanni R 83.56 3 P **P** 09 24 39.7 +0.3
ESBB Sonseca Array 83.56 18 P **P** 09 24 40.4 +0.9
ESBB IAmb IAmb 09 24 42.4
comp=Z,60nm,0.8s
ESDC Sonseca Array 83.57 18 P **P** 09 24 40.2 +0.7
comp=Z,62nm,0.8s,baz=342,slow=4.7,SNR=14.9
ESDC PP **PP** 09 27 49.4 -2.0
comp=Z,6.6nm,1.0s,baz=350,slow=6.9,SNR=8.1
ESDC PKKPbc **PKKPbc** 09 42 54.7 +0.2
comp=Z,0.8nm,0.7s,baz=179,slow=1.3,SNR=6.7
ESDC LR LR 10 03 42.9
comp=Z,559nm,19.5s,baz=342,slow=37
comp=Z,62nm,0.8s
ESDC Sonseca Array 83.57 18 P **P** 09 24 39.9 +0.5
RZN Rozhen 83.58 356 *i*P **P** 09 24 40.1 +0.5
SONA Sohna 83.59 312 *e*P **P** 09 24 40.1 +0.4
SONA *i* x **sP** 09 24 58.3 +0.3
PARRA Arraiolos 83.60 21 *e*P **P** 09 24 40.0 +0.4
PARRA *i* IAmb IAmb 09 24 55.9
comp=Z,88nm,1.9s
KDZ Kurdzhali 83.62 356 *i*P **P** 09 24 39.6 0.0
PESTR Estremoz 83.65 21 *e*P **P** 09 24 40.1 +0.3
PESTR *i* IAmb IAmb 09 24 56.2
comp=Z,100nm,1.5s
PESTR Estremoz 83.65 21 P **P** 09 24 40.4 +0.6
PESTR IAmb IAmb 09 24 56.1
comp=Z,61nm,1.1s
PESTR Estremoz 83.65 21 P **P** 09 24 40.8 +0.9
KOPT Kop Dagi 83.67 344 P **P** 09 24 42.1 +1.8
KOPT IAmb IAmb 09 24 46.0
comp=Z,71nm,0.9s
PHP Peshkopia 83.68 359 P **P** 09 24 40.0 -0.1
HRA Herat 83.73 326 P **P** 09 24 41.0 +0.4
HRA IAmb IAmb 09 24 42.5
comp=Z,48nm,0.8s
KELT Kelkit 83.74 345 P **P** 09 24 41.5 +1.0
JAMC Jamundi, Valle 83.79 93 P **P** 09 24 41.5 +0.4
comp=Z,1μmcomp=Z,102nm,1.0s
MPSI Mapaga 83.80 262 P **P** 09 24 40.9 0.0
comp=Z,1μmcomp=Z,69nm,0.9s
MOE Montemor 83.82 22 *e*P **P** 09 24 41.3 +0.6
MOE *i* IAmb IAmb 09 24 57.4
comp=Z,159nm,1.6s
ROSC El Rosal 83.83 90 P **P** 09 24 43.4 +1.8
comp=Z,6.7nm,0.3s,baz=258,slow=12,SNR=4.2
ROSC LR LR 10 03 38.2
comp=Z,165nm,21.5s,baz=347,slow=37
comp=Z,6.7nm,0.3s
SILT Sile 83.83 352 ⇓P **P** 09 24 41.1 +0.4
KUDL Kundal 83.93 312 *e*P **P** 09 24 41.1 -0.3
TOKA Tokat 83.95 347 P **P** 09 24 43.5 +2.0
ISK Istanbul-Kandi 83.96 353 P **P** 09 24 44.2 +2.8
ALBI Allahabad 84.00 306 *e*P **P** 09 24 40.7 -1.1
VAY Valandovo 84.02 358 *i*P **P** 09 24 42.1 +0.5
SAHE Sakarya_HENDEK 84.03 351 ⇓P **P** 09 24 41.6 -0.2
RDO Rodhopi 84.09 355 P **P** 09 24 42.7 +0.7
RDO Rodhopi 84.09 355 P **P** 09 24 42.5 +0.5
KNT Kendrikon 84.17 357 P **P** 09 24 45.0 +2.5
SRS Serrai 84.19 357 P **P** 09 24 42.9 +0.4
PAOL Paolisi 84.24 4 P **P** 09 24 43.6 +0.7
PAOL IAmb IAmb 09 25 02.8
comp=Z,119nm,1.6s
OHR Ohrid 84.25 359 *i*P **P** 09 24 43.6 +0.6
PLOUS Minas do Lousa 84.28 22 *e*P **P** 09 24 43.4 +0.4
PLOUS *i* IAmb IAmb 09 24 59.6
comp=Z,140nm,1.5s
ALN Alexandroupoli 84.31 355 P **P** 09 24 43.7 +0.5
ALN pmax pmax
comp=Z,125nm,1.0s
ALN Alexandroupoli 84.31 355 P **P** 09 24 43.7 +0.5
ALN Alexandroupoli 84.31 355 P **P** 09 24 43.5 +0.4
POPC Popayan, Colom 84.34 94 P **P** 09 24 42.8 -1.1
comp=Z,218nmcomp=Z,37nm,1.1s
MDUB Mudurnu 84.38 351 P **P** 09 24 44.6 +1.0
PBAR Barrancos 84.43 21 *e*P **P** 09 24 44.2 +0.5
PBAR *i* IAmb IAmb 09 25 05.4
comp=Z,163nm,1.8s
SOH Sokhos 84.49 357 P **P** 09 24 44.5 +0.3
MESJ Messejana 84.50 22 *e*P **P** 09 24 45.1 +0.9
MESJ *e*SKSac **SKSac** 09 35 05.3 +1.1
MESJ IAMs_20 IAMs_20 09 59 44.1
comp=Z,2μm,25.2s
MESJ Messejana 84.50 22 *e*P **P** 09 24 45.1 +0.9
MESJ *i* IAmb IAmb 09 25 05.6
comp=Z,47nm,1.3s
MESJ Messejana 84.50 22 P **P** 09 24 45.0 +0.8
MESJ pmax pmax
comp=Z,56nm,1.3s
MESJ Messejana 84.50 22 P **P** 09 24 45.0 +0.8
MESJ IAmb IAmb 09 25 04.9
comp=Z,56nm,1.3s
CAVK Edirne/Enez-Ca 84.51 355⇑P **P** 09 24 44.1 0.0
MATE Matera 84.69 2 ⇓P **P** 09 24 45.8 +0.7
MATE Matera 84.69 2 P **P** 09 24 45.3 +0.3
BAND Balkesir-Ban 84.73 353⇑P **P** 09 24 45.3 0.0
KBN Korca 84.74 359 P **P** 09 24 45.1 -0.3
PCVE Castro Verde 84.74 22 *e*P **P** 09 24 46.1 +0.7
PCVE *i* IAmb IAmb 09 25 07.1
comp=Z,66nm,1.7s
GURO Guroymak-BITLI 84.85 342 P **P** 09 24 48.1 +2.0
GURO IAmb IAmb 09 24 52.7
comp=Z,42nm,1.1s
PCI Palu 84.85 261 P **P** 09 24 49.1 +2.9
comp=Z,95nm,1.0s
BR131 Keskin Array S 84.88 349*c i*P **P** 09 24 46.3 +0.1
BR131 Keskin Array S 84.88 349 P **P** 09 24 46.5 +0.2
BR131 IAmb IAmb 09 24 48.5
comp=Z,68nm,0.9s
BRTR Keskin Array B 84.88 349 P **P** 09 24 46.6 +0.4
comp=Z,48nm,0.9s,baz=29,slow=2.8,SNR=126
BRTR PKKPbc **PKKPbc** 09 42 52.0 +0.4
comp=Z,2.2nm,0.7s,baz=168,slow=4.8,SNR=12
BRTR LR LR 10 07 58.6
comp=Z,596nm,20.2s,baz=9.5,slow=39
comp=Z,48nm,0.9s
BRTR Keskin Array B 84.88 349 *i*P **P** 09 24 46.5 +0.2
BRTR pmax pmax
comp=Z,49nm,0.9s
GEVA Gevas 84.90 342 P **P** 09 24 47.2 +0.8
VLO Vlora 84.90 0 P **P** 09 24 48.4 +2.3
ARPR Arapgir-MALATY 84.91 345 P **P** 09 24 47.4 +0.9
ARPR IAMs_20 IAMs_20 10 08 34.6
comp=Z,649nm,22.0s
ARPR Arapgir-MALATY 84.91 345 P **P** 09 24 47.8 +1.3
MORF Marmelete 84.92 22 *e*P **P** 09 24 47.2 +0.8
MORF IAMs_20 IAMs_20 10 00 27.6
comp=Z,2μm,27.0s
MORF Marmelete 84.92 22 *e*P **P** 09 24 47.2 +0.8
MARCO Tramutola 85.02 3 P **P** 09 24 47.6 +0.8
PVAQ Vaqueiros 85.03 22 *e*P **P** 09 24 48.1 +1.2
PVAQ *i* IAmb IAmb 09 25 09.5
comp=Z,134nm,1.7s
PVAQ *e*PP **PP** 09 28 09.5 +6.2
PVAQ *e*S **S** 09 35 17.0 +4.5
PVAQ *e*LQ LQ 09 47 30.4
PVAQ *e*LR LR 09 53 09.4
PVAQ *i* IAMs_20 IAMs_20 10 00 37.3
comp=Z,964nm,22.0s
PVAQ Vaqueiros 85.03 22 P **P** 09 24 48.3 +1.5
PVAQ Vaqueiros 85.03 22 P **P** 09 24 48.3 +1.5
PFVI Vila Bisbo 85.05 22 *e*P **P** 09 24 48.1 +1.1
PFVI *i* IAmb IAmb 09 25 04.3
comp=Z,129nm,1.4s
PFVI Vila Bisbo 85.05 22 P **P** 09 24 48.3 +1.3
PFVI IAmb IAmb 09 24 49.1
comp=Z,100nm,1.2s
PBDV Barranco-do-Ve 85.14 22 *e*P **P** 09 24 49.5 +2.1
PBDV *i* IAmb IAmb 09 25 09.6
comp=Z,125nm,1.8s
TULM Tulcn-Chalpat 85.18 96 P **P** 09 24 48.6 +0.1
comp=Z,42nm,1.1s
OTAV Otavalo 85.19 96 P **P** 09 24 47.8 -0.7
OTAV pmax pmax
comp=Z,13nm,1.1s
OTAV Otavalo 85.19 96 P **P** 09 24 47.8 -0.7
LIT Litokhoron 85.24 358 P **P** 09 24 48.1 +0.2
LIT pmax pmax
comp=Z,71nm,0.9s
LIT Litokhoron 85.24 358 P **P** 09 24 48.1 +0.2
LIT IAmb IAmb 09 24 49.7
comp=Z,71nm,0.9s
LIT Litokhoron 85.24 358 P **P** 09 24 48.2 +0.4
RAO Raoul Island 85.25 195 LR LR 09 56 17.6
comp=Z,467nm,21.7s,baz=104,slow=31
RAO Raoul Island 85.25 195 P **P** 09 24 49.9 +2.2
JHNI Jhansi 85.33 309 *e*P **P** 09 24 47.2 -1.4
PAIG Paliouri 85.38 357 P **P** 09 24 48.1 -0.4
BALY Balya 85.38 354 P **P** 09 24 48.6 0.0
KIRS Kirsehir-Merke 85.43 349 ⇓P **P** 09 24 49.1 +0.2
BALB Balikesir 85.46 354 P **P** 09 24 49.6 +0.7
VSL Villasalto 85.47 8 P **P** 09 24 48.4 -0.7
VSL IAmb IAmb 09 25 09.5
comp=Z,40nm,0.8s
VSL Villasalto 85.47 8 P **P** 09 24 49.5 +0.4
BNN Bunyan 85.48 347 P **P** 09 24 50.1 +0.8
SRN Sarande 85.49 360 P **P** 09 24 49.3 +0.2
KKUL Konya-Kulu 85.50 350 P **P** 09 24 50.2 +0.9
KEK Kerkira 85.66 360 P **P** 09 24 49.6 -0.4
KEK IAmb IAmb 09 24 51.1
comp=Z,82nm,1.1s
KEK Kerkira 85.66 360 P **P** 09 24 49.4 -0.5
XOR Xorichti 85.95 357 P **P** 09 24 51.1 -0.3
CART Cartagena 86.10 16 IAMs_20 IAMs_20 10 03 05.0
comp=Z,988nm,21.0s
TIP Timpagrande 86.16 2⇑P **P** 09 24 52.5 0.0
TIP Timpagrande 86.16 2 P **P** 09 24 52.4 0.0
TIP IAMs_20 IAMs_20 10 06 54.9
comp=Z,629nm,22.0s
TIP Timpagrande 86.16 2 P **P** 09 24 52.6 0.0
AJM Ajmer 86.22 313 *e*P **P** 09 24 52.7 -0.3
AJM IAmb IAmb 09 24 56.2
comp=Z,21nm,0.6s
MACC Macarena, Meta 86.29 92 P **P** 09 24 51.2 -2.2
comp=Z,56nm,0.8s
EMAL Malaga-Limoner 86.31 19 P **P** 09 24 54.2 +1.0
AGG Agios Georgios 86.32 358 P **P** 09 24 52.9 -0.3
BWNR Bhubaneshwar 86.37 301 *e*P **P** 09 24 53.5 -0.2
BWNR IAmb IAmb 09 24 56.6
comp=Z,144nm,0.9s
BWNR *i* pP **pP** 09 25 08.6 +1.6
BWNR *es*P **sP** 09 25 13.3 +1.3
MANT Manisa 86.56 353 P **P** 09 24 54.9 +0.2
MTSU Mount Surprise 86.60 232 P **P** 09 24 55.5 +0.8
GUNA GUNA 86.60 310 *e*P **P** 09 24 54.1 -0.8
GUNA *i* x **pP** 09 25 08.9 +0.7
GUNA *ex* **sP** 09 25 13.2 +0.1
ANDN Andirin 86.67 347 P **P** 09 24 56.1 +1.0
GAZ Gaziantep 86.95 346 P **P** 09 24 57.7 +1.3
GAZ IAmb IAmb 09 24 59.8
comp=Z,53nm,0.9s
PMOZ Porto Moniz, M 87.00 30 *e*LR LR 09 55 34.9
PMOZ *i* IAMs_20 IAMs_20 10 02 04.8
comp=Z,384nm,20.0s
PMPST Porto Santo, M 87.01 30 *e*P **P** 09 24 57.1 +0.4
PMPST *i* IAmb IAmb 09 25 12.4
comp=Z,235nm,1.1s
CEL Celeste 87.05 3 P **P** 09 24 55.9 -1.0
AYDN Tasoluk 87.43 353 P **P** 09 24 59.2 +0.5
CTA Charters Tower 87.45 229 P **P** 09 24 58.5 -0.3
comp=Z,24nm,0.8s,baz=19,slow=5.6,SNR=25
CTA LR LR 10 01 49.3
comp=Z,159nm,19.0s,baz=30,slow=34
comp=Z,24nm,0.8s
CTA Charters Tower 87.45 229 P **P** 09 24 59.9 +1.1
CTAO Charters Tower 87.45 229 P **P** 09 25 00.1 +1.3
CTAO Charters Tower 87.45 229 P **P** 09 24 58.5 -0.3
CTAO pmax pmax
comp=Z,25nm,0.8s
CTAO Charters Tower 87.45 229 P **P** 09 24 58.5 -0.3
CTAO IAmb IAmb 09 25 01.1
comp=Z,24nm,0.8s
CTAO Charters Tower 87.45 229 P **P** 09 24 59.6 +0.8
CLTB Caltabellotta 87.63 5 P **P** 09 24 59.8 +0.1
BHPL Bhopal 87.78 309 *e*P **P** 09 24 60.0 -0.7
BHPL IAmb IAmb 09 25 02.1
comp=Z,127nm,1.0s
BHPL *ex* **pP** 09 25 14.4 +0.5
BHPL *i* x **sP** 09 25 19.1 +0.2
MCRA Macar, Loja 88.09 100 P **P** 09 24 58.2 -3.9
comp=Z,316nmcomp=Z,22nm,1.2s
ITM Ithomi 88.16 358 P **P** 09 25 01.8 -0.4
ITM Ithomi 88.16 358 P **P** 09 25 02.3 +0.1
ELL Elmali 88.19 352 P **P** 09 25 02.7 +0.2
ELL pmax pmax
comp=Z,47nm,1.0s
ELL Elmali 88.19 352 P **P** 09 25 02.7 +0.2
ELL IAmb IAmb 09 25 22.3
comp=Z,46nm,1.0s
KAPI Kappang 88.26 259 LR LR 10 01 42.5
comp=Z,88nm,19.9s,baz=36,slow=34
KAPI Kappang 88.26 259 P **P** 09 25 03.0 +0.2
comp=Z,50nmcomp=Z,42nm,1.1s
RAGD RAYAGADA 88.39 302 *e*P **P** 09 25 03.8 +0.3
MTN Manton Dam 88.51 245 P **P** 09 25 04.6 +0.6
MTN IAmb IAmb 09 25 18.4
comp=Z,42nm,1.6s
AKAS Kas 88.72 352 P **P** 09 25 04.9 0.0
AKAS IAmb IAmb 09 25 06.6
comp=Z,55nm,1.1s
AKAS Kas 88.72 352 P **P** 09 25 05.0 0.0
NGP Nagpur 88.83 306 *e*P **P** 09 25 05.0 -0.6
NGP *i* x **pP** 09 25 19.5 +0.6
NGP *ex* **sP** 09 25 24.2 +0.3
ARG Arkhangelos 88.85 353 P **P** 09 25 05.2 -0.2
ARG pmax pmax
comp=Z,71nm,0.9s
ARG Arkhangelos 88.85 353 P **P** 09 25 05.2 -0.2
ARG Arkhangelos 88.85 353 P **P** 09 25 04.9 -0.5
AVE Averroes 89.05 22 P **P** 09 25 06.8 +0.5
AVE IAMs_20 IAMs_20 10 02 35.8
comp=Z,871nm,22.0s
KEST Kesra 89.20 8 P **P** 09 25 07.3 +0.1
comp=Z,27nm,1.0s,baz=335,slow=3.8,SNR=21
KEST LR LR 10 07 17.4
comp=Z,404nm,20.8s,baz=19,slow=37
comp=Z,27nm,1.0s
KEST Kesra 89.20 8 P **P** 09 25 07.6 +0.4
KEST IAmb IAmb 09 25 29.0
comp=Z,27nm,0.9s
IFR Ifrane 89.32 20 P **P** 09 25 08.7 +0.8
KARP Karpathos 89.58 354 IAMs_20 IAMs_20 10 11 59.8
comp=Z,904nm,21.0s
CSS Mathiatis 89.62 349 P **P** 09 25 09.8 +0.7
CSS Mathiatis 89.62 349 P **P** 09 25 09.7 +0.7
VIS Vishakhapatnam 89.75 301 *e*P **P** 09 25 09.7 -0.2
IDI Anoyia 89.96 356 LR LR 10 09 32.9
comp=Z,282nm,20.6s,baz=330,slow=38
PBA Port Blair 89.97 290 P **P** 09 25 12.7 +1.8
MD01 Midelt array s 90.02 20 P **P** 09 25 10.9 -0.2
MD31 MD31 90.02 20 P **P** 09 25 10.7 -0.3
BATI Baumata 90.33 253 LR LR 10 00 21.4
comp=Z,206nm,21.9s,baz=82,slow=32
GVD Gavdhos 90.44 356 P **P** 09 25 12.9 0.0
KULM Kulim 90.81 280 P **P** 09 25 16.0 +1.2
KULM Kulim 90.81 280 P **P** 09 25 15.1 +0.3
KULM Kulim 90.81 280 P **P** 09 25 16.1 +1.2
comp=Z,29nm,0.9s
KULM Kulim 90.81 280 P **P** 09 25 15.3 +0.5
QIS Mount Isa 90.87 234 P **P** 09 25 15.7 +0.8
QIS Mount Isa 90.87 234 P **P** 09 25 14.9 +0.1
ATAH Atahualpa 91.24 101 LR LR 10 04 39.7
comp=Z,285nm,19.8s,baz=330,slow=34
MMAI Mount Meron Ar 91.29 347 LR LR 10 09 29.9
comp=Z,361nm,21.8s,baz=3.5,slow=38
ASF Jabal al Asfar 91.91 345 LR LR 10 13 22.3
comp=Z,296nm,18.7s,baz=26,slow=40
KNRA Kununurra 92.12 246 P **P** 09 25 20.4 -0.3
HYB Hyderabad 92.31 305 *e*P **P** 09 25 21.5 -0.3
HYB IAmb IAmb 09 25 22.6
comp=Z,44nm,0.9s
HYB *i* x **sP** 09 25 40.8 +0.6
HYB Hyderabad 92.31 305 *e*P **P** 09 25 22.4 +0.6
HYB *e*PKiKP **PKiKP** 09 30 11.2 +0.2
HYB *e*S **S** 09 36 23.5 +1.8
WB0 Warramunga Arr 92.70 239 P **P** 09 25 22.8 -0.5
RPN Rapa Nui 92.76 136 LR LR 09 56 55.3
comp=Z,415nm,21.9s,baz=348,slow=29
WR8 Warramunga Arr 92.80 239 P **P** 09 25 24.0 +0.2
WRAB Tennant Creek 92.86 239 P **P** 09 25 24.5 +0.4
WRAB Tennant Creek 92.86 239⇑*i*P **P** 09 25 23.6 -0.5
WRAB pmax pmax
comp=Z,13nm,1.0s
WRAB Tennant Creek 92.86 239 P **P** 09 25 23.6 -0.5
WRAB IAmb IAmb 09 25 38.2
comp=Z,25nm,1.2s
WRAB Tennant Creek 92.86 239 P **P** 09 25 23.9 -0.1
WRA Warramunga Arr 92.87 239 P **P** 09 25 22.9 -1.3
comp=Z,8.7nm,0.9s,baz=38,slow=5.3,SNR=42
WRA PP **PP** 09 29 06.0 -1.3
comp=Z,2.4nm,1.0s,baz=35,slow=8.0,SNR=5.3
comp=Z,8.7nm,0.9s
WRA Warramunga Arr 92.87 239 P **P** 09 25 23.4 -0.8
WRA pmax pmax
comp=Z,3.0nm,1.5s
WRA Warramunga Arr 92.87 239 P **P** 09 25 23.4 -0.8
GHAJ Ghor Haditha 92.95 346 IAMs_20 IAMs_20 10 12 30.5
comp=Z,545nm,21.0s
SHME Shamm 93.40 328 *i*P **P** 09 25 26.0 -0.7
SNR=5.7
BANOM Banah 93.47 327 P **P** 09 25 26.9 -0.2
BOAV Boa Vista 93.73 81 *e*P **P** 09 25 28.4 0.0
PSI Prapat 93.82 280 P **P** 09 25 28.6 -0.3
PSI pmax pmax
comp=Z,37nm,1.0s
RPSI Rantau Prapat 93.91 280 P **P** 09 25 28.6 -0.5
RPSI IAmb IAmb 09 25 37.2
comp=Z,37nm,1.0s

MXZ	**Matakaoa Point**	**93.98**	**197**	IAMs_20	IAMs_20	10 01 08.7		
	comp=Z,909nm,21.0s							
QLP	**Quilpie**	**94.03**	**228**	P	**P**	**09 25 30.5**	**+1.2**	
MDH	**Madha**	**94.05**	**327**	P	**P**	**09 25 28.5**	**-1.2**	
UOSS	**Minazif**	**94.41**	**327**	P	**P**	**09 25 30.2**	**-1.2**	
UOSS	**Minazif**	**94.41**	**327**	IAMs_20	IAMs_20	10 14 48.6		
	comp=Z,811nm,20.0s							
ARMA	**Armidale**	**94.50**	**220**	P	**P**	**09 25 33.9**	**+2.4**	
ARMA				IAmb	IAmb	09 25 41.9		
	comp=Z,44nm,1.5s							
NAZ	**Nazwa, Dubai**	**94.54**	**328**	P	**P**	**09 25 30.5**	**-1.4**	
HATD	**Hatta, Dubai**	**94.55**	**327**	P	**P**	**09 25 31.0**	**-1.0**	
EIL	**Elat**	**94.64**	**347**	LR	LR	10 13 44.5		
	comp=Z,260nm,19.9s,baz=22,slow=39							
TOZ	**Tahuroa Road**	**94.64**	**199**	IAMs_20	IAMs_20	10 00 31.3		
	comp=Z,765nm,21.0s							
ASHO	**Ashiyiah**	**94.70**	**327**	P	**P**	**09 25 31.8**	**-0.9**	
URZ	**Urewera**	**94.87**	**198**	P	**P**	**09 25 33.1**	**+0.3**	
	comp=Z,1.7nm,0.7s,baz=182,slow=15,SNR=1.6							
URZ				LR	LR	10 01 59.7		
	comp=Z,870nm,20.8s,baz=30,slow=32							
	comp=Z,1.7nm,0.7s							
CZSB	**Cruzeiro do Su**	**94.96**	**96**	P	**P**	**09 25 34.3**	**+0.4**	
CZSB				IAmb	IAmb	09 25 48.4		
	comp=Z,43nm,0.9s							
CZSB	**Cruzeiro do Su**	**94.96**	**96**	P	**P**	**09 25 33.4**	**-0.5**	
CZSB	**Cruzeiro do Su**	**94.96**	**96** *eP*	P	**P**	**09 25 34.0**	**0.0**	
SOHO	**SOHO**	**95.07**	**327**	P	**P**	**09 25 33.0**	**-1.3**	
SDSI	**Sungai Dareh**	**95.44**	**276**	P	**P**	**09 25 38.6**	**+2.4**	
	comp=Z,12nm,0.9s							
FITZ	**Fitzroy Crossi**	**95.78**	**247**	LR	LR	10 04 42.0		
	comp=Z,207nm,21.6s,baz=25,slow=33							
FITZ	**Fitzroy Crossi**	**95.78**	**247**	P	**P**	**09 25 38.1**	**+0.7**	
FITZ	**Fitzroy Crossi**	**95.78**	**247**	P	**P**	**09 25 38.0**	**+0.5**	
MDP	**Montagnes des**	**95.92**	**72**	LR	LR	10 08 02.5		
	comp=Z,477nm,21.2s,baz=314,slow=35							
AS31	**Alice Springs**	**96.23**	**237**	P	**P**	**09 25 39.2**	**-0.3**	
ASAR	**Alice Springs**	**96.24**	**237**	P	**P**	**09 25 38.9**	**-0.7**	
	comp=Z,4.5nm,0.8s,baz=34,slow=5.0,SNR=31							
ASAR				PKKPbc	**PKKPdf**	**09 42 24.8**	**-0.6**	
	comp=Z,1.5nm,0.6s,baz=207,slow=1.9,SNR=18							
ASAR				LR	LR	10 02 30.1		
	comp=Z,424nm,21.7s,baz=32,slow=31							
	comp=Z,4.5nm,0.8s							
ASAR	**Alice Springs**	**96.24**	**237**	P	**P**	**09 25 39.0**	**-0.5**	
ASAR	**Alice Springs**	**96.24**	**237**	P	**P**	**09 25 39.0**	**-0.5**	
INKA	**Innaminka**	**96.55**	**230**	P	**P**	**09 25 42.0**	**+1.2**	
LEM	**Lembang**	**96.67**	**268**	LR	LR	10 05 27.6		
	comp=Z,134nm,19.7s,baz=106,slow=33							
MZR	**Muzera**	**97.07**	**329** *i* P		**P**	**09 25 43.1**	**-0.4**	
	SNR=12							
MACA	**Manacapuru-AM**	**98.17**	**84** *eP*		Pdif	09 25 49.0	+0.5	
RAYN	**Ar Rayn**	**98.70**	**336** *i* Pdiff		**P**	**09 25 50.8**	**-0.1**	
	SNR=30							
RAYN	**Ar Rayn**	**98.70**	**336**	P	**P**	**09 25 50.8**	**-0.1**	
RAYN				pmax	pmax			
	comp=Z,27nm,0.8s							
RAYN	**Ar Rayn**	**98.70**	**336**	P	**P**	**09 25 50.8**	**-0.1**	
RAYN				IAmb	IAmb	09 26 11.2		
	comp=Z,27nm,0.8s							
RAYN	**Ar Rayn**	**98.70**	**336**	P	**P**	**09 25 50.8**	**-0.1**	
STKA	**Stephens Creek**	**99.77**	**227**	P	**Pdif**	**09 25 55.7**	**+0.6**	
	comp=Z,3.3nm,0.9s,baz=51,slow=5.7,SNR=4.6							
STKA				LR	LR	10 07 31.3		
	comp=Z,705nm,19.9s,baz=26,slow=33							
	comp=Z,3.3nm,0.9s							
PALK	**Pallekele**	**99.97**	**298**	LR	LR	10 15 48.1		
	comp=Z,331nm,21.9s,baz=2.5,slow=38							
PALK	**Pallekele**	**99.97**	**298**	IAMs_20	IAMs_20	10 10 13.1		
	comp=Z,660nm,20.0s							
TAM	**Tamanrasset**	**101.59**	**13**	IAMs_20	IAMs_20	10 21 07.4		
	comp=Z,548nm,21.0s							
LPAZ	**La Paz**	**104.47**	**98**	Pdiff	**Pdif**	**09 26 20.2**	**+3.0**	
	comp=Z,0.9nm,0.8s,baz=270,slow=4.0,SNR=2.1							
AP01	**Chacalluta**	**104.88**	**101**	IAMs_20	IAMs_20	10 07 02.5		
	comp=Z,375nm,20.0s							
PB16	**IPOC Station P**	**105.33**	**100**	IAMs_20	IAMs_20	10 05 59.3		
	comp=Z,455nm,20.0s							
TORD	**Torodi Ar. Bea**	**110.45**	**19**	PKiKP	**PKiKP**	**09 30 42.5**	**-1.2**	
	comp=Z,0.4nm,0.4s,baz=351,slow=2.3,SNR=4.3							
TORD				PKKPbc	**PKKPbc**	**09 41 41.0**	**-0.1**	
	comp=Z,2.7nm,0.7s,baz=162,slow=2.1,SNR=12							
TORD				PKKPab	**PKKPab**	**09 41 54.5**	**-2.3**	
	comp=Z,3.4nm,0.5s,baz=160,slow=2.2,SNR=14							
ATD	**Arta Tunnel**	**110.88**	**336**	IAMs_20	IAMs_20	10 20 33.3		
	comp=Z,450nm,21.0s							
H03N2	**Juan Fernandez**	**112.15**	**117**	T	T	11 32 08.0		
	baz=323,slow=77,SNR=69							
H03N1	**Juan Fernandez**	**112.16**	**117**	T	T	11 32 07.0		
	baz=323,slow=77,SNR=68							
H03N3	**Juan Fernandez**	**112.17**	**117**	T	T	11 32 07.5		
	baz=323,slow=77,SNR=84							
AC05	**El Transito**	**113.17**	**107**	IAMs_20	IAMs_20	10 24 12.3		
	comp=Z,599nm,20.0s							
CPUP	**Villa Florida**	**118.54**	**96**	PKKPab	PKKPab	09 41 16.9	-0.4	
	comp=Z,4.6nm,0.8s,baz=150,slow=6.3,SNR=9.0							
EDA	**Edea**	**120.91**	**11**	IAMs_20	IAMs_20	10 27 42.9		
	comp=Z,472nm,19.0s							
PLCA	**Paso Flores**	**122.03**	**116**	PKP	**PKPdf**	**09 31 04.2**	**-0.9**	
	comp=Z,4.4nm,0.7s,baz=272,slow=2.0,SNR=15							
PLCA				PKKPbc	**PKKPbc**	**09 41 01.3**	**+0.2**	
	comp=Z,1.5nm,1.0s,baz=161,slow=7.5,SNR=3.5							
VNDA	**Vanda**	**134.32**	**191**	PKP	**PKPdf**	**09 31 24.7**	**-2.6**	
	comp=Z,1.3nm,0.9s,baz=317,slow=5.7,SNR=3.8							
VNDA				SKPbc	**SKPbc**	**09 34 51.2**	**-1.7**	
	comp=Z,2.6nm,0.9s,baz=327,slow=3.5,SNR=5.7							
LSZ	**Lusaka**	**139.80**	**347**	PKhKP	PKPpre	09 31 31.6		
	comp=Z,3.4nm,0.4s,baz=39,slow=1.7,SNR=13							
LSZ				SKPab	**SKPab**	**09 35 23.1**	**+0.7**	
	comp=Z,5.1nm,0.7s,baz=130,slow=3.8,SNR=4.6							
TSUM	**Tsumeb**	**144.23**	**3**	PKP	**PKPab**	**09 31 45.3**	**+0.1**	
	comp=Z,66nm,0.8s,baz=12,slow=5.0,SNR=60							
TSUM	**Tsumeb**	**144.23**	**3**		PKPbc	09 31 45.6	+0.1	
TSUM	**Tsumeb**	**144.23**	**3**	P	**PKPab**	**09 31 45.2**	**+0.1**	
GMARE	**Gumare**	**144.40**	**356**		PKPbc	09 31 46.3	+0.3	
BLWY	**Bulawayo**	**144.53**	**345** *i* P		PKPbc	09 31 46.6	+0.1	
QSPA	**South Pole Qui**	**144.78**	**180**	PKP	**PKPab**	**09 31 45.4**	**-0.3**	
	comp=Z,107nm,0.8s,baz=5.5,slow=0.6,SNR=194							
QSPA				SKPbc	**SKPbc**	**09 35 20.9**	**-1.0**	
	comp=Z,20nm,1.1s,baz=42,slow=0.3,SNR=3.1							
QSPA	**South Pole Qui**	**144.78**	**180**		**PKPab**	**09 31 45.7**	**-0.1**	
MATP	**Matopo**	**144.82**	**345**	PKP	**PKPab**	**09 31 46.3**	**-1.1**	
	comp=Z,107nm,0.9s,baz=4.7,slow=3.5,SNR=108							
MATP	**Matopo**	**144.82**	**345** *i* P		**PKPab**	**09 31 46.2**	**-1.1**	
BROLN	**Tlhalogang**	**145.65**	**347**	P	**PKPbc**	**09 31 49.9**	**0.0**	
CKGRV	**CKGRV**	**146.31**	**353**	P	**PKPbc**	**09 31 52.1**	**+0.2**	
GRTLG	**Ghanzi**	**146.39**	**357**	P	**PKPab**	**09 31 53.1**	**0.0**	
KHWEE	**KHWEE**	**146.70**	**350**		**PKPbc**	**09 31 52.9**	**-0.2**	
KHWEE	**KHWEE**	**146.70**	**350**	P	**PKPbc**	**09 31 53.4**	**+0.3**	
WIN	**Windhoek**	**147.56**	**4**	PKP2	**PKPdf**	**09 31 54.2**	**+1.3**	
WIN	**Windhoek**	**147.56**	**4**		**PKPdf**	**09 31 54.2**	**+1.3**	
WIN	**Windhoek**	**147.56**	**4**	P	**PKPbc**	**09 31 55.9**	**+0.3**	
KOOLE	**Kule**	**148.03**	**359**	P	**PKPbc**	**09 31 57.3**	**+0.5**	
LKGWB	**Lokgwabe**	**149.13**	**357**	P	**PKPbc**	**09 31 59.8**	**+0.2**	
SKOMA	**Sekoma**	**149.38**	**352**	P	**PKPbc**	**09 32 00.1**	**0.0**	
LBTB	**Lobatse**	**149.72**	**349**	P	**PKiKP**	**09 32 01.6**	**-0.4**	
MAKGR	**Makgori**	**150.59**	**350**	PKPbc	**PKPbc**	**09 32 03.1**	**+0.1**	
MAKGR	**Makgori**	**150.59**	**350**	P	**PKiKP**	**09 32 03.5**	**-0.3**	
BOSA	**Boshof**	**153.31**	**349**	PKPbc	**PKPbc**	**09 32 08.8**	**-0.3**	
	comp=Z,31nm,0.8s,baz=348,slow=1.2,SNR=27							
BOSA	**Boshof**	**153.31**	**349**		**PKPbc**	**09 32 09.2**	**0.0**	
BOSA				PKPab	**PKPab**	**09 32 21.7**	**+0.5**	
BOSA	**Boshof**	**153.31**	**349** *i* P		**PKPbc**	**09 32 08.3**	**-0.9**	
BOSA	**Boshof**	**153.31**	**349**	P	**PKPbc**	**09 32 09.0**	**-0.2**	
MAW	**Mawson**	**156.30**	**221**	PKP	**PKPdf**	**09 32 03.6**	**-0.7**	
	comp=Z,1.8nm,0.8s,baz=328,slow=4.4,SNR=3.8							
MAW				PKPab	**PKPab**	**09 32 31.9**	**-0.8**	
	comp=Z,20nm,0.9s,baz=53,slow=3.7,SNR=14							
SUR	**Sutherland**	**157.37**	**357**	PKP	**PKPdf**	**09 32 07.6**	**+0.5**	
	comp=Z,6.3nm,1.0s,baz=110,slow=13,SNR=1.9							
SNAA	**Sanae**	**160.71**	**159**	PKP	**PKPdf**	**09 32 09.6**	**0.0**	
	comp=Z,2.6nm,0.9s,baz=145,slow=3.0,SNR=4.1							
SNAA				PKPab	**PKPab**	**09 32 51.5**	**-0.5**	
	comp=Z,5.6nm,0.9s,baz=202,slow=4.0,SNR=4.1							
NVL	**N'lazarevskaya**	**163.81**	**171** *e*PKP2		**pPKPab**	**09 33 18.5**	**-0.3**	
NVL				pmax	pmax			
	comp=Z,17nm,0.9s							

ISC 29 09:13:04.6±1.6, 61°15N±0°06×146°89W±0°07, h27km, n6, σ0s43/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLI	**Glacier Island** baz=8.1	**0.29**	**200**	P	**Pb**	**09 13 11.3**	**-0.4**
KLU	**Klutina** baz=241	**0.58**	**53**	P	**Pb**	**09 13 16.2**	**-0.1**
SCM	**Sheep Creek Mo** baz=166	**0.72**	**343**	P	**Pb**	**09 13 18.1**	**-0.4**
M23K	**Glacier View** baz=150	**0.76**	**328**	P	**Pb**	**09 13 18.9**	**-0.3**
PWL	**Port Wells** baz=62	**0.76**	**248**	P	**Pb**	**09 13 19.2**	**0.0**
SML	**Sawmill** baz=133	**0.95**	**314**	P	**Pn**	**09 13 22.6**	**+0.4**

*ASRS **29** 09:19:45.0±1.0, 54°.24N×86°.89E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 29 09:19:45.8±3.3, 54°33N×87°00E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=29.9km s-min=18.8km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=72,slow=316,SNR=4.1	**1.34**	**254**	I	I	09 27 40.0	
ZALV	**Zalesovo Beam** 3.1nm,0.3s,baz=72,slow=16,SNR=26	**1.34**	**254**	Pg	Pg	09 20 09.6	-1.9
ZALV				Lg	Lg	09 20 28.9	
	1.8nm,0.3s,baz=76,slow=32,SNR=11						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=54,slow=14,SNR=8.9	**6.37**	**238**	Pn	Pn	09 21 21.7	+0.9
	1.2nm,0.5s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=25,slow=13,SNR=2.1	**8.12**	**204**	Pn	Pn	09 21 46.3	+1.4
	0.2nm,0.4s						

IDC 29 09:27:11.5±4.6, 6°09S×147°89E, h99km±41km, mb3.6/3, mbtmp4.0/5, Error ellipse: s-maj=58.2km s-min=31.9km az=125.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 29nm,0.3s,baz=25,slow=6.8,SNR=23	**3.37**	**192**	P	Pn	09 28 02.8	+0.6
PMG				S	Sn	09 28 42.2	+0.8
	72nm,0.5s,baz=30,slow=20,SNR=5.3						
WRA	**Warramunga Arr** 3.9nm,0.7s,baz=40,slow=11,SNR=28	**19.05**	**222**	P	P	09 31 24.2	-2.0
ASAR	**Alice Springs** 1.9nm,0.6s,baz=53,slow=9.0,SNR=33	**22.05**	**216**	P	P	09 31 57.0	-1.4
	1.9nm,0.6s						
QSPA	**South Pole Qui** 1.9nm,1.0s,baz=1.9,slow=3.1,SNR=2.5	**83.87**	**180**	P	P	09 39 32.0	+1.9
	1.9nm,1.0s						
ILAR	**Eielson Array** 0.7nm,0.7s,baz=263,slow=4.9,SNR=7.5	**85.22**	**23**	P	P	09 39 36.0	-0.7
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea** 0.3nm,0.4s,baz=82,slow=4.2,SNR=1.9	**145.97**	**284**	PKPbc	PKPab	09 46 41.9	+0.4

*ASRS **29** 09:30:44.0±1.8, 53°.72N×91°.06E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 29 09:30:51.2±4.1, 53°69N×90°50E, h0km, mbtmp2.8/3, ML2.4/3, Error ellipse: s-maj=37.4km s-min=27.5km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,1.2s,baz=90,slow=317,SNR=5.6	**3.38**	**277**	I	I	09 52 45.0	
ZALV	**Zalesovo Beam** 0.8nm,0.3s,baz=96,slow=15,SNR=5.8	**3.38**	**277**	Pn	Pn	09 31 46.9	+1.8
ZALV				Lg	Lg	09 32 37.2	
	1.1nm,0.3s,baz=88,slow=28,SNR=6.5						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=66,slow=16,SNR=2.8	**7.97**	**252**	Pn	Pn	09 32 48.4	+0.2
KURBB				Lg	Lg	09 35 05.6	
	baz=60,slow=33,SNR=6.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=38,slow=15,SNR=1.7	**8.67**	**221**	Pn	Pn	09 32 58.0	+0.1
MKAR				Lg	Lg	09 35 25.8	
	0.1nm,0.3s,baz=24,slow=44,SNR=1.3						
	0.2nm,0.5s						

*ASRS **29** 09:34:59.0±1.0, 54°.12N×87°.12E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 29 09:34:59.2±3.7, 54°22N×87°47E, h0km, mbtmp2.6/2, ML2.6/2, Error ellipse: s-maj=32.8km s-min=20.2km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=79,slow=314,SNR=2.6	**1.59**	**261**	I	I	09 43 50.0	
ZALV	**Zalesovo Beam** 1.2nm,0.3s,baz=79,slow=15,SNR=10	**1.59**	**261**	Pg	Pn	09 35 27.2	-1.3
ZALV				Lg	Lg	09 35 50.2	
	1.1nm,0.3s,baz=81,slow=27,SNR=4.4						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=53,slow=13,SNR=2.2	**6.55**	**240**	Pn	Pn	09 36 37.1	+0.3
	0.4nm,0.4s						
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=29,slow=16,SNR=1.1	**8.13**	**206**	Pn	Pn	09 37 00.0	+1.5
	0.1nm,0.4s						

*IDC **29** 09:36:24.1±0.5, 10°.18S×75°.00W, h0km, mb4.5/20, mbtmp4.6/23, ML4.5/3, MS4.0/16, Error ellipse: s-maj=16.1km s-min=10.2km az=86.0*
*INMG **29** 09:36:25.0±2.9, 10°.40S×75°.05W, h10km, M5.2, mb5.2, #DIST_RANGE: DISTANT*
*GFZ **29** 09:36:30.1±0.1, 10°.3S±3°.7W±°, h38km, M4.7/49, mb4.9/49*
*VAO **29** 09:36:31.8±0.3, 10°.26S×74°.83W, h48km, mb5.2, Presumed earthquake*
*NEIC **29** 09:36:31.2±1.9, 10°.33S±0°.06×75°.01W±0°.08, h46km±6km, mb4.9/185, Error ellipse: s-maj=11.1km s-min=9.1km az=104.0*
ISC 29 09:36:30.8±0.3, 10°26S±0°.04×74°99W±0°.05, h50km, n584, σ0s92/517, mb4.9/109, MS4.0/13, 4C, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana** 277nm,0.3s,baz=36,slow=11,SNR=570	**2.50**	**226**	Pn	**Pn**	**09 37 08.5**	**-0.6**
NNA				Sn	**Sn**	**09 37 39.8**	**+1.3**
	660nm,0.3s,baz=65,slow=3.7,SNR=8.3						
	2µm,0.6s						
NNA	**Nana**	**2.50**	**226**		**Pn**	**09 37 08.5**	**-0.6**
NNA				Sn	**Sn**	**09 37 37.9**	**-0.6**
NNA	**Nana**	**2.50**	**226**	P	**Pn**	**09 37 08.9**	**-0.2**
CZSB	**Cruzeiro do Su**	**3.38**	**42**		**Pn**	**09 37 22.4**	**+1.3**
CZSB	**Cruzeiro do Su**	**3.38**	**42**	P	**Pn**	**09 37 23.0**	**+1.9**
CZSB				S	Sn	09 38 17.9	+18
CZSB	**Cruzeiro do Su**	**3.38**	**42** *eP*		**Pn**	**09 37 19.8**	**-1.3**
ATAH	**Atahualpa** 12nm,0.3s,baz=128,slow=9.1,SNR=61	**4.58**	**312**	Pn	**Pn**	**09 37 38.8**	**+0.9**
ATAH				Sn	**Sn**	**09 38 30.4**	**+0.4**
	15nm,0.3s,baz=119,slow=7.8,SNR=4.2						
ATAH				Lg	Lg	09 38 47.4	
	29nm,0.3s,baz=276,slow=22,SNR=3.9						
MCRA	**Macar, Loja** 1µm95nm,0.6s	**7.64**	**320**	P	**Pn**	**09 38 16.2**	**-3.5**
MCRA				S	**Sn**	**09 39 39.8**	**-5.2**
	1µm95nm,0.6s						
LPAZ	**La Paz** 1.5nm,0.3s,baz=325,slow=11,SNR=47	**8.97**	**133**	Pn	**Pn**	**09 38 39.0**	**+0.6**
LPAZ				Lg	Lg	09 41 06.0	
	7.5nm,0.3s,baz=221,slow=22,SNR=2.5						
LPAZ				LR	LR	09 42 46.5	
	comp=Z,561nm,18.2s,baz=317,slow=42						
LPAZ	**La Paz**	**8.97**	**133**		**Pn**	**09 38 38.6**	**+0.2**
LPAZ	**La Paz**	**8.97**	**133** *eP*		**Pn**	**09 38 39.0**	**+0.6**
LPAZ	**La Paz**	**8.97**	**133** P		**Pn**	**09 38 38.6**	**+0.2**
PB18	**Visviri**	**9.04**	**144**		**Pn**	**09 38 37.3**	**-2.0**
PB12	**IPOC Station P**	**9.46**	**152**		**Pn**	**09 38 42.9**	**-1.7**
PB12	**IPOC Station P**	**9.46**	**152** P		**Pn**	**09 38 44.2**	**-0.3**
PB16	**IPOC Station P**	**9.63**	**147**		**Pn**	**09 38 46.1**	**-1.2**
PB16	**IPOC Station P**	**9.63**	**147** P		**Pn**	**09 38 47.5**	**+0.2**
PIAT	**Ana Tenorio** 1µm110nm,0.5s	**9.76**	**340** P		**Pn**	**09 38 47.5**	**-1.5**
PIAT				S	**Sn**	**09 40 35.0**	**-2.4**
	1µm110nm,0.5s						

SLOR	**San Lorenzo -**	**10.09**	**340**		**Pn**	**09 38 53.2**	**-0.3**	
PSGCX	**Pisagua**	**10.41**	**154**	Pn	**Pn**	**09 38 55.9**	**-1.7**	
PB11	**IPOC Station P**	**10.76**	**152**		**Pn**	**09 38 59.3**	**-3.1**	
GO01	**Chusmiza**	**10.90**	**150**		**Pn**	**09 39 03.8**	**-0.9**	
GO01	**Chusmiza**	**10.90**	**150**	P	**Pn**	**09 39 04.2**	**-0.5**	
OTAV	**Otavalo**	**10.98**	**342**		**Pn**	**09 39 08.0**	**+2.3**	
OTAV	**Otavalo**	**10.98**	**342** *eP*		**Pn**	**09 39 08.0**	**+2.3**	
PAC1	**Pacto, Paraso** 1µm139nm,0.6s	**11.12**	**340**	P	**Pn**	**09 39 09.6**	**+2.2**	
PAC1				S	**Sn**	**09 41 14.2**	**+3.8**	
	1µm139nm,0.6s							
TULM	**Tulcn-Chalpat** 1µm120nm,0.7s	**11.25**	**346**	P	**Pn**	**09 39 10.0**	**+0.5**	
PB08	**IPOC Station P**	**11.32**	**151**	Pn	**Pn**	**09 39 08.2**	**-2.2**	
PB08	**IPOC Station P**	**11.32**	**151**	P	**Pn**	**09 39 10.0**	**-0.4**	
CMBC	**Cumbal**	**11.48**	**346**	P	**Pn**	**09 39 11.9**	**-0.6**	
FLOC	**Florencia** 576nm170nm,0.7s	**11.78**	**357**	P	**Pn**	**09 39 14.2**	**-2.1**	
PB02	**IPOC Station P**	**12.04**	**157**	Pn	**Pn**	**09 39 16.7**	**-3.2**	
GARC	**Garzon, Huila** 763nm156nm,0.5s	**12.37**	**358**	P	**Pn**	**09 39 23.1**	**-1.5**	
MACC	**Macarena, Meta** 525nm117nm,0.7s	**12.37**	**5**	P	**Pn**	**09 39 22.0**	**-2.4**	
BBAC	**Balboa, Cauca** 378nm127nm,0.6s	**12.40**	**349**	P	**Pn**	**09 39 23.9**	**-1.1**	
PB07	**IPOC Station P**	**12.41**	**157**	Pn	**Pn**	**09 39 24.1**	**-0.9**	
PB09	**IPOC Station P**	**12.73**	**155**	Pn	**Pn**	**09 39 27.4**	**-2.0**	
PB03	**IPOC Station P**	**12.76**	**157**		**Pn**	**09 39 26.3**	**-3.4**	
POPC	**Popayan, Colom** 326nm63nm,0.9s	**12.82**	**352**	P	**Pn**	**09 39 30.2**	**-0.5**	
PB05	**IPOC Station P**	**13.34**	**160**	Pn	Pn	09 39 32.8	-4.8	
JAMC	**Jamundi, Valle** 434nm67nm,0.8s	**13.49**	**353**	P	**P**	**09 39 45.0**	**-2.7**	
VILC	**Villavicio,**	**14.33**	**5**	P	**Pn**	**09 39 50.7**	**-0.5**	
SIV	**San Ignacio** 0.3nm,0.3s,baz=300,slow=11,SNR=55	**14.70**	**114**	Pn	**Pn**	**09 39 54.6**	**-1.3**	
SIV				Lg	Lg	09 44 06.9		
	0.7nm,0.3s,baz=202,slow=14,SNR=4.0							
SIV				LR	LR	09 46 02.3		
	comp=Z,355nm,18.3s,baz=296,slow=39							
	8.4nm,0.5s							
CVER	**Cruz Verde, Cu** 2µm231nm,0.9s	**14.71**	**4**	P	**Pn**	**09 39 56.8**	**+0.4**	
VILB	**Vilhena**	**14.74**	**102**		**Pn**	**09 39 55.2**	**-1.2**	
VILB	**Vilhena**	**14.74**	**102** *eP*		**Pn**	**09 39 55.4**	**-1.0**	
PB14	**IPOC Station P**	**14.94**	**164**	Pn	**Pn**	**09 39 58.7**	**-0.6**	
ROSC	**El Rosal** 1.7nm,0.3s,baz=109,slow=19,SNR=2.5	**15.01**	**3**	Pn	**Pn**	**09 40 00.4**	**+0.1**	
ROSC				Lg	Lg	09 44 18.2		
	4.5nm,0.3s,baz=202,slow=22,SNR=2.0							
ROSC				LR	LR	09 46 37.5		
	comp=Z,790nm,19.3s,baz=234,slow=41							
ROSC	**El Rosal**	**15.01**	**3**		**Pn**	**09 40 02.2**	**+1.9**	
ROSC				IAmb	IAmb	09 40 14.3		
	comp=Z,38nm,0.6s							
GUY2C	**Guyana, Caldas** comp=Z,2µm comp=Z,225nm,0.7s	**15.38**	**359**	P	**Pn**	**09 40 06.7**	**+1.5**	
BBSD	**Serra de San D**	**15.57**	**118** *eP*		**Pn**	**09 40 06.2**	**-1.0**	
MACA	**Manacapuru-AM**	**15.86**	**65**		**Pn**	**09 40 08.9**	**-2.0**	
MACA	**Manacapuru-AM**	**15.86**	**65** *eP*		**Pn**	**09 40 07.4**	**-3.4**	
CBOC	**Ciudad Bolivar** comp=Z,733nmcomp=Z,90nm,0.8s	**16.05**	**356**	P	**P**	**09 40 16.5**	**+0.4**	
SALTA		**16.15**	**150**	P	**P**	**09 40 16.0**	**-1.6**	
RUSC	**La Rusia** comp=Z,1µmcomp=Z,134nm,0.8s	**16.16**	**7**	P	**Pn**	**09 40 15.8**	**+0.7**	
PTLB	**Pontes e Lacer** comp=Z,95nm,0.9s	**16.29**	**110**		**Pn**	**09 40 13.8**	**-2.6**	
PTLB				IAmb	IAmb	09 40 21.1		
PTLB	**Pontes e Lacer**	**16.29**	**110** *eP*		**Pn**	**09 40 14.2**	**-2.2**	
AC01	**Pan de Azucar**	**16.34**	**166**	Pn	**Pn**	**09 40 15.8**	**-1.2**	
AC02	**Maricunga**	**17.40**	**162**		**Pn**	**09 40 30.3**	**-0.3**	
AC02	**Maricunga**	**17.40**	**162**	P	**P**	**09 40 31.6**	**+0.3**	
PAMC	**Pamplona, Colo**	**17.63**	**8**	P	**P**	**09 40 35.4**	**+1.5**	
URCC	**San Jos de Ur** comp=Z,48nm,0.7s	**17.90**	**358**	P	**P**	**09 40 36.9**	**+0.5**	
APAC	**Apartado, Choc** comp=Z,1µmcomp=Z,119nm,1.0s	**18.11**	**355**	P	**Pn**	**09 40 40.5**	**+1.7**	
AZU	**Azuero** comp=Z,40nm,1.0s	**18.68**	**343**	P	**P**

PMNB **Patos De Minas** 28.82 110 *e*P P 09 42 24.6 -0.1
RCLB **Rio Claro- Sao** 28.93 118 *e*P P 09 42 25.1 -0.6
CANS **Sao Roque de M** 29.29 113 *e*P P 09 42 27.6 -1.3
OBIP **Obispado Ponce** 29.31 16 P P 09 42 30.0 +1.2
OBIP IAmb IAmb 09 42 39.8
comp=Z,31nm,1.1s
PRSN **Puerto Rico Se** 29.33 15 P P 09 42 29.8 +0.8
CELP **Cerrillos** 29.35 16 P P 09 42 29.6 +0.4
DR12 **Loma Pena Alta** 29.39 11 P P 09 42 30.3 +0.7
SJG **San Juan** 29.51 17 P P 09 42 29.8 -0.8
SDBA **SAO DESIDERIO** 29.57 97 *e*P P 09 42 31.3 -0.1
JANB **Januaria** 30.30 102 *e*P P 09 42 37.7 -0.1
PLCA **Paso Flores** 30.61 173 P P 09 42 39.3 -0.9
comp=Z,1.8nm,0.7s,baz=338,slow=6.9,SNR=7.4
PLCA LR LR 09 53 17.3
comp=Z,102nm,19.4s,baz=38,slow=33
comp=Z,1.8nm,0.7s
PLCA **Paso Flores** 30.61 173 *e*P P 09 42 40.0 -0.2
BSCB **Bom Sucesso** 30.94 114 *e*P P 09 42 42.4 -1.0
DIAM **Diamantina, MG** 31.35 108 *e*P P 09 42 47.0 -0.1
TEIG **Tepich** 32.99 337 P P 09 43 01.8 +0.6
TEIG **Tepich** 32.99 337 P P 09 43 00.7 -0.5
TEIG **Tepich** 32.99 337 P P 09 43 01.8 +0.6
TEIG pP pP 09 43 11.9 -2.4
SJMB **Sao Joao De Ma** 33.74 108 *e*P P 09 43 07.1 -0.8
NBPS **Pedro II - PI** 33.76 83 *e*P P 09 43 07.0 -1.2
BSFB **Barra de Sao F** 34.08 108 *e*P P 09 43 10.4 -0.4
BSFB **Barra de Sao F** 34.08 108 P P 09 43 10.3 -0.5
NBPN **Ponto Novo - B** 34.20 94 *e*P P 09 43 11.9 0.0
ALF01 **Guarapari-ES** 34.53 111 *e*P P 09 43 14.7 0.0
RIB01 **Linhares ES** 34.58 109 *e*P P 09 43 14.8 -0.4
GUA01 **Guaratinga, BA** 34.76 104 *e*P P 09 43 17.0 +0.2
CMC01 **Camacan, BA** 34.93 102 *e*P P 09 43 18.4 +0.2
NBMA **Muriti-CE** 35.90 88 *e*P P 09 43 26.6 0.0
HBVL **Hebbronville** 43.64 329 P P 09 44 31.5 +0.9
HBVL IAmb IAmb 09 44 43.3
comp=Z,23nm,0.9s
152A **Waverly Hall** 43.68 348 P P 09 44 30.9 +0.1
152A IAmb IAmb 09 44 45.8
comp=Z,7.8nm,0.8s
GOGA **Godfrey** 44.17 350 P P 09 44 34.1 -0.7
HKT **Hockley** 44.73 334 P P 09 44 39.8 +0.6
TZTN **Tazewell** 47.24 351 P P 09 44 57.9 -1.1
HPIG 47.47 322 P P 09 45 01.8 +0.6
WVT **Waverly** 47.70 346 P P 09 45 00.8 -1.7
WVT **Waverly** 47.70 346 P P 09 45 00.9 -1.7
SAND **Sanderson** 47.76 328 IAmb IAmb 09 45 15.5
comp=Z,6.4nm,0.7s
MIAR **Mount Ida** 47.92 339 P P 09 45 04.2 0.0
TXAR **Lajitas Array** 48.10 326 P P 09 45 06.0 0.0
comp=Z,2.1nm,0.7s,baz=149,slow=8.6,SNR=44
comp=Z,2.1nm,0.7s
TXAR **Lajitas Array** 48.10 326 P P 09 45 05.9 0.0
TX31 **Lajitas Ar. Si** 48.10 326 P P 09 45 06.3 +0.3
WHAR **Wooly Hollow** 48.16 341 P P 09 45 06.0 -0.1
WHAR IAmb IAmb 09 45 17.2
comp=Z,12nm,0.7s
S54A **Dingess, Beckl** 48.17 353 P P 09 45 06.3 +0.1
PLPT **Palo Pinto** 48.27 333 P P 09 45 07.5 +0.5
S51A **Beattyville** 48.32 351 P P 09 45 07.3 0.0
R55A **Marlinton** 48.52 355 P P 09 45 09.8 +0.9
R55A IAmb IAmb 09 45 24.9
comp=Z,19nm,0.9s
FCAR **Ozark Folk Cen** 48.66 341 P P 09 45 09.4 -0.6
FCAR IAmb IAmb 09 45 20.9
comp=Z,9.8nm,0.7s
ABTX **Abilene, Hawle** 48.70 332 P P 09 45 11.2 +0.8
MNHN **Monahans** 49.19 328 IAmb IAmb 09 45 25.8
comp=Z,12nm,0.7s
WCI **Wyandotte Cave** 49.38 348 P P 09 45 14.5 -0.9
POST **Post** 49.95 331 P P 09 45 20.4 +0.4
WMOK **Wichita Mounta** 50.11 334 P P 09 45 20.9 -0.2
P48A **Milroy** 50.40 350 P P 09 45 22.1 -1.2
P48A IAmb IAmb 09 45 22.7
comp=Z,15nm,0.7s
CCM **Cathedral Cave** 50.41 343 P P 09 45 22.1 -1.2
O52A **Adamsville** 50.52 353 P P 09 45 23.8 -0.2
O52A IAmb IAmb 09 45 36.5
comp=Z,18nm,0.8s
Q44A **Meyer Farm, Va** 50.62 346 P P 09 45 24.7 -0.1
MNTX **Cornudas Mount** 50.86 326 P P 09 45 26.9 0.0
SFIN **Lafayette** 51.61 348 P P 09 45 31.1 -1.2
N49A **Columbus Grove** 51.62 351 P P 09 45 31.6 -0.8
BINY **Binghamton** 52.20 359 P P 09 45 36.4 -0.3
HRV **Adam Dziewonsk** 52.60 3 P P 09 45 39.6 +0.1
HRV **Adam Dziewonsk** 52.60 3 P P 09 45 40.6 +1.0
DUN6 **Lazy B Ranch** 53.59 324 IAmb IAmb 09 45 48.9
comp=Z,18nm,1.0s
L42A **Oliver, Polo** 53.72 346 P P 09 45 46.6 -1.3
L42A IAmb IAmb 09 45 57.4
comp=Z,12nm,0.6s
ALQ **Albuquerque** 53.93 328 P P 09 45 50.0 +0.3
ANMO **Albuquerque** 53.93 328 P P 09 45 50.0 +0.2
ANMO pP pP 09 46 00.6 -3.0
ANMO **Albuquerque** 53.93 328 P P 09 45 50.0 +0.2
TUC **Tucson** 54.41 322 P P 09 45 53.4 +0.3
TUC pP pP 09 46 03.8 -3.2
T25A **Trinidad** 54.64 331 IAmb IAmb 09 45 56.2
comp=Z,16nm,0.8s
MVCO **Mesa Verde** 56.72 328 P P 09 46 09.6 -0.3
ECSD **EROS Data Cent** 57.22 341 P P 09 46 11.6 -1.4
ISCO **Idaho Springs** 57.34 332 P P 09 46 13.7 -0.5
U15A **North Rim** 58.21 325 IAmb IAmb 09 46 22.1
comp=Z,5.7nm,1.0s
E38A **The Farm, Brul** 58.51 347 IAmb IAmb 09 46 21.8
comp=Z,10nm,0.8s
KNB **Kanab** 58.92 325 IAmb IAmb 09 46 27.1
comp=Z,8.0nm,0.9s
EYMN **Ely** 59.77 347 IAmb IAmb 09 46 41.4
comp=Z,5.8nm,0.7s
EYMN **Ely** 59.77 347 P P 09 46 29.6 -1.1
K22A **Casper** 60.03 334 IAmb IAmb 09 46 33.6
comp=Z,7.0nm,0.8s
RSSD **Black Hills** 60.20 336 P P 09 46 34.9 +1.0
RSSD IAmb IAmb 09 46 35.3
comp=Z,11nm,1.1s
RSSD **Black Hills** 60.20 336 P P 09 46 34.6 +0.7
BSUT **Blindstream Ca** 60.39 329 IAmb IAmb 09 46 36.8
comp=Z,7.5nm,0.9s
PSUT **Pine Spring** 60.57 326 IAmb IAmb 09 46 41.6
comp=Z,6.2nm,0.9s
TPNV **Topopah Spring** 60.87 323 IAmb IAmb 09 46 55.6
comp=Z,5.8nm,1.0s
AGMN **Agassiz Nation** 61.16 344 P P 09 46 39.7 -0.4
DUG **Dugway, Tooele** 61.20 328 IAmb IAmb 09 46 42.3
comp=Z,12nm,0.9s
DUG **Dugway, Tooele** 61.20 328 P P 09 46 40.8 +0.1
PDAR **Pinedale Array** 61.50 332 P P 09 46 42.1 -0.7
comp=Z,2.8nm,0.8s,baz=127,slow=8.2,SNR=22
comp=Z,2.8nm,0.8s
PDAR **Pinedale Array** 61.50 332 P 09 46 41.7 -1.2
HWUT **Hardware Ranch** 61.59 329 IAmb IAmb 09 46 44.1
comp=Z,15nm,0.8s
HWUT **Hardware Ranch** 61.59 329 P P 09 46 43.4 0.0
EPLO **Experimental L** 61.90 346 P 09 46 44.9 -0.2
EPLO IAmb IAmb 09 47 01.4
comp=Z,13nm,0.9s
AHID **Auburn Hatcher** 62.23 331 P P 09 46 47.5 -0.2
ULM **Lac du Bonnet** 62.95 345 P P 09 46 51.2 -0.9
comp=Z,18nm,0.7s,baz=149,slow=7.0,SNR=41
ULM LR LR 10 16 44.4
comp=Z,112nm,19.3s,baz=34,slow=38
comp=Z,18nm,0.7s
SOK **Sop, Niakhar** 63.03 68 P P 09 46 54.5 +1.3
NVAR **Mina Array Bea** 63.06 323 P P 09 46 53.8 +0.4
comp=Z,1.6nm,0.9s,baz=143,slow=6.6,SNR=12
comp=Z,1.6nm,0.9s
NVAR **Mina Array Bea** 63.06 323 P P 09 46 53.9 +0.5
RLMT **Red Lodge** 63.20 333 IAmb IAmb 09 46 55.0
comp=Z,7.8nm,0.9s
HLID **Hailey** 64.45 329 P P 09 47 02.1 -0.3
PAHR **Pah Rah Range** 64.53 323 IAmb IAmb 09 47 04.7
comp=Z,7.0nm,0.9s
MFID **Camas Ranch** 65.07 328 IAmb IAmb 09 47 07.9
comp=Z,17nm,0.9s
SCHQ **Schefferville** 65.20 5 P P 09 47 07.0 +0.2
comp=Z,5.1nm,0.7s,baz=200,slow=4.7,SNR=7.5
SCHQ LR LR 10 14 47.6
comp=Z,75nm,20.8s,baz=250,slow=35
comp=Z,5.1nm,0.7s
SCHQ **Schefferville** 65.20 5 P P 09 47 07.0 +0.2
SCHQ IAmb IAmb 09 47 22.0
comp=Z,15nm,1.1s
EGMT **Eagleton** 65.69 335 IAmb IAmb 09 47 11.1
comp=Z,11nm,0.8s
ORV **Oroville** 65.70 322 IAmb IAmb 09 47 23.6
comp=Z,8.8nm,0.9s
WVOR **Wild Horse Val** 65.90 326 P P 09 47 11.8 +0.1
MSO **Missoula** 66.61 332 IAmb IAmb 09 47 17.7
comp=Z,13nm,0.8s
F10A **Beach Ranch, E** 67.58 330 IAmb IAmb 09 47 37.1
comp=Z,11nm,1.0s
PINE **Pine Mountain** 68.06 326 IAmb IAmb 09 47 43.6
comp=Z,14nm,1.1s
FFC **Flin Flon** 68.61 344 P P 09 47 27.7 -0.7
NEW **Newport** 69.14 331 P P 09 47 32.1 +0.2
EDM **Edmonton** 71.17 337 IAmb IAmb 09 47 44.6
comp=Z,23nm,0.9s
DBIC **Dimbokro** 71.83 79 P P 09 47 49.0 +0.1
comp=Z,13nm,0.5s,baz=250,slow=5.4,SNR=13
DBIC LR LR 10 19 04.8
comp=Z,424nm,19.5s,baz=350,slow=36
comp=Z,13nm,0.5s
DBIC **Dimbokro** 71.83 79 IAmb IAmb 09 47 50.0
comp=Z,25nm,1.0s
DBIC **Dimbokro** 71.83 79 P P 09 47 49.3 +0.3
DBIC **Dimbokro** 71.83 79 P P 09 47 49.1 +0.1
NLWA **Neilton Lookou** 71.94 327 IAmb IAmb 09 47 51.1
comp=Z,9.7nm,0.9s
VNA1 **Neumayer--Stat** 72.76 161 P P 09 47 54.3 +0.8
comp=Z,5.6nm,0.8s
VNA2 **Neumayer--Watz** 73.12 161 ⇑P P 09 47 55.8 +0.1
comp=Z,3.1nm,0.7s,baz=289,slow=5.5
IVI **Ivigtut** 74.31 13 P P 09 48 03.5 +0.9
IVI IAmb IAmb 09 48 04.2
comp=Z,20nm,0.9s
IVI **Ivigtut** 74.31 13 P P 09 48 03.3 +0.7
IVI **Ivigtut** 74.31 13 *i* P P 09 48 03.2 +0.6
IVI IAmb IAmb 09 48 03.9
comp=Z,19nm,0.9s
SNAA **Sanae** 74.74 162 ⇑P P 09 48 05.4 +0.2
comp=Z,57nm,0.6s
SNAA **Sae** 74.74 162 P P 09 48 05.3 0.0
comp=Z,2.9nm,0.8s,baz=291,slow=7.2,SNR=8.4
comp=Z,2.9nm,0.8s
SNAA **Sanae** 74.74 162 P 09 48 05.2 0.0
BLKN **Baker Lake** 76.05 351 IAmb IAmb 09 48 12.3
comp=Z,7.5nm,0.8s
ACRG **Accra** 76.13 82 P P 09 48 13.8 -0.3
TROLL **Troll, Antarti** 76.45 162 ⇑P P 09 48 14.7 -0.4
comp=Z,174nm,1.1s
AVE **Averroes** 77.42 52 P P 09 48 21.7 +0.7
PBDV **Barranco-do-Ve** 78.49 49 *e*P P 09 48 27.1 +0.2
MESJ **Messejana** 78.51 48 *e*P P 09 48 28.0 +1.0
PCVE **Castro Verde** 78.56 48 *e*P P 09 48 29.3 +2.0
PCVE *i* IAmb IAmb 09 48 45.1
comp=Z,30nm,1.3s
MOE **Montemor** 78.68 47 *e*P P 09 48 29.5 +1.6
YKA **Yellowknife Ar** 78.73 342 P P 09 48 27.2 -0.4
comp=Z,5.0nm,0.9s,baz=142,slow=6.5,SNR=16
comp=Z,5.0nm,0.9s
YKAW3 **Yellowknife Wh** 78.79 342 IAmb IAmb 09 48 28.6
comp=Z,11nm,1.0s
EVO **Evora** 78.92 47 *e*P P 09 48 30.5 +1.3
PMTG **Montargil** 78.98 47 *e*P P 09 48 30.9 +1.3
PMTG *i* IAmb IAmb 09 48 32.1
comp=Z,39nm,1.3s
PARRA **Arraiolos** 79.01 47 *e*P P 09 48 31.2 +1.5
PCAS **Casmilo, Conde** 79.17 46 *e*P P 09 48 32.0 +1.5
PCAS *i* IAmb IAmb 09 48 34.9
comp=Z,48nm,1.7s
PSARD **Sardoal** 79.23 46 *e*P P 09 48 32.1 +1.2
PSARD *i* IAmb IAmb 09 48 33.3
comp=Z,48nm,1.3s
IFR **Ifrane** 79.29 53 P P 09 48 32.2 +0.6
MD01 **Midelt array s** 79.36 54 P P 09 48 33.0 +1.0
MD31 **MD31** 79.36 54 IAmb IAmb 09 48 34.7
comp=Z,9.3nm,1.1s
TORD **Torodi Ar. Bea** 79.58 75 P P 09 48 33.4 0.0
comp=Z,28nm,0.8s,baz=270,slow=5.9,SNR=98
comp=Z,28nm,0.8s
QSPA **South Pole Qui** 79.87 180 P P 09 48 34.5 +0.5
comp=Z,1.5nm,0.6s,baz=148,slow=5.9,SNR=17
comp=Z,1.5nm,0.6s
QSPA **South Pole Qui** 79.87 180 P P 09 48 34.7 +0.6
MTE **Manteigas** 79.98 46 *e*P P 09 48 36.2 +1.2
MTE *i* IAmb IAmb 09 48 37.1
comp=Z,33nm,1.0s
MTE **Manteigas** 79.98 46 P 09 48 36.4 +1.3
MTE IAmb IAmb 09 48 37.0
comp=Z,21nm,0.8s
PGAV **Gavieira, Arco** 80.08 44 *e*P P 09 48 36.6 +1.0
POLO **Lamas de Olo** 80.18 45 *e*P P 09 48 37.6 +1.5
KOTAN **Kotaneelee Air** 80.23 337 P P 09 48 37.0 +1.1
baz=131
V35K **Ketchikan** 80.55 331 P P 09 48 38.6 +1.0
baz=124
LIRD **Liard River Hi** 80.56 336 P P 09 48 38.2 +0.6
baz=129
MVO **Moncorvo** 80.63 45 *e*P P 09 48 39.6 +1.0
MVO *i* IAmb IAmb 09 48 40.9
comp=Z,37nm,1.7s
T35M **Bob Quinn** 80.85 333 IAmb IAmb 09 48 41.2
comp=Z,8.0nm,0.9s
T35M **Bob Quinn** 80.85 333 P P 09 48 40.0 +0.7
baz=125
EMAL **Malaga-Limoner** 80.93 50 P P 09 48 41.4 +1.3
PBRG **Braganca** 81.07 45 *e*P P 09 48 42.0 +1.2
PBRG *i* IAmb IAmb 09 48 44.0
comp=Z,33nm,1.5s
ECAL **Calabor** 81.13 45 P P 09 48 41.1 -0.1
WRAK **Wrangell Islan** 81.49 332 P P 09 48 43.3 +0.7
baz=123
DLBC **Dease Lake** 81.59 334 P P 09 48 44.1 +0.9
baz=126
U33K **Whale Pass** 81.69 331 P P 09 48 44.1 +0.5
baz=122
S34M **Telegraph Cree** 81.77 333 P P 09 48 44.7 +0.6
baz=124
T33K **Petersburg** 81.99 332 P P 09 48 45.6 +0.4
baz=123
WTLY **Watson Lake, Y** 82.07 336 P P 09 48 46.2 +0.5
baz=127
ESDC **Sonseca Array** 82.27 47 P P 09 48 48.8 +1.5
comp=Z,13nm,1.0s,baz=253,slow=5.7,SNR=37
comp=Z,13nm,1.0s
ESBB **Sonseca Array** 82.28 47 IAmb IAmb 09 48 50.8
comp=Z,20nm,1.1s
POIN **Pond Inlet** 82.80 359 IAmb IAmb 09 48 50.5
comp=Z,16nm,1.0s
Q32M **Nakina River** 82.85 334 P P 09 48 49.8 -0.2
baz=124
S32K **Killisnoo** 83.09 332 P P 09 48 51.4 +0.5
baz=121
R32K **Eaglecrest** 83.48 333 P P 09 48 53.2 +0.2
baz=121
P33M **Teslin, Yukon** 83.78 335 IAmb IAmb 09 48 56.0
comp=Z,7.3nm,1.0s
P33M **Teslin, Yukon** 83.78 335 P P 09 48 54.9 +0.4
baz=123
BESE **Bessie Mountai** 83.79 333 IAmb IAmb 09 48 56.5
comp=Z,10nm,1.0s
P32M **Atlin** 83.82 334 P P 09 48 55.0 +0.3
baz=122
S31K **Pelican** 84.10 332 P P 09 48 56.5 +0.4
baz=120
N32M **Quiet Lake** 84.40 336 IAmb IAmb 09 48 59.1
comp=Z,13nm,0.8s
N32M **Quiet Lake** 84.40 336 P P 09 48 58.1 +0.4
baz=123
SKAG **Skagway** 84.45 334 P P 09 48 58.1 +0.2
baz=121
MMPY **Sheldon Lake,** 84.50 337 IAmb IAmb 09 48 59.7
comp=Z,7.0nm,0.9s
MMPY **Sheldon Lake,** 84.50 337 P P 09 48 58.5 +0.3
baz=125
BORG **Borgarnes** 84.82 20 LR LR 10 23 49.8
comp=Z,56nm,21.9s,baz=119,slow=34
BORG **Borgarnes** 84.82 20 P P 09 49 02.0 +2.5
WHY **Whitehorse** 84.88 335 P P 09 49 00.2 +0.1
baz=121
PLBC **Pleasant Camp** 84.91 333 P P 09 49 00.0 -0.2
baz=120
TAM **Tamanrasset** 85.32 66 P 09 49 04.8 +1.5
TAM **Tamanrasset** 85.32 66 P P 09 49 04.3 +1.0
O30N **Mendenhall** 85.45 334 P P 09 49 03.0 +0.1
baz=120,SNR=7.0
M31M **Drury Creek, Y** 85.49 336 P P 09 49 03.3 +0.2
baz=122
P30M **Million Dollar** 85.50 334 P P 09 49 03.3 +0.1
baz=119
P29M **Windy Craggy** 85.60 333 IAmb IAmb 09 49 05.2
comp=Z,5.8nm,1.0s
P29M **Windy Craggy** 85.60 333 P P 09 49 03.7 0.0
baz=119
N31M **Braeburn, Yuko** 85.68 335 IAmb IAmb 09 49 05.6
comp=Z,10nm,1.0s
N31M **Braeburn, Yuko** 85.68 335 P P 09 49 04.1 0.0
baz=121
EDA **Edea** 85.90 85 P 09 49 06.9 +0.8
SUMG **Summit** 86.01 10 P 09 49 06.1 +0.2
SUMG **Summit** 86.01 10 P P 09 49 06.1 +0.2
SUMG **Summit** 86.01 10 *i* P P 09 49 06.7 +0.8
SUMG IAmb IAmb 09 49 07.5
comp=Z,37nm,1.1s
HYT **Haines Junctio** 86.08 334 P P 09 49 06.1 0.0
baz=119
N30M **Aishikik Lake** 86.21 335 IAmb IAmb 09 49 08.7
comp=Z,8.7nm,1.1s
N30M **Aishikik Lake** 86.21 335 P P 09 49 06.8 +0.1
baz=119
O29M **Mount Kennedy** 86.30 333 P P 09 49 06.8 -0.4
baz=118
C36M **Paulatuk** 86.37 344 P P 09 49 07.2 0.0
baz=132
YUK6 **Outpost Mounta** 86.50 334 P P 09 49 08.2 -0.2
baz=118
M30M **Minto, Yukon** 86.64 336 IAmb IAmb 09 49 09.9
comp=Z,4.3nm,0.9s
M30M **Minto, Yukon** 86.64 336 P P 09 49 08.3 -0.5
baz=120,SNR=7.3
VNDA **Vanda** 86.81 191 P P 09 49 11.0 +1.6
comp=Z,0.5nm,0.7s,baz=180,slow=1.0,SNR=2.3
comp=Z,0.5nm,0.7s
YUK4 **Talbot Arm** 86.82 334 P P 09 49 10.1 +0.2
baz=118,SNR=14
BRWY **Burwash Landin** 86.99 334 P P 09 49 10.7 +0.1
baz=118
O28M **Mount Upton** 87.22 334 P P 09 49 12.1 +0.2
baz=117
M29M **Somme Creek** 87.26 335 IAmb IAmb 09 49 13.5
comp=Z,13nm,1.0s
M29M **Somme Creek** 87.26 335 P P 09 49 11.8 0.0
baz=118,SNR=19
YUK8 **Steele Glacier** 87.27 334 P P 09 49 12.3 +0.2
baz=117,SNR=9.4
H31M **Peel River** 87.39 339 IAmb IAmb 09 49 14.0
comp=Z,1.1nm,0.8s
H31M **Peel River** 87.39 339 P P 09 49 12.3 0.0
baz=122,SNR=10
L29M **L29M** 87.44 336 P P 09 49 12.8 +0.2
baz=118,SNR=22
J30M **Hart River** 87.47 338 IAmb IAmb 09 49 14.4
comp=Z,5.8nm,0.9s
J30M **Hart River** 87.47 338 P P 09 49 12.7 -0.1
baz=120,SNR=8.6
K29M **Barlow Dome** 87.56 337 IAmb IAmb 09 49 14.5
comp=Z,6.0nm,0.9s
K29M **Barlow Dome** 87.56 337 P P 09 49 13.1 -0.1
baz=119,SNR=5.5
YUK3 **Moose Creek** 87.78 334 P P 09 49 14.3 -0.2
baz=116,SNR=13
I30M **Mount Dempster** 87.81 338 IAmb IAmb 09 49 15.8
comp=Z,9.9nm,0.9s
I30M **Mount Dempster** 87.81 338 P P 09 49 14.6 +0.1
baz=120,SNR=14
GRNC **Granite Creek** 87.89 333 IAmb IAmb 09 49 16.5
comp=Z,11nm,1.0s
G31M **Satah River** 87.96 340 IAmb IAmb 09 49 15.8
comp=Z,9.7nm,0.8s
G31M **Satah River** 87.96 340 P P 09 49 14.7 -0.2
baz=122,SNR=6.8
F31M **Tsiigehtchic** 88.06 341 P P 09 49 15.2 -0.2
baz=123
SCO **Scoresbysund** 88.15 16 P P 09 49 16.0 +0.2
SCO **Scoresbysund** 88.15 16 *i* P P 09 49 16.2 +0.4
SCO IAmb IAmb 09 49 17.5
comp=Z,4.3nm,0.8s
BVCY **Beaver Creek** 88.24 335 P P 09 49 16.2 -0.2
baz=116
EKA **Eskdalemuir Ar** 88.27 33 LR LR 10 26 36.9
comp=Z,112nm,19.7s,baz=76,slow=34
DAWY **Dawson** 88.39 337 IAmb IAmb 09 49 18.0
comp=Z,6.4nm,0.9s
DAWY **Dawson** 88.39 337 P P 09 49 17.1 -0.1
baz=117,SNR=11
A36M **Sachs Harbour** 88.42 346 P P 09 49 17.0 0.0
baz=131
INK **Inuvik** 88.47 342 LR LR 10 31 49.8
comp=Z,106nm,20.6s,baz=54,slow=38
INK **Inuvik** 88.47 342 P P 09 49 17.1 -0.2
baz=123,SNR=12
INK **Inuvik** 88.47 342 P P 09 49 17.5 +0.2
CRQE **Cirque** 88.50 333 P P 09 49 18.0 +0.2
baz=114
EPYK **Eagle Plains** 88.51 339 IAmb IAmb 09 49 18.6
comp=Z,7.0nm,0.9s
EPYK **Eagle Plains** 88.51 339 P P 09 49 17.8 +0.1
baz=120
I29M **Ogilvie Camp,** 88.58 338 IAmb IAmb 09 49 19.0
comp=Z,10nm,0.9s
I29M **Ogilvie Camp,** 88.58 338 P P 09 49 18.1 +0.1
baz=118,SNR=12
NEEM **North Greenlan** 88.61 5 *i* P P 09 49 19.2 +1.0
NEEM IAmb IAmb 09 49 20.1
comp=Z,44nm,0.8s
M27K **Edge Creek, AK** 88.64 335 IAmb IAmb 09 49 19.4
comp=Z,5.8nm,0.7s
M27K **Edge Creek, AK** 88.64 335 P P 09 49 18.6 +0.1
baz=115
G30M **tAoh Zraii Nji** 88.64 340 P P 09 49 18.3 0.0
baz=120
MCARA **McCarthy VSAT** 88.73 333 P P 09 49 18.9 +0.1
baz=114
KAIM **Kayak Island** 88.78 332 P P 09 49 19.0 0.0
baz=113
F30M **Barrier River** 88.82 340 P P 09 49 19.0 -0.1
baz=121,SNR=6.9
VRDI **Verde Repeater** 88.85 333 IAmb IAmb 09 49 20.7
comp=Z,10nm,1.0s
BCAR **Beaver Creek A** 88.90 335 P 09 49 20.0 +0.4
L27K **Beaver Creek,** 88.92 335 IAmb IAmb 09 49 20.5
comp=Z,4.8nm,0.8s
L27K **Beaver Creek,** 88.92 335 P P 09 49 19.6 0.0
baz=115,SNR=12
H29M **Whitestone** 89.02 339 P P 09 49 19.8 -0.2
baz=118,SNR=8.1
TSUM **Tsumeb** 89.08 109 P 09 49 20.6 -1.0
TSUM **Tsumeb** 89.08 109 P P 09 49 21.7 +0.1
M26K **Nabesna, AK** 89.13 334 P P 09 49 20.4 -0.3
baz=114
G29M **Pine Creek** 89.23 339 P P 09 49 20.5 -0.5
baz=119,SNR=9.1
I28M **Miner Creek** 89.23 338 IAmb IAmb 09 49 25.9
comp=Z,4.4nm,1.0s
I28M **Miner Creek** 89.23 338 P P 09 49 20.8 -0.4
baz=117
BMRM **Bremner River** 89.27 333 P P 09 49 21.2 -0.1
baz=113
N25K **Chitina, Valde** 89.51 333 P P 09 49 22.4 -0.1
baz=113
L26K **Log Cabin Wild** 89.53 335 P P 09 49 22.3 -0.3
baz=114
EYAK **Cordova Ski Ar** 89.63 332 P P 09 49 23.0 +0.1
baz=112
E29M **Blow River** 89.90 341 P P 09 49 24.0 -0.1
baz=119,SNR=20
I27K **Kandik River** 89.93 338 IAmb IAmb 09 49 25.2
comp=Z,5.7nm,1.2s
I27K **Kandik River** 89.93 338 P P 09 49 24.2 -0.1
baz=115
KLU **Klutina** 90.05 333 P P 09 49 25.0 0.0
baz=112
HARP **HAARP** 90.06 334 P P 09 49 25.0 +0.1
baz=112
H27K **Steamboat Moun** 90.16 338 P P 09 49 25.1 -0.3
baz=116
F28M **Old Crow** 90.19 340 IAmb IAmb 09 49 26.2
comp=Z,3.4nm,0.9s
F28M **Old Crow** 90.19 340 P P 09 49 24.4 -1.1
baz=117
P23K **Montague Islan** 90.20 331 P P 09 49 25.2 -0.4
baz=110
GLI **Glacier Island** 90.36 332 P P 09 49 25.6 -0.8
baz=111
I26K **Coal Creek Min** 90.39 337 P P 09 49 26.1 -0.3
baz=114
M24K **Tolsona, Glenn** 90.39 334 P P 09 49 26.1 -0.5
baz=111

PAX Paxson 90.41 334 IAmb IAmb 09 49 27.1
comp=Z,4.1nm,0.8s
PAX Paxson 90.41 334 P P 09 49 25.9 -0.8
baz=112
RIDG Independent Ri 90.44 335 P P 09 49 26.7 -0.1
baz=112
G27K Doyon Strip 90.46 339 P P 09 49 25.9 -0.9
baz=115
E28M Babbage River 90.53 341 IAmb IAmb 09 49 42.7
comp=Z,3.8nm,0.9s
E28M Babbage River 90.53 341 P P 09 49 26.3 -0.8
baz=117
D28M Stokes Point 90.62 341 P P 09 49 27.1 -0.3
baz=118
SCM Sheep Creek Mo 90.80 333 P P 09 49 27.6 -1.0
baz=110
PWL Port Wells 90.93 332 P P 09 49 28.7 -0.4
baz=110
M23K Glacier View 90.97 333 P P 09 49 28.5 -0.7
baz=110
J25K Salcha River, 90.98 336 IAmb IAmb 09 49 30.1
comp=Z,2.9nm,0.7s
J25K Salcha River, 90.98 336 P P 09 49 28.4 -0.9
baz=112
E27K Coleen River 91.03 340 IAmb IAmb 09 49 33.3
comp=Z,3.1nm,1.0s
E27K Coleen River 91.03 340 P P 09 49 29.0 -0.4
baz=115
KNK Knik Glacier 91.17 333 P P 09 49 29.8 -0.4
baz=109
SEW Seward 91.20 331 P P 09 49 29.7 -0.5
baz=108
SML Sawmill 91.24 333 P P 09 49 30.0 -0.5
baz=110
WAT6 Susitna Watana 91.24 334 P P 09 49 30.2 -0.5
baz=110
DHY Denali Highway 91.25 334 P P 09 49 30.2 -0.5
baz=110
D27M Malcolm River 91.28 341 IAmb IAmb 09 49 31.8
comp=Z,5.5nm,0.8s
D27M Malcolm River 91.28 341 P P 09 49 30.3 -0.3
baz=116
G26K Porcupine Rive 91.28 338 P P 09 49 30.5 0.0
baz=113
KEST Kesra 91.37 54 P P 09 49 32.0 +0.3
comp=Z,6.6nm,0.9s,baz=356,slow=1.5,SNR=7.7
comp=Z,6.6nm,0.9s
KEST Kesra 91.37 54 IAmb IAmb 09 49 35.7
comp=Z,6.8nm,0.8s
PRP Porcupine Dome 91.38 337 P P 09 49 30.6 -0.6
baz=112
ISO Isola 91.42 45 P P 09 49 32.2 +0.4
GHO Glory Hole Cre 91.50 333 IAmb IAmb 09 49 34.5
comp=Z,6.5nm,1.0s
PMR Palmer 91.53 333 P P 09 49 31.3 -0.5
baz=109
HDA Harding Lake 91.54 336 P P 09 49 31.2 -0.6
baz=111
ILAR Eielson Array 91.65 336 P P 09 49 31.8 -0.5
comp=Z,0.9nm,0.8s,baz=146,slow=2.3,SNR=12
ILAR PP PP 09 53 08.9 -2.5
comp=Z,0.3nm,0.8s,baz=109,slow=7.4,SNR=2.4
comp=Z,0.9nm,0.8s
ILAR Eielson Array 91.65 336 P P 09 49 31.3 -1.0
RC01 Rabbit Creek A 91.65 332 P P 09 49 31.6 -0.8
baz=108
WAT1 Susitna Watana 91.68 334 P P 09 49 32.0 -0.5
baz=109
F26K Sheenjek River 91.71 339 P P 09 49 32.7 +0.1
baz=113
BRSE Bradley Lake S 91.71 331 P P 09 49 32.4 -0.3
baz=107
CCB Clear Creek Bu 91.97 336 IAmb IAmb 09 49 34.3
comp=Z,2.8nm,0.8s
POKR Poker Plat Res 91.99 336 P P 09 49 33.7 -0.2
baz=110
RND Reindeer 92.00 334 IAmb IAmb 09 49 35.2
comp=Z,8.1nm,1.0s
G25K Bearman Lake 92.06 338 P P 09 49 34.3 +0.2
baz=111
COLA College 92.07 336 P P 09 49 34.1 -0.1
baz=110
COLA College 92.07 336 P P 09 49 34.1 -0.1
MCK McKinley 92.14 335 P P 09 49 34.4 -0.2
baz=109
F25K Christian Rive 92.20 339 P P 09 49 34.4 -0.5
baz=112
JMIC Jan Mayen 92.20 18 LR LR 10 28 21.3
comp=Z,48nm,21.0s,baz=170,slow=34
CAPN Captain Cook N 92.21 332 P P 09 49 34.5 -0.4
baz=107
OHAK Old Harbor 92.28 328 P P 09 49 34.9 -0.4
baz=105
C27K Jago River 92.33 341 IAmb IAmb 09 49 36.7
comp=Z,5.8nm,0.8s
C27K Jago River 92.33 341 P P 09 49 35.1 -0.3
baz=113
E25K Arctic Village 92.37 339 P P 09 49 35.1 -0.5
baz=112
H24K Noodor Dome 92.41 337 P P 09 49 35.6 -0.2
baz=110
NEA2 Nenana 92.47 335 P P 09 49 35.6 -0.5
baz=109
G24K Hadweenzic Riv 92.55 338 P P 09 49 36.4 0.0
baz=110
L22K Petersville 92.56 333 P P 09 49 36.2 -0.4
baz=107
TRF Thorofare Moun 92.62 334 P P 09 49 36.8 -0.2
baz=108
DAG Danmarks Havn 92.67 11 P P 09 49 37.0 +0.2
DAG Danmarks Havn 92.67 11 *i* P P 09 49 36.8 0.0
DAG IAmb IAmb 09 49 37.5
comp=Z,4.6nm,0.8s
O20K Slope Mountain 92.72 331 P P 09 49 37.4 -0.1
baz=106
SKT Skwentna 92.74 333 P P 09 49 37.1 -0.3
baz=107
I23K Minto, Yukon-K 92.77 336 IAmb IAmb 09 49 49.9
comp=Z,2.1nm,0.6s
I23K Minto, Yukon-K 92.77 336 P P 09 49 37.3 -0.1
baz=108
C26K Camden Bay 92.83 341 P P 09 49 37.9 +0.3
baz=112
SPCR Spurr Chakacha 92.83 332 P P 09 49 37.4 -0.5
baz=106
P19K Oil Pt 92.90 330 P P 09 49 38.6 +0.4
baz=105
Q19K Cape Douglas, 92.91 329 P P 09 49 38.4 +0.1
baz=105
F24K Squaw Lake 92.98 338 P P 09 49 38.6 +0.1
baz=110
H23K Yukon River 93.05 337 P P 09 49 38.8 0.0
baz=108
D25K Kavik River 93.08 340 P P 09 49 38.7 -0.2
baz=111
MLY Manley 93.29 336 P P 09 49 39.8 -0.2
baz=107
PPLA Purkeypile 93.29 333 P P 09 49 39.1 -1.0
baz=106
E24K Your Creek 93.38 339 P P 09 49 40.0 -0.3
baz=109
CAST Castle Rocks 93.39 334 IAmb IAmb 09 49 40.4
comp=Z,4.6nm,1.0s
CAST Castle Rocks 93.39 334 P P 09 49 39.5 -0.9
baz=106
M20K Styx River 93.44 332 P P 09 49 39.5 -1.2
baz=105
G23K Bananza Creek 93.51 337 P P 09 49 39.9 -1.0
baz=108
Q18K Katmai Hardscr 93.53 329 P P 09 49 40.3 -1.0
baz=104
O19K Port Alsworth 93.57 331 P P 09 49 40.6 -0.6
baz=104
CHUM Lake Minchumin 93.61 334 P P 09 49 40.9 -0.5
baz=106
COLD Coldfoot 93.73 338 P P 09 49 41.2 -0.6
baz=108
E23K Chandalar 93.78 339 P P 09 49 41.5 -0.6
baz=108
H22K Ishtalitna Cre 93.79 336 P P 09 49 41.6 -0.6
baz=107
N19K Bonanza Creek 93.80 331 P P 09 49 41.0 -1.4
baz=104
P18K Big Mountain, 93.82 330 P P 09 49 41.9 -0.5
baz=104
D24K Happy Valley 93.85 340 P P 09 49 42.0 -0.4
baz=109
O18K Koktuh Hills 93.92 330 P P 09 49 42.3 -0.6
baz=104
TOLK Toolik Lake Re 93.94 339 P P 09 49 42.8 -0.1
baz=108
R17L Mt. Peulik Vol 93.99 328 P P 09 49 42.6 -0.7
baz=103
M19K Big River Lodg 94.02 332 P P 09 49 42.5 -0.8
baz=104
K20K Telida 94.23 334 P P 09 49 43.8 -0.4
baz=104
H21K Melozitna Rive 94.29 336 P P 09 49 44.2 -0.3
baz=105
L19K White Mountain 94.30 332 P P 09 49 44.0 -0.6
baz=104
Q16K King Salmon 94.38 329 P P 09 49 44.1 -0.8
baz=102
P17K Kvichak River 94.38 329 P P 09 49 44.8 -0.1
baz=103
N18K Kilae Creek 94.44 331 P P 09 49 44.7 -0.5
baz=103
J20K Nowinta River 94.47 334 P P 09 49 44.6 -0.7
baz=104
F22K John River 94.55 338 P P 09 49 45.3 -0.4
baz=106
M18K Stony River 94.59 332 P P 09 49 45.2 -0.7
baz=103
C23K Ikkilik River 94.66 340 P P 09 49 45.5 -0.5
baz=107
I20K Naaghedeneel 94.76 335 P P 09 49 46.3 -0.2
baz=104
G21K Allakaket 94.79 337 P P 09 49 46.5 -0.3
baz=105
O17K Koliganek Bris 94.83 330 P P 09 49 45.9 -1.1
baz=102
F21K Alatna River 94.96 337 P P 09 49 46.6 -1.0
baz=104
N17K Nushagak Hills 95.03 331 P P 09 49 46.9 -1.1
baz=102
H20K Anotleneega Mo 95.09 336 P P 09 49 47.3 -0.9
baz=103
L18K Granite Mounta 95.14 332 P P 09 49 47.6 -0.8
baz=102
CHNA Chernabura Isl 95.20 325 P P 09 49 47.7 -1.1
baz=100
O16K Kokwok River B 95.29 330 P P 09 49 48.4 -0.8
baz=101
M17K Holitna River 95.33 331 P P 09 49 48.8 -0.5
baz=102
J18K Innoko River 95.42 333 P P 09 49 49.0 -0.7
baz=102
B22K Teshekpuk Lake 95.72 341 P P 09 49 50.3 -0.5
baz=104
H19K Roundabout Mou 95.73 336 P P 09 49 50.6 -0.4
baz=102
F20K Avaraart Lake 95.77 337 P P 09 49 51.0 -0.1
baz=102
N16K Nishlik Lake 95.79 330 P P 09 49 51.0 -0.5
baz=100
SDPT Sand Point 95.79 325 P P 09 49 51.2 -0.3
baz=100
L17K Donlin 95.87 332 P P 09 49 51.1 -0.6
baz=101
C21K Knifeblade Rid 95.90 339 P P 09 49 51.4 -0.4
baz=103
B21K Ikpikpuk River 95.94 340 P P 09 49 51.8 -0.1
baz=103
M16K Timber Creek 95.98 331 P P 09 49 52.3 0.0
baz=100
K17K Iditarod 95.98 333 P P 09 49 52.2 -0.1
baz=101
O15K Ungalikthiuk R 96.08 329 P P 09 49 52.1 -0.7
baz=100
G19K Purcell Mounta 96.12 336 P P 09 49 52.5 -0.3
baz=101
E20K Nigu River 96.20 338 P P 09 49 53.1 -0.2
baz=102
L16K Owhat River 96.34 332 P P 09 49 53.3 -0.6
baz=100
N15K Kwethluk River 96.38 330 P P 09 49 53.7 -0.4
baz=99
E19K Redstone River 96.43 337 P P 09 49 53.7 -0.5
baz=101
J17K VABM Dome 96.45 333 P P 09 49 54.2 -0.2
baz=100
D20K Etivluk River 96.45 339 P P 09 49 54.3 0.0
baz=102
H18K Honhosa River 96.45 335 P P 09 49 53.9 -0.4
baz=100
MAW Mawson 96.68 165 LR LR 10 32 45.9
comp=Z,296nm,21.9s,baz=66,slow=35
G18K Tagagawik 96.70 336 P P 09 49 55.7 +0.3
baz=100
M15K Kasigluk River 96.76 330 P P 09 49 55.9 +0.1
baz=99
GERES GERESS Array B 96.78 42 P P 09 49 57.0 +0.7
comp=Z,0.8nm,0.9s,baz=240,slow=5.5,SNR=5.0
comp=Z,0.8nm,0.9s
O14K Tigyukauivet M 96.83 329 P P 09 49 56.4 +0.3
baz=98
B20K Meade River 96.89 340 P P 09 49 56.4 +0.2
baz=101
A21K Barrow 96.97 341 P P 09 49 57.2 +0.7
baz=101
NOA NORSAR Array B 97.06 29 P Pdif 09 49 58.4 +1.1
comp=Z,0.7nm,0.8s,baz=296,slow=8.0,SNR=1.3
NOA LR LR 10 30 30.2
comp=Z,62nm,21.8s,baz=105,slow=34
comp=Z,0.7nm,0.8s
J16K Anvik River 97.11 333 P P 09 49 57.2 -0.1
baz=99
N14K Kuskokwak Cree 97.14 330 P P 09 49 57.2 -0.3
baz=98
F18K Selawik 97.22 336 P P 09 49 57.6 -0.1
baz=99
L15K Ungalak Mounta 97.28 331 P P 09 49 57.9 -0.3
baz=98
M14K Bethel 97.39 330 P Pdif 09 49 58.8 +0.1
baz=98
K15K Wolf Creek Mou 97.39 332 P P 09 49 58.3 -0.3
baz=98
G17K Kiwalik Mounta 97.45 335 P P 09 49 58.4 -0.4
baz=98
C19K Lookout Ridge 97.58 339 P P 09 49 59.2 -0.2
baz=99
E18K Tukpahlearik C 97.71 337 P P 09 49 59.9 -0.1
baz=98
L14K Kuka Creek 97.81 331 P P 09 49 60.0 -0.5
baz=97
F17K Baldwin Pennin 97.83 336 P P 09 49 60.0 -0.5
baz=98
H16K Elim 98.01 334 P P 09 50 00.6 -0.7
baz=97
M13K Dall Lake 98.02 330 P P 09 50 00.7 -0.8
baz=96
C18K Utukok River 98.09 338 P P 09 50 01.1 -0.6
baz=97
E17K Hotham Inlet 98.13 337 P P 09 50 01.5 -0.3
baz=97
A19K Wainwright 98.24 340 P P 09 50 02.2 -0.1
baz=97
J14K Nanvaranak Lak 98.38 332 P P 09 50 02.5 -0.5
baz=96
RDOG Red Dog Mine 98.65 338 P P 09 50 04.1 -0.1
baz=96
D17K Noatak River 98.69 337 P P 09 50 04.2 -0.1
baz=96
C17K DeLong Mountai 98.80 338 P Pdif 09 50 05.2 +0.3
baz=96
K13K Kusilvak Mount 98.81 331 P P 09 50 04.6 -0.4
baz=95
G15K Niukluk 98.81 335 P P 09 50 04.4 -0.5
baz=95
UNV Unalaska Valle 99.08 323 P Pdif 09 50 06.3 -0.1
baz=95
F15K North Star Dit 99.13 335 P Pdif 09 50 06.5 +0.1
baz=95
ANM Nome 99.34 334 P Pdif 09 50 07.6 +0.2
baz=94
M11K Mekoryuk 99.43 330 P Pdif 09 50 07.7 -0.1
baz=94
C16K Lisburne Hills 99.58 338 P Pdif 09 50 08.5 +0.2
baz=94
TNA Tin City 100.47 335 P Pdif 09 50 12.2 -0.1
baz=92
GAMB Gambell 102.10 333 P Pdif 09 50 19.5 -0.1
baz=89
STKA Stephens Creek 125.41 218 PKP PKiKP 09 55 27.2 -0.1
comp=Z,0.8nm,0.6s,baz=195,slow=10.0,SNR=3.2
BVAR Borovoye Array 129.07 26 PKP PKiKP 09 55 34.3 +0.3
comp=Z,1.4nm,0.5s,baz=253,slow=1.5,SNR=4.6
ZALV Zalesovo Beam 133.53 16 PKP PKPdf 09 55 42.0 +0.4
comp=Z,4.0nm,0.7s,baz=272,slow=1.9,SNR=12
ZALV Zalesovo Beam 133.53 16 PKiKP 09 55 42.2 -0.7
KURBB Kurchatov Arra 134.23 23 PKP PKiKP 09 55 43.7 -0.7
comp=Z,1.4nm,0.7s,baz=312,slow=2.7,SNR=13
ASAR Alice Springs 136.01 220 PKhKP PKPpre 09 55 43.6
comp=Z,1.8nm,0.8s,baz=140,slow=2.3,SNR=10
ASAR PKP PKPdf 09 55 46.6 -0.6
comp=Z,1.7nm,0.8s,baz=134,slow=2.4,SNR=16
WRA Warramunga Arr 138.35 224 PKP PKPdf 09 55 51.4 -0.2
comp=Z,2.6nm,0.8s,baz=134,slow=1.8,SNR=17
WRA Warramunga Arr 138.35 224 PKPdf 09 55 51.8 +0.1
MKAR Makanchi Array 138.79 24 PKP PKPdf 09 55 51.9 +0.2
comp=Z,1.1nm,0.7s,baz=2.9,slow=2.4,SNR=6.7
KSH2 Kashi 141.05 37 PKP PKiKP 09 55 59.3 +0.4
SONM Songino Array 142.53 358 PKhKP PKPpre 09 55 54.7
comp=Z,1.8nm,0.7s,baz=323,slow=2.2,SNR=7.5
XLT XiLinHaoTe 145.13 346 *eP* PKPbc 09 56 02.5 -0.2
XLT pmax pmax
comp=Z,24nm,0.8s
DHRM DHARAMSHALA 145.63 46 *eP* PKPab 09 56 05.9 +0.7
DHRM IAmb IAmb 09 56 08.2
comp=Z,42nm,0.8s
KSRS Korea Array 145.95 326 PKPbc PKPdf 09 56 04.7 +0.1
comp=Z,0.7nm,0.8s,baz=33,slow=2.3,SNR=4.6
SMLA Simla 146.86 47 *eP* PKPab 09 56 09.0 -0.6
SMLA IAmb IAmb 09 56 09.7
comp=Z,15nm,0.6s
KUDL Kundal 147.85 52 *eP* PKPbc 09 56 10.9 -0.2
KUDL *i* x x 09 56 29.0
KUDL *ex* x 09 56 41.8
HHC Hu-ho-hao-te 148.98 350 *eP* PKPdf 09 56 11.3 +1.6
BTO2 Baotou 149.33 353 *e*PKPbc PKiKP 09 56 15.5 -0.3
BTO2 PP PP 09 59 56.5 +11
BTO2 pmax pmax
comp=Z,48nm,1.0s
BTO2 pmax pmax
comp=Z,370nm,9.5s
GTA2 Gaotai 150.52 8 PKPbc PKPbc 09 56 17.8 +0.2
GTA2 sPKP sPKPbc 09 56 33.0 -5.3
NRDN NARMADA NAGAR 150.63 62 *eP* PKPdf 09 56 15.2 +2.5
NRDN *i* x 09 56 23.7
BHPL Bhopal 150.67 60 *eP* PKPdf 09 56 12.4 -0.4
BHPL IAmb IAmb 09 56 19.4
comp=Z,8.7nm,0.9s
HNS HongShan 151.59 344 ⇑PKPbc PKPbc 09 56 20.0 0.0
NJ2 Nanjing 154.81 331 *eP* PKPdf 09 56 20.0 +1.5
NJ2 pmax pmax
comp=Z,26nm,0.5s
PZH PanZhiHua 163.55 10 PKP PKPdf 09 56 27.0 -2.1
CMAR Chiang Mai Arr 169.95 35 PKP PKPdf 09 56 33.1 -0.8
comp=Z,0.6nm,0.3s,baz=268,slow=2.3,SNR=4.1
CMAR Chiang Mai Arr 169.95 35 PKPdf 09 56 32.7 -1.3

ASRS ***29*** *09:39:45.0±0.8, 54.°21N×87.°11E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 29 09:39:44.9±3.6, 54.°33N×87.°19E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=32.1km s-min=20.8km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.45	256	I	I	09 48 30.0	
	baz=74,slow=316,SNR=2.9						
ZALV	Zalesovo Beam	1.45	256	Pg	Pn	09 40 11.4	-0.8
	0.9nm,0.3s,baz=74,slow=16,SNR=7.1						
ZALV				Lg	Lg	09 40 31.1	
	0.9nm,0.3s,baz=73,slow=24,SNR=5.6						
KURBB	Kurchatov Arra	6.46	238	Pn	Pn	09 41 21.6	+0.4
	baz=54,slow=14,SNR=3.1						
	0.4nm,0.5s						
MKAR	Makanchi Array	8.16	204	Pn	Pn	09 41 45.6	+1.0
	0.1nm,0.3s,baz=16,slow=28,SNR=2.1						
	0.2nm,0.3s						

ASRS ***29*** *09:50:31.0±1.2, 54.°25N×87.°10E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 29 09:50:32.1±3.3, 54.°30N×87.°27E, h0km, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=29.4km s-min=21.0km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.48	257	I	I	09 59 35.0	
	baz=74,slow=318,SNR=10						
ZALV	Zalesovo Beam	1.48	257	Pg	Pn	09 50 58.2	-1.7
	0.6nm,0.3s,baz=76,slow=16,SNR=7.1						
ZALV				Lg	Lg	09 51 18.6	
	0.6nm,0.3s,baz=79,slow=24,SNR=5.4						
KURBB	Kurchatov Arra	6.48	239	Pn	Pn	09 52 09.8	+1.1
	baz=55,slow=14,SNR=6.4						
KURBB				Lg	Lg	09 53 59.8	
	baz=58,slow=32,SNR=2.1						
	1.0nm,0.6s						
MKAR	Makanchi Array	8.15	205	Pn	Pn	09 52 32.3	+0.7
	0.1nm,0.3s,baz=30,slow=18,SNR=1.6						
	0.4nm,0.7s						

MDD ***29*** *09:56:37.9±0.3, 42.°93N×0.°24E, h0km, mb_Lg2.4/22, Error ellipse: s-maj=3.1km s-min=1.5km az=13.0*
STR ***29*** *09:56:37.4±0.0, 42.°89N±0.°08×0.°22E±0.°05, h5km, MLv2.0/15, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
MRB ***29*** *09:56:37.3±0.3, 42.°89N×0.°24E, h3km±1km, ML1.7/26, Error ellipse: s-maj=0.8km s-min=0.6km az=222.0*
LDG ***29*** *09:56:37.5±0.1, 42.°93N×0.°22E, h2km, Ml2.8/7, Error ellipse: s-maj=2.1km s-min=1.5km az=19.0*
ISC 29 09:56:37.3±0.9, 42.°90N±0.°02×0.°23E±0.°01, h5km±7km, n74, σ0s79/138, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RESF	Ens	0.12	138	P	Pg	09 56 39.7	-0.2
RESF				S	Sg	09 56 41.3	-0.3
VIEF	Viey	0.15	265	P	Pg	09 56 40.5	+0.2
VIEF				S	Sg	09 56 42.6	+0.2
	243nm,0.2s						
VIEF	Viey	0.15	265	Pg	Pg	09 56 40.0	-0.3
VIEF				Sg	Sg	09 56 42.3	-0.1
EPF	Esparros	0.16	32	*e*Pg	Pg	09 56 40.2	-0.2
EPF				*e*Sg	Sg	09 56 41.8	-0.8
LABF	Labassere	0.19	323	Pg	Pg	09 56 40.7	-0.3
LABF				Sg	Sg	09 56 43.6	+0.1
ECHI	Chisagues Biel	0.23	186	Pg	Pg	09 56 41.8	-0.1
ECHI				Sg	Sg	09 56 44.8	-0.2
ECHI	Chisagues Biel	0.23	186	P	Pg	09 56 41.8	-0.1
ECHI				S	Sg	09 56 44.9	-0.1
	466nm,0.1s						
ECHI	Chisagues Biel	0.23	186	Pg	Pg	09 56 41.8	-0.1
ECHI				Sg	Sg	09 56 45.1	+0.1
PYLO	Lourdes	0.28	315	P	Pg	09 56 42.9	+0.1
PYLO				S	Sg	09 56 47.0	+0.3
	121nm,0.2s						
PYLO	Lourdes	0.28	315	Pg	Pg	09 56 42.4	-0.4
PYLO				Sg	Sg	09 56 46.3	-0.3
MELF	Melles	0.39	94	Pg	Pg	09 56 44.3	-0.6
MELF				Sg	Sg	09 56 50.2	+0.2
VIER	Vielha - Casau	0.45	115	P	Pg	09 56 45.8	-0.3
VIER				S	Sg	09 56 52.3	+0.3
	56nm,0.2s						
CARA	Val d'Aran	0.47	114	P	Pg	09 56 46.2	-0.2
CARA				S	Sg	09 56 52.8	+0.2
	33nm,0.3s						
CANF	Canfranc	0.56	256	Pg	Pg	09 56 47.5	-0.7
CANF				Sg	Sg	09 56 55.4	-0.2
ETSF	Etsaut	0.58	270	*e*Pg	Pg	09 56 47.7	-0.7
ETSF				*e*Sg	Sg	09 56 55.1	-0.9
	43nm,0.2s						
MLS	Moulis	0.64	84	P	Pg	09 56 49.2	-0.4
MLS				S	Sg	09 56 58.1	+0.3
	4.9nm,0.1s						
MLS	Moulis	0.64	84	Pg	Pg	09 56 48.5	-1.0
CTRE	Tremp	0.70	145	P	Pg	09 56 50.0	-0.7
CTRE				S	Sg	09 57 00.0	+0.2
	8.6nm,0.3s						
ATE	Arette	0.71	286	P	Pg	09 56 51.0	+0.1
ATE				S	Sb	09 57 01.1	-1.0
	18nm,0.1s						
ATE	Arette	0.71	286	Pg	Pg	09 56 50.2	-0.7
ATE				Sg	Sg	09 57 00.5	+0.5
SALF	Salau	0.72	101	P	Pg	09 56 50.5	-0.6

SALF					S		Sg	09 57 00.7	+0.2		
	21nm,0.1s										
SALF	**Salau**	**0.72**	**101**		Pg		**Pg**	**09 56 50.4**	**-0.7**		
SALF					Sg		**Sg**	**09 57 00.7**	**+0.2**		
CEST	**Esterri de Car**	**0.81**	**111**		P		**Pg**	**09 56 52.3**	**-0.6**		
CEST					S		**Sg**	**09 57 03.8**	**+0.4**		
	13nm,0.1s										
CSOR	**Sort**	**0.85**	**128**		P		**Pg**	**09 56 53.1**	**-0.5**		
CSOR					S		**Sg**	**09 57 04.9**	**+0.4**		
	8.1nm,0.2s										
CRAS	**Crastes**	**0.90**	**24**		Pg		**Pg**	**09 56 54.7**	**+0.2**		
CRAS					Sg		**Sb**	**09 57 08.2**	**+0.5**		
ORDF	**Ordiarp**	**0.91**	**291**		Pg		**Pg**	**09 56 54.7**	**-0.1**		
ORDF					Sg		**Sb**	**09 57 07.5**	**-0.4**		
IRAF	**Chalets d'Irat**	**0.94**	**279**		Pg		**Pg**	**09 56 54.8**	**-0.5**		
IRAF					Sg		**Sg**	**09 57 07.8**	**+0.3**		
MLZA	**Monlezun-d-Arm**	**0.96**	**345**		Pg		**Pg**	**09 56 55.9**	**+0.1**		
PAND	**Andorre**	**1.04**	**111**		P		**Pg**	**09 56 56.4**	**-0.8**		
PAND					S		**Sg**	**09 57 11.2**	**+0.4**		
	13nm,0.1s										
PAND	**Andorre**	**1.04**	**111**		Pg		**Pg**	**09 56 56.7**	**-0.6**		
ARBS	**La Rabassa**	**1.07**	**114**		P		**Pg**	**09 56 57.1**	**-0.8**		
ARBS					S		**Sg**	**09 57 11.7**	**-0.1**		
	12nm,0.3s										
CAVN	**Les Avellanes**	**1.09**	**159**		P		**Pg**	**09 56 57.2**	**-0.9**		
CAVN					S		**Sg**	**09 57 12.3**	**+0.1**		
	28nm,0.3s										
SJPF	**Ste Jean**	**1.09**	**282**		*e*Pg		**Pg**	**09 56 57.3**	**-0.8**		
SJPF					*e*Sg		**Sg**	**09 57 10.4**	**-1.8**		
	12nm,0.2s										
OSSF	**Osses**	**1.15**	**289**		P		**Pg**	**09 56 58.3**	**-1.0**		
OSSF					S		**Sg**	**09 57 14.5**	**+0.3**		
	7.7nm,0.3s										
OSSF	**Osses**	**1.15**	**289**		Pg		**Pg**	**09 56 58.2**	**-1.1**		
OSSF					Sg		**Sg**	**09 57 14.5**	**+0.3**		
DUNF	**Dun**	**1.17**	**83**		Pg		**Pg**	**09 56 59.3**	**-0.4**		
DUNF					Sn		**Sn**	**09 57 17.3**	**+0.7**		
ESAC	**San Caprasio**	**1.28**	**204**		Pg		**Pg**	**09 57 01.9**	**+0.1**		
ESAC					Sg		**Sn**	**09 57 20.6**	**+1.1**		
ESAC					*i* IVmb_Lg			09 57 23.3			
ESAC	**San Caprasio**	**1.28**	**204**		P		**Pg**	**09 57 00.8**	**-1.1**		
ESAC					S		**Sg**	**09 57 18.0**	**-0.5**		
EALK	**Alkurruntz**	**1.31**	**285**		Pg		**Pg**	**09 57 01.5**	**-0.9**		
EALK					Sg		**Sn**	**09 57 20.6**	**+0.4**		
EALK					*i* IVmb_Lg			09 57 25.0			
EALK	**Alkurruntz**	**1.31**	**285**		Pg		**Pg**	**09 57 01.7**	**-0.7**		
EARA	**Aranguren**	**1.34**	**265**		Sg		**Sg**	**09 57 20.3**	**+0.1**		
EARA					*i* IVmb_Lg			09 57 26.8			
CLLI	**Llivia**	**1.35**	**107**		P		**Pg**	**09 57 02.0**	**-1.2**		
CLLI					S		**Sg**	**09 57 20.0**	**-0.8**		
	5.5nm,0.2s										
CARF	**Carcanieres**	**1.39**	**97**		P		**Pn**	**09 57 02.5**	**-1.0**		
CARF					S		**Sg**	**09 57 21.2**	**-0.8**		
	19nm,0.3s										
CARF	**Carcanieres**	**1.39**	**97**		Pn		**Pn**	**09 57 03.1**	**-0.4**		
CARF					Sg		**Sg**	**09 57 22.5**	**+0.5**		
VALC	**Valcebollere**	**1.44**	**110**		P		**Pn**	**09 57 03.4**	**-0.7**		
VALC					S		**Sg**	**09 57 22.7**	**-0.7**		
MTLF	**Montolieu**	**1.52**	**72**		*e*Pg		**Pn**	**09 57 05.3**	**+0.2**		
MTLF					*e*Sg		**Sn**	**09 57 25.7**	**+0.4**		
	15nm,0.3s										
MTLF	**Montolieu**	**1.52**	**72**		Pn		**Pn**	**09 57 05.6**	**+0.5**		
MTLF					Sn		**Sn**	**09 57 25.8**	**+0.4**		
CBRU	**Bruguera**	**1.57**	**112**		P		**Pn**	**09 57 05.1**	**-0.8**		
CBRU					S		**Sn**	**09 57 26.4**	**-0.1**		
CORI	**Orista**	**1.64**	**124**		P		**Pn**	**09 57 06.5**	**-0.2**		
CORI					S		**Sn**	**09 57 27.7**	**-0.4**		
	18nm,0.3s										
EPOB	**Poblet**	**1.67**	**157**		Pn		**Pn**	**09 57 07.5**	**+0.2**		
EPOB					Sn		**Sn**	**09 57 29.6**	**+0.5**		
EPOB					*i* IVmb_Lg			09 57 33.3			
EPOB	**Poblet**	**1.67**	**157**		P		**Pn**	**09 57 07.0**	**-0.2**		
EPOB					S		**Sn**	**09 57 29.1**	**0.0**		
	6.1nm,0.2s										
FILF	**Fillols**	**1.75**	**100**		P		**Pn**	**09 57 06.8**	**-1.6**		
FILF					S		**Sn**	**09 57 28.3**	**-2.7**		
	5.0nm,0.2s										
FILF	**Fillols**	**1.75**	**100**		Pn		**Pn**	**09 57 08.4**	**+0.1**		
SLVF	**La Salvetat-Pe**	**1.91**	**47**		Pn		**Pn**	**09 57 08.1**	**-2.4**		
CBEU	**Beuda**	**1.92**	**109**		P		**Pn**	**09 57 10.3**	**-0.4**		
CBEU					S		**Sn**	**09 57 35.0**	**-0.1**		
ERTA	**Horta de San J**	**1.94**	**178**		Sn		**Sn**	**09 57 36.4**	**+0.8**		
ERTA					*i* IVmb_Lg			09 57 41.5			
ERTA	**Horta de San J**	**1.94**	**178**		P		**Pn**	**09 57 10.6**	**-0.3**		
ERTA					S		**Sn**	**09 57 34.7**	**-1.0**		
	8.4nm,0.3s										
CFON	**Fontmartina**	**1.99**	**124**		P		**Pn**	**09 57 11.5**	**-0.1**		
CFON					S		**Sn**	**09 57 37.0**	**0.0**		
VAN2	**Vandellos 2**	**1.99**	**167**		P		**Pn**	**09 57 11.2**	**-0.4**		
VAN2					S		**Sn**	**09 57 36.4**	**-0.6**		
	10nm,0.4s										
SJAF	**Saint Jean de**	**2.00**	**101**		P		**Pn**	**09 57 11.4**	**-0.3**		
SJAF					S		**Sn**	**09 57 36.9**	**-0.2**		
	6.5nm,0.4s										
SJAF	**Saint Jean de**	**2.00**	**101**		Pg		**Pb**	**09 57 14.5**	**+0.4**		
LFF	**La Frestale**	**2.07**	**10**		*e*Pg		**Pb**	**09 57 15.5**	**+0.1**		
LFF					*e*Sg		**Sg**	**09 57 43.2**	**-0.7**		
	24nm,0.3s										
CLAF	**Gruissan**	**2.11**	**83**		*e*Pn		**Pn**	**09 57 13.1**	**-0.1**		
CLAF	**Gruissan**	**2.11**	**83**		P		**Pn**	**09 57 13.1**	**-0.1**		
CLAF					S		**Sn**	**09 57 39.7**	**-0.1**		
CMAS	**Mas de Barbera**	**2.17**	**178**		P		**Pn**	**09 57 13.5**	**-0.6**		
CMAS					S		**Sn**	**09 57 41.3**	**0.0**		
	6.2nm,0.2s										
CCAS	**Cassa de la Se**	**2.23**	**116**		P		**Pn**	**09 57 14.6**	**-0.2**		
CCAS					S		**Sn**	**09 57 42.8**	**+0.1**		
	7.3nm,0.3s										
CPAL	**Palau Saverder**	**2.25**	**104**		P		**Pn**	**09 57 14.9**	**-0.1**		
CPAL					S		**Sn**	**09 57 43.1**	**0.0**		
	6.0nm,0.8s										
ALCN	**Alcanar**	**2.35**	**175**		P		**Pn**	**09 57 16.0**	**-0.5**		
ALCN					S		**Sn**	**09 57 44.8**	**-1.0**		
CAF	**Calviac**	**2.42**	**33**		*e*Pg		**Pb**	**09 57 20.7**	**-0.6**		
CAF					*e*Sg		**Sb**	**09 57 52.5**	**+1.0**		
	8.3nm,0.2s										
RJF	**Les Rejaudoux**	**2.58**	**21**		*e*Pg		**Pg**	**09 57 25.4**	**-1.3**		
RJF					*e*Sg		**Sb**	**09 57 56.7**	**+0.7**		
	13nm,0.2s										
EMOS	**Mosqueruela**	**2.59**	**192**		P		**Pn**	**09 57 19.8**	**-0.1**		
EMOS					S		**Sn**	**09 57 51.1**	**-0.7**		
ETOR	**Torete**	**2.69**	**220**		Pn		**Pn**	**09 57 21.8**	**+0.6**		
ETOR					Sn		**Sn**	**09 57 55.0**	**+0.9**		
ETOR					*i* IVmb_Lg			09 58 12.7			
LASF	**Ste Croix**	**2.89**	**65**		*e*Sg		**Sb**	**09 58 07.6**	**+2.6**		
	4.0nm,0.2s										
MFF	**Saint Martin d**	**3.71**	**356**		*e*Pn		**Pn**	**09 57 33.2**	**-2.0**		
MFF					*e*Pg		**Pb**	**09 57 45.6**	**+2.3**		
MFF					*e*Sg		**Sb**	**09 58 32.0**	**+3.4**		

*IDC **29** 10:00:46.1±0.4,59˚64S×26˚35W,h0km,mb4.7/14, mbtmp4.7/15,ML5.2/1,MS4.1/15,Error ellipse: s-maj=20.6km s-min=13.3km az=57.0*

*GFZ **29** 10:00:55.5±0.3,60˚S×2˚7W±˚,h73km,M5.0/25, mb5.1/25*

*NEIC **29** 10:00:57.2±1.8,59˚70S±0˙09×26˚4W±0˙2,h84km±5km, mb5.0/55,Error ellipse: s-maj=14.4km s-min=12.0km az=45.0*

ISC 29 10:00:57.3±0.3,60˚06S±0˙06×26˚42W±0˙06,h100km, n318,σ1§61/277,mb4.9/33,5C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.96**	**312**	Pn	**Pn**	**10 02 50.2**	**+0.1**
HOPE	**Hope Point**	**7.96**	**312**	P	**Pn**	**10 02 50.6**	**+0.6**
ORCD	**Orcadas**	**9.09**	**258**		**Pn**	**10 03 06.8**	**+1.6**
VNA1	**Neumayer--Stat**	**12.97**	**152**	⇑P	**Pn**	**10 03 55.5**	**-1.9**
	comp=Z,150nm,0.3s						
VNA2	**Neumayer--Watz**	**13.37**	**152**	⇑P	**Pn**	**10 03 59.9**	**-2.7**
	comp=Z,52nm,0.5s,baz=313,slow=13						
VNA2	**Neumayer--Watz**	**13.37**	**152**	P	**Pn**	**10 04 00.2**	**-2.4**
ESPZ	**Base Esperanza**	**14.78**	**244**	Pn	**P**	**10 04 23.4**	**-0.7**
SNAA	**Sanae**	**14.96**	**151**	⇑P	**P**	**10 04 22.2**	**-4.0**
	comp=Z,1μm,0.5s						
SNAA	**Sanae**	**14.96**	**151**	Pn	**P**	**10 04 22.2**	**-4.0**
	comp=Z,9.3nm,0.3s,baz=315,slow=13,SNR=82						
SNAA				Sn	Sn	10 06 56.2	-12
	comp=Z,2.7nm,0.3s,baz=329,slow=18,SNR=11						
SNAA				LR	LR	10 09 06.6	
	comp=Z,686nm,19.9s,baz=326,slow=33						
	comp=Z,36nm,0.4s						

SNAA	**Sanae**	**14.96**	**151**	P	**P**	**10 04 22.4**	**-3.9**
TROLL	**Troll, Antarti**	**16.53**	**148**	⇑P	**P**	**10 04 42.8**	**-0.9**
	comp=Z,1μm,0.3s						
BELA	**Belgrano 2**	**18.10**	**186**		**Pn**	**10 05 04.0**	**+2.3**
EFI	**East Falkland**	**19.47**	**281**	P	**Pn**	**10 05 14.9**	**-3.1**
MG02	**Cerro Sombrero**	**24.39**	**268**	P	**P**	**10 06 06.6**	**+0.8**
MG02	**Cerro Sombrero**	**24.39**	**268**	P	**P**	**10 06 05.8**	**0.0**
MG03	**Isla Dawson**	**24.42**	**265**	P	**P**	**10 06 06.8**	**+0.8**
MG03				IAmb	IAmb	10 06 34.6	
	comp=Z,141nm,1.6s						
GO10	**Punta Arenas**	**25.09**	**266**	P	**P**	**10 06 13.2**	**+1.0**
MG05	**Puerto Natales**	**26.67**	**268**		**P**	**10 06 27.1**	**+0.7**
MG05				IAmb	IAmb	10 06 29.3	
	comp=Z,34nm,0.9s						
MG05	**Puerto Natales**	**26.67**	**268**	P	**P**	**10 06 26.6**	**+0.2**
GO08	**Villa O'Higgin**	**28.72**	**273**		**P**	**10 06 46.1**	**+1.4**
GO08	**Villa O'Higgin**	**28.72**	**273**	P	**P**	**10 06 45.8**	**+1.1**
QSPA	**South Pole Qui**	**30.18**	**180**	P	P	10 07 02.5	+4.9
	comp=Z,15nm,0.6s,baz=242,slow=0.3,SNR=185						
QSPA				PcP	**PcP**	**10 09 59.6**	**+3.6**
	comp=Z,3.0nm,0.4s,baz=344,slow=2.1,SNR=6.1						
QSPA				LR	LR	10 18 53.5	
	comp=Z,524nm,20.5s,baz=116,slow=36						
	comp=Z,15nm,0.6s						
QSPA	**South Pole Qui**	**30.18**	**180**	P	P	10 07 02.8	+5.2
QSPA				IAmb	IAmb	10 07 04.1	
	comp=Z,53nm,1.5s						
QSPA	**South Pole Qui**	**30.18**	**180**	P	P	10 07 03.0	+5.3
TRQA	**Tornquist**	**31.44**	**298**	P	**P**	**10 07 09.6**	**+0.7**
TRQA				IAmb	IAmb	10 07 17.5	
	comp=Z,59nm,1.7s						
LL02	**Futaleuf**	**32.06**	**281**	P	**P**	**10 07 14.8**	**+0.5**
LL02				IAmb	IAmb	10 07 28.9	
	comp=Z,23nm,1.4s						
LL02	**Futaleuf**	**32.06**	**281**	P	**P**	**10 07 14.8**	**+0.5**
ANCO	**Parque Anchore**	**32.97**	**307**	*e*P	**P**	**10 07 22.6**	**+0.4**
PLCA	**Paso Flores**	**33.29**	**285**	P	**P**	**10 07 25.6**	**+0.6**
	comp=Z,3.3nm,0.4s,baz=139,slow=6.4,SNR=39						
	comp=Z,3.3nm,0.4s						
PLCA	**Paso Flores**	**33.29**	**285**		**P**	**10 07 25.9**	**+0.8**
PLCA				IAmb	IAmb	10 07 42.5	
	comp=Z,22nm,1.4s						
PLCA	**Paso Flores**	**33.29**	**285**	*e*P	**P**	**10 07 25.6**	**+0.6**
PLCA	**Paso Flores**	**33.29**	**285**	P	**P**	**10 07 25.9**	**+0.8**
PLCA	**Paso Flores**	**33.29**	**285**	P	**P**	**10 07 25.4**	**+0.4**
LR05	**Currie**	**34.38**	**284**	P	**P**	**10 07 35.0**	**+0.6**
LR05				IAmb	IAmb	10 07 40.2	
	comp=Z,17nm,0.6s						
GO06	**Curarrehue**	**34.62**	**286**	P	**P**	**10 07 36.1**	**-0.5**
GO06	**Curarrehue**	**34.62**	**286**	P	**P**	**10 07 35.8**	**-0.9**
CPSB	**Cacapava Do Su**	**34.74**	**316**	*e*P	**P**	**10 07 38.5**	**+0.9**
CPSB	**Cacapava Do Su**	**34.74**	**316**	P	**P**	**10 07 38.2**	**+0.6**
PSAL	**Palomas, Salto**	**35.65**	**310**	*e*P	**P**	**10 07 45.3**	**0.0**
MAW	**Mawson**	**36.73**	**140**	P	P	10 07 56.8	+2.7
	comp=Z,6.0nm,0.9s,baz=304,slow=5.6,SNR=7.3						
MAW				PcP	**PcP**	**10 10 17.9**	**+3.7**
	comp=Z,3.1nm,0.8s,baz=263,slow=6.0,SNR=4.1						
	comp=Z,6.0nm,0.9s						
MAW	**Mawson**	**36.73**	**140**	P	P	10 07 57.4	+3.3
MAW	**Mawson**	**36.73**	**140**	P	**P**	**10 07 56.7**	**+2.5**
BI02	**San Fabin de**	**36.84**	**289**	P	**P**	**10 07 55.4**	**-0.2**
ITAB	**Concordia**	**37.23**	**320**	*e*P	**P**	**10 07 59.9**	**+1.0**
GO05	**Hualane**	**38.50**	**290**	P	**P**	**10 08 09.7**	**+0.2**
GO05				IAmb	IAmb	10 08 19.9	
	comp=Z,41nm,1.2s						
MT08	**Bocatoma Ro**	**38.90**	**293**	P	**P**	**10 08 14.5**	**+1.5**
MT08				IAmb	IAmb	10 08 16.5	
	comp=Z,24nm,1.1s						
BO03	**Pichilemu**	**38.93**	**290**	P	**P**	**10 08 14.1**	**+1.0**
MT09	**Talagante**	**39.07**	**292**	P	**P**	**10 08 15.1**	**+0.7**
MT09				IAmb	IAmb	10 08 17.2	
	comp=Z,50nm,0.9s						
MT01	**Popeta**	**39.12**	**292**	P	**P**	**10 08 15.2**	**+0.5**
PEL	**Peldehue**	**39.45**	**293**	P	**P**	**10 08 18.6**	**+1.1**
PEL	**Peldehue**	**39.45**	**293**	P	**P**	**10 08 18.8**	**+1.3**
PEL	**Peldehue**	**39.45**	**293**	P	**P**	**10 08 19.0**	**+1.5**
VA03	**San Esteban**	**39.71**	**293**	P	**P**	**10 08 20.9**	**+1.3**
VA03				IAmb	IAmb	10 08 36.7	
	comp=Z,49nm,1.1s						
VA03	**San Esteban**	**39.71**	**293**	P	**P**	**10 08 20.1**	**+0.4**
CPUP	**Villa Florida**	**39.84**	**314**	P	**P**	**10 08 19.9**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=144,slow=8.5,SNR=11						
	comp=Z,3.2nm,0.5s						
CPUP	**Villa Florida**	**39.84**	**314**	P	**P**	**10 08 20.1**	**-0.6**
CPUP				IAmb	IAmb	10 08 52.6	
	comp=Z,60nm,2.0s						
CPUP	**Villa Florida**	**39.84**	**314**	*e*P	**P**	**10 08 20.2**	**-0.4**
SJPY	**San Joaquin**	**40.62**	**316**	*e*P	**P**	**10 08 27.3**	**+0.1**
SUR	**Sutherland**	**41.47**	**70**	P	**P**	**10 08 34.3**	**0.0**
SUR				pP	pP	10 08 47.9	-8.4
SUR				IAmb	IAmb	10 09 21.6	
	comp=Z,87nm,1.8s						
CO01	**Juntas del Tor**	**41.85**	**296**	P	**P**	**10 08 39.6**	**+2.2**
RIB01	**Linhares ES**	**41.92**	**340**	*e*P	**P**	**10 08 36.3**	**-1.4**
SBA	**Scott Base**	**42.10**	**184**	P	P	10 08 44.4	+5.8
SBA				PP	**PP**	**10 10 18.7**	**+1.2**
SBA	**Scott Base**	**42.10**	**184**	P	P	10 08 45.1	+6.5
VNDA	**Vanda**	**42.57**	**183**	P	P	10 08 47.7	+5.3
	comp=Z,9.9nm,0.8s,baz=186,slow=6.4,SNR=44						
	comp=Z,9.9nm,0.8s						
VNDA	**Vanda**	**42.57**	**183**	P	P	10 08 47.3	+4.9
VNDA	**Vanda**	**42.57**	**183**	P	P	10 08 48.1	+5.7
SJMB	**Sao Joao De Ma**	**42.65**	**339**	*e*P	**P**	**10 08 41.9**	**-1.8**
AC05	**El Transito**	**42.91**	**297**	P	**P**	**10 08 46.4**	**+0.6**
AC05	**El Transito**	**42.91**	**297**	P	**P**	**10 08 47.2**	**+1.4**
CCD	**Concordia, Ant**	**43.65**	**169**	P	P	10 08 55.9	+4.4
GUA01	**Guaratinga, BA**	**44.49**	**342**	*e*P	**P**	**10 08 56.4**	**-2.1**
SALTA		**45.23**	**304**	P	**P**	**10 09 04.6**	**-0.4**
H04S2	**CROZET ISLANDS**	**45.66**	**110**	T	T	10 59 34.5	
	baz=225,slow=76,SNR=67						
H04S3	**CROZET ISLANDS**	**45.67**	**110**	T	T	10 59 32.2	
	baz=225,slow=76,SNR=71						
H04S1	**CROZET ISLANDS**	**45.68**	**110**	T	T	10 59 35.7	
	baz=225,slow=76,SNR=57						
BOSA	**Boshof**	**46.72**	**71**	P	**P**	**10 09 15.9**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=229,slow=6.3,SNR=5.5						
	comp=Z,1.7nm,0.6s						
BOSA	**Boshof**	**46.72**	**71**	P	**P**	**10 09 15.7**	**-0.4**
BOSA				IAmb	IAmb	10 09 28.9	
	comp=Z,23nm,1.3s						
BDFB	**Brasilia**	**47.07**	**331**	P	**P**	**10 09 16.9**	**-1.9**
	comp=Z,2.7nm,0.4s,baz=126,slow=11,SNR=4.7						
	comp=Z,2.7nm,0.4s						
BDFB	**Brasilia**	**47.07**	**331**	P	**P**	**10 09 15.8**	**-3.0**
BDFB				IAmb	IAmb	10 10 42.4	
	comp=Z,38nm,2.0s						
PB05	**IPOC Station P**	**48.08**	**301**	P	**P**	**10 09 26.5**	**-0.2**
PB05				IAmb	IAmb	10 09 29.1	
	comp=Z,13nm,0.8s						
PB03	**IPOC Station P**	**48.59**	**302**	P	**P**	**10 09 29.6**	**-1.1**
PB09	**IPOC Station P**	**48.60**	**303**	P	**P**	**10 09 30.9**	**+0.1**
LKGWB	**Lokgwabe**	**48.68**	**64**	P	**P**	**10 09 33.7**	**+2.4**
PB07	**IPOC Station P**	**48.94**	**302**	P	**P**	**10 09 32.9**	**-0.4**
PB02	**IPOC Station P**	**49.30**	**302**	P	**P**	**10 09 36.2**	**+0.2**
BBSD	**Serra de San D**	**49.41**	**315**	*e*P	**P**	**10 09 35.8**	**-1.0**
LBTB	**Lobatse**	**49.92**	**69**	P	**P**	**10 09 41.1**	**+0.4**
LBTB				IAmb	IAmb	10 09 54.1	
	comp=Z,16nm,1.1s						
CASY	**Casey**	**50.00**	**159**	P	P	10 09 44.5	+3.9
CASY				IAmb	IAmb	10 09 47.8	
	comp=Z,18nm,1.6s						
CASY	**Casey**	**50.00**	**159**	P	**P**	**10 09 42.2**	**+1.6**
CASY	**Casey**	**50.00**	**159**	P	P	10 09 44.9	+4.3
PB08	**IPOC Station P**	**50.04**	**304**	P	**P**	**10 09 43.5**	**+1.5**
NBPN	**Ponto Novo - B**	**50.18**	**342**	*e*P	**P**	**10 09 40.2**	**-2.5**
GO01	**Chusmiza**	**50.47**	**304**	P	**P**	**10 09 45.9**	**+0.6**
PTLB	**Pontes e Lacer**	**50.51**	**318**	P	**P**	**10 09 42.7**	**-2.3**
PTLB				IAmb	IAmb	10 09 46.1	
	comp=Z,8.1nm,0.8s						
PTLB	**Pontes e Lacer**	**50.51**	**318**	*e*P	**P**	**10 09 43.8**	**-1.2**
PB11	**IPOC Station P**	**50.59**	**303**	P	**P**	**10 09 46.3**	**+0.5**
PSGCX	**Pisagua**	**50.93**	**303**	P	**P**	**10 09 48.0**	**-0.3**
PSGCX				IAmb	IAmb	10 10 23.8	
	comp=Z,49nm,1.7s						
GRTLG	**Ghanzi**	**51.07**	**62**	P	**P**	**10 09 49.5**	**+0.1**
GRTLG				IAmb	IAmb	10 09 50.3	
	comp=Z,9.6nm,0.9s						
TSUM	**Tsumeb**	**51.41**	**57**	LR	LR	10 28 03.8	
	comp=Z,341nm,21.8s,baz=334,slow=32						
TSUM	**Tsumeb**	**51.41**	**57**	P	**P**	**10 09 51.4**	**-0.5**
SNDB	**Serra Nova Dou**	**51.42**	**328**	*e*P	**P**	**10 09 50.5**	**-1.4**
NBTA	**Tacaratu-PE**	**51.58**	**345**	*e*P	**P**	**10 09 50.6**	**-2.4**
H10S2	**ASCENSION HYDR**	**51.76**	**15**	T	T	11 05 33.1	
	baz=188,slow=74,SNR=61						

H10S3	**ASCENSION HYDR**	**51.76**	**15**	T	T	11 05 35.4	
	baz=32,slow=74,SNR=54						
H10N1	**ASCENSION HYDR**	**52.88**	**15**	T	T	11 06 57.6	
	baz=181,slow=72,SNR=4.3						
H10N3	**ASCENSION HYDR**	**52.88**	**15**	T	T	11 06 56.9	
	baz=181,slow=72,SNR=32						
H10N2	**ASCENSION HYDR**	**52.89**	**15**	T	T	11 07 00.2	
	baz=181,slow=72,SNR=22						
LPAZ	**La Paz**	**53.08**	**307**	P	**P**	**10 10 04.0**	**-0.8**
	comp=Z,4.7nm,0.3s,baz=65,slow=6.8,SNR=37						
	comp=Z,4.7nm,0.3s						
LPAZ	**La Paz**	**53.08**	**307**	P	**P**	**10 10 04.5**	**-0.4**
LPAZ				IAmb	IAmb	10 10 21.8	
	comp=Z,15nm,1.3s						
LPAZ	**La Paz**	**53.08**	**307**	*e*P	**P**	**10 10 05.1**	**+0.3**
LPAZ	**La Paz**	**53.08**	**307**	P	**P**	**10 10 05.2**	**+0.3**
LPAZ	**La Paz**	**53.08**	**307**	P	**P**	**10 10 05.0**	**+0.2**
DRV	**Dumont d'Urvil**	**53.18**	**173**	P	P	10 10 08.9	+4.7
VILB	**Vilhena**	**53.19**	**317**	*e*P	**P**	**10 10 03.5**	**-1.5**
GMARE	**Gumare**	**53.22**	**62**	P	**P**	**10 10 04.6**	**-0.7**
SMTB	**Santa Maria do**	**53.51**	**334**	*e*P	**P**	**10 10 06.3**	**-1.0**
CLDB	**Colider**	**53.74**	**323**	*e*P	**P**	**10 10 06.9**	**-2.1**
KSANE	**Kasane**	**55.96**	**64**	P	**P**	**10 10 25.0**	**-0.1**
KSANE				IAmb	IAmb	10 10 38.9	
	comp=Z,23nm,1.2s						
PRPB	**Parauapebas**	**56.62**	**332**	*e*P	**P**	**10 10 27.9**	**-1.8**
LSZ	**Lusaka**	**59.54**	**66**	P	**P**	**10 10 50.1**	**-0.2**
LSZ				IAmb	IAmb	10 11 04.7	
	comp=Z,11nm,0.8s						
LSZ	**Lusaka**	**59.54**	**66**	P	**P**	**10 10 51.2**	**+1.0**
FOMA	**Nahampoana Res**	**60.44**	**89**	P	**P**	**10 10 58.0**	**+1.9**
CZSB	**Cruzeiro do Su**	**62.67**	**306**	P	**P**	**10 11 10.1**	**-1.1**
CZSB				IAmb	IAmb	10 11 26.9	
	comp=Z,16nm,1.3s						
ATAH	**Atahualpa**	**65.58**	**301**	LR	LR	10 41 46.1	
	comp=Z,41nm,19.6s,baz=155,slow=38						
BOAV	**Boa Vista**	**67.72**	**323**	P	**P**	**10 11 41.6**	**-2.2**
BOAV	**Boa Vista**	**67.72**	**323**	*e*P	**P**	**10 11 41.6**	**-2.2**
MDP	**Montagnes des**	**68.17**	**332**	LR	LR	10 38 37.0	
	comp=Z,142nm,21.5s,baz=146,slow=34						
DBIC	**Dimbokro**	**68.68**	**23**	P	**P**	**10 11 50.1**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=131,slow=20,SNR=2.1						
	comp=Z,1.9nm,0.5s						
DBIC	**Dimbokro**	**68.68**	**23**	P	**P**	**10 11 50.4**	**+0.7**
DBIC				IAmb	IAmb	10 14 17.9	
	comp=Z,34nm,1.6s						
OTAV	**Otavalo**	**72.24**	**304**	P	**P**	**10 12 10.7**	**-1.3**
MBAR	**Mbarara**	**73.68**	**61**	P	**P**	**10 12 18.1**	**-2.0**
MLZ	**Mavora Lakes**	**74.26**	**191**	P	P	10 12 27.3	+4.3
ROSC	**El Rosal**	**74.78**	**310**	P	**P**	**10 12 25.3**	**-1.4**
	comp=Z,6.2nm,0.4s,baz=80,slow=19,SNR=1.6						
ROSC				LR	LR	10 45 59.4

GTA2	Gaotai	140.99	97	ePKP		PKiKP	10 20 19.8	+2.2
ZALV	Zalesovo Beam	143.63	68	PKhKP		PKPpre	10 20 17.3	
	comp=Z,3.7nm,0.4s,baz=219,slow=2.9,SNR=9.4							
NJ2	Nanjing	143.80	125	eP		PKiKP	10 20 23.5	+0.1
NJ2				pmax		pmax		
	comp=Z,27nm,0.5s							
SIT	Sitka	144.42	297	P		PKPdf	10 20 19.9	-0.3
	baz=125							
R32K	Eaglecrest	144.76	299	P		PKiKP	10 20 21.2	-3.3
	baz=124							
P33M	Teslin, Yukon	145.11	303	P		PKiKP	10 20 21.8	-3.5
	baz=122							
P32M	Atlin	145.15	302	P		PKiKP	10 20 22.1	-3.3
	baz=122,SNR=13							
S31K	Pelican	145.34	298	P		PKiKP	10 20 22.7	-2.9
	baz=123							
N32M	Quiet Lake	145.72	304	P		PKiKP	10 20 23.6	-2.9
	baz=121							
MMPY	Sheldon Lake,	145.74	307	P		PKiKP	10 20 24.4	-2.1
	baz=120							
SKAG	Skagway	145.77	301	P		PKiKP	10 20 24.1	-2.4
	baz=122							
WHY	Whitehorse	146.22	303	P		PKiKP	10 20 25.3	-2.3
	baz=121							
PLBC	Pleasant Camp	146.22	300	P		PKiKP	10 20 26.2	-1.3
	baz=121							
C36M	Paulatuk	146.36	321	P		PKiKP	10 20 25.3	-2.2
	baz=116							
HNS	HongShan	146.53	115	⇑PKPbc		PKiKP	10 20 28.8	0.0
HNS				pPKP		pPKPdf	10 20 45.5	-5.0
TIA	Tai'an	146.63	119	PKPbc		PKiKP	10 20 29.0	-0.1
O30N	Mendenhall	146.78	302	P		PKiKP	10 20 26.6	-2.1
	baz=120							
M31M	Drury Creek, Y	146.79	305	P		PKiKP	10 20 26.6	-2.1
	baz=119							
P30M	Million Dollar	146.82	301	P		PKiKP	10 20 27.1	-1.7
	baz=120							
P29M	Windy Craggy	146.90	300	P		PKiKP	10 20 27.7	-1.2
	baz=121							
BTO2	Baotou	146.93	106	ePKPbc		PKiKP	10 20 30.3	+0.5
BTO2				PP		PP	10 24 00.5	+7.4
BTO2				pmax		pmax		
	comp=Z,68nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,220nm,5.3s							
N31M	Braeburn, Yuko	147.01	304	P		PKiKP	10 20 28.0	-1.1
	baz=119							
HYT	Haines Junctio	147.41	302	P		PKPab	10 20 29.6	-0.7
	baz=119							
N30M	Aishikik Lake	147.55	303	P		PKPab	10 20 29.8	-1.0
	baz=118,SNR=6.3							
HHC	Hu-ho-hao-te	147.82	108	eP		PKPab	10 20 32.8	+0.3
M30M	Minto, Yukon	147.96	305	P		PKiKP	10 20 29.8	-1.3
	baz=117,SNR=6.4							
H31M	Peel River	148.41	312	P		PKiKP	10 20 30.6	-1.3
	baz=114							
O28M	Mount Upton	148.54	301	P		PKiKP	10 20 31.9	-0.8
	baz=118							
M29M	Somme Creek	148.58	304	P		PKiKP	10 20 32.0	-0.4
	baz=116,SNR=7.7							
YUK8	Steele Glacier	148.60	302	P		PKiKP	10 20 32.1	-0.6
	baz=117							
J30M	Hart River	148.66	309	P		PKiKP	10 20 32.0	-0.6
	baz=114							
L29M	L29M	148.74	305	P		PKiKP	10 20 32.3	-0.4
	baz=116,SNR=11							
K29M	Barlow Dome	148.82	307	P		PKiKP	10 20 32.1	-0.8
	baz=115							
G31M	Satah River	148.83	314			PKiKP	10 20 31.7	-1.0
G31M	Satah River	148.83	314	P		PKiKP	10 20 32.0	-0.6
	baz=112							
F31M	Tsiigehtchic	148.84	315	P		PKiKP	10 20 31.8	-0.8
	baz=112							
I30M	Mount Dempster	148.94	310	P		PKiKP	10 20 31.7	-1.5
	baz=113,SNR=11							
INK	Inuvik	149.09	316	PKPbc		PKiKP	10 20 32.7	-0.4
	comp=Z,5.9nm,0.8s,baz=108,slow=6.0,SNR=20							
INK	Inuvik	149.09	316	P		PKiKP	10 20 32.3	-0.8
	baz=110							
EPYK	Eagle Plains	149.52	312	P		PKiKP	10 20 33.8	-0.4
	baz=111							
G30M	tAoh Zraii Nji	149.57	313	P		PKiKP	10 20 33.6	-0.6
	baz=111							
BVCY	Beaver Creek	149.57	303	P		PKiKP	10 20 34.3	0.0
	baz=115							
F30M	Barrier River	149.63	314	P		PKiKP	10 20 34.3	0.0
	baz=110							
DAWY	Dawson	149.66	307	P		PKiKP	10 20 34.2	-0.3
	baz=113,SNR=9.8							
I29M	Ogilvie Camp,	149.75	309	P		PKiKP	10 20 34.9	+0.3
	baz=112							
CRQE	Cirque	149.79	299	P		PKiKP	10 20 35.4	+0.4
	baz=116							
M27K	Edge Creek, AK	149.97	303	P		PKiKP	10 20 35.4	0.0
	baz=114							
KAIM	Kayak Island	149.99	297	P		PKiKP	10 20 35.0	-0.3
	baz=117							
MCARA	McCarthy VSAT	150.04	300	P		PKiKP	10 20 35.7	+0.4
	baz=115							
H29M	Whitestone	150.09	311	P		PKiKP	10 20 35.0	-0.3
	baz=110							
G29M	Pine Creek	150.21	312	P		PKiKP	10 20 35.6	+0.1
	baz=110,SNR=11							
L27K	Beaver Creek,	150.25	304	P		PKiKP	10 20 36.1	+0.3
	baz=113							
SONM	Songino Array	150.34	93	PKPbc		PKiKP	10 20 37.9	+1.4
	comp=Z,12nm,0.6s,baz=219,slow=2.5,SNR=56							
SONM	Songino Array	150.34	93			PKPab	10 20 38.2	-4.4
I28M	Miner Creek	150.41	309	P		PKiKP	10 20 36.6	+0.5
	baz=111,SNR=9.0							
M26K	Nabesna, AK	150.47	302	P		PKiKP	10 20 36.8	+0.5
	baz=114							
BMRM	Bremner River	150.55	299	P		PKiKP	10 20 37.3	+0.9
	baz=115							
E29M	Blow River	150.64	315	P		PKiKP	10 20 36.2	-0.1
	baz=107,SNR=13							
ULN	Ulaanbaatar	150.69	94			PKiKP	10 20 39.0	+1.6
N25K	Chitina, Valde	150.82	300	P		PKiKP	10 20 38.0	+0.9
	baz=114							
EYAK	Cordova Ski Ar	150.87	298	P		PKiKP	10 20 37.4	+0.4
	baz=115							
L26K	Log Cabin Wild	150.87	303	P		PKiKP	10 20 37.8	+0.7
	baz=113							
F28M	Old Crow	151.11	313	P		PKiKP	10 20 37.6	+0.2
	baz=107,SNR=8.2							
I27K	Kandik River	151.12	309	P		PKiKP	10 20 38.2	+0.7
	baz=109,SNR=7.8							
E28M	Babbage River	151.28	315	P		PKiKP	10 20 38.6	+0.9
	baz=106							
H27K	Steamboat Moun	151.30	310	P		PKiKP	10 20 38.6	+0.8
	baz=108,SNR=14							
KLU	Klutina	151.35	299	P		PKiKP	10 20 39.3	+1.1
	baz=114							
P23K	Montague Islan	151.36	296	P		PKiKP	10 20 39.1	+1.0
	baz=116							
TLY	Talaya	151.40	85	PKPbc		PKiKP	10 20 40.5	+2.0
	comp=Z,6.5nm,0.5s,baz=228,slow=1.0,SNR=8.9							
TLY	Talaya	151.40	85			PKiKP	10 20 40.8	+2.4
G27K	Doyon Strip	151.53	311	P		PKiKP	10 20 39.1	+0.8
	baz=107							
I26K	Coal Creek Min	151.62	308	P		PKiKP	10 20 39.5	+1.0
	baz=109							
M24K	Tolsona, Glenn	151.71	301	P		PKiKP	10 20 39.8	+1.0
	baz=113							
PAX	Paxson	151.74	302	P		PKiKP	10 20 39.5	+0.6
	baz=112							
RIDG	Independent Ri	151.76	304	P		PKiKP	10 20 40.2	+1.3
	baz=110							
NRIK	Noril'sk	151.78	43	PKPbc		PKiKP	10 20 39.4	+0.7
	comp=Z,2.4nm,0.7s,baz=77,slow=0.5,SNR=4.8							
NRIK	Noril'sk	151.78	43			PKiKP	10 20 39.8	+1.1
E27K	Coleen River	151.90	314	P		PKiKP	10 20 40.5	+1.4
	baz=105							
D27M	Malcolm River	151.95	316	P		PKiKP	10 20 40.1	+1.0
	baz=103,SNR=9.4							
KSRS	Korea Array	152.09	133	PKP		PKPbc	10 20 36.5	-3.5
	comp=Z,0.3nm,0.4s,baz=191,slow=1.2,SNR=1.6							
KSRS				PKPbc		PKiKP	10 20 42.9	+2.6
	comp=Z,3.7nm,0.9s,baz=204,slow=2.1,SNR=10							
KSRS				PKPab		pPKPdf	10 20 53.5	-6.0
	comp=Z,2.7nm,0.8s,baz=206,slow=3.1,SNR=5.7							
SCM	Sheep Creek Mo	152.10	300	P		PKiKP	10 20 41.3	+1.7
	baz=112							
PWL	Port Wells	152.15	297	P		PKiKP	10 20 40.8	+1.0
	baz=114							
K24K	Donnelly Dome	152.17	304	P		PKiKP	10 20 40.9	+1.1
	baz=110							
M23K	Glacier View	152.26	299	P		PKiKP	10 20 41.4	+1.4
	baz=112							
J25K	Salcha River,	152.28	306	P		PKiKP	10 20 41.2	+1.3
	baz=109							
SEW	Seward	152.34	295	P		PKiKP	10 20 41.4	+1.3
	baz=114							
G26K	Porcupine Rive	152.37	311	P		PKiKP	10 20 40.9	+0.9
	baz=106							
KNK	Knik Glacier	152.43	298	P		PKiKP	10 20 41.4	+1.1
	baz=112							
SML	Sawmill	152.53	299	P		PKiKP	10 20 41.4	+0.9
	baz=112							
WAT6	Susitna Watana	152.56	301	P		PKiKP	10 20 40.9	+0.2
	baz=111							
DHY	Denali Highway	152.59	302	P		PKiKP	10 20 41.8	+1.1
	baz=110							
O22K	Cooper Landing	152.62	296	P		PKiKP	10 20 42.1	+1.5
	baz=114							
F26K	Sheenjek River	152.71	313	P		PKiKP	10 20 41.9	+1.2
	baz=104							
KDAK	Kodiak Island	152.75	289	P		PKiKP	10 20 42.1	+1.1
	baz=117							
BRSE	Bradley Lake S	152.77	294	P		PKiKP	10 20 41.9	+0.9
	baz=114							
PMR	Palmer	152.80	298	P		PKiKP	10 20 42.0	+1.1
	baz=112							
HDA	Harding Lake	152.86	305	P		PKiKP	10 20 42.2	+1.1
	baz=108							
RC01	Rabbit Creek A	152.87	297	P		PKiKP	10 20 42.4	+1.2
	baz=112							
ILAR	Eielson Array	152.95	306	PKPbc		PKiKP	10 20 42.0	+0.8
	comp=Z,1.6nm,0.3s,baz=146,slow=2.4,SNR=32							
ILAR				PKPab		pPKPdf	10 20 55.2	-5.3
	comp=Z,0.9nm,0.4s,baz=136,slow=0.7,SNR=5.8							
ILAR	Eielson Array	152.95	306			PKiKP	10 20 42.6	+1.4
C27K	Jago River	152.98	317	P		PKiKP	10 20 42.5	+1.3
	baz=100							
G25K	Bearman Lake	153.21	310	P		PKiKP	10 20 43.0	+1.3
	baz=104							
F25K	Christian Rive	153.24	312	P		PKiKP	10 20 43.4	+1.5
	baz=103							
M22K	Willow	153.29	298	P		PKiKP	10 20 44.0	+2.0
	baz=111							
E25K	Arctic Village	153.33	313	P		PKiKP	10 20 43.4	+1.4
	baz=102							
MCK	McKinley	153.47	303	P		PKiKP	10 20 44.2	+1.8
	baz=108							
H24K	Noodor Dome	153.66	308	P		PKiKP	10 20 44.3	+1.6
	baz=105							
G24K	Hadweenzic Riv	153.72	310	P		PKiKP	10 20 44.5	+1.7
	baz=103							
D25K	Kavik River	153.85	316	P		PKiKP	10 20 43.8	+0.7
	baz=99							
E24K	Your Creek	154.39	313	P		PKPab	10 21 00.6	+1.5
	baz=100							
MJAR	Matsushiro Arr	154.47	150	PKPab		PKPab	10 21 02.5	+2.4
	comp=Z,2.2nm,0.8s,baz=176,slow=4.7,SNR=5.6							
M20K	Styx River	154.68	297	P		PKPab	10 21 01.5	+1.1
	baz=109							
G23K	Bananza Creek	154.71	309	P		PKPab	10 21 01.8	+1.4
	baz=101							
CAST	Castle Rocks	154.71	301	P		PKPab	10 21 01.2	+0.7
	baz=107							
G22K	Bettles	155.33	309	P		PKPab	10 21 05.2	+2.2
	baz=100							
P16K	Nushagak River	155.86	289	P		PKPab	10 21 08.8	+3.4
	baz=113							
G21K	Allakaket	156.04	308	P		PKPab	10 21 09.0	+2.9
	baz=99							
F21K	Alatna River	156.14	310	P		PKPab	10 21 08.7	+2.2
	baz=98							
M16K	Timber Creek	157.03	293	P		PKPab	10 21 13.1	+2.6
	baz=108							
H19K	Roundabout Mou	157.05	305	P		PKPab	10 21 11.6	+1.2
	baz=99							
L17K	Donlin	157.07	296	P		PKPab	10 21 12.2	+1.6
	baz=106							
E20K	Nigu River	157.27	312	P		PKPab	10 21 12.4	+1.0
	baz=93							
L16K	Owhat River	157.48	295	P		PKPab	10 21 14.8	+2.4
	baz=106							
UNV	Unalaska Valle	157.64	272	P		PKPab	10 21 15.6	+2.4
	baz=107							
M15K	Kasigluk River	157.73	292	P		PKPab	10 21 15.6	+2.1
	baz=108							
H18K	Honhosa River	157.78	304	P		PKPab	10 21 15.6	+2.0
	baz=98							
N14K	Kuskokwak Cree	157.94	289	P		PKPab	10 21 16.7	+2.3
	baz=109							
D19K	Kuna River	158.00	313	P		PKPab	10 21 16.0	+1.5
	baz=91							
G18K	Tagagawik	158.01	306	P		PKPab	10 21 16.6	+2.0
	baz=96							
HILR	Hailar Array B	158.10	104	PKPab		PKPab	10 21 17.4	+1.9
	comp=Z,1.9nm,0.4s,baz=289,slow=4.4,SNR=2.2							
L15K	Ungalak Mounta	158.39	294	P		PKPab	10 21 18.2	+1.9
	baz=105							

*SOME **29** 10:12:07.5, 43.60N × 69.75E*

NNC 29 10:12:05.6 ± 4.6, 43.71N × 69.72E, h0 km, mb3.6, mpv2.9, 1D, Error ellipse: s-maj=26.6km s-min=19.2km az=153.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	Boroldaу	0.69	173	P	Pn	10 12 23.6	+1.0
	3.2nm,0.2s						
BRLS				S	Sn	10 12 32.7	-1.3
	14nm,0.1s						
KK31	Karatay Array	0.84	136	P	Pg	10 12 21.6	0.0
	0.5nm,0.2s,baz=334,slow=12,SNR=25						
KK31				⇓S	Sb	10 12 33.9	-0.9
	36nm,0.8s,baz=330,slow=21						
IUG	Iuzhnay	1.58	172	P	Pg	10 12 36.5	+0.6
	18nm,0.3s						
IUG				S	Sn	10 12 55.1	-1.1
	31nm,0.7s						
MRKS	Merke	2.74	109	Pg	Pg	10 12 58.7	+0.7
	1.2nm,0.2s						
MRKS				Lg	Lg	10 13 32.8	
	4.2nm,0.3s						
SGDS	Sogindy	3.58	92	Pg	Pg	10 13 13.0	-1.1
SGDS				Lg	Lg	10 13 57.3	

*IDC **29** 10:30:16.3 ± 1.8, 34.07N × 136.94E, h295km ± 35km, mb2.7/2, mbtmp3.2/4, Error ellipse: s-maj=61.9km s-min=27.7km az=48.0*

*JMA **29** 10:30:16.9 ± 0.2, 34°N ± 4.5' × 13°7E ± 5', h337km, MV2.2/15, ENSYUNADA*

ISC 29 10:30:17.0 ± 1.4, 34.6N ± 0.2 × 137.1E ± 0.1, h350km, n9, σ 0 ± 54/8, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAO	Obara	0.65	10	eP	Pn	10 31 01.1	-0.4
JNY	Yasuok	0.95	40	P	Pn	10 31 02.2	-0.4
JYTA	Yamagatataniai	1.01	342	P	Pn	10 31 02.2	-0.4
JWT	Wachi	1.55	295	P	Pn	10 31 04.8	-0.6
JRY	Ryogami san	2.01	46	P	Pn	10 31 08.8	+0.5
MJAR	Matsushiro Arr	2.10	25	P	Pn	10 31 08.6	-0.4
	5.5nm,0.6s,baz=197,slow=8.1,SNR=17						
KSRS	Korea Array	7.96	293	P	Pn	10 32 10.9	+0.3
	0.5nm,0.5s,baz=106,slow=12,SNR=2.7						
MKAR	Makanchi Array	42.49	304	P	P	10 37 44.5	+5.6
	0.2nm,0.5s,baz=89,slow=9.7,SNR=1.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	54.33	183	P	P	10 39 08.8	+0.3
	0.2nm,0.3s,baz=0.3,slow=7.5,SNR=6.4						
	0.2nm,0.3s						

*IDC **29** 10:37:52.9 ± 2.0, 2.59N × 128.50E, h237km ± 20km, mb3.4/9, mbtmp3.9/10, Error ellipse: s-maj=43.5km s-min=11.6km az=67.0*

*DJA **29** 10:37:53.9 ± 1.0, 3°N ± 9' × 12°8E ± ', h207km ± 12km, M3.6/8, MLv3.6/8*

ISC 29 10:37:54.3 ± 0.9, 2.5N ± 0.1 × 128.4E ± 0.1, h250km, n13, σ 1 ± 46/14, mb3.7/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.00	211	P	Pn	10 38 35.3	-1.5
SGSI	Sangihe	3.10	292	P	Pn	10 38 45.5	-2.3
SIJI	Sorong	4.41	139	P	Pn	10 39 00.9	-2.1
	4.9nm,0.4s,baz=330,slow=16,SNR=4.9						

SANI	Sanana	5.12	208	P		Pn	10 39 09.8	-1.8
FITZ	Fitzroy Crossi	20.65	187	P		P	10 42 15.8	+0.4
	0.9nm,0.4s,baz=8.8,slow=9.5,SNR=8.5							
	0.9nm,0.4s							
WRA	Warramunga Arr	23.06	166	P		P	10 42 38.1	+0.1
	0.8nm,0.5s,baz=342,slow=10,SNR=29							
	0.8nm,0.5s							
ASAR	Alice Springs	26.56	169	P		P	10 43 10.3	+0.7
	0.6nm,0.4s,baz=350,slow=7.8,SNR=18							
ASAR				ScP		ScP	10 49 44.8	+1.4
	0.4nm,0.8s,baz=343,slow=4.8,SNR=2.8							
	0.6nm,0.4s							
CMAR	Chiang Mai Arr	32.92	301	P		P	10 44 07.6	+1.9
	1.0nm,0.6s,baz=113,slow=6.5,SNR=4.4							
	1.0nm,0.6s							
STKA	Stephens Creek	36.42	161	P		P	10 44 35.4	0.0
	0.9nm,0.3s,baz=336,slow=9.3,SNR=7.7							
	0.9nm,0.3s							
MKAR	Makanchi Array	59.51	325	P		P	10 47 31.2	-0.3
	1.1nm,0.5s,baz=117,slow=8.2,SNR=10.0							
	1.1nm,0.5s							
KURBB	Kurchatov Arra	63.66	327	P		P	10 47 58.4	-0.6
	1.6nm,0.4s,baz=127,slow=6.1,SNR=18							
	1.6nm,0.4s							
BVAR	Borovoye Array	69.25	327	P		P	10 48 33.7	-0.6
	0.8nm,0.4s,baz=111,slow=8.2,SNR=2.2							
	0.8nm,0.4s							
QSPA	South Pole Qui	92.42	180	P		P	10 50 37.4	+0.9
	1.3nm,1.1s,baz=113,slow=7.7,SNR=1.6							
	1.3nm,1.1s							

*MDD **29** 10:50:05.7 ± 1.3, 36.61N × 11.30W, h16km, Mb3.8/7, M_mb3.1/7, Error ellipse: s-maj=10.0km s-min=7.8km az=44.0*

*INMG **29** 10:50:08.3 ± 1.4, 36.59N × 11.27W, h74km ± 13km, ML2.0, Error ellipse: s-maj=6.4km s-min=5.9km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*IGIL **29** 10:50:09.0, 36.67N × 11.22W, h20km, ML1.7*

*CNRM **29** 10:50:11.5, 36.40N × 10.84W, h26km*

ISC 29 10:50:04.9 ± 3.3, 36.62N ± 0.06 × 11.2W ± 0.1, h16km ± 23km, n35, σ 1°§57/66, 8C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	1.95	74	⇑eP	Pb	10 50 39.5	-0.5
PFVI				eS	Sn	10 51 02.3	+0.7
PFVI				i IAML		10 51 03.6	
PFVI				i IAML		10 51 03.7	
PFVI				i IAML		10 51 04.1	
PFVI	Vila Bisbo	1.95	74	P	Pb	10 50 39.6	-0.5
PFVI				S	Sn	10 51 01.7	+0.2
MORF	Marmelete	2.13	71	eP	Pb	10 50 42.3	-0.9
MORF				eS	Sn	10 51 06.5	+0.4
MORF				IAML		10 51 08.9	
	comp=N,15nm,0.4s						
MORF	Marmelete	2.13	71	eP	Pb	10 50 42.1	-1.0
MORF				eS	Sn	10 51 07.1	+1.0
MORF				i IAML		10 51 07.5	
MORF				i IAML		10 51 08.6	
MORF				i IAML		10 51 13.3	
PTEO	Sao Teotonio	2.17	64	eP	Pb	10 50 42.8	-0.9
PTEO				eS	Sn	10 51 07.5	+0.6
PTEO				i IAML		10 51 08.4	
PTEO				i IAML		10 51 08.6	
PLOUS	Minas do Lousa	2.61	56	eP	Pn	10 50 48.3	+1.9
PLOUS				eS	Sn	10 51 18.1	+0.4
PLOUS				i IAML		10 51 21.2	
PLOUS				i IAML		10 51 21.6	
PLOUS				i IAML		10 51 21.8	
MESJ	Messejana	2.65	62	eP	Pn	10 50 49.3	+2.3
MESJ				eS	Sn	10 51 18.9	0.0
MESJ				IAML		10 51 19.7	
	comp=E,1.1nm,0.2s						
MESJ	Messejana	2.65	62	eP	Pn	10 50 49.3	+2.3
MESJ				eS	Sn	10 51 19.6	+0.6
MESJ				i IAML		10 51 26.2	
MESJ				i IAML		10 51 29.8	
MESJ				i IAML		10 51 36.0	
PBDV	Barranco-do-Ve	2.67	76	eP	Pb	10 50 50.2	-2.1
PBDV				eS	Sn	10 51 20.4	+1.0
PBDV				i IAML		10 51 26.3	
PCVE	Castro Verde	2.70	67	eP	Pn	10 50 50.0	+2.3
PCVE				eS	Sn	10 51 20.7	+0.6
PCVE				i IAML		10 51 23.6	
PCVE				i IAML		10 51 24.7	
PCVE				i IAML		10 51 26.7	
PMAFR	Mafra	2.77	32	eP	Pn	10 50 50.4	+1.7
PMAFR				eS	Sn	10 51 21.2	-0.6
PVAQ	Vaqueiros	2.88	73	eP	Pn	10 50 52.6	+2.5
PVAQ				eS	Sn	10 51 25.0	+0.7
PVAQ				i IAML		10 51 27.4	
PVAQ				i IAML		10 51 27.4	
PVAQ				i IAML		10 51 30.0	
PVAQ	Vaqueiros	2.88	73	P	Pn	10 50 52.6	+2.5
PVAQ				S	Sn	10 51 27.4	+3.1
MOE	Montemor	2.94	49	eP	Pn	10 50 52.8	+1.8
MOE				eS	Sn	10 51 25.9	0.0
MOE				i IAML		10 51 26.8	
MOE				i IAML		10 51 28.2	
PBEJ	Beja	2.99	61	eS	Sn	10 51 28.1	+0.9
EGRO	El Granado	3.09	72	P	Pn	10 50 53.8	+0.8
EGRO				⇑iVmb_VC		10 50 56.3	
	comp=E,110nm,SNR=1.4						
EGRO				S	Sn	10 51 29.3	-0.3
EVO	Evora	3.15	52	eS	Sn	10 51 31.1	-0.1
EVO				i IAML		10 51 34.1	
EVO				i IAML		10 51 34.9	
EVO				i IAML		10 51 35.5	
PARRA	Arraiolos	3.31	48	eP	Pn	10 50 57.8	+1.7
PARRA				eS	Sn	10 51 34.5	-0.7
PARRA				i IAML		10 51 36.5	
PARRA				i IAML		10 51 37.4	
PARRA				i IAML		10 51 38.3	
PMTG	Montargil	3.38	43	eP	Pn	10 50 59.1	+2.1
PMTG				eS	Sn	10 51 36.6	-0.2
PMTG				i IAML		10 51 41.5	
PMTG				i IAML		10 51 58.0	
PESTR	Estremoz	3.62	51	eS	Sn	10 51 42.4	-0.4
PBAR	Barrancos	3.64	64	eP	Pn	10 51 03.6	+3.0
PBAR				eS	Sn	10 51 43.9	+0.6
PBAR				i IAML		10 51 46.6	
PBAR				i IAML		10 51 52.4	
PBAR				i IAML		10 51 58.5	
EMIN	Mina Concepcio	3.77	71	P	Pn	10 51 03.2	+0.8
EMIN				⇑iVmb_VC		10 51 06.7	
	comp=E,92nm,SNR=1.6						
EMIN				S	Sn	10 51 45.2	-1.3
PSARD	Sardoal	3.81	38	eP	Pn	10 51 04.8	+1.9
PSARD				eS	Sn	10 51 46.4	-1.0
PSARD				i IAML		10 51 49.6	
PSARD				i IAML		10 51 55.2	
PSARD				i IAML		10 51 55.4	
EBAD	Badajoz	3.93	56	P	Pn	10 51 05.4	+0.9

MDT	**MidIt**	**6.61**	**123**	P	**Pn**	**10 51 42.5**	**+1.0**
MDT				S	**Sn**	**10 52 54.7**	**-1.8**
OUZM	**OUZ**	**6.78**	**146**	P	**Pn**	**10 51 45.3**	**+1.5**
OUZM				S	**Sn**	**10 52 59.8**	**-1.0**

IDC ***29*** *11:07:10.3±0.6,30˚.25N×94˚.71E,h0km,mb4.3/23, mbtmp4.3/26,ML4.1/3,MS3.5/5,Error ellipse: s-maj=18.4km s-min=12.7km az=40.0*
BJI ***29*** *11:07:10.5,30˚.35N×94˚.86E,h6km,mB4.8/10,mb4.5/43, ML4.2/6,Ms4.3/45,Ms7 4.1/44*
MOS ***29*** *11:07:11.1±0.9,30˚.34N×94˚.79E,h16km,mb4.8/36,Error ellipse: s-maj=8.0km s-min=4.3km az=121.3*
NDI ***29*** *11:07:11.6±0.8,30˚.48N×94˚.97E,h10km,mb4.7,ML3.9, MW4.4,Presumed earthquake*
NEIC ***29*** *11:07:12.7±1.2,30˚.38N±0˚.08×94˚.77E±0˚.08,h10km±1km, mb4.8/101,Error ellipse: s-maj=14.1km s-min=11.3km az=200.0*
GFZ ***29*** *11:07:13.6±0.3,30˚N±4˚×9˚5E±˚,h10km,M4.5/22, mb4.7/22*
ISC 29 11:07:12.5±0.6,30˚.45N±0˚.03×94˚.82E±0˚.03,h8km±3km, h8km:pP-P,n305,σ1°33/326,mb4.7/99,MS3.9/9,6C-14D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.27**	**258**	P		**Pn**	**11 08 04.0**	**-0.5**
LSA	**Lhasa**	**3.27**	**258**	Pn		**Pn**	**11 08 04.0**	**-0.5**
LSA	**Lhasa**	**3.27**	**258**	*e*Pn		**Pn**	**11 08 04.5**	**0.0**
LSA				Sn		**Sb**	**11 08 53.0**	**+1.8**
LSA				SMN				
	98nm,2.5s							
LSA				SME				
	140nm,3.0s							
TAWA	**Tawang**	**3.85**	**223**	*e*P		**Pn**	**11 08 12.8**	**+0.4**
TAWA				*i* x		**Pb**	**11 08 22.1**	**+1.2**
TAWA				IAML			11 09 17.7	
	comp=N,494nm,0.9s							
TAWA				IAML			11 09 19.3	
	comp=E,398nm,0.9s							
TAWA				IAML			11 09 25.4	
	comp=E,611nm,1.3s							
TEZP	**TEZPUR**	**4.21**	**205**	*e*P		**Pn**	**11 08 16.8**	**-0.2**
TEZP				*i* x		**Pb**	**11 08 27.2**	**+0.3**
TEZP				*ex*		**Sb**	**11 09 17.8**	**-0.2**
GUWA	**GUWAHATI**	**5.06**	**214**	*e*P		**Pn**	**11 08 28.1**	**-0.6**
GUWA				*ex*		**Sb**	**11 09 47.7**	**+5.4**
SHL	**Shillong**	**5.52**	**209**	P		**Pn**	**11 08 33.5**	**-1.6**
SHL	**Shillong**	**5.52**	**209**			**Pn**	**11 08 33.5**	**-1.6**
SHL	**Shillong**	**5.52**	**209**	*e*P		**Pn**	**11 08 34.1**	**-1.0**
SHL				*i* x		**Pb**	**11 08 51.8**	**+2.6**
SHL				*ex*		Sg	11 09 59.8	-10
IMP	**Imphal**	**5.65**	**188**	*e*P		**Pn**	**11 08 36.4**	**-0.5**
IMP				*i* x		**Pg**	**11 09 00.1**	**-0.7**
GOMU	**GeErMu**	**5.73**	**360**	Pn		**Pn**	**11 08 39.3**	**+1.1**
GOMU				Sn		**Sn**	**11 09 47.3**	**+2.9**
GOMU				Sg		**Sg**	**11 10 13.3**	**-3.3**
SILR	**SILCHAR**	**5.92**	**198**	IAML			11 10 11.1	
	comp=E,211nm,0.7s							
MORE	**Moreh**	**6.21**	**184**	Pn		**Pn**	**11 08 44.0**	**-0.5**
PZH	**PanZhiHua**	**7.25**	**121**	P		**Pn**	**11 09 01.8**	**+2.9**
PZH				S		**Sn**	**11 10 24.3**	**+2.9**
PZH				LR	LR			
	comp=N,2μm,5.5s							
PZH				LR	LR			
	comp=E,1μm,5.0s							
PZH				LR	LR			
	comp=Z,940nm,7.9s							
EVN	**Everest**	**7.43**	**252**			**Pn**	**11 09 00.4**	**-1.3**
EVN	**Everest**	**7.43**	**252**	P		**Pn**	**11 09 02.8**	**+1.0**
KMI2	**Kunming**	**8.78**	**125**	P		**Pn**	**11 09 20.3**	**+0.3**
KMI2				S		**Sn**	**11 11 01.3**	**+2.0**
KMI2				SMN				
	comp=Z,48nm,1.9s							
KMI2				SME				
	comp=Z,59nm,2.7s							
KMI2				L	L			
	comp=Z,1μm,4.8s							
KMI2				L	L			
	comp=Z,1μm,5.2s							
KMI2				L	L			
	comp=Z,570nm,11.5s							
LZDM	**Lanzhou Array**	**9.24**	**51**	Pn		**Pn**	**11 09 28.4**	**+2.1**
	baz=220,slow=14							
LZDM				LR	LR		11 13 26.0	
	comp=Z,208nm,22.0s,baz=280,slow=40							
	comp=Z,3.7nm,0.4s							
LZH	**Lanzhou**	**9.41**	**51**	*e*P		Pn	11 09 35.0	+6.4
LZH				pmax	pmax			
	comp=Z,19nm,1.0s							
LZH				L	L			
	comp=Z,1μm,6.0s							
LZH				L	L			
	comp=Z,990nm,6.5s							
LZH				L	L			
	comp=Z,900nm,7.0s							
GTA2	**Gaotai**	**9.88**	**23**	*e*P		**Pn**	**11 09 38.5**	**+3.6**
GTA2				pmax	pmax			
	comp=Z,3.0nm,0.8s							
GTA2				L	L			
	comp=Z,860nm,9.2s							
GTA2				L	L			
	comp=Z,630nm,8.3s							
GTA2				L	L			
	comp=Z,850nm,8.9s							
GYA	**Guiyang**	**11.15**	**108**	P		**Pn**	**11 09 51.8**	**-0.6**
GYA				pmax	pmax			
	comp=Z,41nm,1.0s							
CHTO	**Chiang Mai**	**12.18**	**161**	P		**Pn**	**11 10 05.2**	**-1.1**
CHTO	**Chiang Mai**	**12.18**	**161**	Pn		**Pn**	**11 10 05.2**	**-1.1**
SLVN	**Son La**	**12.21**	**136**	Pn		**Pn**	**11 10 06.2**	**-0.6**
CM31	**Chiang Mai Arr**	**12.51**	**162**	Pn		**Pn**	**11 10 09.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**12.51**	**162**	Pn		**Pn**	**11 10 10.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=333,slow=13,SNR=21							
CMAR	**Chiang Mai Arr**	**12.51**	**162**	*i* P		**Pn**	**11 10 11.8**	**+0.8**
CMAR				pmax	pmax			
	comp=Z,4.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**12.51**	**162**			**Pn**	**11 10 10.0**	**-0.9**
ENH	**Enshi**	**12.67**	**87**	Pn		**Pn**	**11 10 10.6**	**-2.4**
WMQ	**Urumqi**	**14.50**	**339**	*e*P		**Pn**	**11 10 39.3**	**+1.3**
WMQ				S		**Sn**	**11 13 19.5**	**+0.6**
WMQ				pmax	pmax			
	comp=Z,17nm,0.7s							
WMQ				L	L			
	comp=Z,430nm,9.3s							
WMQ				L	L			
	comp=Z,360nm,10.7s							
RAGD	**RAYAGADA**	**15.18**	**225**	*e*P		**Pn**	**11 10 46.7**	**-0.6**
LYN	**LuoYang**	**15.44**	**70**	*e*P		**Pn**	**11 10 51.5**	**+0.9**
LYN				pP		P	11 10 55.5	+0.3
LYN				S		**Sn**	**11 13 40.5**	**-1.3**
LYN				pmax	pmax			
	comp=Z,18nm,0.6s							
LYN				L	L			
	comp=Z,460nm,6.5s							
LYN				L	L			
	comp=Z,370nm,6.7s							
LYN				L	L			
	comp=Z,570nm,9.6s							
BTO2	**Baotou**	**15.96**	**46**	*e*P		**Pn**	**11 10 56.5**	**-1.0**
BTO2				pP		**pP**	**11 11 04.0**	**-0.6**
BTO2				sP		**sP**	**11 11 08.8**	**+2.6**
BTO2				PP		**PnPn**	**11 11 09.8**	**+3.7**
BTO2				S		**Sn**	**11 13 53.3**	**-1.3**
BTO2				pmax	pmax			
	comp=Z,22nm,0.9s							
BTO2				pmax	pmax			
	comp=Z,250nm,5.3s							
BTO2				L	L			
	comp=Z,710nm,11.1s							
BTO2				L	L			
	comp=Z,540nm,12.0s							
BTO2				L	L			
	comp=Z,840nm,11.4s							
KUDL	**Kundal**	**16.16**	**266**	*e*P		**Pn**	**11 11 00.2**	**+0.2**
THN	**Thein Dam**	**16.39**	**282**	*e*P		**Pn**	**11 11 01.5**	**-1.5**
WUS	**Wushi**	**16.56**	**315**			**Pn**	**11 11 04.8**	**-0.4**
WUS				IAmb		IAmb	11 11 11.6	
	comp=Z,104nm,1.0s							
WHN	**Wuhan**	**16.83**	**85**	⇓P		**Pn**	**11 11 08.5**	**0.0**
WHN				sP		**pP**	**11 11 15.0**	**+0.8**
WHN				pmax	pmax			
	comp=Z,260nm,1.8s							
WHN				L	L			
	comp=Z,2μm,10.2s							
WHN				L	L			
	comp=Z,710nm,9.1s							
WHN				L	L			
	comp=Z,2μm,10.0s							
NGP	**Nagpur**	**16.93**	**241**	*e*P		**Pn**	**11 11 09.4**	**-0.4**
HHC	**Hu-ho-hao-te**	**17.08**	**48**	*e*P		**P**	**11 11 14.5**	**+1.0**
HHC				S		**Sn**	**11 14 25.0**	**+3.1**
HHC				pmax	pmax			
	comp=Z,18nm,0.7s							
HHC				pmax	pmax			
	comp=Z,94nm,7.6s							
HHC				L	L			
	comp=Z,350nm,10.7s							
HHC				L	L			
	comp=Z,260nm,12.0s							
HHC				L	L			
	comp=Z,340nm,11.7s							
SHLS	**Shalkode**	**17.63**	**320**	*e*P		**Pn**	**11 11 14.7**	**-3.9**
PDGK	**Podgornoye**	**17.73**	**321**	P		**Pn**	**11 11 19.5**	**-0.3**
PDGK	**Podgornoye**	**17.73**	**321**			**Pn**	**11 11 19.5**	**-0.3**
QIZ	**Qiongzhong**	**17.74**	**126**	P		**Pn**	**11 11 17.0**	**-2.9**
QIZ				S		**Sn**	**11 14 36.5**	**-1.3**
QIZ				L	L			
	comp=Z,370nm,9.6s							
QIZ				L	L			
	comp=Z,330nm,7.7s							
QIZ				L	L			
	comp=Z,360nm,9.9s							
TARG	**Taragay, Kyrgy**	**17.74**	**314**	P		**Pn**	**11 11 20.1**	**-0.1**
TARG				pmax	pmax			
	comp=Z,40nm,1.3s							
TARG	**Taragay, Kyrgy**	**17.74**	**314**			**Pn**	**11 11 20.1**	**-0.1**
TARG	**Taragay, Kyrgy**	**17.74**	**314**	P		**P**	**11 11 23.7**	**+2.6**
PRZ	**Przheval'sk**	**17.82**	**317**	P		**Pn**	**11 11 21.0**	**0.0**
PRZ				pmax	pmax			
	comp=Z,146nm,1.4s							
PRZ	**Przheval'sk**	**17.82**	**317**	P		**Pn**	**11 11 21.0**	**0.0**
PRZ				IAmb	IAmb		11 11 28.2	
	comp=Z,146nm,1.4s							
PRZ	**Przheval'sk**	**17.82**	**317**	P		**P**	**11 11 25.0**	**+3.3**
UZB	**Uzymbulak**	**17.87**	**319**	*e*P		**Pn**	**11 11 20.2**	**-1.4**
HNS	**HongShan**	**17.88**	**62**	⇑P		**Pn**	**11 11 21.5**	**-0.1**
HNS				pmax	pmax			
	comp=Z,13nm,0.9s							
HNS				L	L			
	comp=Z,310nm,10.0s							
HNS				L	L			
	comp=Z,200nm,10.2s							
HNS				L	L			
	comp=Z,360nm,10.8s							
KSH2	**Kashi**	**18.01**	**304**	P		**Pn**	**11 11 23.5**	**+0.1**
KSH2				pmax	pmax			
	comp=Z,10.0nm,1.5s							
ASAI	**AK-SAY(Kyrgyzs**	**18.14**	**310**	P		**P**	**11 11 26.8**	**+1.4**
KDJ	**Kajisay**	**18.35**	**314**	P		**P**	**11 11 27.6**	**0.0**
KDJ				pmax	pmax			
	comp=Z,66nm,1.4s							
KDJ	**Kajisay**	**18.35**	**314**			**P**	**11 11 27.6**	**0.0**
KDJ	**Kajisay**	**18.35**	**314**	P		**P**	**11 11 31.4**	**+3.8**
NIL	**Nilore**	**18.56**	**286**	P		**P**	**11 11 27.2**	**-2.6**
NIL				pmax	pmax			
	comp=Z,286nm,1.9s							
NIL	**Nilore**	**18.56**	**286**			**P**	**11 11 27.2**	**-2.6**
NIL	**Nilore**	**18.56**	**286**	P		**P**	**11 11 27.6**	**-2.2**
MK31	**Makanchi Array**	**18.99**	**333**	*d* iP		**P**	**11 11 34.5**	**+0.1**
MKAR	**Makanchi Array**	**18.99**	**333**	P		**P**	**11 11 34.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=141,slow=13,SNR=20							
	comp=Z,3.4nm,0.7s							
MKAR	**Makanchi Array**	**18.99**	**333**	*i* P		**P**	**11 11 34.0**	**-0.4**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MKAR	**Makanchi Array**	**18.99**	**333**	P		**P**	**11 11 33.4**	**-1.0**
MAKZ	**Makanchi**	**19.13**	**332**	P		**P**	**11 11 35.9**	**0.0**
MAKZ				pmax	pmax			
	comp=Z,29nm,1.5s							
MAKZ	**Makanchi**	**19.13**	**332**			**P**	**11 11 35.9**	**0.0**
TIA	**Tai'an**	**19.48**	**67**	P		**Pn**	**11 11 42.3**	**+1.2**
TIA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
SONM	**Songino Array**	**19.50**	**24**	P		**Pn**	**11 11 41.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=210,slow=10,SNR=19							
SONM				LR	LR		11 19 59.4	
	comp=Z,144nm,19.7s,baz=229,slow=39							
	comp=Z,12nm,1.1s							
SONM	**Songino Array**	**19.50**	**24**	P		**Pn**	**11 11 41.1**	**-0.3**
SONM				pmax	pmax			
	comp=Z,14nm,1.3s							
SONM	**Songino Array**	**19.50**	**24**	P		**Pn**	**11 11 41.1**	**-0.2**
UDPR	**Udaipur**	**19.61**	**258**	*ex*		x	11 11 38.3	
HYB	**Hyderabad**	**19.70**	**232**	*e*P		**P**	**11 11 41.3**	**-1.2**
HYB				*e*S		**Sn**	**11 15 33.6**	**+8.2**
ULN	**Ulaanbaatar**	**19.76**	**25**	*d* iP		**P**	**11 11 43.6**	**+0.6**
ULN				pmax	pmax			
	comp=Z,11nm,1.0s							
ULN	**Ulaanbaatar**	**19.76**	**25**			**P**	**11 11 43.2**	**+0.1**
ULN	**Ulaanbaatar**	**19.76**	**25**	P		**Pn**	**11 11 43.9**	**-0.6**
KNGR	**Kungurtug, Tuv**	**20.23**	**5**	*e*P		Pn	11 11 50.7	+0.7
KNGR				pmax	pmax			
	comp=Z,15nm,1.0s							
AAK	**Ala-Archa**	**20.30**	**312**	P		Pn	11 11 50.5	-0.5
	comp=Z,41nm,1.2s,baz=118,slow=8.2,SNR=24							
	comp=Z,41nm,1.2s							
AAK	**Ala-Archa**	**20.30**	**312**	*d* iP		Pn	11 11 50.8	-0.2
AAK				pmax	pmax			
	comp=Z,70nm,1.3s							
AAK	**Ala-Archa**	**20.30**	**312**			Pn	11 11 50.3	-0.7
AAK				IAmb	IAmb		11 11 55.3	
	comp=Z,77nm,1.4s							
AAK	**Ala-Archa**	**20.30**	**312**	P		Pn	11 11 50.7	-0.2
FRU1	**Bishkek**	**20.31**	**313**	P		Pn	11 11 50.0	-0.9
FRU1				pmax	pmax			
	comp=Z,33nm,1.0s							
FRU1	**Bishkek**	**20.31**	**313**	P		Pn	11 11 50.0	-0.9
FRU1				IAmb	IAmb		11 11 53.6	
	comp=Z,33nm,1.0s							
MANEM	**Manem**	**20.42**	**296**			**P**	**11 11 50.7**	**+0.3**
MANEM				IAmb	IAmb		11 11 57.2	
	comp=Z,70nm,1.1s							
OHH	**Osh**	**20.52**	**305**	P		**P**	**11 11 50.2**	**-1.0**
NJ2	**Nanjing**	**20.60**	**79**	*e*P		**P**	**11 11 51.3**	**-0.8**
NJ2				pP		Pn	11 11 53.8	-0.5
NJ2				pmax	pmax			
	comp=Z,31nm,0.5s							
ARSB	**Arslanbob**	**20.70**	**308**	P		**P**	**11 11 53.4**	**+0.1**
ARSB				pmax	pmax			
	comp=Z,43nm,1.3s							
ARSB	**Arslanbob**	**20.70**	**308**	P		**P**	**11 11 53.4**	**+0.1**
ARSB				IAmb	IAmb		11 11 57.2	
	comp=Z,43nm,1.3s							
DRK	**Karamyk**	**20.86**	**302**	P		**P**	**11 11 55.1**	**-0.1**
DRK				pmax	pmax			
	comp=Z,78nm,1.4s							
DRK	**Karamyk**	**20.86**	**302**	P		**P**	**11 11 55.1**	**-0.1**
DRK				IAmb	IAmb		11 11 58.8	
	comp=Z,78nm,1.4s							
DRK	**Karamyk**	**20.86**	**302**	P		**P**	**11 11 56.1**	**+0.9**
XLT	**XiLinHaoTe**	**21.53**	**46**	*e*P		**P**	**11 12 02.0**	**-0.1**
XLT				PcS		**PcS**	**11 19 40.8**	**-2.0**
XLT				pmax	pmax			
	comp=Z,9.0nm,1.0s							
XLT				L	L			
	comp=Z,220nm,6.9s							
XLT				L	L			
	comp=Z,230nm,7.1s							
MOY	**Mondy**	**21.68**	**10**	*e*P		**P**	**11 12 04.9**	**+1.2**
MOY				pmax	pmax			
	comp=Z,34nm,1.9s							
GAR	**Garm**	**21.83**	**300**	P		**P**	**11 12 04.3**	**-1.1**
GAR	**Garm**	**21.83**	**300**	P		**P**	**11 12 04.6**	**-0.8**
KBL	**Kabul**	**22.10**	**287**	P		**P**	**11 12 07.9**	**-0.6**
KBL				pmax	pmax			
	comp=Z,168nm,1.4s							
KBL	**Kabul**	**22.10**	**287**	P		**P**	**11 12 07.9**	**-0.6**
KBL	**Kabul**	**22.10**	**287**	P		**P**	**11 12 08.6**	**+0.2**
TLY	**Talaya**	**22.20**	**15**	P		**P**	**11 12 11.5**	**+2.4**
	comp=Z,1.5nm,0.4s,baz=188,slow=13,SNR=7.9							
	comp=Z,1.5nm,0.4s							
TLY	**Talaya**	**22.20**	**15**	⇓*i* P		**P**	**11 12 12.6**	**+3.5**
TLY				pmax	pmax			
	comp=Z,18nm,2.3s							
TLY	**Talaya**	**22.20**	**15**	P		**P**	**11 12 11.1**	**+2.0**
TLY	**Talaya**	**22.20**	**15**	P		**P**	**11 12 12.9**	**+3.7**
CHGR	**Chuyangaron**	**22.62**	**298**	⇓*i* P		**P**	**11 12 13.0**	**-0.8**
CHGR				pmax	pmax			
	comp=Z,198nm,1.3s							
CHGR	**Chuyangaron**	**22.62**	**298**	P		**P**	**11 12 12.9**	**-1.0**
CHGR	**Chuyangaron**	**22.62**	**298**	P		**P**	**11 12 13.2**	**-0.6**
IRK	**Irkutsk**	**22.86**	**15**	*e*P		**P**	**11 12 16.5**	**+0.3**
IRK				pmax	pmax			
	comp=Z,43nm,1.9s							
IUG	**Iuzhnay**	**23.05**	**307**	*e*P		**P**	**11 12 18.8**	**+0.4**
KK31	**Karatay Array**	**23.11**	**310**	P		**P**	**11 12 19.3**	**+0.4**
KK31				pmax	pmax			
	comp=Z,23nm,1.3s							
KK31	**Karatay Array**	**23.11**	**310**	P		**P**	**11 12 19.3**	**+0.4**
KKAR	**Karatay Array**	**23.11**	**310**	P		**P**	**11 12 18.8**	**-0.1**
KKAR	**Karatay Array**	**23.11**	**310**	P		**P**	**11 12 18.8**	**-0.1**
SHAA	**Shahritus**	**23.19**	**295**	P		**P**	**11 12 19.7**	**-0.1**
SHAA				IAmb	IAmb		11 12 42.0	
	comp=Z,46nm,1.0s							
BRLS	**Borolday**	**23.54**	**309**	*e*P		**P**	**11 12 22.8**	**-0.4**
BRLS				pmax	pmax			
	comp=Z,5.0nm,1.2s							
DL2	**Dalian**	**23.54**	**62**	*e*P		**P**	**11 12 20.3**	**-2.9**
DL2				S		**S**	**11 16 36.0**	**-1.3**
DL2				pmax	pmax			
	comp=Z,16nm,0.5s							
DL2				pmax	pmax			
	comp=Z,190nm,4.6s							
DL2				L	L			
	comp=Z,160nm,12.4s							
DL2				L	L			
	comp=Z,300nm,11.9s							
DL2				L	L			
	comp=Z,370nm,11.5s							
KURBB	**Kurchatov Arra**	**23.55**	**333**	P		**P**	**11 12 22.6**	**-0.6**
	comp=Z,5.9nm,0.9s,baz=143,slow=10,SNR=36							
KURBB				PcP		**PcP**	**11 16 07.8**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=145,slow=1.6,SNR=6.7							
	comp=Z,5.9nm,0.9s							
KURK	**Kurchatov**	**23.59**	**334**	*d* iP		**P**	**11 12 22.8**	**-0.8**
KURK				pmax	pmax			
	comp=Z,25nm,1.1s							
KURK	**Kurchatov**	**23.59**	**334**	P		**P**	**11 12 23.0**	**-0.6**
KURK				IAmb	IAmb		11 12 26.6	
	comp=Z,64nm,1.6s							
KURK	**Kurchatov**	**23.59**	**334**	P		**P**	**11 12 23.0**	**-0.6**
ZAA0	**Zalesovo Array**	**24.57**	**346**	P		**P**	**11 12 32.6**	**-0.2**
ZAA0				IAmb	IAmb		11 12 35.2	
	comp=Z,39nm,1.6s							
ZALV	**Zalesovo Beam**	**24.57**	**346**	P		**P**	**11 12 32.6**	**-0.1**
	comp=Z,5.0nm,0.7s,baz=170,slow=8.0,SNR=20							
	comp=Z,5.0nm,0.7s							
ZALV	**Zalesovo Beam**	**24.57**	**346**	*i* P		**P**	**11 12 32.7**	**0.0**
ZALV				pmax	pmax			
	comp=Z,5.0nm,0.6s							
ZALV	**Zalesovo Beam**	**24.57**	**346**	P		**P**	**11 12 32.8**	**0.0**
KOD	**Kodaikanal**	**25.80**	**222**	IAmb		IAmb	11 12 47.7	
	comp=Z,15nm,0.8s							
HILR	**Hailar Array B**	**26.79**	**38**	P		**P**	**11 12 55.3**	**+2.4**
	comp=Z,1.8nm,0.5s,baz=195,slow=10,SNR=2.9							
	comp=Z,1.8nm,0.5s							
CN2	**Changchun**	**27.64**	**53**	P		**P**	**11 13 00.3**	**-0.3**
CN2				pmax	pmax			
	comp=Z,20nm,1.1s							
CN2				L	L			
	comp=Z,200nm,11.0s							
CN2				L	L			
	comp=Z,200nm,11.0s							
CN2				L	L			
	comp=Z,400nm,11.0s							
KSRS	**Korea Array**	**28.23**	**67**	P		**P**	**11 13 07.5**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=263,slow=9.4,SNR=7.3							
	comp=Z,1.1nm,0.8s							
BVAR	**Borovoye Array**	**28.74**	**329**	P		**P**	**11 13 10.4**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=136,slow=9.5,SNR=8.4							
	comp=Z,3.1nm,0.8s							
BNX	**BinXian**	**29.59**	**50**	⇑P		**P**	**11 13 19.3**	**+1.4**
BNX				pmax	pmax			
	comp=Z,10.0nm,1.5s							
HEH	**HeiHe**	**31.38**	**42**	*e*P		**P**	**11 13 33.8**	**+0.1**
HEH				L	L			
	comp=Z,160nm,7.7s							
HEH				L	L			
	comp=Z,240nm,8.8s							
HEH				L	L			
	comp=Z,250nm,10.7s							
USA0B	**Ussuriysk Arra**	**32.30**	**54**	*e*P		**P**	**11 13 45.3**	**+3.5**
AB31	**Akbulak array**	**32.32**	**316**	P		**P**	**11 13 41.9**	**0.0**
ABKAR	**Akbulak array**	**32.32**	**316**	P		**P**	**11 13 41.8**	**-0.1**
ZEA	**Zeya**	**33.00**	**36**	*e*P		**P**	**11 13 48.6**	**+0.8**
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ZEA				MLR	MLR			
	comp=N,200nm,13.0s							
ZEA				MLR	MLR			
	comp=Z,200nm,10.0s							
SVE	**Sverdlovsk**	**35.52**	**328**	*e*P		**P**	**11 14 10.7**	**+1.1**
ARTI	**Arti**	**36.35**	**326**	*d* iP		**P**	**11 14 16.8**	**+0.1**
ARTI							11 15 35.1	
ARTI							11 16 39.1	
ARTI				S		**S**	**11 19 58.2**	**+0.4**
ARTI				SS		**SnSn**	**11 22 20.9**	**-3.8**
ARTI				pmax	pmax			
	comp=Z,19nm,1.5s							
ARTI	**Arti**	**36.35**	**326**	P		**P**	**11 14 17.0**	**+0.3**
ARTI				IAmb	IAmb		11 14 18.4	
	comp=Z,9.7nm,0.4s							
YAK	**Yakutsk**	**38.85**	**25**	LR	LR		11 31 43.6	
	comp=Z,173nm,21.2s,baz=259,slow=38							
YAK	**Yakutsk**	**38.85**	**25**	*e*P		**P**	**11 14 37.9**	**+0.1**
YAK				*i* *PP		**pP**	**11 14 41.5**	**-0.2**
YAK				pmax	pmax			
	comp=Z,7.0nm,0.5s							
NRIK	**Noril'sk**	**39.15**	**356**	*c* iP		**P**	**11 14 40.3**	**0.0**
NRIK				pmax	pmax			
	comp=Z,18nm,1.5s							
NRIK	**Noril'sk**	**39.15**	**356**	P		**P**	**11 14 40.0**	**-0.3**
AKT	**Akhty**	**39.24**	**300**	*e*P		**P**	**11 14 40.8**	**-0.7**
AKT				pmax	pmax			
	comp=Z,30nm,1.4s							
ASAJ	**Asahikawa**	**39.84**	**56**	P		**P**	**11 14 46.5**	**+0.1**
ASAJ				pmax	pmax			
	comp=Z,24nm,1.3s							
JKA	**Kamikawa-asahi**	**39.84**	**56**	P		**P**	**11 14 46.5**	**+0.1**
JKA				IAmb	IAmb		11 14 55.2	
	comp=Z,24nm,1.3s							
JKA	**Kamikawa-asahi**	**39.84**	**56**	P		**P**	**11 14 46.8**	**+0.4**
YSS	**Yuzhno-Sakhali**	**40.21**	**52**	*d* iP		**P**	**11 14 49.6**	**+0.3**
YSS				pmax	pmax			
	comp=Z,28nm,1.5s							
YSS	**Yuzhno-Sakhali**	**40.21**	**52**	P		**P**	**11 14 50.4**	**+1.1**
YSS				IAmb	IAmb		11 14 52.1	
	comp=Z,16nm,1.0s							
YSS	**Yuzhno-Sakhali**	**40.21**	**52**	P		**P**	**11 14 49.8**	**+0.5**
BELG	**Belogornoye**	**40.71**	**316**	*

SOC					pmax	pmax		
	comp=Z,15nm,0.8s							
VORD	**Divnogorie**	**45.60**	**313**	*eP*	**P**		**11 15 30.9**	**-2.1**
VORD					pmax	pmax		
	comp=Z,10.0nm,1.0s							
VSR	**Storozhevoye**	**45.70**	**313**	*eP*	**P**		**11 15 33.0**	**-0.8**
VSR					pmax	pmax		
	comp=Z,7.0nm,0.5s							
VORR	**Voronezh**	**45.71**	**314**	*eP*	**P**		**11 15 33.2**	**-0.7**
VORR					pmax	pmax		
	comp=Z,80nm,0.5s							
KELT	**Kelkit**	**45.72**	**298**	P	**P**		**11 15 35.9**	**+1.5**
LPSR	**Galich'ya Gora**	**45.98**	**315**	*eP*	**P**		**11 15 35.3**	**-0.7**
LPSR					pmax	pmax		
	comp=Z,11nm,0.7s							
ARPR	**Arapgir-MALATY**	**46.55**	**297**	P	**P**		**11 15 41.1**	**+0.2**
MOS	**Moscow**	**47.12**	**320**	*eP*	**P**		**11 15 45.5**	**+0.6**
MOS					pmax	pmax		
	comp=Z,25nm,0.6s							
KLMR	**Klimovskoe**	**47.13**	**327**	*eP*	**P**		**11 15 43.2**	**-1.7**
KLMR				*e*			11 17 34.2	
KLMR					pmax	pmax		
	comp=Z,37nm,1.5s							
OBN	**Obninsk**	**47.64**	**319**	*iP*	**P**		**11 15 49.7**	**+0.8**
OBN				*i*			11 17 15.0	
OBN					pmax	pmax		
	comp=Z,18nm,1.3s							
OBN					MLR	MLR		
	comp=Z,56nm,15.0s							
OBN	**Obninsk**	**47.64**	**319**	P	**P**		**11 15 49.5**	**+0.6**
ANDN	**Andirin**	**48.32**	**295**	P	**P**		**11 15 55.6**	**+0.9**
BNN	**Bunyan**	**48.51**	**297**	P	**P**		**11 15 55.1**	**-1.0**
SEY	**Seymchan**	**48.67**	**31**	*iP*	**P**		**11 15 57.1**	**+0.3**
SOEI	**Soe**	**48.98**	**140**	P	**P**		**11 15 59.6**	**-0.3**
BR131	**Keskin Array S**	**50.06**	**298**	*iP*	**P**		**11 16 08.0**	**0.0**
BR131	**Keskin Array S**	**50.06**	**298**	P	**P**		**11 16 07.1**	**-0.8**
BRTR	**Keskin Array B**	**50.06**	**298**	P	**P**		**11 16 08.0**	**0.0**
	comp=Z,2.9nm,0.8s,baz=108,slow=5.1,SNR=12							
	comp=Z,2.9nm,0.8s							
BRTR	**Keskin Array B**	**50.06**	**298**	*i* P		**P**	**11 16 07.0**	**-1.0**
BRTR					pmax	pmax		
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**50.06**	**298**			**P**	**11 16 07.3**	**-0.7**
BR104	**Keskin Array S**	**50.06**	**298**	P		**P**	**11 16 07.6**	**-0.4**
	comp=Z,3.1nm,1.0s							
PETK	**Petropavlovsk-**	**50.23**	**44**	P		**P**	**11 16 09.0**	**+0.1**
	comp=Z,6.0nm,1.0s,baz=268,slow=5.5,SNR=5.1							
	comp=Z,6.0nm,1.0s							
PETK	**Petropavlovsk-**	**50.23**	**44**	P		**P**	**11 16 08.0**	**-0.9**
CY604	**RAF Akrotiri,**	**50.43**	**291**	P		**P**	**11 16 08.9**	**-1.4**
CY604				IAmb		IAmb	11 16 14.3	
	comp=Z,11nm,1.1s							
MDUB	**Mudurnu**	**51.78**	**300**	P		**P**	**11 16 19.5**	**-1.4**
AK09	**Malin Array Si**	**51.94**	**313**	P		**P**	**11 16 21.3**	**-0.4**
AKASG	**Malin Array Be**	**51.97**	**313**	P		**P**	**11 16 20.1**	**-1.9**
	comp=Z,5.6nm,0.9s,baz=78,slow=7.0,SNR=13							
	comp=Z,5.6nm,0.9s							
AKASG	**Malin Array Be**	**51.97**	**313**	P		**P**	**11 16 20.4**	**-1.6**
AKASG					pmax	pmax		
	comp=Z,6.0nm,1.2s							
AKASG	**Malin Array Be**	**51.97**	**313**	P		**P**	**11 16 20.4**	**-1.6**
AKBB	**Malin Array Si**	**51.97**	**313**	*iP*		**P**	**11 16 21.2**	**-0.8**
AKBB					pmax	pmax		
	comp=Z,16nm,1.1s							
AKBB	**Malin Array Si**	**51.97**	**313**	P		**P**	**11 16 21.0**	**-1.0**
AKBB					IAmb	IAmb	11 16 24.3	
	comp=Z,12nm,1.1s							
AKBB	**Malin Array Si**	**51.97**	**313**	P		**P**	**11 16 21.4**	**-0.6**
KIEV	**Kiev**	**51.98**	**313**	P		**P**	**11 16 20.8**	**-1.2**
KIEV					pmax	pmax		
	comp=Z,12nm,1.1s							
KIEV	**Kiev**	**51.98**	**313**	P		**P**	**11 16 20.8**	**-1.2**
KIEV					IAmb	IAmb	11 16 24.3	
	comp=Z,12nm,1.1s							
KIEV	**Kiev**	**51.98**	**313**	P		**P**	**11 16 21.2**	**-0.8**
MNK	**Minsk**	**52.63**	**318**	*iP*		**P**	**11 16 28.9**	**+2.0**
	comp=Z,16nm,1.2s,baz=89							
MNK					*i* PP	**PP**	**11 18 28.1**	**+2.4**
MNK					*i* PPP	PPP	11 19 31.4	
MNK					*i* S	**S**	**11 23 55.3**	**+1.1**
MNK					*i* SS	**SS**	**11 27 33.4**	**+1.2**
MNK					*i* SSS	SSS	11 29 35.8	
MNK					*i* LR	LR	11 39 07.6	
MNK	**Minsk**	**52.63**	**318**	*iP*		**P**	**11 16 28.8**	**+2.0**
MNK				*i*			11 18 28.0	
MNK					*i* PPP	PPP	11 19 31.4	
MNK					*i* S	**S**	**11 23 55.3**	**+1.1**
MNK					*i* SS	**SS**	**11 27 33.4**	**+1.2**
MNK					pmax	pmax		
	comp=Z,16nm,1.2s							
SORM	**Soroca**	**52.75**	**310**	P		**P**	**11 16 26.6**	**-1.2**
	comp=Z,9.2nm,1.3s							
LUBAR	**Lubar, Ukraine**	**52.97**	**312**	P		**P**	**11 16 28.3**	**-1.1**
YLV	**Yalova**	**53.13**	**300**	P		**P**	**11 16 30.9**	**+0.1**
	comp=Z,13nm,1.0s							
ELL	**Elmali**	**53.53**	**295**	P		**P**	**11 16 32.8**	**-1.1**
ELL					pmax	pmax		
	comp=Z,25nm,0.9s							
ELL	**Elmali**	**53.53**	**295**	P		**P**	**11 16 32.8**	**-1.1**
FINES	**FINESS Array B**	**53.65**	**326**	P		**P**	**11 16 33.5**	**-0.7**
	comp=Z,9.1nm,1.2s,baz=87,slow=7.0,SNR=11							
	comp=Z,9.1nm,1.2s							
FINES	**FINESS Array B**	**53.65**	**326**	*iP*		**P**	**11 16 35.0**	**+0.8**
FINES					pmax	pmax		
	comp=Z,3.0nm,0.9s							
KMPD	**K-Podol'skiy**	**53.95**	**310**	P		**P**	**11 16 35.1**	**-1.5**
RNPP9	**Sopachiv**	**54.02**	**314**	P		**P**	**11 16 36.9**	**-0.2**
VRI	**Vrincioaia**	**54.14**	**307**	P		**P**	**11 16 38.1**	**0.0**
VRI	**Vrincioaia**	**54.14**	**307**	P		**P**	**11 16 38.5**	**+0.4**
BALB	**Balikesir**	**54.44**	**299**	P		**P**	**11 16 39.0**	**-1.4**
MLR	**Muntele Rosu**	**54.74**	**307**	P		**P**	**11 16 42.1**	**-0.5**
MLR					pmax	pmax		
	comp=Z,31nm,1.1s							
MLR	**Muntele Rosu**	**54.74**	**307**	P		**P**	**11 16 42.1**	**-0.5**
BURAR	**Bucovina Array**	**54.91**	**309**	P		**P**	**11 16 42.9**	**-0.9**
BUR08	**Bucovina Ar. S**	**54.91**	**309**	P		**P**	**11 16 42.7**	**-1.1**
BUR08					IAmb	IAmb	11 16 46.6	
	comp=Z,18nm,1.8s							
BILL	**Bilibino**	**55.21**	**26**	*iP*		**P**	**11 16 47.5**	**+2.0**
BILL					pmax	pmax		
	comp=Z,25nm,2.7s							
BILL	**Bilibino**	**55.21**	**26**	P		**P**	**11 16 45.8**	**+0.4**
RDO	**Rodhopi**	**55.86**	**301**	P		**P**	**11 16 49.8**	**-0.8**
RDO					IAmb	IAmb	11 16 54.0	
	comp=Z,15nm,1.4s							
KWP	**Kalwaria Pacla**	**56.25**	**312**	*eP*		**P**	**11 16 53.7**	**+0.4**
NIE	**Niedzica**	**57.83**	**312**	*eP*		**P**	**11 17 05.1**	**+0.6**
OJC	**Ojcow**	**58.01**	**313**	*eP*		**P**	**11 17 06.7**	**+1.0**
OJC	**Ojcow**	**58.01**	**313**	P		**P**	**11 17 04.9**	**-0.8**
OJC	**Ojcow**	**58.01**	**313**	P		**P**	**11 17 04.9**	**-0.8**
PSZ	**Piszkesteto**	**58.39**	**310**	P		**P**	**11 17 07.2**	**-1.2**
PSZ					pmax	pmax		
	comp=Z,4.0nm,0.8s							
PSZ	**Piszkesteto**	**58.39**	**310**	P		**P**	**11 17 07.2**	**-1.2**
MORC	**Moravsky Berou**	**59.52**	**313**	*eP*		**P**	**11 17 16.1**	**-0.2**
JAVC	**Velka Javorina**	**59.64**	**312**	*eP*		**P**	**11 17 17.8**	**+0.7**
JAVC	**Velka Javorina**	**59.64**	**312**	P		**P**	**11 17 18.7**	**+1.6**
HFS	**Hagfors**	**59.79**	**325**	P		**P**	**11 17 18.7**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=156,slow=11,SNR=4.1							
	comp=Z,4.1nm,0.8s							
KSP	**Ksiaz**	**60.08**	**314**	*eP*		**P**	**11 17 18.5**	**-1.5**
VRAC	**Vranov**	**60.23**	**312**	*eP*		**P**	**11 17 21.4**	**+0.3**
KRUC	**Moravsky**	**60.41**	**312**	*eP*		**P**	**11 17 22.0**	**-0.3**
NB2	**NORSAR Subarra**	**60.84**	**326**	P		**P**	**11 17 24.2**	**-0.9**
	comp=Z,5.9nm,1.0s,baz=79,slow=6.9							
NOA	**NORSAR Array B**	**60.84**	**326**	P		**P**	**11 17 24.7**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=78,slow=6.8,SNR=7.2							
	comp=Z,2.3nm,0.8s							
LODK	**Lodwar**	**62.10**	**257**	P		**P**	**11 17 33.4**	**-1.0**
GEC2	**GERESS Array S**	**62.19**	**312**			**P**	**11 17 34.0**	**-0.5**
GEC2					IAmb	IAmb	11 17 37.1	
	comp=Z,14nm,1.5s							
GERES	**GERESS Array B**	**62.19**	**312**	P		**P**	**11 17 34.3**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=57,slow=4.9,SNR=7.7							
	comp=Z,1.6nm,0.7s							
GERES	**GERESS Array B**	**62.19**	**312**			**P**	**11 17 33.4**	**-1.1**
WB0	**Warramunga Arr**	**62.78**	**138**	P		**P**	**11 17 36.9**	**-1.7**
WB0					IAmb	IAmb	11 17 38.9	
	comp=Z,8.3nm,1.1s							
SGRT	**San Giovanni R**	**62.81**	**304**	P		**P**	**11 17 37.9**	**-0.8**
SGRT					IAmb	IAmb	11 19 10.0	
	comp=Z,5.5nm,0.7s							
WRA	**Warramunga Arr**	**62.89**	**138**	P		**P**	**11 17 37.5**	**-1.8**
	comp=Z,2.2nm,0.8s,baz=323,slow=8.3,SNR=12							
	comp=Z,2.2nm,0.8s							
WRA	**Warramunga Arr**	**62.89**	**138**	*i* P		**P**	**11 17 37.5**	**-1.8**
WRA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
SABO	**M.te Sabotino**	**63.04**	**309**	P		**P**	**11 17 39.8**	**-0.3**
SABO					IAmb	IAmb	11 17 41.9	
	comp=Z,11nm,1.1s							
GRFO	**Grafenberg**	**63.52**	**314**	P		**P**	**11 17 44.0**	**+0.8**
GRFO					pmax	pmax		
	comp=Z,20nm,0.6s							
GRFO	**Grafenberg**	**63.52**	**314**	P		**P**	**11 17 44.0**	**+0.8**
CEL	**Celeste**	**63.80**	**301**	P		**P**	**11 17 44.5**	**-0.9**
INTR	**Introdacqua**	**64.03**	**305**	P		**P**	**11 17 46.3**	**-0.5**
INTR					IAmb	IAmb	11 17 56.6	
	comp=Z,8.7nm,1.1s							
NRCA	**Norcia**	**64.33**	**306**	P		**P**	**11 17 47.9**	**-0.9**
NRCA					IAmb	IAmb	11 17 50.7	
	comp=Z,4.8nm,0.9s							
MURB	**Monte Urbino**	**64.60**	**307**	P		**P**	**11 17 50.3**	**-0.3**
CESX	**Cesi**	**64.77**	**306**	P		**P**	**11 17 51.2**	**-0.3**
CESX					IAmb	IAmb	11 19 15.9	
	comp=Z,4.3nm,0.7s							
AS31	**Alice Springs**	**65.58**	**141**	P		**P**	**11 17 55.6**	**-1.4**
ASAR	**Alice Springs**	**65.58**	**141**	P		**P**	**11 17 55.4**	**-1.6**
	comp=Z,2.6nm,0.6s,baz=323,slow=6.2,SNR=31							
	comp=Z,2.6nm,0.6s							
ASAR	**Alice Springs**	**65.58**	**141**	P		**P**	**11 17 55.6**	**-1.4**
ASAR	**Alice Springs**	**65.58**	**141**	P		**P**	**11 17 55.6**	**-1.4**
TUE	**Stuetta**	**65.70**	**311**	P		**P**	**11 17 57.1**	**-0.6**
TUE					IAmb	IAmb	11 18 09.0	
	comp=Z,6.8nm,1.1s							
JMIC	**Jan Mayen**	**65.72**	**340**	LR		LR	11 50 25.0	
	comp=Z,22nm,20.0s,baz=336,slow=39							
SENIN	**Lac Senin/Sane**	**67.07**	**311**	P		**P**	**11 18 05.5**	**-1.1**
SENIN					IAmb	IAmb	11 18 08.1	
	comp=Z,5.0nm,0.8s							
I17K	**Unalakleet**	**69.11**	**27**	P		**P**	**11 18 19.7**	**+1.0**
KEST	**Kesra**	**69.60**	**300**	P		**P**	**11 18 22.0**	**-0.4**
	comp=Z,5.9nm,0.8s,baz=125,slow=2.3,SNR=8.0							
	comp=Z,5.9nm,0.8s							
KEST	**Kesra**	**69.60**	**300**	P		**P**	**11 18 21.7**	**-0.7**
KEST					IAmb	IAmb	11 18 25.3	
	comp=Z,8.3nm,0.9s							
C23K	**Itkillik River**	**69.60**	**20**	P		**P**	**11 18 21.8**	**0.0**
EKA	**Eskdalemuir Ar**	**69.80**	**323**	P		**P**	**11 18 23.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=73,slow=5.4,SNR=2.4							
	comp=Z,1.4nm,0.7s							
H19K	**Roundabout Mou**	**69.94**	**25**	P		**P**	**11 18 24.3**	**+0.5**
D23K	**Nanushuk River**	**70.06**	**20**	P		**P**	**11 18 24.9**	**+0.3**
K17K	**Iditarod**	**70.61**	**28**			**P**	**11 18 28.2**	**+0.2**
K17K					IAmb	IAmb	11 18 31.4	
	comp=Z,14nm,1.1s							
IMAR	**Indian Mountai**	**70.67**	**24**	P		**P**	**11 18 28.2**	**-0.1**
J19K	**Poorman**	**71.02**	**26**	P		**P**	**11 18 30.7**	**+0.1**
J19K					IAmb	IAmb	11 18 35.0	
	comp=Z,14nm,1.2s							
M16K	**Timber Creek**	**71.16**	**30**	P		**P**	**11 18 31.8**	**+0.4**
M16K					IAmb	IAmb	11 18 36.2	
	comp=Z,9.1nm,1.2s							
E24K	**Your Creek**	**71.23**	**21**	P		**P**	**11 18 31.9**	**+0.1**
E24K					IAmb	IAmb	11 18 34.5	
	comp=Z,7.1nm,1.1s							
O16K	**Kokwok River B**	**72.23**	**31**			**P**	**11 18 38.5**	**+0.7**
O16K					IAmb	IAmb	11 18 40.4	
	comp=Z,17nm,1.4s							
MLY	**Manley**	**72.25**	**24**			**P**	**11 18 38.6**	**+0.6**
MLY					IAmb	IAmb	11 18 42.0	
	comp=Z,11nm,1.4s							
L19K	**White Mountain**	**72.26**	**28**			**P**	**11 18 39.0**	**+0.9**
L19K					IAmb	IAmb	11 18 43.1	
	comp=Z,11nm,1.2s							
F25K	**Christian Rive**	**72.39**	**20**			**P**	**11 18 39.5**	**+0.7**
F25K					IAmb	IAmb	11 18 42.0	
	comp=Z,7.6nm,1.2s							
CAST	**Castle Rocks**	**72.66**	**26**			**P**	**11 18 40.7**	**+0.3**
CAST					IAmb	IAmb	11 18 43.2	
	comp=Z,12nm,1.3s							
E27K	**Coleen River**	**73.19**	**19**			**P**	**11 18 43.8**	**+0.3**
E27K					IAmb	IAmb	11 18 46.2	
	comp=Z,11nm,1.2s							
G26K	**Porcupine Rive**	**73.36**	**21**			**P**	**11 18 45.4**	**+0.9**
G26K					IAmb	IAmb	11 18 47.7	
	comp=Z,9.4nm,1.2s							
E28M	**Babbage River**	**73.47**	**18**			**P**	**11 18 45.3**	**+0.1**
E28M					IAmb	IAmb	11 18 49.9	
	comp=Z,8.2nm,1.1s							
SKT	**Skwentna**	**73.68**	**27**			**P**	**11 18 46.2**	**-0.3**
ILAR	**Eielson Array**	**73.73**	**23**	P		**P**	**11 18 46.5**	**-0.2**
	comp=Z,3.4nm,1.0s,baz=298,slow=5.4,SNR=18							
	comp=Z,3.4nm,1.0s							
ILAR	**Eielson Array**	**73.73**	**23**	P		**P**	**11 18 45.9**	**-0.8**
E29M	**Blow River**	**74.06**	**18**			**P**	**11 18 48.9**	**+0.4**
J25K	**Salcha River,**	**74.34**	**23**			**P**	**11 18 50.7**	**+0.4**
I27K	**Kandik River**	**74.91**	**21**			**P**	**11 18 54.2**	**+0.6**
I27K					IAmb	IAmb	11 18 58.9	
	comp=Z,14nm,1.2s							
G29M	**Pine Creek**	**75.07**	**19**			**P**	**11 18 55.0**	**+0.5**
G29M					IAmb	IAmb	11 18 56.2	
	comp=Z,31nm,1.9s							
F30M	**Barrier River**	**75.17**	**18**			**P**	**11 18 55.3**	**+0.3**
F30M					IAmb	IAmb	11 18 59.9	
	comp=Z,13nm,1.1s							
INK	**Inuvik**	**75.24**	**17**	P		**P**	**11 18 55.4**	**+0.1**
INK					pmax	pmax		
	comp=Z,8.0nm,1.1s							
INK	**Inuvik**	**75.24**	**17**			**P**	**11 18 55.4**	**+0.1**
INK					IAmb	IAmb	11 18 59.7	
	comp=Z,7.5nm,1.1s							
G30M	**tAoh Zraii Nji**	**75.52**	**18**			**P**	**11 18 57.1**	**+0.1**
I28M	**Miner Creek**	**75.53**	**21**			**P**	**11 18 58.0**	**+0.8**
I28M					IAmb	IAmb	11 18 59.5	
	comp=Z,9.3nm,1.2s							
G31M	**Satah River**	**76.08**	**18**			**P**	**11 19 00.0**	**-0.2**
G31M					IAmb	IAmb	11 19 01.9	
	comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**76.22**	**140**	P		**P**	**11 19 00.1**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=344,slow=6.7,SNR=5.4							
	comp=Z,3.4nm,0.9s							
BCAR	**Beaver Creek A**	**76.56**	**23**			**P**	**11 19 03.1**	**+0.1**
M26K	**Nabesna, AK**	**76.58**	**24**			**P**	**11 19 04.5**	**+1.2**
M26K					IAmb	IAmb	11 19 10.7	
	comp=Z,12nm,1.7s							
I30M	**Mount Dempster**	**76.75**	**20**			**P**	**11 19 04.1**	**-0.1**
I30M					IAmb	IAmb	11 19 08.2	
	comp=Z,9.8nm,1.1s							
H31M	**Peel River**	**76.89**	**19**			**P**	**11 19 04.4**	**-0.5**
BMRM	**Bremner River**	**76.94**	**26**			**P**	**11 19 05.8**	**+0.5**
BMRM					IAmb	IAmb	11 19 08.6	
	comp=Z,7.0nm,0.9s							
ESDC	**Sonseca Array**	**77.36**	**309**	P		**P**	**11 19 07.2**	**-0.8**
	comp=Z,2.5nm,1.1s,baz=55,slow=4.6,SNR=8.4							
	comp=Z,2.5nm,1.1s							
ESDC	**Sonseca Array**	**77.36**	**309**			**P**	**11 19 07.9**	**-0.2**
K29M	**Barlow Dome**	**77.40**	**21**			**P**	**11 19 08.0**	**+0.1**
L29M	**L29M**	**77.73**	**22**			**P**	**11 19 10.5**	**+0.9**
M29M	**Somme Creek**	**78.09**	**22**			**P**	**11 19 12.8**	**+1.0**
LSZ	**Lusaka**	**78.55**	**245**	P		**P**	**11 19 13.4**	**-1.6**
LSZ					pmax	pmax		
	comp=Z,8.0nm,1.0s							
LSZ	**Lusaka**	**78.55**	**245**			**P**	**11 19 13.4**	**-1.6**
LSZ					IAmb	IAmb	11 19 14.7	
	comp=Z,7.8nm,1.0s							
HYT	**Haines Junctio**	**79.57**	**23**			**P**	**11 19 19.8**	**-0.1**
MMPY	**Sheldon Lake,**	**80.20**	**20**			**P**	**11 19 23.8**	**+0.5**
P32M	**Atlin**	**81.76**	**23**			**P**	**11 19 32.6**	**+1.0**
YKA	**Yellowknife Ar**	**84.41**	**13**	P		**P**	**11 19 44.7**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=333,slow=5.5,SNR=4.6							
YKA					LR	LR	12 01 21.9	
	comp=Z,27nm,19.7s,baz=352,slow=38							
	comp=Z,1.6nm,0.9s							
YKA	**Yellowknife Ar**	**84.41**	**13**	*iP*		**P**	**11 19 45.7**	**+0.5**
YKA					pmax	pmax		
	comp=Z,2.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**86.10**	**283**	P		**P**	**11 19 53.9**	**-0.6**
	comp=Z,3.5nm,1.0s,baz=54,slow=3.7,SNR=9.7							
	comp=Z,3.5nm,1.0s							

*GCG **29** 11:07:49.8±1.1, 14.60N×93.11W, h63km±34km, MD4.4, Presumed earthquake*
*MEX **29** 11:07:50.6±1.0, 14.56N×93.11W, h68km±93km, MD3.7*
ISC 29 11:07:47.4±2.2, 14.5N±0.1×93.1W±0.1, h84km±32km, n11, σ1s42/21, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.92**	**63**	*eP*	**Pn**	**11 08 06.5**	**+0.8**
THIG				*eS*	**Sn**	**11 08 18.9**	**-0.5**
THIG		**0.92**	**63**	*iP*	**Pn**	**11 08 05.4**	**-0.3**
THIG				*iS*	**Sn**	**11 08 19.0**	**-0.4**
PATR	**El Naranjo**	**1.05**	**53**	*eP*	**Pn**	**11 08 07.5**	**-0.1**
PATR				*eS*	**Sn**	**11 08 21.3**	**-1.3**
CHUJ	**Union Juarez**	**1.14**	**58**	*eP*	**Pn**	**11 08 09.2**	**+0.6**
CHUJ				*eS*	**Sn**	**11 08 24.8**	**+0.3**
PAVE	**Pavencul**	**1.14**	**52**	*eP*	**Pn**	**11 08 09.3**	**+0.7**
PAVE				*eS*	**Sn**	**11 08 22.9**	**-1.6**
RTAL	**Retalhuleu**	**1.37**	**88**	*eP*	**Pn**	**11 08 13.2**	**+2.0**
RTAL				*eS*	**Sn**	**11 08 32.6**	**+3.4**
STG8	**El Palmar, Qui**	**1.70**	**91**	*eP*	**Pn**	**11 08 14.9**	**-0.9**
STG5	**El Palmar, Qui**	**1.71**	**93**	*iP*	**Pn**	**11 08 15.2**	**-0.4**
STG5				*iS*	**Sn**	**11 08 34.3**	**-2.8**
TGIG		**2.28**	**360**	*eP*	**Pn**	**11 08 24.2**	**+0.9**
TGIG				*eS*	**Sn**	**11 08 50.0**	**-0.6**
TGIG		**2.28**	**360**	*iP*	**Pn**	**11 08 24.5**	**+1.3**
TGIG				*iS*	**Sn**	**11 08 50.1**	**-0.5**
CMIG	**Matias Romero**	**3.10**	**327**	*eP*	**Pn**	**11 08 34.2**	**-0.1**
CMIG				*eS*	**Sn**	**11 09 09.7**	**-0.6**

*IDC **29** 11:33:59.5±0.8, 14.69S×66.52E, h0km, mb4.0/7, mbtmp4.0/7, MS3.7/31, Error ellipse: s-maj=35.4km s-min=22.6km az=24.0*
*NEIC **29** 11:34:01.4±1.2, 15.0S±0.1×66.5E±0.1, h10km±1km, mb4.4/18, Error ellipse: s-maj=25.1km s-min=18.5km az=247.0*
ISC 29 11:34:02.8±0.6, 14.9S±0.1×66.5E±0.1, h19km, n67, σ0s92/31, mb4.4/13, MS3.9/31, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.30**	**40**	T	T	11 45 36.4	
	baz=219,slow=76,SNR=424						
H08S2	**Diego Garcia H**	**9.31**	**40**	T	T	11 45 41.5	
	baz=219,slow=76,SNR=668						
H08S3	**Diego Garcia H**	**9.32**	**40**	T	T	11 45 42.2	
	baz=219,slow=76,SNR=2199						
PALK	**Pallekele**	**26.15**	**34**	LR	LR	11 47 57.9	
	comp=Z,289nm,18.1s,baz=225,slow=32						
ATD	**Arta Tunnel**	**35.15**	**317**	P	**P**	**11 40 55.7**	**0.0**
MATP	**Matopo**	**36.53**	**256**	LR	LR	11 54 09.5	
	comp=Z,190nm,19.9s,baz=82,slow=33						
LSZ	**Lusaka**	**36.92**	**264**	LR	LR	11 55 10.8	
	comp=Z,229nm,18.1s,baz=128,slow=34						
MBAR	**Mbarara**	**38.03**	**289**	LR	LR	11 54 18.1	
	comp=Z,75nm,21.7s,baz=118,slow=32						
LBTB	**Lobatse**	**39.58**	**249**	P	**P**	**11 41 31.9**	**-1.3**
KSANE	**Kasane**	**39.68**	**260**	P	**P**	**11 41 33.0**	**-1.1**
BOSA	**Boshof**	**40.43**	**243**	P	**P**	**11 41 40.6**	**+0.2**
	1.2nm,0.3s,baz=164,slow=18,SNR=5.0						
	1.2nm,0.3s						
BOSA	**Boshof**	**40.43**	**243**	P	**P**	**11 41 40.2**	**-0.1**
BOSA				IAmb	IAmb	11 41 46.4	
	comp=Z,6.5nm,1.1s						
BRDH	**Bariadhala**	**44.74**	**34**	LR	LR	12 01 43.6	
	comp=Z,184nm,18.1s,baz=311,slow=37						
CMAR	**Chiang Mai Arr**	**46.06**	**45**	LR	LR	11 59 04.7	
	comp=Z,72nm,20.1s,baz=225,slow=33						
TSUM	**Tsumeb**	**46.81**	**258**	LR	LR	12 00 29.8	
	comp=Z,124nm,18.6s,baz=151,slow=34						
TSUM	**Tsumeb**	**46.81**	**258**	P	**P**	**11 42 30.8**	**-1.1**
TSUM				IAmb	IAmb	11 42 51.3	
	comp=Z,3.3nm,1.1s						
H01W3	**Cape Leeuwin H**	**47.12**	**124**	T	T	12 32 56.8	
	baz=282,slow=75,SNR=31						
H01W2	**Cape Leeuwin H**	**47.12**	**124**	T	T	12 32 56.7	
	baz=282,slow=75,SNR=38						
H01W1	**Cape Leeuwin H**	**47.14**	**124**	T	T	12 32 58.1	
	baz=282,slow=75,SNR=33						
KBL	**Kabul**	**49.20**	**3**	P	**P**	**11 42 50.0**	**-0.1**
KBL				IAmb	IAmb	11 43 16.6	
	comp=Z,3.0nm,0.7s						
MMAI	**Mount Meron Ar**	**56.11**	**329**	LR	LR	12 06 04.2	
	comp=Z,53nm,18.0s,baz=141,slow=34						
FITZ	**Fitzroy Crossi**	**56.64**	**102**	LR	LR	12 04 01.1	
	comp=Z,74nm,21.7s,baz=217,slow=32						
AAK	**Ala-Archa**	**57.70**	**7**	LR	LR	12 07 44.1	

ASAJ	**Asahikawa**	**90.58**	**44**	LR	LR	12 29 12.1		
	comp=Z,31nm,18.1s,baz=264,slow=37							
PMSA	**Palmer Station**	**92.21**	**199**	LR	LR	12 24 22.1		
	comp=Z,33nm,18.3s,baz=132,slow=33							
TIXI	**Tiksi**	**95.75**	**16**	LR	LR	12 30 59.0		
	comp=Z,89nm,19.9s,baz=236,slow=36							
MA2	**Magadan**	**99.84**	**31**	LR	LR	12 36 42.9		
	comp=Z,32nm,18.2s,baz=165,slow=38							
PDAR	**Pinedale Array**	**152.00**	**354**	PKPbc	**PKiKP**	**11 53 57.0**	**-0.6**	
	comp=Z,0.6nm,0.6s,baz=85,slow=2.7,SNR=10							

*SOME **29** 11:39:54.1,40.°53N×77.°60E,h10km*
*NNC **29** 11:39:55.1±1.1,40.°56N×77.°64E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=7.7km s-min=5.2km az=168.0*
*KRNET **29** 11:39:56.3±0.1,40.°64N×77.°73E,h17km,mb3.2*

ISC 29 11:39:52.4±1.7,40.°44N±0.°06×77.°49E±0.°04,h1km±15km, n42,σ1°926/65,13C-12D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.31**	**10**	⇓*eP*	**Pn**	**11 40 17.1**	**-1.2**
TARG				⇓*eS*	**Sb**	**11 40 32.4**	**-3.3**
KDJ	**Kajisay**	**1.71**	**352**	⇓*eP*	**Pg**	**11 40 25.2**	**0.0**
KDJ				⇓*eS*	**Sb**	**11 40 46.3**	**-0.5**
ULHL	**Ulahol**	**2.04**	**333**	⇓*eP*	**Pg**	**11 40 32.7**	**+1.2**
ULHL				⇓*eS*	**Sg**	**11 40 59.3**	**+1.4**
PRZ	**Przheval'sk**	**2.16**	**18**	⇑*eP*	**Pb**	**11 40 32.1**	**-0.3**
PRZ				⇑*eS*	**Sb**	**11 40 58.2**	**-1.5**
BOOM	**Boomskoye usch**	**2.36**	**331**	⇑*eP*	**Pg**	**11 40 37.4**	**-0.3**
BOOM				⇑*eS*	**Sg**	**11 41 07.3**	**-0.9**
TNSS	**Tian-Shan**	**2.63**	**351**	Pg	**Pg**	**11 40 42.0**	**-0.9**
	6.8nm,0.4s						
TNSS				Lg	Lg	11 41 16.5	
	18nm,0.8s						
TNSS	**Tian-Shan**	**2.63**	**351**	*eP*	**Pg**	**11 40 42.0**	**-0.9**
	6.8nm,0.4s						
TNSS				*eS*	**Sg**	**11 41 16.5**	**-0.5**
	18nm,0.8s						
IZV	**Izvestkoviy**	**2.68**	**346**	Pg	**Pb**	**11 40 42.5**	**+1.2**
	8.5nm,0.3s						
IZV				Lg	Lg	11 41 17.2	
	18nm,0.3s						
IZV	**Izvestkoviy**	**2.68**	**346**	*eP*	**Pb**	**11 40 42.5**	**+1.2**
	8.5nm,0.3s						
IZV				*eS*	**Sg**	**11 41 17.1**	**-1.4**
	18nm,0.3s						
SATY	**Saty**	**2.71**	**14**	Pg	**Pb**	**11 40 42.6**	**+0.9**
	5.9nm,0.4s						
SATY				Lg	Lg	11 41 17.4	
	69nm,0.7s						
SATY	**Saty**	**2.71**	**14**	*eP*	**Pb**	**11 40 42.6**	**+0.9**
	5.9nm,0.4s						
SATY				*eS*	**Sb**	**11 41 17.4**	**+1.8**
	69nm,0.7s						
MDOK	**Medeo**	**2.74**	**353**	Pg	**Pb**	**11 40 43.7**	**+1.3**
	22nm,0.6s						
MDOK				⇓Pg	**Pg**	**11 40 44.1**	**-0.9**
	10nm,0.5s						
MDOK				Lg	Lg	11 41 19.4	
	50nm,0.5s						
MDOK				Lg	Lg	11 41 19.8	
	31nm,0.5s						
KNDC	**Almaty**	**2.81**	**352**	⇑Pg	**Pb**	**11 40 44.9**	**+1.5**
	14nm,0.3s						
KNDC				⇓Lg	Lg	11 41 21.9	
	64nm,0.5s						
SALK	**Salom-Alik**	**2.83**	**280**	⇑*eP*	**Pg**	**11 40 47.1**	**+0.5**
SALK				⇑*eS*	**Sg**	**11 41 24.2**	**+0.9**
UZB	**Uzynbulak**	**2.94**	**22**	Pg	**Pb**	**11 40 46.3**	**+0.5**
	4.9nm,0.2s						
UZB				Lg	Lg	11 41 23.8	
	31nm,1.1s						
UZB	**Uzynbulak**	**2.94**	**22**	*eP*	**Pb**	**11 40 46.3**	**+0.5**
	4.9nm,0.2s						
UZB				*eS*	**Sb**	**11 41 23.8**	**+1.5**
	31nm,1.1s						
SFK	**Sufi-Kurgan**	**3.08**	**263**	⇑*eP*	**Pg**	**11 40 51.3**	**-0.2**
SFK				⇑*eS*	**Sg**	**11 41 31.2**	**-0.3**
DGS	**Degeres**	**3.08**	**336**	Pg	**Pg**	**11 40 50.8**	**-0.8**
	11nm,0.6s						
DGS				Lg	Lg	11 41 31.7	
	16nm,0.5s						
DGS	**Degeres**	**3.08**	**336**	*eP*	**Pg**	**11 40 50.8**	**-0.8**
	11nm,0.6s						
DGS				*eS*	**Sg**	**11 41 31.3**	**-0.2**
	16nm,0.5s						
KURS	**Kuram**	**3.09**	**9**	Pg	**Pb**	**11 40 49.2**	**+0.9**
	7.3nm,0.8s						
KURS				Lg	Lg	11 41 28.6	
	11nm,1.0s						
KURS	**Kuram**	**3.09**	**9**	*eP*	**Pb**	**11 40 49.2**	**+0.9**
	7.3nm,0.8s						
KURS				*eS*	**Sb**	**11 41 28.6**	**+2.1**
	11nm,1.0s						
SHLS	**Shalkode**	**3.09**	**28**	Pg	**Pg**	**11 40 51.7**	**0.0**
	6.9nm,0.3s						
SHLS				Lg	Lg	11 41 32.9	
	16nm,0.3s						
SHLS	**Shalkode**	**3.09**	**28**	*eP*	**Pg**	**11 40 51.7**	**0.0**
	6.9nm,0.3s						
SHLS				*eS*	**Sg**	**11 41 32.9**	**+1.1**
	16nm,0.3s						
AAK	**Ala-Archa**	**3.15**	**315**	⇑Pg	**Pb**	**11 40 50.5**	**+1.2**
	11nm,0.7s						
AAK				⇓Lg	Lg	11 41 32.9	
	14nm,0.6s						
AAK	**Ala-Archa**	**3.15**	**315**	⇑*eP*	**Pb**	**11 40 49.3**	**+0.1**
AAK				⇑*eS*	**Sb**	**11 41 28.0**	**-0.2**
KPKS	**Kokpek**	**3.15**	**16**	Pg	**Pb**	**11 40 50.0**	**+0.7**
	0.2nm,0.2s						
KPKS				Lg	Lg	11 41 30.1	
	23nm,0.7s						
KPKS	**Kokpek**	**3.15**	**16**	*eP*	**Pb**	**11 40 50.0**	**+0.7**
	0.2nm,0.2s						
KPKS				*eS*	**Sb**	**11 41 30.1**	**+1.7**
	23nm,0.7s						
PDGK	**Podgornoye**	**3.25**	**27**	⇓Pg	**Pb**	**11 40 50.0**	**-1.1**
	5.5nm,0.7s						
PDGK				⇑Lg	Lg	11 41 31.2	
	50nm,0.8s						
KTBS	**Karatobe**	**3.33**	**350**	Pg	**Pb**	**11 40 52.8**	**+0.6**
KTBS				Lg	Lg	11 41 35.0	
KTBS	**Karatobe**	**3.33**	**350**	*eP*	**Pb**	**11 40 52.8**	**+0.6**
	0.3nm,0.1s						
KTBS				*eS*	**Sb**	**11 41 35.0**	**+1.7**
	23nm,0.3s						
KRBS	**Karabastau**	**3.53**	**338**	Pg	**Pg**	**11 40 58.2**	**-1.8**
	12nm,0.5s						
KRBS				Lg	Lg	11 41 44.1	
	20nm,0.8s						
KRBS	**Karabastau**	**3.53**	**338**	*eP*	**Pg**	**11 40 58.2**	**-1.8**
	12nm,0.4s						
KRBS				*eS*	**Sg**	**11 41 44.1**	**-1.6**
	20nm,0.8s						
EKS2	**Erkin-Say**	**3.56**	**310**	⇓*eP*	**Pb**	**11 40 55.5**	**-0.9**
EKS2				⇓*eS*	**Sb**	**11 41 38.5**	**-1.7**
KTMS	**Ketmen**	**3.69**	**34**	Pg	**Pb**	**11 40 58.4**	**-0.1**
	0.9nm,0.3s						
KTMS				Lg	Lg	11 41 44.6	
	5.0nm,0.5s						
KTMS	**Ketmen**	**3.69**	**34**	*eP*	**Pb**	**11 40 58.4**	**-0.1**
	0.9nm,0.3s						
KTMS				*eS*	**Sb**	**11 41 44.5**	**+0.7**
	5.0nm,0.5s						
SGDS	**Sogindy**	**3.69**	**326**	Pg	**Pg**	**11 41 01.9**	**-1.3**
	8.6nm,0.6s						
SGDS				Lg	Lg	11 41 50.7	
	9.4nm,0.9s						
BLB	**Baldybastay**	**3.73**	**11**	Pg	**Pb**	**11 41 00.8**	**+1.6**
	6.1nm,0.7s						
BLB				Lg	Lg	11 41 49.0	
	16nm,0.6s						
ARXS	**Arharly**	**3.78**	**4**	Pg	**Pb**	**11 41 01.5**	**+1.5**
	2.4nm,0.6s						
ARXS				Lg	Lg	11 41 49.7	
	36nm,0.6s						
ARXS	**Arharly**	**3.78**	**4**	*eP*	**Pb**	**11 41 01.5**	**+1.5**
	2.4nm,0.6s						
ARXS				*eS*	**Sb**	**11 41 49.7**	**+3.3**
	36nm,0.5s						
MRKS	**Merke**	**3.94**	**307**	Pg	**Pg**	**11 41 08.2**	**+0.2**
	5.5nm,0.3s						
MRKS				Lg	Lg	11 42 01.2	
	5.2nm,0.7s						
MRKS	**Merke**	**3.94**	**307**	*eP*	**Pg**	**11 41 08.2**	**+0.2**
	5.7nm,0.3s						
MRKS				*eS*	**Sg**	**11 42 01.2**	**+2.1**
	5.1nm,0.4s						
KNOS	**Konyrlen**	**4.11**	**17**	Pg	**Pb**	**11 41 07.0**	**+1.2**
	1.1nm,0.2s						
KNOS				Lg	Lg	11 41 59.4	
	5.9nm,0.8s						

*SKHL **29** 11:43:28.8±0.8,46.°20N×153.°40E,h71km±9km,mb4.8/4*
*MOS **29** 11:43:29.5±1.4,46.°59N×153.°26E,h60km,mb4.0/1, Error ellipse: s-maj=19.5km s-min=11.9km az=45.1*
*IDC **29** 11:43:33.2±3.2,46.°64N×153.°26E,h73km±28km,mb3.5/10, mbtmp3.8/12,MS3.4/1,Error ellipse: s-maj=28.1km s-min=19.5km az=134.0*

ISC 29 11:43:26.7±1.0,46.°7N±0.°1×153.°6E±0.°1,h24km,n37, σ2°18/34,mb3.9/10,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REI	**Reidovoe**	**4.10**	**252**	*eP*	**Pn**	**11 44 28.2**	**+0.3**
REI				AMB	AMB	11 44 31.7	
	80nm,0.5s						
REI				*eS*	**Sn**	**11 45 13.1**	**-1.9**
REI				A	A	11 45 22.6	
	30nm,0.4s						
REI				A	A	11 45 22.6	
	30nm,0.4s						
KUR	**Kuril'sk**	**4.21**	**252**	*i*PN	**Pn**	**11 44 30.9**	**+1.5**
KUR				*i* S	**Sn**	**11 45 19.1**	**+1.3**
KUR				pmax	pmax		
	comp=Z,62nm,0.4s						
KUR				smax	smax		
	comp=E,120nm,0.7s						
KUR				smax	smax		
	comp=N,77nm,0.5s						
KUR	**Kuril'sk**	**4.21**	**252**	*i* P	**Pn**	**11 44 30.7**	**+1.3**
KUR				AMB	AMB	11 44 32.9	
	comp=N,60nm,0.4s						
KUR				*i* S	**Sn**	**11 45 16.5**	**-1.3**
KUR				A	A	11 45 29.2	
	comp=N,120nm,0.6s						
KUR				A	A	11 45 29.2	
	comp=N,130nm,0.6s						
SKR	**Severo-Kuril's**	**4.38**	**22**	*eP*	**Pb**	**11 44 41.0**	**-1.9**
PAU	**Pauzhetka**	**5.27**	**23**	*eP*	Pb	11 44 53.2	-4.9
PAU				*eS*	**Sb**	**11 45 59.2**	**-1.7**
SHO	**Shikotan**	**5.50**	**242**	*eP*	**Pb**	**11 44 58.2**	**-3.8**
SHO				AMB	AMB	11 45 01.0	
	comp=N,20nm,0.2s						
SHO				*eS*	**Sn**	**11 45 55.7**	**+6.2**
SHO				A	A	11 46 12.8	
	comp=N,40nm,0.2s						
SHO				A	A	11 46 12.8	
	comp=N,40nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.02**	**247**	*e*PN	**Pn**	**11 44 54.0**	**-0.1**
YUK				pmax	pmax		
	comp=N,23nm,0.3s						
YUK				pmax	pmax		
	comp=Z,72nm,0.3s						
YUK				pmax	pmax		
	comp=E,13nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.02**	**247**	*eP*	**Pn**	**11 44 54.1**	**-0.1**
YUK				AMB	AMB	11 44 57.7	
	comp=E,70nm,0.4s						
YUK				*i* S	**Sn**	**11 45 58.8**	**-3.5**
YUK				A	A	11 46 05.6	
	comp=E,110nm,0.4s						
YUK				A	A	11 46 05.6	
	comp=E,200nm,0.4s						
RUSJ	**Misakicho**	**6.38**	**249**	*e*PN	**Pn**	**11 45 01.7**	**+2.5**
RUSJ				*i* S	**Sn**	**11 46 15.7**	**+4.5**
NMR	**Nemuro--Hokkai**	**6.44**	**242**	*e*PN	**Pn**	**11 44 57.3**	**-2.7**
NMR	**Nemuro--Hokkai**	**6.44**	**242**	*eP*	**Pn**	**11 44 57.7**	**-2.3**
PETK	**Petropavlovsk-**	**7.00**	**21**	P	Pn	11 45 13.9	+6.3
	comp=E,1.3nm,0.4s,baz=197,slow=8.4,SNR=4.2						
AKK	**Akkeshi**	**7.18**	**243**	*eP*	**Pn**	**11 45 08.4**	**-1.7**
PET	**Petropavlovsk**	**7.18**	**25**	*eP*	Pn	11 45 20.5	+10
JKA	**Kamikawa-asahi**	**8.12**	**256**	*eP*	**Pn**	**11 45 25.6**	**+2.6**
ASAJ	**Asahikawa**	**8.12**	**256**	P	**Pn**	**11 45 25.6**	**+2.5**
	comp=E,2.6nm,0.4s,baz=103,slow=21,SNR=7.3						
KSRS	**Korea Array**	**21.06**	**253**	P	**P**	**11 48 09.6**	**+0.8**
	comp=E,0.7nm,0.6s,baz=56,slow=9.9,SNR=6.8						
	comp=E,0.7nm,0.6s						
HILR	**Hailar Array B**	**22.65**	**290**	LR	LR	11 58 16.4	
	comp=E,92nm,18.8s,baz=215,slow=39						
H11N2	**WAKE ISLAND Hy**	**29.00**	**153**	T	T	12 21 08.6	
	baz=340,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**29.01**	**153**	T	T	12 21 05.8	
	baz=340,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**29.01**	**153**	T	T	12 21 02.8	
	baz=340,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**30.09**	**154**	T	T	12 22 34.4	
	baz=341,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**30.10**	**155**	T	T	12 22 31.3	
	baz=341,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**30.11**	**154**	T	T	12 22 32.1	
	baz=341,slow=76,SNR=14						
MKAR	**Makanchi Array**	**47.25**	**298**	P	**P**	**11 51 57.5**	**-0.3**
	comp=E,0.6nm,0.5s,baz=67,slow=7.8,SNR=4.8						
	comp=E,0.6nm,0.5s						
KURK	**Kurchatov**	**47.67**	**304**	P	**P**	**11 52 00.7**	**-0.1**
KURK	**Kurchatov**	**47.67**	**304**	*eP*	**P**	**11 52 00.7**	**-0.1**
KURBB	**Kurchatov Arra**	**47.76**	**304**	P	**P**	**11 52 00.7**	**-0.9**
	comp=E,1.0nm,0.7s,baz=67,slow=8.4,SNR=6.4						
	comp=E,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**50.82**	**37**	P	**P**	**11 52 26.6**	**+1.8**
	comp=E,0.7nm,0.7s,baz=297,slow=8.0,SNR=3.1						
	comp=E,0.7nm,0.7s						
FINES	**FINESS Array B**	**64.26**	**335**	P	**P**	**11 53 59.5**	**+0.1**
	comp=E,1.5nm,0.6s,baz=35,slow=5.1,SNR=5.2						
	comp=E,1.5nm,0.6s						
NB2	**NORSAR Subarra**	**68.42**	**341**	P	**P**	**11 54 27.1**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.42**	**341**	P	**P**	**11 54 26.4**	**+0.4**
	comp=Z,8nm,0.5s,baz=26,slow=6.3,SNR=4.3						
	comp=Z,0.8nm,0.5s						
HFS	**Hagfors**	**68.65**	**340**	P	**P**	**11 54 28.0**	**+0.5**
	comp=Z,2.4nm,0.5s,baz=49,slow=4.4,SNR=12						
	comp=Z,2.4nm,0.5s						
HFS	**Hagfors**	**68.65**	**340**	P	**P**	**11 54 28.0**	**+0.5**
AKASG	**Malin Array Be**	**71.80**	**326**	P	**P**	**11 54 47.0**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=34,slow=6.1,SNR=4.8						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**72.21**	**199**	P	**P**	**11 54 49.7**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=19,slow=5.1,SNR=6.3						
	comp=Z,0.8nm,1.0s						
TXAR	**Lajitas Array**	**77.28**	**61**	P	**P**	**11 55 20.9**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=289,slow=4.4,SNR=3.4						
	comp=Z,0.2nm,0.6s						

IDC 29 11:46:11.6±11.0,1.°11N×124.°33E,h344km±132km, mb3.1/6,mbtmp3.8/7,Error ellipse: s-maj=103.4km s-min=23.1km az=58.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.13**	**176**	P	P	11 50 10.9	0.0
	2.0nm,0.9s,baz=347,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**23.11**	**155**	P	P	11 50 48.2	-0.3
	3.7nm,0.6s,baz=336,slow=9.9,SNR=50						
	3.7nm,0.6s						
ASAR	**Alice Springs**	**26.33**	**160**	P	P	11 51 17.4	+0.1
	0.6nm,0.5s,baz=337,slow=7.3,SNR=21						
	0.6nm,0.5s						
SONM	**Songino Array**	**49.07**	**344**	P	P	11 54 25.4	+0.2
	0.6nm,0.7s,baz=171,slow=10,SNR=2.4						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**58.39**	**327**	P	P	11 55 31.2	-0.8
	0.9nm,0.6s,baz=124,slow=8.5,SNR=11						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**61.87**	**335**	P	P	11 55 55.1	-0.1
	0.3nm,0.3s,baz=163,slow=7.1,SNR=3.5						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**62.69**	**329**	P	P	11 56 01.2	+0.6
	0.7nm,0.6s,baz=132,slow=5.4,SNR=9.1						
	0.7nm,0.6s						

*IDC **29** 11:47:35.4±0.7,36.°71S×77.°21E,h0km,mb4.1/10, mbtmp4.1/10,MS3.6/12,Error ellipse: s-maj=26.7km s-min=20.9km az=106.0*
*NEIC **29** 11:47:37.0±1.3,36.°95S±0.°04×77.°4E±0.°1,h10km±1km, mb4.4/18,Error ellipse: s-maj=20.4km s-min=5.8km az=79.0*

ISC 29 11:47:36.8±0.5,36.°87S±0.°08×77.°3E±0.°1,h10km,n54, σ1°903/35,mb4.4/17,MS3.7/13,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**0.94**	**169**		**Pg**	**11 47 53.6**	**-1.4**
H04N2	**CROZET ISLANDS**	**21.18**	**236**	T	T	12 14 25.2	
	baz=74,slow=73,SNR=1918						
H04N1	**CROZET ISLANDS**	**21.20**	**236**	T	T	12 14 23.2	
	baz=74,slow=73,SNR=3009						
H04N3	**CROZET ISLANDS**	**21.20**	**236**	T	T	12 14 20.5	
	baz=74,slow=73,SNR=9586						
H08S2	**Diego Garcia H**	**29.42**	**350**	T	T	12 24 09.4	
	baz=172,slow=76,SNR=43						
H08S1	**Diego Garcia H**	**29.43**	**350**	T	T	12 24 09.7	
	baz=172,slow=76,SNR=17						
H08S3	**Diego Garcia H**	**29.44**	**350**	T	T	12 24 10.8	
	baz=172,slow=76,SNR=202						
H01W2	**Cape Leeuwin H**	**29.76**	**97**	T	T	12 24 44.4	
	baz=255,slow=74,SNR=66						
H01W3	**Cape Leeuwin H**	**29.77**	**97**	T	T	12 24 44.8	
	baz=255,slow=74,SNR=81						
H01W1	**Cape Leeuwin H**	**29.78**	**97**	T	T	12 24 45.7	
	baz=255,slow=74,SNR=73						
VOI	**Vohitsoka**	**30.35**	**291**	P	**P**	**11 53 49.4**	**+0.4**
VOI				IAmb	IAmb	11 54 07.5	
	comp=Z,8.9nm,1.1s						
MAW	**Mawson**	**31.86**	**190**	P	**P**	**11 54 03.1**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=55,slow=12,SNR=4.2						
	comp=Z,1.2nm,0.7s						
MAW	**Mawson**	**31.86**	**190**	P	**P**	**11 54 01.5**	**-0.1**
MBWA	**Marble Bar**	**39.90**	**79**	P	**P**	**11 55 11.1**	**+0.1**
MBWA				IAmb	IAmb	11 55 38.5	
	comp=Z,9.1nm,1.1s						
LEM	**Lembang**	**40.69**	**50**	LR	LR	12 09 12.9	
	comp=Z,100nm,18.4s,baz=199,slow=32						
FORT	**Forrest**	**42.17**	**97**	P	**P**	**11 55 29.2**	**-0.4**
PALK	**Pallekele**	**44.02**	**5**	LR	LR	12 09 21.1	
	comp=Z,126nm,20.6s,baz=174,slow=30						
BOSA	**Boshof**	**44.12**	**265**	P	**P**	**11 55 44.9**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=121,slow=8.6,SNR=3.9						
	comp=Z,3.6nm,0.9s						
BOSA	**Boshof**	**44.12**	**265**	P	**P**	**11 55 45.2**	**-0.3**
BOSA				IAmb	IAmb	11 55 47.8	
	comp=Z,3.6nm,0.9s						
LBTB	**Lobatse**	**45.43**	**270**	P	**P**	**11 55 56.8**	**+0.7**
LBTB				IAmb	IAmb	11 55 57.4	
	comp=Z,4.1nm,0.8s						
SUR	**Sutherland**	**46.16**	**258**	P	**P**	**11 56 01.0**	**-0.8**
KULM	**Kulim**	**47.26**	**32**	P	**P**	**11 56 10.4**	**+0.1**
LSZ	**Lusaka**	**48.50**	**283**	P	**P**	**11 56 20.2**	**+0.1**
LSZ				IAmb	IAmb	11 56 22.1	
	comp=Z,4.2nm,0.8s						
LKGWB	**Lokgwabe**	**49.37**	**268**	P	**P**	**11 56 24.2**	**-2.6**
ASAR	**Alice Springs**	**49.94**	**91**	P	**P**	**11 56 31.3**	**+0.3**
	comp=Z,0.8nm,1.0s,baz=246,slow=5.4,SNR=4.3						
ASAR				PcP	**PcP**	**11 57 51.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=238,slow=2.8,SNR=5.3						
	comp=Z,0.8nm,1.0s						
KAPI	**Kappang**	**50.08**	**61**	LR	LR	12 13 23.8	
	comp=Z,80nm,21.9s,baz=238,slow=31						
WRA	**Warramunga Arr**	**52.16**	**88**	P	**P**	**11 56 49.0**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=237,slow=7.5,SNR=3.4						
	comp=Z,1.2nm,1.0s						
SNAA	**Sanae**	**52.41**	**203**	P	**P**	**11 56 50.1**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=90,slow=6.9,SNR=5.0						
	comp=Z,1.9nm,0.7s						
SNAA	**Sanae**	**52.41**	**203**	P	**P**	**11 56 48.6**	**-0.3**
QSPA	**South Pole Qui**	**53.29**	**180**	P	**P**	**11 56 56.8**	**+1.2**
	comp=Z,3.2nm,1.0s,baz=277,slow=2.5,SNR=8.1						
	comp=Z,3.2nm,1.0s						
QSPA	**South Pole Qui**	**53.29**	**180**	P	**P**	**11 56 55.2**	**-0.4**
QSPA				IAmb	IAmb	11 57 06.3	
	comp=Z,4.2nm,1.1s						
VNA2	**Neumayer--Watz**	**53.96**	**204**	P	**P**	**11 57 01.5**	**+1.2**
	baz=77,slow=5.2						
VNA1	**Neumayer--Stat**	**54.28**	**204**	P	**P**	**11 57 05.0**	**+2.4**
CMAR	**Chiang Mai Arr**	**58.69**	**24**	LR	LR	12 17 14.5	
	comp=Z,34nm,21.9s,baz=200,slow=30						
SIJI	**Sorong**	**61.24**	**67**	LR	LR	12 22 48.8	
	comp=Z,21nm,19.4s,baz=68,slow=34						
CTA	**Charters Tower**	**61.63**	**95**	LR	LR	12 22 30.8	
	comp=Z,60nm,18.5s,baz=250,slow=34						
SLVN	**Son La**	**63.09**	**28**	P	**P**	**11 58 04.2**	**-0.3**
SLVN				IAmb	IAmb	11 58 20.1	
	comp=Z,2.2nm,0.8s						
EVN	**Everest**	**65.10**	**9**	P	**P**	**11 58 18.0**	**-0.3**
EVN				IAmb	IAmb	11 58 19.4	
	comp=Z,3.4nm,0.9s						
KBL	**Kabul**	**71.47**	**353**	P	**P**	**11 58 58.0**	**+0.4**
KRVT	**Keravat (AS076**	**75.18**	**84**	LR	LR	12 30 21.7	
	comp=Z,15nm,21.8s,baz=70,slow=34						
TARG	**Taragay, Kyrgy**	**78.22**	**0**	P	**P**	**11 59 35.4**	**-1.4**
AAK	**Ala-Archa**	**79.17**	**358**	LR	LR	12 30 43.7	
	comp=Z,55nm,20.6s,baz=194,slow=33						
KK31	**Karatay Array**	**79.84**	**355**	P	**P**	**11 59 46.0**	**+0.9**
KK31				IAmb	IAmb	11 59 49.3	
	comp=Z,7.0nm,0.9s						
KKAR	**Karatay Array**	**79.84**	**355**	P	**P**	**11 59 45.8**	**+0.6**
MKAR	**Makanchi Array**	**83.41**	**3**	P	**P**	**12 00 03.5**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=168,slow=6.2,SNR=14						
MKAR				LR	LR	12 34 05.4	
	comp=Z,34nm,21.2s,baz=139,slow=34						
	comp=Z,2.8nm,0.8s						
USHA	**Ushuaia**	**84.05**	**199**	LR	LR	12 33 24.6	
	comp=Z,904nm,21.0s,baz=134,slow=33						
BRTR	**Keskin Array B**	**86.17**	**328**	P	**P**	**12 00 16.4**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=160,slow=7.6,SNR=5.4						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**86.17**	**328**	P	**P**	**12 00 18.3**	**+0.2**
KURBB	**Kurchatov Arra**	**87.12**	**1**	P	**P**	**12 00 22.4**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=194,slow=4.9,SNR=12						
	comp=Z,2.4nm,0.9s						
**K

2.0nm,0.5s,baz=36,slow=9.2,SNR=6.4
2.0nm,0.5s
LBZ Lake Benmore 29.54 176 P **P** 12 08 13.2 +0.1
LBZ IAmb IAmb 12 08 17.4
comp=Z,13nm,1.0s
WR8 Warramunga Arr 31.71 256 P **P** 12 08 33.7 +1.2
WR8 IAmb IAmb 12 08 45.6
comp=Z,7.5nm,1.1s
WB0 Warramunga Arr 31.80 256 P **P** 12 08 32.5 -0.8
WB0 IAmb IAmb 12 08 32.8
comp=Z,4.2nm,1.0s
WRA Warramunga Arr 31.86 256 P **P** 12 08 33.2 -0.7
comp=Z,0.6nm,0.6s,baz=85,slow=9.1,SNR=9.0
comp=Z,0.6nm,0.6s
WRA Warramunga Arr 31.86 256 P **P** 12 08 33.4 -0.4
AS31 Alice Springs 32.69 249 P **P** 12 08 40.9 -0.2
ASAR Alice Springs 32.70 249 P **P** 12 08 40.7 -0.4
comp=Z,1.4nm,0.7s,baz=80,slow=8.9,SNR=33
ASAR PcP **PcP** 12 11 24.0 0.0
comp=Z,0.6nm,1.1s,baz=64,slow=2.1,SNR=4.3
comp=Z,1.4nm,0.7s
ASAR Alice Springs 32.70 249 P **P** 12 08 40.9 -0.2
BBOO Buckleboo 33.56 232 P **P** 12 08 50.0 +1.5
BBOO IAmb IAmb 12 08 50.7
comp=Z,4.5nm,0.8s
KNRA Kununurra 37.19 264 P **P** 12 09 19.0 -0.7
KNRA IAmb IAmb 12 09 46.1
comp=Z,4.0nm,1.1s
FORT Forrest 39.30 239 P **P** 12 09 38.1 +0.9
FORT IAmb IAmb 12 09 44.8
comp=Z,3.0nm,0.9s
FITZ Fitzroy Crossi 40.06 259 P **P** 12 09 44.2 +0.5
KAPI Kappang 47.79 277 P **P** 12 10 44.5 -1.0
MORW Morawa 49.28 244 P **P** 12 10 56.2 -0.5
VNDA Vanda 62.75 181 P **P** 12 12 32.2 +0.6
comp=Z,1.1nm,0.5s,baz=353,slow=7.6,SNR=8.9
comp=Z,1.1nm,0.5s
VNDA Vanda 62.75 181 P **P** 12 12 32.3 +0.6
SBA Scott Base 63.02 180 P **P** 12 12 35.1 +1.6
SBA IAmb IAmb 12 12 35.8
comp=Z,6.8nm,0.8s
CASY Casey 63.44 202 P **P** 12 12 36.9 +0.4
CASY IAmb IAmb 12 12 37.7
comp=Z,2.2nm,0.7s
QSPA South Pole Qui 75.18 180 P **P** 12 13 48.9 +0.1
comp=Z,3.4nm,0.8s,baz=318,slow=0.4,SNR=23
comp=Z,3.4nm,0.8s
QSPA South Pole Qui 75.18 180 P **P** 12 13 49.2 +0.3
QSPA IAmb IAmb 12 13 49.8
comp=Z,3.5nm,0.8s
ILAR Eielson Array 86.62 18 P **P** 12 14 48.8 -0.4
comp=Z,0.5nm,0.8s,baz=226,slow=5.9,SNR=5.8
comp=Z,0.5nm,0.8s
TROLL Troll, Antarti 92.75 185 ⇓P **P** 12 15 17.9 -0.3
comp=Z,108nm,0.6s
VNA2 Neumayer--Watz 94.36 182 ⇓⇓P **P** 12 15 24.7 -0.7
comp=Z,1.4nm,0.7s,baz=172,slow=5.0
VNA1 Neumayer--Stat 94.66 181 ⇓⇓P **P** 12 15 26.6 -0.1
comp=Z,2.5nm,1.3s
MKAR Makanchi Array 97.34 316 P Pdif 12 15 40.6 +1.1
comp=Z,0.4nm,0.7s,baz=104,slow=6.1,SNR=2.5
comp=Z,0.4nm,0.7s

*IDC **29** 12:04:23.2±3.2,36°.25S×179°.07E,h0km,mb3.4/2, mbtmp3.5/3,ML3.5/1,Error ellipse: s-maj=68.8km s-min=42.6km az=115.0*
*WEL **29** 12:04:27.8±1.1,37°.5±5°×17°.9E±°,h12km,M3.2/27, ML3.2/30,MLv3.2/27,Error ellipse: s-maj=12.2km s-min=6.1km az=83.0*
*NOU **29** 12:04:28.9,37°.16S×179°.43E,h0km,mb4.0/7, Off E. Coast of N. Island, N.Z.*
ISC 29 12:04:24.6±2.3,36°.59S±0°.07×179°.30E±0°.09,h16km±11km, n88,σ2°09/94, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.25**	**219**	P	**Pn**	**12 04 47.6**	**+0.1**
MXZ	**Matakaoa Point**	**1.25**	**219**	P	**Pn**	**12 04 47.8**	**+0.3**
MXZ				S	**Sg**	**12 05 04.8**	**-0.4**
WMGZ	**Waiomatatini S**	**1.42**	**210**	P	**Pg**	**12 04 52.7**	**+0.8**
HAZ	**Te Kaha**	**1.68**	**226**	P	**Pb**	**12 04 54.6**	**-0.5**
PUZ	**Puketiti**	**1.70**	**209**	P	**Pb**	**12 04 56.2**	**+0.7**
RUGZ	**Raukumara Rang**	**1.89**	**223**	P	**Pb**	**12 04 58.8**	**+0.1**
TWGZ	**Tauwhareparae**	**1.90**	**213**	P	**Pb**	**12 04 59.4**	**+0.5**
CNGZ	**Carnagh Station**	**2.08**	**204**	P	**Pb**	**12 05 01.9**	**0.0**
TKGZ	**Te Karaka**	**2.18**	**211**	P	**Pn**	**12 05 02.6**	**+2.5**
TKGZ				S	**Sb**	**12 05 29.8**	**-0.5**
MWZ	**Matawai**	**2.24**	**218**	P	**Pb**	**12 05 04.0**	**-0.7**
WHRZ	**Whale Island**	**2.24**	**235**	P	**Pb**	**12 05 05.5**	**+0.7**
URZ	**Urewera**	**2.41**	**226**	Pn	**Pn**	**12 05 05.2**	**+1.8**
	9.0nm,0.3s,baz=68,slow=6.0,SNR=101						
URZ				Sn	**Sn**	**12 05 33.8**	**+1.2**
	5.1nm,0.3s,baz=163,slow=22,SNR=7.3						
	18nm,0.3s						
URZ	**Urewera**	**2.41**	**226**	P	**Pn**	**12 05 05.2**	**+1.8**
URZ	**Urewera**	**2.41**	**226**	P	**Pb**	**12 05 06.3**	**-1.3**
URZ				S	**Sb**	**12 05 35.0**	**-2.1**
RAGZ	**Rawiri**	**2.42**	**218**	P	**Pn**	**12 05 06.3**	**+2.7**
RAGZ				S	**Sn**	**12 05 35.1**	**+2.1**
RIGZ	**Rimuhau**	**2.44**	**209**	P	**Pn**	**12 05 06.1**	**+2.3**
RIGZ				S	**Sb**	**12 05 36.2**	**-1.7**
MARZ	**Manawahe**	**2.51**	**235**	P	**Pb**	**12 05 07.9**	**-1.5**
MYRZ	**Mayor Island**	**2.54**	**253**	P	**Pn**	**12 05 05.7**	**+0.5**
PRGZ	**Paritu Road**	**2.59**	**205**	P	**Pn**	**12 05 08.1**	**+2.3**
TGRZ	**Tauranga**	**2.68**	**244**	P	**Pn**	**12 05 09.5**	**+2.5**
MKRZ	**Makatiti**	**2.73**	**235**	P	**Pb**	**12 05 12.2**	**-0.9**
KNZ	**Kokohu**	**2.75**	**207**	P	**Pn**	**12 05 09.5**	**+1.5**
MUGZ	**Murupara**	**2.75**	**226**	P	**Pn**	**12 05 10.6**	**+2.5**
TARZ	**Mount Tarawera**	**2.76**	**233**	P	**Pb**	**12 05 12.3**	**-1.4**
MHGZ	**Mahia Peninsul**	**2.79**	**203**	P	**Pn**	**12 05 10.4**	**+1.9**
RRRZ	**Republican Roa**	**2.82**	**231**	P	**Pn**	**12 05 11.7**	**+2.7**
KARZ	**Kaharoa**	**2.82**	**239**	P	**Pn**	**12 05 11.5**	**+2.5**
HLRZ	**Highlands Stat**	**2.87**	**234**	P	**Pb**	**12 05 13.0**	**-2.5**
NGRZ	**Ngongotaha**	**2.90**	**238**	P	**Pb**	**12 05 13.9**	**-2.1**
RAHZ	**Arahi**	**2.91**	**216**	P	**Pn**	**12 05 13.0**	**+2.8**
RAHZ				S	**Sn**	**12 05 47.4**	**+2.4**
KMRZ	**Kaimai**	**2.96**	**244**	P	**Pn**	**12 05 13.7**	**+2.8**
MTHZ	**Maungataniwha**	**2.98**	**220**	P	**Pn**	**12 05 13.7**	**+2.4**
PRRZ	**Plateau Road**	**2.99**	**230**	P	**Pn**	**12 05 13.8**	**+2.4**
GRZ	**Great Barrier**	**3.11**	**275**	P	**Pn**	**12 05 14.1**	**+1.1**
NMHZ	**Naumai**	**3.19**	**217**	P	**Pn**	**12 05 16.5**	**+2.4**
MRHZ	**Matea Rd**	**3.20**	**225**	P	**Pn**	**12 05 17.6**	**+3.3**
ARHZ	**Aropaoanui**	**3.23**	**214**	P	**Pn**	**12 05 16.4**	**+1.8**
TOZ	**Tahuroa Road**	**3.24**	**248**	P	**Pn**	**12 05 15.5**	**+0.8**
WIAZ	**Waiheke Island**	**3.35**	**265**	P	**Pn**	**12 05 17.5**	**+1.2**
MKAZ	**Moumakai**	**3.36**	**260**	P	**Pn**	**12 05 17.5**	**+1.1**
TLZ	**Tolley Road**	**3.46**	**239**	P	**Pb**	**12 05 22.6**	**-2.9**
MCHZ	**McNeill Hill**	**3.51**	**215**	P	**Pn**	**12 05 20.0**	**+1.5**
ETAZ	**East Tamaki Re**	**3.53**	**263**	P	**Pn**	**12 05 20.5**	**+1.8**
CKHZ	**Cape Kidnapper**	**3.53**	**209**	P	**Pn**	**12 05 19.6**	**+0.9**
MBAZ	**Motutapu North**	**3.54**	**266**	P	**Pn**	**12 05 20.4**	**+1.5**
RITZ	**Rihia Road**	**3.62**	**228**	P	**Pb**	**12 05 24.6**	**-3.6**
KWHZ	**Kaweka Forest**	**3.63**	**218**	P	**Pn**	**12 05 21.9**	**+1.7**
EPAZ	**Eden Park BICE**	**3.67**	**264**	P	**Pn**	**12 05 22.9**	**+2.3**
HBAZ	**Herne Bay Bore**	**3.68**	**265**	P	**Pn**	**12 05 23.1**	**+2.4**
KAHZ	**Kahuranaki**	**3.73**	**210**	P	**Pn**	**12 05 22.0**	**+0.5**
AWAZ	**Awhitu Peninsu**	**3.76**	**261**	P	**Pn**	**12 05 23.9**	**+1.9**
RVAZ	**Riverhead Bore**	**3.80**	**266**	P	**Pn**	**12 05 24.6**	**+2.2**
TMVZ	**Te Maari**	**3.80**	**227**	P	**Pn**	**12 05 25.0**	**+2.4**
NTVZ	**North Tongariro**	**3.81**	**228**	P	**Pn**	**12 05 25.0**	**+2.3**
WTAZ	**Waiatarua**	**3.81**	**263**	P	**Pn**	**12 05 24.7**	**+2.1**
ETVZ	**East Tongariro**	**3.81**	**227**	P	**Pn**	**12 05 25.0**	**+2.3**
KRHZ	**Kereru**	**3.83**	**216**	P	**Pn**	**12 05 24.6**	**+1.7**
KRVZ	**Karewarewa**	**3.83**	**228**	P	**Pn**	**12 05 25.5**	**+2.6**
OTVZ	**Oturere**	**3.85**	**227**	P	**Pn**	**12 05 25.5**	**+2.1**
BHHZ	**Black Hill Sta**	**3.86**	**220**	P	**Pn**	**12 05 25.6**	**+2.2**
WTVZ	**West Tongariro**	**3.87**	**228**	P	**Pn**	**12 05 27.3**	**+3.8**
SNVZ	**South Ngauruho**	**3.88**	**227**	P	**Pn**	**12 05 26.0**	**+2.2**
NGZ	**Ngauruhoe**	**3.90**	**227**	P	**Pn**	**12 05 26.3**	**+2.3**
TUVZ	**Tukino**	**3.93**	**226**	P	**Pn**	**12 05 26.7**	**+2.3**
TWVZ	**Taurewa**	**3.93**	**230**	P	**Pn**	**12 05 27.0**	**+2.6**
MOVZ	**Moawhango**	**3.97**	**224**	P	**Pn**	**12 05 26.6**	**+1.8**
WHVZ	**Whangaehu Hut**	**3.98**	**226**	P	**Pn**	**12 05 26.8**	**+1.7**
FWVZ	**Far West T-bar**	**3.98**	**227**	P	**Pn**	**12 05 28.2**	**+3.1**
WNVZ	**Wahianoa**	**4.00**	**226**	P	**Pn**	**12 05 27.0**	**+1.6**
HIZ	**Hauiti**	**4.02**	**240**	P	**Pn**	**12 05 29.0**	**+3.5**
HIZ	**Hauiti**	**4.02**	**240**	P	**Pn**	**12 05 29.3**	**+3.8**
WCZ	**Waipu Caves**	**4.05**	**278**	P	**Pn**	**12 05 27.5**	**+1.6**
PNHZ	**Pukenui**	**4.12**	**215**	P	**Pn**	**12 05 27.2**	**+0.3**
PKVZ	**Pokaka**	**4.13**	**228**	P	**Pn**	**12 05 31.2**	**+4.2**
PRHZ	**Porangahau**	**4.23**	**209**	P	**Pn**	**12 05 28.3**	**-0.1**
TSZ	**Takapari Road**	**4.35**	**216**	P	**Pn**	**12 05 30.7**	**+0.7**
VRZ	**Vera Road**	**4.39**	**233**	P	**Pn**	**12 05 34.0**	**+3.4**
BFZ	**Birch Farm**	**4.73**	**209**	P	**Pn**	**12 05 34.9**	**-0.4**
BFZ	**Birch Farm**	**4.73**	**209**	S	**Sn**	**12 06 27.0**	**-2.9**
OUZ	**Omahuta**	**4.82**	**285**	P	**Pn**	**12 05 37.7**	**+1.2**
KHEZ	**Kahui Hut**	**4.97**	**235**	P	**Pn**	**12 05 43.0**	**+4.3**
KHEZ	**Kahui Hut**	**4.97**	**235**	P	Pn	12 05 43.6	+4.9
OGWZ	**Otaki Gorge**	**5.31**	**216**	P	**Pn**	**12 05 43.2**	**-0.1**
KHZ	**Kahutara**	**7.33**	**216**	P	**Pn**	**12 06 12.2**	**+1.3**
CTZ	**Chatham Island**	**7.79**	**158**	P	**Pn**	**12 06 18.3**	**+1.0**
ASAR	**Alice Springs**	**40.96**	**275**	P	**P**	**12 12 06.1**	**-0.6**
	0.4nm,0.5s,baz=118,slow=8.0,SNR=19						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**42.52**	**280**	P	**P**	**12 12 18.5**	**-1.0**
	0.2nm,0.3s,baz=120,slow=7.7,SNR=8.8						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**149.97**	**334**	PKPbc	**PKPbc**	**12 24 13.4**	**+0.1**
	3.0nm,1.2s,baz=54,slow=2.6,SNR=3.9						

*IDC **29** 12:10:20.7±1.4,10°.55N×86°.12W,h0km,mb3.8/5, mbtmp3.8/6,ML3.4/1,MS3.3/3,Error ellipse: s-maj=51.2km s-min=16.2km az=27.0*
*CATAC **29** 12:10:20.1±0.5,10°.N±3°×8°.6W±°,h8km±4km,M4.3/17, MLv4.3/17,Error ellipse: s-maj=6.4km s-min=4.4km az=29.1,confirmed*
*UCR **29** 12:10:22.4±0.7,10°.35N×86°.27W,h16km±5km,MW4.6, Presumed earthquake*
*NEIC **29** 12:10:23.5±1.1,10°.42N±0°.08×86°.17W±0°.08,h22km±8km, mb4.4/23,Error ellipse: s-maj=14.8km s-min=6.6km az=222.0*
ISC 29 12:10:22.0±1.5,10°.38N±0°.04×86°.22W±0°.05,h16km±9km, n129,σ6°93/142,mb4.3/16,30C-2D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACU	**Santa Cruz**	**0.64**	**100**	*eP*	**Pn**	**12 10 35.7**	**-0.5**
SACU				*eS*	**Sn**	**12 10 45.4**	**-0.7**
DELF	**Filadelfia**	**0.66**	**84**	⇑*iP*	**Pn**	**12 10 36.6**	**-0.1**
ALIBA	**Liberia Airpor**	**0.70**	**72**	⇑*iP*	**Pn**	**12 10 37.8**	**+0.7**
JUD3	**Juan Diaz 3**	**0.70**	**107**		**Pn**	**12 10 36.5**	**-0.8**
JUD3	**Juan Diaz 3**	**0.70**	**107**	⇑*iP*	**Pn**	**12 10 36.6**	**-0.8**
NICO	**Nicoya**	**0.80**	**107**	⇑*iP*	**Pn**	**12 10 38.1**	**-0.4**
ERIA	**Liberia**	**0.81**	**71**	⇑*iP*	**Pn**	**12 10 39.1**	**+0.4**
CMARA	**Lajas Hojancha**	**0.86**	**114**	P	**Pn**	**12 10 39.1**	**-0.4**
CMARA				S	**Sn**	**12 10 51.6**	**-0.2**
CMARA	**Lajas Hojancha**	**0.86**	**114**	⇑*eP*	**Pb**	**12 10 38.3**	**-0.2**
LAPC	**Finca la Perla**	**0.87**	**63**	⇑*iP*	**Pg**	**12 10 38.3**	**-0.5**
LCRUZ	**La Cruz**	**0.91**	**40**	⇑*iP*	**Pn**	**12 10 40.5**	**+0.5**
GPS3	**Bodega del ICE**	**0.92**	**66**	⇑*iP*	**Pn**	**12 10 40.8**	**+0.5**
VRLE	**La Escondida,**	**0.94**	**64**	⇑*iP*	**Pn**	**12 10 40.9**	**+0.4**
BAGA	**Bagaces**	**0.96**	**81**	⇑*iP*	**Pn**	**12 10 41.3**	**+0.6**
VORI	**VORI**	**0.97**	**63**	⇑*iP*	**Pn**	**12 10 41.3**	**+0.2**
BUAI	**Buenos Aires**	**1.01**	**60**	⇑*iP*	**Pn**	**12 10 42.5**	**+1.1**
CARN	**Rivas**	**1.06**	**40**	P	**Pn**	**12 10 42.9**	**+0.8**
CARN				S	**Sn**	**12 11 00.1**	**+3.5**
CARN	**Rivas**	**1.06**	**40**		**Pn**	**12 10 42.1**	**0.0**
CARN	**Rivas**	**1.06**	**40**	⇑*iP*	**Pn**	**12 10 42.9**	**+0.8**
MESS	**Mesas**	**1.07**	**70**	⇑*iP*	**Pg**	**12 10 43.0**	**+0.3**
CUI	**Cuipilapa**	**1.08**	**75**	⇑*iP*	**Pg**	**12 10 43.0**	**+0.2**
HORNC	**Hornillas**	**1.08**	**72**	⇑*iP*	**Pg**	**12 10 42.9**	**0.0**
CLARA	**Aguas Claras**	**1.10**	**68**	⇑*iP*	**Pg**	**12 10 43.4**	**+0.1**
CNAS	**Canas**	**1.11**	**87**	⇓*iP*	**Pg**	**12 10 44.5**	**+1.1**
TIMP	**Tierras Morena**	**1.20**	**80**	⇑*iP*	**Pg**	**12 10 44.4**	**-0.8**
JUNT	**Juntas**	**1.25**	**94**	*eP*	**Pb**	**12 10 44.8**	**-0.3**
JTS	**Las Juntas de**	**1.25**	**94**	Pn	**Pb**	**12 10 45.0**	**-0.2**
	62nm,0.3s,baz=273,slow=7.8,SNR=107						
JTS				Sn	**Sg**	**12 11 02.2**	**-0.3**
	126nm,0.3s,baz=262,slow=15,SNR=8.1						
JTS	**Las Juntas de**	**1.25**	**94**	P	**Pb**	**12 10 45.2**	**0.0**
JTS				S	**Sg**	**12 11 04.3**	**+1.8**
JTS	**Las Juntas de**	**1.25**	**94**		**Pn**	**12 10 44.6**	**-0.2**
JTS	**Las Juntas de**	**1.25**	**94**	⇑*iP*	**Pb**	**12 10 44.9**	**-0.3**
JAPN	**AI SSO del Vol**	**1.26**	**25**	P	**Pg**	**12 10 46.3**	**0.0**
JAPN	**AI SSO del Vol**	**1.26**	**25**	⇑*eP*	**Pg**	**12 10 45.8**	**-0.5**
TENO	**El Achiote**	**1.27**	**75**	⇑*iP*	**Pb**	**12 10 45.0**	**-0.5**
CHIK	**Chiripa**	**1.29**	**87**	*eP*	**Pg**	**12 10 46.1**	**-0.9**
MORN	**AI O del Volca**	**1.29**	**26**	P	**Pg**	**12 10 46.4**	**-0.5**
MORN				S	**Sg**	**12 11 06.3**	**+2.4**
UPAL	**Upala**	**1.30**	**66**	P	**Pg**	**12 10 46.6**	**-0.4**
UPAL				S	**Sg**	**12 11 06.0**	**+2.1**
UPAL	**Upala**	**1.30**	**66**	⇑*eP*	**Pg**	**12 10 45.8**	**-1.2**
CONN	**Concepcion**	**1.32**	**26**	P	**Pg**	**12 10 46.4**	**-1.0**
CONN				S	**Sg**	**12 11 07.0**	**+2.4**
QUEB	**Quebradon, Cot**	**1.33**	**79**	⇑*iP*	**Pg**	**12 10 46.5**	**-1.0**
MTEVE	**Monteverde**	**1.37**	**92**	*eP*	**Pb**	**12 10 46.9**	**-0.5**
NADN	**Granada**	**1.38**	**8**	P	**Pb**	**12 10 46.9**	**-0.5**
NADN				S	**Sg**	**12 11 08.8**	**+2.3**
PAQE	**Paquera**	**1.38**	**113**	*eP*	Pg	12 10 54.4	+5.8
ENAS	**Puntarenas**	**1.42**	**106**	*eP*	**Pg**	**12 10 50.5**	**+1.2**
TABAC	**Tabacon**	**1.44**	**85**	*eP*	**Pg**	**12 10 48.8**	**-0.9**
CASO	**Castillo**	**1.46**	**88**	*eP*	**Pg**	**12 10 49.0**	**-1.2**
ARE1	**Arenal 1**	**1.48**	**87**	⇑*iP*	**Pg**	**12 10 49.6**	**-0.9**
VARE2	**V. Arenal**	**1.48**	**87**	⇑*iP*	**Pg**	**12 10 49.7**	**-0.8**
CEDE	**Laguna Cedeo**	**1.50**	**86**	⇑*iP*	**Pg**	**12 10 49.9**	**-0.7**
REZ	**Monterrey de S**	**1.50**	**84**	*eP*	**Pg**	**12 10 49.7**	**-1.3**
VACR	**Volcan Arenal**	**1.52**	**86**	⇑*iP*	**Pb**	**12 10 49.6**	**-0.2**
NANN	**Nandasmo**	**1.56**	**4**	P	**Pb**	**12 10 50.6**	**+0.2**
SABN	**Sabanita**	**1.57**	**2**	P	**Pn**	**12 10 49.7**	**+0.5**
ARZA	**Esparza**	**1.57**	**104**	*eP*	**Pg**	**12 10 51.8**	**-0.5**
MASN	**Masaya**	**1.60**	**2**	P	**Pb**	**12 10 51.0**	**-0.2**
MASN				S	**Sg**	**12 11 13.2**	**-0.6**
LCHIL	**Los Chiles**	**1.62**	**66**	⇑*iP*	**Pb**	**12 10 50.6**	**-0.8**
MAS3	**AI N del Volca**	**1.64**	**2**	P	**Pn**	**12 10 50.6**	**+0.5**
OROT	**Orotina**	**1.73**	**105**	*eP*	**Pn**	**12 10 51.9**	**+0.6**
SRA1	**San Ramn**	**1.74**	**99**	*eP*	**Pg**	**12 10 55.5**	**+0.1**
RAMO	**San Ramon**	**1.75**	**99**	*eP*	**Pb**	**12 10 52.8**	**-1.0**
QUEU	**Ciudad Quesada**	**1.76**	**92**	*eP*	**Pb**	**12 10 53.2**	**-0.6**
MGAN	**Managua**	**1.76**	**359**		**Pn**	**12 10 51.3**	**-0.5**
PALD	**Palmares**	**1.79**	**100**	*eP*	**Pn**	**12 10 53.0**	**+0.8**
SAPS	**Ciudad Sandino**	**1.79**	**354**	P	**Pn**	**12 10 52.9**	**+0.6**
TRB2	**Turrubares**	**1.80**	**105**	P	**Pn**	**12 10 53.1**	**+0.7**
TRB2	**Turrubares**	**1.80**	**105**	*eP*	**Pn**	**12 10 53.0**	**+0.6**
VPL2	**V. Platanar**	**1.81**	**92**	*eP*	**Pb**	**12 10 53.9**	**-0.9**
ZARE	**Zarcero**	**1.81**	**96**	*eP*	**Pg**	**12 10 58.2**	**+1.3**
VPL1	**V. Platanar**	**1.83**	**94**	*eP*	**Pb**	**12 10 54.1**	**-1.1**
COPN	**Copaltepe**	**1.83**	**349**	P	**Pn**	**12 10 52.9**	**+0.1**
COPN	**Copaltepe**	**1.83**	**349**	*eP*	**Pn**	**12 10 52.6**	**-0.1**
ATEO	**Atenas**	**1.85**	**102**	*eP*	**Pn**	**12 10 53.9**	**+0.8**
VPL3	**V. Platanar**	**1.88**	**91**	*eP*	**Pb**	**12 10 54.8**	**-1.2**
ACON	**Acoyapa**	**1.89**	**33**	P	**Pn**	**12 10 54.1**	**+0.6**
ACON				S	**Sg**	**12 11 22.1**	**-0.7**
ACON	**Acoyapa**	**1.89**	**33**	⇑*iP*	**Pn**	**12 10 54.2**	**+0.6**
TCS1	**Tacares**	**1.92**	**100**	*eP*	**Pb**	**12 10 55.6**	**-1.1**
VPS5	**V. Poas**	**1.97**	**95**	*eP*	**Pb**	**12 10 56.0**	**-1.5**
MOMN	**Momotombo**	**2.04**	**351**	P	**Pn**	**12 10 56.0**	**+0.2**
MOMN				S	**Sb**	**12 11 22.4**	**-1.6**
LEVN	**Ruinas Leon Vi**	**2.05**	**349**	P	**Pn**	**12 10 57.0**	**+1.2**
MOM2	**El Cardon**	**2.07**	**353**	P	**Pn**	**12 10 56.4**	**+0.4**
MOM2				S	**Sb**	**12 11 24.5**	**0.0**
HDC	**Heredia**	**2.11**	**100**		**Pn**	**12 10 57.2**	**+0.6**
MACN	**El Madrono**	**2.12**	**348**	P	**Pb**	**12 10 58.6**	**-1.5**
BOAB	**BOACO BROADBAN**	**2.13**	**15**	P	**Pn**	**12 10 57.5**	**+0.6**
BOAB				S	**Sg**	**12 11 28.0**	**-2.6**
BOAB	**BOACO BROADBAN**	**2.13**	**15**		**Pn**	**12 10 57.0**	**+0.1**
CNGN	**Cerro Negro**	**2.16**	**348**	P	**Pn**	**12 10 57.0**	**-0.4**
HERN	**Volcan Telica**	**2.30**	**345**		**Pn**	**12 10 58.7**	**-0.6**
CRIN	**San Cristobal**	**2.45**	**341**		**Pn**	**12 11 01.1**	**-0.2**
PIRO	**Carate, Puerto**	**3.46**	**124**		**Pn**	**12 11 16.9**	**+1.8**
SIUN	**Universidad Ur**	**3.61**	**23**		**Pn**	**12 11 17.1**	**-0.2**
RGM0	**Gandoca**	**3.64**	**102**	Pn	**Pn**	**12 11 17.7**	**0.0**
TGUH	**Tegucigalpa,Un**	**3.80**	**344**	Pn	**Pn**	**12 11 19.8**	**-0.2**
BRU2	**Volcan**	**3.82**	**114**	Pn	**Pn**	**12 11 19.9**	**-0.4**
BILN	**Bilwi Airport**	**4.59**	**37**	Pn	**Pn**	**12 11 30.3**	**-0.4**
MTO3	**Montecristo**	**5.04**	**323**		**Pn**	**12 11 37.9**	**+0.8**
CMIG	**Matias Romero**	**10.74**	**309**	Pn	**Pn**	**12 12 56.2**	**+1.0**
	0.3nm,0.3s,baz=10.0,slow=14,SNR=3.6						
	3.0nm,0.8s						
SOR	**Soroa**	**12.72**	**14**	Pn	**Pn**	**12 13 22.5**	**+0.2**
ROSC	**El Rosal**	**13.01**	**114**	LR	LR	12 18 39.1	
	comp=Z,74nm,19.7s,baz=256,slow=38						
SDV	**Santo Domingo**	**15.44**	**94**	Pn	**Pn**	**12 13 57.5**	**-1.9**
SDV				IAmb	IAmb	12 13 57.7	
	comp=Z,6.6nm,0.6s						
ATAH	**Atahualpa**	**19.06**	**156**	LR	LR	12 21 08.3	
	comp=Z,130nm,19.2s,baz=329,slow=34						
456A	**Hilliard**	**20.62**	**10**	P	**P**	**12 14 59.9**	**-0.8**
HKT	**Hockley**	**21.44**	**337**	P	**P**	**12 15 10.3**	**+0.8**
833A	**Chaparral WMA,**	**21.72**	**327**	P	**P**	**12 15 13.9**	**+1.4**
833A				IAmb	IAmb	12 15 16.9	
	comp=Z,6.7nm,0.7s						
LRAL	**Lakeview Retre**	**22.56**	**358**		**P**	**12 15 21.2**	**-0.4**
LRAL				IAmb	IAmb	12 15 24.2	
	comp=Z,8.0nm,0.8s						
Y49A	**Blount Mountai**	**23.37**	**360**	P	**P**	**12 15 29.7**	**-0.2**
Y49A				IAmb	IAmb	12 15 31.5	
	comp=Z,9.4nm,0.8s						
Y52A	**Lilburn**	**23.46**	**5**	P	**P**	**12 15 30.7**	**0.0**
Y52A				IAmb	IAmb	12 15 31.6	
	comp=Z,14nm,0.9s						
BRDY	**Brady**	**23.95**	**332**		**P**	**12 15 34.8**	**-0.7**
BRDY				IAmb	IAmb	12 15 36.8	
	comp=Z,4.5nm,0.7s						
HODGE	**Hodges**	**24.02**	**8**	P	**P**	**12 15 36.0**	**-0.1**
HODGE				IAmb	IAmb	12 15 36.7	
	comp=Z,11nm,0.7s						
FPAL	**Fort Paine**	**24.06**	**1**	P	**P**	**12 15 36.0**	**-0.5**
JSC	**Jenkinsville**	**24.23**	**10**	P	**P**	**12 15 37.5**	**-0.5**
JSC				IAmb	IAmb	12 15 38.9	
	comp=Z,12nm,0.7s						
PAULI	**Pauline**	**24.66**	**9**		**P**	**12 15 41.2**	**-0.8**
PAULI				IAmb	IAmb	12 15 43.3	
	comp=Z,12nm,0.8s						
TXAR	**Lajitas Array**	**24.94**	**322**	P	**P**	**12 15 45.8**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=139,slow=11,SNR=21						
TXAR				PcP	**PcP**	**12 19 21.4**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=130,slow=5.1,SNR=5.2						
	comp=Z,1.4nm,0.6s						
TXAR	**Lajitas Array**	**24.94**	**322**	P	**P**	**12 15 44.7**	**0.0**
MIAR	**Mount Ida**	**24.98**	**346**		**P**	**12 15 44.0**	**-0.9**
MIAR				IAmb	IAmb	12 15 45.8	
	comp=Z,6.2nm,0.9s						
TKL	**Tuckaleechee C**	**25.27**	**5**	P	**P**	**12 15 47.2**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=197,slow=12,SNR=5.6						
TKL				LR	LR	12 26 12.6	
	comp=Z,55nm,18.4s,baz=294,slow=38						
	comp=Z,4.2nm,0.6s						
MNHN	**Monahans**	**25.89**	**326**		**P**	**12 15 53.7**	**+0.3**
MNHN				IAmb	IAmb	12 15 55.4	
	comp=Z,7.9nm,0.9s						
Q51A	**Peebles**	**28.65**	**5**	P	**P**	**12 16 17.0**	**-0.9**
SDCO	**Great Sand Dun**	**32.30**	**331**	P	**P**	**12 16 50.2**	**-0.3**
PV18	**Skein Mesa, Pa**	**34.41**	**327**	P	**P**	**12 17 09.4**	**+0.6**
PV18				IAmb	IAmb	12 17 10.9	
	comp=Z,4.7nm,0.7s						
PDAR	**Pinedale

WMOK					IAmb	IAmb	12 28 18.7		
	comp=Z,13nm,1.4s								
PNTR	**Pine Nut**	**16.51**	**339**	P	**P**	**Pn**	**12 27 54.2**	**+1.9**	
PNTR					IAmb	IAmb	12 28 08.4		
	comp=Z,24nm,1.3s								
MPK	**Martis Peak**	**16.84**	**339**	P	**P**	**P**	**12 27 59.4**	**+0.7**	
PAHR	**Pah Rah Range**	**17.01**	**341**		**P**	**P**	**12 28 01.3**	**+1.0**	
ELK	**Elko**	**17.12**	**352**	P	**P**	**P**	**12 28 02.3**	**+0.7**	
	baz=194,slow=13,SNR=6.1								
	comp=Z,2.0nm,1.0s								
CMIG	**Matias Romero**	**17.53**	**109**	LR	LR	LR	12 34 19.6		
	comp=Z,169nm,20.9s,baz=285,slow=36								
PD31	**Pinedale Array**	**19.07**	**6**	P	**P**	**P**	**12 28 23.7**	**+0.5**	
PD31					IAmb	IAmb	12 28 49.5		
	comp=Z,12nm,1.4s								
PDAR	**Pinedale Array**	**19.07**	**6**	P	**P**	**Pn**	**12 28 24.8**	**+0.9**	
	comp=Z,1.4nm,0.8s,baz=182,slow=11,SNR=12								
PDAR					LR	LR	12 35 58.6		
	comp=Z,178nm,19.2s,baz=164,slow=36								
	comp=Z,1.4nm,0.8s								
PDAR	**Pinedale Array**	**19.07**	**6**	P	**P**	**P**	**12 28 23.9**	**+0.7**	
YBH	**Yreka Blue Hor**	**19.94**	**336**	P	**P**	**P**	**12 28 32.5**	**0.0**	
	comp=Z,2.5nm,0.9s,baz=200,slow=15,SNR=6.1								
YBH					LR	LR	12 36 55.9		
	comp=Z,108nm,18.0s,baz=155,slow=38								
	comp=Z,2.5nm,0.9s								
YBH	**Yreka Blue Hor**	**19.94**	**336**	P	**Pn**	**Pn**	**12 28 36.6**	**+2.4**	
K05A	**Summer Lake**	**20.23**	**341**	P	Pn	12 28 39.4	+1.7		
FLWY	**Flagg Ranch**	**20.30**	**3**	P	**P**	**P**	**12 28 36.6**	**+0.1**	
FLWY					IAmb	IAmb	12 29 08.8		
	comp=Z,13nm,1.1s								
YHH	**Holmes Hill**	**21.00**	**3**		**P**	**P**	**12 28 44.8**	**+0.7**	
BMO	**Blue Mountains**	**21.44**	**350**	P	**P**	**P**	**12 28 49.4**	**+0.7**	
NEW	**Newport**	**24.75**	**352**		**P**	**P**	**12 29 22.8**	**+0.7**	
NEW					IAmb	IAmb	12 29 34.7		
	comp=Z,4.5nm,0.9s								
LDM	**Libby Dam**	**24.76**	**355**		**P**	**P**	**12 29 23.2**	**+1.1**	
TKL	**Tuckaleechee C**	**27.28**	**58**	LR	LR	LR	12 41 44.1		
	comp=Z,60nm,19.9s,baz=249,slow=38								
ULM	**Lac du Bonnet**	**29.34**	**22**	LR		LR	12 41 41.3		
	comp=Z,49nm,18.8s,baz=241,slow=35								
SADO	**Sadowa**	**34.08**	**44**	LR	LR	LR	12 43 38.9		
	comp=Z,88nm,18.7s,baz=314,slow=34								
YKA	**Yellowknife Ar**	**38.74**	**358**	LR	LR	LR	12 49 32.0		
	comp=Z,78nm,21.7s,baz=155,slow=39								
SJG	**San Juan**	**43.23**	**88**	LR	LR	LR	12 53 13.5		
	comp=Z,36nm,18.2s,baz=108,slow=40								
SCHQ	**Schefferville**	**45.63**	**35**	LR	LR	LR	12 51 50.8		
	comp=Z,100nm,18.5s,baz=285,slow=36								
INK	**Inuvik**	**46.42**	**349**	LR	LR	LR	12 51 36.4		
	comp=Z,82nm,18.7s,baz=182,slow=35								
ILAR	**Eielson Array**	**46.76**	**340**	P	**P**	**P**	**12 32 26.8**	**-2.8**	
	comp=Z,0.3nm,0.8s,baz=160,slow=6.7,SNR=12								
ILAR					LR	LR	12 51 27.0		
	comp=Z,54nm,18.2s,baz=266,slow=35								
	comp=Z,0.3nm,0.8s								
H11N3	**WAKE ISLAND Hy**	**74.27**	**285**	T	T	T	13 57 10.6		
	baz=68,slow=75,SNR=12								
H11N2	**WAKE ISLAND Hy**	**74.28**	**285**	T	T	T	13 57 41.6		
	baz=68,slow=75,SNR=7.1								
H11N1	**WAKE ISLAND Hy**	**74.29**	**285**	T	T	T	13 57 25.2		
	baz=68,slow=75,SNR=11								

*IDC **29** 12:35:33.8±1.7,67.48N×23.35E,h0km,mbtmp2.5/2, ML1.8/2,Error ellipse: s-maj=35.6km s-min=8.2km az=98.0*

*HEL **29** 12:35:35.3±0.3,67.43N×23.38E,h0km,ML1.2,Explosion*

ISC 29 12:35:34.0±1.0,67.42N±0.04×23.27E±0.07,h0km,n11, σ0s69/13,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLF	**Kolari**	**0.33**	**125**	*e*P	**Pg**	**12 35 40.3**	**+0.1**
KLF				*e*S	**Sg**	**12 35 44.6**	**+0.2**
LANU	**Lannavaara**	**0.79**	**323**	*e*P	**Pg**	**12 35 49.4**	**+0.2**
LANU				*e*S	**Sb**	**12 36 01.5**	**-0.4**
HEF	**Hetta**	**1.00**	**8**	*e*P	**Pg**	**12 35 52.7**	**-0.4**
HEF				*e*S	**Sb**	**12 36 07.4**	**-0.5**
TOF	**Tornio**	**1.41**	**162**	*e*P	**Pn**	**12 36 00.2**	**-0.7**
TOF				*e*S	**Sb**	**12 36 19.9**	**+0.3**
KTK1	**Kautokeino**	**1.60**	**360**	*e*P	**Pn**	**12 36 03.2**	**-0.3**
KTK1				*e*SN	**Sg**	**12 36 26.2**	**+1.0**
ARCES	**ARCESS Array B**	**2.28**	**20**	Pn	**Pn**	**12 36 13.4**	**+0.6**
	0.2nm,0.3s,baz=202,slow=14,SNR=7.0						
ARCES				Lg	Lg	12 36 42.5	
	0.8nm,0.3s,baz=206,slow=30,SNR=9.1						
	0.9nm,0.5s						
I37NO	**I37NO**	**2.40**	**316**	I	I	12 50 25.0	
	baz=133,slow=311,SNR=5.7						
OUL	**Oulu**	**2.58**	**154**	smax	smax	12 36 54.9	
	comp=Z,0.8nm,0.1s						
OBF4	**Vikkela, Lumij**	**2.72**	**163**	smax	smax	12 37 03.4	
	comp=Z,0.5nm,0.1s						
OUF	**Merijarvi**	**3.13**	**168**	smax	smax	12 37 07.5	
	comp=Z,0.6nm,0.1s						
FINES	**FINESS Array B**	**6.12**	**167**	Pn	**Pn**	**12 37 06.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=355,slow=15,SNR=4.9						
FINES				Sn	**Sn**	**12 38 15.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=357,slow=24,SNR=1.5						
	comp=Z,0.8nm,0.6s						

*IDC **29** 12:54:34.2±1.9,18.09S×178.36W,h570km±21km,mb3.0/5, mbtmp3.9/6,Error ellipse: s-maj=30.9km s-min=24.1km az=157.0*

ISC 29 12:54:34.7±0.9,18.1S±0.2×178.5W±0.2,h579km,n8, σ0s66/8,mb3.6/6,2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**275**	P	**P**	**12 55 53.6**	**-0.7**
	110nm,0.6s,baz=124,slow=13,SNR=74						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**13 01 56.8**	**+0.5**
	0.7nm,0.5s,baz=97,slow=6.7,SNR=26						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**13 01 58.3**	**+0.8**
	4.3nm,0.8s,baz=88,slow=8.4,SNR=78						
	4.3nm,0.8s						
QSPA	**South Pole Qui**	**72.00**	**180**	P	**P**	**13 05 00.5**	**0.0**
	1.9nm,0.7s,baz=237,slow=1.3,SNR=12						
	1.9nm,0.7s						
ILAR	**Eielson Array**	**86.04**	**13**	P	**P**	**13 06 13.9**	**-0.3**
	0.2nm,0.4s,baz=225,slow=5.0,SNR=5.3						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**13 06 16.2**	**+0.6**
	0.3nm,0.8s,baz=247,slow=5.3,SNR=2.9						
	0.3nm,0.8s						
TROLL	**Troll, Antarti**	**90.17**	**180**	⇓P	**P**	**13 06 33.4**	**-0.4**
	comp=Z,44nm,0.4s						
VNA2	**Neumayer--Watz**	**91.04**	**177**	⇓P	**P**	**13 06 37.2**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=180,slow=4.9						

*IDC **29** 13:08:28.8±1.6,26.26S×178.85W,h342km±16km,mb3.4/6, mbtmp4.1/7,Error ellipse: s-maj=23.8km s-min=17.6km az=63.0*

ISC 29 13:08:30.5±0.9,26.75S±0.08×178.9W±0.1,h350km,n36, σ2s05/37,mb3.7/8,4C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.66**	**160**	P	**Pn**	**13 09 28.2**	**+1.4**
	361nm,0.2s,baz=49,slow=19,SNR=6.0						
RAO				S	**S**	**13 10 12.2**	**+0.1**
	626nm,0.3s,baz=60,slow=15,SNR=6.8						
GLKZ	**Green Lake**	**2.67**	**160**	P	**Pn**	**13 09 28.2**	**+1.4**
GLKZ				S	**S**	**13 10 12.9**	**+0.7**
MSVF	**Nonsavu**	**9.39**	**342**	P	Pn	13 10 34.1	-7.3
	34nm,0.8s,baz=174,slow=12,SNR=23						
OUZ	**Omahuta**	**10.60**	**215**	P	P	13 11 01.2	+4.7
GRZ	**Great Barrier**	**10.61**	**205**	P	P	13 11 00.2	+3.6
WCZ	**Waipu Caves**	**10.81**	**210**	P	P	13 11 04.1	+5.3
MXZ	**Matakaoa Point**	**11.03**	**192**	P	**P**	**13 11 00.4**	**-0.9**
MXZ				S	**S**	**13 13 00.1**	**-4.1**
WIZ	**White Island**	**11.24**	**196**	P	**P**	**13 11 06.7**	**+3.2**
WMGZ	**Waiomatatini S**	**11.27**	**191**	P	**Pn**	**13 11 01.2**	**-2.2**
WMGZ				S	**S**	**13 13 05.9**	**-3.5**
NIUE	**Niue**	**11.28**	**49**	P	Pn	13 10 57.2	-6.5
NIUE				S	S	13 12 52.5	-18
MBAZ	**Motutapu North**	**11.28**	**206**	P	P	13 11 08.4	+4.4
HAZ	**Te Kaha**	**11.32**	**193**	P	**Pn**	**13 11 02.6**	**-1.5**
HAZ				S	**S**	**13 13 12.3**	**+1.7**
MKAZ	**Moumakai**	**11.47**	**204**	P	P	13 11 09.6	+3.4
PUZ	**Puketiti**	**11.54**	**191**	P	**Pn**	**13 11 03.5**	**-3.1**
PUZ				S	**S**	**13 13 11.3**	**-4.1**
RUGZ	**Raukumara Rang**	**11.55**	**193**	P	**Pn**	**13 11 05.1**	**-1.8**
TGRZ	**Tauranga**	**11.68**	**199**	P	**P**	**13 11 10.0**	**+1.6**
TWGZ	**Tauwhareparae**	**11.69**	**192**	P	**Pn**	**13 11 06.8**	**-1.7**
MWZ	**Matawai**	**11.93**	**194**	P	**Pn**	**13 11 09.3**	**-2.1**
MWZ				S	**S**	**13 13 25.3**	**+1.2**
CNGZ	**Carnagh Statio**	**11.95**	**191**	P	**P**	**13 11 10.4**	**-1.0**
URZ	**Urewera**	**11.95**	**195**	P	**P**	**13 11 12.0**	**+0.5**
	47nm,0.3s,baz=302,slow=3.2,SNR=85						
URZ				S	**S**	**13 13 24.1**	**-0.4**
	36nm,0.5s,baz=49,slow=20,SNR=14						
URZ	**Urewera**	**11.95**	**195**	P	**Pn**	**13 11 09.4**	**-2.2**
URZ				S	**S**	**13 13 24.5**	**+0.1**
TKGZ	**Te Karaka**	**11.97**	**192**	P	**Pn**	**13 11 10.1**	**-1.6**
RAGZ	**Rawiri**	**12.11**	**194**	P	**Pn**	**13 11 12.2**	**-1.4**
RIGZ	**Rimuhau**	**12.24**	**192**	P	**P**	**13 11 12.1**	**-2.7**
AFI	**Afiamalu**	**14.42**	**29**	P	P	13 11 28.7	-10
	72nm,0.4s,baz=133,slow=1.2,SNR=16						
AFI				S	S	13 13 51.5	-24
	23nm,0.5s,baz=253,slow=14,SNR=1.6						
AFI	**Afiamalu**	**14.42**	**29**	P	P	13 11 28.1	-11
STKA	**Stephens Creek**	**34.66**	**252**	P	**P**	**13 14 50.1**	**+1.8**
	0.9nm,0.5s,baz=90,slow=12,SNR=3.9						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**42.59**	**263**	P	**P**	**13 15 53.5**	**-0.2**
	1.9nm,0.4s,baz=110,slow=8.5,SNR=97						
	1.9nm,0.4s						
WRA	**Warramunga Arr**	**43.24**	**269**	P	**P**	**13 15 58.0**	**-0.9**
	3.2nm,0.8s,baz=106,slow=7.7,SNR=53						
	3.2nm,0.8s						
VNDA	**Vanda**	**51.64**	**185**	P	**P**	**13 17 05.0**	**+3.0**
	0.8nm,0.6s,baz=4.9,slow=7.6,SNR=6.6						
	0.8nm,0.6s						
QSPA	**South Pole Qui**	**63.35**	**180**	P	**P**	**13 18 24.7**	**+1.5**
	1.6nm,0.8s,baz=84,slow=3.6,SNR=8.2						
	1.6nm,0.8s						
TROLL	**Troll, Antarti**	**81.51**	**180**	⇑P	**P**	**13 20 09.7**	**+0.4**
	comp=Z,44nm,0.4s						
TROLL				⇑pP	**PcP**	**13 20 13.5**	**-0.7**
	comp=Z,70nm,0.6s						
VNA2	**Neumayer--Watz**	**82.42**	**177**	⇑P	**P**	**13 20 14.0**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=184,slow=4.8						
VNA1	**Neumayer--Stat**	**82.65**	**177**	⇑P	**P**	**13 20 15.2**	**+0.3**
	comp=Z,0.4nm,0.3s						
ILAR	**Eielson Array**	**94.56**	**13**	P	**P**	**13 21 09.9**	**-1.5**
	comp=Z,0.7nm,1.0s,baz=248,slow=1.0,SNR=5.1						
	comp=Z,0.7nm,1.0s						
HFS	**Hagfors**	**145.51**	**349**	PKPbc	**PKPdf**	**13 27 23.3**	**-3.4**
	comp=Z,2.6nm,1.0s,baz=48,slow=2.1,SNR=5.9						

*MOS **29** 13:09:08.7±0.8,54.69N×161.20W,h38km,mb5.5/88, Error ellipse: s-maj=8.6km s-min=4.0km az=95.9*

*BJI **29** 13:09:08.0,54.60N×161.46W,h41km,mB4.9/15, mb5.2/62,Ms4.5/28,Ms7 4.3/28*

*AEIC **29** 13:09:09.8±1.8,54.59N±0.05×161.03W±0.04,h27km±3km, Error ellipse: s-maj=6.6km s-min=3.8km az=179.0*

*NEIC **29** 13:09:09.8,54.62N×160.99W,h37km*

*ANF **29** 13:09:11.0±0.5,54.64N×160.97W,h46km±5km,ML5.2/16, Error ellipse: s-maj=5.0km s-min=2.8km az=9.0*

*NEIC **29** 13:09:10.1±1.4,54.66N±0.05×161.05W±0.05,h38km±4km, mb5.0/437,ML4.9/30,Mwr4.8/68,Mww4.8/53,ML4.7(AEIC), Error ellipse: s-maj=7.5km s-min=4.3km az=179.0, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.21; Mθθ-0.42; Mφφ0.21; Mrθ1.48; Mθφ0.31; Mφr0.95; Fault plane solution: M0 1.82000×10^16^ NP1:φs60.52000°, δ88.05000°, λ,76.22000°. NP2:φs322.63000°,δ13.92000°, λ171.87000°. Principal axes: T 1.9261, Plg45.0000°, Azm317.0000°; N -0.2292, Plg14.0000°, Azm61.0000°; P -1.6968, Plg41.0000°, Azm164.0000°;*

*GFZ **29** 13:09:10.7±0.2,55°N±4°×16°1W±°,h34km,M5.1/139, mb5.3/139,mB5.6/42,Mw(mB)5.1/42*

*IDC **29** 13:09:11.1±1.8,54.72N×161.20W,h44km±15km,mb4.9/40, mbtmp5.1/43,ML4.0/4,MS3.9/82,Error ellipse: s-maj=14.3km s-min=9.3km az=4.0*

*GCMT **29** 13:09:13.1±0.3,54.57N±0.03×160.92W±0.03,h42km±1km, MW4.9/78,Moment Tensor Solution. s40,c45; s78,c101; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.94±.16; Mθθ-1.79±.11; Mφφ-0.15±.12; Mrθ1.22±.09; Mθφ-1.20±.07; Mφr0.56±.08; Best double couple: M0 2.56300×10^16^ NP1:φs239.00000°, δ29.00000°,λ,86.00000°. NP2: φs64.00000°, δ61.00000°, λ,92.00000°. Principal axes: T 2.3220, Plg74.0000°, Azm340.0000°; N 0.4770, Plg2.0000°, Azm243.0000°; P -2.8040, Plg16.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **29** 13:09:18.7,55.97N×162.24W,h33km,mb5.2,Ms3.8*

ISC 29 13:09:10.2±0.3,54.70N±0.04×161.04W±0.03,h40km±2km, h40km:pP-P,n1420,σ1s19/1282,mb5.1/435,MS3.9/94, 63C-34D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.66**	**314**		**Pn**	**13 09 23.0**	**-0.1**
DOL					**Sn**	**13 09 33.0**	**+0.7**
SDPT	**Sand Point**	**0.73**	**26**	P	**Pn**	**13 09 24.7**	**+0.7**
SDPT	**Sand Point**	**0.73**	**26**	S	**Sn**	**13 09 34.9**	**+0.9**
SDPT	**Sand Point**	**0.73**	**26**		**Pn**	**13 09 24.8**	**+0.7**
SDPT				Sn	**Sn**	**13 09 35.4**	**+1.4**
SDPT				IAML		13 09 36.2	
	comp=N,56μm,0.6s						
SDPT				IAML		13 09 40.2	
	comp=E,33μm,0.8s						
SDPT	**Sand Point**	**0.73**	**26**	P	**Pn**	**13 09 24.8**	**+0.7**
	baz=211,SNR=1000						
SDPT				S	**Sn**	**13 09 34.3**	**+0.3**
	baz=211						
HAG	**Hague Volcano**	**0.80**	**321**	P	**Pn**	**13 09 25.9**	**+0.9**
HAG	**Hague Volcano**	**0.80**	**321**		**Pn**	**13 09 25.9**	**+0.9**
PS4A	**Pavlof South-4**	**0.80**	**324**		**Pn**	**13 09 25.8**	**+0.7**
PS4A					**Sn**	**13 09 37.9**	**+2.0**
PVV	**Pavlof Volcano**	**0.81**	**328**		**Pn**	**13 09 25.9**	**+0.8**
DT1	**Dutton Round H**	**0.83**	**300**		**Pn**	**13 09 25.2**	**-0.2**
DT1					**Sn**	**13 09 36.3**	**-0.1**
PS1A	**Pavlof South-1**	**0.83**	**331**		**Pn**	**13 09 26.3**	**+0.9**
PS1A					**Sn**	**13 09 39.2**	**+2.6**
DTNA	**Dutton South F**	**0.84**	**303**		**Pn**	**13 09 25.5**	**0.0**
DTNA					**Sn**	**13 09 37.5**	**+0.8**
CNBA	**Chernabura Isl**	**0.85**	**81**		**Pn**	**13 09 24.5**	**-1.2**
CNBA					**Sn**	**13 09 35.2**	**-1.7**
CNBA				IAML		13 09 35.6	
	comp=N,24μm,0.5s						
CHNA	**Chernabura Isl**	**0.85**	**80**	P	**Pn**	**13 09 27.3**	**+1.6**
CHNA	**Chernabura Isl**	**0.85**	**80**	P	**Pn**	**13 09 24.6**	**-1.1**
	baz=265,SNR=566						
CHNA				S	**Sn**	**13 09 34.0**	**-2.9**
	baz=265						
PN7A	**Pavlof North-7**	**0.92**	**323**		**Pn**	**13 09 27.9**	**+1.2**
PN7A					**Sn**	**13 09 41.8**	**+3.0**
ISNN	**Isanotski Nort**	**1.59**	**276**		**Pn**	**13 09 37.2**	**+1.3**
ISNN					**Sn**	**13 09 56.6**	**+1.2**
VNSW	**Veniaminof 7**	**1.61**	**31**		**Pn**	**13 09 37.9**	**+1.7**
VNKR	**Veniaminof 5**	**1.64**	**35**		**Pn**	**13 09 38.4**	**+1.8**
SSLN	**Shishaldin Nor**	**1.72**	**275**		**Pn**	**13 09 38.7**	**+1.1**
SSLN					**Sn**	**13 10 00.7**	**+2.3**
VNSS	**Veniaminof 8**	**1.78**	**30**		**Pn**	**13 09 41.1**	**+2.5**
SSBA	**Shishaldin**	**1.79**	**274**		**Pn**	**13 09 40.1**	**+1.4**
S14K	**Fog Glacier**	**1.80**	**27**	P	**Pn**	**13 09 41.7**	**+2.9**
	baz=210,SNR=928						
VNFG	**Fog Glacier, M**	**1.80**	**27**		**Pn**	**13 09 41.3**	**+2.5**
VNSG	**Veniaminof 6**	**1.81**	**37**		**Pn**	**13 09 40.6**	**+1.7**
BPBCA	**Veniaminof**	**2.40**	**37**		**Pn**	**13 09 49.3**	**+2.3**
ANPB	**Aniakchak Plen**	**2.62**	**35**		**Pn**	**13 09 52.4**	**+2.4**
AZAC	**Aniakchak**	**2.71**	**35**		**Pn**	**13 09 53.5**	**+2.2**
ANNW	**Aniakchak Nort**	**2.77**	**34**		**Pn**	**13 09 54.9**	**+2.7**
AKSA	**Akutan Strait**	**2.78**	**260**		**Pn**	**13 09 53.2**	**+1.0**
ANNE	**Aniakchak Nort**	**2.78**	**36**		**Pn**	**13 09 54.0**	**+1.7**
AKUT	**Akutan**	**2.83**	**260**	P	**Pn**	**13 09 54.5**	**+1.7**
AKUT	**Akutan**	**2.83**	**260**	S	**Sn**	**13 10 26.3**	**+0.8**
AKUT	**Akutan**	**2.83**	**260**		**Pn**	**13 09 53.0**	**+0.2**
AKUT				Sn	**Sn**	**13 10 25.2**	**-0.4**
AKUT				IAML		13 10 39.1	
	comp=E,3μm,0.9s						
AKUT				IAML		13 10 40.7	
	comp=N,3μm,1.2s						
AHB	**Akutan Harbor**	**2.85**	**260**		**Pn**	**13 09 54.8**	**+1.5**
AKLV	**Akutan Long Va**	**2.92**	**261**		**Pn**	**13 09 55.0**	**+0.8**
AKV	**Akutan Volcano**	**2.94**	**261**		**Pn**	**13 09 55.3**	**+0.9**
AKGG	**Akutan Green G**	**2.94**	**262**		**Pn**	**13 09 56.0**	**+1.6**

ZRO	**Akutan Zero**	**2.95**	**260**			**Pn**	**13 09 55.6**	**+1.0**	
LVA	**Lava Point**	**2.97**	**262**			**Pn**	**13 09 56.0**	**+1.1**	
LVA					IAML		13 10 49.4		
	comp=E,3μm,0.8s								
LVA					IAML		13 10 51.8		
	comp=N,4μm,0.8s								
AKRB	**Akutan Reef Bi**	**3.00**	**261**			**Pn**	**13 09 56.2**	**+1.0**	
UNV	**Unalaska Valle**	**3.32**	**257**	P		**Pn**	**13 10 00.0**	**+0.4**	
UNV	**Unalaska Valle**	**3.32**	**257**	S		**Sn**	**13 10 38.6**	**+0.9**	
UNV	**Unalaska Valle**	**3.32**	**257**			**Pn**	**13 09 59.6**	**0.0**	
UNV					Sn	**Sn**	**13 10 37.8**	**+0.1**	
UNV	**Unalaska Valle**	**3.32**	**257**	P		**Pn**	**13 09 59.9**	**+0.4**	
	baz=72,SNR=38								
UNV					S	**Sn**	**13 10 37.2**	**-0.5**	
	baz=72								
MNAT	**Makushin Natee**	**3.41**	**258**			**Pn**	**13 10 01.9**	**+1.0**	
MREP	**Makushin Rep't**	**3.47**	**257**			**Pn**	**13 10 02.1**	**+0.4**	
MGOD	**Makushin Gods**	**3.54**	**258**			**Pn**	**13 10 03.4**	**+0.7**	
MAPS	**Pakushin South**	**3.58**	**258**			**Pn**	**13 10 04.3**	**+1.1**	
PLBL	**Peulik Blue Cr**	**3.82**	**36**			**Pn**	**13 10 08.9**	**+2.4**	
R17L	**Mt. Peulik Vol**	**3.93**	**40**			**Pn**	**13 10 10.9**	**+2.8**	
R17L	**Mt. Peulik Vol**	**3.93**	**40**	P		**Pn**	**13 10 10.8**	**+2.8**	
	baz=224,SNR=264								
PLK1	**Peulik 1**	**3.97**	**37**			**Pn**	**13 10 10.8**	**+2.2**	
PLK5	**Peulik 5**	**4.04**	**33**			**Pn**	**13 10 12.2**	**+2.8**	
OKFG	**Magazine Ridge**	**4.25**	**255**			**Pn**	**13 10 13.4**	**+1.0**	
SII	**Sitkinak Islan**	**4.31**	**62**	P		**Pn**	**13 10 14.1**	**+0.9**	
SII	**Sitkinak Islan**	**4.31**	**62**			**Pn**	**13 10 13.6**	**+0.4**	
SII	**Sitkinak Islan**	**4.31**	**62**	P		**Pn**	**13 10 13.9**	**+0.7**	
	baz=248								
OKTU	**Okmok Mt. Tuli**	**4.33**	**255**			**Pn**	**13 10 14.7**	**+1.1**	
OKCE	**Okmok Cone E**	**4.39**	**256**			**Pn**	**13 10 15.1**	**+0.8**	
OKWE	**Okmok W'ng Wal**	**4.42**	**257**			**Pn**	**13 10 15.4**	**+0.7**	
OKSP	**Okmok Steeple**	**4.52**	**254**			**Pn**	**13 10 16.9**	**+0.8**	
KJL	**Kejulik**	**4.53**	**40**			**Pn**	**13 10 18.3**	**+2.1**	
O15K	**Ungalikthiuk R**	**4.54**	**8**			**Pn**	**13 10 16.7**	**+0.3**	
O15K					IAML		13 11 52.3		
	comp=E,1μm,1.0s								
O15K	**Ungalikthiuk R**	**4.54**	**8**	P		**Pn**	**13 10 17.8**	**+1.4**	
	baz=189,SNR=157								
O14K	**Tigyukauivet M**	**4.57**	**359**			**Pn**	**13 10 17.9**	**+1.2**	
O14K					IAML		13 11 42.4		
	comp=E,767nm,1.1s								
O14K	**Tigyukauivet M**	**4.57**	**359**	P		**Pn**	**13 10 18.4**	**+1.7**	
	baz=179,SNR=176								
Q17K	**Contact Creek**	**4.57**	**37**			**Pn**	**13 10 19.1**	**+2.1**	
Q17K	**Contact Creek**	**4.57**	**37**	P		**Pn**	**13 10 19.0**	**+2.1**	
	baz=221								
P16K	**Nushagak River**	**4.66**	**20**			**Pn**	**13 10 19.2**	**+1.3**	
P16K					IAML		13 11 55.3		
	comp=N,2μm,0.9s								
P16K					IAML		13 12 04.7		
	comp=E,2μm,1.9s								
P16K	**Nushagak River**	**4.66**	**20**	P		**Pn**	**13 10 19.5**	**+1.6**	
	baz=203,SNR=48								
Q16K	**King Salmon**	**4.66**	**29**			**Pn**	**13 10 20.7**	**+2.7**	
Q16K	**King Salmon**	**4.66**	**29**	P		**Pn**	**13 10 20.6**	**+2.6**	
	baz=214,SNR=104								
ANCK	**Angle Creek**	**4.67**	**39**			**Pn**	**13 10 20.5**	**+2.4**	
ACHA	**Angle Creek He**	**4.74**	**40**			**Pn**	**13 10 21.2**	**+2.1**	
MGLS	**Mageik Landsli**	**4.74**	**41**			**Pn**	**13 10 21.3**	**+2.2**	
KELA	**Mount Kelaz**	**4.76**	**36**			**Pn**	**13 10 21.7**	**+2.3**	
KABU	**Katmai Buttres**	**4.79**	**39**			**Pn**	**13 10 22.4**	**+2.5**	
OHAK	**Old Harbor**	**5.04**	**57**	P		**Pn**	**13 10 23.3**	**+0.2**	
OHAK	**Old Harbor**	**5.04**	**57**			**Pn**	**13 10 23.2**	**+0.2**	
OHAK					IAML		13 11 49.3		
	comp=N,754nm,0.7s								
OHAK					IAML		13 11 49.5		
	comp=E,716nm,1.3s								
OHAK	**Old Harbor**	**5.04**	**57**	P		**Pn**	**13 10 23.3**	**+0.2**	
	baz=244,SNR=32								
P17K	**Kvichak River**	**5.16**	**27**			**Pn**	**13 10 26.1**	**+1.3**	
P17K	**Kvichak River**	**5.16**	**27**	P		**Pn**	**13 10 27.7**	**+2.8**	
	baz=212,SNR=68								
O16K	**Kokwok River B**	**5.16**	**17**			**Pn**	**13 10 25.7**	**+0.8**	
O16K					IAML		13 12 02.9		

M18K	Stony River baz=205,SNR=116	7.35	20	P		Pn	13 10 56.5	+1.7
RDT	Redoubt	7.49	35			Pn	13 10 58.8	+2.0
K13K	Kusilvak Mount	7.50	347			Pn	13 10 58.4	+1.5
K13K	Kusilvak Mount baz=164,SNR=148	7.50	347	P		Pn	13 10 58.4	+1.5
BRSE	Bradley Lake S	7.53	44			Pn	13 10 57.6	+0.2
BRSE	Bradley Lake S baz=233,SNR=24	7.53	44	P		Pn	13 10 57.9	+0.6
L17K	Donlin	7.59	10			Pn	13 10 59.3	+1.1
L17K	Donlin baz=192	7.59	10	P		Pn	13 10 59.2	+1.0
K15K	Wolf Creek Mou	7.62	358			Pn	13 11 00.1	+1.5
K15K	Wolf Creek Mou baz=178,SNR=63	7.62	358	P		Pn	13 11 00.1	+1.5
L18K	Granite Mounta baz=199,SNR=67	7.88	15	P		Pn	13 11 03.7	+1.6
SPNN	North Nagishla	8.01	30			Pn	13 11 06.2	+2.1
M19K	Big River Lodg	8.02	23			Pn	13 11 07.0	+2.9
M19K	Big River Lodg baz=209	8.02	23	P		Pn	13 11 07.0	+2.9
SPCR	Spurr Chakacha baz=220,SNR=11	8.03	32	P		Pn	13 11 05.2	+1.0
CAPN	Captain Cook N baz=226	8.05	37	P		Pn	13 11 07.7	+3.2
SPU	Mount Spurr	8.06	33			Pn	13 11 06.7	+2.0
SPCP	Crater Peak Br	8.10	32			Pn	13 11 07.6	+2.4
KOSE	Korovin Southe	8.11	258			Pn	13 11 05.9	+0.6
KONE	Korovin Northe	8.13	259			Pn	13 11 05.8	+0.2
SPCG	Spurr Capps Gl	8.16	32			Pn	13 11 08.3	+2.3
K17K	Iditarod	8.17	9			Pn	13 11 07.4	+1.4
K17K	Iditarod baz=192	8.17	9	P		Pn	13 11 07.2	+1.1
L19K	White Mountain baz=206,SNR=103	8.17	21	P		Pn	13 11 08.1	+1.9
J14K	Nanvaranak Lak	8.18	352			Pn	13 11 07.9	+1.7
J14K	Nanvaranak Lak baz=170,SNR=41	8.18	352	P		Pn	13 11 07.9	+1.7
SLKM	Skilak Lake	8.22	41			Pn	13 11 07.8	+1.0
ATKA	Atka Island	8.24	258	P		Pn	13 11 07.6	+0.5
ATKA	Atka Island	8.24	258			Pn	13 11 07.6	+0.5
SEW	Seward	8.27	44			Pn	13 11 07.9	+0.5
SEW	Seward baz=234,SNR=43	8.27	44	P		Pn	13 11 07.9	+0.5
M20K	Styx River	8.31	27			Pn	13 11 10.7	+2.5
M20K	Styx River baz=214,SNR=101	8.31	27	P		Pn	13 11 11.4	+3.3
STLK	Strandline Lak	8.37	32			Pn	13 11 11.6	+2.6
O22K	Cooper Landing	8.39	42			Pn	13 11 10.4	+1.4
O22K	Cooper Landing baz=232,SNR=51	8.39	42	P		Pn	13 11 10.6	+1.5
J16K	Anvik River baz=182,SNR=35	8.62	1	P		Pn	13 11 13.3	+1.1
RC01	Rabbit Creek A	8.78	39			Pn	13 11 15.0	+0.6
RC01	Rabbit Creek A baz=228,SNR=31	8.78	39	P		Pn	13 11 14.8	+0.4
J17K	VABM Dome	8.78	6			Pn	13 11 15.0	+0.5
J17K	VABM Dome baz=188,SNR=11	8.78	6	P		Pn	13 11 14.8	+0.3
SKT	Skwentna	8.84	30			Pn	13 11 17.4	+2.1
SKT	Skwentna baz=219,SNR=80	8.84	30	P		Pn	13 11 17.5	+2.2
J18K	Innoko River	9.07	12			Pn	13 11 19.3	+0.9
J18K	Innoko River baz=196,SNR=80	9.07	12	P		Pn	13 11 19.5	+1.1
P23K	Montague Islan	9.07	49			Pn	13 11 18.7	+0.2
P23K	Montague Islan baz=240,SNR=42	9.07	49	P		Pn	13 11 18.8	+0.3
M22K	Willow baz=224,SNR=26	9.11	35	P		Pn	13 11 19.5	+0.5
PWL	Port Wells	9.16	43			Pn	13 11 19.6	-0.1
PWL	Port Wells baz=234	9.16	43	P		Pn	13 11 19.9	+0.1
I17K	Unalakleet	9.22	1			Pn	13 11 22.0	+1.6
I17K	Unalakleet baz=181	9.22	1	P		Pn	13 11 20.8	+0.4
Q23K	Middleton Isla baz=246	9.29	53	P		Pn	13 11 21.5	+0.1
MID	Middleton Isla	9.29	53			Pn	13 11 21.6	+0.2
GSIG	Igitkin Island	9.31	259			Pn	13 11 22.3	+0.5
PMR	Palmer	9.34	37	P		Pn	13 11 22.2	+0.2
PMR	Palmer baz=228,SNR=35	9.34	37	P		Pn	13 11 23.2	+1.2
GSMY	Great Sitkin M	9.37	260			Pn	13 11 23.2	+0.7
K20K	Telida	9.39	20			Pn	13 11 24.8	+2.0
K20K	Telida baz=206	9.39	20	P		Pn	13 11 25.1	+2.3
PPLA	Purkeypile baz=213,SNR=66	9.41	26	P		Pn	13 11 26.2	+3.1
GSCK	Great Sitkin C	9.44	260			Pn	13 11 24.1	+0.6
KNK	Knik Glacier baz=231,SNR=25	9.46	40	P		Pn	13 11 24.8	+1.0
L22K	Petersville	9.49	30			Pn	13 11 25.6	+1.4
L22K	Petersville baz=219,SNR=37	9.49	30	P		Pn	13 11 25.8	+1.6
CUT	Chulitna	9.55	32			Pn	13 11 26.0	+1.1
CUT	Chulitna baz=221,SNR=10	9.55	32	P		Pn	13 11 25.5	+0.6
ETKA	Kagalaska Isla	9.63	259			Pn	13 11 26.0	-0.2
GLI	Glacier Island	9.67	45			Pn	13 11 26.2	-0.4
GLI	Glacier Island baz=237,SNR=17	9.67	45	P		Pn	13 11 26.7	0.0
J19K	Poorman	9.72	14			Pn	13 11 28.8	+1.5
J19K	Poorman baz=199,SNR=108	9.72	14	P		Pn	13 11 28.7	+1.4
SML	Sawmill	9.76	38			Pn	13 11 27.1	-0.8
SML	Sawmill baz=229,SNR=30	9.76	38	P		Pn	13 11 28.0	0.0
ADK	Adak	9.79	260	P		Pn	13 11 28.6	+0.4
ADK	Adak	9.79	260	P		Pn	13 11 28.3	+0.1
ADK	Adak	9.79	260			Pn	13 11 28.3	+0.1
ADK	Adak	9.79	260	P		Pn	13 11 30.7	+2.5
FID	Port Fidalgo	9.86	46			Pn	13 11 28.5	-0.7
CAST	Castle Rocks baz=212,SNR=54	9.88	24	P		Pn	13 11 31.2	+1.8
M23K	Glacier View	9.97	39			Pn	13 11 30.9	+0.1
M23K	Glacier View baz=231,SNR=40	9.97	39	P		Pn	13 11 31.4	+0.6
H16K	Elim baz=176	9.99	357	P		Pn	13 11 31.6	+0.7
EYAK	Cordova Ski Ar	10.06	48	P		Pn	13 11 32.5	+0.5
EYAK	Cordova Ski Ar baz=241,SNR=34	10.06	48	P		Pn	13 11 31.8	-0.2
J20K	Nowinta River baz=204,SNR=82	10.13	17	P		Pn	13 11 34.7	+1.9
ANM	Nome baz=166	10.14	349	P		Pn	13 11 34.3	+1.3
SCM	Sheep Creek Mo baz=232,SNR=59	10.14	40	P		Pn	13 11 33.9	+0.7
CHUM	Lake Minchumin baz=210,SNR=38	10.22	22	P		Pn	13 11 36.3	+2.2
H17K	Granite Mounta baz=184,SNR=15	10.29	3	P		Pn	13 11 36.3	+1.3
GCSA	Galena City Sc baz=194,SNR=11	10.29	10	P		Pn	13 11 36.7	+1.6
TRF	Thorofare Moun baz=217,SNR=35	10.36	28	P		Pn	13 11 37.2	+1.0
KAIM	Kayak Island baz=247,SNR=27	10.39	53	P		Pn	13 11 37.0	+0.5
WAT1	Susitna Watana baz=224	10.40	33	P		Pn	13 11 36.1	-0.5
G15K	Niukluk baz=170,SNR=32	10.44	353	P		Pn	13 11 38.7	+1.6
KLU	Klutina baz=237,SNR=163	10.48	43	P		Pn	13 11 38.0	+0.1
WAT6	Susitna Watana baz=227,SNR=30	10.49	36	P		Pn	13 11 37.3	-0.7
H18K	Honhosa River baz=189	10.57	6	P		Pn	13 11 41.0	+2.1
I20K	Naaghedeneel baz=201,SNR=9.8	10.65	15	P		Pn	13 11 42.4	+2.5
M24K	Tolsona, Glenn baz=233,SNR=55	10.74	40	P		Pn	13 11 41.2	-0.2
G16K	Koyuk River baz=176,SNR=11	10.75	357	P		Pn	13 11 42.8	+1.5
BMRM	Bremner River baz=242,SNR=64	10.76	48	P		Pn	13 11 41.7	+0.1
G17K	Kiwalik Mounta baz=181,SNR=12	10.84	1	P		Pn	13 11 43.9	+1.3
DHY	Denali Highway baz=226,SNR=64	10.95	34	P		Pn	13 11 43.7	-0.6
MCK	McKinley baz=220,SNR=11	10.96	29	P		Pn	13 11 44.2	0.0
N25K	Chitina, Valde baz=239,SNR=54	11.08	45	P		Pn	13 11 46.2	+0.2
H19K	Roundabout Mou baz=194,SNR=74	11.10	10	P		Pn	13 11 47.8	+1.7
F14K	Arctic Creek baz=164,SNR=6.4	11.12	348	P		Pn	13 11 48.0	+1.6
F15K	North Star Dit baz=169,SNR=29	11.19	352	P		Pn	13 11 49.4	+2.0
H20K	Anotleneega Mo baz=199,SNR=79	11.25	13	P		Pn	13 11 49.3	+1.1
G18K	Tagagawik baz=187,SNR=64	11.30	5	P		Pn	13 11 50.7	+1.8
HARP	HAARP baz=234,SNR=14	11.30	41	P		Pn	13 11 49.5	+0.6
CRQE	Cirque baz=246,SNR=27	11.33	50	P		Pn	13 11 49.6	+0.2
TNA	Tin City baz=160	11.42	345	P		Pn	13 11 52.0	+1.6
I21K	Tanana baz=208,SNR=16	11.44	20	P		Pn	13 11 52.1	+1.4
PAX	Paxson baz=231,SNR=82	11.53	38	P		Pn	13 11 52.2	0.0
MLY	Manley baz=211,SNR=24	11.56	22	P		Pn	13 11 54.2	+1.7
NEA2	Nenana baz=217,SNR=8.2	11.60	26	P		Pn	13 11 54.0	+1.0
MCARA	McCarthy VSAT baz=243,SNR=12	11.63	48	P		Pn	13 11 54.2	+0.8
G19K	Purcell Mounta baz=192,SNR=8.8	11.64	8	P		Pn	13 11 55.7	+2.1
H21K	Melozitna Rive baz=204,SNR=33	11.72	17	P		Pn	13 11 56.4	+1.8
F17K	Baldwin Pennin baz=180	11.79	360	P		Pn	13 11 55.6	+0.1
F18K	Selawik baz=184,SNR=13	11.96	3	P		Pn	13 11 59.9	+2.0
K24K	Donnelly Dome baz=225	11.97	34	P		Pn	13 11 59.2	+1.1
I23K	Minto, Yukon-K baz=215,SNR=20	11.98	24	P		Pn	13 11 58.8	+0.7
HDA	Harding Lake baz=223,SNR=38	12.04	30	P		Pn	13 11 57.6	-1.4
COLA	College	12.14	28	P		Pn	13 11 59.3	-1.0
COLA	College	12.14	28	*d* iP		Pn	13 11 58.4	-1.9
COLA	comp=Z,5.0nm,0.9s			pmax		pmax		
COLA	College baz=219	12.14	28	P		Pn	13 11 59.7	-0.7
COLA	College	12.14	28	P		Pn	13 11 58.6	-1.7
M26K	Nabesna, AK baz=239,SNR=49	12.14	43	P		Pn	13 12 00.7	+0.3
H22K	Ishtalitna Cre baz=208,SNR=68	12.19	19	P		Pn	13 12 02.1	+1.1
RIDG	Independent Ri baz=230,SNR=114	12.24	36	P		Pn	13 12 01.3	-0.5
F19K	Shaleruckik Mo baz=189,SNR=28	12.28	6	P		Pn	13 12 03.7	+1.5
ILAR	Eielson Array comp=Z,6.5nm,0.5s,baz=223,slow=13,SNR=119	12.33	29	P		Pn	13 12 00.5	-2.5
ILAR				S		Sn	13 14 10.6	-8.2
ILAR	comp=Z,3.4nm,0.8s,baz=209,slow=16,SNR=1.0			LR		LR	13 17 09.2	
G21K	comp=Z,1μm,20.7s,baz=239,slow=39 Allakaket baz=201	12.40	14	P		Pn	13 12 05.6	+1.6
E17K	Hotham Inlet baz=178,SNR=8.3	12.43	359	P		Pn	13 12 04.8	+0.5
POKR	Poker Plat Res baz=220	12.44	28	P		Pn	13 12 02.7	-1.8
H23K	Yukon River baz=212	12.50	22	P		Pn	13 12 05.3	0.0
M27K	Edge Creek, AK baz=241,SNR=34	12.57	45	P		Pn	13 12 07.6	+1.2
F20K	Avaraart Lake baz=194,SNR=25	12.65	10	P		Pn	13 12 09.4	+2.1
O28M	Mount Upton baz=251,SNR=45	12.65	53	P		Pn	13 12 08.0	+0.3
J25K	Salcha River, baz=226,SNR=58	12.66	32	P		Pn	13 12 06.1	-1.5
E18K	Tukpahlearik C baz=181	12.77	1	P		Pn	13 12 10.9	+2.0
H24K	Noodor Dome baz=216,SNR=29	12.90	25	P		Pn	13 12 11.6	+0.8
YUK3	Moose Creek baz=246,SNR=52	12.91	48	P		Pn	13 12 11.4	+0.3
E19K	Redstone River baz=190	12.93	7	P		Pn	13 12 13.2	+2.0
L27K	Beaver Creek, baz=239,SNR=74	12.95	42	P		Pn	13 12 11.0	-0.4
BVCY	Beaver Creek baz=243,SNR=28	13.02	45	P		Pn	13 12 12.4	0.0
YUK8	Steele Glacier baz=249,SNR=80	13.03	51	P		Pn	13 12 13.8	+1.1
F21K	Alatna River baz=200,SNR=60	13.07	13	P		Pn	13 12 14.7	+1.6
D17K	Noatak River baz=175	13.08	357	P		Pn	13 12 14.7	+1.5
G22K	Bettles baz=205	13.09	17	P		Pn	13 12 14.9	+1.6
G23K	Bananza Creek baz=209,SNR=40	13.17	19	P		Pn	13 12 15.2	+0.8
PRP	Porcupine Dome baz=223	13.27	29	P		Pn	13 12 16.6	+0.7
O29M	Mount Kennedy baz=255,SNR=54	13.28	56	P		Pn	13 12 17.1	+1.0
BRWY	Burwash Landin baz=250,SNR=12	13.39	51	P		Pn	13 12 18.7	+1.3
RDOG	Red Dog Mine baz=175,SNR=16	13.43	357	P		Pn	13 12 18.3	+0.3
F22K	John River baz=203,SNR=22	13.52	15	P		Pn	13 12 20.8	+1.6
P29M	Windy Craggy baz=259,SNR=33	13.54	59	P		Pn	13 12 20.6	+1.1
YUK4	Talbot Arm baz=251	13.55	52	P		Pn	13 12 21.6	+1.7
YUK6	Outpost Mounta baz=253,SNR=9.6	13.56	53	P		Pn	13 12 20.8	+0.9
COLD	Coldfoot baz=208,SNR=44	13.59	18	P		Pn	13 12 21.2	+1.0
G24K	Hadweenzic Riv baz=215,SNR=21	13.70	23	P		Pn	13 12 22.8	+1.2
C16K	Lisburne Hills baz=170	13.77	353	P		Pn	13 12 23.5	+0.9
E20K	Nigu River baz=192	13.80	8	P		Pn	13 12 23.6	+0.7
I26K	Coal Creek Min baz=228	13.83	33	P		Pn	13 12 21.2	-2.2
C17K	DeLong Mountai baz=175,SNR=8.1	13.86	357	P		Pn	13 12 24.5	+0.6
D19K	Kuna River baz=187	13.91	4	P		Pn	13 12 26.2	+1.6
HYT	Haines Junctio baz=255,SNR=10	13.93	54	P		Pn	13 12 24.9	+0.1
C18K	Utukok River baz=180,SNR=20	14.00	360	P		Pn	13 12 25.9	+0.1
P30M	Million Dollar baz=258	14.02	57	P		Pn	13 12 26.8	+0.7
M29M	Somme Creek baz=247,SNR=116	14.04	47	P		Pn	13 12 26.6	+0.3
G25K	Bearman Lake baz=218	14.08	25	P		Pn	13 12 26.6	-0.1
S31K	Pelican baz=268,SNR=21	14.11	67	P		Pn	13 12 27.1	-0.1
E21K	Killik River baz=197	14.18	11	P		Pn	13 12 29.1	+0.9
PLBC	Pleasant Camp baz=261,SNR=45	14.19	60	P		Pn	13 12 28.4	+0.1
D20K	Etivluk River baz=191	14.21	7	P		Pn	13 12 29.3	+0.7
F24K	Squaw Lake baz=212,SNR=7.0	14.29	21	P		Pn	13 12 28.8	-0.9
N30M	Aishikik Lake baz=253,SNR=23	14.30	52	P		Pn	13 12 29.9	0.0
DAWY	Dawson baz=240,SNR=26	14.40	41	P		Pn	13 12 30.8	-0.3
E23K	Chandalar baz=208,SNR=41	14.44	17	P		Pn	13 12 32.3	+0.6
L29M	L29M baz=245,SNR=37	14.45	45	P		Pn	13 12 30.7	-1.2
C19K	Lookout Ridge baz=184	14.48	2	P		Pn	13 12 33.2	+1.0
I27K	Kandik River baz=231	14.51	33	P		Pn	13 12 31.5	-1.1
O30N	Mendenhall baz=257,SNR=22	14.58	55	P		Pn	13 12 33.5	-0.1
SIT	Sitka	14.59	70	P		Pn	13 12 33.5	-0.2
SIT	Sitka baz=272	14.59	70	P		Pn	13 12 33.0	-0.7
E24K	Your Creek baz=210,SNR=44	14.65	19	P		Pn	13 12 34.8	+0.2
SKAG	Skagway	14.72	61	P		P	13 12 38.4	-2.4
SKAG	Skagway baz=263,SNR=14	14.72	61	P		Pn	13 12 36.5	+1.2
C21K	Knifeblade Rid baz=194,SNR=23	14.79	9	P		Pn	13 12 37.0	+0.7
M30M	Minto, Yukon baz=249,SNR=69	14.80	48	P		Pn	13 12 36.9	+0.3
G26K	Porcupine Rive baz=222,SNR=20	14.81	27	P		Pn	13 12 35.7	-0.8
SHEM	Shemya Is, Ala comp=Z,2.4nm,0.3s,baz=89,slow=7.2,SNR=4.5	14.83	273	P		Pn	13 12 36.3	-0.6
SHEM				LR		LR	13 18 53.5	
F25K	comp=Z,376nm,19.8s,baz=92,slow=40 comp=Z,19nm,0.6s Christian Rive baz=217	14.85	23	P		Pn	13 12 37.4	+0.3
N31M	Braeburn, Yuko baz=254,SNR=33	14.91	53	P		Pn	13 12 38.0	0.0
H27K	Steamboat Moun baz=229	14.95	32	P		Pn	13 12 38.0	-0.4
TOLK	Toolik Lake Re baz=207,SNR=52	14.97	16	P		Pn	13 12 38.9	+0.3
I28M	Miner Creek comp=Z,27nm,0.6s	14.97	36	IAmb		IAmb	13 12 46.3	
I28M	Miner Creek baz=234,SNR=41	14.97	36	P		Pn	13 12 38.0	-0.8
S32K	Killisnoo	14.99	69	Pn		Pn	13 12 39.5	+0.6
S32K	Killisnoo baz=271,SNR=22	14.99	69	P		Pn	13 12 38.3	-0.7
K29M	Barlow Dome	15.02	43			Pn	13 12 39.7	+0.3
K29M	Barlow Dome baz=244,SNR=18	15.02	43	P		Pn	13 12 39.4	-0.1
R32K	Eaglecrest baz=268,SNR=24	15.03	65	P		Pn	13 12 41.2	+1.6
J29N	Klondike Camp	15.04	40			Pn	13 12 40.0	+0.2
J29N	comp=Z,25nm,0.6s			IAmb		IAmb	13 12 41.9	
J29N	Klondike Camp baz=240,SNR=13	15.04	40	P		Pn	13 12 40.6	+0.9
D23K	Nanushuk River	15.09	14			Pn	13 12 40.8	+0.5
D23K	comp=Z,60nm,1.1s			IAmb		IAmb	13 12 47.8	
D23K	Nanushuk River baz=204,SNR=26	15.09	14	P		Pn	13 12 41.5	+1.2
JIS	Juneau Island	15.11	65	P		Pn	13 12 42.2	+1.7
WHY	Whitehorse	15.14	56			Pn	13 12 41.3	+0.2
WHY	comp=Z,43nm,1.0s			IAmb		IAmb	13 12 47.7	
WHY	Whitehorse baz=259,SNR=19	15.14	56	P		Pn	13 12 42.8	+1.7
B21K	Ikpikpuk River	15.26	9	Pn		Pn	13 12 43.0	+0.5
B21K	Ikpikpuk River baz=194	15.26	9	P		Pn	13 12 44.1	+1.6
F26K	Sheenjek River	15.28	25			Pn	13 12 43.0	+0.1
F26K	Sheenjek River baz=220	15.28	25	P		Pn	13 12 42.7	-0.1
E25K	Arctic Village	15.29	22			Pn	13 12 42.4	-0.5
E25K	Arctic Village baz=216,SNR=15	15.29	22	P		Pn	13 12 43.1	+0.2
G27K	Doyon Strip baz=227,SNR=8.0	15.30	30	P		Pn	13 12 42.5	-0.5
B20K	Meade River baz=189	15.47	5	P		Pn	13 12 44.9	-0.2
I29M	Ogilvie Camp,	15.48	37			Pn	13 12 45.3	-0.1
I29M	comp=Z,50nm,0.8s			IAmb		IAmb	13 12 52.8	
I29M	Ogilvie Camp, baz=237	15.48	37	P		Pn	13 12 45.0	-0.4
D24K	Happy Valley	15.55	16			Pn	13 12 47.4	+1.2
D24K	comp=Z,60nm,0.9s			IAmb		IAmb	13 12 48.9	
D24K	Happy Valley baz=207	15.55	16	P		Pn	13 12 45.9	-0.3
P32M	Atlin baz=264,SNR=42	15.55	61	P		Pn	13 12 47.1	+0.7
A19K	Wainwright baz=180	15.56	360	P		Pn	13 12 46.0	-0.3
M31M	Drury Creek, Y	15.74	51			Pn	13 12 49.3	+0.4
M31M	Drury Creek, Y baz=254	15.74	51	P		Pn	13 12 48.0	-0.8
J30M	Hart River	15.81	41			Pn	13 12 50.6	+0.8
J30M	Hart River baz=243	15.81	41	P		Pn	13 12 48.9	-0.9
U33K	Whale Pass baz=277,SNR=9.6	15.87	73	P		Pn	13 12 50.7	+0.3
C23K	Itkillik River	15.90	13			Pn	13 12 51.5	+0.7
C23K	comp=Z,84nm,1.0s			IAmb		IAmb	13 12 59.5	
C23K	Itkillik River baz=203	15.90	13	P		Pn	13 12 50.4	-0.4
H29M	Whitestone baz=235	15.94	35	P		Pn	13 12 49.6	-1.7
CRAG	Craig baz=279	15.96	76	P		Pn	13 12 51.4	-0.1
B22K	Teshekpuk Lake baz=196	16.07	9	P		Pn	13 12 52.1	-0.7
P33M	Teslin, Yukon baz=263,SNR=46	16.07	58	P		Pn	13 12 53.2	+0.1
N32M	Quiet Lake baz=259	16.10	55	P		Pn	13 12 54.5	+1.1
I30M	Mount Dempster	16.11	39			Pn	13 12 53.5	0.0
I30M	comp=Z,116nm,0.7s			IAmb		IAmb	13 12 59.5	
I30M	Mount Dempster baz=241,SNR=161	16.11	39	P		Pn	13 12 53.6	+0.1
D25K	Kavik River	16.13	19			Pn	13 12 54.0	+0.4
D25K	Kavik River baz=212,SNR=18	16.13	19	P		Pn	13 12 53.5	-0.2
Q32M	Nakina River baz=268,SNR=56	16.24	63	P		Pn	13 12 56.2	+0.8
WRAK	Wrangell Islan baz=276,SNR=23	16.27	72	P		Pn	13 12 56.6	+1.1
E27K	Coleen River baz=224,SNR=7.2	16.29	26	P		Pn	13 12 55.8	0.0
F28M	Old Crow	16.36	29			Pn	13 12 57.1	+0.5
F28M	Old Crow baz=228,SNR=19	16.36	29	P		Pn	13 12 56.2	-0.4
G29M	Pine Creek comp=Z,112nm,0.8s	16.47	33	IAmb		IAmb	13 13 04.8	
G29M	Pine Creek baz=233,SNR=90	16.47	33	P		Pn	13 12 57.2	-0.7
EPYK	Eagle Plains comp=Z,138nm,0.7s	16.58	36	IAmb		IAmb	13 13 07.7	
EPYK	Eagle Plains baz=237,SNR=131	16.58	36	P		Pn	13 12 58.9	-0.5
DIB	Dawson Inlet,	16.83	83	Pn		Pn	13 13 02.4	-0.2
H02S1	DAWSON INLET T SNR=8.2	16.83	83	T		T	13 29 50.7	
H02S2	DAWSON INLET T SNR=8.6	16.83	83	T		T	13 29 50.7	
S34M	Telegraph Cree baz=272,SNR=27	16.83	67	P		Pn	13 13 01.7	-0.9
V35K	Ketchikan baz=280,SNR=12	16.83	76	P		Pn	13 13 02.1	-0.5
C26K	Camden Bay baz=214,SNR=17	16.91	19	P		Pn	13 13 03.0	-0.4
C27K	Jago River baz=217,SNR=14	16.91	21	P		Pn	13 13 03.9	+0.5
G30M	tAoh Zraii Nji comp=Z,74nm,0.7s	17.08	34	IAmb		IAmb	13 13 13.0	
G30M	tAoh Zraii Nji baz=236,SNR=51	17.08	34	P		Pn	13 13 04.4	-1.3
E28M	Babbage River baz=226	17.13	27	P		Pn	13 13 04.8	-1.5
H31M	Peel River comp=Z,122nm,0.8s	17.13	39	IAmb		IAmb	13 13 15.8	
H31M	Peel River baz=242,SNR=50	17.13	39	P		Pn	13 13 05.9	-0.4
D27M	Malcolm River baz=222,SNR=7.8	17.23	24	P		Pn	13 13 06.6	-0.8
MMPY	Sheldon Lake, baz=256,SNR=63	17.26	51	P		Pn	13 13 06.3	-1.7
T35M	Bob Quinn baz=276,SNR=15	17.37	70	P		Pn	13 13 08.9	-0.4
DLBC	Dease Lake comp=Z,0.1nm,0.3s,baz=266,slow=12,SNR=19	17.40	65	P		P	13 13 11.7	+1.0
DLBC				S		Sn	13 16 21.0	-1.2
DLBC	comp=Z,1.0nm,0.3s,baz=275,slow=26,SNR=1.3 comp=Z,179nm,19.6s,baz=258,slow=34 comp=Z,5.7nm,0.7s			LR		LR	13 19 05.6	
DLBC	Dease Lake baz=271,SNR=10.0	17.40	65	P		Pn	13 13 09.6	-0.2
E29M	Blow River baz=230,SNR=15	17.43	29	P		Pn	13 13 08.8	-1.2
F30M	Barrier River comp=Z,42nm,0.6s	17.58	33	IAmb		IAmb	13 13 20.6	
F30M	Barrier River baz=235,SNR=37	17.58	33	P		Pn	13 13 10.2	-1.6

G31M	**Satah River**	**17.70**	**36**	IAmb	IAmb	13 13 19.6				
	comp=Z,45nm,0.7s									
G31M	**Satah River**	**17.70**	**36**	P	**Pn**	**13 13 12.0**	**-1.2**			
	baz=239,SNR=37									
WTLY	**Watson Lake, Y**	**18.07**	**59**	P	**P**	**13 13 20.1**	**+2.1**			
	baz=267,SNR=24									
F31M	**Tsiigehtchic**	**18.15**	**35**	P	**P**	**13 13 17.7**	**-1.0**			
	baz=239,SNR=22									
INK	**Inuvik**	**18.68**	**32**	P	**P**	**13 13 22.6**	**-1.9**			
	comp=Z,44nm,0.8s,baz=235,slow=13,SNR=61									
INK				LR	LR	13 21 29.4				
	comp=Z,763nm,19.0s,baz=238,slow=40									
INK	**Inuvik**	**18.68**	**32**	P	**P**	**13 13 23.4**	**-1.1**			
	baz=237,SNR=52									
INK	**Inuvik**	**18.68**	**32**	P	**P**	**13 13 23.7**	**-0.8**			
LIRD	**Liard River Hi**	**19.42**	**62**	P	**Pn**	**13 13 35.2**	**+1.0**			
	baz=272,SNR=17									
BBB	**Bella Bella**	**19.67**	**84**	P	**Pn**	**13 13 37.3**	**+0.2**			
	comp=Z,0.3nm,0.3s,baz=306,slow=14,SNR=7.1									
BBB				LR	LR	13 19 48.8				
	comp=Z,347nm,19.5s,baz=277,slow=32									
BILL	**Bilibino**	**20.24**	**324**	*ce*P	**P**	**13 13 41.7**	**+0.1**			
BILL				pmax	pmax					
	comp=Z,13nm,0.8s									
BILL	**Bilibino**	**20.24**	**324**	P	**P**	**13 13 41.0**	**-0.6**			
BILL				IAmb	IAmb	13 13 56.4				
	comp=Z,84nm,1.4s									
KOTAN	**Kotaneelee Air**	**20.44**	**60**	P	**P**	**13 13 44.4**	**+0.6**			
	baz=271,SNR=26									
C36M	**Paulatuk**	**22.20**	**34**	P	**P**	**13 14 01.8**	**-0.9**			
C36M				IAmb	IAmb	13 14 16.6				
	comp=Z,33nm,0.8s									
C36M	**Paulatuk**	**22.20**	**34**	P	**P**	**13 14 00.5**	**-2.1**			
	baz=248									
A36M	**Sachs Harbour**	**23.02**	**28**	P	**P**	**13 14 09.5**	**-1.8**			
A36M	**Sachs Harbour**	**23.02**	**28**	P	**P**	**13 14 09.7**	**-1.6**			
	baz=240,SNR=8.7									
PET	**Petropavlovsk**	**23.61**	**283**	P	**P**	**13 14 17.1**	**0.0**			
PET	**Petropavlovsk**	**23.61**	**283**	*e*P	**P**	**13 14 15.9**	**-1.2**			
PET				*e*S	**S**	**13 18 19.8**	**-8.7**			
PET				pmax	pmax					
	comp=Z,96nm,1.3s									
PET				pmax	pmax					
	comp=Z,100nm,9.8s									
PET				MLR	MLR					
	comp=Z,200nm,18.0s									
PET	**Petropavlovsk**	**23.61**	**283**	P	**P**	**13 14 16.8**	**-0.4**			
	comp=Z,93nm,1.0s									
PET				pP	**pP**	**13 14 26.6**	**-1.1**			
	comp=Z,93nm,1.0s									
PET	**Petropavlovsk**	**23.61**	**283**	P	**P**	**13 14 16.7**	**-0.4**			
PEA0B	**Petropavlovsk-**	**24.12**	**283**	*ce*P	**P**	**13 14 20.8**	**-1.1**			
PEA0B	**Petropavlovsk-**	**24.12**	**283**	P	**P**	**13 14 21.2**	**-0.8**			
PEA0B				IAmb	IAmb	13 14 22.4				
	comp=Z,38nm,0.6s									
PETK	**Petropavlovsk-**	**24.12**	**283**	P	**P**	**13 14 21.2**	**-0.7**			
	comp=Z,40nm,0.6s,baz=76,slow=13,SNR=178									
PETK				PcP	**PcP**	**13 18 02.1**	**+0.2**			
	comp=Z,1.7nm,0.5s,baz=64,slow=4.1,SNR=4.9									
PETK				LR	LR	13 23 42.7				
	comp=Z,198nm,21.3s,baz=84,slow=36									
	comp=Z,40nm,0.6s									
PETK	**Petropavlovsk-**	**24.12**	**283**	P	**P**	**13 14 21.1**	**-0.9**			
PETK					**PcP**	**13 18 01.4**	**-0.5**			
YKAW3	**Yellowknife Wh**	**24.91**	**53**	P	**P**	**13 14 30.0**	**+1.0**			
YKA	**Yellowknife Ar**	**24.91**	**53**	P	**P**	**13 14 30.1**	**+1.0**			
	comp=Z,7.1nm,0.5s,baz=274,slow=8.9,SNR=59									
YKA				PcP	**PcP**	**13 18 03.5**	**+0.1**			
	comp=Z,2.2nm,0.5s,baz=276,slow=2.2,SNR=7.5									
YKA				ScP	**ScP**	**13 21 38.0**	**-0.9**			
	comp=Z,1.7nm,0.9s,baz=272,slow=1.5,SNR=5.1									
YKA				LR	LR	13 25 26.3				
	comp=Z,257nm,19.8s,baz=262,slow=39									
	comp=Z,7.1nm,0.5s									
SEY	**Seymchan**	**24.96**	**308**	LR	LR	13 25 38.3				
	comp=Z,385nm,18.0s,baz=130,slow=40									
SEY	**Seymchan**	**24.96**	**308**	*ce*P	**P**	**13 14 27.8**	**-1.7**			
SEY				pmax	pmax					
	comp=Z,8.0nm,0.9s									
D05A	**Enumclaw**	**25.45**	**91**	P	**P**	**13 14 34.2**	**+0.2**			
D05A				IAmb	IAmb	13 14 51.1				
	comp=Z,55nm,1.2s									
LON	**Longmire**	**25.79**	**92**	P	**P**	**13 14 37.4**	**+0.2**			
LON				pmax	pmax					
	comp=Z,17nm,1.3s									
LON	**Longmire**	**25.79**	**92**	P	**P**	**13 14 37.4**	**+0.2**			
MA2	**Magadan**	**26.12**	**300**	LR	LR	13 25 44.3				
	comp=Z,262nm,18.9s,baz=92,slow=38									
MA2	**Magadan**	**26.12**	**300**	*de*P	**P**	**13 14 39.0**	**-1.0**			
MA2				pmax	pmax					
	comp=Z,32nm,0.9s									
J04A	**Umpqua Nationa**	**27.64**	**98**	IAmb	IAmb	13 15 13.0				
	comp=Z,54nm,1.6s									
EDM	**Edmonton**	**27.67**	**73**	IAmb	IAmb	13 14 56.4				
	comp=Z,15nm,0.9s									
NEW	**Newport**	**27.72**	**85**	LR	LR	13 24 17.9				
	comp=Z,228nm,21.1s,baz=296,slow=33									
NEW	**Newport**	**27.72**	**85**	P	**P**	**13 14 56.3**	**+1.8**			
NEW	**Newport**	**27.72**	**85**	P	**P**	**13 14 56.4**	**+1.9**			
YBH	**Yreka Blue Hor**	**28.26**	**101**	LR	LR	13 23 44.9				
	comp=Z,365nm,20.4s,baz=310,slow=31									
O03E	**Paynes Creek**	**29.72**	**103**	IAmb	IAmb	13 15 49.5				
	comp=Z,24nm,1.4s									
WVOR	**Wild Horse Val**	**30.14**	**96**	P	**P**	**13 15 19.6**	**+3.4**			
WVOR	**Wild Horse Val**	**30.14**	**96**	P	**P**	**13 15 19.8**	**+3.5**			
PNTR	**Pine Nut**	**31.79**	**102**	IAmb	IAmb	13 15 47.8				
	comp=Z,18nm,0.8s									
HLID	**Hailey**	**31.90**	**91**	P	**P**	**13 15 33.5**	**+1.8**			
RES	**Resolute Bay**	**32.07**	**27**	LR	LR	13 29 57.1				
	comp=Z,263nm,20.4s,baz=301,slow=39									
BLKN	**Baker Lake**	**32.89**	**47**	IAmb	IAmb	13 15 41.8				
	comp=Z,26nm,0.8s									
NVAR	**Mina Array Bea**	**32.98**	**102**	P	**P**	**13 15 43.9**	**+2.7**			
	comp=Z,5.1nm,0.7s,baz=300,slow=8.6,SNR=22									
NVAR				PcP	**PcP**	**13 18 25.2**	**+0.8**			
	comp=Z,3.3nm,0.7s,baz=291,slow=2.7,SNR=10									
NVAR				ScP	**ScP**	**13 22 05.0**	**0.0**			
	comp=Z,1.3nm,0.8s,baz=299,slow=2.4,SNR=8.3									
NVAR				LR	LR	13 26 40.9				
	comp=Z,247nm,21.1s,baz=335,slow=32									
	comp=Z,5.1nm,0.7s									
NVAR	**Mina Array Bea**	**32.98**	**102**	P	**P**	**13 15 40.9**	**-0.3**			
NVAR					**PcP**	**13 18 24.8**	**+0.4**			
NV11	**Mina Array Sit**	**33.06**	**102**	P	**P**	**13 15 41.7**	**-0.1**			
ELK	**Elko**	**33.18**	**96**	LR	LR	13 27 11.6				
	comp=Z,203nm,21.2s,baz=353,slow=32									
ELK	**Elko**	**33.18**	**96**	P	**P**	**13 15 45.3**	**+2.2**			
TIXI	**Tiksi**	**33.39**	**327**	LR	LR	13 31 14.9				
	comp=Z,365nm,18.3s,baz=130,slow=40									
TYV	**Tymovskoe**	**33.49**	**287**	*eP*	**P**	**13 15 45.2**	**-0.1**			
TYV				pmax	pmax					
	comp=Z,27nm,0.7s									
TYV				pmax	pmax					
	comp=Z,100nm,4.2s									
DUG	**Dugway, Tooele**	**34.95**	**94**	P	**P**	**13 16 00.2**	**+2.0**			
DUG	**Dugway, Tooele**	**34.95**	**94**	IAmb	IAmb	13 16 15.7				
	comp=Z,18nm,1.3s									
DUG	**Dugway, Tooele**	**34.95**	**94**	P	**P**	**13 16 00.2**	**+2.0**			
S11A	**Rachel**	**34.97**	**100**	IAmb	IAmb	13 16 31.6				
	comp=Z,16nm,1.1s									
DGMT	**Dagmar**	**35.01**	**76**	IAmb	IAmb	13 16 01.0				
	comp=Z,15nm,1.1s									
FURC	**Furnace Creek,**	**35.17**	**103**	IAmb	IAmb	13 16 16.1				
	comp=Z,15nm,1.1s									
TPNV	**Topopah Spring**	**35.17**	**102**	IAmb	IAmb	13 16 04.4				
	comp=Z,14nm,0.9s									
PDAR	**Pinedale Array**	**35.20**	**88**	P	**P**	**13 16 01.6**	**+1.0**			
	comp=Z,0.6nm,0.7s,baz=307,slow=5.6,SNR=6.0									
PDAR				LR	LR	13 29 25.7				
	comp=Z,56nm,19.9s,baz=282,slow=34									
PDAR	**Pinedale Array**	**35.20**	**88**	P	**P**	**13 16 01.1**	**+0.6**			
YAK	**Yakutsk**	**35.42**	**310**	LR	LR	13 31 49.9				
	comp=Z,526nm,19.7s,baz=77,slow=38									
YAK	**Yakutsk**	**35.42**	**310**	*eP*	**P**	**13 16 00.2**	**-1.7**			
YAK				*e**PP	**pP**	**13 16 09.8**	**-3.2**			
YAK				*e*		13 17 18.6				
YAK				*e*		13 18 30.0				
YAK				*e*S	**S**	**13 21 32.4**	**-1.1**			
YAK				*e**SS	**sS**	**13 21 51.3**	**-0.7**			
YAK				*e*SS	**SnSn**	**13 23 52.9**	**-1.8**			
YAK				*e*		13 26 22.1				
YAK				pmax	pmax					
	comp=Z,66nm,1.2s									
YAK				pmax	pmax					
	comp=N,12nm,1.5s									
YAK				pmax	pmax					
	comp=E,15nm,0.9s									
YAK				pmax	pmax					
	comp=Z,104nm,5.8s									
YAK				pmax	pmax					
	comp=E,12nm,1.6s									
YAK				pmax	pmax					
	comp=N,18nm,2.3s									
YAK				smax	smax					
	comp=E,54nm,4.1s									
YAK				smax	smax					
	comp=N,34nm,3.2s									
YAK				MLR	MLR					
	comp=E,413nm,22.0s									
YAK				MLR	MLR					
	comp=N,215nm,20.0s									
YAK				MLR	MLR					
	comp=Z,662nm,24.0s									
YAK	**Yakutsk**	**35.42**	**310**	P	**P**	**13 16 00.7**	**-1.2**			
YAK	**Yakutsk**	**35.42**	**310**	P	**P**	**13 16 00.7**	**-1.2**			
YAK	**Yakutsk**	**35.42**	**310**	P	**P**	**13 16 00.5**	**-1.4**			
GWY	**Greenwater Val**	**35.48**	**103**	IAmb	IAmb	13 16 25.9				
	comp=Z,9.3nm,0.9s									
YSS	**Yuzhno-Sakhali**	**35.48**	**281**	*eP*	**P**	**13 16 03.6**	**+1.1**			
YSS				*e*SS	SS	13 24 00.1	-10			
YSS				pmax	pmax					
	comp=Z,10.0nm,0.7s									
YSS				MLR	MLR					
	comp=N,100nm,14.0s									
QSM	**Queen of Sheba**	**35.52**	**103**	IAmb	IAmb	13 16 18.8				
	comp=Z,9.6nm,0.9s									
PRN	**Pahroc Range**	**35.54**	**100**	IAmb	IAmb	13 16 07.3				
	comp=Z,14nm,1.1s									
FCC	**Fort Churchill**	**35.57**	**56**	IAmb	IAmb	13 16 05.2				
	comp=Z,17nm,1.0s									
BSUT	**Blindstream Ca**	**35.91**	**92**	IAmb	IAmb	13 16 24.9				
	comp=Z,23nm,1.5s									
TCRU	**Three Creeks R**	**36.21**	**96**	IAmb	IAmb	13 16 26.2				
	comp=Z,11nm,0.8s									
Q16A	**Castle Valley**	**36.74**	**94**	IAmb	IAmb	13 16 31.5				
	comp=Z,15nm,1.1s									
P18A	**Preston Nutter**	**36.80**	**93**	IAmb	IAmb	13 16 31.9				
	comp=Z,27nm,1.4s									
ILON	**Igloolik, Nuna**	**36.88**	**35**	P	**P**	**13 16 14.8**	**+0.6**			
GRNR	**Gornyy**	**36.97**	**290**	⇑*i*P	**P**	**13 16 14.3**	**-0.9**			
GRNR				pmax	pmax					
	comp=Z,20nm,0.7s									
GRNR				MLR	MLR					
	comp=Z,100nm,14.0s									
SRU	**San Rafael Swe**	**36.99**	**94**	IAmb	IAmb	13 16 18.7				
	comp=Z,12nm,0.9s									
POIN	**Pond Inlet**	**37.07**	**30**	IAmb	IAmb	13 16 31.9				
	comp=Z,16nm,1.0s									
PKCU	**Pink Cliffs**	**37.08**	**97**	IAmb	IAmb	13 16 34.4				
	comp=Z,12nm,0.9s									
KNB	**Kanab**	**37.09**	**98**	IAmb	IAmb	13 16 32.8				
	comp=Z,26nm,1.7s									
JKA	**Kamikawa-asahi**	**37.21**	**277**	P	**P**	**13 16 17.5**	**+0.1**			
JKA				IAmb	IAmb	13 16 18.5				
	comp=Z,13nm,0.8s									
JKA	**Kamikawa-asahi**	**37.21**	**277**	P	**P**	**13 16 17.9**	**+0.6**			
ASAJ	**Asahikawa**	**37.21**	**277**	LR	LR	13 33 12.4				
	comp=Z,78nm,19.6s,baz=60,slow=39									
ASAJ	**Asahikawa**	**37.21**	**277**	P	**P**	**13 16 17.5**	**+0.2**			
ASAJ				pmax	pmax					
	comp=Z,13nm,0.8s									
PFO	**Pinyon Flats O**	**37.47**	**106**	LR	LR	13 28 47.7				
	comp=Z,261nm,20.9s,baz=270,slow=31									
PFO	**Pinyon Flats O**	**37.47**	**106**	⇑*eP*	**P**	**13 16 20.3**	**+0.5**			
PFO				pmax	pmax					
	comp=Z,13nm,2.6s									
RSSD	**Black Hills**	**37.57**	**82**	P	**P**	**13 16 21.6**	**+0.9**			
RSSD				pmax	pmax					
	comp=Z,8.0nm,0.6s									
RSSD	**Black Hills**	**37.57**	**82**	P	**P**	**13 16 21.6**	**+0.9**			
RSSD				IAmb	IAmb	13 16 42.6				
	comp=Z,7.5nm,0.6s									
RSSD	**Black Hills**	**37.57**	**82**	P	**P**	**13 16 21.9**	**+1.3**			
RSSD	**Black Hills**	**37.57**	**82**	P	**P**	**13 16 22.0**	**+1.3**			
RSSD				pP	**pP**	**13 16 32.4**	**+0.5**			
RSSD				sP	**sP**	**13 16 37.1**	**+0.5**			
O20A	**White River Ci**	**37.63**	**90**	IAmb	IAmb	13 16 40.2				
	comp=Z,23nm,0.8s									
HMU	**Henry Mountain**	**37.65**	**95**	IAmb	IAmb	13 16 25.6				
	comp=Z,17nm,0.7s									
IRM	**Iron Mountain**	**37.80**	**104**	IAmb	IAmb	13 16 38.3				
	comp=Z,14nm,1.1s									
E28A	**Huff**	**38.03**	**77**	IAmb	IAmb	13 16 26.9				
	comp=Z,29nm,0.9s									
JEM	**Erimo**	**38.18**	**274**	P	**P**	**13 16 26.0**	**+0.5**			
ERM	**Erimo**	**38.18**	**274**	P	**P**	**13 16 25.8**	**+0.3**			
ERM	**Erimo**	**38.18**	**274**	*de*P	**P**	**13 16 25.2**	**-0.3**			
ERM				pmax	pmax					
	comp=Z,34nm,1.3s									
ERM	**Erimo**	**38.18**	**274**	P	**P**	**13 16 25.0**	**-0.5**			
ERM				IAmb	IAmb	13 16 25.9				
	comp=Z,20nm,0.8s									
PV23	**Carpenter Ridg**	**38.30**	**93**	IAmb	IAmb	13 16 44.0				
	comp=Z,25nm,1.2s									
PV10	**Paradox Valley**	**38.34**	**93**	IAmb	IAmb	13 16 48.0				
	comp=Z,21nm,0.9s									
PV22	**Blue Mesa, Par**	**38.38**	**93**	IAmb	IAmb	13 16 47.1				
	comp=Z,16nm,1.4s									
PV20	**West Nyswonger**	**38.41**	**93**	IAmb	IAmb	13 16 56.1				
	comp=Z,12nm,0.6s									
BLYC	**Blythe**	**38.45**	**104**	IAmb	IAmb	13 16 43.8				
	comp=Z,24nm,1.4s									
PV17	**East Wray Mesa**	**38.45**	**93**	IAmb	IAmb	13 16 44.9				
	comp=Z,37nm,1.7s									
PV16	**Nyswonger Mesa**	**38.45**	**93**	IAmb	IAmb	13 16 44.2				
	comp=Z,43nm,1.5s									
PV11	**David Mesa, Pa**	**38.49**	**93**	IAmb	IAmb	13 16 45.3				
	comp=Z,14nm,0.9s									
PV18	**Skein Mesa, Pa**	**38.50**	**93**	IAmb	IAmb	13 16 48.5				
	comp=Z,21nm,0.8s									
PV12	**Saucer Basin,**	**38.52**	**93**	IAmb	IAmb	13 16 45.7				
	comp=Z,20nm,1.2s									
PV07	**Paradox Valley**	**38.52**	**93**	IAmb	IAmb	13 16 45.6				
	comp=Z,23nm,1.5s									
PV03	**Paradox Valley**	**38.53**	**93**	IAmb	IAmb	13 16 46.5				
	comp=Z,42nm,1.7s									
PV13	**Radium Mtn., P**	**38.61**	**93**	IAmb	IAmb	13 16 47.8				
	comp=Z,52nm,1.6s									
PV02	**Paradox Valley**	**38.63**	**93**	IAmb	IAmb	13 16 47.9				
	comp=Z,52nm,1.5s									
ULM	**Lac du Bonnet**	**38.66**	**69**	P	**P**	**13 16 30.4**	**+0.9**			
	comp=Z,12nm,0.5s,baz=304,slow=7.6,SNR=40									
ULM				LR	LR	13 32 44.2				
	comp=Z,192nm,18.9s,baz=290,slow=36									
	comp=Z,12nm,0.5s									
ULM	**Lac du Bonnet**	**38.66**	**69**	*c*P	**P**	**13 16 30.3**	**+0.8**			
ULM	**Lac du Bonnet**	**38.66**	**69**	IAmb	IAmb	13 16 31.4				
	comp=Z,30nm,1.1s									
WUAZ	**Wupatki**	**38.97**	**99**	IAmb	IAmb	13 16 49.9				
	comp=Z,14nm,1.1s									
MVCO	**Mesa Verde**	**39.45**	**94**	P	**P**	**13 16 37.1**	**+0.6**			
X16A	**Lo Mia Camp, P**	**39.72**	**100**	IAmb	IAmb	13 16 55.1				
	comp=Z,20nm,1.4s									
AGMN	**Agassiz Nation**	**39.75**	**71**	IAmb	IAmb	13 16 40.4				
	comp=Z,24nm,0.8s									
AGMN	**Agassiz Nation**	**39.75**	**71**	P	**P**	**13 16 39.6**	**+1.0**			
EPLO	**Experimental L**	**40.14**	**68**	IAmb	IAmb	13 16 43.7				
	comp=Z,28nm,1.1s									
ZEA	**Zeya**	**40.25**	**299**	*eP*	**P**	**13 16 41.6**	**-1.1**			
ZEA				pmax	pmax					
	comp=E,10.0nm,0.8s									
ZEA				pmax	pmax					
	comp=Z,30nm,0.7s									
SUSD	**Miller**	**40.28**	**78**	IAmb	IAmb	13 16 44.9				
	comp=Z,38nm,0.8s									
X18A	**Snowflake**	**40.49**	**98**	IAmb	IAmb	13 17 01.2				
	comp=Z,41nm,1.8s									
SDCO	**Great Sand Dun**	**40.82**	**91**	IAmb	IAmb	13 17 05.4				
	comp=Z,33nm,1.9s									
K30B	**Basset**	**41.00**	**81**	IAmb	IAmb	13 16 51.5				
	comp=Z,32nm,0.9s									
NEEM	**North Greenlan**	**41.31**	**18**	*i*P	**P**	**13 16 51.4**	**-0.1**			
NEEM				IAmb	IAmb	13 16 56.0				
	comp=Z,29nm,0.7s									
KULLO	**Kullorsuaq**	**41.62**	**23**	*i*P	**P**	**13 16 54.1**	**+0.3**			
KULLO				IAmb	IAmb	13 16 57.7				
	comp=Z,41nm,1.3s									
TUC	**Tucson**	**41.63**	**101**	P	**P**	**13 16 53.1**	**-1.3**			
TUC				pmax	pmax					
	comp=Z,5.0nm,0.9s									
TUC	**Tucson**	**41.63**	**101**	P	**P**	**13 16 53.1**	**-1.3**			
TUC	**Tucson**	**41.63**	**101**	P	**P**	**13 16 56.6**	**+2.2**			
T25A	**Trinidad**	**41.87**	**91**	IAmb	IAmb	13 17 15.2				
	comp=Z,36nm,1.5s									
ECSD	**EROS Data Cent**	**42.05**	**77**	P	**P**	**13 16 58.0**	**+0.3**			
HEH	**HeiHe**	**42.08**	**295**	*eP*	**P**	**13 16 56.0**	**-1.7**			
HEH				PcP	**PcP**	**13 18 51.5**	**-0.3**			
HEH				pmax	pmax					
	comp=Z,45nm,0.8s									
HEH				L	L					
	comp=Z,88nm,18.8s									
HEH				L	L					
	comp=Z,190nm,18.6s									
HEH				L	L					
	comp=Z,290nm,18.2s									
TASM	**ASL Pad, Albuq**	**42.21**	**95**	IAmb	IAmb	13 17 17.6				
	comp=Z,3.1nm,0.8s									
ANMO	**Albuquerque**	**42.21**	**95**	LR	LR	13 33 49.1				
	comp=Z,49nm,19.1s,baz=306,slow=35									
ANMO	**Albuquerque**	**42.21**	**95**	*de*P	**P**	**13 17 00.7**	**+1.4**			
ANMO				pmax	pmax					
	comp=Z,3.0nm,1.1s									
ANMO	**Albuquerque**	**42.21**	**95**	P	**P**	**13 17 00.9**	**+1.6**			
ALQ	**Albuquerque**	**42.21**	**95**	IAmb	IAmb	13 17 17.6				
	comp=Z,3.0nm,0.8s									
EYMN	**Ely**	**42.34**	**69**	IAmb	IAmb	13 17 01.7				
	comp=Z,31nm,0.8s									
EYMN	**Ely**	**42.34**	**69**	P	**P**	**13 17 00.9**	**+1.0**			
DUN6	**Lazy B Ranch**	**42.42**	**100**	IAmb	IAmb	13 17 17.6				
	comp=Z,73nm,1.5s									
H11N2	**WAKE ISLAND Hy**	**42.55**	**228**	T	T	14 02 09.5				
	baz=27,slow=76,SNR=256									
H11N3	**WAKE ISLAND Hy**	**42.56**	**228**	T	T	14 02 36.9				
	baz=27,slow=76,SNR=256									
H11N1	**WAKE ISLAND Hy**	**42.57**	**228**	T	T	14 02 30.1				
	baz=27,slow=76,SNR=174									
NOR	**Nord**	**42.60**	**7**	P	**P**	**13 17 02.3**	**+0.6**			
NOR	**Nord**	**42.60**	**7**	P	**P**	**13 17 02.3**	**+0.6**			
NOR	**Nord**	**42.60**	**7**	*i*P	**P**	**13 17 02.2**	**+0.5**			
NOR				IAmb	IAmb	13 17 03.0				
	comp=Z,22nm,0.8s									
UPNV	**Upernavik**	**42.87**	**25**	*i*P	**P**	**13 17 04.3**	**+0.4**			
UPNV				IAmb	IAmb	13 17 06.2				
	comp=Z,18nm,0.8s									
E38A	**The Farm, Brul**	**43.11**	**71**	IAmb	IAmb	13 17 07.5				
	comp=Z,38nm,1.1s									
121A	**Cookes Peak, D**	**43.18**	**98**	IAmb	IAmb	13 17 22.5				
	comp=Z,13nm,0.8s									
USRK	**Ussuriysk Ar.**	**43.20**	**285**	LR	LR	13 34 42.7				
	comp=Z,188nm,22.0s,baz=57,slow=36									
CBKS	**Cedar Bluff**	**43.44**	**85**	IAmb	IAmb	13 17 28.2				
	comp=Z,15nm,0.8s									
I37A	**Lemond, Waseca**	**43.68**	**75**	IAmb	IAmb	13 17 12.5				
	comp=Z,29nm,0.9s									
H11S1	**WAKE ISLAND Hy**	**43.72**	**227**	T	T	14 03 28.6				
	baz=27,slow=76,SNR=96									
H11S2	**WAKE ISLAND Hy**	**43.74**	**227**	T	T	14 03 29.7				
	baz=27,slow=76,SNR=113									
H11S3	**WAKE ISLAND Hy**	**43.74**	**227**	T	T	14 03 29.9				
	baz=27,slow=76,SNR=66									
VLA	**Vladivostok**	**43.94**	**284**	⇑*i*P	**P**	**13 17 12.7**	**-0.1**			
VLA				pmax	pmax					
	comp=Z,27nm,1.5s									
FRB	**Frobisher Bay**	**44.10**	**40**	LR	LR	13 36 51.4				
	comp=Z,172nm,20.7s,baz=294,slow=38									
FRB	**Frobisher Bay**	**44.10**	**40**	P	**P**	**13 17 14.9**	**+1.0**			
FRB	**Frobisher Bay**	**44.10**	**40**	P	**P**	**13 17 14.9**	**+1.0**			
MDJ	**Mudanjiang**	**44.27**	**287**	P	**P**	**13 17 14.0**	**-1.6**			
MDJ				pmax	pmax					
	comp=Z,9.0nm,0.8s									
NUUG	**Nuugaatsiaq**	**44.34**	**26**	*i*P	**P**	**13 17 16.0**	**+0.3**			
NUUG				IAmb	IAmb	13 17 16.6				
	comp=Z,16nm,0.7s									
G40A	**Rib Lake**	**44.67**	**72**	IAmb	IAmb	13 17 19.7				
	comp=Z,12nm,0.7s									
MJAR	**Matsushiro Arr**	**44.67**	**272**	P	**P**	**13 17 18.6**	**-0.3**			
	comp=Z

CN2 Changchun 47.09 289 P **P** **13 17 37.0 -0.8**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 L L
comp=Z,100nm,15.0s
CN2 L L
comp=Z,100nm,15.0s
CN2 L L
comp=Z,200nm,16.0s
E46A Sault Ste Mari 47.18 67 IAmb IAmb 13 17 39.9
comp=Z,23nm,0.8s
JWT Wachi 47.18 273 IAmb IAmb 13 18 20.5
comp=Z,13nm,0.7s
SPITS Spitsbergen Ar 47.37 1 P **P** **13 17 39.2 -0.4**
comp=Z,2.1nm,0.4s,baz=38,slow=5.5,SNR=16
SPITS PcP **PcP** **13 19 09.6 0.0**
comp=Z,3.0nm,0.4s,baz=58,slow=5.0,SNR=8.7
SPITS LR LR 13 38 47.5
comp=Z,81nm,18.7s,baz=350,slow=38
comp=Z,2.1nm,0.4s
P40A Paris 47.38 79 IAmb IAmb 13 17 40.9
comp=Z,18nm,0.9s
TX31 Lajitas Ar. Si 47.92 98 IAmb IAmb 13 18 02.2
comp=Z,8.6nm,0.8s
TXAR Lajitas Array 47.92 98 P **P** **13 17 45.8 +1.2**
comp=Z,1.6nm,0.7s,baz=307,slow=5.5,SNR=14
TXAR PcP **PcP** **13 19 12.7 +0.3**
comp=Z,1.9nm,0.7s,baz=232,slow=1.0,SNR=3.8
TXAR ScP **ScP** **13 23 02.8 -0.5**
comp=Z,0.3nm,0.6s,baz=330,slow=4.3,SNR=3.5
TXAR LR LR 13 37 41.3
comp=Z,160nm,18.1s,baz=316,slow=36
TXAR Lajitas Array 47.92 98 P **P** **13 17 44.8 +0.3**
TXAR **PcP** **13 19 12.3 -0.1**
RLO Rose Lookout 47.98 84 P **P** **13 17 44.7 -0.1**
RLO IAmb IAmb 13 18 02.6
comp=Z,19nm,1.1s
SFJD Kangerlussuaq 48.00 30 LR LR 13 39 54.3
comp=Z,120nm,18.9s,baz=317,slow=38
SFJD Kangerlussuaq 48.00 30 P **P** **13 17 45.5 +1.0**
SFJD pmax pmax
comp=Z,43nm,1.0s
SFJD Kangerlussuaq 48.00 30 P **P** **13 17 45.5 +1.0**
SFJD Kangerlussuaq 48.00 30 P **P** **13 17 46.0 +1.5**
SFJD Kangerlussuaq 48.00 30 P **P** **13 17 45.7 +1.2**
SFJD pP **pP** **13 17 57.2 +1.3**
SFJD Kangerlussuaq 48.00 30 *i* P **P** **13 17 45.7 +1.2**
SFJD IAmb IAmb 13 17 46.3
comp=Z,42nm,0.9s
R40A Maddies Statio 48.09 80 IAmb IAmb 13 18 03.3
comp=Z,8.3nm,0.6s
U38A Gravette 48.16 84 IAmb IAmb 13 18 03.2
comp=Z,11nm,0.8s
LPIG La Paz 48.21 108 LR LR 13 33 17.8
comp=Z,75nm,21.3s,baz=358,slow=30
SAND Sanderson 48.34 96 IAmb IAmb 13 18 04.4
comp=Z,19nm,1.8s
PLPT Palo Pinto 48.45 90 IAmb IAmb 13 18 06.1
comp=Z,15nm,1.2s
DBG Daneborg 48.62 13 P **P** **13 17 49.4 +0.2**
DBG Daneborg 48.62 13 *i* P **P** **13 17 49.8 +0.6**
DBG IAmb IAmb 13 17 50.0
comp=Z,14nm,0.9s
CCM Cathedral Cave 48.84 80 P **P** **13 17 50.5 -0.9**
CCM 13 19 15.3
CCM pmax pmax
comp=Z,7.0nm,0.7s
CCM Cathedral Cave 48.84 80 P **P** **13 17 50.5 -0.9**
CCM PcP **PcP** **13 19 15.3 -0.2**
CCM IAmb IAmb 13 19 16.0
comp=Z,7.3nm,0.7s
CCM Cathedral Cave 48.84 80 P **P** **13 17 50.8 -0.6**
BRDY Brady 49.17 92 P **P** **13 17 52.6 -1.4**
BRDY IAmb IAmb 13 18 10.9
comp=Z,7.2nm,0.9s
JMN Monobe 49.17 273 P **P** **13 17 52.8 -1.2**
JMN Monobe 49.17 273 P **P** **13 17 54.5 +0.5**
JCJ Chichijima 49.28 260 LR LR 13 36 21.8
comp=Z,27nm,21.9s,baz=116,slow=33
FVM French Village 49.36 79 IAmb IAmb 13 18 12.1
comp=Z,14nm,1.1s
Q44A Meyer Farm, Va 49.52 77 IAmb IAmb 13 17 57.5
comp=Z,23nm,0.9s
NUUK Nuuk 49.61 33 P **P** **13 17 58.8 +1.9**
VLDQ Val d'Or 49.62 61 IAmb IAmb 13 17 56.7
comp=Z,17nm,0.9s
T42A Van Buren 49.64 81 IAmb IAmb 13 19 19.1
comp=Z,11nm,0.9s
FCAR Ozark Folk Cen 49.85 82 IAmb IAmb 13 18 15.9
comp=Z,19nm,1.0s
MIAR Mount Ida 49.96 85 IAmb IAmb 13 19 20.6
comp=Z,9.4nm,0.8s
MIAR Mount Ida 49.96 85 P **P** **13 18 00.2 +0.2**
KS19 Wonju Array Si 49.97 281 P **P** **13 18 00.0 0.0**
KSRS Korea Array 49.97 281 P **P** **13 18 00.2 +0.3**
comp=Z,19nm,0.8s,baz=50,slow=6.9,SNR=106
KSRS PcP **PcP** **13 19 20.0 +0.4**
comp=Z,3.8nm,0.8s,baz=57,slow=3.5,SNR=6.1
KSRS LR LR 13 40 37.7
comp=Z,46nm,19.6s,baz=55,slow=38
comp=Z,19nm,0.8s
KSAR Wonju Array Be 50.00 281 P **P** **13 18 00.3 +0.1**
KSAR Wonju Array Be 50.00 281 P **P** **13 18 00.3 +0.1**
SCHQ Schefferville 50.24 49 P **P** **13 18 02.5 +0.6**
comp=Z,14nm,0.7s,baz=316,slow=7.7,SNR=24
SCHQ LR LR 13 40 07.7
comp=Z,149nm,20.9s,baz=316,slow=37
comp=Z,14nm,0.7s
SCHQ Schefferville 50.24 49 IAmb IAmb 13 18 02.9
comp=Z,17nm,0.8s
LCAR Lake Charles 50.28 82 IAmb IAmb 13 18 18.5
comp=Z,8.4nm,1.0s
BUKO Buck Lake 50.38 65 IAmb IAmb 13 18 04.2
comp=Z,24nm,0.9s
INCN Inchon 50.69 282 P **P** **13 18 05.8 +0.3**
N49A Columbus Grove 50.85 72 IAmb IAmb 13 18 07.2
comp=Z,21nm,1.0s
SADO Sadowa 50.96 65 LR LR 13 39 02.9
comp=Z,72nm,19.1s,baz=349,slow=35
TJN Taejon 51.05 280 *d i* P **P** **13 18 07.4 -0.7**
JNU Nakatsue 51.34 274 LR LR 13 40 21.2
comp=Z,74nm,21.9s,baz=90,slow=36
SCO Scoresbysund 51.72 16 P **P** **13 18 13.5 +0.8**
SCO Scoresbysund 51.72 16 IAmb IAmb 13 18 28.4
comp=Z,12nm,1.0s
SCO Scoresbysund 51.72 16 P **P** **13 18 13.4 +0.8**
SCO Scoresbysund 51.72 16 *i* P **P** **13 18 13.3 +0.6**
SCO IAmb IAmb 13 18 17.8
comp=Z,6.4nm,0.8s
SOEG Soedalen 51.90 21 *i* P **P** **13 18 14.6 +0.6**
SOEG IAmb IAmb 13 18 15.4
comp=Z,26nm,0.8s
DELO Deloro Mine 51.93 65 IAmb IAmb 13 18 16.1
comp=Z,12nm,0.8s
T47A Sharon Grove 51.94 78 IAmb IAmb 13 18 32.6
comp=Z,34nm,1.3s
HKT Hockley 51.99 91 ⇑ *i* P **P** **13 18 15.0 -0.2**
HKT pmax pmax
comp=Z,9.0nm,1.0s
XLT XiLinHaoTe 52.08 295 *eP* **P** **13 18 15.8 -0.1**
XLT pP sP 13 18 29.8 -2.3
XLT pmax pmax
comp=Z,36nm,0.8s
XLT pmax pmax
comp=Z,34nm,3.9s
XLT L L
comp=Z,140nm,16.8s
XLT L L
comp=Z,140nm,20.1s
WVT Waverly 52.14 79 P **P** **13 18 16.0 -0.3**
WVT pmax pmax
comp=Z,28nm,0.8s
WVT Waverly 52.14 79 P **P** **13 18 16.0 -0.3**
WVT Waverly 52.14 79 P **P** **13 18 16.6 +0.4**
WVT Waverly 52.14 79 P **P** **13 18 16.7 +0.4**
IRK Irkutsk 52.20 309 *eP* **P** **13 18 14.5 -2.0**
IRK pmax pmax
comp=Z,20nm,1.0s
TRQ Mont Tremblant 52.35 61 IAmb IAmb 13 18 18.6
comp=Z,34nm,1.2s
DL2 Dalian 52.51 286 P **P** **13 18 18.3 -0.7**
DL2 pmax pmax
comp=Z,44nm,0.9s
R50A Paris 52.60 75 IAmb IAmb 13 18 20.5
comp=Z,21nm,0.8s

O52A Adamsville 52.70 71 IAmb IAmb 13 18 31.1
comp=Z,22nm,1.1s
N53A Lisbon 52.76 70 IAmb IAmb 13 18 21.4
comp=Z,18nm,0.7s
LDAQ Lac Daran 52.82 58 IAmb IAmb 13 18 50.0
comp=Z,11nm,1.1s
TLY Talaya 52.87 309 LR LR 13 40 22.4
comp=Z,169nm,21.5s,baz=36,slow=36
TLY Talaya 52.87 309 *de* P **P** **13 18 21.9 +0.4**
TLY pmax pmax
comp=Z,12nm,1.0s
IVI Ivigtut 52.90 34 IAmb IAmb 13 18 23.6
comp=Z,19nm,0.8s
IVI Ivigtut 52.90 34 P **P** **13 18 23.1 +1.6**
IVI Ivigtut 52.90 34 P **P** **13 18 22.8 +1.3**
IVI pP **pP** **13 18 33.6 +0.6**
IVI Ivigtut 52.90 34 *i* P **P** **13 18 22.8 +1.3**
IVI IAmb IAmb 13 18 23.4
comp=Z,21nm,0.9s
PAOC Oil Creek Stat 52.90 69 IAmb IAmb 13 18 22.6
comp=Z,16nm,1.0s
V48A Smith Brothers 52.99 79 IAmb IAmb 13 18 41.1
comp=Z,10nm,0.8s
CLTN Cedars of Leba 53.02 78 IAmb IAmb 13 18 24.8
comp=Z,19nm,1.1s
U49A Red Boiling Sp 53.03 77 IAmb IAmb 13 19 32.5
comp=Z,12nm,0.8s
S51A Beattyville 53.46 75 IAmb IAmb 13 18 26.7
comp=Z,16nm,0.9s
CFNY Clifton-Fine, 53.51 63 IAmb IAmb 13 18 27.6
comp=Z,15nm,0.9s
LMQ La Malbaie 53.55 57 IAmb IAmb 13 18 27.2
comp=Z,8.5nm,0.8s
ULN Ulaanbaatar 53.92 304 *c i* P **P** **13 18 29.1 -0.4**
ULN pmax pmax
comp=Z,12nm,0.8s
ULN Ulaanbaatar 53.92 304 P **P** **13 18 29.0 -0.4**
ULN IAmb IAmb 13 18 30.7
comp=Z,12nm,0.8s
ULN Ulaanbaatar 53.92 304 P **P** **13 18 29.4 0.0**
Q54A Coxs Mills 54.04 72 IAmb IAmb 13 18 30.8
comp=Z,11nm,0.9s
MOY Mondy 54.06 310 *eP* **P** **13 18 30.6 +0.2**
MOY pmax pmax
comp=Z,12nm,1.3s
MCWV Mont Chateau 54.11 70 IAmb IAmb 13 18 31.4
comp=Z,20nm,0.9s
W50A Signal Mountai 54.23 78 IAmb IAmb 13 18 32.4
comp=Z,15nm,0.9s
SONM Songino Array 54.26 304 P **P** **13 18 31.9 +0.1**
comp=Z,11nm,0.8s,baz=46,slow=7.3,SNR=37
SONM PcP **PcP** **13 19 36.1 +0.4**
comp=Z,6.0nm,0.7s,baz=57,slow=1.6,SNR=6.8
SONM LR LR 13 43 31.9
comp=Z,222nm,18.0s,baz=70,slow=38
comp=Z,11nm,0.8s
SONM Songino Array 54.26 304 P **P** **13 18 31.5 -0.3**
SONM IAmb IAmb 13 18 33.5
comp=Z,11nm,0.8s
SONM **PcP** **13 19 35.8 +0.1**
TZTN Tazewell 54.27 76 IAmb IAmb 13 18 32.5
comp=Z,12nm,0.8s
TZTN Tazewell 54.27 76 P **P** **13 18 32.0 0.0**
J59A Piesco 54.29 64 P **P** **13 18 31.9 -0.2**
J59A IAmb IAmb 13 18 33.1
comp=Z,11nm,0.8s
M57A Sunshine Farm, 54.40 67 IAmb IAmb 13 18 33.4
comp=Z,11nm,0.7s
SSPA Standing Stone 54.48 68 P **P** **13 18 33.6 +0.1**
D62A Allapoint, All 54.50 57 IAmb IAmb 13 18 34.5
comp=Z,20nm,1.0s
CPCT Cooper Cave 54.50 77 IAmb IAmb 13 18 34.1
comp=Z,9.8nm,0.9s
FPAL Fort Paine 54.54 79 IAmb IAmb 13 18 50.6
comp=Z,8.2nm,0.8s
Y49A Blount Mountai 54.57 80 IAmb IAmb 13 18 53.2
comp=Z,39nm,1.6s
BJI2 Beijing 54.73 291 P **P** **13 18 34.8 -0.4**
BJI2 pmax pmax
comp=Z,2.0nm,0.5s
TKL Tuckaleechee C 54.77 77 LR LR 13 41 48.9
comp=Z,137nm,18.8s,baz=335,slow=36
TKL Tuckaleechee C 54.77 77 IAmb IAmb 13 18 36.2
comp=Z,9.0nm,0.8s
L59A Walton 54.90 65 IAmb IAmb 13 18 37.9
comp=Z,12nm,0.9s
N58A Sunbury 54.97 67 IAmb IAmb 13 18 50.8
comp=Z,15nm,1.0s
G62A West of Eustis 55.08 60 IAmb IAmb 13 18 38.8
comp=Z,15nm,0.8s
W52A Murphy 55.09 77 IAmb IAmb 13 18 54.7
comp=Z,12nm,0.8s
H62A Milan 55.22 60 IAmb IAmb 13 18 39.7
comp=Z,19nm,1.0s
P57A Homestead Farm 55.23 69 IAmb IAmb 13 18 39.8
comp=Z,21nm,1.0s
U54A Nelsons Funny 55.25 74 IAmb IAmb 13 18 40.3
comp=Z,20nm,1.0s
V53A Saluda 55.31 76 IAmb IAmb 13 18 57.5
comp=Z,31nm,1.4s
BLA Blacksburg 55.53 73 IAmb IAmb 13 18 42.0
comp=Z,17nm,0.8s
F64A Sherman 55.70 58 IAmb IAmb 13 18 42.8
comp=Z,19nm,0.8s
KEV Kevo 55.72 357 P **P** **13 18 41.6 -0.3**
KEV pmax pmax
comp=Z,41nm,1.3s
KEV Kevo 55.72 357 P **P** **13 18 41.6 -0.3**
BG3 Lake Jocassee 55.73 76 IAmb IAmb 13 18 43.2
comp=Z,24nm,1.2s
BATG Bathurst New B 55.80 55 P **P** **13 18 43.1 +0.2**
TRO Tromso 55.98 0 *eP* **P** **13 18 43.7 -0.1**
TRO IAmb IAmb 13 18 44.5
comp=Z,66nm,1.5s
ARA0 ARCESS Array S 55.98 357 *eP* **P** **13 18 43.8 -0.1**
ARCES ARCESS Array B 55.98 357 P **P** **13 18 43.2 -0.7**
comp=Z,6.2nm,0.7s,baz=26,slow=6.8,SNR=26
ARCES PcP **PcP** **13 19 41.9 +0.1**
comp=Z,7.8nm,0.8s,baz=20,slow=5.4,SNR=7.4
ARCES LR LR 13 43 59.4
comp=Z,73nm,19.2s,baz=310,slow=37
comp=Z,6.2nm,0.7s
ARCES ARCESS Array B 55.98 357 P **P** **13 18 43.4 -0.5**
ARCES 13 19 42.1
ARCES pmax pmax
comp=Z,12nm,1.0s
ARCES ARCESS Array B 55.98 357 P **P** **13 18 43.4 -0.5**
ARCES PcP **PcP** **13 19 42.1 +0.2**
ARCES IAmb IAmb 13 19 43.2
comp=Z,12nm,1.0s
250A Grady 56.03 81 IAmb IAmb 13 18 58.1
comp=Z,20nm,0.9s
KSCT Kent School, K 56.05 64 IAmb IAmb 13 18 46.1
comp=Z,20nm,1.1s
JETT Jettan, Norway 56.05 359 *eP* **P** **13 18 44.8 +0.4**
JETT IAmb IAmb 13 18 45.4
comp=Z,24nm,0.6s
U56A King 56.18 74 IAmb IAmb 13 18 46.5
comp=Z,30nm,1.3s
KNGR Kungurtug, Tuv 56.35 311 ⇓ *eP* **P** **13 18 47.8 +0.9**
KNGR pmax pmax
comp=Z,37nm,0.9s
R58B Mineral 56.39 70 IAmb IAmb 13 18 48.5
comp=Z,11nm,1.0s
KMSC Kings Mountain 56.52 75 IAmb IAmb 13 18 48.6
comp=Z,15nm,0.9s
WSPT Westport, CT 56.53 65 IAmb IAmb 13 18 49.3
comp=Z,26nm,1.2s
KTK1 Kautokeino 56.56 358 *eP* **P** **13 18 47.7 -0.3**
KTK1 IAmb IAmb 13 18 48.1
comp=Z,12nm,0.8s
G65A Princeton 56.56 58 IAmb IAmb 13 18 49.0
comp=Z,14nm,0.9s
HHC Hu-ho-hao-te 56.60 295 *eP* **P** **13 18 50.5 +1.7**
HHC pmax pmax
comp=Z,13nm,0.6s
HODGE Hodges 56.66 77 IAmb IAmb 13 18 49.4
comp=Z,11nm,0.8s
EMMW East Machias 56.97 58 IAmb IAmb 13 18 51.8
comp=Z,16nm,0.8s
LVZ Lovozero 57.16 353 *ceP* **P** **13 18 51.6 -0.7**
LVZ pmax pmax
comp=Z,23nm,0.9s
LVZ Lovozero 57.16 353 P **P** **13 18 52.0 -0.3**
LVZ IAmb IAmb 13 18 53.9
comp=Z,20nm,0.9s
LVZ Lovozero 57.16 353 P **P** **13 18 51.7 -0.6**
comp=Z,34nm,1.0s
352A Blakely 57.17 81 P **P** **13 18 52.6 -0.2**
V58A Windy Hill, Pi 57.28 73 IAmb IAmb 13 18 54.4
comp=Z,18nm,0.8s
HNS HongShan 57.40 290 ⇑ P **P** **13 18 54.8 +0.4**
HNS pP **pP** **13 19 07.3 +1.3**
HNS pmax pmax
comp=Z,53nm,0.9s
HNS L L
comp=Z,160nm,15.8s
HNS L L
comp=Z,170nm,17.5s
HNS L L
comp=Z,190nm,19.1s
BTO2 Baotou 57.56 296 *eP* **P** **13 18 55.5 -0.1**
BTO2 pP **pP** **13 19 08.3 +1.0**
BTO2 sP **sP** **13 19 13.5 +1.5**
BTO2 pmax pmax
comp=Z,27nm,0.9s
BTO2 pmax pmax
comp=Z,170nm,6.0s
BTO2 L L
comp=Z,430nm,14.6s
BTO2 L L
comp=Z,380nm,20.0s
BTO2 L L
comp=Z,420nm,14.4s
APA Apatity 57.58 353 *eP* **P** **13 18 52.1 -3.0**
APA *e* 13 19 47.9
APA *e* 13 20 59.0
APA pmax pmax
comp=Z,6.0nm,1.3s
SGF Sodankyl 58.05 357 P **P** **13 18 58.3 -0.2**
SGF pmax pmax
comp=Z,36nm,1.5s
SGF Sodankyl 58.05 357 P **P** **13 18 58.6 +0.2**
FAUS Fauske 58.21 2 *eP* **P** **13 18 59.5 0.0**
FAUS IAmb IAmb 13 19 00.1
comp=Z,13nm,0.8s
GUMO Guam 58.59 247 LR LR 13 44 16.5
comp=Z,16nm,18.7s,baz=58,slow=36
GUMO Guam 58.59 247 P **P** **13 19 03.7 +0.8**
VAGH Vaagaholmen 58.82 3 *eP* **P** **13 19 03.8 0.0**
VAGH IAmb IAmb 13 19 04.8
comp=Z,36nm,1.3s
ZAA0 Zalesovo Array 58.91 321 IAmb IAmb 13 19 05.4
comp=Z,7.7nm,0.7s
ZALV Zalesovo Beam 58.91 321 P **P** **13 19 04.8 +0.2**
comp=Z,6.2nm,0.6s,baz=35,slow=6.1,SNR=28
ZALV PcP **PcP** **13 19 53.4 -0.2**
comp=Z,5.5nm,0.7s,baz=18,slow=5.1,SNR=6.5
ZALV LR LR 13 46 47.0
comp=Z,404nm,18.6s,baz=36,slow=38
comp=Z,6.2nm,0.6s
ZALV Zalesovo Beam 58.91 321 P **P** **13 19 04.1 -0.5**
ZALV **PcP** **13 19 53.4 -0.2**
NJ2 Nanjing 59.02 283 *eP* **P** **13 19 05.5 -0.3**
NJ2 pmax pmax
comp=Z,24nm,0.5s
KONS Konsvik 59.05 3 *eP* **P** **13 19 05.6 +0.2**
KONS IAmb IAmb 13 19 06.0
comp=Z,36nm,1.4s
RAUS Rausandaksla 59.13 2 *eP* **P** **13 19 06.1 +0.1**
RAUS IAmb IAmb 13 19 06.6
comp=Z,37nm,1.1s
STOK Stokkvaagen 59.21 3 *eP* **P** **13 19 07.1 +0.6**
MOR8 Moi Rana 59.41 2 *eP* **P** **13 19 06.9 -1.0**
MOR8 IAmb IAmb 13 19 07.0
comp=Z,12nm,0.7s
LEIR Leirfjorden 59.43 3 *eP* **P** **13 19 08.4 +0.4**
LEIR IAmb IAmb 13 19 08.9
comp=Z,46nm,1.3s
MSF Maaselka 59.47 355 P **P** **13 19 08.5 +0.1**
OUL Oulu 60.43 357 P **P** **13 19 14.5 -0.4**
OUL Oulu 60.43 357 P **P** **13 19 14.9 0.0**
LYN LuoYang 60.73 289 P **P** **13 19 17.3 -0.1**
LYN pP pP 13 19 30.5 +1.3
LYN pmax pmax
comp=Z,49nm,0.6s
LYN L L
comp=Z,210nm,15.1s
LYN L L
comp=Z,170nm,15.8s
LYN L L
comp=Z,330nm,16.7s
NSS Namsos 60.98 3 *eP* **P** **13 19 18.8 +0.1**
NSS IAmb IAmb 13 19 19.3
comp=Z,28nm,1.0s
DGZ Jazzator, Alta 61.25 316 *ceP* **P** **13 19 21.1 +0.1**
DGZ pmax pmax
comp=Z,15nm,0.9s
CMIG Matias Romero 62.46 99 LR LR 13 44 52.4
comp=Z,69nm,20.3s,baz=308,slow=34
WHN Wuhan 62.69 285 P **P** **13 19 30.0 -0.7**
MOL Molde 62.73 6 *eP* **P** **13 19 30.9 +0.5**
MOL IAmb IAmb 13 19 31.5
comp=Z,25nm,0.8s
XAN Xi'an 63.04 291 ⇑ P **P** **13 19 33.0 -0.1**
XAN pP pP 13 19 46.5 +1.6
XAN pmax pmax
comp=Z,33nm,1.1s
AKN Aaknes 63.09 6 *eP* **P** **13 19 33.4 +0.5**
AKN IAmb IAmb 13 19 34.3
comp=Z,64nm,0.8s
DOMB Dombas 63.34 5 *eP* **P** **13 19 34.8 +0.2**
DOMB IAmb IAmb 13 19 34.9
comp=Z,28nm,0.7s
KLMR Klimovskoe 63.64 349 *eP* **P** **13 19 35.2 -1.3**
KLMR *e*PP **pP** **13 19 46.1 -2.3**
KLMR pmax pmax
comp=Z,63nm,1.0s
GTA2 Gaotai 63.65 302 P **P** **13 19 36.8 -0.3**
GTA2 sP pP 13 19 49.0 +0.1
GTA2 pmax pmax
comp=Z,26nm,1.1s
GTA2 L L
comp=Z,160nm,16.8s
GTA2 L L
comp=Z,140nm,18.1s
GTA2 L L
comp=Z,230nm,17.1s
KURK Kurchatov 63.76 322 *de* P **P** **13 19 37.7 +0.2**
KURK pmax pmax
comp=Z,27nm,1.3s
KURK Kurchatov 63.76 322 P **P** **13 19 37.4 -0.1**
KURK IAmb IAmb 13 19 38.8
comp=Z,12nm,0.8s
KURK **PcP** **13 20 12.9 -0.3**
KURK Kurchatov 63.76 322 P **P** **13 19 37.6 +0.1**
KURK Kurchatov 63.76 322 P **P** **13 19 37.7 +0.2**
SVE Sverdlovsk 63.78 336 *de* P **P** **13 19 37.7 +0.2**
SVE pmax pmax
comp=Z,43nm,1.0s
KURBB Kurchatov Arra 63.87 322 P **P** **13 19 38.1 -0.1**
comp=Z,9.8nm,0.9s,baz=20,slow=6.8,SNR=62
KURBB PcP **PcP** **13 20 13.4 -0.2**
comp=Z,3.7nm,1.0s,baz=31,slow=5.2,SNR=4.3
KURBB PP **PP** **13 21 52.5 -5.9**
comp=Z,2.3nm,0.8s,baz=45,slow=9.9,SNR=5.0
KURBB LR LR 13 49 45.2
comp=Z,376nm,19.0s,baz=181,slow=38
comp=Z,9.8nm,0.9s
FINES FINESS Array B 64.07 356 P **P** **13 19 39.0 -0.3**
comp=Z,21nm,0.6s,baz=17,slow=7.6,SNR=151
FINES LR LR 13 51 24.8
comp=Z,41nm,18.1s,baz=12,slow=40
comp=Z,21nm,0.6s
FINES FINESS Array B 64.07 356 P **P** **13 19 39.0 -0.3**
FINES FINESS Array B 64.07 356 P **P** **13 19 38.8 -0.5**
SSLB Suanglung 64.08 275 P **P** **13 19 39.1 -1.0**
SSLB Suanglung 64.08 275 P **P** **13 19 39.4 -0.6**
YULB Yu-li 64.19 274 P **P** **13 19 42.2 +1.5**
LZDM Lanzhou Array 64.36 296 P **P** **13 19 42.2 +0.1**
comp=Z,8.2nm,0.5s,baz=253,slow=1.5,SNR=8.9
LZDM LR LR 13 50 02.2
comp=Z,132nm,19.5s,baz=355,slow=38
comp=Z,8.2nm,0.5s
LRW Lerwick 64.39 11 *eP* **P** **13 19 42.1 +0.7**
LRW IAmb IAmb 13 19 44.3
comp=Z,33nm,0.9s
KIRV Kirov 64.44 343 P **P** **13 19 41.5 -0.2**
comp=Z,95nm,0.6s,baz=17,slow=1.4,SNR=35
KIRV LR LR 13 50 35.4
comp=Z,129nm,21.8s,baz=26,slow=39
comp=Z,95nm,0.6s
KIRV Kirov 64.44 343 *c i* P **P** **13 19 41.2 -0.5**

NB2 NORSAR Subarra 64.44 4 P **P** **13 19 41.8 -0.1**
comp=Z,26nm,0.8s,baz=356,slow=6.5
NB2 NORSAR Subarra 64.44 4 P **P** **13 19 41.8 -0.1**
NOA NORSAR Array B 64.44 4 P **P** **13 19 42.1 +0.2**
comp=Z,23nm,0.8s,baz=356,slow=6.6,SNR=69
NOA LR LR 13 46 30.6
comp=Z,30nm,21.5s,baz=355,slow=35
comp=Z,23nm,0.8s
BVAR Borovoye Array 64.51 328 P **P** **13 19 42.5 +0.1**
comp=Z,26nm,0.8s,baz=46,slow=6.4,SNR=73
comp=Z,26nm,0.8s
ASK Askoy 64.64 7 *eP* **P** **13 19 43.8 +0.7**
SKAR Skarslia 64.66 6 *eP* **P** **13 19 43.8 +0.5**
SKAR IAmb IAmb 13 19 44.4
comp=Z,34nm,0.7s
ARTI Arti 64.70 337 *c iP* **P** **13 19 43.2 -0.4**
ARTI *PP **pP** **13 19 54.5 -0.9**
ARTI 13 20 17.7
ARTI 13 22 05.9
ARTI S **S** **13 28 19.5 -1.0**
ARTI SS **SS** **13 32 26.8 -3.9**
ARTI pmax pmax
comp=Z,54nm,0.7s
ARTI Arti 64.70 337 P **P** **13 19 43.1 -0.4**
ARTI Arti 64.70 337 P **P** **13 19 43.4 -0.1**
NC602 NORSAR Array S 64.76 4 *eP* **P** **13 19 44.1 +0.2**
NORES NORESS Array B 64.76 4 P **P** **13 19 43.9 0.0**
NORES pmax pmax
comp=Z,3.0nm,0.5s
ODD1 Odda 65.31 7 *eP* **P** **13 19 48.1 +0.5**
HFS Hagfors 65.44 3 P **P** **13 19 48.4 +0.1**
comp=Z,34nm,0.6s,baz=28,slow=3.5,SNR=122
comp=Z,34nm,0.6s
MK31 Makanchi Array 65.63 318 *c iP* **P** **13 19 49.0 -0.8**
MKAR Makanchi Array 65.63 318 P **P** **13 19 49.4 -0.5**
comp=Z,18nm,0.7s,baz=44,slow=5.7,SNR=114
MKAR LR LR 13 50 30.1
comp=Z,238nm,19.4s,baz=23,slow=38
comp=Z,18nm,0.7s
MKAR Makanchi Array 65.63 318 *i* P **P** **13 19 49.2 -0.6**
MKAR pmax pmax
comp=Z,18nm,0.7s
MKAR Makanchi Array 65.63 318 P **P** **13 19 49.0 -0.8**
MAKZ Makanchi 65.74 318 P **P** **13 19 50.0 -0.5**
MAKZ Makanchi 65.74 318 P **P** **13 19 49.9 -0.7**
MAKZ Makanchi 65.74 318 P **P** **13 19 50.1 -0.4**
MAKZ Makanchi 65.74 318 P **P** **13 19 50.1 -0.4**
KONO Kongsberg 65.76 5 *deP* **P** **13 19 51.3 +1.0**
KONO pmax pmax
comp=Z,32nm,1.7s
KONO Kongsberg 65.76 5 *eP* **P** **13 19 51.1 +0.8**
BLS5 Blasjo 65.79 7 *eP* **P** **13 19 51.3 +0.7**
BLS5 IAmb IAmb 13 19 52.3
comp=Z,52nm,1.0s
WMQ Urumqi 65.83 312 *eP* **P** **13 19 51.8 +0.6**
WMQ pP sP 13 20 05.5 -2.2
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ L L
comp=Z,210nm,23.9s
STRU Stroemstad 66.45 4 *i* P **P** **13 19 55.1 +0.3**
KPL Plockton 66.55 14 *eP* **P** **13 19 56.1 +0.7**
KPL IAmb IAmb 13 19 57.3
comp=Z,16nm,0.8s
MCD Coleburn Disti 66.63 13 *eP* **P** **13 19 56.8 +0.8**
MCD IAmb IAmb 13 19 58.1
comp=Z,52nm,0.8s
SNART Snartemo 66.92 7 *i* P **P** **13 19 58.5 +0.7**
VSU Vasula 67.02 356 *ceP* **P** **13 19 57.4 -1.0**
VSU pmax pmax
comp=Z,41nm,0.9s
VSU Vasula 67.02 356 P **P** **13 19 57.8 -0.6**
DRUM Mains of Drumt 67.39 13 P **P** **13 20 00.6 -0.1**
DRUM Mains of Drumt 67.39 13 *eP* **P** **13 20 01.5 +0.7**
TJOU Tjoern 67.47 4 *i* P **P** **13 20 01.8 +0.6**
LAWE Loch Awe, Argy 67.63 14 *eP* **P** **13 20 03.1 +0.8**
LAWE IAmb IAmb 13 20 03.9
comp=Z,22nm,0.7s
INVG Invergeldie, C 67.65 14 *eP* **P** **13 20 03.1 +0.7**
INVG IAmb IAmb 13 20 04.3
comp=Z,17nm,0.8s
EAB Aberfoyle 67.84 14 *eP* **P** **13 20 04.4 +0.8**
EAB IAmb IAmb 13 20 05.8
comp=Z,32nm,0.8s
ONAU Onsala 68.12 4 *i* P **P** **13 20 05.6 +0.3**
CD2 Chengdu 68.23 293 P **P** **13 20 06.5 -0.1**
CD2 sP sP 13 20 20.8 -2.3
CD2 pmax pmax
comp=Z,40nm,0.9s
IDGL Inch Island, C 68.45 16 P **P** **13 20 08.3 +0.8**
IDGL Inch Island, C 68.45 16 *eP* **P** **13 20 08.3 +0.8**
IDGL IAmb IAmb 13 20 09.7
comp=Z,19nm,0.8s
FABU Falkenberg 68.54 4 *i* P **P** **13 20 08.0 0.0**
GOMU GeErMu 68.65 303 P **P** **13 20 08.5 -1.1**
GOMU S **S** **13 29 10.5 +0.9**
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GOMU L L
comp=Z,140nm,10.3s
GOMU L L
comp=Z,56nm,10.8s
GOMU L L
comp=Z,150nm,10.5s
EKA Eskdalemuir Ar 68.84 13 P **P** **13 20 10.7 +0.8**
comp=Z,24nm,0.7s,baz=338,slow=4.9,SNR=54
EKA LR LR 13 50 55.3
comp=Z,98nm,21.8s,baz=358,slow=36
comp=Z,24nm,0.7s
ESK Eskdalemuir 68.85 13 P **P** **13 20 10.6 +0.6**
ESK pmax pmax
comp=Z,44nm,1.2s
ESK Eskdalemuir 68.85 13 P **P** **13 20 10.6 +0.6**
ESK Eskdalemuir 68.85 13 *eP* **P** **13 20 10.7 +0.8**
ESK IAmb IAmb 13 20 12.0
comp=Z,20nm,0.9s
ESK Eskdalemuir 68.85 13 P **P** **13 20 11.0 +1.0**
ESK pP **pP** **13 20 22.5 +0.6**
MOS Moscow 68.87 349 *eP* **P** **13 20 09.6 -0.5**
MOS pmax pmax
comp=Z,58nm,0.6s
MUD Monsted U'grnd 68.92 6 *i* P **P** **13 20 11.8 +1.4**
MUD IAmb IAmb 13 20 12.0
comp=Z,106nm,1.2s
AFI Afiamalu 68.94 191 LR LR 13 44 42.4
comp=Z,144nm,19.3s,baz=176,slow=31
GAL1 Galloway 69.08 14 *eP* **P** **13 20 11.8 +0.4**
GAL1 IAmb IAmb 13 20 13.2
comp=Z,26nm,0.9s
DEL Delary 69.11 3 *i* P **P** **13 20 11.7 +0.1**
BLEU Blekinge 69.33 2 *i* P **P** **13 20 11.7 -1.2**
BJUU Bjuv 69.48 4 *i* P **P** **13 20 14.2 +0.3**
KESW Keswick, Cumbr 69.57 13 *eP* **P** **13 20 15.3 +0.8**
KESW IAmb IAmb 13 20 16.9
comp=Z,16nm,0.8s
OBN Obninsk 69.60 349 P **P** **13 20 14.2 -0.4**
comp=Z,29nm,0.4s,baz=279,slow=3.3,SNR=10
OBN LR LR 13 56 41.3
comp=Z,97nm,18.6s,baz=16,slow=41
comp=Z,29nm,0.4s
OBN Obninsk 69.60 349 *i* P **P** **13 20 14.0 -0.6**
OBN *i* 13 20 26.0
OBN *i* 13 20 39.0
OBN *i* 13 22 45.5
OBN pmax pmax
comp=Z,52nm,1.0s
OBN Obninsk 69.60 349 P **P** **13 20 14.2 -0.4**
OBN Obninsk 69.60 349 P **P** **13 20 14.4 -0.2**
comp=Z,60nm,0.9s
PDGK Podgornoye 69.61 317 P **P** **13 20 15.1 0.0**
PDGK Podgornoye 69.61 317 P **P** **13 20 15.1 0.0**
ILTH Belurgan, Co L 69.64 16 P **P** **13 20 15.5 +0.6**
ILTH Belurgan, Co L 69.64 16 *eP* **P** **13 20 15.1 +0.2**
ILTH IAmb IAmb 13 20 16.7
comp=Z,23nm,0.9s
IGLA Glengowla, Co 69.72 18 P **P** **13 20 15.7 +0.3**
LUNU Lund 69.94 3 *i* P **P** **13 20 17.1 +0.5**
PABE Paberze 70.08 357 P **P** **13 20 17.9 +0.4**
PABE Paberze 70.08 357 P **P** **13 20 18.0 +0.4**
LLD Lille Linde 70.19 4 *i* P **P** **13 20 17.5 -0.7**
AKTO Aktyubinsk 70.26 335 P **P** **13 20 19.0 +0.2**
comp=Z,28nm,0.7s,baz=28,slow=5.1,SNR=108
AKTO LR LR 13 54 14.0
comp=Z,110nm,21.1s,baz=44,slow=38
comp=Z,28nm,0.7s

DSB Dublin 70.39 16 P **P** **13 20 20.0 +0.5**
BSD Bornholm Skovb 70.50 2 *i* P **P** **13 20 20.4 +0.3**
BSD IAmb IAmb 13 20 27.4
comp=Z,47nm,0.9s
NACGM Naroch 70.57 355 *eP* **P** **13 20 20.8 +0.2**
BELG Belogornoye 70.65 342 P **P** **13 20 21.0 -0.1**
comp=Z,55nm,0.7s,baz=93,slow=2.6,SNR=12
BELG LR LR 13 55 53.7
comp=Z,130nm,18.8s,baz=76,slow=40
comp=Z,55nm,0.7s
BELG Belogornoye 70.65 342 *c iP* **P** **13 20 20.5 -0.6**
BELG pmax pmax
comp=Z,11nm,1.0s
AB31 Akbulak array 70.85 333 P **P** **13 20 22.6 +0.2**
ABKAR Akbulak array 70.85 333 P **P** **13 20 22.5 +0.1**
CHIV Chivirico 70.87 82 P **P** **13 20 23.1 +0.2**
CHIV IAmb IAmb 13 20 34.6
comp=Z,20nm,0.9s
LBWR Ladybower, Pea 70.91 13 *eP* **P** **13 20 23.4 +0.6**
LBWR IAmb IAmb 13 20 25.2
comp=Z,16nm,0.8s
MNK Minsk 70.92 355 *i* P **P** **13 20 23.2 +0.5**
comp=E,21nm,0.9s
MNK *i* P **P** **13 20 23.2 +0.5**
comp=N,9.0nm,0.7s
MNK *i* P **P** **13 20 23.2 +0.5**
comp=Z,68nm,0.9s,baz=5.5
MNK *i* PP **PP** **13 23 00.2 +0.8**
MNK *i* PPP PPP 13 24 43.3
MNK *i* S **S** **13 29 37.4 +2.5**
MNK *i* SS **SS** **13 34 09.5 +2.8**
MNK *i* SSS SSS 13 37 23.0
MNK *i* LQ LQ 13 46 40.3
MNK *i* LR LR 13 52 03.8
MNK Minsk 70.92 355 *i* P **P** **13 20 23.2 +0.5**
MNK *i* 13 23 00.1
MNK *i* PPP PPP 13 24 43.2
MNK *i* S **S** **13 29 37.3 +2.5**
MNK *i* SS **SS** **13 34 09.4 +2.8**
MNK *i* SSS SSS 13 37 22.9
MNK pmax pmax
comp=Z,68nm,0.9s
MNK pmax pmax
comp=N,9.0nm,0.7s
MNK pmax pmax
comp=E,21nm,0.9s
VAL Valentia 70.98 19 P **P** **13 20 24.0 +0.9**
IWEX Carrickbyrne, 71.17 16 P **P** **13 20 24.9 +0.6**
FOEL Foel Wylfa 71.21 14 P **P** **13 20 25.7 +1.2**
FOEL Foel Wylfa 71.21 14 *eP* **P** **13 20 25.2 +0.7**
FOEL IAmb IAmb 13 20 27.2
comp=Z,33nm,0.7s
TKM2 Tokmak 2 71.46 320 P **P** **13 20 27.0 +0.5**
SNR=23
BSEG Bad Segeberg 71.50 5 P **P** **13 20 25.0 -1.1**
WUS Wushi 71.52 316 P **P** **13 20 27.2 +0.4**
KDJ Kajisay 71.53 318 P **P** **13 20 27.3 +0.5**
USP Ospenovka 71.57 321 P **P** **13 20 27.5 +0.6**
SNR=16
SUW Suwalki 71.60 357 *eP* **P** **13 20 26.9 +0.1**
CWF Charnwood Fore 71.62 13 *eP* **P** **13 20 27.9 +0.9**
CWF IAmb IAmb 13 20 29.0
comp=Z,11nm,0.9s
HLM1 Long Mynd 71.62 14 *eP* **P** **13 20 27.9 +0.8**
HLM1 IAmb IAmb 13 20 28.7
comp=Z,7.7nm,1.1s
TARG Taragay, Kyrgy 71.63 318 IAmb IAmb 13 20 29.7
comp=Z,14nm,0.6s
TARG Taragay, Kyrgy 71.63 318 P **P** **13 20 28.7 +1.0**
BOOM Boomskoye usch 71.70 319 P **P** **13 20 28.8 +1.0**
CHMS Chumysh 71.71 320 P **P** **13 20 28.7 +0.9**
SNR=13
LPSR Galich'ya Gora 71.79 347 *eP* **P** **13 20 27.1 -0.9**
LPSR pmax pmax
comp=Z,49nm,0.7s
RSBS Rosebush, Pemb 71.90 15 *eP* **P** **13 20 29.4 +0.7**
RSBS IAmb IAmb 13 20 30.7
comp=Z,20nm,0.9s
KBK Karagaybulak 71.93 320 P **P** **13 20 30.0 +0.8**
SNR=14
MCH1 Michaelchurch 72.11 14 *eP* **P** **13 20 30.7 +0.8**
MCH1 IAmb IAmb 13 20 32.0
comp=Z,12nm,1.0s
AAK Ala-Archa 72.11 320 P **P** **13 20 30.5 +0.2**
comp=Z,31nm,0.9s,baz=77,slow=2.1,SNR=32
AAK LR LR 13 54 51.0
comp=Z,291nm,18.1s,baz=30,slow=38
comp=Z,31nm,0.9s
AAK Ala-Archa 72.11 320 P **P** **13 20 31.4 +1.1**
SNR=14
AAK Ala-Archa 72.11 320 *c iP* **P** **13 20 30.8 +0.5**
AAK pmax pmax
comp=Z,30nm,0.8s
AAK Ala-Archa 72.11 320 P **P** **13 20 30.1 -0.2**
AAK Ala-Archa 72.11 320 P **P** **13 20 31.1 +0.8**
AAK Ala-Archa 72.11 320 P **P** **13 20 31.2 +0.8**
EKS2 Erkin-Say 72.36 321 P **P** **13 20 32.5 +0.8**
SNR=14
RETH Rethem/Aller, 72.64 6 P **P** **13 20 34.1 +1.2**
PPT Papeete 72.64 169 LR LR 13 43 56.4
comp=Z,121nm,21.3s,baz=208,slow=29
VORR Voronezh 72.66 347 *eP* **P** **13 20 31.8 -1.4**
VORR pmax pmax
comp=Z,55nm,0.4s
VRH Novokhopyorsk 72.77 345 *eP* **P** **13 20 33.0 -0.8**
VRH pmax pmax
comp=Z,44nm,0.6s
PZH PanZhiHua 72.78 291 P **P** **13 20 34.0 -0.5**
PZH pmax pmax
comp=Z,30nm,0.9s
ASAI AK-SAY(Kyrgyzs 72.83 318 P **P** **13 20 35.8 +1.0**
IBBN Ibbenburen 72.96 7 *eP* **P** **13 20 35.9 +0.9**
comp=Z,52nm,1.2s,baz=356,slow=5.8
VSR Storozhevoye 73.12 347 *eP* **P** **13 20 35.3 -0.6**
VSR pmax pmax
comp=Z,37nm,0.5s
KKAR Karatay Array 73.14 323 P **P** **13 20 36.2 0.0**
KKAR Karatay Array 73.14 323 P **P** **13 20 36.2 0.0**
FLTG Flechtingen 73.15 5 *eP* **P** **13 20 36.4 +0.4**
comp=Z,26nm,1.0s,baz=356,slow=5.8
ASSE Asse, Remlinge 73.32 5 *eP* **P** **13 20 38.0 +1.0**
comp=Z,26nm,1.2s,baz=356,slow=5.8
VORD Divnogorie 73.34 347 *eP* **P** **13 20 35.1 -2.1**
VORD pmax pmax
comp=Z,50nm,0.9s
DYA Yadsworthy 73.50 15 *eP* **P** **13 20 38.6 +0.4**
DYA IAmb IAmb 13 20 40.1
comp=Z,15nm,0.9s
CCA1 Carnmenellis 73.54 16 *eP* **P** **13 20 39.2 +0.8**
CCA1 IAmb IAmb 13 20 40.1
comp=Z,13nm,0.7s
CLZ Clausthal 73.59 6 *eP* **P** **13 20 40.0 +1.3**
comp=Z,28nm,0.9s,baz=356,slow=5.8
CLZ Clausthal 73.59 6 P **P** **13 20 40.0 +1.3**
JTS Las Juntas de 73.62 95 LR LR 13 54 12.8
comp=Z,31nm,19.8s,baz=329,slow=37
NGOA Tingoa Renbel 73.70 220 P **P** **13 20 41.5 +1.8**
ARK Arkit 73.77 322 P **P** **13 20 40.5 +0.4**
BUG Bochum--Univer 73.78 8 *eP* **P** **13 20 40.5 +0.7**
comp=Z,34nm,0.9s,baz=356,slow=5.8
BUG Bochum--Univer 73.78 8 P **P** **13 20 40.6 +0.8**
ARSB Arslanbob 73.81 321 P **P** **13 20 40.7 +0.3**
ARSB pmax pmax
comp=Z,20nm,0.8s
ARSB Arslanbob 73.81 321 P **P** **13 20 40.7 +0.3**
ARSB IAmb IAmb 13 20 42.3
comp=Z,20nm,0.8s
GTTG Gottingen 73.86 6 *eP* **P** **13 20 41.4 +1.1**
comp=Z,35nm,0.9s,baz=356,slow=5.8
GTTG Gottingen 73.86 6 P **P** **13 20 41.4 +1.1**
WIMM Wimmelburg 73.97 5 P **P** **13 20 41.7 +0.8**
KASTN Kahler Asten 74.10 7 *eP* **P** **13 20 42.6 +0.9**
comp=Z,15nm,0.9s,baz=356,slow=5.8
RNPP9 Sopachiv 74.10 355 P **P** **13 20 41.4 -0.3**
UCC Uccle 74.17 10 *dP* **P** **13 20 42.5 +0.4**
QIZ Qiongzhong 74.20 281 IAmb IAmb 13 20 58.2
comp=Z,22nm,1.3s
CLL Collm 74.25 4 *i* P **P** **13 20 42.7 +0.2**
CLL *i* *PP **pP** **13 20 54.1 -0.5**
CLL pmax pmax
comp=Z,27nm,1.0s
CLL Collm 74.25 4 P **P** **13 20 42.5 -0.1**
CLL IAmb IAmb 13 20 43.9
comp=Z,22nm,0.9s
CLL Collm 74.25 4 *eP* **P** **13 20 42.9 +0.4**
comp=Z,23nm,0.9s,baz=356,slow=5.8
CLL Collm 74.25 4 P **P** **13 20 43.0 +0.5**
comp=Z,26nm,1.0s
CLL Collm 74.25 4 *i* P **P** **13 20 42.7 +0.2**
comp=Z,27nm,1.0s
CLL *i* pP **pP** **13 20 54.1 -0.5**
CLL *esP* **PcP** **13 20 58.0 +0.7**
NEUB Neuenburg 74.29 5 *eP* **P** **13 20 43.8 +1.0**
comp=Z,45nm,0.8s,baz=356,slow=5.8
NEUB Neuenburg 74.29 5 P **P** **13 20 43.8 +1.0**
MSVF Nonsavu 74.32 201 LR LR 13 45 02.2
comp=Z,171nm,20.9s,baz=91,slow=29
JAY Jayapura 74.36 242 LR LR 13 48 54.8
comp=Z,31nm,21.4s,slow=32
BSTI Sart Tilman 74.49 9 *dP* **P** **13 20 44.9 +0.9**
comp=Z,7.0nm,0.6s
MI28 Mi28,Pidlybu 74.49 354 P **P** **13 20 42.4 -1.6**
MEM Membach 74.50 9 *dP* **P** **13 20 44.2 +0.2**
comp=Z,13nm,0.8s
MEM Membach 74.50 9 P **P** **13 20 44.9 +0.8**
BTNL Ternell 74.54 8 *dP* **P** **13 20 44.6 +0.3**
AK21 Malin Array Si 74.56 353 P **P** **13 20 43.7 -0.6**
SDDR Presa de Saban 74.59 79 P **P** **13 20 45.4 +0.3**
SDDR Presa de Saban 74.59 79 P **P** **13 20 45.8 +0.7**
AK20 Malin Array Si 74.59 353 P **P** **13 20 44.4 -0.2**
AKASG Malin Array Be 74.62 353 P **P** **13 20 44.6 -0.1**
comp=Z,32nm,0.6s,baz=9.2,slow=5.7,SNR=47
comp=Z,32nm,0.6s
AKASG Malin Array Be 74.62 353 *i* P **P** **13 20 44.4 -0.3**
AKASG pmax pmax
comp=Z,20nm,0.4s
AKASG Malin Array Be 74.62 353 P **P** **13 20 44.0 -0.7**
AKBB Malin Array Si 74.62 353 *c iP* **P** **13 20 44.3 -0.5**
AKBB Malin Array Si 74.62 353 P **P** **13 20 44.2 -0.5**
KIEV Kiev 74.63 353 ⇑P **P** **13 20 44.5 -0.2**
KIEV Kiev 74.63 353 P **P** **13 20 44.5 -0.2**
KIEV Kiev 74.63 353 P **P** **13 20 44.2 -0.5**
KIEV Kiev 74.63 353 P **P** **13 20 44.5 -0.2**
KIEV Kiev 74.63 353 P **P** **13 20 44.5 -0.2**
BCLA Clavier 74.63 9 *dP* **P** **13 20 45.1 +0.3**
BGES Gesves 74.64 9 *dP* **P** **13 20 45.3 +0.4**
comp=Z,9.7nm,0.6s
DAV Davao City (W) 74.67 260 LR LR 13 54 54.7
comp=Z,27nm,18.6s,baz=88,slow=37
BMRD Maredsous 74.70 9 *dP* **P** **13 20 45.7 +0.6**
comp=Z,13nm,1.0s
BRG Berggiesshubel 74.72 3 *eP* **P** **13 20 45.9 +0.7**
comp=Z,22nm,1.0s,baz=356,slow=5.8
BRG Berggiesshubel 74.72 3 P **P** **13 20 46.0 +0.7**
BRG Berggiesshubel 74.72 3 *eP* **P** **13 20 45.9 +0.7**
BRG Amp 13 20 47.0
comp=Z,22nm,1.0s
BRG Berggiesshubel 74.72 3 P P 13 20 52.5 +7.2
BRG Amp 13 20 53.9
comp=Z,7.2nm,0.9s
KSH2 Kashi 74.72 318 P **P** **13 20 46.0 +0.3**
KSH2 L L
comp=Z,360nm,24.0s
KSH2 L L
comp=Z,190nm,15.8s
KSH2 L L
comp=Z,430nm,20.6s
KSP Ksiaz 74.81 2 *eP* **P** **13 20 46.8 +1.0**
MOX Moxa 74.85 5 *eP* **P** **13 20 46.8 +0.8**
comp=Z,40nm,1.1s,baz=356,slow=5.8
MOX *eL* L 13 50 41.4
comp=Z,58nm,21.2s
MOX Moxa 74.85 5 P **P** **13 20 46.6 +0.5**
BAIF Baives 74.88 10 *eP* **P** **13 20 46.7 +0.5**
BAIF pmax pmax
comp=Z,11nm,0.6s
DOU Dourbes 74.88 10 *dP* **P** **13 20 46.8 +0.5**
comp=Z,7.6nm,1.0s
RCHB Rochefort 74.89 9 *dP* **P** **13 20 46.8 +0.5**
comp=Z,6.9nm,0.9s
RCHB Rochefort 74.89 9 P **P** **13 20 46.9 +0.6**
GIVF Givet 74.90 9 *eP* **P** **13 20 46.5 +0.1**
GIVF pmax pmax
comp=Z,21nm,1.0s
HSKC Hora Svate Kat 74.96 4 *eP* **P** **13 20 47.6 +0.8**
HSKC Hora Svate Kat 74.96 4 P **P** **13 20 47.6 +0.8**
JSA Saint Aubin 74.97 14 *eP* **P** **13 20 47.2 +0.5**
JSA IAmb IAmb 13 20 48.3
comp=Z,19nm,0.7s
PLN Plauen 75.03 4 *eP* **P** **13 20 47.9 +0.7**
comp=Z,5.7nm,1.0s,baz=356,slow=5.8
CHVC Chvalec 75.06 2 *eP* **P** **13 20 48.0 +0.7**
CHVC Chvalec 75.06 2 *eP* **P** **13 20 48.0 +0.7**
TNS Taunus Mts 75.08 7 *eP* **P** **13 20 48.3 +0.8**
comp=Z,20nm,0.9s,baz=356,slow=5.8
TNS Taunus Mts 75.08 7 P **P** **13 20 48.5 +1.0**
OSTC Ostas 75.09 2 *eP* **P** **13 20 48.6 +1.1**
OSTC Ostas 75.09 2 *eP* **P** **13 20 48.6 +1.1**
TANN Tannenbergstha 75.12 4 *eP* **P** **13 20 48.5 +0.8**
comp=Z,8.0nm,0.9s,baz=356,slow=5.8
TANN Tannenbergstha 75.12 4 P **P** **13 20 48.5 +0.8**
UPC Upice 75.14 2 *eP* **P** **13 20 48.5 +0.8**
UPC Upice 75.14 2 *eP* **P** **13 20 48.5 +0.8**
DPC Dobruska-Polom 75.30 2 *eP* **P** **13 20 49.8 +1.1**
DPC *e*PP **sP** **13 21 04.2 -1.2**
DPC Dobruska-Polom 75.30 2 *eP* **P** **13 20 49.8 +1.1**
DPC *epP* **sP** **13 21 04.2 -1.2**
DPC Dobruska-Polom 75.30 2 P **P** **13 20 49.5 +0.8**
comp=Z,42nm,1.1s
DPC Dobruska-Polom 75.30 2 P **P** **13 20 49.9 +1.1**
OJC Ojcow 75.45 359 *eP* **P** **13 20 50.3 +0.8**
OJC Ojcow 75.45 359 P **P** **13 20 50.1 +0.6**
OJC Ojcow 75.45 359 P **P** **13 20 50.1 +0.6**
OJC Ojcow 75.45 359 P **P** **13 20 50.2 +0.6**
comp=Z,15nm,0.9s
OJC Ojcow 75.45 359 P **P** **13 20 50.1 +0.6**
WLF Walferdange 75.45 9 P **P** **13 20 51.4 +1.9**
WLF pmax pmax
comp=Z,31nm,1.1s
WLF Walferdange 75.45 9 *dP* **P** **13 20 50.8 +1.2**
comp=Z,18nm,1.0s
WLF Walferdange 75.45 9 *eP* **P** **13 20 50.9 +1.3**
comp=Z,35nm,1.2s,baz=356,slow=5.8
WLF Walferdange 75.45 9 P **P** **13 20 50.9 +1.3**
LUBAR Lubar, Ukraine 75.49 354 P **P** **13 20 48.6 -1.2**
PRU Pruhonice 75.62 3 *eP* **P** **13 20 51.1 +0.6**
PRU *e*PP **PcP** **13 21 04.9 +1.7**
PRU MLR MLR
comp=Z,200nm,24.4s
PRU Pruhonice 75.62 3 *eP* **P** **13 20 51.1 +0.6**
PRU *epP* **PcP** **13 21 04.9 +1.7**
PRU AMS AMS 14 01 10.0
comp=Z,200nm,24.4s
PRU Pruhonice 75.62 3 P **P** **13 20 51.3 +0.8**
FLN La Foliniere 75.62 13 *eP* **P** **13 20 50.1 -0.4**
FLN pmax pmax
comp=Z,8.0nm,0.5s
ROSF Rostrenen 75.64 15 *eP* **P** **13 20 51.1 +0.5**
ROSF pmax pmax
comp=Z,28nm,1.2s
LSA Lhasa 75.71 301 ⇑ *iP* **P** **13 20 50.0 -1.9**
LSA pmax pmax
comp=Z,40nm,0.8s
LSA Lhasa 75.71 301 P **P** **13 20 52.9 +0.9**
SLVN Son La 75.71 287 IAmb IAmb 13 20 53.6
comp=Z,17nm,0.8s
GRA3 Grafenberg Arr 75.71 5 P **P** **13 20 52.6 +1.6**
STEB Steborice 75.73 1 *eP* **P** **13 20 51.7 +0.5**
GRF Grafenberg Arr 75.78 5 *eP* **P** **13 20 52.6 +1.2**
comp=Z,18nm,0.6s,baz=356,slow=5.8
GRF *eL* L 13 50 51.3
comp=Z,41nm,19.5s
SGMF Saint Gilles 75.83 15 *eP* **P** **13 20 52.1 +0.4**
SGMF pmax pmax
comp=Z,16nm,0.7s
LDF La Druitiere 75.83 13 *eP* **P** **13 20 51.7 0.0**
LDF pmax pmax
comp=Z,16nm,1.0s
OKC Ostrava-Krasne 75.83 1 *eP* **P** **13 20 52.7 +1.0**
OKC *e*PP **sP** **13 21 06.9 -1.5**
OKC Ostrava-Krasne 75.83 1 *eP* **P** **13 20 52.7 +1.0**
OKC *epP* **sP** **13 21 06.9 -1.5**
OKC Ostrava-Krasne 75.83 1 P **P** **13 20 52.6 +0.8**
DRK Karamyk 75.86 321 P **P** **13 20 53.7 +1.2**
MORC Moravsky Berou 75.89 1 ⇑P **P** **13 20 52.8 +0.7**
MORC Moravsky Berou 75.89 1 P **P** **13 20 52.8 +0.7**
MORC Moravsky Berou 75.89 1 P **P** **13 20 52.3 +0.3**
MORC IAmb IAmb 13 20 53.7
comp=Z,18nm,0.8s

MORC Moravsky Berou 75.89 1 *eP* **P 13 20 52.4 +0.3**
MORC Moravsky Berou 75.89 1 P **P 13 20 52.8 +0.7**
GRR Gorron 75.94 13 *eP* **P 13 20 52.5 +0.2**
GRR pmax pmax
comp=Z,17nm,0.7s
GRB4 Grafenberg Arr 76.02 5 P **P 13 20 54.0 +1.1**
GRB1 Grafenberg Arr 76.10 5 P **P 13 20 54.8 +1.5**
GRB3 Grafenberg Arr 76.16 5 P **P 13 20 54.7 +1.1**
ZVC Zvikov 76.16 3 *eP* **P 13 20 54.6 +1.0**
ZVC *ep*P **sP 13 21 08.4 -1.8**
GRB2 Grafenberg Arr 76.22 5 P **P 13 20 52.9 -1.1**
STHS Stebnicka Huta 76.24 358 *eP* **P 13 20 54.7 +0.6**
STHS pmax pmax
comp=Z,34nm,0.7s
STHS Stebnicka Huta 76.24 358 *eP* **P 13 20 54.7 +0.6**
NIE Niedzica 76.25 359 *eP* **P 13 20 55.2 +1.1**
NIE Niedzica 76.25 359 P **P 13 20 55.1 +0.9**
comp=Z,10nm,1.0s
MAUC Maruska 76.30 1 *eP* **P 13 20 55.3 +0.8**
TREC Trest 76.34 2 P **P 13 20 55.0 +0.4**
VRAC Vranov 76.35 2 ⇓P **P 13 20 55.4 +0.7**
VRAC Vranov 76.35 2 P **P 13 20 55.5 +0.8**
comp=Z,30nm,0.9s,baz=3.4,slow=6.3,SNR=22
comp=Z,30nm,0.9s
VRAC Vranov 76.35 2 P **P 13 20 55.6 +0.9**
VRAC Vranov 76.35 2 *eP* **P 13 20 55.1 +0.4**
VRAC Vranov 76.35 2 P **P 13 20 55.6 +0.9**
GRB5 Grafenberg Arr 76.38 5 P **P 13 20 55.7 +0.9**
WET Wettzell 76.40 4 *eP* **P 13 20 55.9 +0.9**
comp=Z,15nm,1.1s,baz=356,slow=5.8
WET Wettzell 76.40 4 P **P 13 20 55.9 +0.9**
KHC Kasperske Hory 76.44 4 *eP* **P 13 20 56.5 +1.2**
KHC *e**PP **sP 13 21 10.3 -1.6**
KHC Kasperske Hory 76.44 4 *eP* **P 13 20 56.5 +1.2**
KHC *ep*P **sP 13 21 10.3 -1.6**
KHC Kasperske Hory 76.44 4 P **P 13 20 56.2 +0.9**
comp=Z,363nmcomp=Z,32nm,1.1s
LANS Liptovska Anna 76.52 360 *eP* **P 13 20 56.9 +1.2**
LANS pmax pmax
comp=Z,19nm,0.7s
LANS Liptovska Anna 76.52 360 *eP* **P 13 20 56.9 +1.2**
KRUC Moravsky 76.59 2 P **P 13 20 56.6 +0.6**
KRUC Moravsky 76.59 2 *eP* **P 13 20 56.4 +0.4**
KRUC Moravsky 76.59 2 P **P 13 20 56.8 +0.8**
GRC3 Grafenberg Arr 76.60 5 P **P 13 20 57.0 +1.0**
CLF Chambon-Foret 76.68 11 P **P 13 20 58.0 +1.5**
KOLS Kolonicke sedl 76.70 358 *eP* **P 13 20 58.0 +1.3**
KOLS pmax pmax
comp=Z,16nm,0.7s
KOLS Kolonicke sedl 76.70 358 P **P 13 20 58.1 +1.3**
KOLS Kolonicke sedl 76.70 358 *eP* **P 13 20 58.0 +1.3**
GEC2 GERESS Array S 76.73 4 IAmb IAmb 13 20 58.6
comp=Z,15nm,0.9s
GEC2 GERESS Array S 76.73 4 *eP* **P 13 20 57.6 +0.6**
comp=Z,15nm,0.9s,baz=356,slow=5.8
GERES GERESS Array B 76.73 4 P **P 13 20 57.5 +0.6**
comp=Z,8.6nm,0.7s,baz=343,slow=4.2,SNR=47
comp=Z,8.6nm,0.7s
GERES GERESS Array B 76.73 4 P **P 13 20 57.1 +0.1**
CKRC Cesky Krumlov 76.78 3 *eP* **P 13 20 57.6 +0.5**
CKRC MLR MLR
comp=Z,100nm,23.6s
CKRC Cesky Krumlov 76.78 3 *eP* **P 13 20 57.6 +0.5**
CKRC AMS AMS 14 01 40.0
comp=Z,100nm,23.6s
CDF Champ du Feu 76.79 8 *eP* **P 13 20 57.5 +0.2**
CDF pmax pmax
comp=Z,9.0nm,0.7s
JAVC Velka Javorina 76.81 1 *eP* **P 13 20 59.1 +1.7**
JAVC Velka Javorina 76.81 1 P **P 13 20 59.4 +2.1**
GAR Garm 76.83 321 P **P 13 20 58.0 +0.3**
KMPD K-Podol'skiy 76.92 355 P **P 13 20 57.1 -0.8**
BFO Black Forest 76.95 7 P **P 13 20 58.4 +0.3**
BFO pmax pmax
comp=Z,9.0nm,0.6s
BFO Black Forest 76.95 7 P **P 13 20 58.4 +0.3**
BFO IAmb IAmb 13 20 59.1
comp=Z,9.3nm,0.6s
BFO Black Forest 76.95 7 *eP* **P 13 20 58.7 +0.5**
comp=Z,7.4nm,0.7s,baz=356,slow=5.8
ECH Echery 76.98 8 P **P 13 20 58.9 +0.6**
ECH Echery 76.98 8 IAmb IAmb 13 20 59.9
comp=Z,21nm,0.9s
ECH Echery 76.98 8 P **P 13 20 59.1 +0.8**
ECH Echery 76.98 8 P **P 13 20 59.0 +0.8**
HAU Haudompre 77.12 9 *eP* **P 13 20 59.3 +0.2**
HAU pmax pmax
comp=Z,16nm,0.8s
VYHS Vyhne 77.18 0 *eP* **P 13 21 00.1 +0.7**
VYHS pmax pmax
comp=Z,32nm,1.1s
VYHS Vyhne 77.18 0 P **P 13 21 00.6 +1.2**
VYHS Vyhne 77.18 0 *eP* **P 13 21 00.1 +0.7**
KECS Kecovo 77.18 359 P **P 13 21 00.5 +1.1**
SORM Soroca 77.23 354 ⇑P **P 13 20 59.4 -0.2**
SORM Soroca 77.23 354 P **P 13 20 59.4 -0.2**
SORM Soroca 77.23 354 P **P 13 20 59.0 -0.6**
MODS Modra-Piesok 77.29 1 *eP* **P 13 21 01.6 +1.6**
MODS pmax pmax
comp=Z,50nm,0.8s
MODS Modra-Piesok 77.29 1 P **P 13 21 01.6 +1.6**
MODS Modra-Piesok 77.29 1 *eP* **P 13 21 01.6 +1.6**
FUR Furstenfeldbru 77.31 5 *eP* **P 13 21 01.4 +1.3**
comp=Z,33nm,0.9s,baz=356,slow=5.8
HINF Hinteralfeld 77.35 8 *eP* **P 13 21 00.4 0.0**
HINF pmax pmax
comp=Z,11nm,0.9s
ABAH Abaujker 77.36 358 P **P 13 21 01.6 +1.3**
TRPA Tarpa 77.50 358 P **P 13 21 02.2 +1.1**
SLE Schleitheim 77.53 7 P **P 13 21 01.8 +0.4**
WINA Alland / Wiene 77.54 2 *i* P **P 13 21 02.5 +1.1**
SNR=8.1
CHGR Chuyangaron 77.55 322 *c i* P **P 13 21 01.7 0.0**
CHGR pmax pmax
comp=Z,170nm,0.9s
CHGR Chuyangaron 77.55 322 P **P 13 21 01.9 +0.2**
LOR Lormes 77.61 10 *eP* **P 13 21 02.0 +0.2**
LOR pmax pmax
comp=Z,15nm,0.9s
MANEM Manem 77.61 320 IAmb IAmb 13 21 04.8
comp=Z,95nm,1.0s
CONA Conrad Observa 77.71 2 *i* P **P 13 21 03.5 +1.0**
comp=Z,25nm,0.8s,SNR=18
MOA Molln 77.75 3 *i* P **P 13 21 03.4 +0.8**
comp=Z,10nm,1.2s
MOA Molln 77.75 3 P **P 13 21 03.3 +0.7**
PSZ Piszkesteto 77.75 359 ⇑P **P 13 21 03.3 +0.7**
PSZ Piszkesteto 77.75 359 P **P 13 21 03.9 +1.2**
PSZ Piszkesteto 77.75 359 P **P 13 21 04.0 +1.4**
MFF Saint Martin d 77.78 13 *eP* **P 13 21 03.2 +0.4**
MFF pmax pmax
comp=Z,121nm,0.8s
BOURR Bourrignon 77.80 8 P **P 13 21 04.2 +1.2**
RJOB Jochberg 77.81 4 P **P 13 21 03.9 +0.9**
BIOA Bad Ischl, Aus 77.89 4 *i* P **P 13 21 04.2 +0.8**
comp=Z,5.6nm,0.6s
BUR08 Bucovina Ar. S 77.90 356 IAmb IAmb 13 21 05.1
comp=Z,15nm,0.8s
BURAR Bucovina Array 77.92 356 ⇑P **P 13 21 04.1 +0.4**
BURAR Bucovina Array 77.92 356 P **P 13 21 04.2 +0.5**
RONA Rosalia, Austr 77.95 2 *i* P **P 13 21 04.9 +1.2**
comp=Z,18nm,1.1s,SNR=6.7
RETA Reutte 77.95 6 *i* P **P 13 21 04.8 +1.0**
comp=Z,3.5nm,0.5s
SOP Sopron 77.97 2 P **P 13 21 05.2 +1.4**
SIJI Sorong 78.00 251 LR LR 13 52 14.1
comp=Z,28nm,18.8s,baz=354,slow=33
AVF Avril sur Loir 78.03 11 *eP* **P 13 21 04.1 0.0**
AVF pmax pmax
comp=Z,12nm,0.6s
DAVA Damuels 78.10 6 *i* P **P 13 21 05.7 +1.0**
comp=Z,2.0nm,0.4s
LESA Schwarzleotal 78.11 4 *i* P **P 13 21 05.5 +0.8**
comp=Z,8.9nm,0.6s,SNR=9.7
MOTA Moosalm 78.11 5 *eP* **P 13 21 05.5 +0.7**
comp=Z,34nm,1.2s,SNR=11
WATA Walderalm 78.15 5 *i* P **P 13 21 05.8 +0.9**
comp=Z,19nm,0.6s,SNR=6.9
BGF Bois d'Agland 78.20 11 *eP* **P 13 21 05.2 +0.1**
BGF pmax pmax
comp=Z,15nm,1.0s
SMF Signal de Mont 78.22 11 *eP* **P 13 21 05.2 0.0**
SMF pmax pmax
comp=Z,21nm,1.0s
WTTA Wattenberg 78.22 5 *i* P **P 13 21 06.3 +0.9**
comp=Z,32nm,0.7s,SNR=10
WTTA Wattenberg 78.22 5 P **P 13 21 06.6 +1.2**
SQTA Sankt Quirin 78.24 5 *i* P **P 13 21 06.4 +0.9**
comp=Z,32nm,0.7s,SNR=14
IMP Imphal 78.27 296 *eP* **P 13 21 05.6 -0.3**
IMP IAmb IAmb 13 21 07.0
comp=Z,14nm,0.6s
ERBR Yeremizino-Bor 78.31 345 *eP* **P 13 21 06.1 +0.4**
ERBR pmax pmax
comp=Z,77nm,0.9s
ARSA Arzberg 78.38 2 IAmb IAmb 13 21 08.3
comp=Z,24nm,1.0s
ARSA Arzberg 78.38 2 *i* P **P 13 21 07.3 +1.2**
comp=Z,19nm,0.9s,SNR=11
ARSA Arzberg 78.38 2 P **P 13 21 07.5 +1.3**
BNALP Bannalp 78.41 7 P **P 13 21 07.6 +1.2**
FETA Feichten 78.42 6 *i* P **P 13 21 07.5 +1.0**
comp=Z,26nm,1.1s,SNR=12
CABF La Chapelle 78.48 9 *eP* **P 13 21 07.3 +0.6**
CABF pmax pmax
comp=Z,18nm,0.9s
KBA Koelnbreinsper 78.49 4 *i* P **P 13 21 08.3 +1.4**
comp=Z,25nm,0.6s,SNR=23
KBA Koelnbreinsper 78.49 4 P **P 13 21 08.3 +1.4**
MPLH Magyarpolny 78.50 1 P **P 13 21 08.3 +1.6**
GOF Gofitskoye 78.53 343 *ceP* **P 13 21 07.3 +0.4**
BIZ Bicaz 78.56 355 ⇑P **P 13 21 08.2 +1.1**
MORE Moreh 78.56 296 IAmb IAmb 13 21 08.6
comp=Z,12nm,0.5s
GIMEL St. Georges / 78.57 9 P **P 13 21 08.4 +1.2**
DAVOX Davos/Dischmat 78.60 6 P **P 13 21 08.6 +1.1**
comp=Z,14nm,0.6s,baz=350,slow=4.6,SNR=16
DAVOX LR LR 13 58 09.5
comp=Z,19nm,19.0s,baz=260,slow=37
comp=Z,14nm,0.6s
SHL Shillong 78.73 298 IAmb IAmb 13 21 08.2
comp=Z,18nm,0.7s
SHL Shillong 78.73 298 *eP* **P 13 21 07.5 -1.1**
SHL IAmb IAmb 13 21 09.8
comp=Z,6.8nm,0.5s
ABTA Abfaltersbach 78.78 5 *i* P **P 13 21 09.7 +1.3**
comp=Z,25nm,1.2s,SNR=6.6
FUORN Ofenpass-Fuorn 78.79 6 IAmb IAmb 13 21 11.0
comp=Z,36nm,1.3s
FUORN Ofenpass-Fuorn 78.79 6 P **P 13 21 10.1 +1.5**
SENIN Lac Senin/Sane 78.83 8 IAmb IAmb 13 21 13.4
comp=Z,6.5nm,0.8s
DRGR 78.83 357 ⇑P **P 13 21 09.3 +0.6**
DRGR 78.83 357 P **P 13 21 09.3 +0.6**
DRGR 78.83 357 P **P 13 21 09.3 +0.6**
TUE Stuetta 78.88 7 IAmb IAmb 13 21 11.2
comp=Z,54nm,2.0s
TUE Stuetta 78.88 7 P **P 13 21 10.3 +1.3**
CJR Cluj-Napoca 78.89 357 ⇓P **P 13 21 09.8 +0.9**
CJR Cluj-Napoca 78.89 357 P **P 13 21 09.8 +0.9**
SHAA Shahritus 78.89 322 IAmb IAmb 13 21 10.7
comp=Z,92nm,0.9s
MARR Marisel-Cluj 78.94 357 ⇑P **P 13 21 09.9 +0.6**
SOKA Soboth 78.94 3 *i* P **P 13 21 10.2 +0.9**
comp=Z,44nm,1.2s,SNR=30
MYKA Terra Mystica 78.95 4 *i* P **P 13 21 09.6 +0.4**
comp=Z,11nm,0.7s,SNR=7.1
TESR Tescani 78.95 355 ⇓P **P 13 21 09.6 +0.4**
TESR Tescani 78.95 355 P **P 13 21 09.1 -0.1**
OBKA Obir 79.10 3 *i* P **P 13 21 11.0 +0.9**
comp=Z,84nm,0.9s,SNR=43
OBKA Obir 79.10 3 P **P 13 21 11.2 +1.0**
PRED Cave del Predi 79.13 4 IAmb IAmb 13 21 12.1
comp=Z,24nm,1.3s
ONER Baraj Valea Uz 79.14 355 ⇑P **P 13 21 11.3 +1.0**
GROS Grobnik 79.17 2 *i* P **P 13 21 11.2 +0.7**
EVN Everest 79.27 303 P **P 13 21 12.4 +0.4**
RJF Les Rejaudoux 79.28 12 *eP* **P 13 21 11.1 +0.1**
RJF pmax pmax
comp=Z,51nm,1.0s
ROBS Robic 79.33 4 *i* P **P 13 21 11.2 0.0**
SIRR Siria 79.38 358 ⇑P **P 13 21 12.5 +0.9**
OZUR 79.41 355 ⇑P **P 13 21 12.9 +1.1**
TURR Turia 79.44 355 ⇑P **P 13 21 12.7 +0.7**
MORH Mrgy, Hungar 79.46 0 ⇓P **P 13 21 12.7 +0.7**
MORH Mrgy, Hungar 79.46 0 P **P 13 21 12.6 +0.6**
LFF La Frestale 79.53 13 *eP* **P 13 21 12.8 +0.4**
LFF pmax pmax
comp=Z,65nm,0.6s
DOPR Dopca 79.56 355 ⇑P **P 13 21 13.9 +1.3**
SABO M.te Sabotino 79.59 4 IAmb IAmb 13 21 13.8
comp=Z,15nm,0.9s
VRI Vrincioaia 79.59 354 ⇑P **P 13 21 13.3 +0.6**
VRI Vrincioaia 79.59 354 P **P 13 21 13.3 +0.6**
VRI Vrincioaia 79.59 354 P **P 13 21 13.4 +0.6**
PLOR Plostina 79.61 355 ⇑P **P 13 21 13.5 +0.6**
PLOR Plostina 79.61 355 P **P 13 21 13.5 +0.6**
LPL La Plagne 79.62 9 *eP* **P 13 21 14.2 +1.0**
LPL pmax pmax
comp=Z,7.0nm,0.8s
LPG La Plagne 79.64 9 *eP* **P 13 21 14.5 +1.1**
LPG pmax pmax
comp=Z,5.0nm,0.8s
COVR Voineasa-Covas 79.64 355 ⇓P **P 13 21 14.5 +1.4**
SSB Saint Sauveur 79.65 10 P **P 13 21 10.5 -2.6**
KVAR Kislovodsk Arr 79.66 340 P **P 13 21 14.6 +1.3**
comp=Z,7.5nm,0.6s,baz=29,slow=10,SNR=4.1
KVAR LR LR 14 01 11.7
comp=Z,36nm,18.2s,baz=284,slow=39
comp=Z,7.5nm,0.6s
KIV Kislovodsk 79.66 343 ⇑P **P 13 21 14.3 +1.0**
KIV Kislovodsk 79.66 343 *eP* **P 13 21 13.9 +0.6**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV MLR MLR
comp=Z,52nm,19.0s
KIV Kislovodsk 79.66 343 P **P 13 21 13.0 -0.2**
KIV Kislovodsk 79.66 343 P **P 13 21 14.2 +0.9**
KIV Kislovodsk 79.66 343 P **P 13 21 14.3 +1.0**
MAK Makhachkala 79.71 339 *eP* **P 13 21 13.9 +0.5**
MAK *e* 13 24 09.3
MAK *eS* **S 13 31 13.5 +0.9**
MAK *eSS* **SS 13 36 26.7 +6.4**
MAK pmax pmax
comp=Z,244nm,1.3s
MAK MLR MLR
comp=Z,394nm,19.0s
CAF Calviac 79.72 12 *eP* **P 13 21 13.7 +0.2**
CAF pmax pmax
comp=Z,10.0nm,0.9s
SAHR Sahastru 79.73 355 ⇑P **P 13 21 14.8 +1.2**
KBZ Khabaz 79.85 343 P **P 13 21 15.1 +1.0**
comp=Z,34nm,0.9s,baz=329,slow=3.3,SNR=57
KBZ LR LR 14 03 18.3
comp=Z,47nm,19.0s,baz=16,slow=41
comp=Z,34nm,0.9s
KBZ Khabaz 79.85 343 *c i* P **P 13 21 14.9 +0.8**
KBZ pmax pmax
comp=Z,38nm,0.9s
SHA1 Shidzhatmaz 79.88 343 ⇓*eP* **P 13 21 14.9 +0.3**
NCK Nalchik 79.95 342 ⇑*eP* **P 13 21 15.7 +1.0**
NCK pmax pmax
comp=Z,78nm,1.0s
MLR Muntele Rosu 80.01 355 ⇑P **P 13 21 16.2 +1.1**
MLR Muntele Rosu 80.01 355 P **P 13 21 16.2 +1.1**
comp=Z,4.5nm,0.5s,baz=43,slow=2.4,SNR=6.6
MLR LR LR 13 57 32.9
comp=Z,60nm,21.6s,baz=10,slow=36
comp=Z,4.5nm,0.5s
MLR Muntele Rosu 80.01 355 IAmb IAmb 13 21 17.3
comp=Z,28nm,1.4s
MLR Muntele Rosu 80.01 355 P **P 13 21 16.1 +0.9**
BZS Buzias 80.03 358 ⇑P **P 13 21 15.7 +0.6**
BZS Buzias 80.03 358 P **P 13 21 15.7 +0.6**
BZS Buzias 80.03 358 P **P 13 21 15.8 +0.6**
VIVF Saint-Julien-l 80.08 10 *eP* **P 13 21 15.8 +0.4**
VIVF pmax pmax
comp=Z,5.0nm,0.7s
VOIR 80.11 356 ⇓P **P 13 21 16.6 +0.9**
VOIR 80.11 356 P **P 13 21 16.5 +0.9**
VOIR 80.11 356 P **P 13 21 16.5 +0.8**
BOJS Bojanci 80.12 3 *i* P **P 13 21 16.1 +0.6**
ORIF Oris-en-Rattie 80.14 9 *eP* **P 13 21 16.4 +0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.6s
KLP Kalpa 80.18 312 *eP* **P 13 21 16.8 +0.2**
KLP IAmb IAmb 13 21 19.0
comp=Z,65nm,0.8s
ARR Arges 80.19 356 ⇓P **P 13 21 16.7 +0.6**
ARR Arges 80.19 356 P **P 13 21 17.1 +1.0**
CFR Carcaliu 80.19 353 ⇑P **P 13 21 16.3 +0.4**
CFR Carcaliu 80.19 353 P **P 13 21 16.3 +0.4**
GZR Gura Zlata 80.23 357 ⇑P **P 13 21 17.2 +0.9**
GZR Gura Zlata 80.23 357 P **P 13 21 17.1 +0.9**
DHRM DHARAMSHALA 80.39 314 *eP* **P 13 21 17.8 +0.3**
DHRM IAmb IAmb 13 21 21.4
comp=Z,29nm,0.5s
MBDF Montbardon 80.41 9 *eP* **P 13 21 18.3 +1.0**
MBDF pmax pmax
comp=Z,11nm,0.6s
NIL Nilore 80.42 317 P **P 13 21 17.8 +0.4**
NIL pmax pmax
comp=Z,111nm,1.2s
NIL Nilore 80.42 317 P **P 13 21 17.8 +0.4**
NIL Nilore 80.42 317 P **P 13 21 18.2 +0.8**
CHTO Chiang Mai 80.48 289 P **P 13 21 17.4 -0.5**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 80.48 289 P **P 13 21 17.4 -0.5**
CHTO IAmb IAmb 13 21 17.8
comp=Z,7.8nm,0.8s
TPGR Topolog 80.49 353 ⇑P **P 13 21 18.3 +0.6**
SOC Sochi 80.51 345 *eP* **P 13 21 17.2 -0.5**
SOC *e* 13 24 19.2
SOC *eS* **S 13 31 17.8 -3.2**
SOC *eSS* **SS 13 36 30.0 -2.1**
SOC *eSSS* SSS 13 39 56.9
SOC pmax pmax
comp=Z,40nm,0.8s
VSLR Vesyoloye 80.58 345 ⇓*eP* **P 13 21 18.8 +0.7**
VSLR pmax pmax
comp=Z,32nm,1.2s
DLV Lat 80.64 277 P **P 13 21 18.3 -0.7**
DLV IAmb IAmb 13 21 20.2
comp=Z,25nm,1.1s
HERR Herculane 80.75 358 ⇑P **P 13 21 19.4 +0.4**
CMAR Chiang Mai Arr 80.77 289 P **P 13 21 19.4 0.0**
comp=Z,28nm,1.0s,baz=18,slow=5.4,SNR=88
CMAR LR LR 14 00 24.2
comp=Z,30nm,18.9s,baz=30,slow=38
comp=Z,28nm,1.0s
CMAR Chiang Mai Arr 80.77 289 P **P 13 21 19.0 -0.5**
MDVR Moldovita 80.87 358 ⇑P **P 13 21 20.1 +0.5**
TIRR Tirgusor 80.89 353 ⇑P **P 13 21 20.3 +0.6**
TIRR Tirgusor 80.89 353 P **P 13 21 20.3 +0.6**
TIRR Tirgusor 80.89 353 P **P 13 21 20.1 +0.4**
PGAV Gavieira, Arco 80.94 20 *eP* **P 13 21 21.4 +1.3**
PGAV *i* IAmb IAmb 13 21 22.7
comp=Z,40nm,1.2s
PGAV *etx* tx 13 21 36.4
ISO Isola 80.97 9 P **P 13 21 19.1 -1.2**
SMLA Simla 80.99 312 *eP* **P 13 21 20.6 +0.1**
SJPF Ste Jean 81.05 15 *eP* **P 13 21 21.5 +0.9**
SJPF pmax pmax
comp=Z,8.0nm,0.9s
AKT Akhty 81.08 339 *eP* **P 13 21 21.5 +0.5**
AKT *e**PP **pP 13 21 34.8 +1.7**
AKT *e**SP **sP 13 21 39.8 +2.1**
AKT *ePPP* PPP 13 26 15.6
AKT pmax pmax
comp=Z,64nm,0.8s
ZCCA Zocca 81.09 6 IAmb IAmb 13 22 02.6
comp=Z,33nm,1.4s
NPW Naypyitaw 81.23 292 P **P 13 21 21.6 -0.3**
BRDH Bariadhala 81.23 297 LR LR 14 04 07.9
comp=Z,181nm,18.1s,baz=145,slow=41
VLC Villacollemand 81.25 6 P **P 13 21 19.9 -1.8**
KBL Kabul 81.25 320 P **P 13 21 21.2 -0.9**
KBL pmax pmax
comp=Z,50nm,1.0s
KBL Kabul 81.25 320 P **P 13 21 21.1 -0.9**
KBL Kabul 81.25 320 P **P 13 21 21.1 -0.9**
SBF Sospel 81.32 8 *eP* **P 13 21 22.4 +0.3**
SBF pmax pmax
comp=Z,18nm,0.8s
ESCA l'Escarene 81.35 8 P **P 13 21 22.6 +0.4**
EPF Esparros 81.36 14 *eP* **P 13 21 22.0 -0.3**
EPF pmax pmax
comp=Z,44nm,0.6s
ETSF Etsaut 81.36 14 *eP* **P 13 21 23.2 +0.8**
ETSF pmax pmax
comp=Z,11nm,0.7s
DZM Mont Dzumac 81.38 210 LR LR 13 51 43.8
comp=Z,129nm,20.9s,baz=296,slow=31
PBRG Braganca 81.39 19 *eP* **P 13 21 23.6 +1.1**
PBRG *i* IAmb IAmb 13 21 38.0
comp=Z,23nm,1.7s
PBRG *etx* tx 13 21 38.2
TBLG Delisi 81.45 341 P **P 13 21 22.8 0.0**
POLO Lamas de Olo 81.60 20 *eP* **P 13 21 25.0 +1.3**
POLO *i* IAmb IAmb 13 21 26.1
comp=Z,18nm,2.1s
POLO *etx* tx 13 21 38.6
TRLG Trialeti 81.75 341 P **P 13 21 26.6 +2.0**
CEST Esterri de Car 81.90 13 IAmb IAmb 13 21 42.3
comp=Z,22nm,1.2s
MVO Moncorvo 81.95 20 *eP* **P 13 21 26.8 +1.3**
MVO *etx* tx 13 21 41.0
MVO *i* IAmb IAmb 13 21 42.9
comp=Z,31nm,1.4s
EPOS Posof 82.04 342 P **P 13 21 27.3 +1.3**
NEF NEVSHA 82.15 354 P **P 13 21 27.1 +0.7**
PLVB Pleven 82.17 356 ⇓P **P 13 21 27.1 +0.6**
PVIS Viseu 82.21 20 *eP* **P 13 21 28.2 +1.3**
PVIS *etx* tx 13 21 42.2
SZH Strazhitsa 82.23 355 P **P 13 21 26.8 0.0**
MPEP Malo Peshtene 82.23 356 P **P 13 21 26.7 -0.2**
PRD Provadia 82.25 354 P **P 13 21 27.6 +0.7**
TOLI2 Tolitoli 82.27 261 P **P 13 21 27.4 0.0**
FDMO Fiordimonte 82.51 4 IAmb IAmb 13 21 29.9
comp=Z,8.7nm,0.7s
MTE Manteigas 82.59 20 *eP* **P 13 21 30.1 +1.3**
MTE *i* IAmb IAmb 13 21 31.4
comp=Z,58nm,1.1s
MTE *etx* tx 13 21 44.0
MTE *eLR* LR 13 50 49.7
MTE *i* IAMs_20 IAMs_20 13 57 08.5
comp=Z,54nm,22.0s
MTE Manteigas 82.59 20 P **P 13 21 30.4 +1.6**
CASP Castiglione de 82.64 6 IAmb IAmb 13 21 31.9
comp=Z,12nm,0.9s
NRCA Norcia 82.71 4 IAmb IAmb 13 21 31.5
comp=Z,13nm,0.8s
PCAS Casmilo, Conde 82.73 21 *eP* **P 13 21 30.8 +1.3**
PCAS *i* IAmb IAmb 13 21 32.0
comp=Z,81nm,1.2s
BLSH Balsha 82.75 357 P **P 13 21 29.7 +0.1**
PGF Pioggiola 82.75 7 *eP* **P 13 21 30.2 +0.5**
PGF pmax pmax
comp=Z,21nm,0.7s
JMB Yambol 82.97 354 P **P 13 21 31.1 +0.4**
GNI Garni 82.97 340 P **P 13 21 32.3 +1.4**
comp=Z,16nm,0.6s,baz=157,slow=3.7,SNR=6.4
GNI LR LR 14 05 19.1
comp=Z,108nm,18.1s,baz=25,slow=41
comp=Z,16nm,0.6s
GNI Garni 82.97 340 *c i* P **P 13 21 32.4 +1.4**
GNI pmax pmax
comp=Z,15nm,0.8s
GNI Garni 82.97 340 P **P 13 21 30.9 -0.1**
DIGO Kars 82.98 341 P **P 13 21 32.7 +1.6**
VTS Vitosha 82.99 357 P **P 13 21 30.9 -0.1**
KTUT Trabzon 83.04 344 ⇑P **P 13 21 33.0 +2.0**
SDV Santo Domingo 83.05 85 LR LR 14 00 34.3
comp=Z,32nm,19.2s,baz=300,slow=37
PLNA Plana 83.12 357 P **P 13 21 31.7 0.0**
NPLP NPLP New Delhi 83.14 311 *eP* **P 13 21 31.6 -0.2**
PSBE So Bento 83.18 21 *eP* **P 13 21 33.3 +1.4**
PSARD Sardoal 83.23 21 *eP* **P 13 21 33.1 +1.0**
PSARD *i* IAmb IAmb 13 21 34.4
comp=Z,88nm,0.9s
PSARD *etx* tx 13 21 47.7
PDG Podgorica 83.25 360 ⇑P **P 13 21 32.7 +0.6**
PDG Podgorica 83.25 360 P **P 13 21 32.6 +0.5**
PLD Plovdiv 83.40 356 P **P 13 21 34.4 +0.5**
DIM Dimitrovgrad 83.46 355 P **P 13 21 34.2 +1.0**
UCM Universidad Co 83.47 17 P **P 13 21 35.0 +1.7**
SONA Sohna 83.53 311 *eP* **P 13 21 33.7 -0.1**
PMRV Marv??o 83.56 20 *eP* **P 13 21 34.6 +0.8**
PMRV *i* IAmb IAmb 13 21 36.1
comp=Z,32nm,1.1s
INTR Introdacqua 83.57 4 IAmb IAmb 13 21 35.8
comp=Z,11nm,0.7s

PMAFR	**Mafra**		**83.62**	**22**	*e*P		**P**	**13 21 35.5**	**+1.4**
PMAFR					*i* IAmb		IAmb	13 21 36.4	
	comp=Z,168nm,1.1s								
PMTG	**Montargil**		**83.73**	**21**	*e*P		**P**	**13 21 34.9**	**+0.2**
PMTG					*i* IAmb		IAmb	13 21 36.1	
	comp=Z,32nm,0.9s								
KKB	**Krupnik**		**83.77**	**357**	P		**P**	**13 21 35.7**	**+0.9**
HRA	**Herat**		**83.78**	**325**	IAmb		IAmb	13 21 36.5	
	comp=Z,14nm,0.8s								
KOPT	**Kop Dagi**		**83.86**	**344**	IAmb		IAmb	13 21 40.8	
	comp=Z,14nm,0.9s								
KUDL	**Kundal**		**83.87**	**311**	*e*P		**P**	**13 21 35.5**	**0.0**
KUDL					*i* pP		**pP**	**13 21 48.4**	**+0.7**
KELT	**Kelkit**		**83.94**	**344**	P		**P**	**13 21 37.4**	**+1.4**
ESDC	**Sonseca Array**		**83.96**	**18**	P		**P**	**13 21 36.8**	**+0.9**
	comp=Z,26nm,0.8s,baz=343,slow=4.9,SNR=134								
ESDC					LR		LR	14 00 38.5	
	comp=Z,47nm,20.4s,baz=319,slow=37								
	comp=Z,26nm,0.8s								
ESDC	**Sonseca Array**		**83.96**	**18**	P		**P**	**13 21 36.5**	**+0.6**
PHP	**Peshkopia**		**83.98**	**359**	P		**P**	**13 21 36.5**	**+0.5**
PARRA	**Arraiolos**		**84.01**	**21**	*e*P		**P**	**13 21 36.9**	**+0.8**
PARRA					*i* IAmb		IAmb	13 21 38.0	
	comp=Z,31nm,1.0s								
PARRA					*e*tx		tx	13 21 51.9	
MMB	**Musomishta**		**84.04**	**356**	P		**P**	**13 21 37.1**	**+0.8**
PESTR	**Estremoz**		**84.06**	**21**	*e*P		**P**	**13 21 37.0**	**+0.7**
PESTR					*i* IAmb		IAmb	13 21 41.3	
	comp=Z,35nm,2.1s								
PESTR					*e*tx		tx	13 21 50.1	
PESTR	**Estremoz**		**84.06**	**21**	P		**P**	**13 21 37.7**	**+1.4**
MOE	**Montemor**		**84.23**	**21**	*e*P		**P**	**13 21 38.2**	**+0.9**
MOE					*i* IAmb		IAmb	13 21 39.5	
	comp=Z,51nm,1.2s								
MOE					*e*tx		tx	13 21 49.2	
SAHE	**Sakarya_HENDEK**		**84.28**	**351**	⇑P		**P**	**13 21 38.1**	**+0.6**
EVO	**Evora**		**84.29**	**21**	*e*P		**P**	**13 21 38.6**	**+1.0**
EVO					*i* IAmb		IAmb	13 21 39.5	
	comp=Z,23nm,1.3s								
EVO					*e*tx		tx	13 21 49.8	
VAY	**Valandovo**		**84.30**	**357**	*i* P		**P**	**13 21 38.6**	**+1.0**
RDO	**Rodhopi**		**84.36**	**355**	P		**P**	**13 21 38.9**	**+1.1**
KNT	**Kendrikon**		**84.45**	**357**	P		**P**	**13 21 41.5**	**+3.2**
SRS	**Serrai**		**84.47**	**356**	P		**P**	**13 21 39.2**	**+0.8**
OHR	**Ohrid**		**84.55**	**359**	*i* P		**P**	**13 21 39.9**	**+1.0**
PAOL	**Paolisi**		**84.57**	**3**	IAmb		IAmb	13 21 39.8	
	comp=Z,12nm,0.9s								
ALN	**Alexandroupoli**		**84.58**	**355**	P		**P**	**13 21 39.6**	**+0.7**
GRG	**Griva**		**84.67**	**357**	P		**P**	**13 21 40.7**	**+1.2**
PLOUS	**Minas do Lousa**		**84.69**	**21**	*e*P		**P**	**13 21 39.6**	**+0.1**
PLOUS					*i* IAmb		IAmb	13 21 40.8	
	comp=Z,33nm,1.8s								
SOH	**Sokhos**		**84.78**	**357**	P		**P**	**13 21 40.6**	**+0.6**
PBAR	**Barrancos**		**84.84**	**20**	*e*P		**P**	**13 21 41.0**	**+0.8**
PBAR					*i* IAmb		IAmb	13 21 43.7	
	comp=Z,31nm,1.4s								
PBAR					*e*tx		tx	13 21 56.7	
MESJ	**Messejana**		**84.92**	**21**	*e*P		**P**	**13 21 41.5**	**+0.8**
MESJ					IAmb		IAmb	13 21 41.9	
	comp=Z,9.0nm,1.1s								
MATE	**Matera**		**85.00**	**2**	⇓P		**P**	**13 21 41.6**	**+0.5**
MATE	**Matera**		**85.00**	**2**	P		**P**	**13 21 42.0**	**+1.0**
BR131	**Keskin Array S**		**85.11**	**349**	*c i*P		**P**	**13 21 42.2**	**+0.4**
BRTR	**Keskin Array B**		**85.11**	**349**	P		**P**	**13 21 42.5**	**+0.7**
	comp=Z,17nm,0.8s,baz=34,slow=2.5,SNR=75								
BRTR					LR		LR	14 05 18.7	
	comp=Z,59nm,19.2s,baz=50,slow=40								
	comp=Z,17nm,0.8s								
BRTR	**Keskin Array B**		**85.11**	**349**	P		**P**	**13 21 42.0**	**+0.2**
ARPR	**Arapgir-MALATY**		**85.11**	**345**	P		**P**	**13 21 43.5**	**+1.7**
MARCO	**Tramutola**		**85.34**	**2**	P		**P**	**13 21 44.0**	**+1.2**
MORF	**Marmelete**		**85.34**	**22**	*e*P		**P**	**13 21 43.5**	**+0.7**
MORF					IAmb		IAmb	13 21 45.5	
	comp=Z,17nm,0.8s								
MORF	**Marmelete**		**85.34**	**22**	*e*P		**P**	**13 21 43.5**	**+0.7**
PVAQ	**Vaqueiros**		**85.44**	**21**	*e*P		**P**	**13 21 44.6**	**+1.3**
PVAQ					*i* IAmb		IAmb	13 21 50.5	
	comp=Z,27nm,1.6s								
LIT	**Litokhoron**		**85.52**	**357**	P		**P**	**13 21 44.1**	**+0.4**
PBDV	**Barranco-do-Ve**		**85.55**	**21**	*e*P		**P**	**13 21 45.3**	**+1.4**
BALY	**Balya**		**85.64**	**353**	P		**P**	**13 21 44.9**	**+0.5**
KIRS	**Kirsehir-Merke**		**85.66**	**348**	⇑P		**P**	**13 21 45.6**	**+1.1**
HAKT	**HAKKARI**		**85.68**	**341**	P		**P**	**13 21 45.8**	**+1.0**
SRN	**Sarande**		**85.79**	**359**	P		**P**	**13 21 45.7**	**+0.8**
VSL	**Villasalto**		**85.82**	**7**	P		**P**	**13 21 46.0**	**+0.8**
KEK	**Kerkira**		**85.96**	**359**	P		**P**	**13 21 45.7**	**-0.2**
XOR	**Xorichti**		**86.24**	**357**	P		**P**	**13 21 47.4**	**+0.1**
TIP	**Timpagrande**		**86.47**	**2**	⇑P		**P**	**13 21 49.0**	**+0.5**
TIP	**Timpagrande**		**86.47**	**2**	P		**P**	**13 21 48.9**	**+0.5**
GUNA	**GUNA**		**86.52**	**309**	*e*P		**P**	**13 21 48.1**	**-0.8**
EMAL	**Malaga-Limoner**		**86.71**	**19**	P		**P**	**13 21 50.5**	**+1.0**
ANDN	**Andirin**		**86.88**	**346**	P		**P**	**13 21 51.9**	**+1.3**
CTA	**Charters Tower**		**86.99**	**228**	LR		LR	13 56 33.6	
	comp=Z,39nm,19.1s,baz=39,slow=33								
CTAO	**Charters Tower**		**86.99**	**228**	P		**P**	**13 21 50.7**	**-0.3**
CTAO	**Charters Tower**		**86.99**	**228**	P		**P**	**13 21 50.7**	**-0.3**
CTAO					pmax		pmax		
	comp=Z,9.0nm,0.8s								
CTAO	**Charters Tower**		**86.99**	**228**	P		**P**	**13 21 50.7**	**-0.3**
CTAO					IAmb		IAmb	13 21 52.2	
	comp=Z,9.4nm,0.8s								
CEL	**Celeste**		**87.37**	**2**	P		**P**	**13 21 51.9**	**-1.0**
AYDN	**Tasoluk**		**87.69**	**353**	P		**P**	**13 21 54.7**	**+0.3**
BHPL	**Bhopal**		**87.70**	**308**	*e*P		**P**	**13 21 53.8**	**-0.8**
BHPL					*i* x		x	13 22 07.9	
VAE	**Valguarnera**		**88.11**	**4**	LR		LR	14 05 06.0	
	comp=Z,31nm,18.1s,baz=330,slow=38								
RAGD	**RAYAGADA**		**88.24**	**301**	*e*P		**P**	**13 21 57.5**	**+0.2**
RAGD					*i* x		x	13 22 11.7	
NRDN	**NARMADA NAGAR**		**88.27**	**308**	*e*P		**P**	**13 21 59.4**	**+2.1**
NRDN					*i* x		x	13 22 13.6	
APE	**Apeiranthos**		**88.43**	**355**	P		**P**	**13 21 59.7**	**+1.8**
APE	**Apeiranthos**		**88.43**	**355**	P		**P**	**13 21 56.5**	**-1.4**
NGP	**Nagpur**		**88.73**	**306**	*e*P		**P**	**13 21 59.0**	**-0.6**
NGP					IAmb		IAmb	13 22 00.2	
	comp=Z,8.9nm,0.6s								
KEST	**Kesra**		**89.55**	**8**	P		**P**	**13 22 03.9**	**+0.7**
	comp=Z,8.1nm,0.9s,baz=352,slow=3.6,SNR=11								
KEST					LR		LR	14 04 33.8	
	comp=Z,43nm,19.5s,baz=3.0,slow=37								
	comp=Z,8.1nm,0.9s								
KEST	**Kesra**		**89.55**	**8**	IAmb		IAmb	13 22 05.8	
	comp=Z,9.0nm,0.9s								
CY604	**RAF Akrotiri,**		**90.32**	**347**	P		**P**	**13 22 06.2**	**-0.2**
CY604					IAmb		IAmb	13 22 11.7	
	comp=Z,9.9nm,1.0s								
MD01	**Midelt array s**		**90.42**	**20**	P		**P**	**13 22 07.5**	**0.0**
MD31	**MD31**		**90.43**	**20**	P		**P**	**13 22 07.5**	**+0.1**
MDT	**Midelt**		**90.51**	**20**	LR		LR	14 05 49.9	
	comp=Z,28nm,19.2s,baz=42,slow=38								
MMAI	**Mount Meron Ar**		**91.50**	**346**	LR		LR	14 08 04.1	
	comp=Z,42nm,19.2s,baz=12,slow=39								
ASF	**Jabal al Asfar**		**92.11**	**345**	LR		LR	14 10 25.9	
	comp=Z,40nm,18.2s,baz=26,slow=40								
WRAB	**Tennant Creek**		**92.40**	**238**	⇓*e*P		**P**	**13 22 15.4**	**-1.0**
WRAB					pmax		pmax		
	comp=Z,6.0nm,0.9s								
WRA	**Warramunga Arr**		**92.41**	**238**	P		**P**	**13 22 15.4**	**-1.0**
	comp=Z,3.0nm,0.8s,baz=38,slow=5.6,SNR=20								
	comp=Z,3.0nm,0.8s								
WRA	**Warramunga Arr**		**92.41**	**238**	*i* P		**P**	**13 22 15.3**	**-1.2**
WRA					pmax		pmax		
	comp=Z,3.0nm,0.8s								
WRA	**Warramunga Arr**		**92.41**	**238**	P		**P**	**13 22 15.3**	**-1.2**
PSI	**Prapat**		**93.53**	**280**	P		**P**	**13 22 21.7**	**-0.3**
PSI					pmax		pmax		
	comp=Z,15nm,1.2s								
QLP	**Quilpie**		**93.57**	**227**	P		**P**	**13 22 22.1**	**+0.5**
RPSI	**Rantau Prapat**		**93.62**	**280**	P		**P**	**13 22 21.7**	**-0.5**
URZ	**Urewera**		**94.47**	**197**	LR		LR	13 58 28.8	
	comp=Z,111nm,20.3s,baz=320,slow=31								
SMRI	**Semarang**		**94.84**	**265**	P		**P**	**13 22 25.7**	**-2.1**
EIL	**Elat**		**94.86**	**346**	LR		LR	14 10 11.7	
	comp=Z,32nm,19.9s,baz=89,slow=39								
ASAR	**Alice Springs**		**95.77**	**237**	P		**P**	**13 22 31.2**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=32,slow=4.1,SNR=15								
ASAR					PKKPbc		**PKKPbc**	**13 39 20.1**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=201,slow=2.2,SNR=11								
ASAR					LR		LR	13 59 02.8	
	comp=Z,81nm,20.1s,baz=358,slow=31								
	comp=Z,2.1nm,0.8s								
BBJI	**Bungbulang**		**96.79**	**267**	P		**P**	**13 22 35.6**	**-1.1**
RAYN	**Ar Rayn**		**98.83**	**335**	P		Pdif	13 22 46.2	+0.3
RAYN	**Ar Rayn**		**98.83**	**335**	P		Pdif	13 22 46.2	+0.3
STKA	**Stephens Creek**		**99.30**	**227**	LR		LR	14 03 48.5	
	comp=Z,113nm,20.1s,baz=25,slow=33								
PALK	**Pallekele**		**99.80**	**298**	LR		LR	14 15 00.1	
	comp=Z,46nm,18.1s,baz=53,slow=40								
TORD	**Torodi Ar. Bea**		**110.85**	**18**	PKiKP		**PKiKP**	**13 27 37.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=349,slow=1.7,SNR=2.4								
H03N2	**Juan Fernandez**		**112.33**	**116**	T		T	15 29 26.2	
	baz=323,slow=77,SNR=21								
H03N1	**Juan Fernandez**		**112.34**	**116**	T		T	15 29 29.2	
	baz=323,slow=77,SNR=18								
H03N3	**Juan Fernandez**		**112.35**	**116**	T		T	15 29 37.2	
	baz=323,slow=77,SNR=18								
PLCA	**Paso Flores**		**122.21**	**116**	PKP		**PKPdf**	**13 27 59.0**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=220,slow=3.1,SNR=5.8								
QSPA	**South Pole Qui**		**144.47**	**180**	PKP		**PKPab**	**13 28 38.7**	**-0.3**
	comp=Z,14nm,0.7s,baz=323,slow=0.4,SNR=104								
QSPA	**South Pole Qui**		**144.47**	**180**			**PKPab**	**13 28 38.9**	**-0.2**
TSUM	**Tsumeb**		**144.55**	**2**	PKPdf		PKPbc	13 28 41.1	+0.1
GRTLG	**Ghanzi**		**146.67**	**356**	PKPbc		**PKPbc**	**13 28 47.4**	**-0.1**
BOSA	**Boshof**		**153.54**	**348**	PKPbc		**PKPbc**	**13 29 04.0**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=1.2,slow=3.1,SNR=6.7								
BOSA	**Boshof**		**153.54**	**348**	PKIKP		**PKPbc**	**13 29 04.0**	**-0.1**
MAW	**Mawson**		**155.84**	**220**	PKPab		**PKPab**	**13 29 25.2**	**0.0**
	comp=Z,6.2nm,0.8s,baz=110,slow=5.8,SNR=9.5								
MAW	**Mawson**		**155.84**	**220**			**PKPab**	**13 29 25.6**	**+0.3**
VNA2	**Neumayer--Watz**		**160.05**	**155**	⇑PKPdf		**PKPdf**	**13 29 04.1**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=252,slow=1.6								
VNA2					⇓PKPab		**PKPab**	**13 29 48.8**	**+5.4**
	comp=Z,3.2nm,0.6s,baz=227,slow=2.3								
SNAA	**Sanae**		**160.56**	**159**	PKP		**PKPdf**	**13 29 03.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=204,slow=3.8,SNR=3.9								

*GUC **29** 13:23:55.9±0.7,22.˚78S×69.˚05W,h96km±4km, ML3.4*
*SJA **29** 13:23:55.1±0.6,22.˚78S×69.˚02W,h100km±3km, ML3.3, MW3.5*

ISC 29 13:23:55.7±1.4,**22.˚75S**±0.˚03×**69.˚04W**±0.˚05,**h105**km±9km, **n25,σ1s05/42,2C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.50**	**275**	*e*P	**Pn**	**13 24 11.7**	**-0.4**
PB06				*e*S	**Sn**	**13 24 23.9**	**-0.6**
PB06				IAML		13 24 24.1	
	comp=Z,796nm,0.1s						
PB06	**IPOC Station P**	**0.50**	**275**	⇓*i*P	**Pn**	**13 24 11.7**	**-0.4**
PB06				*e*S	**Sn**	**13 24 23.5**	**-0.9**
PB06				IAML		13 24 23.9	
	comp=N,3μm,0.1s						
AF01	**San Pedro de A**	**0.81**	**104**	*e*P	**Pn**	**13 24 14.8**	**-0.1**
AF01				*e*S	**Sn**	**13 24 28.7**	**-0.7**
AF01				IAML		13 24 32.5	
	comp=Z,1μm,0.8s						
AF01	**San Pedro de A**	**0.81**	**104**	⇑*i*P	**Pn**	**13 24 14.8**	**-0.1**
AF01				*e*S	**Sn**	**13 24 29.2**	**-0.2**
PB03	**IPOC Station P**	**0.97**	**316**	*e*P	**Pn**	**13 24 16.3**	**0.0**
PB03				*e*S	**Sn**	**13 24 31.8**	**+0.1**
PB03				IAML		13 24 32.5	
	comp=Z,1μm,0.2s						
PB03	**IPOC Station P**	**0.97**	**316**	⇓*i*P	**Pn**	**13 24 16.4**	**0.0**
PB03				*e*S	**Sn**	**13 24 31.9**	**+0.1**
PB03				IAML		13 24 32.5	
	comp=E,1μm,0.2s						
PB09	**IPOC Station P**	**0.97**	**349**	*e*P	**Pn**	**13 24 16.7**	**+0.3**
PB09				*e*S	**Sn**	**13 24 32.9**	**+1.0**
PB09				IAML		13 24 36.2	
	comp=Z,317nm,0.7s						
PB09	**IPOC Station P**	**0.97**	**349**	*i* P	**Pn**	**13 24 17.0**	**+0.6**
PB09				*e*S	**Sn**	**13 24 32.7**	**+0.7**
PB09				IAML		13 24 35.6	
	comp=E,396nm,0.4s						
PB05	**IPOC Station P**	**1.08**	**265**	*e*P	**Pn**	**13 24 17.5**	**0.0**
PB05				*e*S	**Sn**	**13 24 34.4**	**+0.4**
PB05				IAML		13 24 38.5	
	comp=Z,451nm,0.4s						
PB05	**IPOC Station P**	**1.08**	**265**	⇑*i*P	**Pn**	**13 24 17.5**	**0.0**
PB05				*e*S	**Sn**	**13 24 33.8**	**-0.1**
PB05				IAML		13 24 35.2	
	comp=N,690nm,0.4s						
PB07	**IPOC Station P**	**1.29**	**322**	*e*P	**Pn**	**13 24 20.2**	**+0.3**
PB07				IAML		13 24 40.4	
	comp=Z,868nm,0.3s						
PB07	**IPOC Station P**	**1.29**	**322**	*i* P	**Pn**	**13 24 20.5**	**+0.5**
PB07				*e*S	**Sn**	**13 24 38.5**	**+0.3**
PB07				IAML		13 24 39.8	
	comp=E,1μm,0.3s						
PB02	**IPOC Station P**	**1.64**	**331**	*e*P	**Pn**	**13 24 24.6**	**+0.7**
PB02				*e*S	**Sn**	**13 24 46.4**	**+1.0**
PB02				IAML		13 24 48.1	
	comp=Z,893nm,0.2s						
PB02	**IPOC Station P**	**1.64**	**331**	*e*P	**Pn**	**13 24 24.7**	**+0.7**
PB02				*e*S	**Sn**	**13 24 46.4**	**+1.0**
PB02				IAML		13 24 49.2	
	comp=E,898nm,0.2s						
PB14	**IPOC Station P**	**2.25**	**214**	*e*P	**Pn**	**13 24 32.4**	**+0.4**
PB14				*e*S	**Sn**	**13 25 02.8**	**+3.1**
PB14				IAML		13 25 04.6	
	comp=Z,153nm,0.6s						
PB14	**IPOC Station P**	**2.25**	**214**	*e*P	**Pn**	**13 24 32.0**	**0.0**
PB08	**IPOC Station P**	**2.60**	**358**	*e*P	**Pn**	**13 24 37.5**	**+0.8**
PB08	**IPOC Station P**	**2.60**	**358**	*e*P	**Pn**	**13 24 37.5**	**+0.8**
TA02	**Huaiquique**	**2.67**	**337**	*e*P	**Pn**	**13 24 35.0**	**-2.3**
TA02				*e*S	**Sn**	**13 25 08.9**	**-0.2**
TA02				IAML		13 25 17.8	
	comp=Z,97nm,0.2s						
PB11	**IPOC Station P**	**3.03**	**349**	*e*P	**Pn**	**13 24 41.8**	**-0.4**
PB11				IAML		13 25 30.5	
	comp=Z,34nm,0.2s						
GO01	**Chusmiza**	**3.07**	**357**	*e*P	**Pn**	**13 24 42.3**	**-0.8**
GO01				IAML		13 25 47.8	
	comp=Z,32nm,0.5s						
PSGCX	**Pisagua**	**3.30**	**342**	*e*P	**Pn**	**13 24 44.2**	**-1.5**
PSGCX				IAML		13 25 52.6	
	comp=Z,29nm,0.3s						
AC01	**Pan de Azucar**	**3.67**	**203**	*e*P	**Pn**	**13 24 49.0**	**-1.5**
AC01				*e*S	**Sn**	**13 25 30.3**	**-2.6**
AC01				IAML		13 25 48.0	
	comp=Z,42nm,0.5s						
AC02	**Maricunga**	**4.07**	**181**	*e*P	**Pn**	**13 24 56.6**	**+0.3**
AC02				*e*S	**Sn**	**13 25 45.5**	**+2.3**
AC02				IAML		13 25 52.5	
	comp=Z,14nm,0.5s						
PB12	**IPOC Station P**	**4.29**	**343**	*e*P	**Pn**	**13 24 58.3**	**-0.7**
PB12				IAML		13 25 59.9	
	comp=Z,17nm,0.7s						

*AEIC **29** 13:24:20.4±2.2,53.˚2N±0.˚1×170.˚2W±0.˚1,h183km±5km, Error ellipse: s-maj=18.0km s-min=7.1km az=161.0*

NEIC 29 13:24:18.1±1.1,**53.˚14N**±0.˚07×**170.˚16W**±0.˚09, **h199**km±4km,**mb3.4**/23,**ML3.3**/16,**ML3.0**(AEIC),**Error ellipse: s-maj=9.5km s-min=7.6km az=175.0,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.36**	**153**		Pn	13 24 44.4	-0.3
CLES					Sn	13 25 05.0	-0.1
CLES				IAML		13 25 13.9	
	comp=E,239nm,0.9s						
CLES				IAML		13 25 22.5	
	comp=N,257nm,1.5s						
CLCO	**Concord Point,**	**0.45**	**143**		Pn	13 24 44.8	-0.2
CLCO					Sn	13 25 05.0	-0.6
OKWE	**Okmok W'ng Wal**	**1.20**	**73**		Pn	13 24 49.1	-0.1
OKCE	**Okmok Cone E**	**1.23**	**76**		Pn	13 24 49.7	+0.2
OKNC	**Okmok New Cone**	**1.26**	**75**		Pn	13 24 50.0	+0.3
OKTU	**Okmok Mt. Tuli**	**1.29**	**78**		Pn	13 24 50.1	+0.1
OKFG	**Magazine Ridge**	**1.38**	**78**		Pn	13 24 50.8	+0.2
MAPS	**Pakushin South**	**2.04**	**70**		Pn	13 24 57.6	+0.7
MAPS					Sn	13 25 27.0	-0.1
MGOD	**Makushin Gods**	**2.07**	**70**		Pn	13 24 57.8	+0.5
MGOD					Sn	13 25 26.7	-1.1
MNAT	**Makushin Natee**	**2.20**	**69**		Pn	13 24 59.1	+0.4
MNAT					Sn	13 25 30.5	+0.2
UNV	**Unalaska Valle**	**2.29**	**71**		Pn	13 25 00.1	+0.5
UNV				Sn	Sn	13 25 30.4	-1.5
KONE	**Korovin Northe**	**2.52**	**254**		Pn	13 25 02.1	-0.1
KONE					Sn	13 25 36.5	0.0
KOFP	**Korovin Flat P**	**2.55**	**252**		Pn	13 25 02.7	+0.2
KOFP					Sn	13 25 37.1	+0.1
KOKV	**Korovin Volcan**	**2.56**	**254**		Pn	13 25 02.7	0.0
KOWE	**Korovin West**	**2.60**	**254**		Pn	13 25 03.1	-0.1
ATKA	**Atka Island**	**2.63**	**251**		Pn	13 25 03.2	-0.2
ATKA					Sn	13 25 37.6	-1.0
LVA	**Lava Point**	**2.66**	**66**	Pn	Pn	13 25 03.1	-0.6
LVA				IAML		13 25 45.7	
	comp=E,72nm,1.9s						
ZRO	**Akutan Zero**	**2.67**	**67**		Pn	13 25 05.2	+1.4
ZRO					Sn	13 25 40.0	+0.5
AKBBA	**Akutan Broad B**	**2.69**	**68**		Pn	13 25 05.3	+1.2
AKUT	**Akutan**	**2.79**	**67**	Pn	Pn	13 25 04.3	-0.9
AKUT				IAML		13 25 53.0	
	comp=E,65nm,1.7s						
AKUT				IAML		13 27 10.6	
	comp=N,54nm,1.9s						
GSIG	**Igitkin Island**	**3.70**	**254**		Pn	13 25 16.4	+0.2
GSTR	**Great Sitkin T**	**3.75**	**256**	Pn	Pn	13 25 16.3	-0.4
GSMY	**Great Sitkin M**	**3.76**	**255**		Pn	13 25 17.4	+0.5
GSMY					Sn	13 26 02.6	-0.3
GSTD	**Great Sitkin T**	**3.81**	**256**		Pn	13 25 17.8	+0.3
GSCK	**Great Sitkin C**	**3.83**	**255**		Pn	13 25 18.0	+0.2
ETKA	**Kagalaska Isla**	**4.03**	**254**		Pn	13 25 20.3	+0.1
ADAG	**Mount Adagdak**	**4.10**	**256**		Pn	13 25 21.7	+0.6
ADK	**Adak**	**4.18**	**255**		Pn	13 25 22.0	0.0
ADK	**Adak**	**4.18**	**255**	IAML		13 26 50.1	
	comp=N,30nm,2.4s						
ADK				IAML		13 27 28.4	
	comp=N,33nm,2.1s						
KIWB	**Kanaga Island**	**4.46**	**256**		Pn	13 25 26.2	+0.6
KIWB				IAML		13 26 18.2	
	comp=N,36nm,1.4s						
KIKV	**Kanaga Island**	**4.47**	**256**		Pn	13 25 25.8	+0.1
KIMD	**Kanaga Island**	**4.54**	**255**		Pn	13 25 26.6	-0.1
TAFP	**Tanaga Falls P**	**4.94**	**259**		Pn	13 25 32.1	+0.5
GAKI	**Gareloi-Kavalg**	**5.54**	**257**		Pn	13 25 38.9	-0.4
SDPT	**Sand Point**	**6.09**	**65**		Pn	13 25 46.2	-0.2
CNBA	**Chernabura Isl**	**6.46**	**71**		Pn	13 25 50.7	-0.5
AMKA	**Amchitka**	**6.71**	**259**	Pn	Pn	13 25 54.0	-0.4
VNFG	**Fog Glacier, M**	**6.90**	**59**	Pn	Pn	13 25 56.4	-0.6
N14K	**Kuskokwak Cree**	**8.25**	**31**	Pn	Pn	13 26 14.5	+0.1
N15K	**Kwethluk River**	**8.95**	**34**	Pn	Pn	13 26 24.1	+0.6
R17L	**Mt. Peulik Vol**	**9.04**	**55**		Pn	13 26 26.1	+1.3
ACHA	**Angle Creek He**	**9.79**	**53**	Pn	Pn	13 26 34.2	-0.3
SII	**Sitkinak Islan**	**9.82**	**63**	Pn	Pn	13 26 34.6	-0.4
SLKM	**Skilak Lake**	**13.13**	**48**	Pn	Pn	13 27 17.1	0.0
SKT	**Skwentna**	**13.30**	**41**	Pn	Pn	13 27 19.4	+0.2
RC01	**Rabbit Creek A**	**13.60**	**46**	Pn	Pn	13 27 22.3	-0.6
SML	**Sawmill**	**14.53**	**45**		Pn	13 27 34.3	0.0
HIN	**Hinchinbrook I**	**14.80**	**51**		Pn	13 27 37.8	+0.1
SCM	**Sheep Creek Mo**	**14.97**	**45**		Pn	13 27 40.0	+0.3
F19K	**Shaleruckik Mo**	**15.02**	**19**		Pn	13 27 39.3	-0.9
RND	**Reindeer**	**15.12**	**39**		Pn	13 27 40.9	-0.7
RND				IAmb	IAmb	13 27 50.5	
	comp=Z,1.4nm,0.9s						
E19K	**Redstone River**	**15.66**	**19**		P	13 27 47.0	-1.1
I23K	**Minto, Yukon-K**	**15.97**	**33**	P	P	13 27 51.0	-0.3
I23K				IAmb	IAmb	13 27 57.1	
	comp=Z,1.6nm,1.0s						
CCB	**Clear Creek Bu**	**16.20**	**36**	P	P	13 27 54.2	+0.3
H23K	**Yukon River**	**16.35**	**31**	P	P	13 27 55.1	-0.5
HDA	**Harding Lake**	**16.38**	**37**	P	P	13 27 55.1	-0.8
GLB	**Gilahina Butte**	**16.38**	**49**	P	P	13 27 54.5	-1.5
GLB				IAmb	I

Q19K	**Cape Douglas,**	**17.45**	**55**	P	P	13 48 44.4 -0.8
N19K	**Bonanza Creek**	**17.53**	**49**	P	P	13 48 44.8 -1.3
N19K				IAmb	IAmb	13 48 57.8
	comp=Z,4.1nm,1.0s					
KDAK	**Kodiak Island**	**17.82**	**59**	P	P	13 48 48.7 -0.5
KDAK				IAmb	IAmb	13 49 02.4
	comp=Z,5.5nm,1.1s					
L19K	**White Mountain**	**17.84**	**44**	P	P	13 48 49.2 -0.2
M19K	**Big River Lodg**	**17.94**	**45**	P	P	13 48 49.6 -0.9
M19K				IAmb	IAmb	13 48 58.8
	comp=Z,1.9nm,0.7s					
CNPM	**China Poot**	**18.78**	**54**	P	P	13 48 58.9 -0.8
CNPM				IAmb	IAmb	13 49 00.3
	comp=Z,5.1nm,1.2s					
G19K	**Purcell Mounta**	**18.98**	**32**	P	P	13 49 02.0 +0.3
G19K				IAmb	IAmb	13 49 10.6
	comp=Z,3.1nm,1.1s					
BRLK	**Bradley Lake**	**19.00**	**53**	P	P	13 49 02.7 +0.6
SKT	**Skwentna**	**19.24**	**47**	P	P	13 49 05.0 +0.3
SLKM	**Skilak Lake**	**19.47**	**51**	P	P	13 49 06.8 -0.4
SLKM				IAmb	IAmb	13 49 11.9
	comp=Z,2.4nm,0.7s					
CAST	**Castle Rocks**	**19.50**	**42**	P	P	13 49 07.7 +0.2
CAST				IAmb	IAmb	13 49 10.2
	comp=Z,1.8nm,0.8s					
L22K	**Petersville**	**19.75**	**45**	P	P	13 49 10.7 +0.5
SEW	**Seward**	**19.77**	**53**	P	P	13 49 11.0 +0.7
F20K	**Avaraart Lake**	**19.96**	**31**	P	P	13 49 12.0 -0.3
F20K				IAmb	IAmb	13 49 21.2
	comp=Z,2.5nm,1.1s					
H21K	**Melozitna Rive**	**20.19**	**36**	P	P	13 49 15.0 +0.1
H21K				IAmb	IAmb	13 49 19.7
	comp=Z,2.3nm,0.8s					
TRF	**Thorofare Moun**	**20.26**	**43**	P	P	13 49 14.9 -0.9
TRF				IAmb	IAmb	13 49 19.4
	comp=Z,2.3nm,0.6s					
GHO	**Glory Hole Cre**	**20.37**	**48**	P	P	13 49 16.7 -0.2
G21K	**Allakaket**	**20.38**	**33**	P	P	13 49 16.0 -0.9
RND	**Reindeer**	**20.86**	**44**	P	P	13 49 22.3 +0.2
RND				IAmb	IAmb	13 49 38.5
	comp=Z,2.9nm,1.2s					
GLI	**Glacier Island**	**21.05**	**51**	P	P	13 49 23.2 -0.9
SCM	**Sheep Creek Mo**	**21.12**	**48**	P	P	13 49 24.9 0.0
SCM				IAmb	IAmb	13 49 28.4
	comp=Z,2.5nm,0.6s					
FID	**Port Fidalgo**	**21.33**	**52**	P	P	13 49 26.5 -0.7
DHY	**Denali Highway**	**21.40**	**45**	P	P	13 49 27.9 -0.1
CCB	**Clear Creek Bu**	**21.70**	**41**	P	P	13 49 31.1 +0.1
IL31		**22.11**	**41**	P	P	13 49 35.2 0.0
RAGM	**Ragged Mountai**	**22.17**	**53**	P	P	13 49 35.8 -0.1
RAGM				IAmb	IAmb	13 49 38.5
	comp=Z,2.8nm,0.7s					
E23K	**Chandalar**	**22.48**	**32**	P	P	13 49 39.4 +0.5
E23K				IAmb	IAmb	13 49 44.7
	comp=Z,2.6nm,1.1s					
D23K	**Nanushuk River**	**22.62**	**29**	P	P	13 49 40.8 +0.7
RIDG	**Independent Ri**	**22.67**	**44**	P	P	13 49 40.6 -0.1
RIDG				IAmb	IAmb	13 49 55.2
	comp=Z,2.9nm,1.2s					
J25K	**Salcha River,**	**22.68**	**42**	P	P	13 49 40.8 -0.1
CRQM	**Cirque**	**22.96**	**52**	P	P	13 49 44.2 +0.5
C23K	**Itkillik River**	**23.13**	**27**	P	P	13 49 45.0 +0.2
C23K				IAmb	IAmb	13 49 45.9
	comp=Z,3.0nm,0.9s					
GRNC	**Granite Creek**	**23.64**	**52**	P	P	13 49 49.0 -0.9
E25K	**Arctic Village**	**23.85**	**33**	P	P	13 49 52.4 +0.8
E25K				IAmb	IAmb	13 49 53.6
	comp=Z,1.9nm,0.6s					
L27K	**Beaver Creek,**	**23.86**	**47**	P	P	13 49 52.8 +1.0
BCAR	**Beaver Creek A**	**23.89**	**47**	P	P	13 49 52.6 +0.7
F26K	**Sheenjek River**	**24.18**	**35**	P	P	13 49 56.0 +1.5
F26K				IAmb	IAmb	13 49 58.3
	comp=Z,2.4nm,0.9s					
DAWY	**Dawson**	**25.10**	**45**	P	P	13 50 04.1 +1.2
E27K	**Coleen River**	**25.25**	**35**	P	P	13 50 05.7 +1.4
E27K				IAmb	IAmb	13 50 06.1
	comp=Z,1.8nm,0.7s					
H29M	**Whitestone**	**25.92**	**40**	P	P	13 50 10.6 +0.3
H29M				IAmb	IAmb	13 50 17.8
	comp=Z,1.6nm,1.1s					
I30M	**Mount Dempster**	**26.55**	**42**	P	P	13 50 16.7 +0.6
I30M				IAmb	IAmb	13 50 17.3
	comp=Z,1.3nm,1.1s					
INK	**Inuvik**	**28.18**	**36**	P	P	13 50 30.8 +0.5
INK				IAmb	IAmb	13 50 32.1
	comp=Z,1.6nm,0.8s					
MMPY	**Sheldon Lake,**	**28.67**	**48**	P	P	13 50 35.4 +0.5
A36M	**Sachs Harbour**	**31.61**	**30**	P	P	13 51 00.9 +0.4

*IDC **29** 13:45:58.1±1.4,6.66S×153.80E,h0km,mb3.8/7, mbtmp3.8/8,ML2.1/1, Error ellipse: s-maj=42.4km s-min=24.1km az=114.0*
*NEIC **29** 13:45:59.5±0.8,6.57S±0.09×153.73E±0.05,h10km±1km, mb4.3/8, Error ellipse: s-maj=15.2km s-min=7.6km az=191.0*
ISC 29 13:46:03.9±0.8,6.60S±0.09×153.75E±0.09,h48km,n24, σ1s40/25,mb3.9/10,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.87**	**326**		**Pn**	**13 46 44.8**	**-2.5**
HNR	**Honiara**	**6.75**	**115**	Pn	**Pn**	**13 47 38.9**	**-1.6**
PMG	**Port Moresby**	**7.10**	**246**	Pn	**Pn**	**13 47 44.0**	**-1.2**
	2.1nm,0.3s,baz=87,slow=7.3,SNR=8.9						
PMG				Sn	**Sn**	**13 49 05.6**	**+1.0**
	0.5nm,0.3s,baz=51,slow=19,SNR=1.4						
	24nm,0.8s						
PMG	**Port Moresby**	**7.10**	**246**		**Pn**	**13 47 42.9**	**-2.4**
WR8	**Warramunga Arr**	**22.93**	**233**	P	**P**	**13 51 02.5**	**-1.7**
WR8				IAmb	IAmb	13 51 09.7	
	comp=Z,8.0nm,1.2s						
WRA	**Warramunga Arr**	**23.05**	**233**	P	**P**	**13 51 05.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=55,slow=11,SNR=5.9						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**23.05**	**233**	P	**P**	**13 51 03.6**	**-1.7**
INKA	**Innaminka**	**24.38**	**209**	P	**P**	**13 51 17.9**	**+0.2**
AS31	**Alice Springs**	**25.53**	**226**	P	**P**	**13 51 28.1**	**-0.2**
ASAR	**Alice Springs**	**25.53**	**226**	P	**P**	**13 51 28.7**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=60,slow=8.5,SNR=15						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**25.53**	**226**	P	**P**	**13 51 26.6**	**-1.8**
FORT	**Forrest**	**34.04**	**222**	P	**P**	**13 52 43.2**	**-0.5**
FORT				IAmb	IAmb	13 52 51.4	
	comp=Z,3.5nm,1.0s						
SONM	**Songino Array**	**68.34**	**328**	P	**P**	**13 57 02.7**	**+2.2**
	comp=Z,2.5nm,1.0s,baz=165,slow=12,SNR=4.0						
	comp=Z,2.5nm,1.0s						
SONM	**Songino Array**	**68.34**	**328**	P	**P**	**13 57 00.5**	**0.0**
MKAR	**Makanchi Array**	**82.30**	**319**	P	**P**	**13 58 22.8**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=134,slow=3.5,SNR=4.0						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**82.30**	**319**	P	**P**	**13 58 19.9**	**-0.7**
ZALV	**Zalesovo Beam**	**83.17**	**326**	P	**P**	**13 58 25.8**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=103,slow=6.5,SNR=3.5						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**83.17**	**326**	P	**P**	**13 58 25.1**	**+0.3**
HDA	**Harding Lake**	**83.26**	**22**	P	**P**	**13 58 25.7**	**+0.6**
QSPA	**South Pole Qui**	**83.37**	**180**	P	**P**	**13 58 27.0**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=258,slow=0.6,SNR=6.8						
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**83.37**	**180**	P	**P**	**13 58 27.6**	**+1.7**
QSPA				IAmb	IAmb	13 58 46.1	
	comp=Z,2.6nm,1.2s						
KURK	**Kurchatov**	**85.76**	**322**	P	**P**	**13 58 38.0**	**0.0**
KURK				IAmb	IAmb	13 58 46.1	
	comp=Z,3.5nm,1.4s						
KURBB	**Kurchatov Arra**	**85.79**	**322**	P	**P**	**13 58 38.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=100,slow=3.9,SNR=2.2						
	comp=Z,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**151.73**	**285**	PKPbc	**PKiKP**	**14 05 55.5**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=57,slow=3.1,SNR=5.5						

*IDC **29** 13:55:06.5±2.0,54.91N×160.70W,h0km,mb3.9/9, mbtmp3.8/12,ML3.2/3,MS3.4/2, Error ellipse: s-maj=56.1km s-min=18.2km az=150.0*
*AEIC **29** 13:55:13.4±2.1,54.91N±0.04×160.36W±0.04,h34km±4km, Error ellipse: s-maj=5.9km s-min=2.2km az=199.0*
*NEIC **29** 13:55:13.5±1.9,54.90N±0.05×160.32W±0.06,h42km±6km, mb3.8/19,ML3.6/34,ML3.5(AEIC), Error ellipse: s-maj=8.1km s-min=4.5km az=166.0*
ISC 29 13:55:13.6±0.8,54.93N±0.05×160.33W±0.03,h46km±7km, n141,σ1s17/154,mb4.0/12,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.43**	**349**		**Pn**	**13 55 23.4**	**-0.4**
SDPT					**Sn**	**13 55 30.6**	**-0.4**
CNBA	**Chernabura Isl**	**0.44**	**104**		**Pn**	**13 55 23.3**	**-0.5**
CNBA					**Sn**	**13 55 30.8**	**-0.4**
CNBA				IAML		13 55 31.0	
	comp=E,3μm,0.3s						
DOL	**Dolgoi Island**	**0.91**	**285**		**Pn**	**13 55 29.6**	**-0.4**
PS1A	**Pavlof South-1**	**0.95**	**302**		**Pn**	**13 55 30.6**	**+0.1**
PS1A					**Sn**	**13 55 43.6**	**+0.6**
PVV	**Pavlof Volcano**	**0.95**	**299**		**Pn**	**13 55 30.6**	**+0.1**
PS4A	**Pavlof South-4**	**0.97**	**296**		**Pn**	**13 55 30.9**	**+0.1**
PS4A					**Sn**	**13 55 44.4**	**+0.8**
HAG	**Hague Volcano**	**0.99**	**294**		**Pn**	**13 55 31.4**	**+0.3**
PN7A	**Pavlof North-7**	**1.08**	**299**		**Pn**	**13 55 32.9**	**+0.5**
PN7A					**Sn**	**13 55 47.1**	**+0.8**
DTNA	**Dutton South F**	**1.13**	**282**		**Pn**	**13 55 32.9**	**0.0**
DTNA					**Sn**	**13 55 47.8**	**+0.5**
DT1	**Dutton Round H**	**1.14**	**280**		**Pn**	**13 55 32.8**	**-0.2**
DT1					**Sn**	**13 55 47.6**	**+0.1**
VNKR	**Veniaminof 5**	**1.24**	**26**		**Pn**	**13 55 35.3**	**+0.9**
VNWF	**Veniaminof 8**	**1.30**	**19**		**Pn**	**13 55 36.4**	**+1.0**
VNSS	**Veniaminof 8**	**1.40**	**20**		**Pn**	**13 55 37.8**	**+1.0**
VNFG	**Fog Glacier, M**	**1.43**	**18**		**Pn**	**13 55 37.7**	**+0.6**
VNFG	**Fog Glacier, M**	**1.43**	**18**		**Pn**	**13 55 38.4**	**+1.2**
VNFG				Sn	**Sn**	**13 55 55.2**	**+0.3**
VNFG				IAML		13 56 06.3	
	comp=N,1μm,0.7s						
VNFG				IAML		13 56 12.2	
	comp=E,1μm,0.7s						
ISNN	**Isanotski Nort**	**2.00**	**269**		**Pn**	**13 55 46.2**	**+1.4**
ISNN					**Sn**	**13 56 11.9**	**+3.4**
SSLN	**Shishaldin Nor**	**2.12**	**268**		**Pn**	**13 55 48.0**	**+1.4**
ANPB	**Aniakchak Plen**	**2.21**	**31**		**Pn**	**13 55 48.8**	**+1.1**
ANNW	**Aniakchak Nort**	**2.37**	**29**		**Pn**	**13 55 51.1**	**+1.2**
AKSA	**Akutan Strait**	**3.23**	**258**		**Pn**	**13 56 02.9**	**+1.3**
AKSA					**Sn**	**13 56 41.2**	**+2.5**
AKUT	**Akutan**	**3.27**	**258**	Pn	**Pn**	**13 56 03.5**	**+1.3**
AKUT				IAML		13 56 56.0	
	comp=N,218nm,0.9s						
AKUT				IAML		13 56 56.0	
	comp=E,178nm,0.7s						
AHB	**Akutan Harbor**	**3.30**	**258**		**Pn**	**13 56 03.9**	**+1.2**
AHB					**Sn**	**13 56 43.0**	**+2.3**
AKBBA	**Akutan Broad B**	**3.37**	**258**		**Pn**	**13 56 04.5**	**+0.9**
AKBBA					**Sn**	**13 56 45.5**	**+3.2**
ZRO	**Akutan Zero**	**3.40**	**258**		**Pn**	**13 56 04.7**	**+0.7**
ZRO					**Sn**	**13 56 45.3**	**+2.3**
LVA	**Lava Point**	**3.41**	**259**	Pn	**Pn**	**13 56 03.6**	**-0.6**
LVA				IAML		13 56 58.0	
	comp=E,172nm,1.0s						
R17L	**Mt. Peulik Vol**	**3.50**	**38**		**Pn**	**13 56 07.4**	**+2.0**
R17L					**Sn**	**13 56 49.4**	**+3.8**
PLK1	**Peulik 1**	**3.55**	**34**		**Pn**	**13 56 07.6**	**+1.6**
PLK5	**Peulik 5**	**3.63**	**30**		**Pn**	**13 56 08.7**	**+1.6**
UNV	**Unalaska Valle**	**3.77**	**256**		**Pn**	**13 56 09.7**	**+0.6**
UNV				IAML		13 57 06.9	
	comp=N,82nm,0.6s						
UNV				IAML		13 57 10.8	
	comp=E,64nm,0.8s						
SII	**Sitkinak Islan**	**3.84**	**62**	Pn	**Pn**	**13 56 11.3**	**+1.3**
SII				IAML		13 57 20.9	
	comp=N,139nm,0.8s						
MNAT	**Makushin Natee**	**3.86**	**257**		**Pn**	**13 56 10.8**	**+0.5**
MREP	**Makushin Rep't**	**3.92**	**256**		**Pn**	**13 56 11.7**	**+0.5**
MGOD	**Makushin Gods**	**3.99**	**256**		**Pn**	**13 56 12.7**	**+0.4**
ANCK	**Angle Creek**	**4.23**	**37**		**Pn**	**13 56 16.9**	**+1.4**
O15K	**Ungalikthiuk R**	**4.27**	**3**		**Pn**	**13 56 16.3**	**+0.4**
ACHA	**Angle Creek He**	**4.30**	**38**		**Pn**	**13 56 17.7**	**+1.3**
P16K	**Nushagak River**	**4.31**	**16**	Pn	**Pn**	**13 56 17.5**	**+1.0**
P16K				IAML		13 57 56.6	
	comp=N,81nm,1.0s						
KABU	**Katmai Buttres**	**4.36**	**38**		**Pn**	**13 56 18.6**	**+1.4**
O14K	**Tigyukauivet M**	**4.37**	**354**		**Pn**	**13 56 17.9**	**+0.6**
KAKN	**Katmai Knife C**	**4.46**	**39**		**Pn**	**13 56 20.2**	**+1.6**
OHAK	**Old Harbor**	**4.57**	**57**	Pn	**Pn**	**13 56 20.2**	**+0.2**
OHAK				IAML		13 57 40.1	
	comp=N,37nm,0.8s						
OHAK				IAML		13 57 44.3	
	comp=E,32nm,1.0s						
KAWH	**Katmai**	**4.62**	**39**		**Pn**	**13 56 21.2**	**+0.4**
KARR	**Katmai Rainbow**	**4.74**	**39**		**Pn**	**13 56 23.8**	**+1.4**
Q18K	**Katmai Hardscr**	**4.74**	**36**		**Pn**	**13 56 24.0**	**+1.5**
P17K	**Kvichak River**	**4.78**	**25**		**Pn**	**13 56 24.2**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**4.79**	**254**		**Pn**	**13 56 23.9**	**+0.7**
O16K	**Kokwok River B**	**4.84**	**14**		**Pn**	**13 56 24.5**	**+0.8**
O16K				IAML		13 57 57.1	
	comp=E,27nm,0.8s						
N14K	**Kuskokwak Cree**	**5.07**	**352**		**Pn**	**13 56 27.2**	**+0.4**
N14K				IAML		13 58 07.3	
	comp=E,55nm,1.4s						
N14K				IAML		13 58 16.4	
	comp=N,51nm,1.1s						
O17K	**Koliganek Bris**	**5.17**	**18**		**Pn**	**13 56 28.8**	**+0.6**
KDAK	**Kodiak Island**	**5.17**	**53**	Pn	**Pn**	**13 56 27.9**	**-0.4**
	comp=N,0.8nm,0.3s,baz=225,slow=5.0,SNR=29						
KDAK				Sn	**Sn**	**13 57 26.0**	**-0.6**
	comp=N,0.3nm,0.3s,baz=333,slow=23,SNR=0.9						
	comp=N,2.5nm,0.4s						
KDAK	**Kodiak Island**	**5.17**	**53**	Pn	**Pn**	**13 56 29.7**	**+1.4**
KDAK				IAML		13 57 51.1	
	comp=N,35nm,1.2s						
KDAK				IAML		13 57 52.3	
	comp=N,28nm,0.8s						
N15K	**Kwethluk River**	**5.26**	**1**		**Pn**	**13 56 30.1**	**+0.6**
N15K				IAML		13 58 08.6	
	comp=N,27nm,0.8s						
N15K				IAML		13 58 14.3	
	comp=E,48nm,0.9s						
P18K	**Big Mountain,**	**5.27**	**30**		**Pn**	**13 56 30.3**	**+0.6**
Q19K	**Cape Douglas,**	**5.43**	**40**	Pn	**Pn**	**13 56 33.0**	**+1.1**
O18K	**Koktuh Hills**	**5.66**	**27**		**Pn**	**13 56 35.2**	**+0.1**
M13K	**Dall Lake**	**5.74**	**345**		**Pn**	**13 56 36.9**	**+0.9**
M15K	**Kasigluk River**	**5.79**	**358**		**Pn**	**13 56 36.7**	**-0.1**
N17K	**Nushagak Hills**	**5.86**	**15**		**Pn**	**13 56 38.8**	**+1.0**
M14K	**Bethel**	**5.91**	**352**		**Pn**	**13 56 38.6**	**+0.3**
CLCO	**Concord Point,**	**5.96**	**253**		**Pn**	**13 56 41.1**	**+2.0**
SPIA	**Saint Paul Isl**	**6.00**	**296**		**Pn**	**13 56 40.2**	**+0.6**
M16K	**Timber Creek**	**6.16**	**6**		**Pn**	**13 56 42.7**	**+0.9**
N18K	**Kilae Creek**	**6.24**	**21**		**Pn**	**13 56 44.6**	**+1.6**
M11K	**Mekoryuk**	**6.32**	**332**	Pn	**Pn**	**13 56 45.1**	**+1.1**
L14K	**Kuka Creek**	**6.55**	**350**		**Pn**	**13 56 47.3**	**+0.1**
O20K	**Slope Mountain**	**6.63**	**36**		**Pn**	**13 56 51.3**	**+3.0**
M17K	**Holitna River**	**6.67**	**12**		**Pn**	**13 56 49.4**	**+0.5**
N19K	**Bonanza Creek**	**6.67**	**25**		**Pn**	**13 56 50.8**	**+1.8**
L15K	**Ungalak Mounta**	**6.80**	**355**		**Pn**	**13 56 50.1**	**-0.5**
L16K	**Owhat River**	**6.82**	**3**		**Pn**	**13 56 51.5**	**+0.6**
M18K	**Stony River**	**7.00**	**18**		**Pn**	**13 56 53.9**	**+0.5**
L17K	**Donlin**	**7.31**	**8**		**Pn**	**13 56 57.7**	**+0.2**
K13K	**Kusilvak Mount**	**7.38**	**344**		**Pn**	**13 56 59.0**	**+0.4**
K15K	**Wolf Creek Mou**	**7.42**	**356**	Pn	**Pn**	**13 56 59.8**	**+0.7**
L18K	**Granite Mounta**	**7.56**	**13**		**Pn**	**13 57 01.4**	**+0.4**
M19K	**Big River Lodg**	**7.66**	**22**		**Pn**	**13 57 04.4**	**+2.0**
SLKM	**Skilak Lake**	**7.78**	**40**	Pn	**Pn**	**13 57 06.0**	**+1.9**
L19K	**White Mountain**	**7.82**	**19**		**Pn**	**13 57 05.9**	**+1.3**
SEW	**Seward**	**7.82**	**44**	Pn	**Pn**	**13 57 05.4**	**+0.8**
K17K	**Iditarod**	**7.88**	**7**	Pn	**Pn**	**13 57 06.4**	**+0.9**
M20K	**Styx River**	**7.93**	**25**	Pn	**Pn**	**13 57 08.8**	**+2.6**
STLK	**Strandline Lak**	**7.97**	**31**		**Pn**	**13 57 07.6**	**+1.0**
J14K	**Nanvaranak Lak**	**8.02**	**349**	Pn	**Pn**	**13 57 08.0**	**+0.7**
J16K	**Anvik River**	**8.39**	**359**		**Pn**	**13 57 12.8**	**+0.5**
J17K	**VABM Dome**	**8.52**	**4**		**Pn**	**13 57 13.8**	**-0.4**
PWL	**Port Wells**	**8.72**	**42**		**Pn**	**13 57 17.9**	**+1.0**
J18K	**Innoko River**	**8.76**	**11**	Pn	**Pn**	**13 57 17.9**	**+0.4**
ILAR	**Eielson Array**	**11.93**	**29**	Pn	Pn	13 57 55.5	-5.2
	baz=225,slow=13,SNR=1.4						
	comp=E,0.1nm,0.5s						
ILAR	**Eielson Array**	**11.93**	**29**	Pn	**Pn**	**13 58 00.5**	**-0.3**
F19K	**Shaleruckit Mo**	**12.01**	**5**	Pn	**Pn**	**13 58 02.7**	**+0.9**
G21K	**Allakaket**	**12.09**	**13**	Pn	**Pn**	**13 58 04.3**	**+1.4**
BCAR	**Beaver Creek A**	**12.52**	**42**	Pn	**Pn**	**13 58 09.6**	**+0.8**
O29M	**Mount Kennedy**	**12.81**	**56**	Pn	**Pn**	**13 58 14.4**	**+1.5**
S31K	**Pelican**	**13.64**	**67**	Pn	**Pn**	**13 58 25.3**	**+1.2**
N30M	**Aishikik Lake**	**13.84**	**52**	Pn	**Pn**	**13 58 27.0**	**+0.2**
E22K	**Anaktuvuk Pass**	**13.84**	**13**	Pn	**Pn**	**13 58 28.9**	**+2.0**
DAWY	**Dawson**	**13.96**	**41**	Pn	**Pn**	**13 58 29.6**	**+1.2**
I27K	**Kandik River**	**14.10**	**33**	Pn	**Pn**	**13 58 32.0**	**+1.7**
E24K	**Your Creek**	**14.31**	**18**	Pn	**Pn**	**13 58 34.3**	**+1.2**
M30M	**Minto, Yukon**	**14.35**	**48**	Pn	**Pn**	**13 58 34.7**	**+1.0**
R32K	**Eaglecrest**	**14.57**	**66**	Pn	**Pn**	**13 58 36.0**	**-0.6**
K29M	**Barlow Dome**	**14.57**	**43**	Pn	**Pn**	**13 58 37.2**	**+0.5**
H29M	**Whitestone**	**15.52**	**35**	Pn	**Pn**	**13 58 49.9**	**+0.9**
H29M				IAmb	IAmb	13 59 09.7	
	comp=Z,3.2nm,0.7s						
C23K	**Itkillik River**	**15.59**	**13**	Pn	**Pn**	**13 58 50.8**	**+1.0**
C23K				IAmb	IAmb	13 59 02.0	
	comp=Z,6.2nm,1.1s						
D25K	**Kavik River**	**15.78**	**18**		**P**	**13 58 54.1**	**-1.4**
G29M	**Pine Creek**	**16.05**	**33**	Pn	**Pn**	**13 58 56.6**	**+0.8**
G29M				IAmb	IAmb	13 59 14.4	
	comp=Z,4.2nm,0.8s						
EPYK	**Eagle Plains**	**16.16**	**35**		**P**	**13 58 58.8**	**-0.9**
EPYK				IAmb	IAmb	13 59 12.6	
	comp=Z,10nm,1.4s						
H31M	**Peel River**	**16.69**	**39**		**P**	**13 59 05.9**	**+0.3**
H31M				IAmb	IAmb	13 59 23.4	
	comp=Z,4.0nm,0.8s						
MMPY	**Sheldon Lake,**	**16.80**	**51**		**P**	**13 59 06.1**	**-0.8**
MMPY				IAmb	IAmb	13 59 26.2	
	comp=Z,6.7nm,1.4s						
F30M	**Barrier River**	**17.17**	**33**		**P**	**13 59 11.2**	**+0.3**
G31M	**Satah River**	**17.28**	**36**		**P**	**13 59 12.3**	**+0.3**
F31M	**Tsiigehtchic**	**17.73**	**35**		**Pn**	**13 59 16.5**	**0.0**
F31M				IAmb	IAmb	13 59 45.2	
	comp=Z,6.2nm,1.3s						
INK	**Inuvik**	**18.27**	**32**	P	**P**	**13 59 22.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=215,slow=10,SNR=2.5						
INK				LR	LR	14 07 35.7	
	comp=Z,39nm,20.8s,baz=176,slow=41						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**18.27**	**32**	P	**Pn**	**13 59 23.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**24.46**	**283**	P	**P**	**14 00 27.9**	**+0.1**
PETK	**Petropavlovsk-**	**24.46**	**283**	P	**P**	**14 00 25.7**	**-2.1**
	comp=Z,2.5nm,0.5s,baz=73,slow=12,SNR=24						
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**24.46**	**283**	P	**P**	**14 00 28.3**	**+0.5**
KHMM	**Horse Mountain**	**27.90**	**105**	P	**P**	**14 00 59.9**	**+0.8**
KHMM				IAmb	IAmb	14 01 33.3	
	comp=Z,6.6nm,1.0s						
BLKN	**Baker Lake**	**32.44**	**47**	P	**P**	**14 01 40.5**	**+1.8**
BLKN				IAmb	IAmb	14 02 01.9	
	comp=Z,3.5nm,1.0s						
KSRS	**Korea Array**	**50.33**	**281**	P	**P**	**14 04 03.6**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=48,slow=7.1,SNR=4.5						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**63.86**	**357**	P	**P**	**14 05 39.7**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=25,slow=8.9,SNR=8.9						
	comp=Z,0.9nm,0.5s						
FINES	**FINESS Array B**	**63.86**	**357**	P	**P**	**14 05 40.0**	**-0.6**
BVAR	**Borovoye Array**	**64.53**	**329**	P	**P**	**14 05 43.3**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=40,slow=5.8,SNR=4.5						
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**65.19**	**3**	P	**P**	**14 05 48.4**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=1.1,slow=7.2,SNR=4.1						
	comp=Z,2.7nm,0.8s						
MK31	**Makanchi Array**	**65.74**	**318**	P	**P**	**14 05 52.9**	**-0.3**
MKAR	**Makanchi Array**	**65.74**	**318**	P	**P**	**14 05 52.7**	**-0.4**
EKA	**Eskdalemuir Ar**	**68.52**	**14**	P	**P**	**14 06 10.0**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=354,slow=5.0,SNR=3.7						
	comp=Z,0.4nm,0.5s						
AB31	**Akbulak array**	**70.83**	**333**	P	**P**	**14 06 25.1**	**+0.2**
AB31				IAmb	IAmb	14 06 25.1	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**70.83**	**333**	P	**P**	**14 06 25.0**	**+0.1**
KKAR	**Karatay Array**	**73.20**	**324**	P	**P**	**14 06 39.5**	**+0.3**
AKASG	**Malin Array Be**	**74.44**	**354**	P	**P**	**14 06 45.2**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=11,slow=6.1,SNR=4.1						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**74.44**	**354**	P	**P**	**14 06 46.6**	**+0.3**

RAHZ			S	Sn	14 10 56.0	-1.0
MTHZ	**Maungataniwha**	**5.01 199**	P	Pn	14 09 60.0	-0.1
MHGZ	**Mahia Peninsul**	**5.09 189**	P	Pn	14 09 59.2	-1.9
MRHZ	**Matea Rd**	**5.12 202**	P	Pn	14 10 01.2	-0.2
WHHZ	**Waihua**	**5.13 195**	P	Pn	14 10 01.7	+0.1
ARHZ	**Aropaoanui**	**5.36 196**	P	Pn	14 10 04.4	-0.3
MCHZ	**McNeill Hill**	**5.61 198**	P	Pn	14 10 07.6	-0.4
NTVZ	**North Tongarir**	**5.61 207**	P	Pn	14 10 09.7	+1.5
OTVZ	**Oturere**	**5.67 206**	P	Pn	14 10 09.0	0.0
KAHZ	**Kahuranaki**	**5.90 195**	P	Pn	14 10 09.7	-2.2

*IDC **29** 14:14:17.1±0.8, 40°.58N×143°.95E, h0km, mb3.9/13, mbtmp3.9/18, ML3.0/5, MS3.3/16, Error ellipse: s-maj=19.5km s-min=16.7km az=92.0*
*NIED **29** 14:14:19.9, 40°.64N×143°.93E, h56km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.41; $M_{\theta\theta}$0.46; $M_{\phi\phi}$-1.87; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.94; $M_{r\phi}$0.48; Fault plane solution: $M_0$1.95000×10^{15} NP1: ϕ_s180.00000°, δ39.00000°, λ61.00000°. NP2:ϕ_s35.00000°, δ57.00000°, λ111.00000°.*
*JMA **29** 14:14:19.9±0.1, 40°.6N±0°.5×143°.9E±0°.8, h56km±4km, MV3.5/35, FAR E OFF SANRIKU*
*NEIC **29** 14:14:22.8±1.0, 40°.78N±0°.04×143°.68E±0°.08, h26km±5km, mb4.4/42, Error ellipse: s-maj=10.3km s-min=1.5km az=118.0*

ISC 29 14:14:20.2±0.5, **40°.66N**±0°.04×**143°.84E**±0°.05, **h16**km, **n113, s148/111, mb4.3/33, MS3.5/12, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**1.45**	**339**		**Pn**	**14 14 45.0**	**-0.7**
ERM				Sn	**Sn**	**14 15 00.7**	**-3.7**
JEM	**Erimo**	**1.45**	**339**	P	**Pn**	**14 14 44.8**	**-0.9**
JEM				S	**Sn**	**14 15 02.8**	**-1.6**
JTH	**Tanohata**	**1.68**	**245**	P	**Pn**	**14 14 48.1**	**-0.7**
JTH				S	**Sn**	**14 15 08.8**	**-1.2**
JTHR	**Tokachihiroo**	**1.68**	**346**	P	**Pn**	**14 14 47.9**	**-1.0**
JTHR				S	**Sn**	**14 15 09.3**	**-0.8**
JKEN	**Kujiedanarisaw**	**1.69**	**255**	P	**Pn**	**14 14 48.2**	**-0.8**
JANG	**Nango**	**1.79**	**262**	P	**Pn**	**14 14 50.0**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.81**	**334**	P	**Pn**	**14 14 50.5**	**-0.2**
JCH	**Churui**	**1.98**	**350**	P	**Pn**	**14 14 52.3**	**-0.8**
JTM	**Tenmabayashi**	**2.11**	**274**		**Pn**	**14 14 54.4**	**-0.4**
JTM				Sn	**Sn**	**14 15 17.5**	**-3.2**
JOT	**Ohata**	**2.23**	**290**	P	**Pn**	**14 14 56.9**	**+0.4**
JOM	**Ohasama**	**2.29**	**240**	P	**Pn**	**14 14 57.4**	**+0.2**
JAK	**Akkeshi**	**2.42**	**15**	P	**Pn**	**14 14 57.4**	**-1.6**
JAK				S	**Sn**	**14 15 25.8**	**-2.6**
JAR	**Ashorobuto**	**2.63**	**359**	P	**Pn**	**14 15 00.3**	**-1.7**
JAR				S	**Sn**	**14 15 31.3**	**-2.4**
JMK	**Ichinoseki**	**2.64**	**231**	P	**Pn**	**14 15 02.3**	**+0.2**
JEW	**Eniwo**	**2.82**	**321**	*eP*	**Pn**	**14 15 04.9**	**+0.4**
JOMM	**Oshimamatsumae**	**3.02**	**288**	P	**Pn**	**14 15 08.5**	**+1.1**
NEM2	**Nemuro 2**	**3.05**	**27**	P	**Pn**	**14 15 05.8**	**-2.0**
NEM2				S	**Sn**	**14 15 39.7**	**-4.2**
JYK	**Kaneyama**	**3.20**	**238**	P	**Pn**	**14 15 10.3**	**+0.6**
JTKR	**Abashiri--Toko**	**3.31**	**1**	P	**Pn**	**14 15 10.4**	**-0.9**
JTKR				S	**Sn**	**14 15 48.9**	**-1.4**
JKK2	**Kamakawa 2**	**3.31**	**346**	P	**Pn**	**14 15 11.4**	**0.0**
JRA	**Rausu**	**3.41**	**16**	P	**Pn**	**14 15 11.1**	**-1.5**
JHR	**Hokuryu**	**3.46**	**334**	*eP*	**Pn**	**14 15 15.2**	**+1.9**
JKA	**Kamikawa-asahi**	**3.57**	**346**		**Pn**	**14 15 13.9**	**-1.0**
ASAJ	**Asahikawa**	**3.58**	**345**	Pn	**Pn**	**14 15 15.8**	**+0.8**
	0.7nm,0.3s,baz=201,slow=15,SNR=14						
ASAJ				Sn	**Sn**	**14 16 00.8**	**+4.0**
	1.7nm,0.3s,baz=30,slow=25,SNR=4.6 8.9nm,0.7s						
JYT	**Yasato**	**5.27**	**214**	Pn	**Pn**	**14 15 39.0**	**+0.7**
MAJO	**Matsushiro**	**6.03**	**229**		**Pn**	**14 15 49.1**	**+0.4**
MJAR	**Matsushiro Arr**	**6.03**	**229**	Pn	**Pn**	**14 15 48.3**	**-0.5**
	0.1nm,0.3s,baz=32,slow=12,SNR=22 7.1nm,0.8s						
MJAR	**Matsushiro Arr**	**6.03**	**229**		**Pn**	**14 15 49.8**	**+1.1**
MJB9	**Matsu-Tunnel**	**6.03**	**229**		**Pn**	**14 15 50.0**	**+1.2**
JGF	**Kuroka**	**7.18**	**227**	Pn	**Pn**	**14 16 06.1**	**+1.5**
INU	**Inuyama**	**7.56**	**228**	Pn	**Pn**	**14 16 11.3**	**+1.6**
JHJ	**Hachijo jima 2**	**8.20**	**205**	Pn	**Pn**	**14 16 16.4**	**-2.0**
	6.4nm,0.3s,baz=336,slow=11,SNR=2.1						
JHJ				Sn	**Sn**	**14 17 42.8**	**-7.9**
	3.8nm,0.3s,baz=33,slow=22,SNR=1.5 66nm,0.6s						
USA0B	**Ussuriysk Arra**	**9.45**	**296**	Pn	**Pn**	**14 16 34.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**9.45**	**296**	Pn	**Pn**	**14 16 37.2**	**+1.7**
	0.1nm,0.3s,baz=101,slow=12,SNR=5.4 7.4nm,0.9s						
USRK	**Ussuriysk Ar.**	**9.45**	**296**		**Pn**	**14 16 34.8**	**-0.7**
KSRS	**Korea Array**	**12.78**	**261**	Pn	**Pn**	**14 17 21.4**	**+0.2**
	0.1nm,0.3s,baz=75,slow=13,SNR=7.3						
KSRS				LR	LR	14 21 40.3	
	comp=Z,57nm,20.4s,baz=85,slow=34 1.3nm,1.0s						
JNU	**Nakatsue**	**12.81**	**238**	LR	LR	14 22 45.5	
	comp=Z,213nm,18.9s,baz=50,slow=40						
PETK	**Petropavlovsk-**	**15.61**	**32**	LR	LR	14 23 48.2	
	comp=Z,70nm,18.4s,baz=216,slow=36						
MA2	**Magadan**	**19.43**	**11**	LR	LR	14 27 01.7	
	comp=Z,50nm,19.9s,baz=92,slow=39						
YAK	**Yakutsk**	**23.05**	**343**	P	**P**	**14 19 23.2**	**-1.3**
YAK				IAmb	IAmb	14 19 42.7	
	comp=Z,7.0nm,0.6s						
SHEM	**Shemya Is, Ala**	**23.82**	**49**	LR	LR	14 29 08.5	
	comp=Z,17nm,20.9s,baz=308,slow=37						
SHEM	**Shemya Is, Ala**	**23.82**	**49**	P	**P**	**14 19 33.3**	**+1.1**
SMY	**Shemya**	**23.82**	**49**	P	**P**	**14 19 33.2**	**+1.0**
ULN	**Ulaanbaatar**	**27.11**	**298**	P	**P**	**14 20 01.7**	**-0.8**
SONM	**Songino Array**	**27.56**	**298**	P	**P**	**14 20 07.0**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=110,slow=8.3,SNR=6.6						
SONM				LR	LR	14 31 29.8	
	comp=Z,48nm,18.4s,baz=158,slow=37 comp=Z,1.7nm,0.9s						
SONM	**Songino Array**	**27.56**	**298**	P	**P**	**14 20 05.1**	**-1.3**
TLY	**Talaya**	**29.58**	**306**	LR	LR	14 32 43.4	
	comp=Z,65nm,18.7s,baz=158,slow=37						
TIXI	**Tiksi**	**31.96**	**351**	LR	LR	14 35 01.1	
	comp=Z,94nm,18.6s,baz=191,slow=39						
CNBA	**Chernabura Isl**	**39.48**	**49**	P	**P**	**14 21 51.1**	**+1.6**
CNBA				IAmb	IAmb	14 22 19.0	
	comp=Z,10nm,1.0s						
NRIK	**Noril'sk**	**40.83**	**333**	LR	LR	14 40 28.8	
	comp=Z,76nm,18.1s,baz=98,slow=38						
NRIK	**Noril'sk**	**40.83**	**333**	P	**P**	**14 22 01.1**	**+0.5**
ZAA0	**Zalesovo Array**	**40.98**	**309**		**P**	**14 22 01.9**	**-0.1**
ZAA0				IAmb	IAmb	14 22 03.2	
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**40.98**	**309**	P	**P**	**14 22 02.2**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=88,slow=9.0,SNR=16 comp=Z,4.0nm,0.8s						
F19K	**Shaleruckik Mo**	**41.07**	**31**	P	**P**	**14 22 03.4**	**+0.7**
E19K	**Redstone River**	**41.39**	**30**	P	**P**	**14 22 05.7**	**+0.5**
E19K				IAmb	IAmb	14 22 25.0	
	comp=Z,5.2nm,0.9s						
B21K	**Ikpikpuk River**	**42.70**	**27**	P	**P**	**14 22 17.0**	**+1.1**
B21K				IAmb	IAmb	14 22 21.4	
	comp=Z,14nm,1.2s						
ILSW	**Iliamna Southw**	**42.73**	**41**	P	**P**	**14 22 17.2**	**+0.8**
ILSW				IAmb	IAmb	14 22 26.3	
	comp=Z,11nm,1.3s						
SPU	**Mount Spurr**	**43.22**	**40**	P	**P**	**14 22 21.4**	**+1.1**
E22K	**Anaktuvuk Pass**	**43.52**	**29**	P	**P**	**14 22 23.5**	**+0.9**
E22K				IAmb	IAmb	14 22 37.8	
	comp=Z,5.7nm,0.9s						
MKAR	**Makanchi Array**	**43.90**	**299**	P	**P**	**14 22 26.0**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=82,slow=9.3,SNR=18 comp=Z,3.2nm,0.8s						
MKAR	**Makanchi Array**	**43.90**	**299**		**P**	**14 22 25.2**	**-0.7**
CHTO	**Chiang Mai**	**44.07**	**254**	P	**P**	**14 22 28.2**	**+0.6**
MAKZ	**Makanchi**	**44.10**	**299**		**P**	**14 22 27.7**	**+0.2**
MAKZ				IAmb	IAmb	14 22 38.2	
	comp=Z,6.0nm,0.9s						
H23K	**Yukon River**	**44.29**	**33**	P	**P**	**14 22 30.6**	**+1.8**
CMAR	**Chiang Mai Arr**	**44.29**	**254**	P	**P**	**14 22 29.9**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=44,slow=6.6,SNR=3.5						
CMAR				LR	LR	14 40 16.9	
	comp=Z,37nm,18.6s,baz=180,slow=35 comp=Z,0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**44.29**	**254**	P	**P**	**14 22 28.3**	**-1.1**
E23K	**Chandalar**	**44.33**	**30**	P	**P**	**14 22 30.8**	**+1.6**
E23K				IAmb	IAmb	14 23 08.6	
	comp=Z,11nm,1.5s						
E24K	**Your Creek**	**44.76**	**30**	P	**P**	**14 22 34.2**	**+1.7**
E24K				IAmb	IAmb	14 22 54.6	
	comp=Z,5.5nm,1.1s						

KURK	**Kurchatov**	**45.27**	**306**		**P**	**14 22 37.0**	**+0.2**
KURK				IAmb	IAmb	14 22 37.8	
	comp=Z,6.2nm,0.9s						
KURBB	**Kurchatov Arra**	**45.35**	**306**	P	**P**	**14 22 37.6**	**+0.2**
	comp=Z,4.5nm,0.9s,baz=78,slow=8.5,SNR=34 comp=Z,4.5nm,0.9s						
ILAR	**Eielson Array**	**45.43**	**34**	P	**P**	**14 22 37.8**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=264,slow=6.6,SNR=7.5 comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**45.43**	**34**	P	**P**	**14 22 38.4**	**+0.5**
D25K	**Kavik River**	**45.56**	**28**	P	**P**	**14 22 39.6**	**+0.7**
D25K				IAmb	IAmb	14 23 01.9	
	comp=Z,3.1nm,0.9s						
BCAR	**Beaver Creek A**	**47.84**	**36**	P	**P**	**14 22 58.1**	**+1.3**
BVAR	**Borovoye Array**	**49.60**	**311**	P	**P**	**14 23 10.6**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=69,slow=8.1,SNR=7.0 comp=Z,1.7nm,0.7s						
I30M	**Mount Dempster**	**49.80**	**33**	P	**P**	**14 23 13.1**	**+1.2**
I30M				IAmb	IAmb	14 23 27.4	
	comp=Z,2.8nm,1.1s						
HYT	**Haines Junctio**	**50.27**	**39**		**P**	**14 23 16.4**	**+0.8**
HYT				IAmb	IAmb	14 23 28.8	
	comp=Z,4.4nm,0.9s						
G31M	**Satah River**	**50.30**	**30**	P	**P**	**14 23 16.4**	**+0.9**
G31M				IAmb	IAmb	14 23 50.9	
	comp=Z,3.5nm,1.1s						
F31M	**Tsiigehtchic**	**50.39**	**30**	P	**P**	**14 23 15.5**	**-0.7**
F31M				IAmb	IAmb	14 23 42.3	
	comp=Z,5.4nm,1.1s						
KK31	**Karatay Array**	**53.00**	**299**	P	**P**	**14 23 35.9**	**-0.2**
KK31				IAmb	IAmb	14 23 46.3	
	comp=Z,3.2nm,0.9s						
KKAR	**Karatay Array**	**53.00**	**299**	P	**P**	**14 23 35.9**	**-0.2**
BTK	**Batken**	**54.09**	**295**	P	**P**	**14 23 43.9**	**-0.3**
BTK				IAmb	IAmb	14 23 55.1	
	comp=Z,7.0nm,1.3s						
DLBC	**Dease Lake**	**54.62**	**40**	LR	LR	14 49 13.0	
	comp=Z,27nm,19.2s,baz=315,slow=38						
ARTI	**Arti**	**55.05**	**317**	LR	LR	14 49 17.0	
	comp=Z,36nm,18.3s,baz=80,slow=38						
NIL	**Nilore**	**55.33**	**287**		**P**	**14 23 52.5**	**-0.7**
RPSI	**Rantau Prapat**	**55.36**	**239**	P	**P**	**14 23 54.1**	**+0.6**
PUH	**Pauahi**	**55.75**	**93**	P	**P**	**14 23 57.3**	**+0.9**
AB31	**Akbulak array**	**57.09**	**309**	P	**P**	**14 24 05.0**	**-0.5**
AB31				IAmb	IAmb	14 24 16.2	
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**57.09**	**309**	P	**P**	**14 24 05.3**	**-0.2**
WRAB	**Tennant Creek**	**60.92**	**190**	P	**P**	**14 24 33.4**	**+1.1**
WRAB				IAmb	IAmb	14 25 15.9	
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**60.94**	**190**	P	**P**	**14 24 31.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=8.7,slow=7.0,SNR=4.9 comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**60.94**	**190**	P	**P**	**14 24 32.3**	**-0.1**
ARCES	**ARCESS Array B**	**61.28**	**339**	LR	LR	14 56 47.9	
	comp=Z,44nm,18.2s,baz=64,slow=42						
ARCES	**ARCESS Array B**	**61.28**	**339**	P	**P**	**14 24 33.8**	**-0.4**
AS31	**Alice Springs**	**64.66**	**190**	P	**P**	**14 24 58.8**	**+1.6**
ASAR	**Alice Springs**	**64.66**	**190**	P	**P**	**14 24 55.7**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=18,slow=5.8,SNR=5.0 comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**64.66**	**190**	P	**P**	**14 24 57.5**	**+0.4**
ONTNC	**Ouen Toro**	**66.08**	**157**	P	**P**	**14 25 08.7**	**+2.4**
JCC	**Jacoby Creek,**	**66.35**	**56**	P	**P**	**14 25 08.8**	**+0.7**
FIA1	**FINESS Array S**	**66.49**	**332**	P	**P**	**14 25 08.2**	**-0.3**
FINES	**FINESS Array B**	**66.49**	**332**	P	**P**	**14 25 06.8**	**-1.7**
	comp=Z,3.0nm,0.9s,baz=316,slow=5.3,SNR=4.2 comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**66.49**	**332**	P	**P**	**14 25 07.1**	**-1.5**
KHMM	**Horse Mountain**	**66.50**	**56**	P	**P**	**14 25 10.3**	**+1.0**
JTMT	**Jette**	**68.08**	**45**	P	**P**	**14 25 20.0**	**+0.8**
KBZ	**Khabaz**	**69.98**	**311**	P	**P**	**14 25 31.1**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=60,slow=6.2,SNR=4.2 comp=Z,1.8nm,0.8s						
NVAR	**Mina Array Bea**	**71.33**	**55**	P	**P**	**14 25 39.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=318,slow=7.9,SNR=2.1 comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**71.33**	**55**	P	**P**	**14 25 39.9**	**+0.5**
NV11	**Mina Array Sit**	**71.42**	**55**	P	**P**	**14 25 40.5**	**+0.6**
NOA	**NORSAR Array B**	**71.56**	**338**	LR	LR	15 02 24.0	
	comp=Z,28nm,18.4s,baz=35,slow=40						
VRAC	**Vranov**	**79.08**	**328**	LR	LR	15 05 03.5	
	comp=Z,46nm,19.0s,baz=46,slow=38						
RAR	**Rarotonga**	**80.82**	**128**	LR	LR	14 54 54.4	
	comp=Z,27nm,21.4s,baz=160,slow=30						
TXAR	**Lajitas Array**	**86.43**	**54**	P	**P**	**14 27 02.0**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=322,slow=8.9,SNR=1.9 comp=Z,0.1nm,0.6s						
TXAR	**Lajitas Array**	**86.43**	**54**	P	**P**	**14 27 02.3**	**+0.1**

*IDC **29** 14:18:50.8±4.4, 22°.90S×63°.28E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=132.1km s-min=34.0km az=58.0*

ISC 29 14:18:52.5±4.5, **22°.9S**±0°.5×**63°.3E**±0°.8, **h10**km, **n9,** σ0**°35/6, mb4.0/6, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**25.02**	**199**		T	14 50 51.2	
	baz=27,slow=74,SNR=4.6						
H04N1	**CROZET ISLANDS**	**25.02**	**199**		T	14 50 54.8	
	baz=27,slow=74,SNR=6.0						
H04N3	**CROZET ISLANDS**	**25.04**	**199**		T	14 50 52.1	
	baz=27,slow=74,SNR=5.2						
CMAR	**Chiang Mai Arr**	**53.87**	**43**	P	**P**	**14 28 16.3**	**+0.1**
	0.6nm,0.3s,baz=238,slow=9.1,SNR=4.5 0.6nm,0.3s						
ASAR	**Alice Springs**	**64.20**	**106**	P	**P**	**14 29 28.2**	**+0.2**
	0.5nm,0.6s,baz=253,slow=5.9,SNR=13 0.5nm,0.6s						
WRA	**Warramunga Arr**	**65.61**	**102**	P	**P**	**14 29 37.1**	**0.0**
	1.1nm,0.9s,baz=258,slow=5.7,SNR=8.0 1.1nm,0.9s						
KURBB	**Kurchatov Arra**	**74.42**	**10**	P	**P**	**14 30 30.6**	**+0.2**
	0.4nm,0.8s,baz=203,slow=6.7,SNR=3.3 0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**78.75**	**13**	P	**P**	**14 30 55.0**	**+0.2**
	0.9nm,0.5s,baz=201,slow=6.1,SNR=4.3 0.9nm,0.5s						
KSRS	**Korea Array**	**85.39**	**46**	P	**P**	**14 31 29.6**	**-0.5**
	0.7nm,0.8s,baz=228,slow=4.9,SNR=4.4 0.7nm,0.8s						

*IDC **29** 14:20:21.7±1.2, 40°.64N×143°.96E, h0km, mb3.8/9, mbtmp3.7/13, ML2.7/3, Error ellipse: s-maj=27.9km s-min=20.9km az=86.0*
*NIED **29** 14:20:23.7, 40°.62N×143°.97E, h47km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.45; $M_{\theta\theta}$1.30; $M_{\phi\phi}$-6.75; $M_{r\theta}$1.35; $M_{\theta\phi}$-3.47; $M_{r\phi}$1.77; Fault plane solution: $M_0$7.14000×10^{14} NP1: ϕ_s188.00000°, δ37.00000°, λ72.00000°. NP2:ϕ_s30.00000°, δ55.00000°, λ103.00000°.*
*JMA **29** 14:20:23.7±0.1, 40°.6N±0°.5×144°.0E±0°.7, h47km, MV3.5/34, FAR E OFF SANRIKU*
*NEIC **29** 14:20:23.4±0.8, 40°.68N±0°.03×144°.0E±0°.1, h10km±1km, mb4.2/13, Error ellipse: s-maj=16.6km s-min=5.8km az=90.0*

ISC 29 14:20:23.5±0.8, **40°.66N**±0°.05×**144°.01E**±0°.07, **h16**km, **n63,** σ0**°92/66, mb4.0/16, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**1.50**	**335**		**Pn**	**14 20 49.3**	**-0.5**
JEM	**Erimo**	**1.50**	**335**	P	**Pn**	**14 20 49.0**	**-0.8**
JTHR	**Tokachihiroo**	**1.72**	**342**	P	**Pn**	**14 20 52.0**	**-0.7**
JTHR				*eS*	**Sn**	**14 21 13.4**	**-1.0**
JTH	**Tanohata**	**1.79**	**247**	P	**Pn**	**14 20 52.4**	**-1.3**
JKEN	**Kujiedanarisaw**	**1.81**	**256**	P	**Pn**	**14 20 52.4**	**-1.6**
JNBK	**Urakawa-nobuka**	**1.88**	**330**	P	**Pn**	**14 20 54.8**	**-0.1**
JANG	**Nango**	**1.92**	**262**	*eP*	**Pn**	**14 20 54.3**	**-1.2**
JCH	**Churui**	**2.01**	**346**	P	**Pn**	**14 20 56.5**	**-0.4**
JCH				*eS*	**Sn**	**14 21 20.4**	**-1.3**
JTM	**Tenmabayashi**	**2.24**	**274**		**Pn**	**14 20 59.7**	**-0.2**
JOT	**Ohata**	**2.35**	**289**	P	**Pn**	**14 21 01.2**	**-0.3**
JOT				*eS*	**Sn**	**14 21 28.3**	**-1.7**
JAK	**Akkeshi**	**2.39**	**12**	P	**Pn**	**14 21 01.5**	**-0.5**
JAK				S	**Sn**	**14 21 30.2**	**-0.8**
JOM	**Ohasama**	**2.40**	**241**	*i* P	**Pn**	**14 21 01.8**	**-0.3**
JAR	**Ashorobuto**	**2.64**	**356**	*i* P	**Pn**	**14 21 04.6**	**-0.9**
JAR				S	**Sn**	**14 21 35.0**	**-2.2**
JMK	**Ichinoseki**	**2.74**	**232**	P	**Pn**	**14 21 06.6**	**-0.2**
JEW	**Eniwo**	**2.90**	**320**	*eP*	**Pn**	**14 21 09.7**	**+0.7**

NEM2	**Nemuro 2**	**3.00**	**25**	P	**Pn**	**14 21 09.7**	**-0.6**
NEM2				S	**Sn**	**14 21 43.4**	**-2.6**
JOMM	**Oshimamatsumae**	**3.14**	**287**	*eP*	**Pn**	**14 21 12.6**	**+0.3**
JYK	**Kaneyama**	**3.30**	**239**	P	**Pn**	**14 21 14.6**	**+0.1**
JTKR	**Abashiri--Toko**	**3.31**	**359**	P	**Pn**	**14 21 14.4**	**-0.3**
JTKR				S	**Sn**	**14 21 52.3**	**-1.3**
JKK2	**Kamakawa 2**	**3.35**	**344**	P	**Pn**	**14 21 14.8**	**-0.3**
JRA	**Rausu**	**3.38**	**14**	*eP*	**Pn**	**14 21 15.0**	**-0.6**
JRA				S	**Sn**	**14 21 52.7**	**-2.7**
JHR	**Hokuryu**	**3.52**	**332**	*eP*	**Pn**	**14 21 18.6**	**+1.1**
JKA	**Kamikawa-asahi**	**3.61**	**344**		**Pn**	**14 21 19.2**	**+0.4**
ASAJ	**Asahikawa**	**3.61**	**344**	Pn	**Pn**	**14 21 19.8**	**+1.0**
	0.5nm,0.3s,baz=197,slow=9.8,SNR=5.2						
ASAJ				Sn	**Sn**	**14 22 01.1**	**0.0**
	1.3nm,0.3s,baz=57,slow=31,SNR=3.7 4.4nm,0.3s						
MAJO	**Matsushiro**	**6.12**	**230**		**Pn**	**14 21 53.2**	**-0.2**
MJAR	**Matsushiro Arr**	**6.12**	**230**	Pn	**Pn**	**14 21 53.9**	**+0.5**
	0.1nm,0.3s,baz=37,slow=13,SNR=9.2 2.4nm,0.8s						
MJAR	**Matsushiro Arr**	**6.12**	**230**		**Pn**	**14 21 52.7**	**-0.6**
MJB9	**Matsu-Tunnel**	**6.12**	**230**		**Pn**	**14 21 53.4**	**+0.1**
JGF	**Kuroka**	**7.27**	**228**	Pn	**Pn**	**14 22 07.8**	**-1.4**
KSRS	**Korea Array**	**12.90**	**261**	Pn	**Pn**	**14 23 26.5**	**+0.3**
	0.1nm,0.3s,baz=73,slow=13,SNR=1.5 0.3nm,0.5s						
HILR	**Hailar Array B**	**19.23**	**306**	Pn	**P**	**14 24 46.5**	**-0.3**
	2.6nm,0.5s,baz=103,slow=16,SNR=2.4						
ULN	**Ulaanbaatar**	**27.23**	**298**	P	**P**	**14 26 06.8**	**+0.1**
SONM	**Songino Array**	**27.67**	**298**	P	**P**	**14 26 11.0**	**+0.2**
	0.8nm,0.4s,baz=60,slow=8.8,SNR=4.7 0.8nm,0.4s						
SONM	**Songino Array**	**27.67**	**298**	P	**P**	**14 26 10.3**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**28.59**	**130**	T	T	14 56 18.1	
	baz=322,slow=75,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**28.61**	**130**	T	T	14 56 33.2	
	baz=322,slow=75,SNR=4.9						
H11N3	**WAKE ISLAND Hy**	**28.61**	**130**	T	T	14 56 20.4	
	baz=322,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**29.45**	**132**	T	T	14 57 22.7	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**29.45**	**132**	T	T	14 57 30.0	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**29.46**	**132**	T	T	14 57 28.1	
	baz=324						
J18K	**Innoko River**	**41.02**	**36**	P	**P**	**14 28 06.0**	**+0.3**
J18K				IAmb	IAmb	14 28 29.6	
	comp=Z,3.3nm,1.1s						
ZAA0	**Zalesovo Array**	**41.08**	**309**	P	**P**	**14 28 06.5**	**+0.4**
ZAA0				IAmb	IAmb	14 28 13.1	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**41.08**	**309**	P	**P**	**14 28 06.7**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=91,slow=8.9,SNR=7.5 comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**44.01**	**299**	P	**P**	**14 28 30.3**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=82,slow=8.9,SNR=11 comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**44.01**	**299**		**P**	**14 28 30.1**	**0.0**
ILAR	**Eielson Array**	**45.36**	**34**	P	**P**	**14 28 41.6**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=262,slow=8.3,SNR=5.4 comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**45.36**	**34**	P	**P**	**14 28 41.0**	**+0.4**
KURK	**Kurchatov**	**45.38**	**306**		**P**	**14 28 41.3**	**+0.4**
KURBB	**Kurchatov Arra**	**45.46**	**306**	P	**P**	**14 28 41.9**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=78,slow=8.5,SNR=18 comp=Z,2.6nm,0.9s						
H27K	**Steamboat Moun**	**47.48**	**32**	P	**P**	**14 28 58.1**	**+0.9**
H27K				IAmb	IAmb	14 29 01.9	
	comp=Z,4.4nm,1.4s						
K27K	**Chicken**	**47.51**	**35**	P	**P**	**14 28 57.9**	**+0.5**
K27K				IAmb	IAmb	14 29 23.4

ACDV				eS		Sg	14 40 40.3	-0.6
ACCO	**Cerro Coronel**	**2.16**	**100**	eP		Pb	14 40 13.7	+0.3
ACCO				eS		Sg	14 40 43.2	+0.1
ACCO				IAML			14 40 43.6	
	comp=Z,167nm,1.2s							
RTLS	**Leoncito**	**2.47**	**129**	eP		Pb	14 40 17.4	-1.3
RTLS				IAML			14 40 51.1	
	comp=Z,544nm,0.6s							
RTLS				eS		Sg	14 40 51.3	-1.7
VA03	**San Esteban**	**2.65**	**162**	eP		Pn	14 40 18.8	+1.6
VA03				eS		Sb	14 40 53.8	-0.8
VA03				IAML			14 41 02.9	
	comp=Z,182nm,0.7s							
VA03	**San Esteban**	**2.65**	**162**	eP		Pn	14 40 18.4	+1.2
ROCH	**El Roble**	**2.76**	**171**	eP		Pn	14 40 18.8	0.0
ROCH				eP		Pn	14 40 18.7	0.0
GO03	**Copiapo**	**2.88**	**24**	eP		Pn	14 40 21.7	+1.5
GO03				eS		Sb	14 40 58.8	-2.3
GO03				IAML			14 41 11.0	
	comp=Z,160nm,0.4s							
GO03	**Copiapo**	**2.88**	**24**	eP		Pn	14 40 21.8	+1.5
MT02	**Curacav**	**3.02**	**174**	eP		Pn	14 40 22.0	-0.2
MT02				eS		Sn	14 40 59.3	+0.3
MT02				IAML			14 41 06.5	
	comp=Z,64nm,0.3s							
MT02	**Curacav**	**3.02**	**174**	eP		Pn	14 40 21.9	-0.3
MT10	**Hacienda Santa**	**3.14**	**165**	eP		Pn	14 40 24.1	+0.1
CFA	**Coronel Fontan**	**3.14**	**116**	eP		Pn	14 40 26.2	+2.3
CFA				eS		Sb	14 41 07.9	-0.8
CFA				IAML			14 41 14.1	
	comp=Z,66nm,0.2s							
MT05	**Renca**	**3.21**	**168**	eP		Pn	14 40 22.5	-2.4
MT14	**Cerro Cal¡n**	**3.25**	**165**	eP		Pn	14 40 27.3	+1.8
VCA	**Vinchina**	**3.27**	**63**	eP		Pb	14 40 29.9	-2.4
MT03	**Universidad Ad**	**3.35**	**165**	eP		Pn	14 40 29.0	+2.1
MT03				eS		Sn	14 41 08.8	+1.6
MT03				IAML			14 41 20.8	
	comp=Z,116nm,0.5s							
MT03	**Universidad Ad**	**3.35**	**165**	eP		Pn	14 40 26.8	-0.1
MT04	**Ro Olivares**	**3.37**	**160**	eP		Pn	14 40 29.5	+2.3
MT04				eS		Sn	14 41 10.8	+3.1
MT04				IAML			14 41 18.1	
	comp=Z,108nm,0.5s							
MT04	**Ro Olivares**	**3.37**	**160**	eP		Pn	14 40 29.4	+2.2
ARCO	**CERRO ARCO**	**3.41**	**140**	eP		Pb	14 40 33.4	-1.3
ARCO				eS		Sb	14 41 12.3	-4.3
ARCO				IAML			14 41 17.2	
	comp=Z,94nm,1.1s							
MT08	**Bocatoma Ro**	**3.44**	**158**	eP		Pb	14 40 32.5	-2.8
MT08				eS		Sb	14 41 15.3	-2.3
MT08				IAML			14 41 31.2	
	comp=Z,76nm,0.9s							
MT08	**Bocatoma Ro**	**3.44**	**158**	eP		Pn	14 40 31.4	+3.2
MT09	**Talagante**	**3.55**	**173**	eP		Pn	14 40 29.6	-0.1
MT12	**Pirque**	**3.58**	**167**	eP		Pn	14 40 28.2	-1.7
MT01	**Popeta**	**3.62**	**176**	eP		Pn	14 40 31.1	+0.7
MT01				eS		Sn	14 41 15.8	+2.2
MT01				IAML			14 41 30.2	
	comp=Z,69nm,0.4s							
MT01	**Popeta**	**3.62**	**176**	eP		Pn	14 40 29.9	-0.6
MT13	**San Alfonso**	**3.65**	**163**	eP		Pn	14 40 33.5	+2.6
MT13				eS		Sg	14 41 33.2	+2.3
MT13				IAML			14 41 33.5	
	comp=Z,74nm,0.9s							
MT13	**San Alfonso**	**3.65**	**163**	eP		Pn	14 40 33.5	+2.6
LMEL	**Las Melosas**	**3.77**	**163**	eP		Pn	14 40 34.0	+1.4
AC02	**Maricunga**	**4.00**	**32**	eP		Pn	14 40 37.7	+1.6
AC02				eS		Sn	14 41 28.3	+4.6
AC02				IAML			14 41 45.7	
	comp=Z,63nm,0.9s							
AC02	**Maricunga**	**4.00**	**32**	eP		Pn	14 40 38.6	+2.5

*IDC **29** 14:54:14.8±0.7,53°.39S×24°.64E,h0km,mb4.2/12, mbtmp4.3/12,MS3.7/17,Error ellipse: s-maj=28.3km s-min=15.5km az=72.0*
*NEIC **29** 14:54:16.9±0.8,53°.4S±0°.1×24°.7E±0°.2,h10km±1km, mb4.7/27,Error ellipse: s-maj=22.6km s-min=17.9km az=76.0*

ISC 29 14:54:16.6±0.5,53°40S±0°.08×24°.7E±0°.1,h10km,n60, σ0s54/45,mb4.5/24,MS3.7/17,4C,South of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04S2	**CROZET ISLANDS**	**18.57**	**80**	T	T	15 17 52.6	
	baz=240,slow=75,SNR=61						
H04S3	**CROZET ISLANDS**	**18.58**	**80**	T	T	15 17 53.5	
	baz=240,slow=75,SNR=70						
H04S1	**CROZET ISLANDS**	**18.59**	**80**	T	T	15 17 53.2	
	baz=240,slow=75,SNR=88						
CRZF	**Crozet Islands**	**18.77**	**79**	P	**P**	**14 58 35.2**	**-0.5**
TROLL	**Troll, Antarti**	**21.00**	**199**	⇑P	**P**	**14 58 59.8**	**-0.1**
	comp=Z,495nm,0.8s						
SUR	**Sutherland**	**21.19**	**351**	P	**P**	**14 59 03.0**	**+0.8**
	comp=Z,17nm,0.8s,baz=158,slow=11,SNR=9.9						
SUR				LR	LR	15 05 57.0	
	comp=Z,126nm,19.4s,baz=154,slow=33						
	comp=Z,17nm,0.8s						
SUR	**Sutherland**	**21.19**	**351**	P	**P**	**14 59 02.6**	**+0.3**
SUR				IAmb	IAmb	14 59 06.2	
	comp=Z,42nm,1.1s						
SNAA	**Sanae**	**21.91**	**203**	⇑P	**P**	**14 59 09.9**	**+0.4**
	comp=Z,712nm,0.9s						
SNAA	**Sanae**	**21.91**	**203**	P	**P**	**14 59 10.0**	**+0.4**
	comp=Z,32nm,0.9s,baz=54,slow=9.8,SNR=71						
SNAA				LR	LR	15 05 25.0	
	comp=Z,151nm,21.7s,baz=28,slow=31						
	comp=Z,32nm,0.9s						
SNAA	**Sanae**	**21.91**	**203**	P	**P**	**14 59 09.9**	**+0.4**
SNAA				IAmb	IAmb	14 59 13.4	
	comp=Z,50nm,1.1s						
VNA2	**Neumayer--Watz**	**22.60**	**207**	⇑P	**P**	**14 59 16.2**	**-0.7**
	comp=Z,6.4nm,0.8s,baz=51,slow=10						
VNA1	**Neumayer--Stat**	**22.69**	**208**	⇑P	**P**	**14 59 18.5**	**+0.7**
	comp=Z,15nm,1.1s						
MAW	**Mawson**	**23.07**	**143**	P	**P**	**14 59 22.3**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=284,slow=14,SNR=5.3						
MAW				LR	LR	15 06 25.3	
	comp=Z,178nm,20.1s,baz=358,slow=32						
	comp=Z,0.5nm,0.3s						
MAW	**Mawson**	**23.07**	**143**	P	**P**	**14 59 22.1**	**+0.3**
BOSA	**Boshof**	**24.76**	**1**	P	**P**	**14 59 38.2**	**-0.2**
	comp=Z,4.7nm,1.0s,baz=186,slow=11,SNR=3.9						
BOSA				LR	LR	15 07 18.4	
	comp=Z,146nm,20.2s,baz=185,slow=32						
	comp=Z,4.7nm,1.0s						
BOSA	**Boshof**	**24.76**	**1**	P	**P**	**14 59 37.7**	**-0.7**
BOSA				IAmb	IAmb	14 59 56.9	
	comp=Z,23nm,1.5s						
MAKGR	**Makgori**	**27.55**	**0**	P	**P**	**15 00 03.6**	**0.0**
MAKGR				IAmb	IAmb	15 00 06.4	
	comp=Z,19nm,1.1s						
LBTB	**Lobatse**	**28.35**	**2**	LR	LR	15 09 16.1	
	comp=Z,184nm,20.1s,baz=154,slow=32						
LBTB	**Lobatse**	**28.35**	**2**	P	**P**	**15 00 10.8**	**0.0**
LBTB				IAmb	IAmb	15 00 13.0	
	comp=Z,6.7nm,0.8s						
KHWEE	**KHWEE**	**31.41**	**1**	P	**P**	**15 00 37.5**	**-0.3**
BELA	**Belgrano 2**	**32.07**	**200**	P	**P**	**15 00 43.0**	**0.0**
BELA				IAmb	IAmb	15 00 50.5	
	comp=Z,5.2nm,1.0s						
GRTLG	**Ghanzi**	**32.09**	**354**	P	**P**	**15 00 44.2**	**+0.4**
GRTLG				IAmb	IAmb	15 01 14.2	
	comp=Z,6.6nm,1.2s						
MATP	**Matopo**	**33.05**	**7**	LR	LR	15 12 08.7	
	comp=Z,161nm,21.4s,baz=156,slow=32						
TSUM	**Tsumeb**	**34.57**	**348**	LR	LR	15 13 44.8	
	comp=Z,29nm,19.2s,baz=153,slow=34						
TSUM	**Tsumeb**	**34.57**	**348**	P	**P**	**15 01 06.0**	**+0.6**
TSUM				IAmb	IAmb	15 01 07.0	
	comp=Z,7.8nm,1.1s						
QSPA	**South Pole Qui**	**36.83**	**180**	P	**P**	**15 01 24.1**	**-0.4**
	comp=Z,6.0nm,0.8s,baz=64,slow=1.2,SNR=33						
QSPA				LR	LR	15 15 26.2	
	comp=Z,105nm,20.4s,baz=238,slow=34						
	comp=Z,6.0nm,0.8s						
QSPA	**South Pole Qui**	**36.83**	**180**	P	**P**	**15 01 24.6**	**+0.1**
QSPA				IAmb	IAmb	15 01 32.6	
	comp=Z,12nm,1.1s						
LSZ	**Lusaka**	**38.13**	**6**	LR	LR	15 14 54.4	
	comp=Z,188nm,21.6s,baz=152,slow=32						
VNDA	**Vanda**	**46.68**	**168**	P	**P**	**15 02 44.3**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=241,slow=7.8,SNR=4.4						
VNDA				LR	LR	15 21 06.4	
	comp=Z,78nm,21.5s,baz=258,slow=34						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**46.68**	**168**	P	**P**	**15 02 45.2**	**+0.5**
SBA	**Scott Base**	**46.95**	**170**	P	**P**	**15 02 48.0**	**+1.2**
SBA				IAmb	IAmb	15 02 56.5	
	comp=Z,6.4nm,1.1s						
MBAR	**Mbarara**	**52.86**	**8**	LR	LR	15 25 19.2	
	comp=Z,91nm,18.2s,baz=116,slow=35						
H10S2	**ASCENSION HYDR**	**54.43**	**310**	T	T	16 02 35.3	
	baz=151,slow=74,SNR=11						
H10S3	**ASCENSION HYDR**	**54.44**	**310**	T	T	16 02 51.0	
	baz=69,slow=74,SNR=9.5						
DBIC	**Dimbokro**	**64.83**	**327**	P	**P**	**15 04 55.3**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=172,slow=7.1,SNR=1.4						
DBIC				LR	LR	15 29 00.8	
	comp=Z,53nm,18.8s,baz=166,slow=32						
	comp=Z,1.3nm,0.3s						
DBIC	**Dimbokro**	**64.83**	**327**	P	**P**	**15 04 55.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**69.14**	**336**	P	**P**	**15 05 22.4**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=172,slow=6.7,SNR=12						
	comp=Z,2.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.14**	**336**	P	**P**	**15 05 22.5**	**-0.5**
TORD				IAmb	IAmb	15 06 02.1	
	comp=Z,2.5nm,0.6s						
CO01	**Juntas del Tor**	**69.20**	**248**	P	**P**	**15 05 23.8**	**+0.2**
MGBR	**Mount Gambier**	**73.71**	**132**	P	**P**	**15 05 50.5**	**+0.1**
MBWA	**Marble Bar**	**76.23**	**107**	P	**P**	**15 06 05.0**	**-0.2**
MBWA				IAmb	IAmb	15 06 05.5	
	comp=Z,12nm,1.1s						
PB08	**IPOC Station P**	**76.31**	**255**	P	**P**	**15 06 05.5**	**-0.6**
PB08				IAmb	IAmb	15 06 05.8	
	comp=Z,6.0nm,0.9s						
PB11	**IPOC Station P**	**76.90**	**255**	P	**P**	**15 06 08.8**	**-0.4**
PB11				IAmb	IAmb	15 06 17.2	
	comp=Z,8.7nm,1.1s						
PSGCX	**Pisagua**	**77.29**	**254**	P	**P**	**15 06 11.9**	**+0.6**
RAYN	**Ar Rayn**	**78.70**	**19**	P	**P**	**15 06 19.7**	**+0.9**
LPAZ	**La Paz**	**78.74**	**258**	P	**P**	**15 06 19.8**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=114,slow=5.8,SNR=4.2						
	comp=Z,1.1nm,0.7s						
LPAZ	**La Paz**	**78.74**	**258**	P	**P**	**15 06 19.1**	**-0.9**
STKA	**Stephens Creek**	**79.04**	**129**	P	**P**	**15 06 20.7**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=194,slow=4.2,SNR=3.3						
	comp=Z,2.4nm,0.8s						
RPZ	**Rata Peaks**	**79.06**	**156**	LR	LR	15 42 55.7	
	comp=Z,29nm,18.1s,baz=107,slow=37						
FITZ	**Fitzroy Crossi**	**82.02**	**109**	LR	LR	15 39 21.4	
	comp=Z,78nm,18.2s,baz=215,slow=33						
FITZ	**Fitzroy Crossi**	**82.02**	**109**	P	**P**	**15 06 36.5**	**-0.4**
ASAR	**Alice Springs**	**82.03**	**119**	P	**P**	**15 06 36.7**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=208,slow=5.2,SNR=26						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**85.31**	**117**	P	**P**	**15 06 53.6**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=207,slow=4.0,SNR=11						
	comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	**85.31**	**117**	P	**P**	**15 06 53.7**	**-0.2**
WR8	**Warramunga Arr**	**85.38**	**117**	P	**P**	**15 06 54.0**	**-0.2**
WR8				IAmb	IAmb	15 07 05.5	
	comp=Z,12nm,1.4s						
MMAI	**Mount Meron Ar**	**86.56**	**9**	LR	LR	15 44 14.6	
	comp=Z,30nm,19.1s,baz=180,slow=35						
VAE	**Valguarnera**	**90.94**	**352**	LR	LR	15 50 14.5	
	comp=Z,76nm,18.3s,baz=145,slow=37						
MLR	**Muntele Rosu**	**98.52**	**1**	LR	LR	15 55 03.5	
	comp=Z,43nm,18.5s,baz=190,slow=37						
PDAR	**Pinedale Array**	**148.14**	**269**	PKPbc	**PKPbc**	**15 14 00.5**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=128,slow=4.1,SNR=9.3						
NVAR	**Mina Array Bea**	**150.59**	**254**	PKPbc	**PKPbc**	**15 14 08.3**	**0.0**
	comp=Z,1.8nm,0.9s,baz=141,slow=2.2,SNR=7.6						

*IDC **29** 14:54:40.9±3.0,32°.74S×178°.63W,h0km,mb3.5/2, mbtmp3.6/3,ML3.6/1,Error ellipse: s-maj=71.2km s-min=45.6km az=120.0*
*WEL **29** 14:54:43.0±0.6,33°.5S±15°×17°9W±3°6,h12km,M3.7/8, mB4.3/5,ML3.7/8,MLv3.9/8,Mw(mB)3.4/5,Error ellipse: s-maj=50.9km s-min=3.9km az=111.7*

ISC 29 14:54:40.5±1.7,33°.0S±0°.1×178°.4W±0°.3,h10km,n20, σ2s14/35,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.73**	**7**	P	**Pn**	**14 55 38.3**	**+0.2**
GLKZ				S	**Sn**	**14 56 20.8**	**-1.4**
MXZ	**Matakaoa Point**	**5.29**	**209**	P	**Pn**	**14 55 60.0**	**+0.3**
MXZ				S	**Sn**	**14 57 01.1**	**+0.3**
WMGZ	**Waiomatatini S**	**5.47**	**207**	P	**Pn**	**14 56 05.4**	**+3.3**
WMGZ				S	**Sn**	**14 57 05.9**	**+0.8**
HAZ	**Te Kaha**	**5.68**	**212**	P	**Pn**	**14 56 08.0**	**+3.0**
HAZ				S	**Sn**	**14 57 11.2**	**+0.9**
PUZ	**Puketiti**	**5.75**	**207**	P	**Pn**	**14 56 06.8**	**+0.8**
PUZ				S	**Sn**	**14 57 10.9**	**-1.3**
RUGZ	**Raukumara Rang**	**5.90**	**211**	P	**Pn**	**14 56 10.3**	**+2.1**
RUGZ				S	**Sn**	**14 57 16.2**	**+0.3**
TWGZ	**Tauwhareparae**	**5.95**	**208**	P	**Pn**	**14 56 10.7**	**+1.9**
TWGZ				S	**Sn**	**14 57 15.9**	**-1.2**
CNGZ	**Carnagh Statio**	**6.14**	**205**	P	**Pn**	**14 56 12.7**	**+1.4**
MWZ	**Matawai**	**6.28**	**210**	P	**Pn**	**14 56 15.7**	**+2.6**
MWZ				S	**Sn**	**14 57 24.0**	**-0.9**
URZ	**Urewera**	**6.40**	**213**	Pn	**Pn**	**14 56 17.0**	**+2.2**
	1.1nm,0.3s,baz=280,slow=3.9,SNR=10						
URZ				Sn	**Sn**	**14 57 26.2**	**-1.7**
	1.5nm,0.3s,baz=307,slow=23,SNR=6.1						
	2.6nm,0.3s						
URZ	**Urewera**	**6.40**	**213**	P	**Pn**	**14 56 16.5**	**+1.7**
URZ				S	**Sn**	**14 57 26.2**	**-1.7**
RAGZ	**Rawiri**	**6.46**	**210**	P	**Pn**	**14 56 17.6**	**+1.9**
RAGZ				S	**Sn**	**14 57 28.6**	**-0.9**
RIGZ	**Rimuhau**	**6.50**	**207**	P	**Pn**	**14 56 18.3**	**+2.1**
RIGZ				S	**Sn**	**14 57 30.1**	**-0.3**
PRGZ	**Paritu Road**	**6.64**	**206**	P	**Pn**	**14 56 19.9**	**+1.7**
PRGZ				S	**Sn**	**14 57 33.2**	**-0.8**
MTHZ	**Maungataniwha**	**7.00**	**212**	P	**Pn**	**14 56 25.8**	**+2.6**
MTHZ				S	**Sn**	**14 57 40.3**	**-2.7**
BFZ	**Birch Farm**	**8.79**	**207**	P	**Pn**	**14 56 47.0**	**-0.7**
BFZ				S	**Sn**	**14 58 22.4**	**-4.4**
MRZ	**Mangatainoka R**	**9.04**	**210**	P	**Pn**	**14 56 52.1**	**+0.9**
MRZ				S	**Sn**	**14 58 26.7**	**-6.4**
ASAR	**Alice Springs**	**42.67**	**270**	P	**P**	**15 02 38.1**	**+0.5**
	0.2nm,0.6s,baz=105,slow=7.9,SNR=4.5						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**43.89**	**275**	P	P	15 02 48.0	+0.4
	0.4nm,0.3s,baz=114,slow=7.7,SNR=12						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**147.41**	**338**	PKPbc	**PKPbc**	**15 14 24.4**	**+0.5**
	1.8nm,0.8s,baz=29,slow=3.2,SNR=6.5						

WEL 29 15:03:32.5±1.1,33°S±22°×18°0E±4°,h354km±25km, M3.6/6,mB4.0/3,ML3.5/6,MLv3.7/6,Mw(mB)3.0/3,Error ellipse: s-maj=62.3km s-min=12.6km az=115.2,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.74**	**195**	P	Pn	15 04 48.5	-0.9
MXZ				S	S	15 05 52.5	+0.9
WMGZ	**Waiomatatini S**	**4.97**	**193**	P	Pn	15 04 53.3	+1.5
WMGZ				S	S	15 05 57.5	+1.5
HAZ	**Te Kaha**	**5.06**	**199**	P	Pn	15 04 53.5	+0.7
HAZ				S	S	15 05 58.3	+0.6
PUZ	**Puketiti**	**5.24**	**194**	P	Pn	15 04 54.4	-0.4
PUZ				S	S	15 06 01.4	-0.2
RUGZ	**Raukumara Rang**	**5.28**	**199**	P	Pn	15 04 56.1	+0.8
RUGZ				S	S	15 05 59.9	-2.6
TWGZ	**Tauwhareparae**	**5.41**	**196**	P	Pn	15 04 57.1	+0.4
TWGZ				S	S	15 06 06.0	+1.1
URZ	**Urewera**	**5.72**	**202**	P	Pn	15 04 59.8	-0.4
URZ				S	S	15 06 11.0	-0.2
RAGZ	**Rawiri**	**5.85**	**199**	P	Pn	15 04 59.6	-2.1
RAGZ				S	S	15 06 16.5	+2.5
RIGZ	**Rimuhau**	**5.96**	**196**	P	Pn	15 05 03.6	+0.8
RIGZ				S	S	15 06 15.1	-1.2
MUGZ	**Murupara**	**6.03**	**204**	P	Pn	15 05 03.8	+0.1
NMHZ	**Naumai**	**6.58**	**201**	P	Pn	15 05 10.2	+0.1
MCHZ	**McNeill Hill**	**6.94**	**201**	P	Pn	15 05 13.9	-0.2
MCHZ				S	S	15 06 40.2	+3.4
KWHZ	**Kaweka Forest**	**7.00**	**202**	P	Pn	15 05 15.1	+0.2
OTVZ	**Oturere**	**7.04**	**208**	P	Pn	15 05 15.3	-0.2
BHHZ	**Black Hill Sta**	**7.18**	**204**	P	Pn	15 05 15.3	-1.7
BHHZ				S	S	15 06 43.1	+1.1
KAHZ	**Kahuranaki**	**7.21**	**199**	P	Pn	15 05 16.9	-0.5
KAHZ				S	S	15 06 44.6	+2.0
KRHZ	**Kereru**	**7.22**	**202**	P	Pn	15 05 17.2	-0.2
PXZ	**Pawanui**	**7.44**	**198**	P	Pn	15 05 19.0	-0.9
PNHZ	**Pukenui**	**7.52**	**202**	P	Pn	15 05 17.7	-3.3
PRHZ	**Porangahau**	**7.72**	**199**	P	Pn	15 05 22.7	-0.5
TSZ	**Takapari Road**	**7.73**	**203**	P	Pn	15 05 22.1	-1.3
DVHZ	**Dannevirke**	**7.88**	**201**	P	Pn	15 05 22.4	-2.8
BFZ	**Birch Farm**	**8.21**	**200**	P	Pn	15 05 28.0	-1.0
BFZ				S	S	15 07 02.0	-2.2
MRZ	**Mangatainoka R**	**8.40**	**203**	P	Pn	15 05 29.0	-2.2
TIWZ	**Tintock**	**8.40**	**201**	P	Pn	15 05 30.3	-1.0
OGWZ	**Otaki Gorge**	**8.67**	**204**	P	Pn	15 05 31.8	-2.6
CAW	**Cannon Point**	**8.97**	**204**	P	Pn	15 05 35.2	-2.8
MSWZ	**Moikau Station**	**9.19**	**202**	P	Pn	15 05 39.0	-1.5

*NIED **29** 15:12:33.7,29°.47N×130°.69E,h60km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.58; Mθθ-0.79; Mφφ0.21; Mrθ0.44; Mθφ-0.37; Mrφ1.40; Fault plane solution: M0 1.64000×10^15 NP1: φs278.00000°,δ26.00000°,λ157.00000°. NP2: φs29.00000°,δ80.00000°,λ66.00000°.*
*JMA **29** 15:12:33.7±0.2,29°.5N±0°.7×13°1E±°,h60km±3km, MV3.5/35,NEAR AMAMI-OSHIMA ISLAND*
*IDC **29** 15:12:39.1±3.5,29°.71N×130°.71E,h76km±37km,mb3.4/9, mbtmp3.6/12,ML2.8/2,MS3.2/10,Error ellipse: s-maj=50.0km s-min=17.4km az=66.0*

ISC 29 15:12:34.4±1.2,29°43N±0°.04×130°.73E±0°.07,h43km±12km, n41,σ0s87/38,mb3.6/9,MS3.1/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAK	**Yakushimahirau**	**0.83**	**347**	P	**Pn**	**15 12 48.8**	**-0.8**
JYAK				eS	**Sn**	**15 13 00.7**	**0.0**
JNN	**Nakanoshima**	**0.85**	**299**	P	**Pn**	**15 12 49.2**	**-0.8**
JNN				S	**Sn**	**15 13 01.4**	**+0.1**
JMTN	**Minamitane**	**0.97**	**9**	P	**Pn**	**15 12 51.1**	**-0.5**
JMTN				eS	**Sn**	**15 13 05.7**	**+1.4**
JKC	**Kuchinoerabu**	**1.13**	**336**	P	**Pn**	**15 12 53.2**	**-0.5**
JKC				eS	**Sn**	**15 13 07.9**	**-0.1**
JTN	**Tanegashima 3**	**1.24**	**10**	P	**Pn**	**15 12 54.9**	**-0.4**
JZK	**Kikaishima**	**1.30**	**211**	eP	**Pn**	**15 12 56.7**	**+0.6**
JAM	**Amami Oshima**	**1.42**	**224**	eP	**Pn**	**15 12 57.6**	**-0.1**
JTSR	**Tashiro 2**	**1.74**	**5**	eP	**Pn**	**15 13 02.2**	**+0.1**
JAMN	**Amaminishikomi**	**1.81**	**229**	eS	**Sn**	**15 13 25.8**	**+1.0**
JSU	**Suzuyama**	**2.08**	**354**	eP	**Pn**	**15 13 06.5**	**-0.4**
JNAR	**Kushima--Naru**	**2.14**	**12**	eP	**Pn**	**15 13 08.2**	**+0.5**
JTK	**Tokunoshima**	**2.27**	**224**	eP	**Pn**	**15 13 09.9**	**+0.5**
JTK				eS	**Sn**	**15 13 35.7**	**-0.4**
JOKE	**Okinoerabujima**	**2.81**	**223**	eP	**Pn**	**15 13 17.0**	**+0.2**
JYRO	**Yoronjima**	**3.13**	**221**	P	**Pn**	**15 13 21.0**	**-0.3**
JYRO				eS	**Sn**	**15 13 56.4**	**-1.0**
JOW	**Kunigami**	**3.38**	**221**	eP	**Pn**	**15 13 25.1**	**+0.4**
JKDJ	**Kitadaitoujima**	**3.50**	**172**	eP	**Pn**	**15 13 25.0**	**-1.4**
JMZ	**Minamidaito 2**	**3.62**	**173**	eP	**Pn**	**15 13 26.4**	**-1.7**
JNU	**Nakatsue**	**3.68**	**2**	P	**Pn**	**15 13 29.8**	**+0.9**
	2.0nm,0.3s,baz=259,slow=5.2,SNR=26						
JNU				S	**Sn**	**15 14 10.5**	**-0.5**
	29nm,0.8s,baz=208,slow=21,SNR=1.7						
	5.1nm,0.4s						
JKE	**Kume jima 2**	**4.67**	**229**	eP	**Pn**	**15 13 41.7**	**-0.7**
KSRS	**Korea Array**	**8.34**	**344**	P	**Pn**	**15 14 32.7**	**0.0**
	0.3nm,0.6s,baz=172,slow=16,SNR=2.0						
KSRS				LR	LR	15 18 01.5	
	comp=Z,102nm,18.1s,baz=165,slow=40						
MJAR	**Matsushiro Arr**	**9.47**	**40**	P	**Pn**	**15 14 49.3**	**+1.1**
	baz=226,slow=16,SNR=2.0						
	0.7nm,0.6s						
JCJ	**Chichijima**	**10.36**	**100**	LR	LR	15 18 26.3	
	comp=Z,60nm,19.8s,baz=312,slow=33						
GUMO	**Guam**	**20.50**	**137**	LR	LR	15 24 43.9	
	comp=Z,25nm,18.1s,baz=326,slow=35						
SONM	**Songino Array**	**26.26**	**321**	P	**P**	**15 18 04.8**	**-0.9**
	0.4nm,0.3s,baz=140,slow=11,SNR=2.5						
SONM				LR	LR	15 29 42.6	
	comp=Z,66nm,19.3s,baz=116,slow=39						
	0.4nm,0.3s						
PETK	**Petropavlovsk-**	**30.82**	**32**	LR	LR	15 31 58.2	
	comp=Z,26nm,18.9s,baz=264,slow=38						
CMAR	**Chiang Mai Arr**	**30.94**	**257**	LR	LR	15 32 33.4	
	comp=Z,34nm,20.4s,baz=215,slow=38						
MA2	**Magadan**	**33.08**	**19**	LR	LR	15 32 41.8	
	comp=Z,32nm,19.3s,baz=312,slow=37						
H11N2	**WAKE ISLAND Hy**	**34.

QSPA	South Pole Qui	57.31	180	P	P	15 45 46.7	+0.1
	0.8nm,1.0s,baz=104,slow=1.8,SNR=1.3						
	0.8nm,1.0s						
FINES	FINESS Array B	147.22	338	PKPbc	PKPbc	15 55 40.8	-0.8
	2.2nm,0.9s,baz=43,slow=5.7,SNR=4.6						

WEL 29 15:41:11.6±0.9, 33°S±13″×177°9W±3″3, h12km, M4.0/10, mB4.5/6, ML4.0/12, MLv4.3/10, Mw(mB)3.6/6, Error ellipse: s-maj=46.6km s-min=4.3km az=111.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.02	12	P	Pn	15 42 12.8	-0.2
GLKZ				S	Sn	15 42 59.4	-0.6
MXZ	Matakaoa Point	4.92	207	P	Pn	15 42 25.3	0.0
MXZ				S	Sn	15 43 21.7	-0.4
WMGZ	Waiomatatini S	5.11	205	P	Pn	15 42 28.2	+0.3
WMGZ				S	Sn	15 43 26.0	-0.7
HAZ	Te Kaha	5.30	210	P	Pn	15 42 32.8	+2.3
HAZ				S	Sn	15 43 34.9	+3.5
PUZ	Puketiti	5.39	205	P	Pn	15 42 31.4	-0.3
PUZ				S	Sn	15 43 34.3	+0.6
RUGZ	Raukumara Rang	5.52	210	P	Pn	15 42 35.0	+1.4
RUGZ				S	Sn	15 43 40.2	+3.2
TWGZ	Tauwhareparae	5.58	207	P	Pn	15 42 34.7	+0.3
TWGZ				S	Sn	15 43 40.0	+1.5
CNGZ	Carnagh Statio	5.77	204	P	Pn	15 42 36.6	-0.4
TKGZ	Te Karaka	5.86	206	S	Sn	15 43 46.1	+0.8
MWZ	Matawai	5.89	209	P	Pn	15 42 39.1	+0.3
MWZ				S	Sn	15 43 47.0	+0.8
URZ	Urewera	6.01	212	P	Pn	15 42 41.7	+1.4
URZ				S	Sn	15 43 49.9	+0.9
RAGZ	Rawiri	6.08	209	P	Pn	15 42 41.6	+0.3
RAGZ				S	Sn	15 43 51.5	+0.7
RIGZ	Rimuhau	6.13	206	P	Pn	15 42 41.0	-1.0
RIGZ				S	Sn	15 43 50.5	-1.4
MUGZ	Murupara	6.34	213	P	Pn	15 42 45.9	+1.1
MUGZ				S	Sn	15 43 57.8	+0.7
MTHZ	Maungataniwha	6.62	211	P	Pn	15 42 49.8	+1.1
MTHZ				S	Sn	15 44 05.1	+1.0
MCHZ	McNeill Hill	7.18	209	P	Pn	15 42 55.6	-0.7
KWHZ	Kaweka Forest	7.27	210	P	Pn	15 42 57.4	-0.3
KAHZ	Kahuranaki	7.41	206	P	Pn	15 42 57.1	-2.4
BHHZ	Black Hill Sta	7.48	212	P	Pn	15 43 02.1	+1.6
WNVZ	Wahianoa	7.57	215	P	Pn	15 43 03.5	+1.7
PNHZ	Pukenui	7.78	209	P	Pn	15 43 03.6	-1.0
TIWZ	Tintock	8.64	208	P	Pn	15 43 15.7	-0.7
MRZ	Mangatainoka R	8.66	209	P	Pn	15 43 15.9	-0.8
OGWZ	Otaki Gorge	8.96	211	P	Pn	15 43 20.2	-0.6
CAW	Cannon Point	9.25	210	P	Pn	15 43 23.2	-1.5
TCW	Tory Channel	9.68	213	P	Pn	15 43 29.2	-1.4
THZ	Tophouse	10.75	215	P	Pn	15 43 46.2	+0.9
KHZ	Kahutara	10.97	211	P	Pn	15 43 48.2	-0.1

*IDC **29** 15:44:36.3±1.6, 6°77S×129°51E, h137km±15km, mb3.7/16, mbtmp4.2/22, Error ellipse: s-maj=14.5km s-min=10.5km az=81.0*

*NEIC **29** 15:44:36.7±2.5, 6°75S±0°06×129°57E±0°06, h137km±2km, mb4.3/28, Error ellipse: s-maj=9.2km s-min=8.0km az=99.0*

*DJA **29** 15:44:37.7±0.3, 7°S±2″×13°0E±″, h181km±7km, M4.4/20, mB4.8/7, mb4.4/11, MLv4.7/20, Mw(mB)4.1/7*

ISC 29 15:44:36.6±0.3, 6°81S±0°04×129°63E±0°04, h139km, n100, σ1§97/110, mb4.1/27, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.02	125	P	Pn	15 45 13.9	+2.5
SAUI	Saumlaki	2.02	125		Pn	15 45 14.7	+3.2
SAUI				Sn	Sn	15 45 38.3	+0.2
SAUI	Saumlaki	2.02	125	P	Pn	15 45 14.5	+3.1
SAUI				S	Sn	15 45 44.1	+6.0
BNDI	Bandanaira	2.29	7	P	Pn	15 45 18.4	+3.8
NLAI	Namlea	4.35	324	P	Pn	15 45 45.2	+3.9
FAKI	Fak Fak	4.66	34	P	Pn	15 45 45.1	-0.3
FAKI	Fak Fak	4.66	34	Pn	Pn	15 45 45.1	-0.3
FAKI	Fak Fak	4.66	34	P	Pn	15 45 45.3	-0.1
DRS	Darwin Rock St	5.73	167	P	Pn	15 46 01.0	+1.4
SOEI	Soe	6.06	241	P	Pn	15 46 06.2	+2.0
SOEI	Soe	6.06	241	Pn	Pn	15 46 06.4	+2.2
SOEI	Soe	6.06	241	P	Pn	15 46 05.9	+1.7
	0.9nm48nm,0.5s						
SOEI				S	Sn	15 47 15.9	+3.3
	0.9nm48nm,0.5s						
SIJI	Sorong	6.12	16	P	Pn	15 46 04.4	-0.5
	13nm,0.2s,baz=210,slow=16,SNR=76						
SIJI				S	Sn	15 47 09.6	-4.3
	38nm,0.2s,baz=138,slow=22,SNR=8.4						
SIJI	Sorong	6.12	16	P	Pn	15 46 05.0	+0.1
SWI	Sorong	6.12	15	P	Pn	15 46 04.9	-0.1
MTN	Manton Dam	6.18	166	Pn	Pn	15 46 06.1	+0.4
LBMI	Labuha	6.49	341	P	Pn	15 46 13.3	+3.5
BATI	Baumata	6.80	240	P	Pn	15 46 12.7	-1.3
	49nm,0.5s,baz=124,slow=3.7,SNR=8.8						
BATI				S	Sn	15 47 26.9	-3.3
	66nm,0.3s,baz=316,slow=22,SNR=10						
BATI	Baumata	6.80	240	P	Pn	15 46 12.7	-1.3
	0.5nm66nm,0.7s						
KKSI	Kolaka, Sulawe	8.36	288	P	Pn	15 46 37.4	+2.4
	36nm,0.6s						
BAKI	Biak	8.53	49	P	Pn	15 46 38.8	+1.5
KNRA	Kununurra	8.86	185	Pn	Pn	15 46 40.8	-0.7
TOLI2	Tolitoli	11.83	311	P	Pn	15 47 23.5	+2.4
JAY	Jayapura	11.83	69	P	Pn	15 47 24.0	+2.8
	12nm,0.9s,baz=270,slow=14,SNR=2.0						
JAY				S	Sn	15 49 31.4	-0.5
	12nm,0.6s,baz=0.1,slow=19,SNR=1.6						
FITZ	Fitzroy Crossi	11.88	199	P	Pn	15 47 21.6	-0.1
	2.4nm,0.3s,baz=31,slow=12,SNR=15						
FITZ				S	Sn	15 49 23.9	-9.0
	16nm,0.6s,baz=86,slow=20,SNR=7.1						
FITZ	Fitzroy Crossi	11.88	199	P	Pn	15 47 21.1	-0.6
FITZ	Fitzroy Crossi	11.88	199	Pn	Pn	15 47 20.7	-1.0
PLAI	Plampang	11.91	260	P	Pn	15 47 23.5	+1.3
WB0	Warramunga Arr	13.69	161	Pn	Pn	15 47 42.0	-3.1
WRA	Warramunga Arr	13.83	161	P	Pn	15 47 44.4	-2.6
	6.7nm,0.5s,baz=344,slow=13,SNR=68						
WRA				S	Sn	15 50 11.3	-8.7
	11nm,0.5s,baz=335,slow=21,SNR=12						
WRA	Warramunga Arr	13.83	161	Pn	Pn	15 47 43.9	-3.1
WR8	Warramunga Arr	13.90	161	Pn	Pn	15 47 44.6	-3.2
COEN	Coen	15.09	119	P	Pn	15 48 01.8	-1.0
COEN	Coen	15.09	119	Pn	Pn	15 48 01.5	-1.3
COEN				IAmb	IAmb	15 48 07.1	
	comp=Z,19nm,0.8s						
JAGI	Jajag, Banyuwa	15.43	263	P	P	15 48 08.7	+0.2
JAGI	Jajag, Banyuwa	15.43	263		Pn	15 48 06.3	-0.8
QIS	Mount Isa	16.74	146	P	P	15 48 24.0	+1.0
AS31	Alice Springs	17.26	167		P	15 48 27.7	-0.9
AS31				IAmb	IAmb	15 48 30.8	
	comp=Z,6.2nm,0.5s						
ASAR	Alice Springs	17.26	167	P	P	15 48 29.1	+0.4
	comp=Z,11nm,0.6s,baz=346,slow=10,SNR=254						
ASAR				S	S	15 51 34.5	-7.0
	comp=Z,1.7nm,0.5s,baz=318,slow=17,SNR=9.4						
ASAR	Alice Springs	17.26	167	P	P	15 48 27.7	-0.9
AS01	Alice Springs	17.27	167	P	Pn	15 48 30.0	+0.6
PMG	Port Moresby	17.54	100	P	Pn	15 48 34.0	+1.3
	comp=Z,16nm,0.8s,baz=246,slow=20,SNR=5.9						
PMG				S	S	15 51 39.5	-7.8
	comp=Z,23nm,1.1s,baz=109,slow=22,SNR=1.6						
PMG	Port Moresby	17.54	100	P	Pn	15 48 34.9	+2.1
MTSU	Mount Surprise	18.21	130	P	P	15 48 41.0	+1.8
MANU	Manus Island	18.30	76	P	P	15 48 40.5	+0.4
MANU				IAmb	IAmb	15 48 44.0	
	comp=Z,14nm,0.7s						
CTA	Charters Tower	20.84	131	P	P	15 49 09.1	+1.5
	comp=Z,2.0nm,0.6s,baz=296,slow=11,SNR=7.1						
	comp=Z,2.0nm,0.6s						
CTAO	Charters Tower	20.84	131	P	P	15 49 08.9	+1.3
CTAO				IAmb	IAmb	15 49 25.7	
	comp=Z,12nm,1.1s						
BBJI	Bungbulang	21.82	267	P	P	15 49 19.6	+1.5
BBJI	Bungbulang	21.82	267	P	P	15 49 18.3	+0.2
INKA	Innaminka	23.34	154	P	P	15 49 33.8	+1.2
FORT	Forrest	23.89	183	P	P	15 49 37.5	-0.1
FORT				IAmb	IAmb	15 50 14.6	
	comp=Z,11nm,1.4s						
MORW	Morawa	25.59	208	P	P	15 49 54.4	+1.4
MORW				IAmb	IAmb	15 50 07.0	
	comp=Z,8.0nm,1.1s						
BBOO	Buckleboo	26.55	168	P	P	15 50 01.9	+0.2
STKA	Stephens Creek	27.33	157	P	P	15 50 08.7	+0.2
	comp=Z,1.3nm,0.3s,baz=342,slow=6.1,SNR=9.1						
STKA				pP	pP	15 50 38.2	+0.2
	comp=Z,2.0nm,0.5s,baz=324,slow=14,SNR=2.9						
	comp=Z,1.3nm,0.3s						
NWAO	Narrogin (SRO)	28.43	202	P	P	15 50 17.9	-0.4
CMAR	Chiang Mai Arr	39.33	310	P	P	15 51 52.6	+0.1
	comp=Z,2.6nm,0.7s,baz=137,slow=7.3,SNR=16						
	comp=Z,2.6nm,0.7s						
CMAR	Chiang Mai Arr	39.33	310	P	P	15 51 51.9	-0.6
CHTO	Chiang Mai	39.54	311	P	P	15 51 53.5	-0.8
CHTO				IAmb	IAmb	15 51 55.2	
	comp=Z,5.3nm,0.8s						
PZH	PanZhiHua	42.76	322	P	P	15 52 24.5	+3.9
MJAR	Matsushiro Arr	43.87	10	P	P	15 52 27.3	-1.9
	comp=Z,1.3nm,0.6s,baz=189,slow=9.1,SNR=2.3						
	comp=Z,1.3nm,0.6s						
MJAR	Matsushiro Arr	43.87	10	P	P	15 52 28.0	-1.2
MJB9	Matsu-Tunnel	43.87	10	P	P	15 52 28.3	-0.9
MJB9				IAmb	IAmb	15 52 47.5	
	comp=Z,11nm,1.5s						
KSRS	Korea Array	44.06	358	P	P	15 52 28.4	-2.3
	comp=Z,0.5nm,0.5s,baz=178,slow=8.7,SNR=4.6						
	comp=Z,0.5nm,0.5s						
HHC	Hu-ho-hao-te	50.25	342	eP	P	15 53 22.0	+3.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
USRK	Ussuriysk Ar.	50.81	2	P	P	15 53 22.9	+0.1
	comp=Z,1.1nm,0.5s,baz=176,slow=8.0,SNR=3.2						
	comp=Z,1.1nm,0.5s						
TUWZ	Tuamarina	52.27	138	P	P	15 53 34.2	+0.4
GTA2	Gaotai	53.72	331	eP	P	15 53 44.8	+0.3
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EVN	Everest	53.88	312	P	P	15 53 46.2	-0.3
EVN				IAmb	IAmb	15 53 48.1	
	comp=Z,3.4nm,0.6s						
ULN	Ulaanbaatar	57.97	342	P	P	15 54 15.2	+0.5
ULN				IAmb	IAmb	15 54 16.1	
	comp=Z,3.0nm,0.6s						
SONM	Songino Array	58.15	342	P	P	15 54 14.7	-1.2
	comp=Z,1.1nm,0.6s,baz=152,slow=6.3,SNR=5.3						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	58.15	342	P	P	15 54 16.0	+0.1
PETK	Petropavlovsk-	64.26	18	P	P	15 54 57.3	+0.5
	comp=Z,1.7nm,0.8s,baz=213,slow=7.1,SNR=1.8						
PETK				pP	pP	15 55 29.8	+0.3
	comp=Z,0.7nm,0.5s,baz=244,slow=2.4,SNR=1.3						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	67.87	327	P	P	15 55 20.1	+0.1
	comp=Z,3.0nm,0.4s,baz=113,slow=8.7,SNR=78						
	comp=Z,3.0nm,0.4s						
MKAR	Makanchi Array	67.87	327	P	P	15 55 20.0	-0.1
MAKZ	Makanchi	68.05	327	P	P	15 55 21.7	+0.5
MAKZ				IAmb	IAmb	15 56 02.3	
	comp=Z,11nm,1.5s						
ZAA0	Zalesovo Array	71.25	334	P	P	15 55 39.1	-1.5
ZAA0				IAmb	IAmb	15 55 40.6	
	comp=Z,5.8nm,1.2s						
ZALV	Zalesovo Beam	71.25	334	P	P	15 55 39.7	-0.9
	comp=Z,2.3nm,0.6s,baz=122,slow=5.4,SNR=13						
	comp=Z,2.3nm,0.6s						
KURBB	Kurchatov Arra	72.16	329	P	P	15 55 45.7	-0.3
	comp=Z,1.5nm,0.4s,baz=129,slow=4.8,SNR=14						
	comp=Z,1.5nm,0.4s						
KURK	Kurchatov	72.16	329	P	P	15 55 45.8	-0.3
KURK				IAmb	IAmb	15 55 46.8	
	comp=Z,4.8nm,0.9s						
VNDA	Vanda	72.68	173	P	P	15 55 49.3	+0.5
	comp=Z,0.5nm,0.5s,baz=315,slow=7.8,SNR=2.3						
	comp=Z,0.5nm,0.5s						
VNDA	Vanda	72.68	173	P	P	15 55 49.1	+0.4
KKAR	Karatay Array	72.96	319	P	P	15 55 52.0	+1.0
MAW	Mawson	74.99	201	P	P	15 56 02.8	+0.4
	comp=Z,2.6nm,0.9s,baz=97,slow=8.1,SNR=4.2						
	comp=Z,2.6nm,0.9s						
MAW	Mawson	74.99	201	P	P	15 56 01.9	-0.4
BVAR	Borovoye Array	77.71	328	P	P	15 56 16.4	-1.6
	comp=Z,1.2nm,0.5s,baz=126,slow=6.3,SNR=11						
	comp=Z,1.2nm,0.5s						
TIXI	Tiksi	78.30	360	P	P	15 56 20.1	-0.7
TIXI				IAmb	IAmb	15 56 22.8	
	comp=Z,8.0nm,1.0s						
VOI	Vohitsoka	80.87	249	P	P	15 56 36.2	+0.3
AB31	Akbulak array	82.13	322	P	P	15 56 41.0	-0.8
ABKAR	Akbulak array	82.13	322	P	P	15 56 41.0	-0.8
QSPA	South Pole Qui	83.17	180	P	P	15 56 46.5	-0.6
	comp=Z,1.2nm,0.5s,baz=136,slow=0.9,SNR=21						
	comp=Z,1.2nm,0.5s						
QSPA	South Pole Qui	83.17	180	P	P	15 56 46.9	-0.1
M14K	Bethel	85.59	27	P	P	15 56 59.3	+0.2
L16K	Owhat River	87.06	27	P	P	15 57 06.7	+0.4
ILAR	Eielson Array	93.33	25	P	P	15 57 33.9	-1.6
	comp=Z,0.5nm,0.7s,baz=256,slow=5.5,SNR=4.8						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	125.14	59	PKP	PKPdf	16 03 20.7	-0.8
	comp=Z,0.2nm,0.5s,baz=235,slow=4.1,SNR=2.0						
TORD	Torodi Ar. Bea	128.41	281	PKP	PKPdf	16 03 27.1	-0.8
	comp=Z,0.8nm,0.6s,baz=92,slow=2.1,SNR=5.0						
DBIC	Dimbokro	134.81	273	PKP	PKPdf	16 03 40.9	+0.8
	comp=Z,1.5nm,0.4s,baz=122,slow=6.5,SNR=1.7						
DBIC	Dimbokro	134.81	273		PKPdf	16 03 40.5	+0.4
CPUP	Villa Florida	146.37	169	PKPbc	PKPbc	16 04 02.1	+0.1
	comp=Z,1.4nm,0.6s,baz=192,slow=9.0,SNR=3.9						
CPUP	Villa Florida	146.37	169		PKPbc	16 04 02.0	0.0

*NEIC **29** 16:01:54.5±1.4, 15°70S±0°08×74°3W±0°1, h64km±9km, mb4.3/14, Error ellipse: s-maj=17.7km s-min=9.3km az=60.0*

*IDC **29** 16:01:55.8±1.9, 15°61S×74°41W, h68km±17km, mb3.7/11, mbtmp4.1/15, MS3.2/9, Error ellipse: s-maj=23.8km s-min=11.2km az=59.0*

ISC 29 16:01:53.7±0.5, 15°53S±0°06×74°51W±0°08, h54km, n77, σ1§62/63, mb4.1/12, MS3.3/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.36	328	P	Pn	16 02 57.3	-0.1
	71nm,0.3s,baz=145,slow=9.3,SNR=39						
NNA				S	Sn	16 03 49.5	+2.4
	531nm,0.3s,baz=189,slow=14,SNR=8.0						
NNA	Nana	4.36	328	Pn	Pn	16 02 59.6	+2.1
AP01	Chacalluta	4.77	124	Pn	Pn	16 03 02.8	-0.3
PB12	IPOC Station P	4.92	126	Pn	Pn	16 03 03.5	-1.7
PB18	Visviri	5.16	112	Pn	Pn	16 03 08.4	-0.5
PB16	IPOC Station P	5.44	119	Pn	Pn	16 03 12.1	-0.6
PSGCX	Pisagua	5.68	133	Pn	Pn	16 03 13.9	-1.7
PB11	IPOC Station P	6.12	132	Pn	Pn	16 03 20.4	-1.3
LPAZ	La Paz	6.16	96	P	Pn	16 03 24.6	+2.0
	14nm,0.4s,baz=294,slow=7.4,SNR=40						
LPAZ				S	Sn	16 04 36.7	+4.6
	10nm,0.6s,baz=191,slow=20,SNR=1.2						
LPAZ				LR	LR	16 05 46.8	
	comp=Z,47nm,18.9s,baz=280,slow=38						
GO01	Chusmiza	6.40	128	Pn	Pn	16 03 25.0	-0.9
PB08	IPOC Station P	6.72	131	Pn	Pn	16 03 29.4	-0.8
PB02	IPOC Station P	7.07	142	Pn	Pn	16 03 34.0	-0.8
PB07	IPOC Station P	7.40	144	Pn	Pn	16 03 38.1	-1.2
PB03	IPOC Station P	7.73	145	Pn	Pn	16 03 42.7	-1.0
PB09	IPOC Station P	7.83	141	Pn	Pn	16 03 44.7	-0.4
CZSB	Cruzeiro do Su	8.15	13	Pn	Pn	16 03 47.9	-1.5
PB05	IPOC Station P	8.17	151	Pn	Pn	16 03 47.8	-1.9
PB06	IPOC Station P	8.36	147	Pn	Pn	16 03 50.7	-1.7
ATAH	Atahualpa	9.35	336	P	Pn	16 04 03.5	-2.8
	37nm,0.6s,baz=179,slow=3.5,SNR=20						
ATAH				S	Sn	16 05 56.1	+5.8
	48nm,0.7s,baz=304,slow=23,SNR=7.1						
PB14	IPOC Station P	9.65	157	Pn	Pn	16 04 08.8	-1.4
AC01	Pan de Azucar	10.99	161	Pn	Pn	16 04 26.5	-1.7
AC02	Maricunga	12.13	157	Pn	Pn	16 04 45.0	+0.7
SIV	San Ignacio	12.93	93	P	Pn	16 04 51.3	-3.6
	1.1nm,0.3s,baz=270,slow=9.4,SNR=6.0						
CO01	Juntas del Tor	14.75	165	Pn	Pn	16 05 18.4	-1.0
CO06	Fray Jorge	15.10	170	Pn	Pn	16 05 24.3	+0.6
CO06				IAmb	IAmb	16 05 48.7	
	comp=Z,34nm,1.4s						
CO03	El Pedregal	15.44	168	P	P	16 05 31.4	-0.3
CO03				IAmb	IAmb	16 05 35.2	
	comp=Z,23nm,0.9s						
CO02	Combarbal	15.73	169	P	P	16 05 37.8	+2.8
CO02				IAmb	IAmb	16 05 40.6	
	comp=Z,36nm,1.3s						
OTAV	Otavalo	16.34	346	P	P	16 05 41.7	-0.5
CFA	Coronel Fontan	16.80	161	P	P	16 05 46.0	-0.8
	comp=Z,3.6nm,0.6s,baz=346,slow=12,SNR=8.6						
H03N1	Juan Fernandez	18.08	192	T	T	16 24 42.4	
	baz=14,slow=74,SNR=3184						
H03N2	Juan Fernandez	18.08	192	T	T	16 24 39.8	
	baz=14,slow=74,SNR=3536						
H03N3	Juan Fernandez	18.09	192	T	T	16 24 39.5	
	baz=14,slow=74,SNR=1219						
H03S3	Juan Fernandez	18.45	192	T	T	16 25 07.0	
	SNR=24						
H03S2	Juan Fernandez	18.46	192	T	T	16 25 08.2	
	SNR=26						
H03S1	Juan Fernandez	18.47	192	T	T	16 24 59.3	
	SNR=31						
MACA	Manacapuru-AM	18.47	49	P	P	16 06 04.4	-0.9
CPUP	Villa Florida	19.17	126	P	Pn	16 06 13.4	-0.8
	comp=Z,1.2nm,0.7s,baz=229,slow=12,SNR=2.2						
CPUP				LR	LR	16 14 39.4	
	comp=Z,54nm,19.1s,baz=250,slow=40						
ROSC	El Rosal	20.44	1	P	P	16 06 26.6	-0.6
	comp=Z,8.3nm,0.5s,baz=183,slow=22,SNR=1.7						
ROSC				LR	LR	16 14 58.8	
	comp=Z,156nm,19.5s,baz=75,slow=38						
	comp=Z,8.3nm,0.5s						
BOAV	Boa Vista	22.71	39	P	P	16 06 48.6	-2.6
LR05	Currie	24.51	175	P	P	16 07 07.5	-0.4
SDV	Santo Domingo	24.76	9	LR	LR	16 17 38.0	
	comp=Z,60nm,21.7s,baz=294,slow=38						
PLCA	Paso Flores	25.15	173	P	P	16 07 15.3	+1.4
	comp=Z,4.8nm,0.8s,baz=346,slow=13,SNR=11						
PLCA				LR	LR	16 15 21.3	
	comp=Z,40nm,21.0s,baz=344,slow=32						
	comp=Z,4.8nm,0.8s						
PLCA	Paso Flores	25.15	173	P	P	16 07 13.6	-0.2
PLCA				IAmb	IAmb	16 07 31.4	
	comp=Z,13nm,1.4s						
BDFB	Brasilia	25.50	93	P	P	16 07 17.6	+0.2
	comp=Z,1.3nm,0.4s,baz=254,slow=25,SNR=1.6						
	comp=Z,1.3nm,0.4s						
JTS	Las Juntas de	27.85	338	LR	LR	16 17 55.1	
	comp=Z,55nm,18.1s,baz=158,slow=34						
MDP	Montagnes des	29.95	48	LR	LR	16 19 53.9	
	comp=Z,85nm,19.6s,baz=33,slow=36						
TKL	Tuckaleechee C	51.86	350	LR	LR	16 37 02.4	
	comp=Z,28nm,18.2s,baz=37,slow=41						
TXAR	Lajitas Array	52.92	328	P	P	16 11 04.3	-0.3
	comp=Z,0.4nm,0.6s,baz=146,slow=7.1,SNR=4.2						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	52.92	328	P	P	16 11 03.8	-0.8
MIAR	Mount Ida	53.19	340	P	P	16 11 05.9	-0.5
MIAR				IAmb	IAmb	16 11 38.0	
	comp=Z,5.3nm,1.4s						
SDCO	Great Sand Dun	60.65	332	P	P	16 11 59.5	-0.1
SDCO				IAmb	IAmb	16 12 00.9	
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	66.53	333	P	P	16 12 38.5	+0.2
	comp=Z,0.3nm,0.6s,baz=144,slow=3.7,SNR=2.8						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	66.53	333	P	P	16 12 37.8	-0.4
ULM	Lac du Bonnet	68.34	345	P	P	16 12 47.5	-1.6
	comp=Z,0.7nm,0.4s,baz=141,slow=9.5,SNR=3.5						
	comp=Z,0.7nm,0.4s						
YNE	Yellowstone No	68.52	334	P	P	16 12 49.6	-1.2
YNE				IAmb	IAmb	16 12 52.1	
	comp=Z,2.5nm,0.7s						
SNAA	Sanae	69.42	161	P	P	16 12 57.1	+1.3
	comp=Z,3.6nm,0.7s,baz=266,slow=5.7,SNR=12						
	comp=Z,3.6nm,0.7s						
SNAA	Sanae	69.42	161	P	P	16 12 55.3	-0.5
QSPA	South Pole Qui	74.42	180	P	P	16 13 27.8	+1.8
	comp=Z,1.8nm,0.6s,baz=324,slow=1.5,SNR=35						
	comp=Z,1.8nm,0.6s						
QSPA	South Pole Qui	74.42	180	P	P	16 13 26.9	+1.0
QSPA				IAmb	IAmb	16 13 30.5	
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	80.63	73	P	P	16 14 01.2	0.0
	comp=Z,1.7nm,0.6s,baz=256,slow=4.9,SNR=8.0						
	comp=Z,1.7nm,0.6s						
VNDA	Vanda	81.55	191	P	P	16 14 06.7	+1.6
	comp=Z,0.8nm,0.8s,baz=118,slow=4.2,SNR=4.4						
	comp=Z,0.8nm,0.8s						
VNDA	Vanda	81.55	191	P	P	16 14 06.5	+1.4
YKA	Yellowknife Ar	84.07	343	P	P	16 14 17.9	-0.2
	comp=Z,0.4nm,0.6s,baz=144,slow=5.8,SNR=4.2						
	comp=Z,0.4nm,0.6s						
DLBC	Dease Lake	86.70	334	LR	LR	16 56 47.0	
	comp=Z,14nm,18.3s,baz=56,slow=38						
H11N3	WAKE ISLAND Hy	21.63	284	T	T	18 34 00.9	
	baz=97,slow=74,SNR=12						
H11N2

baz=308,slow=75,SNR=6.7
H11N1 WAKE ISLAND Hy 28.34 117 T T 16 46 40.0
baz=308,slow=75,SNR=3.5
H11N3 WAKE ISLAND Hy 28.35 117 T T 16 46 43.1
baz=308,slow=75,SNR=4.9
H11S1 WAKE ISLAND Hy 28.97 119 T T 16 46 53.8
baz=312
H11S3 WAKE ISLAND Hy 28.97 119 T T 16 46 52.3
baz=312
H11S2 WAKE ISLAND Hy 28.99 119 T T 16 46 58.0
baz=312
ZALV Zalesovo Beam 42.18 314 P **P 16 18 48.0 +1.0**
0.4nm,0.4s,baz=83,slow=8.9,SNR=1.7
0.4nm,0.4s
MKAR Makanchi Array 44.06 303 P **P 16 19 04.1 +1.7**
0.3nm,0.6s,baz=81,slow=8.9,SNR=2.4
0.3nm,0.6s
KURBB **Kurchatov Arra 46.12 309** P **P 16 19 17.9 -0.7**
0.5nm,0.7s,baz=82,slow=7.5,SNR=5.5
0.5nm,0.7s
BATI Baumata 48.10 202 LR LR 16 38 23.3
comp=Z,115nm,21.7s,baz=182,slow=34
FITZ Fitzroy Crossi 55.10 197 P **P 16 20 25.8 -0.7**
1.8nm,0.8s,baz=18,slow=6.7,SNR=1.4
1.8nm,0.8s
WRA Warramunga Arr 55.46 187 P **P 16 20 27.7 -1.4**
0.3nm,0.3s,baz=0.8,slow=7.5,SNR=15
0.3nm,0.3s
ASAR Alice Springs 59.19 187 P **P 16 20 55.6 +0.3**
0.2nm,0.7s,baz=1.6,slow=7.6,SNR=4.3
0.2nm,0.7s

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*KRNET **29** 16:14:30.4±0.1,39˚.44N×72˚.91E,h16km,mb3.2*
*SOME **29** 16:14:31.1,39˚.72N×72˚.68E,h5km*
*NNC **29** 16:14:39.2±3.2,39˚.75N×73˚.11E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=24.4km s-min=17.3km az=174.0

ISC 29 16:14:36.4±2.4,39˚.6N±0˚.1×73˚.06E±0˚.05,h10km,n24,
σ1§96/37,26C-12D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.51**	**42**	⇑*iP*	**Pg**	**16 14 44.4**	**-2.0**
SFK				⇑*iS*	**Sb**	**16 14 54.6**	**-0.6**
OHH	**Osh**	**0.92**	**347**	⇑*iP*	**Pg**	**16 14 51.0**	**-3.1**
OHH				⇑*iS*	**Sb**	**16 15 06.0**	**-0.7**
DRK	**Karamyk**	**0.99**	**261**	⇑*iP*	Pg	16 14 46.8	-8.7
DRK				⇑*iS*	Sg	16 14 58.4	-10
SALK	**Salom-Alik**	**1.38**	**25**	⇑*iP*	**Pn**	**16 15 00.3**	**-1.6**
SALK				⇑*iS*	**Sn**	**16 15 21.8**	**+1.5**
ARSB	**Arslanbob**	**1.69**	**358**	⇑*iP*	**Pn**	**16 15 05.1**	**-1.1**
ARSB				⇑*iS*	**Sg**	**16 15 30.3**	**-0.5**
GAR	**Garm**	**2.22**	**254**	⇑*iP*	Pn	16 15 07.7	-5.8
GAR				⇑*iS*	Sn	16 15 34.7	-6.4
ARK	**Arkit**	**2.32**	**339**	⇑*iP*	**Pn**	**16 15 13.3**	**-1.5**
ARK				⇑*iS*	**Sn**	**16 15 44.5**	**+1.1**
TRKS	**Terek-Say**	**2.40**	**323**	⇑*iP*	Pn	16 15 12.7	-3.2
TRKS				⇑*iS*	**Sn**	**16 15 43.5**	**-1.9**
EKS2	**Erkin-Say**	**3.07**	**10**	⇓*iP*	**Pn**	**16 15 24.8**	**-0.4**
EKS2				⇓*iS*	**Sn**	**16 16 04.2**	**+2.2**
MRKS	**Merke**	**3.11**	**2**	Pg	**Pb**	**16 15 33.4**	**+1.5**
	9.9nm,0.3s						
MRKS				Lg	Lg	16 16 16.8	
	23nm,0.3s						
MRKS	**Merke**	**3.11**	**2**	*eP*	**Pn**	**16 15 29.2**	**+3.5**
	9.9nm,0.3s						
MRKS				*eS*	**Sb**	**16 16 10.6**	**+0.7**
	23nm,0.3s						
CHGR	**Chuyangaron**	**3.19**	**253**	⇓*iP*	Pn	16 15 21.0	-5.7
CHGR				⇓*iS*	Sn	16 15 57.8	-7.0
AAK	**Ala-Archa**	**3.19**	**19**	⇓Pn	**Pn**	**16 15 29.5**	**+2.7**
	2.0nm,0.5s,baz=144,slow=13						
AAK				⇑Lg	Lg	16 16 14.2	
	4.6nm,0.6s,baz=144,slow=13						
AAK	**Ala-Archa**	**3.19**	**19**	⇓*iP*	**Pn**	**16 15 26.4**	**-0.4**
AAK				⇓*iS*	**Sn**	**16 16 07.4**	**+2.4**
KBK	**Karagaybulak**	**3.34**	**25**	⇓*iP*	**Pn**	**16 15 28.6**	**-0.3**
KBK				⇓*iS*	**Sn**	**16 16 11.0**	**+2.3**
ULHL	**Ulahol**	**3.55**	**42**	⇑*iP*	**Pn**	**16 15 31.4**	**-0.4**
ULHL				⇑*iS*	**Sn**	**16 16 15.9**	**+2.0**
BOOM	**Boomskoye usch**	**3.59**	**36**	⇓*iP*	**Pn**	**16 15 32.0**	**-0.3**
BOOM				⇓*iS*	**Sn**	**16 16 17.0**	**+2.2**
USP	**Ospenovka**	**3.79**	**16**	⇑*iP*	**Pn**	**16 15 34.5**	**-0.4**
USP				⇑*iS*	**Sn**	**16 16 21.5**	**+2.0**
TKM2	**Tokmak 2**	**3.80**	**29**	⇑*iP*	**Pn**	**16 15 35.1**	**-0.1**
TKM2				⇑*iS*	**Sn**	**16 16 22.1**	**+2.0**
KK31	**Karatay Array**	**3.96**	**332**	⇑Pn	**Pn**	**16 15 39.6**	**+2.3**
	0.7nm,0.3s,baz=144,slow=13,SNR=9.6						
KK31				⇓Sn	**Sn**	**16 16 27.4**	**+3.5**
	1.7nm,0.3s,baz=144,slow=27						
SGDS	**Sogindy**	**3.99**	**17**	Pg	**Pb**	**16 15 48.1**	**+1.2**
	0.2nm,0.1s						
SGDS				Lg	Lg	16 16 41.4	
	5.3nm,0.4s						
KDJ	**Kajisay**	**4.00**	**50**	⇑*eP*	**Pn**	**16 15 37.6**	**-0.3**
KDJ				⇑*eS*	**Sn**	**16 16 26.2**	**+1.3**
DGS	**Degeres**	**4.14**	**29**	Pg	**Pb**	**16 15 53.1**	**+3.7**
	4.6nm,0.3s						
DGS				Lg	Lg	16 16 50.6	
	5.3nm,0.4s						
DGS	**Degeres**	**4.14**	**29**	*eP*	**Pb**	**16 15 49.6**	**+0.1**
	4.6nm,0.3s						
DGS				*eS*	**Sg**	**16 16 45.8**	**-3.6**
	5.3nm,0.4s						

JMA 29 16:18:40.1±0.3,37˚.3N±0˚.6×14˚.1E±˚,h31km±1km,
MV1.4/25,E OFF FUKUSHIMA PREF,Near east coast of
eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.33**	**278**	*eP*	Pb	16 18 47.8	-0.2
JFK				*eS*	Sb	16 18 53.1	-0.3
ONAJ	**Iwakimizuishiy**	**0.45**	**240**	*eS*	Sb	16 18 55.9	-0.5
JMST	**Minamisoumatoc**	**0.51**	**322**	*eP*	Pb	16 18 50.3	-0.4
JMST				*eS*	Sb	16 18 57.6	-0.3
JFFD	**Fukushimafurud**	**0.62**	**248**	*eS*	Sb	16 19 00.4	-0.7
JMM	**Marumori**	**0.67**	**325**	*eS*	Sb	16 19 01.5	-0.8
JOTO	**OTAMA OYAMA**	**0.79**	**288**	*eP*	Pn	16 18 55.1	-0.1
JOTO				*eS*	Sn	16 19 06.1	+0.1
JIO	**Ouri**	**1.13**	**3**	*eS*	Sn	16 19 13.4	-0.9

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*IDC **29** 16:19:36.4±0.8,32˚.31N×139˚.41E,h0km,mb3.7/11,*
mbtmp3.8/13,ML3.5/2,MS2.9/3,Error ellipse:
s-maj=20.2km s-min=13.5km az=101.0
*NEIC **29** 16:19:40.1±2.0,32˚.81N±0˚.09×140˚.8E±0˚.1,h56km±9km,*
mb4.3/7,Error ellipse: s-maj=15.6km s-min=8.4km
az=223.0
*NIED **29** 16:19:41.3,32˚.85N×140˚.73E,h63km,MW3.7,Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm;
Mrr1.18; Mθθ-0.98; Mφφ-0.20; Mrθ-0.67; Mθφ-2.68;
Mφr-2.51; Fault plane solution: M0.84000×10¹⁴ NP1:
φs91.00000°,δ42.00000°,λ163.00000°. NP2:
φs193.00000°,δ79.00000°,λ49.00000°.
*JMA **29** 16:19:41.3±0.1,32˚.9N±0˚.3×14˚.1E±˚,h63km±4km,*
MV3.8/38,E OFF HACHIJOJIMA ISLAND

ISC 29 16:19:39.4±1.2,32˚.75N±0˚.05×140˚.84E±0˚.07,h57km±10km,
n67,σ1§50/74,mb3.9/16,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.93**	**293**	P	**Pn**	**16 19 57.3**	**+0.9**
JHJ2	**Mitsune**	**0.93**	**293**		**Pn**	**16 19 57.2**	**+0.8**
JHJ2					**Sn**	**16 20 08.8**	**-0.1**
JHJ2	**Mitsune**	**0.93**	**293**	*i* P	**Pn**	**16 19 57.4**	**+0.9**
JHJ2				S	**Sn**	**16 20 09.0**	**+0.1**
JHCJ	**Hachijojimakas**	**0.93**	**290**	*i* P	**Pn**	**16 19 57.3**	**+0.8**
JHCJ				S	**Sn**	**16 20 08.3**	**-0.7**
JAOM	**Aogashimamukai**	**0.95**	**253**	*i* P	**Pn**	**16 19 58.4**	**+1.7**
JAOM				*eS*	**Sn**	**16 20 10.9**	**+1.4**
JHJ	**Hachijo jima 2**	**0.96**	**293**	Pn	**Pn**	**16 19 57.2**	**+0.5**
	310nm,0.3s,baz=354,slow=20,SNR=352						
JHJ				Sn	**Sn**	**16 20 08.5**	**-1.1**
	549nm,0.3s,baz=76,slow=21,SNR=6.2						
JMKN	**Mikurajimanish**	**1.54**	**318**	*i* P	**Pn**	**16 20 05.2**	**+0.6**
JMKN				S	**Sn**	**16 20 22.9**	**-0.7**
JMYK	**Miyake Tsubota**	**1.69**	**321**	P	**Pn**	**16 20 07.4**	**+0.8**
JMYK				S	**Sn**	**16 20 25.8**	**-1.4**
BSO1	**Boso 1**	**1.90**	**4**	*i* P	**Pn**	**16 20 10.4**	**+1.4**
BSO1				*eS*	**Sn**	**16 20 32.6**	**+1.1**
BSO2	**Boso 2**	**1.99**	**358**	*eS*	**Sn**	**16 20 35.4**	**+1.2**
BSO3	**Boso 3**	**2.06**	**353**	P	**Pn**	**16 20 12.7**	**+1.3**
BSO3				*eS*	**Sn**	**16 20 36.8**	**+0.9**
JIM2	**Oshima 3**	**2.28**	**330**	*i* P	**Pn**	**16 20 15.4**	**+0.6**
JIM2				S	**Sn**	**16 20 39.6**	**-2.0**
JIZS	**Izushimoda**	**2.55**	**321**	P	**Pn**	**16 20 19.7**	**+1.4**
JIZS				*eS*	**Sn**	**16 20 47.2**	**-1.0**
JOD2	**Odawara 2**	**2.89**	**330**	P	**Pn**	**16 20 24.0**	**+0.9**
JOD2				*eS*	**Sn**	**16 20 54.4**	**-2.3**
JSG	**Sagara**	**2.92**	**312**	P	**Pn**	**16 20 25.9**	**+2.4**
JSG	**Sagara**	**2.92**	**312**	Pn	**Pn**	**16 20 25.3**	**+1.8**
SHZ3	**Shizuoka 3**	**3.17**	**317**	P	**Pn**	**16 20 29.1**	**+2.1**
JYN	**Shimob**	**3.33**	**326**	P	**Pn**	**16 20 31.3**	**+2.1**
TTO1	**TONANKAI O.B.S**	**3.50**	**285**	P	**Pn**	**16 20 33.2**	**+2.0**
JRY	**Ryogami san**	**3.63**	**334**	P	**Pn**	**16 20 34.8**	**+1.6**
JRY				*eS*	**Sn**	**16 21 15.2**	**+0.6**
JIE	**Ise**	**3.81**	**296**	P	**Pn**	**16 20 37.1**	**+1.4**
JIE				S	**Sn**	**16 21 17.8**	**-1.5**
JAG	**Ashikaga**	**3.84**	**343**	P	**Pn**	**16 20 36.2**	**+0.2**
JAG				S	**Sn**	**16 21 18.7**	**-1.1**
JGF	**Kuroka**	**4.05**	**316**	P	**Pn**	**16 20 41.4**	**+2.5**
JGF	**Kuroka**	**4.05**	**316**	Pn	**Pn**	**16 20 41.1**	**+2.3**
INU	**Inuyama**	**4.09**	**310**	P	**Pn**	**16 20 41.6**	**+2.1**
INU	**Inuyama**	**4.09**	**310**	Pn	**Pn**	**16 20 41.4**	**+2.0**
MJAR	**Matsushiro Arr**	**4.36**	**331**	Pn	**Pn**	**16 20 44.4**	**+1.3**
	0.5nm,0.3s,baz=160,slow=15,SNR=21						
MJAR				Sn	**Sn**	**16 21 32.8**	**+0.2**
	0.4nm,0.3s,baz=158,slow=24,SNR=1.4						
MJAR				LR	LR	16 22 21.0	
	comp=Z,35nm,20.7s,baz=170,slow=38						
	7.4nm,0.6s						
MJAR	**Matsushiro Arr**	**4.36**	**331**	Pn	**Pn**	**16 20 43.2**	**+0.1**
MAJO	**Matsushiro**	**4.36**	**331**	P	**Pn**	**16 20 44.8**	**+1.7**
MAJO	**Matsushiro**	**4.36**	**331**	Pn	**Pn**	**16 20 43.4**	**+0.3**
MJB9	**Matsu-Tunnel**	**4.36**	**331**	Pn	**Pn**	**16 20 44.4**	**+1.2**
JCJ	**Chichijima**	**5.76**	**168**	Pn	**Pn**	**16 21 02.6**	**+0.2**
	7.8nm,0.3s,baz=276,slow=22,SNR=1.9						
JCJ				Sn	**Sn**	**16 22 02.8**	**-4.3**
	8.9nm,0.3s,baz=283,slow=21,SNR=2.0						
	22nm,0.3s						
JCJ	**Chichijima**	**5.76**	**168**	Pn	**Pn**	**16 21 03.5**	**+1.2**
JMN	**Monobe**	**5.91**	**281**	P	**Pn**	**16 21 06.9**	**+2.5**
JMN	**Monobe**	**5.91**	**281**	Pn	**Pn**	**16 21 06.6**	**+2.1**
ERM	**Erimo**	**9.43**	**11**	Pn	**Pn**	**16 21 52.1**	**-0.4**
JKA	**Kamikawa-asahi**	**11.43**	**6**	Pn	**Pn**	**16 22 18.0**	**-1.9**
KSRS	**Korea Array**	**11.56**	**298**	LR	LR	16 26 19.7	
	comp=Z,29nm,20.0s,baz=220,slow=38						
KS19	**Wonju Array Si**	**11.62**	**298**	Pn	Pn	16 22 16.4	-6.2
H11N2	**WAKE ISLAND Hy 26.65 113**			T	T	16 54 03.7	
	baz=305,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy 26.65 113**			T	T	16 54 09.7	
	baz=305,slow=75,SNR=9.9						
H11N3	**WAKE ISLAND Hy 26.67 113**			T	T	16 54 16.6	
	baz=305,slow=75,SNR=14						
SONM	**Songino Array 29.99 310**			P	**P**	**16 25 41.1**	**-1.6**
	0.8nm,0.5s,baz=95,slow=6.1,SNR=2.7						
	0.8nm,0.5s						
CMAR	**Chiang Mai Arr 40.11 260**			P	P	16 27 04.9	-4.9
	0.3nm,0.3s,baz=41,slow=8.6,SNR=4.2						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam 44.54 316**			P	**P**	**16 27 44.3**	**-1.0**
	0.5nm,0.3s,baz=108,slow=9.3,SNR=2.9						
	0.5nm,0.3s						
MKAR	**Makanchi Array 46.10 306**			P	**P**	**16 27 57.5**	**-0.4**
	1.1nm,0.3s,baz=85,slow=9.5,SNR=21						
	1.1nm,0.3s						
MKAR	**Makanchi Array 46.10 306**			P	**P**	**16 27 57.3**	**-0.6**
MAKZ	**Makanchi 46.32 306**			P	**P**	**16 27 58.3**	**-1.2**
MAKZ				IAmb	IAmb	16 28 00.6	
	comp=Z,6.2nm,1.1s						
KURK	**Kurchatov 48.29 311**			P	**P**	**16 28 13.5**	**-1.2**
KURK				IAmb	IAmb	16 28 14.8	
	comp=Z,2.2nm,0.9s						
KURBB	**Kurchatov Arra 48.35 311**			P	**P**	**16 28 14.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=87,slow=7.6,SNR=22						
	comp=Z,0.7nm,0.3s						
PDGK	**Podgornoye 48.47 301**			P	**P**	**16 28 15.4**	**-1.0**
WB0	**Warramunga Arr 52.59 188**			P	**P**	**16 28 48.4**	**+0.9**
WR8	**Warramunga Arr 52.76 187**			P	**P**	**16 28 49.2**	**+0.5**
WR8				IAmb	IAmb	16 29 07.8	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr 52.77 188**			P	**P**	**16 28 49.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=5.5,slow=7.6,SNR=12						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr 52.77 188**			P	**P**	**16 28 49.0**	**+0.2**
BVAR	**Borovoye Array 53.17 315**			P	**P**	**16 28 51.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=102,slow=8.2,SNR=2.6						
	comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array 53.38 31**			P	P	16 29 06.2	+13
	comp=Z,0.2nm,0.6s,baz=190,slow=7.3,SNR=1.6						
	comp=Z,0.2nm,0.6s						
KK31	**Karatay Array 54.94 303**			P	**P**	**16 29 03.8**	**-0.8**
KK31				IAmb	IAmb	16 29 04.5	
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array 54.94 303**			P	**P**	**16 29 04.3**	**-0.3**
ASAR	**Alice Springs 56.49 188**			P	**P**	**16 29 15.6**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=2.5,slow=6.6,SNR=7.8						
	comp=Z,0.3nm,0.9s						
ASAR	**Alice Springs 56.49 188**			P	**P**	**16 29 16.2**	**+0.4**
AB31	**Akbulak array 60.38 312**			P	**P**	**16 29 41.5**	**-1.2**
AB31				IAmb	IAmb	16 30 16.6	
	comp=Z,2.5nm,1.4s						
ABKAR	**Akbulak array 60.38 312**			P	**P**	**16 29 41.5**	**-1.2**
HFS	**Hagfors 77.79 336**			P	**P**	**16 31 34.3**	**+4.0**
	comp=Z,1.2nm,0.7s,baz=38,slow=9.7,SNR=1.5						
	comp=Z,1.2nm,0.7s						
NVAR	**Mina Array Bea 77.96 52**			P	P	16 31 42.8	+11
	comp=Z,0.4nm,0.3s,baz=279,slow=12,SNR=12						
	comp=Z,0.4nm,0.3s						
NVAR	**Mina Array Bea 77.96 52**				P	16 31 41.9	+10
RAR	**Rarotonga 78.08 125**			LR	LR	17 04 10.9	
	comp=Z,56nm,19.1s,baz=252,slow=34						

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*GFZ **29** 16:23:22.1±0.3,8˚S±3˚×107˚3E±˚,h10km,M4.7/28,*
mb4.7/28
*IDC **29** 16:23:25.7±0.6,7˚.48S×103˚.56E,h0km,mb4.2/20,*
mbtmp4.3/21,ML4.2/1,MS3.4/2,Error ellipse:
s-maj=21.0km s-min=12.3km az=58.0
*NEIC **29** 16:23:27.4±1.4,7˚.47S±0˚.09×103˚.59E±0˚.09,h10km±1km,*
mb4.6/31,Error ellipse: s-maj=18.6km s-min=11.2km
az=219.0
*DJA **29** 16:23:28.9±0.3,7˚S±4˚×107˚4E±˚,h89km±11km,M4.9/51,*
mb4.9/19,mB5.7/5,MLv4.7/51,Mw(mB)5.2/5

ISC 29 16:23:27.0±0.5,7˚.43S±0˚.06×103˚.58E±0˚.05,h10km,n174,
σ1§42/144,mb4.6/44,MS4.1/6,1D,Southwest of
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**2.11**	**26**	P	**Pn**	**16 24 01.5**	**-0.8**
KASI				S	**Sn**	**16 24 26.3**	**-2.3**
KASI	**Kota Agung**	**2.11**	**26**	P	**Pn**	**16 24 01.2**	**-1.1**
CGJI	**Cibinong**	**2.25**	**69**	P	**Pn**	**16 24 03.4**	**-0.9**
CGJI				S	**Sn**	**16 24 32.3**	**+0.1**
CGJI	**Cibinong**	**2.25**	**69**	P	**Pn**	**16 24 02.9**	**-1.4**
EGSI	**Enggano, Bengk**	**2.44**	**328**	P	**Pn**	**16 24 06.8**	**-0.1**
EGSI				S	**Sn**	**16 24 34.4**	**-2.4**
EGSI	**Enggano, Bengk**	**2.44**	**328**	P	**Pn**	**16 24 06.6**	**-0.2**
BLSI	**Bandar Lampung**	**2.64**	**39**	P	**Pn**	**16 24 09.9**	**+0.3**
BLSI				S	**Sn**	**16 24 40.6**	**-1.1**
BLSI	**Bandar Lampung**	**2.64**	**39**	P	**Pn**	**16 24 09.5**	**-0.2**
SBJI	**Serang**	**2.85**	**63**	P	**Pn**	**16 24 12.2**	**-0.4**
SBJI	**Serang**	**2.85**	**63**	P	Pn	16 24 10.5	-2.1
KLI	**Kotabumi**	**2.85**	**27**	P	**Pn**	**16 24 12.8**	**+0.2**
SKJI	**Sukabumi**	**2.99**	**82**	P	**Pn**	**16 24 14.0**	**-0.4**
MDSI	**Maura Dua**	**2.99**	**12**	P	**Pn**	**16 24 13.4**	**-1.0**
MDSI	**Maura Dua**	**2.99**	**12**	P	**Pn**	**16 24 14.2**	**-0.2**
MNAI	**Manna**	**3.12**	**349**	Pn	**Pn**	**16 24 15.5**	**-0.7**
MNAI	**Manna**	**3.12**	**349**	P	Pn	16 24 13.5	-2.7
DBJI	**Dramaga**	**3.27**	**75**	P	**Pn**	**16 24 18.4**	**+0.1**
DBJI	**Dramaga**	**3.27**	**75**	P	**Pn**	**16 24 18.0**	**-0.3**
CBJI	**Citeko**	**3.40**	**73**	P	**Pn**	**16 24 20.4**	**+0.3**
LHSI	**Lahat**	**3.58**	**359**	P	**Pn**	**16 24 22.7**	**+0.1**
LHSI	**Lahat**	**3.58**	**359**	P	**Pn**	**16 24 22.1**	**-0.5**
UBSI	**University, Be**	**3.87**	**340**	P	**Pn**	**16 24 27.1**	**+0.5**
UBSI	**University, Be**	**3.87**	**340**	P	**Pn**	**16 24 28.8**	**+2.2**
KSI	**Kapahiang**	**3.88**	**345**	P	**Pn**	**16 24 25.5**	**-1.3**
BBJI	**Bungbulang**	**4.04**	**91**	Pn	Pn	16 24 27.2	-1.7
BBJI	**Bungbulang**	**4.04**	**91**	P	Pn	16 24 27.0	-2.0
BBJI	**Bungbulang**	**4.04**	**91**	P	Pn	16 24 26.6	-2.4
LEM	**Lembang**	**4.06**	**82**	Pn	**Pn**	**16 24 30.8**	**+1.5**
	17nm,0.3s,baz=203,slow=6.0,SNR=18						
LEM				Sn	**Sn**	**16 25 18.2**	**+1.2**
	18nm,0.3s,baz=323,slow=14,SNR=4.8						
	54nm,0.4s						
LEM	**Lembang**	**4.06**	**82**	P	**Pn**	**16 24 29.6**	**+0.3**
MASI	**Maura Aman, Be**	**4.47**	**343**	P	**Pn**	**16 24 34.4**	**-0.4**
MASI	**Maura Aman, Be**	**4.47**	**343**	P	Pn	16 24 33.2	-1.7
CMJI	**Cimerak**	**4.84**	**94**	P	**Pn**	**16 24 39.0**	**-0.9**
CMJI	**Cimerak**	**4.84**	**94**	P	**Pn**	**16 24 38.3**	**-1.7**
KPJI	**Karang Pucung**	**5.31**	**89**	P	**Pn**	**16 24 48.1**	**+1.7**
	0.3nm63nm,0.6s						
KPJI	**Karang Pucung**	**5.31**	**89**	P	**Pn**	**16 24 45.9**	**-0.6**
CTJI	**Waduk Cacaban**	**5.58**	**86**	P	**Pn**	**16 24 52.2**	**+2.1**
	0.3nm71nm,0.9s						
CTJI	**Waduk Cacaban**	**5.58**	**86**	P	**Pn**	**16 24 50.2**	**+0.1**
KRJI	**Kerinci**	**5.71**	**338**	P	**Pn**	**16 24 51.9**	**-0.1**
	173nm,0.6s						
KRJI				S	**Sn**	**16 25 54.2**	**-3.5**
	173nm,0.6s						
KRJI	**Kerinci**	**5.71**	**338**	P	**Pn**	**16 24 51.6**	**-0.4**
PPBI	**Pangkal Pinang**	**5.83**	**26**	P	**Pb**	**16 25 08.6**	**-0.1**
SDSI	**Sungai Dareh**	**6.80**	**342**	P	Pn	16 25 04.7	-2.2
SDSI	**Sungai Dareh**	**6.80**	**342**	P	**Pn**	**16 25 07.1**	**+0.1**
SMRI	**Semarang**	**6.82**	**87**	Pn	**Pn**	**16 25 08.0**	**+0.8**
SMRI	**Semarang**	**6.82**	**87**	P	**Pn**	**16 25 08.6**	**+1.4**
	0.6nm186nm,0.8s						
SMRI	**Semarang**	**6.82**	**87**	P	**Pn**	**16 25 07.6**	**+0.4**
UGM	**Wanagama**	**6.90**	**94**	Pn	**Pn**	**16 25 07.8**	**-0.4**
UGM	**Wanagama**	**6.90**	**94**	P	**Pn**	**16 25 07.9**	**-0.4**
DSRI	**Dabo**	**6.98**	**8**	P	Pn	16 25 04.3	-5.1
DSRI	**Dabo**	**6.98**	**8**	P	**Pn**	**16 25 09.6**	**+0.2**
PDSI	**Padang**	**7.18**	**334**	P	Pn	16 25 09.7	-2.5
	0.6nm37nm,0.7s						
PDSI				S	**Sn**	**16 26 29.2**	**-4.7**
	0.6nm37nm,0.7s						
PDSI	**Padang**	**7.18**	**334**	P	Pn	16 25 10.2	-2.0
WOJI	**Wonogiri, Jawa**	**7.29**	**94**	P	Pn	16 25 11.4	-2.3
	105nm,2.2s						
WOJI	**Wonogiri, Jawa**	**7.29**	**94**	P	Pn	16 25 10.6	-3.0
PPI	**Padang Panjang**	**7.62**	**335**	P	Pn	16 25 15.4	-2.8
PPI				S	**Sn**	**16 26 42.0**	**-2.7**
SNJI	**Sawahan-Nganju**	**8.12**	**93**	P	**Pn**	**16 25 25.7**	**+0.5**
	96nm,0.6s						
SJI	**Sawahan**	**8.12**	**93**	P	Pn	16 25 18.2	-7.0
COCO	**West Island**	**8.15**	**234**	P	Pn	16 25 14.5	-11
BTDF	**Bukit Timah Da**	**8.74**	**1**	P	Pn	16 25 45.1	+12
MYKOM	**Kota Tinggi**	**9.17**	**2**	P	**Pn**	**16 25 39.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**10.53**	**96**	Pn	**Pn**	**16 25 56.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**10.53**	**96**	P	**Pn**	**16 25 56.9**	**-1.1**
GSI	**Gunungsitoli**	**10.54**	**325**	Pn	Pn	16 25 56.0	-2.3
GSI	**Gunungsitoli**	**10.54**	**325**	P	Pn	16 25 56.5	-1.8
KCSI	**Kotacane, Aceh**	**12.33**	**332**	P	Pn	16 26 20.1	-2.7
TWSI	**Taliwang, Sumb**	**13.24**	**97**	P	Pn	16 26 33.3	-1.8
PLAI	**Plampang**	**14.13**	**97**	P	Pn	16 26 43.4	-3.9
LHMI	**Lhok Sumawe**	**14.21**	**332**	P	**Pn**	**16 26 48.3**	**-0.2**
WBSI	**Waikabubak, Su**	**15.79**	**99**	P	Pn	16 27 04.9	-4.8
KAPI	**Kappang**	**16.26**	**82**	P	Pn	16 27 11.5	-4.2
BSSI	**Bau Bau, Buton**	**16.84**	**87**	P	**Pn**	**16 27 19.4**	**-3.7**
MPSI	**Mapaga**	**18.02**	**65**	P	**Pn**	**16 27 37.2**	**-0.5**
GIRL	**Giralia**	**18.27**	**147**	Pn	**Pn**	**16 27 37.0**	**-3.8**
GIRL				IAmb	IAmb	16 28 20.3	
	comp=Z,96nm,1.4s						
MMRI	**Maumere**	**18.52**	**95**	P	**P**	**16 27 41.6**	**-2.1**
MMRI				IAmb	IAmb	16 27 49.0	
	comp=Z,75nm,1.3s						
TOLI2	**Tolitoli**	**19.15**	**64**	P	**P**	**16 27 49.9**	**-0.7**
TOLI2	**Tolitoli**	**19.15**	**64**	P	**P**	**16 27 50.5**	**-0.2**
MYLDM	**Lahad Datu**	**19.46**	**50**	P	**P**	**16 27 54.7**	**+0.7**
MYLDM				IAmb	IAmb	16 28 09.9	
	comp=Z,42nm,0.9s						
MYLDM	**Lahad Datu**	**19.

comp=Z,1.5nm,0.7s,baz=291,slow=9.3,SNR=4.1
comp=Z,1.5nm,0.7s
LZH Lanzhou 43.29 0 *eP* P 16 31 28.8 -0.3
LZH sP sP 16 31 36.8 +5.1
LZH pmax pmax
comp=Z,14nm,1.0s
LZH L L
comp=Z,270nm,15.5s
LZH L L
comp=Z,210nm,16.1s
LZH L L
comp=Z,280nm,15.5s
GTA2 Gaotai 46.82 356 P P **16 31 58.3 +1.2**
GTA2 sP pwP 16 32 06.0 +1.6
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 L L
comp=Z,180nm,14.3s
GTA2 L L
comp=Z,110nm,13.0s
GTA2 L L
comp=Z,130nm,15.9s
HHC Hu-ho-hao-te 48.60 8 *eP* P **16 32 13.5 +2.5**
HHC pmax pmax
comp=Z,13nm,0.7s
KSRS Korea Array 50.12 25 P P **16 32 22.2 -0.2**
comp=Z,2.4nm,1.0s,baz=215,slow=8.7,SNR=15
comp=Z,2.4nm,1.0s
XLT XiLinHaoTe 52.33 11 *eP* P **16 32 41.8 +2.7**
XLT pmax pmax
comp=Z,8.0nm,0.7s
XLT pmax pmax
comp=Z,53nm,6.1s
WMQ Urumqi 53.01 346 *eP* P **16 32 46.0 +1.9**
WMQ PcP **PcP** **16 33 54.0 +1.3**
WMQ pmax pmax
comp=Z,11nm,1.1s
KSH2 Kashi 53.13 333 P P 16 32 51.5 +6.3
KSH2 pmax pmax
comp=Z,7.0nm,0.7s
WUS Wushi 53.32 337 P P **16 32 46.7 +0.2**
WUS Wushi 53.32 337 P P **16 32 46.5 0.0**
MANEM Manem 53.75 329 P P **16 32 50.9 +1.0**
MANEM IAmb IAmb 16 33 19.3
comp=Z,22nm,0.8s
MJAR Matsushiro Arr 54.48 34 P P **16 32 54.3 -0.6**
comp=Z,0.3nm,0.3s,baz=212,slow=5.6,SNR=4.2
comp=Z,0.3nm,0.3s
CN2 Changchun 54.71 19 P P **16 32 55.8 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
PDGK Podgornoye 55.05 339 P P **16 32 59.3 +0.2**
SONM Songino Array 55.08 2 P P **16 33 00.3 +1.1**
comp=Z,7.0nm,0.7s,baz=182,slow=9.2,SNR=20
comp=Z,7.0nm,0.7s
SONM Songino Array 55.08 2 P P **16 32 58.7 -0.5**
SONM IAmb IAmb 16 33 03.8
comp=Z,6.2nm,0.8s
ULN Ulaanbaatar 55.14 3 P P **16 32 59.0 -0.7**
ULN IAmb IAmb 16 33 03.9
comp=Z,3.9nm,0.7s
ULN Ulaanbaatar 55.14 3 P P **16 33 03.1 +3.4**
BNX BinXian 57.07 20 ⇓P P **16 33 13.5 +0.2**
BNX pmax pmax
comp=Z,13nm,0.9s
MKAR Makanchi Array 57.21 343 P P **16 33 15.0 +0.7**
comp=Z,3.1nm,0.7s,baz=143,slow=7.8,SNR=19
comp=Z,3.1nm,0.7s
MKAR Makanchi Array 57.21 343 P P **16 33 14.3 0.0**
USA0B Ussuriysk Arra 57.45 24 P P **16 33 15.6 -0.4**
USA0B IAmb IAmb 16 33 19.2
comp=Z,5.5nm,0.9s
USRK Ussuriysk Ar. 57.45 24 P P **16 33 15.9 -0.1**
comp=Z,2.5nm,0.7s,baz=215,slow=7.2,SNR=9.7
comp=Z,2.5nm,0.7s
USRK Ussuriysk Ar. 57.45 24 P P **16 33 15.5 -0.5**
HiLR Hailar Array B 58.48 12 P P **16 33 25.3 +2.0**
comp=Z,8.1nm,0.5s,baz=181,slow=10,SNR=11
comp=Z,8.1nm,0.5s
KK31 Karatay Array 58.59 332 P P **16 33 24.2 +0.1**
KKAR Karatay Array 58.59 332 P P **16 33 24.6 +0.5**
H04N2 CROZET ISLANDS 58.74 220 T T 17 37 04.3
baz=66
H04N1 CROZET ISLANDS 58.76 220 T T 17 37 08.8
baz=66,slow=74
H04N3 CROZET ISLANDS 58.76 220 T T 17 37 06.8
baz=66,slow=74
TLY Talaya 58.88 0 P P **16 33 26.1 +0.1**
TLY IAmb IAmb 16 33 31.7
comp=Z,6.2nm,1.1s
HEH HeiHe 61.07 17 *eP* P **16 33 40.5 -0.5**
HEH pmax pmax
comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra 61.76 342 P P **16 33 46.3 +0.7**
comp=Z,2.6nm,0.8s,baz=160,slow=6.0,SNR=22
comp=Z,2.6nm,0.8s
KURK Kurchatov 61.81 342 P P **16 33 46.2 +0.2**
KURK IAmb IAmb 16 33 47.3
comp=Z,4.2nm,0.8s
KURK Kurchatov 61.81 342 P P 16 33 44.0 -2.0
ZAA0 Zalesovo Array 63.17 348 P P **16 33 55.2 +0.3**
ZALV Zalesovo Beam 63.17 348 P P **16 33 55.4 +0.5**
comp=Z,7.9nm,0.9s,baz=152,slow=5.2,SNR=28
comp=Z,7.9nm,0.9s
ZALV Zalesovo Beam 63.17 348 P P **16 33 55.0 0.0**
BVAR Borovoye Array 66.49 339 P P **16 34 16.5 -0.2**
comp=Z,1.6nm,0.6s,baz=147,slow=8.2,SNR=12
comp=Z,1.6nm,0.6s
AB31 Akbulak array 68.09 331 P P **16 34 27.6 +0.8**
AB31 IAmb IAmb 16 34 46.0
comp=Z,4.5nm,0.9s
ABKAR Akbulak array 68.09 331 P P **16 34 27.2 +0.3**
KBZ Khabaz 74.72 319 P P **16 35 07.5 +0.4**
comp=Z,2.0nm,0.8s,baz=57,slow=3.5,SNR=3.8
comp=Z,2.0nm,0.8s
VNDA Vanda 76.18 169 P P **16 35 15.2 +0.3**
comp=Z,1.1nm,0.9s,baz=304,slow=3.1,SNR=5.2
comp=Z,1.1nm,0.9s
VNDA Vanda 76.18 169 P P **16 35 14.8 -0.1**
NRIK Noril'sk 77.40 354 LR LR 17 11 38.5
comp=Z,33nm,18.6s,baz=86,slow=37
BR131 Keskin Array S 79.60 313 P P **16 35 35.2 +0.4**
BRTR Keskin Array B 79.60 313 P P **16 35 35.2 +0.4**
comp=Z,1.0nm,0.7s,baz=130,slow=7.7,SNR=3.9
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 79.60 313 P P **16 35 35.0 +0.2**
QSPA South Pole Qui 82.56 180 P P **16 35 49.8 -0.3**
comp=Z,1.5nm,0.9s,baz=316,slow=1.2,SNR=7.5
comp=Z,1.5nm,0.9s
QSPA South Pole Qui 82.56 180 P P **16 35 49.6 -0.5**
QSPA IAmb IAmb 16 36 05.4
comp=Z,3.5nm,1.1s
BURAR Bucovina Array 87.67 318 P P **16 36 17.6 +1.7**
BURAR IAmb IAmb 16 36 27.7
comp=Z,2.2nm,0.8s
BUR08 Bucovina Ar. S 87.68 318 P P **16 36 17.4 +1.3**
BUR08 IAmb IAmb 16 36 27.5
comp=Z,3.0nm,0.9s
SNAA Sanae 88.09 198 P P **16 36 18.2 +0.6**
comp=Z,1.0nm,0.6s,baz=120,slow=4.9,SNR=3.8
comp=Z,1.0nm,0.6s
SNAA Sanae 88.09 198 P P **16 36 17.5 -0.1**
SNAA IAmb IAmb 16 36 52.5
comp=Z,5.5nm,1.4s
TXAR Lajitas Array 146.36 46 PKPbc **PKPdf** **16 43 10.0 +2.2**
comp=Z,2.1nm,0.8s,baz=281,slow=2.7,SNR=18
TXAR Lajitas Array 146.36 46 **PKPdf** **16 43 09.2 +1.4**

*IDC **29** 16:36:01.7±1.1,56˚44S×25˚44W,h0km,mb4.4/6, mbtmp4.3/7,ML3.9/1,MS3.3/1,Error ellipse: s-maj=43.6km s-min=20.2km az=65.0*
*NEIC **29** 16:36:03.4±1.9,56˚49S±0˚.08×25˚.5W±0˚.2,h10km±1km, mb4.6/15,Error ellipse: s-maj=25.6km s-min=8.1km az=63.0*

ISC 29 16:36:03.0±0.9,56˚4S±0˚.1×25˚.5W±0˚.1,h10km,n35, σ1ᵍ36/30,mb4.6/12,4C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORCD	**Orcadas**	**10.93**	**239**	Pn	**Pn**	**16 38 40.6**	**+1.3**
VNA1	**Neumayer--Stat**	**16.13**	**159**	⇑P	**Pn**	**16 39 49.5**	**+0.1**
comp=Z,0.6nm,0.2s							
VNA2	**Neumayer--Watz**	**16.53**	**159**	⇑P	**Pn**	**16 39 53.7**	**-0.8**
comp=Z,0.6nm,0.2s,baz=322,slow=12							
SNAA	**Sanae**	**18.05**	**157**	⇑P	**P**	**16 40 16.1**	**+2.1**
comp=Z,14nm,0.2s							
SNAA	**Sanae**	**18.05**	**157**	P	**Pn**	**16 40 12.6**	**-1.0**
comp=Z,0.4nm,0.3s,baz=297,slow=14,SNR=6.1							
comp=Z,0.6nm,0.3s							
SNAA	**Sanae**	**18.05**	**157**	Pn	**Pn**	**16 40 10.9**	**-2.6**
TROLL	**Troll, Antarti**	**19.52**	**154**	⇑P	**Pn**	**16 40 35.3**	**+3.8**
comp=Z,14nm,0.2s							
PMSA	**Palmer Station**	**20.39**	**230**	P	**P**	**16 40 39.7**	**+0.1**
comp=Z,20nm,0.8s,baz=178,slow=9.3,SNR=3.7							
PMSA				LR	LR	16 47 42.2	
comp=Z,76nm,18.4s,baz=156,slow=34							
comp=Z,20nm,0.8s							
BELA	**Belgrano 2**	**21.81**	**185**	P	**P**	**16 40 52.7**	**-2.0**
BELA				IAmb	IAmb	16 40 56.4	
comp=Z,14nm,0.6s							
TRQA	**Tornquist**	**30.33**	**292**	P	**P**	**16 42 13.9**	**-0.5**
TRQA				IAmb	IAmb	16 42 37.7	
comp=Z,16nm,1.4s							
QSPA	**South Pole Qui**	**33.86**	**180**	P	**P**	**16 42 44.7**	**-0.7**
comp=Z,5.1nm,0.5s,baz=14,slow=0.6,SNR=119							
comp=Z,5.1nm,0.5s							
QSPA	**South Pole Qui**	**33.86**	**180**	P	**P**	**16 42 44.6**	**-0.7**
QSPA				IAmb	IAmb	16 42 45.8	
comp=Z,5.8nm,0.6s							
CPUP	**Villa Florida**	**37.75**	**309**	P	**P**	**16 43 19.1**	**+0.3**
comp=Z,1.8nm,0.6s,baz=105,slow=10,SNR=4.6							
comp=Z,1.8nm,0.6s							
CPUP	**Villa Florida**	**37.75**	**309**	P	**P**	**16 43 18.8**	**-0.1**
MT09	**Talagante**	**38.31**	**287**	P	**P**	**16 43 21.3**	**-2.5**
MT09				IAmb	IAmb	16 43 22.3	
comp=Z,10nm,1.2s							
MT01	**Popeta**	**38.39**	**286**	P	**P**	**16 43 22.7**	**-1.5**
MT01				IAmb	IAmb	16 43 46.1	
comp=Z,17nm,1.4s							
MT02	**Curacav**	**38.79**	**287**	P	**P**	**16 43 26.2**	**-1.4**
MT02				IAmb	IAmb	16 43 50.9	
comp=Z,34nm,1.5s							
CO01	**Juntas del Tor**	**40.82**	**291**	P	**P**	**16 43 45.2**	**+0.4**
CO01				IAmb	IAmb	16 43 52.6	
comp=Z,12nm,1.4s							
AC05	**El Transito**	**41.83**	**292**	P	**P**	**16 43 52.5**	**-0.5**
AC05				IAmb	IAmb	16 44 08.2	
comp=Z,30nm,1.4s							
SBA	**Scott Base**	**45.80**	**184**	P	**P**	**16 44 24.3**	**+0.2**
SBA				IAmb	IAmb	16 44 50.6	
comp=Z,5.9nm,1.4s							
VNDA	**Vanda**	**46.27**	**182**	P	**P**	**16 44 27.9**	**0.0**
comp=Z,1.9nm,0.6s,baz=188,slow=6.9,SNR=20							
comp=Z,1.9nm,0.6s							
VNDA	**Vanda**	**46.27**	**182**	P	**P**	**16 44 27.8**	**0.0**
GO01	**Chusmiza**	**48.93**	**300**	P	**P**	**16 44 50.5**	**+0.8**
H10N1	**ASCENSION HYDR**	**49.19**	**14**	T	T	17 38 58.9	
baz=186							
H10N3	**ASCENSION HYDR**	**49.20**	**14**	T	T	17 39 10.3	
baz=186							
H10N2	**ASCENSION HYDR**	**49.21**	**14**	T	T	17 39 18.5	
baz=186							
PSGCX	**Pisagua**	**49.44**	**299**	P	**P**	**16 44 53.5**	**+0.3**
LPAZ	**La Paz**	**51.35**	**304**	P	**P**	**16 45 09.4**	**+1.2**
comp=Z,7.4nm,0.4s,baz=128,slow=4.8,SNR=52							
comp=Z,7.4nm,0.4s							
LPAZ	**La Paz**	**51.35**	**304**	P	**P**	**16 45 09.6**	**+1.4**
ASAR	**Alice Springs**	**98.37**	**161**	P	Pdif	16 49 42.2	+1.2
comp=Z,0.1nm,0.6s,baz=185,slow=3.3,SNR=4.3							
comp=Z,0.1nm,0.6s							
ASAR	**Alice Springs**	**98.37**	**161**	P	Pdif	16 49 41.6	+0.6
YKA	**Yellowknife Ar**	**137.06**	**317**	PKP	**PKPdf**	**16 55 24.8**	**+0.3**
comp=Z,0.4nm,0.4s,baz=133,slow=2.1,SNR=4.5							
SONM	**Songino Array**	**149.81**	**86**	PKPbc	**PKPbc**	**16 55 52.2**	**-0.1**
comp=Z,0.6nm,0.5s,baz=199,slow=3.1,SNR=3.2							
SONM	**Songino Array**	**149.81**	**86**		**PKPbc**	**16 55 51.9**	**-0.4**
ILAR	**Eielson Array**	**151.05**	**311**	PKPbc	**PKPbc**	**16 55 54.4**	**-0.2**
comp=Z,1.8nm,0.8s,baz=127,slow=1.9,SNR=15							

*IDC **29** 16:51:07.9±0.5,16˚78S×173˚47W,h0km,mb4.4/17, mbtmp4.5/20,ML4.5/3,MS3.5/27,Error ellipse: s-maj=18.8km s-min=13.3km az=129.0*
*GFZ **29** 16:51:08.4±0.2,17˚S±4˚×17˚4W±˚,h10km,M5.0/22, mb5.0/22*
*NEIC **29** 16:51:10.6±2.0,16˚80S±0˚.08×173˚46W±0˚.09,h13km±3km, mb5.0/54,Error ellipse: s-maj=12.2km s-min=10.7km az=111.0*
*NOU **29** 16:51:24.9,16˚68S×173˚50W,h152km,mb4.8/19,Tonga Islands*

ISC 29 16:51:10.1±0.4,16˚79S±0˚05×173˚35W±0˚07,h10km, n268,σ2ᵍ31/162,mb4.9/49,MS3.6/25,4D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.25**	**28**	Pn	**Pn**	**16 52 02.9**	**+1.8**
243nm,0.3s,baz=201,slow=1.3,SNR=185							
AFI				Sn	**Sn**	**16 52 36.9**	**-3.0**
379nm,0.3s,baz=230,slow=23,SNR=14							
746nm,0.3s							
AFI	**Afiamalu**	**3.25**	**28**		**Pn**	**16 52 02.9**	**+1.8**
AFI				Sn	**Sn**	**16 52 36.4**	**-3.5**
AFI	**Afiamalu**	**3.25**	**28**	P	**Pn**	**16 52 03.3**	**+2.1**
AFI				S	**Sn**	**16 52 36.8**	**-3.2**
NIUE	**Niue**	**3.98**	**125**	Pn	**Pn**	**16 52 13.1**	**+2.0**
NIUE				Sn	**Sn**	**16 52 53.6**	**-4.3**
NIUE	**Niue**	**3.98**	**125**	P	**Pn**	**16 52 13.8**	**+2.6**
NIUE				S	**Sn**	**16 52 53.2**	**-4.6**
NIUE	**Niue**	**3.98**	**125**	P	**Pn**	**16 52 13.5**	**+2.4**
LKBA	**Tubou, Lakemba**	**5.40**	**254**	P	Pn	16 52 41.1	+10
TAVE	**Taveuni**	**6.28**	**270**	P	Pn	16 52 54.0	+11
DGTI	**Dogotuki**	**6.64**	**273**	P	Pn	16 52 58.5	+11
MSVF	**Nonsavu**	**8.27**	**262**	Pn	Pn	16 53 20.9	+11
4.9nm,0.3s,baz=95,slow=14,SNR=35							
MSVF				LR	LR	16 56 01.8	
comp=Z,521nm,20.9s,baz=196,slow=36							
MSVF	**Nonsavu**	**8.27**	**262**	P	Pn	16 53 21.1	+11
RAO	**Raoul Island**	**13.09**	**198**	LR	LR	16 58 03.6	
comp=Z,275nm,20.7s,baz=146,slow=32							
GLKZ	**Green Lake**	**13.10**	**198**	P	**Pn**	**16 54 16.7**	**+0.4**
GLKZ				S	Sn	16 56 27.4	-15
RAR	**Rarotonga**	**13.57**	**111**	Pn	**Pn**	**16 54 24.3**	**+1.5**
11nm,0.3s,baz=259,slow=7.6,SNR=21							
RAR				Sn	Sn	16 56 44.1	-10
2.1nm,0.3s,baz=105,slow=15,SNR=1.9							
99nm,0.7s							
RAR	**Rarotonga**	**13.57**	**111**	P	**Pn**	**16 54 24.1**	**+1.3**
RAR	**Rarotonga**	**13.57**	**111**	P	**Pn**	**16 54 23.3**	**+0.5**
RAR	**Rarotonga**	**13.57**	**111**	P	**Pn**	**16 54 24.0**	**+1.1**
DZM	**Mont Dzmac**	**19.76**	**251**	P	**P**	**16 55 39.5**	**-1.0**
0.6nm,0.3s,baz=76,slow=23,SNR=7.1							
7.5nm,0.6s							
ONTNC	**Ouen Toro**	**19.80**	**251**	Pn	**P**	**16 55 40.8**	**0.0**
ONTNC				IAmb	IAmb	16 55 47.0	
comp=Z,66nm,0.9s							
OUZ	**Omahuta**	**21.74**	**210**	P	**P**	**16 56 02.1**	**+0.4**
OUZ	**Omahuta**	**21.74**	**210**	P	**P**	**16 56 00.8**	**-0.9**
GRZ	**Great Barrier**	**21.78**	**205**	P	**P**	**16 56 04.0**	**+1.9**
MXZ	**Matakaoa Point**	**21.96**	**198**	P	**P**	**16 56 07.7**	**+3.7**
MXZ				IAmb	IAmb	16 56 08.5	
comp=Z,22nm,0.6s							
MXZ	**Matakaoa Point**	**21.96**	**198**	P	**P**	**16 56 07.9**	**+3.9**
WCZ	**Waipu Caves**	**21.99**	**208**	P	**P**	**16 56 05.3**	**+1.0**
WMGZ	**Waiomatatini S**	**22.17**	**197**	P	**P**	**16 56 09.7**	**+3.5**
WMGZ				S	S	17 00 01.5	-9.0
HAZ	**Te Kaha**	**22.30**	**199**	P	**P**	**16 56 09.1**	**+1.5**
PUZ	**Puketiti**	**22.45**	**198**	P	**P**	**16 56 10.7**	**+1.4**
PUZ				S	S	17 00 02.0	-14
MBAZ	**Motutapu North**	**22.45**	**205**	P	**P**	**16 56 10.4**	**+1.0**
RUGZ	**Raukumara Rang**	**22.52**	**199**	P	**P**	**16 56 12.5**	**+2.3**
TWGZ	**Tauwhareparae**	**22.62**	**198**	P	**P**	**16 56 13.6**	**+2.4**
TWGZ				S	S	17 00 10.2	-8.9
PPT	**Papeete**	**22.73**	**95**	LR	LR	17 03 57.4	
comp=Z,41nm,18.6s,baz=263,slow=34							
TGRZ	**Tauranga**	**22.77**	**202**	P	**P**	**16 56 15.7**	**+2.9**
TGRZ				S	**S**	**17 00 14.9**	**-6.8**
CNGZ	**Carnagh Statio**	**22.84**	**197**	P	**P**	**16 56 16.1**	**+2.6**
MWZ	**Matawai**	**22.91**	**199**	P	**P**	**16 56 16.4**	**+2.2**
TKGZ	**Te Karaka**	**22.91**	**198**	P	**P**	**16 56 16.1**	**+2.0**
URZ	**Urewera**	**22.97**	**200**	P	**P**	**16 56 13.8**	**-0.9**
comp=Z,22nm,0.3s,baz=347,slow=2.5,SNR=46							
comp=Z,22nm,0.3s							
URZ	**Urewera**	**22.97**	**200**	P	**P**	**16 56 15.5**	**+0.7**
URZ	**Urewera**	**22.97**	**200**	P	**P**	**16 56 14.4**	**-0.3**
URZ	**Urewera**	**22.97**	**200**	P	**P**	**16 56 14.0**	**-0.7**
KMRZ	**Kaimai**	**22.99**	**202**	P	**P**	**16 56 17.6**	**+2.5**
KARZ	**Kaharoa**	**23.04**	**201**	P	**P**	**16 56 18.4**	**+2.8**
TOZ	**Tahuroa Road**	**23.05**	**203**	P	**P**	**16 56 17.6**	**+2.0**
TOZ				IAmb	IAmb	16 56 19.3	
comp=Z,60nm,0.9s							
TOZ	**Tahuroa Road**	**23.05**	**203**	P	**P**	**16 56 18.0**	**+2.3**
OMRZ	**Omania**	**23.07**	**201**	P	**P**	**16 56 19.4**	**+3.4**
RAGZ	**Rawiri**	**23.09**	**199**	P	**P**	**16 56 17.8**	**+1.6**
NGRZ	**Ngongotaha**	**23.14**	**201**	P	**P**	**16 56 20.1**	**+3.5**
RIGZ	**Rimuhau**	**23.18**	**198**	P	**P**	**16 56 19.8**	**+2.8**
HLRZ	**Highlands Stat**	**23.21**	**201**	P	**P**	**16 56 20.5**	**+3.1**
RRRZ	**Republican Roa**	**23.24**	**201**	P	**P**	**16 56 21.3**	**+3.7**
MUGZ	**Murupara**	**23.28**	**200**	P	**P**	**16 56 20.3**	**+2.4**
HSRZ	**Hossack Road**	**23.30**	**201**	P	**P**	**16 56 23.0**	**+4.8**
HRRZ	**Handcock Road**	**23.36**	**201**	P	**P**	**16 56 22.6**	**+3.7**
PRRZ	**Plateau Road**	**23.42**	**201**	P	**P**	**16 56 21.9**	**+2.5**
KNZ	**Kokohu**	**23.50**	**198**	P	**P**	**16 56 22.1**	**+2.0**
MHGZ	**Mahia Peninsul**	**23.55**	**197**	P	**P**	**16 56 23.5**	**+2.8**
TLZ	**Tolley Road**	**23.57**	**202**	P	**P**	**16 56 23.2**	**+2.2**
MRHZ	**Matea Rd**	**23.71**	**200**	P	**P**	**16 56 24.2**	**+1.8**
NMHZ	**Naumai**	**23.83**	**199**	P	**P**	**16 56 26.8**	**+3.3**
ARHZ	**Aropaoanui**	**23.92**	**199**	P	**P**	**16 56 26.6**	**+2.4**
HIZ	**Hauiti**	**23.98**	**203**	P	**P**	**16 56 27.4**	**+2.5**
HIZ				IAmb	IAmb	16 56 27.7	
comp=Z,74nm,1.0s							
HIZ	**Hauiti**	**23.98**	**203**	P	**P**	**16 56 24.4**	**-0.5**
BKZ	**Black Stump Fm**	**23.99**	**200**	P	**P**	**16 56 26.4**	**+1.4**
BKZ	**Black Stump Fm**	**23.99**	**200**	S	S	17 00 33.1	-8.8
BKZ	**Black Stump Fm**	**23.99**	**200**	P	**P**	**16 56 23.6**	**-1.4**
ETVZ	**East Tongariro**	**24.23**	**201**	P	**P**	**16 56 28.5**	**+1.2**
BFZ	**Birch Farm**	**25.45**	**199**	P	**P**	**16 56 37.7**	**-0.5**
BFZ				IAmb	IAmb	16 56 43.4	
comp=Z,19nm,0.7s							
BFZ	**Birch Farm**	**25.45**	**199**	P	**P**	**16 56 37.1**	**-1.1**
SNZO	**South Karori**	**26.51**	**200**	P	**P**	**16 56 46.7**	**-1.1**
QRZ	**Quartz Range**	**26.88**	**204**	P	**P**	**16 56 52.9**	**+1.8**
QRZ	**Quartz Range**	**26.88**	**204**	P	**P**	**16 56 50.6**	**-0.6**
HNR	**Honiara**	**26.99**	**282**	LR	LR	17 06 09.7	
comp=Z,11nm,19.1s,baz=202,slow=34							
KHZ	**Kahutara**	**27.89**	**201**	P	**P**	**16 56 58.7**	**-1.5**
RPZ	**Rata Peaks**	**29.92**	**203**	P	**P**	**16 57 17.6**	**-0.6**
LBZ	**Lake Benmore**	**30.82**	**203**	P	**P**	**16 57 26.2**	**0.0**
LBZ				IAmb	IAmb	16 57 34.1	
comp=Z,58nm,1.4s							
WHZ	**Wether Hill Ro**	**32.95**	**204**	P	**P**	**16 57 46.5**	**+1.7**
EIDS	**Eidsvold**	**34.18**	**249**	P	P	16 57 53.8	-2.1
EIDS				IAmb	IAmb	16 58 12.2	
comp=Z,13nm,1.2s							
EIDS	**Eidsvold**	**34.18**	**249**	P	P	16 57 52.2	-3.6
ARMA	**Armidale**	**34.68**	**241**	P	P	16 57 59.3	-1.0
ARMA	**Armidale**	**34.68**	**241**	P	P	16 57 59.3	-1.0
ARMA	**Armidale**	**34.68**	**241**	P	P	16 57 57.4	-2.9
MGCD	**Mangrove Creek**	**35.91**	**236**	P	P	16 58 07.7	-2.9
KRVT	**Keravat (AS076**	**36.15**	**286**	LR	LR	17 11 27.5	
comp=Z,26nm,20.6s,baz=67,slow=34							
PATS	**Pohnpei**	**36.56**	**308**	P	P	16 58 10.9	-5.4
AULRC	**Lightning Ridg**	**37.55**	**243**	P	P	16 58 23.7	-1.0
CAN	**Canberra**	**38.23**	**234**	P	P	16 58 28.8	-1.7
CAN				IAmb	IAmb	16 59 32.8	
comp=Z,47nm,1.5s							
CAN	**Canberra**	**38.23**	**234**	P	P	16 58 27.4	-3.2
CTA	**Charters Tower**	**38.40**	**259**	LR	LR	17 12 03.7	
comp=Z,107nm,18.5s,baz=74,slow=33							
CTA	**Charters Tower**	**38.40**	**259**	P	P	16 58 30.3	-1.7
CTAO	**Charters Tower**	**38.40**	**259**	P	P	16 58 29.7	-2.3
CTAO	**Charters Tower**	**38.40**	**259**	P	P	16 58 28.4	-3.6
PMG	**Port Moresby**	**39.10**	**276**	LR	LR	17 12 37.3	
comp=Z,80nm,21.6s,baz=84,slow=33							
CMSA	**Cobar Meteorol**	**39.90**	**241**	P	P	16 58 41.9	-2.6
H11S2	**WAKE ISLAND Hy**	**40.18**	**330**	T	T	17 41 23.7	
baz=145,slow=76,SNR=19							
H11S3	**WAKE ISLAND Hy**	**40.19**	**330**	T	T	17 41 20.5	
baz=145,slow=76,SNR=4.1							
H11S1	**WAKE ISLAND Hy**	**40.20**	**330**	T	T	17 41 26.7	
baz=145,slow=76,SNR=15							
MTSU	**Mount Surprise**	**40.34**	**262**	P	P	16 58 45.1	-3.2
QLP	**Quilpie**	**40.44**	**249**	P	P	16 58 45.7	-3.3
H11N3	**WAKE ISLAND Hy**	**41.14**	**331**	T	T	17 42 31.1	
baz=150,slow=77							
H11N1	**WAKE ISLAND Hy**	**41.15**	**331**	T	T	17 42 32.0	
baz=150,slow=77							
H11N2	**WAKE ISLAND Hy**	**41.16**	**331**	T	T	17 42 31.7	
baz=150,slow=77							
TOO	**Toolangi**	**41.63**	**232**	P	P	16 58 56.5	-2.2
COEN	**Coen**	**41.95**	**268**	P	P	16 59 00.7	-0.8
COEN				IAmb	IAmb	16 59 23.7	
comp=Z,38nm,1.7s							
COEN	**Coen**	**41.95**	**268**	P	P	16 58 57.9	-3.7
TAU	**Tasmania Unive**	**42.34**	**224**	P	P	16 59 02.0	-2.3
STKA	**Stephens Creek**	**43.40**	**241**	P	P	16 59 11.5	-1.6
comp=Z,22nm,0.7s,baz=85,slow=8.9,SNR=36							
comp=Z,22nm,0.7s							
STKA	**Stephens Creek**	**43.40**	**241**	P	P	16 59 12.2	-0.9
STKA	**Stephens Creek**	**43.40**	**241**	P	P	16 59 10.4	-2.7
INKA	**Innaminka**	**43.63**	**247**	P	P	16 59 13.4	-1.7
QIS	**Mount Isa**	**44.61**	**258**	P	P	16 59 17.1	-5.9
AUMBR	**Murray Bridge**	**45.87**	**237**	P	P	16 59 31.7	-1.1
HTT	**Hallett**	**45.87**	**240**	P	P	16 59 31.9	-1.0
AUJCS	**Jamestown Cent**	**46.09**	**240**	P	P	16 59 33.2	-1.4
JAY	**Jayapura**	**47.31**	**282**	LR	LR	17 20 29.1	
comp=Z,31nm,18.0s,baz=38,slow=37							
BBOO	**Buckleboo**	**48.16**	**241**	P	P	16 59 49.7	-1.1
BBOO	**Buckleboo**	**48.16**	**241**	P	P	16 59 49.2	-1.6
BBOO	**Buckleboo**	**48.16**	**241**	P	P	16 59 48.1	-2.7
WR8	**Warramunga Arr**	**49.43**	**258**	P	P	16 59 57.7	-3.0
WR8				IAmb	IAmb	17 00 22.3	
comp=Z,20nm,1.6s							
WB0	**Warramunga Arr**	**49.55**	**258**	P	P	16 59 58.4	-3.2
WB0				IAmb	IAmb	16 59 59.8	
comp=Z,6.3nm,0.8s							
WRA	**Warramunga Arr**	**49.58**	**258**	P	P	16 59 59.2	-2.6
comp=Z,5.3nm,0.7s,baz=96,slow=6.9,SNR=108							
WRA				PcP	**PcP**	**17 01 22.9**	**-0.7**
comp=Z,1.3nm,0.8s,baz=90,slow=3.8,SNR=2.8							
comp=Z,5.3nm,0.7s							
WRA	**Warramunga Arr**	**49.58**	**258**	P	P	16 59 58.4	-3.5
AS01	**Alice Springs**	**49.69**	**253**	P	P	17 00 00.3	-2.4
AS31	**Alice Springs**	**49.73**	**253**	P	P	17 00 00.6	-2.4
ASAR	**Alice Springs**	**49.74**	**253**	P	P	17 00 00.9	-2.1
comp=Z,96nm,0.6s,baz=88,slow=8.5,SNR=2192							
ASAR				PcP	**PcP**	**17 01 23.2**	**-0.9**
comp=Z,1.8nm,0.8s,baz=97,slow=4.1,SNR=1.2

comp=Z,2.0nm,0.9s
QSPA South Pole Qui 73.26 180 P P 17 02 41.0 -0.4
O02D Mt. Diablo Mer 73.64 38 P P 17 02 44.7 +0.7
O02D IAmb IAmb 17 02 46.1
comp=Z,14nm,1.2s
KHBM Hayfork Bally 73.70 37 P P 17 02 45.0 +0.5
KHBM IAmb IAmb 17 02 46.8
comp=Z,25nm,1.7s
LPIG La Paz 73.73 58 LR LR 17 26 08.7
comp=Z,30nm,19.1s,baz=227,slow=28
PFO Pinyon Flats O 73.83 47 LR LR 17 27 21.7
comp=Z,32nm,19.3s,baz=208,slow=29
PEA0B Petropavlovsk- 73.96 342 P P 17 02 45.5 +0.1
PEA0B IAmb IAmb 17 04 12.4
comp=Z,34nm,1.2s
PETK Petropavlovsk- 73.96 342 P P 17 02 45.9 +0.4
comp=Z,2.4nm,0.7s,baz=113,slow=8.6,SNR=7.0
comp=Z,2.4nm,0.7s
PETK Petropavlovsk- 73.96 342 P P 17 02 45.7 +0.2
MPMC Manual Prospec 74.50 44 P P 17 02 49.4 +0.1
MPMC IAmb IAmb 17 02 50.5
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 74.68 37 LR LR 17 27 33.0
comp=Z,42nm,21.7s,baz=206,slow=29
GWY Greenwater Val 75.12 44 P P 17 02 52.7 -0.1
NVAR Mina Array Bea 75.33 42 P P 17 02 54.0 0.0
comp=Z,6.9nm,0.9s,baz=226,slow=9.0,SNR=23
NVAR LR LR 17 28 08.1
comp=Z,38nm,20.8s,baz=221,slow=29
comp=Z,6.9nm,0.9s
NVAR Mina Array Bea 75.33 42 P P 17 02 53.8 -0.3
KDAK Kodiak Island 76.27 11 LR LR 17 34 13.2
comp=Z,26nm,18.5s,baz=166,slow=34
KSRS Korea Array 77.18 316 P P 17 03 04.1 -0.2
comp=Z,0.9nm,0.8s,baz=124,slow=5.9,SNR=9.0
KSRS LR LR 17 36 18.4
comp=Z,5.7nm,18.0s,baz=225,slow=35
comp=Z,0.9nm,0.8s
KSAR Wonju Array Be 77.20 316 P P 17 03 05.3 +0.9
TUC Tucson 77.24 50 P P 17 03 05.1 +0.2
TUC Tucson 77.24 50 P P 17 03 04.4 -0.5
WVOR Wild Horse Val 77.49 38 P P 17 03 05.3 -0.9
LEM Lembang 77.59 267 LR LR 17 36 35.5
comp=Z,85nm,19.6s,baz=196,slow=35
ELK Elko 78.59 41 P P 17 03 11.3 -1.2
ELK IAmb IAmb 17 03 13.3
comp=Z,7.9nm,0.9s
BBB Bella Bella 79.11 26 LR LR 17 30 47.4
comp=Z,23nm,19.0s,baz=200,slow=30
HAWA Hanford 79.39 35 P P 17 03 15.9 -0.5
HAWA IAmb IAmb 17 03 17.3
comp=Z,14nm,1.2s
DUG Dugway, Tooele 79.85 43 P P 17 03 17.6 -1.5
PLID Pearl Lake 80.60 37 P P 17 03 22.2 -1.0
HLID Hailey 80.67 39 P P 17 03 23.0 -0.6
SRU San Rafael Swe 80.80 45 P P 17 03 24.4 0.0
SRU IAmb IAmb 17 03 25.4
comp=Z,10nm,0.9s
MNTX Cornudas Mount 81.02 53 P P 17 03 24.0 -1.6
NJ2 Nanjing 81.04 307 *e*P **P 17 03 26.5 +1.0**
NJ2 pmax pmax
comp=Z,21nm,0.6s
PV05 Paradox Valley 81.26 46 P P 17 03 27.4 +0.5
PV05 IAmb IAmb 17 03 28.6
comp=Z,32nm,1.4s
TXAR Lajitas Array 81.35 56 P P 17 03 27.3 -0.1
comp=Z,2.7nm,1.0s,baz=224,slow=3.5,SNR=19
comp=Z,2.7nm,1.0s
TXAR Lajitas Array 81.35 56 P P 17 03 27.1 -0.3
PV12 Saucer Basin, 81.58 46 P P **17 03 28.4 -0.2**
ANMO Albuquerque 81.66 50 LR LR 17 31 14.3
comp=Z,31nm,21.3s,baz=234,slow=29
ANMO Albuquerque 81.66 50 P P 17 03 28.5 -0.6
ANMO Albuquerque 81.66 50 P P 17 03 27.1 -1.9
NEW Newport 81.83 34 LR LR 17 35 02.7
comp=Z,30nm,18.3s,baz=176,slow=32
GDL2 Guadalupe Moun 82.02 53 P P 17 03 30.2 -0.7
S22A 4UR Ranch, Cre 82.68 47 P P 17 03 33.9 -0.6
S22A IAmb IAmb 17 03 35.8
comp=Z,16nm,0.9s
LDM Libby Dam 82.92 35 P P 17 03 34.2 -1.0
BW06 Boulder Array 83.27 42 P P 17 03 36.2 -1.1
PD31 Pinedale Array 83.27 42 P P 17 03 36.1 -1.2
PDAR Pinedale Array 83.27 42 P P 17 03 36.9 -0.4
comp=Z,7.6nm,0.8s,baz=210,slow=3.4,SNR=25
comp=Z,7.6nm,0.8s
PDAR Pinedale Array 83.27 42 P P 17 03 36.3 -1.0
BOZ Bozeman (W) 83.45 38 P P 17 03 37.8 -0.3
BOZ IAmb IAmb 17 03 39.0
comp=Z,9.8nm,0.8s
COLA College 83.71 11 P P 17 03 36.6 -2.2
LYMT Lyon Mountain 83.79 37 P P 17 03 38.2 -1.7
ILAR Eielson Array 83.80 11 P P 17 03 38.1 -1.1
comp=Z,1.4nm,0.5s,baz=225,slow=5.9,SNR=25
comp=Z,1.4nm,0.5s
ILAR Eielson Array 83.80 11 P P 17 03 38.0 -1.3
H03S2 Juan Fernandez 84.40 124 T T 18 37 26.4
baz=250,slow=75,SNR=12
H03S1 Juan Fernandez 84.41 124 T T 18 37 17.1
baz=250,slow=75,SNR=12
H03S3 Juan Fernandez 84.42 123 T T 18 37 06.2
baz=250,slow=75,SNR=11
POST Post 84.57 53 P P 17 03 42.8 -1.2
POST IAmb IAmb 17 03 44.3
comp=Z,15nm,0.9s
MAW Mawson 86.50 199 P P 17 03 52.1 -0.8
comp=Z,2.0nm,0.7s,baz=144,slow=7.4,SNR=7.5
comp=Z,2.0nm,0.7s
LYN LuoYang 86.94 307 P **P 17 03 56.0 +0.4**
LYN pmax pmax
comp=Z,24nm,0.8s
Z35A Perchaven, San 87.96 54 P P 17 04 00.1 -0.5
PLCA Paso Flores 88.55 132 P **P 17 04 03.0 -0.4**
comp=Z,1.2nm,0.8s,baz=218,slow=5.2,SNR=3.9
comp=Z,1.2nm,0.8s
HHC Hu-ho-hao-te 90.00 313 *e*P **P 17 04 10.5 +0.3**
HHC pmax pmax
comp=Z,29nm,0.8s
ELIB Princess Elisa 90.76 185 *d*P P 17 04 11.8 -1.5
comp=Z,4.1nm,0.9s
YKA Yellowknife Ar 91.35 23 P P 17 04 14.7 -1.1
comp=Z,0.2nm,0.5s,baz=241,slow=5.3,SNR=5.7
comp=Z,0.2nm,0.5s
PZH PanZhiHua 92.94 297 P P 17 04 23.8 -0.3
CMAR Chiang Mai Arr 93.09 288 P P 17 04 24.2 -0.7
comp=Z,1.5nm,0.6s,baz=105,slow=2.6,SNR=13
CMAR LR LR 17 41 15.3
comp=Z,8.2nm,21.5s,baz=210,slow=32
comp=Z,1.5nm,0.6s
CMAR Chiang Mai Arr 93.09 288 P P 17 04 24.6 -0.3
LZH Lanzhou 94.08 306 *e*P P 17 04 27.0 -2.3
LZH sP PcP 17 04 33.5 +3.8
LZH pmax pmax
comp=Z,14nm,1.1s
ULM Lac du Bonnet 94.98 39 P P 17 04 30.8 -2.0
comp=Z,0.9nm,0.5s,baz=238,slow=3.9,SNR=4.4
ULM LR LR 17 40 20.1
comp=Z,49nm,20.9s,baz=172,slow=31
comp=Z,0.9nm,0.5s
HYB Hyderabad 111.68 282 *e*Pdif **Pdif 17 05 45.3 -2.9**
HYB *e*SKSac **SKSac 17 16 25.4 -2.6**
MKAR Makanchi Array 111.83 314 PKiKP **PKiKP 17 09 43.4 -2.1**
comp=Z,0.4nm,0.6s,baz=90,slow=1.4,SNR=4.1
KURBB Kurchatov Arra 114.27 318 PKP PKPdf 17 09 48.3 -1.6
comp=Z,0.3nm,0.6s,baz=92,slow=1.8,SNR=4.3
BVAR Borovoye Array 119.00 322 PKP **PKPdf 17 09 57.9 -1.1**
comp=Z,1.0nm,0.6s,baz=90,slow=1.5,SNR=5.9
ARCES ARCESS Array B 125.99 352 PKP **PKPdf 17 10 11.0 -0.9**
comp=Z,3.6nm,0.9s,baz=29,slow=3.1,SNR=6.1
FINES FINESS Array B 133.30 347 PKP **PKPdf 17 10 24.8 -1.1**
comp=Z,2.5nm,0.9s,baz=45,slow=2.2,SNR=3.7
AKASG Malin Array Be 141.63 337 PKP **PKPdf 17 10 42.5 +0.8**
comp=Z,0.2nm,0.3s,baz=75,slow=1.1,SNR=1.0
OJC Ojcow 145.01 345 PKPbc 17 10 45.2 -1.7
KSP Ksiaz 145.16 349 *e*PKP **PKPbc 17 10 47.5 +0.1**
CLL Collm 145.19 353 PKPbc 17 10 44.9 -2.6
CLL Collm 145.19 353 *i* PKPbc **PKPbc 17 10 46.5 -1.0**
comp=Z,12nm,1.4s
OSTC Ostas 145.45 349 *e*PKP **PKPbc 17 10 46.8 -1.6**
BRG Berggiesshubel 145.50 352 *e*PKP **PKPdf 17 10 47.9 -0.6**
BRG Amp 17 10 48.7
comp=Z,6.2nm,0.9s
BRG Berggiesshubel 145.50 352 P **PKiKP 17 10 57.6 +5.2**
BRG Amp 17 10 58.5
comp=Z,2.5nm,0.7s
DPC Dobruska-Polom 145.63 349 *e*PKP **PKPdf 17 10 48.9 +0.1**
DPC *ex* x 17 11 13.0
BUR08 Bucovina Ar. S 145.65 338 PKPdf **PKPdf 17 10 48.2 -0.8**
BURAR Bucovina Array 145.67 338 PKPdf **PKPdf 17 10 48.1 -0.9**
STEB Steborice 145.74 347 *e*PKP **PKPdf 17 10 49.3 +0.4**
STEB *ex* x 17 11 10.7
KRLC Kraliky 145.81 348 *e*PKP **PKPdf 17 10 49.1 0.0**
HSKC Hora Svate Kat 145.83 352 *e*PKP **PKPdf 17 10 48.9 -0.2**
MORC Moravsky Berou 145.94 347 *e*PKP **PKPdf 17 10 49.6 +0.3**
MORC *e* 17 11 13.0
GAZ Gaziantep 146.26 313 PKPdf **PKPdf 17 10 48.5 -1.8**
MAUC Maruska 146.26 347 *e*PKP **PKPdf 17 10 51.3 +1.4**
PRU Pruhonice 146.28 351 *e*PKP **PKPdf 17 10 50.6 +0.8**
BNN Bunyan 146.33 317 PKPdf **PKPdf 17 10 48.6 -1.9**
BMRD Maredsous 146.54 2 *d*PKP **PKPdf 17 10 51.0 +0.8**
VRAC Vranov 146.57 348 *e*PKP **PKPdf 17 10 51.6 +1.2**
VRAC *e* 17 11 15.2
DOU Dourbes 146.74 2 *d*PKP **PKPdf 17 10 51.7 +1.1**
JAVC Velka Javorina 146.78 347 *e*PKP **PKPdf 17 10 51.6 +0.8**
KRUC Moravsky 146.85 348 *e*PKP **PKPdf 17 10 51.8 +1.0**
KRUC *e* 17 11 15.7
ZVC Zvikov 146.87 351 *e*PKP **PKPdf 17 10 54.0 +3.1**
WLF Walferdange 147.21 1 *d*PKP **PKPdf 17 10 53.7 +2.3**
BR131 Keskin Array S 147.25 320 PKPdf **PKPdf 17 10 50.5 -1.5**
BRTR Keskin Array B 147.25 320 PKPbc **PKPdf 17 10 53.8 +1.7**
comp=Z,2.6nm,0.9s,baz=146,slow=3.1,SNR=11
BRTR Keskin Array B 147.25 320 PKPdf **PKPdf 17 10 50.3 -1.7**
KHC Kasperske Hory 147.25 352 *e*PKP **PKPdf 17 10 53.4 +1.8**
KHC *ex* x 17 11 16.4
GERES GERESS Array B 147.52 351 PKPbc **PKPdf 17 10 53.8 +1.7**
comp=Z,1.4nm,0.8s,baz=0.0,slow=1.6,SNR=7.9
GERES GERESS Array B 147.52 351 PKPdf **PKPdf 17 10 51.5 -0.6**
CONA Conrad Observa 148.04 348 *i* pPKP **PKPdf 17 10 56.0 +3.0**
comp=Z,3.9nm,0.9s
RONA Rosalia, Austr 148.17 348 *i* pPKP **PKPdf 17 10 56.1 +2.9**
comp=Z,5.1nm,1.1s
MOA Molln 148.40 350 *i* pPKiKP **PKPdf 17 10 59.4 +6.0**
comp=Z,6.7nm,1.7s
ARSA Arzberg 148.75 348 *i* pPKP **PKPdf 17 10 57.7 +3.6**
comp=Z,3.1nm,1.4s
LESA Schwarzleotal 149.05 352 *e*pPKiKP **PKPdf 17 11 00.7 +6.1**
comp=Z,2.7nm,0.7s
RETA Reutte 149.20 355 *i* PKiKP **PKPdf 17 10 58.1 +3.3**
comp=Z,5.7nm,1.3s
WATA Walderalm 149.27 353 *e*pPKP **PKPdf 17 10 59.7 +4.7**
comp=Z,2.5nm,0.7s
MOTA Moosalm 149.31 354 *i* pPKP **PKPdf 17 10 58.9 +3.7**
comp=Z,5.4nm,1.0s
WTTA Wattenberg 149.34 353 *e*pPKP **PKPdf 17 10 59.0 +3.8**
comp=Z,6.2nm,0.7s
SOKA Soboth 149.40 349 *i* PKiKP **PKPdf 17 10 58.6 +3.3**
comp=Z,4.5nm,1.2s
SQTA Sankt Quirin 149.42 354 *e*PKiKP **PKPdf 17 10 59.0 +3.7**
comp=Z,4.3nm,0.9s
MMAI Mount Meron Ar 149.46 307 PKPbc **PKPdf 17 10 57.0 +1.2**
comp=Z,78nm,0.7s,baz=60,slow=6.8,SNR=3.8
DAVA Damuels 149.47 356 *i* pPKP **PKPdf 17 10 59.9 +4.5**
comp=Z,6.7nm,0.8s
FETA Feichten 149.67 354 *i* PKiKP **PKPdf 17 10 59.6 +3.8**
comp=Z,5.5nm,1.0s
MYKA Terra Mystica 149.69 350 *e*PKiKP **PKPdf 17 10 59.1 +3.4**
comp=Z,2.3nm,0.7s
ABTA Abfaltersbach 149.74 352 *i* PKiKP **PKPdf 17 10 58.9 +3.1**
comp=Z,5.0nm,0.7s
FUORN Ofenpass-Fuorn 150.11 355 PKPbc **PKPdf 17 11 01.1 +4.5**
BLY Banja Luka 150.75 345 PKPbc **PKPdf 17 11 02.2 +4.9**
TORD Torodi Ar. Bea 174.00 126 PKPab **PKPab 17 12 50.6 -1.2**
comp=Z,2.0nm,0.8s,baz=251,slow=4.0,SNR=7.3

***IDC 29** 17:04:27.3±1.2,2°.90N×126°.17E,h0km,mb3.4/5,*
mbtmp3.5/6,ML3.3/1,Error ellipse: s-maj=68.2km
s-min=19.3km az=64.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.32**	**126**	Pn	Pn	17 06 00.4	-1.5
	0.7nm,0.3s,baz=324,slow=21,SNR=5.3						
	2.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.87**	**181**	P	P	17 09 10.6	-0.5
	1.7nm,0.9s,baz=352,slow=12,SNR=1.5						
	1.7nm,0.9s						
WRA	**Warramunga Arr**	**24.07**	**161**	P	P	17 09 45.1	+0.5
	0.9nm,0.9s,baz=338,slow=11,SNR=6.9						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**27.46**	**164**	P	P	17 10 16.1	+0.9
	0.4nm,1.0s,baz=344,slow=11,SNR=6.0						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**57.92**	**326**	P	P	17 14 21.6	+0.2
	0.3nm,0.5s,baz=123,slow=7.1,SNR=6.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**62.14**	**328**	P	P	17 14 49.5	-0.8
	0.6nm,0.8s,baz=128,slow=6.6,SNR=5.6						
	0.6nm,0.8s						

*IDC **29** 17:04:49.4±2.3,43°.39N×105°.26W,h0km,mbtmp3.3/2,*
ML2.3/1,Error ellipse: s-maj=50.1km s-min=10.0km
az=153.0
*NEIC **29** 17:04:49.2±2.0,43°.58N±0°.04×105°.2W±0°.1,h0km±1km,*
ML3.2/40,Error ellipse: s-maj=12.9km s-min=7.5km
az=278.0
ISC 29 17:04:47.4±1.2,43°.49N±0°.07×105°.22W±0°.06,h0km,n23,
σ2§28/17,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.06**	**53**	Pg	Pn	**17 05 09.3**	**-0.5**
K22A	**Casper**	**1.27**	**229**		Pn	**17 05 15.6**	**+2.9**
K22A				IAML		17 05 41.3	
	255nm,0.3s						
BW06	**Boulder Array**	**3.26**	**259**	Pn	Pb	**17 05 44.2**	**-2.1**
PD31	**Pinedale Array**	**3.26**	**259**	Pn	Pb	**17 05 43.9**	**-2.5**
PDAR	**Pinedale Array**	**3.26**	**259**	Pn	Pb	**17 05 43.8**	**-2.5**
	2.0nm,0.3s,baz=67,slow=15,SNR=14						
PDAR				Pg	Pg	**17 05 50.6**	**+0.8**
	4.7nm,0.3s,baz=66,slow=16,SNR=18						
PDAR				Lg	Lg	17 06 31.8	
	5.9nm,0.3s,baz=76,slow=38,SNR=2.8						
LAO	**LASA Array**	**3.27**	**348**	Pn	Pn	**17 05 40.2**	**+0.1**
RLMT	**Red Lodge**	**3.33**	**301**	Pn	Pn	**17 05 43.3**	**+2.3**
RLMT				IAML		17 07 19.5	
	41nm,2.1s						
HAYD	**Hayden**	**3.34**	**208**	Pn	Pn	**17 05 43.8**	**+2.7**
HAYD				IAML		17 07 06.2	
	comp=N,44nm,1.0s						
HAYD				IAML		17 07 53.4	
	comp=E,43nm,3.9s						
OGNE	**Ogallala**	**3.48**	**136**	Pn	Pn	**17 05 44.6**	**+1.8**
YNE	**Yellowstone No**	**3.76**	**295**	Pn	Pn	**17 05 49.1**	**+2.2**
YNE				IAML		17 06 53.0	
	comp=N,41nm,0.5s						
YNE				IAML		17 06 55.0	
	comp=E,50nm,0.7s						
YMP	**Mirror Lake Pl**	**3.77**	**291**	Pn	Pn	**17 05 50.4**	**+3.3**
LOHW	**Long Hollow**	**3.92**	**274**		Pn	**17 05 48.6**	**-0.4**
LOHW				IAML		17 07 12.0	
	comp=E,25nm,1.6s						
GCMT	**Greycliff**	**3.92**	**307**	Pn	Pn	**17 05 51.7**	**+2.7**
FLWY	**Flagg Ranch**	**4.01**	**280**		Pg	**17 06 03.9**	**-0.4**
SNOW	**Snow King Moun**	**4.03**	**271**		Pn	**17 05 53.0**	**+2.3**
SNOW				IAML		17 07 32.0	
	comp=E,43nm,2.5s						
YPP	**Pitchstone Pla**	**4.11**	**283**	IAML		17 07 11.1	
	comp=E,22nm,2.4s						
YFT	**Old Faithful**	**4.17**	**285**	IAML		17 07 24.8	
	comp=E,28nm,0.0s						
FXWY	**Fox Creek**	**4.22**	**274**	IAML		17 07 12.6	
FXWY	comp=E,31nm,0.1s			IAML		17 07 12.7	
	comp=E,29nm,0.1s						
RDMU	**Red Mountain**	**4.36**	**229**	IAML		17 07 22.9	
	comp=E,23nm,0.8s						
RDMU				IAML		17 07 23.7	
	comp=N,19nm,3.0s						
YHL	**Hebgen Lake**	**4.50**	**290**	IAML		17 07 24.2	
	comp=N,23nm,1.7s						
YHL				IAML		17 07 31.2	
	comp=E,23nm,0.8s						
BOZ	**Bozeman (W)**	**5.04**	**297**	IAML		17 07 33.2	
	comp=E,13nm,2.3s						
BOZ				IAML		17 09 12.2	
	comp=E,12nm,3.9s						
ULM	**Lac du Bonnet**	**9.30**	**40**	Pn	Pn	**17 07 04.2**	**+1.5**
	comp=E,0.5nm,0.3s,baz=224,slow=13,SNR=4.0						
ULM				Lg	Lg	17 09 39.6	
	comp=E,0.3nm,0.3s,baz=321,slow=22,SNR=2.3						
	comp=E,0.9nm,0.3s						
IS6US	**NEWPORT INFRAS 9.57 304**	I	I			17 56 00.0	
	comp=E,0.1nm,1.2s,baz=118,slow=309,SNR=9.9						

*IDC **29** 17:21:16.0±0.6,60°.46S×34°.32W,h0km,mb4.4/9,*
mbtmp4.4/10,ML4.5/1,MS4.0/27,Error ellipse:
s-maj=24.1km s-min=16.7km az=62.0
*GFZ **29** 17:21:16.4±0.2,61°.5±4°×3°4W±°,h10km,M4.2/37,*
mb4.7/37
*NEIC **29** 17:21:17.6±1.6,60°.53S±0°.05×34°.3W±0°.2,h10km±1km,*
mb4.9/30,Error ellipse: s-maj=14.4km s-min=6.6km
az=294.0
*GCMT **29** 17:21:21.6±0.2,60°.66S±0°.01×34°.13W±0°.03,h16km±1km,*
MW4.9/109,Moment Tensor Solution. s38,c46;
s109,c145; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
Mrr-0.92±.11; Mθθ1.18±.10; Mϕϕ-0.25±.09; Mrθ0.31±.26;
Mθϕ2.68±.08; Mrϕ0.23±.27; Best double couple:
M₀2.79300×10¹⁶ NP1:ϕs7.00000°,δ86.0000°,
λ176.00000°. NP2:ϕs98.00000°,δ86.00000°,λ4.00000°.
Principal axes: T 3.2720, Plg5.0000°, Azm323.0000°; N
-0.9580, Plg85.0000°, Azm141.0000°; P -2.3130,
Plg0.0000°, Azm232.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
ISC 29 17:21:16.7±0.4,60°.66S±0°.06×34°.30W±0°.06,h10km,n138,
σ1§48/106,mb4.9/21,MS4.1/27,4C-3D,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	**5.13**	**265**		Pn	**17 22 31.9**	**-1.5**
ORCD				Sn	Sn	17 23 26.2	-6.4
HOPE	**Hope Point**	**6.50**	**349**		Pn	**17 22 51.0**	**-1.3**
ESPZ	**Base Esperanza**	**10.99**	**246**		Pn	**17 23 54.9**	**+1.3**
VNA1	**Neumayer--Stat**	**14.53**	**144**	⇑P	Pn	**17 24 40.3**	**-1.7**
	comp=Z,14nm,0.3s						
VNA2	**Neumayer--Watz**	**14.92**	**145**	⇑P	Pn	**17 24 46.2**	**-1.0**
	comp=Z,8.0nm,0.4s,baz=305,slow=14						
VNA2	**Neumayer--Watz**	**14.92**	**145**	P	Pn	**17 24 45.1**	**-2.2**
EFI	**East Falkland**	**15.91**	**294**	P	P	**17 25 05.0**	**+0.9**
EFI				IAmb	IAmb	17 25 06.3	
	comp=Z,70nm,0.9s						
EFI	**East Falkland**	**15.91**	**294**	P	Pn	**17 25 02.6**	**+2.2**
SNAA	**Sanae**	**16.56**	**145**	⇑P	P	**17 25 10.4**	**-0.9**
	comp=Z,117nm,0.4s						
SNAA	**Sanae**	**16.56**	**145**	Pn	Pn	**17 25 09.4**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=322,slow=17,SNR=25						
SNAA				Sn	Sn	**17 28 04.8**	**-7.6**
	comp=Z,0.3nm,0.3s,baz=271,slow=14,SNR=2.7						
SNAA				LR	LR	17 30 06.5	
	comp=Z,1μm,21.8s,baz=340,slow=32						
	comp=Z,5.0nm,0.4s						
SNAA	**Sanae**	**16.56**	**145**		Pn	**17 25 09.6**	**+0.8**
SNAA	**Sanae**	**16.56**	**145**	P	Pn	**17 25 08.3**	**-0.5**
BELA	**Belgrano 2**	**17.30**	**180**		Pn	**17 25 18.9**	**+0.9**
TROLL	**Troll, Antarti**	**18.25**	**143**	⇓P	Pn	**17 25 28.4**	**-1.4**
	comp=Z,218nm,0.8s						
TROLL				⇑sP	**sP**	**17 25 32.9**	**+0.3**
	comp=Z,218nm,0.8s						
MG02	**Cerro Sombrero**	**20.51**	**277**	P	P	**17 25 55.9**	**+1.4**
MG05	**Puerto Natales**	**22.78**	**276**	P	P	**17 26 19.3**	**+0.4**
ELIB	**Princess Elisa**	**24.62**	**141**	*d*P	P	**17 26 39.1**	**+2.2**
	comp=Z,2.8nm,1.2s						
GO08	**Villa O'Higgin**	**24.91**	**282**	P	P	**17 26 41.3**	**+1.7**
AY03	**Cochrane**	**25.78**	**284**	P	P	**17 26 49.2**	**+1.8**
AY03				IAmb	IAmb	17 26 51.6	
	comp=Z,30nm,1.4s						
LL02	**Futaleuf**	**28.46**	**291**	P	P	**17 27 12.0**	**+0.4**
QSPA	**South Pole Qui**	**29.58**	**180**	P	P	**17 27 25.4**	**+3.9**
	comp=Z,4.3nm,0.8s,baz=196,slow=4.0,SNR=18						
QSPA				LR	LR	17 38 58.1	
	comp=Z,441nm,18.3s,baz=192,slow=36						
	comp=Z,4.3nm,0.8s						
QSPA	**South Pole Qui**	**29.58**	**180**	P	P	**17 27 25.4**	**+3.9**
QSPA				IAmb	IAmb	17 27 29.2	
	comp=Z,35nm,1.8s						
QSPA	**South Pole Qui**	**29.58**	**180**	P	P	**17 27 22.5**	**+1.0**
PLCA	**Paso Flores**	**29.82**	**295**	P	P	**17 27 22.2**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=149,slow=6.6,SNR=6.2						
	comp=Z,2.1nm,0.7s						
PLCA	**Paso Flores**	**29.82**	**295**	P	P	**17 27 23.6**	**-0.2**
LR05	**Currie**	**30.88**	**294**	P	P	**17 27 33.0**	**+0.1**
LR05				IAmb	IAmb	17 27 34.0	
	comp=Z,16nm,0.9s						
GO06	**Currarrehue**	**31.17**	**296**	P	P	**17 27 35.6**	**-0.1**
LR03	**Panguipulli**	**31.52**	**294**	P	P	**17 27 38.8**	**+0.2**
CPSB	**Cacapava Do Su**	**32.83**	**329**	P	P	**17 27 50.6**	**+0.5**
CPSB				IAmb	IAmb	17 27 51.2	
	comp=Z,13nm,0.8s						
CPSB	**Cacapava Do Su**	**32.83**	**329**	P	P	**17 27 50.2**	**+0.1**
BO02	**Sierra Bellavi**	**34.89**	**301**	P	P	**17 28 09.1**	**+1.0**
GO05	**Hualane**	**35.19**	**300**	P	P	**17 28 10.5**	**-0.1**
BO03	**Pichilemu**	**35.64**	**300**	P	P	**17 28 14.8**	**+0.3**
MT08	**Bocatoma Ro**	**35.73**	**303**	P	P	**17 28 15.8**	**+0.2**
MT08				IAmb	IAmb	17 28 21.0	
	comp=Z,21nm,1.2s						
MT09	**Talagante**	**35.85**	**302**	P	P	**17 28 15.9**	**-0.6**
MT09				IAmb	IAmb	17 28 17.3	
	comp=Z,34nm,1.2s						
MT01	**Popeta**	**35.88**	**301**	P	P	**17 28 15.9**	**-0.6**
MT01				IAmb	IAmb	17 28 41.6	
	comp=Z,52nm,1.8s						
PEL	**Peldehue**	**36.27**	**303**	P	P	**17 28 20.0**	**+0.1**
PEL	**Peldehue**	**36.27**	**303**	P	P	**17 28 20.5**	**+0.5**
VA03	**San Esteban**	**36.54**	**303**	P	P	**17 28 23.8**	**+1.5**
VA01	**Torpederas**	**36.77**	**302**	P	P	**17 28 23.6**	**-0.5**
ZON	**Zonda**	**36.85**	**307**		P	**17 28 25.0**	**0.0**
ZON				IAmb	IAmb	17 28 27.3	
	comp=Z,37nm,1.5s						
ZON	**Zonda**	**36.85**	**307**	P	P	**17 28 25.4**	**+0.4**
CO04	**Los Peladeros**	**37.34**	**303**	P	P	**17 28 28.9**	**-0.5**
CPUP	**Villa Florida**	**37.74**	**325**	P	P	**17 28 32.9**	**+0.4**
	comp=Z,9.2nm,0.9s,baz=163,slow=8.5,SNR=14						
CPUP				LR	LR	17 43 19.7	
	comp=Z,188nm,20.0s,baz=212,slow=35						
	comp=Z,9.2nm,0.9s						
CPUP	**Villa Florida**	**37.74**	**325**		P	**17 28 32.5**	**0.0**
CPUP				IAmb	IAmb	17 28 33.9	
	comp=Z,25nm,1.2s						
CPUP	**Villa Florida**	**37.74**	**325**	P	P	**17 28 33.0**	**+0.6**
CO02	**Combarbal**	**38.09**	**304**	P	P	**17 28 36.1**	**+0.6**
CO02				IAmb	IAmb	17 28 40.0	
	comp=Z,25nm,0.9s						
CO02	**Combarbal**	**38.09**	**304**	P	P	**17 28 36.5**	**+1.0**
CO03	**El Pedregal**	**38.28**	**305**	P	P	**17 28 37.6**	**+0.5**
MAW	**Mawson**	**38.71**	**143**	P	P	**17 28 42.5**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=190,slow=8.9,SNR=3.7						
MAW				LR	LR	17 42 59.4	
	comp=Z,464nm,19.2s,baz=280,slow=34						
	comp=Z,2.5nm,0.9s						
MAW	**Mawson**	**38.71**	**143**	P	P	**17 28 39.1**	**-1.0**
FRTB	**Fartura**	**38.77**	**337**	P	P	**17 28 39.9**	**-1.3**
CO01	**Juntas del Tor**	**38.80**	**306**	P	P	**17 28 43.3**	**+1.6**
CO01	**Juntas del Tor**	**38.80**	**306**	P	P	**17 28 41.7**	**+0.1**
GO04	**Tololo Observa**	**38.91**	**305**	P	P	**17 28 42.9**	**+0.3**
AC05	**El Transito**	**39.89**	**307**		P	**17 28 50.8**	**+0.2**
AC05				IAmb	IAmb	17 28 52.7	
	comp=Z,32nm,0.9s						
AC05	**El Transito**	**39.89**	**307**	P	P	**17 28 51.7**	**+1.1**
LCO	**Las Campanas**	**39.90**	**306**	P	P	**17 28 50.2**	**-0.7**
AC04	**Llanos de Chal**	**40.77**	**306**	P	P	**17 28 58.3**	**+0.6**
AC04	**Llanos de Chal**	**40.77**	**306**	P	P	**17 28 57.7**	**0.0**
GO03	**Copiap

SIV	**San Ignacio**	**48.61**	**325**	LR	LR	17 49 30.2		
	comp=Z,210nm,21.4s,baz=122,slow=35							
H04S2	**CROZET ISLANDS**	**49.05**	**115**	T	T	18 23 34.5		
	baz=221,slow=74,SNR=309							
H04S3	**CROZET ISLANDS**	**49.06**	**115**	T	T	18 23 37.0		
	baz=221,slow=74,SNR=158							
H04S1	**CROZET ISLANDS**	**49.07**	**115**	T	T	18 23 36.9		
	baz=221,slow=74,SNR=330							
LPAZ	**La Paz**	**50.54**	**316**	P	**P**	**17 30 15.4**	**-0.3**	
	comp=Z,2.9nm,0.9s,baz=194,slow=6.5,SNR=7.0							
	comp=Z,2.9nm,0.9s							
LPAZ	**La Paz**	**50.54**	**316**		**P**	**17 30 15.5**	**-0.3**	
LPAZ	**La Paz**	**50.54**	**316**	P	**P**	**17 30 14.5**	**-1.3**	
BOSA	**Boshof**	**50.65**	**79**	P	**P**	**17 30 16.0**	**0.0**	
	comp=Z,5.3nm,0.9s,baz=223,slow=6.2,SNR=5.9							
BOSA				LR	LR	17 48 34.7		
	comp=Z,71nm,19.1s,baz=207,slow=32							
	comp=Z,5.3nm,0.9s							
BOSA	**Boshof**	**50.65**	**79**	IAmb	IAmb	17 30 43.5		
	comp=Z,39nm,1.8s							
VILB	**Vilhena**	**51.26**	**327**	P	**P**	**17 30 19.4**	**-1.1**	
VILB				IAmb	IAmb	17 30 31.0		
	comp=Z,15nm,1.0s							
H10S2	**ASCENSION HYDR**	**53.63**	**24**	T	T	18 28 40.6		
	baz=28,slow=74,SNR=345							
H10S3	**ASCENSION HYDR**	**53.64**	**24**	T	T	18 28 41.2		
	baz=192,slow=74,SNR=314							
LBTB	**Lobatse**	**53.84**	**76**	LR	LR	17 48 54.0		
	comp=Z,206nm,20.7s,baz=194,slow=31							
RCBR	**Riachuelo**	**54.72**	**358**	LR	LR	17 49 22.7		
	comp=Z,48nm,20.7s,baz=190,slow=31							
H10N1	**ASCENSION HYDR**	**54.75**	**24**	T	T	18 30 08.1		
	baz=191,slow=75,SNR=209							
H10N3	**ASCENSION HYDR**	**54.75**	**24**	T	T	18 30 05.0		
	baz=191,slow=75,SNR=338							
H10N2	**ASCENSION HYDR**	**54.77**	**24**	T	T	18 30 07.5		
	baz=191,slow=75,SNR=235							
TSUM	**Tsumeb**	**55.12**	**65**	LR	LR	17 50 37.7		
	comp=Z,122nm,19.0s,baz=164,slow=32							
KHWEE	**KHWEE**	**56.37**	**74**	P	**P**	**17 30 56.8**	**-1.2**	
MATP	**Matopo**	**59.13**	**76**	LR	LR	17 53 14.8		
	comp=Z,177nm,18.6s,baz=240,slow=32							
LSZ	**Lusaka**	**63.42**	**73**	LR	LR	17 53 51.1		
	comp=Z,170nm,21.2s,baz=172,slow=31							
LSZ	**Lusaka**	**63.42**	**73**		**P**	**17 31 46.8**	**+0.3**	
LSZ	**Lusaka**	**63.42**	**73**	P	**P**	**17 31 45.7**	**-0.9**	
MDP	**Montagnes des**	**67.12**	**340**	LR	LR	18 00 58.2		
	comp=Z,88nm,19.3s,baz=268,slow=36							
OTAV	**Otavalo**	**69.52**	**312**	P	**P**	**17 32 26.1**	**+0.2**	
OPO	**Ambohidratompo**	**69.84**	**92**	LR	LR	17 58 02.9		
	comp=Z,148nm,18.8s,baz=90,slow=32							
DBIC	**Dimbokro**	**70.99**	**31**	P	**P**	**17 32 34.5**	**+0.2**	
	comp=Z,11nm,0.9s,baz=193,slow=7.8,SNR=6.5							
DBIC				LR	LR	17 55 56.3		
	comp=Z,70nm,21.1s,baz=166,slow=29							
	comp=Z,11nm,0.9s							
DBIC	**Dimbokro**	**70.99**	**31**	IAmb	IAmb	17 32 35.3		
	comp=Z,19nm,1.0s							
ROSC	**El Rosal**	**72.36**	**318**	LR	LR	18 06 22.6		
	comp=Z,76nm,19.7s,baz=86,slow=38							
EDA	**Edea**	**72.91**	**47**		**P**	**17 32 46.2**	**+0.3**	
SDV	**Santo Domingo**	**75.02**	**323**	LR	LR	18 08 01.9		
	comp=Z,96nm,18.8s,baz=116,slow=38							
MBAR	**Mbarara**	**77.47**	**68**	LR	LR	18 02 44.1		
	comp=Z,99nm,20.9s,baz=195,slow=32							
URZ	**Urewera**	**78.13**	**205**	LR	LR	18 04 28.6		
	comp=Z,80nm,18.3s,baz=178,slow=33							
TORD	**Torodi Ar. Bea**	**78.96**	**36**	P	**P**	**17 33 21.5**	**+1.2**	
	comp=Z,22nm,0.8s,baz=197,slow=6.4							
	comp=Z,22nm,0.8s							
TBI	**Tubuai**	**81.34**	**237**	*e*LR	LR	17 58 57.7		
	comp=Z,2μm,38.5s							
SJG	**San Juan**	**82.59**	**330**	LR	LR	18 08 57.4		
	comp=Z,84nm,22.0s,baz=102,slow=35							
PPT2	**Papeete2**	**86.52**	**240**	*e*LR	LR	18 01 21.1		
	comp=Z,249nm,30.8s							
PPT2				*e*LR	LR	18 01 26.9		
	comp=Z,404nm,27.2s							
PPT	**Papeete**	**86.53**	**240**	LR	LR	18 02 56.4		
	comp=Z,137nm,21.2s,baz=210,slow=29							
STKA	**Stephens Creek**	**87.74**	**177**	LR	LR	18 11 25.1		
	comp=Z,148nm,18.3s,baz=203,slow=34							
TAM	**Tamanrasset**	**89.20**	**36**	P	**P**	**17 34 11.8**	**-0.7**	
TAOE	**Nuku Hiva Isla**	**89.99**	**252**	*e*LR	LR	18 02 47.9		
	comp=Z,199nm,24.3s							
CMIG	**Matias Romero**	**91.31**	**304**	LR	LR	18 13 04.5		
	comp=Z,24nm,18.1s,baz=177,slow=34							
ASAR	**Alice Springs**	**95.44**	**169**	LR	LR	18 14 59.9		
	comp=Z,145nm,21.6s,baz=190,slow=34							
MDT	**Midelt**	**96.26**	**25**	LR	LR	18 12 18.8		
	comp=Z,80nm,20.1s,baz=204,slow=32							
CTA	**Charters Tower**	**99.54**	**181**	LR	LR	18 19 36.3		
	comp=Z,95nm,18.4s,baz=214,slow=35							
KBZ	**Khabaz**	**121.36**	**56**	PKP	**PKiKP**	**17 40 10.7**	**+1.6**	
	comp=Z,0.5nm,0.5s,baz=206,slow=7.4,SNR=1.3							
HFS	**Hagfors**	**126.05**	**27**	PKP	**PKPdf**	**17 40 16.3**	**-1.1**	
	comp=Z,2.0nm,0.7s,baz=208,slow=6.1,SNR=1.7							
CMAR	**Chiang Mai Arr**	**126.45**	**121**	PKP	**PKiKP**	**17 40 20.6**	**+0.6**	
	comp=Z,0.8nm,0.3s,baz=236,slow=4.1,SNR=5.5							
MORE	**Moreh**	**129.48**	**112**		**PKiKP**	**17 40 25.6**	**-0.3**	
YKA	**Yellowknife Ar**	**137.08**	**318**	PKP	**PKPdf**	**17 40 37.6**	**-0.6**	
	comp=Z,0.7nm,0.7s,baz=116,slow=1.4,SNR=3.2							
BVAR	**Borovoye Array**	**140.26**	**66**	PKP	**PKPdf**	**17 40 44.5**	**+0.2**	
	comp=Z,1.5nm,0.9s,baz=186,slow=1.5,SNR=5.0							
KURBB	**Kurchatov Arra**	**142.43**	**74**	PKhKP	PKPpre	17 40 43.5		
	comp=Z,1.1nm,0.8s,baz=228,slow=4.0,SNR=8.2							
KURK	**Kurchatov**	**142.54**	**74**		PKPpre	17 40 43.5		
GTA2	**Gaotai**	**144.71**	**106**	PKP	**PKPdf**	**17 40 53.5**	**+0.6**	
GTA2				LR	LR			
	comp=N,200nm,14.3s							
GTA2				LR	LR			
	comp=E,160nm,15.2s							
GTA2				LR	LR			
	comp=Z,110nm,14.6s							
M30M	**Minto, Yukon**	**145.16**	**308**	PKPbc	**PKPbc**	**17 40 50.9**	**-1.5**	
O28M	**Mount Upton**	**145.53**	**303**	PKPdf	**PKPdf**	**17 40 53.5**	**-0.4**	
M29M	**Somme Creek**	**145.74**	**307**	PKPdf	**PKPdf**	**17 40 53.6**	**-0.3**	
H31M	**Peel River**	**145.93**	**314**		**PKPdf**	**17 40 54.5**	**+0.5**	
L29M	**L29M**	**145.96**	**308**		**PKPbc**	**17 40 54.8**	**-0.2**	
LYN	**LuoYang**	**146.24**	**126**	*e*PKPbc	**PKPbc**	**17 40 56.8**	**+0.2**	
NJ2	**Nanjing**	**146.39**	**136**	*e*P	**PKPbc**	**17 40 57.0**	**-0.1**	
NJ2				pmax	pmax			
	comp=Z,19nm,0.5s							
ZALV	**Zalesovo Beam**	**147.53**	**74**	PKPbc	**PKPbc**	**17 40 58.4**	**-1.2**	
	comp=Z,2.2nm,0.8s,baz=242,slow=3.2,SNR=9.8							
ZALV	**Zalesovo Beam**	**147.53**	**74**	PKPdf	**PKPbc**	**17 40 58.3**	**-1.3**	
HNS	**HongShan**	**149.61**	**126**	⇓PKPbc	**PKiKP**	**17 41 07.0**	**+0.4**	
ILAR	**Eielson Array**	**150.16**	**307**	PKPbc	**PKPbc**	**17 41 06.3**	**+0.3**	
	comp=Z,3.7nm,1.0s,baz=113,slow=3.9,SNR=15							
HHC	**Hu-ho-hao-te**	**151.20**	**118**	*e*P	**PKPdf**	**17 41 01.0**	**-2.5**	
SONM	**Songino Array**	**154.14**	**102**	PKPbc	**PKiKP**	**17 41 16.2**	**+0.4**	
	comp=Z,0.3nm,0.4s,baz=204,slow=3.2,SNR=3.8							
SONM				PKPab	**PKPab**	**17 41 30.2**	**+0.6**	
	comp=Z,2.0nm,0.9s,baz=228,slow=4.3,SNR=7.4							

*NNC **29** 17:23:54.4±6.9, 31.°56N×69.°17E, h0km, mb3.6, Error ellipse: s-maj=77.9km s-min=71.3km az=127.0*
*IDC **29** 17:24:04.5±3.7, 32.°42N×70.°41E, h0km, mb3.5/4, mbtmp3.6/7, ML3.5/3, MS2.9/4, Error ellipse: s-maj=122.0km s-min=25.1km az=83.0*

ISC 29 17:24:03.2±2.0, 32.°3N±0.°2×69.°7E±0.°3, h10km, n12, σ1§85/9, mb3.6/3, 2C, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**10.79**	**3**	⇑P	**Pn**	**17 26 39.6**	**+1.9**
	1.3nm,0.3s,baz=181,slow=14,SNR=12						
KK31				⇑S	Sn	17 28 52.5	+14
	0.5nm,0.3s,baz=188,slow=22						
AAK	**Ala-Archa**	**10.99**	**19**	Pn	**Pn**	**17 26 41.4**	**+0.7**
	1.2nm,0.3s,baz=202,slow=6.7,SNR=7.3						
AAK				LR	LR	17 31 19.3	
	comp=Z,44nm,18.3s,baz=208,slow=41						
	4.0nm,0.4s						
MK31	**Makanchi Array**	**17.40**	**30**	P	**P**	**17 28 09.3**	**+1.9**
	2.1nm,0.9s,baz=201,slow=15,SNR=7.2						
MKAR	**Makanchi Array**	**17.40**	**30**	Pn	**P**	**17 28 04.5**	**-2.9**
	0.2nm,0.3s,baz=220,slow=12,SNR=7.7						
MKAR				LR	LR	17 35 25.1	
	comp=Z,45nm,20.2s,baz=178,slow=40						
	0.9nm,0.7s						
AB31	**Akbulak array**	**18.42**	**340**	P	**P**	**17 28 17.8**	**-0.7**
	0.4nm,0.5s,baz=156,slow=10,SNR=15						
KURBB	**Kurchatov Arra**	**19.44**	**17**	P	**Pn**	**17 28 29.0**	**-1.8**
	baz=200,slow=11,SNR=2.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**20.70**	**1**	P	Pn	17 28 45.2	-0.6
	1.3nm,0.5s,baz=163,slow=11,SNR=12						
	1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**24.19**	**22**	P	**P**	**17 29 18.9**	**-0.7**
	0.5nm,0.3s,baz=197,slow=9.4,SNR=3.6						
	0.5nm,0.3s						
MLR	**Muntele Rosu**	**36.03**	**304**	LR	LR	17 50 57.7	
	comp=Z,27nm,19.7s,baz=7.5,slow=44						
NOA	**NORSAR Array B**	**47.12**	**326**	LR	LR	17 55 46.1	
	comp=Z,16nm,19.4s,baz=235,slow=40						
WRA	**Warramunga Arr**	**80.78**	**121**	P	**P**	**17 36 17.7**	**+0.4**
	0.2nm,0.6s,baz=323,slow=5.0,SNR=4.8						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**82.83**	**124**	P	**P**	**17 36 28.3**	**+0.3**
	0.5nm,1.0s,baz=307,slow=5.5,SNR=2.8						
	0.5nm,1.0s						

*IDC **29** 17:27:52.2±0.5, 30.°30N×94.°85E, h0km, mb4.4/25, mbtmp4.4/29, ML3.7/3, MS3.4/6, Error ellipse: s-maj=16.5km s-min=11.8km az=47.0*
*MOS **29** 17:27:52.9±0.9, 30.°33N×94.°88E, h15km, mb5.1/51, Error ellipse: s-maj=7.7km s-min=3.8km az=124.5*
*BJI **29** 17:27:53.5, 30.°33N×94.°87E, h6km, mB4.6/9, mb4.5/47, ML4.1/9, Ms4.0/33, Ms7 3.8/35*
*NEIC **29** 17:27:54.1±1.7, 30.°34N±0.°07×94.°79E±0.°06, h10km±1km, mb4.9/155, Error ellipse: s-maj=13.7km s-min=5.9km az=28.0*
*GFZ **29** 17:27:55.0±0.2, 30°N±3'×9°5E±', h10km, M4.5/23, mb4.7/23*
*NDI **29** 17:28:03.2±1.9, 29.°85N×94.°51E, h10km, ML3.6, MW4.1, Presumed earthquake*

ISC 29 17:27:54.2±0.3, 30.°36N±0.°03×94.°90E±0.°04, h10km, n561, σ1§11/514, mb4.8/163, MS3.3/8, 35C-21D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.32**	**260**	P	**Pn**	**17 28 46.6**	**0.0**
LSA	**Lhasa**	**3.32**	**260**		**Pn**	**17 28 46.6**	**0.0**
LSA	**Lhasa**	**3.32**	**260**	*e*Pn	**Pn**	**17 28 46.8**	**+0.2**
LSA				Sn	**Sn**	**17 29 31.0**	**+4.7**
LSA				SMN			
	97nm,1.5s						
LSA				SME			
	62nm,1.1s						
TAWA	**Tawang**	**3.83**	**225**	*e*P	**Pn**	**17 28 54.9**	**+1.4**
TAWA				IAML		17 29 57.2	
	comp=N,382nm,0.8s						
TAWA				IAML		17 30 14.1	
	comp=E,420nm,1.2s						
TEZP	**TEZPUR**	**4.16**	**207**	*e*PN	**Pn**	**17 28 59.3**	**+1.5**
TEZP				*e*SG	**Sb**	**17 30 02.2**	**+4.4**
TEZP				IAML		17 30 18.1	
	comp=E,215nm,1.2s						
GUWA	**GUWAHATI**	**5.02**	**215**	*e*PN	**Pn**	**17 29 10.9**	**+1.3**
GUWA				*i* PG	**Pb**	**17 29 25.9**	**+3.7**
SHL	**Shillong**	**5.47**	**210**	P	**Pn**	**17 29 14.3**	**-1.6**
SHL	**Shillong**	**5.47**	**210**		**Pn**	**17 29 14.3**	**-1.6**
SHL	**Shillong**	**5.47**	**210**	*e*PN	**Pn**	**17 29 15.8**	**-0.2**
SHL				*i* PG	Pb	17 29 35.5	+5.6
SHL				IAML		17 30 50.0	
	comp=E,91nm,1.1s						
SHL				IAML		17 30 58.8	
	comp=E,117nm,1.4s						
IMP	**Imphal**	**5.57**	**189**	*e*P	**Pn**	**17 29 18.1**	**+0.8**
IMP				*e*PN	**Pn**	**17 29 18.1**	**+0.8**
IMP				*i* x	x	17 29 36.7	
IMP				*i* PG	**Pg**	**17 29 40.4**	**-0.6**
GOMU	**GeErMu**	**5.83**	**359**	Pn	**Pn**	**17 29 20.5**	**-0.5**
GOMU				Sn	**Sn**	**17 30 30.0**	**+1.9**
GOMU				Sg	**Sb**	**17 30 52.8**	**+6.7**
DHUB	**DHUBRI**	**6.12**	**226**	*e*P	**Pn**	**17 29 25.4**	**+0.7**
MORE	**Moreh**	**6.12**	**185**		**Pn**	**17 29 23.9**	**-0.9**
TNCH	**TengChong**	**6.20**	**148**	Pn	**Pn**	**17 29 27.8**	**+1.7**
TNCH				Sg	**Sg**	**17 31 12.8**	**-0.7**
TNCH				L	L		
	comp=E,330nm,6.7s						
PZH	**PanZhiHua**	**7.14**	**121**	P	Pn	17 29 45.8	+6.8
PZH				S	**Sn**	**17 31 00.5**	**+0.2**
PZH				pmax	pmax		
	comp=Z,30nm,1.4s						
PZH				LR	LR		
	comp=N,830nm,9.3s						
PZH				LR	LR		
	comp=E,580nm,6.7s						
PZH				LR	LR		
	comp=Z,320nm,7.9s						
EVN	**Everest**	**7.46**	**253**		**Pn**	**17 29 41.2**	**-2.5**
EVN	**Everest**	**7.46**	**253**	P	**Pn**	**17 29 45.1**	**+1.4**
BRDH	**Bariadhala**	**8.19**	**202**	Pn	**Pn**	**17 29 52.1**	**-1.0**
	comp=Z,102nm,0.4s,baz=351,slow=17,SNR=1.3						
LZH	**Lanzhou**	**9.42**	**50**	*e*P	**Pn**	**17 30 14.0**	**+3.8**
LZH				sP		17 30 20.8	
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				L	L		
	comp=Z,380nm,7.4s						
LZH				L	L		
	comp=Z,460nm,7.7s						
LZH				L	L		
	comp=Z,450nm,9.5s						
GTA2	**Gaotai**	**9.94**	**22**	*e*P	**Pn**	**17 30 17.5**	**+0.2**
GTA2				sP		17 30 23.5	
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA2				L	L		
	comp=Z,370nm,11.4s						
GTA2				L	L		
	comp=Z,280nm,11.1s						
GTA2				L	L		
	comp=Z,350nm,9.5s						
NPW	**Naypyitaw**	**10.59**	**174**	P	**Pn**	**17 30 25.6**	**-0.6**
CHTO	**Chiang Mai**	**12.07**	**161**	P	**Pn**	**17 30 47.1**	**+0.7**
CHTO	**Chiang Mai**	**12.07**	**161**		**Pn**	**17 30 47.1**	**+0.7**
CHTO	**Chiang Mai**	**12.07**	**161**	P	**Pn**	**17 30 46.9**	**+0.6**
CHTO	**Chiang Mai**	**12.07**	**161**	P	**Pn**	**17 30 47.8**	**+1.5**
SLVN	**Son La**	**12.10**	**136**		**Pn**	**17 30 48.0**	**+1.2**
CM31	**Chiang Mai Arr**	**12.41**	**162**	Pn	**Pn**	**17 30 51.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**12.41**	**162**	Pn	**Pn**	**17 30 49.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=333,slow=13,SNR=26						
	comp=Z,4.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**12.41**	**162**	*i* P	**Pn**	**17 30 53.4**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**12.41**	**162**		**Pn**	**17 30 51.7**	**+0.7**
ENH	**Enshi**	**12.61**	**87**		**Pn**	**17 30 54.8**	**+1.1**
GULI	**GuiLin**	**14.58**	**106**	⇑P	Pn	17 31 15.3	-5.4
GULI				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ	**Urumqi**	**14.61**	**339**	*e*P	**Pn**	**17 31 20.8**	**-0.2**
WMQ				pP	P	17 31 28.5	+1.0
WMQ				pmax	pmax		
	comp=Z,12nm,1.5s						
WMQ				L	L		
	comp=Z,69nm,13.5s						
LYN	**LuoYang**	**15.41**	**70**	P	**P**	**17 31 37.3**	**+1.0**
LYN				pmax	pmax		
	comp=Z,29nm,1.0s						
LYN				L	L		
	comp=Z,200nm,7.5s						
LYN				L	L		
	comp=Z,210nm,7.7s						
LYN				L	L		
	comp=Z,260nm,11.4s						
BTO2	**Baotou**	**15.98**	**46**	*e*P	**Pn**	**17 31 38.3**	**-0.9**
BTO2				pP	**P**	**17 31 46.0**	**+3.2**
BTO2				sP	**sP**	**17 31 50.8**	**+2.1**
BTO2				PP	**PnPn**	**17 31 51.8**	**+4.0**
BTO2				S	**Sn**	**17 34 34.3**	**-2.1**
BTO2				pmax	pmax		
	comp=Z,16nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,230nm,4.1s						
BTO2				L	L		
	comp=Z,320nm,11.0s						
BTO2				L	L		
	comp=Z,340nm,11.4s						
BTO2				L	L		
	comp=Z,450nm,12.3s						
WUS	**Wushi**	**16.67**	**315**		**Pn**	**17 31 47.2**	**-0.9**
WHN	**Wuhan**	**16.78**	**84**	⇑P	**Pn**	**17 31 49.0**	**-0.3**
WHN				sP	**pP**	**17 31 56.5**	**+0.9**
WHN				pmax	pmax		
	comp=Z,120nm,1.3s						
WHN				L	L		
	comp=Z,870nm,9.5s						
HHC	**Hu-ho-hao-te**	**17.10**	**48**	*e*P	**Pn**	**17 31 54.5**	**+1.1**
HHC				S	**Sn**	**17 35 00.5**	**-3.1**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
HHC				L	L		
	comp=Z,170nm,10.9s						
HHC				L	L		
	comp=Z,120nm,9.3s						
HHC				L	L		
	comp=Z,200nm,11.3s						
PDGK	**Podgornoye**	**17.84**	**321**	P	**Pn**	**17 32 01.0**	**-1.7**
PDGK	**Podgornoye**	**17.84**	**321**		**Pn**	**17 32 01.0**	**-1.7**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**Pn**	**17 32 01.8**	**-1.2**
TARG				pmax	pmax		
	comp=Z,53nm,1.2s						
TARG	**Taragay, Kyrgy**	**17.85**	**314**		**Pn**	**17 32 01.8**	**-1.2**
TARG	**Taragay, Kyrgy**	**17.85**	**314**	P	**P**	**17 32 05.7**	**+2.0**
HNS	**HongShan**	**17.87**	**62**	⇑P	**Pn**	**17 32 02.5**	**-0.4**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				L	L		
	comp=Z,210nm,11.4s						
HNS				L	L		
	comp=Z,210nm,11.6s						
PRZ	**Przheval'sk**	**17.93**	**317**	P	**P**	**17 32 07.1**	**+2.7**
PRZ				pmax	pmax		
	comp=Z,150nm,1.2s						
PRZ	**Przheval'sk**	**17.93**	**317**	P	**P**	**17 32 07.1**	**+2.7**
PRZ				IAmb	IAmb	17 32 09.0	
	comp=Z,150nm,1.2s						
KSH2	**Kashi**	**18.12**	**304**	P	**Pn**	**17 32 05.3**	**-0.8**
KSH2				pmax	pmax		
	comp=Z,12nm,1.5s						
NIL	**Nilore**	**18.65**	**286**	P	**P**	**17 32 09.0**	**-3.2**
NIL				pmax	pmax		
	comp=Z,42nm,1.0s						
NIL	**Nilore**	**18.65**	**286**		**P**	**17 32 09.0**	**-3.2**
NIL	**Nilore**	**18.65**	**286**	P	**P**	**17 32 09.4**	**-2.8**
NRN	**Naryn**	**18.84**	**311**	P	**P**	**17 32 12.9**	**-1.7**
NRN				pmax	pmax		
	comp=Z,21nm,1.3s						
NRN	**Naryn**	**18.84**	**311**	P	**P**	**17 32 12.9**	**-1.7**
MK31	**Makanchi Array**	**19.10**	**333**	*de*P	**P**	**17 32 16.4**	**-0.7**
MKAR	**Makanchi Array**	**19.10**	**333**	P	**P**	**17 32 16.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=143,slow=13,SNR=25						
	comp=Z,6.9nm,0.9s						
MKAR	**Makanchi Array**	**19.10**	**333**	*i* P	**P**	**17 32 17.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	**Makanchi Array**	**19.10**	**333**		**P**	**17 32 15.8**	**-1.3**
MAKZ	**Makanchi**	**19.24**	**332**	P	**P**	**17 32 18.4**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,27nm,1.2s						
MAKZ	**Makanchi**	**19.24**	**332**		**P**	**17 32 18.4**	**-0.2**
SONM	**Songino Array**	**19.56**	**24**	P	**P**	**17 32 23.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=216,slow=9.6,SNR=46						
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**19.56**	**24**		**P**	**17 32 22.8**	**+0.5**
HYB	**Hyderabad**	**19.70**	**233**	*e*P	**P**	**17 32 22.4**	**-1.5**
HYB				*e*S	**Sn**	**17 36 14.0**	**+7.3**
ULN	**Ulaanbaatar**	**19.82**	**25**	*ce*P	**P**	**17 32 26.2**	**+1.1**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**19.82**	**25**		**P**	**17 32 25.3**	**+0.1**
ULN	**Ulaanbaatar**	**19.82**	**25**	P	**P**	**17 32 25.7**	**+0.6**
	comp=Z,46nm,1.0s						
ULN	**Ulaanbaatar**	**19.82**	**25**	P	**P**	**17 32 26.4**	**+1.3**
TKM2	**Tokmak 2**	**19.87**	**314**	P	**P**	**17 32 27.3**	**+1.5**
	SNR=8.3						
KBK	**Karagaybulak**	**20.14**	**313**	P	**P**	**17 32 30.7**	**+2.0**
	SNR=9.0						
AAK	**Ala-Archa**	**20.41**	**312**	P	**P**	**17 32 32.7**	**+1.1**
	comp=Z,87nm,1.3s,baz=128,slow=10,SNR=31						
	comp=Z,87nm,1.3s						
AAK	**Ala-Archa**	**20.41**	**312**	P	**P**	**17 32 33.5**	**+1.8**
	SNR=21						
AAK	**Ala-Archa**	**20.41**	**312**	*ce*P	**P**	**17 32 32.9**	**+1.3**
AAK				pmax	pmax		
	comp=Z,79nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**312**		**P**	**17 32 30.3**	**-1.3**
AAK				IAmb	IAmb	17 32 37.6	
	comp=Z,91nm,1.2s						
AAK	**Ala-Archa**	**20.41**	**312**	P	**P**	**17 32 33.2**	**+1.5**
CHMS	**Chumysh**	**20.44**	**314**	P	**P**	**17 32 32.7**	**+1.0**
	SNR=22						
MANEM	**Manem**	**20.52**	**297**	IAmb	IAmb	17 32 36.6	
	comp=Z,95nm,1.2s						
NJ2	**Nanjing**	**20.55**	**79**	*e*P	**P**	**17 32 33.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,29nm,0.8s						
USP	**Ospenovka**	**20.73**	**314**	P	**P**	**17 32 35.9**	**+0.9**
	SNR=15						
ARSB	**Arslanbob**	**20.81**	**308**	IAmb	IAmb	17 32 38.0	
	comp=Z,58nm,1.4s						
EKS2	**Erkin-Say**	**20.89**	**312**	P	**P**	**17 32 37.7**	**+1.0**
	SNR=9.1						
DRK	**Karamyk**	**20.97**	**302**	IAmb	IAmb	17 32 40.4	
	comp=Z,84nm,1.4s						
XLT	**XiLinHaoTe**	**21.55**	**45**	*e*P	**P**	**17 32 45.3**	**+1.5**
XLT				pmax	pmax		
	comp=Z,16nm,1.1s						
XLT				L	L		
	comp=Z,8.0nm,7.9s						
XLT				L	L		
	comp=Z,67nm,8.

comp=Z,26nm,1.4s
KULM Kulim 25.52 167 P **P** **17 33 23.8 +0.8**
PALK Pallekele 26.55 213 *de*P **P** **17 33 32.2 -0.3**
PALK pmax pmax
comp=Z,40nm,1.1s
HILR Hailar Array B 26.82 37 P **P** **17 33 36.5 +1.8**
comp=Z,4.7nm,0.6s,baz=191,slow=6.9,SNR=5.4
comp=Z,4.7nm,0.6s
CN2 Changchun 27.65 52 P **P** **17 33 42.5 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 L L
comp=Z,100nm,9.0s
CN2 L L
comp=Z,200nm,9.0s
CN2 L L
comp=Z,200nm,9.0s
KS19 Wonju Array Si 28.17 66 P P 17 33 42.0 -4.9
KSRS Korea Array 28.21 67 LR LR 17 45 49.4
comp=Z,36nm,18.0s,baz=270,slow=38
BVAR Borovoye Array 28.86 329 P **P** **17 33 52.7 -0.1**
comp=Z,9.4nm,1.1s,baz=128,slow=9.6,SNR=29
BVAR PcP **PcP** **17 37 01.9 -0.1**
comp=Z,1.4nm,0.7s,baz=106,slow=3.2,SNR=4.9
comp=Z,9.4nm,1.1s
BNX BinXian 29.60 50 ⇓P **P** **17 34 00.0 +0.5**
BNX pmax pmax
comp=Z,7.0nm,1.3s
HEH HeiHe 31.41 41 *e*P **P** **17 34 16.5 +1.2**
HEH pmax pmax
comp=Z,5.0nm,1.0s
ABKAR Akbulak array 32.43 316 P **P** **17 34 24.0 -0.3**
ZEA Zeya 33.04 36 *e*P **P** **17 34 30.9 +1.3**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=Z,100nm,10.0s
SVE Sverdlovsk 35.63 328 *e*P **P** **17 34 52.3 +0.3**
SVE pmax pmax
comp=Z,31nm,1.2s
MJAR Matsushiro Arr 36.43 68 P **P** **17 34 58.4 -0.8**
comp=Z,1.4nm,0.9s,baz=270,slow=8.8,SNR=6.0
comp=Z,1.4nm,0.9s
MJAR Matsushiro Arr 36.43 68 IAmb IAmb 17 36 22.1
comp=Z,9.2nm,0.6s
ARTI Arti 36.46 326 *c i*P **P** **17 34 59.2 +0.1**
ARTI 17 36 18.5
ARTI 17 37 20.8
ARTI S **S** **17 40 42.4 +1.6**
ARTI SS **SnSn** **17 43 08.3 -0.5**
ARTI pmax pmax
comp=Z,22nm,1.4s
ARTI Arti 36.46 326 **P** **17 34 58.9 -0.3**
LKRN Lenkeran, Azer 38.56 295 P **P** **17 35 18.7 +1.6**
YAK Yakutsk 38.91 25 P **P** **17 35 19.5 -0.2**
comp=Z,13nm,0.9s,baz=226,slow=3.1,SNR=8.4
comp=Z,13nm,0.9s
YAK Yakutsk 38.91 25 *e*P **P** **17 35 19.1 -0.6**
YAK *e**PP **pP** **17 35 24.9 +0.7**
YAK *e* 17 36 48.7
YAK *e*PPP PPP 17 37 09.7
YAK *e* 17 37 29.6
YAK *e*S **S** **17 41 15.8 -1.9**
YAK *e*SS **SnSn** **17 44 08.0 +0.2**
YAK *e*SSS SSS 17 44 29.7
YAK *e* 17 45 26.6
YAK pmax pmax
comp=Z,25nm,1.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.6s
YAK pmax pmax
comp=N,23nm,2.9s
YAK pmax pmax
comp=Z,44nm,3.3s
YAK pmax pmax
comp=E,22nm,3.2s
YAK smax smax
comp=N,53nm,3.5s
YAK smax smax
comp=E,24nm,4.2s
YAK Yakutsk 38.91 25 P **P** **17 35 18.0 -1.7**
YAK Yakutsk 38.91 25 P **P** **17 35 19.9 +0.1**
NRIK Noril'sk 39.25 356 P **P** **17 35 22.5 0.0**
comp=E,4.4nm,0.8s,baz=165,slow=6.9,SNR=9.1
comp=E,4.4nm,0.8s
NRIK Noril'sk 39.25 356 *i* P **P** **17 35 22.5 0.0**
NRIK pmax pmax
comp=Z,11nm,1.4s
NRIK Noril'sk 39.25 356 IAmb IAmb 17 35 24.2
comp=Z,31nm,1.6s
AKT Akhty 39.34 300 *e*P **P** **17 35 22.8 -1.0**
AKT pmax pmax
comp=Z,23nm,1.1s
SEKA Sheki 39.74 299 P **P** **17 35 28.0 +0.9**
MNGR Mingechevir, A 39.83 299 P **P** **17 35 29.3 +1.6**
ASAJ Asahikawa 39.84 56 P **P** **17 35 28.2 +0.4**
comp=Z,10nm,1.0s,baz=290,slow=13,SNR=5.9
ASAJ LR LR 17 52 52.3
comp=Z,37nm,18.4s,baz=288,slow=38
comp=Z,10nm,1.0s
JKA Kamikawa-asahi 39.84 56 **P** **17 35 28.0 +0.2**
JKA Kamikawa-asahi 39.84 56 P **P** **17 35 28.4 +0.5**
YSS Yuzhno-Sakhali 40.21 52 *e*P **P** **17 35 31.3 +0.5**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS Yuzhno-Sakhali 40.21 52 **P** **17 35 30.5 -0.3**
YSS IAmb IAmb 17 35 32.9
comp=Z,29nm,1.2s
YSS Yuzhno-Sakhali 40.21 52 P **P** **17 35 31.4 +0.6**
GANJ Ganja 40.41 298 P **P** **17 35 33.9 +1.3**
NAX Nakhchivan 41.10 296 P **P** **17 35 39.7 +1.3**
GNI Garni 41.63 298 *ce*P **P** **17 35 44.2 +1.4**
GNI pmax pmax
comp=Z,30nm,1.3s
GNI Garni 41.63 298 **P** **17 35 42.5 -0.3**
GNI IAmb IAmb 17 35 46.8
comp=Z,42nm,1.4s
GNI Garni 41.63 298 P **P** **17 35 46.1 +3.3**
comp=Z,20nm,1.4s
GNI Garni 41.63 298 P **P** **17 35 44.5 +1.7**
KIRV Kirov 41.77 326 *ce*P **P** **17 35 43.7 +0.2**
NCK Nalchik 42.42 303 ⇑ *e*P **P** **17 35 50.1 +1.0**
NCK pmax pmax
comp=Z,11nm,1.1s
GOF Gofitskoye 42.85 305 *ce*P **P** **17 35 53.2 +0.7**
KBZ Khabaz 42.93 303 P **P** **17 35 52.6 -0.6**
comp=Z,2.3nm,0.8s,baz=69,slow=15,SNR=3.9
comp=Z,2.3nm,0.8s
KBZ Khabaz 42.93 303 ⇑ *e*P **P** **17 35 54.6 +1.4**
KBZ pmax pmax
comp=Z,7.0nm,1.5s
KIV Kislovodsk 43.09 303 *e*P **P** **17 35 54.8 +0.2**
KIV pmax pmax
comp=Z,23nm,1.1s
KIV Kislovodsk 43.09 303 **P** **17 35 54.3 -0.3**
KIV IAmb IAmb 17 35 57.7
comp=Z,32nm,1.1s
KIV Kislovodsk 43.09 303 P **P** **17 35 55.8 +1.2**
EPOS Posof 43.10 300 P **P** **17 35 55.5 +0.8**
GURO Guroymak-BITLI 43.84 296 IAmb IAmb 17 36 03.1
comp=Z,16nm,1.1s
VRH Novokhopyorsk 44.21 314 *e*P **P** **17 36 03.0 -0.3**
VRH pmax pmax
comp=Z,22nm,1.1s
RAYN Ar Rayn 44.28 273 P **P** **17 36 02.5 -1.9**
RAYN pmax pmax
comp=Z,8.0nm,1.4s
RAYN Ar Rayn 44.28 273 **P** **17 36 02.5 -1.9**
RAYN Ar Rayn 44.28 273 P **P** **17 36 03.1 -1.2**
LABN Labinsk 44.49 304 *e*P **P** **17 36 06.1 +0.3**
LABN pmax pmax
comp=Z,23nm,0.7s
ERBR Yeremizino-Bor 44.66 306 *e*P **P** **17 36 07.0 -0.1**
ERBR pmax pmax
comp=Z,22nm,0.8s
VSLR Vesyoloye 45.02 303 *ce*P **P** **17 36 11.1 +1.1**
VSLR pmax pmax
comp=Z,44nm,1.2s
SOC Sochi 45.24 303 *e*P **P** **17 36 10.9 -0.8**
SOC *e* 17 38 00.7
SOC *e*PPP PPP 17 38 34.5
SOC *e*S **S** **17 42 50.2 -1.6**
SOC *e*SSS SSS 17 47 00.6
SOC pmax pmax
comp=Z,21nm,0.8s
VORD Divnogorie 45.71 313 *e*P P 17 36 11.5 -3.8
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 45.81 314 *e*P **P** **17 36 15.4 -0.7**
VSR pmax pmax
comp=Z,24nm,1.2s
KELT Kelkit 45.82 298 P **P** **17 36 17.6 +1.0**
VORR Voronezh 45.82 314 *e*P **P** **17 36 15.7 -0.5**
VORR pmax pmax
comp=Z,43nm,0.4s
LPSR Galich'ya Gora 46.09 315 *e*P **P** **17 36 17.6 -0.7**
LPSR pmax pmax
comp=Z,33nm,1.2s
MA2 Magadan 47.18 35 LR LR 17 58 50.5
comp=Z,29nm,20.0s,baz=262,slow=39
MOS Moscow 47.23 320 *e*P **P** **17 36 28.1 +0.9**
MOS pmax pmax
comp=Z,35nm,0.7s
KLMR Klimovskoe 47.24 327 *e*P **P** **17 36 25.5 -1.7**
KLMR *e* 17 38 16.0
KLMR pmax pmax
comp=Z,50nm,1.5s
OBN Obninsk 47.75 319 *c i*P **P** **17 36 31.0 -0.2**
OBN *i* 17 38 00.9
OBN pmax pmax
comp=Z,20nm,1.2s
ANDN Andirin 48.42 295 P **P** **17 36 37.4 +0.5**
SEY Seymchan 48.72 31 ⇑ *e*P **P** **17 36 39.3 +0.7**
SEY pmax pmax
comp=Z,21nm,1.8s
KIRS Kirsehir-Merke 50.04 297 ⇓P **P** **17 36 49.4 +0.2**
BR131 Keskin Array S 50.16 298 *d i*P **P** **17 36 50.1 -0.1**
BRTR Keskin Array B 50.16 298 P **P** **17 36 49.4 -0.8**
comp=Z,2.5nm,0.9s,baz=102,slow=5.7,SNR=14
BRTR PP **PP** **17 38 44.5 -0.8**
comp=Z,0.1nm,0.4s,baz=46,slow=5.3,SNR=3.6
comp=Z,2.5nm,0.9s
BRTR Keskin Array B 50.16 298 *i* P **P** **17 36 50.0 -0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 50.16 298 **P** **17 36 48.0 -2.2**
CY604 RAF Akrotiri, 50.52 291 P **P** **17 36 51.7 -0.7**
CY604 IAmb IAmb 17 36 57.3
comp=Z,9.9nm,0.9s
AKASG Malin Array Be 52.08 313 P **P** **17 37 03.7 -0.6**
comp=Z,12nm,1.0s,baz=80,slow=6.7,SNR=23
comp=Z,12nm,1.0s
AKASG Malin Array Be 52.08 313 *i* P **P** **17 37 03.4 -0.8**
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKASG Malin Array Be 52.08 313 IAmb IAmb 17 37 05.0
comp=Z,5.3nm,1.0s
AKBB Malin Array Si 52.08 313 *de*P **P** **17 37 03.8 -0.4**
AKBB Malin Array Si 52.08 313 IAmb IAmb 17 37 04.7
comp=Z,21nm,1.1s
KIEV Kiev 52.09 313 ⇑P **P** **17 37 04.2 -0.1**
KIEV Kiev 52.09 313 ⇑P **P** **17 37 04.2 -0.1**
KIEV Kiev 52.09 313 P **P** **17 37 04.1 -0.2**
MNK Minsk 52.75 318 *i* P **P** **17 37 09.4 +0.3**
comp=E,20nm,0.7s
MNK *i* P **P** **17 37 09.4 +0.3**
comp=N,20nm,0.8s
MNK *i* P **P** **17 37 09.4 +0.3**
comp=Z,15nm,0.7s,baz=88
MNK *i* PP **PP** **17 39 08.8 +0.7**
MNK *i* PPP PPP 17 40 12.5
MNK *i* S **S** **17 44 37.4 +0.3**
MNK *i* SS **SS** **17 48 18.4 +3.1**
MNK *i* SSS SSS 17 50 04.5
MNK *i* LR LR 17 59 51.2
MNK *i* LRM MLR 18 02 11.9
comp=Z,18nm,13.8s
MNK Minsk 52.75 318 *i* P **P** **17 37 09.4 +0.3**
MNK *i* 17 39 08.8
MNK *i* PPP PPP 17 40 12.5
MNK *i* S **S** **17 44 37.3 +0.3**
MNK *i* SS **SS** **17 48 18.3 +3.1**
MNK *i* SSS SSS 17 50 04.4
MNK pmax pmax
comp=Z,15nm,0.7s
MNK pmax pmax
comp=E,20nm,0.7s
MNK pmax pmax
comp=N,20nm,0.8s
MNK MLR MLR
comp=Z,18nm,14.0s
SORM Soroca 52.86 310 ⇓P **P** **17 37 09.7 -0.3**
SORM Soroca 52.86 310 P **P** **17 37 09.7 -0.3**
TPGR Topolog 53.21 305 ⇑P **P** **17 37 12.7 -0.1**
TIRR Tirgusor 53.28 305 ⇑P **P** **17 37 12.5 -0.6**
TIRR Tirgusor 53.28 305 ⇑P **P** **17 37 12.5 -0.6**
CFR Carcaliu 53.37 306 ⇓P **P** **17 37 14.0 +0.2**
CFR Carcaliu 53.37 306 ⇓P **P** **17 37 14.0 +0.2**
FINES FINESS Array B 53.77 326 P **P** **17 37 15.7 -0.8**
comp=Z,2.3nm,0.8s,baz=90,slow=9.5,SNR=5.3
comp=Z,2.3nm,0.8s
FINES FINESS Array B 53.77 326 *i* P **P** **17 37 17.5 +1.0**
FINES pmax pmax
comp=Z,1.0nm,0.6s
TESR Tescani 54.20 308 P **P** **17 37 19.5 -0.5**
VRI Vrincioaia 54.24 307 ⇑P **P** **17 37 21.3 +1.0**
VRI Vrincioaia 54.24 307 ⇑P **P** **17 37 21.3 +1.0**
VRI Vrincioaia 54.24 307 P **P** **17 37 20.6 +0.3**
PLOR Plostina 54.30 307 ⇑P **P** **17 37 20.7 0.0**
PLOR Plostina 54.30 307 ⇑P **P** **17 37 20.7 0.0**
ONER Baraj Valea Uz 54.40 308 ⇑P **P** **17 37 21.5 +0.1**
BIZ Bicaz 54.51 308 ⇓P **P** **17 37 22.5 +0.3**
MLR Muntele Rosu 54.84 307 ⇑P **P** **17 37 24.9 +0.1**
MLR Muntele Rosu 54.84 307 ⇑P **P** **17 37 24.9 +0.1**
OZUR 54.86 307 ⇓P **P** **17 37 25.8 +1.0**
BURAR Bucovina Array 55.01 309 ⇑P **P** **17 37 26.0 +0.1**
BURAR Bucovina Array 55.01 309 P **P** **17 37 26.0 +0.1**
BURAR Bucovina Array 55.01 309 **P** **17 37 24.2 -1.8**
DOPR Dopca 55.15 307 ⇓P **P** **17 37 27.1 +0.2**
ALN Alexandroupoli 55.64 301 P **P** **17 37 30.6 +0.2**
ALN Alexandroupoli 55.64 301 IAmb IAmb 17 37 31.2
comp=Z,16nm,1.1s
ARR Arges 55.78 307 ⇑P **P** **17 37 30.8 -0.6**
RDO Rodhopi 55.96 301 IAmb IAmb 17 37 34.1
comp=Z,18nm,1.3s
MARR Marisel-Cluj 56.58 308 ⇓P **P** **17 37 37.8 +0.6**
DRGR 56.84 309 ⇑P **P** **17 37 39.9 +0.9**
DRGR 56.84 309 P **P** **17 37 39.9 +0.9**
DRGR 56.84 309 P **P** **17 37 38.9 -0.1**
SIRR Siria 57.65 308 ⇓P **P** **17 37 45.1 +0.4**
MDVR Moldovita 57.92 306 ⇓P **P** **17 37 47.1 +0.4**
BOVS Bovan 58.18 305 ⇑P **P** **17 37 48.3 -0.1**
PSZ Piszkesteto 58.50 310 ⇑P **P** **17 37 50.8 +0.1**
PSZ Piszkesteto 58.50 310 P **P** **17 37 50.8 +0.1**
MORC Moravsky Berou 59.63 313 ⇑P **P** **17 37 59.1 +0.6**
MORC Moravsky Berou 59.63 313 ⇑P **P** **17 37 59.1 +0.6**
MORC Moravsky Berou 59.63 313 IAmb IAmb 17 37 59.9
comp=Z,11nm,1.3s
MORC Moravsky Berou 59.63 313 *e*P **P** **17 37 58.0 -0.5**
MORH Mrgy, Hungar 59.70 309 ⇓P **P** **17 37 58.6 -0.3**
JAVC Velka Javorina 59.75 312 *e*P **P** **17 37 59.9 +0.6**
HFS Hagfors 59.90 325 P **P** **17 37 59.8 -0.3**
comp=Z,2.1nm,0.6s,baz=134,slow=8.6,SNR=4.2
comp=Z,2.1nm,0.6s
KRLC Kraliky 60.05 313 *e*P **P** **17 38 02.2 +0.9**
KRLC Kraliky 60.05 313 *e*P **P** **17 38 02.2 +0.9**
PDG Podgorica 60.22 304 ⇓P **P** **17 38 02.1 -0.4**
PDG Podgorica 60.22 304 IAmb IAmb 17 38 02.7
comp=Z,6.2nm,0.8s
DPC Dobruska-Polom 60.28 314 *e*P **P** **17 38 03.7 +0.8**
DPC Dobruska-Polom 60.28 314 *e*P **P** **17 38 03.7 +0.8**
VRAC Vranov 60.34 312 ⇓P **P** **17 38 02.6 -0.7**
VRAC Vranov 60.34 312 P **P** **17 38 02.6 -0.7**
VRAC Vranov 60.34 312 *e*P **P** **17 38 03.0 -0.3**
KRUC Moravsky 60.52 312 P **P** **17 38 05.4 +0.9**
KRUC Moravsky 60.52 312 *e*P **P** **17 38 04.2 -0.3**
RONA Rosalia, Austr 60.91 311 *i* P **P** **17 38 07.4 +0.1**
comp=Z,9.1nm,1.6s
NB2 NORSAR Subarra 60.95 326 P **P** **17 38 06.6 -0.7**
comp=Z,1.2nm,0.8s,baz=79,slow=6.9
NOA NORSAR Array B 60.95 326 P **P** **17 38 06.8 -0.5**
comp=Z,3.3nm,0.9s,baz=79,slow=6.9,SNR=6.2
comp=Z,3.3nm,0.9s
CONA Conrad Observa 61.14 311 *i* P **P** **17 38 08.9 0.0**
comp=Z,15nm,1.2s,SNR=9.5
PRU Pruhonice 61.47 314 P **P** **17 38 12.4 +1.4**
ARSA Arzberg 61.53 310 *i* P **P** **17 38 10.6 -0.8**
comp=Z,3.9nm,0.8s
BRG Berggiesshubel 61.63 315 *e*P **P** **17 38 11.9 -0.1**
BRG Amp 17 38 14.1
comp=Z,7.1nm,1.2s
CKRC Cesky Krumlov 61.91 312 *e*P **P** **17 38 15.2 +1.2**
CKRC Cesky Krumlov 61.91 312 *e*P **P** **17 38 15.2 +1.2**
SOKA Soboth 62.00 310 *i* P **P** **17 38 14.6 -0.1**
comp=Z,12nm,1.6s,SNR=6.2
LEGS Legarje 62.01 309 *i* P **P** **17 38 14.4 -0.3**
CLL Collm 62.10 315 *e*P **P** **17 38 15.0 -0.1**
CLL Collm 62.10 315 *e*P **P** **17 38 15.0 -0.1**
LODK Lodwar 62.14 257 **P** **17 38 14.3 -1.7**
MOA Molln 62.20 311 *i* P **P** **17 38 15.8 -0.1**
comp=Z,8.5nm,1.2s
GEC2 GERESS Array S 62.30 312 IAmb IAmb 17 38 18.0
comp=Z,8.6nm,1.1s
GERES GERESS Array B 62.30 312 P **P** **17 38 17.1 +0.5**
comp=Z,1.5nm,0.7s,baz=73,slow=4.6,SNR=18
comp=Z,1.5nm,0.7s
GERES GERESS Array B 62.30 312 **P** **17 38 15.0 -1.6**
KHC Kasperske Hory 62.30 313 *e*P **P** **17 38 17.4 +0.8**
KHC Kasperske Hory 62.30 313 *e*P **P** **17 38 17.4 +0.8**
OBKA Obir 62.37 310 *e*P **P** **17 38 16.2 -1.0**
comp=Z,1.2nm,0.7s
WRA Warramunga Arr 62.78 138 P **P** **17 38 19.3 -0.7**
comp=Z,2.9nm,1.0s,baz=323,slow=8.2,SNR=9.9
comp=Z,2.9nm,1.0s
WRA Warramunga Arr 62.78 138 IAmb IAmb 17 38 20.5
comp=Z,0.6nm,1.6s
TIP Timpagrande 62.97 301 ⇓P **P** **17 38 19.8 -1.4**
TIP Timpagrande 62.97 301 IAmb IAmb 17 38 20.8
comp=Z,8.4nm,1.1s
CADS Cadrg 62.99 310 *e*P **P** **17 38 19.8 -1.5**
KBA Koelnbreinsper 63.01 311 *e*P **P** **17 38 20.0 -1.5**
comp=Z,2.1nm,0.5s
SABO M.te Sabotino 63.15 309 IAmb IAmb 17 38 23.3
comp=Z,12nm,1.0s
LESA Schwarzleotal 63.34 311 *i* P **P** **17 38 23.4 -0.2**
comp=Z,14nm,1.2s,SNR=8.6
ABTA Abfaltersbach 63.65 310 *i* P **P** **17 38 25.1 -0.6**
comp=Z,3.8nm,0.9s
STAL STALIGIAL 63.66 310 IAmb IAmb 17 38 25.6
comp=Z,10nm,1.0s
CEL Celeste 63.90 301 **P** **17 38 26.3 -1.2**
WTTA Wattenberg 64.07 311 *i* P **P** **17 38 28.2 -0.4**
comp=Z,8.1nm,1.3s
WATA Walderalm 64.09 311 *e*P **P** **17 38 28.2 -0.4**
comp=Z,10.0nm,1.4s
INTR Introdacqua 64.14 305 **P** **17 38 27.2 -1.8**
INTR IAmb IAmb 17 38 32.9
comp=Z,11nm,1.1s
SQTA Sankt Quirin 64.36 311 *i* P **P** **17 38 29.8 -0.6**
comp=Z,5.8nm,1.1s
FDMO Fiordimonte 64.39 306 IAmb IAmb 17 38 31.3
comp=Z,7.5nm,1.0s
MOTA Moosalm 64.39 311 *i* P **P** **17 38 30.3 -0.3**
comp=Z,9.5nm,1.1s
RETA Reutte 64.57 312 *i* P **P** **17 38 31.4 -0.3**
comp=Z,13nm,1.4s
FETA Feichten 64.73 311 *i* P **P** **17 38 32.5 -0.3**
comp=Z,11nm,1.2s
DAVA Damuels 65.20 312 *e*P **P** **17 38 34.5 -1.4**
comp=Z,3.0nm,0.7s
AS31 Alice Springs 65.47 141 P **P** **17 38 37.0 -0.7**
ASAR Alice Springs 65.47 141 P **P** **17 38 37.5 -0.2**
comp=Z,2.8nm,0.8s,baz=324,slow=6.2,SNR=34
comp=Z,2.8nm,0.8s
C16K Lisburne Hills 65.66 24 P **P** **17 38 38.4 +0.1**
baz=291
TUE Stuetta 65.81 311 IAmb IAmb 17 38 52.0
comp=Z,8.8nm,1.2s
BFO Black Forest 65.86 313 P **P** **17 38 38.6 -1.4**
BFO pmax pmax
comp=Z,18nm,1.5s
BFO Black Forest 65.86 313 **P** **17 38 38.5 -1.4**
F14K Arctic Creek 66.30 27 P **P** **17 38 42.5 +0.1**
baz=291
C17K DeLong Mountai 66.33 23 P **P** **17 38 42.6 -0.1**
baz=293
A19K Wainwright 66.33 21 P **P** **17 38 42.0 -0.6**
baz=294
CDF Champ du Feu 66.49 313 *e*P **P** **17 38 43.4 -0.7**
CDF pmax pmax
comp=Z,8.0nm,1.1s
RDOG Red Dog Mine 66.59 24 P **P** **17 38 44.3 0.0**
baz=293
D17K Noatak River 66.66 24 P **P** **17 38 44.9 +0.2**
baz=293
F15K North Star Dit 66.86 26 P **P** **17 38 45.9 -0.2**
baz=292
C18K Utukok River 66.93 23 P **P** **17 38 46.4 -0.2**
baz=294
HINF Hinteralfeld 66.96 313 *e*P **P** **17 38 46.2 -0.9**
HINF pmax pmax
comp=Z,35nm,2.4s
SENIN Lac Senin/Sane 67.18 311 IAmb IAmb 17 38 49.0
comp=Z,6.6nm,1.1s
E17K Hotham Inlet 67.36 24 P **P** **17 38 49.3 +0.2**
baz=294
G15K Niukluk 67.38 27 P **P** **17 38 49.2 -0.1**
baz=293
GIVF Givet 67.42 316 *e*P **P** **17 38 50.5 +0.6**
GIVF pmax pmax
comp=Z,20nm,1.2s
BAIF Baives 67.80 316 *e*P **P** **17 38 53.1 +0.8**
BAIF pmax pmax
comp=Z,18nm,1.3s
F17K Baldwin Pennin 67.83 25 P **P** **17 38 52.3 +0.2**
baz=295
LPG La Plagne 67.84 311 *e*P **P** **17 38 52.7 -0.3**
LPG pmax pmax
comp=Z,18nm,1.2s
LPL La Plagne 67.85 311 *e*P **P** **17 38 52.7 -0.3**
LPL pmax pmax
comp=Z,15nm,1.0s
G16K Koyuk River 67.86 26 P **P** **17 38 52.2 -0.2**
baz=295
SBF Sospel 67.98 309 *e*P **P** **17 38 52.7 -0.9**
SBF pmax pmax
comp=Z,16nm,1.0s
D19K Kuna River 68.02 22 P **P** **17 38 53.2 -0.2**
baz=297
MBDF Montbardon 68.11 310 *e*P **P** **17 38 55.7 +1.2**
MBDF pmax pmax
comp=Z,7.0nm,0.9s
F18K Selawik 68.34 24 P **P** **17 38 55.3 -0.1**
baz=296
K13K Kusilvak Mount 68.35 30 P **P** **17 38 55.5 0.0**
baz=294
D20K Etivluk River 68.40 22 P **P** **17 38 56.1 +0.3**
baz=298
G17K Kiwalik Mounta 68.46 26 P **P** **17 38 56.5 +0.3**
baz=296
J14K Nanvaranak Lak 68.48 29 P **P** **17 38 56.8 +0.5**
baz=295
B22K Teshekpuk Lake 68.58 20 P **P** **17 38 57.5 +0.7**
baz=300
B21K Ikpikpuk River 68.59 21 P **P** **17 38 57.0 +0.1**
baz=300
ORIF Oris-en-Rattie 68.63 310 *e*P **P** **17 38 56.7 -1.0**
ORIF pmax pmax
comp=Z,8.0nm,1.1s
E20K Nigu River 68.76 22 P **P** **17 38 58.5 +0.5**
baz=299
C21K Knifeblade Rid 68.77 21 P **P** **17 38 58.2 +0.2**
baz=300
E19K Redstone River 68.79 23 P **P** **17 38 58.7 +0.4**
baz=298
F19K Shaleruckik Mo 68.90 24 P **P** **17 38 59.3 +0.5**
baz=298
H17K Granite Mounta 68.99 26 P **P** **17 39 00.3 +0.8**
baz=297
G18K Tagagawik 69.02 25 P **P** **17 39 00.2 +0.5**
baz=298
I17K Unalakleet 69.16 27 P **P** **17 39 00.3 -0.2**
baz=296
SMF Signal de Mont 69.30 313 *e*P **P** **17 39 00.9 -0.8**
SMF pmax pmax
comp=Z,11nm,1.2s
SSB Saint Sauveur 69.37 311 IAmb IAmb 17 39 03.5
comp=Z,7.7nm,1.2s
E21K Killik River 69.38 22 P **P** **17 39 01.8 -0.1**
baz=301
VIVF Saint-Julien-l 69.45 311 *e*P **P** **17 39 02.0 -0.7**
VIVF pmax pmax
comp=Z,17nm,1.3s
L14K Kuka Creek 69.45 30 P **P** **17 39 02.5 +0.1**

	baz=296								
J16K	**Anvik River**	69.47	28	P	P	17 39 02.1	-0.4		
	baz=297								
G19K	**Purcell Mounta**	69.47	24	P	P	17 39 02.0	-0.5		
	baz=299								
H18K	**Honhosa River**	69.48	26	P	P	17 39 02.5	0.0		
	baz=298								
F20K	**Avaraart Lake**	69.50	23	P	P	17 39 02.9	+0.4		
	baz=300								
AVF	**Avril sur Loir**	69.55	313	*e*P	P	17 39 02.5	-0.8		
AVF				pmax	pmax				
	comp=Z,14nm,1.2s								
M13K	**Dall Lake**	69.56	31	P	P	17 39 03.5	+0.5		
	baz=296								
C23K	**Itkillik River**	69.67	20	P	P	17 39 03.9	+0.3		
	baz=303								
KEST	**Kesra**	69.70	300	P	P	17 39 04.5	0.0		
	comp=Z,8.3nm,1.0s,baz=190,slow=2.6,SNR=7.9								
	comp=Z,8.3nm,1.0s								
L15K	**Ungalak Mounta**	69.82	30	P	P	17 39 05.0	+0.3		
	baz=297								
EKA	**Eskdalemuir Ar**	69.91	323	P	P	17 39 04.8	-0.5		
	comp=Z,5.8nm,1.1s,baz=62,slow=7.6,SNR=4.6								
	comp=Z,5.8nm,1.1s								
BGF	**Bois d'Agland**	69.96	313	*e*P	P	17 39 04.9	-0.9		
BGF				pmax	pmax				
	comp=Z,13nm,1.3s								
H19K	**Roundabout Mou**	70.00	25	P	P	17 39 06.5	+0.8		
	baz=300,SNR=7.5								
J17K	**VABM Dome**	70.03	27	P	P	17 39 05.9	0.0		
	baz=298								
M14K	**Bethel**	70.03	31	P	P	17 39 06.2	+0.3		
	baz=296								
D23K	**Nanushuk River**	70.13	20	P	P	17 39 06.8	+0.4		
	baz=303								
F21K	**Alatna River**	70.17	23	IAmb	IAmb	17 39 07.4			
	comp=Z,21nm,1.8s								
F21K	**Alatna River**	70.17	23	P	P	17 39 05.9	-0.9		
	baz=301								
E22K	**Anaktuvuk Pass**	70.23	21	P	P	17 39 06.9	-0.2		
	baz=303								
F22K	**John River**	70.45	22	P	P	17 39 07.9	-0.5		
	baz=302								
G21K	**Allakaket**	70.53	23	P	P	17 39 07.8	-1.2		
	baz=302								
D24K	**Happy Valley**	70.58	20	P	P	17 39 08.8	-0.4		
	baz=305								
H20K	**Anotleneega Mo**	70.58	25	P	P	17 39 08.7	-0.6		
	baz=301								
M15K	**Kasigluk River**	70.61	30	P	P	17 39 09.4	-0.1		
	baz=298								
TOLK	**Toolik Lake Re**	70.64	21	P	P	17 39 09.2	-0.5		
	baz=304								
L16K	**Owhat River**	70.66	29	P	P	17 39 09.6	-0.1		
	baz=298								
K17K	**Iditarod**	70.66	28	P	P	17 39 09.3	-0.5		
	baz=299								
J18K	**Innoko River**	70.92	27	IAmb	IAmb	17 39 13.4			
	comp=Z,8.1nm,1.1s								
J18K	**Innoko River**	70.92	27	P	P	17 39 10.7	-0.6		
	baz=300,SNR=7.3								
L17K	**Donlin**	70.94	28	P	P	17 39 11.6	+0.1		
	baz=299								
E23K	**Chandalar**	70.96	21	P	P	17 39 11.1	-0.5		
	baz=304								
G22K	**Bettles**	70.99	22	P	P	17 39 12.0	+0.3		
	baz=303								
J19K	**Poorman**	71.08	26	P	P	17 39 12.4	+0.1		
	baz=301,SNR=8.0								
N15K	**Kwethluk River**	71.12	31	P	P	17 39 12.1	-0.5		
	baz=298								
CAF	**Calviac**	71.12	311	*e*P	P	17 39 12.8	-0.2		
CAF				pmax	pmax				
	comp=Z,11nm,1.2s								
D25K	**Kavik River**	71.18	19	IAmb	IAmb	17 39 15.0			
	comp=Z,8.3nm,1.1s								
D25K	**Kavik River**	71.18	19	P	P	17 39 12.2	-0.7		
	baz=307,SNR=6.6								
M16K	**Timber Creek**	71.20	30	P	P	17 39 12.7	-0.4		
	baz=299								
C26K	**Camden Bay**	71.23	18	P	P	17 39 12.6	-0.5		
	baz=308								
H21K	**Melozitna Rive**	71.23	24	IAmb	IAmb	17 39 15.5			
	comp=Z,12nm,1.3s								
H21K	**Melozitna Rive**	71.23	24	P	P	17 39 12.9	-0.3		
	baz=302								
COLD	**Coldfoot**	71.24	22	P	P	17 39 13.4	+0.2		
	baz=304								
E24K	**Your Creek**	71.30	21	IAmb	IAmb	17 39 15.3			
	comp=Z,9.2nm,1.1s								
E24K	**Your Creek**	71.30	21	P	P	17 39 13.3	-0.4		
	baz=305,SNR=6.4								
RJF	**Les Rejaudoux**	71.32	312	*e*P	P	17 39 15.2	+1.1		
RJF				pmax	pmax				
	comp=Z,64nm,1.2s								
GRR	**Gorron**	71.51	316	*e*P	P	17 39 14.5	-0.7		
GRR				pmax	pmax				
	comp=Z,26nm,1.4s								
J20K	**Nowinta River**	71.54	26	IAmb	IAmb	17 39 17.7			
	comp=Z,13nm,1.2s								
J20K	**Nowinta River**	71.54	26	P	P	17 39 15.1	+0.1		
	baz=302,SNR=6.2								
N16K	**Nishlik Lake**	71.55	30	P	P	17 39 15.2	-0.1		
	baz=299								
L18K	**Granite Mounta**	71.56	28	IAmb	IAmb	17 39 18.3			
	comp=Z,14nm,1.6s								
L18K	**Granite Mounta**	71.56	28	P	P	17 39 15.3	+0.1		
	baz=300								
G23K	**Bananza Creek**	71.59	22	P	P	17 39 15.2	-0.2		
	baz=304								
H22K	**Ishtalitna Cre**	71.60	23	P	P	17 39 15.3	-0.1		
	baz=304								
M17K	**Holitna River**	71.66	29	P	P	17 39 16.0	+0.2		
	baz=300								
MTLF	**Montolieu**	71.67	310	*e*P	P	17 39 15.8	-0.5		
MTLF				pmax	pmax				
	comp=Z,20nm,1.4s								
O15K	**Ungalikthiuk R**	71.71	32	P	P	17 39 16.4	+0.2		
	baz=299								
C27K	**Jago River**	71.74	18	IAmb	IAmb	17 39 18.2			
	comp=Z,13nm,1.1s								
C27K	**Jago River**	71.74	18	P	P	17 39 16.5	+0.3		
	baz=309,SNR=9.0								
F24K	**Squaw Lake**	71.81	21	P	P	17 39 16.8	+0.1		
	baz=306								
K20K	**Telida**	72.00	26	IAmb	IAmb	17 39 19.9			
	comp=Z,8.4nm,1.2s								
K20K	**Telida**	72.00	26	P	P	17 39 17.9	0.0		
	baz=302								
E25K	**Arctic Village**	72.15	20	P	P	17 39 19.3	+0.5		
	baz=308								
N17K	**Nushagak Hills**	72.21	30	P	P	17 39 19.1	-0.1		
	baz=300								
H23K	**Yukon River**	72.26	23	P	P	17 39 19.6	+0.2		
	baz=305								
O16K	**Kokwok River B**	72.28	31	P	P	17 39 19.7	+0.1		
	baz=300								
M18K	**Stony River**	72.28	28	P	P	17 39 19.5	-0.1		
	baz=301								
MLY	**Manley**	72.30	24	IAmb	IAmb	17 39 21.9			
	comp=Z,9.6nm,1.2s								
MLY	**Manley**	72.30	24	P	P	17 39 19.7	-0.1		
	baz=304								
L19K	**White Mountain**	72.31	28	IAmb	IAmb	17 39 22.4			
	comp=Z,14nm,1.3s								
L19K	**White Mountain**	72.31	28	P	P	17 39 19.2	-0.6		
	baz=302,SNR=5.9								
CHUM	**Lake Minchumin**	72.38	25	P	P	17 39 20.3	+0.2		
	baz=303								
G24K	**Hadweenzic Riv**	72.42	22	P	P	17 39 20.0	-0.3		
	baz=307								
F25K	**Christian Rive**	72.45	20	P	P	17 39 20.3	-0.3		
	baz=308,SNR=6.4								
O17K	**Koliganek Bris**	72.63	30	P	P	17 39 21.3	-0.4		
	baz=301								
M19K	**Big River Lodg**	72.65	28	P	P	17 39 21.9	+0.1		
	baz=302								
N18K	**Kilae Creek**	72.68	29	IAmb	IAmb	17 39 27.0			
	comp=Z,8.8nm,1.2s								
N18K	**Kilae Creek**	72.68	29	P	P	17 39 21.6	-0.3		
	baz=301								
I23K	**Minto, Yukon-K**	72.72	23	IAmb	IAmb	17 39 23.7			
	comp=Z,12nm,1.4s								
I23K	**Minto, Yukon-K**	72.72	23	P	P	17 39 21.9	-0.2		
	baz=306								
CAST	**Castle Rocks**	72.72	26	IAmb	IAmb	17 39 24.6			
	comp=Z,14nm,1.2s								
CAST	**Castle Rocks**	72.72	26	P	P	17 39 21.7	-0.5		
	baz=304,SNR=8.0								
D27M	**Malcolm River**	72.73	18	P	P	17 39 21.3	-0.9		
	baz=312								
H24K	**Noodor Dome**	72.81	23	P	P	17 39 22.7	-0.1		
	baz=307								
G25K	**Bearman Lake**	72.82	21	P	P	17 39 22.4	-0.3		
	baz=308								
F26K	**Sheenjek River**	72.84	20	IAmb	IAmb	17 41 25.8			
	comp=Z,20nm,1.8s								
F26K	**Sheenjek River**	72.84	20	P	P	17 39 23.4	+0.5		
	baz=309								
PPLA	**Purkeypile**	72.97	26	P	P	17 39 23.8	-0.1		
	baz=304,SNR=8.6								
ROSF	**Rostrenen**	72.99	316	*e*P	P	17 39 25.0	+1.0		
ROSF				pmax	pmax				
	comp=Z,31nm,1.4s								
EPF	**Esparros**	73.05	310	*e*P	P	17 39 22.3	-2.3		
EPF				pmax	pmax				
	comp=Z,20nm,1.8s								
BORG	**Borgarnes**	73.12	336	*i* P	P	17 39 22.9	-1.6		
NEA2	**Nenana**	73.14	24	P	P	17 39 24.8	+0.1		
	baz=306								
M20K	**Styx River**	73.16	27	IAmb	IAmb	17 39 32.2			
	comp=Z,12nm,1.2s								
M20K	**Styx River**	73.16	27	P	P	17 39 24.7	-0.2		
	baz=303,SNR=8.3								
N19K	**Bonanza Creek**	73.19	29	IAmb	IAmb	17 39 30.0			
	comp=Z,7.8nm,1.1s								
N19K	**Bonanza Creek**	73.19	29	P	P	17 39 25.0	-0.1		
	baz=302								
SDPT	**Sand Point**	73.25	35	P	P	17 39 26.1	+0.6		
	baz=299								
E27K	**Coleen River**	73.26	19	IAmb	IAmb	17 39 27.0			
	comp=Z,8.0nm,1.1s								
E27K	**Coleen River**	73.26	19	P	P	17 39 25.2	-0.2		
	baz=311								
TRF	**Thotfare Moun**	73.37	25	P	P	17 39 26.2	0.0		
	baz=305								
POKR	**Poker Plat Res**	73.39	23	P	P	17 39 26.2	+0.1		
	baz=307								
COLA	**College**	73.40	23	*ce*P	P	17 39 25.8	-0.3		
COLA				pmax	pmax				
	comp=Z,11nm,1.0s								
O18K	**Koktuh Hills**	73.40	30	P	P	17 39 26.1	-0.2		
	baz=302								
G26K	**Porcupine Rive**	73.42	21	IAmb	IAmb	17 39 28.5			
	comp=Z,8.3nm,1.1s								
G26K	**Porcupine Rive**	73.42	21	P	P	17 39 26.3	0.0		
	baz=310,SNR=5.3								
E28M	**Babbage River**	73.54	18	IAmb	IAmb	17 39 29.2			
	comp=Z,11nm,1.1s								
E28M	**Babbage River**	73.54	18	P	P	17 39 27.0	+0.1		
	baz=313,SNR=6.7								
P18K	**Big Mountain,**	73.64	30	P	P	17 39 27.3	-0.4		
	baz=302								
ETSF	**Etsaut**	73.70	310	*e*P	P	17 39 28.3	-0.1		
ETSF				pmax	pmax				
	comp=Z,4.0nm,0.7s								
L22K	**Petersville**	73.72	26	IAmb	IAmb	17 39 29.7			
	comp=Z,20nm,1.3s								
L22K	**Petersville**	73.72	26	P	P	17 39 28.2	0.0		
	baz=305,SNR=8.9								
SKT	**Skwentna**	73.74	27	IAmb	IAmb	17 39 29.6			
	comp=Z,14nm,1.3s								
SKT	**Skwentna**	73.74	27	P	P	17 39 28.0	-0.3		
	baz=304,SNR=6.2								
ILAR	**Eielson Array**	73.79	23	P	P	17 39 28.4	-0.1		
	comp=Z,2.5nm,1.0s,baz=292,slow=4.9,SNR=22								
	comp=Z,2.5nm,1.0s								
ILAR	**Eielson Array**	73.79	23	P	P	17 39 27.1	-1.4		
RND	**Reindeer**	73.92	25	IAmb	IAmb	17 41 26.2			
	comp=Z,22nm,1.5s								
CUT	**Chulitna**	73.98	26	P	P	17 39 29.7	+0.2		
	baz=305								
R17L	**Mt. Peulik Vol**	74.07	32	P	P	17 39 30.2	0.0		
	baz=302								
F28M	**Old Crow**	74.12	19	P	P	17 39 30.5	+0.1		
	baz=313								
E29M	**Blow River**	74.13	18	P	P	17 39 30.1	-0.2		
	baz=314,SNR=7.8								
Q18K	**Katmai Hardscr**	74.13	31	P	P	17 39 30.2	-0.5		
	baz=303								
G27K	**Doyon Strip**	74.15	20	P	P	17 39 30.4	-0.2		
	baz=312								
WAT1	**Susitna Watana**	74.37	25	P	P	17 39 31.3	-0.6		
	baz=307								
J25K	**Salcha River,**	74.40	23	IAmb	IAmb	17 41 22.4			
	comp=Z,13nm,1.6s								
J25K	**Salcha River,**	74.40	23	P	P	17 39 31.5	-0.6		
	baz=309								
H27K	**Steamboat Moun**	74.58	21	IAmb	IAmb	17 39 35.7			
	comp=Z,12nm,1.1s								
H27K	**Steamboat Moun**	74.58	21	P	P	17 39 32.4	-0.7		
	baz=312,SNR=8.4								
K24K	**Donnelly Dome**	74.77	24	IAmb	IAmb	17 39 35.1			
	comp=Z,13nm,1.0s								
K24K	**Donnelly Dome**	74.77	24	P	P	17 39 33.7	-0.5		
	baz=309								
WAT6	**Susitna Watana**	74.82	25	P	P	17 39 33.8	-0.9		
	baz=307								
PMR	**Palmer**	74.89	26	P	P	17 39 34.7	-0.2		
	baz=306								
RC01	**Rabbit Creek A**	74.95	27	P	P	17 39 34.5	-0.8		
	baz=306								
I27K	**Kandik River**	74.97	21	IAmb	IAmb	17 39 38.1			
	comp=Z,19nm,1.2s								
I27K	**Kandik River**	74.97	21	P	P	17 39 34.9	-0.5		
	baz=312,SNR=13								
SML	**Sawmill**	75.07	26	IAmb	IAmb	17 39 37.8			
	comp=Z,17nm,1.1s								
SML	**Sawmill**	75.07	26	P	P	17 39 35.1	-0.9		
	baz=307,SNR=8.2								
RIDG	**Independent Ri**	75.13	23	P	P	17 39 35.6	-0.8		
	baz=310								
G29M	**Pine Creek**	75.13	19	IAmb	IAmb	17 41 05.1			
	comp=Z,12nm,1.2s								
G29M	**Pine Creek**	75.13	19	P	P	17 39 35.6	-0.6		
	baz=315								
F30M	**Barrier River**	75.24	18	IAmb	IAmb	17 41 05.5			
	comp=Z,15nm,1.1s								
F30M	**Barrier River**	75.24	18	P	P	17 39 36.4	-0.5		
	baz=316,SNR=6.1								
KNK	**Knik Glacier**	75.26	26	P	P	17 39 36.7	-0.4		
	baz=307								
M23K	**Glacier View**	75.31	26	P	P	17 39 36.6	-0.7		
	baz=308								
INK	**Inuvik**	75.31	17	IAmb	IAmb	17 39 39.0			
	comp=Z,12nm,1.2s								
INK	**Inuvik**	75.31	17	P	P	17 39 36.7	-0.5		
	baz=318								
BRSE	**Bradley Lake S**	75.34	28	P	P	17 39 36.9	-0.7		
	baz=306								
PAX	**Paxson**	75.40	24	IAmb	IAmb	17 41 08.4			
	comp=Z,19nm,1.7s								
PAX	**Paxson**	75.40	24	P	P	17 39 37.6	-0.4		
	baz=309								
SCM	**Sheep Creek Mo**	75.43	26	IAmb	IAmb	17 39 40.7			
	comp=Z,19nm,1.4s								
SCM	**Shep Creek Mo**	75.43	26	P	P	17 39 37.8	-0.4		
	baz=308								
H29M	**Whitestone**	75.52	20	IAmb	IAmb	17 41 27.8			
	comp=Z,27nm,1.8s								
H29M	**Whitestone**	75.52	20	P	P	17 39 37.7	-0.7		
	baz=314								
G30M	**tAoh Zraii Nji**	75.58	18	P	P	17 39 38.4	-0.5		
	baz=316,SNR=8.4								
I28M	**Miner Creek**	75.59	21	IAmb	IAmb	17 39 41.9			
	comp=Z,28nm,1.9s								
I28M	**Miner Creek**	75.59	21	P	P	17 39 38.6	-0.4		
	baz=313,SNR=7.4								
PWL	**Port Wells**	75.64	27	P	P	17 39 38.8	-0.5		
	baz=307								
KDAK	**Kodiak Island**	75.68	31	P	P	17 39 39.0	-0.6		
	baz=305								
OHAK	**Old Harbor**	75.69	31	P	P	17 39 38.9	-0.7		
	baz=304								
M24K	**Tolsona, Glenn**	75.69	25	P	P	17 39 39.4	-0.2		
	baz=309								
EPYK	**Eagle Plains**	75.88	19	IAmb	IAmb	17 39 41.9			
	comp=Z,21nm,1.5s								
EPYK	**Eagle Plains**	75.88	19	P	P	17 39 40.2	-0.5		
	baz=316								
F31M	**Tsiigehtchic**	75.90	17	P	P	17 39 40.8	+0.2		
	baz=318								
GLI	**Glacier Island**	76.11	26	P	P	17 39 41.5	-0.4		
	baz=308								
STKA	**Stephens Creek**	76.11	140	P	P	17 39 41.4	-0.9		
	comp=Z,4.3nm,1.0s,baz=24,slow=7.1,SNR=4.3								
	comp=Z,4.3nm,1.0s								
I29M	**Ogilvie Camp,**	76.14	20	P	P	17 39 41.6	-0.4		
	baz=315								
G31M	**Satah River**	76.15	18	IAmb	IAmb	17 39 42.9			
	comp=Z,7.5nm,1.0s								
G31M	**Satah River**	76.15	18	P	P	17 39 41.4	-0.6		
	baz=318								
KLU	**Klutina**	76.17	26	IAmb	IAmb	17 39 44.4			
	comp=Z,12nm,1.2s								
KLU	**Klutina**	76.17	26	P	P	17 39 41.7	-0.7		
	baz=309,SNR=7.7								
P23K	**Montague Islan**	76.53	27	P	P	17 39 43.5	-0.8		
	baz=308								
N25K	**Chitina, Valde**	76.59	25	P	P	17 39 44.1	-0.6		
	baz=310,SNR=6.4								
C36M	**Paulatuk**	76.60	13	P	P	17 39 43.7	-0.8		
	baz=326								
L27K	**Beaver Creek,**	76.60	23	IAmb	IAmb	17 39 47.5			
	comp=Z,9.1nm,1.2s								
L27K	**Beaver Creek,**	76.60	23	P	P	17 39 44.4	-0.3		
	baz=312,SNR=10.0								
BCAR	**Beaver Creek A**	76.61	23		P	17 39 44.1	-0.8		
M26K	**Nabesna, AK**	76.64	24	P	P	17 39 44.7	-0.3		
	baz=311								
I30M	**Mount Dempster**	76.81	20	IAmb	IAmb	17 39 47.5			
	comp=Z,12nm,1.2s								
I30M	**Mount Dempster**	76.81	20	P	P	17 39 45.2	-0.8		
	baz=316,SNR=9.1								
EYAK	**Cordova Ski Ar**	76.83	26	P	P	17 39 46.0	0.0		
	baz=309								
H31M	**Peel River**	76.96	19	P	P	17 39 46.0	-0.7		
	baz=318,SNR=12								
GLB	**Gilahina Butte**	76.98	25	IAmb	IAmb	17 41 04.8			
	comp=Z,14nm,1.7s								
BMRM	**Bremner River**	77.00	26	IAmb	IAmb	17 39 49.0			
	comp=Z,12nm,1.2s								
BMRM	**Bremner River**	77.00	26	P	P	17 39 47.1	+0.1		
	baz=310,SNR=5.3								
M27K	**Edge Creek, AK**	77.06	24	P	P	17 39 47.0	-0.5		
	baz=312,SNR=7.8								
VRDI	**Verde Repeater**	77.25	25	IAmb	IAmb	17 41 04.8			
	comp=Z,23nm,1.8s								
J30M	**Hart River**	77.29	20	P	P	17 39 47.8	-0.9		
	baz=316,SNR=6.6								
MCARA	**McCarthy VSAT**	77.30	25	P	P	17 39 48.8	+0.1		
	baz=312								
BVCY	**Beaver Creek**	77.37	23	P	P	17 39 49.3	+0.2		
	baz=313								
K29M	**Barlow Dome**	77.46	21	P	P	17 39 49.4	-0.2		
	baz=316,SNR=6.3								
ESDC	**Sonseca Array**	77.47	309	P	P	17 39 49.9	-0.3		
	comp=Z,4.1nm,1.1s,baz=48,slow=6.4,SNR=15								
	comp=Z,4.1nm,1.1s								
ESDC	**Sonseca Array**	77.47	309		P	17 39 49.8	-0.3		
CRQE	**Cirque**	77.70	25	P	P	17 39 51.2	+0.1		
	baz=312								
L29M	**L29M**	77.79	22	IAmb	IAmb	17 41 01.7			
	comp=Z,9.6nm,1.1s								
L29M	**L29M**	77.79	22	P	P	17 39 51.8	+0.4		
	baz=315								
YUK3	**Moose Creek**	77.95	24	P	P	17 39 52.6	+0.1		
	baz=314								
M29M	**Somme Creek**	78.15	22	IAmb	IAmb	17 41 07.2			
	comp=Z,8.7nm,1.2s								
M29M	**Somme Creek**	78.15	22	P	P	17 39 53.4	-0.1		
	baz=315,SNR=6.0								
YUK8	**Steele Glacier**	78.53	24	P	P	17 39 55.2	-0.7		
	baz=314								
LSZ	**Lusaka**	78.57	245	P	P	17 39 54.6	-1.9		
LSZ				pmax	pmax				
	comp=Z,10.0nm,1.0s								
LSZ	**Lusaka**	78.57	245		P	17 39 54.6	-1.9		
LSZ				IAmb	IAmb	17 39 57.0			
	comp=Z,9.6nm,0.9s								
M30M	**Minto, Yukon**	78.60	22	P	P	17 39 55.5	-0.4		
	baz=316								
O28M	**Mount Upton**	78.73	24	P	P	17 39 57.0	0.0		
	baz=314								
YUK6	**Outpost Mounta**	79.25	23	P	P	17 39 59.7	-0.1		
	baz=315								
N30M	**Aishikik Lake**	79.31	23	IAmb	IAmb	17 40 56.9			
	comp=Z,13nm,1.4s								
N30M	**Aishikik Lake**	79.31	23	P	P	17 40 00.2	+0.4		
	baz=316								
HYT	**Haines Junctio**	79.63	23	IAmb	IAmb	17 41 03.1			
	comp=Z,15nm,1.5s								
HYT	**Haines Junctio**	79.63	23	P	P	17 40 01.6	-0.1		
	baz=316								
O29M	**Mount Kennedy**	79.63	24	P	P	17 40 02.0	+0.3		
	baz=315								
M31M	**Drury Creek, Y**	79.64	21	P	P	17 40 02.2	+0.6		
	baz=318								
O30N	**Mendenhall**	80.15	23	P	P	17 40 04.2	-0.2		
	baz=317								
MMPY	**Sheldon Lake,**	80.26	20	IAmb	IAmb	17 40 07.7			
	comp=Z,16nm,1.5s								
MMPY	**Sheldon Lake,**	80.26	20	P	P	17 40 05.5	+0.4		
	baz=321								
P30M	**Million Dollar**	80.33	24	P	P	17 40 06.1	+0.7		
	baz=316								
N32M	**Quiet Lake**	80.84	21	P	P	17 40 08.1	0.0		
	baz=320								
PLBC	**Pleasant Camp**	81.02	24	P	P	17 40 08.8	-0.3		
	baz=317								
SKAG	**Skagway**	81.37	23	P	P	17 40 11.6	+0.7		
SKAG				IAmb	IAmb	17 40 13.8			
	comp=Z,8.2nm,1.1s								
SKAG	**Skagway**	81.37	23	P	P	17 40 11.3	+0.4		
	baz=318								
P33M	**Teslin, Yukon**	81.64	22	P	P	17 40 12.6	+0.2		
	baz=320								
P32M	**Atlin**	81.82	23	P	P	17 40 13.2	-0.1		
	baz=319								
S31K	**Pelican**	82.16	25	P	P	17 40 15.4	+0.3		
	baz=317								
SIT	**Sitka**	83.16	25	P	P	17 40 20.9	+0.7		
	baz=318								
DLBC	**Dease Lake**	83.93	22	P	P	17 40 24.4	+0.1		
	baz=322								
S34M	**Telegraph Cree**	83.98	23	P	P	17 40 25.3	+0.8		
	baz=321								
YKA	**Yellowknife Ar**	84.48	13	P	P	17 40 25.8	-1.1		
	comp=Z,0.9nm,0.8s,baz=342,slow=5.1,SNR=5.5								
	comp=Z,0.9nm,0.8s								
YKA	**Yellowknife Ar**	84.48	13	*i* P	P	17 40 26.6	-0.4		
YKA				pm

	comp=E,120nm,1.1s							
TBO					IAML		17 33 13.7	
	comp=N,152nm,1.0s							
AGMN	**Agassiz Nation**	**2.42**	**287**			**Pn**	**17 32 26.4**	**-0.1**
AGMN					IAML		17 33 16.2	
	comp=N,175nm,0.6s							
SPMN	**Marine on St.**	**2.45**	**187**			**Pn**	**17 32 27.1**	**+0.3**
SPMN						**Sn**	**17 32 56.7**	**-0.7**
SPMN					IAmb_Lg		17 32 59.6	
	comp=E,65nm,0.9s							
G40A	**Rib Lake**	**2.82**	**147**			**Pn**	**17 32 31.9**	**-0.1**
G40A					IAmb_Lg		17 33 13.7	
	comp=E,35nm,0.8s							
F33A	**5 Mile Ranch,**	**3.24**	**237**			**Pn**	**17 32 35.8**	**-1.9**
F33A					IAmb_Lg		17 33 30.5	
	comp=E,63nm,0.9s							
ULM	**Lac du Bonnet**	**3.47**	**320**	Pn		**Pn**	**17 32 41.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=141,slow=14,SNR=10							
ULM				Sn		**Sn**	**17 33 23.2**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=126,slow=18,SNR=4.2							
ULM				Lg		Lg	17 33 33.9	
	comp=Z,2.4nm,0.3s,baz=57,slow=20,SNR=36							
	comp=Z,0.5nm,0.4s							
ULM	**Lac du Bonnet**	**3.47**	**320**			**Pn**	**17 32 42.3**	**+1.4**
ULM					IAmb_Lg		17 33 37.5	
	comp=E,36nm,0.7s							
F42A	**Maple Grove Fa**	**3.48**	**121**		IAmb_Lg		17 33 39.1	
	comp=Z,32nm,0.8s							
I10CA	**LAC DU BONNET**	**3.50**	**318**	I		I	17 52 20.0	
	comp=Z,0.1nm,1.0s,baz=137,slow=325,SNR=1.4							
I37A	**Lemond, Waseca**	**3.71**	**191**			**Pn**	**17 32 44.5**	**+0.4**
I40A	**Norwalk**	**3.96**	**161**			**Pn**	**17 32 48.4**	**+0.7**
I40A					IAmb_Lg		17 33 55.5	
	comp=Z,25nm,0.9s							
MDND	**Maddock**	**4.87**	**275**		IAmb_Lg		17 34 28.6	
	comp=Z,29nm,0.9s							
ECSD	**EROS Data Cent**	**4.91**	**219**			**Pn**	**17 33 00.7**	**0.0**
JFWS	**Jewell Farm**	**4.97**	**162**	Pn		**Pn**	**17 33 02.4**	**+0.9**
JFWS					IAmb_Lg		17 34 23.2	
	comp=E,26nm,0.8s							
SUSD	**Miller**	**5.59**	**237**		IAmb_Lg		17 34 37.7	
	comp=E,34nm,0.8s							
L40A	**Anamosa**	**5.65**	**171**		IAmb_Lg		17 34 39.4	
	comp=E,30nm,1.0s							
K43A	**Burlington**	**5.72**	**148**		IAmb_Lg		17 34 46.7	
	comp=E,32nm,1.0s							
E28A	**Huff**	**5.77**	**262**		IAmb_Lg		17 34 48.6	
	comp=E,30nm,0.8s							
SCIA	**State Center**	**5.78**	**186**		IAmb_Lg		17 34 53.1	
	comp=E,25nm,0.9s							
L42A	**Oliver, Polo**	**5.97**	**160**			**Pn**	**17 33 16.8**	**+1.6**
L42A					IAmb_Lg		17 34 50.3	
	comp=E,24nm,0.9s							
N35A	**Tabor**	**7.18**	**200**		IAmb_Lg		17 35 43.9	
	comp=E,22nm,1.0s							
CCM	**Cathedral Cave**	**9.63**	**175**		IAmb_Lg		17 36 46.5	
	comp=E,7.0nm,0.9s							
I56US	**NEWPORT INFRAST**	**16.57**	**281**		I	I	19 09 40.0	
	baz=85,slow=315,SNR=11							
TXAR	**Lajitas Array**	**20.27**	**210**	P		**P**	**17 36 23.2**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=27,slow=13,SNR=3.0							
	comp=Z,0.2nm,0.6s							

*IDC **29** 17:35:08.7±1.2,39.64N×139.56E, h0km, mb3.5/4, mbtmp3.3/8, ML3.0/4, MS2.7/2, Error ellipse: s-maj=33.1km s-min=18.6km az=106.0*

*NIED **29** 17:35:10.4,39.81N×139.79E, h16km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.11; $M_{\theta\theta}$2.28; $M_{\phi\phi}$-2.38; $M_{r\theta}$-0.30; $M_{r\phi}$0.44; $M_{\theta\phi}$0.35; Fault plane solution: $M_0$2.41000×10^{14} NP1: ϕ_s220.00000°, δ79.00000°, λ-179.00000°. NP2: ϕ_s130.00000°, δ89.00000°, λ-11.00000°.*

*JMA **29** 17:35:10.4±0.1,39.8N±0.2×139.8E±0.3, h16km, MD3.9/33, MV4.1/33, OGA PENINSULA REGION*

JMA Felt II J1 at OGA PENINSULA REGION .

ISC 29 17:35:09.9±1.2,39.78N±0.03×139.75E±0.05, h9km±9km, n23, σ1§96/22, mb3.5/4, 4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYW	**Yuwa**	**0.43**	**124**	*i* P		**Pg**	**17 35 18.9**	**+0.6**
JYW				A		A	17 35 18.9	
	comp=N,17nm,0.2s,comp=E,13nm,1.2s							
JYW				*eS*		**Sb**	**17 35 25.3**	**-0.9**
JOG3	**Oga3**	**0.53**	**285**	*i* P		Pg	17 35 13.8	-6.3
JOG3				A		A	17 35 13.8	
	comp=N,139nm,0.3s,comp=E,47nm,0.5s							
JOG3				S		Sg	17 35 16.4	-11
JNTW	**Noshirotokiwa**	**0.59**	**33**	*i* P		**Pg**	**17 35 21.3**	**+0.1**
JNTW				A		A	17 35 21.3	
	comp=N,7.0nm,2.2s,comp=E,7.0nm,0.9s							
JNTW				S		**Sb**	**17 35 28.9**	**-1.8**
JTB	**Tobi-shima**	**0.60**	**194**	*i* P		**Pg**	**17 35 22.7**	**+1.2**
JTB				*eS*		**Sg**	**17 35 31.5**	**+2.1**
JRG	**Rokugo**	**0.79**	**119**	↓*i* P		**Pb**	**17 35 25.0**	**-0.7**
JRG				A		A	17 35 25.0	
	comp=N,27nm,0.5s,comp=E,23nm,0.4s							
JRG				↓*eS*		**Sg**	**17 35 35.2**	**-0.1**
JAH	**Hinai**	**0.80**	**59**	↓*i* P		**Pg**	**17 35 24.6**	**-0.6**
JAH				↓*eS*		**Sg**	**17 35 34.2**	**-1.4**
JIW	**Iwasaki**	**0.84**	**14**	*i* P		**Pb**	**17 35 25.5**	**-1.1**
JIW				A		A	17 35 25.5	
	comp=N,5.0nm,0.4s,comp=E,6.0nm,0.7s							
JIW				*eS*		**Sb**	**17 35 36.4**	**-1.6**
JYA	**Atsumi**	**1.19**	**181**	A		A	17 35 32.5	
	comp=N,4.0nm,2.4s,comp=E,4.0nm,1.0s							
MJAR	**Matsushiro Arr**	**3.45**	**201**	Pn		**Pn**	**17 36 03.0**	**-0.8**
	comp=E,0.3nm,0.3s,baz=78,slow=18,SNR=49							
MJAR				Sn		**Sn**	**17 36 42.8**	**-2.0**
	comp=E,0.7nm,0.3s,baz=19,slow=23,SNR=5.1							
MJAR				LR		LR	17 37 19.8	
	comp=E,19nm,21.0s,baz=20,slow=40							
	comp=E,1.7nm,0.3s							
ASAJ	**Asahikawa**	**4.83**	**25**	Pn		**Pn**	**17 36 26.0**	**+3.4**
	comp=E,0.6nm,0.3s,baz=208,slow=20,SNR=5.1							
ASAJ				Sn		**Sn**	**17 37 23.5**	**+4.9**
	baz=218,slow=19							
	comp=E,2.4nm,0.5s							
USRK	**Ussuriysk Ar.**	**7.27**	**310**	Pn		**Pn**	**17 36 55.5**	**-0.6**
	comp=E,0.4nm,0.3s,baz=114,slow=14,SNR=6.0							
	comp=E,1.2nm,0.3s							
KSRS	**Korea Array**	**9.54**	**260**	Pn		**Pn**	**17 37 25.9**	**-1.4**
	comp=E,0.3nm,0.3s,baz=64,slow=14,SNR=5.7							
	comp=E,0.2nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**30.70**	**123**	T		T	18 12 16.5	
	baz=317,slow=75,SNR=19							
H11N1	**WAKE ISLAND Hy**	**30.71**	**123**	T		T	18 12 16.9	
	baz=317,slow=75,SNR=26							
H11N3	**WAKE ISLAND Hy**	**30.72**	**123**	T		T	18 12 20.1	
	baz=317,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**31.47**	**125**	T		T	18 13 14.8	
	baz=318,slow=76,SNR=4.1							
H11S3	**WAKE ISLAND Hy**	**31.47**	**125**	T		T	18 13 17.6	
	baz=318,slow=76,SNR=4.4							
H11S2	**WAKE ISLAND Hy**	**31.49**	**125**	T		T	18 13 15.9	
	baz=318,slow=76,SNR=3.8							
ILAR	**Eielson Array**	**47.91**	**34**	P		**P**	**17 43 50.3**	**+2.3**
	comp=E,0.3nm,0.7s,baz=278,slow=7.3,SNR=2.3							
	comp=E,0.3nm,0.7s							
WRA	**Warramunga Arr**	**59.62**	**186**	P		**P**	**17 45 12.2**	**-2.0**
	comp=E,0.1nm,0.4s,baz=5.6,slow=7.1,SNR=1.5							
	comp=E,0.1nm,0.4s							
ASAR	**Alice Springs**	**63.35**	**186**	P		**P**	**17 45 38.5**	**-0.9**
	comp=E,0.4nm,1.0s,baz=1.2,slow=7.1,SNR=1.8							
	comp=E,0.4nm,1.0s							
KBZ	**Khabaz**	**68.14**	**309**	P		**P**	**17 46 10.1**	**+0.1**
	comp=E,1.5nm,0.6s,baz=85,slow=6.9,SNR=2.4							
	comp=E,1.5nm,0.6s							
VRAC	**Vranov**	**78.11**	**326**	LR		LR	18 26 50.1	
	comp=E,31nm,18.6s,baz=224,slow=40							

*IDC **29** 17:53:35.5±2.2,20.67S×178.53W, h554km±21km, mb3.2/7, mbtmp4.1/9, Error ellipse: s-maj=28.7km s-min=19.0km az=133.0*

*NEIC **29** 17:53:35.6±1.1,20.7S±0.1×178.4W±0.1, h558km±7km, mb4.1/25, Error ellipse: s-maj=20.8km s-min=17.3km az=132.0*

ISC 29 17:53:34.9±0.5,20.7S±0.1×178.47W±0.10, h550km, n47, σ0§80/47, mb4.0/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.40**	**311**	P		**P**	**17 54 59.9**	**-0.1**
	12nm,0.6s,baz=126,slow=22,SNR=7.6							
MSVF	**Nonsavu**	**4.40**	**311**	P		**P**	**17 55 00.4**	**+0.3**
NIUE	**Niue**	**8.19**	**80**	P		**P**	**17 55 35.2**	**+0.6**
DZM	**Mont Dzumac**	**14.12**	**262**	P		**P**	**17 56 37.1**	**+1.5**
	6.3nm,0.9s,baz=95,slow=12,SNR=1.6							
WHZ	**Wether Hill Ro**	**27.52**	**201**	P		**P**	**17 58 37.9**	**+0.4**
EIDS	**Eidsvold**	**28.38**	**255**	P		**P**	**17 58 45.8**	**+0.4**
TOO	**Toolangi**	**35.44**	**234**	P		**P**	**17 59 45.8**	**+0.4**
STKA	**Stephens Creek**	**37.32**	**244**	P		**P**	**18 00 01.0**	**+0.1**
	1.4nm,0.6s,baz=96,slow=10,SNR=3.0							
	1.4nm,0.6s							
INKA	**Innaminka**	**37.73**	**251**	P		**P**	**18 00 05.0**	**+0.7**
BBOO	**Buckleboo**	**42.08**	**244**	P		**P**	**18 00 38.6**	**-0.5**
WR8	**Warramunga Arr**	**43.99**	**262**	P		**P**	**18 00 53.7**	**-0.4**
WR8					IAmb	IAmb	18 01 22.1	
	comp=Z,8.3nm,1.3s							
AS31	**Alice Springs**	**44.05**	**257**	P		**P**	**18 00 54.3**	**-0.3**
ASAR	**Alice Springs**	**44.05**	**257**	P		**P**	**18 00 54.4**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=92,slow=8.1,SNR=97							
ASAR				PcP		**PcP**	**18 02 27.9**	**0.0**
	comp=Z,0.7nm,0.6s,baz=105,slow=3.8,SNR=9.4							
	comp=Z,3.1nm,0.6s							
ASAR	**Alice Springs**	**44.05**	**257**	P		**P**	**18 00 54.0**	**-0.6**
WB0	**Warramunga Arr**	**44.12**	**263**	P		**P**	**18 00 54.8**	**-0.3**
WB0					IAmb	IAmb	18 01 34.6	
	comp=Z,4.7nm,1.1s							
WRA	**Warramunga Arr**	**44.14**	**262**	P		**P**	**18 00 54.6**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=96,slow=7.3,SNR=95							
	comp=Z,1.4nm,0.3s							
MTN	**Manton Dam**	**48.73**	**271**	P		**P**	**18 01 29.7**	**-0.3**
MTN					IAmb	IAmb	18 01 37.3	
	comp=Z,8.0nm,1.2s							
FORT	**Forrest**	**48.82**	**247**	P		**P**	**18 01 29.9**	**-0.7**
FORT					IAmb	IAmb	18 02 03.7	
	comp=Z,6.8nm,1.1s							
KNRA	**Kununurra**	**50.21**	**267**	P		**P**	**18 01 40.8**	**-0.1**
KNRA					IAmb	IAmb	18 01 47.3	
	comp=Z,9.2nm,1.3s							
MBWA	**Marble Bar**	**57.39**	**258**	P		**P**	**18 02 31.2**	**-0.4**
CASY	**Casey**	**63.62**	**205**	P		**P**	**18 03 11.8**	**0.0**
QSPA	**South Pole Qui**	**69.39**	**180**	P		**P**	**18 03 48.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=50,slow=4.8,SNR=7.0							
	comp=Z,1.2nm,0.7s							
ATKA	**Atka Island**	**72.66**	**3**	P		**P**	**18 04 07.2**	**+0.5**
PETK	**Petropavlovsk-**	**76.33**	**345**	P		**P**	**18 04 28.4**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=167,slow=6.6,SNR=2.4							
	comp=Z,2.3nm,0.8s							
BELA	**Belgrano 2**	**79.44**	**173**	P		**P**	**18 04 43.6**	**-0.3**
O16K	**Kokwok River B**	**81.70**	**10**	P		**P**	**18 04 55.8**	**+0.1**
O16K					IAmb	IAmb	18 05 12.7	
	comp=Z,5.2nm,1.1s							
N19K	**Bonanza Creek**	**83.49**	**12**	P		**P**	**18 05 04.8**	**0.0**
N19K					IAmb	IAmb	18 05 05.8	
	comp=Z,4.2nm,1.2s							
PWL	**Port Wells**	**84.82**	**14**	P		**P**	**18 05 11.8**	**+0.6**
PWL					IAmb	IAmb	18 05 39.1	
	comp=Z,4.6nm,1.1s							
TRF	**Thorofare Moun**	**86.71**	**12**	P		**P**	**18 05 20.6**	**+0.1**
TRF					IAmb	IAmb	18 05 21.6	
	comp=Z,3.9nm,0.9s							
RND	**Reindeer**	**86.97**	**13**	P		**P**	**18 05 21.8**	**+0.3**
RND					IAmb	IAmb	18 05 23.2	
	comp=Z,3.0nm,0.7s							
TXAR	**Lajitas Array**	**87.52**	**58**	P		**P**	**18 05 25.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=236,slow=4.3,SNR=4.5							
	comp=Z,0.4nm,0.8s							
HDA	**Harding Lake**	**88.25**	**13**	P		**P**	**18 05 27.6**	**+0.2**
HDA					IAmb	IAmb	18 05 28.7	
	comp=Z,1.9nm,0.5s							
CCB	**Clear Creek Bu**	**88.28**	**13**	P		**P**	**18 05 27.4**	**0.0**
CCB					IAmb	IAmb	18 05 28.3	
	comp=Z,1.9nm,0.6s							
ILAR	**Eielson Array**	**88.58**	**13**	P		**P**	**18 05 28.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=223,slow=5.5,SNR=5.5							
	comp=Z,0.5nm,0.6s							
H22K	**Ishtalitna Cre**	**88.72**	**11**	P		**P**	**18 05 29.9**	**+0.3**
J25K	**Salcha River,**	**88.77**	**14**	P		**P**	**18 05 30.4**	**+0.5**
J25K					IAmb	IAmb	18 05 45.5	
	comp=Z,4.0nm,1.5s							
SONM	**Songino Array**	**95.60**	**319**	PP		**PP**	**18 10 02.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=146,slow=5.1,SNR=3.8							
MKAR	**Makanchi Array**	**111.00**	**313**	PKiKP		**PKiKP**	**18 11 05.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=80,slow=1.8,SNR=1.6							
GAR	**Garm**	**118.95**	**304**			**PKPdf**	**18 11 18.9**	**-2.7**
HFS	**Hagfors**	**139.64**	**351**	PKhKP		PKPpre	18 11 52.0	
	comp=Z,5.2nm,1.1s,baz=50,slow=4.6,SNR=4.5							
AKASG	**Malin Array Be**	**142.95**	**331**	PKP		**PKPdf**	**18 12 03.4**	**-2.6**
	comp=Z,1.8nm,0.4s,baz=44,slow=4.1,SNR=16							
EKA	**Eskdalemuir Ar**	**145.22**	**5**	PKPbc		**PKPdf**	**18 12 10.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=306,slow=2.0,SNR=1.9							
BRTR	**Keskin Array B**	**146.63**	**312**	PKPbc		**PKPbc**	**18 12 15.2**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=139,slow=3.8,SNR=6.0							
MMAI	**Mount Meron Ar**	**147.52**	**299**	PKPbc		**PKPbc**	**18 12 17.6**	**-0.4**
	comp=Z,4.4nm,0.6s,baz=50,slow=2.2,SNR=3.7							
CLL	**Collm**	**148.13**	**346**	*i* PKPbc		**PKPbc**	**18 12 19.0**	**+0.2**
GEC2	**GERESS Array S**	**150.25**	**344**			**PKPab**	**18 12 30.6**	**-2.1**
GERES	**GERESS Array B**	**150.25**	**344**	PKPbc		**PKPbc**	**18 12 24.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=23,slow=1.7,SNR=4.9							

*IDC **29** 18:20:56.0±0.8,27.43N×142.49E, h100km±6km, mb3.4/4, mbtmp3.7/6, Error ellipse: s-maj=35.4km s-min=15.3km az=105.0*

*JMA **29** 18:20:57.1±0.2,27.4N±0.9×14 2E±, h116km, MV3.6/13, NEAR CHICHIJIMA ISLAND*

ISC 29 18:20:54.6±1.1,27.58N±0.07×142.9E±0.2, h100km, n18, σ2§08/18, mb3.7/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.79**	**232**	P		**Pn**	**18 21 13.8**	**+0.9**
CBIJ				*eS*		**Sn**	**18 21 26.7**	**+0.1**
JCJ	**Chichijima**	**0.79**	**232**	P		**Pn**	**18 21 12.5**	**-0.4**
	632nm,0.4s,baz=283,slow=23,SNR=112							
JCJ				S		**Sn**	**18 21 24.6**	**-1.9**
	627nm,0.3s,baz=295,slow=22,SNR=10							
JHH2	**Haha-jima-NKT2**	**1.14**	**214**	P		**Pn**	**18 21 16.8**	**+0.2**
JHH2				S		**Sn**	**18 21 31.5**	**-1.6**
BSO1	**Boso 1**	**7.24**	**347**	*eP*		**Pn**	**18 22 39.2**	**+2.1**
JHO	**Hitachi**	**9.21**	**348**	P		**Pn**	**18 23 04.9**	**+0.3**
JHO				S		**Sn**	**18 24 43.4**	**-3.0**
JAG	**Ashikaga**	**9.29**	**343**	*eP*		**Pn**	**18 23 03.8**	**-1.8**
MJAR	**Matsushiro Arr**	**9.77**	**337**	P		**Pn**	**18 23 14.3**	**+2.1**
	0.2nm,0.3s,baz=145,slow=17,SNR=2.2							
ASAJ	**Asahikawa**	**16.50**	**359**	P		**P**	**18 24 44.2**	**+3.4**
	1.4nm,0.4s,baz=166,slow=12,SNR=2.7							
H11N2	**WAKE ISLAND Hy**	**23.31**	**104**	T		T	18 51 00.6	
	baz=293							
H11N1	**WAKE ISLAND Hy**	**23.32**	**104**	T		T	18 51 02.9	
	baz=293							
H11N3	**WAKE ISLAND Hy**	**23.33**	**104**	T		T	18 51 01.7	
	baz=293							
H11S3	**WAKE ISLAND Hy**	**23.66**	**107**	T		T	18 51 34.4	
	baz=295							
H11S1	**WAKE ISLAND Hy**	**23.67**	**107**	T		T	18 51 32.1	
	baz=295							
H11S2	**WAKE ISLAND Hy**	**23.68**	**107**	T		T	18 51 33.3	
	baz=295							
WRA	**Warramunga Arr**	**47.96**	**191**	P		**P**	**18 29 22.6**	**-0.7**
	0.5nm,0.4s,baz=11,slow=8.5,SNR=12							
WRA				pP		**pP**	**18 29 47.5**	**+1.6**
	0.9nm,0.6s,baz=11,slow=8.5,SNR=5.2							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**51.68**	**191**	P		**P**	**18 29 50.5**	**-1.0**
	0.4nm,1.0s,baz=9.5,slow=5.8,SNR=5.5							
ASAR				pP		**pP**	**18 30 16.5**	**+2.1**
	0.6nm,1.1s,baz=12,slow=8.5,SNR=2.1							
	0.4nm,1.0s							
DLBC	**Dease Lake**	**65.45**	**35**	P		P	18 31 31.6	+4.8
	0.5nm,0.5s,baz=293,slow=9.1,SNR=2.5							
DLBC				pP		**PcP**	**18 31 53.8**	**-4.1**
	1.4nm,0.5s,baz=18,slow=22,SNR=5.0							
	0.5nm,0.5s							
FINES	**FINESS Array B**	**77.79**	**334**	P		**P**	**18 32 41.2**	**+0.7**
	1.1nm,0.6s,baz=1.4,slow=8.0,SNR=5.4							
	1.1nm,0.6s							

*IDC **29** 18:36:30.5±6.9,19.24S×176.01W, h270km±46km, mb3.6/5, mbtmp4.2/6, Error ellipse: s-maj=81.7km s-min=26.3km az=129.0*

*NEIC **29** 18:36:31.9±1.6,19.1S±0.2×176.1W±0.2, h273km±9km, mb4.1/13, Error ellipse: s-maj=35.2km s-min=18.4km az=161.0*

ISC 29 18:36:28.5±1.2,19.3S±0.3×175.9W±0.2, h250km, n23, σ1§16/24, mb3.9/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.93**	**284**	P		**Pn**	**18 37 57.2**	**+1.4**
	12nm,0.5s,baz=341,slow=18,SNR=16							
CTA	**Charters Tower**	**35.57**	**262**	P		**P**	**18 43 02.7**	**+0.1**
	4.7nm,0.8s,baz=88,slow=12,SNR=4.1							
	4.7nm,0.8s							
CTAO	**Charters Tower**	**35.57**	**262**	P		**P**	**18 43 02.6**	**+0.1**
CTAO					IAmb	IAmb	18 43 03.5	
	comp=Z,7.8nm,1.0s							
WR8	**Warramunga Arr**	**46.56**	**260**	P		**P**	**18 44 30.4**	**-1.4**
WR8					IAmb	IAmb	18 45 08.0	
	comp=Z,6.2nm,1.2s							
WB0	**Warramunga Arr**	**46.69**	**261**	P		**P**	**18 44 31.7**	**-1.1**
WB0					IAmb	IAmb	18 44 50.4	
	comp=Z,5.0nm,1.2s							
AS31	**Alice Springs**	**46.70**	**255**	P		**P**	**18 44 31.9**	**-1.0**
ASAR	**Alice Springs**	**46.70**	**255**	P		**P**	**18 44 32.3**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=91,slow=8.5,SNR=94							
ASAR				PcP		**PcP**	**18 46 01.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=91,slow=3.5,SNR=2.9							
	comp=Z,4.0nm,0.6s							
ASAR	**Alice Springs**	**46.70**	**255**	P		**P**	**18 44 31.6**	**-1.3**
WRA	**Warramunga Arr**	**46.71**	**260**	P		**P**	**18 44 32.2**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=98,slow=7.0,SNR=35							
	comp=Z,0.7nm,0.3s							
WRA	**Warramunga Arr**	**46.71**	**260**	P		**P**	**18 44 32.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**55.13**	**261**	P		**P**	**18 45 35.6**	**+0.1**
MJAR	**Matsushiro Arr**	**70.44**	**322**	P		**P**	**18 47 15.1**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=152,slow=6.5,SNR=6.8							
	comp=Z,1.5nm,0.6s							
MJAR	**Matsushiro Arr**	**70.44**	**322**	P		**P**	**18 47 15.0**	**-0.8**
MJAR					IAmb	IAmb	18 47 16.2	
	comp=Z,1.6nm,0.8s							
PETK	**Petropavlovsk-**	**75.64**	**344**	P		**P**	**18 47 45.2**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=162,slow=5.2,SNR=1.4							
	comp=Z,1.0nm,0.7s							
L16K	**Owhat River**	**81.80**	**8**	P		**P**	**18 48 19.0**	**-0.1**
K15K	**Wolf Creek Mou**	**82.12**	**7**	P		**P**	**18 48 21.0**	**+0.2**
K20K	**Telida**	**84.15**	**10**	P		**P**	**18 48 31.0**	**-0.1**
K20K					IAmb	IAmb	18 48 41.8	
	comp=Z,4.7nm,1.5s							
RND	**Reindeer**	**85.12**	**12**	P		**P**	**18 48 35.2**	**-0.9**
RND					IAmb	IAmb	18 48 36.2	
	comp=Z,5.6nm,1.3s							
PLPT	**Palo Pinto**	**90.38**	**55**	P		**P**	**18 49 02.4**	**+0.7**
PLPT					IAmb	IAmb	18 49 43.1	
	comp=Z,4.2nm,0.7s							
ARCES	**ARCESS Array B**	**128.09**	**351**	PKP		**PKPdf**	**18 55 02.4**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=46,slow=3.5,SNR=4.5							
CLL	**Collm**	**147.30**	**350**	ePKPbc		**PKPdf**	**18 55 42.0**	**+2.4**
BRTR	**Keskin Array B**	**147.43**	**315**	PKPbc		**PKPdf**	**18 55 43.0**	**+2.5**
	comp=Z,0.5nm,0.6s,baz=130,slow=4.9,SNR=4.1							
GERES	**GERESS Array B**	**149.52**	**347**	PKPbc		**PKPbc**	**18 55 47.9**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=40,slow=1.9,SNR=3.6							

*IDC **29** 18:41:13.3±0.8,37.62S×177.07E, h147km±5km, mb3.5/7, mbtmp4.0/8, Error ellipse: s-maj=32.4km s-min=19.0km az=61.0*

*NOU **29** 18:41:13.7,38.00S×177.00E, h170km, MLv4.2/17, North Island, New Zealand*

*NEIC **29** 18:41:14.6±2.4,37.85S±0.07×176.91E±0.07, h156km±4km, mb4.0/9, Error ellipse: s-maj=10.7km s-min=8.2km az=179.0*

*WEL **29** 18:41:17.1,37.72S×176.88E, ML4.2, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.02; $M_{\theta\theta}$-3.37; $M_{\phi\phi}$-2.01; $M_{r\theta}$1.62; $M_{r\phi}$-0.15; $M_{\theta\phi}$1.18; Fault plane solution: $M_0$3.71000×10^{15} NP1:ϕ_s54.00000°, δ83.00000°, λ74.00000°. NP2:ϕ_s301.00000°, δ17.00000°, λ156.00000°. Principal axes: T 2.0819, Plg50.0000°, Azm307.0000°; N 0.1495, Plg16.0000°, Azm56.0000°; P -2.2314, Plg36.0000°, Azm158.0000°; Stations used: HAZ HIZ KNZ MKAZ MWZ MXZ OTVZ PUZ RATZ TOZ URZ WIZ OBLIQUE FAULTING*

*WEL **29** 18:41:17.1±1.1,38 S±6 ×17 7E±, h132km±9km, M4.2/110, ML3.1/8, MLv4.2/110 Error ellipse: s-maj=8.1km s-min=6.8km az=21.2*

**ISC 29 18:41:14.9±0.6,37.91S±0.04×176.86E±

RATZ	Rangitukua	1.28 222	P		Pn	18 41 44.3	+0.7	
BKZ	Black Stump Fm	1.28 193	P		Pn	18 41 43.9	+0.2	
BKZ	Black Stump Fm	1.28 193	S		Sn	18 42 05.2	-0.8	
BKZ	Black Stump Fm	1.28 193	P		Pn	18 41 44.1	+0.4	
PRGZ	Paritu Road	1.29 142	P		Pn	18 41 44.3	+0.7	
PRGZ			S		Sn	18 42 07.1	+1.1	
RITZ	Rihia Road	1.32 216	P		Pn	18 41 44.9	+0.9	
ARHZ	Aropaoanui	1.35 176	P		Pn	18 41 45.5	+1.2	
KATZ	Kakaramea	1.40 220	P		Pn	18 41 45.5	+0.7	
MHGZ	Mahia Peninsul	1.48 147	P		Pn	18 41 46.6	+1.1	
NTVZ	North Tongarir	1.50 218	P		Pn	18 41 46.5	+0.6	
TMVZ	Te Maari	1.50 217	P		Pn	18 41 46.5	+0.6	
ETVZ	East Tongariro	1.52 216	P		Pn	18 41 45.5	-0.5	
KRVZ	Karewarewa	1.52 219	P		Pn	18 41 46.7	+0.7	
MCHZ	McNeill Hill	1.54 185	P		Pn	18 41 47.3	+1.3	
KWHZ	Kaweka Forest	1.55 193	P		Pn	18 41 47.1	+0.9	
OTVZ	Oturere	1.56 217	P		Pn	18 41 47.4	+0.9	
WTVZ	West Tongariro	1.56 219	P		Pn	18 41 47.1	+0.7	
MKAZ	Moumakai	1.57 300	P		Pn	18 41 46.5	0.0	
SNVZ	South Ngauruho	1.59 217	P		Pn	18 41 47.7	+0.9	
NGZ	Ngauruhoe	1.60 218	P		Pn	18 41 47.7	+0.8	
TWVZ	Taurewa	1.61 224	P		Pn	18 41 47.7	+0.8	
COVZ	Chateau Observ	1.65 218	P		Pn	18 41 47.9	+0.6	
TUVZ	Tukino	1.65 215	P		Pn	18 41 48.2	+0.8	
FWVZ	Far West T-bar	1.69 217	P		Pn	18 41 48.3	+0.5	
HIZ	Hauiti	1.69 249	P		Pn	18 41 48.5	+0.9	
HIZ	Hauiti	1.69 249				18 41 48.6	+0.9	
HIZ	Hauiti	1.69 249	P		Pn	18 41 48.7	+1.1	
WHVZ	Whangaehu Hut	1.69 216	P		Pn	18 41 48.5	+0.6	
MAVZ	Matarangi	1.69 217	P		Pn	18 41 48.6	+0.6	
BHHZ	Black Hill Sta	1.69 201	P		Pn	18 41 48.2	+0.5	
TRVZ	Turoa	1.72 216	P		Pn	18 41 49.0	+0.7	
WNVZ	Wahianoa	1.72 215	P		Pn	18 41 48.8	+0.6	
MOVZ	Moawhango	1.73 210	P		Pn	18 41 48.3	+0.2	
CKHZ	Cape Kidnapper	1.75 175	P		Pn	18 41 49.4	+1.1	
KRHZ	Kereru	1.77 192	P		Pn	18 41 49.0	+0.5	
WIAZ	Waiheke Island	1.77 309	P		Pn	18 41 48.5	-0.1	
ETAZ	East Tamaki Re	1.81 301	P		Pn	18 41 49.2	+0.3	
PKVZ	Pokaka	1.82 220	P		Pn	18 41 49.8	+0.7	
MTVZ	Mangateitei	1.83 216	P		Pn	18 41 50.0	+0.8	
KAHZ	Kahuranaki	1.88 180	P		Pn	18 41 50.8	+1.1	
MBAZ	Motutapu North	1.94 306	P		Pn	18 41 50.5	+0.2	
AWAZ	Awhitu Peninsu	1.96 295	P		Pn	18 41 50.8	+0.2	
EPAZ	Eden Park BICE	1.98 301	P		Pn	18 41 50.9	+0.2	
HBAZ	Herne Bay Bore	2.00 301	P		Pn	18 41 51.2	+0.2	
GRZ	Great Barrier	2.00 326	P		Pn	18 41 50.5	-0.6	
VRZ	Vera Road	2.04 233	P		Pn	18 41 52.5	+1.0	
PNHZ	Pukenui	2.06 194	P		Pn	18 41 51.9	+0.1	
WTAZ	Waiatarua	2.07 298	P		Pn	18 41 52.1	+0.3	
ABAZ	Army Bay	2.08 308	P		Pn	18 41 52.2	+0.3	
PXZ	Pawanui	2.12 180	P		Pn	18 41 52.9	+0.6	
RVAZ	Riverhead Bore	2.15 301	P		Pn	18 41 52.7	+0.1	
WPHZ	Waipukurau	2.17 189	P		Pn	18 41 53.4	+0.4	
TSZ	Takapari Road	2.25 198	P		Pn	18 41 54.0	+0.1	
WAZ	Wanganui	2.35 218	Pn		Pn	18 41 55.5	+0.4	
WAZ	Wanganui	2.35 218	P		Pn	18 41 55.8	+0.8	
PRHZ	Porangahau	2.36 184	P		Pn	18 41 55.6	+0.5	
DVHZ	Dannevirke	2.44 193	P		Pn	18 41 56.0	-0.1	
LREZ	Lake Rotokare	2.47 230	P		Pn	18 41 58.2	+1.8	
NEZ	North Egmont	2.56 237	P		Pn	18 41 59.6	+2.1	
ANWZ	Angora Road	2.56 187	P		Pn	18 41 58.0	+0.5	
OHWZ	Ohakea	2.59 207	P		Pn	18 41 58.7	+0.9	
PKE	Pukeiti	2.59 240	P		Pn	18 41 59.6	+1.7	
POWZ	Post Office Ro	2.62 199	P		Pn	18 41 58.3	+0.1	
KHEZ	Kahui Hut	2.62 237	P		Pn	18 41 59.4	+1.1	
KHEZ	Kahui Hut	2.62 237	P		Pn	18 42 00.1	+1.8	
NBEZ	Newall Road No	2.71 239	P		Pn	18 42 01.7	+1.8	
PRWZ	Pori Road	2.73 194	P		Pn	18 41 59.8	+0.3	
BFZ	Birch Farm	2.81 190	P		Pn	18 42 00.3	-0.2	
BFZ	Birch Farm	2.81 190	S		Sn	18 42 33.6	-2.4	
BFZ	Birch Farm	2.81 190				18 42 00.3	-0.2	
BFZ	Birch Farm	2.81 190	P		Pn	18 42 00.4	-0.2	
WCZ	Waipu Caves	2.82 314	P		Pn	18 42 00.7	0.0	
MRZ	Mangatainoka R	2.92 200			Pn	18 42 01.2	-0.6	
MRZ	Mangatainoka R	2.92 200	P		Pn	18 42 01.4	-0.5	
TIWZ	Tintock	2.96 195	P		Pn	18 42 02.3	-0.1	
CPWZ	Castlepoint	3.04 189	P		Pn	18 42 03.7	+0.4	
HOWZ	Holdsworth Sta	3.16 199	P		Pn	18 42 04.2	-0.7	
OGWZ	Otaki Gorge	3.18 204	P		Pn	18 42 04.5	-0.6	
TMWZ	Te Maipa	3.28 193	P		Pn	18 42 06.0	-0.4	
KIW	Kapiti Island	3.31 207	P		Pn	18 42 05.9	-0.8	
MTW	Mount Morrison	3.41 198	P		Pn	18 42 06.9	-1.1	
CAW	Cannon Point	3.48 203	P		Pn	18 42 07.9	-1.0	
TRWZ	Traveller	3.60 194	P		Pn	18 42 09.6	-0.8	
PAWZ	Paruwai Farm	3.64 196	P		Pn	18 42 09.7	-1.3	
DUWZ	D'Urville Isla	3.68 217	P		Pn	18 42 10.1	-1.3	
MSWZ	Moikau Station	3.71 199			Pn	18 42 10.3	-1.6	
MSWZ	Moikau Station	3.71 199	P		Pn	18 42 10.5	-1.3	
WEL	Wellington	3.73 205	P		Pn	18 42 11.2	-0.9	
OUZ	Omahuta	3.76 315	P		Pn	18 42 12.7	+0.2	
OUZ	Omahuta	3.76 315	P		Pn	18 42 12.8	+0.2	
SNZO	South Karori	3.78 205	P		Pn	18 42 11.3	-1.4	
SNZO	South Karori	3.78 205	S		Sn	18 42 55.9	-1.9	
SNZO	South Karori	3.78 205			Pn	18 42 11.3	-1.4	
TCW	Tory Channel	3.85 210	P		Pn	18 42 12.1	-1.5	
PLWZ	Palliser	3.86 198			Pn	18 42 12.0	-1.7	
PLWZ	Palliser	3.86 198	P		Pn	18 42 12.2	-1.5	
TUWZ	Tuamarina	4.17 212			Pn	18 42 16.4	-1.4	
TUWZ	Tuamarina	4.17 212	P		Pn	18 42 16.2	-1.5	
NNZ	Nelson	4.26 218	P		Pn	18 42 17.6	-1.3	
TKNZ	Takaka Hill	4.34 223			Pn	18 42 18.2	-1.7	
TKNZ	Takaka Hill	4.34 223	P		Pn	18 42 18.3	-1.6	
CMWZ	Cape Campbell	4.34 207			Sn	18 43 09.8	-1.0	
BSWZ	Blackbirch Sta	4.44 210			Pn	18 42 19.5	-1.7	
BSWZ	Blackbirch Sta	4.44 210	P		Pn	18 42 19.8	-1.4	
QRZ	Quartz Range	4.44 228	P		Pn	18 42 19.4	-1.9	
QRZ	Quartz Range	4.44 228	S		Sn	18 43 11.9	-1.2	
QRZ	Quartz Range	4.44 228			Sn	18 43 11.1	-2.0	
QRZ	Quartz Range	4.44 228	P		Pn	18 42 19.4	-1.9	
MRNZ	Matariki Terra	4.71 221			Pn	18 42 23.2	-1.5	
MRNZ	Matariki Terra	4.71 221	P		Pn	18 42 23.0	-1.8	
THZ	Tophouse	4.90 217			Pn	18 42 25.7	-1.7	
THZ	Tophouse	4.90 217	P		Pn	18 42 25.6	-1.7	
KHZ	Kahutara	5.17 208	P		Pn	18 42 28.7	-2.0	
KHZ	Kahutara	5.17 208			Pn	18 42 28.8	-2.0	
KHZ	Kahutara	5.17 208	P		Pn	18 42 28.8	-2.0	
DSZ	Denniston Nort	5.46 224	P		Pn	18 42 32.4	-2.2	
GVZ	Greta Valley S	5.83 209	P		Pn	18 42 37.1	-2.4	
LTZ	Lake Taylor	5.99 214	P		Pn	18 42 39.1	-2.6	
AMCZ	Amberley	6.11 210	P		Pn	18 42 41.5	-2.3	
OKCZ	Okains Bay	6.48 205	P		Pn	18 42 45.6	-2.5	
OXZ	Oxford	6.53 213			Pn	18 42 46.2	-2.5	
OXZ	Oxford	6.53 213	P		Pn	18 42 45.8	-3.0	
MQZ	McQueen's Vall	6.61 208	P		Pn	18 42 46.5	-3.2	
AKCZ	Akaroa Harbour	6.66 205	P		Pn	18 42 48.0	-2.4	
RACZ	Rakaia	6.82 210	P		Pn	18 42 49.2	-3.3	
WVZ	Waitaha Valley	6.95 220	P		Pn	18 42 54.4	+0.1	
WACZ	Wakanui South	7.12 211	P		Pn	18 42 53.5	-3.0	
RPZ	Rata Peaks	7.28 215	P		Pn	18 42 57.0	-1.6	
	2.3nm,0.3s,baz=42,slow=3.5,SNR=7.8							
RPZ			S		Sn	18 44 13.1	-7.2	
	3.8nm,0.3s,baz=337,slow=23,SNR=20							
RPZ	Rata Peaks	7.28 215	P		Pn	18 42 57.1	-1.6	
RPZ	Rata Peaks	7.28 215			Pn	18 42 56.7	-1.9	
RPZ	Rata Peaks	7.28 215	P		Pn	18 42 56.9	-1.8	
ARCZ	Arundel	7.41 214	P		Pn	18 42 58.1	-2.2	
TMZ	Timaru	7.83 212	P		Pn	18 43 03.1	-2.8	
LBZ	Lake Benmore	8.19 216	P		Pn	18 43 09.4	-1.4	
ODZ	Otahua Downs	8.51 211	P		Pn	18 43 13.0	-2.0	
ODZ	Otahua Downs	8.51 211	P		Pn	18 43 12.5	-2.4	
TUZ	Tuapeka	9.67 212	P		Pn	18 43 28.7	-1.4	
DZM	Mont Dzumac	18.16 327	P		P	18 45 12.7	-2.3	
	24nm,1.2s,baz=152,slow=12,SNR=1.6							
MSVF	Nonsavu	20.13 3	P		P	18 45 37.3	+1.1	
AS31	Alice Springs	39.20 279	P		P	18 48 28.2	+1.2	
ASAR	Alice Springs	39.20 279	P		P	18 48 28.0	+1.0	
	0.6nm,0.7s,baz=123,slow=7.3,SNR=15							
ASAR			PcP		PcP	18 50 32.5	-0.4	
	0.3nm,0.5s,baz=121,slow=3.6,SNR=6.8							
ASAR			ScP		ScP	18 54 06.1	+0.4	
	0.2nm,0.7s,baz=90,slow=3.7,SNR=1.7							
	0.6nm,0.7s							
FORT	Forrest	40.54 265	P		P	18 48 38.0	+0.1	
FORT			IAmb		IAmb	18 49 14.1		
	comp=Z,8.4nm,1.2s							
WR8	Warramunga Arr	40.77 284	P		P	18 48 39.9	0.0	
WR8			IAmb		IAmb	18 49 12.6		
	comp=Z,6.4nm,1.1s							
WRA	Warramunga Arr	40.90 284	P		P	18 48 41.8	+0.7	
	comp=Z,0.5nm,0.4s,baz=121,slow=7.9,SNR=9.5							
WRA			PcP		PcP	18 50 39.0	+0.6	
	comp=Z,0.3nm,0.9s,baz=132,slow=3.3,SNR=1.5							
	comp=Z,0.5nm,0.4s							
WRA	Warramunga Arr	40.90 284	P		P	18 48 40.8	-0.2	
WB0	Warramunga Arr	40.96 284	P		P	18 48 41.0	-0.5	
WB0			IAmb		IAmb	18 49 03.3		
	comp=Z,7.7nm,1.4s							
QSPA	South Pole Qui	52.21 180	P		P	18 50 11.5	+2.9	
	comp=Z,1.0nm,0.6s,baz=354,slow=0.4,SNR=11							
	comp=Z,1.0nm,0.6s							
QSPA	South Pole Qui	52.21 180	P		P	18 50 10.3	+1.8	
QSPA			IAmb		IAmb	18 50 37.6		
	comp=Z,2.2nm,1.2s							
TRH	Trail	62.65 29	P		P	18 51 21.1	-1.2	
MAW	Mawson	63.77 203	P		P	18 51 31.6	+2.9	
	comp=Z,1.4nm,0.7s,baz=159,slow=2.8,SNR=2.6							
	comp=Z,1.4nm,0.7s							
MAW	Mawson	63.77 203	P		P	18 51 30.2	+1.6	
MAW			IAmb		IAmb	18 51 59.4		
	comp=Z,1.6nm,1.5s							
MJAR	Matsushiro Arr	82.26 329	P		P	18 53 17.1	-0.4	
	comp=Z,0.7nm,0.6s,baz=160,slow=5.4,SNR=4.1							
	comp=Z,0.7nm,0.6s							
MT03	Universidad Ad	85.31 129	P		P	18 53 33.3	-0.2	
KSRS	Korea Array	87.54 323	P		P	18 53 45.1	+1.3	
	comp=Z,1.2nm,0.7s,baz=140,slow=5.4,SNR=8.6							
	comp=Z,1.2nm,0.7s							
CMAR	Chinq Mai Arr	92.03 292	P		P	18 54 06.8	+1.6	
	comp=Z,0.6nm,0.5s,baz=144,slow=4.8,SNR=4.2							
	comp=Z,0.6nm,0.5s							
MKAR	Makanchi Array	119.20 308	PKP		PKPdf	18 59 42.6	-1.2	
	comp=Z,0.2nm,0.6s,baz=113,slow=2.2,SNR=1.2							
KURK	Kurchatov	122.98 311			PKPdf	18 59 50.2	-0.7	
KURBB	Kurchatov Arra	123.00 311	PKP		PKPdf	18 59 50.2	-0.7	
	comp=Z,1.3nm,0.7s,baz=115,slow=1.8,SNR=13							
BVAR	Borovoye Array	128.54 312	PKP		PKiKP	19 00 01.8	-0.3	
	comp=Z,0.7nm,0.6s,baz=74,slow=2.1,SNR=7.3							
KBZ	Khabaz	145.04 294	PKPbc		PKPdf	19 00 32.7	+0.7	
	comp=Z,0.6nm,0.5s,baz=98,slow=2.2,SNR=3.5							
DBIC	Dimbokro	148.86 177	PKPbc		PKiKP	19 00 44.4	-0.4	
	comp=Z,6.3nm,1.0s,baz=280,slow=9.3,SNR=3.0							
FINES	FINESS Array B	150.26 332	PKPbc		PKPbc	19 00 44.8	-0.6	
	comp=Z,2.6nm,0.8s,baz=90,slow=1.9,SNR=9.7							
BRTR	Keskin Array B	151.41 285	PKPbc		PKiKP	19 00 49.0	-0.5	
	comp=Z,1.2nm,0.8s,baz=148,slow=7.3,SNR=6.6							
AKASG	Malin Array Be	153.78 310	PKPbc		PKiKP	19 00 53.6	-0.2	
	comp=Z,0.9nm,0.5s,baz=76,slow=1.9,SNR=4.9							

*IDC **29** 19:00:41.2±0.8, 12°.45N×125°.38E, h0km, mb4.0/12, mbtmp4.0/12, MS3.1/1, Error ellipse: s-maj=44.1km s-min=14.3km az=68.0*
*MAN **29** 19:00:42.0, 12°.80N×125°.84E, h27km, MS4.5*
*NEIC **29** 19:00:43.4±1.0, 12°.58N±0°.09×125°.6E±0°.2, h10km±1km, mb4.4/20, Error ellipse: s-maj=26.4km s-min=15.5km az=84.0*

ISC 29 19:00:44.7±0.6,**12°.62N**±0°.04×**125°.87E**±0°.07,**h32**km,**n56,** σ1s**94**/65,**mb4.3**/21,**Samar**

Code	Station Name	Δ°	AZ°		Phase ID		Time h m s	Res ISC
PLP	Palo	1.69	211	eP		Pn	19 01 11.1	-1.0
PLP				eS		Sb	19 01 35.6	-0.5
SCPH	Surigao	2.85	188	eP		Pn	19 01 28.1	+0.1
SCPH				eS		Sn	19 02 01.9	+0.7
LLP	Lapu-Lapu	2.96	219	eP		Pn	19 01 31.3	+1.9
LLP				i S		Sb	19 02 12.4	0.0
TBP	Tagbilaran	3.52	214	eP		Pn	19 01 40.4	+3.3
TBP				eS		Sn	19 02 18.7	+1.0
GQP	Guinayangan	3.57	291	eP		Pn	19 01 36.1	-1.7
GQP				eS		Sn	19 02 21.1	+2.2
TSSP	Tandag City	3.57	175	i P		Pn	19 01 38.0	0.0
TSSP				eS		Sn	19 02 17.2	-1.9
IBAJ	Ibajay, Aklan	3.70	258	eP		Pn	19 01 40.1	+0.4
LSIP	Lazi, Siquijor	4.11	213	eP		Pn	19 01 44.7	-0.6
LSIP				eS		Sn	19 02 28.7	-3.6
CGP	Cagayan de Oro	4.30	196	eP		Pn	19 01 48.4	+0.4
CGP				eS		Sn	19 02 39.3	+2.3
BIPH	Bislig	4.44	174	eP		Pn	19 01 49.8	-0.1
BIPH				i S		Sn	19 02 36.8	-3.6
LQP	Lukban	4.46	290	eP		Pn	19 01 48.1	-2.2
BUKP	Musuan	4.78	190	i P		Pb	19 02 06.6	-1.2
BUKP				i S		Sn	19 02 52.6	+3.6
CDOP	Cateel, Davao	4.84	173	i P		Pb	19 02 04.9	-4.0
CDOP				i S		Sn	19 02 48.9	-1.5
DAV	Davao City (W)	5.53	183	Pn		Pn	19 02 05.6	+0.8
PALP	Palanan	5.53	323	i P		Pn	19 02 03.9	-0.9
PALP				i S		Sn	19 03 01.3	-6.0
PACPP	Pamplona Cagay	7.25	324	i P		Pn	19 02 28.7	+0.2
PACPP				eS		Sn	19 03 43.4	-6.3
MYLDM	Lahad Datu	10.37	225	Pn		Pn	19 03 08.6	-2.8
JAY	Jayapura	21.06	135	LR		LR	19 13 54.5	
	comp=Z,52nm,18.4s,baz=274,slow=37							
KSRS	Korea Array	24.79	4	P		P	19 06 05.7	+1.9
	0.6nm,0.6s,baz=185,slow=12,SNR=5.9							
	0.6nm,0.6s							
UGM	Wanagama	25.47	218	P		P	19 06 09.6	-0.5
CMAR	Chiang Mai Arr	26.56	286	P		P	19 06 16.1	-3.9
	1.4nm,0.8s,baz=101,slow=7.8,SNR=9.6							
	1.4nm,0.8s							
KNRA	Kununurra	28.27	174	P		P	19 06 35.8	+0.6
KNRA				IAmb		IAmb	19 06 54.9	
	comp=Z,3.8nm,0.7s							
FITZ	Fitzroy Crossi	30.53	180	P		P	19 06 55.8	+0.5
FITZ				IAmb		IAmb	19 07 06.4	
	comp=Z,2.5nm,0.8s							
WB0	Warramunga Arr	33.26	165	P		P	19 07 19.3	0.0
WB0				IAmb		IAmb	19 07 41.4	
	comp=Z,4.0nm,0.9s							
WRA	Warramunga Arr	33.42	165	P		P	19 07 20.4	-0.3
	comp=Z,0.8nm,0.8s,baz=346,slow=9.2,SNR=11							
	comp=Z,0.8nm,0.8s							
WRA	Warramunga Arr	33.42	165	P		P	19 07 19.5	-1.2
WR8	Warramunga Arr	33.47	165	P		P	19 07 21.3	+0.2
MBWA	Marble Bar	34.11	190	P		P	19 07 25.7	-1.0
AS31	Alice Springs	36.91	168			P	19 07 50.5	-0.2
ASAR	Alice Springs	36.91	168	P		P	19 07 51.7	+0.9
	comp=Z,0.7nm,0.5s,baz=350,slow=7.0,SNR=34							
	comp=Z,0.7nm,0.5s							
ASAR	Alice Springs	36.91	168	P		P	19 07 50.5	-0.3
SONM	Songino Array	38.69	339	P		P	19 08 06.4	+0.7
	comp=Z,0.4nm,0.5s,baz=152,slow=9.6,SNR=2.6							
	comp=Z,0.4nm,0.5s							
H11N1	WAKE ISLAND Hy	39.95	74	T		T	19 51 33.4	
	baz=266,slow=74,SNR=6.4							
H11N2	WAKE ISLAND Hy	39.96	74	T		T	19 51 34.5	
	baz=266,slow=74,SNR=6.8							
H11N3	WAKE ISLAND Hy	39.97	74	T		T	19 51 35.6	
	baz=266,slow=74,SNR=4.6							
MORW	Morawa	42.52	193	P		P	19 08 36.8	-0.6
MORW				IAmb		IAmb	19 09 12.8	
	comp=Z,20nm,1.4s							
INKA	Innaminka	42.64	160	P		P	19 08 39.9	+1.6
FORT	Forrest	43.20	177	P		P	19 08 44.1	+1.3
FORT				IAmb		IAmb	19 08 55.1	
	comp=Z,4.9nm,0.7s							
NWAO	Narrogin (SRO)	46.04	190	P		P	19 09 05.5	+0.1
BBOO	Buckleboo	46.22	168	P		P	19 09 08.8	+2.0
STKA	Stephens Creek	46.74	162	P		P	19 09 12.6	+1.6
	comp=Z,2.3nm,0.6s,baz=332,slow=6.4,SNR=5.5							
	comp=Z,2.3nm,0.6s							
MKAR	Makanchi Array	49.94	322	P		P	19 09 37.0	+1.5
	comp=Z,2.2nm,0.7s,baz=114,slow=8.3,SNR=14							
	comp=Z,2.2nm,0.7s							
MKAR	Makanchi Array	49.94	322	P		P	19 09 36.2	+0.6
PDGK	Pogorrnoye	50.22	317	P		P	19 09 38.6	+0.7
ZALV	Zalesovo Beam	52.39	331	P		P	19 09 54.3	+0.5
	comp=Z,0.7nm,0.5s,baz=118,slow=8.6,SNR=5.3							
	comp=Z,0.7nm,0.5s							
KURK	Kurchatov	53.92	325			P	19 10 06.2	+1.0
KURK				IAmb		IAmb	19 10 07.1	
	comp=Z,3.9nm,0.7s							
KURBB	Kurchatov Arra	53.93	325	P		P	19 10 06.4	+1.2
	comp=Z,2.2nm,0.6s,baz=124,slow=7.4,SNR=46							
	comp=Z,2.2nm,0.6s							
BVAR	Borovoye Array	59.52	325	P		P	19 10 45.6	+0.7
	comp=Z,1.6nm,0.5s,baz=124,slow=6.1,SNR=14							
	comp=Z,1.6nm,0.5s							
AB31	Akbulak array	64.85	319	P		P	19 11 21.1	+0.5
AB31				IAmb		IAmb	19 11 22.2	
	comp=Z,1.9nm,0.8s							
ABKAR	Akbulak array	64.85	319	P		P	19 11 21.1	+0.5
ARTI	Arti	67.15	326	P		P	19 11 35.9	+0.7
ARTI				IAmb		IAmb	19 11 37.7	
	comp=Z,3.1nm,0.6s							
CASY	Casey	79.50	186	P		P	19 12 49.5	+1.8
CASY				IAmb		IAmb	19 13 15.5	
	comp=Z,6.2nm,1.2s							
FINES	FINESS Array B	83.64	332	P		P	19 13 10.3	+0.4
	comp=Z,3.2nm,1.0s,baz=90,slow=5.2,SNR=6.6							
	comp=Z,3.2nm,1.0s							
BURAR	Bucovina Array	87.83	318	P		P	19 13 31.6	+0.5
VNDA	Vanda	92.30	173	P		P	19 13 52.8	+1.7
	comp=Z,0.7nm,0.7s,baz=326,slow=3.4,SNR=3.7							
	comp=Z,0.7nm,0.7s							
VNDA	Vanda	92.30	173	P		P	19 13 52.9	+1.8
VNDA				IAmb		IAmb	19 13 54.5	
	comp=Z,1.5nm,0.9s							

*IDC **29** 19:08:27.6±0.7, 32°.79S×178°.53W, h0km, mb4.4/8, mbtmp4.4/10, ML4.4/2, MS3.7/23, Error ellipse: s-maj=28.1km s-min=19.6km az=90.0*
*WEL **29** 19:08:28.2±1.0, 33°.5±9°.×17°.8W±2°.5, h12km, M4.7/8, mB5.2/6, ML4.8/9, MLv4.8/8, Mw(mB)4.5/6, Error ellipse: s-maj=34.8km s-min=4.5km az=108.7*
*NEIC **29** 19:08:29.6±1.5, 32°.98S±0°.08×178°.5W±0°.2, h10km±1km, mb4.5/17, Error ellipse: s-maj=23.3km s-min=11.1km az=112.0*

ISC 29 19:08:28.9±0.6,**32°.90S**±0°.06×**178°.5W**±0°.1,**h10**km,**n95,** σ1s**29**/77,**mb4.6**/20,**MS3.7**/20,**2C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°		Phase ID		Time h m s	Res ISC
GLKZ	Green Lake	3.66	8	P		Pn	19 09 24.4	-1.2
GLKZ				S		Sn	19 10 05.9	-2.8
RAO	Raoul Island	3.67	8	Pn		Pn	19 09 27.4	+1.6
MXZ	Matakaoa Point	5.35	209			Pn	19 09 47.0	-1.8
MXZ	Matakaoa Point	5.35	209	P		Pn	19 09 48.0	-0.8
MXZ				S		Sn	19 10 48.7	-1.7
WMGZ	Waiomatatini S	5.53	207	P		Pn	19 09 51.6	+0.3
WMGZ				S		Sn	19 10 55.6	+0.7
HAZ	Te Kaha	5.73	211	P		Pn	19 09 54.0	-0.1
HAZ				S		Sn	19 11 00.3	+0.4
PUZ	Puketiti	5.81	206	P		Pn	19 09 56.0	+0.8
PUZ				S		Sn	19 11 00.7	-1.2
RUGZ	Raukumara Rang	5.95	211	P		Pn	19 09 56.7	-0.5
RUGZ				S		Sn	19 11 04.3	-1.2
TWGZ	Tauwhareparae	6.01	208	P		Pn	19 09 57.3	-0.6
TWGZ				S		Sn	19 11 06.2	-0.6
GRZ	Great Barrier	6.02	235	P		Pn	19 10 01.8	+3.8
CNGZ	Carnagh Statio	6.19	205	P		Pn	19 10 01.2	+0.8
TKGZ	Te Karaka	6.29	207	P		Pn	19 10 03.3	+1.6
MWZ	Matawai	6.33	210	P		Pn	19 10 00.8	-1.5
URZ	Urewera	6.45	213	Pn		Pn	19 10 03.1	-0.8
	7.8nm,0.3s,baz=259,slow=1.8,SNR=25							
URZ				Sn		Sn	19 11 15.0	-2.5
	7.2nm,0.3s,baz=106,slow=16,SNR=6.4							
URZ				LR		LR	19 12 48.3	
	comp=Z,528nm,18.8s,baz=24,slow=40							
	15nm,0.3s							
RAGZ	Rawiri	6.51	210	P		Pn	19 10 04.1	-0.8
WIAZ	Waiheke Island	6.54	232	P		Pn	19 10 09.2	+4.0
RIGZ	Rimuhau	6.55	207	P		Pn	19 10 04.7	-

comp=Z,7.9nm,1.0s
H03S2 Juan Fernandez 79.42 123 T T 20 49 05.8
baz=236,slow=74,SNR=3.7
H03S1 Juan Fernandez 79.44 123 T T 20 49 05.2
baz=236,slow=74,SNR=3.9
H03S3 Juan Fernandez 79.44 123 T T 20 49 04.7
baz=236,slow=74,SNR=4.5
PLCA Paso Flores 81.10 133 LR LR 19 48 09.5
comp=Z,26nm,21.4s,baz=177,slow=29
JNU Nakatsue 81.16 319 LR LR 19 55 48.6
comp=Z,24nm,18.1s,baz=190,slow=35
SHEM Shemya Is, Ala 85.52 355 LR LR 19 52 44.1
comp=Z,48nm,21.1s,baz=160,slow=31
KSRS Korea Array 85.99 320 P **P** **19 21 09.2 -0.2**
comp=Z,0.8nm,0.7s,baz=139,slow=6.0,SNR=6.2
KSRS LR LR 19 58 05.4
comp=Z,19nm,19.1s,baz=255,slow=35
comp=Z,0.8nm,0.7s
LPIG La Paz 86.19 58 LR LR 19 52 43.8
comp=Z,43nm,18.9s,baz=26,slow=31
NJ2 Nanjing 87.57 311 *eP* **P** **19 21 20.8 +3.6**
NJ2 pmax pmax
comp=Z,14nm,0.5s
PETK Petropavlovsk- 88.13 346 P **P** **19 21 19.6 +0.2**
comp=Z,3.3nm,0.9s,baz=177,slow=6.2,SNR=2.4
PETK LR LR 19 53 50.0
comp=Z,33nm,21.9s,baz=155,slow=31
comp=Z,3.3nm,0.9s
YBH Yreka Blue Hor 90.24 38 LR LR 19 55 51.9
comp=Z,24nm,18.7s,baz=186,slow=32
CMIG Matias Romero 93.90 72 LR LR 19 57 13.5
comp=Z,16nm,18.3s,baz=194,slow=31
TXAR Lajitas Array 94.07 58 LR LR 19 59 18.4
comp=Z,23nm,18.2s,baz=210,slow=32
MA2 Magadan 95.59 345 LR LR 19 59 38.7
comp=Z,27nm,21.6s,baz=136,slow=32
PZH PanZhiHua 96.10 298 P **P** **19 21 56.5 -0.7**
LPAZ La Paz 97.48 115 LR LR 19 59 03.5
comp=Z,26nm,18.7s,baz=169,slow=31
HHC Hu-ho-hao-te 97.68 314 *eP* Pdif 19 22 07.0 +3.0
HHC pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 119.05 309 PKP **PKPdf** **19 27 17.5 -0.1**
comp=Z,0.6nm,0.9s,baz=104,slow=3.0,SNR=1.9
KURK Kurchatov 122.47 313 **PKPdf** **19 27 23.4 -0.6**
KURBB Kurchatov Arra 122.50 313 PKP **PKPdf** **19 27 23.4 -0.7**
comp=Z,1.1nm,0.8s,baz=101,slow=2.2,SNR=9.8
BVAR Borovoye Array 127.89 314 PKP **PKPdf** **19 27 34.4 0.0**
comp=Z,1.7nm,0.9s,baz=90,slow=3.0,SNR=8.8
FINES FINESS Array B 147.33 338 PKPbc **PKPbc** **19 28 11.8 -0.2**
comp=Z,4.6nm,0.5s,baz=47,slow=3.3,SNR=36
NB2 NORSAR Subarra151.15 350 PKP **PKPbc** **19 28 21.6 -0.1**
comp=Z,4.1nm,0.8s,baz=16,slow=4.1
NOA NORSAR Array B151.15 350 PKPbc **PKPbc** **19 28 21.1 -0.6**
comp=Z,0.8nm,0.7s,baz=20,slow=4.7,SNR=9.4
HFS Hagfors 151.60 347 PKPbc **PKPbc** **19 28 21.3 -1.4**
comp=Z,6.3nm,1.0s,baz=100,slow=1.8,SNR=4.3
AKASG Malin Array Be 152.99 319 PKPbc **PKiKP** **19 28 26.2 -0.1**
comp=Z,1.1nm,0.6s,baz=64,slow=2.5,SNR=7.4
BRTR Keskin Array B 153.34 294 PKPbc **PKPbc** **19 28 27.0 -0.5**
comp=Z,1.2nm,0.8s,baz=162,slow=3.5,SNR=6.5
BRTR PKPab **pPKPab** **19 28 40.3 -0.9**
comp=Z,0.7nm,0.8s,baz=94,slow=4.0,SNR=2.9
TORD Torodi Ar. Bea 160.34 180 PKPab **PKPab** **19 29 10.7 +0.9**
comp=Z,0.5nm,0.7s,baz=161,slow=3.1,SNR=2.3
GERES GERESS Array B 161.64 334 PKPab **PKPab** **19 29 14.7 -0.2**
comp=Z,0.2nm,0.4s,baz=38,slow=6.8,SNR=4.7

*NEIC **29** 19:46:14.2±1.1, 17.9°S×0.2°×177.8°W±0.1, h597km±9km, mb4.2/25, Error ellipse: s-maj=24.4km s-min=17.7km az=154.0*
*IDC **29** 19:46:19.4±12.0, 17.94°S×178.10°W, h659km±145km, mb3.2/6, mbtmp4.3/6, Error ellipse: s-maj=71.1km s-min=25.7km az=64.0*
ISC 29 19:46:13.4±0.7, 17.9°S×0.1°×177.9°W×0.1, h590km, n39, σ0s82/39, mb4.3/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTU	**Fugatoga**	**3.57**	**356**	P	**P**	**19 47 35.4**	**0.0**
MSVF	**Nonsavu**	**3.89**	**272**	P	**P**	**19 47 40.5**	**+3.0**
AFI	**Afiamalu**	**7.07**	**57**	P	**P**	**19 48 04.3**	**+0.5**
MARNC	**Mare, Loyalty**	**13.76**	**253**	P	**P**	**19 49 10.1**	**+0.1**
ONTNC	**Ouen Toro**	**15.37**	**251**	P	**P**	**19 49 26.1**	**+0.7**
EIDS	**Eidsvold**	**29.76**	**250**	P	**P**	**19 51 33.2**	**-0.5**
EIDS				IAmb	IAmb	19 51 47.4	
	comp=Z,11nm,1.4s						
ARMA	**Armidale**	**30.40**	**240**	P	**P**	**19 51 39.6**	**+0.4**
CTAO	**Charters Tower**	**33.96**	**260**	P	**P**	**19 52 09.5**	**+0.1**
CTAO				IAmb	IAmb	19 52 10.0	
	comp=Z,7.5nm,0.8s						
CAN	**Canberra**	**34.13**	**233**	P	**P**	**19 52 10.8**	**+0.2**
TOO	**Toolangi**	**37.58**	**231**	P	**P**	**19 52 39.2**	**+0.1**
TOO				IAmb	IAmb	19 53 23.4	
	comp=Z,11nm,1.4s						
COEN	**Coen**	**37.62**	**270**	P	**P**	**19 52 40.7**	**+1.1**
STKA	**Stephens Creek**	**39.09**	**241**	P	**P**	**19 52 51.8**	**+0.5**
	comp=Z,5.6nm,0.5s,baz=85,slow=8.7,SNR=18						
	comp=Z,5.6nm,0.5s						
INKA	**Innaminka**	**39.23**	**248**	P	**P**	**19 52 53.1**	**+0.6**
INKA				IAmb	IAmb	19 52 54.2	
	comp=Z,3.9nm,0.6s						
BBOO	**Buckleboo**	**43.87**	**241**	P	**P**	**19 53 28.6**	**-0.2**
BBOO				IAmb	IAmb	19 54 09.7	
	comp=Z,19nm,1.4s						
WR8	**Warramunga Arr**	**44.99**	**259**	P	**P**	**19 53 37.0**	**-0.6**
WR8				IAmb	IAmb	19 53 53.1	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**45.11**	**260**	P	**P**	**19 53 38.0**	**-0.6**
WB0				IAmb	IAmb	19 53 38.8	
	comp=Z,7.7nm,0.5s						
WRAB	**Tennant Creek**	**45.13**	**259**	P	**P**	**19 53 38.3**	**-0.4**
WRAB				IAmb	IAmb	19 53 38.7	
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**45.14**	**259**	P	**P**	**19 53 38.6**	**-0.3**
	comp=Z,3.8nm,0.4s,baz=96,slow=7.0,SNR=143						
	comp=Z,3.8nm,0.4s						
WRA	**Warramunga Arr**	**45.14**	**259**		**P**	**19 53 38.1**	**-0.7**
AS31	**Alice Springs**	**45.29**	**254**		**P**	**19 53 39.5**	**-0.4**
AS31				IAmb	IAmb	19 53 40.9	
	comp=Z,5.1nm,0.5s						
ASAR	**Alice Springs**	**45.29**	**254**	P	**P**	**19 53 39.9**	**-0.1**
	comp=Z,8.2nm,0.4s,baz=90,slow=8.3,SNR=151						
	comp=Z,8.2nm,0.4s						
ASAR	**Alice Springs**	**45.29**	**254**		**P**	**19 53 39.6**	**-0.4**
MTN	**Manton Dam**	**49.32**	**268**	P	**P**	**19 54 09.8**	**-0.2**
MTN				IAmb	IAmb	19 54 39.0	
	comp=Z,13nm,1.4s						
FORT	**Forrest**	**50.48**	**245**	P	**P**	**19 54 17.6**	**-0.8**
KNRA	**Kununurra**	**51.00**	**264**	P	**P**	**19 54 21.4**	**-1.0**
KNRA				IAmb	IAmb	19 54 38.3	
	comp=Z,16nm,1.5s						
FITZ	**Fitzroy Crossi**	**53.54**	**260**	P	**P**	**19 54 39.5**	**-0.9**
MBWA	**Marble Bar**	**58.58**	**256**	P	**P**	**19 55 14.4**	**-0.7**
MBWA				IAmb	IAmb	19 55 15.4	
	comp=Z,8.4nm,1.0s						
SBA	**Scott Base**	**60.47**	**184**	P	**P**	**19 55 27.6**	**+1.0**
VNDA	**Vanda**	**60.51**	**185**	P	**P**	**19 55 27.7**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=5.4,slow=7.0,SNR=2.8						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**60.51**	**185**	P	**P**	**19 55 27.5**	**+0.6**
GIRL	**Giralia**	**63.39**	**253**	P	**P**	**19 55 45.1**	**-1.4**
JAGI	**Jajag, Banyuwa**	**66.56**	**268**	P	**P**	**19 56 04.9**	**-1.7**
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**19 56 39.4**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=330,slow=0.5,SNR=23						
	comp=Z,2.1nm,0.6s						
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**19 56 39.2**	**0.0**
QSPA				IAmb	IAmb	19 56 39.9	
	comp=Z,2.4nm,0.7s						
SMAI	**San Martin Ant**	**80.99**	**159**	P	**P**	**19 57 27.1**	**0.0**
CRNM	**Carthage**	**85.05**	**52**	P	**P**	**19 57 48.0**	**-0.2**
IMAR	**Indian Mountai**	**85.58**	**10**	P	**P**	**19 57 50.2**	**+0.5**
ILAR	**Eielson Array**	**85.75**	**13**	P	**P**	**19 57 51.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=209,slow=7.2,SNR=1.8						
	comp=Z,0.1nm,0.3s						
BRTR	**Keskin Array B**	**145.13**	**315**	PKPbc	**PKPdf**	**20 04 44.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=49,slow=2.6,SNR=1.6						

*IDC **29** 20:09:30.9±2.1, 28.7°N×104.7°E, h0km, mb3.5/5, mbtmp3.4/7, ML3.9/2, Error ellipse: s-maj=38.8km s-min=30.8km az=146.0*
*NEIC **29** 20:09:32.2±1.0, 28.13°N±0.07°×104.70°E±0.09, h10km±1km, mb4.7/9, Error ellipse: s-maj=14.2km s-min=10.5km az=233.0*
ISC 29 20:09:32.4±0.6, 28.09°N±0.05°×104.84°E±0.05, h10km, n20, σ1s24/25, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.97**	**342**	Pn	**Pn**	**20 10 20.8**	**+1.2**
CD2				Pg	**Pb**	**20 10 26.0**	**+0.6**
CD2				Sn	**Sn**	**20 10 55.5**	**+0.2**
CD2				Sg	**Sb**	**20 11 02.5**	**+0.7**
CD2				smax	smax		
	comp=N,490nm,0.7s						
CD2				smax	smax		
	comp=E,730nm,1.1s						
PZH	**PanZhiHua**	**3.17**	**241**	Pg	**Pg**	**20 10 36.5**	**+3.2**
PZH				Sg	**Sg**	**20 11 14.8**	**+0.3**
PZH				smax	smax		
	comp=N,30nm,0.7s						
PZH				smax	smax		
	comp=E,40nm,1.0s						
ENH	**Enshi**	**4.61**	**61**		**Pn**	**20 10 44.0**	**+1.7**
ENH				Sn	**Sn**	**20 11 37.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**11.01**	**211**	Pn	**Pn**	**20 12 10.0**	**-0.1**
	comp=E,0.5nm,0.3s,baz=24,slow=11,SNR=4.9						
	comp=E,0.4nm,0.3s						
BJT	**Baijiatuau**	**15.14**	**35**	Pn	**Pn**	**20 13 07.0**	**+0.7**
BJT				IAmb	IAmb	20 13 15.5	
	comp=Z,4.8nm,0.4s						
SONM	**Songino Array**	**19.75**	**3**	P	**P**	**20 14 02.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=4.5						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**19.75**	**3**	IAmb	IAmb	20 14 11.2	
	comp=Z,4.8nm,2.0s						
KSRS	**Korea Array**	**21.50**	**58**	P	**P**	**20 14 21.9**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=242,slow=11,SNR=4.4						
	comp=Z,0.5nm,0.5s						
HILR	**Hailar Array B**	**24.30**	**24**	P	**P**	**20 14 48.7**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=203,slow=14,SNR=2.0						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**25.72**	**323**	P	**P**	**20 15 01.3**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=124,slow=11,SNR=4.2						
	comp=Z,0.6nm,0.7s						
HYB	**Hyderabad**	**26.41**	**252**	*eP*	**P**	**20 15 08.1**	**-1.3**
HYB				*eS*	**S**	**20 19 41.5**	**-1.5**
GSI	**Gunungsitoli**	**27.52**	**196**	P	**P**	**20 15 18.8**	**-0.6**
GSI				IAmb	IAmb	20 15 29.6	
	comp=Z,39nm,1.5s						
DAV	**Davao City (W)**	**28.68**	**133**	P	**P**	**20 15 29.7**	**0.0**
ZALV	**Zalesovo Beam**	**29.72**	**336**	P	**P**	**20 15 37.1**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=155,slow=8.3,SNR=2.0						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**30.05**	**326**	P	**P**	**20 15 41.5**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=130,slow=9.9,SNR=6.3						
	comp=Z,0.4nm,0.8s						
WB0	**Warramunga Arr**	**55.50**	**146**	P	**P**	**20 19 06.9**	**-0.9**
FIA1	**FINESS Array S**	**60.43**	**327**	P	**P**	**20 19 40.5**	**-1.3**
NB201	**NORSAR Array S**	**67.50**	**328**	P	**P**	**20 20 27.2**	**-1.3**
ARMA	**Armidale**	**73.34**	**139**	P	**P**	**20 21 04.5**	**-0.1**
SCM	**Sheep Creek Mo**	**73.51**	**28**	P	**P**	**20 21 04.7**	**-0.5**
SCM				IAmb	IAmb	20 21 34.2	
	comp=Z,20nm,1.7s						

*IDC **29** 20:13:07.8±2.4, 5.91°S×147.46°E, h78km±22km, mb3.6/5, mbtmp4.0/11, MS3.2/2, Error ellipse: s-maj=26.8km s-min=15.8km az=80.0*
*NEIC **29** 20:13:09.2±0.9, 5.92°S±0.05°×147.26°E±0.08, h83km±8km, mb4.4/19, Error ellipse: s-maj=12.6km s-min=3.3km az=118.0*
*DJA **29** 20:13:12.8±1.8, 6°S±11'×14°7'E±1'9, h91km±9km, M4.9/11, mb4.8/11, mB5.3/3, MLv5.0/4, Mw(mB)4.7/3*
ISC 29 20:13:08.3±0.5, 5.99°S±0.06°×147.29°E±0.07, h77km, n44, σ1s73/46, mb4.2/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.40**	**182**	P	**Pn**	**20 14 01.0**	**+2.0**
	33nm,0.3s,baz=10,slow=9.4,SNR=33						
PMG				S	**Sn**	**20 14 39.6**	**+1.4**
	90nm,0.5s,baz=13,slow=7.0,SNR=7.4						
PMG	**Port Moresby**	**3.40**	**182**		**Pn**	**20 14 00.6**	**+1.6**
PMG	**Port Moresby**	**3.40**	**182**	P	**Pn**	**20 14 01.5**	**+2.5**
MANU	**Manus Island**	**3.92**	**1**		**Pn**	**20 14 05.9**	**-0.2**
RABL	**Rabaul**	**5.17**	**70**		**Pn**	**20 14 24.0**	**+0.8**
JAY	**Jayapura**	**7.42**	**297**	P	**Pn**	**20 14 55.7**	**+1.7**
	18nm,0.4s,baz=156,slow=6.6,SNR=26						
GENI	**Genyem**	**7.87**	**295**	P	**Pn**	**20 15 03.2**	**+3.2**
	0.3nm76nm,0.9s						
COEN	**Coen**	**8.90**	**207**		**Pn**	**20 15 14.8**	**+0.7**
BAKI	**Biak**	**12.14**	**293**	P	**Pn**	**20 16 01.3**	**+3.0**
	32nm,0.5s						
HNR	**Honiara**	**13.00**	**106**	P	**Pn**	**20 16 08.7**	**-1.2**
	0.8nm,0.4s,baz=239,slow=7.6,SNR=1.6						
HNR	**Honiara**	**13.00**	**106**		**Pn**	**20 16 10.9**	**+0.9**
CTA	**Charters Tower**	**14.05**	**184**	P	**Pn**	**20 16 25.1**	**+1.3**
	1.0nm,0.3s,baz=354,slow=14,SNR=1.4						
CTAO	**Charters Tower**	**14.05**	**184**	Pn	**Pn**	**20 16 23.9**	**+0.1**
FAKI	**Fak Fak**	**15.30**	**281**	Pn	**Pn**	**20 16 39.1**	**-1.0**
SIJI	**Sorong**	**16.78**	**287**	P	**Pn**	**20 16 58.5**	**-0.1**
	3.3nm,0.4s,baz=177,slow=8.7,SNR=10						
SIJI				LR	LR	20 25 37.3	
	comp=Z,44nm,18.2s,baz=338,slow=44						
SIJI	**Sorong**	**16.78**	**287**	P	**P**	**20 17 01.3**	**+1.7**
	16nm,0.6s						
SWI	**Sorong**	**16.79**	**287**	P	**P**	**20 17 02.3**	**+2.6**
PATS	**Pohnpei**	**16.83**	**41**		**P**	**20 16 59.8**	**-0.3**
MTN	**Manton Dam**	**17.33**	**246**		**Pn**	**20 17 04.9**	**-0.4**
MTN				IAmb	IAmb	20 17 28.0	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**18.57**	**221**		**P**	**20 17 19.9**	**+0.6**
WR8	**Warramunga Arr**	**18.64**	**221**		**P**	**20 17 20.7**	**+0.7**
WRAB	**Tennant Creek**	**18.72**	**221**	P	**P**	**20 17 21.2**	**+0.4**
WRAB				IAmb	IAmb	20 17 24.7	
	comp=Z,8.3nm,0.6s						
WRA	**Warramunga Arr**	**18.73**	**221**	P	**P**	**20 17 21.8**	**+0.8**
	comp=Z,6.1nm,0.6s,baz=41,slow=12,SNR=69						
WRA				S	**S**	**20 20 44.5**	**-5.6**
	comp=Z,1.1nm,0.9s,baz=40,slow=20,SNR=3.5						
WRA	**Warramunga Arr**	**18.73**	**221**	P	**P**	**20 17 19.8**	**-1.3**
KNRA	**Kununurra**	**20.57**	**241**	P	**P**	**20 17 41.2**	**+0.2**
KNRA				IAmb	IAmb	20 18 05.9	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**21.79**	**215**	P	**P**	**20 17 54.4**	**+0.3**
AS31				IAmb	IAmb	20 17 57.2	
	comp=Z,3.8nm,0.3s						
ASAR	**Alice Springs**	**21.79**	**215**	P	**P**	**20 17 55.2**	**+1.1**
	comp=Z,2.7nm,0.3s,baz=51,slow=9.4,SNR=99						
ASAR				S	**S**	**20 21 45.8**	**-5.2**
	comp=Z,1.4nm,0.9s,baz=30,slow=22,SNR=5.7						
	comp=Z,2.7nm,0.3s						
ASAR	**Alice Springs**	**21.79**	**215**	P	**P**	**20 17 54.0**	**-0.1**
INKA	**Innaminka**	**22.51**	**195**	P	**P**	**20 18 02.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**24.32**	**238**	P	**P**	**20 18 19.4**	**+0.5**
STKA	**Stephens Creek**	**26.30**	**191**	P	**P**	**20 18 38.0**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=33,slow=6.9,SNR=4.6						
STKA				LR	LR	20 29 29.1	
	comp=Z,81nm,19.2s,baz=210,slow=37						
	comp=Z,1.4nm,0.6s						
TOLI2	**Tolitoli**	**27.39**	**284**	P	**P**	**20 18 46.6**	**-0.2**
TOLI2				IAmb	IAmb	20 19 25.4	
	comp=Z,12nm,1.3s						
BBOO	**Buckleboo**	**28.67**	**200**	P	**P**	**20 18 57.9**	**0.0**
BBOO				IAmb	IAmb	20 19 24.5	
	comp=Z,24nm,1.5s						
SSLB	**Suanglung**	**39.20**	**320**	P	**P**	**20 20 28.0**	**-1.1**
SSLB				IAmb	IAmb	20 20 47.7	
	comp=Z,14nm,1.2s						
BBJI	**Bungbulang**	**39.39**	**266**	P	**P**	**20 20 29.8**	**-1.2**
KSRS	**Korea Array**	**46.85**	**339**	P	**P**	**20 21 30.3**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=157,slow=7.3,SNR=1.4						
	comp=Z,0.2nm,0.4s						
TIXI	**Tiksi**	**78.43**	**354**	P	**P**	**20 24 59.9**	**-0.3**
TIXI				IAmb	IAmb	20 25 37.3	
	comp=Z,8.7nm,1.1s						
ANM	**Nome**	**78.60**	**19**	P	**P**	**20 25 01.1**	**-0.2**
G18K	**Tagagawik**	**81.65**	**20**	P	**P**	**20 25 17.4**	**-0.3**
G18K				IAmb	IAmb	20 26 01.3	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**83.98**	**180**	P	**P**	**20 25 30.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=170,slow=3.0,SNR=8.0						
	comp=Z,0.7nm,0.5s						
QSPA	**South Pole Qui**	**83.98**	**180**	IAmb	IAmb	20 26 08.8	
	comp=Z,3.4nm,1.1s						
H23K	**Yukon River**	**84.81**	**22**	P	**P**	**20 25 33.2**	**-0.8**
H23K				IAmb	IAmb	20 25 41.5	
	comp=Z,7.8nm,1.5s						

ILAR Eielson Array 85.36 23 P **P** **20 25 34.0 -2.7**
comp=Z,0.8nm,0.7s,baz=261,slow=5.0,SNR=7.6
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 145.37 284 PKPbc **PKPbc** **20 32 38.2 -0.2**
comp=Z,0.3nm,0.6s,baz=104,slow=4.6,SNR=2.1

*IDC **29** 20:29:23.4±2.2, 19.80°N×94.59°E, h0km, mb3.7/6, mbtmp3.7/7, ML3.7/1, MS3.3/2, Error ellipse: s-maj=52.3km s-min=32.2km az=35.0*
ISC 29 20:29:29.3±1.9, 20.0°N±0.3×94.8°E±0.2, h35km, n9, σ0s94/7, mb3.8/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**4.24**	**110**	Pn	**Pn**	**20 30 31.7**	**+0.2**
	1.1nm,0.3s,baz=285,slow=14,SNR=24						
	5.1nm,0.5s						
MKAR	**Makanchi Array**	**28.61**	**342**	P	**P**	**20 35 23.4**	**+1.1**
	0.5nm,0.6s,baz=161,slow=8.3,SNR=6.4						
	0.5nm,0.6s						
SONM	**Songino Array**	**29.33**	**16**	P	**P**	**20 35 28.2**	**-0.7**
	0.2nm,0.3s,baz=197,slow=10,SNR=3.0						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**33.15**	**341**	P	**P**	**20 36 03.0**	**+0.7**
	0.6nm,0.4s,baz=152,slow=8.4,SNR=5.6						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**34.74**	**350**	P	**P**	**20 36 16.8**	**+0.7**
	0.8nm,0.5s,baz=179,slow=7.5,SNR=5.0						
	0.8nm,0.5s						
KVAR	**Kislovodsk Arr**	**49.26**	**311**	LR	LR	21 05 22.0	
	comp=Z,25nm,18.6s,baz=11,slow=44						
OBN	**Obninsk**	**55.73**	**324**	LR	LR	21 06 33.5	
	comp=Z,29nm,19.3s,baz=124,slow=40						
HFS	**Hagfors**	**68.44**	**328**	P	**P**	**20 40 26.7**	**-0.9**
	0.4nm,0.4s,baz=101,slow=2.9,SNR=0.8						
	0.4nm,0.4s						
GERES	**GERESS Array B**	**69.40**	**316**	P	**P**	**20 40 34.0**	**+0.1**
	0.4nm,0.5s,baz=71,slow=5.8,SNR=4.5						
	0.4nm,0.5s						

*IDC **29** 20:54:24.7±1.1, 28.24°N×88.06°E, h0km, mb3.8/13, mbtmp3.8/16, ML4.2/3, Error ellipse: s-maj=29.4km s-min=18.2km az=39.0*
*NEIC **29** 20:54:26.9±2.5, 28.4°N±0.1°×88.33°E±0.06, h10km±1km, mb4.1/16, Error ellipse: s-maj=21.3km s-min=8.7km az=178.0*
*NDI **29** 20:54:31.4±2.4, 28.05°N×87.96°E, h10km, ML3.8, MW3.2, Presumed earthquake*
*DMN **29** 20:54:34.8±0.3, 28.20°N×88.07°E, h60km, Ml4.7/7, Error ellipse: s-maj=6.2km s-min=4.0km az=41.0*
ISC 29 20:54:27.7±1.3, 28.34°N±0.04°×88.18°E±0.02, h17km±9km, n61, σ1s88/77, mb3.9/16, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVN	**Everest**	**1.26**	**253**		**Pg**	**20 54 55.5**	**+3.2**
EVN				Sn	**Sn**	**20 55 10.8**	**+2.8**
ODAN	**Odare**	**1.64**	**206**	Pg	**Pg**	**20 55 00.2**	**+1.0**
	baz=204,slow=0.0						
ODAN				Sg	**Sg**	**20 55 19.1**	**-1.4**
	1μm,0.2s,baz=204,slow=0.0						
RAMN	**Ramite**	**1.97**	**226**	Pg	**Pg**	**20 55 03.9**	**-1.7**
	baz=227,slow=0.0						
RAMN				Sg	**Sb**	**20 55 26.1**	**-1.6**
	398nm,0.3s,baz=227,slow=0.0						
GUN	**Gumba**	**2.08**	**259**	Pg	**Pg**	**20 55 06.9**	**-0.7**
	baz=262,slow=0.0						
GUN				Sg	**Sb**	**20 55 30.7**	**-0.1**
	845nm,0.4s,baz=262,slow=0.0						
PKI	**Pulchoki**	**2.57**	**253**	Pg	**Pb**	**20 55 12.8**	**-0.7**
	baz=256,slow=0.0						
PKI				Sg	**Sn**	**20 55 40.5**	**+0.7**
	399nm,0.2s,baz=256,slow=0.0						
PKIN	**Phulchoki**	**2.58**	**253**	Pg	**Pb**	**20 55 12.9**	**-0.7**
	baz=256,slow=0.0						
PKIN				Sg	**Sn**	**20 55 40.7**	**+0.7**
	642nm,0.2s,baz=256,slow=0.0						
KKN	**Kakani**	**2.62**	**259**	Pg	**Pb**	**20 55 13.4**	**-0.9**
	baz=261,slow=0.0						
KKN				Sg	**Sn**	**20 55 42.7**	**+1.7**
	2μm,0.2s,baz=261,slow=0.0						
DMN	**Daman**	**2.81**	**256**	Pg	**Pb**	**20 55 15.9**	**-1.8**
	baz=258,slow=0.0						
DMN				Sg	**Sn**	**20 55 46.5**	**+0.7**
	682nm,0.4s,baz=258,slow=0.0						
DHUB	**DHUBRI**	**2.82**	**145**	*eP*	**Pb**	**20 55 15.9**	**-1.8**
DHUB				*eS*	**Sn**	**20 55 48.1**	**+2.5**
LSA	**Lhasa**	**2.93**	**62**	*i*Pn	**Pb**	**20 55 20.0**	**+0.2**
LSA				Sn	**Sn**	**20 55 48.3**	**-0.7**
LSA				smax	smax		
	comp=N,35nm,0.7s						
LSA				smax	smax		
	comp=E,37nm,0.7s						
LSA	**Lhasa**	**2.93**	**62**		**Pg**	**20 55 22.8**	**-1.2**
TAWA	**Tawang**	**3.35**	**102**	*eP*	**Pb**	**20 55 27.1**	**+0.3**
TAWA				*eS*	**Sb**	**20 56 05.4**	**-2.0**
TAWA				IAML		20 56 07.8	
	comp=N,337nm,0.2s						
TAWA				IAML		20 56 07.8	
	comp=E,490nm,0.1s						
GUWA	**GUWAHATI**	**3.79**	**124**	*eP*	**Pb**	**20 55 30.8**	**-3.4**
GUWA				*eS*	**Sn**	**20 56 11.7**	**+2.2**
GUWA				IAML		20 56 13.0	
	comp=N,227nm,0.5s						
SHL	**Shillong**	**4.31**	**129**		**Pn**	**20 55 36.9**	**+4.3**
SHL				Sn	**Sn**	**20 56 19.6**	**-3.0**
SHL	**Shillong**	**4.31**	**129**	*eP*	**Pn**	**20 55 36.9**	**+4.3**
SHL				*i* x	x	20 55 39.9	
SHL				*ex*	**Sn**	**20 56 23.3**	**+0.7**
SHL				IA

BTK					IAmb	IAmb	20 58 47.2		
	comp=Z,14nm,0.5s								
ENH	**Enshi**	**18.68**	**79**	P	**P**		**20 58 44.0**	**-1.1**	
ENH					IAmb	IAmb	20 58 55.9		
	comp=Z,10.0nm,0.8s								
CHGR	**Chuyangaron**	**18.87**	**308**		**P**		**20 58 46.3**	**-0.9**	
CHGR					IAmb	IAmb	20 58 50.7		
	comp=Z,12nm,0.8s								
MKAR	**Makanchi Array**	**18.99**	**347**	P	**P**		**20 58 48.1**	**-0.2**	
	comp=Z,0.3nm,0.3s,baz=165,slow=10.0,SNR=13								
	comp=Z,2.5nm,0.8s								
MKAR	**Makanchi Array**	**18.99**	**347**	P	**P**		**20 58 47.8**	**-0.5**	
MAKZ	**Makanchi**	**19.07**	**347**	P	**P**		**20 58 49.4**	**+0.2**	
SHAA	**Shahritus**	**19.15**	**304**		**Pn**		**20 58 50.6**	**-0.5**	
SHAA					IAmb	IAmb	20 58 54.0		
	comp=Z,39nm,1.2s								
KK31	**Karatay Array**	**20.50**	**321**	P	**P**		**20 59 05.2**	**+0.4**	
KKAR	**Karatay Array**	**20.50**	**321**		**P**		**20 59 05.7**	**+0.9**	
HHC	**Hu-ho-hao-te**	**22.86**	**51**	*eP*	**P**		**20 59 31.0**	**+0.7**	
HHC					pmax	pmax			
	comp=Z,5.0nm,0.5s								
KURBB	**Kurchatov Arra**	**23.42**	**344**	P	**P**		**20 59 35.9**	**+0.1**	
	comp=Z,1.7nm,0.5s,baz=164,slow=8.9,SNR=15								
	comp=Z,1.7nm,0.5s								
KURK	**Kurchatov**	**23.49**	**345**		**P**		**20 59 36.4**	**0.0**	
KURK					IAmb	IAmb	20 59 39.8		
	comp=Z,4.7nm,1.1s								
SONM	**Songino Array**	**24.06**	**31**	P	**P**		**20 59 43.6**	**+1.5**	
	comp=Z,0.9nm,0.7s,baz=224,slow=9.6,SNR=6.3								
	comp=Z,0.9nm,0.7s								
ULN	**Ulaanbaatar**	**24.39**	**32**	P	**P**		**20 59 42.6**	**-2.5**	
ZAA0	**Zalesovo Array**	**25.70**	**355**	P	**P**		**20 59 55.6**	**-1.2**	
ZAA0					IAmb	IAmb	21 00 00.2		
	comp=Z,2.6nm,1.1s								
ZALV	**Zalesovo Beam**	**25.70**	**355**	P	**P**		**20 59 57.1**	**+0.3**	
	comp=Z,0.6nm,0.3s,baz=178,slow=9.9,SNR=4.3								
	comp=Z,0.6nm,0.3s								
ZALV	**Zalesovo Beam**	**25.70**	**355**	P	**P**		**20 59 55.3**	**-1.4**	
BVAR	**Borovoye Array**	**27.95**	**337**	P	**P**		**21 00 17.2**	**+0.2**	
	comp=Z,1.0nm,0.5s,baz=138,slow=9.7,SNR=6.2								
	comp=Z,1.0nm,0.5s								
KSRS	**Korea Array**	**34.38**	**64**	P	**P**		**21 01 14.1**	**+0.3**	
	comp=Z,0.8nm,0.5s,baz=260,slow=7.4,SNR=5.0								
	comp=Z,0.8nm,0.5s								
ARTI	**Arti**	**35.12**	**331**	P	**P**		**21 01 19.9**	**-0.2**	
BRTR	**Keskin Array B**	**45.97**	**299**	P	**P**		**21 02 50.1**	**0.0**	
	comp=Z,0.3nm,0.6s,baz=104,slow=6.1,SNR=2.5								
	comp=Z,0.3nm,0.6s								
FINES	**FINESS Array B**	**52.24**	**328**	P	**P**		**21 03 37.6**	**0.0**	
	comp=Z,2.6nm,0.8s,baz=104,slow=8.0,SNR=5.9								
	comp=Z,2.6nm,0.8s								
ARCES	**ARCESS Array B**	**54.24**	**337**	P	**P**		**21 03 52.7**	**+0.5**	
	comp=Z,0.8nm,0.4s,baz=105,slow=7.5,SNR=13								
	comp=Z,0.8nm,0.4s								
HFS	**Hagfors**	**58.20**	**325**	P	**P**		**21 04 20.4**	**-0.3**	
	comp=Z,1.2nm,0.4s,baz=100,slow=8.0,SNR=11								
	comp=Z,1.2nm,0.4s								
GERES	**GERESS Array B**	**59.31**	**312**	P	**P**		**21 04 28.4**	**-0.2**	
	comp=Z,1.2nm,0.7s,baz=90,slow=5.6,SNR=12								
	comp=Z,1.2nm,0.7s								
NB2	**NORSAR Subarra**	**59.38**	**327**	P	**P**		**21 04 28.1**	**-0.8**	
	comp=Z,0.4nm,0.5s,baz=86,slow=6.9								
NOA	**NORSAR Array B**	**59.38**	**327**	P	**P**		**21 04 27.9**	**-1.0**	
	comp=Z,0.5nm,0.4s,baz=88,slow=6.6,SNR=3.4								
	comp=Z,0.5nm,0.4s								
EKA	**Eskdalemuir Ar**	**67.92**	**322**	P	**P**		**21 05 24.4**	**-0.8**	
	comp=Z,0.6nm,0.7s,baz=67,slow=7.3,SNR=1.7								
	comp=Z,0.6nm,0.7s								
ASAR	**Alice Springs**	**67.93**	**135**	P	**P**		**21 05 25.6**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=316,slow=6.7,SNR=7.4								
	comp=Z,0.5nm,0.6s								

*NEIC **29** 22:00:53.7±2.1,52.01N±0.04×169.35W±0.08, h10km±1km, mb3.6/29, ML3.6/18, ML3.2(AEIC), Error ellipse: s-maj=8.2km s-min=7.3km az=232.0*
*IDC **29** 22:00:54.3±1.8,52.42N×169.63W, h0km, mb3.8/9, mbtmp3.7/11, ML3.2/2, MS3.5/2, Error ellipse: s-maj=47.9km s-min=20.5km az=4.0*
*AEIC **29** 22:00:57.4±2.7,52.19N±0.07×169.33W±0.09, h18km±5km, Error ellipse: s-maj=10.5km s-min=7.5km az=174.0*

ISC 29 22:00:57.3±2.0, 52°2N±0°1×169°48W±0°06, h31km±13km, n90, σ1s15/90, mb3.8/14, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**0.66**	**347**			**Pb**	**22 01 10.4**	**+0.2**
CLES	**Cleveland East**	**0.72**	**340**	Pn		**Pb**	**22 01 11.4**	**0.0**
CLES						**Sn**	**22 01 22.6**	**+1.2**
CLES				IAML			22 01 27.5	
	comp=E,5μm,0.2s							
OKSP	**Okmok Steeple**	**1.32**	**33**			**Pn**	**22 01 18.9**	**-0.7**
OKSP						**Sn**	**22 01 36.3**	**0.0**
OKTU	**Okmok Mt. Tuli**	**1.52**	**35**			**Pn**	**22 01 22.4**	**+0.1**
OKWE	**Okmok W'ng Wal**	**1.52**	**29**			**Pn**	**22 01 22.2**	**-0.2**
OKNC	**Okmok New Cone**	**1.55**	**32**			**Pn**	**22 01 23.0**	**+0.3**
OKFG	**Magazine Ridge**	**1.58**	**36**			**Pn**	**22 01 22.9**	**-0.3**
MAPS	**Pakushin South**	**2.26**	**42**			**Pn**	**22 01 32.4**	**-0.1**
MAPS						**Sn**	**22 02 00.1**	**+0.7**
MGOD	**Makushin Gods**	**2.28**	**43**			**Pn**	**22 01 33.1**	**+0.3**
MGOD						**Sn**	**22 02 01.0**	**+1.1**
MNAT	**Makushin Natee**	**2.42**	**43**			**Pn**	**22 01 34.9**	**+0.2**
MNAT						**Sn**	**22 02 04.7**	**+1.3**
UNV	**Unalaska Valle**	**2.47**	**45**			**Pn**	**22 01 35.6**	**+0.2**
UNV				Sn		**Sn**	**22 02 05.9**	**+1.4**
UNV				IAML			22 02 17.7	
	comp=N,142nm,0.6s							
AKRB	**Akutan Reef Bi**	**2.86**	**45**			**Pn**	**22 01 42.0**	**+1.3**
ZRO	**Akutan Zero**	**2.87**	**46**			**Pn**	**22 01 42.0**	**+1.1**
LVA	**Lava Point**	**2.89**	**44**			**Pn**	**22 01 42.1**	**+0.8**
LVA				Sn		**Sn**	**22 02 17.6**	**+2.7**
LVA				IAML			22 02 28.7	
	comp=N,264nm,0.7s							
LVA				IAML			22 02 34.6	
	comp=E,159nm,0.9s							
ATKA	**Atka Island**	**2.91**	**273**	Pn		**Pn**	**22 01 41.8**	**+0.5**
AKLV	**Akutan Long Va**	**2.93**	**45**			**Pn**	**22 01 43.0**	**+1.3**
AKGG	**Akutan Green G**	**2.94**	**44**			**Pn**	**22 01 43.0**	**+1.2**
AKUT	**Akutan**	**2.99**	**47**	Pn		**Pn**	**22 01 40.8**	**-1.7**
AKUT				Sn		**Sn**	**22 02 17.8**	**+0.6**
AKUT				IAML			22 02 30.6	
	comp=E,79nm,0.8s							
GSIG	**Igitkin Island**	**3.98**	**270**			**Pn**	**22 01 57.8**	**+1.6**
GSTR	**Great Sitkin T**	**4.06**	**272**	Pn		**Pn**	**22 01 57.7**	**+0.4**
GSTR				IAML			22 03 19.4	
	comp=E,120nm,1.5s							
ETKA	**Kagalaska Isla**	**4.29**	**269**			**Pn**	**22 02 01.9**	**+1.5**
ADK	**Adak**	**4.46**	**269**	Pn		**Pn**	**22 02 02.6**	**-0.1**
ADK				IAML			22 03 04.2	
	comp=E,54nm,1.9s							
ADK				IAML			22 03 21.0	
	comp=E,48nm,1.4s							
KIWB	**Kanaga Island**	**4.75**	**269**	Pn		**Pn**	**22 02 06.6**	**-0.1**
KIWB				IAML			22 03 28.3	
	comp=E,65nm,1.2s							
KIWB				IAML			22 03 31.6	
	comp=N,54nm,1.4s							
SPIA	**Saint Paul Isl**	**5.06**	**355**	Pn		**Pn**	**22 02 11.2**	**+0.3**
CNBA	**Chernabura Isl**	**6.48**	**62**	Pn		**Pn**	**22 02 30.0**	**-0.5**
O15K	**Ungalikthiuk R**	**8.90**	**34**	Pn		**Pn**	**22 03 03.5**	**-0.1**
N15K	**Kwethluk River**	**9.58**	**29**	Pn		**Pn**	**22 03 13.3**	**+0.3**
O16K	**Kokwok River B**	**9.82**	**36**	Pn		**Pn**	**22 03 15.8**	**-0.3**
L16K	**Owhat River**	**11.02**	**26**	Pn		**Pn**	**22 03 33.0**	**+0.5**
K15K	**Wolf Creek Mou**	**11.03**	**20**	Pn		**Pn**	**22 03 33.4**	**+0.6**
KDAK	**Kodiak Island**	**11.22**	**53**	Pn		**Pn**	**22 03 31.2**	**-4.1**
	comp=N,0.2nm,0.3s,baz=94,slow=22,SNR=1.3							
KDAK	**Kodiak Island**	**11.22**	**53**			**Pn**	**22 03 34.9**	**-0.4**
K17K	**Iditarod**	**12.16**	**25**	Pn		**Pn**	**22 03 49.6**	**+1.4**
L19K	**White Mountain**	**12.77**	**32**	Pn		**Pn**	**22 03 56.0**	**-0.5**
SLKM	**Skilak Lake**	**13.53**	**44**	Pn		**Pn**	**22 04 06.3**	**-0.6**
CAST	**Castle Rocks**	**14.55**	**32**	Pn		**Pn**	**22 04 20.3**	**-0.5**
SCM	**Sheep Creek Mo**	**15.40**	**42**	Pn		**Pn**	**22 04 30.1**	**-2.1**
H22K	**Ishtalitna Cre**	**16.53**	**27**	Pn		**Pn**	**22 04 45.7**	**-0.9**
VRDI	**Verde Repeater**	**16.83**	**47**	Pn		**Pn**	**22 04 48.8**	**-1.7**
VRDI				IAmb		IAmb	22 04 55.7	
	comp=Z,4.6nm,1.3s							
ILAR	**Eielson Array**	**17.17**	**34**	Pn		**Pn**	**22 04 52.0**	**-2.6**
	baz=247,slow=11,SNR=1.4							
	comp=Z,0.1nm,0.5s							
RIDG	**Independent Ri**	**17.34**	**38**	Pn		**Pn**	**22 04 55.6**	**-1.2**
RIDG				IAmb		IAmb	22 05 05.5	
	comp=Z,5.2nm,1.4s							
G23K	**Bananza Creek**	**17.51**	**26**	Pn		**Pn**	**22 04 57.7**	**-1.1**
J25K	**Salcha River,**	**17.61**	**36**	Pn		**Pn**	**22 04 58.5**	**-1.7**
M27K	**Edge Creek, AK**	**17.94**	**45**			**Pn**	**22 05 02.8**	**-1.5**
M27K					IAmb	IAmb	22 05 45.5	
	comp=Z,4.0nm,1.3s							
L27K	**Beaver Creek,**	**18.24**	**42**	P		**Pn**	**22 05 07.0**	**-0.8**
BCAR	**Beaver Creek A**	**18.26**	**42**	P		**Pn**	**22 05 07.4**	**-0.6**
O29M	**Mount Kennedy**	**18.86**	**52**	P		**P**	**22 05 14.1**	**-0.7**
M29M	**Somme Creek**	**19.47**	**46**	P		**P**	**22 05 20.4**	**-0.9**
I27K	**Kandik River**	**19.49**	**36**	P		**P**	**22 05 19.9**	**-1.6**
I27K					IAmb	IAmb	22 05 43.8	
	comp=Z,3.6nm,1.4s							
E25K	**Arctic Village**	**19.73**	**27**	P		**P**	**22 05 23.6**	**-0.4**
E25K					IAmb	IAmb	22 06 07.2	
	comp=Z,3.1nm,0.9s							
N30M	**Aishikik Lake**	**19.83**	**49**	P		**P**	**22 05 24.1**	**-1.2**
N30M					IAmb	IAmb	22 05 33.5	
	comp=Z,1.8nm,0.8s							
H27K	**Steamboat Moun**	**19.84**	**34**	P		**P**	**22 05 23.4**	**-1.9**
H27K					IAmb	IAmb	22 06 01.9	
	comp=Z,4.2nm,1.5s							
PETK	**Petropavlovsk-**	**19.86**	**286**	P		**P**	**22 05 25.8**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=83,slow=13,SNR=11							
	comp=Z,2.8nm,0.4s							
PETK	**Petropavlovsk-**	**19.86**	**286**	P		**P**	**22 05 23.9**	**-1.7**
I28M	**Miner Creek**	**20.02**	**37**	P		**P**	**22 05 26.7**	**-0.7**
O30N	**Mendenhall**	**20.16**	**52**	P		**P**	**22 05 28.6**	**-0.3**
O30N					IAmb	IAmb	22 05 32.3	
	comp=Z,3.2nm,0.8s							
K29M	**Barlow Dome**	**20.33**	**42**	P		**P**	**22 05 30.9**	**+0.2**
K29M					IAmb	IAmb	22 05 36.4	
	comp=Z,2.8nm,1.4s							
H29M	**Whitestone**	**20.95**	**36**	P		**P**	**22 05 35.5**	**-1.9**
H29M					IAmb	IAmb	22 05 44.3	
	comp=Z,2.9nm,0.7s							
J30M	**Hart River**	**21.07**	**41**	P		**P**	**22 05 38.0**	**-0.7**
G29M	**Pine Creek**	**21.40**	**34**	P		**P**	**22 05 41.7**	**-0.4**
G29M					IAmb	IAmb	22 05 47.5	
	comp=Z,4.8nm,1.0s							
P33M	**Teslin, Yukon**	**21.69**	**54**	P		**P**	**22 05 45.3**	**0.0**
P33M					IAmb	IAmb	22 05 48.1	
	comp=Z,3.5nm,1.1s							
E29M	**Blow River**	**22.18**	**31**	P		**P**	**22 05 49.0**	**-1.5**
E29M					IAmb	IAmb	22 05 53.1	
	comp=Z,4.2nm,1.4s							
H31M	**Peel River**	**22.29**	**39**	P		**P**	**22 05 49.5**	**-2.2**
F30M	**Barrier River**	**22.49**	**34**	P		**P**	**22 05 53.3**	**-0.5**
MMPY	**Sheldon Lake,**	**22.75**	**48**	P		**P**	**22 05 57.4**	**+0.8**
MMPY					IAmb	IAmb	22 06 35.4	
	comp=Z,1.9nm,1.1s							
INK	**Inuvik**	**23.57**	**33**	P		**P**	**22 06 03.3**	**-1.4**
INK					IAmb	IAmb	22 06 15.5	
	comp=Z,3.5nm,1.2s							
BBB	**Bella Bella**	**25.13**	**73**	LR		LR	22 14 53.3	
	comp=Z,23nm,18.5s,baz=38,slow=33							
YKA	**Yellowknife Ar**	**30.44**	**49**	P		**P**	**22 07 07.2**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=277,slow=9.0,SNR=4.4							
	comp=Z,0.4nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**37.24**	**219**	T		T	22 48 04.0	
	baz=24							
H11N3	**WAKE ISLAND Hy**	**37.25**	**219**	T		T	22 48 01.7	
	baz=24							
H11N1	**WAKE ISLAND Hy**	**37.26**	**219**	T		T	22 48 01.7	
	baz=24							
H11S1	**WAKE ISLAND Hy**	**38.43**	**218**	T		T	22 49 26.3	
	baz=23,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**38.44**	**218**	T		T	22 49 26.3	
	baz=23,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**38.44**	**218**	T		T	22 49 26.9	
	baz=23,slow=76,SNR=5.7							
PDAR	**Pinedale Array**	**40.51**	**79**	P		**P**	**22 08 35.5**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=316,slow=9.2,SNR=1.3							
	comp=Z,0.2nm,0.5s							
JOW	**Kunigami**	**52.41**	**266**	LR		LR	22 30 11.4	
	comp=Z,252nm,21.5s,baz=120,slow=34							
TXAR	**Lajitas Array**	**52.82**	**89**	P		**P**	**22 10 12.0**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=297,slow=8.6,SNR=2.2							
	comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**52.82**	**89**	P		**P**	**22 10 09.6**	**-0.3**
ARCES	**ARCESS Array B**	**58.13**	**354**	P		**P**	**22 10 46.8**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=69,slow=6.6,SNR=4.0							
	comp=Z,3.0nm,0.8s							
ARCES	**ARCESS Array B**	**58.13**	**354**	P		**P**	**22 10 46.3**	**-1.1**
KURK	**Kurchatov**	**62.49**	**318**	P		**P**	**22 11 17.1**	**-0.3**
KURBB	**Kurchatov Arra**	**62.60**	**318**	P		**P**	**22 11 18.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=44,slow=8.2,SNR=6.9							
	comp=Z,0.4nm,0.4s							
BVAR	**Borovoye Array**	**63.84**	**324**	P		**P**	**22 11 26.8**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=41,slow=4.5,SNR=11							
	comp=Z,1.2nm,0.4s							
MKAR	**Makanchi Array**	**63.91**	**313**	P		**P**	**22 11 26.4**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=54,slow=6.9,SNR=6.0							
	comp=Z,0.6nm,0.8s							
MKAR	**Makanchi Array**	**63.91**	**313**	P		**P**	**22 11 26.2**	**-0.7**
FINES	**FINESS Array B**	**66.08**	**352**	P		**P**	**22 11 40.0**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=2.9,slow=3.8,SNR=5.1							
	comp=Z,0.6nm,0.5s							
FINES	**FINESS Array B**	**66.08**	**352**	P		**P**	**22 11 40.5**	**-0.2**
HFS	**Hagfors**	**68.04**	**358**	P		**P**	**22 11 52.7**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=80,slow=1.7,SNR=6.0							
	comp=Z,3.2nm,0.9s							
AB31	**Akbulak array**	**70.59**	**328**	P		**P**	**22 12 09.4**	**+0.3**
ABKAR	**Akbulak array**	**70.59**	**328**	P		**P**	**22 12 09.3**	**+0.2**

*CATAC **29** 22:07:48.0±0.8, 10°N±6°×8°6W±°, h27km±12km, M3.7/14, MLv3.7/14, Error ellipse: s-maj=13.0km s-min=5.6km az=21.5, confirmed*
*UCR **29** 22:07:48.6±0.7, 10°39N×86°25W, h17km±6km, MW4.1, Presumed earthquake*

ISC 29 22:07:47.9±1.4, 10°31N±0°06×86°30W±0°06, h23km, n65, σ0s84/69, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DELF	**Filadelfia**	**0.75**	**79**	*eP*		**Pb**	**22 08 02.5**	**+0.2**
JUD3	**Juan Diaz 3**	**0.76**	**100**	*eP*		**Pb**	**22 08 02.5**	**-0.1**
ALIBA	**Liberia Airpor**	**0.80**	**69**	*eP*		**Pn**	**22 08 03.7**	**-0.1**
NICO	**Nicoya**	**0.86**	**101**	*eP*		**Pb**	**22 08 04.1**	**-0.1**
CMARA	**Lajas Hojancha**	**0.91**	**108**	P		**Pb**	**22 08 04.8**	**-0.3**
CMARA				S		**Sb**	**22 08 17.1**	**+0.2**
CMARA	**Lajas Hojancha**	**0.91**	**108**	*eP*		**Pb**	**22 08 04.8**	**-0.3**
LAPC	**Finca la Perla**	**0.97**	**62**	*eP*		**Pb**	**22 08 04.4**	**-1.7**
LCRUZ	**La Cruz**	**1.01**	**41**	*eP*		**Pb**	**22 08 06.2**	**-0.6**
GPS3	**Bodega del ICE**	**1.02**	**64**	*eP*		**Pn**	**22 08 07.1**	**+0.1**
GPS2	**Hotel Rincn d**	**1.03**	**64**	*eP*		**Pb**	**22 08 06.6**	**-0.6**
VRLE	**La Escondida,**	**1.04**	**62**	*eP*		**Pb**	**22 08 06.5**	**-0.9**
BAGA	**Bagaces**	**1.05**	**78**	*eP*		**Pn**	**22 08 07.1**	**-0.1**
VORI	**VORI**	**1.07**	**61**	*eP*		**Pn**	**22 08 07.1**	**-0.6**
BUAI	**Buenos Aires**	**1.11**	**59**	*eP*		**Pn**	**22 08 06.6**	**-1.5**
PEJA	**Penjamo Buenos**	**1.14**	**59**	*eP*		**Pn**	**22 08 08.5**	**0.0**
CARN	**Rivas**	**1.17**	**41**	P		**Pn**	**22 08 08.8**	**0.0**
CARN	**Rivas**	**1.17**	**41**	*eP*		**Pn**	**22 08 07.6**	**-1.3**
MESS	**Mesas**	**1.17**	**68**	*eP*		**Pn**	**22 08 08.7**	**-0.3**
CUI	**Cuipilapa**	**1.17**	**72**	*eP*		**Pn**	**22 08 08.7**	**-0.3**
HORNC	**Hornillas**	**1.18**	**70**	*eP*		**Pn**	**22 08 08.7**	**-0.4**
CLARA	**Aguas Claras**	**1.21**	**67**	*eP*		**Pn**	**22 08 09.0**	**-0.5**
VMAR	**Armenia, Volca**	**1.27**	**67**	*eP*		**Pn**	**22 08 10.3**	**-0.1**
TIMP	**Tierras Morena**	**1.29**	**78**	*eP*		**Pn**	**22 08 10.5**	**-0.2**
CAO2	**Cobano, Puntar**	**1.33**	**117**	*eP*		**Pn**	**22 08 08.3**	**-2.8**
JTS	**Las Juntas de**	**1.33**	**90**	P		**Pn**	**22 08 10.7**	**-0.5**
JTS	**Las Juntas de**	**1.33**	**90**	*eP*		**Pn**	**22 08 10.9**	**-0.3**
JAPN	**Al SSO del Vol**	**1.36**	**27**	P		**Pn**	**22 08 12.0**	**+0.5**
JAPN	**Al SSO del Vol**	**1.36**	**27**	*eP*		**Pn**	**22 08 12.0**	**+0.5**
TENO	**El Achiote**	**1.36**	**73**	*eP*		**Pn**	**22 08 10.8**	**-0.8**
COTE	**Lago Cote**	**1.39**	**79**	*eP*		**Pn**	**22 08 12.2**	**+0.2**
MORN	**Al O del Volca**	**1.39**	**27**	P		**Pn**	**22 08 12.0**	**0.0**
UPAL	**Upala**	**1.40**	**65**	P		**Pn**	**22 08 12.2**	**+0.2**
UPAL				S		**Sb**	**22 08 30.6**	**-0.2**
CONN	**Concepcion**	**1.42**	**28**	P		**Pn**	**22 08 12.3**	**-0.1**
QUEB	**Quebradon, Cot**	**1.42**	**77**	*eP*		**Pn**	**22 08 12.6**	**+0.2**
MTEVE	**Monteverde**	**1.45**	**89**	*eP*		**Pn**	**22 08 12.9**	**0.0**
TABAC	**Tabacon**	**1.52**	**83**	*eP*		**Pn**	**22 08 14.7**	**-0.8**
ARE1	**Arenal 1**	**1.56**	**84**	*eP*		**Pn**	**22 08 15.4**	**-0.9**
VARE2	**V. Arenal**	**1.56**	**84**	*eP*		**Pn**	**22 08 15.4**	**+0.9**
CEDE	**Laguna Cedeo**	**1.58**	**83**	*eP*		**Pn**	**22 08 15.4**	**+0.7**
REZ	**Monterrey de S**	**1.59**	**82**	*eP*		**Pb**	**22 08 16.0**	**-0.8**
FORC	**Fortuna**	**1.61**	**84**	*eP*		**Pn**	**22 08 16.1**	**+1.0**
NANN	**Nandasmo**	**1.63**	**6**	P		**Pn**	**22 08 16.3**	**+0.9**
SABN	**Sabanita**	**1.65**	**5**	P		**Pn**	**22 08 15.6**	**+0.1**
COPN	**Copaltepe**	**1.89**	**351**	P		**Pn**	**22 08 18.5**	**-0.3**
COPN	**Copaltepe**	**1.89**	**351**	*eP*		**Pn**	**22 08 18.7**	**-0.1**
VPL2	**V. Platanar**	**1.89**	**90**	*eP*		**Pn**	**22 08 20.0**	**+1.0**
ATEO	**Atenas**	**1.92**	**100**	*eP*		**Pb**	**22 08 22.2**	**-0.1**
ACON	**Acoyapa**	**1.99**	**34**	P		**Pn**	**22 08 20.0**	**-0.3**
ACON				S		**Sn**	**22 08 45.5**	**+1.0**
VPS5	**V. Poas**	**2.04**	**93**	*eP*		**Pb**	**22 08 26.6**	**+2.1**
ARTO	**Ro Cuarto**	**2.05**	**89**	*eP*		**Pn**	**22 08 21.8**	**+0.7**
BELE	**Belen**	**2.11**	**99**	*eP*		**Pb**	**22 08 25.9**	**+0.4**
MOM2	**El Cardon**	**2.13**	**355**	P		**Pn**	**22 08 22.0**	**-0.1**
MOM2				S		**Sn**	**22 08 49.4**	**+1.6**
ACOS	**Acosta**	**2.17**	**103**	*eP*		**Pn**	**22 08 22.7**	**-0.1**
MACN	**El Madrono**	**2.18**	**350**	P		**Pn**	**22 08 22.8**	**-0.1**
PICV	**PH. Pirrs**	**2.18**	**108**	*eP*		**Pn**	**22 08 23.7**	**+0.8**
MOM3	**MOM3**	**2.20**	**355**	P		**Pn**	**22 08 23.1**	**-0.1**
CNGA	**Al SSO del Vol**	**2.21**	**350**	P		**Pn**	**22 08 23.5**	**+0.2**
BOAB	**BOACO BROADBAN**	**2.22**	**16**	P		**Pn**	**22 08 23.1**	**-0.3**
HERN	**Volcan Telica**	**2.35**	**347**	*eP*		**Pn**	**22 08 25.0**	**-0.2**
VICA	**Volcano Irazu**	**2.44**	**97**	*eP*		**Pn**	**22 08 28.1**	**+1.3**
CVTQ	**Turrialba Volc**	**2.51**	**97**	*eP*		**Pn**	**22 08 29.1**	**+1.4**
VTR0	**Volcan Turrial**	**2.52**	**96**	*eP*		**Pb**	**22 08 31.4**	**-1.4**
ABRB	**Las Abras (San**	**2.56**	**96**	*eP*		**Pb**	**22 08 31.3**	**-2.1**
DRK0	**Durika**	**3.19**	**109**	*eP*		Pn	22 08 26.4	-10
CNCH	**Conchagua**	**3.31**	**333**	P		**Pn**	**22 08 39.3**	**+0.8**
CNCH				S		**Sn**	**22 09 16.6**	**-0.7**

*PRE **29** 22:11:23.5±0.6, 21°64S×33°59E, h5km, ML3.0, Presumed earthquake*

ISC 29 22:11:27.6±2.4, 21°67S±0°07×33°4E±0°1, h13km, n25, σ2s52/43, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PILG	**Pilgrimsrest,**	**4.09**	**217**	*eP*		**Pn**	**22 12 29.7**	**-0.3**
PILG				*eS*		**Sn**	**22 13 18.0**	**+0.2**
PILG				IAML			22 13 48.9	
	comp=Z,30nm,0.5s							
BLWY	**Bulawayo**	**4.73**	**288**	*i* P		**Pn**	**22 12 40.6**	**+1.8**
MATP	**Matopo**	**4.74**	**284**	*i* P		**Pn**	**22 12 40.4**	**+1.5**
MATP				*i* S		**Sn**	**22 13 32.5**	**-1.3**
LEPH	**Lephalale, Lim**	**5.61**	**246**	*eP*		**Pn**	**22 12 51.2**	**+0.4**
LEPH				*eS*		**Sn**	**22 13 55.5**	**+0.2**
LEPH				IAML			22 14 33.4	
	comp=Z,49nm,0.7s							
BROLN	**Tlhalogang**	**5.68**	**275**	*i* P		**Pn**	**22 12 54.6**	**+2.7**
BROLN				*i* S		**Sn**	**22 13 59.3**	**+2.2**
BROLN				IAML			22 14 31.9	
	comp=E,24nm,0.5s							
HRAO	**HartRAO**	**6.71**	**230**	*eP*		**Pn**	**22 13 06.3**	**+0.3**
HRAO				*eS*		**

CAR1	**CAROLEI**	**0.58**	**98**	⇓P		**Pn**	**22 39 07.8**	**+0.2**
CAR1				S		**S**	**22 39 35.2**	**-1.8**
CAR1				AML		AML		
	comp=N,214μm,0.4s							
CAR1				AML		AML		
	comp=E,328μm,0.4s							
SPS2	**Spezzano della**	**0.67**	**94**	P		**Pn**	**22 39 08.3**	**+0.4**
SPS2				S		**S**	**22 39 36.6**	**-0.9**
SPS2				AML		AML		
	comp=E,64μm,0.3s							
SPS2				AML		AML		
	comp=N,61μm,0.3s							
SPS2				AML		AML		
	comp=E,64μm,0.3s							
GIZZ	**Gizzeria**	**0.68**	**122**	⇓P		**Pn**	**22 39 08.0**	**0.0**
GIZZ				S		**S**	**22 39 35.8**	**-1.8**
BULG	**Bulgheria - Ca**	**0.74**	**354**	⇓P		**Pn**	**22 39 09.0**	**+0.9**
TDS	**Terranova Siba**	**0.74**	**64**	P		**Pn**	**22 39 09.3**	**+1.3**
TDS				S		**S**	**22 39 37.6**	**-0.2**
TDS				AML		AML		
	comp=E,58μm,1.1s							
TDS				AML		AML		
	comp=N,40μm,0.8s							
TDS				AML		AML		
	comp=E,58μm,1.1s							
TDS				AML		AML		
	comp=N,40μm,0.8s							
TDS				AML		AML		
	comp=E,58μm,0.9s							
TDS				AML		AML		
	comp=N,40μm,1.2s							
MGR	**Morigerati**	**0.80**	**5**	⇓P		**Pn**	**22 39 09.0**	**+0.8**
MGR				S		**S**	**22 39 38.4**	**+0.2**
MGR				AML		AML		
	comp=N,31μm,0.7s							
MGR				AML		AML		
	comp=E,23μm,0.8s							
MGR				AML		AML		
	comp=E,23μm,1.2s							
MGR				AML		AML		
	comp=N,31μm,1.3s							
JOPP	**Joppolo**	**0.80**	**156**	⇓P		**Pn**	**22 39 08.5**	**+0.1**
JOPP				S		**S**	**22 39 37.0**	**-1.5**
JOPP				AML		AML		
	comp=E,81μm,0.7s							
JOPP				AML		AML		
	comp=N,126μm,0.3s							
JOPP				AML		AML		
	comp=E,81μm,0.7s							
CELI	**Celico**	**0.81**	**85**	⇓P		**Pn**	**22 39 10.0**	**+1.5**
CELI				S		**S**	**22 39 39.2**	**+0.7**
CELI				AML		AML		
	comp=N,74μm,0.4s							
CELI				AML		AML		
	comp=E,67μm,0.8s							
CELI				AML		AML		
	comp=N,75μm,0.4s							
CELI				AML		AML		
	comp=N,74μm,0.4s							
SALB	**San Lorenzo Be**	**0.86**	**51**	⇓P		**Pn**	**22 39 09.5**	**+0.8**
SALB				S		**S**	**22 39 38.6**	**-0.3**
SALB				AML		AML		
	comp=N,69μm,0.6s							
SALB				AML		AML		
	comp=E,91μm,1.0s							
SALB				AML		AML		
	comp=N,69μm,1.4s							
SIRI	**Monte Sirino -**	**0.89**	**20**	⇓P		**Pn**	**22 39 09.4**	**+0.6**
SIRI				AML		AML		
	comp=N,35μm,1.0s							
SIRI				AML		AML		
	comp=E,32μm,0.4s							
SIRI				AML		AML		
	comp=N,35μm,1.0s							
SIRI				AML		AML		
	comp=N,35μm,1.0s							
SELL	**Sellia**	**0.97**	**111**	⇓P		**Pn**	**22 39 09.9**	**+0.8**
ILOS	**Lipari Osserat**	**0.98**	**205**	P		**Pn**	**22 39 10.7**	**+1.5**
CMPR	**Campora**	**0.98**	**353**	P		**Pn**	**22 39 09.9**	**+0.9**
SERS	**Sersale**	**0.99**	**108**	⇓P		**Pn**	**22 39 10.0**	**+0.7**
SERS				AML		AML		
	comp=E,51μm,0.4s							
SERS				AML		AML		
	comp=N,59μm,1.4s							
SERS				AML		AML		
	comp=E,51μm,0.4s							
SERS				AML		AML		
	comp=N,59μm,0.6s							
TIP	**Timpagrande**	**1.01**	**99**	⇓P		**Pn**	**22 39 10.2**	**+0.9**
TIP				AML		AML		
	comp=E,39μm,0.7s							
TIP				AML		AML		
	comp=N,36μm,0.6s							
TIP				AML		AML		
	comp=E,39μm,1.3s							
IVUG	**Vulcano Grillo**	**1.02**	**202**	P		**Pn**	**22 39 10.2**	**+0.9**
FERC	**Galatro**	**1.02**	**150**	P		**Pn**	**22 39 10.1**	**+0.7**
VPL	**Vulcano Piano**	**1.03**	**202**	P		**Pn**	**22 39 10.5**	**+1.1**
VPL				AML		AML		
	comp=E,112μm,1.0s							
VPL				AML		AML		
	comp=N,124μm,0.4s							
SLCN	**Sala Consilina**	**1.05**	**7**	P		**Pn**	**22 39 10.5**	**+1.0**
MSRU	**Castanea**	**1.08**	**178**	⇓P		**Pn**	**22 39 09.6**	**-0.1**
MSRU				S		**S**	**22 39 39.4**	**-1.3**
MSRU				AML		AML		
	comp=N,105μm,1.3s							
MSRU				AML		AML		
	comp=E,120μm,0.8s							
MSRU				AML		AML		
	comp=N,105μm,0.7s							
CEL	**Celeste**	**1.13**	**163**	P		**Pn**	**22 39 09.7**	**-0.3**
CEL				S		**S**	**22 39 40.1**	**-1.2**
CEL				AML		AML		
	comp=N,103μm,0.1s							
CEL				AML		AML		
	comp=E,89μm,0.3s							
SRN3	**Sant'Arsenio**	**1.14**	**360**	P		**Pn**	**22 39 10.9**	**+0.9**
PLAC	**Placanica**	**1.17**	**139**	⇓P		**Pn**	**22 39 10.7**	**+0.5**
PLAC				AML		AML		
	comp=E,80μm,0.3s							
PLAC				AML		AML		
	comp=N,102μm,1.2s							
PLAC				AML		AML		
	comp=N,70μm,0.3s							
PLAC				AML		AML		
	comp=E,79μm,0.3s							
PLAC				AML		AML		
	comp=N,102μm,1.2s							
PLAC				AML		AML		
	comp=E,82μm,0.7s							
PLAC				AML		AML		
	comp=E,79μm,1.7s							
PLAC				AML		AML		
	comp=N,70μm,1.7s							
PLAC				AML		AML		
	comp=N,102μm,0.8s							
LADO	**San Nicola del**	**1.17**	**92**	⇓P		**Pn**	**22 39 10.8**	**+0.8**
LADO				AML		AML		
	comp=N,106μm,0.7s							
LADO				AML		AML		
	comp=N,105μm,0.7s							
LADO				AML		AML		
	comp=N,105μm,1.3s							
LADO				AML		AML		
	comp=E,102μm,0.6s							
MPNC	**Port Mandanici**	**1.20**	**184**	P		**Pn**	**22 39 10.5**	**+0.1**
GMB	**Gambarie**	**1.21**	**166**	P		**Pn**	**22 39 11.0**	**+0.5**
CRAC	**Craco**	**1.26**	**36**	⇓P		**Pn**	**22 39 11.2**	**+0.7**
CRAC				S		**S**	**22 39 43.5**	**+1.1**
CRAC				AML		AML		
	comp=E,120μm,0.9s							
CRAC				AML		AML		
	comp=N,89μm,0.5s							
PTRP	**Pietrapertosa**	**1.26**	**21**	P		**Pn**	**22 39 11.7**	**+1.0**
NOV	**Novara**	**1.34**	**191**	P		**Pn**	**22 39 12.0**	**+0.7**
NOV				AML		AML		
	comp=E,270μm,0.7s							
NOV				AML		AML		
	comp=N,275μm,0.9s							
NOV				AML		AML		
	comp=E,270μm,1.3s							
SOI	**Samo**	**1.35**	**160**	P		**Pn**	**22 39 11.7**	**+0.5**
SOI				AML		AML		
	comp=E,52μm,0.6s							
SOI				AML		AML		
	comp=N,59μm,1.3s							
MTTG	**Motta San Giov**	**1.35**	**172**	⇓P		**Pn**	**22 39 11.7**	**+0.5**
MTTG				AML		AML		
	comp=E,82μm,1.4s							
MTTG				AML		AML		
	comp=N,122μm,0.5s							
MTTG				AML		AML		
	comp=N,122μm,1.5s							
MTTG				AML		AML		
	comp=E,82μm,0.6s							
MUCR	**Ucria**	**1.38**	**200**	P		**Pn**	**22 39 11.8**	**+0.3**
MUCR				AML		AML		
	comp=N,43μm,0.4s							
MUCR				AML		AML		
	comp=E,31μm,0.7s							
AIO	**Antillo**	**1.38**	**188**	P		**Pn**	**22 39 12.4**	**+0.9**
AIO				AML		AML		
	comp=E,71μm,0.6s							
AIO				AML		AML		
	comp=N,122μm,0.4s							
MSFR	**San Fratello**	**1.48**	**208**	P		**Pn**	**22 39 13.0**	**+0.9**
EMSG	**Monte Spagnolo**	**1.57**	**195**	P		**Pn**	**22 39 15.1**	**+2.2**
GALF	**Gagliano Caste**	**1.78**	**204**	P		**Pn**	**22 39 16.6**	**+2.4**
GALF				AML		AML		
	comp=N,87μm,0.7s							
GALF				AML		AML		
	comp=E,95μm,0.8s							
GALF				AML		AML		
	comp=E,95μm,1.2s							
CSLB	**Castelbuono**	**1.79**	**219**	P		**Pn**	**22 39 14.7**	**+0.4**
CSLB				AML		AML		
	comp=E,13μm,0.8s							
CSLB				AML		AML		
	comp=N,22μm,0.8s							
CSLB				AML		AML		
	comp=E,13μm,1.2s							
PETRA	**Petralia Sopra**	**1.84**	**216**	⇓P		**Pn**	**22 39 15.8**	**+1.0**
PETRA				AML		AML		
	comp=E,48μm,1.3s							
PETRA				AML		AML		
	comp=N,39μm,1.2s							
PETRA				AML		AML		
	comp=E,48μm,0.7s							
PETRA				AML		AML		
	comp=N,39μm,0.8s							
NOCI	**Noci**	**1.89**	**40**	P		**Pn**	**22 39 14.8**	**-0.1**
NOCI				AML		AML		
	comp=E,58μm,0.8s							
NOCI				AML		AML		
	comp=N,44μm,0.9s							
VAE	**Valguarnera**	**2.04**	**204**	P		**Pn**	**22 39 15.9**	**-0.5**
	comp=N,2.8nm,0.5s,baz=207,slow=20,SNR=2.5							
HLNI	**Lentini**	**2.05**	**193**	P		**Pn**	**22 39 16.6**	**+0.3**
HLNI				AML		AML		
	comp=N,27μm,0.2s							
HLNI				AML		AML		
	comp=E,26μm,0.3s							
HAGA	**Augusta**	**2.07**	**187**	AML		AML		
	comp=E,56μm,0.9s							
HAGA				AML		AML		
	comp=N,32μm,0.6s							
SSY	**Sortino**	**2.21**	**188**	P		**Pn**	**22 39 17.5**	**-0.3**
MEU	**Monte Lauro**	**2.28**	**191**	P		**Pn**	**22 39 19.1**	**+0.7**
MEU				AML		AML		
	comp=E,48μm,0.4s							
MEU				AML		AML		
	comp=N,66μm,0.4s							
RAFF	**Raffo Rosso**	**2.29**	**203**	P		**Pn**	**22 39 19.3**	**+0.9**
KEST	**Kesra**	**6.05**	**235**	P		**Pn**	**22 40 01.4**	**+1.3**
	comp=N,2.1nm,0.9s,baz=28,slow=6.8,SNR=3.6							
BRTR	**Keskin Array B**	**14.03**	**83**	P		**P**	**22 41 40.4**	**+2.6**
	comp=N,0.4nm,0.6s,baz=278,slow=16,SNR=2.3							
ESDC	**Sonseca Array**	**15.01**	**277**	P		**Pn**	**22 41 50.8**	**+1.3**
	comp=N,0.5nm,0.6s,baz=71,slow=10,SNR=6.4							
EKA	**Eskdalemuir Ar**	**20.27**	**328**	P		**P**	**22 42 42.2**	**-2.7**
	comp=N,0.3nm,0.4s,baz=141,slow=11,SNR=3.7							
HFS	**Hagfors**	**20.84**	**358**	P		**P**	**22 42 47.2**	**-3.4**
	comp=N,3.2nm,0.9s,baz=175,slow=11,SNR=2.0							
	comp=N,3.2nm,0.9s							
FINES	**FINESS Array B**	**23.08**	**13**	P		**P**	**22 43 09.8**	**-1.3**
	comp=N,1.7nm,0.5s,baz=198,slow=9.0,SNR=15							
	comp=N,1.7nm,0.5s							

NEIC ***29*** *22:41:07.5±1.1, 7.05S±0.04×128.93E±0.09, h163km±12km, mb4.0/4, Error ellipse: s-maj=12.8km s-min=6.1km az=96.0*
IDC ***29*** *22:41:08.1±7.2, 7.38S×129.05E, h142km±74km, mb3.6/1, mbtmp4.2/4, Error ellipse: s-maj=67.7km s-min=44.7km az=27.0*

ISC 29 22:41:08.3±1.2,**7.41S**±0.09×**129.10E**±0.08,**h150**km,**n16,** σ2$39/19,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.25**	**105**	Pn		**Pn**	**22 41 49.1**	**+2.6**
SOEI	**Soe**	**5.32**	**244**			**Pn**	**22 42 26.5**	**+0.4**
FAKI	**Fak Fak**	**5.45**	**35**	Pn		**Pn**	**22 42 24.6**	**-3.2**
MTN	**Manton Dam**	**5.76**	**160**			**Pn**	**22 42 36.5**	**+4.6**
BATI	**Baumata**	**6.05**	**242**	P		**Pn**	**22 42 34.3**	**-1.5**
	48nm,0.4s,baz=86,slow=14,SNR=7.3							
BATI				S		**Sn**	**22 43 44.0**	**-0.3**
	30nm,0.3s,baz=140,slow=18,SNR=4.1							
KNRA	**Kununurra**	**8.23**	**182**	Pn		**Pn**	**22 43 08.2**	**+3.3**
FITZ	**Fitzroy Crossi**	**11.15**	**197**	S		**Sn**	**22 45 43.2**	**-3.7**
	3.9nm,0.5s,baz=154,slow=21,SNR=5.9							
WB0	**Warramunga Arr**	**13.32**	**158**	Pn		**Pn**	**22 44 12.1**	**+0.5**
WRA	**Warramunga Arr**	**13.46**	**158**	P		**Pn**	**22 44 14.2**	**+0.7**
	0.8nm,0.5s,baz=333,slow=13,SNR=12							
WRA				S		**Sn**	**22 46 39.4**	**-3.1**
	1.6nm,0.5s,baz=333,slow=22,SNR=8.8							
COEN	**Coen**	**15.28**	**116**			**P**	**22 44 38.3**	**+0.5**
COEN				IAmb		IAmb	22 44 59.3	
	comp=Z,12nm,1.1s							
AS31	**Alice Springs**	**16.81**	**165**	P		**Pn**	**22 44 56.6**	**+1.6**
AS31				IAmb		IAmb	22 44 59.3	
	comp=Z,3.3nm,0.6s							
ASAR	**Alice Springs**	**16.81**	**165**	P		**Pn**	**22 44 56.9**	**+1.8**
	comp=Z,7.3nm,0.4s,baz=340,slow=9.7,SNR=130							
ASAR				S		**S**	**22 48 02.2**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=347,slow=27,SNR=4.2							
ASAR	**Alice Springs**	**16.81**	**165**	P		**Pn**	**22 44 57.5**	**+2.4**
BBOO	**Buckleboo**	**26.09**	**167**	P		**P**	**22 46 29.0**	**+0.9**
STKA	**Stephens Creek**	**26.99**	**156**	P		**P**	**22 46 36.9**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=305,slow=10.0,SNR=3.9							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**82.57**	**180**	P		**P**	**22 53 12.8**	**-1.7**

MDD ***29*** *22:43:19.0±2.1, 36.71N×4.64W, h57km±18km, Mb2.6/3, Error ellipse: s-maj=16.6km s-min=13.9km az=139.0*

ISC 29 22:43:17.1±4.2,**36.7N**±0.2×**4.7W**±0.1,**h65**km±29km,**n6,** σ1$52/9,**2C,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EMIJ	**Mijas**	**0.14**	**210**	Pg		**Pn**	**22 43 26.8**	**0.0**
EMIJ				Sg		**Sn**	**22 43 34.3**	**+0.4**
EADA	**Adamuz**	**1.48**	**3**	Pg		**Pn**	**22 43 42.0**	**+0.4**
EADA				⇑*i*IVmb_VC			22 43 43.9	
	70nm,SNR=1.3							
EADA				Sg		**Sn**	**22 43 59.3**	**-0.8**
ECAB	**El Cabril**	**1.50**	**337**	Pg		**Pn**	**22 43 44.1**	**+2.1**
ECAB				⇑*i*IVmb_VC			22 43 47.2	
	41nm,SNR=0.8							
ECAB				Sg		**Sn**	**22 43 59.8**	**-0.9**
PSIM	**Granatula de C**	**2.25**	**19**	Sg		**Sn**	**22 44 17.4**	**-1.4**
PBAR	**Barrancos**	**2.39**	**309**	*e*S		**Sn**	**22 44 21.1**	**-1.0**
PBAR				IAML			22 44 24.1	
PBAR				IAML			22 44 24.3	
PBAR				IAML			22 44 25.4	
PVAQ	**Vaqueiros**	**2.53**	**287**	*e*S		**Sn**	**22 44 24.0**	**-1.5**

NOU ***29*** *23:50:31.9, 19.81S×176.53W, h529km, mb4.4/16, Fiji Islands Region*
IDC ***29*** *23:50:47.2±1.3, 20.73S×178.47W, h614km±14km, mb3.4/19, mbtmp4.3/23, Error ellipse: s-maj=14.4km s-min=11.3km az=124.0*
NEIC ***29*** *23:50:52.5±1.7, 20.75±0.1×178.5W±0.1, h600km±7km, mb4.5/60, Error ellipse: s-maj=18.3km s-min=15.8km az=137.0*

ISC 29 23:50:47.2±0.3,**20.79S**±0.07×**178.30W**±0.07,**h600**km,

n552, σ2$97/435,**mb4.3**/63,**48C-32D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAVE	**Taveuni**	**4.34**	**339**	S		S	23 53 05.0	-22
MSVF	**Nonsavu**	**4.60**	**311**	P		**P**	**23 52 16.0**	**-1.1**
	48nm,0.5s,baz=138,slow=4.2,SNR=34							
MSVF	**Nonsavu**	**4.60**	**311**	P		**P**	**23 52 15.8**	**-1.3**
MSVF	**Nonsavu**	**4.60**	**311**			**P**	**23 52 20.9**	**+3.7**
NIUE	**Niue**	**8.06**	**79**	P		**P**	**23 52 46.5**	**-0.6**
NIUE	**Niue**	**8.06**	**79**	P		P	23 52 52.3	+5.2
AFI	**Afiamalu**	**9.25**	**43**	P		**P**	**23 53 01.7**	**+2.9**
	56nm,0.5s,baz=144,slow=1.3,SNR=8.2							
AFI				S		**S**	**23 54 41.6**	**-5.0**
	16nm,0.3s,baz=357,slow=22,SNR=1.6							
AFI	**Afiamalu**	**9.25**	**43**	P		**P**	**23 52 57.2**	**-1.6**
MARNC	**Mare, Loyalty**	**12.78**	**264**	P		**P**	**23 53 36.6**	**+2.9**
MARNC	**Mare, Loyalty**	**12.78**	**264**	P		**P**	**23 53 36.2**	**+2.4**
YATNC	**Mamie plateau,**	**13.85**	**262**	P		**P**	**23 53 48.2**	**+3.5**
DZM	**Mont Dzumac**	**14.27**	**262**	P		**P**	**23 53 45.9**	**-2.8**
	9.4nm,0.8s,baz=81,slow=16,SNR=21							
DZM	**Mont Dzumac**	**14.27**	**262**	P		**P**	**23 53 45.9**	**-2.8**
ONTNC	**Ouen Toro**	**14.27**	**261**	P		**P**	**23 53 51.6**	**+2.9**
NOUC	**Port Laguerre**	**14.40**	**262**	P		**P**	**23 53 53.4**	**+3.5**
OUZ	**Omahuta**	**16.04**	**205**	P		**P**	**23 54 08.0**	**+3.2**
KOUNC	**Koumac, New Ca**	**16.30**	**268**	P		**P**	**23 54 10.9**	**+3.6**
KOUNC	**Koumac, New Ca**	**16.30**	**268**	P		**P**	**23 54 11.5**	**+4.1**
MXZ	**Matakaoa Point**	**16.97**	**189**	P		**P**	**23 54 13.0**	**-0.2**
URZ	**Urewera**	**17.85**	**192**	P		**P**	**23 54 20.1**	**-1.1**
	9.5nm,0.5s,baz=349,slow=5.2,SNR=16							
URZ				S		**S**	**23 57 10.5**	**-4.6**
	2.3nm,0.8s,baz=149,slow=6.7,SNR=3.2							
URZ	**Urewera**	**17.85**	**192**	P		**P**	**23 54 21.3**	**0.0**
URZ	**Urewera**	**17.85**	**192**	P		**P**	**23 54 20.1**	**-1.1**
BKZ	**Black Stump Fm**	**18.85**	**193**	P		**P**	**23 54 30.7**	**+0.3**
BFZ	**Birch Farm**	**20.36**	**192**	P		**P**	**23 54 44.3**	**+0.3**
BFZ	**Birch Farm**	**20.36**	**192**	P		**P**	**23 54 48.2**	**+4.3**
BFZ				IAmb		IAmb	23 54 53.2	
	comp=Z,28nm,1.3s							
QRZ	**Quartz Range**	**21.44**	**199**	P		**P**	**23 54 54.9**	**+1.2**
KHZ	**Kahutara**	**22.63**	**196**	P		**P**	**23 55 05.0**	**+0.8**
TATA	**Tatamba Isabel**	**24.48**	**297**	P		**P**	**23 55 19.0**	**-2.0**
MLZ	**Mavora Lakes**	**26.94**	**201**	P		**P**	**23 55 43.0**	**+0.7**
MLZ	**Mavora Lakes**	**26.94**	**201**	P		**P**	**23 55 47.5**	**+5.2**
MLZ				IAmb		IAmb	23 55 51.9	
	comp=Z,31nm,1.2s							
WHZ	**Wether Hill Ro**	**27.46**	**201**	P		**P**	**23 55 46.7**	**-0.1**
WHZ	**Wether Hill Ro**	**27.46**	**201**	P		**P**	**23 55 52.8**	**+6.0**
WHZ				IAmb		IAmb	23 55 54.4	
	comp=Z,18nm,0.8s							
EIDS	**Eidsvold**	**28.50**	**255**	P		**P**	**23 56 00.6**	**+4.5**
EIDS	**Eidsvold**	**28.50**	**255**	P		**P**	**23 55 54.2**	**-1.8**
EIDS				IAmb		IAmb	23 55 55.7	
	comp=Z,11nm,1.4s							
EIDS	**Eidsvold**	**28.50**	**255**	P		**P**	**23 55 59.1**	**+3.0**
EIDS				IAmb		IAmb	23 56 03.2	
	comp=Z,13nm,1.4s							
ARMA	**Armidale**	**28.69**	**244**	P		P	23 56 02.8	+5.0
ARMA	**Armidale**	**28.69**	**244**	P		**P**	**23 55 56.8**	**-0.9**
ARMA				IAmb		IAmb	23 55 58.0	
	comp=Z,15nm,1.5s							
ARMA	**Armidale**	**28.69**	**244**	P		**P**	**23 56 01.5**	**+3.7**
ARMA				IAmb		IAmb	23 56 04.3	
	comp=Z,24nm,1.1s							
CTA	**Charters Tower**	**33.18**	**265**	P		**P**	**23 56 34.3**	**-1.8**
	comp=Z,4.8nm,0.4s,baz=90,slow=9.5,SNR=11							
	comp=Z,4.8nm,0.4s							
CTA	**Charters Tower**	**33.18**	**265**	P		**P**	**23 56 34.3**	**-1.8**
CTAO	**Charters Tower**	**33.18**	**265**	P		**P**	**23 56 33.9**	**-2.2**
CTAO	**Charters Tower**	**33.18**	**265**	P		**P**	**23 56 39.4**	**+3.3**
CTAO				IAmb		IAmb	23 56 41.0	
	comp=Z,12nm,0.4s							
TOO	**Toolangi**	**35.50**	**234**	P		**P**	**23 56 59.7**	**+4.5**
COEN	**Coen**	**37.32**	**274**	P		**P**	**23 57 07.9**	**-2.5**
COEN	**Coen**	**37.32**	**274**	P		**P**	**23 57 13.8**	**+3.5**
COEN				IAmb		IAmb	23 57 19.3	
	comp=Z,21nm,1.5s							
STKA	**Stephens Creek**	**37.41**	**244**	P		**P**	**23 57 09.5**	**-1.3**
	comp=Z,3.1nm,0.7s,baz=78,slow=8.9,SNR=6.4							
	comp=Z,3.1nm,0.7s							
STKA	**Stephens Creek**	**37.41**	**244**	P		**P**	**23 57 09.5**	**-1.3**
BBOO	**Buckleboo**	**42.17**	**244**	P		**P**	**23 57 47.1**	**-1.7**
BBOO				IAmb		IAmb	23 57 48.8	
	comp=Z,12nm,1.2s							
BBOO	**Buckleboo**	**42.17**	**244**	P		**P**	**23 57 52.5**	**+3.7**
BBOO				IAmb		IAmb	23 57 53.9	
	comp=Z,13nm,0.8s							
WR8	**Warramunga Arr**	**44.13**	**262**	P		**P**	**23 58 01.5**	**-2.7**
WR8				IAmb		IAmb	23 58 02.6	
	comp=Z,5.7nm,0.5s							
WR8	**Warramunga Arr**	**44.13**	**262**	P		**P**	**23 58 07.0**	**+2.8**
WR8				IAmb		IAmb	23 58 15.8	
	comp=Z,8.5nm,1.1s							
ASAR	**Alice Springs**	**44.18**	**257**	P		**P**	**23 58 02.8**	**-1.8**
	comp=Z,8.3nm,0.5s,baz=94,slow=7.6,SNR=99							
ASAR				PcP		**PcP**	**23 59 33.1**	**-2.8**
	comp=Z,3.4nm,0.5s,baz=104,slow=3.7,SNR=11							
ASAR				S		**S**	**00 03 48.4**	**-7.1**
	comp=Z,1.5nm,0.9s,baz=93,slow=15,SNR=6.4							
	comp=Z,8.3nm,0.5s							
ASAR	**Alice Springs**	**44.18**	**257**	P		**P**	**23 58 02.3**	**-2.3**
ASAR	**Alice Springs**	**44.18**	**257**			**P**	**23 58 07.8**	**+3.3**
WB0	**Warramunga Arr**	**44.26**	**263**	P		**P**	**23 58 02.7**	**-2.5**
WB0	**Warramunga Arr**	**44.26**	**263**			**P**	**23 58 08.0**	**+2.8**
WB0				IAmb		IAmb	23 58 09.2	
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**44.28**	**262**	P		**P**	**23 58 02.7**	**-2.6**
	comp=Z,4.5nm,0.4s,baz=98,slow=7.8,SNR=69							
WRA				PcP		**PcP**	**23 59 34.7**	**-1.6**
	comp=Z,1.7nm,0.5s,baz=93,slow=3.2,SNR=4.9							
	comp=Z,4.5nm,0.4s							
WRA	**Warramunga Arr**	**44.28**	**262**	P		**P**	**23 58 03.0**	**-2.4**
WRA	**Warramunga Arr**	**44.28**	**262**			**P**	**23 58 08.3**	**+2.9**
WRA				IAmb		IAmb	23 58 09.3	
	comp=Z,0.5nm,0.9s							
FITZ	**Fitzroy Crossi**	**52.71**	**263**	P		**P**	**23 59 05.9**	**-1.7**
	comp=Z,4.5nm,0.4s,baz=110,slow=3.8,SNR=14							
	comp=Z,4.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**52.71**	**263**	P		**P**	**23 59 05.4**	**-2.2**
SOEI	**Soe**	**56.23**	**272**	P		**P**	**23 59 29.6**	**-2.8**
SOEI	**Soe**	**56.23**	**272**	P		**P**	**23 59 35.1**	**+2.7**
SOEI				IAmb		IAmb	23 59 36.9	
	comp=Z,75nm,0.4s							
MBWA	**Marble Bar**	**57.52**	**258**	P		**P**	**23 59 38.4**	**-2.5**
MBWA				IAmb		IAmb	23 59 39.3	
	comp=Z,5.7nm,0.7s							
MBWA	**Marble Bar**	**57.52**	**258**	P		**P**	**23 59 43.2**	**+2.3**
MBWA				IAmb		IAmb	23 59 45.1	
	comp=Z,5.8nm,0.7s							
SBA	**Scott Base**	**57.56**	**184**	P		**P**	**23 59 43.3**	**+3.1**
VNDA	**Vanda**	**57.59**	**185**	P		**P**	**23 59 40.2**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=2.5,slow=5.0,SNR=7.7							
	comp=Z,0.9nm,0.8s							
VNDA	**Vanda**	**57.59**	**185**	P		**P**	**23 59 39.6**	**-0.9**
VNDA	**Vanda**	**57.59**	**185**	P		**P

MJAR IAmb IAmb 00 01 05.0
comp=Z,4.8nm,0.7s
KIWB Kanaga Island 72.34 1 P P 00 01 16.4 +3.4
ADK Adak 72.38 1 P P 00 01 10.6 -2.6
ADK Adak 72.38 1 P P 00 01 16.2 +3.1
ADK IAmb IAmb 00 01 17.1
comp=Z,40nm,0.7s
JKA Kamikawa-asahi 73.85 332 P 00 01 26.6 +4.9
JKA IAmb IAmb 00 01 27.6
comp=Z,22nm,1.0s
SSLB Suanglung 73.90 304 P P 00 01 24.5 +1.9
SSLB IAmb IAmb 00 01 25.7
comp=Z,19nm,0.9s
UNV Unalaska Valle 75.02 7 P P 00 01 31.0 +2.9
UNV IAmb IAmb 00 01 31.5
comp=Z,17nm,0.6s
UNV Unalaska Valle 75.02 7 P P 00 01 31.2 +3.1
baz=192
PEA0B Petropavlovsk- 76.48 345 P P 00 01 33.8 -2.4
PEA0B Petropavlovsk- 76.48 345 P P 00 01 39.2 +3.0
PEA0B IAmb IAmb 00 01 40.6
comp=Z,12nm,0.7s
PETK Petropavlovsk- 76.48 345 P P 00 01 33.9 -2.4
comp=Z,2.4nm,0.6s,baz=171,slow=30,SNR=4.2
comp=Z,2.4nm,0.6s
PETK Petropavlovsk- 76.48 345 P P 00 01 33.8 -2.4
PETK Petropavlovsk- 76.48 345 P P 00 01 39.6 +3.4
KSRS Korea Array 76.92 319 P P 00 01 37.2 -1.7
comp=Z,0.8nm,0.6s,baz=132,slow=6.0,SNR=5.4
comp=Z,0.8nm,0.6s
KSRS Korea Array 76.92 319 P P 00 01 37.2 -1.7
KSAR Wonju Array Be 76.94 319 P 00 01 43.5 +4.5
CHNA Chernabura Isl 77.00 11 P P 00 01 42.4 +3.4
baz=198
SDPT Sand Point 77.35 10 P P 00 01 44.1 +3.3
baz=197
S14K Fog Glacier 78.40 11 P P 00 01 50.5 +3.9
baz=198
MHC Mount Hamilton 78.66 43 P P 00 01 54.0 +5.6
CHIR Chirikof Islan 78.70 13 P P 00 01 51.9 +3.9
baz=202
HOPS Hopland Field 78.77 41 P P 00 01 55.0 +6.1
HOPS IAmb IAmb 00 01 56.5
comp=Z,14nm,1.2s
KMPM Mount Pierce 79.04 39 P 00 01 56.6 +6.3
KMPM IAmb IAmb 00 01 57.9
comp=Z,21nm,1.1s
USA0B Ussuriysk Arra 79.05 326 P P 00 01 54.6 +4.4
USA0B IAmb IAmb 00 01 55.6
comp=Z,12nm,0.9s
USRK Ussuriysk Ar. 79.05 326 P P 00 01 48.2 -2.0
comp=Z,2.0nm,0.8s,baz=142,slow=3.2,SNR=14
comp=Z,2.0nm,0.8s
USRK Ussuriysk Ar. 79.05 326 P P 00 01 47.8 -2.4
USRK Ussuriysk Ar. 79.05 326 P 00 01 54.4 +4.2
KMRM Mail Ridge 79.16 39 P P 00 01 57.3 +6.3
KMRM IAmb IAmb 00 01 59.0
comp=Z,22nm,0.8s
BELA Belgrano 2 79.30 173 P P 00 01 51.3 +0.2
O02D Mt. Diablo Mer 79.68 40 P P 00 01 53.4 -0.3
O02D Mt. Diablo Mer 79.68 40 P P 00 01 59.5 +5.8
O02D IAmb IAmb 00 02 01.4
comp=Z,10nm,0.8s
SII Sitkinak Islan 79.69 13 P P 00 01 57.6 +4.3
baz=203
KHBM Hayfork Bally 79.72 39 P P 00 02 00.1 +5.9
R17L Mt. Peulik Vol 80.25 12 P P 00 02 00.5 +4.3
baz=201
M02C Callahan 80.40 39 P P 00 01 59.0 +1.5
M02C Callahan 80.40 39 P 00 02 04.0 +6.6
M02C IAmb IAmb 00 02 05.1
comp=Z,10nm,0.8s
MDPB Devils Postpil 80.47 44 P P 00 02 03.9 +5.8
OHAK Old Harbor 80.50 13 P P 00 02 01.6 +4.2
baz=204
MDJ Mudanjiang 80.60 325 P P 00 02 03.0 +4.7
MDJ pmax pmax
comp=Z,19nm,0.9s
MDJ Mudanjiang 80.60 325 P P 00 02 02.4 +4.1
MDJ IAmb IAmb 00 02 03.6
comp=Z,19nm,1.1s
YBH Yreka Blue Hor 80.69 39 P 00 02 05.0 +6.0
YBH IAmb IAmb 00 02 06.3
comp=Z,9.2nm,0.8s
WAKR Walker 80.75 43 P 00 02 05.4 +6.0
WAKR IAmb IAmb 00 02 06.8
comp=Z,10nm,1.1s
Q17K Contact Creek 80.93 12 P P 00 02 03.6 +3.8
baz=201
BEKR Beckworth 80.97 41 P P 00 02 06.2 +5.7
O14K Tigyukauivet M 80.98 9 P P 00 02 03.5 +3.7
baz=196
O15K Ungalikthiuk R 81.12 10 P P 00 02 04.1 +3.6
baz=198
KDAK Kodiak Island 81.17 14 P P 00 02 05.0 +4.2
baz=204
Q16K King Salmon 81.18 11 P P 00 02 04.9 +4.1
baz=201
L04D Klamath Falls 81.23 39 P P 00 02 02.1 +0.3
L04D IAmb IAmb 00 02 03.5
comp=Z,6.6nm,1.2s
L04D Klamath Falls 81.23 39 P 00 02 07.4 +5.6
L04D IAmb IAmb 00 02 08.8
comp=Z,18nm,1.0s
P16K Nushagak River 81.28 10 P P 00 02 05.2 +3.9
baz=199,SNR=5.4
NVAR Mina Array Bea 81.43 43 P P 00 02 03.3 +0.3
comp=Z,0.8nm,0.7s,baz=229,slow=13,SNR=4.1
comp=Z,0.8nm,0.7s
NVAR Mina Array Bea 81.43 43 P P 00 02 02.8 -0.2
NVAR Mina Array Bea 81.43 43 P P 00 02 08.3 +5.3
BBOR Butler Butte 81.43 38 P P 00 02 08.4 +5.5
Q18K Katmai Hardscr 81.46 12 P P 00 02 06.4 +3.9
baz=202,SNR=12
N14K Kuskokwak Cree 81.56 8 P P 00 02 07.3 +4.5
baz=196
P17K Kvichak River 81.70 11 P P 00 02 02.1 -1.4
P17K Kvichak River 81.70 11 P P 00 02 07.6 +4.1
baz=201,SNR=8.5
O16K Kokwok River B 81.79 10 P P 00 02 01.9 -2.1
O16K IAmb IAmb 00 02 02.2
comp=Z,2.8nm,0.7s
O16K Kokwok River B 81.79 10 P P 00 02 07.0 +3.0
O16K IAmb IAmb 00 02 08.1
comp=Z,13nm,0.8s
O16K Kokwok River B 81.79 10 P P 00 02 07.3 +3.3
baz=199
M13K Dall Lake 81.83 7 P P 00 02 07.6 +3.5
baz=194
KVN Kaiserville 81.92 43 P 00 02 05.6 +0.1
Q19K Cape Douglas, 81.99 13 P P 00 02 08.8 +3.7
baz=203
N15K Kwethluk River 82.03 9 P P 00 02 09.9 +4.7
baz=197,SNR=6.8
P18K Big Mountain, 82.11 12 P P 00 02 09.3 +3.6
baz=202,SNR=5.9
O17K Koliganek Bris 82.13 11 P P 00 02 09.3 +3.6
baz=200
M14K Bethel 82.33 8 P P 00 02 11.4 +4.7
baz=196
M15K Kasigluk River 82.44 9 P P 00 02 11.9 +4.6
baz=197,SNR=7.6
BNX BinXian 82.50 325 ⇑P P 00 02 06.3 -1.6
BNX pmax pmax
comp=Z,16nm,0.8s
N16K Nishlik Lake 82.52 10 P P 00 02 12.4 +4.7
baz=199,SNR=8.8
O18K Koktuh Hills 82.55 12 P 00 02 06.2 -1.7
O18K IAmb IAmb 00 02 07.0
comp=Z,4.0nm,0.7s
O18K Koktuh Hills 82.55 12 P P 00 02 11.9 +4.0
O18K IAmb IAmb 00 02 12.6
comp=Z,29nm,0.7s
O18K Koktuh Hills 82.55 12 P P 00 02 11.9 +4.0
baz=202,SNR=13
P19K Oil Pt 82.74 13 P P 00 02 12.7 +3.9
baz=204
L14K Kuka Creek 82.81 8 P P 00 02 13.7 +4.7
baz=195
PINE Pine Mountain 82.99 38 P 00 02 16.2 +5.5
PINE IAmb IAmb 00 02 17.9
comp=Z,17nm,0.9s
M16K Timber Creek 83.01 9 P 00 02 10.1 -0.1
M16K IAmb IAmb 00 02 10.8
comp=Z,14nm,1.4s
M16K Timber Creek 83.01 9 P P 00 02 14.8 +4.6
M16K IAmb IAmb 00 02 16.3
comp=Z,56nm,1.5s
M16K Timber Creek 83.01 9 P P 00 02 15.4 +5.2
baz=198,SNR=6.5
CNPM China Poot 83.05 14 P P 00 02 14.5 +4.1
CNPM IAmb IAmb 00 02 15.4
comp=Z,17nm,0.8s
HOM Homer 83.08 13 P P 00 02 14.8 +4.4
baz=205
K13K Kusilvak Mount 83.16 6 P P 00 02 15.5 +4.6
baz=193
N18K Kilae Creek 83.19 11 P P 00 02 14.8 +3.7
baz=201
O20K Slope Mountain 83.26 13 P P 00 02 15.2 +3.8
baz=204
L15K Ungalak Mounta 83.28 8 P P 00 02 15.7 +4.3
baz=196
BRLK Bradley Lake 83.34 14 P P 00 02 16.1 +4.3
BRLK IAmb IAmb 00 02 16.8
comp=Z,17nm,0.9s
BRSE Bradley Lake S 83.35 14 P P 00 02 16.0 +4.1
baz=206
HG4B Hotspring 83.53 27 P P 00 02 10.2 -2.7
HG4B IAmb IAmb 00 02 10.7
comp=Z,3.3nm,0.9s
HG4B Hotspring 83.53 27 P P 00 02 18.1 +5.2
HG4B IAmb IAmb 00 02 22.1
comp=Z,6.1nm,0.9s
WVOR Wild Horse Val 83.53 40 P P 00 02 19.1 +5.8
N19K Bonanza Creek 83.57 11 P P 00 02 10.7 -2.3
N19K Bonanza Creek 83.57 11 P 00 02 16.4 +3.4
N19K IAmb IAmb 00 02 17.3
comp=Z,9.2nm,1.0s
N19K Bonanza Creek 83.57 11 P P 00 02 16.4 +3.4
baz=202,SNR=5.2
L16K Owhat River 83.59 9 P P 00 02 17.5 +4.6
baz=198
M17K Holitna River 83.61 10 P P 00 02 17.5 +4.4
baz=200
K15K Wolf Creek Mou 83.87 8 P P 00 02 18.8 +4.4
baz=196
M18K Stony River 83.96 11 P P 00 02 19.1 +4.3
baz=201
SEW Seward 83.97 14 P P 00 02 18.5 +3.6
baz=207
J14K Nanvaranak Lak 84.08 7 P P 00 02 19.3 +4.1
baz=194
L17K Donlin 84.17 9 P P 00 02 20.1 +4.3
baz=199
P23K Montague Islan 84.36 15 P P 00 02 20.7 +4.0
baz=209
L18K Granite Mounta 84.50 10 P P 00 02 21.3 +3.8
baz=200,SNR=6.4
M19K Big River Lodg 84.60 11 P P 00 02 21.8 +3.9
baz=203
K17K Iditarod 84.72 9 P P 00 02 22.7 +4.1
baz=199
L19K White Mountain 84.78 11 P P 00 02 22.9 +4.1
baz=202,SNR=7.3
RC01 Rabbit Creek A 84.79 13 P P 00 02 22.7 +3.9
baz=207
M20K Styx River 84.81 12 P P 00 02 22.9 +3.8
baz=204
PWL Port Wells 84.89 14 P P 00 02 23.2 +3.7
baz=208
J16K Anvik River 84.95 8 P P 00 02 23.6 +4.0
baz=197
KAIM Kayak Island 85.05 16 P P 00 02 23.7 +3.6
baz=212
CRAG Craig 85.10 24 P P 00 02 24.0 +3.6
baz=222
GLI Glacier Island 85.20 15 P P 00 02 24.9 +4.0
baz=209
SKT Skwentna 85.22 12 P P 00 02 24.8 +3.9
baz=205
EYAK Cordova Ski Ar 85.24 15 P P 00 02 24.9 +3.9
baz=210
J17K VABM Dome 85.26 9 P P 00 02 25.2 +4.1
baz=198
M22K Willow 85.30 13 P P 00 02 25.4 +4.2
baz=206
KNK Knik Glacier 85.36 14 P P 00 02 25.8 +4.1
baz=208
PMR Palmer 85.37 14 P P 00 02 25.6 +4.0
baz=207
SIT Sitka 85.37 14 P P 00 02 25.6 +4.0
baz=220
SIT Sitka 85.50 22 P P 00 02 26.6 +4.3
baz=220
I17K Unalakleet 85.52 8 P P 00 02 26.7 +4.5
baz=197
V35K Ketchikan 85.57 25 P P 00 02 27.7 +5.0
baz=223
GHO Glory Hole Cre 85.57 14 P P 00 02 20.9 -1.8
GHO IAmb IAmb 00 02 22.0
comp=Z,4.1nm,0.8s
GHO Glory Hole Cre 85.57 14 P P 00 02 26.2 +3.5
GHO IAmb IAmb 00 02 27.6
comp=Z,23nm,0.8s
U33K Whale Pass 85.58 23 P P 00 02 27.8 +5.1
baz=222
J18K Innoko River 85.67 10 P P 00 02 27.1 +4.0
baz=200
SML Sawmill 85.73 14 P P 00 02 27.3 +3.8
baz=208
CUT Chulitna 85.86 13 P P 00 02 27.6 +3.7
baz=206
M23K Glacier View 85.86 14 P P 00 02 27.6 +3.6
baz=209
L22K Petersville 85.86 12 P P 00 02 27.2 +3.1
baz=206,SNR=7.5
BMRM Bremner River 85.89 16 P P 00 02 28.2 +4.0
baz=212,SNR=6.6
S31K Pelican 85.89 21 P P 00 02 28.1 +4.0
baz=219
PPLA Purkeypile 85.92 12 P P 00 02 28.0 +3.5
baz=204
SCM Sheep Creek Mo 85.98 14 P P 00 02 23.4 -1.3
SCM IAmb IAmb 00 02 24.1
comp=Z,4.7nm,0.7s
SCM Sheep Creek Mo 85.98 14 P P 00 02 28.6 +3.9
SCM IAmb IAmb 00 02 29.7
comp=Z,21nm,0.7s
SCM Sheep Creek Mo 85.98 14 P P 00 02 28.7 +4.0
baz=209,SNR=9.4
K20K Telida 86.01 11 P P 00 02 28.6 +4.0
baz=203
KLU Klutina 86.02 15 P P 00 02 28.8 +4.0
baz=210
WRAK Wrangell Islan 86.10 24 P P 00 02 29.3 +4.2
baz=222
CRQE Cirque 86.10 16 P P 00 02 29.5 +4.2
baz=213
G15K Niukluk 86.22 6 P P 00 02 30.0 +4.4
baz=194
J19K Poorman 86.34 10 P P 00 02 30.5 +4.3
baz=201
CAST Castle Rocks 86.42 11 P 00 02 24.0 -2.7
CAST IAmb IAmb 00 02 24.7
comp=Z,1.7nm,0.7s
CAST Castle Rocks 86.42 11 P P 00 02 29.0 +2.4
CAST IAmb IAmb 00 02 30.3
comp=Z,9.2nm,0.7s
CAST Castle Rocks 86.42 11 P P 00 02 29.3 +2.7
baz=205,SNR=9.9
N25K Chitina, Valde 86.44 15 P P 00 02 31.2 +4.3
baz=212,SNR=9.8
F14K Arctic Creek 86.48 5 P P 00 02 31.5 +4.7
baz=191
GLB Gilahina Butte 86.50 16 P 00 02 25.1 -2.0
GLB IAmb IAmb 00 02 26.1
comp=Z,1.6nm,0.6s
WAT6 Susitna Watana 86.55 14 P P 00 02 31.5 +4.0
baz=209,SNR=10
WAT1 Susitna Watana 86.59 13 P P 00 02 31.2 +3.7
baz=208
H17K Granite Mounta 86.62 8 P P 00 02 29.8 +2.3
baz=197
MCARA McCarthy VSAT 86.65 16 P P 00 02 31.9 +4.2
baz=213
P29M Windy Craggy 86.72 19 P P 00 02 32.5 +4.4
baz=218
J20K Nowinta River 86.75 10 P P 00 02 32.2 +4.1
baz=203
TRF Thorofare Moun 86.79 12 P P 00 02 26.6 -2.0
TRF IAmb IAmb 00 02 27.6
comp=Z,3.9nm,0.8s
TRF Thorofare Moun 86.79 12 P P 00 02 32.0 +3.4
TRF IAmb IAmb 00 02 32.8
comp=Z,17nm,0.7s
TRF Thorofare Moun 86.79 12 P P 00 02 31.8 +3.3
baz=206,SNR=12
CHUM Lake Minchumin 86.80 11 P P 00 02 31.6 +3.3
baz=204
O28M Mount Upton 86.91 18 P P 00 02 34.0 +4.7
baz=216
HARP HAARP 86.98 15 P P 00 02 33.8 +4.5
baz=211
O29M Mount Kennedy 87.00 19 P P 00 02 34.5 +4.9
baz=217
PLBC Pleasant Camp 87.02 20 P P 00 02 34.5 +5.0
baz=219,SNR=5.7
H18K Honhosa River 87.03 8 P P 00 02 34.6 +5.2
baz=199
DHY Denali Highway 87.07 14 P P 00 02 33.6 +3.8
baz=209,SNR=5.2
I20K Naaghedeneel 87.27 10 P P 00 02 34.9 +4.4
baz=202
MCK McKinley 87.32 13 P P 00 02 34.5 +3.7
baz=208
P30M Million Dollar 87.35 19 P P 00 02 36.5 +5.4
baz=218
PAX Paxson 87.41 14 P P 00 02 35.0 +3.6
baz=211
TROLL Troll, Antarti 87.44 180 ⇑P P 00 02 37.4 +5.8
comp=Z,120nm,0.7s
TXAR Lajitas Array 87.45 57 P P 00 02 32.3 -0.1
comp=Z,0.6nm,0.9s,baz=242,slow=2.7,SNR=6.7
comp=Z,0.6nm,0.9s
TXAR Lajitas Array 87.45 57 P 00 02 38.8 +6.4
YUK8 Steele Glacier 87.45 18 P P 00 02 36.6 +4.8
baz=216,SNR=11
M26K Nabesna, AK 87.52 16 P P 00 02 36.4 +4.5
baz=213,SNR=6.4
YUK6 Outpost Mounta 87.58 18 P P 00 02 37.1 +4.7
baz=217,SNR=5.3
S34M Telegraph Cree 87.64 23 P P 00 02 38.1 +5.7
baz=224
H19K Roundabout Mou 87.66 9 P P 00 02 36.6 +4.3
baz=201
YUK3 Moose Creek 87.66 17 P P 00 02 37.4 +4.7
baz=215,SNR=12
G18K Tagagawik 87.70 8 P P 00 02 36.7 +4.2
baz=198
BRWY Burwash Landin 87.73 18 P P 00 02 37.7 +4.9
baz=216,SNR=9.9
HYT Haines Junctio 87.74 19 P P 00 02 38.0 +5.0
baz=218,SNR=6.7
M27K Edge Creek, AK 87.77 16 P P 00 02 37.9 +4.8
baz=214,SNR=9.1
YUK4 Talbot Arm 87.82 18 P P 00 02 38.6 +5.1
baz=217,SNR=5.0
H20K Anotleneega Mo 87.86 10 P P 00 02 37.6 +4.3
baz=202,SNR=6.5
L26K Log Cabin Wild 87.96 15 P P 00 02 38.5 +4.7
baz=213
P32M Atlin 87.98 21 P P 00 02 39.2 +5.2
baz=221,SNR=5.0
Q32M Nakina River 88.01 22 P P 00 02 39.7 +5.3
baz=222,SNR=5.6
I21K Tanana 88.05 11 P P 00 02 38.2 +4.0
baz=205,SNR=8.0
K24K Donnelly Dome 88.06 14 P P 00 02 38.6 +4.3
baz=210,SNR=7.7
NEA2 Nenana 88.06 12 P P 00 02 36.6 +2.4
baz=207,SNR=6.4
BVCY Beaver Creek 88.08 16 P P 00 02 39.0 +4.6
baz=215
O30N Mendenhall 88.13 19 P P 00 02 39.6 +4.9
baz=219,SNR=7.5
MLY Manley 88.14 11 P 00 02 32.6 -2.1
MLY IAmb IAmb 00 02 33.0
comp=Z,1.5nm,0.6s
MLY Manley 88.14 11 P P 00 02 37.8 +3.2
baz=206,SNR=11
G19K Purcell Mounta 88.15 8 P P 00 02 38.8 +4.2
baz=200
RIDG Independent Ri 88.21 14 P P 00 02 39.1 +4.0
baz=211,SNR=6.3
VNA2 Neumayer--Watz 88.31 177 ⇑P P 00 02 41.6 +6.1
comp=Z,3.7nm,0.6s,baz=182,slow=4.3
HDA Harding Lake 88.33 13 P P 00 02 39.1 +3.6
baz=203,SNR=9.5
H21K Melozitna Rive 88.34 10 P P 00 02 39.6 +4.0
baz=204,SNR=8.1
CCB Clear Creek Bu 88.36 13 P P 00 02 33.7 -2.0
CCB IAmb IAmb 00 02 34.2
comp=Z,2.8nm,0.6s
CCB Clear Creek Bu 88.36 13 P P 00 02 39.1 +3.4
CCB IAmb IAmb 00 02 39.9
comp=Z,16nm,0.7s
L27K Beaver Creek, 88.37 16 P P 00 02 40.3 +4.5
baz=214
N30M Aishikik Lake 88.37 18 P P 00 02 40.4 +4.5
baz=218
WHY Whitehorse 88.42 20 P P 00 02 41.3 +5.1
baz=220
DLBC Dease Lake 88.43 23 P P 00 02 41.4 +5.2
baz=224
E17K Hotham Inlet 88.47 6 P P 00 02 40.3 +4.2
baz=196
IMAR Indian Mountai 88.49 10 P P 00 02 40.2 +4.0
I23K Minto, Yukon-K 88.50 12 P P 00 02 39.5 +3.3
baz=207,SNR=6.4
VNA1 Neumayer--Stat 88.53 177 ⇑P P 00 02 42.3 +5.7
comp=Z,4.1nm,0.9s
COLA College 88.55 12 P P 00 02 40.0 +3.5
baz=208
ILAR Eielson Array 88.66 13 P P 00 02 34.9 -2.1
comp=Z,0.9nm,0.6s,baz=216,slow=5.4,SNR=8.9
comp=Z,0.9nm,0.6s
ILAR Eielson Array 88.66 13 P P 00 02 40.5 +3.4
F19K Shaleruckik Mo 88.71 8 P P 00 02 41.0 +3.8
baz=199,SNR=5.6
P33M Teslin, Yukon 88.75 21 P P 00 02 42.4 +4.7
baz=222
M29M Somme Creek 88.76 17 P P 00 02 42.5 +4.8
baz=217,SNR=13
N31M Braeburn, Yuko 88.78 19 P P 00 02 42.4 +4.7
baz=219,SNR=6.6
H22K Ishtalitna Cre 88.81 11 P P 00 02 41.9 +4.2
baz=205,SNR=9.1
J25K Salcha River, 88.85 14 P P 00 02 41.9 +3.9
baz=211,SNR=9.2
POKR Poker Plat Res 88.85 13 P P 00 02 41.2 +3.2
baz=209
HILR Hailar Array B 88.93 325 P P 00 02 36.5 -2.1
comp=Z,1.6nm,0.5s,baz=130,slow=6.1,SNR=8.5
comp=Z,1.6nm,0.5s
D17K Noatak River 88.95 6 P P 00 02 42.4 +4.1
baz=194
G21K Allakaket 89.02 10 P P 00 02 42.8 +4.1
baz=203,SNR=7.1
H23K Yukon River 89.07 11 P P 00 02 43.0 +4.0
baz=207
K27K Chicken 89.11 15 P P 00 02 38.5 -0.6
F20K Avaraart Lake 89.19 9 P P 00 02 43.3 +3.9
baz=201,SNR=6.1
KMI2 Kunming 89.24 297 P P 00 02 45.3 +4.4
KMI2 pmax pmax
comp=Z,10.0nm,1.3s
RDOG Red Dog Mine 89.31 6 P P 00 02 43.8 +3.8
baz=195
C16K Lisburne Hills 89.32 5 P P 00 02 44.1 +4.1
baz=192
M30M Minto, Yukon 89.33 18 P P 00 02 44.7 +4.5
baz=218
PDAR Pinedale Array 89.37 43 P P 00 02 41.3 +0.2
comp=Z,0.6nm,0.6s,baz=219,slow=1.9,SNR=4.8
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 89.37 43 P 00 02 46.2 +5.1
E19K Redstone River 89.37 8 P P 00 02 44.4 +4.2
baz=200,SNR=8.6
L29M L29M 89.38 17 P P 00 02 45.4 +4.9
baz=217,SNR=12
H24K Noodor Dome 89.40 12 P P 00 02 44.7 +4.1
baz=208
F21K Alatna River 89.68 9 P P 00 02 45.5 +3.8
baz=203
G22K Bettles 89.72 10 P P 00 02 46.2 +4.3
baz=205
M31M Drury Creek, Y 89.75 19 P P 00 02 46.7 +4.5
baz=221
G23K Bananza Creek 89.78 11 P P 00 02 46.5 +4.2
baz=206
DAWY Dawson 89.82 16 P P 00 02 47.0 +4.6
baz=216,SNR=6.5
I26K Coal Creek Min 89.94 14 P P 00 02 47.4 +4.5

baz=213
CMAR **Chiang Mai Arr** 89.95 290 P P 00 02 43.5 -0.6
comp=Z,1.4nm,0.7s,baz=116,slow=2.7,SNR=9.7
comp=Z,1.4nm,0.7s
C18K **Utukok River** 90.05 6 P P 00 02 48.0 +4.5
baz=196
CHTO **Chiang Mai** 90.08 290 P P 00 02 49.1 +4.4
K29M **Barlow Dome** 90.13 17 P P 00 02 48.8 +4.7
baz=218,SNR=10
F22K **John River** 90.14 10 P P 00 02 48.0 +4.1
baz=204
COLD **Coldfoot** 90.22 11 P P 00 02 48.5 +4.3
baz=206
G24K **Hadweenzic Riv** 90.24 12 P P 00 02 48.6 +4.2
baz=209
D19K **Kuna River** 90.24 7 P P 00 02 48.6 +4.3
baz=199
E20K **Nigu River** 90.26 8 P P 00 02 48.5 +4.1
baz=201,SNR=7.1
I27K **Kandik River** 90.54 14 P P 00 02 49.8 +4.0
baz=214
G25K **Bearman Lake** 90.56 12 P P 00 02 49.8 +4.0
baz=210
D20K **Etivluk River** 90.63 8 P P 00 02 50.2 +4.1
baz=200
C19K **Lookout Ridge** 90.66 7 P P 00 02 50.4 +4.2
baz=198
E21K **Killik River** 90.73 9 P P 00 02 50.5 +3.9
baz=203
E22K **Anaktuvuk Pass** 90.78 10 P P 00 02 50.8 +4.0
baz=205
I28M **Miner Creek** 90.81 15 P P 00 02 51.0 +3.9
baz=216,SNR=6.5
F24K **Squaw Lake** 90.89 11 P P 00 02 51.4 +4.1
baz=208
J30M **Hart River** 91.03 17 P P 00 02 52.3 +4.1
baz=219
MMPY **Sheldon Lake,** 91.04 20 P P 00 02 52.4 +4.3
baz=223
E23K **Chandalar** 91.06 10 P P 00 02 52.4 +4.2
baz=207
H27K **Steamboat Moun** 91.08 14 P P 00 02 52.5 +4.2
baz=214
I29M **Ogilvie Camp,** 91.14 16 P P 00 02 52.7 +4.2
baz=217
G26K **Porcupine Rive** 91.19 13 P P 00 02 53.0 +4.3
baz=212
E24K **Your Creek** 91.27 11 P P 00 02 53.1 +4.0
baz=208
C21K **Knifeblade Rid** 91.29 8 P P 00 02 53.3 +4.2
baz=202
F25K **Christian River** 91.37 12 P P 00 02 53.9 +4.3
baz=210
I30M **Mount Dempster** 91.53 16 P P 00 02 54.6 +4.2
baz=219,SNR=5.7
G27K **Doyon Strip** 91.53 14 P P 00 02 54.6 +4.3
baz=214
A19K **Wainwright** 91.57 6 P P 00 02 54.8 +4.5
baz=196
TOLK **Toolik Lake Re** 91.59 10 P P 00 02 54.8 +4.2
baz=207
D23K **Nanushuk River** 91.71 10 P P 00 02 55.5 +4.5
baz=206
B21K **Ikpikpuk River** 91.74 8 P P 00 02 55.5 +4.4
baz=202
F26K **Sheenjek River** 91.75 12 P P 00 02 55.8 +4.5
baz=212
B20K **Meade River** 91.79 7 P P 00 02 55.4 +4.0
baz=200
H29M **Whitestone** 91.81 15 P P 00 02 55.8 +4.2
baz=217,SNR=7.4
D24K **Happy Valley** 92.17 10 P P 00 02 57.4 +4.3
baz=208
EPYK **Eagle Plains** 92.34 16 P P 00 02 58.1 +4.0
baz=219
G29M **Pine Creek** 92.45 15 P P 00 02 58.5 +4.0
baz=217
C23K **Itkillik River** 92.51 9 P P 00 02 58.7 +4.1
baz=206
H31M **Peel River** 92.52 17 P P 00 02 58.7 +3.8
baz=221
B22K **Teshekpuk Lake** 92.57 8 P P 00 02 58.8 +3.9
baz=203
F28M **Old Crow** 92.59 14 P P 00 02 58.7 +3.6
baz=216
E27K **Coleen River** 92.69 13 P P 00 02 59.5 +3.9
baz=214
D25K **Kavik River** 92.74 11 P P 00 02 59.6 +3.8
baz=210
G30M **tAoh Zraii Nji** 92.94 15 P P 00 03 00.7 +3.9
baz=219,SNR=5.2
G31M **Satah River** 93.39 16 P P 00 03 02.7 +4.0
baz=221,SNR=5.9
E28M **Babbage River** 93.47 13 P P 00 03 03.4 +4.3
baz=216
C27K **Jago River** 93.49 11 P P 00 03 03.5 +4.4
baz=212
C26K **Camden Bay** 93.52 11 P P 00 03 03.8 +4.5
baz=211
F30M **Barrier River** 93.54 15 P P 00 03 03.9 +4.4
baz=220
E29M **Blow River** 93.66 14 P P 00 03 03.7 +3.7
baz=218
D27M **Malcolm River** 93.70 13 P P 00 03 04.0 +3.8
baz=215
F31M **Tsiigehtchic** 93.92 16 P P 00 03 05.0 +3.9
baz=221
INK **Inuvik** 94.63 15 P P 00 03 08.1 +3.7
baz=222
SONM **Songino Array** 95.79 319 P P 00 03 07.7 -2.6
comp=Z,0.2nm,0.6s,baz=118,slow=5.4,SNR=3.5
comp=Z,0.2nm,0.6s
YKA **Yellowknife Ar** 96.89 25 P P 00 03 13.4 -1.2
comp=Z,0.5nm,0.7s,baz=234,slow=4.3,SNR=3.2
comp=Z,0.5nm,0.7s
C36M **Paulatuk** 97.81 17 P P 00 03 22.3 +3.7
baz=230
ZALV **Zalesovo Beam** 110.54 321 PKiKP PKiKP 00 08 09.5 -2.6
comp=Z,2.0nm,0.6s,baz=149,slow=1.2,SNR=12
NRIK **Noril'sk** 110.73 338 PKiKP PKiKP 00 08 10.3 -1.7
comp=Z,4.2nm,0.2s,baz=45,slow=18,SNR=21
MKAR **Makanchi Array** 111.19 313 PKiKP PKiKP 00 08 11.1 -2.5
comp=Z,1.5nm,0.5s,baz=204,slow=0.9,SNR=19
MKAR **Makanchi Array** 111.19 313 PKiKP 00 08 10.9 -2.8
KURK **Kurchatov** 114.02 317 PKiKP 00 08 16.2 -2.6
KURBB **Kurchatov Arra** 114.07 317 PKiKP PKPdf 00 08 16.3 -2.6
comp=Z,0.4nm,0.6s,baz=94,slow=2.0,SNR=5.5
BVAR **Borovoye Array** 119.12 320 PKP PKPdf 00 08 26.6 -2.0
comp=Z,1.7nm,0.4s,baz=120,slow=1.5,SNR=15
SPITS **Spitsbergen Ar** 122.14 356 PKP PKPdf 00 08 32.6 -1.2
comp=Z,5.6nm,0.6s,baz=76,slow=7.0,SNR=8.2
ARTI **Arti** 125.39 325 PKiKP 00 08 44.4 +3.4
AB31 **Akbulak array** 126.11 316 PKiKP 00 08 46.3 +3.7
ARCES **ARCESS Array B** 129.16 349 PKP PKPdf 00 08 45.9 -1.5
comp=Z,1.5nm,0.4s,baz=20,slow=1.4,SNR=6.9
ARCES **ARCESS Array B** 129.16 349 PKPdf 00 08 45.4 -2.0
BELG **Belogornoye** 132.67 323 PKP PKPdf 00 08 53.5 -0.9
comp=Z,15nm,0.7s,baz=20,slow=2.2,SNR=4.7
GRTLG **Ghanzi** 133.97 206 PKPdf PKPpre 00 08 55.6
FINES **FINESS Array B** 135.97 343 PKhKP PKPpre 00 08 51.9
comp=Z,0.4nm,0.3s,baz=48,slow=2.8,SNR=7.6
FINES PKP PKPpre 00 08 57.5
comp=Z,1.2nm,0.5s,baz=102,slow=2.0,SNR=7.5
NB2 **NORSAR Subarra** 139.24 353 PKP PKPpre 00 08 58.6
comp=Z,0.6nm,0.4s,baz=14,slow=4.8
NOA **NORSAR Array B** 139.24 353 PKhKP PKPpre 00 08 59.2
comp=Z,1.0nm,0.7s,baz=20,slow=2.6,SNR=6.4
HFS **Hagfors** 139.78 351 PKhKP PKPpre 00 08 59.6
comp=Z,3.1nm,0.6s,baz=98,slow=4.5,SNR=9.2
LODK **Lodwar** 142.97 247 PKPdf PKPpre 00 09 11.6
LODK **Lodwar** 142.97 247 PKiKP 00 09 17.6 -0.4
MCD **Coleburn Disti** 143.08 4 *e*P PKPdf 00 09 14.5 +1.2
KPL **Plockton** 143.10 7 *e*P PKiKP 00 09 15.3 -1.5
AK03 **Malin Array Si** 143.12 331 P PKPab 00 09 09.0 -2.6
AKASG **Malin Array Be** 143.13 331 PKP PKPab 00 09 09.2 -2.5
comp=Z,5.0nm,0.4s,baz=44,slow=4.2,SNR=42
AKBB **Malin Array Si** 143.13 331 PKPab 00 09 09.3 -2.4
AKBB **Malin Array Si** 143.13 331 PKiKP 00 09 15.1 -2.1
KIEV **Kiev** 143.14 331 PKPdf PKPab 00 09 09.4 -2.3
DRUM **Mains of Drumt** 143.80 4 *e*P PKiKP 00 09 17.0 -1.3
INVG **Invergeldie, C** 144.16 5 *e*P PKiKP 00 09 18.8 -0.3
LAWE **Loch Awe, Argy** 144.19 7 *e*P PKiKP 00 09 18.9 -0.2
EAB **Aberfoyle** 144.37 6 *e*P PKiKP 00 09 19.3 -0.2
SORM **Soroca** 145.31 328 ⇓P PKPdf 00 09 17.2 -0.2
EKA **Eskdalemuir Ar** 145.32 5 PKPbc PKPdf 00 09 16.9 -0.3
comp=Z,1.3nm,0.7s,baz=343,slow=2.0,SNR=4.8
BNN **Bunyan** 145.60 309 PKPbc PKPdf 00 09 17.6 -0.9
BNN **Bunyan** 145.60 309 PKiKP 00 09 24.0 +1.2
EDMD **Edmundbyers** 145.90 4 *e*P PKiKP 00 09 23.7 +1.0
IOMK **Kirk Michael** 146.25 7 *e*P PKPab 00 09 25.0 +1.3
ASF **Jabal al Asfar** 146.66 297 PKPbc PKPbc 00 09 21.6 -1.6
comp=Z,3.7nm,0.9s,baz=106,slow=4.3,SNR=6.6
HPK **Haverah Park** 146.79 4 *e*P PKPab 00 09 26.7 +0.9
BR131 **Keskin Array S** 146.83 312 PKPbc PKPdf 00 09 21.1 +0.6
BR131 **Keskin Array S** 146.83 312 PKPab 00 09 26.6 -0.1
BRTR **Keskin Array B** 146.83 312 PKPbc PKPbc 00 09 21.6 -1.8
comp=Z,1.8nm,0.7s,baz=139,slow=5.1,SNR=13
BRTR **Keskin Array B** 146.83 312 PKPbc PKPdf 00 09 21.2 +0.7
BRTR **Keskin Array B** 146.83 312 PKPab 00 09 26.6 -0.1
KIRS **Kirsehir-Merke** 146.88 311 ⇓P PKPbc 00 09 21.9 -1.6
PRAR **RASCA** 146.88 329 ⇓P PKPab 00 09 26.4 -0.1
VLDR **Vladesti** 146.96 325 ⇓P PKPbc 00 09 22.4 -1.0
GIRR **Girov** 147.03 328 ⇓P PKPab 00 09 27.6 +0.5
SCTR **Scanteiesti** 147.12 325 ⇓P PKPbc 00 09 22.5 -1.3
BUR08 **Bucovina Ar. S** 147.16 330 PKPbc PKPbc 00 09 23.1 -0.9
BUR08 **Bucovina Ar. S** 147.16 330 PKPab 00 09 28.6 +0.8
GHRR 147.18 326 ⇑P PKPbc 00 09 23.5 -0.4
BURAR **Bucovina Array** 147.18 330 ⇓P PKPbc 00 09 24.1 +0.1
BURAR **Bucovina Array** 147.18 330 PKPbc PKPbc 00 09 23.1 -1.0
BURAR **Bucovina Array** 147.18 330 PKPab 00 09 28.3 +0.5
JURR **Jurilovca** 147.21 323 ⇑P PKPab 00 09 28.3 +0.4
WLF1 **Llynfaes** 147.22 7 *e*P PKPab 00 09 27.4 -0.2
TESR **Tescani** 147.26 327 ⇑P PKPab 00 09 22.6 -1.6
NEGRR **Negrea** 147.27 325 ⇑P PKPab 00 09 27.5 -0.5
LBWR **Ladybower, Pea** 147.34 4 *e*P PKPab 00 09 28.0 -0.1
CFR **Carcaliu** 147.36 324 ⇑P PKPab 00 09 28.5 0.0
TPGR **Topolog** 147.41 324 ⇑P PKPbc 00 09 23.6 -1.0
PANC **Panciu** 147.44 326 ⇓P PKPab 00 09 29.1 +0.3
ONER **Baraj Valea Uz** 147.51 327 ⇑P PKPab 00 09 24.2 -0.7
TIRR **Tirgusor** 147.66 323 ⇓P PKPbc 00 09 24.3 -0.9
VRI **Vrincioaia** 147.66 326 ⇑P PKPbc 00 09 23.9 -1.3
PLOR **Plostina** 147.71 327 ⇓P PKPab 00 09 28.5 -1.4
MMAI **Mount Meron Ar** 147.71 299 PKPbc PKPbc 00 09 25.0 -0.9
comp=Z,5.2nm,0.4s,baz=50,slow=8.1,SNR=5.7
FOEL **Foel Wylfa** 147.74 6 *e*P PKPab 00 09 29.2 -0.6
SAHR **Sahastru** 147.77 326 ⇓P PKPab 00 09 29.6 -0.6
TURR **Turia** 147.89 327 ⇑P PKPab 00 09 29.9 -0.8
BMR **Baia Mare** 147.91 332 ⇑P PKPbc 00 09 30.3 -0.4
MANR **Mangalia** 147.95 322 ⇑P PKPbc 00 09 25.1 -0.9
TSMN **Mangalia Port-** 147.95 322 ⇑P PKPbc 00 09 25.3 -0.7
CWF **Charnwood Fore** 148.03 3 *e*P PKPab 00 09 29.7 -1.3
WACR **West Acre** 148.12 1 *e*P PKPab 00 09 29.8 -1.5
HLM1 **Long Mynd** 148.13 5 *e*P PKPab 00 09 30.0 -1.4
MDUB **Mudurnu** 148.15 315 PKPbc PKPdf 00 09 24.0 +1.4
OSTC **Ostas** 148.16 342 *e*PKPDF PKPbc 00 09 25.9 -0.5
OSTC ⇑*e*PKP PKPab 00 09 31.0 -0.6
NEHR **Nehoiu** 148.18 326 ⇑P PKPab 00 09 30.7 -1.2
CHVC **Chvalec** 148.18 343⇑*e*PKP PKPab 00 09 30.5 -1.2
SAHE **Sakarya_HENDEK** 148.19 315 ⇑P PKPbc 00 09 25.2 -1.6
ICOR **Ion Corvin** 148.21 323 ⇑P PKPbc 00 09 30.5 -1.5
STEB **Steborice** 148.25 340 *e*PKPDF PKPbc 00 09 25.6 -1.0
STEB ⇑*e*PKP PKPab 00 09 31.1 -0.9
STEB *e*PKPAB PKiKP 00 09 36.3 +8.6
ISR **Istrita** 148.25 326 ⇓P PKPab 00 09 31.8 -0.5
UPC **Upice** 148.27 343⇑*e*PKP PKPab 00 09 31.0 -1.0
DOPR **Dopca** 148.27 328 ⇑P PKPbc 00 09 26.1 -0.7
CLL **Collm** 148.28 346 PKPbc PKPdf 00 09 23.8 +1.5
CLL **Collm** 148.28 346 PKPab 00 09 30.2 -1.8
CLL **Collm** 148.28 346 *i* PKPdf PKPbc 00 09 25.3 -1.3
comp=Z,7.0nm,0.8s
CLL ⇓*i*PKPbc PKPab 00 09 30.8 -1.2
comp=Z,32nm,0.7s
CLL ⇑*i*PKPab PKiKP 00 09 35.4 +7.7
comp=Z,18nm,0.7s
CLL *e*SKPdf SKPdf 00 11 54.0 -6.0
MLR **Muntele Rosu** 148.32 327 ⇓P PKPbc 00 09 26.4 -0.7
DPC **Dobruska-Polom** 148.32 342 *e*PKPDF PKPbc 00 09 25.7 -1.1
DPC ⇑*e*PKP PKPab 00 09 31.4 -0.9
KRLC **Kraliky** 148.43 341 *e*PKPDF PKPbc 00 09 26.0 -1.1
KRLC ⇑*e*PKP PKPab 00 09 31.5 -1.3
MORC **Moravsky Berou** 148.46 340 ⇑P PKPbc 00 09 26.1 -1.1
MORC **Moravsky Berou** 148.46 340 *e*PKP PKPab 00 09 31.1 -1.8
BRG **Berggiesshubel** 148.47 345⇓*e*PKPf 00 09 26.1
BRG Amp 00 09 26.7
comp=Z,5.7nm,1.1s
BRG ⇑PKPb 00 09 31.5
BRG Amp 00 09 32.1
comp=Z,15nm,0.9s
BRG PKPab PKPab 00 09 36.8 +4.0
BRG Amp 00 09 37.4
comp=Z,6.6nm,0.7s
BRG ⇓*e*PKPf 00 42 40.9
BRG Amp 00 42 41.2
comp=Z,2.7nm,0.9s
CJR **Cluj-Napoca** 148.59 331 ⇑P PKPab 00 09 32.2 -1.4
PVCC **Panska Ves** 148.63 344⇑*e*PKP PKPab 00 09 32.2 -1.3
MCH1 **Michaelchurch** 148.64 6 *e*P PKPab 00 09 31.2 -2.3
MAUC **Maruska** 148.72 340 *e*PKPDF PKPbc 00 09 27.1 -0.7
MAUC ⇑*e*PKP PKPab 00 09 32.7 -1.3
EIL **Elat** 148.74 293 PKPbc PKPbc 00 09 26.5 -1.9
comp=Z,10nm,0.8s,baz=27,slow=2.3,SNR=3.8
VOIR 148.81 327 ⇑P PKPab 00 09 31.8 -2.8
MONM **Monmouth** 148.81 5 *e*P PKPbc 00 09 31.5 -2.7
CSS **Mathiatis** 148.83 304 PKPbc PKPbc 00 09 26.1 -2.4
CSS **Mathiatis** 148.83 304 PKPab 00 09 31.8 -3.1
MARR **Marisel-Cluj** 148.84 331 ⇑P PKPab 00 09 32.5 -2.1
DRUR 148.93 331 ⇑P PKPab 00 09 32.2 -0.3
ARR **Arges** 149.07 328 ⇑P PKPab 00 09 34.1 -1.5
PRU **Pruhonice** 149.14 344 *e*PKPDF PKPbc 00 09 27.5 -1.2
PRU ⇑*e*PKP PKPab 00 09 32.4 -3.2
PRU *e*PKPAB PKiKP 00 09 40.0 +10
VRAC **Vranov** 149.16 341 ⇑P PKPab 00 09 33.4 -2.3
VRAC **Vranov** 149.16 341 PKPbc PKPbc 00 09 26.7 -2.1
comp=Z,5.9nm,1.0s,baz=306,slow=2.6,SNR=8.2
VRAC **Vranov** 149.16 341 *e*PKP PKPab 00 09 33.2 -2.6
PSZ **Piszkesteto** 149.21 336 ⇑P PKPab 00 09 33.5 -2.6
JAVC **Velka Javorina** 149.21 339 *e*PKP PKPab 00 09 34.1 -2.0
RAZG **Razgrad** 149.29 323 ⇓P PKPab 00 09 33.0 -3.5
LOT **Lotru** 149.44 329 ⇓P PKiKP 00 09 33.1 +2.6
KRUC **Moravsky** 149.44 341 *e*PKP PKPab 00 09 33.7 -3.2
WOL **Wolverton** 149.46 4 *e*P PKPab 00 09 33.0 -3.8
HUMR **Humele** 149.47 326 ⇑P PKiKP 00 09 31.5 +1.0
TREC **Trest** 149.51 342⇑*e*PKP PKPab 00 09 33.8 -3.4
DEV **Deva** 149.53 330 ⇑P PKPbc 00 09 33.2 +2.7
ZVC **Zvikov** 149.73 344 *e*PKPDF PKPbc 00 09 29.1 -1.1
ZVC ⇑*e*PKP PKPab 00 09 34.4 -3.7
SIRR **Siria** 149.80 332 ⇑P PKPbc 00 09 29.4 -1.1
GZR **Gura Zlata** 149.95 330 ⇓P PKPbc 00 09 29.1 -1.8
UCC **Uccle** 149.98 357 *d*PKP PKPab 00 09 35.1 -4.0
MEM **Membach** 150.05 354 *d*PKP PKPab 00 09 35.0 -4.4
BTNL **Ternell** 150.06 354 *d*PKiKP PKPbc 00 09 29.7 -1.2
BTNL *d*PKP PKPab 00 09 35.2 -4.3
DYA **Yadsworthy** 150.09 7 *e*P PKiKP 00 09 34.4 +2.9
KHC **Kasperske Hory** 150.17 344 *e*PKPDF PKPbc 00 09 29.9 -1.4
KHC ⇑*e*PKP PKPab 00 09 35.7 -4.3
KHC *e*PKPAB PKiKP 00 09 44.4 +13
CKRC **Cesky Krumlov** 150.27 343⇑*e*PKP PKPab 00 09 36.0 -4.4
SRE **Strehaia** 150.28 328 ⇓P PKPab 00 09 36.0 -4.6
BCLA **Clavier** 150.30 355 *d*PKP PKiKP 00 09 35.2 +3.3
BHOU **Houyegnez** 150.31 354 *d*PKP PKPab 00 09 36.0 -4.5
WINA **Allland / Wiene** 150.39 340 *i* PKiKP PKPab 00 09 36.4 -4.5
SNR=7.4
GERES **GERESS Array B** 150.41 344 PKPbc PKPbc 00 09 30.2 -1.6
comp=Z,0.8nm,0.6s,baz=19,slow=1.9,SNR=10
PLVB **Pleven** 150.44 325 ⇓P PKPab 00 09 36.4 -4.9
HERR **Herculane** 150.50 329 ⇑P PKPbc 00 09 30.6 -1.5
CONA **Conrad Observa** 150.61 340 *i* PKiKP PKiKP 00 09 36.6 +3.9
comp=Z,9.9nm,0.6s,SNR=6.1
DOU **Dourbes** 150.67 356 *d*PKP PKiKP 00 09 36.2 +3.6
RONA **Rosalia, Austr** 150.68 340 *i* PKiKP PKiKP 00 09 36.7 +3.9
comp=Z,13nm,0.5s,SNR=8.3
MDVR **Moldovita** 150.91 330 ⇓P PKiKP 00 09 37.2 +3.8
WLF **Walferdange** 150.97 354 *d*PKP PKiKP 00 09 37.6 +4.3
MORH **Mrgy, Hungar** 151.10 335 ⇑P PKPbc 00 09 31.5 -1.9
MOA **Molln** 151.16 342 *i* PKiKP PKiKP 00 09 37.3 +3.4
comp=Z,4.6nm,0.6s
ALN **Alexandroupoli** 151.21 320 PKiKP 00 09 36.6 +2.5
RDO **Rodhopi** 151.36 320 PKiKP 00 09 37.3 +2.9
BIOA **Bad Ischl, Aus** 151.48 343 *i* PKiKP PKiKP 00 09 37.7 +3.2
comp=Z,4.4nm,0.5s
SESA **Seetaler Alpe,** 151.74 341 *i* PKiKP PKiKP 00 09 38.7 +3.4
SNR=11
BOVS **Bovan** 151.77 328 ⇓P PKPbc 00 09 33.3 -1.6
LESA **Schwarzleotal** 151.98 344 *i* PKiKP PKiKP 00 09 39.4 +3.8
comp=Z,4.2nm,0.5s
SOKA **Soboth** 151.98 340 *i* PKiKP PKiKP 00 09 38.8 +3.1
comp=Z,6.1nm,1.0s
BFO **Black Forest** 152.01 351 PKiKP 00 09 38.4 +2.8
KBA **Koelnbreinsper** 152.12 343 *i* PKiKP PKiKP 00 09 39.2 +3.1
comp=Z,3.5nm,0.6s,SNR=5.4
OBKA **Obir** 152.28 341 *i* PKiKP PKiKP 00 09 39.6 +3.3
comp=Z,3.9nm,1.3s
WATA **Walderalm** 152.34 345 *i* PKiKP PKiKP 00 09 39.9 +3.5
comp=Z,4.3nm,0.4s
RETA **Reutte** 152.38 347 *i* PKiKP PKiKP 00 09 40.4 +3.9
comp=Z,4.0nm,0.6s
WTTA **Wattenberg** 152.39 345 *i* PKiKP PKiKP 00 09 40.3 +3.7
comp=Z,7.6nm,0.4s,SNR=5.4
MOTA **Moosalm** 152.44 346 *i* PKiKP PKiKP 00 09 40.6 +3.9
comp=Z,9.0nm,1.0s
MYKA **Terra Mystica** 152.45 342 *i* PKiKP PKiKP 00 09 39.5 +2.9
comp=Z,5.0nm,0.5s
SQTA **Sankt Quirin** 152.53 346 *i* PKiKP PKiKP 00 09 40.4 +3.6
comp=Z,8.8nm,0.7s
CRES **Cresnjevec Ost** 152.60 339 *i* PKPbc PKiKP 00 09 40.6 +3.7
VNDS **Vrh nad Dolski** 152.60 340 *i* PKPbc PKiKP 00 09 40.5 +3.6
ABTA **Abfaltersbach** 152.65 344 *i* PKiKP PKiKP 00 09 40.0 +3.0
comp=Z,11nm,0.7s,SNR=7.6
LJU **Ljubljana** 152.71 340 *i* PKPbc PKiKP 00 09 40.9 +3.8
DAVA **Damuels** 152.75 348 *i* PKiKP PKiKP 00 09 41.2 +3.9
comp=Z,4.9nm,0.9s
FETA **Feichten** 152.82 346 *e*PKiKP PKiKP 00 09 41.3 +3.8
comp=Z,5.8nm,0.7s
BLY **Banja Luka** 152.89 335 ⇓P PKPbc 00 09 35.6 -1.8
STAL **STALIGIAL** 153.05 343 PKiKP 00 09 40.0 +2.2
GBRS **Gornja Briga** 153.07 339 *e*PKPdf PKPbc 00 09 34.9 -2.9
GBRS *i* PKPbc PKiKP 00 09 41.7 +3.8
DAVOX **Davos/Dischmat** 153.23 347 PKPbc PKPbc 00 09 35.2 -3.1
comp=Z,9.1nm,0.5s,baz=280,slow=2.8,SNR=7.6
FUORN **Ofenpass-Fuorn** 153.31 347 PKPbc 00 09 34.6 -4.0
ESDC **Sonseca Array** 160.56 13 PKPab PKPab 00 10 21.7 -3.3
comp=Z,2.9nm,1.0s,baz=340,slow=4.7,SNR=12
KEST **Kesra** 163.68 337 PKPab PKPab 00 10 36.3 -2.5
comp=Z,1.0nm,0.5s,baz=104,slow=1.7,SNR=4.1

IDC ***30*** *00:20:50.3±1.2, 14°.21N×121°.34E, h0km, mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=41.3km s-min=21.6km az=64.0*
MAN ***30*** *00:21:10.0, 13°.96N×120°.49E, h151km, MS2.8*
ISC 30 00:21:09.5±1.0, 13°.81N±0°.10×120°.4E±0°.1, h150km, n11,
σ2s 06/12, mb3.6/5, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**0.61**	**62**	*e*P		**Pn**	**00 21 32.7**	**+1.2**
TGY				*i* S		**Sn**	**00 21 50.9**	**+2.6**
PGP	**Puerto Galera**	**0.64**	**119**	*e*P		**Pn**	**00 21 32.8**	**+1.2**
PGP				*e*S		**Sn**	**00 21 49.6**	**+1.2**
PCPS	**Palayan City**	**1.06**	**38**	*e*P		Pn	00 21 42.4	+7.6
PCPS				*e*S		Sn	00 22 07.0	+13
LQP	**Lukban**	**1.16**	**75**	*e*P		**Pn**	**00 21 36.3**	**+0.4**
LQP				*e*S		**Sn**	**00 21 56.5**	**+0.5**
GQP	**Guinayangan**	**2.01**	**87**	*e*P		Pn	00 21 30.9	-14
BOLP	**Bolinao**	**2.60**	**350**	*i* P		**Pn**	**00 21 52.0**	**+0.3**
BOLP				*i* S		**Sn**	**00 22 23.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**21.10**	**285**	P		**P**	**00 25 45.7**	**+3.4**
	0.6nm,0.3s,baz=92,slow=8.4,SNR=5.0							
	0.6nm,0.3s							
JNU	**Nakatsue**	**21.47**	**25**	P		P	00 25 32.8	-13
	5.4nm,0.9s,baz=61,slow=22,SNR=3.7							
	5.4nm,0.9s							
WRA	**Warramunga Arr**	**36.24**	**157**	P		**P**	**00 27 55.4**	**-2.9**
	0.7nm,0.6s,baz=338,slow=9.4,SNR=6.3							
	0.7nm,0.6s							
ASAR	**Alice Springs**	**39.52**	**160**	P		**P**	**00 28 23.7**	**-2.1**
	0.9nm,0.4s,baz=335,slow=6.6,SNR=17							
	0.9nm,0.4s							
KURBB	**Kurchatov Arra**	**49.92**	**326**	P		**P**	**00 29 46.7**	**-1.1**
	0.3nm,0.5s,baz=126,slow=7.4,SNR=6.0							
	0.3nm,0.5s							

SOME ***30*** *00:22:43.3, 39°.07N×72°.48E, h20km*
NNC ***30*** *00:22:45.3±4.0, 39°.23N×72°.43E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=28.2km s-min=16.0km az=177.0*
KRNET ***30*** *00:22:46.8±0.1, 39°.05N×72°.47E, h19km, mb3.6*
ISC 30 00:22:48.8±1.2, 39°.21N±0°.06×72°.35E±0°.03, h10km, n28,
σ19 90/48, 16C-18D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**0.50**	**302**	⇑*i*P		**Pb**	**00 22 59.7**	**-0.2**
DRK				⇑*i*S		**Sn**	**00 23 09.0**	**-2.2**
SFK	**Sufi-Kurgan**	**1.20**	**48**	⇓*i*P		**Pb**	**00 23 09.8**	**-2.0**
SFK				⇓*i*S		**Sn**	**00 23 26.6**	**-1.7**
OHH	**Osh**	**1.35**	**14**	⇓*i*P		**Pg**	**00 23 14.0**	**-0.8**
OHH				⇓*i*S		**Sg**	**00 23 34.0**	**+1.6**
BTK	**Batken**	**1.45**	**306**	⇓*i*P		**Pg**	**00 23 16.6**	**-0.1**
BTK				⇓*i*S		**Sg**	**00 23 38.2**	**+2.6**
GAR	**Garm**	**1.59**	**263**	⇑*i*P		**Pb**	**00 23 17.4**	**-1.1**
GAR				⇑*i*S		**Sg**	**00 23 39.6**	**-0.5**
SALK	**Salom-Alik**	**2.02**	**34**	⇓*i*P		**Pb**	**00 23 23.6**	**-2.1**
SALK				⇓*i*S		**Sb**	**00 23 50.5**	**-0.4**
ARSB	**Arslanbob**	**2.16**	**13**	⇑*i*P		**Pb**	**00 23 26.6**	**-1.6**
ARSB				⇑*i*S		**Sb**	**00 23 55.3**	**+0.2**
CHGR	**Chuyangaron**	**2.55**	**258**	⇓*i*P		**Pn**	**00 23 30.8**	**+0.5**
CHGR				⇓*i*S		**Sn**	**00 24 02.8**	**+1.4**
ARK	**Arkit**	**2.60**	**354**	⇑*i*P		**Pb**	**00 23 33.0**	**-2.6**
ARK				⇑*i*S		**Sb**	**00 24 06.7**	**-0.9**
IUG	**Iuzhnay**	**3.42**	**330**	Pg		**Pb**	**00 23 49.2**	**-0.3**
	32nm,0.5s							
IUG				Lg		Lg	00 24 36.9	
	38nm,0.7s							
IUG	**Iuzhnay**	**3.42**	**330**	*e*P		**Pb**	**00 23 49.2**	**-0.3**
	32nm,0.5s							
IUG				*e*S		**Sg**	**00 24 36.9**	**-1.8**
	38nm,0.7s							
NRN	**Naryn**	**3.56**	**50**	⇑*i*P		**Pn**	**00 23 44.1**	**-0.4**
NRN				⇑*i*S		**Sn**	**00 24 25.8**	**-1.1**
MRKS	**Merke**	**3.59**	**10**	Pg		**Pb**	**00 23 50.5**	**-2.0**
	12nm,0.7s							
MRKS				Lg		Lg	00 24 38.9	
	17nm,0.5s							
MRKS	**Merke**	**3.59**	**10**	*e*P		**Pb**	**00 23 50.5**	**-2.0**
	12nm,0.7s							
MRKS				*e*S		**Sb**	**00 24 38.9**	**+2.7**
	17nm,0.5s							
EKS2	**Erkin-Say**	**3.61**	**17**	⇓*i*P		**Pn**	**00 23 46.3**	**+1.3**
EKS2				⇓*i*S		**Sn**	**00 24 29.8**	**+2.1**
AAK	**Ala-Archa**	**3.79**	**25**	⇑Pg		**Pb**	**00 23 53.1**	**-2.7**
	3.0nm,0.5s							
AAK				⇓Lg		Lg	00 24 43.3	
	18nm,1.0s							
AAK	**Ala-Archa**	**3.79**	**25**	⇓*i*P		**Pn**	**00 23 48.7**	**+1.3**
AAK				⇓*i*S		**Sn**	**00 24 33.7**	**+1.6**
KBK	**Karagaybulak**	**3.96**	**29**	⇑*i*P		**Pn**	**00 23 50.8**	**+1.0**
KBK				⇑*i*S		**Sn**	**00 24 37.6**	**+1.1**
KK31	**Karatay Array**	**4.13**	**341**	⇓Pg		**Pb**	**00 23 57.8**	**-3.7**
	11nm,0.3s,baz=147,slow=13,SNR=122							
KK31				⇑Lg		Lg	00 24 55.1	
	6.2nm,0.5s,baz=138,slow=24							
CHMS	**Chumysh**	**4.20**	**25**	⇓*i*P		**Pn**	**00 23 54.1**	**+1.2**
CHMS				⇓*i*S		**Sn**	**00 24 43.1**	**+1.1**
BOOM	**Boomskoye usch**	**4.26**	**39**	⇑*i*P		**Pn**	**00 23 54.6**	**+0.7**
BOOM				⇑*i*S		**Sn**	**00 24 44.2**	**+0.5**
BRLS	**Borolday**	**4.26**	**334**	Pg		**Pb**	**00 24 00.5**	**-3.3**
	2.7nm,0.2s							
BRLS				Lg		Lg	00 24 56.1	
	8.9nm,0.6s							
BRLS	**Borolday**	**4.26**	**334**	*e*P		**Pb**	**00 24 00.5**	**-3.3**
	2.7nm,0.2s							
BRLS	

*NEIC **30** 00:23:29.5±1.2,14˚56S±0˚08×167˚4E±0˚1,h127km±3km, mb4.6/53,Error ellipse: s-maj=17.3km s-min=12.1km az=84.0*

*IDC **30** 00:23:32.1±0.9,14˚60S×167˚48E,h156km±6km,mb4.2/26, mbtmp4.6/27,Error ellipse: s-maj=15.3km s-min=9.6km az=94.0*

*NOU **30** 00:23:33.3,14˚49S×167˚49E,h170km,mb4.7/35, Vanuatu Islands*

ISC 30 00:23:34.0±0.8,14°63S±0°05×167°36E±0°07,h173km±7km, n200,σ1§26/216,mb4.6/64,5C-2D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DVP	**Devils Point**	**3.18**	**166**	P		**Pn**	**00 24 25.2**	**+0.6**
DVP	**Devils Point**	**3.18**	**166**	S		**Sn**	**00 25 04.0**	**0.0**
KOUNC	**Koumac, New Ca**	**6.58**	**206**	P		**Pn**	**00 25 10.0**	**+1.4**
KOUNC	**Koumac, New Ca**	**6.58**	**206**	S		**Sn**	**00 26 26.9**	**+3.8**
KOUNC	**Koumac, New Ca**	**6.58**	**206**			**Pn**	**00 25 04.8**	**-3.8**
MARNC	**Mare, Loyalty**	**6.84**	**175**	Pn		**Pn**	**00 25 08.2**	**-3.8**
YATNC	**Mamie plateau,**	**7.40**	**183**	P		**Pn**	**00 25 21.0**	**+1.5**
YATNC	**Mamie plateau,**	**7.40**	**183**	S		**Sn**	**00 26 45.3**	**+2.6**
DZM	**Mont Dzumac**	**7.45**	**187**	P		**Pn**	**00 25 20.6**	**+0.4**
	20nm,0.6s,baz=43,slow=18							
DZM				S		**Sn**	**00 26 42.4**	**-1.7**
	24nm,0.8s,baz=84,slow=17,SNR=3.4							
NOUC	**Port Laguerre**	**7.50**	**188**	P		**Pn**	**00 25 22.9**	**+2.2**
ONTNC	**Ouen Toro**	**7.68**	**186**	P		**Pn**	**00 25 26.0**	**+2.8**
ONTNC	**Ouen Toro**	**7.68**	**186**	Pn		**Pn**	**00 25 20.1**	**-3.1**
HNR	**Honiara**	**8.90**	**305**	Pn		Pn	00 25 32.0	-7.3
TATA	**Tatamba Isabel**	**9.66**	**309**	P		**Pn**	**00 25 49.6**	**+0.3**
GC1S	**Gold Coast 1 S**	**18.62**	**221**	P		**Pn**	**00 27 41.3**	**+0.5**
EIDS	**Eidsvold**	**18.64**	**233**	P		**Pn**	**00 27 41.1**	**0.0**
EIDS	**Eidsvold**	**18.64**	**233**			**P**	**00 27 39.5**	**+0.7**
EIDS				IAmb		IAmb	00 27 56.1	
	comp=Z,15nm,0.9s							
CTA	**Charters Tower**	**20.86**	**252**	P		**P**	**00 28 03.8**	**+1.2**
	comp=Z,3.2nm,0.6s,baz=68,slow=20,SNR=3.3							
	comp=Z,3.2nm,0.6s							
CTAO	**Charters Tower**	**20.86**	**252**	P		**P**	**00 28 02.4**	**-0.2**
ARMA	**Armidale**	**21.36**	**220**	P		**P**	**00 28 09.6**	**+1.6**
ARMA	**Armidale**	**21.36**	**220**	P		**P**	**00 28 06.8**	**-1.2**
ARMA				IAmb		IAmb	00 28 11.4	
	comp=Z,16nm,0.9s							
COEN	**Coen**	**23.45**	**269**	P		**P**	**00 28 27.9**	**-0.1**
COEN				IAmb		IAmb	00 28 40.0	
	comp=Z,27nm,1.4s							
QLP	**Quilpie**	**24.65**	**237**	P		**P**	**00 28 40.1**	**+1.3**
CMSA	**Cobar Meteorol**	**26.00**	**226**	P		**P**	**00 28 52.0**	**+1.0**
INKA	**Innaminka**	**27.96**	**238**			**P**	**00 29 09.1**	**+0.5**
INKA				IAmb		IAmb	00 29 10.6	
	comp=Z,9.1nm,0.8s							
STKA	**Stephens Creek**	**29.12**	**229**	P		**P**	**00 29 20.5**	**+1.7**
STKA	**Stephens Creek**	**29.12**	**229**	P		**P**	**00 29 20.5**	**+1.7**
	comp=Z,26nm,0.6s,baz=46,slow=7.7,SNR=57							
STKA				PcP		**PcP**	**00 32 22.4**	**+0.2**
	comp=Z,7.6nm,0.7s,baz=360,slow=2.8,SNR=6.1							
	comp=Z,26nm,0.6s							
TOO	**Toolangi**	**29.98**	**216**	P		**P**	**00 29 26.4**	**+0.1**
MLZ	**Mavora Lakes**	**30.64**	**179**	P		**P**	**00 29 31.5**	**-0.5**
MLZ				IAmb		IAmb	00 29 36.6	
	comp=Z,33nm,1.3s							
DCZ	**Deep Cove**	**30.74**	**180**	P		**P**	**00 29 32.5**	**-0.3**
HTT	**Hallett**	**31.85**	**229**	P		**P**	**00 29 44.0**	**+1.2**
WB0	**Warramunga Arr**	**31.87**	**256**			**P**	**00 29 42.0**	**-1.1**
WB0				IAmb		IAmb	00 29 43.0	
	comp=Z,10nm,0.6s							
WRAB	**Tennant Creek**	**31.93**	**256**	P		**P**	**00 29 42.7**	**-0.9**
WRA	**Warramunga Arr**	**31.94**	**256**	P		**P**	**00 29 42.8**	**-0.9**
	comp=Z,5.3nm,0.6s,baz=86,slow=9.0,SNR=32							
WRA				PcP		**PcP**	**00 32 29.0**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=94,slow=3.1,SNR=3.9							
WRA				S		**S**	**00 34 38.7**	**-3.5**
	comp=Z,2.0nm,0.9s,baz=78,slow=15,SNR=5.9							
	comp=Z,5.3nm,0.6s							
WRA	**Warramunga Arr**	**31.94**	**256**	P		**P**	**00 29 41.9**	**-1.8**
AS01	**Alice Springs**	**32.75**	**249**	P		**P**	**00 29 50.1**	**-0.7**
AS31	**Alice Springs**	**32.79**	**249**			**P**	**00 29 50.4**	**-0.7**
ASAR	**Alice Springs**	**32.79**	**249**	P		**P**	**00 29 50.5**	**-0.6**
	comp=Z,9.3nm,0.7s,baz=78,slow=8.9,SNR=107							
ASAR				PcP		**PcP**	**00 32 32.0**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=97,slow=2.8,SNR=5.3							
ASAR				S		**S**	**00 34 51.7**	**-3.8**
	comp=Z,0.8nm,0.8s,baz=78,slow=18,SNR=4.3							
	comp=Z,9.3nm,0.7s							
ASAR	**Alice Springs**	**32.79**	**249**	P		**P**	**00 29 50.3**	**-0.8**
ASAR						**PcP**	**00 32 31.7**	**-0.6**
BBOO	**Buckleboo**	**33.71**	**232**	P		**P**	**00 30 00.0**	**+1.1**
BBOO	**Buckleboo**	**33.71**	**232**			**P**	**00 29 59.6**	**+0.7**
MTN	**Manton Dam**	**35.22**	**268**	P		**P**	**00 30 12.3**	**+0.3**
MTN				IAmb		IAmb	00 30 35.6	
	comp=Z,13nm,1.5s							
KNRA	**Kununurra**	**37.24**	**263**			**P**	**00 30 28.7**	**-0.6**
KNRA				IAmb		IAmb	00 30 29.4	
	comp=Z,10nm,0.8s							
SIJI	**Sorong**	**38.20**	**288**	P		**P**	**00 30 37.8**	**+0.4**
	comp=Z,17nm,0.5s,baz=91,slow=4.9,SNR=6.5							
	comp=Z,17nm,0.5s							
SIJI	**Sorong**	**38.20**	**288**	P		**P**	**00 30 38.2**	**+0.8**
	comp=Z,32nm,1.1s							
FORT	**Forrest**	**39.42**	**239**			**P**	**00 30 47.3**	**0.0**
FORT				IAmb		IAmb	00 30 48.5	
	comp=Z,17nm,0.7s							
FITZ	**Fitzroy Crossi**	**40.12**	**259**	P		**P**	**00 30 53.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**40.12**	**259**			**P**	**00 30 53.2**	**0.0**
MBWA	**Marble Bar**	**45.66**	**255**	P		**P**	**00 31 38.3**	**+0.6**
MBWA	**Marble Bar**	**45.66**	**255**	P		**P**	**00 31 37.7**	**0.0**
MBWA				IAmb		IAmb	00 31 38.9	
	comp=Z,16nm,0.7s							
MEEK	**Meekatharra**	**46.90**	**247**	P		**P**	**00 31 47.8**	**+0.4**
KAPI	**Kappang**	**47.78**	**277**	P		**P**	**00 31 55.3**	**+1.0**
	comp=Z,6.8nm,0.4s,baz=196,slow=12,SNR=4.3							
	comp=Z,6.8nm,0.4s							
KAPI	**Kappang**	**47.78**	**277**	P		**P**	**00 31 54.4**	**0.0**
KAPI				IAmb		IAmb	00 31 56.3	
	comp=Z,28nm,1.1s							
DBNI	**Kabupaten Domp**	**48.36**	**272**	P		**P**	**00 31 59.0**	**+0.2**
TOLI2	**Tolitoli**	**48.67**	**285**	P		**P**	**00 32 00.2**	**-0.9**
TOLI2				IAmb		IAmb	00 32 01.8	
	comp=Z,10nm,0.9s							
PLAI	**Plampang**	**48.81**	**271**	P		**P**	**00 32 02.9**	**+0.7**
NWAO	**Narrogin (SRO)**	**48.88**	**239**	P		**P**	**00 32 02.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**48.88**	**239**	P		**P**	**00 32 01.9**	**-0.5**
MORW	**Morawa**	**49.39**	**244**	P		**P**	**00 32 06.5**	**+0.1**
MORW	**Morawa**	**49.39**	**244**	P		**P**	**00 32 06.2**	**-0.2**
MORW				IAmb		IAmb	00 32 06.8	
	comp=Z,13nm,0.8s							
TWSI	**Taliwang, Sumb**	**49.70**	**271**	P		**P**	**00 32 09.2**	**+0.3**
	comp=Z,107nm,1.0s							
SNJI	**Sawahan-Nganju**	**54.86**	**271**	P		**P**	**00 32 46.5**	**-0.6**
	comp=Z,28nm,0.6s							
UGM	**Wanagama**	**56.02**	**270**	P		**P**	**00 32 55.0**	**-0.3**
KPJI	**Karang Pucung**	**57.69**	**271**	P		**P**	**00 33 06.6**	**-0.4**
	comp=Z,60nm,0.8s							
MJAR	**Matsushiro Arr**	**57.86**	**332**	P		**P**	**00 33 07.2**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=150,slow=7.5,SNR=6.0							
	comp=Z,1.6nm,0.6s							
MJAR	**Matsushiro Arr**	**57.86**	**332**	P		**P**	**00 33 06.3**	**-1.4**
JNU	**Nakatsue**	**58.89**	**324**	P		**P**	**00 33 14.9**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=103,slow=4.3,SNR=6.8							
	comp=Z,7.6nm,0.8s							
BBJI	**Bungbulang**	**58.90**	**270**	P		**P**	**00 33 14.9**	**-0.6**
TNG	**Tangerang**	**60.16**	**271**	P		**P**	**00 33 23.8**	**-0.2**
VNDA	**Vanda**	**62.96**	**181**	P		**P**	**00 33 42.4**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=355,slow=7.4,SNR=21							
	comp=Z,2.9nm,0.5s							
VNDA	**Vanda**	**62.96**	**181**	P		**P**	**00 33 42.3**	**+0.6**
VNDA				IAmb		IAmb	00 33 44.2	
	comp=Z,4.8nm,0.8s							
SBA	**Scott Base**	**63.23**	**180**			**P**	**00 33 44.8**	**+1.3**
CASY	**Casey**	**63.65**	**202**	P		**P**	**00 33 46.7**	**+0.3**
CASY				IAmb		IAmb	00 33 47.5	
	comp=Z,9.4nm,0.7s							
KSRS	**Korea Array**	**63.71**	**326**	P		**P**	**00 33 47.7**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=138,slow=7.5,SNR=8.6							
KSRS				pP		**PcP**	**00 34 22.9**	**+1.2**
	comp=Z,1.4nm,0.9s,baz=148,slow=5.4,SNR=2.8							
	comp=Z,1.5nm,0.7s							
NJ2	**Nanjing**	**65.67**	**316**	*e*P		**P**	**00 34 02.8**	**+2.8**
NJ2				pmax		pmax		
	comp=Z,19nm,0.8s							
USRK	**Ussuriysk Ar.**	**66.84**	**333**	P		**P**	**00 34 07.6**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=205,slow=8.2,SNR=8.2							
	comp=Z,2.1nm,0.7s							
PPSI	**Pulau Pagai**	**67.40**	**273**	P		**P**	**00 34 09.8**	**-1.6**
PDSI	**Padang**	**67.44**	**275**	P		**P**	**00 34 10.3**	**-1.4**
	comp=Z,11µmcomp=Z,26nm,0.9s							
PEA0B	**Petropavlovsk-**	**67.97**	**354**	P		**P**	**00 34 14.4**	**+0.3**
PETK	**Petropavlovsk-**	**67.97**	**354**	P		**P**	**00 34 14.8**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=156,slow=5.9,SNR=7.4							
	comp=Z,6.0nm,0.8s							
PETK	**Petropavlovsk-**	**67.97**	**354**	P		**P**	**00 34 14.2**	**+0.1**
MDJ	**Mudanjiang**	**68.24**	**332**	P		**P**	**00 34 16.8**	**+0.9**
MDJ				pmax		pmax		
	comp=Z,12nm,1.1s							
MDJ	**Mudanjiang**	**68.24**	**332**	P		**P**	**00 34 16.2**	**+0.2**
MDJ				IAmb		IAmb	00 34 17.9	
	comp=Z,11nm,1.1s							
MNSI	**Mandailing Nat**	**68.74**	**277**	P		**P**	**00 34 18.9**	**-0.9**
	comp=Z,38nm,1.0s							
CN2	**Changchun**	**69.61**	**329**	P		**P**	**00 34 24.0**	**-0.4**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
BNX	**BinXian**	**70.09**	**331**	⇑P		**P**	**00 34 27.5**	**+0.2**
BNX				pmax		pmax		
	comp=Z,13nm,0.6s							
GSI	**Gunungsitoli**	**70.81**	**277**	P		**P**	**00 34 31.9**	**-0.6**
GSI	**Gunungsitoli**	**70.81**	**277**	P		**P**	**00 34 31.5**	**-0.9**
	comp=Z,51nm,1.7s							
LYN	**LuoYang**	**71.47**	**315**	P		**P**	**00 34 36.8**	**+0.9**
LYN				pmax		pmax		
	comp=Z,30nm,0.6s							
HEH	**HeiHe**	**73.51**	**335**	*e*P		**P**	**00 34 48.3**	**+0.7**
KMI2	**Kunming**	**74.33**	**302**	P		**P**	**00 34 54.0**	**+0.7**
KMI2				pmax		pmax		
	comp=Z,11nm,1.1s							
CMAR	**Chiang Mai Arr**	**74.99**	**294**	P		**P**	**00 34 58.3**	**+1.4**
	comp=Z,2.7nm,0.6s,baz=120,slow=4.5,SNR=14							
CMAR				pP		**pP**	**00 35 36.0**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=119,slow=4.9,SNR=1.6							
	comp=Z,2.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**74.99**	**294**	P		**P**	**00 34 56.8**	**-0.1**
CHTO	**Chiang Mai**	**75.12**	**294**	P		**P**	**00 34 57.7**	**+0.1**
CHTO	**Chiang Mai**	**75.12**	**294**	P		**P**	**00 34 57.7**	**+0.1**
	comp=Z,7.2nm,1.1s							
QSPA	**South Pole Qui**	**75.40**	**180**	P		**P**	**00 34 58.8**	**+0.3**
	comp=Z,12nm,0.9s,baz=219,slow=1.1,SNR=52							
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**75.40**	**180**	P		**P**	**00 34 58.6**	**+0.1**
QSPA				IAmb		IAmb	00 34 59.9	
	comp=Z,25nm,1.2s							
HHC	**Hu-ho-hao-te**	**75.57**	**320**	*e*P		**P**	**00 34 59.8**	**0.0**
HHC				pmax		pmax		
	comp=Z,11nm,0.8s							
HHC				pmax		pmax		
	comp=Z,27nm,4.5s							
HILR	**Hailar Array B**	**76.44**	**330**	P		**P**	**00 35 05.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=117,slow=7.6,SNR=2.4							
	comp=Z,0.8nm,0.3s							
SEY	**Seymchan**	**78.20**	**353**	P		**P**	**00 35 13.8**	**-0.1**
	comp=Z,2.4nm,0.2s,baz=170,slow=10.0,SNR=6.0							
	comp=Z,2.4nm,0.2s							
Q19K	**Cape Douglas,**	**79.89**	**19**	P		**P**	**00 35 23.1**	**-0.1**
K15K	**Wolf Creek Mou**	**80.48**	**14**	P		**P**	**00 35 26.5**	**+0.2**
K15K				IAmb		IAmb	00 35 27.9	
	comp=Z,13nm,1.4s							
YAK	**Yakutsk**	**81.96**	**343**	P		**P**	**00 35 34.3**	**+0.3**
	comp=Z,30nm,0.6s,baz=72,slow=1.9,SNR=7.2							
	comp=Z,30nm,0.6s							
YAK	**Yakutsk**	**81.96**	**343**	P		**P**	**00 35 34.0**	**-0.1**
MAW	**Mawson**	**82.01**	**202**	P		**P**	**00 35 35.2**	**+0.8**
	comp=Z,7.5nm,0.6s,baz=122,slow=4.9,SNR=23							
	comp=Z,7.5nm,0.6s							
MAW	**Mawson**	**82.01**	**202**	P		**P**	**00 35 35.0**	**+0.6**
ULN	**Ulaanbaatar**	**82.11**	**324**	P		**P**	**00 35 35.5**	**+0.1**
ULN				IAmb		IAmb	00 35 37.1	
	comp=Z,7.8nm,0.9s							
ULN	**Ulaanbaatar**	**82.11**	**324**	P		**P**	**00 35 35.9**	**+0.5**
	comp=Z,43nm,1.3s							
SONM	**Songino Array**	**82.47**	**324**	P		**P**	**00 35 37.8**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=146,slow=5.6,SNR=18							
	comp=Z,1.8nm,0.6s							
SONM	**Songino Array**	**82.47**	**324**			**P**	**00 35 37.1**	**-0.2**
GTA2	**Gaotai**	**82.73**	**314**	*e*P		**P**	**00 35 40.3**	**+1.5**
GTA2				pP		pP	00 36 22.0	+1.0
GTA2				pmax		pmax		
	comp=Z,9.0nm,1.2s							
CAST	**Castle Rocks**	**83.88**	**17**			**P**	**00 35 43.0**	**-0.9**
CAST				IAmb		IAmb	00 35 43.8	
	comp=Z,7.0nm,0.8s							
O02D	**Mt. Diablo Mer**	**84.59**	**46**	P		**P**	**00 35 48.5**	**+0.3**
RND	**Reindeer**	**84.81**	**18**	P		**P**	**00 35 48.6**	**-0.1**
RND				IAmb		IAmb	00 35 49.0	
	comp=Z,4.0nm,0.8s							
IMAR	**Indian Mountai**	**85.45**	**15**	P		**P**	**00 35 51.7**	**-0.1**
WRH	**Wood River Hil**	**85.83**	**18**	P		**P**	**00 35 52.6**	**-1.0**
IL31		**86.41**	**18**	P		**P**	**00 35 55.7**	**-0.7**
IL31				IAmb		IAmb	00 35 57.2	
	comp=Z,3.5nm,0.7s							
ILAR	**Eielson Array**	**86.41**	**18**	P		**P**	**00 35 55.0**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=235,slow=5.5,SNR=36							
	comp=Z,3.4nm,0.7s							
ILAR	**Eielson Array**	**86.41**	**18**	P		**P**	**00 35 55.2**	**-1.3**
J25K	**Salcha River,**	**86.75**	**18**			**P**	**00 35 57.5**	**-0.7**
BELA	**Belgrano 2**	**86.81**	**175**	P		**P**	**00 35 57.7**	**-0.7**
BELA				IAmb		IAmb	00 35 59.1	
	comp=Z,8.8nm,1.3s							
DSP	**Deep Springs**	**87.01**	**50**			**P**	**00 36 00.1**	**+0.2**
NVAR	**Mina Array Bea**	**87.14**	**49**	P		**P**	**00 35 59.9**	**-1.0**
	comp=Z,1.5nm,1.0s,baz=224,slow=7.4,SNR=5.1							
	comp=Z,1.5nm,1.0s							
B21K	**Ikpikpuk River**	**88.17**	**12**	P		**P**	**00 36 05.2**	**+0.5**
EVN	**Everest**	**88.65**	**299**	P		**P**	**00 36 08.1**	**-0.8**
PRN	**Pahroc Range**	**89.21**	**51**	P		**P**	**00 36 10.0**	**-0.6**
PRN				IAmb		IAmb	00 36 12.3	
	comp=Z,4.8nm,0.9s							
F10A	**Beach Ranch, E**	**90.56**	**42**	P		**P**	**00 36 16.3**	**-0.4**
F10A				IAmb		IAmb	00 36 17.5	
	comp=Z,3.5nm,0.8s							
WMQ	**Urumqi**	**92.72**	**315**	*e*P		**P**	**00 36 27.3**	**+0.6**
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.9s							
WMQ				LR		LR		
	comp=N,2µm,15.9s							
WMQ				LR		LR		
	comp=E,2µm,12.5s							
WMQ				LR		LR		
	comp=Z,940nm,15.5s							
TROLL	**Troll, Antarti**	**92.97**	**185**	⇑P		**P**	**00 36 27.1**	**-0.3**
	comp=Z,412nm,0.7s							
SNAA	**Sanae**	**93.65**	**183**	⇑P		**P**	**00 36 29.9**	**-0.6**
	comp=Z,76nm,0.7s							
SNAA	**Sanae**	**93.65**	**183**	P		**P**	**00 36 29.2**	**-1.3**
	comp=Z,3.4nm,0.8s,baz=144,slow=3.1,SNR=9.0							
	comp=Z,3.4nm,0.8s							
SNAA	**Sanae**	**93.65**	**183**			**P**	**00 36 29.9**	**-0.6**
VNA2	**Neumayer--Watz**	**94.58**	**182**	⇑P		**P**	**00 36 34.0**	**-0.7**
	comp=Z,6.1nm,0.6s,baz=172,slow=4.5							
VNA1	**Neumayer--Stat**	**94.88**	**181**	⇑P		**P**	**00 36 35.4**	**-0.6**
	comp=Z,4.1nm,0.9s							
TXAR	**Lajitas Array**	**96.15**	**61**	P		**P**	**00 36 42.1**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=218,slow=5.6,SNR=3.6							
	comp=Z,2.0nm,0.6s							
TXAR	**Lajitas Array**	**96.15**	**61**	P		**P**	**00 36 42.3**	**-0.4**
MKAR	**Makanchi Array**	**97.19**	**316**	P		Pdif	00 36 47.5	+0.5
	comp=Z,3.5nm,0.7s,baz=92,slow=6.1,SNR=25							
MKAR				pP		pP	00 37 27.3	-2.6
	comp=Z,1.0nm,0.8s,baz=98,slow=5.0,SNR=2.8							
	comp=Z,3.5nm,0.7s							
MKAR	**Makanchi Array**	**97.19**	**316**			Pdif	00 36 47.3	+0.2
ZAA0	**Zalesovo Array**	**97.37**	**324**	P		**P**	**00 36 46.0**	**-1.4**
ZAA0				IAmb		IAmb	00 36 47.6	
	comp=Z,4.1nm,0.8s							
ZALV	**Zalesovo Beam**	**97.37**	**324**	P		**P**	**00 36 46.9**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=117,slow=3.9,SNR=18							
	comp=Z,3.2nm,0.7s							
ZALV	**Zalesovo Beam**	**97.37**	**324**			**P**	**00 36 46.4**	**-1.1**
YKA	**Yellowknife Ar**	**97.42**	**27**	P		**P**	**00 36 46.6**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=259,slow=5.0,SNR=3.4							
	comp=Z,0.8nm,0.7s							
KURBB	**Kurchatov Arra**	**100.42**	**320**	P		**Pdif**	**00 37 00.7**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=98,slow=4.0,SNR=4.2							
KURBB				PKiKP		**PKiKP**	**00 41 26.4**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=103,slow=1.2,SNR=4.0							
ARTI	**Arti**	**112.56**	**325**	PKiKP		**PKiKP**	**00 41 49.1**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=190,slow=9.1,SNR=3.6							
AKTO	**Aktyubinsk**	**113.45**	**319**	PKiKP		**PKiKP**	**00 41 51.4**	**0.0**
	comp=Z,1.1nm,0.6s,baz=199,slow=3.0,SNR=3.7							
SPITS	**Spitsbergen Ar**	**114.84**	**354**	PKP		**PKiKP**	**00 41 52.5**	**-0.8**
	comp=Z,7.3nm,1.0s,baz=87,slow=6.3,SNR=2.0							
BELG	**Belogornoye**	**119.51**	**322**	PKP		**PKPdf**	**00 42 02.3**	**-0.6**
	comp=Z,13nm,0.9s,baz=314,slow=6.0,SNR=4.1							
ARCES	**ARCESS Array B**	**120.18**	**345**	PKP		**PKPdf**	**00 42 03.5**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=75,slow=2.2,SNR=20							
ARCES	**ARCESS Array B**	**120.18**	**345**			**PKPdf**	**00 42 03.6**	**-0.1**
BOSA	**Boshof**	**123.51**	**220**	PKP		**PKPdf**	**00 42 11.7**	**+0.1**
	comp=Z,3.8nm,1.1s,baz=164,slow=1.0,SNR=4.4							
BOSA	**Boshof**	**123.51**	**220**			**PKPdf**	**00 42 10.9**	**-0.8**
OBN	**Obninsk**	**124.67**	**328**	PKP		**PKPdf**	**00 42 12.2**	**-0.5**
	comp=Z,4.6nm,0.4s,baz=37,slow=17,SNR=3.5							
KBZ	**Khabaz**	**124.75**	**313**	PKP		**PKiKP**	**00 42 13.9**	**+0.3**
	comp=Z,2.2nm,1.0s,baz=122,slow=6.2,SNR=3.7							
FINES	**FINESS Array B**	**125.67**	**338**	PKP		**PKPdf**	**00 42 14.4**	**0.0**
	comp=Z,0.8nm,0.4s,baz=116,slow=4.1,SNR=9.7							
NB2	**NORSAR Subarra**	**130.55**	**345**	PKPdf		**PKPdf**	**00 42 24.2**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=31,slow=1.9							
NB2				SKP		**SKPbc**	**00 45 33.2**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=40,slow=4.6							
NOA	**NORSAR Array B**	**130.55**	**345**	PKP		**PKPdf**	**00 42 23.9**	**0.0**
	comp=Z,2.2nm,0.8s,baz=31,slow=2.0,SNR=5.2							
NOA				SKPbc		**SKPab**	**00 45 32.2**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=31,slow=3.1,SNR=9.7							
HFS	**Hagfors**	**130.66**	**343**	PKP		**PKPdf**	**00 42 24.1**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=184,slow=5.7,SNR=3.7							
HFS				SKPbc		**SKPab**	**00 45 32.8**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=45,slow=5.2,SNR=2.4							
AKASG	**Malin Array Be**	**130.70**	**326**	PKP		**PKPdf**	**00 42 24.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=59,slow=1.7,SNR=6.2							
AKASG				SKPbc		**SKPab**	**00 45 33.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=48,slow=3.8,SNR=5.3							
AKASG	**Malin Array Be**	**130.70**	**326**			**PKPdf**	**00 42 24.3**	**-0.2**
BRTR	**Keskin Array B**	**132.51**	**311**	PKP		**PKPdf**	**00 42 28.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=126,slow=3.3,SNR=5.5							
BRTR	**Keskin Array B**	**132.51**	**311**			**PKPdf**	**00 42 27.8**	**-0.6**
RONA	**Rosalia, Austr**	**139.23**	**330**	*i* PKiKP		**PKiKP**	**00 42 43.2**	**+0.4**
	comp=Z,3.9nm,0.9s							
CONA	**Conrad Observa**	**139.28**	**331**	*e*PKiKP		**PKiKP**	**00 42 43.4**	**+0.4**
	comp=Z,1.2nm,0.5s							
GERES	**GERESS Array B**	**139.60**	**333**	PKhKP		PKPpre	00 42 33.4	
	comp=Z,0.1nm,0.3s,baz=42,slow=4.2,SNR=4.2							
GERES				PKP		**PKPdf**	**00 42 32.3**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=96,slow=1.3,SNR=9.8							
GERES	**GERESS Array B**	**139.60**	**333**			**PKPdf**	**00 42 40.3**	**-0.9**
MOA	**Molln**	**140.08**	**332**	*i* PKiKP		**PKiKP**	**00 42 44.3**	**-0.2**
	comp=Z,1.4nm,0.6s							
BIOA	**Bad Ischl, Aus**	**140.48**	**332**	*e*PKP		**PKPdf**	**00 42 42.6**	**-0.2**
	comp=Z,2.4nm,1.1s							
SOKA	**Soboth**	**140.56**	**330**	*i* PKP		**PKPdf**	**00 42 41.5**	**-1.5**

ϕ_s353.88599°, δ55.71400°, λ95.27098°. *Principal axes:* T 4.6564, Plg78.5496°, Azm282.9860°; N -0.0413, Plg4.3531°, Azm170.9110°; P -4.6151, Plg10.5700°, Azm80.0971°;

GCMT **30** 00:35:59.7±0.1, 30.57N±0.01×141.81E, h19km, MW5.8/167, Moment Tensor Solution. s145,c294; s167,c500; Duration: 19.9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.50±.04; $M_{\theta\theta}$0.54±.03; $M_{\phi\phi}$-5.04±.03; $M_{r\theta}$0.13±.07; $M_{\theta\phi}$0.53±.02; $M_{\phi r}$2.73±.07; Best double couple: $M_0$5.52100×10^{17} NP1:ϕ_s170.00000°, δ30.00000°, λ82.00000°. NP2:ϕ_s359.00000°, δ60.00000°, λ95.00000°. Principal axes: T 5.2400, Plg75.0000°, Azm282.0000°; N 0.5570, Plg4.0000°, Azm177.0000°; P -5.8020, Plg15.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

BGR **30** 00:36:01.1, 31.19N×142.67E, h37km, mb5.9, Ms5.6

ISC 30 00:35:57.1±0.4, 30.59N±0.02×141.70E±0.03, h18km±1km, h17km:pP-P, n2218, σ1946/2535, mb5.9/517, MS5.5/515, 150C-90D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.49**	**319**	*e*P			**Pn**	**00 36 37.3**	**+0.5**
JAOM				A			A	00 36 37.3	
	comp=N,136nm,4.5s,comp=E,180nm,3.2s								
JAOM				*e*S			**Sb**	**00 37 09.8**	**-2.0**
JHCJ	**Hachijojimakas**	**2.95**	**327**	P			**Pn**	**00 36 42.4**	**-0.8**
JHCJ				A			A	00 36 42.4	
	comp=N,53nm,7.0s,comp=E,86nm,7.8s								
JHCJ				*e*S			**Sn**	**00 37 19.3**	**+1.1**
JHJ2	**Mitsune**	**2.98**	**328**	P			**Pn**	**00 36 43.7**	**+0.2**
JHJ2	**Mitsune**	**2.98**	**328**				**Pn**	**00 36 42.7**	**-0.8**
JHJ2				Sn			**Sn**	**00 37 17.1**	**-1.7**
JHJ2	**Mitsune**	**2.98**	**328**	P			**Pn**	**00 36 42.7**	**-0.8**
JHJ2	**Mitsune**	**2.98**	**328**	P			**Pn**	**00 36 43.1**	**-0.3**
JHJ2	**Mitsune**	**2.98**	**328**	*e*P			**Pn**	**00 36 42.6**	**-0.8**
JHJ2				A			A	00 36 42.6	
	comp=N,74nm,5.7s,comp=E,108nm,8.4s								
JHJ2				*e*S			**Sn**	**00 37 17.6**	**-1.2**
JHJ	**Hachijo jima 2**	**3.00**	**328**	Pn			**Pn**	**00 36 43.5**	**-0.4**
	comp=E,226nm,0.3s,baz=253,slow=22,SNR=40								
JHJ				Sn			**Sn**	**00 37 17.3**	**-2.0**
	comp=E,857nm,0.3s,baz=249,slow=22,SNR=12								
JHJ				LR			LR	00 37 48.4	
	comp=E,52μm,19.8s,baz=74,slow=38								
CBIJ	**Chichi jima**	**3.51**	**173**	*e*P			**Pn**	**00 36 50.6**	**-0.2**
CBIJ				A			A	00 36 50.6	
	comp=N,56nm,3.4s,comp=E,109nm,3.6s								
CBIJ				*e*S			**Sn**	**00 37 32.5**	**+0.5**
JCJ	**Chichijima**	**3.51**	**173**	P			**Pn**	**00 36 50.9**	**0.0**
JCJ	**Chichijima**	**3.51**	**173**	Pn			**Pn**	**00 36 49.2**	**-1.7**
	comp=E,100nm,0.3s,baz=13,slow=18,SNR=71								
JCJ				Sn			**Sn**	**00 37 26.9**	**-5.1**
	comp=E,303nm,0.3s,baz=68,slow=24,SNR=8.1								
JCJ	**Chichijima**	**3.51**	**173**				**Pn**	**00 36 49.2**	**-1.7**
JCJ				Sn			**Sn**	**00 37 29.9**	**-2.0**
JCJ	**Chichijima**	**3.51**	**173**	P			**Pn**	**00 36 50.5**	**-0.3**
JCJ	**Chichijima**	**3.51**	**173**	P			**Pn**	**00 36 50.6**	**-0.3**
JMKN	**Mikurajimanish**	**3.74**	**332**	P			**Pn**	**00 36 53.0**	**-1.0**
JMKN				A			A	00 36 53.0	
	comp=N,70nm,8.2s,comp=E,97nm,9.2s								
JMKN				*e*S			**Sn**	**00 37 37.2**	**-0.5**
JMYK	**Miyake Tsubota**	**3.91**	**333**	*e*P			**Pn**	**00 36 55.7**	**-0.6**
JMYK				A			A	00 36 55.7	
	comp=N,69nm,6.6s,comp=E,83nm,6.3s								
JMYK				*e*S			**Sn**	**00 37 39.9**	**-1.8**
JHH2	**Haha-jima-NKT2**	**3.97**	**174**	*e*P			**Pn**	**00 36 57.4**	**+0.2**
JHH2				A			A	00 36 57.4	
	comp=N,68nm,4.3s,comp=E,94nm,5.3s								
JHH2				*e*S			**Sn**	**00 37 43.4**	**+0.2**
BSO1	**Boso 1**	**4.09**	**352**	*e*P			**Pn**	**00 36 57.4**	**-1.0**
JKO	**Kozu shima**	**4.19**	**329**	A			A	00 36 59.7	
	comp=N,37nm,7.8s,comp=E,79nm,2.8s								
JNIO	**Niijimaoohara**	**4.27**	**332**	A			A	00 37 00.7	
	comp=N,64nm,3.5s,comp=E,68nm,9.1s								
JSKK	**Shikinejimakit**	**4.28**	**331**	A			A	00 37 00.8	
	comp=N,35nm,5.8s,comp=E,50nm,8.7s								
JTHY	**Toshimahigashi**	**4.42**	**333**	A			A	00 37 02.5	
	comp=N,48nm,5.3s,comp=E,48nm,7.9s								
JIM2	**Oshima 3**	**4.54**	**336**	A			A	00 37 04.0	
	comp=N,40nm,14.0s,comp=E,41nm,8.4s								
TATJ	**Tateyama 2**	**4.68**	**341**	A			A	00 37 05.3	
	comp=N,37nm,7.6s,comp=E,56nm,7.3s								
JKUC	**kamogawauchiur**	**4.72**	**345**	A			A	00 37 05.7	
	comp=N,37nm,7.6s,comp=E,56nm,7.3s								
JIZS	**Izushimoda**	**4.75**	**331**	A			A	00 37 07.5	
	comp=N,21nm,13.8s,comp=E,19nm,7.1s								
TTO3	**TONANKAI O.B.S**	**4.89**	**313**	A			A	00 37 11.1	
	comp=N,86nm,10.5s,comp=E,65nm,6.7s								
TTO4	**TONANKAI O.B.S**	**4.90**	**315**	A			A	00 37 11.0	
	comp=N,47nm,7.9s,comp=E,62nm,11.7s								
JHTM	**Izuhatsuma**	**4.91**	**333**	A			A	00 37 09.3	
	comp=N,26nm,4.9s,comp=E,37nm,9.0s								
JYO	**Yokosk**	**4.92**	**340**	A			A	00 37 09.0	
	comp=N,41nm,4.8s,comp=E,55nm,7.6s								
JCCN	**Chibachonan**	**4.93**	**346**	A			A	00 37 08.5	
	comp=N,95nm,9.2s,comp=E,91nm,6.0s								
TTO5	**TONANKAI O.B.S**	**4.96**	**318**	A			A	00 37 11.6	
	comp=N,52nm,14.3s,comp=E,64nm,7.7s								
JSG	**Sagara**	**5.03**	**325**	P			**Pn**	**00 37 13.6**	**+1.8**
JSG	**Sagara**	**5.03**	**325**				**Pn**	**00 37 11.7**	**-0.1**
JSG	**Sagara**	**5.03**	**325**	P			**Pn**	**00 37 13.3**	**+1.5**
JSG	**Sagara**	**5.03**	**325**	P			**Pn**	**00 37 13.7**	**+1.9**
JSG	**Sagara**	**5.03**	**325**	A			A	00 37 12.0	
	comp=N,60nm,9.0s,comp=E,41nm,6.6s								
TTO2	**TONANKAI O.B.S**	**5.05**	**310**	A			A	00 37 13.6	
	comp=N,127nm,10.0s,comp=E,77nm,10.1s								
JSMT	**Sammumatsuo**	**5.14**	**349**	A			A	00 37 11.1	
	comp=N,88nm,6.8s,comp=E,119nm,6.4s								
JOD2	**Odawara 2**	**5.15**	**335**	*e*P			**Pn**	**00 37 12.2**	**-1.1**
JOD2				A			A	00 37 12.2	
	comp=N,20nm,11.0s,comp=E,22nm,10.5s								
TTO1	**TONANKAI O.B.S**	**5.15**	**307**	*e*P			**Pn**	**00 37 15.5**	**+2.4**
TTO1				A			A	00 37 15.5	
	comp=N,101nm,9.9s,comp=E,86nm,11.3s								
JCAJ	**Choshiashikaji**	**5.16**	**352**	A			A	00 37 11.0	
	comp=N,30nm,7.4s,comp=E,37nm,6.6s								
JKKS	**Kakegawashinom**	**5.20**	**324**	A			A	00 37 14.2	
	comp=N,40nm,10.3s,comp=E,47nm,12.8s								
JFNN	**Fujinakano**	**5.24**	**332**	A			A	00 37 14.2	
	comp=N,31nm,3.1s,comp=E,31nm,10.8s								
TOK	**Tokyo**	**5.33**	**343**	A			A	00 37 14.3	
	comp=N,79nm,7.1s,comp=E,107nm,6.6s								
SHZ3	**Shizuoka 3**	**5.34**	**328**	A			A	00 37 16.1	
	comp=N,19nm,11.5s,comp=E,18nm,9.0s								
HMMJ	**Hamamatsu 2**	**5.41**	**323**	A			A	00 37 17.5	
	comp=N,14nm,11.5s,comp=E,15nm,8.0s								
JSGW	**Sagamiharawaka**	**5.41**	**338**	A			A	00 37 16.0	
	comp=N,11nm,3.6s,comp=E,14nm,7.4s								
JIHU	**Itakohorinouch**	**5.45**	**350**	A			A	00 37 15.2	
	comp=N,73nm,5.9s,comp=E,83nm,5.4s								
JIE	**Ise**	**5.67**	**313**	*e*P			**Pn**	**00 37 22.1**	**+1.6**
JIE				A			A	00 37 22.1	
	comp=N,9.0nm,22.1s,comp=E,6.0nm,3.3s								
JNY	**Yasuok**	**5.74**	**327**	A			A	00 37 21.7	
	comp=N,12nm,3.0s,comp=E,16nm,6.4s								
JHYU	**Hitachinakayam**	**5.81**	**351**	A			A	00 37 20.1	
	comp=N,13nm,8.1s,comp=E,25nm,5.4s								
JRY	**Ryogami san**	**5.89**	**337**	*e*P			**Pn**	**00 37 22.9**	**-0.7**
JRY				*e*S			**Sn**	**00 38 29.9**	**-0.8**
JAO	**Obara**	**5.97**	**322**	A			A	00 37 25.4	
	comp=N,15nm,13.3s,comp=E,10.0nm,5.9s								
JNT	**Takato**	**6.05**	**331**	A			A	00 37 25.6	
	comp=N,22nm,6.3s,comp=E,17nm,6.9s								
JTNC	**Tanabenakahech**	**6.08**	**304**	*e*P			**Pn**	**00 37 28.0**	**+1.8**
JAG	**Ashikaga**	**6.11**	**343**	A			A	00 37 25.2	
	comp=N,13nm,6.2s,comp=E,25nm,7.0s								
INU	**Inuyama**	**6.16**	**322**	P			**Pn**	**00 37 28.7**	**+1.5**
	comp=E,478nm,1.0s								
INU	**Inuyama**	**6.16**	**322**				**Pn**	**00 37 27.6**	**+0.4**
INU	**Inuyama**	**6.16**	**322**	P			**Pn**	**00 37 28.4**	**+1.2**
INU	**Inuyama**	**6.16**	**322**	P			**Pn**	**00 37 29.1**	**+1.8**
JGF	**Kuroka**	**6.18**	**325**	P			**Pn**	**00 37 29.6**	**+2.0**
	comp=E,1μm,1.0s								
JGF	**Kuroka**	**6.18**	**325**				**Pn**	**00 37 29.0**	**+1.5**
JGF	**Kuroka**	**6.18**	**325**	P			**Pn**	**00 37 28.6**	**+1.0**
JGF	**Kuroka**	**6.18**	**325**	P			**Pn**	**00 37 29.2**	**+1.6**
JGK	**Kuni**	**6.48**	**338**	A			A	00 37 30.9	
	comp=N,21nm,6.2s,comp=E,18nm,4.9s								
JSB	**Shiboa**	**6.53**	**347**	A			A	00 37 30.6	
	comp=N,36nm,4.5s,comp=E,38nm,3.3s								
MJAR	**Matsushiro Arr**	**6.61**	**335**	Pn			**Pn**	**00 37 33.6**	**+0.2**
	comp=E,3.9nm,0.3s,baz=153,slow=10,SNR=440								
MJAR				LR			LR	00 40 11.6	
	comp=E,35μm,19.3s,baz=148,slow=39								
	comp=E,474nm,1.0s								
MJAR	**Matsushiro Arr**	**6.61**	**335**				**Pn**	**00 37 33.3**	**-0.1**
MAJO	**Matsushiro**	**6.61**	**335**	P			**Pn**	**00 37 35.1**	**+1.7**
	comp=E,723nm,1.0s								
MAJO	**Matsushiro**	**6.61**	**335**	*c*	*i*P		**Pn**	**00 37 34.8**	**+1.4**
MAJO				MLR			MLR		
	comp=Z,25μm,16.0s								
MAJO	**Matsushiro**	**6.61**	**335**				**Pn**	**00 37 33.8**	**+0.3**
MAJO	**Matsushiro**	**6.61**	**335**	P			**Pn**	**00 37 33.4**	**0.0**
MAJO	**Matsushiro**	**6.61**	**335**	P			**Pn**	**00 37 34.2**	**+0.8**
MJB9	**Matsu-Tunnel**	**6.61**	**335**				**Pn**	**00 37 34.4**	**+0.9**
MJB9	**Matsu-Tunnel**	**6.61**	**335**	P			**Pn**	**00 37 33.0**	**-0.5**
JGN	**Niukaw**	**6.70**	**328**	A			A	00 37 35.0	
	comp=N,7.0nm,8.2s,comp=E,13nm,8.8s								
JMN	**Monobe**	**7.33**	**297**	P			**Pn**	**00 37 45.3**	**+1.9**
	comp=E,505nm,1.1s								
JMN	**Monobe**	**7.33**	**297**				**Pn**	**00 37 45.4**	**+2.1**
JMN	**Monobe**	**7.33**	**297**	P			**Pn**	**00 37 46.1**	**+2.7**
JMN	**Monobe**	**7.33**	**297**	P			**Pn**	**00 37 46.2**	**+2.8**
JTO	**Tosashimizu**	**7.91**	**289**	*e*P			**Pn**	**00 37 54.2**	**+2.9**
JMK	**Ichinoseki**	**8.35**	**357**	*e*P			**Pn**	**00 37 54.1**	**-3.1**
JMK				*e*S			Sn	00 39 21.3	-10
JHS	**Saijyo**	**8.45**	**304**	*e*P			**Pn**	**00 38 01.4**	**+2.6**
JOI	**OKI**	**9.06**	**311**	*e*P			**Pn**	**00 38 09.4**	**+2.4**
JNU	**Nakatsue**	**9.54**	**288**	Pn			**Pn**	**00 38 14.2**	**+0.5**
	comp=E,1.8nm,0.3s,baz=78,slow=8.2,SNR=88								
JNU				LR			LR	00 41 57.9	
	comp=E,58μm,18.5s,baz=123,slow=38								
JSU	**Suzuyama**	**9.69**	**278**				**Pn**	**00 38 16.9**	**+1.2**
JSU	**Suzuyama**	**9.69**	**278**	P			Pn	00 38 20.9	+5.2
JSU	**Suzuyama**	**9.69**	**278**	P			Pn	00 38 21.5	+5.8
JTM	**Tenmabayashi**	**10.18**	**357**				**Pn**	**00 38 19.6**	**-2.8**
JTM	**Tenmabayashi**	**10.18**	**357**	P			**Pn**	**00 38 19.3**	**-3.1**
JTM	**Tenmabayashi**	**10.18**	**357**	P			**Pn**	**00 38 20.4**	**-2.0**
JSJ	**Shimokoshiki**	**10.33**	**279**	*e*P			Pn	00 38 29.5	+5.1
JMZ	**Minamidaito 2**	**10.39**	**245**	P			**Pn**	**00 38 27.2**	**+1.9**
	comp=E,2μm,1.8s								
JMZ	**Minamidaito 2**	**10.39**	**245**				**Pn**	**00 38 27.4**	**+2.1**
JMZ	**Minamidaito 2**	**10.39**	**245**	P			**Pn**	**00 38 29.7**	**+4.4**
JMZ	**Minamidaito 2**	**10.39**	**245**	P			Pn	00 38 30.9	+5.6
JMZ	**Minamidaito 2**	**10.39**	**245**	*e*P			**Pn**	**00 38 30.1**	**+4.8**
JOT	**Ohata**	**10.78**	**357**	*e*P			**Pn**	**00 38 28.2**	**-2.4**
JTU	**Tsushima**	**11.09**	**294**	P			**Pn**	**00 38 36.6**	**+1.7**
	comp=E,145nm,1.0s								
JTU	**Tsushima**	**11.09**	**294**	P			**Pn**	**00 38 39.3**	**+4.4**
JTU	**Tsushima**	**11.09**	**294**	*e*P			**Pn**	**00 38 38.1**	**+3.3**
JAMN	**Amaminishikomi**	**11.17**	**261**	*e*P			Pn	00 38 42.1	+6.2
ERM	**Erimo**	**11.46**	**5**	*de*P			**Pn**	**00 38 35.6**	**-4.3**
ERM				MLR			MLR		
	comp=Z,20μm,14.0s								
ERM	**Erimo**	**11.46**	**5**				**Pn**	**00 38 35.5**	**-4.3**
ERM	**Erimo**	**11.46**	**5**	P			Pn	00 38 34.8	-5.0
ERM	**Erimo**	**11.46**	**5**	P			**Pn**	**00 38 35.7**	**-4.1**
JEM	**Erimo**	**11.46**	**5**	P			**Pn**	**00 38 39.8**	**-0.1**
	comp=Z,193nm,1.3s								
JOSM	**Okushiri--Mats**	**11.60**	**352**	*e*P			**Pn**	**00 38 38.7**	**-3.1**
JOW	**Kunigami**	**12.36**	**256**	P			**Pn**	**00 38 53.5**	**+1.2**
	comp=Z,201nm,0.8s								
JOW	**Kunigami**	**12.36**	**256**	LR			LR	00 43 18.9	
	comp=Z,46μm,20.2s,baz=92,slow=36								
JOW	**Kunigami**	**12.36**	**256**				**Pn**	**00 38 53.1**	**+0.8**
JOW	**Kunigami**	**12.36**	**256**	P			**Pn**	**00 38 56.2**	**+3.9**
JOW	**Kunigami**	**12.36**	**256**	P			**Pn**	**00 38 56.2**	**+3.9**
TJN	**Taejon**	**13.28**	**300**	P			**Pn**	**00 39 06.2**	**+1.5**
	comp=Z,1μm,1.2s								
TJN	**Taejon**	**13.28**	**300**	*c*	*i*P		**Pn**	**00 39 08.1**	**+3.4**
TJN	**Taejon**	**13.28**	**300**				**Pn**	**00 39 04.9**	**+0.1**
TJN	**Taejon**	**13.28**	**300**	P			**Pn**	**00 39 07.7**	**+3.0**
KSRS	**Korea Array**	**13.31**	**305**	Pn			**Pn**	**00 39 07.8**	**+2.7**
	comp=Z,0.8nm,0.3s,baz=116,slow=13,SNR=106								
KSRS				LR			LR	00 44 15.7	
	comp=Z,25μm,18.3s,baz=115,slow=38								
KSRS				PcP			**PcP**	**00 44 35.0**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=156,slow=1.3,SNR=4.6								
KSRS				ScP			**ScP**	**00 48 07.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=78,slow=1.5,SNR=4.2								
KSAR	**Wonju Array Be**	**13.33**	**304**	P			**Pn**	**00 39 06.4**	**+0.9**
KSAR	**Wonju Array Be**	**13.33**	**304**				**Pn**	**00 39 06.4**	**+0.9**
KS19	**Wonju Array Si**	**13.37**	**305**				**Pn**	**00 39 07.0**	**+0.9**
ASAJ	**Asahikawa**	**13.52**	**3**	Pn			**Pn**	**00 39 05.9**	**-2.1**
	comp=Z,4.7nm,0.3s,baz=221,slow=13,SNR=13								
ASAJ				Sn			Sn	00 41 25.7	-12
	comp=Z,3.3nm,0.3s,baz=217,slow=20,SNR=1.9								
ASAJ				LR			LR	00 43 49.7	
	comp=Z,7μm,21.8s,baz=190,slow=35								
ASAJ				PcP			**PcP**	**00 44 36.0**	**+1.6**
	comp=Z,8.3nm,0.7s,baz=230,slow=2.4,SNR=1.6								
	comp=Z,28nm,0.4s								
JKA	**Kamikawa-asahi**	**13.52**	**3**				**Pn**	**00 39 03.5**	**-4.5**
JKA	**Kamikawa-asahi**	**13.52**	**3**	P			**Pn**	**00 39 04.2**	**-3.8**
JKA	**Kamikawa-asahi**	**13.52**	**3**	P			**Pn**	**00 39 04.8**	**-3.1**
YUK	**Yuzh-Kuril'sk**	**13.82**	**13**	*e*P			**Pn**	**00 39 13.7**	**+1.7**
YUK				pmax			pmax		
	comp=Z,785nm,1.3s								
YUK				pmax			pmax		
	comp=Z,248nm,0.5s								
YUK				pmax			pmax		
	comp=E,62nm,0.1s								
YUK				pmax			pmax		
	comp=N,150nm,0.5s								
INCN	**Inchon**	**14.25**	**303**	P			**Pn**	**00 39 19.1**	**+1.0**
	comp=N,336nm,1.0s								
INCN	**Inchon**	**14.25**	**303**	P			**Pn**	**00 39 18.1**	**0.0**
INCN	**Inchon**	**14.25**	**303**	P			**Pn**	**00 39 19.3**	**+1.3**
INCN				P			**Pn**	**00 39 19.3**	**+1.3**
INCN				P			**Pn**	**00 39 19.3**	**+1.3**
INCN				S			**Sn**	**00 41 54.9**	**-0.8**
INCN				S			**Sn**	**00 41 54.9**	**-0.8**
INCN				S			**Sn**	**00 41 54.9**	**-0.8**
INCN	**Inchon**	**14.25**	**303**				**Pn**	**00 39 18.1**	**0.0**
INCN	**Inchon**	**14.25**	**303**	P			**Pn**	**00 39 19.7**	**+1.6**
INCN	**Inchon**	**14.25**	**303**	P			**Pn**	**00 39 20.9**	**+2.9**
VLA	**Vladivostok**	**14.75**	**331**	*de*P			**Pn**	**00 39 22.9**	**-1.9**
VLA				MLR			MLR		
	comp=Z,17μm,16.0s								
PSTR	**Posyet**	**14.86**	**327**	*d*	*i*P		**Pn**	**00 39 25.0**	**-1.3**
KUR	**Kuril'sk**	**15.40**	**17**	P			**Pn**	**00 39 30.4**	**-3.0**
KUR				pmax			pmax		
	comp=Z,271nm,1.2s								
KUR				MLR			MLR		
	comp=Z,8μm,14.0s								
USA0B	**Ussuriysk Arra**	**15.60**	**333**	*d*	*i*P		**Pn**	**00 39 34.9**	**-1.2**
USA0B	**Ussuriysk Arra**	**15.60**	**333**				**Pn**	**00 39 34.0**	**-2.1**
USRK	**Ussuriysk Ar.**	**15.60**	**333**	Pn			**Pn**	**00 39 34.0**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=144,slow=11,SNR=67								
USRK				LR			LR	00 45 23.8	
	comp=Z,15μm,18.9s,baz=148,slow=36								
	comp=Z,54nm,1.0s								
USRK	**Ussuriysk Ar.**	**15.60**	**333**	P			**Pn**	**00 39 34.0**	**-2.1**
USRK	**Ussuriysk Ar.**	**15.60**	**333**				**Pn**	**00 39 33.5**	**-2.6**
DPSS	**Saipan**	**15.74**	**165**	Pn			**Pn**	**00 39 35.3**	**-2.7**
YSS	**Yuzhno-Sakhali**	**16.36**	**3**	*ce*P			**Pn**	**00 39 42.4**	**-3.4**
YSS				*e*S			**Sn**	**00 42 41.9**	**-4.9**
YSS				pmax			pmax		
	comp=Z,180nm,0.9s								
YSS				pmax			pmax		
	comp=Z,1μm,3.6s								
YSS				pmax			pmax		
	comp=N,1μm,3.5s								
YSS				pmax			pmax		
	comp=E,500nm,4.0s								
YSS	**Yuzhno-Sakhali**	**16.36**	**3**				**Pn**	**00 39 41.9**	**-3.9**
YSS	**Yuzhno-Sakhali**	**16.36**	**3**	P			**Pn**	**00 39 42.9**	**-2.9**
MDJ	**Mudanjiang**	**16.94**	**329**	P			**Pn**	**00 39 51.7**	**-1.5**
	comp=E,445nm,1.1s								
MDJ	**Mudanjiang**	**16.94**	**329**				**Pn**	**00 39 50.8**	**-2.5**
MDJ	**Mudanjiang**	**16.94**	**329**	P			**Pn**	**00 39 51.0**	**-2.2**
MDJ				pmax			pmax		
	comp=E,3μm,7.2s								
MDJ				L			L		
	comp=E,12μm,19.2s								
MDJ				L			L		
	comp=E,19μm,16.5s								
MDJ				L			L		
	comp=E,30μm,16.5s								
GUMO	**Guam**	**17.18**	**170**	P			**P**	**00 39 59.2**	**+1.3**
	comp=E,2μm,1.2s								
GUMO	**Guam**	**17.18**	**170**	P			**P**	**00 39 57.9**	**+0.1**
	comp=E,10nm,0.3s,baz=331,slow=3.2,SNR=20								
GUMO				LR			LR	00 45 02.7	
	comp=E,9μm,20.9s,baz=360,slow=32								
	comp=E,681nm,1.1s								
GUMO	**Guam**	**17.18**	**170**				**Pn**	**00 39 55.5**	**-0.8**
GUMO				pmax			pmax		
	comp=Z,2μm,1.2s								
GUMO	**Guam**	**17.18**	**170**				**Pn**	**00 39 55.5**	**-0.8**
GUMO	**Guam**	**17.18**	**170**	P			**P**	**00 39 59.1**	**+1.3**
GUMO	**Guam**	**17.18**	**170**	P			**P**	**00 39 59.1**	**+1.3**
SSE	**Sheshan**	**17.62**	**277**	P			**Pn**	**00 40 01.8**	**0.0**
SSE				S			**Sn**	**00 43 20.0**	**+2.3**
SSE				pmax			pmax		
	comp=Z,2μm,8.3s								
YOJ	**Yonaguni jima**	**17.66**	**254**	P			**P**	**00 40 03.5**	**+0.4**
	comp=Z,754nm,0.9s								
YOJ	**Yonaguni jima**	**17.66**	**254**	P			**P**	**00 40 02.9**	**-0.2**
YOJ				pmax			pmax		
	comp=Z,564nm,0.8s								
YOJ	**Yonaguni jima**	**17.66**	**254**	P			**P**	**00 40 02.9**	**-0.2**
YOJ				IAmb			IAmb	00 40 07.2	
	comp=Z,564nm,0.8s								
YOJ	**Yonaguni jima**	**17.66**	**254**	P			**P**	**00 40 04.6**	**+1.5**
SNY	**Shenyang**	**18.39**	**313**	⇓P			**P**	**00 40 10.5**	**-0.5**
SNY				pP			**Pn**	**00 40 12.8**	**+1.7**
SNY				S			**Sn**	**00 43 35.3**	**-0.7**
SNY				pmax			pmax		
	comp=Z,3μm,8.5s								
SNY				L			L		
	comp=Z,16μm,15.0s								
SNY				L			L		
	comp=Z,12μm,16.2s								
SNY				L			L		
	comp=Z,19μm,16.1s								
CN2	**Changchun**	**18.43**	**320**	P			**P**	**00 40 09.8**	**-1.8**
CN2				S			**Sn**	**00 43 31.8**	**-5.3**
CN2				pmax			pmax		
	comp=Z,230nm,1.0s								
CN2				pmax			pmax		
	comp=Z,3μm,7.0s								
CN2				L			L		
	comp=Z,14μm,15.0s								
CN2				L			L		
	comp=Z,15μm,15.0s								
CN2				L			L		
	comp=Z,19μm,16.0s								
DL2	**Dalian**	**18.43**	**302**	P			**P**	**00 40 11.0**	**-0.6**
DL2				pP			**sP**	**00 40 18.5**	**+1.0**
DL2				sP			**pwP**	**00 40 24.0**	**+3.7**
DL2				S			**Sn**	**00 43 38.0**	**+0.7**
DL2				pmax			pmax		
	comp=Z,170nm,1.2s								
DL2				pmax			pmax		
	comp=Z,5μm,7.3s								
DL2				L			L		
	comp=Z,19μm,19.0s								
DL2				L			L		
	comp=Z,30μm,16.6s								
DL2				L			L		
	comp=Z,37μm,17.9s								
UGL	**Uglegorsk**	**18.46**	**1**	*e*P			**Pn**	**00 40 12.6**	**+0.6**
UGL				*e*S			**Sn**	**00 43 36.0**	**-1.8**
UGL				pmax			pmax		
	comp=Z,300nm,1.1s								
UGL				pmax			pmax		
	comp=Z,5μm,10.0s								
UGL				smax			smax		
	comp=E,12μm,9.0s								
UGL				smax			smax		
	comp=N,7μm,12.0s				

QZH2 L L
comp=Z,15μm,18.9s
QZH2 L L
comp=Z,18μm,20.3s
QZH2 L L
comp=Z,25μm,20.3s
TIA Tai'an 21.24 292 P **P** **00 40 40.8 -1.5**
TIA PP **PnPn** **00 41 01.0 -0.9**
TIA S **S** **00 44 39.0 +1.3**
TIA pmax pmax
comp=Z,190nm,1.2s
TIA pmax pmax
comp=Z,2μm,9.2s
TIA L L
comp=Z,25μm,15.9s
TIA L L
comp=Z,21μm,16.9s
TIA L L
comp=Z,36μm,15.3s
KNMB Chin-men Tao 21.54 259 P **P** **00 40 45.2 -0.3**
KNMB IAmb IAmb 00 40 48.8
comp=Z,352nm,0.9s
KNMB IAMs_20 IAMs_20 00 48 58.0
comp=Z,15μm,20.0s
HEH HeiHe 22.38 335 *e*P **P** **00 40 52.8 -1.5**
HEH pP **pP** **00 40 56.5 -1.7**
HEH PcP **PcP** **00 44 50.0 +1.1**
HEH S **S** **00 44 55.0 -4.3**
HEH pmax pmax
comp=Z,250nm,1.3s
HEH pmax pmax
comp=Z,8μm,7.3s
HEH L L
comp=Z,8μm,17.0s
HEH L L
comp=Z,11μm,16.1s
HEH L L
comp=Z,15μm,17.3s
NKL Nikolayevsk 22.55 358 *e*P **P** **00 40 54.5 -1.6**
NKL *e*S **S** **00 45 02.2 -0.3**
NKL pmax pmax
comp=N,329nm,1.3s
NKL pmax pmax
comp=E,582nm,1.2s
NKL pmax pmax
comp=Z,1μm,1.2s
NKL smax smax
comp=E,782nm,2.3s
NKL smax smax
comp=N,2μm,3.0s
NKL MLR MLR
comp=E,37μm,15.0s
NKL MLR MLR
comp=N,5μm,10.0s
NKL MLR MLR
comp=Z,38μm,16.0s
SKR Severo-Kuril's 22.78 24 *e*P **P** **00 40 57.5 -1.0**
SKR *e*S **S** **00 45 06.0 -0.6**
SKR pmax pmax
comp=Z,34nm,0.7s
SKR pmax pmax
comp=Z,900nm,4.8s
SKR MLR MLR
comp=Z,10μm,11.0s
BJI2 Beijing 22.79 301 P **P** **00 40 57.0 -1.8**
BJI2 PP **PnPn** **00 41 25.5 +2.5**
BJI2 S **S** **00 45 01.5 -5.6**
BJI2 pmax pmax
comp=Z,110nm,1.2s
BJI2 pmax pmax
comp=Z,1μm,8.1s
BJI2 L L
comp=Z,5μm,17.3s
BJI2 L L
comp=Z,12μm,18.6s
BJI2 L L
comp=Z,16μm,17.5s
BJT Baijiatuau 22.80 301 P **P** **00 40 56.9 -1.9**
comp=Z,324nm,1.7s
BJT Baijiatuau 22.80 301 P **P** **00 40 56.8 -2.1**
BJT pmax pmax
comp=Z,227nm,1.0s
BJT MLR MLR
comp=Z,28μm,18.0s
BJT Baijiatuau 22.80 301 **P** **00 40 56.8 -2.1**
SZP Santa 23.29 241 P **P** **00 41 04.5 +0.5**
comp=Z,940nm,1.0s
HNS HongShan 23.34 294 ⇑P **P** **00 41 00.5 -3.9**
HNS PP **PnPn** **00 41 32.5 +2.0**
HNS S **S** **00 45 10.5 -5.8**
HNS pmax pmax
comp=Z,190nm,1.0s
HNS pmax pmax
comp=Z,3μm,10.2s
HNS L L
comp=Z,13μm,17.5s
HNS L L
comp=Z,31μm,17.0s
HNS L L
comp=Z,35μm,17.0s
WHN Wuhan 23.53 277 ⇑P **P** **00 41 05.5 -0.9**
WHN S **S** **00 45 20.3 +0.7**
WHN pmax pmax
comp=Z,550nm,1.1s
WHN pmax pmax
comp=Z,6μm,3.3s
WHN L L
comp=Z,24μm,14.2s
WHN L L
comp=Z,68μm,15.7s
WHN L L
comp=Z,85μm,16.3s
XLT XiLinHaoTe 24.22 310 *e*P **P** **00 41 10.5 -2.4**
XLT S **S** **00 45 23.5 -7.1**
XLT PcS **PcS** **00 48 33.0 +0.2**
XLT pmax pmax
comp=Z,3μm,7.2s
XLT L L
comp=Z,1μm,18.4s
XLT L L
comp=Z,8μm,18.8s
XLT L L
comp=Z,9μm,22.1s
LYN LuoYang 24.91 287 ⇑P **P** **00 41 16.8 -2.3**
LYN sP sP 00 41 26.0 +0.7
LYN S **S** **00 45 36.3 -5.4**
LYN sS pS 00 45 46.8 +0.3
LYN pmax pmax
comp=Z,300nm,1.1s
LYN pmax pmax
comp=Z,3μm,8.2s
LYN L L
comp=Z,13μm,18.5s
LYN L L
comp=Z,15μm,20.3s
LYN L L
comp=Z,23μm,19.7s
HIA Hailar 24.97 325 P **P** **00 41 19.4 -0.2**
comp=Z,889nm,1.2s
HIA Hailar 24.97 325 P **P** **00 41 19.3 -0.3**
HIA pmax pmax
comp=Z,867nm,1.0s
HIA MLR MLR
comp=Z,13μm,18.0s
HIA Hailar 24.97 325 **P** **00 41 19.2 -0.3**
HIA Hailar 24.97 325 IAMs_20 IAMs_20 00 51 29.1
comp=Z,13μm,18.0s
CNSH ChangSha 25.15 272 P **P** **00 41 20.5 -0.9**
CNSH S **S** **00 45 50.0 +4.3**
CNSH pmax pmax
comp=Z,300nm,1.0s
CNSH L L
comp=Z,6μm,15.1s
CNSH L L
comp=Z,13μm,15.5s
CNSH L L
comp=Z,10μm,18.1s
HILR Hailar Array B 25.16 325 P **P** **00 41 20.7 -0.6**
comp=Z,429nm,1.0s,baz=133,slow=10,SNR=190
HILR PcP **PcP** **00 44 55.7 +0.7**
comp=Z,8.0nm,0.8s,baz=95,slow=8.8,SNR=2.0
HILR LR LR 00 51 20.4
comp=Z,7μm,19.5s,baz=105,slow=37
comp=Z,429nm,1.0s
TIY Taiyuan 25.17 294 P **P** **00 41 21.0 -0.6**
TIY S **S** **00 45 47.5 +1.5**

TIY pmax pmax
comp=Z,290nm,0.7s
TIY pmax pmax
comp=Z,2μm,8.3s
TIY L L
comp=Z,7μm,17.3s
TIY L L
comp=Z,22μm,17.2s
TIY L L
comp=Z,25μm,18.0s
H11N2 WAKE ISLAND Hy 25.18 110 P **P** **00 41 21.9 +0.3**
baz=276,slow=11,SNR=4.3
H11N2 T T 01 07 29.8
baz=302,slow=74,SNR=20
H11N1 WAKE ISLAND Hy 25.19 110 P **P** **00 41 22.2 +0.6**
baz=276,slow=11,SNR=4.7
H11N1 T T 01 07 32.1
baz=302,slow=74,SNR=12
H11N3 WAKE ISLAND Hy 25.20 110 P **P** **00 41 21.7 +0.1**
baz=276,slow=11,SNR=4.5
H11N3 T T 01 07 31.5
baz=302,slow=74,SNR=20
WAKE Wake Island 25.22 111 P **P** **00 41 24.2 +2.2**
comp=Z,199nm,1.1s
WAKE Wake Island 25.22 111 P **P** **00 41 19.8 -2.2**
WAKE IAmb IAmb 00 41 49.6
comp=Z,331nm,1.0s
PEA0B Petropavlovsk- 25.34 23 *de*P **P** **00 41 23.5 +0.6**
PEA0B Petropavlovsk- 25.34 23 P **P** **00 41 22.9 0.0**
PETK Petropavlovsk- 25.34 23 P **P** **00 41 23.8 +0.9**
comp=Z,35nm,1.2s,baz=201,slow=7.9,SNR=8.2
PETK PcP **PcP** **00 44 55.6 +0.4**
comp=Z,6.6nm,0.9s,baz=223,slow=5.0,SNR=3.2
PETK LR LR 00 53 16.5
comp=Z,3μm,19.4s,baz=204,slow=41
comp=Z,35nm,1.2s
PETK Petropavlovsk- 25.34 23 P **P** **00 41 22.3 -0.6**
PETK Petropavlovsk- 25.34 23 P **P** **00 41 22.3 -0.6**
ZEA Zeya 25.39 340 *e*P **P** **00 41 23.4 +0.1**
ZEA *e*S **S** **00 45 43.0 -6.0**
ZEA pmax pmax
comp=E,700nm,2.0s
ZEA pmax pmax
comp=N,700nm,1.5s
ZEA pmax pmax
comp=Z,2μm,1.7s
ZEA pmax pmax
comp=E,190nm,1.0s
ZEA pmax pmax
comp=N,360nm,1.1s
ZEA pmax pmax
comp=Z,880nm,1.2s
ZEA MLR MLR
comp=E,2μm,13.0s
ZEA MLR MLR
comp=Z,5μm,15.0s
PET Petropavlovsk 25.60 24 P **P** **00 41 28.1 +2.9**
comp=Z,527nm,1.5s
PET Petropavlovsk 25.60 24 *e*P **P** **00 41 26.4 +1.2**
PET *e*S **S** **00 45 52.4 +0.1**
PET pmax pmax
comp=Z,900nm,10.5s
PET pmax pmax
comp=Z,127nm,1.3s
PET pmax pmax
comp=Z,1μm,7.3s
PET Petropavlovsk 25.60 24 P **P** **00 41 23.9 -1.3**
PET Petropavlovsk 25.60 24 pP pP 00 41 32.9 +3.6
comp=Z,2μmcomp=Z,131nm,1.5s
H11S3 WAKE ISLAND Hy 25.66 112 T T 01 08 02.7
baz=304,slow=74,SNR=83
H11S1 WAKE ISLAND Hy 25.66 112 T T 01 08 03.1
baz=304,slow=74,SNR=126
H11S2 WAKE ISLAND Hy 25.68 112 T T 01 08 03.9
baz=304,slow=74,SNR=133
GZH2 Guangzhou 25.86 261 P **P** **00 41 26.0 -1.8**
GZH2 S **S** **00 45 57.3 +0.4**
GZH2 pmax pmax
comp=Z,300nm,1.0s
GZH2 L L
comp=Z,10μm,15.7s
GZH2 L L
comp=Z,12μm,15.6s
GZH2 L L
comp=Z,27μm,17.3s
HKPS Hong Kong Po S 25.98 258 P **P** **00 41 31.0 +2.0**
comp=Z,153nm,0.9s
HKPS Hong Kong Po S 25.98 258 P **P** **00 41 29.2 +0.2**
HKPS Hong Kong Po S 25.98 258 **P** **00 41 29.3 +0.3**
HKPS IAMs_20 IAMs_20 00 51 42.7
comp=Z,16μm,19.0s
HKPS Hong Kong Po S 25.98 258 P **P** **00 41 31.2 +2.2**
HHC Hu-ho-hao-te 26.40 301 ⇑*i*P **P** **00 41 31.0 -1.8**
HHC sP sP 00 41 39.0 +0.1
HHC S **S** **00 46 04.0 -1.5**
HHC sS sS 00 46 12.0 -0.6
HHC pmax pmax
comp=Z,92nm,1.1s
HHC pmax pmax
comp=Z,410nm,4.8s
HHC L L
comp=Z,12μm,15.4s
HHC L L
comp=Z,29μm,17.6s
HHC L L
comp=Z,35μm,17.6s
BTO2 Baotou 27.63 300 *e*P **P** **00 41 42.8 -1.1**
BTO2 pP **pP** **00 41 47.5 -0.7**
BTO2 sP **sP** **00 41 50.0 0.0**
BTO2 PP **PnPn** **00 42 31.0 +1.7**
BTO2 S **S** **00 46 26.5 +1.5**
BTO2 sS **sS** **00 46 33.8 +1.7**
BTO2 SS **SnSn** **00 47 42.0 +5.5**
BTO2 pmax pmax
comp=Z,480nm,1.3s
BTO2 pmax pmax
comp=Z,5μm,8.4s
BTO2 L L
comp=Z,47μm,16.1s
BTO2 L L
comp=Z,76μm,16.9s
BTO2 L L
comp=Z,94μm,15.2s
ENH Enshi 27.73 278 P **P** **00 41 42.9 -1.8**
comp=Z,162nm,1.1s
ENH Enshi 27.73 278 **P** **00 41 42.4 -2.3**
ENH IAMs_20 IAMs_20 00 52 27.6
comp=Z,16μm,21.0s
XAN Xi'an 27.85 286 ⇓P **P** **00 41 44.0 -1.8**
XAN pP pwP 00 41 53.3 -1.4
XAN pmax pmax
comp=Z,530nm,1.1s
XAN pmax pmax
comp=Z,2μm,6.9s
XAN L L
comp=Z,9μm,14.3s
XAN L L
comp=Z,14μm,15.8s
XAN L L
comp=Z,17μm,17.7s
DAV Davao City (W) 27.86 216 LR LR 00 54 57.8
comp=Z,6μm,18.0s,baz=56,slow=41
DAV Davao City (W) 27.86 216 P **P** **00 41 46.6 +0.6**
DAV Davao City (W) 27.86 216 P **P** **00 41 45.2 -0.7**
DAV Davao City (W) 27.86 216 IAMs_20 IAMs_20 00 54 56.0
comp=Z,9μm,20.0s
PATS Pohnpei 28.31 143 IAMs_20 IAMs_20 00 53 49.3
comp=Z,8μm,19.0s
MA2 Magadan 29.62 9 P **P** **00 42 01.9 +0.7**
comp=Z,143nm,1.9s
MA2 Magadan 29.62 9 LR LR 00 57 18.4
comp=Z,3μm,18.1s,baz=198,slow=43
MA2 Magadan 29.62 9 *ci*P **P** **00 42 00.4 -0.8**
MA2 pmax pmax
comp=Z,262nm,1.7s
MA2 MLR MLR
comp=Z,5μm,18.0s
MA2 Magadan 29.62 9 P **P** **00 42 00.2 -1.0**
MA2 IAmb IAmb 00 42 06.5
comp=Z,348nm,1.6s
MA2 Magadan 29.62 9 P **P** **00 42 01.3 +0.1**
comp=Z,2μmcomp=Z,140nm,1.9s
MA2 Magadan 29.62 9 P **P** **00 42 01.7 +0.5**
SGSI Sangihe 30.82 213 P **P** **00 42 11.3 -0.8**
GYA Guiyang 30.98 271 ⇑P **P** **00 42 12.0 -1.7**
GYA pP pP 00 42 14.0 -4.0

GYA PcP **PcP** **00 45 12.3 +2.6**
GYA S **S** **00 47 25.0 +7.2**
GYA pmax pmax
comp=Z,58nm,0.9s
GYA pmax pmax
comp=Z,1μm,6.7s
GYA L L
comp=Z,6μm,15.8s
GYA L L
comp=Z,13μm,18.2s
GYA L L
comp=Z,16μm,18.0s
QIZ Qiongzhong 31.02 256 P **P** **00 42 14.6 +0.6**
comp=Z,62nm,1.4s
QIZ Qiongzhong 31.02 256 **P** **00 42 13.1 -0.9**
QIZ Qiongzhong 31.02 256 IAMs_20 IAMs_20 00 53 58.3
comp=Z,10μm,21.0s
QIZ Qiongzhong 31.02 256 P **P** **00 42 14.3 +0.3**
QIZ PP **PnPn** **00 43 18.8 +3.7**
QIZ S **S** **00 47 16.0 -2.3**
QIZ pmax pmax
comp=Z,49nm,1.0s
QIZ pmax pmax
comp=Z,890nm,6.6s
QIZ L L
comp=Z,3μm,12.9s
QIZ L L
comp=Z,7μm,18.9s
QIZ L L
comp=Z,9μm,18.9s
ULN Ulaanbaatar 31.56 313 *ci*P **P** **00 42 18.9 +0.2**
ULN pmax pmax
comp=Z,292nm,1.3s
ULN MLR MLR
comp=Z,12μm,16.0s
ULN Ulaanbaatar 31.56 313 P **P** **00 42 19.3 +0.6**
ULN P **P** **00 42 19.3 +0.6**
ULN P **P** **00 42 19.3 +0.6**
ULN S **S** **00 47 27.3 +0.7**
ULN S **S** **00 47 27.3 +0.7**
ULN S **S** **00 47 27.3 +0.7**
ULN Ulaanbaatar 31.56 313 P **P** **00 42 18.6 -0.1**
ULN Ulaanbaatar 31.56 313 IAMs_20 IAMs_20 00 55 32.4
comp=Z,12μm,19.0s
ULN Ulaanbaatar 31.56 313 P **P** **00 42 18.4 -0.3**
ULN Ulaanbaatar 31.56 313 P **P** **00 42 19.1 +0.4**
LZH Lanzhou 31.96 290 *e*P **P** **00 42 20.8 -1.5**
LZH pP pP 00 42 25.0 -1.6
LZH S **S** **00 47 38.5 +5.5**
LZH pmax pmax
comp=Z,170nm,1.2s
LZH pmax pmax
comp=Z,770nm,5.1s
LZH L L
comp=Z,12μm,13.4s
LZH L L
comp=Z,14μm,12.4s
LZH L L
comp=Z,16μm,13.4s
SONM Songino Array 31.97 313 P **P** **00 42 22.9 +0.7**
comp=Z,85nm,1.0s,baz=126,slow=8.1,SNR=210
SONM ScP **ScP** **00 48 57.3 +2.6**
comp=Z,2.6nm,0.9s,baz=148,slow=12,SNR=3.8
SONM LR LR 00 55 56.7
comp=Z,12μm,18.8s,baz=114,slow=38
SONM P3KPbc 01 13 54.4
comp=Z,0.6nm,0.9s,baz=277,slow=3.9,SNR=5.9
comp=Z,85nm,1.0s
SONM Songino Array 31.97 313 P **P** **00 42 22.1 0.0**
SONM IAmb IAmb 00 42 24.4
comp=Z,113nm,1.0s
SONM **ScP** **00 48 51.8 -2.9**
BAKI Biak 32.05 191 P **P** **00 42 23.6 +0.6**
comp=Z,2μmcomp=Z,98nm,1.1s
LZDM Lanzhou Array 32.08 290 P **P** **00 42 22.8 -0.8**
comp=Z,118nm,1.0s,baz=108,slow=8.3,SNR=38
LZDM LR LR 00 56 05.9
comp=Z,6μm,18.4s,baz=80,slow=38
comp=Z,118nm,1.0s
SHEM Shemya Is, Ala 32.35 38 P **P** **00 42 25.4 +0.1**
comp=Z,119nm,1.2s,baz=43,slow=3.2,SNR=8.4
SHEM LR LR 00 52 34.2
comp=Z,3μm,21.1s,baz=236,slow=31
comp=Z,119nm,1.2s
SHEM Shemya Is, Ala 32.35 38 P **P** **00 42 24.1 -1.2**
SHEM IAmb IAmb 00 42 31.3
comp=Z,385nm,1.4s
SMY Shemya 32.35 38 P **P** **00 42 29.3 +4.0**
comp=Z,256nm,1.4s
SMY Shemya 32.35 38 P **P** **00 42 23.4 -1.9**
SMY pmax pmax
comp=Z,483nm,1.4s
SMY Shemya 32.35 38 P **P** **00 42 23.4 -1.9**
YAK Yakutsk 32.41 349 LR LR 00 55 42.3
comp=Z,5μm,18.6s,baz=158,slow=37
YAK Yakutsk 32.41 349 *ci*P **P** **00 42 24.9 -0.8**
YAK *e**PP **pwP** **00 42 34.4 -1.1**
YAK *e* 00 43 30.5
YAK *e*PPP PPP 00 43 43.2
YAK *e* 00 45 11.8
YAK *e*S **S** **00 47 37.7 -1.4**
YAK *e*SS **SnSn** **00 49 32.4 +0.3**
YAK *e* 00 52 49.7
YAK pmax pmax
comp=Z,273nm,1.4s
YAK pmax pmax
comp=N,144nm,1.3s
YAK pmax pmax
comp=E,28nm,1.3s
YAK pmax pmax
comp=Z,353nm,3.2s
YAK pmax pmax
comp=N,135nm,2.0s
YAK pmax pmax
comp=E,149nm,2.7s
YAK smax smax
comp=E,717nm,5.0s
YAK smax smax
comp=N,370nm,5.4s
YAK MLR MLR
comp=Z,6μm,21.0s
YAK MLR MLR
comp=N,4μm,20.0s
YAK MLR MLR
comp=E,3μm,17.0s
YAK Yakutsk 32.41 349 P **P** **00 42 24.2 -1.5**
YAK IAmb IAmb 00 42 26.4
comp=Z,356nm,1.2s
YAK Yakutsk 32.41 349 P **P** **00 42 25.1 -0.6**
CD2 Chengdu 32.51 280 ⇑P **P** **00 42 24.8 -2.2**
CD2 S **S** **00 47 46.5 +5.1**
CD2 pmax pmax
comp=Z,200nm,0.9s
CD2 pmax pmax
comp=Z,2μm,6.2s
CD2 L L
comp=Z,17μm,15.2s
CD2 L L
comp=Z,23μm,19.0s
CD2 L L
comp=Z,19μm,17.1s
TNTI Ternate 32.63 207 P **P** **00 42 28.2 0.0**
comp=Z,170nm,0.9s
TNTI Ternate 32.63 207 P **P** **00 42 27.2 -0.9**
TNTI IAmb IAmb 00 42 32.3
comp=Z,136nm,0.9s
TNTI Ternate 32.63 207 P **P** **00 42 27.9 -0.2**
comp=Z,3μmcomp=Z,170nm,0.9s
TNTI Ternate 32.63 207 P **P** **00 42 28.1 0.0**
SWI Sorong 32.82 200 P **P** **00 42 29.8 0.0**
comp=Z,2μmcomp=Z,106nm,0.9s
SIJI Sorong 32.83 200 LR LR 00 55 30.9
comp=Z,5μm,18.1s,baz=49,slow=36
SIJI Sorong 32.83 200 P **P** **00 42 29.3 -0.5**
comp=Z,82nm,1.0s
MANU Manus Island 32.90 170 P **P** **00 42 28.9 -1.6**
JAY Jayapura 32.94 182 LR LR 00 54 24.4
comp=Z,7μm,20.5s,slow=34
GENI Genyem 33.03 183 P **P** **00 42 33.0 +1.4**
comp=Z,185nm,1.0s
GENI Genyem 33.03 183 P **P** **00 42 32.4 +0.8**
comp=Z,4μmcomp=Z,182nm,0.9s
GENI Genyem 33.03 183 P **P** **00 42 32.7 +1.1**
SEY Seymchan 33.08 9 LR LR 00 56 40.3
comp=Z,6μm,21.3s,baz=203,slow=38
SEY Seymchan 33.08 9 *ce*P **P** **00 42 31.7 +0.2**

SEY				pmax	pmax			
	comp=Z,41nm,1.1s							
SEY				MLR	MLR			
	comp=Z,6µm,17.0s							
BOD	**Bodaibo**	**33.24**	**333**	*e*P	**P**	**00**	**42**	**32.8 -0.2**
BOD				pmax	pmax			
	comp=Z,449nm,1.2s							
MYLDM	**Lahad Datu**	**33.41**	**225**	P	**P**	**00**	**42**	**36.9 +2.0**
	comp=Z,416nm,1.2s							
MYLDM	**Lahad Datu**	**33.41**	**225**	P	**P**	**00**	**42**	**35.5 +0.6**
MYLDM				IAMs_20	IAMs_20	00	54	40.3
	comp=Z,12µm,19.0s							
MYLDM	**Lahad Datu**	**33.41**	**225**	P	**P**	**00**	**42**	**35.3 +0.4**
	comp=Z,6µmcomp=Z,4µmcomp=Z,416nm,1.2s							
MYLDM	**Lahad Datu**	**33.41**	**225**	P	**P**	**00**	**42**	**37.1 +2.2**
FAKI	**Fak Fak**	**34.52**	**197**	P	**P**	**00**	**42**	**45.8 +1.2**
	comp=Z,97nm,1.2s							
FAKI	**Fak Fak**	**34.52**	**197**	P	**P**	**00**	**42**	**44.1 -0.5**
FAKI				IAmb	IAmb	00	42	48.3
	comp=Z,346nm,1.8s							
FAKI				IAMs_20	IAMs_20	00	55	02.7
	comp=Z,8µm,19.0s							
KMI2	**Kunming**	**34.74**	**271**	⇑P	**P**	**00**	**42**	**45.5 -1.2**
KMI2				S	**S**	**00**	**48**	**10.0 -6.4**
KMI2				pmax	pmax			
	comp=Z,35nm,1.0s							
KMI2				pmax	pmax			
	comp=Z,1µm,9.1s							
KMI2				L	L			
	comp=Z,6µm,16.1s							
KMI2				L	L			
	comp=Z,5µm,15.1s							
KMI2				L	L			
	comp=Z,6µm,14.6s							
IRK	**Irkutsk**	**34.87**	**319**	*e*P	**P**	**00**	**42**	**47.4 +0.1**
IRK				*e*S	**S**	**00**	**48**	**20.8 +3.2**
IRK				pmax	pmax			
	comp=Z,702nm,2.4s							
TLY	**Talaya**	**35.01**	**318**	P	**P**	**00**	**42**	**49.8 +1.3**
	comp=Z,222nm,1.1s,baz=126,slow=9.9,SNR=78							
TLY				LR	LR	00	57	43.0
	comp=Z,15µm,18.5s,baz=114,slow=37							
	comp=Z,222nm,1.1s							
TLY	**Talaya**	**35.01**	**318**	*ce*P	**P**	**00**	**42**	**49.6 +1.1**
TLY				pmax	pmax			
	comp=Z,604nm,1.7s							
TLY				MLR	MLR			
	comp=Z,19µm,17.0s							
TLY	**Talaya**	**35.01**	**318**	P	**P**	**00**	**42**	**50.1 +1.6**
TLY				P	**P**	**00**	**42**	**50.1 +1.6**
TLY				P	**P**	**00**	**42**	**50.1 +1.6**
TLY				S	**S**	**00**	**48**	**22.5 +2.7**
TLY				S	**S**	**00**	**48**	**22.5 +2.7**
TLY				S	**S**	**00**	**48**	**22.5 +2.7**
TLY	**Talaya**	**35.01**	**318**	P	**P**	**00**	**42**	**49.3 +0.8**
TLY				IAmb	IAmb	00	42	51.2
	comp=Z,372nm,1.2s							
TLY	**Talaya**	**35.01**	**318**	P	**P**	**00**	**42**	**49.9 +1.3**
SLVN	**Son La**	**35.07**	**264**	P	**P**	**00**	**42**	**49.3 -0.1**
	comp=Z,59nm,1.2s							
SLVN	**Son La**	**35.07**	**264**	P	**P**	**00**	**42**	**48.6 -0.8**
GTA2	**Gaotai**	**35.20**	**296**	P	**P**	**00**	**42**	**48.8 -1.7**
GTA2				PP	**PnPn**	**00**	**44**	**08.5 +0.2**
GTA2				S	**S**	**00**	**48**	**15.5 -7.7**
GTA2				ScP	**ScP**	**00**	**49**	**06.3 +0.1**
GTA2				ScS	**ScS**	**00**	**53**	**06.8 -3.6**
GTA2				pmax	pmax			
	comp=Z,210nm,1.0s							
GTA2				pmax	pmax			
	comp=Z,1µm,8.9s							
GTA2				L	L			
	comp=Z,11µm,16.5s							
GTA2				L	L			
	comp=Z,24µm,18.4s							
GTA2				L	L			
	comp=Z,29µm,19.0s							
PZH	**PanZhiHua**	**35.21**	**273**	P	**P**	**00**	**42**	**49.0 -1.6**
PZH				S	**S**	**00**	**48**	**24.3 +0.8**
PZH				pmax	pmax			
	comp=Z,70nm,1.0s							
PZH				pmax	pmax			
	comp=Z,990nm,9.0s							
PZH				L	L			
	comp=Z,5µm,17.5s							
PZH				L	L			
	comp=Z,5µm,17.6s							
PZH				L	L			
	comp=Z,7µm,19.2s							
TOLI2	**Tolitoli**	**35.41**	**218**	P	**P**	**00**	**42**	**52.2 0.0**
	comp=Z,113nm,1.4s							
TOLI2	**Tolitoli**	**35.41**	**218**	P	**P**	**00**	**42**	**51.2 -1.0**
TOLI2				IAmb	IAmb	00	43	03.2
	comp=Z,146nm,1.2s							
TOLI2	**Tolitoli**	**35.41**	**218**	P	**P**	**00**	**42**	**52.0 -0.3**
SANI	**Sanana**	**35.75**	**208**	P	**P**	**00**	**42**	**54.6 -0.6**
	comp=Z,344nm,0.6s							
SANI	**Sanana**	**35.75**	**208**	P	**P**	**00**	**42**	**53.5 -1.7**
SANI	**Sanana**	**35.75**	**208**	P	**P**	**00**	**42**	**54.0 -1.2**
MSAI	**Masohi**	**35.89**	**202**	P	**P**	**00**	**42**	**57.2 +0.9**
	comp=Z,6µmcomp=Z,346nm,1.4s							
DLV	**Lat**	**35.89**	**246**	P	**P**	**00**	**42**	**57.1 +0.5**
	comp=Z,102nm,1.3s							
DLV	**Lat**	**35.89**	**246**	P	**P**	**00**	**42**	**56.3 -0.3**
DLV	**Lat**	**35.89**	**246**	P	**P**	**00**	**42**	**56.9 +0.3**
RABL	**Rabaul**	**36.01**	**162**	P	**P**	**00**	**42**	**56.2 -1.1**
RABL				IAmb	IAmb	00	43	09.2
	comp=Z,109nm,0.7s							
KRVT	**Keravat (AS076**	**36.08**	**162**	LR	LR	00	57	01.9
	comp=Z,452nm,18.8s,baz=269,slow=35							
LUWI	**Luwuk**	**36.26**	**213**	P	**P**	**00**	**42**	**59.7 +0.2**
	comp=Z,260nm,1.1s							
LUWI	**Luwuk**	**36.26**	**213**	P	**P**	**00**	**42**	**58.1 -1.4**
LUWI				IAmb	IAmb	00	43	43.7
	comp=Z,159nm,0.7s							
LUWI	**Luwuk**	**36.26**	**213**	P	**P**	**00**	**42**	**57.7 -1.8**
	comp=Z,9µmcomp=Z,265nm,1.1s							
LUWI	**Luwuk**	**36.26**	**213**	P	**P**	**00**	**42**	**58.6 -0.9**
NLAI	**Namlea**	**36.42**	**205**	P	**P**	**00**	**43**	**01.3 +0.4**
	comp=Z,4µmcomp=Z,3µmcomp=Z,202nm,1.3s							
MOY	**Mondy**	**36.55**	**317**	*e*P	**P**	**00**	**43**	**02.2 +0.3**
MOY				pmax	pmax			
	comp=Z,312nm,1.5s							
APSI	**Ampana**	**36.69**	**215**	P	**P**	**00**	**43**	**02.4 -0.8**
	comp=Z,3µmcomp=Z,330nm,1.3s							
KIWB	**Kanaga Island**	**36.87**	**43**	P	**P**	**00**	**43**	**02.0 -2.4**
KIWB				IAmb	IAmb	00	43	09.2
	comp=Z,274nm,1.2s							
ADK	**Adak**	**37.16**	**43**	P	**P**	**00**	**43**	**08.1 +1.3**
ADK	**Adak**	**37.16**	**43**	P	**P**	**00**	**43**	**05.2 -1.6**
ADK				pmax	pmax			
	comp=Z,483nm,1.5s							
ADK	**Adak**	**37.16**	**43**	P	**P**	**00**	**43**	**05.2 -1.6**
ADK				IAmb	IAmb	00	43	11.5
	comp=Z,483nm,1.5s							
ADK	**Adak**	**37.16**	**43**	IAMs_20	IAMs_20	00	55	54.3
	comp=Z,6µm,20.0s							
ADK	**Adak**	**37.16**	**43**	P	**P**	**00**	**43**	**06.9 +0.1**
PCI	**Palu**	**37.61**	**218**	P	**P**	**00**	**43**	**10.3 -0.7**
TNCH	**TengChong**	**38.42**	**273**	⇑P	**P**	**00**	**43**	**17.5 -0.6**
TNCH				pP	pP	00	43	21.5 -0.9
TNCH				sP	sP	00	43	23.3 -1.0
TNCH				PP	**PP**	**00**	**44**	**47.0 +1.0**
TNCH				S	**S**	**00**	**49**	**08.0 -4.6**
TNCH				pmax	pmax			
	comp=Z,240nm,1.0s							
TNCH				L	L			
	comp=Z,4µm,16.0s							
TNCH				L	L			
	comp=Z,6µm,17.4s							
TNCH				L	L			
	comp=Z,15µm,18.6s							
ATKA	**Atka Island**	**38.72**	**43**	P	**P**	**00**	**43**	**22.7 +2.7**
	comp=Z,105nm,1.3s							
ATKA	**Atka Island**	**38.72**	**43**	P	**P**	**00**	**43**	**18.0 -2.0**
ATKA				IAMs_20	IAMs_20	00	56	39.6
	comp=Z,5µm,21.0s							
KDI	**Kendari**	**38.90**	**211**	P	**P**	**00**	**43**	**22.1 +0.3**
	comp=Z,3µmcomp=Z,3µmcomp=Z,138nm,1.5s							
GOMU	**GeErMu**	**39.24**	**291**	P	**P**	**00**	**43**	**24.0 -1.1**
GOMU				pP	pP	00	43	27.8 -1.7
GOMU				sP	pwP	00	43	32.8 -1.2
GOMU				PP	**PP**	**00**	**44**	**54.0 -1.1**
GOMU				S	**S**	**00**	**49**	**25.3 +0.1**
GOMU				pmax	pmax			
	comp=Z,560nm,1.1s							
GOMU				L	L			
	comp=Z,5µm,15.4s							
GOMU				L	L			
	comp=Z,9µm,15.5s							
GOMU				L	L			
	comp=Z,14µm,15.0s							
KKSI	**Kolaka, Sulawe**	**39.53**	**212**	P	**P**	**00**	**43**	**27.8 +0.7**
	comp=Z,3µmcomp=Z,132nm,0.6s							
PMG	**Port Moresby**	**40.11**	**172**	P	**P**	**00**	**43**	**34.8 +2.8**
	comp=Z,85nm,1.3s							
PMG	**Port Moresby**	**40.11**	**172**	LR	LR	00	59	52.3
	comp=Z,1µm,19.2s,baz=6.0,slow=36							
PMG	**Port Moresby**	**40.11**	**172**	⇑*e*P	**P**	**00**	**43**	**34.0 +2.0**
PMG				pmax	pmax			
	comp=Z,73nm,1.2s							
PMG				MLR	MLR			
	comp=Z,2µm,16.0s							
PMG	**Port Moresby**	**40.11**	**172**	P	**P**	**00**	**43**	**31.1 -0.9**
PMG	**Port Moresby**	**40.11**	**172**	P	**P**	**00**	**43**	**33.3 +1.3**
PMG	**Port Moresby**	**40.11**	**172**	P	**P**	**00**	**43**	**35.6 +3.7**
BILL	**Bilibino**	**40.16**	**14**	*c* iP	**P**	**00**	**43**	**31.3 -0.6**
BILL				pmax	pmax			
	comp=Z,49nm,1.3s							
BILL				MLR	MLR			
	comp=Z,4µm,16.0s							
BILL	**Bilibino**	**40.16**	**14**	P	**P**	**00**	**43**	**31.2 -0.7**
SPSI	**Sidrap Palu**	**40.25**	**215**	P	**P**	**00**	**43**	**32.4 -0.7**
	comp=Z,3µmcomp=Z,155nm,0.6s							
BBSI	**Bau Bau**	**40.28**	**210**	P	**P**	**00**	**43**	**34.3 +0.9**
	comp=Z,3µmcomp=Z,3µmcomp=Z,220nm,1.0s							
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**32.8 -1.3**
	comp=Z,51nm,1.0s							
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**33.1 -1.0**
CHTO				pmax	pmax			
	comp=Z,48nm,0.7s							
CHTO				MLR	MLR			
	comp=Z,10µm,20.0s							
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**33.4 -0.7**
CHTO				P	**P**	**00**	**43**	**33.4 -0.7**
CHTO				S	**S**	**00**	**49**	**40.0 -1.4**
CHTO				S	**S**	**00**	**49**	**40.0 -1.4**
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**33.1 -1.0**
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**32.4 -1.7**
	comp=Z,3µmcomp=Z,85nm,1.0s							
CHTO	**Chiang Mai**	**40.35**	**263**	P	**P**	**00**	**43**	**33.3 -0.7**
CM31	**Chiang Mai Arr**	**40.51**	**263**	P	**P**	**00**	**43**	**35.0 -0.3**
	SNR=17							
CM31				P	**P**	**00**	**43**	**35.0 -0.3**
	SNR=17							
CM31	**Chiang Mai Arr**	**40.51**	**263**	P	**P**	**00**	**43**	**34.0 -1.3**
CMAR	**Chiang Mai Arr**	**40.51**	**263**	P	**P**	**00**	**43**	**34.6 -0.8**
	comp=Z,22nm,0.8s,baz=55,slow=6.9,SNR=87							
CMAR				PcP	**PcP**	**00**	**45**	**39.4 +1.6**
	comp=Z,20nm,0.9s,baz=45,slow=0.4,SNR=13							
CMAR				ScP	**ScP**	**00**	**49**	**28.8 +2.4**
	comp=Z,1.8nm,0.4s,baz=29,slow=3.3,SNR=4.4							
CMAR				LR	LR	01	00	55.0
	comp=Z,11µm,20.1s,baz=65,slow=37							
	comp=Z,22nm,0.8s							
CMAR	**Chiang Mai Arr**	**40.51**	**263**	*ce*P	**P**	**00**	**43**	**34.5 -0.8**
CMAR				pmax	pmax			
	comp=Z,24nm,0.8s							
KAPI	**Kappang**	**41.17**	**214**	P	**P**	**00**	**43**	**40.9 +0.2**
	comp=Z,80nm,0.8s							
KAPI	**Kappang**	**41.17**	**214**	LR	LR	01	00	52.8
	comp=Z,3µm,20.3s,baz=24,slow=36							
KAPI	**Kappang**	**41.17**	**214**	*c* iP	**P**	**00**	**43**	**40.9 +0.2**
KAPI				pmax	pmax			
	comp=Z,113nm,1.1s							
KAPI				MLR	MLR			
	comp=Z,3µm,19.0s							
KAPI	**Kappang**	**41.17**	**214**	P	**P**	**00**	**43**	**41.3 +0.6**
KAPI				P	**P**	**00**	**43**	**41.3 +0.6**
KAPI				S	**S**	**00**	**49**	**53.1 -0.3**
KAPI				S	**S**	**00**	**49**	**53.1 -0.3**
KAPI	**Kappang**	**41.17**	**214**	P	**P**	**00**	**43**	**40.4 -0.4**
KAPI	**Kappang**	**41.17**	**214**	P	**P**	**00**	**43**	**40.3 -0.4**
	comp=Z,80nm,0.8s							
KAPI	**Kappang**	**41.17**	**214**	P	**P**	**00**	**43**	**41.0 +0.3**
MKS	**Makassar**	**41.48**	**215**	P	**P**	**00**	**43**	**43.3 0.0**
	comp=Z,4µmcomp=Z,4µmcomp=Z,288nm,1.2s							
TIXI	**Tiksi**	**41.70**	**354**	*ce*P	**P**	**00**	**43**	**43.7 -0.7**
TIXI				pmax	pmax			
	comp=Z,78nm,2.5s							
TIXI				MLR	MLR			
	comp=Z,3µm,16.0s							
TIXI	**Tiksi**	**41.70**	**354**	P	**P**	**00**	**43**	**43.4 -1.0**
BSSI	**Bau Bau, Buton**	**41.80**	**213**	P	**P**	**00**	**43**	**45.5 -0.4**
	comp=Z,3µmcomp=Z,200nm,1.4s							
MORE	**Moreh**	**42.31**	**273**	P	**P**	**00**	**43**	**47.5 -2.6**
MORE				IAMs_20	IAMs_20	01	01	30.3
	comp=Z,8µm,22.0s							
NPW	**Naypyitaw**	**42.36**	**266**	P	**P**	**00**	**43**	**50.3 -0.2**
SPIA	**Saint Paul Isl**	**42.38**	**37**	P	**P**	**00**	**43**	**53.4 +3.2**
	comp=Z,226nm,1.3s							
SPIA	**Saint Paul Isl**	**42.38**	**37**	P	**P**	**00**	**43**	**50.2 0.0**
	baz=252							
SPIA				S	**S**	**00**	**50**	**09.7 -0.9**
	baz=252							
TATA	**Tatamba Isabel**	**42.48**	**153**	P	**P**	**00**	**43**	**53.4 +2.0**
	comp=Z,134nm,1.0s							
MMRI	**Maumere**	**43.25**	**209**	P	**P**	**00**	**43**	**57.4 -0.3**
	comp=Z,215nm,0.9s							
MMRI	**Maumere**	**43.25**	**209**	P	**P**	**00**	**43**	**56.9 -0.8**
MMRI				IAmb	IAmb	00	43	58.8
	comp=Z,410nm,1.3s							
MMRI	**Maumere**	**43.25**	**209**	P	**P**	**00**	**43**	**57.3 -0.4**
	comp=Z,5µmcomp=Z,211nm,0.9s							
MMRI	**Maumere**	**43.25**	**209**	P	**P**	**00**	**43**	**57.7 0.0**
LSA	**Lhasa**	**43.42**	**282**	P	**P**	**00**	**43**	**59.2 -0.3**
LSA	**Lhasa**	**43.42**	**282**	P	**P**	**00**	**43**	**58.8 -0.8**
LSA				pmax	pmax			
	comp=Z,64nm,1.2s							
LSA				MLR	MLR			
	comp=Z,12µm,20.0s							
LSA	**Lhasa**	**43.42**	**282**	P	**P**	**00**	**43**	**59.1 -0.4**
LSA				P	**P**	**00**	**43**	**59.1 -0.4**
LSA	**Lhasa**	**43.42**	**282**		**P**	**00**	**43**	**58.8 -0.8**
LSA	**Lhasa**	**43.42**	**282**	⇓ *i*P	**P**	**00**	**43**	**56.8 -2.8**
LSA				pmax	pmax			
	comp=Z,47nm,1.3s							
LSA				L	L			
	comp=Z,3µm,16.9s							
LSA				L	L			
	comp=Z,8µm,19.4s							
LSA				L	L			
	comp=Z,12µm,18.7s							
SOEI	**Soe**	**43.47**	**205**	P	**P**	**00**	**43**	**59.2 -0.4**
	comp=Z,446nm,1.1s							
SOEI	**Soe**	**43.47**	**205**	P	**P**	**00**	**43**	**58.1 -1.5**
SOEI	**Soe**	**43.47**	**205**	P	**P**	**00**	**43**	**58.4 -1.2**
	comp=Z,4µmcomp=Z,377nm,1.2s							
SOEI	**Soe**	**43.47**	**205**	P	**P**	**00**	**43**	**59.6 -0.1**
HNR	**Honiara**	**43.48**	**153**	P	**P**	**00**	**44**	**03.2 +3.6**
	comp=Z,172nm,1.0s							
HNR	**Honiara**	**43.48**	**153**	LR	LR	01	01	41.4
	comp=Z,224nm,20.7s,baz=47,slow=36							
HNR	**Honiara**	**43.48**	**153**	P	**P**	**00**	**43**	**58.5 -1.0**
HNR				pmax	pmax			
	comp=Z,234nm,1.0s							
HNR	**Honiara**	**43.48**	**153**	P	**P**	**00**	**43**	**58.5 -1.0**
HNR				IAmb	IAmb	00	44	30.4
	comp=Z,234nm,1.0s							
HNR	**Honiara**	**43.48**	**153**	IAMs_20	IAMs_20	00	59	47.6
	comp=Z,8µm,22.0s							
UNV	**Unalaska Valle**	**43.62**	**42**	P	**P**	**00**	**44**	**03.4 +3.1**
	comp=Z,56nm,1.5s							
UNV	**Unalaska Valle**	**43.62**	**42**	P	**P**	**00**	**43**	**58.5 -1.8**
UNV				IAMs_20	IAMs_20	00	59	40.8
	comp=Z,5µm,21.0s							
UNV	**Unalaska Valle**	**43.62**	**42**	P	**P**	**00**	**43**	**60.0 -0.3**
	baz=259							
UNV				S	**S**	**00**	**50**	**26.2 -2.7**
	baz=259							
KDU	**Kakadu**	**43.94**	**193**	P	**P**	**00**	**44**	**03.2 0.0**
	comp=Z,50nm,1.1s							
LVA	**Lava Point**	**43.95**	**42**	P	**P**	**00**	**44**	**02.2 -0.8**
LVA				IAmb	IAmb	00	44	07.5
	comp=Z,454nm,2.0s							
SHL	**Shillong**	**43.95**	**276**	P	**P**	**00**	**44**	**01.8 -1.8**
SHL				pmax	pmax			
	comp=Z,57nm,1.0s							
SHL	**Shillong**	**43.95**	**276**	P	**P**	**00**	**44**	**03.3 -0.3**
	SNR=6.7							
SHL	**Shillong**	**43.95**	**276**	P	**P**	**00**	**44**	**01.8 -1.8**
SHL	**Shillong**	**43.95**	**276**	*e*P	**P**	**00**	**44**	**01.2 -2.4**
SHL				*i* Rg	Rg	01	02	03.1
DRS	**Darwin Rock St**	**44.02**	**195**	P	**P**	**00**	**44**	**05.3 +1.5**
	comp=Z,48nm,0.8s							
BATI	**Baumata**	**44.11**	**206**	LR	LR	01	01	00.7
	comp=Z,4µm,21.1s,baz=12,slow=34							
BATI	**Baumata**	**44.11**	**206**	P	P	00	43	59.5 -5.2
	comp=Z,4µmcomp=Z,190nm,1.0s							
GAMB	**Gambeli**	**44.20**	**28**	P	**P**	**00**	**44**	**05.3 +0.6**
	baz=244							
GAMB				S	**S**	**00**	**50**	**37.7 +0.7**
	baz=244							
WMQ	**Urumqi**	**44.26**	**303**	⇑P	**P**	**00**	**44**	**05.5 -0.1**
WMQ				PcP	**PcP**	**00**	**45**	**51.8 +1.8**
WMQ				S	**S**	**00**	**50**	**41.8 +3.2**
WMQ				ScS	**ScS**	**00**	**54**	**01.3 -2.1**
WMQ				pmax	pmax			
	comp=Z,94nm,1.7s							
WMQ				pmax	pmax			
	comp=Z,2µm,6.9s							
WMQ				L	L			
	comp=Z,8µm,22.1s							
WMQ				L	L			
	comp=Z,3µm,22.1s							
WMQ				L	L			
	comp=Z,4µm,24.3s							
COEN	**Coen**	**44.32**	**178**	P	**P**	**00**	**44**	**07.7 +1.5**
	comp=Z,171nm,1.1s							
COEN	**Coen**	**44.32**	**178**	P	**P**	**00**	**44**	**08.1 +1.9**
	comp=Z,171nm,1.1s							
COEN	**Coen**	**44.32**	**178**	P	**P**	**00**	**44**	**06.2 0.0**
COEN				IAmb	IAmb	00	44	19.5
	comp=Z,207nm,1.1s							
MTN	**Manton Dam**	**44.37**	**195**	P	**P**	**00**	**44**	**07.0 +0.3**
	comp=Z,64nm,1.4s							
MTN	**Manton Dam**	**44.37**	**195**	P	**P**	**00**	**44**	**05.8 -0.8**
DGZ	**Jazzator, Alta**	**44.59**	**311**	*c* iP	**P**	**00**	**44**	**08.6 +0.2**
DGZ				pmax	pmax			
	comp=Z,327nm,1.1s							
DGZ				MLR	MLR			
	comp=Z,7µm,15.0s							
DBNI	**Kabupaten Domp**	**44.89**	**214**	P	**P**	**00**	**44**	**10.0 -0.8**
	comp=Z,3µmcomp=Z,237nm,1.2s							
BRDH	**Bariadhala**	**45.13**	**272**	P	**P**	**00**	**44**	**11.7 -1.1**
	comp=Z,86nm,0.3s,baz=76,slow=7.9,SNR=5.7							
BRDH				LR	LR	01	05	46.0
	comp=Z,6µm,18.5s,baz=42,slow=40							
	comp=Z,86nm,0.3s							
M11K	**Mekoryuk**	**45.36**	**33**	P	**P**	**00**	**44**	**14.5 +0.4**
	baz=253							
M11K				S	**S**	**00**	**50**	**55.3 +1.4**
	baz=253							
PLAI	**Plampang**	**45.43**	**214**	P	**P**	**00**	**44**	**14.0 -1.1**
	comp=Z,312nm,1.0s							
PLAI	**Plampang**	**45.43**	**214**	P	**P**	**00**	**44**	**13.4 -1.7**
	comp=Z,3µmcomp=Z,311nm,0.9s							
NGOA	**Tingoa Renbel**	**45.48**	**154**	P	**P**	**00**	**44**	**18.7 +3.3**
	comp=Z,306nm,1.3s							
TWSI	**Taliwang, Sumb**	**45.79**	**215**	P	**P**	**00**	**44**	**16.4 -1.6**
	comp=Z,3µmcomp=Z,3µmcomp=Z,258nm,1.1s							
MYKOM	**Kota Tinggi**	**45.87**	**239**	P	**P**	**00**	**44**	**19.3 +0.6**
	comp=Z,60nm,2.5s							
MYKOM	**Kota Tinggi**	**45.87**	**239**	P	**P**	**00**	**44**	**18.8 +0.1**
MYKOM				IAmb	IAmb	00	44	21.0
	comp=Z,261nm,1.8s							
MYKOM	**Kota Tinggi**	**45.87**	**239**	P	**P**	**00**	**44**	**18.5 -0.2**
KULM	**Kulim**	**46.06**	**245**	P	**P**	**00**	**44**	**21.0 +0.8**
	comp=Z,118nm,1.5s							
KULM	**Kulim**	**46.06**	**245**	P	**P**	**00**	**44**	**19.9 -0.3**
KULM				IAmb	IAmb	00	44	22.8
	comp=Z,97nm,0.9s							
KULM				IAMs_20	IAMs_20	01	05	27.2
	comp=Z,4µm,18.0s							
KULM	**Kulim**	**46.06**	**245**	P	**P**	**00**	**44**	**19.9 -0.3**
	comp=Z,118nm,1.5s							
SRBI	**Singaraja**	**46.10**	**218**	P	**P**	**00**	**44**	**20.2 -0.2**
	comp=Z,5µmcomp=Z,5µmcomp=Z,240nm,1.0s							
KHKI	**Kahang-Kahang**	**46.12**	**217**	P	**P**	**00**	**44**	**21.1 +0.5**
ZSN	**Zaisan**	**46.20**	**308**	*c* iP	**P**	**00**	**44**	**20.9 -0.1**
ZSN				*e*S	**S**	**00**	**51**	**08.4 +1.8**
ZSN				pmax	pmax			
	comp=Z,141nm,1.5s							
ZSN	**Zaisan**	**46.20**	**308**	⇑ *i*P	**P**	**00**	**44**	**21.0 -0.1**
	comp=Z,141nm,1.5s							
ZSN				*e*S	**S**	**00**	**51**	**08.4 +1.8**
BTDF	**Bukit Timah Da**	**46.22**	**238**	P	**P**	**00**	**44**	**22.7 +1.3**
	comp=Z,19nm,1.5s							
BTDF	**Bukit Timah Da**	**46.22**	**238**	P	**P**	**00**	**44**	**21.5 +0.1**
ABJI	**Asem Bagus**	**46.38**	**219**	P	**P**	**00**	**44**	**22.7 +0.1**
	comp=Z,5µmcomp=Z,303nm,1.4s							
TPI	**Tanjungpandan**	**46.41**	**231**	P	**P**	**00**	**44**	**22.8 -0.1**
TNA	**Tin City**	**46.43**	**26**	P	**P**	**00**	**44**	**22.9 +0.5**
	baz=246							
TNA				S	**S**	**00**	**51**	**10.1 +1.0**
	baz=246							
K13K	**Kusilvak Mount**	**46.53**	**32**	P	**P**	**00**	**44**	**22.9 -0.4**
K13K				IAmb	IAmb	00	44	29.6
	comp=Z,236nm,1.5s							
K13K	**Kusilvak Mount**	**46.53**	**32**	P	**P**	**00**	**44**	**23.9 +0.6**
	baz=253,SNR=22							
K13K				S	**S**	**00**	**51**	**10.9 +0.1**
	baz=253							
RTBI	**Rangdo, Negare**	**46.55**	**218**	P	**P**	**00**	**44**	**23.0 -1.0**
DNP	**Denpasar**	**46.60**	**217**	P	**P**	**00**	**44**	**24.9 +0.6**
ZAA0	**Zalesovo Array**	**46.61**	**317**	P	**P**	**00**	**44**	**23.0 -1.0**
ZAA0				IAmb	IAmb	00	44	25.4
	comp=Z,153nm,1.4s							
ZALV	**Zalesovo Beam**	**46.61**	**317**	P	**P**	**00**	**44**	**23.6 -0.5**
	comp=Z,16nm,0.5s,baz=98,slow=6.1,SNR=101							
ZALV				PcP	**PcP**	**00**	**45**	**57.7 -0.1**
	comp=Z,34nm,

baz=259
EVN Everest 47.55 281 P **P** **00 44 31.4 -1.1**
KNRA Kununurra 47.66 197 P **P** **00 44 33.1 +0.5**
comp=Z,46nm,1.1s
KNRA Kununurra 47.66 197 P **P** **00 44 32.0 -0.5**
SJI Sawahan 47.71 222 P **P** **00 44 31.7 -1.5**
comp=Z,6μmcomp=Z,382nm,1.4s
F15K North Star Dit 47.74 27 P **P** **00 44 33.3 +0.6**
baz=250,SNR=12
F15K S **S** **00 51 29.2 +1.2**
baz=250
G15K Niukluk 47.74 28 P **P** **00 44 33.1 +0.3**
baz=251
G15K S **S** **00 51 28.9 +0.9**
baz=251
SNJI Sawahan-Nganju 47.75 222 P **P** **00 44 33.1 -0.5**
comp=Z,3μmcomp=Z,192nm,1.3s
CHNA Chernabura Isl 47.77 42 P **P** **00 44 35.8 +2.8**
comp=Z,123nm,1.3s
CHNA Chernabura Isl 47.77 42 P **P** **00 44 33.1 +0.1**
baz=264
CHNA S **S** **00 51 25.0 -3.6**
baz=264
CNBA Chernabura Isl 47.77 42 P **P** **00 44 31.5 -1.5**
CNBA IAmb IAmb 00 44 56.1
comp=Z,106nm,1.0s
L15K Ungalak Mounta 47.92 33 P **P** **00 44 34.8 +0.7**
baz=256,SNR=9.7
L15K S **S** **00 51 29.6 -0.9**
baz=256
SMRI Semarang 47.94 224 P **P** **00 44 35.4 +0.5**
comp=Z,238nm,0.4s
SMRI Semarang 47.94 224 P **P** **00 44 34.4 -0.5**
SMRI Semarang 47.94 224 P **P** **00 44 34.8 -0.1**
comp=Z,237nm,1.6s
VNFG Fog Glacier, M 47.95 40 IAMs_20 IAMs_20 01 02 50.1
comp=Z,4μm,19.0s
MK31 Makanchi Array 47.97 307*c i* P **P** **00 44 34.4 -0.5**
MK31 pmax pmax
comp=Z,95nm,0.8s
MKAR Makanchi Array 47.97 307 P **P** **00 44 35.1 +0.3**
comp=Z,108nm,0.9s,baz=91,slow=8.9,SNR=340
MKAR ScP **ScP** **00 49 58.3 +1.8**
comp=Z,2.6nm,0.8s,baz=81,slow=3.2,SNR=4.7
MKAR LR LR 01 05 44.7
comp=Z,8μm,18.9s,baz=86,slow=37
comp=Z,108nm,0.9s
MKAR Makanchi Array 47.97 307*ce* P **P** **00 44 34.5 -0.4**
MKAR pmax pmax
comp=Z,108nm,0.9s
MKAR Makanchi Array 47.97 307 P **P** **00 44 34.2 -0.6**
K15K Wolf Creek Mou 48.04 32 P **P** **00 44 35.5 +0.4**
baz=256,SNR=14
K15K S **S** **00 51 32.8 +0.4**
baz=256
M15K Kasigluk River 48.08 34 P **P** **00 44 35.8 +0.4**
baz=258,SNR=15
M15K S **S** **00 51 31.6 -1.2**
baz=258
MAKZ Makanchi 48.19 307 P **P** **00 44 35.8 -0.7**
MAKZ pmax pmax
comp=Z,395nm,1.5s
MAKZ MLR MLR
comp=Z,8μm,20.0s
MAKZ Makanchi 48.19 307 P **P** **00 44 35.8 -0.7**
O15K Ungalikthiuk R 48.22 36 P **P** **00 44 37.2 +0.7**
baz=260,SNR=19
O15K S **S** **00 51 33.2 -1.7**
baz=260
N15K Kwethluk River 48.26 35 P **P** **00 44 37.3 +0.5**
baz=259,SNR=20
N15K S **S** **00 51 35.0 -0.6**
baz=259
WOJI Wonogiri, Jawa 48.28 223 P **P** **00 44 35.2 -2.3**
comp=Z,107nm,1.6s
H16K Eliim 48.37 29 P **P** **00 44 38.9 +1.3**
baz=253,SNR=11
H16K S **S** **00 51 37.8 +1.0**
baz=253
PCJI Pacitan 48.42 222 P **P** **00 44 38.2 -0.4**
comp=Z,244nm,1.0s
C16K Lisburne Hills 48.44 23 P **P** **00 44 38.9 +0.8**
baz=247
C16K S **S** **00 51 38.4 +0.7**
baz=247
PMBI Palembang 48.49 233 P **P** **00 44 39.3 +0.2**
PMBI IAMs_20 IAMs_20 01 03 05.6
comp=Z,4μm,20.0s
MTSU Mount Surprise 48.51 177 P **P** **00 44 40.7 +1.5**
comp=Z,80nm,1.0s
MTSU Mount Surprise 48.51 177 P **P** **00 44 40.9 +1.7**
comp=Z,80nm,1.0s
G16K Koyuk River 48.54 28 P **P** **00 44 39.7 +0.8**
baz=252
G16K S **S** **00 51 40.0 +0.7**
baz=252
UGM Wanagama 48.58 223 P **P** **00 44 39.1 -0.7**
comp=Z,316nm,1.5s
UGM Wanagama 48.58 223 P **P** **00 44 38.9 -0.9**
UGM IAMs_20 IAMs_20 01 07 19.8
comp=Z,3μm,20.0s
UGM Wanagama 48.58 223 P **P** **00 44 39.3 -0.5**
comp=Z,342nm,1.4s
YOGI Yogyakarta 48.64 223 P **P** **00 44 38.7 -1.5**
J16K Anvik River 48.70 31 P **P** **00 44 41.1 +0.9**
baz=256,SNR=12
J16K S **S** **00 51 42.8 +1.2**
baz=256
I17K Unalakleet 48.81 30 P **P** **00 44 41.5 +0.5**
baz=255,SNR=11
I17K S **S** **00 51 43.4 +0.3**
baz=255
L16K Owhat River 48.86 33 P **P** **00 44 42.8 +1.5**
baz=258,SNR=24
L16K S **S** **00 51 43.4 -0.4**
baz=258
BKNI Bangkinang 48.93 240 P **P** **00 44 43.4 +0.9**
comp=Z,134nm,1.6s
BKNI Bangkinang 48.93 240 P **P** **00 44 42.4 -0.1**
BKNI IAMs_20 IAMs_20 01 01 44.3
comp=Z,6μm,22.0s
PSI Prapat 48.95 244 P **P** **00 44 42.5 -0.3**
comp=Z,82nm,1.3s
PSI Prapat 48.95 244 P **P** **00 44 42.5 -0.3**
PSI pmax pmax
comp=Z,200nm,1.0s
N16K Nishlik Lake 48.97 34 P **P** **00 44 43.0 +0.8**
baz=260,SNR=40
N16K S **S** **00 51 44.8 -0.7**
baz=260
M16K Timber Creek 48.97 34 P **P** **00 44 43.1 +0.8**
baz=259,SNR=21
M16K S **S** **00 51 45.4 -0.1**
baz=259
PBA Port Blair 48.98 258 P **P** **00 44 43.0 +0.1**
RPSI Rantau Prapat 49.01 244 P **P** **00 44 42.5 -0.7**
RPSI PcP **PcP** **00 46 07.4 +0.4**
RPSI IAmb IAmb 00 46 09.7
comp=Z,199nm,1.0s
D17K Noatak River 49.02 25 P **P** **00 44 43.5 +1.0**
baz=250,SNR=21
D17K S **S** **00 51 46.7 +0.8**
baz=250
LHMI Lhok Sumawe 49.03 248 P **P** **00 44 44.3 +1.0**
comp=Z,158nm,0.8s
LHMI Lhok Sumawe 49.03 248 P **P** **00 44 43.0 -0.2**
LHMI IAmb IAmb 00 44 49.3
comp=Z,144nm,0.9s
LHMI Lhok Sumawe 49.03 248 P **P** **00 44 43.1 -0.2**
comp=Z,155nm,0.8s
KPJI Karang Pucung 49.08 225 P **P** **00 44 43.0 -0.6**
comp=Z,3μmcomp=Z,272nm,1.4s
P16K Nushagak River 49.13 36 IAMs_20 IAMs_20 01 05 23.5
comp=Z,3μm,20.0s
P16K Nushagak River 49.13 36 P **P** **00 44 44.0 +0.5**
baz=262,SNR=27
P16K S **S** **00 51 47.9 +0.2**
baz=262
O16K Kokwok River B 49.16 36 P **P** **00 44 44.3 +0.6**
baz=261,SNR=22
O16K S **S** **00 51 47.9 -0.2**
baz=261
RDOG Red Dog Mine 49.20 24 P **P** **00 44 43.8 -0.2**
RDOG IAmb IAmb 00 44 50.3
comp=Z,255nm,1.7s
RDOG Red Dog Mine 49.20 24 P **P** **00 44 44.5 +0.5**
baz=250,SNR=7.6
RDOG S **S** **00 51 49.2 +0.7**
baz=250
NRIK Noril'sk 49.25 338 P **P** **00 44 44.3 0.0**
comp=Z,146nm,1.0s,baz=116,slow=7.8,SNR=185
NRIK LR LR 01 06 52.4
comp=Z,4μm,18.1s,baz=116,slow=38
comp=Z,146nm,1.0s
NRIK Noril'sk 49.25 338*c i* P **P** **00 44 44.4 +0.1**
NRIK Noril'sk 49.25 338 P **P** **00 44 44.1 -0.2**
G17K Kiwalik Mounta 49.26 28 P **P** **00 44 45.0 +0.7**
baz=254,SNR=25
G17K S **S** **00 51 49.8 +0.5**
baz=254
C17K DeLong Mountai 49.26 24 P **P** **00 44 44.6 +0.2**
baz=249
C17K S **S** **00 51 49.7 +0.3**
baz=249
E17K Hotham Inlet 49.27 26 P **P** **00 44 45.0 +0.5**
baz=251,SNR=8.7
E17K S **S** **00 51 49.2 -0.3**
baz=251
F17K Baldwin Pennin 49.29 26 P **P** **00 44 45.3 +0.7**
baz=252
F17K S **S** **00 51 51.0 +1.2**
baz=252
J17K VABM Dome 49.40 31 P **P** **00 44 45.9 +0.5**
baz=257,SNR=44
J17K S **S** **00 51 51.4 +0.1**
baz=257
KCSI Kotacane, Aceh 49.40 246 P **P** **00 44 44.9 -1.3**
H17K Granite Mounta 49.41 29 P **P** **00 44 46.3 +0.7**
baz=255,SNR=16
H17K S **S** **00 51 51.8 +0.3**
baz=255
SDSI Sungai Dareh 49.48 238 P **P** **00 44 46.3 -0.5**
L17K Donlin 49.49 32 P **P** **00 44 47.1 +0.9**
baz=259,SNR=29
L17K S **S** **00 51 53.2 +0.5**
baz=259
LEM Lembang 49.51 227 LR LR 01 08 23.9
comp=Z,3μm,18.1s,baz=22,slow=39
K17K Iditarod 49.60 32 IAMs_20 IAMs_20 01 07 27.1
comp=Z,3μm,18.0s
K17K Iditarod 49.60 32 P **P** **00 44 47.9 +0.9**
baz=259,SNR=51
K17K S **S** **00 51 54.6 +0.4**
baz=259
BOK Bokaro 49.69 276*eP* **P** **00 44 47.8 -0.5**
BOK IAmb IAmb 00 44 50.7
comp=Z,73nm,1.0s
O17K Koliganek Bris 49.69 36 P **P** **00 44 48.6 +0.9**
baz=262
O17K S **S** **00 51 54.4 -1.1**
baz=262
MNSI Mandailing Nat 49.72 242 P **P** **00 44 48.1 -0.5**
comp=Z,125nm,1.4s
N17K Nushagak Hills 49.75 35 IAMs_20 IAMs_20 01 09 11.1
comp=Z,3μm,18.0s
N17K Nushagak Hills 49.75 35 P **P** **00 44 48.9 +0.7**
baz=262,SNR=28
N17K S **S** **00 51 57.3 +1.0**
baz=262
M17K Holitna River 49.76 33 P **P** **00 44 49.1 +0.8**
baz=260,SNR=42
M17K S **S** **00 51 56.1 -0.5**
baz=260
Q16K King Salmon 49.78 37 P **P** **00 44 48.5 +0.1**
baz=264,SNR=7.6
Q16K S **S** **00 51 55.3 -1.4**
baz=264
R17L Mt. Peulik Vol 49.83 38 P **P** **00 44 49.3 +0.5**
baz=265
R17L S **S** **00 51 52.9 -4.7**
baz=265
KLI Kotabumi 49.84 231 P **P** **00 44 48.8 -0.6**
comp=Z,365nm,1.0s
DBJI Dramaga 49.85 228 P **P** **00 44 49.1 -0.4**
comp=Z,10μmcomp=Z,190nm,1.5s
GAYA Gaya 49.90 278⇑*i* P **P** **00 44 48.7 -1.1**
GAYA IAmb IAmb 00 44 52.0
comp=Z,95nm,1.2s
PPI Padang Panjang 49.93 240 P **P** **00 44 49.7 -0.4**
BLSI Bandar Lampung 49.95 231 P **P** **00 44 49.9 -0.4**
P17K Kvichak River 49.95 36 IAMs_20 IAMs_20 01 06 56.0
comp=Z,4μm,18.0s
P17K Kvichak River 49.95 36 P **P** **00 44 50.3 +0.6**
baz=263,SNR=24
P17K S **S** **00 51 58.3 -0.8**
baz=263
F18K Selawik 49.95 26 P **P** **00 44 49.9 +0.3**
baz=254,SNR=34
F18K S **S** **00 51 59.5 +0.6**
baz=254
BBJI Bungbulang 49.97 226 P **P** **00 44 48.9 -1.6**
comp=Z,49nm,0.8s
BBJI Bungbulang 49.97 226 P **P** **00 44 48.1 -2.4**
BBJI Bungbulang 49.97 226 P **P** **00 44 49.3 -1.2**
comp=Z,49nm,0.8s
LHSI Lahat 50.00 234 P **P** **00 44 50.3 -0.4**
comp=Z,5μmcomp=Z,9μmcomp=Z,207nm,1.0s
C18K Utukok River 50.00 24 P **P** **00 44 50.7 +0.6**
baz=251
C18K S **S** **00 51 58.9 -1.0**
baz=251
MDSI Maura Dua 50.02 232 P **P** **00 44 49.9 -0.9**
comp=Z,4μmcomp=Z,288nm,1.4s
MLSI Meulaboh, Aceh 50.03 248 P **P** **00 44 50.5 -0.5**
comp=Z,137nm,0.7s
H18K Honhosa River 50.10 28 P **P** **00 44 50.9 +0.1**
baz=256,SNR=17
H18K S **S** **00 52 00.6 -0.5**
baz=256
CHIR Chirikof Islan 50.10 41 P **P** **00 44 54.5 +3.6**
comp=Z,288nm,1.4s
CHIR Chirikof Islan 50.10 41 P **P** **00 44 50.4 -0.6**
CHIR IAMs_20 IAMs_20 01 04 40.1
comp=Z,4μm,19.0s
CHIR Chirikof Islan 50.10 41 P **P** **00 44 50.6 -0.4**
baz=267
CHIR S **S** **00 51 59.9 -1.5**
baz=267
Q17K Contact Creek 50.14 38 P **P** **00 44 51.0 -0.3**
baz=265
Q17K S **S** **00 51 57.8 -4.3**
baz=265
G18K Tagagawik 50.16 27 P **P** **00 44 51.6 +0.4**
baz=256,SNR=57
G18K S **S** **00 52 01.4 -0.6**
baz=256
PDSI Padang 50.18 239 P **P** **00 44 51.7 -0.4**
AUAYR Ayr State High 50.19 173 P **P** **00 44 53.1 +1.2**
comp=Z,131nm,0.5s
BSI Banda Aceh 50.20 250 P **P** **00 44 51.8 -0.5**
PDGK Podgornoye 50.23 303 P **P** **00 44 51.2 -1.2**
PDGK Podgornoye 50.23 303 P **P** **00 44 51.2 -1.2**
L18K Granite Mounta 50.25 32 P **P** **00 44 51.9 -0.1**
baz=260,SNR=59
L18K S **S** **00 52 03.9 +0.6**
baz=260
KRJI Kerinci 50.25 237 P **P** **00 44 52.2 -0.5**
KURK Kurchatov 50.27 313*c i* P **P** **00 44 51.9 -0.4**
KURK pmax pmax
comp=Z,627nm,1.3s
KURK MLR MLR
comp=Z,15μm,16.0s
KURK Kurchatov 50.27 313 P **P** **00 44 52.3 -0.1**
KURK P **P** **00 44 52.3 -0.1**
KURK S **S** **00 52 05.6 +1.7**
KURK S **S** **00 52 05.6 +1.7**
KURK Kurchatov 50.27 313 P **P** **00 44 51.9 -0.4**
SHLS Shalkode 50.28 303*c i* P **P** **00 44 50.0 -2.6**
SHLS *eS* **S** **00 52 01.9 -2.6**
SHLS pmax pmax
comp=Z,159nm,1.5s
SHLS Shalkode 50.28 303⇑*i* P **P** **00 44 50.1 -2.6**
comp=Z,159nm,1.5s
SHLS *eS* **S** **00 52 01.9 -2.6**
KURBB Kurchatov Arra 50.34 312 P **P** **00 44 52.7 -0.1**
comp=Z,234nm,1.0s,baz=89,slow=7.5,SNR=841
KURBB LR LR 01 07 06.4
comp=Z,13μm,18.1s,baz=84,slow=37
KURBB PKPPKP P'P'df 01 15 30.5 -18
comp=Z,0.9nm,0.9s,baz=229,slow=2.9,SNR=6.6
comp=Z,234nm,1.0s
N18K Kilae Creek 50.40 34 P **P** **00 44 52.9 -0.3**
baz=262,SNR=23
N18K S **S** **00 52 05.6 0.0**
baz=262
MASI Maura Aman, Be 50.42 235 P **P** **00 44 53.3 -0.6**
J18K Innoko River 50.45 31 P **P** **00 44 53.5 0.0**
baz=260,SNR=16
J18K S **S** **00 52 05.2 -0.9**
baz=260
LWLI Liwa 50.49 232 P **P** **00 44 54.0 -0.5**
comp=Z,227nm,1.0s
KSI Kapahiang 50.53 235 P **P** **00 44 54.3 -0.4**
comp=Z,167nm,0.9s
M18K Stony River 50.54 33 P **P** **00 44 54.1 -0.1**
baz=262,SNR=26
M18K S **S** **00 52 08.0 +0.6**
baz=262
WB0 Warramunga Arr 50.56 189 P **P** **00 44 54.1 -0.7**
KASI Kota Agung 50.56 231 P **P** **00 44 53.8 -1.1**
comp=Z,109nm,0.9s
A19K Wainwright 50.57 22 P **P** **00 44 54.5 +0.3**
baz=250
A19K S **S** **00 52 08.1 +0.7**
baz=250
CTA Charters Tower 50.58 174 LR LR 01 07 24.3
comp=Z,2μm,18.6s,baz=352,slow=37
CTAO Charters Tower 50.58 174 P **P** **00 44 56.3 +1.4**
comp=Z,39nm,0.8s
CTAO Charters Tower 50.58 174 P **P** **00 44 55.5 +0.6**
CTAO pmax pmax
comp=Z,285nm,1.5s
CTAO MLR MLR
comp=Z,2μm,21.0s
CTAO Charters Tower 50.58 174 P **P** **00 44 55.5 +0.6**
CTAO IAmb IAmb 00 45 12.9
comp=Z,285nm,1.4s
P18K Big Mountain, 50.59 36 P **P** **00 44 54.8 +0.1**
baz=264,SNR=34
P18K S **S** **00 52 07.2 -0.9**
baz=264
UZB Uzynbulak 50.60 303*c i* P **P** **00 44 54.9 -0.2**
UZB *eS* **S** **00 52 10.6 +1.6**
UZB pmax pmax
comp=Z,116nm,1.5s
UZB Uzynbulak 50.60 303⇑*i* P **P** **00 44 55.0 -0.2**
comp=Z,116nm,1.5s
UZB *eS* **S** **00 52 10.7 +1.6**
GCSA Galena City Sc 50.62 29 P **P** **00 44 55.1 +0.4**
baz=258
GCSA S **S** **00 52 07.1 -1.3**
baz=258
Q18K Katmai Hardscr 50.63 37 P **P** **00 44 54.3 -0.8**
baz=265,SNR=22
Q18K S **S** **00 52 04.5 -4.4**
baz=265
O18K Koktuh Hills 50.64 36 P **P** **00 44 54.9 -0.2**
baz=264,SNR=30
O18K S **S** **00 52 09.3 +0.4**
baz=264
C19K Lookout Ridge 50.70 23 IAMs_20 IAMs_20 01 06 12.9
comp=Z,3μm,19.0s
C19K Lookout Ridge 50.70 23 P **P** **00 44 55.8 +0.5**
baz=252,SNR=15
C19K S **S** **00 52 09.1 -0.4**
baz=252
WRAB Tennant Creek 50.73 189 P **P** **00 44 55.6 -0.4**
comp=Z,144nm,1.0s
WRAB Tennant Creek 50.73 189*c i* P **P** **00 44 55.8 -0.2**
WRAB pmax pmax
comp=Z,228nm,1.0s
WRAB Tennant Creek 50.73 189 P **P** **00 44 56.0 -0.1**
WRAB IAmb IAmb 00 44 57.1
comp=Z,189nm,0.8s
F19K Shaleruckik Mo 50.73 26 P **P** **00 44 55.7 +0.1**
baz=256,SNR=11
F19K S **S** **00 52 09.0 -0.8**
baz=256
WUS Wushi 50.73 300 **P** **00 44 55.6 -0.5**
WRA Warramunga Arr 50.74 189 P **P** **00 44 55.8 -0.4**
comp=Z,178nm,0.8s,baz=8.1,slow=7.9,SNR=295
WRA PcP **PcP** **00 46 14.1 +1.0**
comp=Z,24nm,0.6s,baz=1.9,slow=3.9,SNR=7.0
WRA ScP **ScP** **00 50 10.7 +2.2**
comp=Z,13nm,0.9s,baz=359,slow=4.5,SNR=8.8
WRA P4KPbc 01 22 28.6
comp=Z,1.9nm,0.9s,baz=5.6,slow=4.7,SNR=7.3
comp=Z,178nm,0.8s
WRA Warramunga Arr 50.74 189*i* P **P** **00 44 54.5 -1.6**
WRA pmax pmax
comp=Z,181nm,0.8s
WRA Warramunga Arr 50.74 189 P **P** **00 44 55.6 -0.5**
MNAI Manna 50.77 234 P **P** **00 44 56.5 -0.1**
MNAI IAMs_20 IAMs_20 01 06 50.2
comp=Z,4μm,19.0s
KPKS Kokpek 50.80 303*eP* **P** **00 44 56.6 +0.1**
KPKS *eS* **S** **00 52 13.6 +1.9**
KPKS Kokpek 50.80 303*eP* **P** **00 44 56.7 +0.1**
KPKS *eS* **S** **00 52 13.7 +1.9**
TDK Taldyqorghan 50.81 305*c i* P **P** **00 44 56.6 +0.1**
TDK pmax pmax
comp=Z,173nm,1.8s
TDK MLR MLR
comp=Z,7μm,16.0s
TDK Taldyqorghan 50.81 305⇑*i* P **P** **00 44 56.6 +0.1**
comp=Z,173nm,1.8s
TDK LR LR 01 07 06.6
comp=Z,7μm,16.2s
FITZ Fitzroy Crossi 50.82 200 P **P** **00 44 57.3 +0.6**
comp=Z,305nm,1.6s
FITZ Fitzroy Crossi 50.82 200 LR LR 01 05 50.9
comp=Z,2μm,19.9s,baz=14,slow=35
FITZ Fitzroy Crossi 50.82 200 P **P** **00 44 57.6 +0.9**
comp=Z,31nm,1.6s
FITZ Fitzroy Crossi 50.82 200 P **P** **00 44 56.8 +0.1**
G19K Purcell Mounta 50.84 27 P **P** **00 44 56.7 +0.3**
baz=257,SNR=29
G19K S **S** **00 52 10.1 -1.3**
baz=257
QIS Mount Isa 50.90 183 P **P** **00 44 58.0 +0.7**
comp=Z,211nm,1.4s
QIS Mount Isa 50.90 183 P **P** **00 44 57.8 +0.5**
comp=Z,211nm,1.4s
GSI Gunungsitoli 50.93 244 P **P** **00 44 57.0 -0.8**
comp=Z,550nm,1.5s
GSI Gunungsitoli 50.93 244 P **P** **00 44 57.0 -0.8**
GSI Gunungsitoli 50.93 244 P **P** **00 44 56.9 -0.8**
SII Sitkinak Islan 50.94 40 P **P** **00 45 00.5 +3.2**
comp=Z,161nm,1.3s
SII Sitkinak Islan 50.94 40 P **P** **00 44 56.5 -0.8**
SII IAmb IAmb 00 45 01.5
comp=Z,232nm,1.2s
SII IAMs_20 IAMs_20 01 08 21.3
comp=Z,4μm,20.0s
SII Sitkinak Islan 50.94 40 P **P** **00 44 57.5 +0.2**
baz=267,SNR=9.3
SII S **S** **00 52 11.2 -1.9**
baz=267
H19K Roundabout Mou 50.96 28 P **P** **00 44 58.2 +0.9**
baz=258,SNR=68
H19K S **S** **00 52 12.9 -0.1**
baz=258
J19K Poorman 51.02 30 P **P** **00 44 58.0 +0.2**
baz=260,SNR=54
J19K S **S** **00 52 12.5 -1.5**
baz=260
D19K Kuna River 51.04 24 P **P** **00 44 58.2 +0.3**
baz=254
D19K S **S** **00 52 13.5 -0.6**
baz=254
SATY Saty 51.06 303*c i* P **P** **00 44 58.5 -0.1**
SATY *eS* **S** **00 52 17.0 +1.7**
SATY pmax pmax
comp=Z,224nm,2.2s
SATY Saty 51.06 303⇑*i* P **P** **00 44 58.5 -0.1**
comp=Z,224nm,2.2s
SATY *eS* **S** **00 52 17.0 +1.7**
BWNR Bhubaneshwar 51.07 272⇑*i* P **P** **00 44 57.2 -1.5**
E19K Redstone River 51.09 26 P **P** **00 44 58.8 +0.6**
baz=256,SNR=28
E19K S **S** **00 52 14.2 -0.7**
baz=256
L19K White Mountain 51.09 33 P **P** **00 44 58.5 +0.1**
L19K White Mountain 51.09 33 P **P** **00 44 58.3 -0.1**
baz=262,SNR=35
L19K S **S** **00 52 14.6 -0.4**
baz=262
N19K Bonanza Creek 51.10 34 P **P** **00 44 59.1 +0.6**
baz=264,SNR=22
N19K S **S** **00 52 15.5 +0.1**
baz=264

O19K Port Alsworth 51.12 35 P P 00 44 59.3 +0.7
baz=264
O19K S S 00 52 15.7 +0.3
baz=264
PRZ Przheval'sk 51.14 302 P P 00 44 59.6 +0.3
PRZ Przheval'sk 51.14 302 P P 00 44 59.6 +0.3
SNSI Sinabang, Aceh 51.22 246 P P 00 44 59.5 -0.4
comp=Z,6µmcomp=Z,196nm,0.9s
M19K Big River Lodg 51.27 33 P P 00 44 60.0 +0.2
baz=263
M19K S S 00 52 17.6 +0.1
baz=263
Q19K Cape Douglas, 51.36 37 IAMs_20 IAMs_20 01 04 03.4
comp=Z,4µm,20.0s
Q19K Cape Douglas, 51.36 37 P P 00 45 00.6 +0.1
baz=266
OHAK Old Harbor 51.46 39 P P 00 45 03.3 +2.2
comp=Z,79nm,1.4s
OHAK Old Harbor 51.46 39 P P 00 45 01.3 +0.1
baz=268,SNR=16
OHAK S S 00 52 16.8 -3.4
baz=268
F20K Avaraart Lake 51.57 26 P P 00 45 02.1 +0.3
baz=258,SNR=23
F20K S S 00 52 20.5 -0.9
baz=258
H20K Anotleneega Mo 51.60 28 P P 00 45 02.7 +0.6
baz=260,SNR=46
H20K S S 00 52 21.8 -0.1
baz=260
K20K Telida 51.61 31 P P 00 45 02.6 +0.4
baz=262,SNR=70
K20K S S 00 52 22.9 +0.8
baz=262
P19K Oil Pt 51.62 36 P P 00 45 02.6 +0.2
baz=266
P19K S S 00 52 19.1 -3.3
baz=266
D20K Etivluk River 51.63 24 P P 00 45 02.7 +0.4
baz=255,SNR=26
D20K S S 00 52 21.2 -1.0
baz=255
I20K Naaghedeneel 51.65 29 P P 00 45 03.1 +0.7
baz=261,SNR=22
I20K S S 00 52 23.8 +1.3
baz=261
E20K Nigu River 51.67 25 P P 00 45 02.9 +0.3
baz=256,SNR=16
E20K S S 00 52 21.3 -1.7
baz=256
J20K Nowinta River 51.69 30 IAMs_20 IAMs_20 01 07 12.4
comp=Z,3µm,18.0s
J20K Nowinta River 51.69 30 P P 00 45 03.3 +0.6
baz=261,SNR=68
J20K S S 00 52 23.6 +0.4
baz=261
TARG Taragay, Kyrgy 51.70 301 P P 00 45 03.7 0.0
TARG pmax pmax
comp=Z,271nm,1.3s
TARG Taragay, Kyrgy 51.70 301 P P 00 45 03.7 0.0
TARG IAmb IAmb 00 45 05.7
comp=Z,271nm,1.3s
B20K Meade River 51.78 23 IAMs_20 IAMs_20 01 11 02.2
comp=Z,3µm,18.0s
B20K Meade River 51.78 23 P P 00 45 04.3 +0.9
baz=254
B20K S S 00 52 23.2 -1.0
baz=254
KDAK Kodiak Island 51.86 38 *de*P P 00 45 03.3 -0.8
KDAK pmax pmax
comp=Z,110nm,1.5s
KDAK Kodiak Island 51.86 38 P P 00 45 03.2 -0.9
KDAK IAmb IAmb 00 45 08.9
comp=Z,422nm,1.6s
KDAK Kodiak Island 51.86 38 IAMs_20 IAMs_20 01 06 10.6
comp=Z,5µm,20.0s
KDAK Kodiak Island 51.86 38 P P 00 45 04.8 +0.7
baz=268
KDAK S S 00 52 22.0 -3.7
baz=268
M20K Styx River 51.86 33 P P 00 45 05.0 +0.8
baz=264,SNR=17
M20K S S 00 52 26.2 +0.3
baz=264
O20K Slope Mountain 51.96 35 P P 00 45 05.6 +0.7
baz=266,SNR=14
O20K S S 00 52 24.6 -2.5
baz=266
MDOK Medeo 52.03 303 *e*P P 00 45 05.6 -0.2
MDOK *e*S S 00 52 30.4 +1.7
MDOK Medeo 52.03 303 *e*P P 00 45 05.7 -0.2
MDOK *e*S S 00 52 30.4 +1.7
MDOK LR LR 01 08 22.4
KDJ Kajisay 52.09 302 P P 00 45 06.3 -0.1
KDJ pmax pmax
comp=Z,435nm,1.8s
KDJ Kajisay 52.09 302 P P 00 45 06.3 -0.1
KDJ IAmb IAmb 00 45 08.3
comp=Z,434nm,1.8s
AAA Alma-Ata 52.12 303 *e*P P 00 45 06.4 0.0
AAA pmax pmax
comp=Z,130nm,0.8s
AAA MLR MLR
comp=Z,5µm,15.0s
AAA Alma-Ata 52.12 303 *e*P P 00 45 06.5 0.0
comp=Z,130nm,0.8s
AAA LR LR 01 08 34.6
comp=Z,5µm,14.5s
TNSS Tian-Shan 52.12 303 *e*P P 00 45 06.5 -0.3
TNSS Tian-Shan 52.12 303 *e*P P 00 45 06.5 -0.3
IMAR Indian Mountai 52.14 28 P P 00 45 05.9 -0.2
SPCR Spurr Chakacha 52.24 34 P P 00 45 07.7 +0.7
baz=266,SNR=13
SPCR S S 00 52 30.9 -0.1
baz=266
A21K Barrow 52.32 21 S S 00 52 32.0 +0.3
baz=253
G21K Allakaket 52.33 27 P P 00 45 08.5 +0.9
baz=260,SNR=29
G21K S S 00 52 31.6 -0.3
baz=260
C21K Knifeblade Rid 52.38 24 P P 00 45 08.8 +0.9
baz=257,SNR=7.7
C21K S S 00 52 31.2 -1.3
baz=257
PPLA Purkeypile 52.40 32 P P 00 45 08.2 0.0
PPLA IAmb IAmb 00 45 14.6
comp=Z,312nm,1.6s
PPLA Purkeypile 52.40 32 P P 00 45 09.2 +0.9
baz=264,SNR=39
PPLA S S 00 52 32.9 -0.4
baz=264
KUU Kurty 52.43 304 *e*P P 00 45 08.6 0.0
KUU pmax pmax
comp=Z,294nm,2.0s
KUU MLR MLR
comp=Z,1µm,12.0s
KUU Kurty 52.43 304 *e*P P 00 45 08.6 0.0
comp=Z,294nm,2.0s
KUU LR LR 01 08 41.6
comp=Z,1µm,12.2s
HOM Homer 52.43 36 P P 00 45 09.2 +0.8
baz=267
CHUM Lake Minchumin 52.45 31 P P 00 45 09.1 +0.7
baz=263,SNR=23
CHUM S S 00 52 33.9 +0.2
baz=263
F21K Alatna River 52.46 26 P P 00 45 09.0 +0.5
baz=260
F21K S S 00 52 34.0 +0.2
baz=260
H21K Melozitna Rive 52.48 28 P P 00 45 09.7 +1.0
baz=262,SNR=82
H21K S S 00 52 34.9 +0.9
baz=262
CAST Castle Rocks 52.50 31 P P 00 45 08.7 -0.2
CAST IAmb IAmb 00 45 15.1
comp=Z,448nm,2.0s
CAST Castle Rocks 52.50 31 P P 00 45 09.7 +0.8
baz=264,SNR=80
CAST S S 00 52 33.1 -1.3
baz=264
E21K Killik River 52.51 25 P P 00 45 10.0 +1.1
baz=258
E21K S S 00 52 32.2 -2.2
baz=258
B21K Ikpikpuk River 52.54 23 P P 00 45 09.8 +0.8
baz=257
B21K S S 00 52 32.7 -1.9
baz=257
PTH Pithoragarh 52.61 286 ⇑*i*P P 00 45 09.7 -0.7
SKT Skwentna 52.63 33 P P 00 45 09.1 -0.7
SKT IAmb IAmb 00 45 14.8
comp=Z,213nm,1.7s
SKT Skwentna 52.63 33 P P 00 45 10.5 +0.7
baz=266,SNR=48
SKT S S 00 52 34.3 -1.9
baz=266
CNPM China Poot 52.63 36 P P 00 45 09.5 -0.4
CNPM IAMs_20 IAMs_20 01 09 23.9
comp=Z,4µm,20.0s
ALBI Allahabad 52.64 280 ⇑*i*P P 00 45 08.7 -1.7
CAPN Captain Cook N 52.73 35 S S 00 52 35.3 -2.1
baz=267
I21K Tanana 52.75 29 P P 00 45 11.6 +0.9
baz=263,SNR=55
I21K S S 00 52 38.6 +0.9
baz=263
A22K Sinclair Lake 52.75 22 S S 00 52 37.9 +0.4
baz=255
ULHL Ulahol 52.76 302 P P 00 45 12.5 +1.2
SNR=6.8
BRLK Bradley Lake 52.82 36 P P 00 45 11.1 -0.2
JOSI Joshimath 52.86 287 ⇑*i*P P 00 45 11.6 -0.6
BRSE Bradley Lake S 52.89 36 P P 00 45 12.4 +0.6
baz=268,SNR=8.7
BRSE S S 00 52 34.3 -5.5
baz=268
BOOM Boomskoye usch 52.94 302 P P 00 45 12.1 -0.5
BOOM pmax pmax
comp=Z,422nm,1.7s
BOOM Boomskoye usch 52.94 302 P P 00 45 12.1 -0.5
BOOM IAmb IAmb 00 45 14.7
comp=Z,422nm,1.7s
F22K John River 53.01 26 P P 00 45 13.6 +1.1
baz=261
F22K S S 00 52 41.3 +0.1
baz=261
L22K Petersville 53.02 32 IAMs_20 IAMs_20 01 09 37.6
comp=Z,3µm,18.0s
L22K Petersville 53.02 32 P P 00 45 13.5 +0.7
baz=266,SNR=50
L22K S S 00 52 38.1 -3.5
baz=266
KTH Kantishna Hill 53.03 31 P P 00 45 13.2 +0.3
KTH IAmb IAmb 00 45 18.9
comp=Z,195nm,1.6s
NRN Naryn 53.08 301 P P 00 45 13.4 -0.5
NRN pmax pmax
comp=Z,103nm,1.0s
NRN Naryn 53.08 301 P P 00 45 13.4 -0.5
H22K Ishtalitna Cre 53.09 28 P P 00 45 14.1 +0.9
baz=263,SNR=59
H22K S S 00 52 43.6 +1.2
baz=263
B22K Teshekpuk Lake 53.10 23 P P 00 45 13.1 0.0
baz=257
B22K S S 00 52 42.6 +0.3
baz=257
TKM2 Tokmak 2 53.12 303 P P 00 45 14.3 +0.3
SNR=86
G22K Bettles 53.18 27 P P 00 45 14.3 +0.5
baz=262
G22K S S 00 52 43.1 -0.3
baz=262
CUT Chulitna 53.25 33 IAMs_20 IAMs_20 01 09 53.6
comp=Z,3µm,18.0s
CUT Chulitna 53.25 33 P P 00 45 14.6 +0.3
baz=266,SNR=13
CUT S S 00 52 41.9 -2.6
baz=266
MLY Manley 53.26 29 P P 00 45 14.5 0.0
baz=264,SNR=74
MLY S S 00 52 45.3 +0.6
baz=264
M22K Willow 53.28 33 P P 00 45 15.1 +0.5
baz=267
M22K S S 00 52 42.1 -2.8
baz=267
TRF Thorofare Moun 53.31 31 P P 00 45 15.1 +0.1
baz=266,SNR=25
TRF S S 00 52 43.8 -2.0
baz=266
O22K Cooper Landing 53.42 35 IAMs_20 IAMs_20 01 08 01.7
comp=Z,5µm,19.0s
O22K Cooper Landing 53.42 35 P P 00 45 16.0 +0.3
baz=268
RC01 Rabbit Creek A 53.43 34 P P 00 45 15.3 -0.5
RC01 IAmb IAmb 00 45 20.4
comp=Z,167nm,1.5s
RC01 Rabbit Creek A 53.43 34 P P 00 45 15.8 +0.1
baz=268,SNR=20
RC01 S S 00 52 43.0 -4.2
baz=268
BLSP Bilaspur 53.49 276 *e*P P 00 45 15.4 -1.4
XMI Christmas Isla 53.50 226 P P 00 45 16.4 -0.4
comp=Z,243nm,1.1s
RAGD RAYAGADA 53.51 272 ⇑*i*P P 00 45 16.3 -0.6
SEW Seward 53.55 36 IAMs_20 IAMs_20 01 09 47.6
comp=Z,5µm,19.0s
SEW Seward 53.55 36 P P 00 45 16.7 +0.1
baz=269,SNR=10
SEW S S 00 52 44.1 -4.5
baz=269
KBK Karagaybulak 53.63 303 P P 00 45 17.8 +0.1
SNR=84
KLP Kalpa 53.65 288 ⇑*i*P P 00 45 17.2 -1.0
KLP IAmb IAmb 00 45 21.1
comp=Z,582nm,1.7s
CHMS Chumysh 53.71 303 P P 00 45 18.0 -0.1
SNR=54
SGDS Sogindy 53.72 304 ⇑*i*P P 00 45 18.2 -0.1
comp=Z,145nm,1.9s
SGDS *e*S S 00 52 53.5 +1.8
COLD Coldfoot 53.72 27 P P 00 45 18.6 +0.8
baz=263
COLD S S 00 52 50.1 -0.8
baz=263
UTK UTTARKASHI 53.73 287 ⇑*i*P P 00 45 17.8 -0.8
BWN Browne 53.73 30 IAMs_20 IAMs_20 01 11 37.1
comp=Z,3µm,18.0s
G23K Bananza Creek 53.73 27 P P 00 45 18.7 +0.8
baz=263,SNR=70
G23K S S 00 52 51.6 +0.5
baz=263
PMR Palmer 53.74 34 P P 00 45 19.9 +1.9
comp=Z,100nm,1.5s
PMR Palmer 53.74 34 P P 00 45 18.4 +0.4
PMR pmax pmax
comp=Z,200nm,1.5s
PMR Palmer 53.74 34 P P 00 45 18.4 +0.4
PMR IAmb IAmb 00 45 22.6
comp=Z,200nm,1.5s
PMR Palmer 53.74 34 P P 00 45 18.1 +0.1
baz=268,SNR=21
PMR S S 00 52 48.0 -3.2
baz=268
D23K Nanushuk River 53.79 24 P P 00 45 19.5 +1.2
baz=261,SNR=22
D23K S S 00 52 52.0 +0.3
baz=261
H23K Yukon River 53.83 28 P P 00 45 19.5 +0.9
baz=264
H23K S S 00 52 54.5 +2.0
baz=264
FRU1 Bishkek 53.83 303 P P 00 45 18.8 -0.3
FRU1 pmax pmax
comp=Z,701nm,1.9s
FRU1 Bishkek 53.83 303 P P 00 45 18.8 -0.3
USP Ospenovka 53.85 303 P P 00 45 18.9 -0.2
SNR=58
I23K Minto, Yukon-K 53.85 29 P P 00 45 19.5 +0.8
baz=265,SNR=54
I23K S S 00 52 52.7 +0.1
baz=265
KSH2 Kashi 53.86 298 P P 00 45 19.8 +0.3
KSH2 pP pP 00 45 24.3 +0.3
KSH2 S S 00 52 48.5 -5.4
KSH2 ScS ScS 00 55 01.5 -6.9
KSH2 pmax pmax
comp=Z,330nm,1.0s
KSH2 pmax pmax
comp=Z,2µm,8.8s
KSH2 L L
comp=Z,5µm,16.8s
KSH2 L L
comp=Z,6µm,19.6s
KSH2 L L
comp=Z,10µm,18.5s
TKRD Thakurdwara 53.87 285 *e*P P 00 45 18.7 -0.7
BTLS Baital 53.87 306 *e*P P 00 45 19.2 0.0
BTLS pmax pmax
comp=Z,102nm,1.1s
BTLS Baital 53.87 306 *e*P P 00 45 19.3 0.0
comp=Z,102nm,1.1s
NEA2 Nenana 53.93 30 P P 00 45 20.0 +0.6
baz=266,SNR=56
NEA2 S S 00 52 52.7 -1.1
baz=266
MCK McKinley 53.93 31 IAMs_20 IAMs_20 01 11 14.6
comp=Z,3µm,19.0s
MCK McKinley 53.93 31 P P 00 45 19.7 +0.3
baz=267,SNR=14
MCK S S 00 52 52.4 -1.4
baz=267
C23K Itkillik River 53.95 23 P P 00 45 20.0 +0.6
baz=260
C23K S S 00 52 52.9 -0.9
baz=260
RND Reindeer 53.95 31 P P 00 45 18.8 -0.8
RND pmax pmax
comp=Z,73nm,1.1s
RND MLR MLR
comp=Z,3µm,18.0s
RND Reindeer 53.95 31 P P 00 45 18.8 -0.8
RND IAMs_20 IAMs_20 01 11 18.1
comp=Z,3µm,18.0s
AAK Ala-Archa 53.96 303 P P 00 45 20.2 0.0
comp=Z,48nm,0.8s,baz=103,slow=6.1,SNR=70
AAK PcP PcP 00 46 24.9 -0.4
comp=Z,27nm,1.1s,baz=108,slow=6.4,SNR=3.8
AAK LR LR 01 09 15.5
comp=Z,7µm,20.3s,baz=78,slow=37
comp=Z,48nm,0.8s
AAK Ala-Archa 53.96 303 P P 00 45 20.9 +0.7
SNR=28
AAK Ala-Archa 53.96 303 *i* P P 00 45 20.2 0.0
SNR=29
AAK Ala-Archa 53.96 303 *c i*P P 00 45 20.0 -0.1
AAK pmax pmax
comp=Z,65nm,1.0s
AAK MLR MLR
comp=Z,6µm,19.0s
AAK Ala-Archa 53.96 303 P P 00 45 20.6 +0.5
AAK P P 00 45 20.6 +0.5
AAK P P 00 45 20.6 +0.5
AAK S S 00 52 56.1 +0.9
AAK S S 00 52 56.1 +0.9
AAK S S 00 52 56.1 +0.9
AAK Ala-Archa 53.96 303 P P 00 45 19.9 -0.3
UCH Uchtor 54.03 302 P P 00 45 22.4 +1.5
SNR=12
E23K Chandalar 54.05 26 P P 00 45 20.6 +0.3
baz=263,SNR=38
E23K S S 00 52 55.3 -0.2
baz=263
KNK Knik Glacier 54.06 34 IAMs_20 IAMs_20 01 06 36.1
comp=Z,3µm,20.0s
KNK Knik Glacier 54.06 34 P P 00 45 20.7 +0.3
baz=269,SNR=8.7
KNK S S 00 52 53.3 -2.3
baz=269
WAT1 Susitna Watana 54.06 32 P P 00 45 20.7 +0.3
baz=268
WAT1 S S 00 52 53.1 -2.6
baz=268
PWL Port Wells 54.11 35 IAMs_20 IAMs_20 01 08 04.5
comp=Z,5µm,19.0s
PWL Port Wells 54.11 35 P P 00 45 20.8 0.0
baz=269
PWL S S 00 52 53.4 -2.9
baz=269
SML Sawmill 54.13 33 P P 00 45 20.5 -0.4
SML IAMs_20 IAMs_20 01 10 14.9
comp=Z,3µm,19.0s
SML Sawmill 54.13 33 P P 00 45 21.3 +0.4
baz=268,SNR=21
SML S S 00 52 53.9 -2.8
baz=268
TOLK Toolik Lake Re 54.14 25 P P 00 45 21.1 +0.2
baz=262,SNR=21
TOLK S S 00 52 55.7 -0.9
baz=262
KIP Kipapa 54.40 84⇓ *e*P P 00 45 21.9 -1.5
KIP pmax pmax
comp=Z,68nm,1.1s
M23K Glacier View 54.42 33 P P 00 45 23.3 +0.3
baz=269,SNR=13
M23K S S 00 52 59.0 -1.5
baz=269
WAT6 Susitna Watana 54.43 32 P P 00 45 23.7 +0.5
baz=268,SNR=56
WAT6 S S 00 52 58.5 -2.4
baz=268
AS01 Alice Springs 54.46 189 P P 00 45 23.3 -0.3
comp=Z,143nm,1.1s
AS31 Alice Springs 54.47 189 P P 00 45 23.2 -0.5
ASAR Alice Springs 54.47 189 P P 00 45 23.4 -0.2
comp=Z,62nm,0.8s,baz=4.6,slow=6.0,SNR=370
ASAR ScP ScP 00 50 26.9 +2.3
comp=Z,2.7nm,0.8s,baz=4.1,slow=4.7,SNR=3.7
ASAR LR LR 01 08 30.5
comp=Z,4µm,21.1s,baz=14,slow=36
ASAR PKPPKP P'P'df 01 15 35.0 +5.5
comp=Z,0.6nm,0.8s,baz=146,slow=3.7,SNR=5.2
ASAR P4KPbc 01 22 45.0
comp=Z,1.1nm,0.7s,baz=5.8,slow=5.3,SNR=9.7
comp=Z,62nm,0.8s
ASAR Alice Springs 54.47 189 P P 00 45 22.9 -0.8
ASAR ScP 00 50 25.3 +0.7
COLA College 54.47 30 P P 00 45 26.1 +2.9
comp=Z,19nm,1.4s
COLA College 54.47 30 *de*P P 00 45 24.1 +0.9
COLA pmax pmax
comp=Z,12nm,0.9s
COLA College 54.47 30 S S 00 52 59.3 -1.6
baz=267
E24K Your Creek 54.47 26 P P 00 45 24.0 +0.7
baz=264,SNR=48
E24K S S 00 53 00.8 -0.3
baz=264
D24K Happy Valley 54.47 24 IAMs_20 IAMs_20 01 11 54.1
comp=Z,3µm,18.0s
D24K Happy Valley 54.47 24 P P 00 45 24.0 +0.8
baz=263
D24K S S 00 53 00.9 -0.1
baz=263
EKS2 Erkin-Say 54.48 303 P P 00 45 23.8 0.0
SNR=45
H24K Noodor Dome 54.52 28 P P 00 45 24.4 +0.7
baz=266,SNR=49
H24K S S 00 53 02.5 +0.7
baz=266
P23K Montague Islan 54.58 36 IAMs_20 IAMs_20 01 09 44.7
comp=Z,3µm,20.0s
P23K Montague Islan 54.58 36 P P 00 45 24.8 +0.7
baz=271,SNR=24
P23K S S 00 53 02.3 -0.3
baz=271
DHY Denali Highway 54.61 32 P P 00 45 24.9 +0.4
baz=268,SNR=15
DHY S S 00 53 01.2 -2.1
baz=268
SCM Sheep Creek Mo 54.61 33 P P 00 45 24.3 -0.1
SCM pmax pmax
comp=Z,155nm,1.1s
SCM MLR MLR
comp=Z,3µm,20.0s
SCM Sheep Creek Mo 54.61 33 P P 00 45 24.3 -0.1
SCM IAmb IAmb 00 45 29.0
comp=Z,155nm,1.1s
SCM Sheep Creek Mo 54.61 33 P P 00 45 25.0 +0.6
baz=269,SNR=76
SCM S S 00 53 01.4 -1.7
baz=269
F24K Squaw Lake 54.65 26 P P 00 45 25.0 +0.4
baz=265,SNR=24
F24K S S 00 53 03.4 0.0
baz=265
SMLA Simla 54.66 288 ⇑*i*P P 00 45 24.3 -0.8
SMLA IAmb IAmb 00 45 27.4

comp=Z,155nm,0.9s
POKR Poker Plat Res 54.66 29 P P 00 45 24.9 +0.3
baz=267
POKR S S 00 53 03.0 -0.6
baz=267
GLI Glacier Island 54.72 35 IAms_20 IAms_20 01 10 20.5
comp=Z,3µm,19.0s
GLI Glacier Island 54.72 35 P P 00 45 25.3 +0.2
baz=270,SNR=9.6
GLI S S 00 53 02.2 -2.3
baz=270
G24K Hadweenzic Riv 54.74 27 P P 00 45 25.8 +0.6
baz=266,SNR=56
G24K S S 00 53 05.8 +1.1
baz=266
HDA Harding Lake 54.84 30 P P 00 45 25.9 -0.1
baz=268,SNR=15
HDA S S 00 53 01.8 -4.2
baz=268
ILAR Eielson Array 54.88 30 P P 00 45 25.8 -0.5
comp=Z,15nm,0.8s,baz=262,slow=6.2,SNR=43
ILAR PKPPKP **P'P'df 01 15 36.8 -5.4**
comp=Z,2.2nm,1.0s,baz=111,slow=1.7,SNR=4.2
comp=Z,15nm,0.8s
ILAR Eielson Array 54.88 30 P P 00 45 25.2 -1.1
TSSA Tissa 54.99 291 ⇑*i*P **P 00 45 27.0 -0.8**
TSSA IAmb IAmb 00 45 33.6
comp=Z,224nm,0.6s
HIN Hinchinbrook I 55.02 35 IAMs_20 IAMs_20 01 09 02.4
comp=Z,3µm,20.0s
FID Port Fidalgo 55.02 35 P P 00 45 27.8 +0.5
FID IAmb IAmb 00 45 31.7
comp=Z,211nm,1.4s
FID IAMs_20 IAMs_20 01 11 02.0
comp=Z,4µm,19.0s
M24K Tolsona, Glenn 55.15 33 S S 00 53 11.7 +1.3
baz=270
BVAR Borovoye Array 55.22 316 P P 00 45 28.8 -0.1
comp=Z,69nm,0.9s,baz=92,slow=8.4,SNR=137
BVAR PKP2bc **P'P'bc 01 15 50.4 -4.6**
comp=Z,0.7nm,0.5s,baz=257,slow=5.9,SNR=3.7
BVAR P4KPbc 01 22 43.8
comp=Z,0.8nm,0.6s,baz=105,slow=1.7,SNR=4.7
comp=Z,69nm,0.9s
BHK Bhakra 55.22 289 *ex* **P 00 45 26.7 -2.6**
BHK ⇑*ix* x 00 45 28.5
BHK IAmb IAmb 00 45 32.3
comp=Z,1µm,1.4s
AGRA Agra 55.25 284 *i* P **P 00 45 27.8 -1.7**
AGRA *i* x x 00 48 50.8
KLU Klutina 55.28 34 IAMs_20 IAMs_20 01 08 32.3
comp=Z,3µm,20.0s
KLU Klutina 55.28 34 P P 00 45 29.7 +0.4
baz=271,SNR=21
KLU S S 00 53 11.2 -0.9
baz=271
G25K Bearman Lake 55.29 27 P P 00 45 29.9 +0.7
baz=267,SNR=17
G25K S S 00 53 13.6 +1.7
baz=267
KOUNC Koumac, New Ca 55.29 154 P P 00 45 32.0 +2.3
comp=Z,91nm,1.3s
KOUNC Koumac, New Ca 55.29 154 P P 00 45 28.6 -1.1
KOUNC IAmb IAmb 00 45 36.4
comp=Z,203nm,1.3s
KKR Kurukshetra 55.30 287 ⇑*i*P **P 00 45 28.9 -0.9**
ARSB Arslanbob 55.33 301 P P 00 45 29.9 -0.2
ARSB pmax pmax
comp=Z,525nm,1.3s
ARSB Arslanbob 55.33 301 P P 00 45 29.9 -0.2
K24K Donnelly Dome 55.34 31 IAMs_20 IAMs_20 01 09 29.8
comp=Z,3µm,20.0s
K24K Donnelly Dome 55.34 31 P P 00 45 30.2 +0.5
baz=269,SNR=7.4
K24K S S 00 53 10.6 -2.2
baz=269
JMIU JAMIA UNIVERSI 55.35 285 *eP* **P 00 45 28.7 -1.5**
D25K Kavik River 55.36 24 IAMs_20 IAMs_20 01 13 09.0
comp=Z,3µm,18.0s
D25K Kavik River 55.36 24 P P 00 45 30.4 +0.7
baz=265,SNR=41
D25K S S 00 53 11.7 -1.3
baz=265
DIV Divide 55.36 34 IAMs_20 IAMs_20 01 10 40.4
comp=Z,3µm,19.0s
NDI New Delhi 55.38 286 ⇑*i*P **P 00 45 29.3 -1.1**
EYAK Cordova Ski Ar 55.39 35 P P 00 45 32.7 +2.8
comp=Z,46nm,1.6s
EYAK Cordova Ski Ar 55.39 35 IAMs_20 IAMs_20 01 09 15.2
comp=Z,5µm,20.0s
EYAK Cordova Ski Ar 55.39 35 P P 00 45 30.6 +0.7
baz=272,SNR=7.4
EYAK S S 00 53 12.5 -0.8
baz=272
GNR GANAUR 55.40 286 *i* P **P 00 45 30.0 -0.5**
LDR Lodi Road 55.41 285 *eP* **P 00 45 29.3 -1.3**
THN Thein Dam 55.42 290 ⇑*i*P **P 00 45 30.0 -0.7**
NPLP NPLP New Delhi 55.43 285 *eP* **P 00 45 30.1 -0.7**
PAX Paxson 55.48 32 IAMs_20 IAMs_20 01 12 18.4
comp=Z,3µm,20.0s
PAX Paxson 55.48 32 P P 00 45 31.2 +0.6
baz=270,SNR=39
PAX S S 00 53 12.9 -1.8
baz=270
PRP Porcupine Dome 55.48 29 P P 00 45 31.5 +0.8
baz=268
PRP S S 00 53 13.0 -1.8
baz=268
F25K Christian Rive 55.51 26 P P 00 45 32.0 +1.2
baz=267,SNR=53
F25K S S 00 53 16.6 +1.5
baz=267
AYAN Aya Nagar 55.52 285 ⇑*i*P **P 00 45 30.1 -1.3**
J25K Salcha River, 55.52 30 P P 00 45 31.6 +0.6
baz=269,SNR=13
J25K S S 00 53 11.4 -3.9
baz=269
E25K Arctic Village 55.57 26 P P 00 45 32.1 +0.9
baz=267,SNR=53
E25K S S 00 53 16.1 +0.4
baz=267
MBWA Marble Bar 55.62 205 P P 00 45 31.4 -0.6
comp=Z,122nm,0.9s
MBWA Marble Bar 55.62 205 P P 00 45 32.5 +0.4
comp=Z,212nm,0.9s
MBWA Marble Bar 55.62 205 P P 00 45 32.4 +0.3
MBWA P P 00 45 32.4 +0.3
MBWA Marble Bar 55.62 205 P P 00 45 31.3 -0.7
MBWA IAmb IAmb 00 45 33.1
comp=Z,151nm,0.8s
HARP HAARP 55.63 33 IAMs_20 IAMs_20 01 09 11.4
comp=Z,3µm,20.0s
HARP HAARP 55.63 33 P P 00 45 32.3 +0.6
baz=271,SNR=8.9
HARP S S 00 53 15.4 -1.3
baz=271
SONA Sohna 55.65 285 ⇑*i*P **P 00 45 31.3 -1.1**
SONA IAmb IAmb 00 45 33.8
comp=Z,134nm,1.0s
RIDG Independent Ri 55.75 31 IAMs_20 IAMs_20 01 12 57.7
comp=Z,3µm,20.0s
RIDG Independent Ri 55.75 31 P P 00 45 33.2 +0.6
baz=270,SNR=22
RIDG S S 00 53 15.7 -2.6
baz=270
N25K Chitina, Valde 55.91 34 P P 00 45 34.4 +0.5
baz=272,SNR=19
N25K S S 00 53 19.9 -0.7
baz=272
C26K Camden Bay 55.92 24 P P 00 45 34.9 +1.3
baz=266,SNR=25
C26K S S 00 53 21.4 +1.2
baz=266
RAGM Ragged Mountai 55.92 35 IAMs_20 IAMs_20 01 11 52.4
comp=Z,4µm,19.0s
BMRM Bremner River 55.93 34 IAMs_20 IAMs_20 01 09 03.6
comp=Z,5µm,20.0s
BMRM Bremner River 55.93 34 P P 00 45 35.0 +1.0
baz=272,SNR=30
BMRM S S 00 53 20.6 -0.3
baz=272
JMU Jammu 56.06 291 ⇑*i*P **P 00 45 34.9 -0.5**
KAIM Kayak Island 56.08 36 P P 00 45 36.0 +1.1
KAIM IAMs_20 IAMs_20 01 06 35.5
comp=Z,3µm,21.0s
KAIM Kayak Island 56.08 36 P P 00 45 35.6 +0.7
baz=273,SNR=22
KAIM S S 00 53 24.1 +1.4
baz=273
F26K Sheenjek River 56.09 26 P P 00 45 36.2 +1.3
baz=268,SNR=91
F26K S S 00 53 24.8 +2.1
baz=268
DZA Taraz 56.20 304 *eP* **P 00 45 36.1 0.0**
DZA pmax pmax
comp=Z,56nm,0.9s
DZA Taraz 56.20 304 *eP* **P 00 45 36.1 0.0**
comp=Z,56nm,0.9s
G26K Porcupine Rive 56.21 27 P P 00 45 37.0 +1.2
baz=269,SNR=40
G26K S S 00 53 26.5 +2.3
baz=269
MENT Mentasta 56.27 32 P P 00 45 38.6 +2.3
comp=Z,76nm,1.6s
GLB Gilahina Butte 56.30 34 IAMs_20 IAMs_20 01 08 05.1
comp=Z,3µm,22.0s
C27K Jago River 56.32 24 P P 00 45 37.2 +0.7
baz=267,SNR=40
C27K S S 00 53 25.7 0.0
baz=267
EIDS Eidsvold 56.37 170 P P 00 45 38.6 +1.3
comp=Z,170nm,1.1s
EIDS Eidsvold 56.37 170 P P 00 45 38.8 +1.5
comp=Z,169nm,1.1s
EIDS Eidsvold 56.37 170 P P 00 45 37.2 0.0
EIDS IAmb IAmb 00 45 50.6
comp=Z,182nm,1.1s
BERG Berg Lake 56.41 35 P P 00 45 37.9 +0.6
BERG IAmb IAmb 00 45 43.0
comp=Z,286nm,1.6s
L26K Log Cabin Wild 56.44 32 IAMs_20 IAMs_20 01 13 34.0
comp=Z,3µm,18.0s
L26K Log Cabin Wild 56.44 32 P P 00 45 38.5 +1.0
baz=272,SNR=66
L26K S S 00 53 28.6 +1.1
baz=272
I26K Coal Creek Min 56.47 29 P P 00 45 38.6 +1.0
baz=271
I26K S S 00 53 26.4 -1.3
baz=271
VRDI Verde Repeater 56.48 34 P P 00 45 39.0 +0.9
VRDI IAmb IAmb 00 45 42.9
comp=Z,150nm,1.5s
VRDI IAMs_20 IAMs_20 01 09 12.0
comp=Z,4µm,21.0s
NGP Nagpur 56.52 276 ⇑*i*P **P 00 45 37.4 -1.3**
DRK Karamyk 56.63 300 P P 00 45 39.6 0.0
DRK pmax pmax
comp=Z,374nm,1.2s
DRK Karamyk 56.63 300 P P 00 45 39.6 0.0
M26K Nabesna, AK 56.63 33 IAMs_20 IAMs_20 01 09 59.0
comp=Z,4µm,20.0s
M26K Nabesna, AK 56.63 33 P P 00 45 39.6 +0.7
baz=273,SNR=31
M26K S S 00 53 29.4 -0.7
baz=273
CRQM Cirque 56.66 35 IAMs_20 IAMs_20 01 12 10.5
comp=Z,3µm,18.0s
GUNA GUNA 56.67 281 ⇑*i*P **P 00 45 36.8 -3.0**
GUNA IAmb IAmb 00 45 40.5
comp=Z,47nm,0.8s
MCARA McCarthy VSAT 56.68 34 IAMs_20 IAMs_20 01 09 09.2
comp=Z,3µm,21.0s
MCARA McCarthy VSAT 56.68 34 P P 00 45 40.0 +0.8
baz=273,SNR=16
MCARA S S 00 53 29.2 -1.4
baz=273
CRQE Cirque 56.68 35 P P 00 45 40.1 +0.7
baz=274,SNR=28
CRQE S S 00 53 29.8 -1.2
baz=274
KK31 Karatay Array 56.74 304 P P 00 45 39.7 -0.3
KK31 pmax pmax
comp=Z,1µm,1.8s
KK31 Karatay Array 56.74 304 P P 00 45 39.7 -0.3
KKAR Karatay Array 56.74 304 P P 00 45 39.5 -0.5
KKAR Karatay Array 56.74 304 P P 00 45 39.5 -0.5
TGL Tana Glacier 56.81 35 IAMs_20 IAMs_20 01 06 13.9
comp=Z,3µm,22.0s
QLP Quilpie 56.91 177 P P 00 45 41.2 +0.1
comp=Z,580nm,0.9s
QLP Quilpie 56.91 177 P P 00 45 41.9 +0.8
comp=Z,580nm,0.9s
G27K Doyon Strip 57.05 27 P P 00 45 42.8 +1.0
baz=271,SNR=27
G27K S S 00 53 37.4 +2.0
baz=271
E27K Coleen River 57.05 26 IAMs_20 IAMs_20 01 13 10.8
comp=Z,3µm,18.0s
E27K Coleen River 57.05 26 P P 00 45 42.8 +1.0
baz=270,SNR=42
E27K S S 00 53 36.4 +0.9
baz=270
NIL Nilore 57.08 292 P P 00 45 42.2 -0.3
NIL pmax pmax
NIL MLR MLR
comp=Z,525nm,1.0s
comp=Z,4µm,20.0s
NIL Nilore 57.08 292 P P 00 45 42.7 +0.1
NIL P P 00 45 42.7 +0.1
NIL Nilore 57.08 292 P P 00 45 42.1 -0.3
NIL Nilore 57.08 292 IAMs_20 IAMs_20 01 12 52.3
comp=Z,4µm,20.0s
VJD Vijayawada 57.08 271 *eP* P 00 45 48.7 +6.1
I27K Kandik River 57.10 29 P P 00 45 43.2 +1.0
baz=272,SNR=35
I27K S S 00 53 35.3 -0.9
baz=272
BHPL Bhopal 57.11 279 ⇑*i*P **P 00 45 41.5 -1.4**
BHPL IAmb IAmb 00 45 43.3
comp=Z,59nm,0.6s
BHPL *i* x x 00 46 38.6
BHPL *ex* x 00 47 14.5
H27K Steamboat Moun 57.12 28 P P 00 45 43.4 +1.1
baz=272,SNR=133
H27K S S 00 53 38.1 +1.8
baz=272
L27K Beaver Creek, 57.13 32 IAMs_20 IAMs_20 01 10 31.2
comp=Z,3µm,20.0s
L27K Beaver Creek, 57.13 32 P P 00 45 43.2 +0.7
baz=273,SNR=81
L27K S S 00 53 36.6 -0.1
baz=273
BCAR Beaver Creek A 57.15 32 P P 00 45 42.5 -0.1
M27K Edge Creek, AK 57.15 33 P P 00 45 43.4 +0.7
baz=274
M27K S S 00 53 36.7 -0.5
baz=274
RMQ Roma 57.16 172 P P 00 45 45.7 +2.8
comp=Z,54nm,1.0s
MANEM Manem 57.22 297 P P 00 45 43.8 +0.1
MANEM IAmb IAmb 00 45 46.0
comp=Z,1µm,1.0s
BTK Batken 57.22 300 P P 00 45 43.2 -0.3
BTK pmax pmax
comp=Z,331nm,1.4s
BTK Batken 57.22 300 P P 00 45 43.2 -0.3
BRLS Borolday 57.24 304 *ci*P **P 00 45 44.7 +1.2**
BRLS pmax pmax
comp=Z,241nm,2.0s
BRLS Borolday 57.24 304 ⇑*i*P **P 00 45 44.8 +1.2**
comp=Z,241nm,2.0s
OVEH Oceanview Est 57.24 86 P P 00 45 43.3 -0.7
D27M Malcolm River 57.28 24 P P 00 45 44.3 +0.9
baz=270,SNR=21
D27M S S 00 53 38.5 0.0
baz=270
IUG Iuzhnay 57.30 303 *ci*P **P 00 45 44.0 0.0**
IUG *eS* **S 00 53 41.3 +1.7**
IUG pmax pmax
comp=Z,166nm,1.4s
IUG Iuzhnay 57.30 303 ⇑*i*P **P 00 45 44.0 0.0**
comp=Z,166nm,1.4s
IUG *eS* **S 00 53 41.4 +1.7**
GRNC Granite Creek 57.34 35 IAMs_20 IAMs_20 01 12 20.8
comp=Z,3µm,18.0s
NOUC Port Laguerre 57.48 153 P P 00 45 48.9 +3.7
comp=Z,302nm,1.4s
DES Desert 57.49 86 P P 00 45 45.3 -0.3
NRDN NARMADA NAGAR 57.53 279 ⇑*ix* **P 00 45 49.6 +3.8**
CHM Chimkent 57.57 303 *eP* **P 00 45 45.9 +0.1**
CHM pmax pmax
comp=Z,78nm,1.0s
CHM MLR MLR
comp=Z,2µm,15.0s
CHM Chimkent 57.57 303 *eP* **P 00 45 45.9 +0.1**
comp=Z,78nm,1.0s
CHM LR LR 01 11 47.1
comp=Z,2µm,15.0s
BVCY Beaver Creek 57.62 33 P P 00 45 47.0 +1.1
baz=275,SNR=10
BVCY S S 00 53 42.2 -0.9
baz=275
YATNC Mamie plateau, 57.67 152 P P 00 45 49.5 +2.9
comp=Z,139nm,1.2s
LOGN Logan Glacier 57.70 34 IAMs_20 IAMs_20 01 15 08.3
comp=Z,3µm,18.0s
F28M Old Crow 57.72 26 P P 00 45 47.3 +0.8
baz=272,SNR=55
F28M S S 00 53 45.2 +1.0
baz=272
ONTNC Ouen Toro 57.72 153 P P 00 45 50.3 +3.4
comp=Z,240nm,1.4s
ONTNC Ouen Toro 57.72 153 P P 00 45 47.2 +0.2
ONTNC IAMs_20 IAMs_20 01 10 07.7
comp=Z,4µm,19.0s
SRGN SRI GANGA NAGA 57.72 288 *eP* **P 00 45 46.0 -1.1**
I28M Miner Creek 57.81 29 IAMs_20 IAMs_20 01 11 21.7
comp=Z,3µm,20.0s
I28M Miner Creek 57.81 29 P P 00 45 48.0 +0.8
baz=274,SNR=60
I28M S S 00 53 44.9 -0.7
baz=274
E28M Babbage River 57.81 25 P P 00 45 48.2 +1.1
baz=272,SNR=58
E28M S S 00 53 45.2 -0.1
baz=272
GAR Garm 57.87 299 P P 00 45 47.6 -0.5
YUK3 Moose Creek 57.87 33 P P 00 45 48.3 +0.5
baz=275,SNR=66
YUK3 S S 00 53 45.6 -1.1
baz=275
OUENC Ouen Island, N 57.98 152 P P 00 45 52.6 +3.9
comp=Z,276nm,1.4s
OUENC Ouen Island, N 57.98 152 P P 00 45 49.3 +0.6
INKA Innaminka 58.02 181 P P 00 45 48.9 0.0
INKA IAmb IAmb 00 46 01.4
comp=Z,107nm,0.8s
D28M Stokes Point 58.07 24 P P 00 45 50.0 +1.1
baz=272
D28M S S 00 53 48.7 +0.1
baz=272
O28M Mount Upton 58.10 34 IAMs_20 IAMs_20 01 15 20.4
comp=Z,3µm,19.0s
O28M Mount Upton 58.10 34 P P 00 45 49.8 +0.2
baz=276,SNR=8.4
O28M S S 00 53 48.6 -1.3
baz=276
AUBSH Beerwah State 58.13 168 P P 00 45 52.3 +2.6
comp=Z,119nm,1.1s
DAWY Dawson 58.15 31 P P 00 45 50.1 +0.6
DAWY IAmb IAmb 00 45 55.5
comp=Z,155nm,1.4s
DAWY Dawson 58.15 31 P P 00 45 50.3 +0.7
baz=275,SNR=22
DAWY S S 00 53 50.3 +0.4
baz=275
YUK8 Steele Glacier 58.25 34 P P 00 45 51.1 +0.5
baz=276,SNR=13
YUK8 S S 00 53 51.0 -0.8
baz=276
AJM Ajmer 58.30 284 ⇑*i*P **P 00 45 49.9 -1.3**
H29M Whitestone 58.40 28 P P 00 45 52.5 +1.2
baz=274,SNR=34
H29M S S 00 53 54.8 +1.8
baz=274
E29M Blow River 58.42 25 IAMs_20 IAMs_20 01 13 54.9
comp=Z,3µm,19.0s
E29M Blow River 58.42 25 P P 00 45 52.2 +0.8
baz=274,SNR=61
E29M S S 00 53 53.7 +0.4
baz=274
G29M Pine Creek 58.48 27 P P 00 45 52.9 +1.1
baz=274,SNR=74
G29M S S 00 53 56.0 +1.8
baz=274
I29M Ogilvie Camp, 58.49 29 P P 00 45 52.4 +0.5
baz=275,SNR=52
I29M S S 00 53 54.4 0.0
baz=275
HYB Hyderabad 58.50 273 *eP* **P 00 45 51.9 -0.8**
HYB IAmb IAmb 00 45 53.0
comp=Z,33nm,0.8s
HYB Hyderabad 58.50 273 *eP* **P 00 45 51.6 -1.1**
HYB *ePcP* **PcP 00 46 43.0 -0.1**
HYB *eS* **S 00 53 57.2 +1.4**
BRWY Burwash Landin 58.59 34 P P 00 45 53.4 +0.7
baz=277,SNR=33
BRWY S S 00 53 55.8 0.0
baz=277
J29N Klondike Camp 58.62 30 P P 00 45 53.8 +0.9
baz=276
J29N S S 00 53 57.4 +1.3
baz=276
TW1H Toowoomba 1 Ha 58.64 169 P P 00 45 55.9 +2.5
comp=Z,92nm,0.9s
M29M Somme Creek 58.73 32 IAMs_20 IAMs_20 01 11 07.0
comp=Z,3µm,20.0s
M29M Somme Creek 58.73 32 P P 00 45 54.5 +0.7
baz=277,SNR=108
M29M S S 00 53 59.6 +1.9
baz=277
YUK4 Talbot Arm 58.78 34 P P 00 45 55.1 +0.8
baz=277,SNR=52
L29M L29M 58.80 32 P P 00 45 55.0 +0.8
L29M IAmb IAmb 00 46 00.8
comp=Z,163nm,1.0s
L29M IAMs_20 IAMs_20 01 11 37.0
comp=Z,3µm,20.0s
L29M L29M 58.80 32 P P 00 45 54.9 +0.7
baz=277,SNR=166
L29M S S 00 54 00.4 +1.8
baz=277
CHGR Chuyangaron 58.83 299 *ci*P **P 00 45 55.0 +0.2**
CHGR pmax pmax
comp=Z,2µm,1.0s
O29M Mount Kennedy 58.95 35 P P 00 45 56.4 +1.1
baz=278,SNR=29
O29M S S 00 54 01.9 +1.2
baz=278
YUK6 Outpost Mounta 58.97 34 P P 00 45 56.7 +1.1
baz=278,SNR=38
YUK6 S S 00 54 02.0 +0.9
baz=278
MDRS Chennai 58.98 267 *eP* **P 00 45 56.6 +0.6**
K29M Barlow Dome 58.99 31 P P 00 45 56.3 +0.8
baz=277,SNR=70
K29M S S 00 54 02.5 +1.4
baz=277
EPYK Eagle Plains 59.05 28 P P 00 45 56.4 +0.6
baz=276,SNR=78
EPYK S S 00 54 02.1 +0.5
baz=276
FUTU Fugatoga 59.05 133 IAMs_20 IAMs_20 01 12 17.6
comp=Z,4µm,20.0s
GIRL Giralia 59.14 210 P P 00 45 57.0 +0.2
GIRL IAmb IAmb 00 46 13.5
comp=Z,215nm,1.8s
G30M tAoh Zraii Nji 59.18 27 P P 00 45 57.5 +0.8
baz=276,SNR=31
G30M S S 00 54 03.8 +0.6
baz=276
DGTI Dogotuki 59.27 137 P P 00 46 01.2 +3.3
comp=Z,70nm,1.4s
F30M Barrier River 59.28 26 P P 00 45 58.0 +0.7
baz=276,SNR=36
F30M S S 00 54 05.1 +0.6
baz=276
I30M Mount Dempster 59.32 29 IAMs_20 IAMs_20 01 12 12.4
comp=Z,3µm,21.0s
I30M Mount Dempster 59.32 29 P P 00 45 58.2 +0.4
baz=277,SNR=66
I30M S S 00 54 05.6 +0.3
baz=277
HYT Haines Junctio 59.40 34 P P 00 45 59.1 +0.7
baz=278,SNR=32
HYT S S 00 54 07.2 +0.7
baz=278
J30M Hart River 59.42 30 P P 00 45 59.5 +1.0
baz=277,SNR=34
J30M S S 00 54 07.1 +0.5
baz=277

MSVF	**Nonsavu**	**59.43**	**139**	P		**P**	**00 46 03.1**	**+4.1**
MSVF	**Nonsavu**	**59.43**	**139**	LR		LR	01 08 58.5	
	comp=Z,2µm,19.9s,baz=335,slow=33							
MSVF	**Nonsavu**	**59.43**	**139**	P		**P**	**00 45 58.9**	**-0.1**
MSVF				pmax		pmax		
	comp=Z,85nm,1.1s							
MSVF	**Nonsavu**	**59.43**	**139**	P		**P**	**00 45 58.9**	**-0.1**
MSVF				IAmb		IAmb	00 46 18.5	
	comp=Z,85nm,1.1s							
MSVF	**Nonsavu**	**59.43**	**139**	IAMs_20		IAMs_20	01 08 45.6	
	comp=Z,3µm,20.0s							
P29M	**Windy Craggy**	**59.47**	**36**	P		**P**	**00 45 59.7**	**+0.9**
	baz=279,SNR=19							
P29M				S		**S**	**00 54 07.7**	**+0.5**
	baz=279							
M30M	**Minto, Yukon**	**59.48**	**32**	P		**P**	**00 46 00.2**	**+1.3**
	baz=278,SNR=57							
M30M				S		**S**	**00 54 08.9**	**+1.6**
	baz=278							
N30M	**Aishikik Lake**	**59.51**	**33**	IAMs_20		IAMs_20	01 14 48.5	
	comp=Z,3µm,19.0s							
N30M	**Aishikik Lake**	**59.51**	**33**	P		**P**	**00 46 00.2**	**+1.1**
	baz=278,SNR=28							
N30M				S		**S**	**00 54 08.5**	**+0.8**
	baz=278							
GC1S	**Gold Coast 1 S**	**59.51**	**168**	P		**P**	**00 46 01.4**	**+2.2**
UDPR	**Udaipur**	**59.75**	**282**	*e*P		**P**	**00 45 60.0**	**-1.4**
P30M	**Million Dollar**	**59.78**	**35**	P		**P**	**00 46 01.8**	**+0.8**
	baz=279							
P30M				S		**S**	**00 54 11.2**	**0.0**
	baz=279							
SHAA	**Shahritus**	**59.92**	**298**	P		**P**	**00 46 02.5**	**+0.2**
SHAA				IAmb		IAmb	00 46 04.6	
	comp=Z,2µm,1.1s							
G31M	**Satah River**	**59.95**	**27**	IAMs_20		IAMs_20	01 13 27.6	
	comp=Z,2µm,19.0s							
G31M	**Satah River**	**59.95**	**27**	P		**P**	**00 46 02.4**	**+0.5**
	baz=278,SNR=31							
G31M				S		**S**	**00 54 12.4**	**-0.6**
	baz=278							
INK	**Inuvik**	**60.05**	**25**	P		**P**	**00 46 02.5**	**0.0**
	comp=Z,18nm,0.8s,baz=277,slow=4.8,SNR=24							
	comp=Z,18nm,0.8s							
INK	**Inuvik**	**60.05**	**25**	P		**P**	**00 46 02.1**	**-0.4**
INK				pmax		pmax		
	comp=Z,60nm,1.1s							
INK	**Inuvik**	**60.05**	**25**	P		**P**	**00 46 02.1**	**-0.4**
INK	**Inuvik**	**60.05**	**25**	P		**P**	**00 46 03.3**	**+0.7**
	baz=278,SNR=25							
INK				S		**S**	**00 54 13.1**	**-1.1**
	baz=278							
H31M	**Peel River**	**60.08**	**28**	P		**P**	**00 46 03.1**	**+0.2**
	baz=278,SNR=38							
H31M				S		**S**	**00 54 14.7**	**-0.2**
	baz=278							
F31M	**Tsiigehtchic**	**60.08**	**26**	P		**P**	**00 46 04.0**	**+1.2**
	baz=278,SNR=18							
F31M				S		**S**	**00 54 13.9**	**-0.8**
	baz=278							
O30N	**Mendenhall**	**60.09**	**34**	P		**P**	**00 46 04.1**	**+1.0**
	baz=280,SNR=21							
O30N				S		**S**	**00 54 15.6**	**+0.3**
	baz=280							
N31M	**Braeburn, Yuko**	**60.12**	**33**	IAMs_20		IAMs_20	01 11 18.3	
	comp=Z,3µm,20.0s							
N31M	**Braeburn, Yuko**	**60.12**	**33**	P		**P**	**00 46 04.5**	**+1.3**
	baz=280,SNR=37							
N31M				S		**S**	**00 54 16.9**	**+1.3**
	baz=280							
KBL	**Kabul**	**60.13**	**295**	P		**P**	**00 46 03.2**	**-0.8**
KBL				pmax		pmax		
	comp=Z,329nm,1.1s							
KBL	**Kabul**	**60.13**	**295**	P		**P**	**00 46 03.8**	**-0.2**
	SNR=155							
KBL				P		**P**	**00 46 03.8**	**-0.2**
	SNR=155							
KBL				P		**P**	**00 46 03.8**	**-0.2**
	SNR=155							
KBL				S		**S**	**00 54 14.8**	**-2.1**
KBL				S		**S**	**00 54 14.8**	**-2.1**
KBL				S		**S**	**00 54 14.8**	**-2.1**
KBL	**Kabul**	**60.13**	**295**	P		**P**	**00 46 03.2**	**-0.8**
PLBC	**Pleasant Camp**	**60.19**	**36**	P		**P**	**00 46 04.5**	**+0.8**
	baz=280,SNR=28							
PLBC				S		**S**	**00 54 17.6**	**+1.2**
	baz=280							
SVE	**Sverdlovsk**	**60.22**	**321**	*de*P		**P**	**00 46 04.3**	**+0.3**
SVE				*e*S		**S**	**00 54 16.1**	**-0.7**
SVE				*e*			00 55 50.6	
SVE				pmax		pmax		
	comp=Z,433nm,1.3s							
SVE				pmax		pmax		
	comp=Z,861nm,10.3s							
SVE				MLR		MLR		
	comp=Z,5µm,18.0s							
S31K	**Pelican**	**60.53**	**37**	P		**P**	**00 46 07.1**	**+1.0**
	baz=281							
S31K				S		**S**	**00 54 21.6**	**+0.8**
	baz=281							
COCO	**West Island**	**60.57**	**232**	P		**P**	**00 46 05.7**	**-1.1**
COCO	**West Island**	**60.57**	**232**	P		**P**	**00 46 05.4**	**-1.4**
COCO				P		**P**	**00 46 05.4**	**-1.4**
M31M	**Drury Creek, Y**	**60.65**	**32**	IAMs_20		IAMs_20	01 12 56.1	
	comp=Z,4µm,20.0s							
M31M	**Drury Creek, Y**	**60.65**	**32**	P		**P**	**00 46 07.5**	**+0.7**
	baz=280,SNR=14							
M31M				S		**S**	**00 54 23.7**	**+1.5**
	baz=280							
WHY	**Whitehorse**	**60.70**	**34**	P		**P**	**00 46 07.9**	**+0.6**
WHY				IAmb		IAmb	00 46 12.9	
	comp=Z,230nm,1.6s							
WHY	**Whitehorse**	**60.70**	**34**	P		**P**	**00 46 07.9**	**+0.6**
	baz=281,SNR=22							
WHY				S		**S**	**00 54 24.1**	**+1.0**
	baz=281							
SKAG	**Skagway**	**60.71**	**36**	P		**P**	**00 46 10.6**	**+3.4**
	comp=Z,26nm,1.3s							
SKAG	**Skagway**	**60.71**	**36**	P		**P**	**00 46 08.0**	**+0.8**
	baz=281,SNR=6.0							
SKAG				S		**S**	**00 54 24.4**	**+1.5**
	baz=281							
MEEK	**Meekatharra**	**61.04**	**204**	P		**P**	**00 46 09.3**	**-0.6**
	comp=Z,92nm,1.3s							
MEEK	**Meekatharra**	**61.04**	**204**	P		**P**	**00 46 10.0**	**+0.1**
	comp=Z,92nm,1.3s							
SIT	**Sitka**	**61.20**	**38**	P		**P**	**00 46 14.0**	**+3.4**
	comp=Z,32nm,1.5s							
SIT	**Sitka**	**61.20**	**38**	P		**P**	**00 46 11.3**	**+0.7**
	baz=282							
SIT				S		**S**	**00 54 30.2**	**+0.9**
	baz=282							
JASL	**Jaisalmer**	**61.23**	**286**	*e*P		**P**	**00 46 11.0**	**-0.3**
R32K	**Eaglecrest**	**61.36**	**37**	P		**P**	**00 46 12.8**	**+1.1**
	baz=282,SNR=9.7							
ARMA	**Armidale**	**61.41**	**170**	P		**P**	**00 46 14.6**	**+2.2**
	comp=Z,121nm,1.1s							
ARMA	**Armidale**	**61.41**	**170**	P		**P**	**00 46 14.8**	**+2.4**
	comp=Z,121nm,1.1s							
ARMA	**Armidale**	**61.41**	**170**	P		**P**	**00 46 12.4**	**+0.1**
ARMA				IAmb		IAmb	00 46 26.6	
	comp=Z,147nm,1.1s							
PALK	**Pallekele**	**61.42**	**261**	*i* P		**P**	**00 46 12.1**	**-0.7**
	SNR=6.0							
PALK	**Pallekele**	**61.42**	**261**	*de*P		**P**	**00 46 12.8**	**0.0**
PALK				pmax		pmax		
	comp=Z,64nm,1.0s							
PALK	**Pallekele**	**61.42**	**261**	P		**P**	**00 46 12.1**	**-0.7**
PALK				P		**P**	**00 46 12.1**	**-0.7**
PALK	**Pallekele**	**61.42**	**261**	P		**P**	**00 46 12.0**	**-0.7**
PALK	**Pallekele**	**61.42**	**261**	IAMs_20		IAMs_20	01 13 12.0	
	comp=Z,3µm,20.0s							
PALK	**Pallekele**	**61.42**	**261**	P		**P**	**00 46 12.1**	**-0.7**
JIS	**Juneau Island**	**61.43**	**37**	P		**P**	**00 46 15.7**	**+3.6**
	comp=Z,42nm,1.0s							
N32M	**Quiet Lake**	**61.46**	**33**	IAMs_20		IAMs_20	01 16 36.3	
	comp=Z,3µm,18.0s							
N32M	**Quiet Lake**	**61.46**	**33**	P		**P**	**00 46 13.3**	**+0.9**
	baz=282							
N32M				S		**S**	**00 54 33.7**	**+1.0**
	baz=282							
P32M	**Atlin**	**61.48**	**35**	P		**P**	**00 46 13.5**	**+0.8**
	baz=282,SNR=17							
P32M				S		**S**	**00 54 34.6**	**+1.6**
	baz=282							
S32K	**Killisnoo**	**61.51**	**38**	IAMs_20		IAMs_20	01 10 08.7	
	comp=Z,3µm,19.0s							
S32K	**Killisnoo**	**61.51**	**38**	P		**P**	**00 46 13.2**	**+0.6**
	baz=283,SNR=8.4							
ARTI	**Arti**	**61.53**	**321**	P		**P**	**00 46 12.9**	**0.0**
	comp=Z,237nm,0.8s,baz=86,slow=4.3,SNR=363							
ARTI				PKPPKP		P'P'df	01 15 19.9	-12
	comp=Z,2.6nm,0.8s,baz=224,slow=4.9,SNR=4.8							
ARTI				LR		LR	01 15 35.8	
	comp=Z,5µm,18.3s,baz=86,slow=39							
	comp=Z,237nm,0.8s							
ARTI	**Arti**	**61.53**	**321**	*c i*P		**P**	**00 46 12.5**	**-0.4**
ARTI							00 46 59.7	
ARTI							00 48 26.0	
ARTI				PPP		PPP	00 49 56.5	
ARTI				S		**S**	**00 54 34.6**	**+1.0**
ARTI							00 55 58.8	
ARTI				SS		**SS**	**00 58 34.9**	**+0.8**
ARTI				pmax		pmax		
	comp=Z,375nm,0.9s							
ARTI				MLR		MLR		
	comp=Z,6µm,17.0s							
ARTI	**Arti**	**61.53**	**321**	P		**P**	**00 46 12.3**	**-0.6**
P33M	**Teslin, Yukon**	**61.79**	**34**	IAMs_20		IAMs_20	01 15 29.1	
	comp=Z,3µm,18.0s							
P33M	**Teslin, Yukon**	**61.79**	**34**	P		**P**	**00 46 15.4**	**+0.7**
	baz=283,SNR=33							
P33M				S		**S**	**00 54 37.6**	**+0.7**
	baz=283							
CMSA	**Cobar Meteorol**	**61.91**	**176**	P		**P**	**00 46 17.2**	**+1.7**
	comp=Z,146nm,1.0s							
CMSA	**Cobar Meteorol**	**61.91**	**176**	P		**P**	**00 46 17.3**	**+1.7**
	comp=Z,146nm,1.0s							
MMPY	**Sheldon Lake,**	**61.99**	**32**	P		**P**	**00 46 16.9**	**+0.9**
	baz=283,SNR=32							
MMPY				S		**S**	**00 54 40.3**	**+1.0**
	baz=283							
STKA	**Stephens Creek**	**62.13**	**180**	P		**P**	**00 46 17.4**	**+0.3**
	comp=Z,26nm,1.0s							
STKA	**Stephens Creek**	**62.13**	**180**	P		**P**	**00 46 17.0**	**-0.1**
	comp=Z,31nm,0.7s,baz=350,slow=7.8,SNR=41							
STKA				LR		LR	01 14 25.8	
	comp=Z,3µm,20.1s,baz=358,slow=37							
	comp=Z,31nm,0.7s							
STKA	**Stephens Creek**	**62.13**	**180**	P		**P**	**00 46 18.0**	**+1.0**
	comp=Z,523nm,1.0s							
STKA	**Stephens Creek**	**62.13**	**180**	*c i*P		**P**	**00 46 17.4**	**+0.3**
A36M	**Sachs Harbour**	**62.16**	**21**	P		**P**	**00 46 17.3**	**+0.5**
	baz=283							
A36M				S		**S**	**00 54 40.9**	**-0.1**
	baz=283							
KAD	**Karad**	**62.30**	**275⇑**	*i*P		**P**	**00 46 17.6**	**-1.2**
KAD				IAmb		IAmb	00 46 19.6	
	comp=Z,72nm,0.9s							
Q32M	**Nakina River**	**62.35**	**36**	P		**P**	**00 46 18.8**	**+0.2**
	baz=284,SNR=16							
Q32M				S		**S**	**00 54 45.1**	**+0.8**
	baz=284							
AB31	**Akbulak array**	**62.38**	**313⇑**	*e*P		**P**	**00 46 18.5**	**-0.2**
AB31				pmax		pmax		
	comp=Z,164nm,1.1s							
AB31	**Akbulak array**	**62.38**	**313**	P		**P**	**00 46 18.4**	**-0.4**
AB31				IAmb		IAmb	00 46 20.2	
	comp=Z,142nm,1.1s							
ABKAR	**Akbulak array**	**62.38**	**313**	P		**P**	**00 46 18.5**	**-0.3**
FORT	**Forrest**	**62.40**	**193**	P		**P**	**00 46 19.2**	**+0.3**
	comp=Z,151nm,1.4s							
FORT	**Forrest**	**62.40**	**193**	P		**P**	**00 46 18.7**	**-0.2**
FORT				IAmb		IAmb	00 46 20.1	
	comp=Z,101nm,0.8s							
U33K	**Whale Pass**	**62.61**	**39**	IAMs_20		IAMs_20	01 08 09.7	
	comp=Z,3µm,22.0s							
U33K	**Whale Pass**	**62.61**	**39**	P		**P**	**00 46 21.0**	**+0.9**
	baz=284,SNR=9.9							
U33K				S		**S**	**00 54 48.5**	**+1.4**
	baz=284							
CRAG	**Craig**	**62.77**	**40**	P		**P**	**00 46 24.4**	**+3.2**
	comp=Z,34nm,1.2s							
CRAG	**Craig**	**62.77**	**40**	P		**P**	**00 46 22.2**	**+1.0**
	baz=285,SNR=6.4							
CRAG				S		**S**	**00 54 50.9**	**+1.7**
	baz=285							
AUDCS	**Dubbo College**	**62.83**	**173**	P		**P**	**00 46 22.9**	**+1.2**
	comp=Z,139nm,1.1s							
AFI	**Afiamalu**	**62.92**	**128**	IAMs_20		IAMs_20	01 12 21.7	
	comp=Z,3µm,20.0s							
WRAK	**Wrangell Islan**	**62.95**	**38**	IAMs_20		IAMs_20	01 09 53.7	
	comp=Z,2µm,20.0s							
WRAK	**Wrangell Islan**	**62.95**	**38**	P		**P**	**00 46 23.5**	**+1.1**
	baz=285							
WRAK				S		**S**	**00 54 53.4**	**+2.1**
	baz=285							
S34M	**Telegraph Cree**	**63.19**	**37**	P		**P**	**00 46 24.9**	**+0.9**
	baz=285,SNR=10							
C36M	**Paulatuk**	**63.20**	**23**	P		**P**	**00 46 24.2**	**+0.4**
C36M				IAmb		IAmb	00 46 43.5	
	comp=Z,265nm,1.9s							
C36M	**Paulatuk**	**63.20**	**23**	P		**P**	**00 46 23.6**	**-0.1**
	baz=285							
C36M				S		**S**	**00 54 51.8**	**-2.3**
	baz=285							
AKTO	**Aktyubinsk**	**63.26**	**315**	P		**P**	**00 46 24.5**	**0.0**
	comp=Z,114nm,1.0s,baz=72,slow=7.7,SNR=24							
AKTO				LR		LR	01 15 01.3	
	comp=Z,8µm,18.7s,baz=76,slow=37							
	comp=Z,114nm,1.0s							
BBOO	**Buckleboo**	**63.29**	**185**	P		**P**	**00 46 25.8**	**+1.0**
	comp=Z,174nm,1.8s							
BBOO	**Buckleboo**	**63.29**	**185**	P		**P**	**00 46 25.4**	**+0.6**
	comp=Z,174nm,1.8s							
BBOO	**Buckleboo**	**63.29**	**185**	P		**P**	**00 46 24.2**	**-0.6**
DLBC	**Dease Lake**	**63.62**	**36**	P		**P**	**00 46 27.8**	**+0.9**
	comp=Z,13nm,1.0s,baz=276,slow=5.7,SNR=31							
	comp=Z,13nm,1.0s							
DLBC	**Dease Lake**	**63.62**	**36**	P		**P**	**00 46 28.2**	**+1.4**
	baz=286,SNR=31							
DLBC				S		**S**	**00 55 01.9**	**+2.0**
	baz=286							
V35K	**Ketchikan**	**63.64**	**40**	P		**P**	**00 46 27.6**	**+0.7**
	baz=286,SNR=6.0							
V35K				S		**S**	**00 55 01.0**	**+1.0**
	baz=286							
BHUJ	**Bhuj**	**63.69**	**283**	*e*P		**P**	**00 46 28.3**	**+0.5**
HTT	**Hallett**	**63.73**	**183**	P		**P**	**00 46 29.0**	**+1.2**
	comp=Z,142nm,1.2s							
HTT	**Hallett**	**63.73**	**183**	P		**P**	**00 46 29.3**	**+1.5**
	comp=Z,57nm,1.2s							
HTT	**Hallett**	**63.73**	**183**	P		**P**	**00 46 29.2**	**+1.5**
H02S1	**DAWSON INLET T**	**63.75**	**42**	P		**P**	**00 46 27.7**	**0.0**
	SNR=19							
H02S2	**DAWSON INLET T**	**63.75**	**42**	P		**P**	**00 46 27.4**	**-0.3**
WTLY	**Watson Lake, Y**	**63.76**	**34**	P		**P**	**00 46 29.2**	**+1.5**
	baz=286,SNR=12							
T35M	**Bob Quinn**	**63.91**	**38**	IAMs_20		IAMs_20	01 17 49.1	
	comp=Z,3µm,18.0s							
T35M	**Bob Quinn**	**63.91**	**38**	P		**P**	**00 46 30.4**	**+1.6**
	baz=286,SNR=9.7							
T35M				S		**S**	**00 55 06.5**	**+3.1**
	baz=286							
MORW	**Morawa**	**64.17**	**205**	P		**P**	**00 46 31.2**	**+0.5**
	comp=Z,92nm,1.3s							
MORW	**Morawa**	**64.17**	**205**	P		**P**	**00 46 30.7**	**0.0**
	comp=Z,92nm,1.3s							
MORW	**Morawa**	**64.17**	**205**	P		**P**	**00 46 30.0**	**-0.7**
MORW				IAmb		IAmb	00 46 31.7	
	comp=Z,54nm,0.8s							
KMBL	**Kambalda**	**64.43**	**199**	P		**P**	**00 46 32.6**	**+0.3**
	comp=Z,73nm,1.2s							
SYDH	**Sydney Hard Ro**	**64.58**	**172**	P		**P**	**00 46 36.8**	**+3.6**
	comp=Z,102nm,1.2s							
WOLH	**Wollongong Har**	**65.23**	**172**	P		**P**	**00 46 38.4**	**+0.9**
	comp=Z,94nm,1.1s							
WRGLY	**Wrigley**	**65.26**	**30**	P		**P**	**00 46 38.9**	**+1.5**
	baz=289							
WRGLY				S		**S**	**00 55 20.4**	**+0.6**
	baz=289							
LIRD	**Liard River Hi**	**65.28**	**34**	P		**P**	**00 46 38.9**	**+1.3**
	baz=288,SNR=16							
BLDU	**Ballidu**	**65.34**	**204**	P		**P**	**00 46 38.2**	**-0.1**
	comp=Z,132nm,1.0s							
BLDU	**Ballidu**	**65.34**	**204**	P		**P**	**00 46 38.4**	**+0.1**
	comp=Z,132nm,1.0s							
AUMBR	**Murray Bridge**	**65.42**	**182**	P		**P**	**00 46 39.8**	**+1.2**
	comp=Z,230nm,1.3s							
HRA	**Herat**	**65.47**	**297**	P		**P**	**00 46 39.3**	**-0.3**
KIRV	**Kirov**	**65.58**	**325**	P		**P**	**00 46 40.0**	**+0.4**
	comp=Z,182nm,0.7s,baz=78,slow=1.8,SNR=118							
KIRV				LR		LR	01 17 38.2	
	comp=Z,5µm,18.7s,baz=73,slow=38							
	comp=Z,182nm,0.7s							
KIRV	**Kirov**	**65.58**	**325**	*c i*P		**P**	**00 46 39.8**	**+0.2**
AUMTS	**Mt Stromlo**	**65.92**	**173**	P		**P**	**00 46 44.2**	**+2.2**
	comp=Z,122nm,1.1s							
CAN	**Canberra**	**65.92**	**173**	P		**P**	**00 46 44.1**	**+2.1**
	comp=Z,166nm,1.1s							
CAN	**Canberra**	**65.92**	**173**	P		**P**	**00 46 44.0**	**+1.9**
	comp=Z,108nm,1.1s							
CAN	**Canberra**	**65.92**	**173**	P		**P**	**00 46 42.7**	**+0.7**
CAN				pmax		pmax		
	comp=Z,99nm,1.0s							
CAN	**Canberra**	**65.92**	**173**	P		**P**	**00 46 42.7**	**+0.7**
CAN				IAmb		IAmb	00 46 55.7	
	comp=Z,99nm,1.0s							
CNB	**Canberra Magne**	**65.95**	**173**	P		**P**	**00 46 44.8**	**+2.5**
	comp=Z,1.5nm,1.0s							
AUMHS	**Melrose High S**	**65.97**	**173**	P		**P**	**00 46 45.8**	**+3.5**
	comp=Z,108nm,1.1s							
KOTAN	**Kotaneelee Air**	**66.02**	**33**	P		**P**	**00 46 43.6**	**+1.2**
	baz=290,SNR=6.3							
KOTAN				S		**S**	**00 55 29.7**	**+0.4**
	baz=290							
HOPEN	**Hopen**	**66.34**	**347**	*e*P		**P**	**00 46 45.4**	**+1.2**
HOPEN				IAmb		IAmb	00 46 46.1	
	comp=Z,228nm,1.1s							
HOPEN				*e*PP		**PP**	**00 49 08.9**	**-0.9**
HOPEN				*e*S		**S**	**00 55 35.4**	**+2.7**
HOPEN				*e*ScS		**ScS**	**00 56 41.8**	**+2.3**
HOPEN				IAMs_20		IAMs_20	01 18 40.6	
	comp=Z,6µm,17.4s							
BBB	**Bella Bella**	**66.59**	**42**	P		**P**	**00 46 46.5**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=260,slow=8.4,SNR=9.1							
BBB				LR		LR	01 12 50.7	
	comp=Z,514nm,20.5s,baz=293,slow=33							
SPA0	**Spitsbergen Ar**	**66.88**	**349**	*e*P		**P**	**00 46 47.9**	**+0.3**
SPA0				IAmb		IAmb	00 46 49.3	
	comp=Z,123nm,1.1s							
SPA0				*e*PP		**PP**	**00 49 14.0**	**-0.6**
SPA0				*e*S		**S**	**00 55 41.9**	**+2.7**
SPA0				*e*ScS		**ScS**	**00 56 45.3**	**+1.6**
SPA0				IAMs_20		IAMs_20	01 18 39.9	
	comp=Z,3µm,18.1s							
SPITS	**Spitsbergen Ar**	**66.88**	**349**	P		**P**	**00 46 48.4**	**+0.8**
	comp=Z,60nm,0.9s,baz=94,slow=14,SNR=22							
SPITS				LR		LR	01 18 58.8	
	comp=Z,2µm,18.2s,baz=42,slow=39							
	comp=Z,60nm,0.9s							
SPITS	**Spitsbergen Ar**	**66.88**	**349**	P		**P**	**00 46 47.6**	**0.0**
SPITS				pmax		pmax		
	comp=Z,114nm,1.1s							
ARPS	**Mount Arapiles**	**67.01**	**180**	P		**P**	**00 46 50.3**	**+1.4**
	comp=Z,113nm,1.2s							
KBS	**Kingsbay**	**67.03**	**351**	*c i*P		**P**	**00 46 49.2**	**+0.6**
KBS				pmax		pmax		
	comp=Z,270nm,1.3s							
KBS				MLR		MLR		
	comp=Z,2µm,18.0s							
KBS	**Kingsbay**	**67.03**	**351**	*e*P		**P**	**00 46 49.3**	**+0.8**
KBS				IAmb		IAmb	00 46 50.6	
	comp=Z,217nm,1.1s							
KBS				*e*PP		**PP**	**00 49 16.3**	**+0.5**
KBS				*e*S		**S**	**00 55 43.3**	**+2.3**
KBS				*e*SKSac		**ScS**	**00 56 46.0**	**+1.2**
KBS				*e*SS		**SS**	**01 00 03.4**	**+4.4**
KBS				IAMs_20		IAMs_20	01 17 13.5	
	comp=Z,2µm,18.7s							
KBS	**Kingsbay**	**67.03**	**351**	P		**P**	**00 46 48.6**	**0.0**
KBS	**Kingsbay**	**67.03**	**351**	*i* P		**P**	**00 46 49.6**	**+1.0**
NWAO	**Narrogin (SRO)**	**67.29**	**202**	P		**P**	**00 46 49.7**	**-1.0**
	comp=Z,131nm,1.0s							
NWAO	**Narrogin (SRO)**	**67.29**	**202**	P		**P**	**00 46 51.1**	**+0.4**
	comp=Z,231nm,1.0s							
NWAO	**Narrogin (SRO)**	**67.29**	**202**	P		**P**	**00 46 50.2**	**-0.5**
NWAO				pmax		pmax		
	comp=Z,166nm,0.9s							
NWAO	**Narrogin (SRO)**	**67.29**	**202**	P		**P**	**00 46 50.9**	**+0.2**
NWAO				P		**P**	**00 46 50.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**67.29**	**202**	P		**P**	**00 46 50.2**	**-0.5**
NOR	**Nord**	**67.48**	**357**	*i* P		**P**	**00 46 50.9**	**-0.5**
NOR				IAmb		IAmb	00 46 52.0	
	comp=Z,50nm,1.2s							
MILA	**Mila**	**67.66**	**174**	P		**P**	**00 46 54.9**	**+1.9**
	comp=Z,34nm,1.1s							
TOO	**Toolangi**	**67.90**	**177**	P		**P**	**00 46 56.7**	**+2.1**
	comp=Z,37nm,1.5s							
TOO	**Toolangi**	**67.90**	**177**	P		**P**	**00 46 55.4**	**+0.8**
TOO				pmax		pmax		
	comp=Z,63nm,1.4s							
TOO	**Toolangi**	**67.90**	**177**	P		**P**	**00 46 55.4**	**+0.8**
LVZ	**Lovozero**	**68.09**	**337**	*c i*P		**P**	**00 46 55.4**	**-0.1**
LVZ				pmax		pmax		
	comp=Z,134nm,1.0s							
LVZ				MLR		MLR		
	comp=Z,4µm,19.0s							
LVZ	**Lovozero**	**68.09**	**337**	P		**P**	**00 46 54.9**	**-0.6**
LVZ				IAmb		IAmb	00 46 56.8	
	comp=Z,122nm,1.1s							
LVZ	**Lovozero**	**68.09**	**337**	P		**P**	**00 46 55.6**	**+0.1**
	comp=Z,2µmcomp=Z,123nm,1.3s							
ADZR	**Andozero**	**68.54**	**332**	*c i*P		**P**	**00 46 58.5**	**+0.3**
ADZR				S		**S**	**00 55 58.2**	**-1.2**
ADZR				pmax		pmax		
	comp=Z,581nm,1.1s							
ADZR				pmax		pmax		
	comp=Z,389nm,1.0s							
APA	**Apatity**	**68.67**	**337**	*e*P		**P**	**00 46 57.7**	**-1.3**
APA				*e*			00 47 23.2	
APA				*e*			00 49 27.1	
APA				*e*S		**S**	**00 56 01.5**	**+0.6**
APA				*e*			00 56 50.4	
APA				*e*SS		**SS**	**01 00 20.8**	**-3.8**
APA				pmax		pmax		
	comp=Z,166nm,1.0s							
APA				MLR		MLR		
	comp=Z,5µm,19.3s							
VADS	**Vadso**	**68.67**	**340**	*e*P		**P**	**00 46 59.4**	**+0.4**
VADS				IAmb		IAmb	00 47 00.6	
	comp=Z,146nm,0.9s							
VADS				*e*PP		**PP**	**00 49 30.5**	**+0.3**
V

comp=Z,156nm,1.1s
ARA0 ARCESS Array S 70.11 340 *e*P **P** **00 47 08.3 +0.4**
ARA0 IAmb IAmb 00 47 09.6
comp=Z,153nm,1.0s
ARA0 *e*PP **PP** **00 49 42.6 -0.1**
ARA0 *e*S **S** **00 56 20.5 +2.6**
ARA0 *e*SKSac **SKKSac** **00 57 08.4 +0.2**
ARA0 *e*SS **SS** **01 00 51.3 +4.5**
ARA0 IAMs_20 IAMs_20 01 22 15.6
comp=Z,4µm,19.4s
ARCES ARCESS Array B 70.11 340 P **P** **00 47 08.4 +0.4**
comp=Z,85nm,0.8s,baz=57,slow=8.8,SNR=97
ARCES LR LR 01 22 33.8
comp=Z,4µm,19.3s,baz=72,slow=40
comp=Z,85nm,0.8s
ARCES ARCESS Array B 70.11 340 P **P** **00 47 07.7 -0.3**
ARCES pmax pmax
comp=Z,151nm,1.0s
ARCES ARCESS Array B 70.11 340 P **P** **00 47 07.7 -0.3**
ARCES IAmb IAmb 00 47 09.9
comp=Z,151nm,1.0s
RAO Raoul Island 70.86 143 LR LR 01 17 31.0
comp=Z,1µm,18.4s,baz=324,slow=35
RAO Raoul Island 70.86 143 IAMs_20 IAMs_20 01 17 55.2
comp=Z,2µm,20.0s
NLWA Neilton Lookou 70.95 46 P **P** **00 47 13.2 -0.4**
NLWA IAmb IAmb 00 47 19.4
comp=Z,150nm,1.5s
NLWA IAMs_20 IAMs_20 01 16 41.8
comp=Z,2µm,19.0s
SGF Sodankyl 70.99 338 P **P** **00 47 13.8 +0.5**
MSF Maaselka 71.01 336 P **P** **00 47 13.9 +0.4**
KTK1 Kautokeino 71.07 340 *e*P **P** **00 47 14.2 +0.4**
KTK1 IAmb IAmb 00 47 15.3
comp=Z,151nm,1.1s
KTK1 *e*PP **PP** **00 49 50.0 -0.9**
KTK1 *e* 00 51 37.1
KTK1 *e*S **S** **00 56 31.1 +2.0**
KTK1 *e*SKSac **SKKSac** **00 57 15.8 +0.4**
KTK1 *e*SS **SS** **01 01 05.5 +4.0**
KTK1 IAMs_20 IAMs_20 01 28 42.2
comp=Z,3µm,18.2s
TULEG Thule 71.44 7 P **P** **00 47 15.8 -0.1**
TULEG IAMs_20 IAMs_20 01 20 41.8
comp=Z,2µm,19.0s
TULEG Thule 71.44 7 *i*P **P** **00 47 15.9 -0.1**
TULEG IAmb IAmb 00 47 23.9
comp=Z,384nm,1.7s
GLAD Gladstone 71.46 175 P **P** **00 47 19.1 +2.8**
comp=Z,88nm,1.0s
GNW Green Mountain 71.53 45 P **P** **00 47 16.8 -0.1**
GNW IAmb IAmb 00 47 22.7
comp=Z,151nm,1.5s
JETT Jettan, Norway 71.53 342 *e*P **P** **00 47 17.2 +0.5**
JETT IAmb IAmb 00 47 17.6
comp=Z,134nm,1.1s
JETT IAMs_20 IAMs_20 01 23 19.5
comp=Z,7µm,19.3s
TRO Tromso 71.88 342 *e*P **P** **00 47 18.6 0.0**
TRO IAmb IAmb 00 47 19.9
comp=Z,341nm,1.7s
TRO *e*PP **PP** **00 49 57.0 -0.8**
TRO *e* 00 51 46.3
TRO *e*S **S** **00 56 39.2 +0.8**
TRO *e*SKSac **ScS** **00 57 23.7 +0.5**
TRO *e*SS **SS** **01 01 17.2 +3.4**
TRO IAMs_20 IAMs_20 01 23 55.8
comp=Z,7µm,18.7s
NEEM North Greenlan 71.93 3 *i*P **P** **00 47 19.4 +0.2**
NEEM IAmb IAmb 00 47 20.7
comp=Z,164nm,1.1s
DAG Danmarks Havn 72.19 355 P **P** **00 47 20.7 +0.3**
DAG Danmarks Havn 72.19 355 *i*P **P** **00 47 20.6 +0.1**
DAG IAmb IAmb 00 47 21.8
comp=Z,204nm,1.2s
DAG IAML 00 47 22.1
comp=Z,65nm,1.0s
COR Corvallis 72.51 48 P **P** **00 47 23.2 +0.4**
COR pmax pmax
comp=Z,204nm,1.4s
COR Corvallis 72.51 48 P **P** **00 47 23.2 +0.4**
COR IAmb IAmb 00 47 28.9
comp=Z,204nm,1.4s
COR Corvallis 72.51 48 IAMs_20 IAMs_20 01 15 30.3
comp=Z,3µm,19.0s
OUL Oulu 72.56 336 P **P** **00 47 23.2 +0.4**
VRH Novokhopyorsk 72.56 320*c* *i*P **P** **00 47 22.6 -0.5**
VRH pmax pmax
comp=Z,153nm,0.7s
MOS Moscow 72.60 325 *e*P **P** **00 47 23.4 +0.2**
MOS *e* 00 47 42.7
MOS *e* 00 50 04.3
MOS *e*PPP PPP 00 51 50.0
MOS *e*S **S** **00 56 47.7 +0.7**
MOS pmax pmax
comp=Z,368nm,1.2s
MOS MLR MLR
comp=Z,8µm,18.0s
MOS MLR MLR
comp=N,3µm,16.0s
MOS MLR MLR
comp=E,5µm,16.0s
MAK Makhachkala 72.69 310 *e*P P 00 47 18.7 -5.2
MAK *e* 00 50 02.5
MAK *e*PPP PPP 00 51 48.9
MAK *e*S **S** **00 56 40.8 -7.6**
MAK pmax pmax
comp=Z,299nm,1.7s
MAK MLR MLR
comp=Z,20µm,17.0s
JLN Jalan Bani Buh 72.72 286 P **P** **00 47 25.4 +0.9**
SNR=6.8
JLN P **P** **00 47 25.4 +0.9**
SNR=6.8
MOO Moorlands 72.85 176 P **P** **00 47 26.5 +1.8**
comp=Z,106nm,1.4s
WBK Wadi Bani Khal 72.88 286 P **P** **00 47 26.4 +0.9**
SNR=16
WBK P **P** **00 47 26.4 +0.9**
SNR=16
WSAR Wadi Sarin 72.88 287 P **P** **00 47 26.4 +0.9**
SNR=13
BIDO Bidbid 73.17 288 P **P** **00 47 28.0 +0.9**
SNR=30
BIDO P **P** **00 47 28.0 +0.9**
SNR=30
AKT Akhty 73.18 308⇑ *i*P **P** **00 47 27.5 +0.4**
AKT *e* 00 47 42.5
AKT *e* 00 50 07.0
AKT *e*PPP PPP 00 51 53.2
AKT *e*S **S** **00 56 53.4 -1.1**
AKT *e* 00 57 32.9
AKT pmax pmax
comp=Z,165nm,0.6s
AKT MLR MLR
comp=Z,4µm,15.0s
TAU Tasmania Unive 73.33 176 P **P** **00 47 29.3 +1.9**
comp=Z,111nm,0.9s
TAU Tasmania Unive 73.33 176 P **P** **00 47 27.5 +0.1**
TAU pmax pmax
comp=Z,123nm,1.1s
TAU Tasmania Unive 73.33 176 P **P** **00 47 27.5 +0.1**
TAU IAmb IAmb 00 47 48.6
comp=Z,122nm,1.1s
AUTAR Taroona High S 73.36 176 P **P** **00 47 29.8 +2.2**
comp=Z,177nm,1.1s
OBN Obninsk 73.43 325⇑P **P** **00 47 28.2 0.0**
OBN Obninsk 73.43 325 P **P** **00 47 27.9 -0.2**
comp=Z,168nm,1.1s,baz=46,slow=2.0,SNR=82
OBN LR LR 01 22 02.4
comp=Z,6µm,19.7s,baz=57,slow=38
comp=Z,168nm,1.1s
OBN Obninsk 73.43 325 *i*P **P** **00 47 28.1 0.0**
OBN pmax pmax
comp=Z,366nm,1.3s
OBN Obninsk 73.43 325 P **P** **00 47 27.4 -0.7**
OBN Obninsk 73.43 325 P **P** **00 47 27.9 -0.2**
comp=Z,4µmcomp=Z,286nm,1.5s
SMDO Samad 73.44 287 P **P** **00 47 29.6 +0.7**
SNR=25
SMDO P **P** **00 47 29.6 +0.7**
SNR=25
LPSR Galich'ya Gora 73.44 322*c* *i*P **P** **00 47 28.1 -0.1**
LPSR pmax pmax
comp=Z,272nm,1.2s

POIN Pond Inlet 73.46 11 P **P** **00 47 27.9 -0.2**
BANOM Banah 73.59 291 *i*P **P** **00 47 30.5 +0.8**
SNR=14
BANOM Banah 73.59 291 P **P** **00 47 30.2 +0.5**
BANOM P **P** **00 47 30.2 +0.5**
SEKA Sheki 73.66 308 P **P** **00 47 30.1 +0.2**
SHME Shamm 73.66 291 *i*P **P** **00 47 30.8 +0.7**
SNR=74
SHME Shamm 73.66 291 P **P** **00 47 31.6 +1.5**
SNR=35
SHME P **P** **00 47 31.6 +1.5**
SNR=35
LKRN Lenkeran, Azer 73.68 305 P **P** **00 47 30.9 +1.0**
WIFE Three Sisters- 73.69 48 P **P** **00 47 30.3 +0.1**
WIFE IAmb IAmb 00 47 35.7
comp=Z,116nm,1.2s
JMDO Jabal Madar 73.70 287 P **P** **00 47 31.0 +0.6**
SNR=15
JMDO P **P** **00 47 31.0 +0.6**
SNR=15
VORR Voronezh 73.73 321 *e*P **P** **00 47 29.7 -0.3**
VORR pmax pmax
comp=Z,124nm,0.7s
KMPM Mount Pierce 73.80 52 P **P** **00 47 29.8 -0.9**
KMPM IAmb IAmb 00 47 36.5
comp=Z,107nm,1.2s
HOQ Hoqain 73.81 288 P **P** **00 47 31.1 +0.1**
SNR=45
HOQ P **P** **00 47 31.1 +0.1**
SNR=45
MDH Madha 73.87 290 *i*P **P** **00 47 30.9 -0.4**
SNR=16
MDH Madha 73.87 290 P **P** **00 47 31.6 +0.3**
SNR=9.8
MDH P **P** **00 47 31.6 +0.3**
SNR=9.8
PUL Pulkovo 73.87 331*c* *i*P **P** **00 47 30.8 +0.2**
PUL pmax pmax
comp=Z,576nm,1.7s
PUL MLR MLR
comp=Z,3µm,18.0s
MNGR Mingechevir, A 73.93 308 P **P** **00 47 32.7 +1.4**
MASF Masafi 73.95 290 P **P** **00 47 32.0 +0.3**
SNR=25
MASF P **P** **00 47 32.0 +0.3**
SNR=25
MSFE Esma-Masafi 73.96 290 *i*P **P** **00 47 32.1 +0.3**
SNR=26
VSR Storozhevoye 73.98 320*c* *i*P **P** **00 47 31.3 -0.1**
VSR pmax pmax
comp=Z,263nm,1.3s
STEI Steigen 74.03 342 *e*P **P** **00 47 31.4 +0.1**
STEI IAmb IAmb 00 47 32.7
comp=Z,160nm,1.0s
STEI *e*PP **PP** **00 50 15.9 -0.1**
STEI *e*S **S** **00 57 04.2 +1.5**
STEI *e*ScS **ScS** **00 57 41.0 +0.7**
STEI *e*SS **SS** **01 01 49.8 +3.3**
STEI IAMs_20 IAMs_20 01 24 07.1
comp=Z,4µm,16.5s
VORD Divnogorie 74.03 320 *e*P **P** **00 47 30.3 -1.4**
VORD pmax pmax
comp=Z,120nm,0.2s
VORD MLR MLR
comp=Z,2µm,13.0s
UOSS Minazif 74.10 290 P **P** **00 47 32.4 -0.3**
UOSS Minazif 74.10 290 P **P** **00 47 33.0 +0.3**
UOSS Minazif 74.10 290 P **P** **00 47 32.0 -0.7**
UOSS IAmb IAmb 00 47 34.1
comp=Z,144nm,1.1s
YBH Yreka Blue Hor 74.16 51 LR LR 01 13 56.3
comp=Z,3µm,22.0s,baz=295,slow=31
YBH Yreka Blue Hor 74.16 51 P **P** **00 47 32.5 -0.3**
YBH pmax pmax
comp=Z,106nm,1.5s
YBH Yreka Blue Hor 74.16 51 P **P** **00 47 32.5 -0.3**
KMRM Mail Ridge 74.16 52 P **P** **00 47 33.1 +0.3**
SOHO SOHO 74.20 289 *i*P **P** **00 47 32.7 -0.5**
SNR=39
SOHO SOHO 74.20 289 P **P** **00 47 33.5 +0.3**
SOHO P **P** **00 47 33.5 +0.3**
HATD Hatta, Dubai 74.22 290 *i*P **P** **00 47 33.8 +0.4**
SNR=115
HATD Hatta, Dubai 74.22 290 P **P** **00 47 34.4 +1.0**
SNR=56
HATD P **P** **00 47 34.4 +1.0**
SNR=56
BSY Bisya 74.28 287 P **P** **00 47 34.1 +0.4**
SNR=31
BSY P **P** **00 47 34.1 +0.4**
SNR=31
UMQ Umm Al-Quwin 74.28 291 *i*P **P** **00 47 35.1 +1.5**
SNR=6.4
UMQ Umm Al-Quwin 74.28 291 P **P** **00 47 34.7 +1.0**
UMQ P **P** **00 47 34.7 +1.0**
LOF Lofoten 74.34 342 *e*P **P** **00 47 32.7 -0.5**
LOF IAmb IAmb 00 47 33.4
comp=Z,55nm,1.2s
LOF *e*PP **PP** **00 50 19.5 +0.8**
LOF *e*S **S** **00 57 08.2 +1.9**
LOF *e*SS **SS** **01 01 56.6 +5.4**
LOF IAMs_20 IAMs_20 01 25 06.5
comp=Z,4µm,19.2s
ASHO Ashiyiah 74.34 290 *i*P **P** **00 47 34.5 +0.4**
SNR=34
ASHO Ashiyiah 74.34 290 P **P** **00 47 34.3 +0.3**
SNR=47
ASHO P **P** **00 47 34.3 +0.3**
SNR=47
KULLO Kullorsuaq 74.35 5 *i*P **P** **00 47 33.0 -0.2**
KULLO IAmb IAmb 00 47 34.3
comp=Z,124nm,1.1s
FAUS Fauske 74.39 341 *e*P **P** **00 47 33.7 +0.1**
FAUS IAmb IAmb 00 47 34.9
comp=Z,198nm,1.0s
FAUS *e*PP **PP** **00 50 20.0 +0.8**
FAUS *e*S **S** **00 57 08.1 +1.2**
FAUS *e*ScS **ScS** **00 57 44.1 +0.8**
FAUS *e*SS **SS** **01 01 56.6 +4.4**
FAUS IAMs_20 IAMs_20 01 21 18.4
comp=Z,4µm,21.6s
MHTO MHTO 74.44 285 P **P** **00 47 35.0 +0.4**
SNR=22
MHTO P **P** **00 47 35.0 +0.4**
SNR=22
GANJ Ganja 74.51 308 P **P** **00 47 35.2 +0.4**
NAZ Nazwa, Dubai 74.53 290 *i*P **P** **00 47 35.4 +0.3**
SNR=21
NAZ Nazwa, Dubai 74.53 290 P **P** **00 47 35.4 +0.3**
SNR=25
NAZ P **P** **00 47 35.4 +0.3**
SNR=25
ARQ Araqi 74.57 288 P **P** **00 47 35.8 +0.4**
SNR=45
ARQ P **P** **00 47 35.8 +0.4**
SNR=45
GOF Gofitskoye 74.62 313*c* *i*P **P** **00 47 35.8 +0.5**
GOF *e*S **S** **00 57 09.3 -0.9**
NEW Newport 74.63 43 LR LR 01 15 43.2
comp=Z,956nm,21.6s,baz=306,slow=32
NEW Newport 74.63 43 P **P** **00 47 35.0 -0.4**
NEW pmax pmax
comp=Z,105nm,1.3s
NEW Newport 74.63 43 P **P** **00 47 35.0 -0.4**
FIA1 FINESS Array S 74.63 333 P **P** **00 47 34.1 -0.9**
FINES FINESS Array B 74.64 333 P **P** **00 47 35.1 +0.1**
comp=Z,136nm,1.0s,baz=70,slow=6.3,SNR=158
FINES LR LR 01 22 51.1
comp=Z,3µm,18.9s,baz=56,slow=38
comp=Z,136nm,1.0s
FINES FINESS Array B 74.64 333 *i*P **P** **00 47 35.0 0.0**
FINES pmax pmax
comp=Z,136nm,1.0s
FINES FINESS Array B 74.64 333 P **P** **00 47 34.1 -1.0**
DBG Daneborg 74.68 355 *i*P **P** **00 47 35.0 -0.1**
DBG IAmb IAmb 00 47 35.9
comp=Z,58nm,1.1s
FAQ Al Faqa, Dubai 74.69 290 *i*P **P** **00 47 36.2 +0.1**
SNR=29
FAQ Al Faqa, Dubai 74.69 290 P **P** **00 47 36.4 +0.3**
SNR=22
ALNE Al Ain 74.87 289 *i*P **P** **00 47 37.4 +0.2**
SNR=35
ALNE Al Ain 74.87 289 P **P** **00 47 37.4 +0.2**
SNR=52
ALNE P **P** **00 47 37.4 +0.2**

ASUD Al Ashush, Dub 74.96 290 *i*P **P** **00 47 38.2 +0.6**
SNR=16
ASUD Al Ashush, Dub 74.96 290 P **P** **00 47 38.0 +0.4**
SNR=16
ASUD P **P** **00 47 38.0 +0.4**
SNR=16
TOZ Tahuroa Road 74.96 153 P **P** **00 47 37.3 +0.2**
TOZ IAmb IAmb 00 47 44.0
comp=Z,216nm,1.5s
TBLG Delisi 75.07 310 P **P** **00 47 38.7 +0.7**
BLKN Baker Lake 75.22 22 P **P** **00 47 37.7 -0.7**
BLKN IAmb IAmb 00 47 52.1
comp=Z,82nm,1.0s
AJN Ajban 75.26 290 *i*P **P** **00 47 39.2 -0.1**
SNR=31
AJN Ajban 75.26 290 P **P** **00 47 39.7 +0.4**
SNR=27
AJN P **P** **00 47 39.7 +0.4**
SNR=27
DQM DQM 75.28 285 P **P** **00 47 40.1 +0.6**
SNR=7.1
DQM P **P** **00 47 40.1 +0.6**
SNR=7.1
KBZ Khabaz 75.33 312 P **P** **00 47 40.2 +0.8**
comp=Z,99nm,0.8s,baz=80,slow=3.8,SNR=227
KBZ LR LR 01 21 47.2
comp=Z,3µm,20.7s,baz=78,slow=36
comp=Z,99nm,0.8s
KBZ Khabaz 75.33 312*c* *i*P **P** **00 47 40.0 +0.6**
KBZ pmax pmax
comp=Z,122nm,0.9s
KBZ MLR MLR
comp=Z,3µm,19.0s
KVAR Kislovodsk Arr 75.36 313 LR LR 01 23 56.9
comp=Z,2µm,18.3s,baz=326,slow=38
KIV Kislovodsk 75.36 313⇑P **P** **00 47 40.4 +0.6**
KIV Kislovodsk 75.36 313 *i*P **P** **00 47 40.6 +0.9**
SNR=56
KIV Kislovodsk 75.36 313 *e*P **P** **00 47 39.8 +0.1**
KIV *e* 00 50 27.7
KIV *e*PPP PPP 00 52 10.7
KIV *e*S **S** **00 57 18.7 -0.1**
KIV *e*SS **SS** **01 02 11.4 +3.2**
KIV pmax pmax
comp=Z,165nm,1.1s
KIV pmax pmax
comp=Z,454nm,3.8s
KIV MLR MLR
comp=Z,3µm,18.0s
KIV Kislovodsk 75.36 313 P **P** **00 47 40.1 +0.4**
KIV Kislovodsk 75.36 313 P **P** **00 47 40.6 +0.9**
comp=Z,3µmcomp=Z,198nm,1.3s
HIZ Hauiti 75.39 154 IAMs_20 IAMs_20 01 16 50.1
comp=Z,2µm,21.0s
RAUS Rausandaksla 75.41 341 *e*P **P** **00 47 39.3 -0.2**
RAUS IAmb IAmb 00 47 40.0
comp=Z,83nm,1.0s
RAUS *e*PP **PP** **00 50 27.6 -0.3**
RAUS *e* 00 52 18.8
RAUS *e*S **S** **00 57 19.3 +1.0**
RAUS *e*SS **SS** **01 02 11.2 +3.6**
RAUS IAMs_20 IAMs_20 01 27 07.1
comp=Z,4µm,17.4s
HATC Hat Creek Radi 75.42 51 IAMs_20 IAMs_20 01 17 35.2
comp=Z,3µm,20.0s
VAGH Vaagaholmen 75.42 341 *e*P **P** **00 47 39.3 -0.2**
VAGH IAmb IAmb 00 47 51.1
comp=Z,128nm,1.1s
VAGH *e*PP **PP** **00 50 27.7 -0.1**
VAGH *e* 00 52 21.1
VAGH *e*S **S** **00 57 20.5 +2.2**
VAGH *e*SS **SS** **01 02 10.8 +3.2**
VAGH IAMs_20 IAMs_20 01 24 38.4
comp=Z,4µm,18.3s
O03E Paynes Creek 75.43 52 IAMs_20 IAMs_20 01 18 29.6
comp=Z,2µm,18.0s
SHA1 Shidzhatmaz 75.48 312*c* *i*P **P** **00 47 41.2 +0.6**
MOR8 Moi Rana 75.48 340 *e*P **P** **00 47 38.8 -1.1**
MOR8 IAmb IAmb 00 47 39.9
comp=Z,160nm,1.0s
MOR8 *e*PP **PP** **00 50 26.6 -1.8**
MOR8 *e* 00 52 16.2
MOR8 *e*S **S** **00 57 19.5 +0.3**
MOR8 *e*SS **SS** **01 02 10.2 +1.4**
MOR8 IAMs_20 IAMs_20 01 25 30.9
comp=Z,4µm,18.4s
TRLG Trialeti 75.58 310 P **P** **00 47 42.8 +1.7**
LDM Libby Dam 75.59 42 P **P** **00 47 41.0 +0.2**
KONS Konsvik 75.62 341 *e*P **P** **00 47 40.5 -0.2**
KONS IAmb IAmb 00 47 41.8
comp=Z,75nm,1.2s
KONS *e*PP **PP** **00 50 30.3 +0.7**
KONS *e* 00 52 21.5
KONS *e*S **S** **00 57 22.2 +1.6**
KONS *e*SS **SS** **01 02 15.1 +4.3**
KONS IAMs_20 IAMs_20 01 31 32.0
comp=Z,4µm,16.4s
MCCM Marconi Confer 75.68 54 IAMs_20 IAMs_20 01 21 22.5
comp=Z,3µm,18.0s
NAX Nakhchivan 75.75 307 P **P** **00 47 42.3 +0.3**
STOK Stokkvaagen 75.77 341 *e*P **P** **00 47 41.1 -0.4**
STOK IAmb IAmb 00 47 54.8
comp=Z,55nm,1.0s
STOK *e*PP **PP** **00 50 30.9 0.0**
STOK *e* 00 52 22.8
STOK *e*S **S** **00 57 24.8 +2.5**
STOK *e*SS **SS** **01 02 16.5 +3.4**
STOK IAMs_20 IAMs_20 01 27 17.4
comp=Z,4µm,17.5s
GNI Garni 75.81 308 LR LR 01 23 52.9
comp=Z,1µm,19.3s,baz=66,slow=38
GNI Garni 75.81 308*c* *i*P **P** **00 47 43.8 +1.4**
GNI pmax pmax
comp=Z,331nm,1.7s
GNI Garni 75.81 308 P **P** **00 47 43.3 +0.9**
GNI Garni 75.81 308 IAMs_20 IAMs_20 01 26 45.7
comp=Z,2µm,18.0s
GNI Garni 75.81 308 P **P** **00 47 43.9 +1.4**
comp=Z,3µmcomp=Z,276nm,1.1s
CVS Carmenet Viney 75.89 54 IAMs_20 IAMs_20 01 21 30.8
comp=Z,3µm,19.0s
ERBR Yeremizino-Bor 75.89 315⇑ *i*P **P** **00 47 43.2 +0.6**
ERBR *e* 00 50 35.6
ERBR *e*S **S** **00 57 21.6 -2.7**
ERBR *e*SS **SS** **01 02 24.7 +8.8**
ERBR pmax pmax
comp=Z,222nm,1.0s
ERBR MLR MLR
comp=N,6µm,15.0s
ERBR MLR MLR
comp=E,8µm,16.0s
ERBR MLR MLR
comp=Z,5µm,15.0s
LEIR Leirfjorden 75.91 341 *e*P **P** **00 47 42.1 -0.2**
LEIR IAmb IAmb 00 47 43.4
comp=Z,122nm,1.2s
LEIR *e*PP **PP** **00 50 32.0 0.0**
LEIR *e* 00 52 22.5
LEIR *e*S **S** **00 57 25.5 +1.8**
LEIR *e*SS **SS** **01 02 19.1 +4.0**
LEIR IAMs_20 IAMs_20 01 27 21.4
comp=Z,4µm,17.9s
SUTB Sutter Butte 75.94 53 IAMs_20 IAMs_20 01 18 06.1
comp=Z,2µm,19.0s
MXZ Matakaoa Point 75.96 151 P **P** **00 47 45.7 +2.9**
comp=Z,57nm,1.7s
UMZA Um Al Zommool 75.97 288 P **P** **00 47 43.7 +0.3**
UMZA P **P** **00 47 43.7 +0.3**
ORV Oroville 75.98 52 IAMs_20 IAMs_20 01 18 08.2
comp=Z,3µm,20.0s
URZ Urewera 76.06 152 LR LR 01 18 01.7
comp=Z,2µm,22.0s,baz=326,slow=33
VSU Vasula 76.14 331*c* *i*P **P** **00 47 43.2 -0.5**
VSU pmax pmax
comp=Z,341nm,1.1s
VSU MLR MLR
comp=Z,2µm,16.0s
BMO Blue Mountains 76.17 46 P **P** **00 47 45.2 +0.8**
BMO Blue Mountains 76.17 46 IAMs_20 IAMs_20 01 17 52.9
comp=Z,2µm,20.0s
UPNV Upernavik 76.17 5 *i*P **P** **00 47 43.5 -0.2**
UPNV IAmb IAmb 00 47 44.9
comp=Z,70nm,1.0s
RAR Rarotonga 76.24 125 LR LR 01 14 24.5

comp=Z,2µm,21.4s,baz=314,slow=30
LABN Labinsk 76.27 314 *c* iP **P 00 47 45.7 +0.9**
LABN *e* 00 50 39.6
LABN *e*S **S 00 57 28.7 +0.2**
LABN pmax pmax
comp=Z,121nm,0.9s
LABN MLR MLR
comp=N,9µm,15.0s
LABN MLR MLR
comp=Z,5µm,15.0s
JNW Jan Mayen West 76.47 350 *e*P **P 00 47 47.3 +1.9**
JNW IAmb IAmb 00 47 48.0
comp=Z,113nm,1.1s
JNW *e*PP **PP 00 50 37.4 +0.8**
JNW *e*S **S 00 57 30.5 +0.8**
JNW *e*SS **SS 01 02 27.1 +3.8**
JNW IAMs_20 IAMs_20 01 27 49.4
comp=Z,916nm,17.8s
JNE Jan Mayen East 76.48 350 *e*P **P 00 47 46.5 +1.0**
JNE IAmb IAmb 00 47 47.4
comp=Z,101nm,1.1s
JNE *e*S **S 00 57 31.5 +1.5**
JNE IAMs_20 IAMs_20 01 24 52.4
comp=Z,892nm,15.4s
WVOR Wild Horse Val 76.51 49 P **P 00 47 46.4 0.0**
WVOR pmax pmax
comp=Z,201nm,1.7s
WVOR Wild Horse Val 76.51 49 P **P 00 47 46.4 0.0**
WVOR IAmb IAmb 00 47 51.7
comp=Z,200nm,1.7s
JMIC Jan Mayen 76.52 350 LR LR 01 22 15.7
comp=Z,667nm,20.1s,baz=37,slow=36
JMIC Jan Mayen 76.52 350 *e*P **P 00 47 47.5 +1.8**
JMIC IAmb IAmb 00 47 48.1
comp=Z,93nm,1.2s
JMIC *e*PP **PP 00 50 36.0 -1.1**
JMIC *e*S **S 00 57 30.9 +0.6**
JMIC IAMs_20 IAMs_20 01 26 33.8
comp=Z,905nm,19.8s
MZWR Madinat Zayed 76.53 290 P **P 00 47 47.1 +0.5**
MZWR P **P 00 47 47.1 +0.5**
BKZ Black Stump Fm 76.59 153 P **P 00 47 49.1 +2.6**
comp=Z,33nm,1.0s
JMI Jan Mayen 76.60 350 *e*P **P 00 47 47.5 +1.4**
JMI IAmb IAmb 00 48 06.0
comp=Z,749nm,2.7s
JMI *e*PP **PP 00 50 37.3 -0.4**
JMI *e*S **S 00 57 32.4 +1.2**
JMI IAMs_20 IAMs_20 01 26 36.4
comp=Z,1µm,16.5s
JRN Qarnain Island 76.82 291 P **P 00 47 48.6 +0.4**
SNR=35
JRN P **P 00 47 48.6 +0.4**
SNR=35
PLID Pearl Lake 76.86 45 P **P 00 47 47.8 -0.6**
PLID IAMs_20 IAMs_20 01 18 17.1
comp=Z,2µm,20.0s
WELL Weller Preserv 77.04 53 IAMs_20 IAMs_20 01 14 11.3
comp=Z,2µm,22.0s
SUMG Summit 77.11 0 P **P 00 47 49.7 +0.2**
SUMG pmax pmax
comp=Z,141nm,1.1s
SUMG MLR MLR
comp=Z,2µm,20.0s
SUMG Summit 77.11 0 P **P 00 47 49.7 +0.2**
SUMG IAmb IAmb 00 47 52.1
comp=Z,140nm,1.1s
SUMG IAMs_20 IAMs_20 01 22 46.9
comp=Z,2µm,20.0s
SUMG Summit 77.11 0 *i* P **P 00 47 50.4 +0.9**
SUMG IAmb IAmb 00 47 51.5
comp=Z,131nm,1.1s
BATM Batumi 77.14 311 ⇓P **P 00 47 51.0 +1.2**
BATM Batumi 77.14 311 P **P 00 47 50.9 +1.2**
MZR Muzera 77.21 289 *i* P **P 00 47 50.7 +0.3**
SNR=125
MZR Muzera 77.21 289 P **P 00 47 51.0 +0.5**
SNR=56
MZR P **P 00 47 51.0 +0.5**
SNR=56
GHWR Ruwais 77.25 290 P **P 00 47 50.8 +0.1**
GHWR P **P 00 47 50.8 +0.1**
VSLR Vesyoloye 77.28 313 *c* iP **P 00 47 51.0 +0.5**
VSLR pmax pmax
comp=Z,300nm,0.9s
VSLR MLR MLR
comp=Z,3µm,16.0s
SAO San Andreas Ge 77.34 55 P **P 00 47 51.7 +0.7**
NSS Namsos 77.39 340 *e*P **P 00 47 50.3 -0.4**
NSS IAmb IAmb 00 47 51.0
comp=Z,103nm,1.2s
NSS *e*PP **PP 00 50 41.3 -3.2**
NSS *e*S **S 00 57 40.6 +0.5**
NSS IAMs_20 IAMs_20 01 25 24.0
comp=Z,4µm,19.1s
SOC Sochi 77.42 313 *e*P **P 00 47 49.7 -1.6**
SOC *e* 00 50 42.2
SOC *e*PPP PPP 00 52 33.4
SOC *e*S **S 00 57 38.8 -2.3**
SOC *e*SS **SS 01 02 40.3 +1.2**
SOC *e*SSS SSS 01 06 00.0
SOC pmax pmax
comp=Z,100nm,0.7s
SOC MLR MLR
comp=Z,5µm,17.0s
CMB Columbia Colle 77.47 53 IAMs_20 IAMs_20 01 22 22.7
comp=Z,2µm,19.0s
MRZ Mangatainoka R 77.53 154 P **P 00 47 52.1 +0.4**
NUUG Nuugaatsiaq 77.61 5 *i* P **P 00 47 51.8 0.0**
NUUG IAmb IAmb 00 47 52.5
comp=Z,51nm,1.3s
BBGB Big Mountain B 77.72 55 P **P 00 47 53.3 +0.1**
BBGB IAmb IAmb 00 47 58.5
comp=Z,190nm,1.4s
SHAO Shalim 77.77 284 P **P 00 47 54.6 +1.0**
SNZO South Karori 77.78 155 P **P 00 47 55.2 +2.2**
comp=Z,74nm,1.2s
SNZO South Karori 77.78 155 IAMs_20 IAMs_20 01 16 54.3
comp=Z,2µm,20.0s
BFZ Birch Farm 77.80 154 P **P 00 47 54.4 +1.2**
comp=Z,143nm,1.4s
GEVA Gevas 77.83 307 P **P 00 47 53.5 -0.5**
GEVA IAmb IAmb 00 47 58.6
comp=Z,128nm,1.1s
HULI Fort Hunter Li 77.85 55 P **P 00 47 53.8 0.0**
HULI IAmb IAmb 00 48 00.1
comp=Z,254nm,1.4s
MNK Minsk 77.98 327 *i* P **P 00 47 54.3 +0.2**
comp=E,152nm,1.2s
MNK *i* P **P 00 47 54.3 +0.2**
comp=N,185nm,1.6s
MNK *i* P **P 00 47 54.3 +0.2**
comp=Z,259nm,1.1s,baz=54
MNK *i* PcP **PcP 00 48 03.7 -0.2**
MNK *i* PP **PP 00 50 50.2 +0.5**
MNK *i* PPP PPP 00 52 37.6
MNK *i* S **S 00 57 45.8 -1.0**
MNK *i* SS **SS 01 02 54.2 +7.3**
MNK *i* SSS SSS 01 06 25.1
MNK *i* LQ LQ 01 16 59.0
MNK *i* LR LR 01 21 40.5
MNK *i* LRM MLR 01 25 20.4
comp=N,4µm,18.6s
MNK *i* LRM MLR 01 25 30.0
comp=Z,5µm,16.5s
MNK Minsk 77.98 327 *i* P **P 00 47 54.3 +0.2**
MNK *i* 00 48 03.7
MNK *i* 00 50 50.1
MNK *i* PPP PPP 00 52 37.6
MNK *i* S **S 00 57 45.8 -1.0**
MNK *i* SS **SS 01 02 54.2 +7.3**
MNK pmax pmax
comp=Z,259nm,1.1s
MNK pmax pmax
comp=E,152nm,1.2s
MNK pmax pmax
comp=N,185nm,1.6s
MNK MLR MLR
comp=N,4µm,19.0s
MNK MLR MLR
comp=Z,5µm,17.0s
MNK MLR MLR
comp=E,3µm,16.0s
SLWR Sila 78.15 291 P **P 00 47 56.0 +0.3**
SLWR P **P 00 47 56.0 +0.3**
SAKB Bahrain 78.18 293 P **P 00 47 56.0 +0.2**
ANN Anapa 78.21 315 ⇓*i* P **P 00 47 55.4 -0.2**
ANN *e**PP **pwP 00 48 03.5 -1.1**
ANN *e* 00 50 57.3
ANN *e*S **S 00 57 47.5 -2.1**
ANN pmax pmax
comp=Z,153nm,1.0s
ANN MLR MLR
comp=N,6µm,17.0s
ANN MLR MLR
comp=Z,4µm,17.0s
JCZ Jackson Bay 78.33 160 P **P 00 47 58.8 +2.7**
comp=Z,112nm,1.5s
KHZ Kahutara 78.34 156 P **P 00 47 58.0 +1.9**
KHZ Kahutara 78.34 156 P **P 00 47 55.7 -0.4**
KHZ IAmb IAmb 00 48 01.2
comp=Z,91nm,0.9s
GURO Guroymak-BITLI 78.42 308 P **P 00 47 57.5 +0.3**
GURO IAmb IAmb 00 47 59.7
comp=Z,155nm,1.0s
SCO Scoresbysund 78.53 354 P **P 00 47 57.1 +0.2**
SCO pmax pmax
comp=Z,172nm,1.3s
SCO Scoresbysund 78.53 354 P **P 00 47 57.1 +0.2**
SCO IAmb IAmb 00 47 59.5
comp=Z,172nm,1.3s
SCO Scoresbysund 78.53 354 *i* P **P 00 47 58.0 +1.1**
SCO IAmb IAmb 00 47 59.3
comp=Z,164nm,1.3s
HLID Hailey 78.62 46 IAMs_20 IAMs_20 01 24 10.6
comp=Z,2µm,19.0s
OXZ Oxford 78.65 158 P **P 00 47 57.1 -0.7**
RPZ Rata Peaks 78.68 159 LR LR 01 20 22.9
comp=Z,208nm,21.0s,baz=341,slow=34
KTUT Trabzon 78.70 311 ⇑P **P 00 48 00.3 +1.9**
NVAR Mina Array Bea 78.70 52 P **P 00 47 59.5 +0.6**
comp=Z,19nm,0.8s,baz=289,slow=5.7,SNR=72
NVAR PKP2bc 01 14 43.6
comp=Z,0.1nm,0.4s,baz=222,slow=2.0,SNR=3.8
NVAR LR LR 01 19 31.0
comp=Z,3µm,19.4s,baz=290,slow=33
comp=Z,19nm,0.8s
NVAR Mina Array Bea 78.70 52 P **P 00 47 58.3 -0.5**
KOPT Kop Dagi 78.71 310 P **P 00 47 59.2 +0.3**
KOPT IAmb IAmb 00 48 13.8
comp=Z,112nm,1.1s
NV11 Mina Array Sit 78.80 52 P **P 00 47 59.1 -0.2**
EGMT Eagleton 78.97 40 P **P 00 47 59.8 -0.2**
EGMT IAmb IAmb 00 48 05.0
comp=Z,214nm,1.4s
FFC Flin Flon 79.01 32 P **P 00 47 59.0 -0.9**
FFC pmax pmax
comp=Z,59nm,1.2s
FFC MLR MLR
comp=Z,2µm,20.0s
FFC Flin Flon 79.01 32 P **P 00 47 59.0 -0.9**
FFC Flin Flon 79.01 32 IAMs_20 IAMs_20 01 23 49.6
comp=Z,2µm,20.0s
PABE Paberze 79.15 329 P **P 00 47 59.9 -0.7**
RBK Rabkut 79.20 284 P **P 00 48 01.7 +0.1**
SNR=11
RBK P **P 00 48 01.7 +0.1**
SNR=11
WHFO Wadi Hawf 79.37 285 P **P 00 48 02.4 -0.1**
SNR=11
WHFO P **P 00 48 02.4 -0.1**
SNR=11
AK03 Malin Array Si 79.55 323 P **P 00 48 02.7 -0.2**
AKASG Malin Array Be 79.56 323 P **P 00 48 02.6 -0.3**
comp=Z,47nm,0.7s,baz=49,slow=5.9,SNR=200
AKASG PP **PP 00 51 02.5 -0.5**
comp=Z,17nm,1.1s,baz=48,slow=8.7,SNR=6.8
AKASG LR LR 01 25 45.2
comp=Z,8µm,19.7s,baz=50,slow=38
comp=Z,47nm,0.7s
AKASG Malin Array Be 79.56 323 P **P 00 48 02.5 -0.4**
AKASG pmax pmax
comp=Z,508nm,1.9s
AKASG Malin Array Be 79.56 323 P **P 00 48 02.5 -0.4**
AKBB Malin Array Si 79.56 323 *c* iP **P 00 48 02.6 -0.3**
AKBB Malin Array Si 79.56 323 P **P 00 48 02.6 -0.3**
AKBB Malin Array Si 79.56 323 P **P 00 48 02.2 -0.7**
ELK Elko 79.56 49 LR LR 01 17 37.3
comp=Z,4µm,21.5s,baz=298,slow=32
ELK Elko 79.56 49 P **P 00 48 03.3 -0.2**
ELK pmax pmax
comp=Z,84nm,1.4s
ELK Elko 79.56 49 P **P 00 48 03.3 -0.2**
KIEV Kiev 79.57 323 ⇑P **P 00 48 02.9 -0.1**
KIEV Kiev 79.57 323 *i* P **P 00 48 02.9 -0.1**
SNR=53
KIEV *i* P **P 00 48 03.2 +0.2**
SNR=29
KIEV Kiev 79.57 323 P **P 00 48 02.9 -0.1**
KIEV Kiev 79.57 323 P **P 00 48 02.3 -0.7**
comp=Z,11µmcomp=Z,628nm,1.8s
NC405 NORSAR Array S 80.00 338 P **P 00 48 04.8 -0.4**
NC405 IAmb IAmb 00 48 06.7
comp=Z,184nm,1.1s
ILULI Ilulissat 80.05 5 P **P 00 48 05.2 0.0**
ILULI pmax pmax
comp=Z,153nm,1.2s
ILULI MLR MLR
comp=Z,2µm,19.0s
ILULI Ilulissat 80.05 5 P **P 00 48 05.2 0.0**
ILULI IAmb IAmb 00 48 07.0
comp=Z,153nm,1.2s
ILULI IAMs_20 IAMs_20 01 28 08.3
comp=Z,2µm,19.0s
ILULI Ilulissat 80.05 5 *i* P **P 00 48 05.4 +0.2**
ILULI IAmb IAmb 00 48 06.6
comp=Z,162nm,1.2s
HFS Hagfors 80.06 336 P **P 00 48 05.6 +0.2**
comp=Z,46nm,0.8s,baz=101,slow=3.2,SNR=46
HFS LR LR 01 26 05.0
comp=Z,3µm,19.4s,baz=40,slow=38
comp=Z,46nm,0.8s
SIM Simferopol' **80.12 317** *e*P **P 00 48 04.9 -1.2**
SIM *e* 00 48 13.0
SIM *e* 00 51 08.0
SIM *e*S **S 00 58 06.0 -3.9**
SIM pmax pmax
comp=Z,112nm,0.9s
DOMB Dombas 80.13 339 *e*P **P 00 48 06.1 +0.2**
DOMB IAmb IAmb 00 48 06.5
comp=Z,105nm,1.0s
DOMB *e*PP **PP 00 51 06.7 -0.8**
DOMB *e*S **S 00 58 10.4 +0.9**
DOMB *e*SS **SS 01 03 21.6 +2.8**
DOMB IAMs_20 IAMs_20 01 29 04.3
comp=Z,5µm,17.2s
MOL Molde 80.17 340 *e*P **P 00 48 06.4 +0.4**
MOL IAmb IAmb 00 48 07.5
comp=Z,2µm,3.4s
MOL *e*PP **PP 00 51 08.0 +0.3**
MOL *e*S **S 00 58 11.1 +1.3**
MOL *e*SS **SS 01 03 23.6 +4.3**
MOL IAMs_20 IAMs_20 01 29 25.8
comp=Z,4µm,17.4s
MI28 Mi28,Pidlybu 80.22 324 P **P 00 48 05.9 -0.6**
NB2 NORSAR Subarra 80.22 338 P **P 00 48 06.3 -0.1**
comp=Z,178nm,1.1s,baz=41,slow=5.3
NB2 PP **PP 00 51 08.8 +0.6**
comp=Z,34nm,1.2s,baz=47,slow=8.6
NB2 NORSAR Subarra 80.22 338 P **P 00 48 03.0 -3.4**
NB2 pmax pmax
comp=Z,207nm,1.3s
NB2 NORSAR Subarra 80.22 338 P P 00 48 18.0 +12
NOA NORSAR Array B 80.22 338 P **P 00 48 06.2 -0.2**
comp=Z,47nm,0.8s,baz=42,slow=5.3,SNR=112
NOA PP **PP 00 51 07.2 -1.0**
comp=Z,9.5nm,1.0s,baz=47,slow=8.5,SNR=4.5
NOA LR LR 01 26 51.6
comp=Z,4µm,19.9s,baz=40,slow=38
comp=Z,47nm,0.8s
NC602 NORSAR Array S 80.34 338 *e*P **P 00 48 05.2 -1.7**
NC602 IAmb IAmb 00 48 18.2
comp=Z,122nm,1.4s
NC602 *e*PP **PP 00 51 08.6 -0.6**
NC602 *e*S **S 00 58 13.3 +1.6**
NC602 *e*SS **SS 01 03 25.8 +3.9**
NC602 IAMs_20 IAMs_20 01 26 15.7
comp=Z,5µm,21.2s
NORES NORESS Array B 80.34 338 P **P 00 48 06.8 -0.2**
NORES pmax pmax
comp=Z,31nm,1.1s
SUW Suwalki 80.45 328 *e*P **P 00 48 08.0 +0.3**
SUW *e*S **SKSac 00 58 24.5 -0.3**
SUW Suwalki 80.45 328 P **P 00 48 07.3 -0.4**
SUW MLR MLR
comp=Z,3µm,19.0s
SUW Suwalki 80.45 328 P **P 00 48 07.3 -0.4**
SUW IAMs_20 IAMs_20 01 26 24.6
comp=Z,3µm,19.0s
HVU Hansel Valley 80.59 47 P **P 00 48 09.5 +0.6**
HVU pmax pmax
comp=Z,177nm,1.5s
HVU Hansel Valley 80.59 47 P **P 00 48 09.5 +0.6**
HVU IAmb IAmb 00 48 16.3
comp=Z,177nm,1.5s
ARPR Arapgir-MALATY 80.62 310 P **P 00 48 09.7 +0.6**
AKN Aaknes 80.64 340 *e*P **P 00 48 09.2 +0.6**
AKN IAmb IAmb 00 48 10.2
comp=Z,88nm,1.1s
AKN *e*PP **PP 00 51 11.6 0.0**
AKN *e*S **S 00 58 16.8 +2.0**
AKN *e*SS **SS 01 03 30.1 +3.7**
AKN IAMs_20 IAMs_20 01 29 41.0
comp=Z,4µm,17.6s
SYZ Scrubby Hill 80.68 161 P **P 00 48 11.5 +2.8**
comp=Z,98nm,1.3s
FURC Furnace Creek, 80.69 53 IAMs_20 IAMs_20 01 24 32.8
comp=Z,2µm,18.0s
LUBAR Lubar, Ukraine 80.78 323 P **P 00 48 09.2 -0.3**
RNPP9 Sopachiv 80.81 325 P **P 00 48 10.1 +0.4**
TPNV Topopah Spring 80.86 53 P **P 00 48 10.0 -0.4**
TPNV pmax pmax
comp=Z,123nm,1.3s
TPNV MLR MLR
comp=Z,2µm,18.0s
TPNV Topopah Spring 80.86 53 P **P 00 48 10.0 -0.4**
TPNV IAmb IAmb 00 48 15.4
comp=Z,123nm,1.2s
TPNV IAMs_20 IAMs_20 01 24 54.3
comp=Z,2µm,18.0s
SNOW Snow King Moun 80.92 45 IAMs_20 IAMs_20 01 30 39.4
comp=Z,2µm,18.0s
PASC Pasadena Art C 80.93 56 P **P 00 48 10.7 0.0**
BAL3X Bal3x, Balta 80.98 321 P **P 00 48 10.4 -0.3**
AHID Auburn Hatcher 81.09 45 P **P 00 48 11.8 +0.2**
AHID IAmb IAmb 00 48 16.9
comp=Z,136nm,1.5s
AHID IAMs_20 IAMs_20 01 23 07.0
comp=Z,2µm,18.0s
OSL Oslo 81.21 337 *e*P **P 00 48 12.0 +0.4**
OSL IAmb IAmb 00 48 23.4
comp=Z,228nm,1.2s
OSL *e*PP **PP 00 51 15.5 -0.8**
OSL *e*S **S 00 58 22.1 +1.4**
OSL IAMs_20 IAMs_20 01 29 39.5
comp=Z,3µm,15.1s
SOEG Soedalen 81.37 357 *i* P **P 00 48 12.0 -0.3**
SOEG IAmb IAmb 00 48 13.2
comp=Z,44nm,1.0s
SHOC Shoshone, Teco 81.39 53 IAMs_20 IAMs_20 01 25 18.7
comp=Z,3µm,19.0s
SKAR Skarslia 81.42 339 *e*P **P 00 48 13.5 +0.7**
SKAR IAmb IAmb 00 48 14.4
comp=Z,459nm,2.1s
SKAR *e*PP **PP 00 51 17.6 -0.5**
SKAR *e*S **S 00 58 23.8 +0.7**
SKAR IAMs_20 IAMs_20 01 27 13.9
comp=Z,5µm,19.2s
DUG Dugway, Tooele 81.42 48 P **P 00 48 12.8 -0.6**
DUG pmax pmax
comp=Z,165nm,1.4s
DUG MLR MLR
comp=Z,3µm,19.0s
DUG Dugway, Tooele 81.42 48 P **P 00 48 12.8 -0.6**
DUG IAmb IAmb 00 48 18.7
comp=Z,165nm,1.4s
HWUT Hardware Ranch 81.44 47 P **P 00 48 13.6 +0.1**
HWUT IAmb IAmb 00 48 19.1
comp=Z,211nm,1.3s
SORM Soroca 81.54 322 ⇓P **P 00 48 13.6 0.0**
SORM Soroca 81.54 322 P **P 00 48 13.6 0.0**
SORM Soroca 81.54 322 P **P 00 48 13.6 0.0**
comp=Z,2µmcomp=Z,84nm,1.2s
PPT Papeete 81.57 116 LR LR 01 16 56.1
comp=Z,1µm,21.9s,baz=304,slow=30
PURM Purcari 81.66 320 ⇓P **P 00 48 14.6 +0.4**
PURM Purcari 81.66 320 P **P 00 48 14.0 -0.3**
comp=Z,3µmcomp=Z,169nm,1.2s
FOO Floro 81.67 341 *e*P **P 00 48 14.5 +0.5**
FOO IAmb IAmb 00 48 14.8
comp=Z,76nm,1.1s
FOO *e*PP **PP 00 51 19.5 -0.5**
FOO *e*S **S 00 58 26.5 +1.1**
FOO *e*SS **SS 01 03 45.4 +3.9**
FOO IAMs_20 IAMs_20 01 27 56.2
comp=Z,3µm,17.4s
HYA Hoyanger 81.68 340 *e*P **P 00 48 14.8 +0.7**
HYA IAmb IAmb 00 48 15.5
comp=Z,134nm,1.1s
HYA *e*PP **PP 00 51 19.7 -0.4**
HYA *e*S **S 00 58 26.9 +1.4**
HYA IAMs_20 IAMs_20 01 30 04.0
comp=Z,5µm,17.7s
LAO LASA Array 81.71 40 P **P 00 48 15.0 +0.3**
LAO IAmb IAmb 00 48 20.1
comp=Z,337nm,1.7s
STRU Stroemstad 81.73 337 *i* P **P 00 48 14.3 0.0**
KONO Kongsberg 81.80 338 *de*P **P 00 48 15.3 +0.6**
KONO pmax pmax
comp=Z,64nm,1.3s
KONO MLR MLR
comp=Z,3µm,20.0s
KONO Kongsberg 81.80 338 *e*P **P 00 48 15.0 +0.2**
KONO *e*PP **PP 00 51 21.4 +0.2**
KONO *e*S **S 00 58 28.5 +1.6**
KONO IAMs_20 IAMs_20 01 27 20.1
comp=Z,3µm,18.9s
KONO Kongsberg 81.80 338 P **P 00 48 14.8 0.0**
KONO IAmb IAmb 00 48 26.7
comp=Z,123nm,1.3s
BZK Bozkurt 81.84 314 ⇑P **P 00 48 16.0 +0.7**
BZK Bozkurt 81.84 314 P **P 00 48 15.5 +0.2**
BZK IAmb IAmb 00 48 30.2
comp=Z,80nm,1.0s
BLEU Blekinge 82.03 333 *i* P **P 00 48 15.3 -0.7**
BW06 Boulder Array 82.03 45 IAMs_20 IAMs_20 01 22 53.9
comp=Z,2µm,20.0s
PD31 Pinedale Array 82.03 45 P **P 00 48 16.1 -0.5**
PDAR Pinedale Array 82.03 45 P **P 00 48 16.9 +0.2**
comp=Z,17nm,1.1s,baz=283,slow=2.4,SNR=31
PDAR PKKPbc **PKKPbc 01 06 44.6 -1.1**
comp=Z,0.3nm,0.5s,baz=147,slow=4.7,SNR=2.7
PDAR PKPPKP **P'P'df 01 14 50.0 -5.7**
comp=Z,0.7nm,1.0s,baz=142,slow=3.6,SNR=5.7
PDAR LR LR 01 21 47.5
comp=Z,975nm,19.7s,baz=299,slow=34
comp=Z,17nm,1.1s
PDAR Pinedale Array 82.03 45 P **P 00 48 15.9 -0.8**
SUE Sulen 82.18 340 *e*P **P 00 48 17.4 +0.7**
SUE IAmb IAmb 00 48 17.6
comp=Z,185nm,1.7s
SUE *e*PP **PP 00 51 23.9 -0.4**
SUE *e*S **S 00 58 32.9 +2.2**
SUE IAMs_20 IAMs_20 01 30 36.9
comp=Z,3µm,15.6s
SFJD Kangerlussuaq 82.27 5 LR LR 01 28 21.3
comp=Z,560nm,19.0s,baz=344,slow=38
SFJD Kangerlussuaq 82.27 5 P **P 00 48 16.8 -0.3**
SFJD pmax pmax
comp=Z,121nm,1.2s
SFJD Kangerlussuaq 82.27 5 P **P 00 48 16.8 -0.3**
SFJD IAmb IAmb 00 48 18.7
comp=Z,121nm,1.1s
SFJD Kangerlussuaq 82.27 5 IAMs_20 IAMs_20 01 31 52.0
comp=Z,1µm,19.0s
SFJD Kangerlussuaq 82.27 5 *i* P **P 00 48 17.2 +0.1**
SFJD IAmb IAmb 00 48 18.4
comp=Z,122nm,1.1s
SFJD IAML 00 48 18.7
comp=Z,41nm,1.1s
KMPD K-Podol'skiy 82.28 323 P **P 00 48 16.9 -0.6**
TJOU Tjoern 82.33 336 *i* P **P 00 48 17.4 -0.2**
BNN Bunyan 82.39 311 P **P 00 48 18.7 +0.3**
GAZ Gaziantep 82.39 309 P **P 00 48 18.8 +0.4**
PFO Pinyon Flats O 82.45 55 LR LR 01 24 28.7
comp=Z,4µm,18.1s,baz=278,slow=35

PFO Pinyon Flats O 82.45 55 *d* iP P 00 48 18.9 0.0
PFO pmax pmax
comp=Z,69nm,1.2s
PFO MLR MLR
comp=Z,6µm,18.0s
PFO Pinyon Flats O 82.45 55 P P 00 48 18.4 -0.5
PFO IAmb IAmb 00 48 23.7
comp=Z,116nm,1.4s
ASK Askoy 82.52 340 *e*P P 00 48 19.4 +0.9
ASK IAmb IAmb 00 48 20.1
comp=Z,336nm,1.7s
ASK *e*PP PP 00 51 26.4 -0.7
ASK *e*S S 00 58 36.7 +2.5
ASK *e*SS SS 01 03 58.3 +4.1
ASK IAMs_20 IAMs_20 01 30 45.6
comp=Z,5µm,18.8s
IASR Iasi 82.54 321 ⇑P P 00 48 19.7 +0.8
ODD1 Odda 82.54 339 *e*P P 00 48 19.6 +0.9
ODD1 IAmb IAmb 00 48 30.8
comp=Z,101nm,1.1s
ODD1 *e*PP PP 00 51 27.4 +0.1
ODD1 *e*S SKSac 00 58 37.7 -1.2
ODD1 IAMs_20 IAMs_20 01 28 08.4
comp=Z,5µm,20.6s
BER Bergen 82.56 340 *e*P P 00 48 19.1 +0.4
BER IAmb IAmb 00 48 30.9
comp=Z,193nm,1.4s
BER *e*PP PP 00 51 28.1 +0.7
BER *e*SKSac SKSac 00 58 38.3 -0.6
BER IAMs_20 IAMs_20 01 30 38.1
comp=Z,5µm,18.4s
R9F13 Warsaw-Wawer 82.56 328 *i* P P 00 48 19.2 +0.3
comp=Z,3.9nm,0.6s
R9F13 *e*PP PP 00 51 29.8 +2.2
R9F13 *e* 00 54 01.2
R9F13 *e*S S 00 58 34.9 0.0
LEOM Leova 82.60 320 P P 00 48 19.2 0.0
DEL Delary 82.66 334 *i* P P 00 48 18.7 -0.6
FABU Falkenberg 82.70 335 *i* P P 00 48 18.9 -0.6
ONAU Onsala 82.70 335 *i* P P 00 48 19.1 -0.4
VASR Vaslui 82.75 321 ⇑P P 00 48 21.2 +1.2
BAR Barrett 82.79 56 IAMs_20 IAMs_20 01 22 56.7
comp=Z,3µm,19.0s
BEL Belsk 82.97 328 *e*P P 00 48 21.8 +0.8
BEL *e*S S 00 58 53.1 +14
FRB Frobisher Bay 82.97 13 LR LR 01 29 32.7
comp=Z,1µm,20.3s,baz=340,slow=39
BLS5 Blasjo 82.98 339 *e*P P 00 48 22.1 +1.1
BLS5 IAmb IAmb 00 48 33.2
comp=Z,155nm,1.2s
BLS5 *e*PP PP 00 51 32.2 +1.3
BLS5 *e*SKSac SKSac 00 58 41.7 -0.1
BLS5 *e*SS SS 01 04 06.0 +4.7
BLS5 IAMs_20 IAMs_20 01 28 10.7
comp=Z,6µm,18.4s
CBX Cerro Bola 82.98 57 P P 00 48 21.4 -0.3
CBX IAmb IAmb 00 48 26.4
comp=Z,114nm,1.3s
BIR Birlad 83.06 320 ⇓P P 00 48 22.9 +1.3
BIR Birlad 83.06 320 P P 00 48 22.9 +1.3
VLDR Vladesti 83.07 320 ⇓P P 00 48 22.6 +0.9
PRAR RASCA 83.15 322 ⇓P P 00 48 22.4 +0.3
VARL Varlezi 83.17 320 ⇓P P 00 48 23.1 +0.9
SCTR Scanteiesti 83.22 320 ⇓P P 00 48 23.6 +1.2
HOMB Homborsund 83.22 337 *e*P P 00 48 23.1 +0.9
HOMB *e*PP PP 00 51 32.1 -0.7
HOMB *e*S S 00 58 42.9 +1.4
HOMB *e*SS SS 01 04 07.8 +3.0
HOMB IAMs_20 IAMs_20 01 30 00.7
comp=Z,4µm,18.2s
HOMB Homborsund 83.22 337 *i* P P 00 48 19.1 -3.0
BSD Bornholm Skovb 83.23 332 *i* P P 00 48 21.6 -0.7
BSD IAmb IAmb 00 48 23.1
comp=Z,283nm,1.2s
GIRR Girov 83.25 321 ⇓P P 00 48 23.1 +0.4
BJUU Bjuv 83.27 334 *i* P P 00 48 21.6 -0.9
JURR Jurilovca 83.27 319 ⇓P P 00 48 23.2 +0.5
GHRR 83.31 320 ⇓P P 00 48 24.2 +1.3
GHRR 83.31 320 P P 00 48 23.9 +1.0
BR131 Keskin Array S 83.33 312 *c* iP P 00 48 23.6 +0.3
BR131 Keskin Array S 83.33 312 P P 00 48 23.8 +0.5
SNR=108
BR131 P P 00 48 23.8 +0.5
SNR=108
BR131 Keskin Array S 83.33 312 P P 00 48 23.2 -0.2
BRTR Keskin Array B 83.33 312 P P 00 48 23.9 +0.5
comp=Z,104nm,0.9s,baz=108,slow=3.7,SNR=400
BRTR PKKPbc **PKKPbc 01 06 42.1 -0.4**
comp=Z,0.7nm,1.0s,baz=198,slow=2.5,SNR=4.0
BRTR LR LR 01 29 52.3
comp=Z,2µm,19.0s,baz=57,slow=39
comp=Z,104nm,0.9s
BRTR Keskin Array B 83.33 312 *ce* P P 00 48 23.7 +0.4
BRTR pmax pmax
comp=Z,108nm,0.9s
BRTR Keskin Array B 83.33 312 P P 00 48 23.3 0.0
BR106 Keskin Array S 83.34 312 P P 00 48 23.9 +0.5
comp=Z,1µmcomp=Z,130nm,1.1s
RAYN Ar Rayn 83.36 293 *i* P P 00 48 24.3 +0.7
SNR=637
RAYN Ar Rayn 83.36 293 P P 00 48 24.1 +0.4
RAYN pmax pmax
comp=Z,421nm,0.8s
RAYN MLR MLR
comp=Z,5µm,20.0s
RAYN Ar Rayn 83.36 293 P P 00 48 24.1 +0.4
NEGRR Negrea 83.37 320 ⇑P P 00 48 24.6 +1.3
SCHL Schela 83.42 320 ⇑P P 00 48 24.8 +1.3
IZVR Izvoarele 83.43 320 ⇓P P 00 48 24.6 +1.1
LUNU Lund 83.43 333 *i* P P 00 48 22.6 -0.8
CFR Carcaliu 83.44 319 ⇑P P 00 48 23.5 -0.1
CFR Carcaliu 83.44 319 P P 00 48 23.5 -0.1
TESR Tescani 83.45 321 ⇓P P 00 48 24.2 +0.6
TUDR 83.45 320 ⇓P P 00 48 24.8 +1.2
TPGR Topolog 83.48 319 ⇓P P 00 48 25.6 +1.8
BIZ Bicaz 83.48 322 ⇓P P 00 48 24.7 +0.9
KIRS Kirsehir-Merke 83.48 312 ⇑P P 00 48 24.7 +0.6
KWP Kalwaria Pacla 83.51 325 *e*P P 00 48 24.5 +0.6
KWP *e*S S 00 58 44.4 -0.4
KWP Kalwaria Pacla 83.51 325 P P 00 48 24.1 +0.1
KWP Kalwaria Pacla 83.51 325 P P 00 48 24.0 +0.1
BUR08 Bucovina Ar. S 83.52 322 P P 00 48 24.0 -0.1
BUR08 IAmb IAmb 00 48 25.9
comp=Z,52nm,0.9s
KMY Karmoy 83.52 339 *e*P P 00 48 23.7 0.0
KMY IAmb IAmb 00 48 31.9
comp=Z,297nm,1.7s
KMY *e*PP PP 00 51 35.6 +0.3
KMY *e*SKSac SKSac 00 58 45.1 -0.2
KMY *e*SS SS 01 04 12.4 +3.2
KMY IAMs_20 IAMs_20 01 28 38.6
comp=Z,4µm,20.5s
BURAR Bucovina Array 83.53 322 ⇑P P 00 48 24.3 +0.2
BURAR Bucovina Array 83.53 322 P P 00 48 24.3 +0.2
BURAR Bucovina Array 83.53 322 P P 00 48 24.4 +0.2
BURAR IAmb IAmb 00 48 26.2
comp=Z,62nm,0.9s
PANC Panciu 83.57 320 ⇑P P 00 48 25.4 +1.1
GKP Gorka Klasztor 83.58 330 *e*P P 00 48 24.5 +0.4
GKP *e*S S 00 58 43.3 -2.0
SNART Snartemo 83.60 338 *e*P P 00 48 25.1 +1.0
SNART Snartemo 83.60 338 *i* P P 00 48 24.4 +0.2
ODBI Odobesti 83.69 320 ⇓P P 00 48 27.0 +2.1
ONER Baraj Valea Uz 83.70 321 ⇓P P 00 48 26.0 +1.1
TIRR Tirgusor 83.72 319 ⇑P P 00 48 25.3 +0.2
TIRR Tirgusor 83.72 319 P P 00 48 24.7 -0.3
TIRR pmax pmax
comp=Z,72nm,1.1s
TIRR MLR MLR
comp=Z,3µm,18.0s
TIRR Tirgusor 83.72 319 P P 00 48 24.7 -0.3
TIRR IAmb IAmb 00 48 26.1
comp=Z,72nm,1.1s
COP Copenhagen 83.78 334 *i* P P 00 48 25.1 0.0
COP IAmb IAmb 00 48 26.9
comp=Z,602nm,1.4s
VRI Vrincioaia 83.81 320 ⇓P P 00 48 26.4 +0.9
VRI Vrincioaia 83.81 320 P P 00 48 26.4 +0.9
EFOR EFORIE 83.82 318 ⇑P P 00 48 27.0 +1.5
PLOR Plostina 83.86 320 ⇓P P 00 48 26.7 +0.9
PLOR Plostina 83.86 320 P P 00 48 26.6 +0.9
TLBR Topalu 83.88 319 ⇓P P 00 48 26.6 +0.8
SAHR Sahastru 83.91 320 ⇓P P 00 48 27.3 +1.2

GRER 83.97 320 ⇓P P 00 48 28.6 +2.3
MANR Mangalia 84.01 318 ⇓P P 00 48 27.4 +0.9
TSMN Mangalia Port- 84.01 318 ⇓P P 00 48 27.8 +1.3
BORG Borgarnes 84.05 353 P P 00 48 26.4 +0.1
BORG pmax pmax
comp=Z,65nm,1.1s
BORG Borgarnes 84.05 353 P P 00 48 26.4 +0.1
BORG IAmb IAmb 00 48 29.3
comp=Z,65nm,1.1s
TURR Turia 84.08 321 ⇑P P 00 48 27.9 +1.0
ANGG Ammassalik, Gr 84.10 360 P P 00 48 25.0 -1.5
ANGG IAmb IAmb 00 48 27.5
comp=Z,49nm,0.9s
ANGG IAMs_20 IAMs_20 01 27 48.7
comp=Z,2µm,20.0s
ANGG Ammassalik, Gr 84.10 360 *i* P P 00 48 26.2 -0.4
ANGG IAmb IAmb 00 48 27.2
comp=Z,52nm,1.0s
COVR Voineasa-Covas 84.11 321 ⇑P P 00 48 27.5 +0.4
ISOG Isortoq, Green 84.17 0 *i* P P 00 48 26.9 0.0
ISOG IAmb IAmb 00 48 27.8
comp=Z,106nm,1.2s
OZUR 84.18 321 ⇑P P 00 48 28.5 +1.1
KOLS Kolonicke sedl 84.18 325 *e*P P 00 48 27.9 +0.5
KOLS pmax pmax
comp=Z,40nm,1.1s
KOLS Kolonicke sedl 84.18 325 *e*P P 00 48 27.9 +0.5
AMRR Amara 84.24 319 ⇓P P 00 48 29.1 +1.3
AMRR Amara 84.24 319 P P 00 48 29.0 +1.3
BOSR Bodos 84.26 321 ⇓P P 00 48 29.2 +1.4
ICOR Ion Corvin 84.28 319 ⇓P P 00 48 29.1 +1.2
RGN Rugen 84.28 333 P P 00 48 27.9 +0.2
ARCR ARCALIA 84.31 322 ⇓P P 00 48 29.4 +1.4
NEHR Nehoiu 84.31 320 ⇑P P 00 48 29.8 +1.7
O20A White River Ci 84.35 46 IAMs_20 IAMs_20 01 23 10.4
comp=Z,2µm,19.0s
ISR Istrita 84.37 320 ⇓P P 00 48 29.6 +1.2
ISR Istrita 84.37 320 P P 00 48 29.6 +1.2
STHS Stebnicka Huta 84.37 326 *e*P P 00 48 28.6 +0.3
STHS pmax pmax
comp=Z,56nm,1.4s
STHS Stebnicka Huta 84.37 326 *e*P P 00 48 28.6 +0.3
UZHM Uzhgorod 84.38 324 P P 00 48 28.5 +0.2
PSN Preselentsi 84.38 318 *e*P P 00 48 28.9 +0.5
BMR Baia Mare 84.38 323 ⇓P P 00 48 29.5 +1.1
BMR Baia Mare 84.38 323 P P 00 48 29.4 +1.1
MUD Monsted U'grnd 84.40 336 *i* P P 00 48 28.3 +0.1
MUD IAmb IAmb 00 48 29.4
comp=Z,171nm,1.3s
SAHE Sakarya_HENDEK 84.42 315 ⇓P P 00 48 28.9 +0.2
MDUB Mudurnu 84.43 314 P P 00 48 28.7 -0.2
MLR Muntele Rosu 84.47 320 ⇓P P 00 48 29.3 +0.3
MLR Muntele Rosu 84.47 320 LR LR 01 29 07.5
comp=Z,6µm,18.1s,baz=60,slow=38
MLR Muntele Rosu 84.47 320 P P 00 48 28.3 -0.8
MLR pmax pmax
comp=Z,126nm,1.4s
MLR MLR MLR
comp=Z,6µm,18.0s
MLR Muntele Rosu 84.47 320 P P 00 48 28.2 -0.8
MLR IAmb IAmb 00 49 06.2
comp=Z,126nm,1.4s
DOPR Dopca 84.47 321 ⇑P P 00 48 30.1 +1.2
RSSD Black Hills 84.48 41 P P 00 48 29.8 +0.5
RSSD pmax pmax
comp=Z,167nm,1.7s
BEIL Beino 84.52 307 *e*P P 00 48 29.9 +0.5
MDND Maddock 84.53 36 IAMs_20 IAMs_20 01 22 05.4
comp=Z,2µm,21.0s
OJC Ojcow 84.53 327 *e*P P 00 48 29.4 +0.3
OJC *e*S SKSac 00 58 53.2 +1.0
OJC Ojcow 84.53 327 P P 00 48 28.8 -0.3
OJC Ojcow 84.53 327 P P 00 48 28.8 -0.3
LEHL Lehliu 84.61 319 ⇓P P 00 48 30.5 +0.9
ULM Lac du Bonnet 84.75 33 P P 00 48 29.6 -0.6
comp=Z,6.4nm,0.8s,baz=317,slow=4.7,SNR=21
ULM PKKPbc **PKKPbc 01 06 38.1 -1.3**
comp=Z,2.0nm,0.8s,baz=51,slow=3.1,SNR=4.0
ULM LR LR 01 28 11.4
comp=Z,1µm,19.0s,baz=312,slow=37
comp=Z,6.4nm,0.8s
ULM Lac du Bonnet 84.75 33 P P 00 48 29.7 -0.5
E28A Huff 84.78 38 IAMs_20 IAMs_20 01 24 45.2
comp=Z,1µm,20.0s
NIE Niedzica 84.83 326 *e*P P 00 48 31.6 +0.9
NIE *e*S SKSac 00 58 57.0 +2.8
HWQ Hawqa 84.83 307 *e*P P 00 48 31.2 +0.1
MDB Medias 84.90 322 ⇓P P 00 48 32.5 +1.4
MDB Medias 84.90 322 P P 00 48 32.4 +1.4
CEI Carei 84.91 324 ⇓P P 00 48 32.3 +1.3
CEI Carei 84.91 324 P P 00 48 32.3 +1.3
WUAZ Wupatki 84.95 52 IAMs_20 IAMs_20 01 27 21.5
comp=Z,2µm,19.0s
CJR Cluj-Napoca 84.95 322 ⇑P P 00 48 32.0 +0.7
CJR Cluj-Napoca 84.95 322 P P 00 48 32.0 +0.7
NUUK Nuuk 84.95 6 *i* P P 00 48 30.9 0.0
NUUK IAmb IAmb 00 48 32.7
comp=Z,158nm,1.1s
SILT Sile 84.98 315 ⇓P P 00 48 31.6 +0.1
SSRD Sdr. Stenderup 84.98 335 *i* P P 00 48 31.6 +0.4
SSRD IAmb IAmb 00 48 32.6
comp=Z,340nm,1.1s
VOIR 84.99 321 ⇑P P 00 48 32.6 +0.9
VOIR 84.99 321 P P 00 48 32.5 +0.9
MESR Meseseni 85.01 323 ⇓P P 00 48 32.6 +1.1
PRD Provadia 85.09 318 *e*P P 00 48 31.8 -0.2
ZAHL Zahle 85.11 307 *e*P P 00 48 32.9 +0.4
MARR Marisel-Cluj 85.23 323 ⇓P P 00 48 33.3 +0.5
BHL Bhannes 85.24 307 *e*P P 00 48 33.2 +0.1
ARR Arges 85.26 321 ⇓P P 00 48 34.1 +1.2
TNR Turnu Rosu 85.28 321 ⇓P P 00 48 34.2 +1.2
TNR Turnu Rosu 85.28 321 P P 00 48 34.1 +1.2
ASF Jabal al Asfar 85.32 305 LR LR 01 31 01.5
comp=Z,1µm,20.2s,baz=30,slow=39
RCY Rachaya 85.34 306 *e*P P 00 48 33.7 +0.1
RAZG Razgrad 85.35 319 ⇑P P 00 48 34.3 +0.9
DRGR 85.36 323 ⇓P P 00 48 33.7 +0.3
DRGR 85.36 323 P P 00 48 33.7 +0.3
ISK Istanbul-Kandi 85.39 316 P P 00 48 36.3 +2.8
LTVH Ltavrtes, Hu 85.39 324 ⇑P P 00 48 35.0 +1.5
DQRL Deir Qamar 85.41 307 *e*P P 00 48 33.9 -0.1
LANS Liptovska Anna 85.41 326 *e*P P 00 48 34.6 +1.0
LANS pmax pmax
comp=Z,12nm,1.1s
LANS Liptovska Anna 85.41 326 *e*P P 00 48 34.6 +1.0
QRWL Quaraouon 85.42 306 *e*P P 00 48 34.1 +0.2
SHBL Chebaa 85.49 306 *e*P P 00 48 34.7 +0.3
OKC Ostrava-Krasne 85.56 327 *e*P P 00 48 34.7 +0.4
OKC *e* 00 51 55.1
OKC *e* 00 59 00.8
OKC MLR MLR
comp=Z,3µm,15.4s
OKC Ostrava-Krasne 85.56 327 *e*P P 00 48 34.7 +0.4
OKC *e*PP PP 00 51 55.1 +2.9
OKC *e*SKS SKSac 00 59 00.8 +2.0
OKC AMS AMS 01 30 10.0
comp=Z,3µm,15.4s
HUMR Humele 85.61 320 ⇑P P 00 48 34.6 +0.1
RUE Ruedersdorf 85.61 331 *e*P P 00 48 34.8 +0.4
comp=Z,263nm,1.4s,baz=40,slow=4.7
STEB Steborice 85.67 327 *e*P P 00 48 35.3 +0.5
LOT Lotru 85.68 321 ⇓P P 00 48 35.5 +0.4
KSP Ksiaz 85.70 329 *e*P P 00 48 35.1 +0.2
KSP *e*S S 00 59 05.5 -1.0
CY604 RAF Akrotiri, 85.78 308 P P 00 48 35.2 -0.1
CY604 IAmb IAmb 00 48 40.7
comp=Z,134nm,1.0s
SZH Strazhitsa 85.84 319 *e*P P 00 48 35.2 -0.6
DEV Deva 85.86 322 ⇓P P 00 48 36.3 +0.5
DEV Deva 85.86 322 P P 00 48 36.3 +0.5
MORC Moravsky Berou 85.89 327 ⇑P P 00 48 36.3 +0.3
MORC Moravsky Berou 85.89 327 P P 00 48 35.1 -0.8
MORC pmax pmax
comp=Z,40nm,1.0s
MORC Moravsky Berou 85.89 327 P P 00 48 35.1 -0.8
MORC Moravsky Berou 85.89 327 *e*P P 00 48 35.8 -0.1
MORC *e*PP PP 00 51 56.6 +1.7
MORC *e*SKS SKSac 00 59 02.0 +1.1
MVCO Mesa Verde 85.89 49 IAMs_20 IAMs_20 01 33 16.4
comp=Z,2µm,18.0s
BSEG Bad Segeberg 85.91 334 *e*P P 00 48 35.3 -0.5
comp=Z,108nm,1.2s,baz=40,slow=4.7
MMAI Mount Meron Ar 85.91 306 P P 00 48 36.7 +0.3
comp=Z,191nm,0.9s,baz=43,slow=9.1,SNR=57
MMAI LR LR 01 31 42.4
comp=Z,3µm,18.3s,baz=52,slow=39
comp=Z,191nm,0.9s
OSTC Ostas 85.94 329 *e*P P 00 48 36.7 +0.5
OSTC *e* 00 59 09.0
OSTC MLR MLR
comp=Z,5µm,15.3s
OSTC Ostas 85.94 329 *e*P P 00 48 36.7 +0.5
OSTC *e*SKS S 00 59 09.0 0.0
OSTC AMS AMS 01 31 30.0
comp=Z,5µm,15.3s
CHVC Chvalec 85.99 329 *e*P P 00 48 37.0 +0.6
CHVC MLR MLR
comp=Z,5µm,15.5s
CHVC Chvalec 85.99 329 *e*P P 00 48 37.0 +0.6
CHVC AMS AMS 01 31 20.0
comp=Z,5µm,15.5s
JMB Yambol 86.01 318 *e*P P 00 48 36.4 -0.2
KRLC Kraliky 86.03 328 *e*P P 00 48 37.0 +0.4
KRLC MLR MLR
comp=Z,5µm,18.9s
KRLC Kraliky 86.03 328 *e*P P 00 48 37.0 +0.4
KRLC AMS AMS 01 29 50.0
comp=Z,5µm,18.9s
DPC Dobruska-Polom 86.04 328 *e*P P 00 48 37.3 +0.6
DPC *e* 00 51 59.6
DPC *e* 00 59 06.7
DPC pmax pmax
comp=Z,15nm,0.6s
DPC MLR MLR
comp=Z,4µm,15.1s
DPC Dobruska-Polom 86.04 328 *e*P P 00 48 37.3 +0.6
comp=Z,15nm,0.6s
DPC *e*PP PP 00 51 59.6 +3.4
DPC *e*SKS S 00 59 06.7 -3.3
DPC AMS AMS 01 31 30.0
comp=Z,4µm,15.1s
MAUC Maruska 86.04 327 *e*P P 00 48 37.5 +0.8
PSZ Piszkesteto 86.04 325 ⇓P P 00 48 36.8 +0.1
PSZ Piszkesteto 86.04 325 P P 00 48 36.4 -0.4
PSZ pmax pmax
comp=Z,95nm,1.3s
PSZ MLR MLR
comp=Z,8µm,18.0s
PSZ Piszkesteto 86.04 325 P P 00 48 36.4 -0.4
PSZ IAmb IAmb 00 48 49.0
comp=Z,95nm,1.3s
UPC Upice 86.07 329 *e*P P 00 48 37.4 +0.6
UPC MLR MLR
comp=Z,5µm,15.2s
UPC Upice 86.07 329 *e*P P 00 48 37.4 +0.6
UPC AMS AMS 01 31 30.0
comp=Z,5µm,15.2s
AGMN Agassiz Nation 86.09 34 IAMs_20 IAMs_20 01 29 30.8
comp=Z,2µm,20.0s
VYHS Vyhne 86.17 326 *e*P P 00 48 37.8 +0.5
VYHS pmax pmax
comp=Z,83nm,1.1s
VYHS Vyhne 86.17 326 *e*P P 00 48 37.8 +0.5
ISCO Idaho Springs 86.18 45 P P 00 48 38.3 +0.4
ISCO pmax pmax
comp=Z,142nm,1.6s
ISCO MLR MLR
comp=Z,2µm,20.0s
ISCO Idaho Springs 86.18 45 P P 00 48 38.3 +0.4
ISCO IAmb IAmb 00 48 46.9
comp=Z,142nm,1.6s
ISCO IAMs_20 IAMs_20 01 29 01.6
comp=Z,2µm,20.0s
CSS Mathiatis 86.23 309 P P 00 48 37.1 -0.8
CSS IAmb IAmb 00 49 01.9
comp=Z,158nm,1.3s
GORT1 Trebel 86.24 333 *e*P P 00 48 37.4 -0.1
comp=Z,404nm,1.6s,baz=40,slow=4.7
GZR Gura Zlata 86.25 322 ⇓P P 00 48 37.8 0.0
GZR Gura Zlata 86.25 322 P P 00 48 37.8 0.0
SIRR Siria 86.26 323 ⇓P P 00 48 38.1 +0.3
VLAD Vladila 86.26 320 ⇓P P 00 48 37.8 0.0
BAND Balkesir-Ban 86.40 315 ⇑P P 00 48 39.2 +0.6
JAVC Velka Javorina 86.47 327 *e*P P 00 48 39.5 +0.7
JAVC *e*PP PP 00 52 01.2 +1.5
JAVC *e*SKS SKSac 00 59 07.6 +3.0
SRE Strehaia 86.49 321 ⇑P P 00 48 40.2 +1.2
SRE Strehaia 86.49 321 P P 00 48 40.1 +1.2
PLVB Pleven 86.53 319 ⇓P P 00 48 39.4 +0.2
S22A 4UR Ranch, Cre 86.65 48 IAMs_20 IAMs_20 01 23 49.2
comp=Z,3µm,20.0s
VRAC Vranov 86.66 328 ⇓P P 00 48 40.5 +0.8
VRAC Vranov 86.66 328 LR LR 01 30 21.7
comp=Z,3µm,20.3s,baz=44,slow=38
VRAC Vranov 86.66 328 P P 00 48 40.5 +0.8
VRAC Vranov 86.66 328 *e*P P 00 48 39.6 -0.1
VRAC *e*PP PP 00 52 02.5 +1.4
VRAC *e*SKS SKSac 00 59 02.6 -3.1
AMBH Ambrzfalva 86.68 323 ⇓P P 00 48 40.5 +0.7
PVCC Panska Ves 86.69 329 *e*P P 00 48 40.2 +0.4
PVCC MLR MLR
comp=Z,3µm,16.1s
PVCC Panska Ves 86.69 329 *e*P P 00 48 40.2 +0.4
PVCC AMS AMS 01 34 20.0
comp=Z,3µm,16.1s
BZS Buzias 86.71 323 ⇑P P 00 48 39.4 -0.7
BZS Buzias 86.71 323 P P 00 48 39.3 -0.7
BRG Berggiesshubel 86.72 330 *e*P P 00 48 39.7 -0.2
comp=Z,136nm,1.7s,baz=40,slow=4.7
BRG Berggiesshubel 86.72 330 *e*P P 00 48 39.7 -0.2
BRG Amp 00 48 42.7
comp=Z,67nm,1.5s
BRG Berggiesshubel 86.72 330 P P 00 48 48.0 +8.1
BRG Amp 00 48 53.1
comp=Z,70nm,1.4s
BRG Berggiesshubel 86.72 330 S S 00 59 11.0 -5.5
BRG Berggiesshubel 86.72 330 SS SS 01 04 56.0 -0.6
GHAJ Ghor Haditha 86.75 305 P P 00 48 39.8 -0.6
GHAJ IAmb IAmb 00 48 52.3
comp=Z,103nm,0.8s
GHAJ IAMs_20 IAMs_20 01 33 32.6
comp=Z,2µm,18.0s
FLTG Flechtingen 86.76 332 *e*P P 00 48 39.2 -0.9
comp=Z,194nm,1.5s,baz=40,slow=4.7
BUD Budapest 86.77 325 P P 00 48 40.0 -0.2
HERR Herculane 86.77 322 ⇓P P 00 48 39.8 -0.5
CLL Collm 86.80 331 ⇑*i*P P 00 48 39.6 -0.7
CLL *e*S SKKSac 00 59 15.0 +0.2
CLL pmax pmax
comp=Z,278nm,1.9s
CLL Collm 86.80 331 P P 00 48 39.5 -0.8
CLL IAmb IAmb 00 48 41.7
comp=Z,268nm,1.9s
CLL Collm 86.80 331 *e*P P 00 48 39.9 -0.4
comp=Z,305nm,1.9s,baz=40,slow=4.7
CLL Collm 86.80 331 ⇑*i*P P 00 48 39.6 -0.7
comp=Z,278nm,1.9s
CLL *e*Pmax 00 48 43.0
CLL *ex* x 00 51 42.0
CLL *e*PP PP 00 52 02.0 -0.1
CLL *ex* x 00 54 19.0
CLL *e*SKSac SKSac 00 59 03.0 -3.4
CLL *e*S SKKSac 00 59 15.0 +0.2
CLL *e*PS PnS 01 00 18.0 +1.4
CLL *e*PPS PPS 01 00 42.0
CLL *ex* x 01 02 00.0
CLL *e*SS SS 01 04 59.0 +1.2
CLL *e*SSS SSS 01 08 24.0
CLL *ex* x 01 09 42.0
CLL *e*SSSS 01 11 42.0
CLL AMS AMS 01 33 00.0
SMOL Smolenice 86.83 327 *e*P P 00 48 41.7 +1.2
SMOL pmax pmax
comp=Z,17nm,0.9s
DIM Dimitrovgrad 86.84 318 *e*P P 00 48 40.7 0.0
RICC Richard 86.89 330 *e*P P 00 48 41.1 +0.3
RICC AMS AMS 01 31 30.0
comp=Z,4µm,16.6s
KRUC Moravsky 86.92 327 *e*P P 00 48 40.9 -0.1
KRUC *e*PP PP 00 52 02.7 -0.5
KRUC *e*SKS SKSac 00 59 07.0 -0.3
MODS Modra-Piesok 87.00 327 *e*P P 00 48 42.1 +0.7
MODS pmax pmax
comp=Z,190nm,1.4s
MODS Modra-Piesok 87.00 327 *e*P P 00 48 42.1 +0.7
MPEP Malo Peshtene 87.05 320 *e*P P 00 48 41.6 -0.1
SUSD Miller 87.09 39 IAMs_20 IAMs_20 01 30 03.4

comp=Z,2µm,20.0s
PRU Pruhonice 87.10 329 *e*P **P** **00 48 41.1 -0.7**
PRU *e* 00 52 07.0
PRU MLR MLR
comp=Z,4µm,16.2s
PRU Pruhonice 87.10 329 *e*P **P** **00 48 41.1 -0.7**
PRU *e*PP **PP** **00 52 07.0 +2.4**
PRU AMS AMS 01 32 20.0
comp=Z,4µm,16.2s
ASSE Asse, Remlinge 87.14 332 *e*P **P** **00 48 41.0 -0.8**
comp=Z,175nm,1.7s,baz=40,slow=4.7
TUC Tucson 87.16 54 P **P** **00 48 42.3 -0.3**
TUC pmax pmax
comp=Z,82nm,1.5s
TUC MLR MLR
comp=Z,5µm,19.0s
TUC Tucson 87.16 54 P **P** **00 48 42.2 -0.3**
TUC IAmb IAmb 00 48 47.9
comp=Z,82nm,1.5s
TREC Trest 87.17 328 *e*P **P** **00 48 42.4 +0.2**
TREC MLR MLR
comp=Z,4µm,18.9s
TREC Trest 87.17 328 *e*P **P** **00 48 42.4 +0.2**
TREC AMS AMS 01 30 20.0
comp=Z,4µm,18.9s
RETH Rethem/Aller, 87.19 333 *e*P **P** **00 48 42.1 0.0**
comp=Z,163nm,1.6s,baz=40,slow=4.7
MDVR Moldovita 87.22 322 ⇑P **P** **00 48 41.7 -0.8**
KDZ Kurdzhali 87.24 318 *e*P **P** **00 48 42.0 -0.6**
KDZ *e*P **P** **00 48 42.1 -0.6**
PLD Plovdiv 87.25 318 *e*P **P** **00 48 41.7 -1.0**
ALN Alexandroupoli 87.29 317 P **P** **00 48 41.4 -1.5**
ALN pmax pmax
comp=Z,21nm,1.1s
ALN Alexandroupoli 87.29 317 P **P** **00 48 41.4 -1.5**
MCD Coleburn Disti 87.34 342 *e*P **P** **00 48 42.4 -0.4**
MCD IAmb IAmb 00 48 44.5
comp=Z,27nm,0.8s
PGB Panagyurishte 87.34 319 *e*P **P** **00 48 43.3 +0.1**
NEUB Neuenburg 87.39 331 *e*P **P** **00 48 42.9 -0.3**
comp=Z,288nm,1.9s,baz=40,slow=4.7
CLZ Clausthal 87.48 332 *e*P **P** **00 48 43.5 -0.2**
comp=Z,95nm,1.3s,baz=40,slow=4.7
CLZ *e*pP **pwP** **00 48 54.2 +0.5**
CLZ *e*PP **PP** **00 52 07.2 -0.5**
baz=39,slow=8.3
SDCO Great Sand Dun 87.49 47 P **P** **00 48 44.0 -0.3**
SDCO IAmb IAmb 00 48 49.6
comp=Z,97nm,1.6s
SDCO IAMs_20 IAMs_20 01 30 41.4
comp=Z,2µm,19.0s
RZN Rozhen 87.55 318 *e*P **P** **00 48 44.0 -0.4**
F33A 5 Mile Ranch, 87.56 36 IAMs_20 IAMs_20 01 23 44.6
comp=Z,1µm,21.0s
OGNE Ogallala 87.62 43 P **P** **00 48 45.0 +0.4**
ZVC Zvikov 87.66 329 *e*P **P** **00 48 44.6 +0.1**
ZVC AMS AMS 01 32 30.0
comp=Z,6µm,15.5s
TANN Tannenbergstha 87.69 330 *e*P **P** **00 48 44.4 -0.3**
comp=Z,251nm,2.6s,baz=40,slow=4.7
WINA Alland / Wiene 87.75 327 *i* P **P** **00 48 44.7 -0.3**
SNR=26
PLN Plauen 87.77 330 *e*P **P** **00 48 44.8 -0.2**
comp=Z,116nm,2.5s,baz=40,slow=4.7
PLN *e*PP **PP** **00 52 09.6 -0.4**
baz=39,slow=8.3
PLNA Plana 87.79 319 *e*P **P** **00 48 45.3 -0.2**
MORH Mrgy, Hungar 87.83 324 ⇑P **P** **00 48 44.6 -0.8**
MORH Mrgy, Hungar 87.83 324 ⇑*i*P **P** **00 48 44.4 -1.0**
GTTG Gottingen 87.87 332 *e*P **P** **00 48 45.1 -0.4**
comp=Z,653nm,3.0s,baz=40,slow=4.7
GTTG *e*pP **pwP** **00 48 55.7 +0.2**
GTTG *e*PP **PP** **00 52 10.5 -0.3**
baz=39,slow=8.3
MOX Moxa 87.88 331 *e*P **P** **00 48 45.2 -0.4**
comp=Z,213nm,2.3s,baz=40,slow=4.7
MOX *e*PP **PP** **00 52 10.6 -0.2**
baz=39,slow=8.3
MOX *e*L L 01 32 40.4
comp=Z,3µm,18.1s
RONA Rosalia, Austr 87.94 327 *i* PcP **P** **00 48 45.7 -0.2**
comp=Z,35nm,1.1s,SNR=27
RONA *i* PP **PP** **00 52 11.6 +0.1**
comp=Z,36nm,1.6s
FRGS Fruska Gora 87.96 323 ⇑*i*P **P** **00 48 45.7 -0.4**
BOVS Bovan 87.98 321 ⇓P **P** **00 48 45.7 -0.4**
CONA Conrad Observa 87.98 327 *i* PcP **P** **00 48 45.8 -0.4**
comp=Z,40nm,1.2s,SNR=28
CONA *e*PP **PP** **00 52 12.0 +0.2**
comp=Z,56nm,1.6s
CKRC Cesky Krumlov 88.05 328 *e*P **P** **00 48 46.4 -0.1**
CKRC *e* 00 59 16.9
CKRC pmax pmax
comp=Z,5.0nm,0.6s
CKRC MLR MLR
comp=Z,4µm,18.1s
CKRC Cesky Krumlov 88.05 328 *e*P **P** **00 48 46.4 -0.1**
comp=Z,4.8nm,0.6s
CKRC *e*SKS **SKSac** **00 59 16.9 +2.7**
CKRC AMS AMS 01 31 00.0
comp=Z,4µm,18.1s
IBBN Ibbenburen 88.15 334 *e*P **P** **00 48 46.5 -0.2**
comp=Z,292nm,1.7s,baz=40,slow=4.7
KHC Kasperske Hory 88.15 329 *e*P **P** **00 48 46.9 -0.1**
KHC *e* 00 52 15.0
KHC *e* 00 59 18.4
KHC pmax pmax
comp=Z,6.0nm,0.6s
KHC MLR MLR
comp=Z,7µm,15.3s
KHC Kasperske Hory 88.15 329 *e*P **P** **00 48 46.9 -0.1**
comp=Z,6.0nm,0.6s
KHC *e*PP **PP** **00 52 15.0 +1.8**
KHC *e*SKS **SKSac** **00 59 18.4 +3.5**
KHC AMS AMS 01 32 50.0
comp=Z,7µm,15.3s
IVI Ivigtut 88.18 5 IAMs_20 IAMs_20 01 33 01.2
comp=Z,2µm,19.0s
KPL Plockton 88.18 343 *e*P **P** **00 48 46.7 -0.1**
KPL IAmb IAmb 00 48 48.8
comp=Z,25nm,0.8s
MMB Musomishta 88.21 318 *e*P **P** **00 48 46.6 -0.8**
GEC2 GERESS Array S 88.31 329 P **P** **00 48 45.9 -1.9**
GEC2 GERESS Array S 88.31 329 *e*P **P** **00 48 47.1 -0.7**
comp=Z,19nm,1.1s,baz=40,slow=4.7
GEC2 *e*PP **PP** **00 52 15.4 +1.0**
baz=39,slow=8.3
GERES GERESS Array B 88.31 329 P **P** **00 48 47.1 -0.7**
comp=Z,5.3nm,0.6s,baz=35,slow=4.2,SNR=50
GERES PP **PP** **00 52 13.8 -0.6**
comp=Z,4.6nm,1.1s,baz=34,slow=3.6,SNR=4.3
GERES PKKPbc **PKKPbc** **01 06 30.2 -0.9**
comp=Z,0.3nm,0.7s,baz=226,slow=3.5,SNR=3.5
GERES PKPPKP P'P'df 01 14 35.7 -8.4
comp=Z,0.3nm,0.8s,baz=264,slow=2.7,SNR=3.5
GERES LR LR 01 31 42.9
comp=Z,5µm,18.4s,baz=48,slow=38
comp=Z,5.3nm,0.6s
GERES GERESS Array B 88.31 329 P **P** **00 48 46.9 -0.9**
GERES GERESS Array B 88.31 329 P **P** **00 48 46.9 -0.9**
KKB Krupnik 88.37 319 *e*P **P** **00 48 47.3 -0.8**
NRS Narsarsuaq 88.39 3 IAMs_20 IAMs_20 01 32 46.8
comp=Z,2µm,20.0s
UBBA Unterbreizbach 88.42 332 *e*P **P** **00 48 46.5 -1.4**
comp=Z,80nm,1.7s,baz=40,slow=4.7
UBBA *e*PP **PP** **00 52 14.8 -0.2**
baz=39,slow=8.3
EYMN Ely 88.42 33 IAMs_20 IAMs_20 01 33 54.1
comp=Z,2µm,19.0s
WET Wettzell 88.45 329 *e*P **P** **00 48 48.1 -0.3**
comp=Z,105nm,2.0s,baz=40,slow=4.7
WET *e*PP **PP** **00 52 16.3 +0.8**
baz=39,slow=8.3
KSCO Kaye Shedlock' 88.48 45 IAMs_20 IAMs_20 01 27 19.6
comp=Z,2µm,20.0s
TEKS Tekeris 88.52 323 ⇑*i*P **P** **00 48 47.9 -0.9**
PEHC Pehcevo 88.54 319 *i* P **P** **00 48 48.3 -0.7**
T25A Trinidad 88.55 47 P **P** **00 48 49.4 +0.2**
T25A IAmb IAmb 00 48 54.7
comp=Z,89nm,1.4s
T25A IAMs_20 IAMs_20 01 25 16.4
comp=Z,2µm,20.0s
ANMO Albuquerque 88.56 50 LR LR 01 25 27.4
comp=Z,4µm,19.4s,baz=311,slow=34
ANMO Albuquerque 88.56 50 P **P** **00 48 49.4 0.0**
ANMO pmax pmax
comp=Z,36nm,1.3s
ANMO Albuquerque 88.56 50 P **P** **00 48 49.4 0.0**
ALQ Albuquerque 88.56 50 IAMs_20 IAMs_20 01 25 54.9
comp=Z,4µm,20.0s
INVG Invergeldie, C 88.56 342 *e*P **P** **00 48 48.7 0.0**
INVG IAmb IAmb 00 48 50.8
comp=Z,12nm,0.9s
BEHE Becsehely 88.58 325 *e*P **P** **00 48 50.2 +1.2**
ARSA Arzberg 88.63 327 P **P** **00 48 48.2 -1.0**
ARSA Arzberg 88.63 327 *i* PcP **P** **00 48 48.9 -0.3**
comp=Z,26nm,1.2s,SNR=14
ARSA *i* PP **PP** **00 52 16.9 -0.1**
comp=Z,24nm,1.6s
KASTN Kahler Asten 88.76 333 *e*P **P** **00 48 49.0 -0.7**
comp=Z,48nm,1.4s,baz=40,slow=4.7
KASTN *e*PP **PP** **00 52 18.3 +0.4**
baz=39,slow=8.3
GRA1 Grafenberg Arr 88.76 330 P **P** **00 48 49.1 -0.7**
GRA1 IAmb IAmb 00 49 02.0
comp=Z,85nm,1.3s
GRA1 IAMs_20 IAMs_20 01 31 10.1
comp=Z,2µm,21.0s
GRF Grafenberg Arr 88.76 330 P **P** **00 48 49.1 -0.7**
GRF pmax pmax
comp=Z,85nm,1.3s
GRF MLR MLR
comp=Z,2µm,21.0s
GRF Grafenberg Arr 88.76 330 *e*P **P** **00 48 49.6 -0.2**
comp=Z,196nm,2.2s,baz=40,slow=4.7
GRF *e*pP **pwP** **00 49 00.6 +0.8**
GRF *e*PP **PP** **00 52 18.2 +0.2**
baz=39,slow=8.3
GRF *e*L L 01 31 10.2
comp=Z,2µm,20.6s
GRFO Grafenberg 88.77 330 IAMs_20 IAMs_20 01 31 10.2
comp=Z,2µm,20.0s
MOA Molln 88.78 328 *i* PcP **P** **00 48 49.7 -0.2**
comp=Z,22nm,1.0s,SNR=12
MOA *i* PP **PP** **00 52 18.2 0.0**
comp=Z,78nm,1.4s
ECSD EROS Data Cent 88.82 38 P **P** **00 48 49.6 -0.6**
ECSD IAmb IAmb 00 48 54.8
comp=Z,87nm,1.4s
ECSD EROS Data Cent 88.82 38 IAMs_20 IAMs_20 01 31 19.1
comp=Z,2µm,20.0s
KOGS Kog 88.85 326 *e*P **P** **00 48 49.5 -0.8**
TBO Thunder Bay 88.86 31 P **P** **00 48 49.8 -0.4**
TBO IAmb IAmb 00 48 55.0
comp=Z,77nm,1.3s
HSIG 88.90 57 P **P** **00 48 50.6 -0.2**
HSIG IAmb IAmb 00 48 56.1
comp=Z,69nm,1.3s
BUG Bochum--Univer 89.02 333 *e*P **P** **00 48 50.1 -0.8**
comp=Z,57nm,1.3s,baz=40,slow=4.7
BUG *e*PP **PP** **00 52 20.1 +0.2**
baz=39,slow=8.3
VAY Valandovo 89.03 319 *i* P **P** **00 48 50.1 -1.0**
BBLS Lazi&#263i 89.06 322 ⇑*i*P **P** **00 48 50.9 -0.5**
MSEY Mahe Island 89.10 264 *i* P **P** **00 48 52.7 +0.7**
SNR=7.0
MSEY Mahe Island 89.10 264 P **P** **00 48 51.6 -0.4**
MSEY pmax pmax
comp=Z,169nm,1.1s
MSEY MLR MLR
comp=Z,2µm,18.0s
MSEY Mahe Island 89.10 264 P **P** **00 48 53.2 +1.2**
MSEY P **P** **00 48 53.2 +1.2**
MSEY Mahe Island 89.10 264 P **P** **00 48 51.6 -0.4**
MSEY Mahe Island 89.10 264 IAMs_20 IAMs_20 01 29 25.4
comp=Z,2µm,18.0s
SJES Sjenica 89.17 322 ⇑*i*P **P** **00 48 51.4 -0.5**
SESA Seetaler Alpe, 89.18 327 *i* PcP **P** **00 48 51.7 -0.4**
SNR=38
BIOA Bad Ischl, Aus 89.19 328 *i* P **P** **00 48 51.1 -0.7**
comp=Z,30nm,1.0s,SNR=22
BIOA *i* PP **PP** **00 52 20.3 -1.1**
comp=Z,33nm,1.4s
GROS Grobnik 89.20 326 *i* P **P** **00 48 51.1 -0.9**
GROS *e*S **SKSac** **00 59 17.8 -3.5**
PGBU Glenifferbraes 89.22 342 *e*P **P** **00 48 51.7 -0.1**
PGBU IAmb IAmb 00 48 54.6
comp=Z,35nm,1.0s
SKO Skopje 89.23 320 *i* P **P** **00 48 52.0 -0.2**
SOKA Soboth 89.27 326 *i* P **P** **00 48 51.5 -0.8**
comp=Z,52nm,1.0s,SNR=57
SOKA *i* PP **PP** **00 52 21.5 -0.7**
comp=Z,45nm,1.5s
EKA Eskdalemuir Ar 89.27 341 P **P** **00 48 52.1 +0.1**
comp=Z,22nm,1.1s,baz=35,slow=4.6,SNR=25
EKA PP **PP** **00 52 21.6 -0.2**
comp=Z,8.2nm,1.1s,baz=20,slow=7.5,SNR=4.4
EKA LR LR 01 33 00.3
comp=Z,2µm,18.2s,baz=38,slow=38
comp=Z,22nm,1.1s
EKB Eskdalemuir 89.28 341 P **P** **00 48 51.8 -0.3**
EKB IAmb IAmb 00 49 04.3
comp=Z,145nm,1.9s
ESK Eskdalemuir 89.30 341 P **P** **00 48 51.7 -0.5**
ESK pmax pmax
comp=Z,72nm,1.3s
ESK MLR MLR
comp=Z,2µm,20.0s
ESK Eskdalemuir 89.30 341 P **P** **00 48 51.7 -0.5**
ESK IAmb IAmb 00 48 53.6
comp=Z,72nm,1.3s
ESK Eskdalemuir 89.30 341 IAMs_20 IAMs_20 01 32 40.2
comp=Z,2µm,20.0s
ESK Eskdalemuir 89.30 341 *e*P **P** **00 48 51.7 -0.5**
ESK IAmb IAmb 00 48 54.3
comp=Z,15nm,1.0s
E38A The Farm, Brul 89.36 34 IAMs_20 IAMs_20 01 25 58.1
comp=Z,2µm,21.0s
TNS Taunus Mts 89.51 332 *e*P **P** **00 48 52.6 -0.7**
comp=Z,58nm,1.7s,baz=40,slow=4.7
TNS *e*PP **PP** **00 52 24.4 +0.5**
baz=39,slow=8.3
BGNE Belgrade 89.55 41 IAMs_20 IAMs_20 01 23 06.5
comp=Z,1µm,21.0s
BLY Banja Luka 89.59 324 ⇑P **P** **00 48 53.3 -0.4**
BLY Banja Luka 89.59 324 ⇑*i*P **P** **00 48 53.1 -0.6**
OBKA Obir 89.62 327 *i* P **P** **00 48 53.0 -1.0**
comp=Z,20nm,0.9s,SNR=16
OBKA *i* PP **PP** **00 52 24.6 -0.5**
comp=Z,42nm,1.2s
SPMN Marine on St. 89.75 35 IAMs_20 IAMs_20 01 31 22.3
comp=Z,2µm,20.0s
KBA Koelnbreinsper 89.77 328 *i* P **P** **00 48 53.7 -1.0**
comp=Z,16nm,1.0s,SNR=14
KBA *e*PP **PP** **00 52 26.3 0.0**
comp=Z,85nm,1.4s,SNR=6.6
LESA Schwarzleotal 89.82 328 *i* P **P** **00 48 53.9 -1.0**
comp=Z,29nm,1.0s,SNR=23
LESA *i* PP **PP** **00 52 26.7 +0.1**
comp=Z,94nm,1.4s,SNR=10.0
FUR Furstenfeldbru 89.89 329 *e*P **P** **00 48 55.0 -0.1**
comp=Z,318nm,2.0s,baz=40,slow=4.7
FUR *e*PP **PP** **00 52 28.1 +1.1**
baz=39,slow=8.3
KARP Karpathos 89.94 312 P **P** **00 48 54.4 -1.2**
KARP IAmb IAmb 00 48 56.2
comp=Z,109nm,1.1s
KARP IAMs_20 IAMs_20 01 34 50.4
comp=Z,2µm,21.0s
MYKA Terra Mystica 89.96 327 *i* P **P** **00 48 54.3 -1.2**
comp=Z,26nm,0.8s,SNR=20
MYKA *i* PP **PP** **00 52 27.4 -0.3**
comp=Z,75nm,1.7s,SNR=6.6
KLINJ Klinje 89.97 322 *e*P **P** **00 48 58.0 +2.3**
LJU Ljubljana 89.97 326 *e*P **P** **00 48 54.4 -1.1**
LJU *i* PP **PP** **00 52 30.1 +2.4**
LJU *e*S **SKSac** **00 59 21.1 -4.6**
BOJS Bojanci 90.01 326 *e*P **P** **00 48 55.1 -0.6**
BOJS *e*PP **PP** **00 52 30.2 +2.2**
PDG Podgorica 90.12 321 ⇑P **P** **00 48 55.5 -0.7**
PDG Podgorica 90.12 321 ⇑*i*P **P** **00 48 55.1 -1.1**
BTNL Ternell 90.13 333 *d*P **P** **00 48 54.9 -1.3**
comp=Z,7.1nm,1.4s
BTNL *d*PP **PP** **00 52 28.7 -0.1**
PRED Cave del Predi 90.14 327 P **P** **00 48 54.6 -1.8**
BEBN Eben Emael 90.14 334 *d*P **P** **00 48 55.7 -0.4**
L34A Svendsen Farm, 90.15 39 IAMs_20 IAMs_20 01 34 50.4
comp=Z,1µm,20.0s
MEM Membach 90.16 334 *d*P **P** **00 48 55.7 -0.5**
comp=Z,13nm,1.0s
OHR Ohrid 90.17 320 *i* P **P** **00 48 56.0 -0.6**
BRY Bratogost 90.18 322 ⇑*i*P **P** **00 48 55.6 -1.1**
I37A Lemond, Waseca 90.30 36 IAMs_20 IAMs_20 01 36 00.2
comp=Z,2µm,18.0s
DRME Dracevica, Mon 90.32 321 ⇑*i*P **P** **00 48 56.3 -0.9**
STU Stuttgart 90.33 331 P **P** **00 48 56.4 -0.7**
STU pmax pmax
comp=Z,58nm,1.2s
STU Stuttgart 90.33 331 P **P** **00 48 56.4 -0.7**
STU IAMs_20 IAMs_20 01 35 21.4
comp=Z,2µm,18.0s
STU Stuttgart 90.33 331 *e*P **P** **00 48 57.0 -0.1**
comp=Z,112nm,1.2s,baz=40,slow=4.7
STU *e*PP **PP** **00 52 31.5 +1.1**
baz=39,slow=8.3
CBKS Cedar Bluff 90.34 43 IAMs_20 IAMs_20 01 27 00.7
comp=Z,2µm,21.0s
WACR West Acre 90.34 338 *e*P **P** **00 48 57.0 -0.1**
WACR IAmb IAmb 00 48 59.1
comp=Z,55nm,0.9s
BSTI Sart Tilman 90.35 334 *d*P **P** **00 48 56.7 -0.4**
BSTI *d*PP **PP** **00 52 27.5 -3.1**
BHOU Houvegnez 90.37 333 *d*P **P** **00 48 56.9 -0.4**
WATA Walderalm 90.39 329 *i* P **P** **00 48 56.7 -0.9**
comp=Z,15nm,0.9s,SNR=13
WATA *i* PP **PP** **00 52 30.6 -0.5**
comp=Z,71nm,1.3s,SNR=6.1
ABTA Abfaltersbach 90.40 328 *i* P **P** **00 48 56.0 -1.6**
comp=Z,37nm,1.0s,SNR=27
ABTA *e*PP **PP** **00 52 33.0 +1.8**
comp=Z,33nm,2.1s
TREB Trebinje 90.40 322 *e*P **P** **00 48 56.4 -1.2**
WTTA Wattenberg 90.41 329 *i* PcP **P** **00 48 56.8 -0.9**
comp=Z,20nm,0.9s,SNR=17
WTTA *i* PP **PP** **00 52 31.8 +0.5**
comp=Z,92nm,1.4s,SNR=7.0
HCY Herceg Novi 90.52 322 ⇑*i*P **P** **00 48 56.4 -1.7**
LBWR Ladybower, Pea 90.52 339 *e*P **P** **00 48 57.8 -0.1**
LBWR IAmb IAmb 00 49 00.1
comp=Z,64nm,0.9s
BCLA Clavier 90.58 334 *d*P **P** **00 48 57.2 -1.0**
BCLA *d*PP **PP** **00 52 32.7 +0.4**
MOTA Moosalm 90.59 329 *i* PcP **P** **00 48 57.6 -0.9**
comp=Z,23nm,0.9s,SNR=18
MOTA *i* PP **PP** **00 52 33.0 +0.2**
comp=Z,61nm,1.5s
UCC Uccle 90.63 335 P **P** **00 48 57.3 -1.1**
UCC Uccle 90.63 335 P **P** **00 48 57.3 -1.1**
UCC IAmb IAmb 00 48 59.5
comp=Z,82nm,1.7s
UCC Uccle 90.63 335 *d*P **P** **00 48 57.9 -0.6**
comp=Z,9.7nm,1.6s
RETA Reutte 90.63 329 *i* P **P** **00 48 57.7 -0.9**
comp=Z,34nm,1.0s,SNR=21
RETA *i* PP **PP** **00 52 32.8 -0.1**
comp=Z,39nm,2.2s
SQTA Sankt Quirin 90.64 329 *i* P **P** **00 48 57.7 -1.0**
comp=Z,21nm,0.9s,SNR=13
SQTA *e*PP **PP** **00 52 32.8 -0.3**
comp=Z,78nm,1.4s
STAL STALIGIAL 90.67 327 P **P** **00 48 56.7 -2.1**
STAL IAmb IAmb 00 48 58.4
comp=Z,48nm,0.9s
IDGL Inch Island, C 90.67 343 P **P** **00 48 58.7 +0.2**
BGES Gesves 90.69 334 *d*P **P** **00 48 58.5 -0.3**
comp=Z,10.0nm,1.6s
ELMS Elmsett, Ipswi 90.75 337 *e*P **P** **00 48 59.2 +0.2**
ELMS IAmb IAmb 00 49 00.5
comp=Z,44nm,0.8s
RCHB Rochefort 90.83 334 *d*P **P** **00 48 58.4 -1.0**
comp=Z,12nm,1.5s
RCHB *d*PP **PP** **00 52 29.0 -5.3**
WLF Walferdange 90.86 333 P **P** **00 48 59.2 -0.4**
WLF pmax pmax
comp=Z,150nm,1.7s
WLF Walferdange 90.86 333 P **P** **00 48 59.2 -0.4**
WLF IAmb IAmb 00 49 01.4
comp=Z,150nm,1.7s
WLF Walferdange 90.86 333 *d*P **P** **00 48 59.5 -0.1**
WLF *d*PP **PP** **00 52 33.9 -0.7**
WLF Walferdange 90.86 333 *e*P **P** **00 48 59.5 -0.1**
comp=Z,152nm,1.7s,baz=40,slow=4.7
WLF *e*PP **PP** **00 52 35.1 +0.5**
baz=39,slow=8.3
BMRD Maredsous 90.88 334 *d*P **P** **00 48 59.0 -0.7**
comp=Z,15nm,1.4s
BMRD *d*PP **PP** **00 52 30.8 -3.9**
CWF Charnwood Fore 90.96 339 *e*P **P** **00 48 59.7 -0.3**
CWF IAmb IAmb 00 49 01.4
comp=Z,46nm,1.0s
G40A Rib Lake 90.98 34 IAMs_20 IAMs_20 01 26 58.0
comp=Z,2µm,21.0s
FETA Feichten 91.00 329 *i* PcP **P** **00 48 59.6 -0.9**
comp=Z,28nm,0.9s,SNR=19
FETA *i* PP **PP** **00 52 35.4 -0.6**
comp=Z,44nm,1.3s
BFO Black Forest 91.03 331 P **P** **00 48 59.3 -1.1**
BFO pmax pmax
comp=Z,67nm,1.1s
BFO Black Forest 91.03 331 P **P** **00 48 59.3 -1.1**
BFO IAmb IAmb 00 49 11.9
comp=Z,66nm,1.1s
BFO Black Forest 91.03 331 *e*P **P** **00 48 59.7 -0.7**
comp=Z,108nm,1.6s,baz=40,slow=4.7
BFO *e*PP **PP** **00 52 36.6 +0.6**
baz=39,slow=8.3
DOU Dourbes 91.11 334 *d*P **P** **00 49 00.2 -0.5**
DAVA Damuels 91.17 330 *i* PcP **P** **00 49 00.6 -0.7**
comp=Z,51nm,1.0s,SNR=27
DAVA *e*PP **PP** **00 52 36.3 -1.1**
comp=Z,28nm,1.2s
R32A Long Quarter, 91.20 43 IAMs_20 IAMs_20 01 37 24.5
comp=Z,1µm,19.0s
MNTX Cornudas Mount 91.23 52 IAMs_20 IAMs_20 01 26 46.8
comp=Z,2µm,20.0s
ILTH Belurgan, Co L 91.30 342 P **P** **00 49 01.2 -0.3**
N35A Tabor 91.31 40 IAMs_20 IAMs_20 01 32 52.1
comp=Z,2µm,19.0s
SLE Schleitheim 91.40 331 P **P** **00 49 00.6 -1.6**
FOEL Foel Wylfa 91.41 340 *e*P **P** **00 49 02.0 0.0**
FOEL IAmb IAmb 00 49 03.8
comp=Z,50nm,0.9s
SCHQ Schefferville 91.45 16 P **P** **00 49 02.2 0.0**
comp=Z,7.1nm,0.9s,baz=343,slow=5.9,SNR=8.0
SCHQ PKKPbc **PKKPbc** **01 06 21.8 -1.5**
comp=Z,4.3nm,0.8s,baz=111,slow=1.6,SNR=7.3
SCHQ LR LR 01 38 39.2
comp=Z,337nm,18.2s,baz=348,slow=41
comp=Z,7.1nm,0.9s
FUORN Ofenpass-Fuorn 91.51 329 P **P** **00 49 02.2 -0.8**
IDI Anoyia 91.54 313 LR LR 01 35 40.0
comp=Z,2µm,19.1s,baz=66,slow=39
DAVOX Davos/Dischmat 91.56 329 LR LR 01 36 13.7
comp=Z,2µm,19.1s,baz=40,slow=40
F42A Maple Grove Fa 91.59 32 IAMs_20 IAMs_20 01 31 24.0
comp=Z,2µm,20.0s
ECH Echery 91.61 332 IAMs_20 IAMs_20 01 36 20.2
comp=Z,2µm,18.0s
HLM1 Long Mynd 91.64 339 *e*P **P** **00 49 02.8 -0.4**
HLM1 IAmb IAmb 00 49 04.5
comp=Z,13nm,1.0s
AMTX Amarillo 91.68 47 IAMs_20 IAMs_20 01 31 00.4
comp=Z,2µm,18.0s
ATD Arta Tunnel 91.69 284 LR LR 01 30 53.8
comp=Z,56nm,21.9s,baz=44,slow=36
ATD Arta Tunnel 91.69 284 P **P** **00 49 05.4 +1.3**
SNR=14
ATD Arta Tunnel 91.69 284 P **P** **00 49 04.0 -0.1**
ATD IAMs_20 IAMs_20 01 36 42.8
comp=Z,1µm,19.0s
I40A Norwalk 91.79 35 IAMs_20 IAMs_20 01 35 18.4
comp=Z,2µm,18.0s
SCIA State Center 91.89 38 P **P** **00 49 05.0 +0.5**
SCIA IAMs_20 IAMs_20 01 30 02.3
comp=Z,2µm,19.0s
KSU1 Kansas State U 91.97 41 IAMs_20 IAMs_20 01 35 48.7
comp=Z,1µm,19.0s
HMNX Herstmonceux 92.01 337 *e*P **P** **00 49 04.7 -0.1**
HMNX IAmb IAmb 00 49 06.9
comp=Z,48nm,1.0s
DSB Dublin 92.01 341 P **P** **00 49 05.8 +1.0**
DSB Dublin 92.01 341 IAMs_20 IAMs_20 01 37 07.8
comp=Z,2µm,19.0s
STRD Stroud 92.06 338 *e*P **P** **00 49 04.6 -0.5**
STRD IAmb IAmb 00 49 06.6
comp=Z,61nm,0.9s
MCH1 Michaelchurch 92.12 339 *e*P **P** **00 49 05.0 -0.3**
MCH1 IAmb IAmb 00 49 06.8

comp=Z,25nm,0.9s
LPIG La Paz 92.16 60 LR LR 01 25 47.2
comp=Z,3µm,19.5s,baz=314,slow=32
SWN1 Swindon 92.17 338 *e*P **P 00 49 05.5 -0.1**
SWN1 IAmb IAmb 00 49 06.8
comp=Z,44nm,1.0s
MONM Monmouth 92.20 339 *e*P **P 00 49 05.6 -0.1**
MONM IAmb IAmb 00 49 07.2
comp=Z,35nm,0.8s
ELIS Ellis County 92.33 45 P **P 00 49 07.0 +0.3**
I42A Draeger Farm, 92.62 34 P **P 00 49 07.5 -0.3**
I42A IAmb IAmb 00 49 12.5
comp=Z,73nm,1.4s
I42A IAMs_20 IAMs_20 01 27 00.4
comp=Z,2µm,21.0s
IGLA Glengowla, Co 92.64 343 P **P 00 49 08.7 +1.0**
N38A Joes South For 92.67 38 IAMs_20 IAMs_20 01 28 44.9
comp=Z,1µm,20.0s
SLBS Sierra La Lagu 92.67 61 P **P 00 49 08.0 -0.6**
SLBS IAmb IAmb 00 49 14.8
comp=Z,134nm,1.4s
JFWS Jewell Farm 92.69 35 IAMs_20 IAMs_20 01 31 21.2
comp=Z,1µm,20.0s
H43A Windswept, Lux 92.73 33 IAMs_20 IAMs_20 01 34 34.2
comp=Z,1µm,18.0s
MATE Matera 92.73 321 ⇓P **P 00 49 07.9 -0.4**
L40A Anamosa 92.81 36 IAMs_20 IAMs_20 01 36 01.7
comp=Z,2µm,19.0s
E46A Sault Ste Mari 92.83 30 IAMs_20 IAMs_20 01 29 35.7
comp=Z,2µm,21.0s
ODSA Odessa 92.86 50 P **P 00 49 09.2 -0.1**
IWEX Carrickbyrne, 92.90 341 P **P 00 49 08.7 -0.2**
SENIN Lac Senin/Sane 93.01 330 P **P 00 49 08.8 -1.0**
SENIN IAmb IAmb 00 49 27.1
comp=Z,149nm,1.9s
AQU L'Aquila 93.22 324 P **P 00 49 09.9 -0.8**
AQU pmax pmax
comp=Z,60nm,1.3s
AQU L'Aquila 93.22 324 P **P 00 49 09.9 -0.8**
AQU IAmb IAmb 00 49 11.9
comp=Z,60nm,1.3s
AQU L'Aquila 93.22 324 ⇑*i*P **P 00 49 10.4 -0.3**
P38A Dawn 93.33 39 IAMs_20 IAMs_20 01 27 41.5
comp=Z,1µm,22.0s
T35A Sooner Cattle 93.51 43 IAMs_20 IAMs_20 01 31 02.5
comp=Z,1µm,20.0s
WMOK Wichita Mounta 93.59 46 P **P 00 49 11.9 -0.6**
WMOK pmax pmax
comp=Z,140nm,1.6s
WMOK Wichita Mounta 93.59 46 P **P 00 49 11.9 -0.6**
WMOK IAmb IAmb 00 49 18.2
comp=Z,140nm,1.6s
WMOK Wichita Mounta 93.59 46 IAMs_20 IAMs_20 01 28 50.9
comp=Z,2µm,20.0s
L42A Oliver, Polo 93.65 36 IAMs_20 IAMs_20 01 33 43.6
comp=Z,1µm,19.0s
CLF Chambon-Foret 93.69 334 P **P 00 49 11.9 -0.7**
CLF IAmb IAmb 00 49 14.4
comp=Z,72nm,1.2s
OK029 Liberty Lake 93.70 44 IAMs_20 IAMs_20 01 30 56.7
comp=Z,1µm,20.0s
TIP Timpagrande 93.74 320 ⇓P **P 00 49 13.0 -0.2**
I45A Fountain 93.78 32 IAMs_20 IAMs_20 01 34 12.9
comp=Z,2µm,19.0s
K43A Burlington 93.79 34 IAMs_20 IAMs_20 01 39 04.3
comp=Z,2µm,18.0s
TXAR Lajitas Array 93.84 53 P **P 00 49 14.8 +1.0**
comp=Z,39nm,1.0s,baz=302,slow=2.7,SNR=123
TXAR PP **PP 00 52 56.4 -2.5**
comp=Z,1.6nm,1.1s,baz=309,slow=5.2,SNR=2.0
TXAR PKKPbc **PKKPbc 01 06 16.8 +0.2**
comp=Z,0.6nm,0.9s,baz=114,slow=6.0,SNR=3.8
TXAR LR LR 01 33 09.5
comp=Z,3µm,18.1s,baz=307,slow=37
comp=Z,39nm,1.0s
TXAR Lajitas Array 93.84 53 P **P 00 49 14.3 +0.4**
TXAR Lajitas Array 93.84 53 P **P 00 49 14.2 +0.4**
HPIG 93.90 56 P **P 00 49 14.2 -0.2**
HPIG IAmb IAmb 00 49 19.9
comp=Z,108nm,1.5s
OK052 Battle Ridge R 93.96 44 IAMs_20 IAMs_20 01 32 52.5
comp=Z,1µm,19.0s
N41A Harden Midland 93.99 37 IAMs_20 IAMs_20 01 35 11.8
comp=Z,2µm,20.0s
JSA Saint Aubin 94.29 337 *e*P **P 00 49 15.1 -0.2**
L44A Lake County Fo 94.39 35 IAMs_20 IAMs_20 01 34 44.2
comp=Z,2µm,19.0s
TUL3 Leonard 94.62 43 IAMs_20 IAMs_20 01 31 12.9
comp=Z,2µm,20.0s
S39A Bolivar 94.81 41 IAMs_20 IAMs_20 01 37 31.7
comp=Z,2µm,19.0s
CEL Celeste 94.87 320 IAMs_20 IAMs_20 01 37 01.9
comp=Z,2µm,20.0s
HDIL Hopedale 94.91 36 P **P 00 49 17.9 -0.5**
HDIL IAMs_20 IAMs_20 01 36 08.1
comp=Z,2µm,18.0s
R40A Maddies Statio 94.97 40 IAMs_20 IAMs_20 01 33 58.9
comp=Z,2µm,19.0s
SSB Saint Sauveur 95.03 331 P **P 00 49 18.0 -1.0**
SSB pmax pmax
comp=Z,17nm,1.0s
SSB Saint Sauveur 95.03 331 P **P 00 49 18.0 -1.0**
SSB Saint Sauveur 95.03 331 IAMs_20 IAMs_20 01 36 14.0
comp=Z,2µm,19.0s
J47A Sunmer 95.05 32 IAMs_20 IAMs_20 01 36 39.4
comp=Z,2µm,19.0s
U38A Gravette 95.08 42 IAMs_20 IAMs_20 01 37 45.9
comp=Z,2µm,18.0s
I49A Point Hope 95.39 31 IAMs_20 IAMs_20 01 28 58.4
comp=Z,2µm,22.0s
P43A Skaggs, Pawnee 95.46 37 IAMs_20 IAMs_20 01 36 16.4
comp=Z,2µm,19.0s
CCM Cathedral Cave 95.70 39 P **P 00 49 20.9 -1.2**
CCM pmax pmax
comp=Z,92nm,1.4s
CCM MLR MLR
comp=Z,1µm,20.0s
CCM Cathedral Cave 95.70 39 P **P 00 49 20.9 -1.2**
CCM IAmb IAmb 00 49 27.1
comp=Z,92nm,1.4s
SFIN Lafayette 96.15 35 IAMs_20 IAMs_20 01 35 16.8
comp=Z,2µm,19.0s
SADO Sadowa 96.27 28 LR LR 01 43 25.8
comp=Z,531nm,18.0s,baz=352,slow=42
AAM Ann Arbor 96.31 32 IAMs_20 IAMs_20 01 35 58.9
comp=Z,2µm,18.0s
K50A Casco 96.40 31 IAMs_20 IAMs_20 01 36 32.3
comp=Z,1µm,19.0s
N47A Urbana 96.46 34 IAMs_20 IAMs_20 01 40 35.9
comp=Z,2µm,18.0s
T42A Van Buren 96.52 40 IAMs_20 IAMs_20 01 41 06.1
comp=Z,1µm,19.0s
FURI Furi 96.56 284 P **P 00 49 26.9 +0.1**
FURI IAMs_20 IAMs_20 01 39 25.0
comp=Z,2µm,20.0s
P46A Rosedale 96.67 36 IAMs_20 IAMs_20 01 34 41.6
comp=Z,1µm,19.0s
MIAR Mount Ida 96.87 43 P **P 00 49 27.0 -0.4**
MIAR pmax pmax
comp=Z,42nm,1.2s
MIAR MLR MLR
comp=Z,2µm,18.0s
MIAR Mount Ida 96.87 43 P **P 00 49 27.0 -0.4**
MIAR IAmb IAmb 00 49 32.1
comp=Z,42nm,1.1s
MIAR IAMs_20 IAMs_20 01 36 28.4
comp=Z,1µm,18.0s
S44A Carbondale 97.04 38 IAMs_20 IAMs_20 01 36 40.6
comp=Z,2µm,19.0s
N49A Columbus Grove 97.15 33 IAMs_20 IAMs_20 01 38 53.1
comp=Z,1µm,18.0s
O48B Farmland 97.20 34 IAMs_20 IAMs_20 01 29 38.5
comp=Z,1µm,22.0s
M50A Fremont 97.30 32 IAMs_20 IAMs_20 01 36 29.1
comp=Z,2µm,20.0s
P48A Milroy 97.68 35 IAMs_20 IAMs_20 01 33 44.3
comp=Z,1µm,21.0s
D62A Allapoint, All 97.86 21 IAMs_20 IAMs_20 01 38 59.7
comp=Z,2µm,19.0s
T45A Paducah 97.86 38 IAMs_20 IAMs_20 01 32 46.5
comp=Z,1µm,20.0s
M52A Chesterland 97.96 31 IAMs_20 IAMs_20 01 38 00.4
comp=Z,1µm,20.0s
N51A Ashland 97.99 32 IAMs_20 IAMs_20 01 31 56.4
comp=Z,2µm,21.0s
NATX Nacogdoches 98.14 46 IAMs_20 IAMs_20 01 41 08.4
comp=Z,2µm,18.0s
LONY Lake Ozonia 98.16 25 IAMs_20 IAMs_20 01 42 12.4
comp=Z,2µm,18.0s
WCI Wyandotte Cave 98.19 36 IAMs_20 IAMs_20 01 36 28.8
comp=Z,2µm,19.0s
ACSO Alum Creek Sta 98.25 33 P **P 00 49 32.4 -1.2**
J57A Williamstown 98.65 27 IAMs_20 IAMs_20 01 40 50.6
comp=Z,2µm,19.0s
ZAIG Zacatecas 98.67 57 P **P 00 49 35.0 -1.1**
R49A Shelbyville 98.71 36 IAMs_20 IAMs_20 01 36 44.5
comp=Z,2µm,20.0s
N53A Lisbon 98.78 31 IAMs_20 IAMs_20 01 38 34.2
comp=Z,1µm,19.0s
O52A Adamsville 98.88 32 IAMs_20 IAMs_20 01 35 34.9
comp=Z,1µm,20.0s
WVT Waverly 98.96 39 IAMs_20 IAMs_20 01 37 31.6
comp=Z,1µm,19.0s
Q51A Peebles 99.03 34 IAMs_20 IAMs_20 01 30 46.0
comp=Z,2µm,22.0s
G62A West of Eustis 99.05 22 IAMs_20 IAMs_20 01 38 02.2
comp=Z,1µm,20.0s
L56A Greenwood 99.10 28 IAMs_20 IAMs_20 01 37 43.5
comp=Z,1µm,19.0s
R50A Paris 99.13 35 IAMs_20 IAMs_20 01 34 56.8
comp=Z,1µm,20.0s
F64A Sherman 99.17 21 IAMs_20 IAMs_20 01 32 07.3
comp=Z,1µm,21.0s
J59A Piesco 99.18 26 IAMs_20 IAMs_20 01 38 47.4
comp=Z,2µm,20.0s
OXF Oxford 99.29 41 IAMs_20 IAMs_20 01 42 24.4
comp=Z,2µm,18.0s
H62A Milan 99.41 23 IAMs_20 IAMs_20 01 42 27.8
comp=Z,2µm,18.0s
PKME Peaks-Kenny Pk 99.41 22 IAMs_20 IAMs_20 01 41 18.7
comp=Z,2µm,19.0s
LBNH Lisbon 99.44 24 IAMs_20 IAMs_20 01 40 36.6
comp=Z,1µm,19.0s
143A Sos Landing, 99.45 43 IAMs_20 IAMs_20 01 33 51.9
comp=Z,2µm,20.0s
CASY Casey 99.48 192 P **Pdif 00 49 38.9 +0.7**
CASY IAmb IAmb 00 49 44.3
comp=Z,73nm,1.8s
O54A Avella 99.49 31 IAMs_20 IAMs_20 01 39 05.0
comp=Z,2µm,19.0s
MAHO Mahon 99.50 328 IAMs_20 IAMs_20 01 38 04.5
comp=Z,2µm,20.0s
P53A Whipple 99.59 32 IAMs_20 IAMs_20 01 41 45.7
comp=Z,2µm,19.0s
Q52A Bidwell 99.60 33 IAMs_20 IAMs_20 01 40 44.9
comp=Z,1µm,19.0s
Y45A Yeager Farm, C 99.69 41 IAMs_20 IAMs_20 01 35 00.9
comp=Z,2µm,20.0s
441A DeRidder 99.75 46 IAMs_20 IAMs_20 01 29 54.9
comp=Z,2µm,20.0s
U49A Red Boiling Sp 99.76 37 IAMs_20 IAMs_20 01 37 30.1
comp=Z,2µm,19.0s
HNH Hanover 99.78 24 IAMs_20 IAMs_20 01 39 10.6
comp=Z,1µm,20.0s
V48A Smith Brothers 99.80 38 IAMs_20 IAMs_20 01 36 43.6
comp=Z,2µm,20.0s
WVL Waterville 99.92 22 IAMs_20 IAMs_20 01 36 11.1
comp=Z,2µm,21.0s
M57A Sunshine Farm, 99.94 29 IAMs_20 IAMs_20 01 42 47.7
comp=Z,2µm,19.0s
I62A Tamworth 99.96 24 IAMs_20 IAMs_20 01 42 49.5
comp=Z,1µm,20.0s
J61A Chester 100.00 25 IAMs_20 IAMs_20 01 43 07.4
comp=Z,2µm,18.0s
S51A Beattyville 100.00 35 IAMs_20 IAMs_20 01 38 06.6
comp=Z,2µm,19.0s
G65A Princeton 100.00 21 IAMs_20 IAMs_20 01 36 28.4
comp=Z,1µm,20.0s
L59A Walton 100.06 27 IAMs_20 IAMs_20 01 41 40.8
comp=Z,2µm,19.0s
I63A Otisfield 100.07 23 IAMs_20 IAMs_20 01 35 07.3
comp=Z,1µm,21.0s
MCWV Mont Chateau 100.15 31 IAMs_20 IAMs_20 01 35 09.9
comp=Z,1µm,20.0s
KEST Kesra 100.27 322 P **Pdif 00 49 42.7 0.0**
comp=Z,3.8nm,0.9s,baz=293,slow=6.3,SNR=4.5
KEST PP **PP 00 53 45.7 -2.2**
comp=Z,4.9nm,1.1s,baz=31,slow=8.0,SNR=4.7
KEST Kesra 100.27 322 **Pdif 00 49 41.8 -1.0**
VBMS Vicksburg 100.32 43 IAMs_20 IAMs_20 01 40 08.8
comp=Z,2µm,19.0s
EMMW East Machias 100.48 21 IAMs_20 IAMs_20 01 38 20.0
comp=Z,1µm,20.0s
N58A Sunbury 100.53 29 IAMs_20 IAMs_20 01 33 32.3
comp=Z,1µm,21.0s
X48A Hartselle 100.64 39 IAMs_20 IAMs_20 01 40 17.1
comp=Z,1µm,19.0s
K62A Royalston 100.70 25 IAMs_20 IAMs_20 01 40 54.1
comp=Z,1µm,20.0s
L61B Nhampton 100.73 25 IAMs_20 IAMs_20 01 44 12.5
comp=Z,2µm,18.0s
146A Union 100.86 42 IAMs_20 IAMs_20 01 37 45.1
comp=Z,2µm,20.0s
TZTN Tazewell 100.87 36 IAMs_20 IAMs_20 01 30 16.9
comp=Z,2µm,22.0s
Q56A Snyder Ridge, 100.95 31 IAMs_20 IAMs_20 01 35 42.7
comp=Z,2µm,21.0s
S54A Dingess, Beckl 100.97 33 IAMs_20 IAMs_20 01 38 44.0
comp=Z,1µm,20.0s
W50A Signal Mountai 101.00 38 IAMs_20 IAMs_20 01 37 41.5
comp=Z,2µm,20.0s
Z47A Carrollton 101.01 41 IAMs_20 IAMs_20 01 37 44.9
comp=Z,1µm,19.0s
HRV Adam Dziewonsk 101.08 24 IAMs_20 IAMs_20 01 44 13.2
comp=Z,2µm,18.0s
P57A Homestead Farm 101.11 30 IAMs_20 IAMs_20 01 38 49.7
comp=Z,2µm,20.0s
Y49A Blunt Mountai 101.44 39 IAMs_20 IAMs_20 01 39 17.1
comp=Z,2µm,20.0s
346A Big Creek Wild 101.53 43 IAMs_20 IAMs_20 01 36 05.0
comp=Z,1µm,20.0s
WSPT Westport, CT 101.59 26 IAMs_20 IAMs_20 01 41 51.4
comp=Z,1µm,20.0s
LRAL Lakeview Retre 101.73 40 IAMs_20 IAMs_20 01 44 23.9
comp=Z,1µm,19.0s
X51A Calhoun 101.73 38 IAMs_20 IAMs_20 01 38 13.8
comp=Z,2µm,20.0s
N62A Caumsett State 101.75 26 IAMs_20 IAMs_20 01 42 56.4
comp=Z,2µm,19.0s
U54A Nelsons Funny 101.75 35 IAMs_20 IAMs_20 01 39 31.0
comp=Z,1µm,20.0s
W52A Murphy 101.81 37 IAMs_20 IAMs_20 01 33 34.8
comp=Z,1µm,20.0s
L64A Middleborough 101.84 24 IAMs_20 IAMs_20 01 44 25.2
comp=Z,2µm,18.0s
BLA Blacksburg 101.87 33 IAMs_20 IAMs_20 01 44 47.1
comp=Z,2µm,18.0s
M63A Gales Ferry 101.87 25 IAMs_20 IAMs_20 01 41 49.7
comp=Z,1µm,20.0s
V53A Saluda 101.93 36 IAMs_20 IAMs_20 01 44 19.8
comp=Z,1µm,19.0s
S57A Dark Hollow, R 102.10 32 IAMs_20 IAMs_20 01 37 46.2
comp=Z,2µm,20.0s
M65A Busby, Falmout 102.24 24 IAMs_20 IAMs_20 01 41 49.7
comp=Z,1µm,20.0s
LODK Lodwar 102.25 281 P **Pdif 00 49 53.2 +1.3**
LODK Lodwar 102.25 281 IAMs_20 IAMs_20 01 39 41.8
comp=Z,1µm,19.0s
PBRG Braganca 102.30 336 *e*PP **PP 00 54 06.1 +3.2**
R58B Mineral 102.42 31 IAMs_20 IAMs_20 01 40 38.5
comp=Z,1µm,19.0s
CBN Corbin Frederi 102.44 31 IAMs_20 IAMs_20 01 41 33.1
comp=Z,1µm,20.0s
V55A Taylorsville 102.58 35 IAMs_20 IAMs_20 01 40 04.9
comp=Z,2µm,20.0s
U56A King 102.58 34 IAMs_20 IAMs_20 01 37 30.0
comp=Z,1µm,20.0s
PGAV Gavieira, Arco 102.67 338 *e*PP **PP 00 54 09.2 +3.5**
PGAV *e*LR LR 01 32 20.4
PGAV *i* IAMs_20 IAMs_20 01 45 43.4
comp=Z,2µm,18.0s
PCAB Cabril 102.82 337 *e*PP **PKiKP 00 54 10.4 -4.0**
250A Grady 102.93 40 IAMs_20 IAMs_20 01 36 59.7
comp=Z,2µm,21.0s
KIBK Kibwezi 102.94 275 P **Pdif 00 49 56.1 +1.1**
KIBK Kibwezi 102.94 275 Pdif **Pdif 00 49 54.0 -1.0**
KIBK IAMs_20 IAMs_20 01 41 59.0
comp=Z,1µm,20.0s
MVO Moncorvo 102.97 336 *e*PP **PP 00 54 09.1 +1.2**
MVO *e*LR LR 01 35 00.9
MVO *i* IAMs_20 IAMs_20 01 44 07.5
comp=Z,2µm,18.0s
POLO Lamas de Olo 103.04 337 *e*PP **PKiKP 00 54 12.0 -2.9**
KMSC Kings Mountain 103.08 35 IAMs_20 IAMs_20 01 33 23.4
comp=Z,1µm,20.0s
BRAL Brewton 103.09 41 IAMs_20 IAMs_20 01 40 59.1
comp=Z,1µm,20.0s
ESDC Sonseca Array 103.15 333 Pdiff **Pdif 00 49 55.0 -0.5**
comp=Z,0.9nm,0.9s,baz=7.6,slow=4.5,SNR=4.1
ESDC PKKPbc **PKKPbc 01 05 52.1 +0.9**
comp=Z,0.4nm,0.6s,baz=228,slow=1.9,SNR=4.7
R61A Willards 103.21 29 IAMs_20 IAMs_20 01 43 06.3
comp=Z,2µm,19.0s
152A Waverly Hall 103.26 39 IAMs_20 IAMs_20 01 40 13.3
comp=Z,2µm,19.0s
T59A Double "B" Far 103.39 31 IAMs_20 IAMs_20 01 37 15.1
comp=Z,1µm,19.0s
S61A Accomac 103.62 30 IAMs_20 IAMs_20 01 45 05.1
comp=Z,2µm,20.0s
V58A Windy Hill, Pi 103.63 33 IAMs_20 IAMs_20 01 45 55.7
comp=Z,1µm,18.0s
PVIS Viseu 103.66 337 *e*PP **PKiKP 00 54 15.9 0.0**
CART Cartagena 103.73 330 IAMs_20 IAMs_20 01 42 42.1
comp=Z,2µm,20.0s
MTE Manteigas 103.83 336 *e*PP **PKiKP 00 54 17.7 +1.4**
MTE *e*LR LR 01 32 17.4
MTE *i* IAMs_20 IAMs_20 01 44 51.8
comp=Z,3µm,18.0s
352A Blakely 104.05 40 IAMs_20 IAMs_20 01 37 55.4
comp=Z,1µm,20.0s
154A Montrose 104.16 38 IAMs_20 IAMs_20 01 44 28.2
comp=Z,2µm,19.0s
451A Vernon 104.25 41 IAMs_20 IAMs_20 01 39 56.6
comp=Z,2µm,20.0s
PCBR Castelo Branco 104.30 336 *e*PP **PP 00 54 17.6 -0.2**
Y57A Sumter 104.45 35 IAMs_20 IAMs_20 01 42 00.5
comp=Z,2µm,20.0s
W59A Clinton 104.46 33 IAMs_20 IAMs_20 01 38 59.6
comp=Z,2µm,20.0s
PCAS Casmilo, Conde 104.46 337 *e*PP **PKiKP 00 54 17.1 -0.3**
X58A Rowland 104.53 34 IAMs_20 IAMs_20 01 42 26.6
comp=Z,1µm,20.0s
PMRV Marv??o 104.64 336 *e*Pdif **Pdif 00 50 05.0 +3.0**
PMRV *e*PP **PKiKP 00 54 17.6 -0.1**
PMRV *e*LR LR 01 32 58.8
PMRV *i* IAMs_20 IAMs_20 01 44 50.9
comp=Z,3µm,18.0s
PSARD Sardoal 104.75 336 *e*Pdif **Pdif 00 50 08.3 +5.7**
PSARD *e*PP **PP 00 54 22.8 +1.6**
V61A Roper 104.80 31 IAMs_20 IAMs_20 01 37 28.6
comp=Z,1µm,20.0s
TIGA Tifton 104.81 39 IAMs_20 IAMs_20 01 35 15.5
comp=Z,1µm,21.0s
Y58A Scranton 104.89 35 IAMs_20 IAMs_20 01 45 12.3
comp=Z,1µm,20.0s
PSBE So Bento 105.05 337 *e*Pdif **Pdif 00 50 07.5 +3.6**
PSBE *e*PP **PP 00 54 23.7 +0.3**
PESTR Estremoz 105.20 336 *e*Pdif **Pdif 00 50 07.1 +2.5**
PESTR *e*PP **PP 00 54 26.1 +1.6**
PMTG Montargil 105.25 336 *e*Pdif **Pdif 00 50 06.3 +1.5**
PMTG *e*PP **PP 00 54 27.4 +2.6**
NHSC New Hope 105.28 36 IAMs_20 IAMs_20 01 46 54.6
comp=Z,2µm,19.0s
553A Crawfordville 105.31 40 IAMs_20 IAMs_20 01 39 08.7
comp=Z,1µm,20.0s
PARRA Arraiolos 105.41 336 *e*PP **PP 00 54 28.6 +2.5**
Y60A Bolivia 105.52 34 IAMs_20 IAMs_20 01 47 02.6
comp=Z,1µm,19.0s
PBAR Barrancos 105.62 335 *e*Pdif **Pdif 00 50 07.9 +1.5**
PBAR *e*PP **PP 00 54 30.3 +2.7**
EVO Evora 105.65 336 *e*PP **PP 00 54 29.8 +2.0**
PMAFR Mafra 105.71 337 *e*Pdif **Pdif 00 50 09.1 +2.3**
MOE Montemor 105.78 336 *e*Pdif **Pdif 00 50 11.9 +4.8**
MOE *e*PP **PP 00 54 30.2 +1.4**
LIS Lisbon 105.88 337 *e*PP **PP 00 54 29.8 +0.3**
LIS IAMs_20 IAMs_20 01 42 54.3
comp=Z,2µm,17.5s
PBEJ Beja 106.05 335 *e*PP **PP 00 54 31.8 +1.0**
456A Hilliard 106.21 38 IAMs_20 IAMs_20 01 36 29.5
comp=Z,2µm,21.0s
PLOUS Minas do Lousa 106.24 336 *e*PP **PP 00 54 33.4 +1.2**
MESJ Messejana 106.34 336 *e*Pdif **Pdif 00 50 09.1 -0.6**
MESJ *e*PP **PP 00 54 33.2 +0.3**
MESJ IAMs_20 IAMs_20 01 46 16.2
comp=Z,3µm,18.2s
MESJ Messejana 106.34 336 *e*PP **PP 00 54 35.6 +2.6**
MESJ Messejana 106.34 336 *e*P **Pdif 00 50 09.1 -0.6**
MESJ *e* 00 54 33.2
PCVE Castro Verde 106.46 335 *e*Pdif **Pdif 00 50 15.2 +5.0**
PCVE *e*PP **PP 00 54 35.1 +1.3**
PVAQ Vaqueiros 106.55 335 *e*Pdif **Pdif 00 50 16.8 +6.2**
PVAQ *e*PP **PP 00 54 37.5 +3.0**
PVAQ *e*LR LR 01 32 05.9
PVAQ *i* IAMs_20 IAMs_20 01 35 33.3
comp=Z,2µm,18.0s
PBDV Barranco-do-Ve 106.77 335 *e*Pdif **Pdif 00 50 17.2 +5.6**
PBDV *e*PP **PP 00 54 38.8 +2.6**
PTEO Sao Teotonio 106.78 336 *e*Pdif **Pdif 00 50 16.8 +5.2**
PTEO *e*PP **PP 00 54 38.8 +2.6**
MORF Marmelete 106.97 336 *e*PP **PP 00 54 38.0 +0.3**
MORF IAMs_20 IAMs_20 01 46 43.1
comp=Z,3µm,12.9s
656A Willston 106.99 40 IAMs_20 IAMs_20 01 41 02.1
comp=Z,2µm,19.0s
PFVI Vila Bisbo 107.19 336 *e*Pdif **Pdif 00 50 18.0 +4.6**
PFVI *e*PP **PP 00 54 41.6 +2.5**
MBAR Mbarara 108.28 280 *i* P **Pdif 00 50 18.3 -0.6**
MBAR MLR MLR
comp=Z,2µm,21.0s
MBAR Mbarara 108.28 280 Pdif **Pdif 00 50 18.3 -0.6**
MBAR Mbarara 108.28 280 IAMs_20 IAMs_20 01 41 15.0
comp=Z,1µm,21.0s
VNDA Vanda 108.55 175 PKiKP **PKiKP 00 54 25.0 +1.3**
comp=Z,3.2nm,0.9s,baz=323,slow=3.4,SNR=3.9
VNDA PKKPbc **PKKPbc 01 05 37.5 +1.7**
comp=Z,2.3nm,1.1s,baz=266,slow=3.0,SNR=3.1
DWPF Disney Wildern 108.57 40 IAMs_20 IAMs_20 01 41 59.1
comp=Z,2µm,20.0s
060A Indiantown 110.00 39 IAMs_20 IAMs_20 01 40 15.9
comp=Z,1µm,20.0s
AVE Averroes 110.06 333 IAMs_20 IAMs_20 01 50 48.6
comp=Z,1µm,19.0s
TEIG Tepich 110.29 50 IAMs_20 IAMs_20 01 38 23.5
comp=Z,1µm,20.0s
TAM Tamanrasset 112.28 316 IAMs_20 IAMs_20 01 48 55.4
comp=Z,1µm,21.0s
PMPST Porto Santo, M 113.35 340 *e*PP **PP 00 55 24.6 +1.0**
MAW Mawson 113.81 204 Pdiff **Pdif 00 50 40.9 -0.9**
comp=Z,1.7nm,0.9s,baz=35,slow=12,SNR=1.9
MAW PKiKP **PKiKP 00 54 33.4 -0.4**
comp=Z,4.3nm,0.9s,baz=68,slow=1.6,SNR=6.0
MAW PP **PP 00 55 27.2 -0.3**
comp=Z,9.5nm,1.2s,baz=66,slow=3.6,SNR=4.0
MAW PKKPbc **PKKPbc 01 05 16.8 -1.3**
comp=Z,1.7nm,0.5s,baz=267,slow=4.7,SNR=4.0
PMOZ Porto Moniz, M 113.84 341 *e*PP **PP 00 55 30.2 +3.0**
PMOZ *e*LR LR 01 38 58.8
PMOZ *i* IAMs_20 IAMs_20 01 53 46.3
comp=Z,1µm,18.0s
PMAR Madeira 113.85 340 *e*PP **PP 00 55 28.4 +1.0**
MTDJ Mount Denham 118.51 43 IAMs_20 IAMs_20 01 51 08.8
comp=Z,895nm,21.0s
GTBY Guantanamo Bay 118.55 40 IAMs_20 IAMs_20 01 49 33.5
comp=Z,2µm,20.0s
HDC Heredia 120.31 55 IAMs_20 IAMs_20 01 41 03.5
comp=Z,1µm,22.0s
QSPA South Pole Qui 120.35 180 PKP **PKiKP 00 54 46.7 +0.1**
comp=Z,16nm,0.9s,baz=6.9,slow=1.0,SNR=30
QSPA PP **PP 00 56 13.7 +0.4**
comp=Z,9.3nm,1.0s,baz=337,slow=1.4,SNR=5.0
QSPA PKKPbc **PKKPbc 01 04 54.3 -1.1**
comp=Z,1.0nm,0.7s,baz=2.7,slow=0.4,SNR=7.1
QSPA South Pole Qui 120.35 180 **PKiKP 00 54 46.9 +0.3**
KSANE Kasane 121.39 267 PKPdf **PKPdf 00 54 48.9 -1.2**
TORD Torodi Ar. Bea 121.94 312 PKP **PKPdf 00 54 50.8 -0.4**
comp=Z,11nm,0.8s,baz=26,slow=1.4,SNR=75
TORD PP **PP 00 56 22.8 -1.4**
comp=Z,10.0nm,1.0s,baz=29,slow=4.5,SNR=6.5
TORD PKKPbc **PKKPbc 01 04 48.6 +0.7**
comp=Z,3.3nm,1.0s,baz=217,slow=3.4,SNR=3.8
PAYG Puerto Ayora 122.47 69 IAMs_20 IAMs_20 01 44 17.9
comp=Z,1µm,20.0s
EDA Edea 122.51 298 IAMs_20 IAMs_20 01 53 24.2
comp=Z,1µm,20.0s
SYO Syowa Base 122.52 205 ⇑*i*P **PKPdf 00 54 49.4 -1.1**
SYO Syowa Base 122.52 205 ⇑*e*P **PKiKP 00 54 54.3 +3.6**
LBTB Lobatse 123.86 259 PKIKP **PKPdf 00 54 53.9 -0.7**
LBTB Lobatse 123.86 259 PKPdf **PKPdf 00 54 53.9 -0.7**
SJG San Juan 124.66 33 IAMs_20 IAMs_20 01 46 38.6
comp=Z,1µm,21.0s

MAKGR	**Makgori**	124.82	258			PKiKP	00 54 56.8	0.0
BOSA	**Boshof**	125.37	255	PKP		PKiKP	00 54 57.9	0.0
	comp=Z,6.7nm,0.8s,baz=94,slow=2.3,SNR=12							
BOSA	**Boshof**	125.37	255	PKiKP		PKPdf	00 54 57.1	-0.4
BOSA	**Boshof**	125.37	255			PKPdf	00 54 57.1	-0.4
GRTLG	**Ghanzi**	126.24	265	PKPdf		PKiKP	00 54 59.8	0.0
SEUS	**St. Eustatius**	126.61	30	IAMs_20	IAMs_20		01 51 58.3	
	comp=Z,1μm,20.0s							
KOOLE	**Kule**	127.73	263	PKPdf		PKPdf	00 55 01.2	-0.9
CBOC	**Ciudad Bolivar**	128.85	51	P		PKPdf	00 55 04.1	-0.5
PTBC	**PUERTO BERRIO**	129.38	49	P		PKPdf	00 55 04.9	-0.6
GUY2C	**Guyana, Caldas**	129.75	51	P		PKPdf	00 55 06.3	-0.4
NORC	**Norcasia**	129.83	51	P		PKPdf	00 55 05.9	-0.5
SDV	**Santo Domingo**	129.96	44	PKP		PKiKP	00 55 07.4	-0.1
	comp=Z,33nm,1.0s,baz=349,slow=2.6,SNR=4.5							
SDV	**Santo Domingo**	129.96	44	*eP*		PKPdf	00 55 04.5	-2.3
SPBC	**San Pablo de B**	130.29	50	P		PKPdf	00 55 07.1	-0.2
JAMC	**Jamundi, Valle**	130.30	54	P		PKPdf	00 55 07.8	+0.3
BBAC	**Balboa, Cauca**	130.73	56	P		PKPdf	00 55 08.4	+0.1
ROSC	**El Rosal**	130.73	51	PKP		PKiKP	00 55 09.6	+0.2
	comp=Z,7.2nm,0.4s,baz=358,slow=0.9,SNR=13							
ROSC	**El Rosal**	130.73	51	PKiKP		PKPdf	00 55 07.7	-0.8
ROSC	**El Rosal**	130.73	51			PKPdf	00 55 07.7	-0.8
ROSC	**El Rosal**	130.73	51	P		PKPdf	00 55 08.6	+0.1
RUSC	**La Rusia**	130.76	49	P		PKPdf	00 55 08.6	-0.1
POPC	**Popayan, Colom**	130.77	55	P		PKPdf	00 55 07.8	-0.6
ORTC	**Ortega, Tolima**	130.79	52	P		PKPdf	00 55 07.6	-0.6
PAC1	**Pacto, Paraso**	130.80	59	P		PKPdf	00 55 08.6	+0.3
DBIC	**Dimbokro**	131.02	313	PKP		PKPdf	00 55 08.6	0.0
	comp=Z,11nm,0.6s,baz=71,slow=1.7,SNR=13							
DBIC				PP		PP	00 57 26.0	+1.6
	comp=Z,18nm,1.0s,baz=46,slow=10,SNR=4.4							
OTAV	**Otavalo**	131.07	59	PKiKP		PKPdf	00 55 08.8	-0.4
OTAV	**Otavalo**	131.07	59	PKPdf		PKPdf	00 55 08.8	-0.4
OTAV	**Otavalo**	131.07	59	IAMs_20	IAMs_20		02 02 26.5	
	comp=Z,829nm,18.0s							
OTAV	**Otavalo**	131.07	59	*eP*		PKPdf	00 55 08.6	-0.6
PRAC	**Prado**	131.18	52	P		PKPdf	00 55 08.5	-0.4
TULM	**Tulcn-Chalpat**	131.24	58	P		PKiKP	00 55 10.8	+0.3
CHIC	**Chingaza**	131.28	50	P		PKPdf	00 55 09.1	-0.5
NVL	**N'lazarevskaya**	131.37	200	*e*	PKiKP	PKPdf	00 55 07.1	-0.3
NVL				*e*			01 02 14.9	
NVL				*e*SS		SS	01 14 54.6	-3.4
NVL				pmax		pmax		
	comp=Z,13nm,0.9s							
SLOR	**San Lorenzo -**	131.68	60	PKPdf		PKPdf	00 55 10.0	-0.4
GRGR	**Grenville**	131.95	31	IAMs_20	IAMs_20		01 52 33.7	
	comp=Z,960nm,20.0s							
CASC	**Dorado de Casc**	131.96	58	P		PKPdf	00 55 09.3	-1.2
PIAT	**Ana Tenorio**	132.03	60	P		PKiKP	00 55 12.1	+0.1
FLOC	**Florencia**	132.17	55	P		PKPdf	00 55 10.9	+0.1
MACC	**Macarena, Meta**	133.02	53	P		PKPdf	00 55 11.6	-0.8
TROLL	**Troll, Antarti**	133.16	196	⇑PKPdf		PKiKP	00 55 11.8	-0.4
	comp=Z,1μm,0.7s							
PTLC	**Puerto Leguiza**	133.76	55	P		PKPdf	00 55 14.3	+0.6
SNAA	**Sanae**	134.64	195	⇑PKPdf		PKPdf	00 55 13.8	+0.1
	comp=Z,282nm,0.8s							
SNAA				⇑PP		PP	00 57 44.7	-2.4
	comp=Z,333nm,1.2s							
SNAA				⇓SKPdf		SKPbc	00 58 42.8	0.0
	comp=Z,211nm,1.0s							
SNAA	**Sanae**	134.64	195	PKhKP		PKPpre	00 55 05.6	
	comp=Z,4.0nm,1.0s,baz=155,slow=3.5,SNR=7.1							
SNAA				PKP		PKPdf	00 55 14.0	+0.4
	comp=Z,18nm,1.0s,baz=95,slow=3.2,SNR=6.8							
SNAA				PP		PP	00 57 45.5	-1.6
	comp=Z,29nm,1.2s,baz=109,slow=6.3,SNR=8.3							
SNAA	**Sanae**	134.64	195	PKiKP		PKPdf	00 55 14.0	+0.4
SNAA	**Sanae**	134.64	195	PKPdf		PKPdf	00 55 14.1	+0.4
SNAA				IAMs_20	IAMs_20		01 56 49.0	
	comp=Z,743nm,19.0s							
ATAH	**Atahualpa**	135.81	66	PKP		PKPdf	00 55 18.4	+0.4
	comp=Z,22nm,1.3s,baz=265,slow=8.7,SNR=5.5							
VNA2	**Neumayer--Watz**	136.18	194	⇑PKPdf		PKPdf	00 55 16.9	+0.5
	comp=Z,34nm,0.6s,baz=122,slow=1.9							
VNA2				⇑PP		PP	00 57 54.5	-2.2
	comp=N,11nm,1.1s,baz=136,slow=2.3							
VNA2				⇑SKPdf		SKPbc	00 58 48.1	+0.5
	comp=Z,7.0nm,0.8s,baz=135,slow=2.7							
VNA1	**Neumayer--Stat**	136.57	194	⇑PKPdf		PKPdf	00 55 17.9	+0.7
	comp=Z,30nm,1.2s							
NNA	**Nana**	139.86	71	PKP		PKPdf	00 55 24.5	-0.5
	comp=Z,6.9nm,0.4s,baz=358,slow=3.4,SNR=4.3							
NNA	**Nana**	139.86	71	PKiKP		PKPdf	00 55 22.7	-2.3
NNA				MLR		MLR		
	comp=Z,1μm,19.0s							
NNA	**Nana**	139.86	71			PKPdf	00 55 22.7	-2.3
CZSB	**Cruzeiro do Su**	140.60	62	PKPdf		PKPdf	00 55 24.9	-1.4
CZSB	**Cruzeiro do Su**	140.60	62	*eP*		PKPdf	00 55 20.4	-5.9
BOAV	**Boa Vista**	140.94	37	*eP*		PKPdf	00 55 26.1	-0.8
MDP	**Montagnes des**	141.94	24	PKhKP		PKPpre	00 55 25.4	
	comp=Z,13nm,0.9s,baz=270,slow=1.0,SNR=2.0							
TEFE	**Tefe**	143.34	48	*eP*		PKPbc	00 55 28.3	+0.1
ESPZ	**Base Esperanza**	145.08	165	PKPbc		PKPdf	00 55 33.3	+0.6
MACA	**Manacapuru-AM**	145.47	42	PKPbc		PKPbc	00 55 33.4	-1.5
MACA	**Manacapuru-AM**	145.47	42	*eP*		PKPbc	00 55 33.4	-1.5
MG05	**Puerto Natales**	147.17	140			PKPdf	00 55 37.2	+0.7
AP01	**Chacalluta**	148.52	75	IAMs_20	IAMs_20		02 00 14.1	
	comp=Z,764nm,21.0s							
PB12	**IPOC Station P**	148.64	75			PKPdf	00 55 37.7	-2.4
PB12				IAMs_20	IAMs_20		01 52 46.5	
	comp=Z,760nm,20.0s							
PB18	**Visviri**	148.84	73	IAMs_20	IAMs_20		01 50 25.7	
	comp=Z,1μm,22.0s							
ITTB	**Itatuba**	149.16	36	*eP*		PKPdf	00 55 40.6	-0.5
PB16	**IPOC Station P**	149.19	74			PKPdf	00 55 39.9	-1.8
PB16				IAMs_20	IAMs_20		01 51 53.0	
	comp=Z,965nm,22.0s							
LPAZ	**La Paz**	149.27	69	PKPbc		PKPdf	00 55 43.7	+1.8
	comp=Z,26nm,1.0s,baz=357,slow=3.6,SNR=36							
LPAZ	**La Paz**	149.27	69	*eP*		PKPdf	00 55 41.2	-0.7
GO07	**Milladeo Hill,**	149.29	124			PKPbc	00 55 43.9	-0.8
PB11	**IPOC Station P**	149.74	77	PKPdf		PKPdf	00 55 41.0	-1.0
LR04	**Corral**	150.01	118			PKPbc	00 55 44.9	-1.7
PB08	**IPOC Station P**	150.33	77			PKPdf	00 55 42.3	-0.9
PB05	**IPOC Station P**	150.55	83			PKPdf	00 55 42.5	-0.7
LL02	**Futaleuf**	150.57	125			PKPdf	00 55 42.8	+0.4
LR03	**Panguipulli**	150.87	117	PKPdf		PKPdf	00 55 41.6	-1.4
LR03				IAMs_20	IAMs_20		01 58 42.6	
	comp=Z,953nm,19.0s							
PB09	**IPOC Station P**	150.96	80			PKPdf	00 55 41.4	-2.5
PB06	**IPOC Station P**	151.04	82	IAMs_20	IAMs_20		01 52 02.3	
	comp=Z,970nm,21.0s							
LR05	**Currie**	151.04	119	PKPdf		PKPdf	00 55 43.2	0.0
LR05				IAMs_20	IAMs_20		01 53 26.2	
	comp=Z,1000nm,20.0s							
AC01	**Pan de Azucar**	151.29	89			PKPdf	00 55 42.7	-1.4
AC01				IAMs_20	IAMs_20		01 56 05.3	
	comp=Z,1μm,20.0s							
GO06	**Curarrehue**	151.54	117	IAMs_20	IAMs_20		01 56 03.5	
	comp=Z,926nm,20.0s							
ML02	**Panimavida**	151.89	109	PKPdf		PKPdf	00 55 44.1	-0.6
GO03	**Copiapo**	151.98	92	PKPdf		PKPdf	00 55 43.6	-1.5
CO02	**Combarbal**	151.99	100			PKPdf	00 55 44.2	-0.9
MT01	**Popeta**	152.00	105	PKPdf		PKPdf	00 55 43.7	-1.2
PLCA	**Paso Flores**	152.05	120	PKP		PKPdf	00 55 45.1	+0.3
	comp=Z,11nm,1.3s,baz=221,slow=6.3,SNR=3.5							
PLCA				PKPbc		PKiKP	00 55 51.6	-0.1
	comp=Z,23nm,1.0s,baz=251,slow=3.2,SNR=23							
PLCA	**Paso Flores**	152.05	120	PKiKP		PKPdf	00 55 43.2	-1.6
PLCA	**Paso Flores**	152.05	120	PKPdf		PKPdf	00 55 43.2	-1.6
PLCA	**Paso Flores**	152.05	120	*eP*		PKPdf	00 55 43.8	-1.0
CO04	**Los Peladeros**	152.10	101	PKPdf		PKPdf	00 55 43.9	-1.6
CO03	**El Pedregal**	152.20	99			PKPdf	00 55 43.3	-2.1
MT09	**Talagante**	152.22	105	PKPdf		PKPdf	00 55 44.4	-1.0
AC05	**El Transito**	152.22	95	PKPdf		PKPdf	00 55 44.6	-0.9
AF01	**San Pedro de A**	152.32	81	PKPdf		PKPdf	00 55 44.3	-1.8
BO02	**Sierra Bellavi**	152.41	107	PKPdf		PKPdf	00 55 44.7	-0.9
VA03	**San Esteban**	152.52	103	PKPdf		PKPdf	00 55 44.6	-1.2
BO04	**La Punta**	152.54	106			PKPdf	00 55 44.5	-1.3
MT16	**CCHEN**	152.59	104	PKPdf		PKPdf	00 55 44.3	-1.6
MT13	**San Alfonso**	152.80	105	PKPdf		PKPdf	00 55 45.6	-0.6
NBMO	**Morrinhos-CE**	152.81	4	*eP*		PKPdf	00 55 46.4	-0.3
VILB	**Vilhena**	153.22	54			PKPdf	00 55 45.0	-2.2
VILB	**Vilhena**	153.22	54	*eP*		PKPdf	00 55 47.2	0.0
PRPB	**Parauapebas**	153.41	26	*eP*		PKPdf	00 55 47.0	-0.6
NBPS	**Pedro II - PI**	153.77	7	*eP*		PKPdf	00 55 48.2	0.0
ZON	**Zonda**	154.00	100	PKiKP		PKPdf	00 55 46.2	-1.8
ZON	**Zonda**	154.00	100	PKPdf		PKPdf	00 55 46.2	-1.8
CLDB	**Colider**	154.52	43	*eP*		PKPdf	00 55 48.6	-0.5
SIV	**San Ignacio**	154.60	60	PKP		PKPdf	00 55 50.1	+1.0
	comp=Z,7.6nm,0.9s,baz=218,slow=0.1,SNR=23							
SIV				PKPab		PKPab	00 56 13.3	+1.0
	comp=Z,42nm,0.9s,baz=308,slow=4.1,SNR=13							
RCBR	**Riachuelo**	155.26	354	IAMs_20	IAMs_20		02 14 28.5	
	comp=Z,812nm,19.0s							
PTLB	**Pontes e Lacer**	155.67	56	*eP*		PKPdf	00 55 50.4	-0.2
BBSD	**Serra de San D**	155.69	62	*eP*		PKPdf	00 55 50.8	+0.2
SMTB	**Santa Maria do**	156.70	24	*eP*		PKPdf	00 55 52.2	+0.1
SNDB	**Serra Nova Dou**	157.90	36	*eP*		PKPdf	00 55 53.2	-0.4
SALV	**Santo Antonio**	158.38	51	*eP*		PKPdf	00 55 54.5	+0.5
COIM	**Forte Coimbra**	159.44	63	*eP*		PKPdf	00 55 55.8	+0.6
PP1B	**Ponte de Pedra**	160.12	53	*eP*		PKPdf	00 55 56.0	-0.1
NBPN	**Ponto Novo - B**	160.27	6	*eP*		PKPdf	00 55 55.8	-0.6
MURT	**Porto Murtinho**	160.53	67	*eP*		PKPdf	00 55 55.5	-0.8
ARAG	**Araguaiana, MT**	160.69	43	*eP*		PKPdf	00 55 56.5	-0.1
AQDB	**Aquidauana**	161.37	61	PKPdf		PKPdf	00 55 56.7	-0.6
BDFB	**Brasilia**	162.66	33	PKP		PKPdf	00 56 00.0	+1.1
	comp=Z,11nm,1.0s,baz=247,slow=3.2,SNR=9.0							
BDFB				PKPab		PKPab	00 56 47.5	+0.4
	comp=Z,3.5nm,0.8s,baz=116,slow=22,SNR=1.4							
CPUP	**Villa Florida**	162.74	80	PKP		PKPdf	00 55 59.0	+0.5
	comp=Z,12nm,1.1s,baz=345,slow=1.7,SNR=11							
CPUP				PKPab		PKPab	00 56 48.6	+1.3
	comp=Z,16nm,1.1s,baz=290,slow=3.4,SNR=5.8							
CPUP				PP		PP	01 00 38.3	+6.0
	comp=Z,5.4nm,1.1s,baz=313,slow=6.0,SNR=3.9							
CPUP	**Villa Florida**	162.74	80	PKiKP		PKPdf	00 55 57.7	-0.8
CPUP	**Villa Florida**	162.74	80			PKPdf	00 55 57.7	-0.8
SJPY	**San Joaquin**	163.29	75	*eP*		PKPdf	00 55 59.5	+0.4
PSAL	**Palomas, Salto**	163.41	97	*eP*		PKPdf	00 55 59.7	+0.7
JANB	**Januaria**	163.58	21	*eP*		PKPdf	00 55 59.1	-0.6
NBIT	**Itapeh - BA**	164.38	4	*eP*		PKPdf	00 56 00.7	+0.4
IPMB	**Ipameri, GO**	164.54	38	*eP*		PKPdf	00 56 00.7	+0.2
CMC01	**Camacan, BA**	164.79	4	*eP*		PKPdf	00 56 00.7	0.0
TRCB	**Terra Rica**	165.03	62	*eP*		PKPdf	00 56 01.1	+0.3
ARCA	**Araçuai, MG**	165.91	15	*eP*		PKPdf	00 56 01.3	-0.3
GUA01	**Guaratinga, BA**	165.99	6	*eP*		PKPdf	00 56 01.5	-0.2
PTGB	**Pitanga**	166.47	68	*eP*		PKPdf	00 56 02.1	+0.1
LDASE	**Londrina, Braz**	166.52	61	*eP*		PKPdf	00 56 02.5	+0.5
CPSB	**Cacapava Do Su**	166.94	93	PKPdf		PKPdf	00 56 01.4	-0.6
CPSB	**Cacapava Do Su**	166.94	93	*eP*		PKPdf	00 56 02.3	+0.2
ITAB	**Concordia**	167.43	78	*eP*		PKPdf	00 56 01.1	-1.4
SJMB	**Sao Joao De Ma**	167.88	13	*eP*		PKPdf	00 56 03.1	+0.1
BSFB	**Barra de Sao F**	168.06	12	*eP*		PKPdf	00 56 03.9	+0.7
RIB01	**Linhares ES**	168.61	10	*eP*		PKPdf	00 56 03.5	0.0

*IDC **30** 00:48:50.6±12.0, 6°.15S×135°.37E, h0km, mb4.0/1, mbtmp4.4/3, ML3.7/2, MS4.5/1, Error ellipse: s-maj=169.2km s-min=95.8km az=163.0, Aru Islands region*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	13.75	184	Pn	Pn	00 52 06.2	-0.8
	0.3nm,0.3s,baz=5.9,slow=13,SNR=8.3						
	18nm,1.0s						
ASAR	**Alice Springs**	17.47	184	P	Pn	00 52 56.4	+0.4
	0.3nm,0.3s,baz=1.5,slow=12,SNR=13						
	10nm,0.9s						
STKA	**Stephens Creek**	26.25	168	P	P	00 54 27.7	+0.1
	2.0nm,0.8s,baz=347,slow=8.7,SNR=1.2						
	2.0nm,0.8s						
JOW	**Kunigami**	33.50	348	LR	LR	01 07 41.1	
	comp=Z,708nm,20.1s,baz=69,slow=34						

*IDC **30** 00:52:54.4±2.0, 30°.30N×141°.08E, h0km, mb3.7/2, mbtmp3.7/5, ML3.2/3, Error ellipse: s-maj=102.2km s-min=19.0km az=73.0*

ISC 30 00:52:58.6±1.6, 30°.4N±0°.2×141°.2E±0°.6, h35km, n6, σ1s04/8, mb3.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	2.99	336	Pn	Pn	00 53 43.6	+0.1
	4.8nm,0.3s,baz=340,slow=12,SNR=1.3						
JHJ				Sn	Sn	00 54 16.3	-1.8
	7.3nm,0.3s,baz=91,slow=17,SNR=1.4						
	24nm,0.2s						
JCJ	**Chichijima**	3.39	166	Pn	Pn	00 53 48.8	-0.3
	6.5nm,0.3s,baz=298,slow=23,SNR=10.0						
JCJ				Sn	Sn	00 54 27.4	-0.7
	8.1nm,0.3s,baz=279,slow=22,SNR=2.7						
	17nm,0.3s						
MJAR	**Matsushiro Arr**	6.63	338	Pn	Pn	00 54 33.3	-0.3
	0.2nm,0.3s,baz=158,slow=11,SNR=7.6						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	47.78	307	P	P	01 01 32.8	+0.4
	0.3nm,0.4s,baz=90,slow=7.9,SNR=4.2						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	50.49	188	P	P	01 01 53.2	0.0
	0.8nm,0.5s,baz=10,slow=8.0,SNR=5.9						
FINES	**FINESS Array B**	74.64	333	P	P	01 04 35.2	+1.2
	1.0nm,0.8s,baz=64,slow=5.6,SNR=4.4						
	1.0nm,0.8s						

*TAP **30** 00:53:15.6, 24°.03N×122°.59E, h28km, ML2.8, D*
*JMA **30** 00:53:15.8±0.2, 24°.N±2°×12°.3E±°, h35km, MV2.2/11, NW OFF ISHIGAKIJIMA IS*

ISC 30 00:53:15.5±1.0, 23°.97N±0°.03×122°.57E±0°.02, h30km±10km, n51, σ0s82/94, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	0.28	303	P	Pb	00 53 22.3	+0.1
EOS4				S	Sn	00 53 27.3	-0.9
EOS3	**EOS3**	0.39	324	*i* P	Pn	00 53 24.5	-0.5
EOS3				S	Sn	00 53 31.0	-0.4
EOS2	**EOS2**	0.55	325	P	Pn	00 53 27.4	+0.3
EOS2				S	Sn	00 53 36.3	+1.1
JYNG	**Yonagunijimaku**	0.59	35	*e*P	Pn	00 53 27.3	-0.5
JYNG				*e*S	Sb	00 53 34.2	-1.3
YOJ	**Yonaguni jima**	0.63	39	P	Pb	00 53 27.8	-0.3
YOJ				S	Sb	00 53 35.5	-1.2
YOJ	**Yonaguni jima**	0.63	39	*e*P	Pn	00 53 28.0	-0.4
YOJ				*e*S	Sb	00 53 35.6	-1.2
EWUT	**Wuta**	0.87	303	*e*P	Pn	00 53 31.5	-0.2
EWUT				*e*S	Sb	00 53 44.3	+1.0
ENA	**Nanau**	0.89	301	*e*P	Pn	00 53 30.0	-2.0
ENA				*e*S	Sn	00 53 42.3	-1.4
NACB	**Ninganchiao**	0.92	283	P	Pn	00 53 32.2	-0.1
NACB				*e*S	Sb	00 53 45.4	+0.7
TWC	**Suao**	0.92	314	*e*P	Pb	00 53 32.4	-0.4
TWC				*e*S	Sb	00 53 45.3	+0.6
SHUL	**Shoufeng**	0.94	259	P	Pn	00 53 32.2	-0.4
SHUL				*e*S	Sn	00 53 45.4	+0.3
ETM	**Tongmen**	0.99	270	P	Pn	00 53 32.5	-0.8
ETM				S	Sb	00 53 46.7	0.0
ETLH	**Xiulin Townshi**	1.02	284	*e*P	Pn	00 53 33.9	0.0
ETLH				*e*S	Sb	00 53 48.5	+0.7
NDS	**Dongshan**	1.02	310	*e*P	Pb	00 53 34.3	-0.3
NDS				*e*S	Sb	00 53 48.8	+1.0
LXIB	**Xiulin Townshi**	1.06	273	*e*P	Pn	00 53 34.1	-0.4
LXIB				*e*S	Sn	00 53 48.4	+0.1
LATG	**Datong**	1.11	301	*e*P	Pb	00 53 36.1	0.0
LATG				S	Sb	00 53 51.7	+1.5
WARBT	**Fenglin Townsh**	1.11	257	*e*P	Pn	00 53 34.5	-0.6
WARBT				*e*S	Sn	00 53 49.8	+0.3
IRIF	**Iriomote-Funau**	1.12	71	*e*P	Pn	00 53 35.4	+0.3
HATJ	**Hateruma jima**	1.13	85	*e*P	Pn	00 53 35.9	+0.6
HATJ				*e*S	Sb	00 53 50.9	+0.2
HGSD	**Ruisui**	1.15	246	*e*P	Pn	00 53 35.5	-0.1
HGSD				*e*S	Sn	00 53 50.7	+0.3
NDT	**Datong Townshi**	1.16	303	*e*P	Pb	00 53 37.5	+0.7
NDT				*e*S	Sb	00 53 53.1	+1.6
NNSB	**Datong**	1.18	293	*e*P	Pn	00 53 36.4	+0.3
NNSB				*e*S	Sb	00 53 52.1	-0.2
FUSB	**Fushanzhiwuyua**	1.20	311	*e*P	Pb	00 53 37.4	-0.1
FUSB				*e*S	Sb	00 53 54.2	+1.6
TIPB	**Shuangxi**	1.21	326	*e*P	Pb	00 53 37.8	0.0
TIPB				*e*S	Sb	00 53 53.5	+0.4
EHYH	**Wanrong**	1.22	247	*e*P	Pn	00 53 36.5	-0.1
EHYH				*e*S	Sn	00 53 51.8	-0.2
NWLT	**Wulai**	1.27	310	*e*P	Pb	00 53 38.0	-0.7
NWLT				*e*S	Sb	00 53 55.5	+0.9
OWD	**Renai**	1.28	270	*e*P	Pn	00 53 37.5	+0.1
OWD				*e*S	Sn	00 53 54.0	+0.4
SXI1	**Grass Mountain**	1.29	331	*e*P	Pb	00 53 38.5	-0.6
SXI1				*e*S	Sb	00 53 55.3	-0.1
YHNB	**Yeheng**	1.30	303	P	Pb	00 53 38.5	-0.7
YHNB				*e*S	Sb	00 53 55.1	-0.4
YULB	**Yu-li**	1.30	244	*e*P	Pn	00 53 37.5	-0.1
YULB				*e*S	Sn	00 53 54.9	+0.8
NSK	**Sanguang**	1.31	303	*e*P	Pb	00 53 38.5	-1.0
NSK				*e*S	Sb	00 53 56.4	+0.4
TWF1	**Yuli**	1.32	243	*e*P	Pn	00 53 37.5	-0.4
TWF1				*e*S	Sn	00 53 53.7	-0.8
TDCB	**Techi**	1.32	283	*e*P	Pn	00 53 37.9	-0.1
VWDT	**VWDT**	1.33	261	*e*P	Pn	00 53 38.0	+0.1
VWDT				*e*S	Sn	00 53 55.4	+0.8
WUSB	**Renai**	1.33	271	*e*P	Pn	00 53 38.7	+0.6
WUSB				*e*S	Sb	00 53 56.1	-0.5
NFF	**Wufeng Townshi**	1.48	297	*e*P	Pb	00 53 41.7	-0.7
NFF				*e*S	Sb	00 54 01.1	+0.3
JIJ	**Ishigaki jima**	1.49	74	*e*P	Pn	00 53 40.7	+0.6
JIJ				*e*S	Sn	00 53 59.5	+0.8
SSLB	**Suanglung**	1.49	263	*e*P	Pn	00 53 41.4	+1.1
WHP	**Taichung City**	1.52	282	*e*P	Pb	00 53 43.1	+0.1
WHP				*e*S	Sb	00 54 01.5	-0.4
WCS	**Beigang Elemen**	1.52	274	*e*P	Pb	00 53 43.0	0.0
WCS				*e*S	Sb	00 54 02.4	+0.5
SMLT	**Sun Moon Lake**	1.53	267	*e*P	Pn	00 53 42.1	+1.2
SMLT				*e*S	Sb	00 54 02.5	+0.2
LIOB	**Emei**	1.57	296	*e*P	Pb	00 53 42.6	-1.3
ELDTW	**Lidau**	1.62	242	*e*P	Pn	00 53 41.4	-0.8
ALS	**Alishan**	1.68	255	*e*P	Pn	00 53 43.4	+0.3
JISG	**Ishigakijimahi**	1.70	68	*e*P	Pn	00 53 44.1	+1.0
JISG				*e*S	Sn	00 54 04.6	+0.7
TPUB	**Ta-pu**	1.90	250	*e*P	Pn	00 53 48.1	+2.2
TPUB				*e*S	Sb	00 54 11.7	-1.1
CHN4	**Tsaushan**	1.92	252	*e*P	Pb	00 53 48.4	-1.4
CHN4				*e*S	Sb	00 54 13.4	+0.1
WTP	**Ta-pu**	1.94	249	*e*P	Pn	00 53 48.1	+1.7
WTP				*e*S	Sb	00 54 13.5	-0.3
ECL	**Taimali**	2.02	228	*e*P	Pn	00 53 48.5	+1.0
SGST	**Jiashian**	2.03	245	*e*P	Pn	00 53 49.0	+1.4
TWK	**Hsinying**	2.04	250	*e*P	Pb	00 53 50.4	-1.4
TWK				*e*S	Sb	00 54 15.3	-1.4

*IDC **30** 00:55:01.1±1.2, 13°.79N×145°.23E, h110km±6km, mb3.5/7, mbtmp3.9/7, Error ellipse: s-maj=38.5km s-min=17.4km az=91.0*
*NEIC **30** 00:55:02.9±1.4, 13°.8N±0°.1×145°.1E±0°.2, h120km±5km, mb4.2/5, Error ellipse: s-maj=32.1km s-min=10.3km az=114.0*

MRKS Merke 4.73 350 *e*P Pn 00 59 46.4 +1.0
comp=E,24nm,0.7s
MRKS *e*S Sn 01 00 36.6 -3.5
comp=E,149nm,0.4s
CHMS Chumysh 4.91 3 P Pn 00 59 49.4 +1.7
SNR=13
TKM2 Tokmak 2 4.92 11 P Pn 00 59 49.5 +1.5
SNR=21
SHAA Shahritus 4.96 266 Pn 00 59 48.5 +0.1
USP Ospenovka 5.17 1 P Pn 00 59 52.1 +0.9
SNR=5.1
IUG Iuzhnay 5.23 322 Pg Pn 00 59 49.1 -3.0
comp=E,15nm,0.1s
IUG Lg Lg 01 00 41.3
comp=E,432nm,0.6s
IUG Iuzhnay 5.23 322 *e*P Pn 00 59 49.1 -3.0
comp=E,15nm,0.1s
IUG *e*S Sn 01 00 41.3 -11
comp=E,432nm,0.6s
DGS Degeres 5.26 11 Pg Pn 01 00 04.9 +13
comp=E,7.3nm,0.5s
DGS Lg Lg 01 01 08.4
comp=E,28nm,0.8s
DGS Degeres 5.26 11 *e*P Pn 01 00 04.9 +13
comp=E,7.3nm,0.5s
DGS *e*S Sn 01 01 08.4 +16
comp=E,28nm,0.8s
JMU Jammu 5.31 176 *e*S Sn 01 00 54.1 +0.3
JMU IAML 01 01 02.3
comp=E,133nm,0.1s
JMU IAML 01 01 02.3
comp=N,173nm,0.8s
SGDS Sogindy 5.36 2 Pg Pn 01 00 02.6 +8.9
comp=N,2.5nm,0.5s
SGDS Lg Lg 01 01 04.3
comp=N,13nm,0.7s
TSSA Tissa 5.44 164 *e*P Pn 00 59 57.3 +2.4
TSSA *e*S Sn 01 00 57.0 -0.2
TSSA IAML 01 00 58.0
comp=N,228nm,0.5s
TSSA IAML 01 00 58.3
comp=E,241nm,0.3s
MDOK Medeo 5.47 21 Pg Pn 01 00 15.6 +20
comp=E,4.7nm,0.3s
MDOK Lg Lg 01 01 26.5
comp=E,13nm,1.0s
KBL Kabul 5.56 232 Pn Pn 00 59 57.4 +0.8
THN Thein Dam 5.75 168 *e*P Pn 01 00 02.8 +3.9
THN *e*S Sn 01 01 05.0 +0.8
THN IAML 01 01 06.5
comp=E,100nm,0.6s
THN IAML 01 01 06.6
comp=N,67nm,0.2s
KK31 Karatay Array 5.80 331 Pg Pn 00 59 58.8 -0.6
comp=N,3.3nm,0.3s,baz=358,slow=34,SNR=46
KK31 ⇑Lg Lg 01 00 58.8
comp=N,36nm,0.5s,baz=173,slow=24,SNR=13
KK31 Karatay Array 5.80 331 Pn 00 59 59.0 -0.4
KKAR Karatay Array 5.80 331 Pn 00 59 59.1 -0.3
BRLS Borolday 6.01 327 Pg Pn 00 59 59.8 -2.5
comp=N,5.4nm,0.2s
BRLS Lg Lg 01 00 59.4
comp=N,60nm,0.6s
BRLS Borolday 6.01 327 *e*P Pn 00 59 59.8 -2.5
comp=N,5.4nm,0.2s
BRLS *e*S Sn 01 00 59.4 -11
comp=N,60nm,0.6s
PDGK Podgornoye 6.53 35 Pn Pn 01 00 09.3 +0.2
BHK Bhakra 6.88 165 *e*S Sn 01 01 29.4 -1.9
KLP Kalpa 7.28 153 *e*P Pn 01 00 22.7 +3.2
KLP *e*S Sn 01 01 37.8 -3.5
KLP IAML 01 01 45.4
comp=N,68nm,0.8s
KLP IAML 01 01 46.1
comp=E,103nm,0.6s
SMLA Simla 7.32 161 *e*P Pn 01 00 22.6 +2.9
SMLA *e*S Sn 01 01 38.7 -3.0
SMLA IAML 01 01 40.6
comp=E,44nm,0.4s
SMLA IAML 01 01 40.8
comp=N,62nm,0.4s
JOSI Joshimath 8.66 149 IAML 01 01 00.8
comp=E,44nm,0.5s
JOSI *e*S Sn 01 02 10.0 -4.2
PTH Pithoragarh 9.78 148 IAML 01 02 40.4
comp=N,9.7nm,0.2s
LGTI Lohaghat 9.89 150 *e*P Pn 01 00 56.8 +2.7
LGTI *e*S Sn 01 02 37.5 -6.3
LGTI IAML 01 02 43.8
comp=E,11nm,0.7s
MAKZ Makanchi 10.37 30 Pn Pn 01 01 00.1 +0.1
MKAR Makanchi Array 10.48 31 P Pn 01 01 01.9 +0.4
comp=E,0.6nm,0.7s,baz=221,slow=16,SNR=4.2
MKAR Makanchi Array 10.48 31 Pn Pn 01 01 01.2 -0.3
WMQ Urumqi 11.59 56 *e*P Pn 01 01 17.5 +1.4
WMQ LR LR
comp=N,4μm,17.7s
WMQ LR LR
comp=E,6μm,11.9s
WMQ LR LR
comp=Z,2μm,14.5s
AJM Ajmer 11.63 179 *e*S Sn 01 03 19.9 -5.6
KURBB Kurchatov Arra 12.88 12 P Pn 01 01 31.6 -1.0
comp=Z,1.0nm,0.8s,baz=200,slow=11,SNR=8.1
KURK Kurchatov 12.98 12 Pn Pn 01 01 32.2 -1.6
EVN Everest 14.53 130 Pn Pn 01 01 54.0 -0.2
BVAR Borovoye Array 15.19 351 P Pn 01 02 00.9 -0.6
comp=Z,4.6nm,0.5s,baz=163,slow=11,SNR=17
AB31 Akbulak array 15.24 322 Pn Pn 01 02 00.4 -1.8
ABKAR Akbulak array 15.24 322 Pn Pn 01 02 01.3 -0.9
AKTO Aktyubinsk 16.96 322 P P 01 02 23.0 +0.6
comp=Z,2.0nm,0.4s,baz=200,slow=6.1,SNR=6.7
ZAA0 Zalesovo Array 17.41 21 P 01 02 27.7 +0.3
ZAA0 IAmb IAmb 01 02 29.8
comp=Z,11nm,0.6s
ZALV Zalesovo Beam 17.41 21 P Pn 01 02 29.3 +0.8
comp=Z,11nm,0.4s,baz=216,slow=11,SNR=62
ZALV Zalesovo Beam 17.41 21 P 01 02 28.3 +0.9
ARTI Arti 21.18 335 P P 01 03 09.2 +1.2
comp=Z,1.9nm,0.5s,baz=154,slow=8.4,SNR=5.3
comp=Z,1.9nm,0.5s
ARTI Arti 21.18 335 P P 01 03 07.7 -0.4
HHC Hu-ho-hao-te 28.72 73 *e*P P 01 04 18.5 +0.7
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,1μm,5.6s
AKASG Malin Array Be 34.09 306 P P 01 05 03.7 -0.9
comp=Z,0.3nm,0.4s,baz=78,slow=8.1,SNR=2.8
comp=Z,0.3nm,0.4s
AKBB Malin Array Si 34.09 306 P P 01 05 04.8 +0.2
AKBB IAmb IAmb 01 05 05.5
comp=Z,3.9nm,1.1s
FIA1 FINESS Array S 37.71 324 P P 01 05 35.5 +0.3
FIA1 IAmb IAmb 01 05 50.1
comp=Z,16nm,1.0s
FINES FINESS Array B 37.71 324 P P 01 05 36.0 +0.8
comp=Z,1.0nm,0.3s,baz=115,slow=10,SNR=14
comp=Z,1.0nm,0.3s
FINES FINESS Array B 37.71 324 P P 01 05 35.9 +0.6
ARCES ARCESS Array B 40.74 336 P P 01 06 01.6 +1.4
comp=Z,1.0nm,0.4s,baz=108,slow=8.3,SNR=14
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 40.74 336 P P 01 06 01.1 +0.9
ARCES IAmb IAmb 01 06 03.6
comp=Z,4.2nm,1.1s
HFS Hagfors 43.50 321 P P 01 06 23.8 +1.1
comp=Z,1.9nm,0.5s,baz=95,slow=14,SNR=8.7
comp=Z,1.9nm,0.5s
NC303 NORSAR Array S 44.68 322 P P 01 06 33.1 +1.0
NC303 IAmb IAmb 01 06 55.1
comp=Z,15nm,1.1s
NB2 NORSAR Subarra 44.75 322 P P 01 06 33.2 +0.5
comp=Z,0.7nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 44.75 322 P P 01 06 33.6 +0.9
comp=Z,0.7nm,0.6s,baz=90,slow=7.7,SNR=3.6
comp=Z,0.7nm,0.6s
TORD Torodi Ar. Bea 68.41 270 P P 01 09 20.6 +0.3
comp=Z,0.6nm,0.5s,baz=51,slow=5.1,SNR=6.7
comp=Z,0.6nm,0.5s
WRA Warramunga Arr 80.62 124 P P 01 10 32.0 +1.4
comp=Z,0.6nm,0.7s,baz=314,slow=5.4,SNR=2.6
comp=Z,0.6nm,0.7s

*VAO **30** 01:14:29.1±0.9,21°.74S×68°.68W,h79km, mb4.3,*

Presumed earthquake
*SJA **30** 01:14:30.7±0.7,21°.89S×68°.87W,h130km±3km, ML4.0, MW3.9*
*IDC **30** 01:14:31.0±2.3,22°.00S×68°.52W,h106km±20km, mb3.4/6, mbtmp3.7/11, Error ellipse: s-maj=27.2km s-min=20.0km az=41.0*
*NEIC **30** 01:14:31.3±0.9,21°.92S±0°.04×68°.81W±0°.07, h121km±5km, mb4.0/4, ML4.1(GUC), Error ellipse: s-maj=10.1km s-min=5.7km az=69.0*
*GUC **30** 01:14:33.0±0.8,21°.88S×68°.78W, h109km±4km, ML4.1*
ISC 30 01:14:31.5±0.6, 21°.88S±0°.03×68°.73W±0°.05, h119km±6km, n113, σ1s50/139, mb3.7/6, 9C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.48**	**279**	*e*P		**Pn**		**01 14 49.5**	**+0.1**
PB09				*i* S		**Sn**		**01 15 03.3**	**+0.4**
PB09				IAML				01 15 06.2	
	comp=Z,5μm,0.4s								
PB09	**IPOC Station P**	**0.48**	**279**	⇑*i*P		**Pn**		**01 14 49.3**	**-0.1**
PB09				*e*S		**Sn**		**01 15 02.5**	**-0.4**
PB09				IAML				01 15 04.5	
	comp=E,8μm,0.3s								
PB09	**IPOC Station P**	**0.48**	**279**			**Pn**		**01 14 49.1**	**-0.3**
PB09				Sn		**Sn**		**01 15 02.0**	**-0.8**
PB03	**IPOC Station P**	**0.96**	**260**	*e*P		**Pn**		**01 14 53.1**	**-0.1**
PB03				*i* S		**Sn**		**01 15 09.4**	**-0.3**
PB03				IAML				01 15 09.9	
	comp=Z,7μm,0.2s								
PB03	**IPOC Station P**	**0.96**	**260**	⇑*i*P		**Pn**		**01 14 53.0**	**-0.2**
PB03				*e*S		**Sn**		**01 15 08.4**	**-1.3**
PB03				IAML				01 15 10.1	
	comp=E,11μm,0.1s								
PB03	**IPOC Station P**	**0.96**	**260**			**Pn**		**01 14 52.4**	**-0.9**
PB03				Sn		**Sn**		**01 15 08.2**	**-1.4**
PB07	**IPOC Station P**	**1.08**	**278**	*e*P		**Pn**		**01 14 54.4**	**-0.1**
PB07				*i* S		**Sn**		**01 15 11.5**	**-0.3**
PB07				IAML				01 15 13.2	
	comp=Z,4μm,0.5s								
PB07	**IPOC Station P**	**1.08**	**278**	⇑*i*P		**Pn**		**01 14 54.3**	**-0.1**
PB07				*e*S		**Sn**		**01 15 10.9**	**-0.9**
PB07				IAML				01 15 13.0	
	comp=E,5μm,0.2s								
PB07	**IPOC Station P**	**1.08**	**278**			**Pn**		**01 14 53.6**	**-0.8**
PB07				Sn		**Sn**		**01 15 10.5**	**-1.3**
PB06	**IPOC Station P**	**1.13**	**223**	*e*P		**Pn**		**01 14 55.0**	**+0.1**
PB06				*i* S		**Sn**		**01 15 12.7**	**0.0**
PB06				IAML				01 15 13.7	
	comp=Z,2μm,0.8s								
PB06	**IPOC Station P**	**1.13**	**223**	⇑*i*P		**Pn**		**01 14 55.0**	**+0.1**
PB06				*e*S		**Sn**		**01 15 12.3**	**-0.5**
PB06				IAML				01 15 13.5	
	comp=N,5μm,0.2s								
PB06	**IPOC Station P**	**1.13**	**223**			**Pn**		**01 14 54.7**	**-0.2**
PB06				Sn		**Sn**		**01 15 12.1**	**-0.6**
AF01	**San Pedro de A**	**1.19**	**155**	*i* P		**Pn**		**01 14 56.9**	**+1.2**
AF01				*e*P				01 14 57.5	
AF01				IAML				01 15 26.7	
	comp=Z,2μm,0.3s								
AF01	**San Pedro de A**	**1.19**	**155**	*e*P		**Pn**		**01 14 56.3**	**+0.6**
AF01				IAML				01 15 17.3	
	comp=E,4μm,0.5s								
AF01	**San Pedro de A**	**1.19**	**155**			**Pn**		**01 14 56.0**	**+0.3**
AF01				Sn		**Sn**		**01 15 13.9**	**0.0**
PB02	**IPOC Station P**	**1.22**	**297**	*e*P		**Pn**		**01 14 55.6**	**-0.2**
PB02				*i* S		**Sn**		**01 15 13.8**	**-0.4**
PB02				IAML				01 15 19.7	
	comp=Z,3μm,0.2s								
PB02	**IPOC Station P**	**1.22**	**297**	⇑*i*P		**Pn**		**01 14 55.6**	**-0.2**
PB02				IAML				01 15 17.2	
	comp=E,4μm,0.2s								
PB02	**IPOC Station P**	**1.22**	**297**			**Pn**		**01 14 55.3**	**-0.4**
PB02				Sn		**Sn**		**01 15 13.2**	**-1.0**
PB05	**IPOC Station P**	**1.67**	**234**	*e*P		**Pn**		**01 15 00.8**	**-0.2**
PB05				*i* S		**Sn**		**01 15 22.3**	**-1.2**
PB05				IAML				01 15 23.7	
	comp=Z,914nm,0.4s								
PB05	**IPOC Station P**	**1.67**	**234**	⇑*i*P		**Pn**		**01 15 00.8**	**-0.2**
PB05				*e*S		**Sn**		**01 15 22.2**	**-1.2**
PB05				IAML				01 15 27.7	
	comp=E,2μm,0.3s								
PB05	**IPOC Station P**	**1.67**	**234**			**Pn**		**01 15 00.6**	**-0.4**
PB08	**IPOC Station P**	**1.77**	**347**	*e*P		**Pn**		**01 15 03.3**	**+0.8**
PB08				*i* S		**Sn**		**01 15 27.1**	**+1.0**
PB08				IAML				01 15 30.0	
	comp=Z,881nm,1.0s								
PB08	**IPOC Station P**	**1.77**	**347**	⇑*i*P		**Pn**		**01 15 03.3**	**+0.8**
PB08				*e*S		**Sn**		**01 15 26.3**	**+0.2**
PB08				IAML				01 15 28.6	
	comp=E,1μm,0.4s								
PB08	**IPOC Station P**	**1.77**	**347**			**Pn**		**01 15 02.9**	**+0.4**
TA02	**Huaiquique**	**2.06**	**320**	*e*P		**Pn**		**01 15 05.3**	**-0.4**
TA02				*e*S		**Sn**		**01 15 34.3**	**+2.4**
TA02				IAML				01 15 38.3	
	comp=Z,1μm,0.1s								
TA02	**Huaiquique**	**2.06**	**320**	*e*P		**Pn**		**01 15 04.6**	**-1.1**
GO01	**Chusmiza**	**2.24**	**349**	*e*P		**Pn**		**01 15 09.3**	**+0.9**
GO01				IAML				01 15 39.8	
	comp=Z,614nm,0.8s								
GO01	**Chusmiza**	**2.24**	**349**	⇑*i*P		**Pn**		**01 15 08.9**	**+0.5**
GO01				IAML				01 15 39.7	
	comp=N,3μm,0.2s								
GO01	**Chusmiza**	**2.24**	**349**			**Pn**		**01 15 08.6**	**+0.2**
PB11	**IPOC Station P**	**2.28**	**338**	*e*P		**Pn**		**01 15 08.4**	**-0.2**
PB11				*e*S		**Sn**		**01 15 37.0**	**+0.1**
PB11				IAML				01 15 38.8	
	comp=Z,758nm,0.4s								
PB11	**IPOC Station P**	**2.28**	**338**	*i* P		**Pn**		**01 15 07.9**	**-0.6**
PB11				*e*S		**Sn**		**01 15 35.7**	**-1.2**
PB11				IAML				01 15 36.6	
	comp=E,2μm,0.4s								
PB11	**IPOC Station P**	**2.28**	**338**			**Pn**		**01 15 08.1**	**-0.4**
PSGCX	**Pisagua**	**2.62**	**330**	*e*P		**Pn**		**01 15 11.6**	**-1.3**
PSGCX				*e*S		**Sn**		**01 15 42.7**	**-1.9**
PSGCX				IAML				01 15 43.8	
	comp=Z,343nm,0.3s								
PSGCX	**Pisagua**	**2.62**	**330**	⇑*i*P		**Pn**		**01 15 11.4**	**-1.5**
PSGCX	**Pisagua**	**2.62**	**330**			**Pn**		**01 15 11.4**	**-1.5**
YJA	**Yavi**	**3.00**	**96**	*e*P		**Pn**		**01 15 21.0**	**+2.8**
YJA	**Yavi**	**3.00**	**96**	*e*P		**Pn**		**01 15 19.5**	**+1.4**
PB14	**IPOC Station P**	**3.14**	**209**	*e*P		**Pn**		**01 15 19.1**	**-0.8**
PB14				*e*S		Sn		01 15 43.2	-14
PB14				IAML				01 15 49.2	
	comp=Z,284nm,0.7s								
PB14	**IPOC Station P**	**3.14**	**209**	*e*P		**Pn**		**01 15 19.4**	**-0.5**
PB14	**IPOC Station P**	**3.14**	**209**			**Pn**		**01 15 19.0**	**-0.8**
PX02	**IPOC Station P**	**3.21**	**334**	*e*P		**Pn**		**01 15 18.2**	**-2.4**
SALTA		**3.21**	**137**	*e*P		**Pn**		**01 15 23.0**	**+2.0**
HJA	**Humahuaca**	**3.34**	**114**	*e*P		**Pn**		**01 15 25.1**	**+2.5**
PB12	**IPOC Station P**	**3.58**	**335**	*e*P		**Pn**		**01 15 23.9**	**-1.6**
PB12				*e*S		**Sn**		**01 16 04.5**	**-2.7**
PB12				IAML				01 16 06.3	
	comp=Z,159nm,0.1s								
PB12	**IPOC Station P**	**3.58**	**335**	*e*P		**Pn**		**01 15 23.5**	**-1.9**
PB12	**IPOC Station P**	**3.58**	**335**			**Pn**		**01 15 23.6**	**-1.9**
PB16	**IPOC Station P**	**3.60**	**348**	*e*P		**Pn**		**01 15 26.9**	**+0.7**
PB16				*e*S		**Sn**		**01 16 04.8**	**-3.6**
PB16				IAML				01 16 21.7	
	comp=Z,150nm,0.5s								
PB16	**IPOC Station P**	**3.60**	**348**	*e*P		**Pn**		**01 15 26.7**	**+0.5**
PB16	**IPOC Station P**	**3.60**	**348**			**Pn**		**01 15 26.4**	**+0.2**
AP01	**Chacalluta**	**3.80**	**336**	*e*P		**Pn**		**01 15 30.2**	**+1.8**
AP01				*e*S		**Sn**		**01 16 10.8**	**-1.7**
AP01				IAML				01 16 16.0	
	comp=Z,271nm,0.1s								
AP01	**Chacalluta**	**3.80**	**336**	Pn		**Pn**		**01 15 28.2**	**-0.2**
SLA	**San Lorenzo**	**4.10**	**134**	*e*P		**Pn**		**01 15 35.1**	**+2.6**
SLA				*e*S		Sn		01 16 01.9	-18
SLA				IAML				01 16 02.5	
	comp=Z,412nm,3.2s								
PB18	**Visviri**	**4.32**	**350**	*e*P		**Pn**		**01 15 37.6**	**+1.7**
PB18	**Visviri**	**4.32**	**350**			**Pn**		**01 15 36.1**	**+0.2**
AC01	**Pan de Azucar**	**4.58**	**202**	*e*P		**Pn**		**01 15 36.8**	**-2.0**
AC01				*e*S		**Sn**		**01 16 27.0**	**-4.1**
AC01				IAML				01 17 08.1	
	comp=Z,74nm,0.6s								
AC01	**Pan de Azucar**	**4.58**	**202**			**Pn**		**01 15 36.9**	**-2.0**
FSA	**Cafayete**	**4.91**	**150**	*e*P		**Pn**		**01 15 44.9**	**+1.5**
AC02	**Maricunga**	**4.95**	**184**	*e*P		**Pn**		**01 15 44.0**	**-0.2**
AC02				*e*S		Sn		01 16 28.8	-12
AC02				IAML				01 17 19.7	
	comp=Z,50nm,0.3s								
AC02	**Maricunga**	**4.95**	**184**			**Pn**		**01 15 43.5**	**-0.7**
LPAZ	**La Paz**	**5.59**	**6**	P		**Pn**		**01 15 55.0**	**+2.0**
	comp=Z,2.1nm,0.4s,baz=267,slow=1.5,SNR=28								
LPAZ				S		**Sn**		**01 16 49.8**	**-6.6**
	comp=Z,5.3nm,0.5s,baz=177,slow=10,SNR=4.4								
LPAZ	**La Paz**	**5.59**	**6**			**Pn**		**01 15 53.9**	**+1.0**
LPAZ	**La Paz**	**5.59**	**6**	*e*P		Pn		01 15 48.2	-4.8
GO03	**Copiapo**	**5.85**	**193**	Pn		**Pn**		**01 15 53.6**	**-2.4**
AC05	**El Transito**	**7.07**	**191**			**Pn**		**01 16 09.7**	**-2.8**
GO04	**Tololo Observa**	**8.47**	**192**			**Pn**		**01 16 32.0**	**+0.5**
BBSD	**Serra de San D**	**8.97**	**60**	*e*P		**Pn**		**01 16 34.9**	**-3.2**
SIV	**San Ignacio**	**9.31**	**52**	P		**Pn**		**01 16 39.7**	**-3.2**
	comp=Z,3.7nm,0.6s,baz=228,slow=12,SNR=18								
SIV				S		Sn		01 18 17.4	-8.5
	comp=Z,2.5nm,0.8s,baz=308,slow=22,SNR=1.8								
CFA	**Coronel Fontan**	**9.70**	**177**	P		**Pn**		**01 16 45.6**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=355,slow=16,SNR=8.7								
CFA				S		Sn		01 18 24.7	-10
	comp=Z,1.4nm,0.5s,baz=282,slow=21,SNR=1.5								
MURT	**Porto Murtinho**	**10.34**	**91**	*e*P		**Pn**		**01 16 53.6**	**-3.0**
COIM	**Forte Coimbra**	**10.41**	**81**	*e*P		Pn		01 16 52.5	-5.1
CPUP	**Villa Florida**	**11.32**	**115**	P		**Pn**		**01 17 06.5**	**-3.2**
	comp=Z,0.9nm,0.5s,baz=289,slow=14,SNR=3.5								
SJPY	**San Joaquin**	**12.00**	**107**	*e*P		**Pn**		**01 17 17.9**	**-0.9**
AQDB	**Aquidauana**	**12.24**	**86**	*e*P		**Pn**		**01 17 21.3**	**-0.6**
SALV	**Santo Antonio**	**13.69**	**67**	*e*P		**Pn**		**01 17 38.8**	**-2.0**
TRCB	**Terra Rica**	**14.93**	**97**	P		**Pn**		**01 17 56.6**	**0.0**
TRCB	**Terra Rica**	**14.93**	**97**	*e*P		**Pn**		**01 17 56.5**	**0.0**
PTGB	**Pitanga**	**15.57**	**104**	*e*P		**P**		**01 18 06.1**	**-0.3**
ITAB	**Concordia**	**16.01**	**113**	*e*P		**Pn**		**01 18 10.8**	**+0.8**
CPSB	**Cacapava Do Su**	**16.13**	**125**			**Pn**		**01 18 11.9**	**+0.5**
CPSB	**Cacapava Do Su**	**16.13**	**125**	*e*P		**Pn**		**01 18 11.8**	**+0.3**
LDASE	**Londrina, Braz**	**16.33**	**99**	*e*P		**Pn**		**01 18 13.2**	**-0.9**
CLDB	**Colider**	**16.53**	**51**	*e*P		**Pn**		**01 18 13.9**	**-2.6**
TRQA	**Tornquist**	**17.14**	**162**	P		**P**		**01 18 21.6**	**-2.0**
ARAG	**Araguaiana, MT**	**17.15**	**72**	*e*P		**P**		**01 18 24.3**	**+0.5**
ATAH	**Atahualpa**	**17.37**	**326**	P		**Pn**		**01 18 30.3**	**+3.2**
	comp=Z,1.1nm,0.3s,baz=96,slow=7.1,SNR=2.0								
FRTB	**Fartura**	**17.76**	**98**	*e*P		**P**		**01 18 30.4**	**-0.1**
TEFE	**Tefe**	**18.69**	**13**	*e*P		**P**		**01 18 40.9**	**+0.3**
BB19B	**Bebedouro**	**18.82**	**91**	*e*P		**P**		**01 18 41.8**	**-0.3**
SNDB	**Serra Nova Dou**	**19.35**	**62**	*e*P		**P**		**01 18 47.2**	**-0.7**
IPMB	**Ipameri, GO**	**19.67**	**82**	*e*P		**P**		**01 18 51.0**	**-0.4**
PET01	**Itanhaem-SP**	**19.89**	**101**	*e*P		**P**		**01 18 53.5**	**-0.1**
VAO	**Valinhos**	**20.15**	**97**	*e*P		**P**		**01 18 56.2**	**-0.3**
BDFB	**Brasilia**	**20.57**	**76**	P		**P**		**01 19 00.5**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=252,slow=8.0,SNR=3.8								
	comp=Z,2.5nm,0.5s								
CANS	**Sao Roque de M**	**20.90**	**90**	*e*P		**P**		**01 19 04.1**	**-0.6**
PMNB	**Patos De Minas**	**21.18**	**85**	*e*P		**P**		**01 19 07.1**	**-0.6**
ITTB	**Itaituba**	**21.49**	**38**	*e*P		**P**		**01 19 10.2**	**-0.7**
BSCB	**Bom Sucesso**	**22.32**	**92**	*e*P		**P**		**01 19 19.8**	**+0.2**
DIAM	**Diamantina, MG**	**23.80**	**86**	*e*P		**P**		**01 19 33.2**	**-0.4**
PRPB	**Parauapebas**	**24.05**	**52**	*e*P		**P**		**01 19 35.7**	**-0.1**
SMTB	**Santa Maria do**	**24.10**	**61**	*e*P		**P**		**01 19 36.7**	**+0.4**
JANB	**Januaria**	**24.12**	**78**	*e*P		**P**		**01 19 36.0**	**-0.5**
SDBA	**SAO DESIDERIO**	**24.61**	**71**	*e*P		**P**		**01 19 41.0**	**0.0**
BOAV	**Boa Vista**	**25.42**	**19**	P		**P**		**01 19 48.7**	**+0.4**
BOAV				IAmb		IAmb		01 19 49.6	
	comp=Z,3.5nm,0.8s								
BOAV	**Boa Vista**	**25.42**	**19**	*e*P		**P**		**01 19 48.2**	**0.0**
RIB01	**Linhares ES**	**26.63**	**90**	*e*P		**P**		**01 19 59.2**	**0.0**
GUA01	**Guaratinga, BA**	**27.79**	**84**	*e*P		**P**		**01 20 09.8**	**+0.3**
TXAR	**Lajitas Array**	**61.03**	**325**	P		**P**		**01 24 34.3**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=153,slow=8.1,SNR=6.0								
	comp=Z,0.3nm,0.5s								
QSPA	**South Pole Qui**	**68.32**	**180**	P		**P**		**01 25 18.8**	**-0.8**
QSPA				IAmb		IAmb		01 25 34.9	
	comp=Z,3.9nm,1.4s								
PDAR	**Pinedale Array**	**74.52**	**330**	P		**P**		**01 25 59.2**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=146,slow=6.5,SNR=4.3								
	comp=Z,0.4nm,0.7s								
NVAR	**Mina Array Bea**	**75.89**	**322**	P		**P**		**01 26 09.4**	**+4.2**
	comp=Z,0.2nm,0.6s,baz=162,slow=6.2,SNR=3.6								
	comp=Z,0.2nm,0.6s								
TORD	**Torodi Ar. Bea**	**77.33**	**70**	P		**P**		**01 26 13.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=251,slow=5.4,SNR=13								
	comp=Z,0.7nm,0.6s								
YKA	**Yellowknife Ar**	**91.60**	**341**	P		**P**		**01 27 24.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=153,slow=4.4,SNR=6.4								
	comp=Z,1.0nm,0.6s								
MKAR	**Makanchi Array**	**145.84**	**36**	PKPbc		**PKPab**		**01 33 57.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=325,slow=3.2,SNR=6.6								

*IDC **30** 01:16:44.9±0.8,27°.46N×132°.51E, h0km, mb3.8/11, mbtmp3.9/15, ML3.5/3, Error ellipse: s-maj=25.1km s-min=15.8km az=74.0*
*NEIC **30** 01:16:45.6±1.7,27°.40N±0°.06×132°.19E±0°.08, h10km±1km, mb4.3/8, Error ellipse: s-maj=12.9km s-min=8.7km az=113.0*
*JMA **30** 01:16:46.6±0.2,27°.4N±0°.4×13°.2E±°, h70km, MV4.3/31, N PHILIPPINE BASIN*
ISC 30 01:16:46.2±4.4, 27°.42N±0°.03×132°.19E±0°.05, h16km±29km, n63, σ1s82/84, mb3.9/15, West of Bonin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.67**	**209**	P		Pn		**01 17 13.9**	**-1.0**
JKDJ				*e*S		**Sn**		**01 17 33.8**	**-2.2**
JMZ	**Minamidaito 2**	**1.82**	**209**			**Pn**		**01 17 16.0**	**-0.9**
JMZ				Sn		**Sn**		**01 17 38.0**	**-1.6**
JMZ	**Minamidaito 2**	**1.82**	**209**	P		**Pn**		**01 17 16.3**	**-0.6**
JMZ				S		**Sn**		**01 17 37.9**	**-1.6**
JZK	**Kikaishima**	**2.16**	**295**	*e*P		**Pn**		**01 17 21.4**	**-0.1**
JZK				*e*S		**Sn**		**01 17 48.3**	**+0.3**
JAM	**Amami Oshima**	**2.49**	**294**	*e*P		**Pn**		**01 17 25.7**	**-0.5**
JAM				S		**Sn**		**01 17 54.7**	**-1.6**
JAMN	**Amaminishikomi**	**2.79**	**288**	P		**Pn**		**01 17 30.0**	**-0.3**
JAMN				*e*S		**Sn**		**01 18 01.0**	**-2.7**
JTK	**Tokunoshima**	**2.90**	**278**	P		**Pn**		**01 17 31.3**	**-0.5**
JTK				*e*S		**Sn**		**01 18 05.2**	**-1.2**
JTAJ	**

USRK	**Ussuriysk Ar.**	**16.74**	**359**	Pn		**Pn**	**01 20 40.6**	**+0.5**
	0.2nm,0.3s,baz=158,slow=7.0,SNR=5.7							
	2.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**16.74**	**359**			**Pn**	**01 20 39.9**	**-0.2**
SONM	**Songino Array**	**28.63**	**322**	P		**P**	**01 22 44.1**	**+2.0**
	1.1nm,0.7s,baz=136,slow=10,SNR=4.7							
	1.1nm,0.7s							
SONM	**Songino Array**	**28.63**	**322**	P		**P**	**01 22 43.0**	**+0.9**
PETK	**Petropavlovsk-**	**31.88**	**29**	P		**P**	**01 23 10.3**	**-0.4**
	2.1nm,0.9s,baz=203,slow=12,SNR=2.7							
	2.1nm,0.9s							
PETK	**Petropavlovsk-**	**31.88**	**29**	P		**P**	**01 23 10.1**	**-0.6**
MKAR	**Makanchi Array**	**43.43**	**310**	P		**P**	**01 24 50.9**	**+2.5**
	0.7nm,0.9s,baz=98,slow=7.5,SNR=4.3							
	0.7nm,0.9s							
MKAR	**Makanchi Array**	**43.43**	**310**	P		**P**	**01 24 48.8**	**+0.4**
ZALV	**Zalesovo Beam**	**43.50**	**321**	P		**P**	**01 24 52.1**	**+3.3**
	0.8nm,0.4s,baz=108,slow=8.0,SNR=5.4							
	0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**43.50**	**321**	P		**P**	**01 24 49.5**	**+0.7**
KURK	**Kurchatov**	**46.44**	**315**	P		**P**	**01 25 11.8**	**-0.4**
KURK				IAmb		IAmb	01 25 30.1	
	comp=Z,0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**46.48**	**315**	P		**P**	**01 25 15.4**	**+2.9**
	comp=Z,0.4nm,0.8s,baz=102,slow=8.6,SNR=4.2							
	comp=Z,0.4nm,0.8s							
WRA	**Warramunga Arr**	**47.13**	**177**	P		**P**	**01 25 18.8**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=349,slow=7.7,SNR=4.8							
	comp=Z,1.4nm,0.8s							
WRA	**Warramunga Arr**	**47.13**	**177**	P		**P**	**01 25 16.0**	**-1.9**
WR8	**Warramunga Arr**	**47.15**	**177**	P		**P**	**01 25 17.5**	**-0.6**
WR8				IAmb		IAmb	01 25 34.1	
	comp=Z,5.3nm,0.9s							
CTAO	**Charters Tower**	**49.15**	**162**	P		**P**	**01 25 32.8**	**-0.8**
CTAO				IAmb		IAmb	01 25 39.4	
	comp=Z,7.2nm,1.0s							
ASAR	**Alice Springs**	**50.82**	**178**	P		**P**	**01 25 47.5**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=12,slow=13,SNR=15							
	comp=Z,1.2nm,0.6s							
ASAR	**Alice Springs**	**50.82**	**178**	P		**P**	**01 25 47.2**	**+1.0**
BVAR	**Borovoye Array**	**51.77**	**317**	P		**P**	**01 25 54.1**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=111,slow=8.1,SNR=4.3							
	comp=Z,0.9nm,0.7s							
AB31	**Akbulak array**	**58.42**	**313**	P		**P**	**01 26 41.4**	**+0.3**
AB31				IAmb		IAmb	01 26 56.1	
	comp=Z,0.8nm,0.7s							
ABKAR	**Akbulak array**	**58.42**	**313**	P		**P**	**01 26 41.6**	**+0.5**
B21K	**Ikpikpuk River**	**58.73**	**23**	P		**P**	**01 26 42.3**	**-0.6**
Q19K	**Cape Douglas,**	**58.84**	**36**	P		**P**	**01 26 43.9**	**0.0**
STKA	**Stephens Creek**	**59.65**	**171**	P		**P**	**01 26 50.7**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=327,slow=14,SNR=1.1							
	comp=Z,1.0nm,0.4s							
ILAR	**Eielson Array**	**61.70**	**29**	P		**P**	**01 27 02.5**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=267,slow=6.0,SNR=1.9							
	comp=Z,0.2nm,0.7s							
ILAR	**Eielson Array**	**61.70**	**29**	P		**P**	**01 27 05.3**	**+1.9**
BRTR	**Keskin Array B**	**79.07**	**309**	P		**P**	**01 28 53.2**	**+3.0**
	comp=Z,0.7nm,0.9s,baz=64,slow=5.6,SNR=4.7							
	comp=Z,0.7nm,0.9s							
BRTR	**Keskin Array B**	**79.07**	**309**	P		**P**	**01 28 51.4**	**+1.3**

*NSSP **30** 01:47:57.6, 38°.38N×44°.55E, h10km, Ms3.2*
*AFAD **30** 01:47:57.4, 38°.41N×44°.57E, h7km±2km, ML3.1*
*ISK **30** 01:47:58.4, 38°.33N×44°.44E, h5km, ML3.4/15*
*TEH **30** 01:47:58.4, 38°.37N×44°.44E, h5km±40km, ML3.2, Presumed earthquake*
*AZER **30** 01:47:59.1, 38°.40N×44°.50E, h10km, ml3.6*
*IDC **30** 01:48:03.3±4.7, 38°.39N×45°.12E, h0km, mb3.5/4, mbtmp3.4/5, ML2.3/1, MS3.7/1, Error ellipse: s-maj=86.6km s-min=26.2km az=45.0*

ISC 30 01:47:58.6±1.1, **38°.36N**±0°.02×**44°.50E**±0°.02, **h1**km±9km, **n102**, σ1§**05**/150, **mb3.3**/4, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**308**	P		**Pg**	**01 48 07.8**	**-0.5**
OZAP				S		**Sg**	**01 48 15.1**	**+0.4**
OZAP				IAML			01 48 17.0	
	comp=N,4μm,0.6s							
OZAP				IAML			01 48 18.0	
	comp=E,4μm,0.5s							
OZAP	**Van, Ozalp-Mer**	**0.50**	**308**	Pg		**Pg**	**01 48 07.7**	**-0.5**
YOVA	**Hakkari_Yksek**	**0.79**	**192**	P		**Pg**	**01 48 13.7**	**0.0**
YOVA				IAML			01 48 30.0	
	comp=N,535nm,0.7s							
YOVA				IAML			01 48 31.0	
	comp=E,674nm,1.0s							
YOVA	**Hakkari_Yksek**	**0.79**	**192**	Pg		**Pg**	**01 48 13.7**	**0.0**
TVAN	**Van**	**0.87**	**282**	P		**Pg**	**01 48 14.1**	**-1.4**
TVAN	**Van**	**0.87**	**282**	Pg		**Pg**	**01 48 14.0**	**-1.4**
ISHB	**Shabestar**	**0.88**	**94**	Pg		**Pb**	**01 48 16.6**	**-0.3**
VMUR	**Van-Muradiye**	**0.96**	**311**	P		**Pg**	**01 48 16.2**	**-0.9**
VMUR				S		**Sg**	**01 48 30.3**	**+0.7**
VMUR				IAML			01 48 35.0	
	comp=N,906nm,0.5s							
VMUR				IAML			01 48 38.0	
	comp=E,863nm,0.5s							
VMUR	**Van-Muradiye**	**0.96**	**311**	Pg		**Pg**	**01 48 16.2**	**-0.9**
IMRD	**Marand**	**1.01**	**69**	Pg		**Pg**	**01 48 17.9**	**-0.1**
HAKT	**HAKKARI**	**1.01**	**218**	P		**Pg**	**01 48 17.3**	**-0.8**
HAKT				S		**Sn**	**01 48 34.5**	**-0.7**
HAKT	**HAKKARI**	**1.01**	**218**	Pg		**Pg**	**01 48 17.2**	**-0.8**
HAKT	**HAKKARI**	**1.01**	**218**	P		**Pg**	**01 48 16.6**	**-1.4**
HAKT				S		**Sn**	**01 48 33.9**	**-1.3**
NAX	**Nakhchivan**	**1.13**	**43**	Pg		**Pb**	**01 48 19.9**	**-1.1**
NAX	**Nakhchivan**	**1.13**	**43**	P		**Pb**	**01 48 19.9**	**-1.1**
NAX				S		**Sn**	**01 48 37.5**	**-0.4**
GEVA	**Gevas**	**1.13**	**268**	P		**Pg**	**01 48 18.5**	**-1.8**
GEVA				S		**Sn**	**01 48 37.3**	**-0.8**
GEVA	**Gevas**	**1.13**	**268**	Pg		**Pg**	**01 48 18.5**	**-1.8**
AKDM	**Akdamar-Van**	**1.19**	**269**	Pn		**Pb**	**01 48 19.9**	**-2.3**
AKDM				Sn		**Sn**	**01 48 38.3**	**-1.3**
ORD	**Ordubad**	**1.30**	**64**	Pg		**Pn**	**01 48 22.9**	**-1.1**
ORD	**Ordubad**	**1.30**	**64**	P		**Pn**	**01 48 23.0**	**-1.1**
ORD				S		**Sg**	**01 48 42.4**	**+1.9**
CUKT	**Cukurca**	**1.31**	**213**	Pn		**Pn**	**01 48 23.5**	**-0.7**
CUKT				Sn		**Sg**	**01 48 42.3**	**+1.5**
CUKT	**Cukurca**	**1.31**	**213**	Pg		**Pn**	**01 48 22.6**	**-1.6**
SBZ	**Shahbuz**	**1.33**	**38**	Pg		**Pn**	**01 48 23.2**	**-1.2**
SBZ	**Shahbuz**	**1.33**	**38**	P		**Pn**	**01 48 23.2**	**-1.2**
SBZ				S		**Sb**	**01 48 41.3**	**-0.6**
IAZR	**Azarshahr**	**1.35**	**120**	Pg		**Pb**	**01 48 25.0**	**0.0**
HYR	**Heyderabad**	**1.39**	**11**	P		**Pn**	**01 48 24.5**	**-0.8**
HYR				S		**Sg**	**01 48 44.2**	**+0.9**
ADCV	**BITLIS_Adilcev**	**1.46**	**289**	P		**Pn**	**01 48 25.8**	**-0.5**
ADCV				S		**Sg**	**01 48 48.6**	**+3.0**
ADCV				IAML			01 48 50.0	
	comp=N,425nm,0.8s							
ADCV				IAML			01 48 51.0	
	comp=E,355nm,0.6s							
IGDI	**IGDIR**	**1.54**	**348**	P		**Pn**	**01 48 27.5**	**+0.1**
IGDI	**IGDIR**	**1.54**	**348**	Pg		**Pn**	**01 48 27.4**	**+0.1**
IGDI	**IGDIR**	**1.54**	**348**	P		**Pn**	**01 48 26.6**	**-0.8**
IGDI				S		**Sg**	**01 48 49.1**	**+0.8**
ALVK	**Alvank**	**1.56**	**67**	eP		**Pn**	**01 48 27.1**	**-0.6**
ALVK				eS		**Sb**	**01 48 48.5**	**-0.2**
PERV	**Siirt/Pervari-**	**1.59**	**256**	P		**Pn**	**01 48 27.7**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.64**	**353**	Pn		**Pb**	**01 48 29.3**	**-0.4**
TASB				Sn		**Sg**	**01 48 52.9**	**+1.6**
DORK	**Agr/Tutak/Do**	**1.69**	**308**	P		**Pn**	**01 48 29.2**	**-0.3**
DORK				S		**Sg**	**01 48 53.5**	**+0.6**
DORK				IAML			01 48 55.0	
	comp=N,271nm,0.7s							
DORK				IAML			01 48 58.0	
	comp=E,245nm,0.7s							
AGRB	**Hanur-Agry**	**1.69**	**317**	Pn		**Pn**	**01 48 29.9**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.71**	**298**	Pn		**Pn**	**01 48 30.2**	**+0.4**
KOTA	**Agri, Merkez-K**	**1.76**	**326**	P		**Pn**	**01 48 29.4**	**-1.0**
KOTA				IAML			01 48 59.0	
	comp=E,153nm,1.7s							
KOTA				IAML			01 49 04.0	
	comp=N,103nm,0.8s							
GNI	**Garni**	**1.80**	**6**	Pn		**Pb**	**01 48 32.3**	**-0.2**
GNI	**Garni**	**1.80**	**6**	eP		**Pb**	**01 48 32.0**	**-0.5**
GNI				eS		**Sg**	**01 48 57.1**	**+0.6**
GNI	**Garni**	**1.80**	**6**	Pg		**Pn**	**01 48 31.2**	**+0.2**
EGVZ	**Egvard**	**1.82**	**61**	eP		**Pn**	**01 48 31.4**	**+0.2**
EGVZ				eS		**Sb**	**01 48 56.1**	**-0.1**
MAHB	**Mahabad**	**1.85**	**148**	Pn		**Pb**	**01 48 33.1**	**-0.3**
GURO	**Guroymak-BITLI**	**1.94**	**277**	Pn		**Pn**	**01 48 33.3**	**+0.4**
ARUZ	**Aruch**	**1.95**	**351**	eP		**Pb**	**01 48 34.1**	**-0.9**
ARUZ				eS		**Sb**	**01 49 00.9**	**+1.0**
KAPZ	**Kaputan**	**1.97**	**4**	eP		**Pb**	**01 48 34.4**	**-1.0**
KAPZ				eS		**Sb**	**01 49 01.2**	**+0.7**
IHRS	**Heris**	**2.00**	**90**	Pn		**Pb**	**01 48 35.6**	**-0.4**
AYRK	**Ayrk**	**2.02**	**29**	eP		**Pb**	**01 48 35.5**	**-0.8**
AYRK				eS		**Sb**	**01 49 03.1**	**+1.0**
AMBZ	**Amberd**	**2.04**	**355**	eP		**Pb**	**01 48 35.4**	**-1.2**
AMBZ				eS		**Sb**	**01 49 02.9**	**+0.3**
QRD	**Qoradiz**	**2.46**	**62**	P		**Pn**	**01 48 40.0**	**0.0**
QRD				S		**Sn**	**01 49 09.3**	**-1.4**
VRTB	**Varto-Mus**	**2.51**	**290**	Pn		**Pn**	**01 48 41.6**	**+0.9**
KARS	**Kars**	**2.52**	**335**	Pn		**Pn**	**01 48 41.9**	**+1.0**
GDB	**GEDABAY**	**2.55**	**22**	P		**Pn**	**01 48 41.1**	**-0.2**
GDB				S		**Sn**	**01 49 12.2**	**-1.0**
ISRB	**Sarab**	**2.56**	**101**	Pn		**Pb**	**01 48 43.5**	**-1.9**
SVAN	**Silvan-Diyarba**	**2.60**	**267**	Pn		**Pn**	**01 48 42.5**	**+0.6**
LSVT	**Lusahovit**	**2.61**	**12**	eP		**Pn**	**01 48 43.1**	**+1.0**
LSVT				eS		**Sb**	**01 49 16.3**	**-2.6**
KOPR	**Koprukoy-ERZUR**	**2.62**	**309**	Pn		**Pn**	**01 48 43.2**	**+0.9**
AGDM	**Agdam**	**2.68**	**48**	P		**Pn**	**01 48 42.3**	**-0.6**
AGDM				S		**Sn**	**01 49 15.2**	**-0.8**
GANJ	**Ganja**	**2.69**	**31**	P		**Pn**	**01 48 42.0**	**-1.1**
GANJ				S		**Sn**	**01 49 15.4**	**-0.9**
SRTK	**Saratovka**	**2.71**	**357**	eP		**Pb**	**01 48 47.2**	**-0.8**
SRTK				eS		**Sb**	**01 49 23.6**	**+1.8**
BLQ	**Beylaqan**	**2.75**	**59**	P		**Pn**	**01 48 43.5**	**-0.3**
BLQ				S		**Sn**	**01 49 16.6**	**-1.1**
QZX	**Qazax, Azerbai**	**2.78**	**14**	P		**Pn**	**01 48 43.9**	**-0.4**
QZX				S		**Sn**	**01 49 17.1**	**-1.5**
BRDA	**Brd**	**2.82**	**47**	P		**Pn**	**01 48 44.2**	**-0.6**
KARO	**Karliova-Bingo**	**2.86**	**291**	Pn		**Pn**	**01 48 46.4**	**+0.9**
YRD	**Yardimli**	**2.98**	**78**	P		**Pn**	**01 48 46.9**	**-0.4**
YRD				S		**Sn**	**01 49 23.0**	**-0.8**
LRK	**Lerik**	**3.03**	**83**	P		**Pn**	**01 48 48.1**	**+0.2**
LRK				S		**Sn**	**01 49 24.0**	**-0.9**
BNGB	**Bingl**	**3.06**	**283**	Pn		**Pn**	**01 48 49.1**	**+0.9**
ZRD	**Zardab**	**3.13**	**51**	P		**Pn**	**01 48 48.6**	**-0.5**
ZRD				S		**Sn**	**01 49 26.2**	**-0.9**
MNGR	**Mingechevir, A**	**3.13**	**39**	P		**Pn**	**01 48 48.0**	**-1.2**
MNGR				S		**Sn**	**01 49 26.2**	**-1.0**
AKH	**Akhalkalaki**	**3.15**	**346**	P		**Pb**	**01 48 54.5**	**-0.9**
DGRG	**David-gareji**	**3.16**	**12**	P		**Pb**	**01 48 52.7**	**-2.9**
GLBA	**Clilabad**	**3.17**	**73**	P		**Pn**	**01 48 48.8**	**-0.8**
GLBA				S		**Sn**	**01 49 27.5**	**-0.6**
VSHL	**Vashlovani**	**3.22**	**26**	P		**Pn**	**01 48 52.3**	**+1.8**
YEDI	**Yedisu-Bingol**	**3.27**	**291**	Pn		**Pn**	**01 48 52.2**	**+1.0**
ASTR	**Astara**	**3.38**	**85**	P		**Pn**	**01 48 51.5**	**-1.0**
ASTR				S		**Sn**	**01 49 32.7**	**-0.5**
LKRN	**Lenkeran, Azer**	**3.38**	**83**	P		**Pn**	**01 48 51.5**	**-1.0**
LKRN				S		**Sn**	**01 49 32.5**	**-0.6**
SAAT	**Saatly**	**3.40**	**63**	S		**Sn**	**01 49 33.0**	**-0.8**
DYBB	**Diyarbakir**	**3.46**	**265**	Pn		**Pn**	**01 48 54.8**	**+1.1**
KDMR	**Kurdemir**	**3.50**	**54**	S		**Sn**	**01 49 35.5**	**-0.7**
SEKA	**Sheki**	**3.53**	**35**	P		**Pn**	**01 48 54.6**	**0.0**
SEKA				S		**Sn**	**01 49 37.2**	**+0.2**
QBL	**Gabala**	**3.65**	**44**	P		**Pn**	**01 48 55.1**	**-1.3**
QBL				S		**Sn**	**01 49 39.4**	**-0.7**
ZKTA	**Zakatala**	**3.66**	**26**	P		**Pn**	**01 48 55.3**	**-1.1**
ZKTA				S		**Sn**	**01 49 39.6**	**-0.7**
LGD	**Lagodekhi**	**3.72**	**21**	P		**Pb**	**01 49 06.3**	**+1.1**
IML	**Ismayilli**	**3.75**	**48**	P		**Pn**	**01 48 56.5**	**-1.1**
IML				S		**Sn**	**01 49 41.6**	**-0.8**
XNQ	**Khinaliq**	**3.97**	**44**	P		**Pn**	**01 48 59.6**	**-1.3**
XNQ				S		**Sn**	**01 49 47.5**	**-0.8**
QSAR	**Qusar**	**4.28**	**41**	P		**Pn**	**01 49 03.8**	**-1.2**
QSAR				S		**Sn**	**01 49 54.6**	**-1.0**
QUBA	**Quba, Azerbaij**	**4.29**	**44**	P		**Pn**	**01 49 03.9**	**-1.3**
QUBA				S		**Sn**	**01 49 54.7**	**-1.1**
SHTL	**Shatili**	**4.33**	**6**	P		**Pb**	**01 49 15.8**	**+0.3**
SIZA	**Siyzn**	**4.35**	**50**	P		**Pn**	**01 49 04.5**	**-1.4**
SIZA				S		**Sn**	**01 49 56.4**	**-0.9**
GOBA	**Gobu**	**4.54**	**62**	P		**Pn**	**01 49 07.5**	**-1.0**
GOBA				S		**Sn**	**01 50 01.0**	**-0.9**
NDR	**Nardaran**	**4.79**	**61**	P		**Pn**	**01 49 11.2**	**-0.8**
NDR				S		**Sn**	**01 50 07.4**	**-0.7**
GALA	**Gala**	**4.84**	**63**	P		**Pn**	**01 49 11.9**	**-0.6**
GALA				S		**Sn**	**01 50 08.6**	**-0.6**
KBZ	**Khabaz**	**5.50**	**348**	Pn		Pb	01 49 30.5	-5.0
	0.1nm,0.3s,baz=102,slow=13,SNR=2.1							
	0.9nm,0.9s							
MMAI	**Mount Meron Ar**	**9.11**	**237**	LR		LR	01 55 03.1	
	comp=Z,430nm,18.9s,baz=220,slow=44							
BVAR	**Borovoye Array**	**23.11**	**42**	P		**P**	**01 53 07.8**	**+1.9**
	0.3nm,0.4s,baz=237,slow=8.8,SNR=3.5							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**26.95**	**52**	P		**P**	**01 53 43.0**	**+1.5**
	0.4nm,0.7s,baz=262,slow=9.0,SNR=6.3							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**28.85**	**61**	P		**P**	**01 53 57.7**	**-0.8**
	0.3nm,0.7s,baz=269,slow=8.5,SNR=3.5							
	0.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**51.07**	**97**	P		**P**	**01 57 04.3**	**+1.4**
	0.9nm,0.3s,baz=291,slow=9.1,SNR=4.0							
	0.9nm,0.3s							

*THE **30** 02:14:00.8, 35°N±63°×2°7E±5°, h1km±30km, MLh2.5/3*
*ATH **30** 02:14:01.9±0.9, 34°.84N×27°.11E, h8km, ML2.6/4, Latitude uncertainty: 7 km; Longitude uncertainty: 3 km*

ISC 30 02:14:01.7±2.7, **34°.9N**±0°.1×**27°.14E**±0°.07, **h4**km±16km, **n17**, σ0§**74**/22, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KARP	**Karpathos**	**0.62**	**2**	P		**Pg**	**02 14 12.5**	**-1.2**
KARP				S		**Sg**	**02 14 21.8**	**0.0**
ZKR	**Zakros**	**0.78**	**284**	P		**Pg**	**02 14 16.3**	**-0.5**
ZKR				S		**Sb**	**02 14 28.7**	**-0.3**
ZKR	**Zakros**	**0.78**	**284**	P		**Pg**	**02 14 16.1**	**-0.6**
ZKR				S		**Sg**	**02 14 27.9**	**+1.0**
SIT2	**Siteia**	**0.89**	**289**	P		**Pg**	**02 14 19.1**	**+0.2**
SIT2				S		**Sb**	**02 14 32.6**	**+0.5**
NPS	**Neapolis**	**1.30**	**285**	P		**Pn**	**02 14 26.0**	**-0.8**
NPS	**Neapolis**	**1.30**	**285**	P		**Pn**	**02 14 25.9**	**-0.8**
ARG	**Arkhangelos**	**1.52**	**32**	P		**Pn**	**02 14 30.0**	**+0.2**
ARG				S		**Sg**	**02 14 52.1**	**+1.6**
IDI	**Anoyia**	**1.88**	**282**	P		**Pn**	**02 14 35.4**	**+0.6**
SIVA	**Sivas**	**1.92**	**273**	P		**Pn**	**02 14 34.7**	**-0.5**
THERA	**Ancient Thera,**	**1.98**	**317**	P		**Pn**	**02 14 35.1**	**-0.9**
THERA	**Ancient Thera,**	**1.98**	**317**	P		**Pn**	**02 14 35.9**	**-0.2**
THR8	**Santorini-Mono**	**2.00**	**318**	P		**Pn**	**02 14 36.4**	**0.0**
THR6	**Thira Island,**	**2.01**	**316**	P		**Pn**	**02 14 36.9**	**+0.4**
THR9	**Santorini-Faro**	**2.04**	**315**	P		**Pn**	**02 14 37.3**	**+0.4**
SNT5	**Nea Kammeni, S**	**2.05**	**317**	P		**Pn**	**02 14 37.7**	**+0.7**
THR3	**Thira Island,**	**2.05**	**317**	P		**Pn**	**02 14 36.5**	**-0.6**
THR5	**Thira Island,**	**2.08**	**316**	P		**Pn**	**02 14 37.7**	**+0.2**

*AEIC **30** 02:16:34.8±1.8, 54°.42N±0°.04×160°.88W±0°.05, h30km±6km, Error ellipse: s-maj=5.3km s-min=4.1km az=191.0*
*NEIC **30** 02:16:36.3±2.1, 54°.45N±0°.06×160°.88W±0°.06, h35km±2km, ML3.3/28, ML3.3(AEIC), Error ellipse: s-maj=9.6km s-min=5.1km az=346.0*
*IDC **30** 02:16:39.4±6.1, 54°.13N×159°.50W, h0km, mb3.2/2, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=105.8km s-min=33.9km az=91.0*

ISC 30 02:16:33.0±1.5, **54°.40N**±0°.06×**160°.88W**±0°.03, **h10**km±10km, **n59**, σ0§**83**/66, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNBA	**Chernabura Isl**	**0.86**	**60**			**Pg**	**02 16 49.9**	**+0.4**
CNBA				Sn		**Sg**	**02 17 01.1**	**+0.4**
DOL	**Dolgoi Island**	**0.94**	**323**			**Pb**	**02 16 51.0**	**-0.4**
DOL						**Sb**	**02 17 03.5**	**-0.5**
SDPT	**Sand Point**	**0.98**	**14**	Pn		**Pg**	**02 16 51.5**	**-0.2**
SDPT				Sn		**Sb**	**02 17 05.2**	**+0.2**
SDPT				IAML			02 17 10.2	
	comp=N,816nm,0.6s							
SDPT				IAML			02 17 11.5	
	comp=E,760nm,0.4s							
DT1	**Dutton Round H**	**1.08**	**312**			**Pg**	**02 16 52.8**	**-0.8**
DT1						**Sb**	**02 17 06.6**	**-1.2**
DTNA	**Dutton South F**	**1.09**	**314**			**Pg**	**02 16 53.3**	**-0.6**
DTNA						**Sb**	**02 17 07.7**	**-0.6**
HAG	**Hague Volcano**	**1.09**	**328**			**Pb**	**02 16 54.0**	**0.0**
PS4A	**Pavlof South-4**	**1.10**	**330**			**Pb**	**02 16 54.0**	**-0.2**
PS4A						**Sn**	**02 17 09.0**	**-0.8**
PVV	**Pavlof Volcano**	**1.11**	**332**			**Pb**	**02 16 54.0**	**-0.2**
PS1A	**Pavlof South-1**	**1.14**	**334**			**Pb**	**02 16 54.6**	**-0.1**
PS1A						**Sn**	**02 17 09.7**	**-1.0**
PN7A	**Pavlof North-7**	**1.22**	**329**			**Pb**	**02 16 56.0**	**-0.2**
PN7A						**Sn**	**02 17 12.2**	**-0.5**
ISNN	**Isanotski Nort**	**1.74**	**286**			**Pn**	**02 17 03.7**	**+0.5**
ISNN						**Sb**	**02 17 26.9**	**0.0**
SSLS	**Shishaldin Sou**	**1.84**	**281**			**Pn**	**02 17 05.3**	**+0.6**
VNKR	**Veniaminof 5**	**1.85**	**27**			**Pn**	**02 17 05.5**	**+0.7**
VNKR						**Sn**	**02 17 29.0**	**+0.7**
SSLN	**Shishaldin Nor**	**1.86**	**284**			**Pn**	**02 17 05.7**	**+0.8**
SSBA	**Shishaldin**	**1.92**	**282**			**Pn**	**02 17 06.4**	**+0.6**
S14K	**Fog Glacier**	**2.04**	**21**			**Pn**	**02 17 08.7**	**+1.3**
VNFG	**Fog Glacier, M**	**2.04**	**21**	Pn		**Pn**	**02 17 08.2**	**+0.8**
VNFG				Sn		**Sn**	**02 17 32.8**	**-0.2**
AKSA	**Akutan Strait**	**2.84**	**267**			**Pn**	**02 17 18.8**	**+0.5**
AKSA						**Sn**	**02 17 51.9**	**-0.6**
AKUT	**Akutan**	**2.88**	**267**	Pn		**Pn**	**02 17 20.0**	**+1.1**
AKUT				IAML			02 18 07.3	
	comp=E,113nm,0.9s							
AKUT				IAML			02 18 11.1	
	comp=N,100nm,0.9s							
AHB	**Akutan Harbor**	**2.91**	**266**			**Pn**	**02 17 19.6**	**+0.2**
AKLV	**Akutan Long Va**	**2.98**	**267**			**Pn**	**02 17 20.4**	**0.0**
ZRO	**Akutan Zero**	**3.01**	**266**			**Pn**	**02 17 20.9**	**+0.3**
LVA	**Lava Point**	**3.03**	**268**			**Pn**	**02 17 21.5**	**+0.5**
LVA				IAML			02 18 31.3	
	comp=E,92nm,0.7s							
CHIR	**Chirikof Islan**	**3.34**	**63**	Pn		**Pn**	**02 17 24.3**	**-0.9**
CHIR				IAML			02 18 37.5	
	comp=E,46nm,0.9s							
UNV	**Unalaska Valle**	**3.36**	**263**			**Pn**	**02 17 25.7**	**+0.3**
MNAT	**Makushin Natee**	**3.45**	**264**			**Pn**	**02 17 26.6**	**-0.2**
MGOD	**Makushin Gods**	**3.58**	**263**			**Pn**	**02 17 28.7**	**+0.1**
SII	**Sitkinak Islan**	**4.38**	**58**	Pn		**Pn**	**02 17 39.2**	**-0.3**
SII				IAML			02 19 02.0	
	comp=N,47nm,0.9s							
O15K	**Ungalikthiuk R**	**4.82**	**6**	Pn		**Pn**	**02 17 46.4**	**+0.8**
O15K				IAML			02 19 16.9	
	comp=E,22nm,0.9s							
ANCK	**Angle Creek**	**4.85**	**36**			**Pn**	**02 17 46.8**	**+0.8**
O14K	**Tigyukauivet M**	**4.87**	**358**	Pn		**Pn**	**02 17 47.4**	**+1.2**
O14K				IAML			02 19 19.0	
	comp=E,15nm,1.1s							
O14K				IAML			02 19 32.1	
	comp=N,18nm,0.9s							
P16K	**Nushagak River**	**4.91**	**18**	Pn		**Pn**	**02 17 47.8**	**+1.1**
P16K				IAML			02 19 29.1	
	comp=N,32nm,0.9s							
MGLS	**Mageik Landsli**	**4.92**	**38**			**Pn**	**02 17 47.0**	**+0.1**
OHAK	**Old Harbor**	**5.13**	**53**	Pn		**Pn**	**02 17 49.4**	**-0.4**
OHAK				IAML			02 19 25.9	
	comp=N,15nm,1.1s							
P17K	**Kvichak River**	**5.39**	**25**	Pn		**Pn**	**02 17 54.2**	**+0.9**
O16K	**Kokwok River B**	**5.42**	**15**	Pn		**Pn**	**02 17 54.7**	**+0.8**
O16K				IAML			02 19 32.0	
	comp=E,10nm,0.7s							
O16K				I

ALFC					AML	AML	02 31 24.0	
	11nm,0.3s							
ALFC					AML	AML	02 31 24.4	
	9.3nm,0.2s							
NATA	**Nata**	**0.45**	**246**	⇑ *i*P	**Pb**		**02 31 15.5**	**+0.9**
NATA				S	**Sb**		**02 31 23.9**	**+2.6**
NATA				AML	AML		02 31 25.5	
	58nm,0.3s							
NATA				AML	AML		02 31 27.1	
	37nm,0.5s							
MVOU	**Mavrovouni**	**0.46**	**83**	⇓ *i*P	**Pn**		**02 31 15.4**	**+0.4**
MVOU				S	**Sn**		**02 31 23.2**	**+1.2**
MVOU				AML	AML		02 31 25.1	
	4.5nm,0.4s							
MVOU				AML	AML		02 31 27.9	
	3.3nm,0.5s							
LFK	**Lefkose**	**0.49**	**50**	Pg	**Pn**		**02 31 16.6**	**+1.2**
LFK				Sg	**Sn**		**02 31 24.7**	**+1.9**
AKMS	**Akamas**	**0.61**	**276**	⇓ *i*P	**Pn**		**02 31 17.3**	**+0.5**
AKMS				S	**Sn**		**02 31 27.9**	**+2.4**
AKMS				AML	AML		02 31 30.1	
	3.7nm,0.3s							
AKMS				AML	AML		02 31 31.0	
	4.7nm,0.3s							
PARAL	**Paralimni**	**0.80**	**87**	P	**Pb**		**02 31 21.3**	**+1.2**
PARAL				S	**Sb**		**02 31 34.1**	**+3.4**
PARAL				AML	AML		02 31 37.5	
	4.3nm,0.9s							
PARAL				AML	AML		02 31 40.4	
	2.9nm,0.7s							
EREN	**Erenkoy**	**1.06**	**57**	Pg	**Pb**		**02 31 24.3**	**-0.3**
EREN	**Erenkoy**	**1.06**	**57**	P	**Pn**		**02 31 24.0**	**+0.8**
EREN				S	**Sb**		**02 31 41.1**	**+2.9**
EREN				IAML			02 31 43.0	
	comp=E,1µm,0.3s							
EREN				IAML			02 31 44.0	
	comp=N,1µm,0.4s							
BOZY	**Bozyazi-Mersin**	**1.15**	**356**	Pn	**Pn**		**02 31 24.5**	**+0.2**
BOZY				Sn	**Sn**		**02 31 39.5**	**+0.7**
TEKE	**Tekeli-Mersin**	**1.18**	**2**	Pn	**Pn**		**02 31 25.1**	**+0.4**
TEKE				Sn	**Sn**		**02 31 40.4**	**+0.8**
YORU	**Yoruktepe-Mers**	**1.22**	**13**	Pn	**Pn**		**02 31 25.8**	**+0.5**
AKK2	**Akkuyu-Mersin**	**1.24**	**18**	Pn	**Pn**		**02 31 25.9**	**+0.4**
AKK1	**Akkuyu-Mersin**	**1.24**	**18**	Pn	**Pn**		**02 31 25.9**	**+0.3**
BECE	**Buyukeceli-Mer**	**1.26**	**18**	Pn	**Pn**		**02 31 26.0**	**+0.2**
BECE	**Buyukeceli-Mer**	**1.26**	**18**	Pn	**Pn**		**02 31 26.2**	**+0.4**
GULN	**MERSIN_Gulnar**	**1.28**	**17**	P	**Pn**		**02 31 26.4**	**+0.3**
GULN				S	**Sb**		**02 31 43.9**	**-0.4**
GULN				IAML			02 31 44.0	
	comp=N,173nm,0.5s							
GULN				IAML			02 31 46.0	
	comp=E,266nm,0.4s							
OREN	**Orenkoy-Mersin**	**1.28**	**14**	Pn	**Pn**		**02 31 25.8**	**-0.4**
TISA	**Tisan-Mersin**	**1.30**	**22**	Pn	**Pn**		**02 31 26.5**	**+0.2**
YESI	**Yesilovacik-Me**	**1.32**	**21**	Pn	**Pn**		**02 31 27.2**	**+0.6**
TEPK	**Tepekoy-MERSIN**	**1.32**	**17**	Pn	**Pn**		**02 31 26.7**	**0.0**
CY604	**RAF Akrotiri,**	**1.34**	**117**		**Pn**		**02 31 27.6**	**+0.9**
CY604				Sn	**Sb**		**02 31 46.0**	**+0.2**
KARG	**Kargicak-Mersi**	**1.34**	**23**	Pn	**Pn**		**02 31 27.4**	**+0.4**
IKL	**Isikli**	**1.37**	**21**	Pn	**Pn**		**02 31 27.9**	**+0.6**
BERE	**Bereket-Mersin**	**1.39**	**5**	Pn	**Pn**		**02 31 28.1**	**+0.3**
GAZI	**Gazipasa**	**1.41**	**334**	Pn	**Pn**		**02 31 28.5**	**+0.5**
GAZI	**Gazipasa**	**1.41**	**334**	P	**Pn**		**02 31 28.4**	**+0.5**
GAZI				S	**Sn**		**02 31 45.7**	**+0.3**
GAZI				IAML			02 31 47.0	
	comp=N,582nm,0.7s							
GAZI				IAML			02 31 47.0	
	comp=E,348nm,0.3s							
TEVE	**Tevekalti-Mers**	**1.50**	**12**	Pn	**Pn**		**02 31 29.6**	**+0.3**
SILI	**Silifke-Mersin**	**1.56**	**26**	Pn	**Pn**		**02 31 30.9**	**+0.9**
KEBE	**Keben-Mersin**	**1.57**	**19**	Pn	**Pn**		**02 31 30.9**	**+0.7**
SLFK	**Silifke-Mersin**	**1.60**	**26**	Pn	**Pn**		**02 31 31.3**	**+0.8**
ERMK	**Ermenek**	**1.68**	**356**	P	**Pb**		**02 31 36.2**	**+1.1**
ALAN	**Alanya-ANTALYA**	**1.80**	**332**	Pn	**Pn**		**02 31 33.7**	**+0.4**
HDMB	**Hadim**	**2.05**	**347**	Pn	**Pn**		**02 31 37.7**	**+0.7**
KRMN	**Karaman**	**2.21**	**4**	Pn	**Pn**		**02 31 39.9**	**+0.8**
KKBE	**Karaman, Kazim**	**2.26**	**357**	P	**Pn**		**02 31 42.0**	**+2.4**
KKBE				S	**Sb**		**02 32 11.2**	**-1.2**
KKBE				IAML			02 32 12.0	
	comp=N,87nm,0.5s							
KKBE				IAML			02 32 12.0	
	comp=E,151nm,0.5s							
KEPZ	**Antalya-Kepez**	**2.27**	**329**	P	**Pn**		**02 31 41.2**	**+1.4**
KEPZ				S	**Sn**		**02 32 09.4**	**+2.8**
KEPZ				IAML			02 32 17.0	
	comp=E,195nm,0.9s							
KEPZ				IAML			02 32 18.0	
	comp=N,157nm,0.7s							
BHL	**Bhannes**	**2.38**	**116**	*e*P	**Pn**		**02 31 40.1**	**-1.3**
DQRL	**Deir Qamar**	**2.42**	**120**	*e*P	**Pn**		**02 31 40.8**	**-1.1**
HWQ	**Hawqa**	**2.47**	**105**	*e*P	**Pn**		**02 31 43.0**	**+0.4**
HNTI	**Hanita**	**2.56**	**136**	P	**Pn**		**02 31 44.3**	**+0.5**
HNTI				S	**Sn**		**02 32 13.8**	**0.0**
ZAHL	**Zahle**	**2.58**	**115**	*e*P	**Pn**		**02 31 43.9**	**-0.1**
QRWL	**Qaraoun**	**2.58**	**122**	*e*P	**Pn**		**02 31 44.4**	**+0.3**
KERG	**Konya-Eregli**	**2.59**	**19**	P	**Pn**		**02 31 46.9**	**+2.6**
KERG				S	**Sb**		**02 32 20.0**	**-2.1**
KERG				IAML			02 32 24.0	
	comp=E,180nm,0.4s							
KERG				IAML			02 32 24.0	
	comp=N,134nm,0.6s							
BEIL	**Beino**	**2.60**	**98**	*e*P	**Pn**		**02 31 44.4**	**+0.1**
ZRT	**Zar'it**	**2.62**	**135**	P	**Pn**		**02 31 45.0**	**+0.5**
ZRT				S	**Sn**		**02 32 14.6**	**-0.5**
SEDI	**Konya, Seydise**	**2.70**	**337**	P	**Pn**		**02 31 49.0**	**+3.2**
SEDI				S	**Sb**		**02 32 24.1**	**-1.1**
KIRY	**Kiryat Shemona**	**2.71**	**129**	P	**Pn**		**02 31 46.6**	**+0.8**
RCY	**Rachaya**	**2.72**	**122**	*e*P	**Pn**		**02 31 46.2**	**+0.2**
SHBL	**Chebaa**	**2.74**	**125**	*e*P	**Pn**		**02 31 46.6**	**+0.3**
MMAI	**Mount Meron Ar**	**2.74**	**134**	Pn	**Pn**		**02 31 46.5**	**+0.1**
	53nm,0.2s,baz=320,slow=13,SNR=216							
MMAI				Sn	**Sn**		**02 32 17.5**	**-0.8**
	64nm,0.3s,baz=325,slow=30,SNR=5.3							
GEM	**Giv'at Ha'Em**	**2.77**	**128**	P	**Pn**		**02 31 47.2**	**+0.6**
GEM	**Giv'at Ha'Em**	**2.77**	**128**	P	**Pn**		**02 31 47.2**	**+0.6**
GEM				S	**Sn**		**02 32 18.9**	**0.0**
NATI	**Neve Ativ**	**2.79**	**127**	P	**Pn**		**02 31 48.0**	**+1.2**
OFRI	**`Ofer**	**2.83**	**145**	P	**Pn**		**02 31 47.8**	**+0.4**
OFRI				S	**Sn**		**02 32 19.4**	**-1.0**
ZEFT	**Zefat**	**2.83**	**134**	P	**Pn**		**02 31 48.5**	**+1.0**
BLGI	**Bet Lehem HaGe**	**2.84**	**141**	P	**Pn**		**02 31 48.9**	**+1.3**
BLGI				S	**Sn**		**02 32 21.2**	**+0.6**
KMER	**Konya-Meram**	**2.86**	**349**	P	**Pn**		**02 31 50.7**	**+2.8**
KMER				IAML			02 32 27.0	
	comp=N,59nm,0.5s							
KMER				S	**Sb**		**02 32 27.4**	**-2.2**
KMER				IAML			02 32 31.0	
	comp=E,94nm,0.5s							
KNHM	**Kefar Nahum**	**2.94**	**134**	P	**Pn**		**02 31 49.9**	**+1.0**
KNHM				S	**Sn**		**02 32 23.7**	**+0.6**
TVER	**Teveria**	**2.99**	**136**	P	**Pn**		**02 31 50.8**	**+1.2**
TVER				S	**Sn**		**02 32 25.0**	**+0.7**
KORT	**Korkueli**	**3.00**	**313**	P	**Pn**		**02 31 53.0**	**+3.1**
KSHT	**Keshet**	**3.01**	**130**	P	**Pn**		**02 31 51.1**	**+1.0**
RMOT	**Ramot**	**3.01**	**134**	P	**Pn**		**02 31 51.6**	**+1.6**
KONT	**Konya--Tatoy**	**3.03**	**349**	P	**Pn**		**02 31 53.0**	**+2.7**
KONT				IAML			02 32 42.0	
	comp=E,56nm,0.9s							
KONT				IAML			02 32 43.0	
	comp=N,44nm,1.0s							
BUCA	**Burdur, Bucak-**	**3.12**	**320**	P	**Pn**		**02 31 53.8**	**+2.4**
BUCA				IAML			02 32 34.0	
	comp=N,43nm,0.6s							
BUCA				IAML			02 32 37.0	
	comp=E,62nm,0.7s							
ELL	**Elmali**	**3.13**	**306**	Pn	**Pn**		**02 31 50.4**	**-1.2**
SLTI	**Sal'it**	**3.17**	**148**	P	**Pn**		**02 31 51.3**	**-0.9**
SLTI				S	**Sn**		**02 32 26.4**	**-2.4**
MMLI	**Mount Malkishu**	**3.19**	**141**	P	**Pn**		**02 31 53.3**	**+0.9**
MMLI				S	**Sn**		**02 32 29.4**	**+0.1**
QRNJ	**Al-Qirein**	**3.35**	**141**	P	**Pn**		**02 31 56.2**	**+1.6**
ARIL	**Ariel Universi**	**3.36**	**147**	P	**Pn**		**02 31 56.7**	**+1.9**
ARIL				S	**Sn**		**02 32 33.3**	**-0.3**
ROI	**Roi**	**3.38**	**143**	P	**Pn**		**02 31 56.4**	**+1.5**
SALP	**Salfit**	**3.39**	**148**	P	**Pn**		**02 31 56.7**	**+1.6**
RGMN	**Argaman**	**3.46**	**143**	P	**Pn**		**02 31 58.0**	**+2.0**
YITV	**Yitav**	**3.59**	**146**	P	**Pn**		**02 31 59.1**	**+1.2**
UJAP	**Al Uja**	**3.61**	**146**	P	**Pn**		**02 31 59.6**	**+1.5**
JER	**Jerusalem**	**3.65**	**150**	P	**Pn**		**02 31 59.8**	**+1.1**
JER				S	**Sn**		**02 32 40.6**	**0.0**
ALMO	**Almog**	**3.74**	**147**	P	**Pn**		**02 32 01.4**	**+1.4**
ALMO				S	**Sn**		**02 32 42.9**	**0.0**

AMAZ	**Amatzia**		**3.75**	**155**	P	**Pn**	**02 32 01.6**	**+1.4**
AMAZ	**Amatzia**		**3.75**	**155**	P	**Pn**	**02 32 01.8**	**+1.6**
AMAZ					S	**Sn**	**02 32 43.0**	**-0.2**
HSUJ	**Al Zarqa**		**3.86**	**137**	P	**Pn**	**02 32 03.8**	**+2.1**
MZS	**Mizpe Shalem**		**3.91**	**149**	P	**Pn**	**02 32 03.8**	**+1.6**
YTIR	**Yattir**		**3.98**	**154**	P	**Pn**	**02 32 04.1**	**+0.8**
GAZ	**Gaziantep**		**4.01**	**55**		**Pn**	**02 32 05.7**	**+1.9**
MSBI	**Mazada**		**4.11**	**152**	P	**Pn**	**02 32 02.1**	**-3.0**
MSBI	**Mazada**		**4.11**	**152**	P	**Pn**	**02 32 06.6**	**+1.6**
MSBI					S	**Sn**	**02 32 51.7**	**-0.3**
KZIT	**Kziot**		**4.20**	**164**	P	**Pn**	**02 32 07.2**	**+1.0**
KZIT	**Kziot**		**4.20**	**164**	P	**Pn**	**02 32 07.2**	**+1.0**
KZIT					S	**Sn**	**02 32 52.7**	**-1.4**
GHAJ	**Ghor Haditha**		**4.21**	**149**		**Pn**	**02 32 06.7**	**+0.4**
GHAJ	**Ghor Haditha**		**4.21**	**149**	P	**Pn**	**02 32 08.2**	**+1.8**
ARG	**Arkhangelos**		**4.22**	**289**	Pn	**Pn**	**02 32 03.9**	**-2.6**
ASF	**Jabal al Asfar**		**4.24**	**130**	Pn	**Pn**	**02 32 08.3**	**+1.5**
	8.4nm,0.2s,baz=309,slow=14,SNR=36							
ASF					Sn	**Sn**	**02 32 57.3**	**+2.1**
	6.1nm,0.3s,baz=135,slow=16,SNR=8.4							
ASF	**Jabal al Asfar**		**4.24**	**130**	P	**Pn**	**02 32 08.8**	**+1.9**
BNN	**Bunyan**		**4.47**	**29**		**Pn**	**02 32 11.7**	**+1.5**
RMNI	**Mount Ramon**		**4.58**	**161**	P	**Pn**	**02 32 12.6**	**+1.0**
RMNI					S	**Sn**	**02 33 02.4**	**-1.3**
BR131	**Keskin Array S**		**4.78**	**5**		**Pn**	**02 32 14.9**	**+0.6**
BRTR	**Keskin Array B**		**4.78**	**5**	Pn	**Pn**	**02 32 16.8**	**+2.5**
	0.9nm,0.3s,baz=182,slow=15,SNR=33							
BRTR					Sn	**Sn**	**02 33 07.1**	**-1.4**
	0.2nm,0.3s,baz=168,slow=20,SNR=7.2							
BRTR	**Keskin Array B**		**4.78**	**5**		**Pn**	**02 32 15.2**	**+0.9**
KARP	**Karpathos**		**4.87**	**279**	Pn	**Pn**	**02 32 13.3**	**-2.3**
MANT	**Manisa**		**5.05**	**315**	Pn	**Pn**	**02 32 16.6**	**-1.6**
HRFI	**Mount Harif**		**5.18**	**161**	P	**Pn**	**02 32 20.1**	**+0.2**
HRFI	**Mount Harif**		**5.18**	**161**	P	**Pn**	**02 32 20.8**	**+1.0**
HRFI					S	**Sn**	**02 33 17.2**	**-1.3**
EIL	**Elat**		**5.51**	**163**	Pn	**Pn**	**02 32 25.3**	**+1.0**
	3.2nm,0.2s,baz=7.1,slow=8.1,SNR=44							
EIL					Sn	**Sn**	**02 33 25.3**	**-1.2**
	11nm,0.3s,baz=72,slow=12,SNR=15							
EIL	**Elat**		**5.51**	**163**	P	**Pn**	**02 32 25.5**	**+1.2**
EIL	**Elat**		**5.51**	**163**	P	**Pn**	**02 32 24.8**	**+0.5**
EIL					S	**Sn**	**02 33 25.9**	**-0.7**
IDI	**Anoyia**		**6.71**	**275**	Pn	**Pn**	**02 32 40.1**	**-0.8**
	1.1nm,0.3s,baz=93,slow=5.7,SNR=24							
IDI					Sn	**Sn**	**02 33 51.0**	**-5.1**
	2.9nm,0.3s,baz=279,slow=21,SNR=8.2							
	2.8nm,0.3s							
IDI	**Anoyia**		**6.71**	**275**		Pn	02 32 37.8	-3.0
TIP	**Timpagrande**		**13.69**	**293**	Pn	**Pn**	**02 34 13.6**	**-2.7**
GERES	**GERESS Array B**		**19.93**	**320**	P	**P**	**02 35 31.8**	**-1.7**
	baz=114,slow=12,SNR=4.2							
	0.3nm,0.6s							
GERES	**GERESS Array B**		**19.93**	**320**	P	**P**	**02 35 33.6**	**0.0**
AB31	**Akbulak array**		**24.36**	**46**	P	**P**	**02 36 19.5**	**+0.2**
AB31					IAmb	IAmb	02 36 51.6	
	comp=Z,1.3nm,1.1s							
ABKAR	**Akbulak array**		**24.36**	**46**	P	**P**	**02 36 20.4**	**+1.1**
WLF	**Walferdange**		**24.57**	**315**	P	**P**	**02 36 20.9**	**-0.3**
WLF					IAmb	IAmb	02 36 28.1	
	comp=Z,7.1nm,0.9s							
FINES	**FINESS Array B**		**26.88**	**353**	P	**P**	**02 36 40.5**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=147,slow=13,SNR=4.4							
	comp=Z,1.7nm,0.7s							
FINES	**FINESS Array B**		**26.88**	**353**	P	**P**	**02 36 42.3**	**+0.3**
ARCES	**ARCESS Array B**		**34.88**	**355**	P	**P**	**02 37 51.2**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=175,slow=8.1,SNR=4.1							
	comp=Z,2.1nm,0.9s							
ARCES	**ARCESS Array B**		**34.88**	**355**	P	**P**	**02 37 52.5**	**+0.1**
ARCES					IAmb	IAmb	02 38 00.2	
	comp=Z,7.8nm,1.1s							

IDC 30 02:50:25.9±803.0, 1°.94N×97°.28E, h0km, Error ellipse: s-maj=1631.0km s-min=23.3km az=51.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.50**	**249**	H	H	03 23 26.9	
	baz=71,slow=76,SNR=20						
H08S3	**Diego Garcia H**	**26.50**	**249**	H	H	03 23 27.1	
	baz=71,slow=76,SNR=44						
H08S1	**Diego Carcia H**	**26.51**	**249**	H	H	03 23 28.6	
	baz=71,slow=76,SNR=18						
H04N2	**CROZET ISLANDS**	**62.43**	**214**	H	H	04 08 18.7	
	baz=54,slow=75,SNR=29						
H04N1	**CROZET ISLANDS**	**62.44**	**214**	H	H	04 08 19.3	
	baz=54,slow=75,SNR=27						
H04N3	**CROZET ISLANDS**	**62.45**	**214**	H	H	04 08 17.9	
	baz=54,slow=75,SNR=27						
H04S1	**CROZET ISLANDS**	**62.77**	**213**	H	H	04 08 41.9	
	baz=56						
H04S3	**CROZET ISLANDS**	**62.78**	**213**	H	H	04 08 41.6	
	baz=56						
H04S2	**CROZET ISLANDS**	**62.79**	**213**	H	H	04 08 43.1	
	baz=56						

IDC 30 02:50:31.5±999.0, 1°.76N×96°.99E, h0km, Error ellipse: s-maj=2052.0km s-min=9.9km az=51.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.16**	**249**	H	H	03 23 07.4	
	baz=72						
H08S3	**Diego Garcia H**	**26.16**	**249**	H	H	03 23 07.6	
	baz=72						
H08S1	**Diego Carcia H**	**26.18**	**249**	H	H	03 23 08.7	
	baz=72						
H04N2	**CROZET ISLANDS**	**62.12**	**214**	H	H	04 07 58.5	
	baz=55						
H04N1	**CROZET ISLANDS**	**62.13**	**214**	H	H	04 07 59.0	
	baz=55						
H04N3	**CROZET ISLANDS**	**62.13**	**214**	H	H	04 07 57.6	
	baz=55						
H04S1	**CROZET ISLANDS**	**62.46**	**213**	H	H	04 08 22.8	
	baz=54						
H04S3	**CROZET ISLANDS**	**62.47**	**213**	H	H	04 08 22.2	
	baz=54						
H04S2	**CROZET ISLANDS**	**62.48**	**213**	H	H	04 08 23.5	
	baz=54						

*BJI **30** 02:51:14.5, 3°.68S×131°.37E, h14km, mB5.2/42, mb5.1/71, Ms5.0/72, Ms7 4.8/72*

*IDC **30** 02:51:16.6±0.4, 3°.48S×131°.15E, h0km, mb5.0/26, mbtmp5.0/29, ML3.8/3, MS4.7/50, Error ellipse: s-maj=17.8km s-min=10.5km az=81.0*

*MOS **30** 02:51:17.4±0.9, 3°.45S×131°.16E, h17km, mb5.5/49, MS4.8/8, Error ellipse: s-maj=8.5km s-min=4.7km az=117.9*

*NEIC **30** 02:51:18.5±1.8, 3°.44S±0°.04×131°.14E±0°.05, h10km±1km, mb5.2/233, Mww5.3/11, Error ellipse: s-maj=8.7km s-min=7.1km az=250.0*

*GFZ **30** 02:51:18.5±0.1, 4°S±2°×13°1E±°, h10km, M5.2/67, mb5.4/67*

*GFZ **30** 02:51:19.0, 3°.45S×131°.07E, h10km, Mw5.3/75, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr 7.15; Mθθ -5.75; Mφφ -1.40; Mrθ -4.92; Mθφ 5.31; Mφr 1.35; Fault plane solution: Mo 9.86419×10^16 NP1: φs 139.15832°, δ 31.51210°, λ 113.91682°. NP2: φs 291.67464°, δ 61.45827°, λ 76.04180°. Principal axes: T 8.8322, Plg 70.1668°, Azm 171.4946°; N 1.8125, Plg 12.2337°, Azm 298.4473°; P -10.6448, Plg 15.3655°, Azm 31.8631°;*

*GCMT **30** 02:51:20.5±0.1, 3°.46S±0°.01×131°.11E±0°.01, h16km, MW5.4/139, Moment Tensor Solution. s137, c231; s139, c271; Duration: 1 3 Moment tensor: Scale 10^17 Nm; Mrr 1.07±.02; Mθθ -0.82±.01; Mφφ -0.25±.01; Mrθ -0.67±.04; Mθφ 0.59±.01; Mφr 1.18±.05; Best double couple: Mo 1.76900×10^17 NP1: φs 103.00000°, δ 24.00000°, λ 52.00000°. NP2: φs 323.00000°, δ 71.00000°, λ 105.00000°. Principal axes: T 1.7950, Plg 61.0000°, Azm 256.0000°; N -0.0530, Plg 15.0000°, Azm 138.0000°; P -1.7430, Plg 25.0000°, Azm 41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **30** 02:51:21.1±0.3, 3°S±1°×13°1E±°, h22km±3km, M5.4/83, mB5.9/60, mb5.7/83, MLv5.4/30, Mw5.3/31, Mw(mB)5.5/60,*

MwMwp5.2/37, Mwp5.4/37

ISC 30 02:51:19.2±0.4, 3°.46S±0°.03×131°.13E±0°.03, h16km±2km, h17km:pP-P, n1012, σ1938/972, mb5.2/213, MS4.7/78, 36C-12D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.25**	**64**	P	**Pb**	**02 51 43.7**	**+1.4**
FAKI	**Fak Fak**	**1.25**	**64**		**Pn**	**02 51 42.5**	**+0.5**
FAKI	**Fak Fak**	**1.25**	**64**	P	**Pn**	**02 51 43.1**	**+1.2**
FAKI				Sg	**Sn**	**02 52 00.8**	**+2.4**
FAKI	**Fak Fak**	**1.25**	**64**	P	**Pn**	**02 51 43.1**	**+1.2**
BNDI	**Bandanaira**	**1.61**	**229**	P	**Pn**	**02 51 48.7**	**+1.8**
BNDI	**Bandanaira**	**1.61**	**229**	P	**Pn**	**02 51 48.5**	**+1.6**
BNDI				Sg	**Sg**	**02 52 15.1**	**+4.0**
BNDI	**Bandanaira**	**1.61**	**229**	P	**Pn**	**02 51 47.2**	**+0.3**
MSAI	**Masohi**	**2.19**	**273**	P	**Pn**	**02 51 56.3**	**+1.3**
SIJI	**Sorong**	**2.58**	**3**	Pn	**Pn**	**02 52 00.4**	**+0.1**
	101nm,0.3s,baz=212,slow=9.7,SNR=110						
SIJI				Sn	**Sn**	**02 52 30.5**	**-0.9**
	209nm,0.3s,baz=195,slow=18,SNR=2.7						
SIJI				LR	LR	02 53 18.8	
	comp=Z,25µm,20.2s,baz=294,slow=47						
	272nm,0.3s						
SIJI	**Sorong**	**2.58**	**3**	P	**Pn**	**02 52 00.4**	**+0.1**
SIJI				S	**Sn**	**02 52 32.6**	**+1.2**
KMPI	**Kaimana, Papua**	**2.58**	**94**	P	**Pn**	**02 52 01.6**	**+1.3**
KMPI				S	**Sn**	**02 52 33.5**	**+2.1**
SWI	**Sorong**	**2.59**	**3**	P	**Pn**	**02 52 00.7**	**+0.3**
SWI				S	**Sn**	**02 52 32.5**	**+1.0**
KRAI	**Karang Ratu**	**2.73**	**273**	P	**Pn**	**02 52 03.7**	**+1.4**
AAI	**Ambon**	**2.93**	**266**	P	**Pn**	**02 52 06.7**	**+1.6**
AAI				S	**Sn**	**02 52 43.3**	**+3.3**
NLAI	**Namlea**	**4.02**	**273**	P	**Pn**	**02 52 22.7**	**+2.6**
SAUI	**Saumlaki**	**4.49**	**178**	P	**Pn**	**02 52 29.0**	**+2.4**
SAUI	**Saumlaki**	**4.49**	**178**	S	**Sn**	**02 53 19.2**	**+0.6**
SAUI	**Saumlaki**	**4.49**	**178**	Pn	**Pn**	**02 52 27.8**	**+1.2**
SAUI	**Saumlaki**	**4.49**	**178**	P	**Pn**	**02 52 28.0**	**+1.4**
SAUI	**Saumlaki**	**4.49**	**178**	P	**Pn**	**02 52 25.8**	**-0.9**
SANI	**Sanana**	**5.32**	**285**	P	**Pn**	**02 52 37.6**	**-0.4**
SANI	**Sanana**	**5.32**	**285**	S	**Sn**	**02 53 37.6**	**-1.4**
SANI	**Sanana**	**5.32**	**285**	P	**Pn**	**02 52 37.0**	**-1.0**
	2.6nm6µm6µm546nm,0.6s						
SANI	**Sanana**	**5.32**	**285**	P	**Pn**	**02 52 38.0**	**0.0**
BAKI	**Biak**	**5.47**	**66**	P	**Pn**	**02 52 43.0**	**+3.0**
BAKI				S	**Sn**	**02 53 45.2**	**+2.6**
TNTI	**Ternate**	**5.64**	**318**	P	**Pn**	**02 52 44.3**	**+1.9**
TNTI	**Ternate**	**5.64**	**318**	S	**Sn**	**02 53 47.5**	**+0.6**
TNTI	**Ternate**	**5.64**	**318**	Pn	**Pn**	**02 52 42.7**	**+0.3**
TNTI	**Ternate**	**5.64**	**318**	P	**Pn**	**02 52 43.2**	**+0.8**
	5µm302nm,0.8s						
TNTI	**Ternate**	**5.64**	**318**	P	**Pn**	**02 52 43.5**	**+1.1**
GAMI	**Galela, Maluku**	**6.23**	**328**	P	Pn	02 52 55.1	+4.5
MNI	**Manado**	**7.95**	**308**	P	**Pn**	**02 53 15.8**	**+1.6**
KDI	**Kendari**	**8.50**	**266**	P	**Pn**	**02 53 22.8**	**+1.1**
	10µm2µm114nm,0.6s						
LUWI	**Luwuk**	**8.69**	**286**	P	**Pn**	**02 53 24.9**	**+0.7**
LUWI	**Luwuk**	**8.69**	**286**	S	**Sn**	**02 55 01.0**	**-0.9**
LUWI	**Luwuk**	**8.69**	**286**	Pn	**Pn**	**02 53 23.5**	**-0.7**
LUWI	**Luwuk**	**8.69**	**286**	P	**Pn**	**02 53 23.0**	**-1.2**
	427nm,0.9s						
LUWI	**Luwuk**	**8.69**	**286**	P	**Pn**	**02 53 24.0**	**-0.3**
BBSI	**Bau Bau**	**8.76**	**256**	P	**Pn**	**02 53 29.2**	**+3.9**
	11µm585nm,1.3s						
DRS	**Darwin Rock St**	**8.91**	**181**	P	**Pn**	**02 53 28.2**	**+0.9**
DRS	**Darwin Rock St**	**8.91**	**181**	S	**Sn**	**02 55 08.3**	**+0.8**
SGSI	**Sangihe**	**9.04**	**322**	P	**Pn**	**02 53 30.9**	**+1.8**
GENI	**Genyem**	**9.07**	**85**	P	**Pn**	**02 53 32.6**	**+3.1**
GENI	**Genyem**	**9.07**	**85**	P	**Pn**	**02 53 31.8**	**+2.3**
	9µm3µm316nm,1.1s						
GENI	**Genyem**	**9.07**	**85**	P	**Pn**	**02 53 32.7**	**+3.1**
SOEI	**Soe**	**9.24**	**227**	P	**Pn**	**02 53 32.4**	**+0.4**
SOEI	**Soe**	**9.24**	**227**	S	**Sn**	**02 55 13.8**	**-2.0**
SOEI	**Soe**	**9.24**	**227**	Pn	**Pn**	**02 53 35.1**	**+3.1**
SOEI	**Soe**	**9.24**	**227**	P	**Pn**	**02 53 35.2**	**+3.2**
	12µm609nm,0.9s						
**SO

WRAB Tennant Creek 16.67 169 ⇑*e*P **Pn** **02 55 11.7 -0.5**
WRAB pmax pmax
comp=Z,27nm,0.3s
WRAB Tennant Creek 16.67 169 Pn **Pn** **02 55 11.0 -1.2**
WRAB Tennant Creek 16.67 169 P **Pn** **02 55 11.4 -0.9**
WRA Warramunga Arr 16.68 169 Pn Pn 02 55 05.4 -6.9
comp=Z,3.1nm,0.3s,baz=352,slow=14,SNR=62
WRA Sn Sn 02 58 02.9 -14
comp=Z,11nm,0.3s,baz=351,slow=24,SNR=7.8
WRA Warramunga Arr 16.68 169 P Pn 02 55 06.4 -5.9
WRA pmax pmax
comp=Z,4.0nm,1.3s
WRA Warramunga Arr 16.68 169 Pn Pn 02 55 06.4 -5.9
WB1 Warramunga Ar. 16.69 169 P **Pn** **02 55 11.5 -1.1**
WR8 Warramunga Arr 16.72 169 Pn **Pn** **02 55 09.6 -3.3**
RTBI Rangdo, Negare 16.84 252 P **Pn** **02 55 15.9 +1.5**
comp=Z,3µmcomp=Z,278nm,0.9s
PMG Port Moresby 16.99 111 P **P** **02 55 20.0 +1.9**
PMG Port Moresby 16.99 111 P **P** **02 55 19.8 +1.7**
PMG Port Moresby 16.99 111 Pn **Pn** **02 55 17.1 +0.9**
comp=Z,2.3nm,0.3s,baz=334,slow=7.7,SNR=6.7
PMG LR LR 03 04 19.2
comp=Z,5µm,18.5s,baz=288,slow=46
comp=Z,45nm,0.8s
PMG Port Moresby 16.99 111 *de*P **Pn** **02 55 14.4 -1.9**
PMG pmax pmax
comp=Z,105nm,1.8s
PMG Port Moresby 16.99 111 Pn **Pn** **02 55 13.8 -2.4**
PMG Port Moresby 16.99 111 P **P** **02 55 21.2 +3.1**
PMG Port Moresby 16.99 111 P **Pn** **02 55 16.3 0.0**
BYJI Banyuwangi 17.33 253 P **P** **02 55 24.7 +2.8**
ABJI Asem Bagus 17.35 255 P **Pn** **02 55 22.5 +1.7**
comp=Z,7µmcomp=Z,5µmcomp=Z,207nm,1.3s
KMMI Kalianget 17.45 258 P **Pn** **02 55 22.7 +0.6**
comp=Z,6µmcomp=Z,4µmcomp=Z,421nm,0.9s
JAGI Jajag, Banyuwa 17.59 253 P **Pn** **02 55 24.1 +0.2**
JAGI Jajag, Banyuwa 17.59 253 Pn **Pn** **02 55 22.8 -1.1**
JAGI IAmb IAmb 02 55 31.4
comp=Z,133nm,0.6s
JAGI Jajag, Banyuwa 17.59 253 P **Pn** **02 55 22.1 -1.8**
JAGI Jajag, Banyuwa 17.59 253 P **Pn** **02 55 23.2 -0.7**
BLJI Banyuglugur 17.95 256 P **Pn** **02 55 29.2 +0.9**
QIS Mount Isa 18.89 155 P **P** **02 55 40.5 +1.4**
QIS Mount Isa 18.89 155 P **Pn** **02 55 41.2 +1.5**
comp=Z,0.0nmcomp=Z,91nm,0.9s
QIS Mount Isa 18.89 155 P **P** **02 55 40.0 +0.9**
MTSU Mount Surprise 19.48 139 P **P** **02 55 47.4 +1.8**
MTSU Mount Surprise 19.48 139 P **P** **02 55 47.3 +1.6**
comp=Z,93nm,0.8s
MTSU Mount Surprise 19.48 139 P **P** **02 55 47.2 +1.6**
SJI Sawahan 19.72 257 P **P** **02 55 48.4 +0.1**
comp=Z,603nm,0.8s
SNJI Sawahan-Nganju 19.74 257 P **P** **02 55 48.8 +0.2**
comp=Z,4µmcomp=Z,289nm,0.8s
NGJI Ngawi 19.95 258 P **P** **02 55 51.4 +0.6**
comp=Z,586nm,0.8s
AS15 Alice Springs 20.23 173 P **P** **02 55 54.3 +0.5**
comp=Z,296nm,0.8s
AS31 Alice Springs 20.26 173 P **P** **02 55 54.7 +0.6**
comp=Z,68nm,0.7s
AS31 Alice Springs 20.26 173 **P** **02 55 53.1 -0.9**
AS31 IAmb IAmb 02 56 05.0
comp=Z,55nm,0.7s
ASAR Alice Springs 20.26 173 P **P** **02 55 54.2 +0.1**
comp=Z,154nm,0.9s,baz=353,slow=11,SNR=270
ASAR S S 02 59 30.1 -11
comp=Z,13nm,0.7s,baz=0.3,slow=28,SNR=5.4
comp=Z,154nm,0.9s
ASAR Alice Springs 20.26 173 P **P** **02 55 53.8 -0.3**
AS01 Alice Springs 20.27 172 P **P** **02 55 54.7 +0.5**
AS01 Alice Springs 20.27 172 P **P** **02 55 54.6 +0.5**
comp=Z,315nm,0.8s
AS17 Alice Springs 20.27 172 P **P** **02 55 54.8 +0.6**
comp=Z,202nm,0.7s
AS09 Alice Springs 20.30 173 P **P** **02 55 54.6 +0.1**
comp=Z,207nm,0.8s
PCJI Pacitan 20.39 256 P **P** **02 55 55.1 -0.4**
comp=Z,5µmcomp=Z,470nm,0.8s
WOJI Wonogiri, Jawa 20.56 257 P **P** **02 55 58.0 +0.6**
comp=Z,222nm,0.8s
MBWA Marble Bar 20.79 211 P **P** **02 55 57.9 -1.9**
MBWA Marble Bar 20.79 211 P **P** **02 55 58.0 -1.8**
comp=Z,0.0nmcomp=Z,91nm,0.9s
MBWA Marble Bar 20.79 211 P **P** **02 55 57.3 -2.5**
MBWA IAmb IAmb 02 56 00.1
comp=Z,71nm,0.8s
MBWA Marble Bar 20.79 211 P **P** **02 55 57.5 -2.2**
KRVT Keravat (AS076 20.87 93 LR LR 03 06 05.5
comp=Z,1µm,21.5s,baz=231,slow=43
SMRI Semarang 20.90 259 P **P** **02 56 02.1 +1.0**
SMRI Semarang 20.90 259 P **P** **02 56 00.6 -0.5**
comp=Z,338nm,0.9s
SMRI Semarang 20.90 259 P **P** **02 56 00.4 -0.7**
UGM Wanagama 20.97 257 P **P** **02 56 00.7 -1.1**
UGM IAmb IAmb 02 56 05.6
comp=Z,105nm,0.8s
GUMO Guam 21.75 39 LR LR 03 05 01.0
comp=Z,1µm,19.5s,baz=230,slow=38
KPJI Karang Pucung 22.42 259 P **P** **02 56 15.1 -2.3**
SZP Santa 23.39 334 P **P** **02 56 29.6 +2.3**
TPI Tanjungpandan 23.45 271 P **P** **02 56 28.5 +0.4**
LEM Lembang 23.65 261 P **P** **02 56 27.1 -3.0**
comp=Z,99nm,0.8s,baz=69,slow=9.7,SNR=12
LEM LR LR 03 06 43.5
comp=Z,6µm,20.4s,baz=90,slow=39
BBJI Bungbulang 23.70 259 P **P** **02 56 29.9 -0.7**
BBJI Bungbulang 23.70 259 P **P** **02 56 26.7 -3.9**
BBJI Bungbulang 23.70 259 P **P** **02 56 26.8 -3.8**
CBJI Citeko 24.36 262 P **P** **02 56 36.0 -0.7**
comp=Z,148nm,0.7s
DBJI Dramaga 24.47 262 P **P** **02 56 36.1 -1.7**
GIRL Giralia 25.13 219 P **P** **02 56 42.7 -0.8**
GIRL IAmb IAmb 02 57 16.6
comp=Z,63nm,1.1s
CGJI Cibinong 25.52 262 P **P** **02 56 43.8 -3.5**
INKA Innaminka 25.83 160 IAmb IAmb 02 57 02.6
comp=Z,43nm,0.8s
MEEK Meekatharra 25.97 206 P **P** **02 56 49.6 -1.7**
MEEK Meekatharra 25.97 206 P **P** **02 56 49.1 -2.1**
QLP Quilpie 26.20 153 P **P** **02 56 54.3 +1.1**
QLP Quilpie 26.20 153 P **P** **02 56 54.1 +0.9**
comp=Z,173nm,1.3s
QLP Quilpie 26.20 153 P **P** **02 56 54.1 +0.9**
KASI Kota Agung 26.62 265 P **P** **02 56 55.0 -2.2**
DSRI Dabo 26.69 276 P **P** **02 57 01.2 +3.3**
MDSI Maura Dua 26.90 267 P **P** **02 56 59.2 -0.5**
TPRI Tanjung Pinang 26.94 279 P **P** **02 57 00.3 +0.2**
LWLI Liwa 27.03 266 P **P** **02 57 00.3 -0.8**
comp=Z,168nm,0.7s
DLV Lat 27.22 305 P **P** **02 57 03.4 +0.6**
DLV Lat 27.22 305 P **P** **02 57 03.7 +0.9**
FORT Forrest 27.32 186 P **P** **02 57 03.0 -0.3**
comp=Z,53nm,0.7s
FORT Forrest 27.32 186 P **P** **02 57 02.8 -0.6**
FORT IAmb IAmb 02 57 04.8
comp=Z,39nm,0.7s
LHSI Lahat 27.55 268 P **P** **02 57 06.8 +1.2**
BTDF Bukit Timah Da 27.76 279 P **P** **02 57 09.4 +2.0**
MYKOM Kota Tinggi 27.76 280 P **P** **02 57 09.0 +1.5**
MYKOM Kota Tinggi 27.76 280 P **P** **02 57 08.7 +1.3**
comp=Z,1µmcomp=Z,88nm,0.9s
MYKOM Kota Tinggi 27.76 280 P **P** **02 57 09.0 +1.5**
KSI Kapahiang 28.48 269 P **P** **02 57 14.7 +0.7**
TPUB Ta-pu 28.50 339 P **P** **02 57 14.1 +0.1**
MASI Maura Aman, Be 28.84 270 P **P** **02 57 18.6 +1.5**
SSLB Suanglung 28.84 340 P **P** **02 57 15.9 -1.1**
SSLB Suanglung 28.84 340 P **P** **02 57 15.1 -1.9**
SSLB IAmb IAmb 02 57 21.9
comp=Z,27nm,0.9s
KMBL Kambalda 29.09 196 P **P** **02 57 17.6 -1.6**
comp=Z,32nm,0.6s
MORW Morawa 29.22 208 P **P** **02 57 20.0 -0.3**
MORW Morawa 29.22 208 P **P** **02 57 17.3 -3.0**
MORW IAmb IAmb 02 57 27.8
comp=Z,17nm,0.6s
BBOO Buckleboo 29.56 172 P **P** **02 57 23.8 +0.5**
BBOO Buckleboo 29.56 172 P **P** **02 57 23.0 -0.2**
BBOO IAmb IAmb 02 58 21.3
comp=Z,24nm,0.8s
BBOO Buckleboo 29.56 172 P **P** **02 57 22.3 -0.9**
KRJI Kerinci 29.66 272 P **P** **02 57 27.6 +3.1**
SDSI Sungai Dareh 29.78 274 P **P** **02 57 25.5 +0.1**
STKA Stephens Creek 29.93 162 P **P** **02 57 25.7 -0.9**
comp=Z,17nm,0.9s,baz=335,slow=8.8,SNR=16
comp=Z,17nm,0.9s

STKA Stephens Creek 29.93 162 ⇓*e*P **P** **02 57 26.6 0.0**
STKA Stephens Creek 29.93 162 P **P** **02 57 25.8 -0.7**
JOW Kunigami 30.24 355 LR LR 03 10 33.7
comp=Z,2µm,19.4s,baz=186,slow=38
BLDU Ballidu 30.25 205 P **P** **02 57 29.4 0.0**
AULRC Lightning Ridg 30.38 150 P **P** **02 57 31.8 +1.3**
QIZ Qiongzhong 30.63 318 P **P** **02 57 31.5 -1.4**
QIZ Qiongzhong 30.63 318 P **P** **02 57 33.5 +0.6**
QIZ S **S** **03 02 34.3 -0.4**
QIZ pmax pmax
comp=Z,160nm,7.7s
QIZ L L
comp=Z,1µm,13.7s
QIZ L L
comp=Z,570nm,11.0s
QIZ L L
comp=Z,1µm,19.2s
KLBR Kellerberrin 30.68 203 P **P** **02 57 31.7 -1.5**
KLBR Kellerberrin 30.68 203 P **P** **02 57 32.1 -1.1**
comp=Z,149nm,0.7s
KLBR Kellerberrin 30.68 203 P **P** **02 57 30.8 -2.4**
HTT Hallett 30.69 167 P **P** **02 57 35.2 +1.9**
HTT Hallett 30.69 167 P **P** **02 57 34.1 +0.7**
comp=Z,4.1nm,1.3s
HTT Hallett 30.69 167 P **P** **02 57 34.0 +0.7**
PDSI Padang 30.74 274 P **P** **02 57 33.0 -1.0**
PPI Padang Panjang 30.85 275 P **P** **02 57 34.9 0.0**
CMSA Cobar Meteorol 31.11 155 P **P** **02 57 37.8 +0.8**
CMSA Cobar Meteorol 31.11 155 P **P** **02 57 38.4 +1.4**
comp=Z,52nm,1.1s
CMSA Cobar Meteorol 31.11 155 P **P** **02 57 37.0 0.0**
MUN Mundaring 31.64 205 P **P** **02 57 40.4 -1.3**
MUN Mundaring 31.64 205 P **P** **02 57 40.7 -1.0**
comp=Z,42nm,1.0s
MUN Mundaring 31.64 205 P **P** **02 57 40.6 -1.0**
KULM Kulim 31.66 286 P **P** **02 57 43.0 +1.0**
KULM Kulim 31.66 286 P **P** **02 57 42.1 +0.1**
KULM IAmb IAmb 02 57 45.8
comp=Z,38nm,0.8s
KULM Kulim 31.66 286 P **P** **02 57 43.2 +1.2**
KULM Kulim 31.66 286 P **P** **02 57 40.7 -1.3**
MNSI Mandailing Nat 31.81 277 P **P** **02 57 43.7 +0.3**
SISI Saibi 32.08 273 P **P** **02 57 45.0 -0.7**
JCJ Chichijima 32.20 19 LR LR 03 09 56.8
comp=Z,2µm,20.2s,baz=206,slow=35
RPSI Rantau Prapat 32.76 280 P **P** **02 57 50.6 -1.1**
PSI Prapat 32.78 281 P **P** **02 57 51.8 -0.2**
PSI Prapat 32.78 281 P **P** **02 57 50.6 -1.4**
PSI pmax pmax
comp=Z,62nm,0.9s
AUDCS Dubbo College 33.00 152 P **P** **02 57 54.8 +1.2**
ARMA Armidale 33.08 146 P **P** **02 57 55.8 +1.3**
ARMA Armidale 33.08 146 P **P** **02 57 54.6 +0.1**
comp=Z,37nm,1.2s
ARMA Armidale 33.08 146 P **P** **02 57 55.2 +0.8**
ARMA IAmb IAmb 02 57 58.2
comp=Z,29nm,0.9s
ARMA Armidale 33.08 146 P **P** **02 57 54.6 +0.1**
GSI Gunungsitoli 33.87 277 P **P** **02 58 02.0 +0.6**
GSI Gunungsitoli 33.87 277 P **P** **02 58 00.8 -0.6**
GSI Gunungsitoli 33.87 277 P **P** **02 58 00.2 -1.2**
GSI Gunungsitoli 33.87 277 P **P** **02 57 59.1 -2.3**
KCSI Kotacane, Aceh 34.05 281 P **P** **02 58 02.5 -0.5**
ARPS Mount Arapiles 34.58 165 P **P** **02 58 05.5 -1.8**
comp=Z,31nm,1.4s
JSU Suzuyama 34.78 359 P **P** **02 58 10.1 +1.0**
JSU Suzuyama 34.78 359 P **P** **02 58 08.3 -0.8**
JSU IAmb IAmb 02 58 12.6
comp=Z,27nm,0.9s
JSU Suzuyama 34.78 359 P **P** **02 58 09.7 +0.6**
AUMTS Mt Stromlo 35.77 155 P **P** **02 58 20.1 +2.5**
CAN Canberra 35.77 155 P **P** **02 58 20.0 +2.4**
CAN Canberra 35.77 155 P **P** **02 58 19.6 +2.1**
comp=Z,78nm,0.9s
CAN Canberra 35.77 155 P **P** **02 58 17.8 +0.2**
CAN pmax pmax
comp=Z,62nm,0.9s
CAN Canberra 35.77 155 P **P** **02 58 17.8 +0.2**
CAN Canberra 35.77 155 P **P** **02 58 18.1 +0.5**
AUMHS Melrose High S 35.84 154 P **P** **02 58 20.1 +1.9**
WOLH Wollongong Har 35.85 152 P **P** **02 58 20.2 +2.0**
BRAT Ballarat 35.90 163 P **P** **02 58 18.7 +0.1**
CNB Canberra Magne 35.92 154 P **P** **02 58 20.2 +1.3**
comp=Z,0.8nm,1.8s
CNSH ChangSha 36.01 332 P **P** **02 58 20.5 +0.9**
CNSH S **S** **03 04 00.0 +2.0**
CNSH pmax pmax
comp=Z,13nm,0.9s
CNSH L L
comp=Z,1µm,21.6s
CNSH L L
comp=Z,630nm,20.1s
CNSH L L
comp=Z,1µm,22.6s
SLVN Son La 36.31 314 P **P** **02 58 23.3 +0.9**
SLVN Son La 36.31 314 P **P** **02 58 21.9 -0.5**
SLVN IAmb IAmb 02 58 40.4
comp=Z,28nm,1.2s
JNU Nakatsue 36.39 360 LR LR 03 12 22.4
comp=Z,2µm,21.4s,baz=179,slow=35
TOO Toolangi 36.41 161 P **P** **02 58 20.2 -2.9**
TOO pmax pmax
comp=Z,7.0nm,0.9s
TOO Toolangi 36.41 161 **P** **02 58 20.2 -2.9**
JMN Monobe 37.08 4 P **P** **02 58 29.7 +0.9**
JMN Monobe 37.08 4 P **P** **02 58 28.4 -0.4**
JMN IAmb IAmb 02 58 45.7
comp=Z,44nm,1.0s
JMN Monobe 37.08 4 P **P** **02 58 28.7 -0.1**
NJ2 Nanjing 37.20 343 ⇑P **P** **02 58 31.5 +1.8**
NJ2 sP **sP** **02 58 36.3 -0.1**
NJ2 pmax pmax
comp=Z,27nm,0.5s
NJ2 pmax pmax
comp=Z,1µm,10.4s
NJ2 L L
comp=Z,2µm,24.4s
NJ2 L L
comp=Z,3µm,24.5s
NJ2 L L
comp=Z,7µm,21.8s
JHJ Hachijo jima 2 37.30 12 LR LR 03 12 51.6
comp=Z,3µm,19.2s,baz=180,slow=35
WHN Wuhan 37.42 336 ⇑P **P** **02 58 32.5 +0.8**
WHN sP sP 02 58 44.3 +5.9
WHN S **S** **03 04 20.0 +0.6**
WHN pmax pmax
comp=Z,78nm,0.9s
WHN L L
comp=Z,5µm,19.3s
WHN L L
comp=Z,1µm,13.8s
WHN L L
comp=Z,7µm,22.9s
GYA Guiyang 38.01 323 ⇑P **P** **02 58 38.0 +1.1**
GYA pP sP 02 58 43.0 -0.7
GYA S **S** **03 04 30.0 +1.2**
GYA pmax pmax
comp=Z,24nm,0.8s
GYA L L
comp=Z,950nm,23.8s
GYA L L
comp=Z,1µm,27.4s
GYA L L
comp=Z,1µm,25.3s
CM31 Chiang Mai Arr 38.46 306 P **P** **02 58 42.0 +1.3**
SNR=15
CM31 Chiang Mai Arr 38.46 306 P **P** **02 58 39.5 -1.1**
CM31 IAmb IAmb 02 58 43.6
comp=Z,49nm,0.9s
CMAR Chiang Mai Arr 38.46 306 P **P** **02 58 41.5 +0.8**
comp=Z,28nm,0.9s,baz=136,slow=7.5,SNR=97
CMAR PcP **PcP** **03 00 55.1 +1.2**
comp=Z,6.7nm,0.9s,baz=148,slow=2.7,SNR=4.2
CMAR LR LR 03 17 39.2
comp=Z,784nm,19.3s,baz=115,slow=41
comp=Z,28nm,0.9s
CMAR Chiang Mai Arr 38.46 306 *ce*P **P** **02 58 41.7 +1.0**
CMAR pmax pmax
comp=Z,30nm,0.9s
CMAR Chiang Mai Arr 38.46 306 P **P** **02 58 40.5 -0.1**
CMAR PcP **PcP** **03 00 54.5 +0.7**
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.5 +0.3**
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.3 +0.1**

CHTO pmax pmax
comp=Z,48nm,0.9s
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.8 +0.6**
CHTO S S 03 04 26.9 -11
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.3 +0.1**
CHTO IAmb IAmb 02 58 44.8
comp=Z,48nm,0.9s
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.8 +0.6**
CHTO Chiang Mai 38.65 306 P **P** **02 58 42.1 -0.1**
JGF Kuroka 39.30 8 P **P** **02 58 49.0 +1.6**
JGF Kuroka 39.30 8 P **P** **02 58 47.0 -0.4**
JGF Kuroka 39.30 8 P **P** **02 58 47.6 +0.2**
ENH Enshi 39.41 330 P **P** **02 58 50.2 +1.7**
ENH Enshi 39.41 330 P **P** **02 58 47.6 -0.9**
ENH IAmb IAmb 02 58 50.8
comp=Z,46nm,1.1s
ENH Enshi 39.41 330 P **P** **02 58 48.9 +0.4**
KMI2 Kunming 39.59 317 ⇑P **P** **02 58 51.0 +0.7**
KMI2 S **S** **03 04 53.0 +0.1**
KMI2 pmax pmax
comp=Z,25nm,0.7s
KMI2 pmax pmax
comp=Z,190nm,4.1s
KMI2 L L
comp=Z,540nm,20.8s
KMI2 L L
comp=Z,910nm,23.0s
KMI2 L L
comp=Z,750nm,23.4s
TJN Taejon 39.79 355 P **P** **02 58 52.1 +0.6**
TJN Taejon 39.79 355 *ce*P **P** **02 58 51.4 -0.1**
TJN Taejon 39.79 355 **P** **02 58 50.8 -0.6**
MAJO Matsushiro 40.34 9 P **P** **02 58 57.7 +1.6**
MAJO Matsushiro 40.34 9 *de*P **P** **02 58 54.7 -1.4**
MAJO pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 40.34 9 P **P** **02 58 54.1 -2.1**
MAJO Matsushiro 40.34 9 P **P** **02 58 55.0 -1.2**
MJAR Matsushiro Arr 40.34 9 P **P** **02 58 54.6 -1.5**
comp=Z,6.3nm,0.7s,baz=186,slow=8.9,SNR=15
comp=Z,6.3nm,0.7s
MJAR Matsushiro Arr 40.34 9 P **P** **02 58 56.0 -0.1**
MJAR pmax pmax
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 40.34 9 P **P** **02 58 56.0 -0.1**
MJB9 Matsu-Tunnel 40.35 9 P **P** **02 58 55.0 -1.1**
KSAR Wonju Array Be 40.81 356 P **P** **02 59 00.3 +0.4**
KSAR Wonju Array Be 40.81 356 P **P** **02 59 00.3 +0.4**
KSRS Korea Array 40.82 356 P **P** **02 59 00.2 +0.2**
comp=Z,7.8nm,0.6s,baz=176,slow=9.9,SNR=31
KSRS LR LR 03 16 24.1
comp=Z,1µm,19.8s,baz=180,slow=37
comp=Z,7.8nm,0.6s
KS19 Wonju Array Si 40.87 356 P **P** **02 58 59.6 -0.8**
PZH PanZhiHua 41.17 318 P **P** **02 59 05.8 +2.6**
PZH S **S** **03 05 14.0 -2.2**
PZH SS **SS** **03 08 18.5 -0.9**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,260nm,10.2s
PZH L L
comp=Z,580nm,16.1s
PZH L L
comp=Z,680nm,14.7s
PZH L L
comp=Z,1µm,21.2s
NPW Naypyitaw 41.41 305 P **P** **02 59 05.1 0.0**
TIA Tai'an 41.58 343 P **P** **02 59 06.0 -0.3**
TIA S **S** **03 05 17.0 -4.9**
TIA pmax pmax
comp=Z,10.0nm,1.0s
TIA L L
comp=Z,670nm,21.9s
TIA L L
comp=Z,1µm,21.9s
TIA L L
comp=Z,1µm,24.7s
LYN LuoYang 41.69 337 P **P** **02 59 07.3 +0.1**
LYN pP pP 02 59 12.3 +0.2
LYN S S 03 05 17.0 -6.5
LYN sS sS 03 05 33.5 +1.9
LYN pmax pmax
comp=Z,30nm,0.7s
LYN pmax pmax
comp=Z,260nm,3.9s
LYN L L
comp=Z,1µm,20.6s
LYN L L
comp=Z,2µm,21.5s
LYN L L
comp=Z,2µm,22.1s
XAN Xi'an 42.78 332 P P 02 59 11.8 -4.4
XAN S S 03 05 33.5 -6.2
XAN pmax pmax
comp=Z,47nm,0.9s
XAN pmax pmax
comp=Z,390nm,11.2s
XAN L L
comp=Z,1µm,22.2s
XAN L L
comp=Z,1µm,16.6s
XAN L L
comp=Z,1µm,22.1s
CD2 Chengdu 43.01 325 P **P** **02 59 17.5 -0.6**
CD2 S **S** **03 05 39.3 -3.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,380nm,4.0s
CD2 L L
comp=Z,2µm,21.6s
CD2 L L
comp=Z,1µm,16.5s
CD2 L L
comp=Z,3µm,22.2s
DL2 Dalian 43.06 349 P **P** **02 59 19.3 +1.0**
DL2 S **S** **03 05 43.3 -0.2**
DL2 pmax pmax
comp=Z,73nm,0.8s
DL2 pmax pmax
comp=Z,210nm,4.8s
DL2 L L
comp=Z,1µm,20.3s
DL2 L L
comp=Z,2µm,22.0s
DL2 L L
comp=Z,3µm,24.0s
HNS HongShan 43.43 341 ⇓P **P** **02 59 21.5 +0.2**
HNS S **S** **03 05 46.0 -2.9**
HNS pmax pmax
comp=Z,12nm,0.8s
HNS L L
comp=Z,520nm,22.4s
HNS L L
comp=Z,930nm,21.6s
HNS L L
comp=Z,770nm,16.7s
MORE Moreh 45.17 310 P **P** **02 59 33.9 -1.6**
MORE IAmb IAmb 02 59 36.9
comp=Z,32nm,0.9s
BJI2 Beijing 45.40 344 P **P** **02 59 37.5 +0.5**
BJI2 S **S** **03 06 21.0 +3.4**
BJI2 pmax pmax
comp=Z,12nm,1.0s
BJI2 pmax pmax
comp=Z,130nm,8.0s
BJI2 L L
comp=Z,190nm,24.8s
BJI2 L L
comp=Z,370nm,24.9s
BJI2 L L
comp=Z,460nm,22.6s
BJT Baijiatuau 45.40 344 P **P** **02 59 38.2 +1.2**
BJT Baijiatuau 45.40 344 P **P** **02 59 37.1 +0.1**
BJT pmax pmax
comp=Z,26nm,1.0s
BJT Baijiatuau 45.40 344 P **P** **02 59 37.1 +0.1**
BJT IAmb IAmb 02 59 38.2
comp=Z,26nm,1.0s
BJT Baijiatuau 45.40 344 P **P** **02 59 37.5 +0.5**
BRDH Bariadhala 46.48 306 LR LR 03 23 29.1
comp=Z,512nm,18.7s,baz=163,slow=42
LZDM Lanzhou Array 46.86 329 P **P** **02 59 49.0 0.0**
comp=Z,14nm,0.8s,baz=158,slow=12,SNR=7.5
comp=Z,14nm,0.8s

LZH	**Lanzhou**	**46.89**	**329**	*e*P		**P**		**02 59 50.0**	**+0.9**
LZH				pP		sP		02 59 55.5	-0.4
LZH				S		**S**		**03 06 37.8**	**-1.7**
LZH				pmax		pmax			
	comp=Z,38nm,1.3s								
LZH				pmax		pmax			
	comp=Z,340nm,4.8s								
LZH				L		L			
	comp=Z,1μm,14.1s								
LZH				L		L			
	comp=Z,1μm,14.1s								
LZH				L		L			
	comp=Z,940nm,13.4s								
CN2	**Changchun**	**47.33**	**354**	P		**P**		**02 59 51.5**	**-0.6**
CN2				S		**S**		**03 06 44.3**	**-0.8**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				L		L			
	comp=Z,900nm,18.0s								
CN2				L		L			
	comp=Z,900nm,18.0s								
CN2				L		L			
	comp=Z,1μm,18.0s								
USA0B	**Ussuriysk Arra**	**47.45**	**1***c i*	P		**P**		**02 59 53.2**	**+0.1**
USA0B	**Ussuriysk Arra**	**47.45**	**1**	P		**P**		**02 59 52.7**	**-0.3**
USRK	**Ussuriysk Ar.**	**47.45**	**1**	P		**P**		**02 59 53.5**	**+0.4**
	comp=Z,7.3nm,0.6s,baz=178,slow=7.0,SNR=20								
USRK				LR		LR		03 19 35.3	
	comp=Z,670nm,20.7s,baz=174,slow=36								
	comp=Z,7.3nm,0.6s								
USRK	**Ussuriysk Ar.**	**47.45**	**1**			**P**		**02 59 52.8**	**-0.2**
HHC	**Hu-ho-hao-te**	**47.59**	**340**	*e*P		**P**		**02 59 55.5**	**+1.1**
HHC				S		**S**		**03 06 45.3**	**-3.9**
HHC				pmax		pmax			
	comp=Z,18nm,0.6s								
HHC				pmax		pmax			
	comp=Z,98nm,4.8s								
HHC				L		L			
	comp=Z,510nm,13.5s								
HHC				L		L			
	comp=Z,840nm,24.4s								
HHC				L		L			
	comp=Z,1μm,24.4s								
SHL	**Shillong**	**47.74**	**309**	P		**P**		**02 59 55.3**	**-0.6**
SHL				pmax		pmax			
	comp=Z,53nm,0.8s								
SHL	**Shillong**	**47.74**	**309**	P		**P**		**02 59 56.0**	**+0.1**
	SNR=10								
SHL	**Shillong**	**47.74**	**309**	P		**P**		**02 59 55.3**	**-0.6**
SHL	**Shillong**	**47.74**	**309**	*e*P		**P**		**02 59 55.4**	**-0.6**
SHL				IAmb		IAmb		02 59 57.3	
	comp=Z,48nm,1.0s								
MDJ	**Mudanjiang**	**47.88**	**359**	P		**P**		**02 59 58.0**	**+1.6**
MDJ	**Mudanjiang**	**47.88**	**359**	P		**P**		**02 59 55.8**	**-0.6**
MDJ				IAmb		IAmb		02 59 59.6	
	comp=Z,17nm,0.6s								
MDJ	**Mudanjiang**	**47.88**	**359**	P		**P**		**02 59 56.5**	**+0.1**
MDJ				S		**S**		**03 06 55.5**	**+2.5**
MDJ				pmax		pmax			
	comp=Z,17nm,0.9s								
MDJ				L		L			
	comp=Z,510nm,22.1s								
MDJ				L		L			
	comp=Z,550nm,17.6s								
MDJ				L		L			
	comp=Z,910nm,23.5s								
MDJ	**Mudanjiang**	**47.88**	**359**	P		**P**		**02 59 57.2**	**+0.7**
MSVF	**Nonsavu**	**48.09**	**111**	LR		LR		03 21 04.7	
	comp=Z,867nm,19.4s,baz=312,slow=37								
ASAJ	**Asahikawa**	**48.47**	**11**	LR		LR		03 20 32.2	
	comp=Z,516nm,19.6s,baz=194,slow=36								
XLT	**XiLinHaoTe**	**49.05**	**346**	*e*P		**P**		**03 00 06.3**	**+0.7**
XLT				S		**S**		**03 07 07.5**	**-2.2**
XLT				pmax		pmax			
	comp=Z,13nm,0.8s								
XLT				pmax		pmax			
	comp=Z,270nm,7.8s								
XLT				L		L			
	comp=Z,810nm,18.5s								
XLT				L		L			
	comp=Z,930nm,23.6s								
BNX	**BinXian**	**49.10**	**357**	⇓P		**P**		**03 00 05.5**	**-0.3**
BNX				pP		**pP**		**03 00 08.8**	**-1.9**
BNX				sP		**sP**		**03 00 10.3**	**-2.3**
BNX				PP		**PP**		**03 02 04.0**	**+4.4**
BNX				S		**S**		**03 07 11.8**	**+1.7**
BNX				sS		**sS**		**03 07 17.5**	**-0.8**
BNX				SS		**SS**		**03 10 42.8**	**+1.2**
BNX				pmax		pmax			
	comp=Z,16nm,0.8s								
BNX				pmax		pmax			
	comp=Z,230nm,7.9s								
BNX				L		L			
	comp=Z,1μm,20.1s								
BNX				L		L			
	comp=Z,520nm,23.1s								
BNX				L		L			
	comp=Z,2μm,19.5s								
BWNR	**Bhubaneshwar**	**50.32**	**300**	*e*P		**P**		**03 00 15.9**	**+0.4**
LSA	**Lhasa**	**50.51**	**314**	*i* P		**P**		**03 00 19.0**	**+1.6**
	SNR=7.7								
LSA	**Lhasa**	**50.51**	**314**	P		**P**		**03 00 16.6**	**-0.8**
LSA				pmax		pmax			
	comp=Z,25nm,0.9s								
LSA	**Lhasa**	**50.51**	**314**	P		**P**		**03 00 16.6**	**-0.8**
LSA				IAmb		IAmb		03 00 38.8	
	comp=Z,25nm,0.9s								
LSA	**Lhasa**	**50.51**	**314**	⇑*i* P		**P**		**03 00 15.0**	**-2.4**
LSA				pmax		pmax			
	comp=Z,23nm,0.8s								
LSA	**Lhasa**	**50.51**	**314**	P		**P**		**03 00 17.1**	**-0.3**
SHBG	**Sahibganj**	**50.92**	**307**	*e*P		**P**		**03 00 21.1**	**+1.2**
YSS	**Yuzhno-Sakhali**	**51.24**	**10**	*e*P		**P**		**03 00 21.7**	**-0.3**
YSS				eS		**S**		**03 07 36.2**	**-3.7**
YSS				*e*SS		SS		03 11 04.6	-11
YSS				pmax		pmax			
	comp=Z,20nm,0.6s								
PALK	**Pallekele**	**51.44**	**282**	P		**P**		**03 00 25.2**	**+1.1**
	comp=Z,14nm,0.9s,baz=96,slow=2.9,SNR=3.5								
PALK				LR		LR		03 24 13.8	
	comp=Z,664nm,18.8s,baz=104,slow=38								
	comp=Z,14nm,0.9s								
PALK	**Pallekele**	**51.44**	**282**	P		**P**		**03 00 23.3**	**-0.8**
GTA2	**Gaotai**	**51.57**	**329**	P		**P**		**03 00 25.3**	**+0.5**
GTA2				sP		sP		03 00 37.0	+5.3
GTA2				S		**S**		**03 07 44.0**	**-1.1**
GTA2				pmax		pmax			
	comp=Z,25nm,0.9s								
GTA2				L		L			
	comp=Z,1μm,24.8s								
GTA2				L		L			
	comp=Z,760nm,22.2s								
GTA2				L		L			
	comp=Z,660nm,21.9s								
BOK	**Bokaro**	**51.70**	**304**	*e*P		**P**		**03 00 27.1**	**+1.2**
BOK				IAML				03 00 28.1	
	comp=Z,11nm,0.8s								
MALK	**Mahakanadarawa**	**51.80**	**283**	P		**P**		**03 00 26.4**	**-0.4**
RAGD	**RAYAGADA**	**52.02**	**298**	*e*P		**P**		**03 00 28.8**	**+0.5**
RAGD				IAmb		IAmb		03 00 30.1	
	comp=Z,46nm,0.8s								
JCZ	**Jackson Bay**	**52.33**	**146**	P		**P**		**03 00 30.7**	**+0.4**
EVN	**Everest**	**52.85**	**309**			**P**		**03 00 34.1**	**-1.1**
EVN				IAmb		IAmb		03 00 36.8	
	comp=Z,37nm,0.8s								
EVN	**Everest**	**52.85**	**309**	P		**P**		**03 00 34.0**	**-1.1**
WHZ	**Wether Hill Ro**	**53.06**	**148**	P		**P**		**03 00 35.0**	**-0.6**
MDRS	**Chennai**	**53.11**	**289**	*e*P		**P**		**03 00 36.6**	**+0.2**
RPZ	**Rata Peaks**	**53.39**	**145**	LR		LR		03 24 42.5	
	comp=Z,298nm,19.8s,baz=298,slow=38								
HEH	**HeiHe**	**53.60**	**357**	*e*P		**P**		**03 00 39.8**	**+0.4**
HEH				sP		**sP**		**03 00 46.0**	**-0.4**
HEH				S		**S**		**03 08 09.3**	**-2.8**
HEH				pmax		pmax			
	comp=Z,26nm,1.2s								
HEH				L		L			
	comp=Z,480nm,21.0s								
HEH				L		L			
	comp=Z,580nm,22.0s								
HEH				L		L			
	comp=Z,1μm,21.4s								
HILR	**Hailar Array B**	**53.72**	**351**	P		**P**		**03 00 41.5**	**+1.1**
	comp=Z,15nm,0.8s,baz=152,slow=9.9,SNR=10								
HILR				LR		LR		03 23 05.2	
	comp=Z,739nm,21.9s,baz=125,slow=36								
	comp=Z,15nm,0.8s								
BLSP	**Bilaspur**	**54.16**	**300**	*e*P		**P**		**03 00 44.0**	**-0.1**
BLSP				IAmb		IAmb		03 00 45.4	
	comp=Z,45nm,0.9s								
URZ	**Urewera**	**54.34**	**136**	LR		LR		03 25 13.9	
	comp=Z,1μm,18.7s,baz=308,slow=38								
BKZ	**Black Stump Fm**	**54.34**	**137**	P		**P**		**03 00 46.5**	**+1.3**
TYV	**Tymovskoe**	**55.01**	**9**	*e*P		**P**		**03 00 50.9**	**+1.2**
TYV				*e*S		**S**		**03 08 33.6**	**+2.4**
TYV				pmax		pmax			
	comp=Z,300nm,4.1s								
TYV				pmax		pmax			
	comp=Z,14nm,1.2s								
TYV				smax		smax			
	comp=N,300nm,7.0s								
TYV				smax		smax			
	comp=E,400nm,7.0s								
KOD	**Kodaikanal**	**55.13**	**285**	*e*P		**P**		**03 00 51.1**	**-0.6**
KOD				IAmb		IAmb		03 00 53.9	
	comp=Z,61nm,1.1s								
ULN	**Ulaanbaatar**	**55.30**	**340***c i*	P		**P**		**03 00 52.6**	**+0.5**
ULN				pmax		pmax			
	comp=Z,24nm,1.0s								
ULN	**Ulaanbaatar**	**55.30**	**340**	P		**P**		**03 00 52.6**	**+0.5**
ULN				IAmb		IAmb		03 01 05.1	
	comp=Z,32nm,1.1s								
ULN	**Ulaanbaatar**	**55.30**	**340**	P		**P**		**03 00 52.9**	**+0.8**
ULN	**Ulaanbaatar**	**55.30**	**340**	P		**P**		**03 00 52.3**	**+0.2**
SONM	**Songino Array**	**55.49**	**340**	P		**P**		**03 00 54.3**	**+0.9**
	comp=Z,13nm,1.0s,baz=157,slow=7.9,SNR=35								
SONM				LR		LR		03 27 12.7	
	comp=Z,455nm,22.0s,baz=158,slow=39								
	comp=Z,13nm,1.0s								
SONM	**Songino Array**	**55.49**	**340**	P		**P**		**03 00 53.8**	**+0.4**
SONM				IAmb		IAmb		03 01 08.9	
	comp=Z,19nm,1.2s								
ALBI	**Allahabad**	**55.70**	**304**	*e*P		**P**		**03 00 54.4**	**-0.8**
ALBI				IAmb		IAmb		03 00 55.3	
	comp=Z,32nm,0.8s								
HYB	**Hyderabad**	**55.85**	**294**	*e*P		**P**		**03 00 55.8**	**-0.6**
HYB				*e*S		**S**		**03 08 44.3**	**+0.7**
NGP	**Nagpur**	**56.56**	**298**	*e*P		**P**		**03 01 00.6**	**-0.8**
NGP				IAmb		IAmb		03 01 03.1	
	comp=Z,27nm,1.0s								
ZEA	**Zeya**	**57.09**	**357**	*e*P		**P**		**03 01 04.9**	**+0.4**
ZEA				pmax		pmax			
	comp=Z,20nm,0.6s								
AKL	**Akola**	**58.21**	**297**	*e*P		**P**		**03 01 12.6**	**-0.5**
AKL				IAmb		IAmb		03 01 13.8	
	comp=Z,26nm,1.0s								
JHNI	**Jhansi**	**58.43**	**303**	*e*P		**P**		**03 01 13.7**	**-0.9**
BHPL	**Bhopal**	**58.67**	**300**	*e*P		**P**		**03 01 15.7**	**-0.5**
BHPL				IAML				03 01 16.7	
	comp=Z,12nm,1.5s								
GUNA	**GUNA**	**59.23**	**301**	*e*P		**P**		**03 01 19.5**	**-0.6**
JOSI	**Joshimath**	**59.68**	**308**	*e*P		**P**		**03 01 24.0**	**+0.7**
TLY	**Talaya**	**59.71**	**341**	LR		LR		03 32 16.0	
	comp=Z,206nm,18.1s,baz=139,slow=41								
TLY	**Talaya**	**59.71**	**341***ce*	P		**P**		**03 01 23.6**	**+0.7**
TLY				pmax		pmax			
	comp=Z,8.0nm,0.9s								
TLY	**Talaya**	**59.71**	**341**			**P**		**03 01 21.9**	**-1.1**
TLY				IAmb		IAmb		03 02 50.7	
	comp=Z,10nm,0.8s								
TLY	**Talaya**	**59.71**	**341**	P		**P**		**03 01 22.0**	**-0.9**
IRK	**Irkutsk**	**59.98**	**341**	*e*P		**P**		**03 01 23.6**	**-1.2**
IRK				pmax		pmax			
	comp=Z,53nm,2.2s								
MOY	**Mondy**	**60.61**	**339**	*e*P		**P**		**03 01 30.3**	**+1.1**
MOY				pmax		pmax			
	comp=Z,42nm,1.6s								
PEA0B	**Petropavlovsk-**	**60.64**	**18***ce*	P		**P**		**03 01 29.1**	**-0.1**
PETK	**Petropavlovsk-**	**60.64**	**18**	P		**P**		**03 01 30.4**	**+1.2**
	comp=Z,8.2nm,0.8s,baz=215,slow=4.9,SNR=10								
PETK				LR		LR		03 23 15.3	
	comp=Z,712nm,21.9s,baz=203,slow=32								
	comp=Z,8.2nm,0.8s								
PETK	**Petropavlovsk-**	**60.64**	**18**	P		**P**		**03 01 28.1**	**-1.1**
SONA	**Sohna**	**60.75**	**305**	*e*P		**P**		**03 01 29.6**	**-0.8**
AYAN	**Aya Nagar**	**60.79**	**305**	*e*P		**P**		**03 01 29.8**	**-1.0**
NDI	**New Delhi**	**60.79**	**306**	*e*P		**P**		**03 01 29.8**	**-0.9**
HNLY	**HANLEY**	**61.08**	**311**	*e*P		**P**		**03 01 33.5**	**+0.2**
HNLY				IAmb		IAmb		03 01 35.9	
	comp=Z,15nm,1.0s								
WMQ	**Urumqi**	**61.10**	**325**	⇑P		**P**		**03 01 33.0**	**+0.4**
WMQ				sP		sP		03 01 43.5	+3.9
WMQ				PcP		**PcP**		**03 02 17.0**	**+1.4**
WMQ				S		**S**		**03 09 49.8**	**-1.5**
WMQ				ScS		**SKKSac**		**03 11 16.3**	**-7.1**
WMQ				pmax		pmax			
	comp=Z,32nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,240nm,3.8s								
WMQ				L		L			
	comp=Z,1μm,22.1s								
WMQ				L		L			
	comp=Z,490nm,23.5s								
WMQ				L		L			
	comp=Z,1μm,24.2s								
KUDL	**Kundal**	**61.18**	**305**	*e*P		**P**		**03 01 32.3**	**-1.1**
SMLA	**Simla**	**61.78**	**308**	*e*P		**P**		**03 01 37.5**	**+0.1**
SMLA				IAML				03 01 51.9	
	comp=Z,32nm,0.0s								
AJM	**Ajmer**	**62.13**	**302**	*e*P		**P**		**03 01 39.1**	**-0.8**
AJM				IAmb		IAmb		03 01 41.2	
	comp=Z,23nm,1.0s								
UDPR	**Udaipur**	**62.31**	**300**	*e*P		**P**		**03 01 41.1**	**-0.1**
THN	**Thein Dam**	**63.41**	**309**	*e*P		**P**		**03 01 48.4**	**0.0**
CASY	**Casey**	**64.35**	**189**	P		**P**		**03 01 52.8**	**-1.0**
CASY				IAmb		IAmb		03 02 07.3	
	comp=Z,12nm,1.1s								
CASY	**Casey**	**64.35**	**189**	P		**P**		**03 01 53.6**	**-0.2**
WUS	**Wushi**	**64.83**	**319**	P		**P**		**03 01 56.9**	**-0.7**
WUS				IAmb		IAmb		03 02 13.6	
	comp=Z,10nm,0.6s								
WUS	**Wushi**	**64.83**	**319**	P		**P**		**03 01 58.5**	**+0.9**
ZSN	**Zaisan**	**64.89**	**327**	*e*P		**P**		**03 01 58.4**	**+0.7**
ZSN	**Zaisan**	**64.89**	**327**	*e*P		**P**		**03 01 58.4**	**+0.7**
DGZ	**Jazzator, Alta**	**64.98**	**330***ce*	P		**P**		**03 01 58.9**	**+0.5**
DGZ				pmax		pmax			
	comp=Z,16nm,1.0s								
YAK	**Yakutsk**	**65.32**	**359**	LR		LR		03 31 18.6	
	comp=Z,204nm,19.9s,baz=172,slow=37								
YAK	**Yakutsk**	**65.32**	**359**	*e*P		**P**		**03 02 00.2**	**+0.1**
YAK				*e**PP		**sP**		**03 02 08.0**	**+0.8**
YAK				*e*				03 02 31.9	
YAK				*e*				03 04 23.6	
YAK				*e*PPP		PPP		03 05 55.5	
YAK				*e*S		**S**		**03 10 42.4**	**-0.7**
YAK				*e**SS		sS		03 10 59.9	+8.4
YAK				*e*				03 11 52.6	
YAK				*e*SS		**SS**		**03 14 54.8**	**-1.7**
YAK				pmax		pmax			
	comp=Z,66nm,0.9s								
YAK				pmax		pmax			
	comp=N,9.0nm,0.9s								
YAK				pmax		pmax			
	comp=E,6.0nm,0.9s								
YAK				pmax		pmax			
	comp=Z,139nm,4.3s								
YAK				pmax		pmax			
	comp=N,112nm,5.9s								
YAK				pmax		pmax			
	comp=E,39nm,3.0s								
YAK				smax		smax			
	comp=E,84nm,2.5s								
YAK				smax		smax			
	comp=N,401nm,5.6s								
YAK				MLR		MLR			
	comp=E,449nm,27.0s								
YAK	**Yakutsk**	**65.32**	**359**	P		**P**		**03 02 00.2**	**+0.1**
YAK	**Yakutsk**	**65.32**	**359**	P		**P**		**03 02 00.8**	**+0.7**
SHLS	**Shalkode**	**65.66**	**321**	*e*P		**P**		**03 02 01.7**	**-1.2**
SHLS				pmax		pmax			
	comp=Z,12nm,0.9s								
SHLS	**Shalkode**	**65.66**	**321**	*e*P		**P**		**03 02 01.7**	**-1.2**
	comp=Z,12nm,0.9s								
PDGK	**Podgornoye**	**65.73**	**321**	P		**P**		**03 02 02.9**	**-0.5**
PDGK	**Podgornoye**	**65.73**	**321**			**P**		**03 02 02.9**	**-0.5**
NIL	**Nilore**	**65.81**	**309**	P		**P**		**03 02 03.6**	**-0.4**
NIL				pmax		pmax			
	comp=Z,16nm,1.0s								
NIL	**Nilore**	**65.81**	**309**	P		**P**		**03 02 03.6**	**-0.4**
NIL				IAmb		IAmb		03 02 12.7	
	comp=Z,16nm,1.0s								
NIL	**Nilore**	**65.81**	**309**	P		**P**		**03 02 03.9**	**-0.1**
UZB	**Uzynbulak**	**65.93**	**321***c i*	P		**P**		**03 02 05.1**	**+0.4**
UZB				*e*S		**S**		**03 10 53.6**	**+1.9**
UZB				pmax		pmax			
	comp=Z,11nm,0.9s								
UZB	**Uzynbulak**	**65.93**	**321**⇑ *i* P			**P**		**03 02 05.2**	**+0.4**
	comp=Z,11nm,0.9s								
UZB				*e*S		**S**		**03 10 53.6**	**+1.9**
MK31	**Makanchi Array**	**65.93**	**325***c i*	P		**P**		**03 02 04.8**	**+0.3**
MK31				pmax		pmax			
	comp=Z,19nm,0.8s								
MK31	**Makanchi Array**	**65.93**	**325**	P		**P**		**03 02 04.6**	**+0.1**
MK31				IAmb		IAmb		03 02 06.9	
	comp=Z,22nm,0.9s								
MKAR	**Makanchi Array**	**65.93**	**325**	P		**P**		**03 02 05.0**	**+0.5**
	comp=Z,32nm,0.8s,baz=124,slow=7.6,SNR=137								
MKAR				LR		LR		03 33 34.8	
	comp=Z,441nm,20.7s,baz=110,slow=38								
	comp=Z,32nm,0.8s								
MKAR	**Makanchi Array**	**65.93**	**325**	P		**P**		**03 02 05.0**	**+0.5**
MKAR	**Makanchi Array**	**65.93**	**325**	P		**P**		**03 02 04.8**	**+0.3**
PRZ	**Przheval'sk**	**66.00**	**320**	P		**P**		**03 02 05.2**	**0.0**
PRZ				pmax		pmax			
	comp=Z,30nm,0.8s								
PRZ	**Przheval'sk**	**66.00**	**320**	P		**P**		**03 02 05.2**	**0.0**
PRZ	**Przheval'sk**	**66.00**	**320**	P		**P**		**03 02 05.4**	**+0.2**
TARG	**Taragay, Kyrgy**	**66.01**	**319**	P		**P**		**03 02 05.6**	**0.0**
TARG				pmax		pmax			
	comp=Z,14nm,0.8s								
TARG	**Taragay, Kyrgy**	**66.01**	**319**			**P**		**03 02 05.6**	**0.0**
TARG				IAmb		IAmb		03 02 34.8	
	comp=Z,14nm,0.8s								
TARG	**Taragay, Kyrgy**	**66.01**	**319**	P		**P**		**03 02 05.6**	**0.0**
MAKZ	**Makanchi**	**66.12**	**325**	P		**P**		**03 02 06.0**	**+0.3**
MAKZ				pmax		pmax			
	comp=Z,28nm,0.9s								
MAKZ	**Makanchi**	**66.12**	**325**	P		**P**		**03 02 06.0**	**+0.3**
MAKZ	**Makanchi**	**66.12**	**325**	P		**P**		**03 02 06.3**	**+0.6**
SATY	**Saty**	**66.28**	**320***c i*	P		**P**		**03 02 07.4**	**+0.5**
SATY				*e*S		**S**		**03 10 57.8**	**+2.0**
SATY				pmax		pmax			
	comp=Z,10.0nm,0.8s								
SATY	**Saty**	**66.28**	**320**⇑ *i* P			**P**		**03 02 07.5**	**+0.5**
	comp=Z,10nm,0.8s								
SATY				*e*S		**S**		**03 10 57.9**	**+2.0**
KPKS	**Kokpek**	**66.30**	**321**	*e*P		**P**		**03 02 07.6**	**+0.6**
KPKS				*e*S		**S**		**03 10 58.1**	**+2.0**
KPKS	**Kokpek**	**66.30**	**321**	*e*P		**P**		**03 02 07.6**	**+0.6**
KPKS				*e*S		**S**		**03 10 58.2**	**+2.0**
KSH2	**Kashi**	**66.34**	**316**	P		**P**		**03 02 08.0**	**+0.5**
KSH2				pP		sP		03 02 14.0	-0.5
KSH2				sP		pP		03 02 20.3	+7.7
KSH2				PcP		**PcP**		**03 02 38.5**	**+1.2**
KSH2				pmax		pmax			
	comp=Z,16nm,0.9s								
KSH2				L		L			
	comp=Z,440nm,14.4s								
KSH2				L		L			
	comp=Z,550nm,22.7s								
KSH2				L		L			
	comp=Z,720nm,24.7s								
ASAI	**AK-SAY(Kyrgyzs**	**66.48**	**318**	P		**P**		**03 02 09.4**	**+0.8**
KDJ	**Kajisay**	**66.61**	**319**	P		**P**		**03 02 10.2**	**+1.0**
SHEM	**Shemya Is, Ala**	**66.64**	**27**	LR		LR		03 29 48.3	
	comp=Z,271nm,18.7s,baz=275,slow=35								
NRN	**Naryn**	**67.07**	**318**	IAmb		IAmb		03 02 14.5	
	comp=Z,20nm,0.9s								
MDOK	**Medeo**	**67.19**	**320**	*e*P		**P**		**03 02 13.3**	**+0.5**
MDOK				*e*S		**S**		**03 11 09.0**	**+2.0**
MDOK	**Medeo**	**67.19**	**320**	*e*P		**P**		**03 02 13.3**	**+0.5**
MDOK				*e*S		**S**		**03 11 09.0**	**+2.0**
TNSS	**Tian-Shan**	**67.20**	**320**	*e*P		**P**		**03 02 13.3**	**+0.2**
TNSS	**Tian-Shan**	**67.20**	**320**	*e*P		**P**		**03 02 13.4**	**+0.2**
TDK	**Taldyqorghan**	**67.25**	**322**	*e*P		**P**		**03 02 13.7**	**+0.8**
TDK				pmax		pmax			
	comp=Z,16nm,0.8s								
TDK	**Taldyqorghan**	**67.25**	**322**	*e*P		**P**		**03 02 13.8**	**+0.8**
	comp=Z,16nm,0.8s								
AAA	**Alma-Ata**	**67.30**	**320**	*e*P		**P**		**03 02 13.9**	**+0.5**
AAA	**Alma-Ata**	**67.30**	**320**	*e*P		**P**		**03 02 13.9**	**+0.5**
BOOM	**Boomskoye usch**	**67.60**	**319**	P		**P**		**03 02 15.8**	**+0.4**
BOOM				pmax		pmax			
	comp=Z,18nm,1.0s								
BOOM	**Boomskoye usch**	**67.60**	**319**	P		**P**		**03 02 15.8**	**+0.4**
BOOM				IAmb		IAmb		03 02 18.1	
	comp=Z,18nm,1.0s								
BOOM	**Boomskoye usch**	**67.60**	**319**	P		**P**		**03 02 14.9**	**-0.5**
KUU	**Kurty**	**68.00**	**320**	*e*P		**P**		**03 02 18.1**	**+0.4**
KUU				pmax		pmax			
	comp=Z,13nm,0.8s								
KUU	**Kurty**	**68.00**	**320**	*e*P		**P**		**03 02 18.2**	**+0.4**
	comp=Z,13nm,0.8s								
TKM2	**Tokmak 2**	**68.02**	**319**	P		**P**		**03 02 18.5**	**+0.4**
	SNR=29								
SEY	**Seymchan**	**68.15**	**10**	LR		LR		03 30 19.4	
	comp=Z,538nm,21.5s,baz=163,slow=34								
SEY	**Seymchan**	**68.15**	**10***de*	P		**P**		**03 02 19.6**	**+1.4**
SEY				pmax		pmax			
	comp=Z,17nm,0.9s								
UCH	**Uchtor**	**68.42**	**318**	P		**P**		**03 02 22.6**	**+1.7**
	SNR=5.8								
MANEM	**Manem**	**68.47**	**313**	P		**P**		**03 02 20.8**	**-0.3**
MANEM				IAmb		IAmb		03 02 43.4	
	comp=Z,24nm,0.8s								
AAK	**Ala-Archa**	**68.61**	**319**	LR		LR		03 37 11.3	
	comp=Z,266nm,19.3s,baz=95,slow=40								
AAK	**Ala-Archa**	**68.61**	**319**	P		**P**		**03 02 22.8**	**+1.0**
	SNR=7.0								
AAK	**Ala-Archa**	**68.61**	**319**	*i* P		**P**		**03 02 22.7**	**+0.9**
	SNR=6.6								
AAK	**Ala-Archa**	**68.61**	**319***c i*	P		**P**		**03 02 22.7**	**+0.9**
AAK				pmax		pmax			
	comp=Z,12nm,1.0s								
AAK	**Ala-

comp=Z,25nm,1.0s
IUG Iuzhnay 71.42 317 *e*P **P 03 02 39.3 +0.4**
IUG pmax pmax
comp=Z,15nm,0.7s
IUG Iuzhnay 71.42 317 *e*P **P 03 02 39.3 +0.4**
comp=Z,15nm,0.7s
KK31 Karatay Array 71.47 318 IAmb IAmb 03 02 41.5
comp=Z,16nm,0.9s
KKAR Karatay Array 71.47 318 P **P 03 02 39.3 +0.2**
KKAR Karatay Array 71.47 318 P **P 03 02 39.2 +0.2**
CHM Chimkent 71.78 317 *e*P **P 03 02 41.5 +0.6**
CHM pmax pmax
comp=Z,14nm,0.7s
CHM Chimkent 71.78 317 *e*P **P 03 02 41.6 +0.6**
comp=Z,14nm,0.7s
BRLS Borolday 71.89 317 *c i*P **P 03 02 42.2 +0.5**
BRLS pmax pmax
comp=Z,13nm,1.0s
BRLS Borolday 71.89 317⇑ *i*P **P 03 02 42.2 +0.5**
comp=Z,13nm,1.0s
JLN Jalan Bani Buh 74.46 294 P **P 03 02 57.8 +0.6**
WBK Wadi Bani Khal 74.95 294 P **P 03 03 01.1 +1.0**
TIXI Tiksi 74.99 359 LR LR 03 35 24.1
comp=Z,979nm,21.9s,baz=194,slow=35
TIXI Tiksi 74.99 359 *de*P **P 03 02 59.6 +0.3**
TIXI pmax pmax
comp=Z,14nm,0.7s
TIXI Tiksi 74.99 359 P **P 03 02 59.0 -0.2**
TIXI IAmb IAmb 03 03 00.2
comp=Z,16nm,0.8s
RER Riviere de l'E 75.12 249 P **P 03 03 01.6 +0.3**
RER Riviere de l'E 75.12 249 P **P 03 03 00.8 -0.4**
WSAR Wadi Sarin 75.37 295 P **P 03 03 03.8 +1.3**
BILL Bilibino 75.44 13⇓ *e*P **P 03 03 01.9 -0.1**
BILL pmax pmax
comp=Z,4.0nm,0.9s
MHTO MHTO 75.59 293 P **P 03 03 03.9 +0.2**
JMDO Jabal Madar 75.69 294 P **P 03 03 05.6 +1.2**
BVAR Borovoye Array 75.70 327 P **P 03 03 04.2 +0.4**
comp=Z,51nm,0.8s,baz=120,slow=5.8,SNR=126
comp=Z,51nm,0.8s
VNDA Vanda 75.80 173 P **P 03 03 04.0 +0.1**
comp=Z,6.7nm,0.8s,baz=314,slow=6.4,SNR=35
comp=Z,6.7nm,0.8s
VNDA Vanda 75.80 173 P **P 03 03 03.7 -0.2**
SMDO Samad 75.86 295 P **P 03 03 06.2 +0.8**
BIDO Bidbid 75.87 295 P **P 03 03 06.3 +0.9**
SPIA Saint Paul Isl 76.55 29 P **P 03 03 09.6 +1.2**
baz=241
BSY Bisya 76.58 294 P **P 03 03 10.1 +0.7**
HOQ Hoqain 76.62 295 P **P 03 03 10.6 +0.9**
SBA Scott Base 76.67 173 P **P 03 03 09.6 +0.7**
SBA pmax pmax
comp=Z,10.0nm,1.0s
SBA Scott Base 76.67 173 P **P 03 03 09.6 +0.7**
UNV Unalaska Valle 76.94 33 P **P 03 03 11.9 +1.1**
baz=245
ARQ Araqi 77.29 295 P **P 03 03 14.5 +1.0**
SHAO Shalim 77.33 289 P **P 03 03 14.3 +0.6**
SOHO SOHO 77.41 296 *i* P **P 03 03 14.3 +0.3**
SNR=21
SOHO SOHO 77.41 296 P **P 03 03 14.6 +0.6**
MDH Madha 77.82 297 P **P 03 03 16.1 -0.2**
UOSS Minazif 77.84 296 *i* P **P 03 03 16.6 +0.1**
SNR=7.1
UOSS Minazif 77.84 296 P **P 03 03 17.1 +0.6**
UOSS Minazif 77.84 296 P **P 03 03 15.8 -0.6**
UOSS IAmb IAmb 03 03 28.6
comp=Z,15nm,0.7s
UOSS Minazif 77.84 296 P **P 03 03 16.8 +0.3**
HATD Hatta, Dubai 77.89 296 *i* P **P 03 03 17.4 +0.6**
SNR=12
HATD Hatta, Dubai 77.89 296 P **P 03 03 17.7 +1.0**
SNR=5.1
BANOM Banah 77.92 297 P **P 03 03 18.0 +1.0**
BANOM Banah 77.92 297 P **P 03 03 18.4 +1.5**
DMTO DMTO 77.93 289 P **P 03 03 17.6 +0.5**
ASHO Ashiyiah 77.93 296 P **P 03 03 18.1 +1.1**
MSFE Esma-Masafi 77.95 297 *i* P **P 03 03 17.7 +0.6**
SNR=26
MASF Masafi 77.95 297 P **P 03 03 19.4 +2.3**
SNR=8.7
SHME Shamm 78.09 297 *i* P **P 03 03 18.7 +1.0**
SNR=13
SHME Shamm 78.09 297 P **P 03 03 19.0 +1.2**
ALNE Al Ain 78.11 295 *i* P **P 03 03 18.5 +0.6**
SNR=14
ALNE Al Ain 78.11 295 P **P 03 03 18.9 +1.0**
SNR=7.5
NAZ Nazwa, Dubai 78.34 296 *i* P **P 03 03 19.6 +0.4**
SNR=10
NAZ Nazwa, Dubai 78.34 296 P **P 03 03 20.0 +0.8**
FAQ Al Faqa, Dubai 78.36 296 *i* P **P 03 03 20.7 +1.4**
SNR=8.0
FAQ Al Faqa, Dubai 78.36 296 P **P 03 03 21.0 +1.6**
SNR=5.1
NRIK Noril'sk 78.43 346 P **P 03 03 17.9 -0.9**
comp=Z,18nm,0.9s,baz=129,slow=6.3,SNR=18
NRIK LR LR 03 38 51.4
comp=Z,983nm,21.2s,baz=144,slow=36
comp=Z,18nm,0.9s
NRIK Noril'sk 78.43 346 *c i*P **P 03 03 19.0 +0.2**
NRIK pmax pmax
comp=Z,18nm,0.9s
NRIK Noril'sk 78.43 346 IAmb IAmb 03 03 31.3
comp=Z,25nm,1.1s
UMZA Um Al Zommool 78.43 294 P **P 03 03 20.2 +0.5**
ASUD Al Ashush, Dub 78.58 296 *i* P **P 03 03 21.3 +0.8**
SNR=12
ASUD Al Ashush, Dub 78.58 296 P **P 03 03 21.8 +1.2**
RBK Rabkut 78.60 289 P **P 03 03 21.7 +0.8**
MAW Mawson 78.63 201 P **P 03 03 19.9 0.0**
comp=Z,9.0nm,0.8s,baz=70,slow=6.2,SNR=22
MAW LR LR 03 36 10.0
comp=Z,482nm,20.3s,baz=61,slow=34
comp=Z,9.0nm,0.8s
MAW Mawson 78.63 201 P **P 03 03 20.5 +0.6**
comp=Z,4.5nm,1.3s
MAW Mawson 78.63 201 P **P 03 03 19.8 -0.1**
MAW Mawson 78.63 201 P **P 03 03 20.4 +0.6**
PPT Papeete 78.77 107 LR LR 03 37 25.2
comp=Z,205nm,19.5s,baz=261,slow=35
PPT2 Papeete2 78.77 107 *e*LR LR 03 27 40.8
comp=Z,703nm,28.2s
PPT2 *e*LR LR 03 27 50.6
comp=Z,968nm,25.0s
AJN Ajban 78.88 296 *i* P **P 03 03 22.6 +0.5**
SNR=6.3
AJN Ajban 78.88 296 P **P 03 03 22.6 +0.5**
SNR=5.4
TBI Tubuai 78.92 113 *e*S **S 03 13 21.3 +0.6**
comp=Z,2μm,29.0s
TBI *e*LQ LQ 03 24 31.2
comp=Z,4μm,32.8s
TBI *e*LR LR 03 27 46.2
comp=Z,5μm,30.0s
TBI *e*LR LR 03 27 48.8
comp=Z,2μm,30.0s
WHFO Wadi Hawf 79.06 289 P **P 03 03 23.5 +0.1**
GAMB Gambell 79.24 22 P **P 03 03 24.7 +1.4**
baz=239
MZWR Madinat Zayed 79.75 295 P **P 03 03 27.9 +0.9**
M11K Mekoryuk 79.89 27 P **P 03 03 28.1 +1.2**
baz=244
MZR Muzera 80.01 294 *i* P **P 03 03 29.1 +0.7**
SNR=8.0
MZR Muzera 80.01 294 P **P 03 03 29.7 +1.3**
SNR=6.0
AB31 Akbulak array 80.47 321⇑ *e*P **P 03 03 30.0 -0.3**
AB31 pmax pmax
comp=Z,13nm,0.8s
AB31 Akbulak array 80.47 321 IAmb IAmb 03 03 53.0
comp=Z,16nm,0.8s
ABKAR Akbulak array 80.47 321 P **P 03 03 29.7 -0.6**
GHWR Ruwais 80.69 295 P **P 03 03 33.0 +1.0**
SDPT Sand Point 80.76 33 P **P 03 03 31.9 +0.3**
SDPT Sand Point 80.76 33 P **P 03 03 32.4 +0.8**
baz=250
JRN Qarnain Island 80.85 296 P **P 03 03 34.6 +1.8**
SNR=5.7
CHNA Chernabura Isl 81.06 33 P **P 03 03 34.0 +0.6**
baz=251
M13K Dall Lake 81.19 27 P **P 03 03 34.9 +1.0**
baz=247
K13K Kusilvak Mount 81.23 26 IAmb IAmb 03 03 45.2
comp=Z,15nm,0.9s
K13K Kusilvak Mount 81.23 26 P **P 03 03 35.0 +0.9**
baz=245
TNA Tin City 81.54 22 P **P 03 03 36.7 +1.0**
baz=242
S14K Fog Glacier 81.56 32 P **P 03 03 36.7 +0.6**
baz=251
O14K Tigyukauivet M 81.73 29 P **P 03 03 37.6 +0.9**
baz=250
N14K Kuskokwak Cree 81.78 28 P **P 03 03 38.2 +1.3**
baz=248
SLWR Sila 81.78 295 P **P 03 03 38.7 +0.9**
L14K Kuka Creek 81.86 26 P **P 03 03 38.6 +1.2**
baz=247,SNR=9.1
M14K Bethel 81.96 27 P **P 03 03 39.1 +1.2**
baz=248,SNR=7.3
AKTO Aktyubinsk 81.99 322 LR LR 03 43 34.2
comp=Z,341nm,21.9s,baz=82,slow=38
J14K Nanvaranak Lak 82.03 25 P **P 03 03 39.8 +1.5**
baz=246
ANM Nome 82.06 23 P **P 03 03 39.6 +1.2**
baz=244
F14K Arctic Creek 82.09 22 P **P 03 03 39.8 +1.3**
baz=243
SVE Sverdlovsk 82.35 328 *e*P **P 03 03 40.7 +0.6**
SVE pmax pmax
comp=Z,21nm,0.8s
O15K Ungalikthiuk R 82.40 29 P **P 03 03 41.3 +1.0**
baz=250
L15K Ungalak Mounta 82.52 26 P **P 03 03 41.6 +0.8**
baz=248
M15K Kasigluk River 82.52 27 P **P 03 03 42.1 +1.2**
baz=249
N15K Kwethluk River 82.61 28 IAmb IAmb 03 03 45.4
comp=Z,22nm,0.8s
N15K Kwethluk River 82.61 28 P **P 03 03 42.4 +1.0**
baz=250
K15K Wolf Creek Mou 82.72 26 IAmb IAmb 03 03 53.2
comp=Z,22nm,0.9s
K15K Wolf Creek Mou 82.72 26 P **P 03 03 43.1 +1.1**
baz=248,SNR=6.5
G15K Niukluk 82.76 23 P **P 03 03 43.2 +1.1**
baz=246
F15K North Star Dit 82.82 22 P **P 03 03 43.4 +1.0**
baz=245
ABPO Ambohimpanom 83.12 251 P **P 03 03 45.4 +0.2**
ABPO pmax pmax
comp=Z,18nm,1.2s
ABPO Ambohimpanom 83.12 251 P **P 03 03 45.4 +0.2**
ABPO IAmb IAmb 03 04 11.8
comp=Z,18nm,1.2s
P16K Nushagak River 83.24 29 P **P 03 03 45.5 +0.8**
baz=252
H16K Elim 83.32 23 P **P 03 03 46.2 +1.2**
baz=247
N16K Nishlik Lake 83.33 28 P **P 03 03 46.3 +1.1**
baz=251
O16K Kokwok River B 83.37 29 IAmb IAmb 03 03 56.2
comp=Z,17nm,1.0s
O16K Kokwok River B 83.37 29 P **P 03 03 46.3 +0.9**
baz=252
ARTI Arti 83.41 328 LR LR 03 45 03.6
comp=Z,210nm,18.4s,baz=106,slow=39
ARTI Arti 83.41 328 *c i*P **P 03 03 45.0 -0.6**
ARTI S **S 03 14 06.2 +0.1**
ARTI pmax pmax
comp=Z,11nm,0.9s
ARTI Arti 83.41 328 **P 03 03 45.1 -0.5**
ARTI IAmb IAmb 03 04 11.3
comp=Z,15nm,0.7s
L16K Owhat River 83.42 27 P **P 03 03 46.7 +1.1**
baz=250,SNR=18
M16K Timber Creek 83.42 27 P **P 03 03 46.7 +1.0**
baz=251,SNR=13
VOI Vohitsoka 83.46 248 P **P 03 03 45.7 -1.2**
VOI Vohitsoka 83.46 248 P **P 03 03 47.0 +0.2**
J16K Anvik River 83.48 25 IAmb IAmb 03 03 51.8
comp=Z,15nm,0.8s
J16K Anvik River 83.48 25 P **P 03 03 47.1 +1.2**
baz=249,SNR=9.9
CHIR Chirikof Islan 83.53 33 P **P 03 03 47.1 +0.9**
baz=254
G16K Koyuk River 83.57 23 IAmb IAmb 03 03 48.5
comp=Z,20nm,0.9s
G16K Koyuk River 83.57 23 P **P 03 03 47.3 +1.1**
baz=247
R17L Mt. Peulik Vol 83.64 31 P **P 03 03 47.9 +1.1**
baz=253
I17K Unalakleet 83.66 24 IAmb IAmb 03 03 56.9
comp=Z,18nm,1.0s
I17K Unalakleet 83.66 24 P **P 03 03 47.9 +1.2**
baz=249
C16K Lisburne Hills 83.69 20 P **P 03 03 47.9 +1.2**
baz=244
O17K Koliganek Bris 83.91 29 P **P 03 03 49.0 +0.9**
baz=252
P17K Kvichak River 84.06 30 P **P 03 03 49.4 +0.6**
baz=253
Q17K Contact Creek 84.06 31 P **P 03 03 49.7 +0.6**
baz=254
L17K Donlin 84.09 26 P **P 03 03 50.2 +1.2**
baz=251
N17K Nushagak Hills 84.09 28 IAmb IAmb 03 03 53.7
comp=Z,8.9nm,0.8s
N17K Nushagak Hills 84.09 28 P **P 03 03 50.3 +1.3**
baz=252
J17K VABM Dome 84.17 25 P **P 03 03 50.8 +1.4**
baz=250,SNR=11
D17K Noatak River 84.22 20 P **P 03 03 50.9 +1.4**
baz=246
M17K Holitna River 84.25 27 IAmb IAmb 03 03 57.2
comp=Z,12nm,0.9s
M17K Holitna River 84.25 27 P **P 03 03 50.9 +1.1**
baz=252
G17K Kiwalik Mounta 84.27 23 P **P 03 03 51.2 +1.4**
baz=249,SNR=11
K17K Iditarod 84.28 26 P **P 03 03 51.5 +1.5**
baz=251,SNR=12
ACHA Angle Creek He 84.33 31 IAmb IAmb 03 03 55.7
comp=Z,14nm,0.9s
H17K Granite Mounta 84.36 24 IAmb IAmb 03 03 52.7
comp=Z,17nm,0.9s
H17K Granite Mounta 84.36 24 P **P 03 03 51.6 +1.3**
baz=249,SNR=9.7
F17K Baldwin Pennin 84.39 22 P **P 03 03 51.7 +1.4**
baz=248
E17K Hotham Inlet 84.42 21 P **P 03 03 51.7 +1.2**
baz=247
RDOG Red Dog Mine 84.42 20 P **P 03 03 51.8 +1.2**
baz=246
SII Sitkinak Islan 84.50 32 P **P 03 03 53.2 +2.0**
SII Sitkinak Islan 84.50 32 P **P 03 03 52.1 +0.9**
baz=255
C17K Deng Mountai 84.50 20 P **P 03 03 52.0 +1.1**
baz=246
Q18K Katmai Hardscr 84.61 30 P **P 03 03 52.4 +0.6**
baz=254,SNR=7.7
P18K Big Mountain, 84.71 30 P **P 03 03 53.1 +0.9**
baz=254
N18K Kilae Creek 84.75 28 P **P 03 03 53.2 +0.8**
baz=253
L18K Granite Mounta 84.83 27 P **P 03 03 54.0 +1.2**
baz=253,SNR=16
O18K Koktuh Hills 84.84 29 IAmb IAmb 03 03 57.4
comp=Z,13nm,0.8s
O18K Koktuh Hills 84.84 29 P **P 03 03 54.0 +1.1**
baz=254
M18K Stony River 85.01 27 P **P 03 03 54.8 +1.2**
baz=253,SNR=8.9
F18K Selawik 85.04 22 P **P 03 03 55.0 +1.3**
baz=250
H18K Honhosa River 85.05 24 IAmb IAmb 03 04 35.4
comp=Z,28nm,1.5s
H18K Honhosa River 85.05 24 P **P 03 03 55.0 +1.2**
baz=251
OHAK Old Harbor 85.14 32 P **P 03 03 57.7 +3.4**
OHAK Old Harbor 85.14 32 IAmb IAmb 03 04 16.8
comp=Z,12nm,0.8s
OHAK Old Harbor 85.14 32 P **P 03 03 55.4 +1.0**
baz=256
G18K Tagagawik 85.18 23 P **P 03 03 55.5 +1.0**
baz=250,SNR=7.1
J18K Innoko River 85.20 25 P **P 03 03 55.5 +1.0**
baz=252,SNR=29
C18K Utukok River 85.24 20 P **P 03 03 55.6 +0.9**
baz=248
Q19K Cape Douglas, 85.37 30 P **P 03 03 56.2 +0.6**
baz=256
N19K Bonanza Creek 85.45 28 P **P 03 03 56.9 +0.9**
baz=255
GCSA Galena City Sc 85.52 24 P **P 03 03 57.4 +1.3**
baz=252
KDAK Kodiak Island 85.64 31 P **P 03 03 57.5 +0.6**
comp=Z,14nm,0.8s,baz=234,slow=7.5,SNR=8.9
comp=Z,14nm,0.8s
KDAK Kodiak Island 85.64 31 P **P 03 03 57.2 +0.3**
KDAK IAmb IAmb 03 04 03.4
comp=Z,15nm,0.8s
KDAK Kodiak Island 85.64 31 P **P 03 03 57.8 +1.0**
baz=256
KDAK Kodiak Island 85.64 31 P **P 03 03 58.1 +1.2**
L19K White Mountain 85.65 27 IAmb IAmb 03 04 01.4
comp=Z,18nm,0.8s
L19K White Mountain 85.65 27 P **P 03 03 58.0 +1.1**
baz=254,SNR=15
P19K Oil Pt 85.76 30 P **P 03 03 58.3 +0.9**
baz=256
M19K Big River Lodg 85.78 27 IAmb IAmb 03 04 11.7
comp=Z,15nm,0.9s
M19K Big River Lodg 85.78 27 P **P 03 03 58.4 +0.9**
baz=255
J19K Poorman 85.82 25 IAmb IAmb 03 04 09.2
comp=Z,20nm,1.2s
J19K Poorman 85.82 25 P **P 03 03 58.8 +1.1**
baz=253,SNR=7.3
F19K Shaleruckik Mo 85.83 22 P **P 03 03 58.7 +1.1**
baz=251
G19K Purcell Mounta 85.87 23 IAmb IAmb 03 04 09.4
comp=Z,15nm,1.1s
G19K Purcell Mounta 85.87 23 P **P 03 03 59.2 +1.4**
baz=252,SNR=7.0
A19K Wainwright 85.87 18 P **P 03 03 59.3 +1.6**
baz=248
H19K Roundabout Mou 85.93 23 P **P 03 03 59.4 +1.3**
baz=252
C19K Lookout Ridge 85.95 20 P **P 03 03 59.3 +1.0**
baz=249
O20K Slope Mountain 86.16 29 P **P 03 04 00.2 +0.7**
baz=256
LKRN Lenkeran, Azer 86.18 309 P **P 03 04 01.5 +1.5**
E19K Redstone River 86.22 22 P **P 03 04 00.3 +0.7**
baz=252
D19K Kuna River 86.25 20 IAmb IAmb 03 04 03.2
comp=Z,17nm,0.8s
D19K Kuna River 86.25 20 P **P 03 04 00.8 +1.1**
baz=251
K20K Telida 86.31 26 IAmb IAmb 03 04 20.8
comp=Z,14nm,0.9s
K20K Telida 86.31 26 P **P 03 04 01.0 +0.8**
baz=255,SNR=10
M20K Styx River 86.35 27 IAmb IAmb 03 04 04.4
comp=Z,20nm,0.8s
M20K Styx River 86.35 27 P **P 03 04 01.2 +0.8**
baz=256
QSPA South Pole Qui 86.49 180 P **P 03 04 00.7 -0.4**
comp=Z,6.1nm,0.7s,baz=324,slow=1.3,SNR=33
comp=Z,6.1nm,0.7s
QSPA South Pole Qui 86.49 180 P **P 03 04 00.2 -0.9**
J20K Nowinta River 86.49 25 IAmb IAmb 03 04 03.3
comp=Z,15nm,1.0s
J20K Nowinta River 86.49 25 P **P 03 04 02.0 +1.1**
baz=255,SNR=16
I20K Naaghedeneel 86.52 24 P **P 03 04 02.1 +1.1**
baz=254
HOM Homer 86.54 30 P **P 03 04 02.2 +0.9**
baz=257
H20K Anotleneega Mo 86.55 24 P **P 03 04 02.2 +0.9**
baz=254
SPCR Spurr Chakacha 86.62 28 P **P 03 04 02.2 +0.5**
baz=257
F20K Avaraart Lake 86.66 22 P **P 03 04 02.4 +0.7**
baz=253
D20K Etivluk River 86.84 20 IAmb IAmb 03 04 06.4
comp=Z,11nm,0.8s
D20K Etivluk River 86.84 20 P **P 03 04 03.3 +0.7**
baz=252
E20K Nigu River 86.85 21 P **P 03 04 03.5 +0.8**
baz=253
BRSE Bradley Lake S 87.01 30 P **P 03 04 04.0 +0.4**
baz=256
PPLA Purkeypile 87.02 27 P **P 03 04 04.3 +0.5**
baz=257
SKT Skwentna 87.11 27 IAmb IAmb 03 04 09.8
comp=Z,11nm,0.8s
SKT Skwentna 87.11 27 P **P 03 04 04.1 0.0**
baz=257
CAST Castle Rocks 87.19 26 P **P 03 04 05.3 +0.8**
baz=257,SNR=14
CHUM Lake Minchumin 87.20 26 P **P 03 04 05.5 +1.1**
baz=256,SNR=27
AKT Akhty 87.33 312 *e*P **P 03 04 05.7 0.0**
AKT pmax pmax
comp=Z,20nm,1.1s
AKT MLR MLR
comp=Z,616nm,22.0s
SYO Syowa Base 87.34 201⇑ *e*P **P 03 04 05.1 +0.1**
SYO Syowa Base 87.34 201⇑ *e*P P 03 04 12.4 +7.4
RAYN Ar Rayn 87.36 294 *i* P **P 03 04 06.3 +0.2**
SNR=48
RAYN Ar Rayn 87.36 294 P **P 03 04 05.8 -0.4**
RAYN pmax pmax
comp=Z,41nm,0.9s
RAYN Ar Rayn 87.36 294 P **P 03 04 06.9 +0.8**
RAYN Ar Rayn 87.36 294 P **P 03 04 05.8 -0.4**
RAYN Ar Rayn 87.36 294 P **P 03 04 06.5 +0.4**
G21K Allakaket 87.36 23 P **P 03 04 06.2 +1.1**
baz=255
H21K Melozitna Rive 87.42 24 IAmb IAmb 03 05 06.6
comp=Z,29nm,1.8s
H21K Melozitna Rive 87.42 24 P **P 03 04 06.4 +1.0**
baz=256
F21K Alatna River 87.55 22 P **P 03 04 07.1 +1.0**
baz=255
L22K Petersville 87.58 27 IAmb IAmb 03 04 08.9
comp=Z,13nm,0.9s
L22K Petersville 87.58 27 P **P 03 04 06.8 +0.4**
baz=258
C21K Knifeblade Rid 87.60 20 P **P 03 04 07.3 +1.1**
baz=254
I21K Tanana 87.64 24 P **P 03 04 07.4 +0.9**
baz=257,SNR=9.1
O22K Cooper Landing 87.66 29 P **P 03 04 07.3 +0.7**
baz=259
E21K Killik River 87.69 21 P **P 03 04 07.7 +1.0**
baz=255
SEKA Sheki 87.69 311 P **P 03 04 08.5 +1.1**
SEW Seward 87.72 30 P **P 03 04 07.7 +0.7**
baz=259
M22K Willow 87.72 28 P **P 03 04 07.8 +0.9**
baz=258
MNGR Mingechevir, A 87.73 311 P **P 03 04 09.1 +1.6**
KTH Kantishna Hill 87.73 26 IAmb IAmb 03 04 15.7
comp=Z,9.3nm,1.0s
RC01 Rabbit Creek A 87.77 29 P **P 03 04 07.7 +0.5**
baz=259
CUT Chulitna 87.78 27 P **P 03 04 07.8 +0.6**
baz=258
B21K Ikpikpuk River 87.79 20 IAmb IAmb 03 04 10.5
comp=Z,15nm,0.8s
B21K Ikpikpuk River 87.79 20 P **P 03 04 07.9 +0.8**
baz=254
TRF Thorofare Moun 87.98 26 P **P 03 04 08.9 +0.5**
baz=258
H22K Ishtalitna Cre 88.05 24 P **P 03 04 09.4 +0.9**
baz=257
F22K John River 88.11 22 P **P 03 04 09.6 +0.9**
baz=256
MLY Manley 88.12 25 IAmb IAmb 03 04 18.6
comp=Z,11nm,0.8s
MLY Manley 88.12 25 P **P 03 04 09.6 +0.7**
baz=258,SNR=23
PMR Palmer 88.15 28 P **P 03 04 09.9 +0.9**
PMR Palmer 88.15 28 IAmb IAmb 03 04 11.9
comp=Z,11nm,0.8s
PMR Palmer 88.15 28 P **P 03 04 09.6 +0.6**
baz=259
TAOE Nuku Hiva Isla 88.22 99 *e*LR LR 03 32 09.7
comp=Z,412nm,24.2s
G22K Bettles 88.23 23 P **P 03 04 10.1 +0.8**
baz=257
GHO Glory Hole Cre 88.28 28 IAmb IAmb 03 04 36.0
comp=Z,9.9nm,0.8s
GANJ Ganja 88.29 311 P **P 03 04 11.7 +1.5**
B22K Teshekpuk Lake 88.38 19 P **P 03 04 10.9 +1.0**
baz=255
PWL Port Wells 88.40 29 P **P 03 04 11.1 +0.9**
baz=260

KNK Knik Glacier 88.44 28 P P 03 04 11.2 +0.8
baz=260
SML Sawmill 88.56 28 P P 03 04 11.4 +0.4
baz=260
KIRV Kirov 88.61 329 LR LR 03 46 56.8
comp=Z,340nm,21.0s,baz=100,slow=38
KIRV Kirov 88.61 329⇑ eP P 03 04 09.9 -1.3
RND Reindeer 88.61 26 IAmb IAmb 03 04 14.0
comp=Z,14nm,0.8s
MCK McKinley 88.63 26 P P 03 04 11.8 +0.5
baz=259
WAT1 Susitna Watana 88.64 27 P P 03 04 11.8 +0.4
baz=260
P23K Montague Islan 88.71 30 IAmb IAmb 03 04 15.3
comp=Z,11nm,0.9s
P23K Montague Islan 88.71 30 P P 03 04 12.0 +0.3
baz=261
I23K Minto, Yukon-K 88.72 25 IAmb IAmb 03 04 32.2
comp=Z,11nm,0.8s
I23K Minto, Yukon-K 88.72 25 P P 03 04 12.2 +0.6
baz=259,SNR=12
NEA2 Nenana 88.74 25 P P 03 04 12.3 +0.5
baz=259
BELG Belogornoye 88.75 322 de P P 03 04 10.7 -1.3
BELG pmax pmax
comp=Z,2.0nm,0.9s
G23K Bananza Creek 88.76 23 IAmb IAmb 03 04 20.3
comp=Z,11nm,1.1s
G23K Bananza Creek 88.76 23 P P 03 04 12.5 +0.6
baz=258,SNR=9.4
H23K Yukon River 88.77 24 P P 03 04 12.4 +0.4
baz=259
NAX Nakhchivan 88.78 309 P P 03 04 14.0 +1.4
COLD Coldfoot 88.80 22 P P 03 04 12.6 +0.7
baz=258
M23K Glacier View 88.84 28 P P 03 04 12.5 +0.2
baz=261
WAT6 Susitna Watana 88.97 27 P P 03 04 13.3 +0.2
baz=260
D23K Nanushuk River 88.98 21 IAmb IAmb 03 04 22.1
comp=Z,18nm,1.2s
D23K Nanushuk River 88.98 21 P P 03 04 13.6 +0.8
baz=258
ATD Arta Tunnel 89.00 282 LR LR 03 42 53.0
comp=Z,14nm,19.7s,baz=69,slow=35
ATD Arta Tunnel 89.00 282 P P 03 04 17.0 +2.9
GLI Glacier Island 89.00 29 P P 03 04 13.3 +0.3
baz=261
SCM Sheep Creek Mo 89.04 28 IAmb IAmb 03 04 23.1
comp=Z,25nm,1.2s
SCM Sheep Creek Mo 89.04 28 P P 03 04 13.7 +0.3
baz=261
WRH Wood River Hil 89.13 25 IAmb IAmb 03 04 16.7
comp=Z,7.7nm,0.7s
E23K Chandalar 89.18 22 IAmb IAmb 03 04 17.5
comp=Z,8.6nm,0.7s
E23K Chandalar 89.18 22 P P 03 04 14.2 +0.3
baz=259,SNR=7.2
C23K Itkillik River 89.19 20 IAmb IAmb 03 04 24.0
comp=Z,17nm,1.0s
C23K Itkillik River 89.19 20 P P 03 04 14.4 +0.7
baz=258
DHY Denali Highway 89.21 27 P P 03 04 14.5 +0.3
baz=261
CCB Clear Creek Bu 89.28 25 IAmb IAmb 03 04 22.4
comp=Z,7.7nm,0.8s
COLA College 89.30 25 P P 03 04 16.2 +1.9
COLA College 89.30 25⇑ eP P 03 04 14.1 -0.2
COLA pmax pmax
comp=Z,5.0nm,0.8s
COLA College 89.30 25 P P 03 04 15.6 +1.3
TOLK Toolik Lake Re 89.31 21 P P 03 04 15.0 +0.6
baz=259
GNI Garni 89.44 310 LR LR 03 51 51.0
comp=Z,103nm,18.4s,baz=85,slow=41
GNI Garni 89.44 310⇑ eP P 03 04 15.6 -0.2
GNI pmax pmax
comp=Z,16nm,1.7s
GNI Garni 89.44 310 P P 03 04 15.2 -0.6
comp=Z,16nm,0.8s
H24K Noodor Dome 89.45 24 IAmb IAmb 03 04 35.5
comp=Z,10nm,1.0s
H24K Noodor Dome 89.45 24 P P 03 04 15.6 +0.5
baz=260,SNR=6.9
POKR Poker Plat Res 89.52 25 P P 03 04 16.0 +0.6
baz=261
E24K Your Creek 89.60 22 IAmb IAmb 03 05 05.1
comp=Z,17nm,1.8s
E24K Your Creek 89.60 22 P P 03 04 16.3 +0.5
baz=260
EYAK Cordova Ski Ar 89.61 29 P P 03 04 16.3 +0.5
baz=262
HDA Harding Lake 89.61 25 IAmb IAmb 03 04 19.4
comp=Z,8.3nm,0.8s
HDA Harding Lake 89.61 25 P P 03 04 16.4 +0.5
baz=261
M24K Tolsona, Glenn 89.62 28 P P 03 04 16.4 +0.3
baz=262
KLU Klutina 89.65 28 P P 03 04 16.6 +0.4
KLU Klutina 89.65 28 P P 03 04 16.7 +0.4
baz=262
D24K Happy Valley 89.67 21 P P 03 04 16.8 +0.7
baz=260
DIV Divide 89.67 29 IAmb IAmb 03 04 40.0
comp=Z,10nm,0.8s
ILAR Eielson Array 89.69 25 P P 03 04 14.9 -1.3
comp=Z,3.3nm,0.7s,baz=269,slow=3.5,SNR=32
comp=Z,3.3nm,0.7s
ILAR Eielson Array 89.69 25 P P 03 04 14.4 -1.8
F24K Squaw Lake 89.73 22 P P 03 04 17.0 +0.6
baz=260,SNR=6.5
G24K Hadweenzic Riv 89.75 23 IAmb IAmb 03 04 25.5
comp=Z,11nm,1.2s
G24K Hadweenzic Riv 89.75 23 P P 03 04 16.8 +0.3
baz=261
K24K Donnelly Dome 90.03 26 IAmb IAmb 03 04 40.3
comp=Z,11nm,0.8s
K24K Donnelly Dome 90.03 26 P P 03 04 18.0 +0.1
baz=262
HAKT HAKKARI 90.04 307 P P 03 04 19.2 +0.4
PAX Paxson 90.06 27 P P 03 04 18.2 +0.2
baz=263
HARP HAARP 90.13 28 P P 03 04 18.8 +0.4
baz=263
KAIM Kayak Island 90.19 30 P P 03 04 18.9 +0.3
baz=264
BMRM Bremner River 90.22 29 IAmb IAmb 03 04 27.1
comp=Z,10nm,0.9s
BMRM Bremner River 90.22 29 P P 03 04 19.1 +0.3
baz=263
N25K Chitina, Valde 90.29 28 P P 03 04 19.3 +0.1
baz=263
G25K Bearman Lake 90.30 23 P P 03 04 19.3 +0.4
baz=262
J25K Salcha River, 90.31 25 P P 03 04 19.2 0.0
baz=263
PRP Porcupine Dome 90.37 24 P P 03 04 19.4 -0.1
baz=262
RIDG Independent Ri 90.43 26 IAmb IAmb 03 04 25.2
comp=Z,7.1nm,0.8s
RIDG Independent Ri 90.43 26 P P 03 04 19.9 +0.2
baz=263
D25K Kavik River 90.56 21 P P 03 04 20.7 +0.4
baz=262
F25K Christian Rive 90.59 22 P P 03 04 21.0 +0.6
baz=262,SNR=6.4
FYU Fort Yukon 90.62 23 IAmb IAmb 03 04 23.1
comp=Z,7.3nm,0.9s
GLB Gilahina Butte 90.65 29 IAmb IAmb 03 04 29.6
comp=Z,7.9nm,0.9s
E25K Arctic Village 90.69 22 P P 03 04 21.6 +0.8
baz=262
CRQM Cirque 90.91 29 IAmb IAmb 03 04 31.6
comp=Z,11nm,0.8s
CRQE Cirque 90.93 29 P P 03 04 22.3 0.0
baz=265
MCARA McCarthy VSAT 91.02 29 P P 03 04 22.9 +0.4
baz=265
L26K Log Cabin Wild 91.03 27 P P 03 04 22.9 +0.4
baz=264
KBZ Khabaz 91.09 314 P P 03 04 22.9 -0.3
comp=Z,2.0nm,0.9s,baz=128,slow=7.3,SNR=4.3
comp=Z,2.0nm,0.9s
KBZ Khabaz 91.09 314⇑ eP P 03 04 22.7 -0.4
KBZ pmax pmax
comp=Z,2.0nm,0.9s
M26K Nabesna, AK 91.13 28 P P 03 04 23.5 +0.5
baz=265

C26K Camden Bay 91.15 20 P P 03 04 23.6 +0.7
baz=263
F26K Sheenjek River 91.17 22 P P 03 04 23.7 +0.6
baz=264,SNR=6.8
G26K Porcupine Rive 91.23 23 P P 03 04 24.0 +0.7
baz=264
KVAR Kislovodsk Arr 91.25 314 LR LR 03 50 24.6
comp=Z,115nm,20.0s,baz=285,slow=39
KIV Kislovodsk 91.25 314 eP P 03 04 24.3 +0.2
KIV e 03 14 55.9
KIV eSS SS 03 21 30.2 +3.0
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,37nm,20.0s
I26K Coal Creek Min 91.33 25 P P 03 04 24.3 +0.5
baz=265
C27K Jago River 91.53 20 P P 03 04 25.3 +0.6
baz=264
GRNC Granite Creek 91.58 29 IAmb IAmb 03 04 34.1
comp=Z,8.2nm,0.9s
M27K Edge Creek, AK 91.64 28 P P 03 04 25.9 +0.3
baz=266
BARN Barnard Glacie 91.65 29 IAmb IAmb 03 04 34.0
comp=Z,11nm,0.9s
K27K Chicken 91.68 26 IAmb IAmb 03 04 29.5
comp=Z,11nm,0.8s
L27K Beaver Creek, 91.72 27 IAmb IAmb 03 04 29.6
comp=Z,8.3nm,0.8s
L27K Beaver Creek, 91.72 27 P P 03 04 26.2 +0.4
baz=266
BCAR Beaver Creek A 91.74 27 P P 03 04 26.1 +0.2
I27K Kandik River 91.99 25 IAmb IAmb 03 04 37.7
comp=Z,8.4nm,0.8s
I27K Kandik River 91.99 25 P P 03 04 27.6 +0.6
baz=266,SNR=9.8
G27K Doyon Strip 92.06 23 P P 03 04 27.7 +0.5
baz=266
H27K Steamboat Moun 92.07 24 IAmb IAmb 03 04 34.8
comp=Z,18nm,1.5s
H27K Steamboat Moun 92.07 24 P P 03 04 27.9 +0.5
baz=266,SNR=7.8
E27K Coleen River 92.18 22 P P 03 04 28.1 +0.4
baz=266
ELIB Princess Elisa 92.18 197 dP P 03 04 28.9 +1.0
comp=Z,17nm,0.8s
YUK3 Moose Creek 92.27 28 P P 03 04 28.8 +0.2
baz=267
O28M Mount Upton 92.35 29 P P 03 04 29.1 0.0
baz=267
D27M Malcolm River 92.47 21 P P 03 04 29.5 +0.3
baz=267
YUK8 Steele Glacier 92.58 29 P P 03 04 30.1 +0.1
baz=268
I28M Miner Creek 92.68 25 IAmb IAmb 03 04 50.9
comp=Z,9.6nm,0.9s
I28M Miner Creek 92.68 25 P P 03 04 30.5 +0.3
baz=268,SNR=13
F28M Old Crow 92.80 23 IAmb IAmb 03 04 50.3
comp=Z,5.8nm,0.9s
F28M Old Crow 92.80 23 P P 03 04 30.9 +0.3
baz=268
DAWY Dawson 92.86 26 IAmb IAmb 03 04 50.8
comp=Z,9.4nm,0.8s
DAWY Dawson 92.86 26 P P 03 04 31.3 +0.3
baz=268,SNR=7.4
KIBK Kibwezi 92.93 267 IAmb IAmb 03 04 36.1
comp=Z,11nm,1.0s
KIBK Kibwezi 92.93 267 P P 03 04 33.6 +1.1
BRWY Burwash Landin 92.94 29 P P 03 04 31.8 +0.4
baz=268
E28M Babbage River 92.96 22 P P 03 04 31.9 +0.6
baz=268
YUK4 Talbot Arm 93.12 29 P P 03 04 32.9 +0.4
baz=269
M29M Somme Creek 93.24 28 IAmb IAmb 03 04 41.0
comp=Z,6.6nm,0.9s
M29M Somme Creek 93.24 28 P P 03 04 33.0 +0.1
baz=269,SNR=10
YUK6 Outpost Mounta 93.25 29 P P 03 04 33.0 -0.1
baz=269
D28M Stokes Point 93.27 21 P P 03 04 33.1 +0.4
baz=269
H29M Whitestone 93.35 24 P P 03 04 33.6 +0.5
baz=269
I29M Ogilvie Camp, 93.36 25 IAmb IAmb 03 04 42.0
comp=Z,9.2nm,1.1s
I29M Ogilvie Camp, 93.36 25 P P 03 04 33.4 +0.1
baz=269,SNR=7.3
SOC Sochi 93.39 313 eP P 03 04 36.9 +3.1
SOC e 03 08 17.0
SOC ePPP PPP 03 10 17.1
SOC eS SKSac 03 15 11.6 +3.9
SOC eSS SS 03 22 02.8 +5.1
SOC eSSS SSS 03 25 41.3
SOC MLR MLR
comp=Z,162nm,22.0s
L29M L29M 93.40 27 IAmb IAmb 03 04 42.0
comp=Z,14nm,1.0s
L29M L29M 93.40 27 P P 03 04 33.6 0.0
baz=269,SNR=17
G29M Pine Creek 93.50 23 IAmb IAmb 03 04 44.2
comp=Z,15nm,1.1s
G29M Pine Creek 93.50 23 P P 03 04 34.2 +0.3
baz=269
P29M Windy Craggy 93.54 31 P P 03 04 34.3 +0.1
baz=269
E29M Blow River 93.56 22 P P 03 04 34.2 +0.1
baz=270
HYT Haines Junctio 93.67 29 P P 03 04 34.9 0.0
baz=270
K29M Barlow Dome 93.69 26 IAmb IAmb 03 04 43.1
comp=Z,7.7nm,0.9s
K29M Barlow Dome 93.69 26 P P 03 04 34.9 0.0
baz=270,SNR=9.1
KLMR Klimovskoe 93.79 331 eP P 03 04 32.5 -2.7
KLMR pmax pmax
comp=Z,13nm,1.6s
KMBO Kilima Mbogo 93.80 269 LR LR 03 42 32.1
comp=Z,727nm,21.6s,baz=118,slow=33
N30M Aishikik Lake 93.88 29 P P 03 04 35.7 -0.1
baz=270
P30M Million Dollar 93.94 30 P P 03 04 36.1 +0.1
baz=270
M30M Minto, Yukon 94.01 28 P P 03 04 36.5 +0.2
baz=270,SNR=5.6
EPYK Eagle Plains 94.02 24 P P 03 04 36.2 -0.1
baz=271
I30M Mount Dempster 94.17 25 P P 03 04 37.2 +0.1
baz=271
J30M Hart River 94.20 26 IAmb IAmb 03 04 44.3
comp=Z,8.3nm,0.9s
J30M Hart River 94.20 26 P P 03 04 37.4 +0.1
baz=271,SNR=15
G30M tAoh Zraii Nji 94.21 23 P P 03 04 37.3 +0.1
baz=271
PLBC Pleasant Camp 94.24 31 P P 03 04 37.3 -0.1
baz=270
S31K Pelican 94.32 32 P P 03 04 37.8 +0.1
baz=270
F30M Barrier River 94.36 23 IAmb IAmb 03 05 01.1
comp=Z,11nm,1.1s
F30M Barrier River 94.36 23 P P 03 04 38.0 +0.3
baz=272
O30N Mendenhall 94.36 29 P P 03 04 37.9 -0.1
baz=271
N31M Braeburn, Yuko 94.50 29 P P 03 04 38.6 0.0
baz=271
SKAG Skagway 94.77 31 P P 03 04 39.8 0.0
baz=271
SIT Sitka 94.82 33 P P 03 04 40.1 +0.1
baz=271
WHY Whitehorse 94.96 30 P P 03 04 40.8 -0.1
baz=272
G31M Satah River 94.98 23 IAmb IAmb 03 05 06.0
comp=Z,9.6nm,1.0s
G31M Satah River 94.98 23 P P 03 04 40.6 +0.1
baz=273
H31M Peel River 95.00 24 P P 03 04 41.0 +0.2
baz=273
ANN Anapa 95.04 315 eP P 03 04 41.8 +0.4
ANN pmax pmax
comp=Z,20nm,1.0s
ANN MLR MLR
comp=N,255nm,14.0s
ANN MLR MLR
comp=Z,153nm,13.0s
M31M Drury Creek, Y 95.14 28 P P 03 04 41.5 0.0
baz=272
F31M Tsiigehtchic 95.15 23 P P 03 04 41.5 +0.2
baz=273
INK Inuvik 95.18 22 P P 03 04 41.0 -0.5
comp=Z,4.2nm,0.8s,baz=64,slow=1.1,SNR=7.1
comp=Z,4.2nm,0.8s
INK Inuvik 95.18 22 P P 03 04 41.0 -0.5
INK Inuvik 95.18 22 P P 03 04 40.0 -1.4
INK Inuvik 95.18 22 P P 03 04 42.0 +0.6
baz=274
INK Inuvik 95.18 22 P P 03 04 40.7 -0.8
S32K Killisnoo 95.22 33 P P 03 04 42.0 +0.1
baz=272
R32K Eaglecrest 95.22 32 P P 03 04 42.1 +0.2
baz=272
ASF Jabal al Asfar 95.41 302 LR LR 03 54 59.2
comp=Z,201nm,18.9s,baz=27,slow=40
OBN Obninsk 95.43 325 LR LR 03 51 47.1
comp=Z,336nm,21.1s,baz=66,slow=38
P32M Atlin 95.59 31 P P 03 04 43.8 +0.2
baz=273
P33M Teslin, Yukon 96.00 30 P P 03 04 45.8 +0.2
baz=274
NVL N'lazarevskaya 96.04 197 eP P 03 04 44.5 -0.9
NVL eS SKSac 03 15 20.7 -0.3
NVL pmax pmax
comp=Z,7.0nm,0.9s
NVL MLR MLR
comp=Z,653nm,17.0s
U33K Whale Pass 96.07 34 P P 03 04 45.9 +0.1
baz=273
CRAG Craig 96.10 35 P P 03 04 46.0 0.0
baz=273
Q32M Nakina River 96.36 31 P P 03 04 47.5 +0.2
baz=274
MMPY Sheldon Lake, 96.57 27 P P 03 04 48.4 +0.4
baz=261
MMAI Mount Meron Ar 96.67 303 LR LR 03 55 57.1
comp=Z,295nm,19.1s,baz=96,slow=40
V35K Ketchikan 96.97 35 P P 03 04 50.2 +0.4
baz=274
EIL Elat 97.06 299 LR LR 03 56 13.7
comp=Z,393nm,18.2s,baz=88,slow=40
DLBC Dease Lake 97.57 32 P P 03 04 52.9 +0.2
baz=276
T35M Bob Quinn 97.60 33 P P 03 04 52.9 +0.2
baz=275
TROLL Troll, Antarti 97.84 194 ⇑P P 03 04 54.2 +0.5
comp=Z,269nm,0.8s
BR131 Keskin Array S 97.96 309⇓ eP P 03 04 54.5 -0.5
BRTR Keskin Array B 97.96 309 P P 03 04 53.5 -1.5
comp=Z,0.9nm,0.8s,baz=131,slow=3.4,SNR=7.0
BRTR LR LR 03 56 49.0
comp=Z,105nm,18.7s,baz=116,slow=40
comp=Z,0.9nm,0.8s
BRTR Keskin Array B 97.96 309 ce P P 03 04 53.7 -1.3
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 97.96 309 P P 03 04 54.0 -0.9
SPITS Spitsbergen Ar 98.33 349 LR LR 03 51 41.4
comp=Z,399nm,21.4s,baz=54,slow=37
BELA Belgrano 2 98.39 183 P 03 04 55.9 -0.1
BELA IAmb IAmb 03 05 00.7
comp=Z,3.5nm,0.7s
C36M Paulatuk 98.43 20 P P 03 04 56.5 +0.4
baz=283
KKUL Konya-Kulu 98.54 309 P P 03 04 57.5 0.0
ARCES ARCESS Array B 98.67 340 P P 03 04 57.0 -0.3
comp=Z,5.2nm,0.8s,baz=13,slow=11,SNR=7.6
ARCES LR LR 03 54 13.4
comp=Z,420nm,22.0s,baz=80,slow=38
comp=Z,5.2nm,0.8s
ARCES ARCESS Array B 98.67 340 P P 03 04 57.0 -0.3
ARCES ARCESS Array B 98.67 340 P P 03 04 56.0 -1.3
BBB Bella Bella 99.33 38 LR LR 03 43 10.3
comp=Z,277nm,21.9s,baz=263,slow=31
SNAA Sanae 99.34 193 P Pdif 03 05 00.6 +0.3
comp=Z,2.0nm,0.8s,baz=175,slow=4.6,SNR=4.8
SNAA LR LR 03 49 06.6
comp=Z,709nm,21.2s,baz=104,slow=35
comp=Z,2.0nm,0.8s
SNAA Sanae 99.34 193⇓ eP Pdif 03 05 01.0 +0.6
SNAA pmax pmax
comp=Z,2.0nm,1.0s
SNAA Sanae 99.34 193 P Pdif 03 04 59.5 -0.8
FINES FINESS Array B 100.20 332 P Pdif 03 05 06.1 +1.8
comp=Z,2.2nm,0.9s,baz=28,slow=6.5,SNR=1.8
FINES FINESS Array B 100.20 332 Pdif 03 05 01.4 -2.9
BAL3X Bal3x, Balta 100.28 318 P Pdif 03 05 04.5 -0.4
MNK Minsk 100.49 325 i P Pdif 03 05 05.1 -0.6
comp=Z,7.0nm,0.6s
MNK i P Pdif 03 05 05.8 +0.1
comp=E,9.0nm,0.7s
MNK i P Pdif 03 05 05.8 +0.1
comp=N,7.0nm,0.7s,baz=81
MNK i PP PP 03 09 13.4 +1.1
MNK i PPP PPP 03 11 18.9
MNK i SKS 03 15 06.0
MNK i S SKSac 03 15 44.8 +0.8
MNK i PS PS 03 18 14.3 +1.2
MNK i SS SS 03 23 39.9 +2.6
MNK i SSS SSS 03 27 27.8
MNK i LQ LQ 03 44 17.7
MNK i LRM MLR 03 51 28.0
comp=E,316nm,20.6s
MNK i LRM MLR 03 51 48.1
comp=N,406nm,22.3s
MNK Minsk 100.49 325 i P Pdif 03 05 05.1 -0.6
MNK i 03 09 13.4
MNK i PPP PPP 03 11 18.9
MNK i S SKSac 03 15 44.8 +0.8
MNK i PS PS 03 18 14.3 +1.2
MNK i SS SS 03 23 39.9 +2.6
MNK i SSS SSS 03 27 27.8
MNK pmax pmax
comp=Z,7.0nm,0.6s
MNK pmax pmax
comp=E,9.0nm,0.7s
MNK pmax pmax
comp=N,7.0nm,0.7s
MNK MLR MLR
comp=E,316nm,21.0s
MNK MLR MLR
comp=N,406nm,22.0s
MNK MLR MLR
comp=Z,518nm,21.0s
VNA2 Neumayer--Watz 100.91 193 ⇑P Pdif 03 05 09.2 +1.9
comp=Z,2.0nm,0.7s,baz=132,slow=4.9
NACGM Naroch 101.06 325 ePP PKiKP 03 09 15.5 -18
baz=80
BOSA Boshof 102.20 240 P Pdif 03 05 13.3 -0.8
comp=Z,8.7nm,0.9s,baz=98,slow=4.8,SNR=11
BOSA Boshof 102.20 240 Pdif 03 05 12.4 -1.7
RNPP5 Staryi Chortor 102.22 322 P Pdif 03 05 13.0 -0.5
NOA NORSAR Array B 107.14 334 Pdiff Pdif 03 05 33.1 -2.1
comp=Z,1.3nm,0.8s,baz=66,slow=4.6,SNR=4.1
NVAR Mina Array Bea 108.22 51 Pdiff Pdif 03 05 39.7 -1.1
comp=Z,0.1nm,0.4s,baz=298,slow=4.2,SNR=2.1
NVAR PP PP 03 10 10.0 -0.6
comp=Z,0.4nm,0.8s,baz=285,slow=7.1,SNR=4.3
CLL Collm 110.00 324 i P Pdif 03 05 48.2 +0.1
CLL MLR MLR
comp=Z,300nm,20.4s
CLL Collm 110.00 324 i Pdif Pdif 03 05 48.2 +0.1
CLL ePKiKP PKiKP 03 09 50.0 +0.1
CLL eSdif Sdif 03 18 02.0 +0.9
CLL ePS PS 03 19 48.0 -4.1
CLL eSS SS 03 25 44.0 -3.2
CLL ex x 03 27 30.0
CLL eSSS SSS 03 30 00.0
CLL eSSSS 03 33 24.0
CLL AMS AMS 04 05 00.0
comp=Z,300nm,20.4s
GERES GERESS Array B 110.41 321 PKiKP PKiKP 03 09 51.4 +0.5
comp=Z,0.5nm,0.7s,baz=5.7,slow=1.3,SNR=4.6
PDAR Pinedale Array 113.61 44 PKiKP PKiKP 03 09 57.8 +0.4
comp=Z,0.3nm,0.4s,baz=105,slow=1.7,SNR=3.5
PDAR PKKPbc PKKPbc 03 20 40.6 -1.5
comp=Z,1.3nm,0.8s,baz=109,slow=5.6,SNR=12
EKA Eskdalemuir Ar 116.58 333 PKP PKPdf 03 10 02.9 +0.5
comp=Z,0.8nm,0.7s,baz=12,slow=4.3,SNR=3.9
KEST Kesra 117.56 309 PKP PKPdf 03 10 05.0 0.0
comp=Z,3.2nm,1.0s,baz=270,slow=1.0,SNR=5.2
KEST PP PP 03 11 14.0 -3.0
comp=Z,4.1nm,0.9s,baz=356,slow=8.5,SNR=5.2
ULM Lac du Bonnet 118.89 32 PKP PKPdf 03 10 06.3 -0.7

comp=Z,1.7nm,0.7s,baz=294,slow=3.9,SNR=4.9
ULM PKKPbc **PKKPbc** **03 20 22.4 -1.2**
comp=Z,2.1nm,1.0s,baz=136,slow=8.5,SNR=5.0
EPLO Experimental L 120.36 32 PKPdf 03 10 09.9 0.0
CEST Esterri de Car 120.86 319 PKPdf 03 10 10.2 -1.0
ECSD EROS Data Cent 121.87 39 PKPdf 03 10 11.7 -1.3
TXAR Lajitas Array 122.13 57 PKP **PKPdf 03 10 12.8 -1.2**
comp=Z,0.6nm,0.7s,baz=222,slow=1.7,SNR=3.6
TXAR PKKPbc **PKKPbc** **03 20 10.7 -0.3**
comp=Z,1.2nm,0.8s,baz=121,slow=6.9,SNR=15
TXAR Lajitas Array 122.13 57 PKIKP **PKPdf 03 10 13.2 -0.8**
TXAR Lajitas Array 122.13 57 PKPdf 03 10 13.2 -0.8
TBO Thunder Bay 123.23 31 PKPdf 03 10 14.9 -0.5
ESDC Sonseca Array 125.72 318 PKP **PKPdf 03 10 20.3 -0.2**
comp=Z,0.8nm,0.8s,baz=18,slow=4.6,SNR=5.5
ESDC PP **PP** **03 12 11.2 -1.0**
comp=Z,0.8nm,0.8s,baz=58,slow=7.5,SNR=5.0
ESDC Sonseca Array 125.72 318 PKPdf 03 10 19.9 -0.6
P38A Dawn 125.91 42 PKPdf 03 10 20.3 -0.5
TORD Torodi Ar. Bea 129.13 284 PKP **PKPdf 03 10 27.1 -0.5**
comp=Z,7.0nm,0.8s,baz=67,slow=1.6,SNR=34
PLCA Paso Flores 131.75 158 PKP **PKPdf 03 10 32.9 +0.9**
comp=Z,1.9nm,0.7s,baz=235,slow=2.1,SNR=6.9
DBIC Dimbokro 136.05 276 PKP **PKPdf 03 10 40.9 +0.2**
comp=Z,8.5nm,0.9s,baz=76,slow=2.0,SNR=5.2
DBIC Dimbokro 136.05 276 PKPdf 03 10 40.4 -0.3
AC05 El Transito 141.87 149 PKPdf 03 10 49.3 -1.8
PSAL Palomas, Salto 144.65 167 *eP* **PKPab 03 10 53.1 -1.2**
CPSB Cacapava Do Su 146.04 173 *eP* **PKPdf 03 10 55.4 -2.8**
PB08 IPOC Station P 149.23 140 PKPdf **PKPdf 03 11 03.1 -1.2**
CPUP Villa Florida 149.27 165 PKPbc **PKPbc 03 11 08.5 +0.6**
comp=Z,4.4nm,0.7s,baz=176,slow=1.8,SNR=12
CPUP Villa Florida 149.27 165 PKP2 **PKPdf 03 11 07.5 +3.8**
CPUP Villa Florida 149.27 165 PKPbc **PKPdf 03 11 07.5 +3.8**
CPUP Villa Florida 149.27 165 *eP* **PKPdf 03 11 01.0 -2.6**
ITAB Concordia 149.32 174 *eP* **PKPdf 03 10 59.7 -4.0**
GO01 Chusmiza 149.55 140 PKPdf **PKPdf 03 11 03.0 -1.8**
SLOR San Lorenzo - 150.10 97 PKPdf **PKPdf 03 11 03.2 -2.7**
OTAV Otavalo 150.27 96 PKIKP **PKPdf 03 11 02.3 -3.9**
OTAV Otavalo 150.27 96 PKPdf **PKPdf 03 11 02.3 -3.9**
OTAV Otavalo 150.27 96 *eP* **PKPdf 03 11 02.4 -3.8**
SJPY San Joaquin 150.85 166 *eP* **PKPdf 03 11 03.1 -3.1**
LPAZ La Paz 152.66 136 PKP **PKPdf 03 11 10.2 +0.4**
comp=Z,2.6nm,0.9s,baz=300,slow=1.7,SNR=11
LPAZ PKPbc **PKPbc** **03 11 17.9 +0.9**
comp=Z,9.9nm,0.8s,baz=171,slow=0.8,SNR=40
LPAZ La Paz 152.66 136 *eP* **PKPdf 03 11 04.9 -5.0**
CZSB Cruzeiro do Su 153.75 115 *eP* **PKPdf 03 11 06.3 -4.5**
ROSC El Rosal 154.59 86 PKPbc **PKPbc 03 11 21.4 +0.4**
comp=Z,6.7nm,0.5s,baz=55,slow=8.1,SNR=3.8
COIM Forte Coimbra 155.18 160 *eP* **PKPdf 03 11 08.9 -3.7**
AQDB Aquidauana 155.28 165 *eP* **PKPdf 03 11 08.6 -4.1**
BBSD Serra de San D 156.44 151 *eP* **PKPdf 03 11 09.7 -4.7**
PTLB Pontes e Lacer 158.64 152 *eP* **PKPdf 03 11 13.5 -3.6**
SALV Santo Antonio 159.61 161 *eP* **PKPdf 03 11 15.6 -2.7**
VILB Vilhena 160.19 146 *eP* **PKPdf 03 11 15.3 -3.7**
BDFB Brasilia 161.00 183 PKP **PKPdf 03 11 19.8 -0.2**
comp=Z,6.1nm,0.9s,baz=161,slow=5.1,SNR=6.8
TEFE Tefe 162.79 114 *eP* **PKPdf 03 11 20.0 -1.7**

IDC 30 02:57:23.8±12.0, 5°84.5S×155°20.1E, h0km, mb4.3/4, mbtmp4.3/4,1C, Error ellipse: s-maj=409.2km s-min=44.2km az=113.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.65**	**233**	P	P	03 02 46.4	0.0
	4.3nm,0.8s,baz=58,slow=9.4,SNR=3.4						
	4.3nm,0.8s						
MKAR	**Makanchi Array**	**82.67**	**319**	P	P	03 09 50.2	+0.8
	4.3nm,0.7s,baz=103,slow=5.8,SNR=25						
	4.3nm,0.7s						
ZALV	**Zalesovo Beam**	**83.34**	**326**	P	P	03 09 52.4	-0.3
	2.6nm,0.6s,baz=114,slow=6.1,SNR=10						
	2.6nm,0.6s						
KURBB	**Kurchatov Arra**	**86.09**	**322**	P	P	03 10 05.9	-0.7
	0.7nm,0.6s,baz=102,slow=4.5,SNR=5.4						
	0.7nm,0.6s						
SYO	**Syowa Base**	**93.48**	**199**	*eP*	PKIKP	P	03 10 42.2 +1.1

*NEIC **30** 03:05:51.8±1.0, 18°.0S±0°.1×178°.52W±0°.10, h590km±9km, mb4.2/22, Error ellipse: s-maj=20.9km s-min=12.9km az=196.0*
*IDC **30** 03:05:52.3±2.0, 17°.68S×178°.75W, h594km±20km, mb3.1/7, mbtmp4.0/8, Error ellipse: s-maj=54.4km s-min=18.0km az=147.0*

ISC 30 03:05:50.5±0.7, 17°.9S±0°.1×178°.6W±0°.1, h579km, n36, σ0.65/40, mb4.1/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.21**	**272**	P	P	**03 07 11.2**	**+1.9**
	12nm,0.5s,baz=135,slow=6.4,SNR=11						
LHI	**Lord Howe Isla**	**24.38**	**232**	P	P	**03 10 24.7**	**+0.5**
ARMA	**Armidale**	**29.82**	**240**	P	P	**03 11 11.9**	**-0.1**
COEN	**Coen**	**36.94**	**270**	P	P	**03 12 11.5**	**-0.3**
COEN				IAmb	IAmb	03 12 13.1	
	comp=Z,7.3nm,0.9s						
TOO	**Toolangi**	**37.07**	**231**	P	P	**03 12 13.3**	**+0.7**
TOO				IAmb	IAmb	03 12 34.0	
	comp=Z,9.1nm,1.4s						
STKA	**Stephens Creek**	**38.51**	**241**	P	P	**03 12 25.1**	**+0.7**
	comp=Z,4.0nm,0.5s,baz=88,slow=9.7,SNR=10						
	comp=Z,4.0nm,0.5s						
INKA	**Innaminka**	**38.61**	**248**	P	P	**03 12 25.6**	**+0.3**
INKA				IAmb	IAmb	03 12 26.7	
	comp=Z,1.9nm,0.5s						
BBOO	**Buckleboo**	**43.28**	**241**	P	P	**03 13 02.2**	**0.0**
BBOO				IAmb	IAmb	03 13 22.5	
	comp=Z,17nm,1.4s						
WR0	**Warramunga Arr**	**44.29**	**260**	P	P	**03 13 10.6**	**+0.4**
WR8	**Warramunga Arr**	**44.33**	**260**	P	P	**03 13 09.8**	**-0.6**
WR8				IAmb	IAmb	03 13 28.1	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**44.45**	**260**	P	P	**03 13 11.1**	**-0.2**
WB0				IAmb	IAmb	03 13 12.4	
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	**44.47**	**260**	P	P	**03 13 10.7**	**-0.8**
WRA	**Warramunga Arr**	**44.48**	**260**	P	P	**03 13 11.0**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=96,slow=7.5,SNR=30						
WRA				PcP	**PcP**	**03 14 41.9**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=98,slow=5.0,SNR=2.4						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.48**	**260**	P	P	**03 13 10.4**	**-1.2**
WRA					**PcP**	**03 14 41.7**	**-0.7**
AS31	**Alice Springs**	**44.65**	**254**		P	**03 13 12.9**	**0.0**
AS31				IAmb	IAmb	03 13 13.4	
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**44.65**	**254**	P	P	**03 13 12.9**	**0.0**
	comp=Z,14nm,0.6s,baz=88,slow=8.4,SNR=176						
ASAR				PcP	**PcP**	**03 14 42.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=98,slow=3.3,SNR=2.5						
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**44.65**	**254**	P	P	**03 13 12.6**	**-0.3**
ASAR					**PcP**	**03 14 42.6**	**-0.2**
FORT	**Forrest**	**49.88**	**245**	P	P	**03 13 51.4**	**-0.5**
FORT				IAmb	IAmb	03 13 52.7	
	comp=Z,7.2nm,0.9s						
KNRA	**Kununurra**	**50.33**	**264**	P	P	**03 13 55.4**	**0.0**
KNRA				IAmb	IAmb	03 14 31.6	
	comp=Z,14nm,1.3s						
FITZ	**Fitzroy Crossi**	**52.87**	**261**	P	P	**03 14 13.7**	**0.0**
MBWA	**Marble Bar**	**57.93**	**256**	P	P	**03 14 48.1**	**-0.5**
MBWA				IAmb	IAmb	03 14 57.3	
	comp=Z,12nm,1.2s						
MORW	**Morawa**	**60.35**	**246**	P	P	**03 15 04.2**	**-0.5**
MORW				IAmb	IAmb	03 15 18.2	
	comp=Z,17nm,1.3s						
VNDA	**Vanda**	**60.48**	**185**	P	P	**03 15 04.9**	**+0.2**
GIRL	**Giralia**	**62.75**	**253**	P	P	**03 15 19.7**	**-0.8**
CASY	**Casey**	**66.11**	**205**	P	P	**03 15 40.6**	**-0.2**
QSPA	**South Pole Qui**	**72.19**	**180**	P	P	**03 16 16.8**	**-0.6**
QSPA				IAmb	IAmb	03 16 24.9	
	comp=Z,4.0nm,1.4s						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	P	**03 16 58.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=225,slow=8.2,SNR=4.0						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	P	**03 16 58.4**	**+0.1**
MAW	**Mawson**	**83.85**	**200**	P	P	**03 17 19.4**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=23,slow=14,SNR=1.8						
	comp=Z,0.9nm,0.6s						
MAW	**Mawson**	**83.85**	**200**	P	P	**03 17 19.3**	**-0.2**
ILAR	**Eielson Array**	**85.88**	**13**	P	P	**03 17 28.0**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=227,slow=4.8,SNR=5.0						
	comp=Z,0.1nm,0.4s						
ILAR	**Eielson Array**	**85.88**	**13**	P	P	**03 17 29.4**	**+0.1**
TXAR	**Lajitas Array**	**86.11**	**58**	P	P	**03 17 32.8**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=231,slow=7.9,SNR=4.2						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**86.11**	**58**	P	P	**03 17 31.2**	**-0.1**
GERES	**GERESS Array B**	**147.53**	**345**	PKPbc	**PKPbc**	**03 24 30.0**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=20,slow=3.3,SNR=2.1						
GERES	**GERESS Array B**	**147.53**	**345**		**PKPbc**	**03 24 29.5**	**-0.9**

*IDC **30** 03:23:00.6±1.4, 36°.12N×120°.78W, h0km, mb3.5/2, mbtmp3.4/10, ML3.5/7, MS3.0/3, Error ellipse: s-maj=17.1km s-min=9.7km az=69.0*
*NEIC **30** 03:23:01.6±1.7, 36°.20N±0°.01×120°.763W±0°.009, h10km±1km, mb3.9/5, ML3.7/180, Mwr3.9/109, Mwr3.9/5(NCEDC), Error ellipse: s-maj=2.9km s-min=2.1km az=103.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.20; $M_{\theta\theta}$-7.84; $M_{\phi\phi}$6.64; $M_{r\theta}$-1.16; $M_{r\phi}$4.31; $M_{\theta\phi}$-0.48; Fault plane solution: M_o8.59000×10^{14} NP1:ϕ≈150.39000°, δ81.43000°, λ179.21000°. NP2:ϕ≈240.51000°, δ89.22000°, λ8.57000°. Principal axes: T 7.9203, Plg7.0000°, Azm106.0000°; N 1.2061, Plg81.0000°, Azm246.0000°; P -9.1263, Plg5.0000°, Azm15.0000°;*
*NEIC **30** 03:23:01.5, 36°.18N×120°.75W, h19km*
*NCEDC **30** 03:23:01.9±1.9, 36°.19N±0°.01×120°.77W±0°.02, h9km±6km, Error ellipse: s-maj=2.6km s-min=1.6km az=48.0*

ISC 30 03:23:02.2±0.8, 36°.17N±0°.02×120°.80W±0°.02, h12km±5km, n236, σ1$10/229, mb3.8/4, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPB	**Monarch Peak**	**0.04**	**0**		**Pg**	**03 23 04.0**	**-0.6**
PMPB				Sg	**Sg**	03 23 05.5	-0.6
PPTM	**Peach Tree Val**	**0.09**	**134**		**Pg**	03 23 04.5	-0.4
PSAM	**San Ardo**	**0.16**	**206**		**Pg**	03 23 06.2	+0.3
PSMM	**Smith Mountain**	**0.20**	**121**		**Pg**	03 23 06.4	-0.1
LRC	**Lone Oak Road**	**0.21**	**291**		**Pg**	03 23 06.9	+0.3
PHPM	**Hope Ranch**	**0.25**	**140**		**Pg**	03 23 07.0	-0.3
PCCM	**Crazy Canyon**	**0.30**	**255**		**Pg**	03 23 09.0	+0.7
LRV	**Little Rabbit**	**0.31**	**325**		**Pb**	03 23 08.8	-0.9
PKD	**Bear Valley Ra**	**0.31**	**137**	Pg	**Pg**	03 23 08.1	-0.4
PKD				Sg	**Sg**	03 23 12.2	-0.4
PKD				IAML		03 23 12.8	
	comp=E,13μm,0.6s						
PKD				IAML		03 23 12.8	
	comp=N,13μm,0.6s						
PVCM	**Vineyard Canyo**	**0.33**	**139**		**Pg**	**03 23 08.6**	**-0.2**
PPO	**Portuguese Can**	**0.34**	**154**		**Pb**	03 23 09.3	-0.9
PSTM	**Stockdale Moun**	**0.34**	**135**		**Pg**	03 23 08.5	-0.5
BABI	**Panoche/Babies**	**0.35**	**353**		**Pb**	03 23 09.4	-0.9
TRC	**Taylor Ranch**	**0.35**	**130**		**Pb**	03 23 09.1	-1.2
JCNB	**Joaquin Canyon**	**0.38**	**128**		**Pb**	03 23 09.9	-1.0
HULI	**Fort Hunter Li**	**0.38**	**247**	Pg	**Pb**	03 23 10.2	-0.7
HULI				Sg	**Sb**	03 23 15.6	-1.2
PHGM	**Hog Canyon**	**0.39**	**139**		**Pb**	03 23 10.0	-1.1
PHFM	**Heflinger Ranc**	**0.43**	**132**		**Pg**	03 23 10.6	-0.2
BSGM	**Shirttail Gulc**	**0.44**	**304**		**Pb**	03 23 10.5	-1.3
AVNL	**Avenal, CA USA**	**0.44**	**111**		**Pb**	03 23 11.1	-0.8
CTM	**Castle Mountai**	**0.45**	**122**		**Pb**	03 23 11.5	-0.6
BBGB	**Big Mountain B**	**0.45**	**335**	Pg	**Pb**	03 23 11.7	-0.4
BBGB				Sg	**Sb**	03 23 18.8	-0.1
BMSM	**Mercy Hot Spri**	**0.49**	**1**		**Pb**	03 23 12.2	-0.5
GHIB	**Gold Hill**	**0.50**	**132**		**Pg**	03 23 11.5	-0.4
GHIB	**Gold Hill**	**0.50**	**132**		**Pg**	03 23 11.6	-0.4
BVL	**Bear Valley**	**0.51**	**322**		**Pb**	03 23 11.9	-1.2
LCUV	**Le Cuvier**	**0.52**	**174**		**Pb**	03 23 12.2	-1.1
RAMR	**Ramage Ranch**	**0.54**	**186**		**Pb**	03 23 12.8	-0.8
PKLM	**Kerr Lake**	**0.55**	**137**		**Pb**	03 23 12.6	-1.1
BSMM	**Soledad Missio**	**0.55**	**293**		**Pb**	03 23 12.8	-1.0
TCHL	**Shandon**	**0.58**	**146**		**Pb**	03 23 13.6	-0.8
TCAS	**Cass Winery, P**	**0.59**	**161**		**Pb**	03 23 13.8	-0.8
PMRM	**Maxey Ranch**	**0.60**	**130**		**Pb**	03 23 13.8	-0.9
BJCM	**Johnson Can.**	**0.61**	**308**		**Pb**	03 23 13.5	-1.2
BJOM	**Mount Johnson**	**0.61**	**318**		**Pb**	03 23 13.4	-1.4
SCZ	**Santa Cruz**	**0.65**	**311**		**Pb**	03 23 14.2	-1.2
THIS	**South End of C**	**0.65**	**134**		**Pb**	03 23 14.4	-1.0
TSCN	**Private Proper**	**0.73**	**149**		**Pb**	03 23 16.0	-0.8
BSRM	**Salinas Radio**	**0.76**	**311**		**Pb**	03 23 16.4	-0.9
BPCNC	**Pine Canyon**	**0.78**	**301**		**Pb**	03 23 17.1	-0.6
PTAM	**Tassajara Cree**	**0.78**	**174**		**Pb**	03 23 17.1	-0.7
BPOM	**Post Ranch**	**0.78**	**274**		**Pn**	03 23 17.0	-2.1
BPRM	**Ponciano Ridge**	**0.79**	**288**		**Pb**	03 23 17.0	-0.8
SAO	**San Andreas Ge**	**0.79**	**319**	Pg	**Pb**	03 23 16.9	-0.9
SAO				Sg	**Sb**	03 23 27.5	-1.0
FRP	**Fremont Peak**	**0.80**	**317**		**Pb**	03 23 16.9	-1.2
FRP	**Fremont Peak**	**0.80**	**317**		**Pg**	03 23 16.6	-1.1
LTR	**Lone Tree Road**	**0.82**	**330**		**Pn**	03 23 18.5	-1.1
TRAY	**Twisselman Ran**	**0.83**	**138**		**Pg**	03 23 17.5	-0.7
PBPM	**Bitterwater Pu**	**0.83**	**135**		**Pb**	03 23 17.9	-0.8
HSFM	**Saint Francis**	**0.85**	**319**		**Pb**	03 23 18.1	-0.8
HJGM	**San Juan Grade**	**0.88**	**315**		**Pb**	03 23 18.4	-1.1
PACP	**Pacheco Peak**	**0.92**	**335**		**Pb**	03 23 20.1	-0.1
FORD	**Fort Ord Natur**	**0.94**	**303**	Pg	**Pn**	03 23 20.1	-1.2
FORD				Sg	**Sn**	03 23 33.8	-0.9
HFEM	**San Felipe**	**0.94**	**329**		**Pb**	03 23 20.1	-0.4
SLD	**San Luis Dam**	**0.96**	**340**		**Pb**	03 23 20.4	-0.4
HERM	**Elkhorn Road**	**0.96**	**311**		**Pb**	03 23 20.2	-0.6
HPCM	**Pacheco Lake**	**0.96**	**337**		**Pb**	03 23 20.5	-0.4
HMOM	**Monterey**	**1.00**	**296**		**Pb**	03 23 20.4	-1.1
YEG	**Yeguas Mountai**	**1.00**	**137**		**Pb**	03 23 20.9	-0.7
CSR	**Chase Ranch**	**1.01**	**321**		**Pb**	03 23 20.8	-0.8
HCAM	**Canada Road**	**1.01**	**327**		**Pn**	03 23 21.7	-0.5
PABC	**Pismo Preserve**	**1.02**	**173**		**Pn**	03 23 21.3	-1.0
HCBM	**Chamberlain**	**1.03**	**318**		**Pb**	03 23 20.9	-1.1
GHS	**Gilroy Hot Spr**	**1.06**	**331**		**Pb**	03 23 22.1	-0.4
SMMC	**Simmler**	**1.08**	**142**		**Pb**	03 23 22.0	-0.8
JELB	**Ellicott, Sant**	**1.12**	**313**		**Pg**	03 23 22.3	-1.4
KARE	**Kearney REC, C**	**1.13**	**68**		**Pg**	03 23 21.5	-2.4
VOG	**Valley Oaks Go**	**1.16**	**82**		**Pg**	03 23 21.9	-2.5
CARC	**Carrizo Plain**	**1.16**	**138**		**Pg**	03 23 23.4	-1.1
LEGD	**La Grand CA**	**1.17**	**27**		**Pb**	03 23 22.7	-1.5
CADM	**Anderson Res.**	**1.19**	**326**		**Pg**	03 23 23.7	-1.4
FRI	**Friant**	**1.20**	**47**		**Pn**	03 23 22.8	-2.0
JLAB	**Laurel Hill**	**1.23**	**323**		**Pn**	03 23 24.8	-0.5
CRGC	**Crocker Grade**	**1.28**	**136**		**Pn**	03 23 24.8	-1.1
CCOB	**Coe Ranch Numb**	**1.29**	**327**		**Pn**	03 23 25.5	-0.6
JUCM	**University of**	**1.30**	**310**		**Pn**	03 23 24.0	-2.2
JSTM	**Santa Teresa H**	**1.31**	**323**		**Pn**	03 23 25.1	-1.1
ARN	**Arnold Ranch**	**1.31**	**334**		**Pn**	03 23 25.5	-0.9
MHC	**Mount Hamilton**	**1.35**	**330**	Pn	**Pn**	03 23 26.0	-1.0
MHC				IAML		03 23 53.4	
	comp=N,1μm,0.7s						
MHC				IAML		03 23 57.4	
	comp=E,2μm,0.8s						
LT15	**Bear Creek Roa**	**1.39**	**315**		**Pn**	**03 23 26.9**	**-0.6**
MTOS	**Mt Oso, Westle**	**1.40**	**343**		**Pn**	03 23 26.4	-1.1
CMMM	**Mount Mocho**	**1.40**	**337**		**Pn**	03 23 26.8	-0.8
JJOM	**Saint Joseph's**	**1.40**	**318**		**Pn**	03 23 26.5	-1.1
SCCB	**Santa Clara Co**	**1.40**	**323**		**Pb**	03 23 27.3	-1.0
MHR	**Mount Hamilton**	**1.41**	**327**		**Pn**	03 23 27.4	-0.4
VES	**Vestal, Richgr**	**1.43**	**103**	Pn	**Pn**	**03 23 26.2**	**-1.8**
VES				IAML		03 23 53.1	
	comp=N,1μm,0.6s						
VES				IAML		03 23 53.2	
	comp=E,1μm,0.6s						
JBNB	**Ben Lomond Mou**	**1.45**	**311**		**Pn**	**03 23 26.1**	**-2.1**
CMLM	**Mount Lewis**	**1.47**	**333**		**Pn**	03 23 27.8	-0.8
MBUM	**Mount Bullion**	**1.50**	**23**		**Pn**	03 23 28.0	-1.1
CALM	**Calaveras Res.**	**1.51**	**328**		**Pn**	03 23 28.3	-0.8
PKM	**Mcpherson Peak**	**1.51**	**148**		**Pn**	03 23 28.2	-1.0
JSJM	**St Joseph**	**1.56**	**319**		**Pn**	03 23 29.5	-0.2
CSTL	**Corral Hollow**	**1.57**	**339**		**Pn**	03 23 30.0	+0.2
JBMM	**Black Mountain**	**1.58**	**317**		**Pn**	03 23 28.8	-1.3
JPC	**Peters Creek,**	**1.58**	**314**		**Pn**	03 23 28.6	-1.4
FIGC	**Figueroa Mtn.**	**1.59**	**155**		**Pn**	03 23 29.4	-0.8
BAKC	**Calstate**	**1.61**	**120**		**Pn**	03 23 28.9	-1.5
JPSM		**1.61**	**310**		**Pn**	03 23 28.6	-1.8
JFP	**Foothills Park**	**1.63**	**317**		**Pn**	03 23 29.6	-1.1
WENL	**Wente Vineyard**	**1.64**	**332**		**Pn**	03 23 30.4	-0.4
SPG2	**Springville 2**	**1.65**	**88**		**Pn**	03 23 29.0	-2.0
JSFB	**Stanford Teles**	**1.65**	**319**		**Pn**	03 23 30.3	-0.7
KCC	**Kaiser Creek**	**1.66**	**46**		**Pn**	03 23 30.3	-0.9
BCW	**Bitter Crk WRg**	**1.67**	**137**		**Pn**	03 23 30.7	-0.7
CBZL	**Buffer Zone**	**1.69**	**334**		**Pn**	03 23 31.6	+0.2
JRSC	**Jasper Ridge**	**1.69**	**317**	Pn	**Pn**	**03 23 30.3**	**-1.1**
JRSC				IAML		03 24 03.3	
	comp=N,961nm,1.0s						
JRSC				IAML		03 24 09.0	
	comp=E,979nm,1.3s						
CNIC	**Niles Canyon**	**1.71**	**327**		**Pn**	**03 23 31.1**	**-0.7**
NJQ	**Nojoqui County**	**1.71**	**162**		**Pn**	03 23 31.1	-0.7
SYP	**Santa Ynez Pea**	**1.77**	**157**		**Pn**	03 23 31.9	-1.0
CBSNC	**Byron Hot Spri**	**1.77**	**338**		**Pn**	03 23 32.7	0.0
CLCB	**Lake Chabot**	**1.86**	**327**		**Pn**	03 23 33.2	-0.7
JCPM	**Coyote Point**	**1.87**	**320**		**Pn**	03 23 33.1	-0.8
WASM	**Alta Sierra Ca**	**1.87**	**103**		**Pn**	03 23 33.0	-1.2
CSLM	**San Leandro Hi**	**1.88**	**326**		**Pn**	03 23 33.5	-0.6
CMB	**Columbia Colle**	**1.89**	**10**	Pn	**Pn**	03 23 33.7	-0.6
JEGM	**El Granada**	**1.89**	**316**		**Pn**	03 23 33.6	-0.7
SAC	**San Andreas**	**1.91**	**318**		**Pn**	03 23 33.8	-0.9
ARVC	**Arvin**	**1.91**	**122**		**Pn**	03 23 32.9	-1.8
BGC	**Bolinger Road**	**1.93**	**329**		**Pn**	03 23 34.1	-0.7
SBC	**Santa Barbara**	**1.94**	**152**		**Pn**	03 23 34.5	-0.5
CMCM	**Mills College**	**1.95**	**326**		**Pn**	03 23 34.7	-0.4
CRPB	**Russellman Par**	**1.95**	**333**		**Pn**	03 23 35.0	-0.1
ISA	**Isabella, Lake**	**1.96**	**104**	Pn	**Pn**	**03 23 34.5**	**-0.8**
ISA				IAML		03 24 03.2	
	comp=E,603nm,0.5s						
ISA				IAML		03 24 06.0	
	comp=N,762nm,0.5s						
TEJ	**El Tejon**	**1.96**	**118**		**Pn**	**03 23 32.9**	**-2.4**
BDM	**Black Diamond**	**1.97**	**335**		**Pn**	03 23 35.2	-0.3
JSBM	**San Bruno Moun**	**1.97**	**320**		**Pn**	03 23 34.2	-1.3
JMGM	**Milagra Ridge**	**1.98**	**318**		**Pn**	03 23 34.3	-1.3
MDPB	**Devils Postpil**	**2.01**	**43**	Pn	**Pn**	**03 23 36.4**	**+0.2**
MDPB				IAML		03 24 05.3	
	comp=E,1μm,0.5s						
LOK	**Lockwood Valle**	**2.01**	**135**		**Pn**	**03 23 34.9**	**-1.2**
WLHM	**Little Horse**	**2.01**	**90**		**Pn**	03 23 35.9	-0.4
MMPM	**Mammoth Pass**	**2.02**	**44**		**Pn**	03 23 36.6	+0.2
TJR	**Tejon Ranch**	**2.03**	**124**		**Pn**	03 23 34.3	-1.9
MINS	**Minaret Summit**	**2.03**	**43**		**Pn**	03 23 36.8	+0.2
MLIM	**Lincoln Peak**	**2.04**	**44**		**Pn**	03 23 37.0	+0.2
MLIM	**Lincoln Peak**	**2.04**	**44**		**Pn**	03 23 37.3	+0.5
BRIB	**Briones**	**2.05**	**329**		**Pn**	03 23 35.9	-0.7
BKS	**Berkeley--Byer**	**2.05**	**326**		**Pn**	03 23 35.8	-0.7
VAK	**Adit at Lawren**	**2.06**	**326**		**Pn**	03 23 36.1	-0.5
BL67	**Building 67, L**	**2.06**	**326**		**Pn**	03 23 36.0	-0.7
BRK	**Berkeley--Havi**	**2.06**	**326**		**Pn**	03 23 36.1	-0.6
MDYM	**Dry Creek**	**2.06**	**43**		**Pn**	03 23 37.6	+0.6
MMLB	**Mammoth Lakes**	**2.08**	**44**		**Pn**	03 23 37.9	+0.6
MDCM	**Deadman Creek**	**2.08**	**42**		**Pn**	03 23 37.7	+0.4
MLCM	**Laurel Creek C**	**2.09**	**46**		**Pn**	03 23 37.6	+0.4
JPRM	**Presidio of Sa**	**2.10**	**321**		**Pn**	03 23 37.1	-0.1
MGPM	**Gravel Pit**	**2.10**	**46**		**Pn**	03 23 38.0	+0.5
MCMM	**Convict Lake**	**2.11**	**47**		**Pn**	03 23 38.3	+0.7
MEMM	**East Mammoth H**	**2.11**	**44**		**Pn**	03 23 38.1	+0.5
MCBM	**Casa Benchmark**	**2.12**	**46**		**Pn**	03 23 38.3	+0.6
MCSM	**Casa Diablo Ho**	**2.12**	**45**		**Pn**	03 23 38.4

GSC	**Goldstone, Bar**	**3.36**	**104**	IAML			03 24 52.1		
	comp=N,232nm,1.1s								
GSC				IAML			03 24 57.6		
	comp=E,282nm,0.7s								
ORV	**Oroville**	**3.42**	**351**			**Pn**	**03 23 54.2**	**-1.2**	
WCT	**Wildcat Mounta**	**3.42**	**78**			**Pn**	**03 23 55.2**	**-0.3**	
TPH	**Tonopah**	**3.43**	**55**			**Pn**	**03 23 54.2**	**-1.5**	
TPH				IAML			03 25 04.0		
	comp=E,164nm,0.8s								
TPH				IAML			03 25 10.0		
	comp=N,175nm,0.9s								
KVN	**Kaiserville**	**3.59**	**36**			**Pn**	**03 23 56.8**	**-1.0**	
KVN				IAML			03 24 57.7		
	comp=E,95nm,0.7s								
KVN				IAML			03 24 58.0		
	comp=N,109nm,1.2s								
PAHR	**Pah Rah Range**	**3.70**	**17**	Pn		**Pn**	**03 23 60.0**	**+0.6**	
PAHR				IAML			03 24 59.9		
	comp=N,124nm,1.3s								
PAHR				IAML			03 25 01.9		
	comp=E,197nm,1.0s								
BEKR	**Beckworth**	**3.71**	**5**	IAML			03 25 01.7		
	comp=E,200nm,0.6s								
BEKR				IAML			03 25 06.0		
	comp=N,106nm,0.9s								
TPNV	**Topopah Spring**	**3.75**	**77**	IAML			03 25 19.6		
	comp=N,141nm,1.0s								
TPNV				IAML			03 25 29.6		
	comp=N,131nm,1.1s								
O03E	**Paynes Creek**	**4.19**	**349**	Pn		**Pn**	**03 24 06.4**	**+0.3**	
O03E				IAML			03 25 31.6		
	comp=E,177nm,1.4s								
O03E				IAML			03 25 36.3		
	comp=N,112nm,0.9s								
MTPC	**Mountain Pass**	**4.32**	**98**	IAML			03 25 27.6		
	comp=N,60nm,1.2s								
PFO	**Pinyon Flats O**	**4.39**	**124**	Pn		**Pn**	**03 24 08.3**	**-0.5**	
	comp=N,5.1nm,0.3s,baz=307,slow=12,SNR=61								
PFO				Sn		**Sn**	**03 24 59.3**	**-0.6**	
	comp=N,3.3nm,0.3s,baz=324,slow=15,SNR=7.9								
	comp=N,14nm,0.4s								
PFO	**Pinyon Flats O**	**4.39**	**124**	Pn		**Pn**	**03 24 08.1**	**-0.6**	
PFO				IAML			03 25 03.9		
	comp=N,52nm,1.1s								
BELC	**Belle Mtn. Jos**	**4.50**	**117**	IAML			03 25 42.7		
	comp=N,67nm,0.9s								
BELC				IAML			03 25 43.1		
	comp=E,57nm,1.2s								
HATC	**Hat Creek Radi**	**4.67**	**354**	IAML			03 26 06.3		
	comp=N,118nm,1.5s								
DANC	**Danby, Needles**	**4.68**	**107**	IAML			03 26 02.8		
	comp=N,137nm,1.1s								
PRN	**Pahroc Range**	**4.78**	**73**	Pn		**Pn**	**03 24 13.8**	**-0.3**	
PRN				IAML			03 25 39.6		
	comp=N,89nm,0.8s								
BC3	**Big Chuckawall**	**5.06**	**118**	IAML			03 25 54.3		
	comp=E,37nm,1.1s								
BC3				IAML			03 25 55.4		
	comp=N,47nm,1.2s								
BMN	**Battle Mountai**	**5.10**	**32**	IAML			03 25 48.6		
	comp=E,41nm,1.3s								
BMN				IAML			03 25 55.2		
	comp=N,49nm,1.4s								
CBX	**Cerro Bola**	**5.15**	**137**	IAML			03 25 54.2		
	comp=N,45nm,1.2s								
CBX				IAML			03 26 03.0		
	comp=E,44nm,1.2s								
YBH	**Yreka Blue Hor**	**5.75**	**346**	Pn		**Pn**	**03 24 29.1**	**+1.7**	
	comp=E,0.2nm,0.3s,baz=158,slow=11,SNR=5.4								
YBH				LR		LR	03 26 59.4		
	comp=E,170nm,18.0s,baz=76,slow=41								
	comp=E,1.1nm,0.5s								
ELK	**Elko**	**6.32**	**42**	Pn		**Pn**	**03 24 36.8**	**+1.4**	
	comp=E,0.3nm,0.3s,baz=232,slow=14,SNR=7.3								
ELK				Lg		Lg	03 26 13.5		
	comp=E,0.5nm,0.3s,baz=286,slow=12,SNR=3.2								
	comp=E,1.7nm,0.6s								
PDAR	**Pinedale Array**	**10.90**	**49**	Pn		**Pn**	**03 25 42.8**	**+4.6**	
	comp=E,0.1nm,0.3s,baz=252,slow=17,SNR=9.3								
	comp=E,1.6nm,0.9s								
ANMO	**Albuquerque**	**11.75**	**92**	Pn		**Pn**	**03 25 50.6**	**+0.8**	
	comp=E,0.4nm,0.6s,baz=264,slow=18,SNR=2.0								
NEW	**Newport**	**12.39**	**12**	Pn		**Pn**	**03 26 02.1**	**+3.8**	
	comp=E,0.1nm,0.3s,baz=176,slow=14,SNR=2.9								
NEW				LR		LR	03 31 01.3		
	comp=E,147nm,19.1s,baz=178,slow=39								
	comp=E,1.9nm,1.0s								
HOLB	**Holberg**	**15.40**	**342**			**P**	**03 26 47.6**	**+3.8**	
TXAR	**Lajitas Array**	**15.94**	**110**	Pn		**P**	**03 26 49.5**	**-0.5**	
	baz=289,slow=12,SNR=5.2								
	comp=E,0.3nm,0.6s								
EDM	**Edmonton**	**17.83**	**15**	P		**P**	**03 27 11.9**	**+1.1**	
GC02	**Grant County #**	**18.45**	**81**	P		**Pn**	**03 27 19.3**	**+1.5**	
FFC	**Flin Flon**	**22.64**	**29**	P		**P**	**03 28 02.9**	**-0.1**	
FFC				IAmb		IAmb	03 28 04.6		
	comp=Z,3.5nm,0.8s								
ULM	**Lac du Bonnet**	**22.84**	**44**	P		**P**	**03 28 05.6**	**+0.5**	
	comp=Z,2.4nm,0.8s,baz=252,slow=11,SNR=5.1								
	comp=Z,2.4nm,0.8s								
ULM	**Lac du Bonnet**	**22.84**	**44**	IAmb		IAmb	03 28 12.7		
	comp=Z,3.7nm,0.9s								
S32K	**Killisnoo**	**23.21**	**341**	P		**P**	**03 28 06.5**	**-2.2**	
S32K				IAmb		IAmb	03 28 29.8		
	comp=Z,4.5nm,1.2s								
ILAR	**Eielson Array**	**32.61**	**340**	P		**P**	**03 29 34.0**	**+0.6**	
	comp=Z,0.4nm,0.9s,baz=178,slow=5.3,SNR=4.8								
	comp=Z,0.4nm,0.9s								

IDC 30 03:27:29.2±6.1, 30°66N×141°91E, h0km, mb3.5/2, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=260.9km s-min=23.8km az=73.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.05**	**324**	Pn	Pn	03 28 18.3	-0.4
	2.6nm,0.3s,baz=67,slow=15,SNR=1.1						
JHJ				Sn	Sn	03 28 48.2	-7.8
	6.1nm,0.3s,baz=72,slow=20,SNR=2.7						
	60nm,0.6s						
JCJ	**Chichijima**	**3.56**	**176**	Pn	Pn	03 28 25.6	-0.1
	3.7nm,0.3s,baz=11,slow=20,SNR=6.6						
JCJ				Sn	Sn	03 29 05.4	-3.0
	12nm,0.3s,baz=355,slow=22,SNR=8.2						
	10nm,0.5s						
MJAR	**Matsushiro Arr**	**6.63**	**333**	Pn	Pn	03 29 07.8	-0.2
	0.1nm,0.3s,baz=150,slow=11,SNR=6.0						
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**50.83**	**189**	P	P	03 36 31.8	0.0
	0.2nm,0.3s,baz=6.8,slow=7.5,SNR=4.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**54.56**	**189**	P	P	03 36 59.0	-0.3
	0.3nm,0.4s,baz=12,slow=6.4,SNR=1.3						
	0.3nm,0.4s						

*IDC **30** 04:08:59.2±2.3, 9°06N×126°36E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=241.3km s-min=22.0km az=68.0*
*NEIC **30** 04:09:05.5±1.2, 9°0N±0°1×126°4E±0°1, h43km±2km, mb4.5/12, Error ellipse: s-maj=18.4km s-min=15.7km az=103.0*
*MAN **30** 04:09:09.0, 8°97N×126°20E, h45km, MS3.8*
ISC 30 04:09:07.9±0.7, 8°99N±0°04×126°27E±0°05, h70km±6km, n42, σ1°48/50, mb4.3/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSP	**Tandag City**	**0.09**	**309**	*e*P	**Pn**	**04 09 17.4**	**-0.7**
TSSP				*e*S	**Sn**	**04 09 26.6**	**+1.0**
BUTP	**Butuan**	**0.64**	**268**	*i* P	**Pn**	**04 09 22.2**	**0.0**
BUTP				*i* S	**Sn**	**04 09 32.6**	**-0.1**
BIPH	**Bislig**	**0.80**	**174**	*e*P	**Pn**	**04 09 24.2**	**+0.2**
BIPH				*e*S	**Sn**	**04 09 37.3**	**+1.4**
CDOP	**Cateel, Davao**	**1.21**	**172**	*i* P	**Pn**	**04 09 30.8**	**+1.7**
CDOP				*i* S	**Sn**	**04 09 47.0**	**+2.2**
BUKP	**Musuan**	**1.62**	**227**	*e*P	**Pn**	**04 09 36.0**	**+1.4**
BUKP				*e*S	**Sn**	**04 09 57.4**	**+2.7**
CGP	**Cagayan de Oro**	**1.65**	**251**	*i* P	**Pn**	**04 09 34.8**	**0.0**
CGP				*i* S	**Sn**	**04 09 54.8**	**-0.4**
DMPH	**Davao City--Mi**	**2.04**	**202**	*e*P	Pn	04 09 46.1	+6.0
DMPH				*i* S	Sn	04 10 33.1	+28
KCP	**Kidapawan**	**2.29**	**211**	*e*P	**Pn**	**04 09 45.9**	**+2.3**
KCP				*e*S	**Sn**	**04 10 12.4**	**+1.7**
TBP	**Tagbilaran**	**2.48**	**287**	*e*P	**Pn**	**04 09 47.3**	**+1.3**
TBP				*e*S	**Sn**	**04 10 17.3**	**+2.1**
PLP	**Palo**	**2.51**	**330**	*e*P	**Pn**	**04 09 48.6**	**+2.2**
PLP				*e*S	**Sn**	**04 10 20.3**	**+4.2**
LSIP	**Lazi, Siquijor**	**2.61**	**273**	*i* P	**Pn**	**04 09 49.0**	**+1.2**
LSIP				*i* S	**Sn**	**04 10 17.5**	**-1.0**
LLP	**Lapu-Lapu**	**2.63**	**300**	*e*P	**Pn**	**04 09 50.6**	**+2.5**
LLP				*i* S	**Sn**	**04 10 21.0**	**+2.1**
CTBH	**Cotabato--PC H**	**2.66**	**229**	*i* P	**Pn**	**04 09 49.9**	**+1.4**
DCPH	**Dipolog City**	**2.91**	**262**	*i* P	**Pn**	**04 09 52.8**	**+0.8**
DCPH				*i* S	**Sn**	**04 10 22.8**	**-3.0**
MYLDM	**Lahad Datu**	**8.59**	**244**	Pn	**Pn**	**04 11 09.3**	**-0.3**
MAJO	**Matsushiro**	**29.50**	**20**	P	**P**	**04 15 03.6**	**-2.0**
MAJO				IAmb	IAmb	04 15 16.9	
	comp=Z,5.3nm,0.5s						
WB0	**Warramunga Arr**	**29.67**	**164**	P	**P**	**04 15 06.6**	**-0.6**
WB0				IAmb	IAmb	04 15 45.7	
	comp=Z,7.7nm,1.2s						
WRA	**Warramunga Arr**	**29.82**	**165**	P	**P**	**04 15 08.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=344,slow=8.8,SNR=2.3						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**29.82**	**165**	P	**P**	**04 15 07.1**	**-1.4**
WR8	**Warramunga Arr**	**29.88**	**164**	P	**P**	**04 15 08.2**	**-0.8**
WR8				IAmb	IAmb	04 15 45.1	
	comp=Z,6.5nm,1.1s						
PBA	**Port Blair**	**33.08**	**278**	P	**P**	**04 15 37.9**	**+0.6**
ASAR	**Alice Springs**	**33.30**	**167**	P	**P**	**04 15 39.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=346,slow=8.4,SNR=4.6						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**33.30**	**167**	P	**P**	**04 15 37.4**	**-1.7**
USA0B	**Ussuriysk Arra**	**35.43**	**7**	P	**P**	**04 15 56.7**	**-0.6**
USA0B				IAmb	IAmb	04 16 14.3	
	comp=Z,4.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**35.43**	**7**	P	**P**	**04 15 56.1**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**40.30**	**72**	T	T	04 59 41.8	
	baz=262,slow=75,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	04 59 47.4	
	baz=262,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	04 59 40.4	
	baz=262,slow=75,SNR=5.7						
BBOO	**Buckleboo**	**42.60**	**168**	P	**P**	**04 16 58.3**	**+1.1**
BBOO				IAmb	IAmb	04 16 60.0	
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**53.05**	**323**	P	**P**	**04 18 18.8**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=118,slow=8.3,SNR=4.4						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**53.05**	**323**	P	**P**	**04 18 17.6**	**-0.4**
ZALV	**Zalesovo Beam**	**55.75**	**332**	P	**P**	**04 18 38.4**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=134,slow=10,SNR=1.8						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**55.75**	**332**	P	**P**	**04 18 37.9**	**+0.6**
KURK	**Kurchatov**	**57.12**	**326**	P	**P**	**04 18 47.7**	**+0.5**
KURBB	**Kurchatov Arra**	**57.13**	**326**	P	**P**	**04 18 46.8**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=129,slow=6.6,SNR=6.2						
	comp=Z,0.7nm,0.8s						
SHEM	**Shemya Is, Ala**	**58.23**	**32**	P	**P**	**04 18 54.5**	**-0.3**
SMY	**Shemya**	**58.23**	**32**	P	**P**	**04 18 54.2**	**-0.7**
AB31	**Akbulak array**	**67.84**	**320**	P	**P**	**04 19 58.7**	**0.0**
ABKAR	**Akbulak array**	**67.84**	**320**	P	**P**	**04 19 58.0**	**-0.7**
J14K	**Nanvaranak Lak**	**73.02**	**27**	P	**P**	**04 20 29.1**	**-0.8**
J14K				IAmb	IAmb	04 20 47.8	
	comp=Z,11nm,1.2s						
FINES	**FINESS Array B**	**87.01**	**332**	P	**P**	**04 21 45.2**	**-0.2**
	comp=Z,4.1nm,1.1s,baz=83,slow=3.2,SNR=2.1						
	comp=Z,4.1nm,1.1s						
FINES	**FINESS Array B**	**87.01**	**332**	P	**P**	**04 21 45.9**	**+0.5**

*BEO **30** 04:28:57.6±2.6, 39°13N×20°13E, h0km, ML3.1/9*
*THE **30** 04:29:00.8, 39°4N±0°6×20°3E±0°8, h2km±1km, M3.1/19, MLh3.1/19*
*PDG **30** 04:29:00.0±0.5, 39°44N×20°18E, h4km±1km, ML3.1/11, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*
*IDC **30** 04:29:00.1±1.2, 39°62N×20°41E, h0km, mb3.6/7, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=24.2km s-min=19.2km az=68.0*
*TIR **30** 04:29:00.3, 39°41N×20°29E, h12km, MI3.2/3*
*ATH **30** 04:29:00.5, 39°41N×20°29E, h5km±1km, ML3.1/14, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
ISC 30 04:29:00.6±0.9, 39°41N±0°02×20°30E±0°02, h7km±6km, n103, σ0s99/131, mb3.6/6, 4C-7D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.13**	**12**	P	**Pg**	**04 29 03.4**	**0.0**
IGT				S	**Sg**	**04 29 04.6**	**-0.7**
IGT				AML	AML	04 29 05.7	
	515nm,0.2s						
IGT	**Igoumenitsa**	**0.13**	**12**	P	**Pg**	**04 29 03.3**	**0.0**
IGT				S	**Sg**	**04 29 04.7**	**-0.5**
IGT	**Igoumenitsa**	**0.13**	**12**	P	**Pg**	**04 29 03.3**	**0.0**
PRGA	**Parga**	**0.14**	**146**	P	**Pg**	**04 29 03.6**	**0.0**
LFKM	**Lefkimmi**	**0.19**	**282**	P	**Pg**	**04 29 06.1**	**+1.8**
KEK	**Kerkira**	**0.49**	**309**	P	**Pg**	**04 29 10.0**	**-0.2**
KEK				P	**Pg**	**04 29 10.0**	**-0.2**
KEK				S	**Sb**	**04 29 17.8**	**-1.2**
KEK				S	**Sg**	**04 29 18.0**	**+1.4**
KEK	**Kerkira**	**0.49**	**309**	P	**Pg**	**04 29 09.9**	**-0.2**
KEK				S	**Sg**	**04 29 16.7**	**+0.1**
KEK	**Kerkira**	**0.49**	**309**	P	**Pg**	**04 29 09.9**	**-0.2**
JAN	**Janina**	**0.49**	**59**	P	**Pg**	**04 29 10.2**	**0.0**
JAN				S	**Sg**	**04 29 17.6**	**+0.9**
JAN	**Janina**	**0.49**	**59**	P	**Pg**	**04 29 10.1**	**0.0**
SRN	**Sarande**	**0.53**	**334**	P	**Pb**	**04 29 11.1**	**-1.1**
SRN				S	**Sb**	**04 29 19.1**	**-0.9**
SRN				AML	AML	04 29 27.4	
	3.3nm,0.4s						
SRN	**Sarande**	**0.53**	**334**	P	**Pb**	**04 29 11.1**	**-1.1**
SRN				S	**Sb**	**04 29 19.3**	**-1.7**
PRMD	**Pramanda**	**0.63**	**78**	P	**Pg**	**04 29 12.9**	**+0.1**
PRMD				S	**Sb**	**04 29 22.5**	**-0.5**
PRMD	**Pramanda**	**0.63**	**78**	P	**Pg**	**04 29 12.8**	**+0.1**
TSLK	**Tsoukalades, L**	**0.64**	**154**	P	**Pg**	**04 29 13.2**	**+0.2**
TSLK				S	**Sb**	**04 29 23.5**	**+0.2**
TSLK	**Tsoukalades, L**	**0.64**	**154**	P	**Pg**	**04 29 13.1**	**+0.2**
LKD2	**Lefkada island**	**0.68**	**156**	P	**Pg**	**04 29 13.8**	**+0.2**
LKD2				S	**Sn**	**04 29 27.0**	**-0.5**
LKD2				AML	AML	04 29 32.6	
	4.7nm,0.6s						
LKD2	**Lefkada island**	**0.68**	**156**	P	**Pg**	**04 29 13.6**	**-0.1**
LKD2	**Lefkada island**	**0.68**	**156**	P	**Pg**	**04 29 13.5**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.75**	**163**	P	**Pg**	**04 29 15.1**	**+0.1**
DRAG	**Dragano-Lefkad**	**0.75**	**163**	P	**Pg**	**04 29 15.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.76**	**156**	P	**Pg**	**04 29 15.0**	**-0.1**
TETR	**Tetrakomo, Epi**	**0.76**	**94**	P	**Pg**	**04 29 14.8**	**-0.4**
TETR				S	**Sb**	**04 29 26.9**	**+0.2**
TETR	**Tetrakomo, Epi**	**0.76**	**94**	P	**Pg**	**04 29 14.7**	**-0.5**
EVGI	**Lefkada island**	**0.83**	**160**	P	**Pg**	**04 29 16.6**	**0.0**
EVGI	**Lefkada island**	**0.83**	**160**	P	**Pg**	**04 29 16.4**	**-0.2**
AMPL	**Ampelaki**	**0.86**	**124**	P	**Pg**	**04 29 17.4**	**+0.3**
AMPL	**Ampelaki**	**0.86**	**124**	P	**Pg**	**04 29 17.4**	**+0.3**
FSK	**Fiskardo**	**0.97**	**168**	P	**Pb**	**04 29 19.7**	**0.0**
FSK	**Fiskardo**	**0.97**	**168**	P	**Pg**	**04 29 18.0**	**-1.2**
KPRO	**Kipourio**	**0.99**	**56**	P	**Pg**	**04 29 19.4**	**-0.2**
KPRO	**Kipourio**	**0.99**	**56**	P	**Pg**	**04 29 18.8**	**-0.7**
VSK1	**VASILIKIADES**	**1.02**	**168**	P	**Pg**	**04 29 20.1**	**0.0**
PENT	**Pentalofos**	**1.02**	**39**	P	**Pg**	**04 29 20.0**	**-0.2**
PENT	**Pentalofos**	**1.02**	**39**	P	**Pg**	**04 29 19.9**	**-0.3**
SMHA	**Samh**	**1.19**	**167**	P	**Pg**	**04 29 22.5**	**-0.8**
PVO	**Paravola**	**1.24**	**129**	P	**Pg**	**04 29 24.1**	**-0.2**
PVO	**Paravola**	**1.24**	**129**	P	**Pg**	**04 29 24.1**	**-0.2**
VLS	**Valsamata**	**1.25**	**169**	P	**Pg**	**04 29 23.9**	**-0.6**
VLS	**Valsamata**	**1.25**	**169**	P	**Pg**	**04 29 23.5**	**-1.0**
EVR	**Evrytania**	**1.27**	**112**	P	**Pn**	**04 29 25.4**	**+0.5**
KBN	**Korca**	**1.27**	**17**	P	**Pn**	**04 29 25.9**	**+1.0**
PLEV	**Plevrona-Mesol**	**1.32**	**139**	P	**Pn**	**04 29 25.0**	**-0.4**
PLEV	**Plevrona-Mesol**	**1.32**	**139**	P	**Pn**	**04 29 24.7**	**-0.7**
THL	**Klokotos Trika**	**1.34**	**83**	P	**Pg**	**04 29 26.3**	**+0.1**
THL	**Klokotos Trika**	**1.34**	**83**	P	**Pg**	**04 29 26.2**	**0.0**
THL	**Klokotos Trika**	**1.34**	**83**	P	**Pb**	**04 29 25.9**	**0.0**
RTZL	**Ratzakli, Kefa**	**1.38**	**164**	P	**Pb**	**04 29 26.8**	**+0.1**
RTZL	**Ratzakli, Kefa**	**1.38**	**164**	P	**Pn**	**04 29 26.5**	**+0.2**
KZN	**Kozani**	**1.45**	**51**	P	**Pg**	**04 29 28.1**	**-0.3**
AXS	**Araxos**	**1.47**	**145**	P	**Pn**	**04 29 27.6**	**0.0**
AXS	**Araxos**	**1.47**	**145**	P	**Pn**	**04 29 27.7**	**+0.1**
AGRP	**Agrapidokambos**	**1.50**	**132**	P	**Pn**	**04 29 28.0**	**0.0**
ANX	**Ano Chora**	**1.50**	**122**	P	**Pb**	**04 29 29.0**	**+0.1**
OHR	**Ohrid**	**1.75**	**12**	*i* Pn	**Pg**	**04 29 34.8**	**+0.7**
OHR				*i* Sn	**Sg**	**04 30 00.4**	**+3.7**
PHP	**Peshkopia**	**2.28**	**3**	P	**Pb**	**04 29 40.7**	**-1.4**
VAY	**Valandovo**	**2.58**	**41**	*i* Pn	**Pn**	**04 29 44.6**	**+1.8**
VAY				*i* Sn	**Sb**	**04 30 17.5**	**-1.6**
ULC	**Ulcinj**	**2.68**	**343**	*i* Pn	**Pn**	**04 29 44.2**	**0.0**
ULC				*i* Sn	**Sn**	**04 30 18.7**	**+1.8**
SKO	**Skopje**	**2.71**	**18**	*e*Pn	**Pg**	**04 29 51.9**	**-0.5**
SKO				*i* Sn	**Sb**	**04 30 23.3**	**+0.6**
DRME	**Dracevica, Mon**	**2.90**	**343**	*i* Pn	**Pn**	**04 29 47.7**	**+0.5**
DRME				*i* Sn	**Sn**	**04 30 23.6**	**+1.2**
SRS	**Serrai**	**3.04**	**55**	*e*Pn	**Pn**	**04 29 50.1**	**+0.9**
BUM	**Brajici-Budva**	**3.08**	**340**	*i* Pn	**Pn**	**04 29 49.6**	**-0.2**
BUM				*i* Sn	**Sn**	**04 30 28.1**	**+1.2**
PEHC	**Pehcevo**	**3.09**	**39**	*i* Pn	**Pn**	**04 29 51.3**	**+1.4**
PDG	**Podgorica**	**3.12**	**346**	*e*Pn	**Pn**	**04 29 50.9**	**+0.7**
PDG	**Podgorica**	**3.12**	**346**	*i* Pn	**Pn**	**04 29 50.0**	**-0.2**
PDG				*i* Sn	**Sn**	**04 30 29.6**	**+1.8**
PVY	**Plav**	**3.20**	**355**	*i* Pn	**Pn**	**04 29 52.5**	**+1.1**
PVY				*i* Sn	**Sn**	**04 30 31.3**	**+1.5**
CEME	**Cevo**	**3.31**	**342**	*i* Pn	**Pn**	**04 29 52.7**	**-0.1**
CEME				*i* Sn	**Sn**	**04 30 33.7**	**+1.3**
HCY	**Herceg Novi**	**3.33**	**336**	*i* Pn	**Pn**	**04 29 52.8**	**-0.3**
HCY				*i* Sn	**Sn**	**04 30 34.0**	**+1.0**
IVA	**Berane**	**3.48**	**355**	*i* Pn	**Pn**	**04 29 56.1**	**+0.9**
IVA				*i* Sn	**Sn**	**04 30 37.9**	**+1.3**
KOME	**Kolasin**	**3.49**	**350**	*i* Pn	**Pn**	**04 29 56.4**	**+1.0**
KOME				*i* Sn	**Sn**	**04 30 38.0**	**+1.0**
BOSS	**Bosilegrad**	**3.50**	**27**	*e*Pn	**Pn**	**04 29 57.2**	**+1.7**
BARS	**Barje**	**3.59**	**18**	*e*Pn	**Pn**	**04 29 57.9**	**+1.2**
TREB	**Trebinje**	**3.62**	**337**	*e*Pn	**Pn**	**04 29 56.6**	**-0.5**
BRY	**Bratogost**	**3.74**	**340**	*i* Pn	**Pn**	**04 29 58.4**	**-0.4**
BRY				*i* Sn	**Sn**	**04 30 43.9**	**+0.8**
SELS	**Selova**	**3.86**	**9**	*e*Pn	**Pn**	**04 30 01.1**	**+0.7**
SJES	**Sjenica**	**3.86**	**356**	*e*Pn	**Pn**	**04 30 02.0**	**+1.5**
VTS	**Vitosha**	**3.90**	**34**	*e*Pn	**Pn**	**04 30 02.9**	**+1.8**
UPM	**Unac-Piva**	**3.94**	**345**	*i* Pn	**Pn**	**04 30 01.4**	**-0.2**
UPM				*i* Sn	**Sn**	**04 30 48.5**	**+0.4**
STON	**Ston**	**3.98**	**331**	*e*Pn	**Pn**	**04 30 01.3**	**-0.7**
ZAPS	**Zavoj**	**4.25**	**24**	*e*Pn	**Pn**	**04 30 07.7**	**+2.0**
BOVS	**Bovan**	**4.36**	**14**	*e*Pn	**Pn**	**04 30 07.7**	**+0.5**
GRUS	**Gruza**	**4.49**	**4**	*e*Pn	**Pn**	**04 30 10.5**	**+1.5**
BBLS	**Lazi&#263i**	**4.51**	**352**	*e*Pn	**Pn**	**04 30 10.9**	**+1.6**
DIVS	**Divibare**	**4.69**	**357**	*e*Pn	**Pn**	**04 30 12.0**	**+0.1**
IDI	**Anoyia**	**5.50**	**137**	Pn	**Pn**	**04 30 25.6**	**+2.6**
	8.8nm,0.9s,baz=338,slow=16,SNR=3.4						
IDI				Sn	**Sn**	**04 31 23.9**	**-2.6**
	1.0nm,0.3s,baz=299,slow=19,SNR=6.2						
BOJS	**Bojanci**	**7.14**	**330**	*e*Pn	**Pn**	**04 30 45.4**	**-0.1**
CRES	**Cresnjevec Ost**	**7.34**	**332**	*i* Pn	**Pn**	**04 30 47.5**	**-0.6**
GBRS	**Gornja Briga**	**7.34**	**328**	*i* Pn	**Pn**	**04 30 48.3**	**+0.1**
KNDS	**Knezji Dol**	**7.52**	**326**	*i* Pn	**Pn**	**04 30 50.3**	**+2.4**
SKDS	**Skadanscina**	**7.69**	**325**	*e*Pn	**Pn**	**04 30 52.1**	**-0.9**
OBKA	**Obir**	**8.25**	**331**	*i* Pn	**Pn**	**04 31 01.0**	**+0.2**
	1.0nm,0.2s						
SQTA	**Sankt Quirin**	**10.23**	**323**	*e*Pn	**Pn**	**04 31 28.0**	**0.0**
	1.9nm,0.4s						
FETA	**Feichten**	**10.32**	**321**	*e*Pn	**Pn**	**04 31 29.3**	**+0.1**
	0.1nm,0.2s						
MOTA	**Moosalm**	**10.37**	**323**	*e*Pn	**Pn**	**04 31 30.4**	**+0.5**
	1.7nm,0.4s						
GERES	**GERESS Array B**	**10.56**	**336**	Pn	**Pn**	**04 31 31.1**	**-1.2**
	baz=143,slow=13,SNR=5.2						
	0.5nm,0.4s						
ESDC	**Sonseca Array**	**18.71**	**279**	P	**Pn**	**04 33 21.3**	**+1.4**
	0.1nm,0.3s,baz=89,slow=10,SNR=2.0						
	0.4nm,0.8s						
HFS	**Hagfors**	**21.16**	**351**

DBG	**Daneborg**	**7.30**	**263**	*i* P	**Pn**	**04 41 21.1**	**+3.8**
DBG				*i* S	**Sn**	**04 42 37.0**	**-3.0**
DBG				IAML		04 42 41.6	
	comp=Z,1.1nm,0.4s						
OMEGA	**Omega**	**8.56**	**44**	*eP*	**Pn**	**04 41 34.2**	**-0.4**
OMEGA				*eS*	**Sn**	**04 43 09.0**	**-2.1**
ARA0	**ARCESS Array S**	**8.97**	**135**	Pn	**Pn**	**04 41 42.4**	**+2.1**
	baz=333,slow=12						
ARA0				Sn	Sn	04 43 15.4	-5.8
	baz=337,slow=28						
ARA0	**ARCESS Array S**	**8.97**	**135**	Pn	**Pn**	**04 41 42.4**	**+2.1**
ARA0				Sn	Sn	04 43 15.4	-5.8
VADS	**Vadso**	**9.13**	**126**	P	**Pn**	**04 41 45.3**	**+2.9**
VADS				S	**Sn**	**04 43 20.4**	**-4.6**
TERR	**Teriberka**	**11.01**	**120**	S	**Sn**	**04 44 06.0**	**-5.0**
APA0	**Apatity Array**	**11.97**	**127**	P	**Pn**	**04 42 24.9**	**+3.6**
APA0				S	Sn	04 44 27.2	-7.5
NEEM	**North Greenlan**	**12.56**	**301**	*i* P	**Pn**	**04 42 30.2**	**+0.6**
NEEM				*i* S	Sn	04 44 37.9	-11
NEEM				IAML		04 44 41.7	
	comp=Z,2.7nm,0.4s						

*MDD **30** 04:45:36.3±0.4,29˚.43N×14˚.65W,h30km,mb_Lg3.2/32, Error ellipse: s-maj=5.5km s-min=2.7km az=172.0*
*INMG **30** 04:45:37.6±1.1,29˚.47N×14˚.62W,h25km±44km,ML2.7, Error ellipse: s-maj=2.8km s-min=2.5km az=155.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canary Islands, Spain Region*
*CNRM **30** 04:45:39.3,30˚.28N×14˚.37W,h30km*
ISC 30 04:45:28.2±1.2,29˚.51N±0˚.03×14˚.76W±0˚.03,h10km±10km, n44,σ1§53/85,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDLV	**Cueva Verdes**	**1.19**	**106**	P	**Pg**	**04 45 52.8**	**+1.7**
CDLV				S	**Sg**	**04 46 05.2**	**-1.5**
CDLV				*i* lVmb_Lg		04 46 05.6	
CFTV	**Fuerteventura**	**1.24**	**151**	P	**Pn**	**04 45 53.8**	**+2.3**
CFTV				S	**Sg**	**04 46 06.4**	**-1.7**
CFTV				*i* lVmb_Lg		04 46 06.9	
CGIN	**Giniginamar, F**	**1.42**	**155**	P	**Pg**	**04 45 56.6**	**+1.1**
CGIN				S	**Sb**	**04 46 11.3**	**-1.7**
CGIN				*i* lVmb_Lg		04 46 12.3	
GGC	**Guia, Gran Can**	**1.58**	**209**	P	**Pg**	**04 46 00.8**	**+2.2**
GGC				S	**Sg**	**04 46 18.3**	**-0.8**
GGC				*i* lVmb_Lg		04 46 19.4	
EOSO	**Osorio**	**1.59**	**206**	P	**Pg**	**04 46 00.9**	**+2.2**
EOSO				S	**Sn**	**04 46 17.2**	**+0.1**
EOSO				*i* lVmb_Lg		04 47 01.2	
EBAJ	**Bajamar**	**1.69**	**236**	P	**Pg**	**04 46 02.5**	**+1.8**
EBAJ				S	**Sg**	**04 46 21.3**	**-1.3**
EBAJ				*i* lVmb_Lg		04 46 25.1	
CLUM	**San Bartolome**	**1.86**	**205**	P	**Pg**	**04 46 04.7**	**+0.9**
CLUM				S	**Sb**	**04 46 25.5**	**0.0**
CLUM				*i* lVmb_Lg		04 46 27.1	
CGUI	**Guimar, Teneri**	**1.89**	**232**	P	**Pg**	**04 46 05.4**	**+0.9**
CGUI				S	**Sb**	**04 46 26.5**	**-0.1**
CGUI				*i* lVmb_Lg		04 46 28.1	
CREA	**Los Realejos,**	**1.97**	**235**	P	**Pg**	**04 46 06.4**	**+0.4**
CREA				S	**Sb**	**04 46 28.3**	**-0.6**
CREA				*i* lVmb_Lg		04 46 31.2	
MACI	**Morro de la Ar**	**1.98**	**231**	P	**Pg**	**04 46 06.4**	**+0.2**
MACI				S	**Sb**	**04 46 28.5**	**-0.8**
MACI				*i* lVmb_Lg		04 46 50.4	
CDIE	**La Orotava (Te**	**2.00**	**233**	P	**Pg**	**04 46 06.5**	**0.0**
CDIE				S	**Sb**	**04 46 29.0**	**-0.7**
CFOR	**Fortaleza, Los**	**2.00**	**234**	P	**Pg**	**04 46 06.9**	**+0.3**
CFOR				S	**Sb**	**04 46 29.1**	**-0.8**
CFOR				*i* lVmb_Lg		04 46 33.0	
CRAJ	**Montana Rajada**	**2.03**	**233**	P	**Pg**	**04 46 07.2**	**-0.1**
CRAJ				S	**Sb**	**04 46 30.3**	**-0.6**
CRAJ				*i* lVmb_Lg		04 46 38.4	
CNOR	**Icod de los Vi**	**2.05**	**235**	P	**Pg**	**04 46 07.5**	**0.0**
CNOR				S	**Sb**	**04 46 29.9**	**-1.3**
CCAN	**Las Canadas**	**2.07**	**232**	P	**Pg**	**04 46 07.3**	**-0.6**
CCAN				S	**Sb**	**04 46 30.5**	**-1.3**
CCAN				*i* lVmb_Lg		04 46 36.0	
CPVI	**La Orotava (Te**	**2.08**	**234**	P	**Pg**	**04 46 08.1**	**0.0**
CPVI				S	**Sb**	**04 46 32.4**	**0.0**
CGRA	**Granadilla de**	**2.09**	**229**	P	**Pg**	**04 46 08.0**	**-0.3**
CGRA				S	**Sb**	**04 46 30.9**	**-1.5**
CGRA				*i* lVmb_Lg		04 47 08.2	
CCHO	**La Orotava (Te**	**2.11**	**233**	P	**Pg**	**04 46 08.1**	**-0.6**
CCHO				S	**Sb**	**04 46 31.4**	**-1.7**
CCHO				*i* lVmb_Lg		04 46 33.4	
CDOS	**Garachico, Isl**	**2.12**	**236**	P	**Pg**	**04 46 08.4**	**-0.4**
CDOS				S	**Sb**	**04 46 32.4**	**-0.8**
CDOS				*i* lVmb_Lg		04 46 47.0	
GUIA	**Guia de Isora,**	**2.13**	**234**	P	**Pg**	**04 46 08.5**	**-0.6**
GUIA				S	**Sb**	**04 46 33.0**	**-0.6**
GUIA				*i* lVmb_Lg		04 46 49.6	
CLAJ	**Vilaflor (Tene**	**2.16**	**232**	P	**Pg**	**04 46 08.4**	**-1.2**
CLAJ				S	**Sn**	**04 46 32.0**	**+0.9**
CLAJ				*i* lVmb_Lg		04 46 50.9	
CBOL	**Buenavista del**	**2.17**	**237**	P	**Pg**	**04 46 09.2**	**-0.7**
CBOL				S	**Sn**	**04 46 32.2**	**+0.6**
CBOL				*i* lVmb_Lg		04 46 34.2	
CTFS	**San Miguel de**	**2.17**	**230**	P	**Pg**	**04 46 08.8**	**-1.0**
CTFS				S	**Sn**	**04 46 32.0**	**+0.5**
CTFS				*i* lVmb_Lg		04 46 43.3	
CADE	**Adeje, Tenerif**	**2.20**	**233**	P	**Pg**	**04 46 09.0**	**-1.4**
CADE				S	**Sb**	**04 46 33.7**	**-1.7**
CADE				*i* lVmb_Lg		04 46 41.5	
CPUN	**Puntallana, La**	**2.74**	**254**	P	**Pb**	**04 46 17.9**	**+0.6**
CPUN				S	**Sn**	**04 46 46.7**	**+1.4**
CPUN				*i* lVmb_Lg		04 47 43.1	
CBRE	**Brena Baja,La**	**2.80**	**253**	P	**Pb**	**04 46 18.7**	**+0.4**
CBRE				*i* lVmb_Lg		04 46 36.2	
CBRE				S	**Sn**	**04 46 48.9**	**+2.0**
CROM	**Garafia, La Pa**	**2.83**	**256**	P	**Pb**	**04 46 19.1**	**0.0**
CROM				S	**Sn**	**04 46 49.0**	**+0.9**
CROM				*i* lVmb_Lg		04 47 13.4	
CMIR	**El Paso, La Pa**	**2.84**	**254**	P	**Pb**	**04 46 18.5**	**-0.5**
CMIR				S	**Sn**	**04 46 49.2**	**+1.2**
CMIR				*i* lVmb_Lg		04 46 49.9	
CVIE	**Villa de Mazo,**	**2.84**	**252**	P	**Pb**	**04 46 18.9**	**-0.1**
CVIE				S	**Sb**	**04 46 50.2**	**-3.6**
CENR	**El Paso, La Pa**	**2.84**	**253**	P	**Pb**	**04 46 18.8**	**-0.3**
CENR				S	**Sn**	**04 46 47.8**	**-0.3**
CENR				*i* lVmb_Lg		04 47 02.1	
CJED	**Jedey, El Paso**	**2.88**	**252**	P	**Pb**	**04 46 19.4**	**-0.3**
CJED				S	**Sn**	**04 46 51.2**	**+2.2**
CJED				*i* lVmb_Lg		04 47 10.6	
TBT	**Taburiente**	**2.88**	**254**	P	**Pb**	**04 46 18.8**	**-1.0**
TBT				S	**Sn**	**04 46 47.9**	**-1.1**
TBT				*i* lVmb_Lg		04 47 05.2	
CGOR	**Puntagorda, La**	**2.92**	**256**	P	**Pb**	**04 46 20.3**	**-0.1**
CGOR				S	**Sn**	**04 46 51.7**	**+1.7**
CGOR				*i* lVmb_Lg		04 46 56.7	
CCUM	**Cumbre, El Hie**	**3.37**	**239**	P	**Pb**	**04 46 25.8**	**-2.2**
CCUM				*i* lVmb_Lg		04 46 43.8	
CCUM				S	**Sn**	**04 47 01.5**	**+0.5**
CTAC	**Tacoron (Front**	**3.40**	**238**	P	**Pb**	**04 46 27.3**	**-1.2**
CTAC				*i* lVmb_Lg		04 46 52.6	
CTAC				S	**Sn**	**04 47 02.5**	**+0.8**
PMAR	**Madeira**	**3.70**	**331**	*eP*	**Pn**	**04 46 29.8**	**+4.2**
PMAR				*eS*	**Sn**	**04 47 08.1**	**-1.3**
PMAR				*i* IAML		04 47 13.5	
PMAR				*i* IAML		04 47 15.2	
PMAR				*i* IAML		04 47 15.2	
PMAR	**Madeira**	**3.70**	**331**	P	**Pn**	**04 46 28.3**	**+2.6**
PMAR				S	**Sn**	**04 47 07.6**	**-1.9**
PMPS	**Porto Santo**	**3.79**	**340**	*eP*	**Pn**	**04 46 30.1**	**+3.5**
PMPS				*eS*	**Sn**	**04 47 11.4**	**+0.1**
PMPS				*i* IAML		04 47 15.8	
PMPST	**Porto Santo, M**	**3.81**	**340**	*eP*	**Pn**	**04 46 31.3**	**+4.4**
PMPST				*eS*	**Sn**	**04 47 10.2**	**-1.5**
PMPST				*i* IAML		04 47 13.2	
PMPST				*i* IAML		04 47 13.2	
PMPST				*i* IAML		04 47 13.4	
OUK	**Oukaimeden**	**6.19**	**72**	P	**Pn**	**04 47 01.5**	**+1.5**
OUK				S	**Sn**	**04 48 07.9**	**-3.1**
SRHM	**Skhour des Reh**	**6.59**	**62**	P	**Pn**	**04 47 04.5**	**-0.6**
SRHM				S	Sn	04 48 10.4	-10
TIO	**Tiouine**	**6.64**	**76**	P	**Pn**	**04 47 07.8**	**+1.9**
TIO				S	**Sn**	**04 48 17.9**	**-3.8**
MD31	**MD31**	**9.19**	**66**	P	**Pn**	**04 47 41.5**	**+0.5**
MD31				S	Sn	04 49 16.7	-7.8
MDT	**Midelt**	**9.30**	**67**	P	**Pn**	**04 47 42.9**	**+0.5**
MDT				S	Sn	04 49 19.9	-7.2

*BER **30** 05:07:20.1±2.4,77˚.05N×7˚.29E,h10km,Mw3.5, ML1.5(DNK), Confirmed Earthquake*
*DNK **30** 05:07:20.2±3.6,77˚.20N×6˚.56E,h10km,ML1.5,Presumed earthquake*
*KOLA **30** 05:07:22.4,77˚.38N×8˚.09E,h0km,ML2.0,Error ellipse: s-maj=20.7km s-min=17.8km az=70.0,Greenland sea,Knipovich ridge, middle*
ISC 30 05:07:15.7±1.6,77˚.09N±0˚.06×7˚.41E±0˚.05,h8km±12km, n23,σ1§84/34,1C,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**1.77**	**53**	*eP*	**Pg**	**05 07 49.6**	**0.0**
BRBA				*eS*	**Sg**	**05 08 10.7**	**-1.8**
BRBA				IAMLHF		05 08 15.6	
	comp=Z,5.6nm,0.2s						
BRBB	**Barentsburg B**	**1.78**	**52**	*eP*	**Pg**	**05 07 49.9**	**0.0**
BRBB				*e*		05 08 09.0	
BRBB				*eS*	**Sg**	**05 08 10.9**	**-2.0**
BRBB	**Barentsburg B**	**1.78**	**52**	P	**Pg**	**05 07 49.8**	**0.0**
BRBB				S	**Sb**	**05 08 10.4**	**-0.6**
KBS	**Kingsbay**	**2.08**	**25**	*eP*	**Pg**	**05 07 55.0**	**-0.5**
KBS				IAML		05 07 57.8	
	comp=Z,16nm,0.2s						
KBS				*eS*	**Sb**	**05 08 19.0**	**-0.5**
KBS	**Kingsbay**	**2.08**	**25**	P	**Pb**	**05 07 54.5**	**+0.9**
KBS				S	**Sn**	**05 08 17.0**	**+0.2**
KBS	**Kingsbay**	**2.08**	**25**	*i* P	**Pg**	**05 07 55.0**	**-0.5**
KBS				*i* S	**Sb**	**05 08 18.9**	**-0.5**
SPA0	**Spitsbergen Ar**	**2.22**	**56**	⇑*i* P	**Pg**	**05 07 56.9**	**-1.2**
SPA0				IAML		05 07 57.8	
	comp=Z,3.8nm,0.2s						
SPA0				*eS*	**Sb**	**05 08 23.3**	**-0.3**
SPITS	**Spitsbergen Ar**	**2.22**	**56**	P	**Pg**	**05 07 56.8**	**-1.4**
SPITS				S	**Sb**	**05 08 21.9**	**-1.7**
HOPEN	**Hopen**	**4.07**	**90**	*eP*	**Pn**	**05 08 20.2**	**+2.0**
HOPEN				IAML		05 08 20.5	
	comp=Z,10.0nm,0.1s						
HOPEN				*eS*	**Sn**	**05 09 04.1**	**-1.7**
DAG	**Danmarks Havn**	**5.89**	**280**	*eP*	**Pn**	**05 08 44.9**	**+1.8**
DAG				*eS*	**Sn**	**05 09 46.1**	**-4.6**
DAG	**Danmarks Havn**	**5.89**	**280**	*i* P	**Pn**	**05 08 44.6**	**+1.4**
DAG				*i* S	**Sn**	**05 09 46.9**	**-3.8**
DAG				IAML		05 09 49.4	
	comp=Z,4.5nm,0.4s						
NOR	**Nord**	**6.29**	**327**	*eP*	**Pn**	**05 08 52.5**	**+3.9**
DBG	**Daneborg**	**7.33**	**262**	*eP*	**Pn**	**05 09 05.3**	**+2.5**
DBG				*eS*	Sn	05 10 18.3	-7.8
DBG	**Daneborg**	**7.33**	**262**	*i* P	**Pn**	**05 09 05.0**	**+2.2**
DBG				*i* S	Sn	05 10 16.2	-10
DBG				IAML		05 10 30.6	
	comp=Z,0.6nm,0.4s						
JNW	**Jan Mayen West**	**7.45**	**224**	*eP*	**Pn**	**05 09 06.0**	**+1.5**
LOF	**Lofoten**	**9.18**	**165**	*eP*	**Pn**	**05 09 27.5**	**-0.6**
LOF				IAML		05 09 28.8	
	comp=Z,1.9nm,0.4s						
VADS	**Vadso**	**9.26**	**127**	*eP*	**Pn**	**05 09 29.6**	**+0.3**
VADS				IAML		05 09 38.1	
	comp=Z,4.6nm,0.7s						
STEI	**Steigen**	**9.49**	**162**	*eP*	**Pn**	**05 09 32.8**	**+0.4**
STEI				IAML		05 09 32.9	
	comp=Z,1.5nm,0.8s						
SALU	**Saltoluokta**	**10.29**	**155**	*eP*	**Pn**	**05 09 45.9**	**+2.4**
VAGH	**Vaagaholmen**	**10.56**	**167**	*eP*	**Pn**	**05 09 47.2**	**+0.1**
KONS	**Konsvik**	**10.78**	**168**	*eP*	**Pn**	**05 09 49.7**	**-0.4**
STOK	**Stokkvaagen**	**10.94**	**168**	*eP*	**Pn**	**05 09 53.0**	**+0.8**
LEIR	**Leirfjorden**	**11.17**	**168**	*eP*	**Pn**	**05 09 56.5**	**+1.1**

*KRNET **30** 05:09:25.4±0.1,42˚.30N×72˚.66E,h30km,mb3.0*
*NNC **30** 05:09:25.3±0.5,42˚.23N×72˚.71E,h0km,mb3.2,mpv3.4, Error ellipse: s-maj=6.1km s-min=2.1km az=176.0*
*SOME **30** 05:09:26.0,42˚.25N×72˚.75E,h10km*
*KNET **30** 05:09:29.7±0.2,42˚.34N×72˚.97E,h11km,ml2.3,Error ellipse: s-maj=1.8km s-min=1.2km az=151.0*
ISC 30 05:09:25.4±1.1,42˚.29N±0˚.03×72˚.73E±0˚.02,h8km±10km, n46,σ1§14/80,26C-15D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**0.58**	**38**	P	**Pb**	**05 09 38.3**	**+0.3**
	28nm,0.1s						
MRKS				S	**Sb**	**05 09 46.9**	**+0.4**
	143nm,0.3s						
MRKS	**Merke**	**0.58**	**38**	*eP*	**Pb**	**05 09 38.3**	**+0.3**
	28nm,0.1s						
MRKS				*eS*	**Sb**	**05 09 46.9**	**+0.4**
	143nm,0.3s						
ARK	**Arkit**	**0.76**	**230**	⇓*i* P	**Pg**	**05 09 39.2**	**-0.7**
ARK				⇓*i* S	**Sg**	**05 09 49.5**	**-0.3**
EKS2	**Erkin-Say**	**0.86**	**64**	⇑P	**Pb**	**05 09 42.8**	**+0.2**
	6.5nm,0.1s,SNR=8.6						
EKS2				⇓S	**Sg**	**05 09 53.0**	**0.0**
	14nm,0.1s						
EKS2	**Erkin-Say**	**0.86**	**64**	⇓*i* P	**Pg**	**05 09 42.5**	**+0.6**
EKS2				⇓*i* S	**Sb**	**05 09 54.9**	**+0.5**
ARSB	**Arslanbob**	**0.98**	**169**	⇑*i* P	**Pg**	**05 09 44.1**	**-0.2**
ARSB				⇑*i* S	**Sg**	**05 09 57.7**	**+0.7**
UCH	**Uchtor**	**1.32**	**92**	⇑P	**Pg**	**05 09 51.9**	**+1.1**
	4.3nm,0.1s,SNR=7.5						
AAK	**Ala-Archa**	**1.35**	**74**	⇑P	**Pg**	**05 09 51.9**	**+0.7**
	6.3nm,0.1s						
AAK				⇑S	**Sg**	**05 10 09.4**	**+0.6**
	12nm,0.2s						
AAK	**Ala-Archa**	**1.35**	**74**	⇓P	**Pg**	**05 09 51.5**	**+0.2**
	1.5nm,0.5s						
AAK				⇑S	**Sg**	**05 10 09.6**	**+0.8**
	1.4nm,0.4s						
AAK	**Ala-Archa**	**1.35**	**74**	⇑*i* P	**Pn**	**05 09 50.7**	**0.0**
AAK				⇑*i* S	**Sg**	**05 10 09.2**	**+0.4**
TRKS	**Terek-Say**	**1.41**	**238**	⇑*i* P	**Pn**	**05 09 50.5**	**-1.1**
TRKS				⇑*i* S	**Sn**	**05 10 08.6**	**-1.9**
FRU1	**Bishkek**	**1.50**	**69**	⇑*eP*	**Pb**	**05 09 53.2**	**-0.3**
FRU1				⇑*eS*	**Sb**	**05 10 13.0**	**+0.3**
SALK	**Salom-Alik**	**1.62**	**149**	⇓*i* P	**Pn**	**05 09 54.6**	**+0.1**
SALK				⇓*i* S	**Sn**	**05 10 16.1**	**+0.4**
USP	**Ospenovka**	**1.63**	**52**	⇓P	**Pg**	**05 09 56.8**	**+0.2**
	9.9nm,0.1s,SNR=14						
USP				⇑S	**Sg**	**05 10 18.0**	**+0.3**
	71nm,0.2s						
CHMS	**Chumysh**	**1.65**	**64**	⇓P	**Pg**	**05 09 57.2**	**+0.1**
	5.6nm,0.1s,SNR=11						
CHMS				⇑S	**Sg**	**05 10 18.4**	**0.0**
	15nm,0.1s						
CHMS	**Chumysh**	**1.65**	**64**	⇑*i* P	**Pn**	**05 09 55.1**	**+0.4**
CHMS				⇑*i* S	**Sb**	**05 10 16.6**	**-0.5**
KBK	**Karagaybulak**	**1.68**	**77**	⇑P	**Pg**	**05 09 57.9**	**+0.3**
	12nm,0.1s,SNR=7.5						
KBK				⇑S	**Sg**	**05 10 19.2**	**-0.1**
	50nm,0.3s						
KBK	**Karagaybulak**	**1.68**	**77**	⇓*i* P	**Pn**	**05 09 55.7**	**+0.4**
KBK				⇓*i* S	**Sb**	**05 10 17.7**	**-0.4**
SGDS	**Sogindy**	**1.81**	**50**	P	**Pg**	**05 09 60.0**	**-0.2**
	12nm,0.1s						
SGDS				S	**Sg**	**05 10 24.2**	**+0.5**
	40nm,0.1s						
KK31	**Karatay Array**	**1.83**	**297**	⇑P	**Pn**	**05 09 58.5**	**+1.3**
	2.8nm,0.2s,baz=114,slow=16,SNR=101						
KK31				⇑S	**Sb**	**05 10 22.3**	**0.0**
	6.1nm,0.2s,baz=120,slow=30,SNR=12						
IUG	**Iuzhnay**	**2.01**	**267**	Pg	**Pb**	**05 10 02.8**	**+0.5**
	34nm,0.2s						
IUG				Lg	Lg	05 10 29.1	
	127nm,0.4s						
IUG	**Iuzhnay**	**2.01**	**267**	*eP*	**Pb**	**05 10 02.8**	**+0.5**
	34nm,0.2s						
IUG				*eS*	**Sb**	**05 10 29.1**	**+1.5**
	127nm,0.4s						
TKM2	**Tokmak 2**	**2.21**	**72**	⇑P	**Pb**	**05 10 06.8**	**+1.1**
	4.9nm,0.2s,SNR=8.3						
TKM2				⇓S	**Sg**	**05 10 36.0**	**-0.3**
	37nm,0.1s						
BRLS	**Borolday**	**2.26**	**290**	Pg	**Pb**	**05 10 08.0**	**+1.5**
	5.7nm,0.3s						
BRLS				Lg	Lg	05 10 37.8	
	41nm,0.4s						
BRLS	**Borolday**	**2.26**	**290**	*eP*	**Pb**	**05 10 08.0**	**+1.5**
	5.7nm,0.3s						
BRLS				*eS*	**Sg**	**05 10 37.8**	**-0.3**
	41nm,0.4s						
SFK	**Sufi-Kurgan**	**2.35**	**165**	⇑*i* P	**Pn**	**05 10 04.5**	**0.0**
SFK				⇑*i* S	**Sn**	**05 10 33.0**	**-0.7**
BOOM	**Boomskoye usch**	**2.38**	**84**	⇓*i* P	**Pn**	**05 10 05.5**	**+0.5**
BOOM				⇓*i* S	**Sn**	**05 10 34.7**	**+0.2**
DGS	**Degeres**	**2.43**	**66**	Pg	**Pg**	**05 10 11.2**	**-0.8**
	6.7nm,0.2s						
DGS				Lg	Lg	05 10 43.4	
	20nm,0.5s						
DGS	**Degeres**	**2.43**	**66**	*eP*	**Pg**	**05 10 11.2**	**-0.8**
	6.7nm,0.2s						
DGS				*eS*	**Sg**	**05 10 43.4**	**-0.1**
	20nm,0.5s						
KRBS	**Karabastau**	**2.58**	**56**	Pg	**Pg**	**05 10 13.7**	**-1.1**
	2.3nm,0.2s						
KRBS				Lg	Lg	05 10 47.7	
	3.7nm,0.3s						
KRBS	**Karabastau**	**2.58**	**56**	*eP*	**Pg**	**05 10 13.7**	**-1.1**
	2.3nm,0.2s						
KRBS				*eS*	**Sg**	**05 10 47.7**	**-0.4**
	3.7nm,0.3s						
NRN	**Naryn**	**2.58**	**108**	⇑*i* P	**Pn**	**05 10 08.1**	**+0.2**
NRN				⇑*i* S	**Sn**	**05 10 39.4**	**-0.3**
BTLS	**Baital**	**2.91**	**19**	Pg	**Pg**	**05 10 20.3**	**-0.9**
	2.6nm,0.1s						
BTLS				Lg	Lg	05 10 59.0	
	9.4nm,0.2s						
BTLS	**Baital**	**2.91**	**19**	*eP*	**Pg**	**05 10 20.3**	**-0.9**
	2.6nm,0.1s						
BTLS				*eS*	**Sg**	**05 10 59.0**	**+0.1**
	9.4nm,0.2s						
KUU	**Kurty**	**3.09**	**58**	Pg	**Pg**	**05 10 22.9**	**-1.7**
	1.7nm,0.1s						
KUU				Lg	Lg	05 11 03.4	
	14nm,0.2s						
KUU	**Kurty**	**3.09**	**58**	*eP*	**Pg**	**05 10 22.9**	**-1.7**
	1.7nm,0.1s						
KUU				*eS*	**Sg**	**05 11 03.4**	**-1.2**
	14nm,0.2s						
TNSS	**Tian-Shan**	**3.20**	**75**	Pg	**Pb**	**05 10 24.4**	**+1.7**
	1.4nm,0.7s						
TNSS				Lg	Lg	05 11 06.1	
	2.0nm,0.2s						
TNSS	**Tian-Shan**	**3.20**	**75**	*eP*	**Pb**	**05 10 24.4**	**+1.7**
	1.4nm,0.7s						
TNSS				*eS*	**Sg**	**05 11 06.1**	**-2.0**
	2.0nm,0.2s						
KTBS	**Karatobe**	**3.23**	**63**	Pg	**Pb**	**05 10 25.3**	**+2.3**
	0.5nm,0.1s						
KTBS				Lg	Lg	05 11 07.7	
	16nm,0.5s						
KTBS	**Karatobe**	**3.23**	**63**	*eP*	**Pb**	**05 10 25.3**	**+2.3**
	0.5nm,0.1s						
KTBS				*eS*	**Sg**	**05 11 07.7**	**-1.3**
	16nm,0.5s						
MDOK	**Medeo**	**3.30**	**73**	Pg	**Pb**	**05 10 26.4**	**+2.1**
	4.3nm,0.4s						
MDOK				Lg	Lg	05 11 09.7	
	12nm,0.3s						
MDOK	**Medeo**	**3.30**	**73**	*eP*	**Pb**	**05 10 26.4**	**+2.1**
	4.3nm,0.4s						
MDOK				*eS*	**Sg**	**05 11 09.7**	**-1.6**
	12nm,0.3s						
ARXS	**Arharly**	**4.19**	**61**	Pg	**Pg**	**05 10 43.2**	**-2.4**
	2.0nm,0.5s						
ARXS				Lg	Lg	05 11 38.6	
	9.6nm,0.6s						
ARXS	**Arharly**	**4.19**	**61**	*eP*	**Pg**	**05 10 43.2**	**-2.4**
	2.0nm,0.5s						
ARXS				*eS*	**Sg**	**05 11 38.6**	**-1.2**
	9.6nm,0.6s						
SATY	**Saty**	**4.25**	**78**	Pg	**Pg**	**05 10 44.2**	**-2.6**
	1.4nm,0.1s						
SATY				Lg	Lg	05 11 40.1	
	6.1nm,0.3s						
SATY	**Saty**	**4.25**	**78**	*eP*	**Pg**	**05 10 44.2**	**-2.6**
	1.4nm,0.1s						
SATY				*eS*	**Sg**	**05 11 40.1**	**-1.8**
	6.1nm,0.3s						

*DJA **30** 05:17:21.9±0.9,10˚N±8˚×12˚2E±˚,h10km,M5.3/18, mb5.2/18,mB5.8/4,MLv5.3/3,Mw(mB)5.4/4*
*IDC **30** 05:17:28.2±0.5,8˚.65N×122˚.82E,h0km,mb4.3/21, mbtmp4.4/22,ML5.1/1,MS3.6/14,Error ellipse: s-maj=37.0km s-min=11.2km az=71.0*
*MAN **30** 05:17:32.0,8˚.52N×122˚.44E,h38km,MS4.8*
MAN INTENSITY II - LILOY AND TAMPILISAN ZAMBOANGA DEL NORTE.
*NEIC **30** 05:17:35.0±1.3,8˚.55N±0˚.07×122˚.63E±0˚.05,h43km±5km, mb4.6/63,Error ellipse: s-maj=10.8km s-min=6.6km az=183.0*
*GFZ **30** 05:17:35.8±0.5,8˚N±3˚×12˚3E±˚,h62km±6km,M4.6/18, mb4.6/18, Error ellipse: s-maj=9.0km s-min=5.9km az=78.0,confirmed*
ISC 30 05:17:33.7±0.5,8˚.56N±0˚.03×122˚.42E±0˚.04,h36km±1km, n170,σ1§42/152,mb4.5/54,MS3.6/13,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.78**	**169**	*i* P	**Pn**	**05 17 47.0**	**-1.2**
IPIL				*i* S	**Sn**	**05 17 58.2**	**-0.4**
DCPH	**Dipolog City**	**0.92**	**88**	*i* P	**Pn**	**05 17 48.2**	**-1.9**
DCPH				*i* S	**Sn**	**05 18 01.4**	**-0.8**
SNPH	**Sibulan**	**1.12**	**46**	*eP*	**Pn**	**05 17 52.0**	**-1.0**
SNPH				*eS*	**Sn**	**05 18 11.4**	**+4.2**
PAGZ	**Pagadian**	**1.18**

YULB	Yu-li	14.79	356	P	P	05 21 02.8	-3.1
FAKI	Fak Fak	15.03	139	Pn	Pn	05 21 00.5	-3.2
FAKI	Fak Fak	15.03	139	P	Pn	05 21 03.3	-0.3
QIZ	Qiongzhong	16.04	312	P	P	05 21 21.3	+1.6
QIZ				S	S	05 24 20.3	-5.9
QIZ				LR	LR		
	comp=N,340nm,12.4s						
QIZ				LR	LR		
	comp=E,350nm,14.4s						
QIZ				LR	LR		
	comp=Z,470nm,14.9s						
QIZ	Qiongzhong	16.04	312	Pn	P	05 21 17.8	-1.9
KMPI	Kaimana, Papua	16.55	137	P	P	05 21 28.8	+3.4
PLAI	Plampang	17.88	195	P	P	05 21 40.9	+0.8
SOEI	Soe	18.28	174	P	Pn	05 21 45.3	+0.5
BATI	Baumata	18.68	176	P	Pn	05 21 48.5	-1.0
	comp=Z,5.7nm,0.3s,baz=199,slow=2.5,SNR=4.5						
	comp=Z,31nm,0.3s						
BATI	Baumata	18.68	176	P	Pn	05 21 48.0	-1.5
JAGI	Jajag, Banyuwa	18.81	206	P	Pn	05 21 49.7	-1.5
JAGI				IAmb	IAmb	05 22 22.0	
	comp=Z,46nm,1.2s						
JOW	Kunigami	19.01	16	P	Pn	05 21 52.0	-1.3
GENI	Genyem	20.87	121	P	Pn	05 22 16.6	+1.1
GENI	Genyem	20.87	121	P	Pn	05 22 11.9	-3.7
LEM	Lembang	21.24	224	LR	LR	05 30 52.9	
	comp=Z,198nm,19.9s,baz=219,slow=37						
JAY	Jayapura	21.29	120	LR	LR	05 29 18.2	
	comp=Z,72nm,21.9s,baz=338,slow=34						
KULM	Kulim	21.85	263	P	P	05 22 24.7	+1.3
KULM				IAmb	IAmb	05 22 32.5	
	comp=Z,35nm,1.4s						
KULM	Kulim	21.85	263	P	P	05 22 32.4	+9.0
SLVN	Son La	21.91	307	P	P	05 22 26.3	+2.2
MDSI	Maura Dua	22.33	235	P	P	05 22 29.8	+1.2
GUMO	Guam	22.58	75	LR	LR	05 32 33.9	
	comp=Z,61nm,18.3s,baz=84,slow=41						
KASI	Kota Agung	22.70	233	P	P	05 22 32.9	+0.4
SDSI	Sungai Dareh	22.95	247	P	P	05 22 35.2	+0.1
NJ2	Nanjing	23.61	352	eP	P	05 22 45.0	+3.5
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
RPSI	Rantau Prapat	24.09	257	P	P	05 22 46.2	+0.1
RPSI				IAmb	IAmb	05 23 00.7	
	comp=Z,25nm,1.3s						
CRAI	Chiangrai	24.27	301	P	P	05 22 47.7	-0.1
CMAR	Chiang Mai Arr	24.83	296	P	P	05 22 55.0	+2.1
	comp=Z,0.7nm,0.3s,baz=123,slow=8.4,SNR=4.4						
CMAR				PcP	PcP	05 26 29.4	+0.7
	comp=Z,0.8nm,0.3s,baz=31,slow=0.9,SNR=5.5						
CMAR				LR	LR	05 33 19.1	
	comp=Z,163nm,18.1s,baz=105,slow=38						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	24.83	296	P	P	05 22 54.5	+1.6
KNRA	Kununurra	24.88	165	P	P	05 22 51.9	-1.4
KNRA				IAmb	IAmb	05 23 28.2	
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	24.95	297	P	P	05 22 55.6	+1.6
JCJ	Chichijima	26.27	43	LR	LR	05 31 53.6	
	comp=Z,89nm,20.8s,baz=278,slow=33						
FITZ	Fitzroy Crossi	26.67	173	P	P	05 23 09.5	0.0
	comp=Z,4.2nm,0.7s,baz=19,slow=3.0,SNR=4.0						
	comp=Z,4.2nm,0.7s						
FITZ	Fitzroy Crossi	26.67	173	P	P	05 23 08.1	-1.3
FITZ	Fitzroy Crossi	26.67	173	P	P	05 23 07.2	-2.3
COEN	Coen	30.41	137	P	P	05 23 40.7	-2.1
WB0	Warramunga Arr	30.51	157	P	P	05 23 42.5	-1.2
WB0				IAmb	IAmb	05 24 17.5	
	comp=Z,6.3nm,0.9s						
WRA	Warramunga Arr	30.65	158	P	P	05 23 43.9	-1.1
	comp=Z,1.4nm,0.6s,baz=341,slow=9.2,SNR=10						
	comp=Z,1.4nm,0.6s						
WRA	Warramunga Arr	30.65	158	P	P	05 23 44.0	-1.1
WR8	Warramunga Arr	30.73	157	P	P	05 23 43.3	-2.3
WR8				IAmb	IAmb	05 24 26.2	
	comp=Z,12nm,1.2s						
HHC	Hu-ho-hao-te	33.58	345	eP	P	05 24 15.3	+4.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,71nm,4.3s						
SHL	Shillong	33.61	304	P	P	05 24 12.0	+0.9
SHL				IAmb	IAmb	05 24 29.2	
	comp=Z,13nm,1.0s						
AS31	Alice Springs	33.93	161	P	P	05 24 12.9	-0.8
ASAR	Alice Springs	33.94	161	P	P	05 24 13.5	-0.2
	comp=Z,3.9nm,0.6s,baz=340,slow=7.2,SNR=39						
ASAR				PcP	PcP	05 26 51.3	-0.4
	comp=Z,2.1nm,0.9s,baz=348,slow=2.4,SNR=8.1						
	comp=Z,3.9nm,0.6s						
ASAR	Alice Springs	33.94	161	P	P	05 24 12.9	-0.8
CTA	Charters Tower	36.88	141	LR	LR	05 41 49.1	
	comp=Z,52nm,20.8s,baz=72,slow=40						
BNX	BinXian	37.30	6	⇓P	P	05 24 41.3	-1.0
BNX				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORW	Morawa	37.91	189	P	P	05 24 47.8	+0.2
EVN	Everest	38.72	305		P	05 24 56.6	+1.3
FORT	Forrest	39.48	172	P	P	05 25 01.0	+0.2
FORT				IAmb	IAmb	05 25 01.8	
	comp=Z,7.0nm,0.7s						
KLBR	Kellerberrin	40.17	186	P	P	05 25 05.0	-1.6
INKA	Innaminka	40.21	154	P	P	05 25 07.4	+0.5
INKA				IAmb	IAmb	05 25 08.8	
	comp=Z,10nm,1.4s						
ULN	Ulaanbaatar	41.29	344	P	P	05 25 15.9	+0.1
ULN	Ulaanbaatar	41.29	344	P	P	05 25 14.9	-0.9
SONM	Songino Airay	41.44	344	P	P	05 25 17.4	+0.4
	comp=Z,1.0nm,0.7s,baz=164,slow=8.1,SNR=5.4						
SONM				PcP	PcP	05 27 14.3	-0.2
	comp=Z,2.1nm,0.8s,baz=156,slow=2.5,SNR=5.3						
SONM				LR	LR	05 44 46.6	
	comp=Z,123nm,18.6s,baz=58,slow=40						
	comp=Z,1.0nm,0.7s						
SONM	Songino Airay	41.44	344	P	P	05 25 17.9	+1.0
NWAO	Narrogin (SRO)	41.55	187	P	P	05 25 18.5	+0.6
	comp=Z,12nm,0.6s,baz=27,slow=7.8,SNR=7.5						
	comp=Z,12nm,0.6s						
NWAO	Narrogin (SRO)	41.55	187	P	P	05 25 17.7	-0.2
BBOO	Buckleboo	43.14	163		P	05 25 29.6	-1.2
BBOO	Buckleboo	43.14	163	P	P	05 25 29.4	-1.4
EIDS	Eidsvold	43.77	141	P	P	05 25 34.9	-1.1
EIDS				IAmb	IAmb	05 25 54.4	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	44.19	156	P	P	05 25 39.1	-0.2
	comp=Z,11nm,1.1s,baz=346,slow=6.9,SNR=7.4						
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	44.19	156	P	P	05 25 38.1	-1.2
TLY	Talaya	45.68	344	LR	LR	05 47 23.6	
	comp=Z,102nm,18.7s,baz=198,slow=39						
WMQ	Urumqi	46.34	325	eP	P	05 25 59.8	+3.4
WMQ				LR	LR		
	comp=N,220nm,19.5s						
WMQ				LR	LR		
	comp=E,180nm,18.3s						
WMQ				LR	LR		
	comp=Z,120nm,18.3s						
ARMA	Armidale	47.84	145	P	P	05 26 07.5	-0.7
PDGK	Podgornoye	50.99	320		P	05 26 33.9	+1.7
MK31	Makanchi Array	51.18	325	P	P	05 26 34.6	+1.2
MK31				IAmb	IAmb	05 26 49.0	
	comp=Z,5.8nm,1.2s						
MKAR	Makanchi Array	51.18	325	P	P	05 26 35.0	+1.6
	comp=Z,1.7nm,0.5s,baz=124,slow=8.2,SNR=9.4						
MKAR				PcP	PcP	05 27 49.0	+0.5
	comp=Z,1.8nm,0.5s,baz=112,slow=4.5,SNR=5.0						
MKAR				LR	LR	05 49 48.3	
	comp=Z,176nm,18.1s,baz=114,slow=38						
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	51.18	325	P	P	05 26 34.9	+1.5
MAKZ	Makanchi	51.36	325	P	P	05 26 36.1	+1.3
MAKZ				IAmb	IAmb	05 26 51.1	
	comp=Z,6.8nm,1.1s						
NIL	Nilore	51.62	306	P	P	05 26 37.8	+0.9
KSH2	Kashi	51.77	314	P	P	05 26 39.8	+1.7
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOOM	Boomskoye usch	52.90	318	P	P	05 26 47.6	+1.1
YAK	Yakutsk	53.64	4	LR	LR	05 50 21.6	
	comp=Z,46nm,20.7s,baz=344,slow=37						
AAK	Ala-Archa	53.93	317	LR	LR	05 50 30.8	
	comp=Z,75nm,18.1s,baz=148,slow=37						
MANEM	Manem	54.04	311	P	P	05 26 55.7	+0.6
MANEM				IAmb	IAmb	05 27 10.6	
	comp=Z,20nm,0.8s						
ZAA0	Zalesovo Array	54.38	334	P	P	05 26 57.0	+0.1
ZAA0				IAmb	IAmb	05 27 11.2	
	comp=Z,4.0nm,1.0s						
ZALV	Zalesovo Beam	54.38	334	P	P	05 26 57.5	+0.6
	comp=Z,0.5nm,0.4s,baz=133,slow=8.1,SNR=5.2						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	54.38	334	P	P	05 26 57.3	+0.4
ARSB	Arslanbob	54.44	315	P	P	05 26 57.7	-0.1
ARSB				IAmb	IAmb	05 27 11.9	
	comp=Z,9.0nm,1.2s						
KBL	Kabul	55.22	306	P	P	05 27 03.6	0.0
KBL				IAmb	IAmb	05 27 18.0	
	comp=Z,8.2nm,0.9s						
KURBB	Kurchatov Arra	55.39	328	P	P	05 27 05.6	+1.3
	comp=Z,2.9nm,0.6s,baz=126,slow=6.9,SNR=12						
	comp=Z,2.9nm,0.6s						
KURK	Kurchatov	55.40	328		P	05 27 05.8	+1.5
BTK	Batken	55.51	313	P	P	05 27 06.8	+1.3
BTK				IAmb	IAmb	05 27 25.9	
	comp=Z,7.3nm,1.2s						
GAR	Garm	55.53	312		P	05 27 06.8	+1.2
CHGR	Chuyangaron	56.28	311	P	P	05 27 12.3	+1.3
CHGR				IAmb	IAmb	05 27 26.3	
	comp=Z,8.2nm,0.9s						
KK31	Karatay Array	56.80	316		P	05 27 16.0	+1.4
KK31				IAmb	IAmb	05 27 16.9	
	comp=Z,3.4nm,0.8s						
KKAR	Karatay Array	56.80	316		P	05 27 16.0	+1.4
BVAR	Borovoye Array	60.97	327	P	P	05 27 44.3	+1.1
	comp=Z,2.5nm,0.8s,baz=121,slow=7.6,SNR=9.6						
	comp=Z,2.5nm,0.8s						
NRIK	Noril'sk	64.78	347	P	P	05 28 08.3	0.0
	comp=Z,8.7nm,0.7s,baz=135,slow=6.5,SNR=10						
	comp=Z,8.7nm,0.7s						
NRIK	Noril'sk	64.78	347		P	05 28 08.2	0.0
AB31	Akbulak array	65.73	320	P	P	05 28 15.9	+1.1
AB31				IAmb	IAmb	05 28 31.6	
	comp=Z,7.4nm,1.4s						
ABKAR	Akbulak array	65.73	320	P	P	05 28 16.0	+1.2
AKTO	Aktyubinsk	67.24	321	LR	LR	05 59 14.1	
	comp=Z,64nm,20.8s,baz=237,slow=37						
G21K	Allakaket	79.84	24	P	P	05 29 37.2	-1.1
CAST	Castle Rocks	80.39	27		P	05 29 40.5	-0.8
CAST				IAmb	IAmb	05 29 41.0	
	comp=Z,4.2nm,0.9s						
D25K	Kavik River	82.48	21	IAmb	IAmb	05 30 09.5	
	comp=Z,4.9nm,1.1s						
ILAR	Eielson Array	82.62	26	P	P	05 29 50.2	-2.8
	comp=Z,0.3nm,0.6s,baz=237,slow=5.3,SNR=5.5						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	82.62	26	P	P	05 29 52.8	-0.3
F25K	Christian Rive	82.89	23	P	P	05 29 54.7	+0.2
C27K	Jago River	83.39	21	IAmb	IAmb	05 30 10.2	
	comp=Z,4.7nm,1.1s						
BRTR	Keskin Array B	83.67	309	P	P	05 29 59.6	+0.4
	comp=Z,0.8nm,0.6s,baz=102,slow=4.6,SNR=7.2						
	comp=Z,0.8nm,0.6s						
E27K	Coleen River	84.34	22	IAmb	IAmb	05 30 03.4	
	comp=Z,4.7nm,0.9s						
ARCES	ARCESS Array B	84.46	339	P	P	05 30 02.6	+0.1
	comp=Z,2.8nm,0.7s,baz=69,slow=6.6,SNR=6.7						
	comp=Z,2.8nm,0.7s						
ARCES	ARCESS Array B	84.46	339	P	P	05 30 02.8	+0.4
ARCES				IAmb	IAmb	05 30 20.6	
	comp=Z,6.3nm,1.1s						
G27K	Doyon Strip	84.53	23	IAmb	IAmb	05 30 30.4	
	comp=Z,5.8nm,1.4s						
M26K	Nabesna, AK	84.61	28	IAmb	IAmb	05 30 03.9	
	comp=Z,3.5nm,1.0s						
I27K	Kandik River	84.73	25		P	05 30 04.1	+0.2
I27K				IAmb	IAmb	05 30 05.3	
	comp=Z,7.4nm,1.0s						
K27K	Chicken	84.78	26	IAmb	IAmb	05 30 05.2	
	comp=Z,3.9nm,0.9s						
SPITS	Spitsbergen Ar	84.94	349	P	P	05 30 05.1	+0.4
	comp=Z,4.6nm,0.6s,baz=88,slow=4.9,SNR=7.1						
	comp=Z,4.6nm,0.6s						
E28M	Babbage River	85.03	21	IAmb	IAmb	05 30 06.1	
	comp=Z,4.3nm,0.8s						
BCAR	Beaver Creek A	85.06	27	P	P	05 30 05.5	-0.1
F28M	Old Crow	85.08	22	P	P	05 30 05.5	-0.1
BARN	Barnard Glacie	85.44	29	IAmb	IAmb	05 30 08.3	
	comp=Z,5.0nm,0.8s						
I28M	Miner Creek	85.45	25		P	05 30 07.7	+0.2
FINES	FINESS Array B	85.58	331	P	P	05 30 09.2	+1.1
	comp=Z,2.9nm,0.9s,baz=90,slow=5.7,SNR=4.5						
	comp=Z,2.9nm,0.9s						
FINES	FINESS Array B	85.58	331	P	P	05 30 09.1	+1.0
G29M	Pine Creek	85.92	23		P	05 30 09.8	0.0
H29M	Whitestone	85.93	24	P	P	05 30 09.8	0.0
H29M				IAmb	IAmb	05 30 22.6	
	comp=Z,6.8nm,1.1s						
DAWY	Dawson	85.94	26		P	05 30 09.9	0.0
F30M	Barrier River	86.61	22	P	P	05 30 13.3	+0.2
F30M				IAmb	IAmb	05 30 34.8	
	comp=Z,4.0nm,0.9s						
VNDA	Vanda	88.74	172	P	P	05 30 22.8	-0.2
	comp=Z,2.2nm,0.8s,baz=321,slow=6.1,SNR=11						
	comp=Z,2.2nm,0.8s						
VNDA	Vanda	88.74	172	P	P	05 30 22.7	-0.4
VNDA				IAmb	IAmb	05 30 24.0	
	comp=Z,2.5nm,0.9s						
HFS	Hagfors	91.78	332	P	P	05 30 37.4	-0.2
	comp=Z,3.1nm,0.8s,baz=102,slow=10,SNR=2.0						
	comp=Z,3.1nm,0.8s						
NOA	NORSAR Array B	92.58	333	P	P	05 30 41.8	+0.4
	comp=Z,0.8nm,0.8s,baz=114,slow=5.2,SNR=1.5						
	comp=Z,0.8nm,0.8s						
QSPA	South Pole Qui	98.43	180	P	Pdif	05 31 08.4	+0.4
	comp=Z,0.7nm,0.7s,baz=304,slow=3.6,SNR=2.2						
	comp=Z,0.7nm,0.7s						
QSPA	South Pole Qui	98.43	180	P	Pdif	05 31 07.8	-0.2
TORD	Torodi Ar. Bea	117.31	290	PKP	PKiKP	05 36 16.3	-0.1
	comp=Z,0.6nm,0.9s,baz=38,slow=3.5,SNR=2.6						
TXAR	Lajitas Array	121.80	48	PKP	PKiKP		
	comp=Z,0.3nm,0.6s,baz=19,slow=3.0,SNR=6.7					05 36 25.5	+0.5
PLCA	Paso Flores	145.94	162	PKPbc	PKPab	05 37 08.9	-1.5
	comp=Z,5.7nm,0.8s,baz=198,slow=3.2,SNR=15						
LPAZ	La Paz	167.15	128	PKP	PKPdf	05 37 37.1	-0.4
	comp=Z,2.2nm,1.0s,baz=10.0,slow=2.2,SNR=6.7						

*TRN **30** 05:32:00.0, 11.49N×61.68W, h121km, MD3.2, South of Grenada.*

FUNV 30 05:32:20.9, 11.66N×60.52W, h36km, MW3.2, Presumed earthquake, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	Grenville	1.20	293	eP	Pn	05 32 41.0	-0.2
GRGR				eS	Sn	05 32 55.5	-0.7
GRGR	Grenville	1.20	293	eP	Pn	05 32 41.0	-0.2
GRGR				eS	Sn	05 32 56.1	-0.1
GCMP	Grenada, Carri	1.20	313	eP	Pn	05 32 43.8	+2.6
GCMP				eS	Sn	05 33 01.3	+5.0
GRSS	Sisters	1.24	301	eP	Pn	05 32 41.9	+0.2
GRSS				eS	Sn	05 32 58.1	+1.0
TRN	Trinidad (W)	1.33	221	eP	Pn	05 32 43.2	+0.2
TRN				eS	Sn	05 32 58.1	-1.3
TRN	Trinidad (W)	1.33	221	eP	Pn	05 32 43.2	+0.3
TRN				eS	Sn	05 32 59.4	0.0
PSKH	Kent House, Po	1.39	225	eP	Pn	05 32 42.7	-1.0
DMDM	Guralp CMG5TDE	1.39	227	eP	Pn	05 32 42.5	-1.4
DMDM				eS	Sn	05 32 57.8	-3.2
PSMG	Mucurapo Girls	1.40	225	eP	Pn	05 32 42.7	-1.2
PSMG				eS	Sn	05 32 57.9	-3.2
BBGH	Gun Hill	1.75	33	eP	Pn	05 32 48.1	-0.6
BBGH				eS	Sn	05 33 08.0	-1.7
SLAC	Saint Lucia, A	2.25	351	eP	Pn	05 33 01.8	+6.1
SLBI	Saint Lucia, B	2.39	349	eP	Pn	05 33 04.2	+6.8
SLBI				eS	Sn	05 33 34.5	+9.0

*IDC **30** 05:32:30.5±0.9, 37.19S×96.28W, h0km, mb4.1/9, mbtmp4.1/9, MS4.5/40, Error ellipse: s-maj=30.9km s-min=23.2km az=82.0*

*NEIC **30** 05:32:32.6±1.5, 37.1S±0.1°×96.2W±0.1°, h10km±1km, mb4.7/80, Error ellipse: s-maj=21.2km s-min=13.1km az=330.0*

*GFZ **30** 05:32:33.4±0.3, 37°S±.5°×9°6W±°, h10km, M4.5/25, mb4.5/25*

*GCMT **30** 05:32:35.7±0.1, 37.03S±0.01°×96.40W±0.01, h12km, MW5.3/148, Moment Tensor Solution. s113,c196; s148,c269; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.21±.01; Mθθ=0.01±.01; Mφφ=0.20±.01; Mrθ=0.18±.03; Mrφ=-1.10±.01; Mθφ=-0.09±.03; Best double couple: M₀1.12000×10^17 NP1:φ₀183.00000°, δ81.00000°, λ1.00000°. NP2:φ₀93.00000°, δ89.00000°, λ171.00000°. Principal axes: T 1.2330, Plg7.0000°, Azm47.0000°; N -0.2270, Plg81.0000°, Azm264.0000°; P -1.0060, Plg5.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 05:32:32.9±0.6, 37.09S±0.09×96.13W±0.10, h10km, n167, σ1.29/121, mb4.6/43, MS4.5/41, 1C-1D, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	14.39	82	T	T	05 51 21.9	
	baz=252,slow=74,SNR=494						
H03S1	Juan Fernandez	14.41	82	T	T	05 51 14.4	
	baz=252,slow=74,SNR=389						
H03S3	Juan Fernandez	14.41	82	T	T	05 51 11.3	
	baz=252,slow=74,SNR=274						
H03N2	Juan Fernandez	14.52	81	T	T	05 51 19.6	
	baz=249,slow=73,SNR=392						
H03N3	Juan Fernandez	14.52	81	T	T	05 51 14.6	
	baz=249,slow=73,SNR=49						
VA04	Juan Fernndez	14.53	81		Pn	05 35 58.1	-0.5
H03N1	Juan Fernandez	14.53	81	T	T	05 51 19.1	
	baz=249,slow=73,SNR=271						
RPN	Rapa Nui	14.94	308	LR	LR	05 39 58.6	
	comp=Z,4μm,21.2s,baz=118,slow=30						
LR03	Panguipulli	18.82	105	P	P	05 36 52.6	-0.1
LR05	Currie	19.09	107	P	P	05 36 54.9	-0.8
LL02	Futaleuf	19.51	116	P	P	05 37 00.6	+0.3
BI02	San Fabin de	19.88	96		P	05 37 03.5	-1.0
BI02	San Fabin de	19.88	96	P	Pn	05 37 06.3	+0.3
ML02	Panimavida	19.92	94	P	P	05 37 05.0	+0.2
ML02				IAmb	IAmb	05 37 39.4	
	comp=Z,47nm,1.3s						
ML02	Panimavida	19.92	94	P	Pn	05 37 08.5	+2.1
PLCA	Paso Flores	20.21	108	LR	LR	05 43 07.1	
	comp=Z,1μm,20.6s,baz=272,slow=31						
PLCA	Paso Flores	20.21	108	P	P	05 37 07.8	-0.2
PLCA				IAmb	IAmb	05 37 11.3	
	comp=Z,11nm,1.0s						
PLCA	Paso Flores	20.21	108	P	Pn	05 37 09.8	-0.2
GO08	Villa O'Higgin	20.62	131	P	P	05 37 12.2	0.0
BO02	Sierra Bellavi	20.64	91	P	Pn	05 37 14.3	-0.7
MT09	Talagante	20.73	88	P	P	05 37 14.3	+0.5
BO04	La Punta	20.98	89	P	P	05 37 14.8	-1.6
BO04				IAmb	IAmb	05 37 37.4	
	comp=Z,30nm,1.1s						
CO04	Los Pelederos	21.29	84	P	P	05 37 21.5	+1.5
MT13	San Alfonso	21.31	89	P	P	05 37 19.2	-0.8
MT13				IAmb	IAmb	05 37 51.8	
	comp=Z,36nm,1.2s						
VA03	San Esteban	21.39	86	P	P	05 37 23.3	+2.5
MT08	Bocatoma Ro	21.61	88		P	05 37 22.0	-1.3
CO03	El Pedregal	21.97	81	P	P	05 37 30.2	+3.1
LCO	Las Campanas	22.74	77	P	P	05 37 34.1	-1.4
LCO				IAmb	IAmb	05 38 01.3	
	comp=Z,29nm,1.3s						
CO01	Juntas del Tor	22.79	80	P	P	05 37 37.9	+1.9
AC04	Llanos de Chal	22.83	74	P	P	05 37 34.9	-1.3
AC04				IAmb	IAmb	05 37 56.8	
	comp=Z,24nm,1.2s						
AC05	El Transito	23.15	77	P	P	05 37 40.4	+0.7
ZON	Zonda	23.30	84		P	05 37 42.2	+1.2
CFA	Coronel Fontan	23.63	85	LR	LR	05 44 56.7	
	comp=Z,402nm,19.8s,baz=227,slow=31						
AC02	Maricunga	25.01	74		P	05 37 57.2	-0.4
AC02	Maricunga	25.01	74	P	P	05 37 57.7	+0.1
PB14	IPOC Station P	25.25	68	P	P	05 38 02.1	+2.5
USHA	Ushuaia	25.92	142	LR	LR	05 46 09.8	
	comp=Z,2μm,18.8s,baz=337,slow=32						
PB16	IPOC Station P	29.91	59	P	P	05 38 43.6	+1.8
NNA	Nana	30.41	40	LR	LR	05 47 45.0	
	comp=Z,2μm,21.7s,baz=214,slow=30						
LPAZ	La Paz	32.28	58	P	P	05 39 03.6	+1.0
	comp=Z,4.8nm,1.1s,baz=206,slow=6.0,SNR=7.6						
	comp=Z,4.8nm,1.1s						
LPAZ	La Paz	32.28	58		P	05 39 02.0	-0.7
LPAZ				IAmb	IAmb	05 39 13.9	
	comp=Z,17nm,1.2s						
LPAZ	La Paz	32.28	58	P	P	05 39 04.2	+1.5
PMSA	Palmer Station	33.60	156	LR	LR	05 49 07.3	
	comp=Z,660nm,20.2s,baz=306,slow=30						
ATAH	Atahualpa	33.91	33	LR	LR	05 49 42.0	
	comp=Z,2μm,21.7s,baz=219,slow=30						
CPUP	Villa Florida	34.50	83	P	P	05 39 20.9	-0.4
	comp=Z,3.5nm,1.1s,baz=236,slow=7.3,SNR=3.1						
CPUP				LR	LR	05 51 30.7	
	comp=Z,434nm,20.0s,baz=250,slow=33						
	comp=Z,3.5nm,1.1s						
SMAI	San Martin Ant	35.05	162	P	P	05 39 24.1	-1.4
CZSB	Cruzeiro do Su	36.16	42	P	P	05 39 34.8	-0.8
CZSB				IAmb	IAmb	05 39 58.4	
	comp=Z,25nm,1.5s						
SIV	San Ignacio	37.44	65	LR	LR	05 52 57.4	
	comp=Z,792nm,21.4s,baz=266,slow=33						
ITAB	Concordia	38.23	88	P	P	05 39 52.8	-0.3
AQDB	Aquidauana	38.78	76	P	P	05 39 57.4	-0.5
AQDB				IAmb	IAmb	05 40 21.2	
	comp=Z,21nm,1.4s						
PTLB	Pontes e Lacer	39.21	67	P	P	05 40 01.0	-0.4
SLOR	San Lorenzo -	39.68	28		P	05 40 04.5	-1.4
SLOR				IAmb	IAmb	05 40 38.8	
	comp=Z,9.8nm,0.7s						
VILB	Vilhena	40.10	63	P	P	05 40 09.0	+0.1
VILB				IAmb	IAmb	05 40 20.2	
	comp=Z,20nm,1.2s

HKT	**Hockley**	**66.69**	**0**	P	**P**	**05 43 23.9**	**+0.2**
HKT				IAmb	IAmb	05 43 36.8	
	comp=Z,9.0nm,1.2s						
RAO	**Raoul Island**	**66.94**	**250**	LR	LR	06 06 22.5	
	comp=Z,484nm,21.4s,baz=137,slow=30						
JCT	**Junction City**	**67.30**	**357**	P	**P**	**05 43 27.2**	**-0.6**
ALPN	**Alpine**	**67.48**	**353**		**P**	**05 43 29.7**	**+0.6**
ALPN				IAmb	IAmb	05 43 38.7	
	comp=Z,8.3nm,1.1s						
OZNA	**Ozona**	**67.82**	**355**		**P**	**05 43 31.7**	**+0.6**
OZNA				IAmb	IAmb	05 44 06.4	
	comp=Z,8.3nm,1.2s						
VHRN	**Van Horn**	**68.03**	**352**	P	**P**	**05 43 31.9**	**-0.7**
VHRN				IAmb	IAmb	05 43 49.0	
	comp=Z,6.2nm,1.2s						
TPB01	**Permian Basin**	**68.06**	**353**		**P**	**05 43 32.0**	**-0.6**
TPB01				IAmb	IAmb	05 43 56.9	
	comp=Z,4.5nm,0.9s						
BRDY	**Brady**	**68.07**	**357**		**P**	**05 43 32.8**	**+0.2**
BRDY				IAmb	IAmb	05 43 56.3	
	comp=Z,3.4nm,0.9s						
MNHN	**Monahans**	**68.36**	**354**		**P**	**05 43 34.0**	**-0.4**
PECS	**Pecos**	**68.49**	**353**	P	**P**	**05 43 34.7**	**-0.6**
PECS				IAmb	IAmb	05 43 46.9	
	comp=Z,6.5nm,1.2s						
TPB28		**68.85**	**352**	P	**P**	**05 43 37.3**	**-0.4**
TPB28				IAmb	IAmb	05 43 42.9	
	comp=Z,6.2nm,1.3s						
MNTX	**Cornudas Mount**	**68.97**	**352**	P	**P**	**05 43 37.6**	**-0.6**
MNTX	**Cornudas Mount**	**68.97**	**352**	P	**P**	**05 43 37.3**	**-1.0**
TPB11	**China Draw**	**69.06**	**353**	P	**P**	**05 43 37.4**	**-1.5**
PLPT	**Palo Pinto**	**69.57**	**358**	P	**P**	**05 43 41.5**	**-0.4**
PLPT				IAmb	IAmb	05 43 53.8	
	comp=Z,9.2nm,1.1s						
128A	**Castleberry Fa**	**69.60**	**354**	P	**P**	**05 43 41.1**	**-1.1**
APMT	**Aspermont**	**70.15**	**356**	P	**P**	**05 43 45.3**	**-0.2**
DUN6	**Lazy B Ranch**	**70.33**	**348**	P	**P**	**05 43 47.8**	**+1.0**
TUC	**Tucson**	**70.39**	**347**	P	**P**	**05 43 46.5**	**-0.6**
TUC				IAmb	IAmb	05 43 53.6	
	comp=Z,4.7nm,1.1s						
TUC	**Tucson**	**70.39**	**347**	P	**P**	**05 43 47.3**	**+0.3**
DKNS	**Dickens**	**70.53**	**356**	P	**P**	**05 43 47.1**	**-0.8**
MSTX	**Muleshoe**	**70.97**	**354**	P	**P**	**05 43 49.0**	**-1.6**
MIAR	**Mount Ida**	**71.31**	**2**	P	**P**	**05 43 51.9**	**-0.6**
MIAR				IAmb	IAmb	05 44 04.3	
	comp=Z,9.1nm,1.2s						
MIAR	**Mount Ida**	**71.31**	**2**	P	**P**	**05 43 53.0**	**+0.5**
WMOK	**Wichita Mounta**	**71.50**	**358**	P	**P**	**05 43 54.2**	**+0.5**
AMTX	**Amarillo**	**71.79**	**355**		**P**	**05 43 54.9**	**-0.6**
ALQ	**Albuquerque**	**72.31**	**351**		**P**	**05 43 58.7**	**0.0**
ALQ	**Albuquerque**	**72.31**	**351**	P	**P**	**05 43 58.2**	**-0.6**
ALQ				IAmb	IAmb	05 44 04.7	
	comp=Z,5.0nm,1.2s						
ANMO	**Albuquerque**	**72.31**	**351**		**P**	**05 43 59.0**	**+0.2**
ANMO	**Albuquerque**	**72.31**	**351**	P	**P**	**05 44 00.5**	**+1.7**
X18A	**Snowflake**	**72.41**	**348**	P	**P**	**05 43 59.0**	**-0.3**
X18A				IAmb	IAmb	05 44 05.8	
	comp=Z,8.7nm,1.2s						
PFO	**Pinyon Flats O**	**72.85**	**342**	LR	LR	06 08 17.8	
	comp=Z,167nm,21.8s,baz=154,slow=30						
LCAR	**Lake Charles**	**72.94**	**4**	P	**P**	**05 44 01.6**	**-0.6**
LCAR				IAmb	IAmb	05 44 13.4	
	comp=Z,7.7nm,1.2s						
U38A	**Gravette**	**73.18**	**1**		**P**	**05 44 02.5**	**-1.1**
TKL	**Tuckaleechee C**	**73.28**	**10**	LR	LR	06 12 27.7	
	comp=Z,164nm,19.2s,baz=173,slow=33						
MAW	**Mawson**	**74.42**	**172**	LR	LR	06 16 05.9	
	comp=Z,325nm,18.0s,baz=206,slow=35						
MVCO	**Mesa Verde**	**74.81**	**350**		**P**	**05 44 13.7**	**+0.2**
MVCO				IAmb	IAmb	05 44 29.6	
	comp=Z,8.2nm,1.1s						
MVCO	**Mesa Verde**	**74.81**	**350**	P	**P**	**05 44 15.3**	**+1.9**
FVM	**French Village**	**74.89**	**5**	P	**P**	**05 44 14.1**	**+0.5**
FVM				IAmb	IAmb	05 44 20.1	
	comp=Z,8.6nm,1.1s						
CCM	**Cathedral Cave**	**74.91**	**4**	P	**P**	**05 44 13.8**	**+0.1**
CCM				IAmb	IAmb	05 44 25.4	
	comp=Z,10nm,1.1s						
CCM	**Cathedral Cave**	**74.91**	**4**	P	**P**	**05 44 13.2**	**-0.6**
SDCO	**Great Sand Dun**	**74.97**	**352**	P	**P**	**05 44 13.1**	**-1.3**
PV23	**Carpenter Ridg**	**76.10**	**350**	P	**P**	**05 44 18.8**	**-2.2**
P38A	**Dawn**	**76.38**	**2**	P	**P**	**05 44 20.2**	**-1.8**
P38A				IAmb	IAmb	05 44 36.9	
	comp=Z,6.5nm,1.0s						
DSP	**Deep Springs**	**76.79**	**342**		**P**	**05 44 24.1**	**-0.4**
DSP				IAmb	IAmb	05 44 41.1	
	comp=Z,6.8nm,1.2s						
NVAR	**Mina Array Bea**	**77.88**	**342**	P	**P**	**05 44 30.6**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=171,slow=7.0,SNR=14						
NVAR				LR	LR	06 11 05.1	
	comp=Z,132nm,21.9s,baz=184,slow=30						
	comp=Z,1.9nm,0.7s						
DUG	**Dugway, Tooele**	**78.42**	**347**	P	**P**	**05 44 33.2**	**-0.5**
ELK	**Elko**	**79.42**	**345**		**P**	**05 44 39.2**	**-0.1**
BEKR	**Beckworth**	**79.75**	**341**		**P**	**05 44 40.0**	**-1.1**
PD31	**Pinedale Array**	**80.41**	**350**	P	**P**	**05 44 44.2**	**-0.5**
PD31				IAmb	IAmb	05 45 01.0	
	comp=Z,6.6nm,1.1s						
PDAR	**Pinedale Array**	**80.41**	**350**	P	**P**	**05 44 43.8**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=155,slow=6.3,SNR=8.6						
PDAR				LR	LR	06 16 31.3	
	comp=Z,95nm,18.2s,baz=145,slow=33						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**80.41**	**350**	P	**P**	**05 44 44.3**	**-0.4**
BW06	**Boulder Array**	**80.42**	**350**	P	**P**	**05 44 44.3**	**-0.4**
BW06				IAmb	IAmb	05 45 01.0	
	comp=Z,6.5nm,1.1s						
ECSD	**EROS Data Cent**	**80.45**	**360**	P	**P**	**05 44 46.0**	**+1.5**
I37A	**Lemond, Waseca**	**80.76**	**2**		**P**	**05 44 45.2**	**-1.0**
RSSD	**Black Hills**	**81.15**	**354**		**P**	**05 44 46.9**	**-1.7**
RSSD				IAmb	IAmb	05 45 05.0	
	comp=Z,8.9nm,1.1s						
RSSD	**Black Hills**	**81.15**	**354**	P	**P**	**05 44 49.3**	**+0.7**
FXWY	**Fox Creek**	**81.48**	**349**	P	**P**	**05 44 48.4**	**-1.9**
M03C	**McCloud**	**81.54**	**340**	P	**P**	**05 44 49.4**	**-1.1**
M03C				IAmb	IAmb	05 44 56.4	
	comp=Z,8.7nm,1.2s						
WVOR	**Wild Horse Val**	**81.77**	**343**	P	**P**	**05 44 53.0**	**+1.3**
HLID	**Hailey**	**81.97**	**347**		**P**	**05 44 52.5**	**-0.5**
HLID				IAmb	IAmb	05 45 09.4	
	comp=Z,5.2nm,0.9s						
HLID	**Hailey**	**81.97**	**347**	P	**P**	**05 44 52.4**	**-0.5**
YBH	**Yreka Blue Hor**	**82.12**	**340**	LR	LR	06 13 56.5	
	comp=Z,127nm,20.6s,baz=170,slow=30						
BCYI	**Bear Canyon**	**82.52**	**348**	P	**P**	**05 44 55.5**	**-0.3**
BCYI				IAmb	IAmb	05 45 22.6	
	comp=Z,5.5nm,1.2s						
SADO	**Sadowa**	**82.92**	**12**	LR	LR	06 18 24.4	
	comp=Z,239nm,18.2s,baz=205,slow=33						
PLID	**Pearl Lake**	**83.75**	**346**		**P**	**05 45 01.1**	**-1.0**
PLID				IAmb	IAmb	05 45 14.3	
	comp=Z,4.8nm,1.1s						
G08A	**Pilot Rock**	**84.55**	**344**		**P**	**05 45 04.6**	**-1.4**
G08A				IAmb	IAmb	05 45 12.7	
	comp=Z,8.4nm,1.4s						
AGMN	**Agassiz Nation**	**85.01**	**0**	P	**P**	**05 45 07.2**	**-0.9**
ULM	**Lac du Bonnet**	**86.96**	**0**	P	**P**	**05 45 17.2**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=165,slow=5.2,SNR=3.2						
ULM				LR	LR	06 21 41.1	
	comp=Z,234nm,19.6s,baz=172,slow=34						
	comp=Z,0.5nm,0.5s						
SUR	**Sutherland**	**89.23**	**131**	LR	LR	06 17 08.5	
	comp=Z,256nm,21.9s,baz=226,slow=30						
STKA	**Stephens Creek**	**92.73**	**226**	LR	LR	06 19 36.5	
	comp=Z,474nm,20.2s,baz=111,slow=30						
BOSA	**Boshof**	**94.59**	**131**	LR	LR	06 20 48.3	
	comp=Z,107nm,21.2s,baz=202,slow=31						
SCHQ	**Schefferville**	**94.95**	**17**	LR	LR	06 25 19.2	
	comp=Z,252nm,18.1s,baz=206,slow=33						
HNR	**Honiara**	**95.28**	**254**	LR	LR	06 20 13.2	
	comp=Z,15nm,21.7s,baz=228,slow=30						
TSUM	**Tsumeb**	**96.18**	**120**	LR	LR	06 22 00.9	
	comp=Z,217nm,22.0s,baz=173,slow=31						
LBTB	**Lobatse**	**97.41**	**129**	LR	LR	06 22 49.2	
	comp=Z,144nm,21.9s,baz=229,slow=31						
CTA	**Charters Tower**	**98.24**	**237**	LR	LR	06 22 35.2	
	comp=Z,472nm,21.9s,baz=144,slow=31						
DLBC	**Dease Lake**	**99.30**	**343**	LR	LR	06 26 30.1	
	comp=Z,58nm,18.2s,baz=100,slow=33						
H01W1	**Cape Leeuwin H**	**103.04**	**205**	T	T	07 42 16.0	
	baz=154,slow=75,SNR=32						
H01W2	**Cape Leeuwin H**	**103.04**	**205**	T	T	07 42 17.1	
	baz=154,slow=75,SNR=27						
H01W3	**Cape Leeuwin H**	**103.06**	**205**	T	T	07 42 17.1	
	baz=154,slow=75,SNR=22						

KSRS	**Korea Array**	**145.18**	**284**	PKPbc	**PKPbc**	**05 52 08.1**	**-2.1**
	comp=Z,1.8nm,1.0s,baz=102,slow=3.7,SNR=6.8						
HEH	**HeiHe**	**146.35**	**307**	PKPbc	PKPdf	05 52 00.3	-12
HEH				LR	LR		
	comp=N,84nm,20.8s						
HEH				LR	LR		
	comp=E,140nm,19.6s						
HEH				LR	LR		
	comp=Z,170nm,19.0s						
BNX	**BinXian**	**146.57**	**299**	⇑P	**PKiKP**	**05 52 15.8**	**-1.3**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NJ2	**Nanjing**	**150.86**	**271**	*e*P	**PKiKP**	**05 52 26.0**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,52nm,0.5s						
HHC	**Hu-ho-hao-te**	**158.18**	**288**	*e*P	**PKPdf**	**05 52 35.0**	**+4.8**
PZH	**PanZhiHua**	**161.53**	**240**	PKP	PKPdf	05 52 25.8	-8.6
WMQ	**Urumqi**	**172.67**	**338**	*e*PKP	**PKPdf**	**05 52 48.8**	**+6.8**
WMQ				pPKP	sPKPdf	05 52 59.5	+14
WMQ				PKPab	**sPKPab**	**05 54 11.0**	**+0.7**
WMQ				LR	LR		
	comp=N,260nm,17.7s						
WMQ				LR	LR		
	comp=E,270nm,16.3s						
WMQ				LR	LR		
	comp=Z,140nm,22.9s						

TAP ***30*** *05:33:18.9, 24.°08N×121.°40E, h60km, ML3.6, B*
JMA ***30*** *05:33:19.1±0.1, 24.°0N±0.°4×121.°5E±1.°0, h56km±1km, MV2.6/7, TAIWAN REGION*

ISC 30 05:33:19.2±1.2, 24.°11N±0.°02×121.°39E±0.°02, h62km±4km, n134,σ1°06/236, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LXIB	**Xiulin Townshi**	**0.09**	**168**	*i*	P	**Pn**	**05 33 28.6**	**0.0**
LXIB				*i*	S	**Sn**	05 33 35.4	-0.1
WHF	**Hehuan Shan**	**0.12**	**288**	*i*	P	**Pn**	05 33 29.5	+0.4
WHF				*i*	S	**Sn**	05 33 36.7	+0.4
ETLH	**Xiulin Townshi**	**0.13**	**39**		P	**Pn**	05 33 29.0	+0.2
ETLH					S	**Sn**	05 33 35.5	-0.1
ETM	**Tongmen**	**0.17**	**147**	*i*	P	**Pn**	05 33 28.3	-0.5
ETM					S	**Sn**	05 33 35.4	-0.3
FUSS	**Fushou**	**0.20**	**316**	*i*	P	**Pn**	05 33 29.8	+0.5
FUSS					S	**Sn**	05 33 37.1	+0.7
NACB	**Ninganchiao**	**0.20**	**70**	P		**Pn**	05 33 28.0	-0.9
NACB	**Ninganchiao**	**0.20**	**70**	P		Pn	05 33 34.8	+5.9
NACB	**Ninganchiao**	**0.20**	**70**	P		**Pn**	05 33 28.2	-0.7
NACB				*i*	S	**Sn**	05 33 35.0	-0.9
ETL	**Fush Village**	**0.22**	**76**	P		**Pn**	05 33 28.4	-0.6
ETL					S	**Sn**	05 33 35.2	-0.9
HWA	**Hwalien**	**0.23**	**124**	*e*P		**Pn**	05 33 29.4	+0.4
HWA					S	**Sn**	05 33 36.2	+0.1
TWT	**Tachien**	**0.25**	**306**	*i*	P	**Pn**	05 33 30.1	+0.6
TWT					S	**Sn**	05 33 37.5	+0.8
OWD	**Renai**	**0.25**	**233**	*i*	P	**Pn**	05 33 29.5	+0.2
OWD					S	**Sn**	05 33 36.6	-0.1
TDCB	**Techi**	**0.26**	**304**	*i*	P	**Pn**	05 33 29.9	+0.4
TDCB					S	**Sn**	05 33 37.4	+0.6
WUSB	**Renai**	**0.28**	**246**	*i*	P	**Pn**	05 33 29.9	+0.4
WUSB					S	**Sn**	05 33 37.5	+0.5
ESL	**Shilin**	**0.29**	**173**		P	**Pn**	05 33 28.6	-0.9
ESL					S	**Sn**	05 33 35.8	-1.1
TEYL	**Yanliau Villag**	**0.30**	**142**		P	**Pn**	05 33 28.8	-0.7
TEYL					*e*S	**Sn**	05 33 36.7	-0.4
NNSB	**Datong**	**0.32**	**358**	*i*	P	**Pn**	05 33 30.4	+0.6
NNSB					S	**Sn**	05 33 38.4	+0.8
NNS	**Nan Shan**	**0.33**	**357**	*i*	P	**Pn**	05 33 30.7	+0.7
NNS					S	**Sn**	05 33 39.1	+1.3
SHUL	**Shoufeng**	**0.35**	**154**		P	**Pn**	05 33 29.6	-0.3
SHUL					S	**Sn**	05 33 37.4	-0.3
EHP	**Heping Village**	**0.38**	**57**	*e*S		**Sn**	05 33 37.4	-0.8
EAHA	**Aohua**	**0.39**	**55**	P		**Pn**	05 33 29.6	-0.6
WARBT	**Fenglin Townsh**	**0.39**	**181**	*i*	P	**Pn**	05 33 29.2	-1.1
WARBT					S	**Sn**	05 33 37.0	-1.3
TEGC	**Jichi Village**	**0.42**	**161**		P	**Pn**	05 33 29.8	-0.7
TEGC					S	**Sn**	05 33 38.9	+0.2
VWDT	**VWDT**	**0.42**	**213**		P	**Pn**	05 33 31.3	+0.8
VWDT					S	**Sn**	05 33 39.4	+0.6
WCS	**Beigang Elemen**	**0.44**	**264**		P	**Pn**	05 33 31.2	+0.4
WCS					S	**Sn**	05 33 39.9	+0.7
WHP	**Taichung City**	**0.44**	**293**	*i*	P	**Pn**	05 33 31.1	+0.2
WHP					S	**Sn**	05 33 40.2	+0.9
LATG	**Datong**	**0.44**	**16**		P	**Pn**	05 33 31.5	+0.6
LATG					S	**Sn**	05 33 40.7	+1.3
ENA	**Nanau**	**0.45**	**45**		P	**Pn**	05 33 28.7	-2.2
ENA					*e*S	**Sn**	05 33 37.2	-2.1
EWUT	**Wuta**	**0.49**	**46**		P	**Pn**	05 33 31.0	-0.2
EWUT					S	**Sn**	05 33 38.9	-1.0
SMLT	**Sun Moon Lake**	**0.50**	**244**	*i*	P	**Pn**	05 33 32.0	+0.5
SMLT					S	**Sn**	05 33 41.0	+0.5
NDT	**Datong Townshi**	**0.51**	**12**	*i*	P	**Pn**	05 33 32.4	+1.0
NDT					*e*S	**Sn**	05 33 41.7	+1.4
SSLB	**Suanglung**	**0.51**	**232**		P	**Pn**	05 33 31.7	+0.2
SSLB	**Suanglung**	**0.51**	**232**	*i*	P	**Pn**	05 33 31.9	+0.4
SSLB					S	**Sn**	05 33 41.3	+0.9
TYC	**Yuchr**	**0.53**	**248**	*i*	P	**Pn**	05 33 32.1	+0.5
TYC					S	**Sn**	05 33 41.5	+0.8
YHNB	**Yeheng**	**0.56**	**358**		P	**Pn**	05 33 32.7	+0.6
YHNB	**Yeheng**	**0.56**	**358**		S	**Sn**	05 33 43.2	+1.7
YHNB	**Yeheng**	**0.56**	**358**		P	**Pn**	05 33 32.8	+0.7
YHNB					S	**Sn**	05 33 42.5	+1.0
NFF	**Wufeng Townshi**	**0.58**	**334**	*i*	P	**Pn**	05 33 32.6	+0.3
NFF					S	**Sn**	05 33 43.1	+1.2
EHY	**Hungye**	**0.60**	**186**		P	**Pn**	05 33 32.2	-0.3
EHY					*e*S	**Sn**	05 33 43.2	+1.1
NDS	**Dongshan**	**0.60**	**29**		P	**Pn**	05 33 32.3	-0.2
NDS					S	**Sn**	05 33 42.0	-0.1
EHYH	**Wanrong**	**0.61**	**184**	*e*P		**Pn**	05 33 32.3	-0.2
EHYH					*e*S	**Sn**	05 33 42.7	+0.4
HGSD	**Ruisui**	**0.61**	**177**	P		**Pn**	05 33 32.0	-0.6
HGSD					*e*S	**Sn**	05 33 42.0	-0.3
TWQ1	**Liyutan**	**0.62**	**293**	*i*	P	**Pn**	05 33 32.5	-0.1
TWQ1					S	**Sn**	05 33 43.0	+0.5
NSTT	**Nanjuang**	**0.63**	**326**		P	**Pn**	05 33 32.8	0.0
NSTT					S	**Sn**	05 33 43.7	+1.0
LIOB	**Emei**	**0.64**	**327**		P	**Pn**	05 33 33.0	+0.1
LIOB					S	**Sn**	05 33 44.0	+1.1
WHYT	**Xinyi Township**	**0.64**	**231**	*i*	P	**Pn**	05 33 33.5	+0.6
WHYT					S	**Sn**	05 33 44.2	+1.2
TWC	**Suao**	**0.65**	**40**		P	**Pn**	05 33 33.0	0.0
TWC					S	**Sn**	05 33 43.8	+0.7
TCU	**Taichung**	**0.66**	**274**		P	**Pn**	05 33 33.1	+0.1
TCU					S	**Sn**	05 33 43.6	+0.4
WJS	**Zhushan**	**0.67**	**245**		P	**Pn**	05 33 33.7	+0.5
WJS					*e*S	**Sn**	05 33 45.1	+1.6
FUSB	**Fushanzhiwuyua**	**0.67**	**15**		P	**Pn**	05 33 34.0	+0.7
FUSB					S	**Sn**	05 33 45.9	+2.2
NWLT	**Wulai**	**0.68**	**8**	*i*	P	**Pn**	05 33 34.2	+0.9
NWLT					S	**Sn**	05 33 45.1	+1.4
WNT	**Mingjian**	**0.69**	**251**		P	**Pn**	05 33 33.8	+0.3
WNT					S	**Sn**	05 33 44.9	+1.1
KSHI	**Guanxi Townshi**	**0.70**	**343**		P	**Pn**	05 33 34.4	+0.8
KSHI					*e*S	**Sn**	05 33 45.9	+1.9
NMLH	**Miaoli**	**0.70**	**308**		P	**Pn**	05 33 33.7	+0.1
YULB	**Yu-li**	**0.72**	**187**		S	**Sn**	05 33 44.8	+0.3
YULB	**Yu-li**	**0.72**	**187**		P	**Pn**	05 33 33.2	-0.6
YULB	**Yu-li**	**0.72**	**187**		P	**Pn**	05 33 32.2	-1.6
YULB					*e*S	**Sn**	05 33 43.8	-0.7
WDJ	**Dajia District**	**0.73**	**289**		P	**Pn**	05 33 34.0	+0.1
WDJ					*e*S	**Sn**	05 33 45.5	+0.7
ILA	**Ilan**	**0.73**	**26**	*e*S		**Sn**	05 33 46.5	+1.7
TWF1	**Yuli**	**0.76**	**187**	P		**Pn**	05 33 32.6	-1.7
WCHH	**Zhanghua**	**0.76**	**268**	*i*	P	**Pn**	05 33 34.3	0.0
WCHH					S	**Sn**	05 33 45.8	+0.3
ECBN	**Changbin**	**0.79**	**176**	*e*P		**Pn**	05 33 34.5	-0.2
ECBN					*e*S	**Sn**	05 33 47.7	+1.7
ALS	**Alishan**	**0.80**	**222**	P		**Pn**	05 33 35.7	+0.6
ALS					S	**Sn**	05 33 48.3	+1.5
EOS2	**EOS2**	**0.83**	**68**	P		**Pn**	05 33 36.2	+1.2
EOS2					*e*S	**Sn**	05 33 46.4	-0.2
CHN5	**Tsauling**	**0.83**	**232**	P		**Pn**	05 33 35.8	+0.5
CHN5					S	**Sn**	05 33 47.8	+0.8
EOS4	**EOS4**	**0.84**	**89**	*e*P		**Pn**	05 33 34.8	-0.1
EOS4					S	**Sn**	05 33 46.9	+0.2
EOS3	**EOS3**	**0.86**	**78**	*e*P		**Pn**	05 33 36.2	+0.7
EOS3					*e*S	**Sn**	05 33 46.4	-1.0
TATO	**Taipei**	**0.87**	**6**	P		**Sn**	05 33 50.2	+2.4
WDL	**Douliou City**	**0.87**	**244**	*e*S		**Sn**	05 33 49.9	+2.1

NCUH	**Zhongli**	**0.88**	**348**	*e*S		**Sn**	**05 33 48.3**	**+0.3**
EGS		**0.88**	**34**	*e*P		**Pn**	**05 33 36.7**	**+0.9**
WDLH	**Douliu**	**0.89**	**242**	P		**Pn**	**05 33 36.6**	**+0.7**
WDLH				S		**Sn**	05 33 49.2	+1.0
TWA	**Mucha**	**0.89**	**11**	*e*P		**Pn**	05 33 37.4	+1.5
TWA				*e*S		**Sn**	05 33 49.9	+1.7
FULB	**Fuli**	**0.91**	**186**	*e*P		**Pn**	05 33 35.9	-0.3
FULB				*e*S		**Sn**	05 33 49.8	+1.1
CHKH	**Chenggong**	**0.91**	**180**	*e*P		**Pn**	05 33 35.0	-1.2
CHKH				*e*S		**Sn**	05 33 48.9	+0.2
TIPB	**Shuangxi**	**0.95**	**24**	P		**Pn**	05 33 37.2	+0.5
TIPB				S		**Sn**	05 33 50.1	+0.5
WRL	**Guolierlin Hig**	**0.95**	**258**	*e*P		**Pn**	05 33 36.5	-0.2
WRL				*e*S		**Sn**	05 33 49.5	-0.2
EHD	**Haiduan**	**0.97**	**190**	*e*P		**Pn**	05 33 36.6	-0.3
EHD				*e*S		**Sn**	05 33 50.4	+0.3
RLNB	**Erlin**	**0.97**	**257**	*e*P		**Pn**	05 33 36.9	0.0
RLNB				S		**Sn**	05 33 50.5	+0.5
ELDTW	**Lidau**	**0.98**	**201**	*e*P		**Pn**	05 33 37.0	-0.2
ELDTW				*e*S		**Sn**	05 33 51.4	+1.0
WCKO	**Fanlu**	**0.98**	**228**	*e*P		**Pn**	05 33 38.3	+1.2
WCKO				*e*S		**Sn**	05 33 52.2	+1.8
TWS1	**Kuangyinshan**	**0.99**	**1**	*e*P		**Pn**	05 33 38.0	+0.8
TWS1				*i*	S	**Sn**	05 33 52.4	+1.8
CHKT	**Chengkung**	**1.00**	**181**	*e*P		**Pn**	05 33 36.4	-1.0
CHKT				*e*S		**Sn**	05 33 50.4	-0.4
YM01	**YM01**	**1.05**	**9**	P		**Pn**	05 33 38.5	+0.4
YM01				S		**Sn**	05 33 52.8	+0.8
TWB1	**Santiao Chiao**	**1.05**	**31**	P		**Pn**	05 33 39.1	+1.2
TWB1				*e*S		**Sn**	05 33 53.0	+1.1
CHN4	**Tsaushan**	**1.05**	**224**	*e*P		**Pn**	05 33 38.8	+0.8
CHN4				*e*S		**Sn**	05 33 53.7	+1.8
NTST	**Danshui**	**1.05**	**3**	P		**Pn**	05 33 38.6	+0.6
NTST				*i*	S	**Sn**	05 33 53.6	+1.6
ZUZH	**Zhuzihu**	**1.06**	**7**	*i*	P	**Pn**	05 33 38.6	+0.4
ZUZH				*i*	S	**Sn**	05 33 52.7	+0.5
TPUB	**Ta-pu**	**1.06**	**221**	P		**Pn**	05 33 38.6	+0.4
TPUB	**Ta-pu**	**1.06**	**221**	P		**Pn**	05 33 38.9	+0.7
TPUB				S		**Sn**	05 33 53.9	+1.6
CHY	**Chiayi**	**1.07**	**236**	*e*S		**Sn**	05 33 53.9	+1.4
SXI1	**Grass Mountain**	**1.08**	**24**	P		**Pn**	05 33 38.7	+0.2
SXI1				S		**Sn**	05 33 54.1	+1.4
STYH	**Taoyuan**	**1.09**	**211**	P		**Pn**	05 33 39.4	+0.9
STYH				S		**Sn**	05 33 54.8	+2.0
YM08	**YM08**	**1.09**	**9**	P		**Pn**	05 33 38.7	+0.1
YM08				*e*S		**Sn**	05 33 53.2	+0.3
TNOU	**National Taiwa**	**1.09**	**18**	*e*P		**Pn**	05 33 41.2	+2.6
WTP	**Ta-pu**	**1.11**	**220**	P		**Pn**	05 33 39.3	+0.4
WTP				*e*S		**Sn**	05 33 54.7	+1.2
WSF	**Szhu**	**1.17**	**247**	S		**Sn**	05 33 55.7	+1.0
TWK	**Hsinying**	**1.18**	**225**	P		**Pn**	05 33 40.2	+0.4
TWK				*e*S		**Sn**	05 33 57.3	+2.3
CHN1	**Nanshi**	**1.21**	**221**	P		**Pn**	05 33 40.3	+0.1
CHN1				S		**Sn**	05 33 57.4	+1.6
WSL	**Shuilin Townsh**	**1.22**	**242**	*e*P		**Pn**	05 33 40.5	+0.3
WSL				*e*S		**Sn**	05 33 56.3	+0.5
SGST	**Jiashian**	**1.26**	**216**	*e*P		**Pn**	05 33 40.5	-0.3
SGST

CEVE				S		Sn	05 39 23.1	0.0
SNJE	**San Jose**	**1.59**	**112**	*e*P		**Pn**	**05 39 00.0**	**-0.1**
MTO3	**Montecristo**	**1.71**	**93**	P		**Pn**	**05 39 01.2**	**-0.2**
MTO3				S		**Sn**	**05 39 25.6**	**+0.2**
MTO3	**Montecristo**	**1.71**	**93**	*e*P		**Pn**	05 39 00.8	-0.5
ESQI	**Esquipulas**	**1.73**	**87**	P		**Pn**	**05 39 01.5**	**0.0**
ESQI				S		**Sn**	**05 39 26.8**	**+1.3**
ESQI	**Esquipulas**	**1.73**	**87**	*e*P		**Pn**	**05 39 01.4**	**0.0**
JAYA	**Jayaque - finc**	**1.82**	**117**	P		**Pn**	**05 39 02.5**	**-0.1**
JAYA				S		**Sn**	**05 39 27.9**	**+0.3**
JAYA	**Jayaque - finc**	**1.82**	**117**	*e*P		**Pn**	**05 39 02.4**	**-0.2**
PMON	**Piamonte**	**1.91**	**113**	P		**Pn**	**05 39 03.7**	**+0.1**
PMON				S		**Sn**	**05 39 29.8**	**+0.4**
PMN	**Piamonte**	**1.91**	**113**	*e*P		**Pn**	**05 39 04.5**	**+0.8**
UEES	**Universidad Ev**	**1.98**	**112**	P		**Pn**	**05 39 03.9**	**-0.5**
UEES				S		**Sn**	**05 39 31.1**	**+0.3**
SARH	**Santa Rosa de**	**2.31**	**82**	P		**Pn**	**05 39 08.6**	**+0.3**
COEG	**Centro de Oper**	**2.34**	**111**	P		**Pn**	**05 39 08.5**	**-0.2**
SCLA	**Alcaldia de Sa**	**2.45**	**108**	P		**Pn**	**05 39 10.6**	**+0.5**
TECO	**Alcaldia de Te**	**2.46**	**112**	P		**Pn**	**05 39 10.4**	**+0.2**
TECO				S		**Sn**	**05 39 41.7**	**+0.6**
PETF	**Flores**	**2.71**	**26**	P		**Pn**	**05 39 12.6**	**-0.6**
PETF	**Flores**	**2.71**	**26**	*i* P		**Pn**	**05 39 12.4**	**-0.8**
PACA	**Pacayal**	**2.90**	**110**	P		**Pn**	**05 39 15.8**	**+0.1**
CSGN	**Cosiguina Volc**	**3.77**	**113**	P		**Pn**	**05 39 27.1**	**0.0**
SCIG	**Sabancuy**	**4.46**	**359**	P		**Pn**	**05 39 34.8**	**-1.2**
QUEN	**Al S del Volca**	**4.56**	**114**	P		**Pn**	**05 39 37.2**	**-0.2**
MACN	**El Madrono**	**4.77**	**114**	P		**Pn**	**05 39 40.2**	**0.0**
COPN	**Copaltepe**	**4.97**	**117**	P		**Pn**	**05 39 42.8**	**0.0**
SAPS	**Ciudad Sandino**	**5.13**	**116**	P		**Pn**	**05 39 45.0**	**0.0**

*CNRM **30** 05:43:29.1,29°.73N×14°.35W,h10km*
*MDD **30** 05:43:31.9±0.6,29°.39N×14°.68W,h5km,mb_Lg3.1/16,*
Error ellipse: s-maj=6.5km s-min=2.8km az=1.0
ISC 30 05:43:25.6±0.9,**29°.52N**±0°.04×**14°.61W**±0°.04,**h10**km,**n39,**
σ2$40/75,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTIM	**Tinajo, Isla d**	**0.91**	**124**	P	**Pn**	**05 43 47.6**	**+3.1**
CTIM				S	**Sb**	**05 43 57.7**	**+2.1**
EFAM	**Famara**	**1.02**	**112**	S	**Sb**	**05 44 00.4**	**+1.6**
EFAM				*i* IVmb_Lg		05 44 01.5	
CDLV	**Cueva Verdes**	**1.08**	**109**	P	**Pn**	**05 43 49.1**	**+2.4**
CDLV				S	**Sg**	**05 44 01.1**	**+0.9**
CDLV				*i* IVmb_Lg		05 44 01.9	
CFTV	**Fuerteventura**	**1.19**	**157**	P	**Pb**	**05 43 50.1**	**+1.9**
CFTV				S	**Sb**	**05 44 02.8**	**-0.9**
CFTV				*i* IVmb_Lg		05 44 03.3	
CGIN	**Giniginamar, F**	**1.39**	**160**	P	**Pn**	**05 43 52.9**	**+2.0**
CGIN				S	**Sb**	**05 44 07.9**	**-1.4**
CGIN				*i* IVmb_Lg		05 44 08.5	
EOSO	**Osorio**	**1.66**	**210**	P	**Pn**	**05 43 57.1**	**+2.3**
EOSO				S	**Sn**	**05 44 13.6**	**-2.7**
EBAJ	**Bajamar**	**1.81**	**238**	P	**Pn**	**05 43 58.8**	**+2.0**
EBAJ				S	**Sn**	**05 44 17.5**	**-2.2**
CLUM	**San Bartolome**	**1.93**	**209**	P	**Pn**	**05 44 00.8**	**+2.4**
CLUM				S	**Sn**	**05 44 22.1**	**-0.6**
CLUM				*i* IVmb_Lg		05 44 23.3	
CGUI	**Guimar, Teneri**	**2.00**	**234**	P	**Pn**	**05 44 01.6**	**+2.1**
CGUI				S	**Sn**	**05 44 22.9**	**-1.8**
CGUI				*i* IVmb_Lg		05 44 24.2	
CREA	**Los Realejos,**	**2.08**	**237**	P	**Pn**	**05 44 02.8**	**+2.1**
CREA				S	**Sn**	**05 44 25.4**	**-1.3**
CREA				*i* IVmb_Lg		05 44 26.7	
MACI	**Morro de la Ar**	**2.09**	**233**	P	**Pn**	**05 44 02.9**	**+2.0**
MACI				S	**Sn**	**05 44 25.5**	**-1.5**
MACI				*i* IVmb_Lg		05 44 27.1	
CDIE	**La Orotava (Te**	**2.11**	**235**	P	**Pn**	**05 44 02.7**	**+1.6**
CDIE				S	**Sn**	**05 44 24.4**	**-3.0**
CFOR	**Fortaleza, Los**	**2.11**	**236**	P	**Pn**	**05 44 03.3**	**+2.1**
CFOR				S	**Sn**	**05 44 24.9**	**-2.7**
CFOR				*i* IVmb_Lg		05 44 27.8	
CNOR	**Icod de los Vi**	**2.16**	**237**	P	**Pn**	**05 44 03.8**	**+2.0**
CNOR				S	**Sn**	**05 44 27.1**	**-1.7**
CCAN	**Las Canadas**	**2.18**	**234**	P	**Pn**	**05 44 03.6**	**+1.5**
CCAN				S	**Sn**	**05 44 26.2**	**-3.0**
CPVI	**La Orotava (Te**	**2.19**	**236**	P	**Pn**	**05 44 04.5**	**+2.1**
CPVI				S	**Sn**	**05 44 28.5**	**-1.3**
CGRA	**Granadilla de**	**2.20**	**231**	P	**Pn**	**05 44 04.3**	**+2.1**
CGRA				S	**Sn**	**05 44 27.0**	**-2.4**
CGRA				*i* IVmb_Lg		05 44 30.1	
CCHO	**La Orotava (Te**	**2.22**	**235**	P	**Pn**	**05 44 04.5**	**+1.8**
CCHO				S	**Sn**	**05 44 27.5**	**-2.8**
CCHO				*i* IVmb_Lg		05 44 32.3	
CDOS	**Garachico, Isl**	**2.23**	**237**	P	**Pn**	**05 44 04.8**	**+2.0**
CDOS				S	**Sn**	**05 44 28.4**	**-2.1**
GUIA	**Guia de Isora,**	**2.24**	**236**	P	**Pn**	**05 44 04.9**	**+1.9**
GUIA				S	**Sn**	**05 44 28.9**	**-1.9**
CLAJ	**Vilaflor (Tene**	**2.27**	**234**	P	**Pn**	**05 44 04.8**	**+1.6**
CLAJ				S	**Sn**	**05 44 28.5**	**-2.8**
CLAJ				*i* IVmb_Lg		05 44 31.7	
CTFS	**San Miguel de**	**2.28**	**232**	P	**Pn**	**05 44 05.2**	**+1.9**
CTFS				S	**Sn**	**05 44 27.4**	**-4.1**
CBOL	**Buenavista del**	**2.29**	**239**	P	**Pn**	**05 44 05.4**	**+1.9**
CBOL				S	**Sn**	**05 44 28.4**	**-3.4**
CBOL				*i* IVmb_Lg		05 44 32.5	
CADE	**Adeje, Tenerif**	**2.31**	**235**	P	**Pn**	**05 44 05.3**	**+1.6**
CADE				S	**Sn**	**05 44 29.5**	**-2.8**
CPUN	**Puntallana, La**	**2.86**	**255**	P	**Pn**	**05 44 14.4**	**+3.1**
CPUN				S	**Sn**	**05 44 43.7**	**-2.1**
CVIE	**Villa de Mazo,**	**2.96**	**253**	P	**Pn**	**05 44 15.3**	**+2.5**
CVIE				S	**Sn**	**05 44 47.8**	**-0.6**
CMIR	**El Paso, La Pa**	**2.96**	**255**	P	**Pn**	**05 44 14.2**	**+1.4**
CMIR				S	**Sn**	**05 44 45.3**	**-3.2**
CMIR				*i* IVmb_Lg		05 44 47.0	
CROM	**Garafia, La Pa**	**2.96**	**256**	P	**Pn**	**05 44 15.2**	**+2.3**
CROM				S	**Sn**	**05 44 46.0**	**-2.7**
TBT	**Taburiente**	**3.01**	**255**	P	**Pn**	**05 44 15.3**	**+2.0**
TBT				S	**Sn**	**05 44 46.1**	**-3.4**
TBT				*i* IVmb_Lg		05 44 47.7	
CGOR	**Puntagorda, La**	**3.05**	**257**	P	**Pn**	**05 44 14.9**	**+1.0**
CGOR				S	**Sn**	**05 44 47.7**	**-2.8**
TANT	**Tantan**	**3.16**	**110**	P	**Pn**	**05 44 18.5**	**+3.1**
TANT				S	**Sn**	**05 44 52.4**	**-0.7**
PMAR	**Madeira**	**3.76**	**329**	*e*P	**Pn**	**05 44 26.0**	**+2.3**
PMAR				*e*S	**Sn**	**05 45 04.6**	**-3.6**
PMAR				IAML		05 45 05.1	
PMAR				IAML		05 45 14.6	
PMAR	**Madeira**	**3.76**	**329**	P	**Pn**	**05 44 27.6**	**+3.8**
PMAR				S	**Sn**	**05 45 09.5**	**+1.4**
PMPS	**Porto Santo**	**3.83**	**338**	*e*P	**Pn**	**05 44 26.6**	**+2.1**
PMPS				*e*S	**Sn**	**05 45 07.0**	**-2.5**
PMPS				IAML		05 45 09.3	
SRHM	**Skhour des Reh**	**6.47**	**61**	P	**Pn**	**05 44 58.9**	**-2.1**
SRHM				Sn	Sn	05 46 07.6	-7.2
OUZM	**OUZ**	**6.93**	**77**	P	**Pn**	**05 45 06.4**	**-0.9**
OUZM				S	**Sn**	**05 46 20.2**	**-6.2**
ZHG	**ZHG**	**7.85**	**58**	P	**Pn**	**05 45 18.5**	**-1.4**
ZHG				Sn	Sn	05 46 41.5	-7.4
MD31	**MD31**	**9.07**	**66**	P	**Pn**	**05 45 35.7**	**-1.0**
MD31				Sn	**Sn**	**05 47 15.4**	**-3.5**
MDT	**Midelt**	**9.18**	**66**	P	**Pn**	**05 45 38.0**	**-0.1**
MDT				Sn	**Sn**	**05 47 18.7**	**-2.8**

*SJA **30** 06:02:38.0±0.7,20°.74S×68°.87W,h122km±6km,ML3.5,*
MW3.5
*GUC **30** 06:02:39.5±0.8,20°.71S×68°.82W,h104km±4km,ML3.5*
ISC 30 06:02:41.9±1.3,**20°.69S**±0°.03×**68°.96W**±0°.05,**h91**km±10km,
n32,σ1$**78**/51,**4C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.58**	**342**	*e*P	Pn	06 02 51.3	-6.6
PB08				*e*S	**Sn**	**06 03 10.8**	**+1.1**
PB08				IAML		06 03 11.5	
	comp=Z,683nm,0.2s						
PB08	**IPOC Station P**	**0.58**	**342**	⇑*i*P	**Pn**	**06 02 56.9**	**-1.0**
PB08				*e*S	**Sn**	**06 03 10.3**	**+0.6**
PB08				IAML		06 03 11.3	
	comp=E,2μm,0.3s						
GO01	**Chusmiza**	**1.04**	**348**	*e*P	**Pn**	**06 03 01.4**	**-1.3**
GO01				*e*S	**Sn**	**06 03 20.8**	**+2.5**
GO01				IAML		06 03 21.7	
	comp=Z,389nm,0.6s						
GO01	**Chusmiza**	**1.04**	**348**	*e*P	**Pn**	**06 03 01.1**	**-1.6**
GO01				*e*S	**Sn**	**06 03 19.3**	**+1.0**
GO01				IAML		06 03 21.8	
	comp=N,2μm,0.1s						
PB02	**IPOC Station P**	**1.07**	**234**	*e*P	**Pn**	**06 03 01.4**	**-1.2**
PB02				*e*S	**Sn**	**06 03 20.2**	**+2.0**
PB02				IAML		06 03 21.1	
	comp=Z,1μm,0.4s						
PB02	**IPOC Station P**	**1.07**	**234**	*i* P	**Pn**	**06 03 01.6**	**-1.0**
PB02				*e*S	**Sn**	**06 03 19.1**	**+0.9**
PB02				IAML		06 03 21.5	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	**1.13**	**193**	*e*P	**Pn**	**06 03 02.0**	**-1.3**
PB09				*e*P		06 03 02.3	
PB09				*e*S	**Sn**	**06 03 20.4**	**+0.9**
PB09				IAML		06 03 22.4	
	comp=Z,378nm,0.6s						
PB09	**IPOC Station P**	**1.13**	**193**	*i* P	**Pn**	**06 03 02.1**	**-1.3**
PB09				*e*S	**Sn**	**06 03 19.5**	**+0.1**
PB09				IAML		06 03 22.8	
	comp=E,659nm,0.3s						
PB11	**IPOC Station P**	**1.13**	**325**	*e*P	**Pn**	**06 03 02.3**	**-1.1**
PB11				*e*S	**Sn**	**06 03 20.4**	**+0.8**
PB11				IAML		06 03 22.1	
	comp=Z,604nm,0.3s						
PB11	**IPOC Station P**	**1.13**	**325**	⇑*i*P	**Pn**	**06 03 02.2**	**-1.2**
PB11				*e*S	**Sn**	**06 03 20.0**	**+0.4**
PB11				IAML		06 03 20.8	
	comp=N,2μm,0.5s						
TA02	**Huaiquique**	**1.18**	**291**	*e*P	**Pn**	**06 03 03.4**	**-0.4**
TA02				*e*S	**Sn**	**06 03 22.7**	**+2.6**
TA02				IAML		06 03 29.1	
	comp=Z,1μm,0.1s						
TA02	**Huaiquique**	**1.18**	**291**	*e*P	**Pn**	**06 03 02.5**	**-1.2**
PB07	**IPOC Station P**	**1.34**	**220**	*e*P	**Pn**	**06 03 04.6**	**-1.3**
PB07				*e*S	**Sn**	**06 03 24.8**	**+0.8**
PB07				IAML		06 03 25.8	
	comp=Z,570nm,0.2s						
PB07	**IPOC Station P**	**1.34**	**220**	⇑*i*P	**Pn**	**06 03 04.7**	**-1.3**
PB07				*e*S	**Sn**	**06 03 24.1**	**+0.1**
PB07				IAML		06 03 26.1	
	comp=E,2μm,0.3s						
PB03	**IPOC Station P**	**1.54**	**209**	*e*P	**Pn**	**06 03 07.0**	**-1.4**
PB03				IAML		06 03 30.6	
	comp=Z,640nm,0.3s						
PB03	**IPOC Station P**	**1.54**	**209**	⇑*i*P	**Pn**	**06 03 06.9**	**-1.4**
PB03				IAML		06 03 33.9	
	comp=E,1μm,0.1s						
PSGCX	**Pisagua**	**1.54**	**315**	*e*P	**Pn**	**06 03 07.1**	**-1.3**
PSGCX				*e*S	**Sn**	**06 03 30.9**	**+2.5**
PSGCX				IAML		06 03 33.9	
	comp=Z,360nm,0.3s						
PSGCX	**Pisagua**	**1.54**	**315**	*i* P	**Pn**	**06 03 06.8**	**-1.5**
PB06	**IPOC Station P**	**2.08**	**196**	*e*P	**Pn**	**06 03 13.8**	**-1.6**
PB06				*e*S	**Sn**	**06 03 42.2**	**+1.3**
PB06				IAML		06 03 45.6	
	comp=Z,306nm,0.3s						
PB06	**IPOC Station P**	**2.08**	**196**	*e*P	**Pn**	**06 03 13.5**	**-1.9**
PB06				IAML		06 03 45.1	
	comp=N,462nm,0.3s						
AF01	**San Pedro de A**	**2.36**	**162**	*e*P	**Pn**	**06 03 18.5**	**-0.8**
AF01				*e*S	Sn	06 03 56.7	+8.9
AF01				IAML		06 04 25.9	
	comp=Z,110nm,0.3s						
PB16	**IPOC Station P**	**2.40**	**348**	*e*P	**Pn**	**06 03 19.4**	**-0.7**
PB16				*e*S	**Sn**	**06 03 47.1**	**-2.1**
PB16	**IPOC Station P**	**2.40**	**348**	*e*P	**Pn**	**06 03 19.1**	**-0.9**
PB16				IAML		06 04 00.3	
	comp=N,86nm,0.3s						
PB12	**IPOC Station P**	**2.44**	**328**	*e*P	**Pn**	**06 03 18.0**	**-2.1**
PB12				*e*S	**Sn**	**06 03 52.9**	**+3.7**
PB12				IAML		06 03 58.4	
	comp=Z,147nm,0.3s						
PB12	**IPOC Station P**	**2.44**	**328**	*e*P	**Pn**	**06 03 17.1**	**-2.9**
PB12				IAML		06 03 58.5	
	comp=E,331nm,0.3s						
PB05	**IPOC Station P**	**2.44**	**208**	*e*P	**Pn**	**06 03 18.9**	**-1.2**
PB05				*e*S	**Sn**	**06 03 53.5**	**+4.2**
PB05				IAML		06 03 57.3	
	comp=Z,179nm,0.3s						
PB05	**IPOC Station P**	**2.44**	**208**	*e*P	**Pn**	**06 03 18.2**	**-1.8**
PB05				IAML		06 03 56.4	
	comp=E,249nm,0.2s						
AP01	**Chacalluta**	**2.65**	**330**	*e*S	**Sn**	**06 03 55.6**	**+1.4**
AP01				IAML		06 04 03.8	
	comp=Z,263nm,0.6s						
PB14	**IPOC Station P**	**4.13**	**199**	*e*P	**Pn**	**06 03 41.6**	**-1.5**
PB14				*e*S	**Sn**	**06 04 32.7**	**+2.2**
PB14				IAML		06 04 41.0	
	comp=Z,41nm,0.3s						
PB14	**IPOC Station P**	**4.13**	**199**	*e*P	**Pn**	**06 03 40.3**	**-2.8**
HJA	**Humahuaca**	**4.14**	**128**	*e*P	**Pn**	**06 03 41.5**	**-1.7**
HJA				*e*S	**Sn**	**06 04 33.7**	**+3.0**
HJA				IAML		06 04 38.1	
	comp=Z,96nm,0.3s						
LPAZ	**La Paz**	**4.45**	**10**	*e*P	**Pn**	**06 03 47.6**	**-0.1**

*IDC **30** 06:03:56.3±2.5,7°.17S×129°.50E,h128km±24km,mb3.8/6,*
mbtmp4.2/10,Error ellipse: s-maj=36.2km s-min=15.6km
az=74.0
ISC 30 06:03:56.6±0.8,**7°.15S**±0°.08×**129°.5E**±0°.1,**h139**km,**n15,**
σ1$58/13,mb3.8/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.48**	**16**	P	**Pn**	**06 05 30.5**	**+0.8**
	10nm,0.3s,baz=209,slow=19,SNR=15						
SIJI				S	**Sn**	**06 06 39.6**	**-3.0**
	12nm,0.2s,baz=169,slow=22,SNR=6.6						
BATI	**Baumata**	**6.53**	**242**	S	**Sn**	**06 06 41.1**	**-2.4**
	90nm,0.5s,baz=331,slow=14,SNR=13						
FITZ	**Fitzroy Crossi**	**11.51**	**199**	P	**Pn**	**06 06 36.4**	**-0.5**
	3.9nm,0.3s,baz=26,slow=12,SNR=24						
FITZ				S	Sn	06 08 35.0	-9.0
	9.1nm,0.4s,baz=323,slow=24,SNR=7.2						
WRA	**Warramunga Arr**	**13.55**	**160**	P	**Pn**	**06 07 01.6**	**-1.7**
	4.5nm,0.6s,baz=331,slow=14,SNR=26						
WRA				S	Sn	06 09 24.2	-9.0
	14nm,0.6s,baz=331,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.95**	**166**	P	**Pn**	**06 07 46.4**	**+0.8**
	3.7nm,0.7s,baz=338,slow=9.9,SNR=22						
ASAR				S	S	06 10 43.0	-12
	1.1nm,0.3s,baz=345,slow=25,SNR=4.9						
STKA	**Stephens Creek**	**27.06**	**157**	P	**P**	**06 09 26.4**	**+0.3**
	0.6nm,0.4s,baz=326,slow=11,SNR=3.8						
	0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**39.46**	**311**	P	**P**	**06 11 14.3**	**+0.8**
	1.9nm,0.3s,baz=141,slow=7.3,SNR=5.5						
	1.9nm,0.3s						
MKAR	**Makanchi Array**	**68.09**	**327**	P	**P**	**06 14 42.8**	**+1.5**
	2.3nm,0.5s,baz=119,slow=8.1,SNR=14						
	2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**06 15 02.2**	**+0.2**
	0.8nm,0.5s,baz=122,slow=5.4,SNR=4.8						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**72.38**	**329**	P	**P**	**06 15 08.2**	**+0.9**
	0.7nm,0.3s,baz=132,slow=4.7,SNR=8.6						
	0.7nm,0.3s						
H04N2	**CROZET ISLANDS**	**76.36**	**224**	P	P	06 15 40.2	+10
	baz=43,slow=26,SNR=25						
H04N3	**CROZET ISLANDS**	**76.38**	**224**	P	P	06 15 40.7	+10
	baz=43,slow=26,SNR=23						
H04N1	**CROZET ISLANDS**	**76.38**	**224**	P	P	06 15 40.2	+10
	baz=43,slow=26,SNR=23						
ILAR	**Eielson Array**	**93.69**	**25**	P	**P**	**06 16 56.6**	**-0.5**
	0.5nm,0.9s,baz=255,slow=5.1,SNR=4.5						
	0.5nm,0.9s						
LPAZ	**La Paz**	**150.89**	**143**	PKPbc	**PKiKP**	**06 23 36.4**	**+1.3**
	0.7nm,0.4s,baz=220,slow=1.6,SNR=10.0						

*NOU **30** 06:04:25.9,32°.14S×177°.42W,h190km,mb4.7/12,South*
of Kermadec Islands
*NEIC **30** 06:04:34.3±0.8,32°.49S±0°.06×179°.2W±0°.1,h10km±1km,*
mb4.5/28,Error ellipse: s-maj=23.3km s-min=3.9km
az=114.0
*WEL **30** 06:04:39.0±0.7,33°.S±6°×17°.9W±1°.4,h12km,M5.5/19,*
mB5.9/15,ML5.2/19,MLv5.5/19,Mw(mB)5.5/15,Error
ellipse: s-maj=19.3km s-min=4.3km az=108.2
*IDC **30** 06:04:46.7±2.1,32°.29S×179°.31W,h121km±19km,mb4.0/8,*
mbtmp4.5/10,MS4.0/8,Error ellipse: s-maj=20.5km
s-min=16.5km az=78.0
ISC 30 06:04:32.7±0.3,**32°.31S**±0°.04×**179°.02W**±0°.08,**h10**km,
n236,σ2$**08**/181,**mb4.5**/25,**MS4.0**/9,**4C,South of**
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.18**	**18**	P	**Pg**	**06 05 34.0**	**+0.3**
GLKZ				S	**Sg**	**06 06 13.4**	**-1.6**
RAO	**Raoul Island**	**3.19**	**18**	P	**Pg**	**06 05 35.3**	**+1.3**
	477nm,0.4s,baz=232,slow=10,SNR=3.9						
RAO				S	**Sg**	**06 06 15.3**	**0.0**
	1μm,0.3s,baz=231,slow=23,SNR=7.3						
RAO	**Raoul Island**	**3.19**	**18**		**Pb**	**06 05 27.6**	**-1.9**
MXZ	**Matakaoa Point**	**5.68**	**202**	P	**Pn**	**06 05 59.8**	**+2.6**
MXZ	**Matakaoa Point**	**5.68**	**202**	P	Pn	06 06 03.0	+5.9
MXZ				S	**Sn**	**06 07 02.0**	**-0.4**
WMGZ	**Waiomatatini S**	**5.88**	**200**	P	**Pn**	**06 06 03.3**	**+3.3**
WMGZ				S	**Sn**	**06 07 09.0**	**+1.6**
GRZ	**Great Barrier**	**6.03**	**228**	P	Pn	06 06 09.6	+7.6
HAZ	**Te Kaha**	**6.03**	**205**	P	**Pn**	**06 06 05.2**	**+3.1**
HAZ				S	**Sn**	**06 07 12.2**	**+1.1**
WSRZ	**White Island S**	**6.06**	**210**	P	Pn	06 06 10.0	+7.5
WIZ	**White Island**	**6.07**	**210**	P	Pn	06 06 07.9	+5.4
PUZ	**Puketiti**	**6.17**	**200**	P	**Pn**	**06 06 06.3**	**+2.4**
PUZ				S	**Sn**	**06 07 12.5**	**-1.9**
RUGZ	**Raukumara Rang**	**6.26**	**205**	P	**Pn**	**06 06 07.9**	**+2.7**
MYRZ	**Mayor Island**	**6.31**	**217**	P	Pn	06 06 13.4	+7.6
TWGZ	**Tauwhareparae**	**6.35**	**202**	P	**Pn**	**06 06 08.9**	**+2.6**
TWGZ				S	**Sn**	**06 07 16.3**	**-2.6**
WHRZ	**Whale Island**	**6.43**	**210**	P	Pn	06 06 14.5	+6.9
WHRZ				S	**Sn**	**06 07 20.4**	**-0.6**
CNGZ	**Carnagh Statio**	**6.56**	**199**	P	**Pn**	**06 06 11.7**	**+2.4**
WCZ	**Waipu Caves**	**6.59**	**235**	P	Pn	06 06 17.6	+8.0
OPRZ	**Ohinepanea**	**6.61**	**212**	P	Pn	06 06 14.5	+4.6
TKGZ	**Te Karaka**	**6.63**	**202**	P	**Pn**	**06 06 12.1**	**+1.9**
TKGZ				S	**Sn**	**06 07 25.2**	**-0.6**
MWZ	**Matawai**	**6.64**	**204**	P	**Pn**	**06 06 12.4**	**+2.0**
MWZ				S	**Sn**	**06 07 24.1**	**-2.0**
TGRZ	**Tauranga**	**6.65**	**214**	P	Pn	06 06 17.0	+6.5
MARZ	**Manawahe**	**6.67**	**211**	P	Pn	06 06 16.1	+5.3
URZ	**Urewera**	**6.73**	**207**	P	**Pn**	**06 06 13.3**	**+1.8**
URZ	**Urewera**	**6.73**	**207**	P	**Pn**	**06 06 14.2**	**+2.6**
	132nm,0.3s,baz=255,slow=4.3,SNR=187						
URZ				S	**Sn**	**06 07 24.4**	**-3.8**
	320nm,0.4s,baz=191,slow=21,SNR=20						
URZ	**Urewera**	**6.73**	**207**	P	**Pn**	**06 06 13.6**	**+2.1**
EDRZ	**Edgecumbe**	**6.74**	**210**	P	Pn	06 06 16.9	+5.0
MKAZ	**Moumakai**	**6.77**	**223**	P	Pn	06 06 19.5	+7.4
OUZ	**Omahuta**	**6.80**	**243**	P	Pn	06 06 19.5	+6.9
OUZ	**Omahuta**	**6.80**	**243**	P	Pn	06 06 19.7	+7.1
ETAZ	**East Tamaki Re**	**6.81**	**225**	P	Pn	06 06 20.7	+8.0
RAGZ	**Rawiri**	**6.82**	**204**	P	**Pn**	**06 06 14.8**	**+1.8**
MKRZ	**Makatiti**	**6.89**	**211**	P	Pn	06 06 21.8	+8.0
KARZ	**Kaharoa**	**6.89**	**213**	P	Pn	06 06 20.2	+6.4
KMRZ	**Kaimai**	**6.90**	**215**	P	Pn	06 06 20.8	+6.9
RIGZ	**Rimuhau**	**6.90**	**201**	P	**Pn**	**06 06 15.8**	**+1.8**
OMRZ	**Omania**	**6.90**	**212**	P	Pn	06 06 20.0	+5.9
TARZ	**Mount Tarawera**	**6.95**	**211**	P	Pn	06 06 20.1	+5.4
NGRZ	**Ngongotaha**	**6.98**	**213**	P	Pn	06 06 22.6	+7.5
TOZ	**Tahuroa Road**	**7.03**	**218**	P	Pn	06 06 23.3	+7.6
HLRZ	**Highlands Stat**	**7.03**	**211**	P	Pn	06 06 22.6	+6.8
RRRZ	**Republican Roa**	**7.04**	**210**	P	Pn	06 06 21.6	+5.8
MUGZ	**Murupara**	**7.05**	**208**	P	**Pn**	**06 06 17.8**	**+1.9**
AWAZ	**Awhitu Peninsu**	**7.05**	**226**	P	Pn	06 06 24.7	+8.7
PRGZ	**Paritu Road**	**7.06**	**200**	P	**Pn**	**06 06 17.8**	**+1.6**
HSRZ	**Hossack Road**	**7.13**	**212**	P	Pn	06 06 24.3	+7.2
HRRZ	**Handcock Road**	**7.18**	**211**	P	Pn	06 06 24.4	+6.6
KNZ	**Kokohu**	**7.22**	**201**	P	**Pn**	**06 06 19.0**	**+0.8**
PRRZ	**Plateau Road**	**7.22**	**210**	P	**Pn**	**06 06 21.8**	**+3.4**
MHGZ	**Mahia Peninsul**	**7.27**	**199**	P	**Pn**	**06 06 20.3**	**+1.2**
ALRZ	**Allen Road**	**7.29**	**210**	P	**Pn**	**06 06 23.3**	**+3.9**
RAHZ	**Arahi**	**7.31**	**205**	P	**Pn**	**06 06 21.4**	**+1.7**
WPRZ	**Whakapapatarin**	**7.34**	**211**	P	Pn	06 06 25.6	+5.6
MTHZ	**Maungataniwha**	**7.35**	**206**	P	**Pn**	**06 06 21.8**	**+1.6**
WHHZ	**Waihua**	**7.41**	**203**	P	**Pn**	**06 06 22.6**	**+1.7**
KUTZ	**Kaahu Road**	**7

MSVF	**Nonsavu**	**14.76**	**349**	P	**P**	**06 08 10.0**	**+2.3**
	19nm,0.6s,baz=226,slow=10.0,SNR=16						
ODZ	**Otahua Downs**	**15.04**	**209**	P	**Pn**	**06 08 00.8**	**-4.5**
JCZ	**Jackson Bay**	**15.14**	**216**	P	**Pn**	**06 08 02.1**	**-4.6**
JCZ	**Jackson Bay**	**15.14**	**216**	P	**Pn**	**06 08 02.1**	**-4.6**
NIUE	**Niue**	**15.51**	**34**	P	**P**	**06 08 18.4**	**+2.4**
NIUE				S	**Sn**	**06 11 00.1**	**-3.3**
WKZ	**Wanaka**	**15.59**	**213**	P	**Pn**	**06 08 08.1**	**-4.4**
HHSZ	**Highcliff Hill**	**15.75**	**208**	P	**Pn**	**06 08 11.1**	**-3.5**
EAZ	**Earnscleugh**	**15.77**	**212**	P	**Pn**	**06 08 10.4**	**-4.4**
MSZ	**Milford Sound**	**16.00**	**216**	P	**Pn**	**06 08 14.1**	**-3.7**
TUZ	**Tuapeka**	**16.20**	**209**	P	**Pn**	**06 08 17.3**	**-3.0**
MLZ	**Mavora Lakes**	**16.41**	**214**	P	**Pn**	**06 08 19.0**	**-4.2**
SYZ	**Scrubby Hill**	**16.87**	**209**	P	**Pn**	**06 08 26.5**	**-2.4**
WHZ	**Wether Hill Ro**	**16.89**	**213**	P	**Pn**	**06 08 24.4**	**-4.8**
LHI	**Lord Howe Isla**	**18.62**	**267**		**P**	**06 08 47.6**	**-2.8**
LHI				IAmb	IAmb	06 08 59.5	
	comp=Z,47nm,1.1s						
ARMA	**Armidale**	**25.10**	**266**	P	**P**	**06 09 56.8**	**-1.0**
ARMA				IAmb	IAmb	06 10 06.1	
	comp=Z,8.6nm,1.1s						
EIDS	**Eidsvold**	**27.03**	**277**	P	**P**	**06 10 14.7**	**-0.5**
EIDS				IAmb	IAmb	06 10 21.0	
	comp=Z,7.4nm,1.0s						
CTA	**Charters Tower**	**33.31**	**283**	P	**P**	**06 11 12.3**	**+1.5**
	comp=Z,5.8nm,0.8s,baz=138,slow=9.7,SNR=6.0						
	comp=Z,5.8nm,0.8s						
CTAO	**Charters Tower**	**33.31**	**283**	P	**P**	**06 11 10.2**	**-0.6**
BBOO	**Buckleboo**	**37.65**	**257**	P	**P**	**06 11 47.1**	**-0.9**
AS31	**Alice Springs**	**42.18**	**270**	P	**P**	**06 12 24.9**	**-1.0**
ASAR	**Alice Springs**	**42.18**	**270**	P	**P**	**06 12 25.2**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=113,slow=8.2,SNR=4.2						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**42.18**	**270**	P	**P**	**06 12 24.9**	**-0.9**
WR0	**Warramunga Arr**	**43.16**	**275**	P	**P**	**06 12 33.7**	**-0.1**
WB2	**Warramunga Arr**	**43.33**	**275**	P	**P**	**06 12 35.1**	**-0.1**
WB2				IAmb	IAmb	06 12 55.0	
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**43.34**	**275**	P	**P**	**06 12 34.8**	**-0.4**
	comp=Z,3.9nm,0.4s,baz=113,slow=8.0,SNR=5.5						
	comp=Z,3.9nm,0.4s						
WRA	**Warramunga Arr**	**43.34**	**275**	P	**P**	**06 12 34.9**	**-0.4**
WB0	**Warramunga Arr**	**43.37**	**275**	P	**P**	**06 12 35.1**	**-0.5**
WB0				IAmb	IAmb	06 12 37.9	
	comp=Z,8.9nm,0.6s						
FORT	**Forrest**	**44.75**	**257**	P	**P**	**06 12 45.5**	**-0.9**
FORT				IAmb	IAmb	06 12 46.6	
	comp=Z,5.0nm,0.6s						
SBA	**Scott Base**	**46.07**	**184**	P	**P**	**06 12 55.8**	**-0.5**
SBA				IAmb	IAmb	06 13 10.1	
	comp=Z,4.0nm,1.1s						
VNDA	**Vanda**	**46.11**	**186**	LR	LR	06 27 18.9	
	comp=Z,100nm,21.4s,baz=40,slow=29						
VNDA	**Vanda**	**46.11**	**186**		**P**	**06 12 56.7**	**+0.1**
JAY	**Jayapura**	**48.04**	**300**	LR	LR	06 32 37.9	
	comp=Z,157nm,20.6s,baz=130,slow=35						
MTN	**Manton Dam**	**49.46**	**281**	P	**P**	**06 13 23.6**	**+0.2**
MTN				IAmb	IAmb	06 13 30.5	
	comp=Z,6.3nm,1.1s						
KNRA	**Kununurra**	**50.02**	**276**	P	**P**	**06 13 27.5**	**-0.1**
KNRA				IAmb	IAmb	06 13 30.4	
	comp=Z,7.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.52**	**272**	P	**P**	**06 13 39.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**52.93**	**251**	P	**P**	**06 13 47.5**	**-1.8**
CASY	**Casey**	**53.05**	**208**	P	**P**	**06 13 48.7**	**-0.9**
CASY				IAmb	IAmb	06 14 09.9	
	comp=Z,4.3nm,1.0s						
MBWA	**Marble Bar**	**55.18**	**265**	P	**P**	**06 14 05.2**	**-0.6**
MBWA				IAmb	IAmb	06 14 27.0	
	comp=Z,6.4nm,1.0s						
SIJI	**Sorong**	**56.26**	**293**	LR	LR	06 39 00.1	
	comp=Z,194nm,20.8s,baz=206,slow=37						
SOEI	**Soe**	**56.80**	**280**	P	**P**	**06 14 17.0**	**-0.6**
QSPA	**South Pole Qui**	**57.80**	**180**	P	**P**	**06 14 26.1**	**+2.1**
	comp=Z,11nm,0.7s,baz=327,slow=0.5,SNR=85						
	comp=Z,11nm,0.7s						
QSPA	**South Pole Qui**	**57.80**	**180**	P	**P**	**06 14 24.8**	**+0.7**
GIRL	**Giralia**	**59.17**	**261**	P	**P**	**06 14 33.4**	**-0.7**
KAPI	**Kappang**	**63.12**	**282**	LR	LR	06 40 25.3	
	comp=Z,474nm,21.2s,baz=138,slow=34						
DAV	**Davao City (W)**	**65.66**	**296**	LR	LR	06 42 54.4	
	comp=Z,88nm,21.7s,baz=160,slow=35						
SMAI	**San Martin Ant**	**67.99**	**158**	P	**P**	**06 15 32.6**	**+1.1**
SMAI				IAmb	IAmb	06 16 01.3	
	comp=Z,2.0nm,0.5s						
BELA	**Belgrano 2**	**68.01**	**172**	P	**P**	**06 15 32.1**	**+0.4**
BELA				IAmb	IAmb	06 15 32.8	
	comp=Z,4.5nm,1.0s						
MAW	**Mawson**	**70.22**	**201**	P	**P**	**06 15 44.3**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=107,slow=11,SNR=2.5						
	comp=Z,1.1nm,0.5s						
MAW	**Mawson**	**70.22**	**201**	P	**P**	**06 15 44.5**	**-0.9**
TROLL	**Troll, Antarti**	**75.96**	**180** ⇑	P	**P**	**06 16 20.0**	**+0.4**
	comp=Z,174nm,0.4s						
SNAA	**Sanae**	**76.27**	**179** ⇑	P	**P**	**06 16 21.5**	**+0.3**
	comp=Z,58nm,0.6s						
SNAA	**Sanae**	**76.27**	**179**	P	**P**	**06 16 20.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=198,slow=7.7,SNR=7.2						
	comp=Z,1.2nm,0.4s						
SNAA	**Sanae**	**76.27**	**179**	P	**P**	**06 16 21.2**	**0.0**
SNAA				IAmb	IAmb	06 16 24.6	
	comp=Z,2.8nm,0.9s						
VNA2	**Neumayer--Watz**	**76.88**	**177** ⇑	P	**P**	**06 16 25.1**	**+0.5**
	comp=Z,18nm,0.6s,baz=182,slow=5.2						
VNA1	**Neumayer--Stat**	**77.12**	**177** ⇑	P	**P**	**06 16 26.6**	**+0.7**
	comp=Z,12nm,0.8s						
H03S2	**Juan Fernandez**	**80.14**	**124**	T	T	07 45 22.9	
	baz=236,slow=74,SNR=57						
H03S1	**Juan Fernandez**	**80.14**	**124**	T	T	07 45 24.1	
	baz=236,slow=74,SNR=64						
H03S3	**Juan Fernandez**	**80.15**	**124**	T	T	07 45 23.0	
	baz=236,slow=74,SNR=64						
H03N3	**Juan Fernandez**	**80.34**	**123**	T	T	07 45 30.0	
	baz=240,slow=72,SNR=19						
H03N2	**Juan Fernandez**	**80.34**	**123**	T	T	07 45 35.3	
	baz=240,slow=72,SNR=31						
H03N1	**Juan Fernandez**	**80.36**	**123**	T	T	07 45 37.2	
	baz=240,slow=72,SNR=55						
PLCA	**Paso Flores**	**81.84**	**133**	P	**P**	**06 16 54.9**	**+2.5**
	comp=Z,3.0nm,0.9s,baz=275,slow=4.5,SNR=7.8						
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**85.25**	**320**	P	**P**	**06 17 09.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=123,slow=4.5,SNR=2.3						
	comp=Z,0.5nm,0.4s						
NJ2	**Nanjing**	**86.83**	**311**	*e*P	**P**	**06 17 21.8**	**+4.3**
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
NVAR	**Mina Array Bea**	**90.23**	**43**	P	**P**	**06 17 31.7**	**-2.0**
	comp=Z,0.6nm,0.9s,baz=228,slow=6.0,SNR=4.0						
PINE	**Pine Mountain**	**92.44**	**38**	P	**P**	**06 17 45.9**	**+2.0**
TXAR	**Lajitas Array**	**94.14**	**58**	LR	LR	06 52 59.6	
	comp=Z,30nm,19.7s,baz=54,slow=31						
ANMO	**Albuquerque**	**95.44**	**52**	LR	LR	06 51 32.9	
	comp=Z,126nm,21.9s,baz=95,slow=29						
HHC	**Hu-ho-hao-te**	**96.94**	**314**	*e*P	**P**	**06 18 08.8**	**+4.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,42nm,4.9s						
PDAR	**Pinedale Array**	**98.11**	**44**	LR	LR	06 54 07.3	
	comp=Z,30nm,20.7s,baz=111,slow=30						
WMQ	**Urumqi**	**113.72**	**308**	*e*PKP	**PKiKP**	**06 23 14.0**	**+2.6**
WMQ				LR	LR		
	comp=Z,180nm,22.9s						
KURBB	**Kurchatov Arra**	**121.76**	**313**	PKP	**PKPdf**	**06 23 24.7**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=108,slow=1.7,SNR=8.2						
BVAR	**Borovoye Array**	**127.15**	**315**	PKP	**PKPdf**	**06 23 35.5**	**-1.2**
	comp=Z,1.8nm,0.5s,baz=288,slow=0.5,SNR=6.4						
ARCES	**ARCESS Array B**	**140.26**	**347**	PKhKP	PKPpre	06 23 55.6	
	comp=Z,3.0nm,1.0s,baz=72,slow=4.0,SNR=5.7						
STEI	**Steigen**	**143.38**	**351**	*e*P	**PKPdf**	**06 24 05.2**	**-1.3**
VAGH	**Vaagaholmen**	**144.77**	**352**	*e*P	**PKPdf**	**06 24 09.3**	**+0.4**
VAGH				IAmb	IAmb	06 24 09.7	
	comp=Z,16nm,0.7s						
RAUS	**Rausandaksla**	**144.95**	**351**	*e*P	**PKPdf**	**06 24 09.7**	**+0.4**
RAUS				IAmb	IAmb	06 24 09.7	
	comp=Z,17nm,0.8s						
KONS	**Konsvik**	**145.01**	**352**	*e*P	**PKPdf**	**06 24 09.2**	**-0.2**
KONS				IAmb	IAmb	06 24 10.6	
	comp=Z,85nm,1.7s						
MOR8	**Moi Rana**	**145.15**	**350**	*e*P	**PKPdf**	**06 24 09.5**	**-0.1**
MOR8				IAmb	IAmb	06 24 09.6	
	comp=Z,13nm,0.9s						
STOK	**Stokkvaagen**	**145.18**	**352**	*e*P	**PKPdf**	**06 24 10.5**	**+0.8**
STOK				IAmb	IAmb	06 24 11.2	
	comp=Z,26nm,0.6s						
LEIR	**Leirfjorden**	**145.38**	**351**	*e*P	**PKPab**	**06 24 11.7**	**+1.6**
LEIR				IAmb	IAmb	06 24 11.9	
	comp=Z,22nm,1.0s						
KBZ	**Khabaz**	**145.41**	**301**	PKPbc	**PKPdf**	**06 24 08.0**	**-2.7**
	comp=Z,2.6nm,0.8s,baz=201,slow=1.3,SNR=5.3						
FINES	**FINESS Array B**	**146.61**	**338**	PKPbc	**PKPdf**	**06 24 12.5**	**+0.3**
	comp=Z,10nm,0.4s,baz=42,slow=4.6,SNR=85						
FINES	**FINESS Array B**	**146.61**	**338**		**PKPbc**	**06 24 13.5**	**-0.3**
NSS	**Namsos**	**147.04**	**351**	*e*P	**PKPab**	**06 24 15.9**	**-0.6**
NSS				IAmb	IAmb	06 24 20.2	
	comp=Z,48nm,1.7s						
NB2	**NORSAR Subarra**	**150.49**	**350**	PKP	**PKPbc**	**06 24 23.2**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=18,slow=4.3						
NOA	**NORSAR Array B**	**150.49**	**350**	PKPbc	**PKPbc**	**06 24 22.9**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=17,slow=4.2,SNR=7.6						
HFS	**Hagfors**	**150.92**	**347**	PKPbc	**PKPbc**	**06 24 23.8**	**-1.2**
	comp=Z,1.9nm,0.4s,baz=132,slow=4.2,SNR=13						
MMAI	**Mount Meron Ar**	**151.09**	**281**	PKPbc	**PKPbc**	**06 24 24.7**	**-1.6**
	comp=Z,3.3nm,0.4s,baz=99,slow=4.5,SNR=3.3						
AKASG	**Malin Array Be**	**152.24**	**320**	PKPbc	**PKPbc**	**06 24 26.8**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=49,slow=3.0,SNR=9.1						
AKASG	**Malin Array Be**	**152.24**	**320**		**PKiKP**	**06 24 29.1**	**+0.5**
BRTR	**Keskin Array B**	**152.68**	**295**	PKPbc	**PKPbc**	**06 24 28.9**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=145,slow=3.6,SNR=14						
BRTR	**Keskin Array B**	**152.68**	**295**		**PKPbc**	**06 24 29.0**	**-0.8**
DBIC	**Dimbokro**	**153.91**	**167**	PKPbc	**PKPbc**	**06 24 32.5**	**-0.6**
	comp=Z,6.9nm,1.1s,baz=143,slow=2.5,SNR=4.2						
CLL	**Collm**	**159.06**	**339**	*i* PKPab	**PKPab**	**06 25 08.0**	**+0.8**
	comp=Z,14nm,1.6s						
TORD	**Torodi Ar. Bea**	**160.91**	**182**	PKPab	**PKPab**	**06 25 15.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=170,slow=3.8,SNR=13						

KRNET ***30*** *06:09:20.3±0.1,42.2°28N×72.6°68E,h26km,mb3.0*
NNC ***30*** *06:09:20.4±1.0,42.2°27N×72.7°71E,h3km±5km,mb3.3, mpv3.2,Error ellipse: s-maj=10.9km s-min=3.2km az=178.0*
SOME ***30*** *06:09:21.1,42.3°32N×72.7°68E,h20km*
KNET ***30*** *06:09:24.9±0.7,42.3°37N×72.9°94E,h26km±3km,ml1.9,Error ellipse: s-maj=7.0km s-min=4.2km az=137.0*

ISC 30 06:09:20.5±1.1,42.25N±0.04×72.69E±0.02,h8km±10km, n36,σ0.983/64,24C-16D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.63**	**39**	P	P	**Pg**	**06 09 33.0**	**+0.3**
	43nm,0.1s							
MRKS				S		**Sg**	**06 09 41.4**	**+0.4**
	179nm,0.2s							
MRKS	**Merke**	**0.63**	**39**	*e*P	P	**Pg**	**06 09 33.0**	**+0.3**
	43nm,0.1s							
MRKS				*e*S		**Sg**	**06 09 41.4**	**+0.4**
	179nm,0.2s							
ARK	**Arkit**	**0.70**	**230**	⇑*i*P	P	**Pg**	**06 09 34.2**	**+0.1**
ARK				⇑*i*S	S	**Sg**	**06 09 43.9**	**+0.6**
EKS2	**Erkin-Say**	**0.91**	**63**	⇓P	P	**Pg**	**06 09 37.8**	**-0.1**
	3.7nm,0.1s							
EKS2				⇓S	S	**Sg**	**06 09 47.7**	**-2.0**
	9.6nm,0.1s							
EKS2	**Erkin-Say**	**0.91**	**63**	⇑*i*P	P	**Pg**	**06 09 37.4**	**-0.5**
EKS2				⇑*i*S	S	**Sg**	**06 09 49.3**	**-0.4**
UCH	**Uchtor**	**1.36**	**91**	⇓P	P	**Pg**	**06 09 46.9**	**+0.3**
	2.4nm,0.1s							
TRKS	**Terek-Say**	**1.36**	**238**	⇑*i*P	P	**Pn**	**06 09 45.6**	**-0.4**
TRKS				⇑*i*S	S	**Sb**	**06 10 03.8**	**-0.2**
AAK	**Ala-Archa**	**1.39**	**73**	⇑P	P	**Pb**	**06 09 46.9**	**0.0**
	7.4nm,0.2s							
AAK				⇓S	S	**Sb**	**06 10 04.1**	**-0.8**
	6.0nm,0.1s							
AAK	**Ala-Archa**	**1.39**	**73**	⇑P	P	**Pn**	**06 09 46.5**	**0.0**
	0.5nm,0.3s							
AAK				⇑S	S	**Sb**	**06 10 03.8**	**-1.1**
	4.3nm,0.7s							
AAK	**Ala-Archa**	**1.39**	**73**	⇑*i*P	P	**Pn**	**06 09 45.6**	**-0.8**
AAK				⇑*i*S	S	**Sb**	**06 10 03.9**	**-1.0**
FRU1	**Bishkek**	**1.54**	**68**	⇑*e*P	P	**Pn**	**06 09 48.2**	**-0.2**
FRU1				⇑*e*S	S	**Sn**	**06 10 07.8**	**-0.8**
SALK	**Salom-Alik**	**1.61**	**148**	⇓*i*P	P	**Pn**	**06 09 49.7**	**+0.3**
SALK				⇓*i*S	S	**Sn**	**06 10 10.9**	**+0.4**
USP	**Ospenovka**	**1.68**	**52**	⇑P	P	**Pb**	**06 09 51.5**	**-0.2**
	11nm,0.2s							
USP				⇑S	S	**Sb**	**06 10 12.2**	**-0.7**
	63nm,0.3s							
USP	**Ospenovka**	**1.68**	**52**	⇑*i*P	P	**Pn**	**06 09 50.1**	**-0.1**
USP				⇑*i*S	S	**Sn**	**06 10 11.8**	**-0.1**
CHMS	**Chumysh**	**1.70**	**63**	⇑P	P	**Pb**	**06 09 52.1**	**+0.1**
	4.4nm,0.1s							
CHMS				⇓S	S	**Sb**	**06 10 13.3**	**-0.3**
	10nm,0.1s							
CHMS	**Chumysh**	**1.70**	**63**	⇓*i*P	P	**Pn**	**06 09 50.3**	**-0.2**
CHMS				⇓*i*S	S	**Sn**	**06 10 12.2**	**-0.2**
KBK	**Karagaybulak**	**1.72**	**76**	⇑P	P	**Pb**	**06 09 52.8**	**+0.3**
	6.3nm,0.1s							
KBK				⇑S	S	**Sb**	**06 10 14.6**	**+0.2**
	18nm,0.2s							
KK31	**Karatay Array**	**1.81**	**299**	⇑P	P	**Pb**	**06 09 53.4**	**-0.5**
	1.3nm,0.2s,baz=114,slow=15,SNR=104							
KK31				⇓S	S	**Sb**	**06 10 16.3**	**-0.5**
	5.6nm,0.2s,baz=120,slow=27,SNR=11							
SGDS	**Sogindy**	**1.86**	**49**	P	P	**Pb**	**06 09 54.7**	**-0.1**
	11nm,0.1s							
SGDS				S	S	**Sb**	**06 10 18.9**	**+0.5**
	64nm,0.2s							
IUG	**luzhnay**	**1.98**	**268**	Pg	P	**Pb**	**06 09 57.3**	**+0.6**
	38nm,0.3s							
IUG				Lg	Lg		06 10 23.0	
	65nm,0.4s							
IUG	**luzhnay**	**1.98**	**268**	*e*P	P	**Pb**	**06 09 57.4**	**+0.6**
	38nm,0.3s							
IUG				*e*S	S	**Sg**	**06 10 23.0**	**-0.9**
	65nm,0.4s							
BRLS	**Boroldaу**	**2.24**	**291**	Pg	P	**Pb**	**06 10 02.0**	**+0.7**
	4.2nm,0.1s							
BRLS				Lg	Lg		06 10 31.3	
	18nm,0.2s							
BRLS	**Boroldaу**	**2.24**	**291**	*e*P	P	**Pb**	**06 10 01.9**	**+0.7**
	4.2nm,0.1s							
BRLS				*e*S	S	**Sg**	**06 10 31.3**	**-1.2**
	18nm,0.2s							
TKM2	**Tokmak 2**	**2.25**	**72**	⇑P	P	**Pb**	**06 10 00.7**	**-0.9**
	7.3nm,0.3s							
TKM2				⇓S	S	**Sn**	**06 10 27.6**	**+1.3**
	22nm,0.1s							
BOOM	**Boomskoye usch**	**2.42**	**83**	⇓*i*P	P	**Pn**	**06 10 00.6**	**0.0**
BOOM				⇓*i*S	S	**Sn**	**06 10 30.0**	**-0.5**
DGS	**Degeres**	**2.48**	**65**	Pg	P	**Pb**	**06 10 05.4**	**+0.1**
	3.1nm,0.3s							
DGS				Lg	Lg		06 10 37.1	
	15nm,0.5s							
DGS	**Degeres**	**2.48**	**65**	*e*P	P	**Pb**	**06 10 05.4**	**+0.1**
	3.1nm,0.3s							
DGS				*e*S	S	**Sb**	**06 10 37.1**	**+1.0**
	15nm,0.5s							
NRN	**Naryn**	**2.61**	**107**	⇓*e*P	P	**Pn**	**06 10 03.5**	**+0.2**
NRN				⇓*e*S	S	**Sn**	**06 10 34.5**	**-0.8**
KRBS	**Karabastau**	**2.62**	**56**	Pg	P	**Pb**	**06 10 07.9**	**+0.1**
	2.2nm,0.2s							
KRBS				Lg	Lg		06 10 41.5	
	25nm,0.2s							
KRBS	**Karabastau**	**2.62**	**56**	*e*P	P	**Pb**	**06 10 08.0**	**+0.1**
	2.2nm,0.2s							
KRBS				*e*S	S	**Sb**	**06 10 41.5**	**+1.2**
	25nm,0.2s							
ULHL	**Ulahol**	**2.64**	**89**	⇓P	P	**Pb**	**06 10 06.4**	**-1.8**
	2.4nm,0.2s							
TNSS	**Tian-Shan**	**3.24**	**75**	Pg	P	**Pb**	**06 10 19.1**	**+0.6**
	0.7nm,0.2s							
TNSS				Lg	Lg		06 11 00.6	
	1.7nm,0.1s							
TNSS	**Tian-Shan**	**3.24**	**75**	*e*P	P	**Pb**	**06 10 19.1**	**+0.6**
	0.7nm,0.2s							
TNSS				*e*S	S	**Sb**	**06 11 00.6**	**+2.3**
	1.7nm,0.1s							
KTBS	**Karatobe**	**3.27**	**62**	Pg	P	**Pb**	**06 10 19.9**	**+1.0**
	0.5nm,0.1s							
KTBS				Lg	Lg		06 11 01.8	
	12nm,0.4s							
KTBS	**Karatobe**	**3.27**	**62**	*e*P	P	**Pb**	**06 10 19.9**	**+1.0**
	0.5nm,0.1s							
KTBS				*e*S	S	**Sb**	**06 11 01.8**	**+2.8**
	12nm,0.4s							
KDJ	**Kajisay**	**3.34**	**91**	⇑*e*P	P	**Pn**	**06 10 13.7**	**+0.5**
KDJ				⇑*e*S	S	**Sn**	**06 10 52.5**	**-0.7**

GCMT 30 06:11:27.0±0.3,3.22N±0.03×31.32W±0.02,h12km, MW4.8/93,Moment Tensor Solution. s18,c18; s93,c125; Duration: 0 Moment tensor: Scale 10^{16} Nm; Mrr-1.88±.07; Mθθ0.10±.07; Mϕϕ1.78±.06; Mrθ-1.62±.34; Mrϕ-0.57±.06; Mθϕ-0.23±.23; Best double couple: M=2.40800×10^{16} NP1:ϕ5.70000°,δ47.00000°, λ-47.00000°. NP2:ϕ5134.00000°,δ57.00000°, λ-126.00000°. Principal axes: T 1.9790, Plg6.0000°, Azm248.0000°; N 0.8590, Plg30.0000°, Azm155.0000°; P -2.8370, Plg60.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Central Mid-Atlantic Ridge

DJA ***30*** *06:52:10.5±0.2,8°S±3°×117°E±°,h283km±3km,M4.7/37, mb4.6/13,mB5.5/6,MLv4.6/37,Mw(mB)4.9/6*
NEIC ***30*** *06:52:10.7±2.0,7.85S±0.07×116.69E±0.07,h286km±9km, mb4.2/21,Error ellipse: s-maj=11.3km s-min=9.3km az=138.0*
GFZ ***30*** *06:52:10.4±0.1,8°S±3°×117°E±°,h281km±2km,M4.3/26, mb4.5/26,Error ellipse: s-maj=7.3km s-min=3.6km az=4.7, confirmed*
IDC ***30*** *06:52:14.5±1.4,7.51S×117.14E,h318km±13km,mb3.5/10, mbtmp4.3/15,Error ellipse: s-maj=27.0km s-min=8.9km az=51.0*

ISC 30 06:52:11.0±0.4,7.89S±0.05×116.80E±0.04,h300km,n124, σ2.505/136,mb4.1/18,Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.85**	**175**	P	P	**Pn**	**06 52 48.6**	**-2.1**
TWSI				S	S	**Sn**	**06 53 18.3**	**-4.0**
TWSI	**Taliwang, Sumb**	**0.85**	**175**	P	P	**Pn**	**06 52 48.4**	**-2.3**
KHKI	**Kahang-Kahang**	**1.27**	**248**	P	P	**Pn**	**06 52 50.9**	**-1.9**
KHKI				S	S		**06 53 21.5**	**-4.5**
PLAI	**Plampang**	**1.34**	**134**	P	P	**Pn**	**06 52 51.1**	**-2.1**
PLAI				S	S		**06 53 22.0**	**-4.8**
PLAI	**Plampang**	**1.34**	**134**	P	P	**Pn**	**06 52 51.0**	**-2.2**
SRBI	**Singaraja**	**1.58**	**263**	P	P	**Pn**	**06 52 52.5**	**-2.2**
SRBI	**Singaraja**	**1.58**	**263**	P	P	**Pn**	**06 52 51.9**	**-2.8**
DBNI	**Kabupaten Domp**	**1.61**	**112**	P	P	**Pn**	**06 52 52.9**	**-2.1**
DBNI	**Kabupaten Domp**	**1.61**	**112**	P	P	**Pn**	**06 52 52.9**	**-2.1**
DNP	**Denpasar**	**1.76**	**243**	P	P	**Pn**	**06 52 54.3**	**-1.6**
DNP	**Denpasar**	**1.76**	**243**	P	P	**Pn**	**06 52 53.9**	**-2.0**
RTBI	**Rangdo, Negare**	**1.93**	**253**	P	P	**Pn**	**06 52 55.1**	**-2.1**
RTBI	**Rangdo, Negare**	**1.93**	**253**	P	P	**Pn**	**06 52 54.7**	**-2.5**
BYJI	**Banyuwangi**	**2.44**	**262**	P	P	**Pn**	**06 53 00.9**	**-0.6**
BYJI	**Banyuwangi**	**2.44**	**262**	P	P	**Pn**	**06 53 00.7**	**-1.2**
ABJI	**Asem Bagus**	**2.54**	**272**	P	P	**Pn**	**06 53 01.6**	**-0.8**
ABJI	**Asem Bagus**	**2.54**	**272**	P	P	**Pn**	**06 53 00.9**	**-1.5**
JAGI	**Jajag, Banyuwa**	**2.68**	**257**		P	**Pn**	**06 53 01.5**	**-2.2**
JAGI					Sn	**S**	**06 53 39.8**	**-6.0**
JAGI	**Jajag, Banyuwa**	**2.68**	**257**	P	P	**Pn**	**06 53 01.1**	**-2.6**
JAGI	**Jajag, Banyuwa**	**2.68**	**257**	P	P	**Pn**	**06 53 01.2**	**-2.6**
KMMI	**Kalianget**	**2.93**	**286**	P	P	**Pn**	**06 53 05.8**	**-0.3**
WBSI	**Waikabubak, Su**	**3.10**	**124**	P	P	**Pn**	**06 53 05.6**	**-2.2**
WBSI				S	S		**06 53 49.2**	**-3.9**
WBSI	**Waikabubak, Su**	**3.10**	**124**	P	P	**Pn**	**06 53 05.2**	**-2.6**
BLJI	**Banyuglugur**	**3.18**	**272**	P	P	**Pn**	**06 53 07.6**	**-1.0**
BLJI	**Banyuglugur**	**3.18**	**272**	P	P	**Pn**	**06 53 07.5**	**-1.1**
MKS	**Makassar**	**3.75**	**45**	P	P	**Pn**	**06 53 14.1**	**-0.5**
WSI	**Waingapu**	**3.88**	**117**	P	P	**Pn**	**06 53 13.8**	**-2.1**
BSSI	**Bau Bau, Buton**	**4.05**	**65**	P	P	**Pn**	**06 53 17.5**	**-0.4**
KAPI	**Kappang**	**4.09**	**46**	P	P	**Pn**	**06 53 17.6**	**-0.7**
	32nm,0.7s,baz=221,slow=5.6,SNR=14							
KAPI	**Kappang**	**4.09**	**46**			**Pn**	**06 53 17.9**	**-0.5**
KAPI			

comp=Z,0.2nm,0.5s,baz=307,slow=14,SNR=1.5
ASAR ScP **ScP** **07 03 38.0 -0.6**
comp=Z,0.4nm,0.5s,baz=320,slow=2.3,SNR=4.6
comp=Z,3.7nm,0.7s
ASAR Alice Springs 22.69 136 P **P** **06 56 49.2 +1.7**
MLSI Meulaboh, Aceh 23.66 300 P **P** **06 56 55.1 -1.2**
QIS Mount Isa 25.39 122 P **P** **06 57 13.8 +1.9**
COEN Coen 26.57 105 P **P** **06 57 24.4 +2.0**
COEN IAmb IAmb 06 57 25.5
comp=Z,7.7nm,0.8s
MTSU Mount Surprise 28.64 114 P **P** **06 57 43.2 +2.5**
BBOO Buckleboo 30.56 147 P **P** **06 57 57.7 +0.3**
BBOO IAmb IAmb 06 58 21.2
comp=Z,13nm,1.4s
CTAO Charters Tower 30.98 116 P **P** **06 58 04.1 +2.9**
CMAR Chiang Mai Arr 31.56 326 P **P** **06 58 07.6 +1.3**
comp=Z,1.3nm,0.5s,baz=154,slow=6.2,SNR=8.2
comp=Z,1.3nm,0.5s
QLP Quilpie 32.00 129 P **P** **06 58 13.0 +2.9**
STKA Stephens Creek 33.20 139 P **P** **06 58 22.9 +2.6**
comp=Z,1.8nm,0.4s,baz=327,slow=9.5,SNR=4.7
comp=Z,1.8nm,0.4s
JMJ Miyako jima 2 33.55 14 P **P** **06 58 24.3 +1.0**
MORE Moreh 38.75 326 P **P** **06 59 05.8 -1.4**
SHL Shillong 41.15 325 P **P** **06 59 26.1 -0.9**
LSA Lhasa 44.78 328 P **P** **06 59 56.2 -0.1**
LSA IAmb IAmb 07 00 34.2
comp=Z,7.8nm,0.5s
HHC Hu-ho-hao-te 48.74 355 *eP* **P** **07 00 29.3 +3.2**
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,55nm,4.5s
SONM Songino Array 56.24 352 P **P** **07 01 21.4 +0.7**
comp=Z,2.3nm,0.4s,baz=174,slow=9.1,SNR=11
comp=Z,2.3nm,0.4s
SONM Songino Array 56.24 352 P **P** **07 01 21.7 +1.0**
HIA Hailar 56.97 2 P **P** **07 01 22.4 -3.2**
BOOM Boomskoye usch 62.46 327 P **P** **07 02 04.0 +0.9**
BOOM IAmb IAmb 07 02 04.3
comp=Z,2.1nm,0.6s
MKAR Makanchi Array 62.50 334 P **P** **07 02 03.6 +0.5**
comp=Z,1.8nm,0.3s,baz=149,slow=6.3,SNR=25
comp=Z,1.8nm,0.3s
MAKZ Makanchi 62.65 334 P **P** **07 02 04.7 +0.6**
GAR Garm 63.51 321 P **P** **07 02 08.7 -1.4**
CHGR Chuyangaron 64.04 320 P **P** **07 02 12.8 -0.6**
CHGR IAmb IAmb 07 02 15.8
comp=Z,5.7nm,0.8s
KK31 Karatay Array 65.89 325 P **P** **07 02 25.2 0.0**
KK31 IAmb IAmb 07 02 28.9
comp=Z,5.8nm,1.5s
KKAR Karatay Array 65.89 325 P **P** **07 02 24.7 -0.4**
KURBB Kurchatov Arra 67.03 335 P **P** **07 02 32.1 0.0**
comp=Z,0.9nm,0.6s,baz=145,slow=5.9,SNR=7.4
comp=Z,0.9nm,0.6s
KURK Kurchatov 67.06 335 P **P** **07 02 31.5 -0.8**
ZALV Zalesovo Beam 67.25 340 P **P** **07 02 32.8 -0.6**
comp=Z,1.2nm,0.3s,baz=134,slow=4.2,SNR=5.5
comp=Z,1.2nm,0.3s
BVAR Borovoye Array 72.31 333 P **P** **07 03 04.4 +0.3**
comp=Z,2.2nm,0.6s,baz=136,slow=8.4,SNR=7.5
comp=Z,2.2nm,0.6s
AB31 Akbulak array 75.41 325 **P** **07 03 22.4 +0.3**
AB31 IAmb IAmb 07 03 22.9
comp=Z,3.0nm,0.6s
ABKAR Akbulak array 75.41 325 **P** **07 03 22.4 +0.3**
BRTR Keskin Array B 89.76 310 P **P** **07 04 37.6 +1.5**
comp=Z,0.3nm,0.6s,baz=136,slow=5.2,SNR=3.8
comp=Z,0.3nm,0.6s

*MDD **30** 06:52:35.4±0.9, 40.49N×14.59W, h0km, Mb4.2/16, M_mb3.6/12, Error ellipse: s-maj=7.7km s-min=5.5km az=84.0*

*INMG **30** 06:52:37.9±1.2, 40.50N×14.97W, h23km, ML2.5, Error ellipse: s-maj=6.5km s-min=4.3km az=85.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Abissal Iberica*

*CNRM **30** 06:52:45.3, 39.57N×14.19W, h30km*

ISC 30 06:52:35.3±3.4, 40.33N±0.06×14.5W±0.2, h10km, n47, σ2e33/87, 15C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**4.23**	**107**	*eP*	**Pn**	**06 53 42.0**	**+2.3**
PMAFR				*eS*	**Sn**	**06 54 30.6**	**+1.4**
PMAFR				*i* IAML		06 54 33.9	
PMAFR				*i* IAML		06 54 33.9	
PSBE	**So Bento**	**4.43**	**99**	*eP*	**Pn**	**06 53 44.7**	**+2.1**
PSBE				*eS*	**Sn**	**06 54 35.5**	**+1.3**
PSBE				*i* IAML		06 54 38.7	
PSBE				*i* IAML		06 54 43.3	
PCAS	**Casmilo, Conde**	**4.57**	**92**	*eP*	**Pn**	**06 53 45.9**	**+1.4**
PCAS				*eS*	**Sn**	**06 54 37.3**	**-0.4**
PCAS				*i* IAML		06 54 40.8	
PCAS				*i* IAML		06 54 41.1	
PCAS				*i* IAML		06 54 43.6	
EZAM	**Zamans**	**4.71**	**65**	Pn	**Pn**	**06 53 46.9**	**+0.5**
EZAM				⇑*i*Vmb_VC		06 53 48.3	
	259nm,SNR=2.0						
EZAM				Sn	**Sn**	**06 54 40.4**	**-0.6**
EMAZ	**Mazaricos**	**4.87**	**56**	Pn	**Pn**	**06 53 47.9**	**-0.7**
EMAZ				⇑*i*Vmb_VC		06 53 49.7	
	275nm,SNR=1.9						
EMAZ				Sn	**Sn**	**06 54 40.3**	**-4.7**
PSARD	**Sardoal**	**4.89**	**97**	*eP*	**Pn**	**06 53 50.5**	**+1.6**
PSARD				*eS*	**Sn**	**06 54 45.4**	**-0.2**
PSARD				*i* IAML		06 54 48.7	
PSARD				*i* IAML		06 54 49.9	
PSARD				*i* IAML		06 54 51.1	
PGAV	**Gavieira, Arco**	**4.95**	**69**	*eP*	**Pn**	**06 53 51.4**	**+1.6**
PGAV				*eS*	**Sn**	**06 54 45.0**	**-2.1**
PGAV				*i* IAML		06 54 48.9	
PGAV				*i* IAML		06 54 51.7	
PGAV				*i* IAML		06 54 54.4	
PMTG	**Montargil**	**4.97**	**103**	*eP*	**Pn**	**06 53 51.6**	**+1.7**
PMTG				*eS*	**Sn**	**06 54 48.5**	**+1.0**
PMTG				*i* IAML		06 54 51.3	
PMTG				*i* IAML		06 54 52.8	
PMTG				*i* IAML		06 54 55.6	
PVIS	**Viseu**	**5.02**	**84**	*eP*	**Pn**	**06 53 51.6**	**+0.9**
PVIS				*eS*	**Sn**	**06 54 47.1**	**-1.6**
PCAB	**Cabril**	**5.06**	**72**	*eP*	**Pn**	**06 53 52.8**	**+1.6**
PCAB				*eS*	**Sn**	**06 54 48.4**	**-1.3**
PCAB				*i* IAML		06 54 56.3	
PCAB				*i* IAML		06 54 57.1	
MOE	**Montemor**	**5.06**	**109**	*eP*	**Pn**	**06 53 53.6**	**+2.3**
MOE				*eS*	**Sn**	**06 54 51.6**	**+1.8**
MOE				*i* IAML		06 54 53.7	
MOE				*i* IAML		06 54 53.9	
MOE				*i* IAML		06 54 55.3	
ELOB	**Lobios**	**5.07**	**70**	Pn	**Pn**	**06 53 52.2**	**+0.7**
ELOB				⇑*i*Vmb_VC		06 53 53.9	
	250nm,SNR=2.2						
ELOB				Sn	**Sn**	**06 54 48.4**	**-1.7**
POLO	**Lamas de Olo**	**5.16**	**76**	*eP*	**Pn**	**06 53 54.5**	**+1.9**
POLO				*eS*	**Sn**	**06 54 51.5**	**-0.8**
POLO				*i* IAML		06 54 55.3	
POLO				*i* IAML		06 54 55.6	
PARRA	**Arraiolos**	**5.19**	**105**	*eP*	**Pn**	**06 53 54.4**	**+1.5**
PARRA				*eS*	**Sn**	**06 54 52.9**	**+0.1**
PARRA				*i* IAML		06 54 58.5	
PARRA				*i* IAML		06 54 58.7	
PARRA				*i* IAML		06 54 59.9	
PLOUS	**Minas do Lousa**	**5.22**	**114**	*eP*	**Pn**	**06 53 55.8**	**+2.3**
PLOUS				*eS*	**Sn**	**06 54 54.2**	**+0.5**
PLOUS				*i* IAML		06 54 59.6	
PLOUS				*i* IAML		06 55 01.9	
PTEO	**Sao Teotonio**	**5.27**	**120**	*eP*	**Pn**	**06 53 56.1**	**+2.1**
PTEO				*eS*	**Sn**	**06 54 55.3**	**+0.5**
PTEO				*i* IAML		06 54 57.5	
PTEO				*i* IAML		06 54 57.6	
MTE	**Manteigas**	**5.28**	**87**	*eP*	**Pn**	**06 53 56.5**	**+2.2**
MTE				*eS*	**Sn**	**06 54 54.7**	**-0.6**
EVO	**Evora**	**5.30**	**108**	*eP*	**Pn**	**06 53 56.4**	**+1.8**
EVO				*eS*	**Sn**	**06 54 58.2**	**+2.4**
EAGO	**Agolada(Pontev**	**5.38**	**61**	Pn	**Pn**	**06 53 55.6**	**0.0**
EAGO				⇑*i*Vmb_VC		06 53 57.0	
	253nm,SNR=2.5						
EAGO				Sn	**Sn**	**06 54 54.4**	**-3.2**
PCBR	**Castelo Branco**	**5.38**	**93**	*eS*	**Sn**	**06 54 56.4**	**-1.1**
PFVI	**Vila Bisbo**	**5.44**	**124**	*eP*	**Pn**	**06 53 57.4**	**+1.0**
PFVI				*eS*	**Sn**	**06 54 58.4**	**-0.7**
PFVI				*i* IAML		06 55 00.7	
PFVI				*i* IAML		06 55 02.6	
PFVI	**Vila Bisbo**	**5.44**	**124**	P	**Pn**	**06 53 57.0**	**+0.5**
PFVI				S	**Sn**	**06 54 51.7**	**-7.4**
MESJ	**Messejana**	**5.45**	**115**	*eP*	**Pn**	**06 53 59.1**	**+2.5**
MESJ				*eS*	**Sn**	**06 55 00.3**	**+0.8**
MESJ				*i* IAML		06 55 02.6	
MESJ				*i* IAML		06 55 03.1	
PESTR	**Estremoz**	**5.50**	**103**	*eP*	**Pn**	**06 53 59.0**	**+1.6**
PESTR				*eS*	**Sn**	**06 54 59.8**	**-0.9**
PESTR				*i* IAML		06 55 07.1	
PESTR				*i* IAML		06 55 07.8	
PESTR	**Estremoz**	**5.50**	**103**	P	**Pn**	**06 53 58.3**	**+1.0**
PESTR				S	**Sn**	**06 55 02.5**	**+1.9**
PMRV	**Marv??o**	**5.51**	**97**	*eP*	**Pn**	**06 53 58.7**	**+1.3**
PMRV				*eS*	**Sn**	**06 54 59.8**	**-1.1**
PMRV				*i* IAML		06 55 03.4	
PMRV				*i* IAML		06 55 05.7	
PMRV				*i* IAML		06 55 05.8	
PCVE	**Castro Verde**	**5.68**	**116**	*eP*	**Pn**	**06 54 02.4**	**+2.6**
PCVE				*eS*	**Sn**	**06 55 05.8**	**+0.7**
MVO	**Moncorvo**	**5.70**	**79**	*eP*	**Pn**	**06 54 02.1**	**+1.9**
MVO				*eS*	**Sn**	**06 55 03.9**	**-1.8**
MVO				*i* IAML		06 55 08.1	
MVO				*i* IAML		06 55 08.4	
MVO				*i* IAML		06 55 09.1	
PBDV	**Barranco-do-Ve**	**5.96**	**119**	*eS*	**Sn**	**06 55 11.1**	**-0.8**
PBDV				*i* IAML		06 55 18.6	
PBDV				*i* IAML		06 55 20.1	
PVAQ	**Vaqueiros**	**6.02**	**117**	*eP*	**Pn**	**06 54 07.2**	**+2.9**
PVAQ				*eS*	**Sn**	**06 55 12.9**	**-0.4**
PVAQ				*i* IAML		06 55 18.5	
PVAQ				*i* IAML		06 55 18.6	
PVAQ				*i* IAML		06 55 21.4	
PVAQ	**Vaqueiros**	**6.02**	**117**	P	**Pn**	**06 54 05.0**	**+0.6**
PVAQ				S	**Sn**	**06 55 07.1**	**-6.3**
ECAL	**Calabor**	**6.05**	**72**	Pn	**Pn**	**06 54 05.8**	**+1.0**
ECAL				⇑*i*Vmb_VC		06 54 07.8	
	203nm,SNR=1.2						
ECAL				Sn	**Sn**	**06 55 10.7**	**-3.4**
EGRO	**El Granado**	**6.11**	**115**	Pn	**Pn**	**06 54 07.8**	**+2.1**
EGRO				⇑*i*Vmb_VC		06 54 09.5	
	100nm,SNR=1.0						
EGRO				Sn	**Sn**	**06 55 16.5**	**+0.9**
PBAR	**Barrancos**	**6.15**	**108**	*eP*	**Pn**	**06 54 08.5**	**+2.3**
PBAR				*eS*	**Sn**	**06 55 16.8**	**+0.3**
EPON	**Pontenova**	**6.22**	**59**	Pn	**Pn**	**06 54 08.3**	**+1.0**
EPON				⇑*i*Vmb_VC		06 54 10.3	
	138nm,SNR=1.1						
EPON				Sn	**Sn**	**06 55 15.2**	**-3.3**
EPLA	**Plasencia**	**6.42**	**90**	Pn	**Pn**	**06 54 11.2**	**+1.3**
EPLA				⇑*i*Vmb_VC		06 54 11.8	
	89nm,SNR=1.1						
EPLA				Sn	**Sn**	**06 55 22.4**	**-0.9**
EMIN	**Mina Concepcio**	**6.58**	**110**	Pn	**Pn**	**06 54 14.5**	**+2.4**
EMIN				⇑*i*Vmb_VC		06 54 14.9	
	43nm,SNR=0.6						
EMIN				Sn	**Sn**	**06 55 28.6**	**+1.5**
ECAB	**El Cabril**	**7.37**	**105**	Pn	**Pn**	**06 54 24.6**	**+1.6**
ECAB				⇑*i*Vmb_VC		06 54 26.7	
	72nm,SNR=1.4						
ECAB				Sn	**Sn**	**06 55 45.2**	**-1.5**
EARI	**Arriondas**	**7.52**	**64**	Pn	**Pn**	**06 54 26.4**	**+1.4**
EARI				⇑*i*Vmb_VC		06 54 28.9	
	158nm,SNR=1.4						
PAB	**San Pablo**	**7.81**	**93**	Pn	**Pn**	**06 54 31.2**	**+2.1**
PAB				⇑*i*Vmb_VC		06 54 32.3	
	48nm,SNR=1.5						
PAB				Sn	**Sn**	**06 55 56.9**	**-0.6**
GUD	**Guadarrama**	**7.86**	**84**	Pn	**Pn**	**06 54 31.0**	**+1.2**
GUD				⇑*i*Vmb_VC		06 54 32.6	
	37nm,SNR=1.0						
EADA	**Adamuz**	**7.97**	**103**	Pn	**Pn**	**06 54 32.4**	**+1.2**
EADA				⇑*i*Vmb_VC		06 54 33.3	
	54nm,SNR=1.0						
EADA				Sn	**Sn**	**06 55 58.8**	**-2.5**
PSIM	**Granatula de C**	**8.40**	**97**	Pn	**Pn**	**06 54 39.3**	**+2.1**
ETOR	**Torete**	**9.45**	**83**	Pn	**Pn**	**06 54 53.2**	**+1.6**
ETOR				⇑*i*Vmb_VC		06 54 53.8	
	82nm,SNR=1.1						
MD31	**MD31**	**10.78**	**131**	P	**Pn**	**06 55 08.1**	**-1.6**
MD31				S	**Sn**	**06 57 02.9**	**-7.6**
MDT	**Midelt**	**10.90**	**130**	P	**Pn**	**06 55 11.0**	**-0.5**
MDT				S	**Sn**	**06 57 05.2**	**-8.4**
OUZM	**OUZ**	**11.29**	**144**	P	**Pn**	**06 55 16.8**	**0.0**
OUZM				S	Sn	06 57 13.1	-10

*MOS **30** 06:55:56.8±0.8, 30.65N×141.66E, h10km, mb5.0/43, MS4.1/4, Error ellipse: s-maj=11.5km s-min=4.7km az=123.9*

*BJI **30** 06:55:56.1, 30.63N×141.90E, h20km, mB4.7/19, mb4.7/56, Ms4.4/42, Ms7 4.2/43*

*IDC **30** 06:55:57.3±0.5, 30.66N×141.66E, h0km, mb4.4/28, mbtmp4.4/33, ML3.7/5, MS3.8/32, Error ellipse: s-maj=17.0km s-min=11.9km az=68.0*

*NEIC **30** 06:55:59.4±1.0, 30.67N±0.05×141.53E±0.10, h10km±1km, mb4.7/103, Error ellipse: s-maj=14.4km s-min=8.0km az=71.0*

*JMA **30** 06:56:00.0±0.2, 30.8N±1.0×14.2E±, h53km, MV4.7/40, NEAR TORISHIMA IS*

*NIED **30** 06:56:00.0, 30.79N×141.96E, h53km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr1.35; Mθθ2.36; Mϕϕ-3.71; Mrθ3.46; Mθϕ-2.04; Mϕr3.85; Fault plane solution: M06.30000×10^15 NP1: ϕs153.00000°, δ31.00000°, λ16.00000°. NP2:ϕs48.00000°, δ82.00000°, λ120.00000°.*

*GFZ **30** 06:56:01.2±0.3, 31°N±4°×14°2E±°, h10km, M4.7/23, mb4.9/23*

ISC 30 06:55:59.2±0.6, 30.68N±0.04×141.64E±0.06, h11km±3km, h11km:pP-P, n363, σ1s36/346, mb4.7/118, MS4.0/40, 9C-1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**2.85**	**327**	P	**Pn**	**06 56 44.8**	**+0.3**
JHCJ				*eS*	**Sn**	**06 57 18.4**	**-0.4**
JHJ2	**Mitsune**	**2.87**	**328**	P	**Pn**	**06 56 45.5**	**+0.6**
JHJ2	**Mitsune**	**2.87**	**328**	Pn	**Pn**	**06 56 45.3**	**+0.5**
JHJ2				Sn	**Sn**	**06 57 18.6**	**-0.8**
JHJ2	**Mitsune**	**2.87**	**328**	P	**Pn**	**06 56 46.0**	**+1.1**
JHJ2				*eS*	**Sn**	**06 57 18.9**	**-0.5**
JHJ	**Hachijo jima 2**	**2.90**	**328**	Pn	**Pn**	**06 56 45.5**	**+0.3**
	39nm,0.3s,baz=7.2,slow=19,SNR=21						
JHJ				Sn	**Sn**	**06 57 18.2**	**-1.8**
	126nm,0.3s,baz=77,slow=18,SNR=8.9						
JHJ				LR	LR	06 57 58.1	
	comp=Z,2μm,18.2s,baz=108,slow=42 118nm,0.4s						
CBIJ	**Chichi jima**	**3.61**	**172**	*eP*	**Pn**	**06 56 55.6**	**+0.6**
JCJ	**Chichijima**	**3.61**	**172**	P	**Pn**	**06 56 56.3**	**+1.3**
JCJ	**Chichijima**	**3.61**	**172**	Pn	**Pn**	**06 56 54.1**	**-0.8**
	19nm,0.3s,baz=346,slow=23,SNR=15						
JCJ				Sn	**Sn**	**06 57 31.8**	**-5.7**
	35nm,0.3s,baz=133,slow=23,SNR=5.4						
	54nm,0.3s						
JCJ	**Chichijima**	**3.61**	**172**		**Pn**	**06 56 56.2**	**+1.3**
JCJ				Sn	**Sn**	**06 57 36.0**	**-1.5**
JCJ	**Chichijima**	**3.61**	**172**	P	**Pn**	**06 56 57.9**	**+2.9**
JMKN	**Mikurajimanish**	**3.64**	**332**	*eP*	**Pn**	**06 56 55.4**	**0.0**
JMKN				S	**Sn**	**06 57 37.8**	**-0.5**
JMYK	**Miyake Tsubota**	**3.80**	**333**	P	**Pn**	**06 56 58.3**	**+0.6**
JKO	**Kozu shima**	**4.08**	**329**	P	**Pn**	**06 57 02.3**	**+0.8**
JKO				*eS*	**Sn**	**06 57 49.7**	**+0.5**
BSO3	**Boso 3**	**4.21**	**347**	*eP*	**Pn**	**06 57 03.9**	**+0.8**
BSO4	**Boso 4**	**4.43**	**346**	P	**Pn**	**06 57 07.0**	**+0.8**
JHU2	**Hanno**	**5.51**	**340**	P	**Pn**	**06 57 22.4**	**+1.3**
JYT	**Yasato**	**5.66**	**348**	P	**Pn**	**06 57 24.2**	**+1.0**
JRY	**Ryogami san**	**5.79**	**337**	P	**Pn**	**06 57 26.5**	**+1.5**
JRY				*eS*	**Sn**	**06 58 31.6**	**+0.2**
JHO	**Hitachi**	**5.98**	**352**	P	**Pn**	**06 57 26.9**	**-0.7**
JAG	**Ashikaga**	**6.01**	**343**	P	**Pn**	**06 57 28.2**	**+0.3**
INU	**Inuyama**	**6.06**	**321**		**Pn**	**06 57 29.2**	**+0.6**
INU	**Inuyama**	**6.06**	**321**	P	**Pn**	**06 57 31.5**	**+2.9**
JGF	**Kuroka**	**6.08**	**325**	P	**Pn**	**06 57 31.9**	**+3.0**
JGF	**Kuroka**	**6.08**	**325**		**Pn**	**06 57 30.2**	**+1.3**
JGF	**Kuroka**	**6.08**	**325**	P	**Pn**	**06 57 32.0**	**+3.1**
MJAR	**Matsushiro Arr**	**6.50**	**335**	Pn	**Pn**	**06 57 36.5**	**+1.7**
	1.4nm,0.3s,baz=154,slow=11,SNR=106						
MJAR				Sn	**Sn**	**06 58 49.1**	**+0.1**
	0.7nm,0.3s,baz=158,slow=19,SNR=5.6						
MJAR				LR	LR	07 00 12.7	
	comp=Z,762nm,19.0s,baz=146,slow=39 42nm,0.8s						
MAJO	**Matsushiro**	**6.51**	**335**	P	**Pn**	**06 57 37.0**	**+2.2**
MAJO	**Matsushiro**	**6.51**	**335**	*i* P	**Pn**	**06 57 36.5**	**+1.7**
MAJO	**Matsushiro**	**6.51**	**335**		**Pn**	**06 57 36.3**	**+1.5**
MAJO	**Matsushiro**	**6.51**	**335**	P	**Pn**	**06 57 37.0**	**+2.2**
MJB9	**Matsu-Tunnel**	**6.51**	**335**		**Pn**	**06 57 35.7**	**+0.8**
JMN	**Monobe**	**7.24**	**297**	Pn	**Pn**	**06 57 44.5**	**-0.5**
JMN	**Monobe**	**7.24**	**297**	P	**Pn**	**06 57 49.4**	**+4.4**
JNU	**Nakatsue**	**9.46**	**288**	Pn	**Pn**	**06 58 19.6**	**+4.2**
	0.5nm,0.3s,baz=36,slow=14,SNR=4.5						
JNU				LR	LR	07 01 59.5	
	comp=Z,1μm,18.5s,baz=118,slow=38						
JTM	**Tenmabayashi**	**10.09**	**358**	P	**Pn**	**06 58 22.8**	**-1.2**
JTM	**Tenmabayashi**	**10.09**	**358**	S	**Sn**	**07 00 10.5**	**-6.6**
JTM	**Tenmabayashi**	**10.09**	**358**		**Pn**	**06 58 22.1**	**-1.9**
ERM	**Erimo**	**11.38**	**6**	P	**Pn**	**06 58 38.2**	**-3.3**
ERM	**Erimo**	**11.38**	**6**	P	**Pn**	**06 58 37.8**	**-3.7**
ERM	**Erimo**	**11.38**	**6**	Pn	**Pn**	**06 58 37.8**	**-3.7**
JEM	**Erimo**	**11.38**	**6**	P	**Pn**	**06 58 37.9**	**-3.6**
JOW	**Kunigami**	**12.33**	**255**	LR	LR	07 03 31.4	
	comp=Z,934nm,19.2s,baz=66,slow=37						
JOW	**Kunigami**	**12.33**	**255**	Pn	**Pn**	**06 58 53.1**	**-1.6**
KSRS	**Korea Array**	**13.22**	**304**	Pn	**Pn**	**06 59 08.3**	**+1.6**
	0.4nm,0.3s,baz=117,slow=12,SNR=10						
KSRS				LR	LR	07 04 16.9	
	comp=Z,582nm,18.6s,baz=110,slow=38 1.9nm,0.7s						
KSAR	**Wonju Array Be**	**13.24**	**304**	P	**Pn**	**06 59 03.7**	**-3.3**
KSAR	**Wonju Array Be**	**13.24**	**304**	Pn	**Pn**	**06 59 03.7**	**-3.3**
KS19	**Wonju Array Si**	**13.28**	**304**	Pn	**Pn**	**06 59 05.0**	**-2.5**
ASAJ	**Asahikawa**	**13.43**	**3**	Pn	**Pn**	**06 59 07.1**	**-2.5**
	1.2nm,0.3s,baz=206,slow=13,SNR=6.7						
ASAJ				Sn	Sn	07 01 28.1	-11
	0.5nm,0.3s,baz=20,slow=32,SNR=2.0						
ASAJ				LR	LR	07 03 51.3	
	comp=Z,115nm,21.8s,baz=177,slow=35						
ASAJ	**Asahikawa**	**13.43**	**3**	P	**Pn**	**06 59 06.9**	**-2.7**
JKA	**Kamikawa-asahi**	**13.43**	**3**	Pn	**Pn**	**06 59 06.9**	**-2.7**
INCN	**Inchon**	**14.15**	**303**	P	**Pn**	**06 59 18.6**	**-1.0**
INCN	**Inchon**	**14.15**	**303**	Pn	**Pn**	**06 59 18.6**	**-1.0**
USA0B	**Ussuriysk Arra**	**15.50**	**333**	*i* P	**Pn**	**06 59 36.1**	**-1.5**
USA0B	**Ussuriysk Arra**	**15.50**	**333**	Pn	**Pn**	**06 59 36.8**	**-0.8**
USRK	**Ussuriysk Ar.**	**15.50**	**333**	Pn	**Pn**	**06 59 36.3**	**-1.2**
	0.1nm,0.3s,baz=140,slow=12,SNR=8.0						
USRK				LR	LR	07 05 25.0	
	comp=Z,360nm,18.8s,baz=154,slow=37 8.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**15.50**	**333**	P	**Pn**	**06 59 36.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**15.50**	**333**	Pn	**Pn**	**06 59 36.5**	**-1.1**
YSS	**Yuzhno-Sakhali**	**16.27**	**3**	*eP*	**Pn**	**06 59 45.8**	**-1.7**
YSS				*eS*	**Sn**	**07 02 45.2**	**-2.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
MDJ	**Mudanjiang**	**16.84**	**329**	P	**Pn**	**06 59 54.0**	**-0.8**
MDJ				pmax	pmax		
	comp=N,8.0nm,0.9s						
MDJ	**Mudanjiang**	**16.84**	**329**	P	**Pn**	**06 59 54.3**	**-0.5**
GUMO	**Guam**	**17.27**	**169**	LR	LR	07 04 55.6	
	comp=N,207nm,20.2s,baz=358,slow=31						
CN2	**Changchun**	**18.33**	**320**	P	**Pn**	**07 00 13.3**	**0.0**
CN2				pmax	pmax		
	comp=N,20nm,0.8s						
CN2				L	L		
	comp=N,300nm,14.0s						
CN2				L	L		
	comp=N,400nm,14.0s						
CN2				L	L		
	comp=N,400nm,15.0s						
DL2	**Dalian**	**18.34**	**302**	*eP*	**P**	**07 00 14.0**	**+0.5**
DL2				*eS*	**S**	**07 03 41.8**	**-1.2**
DL2				pmax	pmax		
	comp=N,28nm,0.8s						
DL2				pmax	pmax		
	comp=N,230nm,4.7s						
DL2				L	L		
	comp=N,640nm,17.8s						
DL2				L	L		
	comp=N,680nm,16.5s						
DL2				L	L		
	comp=N,910nm,15.4s						
BNX	**BinXian**	**18.69**	**328**	⇓P	**P**	**07 00 17.0**	**-0.3**
BNX				pmax	pmax		
	comp=N,18nm,0.9s						
YHNB	**Yeheng**	**18.91**	**256**	P	**P**	**07 00 17.4**	**-2.5**
YHNB				IAmb	IAmb	07 00 21.9	
	comp=Z,35nm,1.0s						
NACB	**Ninganchiao**	**18.92**	**255**	P	**Pn**	**07 00 23.6**	**+3.0**
NJ2	**Nanjing**	**19.50**	**280**	*eP*	**Pn**	**07 00 27.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
YULB	**Yu-li**	**19.50**	**253**	P	**Pn**	**07 00 28.6**	**+1.0**
YULB	**Yu-li**	**19.50**	**253**	P	**Pn**	**07 00 28.4**	**+0.7**
SSLB	**Suanglung**	**19.62**	**255**		**P**	**07 00 26.5**	**-1.1**
SSLB	**Suanglung**	**19.62**	**255**	P	**Pn**	**07 00 30.3**	**+1.2**
TWG	**Pinlang**	**19.95**	**252**	P	**P**	**07 00 30.2**	**-1.0**
TWG				IAmb	IAmb	07 00 40.8	
	comp=Z,30nm,1.0s						
TWG	**Pinlang**	**19.95**	**252**	P	**Pn**	**07 00 33.6**	**+0.7**
TPUB	**Ta-pu**	**20.09**	**254**	P	**P**	**07 00 31.4**	**-1.4**
TPUB				IAmb	IAmb	07 00 39.1	
	comp=Z,63nm,1.2s						
TPUB	**Ta-pu**	**20.09**	**254**	P	Pn	07 00 35.4	+0.7
TYV	**Tymovskoe**	**20.18**	**2**	*eP*	Pn	07 00 46.9	+12
TYV				pmax	pmax		
	comp=Z,17nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,4.6s						
GRNR	**Gornyy**	**20.44**	**350**	⇑*i*P	Pn	07 00 41.8	+3.3
GRNR				pmax	pmax		

HILR Hailar Array B 25.05 325 P **P** **07 01 23.9 +0.6**
comp=Z,15nm,0.6s,baz=129,slow=9.8,SNR=40
comp=Z,15nm,0.6s
H11N2 WAKE ISLAND Hy 25.27 110 T T 07 27 38.4
baz=327,slow=74,SNR=7.4
H11N1 WAKE ISLAND Hy 25.27 110 T T 07 27 45.2
baz=327,slow=74,SNR=5.4
H11N3 WAKE ISLAND Hy 25.28 110 T T 07 27 40.3
baz=327,slow=74,SNR=5.6
PETK Petropavlovsk- 25.28 23 LR LR 07 13 18.3
comp=Z,87nm,19.3s,baz=209,slow=41
ZEA Zeya 25.29 340 *e*P **P** **07 01 27.5 +2.2**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA MLR MLR
comp=Z,100nm,16.0s
WAKE Wake Island 25.30 111 P **P** **07 01 27.3 +1.6**
H11S3 WAKE ISLAND Hy 25.74 112 T T 07 28 04.5
baz=304,slow=74,SNR=17
H11S1 WAKE ISLAND Hy 25.75 112 T T 07 28 05.6
baz=304,slow=74,SNR=22
H11S2 WAKE ISLAND Hy 25.76 112 T T 07 28 04.0
baz=304,slow=74,SNR=18
HHC Hu-ho-hao-te 26.31 301 *e*P **P** **07 01 36.5 +1.5**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,39nm,4.9s
HHC L L
comp=Z,310nm,15.5s
HHC L L
comp=Z,660nm,18.0s
HHC L L
comp=Z,760nm,18.8s
BTO2 Baotou 27.54 300 *e*P **P** **07 01 46.0 0.0**
BTO2 pP **sP** **07 01 50.5 +1.2**
BTO2 sP **pwP** **07 01 53.0 +0.2**
BTO2 PP **PnPn** **07 02 33.3 +2.5**
BTO2 SS SS 07 07 43.8 -39
BTO2 pmax pmax
comp=Z,39nm,0.7s
BTO2 pmax pmax
comp=Z,340nm,9.3s
BTO2 L L
comp=Z,1μm,16.0s
BTO2 L L
comp=Z,2μm,16.0s
BTO2 L L
comp=Z,3μm,16.5s
DAV Davao City (W) 27.90 216 LR LR 07 15 10.7
comp=Z,137nm,18.0s,baz=9.5,slow=41
ULN Ulaanbaatar 31.46 313*ce*P **P** **07 02 21.6 +0.8**
ULN pmax pmax
comp=Z,15nm,1.3s
ULN Ulaanbaatar 31.46 313 **P** **07 02 19.7 -1.1**
ULN IAmb IAmb 07 02 23.7
comp=Z,23nm,1.4s
ULN Ulaanbaatar 31.46 313 P **P** **07 02 21.8 +1.0**
SONM Songino Array 31.87 313 P **P** **07 02 24.8 +0.5**
comp=Z,3.8nm,0.7s,baz=119,slow=8.8,SNR=15
SONM LR LR 07 16 06.2
comp=Z,251nm,18.1s,baz=55,slow=38
comp=Z,3.8nm,0.7s
SONM Songino Array 31.87 313 **P** **07 02 23.4 -0.9**
SONM IAmb IAmb 07 02 30.0
comp=Z,6.8nm,1.1s
LZH Lanzhou 31.88 290 *e*P **P** **07 02 24.5 -0.1**
LZH pmax pmax
comp=Z,18nm,1.3s
LZH L L
comp=Z,270nm,16.1s
LZH L L
comp=Z,300nm,19.2s
LZH L L
comp=Z,420nm,18.2s
LZDM Lanzhou Array 32.00 290 P **P** **07 02 25.6 -0.3**
comp=Z,2.1nm,0.3s,baz=85,slow=3.1,SNR=3.7
comp=Z,2.1nm,0.3s
YAK Yakutsk 32.31 349 *e*P **P** **07 02 28.1 +0.3**
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,4.0nm,0.8s
YAK pmax pmax
comp=E,4.0nm,1.3s
SHEM Shemya Is, Ala 32.31 38 LR LR 07 13 09.1
comp=E,63nm,20.6s,baz=312,slow=32
SEY Seymchan 33.00 9 P **P** **07 02 33.7 -0.1**
comp=E,2.6nm,0.8s,baz=180,slow=14,SNR=4.2
comp=E,2.6nm,0.8s
IRK Irkutsk 34.77 319 *e*P **P** **07 02 48.9 -0.5**
IRK pmax pmax
comp=Z,24nm,2.0s
TLY Talaya 34.91 318 P **P** **07 02 50.5 -0.1**
comp=Z,7.3nm,0.7s,baz=134,slow=10,SNR=7.1
TLY LR LR 07 17 44.5
comp=Z,282nm,19.8s,baz=156,slow=37
comp=Z,7.3nm,0.7s
TLY Talaya 34.91 318*ce*P **P** **07 02 51.8 +1.1**
TLY pmax pmax
comp=Z,21nm,1.7s
TLY Talaya 34.91 318 P **P** **07 02 50.6 -0.1**
TLY IAmb IAmb 07 02 53.2
comp=Z,9.9nm,0.8s
GTA2 Gaotai 35.12 296 P **P** **07 02 52.0 -0.7**
GTA2 pmax pmax
comp=Z,16nm,0.8s
GTA2 L L
comp=Z,310nm,16.8s
GTA2 L L
comp=Z,560nm,19.0s
GTA2 L L
comp=Z,770nm,18.7s
PZH PanZhiHua 35.15 273 P **P** **07 02 54.5 +1.4**
GOMU GeErMu 39.16 291 P **P** **07 03 25.5 -1.9**
GOMU pP pP 07 03 29.3 -0.6
GOMU sP pwP 07 03 32.8 -1.5
GOMU S **S** **07 09 25.0 -2.5**
GOMU pmax pmax
comp=Z,25nm,0.8s
GOMU L L
comp=Z,170nm,11.3s
GOMU L L
comp=Z,160nm,11.3s
GOMU L L
comp=Z,380nm,11.3s
BILL Bilibino 40.09 14 *i* P **P** **07 03 34.2 -0.1**
BILL pmax pmax
comp=Z,4.0nm,1.0s
CMAR Chiang Mai Arr 40.46 263 P **P** **07 03 36.6 -1.4**
comp=Z,1.6nm,0.3s,baz=63,slow=5.5,SNR=4.7
CMAR LR LR 07 20 57.7
comp=Z,231nm,20.0s,baz=320,slow=37
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 40.46 263 *i* P **P** **07 03 40.2 +2.2**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
MMRI Maumere 43.30 209 P **P** **07 04 00.3 -0.8**
HNR Honiara 43.59 153 LR LR 07 19 51.5
comp=Z,8.7nm,21.1s,baz=48,slow=33
SHL Shillong 43.89 276 P **P** **07 04 05.2 -0.9**
SHL pmax pmax
comp=Z,5.0nm,0.6s
SHL Shillong 43.89 276 P **P** **07 04 05.2 -0.9**
SHL IAmb IAmb 07 04 07.2
comp=Z,5.4nm,0.6s
WMQ Urumqi 44.16 303 *e*P **P** **07 04 08.5 +0.6**
WMQ pP pwP 07 04 14.0 -1.4
WMQ pmax pmax
comp=Z,9.0nm,1.3s
WMQ L L
comp=Z,290nm,16.9s
WMQ L L
comp=Z,290nm,20.5s
WMQ L L
comp=Z,100nm,21.7s
COEN Coen 44.41 178 P **P** **07 04 10.3 +0.4**
COEN IAmb IAmb 07 04 18.4
comp=Z,9.8nm,1.0s
MTN Manton Dam 44.44 195 P **P** **07 04 09.6 -0.7**
MTN IAmb IAmb 07 04 29.0
comp=Z,14nm,1.3s
DGZ Jazzator, Alta 44.49 311 *i* P **P** **07 04 11.4 +0.8**
DGZ pmax pmax
comp=Z,15nm,1.0s
BRDH Bariadhala 45.08 272 LR LR 07 25 30.4
comp=Z,218nm,18.2s,baz=278,slow=39
ZSN Zaisan 46.11 308 *e*P **P** **07 04 23.7 +0.5**
ZSN pmax pmax
comp=Z,13nm,1.2s
ZSN Zaisan 46.11 308 *e*P **P** **07 04 23.8 +0.5**
comp=Z,13nm,1.2s
ZALV Zalesovo Beam 46.51 317 LR LR 07 24 45.6
comp=Z,152nm,18.8s,baz=148,slow=37
EVN Everest 47.48 281 **P** **07 04 33.5 -1.5**
EVN IAmb IAmb 07 04 38.1
comp=Z,4.8nm,0.7s
EVN Everest 47.48 281 P **P** **07 04 34.5 -0.6**
MK31 Makanchi Array 47.88 307 *i* P **P** **07 04 37.4 +0.3**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 47.88 307 P **P** **07 04 37.6 +0.5**
comp=Z,4.7nm,0.6s,baz=90,slow=9.4,SNR=39
MKAR LR LR 07 25 46.1
comp=Z,145nm,19.2s,baz=26,slow=37
comp=Z,4.7nm,0.6s
MAKZ Makanchi 48.09 307 P **P** **07 04 39.2 +0.4**
MAKZ pmax pmax
comp=Z,6.0nm,0.6s
MAKZ Makanchi 48.09 307 **P** **07 04 39.2 +0.4**
MAKZ IAmb IAmb 07 04 39.7
comp=Z,5.8nm,0.6s
MAKZ Makanchi 48.09 307 P **P** **07 04 39.5 +0.7**
PSI Prapat 48.94 244 P **P** **07 04 45.9 +0.2**
PSI pmax pmax
comp=Z,4.0nm,0.8s
RPSI Rantau Prapat 49.00 244 P **P** **07 04 45.9 -0.2**
RPSI IAmb IAmb 07 04 47.2
comp=Z,4.4nm,0.8s
LHMI Lhok Sumawe 49.01 248 P **P** **07 04 44.8 -1.4**
NRIK Noril'sk 49.15 338 P **P** **07 04 46.9 +0.4**
comp=Z,5.1nm,0.9s,baz=123,slow=9.7,SNR=8.8
NRIK LR LR 07 26 53.2
comp=Z,92nm,18.6s,baz=133,slow=38
comp=Z,5.1nm,0.9s
NRIK Noril'sk 49.15 338 *i* P **P** **07 04 46.7 +0.2**
NRIK pmax pmax
comp=Z,8.0nm,1.0s
NRIK Noril'sk 49.15 338 **P** **07 04 46.7 +0.2**
NRIK IAmb IAmb 07 04 47.9
comp=Z,7.8nm,0.9s
J17K VABM Dome 49.35 31 P **P** **07 04 49.1 +1.0**
J17K IAmb IAmb 07 05 01.5
comp=Z,11nm,1.3s
M17K Holitna River 49.72 33 P **P** **07 04 53.0 +2.1**
M17K IAmb IAmb 07 05 01.1
comp=Z,18nm,1.2s
G18K Tagagawik 50.10 28 P **P** **07 04 54.4 +0.6**
G18K IAmb IAmb 07 04 58.5
comp=Z,11nm,1.4s
PDGK Podgornoye 50.14 303 P **P** **07 04 54.5 -0.2**
PDGK Podgornoye 50.14 303 **P** **07 04 54.5 -0.2**
KURK Kurchatov 50.17 312 *i* P **P** **07 04 54.7 +0.1**
KURK pmax pmax
comp=Z,30nm,1.0s
KURK Kurchatov 50.17 312 **P** **07 04 54.2 -0.4**
KURK Kurchatov 50.17 312 P **P** **07 04 54.8 +0.1**
SHLS Shalkode 50.18 303 *e*P **P** **07 04 53.0 -2.0**
SHLS Shalkode 50.18 303 *e*P **P** **07 04 53.0 -2.0**
L18K Granite Mounta 50.20 32 P **P** **07 04 55.7 +1.0**
L18K IAmb IAmb 07 05 01.7
comp=Z,10nm,1.3s
KURBB Kurchatov Arra 50.23 312 P **P** **07 04 55.0 0.0**
comp=Z,6.5nm,0.5s,baz=89,slow=7.6,SNR=44
comp=Z,6.5nm,0.5s
UZB Uzynbulak 50.50 303 *e*P **P** **07 04 57.7 +0.3**
UZB Uzynbulak 50.50 303 *e*P **P** **07 04 57.7 +0.3**
WB0 Warramunga Arr 50.64 189 **P** **07 04 58.1 -0.3**
C19K Lookout Ridge 50.64 23 P **P** **07 04 58.7 +0.7**
C19K IAmb IAmb 07 05 17.7
comp=Z,23nm,1.4s
CTA Charters Tower 50.67 174 LR LR 07 25 41.8
comp=Z,65nm,19.0s,baz=30,slow=35
F19K Shaleruckik Mo 50.68 26 P **P** **07 04 58.9 +0.7**
KPKS Kokpek 50.71 303 *e*P **P** **07 04 59.3 +0.4**
KPKS Kokpek 50.71 303 *e*P **P** **07 04 59.3 +0.4**
TDK Taldyqorghan 50.72 305 *e*P **P** **07 04 59.3 +0.4**
TDK Taldyqorghan 50.72 305 *e*P **P** **07 04 59.3 +0.4**
WRAB Tennant Creek 50.81 189*ce*P **P** **07 04 57.8 -1.9**
WRAB pmax pmax
comp=Z,16nm,1.3s
WRAB Tennant Creek 50.81 189 P **P** **07 04 59.1 -0.5**
WRAB IAmb IAmb 07 05 14.4
comp=Z,9.5nm,0.7s
WR8 Warramunga Arr 50.81 189 P **P** **07 04 59.3 -0.4**
WR8 IAmb IAmb 07 05 14.0
comp=Z,15nm,0.9s
WRA Warramunga Arr 50.82 189 P **P** **07 04 59.4 -0.3**
comp=Z,7.7nm,0.6s,baz=7.1,slow=7.7,SNR=57
comp=Z,7.7nm,0.6s
WRA Warramunga Arr 50.82 189 **P** **07 04 58.6 -1.1**
FITZ Fitzroy Crossi 50.88 200 P **P** **07 05 00.3 +0.1**
SATY Saty 50.96 303 *e*P **P** **07 05 01.1 +0.2**
SATY pmax pmax
comp=Z,8.0nm,1.4s
SATY Saty 50.96 303 *e*P **P** **07 05 01.1 +0.2**
comp=Z,7.8nm,1.4s
J19K Poorman 50.97 30 P **P** **07 05 00.9 +0.4**
E19K Redstone River 51.03 26 P **P** **07 05 01.5 +0.7**
TARG Taragay, Kyrgy 51.60 301 P **P** **07 05 05.7 -0.4**
TARG pmax pmax
comp=Z,13nm,1.5s
TARG Taragay, Kyrgy 51.60 301 P **P** **07 05 05.7 -0.4**
TARG IAmb IAmb 07 05 07.8
comp=Z,13nm,1.5s
J20K Nowinta River 51.64 30 **P** **07 05 06.5 +1.0**
KDAK Kodiak Island 51.82 38 LR LR 07 26 14.3
comp=Z,113nm,21.0s,baz=254,slow=35
MDOK Medeo 51.93 303 *e*P **P** **07 05 08.4 +0.3**
MDOK Medeo 51.93 303 *e*P **P** **07 05 08.4 +0.3**
KDJ Kajisay 52.00 302 P **P** **07 05 08.1 -0.6**
KDJ pmax pmax
comp=Z,9.0nm,1.4s
KDJ Kajisay 52.00 302 P **P** **07 05 08.1 -0.6**
KDJ IAmb IAmb 07 05 23.1
comp=Z,9.1nm,1.4s
AAA Alma-Ata 52.02 303 *e*P **P** **07 05 09.1 +0.4**
AAA Alma-Ata 52.02 303 *e*P **P** **07 05 09.1 +0.4**
TNSS Tian-Shan 52.02 303 *e*P **P** **07 05 09.0 -0.1**
TNSS Tian-Shan 52.02 303 *e*P **P** **07 05 09.1 -0.1**
IMAR Indian Mountai 52.09 28 **P** **07 05 09.0 +0.2**
KUU Kurty 52.33 304 *e*P **P** **07 05 11.3 +0.4**
KUU Kurty 52.33 304 *e*P **P** **07 05 11.4 +0.4**
ASAI AK-SAY(Kyrgyzs 52.70 300 P **P** **07 05 15.2 +1.1**
H22K Ishtalitna Cre 53.04 28 P **P** **07 05 16.9 +1.1**
H22K IAmb IAmb 07 05 25.4
comp=Z,8.4nm,1.4s
SGDS Sogindy 53.63 304 *e*P **P** **07 05 20.9 +0.3**
KSH2 Kashi 53.77 298 P **P** **07 05 23.0 +1.2**
KSH2 pP sP 07 05 26.8 +1.6
KSH2 sP pwP 07 05 31.0 +1.7
KSH2 pmax pmax
comp=Z,12nm,0.9s
BTLS Baital 53.78 306 *e*P **P** **07 05 22.0 +0.4**
BTLS Baital 53.78 306 *e*P **P** **07 05 22.0 +0.4**
H23K Yukon River 53.78 28 P **P** **07 05 21.6 +0.3**
AAK Ala-Archa 53.87 303 P **P** **07 05 23.1 +0.6**
comp=Z,1.9nm,0.4s,baz=98,slow=7.4,SNR=4.0
AAK LR LR 07 29 50.0
comp=Z,128nm,18.4s,baz=88,slow=38
comp=Z,1.9nm,0.4s
AAK Ala-Archa 53.87 303*ce*P **P** **07 05 23.3 +0.8**
AAK pmax pmax
comp=Z,4.0nm,1.3s
AAK Ala-Archa 53.87 303 P **P** **07 05 21.9 -0.6**
NEA2 Nenana 53.88 30 P **P** **07 05 22.6 +0.6**
NEA2 IAmb IAmb 07 05 51.8
comp=Z,5.5nm,0.8s
C23K Itkillik River 53.89 23 P **P** **07 05 22.3 +0.4**
C23K IAmb IAmb 07 05 43.4
comp=Z,16nm,1.2s
AS31 Alice Springs 54.55 189 **P** **07 05 26.8 -0.5**
ASAR Alice Springs 54.55 189 P **P** **07 05 26.9 -0.3**
comp=Z,2.0nm,0.5s,baz=3.2,slow=5.8,SNR=29
comp=Z,2.0nm,0.5s
ASAR Alice Springs 54.55 189 P **P** **07 05 27.0 -0.3**
ASAR Alice Springs 54.55 189 **P** **07 05 26.8 -0.5**
SMLA Simla 54.58 288 *e*P **P** **07 05 27.5 -0.1**
ILAR Eielson Array 54.83 30 P **P** **07 05 28.4 -0.5**
comp=Z,1.0nm,0.7s,baz=259,slow=6.2,SNR=15
comp=Z,1.0nm,0.7s
ILAR Eielson Array 54.83 30 P **P** **07 05 29.0 +0.1**
ILAR Eielson Array 54.83 30 P **P** **07 05 29.0 +0.1**
DHRM DHARAMSHALA 54.95 290 *e*P **P** **07 05 31.3 +0.7**
BVAR Borovoye Array 55.11 316 P **P** **07 05 31.3 +0.1**
comp=Z,3.3nm,0.6s,baz=89,slow=8.0,SNR=11
comp=Z,3.3nm,0.6s
ARK Arkit 55.88 302 P **P** **07 05 38.3 +1.3**
DZA Taraz 56.10 304 *e*P **P** **07 05 38.9 +0.4**
DZA Taraz 56.10 304 *e*P **P** **07 05 38.9 +0.4**
KK31 Karatay Array 56.64 304 P **P** **07 05 42.0 -0.3**
KK31 pmax pmax
comp=Z,8.0nm,0.7s
KK31 Karatay Array 56.64 304 **P** **07 05 42.0 -0.3**
KK31 IAmb IAmb 07 05 43.7
comp=Z,7.6nm,0.7s
KKAR Karatay Array 56.64 304 P **P** **07 05 42.0 -0.3**
KKAR Karatay Array 56.64 304 **P** **07 05 42.0 -0.3**
NIL Nilore 56.99 292 P **P** **07 05 44.1 -0.9**
NIL pmax pmax
comp=Z,29nm,0.8s
NIL Nilore 56.99 292 **P** **07 05 44.1 -0.9**
NIL Nilore 56.99 292 P **P** **07 05 45.8 +0.8**
BCAR Beaver Creek A 57.10 32 **P** **07 05 45.7 +0.4**
MANEM Manem 57.13 297 **P** **07 05 45.6 -0.5**
MANEM IAmb IAmb 07 05 48.2
comp=Z,44nm,0.9s
BTK Batken 57.13 300 P **P** **07 05 46.1 +0.2**
BRLS Borolday 57.14 304 *e*P **P** **07 05 47.4 +1.5**
BRLS Borolday 57.14 304 *e*P **P** **07 05 47.4 +1.5**
IUG Iuzhnay 57.21 303 *e*P **P** **07 05 46.8 +0.4**
IUG pmax pmax
comp=Z,8.0nm,0.7s
IUG Iuzhnay 57.21 303 *e*P **P** **07 05 46.8 +0.4**
comp=Z,8.1nm,0.7s
CHM Chimkent 57.47 303 *e*P **P** **07 05 48.6 +0.4**
CHM Chimkent 57.47 303 *e*P **P** **07 05 48.7 +0.4**
DZM Mont Dzumac 57.61 153 LR LR 07 31 15.2
comp=Z,109nm,18.9s,baz=31,slow=37
I28M Miner Creek 57.76 29 **P** **07 05 50.3 +0.4**
GAR Garm 57.78 299 P **P** **07 05 51.3 +0.8**
DAWY Dawson 58.10 31 P **P** **07 05 52.8 +0.5**
H29M Whitestone 58.34 28 P **P** **07 05 55.4 +1.5**
H29M IAmb IAmb 07 06 13.5
comp=Z,6.2nm,1.2s
G29M Pine Creek 58.43 27 IAmb IAmb 07 06 03.1
comp=Z,17nm,1.5s
M29M Somme Creek 58.68 32 IAmb IAmb 07 06 06.0
comp=Z,13nm,1.5s
CHGR Chuyangaron 58.74 299 *i* P **P** **07 05 57.8 +0.6**
CHGR Chuyangaron 58.74 299 P **P** **07 05 57.9 +0.7**
K29M Barlow Dome 58.94 31 **P** **07 05 59.0 +0.8**
K29M IAmb IAmb 07 06 19.3
comp=Z,6.0nm,1.1s
EPYK Eagle Plains 58.99 28 P **P** **07 05 58.9 +0.4**
EPYK IAmb IAmb 07 06 17.2
comp=Z,11nm,1.1s
G30M tAoh Zraii Nji 59.12 27 **P** **07 05 59.7 +0.3**
G30M IAmb IAmb 07 06 11.8
comp=Z,7.0nm,1.1s
MSVF Nonsavu 59.53 139 LR LR 07 31 51.7
comp=Z,51nm,18.3s,baz=151,slow=36
SHAA Shahritus 59.83 298 IAmb IAmb 07 06 06.8
comp=Z,87nm,1.3s
G31M Satah River 59.90 27 P **P** **07 06 04.5 -0.1**
G31M IAmb IAmb 07 06 09.0
comp=Z,11nm,1.4s
INK Inuvik 59.99 25 P **P** **07 06 05.0 -0.2**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 59.99 25 P **P** **07 06 05.0 -0.2**
KBL Kabul 60.05 295 P **P** **07 06 05.3 -1.2**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 60.05 295 **P** **07 06 05.3 -1.2**
KBL Kabul 60.05 295 P **P** **07 06 05.8 -0.6**
SVE Sverdlovsk 60.12 321 *e*P **P** **07 06 06.9 +0.6**
SVE pmax pmax
comp=Z,20nm,1.0s
PALK Pallekele 61.38 261 LR LR 07 35 09.2
comp=Z,87nm,18.1s,baz=34,slow=38
ARTI Arti 61.43 321 P **P** **07 06 15.5 +0.2**
comp=Z,20nm,0.6s,baz=89,slow=4.2,SNR=25
comp=Z,20nm,0.6s
ARTI Arti 61.43 321*c i*P **P** **07 06 15.3 +0.1**
ARTI 07 07 00.4
ARTI S **S** **07 14 37.7 +1.7**
ARTI SS **SS** **07 18 36.2 +0.1**
ARTI pmax pmax
comp=Z,20nm,0.7s
ARTI Arti 61.43 321 **P** **07 06 15.0 -0.2**
STKA Stephens Creek 62.22 180 P **P** **07 06 21.7 +1.0**
comp=Z,2.6nm,0.8s,baz=11,slow=6.3,SNR=5.0
comp=Z,2.6nm,0.8s
AB31 Akbulak array 62.28 313 *i* P **P** **07 06 21.2 +0.1**
AB31 pmax pmax
comp=Z,5.0nm,0.6s
AB31 Akbulak array 62.28 313 **P** **07 06 21.0 -0.1**
ABKAR Akbulak array 62.28 313 **P** **07 06 20.7 -0.4**
AKTO Aktyubinsk 63.16 315 LR LR 07 35 01.6
comp=Z,129nm,18.1s,baz=50,slow=37
DLBC Dease Lake 63.58 36 LR LR 07 32 18.9
comp=Z,33nm,21.0s,baz=292,slow=34
HRA Herat 65.38 297 IAmb IAmb 07 06 47.8
comp=Z,8.8nm,1.0s
KIRV Kirov 65.48 325 *i* P **P** **07 06 42.2 +0.3**
NOR Nord 67.39 357 *i* P **P** **07 06 55.7 +1.8**
NOR IAmb IAmb 07 06 58.0
comp=Z,4.9nm,1.3s
APA Apatity 68.56 337 *e*P **P** **07 07 00.9 -0.6**
APA *e* 07 07 23.4
APA *e* 07 09 33.6
APA *e*S **S** **07 15 59.1 -4.2**
APA *e* 07 16 59.2
APA pmax pmax
comp=Z,12nm,1.0s
APA MLR MLR
comp=Z,220nm,3.6s
BELG Belogornoye 68.64 319 LR LR 07 39 24.4
comp=Z,177nm,18.0s,baz=91,slow=38
BELG Belogornoye 68.64 319 *i* P **P** **07 07 02.3 +0.2**
BELG pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 68.70 14 LR LR 07 42 27.4
comp=Z,21nm,19.3s,baz=265,slow=41
YKA Yellowknife Ar 69.23 29 P **P** **07 07 05.1 -0.6**
comp=Z,0.3nm,0.4s,baz=299,slow=6.4,SNR=2.5
comp=Z,0.3nm,0.4s
YKA Yellowknife Ar 69.23 29 P **P** **07 07 05.4 -0.3**
YKA Yellowknife Ar 69.23 29 P **P** **07 07 05.4 -0.3**
KLMR Klimovskoe 69.25 329 *e*P **P** **07 07 04.7 -1.1**
KLMR pmax pmax
comp=Z,27nm,1.2s
ARCES ARCESS Array B 70.01 340 P **P** **07 07 11.0 +0.6**
comp=Z,5.3nm,0.8s,baz=69,slow=6.8,SNR=7.6
comp=Z,5.3nm,0.8s
ARCES ARCESS Array B 70.01 340 **P** **07 07 11.0 +0.6**
ARCES ARCESS Array B 70.01 340 P **P** **07 07 10.4 0.0**
ARCES IAmb IAmb 07 07 12.4
comp=Z,6.9nm,0.9s
NEEM North Greenlan 71.84 3 *i* P **P** **07 07 22.1 +0.3**
NEEM IAmb IAmb 07 07 22.2
comp=Z,8.6nm,1.1s
DAG Danmarks Havn 72.10 355 P **P** **07 07 23.3 +0.3**
DAG Danmarks Havn 72.10 355 P **P** **07 07 23.3 +0.3**
DAG Danmarks Havn 72.10 355 *i* P **P** **07 07 23.1 +0.2**
DAG IAmb IAmb 07 07 23.9
comp=Z,8.7nm,1.0s
VRH Novokhopyorsk 72.46 319 *e*P **P** **07 07 23.7 -1.8**
VRH pmax pmax
comp=Z,8.0nm,1.0s
MOS Moscow 72.50 325 *e*P **P** **07 07 27.1 +1.5**
OBN Obninsk 73.33 325 LR LR 07 41 52.7
comp=Z,102nm,19.9s,baz=174,slow=38
OBN Obninsk 73.33 325*ce*P **P** **07 07 30.2 -0.3**
OBN *i* *PP **sP** **07 07 33.8 -0.2**
OBN *SP **pwP** **07 07 37.0 -1.0**
OBN 07 07 45.0
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,171nm,16.0s
LPSR Galich'ya Gora 73.33 322 *e*P **P** **07 07 29.2 -1.5**

LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 73.87 320 *e*P **P 07 07 32.5 -1.4**
VSR pmax pmax
comp=Z,8.0nm,1.0s
YBH Yreka Blue Hor 74.14 51 LR LR 07 38 23.2
comp=Z,61nm,18.9s,baz=302,slow=34
PINE Pine Mountain 74.36 48 IAmb IAmb 07 07 53.0
comp=Z,15nm,1.4s
FINES FINESS Array B 74.53 333 P **P 07 07 37.9 +0.4**
comp=Z,4.7nm,0.4s,baz=55,slow=5.9,SNR=36
comp=Z,4.7nm,0.4s
FINES FINESS Array B 74.53 333 P **P 07 07 37.6 +0.1**
DBG Daneborg 74.59 355 *i* P **P 07 07 37.4 -0.3**
DBG IAmb IAmb 07 07 38.0
comp=Z,3.9nm,1.1s
NEW Newport 74.60 43 P P 07 07 43.4 +5.1
K05A Summer Lake 74.89 49 **P 07 07 41.1 +0.9**
K05A IAmb IAmb 07 08 00.8
comp=Z,14nm,1.3s
KBZ Khabaz 75.23 312 P **P 07 07 42.6 +0.7**
comp=Z,5.6nm,0.8s,baz=100,slow=4.7,SNR=14
KBZ LR LR 07 41 59.2
comp=Z,69nm,21.0s,baz=94,slow=37
comp=Z,5.6nm,0.8s
KIV Kislovodsk 75.26 312 *e*P **P 07 07 43.0 +0.8**
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,81nm,18.0s
SHA1 Shidzhatmaz 75.38 312 *i* P **P 07 07 43.5 +0.4**
BEKR Beckworth 76.59 52 **P 07 07 49.6 -0.4**
SUMG Summit 77.02 0 P **P 07 07 51.3 -0.8**
SUMG pmax pmax
comp=Z,12nm,1.3s
SUMG Summit 77.02 0 **P 07 07 51.3 -0.8**
SUMG IAmb IAmb 07 08 07.4
comp=Z,12nm,1.3s
SUMG Summit 77.02 0 P **P 07 07 51.4 -0.8**
SUMG Summit 77.02 0 *i* P **P 07 07 52.5 +0.4**
SUMG IAmb IAmb 07 07 54.1
comp=Z,5.2nm,0.9s
MNK Minsk 77.88 327 *i* P **P 07 07 58.0 +1.3**
comp=E,17nm,0.7s
MNK *i* P **P 07 07 58.0 +1.3**
comp=N,8.0nm,0.7s
MNK *i* P **P 07 07 58.0 +1.3**
comp=Z,23nm,1.0s,baz=54
MNK *i* PP **PP 07 10 53.7 +1.9**
MNK *i* PPP PPP 07 12 42.0
MNK *i* S **S 07 17 52.3 +2.9**
MNK *i* SS **SS 07 22 52.9 +3.9**
MNK *i* SSS SSS 07 26 18.6
MNK *i* LQ LQ 07 36 28.9
MNK *i* LR LR 07 42 36.1
MNK *i* LRM MLR 07 44 48.9
comp=E,345nm,21.2s
MNK *i* LRM MLR 07 45 41.9
comp=N,500nm,21.4s
MNK Minsk 77.88 327 *i* P **P 07 07 58.0 +1.3**
MNK *i* 07 10 53.7
MNK *i* PPP PPP 07 12 41.9
MNK *i* S **S 07 17 52.2 +2.9**
MNK *i* SS **SS 07 22 52.9 +3.9**
MNK pmax pmax
comp=N,8.0nm,0.7s
MNK pmax pmax
comp=Z,23nm,1.0s
MNK pmax pmax
comp=E,17nm,0.7s
MNK MLR MLR
comp=E,345nm,21.0s
MNK MLR MLR
comp=N,500nm,21.0s
MNK MLR MLR
comp=Z,146nm,18.0s
NACGM Naroch 78.15 328 *e*P **P 07 07 59.2 +1.0**
comp=Z,19nm,0.8s,baz=53
NVAR Mina Array Bea 78.69 52 P **P 07 08 02.0 +0.2**
comp=Z,1.3nm,0.6s,baz=294,slow=5.6,SNR=8.5
NVAR LR LR 07 40 01.6
comp=Z,63nm,19.1s,baz=208,slow=34
comp=Z,1.3nm,0.6s
NVAR Mina Array Bea 78.69 52 P **P 07 08 01.9 +0.2**
DLMT Dillon 78.75 44 **P 07 08 02.2 +0.3**
AK03 Malin Array Si 79.44 323 P **P 07 08 05.2 -0.2**
AKASG Malin Array Be 79.46 323 P **P 07 08 05.4 -0.1**
comp=Z,1.5nm,0.5s,baz=50,slow=4.7,SNR=9.9
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 79.46 323 IAmb IAmb 07 08 06.8
comp=Z,9.9nm,1.4s
AKBB Malin Array Si 79.46 323 *ce*P **P 07 08 04.3 -1.1**
AKBB pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 79.46 323 P **P 07 08 05.0 -0.4**
AKBB IAmb IAmb 07 08 15.0
comp=Z,5.5nm,0.8s
AKBB Malin Array Si 79.46 323 P **P 07 08 05.3 -0.1**
KIEV Kiev 79.47 323 P **P 07 08 05.2 -0.3**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 79.47 323 P **P 07 08 05.2 -0.3**
KIEV IAmb IAmb 07 08 15.0
comp=Z,5.0nm,0.8s
KIEV Kiev 79.47 323 P **P 07 08 05.2 -0.3**
comp=Z,28nm,0.8s
KIEV Kiev 79.47 323 P **P 07 08 05.5 0.0**
AK04 Malin Array Si 79.47 323 P **P 07 08 05.4 -0.1**
AK09 Malin Array Si 79.47 323 P **P 07 08 05.4 -0.1**
AK02 Malin Array Si 79.49 323 P **P 07 08 05.3 -0.3**
HFS Hagfors 79.95 336 P **P 07 08 07.7 -0.3**
comp=Z,7.3nm,0.9s,baz=91,slow=5.9,SNR=7.2
comp=Z,7.3nm,0.9s
NB2 NORSAR Subarra 80.11 338 P **P 07 08 08.7 -0.2**
comp=Z,1.5nm,0.6s,baz=41,slow=5.3
NB2 NORSAR Subarra 80.11 338 P **P 07 08 08.6 -0.3**
NB2 pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 80.11 338 P **P 07 08 08.8 0.0**
comp=Z,3.7nm,0.8s,baz=41,slow=5.3,SNR=10
comp=Z,3.7nm,0.8s
LUBAR Lubar, Ukraine 80.68 323 P **P 07 08 12.1 0.0**
RNPP9 Sopachiv 80.71 325 P **P 07 08 12.3 +0.1**
DUG Dugway, Tooele 81.40 48 P **P 07 08 20.6 +4.3**
DUG Dugway, Tooele 81.40 48 P **P 07 08 20.6 +4.3**
HWUT Hardware Ranch 81.42 47 P P 07 08 21.5 +5.0
PDAR Pinedale Array 82.01 45 P **P 07 08 19.6 0.0**
comp=Z,0.6nm,0.7s,baz=239,slow=3.3,SNR=6.5
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 82.01 45 **P 07 08 20.0 +0.4**
P17A Butcher Ranch, 83.13 48 IAmb IAmb 07 08 43.7
comp=Z,8.1nm,1.3s
BR131 Keskin Array S 83.23 312 *i* P **P 07 08 26.2 +0.3**
BR131 Keskin Array S 83.23 312 **P 07 08 25.7 -0.2**
BR131 IAmb IAmb 07 08 27.4
comp=Z,7.5nm,0.9s
BRTR Keskin Array B 83.23 312 P **P 07 08 26.4 +0.5**
comp=Z,4.9nm,0.9s,baz=101,slow=3.9,SNR=26
comp=Z,4.9nm,0.9s
BRTR Keskin Array B 83.23 312 P **P 07 08 25.6 -0.2**
BR104 Keskin Array S 83.24 312 P **P 07 08 26.0 +0.1**
comp=Z,64nmcomp=Z,7.9nm,1.0s
BR106 Keskin Array S 83.24 312 P **P 07 08 26.0 +0.1**
comp=Z,58nmcomp=Z,6.8nm,0.9s
BR105 Keskin Array S 83.25 312 P **P 07 08 26.1 +0.1**
comp=Z,57nmcomp=Z,8.0nm,0.9s
RAYN Ar Rayn 83.28 293 P **P 07 08 26.0 -0.3**
RAYN pmax pmax
comp=Z,17nm,0.7s
RAYN Ar Rayn 83.28 293 **P 07 08 26.0 -0.3**
RAYN Ar Rayn 83.28 293 P **P 07 08 27.4 +1.1**
P18A Preston Nutter 83.36 48 IAmb IAmb 07 08 48.4
comp=Z,3.2nm,0.9s
BUR08 Bucovina Ar. S 83.41 322 **P 07 08 26.2 -0.4**
BUR08 IAmb IAmb 07 08 28.1
comp=Z,5.8nm,1.2s
BURAR Bucovina Array 83.42 322 P **P 07 08 26.3 -0.4**
BURAR pmax pmax
comp=Z,3.0nm,1.0s
BURAR Bucovina Array 83.42 322 **P 07 08 25.2 -1.4**
SRU San Rafael Swe 83.47 48 IAmb IAmb 07 08 44.0
comp=Z,2.4nm,0.7s
PV16 Nyswonger Mesa 84.96 48 IAmb IAmb 07 08 57.8
comp=Z,4.2nm,0.8s
PV05 Paradox Valley 84.98 48 IAmb IAmb 07 08 50.0
comp=Z,4.8nm,0.9s
PV03 Paradox Valley 85.04 48 IAmb IAmb 07 08 52.1
comp=Z,7.3nm,1.1s
PV13 Radium Mtn., P 85.11 48 IAmb IAmb 07 08 43.5
comp=Z,6.8nm,1.1s
PV02 Paradox Valley 85.14 48 IAmb IAmb 07 08 43.7
comp=Z,11nm,1.1s
PV01 Paradox Valley 85.29 48 IAmb IAmb 07 08 59.3
comp=Z,4.8nm,1.2s
KSP Ksiaz 85.60 329 P **P 07 08 37.6 +0.1**
comp=Z,7.6nm,1.8s
CLL Collm 86.69 331 *e*P **P 07 08 46.0 +3.1**
CLL Collm 86.69 331 *e*Px Px 07 08 46.0
CLL *ex* x 07 08 51.0
CLL AMS AMS 08 16 00.0
comp=Z,100nm,19.1s
GERES GERESS Array B 88.20 329 P **P 07 08 49.9 -0.4**
comp=Z,0.5nm,0.7s,baz=46,slow=8.4,SNR=1.8
comp=Z,0.5nm,0.7s
GERES GERESS Array B 88.20 329 P **P 07 08 49.2 -1.1**
SRS Serrai 88.48 318 P **P 07 08 55.9 +4.2**
TUE Stuetta 91.93 329 P **P 07 09 07.7 -0.2**
TXAR Lajitas Array 93.83 53 P **P 07 09 17.6 +0.7**
comp=Z,2.0nm,1.0s,baz=286,slow=2.8,SNR=13
comp=Z,2.0nm,1.0s
TXAR Lajitas Array 93.83 53 P **P 07 09 16.3 -0.6**
QSPA South Pole Qui 120.44 180 PKP **PKPdf 07 14 49.3 -0.6**
comp=Z,1.5nm,0.9s,baz=250,slow=2.6,SNR=5.1
QSPA South Pole Qui 120.44 180 **PKiKP 07 14 49.8 -0.1**
TORD Torodi Ar. Bea 121.84 312 PKP **PKPdf 07 14 53.2 -0.9**
comp=Z,0.5nm,0.5s,baz=17,slow=2.4,SNR=6.0
LPAZ La Paz 149.28 69 PKPbc **PKPbc 07 15 49.5 +0.2**
comp=Z,2.5nm,1.0s,baz=353,slow=4.6,SNR=7.1

ASRS ***30*** *06:59:35.0±1.3,54.7°N×87.7°E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 30 06:59:42.2±3.3,54.7°N×86.8°E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=27.6km s-min=17.9km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.22**	**260**	I	I	07 08 20.0	
	baz=80,slow=320,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.22**	**260**	Pg	Pg	07 00 04.4	-1.1
	1.1nm,0.3s,baz=80,slow=14,SNR=7.7						
ZALV				Lg	Lg	07 00 22.9	
	1.0nm,0.3s,baz=80,slow=28,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.21**	**238**	Pn	Pn	07 01 14.6	-0.4
	baz=56,slow=14,SNR=3.2						
KURBB				Lg	Lg	07 02 58.1	
	baz=52,slow=32,SNR=1.2						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.94**	**203**	Pn	Pn	07 01 41.1	+2.3
	0.1nm,0.3s,baz=31,slow=14,SNR=1.9						
	0.1nm,0.3s						

JMA ***30*** *07:01:01.6±0.1,36.3°N±0.4×139.4°E±0.6,h119km±1km, MV3.5/38,SE GUNMA PREF*
JMA Felt I J1 at SE GUNMA PREF .
IDC ***30*** *07:01:01.5±0.8,36.2°N×139.1°E,h128km±8km,mb3.3/6, mbtmp3.7/8,Error ellipse: s-maj=28.2km s-min=11.0km az=73.0*
ISC 30 07:01:01.1±0.8,36.31°N±0.05×139.34°E±0.07,h125km±6km, n24,σ0°73/28,mb3.6/6,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAG	**Ashikaga**	**0.15**	**38**	*i* P	**Pn**	**07 01 18.1**	**-0.1**
JAG				S	**Sn**	**07 01 30.6**	**-0.5**
JRY	**Ryogami san**	**0.46**	**231**	*i* P	**Pn**	**07 01 19.9**	**+0.5**
JRY				S	**Sn**	**07 01 33.7**	**+0.5**
JKT	**Katashina**	**0.46**	**351**	*i* P	**Pn**	**07 01 19.7**	**+0.2**
JKT				S	**Sn**	**07 01 33.5**	**+0.1**
JUON	**Uonuma**	**0.93**	**346**	P	**Pn**	**07 01 23.2**	**+0.4**
JUON				S	**Sn**	**07 01 39.5**	**+0.2**
MJAR	**Matsushiro Arr**	**0.94**	**285**	P	**Pn**	**07 01 22.8**	**-0.2**
	76nm,0.2s,baz=48,slow=9.1,SNR=202						
MJAR				S	**Sn**	**07 01 39.6**	**0.0**
	26nm,0.5s,baz=146,slow=12,SNR=6.7						
MAT	**Matsushiro**	**0.94**	**285**	*i* P	**Pn**	**07 01 23.5**	**+0.5**
MAT				*e*S	**Sn**	**07 01 40.4**	**+0.8**
JYN	**Shimob**	**1.03**	**219**	*i* P	**Pn**	**07 01 24.2**	**+0.2**
JYN				S	**Sn**	**07 01 41.9**	**+0.6**
JOD2	**Odawara 2**	**1.06**	**191**	*i* P	**Pn**	**07 01 23.8**	**-0.3**
JOD2				S	**Sn**	**07 01 40.9**	**-0.7**
JOTO	**OTAMA OYAMA**	**1.48**	**32**	*i* P	**Pn**	**07 01 29.1**	**+0.5**
JOTO				S	**Sn**	**07 01 49.7**	**+0.1**
JHJ	**Hachijo jima 2**	**3.20**	**173**	P	**Pn**	**07 01 49.9**	**-0.3**
	348nm,0.3s,baz=119,slow=22,SNR=41						
JHJ				S	**Sn**	**07 02 27.8**	**-0.2**
	118nm,0.3s,baz=251,slow=23,SNR=1.2						
ASAJ	**Asahikawa**	**8.19**	**17**	P	**Pn**	**07 02 55.5**	**-1.5**
	3.7nm,0.3s,baz=222,slow=14,SNR=5.2						
HILR	**Hailar Array B**	**19.44**	**319**	P	**P**	**07 05 15.7**	**-2.0**
	0.5nm,0.3s,baz=119,slow=12,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**29.26**	**117**	T	T	07 37 10.6	
	baz=308,slow=75,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**29.27**	**117**	T	T	07 36 46.1	
	baz=308,slow=75,SNR=2.8						
H11N3	**WAKE ISLAND Hy**	**29.28**	**117**	T	T	07 37 02.7	
	baz=308,slow=75,SNR=2.9						
H11S1	**WAKE ISLAND Hy**	**29.92**	**119**	T	T	07 37 48.0	
	baz=311						
H11S3	**WAKE ISLAND Hy**	**29.92**	**119**	T	T	07 37 49.1	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**29.93**	**119**	T	T	07 37 48.6	
	baz=311						
KURBB	**Kurchatov Arra**	**45.14**	**308**	P	**P**	**07 09 04.6**	**-0.2**
	1.0nm,0.5s,baz=85,slow=7.5,SNR=2.8						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**50.99**	**32**	P	**P**	**07 09 49.8**	**+0.1**
	0.3nm,0.6s,baz=276,slow=7.5,SNR=2.8						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**56.14**	**186**	P	**P**	**07 10 26.9**	**-0.7**
	1.0nm,0.9s,baz=1.0,slow=7.6,SNR=6.9						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**59.87**	**186**	P	**P**	**07 10 53.9**	**+0.3**
	0.3nm,0.8s,baz=0.3,slow=5.4,SNR=4.2						
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**76.75**	**52**	P	**P**	**07 12 40.6**	**+1.6**
	0.4nm,0.4s,baz=251,slow=7.2,SNR=8.9						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**91.88**	**51**	P	**P**	**07 13 55.6**	**+0.1**
	0.2nm,0.5s,baz=316,slow=3.6,SNR=4.1						
	0.2nm,0.5s						

KRNET ***30*** *07:02:10.6±0.1,41.7°N×74.4°E,h30km,mb2.3*
NNC ***30*** *07:02:12.0±3.0,41.7°N×74.2°E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=23.3km s-min=15.9km az=116.0*
ISC 30 07:02:09.9±1.3,41.64°N±0.03×74.33°E±0.03,h2km±12km, n25,σ1°12/36,14C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**0.61**	**13**	↑*i* P	**Pg**	**07 02 21.4**	**-0.2**
UCH				↑*i* S	**Sg**	**07 02 29.8**	**+0.3**
SALK	**Salom-Alik**	**0.84**	**207**	↑*i* P	**Pb**	**07 02 27.5**	**+0.1**
SALK				↑*i* S	**Sb**	**07 02 40.0**	**+0.7**
AAK	**Ala-Archa**	**1.01**	**7**	↑↑P	**Pg**	**07 02 28.5**	**-0.8**
	0.7nm,0.4s						
AAK				↓S	**Sg**	**07 02 41.5**	**-0.9**
	2.2nm,0.5s						
AAK	**Ala-Archa**	**1.01**	**7**	↓↓*i* P	**Pg**	**07 02 28.3**	**-0.9**
AAK				↓*i* S	**Sg**	**07 02 41.3**	**-1.0**
EKS2	**Erkin-Say**	**1.10**	**338**	↑*i* P	**Pg**	**07 02 30.5**	**-0.6**
EKS2				↑*i* S	**Sg**	**07 02 45.0**	**-0.4**
NRN	**Naryn**	**1.27**	**99**	↑*e* P	**Pg**	**07 02 33.6**	**-0.6**
NRN				↑*e* S	**Sg**	**07 02 50.6**	**-0.1**
MRKS	**Merke**	**1.38**	**324**	*e*S	**Sg**	**07 02 54.6**	**+0.4**
	4.7nm,0.4s						
MRKS	**Merke**	**1.38**	**324**	*e*P	**Pn**	**07 02 36.4**	**+0.1**
	1.8nm,0.2s						
BOOM	**Boomskoye usch**	**1.47**	**54**	↑↑*i* P	**Pn**	**07 02 36.3**	**-1.3**
BOOM				↑↑*i* S	**Sb**	**07 02 55.0**	**-2.3**
SFK	**Sufi-Kurgan**	**1.74**	**201**	↓*e* P	**Pn**	**07 02 42.3**	**+0.9**
SFK				↓*e* S	**Sn**	**07 03 04.7**	**+0.5**
ARK	**Arkit**	**1.78**	**276**	↓*e* P	**Pn**	**07 02 41.5**	**-0.3**
ARK				↑↑*e* S	**Sn**	**07 03 04.3**	**-0.8**
SGDS	**Sogindy**	**1.83**	**7**	P	**Pb**	**07 02 45.4**	**+1.2**
	5.0nm,0.5s						
SGDS				S	**Sg**	**07 03 10.2**	**+1.5**
	12nm,0.3s						
DGS Degeres 1.93 33 Pg **Pb 07 02 47.0 +1.1**
5.4nm,0.4s
DGS Lg Lg 07 03 12.9
6.3nm,0.5s
DGS Degeres 1.93 33 *e*S **Sg 07 03 12.9 +1.0**
6.3nm,0.5s
DGS Degeres 1.93 33 *e*P **Pb 07 02 47.0 +1.1**
5.4nm,0.4s
KDJ Kajisay 2.18 76 ↓↓*e*P **Pn 07 02 47.3 -0.1**
KDJ ↓↓*e*S **Sn 07 03 13.4 -1.7**
KRBS Karabastau 2.29 25 Pg **Pb 07 02 52.9 +1.0**
2.8nm,0.4s
KRBS Lg Lg 07 03 23.2
1.9nm,0.5s
KRBS Karabastau 2.29 25 *e*S **Sg 07 03 23.2 -0.1**
1.9nm,0.5s
KRBS Karabastau 2.29 25 *e*P **Pb 07 02 52.9 +1.0**
2.8nm,0.4s
TNSS Tian-Shan 2.39 53 Pg **Pb 07 02 55.5 +1.5**
1.5nm,0.4s
TNSS Lg Lg 07 03 27.5
0.9nm,0.3s
TNSS Tian-Shan 2.39 53 *e*S **Sg 07 03 27.5 +0.7**
0.9nm,0.3s
TNSS Tian-Shan 2.39 53 *e*P **Pb 07 02 55.5 +1.5**
1.5nm,0.4s
KK31 Karatay Array 3.19 299 ↓↓Pg **Pb 07 03 06.5 -0.8**
0.4nm,0.3s,baz=126,slow=16,SNR=6.0
KK31 ↑↑Lg Lg 07 03 52.2
0.8nm,0.4s,baz=110,slow=32,SNR=4.8
BTLS Baital 3.41 357 *e*S **Sb 07 03 55.5 +2.6**
2.8nm,0.7s
BTLS Baital 3.41 357 *e*P **Pb 07 03 12.0 +0.9**
0.7nm,0.1s

IDC ***30*** *07:09:38.6±0.8,54.3°N×55.0°W,h0km,mb4.3/10, mbtmp4.3/11,ML4.6/1,MS4.2/28,Error ellipse: s-maj=34.9km s-min=15.2km az=72.0*
NEIC ***30*** *07:09:39.8±1.4,54.1°N±0.7×55.1°W±0.2,h10km±1km, mb4.8/74,Error ellipse: s-maj=19.5km s-min=5.4km az=236.0*
GFZ ***30*** *07:09:40.0±0.2,54.3°N×55.6°W±°,h10km,M4.5/29, mb4.7/29,Error ellipse: s-maj=8.6km s-min=4.7km az=51.0,confirmed*
GCMT ***30*** *07:09:42.8±0.2,54.2°N×55.0°W±0.1,h16km±1km, MW5.0/112,Moment Tensor Solution. s34,c43; s112,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.53±.11; Mθθ-2.16±.09; Mϕϕ1.63±.10; Mrθ-0.36±.29; Mθϕ2.65±.09; Mϕr-0.46±.30; Best double couple: M3.32200×10¹⁶ NP1:ϕ162.00000°,δ80.00000°, λ172.00000°. NP2:ϕ253.00000°,δ82.00000°,λ10.00000°. Principal axes: T 3.1180, Plg12.0000°, Azm117.0000°; N 0.4090, Plg77.0000°, Azm290.0000°; P -3.5260, Plg2.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 07:09:39.4±0.3,54.31S±0.05×55.44W±0.06,h10km,n200, σ1°26/177,mb4.7/40,MS4.3/26,4C-1D,Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFI	**East Falkland**	**3.08**	**328**		**Pn**	**07 10 29.0**	**+1.1**
EFI	**East Falkland**	**3.08**	**328**	P	**Pn**	**07 10 29.4**	**+1.4**
USHA	**Ushuaia**	**7.57**	**261**	Pn	**Pn**	**07 11 28.9**	**-0.7**
	8.1nm,0.3s,baz=123,slow=0.1,SNR=43						
USHA				Sn	**Sn**	**07 12 54.6**	**-0.8**
	27nm,0.3s,baz=114,slow=15,SNR=12						
MG02	**Cerro Sombrero**	**8.35**	**275**		**Pn**	**07 11 38.4**	**-2.0**
MG02	**Cerro Sombrero**	**8.35**	**275**	P	**Pn**	**07 11 38.4**	**-2.0**
ORCD	**Orcadas**	**8.63**	**143**	Pn	**Pn**	**07 11 40.6**	**-3.6**
MG03	**Isla Dawson**	**8.85**	**267**	Pn	**Pn**	**07 11 44.8**	**-2.4**
ESPZ	**Base Esperanza**	**9.15**	**184**	Pn	Pn	07 11 56.8	+5.6
GO10	**Punta Arenas**	**9.32**	**271**		**Pn**	**07 11 51.8**	**-2.0**
GO10	**Punta Arenas**	**9.32**	**271**	P	**Pn**	**07 11 50.8**	**-2.9**
MG05	**Puerto Natales**	**10.62**	**277**		**Pn**	**07 12 09.4**	**-1.9**
MG05	**Puerto Natales**	**10.62**	**277**	P	**Pn**	**07 12 08.6**	**-2.7**
HOPE	**Hope Point**	**11.08**	**98**	Pn	**Pn**	**07 12 18.6**	**+0.9**
HOPE	**Hope Point**	**11.08**	**98**	P	**Pn**	**07 12 18.1**	**+0.4**
PMSA	**Palmer Station**	**11.35**	**199**	LR	LR	07 16 01.4	
	comp=Z,2μm,20.2s,baz=17,slow=33						
PMSA	**Palmer Station**	**11.35**	**199**	P	**Pn**	**07 12 19.7**	**-1.7**
GO08	**Villa O'Higgin**	**12.17**	**292**		**Pn**	**07 12 31.2**	**-1.4**
GO08	**Villa O'Higgin**	**12.17**	**292**	P	**Pn**	**07 12 30.2**	**-2.5**
AY03	**Cochrane**	**12.93**	**296**		**Pn**	**07 12 43.3**	**+0.4**
SMAI	**San Martin Ant**	**14.91**	**197**	Pn	**Pn**	**07 13 13.4**	**+3.5**
LL02	**Futaleuf**	**15.47**	**309**	Pn	**Pn**	**07 13 18.5**	**+1.0**
LL02	**Futaleuf**	**15.47**	**309**	P	**Pn**	**07 13 18.3**	**+0.7**
GO07	**Milladeo Hill,**	**16.38**	**306**	Pn	**Pn**	**07 13 29.5**	**+0.3**
GO07				IAmb	IAmb	07 13 34.2	
	comp=Z,86nm,1.6s						
GO07	**Milladeo Hill,**	**16.38**	**306**	P	**Pn**	**07 13 29.6**	**+0.3**
LL07	**Hotel Espejo d**	**16.51**	**307**	Pn	**Pn**	**07 13 31.7**	**+0.9**
LL07	**Hotel Espejo d**	**16.51**	**307**	P	**Pn**	**07 13 31.2**	**+0.5**
TRQA	**Tornquist**	**16.86**	**342**	P	**Pn**	**07 13 35.1**	**-0.3**
PLCA	**Paso Flores**	**16.94**	**317**	Pn	**P**	**07 13 38.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=156,slow=12,SNR=21						
PLCA				LR	LR	07 21 34.1	
	comp=Z,1μm,18.9s,baz=144,slow=42						
	comp=Z,9.7nm,0.8s						
PLCA	**Paso Flores**	**16.94**	**317**	Pn	**Pn**	**07 13 36.9**	**+0.5**
PLCA	**Paso Flores**	**16.94**	**317**	*e*P	**P**	**07 13 38.9**	**+0.6**
PLCA				*e*S	**S**	**07 16 52.3**	**-2.5**
PLCA	**Paso Flores**	**16.94**	**317**	P	**P**	**07 13 38.3**	**0.0**
LL03	**Petrohue**	**17.37**	**312**	Pn	**Pn**	**07 13 41.1**	**-0.5**
LL03				IAmb	IAmb	07 13 48.8	
	comp=Z,64nm,1.2s						
LL05	**Los Muermos**	**17.62**	**310**	P	**P**	**07 13 45.7**	**-0.1**
LL05				IAmb	IAmb	07 13 46.2	
	comp=Z,105nm,1.8s						
LR05	**Currie**	**17.95**	**315**	P	**Pn**	**07 13 48.9**	**0.0**
LR05				IAmb	IAmb	07 13 55.5	
	comp=Z,61nm,1.3s						
GO06	**Curarrehue**	**18.28**	**317**	P	**P**	**07 13 54.1**	**+0.8**
GO06	**Curarrehue**	**18.28**	**317**	P	**P**	**07 13 54.4**	**+1.1**
LR03	**Panguipulli**	**18.60**	**315**	P	**P**	**07 13 56.2**	**-0.3**
LR04	**Corral**	**18.84**	**313**	P	**P**	**07 13 59.4**	**+0.2**
LR04				IAmb	IAmb	07 14 05.0	
	comp=Z,70nm,1.5s						
ANCO	**Parque Anchore**	**20.11**	**354**	*e*P	Pn	07 14 15.0	+0.1
BI02	**San Fabin de**	**20.76**	**322**	P	**P**	**07 14 20.9**	**+0.6**
BI02	**San Fabin de**	**20.76**	**322**	P	**P**	**07 14 21.6**	**+1.3**
BI05	**Punta Hualpn**	**21.41**	**318**	P	**P**	**07 14 27.9**	**+0.7**
BI05				IAmb	IAmb	07 14 44.8	
	comp=Z,65nm,1.6s						
ML02	**Panimavida**	**21.62**	**323**	P	**P**	**07 14 29.4**	**0.0**
ML02				IAmb	IAmb	07 14 45.5	
	comp=Z,32nm,0.8s						
ML02	**Panimavida**	**21.62**	**323**	P	**P**	**07 14 29.2**	**-0.2**
BO02	**Sierra Bellavi**	**22.27**	**325**	P	**P**	**07 14 36.4**	**-0.1**
BO02	**Sierra Bellavi**	**22.27**	**325**	P	**P**	**07 14 38.0**	**+1.4**
BO03	**Pichilemu**	**22.95**	**323**	P	**P**	**07 14 45.3**	**+1.7**
BO04	**La Punta**	**22.95**	**326**	P	**P**	**07 14 43.2**	**-0.5**
MT13	**San Alfonso**	**23.07**	**327**	P	**P**	**07 14 44.9**	**-0.1**
MT08	**Bocatoma Ro**	**23.27**	**328**	P	**P**	**07 14 47.5**	**+0.4**
PSAL	**Palomas, Salto**	**23.27**	**355**	*e*P	**P**	**07 14 47.2**	**+0.3**
MT09	**Talagante**	**23.27**	**326**	P	**P**	**07 14 47.7**	**+0.6**
MT09				IAmb	IAmb	07 15 06.1	
	comp=Z,34nm,1.1s						
MT01	**Popeta**	**23.28**	**325**	P	**P**	**07 14 46.8**	**-0.2**
MT01				IAmb	IAmb	07 15 08.6	
	comp=Z,33nm,1.6s						
MT03	**Universidad Ad**	**23.38**	**327**	P	**P**	**07 14 48.0**	**-0.1**
MT03				IAmb	IAmb	07 15 03.4	
	comp=Z,22nm,1.1s						
MT16	**CCHEN**	**23.44**	**327**	P	**P**	**07 14 48.9**	**+0.2**
MT16				IAmb	IAmb	07 15 03.3	
	comp=Z,15nm,0.8s						
PEL	**Peldehue**	**23.75**	**327**	P	**P**	**07 14 52.6**	**+0.8**
PEL				IAmb	IAmb	07 15 11.0	
	comp=Z,19nm,0.9s						
PEL	**Peldehue**	**23.75**	**327**	P	**P**	**07 14 53.1**	**+1.3**
MT02	**Curacav**	**23.80**	**326**	P	**P**	**07 14 52.5**	**+0.4**
MT02				IAmb	IAmb	07 15 10.8	
	comp=Z,20nm,1.0s						
CPSB	**Cacapava Do Su**	**23.93**	**4**	P	**P**	**07 14 52.4**	**-1.0**

CPSB	**Cacapava Do Su**	**23.93**	**4**	P		**P**	**07 14 53.5**	**+0.1**
VA03	**San Esteban**	**24.06**	**327**	P		**P**	**07 14 54.5**	**-0.3**
VA03	**San Esteban**	**24.06**	**327**	P		**P**	**07 14 56.0**	**+1.2**
ZON	**Zonda**	**24.65**	**332**	P		**P**	**07 15 00.2**	**+0.1**
ZON	**Zonda**	**24.65**	**332**	P		**P**	**07 14 58.7**	**-1.3**
BELA	**Belgrano 2**	**24.80**	**170**	P		**P**	**07 15 03.0**	**+2.0**
CO04	**Los Peladeros**	**24.86**	**327**	P		**P**	**07 15 02.6**	**+0.3**
CO04	**Los Peladeros**	**24.86**	**327**	P		**P**	**07 15 03.7**	**+1.4**
CO02	**Combarbal**	**25.65**	**328**	P		**P**	**07 15 08.6**	**-0.6**
CO02				IAmb	IAmb		07 15 38.1	
	comp=Z,28nm,1.0s							
CO03	**El Pedregal**	**25.89**	**329**	P		**P**	**07 15 11.2**	**-0.2**
CO03				IAmb	IAmb		07 15 45.4	
	comp=Z,19nm,1.1s							
CO03	**El Pedregal**	**25.89**	**329**	P		**P**	**07 15 13.8**	**+2.4**
VNA1	**Neumayer--Stat**	**26.27**	**146**	⇑P		**P**	**07 15 16.3**	**+2.0**
	comp=Z,17nm,0.8s							
CO06	**Fray Jorge**	**26.34**	**327**	P		**P**	**07 15 14.9**	**-0.4**
CO06				IAmb	IAmb		07 15 18.6	
	comp=Z,49nm,1.6s							
CO01	**Juntas del Tor**	**26.52**	**331**	P		**P**	**07 15 18.4**	**+1.2**
CO01				IAmb	IAmb		07 15 45.4	
	comp=Z,25nm,1.1s							
CO01	**Juntas del Tor**	**26.52**	**331**	P		**P**	**07 15 17.8**	**+0.5**
GO04	**Tololo Observa**	**26.55**	**329**	P		**P**	**07 15 17.3**	**-0.2**
GO04				IAmb	IAmb		07 15 33.9	
	comp=Z,20nm,0.9s							
GO04	**Tololo Observa**	**26.55**	**329**	P		**P**	**07 15 17.0**	**-0.5**
VNA2	**Neumayer--Watz**	**26.61**	**147**	⇑P		**P**	**07 15 19.0**	**+1.5**
	comp=Z,11nm,0.7s,baz=286,slow=9.9							
VNA2	**Neumayer--Watz**	**26.61**	**147**	P		**P**	**07 15 18.1**	**+0.7**
LCO	**Las Campanas**	**27.61**	**330**	P		**P**	**07 15 26.4**	**-0.6**
LCO				IAmb	IAmb		07 16 04.7	
	comp=Z,17nm,1.2s							
LCO	**Las Campanas**	**27.61**	**330**	P		**P**	**07 15 28.0**	**+1.0**
AC05	**El Transito**	**27.65**	**331**	P		**P**	**07 15 26.8**	**-0.5**
AC05				IAmb	IAmb		07 16 03.6	
	comp=Z,18nm,0.7s							
AC05	**El Transito**	**27.65**	**331**	P		**P**	**07 15 29.4**	**+2.1**
CPUP	**Villa Florida**	**27.98**	**356**	P		**P**	**07 15 29.9**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=190,slow=11,SNR=7.3							
CPUP				LR		LR	07 26 39.6	
	comp=Z,554nm,21.0s,baz=177,slow=37							
	comp=Z,2.1nm,0.7s							
CPUP	**Villa Florida**	**27.98**	**356**	P		**P**	**07 15 28.8**	**-1.3**
CPUP				IAmb	IAmb		07 15 35.1	
	comp=Z,26nm,1.9s							
CPUP	**Villa Florida**	**27.98**	**356**	P		**P**	**07 15 31.8**	**+1.7**
SNAA	**Sanae**	**28.20**	**148**	⇑P		**P**	**07 15 32.9**	**+1.2**
	comp=Z,136nm,0.8s							
SNAA	**Sanae**	**28.20**	**148**	P		**P**	**07 15 32.9**	**+1.2**
	comp=Z,6.2nm,0.8s,baz=288,slow=7.9,SNR=16							
SNAA				LR		LR	07 25 34.2	
	comp=Z,328nm,19.2s,baz=284,slow=34							
	comp=Z,6.2nm,0.8s							
SNAA	**Sanae**	**28.20**	**148**	P		**P**	**07 15 32.9**	**+1.2**
SNAA	**Sanae**	**28.20**	**148**	P		**P**	**07 15 32.5**	**+0.7**
AC04	**Llanos de Chal**	**28.48**	**330**	P		**P**	**07 15 34.3**	**-0.2**
AC04				IAmb	IAmb		07 15 53.6	
	comp=Z,13nm,0.8s							
AC04	**Llanos de Chal**	**28.48**	**330**	P		**P**	**07 15 33.3**	**-1.2**
GO03	**Copiapo**	**28.81**	**332**	P		**P**	**07 15 37.1**	**-0.5**
GO03				IAmb	IAmb		07 16 28.1	
	comp=Z,14nm,1.0s							
GO03	**Copiapo**	**28.81**	**332**	P		**P**	**07 15 36.4**	**-1.2**
AC02	**Maricunga**	**29.24**	**334**	P		**P**	**07 15 41.4**	**-0.5**
AC02				IAmb	IAmb		07 16 37.7	
	comp=Z,43nm,1.9s							
AC02	**Maricunga**	**29.24**	**334**	P		**P**	**07 15 41.8**	**-0.1**
TROLL	**Troll, Antarti**	**29.91**	**148**	⇑P		**P**	**07 15 48.3**	**+1.2**
	comp=Z,166nm,0.9s							
AC01	**Pan de Azucar**	**30.28**	**332**	P		**P**	**07 15 50.7**	**+0.2**
AC01				IAmb	IAmb		07 16 02.3	
	comp=Z,25nm,1.1s							
AC01	**Pan de Azucar**	**30.28**	**332**	P		**P**	**07 15 52.2**	**+1.6**
SALTA		**31.13**	**340**	P		**P**	**07 15 58.8**	**+0.2**
SPB	**Sao Paulo**	**31.26**	**14**	P		**P**	**07 16 00.5**	**+1.3**
PB14	**IPOC Station P**	**31.68**	**333**	P		**P**	**07 16 02.0**	**-1.2**
PB14				IAmb	IAmb		07 17 06.6	
	comp=Z,15nm,1.2s							
PB06	**IPOC Station P**	**33.31**	**336**	P		**P**	**07 16 16.1**	**-1.2**
PB06				IAmb	IAmb		07 16 20.8	
	comp=Z,10.0nm,0.9s							
PB06	**IPOC Station P**	**33.31**	**336**	P		**P**	**07 16 17.0**	**-0.3**
AQDB	**Aquidauana**	**33.78**	**360**	P		**P**	**07 16 19.2**	**-2.0**
AQDB				IAmb	IAmb		07 17 19.0	
	comp=Z,34nm,2.0s							
COIM	**Forte Coimbra**	**34.39**	**356**	*e*P		**P**	**07 16 28.2**	**+1.7**
COIM				*e*S		**S**	**07 21 57.1**	**+2.9**
QSPA	**South Pole Qui**	**35.94**	**180**	P		**P**	**07 16 41.4**	**+1.7**
	comp=Z,3.9nm,0.7s,baz=271,slow=0.5,SNR=21							
QSPA				LR		LR	07 31 02.3	
	comp=Z,371nm,22.0s,baz=168,slow=36							
	comp=Z,3.9nm,0.7s							
QSPA	**South Pole Qui**	**35.94**	**180**	P		**P**	**07 16 41.8**	**+2.1**
QSPA				IAmb	IAmb		07 16 54.4	
	comp=Z,21nm,1.1s							
PB11	**IPOC Station P**	**36.16**	**337**	P		**P**	**07 16 40.3**	**-1.7**
PB11				IAmb	IAmb		07 16 46.2	
	comp=Z,23nm,1.1s							
ELIB	**Princess Elisa**	**36.35**	**149**	*d*P		**P**	**07 16 44.0**	**+1.0**
	comp=Z,20nm,0.7s							
PSGCX	**Pisagua**	**36.43**	**336**	P		**P**	**07 16 44.7**	**+0.5**
BSFB	**Barra de Sao F**	**37.15**	**23**	*e*P		**P**	**07 16 50.1**	**-0.1**
BSFB				*e*S		**S**	**07 22 36.8**	**+0.3**
SJMB	**Sao Joao De Ma**	**37.20**	**23**	*e*P		**P**	**07 16 49.1**	**-1.5**
SJMB				*e*S		**S**	**07 22 37.6**	**+0.3**
PB12	**IPOC Station P**	**37.42**	**336**	P		**P**	**07 16 51.4**	**-1.3**
PB12				IAmb	IAmb		07 16 57.5	
	comp=Z,8.7nm,0.8s							
SALV	**Santo Antonio**	**38.33**	**360**	*e*P		**P**	**07 17 00.2**	**0.0**
SIV	**San Ignacio**	**38.49**	**351**	P		**P**	**07 17 01.5**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=166,slow=8.6,SNR=5.3							
SIV				LR		LR	07 33 15.2	
	comp=Z,495nm,21.5s,baz=212,slow=37							
	comp=Z,2.7nm,0.6s							
PTLB	**Pontes e Lacer**	**38.88**	**354**	P		**P**	**07 17 03.2**	**-1.6**
PTLB				IAmb	IAmb		07 17 08.0	
	comp=Z,22nm,1.3s							
PTLB	**Pontes e Lacer**	**38.88**	**354**	*e*P		**P**	**07 17 05.4**	**+0.6**
BDFB	**Brasilia**	**39.02**	**11**	P		**P**	**07 17 05.7**	**-0.4**
	comp=Z,7.3nm,0.8s,baz=158,slow=8.2,SNR=9.3							
BDFB				LR		LR	07 32 31.7	
	comp=Z,518nm,21.8s,baz=172,slow=35							
	comp=Z,7.3nm,0.8s							
BDFB	**Brasilia**	**39.02**	**11**			**P**	**07 17 03.7**	**-2.4**
LPAZ	**La Paz**	**39.21**	**341**	P		**P**	**07 17 08.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=230,slow=13,SNR=4.0							
LPAZ				LR		LR	07 34 45.4	
	comp=Z,546nm,19.2s,baz=201,slow=38							
	comp=Z,1.8nm,0.7s							
LPAZ	**La Paz**	**39.21**	**341**	P		**P**	**07 17 06.2**	**-2.0**
JANB	**Januaria**	**40.12**	**17**	*e*P		**P**	**07 17 14.9**	**-0.4**
VILB	**Vilhena**	**41.43**	**353**	P		**P**	**07 17 25.6**	**-0.4**
VILB	**Vilhena**	**41.43**	**353**	*e*P		**P**	**07 17 26.9**	**+0.9**
SNDB	**Serra Nova Dou**	**42.36**	**6**	*e*P		**P**	**07 17 33.7**	**+0.1**
CLDB	**Colider**	**43.33**	**359**	*e*P		**P**	**07 17 41.1**	**-0.4**
NNA	**Nana**	**45.49**	**330**	P		**P**	**07 17 58.3**	**-0.5**
SBA	**Scott Base**	**45.57**	**191**	P		**P**	**07 18 00.9**	**+2.2**
VNDA	**Vanda**	**46.41**	**190**	LR		LR	07 34 53.4	
	comp=Z,234nm,21.8s,baz=148,slow=32							
VNDA	**Vanda**	**46.41**	**190**	P		**P**	**07 18 06.4**	**+1.1**
RPN	**Rapa Nui**	**47.52**	**283**	LR		LR	07 36 10.6	
	comp=Z,311nm,21.6s,baz=144,slow=33							
RPN	**Rapa Nui**	**47.52**	**283**	P		**P**	**07 18 15.8**	**+1.2**
CZSB	**Cruzeiro do Su**	**48.48**	**337**	P		**P**	**07 18 21.5**	**-0.6**
CZSB	**Cruzeiro do Su**	**48.48**	**337**	*e*P		**P**	**07 18 24.1**	**+1.9**
ITTB	**Itaituba**	**49.79**	**360**	*e*P		**P**	**07 18 32.0**	**-0.1**
MAW	**Mawson**	**50.06**	**154**	P		**P**	**07 18 34.4**	**+0.8**
	comp=Z,4.0nm,1.0s,baz=228,slow=11,SNR=6.4							
MAW				LR		LR	07 39 11.4	
	comp=Z,307nm,18.0s,baz=232,slow=35							
	comp=Z,4.0nm,1.0s							
MAW	**Mawson**	**50.06**	**154**	P		**P**	**07 18 33.3**	**-0.3**
RCBR	**Riachuelo**	**50.87**	**25**	LR		LR	07 37 10.4	
	comp=Z,80nm,21.9s,baz=227,slow=33							
RCBR	**Riachuelo**	**50.87**	**25**	P		**P**	**07 18 37.8**	**-2.5**
MACA	**Manacapuru-AM**	**51.17**	**353**	P		**P**	**07 18 40.9**	**-1.6**
SHEL	**Horse Pasture**	**54.12**	**65**	P		**P**	**07 19 01.6**	**-2.9**
H10S3	**ASCENSION HYDR**	**55.69**	**51**	T		T	08 19 16.5	
	baz=12,slow=74,SNR=18							
H10S2	**ASCENSION HYDR**	**55.69**	**51**	T		T	08 19 05.5	
	baz=208,slow=74,SNR=14							
SUR	**Sutherland**	**56.65**	**100**	LR		LR	07 39 13.1	
	comp=Z,292nm,21.6s,baz=226,slow=31							
BOAV	**Boa Vista**	**56.66**	**354**	P		**P**	**07 19 21.4**	**-1.3**
BOAV				IAmb	IAmb		07 19 25.5	
	comp=Z,7.0nm,1.1s							
BOAV	**Boa Vista**	**56.66**	**354**	*e*P		**P**	**07 19 23.6**	**+0.9**
H10N3	**ASCENSION HYDR**	**56.74**	**51**	T		T	08 20 33.2	
	baz=207,slow=76,SNR=15							
H10N1	**ASCENSION HYDR**	**56.75**	**51**	T		T	08 20 34.7	
	baz=207,slow=76,SNR=22							
H10N2	**ASCENSION HYDR**	**56.76**	**51**	T		T	08 20 35.6	
	baz=207,slow=76,SNR=18							
OTAV	**Otavalo**	**57.59**	**332**	P		**P**	**07 19 29.0**	**-0.8**
OTAV	**Otavalo**	**57.59**	**332**	*e*P		**P**	**07 19 32.2**	**+2.4**
MDP	**Montagnes des**	**59.24**	**3**	LR		LR	07 46 31.1	
	comp=Z,335nm,21.2s,baz=190,slow=37							
BOSA	**Boshof**	**62.01**	**101**	P		**P**	**07 19 58.8**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=203,slow=7.5,SNR=5.2							
BOSA				LR		LR	07 44 24.5	
	comp=Z,231nm,18.5s,baz=216,slow=34							
	comp=Z,2.6nm,0.7s							
BOSA	**Boshof**	**62.01**	**101**	P		**P**	**07 19 58.1**	**-1.7**
LBTB	**Lobatse**	**64.94**	**98**	LR		LR	07 45 38.7	
	comp=Z,133nm,18.9s,baz=216,slow=33							
GRTLG	**Ghanzi**	**65.20**	**92**	P		**P**	**07 20 18.1**	**-2.9**
MATP	**Matopo**	**70.18**	**98**	LR		LR	07 49 53.9	
	comp=Z,96nm,18.2s,baz=214,slow=34							
MLPR	**Magueyes Islan**	**72.67**	**348**	P		**P**	**07 21 06.4**	**-0.6**
CELP	**Cerrillos**	**72.72**	**349**	P		**P**	**07 21 07.7**	**+0.4**
TBI	**Tubuai**	**73.64**	**253**	*e*LR		LR	07 43 46.3	
	comp=Z,2μm,24.0s							
DBIC	**Dimboro**	**73.97**	**53**	LR		LR	07 47 05.0	
	comp=Z,149nm,21.9s,baz=203,slow=30							
LSZ	**Lusaka**	**74.04**	**94**	LR		LR	07 51 14.0	
	comp=Z,230nm,19.0s,baz=183,slow=34							
RTAL	**Retalhuleu**	**75.19**	**324**	P		**P**	**07 21 22.2**	**+0.3**
URZ	**Urewera**	**77.34**	**220**	LR		LR	07 49 21.6	
	comp=Z,170nm,20.7s,baz=146,slow=31							
PPT2	**Papeete2**	**78.28**	**256**	*e*LR		LR	07 45 46.9	
	comp=Z,500nm,24.0s							
PPT2				*e*LR		LR	07 45 53.9	
	comp=Z,652nm,24.2s							
CMIG	**Matias Romero**	**78.69**	**322**	LR		LR	07 52 46.4	
	comp=Z,155nm,19.0s,baz=154,slow=33							
TAOE	**Nuku Hiva Isla**	**79.78**	**269**	*e*LR		LR	07 46 31.2	
	comp=Z,454nm,23.7s							
OPO	**Ambohidratompo**	**82.24**	**111**	LR		LR	07 51 12.4	
	comp=Z,121nm,21.0s,baz=269,slow=30							
TORD	**Torodi Ar. Bea**	**82.73**	**56**	P		**P**	**07 22 03.1**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=224,slow=4.8,SNR=6.8							
	comp=Z,2.1nm,0.9s							
MBAR	**Mbarara**	**87.28**	**87**	LR		LR	07 57 23.1	
	comp=Z,210nm,21.2s,baz=202,slow=33							
LPIG	**La Paz**	**91.20**	**312**	LR		LR	07 59 09.1	
	comp=Z,113nm,18.4s,baz=190,slow=32							
TKL	**Tuckaleechee C**	**92.88**	**337**	LR		LR	08 10 15.8	
	comp=Z,106nm,18.5s,baz=152,slow=39							
NWAO	**Narrogin (SRO)**	**92.89**	**174**	LR		LR	08 02 59.5	
	comp=Z,77nm,18.3s,baz=270,slow=34							
STKA	**Stephens Creek**	**92.91**	**196**	LR		LR	08 00 26.5	
	comp=Z,83nm,19.2s,baz=199,slow=33							
TX31	**Lajitas Ar. Si**	**93.10**	**319**	P		**P**	**07 22 52.1**	**-1.0**
TX31				IAmb	IAmb		07 26 07.5	
	comp=Z,12nm,2.0s							
TXAR	**Lajitas Array**	**93.10**	**319**	P		**P**	**07 22 54.5**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=244,slow=4.6,SNR=3.0							
	comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**93.10**	**319**	P		**P**	**07 22 52.5**	**-0.7**
MDT	**Middel**	**97.20**	**41**	LR		LR	08 05 11.7	
	comp=Z,144nm,19.4s,baz=220,slow=34							
YKA	**Yellowknife Ar**	**125.33**	**331**	PKP		**PKPdf**	**07 28 39.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=141,slow=2.0,SNR=4.5							
ILAR	**Eielson Array**	**137.60**	**321**	PKP		**PKPdf**	**07 29 02.3**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=175,slow=1.5,SNR=5.1							
KK31	**Karatay Array**	**143.49**	**85**	PKPdf		**PKPdf**	**07 29 12.7**	**-0.6**
AAK	**Ala-Archa**	**145.53**	**89**	PKPbc		**PKPdf**	**07 29 16.8**	**-0.3**
LSA	**Lhasa**	**145.59**	**122**			**PKPdf**	**07 29 17.8**	**-0.2**
NRN	**Naryn**	**145.67**	**92**	PKPbc		**PKPdf**	**07 29 16.3**	**-1.4**
FRU1	**Bishkek**	**145.72**	**89**	PKPdf		**PKPdf**	**07 29 17.4**	**+0.1**
C16K	**Lisburne Hills**	**145.72**	**322**	PKPdf		**PKPab**	**07 29 17.6**	**+0.3**
KIWB	**Kanaga Island**	**146.76**	**290**	PKPdf		**PKPdf**	**07 29 17.4**	**+0.5**
TNA	**Tiksi City**	**146.11**	**316**	PKPdf		**PKPdf**	**07 29 17.1**	**+0.1**
BOOM	**Boomskoye usch**	**146.29**	**90**	PKPdf		**PKPdf**	**07 29 17.4**	**-1.1**
KDJ	**Kajisay**	**146.80**	**92**	PKPdf		**PKPdf**	**07 29 18.8**	**-0.5**
TARG	**Taragay, Kyrgy**	**146.91**	**93**	PKPdf		**PKPdf**	**07 29 19.2**	**-0.6**
PZH	**PanZhiHua**	**147.53**	**140**	PKPbc		**PKPdf**	**07 29 21.8**	**+0.8**
BVAR	**Borovoye Array**	**148.54**	**70**	PKPbc		**PKPbc**	**07 29 25.0**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=258,slow=3.3,SNR=8.2							
KURBB	**Kurchatov Arra**	**152.11**	**78**	PKPbc		**PKPbc**	**07 29 33.8**	**0.0**
	comp=Z,2.4nm,0.6s,baz=245,slow=2.9,SNR=31							
KURK	**Kurchatov**	**152.20**	**78**			**PKiKP**	**07 29 34.6**	**+0.3**
MKAR	**Makanchi Array**	**152.46**	**88**	PKPbc		**PKPbc**	**07 29 34.4**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=240,slow=3.0,SNR=14							
ZALV	**Zalesovo Beam**	**156.92**	**75**	PKPab		**PKPab**	**07 30 02.5**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=262,slow=2.7,SNR=4.3							
NJ2	**Nanjing**	**157.38**	**167**	*e*P		**PKPdf**	**07 29 36.5**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,15nm,0.7s							
HHC	**Hu-ho-hao-te**	**163.97**	**142**	*e*P		**PKPdf**	**07 29 40.0**	**-2.2**

*IDC **30** 07:13:05.2±1.4, 3.˚49S×131.˚15E, h0km, mb4.0/5, mbtmp4.0/6, ML3.5/1, MS3.5/4, Error ellipse: s-maj=90.8km s-min=20.9km az=81.0*

*DJA **30** 07:13:09.2±0.4, 3˚S±3˚×13˚1E±˚, h19km±4km, M3.9/13, MLv3.9/13*

ISC 30 07:13:08.5±0.7, 3.56S±0.06×131.24E±0.08, h30km, n18, σ3=03/17, mb3.9/4, MS3.7/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.19**	**58**	P		**Pb**	**07 13 31.4**	**+0.9**
FAKI				Sg		**Sb**	**07 13 49.4**	**+3.8**
BNDI	**Bandanaira**	**1.64**	**234**	P		**Pn**	**07 13 36.9**	**+1.6**
MSAI	**Masohi**	**2.31**	**275**	P		**Pn**	**07 13 45.3**	**+0.7**
SIJI	**Sorong**	**2.67**	**1**	Pn		**Pn**	**07 13 48.5**	**-1.0**
	9.1nm,0.3s,baz=162,slow=19,SNR=30							
SIJI				Sn		**Sn**	**07 14 17.4**	**-3.4**
	28nm,0.3s,baz=239,slow=22,SNR=14							
	22nm,0.2s							
SIJI	**Sorong**	**2.67**	**1**	P		**Pn**	**07 13 48.1**	**-1.4**
SWI	**Sorong**	**2.68**	**0**	P		**Pn**	**07 13 49.0**	**-0.6**
KRAI	**Karang Ratu**	**2.85**	**275**	P		**Pn**	**07 13 52.4**	**+0.5**
BATI	**Baumata**	**10.01**	**228**	LR		LR	07 19 52.6	
	comp=Z,469nm,18.1s,baz=118,slow=41							
FITZ	**Fitzroy Crossi**	**15.46**	**200**	Pn		**Pn**	**07 16 41.3**	**-3.2**
	0.8nm,0.3s,baz=23,slow=9.1,SNR=18							
FITZ				Sn		Sn	07 19 24.7	-10
	0.2nm,0.3s,baz=76,slow=23,SNR=2.1							
WRA	**Warramunga Arr**	**16.57**	**170**	Pn		**Pn**	**07 16 54.7**	**-4.0**
	0.5nm,0.3s,baz=352,slow=14,SNR=19							
WRA				Sn		Sn	07 19 50.6	-11
	0.5nm,0.3s,baz=334,slow=22,SNR=6.7							
ASAR	**Alice Springs**	**20.16**	**173**	P		**P**	**07 17 42.3**	**+1.7**
	5.3nm,0.3s,baz=349,slow=11,SNR=85							
ASAR				S		**S**	**07 21 17.9**	**-7.6**
	0.4nm,0.7s,baz=337,slow=23,SNR=3.0							
	5.3nm,0.3s							
JHJ	**Hachijo jima 2**	**37.36**	**12**	LR		LR	07 34 48.9	
	comp=Z,43nm,19.4s,baz=170,slow=35							
MKAR	**Makanchi Array**	**66.07**	**325**	P		**P**	**07 23 53.3**	**+0.6**
	0.5nm,0.5s,baz=123,slow=7.7,SNR=4.3							
	0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**70.26**	**327**	P		**P**	**07 24 19.8**	**+1.0**
	1.4nm,0.7s,baz=127,slow=5.3,SNR=14							
	1.4nm,0.7s							
VNDA	**Vanda**	**75.70**	**173**	P		**P**	**07 24 52.5**	**+1.9**
	0.9nm,0.8s,baz=344,slow=3.8,SNR=3.7							
	0.9nm,0.8s							
MAW	**Mawson**	**78.58**	**201**	P		**P**	**07 25 08.5**	**+1.6**
	1.0nm,0.7s,baz=74,slow=7.4,SNR=1.6							
	1.0nm,0.7s							
ASF	**Jabal al Asfar**	**95.55**	**302**	LR		LR	08 13 30.8	
	comp=Z,26nm,22.0s,baz=206,slow=38							
BRTR	**Keskin Array B**	**98.11**	**309**	LR		LR	08 19 02.3	
	comp=Z,22nm,18.6s,baz=254,slow=40							

*IDC **30** 07:18:45.2±3.6, 34.˚64N×139.˚14E, h0km, mb3.6/2, mbtmp3.6/2, ML1.6/1, Error ellipse: s-maj=148.1km s-min=23.5km az=74.0*

*JMA **30** 07:18:47.2±0.2, 35.˚3N±0.˚7×14˚0E±˚, h62km±1km, MV2.2/38, SOUTHERN BOSO PENINSULA*

ISC 30 07:18:48.3±1.1, 35.25N±0.04×140.19E±0.06, h59km±7km, n21, σ3=90/27, Near east coast of eastern Honshu

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

JKUC	**kamogawauchiur**	**0.09**	**173**	*i* P		**Pn**	**07 18 56.5**	**-0.6**
JKUC				S		**Sn**	**07 19 03.1**	**-0.4**
JCCN	**Chibachonan**	**0.14**	**16**	*e*P		**Pn**	**07 18 57.3**	**0.0**
KTR	**Katsuura**	**0.15**	**134**	P		**Pn**	**07 18 56.7**	**-0.6**
KTR				*e*S		**Sn**	**07 19 03.3**	**-0.5**
BSO4	**Boso 4**	**0.29**	**154**	P		**Pn**	**07 18 57.9**	**-0.1**
BSO4				X			07 19 06.3	
TATJ	**Tateyama 2**	**0.33**	**228**	*e*P		**Pn**	**07 18 58.7**	**+0.3**
TATJ				*e*S		**Sn**	**07 19 07.0**	**+1.2**
BSO3	**Boso 3**	**0.52**	**149**	*i* P		**Pn**	**07 18 59.8**	**-0.3**
BSO3				*e*X			07 19 09.8	
JIM2	**Oshima 3**	**0.82**	**230**	P		**Pn**	**07 19 03.2**	**-0.7**
JIM2				*e*S		**Sn**	**07 19 14.7**	**-0.7**
BSO1	**Boso 1**	**0.88**	**132**	*e*P		**Pn**	**07 19 03.3**	**-0.9**
BSO1				*e*X			07 19 15.7	
JOD2	**Odawara 2**	**0.90**	**271**	P		**Pn**	**07 19 04.1**	**-0.9**
JOD2				*e*S		**Sn**	**07 19 15.9**	**-1.3**
JIZS	**Izushimoda**	**1.20**	**244**	S		**Sn**	**07 19 23.4**	**-0.9**
JMYK	**Miyake Tsubota**	**1.30**	**204**	S		**Sn**	**07 19 27.1**	**+0.6**
JRY	**Ryogami san**	**1.30**	**307**	P		**Pn**	**07 19 09.8**	**-0.5**
JRY				S		**Sn**	**07 19 26.1**	**-0.5**
JAG	**Ashikaga**	**1.32**	**333**	P		**Pn**	**07 19 09.3**	**-1.2**
JAG				S		**Sn**	**07 19 25.6**	**-1.5**
JYN	**Shimob**	**1.36**	**281**	P		**Pn**	**07 19 10.6**	**-0.5**
JMKN	**Mikurajimanish**	**1.44**	**200**	P		**Pn**	**07 19 11.4**	**-0.7**
JMKN				S		**Sn**	**07 19 29.2**	**-0.8**
MJAR	**Matsushiro Arr**	**2.06**	**309**	Pn		**Pn**	**07 19 20.8**	**+0.2**
	0.2nm,0.3s,baz=140,slow=13,SNR=5.8							
MJAR				Sn		**Sn**	**07 19 45.6**	**+0.5**
	0.2nm,0.3s,baz=269,slow=8.4,SNR=4.6							
SONM	**Songino Array**	**28.01**	**307**	P		**P**	**07 24 35.7**	**+2.0**
	0.4nm,0.4s,baz=120,slow=8.5,SNR=1.8							
	0.4nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.17**	**116**	T		T	07 54 19.9	
	baz=308							
H11N1	**WAKE ISLAND Hy**	**28.18**	**116**	T		T	07 54 01.4	
	baz=308							
H11N3	**WAKE ISLAND Hy**	**28.19**	**116**	T		T	07 54 03.1	
	baz=308							
WRA	**Warramunga Arr**	**55.17**	**187**	P		**P**	**07 28 14.3**	**-0.6**
	0.2nm,0.4s,baz=2.0,slow=7.5,SNR=6.4							
	0.2nm,0.4s							

*VAO **30** 07:20:56.8±0.7, 21.˚00S×69.˚59W, h10km, mb4.7, Presumed earthquake*

*SJA **30** 07:21:13.7±0.6, 20.˚85S×68.˚85W, h121km±4km, ML4.2, MW4.1*

*GFZ **30** 07:21:13.2±0.2, 21˚S±2˚×6˚9W±˚, h131km, M4.5/22, mb4.4/22*

*NEIC **30** 07:21:14.9±1.3, 20.˚84S±0.˚03×68.˚93W±0.˚08, h118km±4km, mb4.5/34, Mwr4.1/22, Mwr4.2(GUC), Error ellipse: s-maj=10.6km s-min=4.5km az=84.0, Moment Tensor Solution. Moment t

PSGCX **Pisagua** 1.77 316 P Pn 07 21 44.6 +0.5
PB06 **IPOC Station P** 1.94 201 eP Pn 07 21 47.8 +1.6
PB06 IAML 07 22 14.9
comp=Z,1μm,0.5s
PB06 **IPOC Station P** 1.94 201 i P Pn 07 21 47.4 +1.2
PB06 IAML 07 22 20.9
comp=N,2μm,0.5s
PB06 **IPOC Station P** 1.94 201 Pn 07 21 47.5 +1.3
PB06 Sn Sn 07 22 12.9 +1.7
PB06 **IPOC Station P** 1.94 201 P Pn 07 21 47.7 +0.8
AF01 **San Pedro de A** 2.14 164 eP Pn 07 21 51.7 +2.9
AF01 eS Sn 07 22 29.4 +14
AF01 IAML 07 22 37.1
comp=Z,820nm,0.9s
AF01 **San Pedro de A** 2.14 164 i P Pn 07 21 51.5 +2.7
AF01 **San Pedro de A** 2.14 164 Pn 07 21 51.7 +2.9
PX02 **IPOC Station P** 2.31 326 eP Pn 07 21 50.0 -0.8
PB05 **IPOC Station P** 2.34 213 eP Pn 07 21 52.4 +1.2
PB05 eS Sn 07 22 13.5 -6.7
PB05 IAML 07 22 23.2
comp=Z,493nm,0.6s
PB05 **IPOC Station P** 2.34 213 eP Pn 07 21 51.6 +0.4
PB05 IAML 07 22 28.8
comp=E,1μm,0.8s
PB05 **IPOC Station P** 2.34 213 Pn 07 21 52.0 +0.7
PB05 **IPOC Station P** 2.34 213 P Pn 07 21 51.0 -0.3
PB16 **IPOC Station P** 2.62 345 eP Pn 07 21 56.7 +1.4
PB16 eS Sn 07 22 29.8 +2.6
PB16 IAML 07 22 38.3
comp=Z,448nm,0.4s
PB16 **IPOC Station P** 2.62 345 i P Pn 07 21 56.5 +1.2
PB16 IAML 07 22 33.3
comp=E,750nm,0.6s
PB16 **IPOC Station P** 2.62 345 Pn 07 21 56.4 +1.2
PB16 **IPOC Station P** 2.62 345 P Pn 07 21 55.7 +0.5
PB12 **IPOC Station P** 2.67 328 eP Pn 07 21 55.3 -0.1
PB12 eS Sn 07 22 22.6 -5.1
PB12 IAML 07 22 35.8
comp=Z,1μm,0.4s
PB12 **IPOC Station P** 2.67 328 i P Pn 07 21 55.2 -0.3
PB12 IAML 07 22 35.4
comp=E,2μm,0.3s
PB12 **IPOC Station P** 2.67 328 Pn 07 21 55.1 -0.3
PB12 **IPOC Station P** 2.67 328 P Pn 07 21 54.6 -0.8
AP01 **Chacalluta** 2.88 330 eP Pn 07 21 59.2 +1.1
AP01 eS Sn 07 22 29.9 -2.6
AP01 IAML 07 22 45.1
comp=Z,1μm,0.8s
AP01 **Chacalluta** 2.88 330 eP Pn 07 21 57.9 -0.3
AP01 **Chacalluta** 2.88 330 Pn 07 21 58.2 +0.1
AP01 **Chacalluta** 2.88 330 P Pn 07 21 59.0 +0.8
YJA **Yavi** 3.33 113 eP Pn 07 22 07.4 +2.9
YJA **Yavi** 3.33 113 eP Pn 07 22 07.0 +2.6
PB18 **Visviri** 3.34 349 Pn 07 22 04.5 -0.2
PB18 **Visviri** 3.34 349 P Pn 07 22 05.1 +0.5
HJA **Humahuaca** 3.92 127 eP Pn 07 22 15.6 +3.3
PB14 **IPOC Station P** 4.00 201 eP Pn 07 22 13.6 +0.3
PB14 IAML 07 23 13.6
comp=Z,182nm,0.5s
PB14 **IPOC Station P** 4.00 201 Pn 07 22 12.8 -0.5
PB14 **IPOC Station P** 4.00 201 P Pn 07 22 12.0 -1.3
SALTA 4.04 146 eP Pn 07 22 12.0 -2.0
SALTA eP 07 22 12.2
SALTA eP 07 22 13.0
LPAZ **La Paz** 4.62 8 P Pn 07 22 23.8 +1.9
comp=Z,32nm,0.4s,baz=159,slow=4.5,SNR=99
LPAZ **La Paz** 4.62 8 Pn 07 22 23.9 +2.0
LPAZ **La Paz** 4.62 8 eP Pn 07 22 10.6 -11
LPAZ **La Paz** 4.62 8 P Pn 07 22 22.9 +1.0
SLA **San Lorenzo** 4.89 142 eP Pn 07 22 28.2 +3.1
AC01 **Pan de Azucar** 5.49 197 Pn 07 22 31.9 -1.1
AC01 **Pan de Azucar** 5.49 197 P Pn 07 22 31.2 -1.8
AC02 **Maricunga** 5.93 183 Pn 07 22 39.9 +0.4
AC02 **Maricunga** 5.93 183 P Pn 07 22 38.4 -1.1
GO03 **Copiapo** 6.80 191 Pn 07 22 49.3 -1.5
GO03 **Copiapo** 6.80 191 P Pn 07 22 49.6 -1.2
AC04 **Llanos de Chal** 7.57 195 P Pn 07 22 57.2 -3.9
AC05 **El Transito** 8.03 189 Pn 07 23 05.3 -2.1
AC05 **El Transito** 8.03 189 P Pn 07 23 04.6 -2.8
LCO **Las Campanas** 8.27 192 Pn 07 23 08.4 -2.5
LCO **Las Campanas** 8.27 192 P Pn 07 23 08.1 -2.8
BBSD **Serra de San D** 8.59 66 eP Pn 07 23 09.2 -5.9
SIV **San Ignacio** 8.81 58 P Pn 07 23 15.6 -2.5
comp=Z,17nm,0.6s,baz=248,slow=10,SNR=68
CO01 **Juntas del Tor** 9.13 187 Pn 07 23 20.9 -1.6
CO01 **Juntas del Tor** 9.13 187 P Pn 07 23 20.3 -2.1
GO04 **Tololo Observa** 9.42 191 Pn Pn 07 23 23.7 -2.7
GO04 **Tololo Observa** 9.42 191 P Pn 07 23 23.4 -3.0
CO03 **El Pedregal** 10.06 189 Pn 07 23 31.4 -3.4
CO03 **El Pedregal** 10.06 189 P Pn 07 23 31.0 -3.8
COIM **Forte Coimbra** 10.39 87 eP Pn 07 23 34.9 -4.4
CO02 **Combarbal** 10.46 190 P Pn 07 23 36.2 -4.2
MURT **Porto Murtinho** 10.48 96 eP Pn 07 23 37.9 -2.7
PTLB **Pontes e Lacer** 10.67 61 Pn 07 23 41.1 -2.1
PTLB **Pontes e Lacer** 10.67 61 eP Pn 07 23 40.9 -2.3
CFA **Coronel Fontan** 10.69 177 P Pn 07 23 40.4 -3.0
comp=Z,1.3nm,0.4s,baz=342,slow=13,SNR=17
CFA S Sn 07 25 32.8 -8.4
comp=Z,1.8nm,0.3s,baz=233,slow=20,SNR=8.5
CO04 **Los Peladeros** 11.28 189 P Pn 07 23 47.8 -3.7
VILB **Vilhena** 11.41 48 Pn 07 23 52.2 -0.9
VILB **Vilhena** 11.41 48 eP Pn 07 23 47.6 -5.5
CPUP **Villa Florida** 11.84 119 P Pn 07 23 57.5 -1.3
comp=Z,2.7nm,0.6s,baz=300,slow=11,SNR=9.0
CPUP **Villa Florida** 11.84 119 eP Pn 07 23 53.8 -5.0
CPUP **Villa Florida** 11.84 119 P Pn 07 23 57.5 -1.3
VA03 **San Esteban** 11.93 187 P Pn 07 23 57.6 -2.4
AQDB **Aquidauana** 12.29 90 Pn Pn 07 24 04.2 -0.6
AQDB **Aquidauana** 12.29 90 eP Pn 07 24 01.2 -3.4
AQDB **Aquidauana** 12.29 90 P Pn 07 24 05.1 +0.4
VA01 **Torpederas** 12.35 191 P Pn 07 24 02.4 -3.0
SJPY **San Joaquin** 12.41 112 eP Pn 07 24 01.7 -4.5
MT02 **Curacav** 12.50 189 Pn Pn 07 24 04.4 -2.9
MT08 **Bocatoma Ro** 12.56 185 Pn Pn 07 24 05.8 -2.6
MT05 **Renca** 12.58 187 Pn Pn 07 24 04.6 -3.7
MT16 **CCHEN** 12.59 187 Pn Pn 07 24 05.2 -3.3
MT03 **Universidad Ad** 12.65 186 Pn Pn 07 24 05.6 -3.8
MT09 **Talagante** 12.99 188 Pn Pn 07 24 09.4 -4.4
MT01 **Popeta** 13.11 189 Pn 07 24 12.3 -3.0
BO04 **La Punta** 13.15 187 Pn Pn 07 24 12.8 -3.1
SALV **Santo Antonio** 13.40 70 eP Pn 07 24 18.0 -1.2
PP1B **Ponte de Pedra** 13.56 78 eP Pn 07 24 18.2 -3.1
BO02 **Sierra Bellavi** 13.96 187 Pn Pn 07 24 23.6 -2.8
BO02 **Sierra Bellavi** 13.96 187 P Pn 07 24 24.6 -1.8
GO05 **Hualane** 14.34 190 P Pn 07 24 27.9 -3.2
ML02 **Panimavida** 15.00 188 Pn Pn 07 24 35.7 -3.8
ML02 IAmb IAmb 07 24 41.8
comp=Z,21nm,0.9s
ML02 **Panimavida** 15.00 188 P Pn 07 24 38.8 -0.6
TRCB **Terra Rica** 15.15 100 Pn Pn 07 24 41.0 -0.5
TRCB **Terra Rica** 15.15 100 eP Pn 07 24 40.6 -0.9
TRCB **Terra Rica** 15.15 100 P P 07 24 42.4 -1.5
H03N1 **Juan Fernandez** 15.39 214 T T 07 40 21.5
baz=34,slow=74,SNR=6.0
H03N2 **Juan Fernandez** 15.40 214 T T 07 40 21.5
baz=34,slow=74,SNR=5.7
H03N3 **Juan Fernandez** 15.40 214 T T 07 40 22.6
baz=34,SNR=15
BI02 **San Fabin de** 15.87 187 Pn Pn 07 24 46.9 -3.5
BI02 IAmb IAmb 07 24 53.1
comp=Z,26nm,0.8s
BI02 **San Fabin de** 15.87 187 P Pn 07 24 50.1 -0.3
PTGB **Pitanga** 15.91 107 eP Pn 07 24 50.0 -1.0
CLDB **Colider** 15.99 53 eP Pn 07 24 51.1 -0.9
CLDB **Colider** 15.99 53 P P 07 24 51.7 -1.5
BI05 **Punta Hualpn** 16.26 193 Pn Pn 07 24 51.5 -3.6
ITAB **Concordia** 16.49 116 P 07 24 57.7 -1.0
ITAB **Concordia** 16.49 116 eP Pn 07 24 56.9 -1.2
ITAB **Concordia** 16.49 116 P P 07 24 57.9 -0.8
LDASE **Londrina, Braz** 16.59 102 eP P 07 24 58.8 -1.1
CPSB **Cacapava Do Su** 16.78 127 P 07 25 00.8 -1.1
CPSB IAmb IAmb 07 25 03.2
comp=Z,24nm,0.7s
CPSB **Cacapava Do Su** 16.78 127 eP Pn 07 24 59.8 -1.8
CPSB **Cacapava Do Su** 16.78 127 P P 07 25 01.0 -0.9
ARAG **Araguaiana, MT** 16.95 75 eP P 07 25 04.3 +0.5
FRTB **Fartura** 18.01 101 eP Pn 07 25 15.0 -1.5
FRTB **Fartura** 18.01 101 P Pn 07 25 15.4 -1.1
GO06 **Curarrehue** 18.78 186 P P 07 25 20.8 -3.0
GO06 **Curarrehue** 18.78 186 P P 07 25 22.9 -0.9
BB19B **Bebedouro** 18.95 94 eP Pn 07 25 25.9 -1.8
SNDB **Serra Nova Dou** 18.98 65 eP P 07 25 25.9 -0.3

MACA **Manacapuru-AM** 19.32 25 P P 07 25 28.7 -1.0
MACA **Manacapuru-AM** 19.32 25 eP P 07 25 28.6 -1.2
LR05 **Currie** 19.48 187 P P 07 25 30.5 -0.8
LR05 IAmb IAmb 07 25 34.7
comp=Z,12nm,0.8s
IPMB **Ipameri, GO** 19.64 85 eP P 07 25 33.2 -0.1
PLCA **Paso Flores** 19.84 184 P Pn 07 25 37.4 -0.6
comp=Z,1.0nm,0.6s,baz=6.2,slow=11,SNR=8.0
PLCA **Paso Flores** 19.84 184 P 07 25 35.2 -0.1
RCLB **Rio Claro- Sao** 19.84 98 eP P 07 25 34.9 -0.6
SPB **Sao Paulo** 19.98 102 P Pn 07 25 37.0 -2.6
SPB IAmb IAmb 07 26 12.8
comp=Z,60nm,1.5s
SPB **Sao Paulo** 19.98 102 eP Pn 07 25 37.2 -2.5
SPB **Sao Paulo** 19.98 102 P P 07 25 36.8 -0.1
PET01 **Itanhaem-SP** 20.18 104 eP Pn 07 25 39.5 -2.4
VAO **Valinhos** 20.38 100 P P 07 25 40.8 -0.5
VAO IAmb IAmb 07 25 42.2
comp=Z,28nm,0.9s
VAO **Valinhos** 20.38 100 eP P 07 25 40.2 -1.0
LL03 **Petrohue** 20.42 188 P P 07 25 40.3 -1.1
BDFB **Brasilia** 20.43 79 P P 07 25 39.9 -2.0
comp=Z,3.1nm,0.4s,baz=266,slow=13,SNR=6.2
comp=E,3.1nm,0.4s
BDFB **Brasilia** 20.43 79 P P 07 25 40.5 -1.3
ITTB **Itaituba** 20.77 40 eP P 07 25 44.2 -1.2
LL05 **Los Muermos** 20.84 190 P P 07 25 45.0 -0.9
LL05 IAmb IAmb 07 26 09.3
comp=Z,34nm,1.1s
CANS **Sao Roque de M** 21.00 92 eP P 07 25 47.0 -1.0
PMNB **Patos De Minas** 21.20 88 eP P 07 25 49.2 -0.9
PMNB **Patos De Minas** 21.20 88 P P 07 25 48.4 -1.7
SLOR **San Lorenzo -** 22.15 334 P P 07 25 58.5 -2.0
SLOR IAmb IAmb 07 26 16.5
comp=Z,9.9nm,0.9s
BSCB **Bom Sucesso** 22.45 95 eP P 07 26 03.5 +0.2
BSCB **Bom Sucesso** 22.45 95 P P 07 26 02.5 -0.8
GO07 **Milladeo Hill,** 22.54 189 P P 07 26 04.7 +1.0
OTAV **Otavalo** 23.01 335 eP P 07 25 59.2 -10
DIAM **Diamantina, MG** 23.82 88 eP P 07 26 16.8 +0.5
JANB **Januaria** 24.00 80 eP P 07 26 17.4 -0.4
BOAV **Boa Vista** 24.52 20 P 07 26 22.7 +0.4
BOAV IAmb IAmb 07 26 24.6
comp=Z,11nm,0.6s
BOAV **Boa Vista** 24.52 20 eP P 07 26 20.2 -2.2
OBIP **Obispado Ponce** 38.75 3 P P 07 28 27.6 +0.9
CELP **Cerrillos** 38.78 3 P P 07 28 27.8 +0.8
Y58A **Scranton** 55.46 349 P P 07 30 36.4 +0.3
V58A **Windy Hill, Pi** 57.21 350 P P 07 30 49.8 +1.3
V58A IAmb IAmb 07 31 17.3
comp=Z,7.8nm,1.1s
BELA **Belgrano 2** 59.34 172 P P 07 31 03.4 +0.4
BELA IAmb IAmb 07 31 14.0
comp=Z,5.3nm,1.4s
TXAR **Lajitas Array** 60.18 325 P P 07 31 12.6 +3.2
comp=Z,0.2nm,0.8s,baz=142,slow=6.7,SNR=2.3
comp=Z,0.2nm,0.8s
VNA1 **Neumayer--Stat** 60.83 161 ⇑P P 07 31 15.8 +2.6
comp=Z,2.7nm,1.0s
VNA2 **Neumayer--Watz** 61.20 161 ⇑P P 07 31 17.8 +2.1
comp=Z,1.6nm,0.7s,baz=286,slow=6.5
SNAA **Sanae** 62.83 161 P P 07 31 28.6 +2.0
comp=Z,45nm,0.7s
SNAA **Sanae** 62.83 161 P P 07 31 27.3 +0.7
comp=Z,1.7nm,0.7s,baz=281,slow=4.9,SNR=6.0
comp=Z,1.7nm,0.7s
SNAA **Sanae** 62.83 161 P P 07 31 27.8 +1.2
TROLL **Troll, Antarti** 64.55 161 ⇑P P 07 31 40.3 +2.3
comp=Z,75nm,0.5s
DBIC **Dimbokro** 68.48 74 P P 07 32 03.6 -0.1
comp=Z,5.1nm,0.8s,baz=270,slow=5.1,SNR=4.0
comp=Z,5.1nm,0.8s
DBIC **Dimbokro** 68.48 74 P P 07 32 04.2 +0.4
DBIC IAmb IAmb 07 32 08.7
comp=Z,20nm,1.4s
VLDQ **Val d'Or** 69.11 354 P P 07 32 09.0 +2.1
VLDQ IAmb IAmb 07 32 16.1
comp=Z,6.4nm,1.4s
QSPA **South Pole Qui** 69.30 180 P P 07 32 11.0 +2.8
comp=Z,0.8nm,0.7s,baz=316,slow=1.9,SNR=9.7
comp=Z,0.8nm,0.7s
QSPA **South Pole Qui** 69.30 180 P P 07 32 08.9 +0.7
QSPA IAmb IAmb 07 32 53.8
comp=Z,5.5nm,1.4s
CBX **Cerro Bola** 69.95 318 P P 07 32 11.7 -1.0
CBX IAmb IAmb 07 32 42.2
comp=Z,19nm,1.3s
EYMN **Ely** 71.47 344 P P 07 32 22.1 +0.8
SCHQ **Schefferville** 75.43 1 P P 07 32 44.7 +0.4
PAHR **Pah Rah Range** 76.54 322 P P 07 32 51.6 +0.4
TORD **Torodi Ar. Bea** 77.07 70 P P 07 32 54.6 +0.1
comp=Z,2.6nm,0.5s,baz=254,slow=5.2,SNR=24
comp=Z,2.6nm,0.5s
MAW **Mawson** 84.89 163 P P 07 33 37.4 +2.3
comp=Z,0.4nm,0.3s,baz=299,slow=13,SNR=6.8
comp=Z,0.4nm,0.3s
MAW **Mawson** 84.89 163 P P 07 33 37.3 +2.3
KSANE **Kasane** 87.37 108 P P 07 33 49.1 +0.7
KSANE IAmb IAmb 07 33 54.7
comp=Z,4.0nm,0.7s
MKAR **Makanchi Array** 145.09 35 PKP PKPdf 07 40 38.8 +1.5
comp=Z,1.6nm,0.6s,baz=307,slow=3.5,SNR=8.8
MKAR **Makanchi Array** 145.09 35 PKPdf 07 40 38.0 +0.7
HILR **Hailar Array B** 150.59 349 PKPbc PKiKP 07 40 53.9 +1.4
comp=Z,0.7nm,0.4s,baz=28,slow=3.4,SNR=1.9
HHC **Hu-ho-hao-te** 160.09 359 eP PKPdf 07 41 00.5 +1.1
PZH **PanZhiHua** 169.70 55 PKP PKPdf 07 41 04.3 -3.8

*NEIC **30** 07:34:45.5±1.7, 10.26°S±0.09°×162.08°E±0.05, h35km±1km, mb4.5/15, Error ellipse: s-maj=15.9km s-min=5.8km az=154.0*
*IDC **30** 07:34:47.2±3.1, 10.37°S×162.01°E, h57km±25km, mb3.7/6, mbtmp4.1/9, ML3.8/3, MS1.3/1, Error ellipse: s-maj=27.8km s-min=17.7km az=60.0*
ISC 30 07:34:46.9±0.7, 10.31°S±0.09°×162.1°E±0.1, h54km, n36, σ0§72/30, mb4.3/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	2.24	293	P	P	Pn	07 35 21.3	-0.3
	11nm,0.3s,baz=273,slow=7.5,SNR=64							
HNR				S		Sn	07 35 49.2	+1.0
	43nm,0.5s,baz=88,slow=22,SNR=8.0							
HNR				LR		LR	07 36 31.8	
	comp=Z,7.4nm,21.1s,baz=214,slow=47							
	43nm,0.5s							
HNR	**Honiara**	2.24	293			Pn	07 35 21.2	-0.5
DZM	**Mont Dzumac**	12.44	161	P		Pn	07 37 41.2	-0.2
	0.4nm,0.3s,baz=357,slow=17,SNR=25							
	3.4nm,0.7s							
CTA	**Charters Tower**	18.07	236	P		P	07 38 54.2	+0.1
	0.5nm,0.3s,baz=42,slow=13,SNR=6.0							
	8.6nm,0.8s							
ARMA	**Armidale**	22.24	204	P		P	07 39 40.2	+0.8
ARMA				IAmb		IAmb	07 40 06.3	
	comp=Z,14nm,1.1s							
INKA	**Innaminka**	26.50	226	P		P	07 40 20.2	+0.7
INKA				IAmb		IAmb	07 40 22.7	
	comp=Z,8.0nm,0.8s							
WR8	**Warramunga Arr**	28.23	247	P		P	07 40 34.8	-0.2
WR8				IAmb		IAmb	07 40 35.4	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Ar**	28.37	247	P		P	07 40 35.7	-0.6
	comp=Z,1.1nm,0.6s,baz=76,slow=9.6,SNR=16							
	comp=Z,2.1nm,0.6s							
WRA	**Warramunga Ar**	28.37	247	P		P	07 40 35.1	-1.2
H11S2	**WAKE ISLAND Hy**	28.98	9	T		T	08 11 18.7	
	baz=188,slow=76,SNR=57							
H11S3	**WAKE ISLAND Hy**	28.98	9	T		T	08 11 13.8	
	baz=188,slow=76,SNR=21							
H11S1	**WAKE ISLAND Hy**	29.00	9	T		T	08 11 14.3	
	baz=188,slow=76,SNR=21							
AS31	**Alice Springs**	29.94	240	P		P	07 40 49.6	-0.6
ASAR	**Alice Springs**	29.94	240	P		P	07 40 48.8	-1.5
	comp=Z,0.8nm,0.7s,baz=65,slow=10,SNR=7.2							
	comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	29.94	240	P		P	07 40 49.4	-0.8
H11N1	**WAKE ISLAND Hy**	30.21	9	T		T	08 12 50.6	
	baz=188,slow=76,SNR=15							
H11N3	**WAKE ISLAND Hy**	30.21	9	T		T	08 12 56.5	
	baz=188,slow=76,SNR=16							
H11N2	**WAKE ISLAND Hy**	30.23	9	T		T	08 12 51.6	
	baz=188,slow=76,SNR=14							

BBOO **Buckleboo** 32.78 223 P P 07 41 15.2 +0.1
BBOO IAmb IAmb 07 41 15.4
comp=Z,25nm,1.4s
KNRA **Kununurra** 32.84 257 P P 07 41 15.4 -0.4
KNRA IAmb IAmb 07 41 24.9
comp=Z,6.8nm,1.1s
FITZ **Fitzroy Crossi** 36.08 253 P P 07 41 42.8 -1.0
MAJO **Matsushiro** 51.72 336 P P 07 43 48.1 -0.7
MJB9 **Matsu-Tunnel** 51.72 336 P P 07 43 47.7 -1.2
MJB9 IAmb IAmb 07 43 55.0
comp=Z,7.2nm,1.1s
USA0B **Ussuriysk Arra** 60.72 336 P P 07 44 53.3 +0.5
USA0B IAmb IAmb 07 45 22.7
comp=Z,5.3nm,0.7s
USRK **Ussuriysk Ar.** 60.72 336 P P 07 44 53.0 +0.1
PEA0B **Petropavlovsk-** 63.27 357 P P 07 45 09.5 -0.3
PETK **Petropavlovsk-** 63.27 357 P P 07 45 10.1 +0.3
SONM **Songino Array** 75.95 325 P P 07 46 29.1 +0.9
comp=Z,1.7nm,0.7s,baz=142,slow=6.0,SNR=9.2
comp=Z,1.7nm,0.7s
SONM **Songino Array** 75.95 325 P P 07 46 29.1 +0.9
SONM IAmb IAmb 07 46 30.6
comp=Z,2.2nm,0.8s
KDAK **Kodiak Island** 77.28 23 P P 07 46 36.1 +0.8
QSPA **South Pole Qui** 79.69 180 P P 07 46 48.7 -0.1
comp=Z,1.2nm,0.8s,baz=44,slow=1.1,SNR=6.0
comp=Z,1.2nm,0.8s
QSPA **South Pole Qui** 79.69 180 P P 07 46 49.3 +0.5
QSPA IAmb IAmb 07 46 50.7
comp=Z,4.0nm,1.2s
ILAR **Eielson Array** 84.00 20 P P 07 47 10.6 -0.6
comp=Z,0.7nm,0.8s,baz=245,slow=5.7,SNR=5.6
comp=Z,0.7nm,0.8s
MKAR **Makanchi Array** 90.51 317 P P 07 47 43.2 +0.1
comp=Z,0.7nm,0.6s,baz=92,slow=6.1,SNR=6.6
comp=Z,0.7nm,0.6s
MKAR **Makanchi Array** 90.51 317 P P 07 47 42.7 -0.4
AAK **Ala-Archa** 95.10 312 LR LR 08 32 24.7
comp=Z,47nm,20.4s,baz=278,slow=36

IDC 30 07:51:54.7±22.0, 28.24N×94.13E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=348.0km s-min=67.9km az=173.0, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	20.72	337	P	P	P	07 56 36.5	-0.2
	0.7nm,0.9s,baz=156,slow=13,SNR=4.9							
	0.7nm,0.9s							
SONM	**Songino Array**	21.77	23	P	P	P	07 56 47.8	-0.3
	1.0nm,0.9s,baz=203,slow=9.4,SNR=5.1							
	1.0nm,0.9s							
KURBB	**Kurchatov Arra**	25.29	336	P	P	P	07 57 22.2	-0.5
	0.6nm,0.7s,baz=144,slow=10,SNR=4.9							
	0.6nm,0.7s							
ZALV	**Zalesovo Beam**	26.58	348	P	P	P	07 57 35.5	+1.1
	5nm,0.5s,baz=156,slow=7.6,SNR=1.8							
	0.5nm,0.5s							

JMA 30 08:44:39.8±0.2, 31.1°N×141°E±°, h42km, MW3.9/21, NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	3.00	325	eS		Sn	08 46 00.9	+1.3
CBIJ	**Chichi jima**	3.55	175	eP		Pn	08 45 34.2	+1.8
CBIJ				eS		Sn	08 46 14.4	+1.2
JMKN	**Mikurajimanish**	3.76	330	eS		Sn	08 46 20.6	+2.4
BSO1	**Boso 1**	4.06	350	eP		Pn	08 45 41.4	+2.5
BSO1				eS		Sn	08 46 28.4	+3.6
JHO	**Hitachi**	6.04	350	eP		Pn	08 46 08.7	+2.1
JAG	**Ashikaga**	6.10	341	eP		Pn	08 46 10.0	+2.6
JAG				eS		Sn	08 47 18.2	+2.4

*UPA **30** 08:46:55.4±2.3, 7.46N×81.76W, h0km±93km, MW3.6, Presumed earthquake*
*UCR **30** 08:46:57.2±0.8, 7.38N×82.01W, h16km±6km, MW3.5, Presumed earthquake*
ISC 30 08:46:59.3±1.8, 7.55N±0.08×81.88W±0.04, h23km±16km, n23, σ1§98/33, 2D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	0.68	72	⇓iP		Pn	08 47 12.2	-1.3
GMAL				eS		Sn	08 47 24.3	+1.0
LMNES	**Limones**	1.11	299	eP		Pb	08 47 19.4	-0.5
LMNES				eS		Sn	08 47 37.5	+3.3
PTPA	**Petro Terminal**	1.17	303	eP		Pn	08 47 18.7	-1.7
BQTLY	**Boquete Panama**	1.33	334	eP		Pb	08 47 22.4	-1.3
BQTLY	**Boquete Panama**	1.33	334	eP		Pb	08 47 22.3	-1.3
RBALA	**Bur**	1.35	348	eP		Pb	08 47 22.9	-1.0
RBALA				eS		Sb	08 47 41.5	+0.8
RBALA	**Bur**	1.35	348	eP		Pb	08 47 22.7	-1.2
RBALA				eS		Sb	08 47 43.2	+2.5
PBNVO	**Pueblo Nuevo,**	1.37	347	eP		Pn	08 47 22.7	-0.3
PBNVO				eS		Sb	08 47 41.5	+0.2
PBNVO	**Pueblo Nuevo,**	1.37	347	eP		Pn	08 47 22.6	-0.3
PBNVO				eS		Sn	08 47 41.0	+0.5
CLLRA	**Cordillera,**	1.39	329	eP		Pb	08 47 23.4	-1.3
CLLRA				eS		Sb	08 47 44.9	+2.8
BRU2	**Volcan**	1.47	327	eP		Pb	08 47 24.4	-1.7
BRU2				eS		Sb	08 47 44.7	+0.3
BRU2	**Volcan**	1.47	327	eP		Pb	08 47 24.8	-1.3
BRU2				eS		Sb	08 47 47.4	+3.0
NELY	**Ciudad Neily**	1.52	316	eP		Pn	08 47 23.4	-1.7
NELY	**Ciudad Neily**	1.52	316	eP		Pn	08 47 23.4	-1.7
NELY				eS		Sb	08 47 47.7	+2.1
SCLRA	**Santa Clara, W**	1.56	325	eS		Sb	08 47 50.2	+3.4
AZU	**Azuero**	1.61	81	⇓eP		Pb	08 47 27.7	-0.6
AZU				eS		Sb	08 47 51.6	+3.4
DRK0	**Durika**	2.17	322	eP		Pn	08 47 22.9	-11
EDPE	**Pejibaye, P**	2.31	314	eP		Pn	08 47 35.2	-0.8
SAJE	**San Jernim**	2.40	318	eP		Pn	08 47 37.2	-0.3
ZANG	**Zanguenga, Cho**	2.43	55	eP		Pb	08 47 40.3	-2.1
BCIP	**Isla Barro Col**	2.58	51	eP		Pb	08 47 43.7	-1.2
VTCV	**VTCV, Calle Va**	3.03	323	eP		Pn	08 47 48.1	+2.0
ABRB	**Las Abras (San**	3.04	323	eP		Pb	08 47 48.8	-4.1

*IDC **30** 08:48:35.1±0.6, 6.36S×143.37E, h0km, mb4.3/16, mbtmp4.3/20, ML4.0/3, MS3.7/43, Error ellipse: s-maj=22.1km s-min=12.8km az=78.0*
*NEIC **30** 08:48:38.4±1.8, 6.60S±0.07°×143.06E±0.07, h10km±1km, mb4.9/89, Error ellipse: s-maj=11.9km s-min=11.1km az=221.0*
*GFZ **30** 08:48:39.7±0.2, 7.3S±3°×147.3E±°, h11km, M4.8/32, mb4.8/32*
*BJI **30** 08:48:39.0, 6.48S×143.20E, h7km, mB4.9/3, mb4.7/30, Ms4.5/3*
*DJA **30** 08:48:40.1±0.3, 7.3S±3°×147.3E±°, h10km, M5.4/30, mb4.9/30, mB5.8/13, MLv5.6/6, Mw(mB)5.4/13, MwMwp5.7/2, Mwp5.8/2*
*GCMT **30** 08:48:40.4±0.3, 6.37S±0.02×143.11E±0.02, h20km±1km, MW4.8/68, Moment Tensor Solution. s16,c16; s68,c91; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.99±.15; Mθθ -2.01±.11; Mφφ 1.02±.09; Mrθ -0.08±.16; Mφθ 0.26±.07; Mφr -0.59±.19; Best double couple: Mo 1.82000×10^16 NP1: φs 131.00000°, δ60.00000°, λ146.00000°. NP2: φs 239.00000°, δ61.00000°, λ34.00000°. Principal axes: T 1.6080, Plg44.0000°, Azm95.0000°; N 0.4250, Plg46.0000°, Azm274.0000°; P -2.0330, Plg1.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 08:48:38.6±0.3, 6.67S±0.04×143.12E±0.05, h10km, n231, σ1§71/176, mb4.8/68, MS3.8/40, 1C-1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	4.78	330	Pn	Pn	Pn	08 49 47.5	-3.3
	11nm,0.3s,baz=156,slow=10.0,SNR=13							
JAY						Sn	**08 50 42.0**	**-4.2**
	12nm,0.3s,baz=21,slow=14,SNR=3.9							
JAY				LR		LR	08 51 51.1	
	comp=Z,1μm,19.2s,baz=51,slow=42							
	26nm,0.4s							
PMG	**Port Moresby**	4.83	124	Pn		Pn	08 49 49.9	-1.6

118nm,0.8s,baz=336,slow=5.0,SNR=22
PMG Sn **Sn** **08 50 45.1 -2.4**
12nm,0.3s,baz=16,slow=11,SNR=4.7
PMG LR LR 08 51 54.2
comp=Z,900nm,21.6s,baz=278,slow=41
PMG Port Moresby 4.83 124 Pn 08 49 52.4 +0.9
PMG Port Moresby 4.83 124 P **Pn** **08 49 52.1 +0.6**
PMG Port Moresby 4.83 124 P **Pn** **08 49 52.0 +0.5**
GENI Genyem 5.01 324 P **Pn** **08 49 54.2 +0.3**
GENI S **Sn** **08 50 53.9 +2.0**
GENI Genyem 5.01 324 P **Pn** **08 49 54.4 +0.5**
MANU Manus Island 6.25 43 Pn 08 50 09.6 -1.3
COEN Coen 7.24 180 Pn **Pn** **08 50 24.2 -0.4**
COEN Coen 7.24 180 P **Pn** **08 50 28.7 +4.1**
BAKI Biak 8.86 308 P **Pn** **08 50 45.3 -1.6**
36nm,1.0s
KRVT Keravat (AS076 9.17 76 LR LR 08 54 54.1
comp=Z,244nm,18.2s,baz=259,slow=43
RABL Rabaul 9.33 75 Pn **Pn** **08 50 52.3 -1.0**
MTSU Mount Surprise 11.46 174 P Pn 08 51 27.6 +5.2
FAKI Fak Fak 11.46 288 Pn Pn 08 51 19.9 -2.5
FAKI Fak Fak 11.46 288 P **Pn** **08 51 24.6 +2.1**
SAUI Saumlaki 11.80 263 Pn Pn 08 51 24.7 -2.4
SIJI Sorong 13.16 295 LR LR 08 57 31.3
comp=Z,556nm,19.4s,baz=114,slow=40
SIJI Sorong 13.16 295 P **Pn** **08 51 46.5 +0.8**
MTN Manton Dam 13.31 242 **Pn** **08 51 46.3 -1.5**
MTN Manton Dam 13.31 242 P **Pn** **08 51 47.2 -0.6**
BNDI Bandanaira 13.33 279 P **Pn** **08 51 49.0 +1.0**
CTA Charters Tower 13.68 167 Pn **Pn** **08 51 54.9 +2.1**
0.2nm,0.3s,baz=0.0,slow=17,SNR=1.7
CTA LR LR 08 57 09.0
comp=Z,365nm,18.2s,baz=353,slow=37
2.6nm,0.7s
CTAO Charters Tower 13.68 167 P **Pn** **08 51 55.0 +2.2**
QIS Mount Isa 14.22 194 P **Pn** **08 52 04.1 +3.8**
WB0 Warramunga Arr 15.54 212 **Pn** **08 52 16.7 -1.3**
WR0 Warramunga Arr 15.62 211 Pn **Pn** **08 52 18.3 -0.8**
WR8 Warramunga Arr 15.64 212 **Pn** **08 52 18.4 -0.9**
WRAB Tennant Creek 15.70 212 **Pn** **08 52 19.2 -0.9**
WRAB Tennant Creek 15.70 212 P **Pn** **08 52 19.6 -0.5**
WRA Warramunga Arr 15.71 212 Pn **Pn** **08 52 19.2 -1.0**
1.0nm,0.3s,baz=34,slow=14,SNR=42
WRA Sn **Sn** **08 55 07.6 -6.9**
1.2nm,0.3s,baz=36,slow=21,SNR=5.0
WRA Warramunga Arr 15.71 212 **Pn** **08 52 17.3 -2.9**
NLAI Namlea 16.32 281 P **Pn** **08 52 27.7 -0.4**
KNRA Kununurra 16.68 236 **Pn** **08 52 31.0 -1.6**
HNR Honiara 16.88 100 **Pn** **08 52 36.1 +0.9**
HNR IAmb IAmb 08 52 38.6
comp=Z,214nm,1.3s
HNR Honiara 16.88 100 P **Pn** **08 52 35.9 +0.7**
TNTI Ternate 17.38 295 Pn **Pn** **08 52 38.7 -2.7**
SANI Sanana 17.69 284 P **Pn** **08 52 47.5 +2.2**
SOEI Soe 18.91 259 P **P** **08 52 57.2 -2.6**
SOEI IAmb IAmb 08 53 09.5
comp=Z,84nm,1.0s
SOEI Soe 18.91 259 P **P** **08 52 59.5 -0.3**
comp=Z,115nm,0.9s
SOEI Soe 18.91 259 P **P** **08 53 00.6 +0.7**
AS31 Alice Springs 19.08 207 P **P** **08 53 01.1 -0.5**
ASAR Alice Springs 19.08 207 P **P** **08 53 04.7 +3.1**
comp=Z,0.8nm,0.3s,baz=34,slow=9.9,SNR=136
ASAR S **Sn** **08 56 36.1 -0.2**
comp=Z,3.9nm,0.8s,baz=38,slow=15,SNR=2.3
ASAR LR LR 09 00 26.9
comp=Z,324nm,21.9s,baz=30,slow=37
comp=Z,18nm,0.8s
ASAR Alice Springs 19.08 207 P **P** **08 53 00.6 -0.9**
QLP Quilpie 19.83 177 P **Pn** **08 53 14.0 +2.8**
EIDS Eidsvold 20.09 159 P **P** **08 53 11.8 -0.7**
EIDS IAmb IAmb 08 53 26.6
comp=Z,48nm,1.1s
EIDS Eidsvold 20.09 159 P **P** **08 53 14.8 +2.2**
GUMO Guam 20.20 5 LR LR 09 00 17.6
comp=Z,91nm,19.2s,baz=162,slow=35
RMQ Roma 20.43 165 P **P** **08 53 18.9 +2.8**
FITZ Fitzroy Crossi 20.48 235 P **P** **08 53 18.3 +1.5**
comp=Z,21nm,0.7s,baz=60,slow=10.0,SNR=35
FITZ S S 08 56 56.5 -10
comp=Z,12nm,0.9s,baz=164,slow=16,SNR=3.3
FITZ LR LR 09 02 26.9
comp=Z,77nm,18.9s,baz=52,slow=40
comp=Z,21nm,0.7s
FITZ Fitzroy Crossi 20.48 235 P **P** **08 53 16.4 -0.5**
FITZ Fitzroy Crossi 20.48 235 P **P** **08 53 18.4 +1.5**
KDI Kendari 20.59 276 P **P** **08 53 20.2 +2.1**
comp=Z,38nm,1.3s
MMRI Maumere 20.79 263 P **P** **08 53 19.2 -1.0**
MMRI IAmb IAmb 08 53 33.4
comp=Z,71nm,1.3s
MMRI Maumere 20.79 263 P **P** **08 53 21.6 +1.4**
LUWI Luwuk 21.05 285 P **P** **08 53 21.4 -1.6**
LUWI Luwuk 21.05 285 P **P** **08 53 23.7 +0.7**
comp=Z,4µmcomp=Z,101nm,1.0s
LUWI Luwuk 21.05 285 P **P** **08 53 24.0 +1.0**
INKA Innaminka 21.08 186 P **P** **08 53 23.5 +0.4**
APSI Ampana 22.17 284 P **P** **08 53 35.7 +0.6**
comp=Z,1µmcomp=Z,60nm,1.7s
APSI Ampana 22.17 284 P **P** **08 53 35.1 0.0**
DAV Davao City (W) 22.20 308 LR LR 09 03 06.1
comp=Z,93nm,18.6s,baz=314,slow=39
BSSI Bau Bau, Buton 22.50 270 P **P** **08 53 41.2 +2.6**
KAPI Kappang 23.31 273 P **P** **08 53 46.9 -0.1**
comp=Z,5.9nm,0.3s,baz=83,slow=9.0,SNR=9.7
KAPI LR LR 09 05 10.9
comp=Z,202nm,19.7s,baz=88,slow=42
comp=Z,5.9nm,0.3s
KAPI Kappang 23.31 273 P **P** **08 53 46.0 -1.0**
KAPI Kappang 23.31 273 P **P** **08 53 49.6 +2.6**
SPSI Sidrap Palu 23.41 275 P **P** **08 53 48.7 +0.7**
TOLI2 Tolitoli 23.60 288 **P** **08 53 48.1 -1.8**
TOLI2 IAmb IAmb 08 53 56.9
comp=Z,42nm,0.8s
TOLI2 Tolitoli 23.60 288 P **P** **08 53 51.8 +1.9**
WBSI Waikabubak, Su 23.67 261 P **P** **08 53 50.9 +0.2**
MPSI Mapaga 24.20 286 P **P** **08 53 57.1 +1.4**
PMSI Majene 24.32 276 P **P** **08 53 59.0 +2.2**
CMSA Cobar Meteorol 24.86 175 P **P** **08 54 03.4 +1.9**
ARMA Armidale 24.94 162 P **P** **08 54 02.7 +0.4**
ARMA IAmb IAmb 08 54 14.6
comp=Z,25nm,1.1s
STKA Stephens Creek 25.12 183 P **P** **08 54 05.3 +1.5**
comp=Z,4.1nm,0.8s,baz=3.9,slow=14,SNR=7.6
STKA LR LR 09 04 59.1
comp=Z,464nm,18.1s,baz=4.7,slow=39
comp=Z,4.1nm,0.8s
STKA Stephens Creek 25.12 183 P **P** **08 54 04.4 +0.6**
BBOO Buckleboo 26.83 193 P **P** **08 54 17.9 -1.3**
BBOO IAmb IAmb 08 54 32.1
comp=Z,16nm,0.9s
MBWA Marble Bar 26.83 235 P **P** **08 54 17.4 -2.1**
MBWA IAmb IAmb 08 54 27.3
comp=Z,43nm,1.6s
MYLDM Lahad Datu 27.25 295 P **P** **08 54 20.9 -2.3**
ONTNC Ouen Toro 27.35 127 P **P** **08 54 23.9 -0.3**
FORT Forrest 27.84 209 P **P** **08 54 27.6 -0.8**
FORT IAmb IAmb 08 55 11.1
comp=Z,11nm,0.8s
MARNC Mare, Loyalty 28.22 124 P **P** **08 54 31.3 -0.6**
JCJ Chichijima 33.58 358 LR LR 09 07 14.6
comp=Z,54nm,21.7s,baz=140,slow=34
NWAO Narrogin (SRO) 35.51 219 LR LR 09 11 14.2
comp=Z,204nm,20.8s,baz=140,slow=38
JOW Kunigami 36.28 337 LR LR 09 10 02.2
comp=Z,70nm,19.7s,baz=16,slow=36
YULB Yu-li 36.71 325 P **P** **08 55 44.5 -1.6**
YULB IAmb IAmb 08 56 01.0
comp=Z,24nm,1.3s
SSLB Suanglung 37.21 325 P **P** **08 55 49.2 -1.2**
SSLB IAmb IAmb 08 56 25.7
comp=Z,15nm,1.0s
JHJ Hachijo jima 2 39.70 356 LR LR 09 09 30.4
comp=Z,158nm,21.0s,baz=294,slow=32
JNU Nakatsue 41.25 344 LR LR 09 11 10.0
comp=Z,88nm,20.6s,baz=72,slow=33
MJAR Matsushiro Arr 43.23 354 P P 08 56 36.3 -3.8
comp=Z,0.9nm,0.7s,baz=181,slow=9.4,SNR=4.6
comp=Z,0.9nm,0.7s
MJAR Matsushiro Arr 43.23 354 P **P** **08 56 38.6 -1.6**
URZ Urewera 43.98 141 LR LR 09 14 52.1
comp=Z,167nm,18.4s,baz=311,slow=36
TUWZ Tuamarina 44.15 146 P **P** **08 56 47.2 -0.3**
RPZ Rata Peaks 44.29 151 LR LR 09 13 07.8
comp=Z,38nm,19.0s,baz=212,slow=33

AFI Afiamalu 44.89 103 LR LR 09 14 00.8
comp=Z,136nm,18.6s,baz=262,slow=34
NJ2 Nanjing 44.93 330 *e*P **P** **08 56 57.3 +3.5**
NJ2 pmax pmax
comp=Z,17nm,0.6s
KSAR Wonju Array Be 46.13 343 P **P** **08 57 02.5 -0.7**
KSRS Korea Array 46.13 343 P P 08 57 00.2 -3.0
comp=Z,1.6nm,0.8s,baz=166,slow=9.6,SNR=13
comp=Z,1.6nm,0.8s
KS19 Wonju Array Si 46.20 343 P **P** **08 57 03.0 -0.8**
KS19 IAmb IAmb 08 57 12.1
comp=Z,37nm,1.9s
NIUE Niue 47.25 110 P **P** **08 57 12.0 -0.4**
JTM Tenmabayashi 47.26 358 P **P** **08 57 11.8 -0.2**
ENH Enshi 48.88 320 P **P** **08 57 23.9 -1.0**
ENH IAmb IAmb 08 59 03.3
comp=Z,13nm,0.7s
CRAI Chiangrai 49.81 303 P P 08 57 29.9 -2.2
CRAI IAmb IAmb 08 57 36.8
comp=Z,14nm,1.6s
CMAR Chiang Mai Arr 50.22 301 P **P** **08 57 33.7 -1.6**
comp=Z,0.8nm,0.3s,baz=127,slow=5.9,SNR=8.2
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 50.22 301 P P 08 57 33.3 -1.9
KMI2 Kunming 50.43 310 P **P** **08 57 41.3 +4.3**
KMI2 sP sP 08 57 45.5 +4.0
KMI2 pmax pmax
comp=Z,20nm,1.1s
ASAJ Asahikawa 50.55 360 LR LR 09 23 39.6
comp=Z,18nm,18.5s,baz=181,slow=42
USA0B Ussuriysk Arra 51.62 350 P **P** **08 57 44.9 -0.4**
USRK Ussuriysk Ar. 51.62 350 P P 08 57 41.9 -3.4
comp=Z,3.2nm,0.7s,baz=128,slow=9.3,SNR=3.7
USRK LR LR 09 16 26.5
comp=Z,102nm,21.3s,baz=169,slow=32
comp=Z,3.2nm,0.7s
USRK Ussuriysk Ar. 51.62 350 P **P** **08 57 44.4 -0.9**
PZH PanZhiHua 51.93 311 P **P** **08 57 52.0 +3.9**
CN2 Changchun 52.72 344 P P 08 57 46.5 -7.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s
BNX BinXian 54.04 346 ⇑P **P** **08 58 05.5 +2.4**
BNX pmax pmax
comp=Z,15nm,0.8s
HHC Hu-ho-hao-te 55.47 331 *e*P **P** **08 58 18.0 +4.2**
LZH Lanzhou 56.28 322 *e*P **P** **08 58 21.0 +1.2**
LZH sP sP 08 58 29.3 +4.9
LZH pmax pmax
comp=Z,21nm,1.2s
LZH L L
comp=Z,130nm,17.9s
LZH L L
comp=Z,170nm,14.5s
LZDM Lanzhou Array 56.28 322 LR LR 09 20 14.7
comp=Z,48nm,21.2s,baz=280,slow=34
KLR Kul'dur 56.55 351 LR LR 09 19 14.9
comp=Z,65nm,21.9s,baz=170,slow=33
RAR Rarotonga 56.98 111 LR LR 09 22 00.6
comp=Z,37nm,18.1s,baz=298,slow=35
HEH HeiHe 58.31 348 *e*P **P** **08 58 37.0 +3.4**
HEH L L
comp=Z,360nm,21.0s
HEH L L
comp=Z,180nm,20.4s
SHL Shillong 59.19 305 P **P** **08 58 39.5 -1.0**
PEA0B Petropavlovsk- 60.82 10 P **P** **08 58 51.1 +0.2**
PETK Petropavlovsk- 60.82 10 P P 08 58 46.9 -4.0
comp=Z,3.4nm,0.4s,baz=218,slow=6.7,SNR=6.1
PETK LR LR 09 24 51.0
comp=Z,25nm,19.6s,baz=216,slow=36
comp=Z,3.4nm,0.4s
PETK Petropavlovsk- 60.82 10 P **P** **08 58 50.8 -0.1**
PET Petropavlovsk 60.91 11 P **P** **08 58 51.3 -0.1**
GTA2 Gaotai 60.94 323 *e*P **P** **08 58 53.5 +1.4**
GTA2 sP sP 08 59 01.3 +4.5
GTA2 pmax pmax
comp=Z,3.0nm,1.2s
GTA2 L L
comp=Z,120nm,16.5s
GTA2 L L
comp=Z,99nm,17.5s
ULN Ulaanbaatar 62.91 334 P **P** **08 59 04.0 -1.3**
SONM Songino Array 63.18 333 P P 08 59 04.2 -2.9
comp=Z,0.7nm,0.9s,baz=148,slow=8.6,SNR=6.0
SONM LR LR 09 24 54.8
comp=Z,77nm,21.9s,baz=123,slow=35
comp=Z,0.7nm,0.9s
SONM Songino Array 63.18 333 P **P** **08 59 06.1 -0.9**
CASY Casey 63.63 194 P **P** **08 59 10.2 +0.7**
CASY IAmb IAmb 08 59 17.6
comp=Z,11nm,1.1s
PALK Pallekele 63.79 281 LR LR 09 28 57.3
comp=Z,61nm,20.7s,baz=108,slow=38
EVN Everest 64.30 305 P **P** **08 59 14.0 -1.4**
EVN IAmb IAmb 08 59 21.1
comp=Z,10nm,1.1s
EVN Everest 64.30 305 P **P** **08 59 14.2 -1.3**
SHEM Shemya Is, Ala 64.76 20 LR LR 09 23 08.0
comp=Z,88nm,20.7s,baz=270,slow=32
PPT Papeete 66.40 106 LR LR 09 24 32.8
comp=Z,42nm,21.4s,baz=216,slow=33
PPT2 Papeete2 66.40 106 *e*LR LR 09 19 20.0
comp=Z,151nm,25.8s
PPT2 *e*LR LR 09 19 27.1
comp=Z,120nm,27.8s
TLY Talaya 67.23 335 LR LR 09 28 36.3
comp=Z,29nm,20.4s,baz=136,slow=36
KIWB Kanaga Island 67.46 25 P **P** **08 59 35.0 +0.5**
YAK Yakutsk 69.28 353 LR LR 09 28 53.2
comp=Z,34nm,20.1s,baz=164,slow=35
WMQ Urumqi 70.83 321 *e*P **P** **08 59 58.8 +3.1**
WMQ pmax pmax
comp=Z,10.0nm,1.3s
VNDA Vanda 71.50 176 P **P** **08 59 59.6 +0.4**
comp=Z,1.9nm,0.9s,baz=320,slow=7.1,SNR=7.0
VNDA LR LR 09 31 20.9
comp=Z,67nm,18.5s,baz=328,slow=36
comp=Z,1.9nm,0.9s
VNDA Vanda 71.50 176 P **P** **08 59 59.4 +0.2**
ZSN Zaisan 74.34 323 *e*P **P** **09 00 18.8 +2.3**
MAKZ Makanchi 75.79 322 P P 09 00 22.9 -2.0
MAKZ IAmb IAmb 09 00 29.7
comp=Z,8.7nm,0.8s
MAKZ Makanchi 75.79 322 P **P** **09 00 24.4 -0.5**
SHLS Shalkode 75.89 317 *e*P **P** **09 00 26.2 +0.6**
PDGK Podgornoye 75.94 318 P **P** **09 00 24.2 -1.8**
TAOE Nuku Hiva Isla 75.94 97 *e*LR LR 09 23 56.3
comp=Z,58nm,22.9s
UZB Uzynbulak 76.18 317 *e*P **P** **09 00 29.5 +2.1**
comp=Z,5.2nm,0.9s
KPKS Kokpek 76.53 318 *e*P **P** **09 00 31.3 +2.1**
SATY Saty 76.56 317 *e*P **P** **09 00 31.8 +2.3**
comp=Z,7.4nm,1.2s
KDJ Kajisay 77.05 316 P **P** **09 00 30.6 -1.8**
KDJ IAmb IAmb 09 00 37.7
comp=Z,8.6nm,1.2s
KDJ Kajisay 77.05 316 P **P** **09 00 31.7 -0.7**
KSH2 Kashi 77.15 313 P **P** **09 00 36.3 +3.3**
KSH2 sP PcP 09 00 47.5 +3.7
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
NIL Nilore 77.20 307 P P 09 00 31.3 -1.9
NIL IAmb IAmb 09 00 38.5
comp=Z,25nm,1.2s
NIL Nilore 77.20 307 P **P** **09 00 34.3 +1.1**
TDK Taldyqorghan 77.31 319 *e*P **P** **09 00 35.9 +2.3**
MDOK Medeo 77.52 317 *e*P **P** **09 00 37.1 +2.2**
TNSS Tian-Shan 77.54 317 *e*P **P** **09 00 37.2 +1.8**
ZAA0 Zalesovo Array 77.56 329 P **P** **09 00 34.1 -0.6**
ZAA0 IAmb IAmb 09 01 26.5
comp=Z,3.5nm,0.6s
ZALV Zalesovo Beam 77.56 329 P **P** **09 00 33.1 -1.6**
comp=Z,1.6nm,0.4s,baz=72,slow=4.8,SNR=6.5
ZALV LR LR 09 36 15.1
comp=Z,30nm,18.8s,baz=100,slow=37
comp=Z,1.6nm,0.4s
ZALV Zalesovo Beam 77.56 329 **P** **09 00 33.6 -1.1**
AAA Alma-Ata 77.63 317 *e*P **P** **09 00 37.9 +2.5**
BOOM Boomskoye usch 78.04 316 P **P** **09 00 36.2 -1.7**
BOOM IAmb IAmb 09 00 45.4
comp=Z,9.2nm,1.3s
BOOM Boomskoye usch 78.04 316 P **P** **09 00 38.7 +0.8**
ROCAM Rodrigues Isla 78.16 251 P **P** **09 00 38.1 -0.7**
KUU Kurty 78.27 317 *e*P **P** **09 00 41.0 +2.1**
TIXI Tiksi 78.72 355 P **P** **09 00 41.0 +0.2**
AAK Ala-Archa 79.09 316 LR LR 09 37 52.9

comp=Z,24nm,20.4s,baz=110,slow=37
AAK Ala-Archa 79.09 316 P **P** **09 00 42.5 -1.2**
SGDS Sogindy 79.27 316 *e*P **P** **09 00 46.5 +2.0**
KURK Kurchatov 79.47 324 P P 09 00 43.4 -1.9
KURK IAmb IAmb 09 00 49.6
comp=Z,14nm,1.2s
KURK Kurchatov 79.47 324 P **P** **09 00 44.3 -1.0**
KURBB Kurchatov Arra 79.48 324 P P 09 00 42.3 -3.1
comp=Z,0.6nm,0.5s,baz=117,slow=4.4,SNR=6.3
comp=Z,0.6nm,0.5s
L14K Kuka Creek 79.68 23 P **P** **09 00 46.2 0.0**
MAW Mawson 80.15 203 LR LR 09 33 53.5
comp=Z,70nm,19.2s,baz=27,slow=34
ARK Arkit 80.61 314 P **P** **09 00 52.6 +0.7**
KBL Kabul 80.81 306 P **P** **09 00 51.6 -1.6**
GAR Garm 81.00 311 P P 09 00 51.8 -2.2
GAR IAmb IAmb 09 00 58.8
comp=Z,11nm,1.0s
GAR Garm 81.00 311 P **P** **09 00 54.1 +0.1**
P17K Kvichak River 81.18 27 P **P** **09 00 54.4 0.0**
DZA Taraz 81.38 315 *e*P **P** **09 00 58.1 +2.2**
N17K Nushagak Hills 81.51 26 P **P** **09 00 54.7 -1.4**
N17K IAmb IAmb 09 01 38.2
comp=Z,21nm,1.5s
J16K Anvik River 81.58 22 P **P** **09 00 56.1 -0.3**
J16K IAmb IAmb 09 01 25.9
comp=Z,19nm,1.4s
CHGR Chuyangaron 81.78 311 P P 09 00 55.9 -2.3
CHGR Chuyangaron 81.78 311 P **P** **09 00 59.6 +1.5**
KK31 Karatay Array 82.02 315 P P 09 00 56.7 -2.5
KKAR Karatay Array 82.02 315 P 09 00 56.7 -2.5
IUG Iuzhnay 82.08 314 *e*P **P** **09 01 02.0 +2.3**
comp=Z,6.7nm,1.2s
J17K VABM Dome 82.22 23 P **P** **09 00 60.0 +0.2**
J17K IAmb IAmb 09 01 10.2
comp=Z,9.2nm,1.1s
KDAK Kodiak Island 82.33 29 LR LR 09 31 40.6
comp=Z,48nm,20.0s,baz=244,slow=32
CHM Chimkent 82.44 314 *e*P **P** **09 01 03.7 +2.3**
BRLS Borolday 82.47 315 *e*P **P** **09 01 03.9 +2.3**
H17K Granite Mounta 82.75 21 P **P** **09 01 01.5 -0.9**
N19K Bonanza Creek 82.82 26 P **P** **09 01 02.2 -0.8**
QSPA South Pole Qui 83.30 180 P **P** **09 01 04.8 -0.8**
comp=Z,5.3nm,0.8s,baz=6.0,slow=7.3,SNR=21
QSPA LR LR 09 37 58.7
comp=Z,144nm,18.4s,baz=18,slow=35
comp=Z,5.3nm,0.8s
QSPA South Pole Qui 83.30 180 P **P** **09 01 05.3 -0.2**
QSPA IAmb IAmb 09 01 16.9
comp=Z,9.0nm,0.8s
G18K Tagagawik 83.70 21 P **P** **09 01 07.0 -0.4**
G18K IAmb IAmb 09 02 00.6
comp=Z,11nm,1.2s
E18K Tukpahlearik C 83.88 19 P **P** **09 01 07.6 -0.6**
H19K Roundabout Mou 84.30 21 P **P** **09 01 09.2 -1.2**
H19K IAmb IAmb 09 01 28.2
comp=Z,7.0nm,1.1s
J20K Nowinta River 84.51 23 P 09 01 09.8 -1.7
J20K IAmb IAmb 09 01 19.5
comp=Z,5.5nm,1.0s
NRIK Noril'sk 84.75 343 P P 09 01 08.9 -3.8
comp=Z,2.4nm,0.4s,baz=134,slow=4.5,SNR=4.7
NRIK LR LR 09 37 18.6
comp=Z,42nm,21.8s,baz=85,slow=35
comp=Z,2.4nm,0.4s
E19K Redstone River 85.00 20 P **P** **09 01 13.4 -0.6**
E19K IAmb IAmb 09 01 19.3
comp=Z,5.2nm,0.8s
BVAR Borovoye Array 85.06 325 P P 09 01 11.8 -2.7
comp=Z,2.5nm,0.5s,baz=116,slow=6.8,SNR=9.8
comp=Z,2.5nm,0.5s
C19K Lookout Ridge 85.13 18 P **P** **09 01 13.5 -1.2**
F20K Avaraart Lake 85.31 20 P **P** **09 01 14.6 -0.8**
SML Sawmill 85.93 26 P **P** **09 01 19.1 +0.3**
MLY Manley 86.21 23 P **P** **09 01 19.0 -1.1**
DHY Denali Highway 86.81 25 **P** **09 01 23.2 0.0**
DHY IAmb IAmb 09 01 38.8
comp=Z,7.2nm,0.7s
E22K Anaktuvuk Pass 87.14 20 IAmb IAmb 09 01 30.4
comp=Z,26nm,1.9s
G23K Bananza Creek 87.17 21 P **P** **09 01 24.2 -0.6**
G23K IAmb IAmb 09 01 29.7
comp=Z,3.6nm,0.8s
ILAR Eielson Array 87.62 24 P P 09 01 21.9 -5.0
comp=Z,1.8nm,0.9s,baz=256,slow=5.0,SNR=13
ILAR LR LR 09 38 40.5
comp=Z,40nm,19.0s,baz=258,slow=34
comp=Z,1.8nm,0.9s
GLB Gilahina Butte 87.83 27 P **P** **09 01 26.8 -1.3**
GLB IAmb IAmb 09 01 35.3
comp=Z,5.2nm,1.0s
D23K Nanushuk River 87.87 19 P **P** **09 01 26.9 -1.1**
VRDI Verde Repeater 87.93 28 P **P** **09 01 27.4 -1.3**
VRDI IAmb IAmb 09 01 44.7
comp=Z,8.0nm,1.4s
TGL Tana Glacier 88.08 28 P P 09 01 27.2 -2.1
TGL IAmb IAmb 09 01 36.9
comp=Z,13nm,1.2s
D24K Happy Valley 88.56 19 P P 09 01 29.6 -1.6
E25K Arctic Village 89.29 21 P **P** **09 01 34.7 -0.1**
E25K IAmb IAmb 09 02 21.4
comp=Z,8.3nm,1.2s
D25K Kavik River 89.43 20 P **P** **09 01 35.5 0.0**
D25K IAmb IAmb 09 02 23.2
comp=Z,5.5nm,1.1s
F26K Sheenjek River 89.66 21 IAmb IAmb 09 01 45.0
comp=Z,6.6nm,0.9s
H27K Steamboat Moun 90.21 23 IAmb IAmb 09 01 47.3
comp=Z,7.8nm,0.9s
ABKAR Akbulak array 90.57 319 P **P** **09 01 40.7 -0.4**
HYT Haines Junctio 90.62 29 P **P** **09 01 40.5 -0.7**
HYT IAmb IAmb 09 01 49.0
comp=Z,3.6nm,0.9s
SIT Sitka 90.97 33 P **P** **09 01 42.6 -0.1**
SIT IAmb IAmb 09 01 46.2
comp=Z,5.8nm,0.6s
BESE Bessie Mountai 91.49 31 P **P** **09 01 45.6 +0.4**
BESE IAmb IAmb 09 02 08.0
comp=Z,5.4nm,0.9s
AKTO Aktyubinsk 91.98 320 LR LR 09 46 15.9
comp=Z,37nm,19.0s,baz=184,slow=38
ELIB Princess Elisa 92.53 196 *d*P **P** **09 01 49.5 -0.5**
comp=Z,1.7nm,1.0s
G31M Satah River 93.19 23 P **P** **09 01 52.2 -0.6**
INK Inuvik 93.69 22 LR LR 09 40 26.6
comp=Z,56nm,20.2s,baz=257,slow=33
DLBC Dease Lake 93.98 32 LR LR 09 38 19.7
comp=Z,33nm,20.1s,baz=228,slow=32
YBH Yreka Blue Hor 97.50 49 LR LR 09 38 05.6
comp=Z,71nm,21.6s,baz=276,slow=31
LPAZ La Paz 141.57 127 PKP **PKPdf** **09 08 10.2 -1.8**
comp=Z,1.7nm,1.0s,baz=180,slow=2.0,SNR=4.2

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*IDC **30** 09:06:01.9±3.7, 11°.04S×165°.94E, h85km±33km, mb3.6/3, mbtmp4.1/4, Error ellipse: s-maj=36.2km s-min=32.7km az=133.0*
*NEIC **30** 09:06:01.7±1.1, 10°.9S±0°.1×166°.01E±0°.09, h77km±13km, mb4.2/6, Error ellipse: s-maj=20.8km s-min=9.1km az=208.0*

ISC 30 09:06:00.1±1.5, **11°.1S±0°.1×166°.0E±0°.2, h61km, n21, σ2.53/14, mb4.0/6, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HNR	**Honiara**	**6.20**	**285**	P		**Pn**	**09 07 29.3**	**+0.2**
	3.5nm,0.5s,baz=61,slow=19,SNR=7.3							
HNR	**Honiara**	**6.20**	**285**			**Pn**	**09 07 29.6**	**+0.5**
KOUNC	**Koumac, New Ca**	**9.56**	**190**	Pn		**Pn**	**09 08 18.5**	**+3.4**
DZM	**Mont Dzumac**	**10.93**	**178**	P		**Pn**	**09 08 36.6**	**+2.6**
	6.4nm,0.3s,baz=15,slow=20,SNR=37							
DZM				S		**Sn**	**09 10 29.8**	**-5.0**
	4.8nm,0.8s,baz=250,slow=20,SNR=1.6							
ONTNC	**Ouen Toro**	**11.17**	**178**	Pn		**Pn**	**09 08 39.9**	**+2.9**
OUENC	**Ouen Island, N**	**11.30**	**176**	Pn		**Pn**	**09 08 42.4**	**+3.5**
EIDS	**Eidsvold**	**20.05**	**223**	P		Pn	09 10 29.8	-0.8
EIDS				IAmb	IAmb		09 11 12.4	
	comp=Z,11nm,1.2s							
H11S2	**WAKE ISLAND Hy 29.39**	**1**		T		T	09 42 25.8	
	baz=181,slow=76,SNR=25							
H11S3	**WAKE ISLAND Hy 29.40**	**1**		T		T	09 42 26.1	
	baz=181,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy 29.41**	**1**		T		T	09 42 27.2	
	baz=181,slow=76,SNR=20							
H11N1	**WAKE ISLAND Hy 30.61**	**2**		T		T	09 43 57.4	

baz=182,slow=76,SNR=7.7
H11N3 WAKE ISLAND Hy 30.62 2 T T 09 43 57.9
baz=182,slow=76,SNR=6.2
H11N2 WAKE ISLAND Hy 30.63 2 T T 09 43 58.8
baz=182,slow=76,SNR=5.9
WR8 Warramunga Arr 31.58 250 P **P** **09 12 16.2 -1.0**
WR8 IAmb IAmb 09 12 46.8
comp=Z,11nm,1.4s
WB0 Warramunga Arr 31.64 250 P **P** **09 12 16.8 -1.0**
WB0 IAmb IAmb 09 12 18.0
comp=Z,6.4nm,0.9s
WRA Warramunga Arr 31.73 250 P **P** **09 12 17.6 -1.0**
comp=Z,2.7nm,0.8s,baz=83,slow=9.0,SNR=14
comp=Z,2.7nm,0.8s
WRA Warramunga Arr 31.73 250 IAmb IAmb 09 12 18.7
comp=Z,0.4nm,1.4s
ASAR Alice Springs 33.02 243 P **P** **09 12 28.8 -1.1**
comp=Z,1.3nm,0.7s,baz=71,slow=9.8,SNR=12
comp=Z,1.3nm,0.7s
BBOO Buckleboo 35.00 227 P **P** **09 12 47.2 +0.3**
FITZ Fitzroy Crossi 39.63 255 P **P** **09 13 25.7 -0.6**
FITZ IAmb IAmb 09 13 57.5
comp=Z,2.2nm,1.3s
ILAR Eielson Array 83.46 18 P **P** **09 18 19.7 -1.1**
comp=Z,0.5nm,0.8s,baz=207,slow=5.1,SNR=4.6
comp=Z,0.5nm,0.8s

WEL 30 09:10:46.6±0.8, 35°S±11″×17°9E±2°0, h320km±12km, M3.6/13, mB4.4/2, ML3.4/8, MLv3.6/13, Mw(mB)3.6/2, Error ellipse: s-maj=29.1km s-min=7.0km az=116.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.71**	**189**	P	Pn	09 11 39.7	-1.2
WMGZ	**Waiomatatini S**	**2.95**	**186**	P	Pn	09 11 43.2	0.0
HAZ	**Te Kaha**	**2.99**	**196**	P	Pn	09 11 42.7	-0.9
RUGZ	**Raukumara Rang**	**3.21**	**196**	P	Pn	09 11 45.1	-0.8
TWGZ	**Tauwhareparae**	**3.36**	**191**	P	Pn	09 11 48.0	+0.8
TWGZ				S	S	09 12 35.4	-0.4
MWZ	**Matawai**	**3.60**	**196**	P	Pn	09 11 50.0	+0.3
MWZ				S	S	09 12 40.1	-0.1
CNGZ	**Carnagh Statio**	**3.63**	**188**	P	Pn	09 11 50.3	+0.4
TKGZ	**Te Karaka**	**3.64**	**192**	P	Pn	09 11 49.7	-0.3
TKGZ				S	S	09 12 40.8	0.0
URZ	**Urewera**	**3.64**	**202**	P	Pn	09 11 49.6	-0.4
URZ				S	S	09 12 41.1	+0.2
RAGZ	**Rawiri**	**3.78**	**197**	P	Pn	09 11 51.7	+0.2
RAGZ				S	S	09 12 43.4	-0.3
RIGZ	**Rimuhau**	**3.91**	**192**	P	Pn	09 11 53.2	+0.3
RIGZ				S	S	09 12 47.3	+1.2
MUGZ	**Murupara**	**3.95**	**204**	P	Pn	09 11 53.3	0.0
MUGZ				S	S	09 12 48.1	+1.3
KNZ	**Kokohu**	**4.23**	**192**	P	Pn	09 11 54.9	-1.4
RAHZ	**Arahi**	**4.26**	**198**	P	Pn	09 11 57.0	+0.4
RAHZ				S	S	09 12 53.4	+0.5
MTHZ	**Maungataniwha**	**4.27**	**201**	P	Pn	09 11 57.4	+0.7
MTHZ				S	S	09 12 53.8	+0.7
WHHZ	**Waihua**	**4.38**	**196**	P	Pn	09 11 58.7	+0.8
WHHZ				S	S	09 12 56.5	+1.4
MRHZ	**Matea Rd**	**4.39**	**205**	P	Pn	09 11 58.3	+0.2
NMHZ	**Naumai**	**4.51**	**200**	P	Pn	09 11 60.0	+0.6
ARHZ	**Aropaoanui**	**4.61**	**198**	P	Pn	09 12 00.8	+0.4
ARHZ				S	S	09 13 00.7	+0.9
MCHZ	**McNeill Hill**	**4.86**	**200**	P	Pn	09 12 04.1	+0.9
MCHZ				S	S	09 13 06.5	+1.5
TMVZ	**Te Maari**	**4.91**	**210**	P	Pn	09 12 05.0	+1.2
ETVZ	**East Tongariro**	**4.92**	**209**	P	Pn	09 12 04.9	+0.9
KWHZ	**Kaweka Forest**	**4.92**	**202**	P	Pn	09 12 04.1	+0.1
KWHZ				S	S	09 13 07.6	+1.2
OTVZ	**Oturere**	**4.96**	**210**	P	Pn	09 12 05.6	+1.1
SNVZ	**South Ngauruho**	**4.99**	**210**	P	Pn	09 12 05.9	+1.1
FWVZ	**Far West T-bar**	**5.09**	**210**	P	Pn	09 12 05.0	-1.0
WHVZ	**Whangaehu Hut**	**5.10**	**209**	P	Pn	09 12 06.2	+0.1
BHHZ	**Black Hill Sta**	**5.10**	**205**	P	Pn	09 12 06.1	+0.1
BHHZ				S	S	09 13 10.7	+0.7
TRVZ	**Turoa**	**5.13**	**210**	P	Pn	09 12 06.4	0.0
WNVZ	**Wahianoa**	**5.13**	**209**	P	Pn	09 12 06.7	+0.2
MOVZ	**Moawhango**	**5.14**	**208**	P	Pn	09 12 06.3	-0.1
KRHZ	**Kereru**	**5.14**	**202**	P	Pn	09 12 06.4	0.0
KRHZ				S	S	09 13 11.0	+0.3
KAHZ	**Kahuranaki**	**5.14**	**197**	P	Pn	09 12 07.2	+0.7
PXZ	**Pawanui**	**5.37**	**196**	P	Pn	09 12 09.1	+0.1
PXZ				S	S	09 13 16.7	+1.2
PNHZ	**Pukenui**	**5.44**	**202**	P	Pn	09 12 09.3	-0.5
PNHZ				S	S	09 13 16.6	-0.5
TSZ	**Takapari Road**	**5.65**	**203**	P	Pn	09 12 11.9	-0.3
PRHZ	**Porangahau**	**5.65**	**197**	P	Pn	09 12 12.7	+0.5
DVHZ	**Dannevirke**	**5.80**	**200**	P	Pn	09 12 13.4	-0.7
DVHZ				S	S	09 13 25.3	+0.6
ANWZ	**Angora Road**	**5.87**	**198**	P	Pn	09 12 15.5	+0.7
ANWZ				S	S	09 13 27.6	+1.5
POWZ	**Post Office Ro**	**6.01**	**203**	P	Pn	09 12 16.4	0.0
POWZ				S	S	09 13 32.1	+3.0
PRWZ	**Pori Road**	**6.10**	**201**	P	Pn	09 12 17.7	+0.2
PRWZ				S	S	09 13 33.0	+2.1
BFZ	**Birch Farm**	**6.14**	**199**	P	Pn	09 12 18.1	+0.1
BFZ				S	S	09 13 33.0	+1.2
MRZ	**Mangatainoka R**	**6.31**	**203**	P	Pn	09 12 19.5	-0.6
MRZ				S	S	09 13 35.0	-0.7
TIWZ	**Tintock**	**6.33**	**201**	P	Pn	09 12 20.2	0.0
TIWZ				S	S	09 13 36.2	+0.3
CPWZ	**Castlepoint**	**6.37**	**198**	P	Pn	09 12 21.2	+0.6
HOWZ	**Holdsworth Sta**	**6.55**	**202**	P	Pn	09 12 22.1	-0.7
HOWZ				S	S	09 13 39.5	-1.3
OGWZ	**Otaki Gorge**	**6.59**	**205**	P	Pn	09 12 22.2	-1.1
OGWZ				S	S	09 13 40.9	-1.6
KIW	**Kapiti Island**	**6.72**	**206**	P	Pn	09 12 24.1	-0.8
KIW				S	S	09 13 44.3	-0.2
CAW	**Cannon Point**	**6.88**	**204**	P	Pn	09 12 25.8	-1.0
TRWZ	**Traveller**	**6.96**	**200**	P	Pn	09 12 27.4	-0.3
TRWZ				S	S	09 13 51.0	+1.3
PAWZ	**Paruwai Farm**	**7.02**	**201**	P	Pn	09 12 27.7	-0.8
MSWZ	**Moikau Station**	**7.10**	**202**	P	Pn	09 12 28.8	-0.7
PLWZ	**Palliser**	**7.24**	**202**	P	Pn	09 12 30.6	-0.6
TCW	**Tory Channel**	**7.26**	**208**	P	Pn	09 12 30.1	-1.2

*HEL **30** 10:02:07.3±0.3, 64°.47N×31°.02E, h0km, ML2.0, Explosion*
*IDC **30** 10:02:11.5±3.4, 64°.58N×30°.92E, h0km, mbtmp3.1/3, ML1.7/3, Error ellipse: s-maj=54.2km s-min=11.4km az=108.0*
*KOLA **30** 10:02:17.0±0.5, 64°.9N±0°.3×30°.7E±0°.3, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

ISC 30 10:02:08.8±0.9, 64°58N±0°.03×30°60E±0°.04, h0km, n33, σ1s69/42, 1C, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.47**	**219**	smax	smax	10 02 24.7	
	comp=Z,18nm,0.2s						
KU1	**Kurvinen**	**1.08**	**336**	PG	**Pb**	**10 02 30.0**	**-0.3**
KU6	**Riekki**	**1.48**	**349**	PG	**Pn**	**10 02 36.6**	**-0.1**
	baz=164						
KU6				smax	smax	10 02 56.0	
	comp=Z,6.9nm,0.2s						
KU6				SG	**Sg**	**10 02 56.4**	**+0.2**
MSF	**Maaselka**	**1.49**	**334**	PG	**Pb**	**10 02 37.0**	**-0.2**
	baz=153						
MSF				SN	**Sn**	**10 03 00.0**	**+3.1**
KU2	**Taivalkoski**	**1.51**	**319**	PG	**Pg**	**10 02 38.0**	**+0.3**
	baz=135						
JOF	**Joensuu**	**1.70**	**169**	*eP*	**Pg**	**10 02 43.6**	**+2.2**
OLKF	**Oulanka, Finla**	**1.81**	**344**	PG	**Pb**	**10 02 42.8**	**-0.1**
OLKF				smax	smax	10 03 05.9	
	comp=Z,7.8nm,0.2s						
OLKF				SG	**Sg**	**10 03 08.4**	**+1.4**
OUL	**Oulu**	**2.07**	**286**	PG	**Pg**	**10 02 48.9**	**+0.4**
OUL				SG	**Sg**	**10 03 17.8**	**+2.5**
RANF	**Ranua**	**2.15**	**314**	PG	**Pb**	**10 02 49.1**	**+0.5**
	baz=128						
RANF				SB	**Sg**	**10 03 17.2**	**-0.6**
KVDA	**Kovda**	**2.32**	**23**	P	**Pb**	**10 02 51.1**	**-0.2**
KVDA				S	**Sn**	**10 03 17.0**	**-0.3**
OBF4	**Vikkela, Lumij**	**2.38**	**278**	PG	**Pg**	**10 02 53.9**	**-0.4**
OBF4				smax	smax	10 03 23.0	
	comp=Z,5.1nm,0.2s						
OBF4				SG	**Sg**	**10 03 28.6**	**+3.6**
OUF	**Merijarvi**	**2.55**	**268**	smax	smax	10 03 27.6	
	comp=Z,8.8nm,0.2s						
OUF				SG	**Sg**	**10 03 31.4**	**+0.7**
SUF	**Sumiainen**	**2.73**	**229**	*eP*	**Pg**	**10 03 00.4**	**-0.6**
OBF0	**Syolatti, Pyha**	**2.75**	**271**	smax	smax	10 03 33.6	
	comp=Z,6.4nm,0.2s						
OBF0				SG	**Sg**	**10 03 39.9**	**+2.8**
RNF	**Rovaniemi**	**2.79**	**319**	PG	**Pb**	**10 02 59.6**	**+0.2**
	baz=136						
RNF				SG	**Sg**	**10 03 38.3**	**+0.1**
TOF	**Tornio**	**3.03**	**303**	PG	**Pg**	**10 03 05.8**	**-1.0**
TOF				SB	**Sg**	**10 03 44.2**	**-1.9**
APA0	**Apatity Array**	**3.19**	**17**	P	**Pb**	**10 03 04.1**	**-2.1**
APA0				S	**Sn**	**10 03 38.5**	**-0.2**
VRF	**Varrio**	**3.20**	**353**	SG	**Sg**	**10 03 50.2**	**-1.4**
KEF	**Keuruu**	**3.54**	**229**	*eP*	**Pb**	**10 03 08.4**	**-3.8**
KEF	**Keuruu**	**3.54**	**229**	PG	**Pb**	**10 03 11.6**	**-0.7**
LVZ	**Lovozero**	**3.71**	**24**	S	**Sn**	**10 03 52.5**	**+0.9**
LVZ	**Lovozero**	**3.71**	**24**	PG	**Pb**	**10 03 14.1**	**-1.1**
FIA0	**FINESS Array S**	**3.77**	**215**	PG	**Pb**	**10 03 15.3**	**-0.8**
	baz=33						
FINES	**FINESS Array B**	**3.77**	**215**	Pn	**Pb**	**10 03 12.2**	**-3.9**
	baz=35,slow=14,SNR=1.2						
FINES				Lg	Lg	10 04 11.3	
	comp=Z,1.3nm,0.3s,baz=36,slow=26,SNR=16						
	comp=Z,0.9nm,0.8s						
KLF	**Kolari**	**3.81**	**317**	SG	**Sg**	**10 04 09.1**	**-1.8**
VAF	**Ylistaro**	**3.84**	**250**	*eP*	**Pb**	**10 03 14.0**	**-3.3**
VAF	**Ylistaro**	**3.84**	**250**	PG	**Pb**	**10 03 17.7**	**+0.3**
ERTU	**Ertsjaerv**	**4.02**	**303**	PB	**Pb**	**10 03 19.6**	**-0.7**
ERTU				SG	**Sg**	**10 04 16.6**	**-1.0**
ARCES	**ARCESS Array B**	**5.36**	**340**	Pn	**Pn**	**10 03 30.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=8.1						
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**5.36**	**340**	S	**Sn**	**10 04 30.1**	**-2.1**
I37NO	**I37NO**	**6.53**	**319**	I	I	10 40 50.0	
	baz=128,slow=307,SNR=2.7						
HFS	**Hagfors**	**9.02**	**248**	Pn	**Pn**	**10 04 20.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=55,slow=12,SNR=1.8						
HFS				Lg	Lg	10 06 50.9	
	comp=Z,0.3nm,0.3s,baz=60,slow=29,SNR=4.6						
	comp=Z,3.2nm,1.1s						
BLKB	**Belogradchik**	**21.48**	**196**	⇑S	**S**	**10 10 56.8**	**-0.7**

*AZER **30** 10:13:31.5, 41°.86N×46°.00E, h31km, ml2.3*
*MOS **30** 10:13:31.9, 41°.93N×46°.03E, h28km, MPVA3.2*
*DRS **30** 10:13:32.1, 41°.95N×45°.93E, h15km*

ISC 30 10:13:32.6±1.2, 41°.85N±0°.03×46°.01E±0°.04, h23km±12km, n16, σ0s62/31, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLTR	**Tlyarata**	**0.36**	**45**	*ePg*	**Pb**	**10 13 40.3**	**-0.3**
TLTR				*eSg*	**Sb**	**10 13 46.5**	**+0.5**
ZKTA	**Zakatala**	**0.50**	**114**	P	**Pb**	**10 13 43.3**	**+0.5**
ZKTA				S	**Sn**	**10 13 52.3**	**-0.1**
BTLR	**Botlikh**	**0.83**	**11**	*ePg*	**Pb**	**10 13 47.6**	**-0.8**
BTLR				*eSg*	**Sb**	**10 13 58.7**	**-0.5**
XNZR	**Khunzakh**	**0.86**	**36**	*ePg*	**Pb**	**10 13 48.6**	**-0.5**
XNZR				*eSg*	**Sb**	**10 14 00.7**	**+0.4**
GNBR	**Gunib**	**0.89**	**52**	*ePg*	**Pb**	**10 13 49.1**	**-0.3**
GNBR				*eSg*	**Sn**	**10 14 01.9**	**-0.2**
QZX	**Qazax, Azerbai**	**0.92**	**212**	P	**Pn**	**10 13 49.5**	**-0.8**
QZX				S	**Sb**	**10 14 01.8**	**0.0**
UNCR	**Uncukul**	**1.04**	**34**	*ePg*	**Pn**	**10 13 51.3**	**-0.6**
UNCR				*eSg*	**Sn**	**10 14 05.4**	**-0.4**
ARKR	**Arakani**	**1.05**	**44**	*ePg*	**Pn**	**10 13 51.8**	**-0.3**
ARKR				*eSg*	**Sn**	**10 14 06.4**	**+0.4**
SEKA	**Sheki**	**1.10**	**125**	P	**Pn**	**10 13 51.8**	**-0.9**
SEKA				S	**Sn**	**10 14 08.5**	**+1.4**
DVE	**Vedeno**	**1.11**	**4**	*ePg*	**Pn**	**10 13 52.5**	**-0.4**
DVE				*eSg*	**Sn**	**10 14 08.2**	**+0.6**
GDB	**GEDABAY**	**1.14**	**190**	P	**Pn**	**10 13 52.6**	**-0.8**
GDB				S	**Sn**	**10 14 08.6**	**+0.1**
KRNR	**Karanay**	**1.18**	**34**	*ePg*	**Pn**	**10 13 53.7**	**-0.2**
KRNR				*eSg*	**Sb**	**10 14 09.8**	**+0.4**
GANJ	**Ganja**	**1.22**	**169**	P	**Pn**	**10 13 54.2**	**-0.2**
GANJ				S	**Sn**	**10 14 11.1**	**+0.8**
DBC	**Dubki**	**1.32**	**27**	*ePg*	**Pn**	**10 13 56.2**	**+0.4**
DBC				*eSg*	**Sb**	**10 14 13.9**	**+0.6**
MNGR	**Mingechevir, A**	**1.34**	**143**	S	**Sn**	**10 14 13.7**	**+0.5**
LACR	**Lac**	**1.60**	**308**	*ePg*	**Pn**	**10 14 00.2**	**+0.5**
LACR				*eSg*	**Sn**	**10 14 20.8**	**+1.0**

*NEIC **30** 10:18:01.7±1.8, 54°.39N±0°.05×158°.85W±0°.08, h18km±5km, ML3.0/16, ML2.9(AEIC), Error ellipse: s-maj=8.8km s-min=4.9km az=45.0*
*AEIC **30** 10:18:04.9±1.9, 54°.50N±0°.07×159°.07W±0°.09, h34km±6km, Error ellipse: s-maj=10.3km s-min=7.9km az=177.0*
*IDC **30** 10:18:06.0±2.0, 54°.63N×157°.90W, h0km, mb3.6/2, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=38.9km s-min=27.2km az=154.0*

ISC 30 10:18:03.3±2.0, 54°.6N±0°.1×158°.74W±0°.05, h24km±1.4km, n36, σ1s85/32, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.56**	**300**		**Pb**	**10 18 15.0**	**+0.4**
CNBA					**Sb**	**10 18 22.2**	**0.0**
CNBA	**Chernabura Isl**	**0.56**	**300**	IAML		10 18 33.2	
	comp=N,928nm,0.6s						
SDPT	**Sand Point**	**1.28**	**310**		**Pn**	**10 18 25.3**	**-0.3**
SDPT					**Sn**	**10 18 41.0**	**-1.1**
SDPT	**Sand Point**	**1.28**	**310**	IAML		10 19 01.0	
	comp=N,245nm,0.8s						
SDPT				IAML		10 19 03.1	
	comp=E,244nm,0.9s						
VNKR	**Veniaminof 5**	**1.53**	**347**		**Pb**	**10 18 30.2**	**-0.8**
S14K	**Fog Glacier**	**1.80**	**345**		**Pb**	**10 18 35.0**	**-0.7**
VNFG	**Fog Glacier, M**	**1.80**	**346**	Pn	**Pn**	**10 18 34.0**	**+1.1**
DOL	**Dolgoi Island**	**1.90**	**290**		**Pn**	**10 18 33.1**	**-1.1**
DOL					**Sn**	**10 18 52.2**	**-2.2**
PS1A	**Pavlof South-1**	**1.94**	**298**		**Pn**	**10 18 34.3**	**-0.4**
PS1A					**Sn**	**10 18 56.7**	**-1.5**
PS4A	**Pavlof South-4**	**1.97**	**295**		**Pn**	**10 18 34.8**	**-0.3**
PS4A					**Sn**	**10 18 57.4**	**-1.5**
HAG	**Hague Volcano**	**1.98**	**294**		**Pn**	**10 18 35.0**	**-0.3**
PN7A	**Pavlof North-7**	**2.08**	**297**		**Pn**	**10 18 35.8**	**-0.8**
DTNA	**Dutton South F**	**2.12**	**288**		**Pn**	**10 18 36.1**	**-1.0**
DT1	**Dutton Round H**	**2.12**	**287**		**Pn**	**10 18 35.8**	**-1.4**
ISNN	**Isanotski Nort**	**2.94**	**278**		**Pn**	**10 18 47.4**	**-1.1**
SSBA	**Shishaldin**	**3.13**	**276**		**Pn**	**10 18 50.1**	**-1.1**
OHAK	**Old Harbor**	**4.08**	**47**	Pn	**Pn**	**10 19 03.1**	**-1.0**
AKUT	**Akutan**	**4.13**	**267**	Pn	**Pn**	**10 19 01.8**	**-3.1**
AKUT				IAML		10 21 33.8	
	comp=N,25nm,1.2s						
AKUT				IAML		10 21 46.6	
	comp=E,32nm,1.5s						
UNV	**Unalaska Valle**	**4.61**	**264**	Pn	**Pn**	**10 19 08.4**	**-2.9**
UNV				IAML		10 20 09.5	
	comp=E,13nm,1.4s						
UNV				IAML		10 20 27.6	
	comp=N,13nm,1.3s						
KDAK	**Kodiak Island**	**4.73**	**44**	Pn	**Pn**	**10 19 11.6**	**-1.4**
	comp=N,0.4nm,0.3s,baz=181,slow=1.8,SNR=27						
KDAK				Sn	**Sn**	**10 20 02.3**	**-4.7**
	comp=N,0.7nm,0.3s,baz=274,slow=4.4,SNR=1.6						
	comp=N,1.2nm,0.3s						
KDAK	**Kodiak Island**	**4.73**	**44**	IAML		10 20 19.4	
	comp=N,9.9nm,1.5s						
O14K	**Tigyukauivet M**	**4.92**	**345**	Pn	**Pn**	**10 19 16.3**	**+0.7**
M17K	**Holitna River**	**6.91**	**5**	Pn	**Pn**	**10 19 45.2**	**+2.3**
HIN	**Hinchinbrook I**	**8.82**	**43**	Pn	**Pn**	**10 20 09.4**	**+0.3**
GHO	**Glory Hole Cre**	**8.90**	**32**	Pn	**Pn**	**10 20 11.5**	**+1.1**
KAIM	**Kayak Island**	**9.44**	**49**	Pn	**Pn**	**10 20 19.0**	**+1.4**
ILAR	**Eielson Array**	**11.85**	**25**	Pn	**Pn**	**10 20 46.4**	**-4.1**
	baz=221,slow=14,SNR=2.4						
	comp=N,0.2nm,0.9s						
INK	**Inuvik**	**18.11**	**31**	Pn	**P**	**10 22 12.9**	**-0.1**
	comp=N,0.2nm,0.3s,baz=238,slow=13,SNR=5.6						
	comp=N,1.8nm,0.8s						
PETK	**Petropavlovsk-**	**25.45**	**285**	P	P	10 23 39.5	+11
	comp=N,2.9nm,0.9s,baz=57,slow=8.9,SNR=3.2						
	comp=N,2.9nm,0.9s						
H11N2	**WAKE ISLAND Hy 43.46 231**			T	T	11 12 44.0	
	baz=28,slow=75,SNR=8.9						
H11N3	**WAKE ISLAND Hy 43.47 231**			T	T	11 12 43.4	
	baz=28,slow=75,SNR=8.5						
H11N1	**WAKE ISLAND Hy 43.48 231**			T	T	11 12 44.3	
	baz=28,slow=75,SNR=4.3						
H11S1	**WAKE ISLAND Hy 44.62 230**			T	T	11 14 06.8	
	baz=28,slow=76,SNR=7.0						
H11S2	**WAKE ISLAND Hy 44.63 230**			T	T	11 14 13.6	
	baz=28,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy 44.64 230**			T	T	11 14 07.7	
	baz=28,slow=76,SNR=5.3						
TXAR	**Lajitas Array 46.58 100**			P	**P**	**10 26 31.6**	**+2.5**
	comp=N,0.2nm,0.6s,baz=326,slow=7.9,SNR=3.9						
	comp=N,0.2nm,0.6s						

*IPEC **30** 10:24:39.8±0.2, 51°.59N×16°.04E, h1km, ML2.3/8, Error ellipse: s-maj=1.9km s-min=1.1km az=63.0*
*VIE **30** 10:24:39.6±1.5, 51°.55N×15°.88E, h0km, mb2.3/7, ml2.7/8, Error ellipse: s-maj=11.2km s-min=7.9km az=27.0 93 km NW of Wroclaw Suspected Mining induced.*
*PRU **30** 10:24:43.4, 51°.47N×15°.94E, h0km*

ISC 30 10:24:39.2±1.2, 51°.62N±0°.05×16°.00E±0°.03, h0km, n34, σ0s94/61, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.80**	**166**	*ePg*	**Pg**	**10 24 54.9**	**+0.3**
KSP				*eSg*	**Sg**	**10 25 05.0**	**+0.1**
CHVC	**Chvalec**	**1.03**	**178**	*ePG*	**Pg**	**10 24 59.2**	**+0.2**
CHVC				*eSG*	**Sg**	**10 25 12.4**	**0.0**
	comp=Z,37nm,0.4s						
OSTC	**Ostas**	**1.07**	**173**	*ePG*	**Pb**	**10 25 00.6**	**-0.1**
OSTC				*eSG*	**Sg**	**10 25 13.7**	**0.0**
	comp=Z,38nm,0.3s						
UPC	**Upice**	**1.11**	**180**	*ePG*	**Pg**	**10 25 00.8**	**+0.2**
UPC				*eSG*	**Sg**	**10 25 14.0**	**-1.0**
	comp=Z,96nm,0.4s						
DPC	**Dobruska-Polom**	**1.29**	**171**	*ePG*	**Pg**	**10 25 03.7**	**-0.2**
DPC				*eSG*	**Sg**	**10 25 19.6**	**-1.0**
	comp=Z,33nm,0.6s						
PVCC	**Panska Ves**	**1.42**	**220**	*ePG*	**Pb**	**10 25 07.0**	**+0.5**
PVCC				*eSG*	**Sb**	**10 25 25.0**	**-0.1**
	comp=Z,153nm,0.2s						
PIVO	**Bartosovice**	**1.48**	**166**	*ePn*	**Pn**	**10 25 06.8**	**-0.3**
	baz=347						
PIVO				*eSg*	**Sg**	**10 25 25.0**	**-1.7**
	49nm,0.3s,baz=347						
BRG	**Berggiesshubel**	**1.49**	**241**	Pg	**Pg**	**10 25 08.2**	**+0.3**
BRG				Sg	**Sn**	**10 25 28.1**	**+0.6**
BRG				Amp		10 25 28.6	
	comp=Z,91nm,0.4s						
KRLC	**Kraliky**	**1.62**	**162**	*ePG*	**Pn**	**10 25 08.8**	**-0.4**
KRLC				*eSG*	**Sn**	**10 25 30.7**	**-0.1**
	comp=Z,40nm,0.5s						
ANAC	**Anensky vrch**	**1.78**	**150**	*ePn*	**Pn**	**10 25 11.0**	**-0.3**
	baz=331						
ANAC				*eSg*	**Sn**	**10 25 34.3**	**-0.3**
	comp=Z,14nm,0.2s,baz=331						
RYBC	**Ceska Rybna**	**1.81**	**179**	*ePn*	**Pn**	**10 25 11.7**	**0.0**
	baz=360						
RYBC				*eSg*	**Sn**	**10 25 35.9**	**+0.5**
	comp=Z,32nm,0.2s,baz=360						
PRU	**Pruhonice**	**1.88**	**210**	*eSG*	**Sb**	**10 25 37.8**	**-0.6**
	comp=Z,30nm,0.4s						
CLL	**Collm**	**1.90**	**262**	*ePn*	**Pn**	**10 25 13.0**	**+0.1**
CLL				*ePg*	**Pb**	**10 25 15.0**	**+0.2**
CLL				*i* x	x	10 25 19.6	
CLL				*i* Sg	**Sg**	**10 25 40.3**	**+0.1**
	comp=Z,14nm,0.3s						
HSKC	**Hora Svate Kat**	**1.91**	**239**	*ePG*	**Pb**	**10 25 14.9**	**0.0**
HSKC				*eSG*	**Sb**	**10 25 39.6**	**+0.3**
	comp=Z,34nm,0.3s						
STEB	**Steborice**	**2.03**	**146**	*ePG*	**Pb**	**10 25 17.4**	**+0.4**
STEB				*eSG*	**Sg**	**10 25 44.0**	**-0.4**
	comp=Z,33nm,0.7s						
MORC	**Moravsky Berou**	**2.09**	**151**	*ePn*	**Pn**	**10 25 15.3**	**-0.3**
	baz=333						
MORC				*eSg*	**Sb**	**10 25 44.2**	**-0.4**
	comp=Z,25nm,0.6s,baz=333						
VRAC	**Vranov**	**2.35**	**170**	*ePn*	**Pn**	**10 25 19.1**	**+0.1**
	baz=351						
VRAC				*eSg*	**Sb**	**10 25 52.1**	**+0.2**
	comp=Z,13nm,0.3s,baz=351						
TREC	**Trest**	**2.35**	**188**	*eSG*	**Sg**	**10 25 54.0**	**-0.7**
KRUC	**Moravsky**	**2.57**	**174**	*ePn*	**Pn**	**10 25 22.3**	**+0.1**
	baz=355						
KRUC				*eSg*	**Sb**	**10 25 59.4**	**+1.0**
	comp=Z,14nm,0.5s,baz=355						
KRUC	**Moravsky**	**2.57**	**174**	*ePN*	**Pn**	**10 25 22.4**	**+0.2**
KRUC				*eSG*	**Sb**	**10 25 59.5**	**+1.0**
STAC	**Stalkov**	**2.63**	**190**	*ePn*	**Pn**	**10 25 23.1**	**+0.1**
	baz=10						
STAC				*eSg*	**Sb**	**10 26 01.1**	**+1.0**
	comp=Z,14nm,0.2s,baz=10						
NKC	**Novy Kostel**	**2.64**	**240**	*ePN*	**Pn**	**10 25 24.0**	**+0.9**
NKC				*ePG*	**Pg**	**10 25 29.1**	**-0.7**
NKC				*eSG*	**Sg**	**10 26 02.8**	**-1.2**
	comp=Z,37nm,0.4s						
OJC	**Ojcow**	**2.78**	**119**	*ePg*	**Pg**	**10 25 32.2**	**-0.4**
OJC				*eSg*	**Sg**	**10 26 08.9**	**+0.3**
KHC	**Kasperske Hory**

GNAM Navarro Ridge 2.97 114 Pn 10 51 08.5 -1.2
KHBM Hayfork Bally 2.98 85 Pn 10 51 09.0 -1.1
KHBM IAML 10 51 36.3
comp=E,72nm,1.0s
KHBM IAML 10 51 53.2
comp=N,72nm,1.0s
GHOM Hamilton Openi 3.10 116 Pn 10 51 10.7 -0.9
L02F Cave Junction 3.15 57 Pn 10 51 11.6 -0.6
L02F IAML 10 51 53.0
comp=E,54nm,0.9s
BONV Boonville, CA 3.26 116 Pn 10 51 13.0 -0.8
O02D Mt. Diablo Mer 3.33 94 Pn 10 51 14.5 -0.3
O02D IAML 10 51 42.9
comp=N,48nm,1.2s
M02C Callahan 3.36 73 Pn 10 51 14.7 -0.6
M02C IAML 10 51 50.3
comp=E,46nm,1.2s
GSNM Snow Mountain 3.39 115 Pn 10 51 14.8 -0.9
K02D Willamette Mer 3.42 48 Pn 10 51 15.0 -1.0
LBKM Bonanza King 3.44 78 Pn 10 51 15.6 -0.8
HOPS Hopland Field 3.45 114 Pn 10 51 16.5 +0.1
HOPS IAML 10 51 41.0
comp=E,42nm,1.1s
HOPS IAML 10 52 05.4
comp=N,51nm,1.2s
GVV Valley View 3.48 100 Pn 10 51 16.9 +0.1
YBH Yreka Blue Hor 3.57 68 Pn Pn 10 51 19.2 +1.1
comp=N,11nm,0.3s,baz=272,slow=10.0,SNR=165
YBH Sn Sn 10 51 58.6 -1.3
baz=79,slow=12
YBH LR LR 10 52 24.0
comp=N,440nm,20.3s,baz=292,slow=35
comp=N,19nm,0.3s
YBH Yreka Blue Hor 3.57 68 Pn 10 51 18.9 +0.8
YBH IAML 10 53 39.2
comp=N,44nm,0.3s
GGPM Geyser Peak 3.71 116 Pn 10 51 19.3 -0.8
GDXM Geysers 3.73 115 Pn 10 51 20.9 +0.7
M03C McCloud 3.88 76 Pn 10 51 22.6 +0.3
MCCM Marconi Confer 4.03 124 Pn 10 51 23.8 -0.4
MCCM IAML 10 52 20.8
comp=N,52nm,0.9s
L04D Klamath Falls 4.03 63 Pn 10 51 25.5 +1.0
O03E Paynes Creek 4.07 91 Pn 10 51 24.4 -0.6
O03E IAML 10 52 19.5
comp=N,35nm,1.0s
O03E IAML 10 52 26.3
comp=E,48nm,1.0s
BBOR Butler Butte 4.11 53 IAML 10 52 02.2
comp=E,45nm,1.4s
BBOR IAML 10 52 07.0
comp=N,39nm,1.1s
CVS Carmenet Viney 4.19 119 Pn 10 51 26.0 -0.5
CVS IAML 10 52 00.3
comp=N,46nm,1.1s
CVS IAML 10 52 17.8
comp=E,37nm,1.3s
FARB Farallon Islan 4.23 129 Pn 10 51 26.3 -0.8
I03D Drain, OR 4.28 40 Pn 10 51 27.3 -0.4
I02E Swisshome, OR 4.38 33 IAML 10 52 45.1
comp=E,29nm,3.6s
I02E IAML 10 53 15.3
comp=N,19nm,4.8s
ORV Oroville 4.41 100 Pn 10 51 30.0 +0.4
BUCK Buck Mountain 4.83 38 Pn 10 51 35.7 +0.3
BUCK IAML 10 52 14.8
comp=N,19nm,1.6s
BUCK IAML 10 53 55.7
comp=E,22nm,4.6s
I04A Tendick Farm, 4.83 45 Pn 10 51 35.5 +0.1
I04A IAML 10 52 17.6
comp=N,16nm,1.8s
I04A IAML 10 52 35.0
comp=E,25nm,1.1s
JRSC Jasper Ridge 4.88 127 Pn 10 51 35.3 -0.7
AFDM Forest Hills D 4.98 106 Pn 10 51 37.3 -0.1
K05A Summer Lake 5.19 62 IAML 10 52 18.0
comp=E,28nm,1.6s
H04D Lebanon 5.19 37 Pn 10 51 41.0 +0.7
H04D IAML 10 52 29.4
comp=N,17nm,2.8s
H04D IAML 10 52 43.5
comp=E,20nm,2.5s
BEKR Beckworth 5.22 94 IAML 10 52 59.5
comp=N,13nm,1.9s
WIFE Three Sisters- 5.33 46 IAML 10 52 29.2
comp=N,14nm,1.2s
WIFE IAML 10 52 29.4
comp=E,21nm,1.4s
SAO San Andreas Ge 5.78 128 Pn 10 51 47.7 -0.6
PNTR Pine Nut 5.96 101 Pn 10 51 52.0 +1.0
G05A Wamic 6.40 40 Pn 10 51 58.2 +1.3
NVAR Mina Array Bea 7.12 104 Pn Pn 10 52 09.3 +2.2
comp=E,0.1nm,0.3s,baz=276,slow=14,SNR=7.5
comp=E,0.5nm,0.6s
MPMC Manual Prospec 8.76 117 Pn 10 52 29.9 +0.4
EPH Ephrata 8.77 36 Pn 10 52 31.0 +1.6
ELK Elko 9.05 84 Pn Pn 10 52 35.8 +2.4
comp=E,0.1nm,0.3s,baz=296,slow=11,SNR=4.3
ELK LR LR 10 56 19.6
comp=E,218nm,18.4s,baz=260,slow=40
comp=E,0.4nm,0.4s
HLID Hailey 9.95 68 Pn 10 52 47.5 +1.7
NEW Newport 10.58 39 Pn Pn 10 52 55.5 +1.4
comp=E,0.1nm,0.3s,baz=190,slow=14,SNR=3.1
NEW LR LR 10 56 55.4
comp=E,266nm,20.2s,baz=224,slow=38
comp=E,1.1nm,0.8s
PFO Pinyon Flats O 10.92 125 LR LR 10 56 37.6
comp=E,79nm,20.0s,baz=252,slow=34
DUG Dugway, Tooele 10.93 87 Pn 10 53 01.4 +2.2
BBB Bella Bella 11.74 357 Pn Pn 10 53 09.1 -0.9
comp=E,0.1nm,0.3s,baz=172,slow=17,SNR=3.2
BBB LR LR 10 56 39.6
comp=E,78nm,21.1s,baz=174,slow=33
comp=E,0.5nm,0.7s
GLA Glamis 12.32 123 Pn 10 53 20.9 +2.8
PDAR Pinedale Array 13.35 74 Pn Pn 10 53 35.5 +3.3
baz=243,slow=13,SNR=4.4
PDAR LR LR 10 59 01.3
comp=E,198nm,18.5s,baz=247,slow=39
comp=E,0.2nm,0.5s
PDAR Pinedale Array 13.35 74 Pn 10 53 32.9 +0.7
V35K Ketchikan 15.17 350 P Pn 10 53 57.4 +0.8
baz=167
TUC Tucson 15.46 117 Pn Pn 10 54 01.1 +0.4
CRAG Craig 15.53 347 P P 10 54 02.8 -2.9
baz=163
K22A Casper 15.57 75 Pn 10 54 01.9 -0.4
K22A IAmb IAmb 10 54 17.3
comp=Z,14nm,1.2s
EDM Edmonton 15.82 32 Pn P 10 54 06.2 -2.8
EDM IAmb IAmb 10 54 12.0
comp=Z,16nm,1.0s
U33K Whale Pass 16.15 348 P P 10 54 10.8 -1.8
baz=163
WRAK Wrangell Islan 16.33 350 P P 10 54 12.7 -1.8
baz=166
T35M Bob Quinn 16.66 354 P P 10 54 17.0 -1.2
baz=172
ANMO Albuquerque 17.24 102 P P 10 54 24.8 -0.3
comp=Z,0.1nm,0.3s,baz=292,slow=12,SNR=6.0
ANMO LR LR 11 01 13.9
comp=Z,89nm,21.6s,baz=293,slow=38
comp=Z,0.2nm,0.3s
ANMO Albuquerque 17.24 102 P 10 54 25.2 +0.1
SIT Sitka 17.44 345 P P 10 54 25.9 -0.9
baz=159
RSSD Black Hills 17.45 70 P P 10 54 27.4 0.0
S34M Telegraph Cree 17.65 353 P P 10 54 28.5 -0.7
baz=170
S32K Killisnoo 17.69 347 P P 10 54 28.8 -0.7
baz=161
DLBC Dease Lake 18.09 355 P Pn 10 54 32.6 -1.1
comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=6.9
comp=Z,2.6nm,1.0s
DLBC Dease Lake 18.09 355 P P 10 54 34.0 0.0
baz=173
R32K Eaglecrest 18.44 348 P P 10 54 39.1 +1.2
baz=162
Q32M Nakina River 18.80 352 P Pn 10 54 42.9 +0.3
baz=168
WTLY Watson Lake, Y 19.70 358 P Pn 10 54 52.4 -0.7
baz=176
KOTAN Kotaneelee Air 19.78 5 P Pn 10 54 53.5 -0.6
baz=187

PLBC Pleasant Camp 19.88 346 P Pn 10 54 54.5 -0.8
baz=159
P33M Teslin, Yukon 20.09 352 P Pn 10 54 57.7 -0.1
baz=167
P29M Windy Craggy 20.31 344 P Pn 10 54 59.5 -0.9
baz=156
P30M Million Dollar 20.61 346 P Pn 10 55 03.0 -1.0
baz=158
WHY Whitehorse 20.78 349 P Pn 10 55 04.4 -1.5
baz=163
N32M Quiet Lake 21.04 352 P 10 55 07.5
baz=167
O30N Mendenhall 21.07 348 P 10 55 07.6
baz=161
O29M Mount Kennedy 21.10 344 P P 10 55 08.0 +1.0
baz=155
SUSD Miller 21.11 70 P P 10 55 08.5 +1.3
TPB01 Permian Basin 21.15 109 P P 10 55 08.2 +0.5
TPB01 IAmb IAmb 10 55 30.0
comp=Z,9.5nm,1.2s
HYT Haines Junctio 21.37 346 P 10 55 10.3 +0.4
HYT Haines Junctio 21.37 346 P P 10 55 11.1 +1.3
baz=158,SNR=5.2
YUK6 Outpost Mounta 21.64 345 P P 10 55 13.9 +1.0
baz=156
N31M Braeburn, Yuko 21.70 349 P P 10 55 14.1 +0.7
baz=162
O28M Mount Upton 21.88 343 P P 10 55 16.3 +0.8
baz=152
N30M Aishikik Lake 21.89 347 P P 10 55 16.3 +0.9
baz=159
FFC Flin Flon 22.00 41 P P 10 55 16.3 -0.2
FFC IAmb IAmb 10 55 36.1
comp=Z,8.6nm,1.1s
R32A Long Quarter, 22.00 86 P P 10 55 17.8 +1.1
R32A IAmb IAmb 10 55 29.7
comp=Z,15nm,0.9s
YUK4 Talbot Arm 22.07 345 P P 10 55 19.0 +1.6
baz=156
TXAR Lajitas Array 22.15 113 P P 10 55 21.1 +2.7
comp=Z,1.1nm,0.9s,baz=299,slow=5.8,SNR=10
comp=Z,1.1nm,0.9s
TXAR Lajitas Array 22.15 113 P P 10 55 19.4 +1.0
BRWY Burwash Landin 22.17 345 P P 10 55 19.3 +0.9
baz=155
M31M Drury Creek, Y 22.21 351 P P 10 55 19.5 +0.7
baz=165
YUK8 Steele Glacier 22.24 344 P P 10 55 20.0 +0.6
baz=154
KAIM Kayak Island 22.28 337 P P 10 55 20.5 +1.0
baz=143
MMPY Sheldon Lake, 22.33 355 P P 10 55 21.3 +1.2
baz=172
Q23K Middleton Isla 22.50 334 P P 10 55 23.1 +1.2
baz=139
CRQE Cirque 22.58 339 P P 10 55 23.9 +1.0
baz=147
YUK3 Moose Creek 22.83 344 P P 10 55 26.9 +1.3
baz=153
M30M Minto, Yukon 22.89 348 P P 10 55 26.9 +0.8
M30M Minto, Yukon 22.89 348 P P 10 55 27.2 +1.1
baz=161,SNR=7.4
WRGLY Wrigley 22.90 4 P P 10 55 27.4 +1.4
baz=187
F33A 5 Mile Ranch, 23.04 66 P P 10 55 27.9 +0.2
F33A IAmb IAmb 10 55 37.7
comp=Z,12nm,1.1s
M29M Somme Creek 23.05 346 P P 10 55 29.1 +1.4
baz=157,SNR=5.5
VRDI Verde Repeater 23.07 340 P 10 55 29.2 +1.2
VRDI IAmb IAmb 10 55 31.4
comp=Z,7.5nm,1.1s
MCARA McCarthy VSAT 23.09 340 P P 10 55 29.9 +1.8
baz=148
BMRM Bremner River 23.18 338 P P 10 55 29.9 +1.0
baz=144
EYAK Cordova Ski Ar 23.18 336 P P 10 55 30.2 +1.3
baz=142
P23K Montague Islan 23.29 334 P P 10 55 31.0 +1.0
baz=138
YKA Yellowknife Ar 23.31 15 P P 10 55 29.2 -1.0
comp=Z,0.9nm,0.9s,baz=113,slow=23,SNR=4.5
YKA LR LR 11 03 36.9
comp=Z,54nm,19.8s,baz=336,slow=34
comp=Z,0.9nm,0.9s
AGMN Agassiz Nation 23.55 60 P P 10 55 33.9 +1.1
AGMN IAmb IAmb 10 55 43.1
comp=Z,16nm,1.4s
L29M L29M 23.61 347 IAmb IAmb 10 55 36.4
comp=Z,6.1nm,0.9s
L29M L29M 23.61 347 P P 10 55 34.3 +1.1
baz=159,SNR=6.7
M27K Edge Creek, AK 23.66 343 P P 10 55 35.0 +1.2
baz=151
N25K China, Valde 23.70 339 P P 10 55 35.5 +1.3
baz=145
OHAK Old Harbor 23.80 324 P P 10 55 36.0 +0.9
baz=124
KDAK Kodiak Island 23.81 325 LR LR 11 02 00.0
comp=Z,33nm,21.9s,baz=120,slow=30
KDAK Kodiak Island 23.81 325 P P 10 55 35.7 +0.6
baz=126
GLI Glacier Island 23.85 336 P P 10 55 36.1 +0.5
baz=140
SII Sitkinak Islan 23.86 321 P P 10 55 36.3 +0.6
baz=121
ULM Lac du Bonnet 23.88 55 P P 10 55 36.3 +0.4
comp=Z,4.7nm,1.0s,baz=244,slow=8.1,SNR=7.0
ULM LR LR 11 05 09.2
comp=Z,170nm,19.7s,baz=254,slow=37
comp=Z,4.7nm,1.0s
ULM Lac du Bonnet 23.88 55 IAmb IAmb 10 55 40.8
comp=Z,9.2nm,1.1s
M26K Nabesna, AK 23.96 342 P P 10 55 37.4 +0.8
baz=149
KLU Klutina 23.98 338 P P 10 55 37.0 +0.2
baz=143
SEW Seward 24.07 332 P P 10 55 38.4 +0.9
baz=135
K29M Barlow Dome 24.20 349 P P 10 55 39.9 +0.9
baz=160
CHIR Chirikof Islan 24.21 319 P P 10 55 39.9 +1.0
baz=117
PWL Port Wells 24.24 334 P P 10 55 39.8 +0.6
baz=138
L27K Beaver Creek, 24.27 344 P P 10 55 40.6 +1.1
baz=152
BRSE Bradley Lake S 24.29 330 P P 10 55 40.9 +1.2
baz=132
HARP HAARP 24.50 340 P P 10 55 42.7 +1.1
baz=145
L26K Log Cabin Wild 24.58 342 P P 10 55 43.6 +1.3
baz=149
SCM Sheep Creek Mo 24.66 337 P P 10 55 44.4 +1.3
baz=141
KNK Knik Glacier 24.69 335 P P 10 55 44.6 +1.3
baz=138
DAWY Dawson 24.71 347 P P 10 55 45.0 +1.5
baz=157,SNR=5.7
J30M Hart River 24.74 350 IAmb IAmb 10 55 47.4
comp=Z,7.9nm,1.1s
J30M Hart River 24.74 350 P P 10 55 44.9 +1.1
baz=163,SNR=6.9
M23K Glacier View 24.75 336 P P 10 55 45.3 +1.5
baz=140
RC01 Rabbit Creek A 24.87 334 P P 10 55 46.0 +1.0
baz=136
Q19K Cape Douglas, 24.94 327 P P 10 55 46.3 +0.7
baz=126
SML Sawmill 24.95 336 P P 10 55 46.7 +1.1
baz=139
PMR Palmer 25.04 335 P P 10 55 47.8 +1.4
baz=138,SNR=6.5
PAX Paxson 25.05 340 P P 10 55 47.8 +1.2
baz=145
P19K Oil Pt 25.20 328 P P 10 55 48.8 +0.9
baz=128
O20K Slope Mountain 25.23 330 P P 10 55 49.9 +1.6
baz=130
Q18K Katmai Hardscr 25.36 325 P P 10 55 50.8 +1.3
baz=124
I30M Mount Dempster 25.37 351 P P 10 55 51.0 +1.5
baz=163
WAT6 Susitna Watana 25.37 338 P P 10 55 50.9 +1.3
baz=141
M22K Willow 25.48 334 P P 10 55 51.9 +1.6
baz=136
RIDG Independent Ri 25.54 342 P P 10 55 52.9 +1.9
baz=147
DHY Denali Highway 25.65 339 P P 10 55 52.7 +0.5
baz=142,SNR=5.5
H31M Peel River 25.72 353 P P 10 55 54.0 +1.5
baz=167,SNR=6.6
I29M Ogilvie Camp, 25.75 349 P P 10 55 53.9 +1.0
baz=160
WAT1 Susitna Watana 25.80 337 P P 10 55 54.3 +1.0
baz=140
U38A Gravette 25.87 88 P P 10 55 53.8 -0.4
CHNA Chernabura Isl 25.88 315 P P 10 55 54.9 +0.9
baz=110
O19K Port Alsworth 25.97 329 P P 10 55 56.3 +1.5
baz=127
CUT Chulitna 26.00 335 P P 10 55 56.9 +1.8
baz=137
I28M Miner Creek 26.08 348 IAmb IAmb 10 56 00.6
comp=Z,4.2nm,0.9s
I28M Miner Creek 26.08 348 P P 10 55 56.9 +0.9
baz=157
Q16K King Salmon 26.10 324 P P 10 55 57.4 +1.4
baz=121
SKT Skwentna 26.11 334 P P 10 55 57.0 +0.9
baz=134
O18K Koktuh Hills 26.13 327 P P 10 55 57.2 +0.8
baz=125
L22K Petersville 26.25 335 IAmb IAmb 10 56 00.2
comp=Z,8.8nm,1.0s
L22K Petersville 26.25 335 P P 10 55 58.3 +0.8
baz=136,SNR=7.0
P17K Kvichak River 26.28 325 P P 10 55 59.0 +1.4
baz=122
S14K Fog Glacier 26.40 318 P P 10 56 00.1 +1.2
baz=113
J25K Salcha River, 26.41 342 P P 10 56 00.5 +1.6
baz=148
N19K Bonanza Creek 26.41 330 P P 10 56 00.5 +1.6
baz=128
I27K Kandik River 26.51 347 P P 10 56 01.4 +1.6
baz=155
EPYK Eagle Plains 26.51 351 P P 10 56 01.3 +1.5
baz=163
I26K Coal Creek Min 26.53 345 P P 10 56 01.3 +1.4
baz=152
SDPT Sand Point 26.54 315 P P 10 56 01.3 +1.3
baz=110
H29M Whitestone 26.57 350 IAmb IAmb 10 56 02.7
comp=Z,7.2nm,0.8s
H29M Whitestone 26.57 350 P P 10 56 01.9 +1.6
baz=160,SNR=8.1
M20K Styx River 26.60 332 P P 10 56 02.1 +1.5
baz=132
MCK McKinley 26.61 338 P P 10 56 01.7 +1.1
baz=141
HDA Harding Lake 26.62 341 P P 10 56 01.8 +1.1
baz=145
TRF Thorofare Moun 26.78 337 P P 10 56 03.9 +1.5
baz=138
G31M Satah River 26.81 354 P P 10 56 03.7 +1.4
baz=168
O17K Koliganek Bris 26.87 326 P P 10 56 04.1 +1.1
baz=122
P16K Nushagak River 26.88 324 P P 10 56 04.3 +1.2
baz=120
N18K Kilae Creek 26.89 328 P P 10 56 03.9 +0.7
baz=126
ILAR Eielson Array 26.90 341 P P 10 56 02.2 -1.0
comp=Z,1.5nm,0.9s,baz=159,slow=7.7,SNR=18
ILAR PcP PcP 10 59 23.6 -1.3
comp=Z,0.3nm,0.7s,baz=143,slow=2.6,SNR=4.6
ILAR LR LR 11 04 10.0
comp=Z,19nm,18.8s,baz=81,slow=31
comp=Z,1.5nm,0.9s
ILAR Eielson Array 26.90 341 P P 10 56 02.1 -1.1
PPLA Purkeypile 26.98 335 P P 10 56 04.7 +0.6
baz=134
G30M tAoh Zraii Nji 27.05 352 P P 10 56 05.5 +1.0
baz=165
H27K Steamboat Moun 27.06 347 P P 10 56 06.0 +1.3
baz=155
M19K Big River Lodg 27.07 332 P P 10 56 05.9 +1.2
baz=130
G29M Pine Creek 27.19 351 IAmb IAmb 10 56 07.9
comp=Z,7.9nm,0.9s
G29M Pine Creek 27.19 351 P P 10 56 06.5 +0.8
baz=162,SNR=5.6
O16K Kokwok River B 27.21 325 P P 10 56 06.9 +0.9
baz=121
F31M Tsiigehtchic 27.28 354 P P 10 56 07.0 +0.5
baz=169
CAST Castle Rocks 27.31 336 IAmb IAmb 10 56 08.9
comp=Z,5.5nm,1.3s
CAST Castle Rocks 27.31 336 P P 10 56 07.7 +0.7
baz=135
NEA2 Nenana 27.32 339 P P 10 56 08.3 +1.3
baz=142
POKR Poker Plat Res 27.32 341 P P 10 56 08.1 +1.1
baz=145
N17K Nushagak Hills 27.32 327 P P 10 56 08.3 +1.2
baz=124
M18K Stony River 27.34 330 P P 10 56 07.7 +0.5
baz=127
L19K White Mountain 27.41 332 P P 10 56 08.1 +0.2
baz=130
G27K Doyon Strip 27.61 348 P P 10 56 10.4 +0.7
baz=156
F30M Barrier River 27.61 353 P P 10 56 10.8 +1.2
baz=166
CHUM Lake Minchumin 27.72 336 P P 10 56 11.1 +0.6
baz=136
O15K Ungalikthiuk R 27.78 323 P P 10 56 11.5 +0.4
baz=118
I23K Minto, Yukon-K 27.83 340 P P 10 56 12.5 +1.0
baz=142
K20K Telida 27.91 334 P P 10 56 12.7 +0.4
baz=132
M17K Holitna River 27.92 329 P P 10 56 13.2 +0.8
baz=125
N16K Nishlik Lake 27.96 326 P P 10 56 13.2 +0.4
baz=121
H24K Noodor Dome 28.02 342 P P 10 56 14.5 +1.3
baz=145
F28M Old Crow 28.09 350 P P 10 56 15.1 +1.2
baz=159
MLY Manley 28.11 339 IAmb IAmb 10 56 16.4
comp=Z,4.1nm,1.0s
MLY Manley 28.11 339 P P 10 56 14.8 +0.7
baz=140,SNR=5.3
G26K Porcupine Rive 28.11 346 P P 10 56 15.4 +1.4
baz=152
L18K Granite Mounta 28.11 331 P P 10 56 14.4 +0.3
baz=127
INK Inuvik 28.11 355 P P 10 56 15.5 +1.5
baz=170
M16K Timber Creek 28.33 327 P P 10 56 17.1 +1.0
baz=122
N15K Kwethluk River 28.37 325 P P 10 56 17.2 +0.8
baz=119
G25K Bearman Lake 28.40 344 P P 10 56 17.5 +0.9
baz=148
H23K Yukon River 28.41 341 P P 10 56 17.8 +1.1
baz=142
O14K Tigyukauivet M 28.47 323 P P 10 56 17.7 +0.4
baz=116
J20K Nowinta River 28.50 335 IAmb IAmb 10 56 19.7
comp=Z,7.2nm,1.0s
J20K Nowinta River 28.50 335 P P 10 56 17.9 +0.4
baz=133
I21K Tanana 28.57 338 P P 10 56 18.4 +0.3
baz=138
E29M Blow River 28.58 352 P P 10 56 18.9 +0.6
baz=163
G24K Hadweenzic Riv 28.64 343 P P 10 56 20.1 +1.3
baz=146
L17K Donlin 28.67 330 P P 10 56 19.9 +0.8
baz=125
F26K Sheenjek River 28.84 347 P P 10 56 21.4 +0.8
baz=152
J19K Poorman 28.86 334 IAmb IAmb 10 56 23.5
comp=Z,7.4nm,1.0s
J19K Poorman 28.86 334 P P 10 56 21.9 +1.2
baz=131,SNR=5.3
E27K Coleen River 28.87 349 IAmb IAmb 10 56 24.2
comp=Z,3.7nm,0.9s
E27K Coleen River 28.87 349 P P 10 56 21.5 +0.7
baz=157
M15K Kasigluk River 28.89 326 P P 10 56 21.9 +0.9
baz=119

J18K	**Innoko River** baz=129	**28.89**	333	P	**P**	**10 56 21.7 +0.7**
L16K	**Owhat River** baz=122	**28.90**	328	P	**P**	**10 56 21.7 +0.6**
N14K	**Kuskokwak Cree** baz=117	**28.96**	324	P	**P**	**10 56 22.4 +0.7**
E28M	**Babbage River** baz=160	**28.98**	351	P	**P**	**10 56 22.2 +0.4**
C36M	**Paulatuk** baz=185	**28.99**	2	P	**P**	**10 56 22.3 +0.5**
K17K	**Iditarod** baz=125	**29.01**	331	P	**P**	**10 56 22.6 +0.5**
F25K	**Christian Rive** baz=150	**29.02**	345	P	**P**	**10 56 23.1 +0.9**
I20K	**Naaghedeneel** baz=134	**29.03**	336	P	**P**	**10 56 23.4 +1.2**
H21K	**Melozitna Rive** baz=137	**29.15**	338	P	**P**	**10 56 24.3 +0.9**
G23K	**Bananza Creek** baz=142	**29.24**	342	P	**P**	**10 56 24.4 +0.3**
F24K	**Squaw Lake** baz=146	**29.41**	344	P	**P**	**10 56 26.0 +0.3**
M14K	**Bethel** baz=118	**29.46**	325	P	**P**	**10 56 25.8 -0.3**
E25K	**Arctic Village** baz=151	**29.47**	346	P	**P**	**10 56 25.6 -0.6**
UNV	**Unalaska Valle** baz=101	**29.52**	310	P	**P**	**10 56 26.8 +0.2**
H20K	**Anotleneega Mo** baz=134,SNR=5.6	**29.64**	337	P	**P**	**10 56 27.1 -0.6**
IMAR	**Indian Mountai**	**29.66**	338	P	**P**	**10 56 27.1 -0.7**
COLD	**Coldfoot** baz=143	**29.69**	342	P	**P**	**10 56 28.1 0.0**
J17K	**VABM Dome** baz=125	**29.69**	331	P	**P**	**10 56 28.0 -0.1**
L15K	**Ungalak Mounta** baz=120	**29.71**	327	P	**P**	**10 56 28.1 -0.1**
GCSA	**Galena City Sc** baz=130	**29.76**	335	P	**P**	**10 56 29.3 +0.6**
D27M	**Malcolm River** baz=158	**29.77**	350	P	**P**	**10 56 29.3 +0.5**
G22K	**Bettles** baz=115	**29.77**	341	P	**P**	**10 56 29.1 +0.4**
M13K	**Dall Lake** baz=115	**29.93**	324	P	**P**	**10 56 30.4 +0.2**
G21K	**Allakaket** baz=137	**29.98**	339	P	**P**	**10 56 30.9 +0.2**
E24K	**Your Creek** baz=146	**30.00**	344	P	**P**	**10 56 31.1 +0.2**
K15K	**Wolf Creek Mou** baz=120	**30.04**	328	P	**P**	**10 56 31.8 +0.7**
L14K	**Kuka Creek** baz=118	**30.05**	326	P	**P**	**10 56 32.0 +0.7**
H19K	**Roundabout Mou** baz=132,SNR=5.9	**30.14**	336	P	**P**	**10 56 32.3 +0.3**
J16K	**Anvik River** baz=123	**30.20**	330	P	**P**	**10 56 33.1 +0.6**
E23K	**Chandalar** baz=144	**30.23**	343	P	**P**	**10 56 33.7 +0.7**
F22K	**John River** baz=140	**30.39**	341	P	**P**	**10 56 34.5 +0.2**
F21K	**Alatna River** baz=138	**30.50**	340	P	**P**	**10 56 35.6 +0.3**
C27K	**Jago River** baz=154	**30.50**	349	P	**P**	**10 56 35.6 +0.4**
H18K	**Honhosa River** baz=129	**30.51**	334	P	**P**	**10 56 35.8 +0.4**
I17K	**Unalakleet** baz=124	**30.57**	331	P	**P**	**10 56 36.3 +0.5**
D25K	**Kavik River** baz=150	**30.67**	347	P	**P**	**10 56 37.0 +0.3**
TOLK	**Toolik Lake Re** baz=145	**30.70**	344	P	**P**	**10 56 37.3 +0.3**
G19K	**Purcell Mounta** baz=132	**30.75**	337	P	**P**	**10 56 36.6 -0.8**
E22K	**Anaktuvuk Pass** baz=141	**30.79**	342	P	**P**	**10 56 38.2 +0.4**
H17K	**Granite Mounta** baz=126	**30.90**	333	P	**P**	**10 56 38.7 0.0**
C26K	**Camden Bay** baz=153	**30.95**	348	P	**P**	**10 56 39.3 +0.1**
D24K	**Happy Valley** baz=147	**30.98**	345	P	**P**	**10 56 39.4 0.0**
F20K	**Avaraart Lake** baz=135	**30.98**	339	P	**P**	**10 56 40.1 +0.7**
G18K	**Tagagawik** baz=129	**31.07**	335	P	**P**	**10 56 40.4 +0.1**
J14K	**Nanvaranak Lak** baz=119	**31.08**	328	P	**P**	**10 56 40.3 0.0**
K13K	**Kusilvak Mount** baz=116	**31.16**	326	P	**P**	**10 56 40.4 -0.6**
D23K	**Nanushuk River** baz=144	**31.20**	344	P	**P**	**10 56 41.8 +0.4**
M11K	**Mekoryuk** baz=112	**31.21**	323	P	**P**	**10 56 41.7 +0.2**
F19K	**Shaleruckik Mo** baz=132	**31.42**	337	P	**P**	**10 56 43.9 +0.7**
G17K	**Kiwalik Mounta** baz=126	**31.48**	334	P	**P**	**10 56 44.5 +0.6**
E21K	**Killik River** baz=139	**31.54**	341	P	**P**	**10 56 45.3 +0.8**
H16K	**Elim** baz=123	**31.55**	332	P	**P**	**10 56 44.6 +0.2**
E19K	**Redstone River** baz=133	**31.68**	338	P	**P**	**10 56 46.3 +0.6**
F18K	**Selawik** baz=129	**31.83**	336	P	**P**	**10 56 47.6 +0.7**
C23K	**Itkillik River** baz=145	**31.90**	345	P	**P**	**10 56 48.5 +1.0**
E20K	**Nigu River** baz=136	**31.96**	340	P	**P**	**10 56 48.7 +0.6**
G16K	**Koyuk River** baz=124	**32.01**	333	P	**P**	**10 56 48.9 +0.4**
F17K	**Baldwin Pennin** baz=127	**32.24**	335	P	**P**	**10 56 51.0 +0.5**
C21K	**Knifeblade Rid** baz=138	**32.27**	342	P	**P**	**10 56 50.9 0.0**
SPIA	**Saint Paul Isl** baz=102	**32.28**	316	P	**P**	**10 56 50.8 -0.1**
G15K	**Niukluk** baz=121	**32.39**	332	P	**P**	**10 56 52.7 +0.8**
D20K	**Etivluk River** baz=136	**32.40**	340	P	**P**	**10 56 52.4 +0.5**
B21K	**Ikpikpuk River** baz=139	**32.59**	343	P	**P**	**10 56 54.0 +0.5**
D19K	**Kuna River** baz=133	**32.64**	339	P	**P**	**10 56 54.1 0.0**
E17K	**Hotham Inlet** baz=127	**32.81**	336	P	**P**	**10 56 56.0 +0.5**
B22K	**Teshekpuk Lake** baz=141	**32.88**	344	P	**P**	**10 56 56.6 +0.5**
F15K	**North Star Dit** baz=121	**32.98**	332	P	**P**	**10 56 57.3 +0.3**
C19K	**Lookout Ridge** baz=132	**33.45**	340	P	**P**	**10 57 01.5 +0.4**
F14K	**Arctic Creek** baz=119	**33.47**	331	P	**P**	**10 57 01.2 0.0**
B20K	**Meade River** baz=136	**33.47**	342	P	**P**	**10 57 01.6 +0.4**
D17K	**Noatak River** baz=126	**33.57**	336	P	**P**	**10 57 02.4 +0.3**
C18K	**Utukok River** baz=129	**33.59**	338	P	**P**	**10 57 02.8 +0.4**
A22K	**Sinclair Lake** baz=140	**33.72**	344	P	**P**	**10 57 03.8 +0.4**
RDOG	**Red Dog Mine** baz=126	**33.73**	337	P	**P**	**10 57 04.0 +0.5**
C17K	**DeLong Mountai** baz=127	**34.06**	337	P	**P**	**10 57 06.9 +0.5**
TNA	**Tin City** baz=117	**34.09**	331	P	**P**	**10 57 07.2 +0.5**
TKL	**Tuckaleechee C** comp=Z,55nm,18.6s,baz=298,slow=37	**34.21**	84	LR	LR	11 11 28.5
SADO	**Sadowa** comp=Z,96nm,20.9s,baz=293,slow=37	**35.16**	67	LR	LR	11 12 08.3
CMIG	**Matias Romero** comp=Z,9.5nm,19.4s,baz=346,slow=38	**36.29**	120	LR	LR	11 13 44.6
RES	**Resolute Bay** comp=Z,46nm,19.6s,baz=105,slow=36	**37.37**	14	LR	LR	11 12 26.8
FRB	**Frobisher Bay** comp=Z,55nm,18.7s,baz=287,slow=35	**40.90**	35	LR	LR	11 14 02.7
SHEM	**Shemya Is, Ala** comp=Z,8.2nm,20.0s,baz=165,slow=32	**41.09**	308	LR	LR	11 12 07.5
SCHQ	**Schefferville** comp=Z,39nm,19.5s,baz=270,slow=34	**41.75**	49	LR	LR	11 13 37.5
SFJD	**Kangerlussuaq** comp=Z,57nm,18.8s,baz=274,slow=36	**48.36**	31	LR	LR	11 19 30.9
PETK	**Petropavlovsk-**	**50.70**	311	P	**P**	**10 59 21.6 -0.2**
	comp=Z,5.6nm,0.8s,baz=77,slow=13,SNR=5.0					
	comp=Z,5.6nm,0.8s					
H11N3	**WAKE ISLAND Hy** baz=53,slow=75,SNR=15	**59.37**	271	T	T	12 04 41.1
H11N2	**WAKE ISLAND Hy** baz=53,slow=75,SNR=12	**59.37**	271	T	T	12 04 39.0
H11N1	**WAKE ISLAND Hy** baz=53,slow=75,SNR=16	**59.38**	271	T	T	12 04 42.4
H11S1	**WAKE ISLAND Hy** baz=54,slow=75,SNR=10	**60.24**	270	T	T	12 05 43.8
H11S2	**WAKE ISLAND Hy** baz=54,slow=75,SNR=7.2	**60.24**	270	T	T	12 05 45.5
H11S3	**WAKE ISLAND Hy** baz=54,slow=75,SNR=6.5	**60.26**	270	T	T	12 05 46.0
BORG	**Borgarnes** comp=Z,71nm,18.3s,baz=316,slow=36	**60.34**	28	LR	LR	11 26 50.5
ARCES	**ARCESS Array B** comp=Z,26nm,18.4s,baz=60,slow=36	**68.48**	10	LR	LR	11 31 11.8
RAR	**Rarotonga** comp=Z,24nm,18.9s,baz=285,slow=31	**68.48**	213	LR	LR	11 25 57.7
JHJ	**Hachijo jima 2** comp=Z,10nm,20.8s,baz=38,slow=32	**71.52**	298	LR	LR	11 28 56.5
NOA	**NORSAR Array B** comp=Z,14nm,20.3s,baz=90,slow=35	**73.30**	20	LR	LR	11 33 29.1
JCJ	**Chichijima** comp=Z,36nm,21.8s,baz=67,slow=30	**73.46**	292	LR	LR	11 27 00.6
HFS	**Hagfors** comp=Z,40nm,18.8s,baz=343,slow=36	**74.71**	19	LR	LR	11 34 27.6
KSRS	**Korea Array** comp=Z,5.8nm,21.6s,baz=170,slow=32	**76.42**	308	LR	LR	11 30 38.1
MSVF	**Nonsavu** comp=Z,44nm,19.0s,baz=72,slow=30	**77.11**	233	LR	LR	11 28 56.5
GUMO	**Guam** comp=Z,31nm,21.9s,baz=124,slow=29	**79.82**	279	LR	LR	11 29 10.0
SONM	**Songino Array** comp=Z,0.3nm,0.3s,baz=76,slow=6.3,SNR=4.0	**80.09**	327	P	**P**	**11 02 33.2 +0.8**
	comp=Z,0.3nm,0.3s					
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,baz=29,slow=3.3,SNR=2.4	**82.03**	342	P	**P**	**11 02 42.7 +0.4**
ZALV				LR	LR	11 43 03.1
	comp=Z,17nm,18.3s,baz=52,slow=39					
	comp=Z,0.4nm,0.4s					
HHC	**Hu-ho-hao-te**	**83.08**	319	*e*P	**P**	**11 02 45.0 -3.3**
HHC				pmax	pmax	
	comp=Z,9.0nm,0.6s					
HHC				pmax	pmax	
	comp=Z,43nm,4.2s					
ESDC	**Sonseca Array** comp=Z,19nm,18.1s,baz=159,slow=34	**84.89**	40	LR	LR	11 38 37.9
VRAC	**Vranov** comp=Z,15nm,22.0s,baz=328,slow=36	**85.05**	23	LR	LR	11 40 48.1
DAVOX	**Davos/Dischmat** comp=Z,27nm,18.1s,baz=84,slow=37	**85.06**	292	LR	LR	11 42 26.9
KURK	**Kurchatov**	**86.44**	344	P	**P**	**11 03 04.8 -0.1**
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.6s,baz=15,slow=4.6,SNR=4.3	**86.54**	344	P	**P**	**11 03 04.8 -0.6**
	comp=Z,0.7nm,0.6s					
WMQ	**Urumqi**	**90.42**	336	*e*P	**P**	**11 03 27.5 +3.5**
WMQ				pP	sP	11 03 30.5 +0.3
WMQ				pmax	pmax	
	comp=Z,12nm,0.9s					
DAV	**Davao City (W)** comp=Z,21nm,20.5s,baz=119,slow=31	**98.40**	287	LR	LR	11 40 59.9
QSPA	**South Pole Qui** comp=Z,2.0nm,1.1s,baz=97,slow=1.6,SNR=3.3	**130.27**	180	PKP	**PKiKP**	**11 09 32.7 +0.3**

STR 30 10:51:25.2±0.7, 45°N±4°×°±°, h0km, MLv1.4/7, LOCSAT earthModelID haslach_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLMF	**Criteuil-la-Ma**	**0.78**	**275**	Pg	Pg	10 51 40.3	+0.1
VERF	**Verneugheol**	**1.14**	**75**	Pg	Pg	10 51 46.6	-0.5
VERF				Sg	Sb	10 52 02.9	-0.4
FRNF	**Fournols**	**1.17**	**93**	Pg	Pg	10 51 47.4	-0.1
FRNF				Sg	Sb	10 52 03.4	-0.6
MFF	**Saint Martin d**	**1.36**	**328**	Pg	Pg	10 51 51.0	-0.3
MFF				Sg	Sb	10 52 09.6	+0.1
SLVF	**La Salvetat-Pe**	**1.55**	**144**	Pn	Pn	10 51 52.3	-1.7
SLVF				Sn	Sg	10 52 14.9	0.0

ROM 30 10:53:46.1±0.1, 46°308N±0°004×13°089E±0°005, h6km±1km, ML0.9/8, 4C-7D, Error ellipse: s-maj=0.5km s-min=0.1km az=27.0, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOO	**Bordano**	**0.01**	**32**	*e*Pg	Pg	10 53 47.8	+0.4
BOO				*e*Sg	Sg	10 53 48.6	+0.4
BOO	**Bordano**	**0.01**	**32**	P	Pg	10 53 47.7	+0.4
BOO				S	Sg	10 53 47.8	-0.4
GEPF	**Gemona**	**0.05**	**133**	P	Pg	10 53 48.0	+0.5
GEPF				S	Sg	10 53 49.2	+0.7
GEPF				AML	AML		
	comp=N,887μm,0.2s						
GEPF				AML	AML		
	comp=E,352μm,0.2s						
BUA	**Buia**	**0.09**	**165**	*e*Pg	Pg	10 53 48.6	+0.4
BUA				*e*Sg	Sg	10 53 50.2	+0.5
MPRI	**Monte Prat**	**0.10**	**227**	*e*Pg	Pg	10 53 48.7	+0.5
MPRI				*e*Sg	Sg	10 53 50.4	+0.6
MPRI	**Monte Prat**	**0.10**	**227**	P	Pg	10 53 48.8	+0.5
MPRI				S	Sg	10 53 50.6	+0.9
MPRI				AML	AML		
	comp=E,154μm,0.2s						
MPRI				AML	AML		
	comp=N,217μm,1.6s						
MPRI				AML	AML		
	comp=N,217μm,0.4s						
FUSE	**Fusea**	**0.12**	**330**	*e*Pg	Pg	10 53 49.3	+0.6
FUSE				*e*Sg	Sg	10 53 51.6	+1.1
FUSE	**Fusea**	**0.12**	**330**	P	Pg	10 53 49.3	+0.6
FUSE				S	Sg	10 53 51.6	+1.0
BAD	**Bernadia**	**0.13**	**123**	*e*Pg	Pg	10 53 49.3	+0.5
BAD				*e*Sg	Sg	10 53 51.5	+0.9
BAD	**Bernadia**	**0.13**	**123**	P	Pg	10 53 49.2	+0.4
BAD				S	Sg	10 53 51.5	+0.9
VINO	**Villanova**	**0.14**	**111**	*e*Pg	Pg	10 53 49.5	+0.4
VINO				*e*Sg	Sg	10 53 51.9	+0.9
VINO	**Villanova**	**0.14**	**111**	P	Pg	10 53 49.5	+0.4
VINO				S	Sg	10 53 52.0	+1.0
VINO				AML	AML		
	comp=E,71μm,1.0s						
VINO				AML	AML		
	comp=N,66μm,0.9s						
CLUD	**Cludinico**	**0.21**	**316**	*e*Pg	Pg	10 53 51.0	+0.7
CLUD				*e*Sg	Sg	10 53 54.1	+1.0
CLUD	**Cludinico**	**0.21**	**316**	P	Pg	10 53 50.9	+0.7
CLUD				S	Sg	10 53 54.4	+1.3
CLUD				AML	AML		
	comp=E,26μm,0.6s						
CLUD				AML	AML		
	comp=N,19μm,1.2s						
CLUD				AML	AML		
	comp=E,26μm,1.4s						
CLUD				AML	AML		
	comp=N,19μm,0.8s						
PTCC	**Patocco-Chiusa**	**0.21**	**62**	P	Pg	10 53 50.8	+0.6
PTCC				S	Sg	10 53 53.9	+0.8
PLRO	**Paularo**	**0.25**	**10**	*e*Pg	Pg	10 53 51.7	+0.7
PLRO				*e*Sg	Sg	10 53 55.7	+1.4
PLRO	**Paularo**	**0.25**	**10**	P	Pg	10 53 51.8	+0.8
PLRO				S	Sg	10 53 56.0	+1.7
ZOU	**Zoufplan**	**0.26**	**342**	*e*Pg	Pg	10 53 52.1	+0.8
ZOU				*e*Sg	Sg	10 53 56.1	+1.3
COLI	**Coloredo**	**0.27**	**131**	*e*Pg	Pg	10 53 51.9	+0.6
COLI				*e*Sg	Sg	10 53 55.7	+0.8
STAL	**STALIGIAL**	**0.27**	**260**	P	Pg	10 53 51.6	+0.3
STAL				S	Sg	10 53 56.0	+1.1
STAL				AML	AML		
	comp=E,46μm,1.5s						
STAL				AML	AML		
	comp=N,59μm,0.7s						
STAL				AML	AML		
	comp=E,46μm,0.5s						
LSR	**Lussari**	**0.35**	**61**	*e*Pg	Pg	10 53 53.6	+0.6
LSR				*e*Sg	Sg	10 53 58.7	+1.1

*IDC **30** 11:16:46.0±1.6, 55°.43N×161°.94W, h0km, mb3.7/6, mbtmp3.5/8, ML3.1/1, Error ellipse: s-maj=41.8km s-min=19.6km az=164.0*
*NEIC **30** 11:16:46.9±2.0, 54°.61N±0°.05×160°.98W±0°.05, h44km±9km, ML3.4/22, ML3.3(AEIC), Error ellipse: s-maj=7.7km s-min=4.5km az=173.0*
*AEIC **30** 11:16:46.7±2.6, 54°.62N±0°.05×161°.10W±0°.05, h30km±5km, Error ellipse: s-maj=7.4km s-min=3.9km az=186.0*

ISC 30 11:16:45.3±1.6, 54°.59N±0°.07×160°.99W±0°.04, h29km±11km, n77, σ1°52/75, mb3.8/6, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**0.76**	**318**		**Pb**	**11 16 59.6**	**-0.4**
DOL					**Sb**	**11 17 09.3**	**-0.7**
SDPT	**Sand Point**	**0.82**	**21**	P	**Pn**	**11 17 01.2**	**+0.4**
SDPT	**Sand Point**	**0.82**	**21**		**Pn**	**11 17 01.5**	**+0.7**
SDPT				IAML		11 17 13.1	
	comp=N,2μm,0.4s						
SDPT	**Sand Point**	**0.82**	**21**		**Sb**	**11 17 12.4**	**+0.7**
CNBA	**Chernabura Isl**	**0.84**	**73**		**Pn**	**11 17 01.1**	**-0.1**
CNBA					**Sn**	**11 17 11.8**	**-0.7**
CHNA	**Chernabura Isl**	**0.85**	**73**	P	**Pn**	**11 17 00.8**	**-0.4**
HAG	**Hague Volcano**	**0.90**	**325**		**Pn**	**11 17 02.3**	**+0.2**
PS4A	**Pavlof South-4**	**0.91**	**327**		**Pn**	**11 17 02.3**	**+0.2**
PS4A					**Sn**	**11 17 14.5**	**+0.3**
DT1	**Dutton Round H**	**0.91**	**305**		**Pn**	**11 17 01.6**	**-0.6**
DT1					**Sb**	**11 17 12.4**	**-1.9**
PVV	**Pavlof Volcano**	**0.92**	**330**		**Pn**	**11 17 02.4**	**+0.2**
DTNA	**Dutton South F**	**0.92**	**308**		**Pn**	**11 17 02.1**	**-0.2**
DTNA					**Sb**	**11 17 13.4**	**-1.3**
PS1A	**Pavlof South-1**	**0.94**	**333**		**Pn**	**11 17 03.0**	**+0.5**
PS1A					**Sn**	**11 17 16.0**	**+0.9**
PN7A	**Pavlof North-7**	**1.03**	**326**		**Pn**	**11 17 04.4**	**+0.6**
ISNN	**Isanotski Nort**	**1.64**	**280**		**Pn**	**11 17 13.1**	**+1.0**
VNKR	**Veniaminof 5**	**1.72**	**32**		**Pn**	**11 17 15.2**	**+2.0**
VNKR					**Sn**	**11 17 37.1**	**+2.9**
SSBA	**Shishaldin**	**1.83**	**277**		**Pn**	**11 17 15.6**	**+0.8**
VNSS	**Veniaminof 8**	**1.86**	**27**		**Pn**	**11 17 17.1**	**+1.8**
VNSG	**Veniaminof 6**	**1.89**	**34**		**Pn**	**11 17 18.1**	**+2.5**
S14K	**Fog Glacier**	**1.89**	**25**		**Pn**	**11 17 18.3**	**+2.7**
VNFG	**Fog Glacier, M**	**1.89**	**25**		**Pn**	**11 17 18.7**	**+3.1**
ANPB	**Aniakchak Plen**	**2.70**	**33**		**Pn**	**11 17 29.0**	**+2.3**
AKSA	**Akutan Strait**	**2.79**	**263**		**Pn**	**11 17 29.8**	**+1.8**
AKSA					**Sn**	**11 18 02.5**	**+1.9**
AKUT	**Akutan**	**2.84**	**263**	P	**Pn**	**11 17 30.6**	**+2.1**
AKUT	**Akutan**	**2.84**	**263**	Pn	**Pn**	**11 17 30.4**	**+1.9**
AKUT				IAML		11 18 13.4	
	comp=E,82nm,0.8s						
AKUT				IAML		11 18 16.7	
	comp=N,128nm,0.6s						
AKLV	**Akutan Long Va**	**2.94**	**264**		**Pn**	**11 17 31.5**	**+1.5**
AKGG	**Akutan Green G**	**2.95**	**264**		**Pn**	**11 17 31.8**	**+1.7**
ZRO	**Akutan Zero**	**2.96**	**262**		**Pn**	**11 17 31.5**	**+1.2**
LVA	**Lava Point**	**2.98**	**264**	Pn	**Pn**	**11 17 32.1**	**+1.5**
LVA				IAML		11 18 19.8	
	comp=N,183nm,0.9s						
LVA				IAML		11 18 29.7	
	comp=E,131nm,0.8s						
UNV	**Unalaska Valle**	**3.32**	**259**	P	**Pn**	**11 17 36.2**	**+1.0**
UNV	**Unalaska Valle**	**3.32**	**259**		**Pn**	**11 17 36.2**	**+1.0**
MNAT	**Makushin Natee**	**3.42**	**260**		**Pn**	**11 17 37.6**	**+1.1**
MGOD	**Makushin Gods**	**3.55**	**259**		**Pn**	**11 17 39.5**	**+1.1**
O15K	**Ungalikthiuk R**	**4.65**	**7**		**Pn**	**11 17 54.6**	**+1.2**
O15K	**Ungalikthiuk R** comp=N,27nm,2.2s	**4.65**	**7**	IAML		11 19 27.2	
O15K				IAML		11 19 32.5	
	comp=E,30nm,2.0s						
O14K	**Tigyukauivet M**	**4.68**	**358**		**Pn**	**11 17 55.1**	**+1.2**
O14K	**Tigyukauivet M** comp=E,29nm,1.6s	**4.68**	**358**	IAML		11 19 17.9	
O14K				IAML		11 21 00.0	
	comp=N,42nm,3.0s						
OHAK	**Old Harbor**	**5.07**	**55**	P	**Pn**	**11 17 59.9**	**+0.7**
OHAK	**Old Harbor**	**5.07**	**55**		**Pn**	**11 17 60.0**	**+0.7**
OHAK	**Old Harbor** comp=N,18nm,0.9s	**5.07**	**55**	IAML		11 19 23.9	
O16K	**Kokwok River B**	**5.26**	**16**	Pn	**Pn**	**11 18 04.4**	**+2.6**
O16K				IAML		11 19 52.9	
	comp=N,14nm,0.7s						
O16K				IAML		11 20 35.8	
	comp=E,17nm,2.9s						
N14K	**Kuskokwak Cree**	**5.37**	**356**		**Pn**	**11 18 04.6**	**+1.3**
KDAK	**Kodiak Island** comp=E,0.5nm,0.3s,baz=211,slow=3.3,SNR=25	**5.68**	**52**	Pn	**Pn**	**11 18 09.1**	**+1.5**
KDAK				Sn	**Sn**	**11 19 08.3**	**-3.4**
	comp=E,0.3nm,0.3s,baz=19,slow=13,SNR=1.4						
KDAK				Lg	Lg	11 19 33.1	
	comp=E,1.8nm,0.3s,baz=231,slow=18,SNR=6.3						
	comp=E,3.1nm,0.5s						
SPIA	**Saint Paul Isl**	**5.82**	**300**	P	**Pn**	**11 18 12.2**	**+2.7**
SPIA	**Saint Paul Isl**	**5.82**	**300**	Pn	**Pn**	**11 18 11.5**	**+2.0**
Q19K	**Cape Douglas,**	**5.94**	**40**	Pn	**Pn**	**11 18 13.6**	**+2.5**
M13K	**Dall Lake**	**5.98**	**349**		**Pn**	**11 18 13.1**	**+1.4**
N16K	**Nishlik Lake**	**6.02**	**11**		**Pn**	**11 18 14.0**	**+1.7**
M15K	**Kasigluk River**	**6.13**	**1**		**Pn**	**11 18 14.7**	**+1.0**
M11K	**Mekoryuk**	**6.46**	**336**		**Pn**	**11 18 19.1**	**+0.9**
M16K	**Timber Creek**	**6.54**	**9**		**Pn**	**11 18 21.1**	**+1.6**
L14K	**Kuka Creek**	**6.83**	**353**		**Pn**	**11 18 24.3**	**+0.9**
M17K	**Holitna River**	**7.09**	**14**		**Pn**	**11 18 28.2**	**+1.3**
M18K	**Stony River**	**7.44**	**19**		**Pn**	**11 18 33.5**	**+1.7**
K13K	**Kusilvak Mount**	**7.62**	**347**		**Pn**	**11 18 35.4**	**+1.3**
L17K	**Donlin**	**7.70**	**9**		**Pn**	**11 18 36.1**	**+0.8**
K15K	**Wolf Creek Mou**	**7.74**	**358**		**Pn**	**11 18 37.1**	**+1.3**
K17K	**Iditarod**	**8.27**	**9**		**Pn**	**11 18 44.5**	**+1.4**
J14K	**Nanvaranak Lak**	**8.29**	**352**		**Pn**	**11 18 44.3**	**+1.0**
J16K	**Anvik River**	**8.73**	**1**		**Pn**	**11 18 50.1**	**+0.9**
P23K	**Montague Islan**	**9.13**	**48**		**Pn**	**11 18 56.0**	**+1.1**
PWL	**Port Wells**	**9.23**	**42**		**Pn**	**11 18 57.0**	**+0.7**
HIN	**Hinchinbrook I**	**9.72**	**47**		**Pn**	**11 19 03.8**	**+0.9**
ADK	**Adak**	**9.79**	**260**	P	**Pn**	**11 19 06.7**	**+2.7**
FID	**Port Fidalgo**	**9.91**	**46**		**Pn**	**11 19 05.6**	**0.0**
ILAR	**Eielson Array** comp=E,0.1nm,0.8s,baz=223,slow=14,SNR=1.5	**12.41**	**29**	Pn	Pn	11 19 34.8	-5.0
PETK	**Petropavlovsk-** comp=E,1.6nm,0.5s,baz=83,slow=14,SNR=19	**24.17**	**284**	P	**P**	**11 21 57.2**	**-1.5**
	comp=E,1.6nm,0.5s						
H11N2	**WAKE ISLAND Hy** baz=27,slow=76,SNR=5.2	**42.50**	**228**	T	T	12 09 36.4	
H11N3	**WAKE ISLAND Hy** baz=27,slow=76,SNR=4.5	**42.51**	**228**	T	T	12 09 36.9	
H11N1	**WAKE ISLAND Hy** baz=27,slow=76,SNR=3.5	**42.52**	**228**	T	T	12 09 39.0	
H11S1	**WAKE ISLAND Hy** baz=25,slow=74,SNR=4.8	**43.67**	**227**	T	T	12 11 05.0	
H11S2	**WAKE ISLAND Hy** baz=25,slow=74,SNR=3.1	**43.68**	**227**	T	T	12 11 06.1	
H11S3	**WAKE ISLAND Hy** baz=25	**43.68**	**227**	T	T	12 11 06.4	
TXAR	**Lajitas Array** comp=E,0.1nm,0.6s,baz=318,slow=6.9,SNR=2.2	**47.88**	**98**	P	P	11 25 31.5	+11
	comp=E,0.1nm,0.6s						
KSRS	**Korea Array** comp=E,0.7nm,0.5s,baz=47,slow=6.9,SNR=4.5	**50.02**	**281**	P	**P**	**11 25 36.5**	**-0.2**
	comp=E,0.7nm,0.5s						
NOA	**NORSAR Array B** comp=E,0.4nm,0.7s,baz=354,slow=6.3,SNR=1.9	**64.55**	**4**	P	**P**	**11 27 18.0**	**-1.0**
	comp=E,0.4nm,0.7s						
HFS	**Hagfors** comp=E,1.5nm,0.8s,baz=4.8,slow=3.4,SNR=1.4	**65.55**	**3**	P	**P**	**11 27 24.8**	**-0.6**
	comp=E,1.5nm,0.8s						
MKAR	**Makanchi Array** comp=E,0.3nm,0.5s,baz=54,slow=6.4,SNR=4.1	**65.73**	**318**	P	**P**	**11 27 25.9**	**-1.1**
	comp=E,0.3nm,0.5s						

*IDC **30** 11:29:24.7±1.7, 34°.28N×118°.63W,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DECC	**Green Verdugo**	**0.09**	**123**		**Pg**	**11 29 31.5**	**-0.2**
DECC					**Sg**	**11 29 33.8**	**-0.1**
HLLC	**North Hollywoo**	**0.14**	**157**		**Pg**	**11 29 32.3**	**+0.1**
HLLC					**Sg**	**11 29 35.0**	**+0.2**
OAT	**Oat Mountain**	**0.16**	**284**		**Pg**	**11 29 32.5**	**-0.1**
PDE	**Pardee, Santa**	**0.19**	**317**		**Pg**	**11 29 33.3**	**+0.4**
PDE					**Sb**	**11 29 37.1**	**+0.2**
DJJ	**Donna J Jenkin**	**0.20**	**187**		**Pg**	**11 29 32.8**	**-0.3**
DJJ					**Sg**	**11 29 35.8**	**-0.4**
DJJ	**Donna J Jenkin**	**0.20**	**187**		**Pg**	**11 29 32.8**	**-0.3**
DJJ					**Sg**	**11 29 35.8**	**-0.4**
BLCC	**Black Canyon**	**0.21**	**254**		**Pg**	**11 29 33.2**	**-0.1**
BLCC					**Sg**	**11 29 36.7**	**+0.1**
GR2C	**Griffith Obs.**	**0.21**	**151**		**Pg**	**11 29 33.3**	**0.0**
GR2C					**Sg**	**11 29 36.8**	**+0.1**
PASC	**Pasadena Art C**	**0.24**	**124**		**Pg**	**11 29 33.9**	**+0.1**
PASC	comp=N,30μm,0.4s			IAML		11 29 38.1	
PASC	comp=E,46μm,0.5s			IAML		11 29 38.4	
TPRS	**Tripped Ranch**	**0.25**	**212**		**Pg**	**11 29 34.0**	**+0.1**
CBCC	**Caltech Broad**	**0.30**	**123**		**Pg**	**11 29 35.0**	**+0.4**
CBCC					**Sb**	**11 29 39.8**	**-0.2**
GSA	**Caltech--GSA**	**0.30**	**124**		**Pg**	**11 29 33.4**	**-1.3**
GSA					**Sg**	**11 29 38.4**	**-0.6**
CRPC	**Caltech Rob'n**	**0.30**	**124**		**Pg**	**11 29 35.1**	**+0.4**
CRPC					**Sb**	**11 29 40.3**	**+0.2**
CACC	**Caltech Cellar**	**0.30**	**123**		**Pg**	**11 29 35.1**	**+0.4**
CACC					**Sb**	**11 29 40.1**	**-0.1**
LCGC	**La Cienega, Cu**	**0.31**	**172**		**Pb**	**11 29 35.6**	**+0.1**
LCGC					**Sb**	**11 29 41.3**	**+1.1**
USC	**University of**	**0.31**	**158**		**Sb**	**11 29 40.7**	**+0.5**
MWC	**Mount Wilson**	**0.32**	**105**		**Pg**	**11 29 35.4**	**+0.3**
MWC	comp=N,53μm,0.7s			IAML		11 29 40.7	
MWC	comp=E,28μm,0.7s			IAML		11 29 41.0	
MWC	**Mount Wilson**	**0.32**	**105**		**Sb**	**11 29 40.5**	**-0.3**
BHPC	**Baldwin Hills**	**0.32**	**170**		**Pb**	**11 29 35.7**	**0.0**
BHPC					**Sb**	**11 29 41.4**	**+0.8**
AGOC	**Agoura**	**0.32**	**241**		**Pg**	**11 29 34.6**	**-0.5**
AGOC					**Sg**	**11 29 39.6**	**-0.1**
CHFC	**Chilao Flat St**	**0.33**	**85**		**Pg**	**11 29 35.6**	**+0.2**
CHFC					**Sg**	**11 29 40.7**	**+0.5**
LEOC	**Leona Valley**	**0.34**	**17**		**Sg**	**11 29 40.6**	**+0.2**
GVRC	**Garvey Reservo**	**0.36**	**135**		**Sb**	**11 29 42.5**	**+0.7**
WTT2	**Watts, South G**	**0.38**	**158**		**Sb**	**11 29 43.9**	**+1.5**
OSI	**Osito Audit: C**	**0.40**	**322**		**Pg**	**11 29 36.8**	**+0.4**
OSI	comp=N,21μm,0.9s			IAML		11 29 44.9	
OSI	comp=E,15μm,1.2s			IAML		11 29 48.5	
OSI	**Osito Audit: C**	**0.40**	**322**		**Sb**	**11 29 42.9**	**0.0**
ALPC	**Antelope**	**0.40**	**15**		**Pg**	**11 29 36.6**	**+0.1**
ALPC					**Sg**	**11 29 42.5**	**+0.5**
BTPC	**Burnt Peak**	**0.40**	**342**		**Pg**	**11 29 36.6**	**+0.1**
BTPC					**Sg**	**11 29 42.6**	**+0.5**
JNH	**Juniper Hills**	**0.42**	**70**		**Pg**	**11 29 37.0**	**+0.2**
JNH					**Sb**	**11 29 43.2**	**-0.4**
RHC	**Rose Hills Cem**	**0.46**	**131**		**Sn**	**11 29 46.9**	**-1.3**
FOXC	**Fox Airport**	**0.47**	**20**		**Sg**	**11 29 44.0**	**-0.1**
HOLC	**Holcomb Ridge**	**0.51**	**72**		**Sb**	**11 29 46.0**	**-0.2**
DLAC	**Del Amo**	**0.53**	**149**		**Sn**	**11 29 48.8**	**-1.1**
PSRC	**Puddingstone R**	**0.56**	**112**		**Pb**	**11 29 39.6**	**-0.1**
PSRC					**Sb**	**11 29 47.3**	**-0.1**
RPV	**Rancho Palos V**	**0.56**	**178**		**Sb**	**11 29 47.4**	**-0.1**
TPO	**Tropico Hills**	**0.60**	**16**		**Pg**	**11 29 40.2**	**+0.1**
FMP	**Fort Macarthur**	**0.60**	**169**		**Pg**	**11 29 40.0**	**-0.2**
FMP					**Sg**	**11 29 48.4**	**+0.2**
FULC	**Fullerton**	**0.60**	**136**		**Sn**	**11 29 51.3**	**-0.4**
TMC	**Table Mountain**	**0.61**	**83**		**Sb**	**11 29 49.5**	**+0.2**
BREC	**Barre Substati**	**0.62**	**143**		**Sn**	**11 29 51.7**	**-0.4**
SBB	**Saddle Back Bu**	**0.63**	**52**		**Sg**	**11 29 49.1**	**+0.1**
STCC	**Santa Clara**	**0.63**	**270**		**Sn**	**11 29 51.3**	**-1.1**
THC	**Tehachapi Micr**	**0.63**	**342**		**Sb**	**11 29 50.1**	**+0.2**
BFSC	**Mount Baldy Ra**	**0.64**	**96**		**Pg**	**11 29 40.7**	**-0.2**
BFSC	**Mount Baldy Ra**	**0.64**	**96**		**Sg**	**11 29 49.6**	**+0.2**
EDW2	**Edwards Air Fo**	**0.68**	**32**		**Pg**	**11 29 41.4**	**-0.2**
EDW2					**Sg**	**11 29 50.5**	**-0.1**
CHNC	**Chino**	**0.69**	**116**		**Pg**	**11 29 42.0**	**+0.1**
CHNC					**Sb**	**11 29 52.1**	**+0.8**
LOK	**Lockwood Valle**	**0.69**	**308**		**Pb**	**11 29 42.2**	**0.0**
LOK					**Sb**	**11 29 52.7**	**+1.2**
SANC	**Santa Ana**	**0.75**	**143**		**Pb**	**11 29 43.2**	**+0.2**
BCD	**Casitas Dam**	**0.76**	**275**		**Pg**	**11 29 43.1**	**-0.1**
BCD					**Sb**	**11 29 54.5**	**+1.1**
TJR	**Tejon Ranch**	**0.77**	**340**		**Pg**	**11 29 43.3**	**0.0**
TJR					**Sb**	**11 29 54.0**	**+0.4**
MLSC	**Mira Loma**	**0.78**	**112**		**Pb**	**11 29 43.2**	**-0.3**
MLSC					**Sb**	**11 29 53.9**	**0.0**
MPI	**Mount Pinos, F**	**0.78**	**311**		**Pg**	**11 29 43.6**	**-0.1**
MPI					**Sb**	**11 29 54.8**	**+0.6**
CRNC	**Corona**	**0.84**	**121**		**Pb**	**11 29 44.2**	**-0.3**
CRNC					**Sg**	**11 29 55.7**	**+0.1**
FON	**Fontana**	**0.84**	**104**		**Pb**	**11 29 44.7**	**0.0**
FON					**Sg**	**11 29 56.1**	**+0.2**
ADO	**Adelanto Recei**	**0.86**	**73**		**Pg**	**11 29 45.1**	**+0.1**
ARVC	**Arvin**	**0.89**	**338**		**Pb**	**11 29 45.5**	**+0.1**
ARVC					**Sg**	**11 29 57.6**	**+0.4**
CIAC	**Catalina I. Ai**	**0.90**	**179**		**Pb**	**11 29 45.6**	**0.0**
CIAC					**Sg**	**11 29 57.8**	**+0.1**
HYS	**Haystack Butte**	**0.90**	**51**		**Pb**	**11 29 45.6**	**0.0**
HYS					**Sb**	**11 29 57.6**	**+0.1**
CCAC	**Calif City Air**	**0.91**	**22**		**Pb**	**11 29 45.9**	**0.0**
RVR	**Riverside**	**0.93**	**109**		**Pb**	**11 29 45.6**	**-0.4**
RVR					**Sb**	**11 29 58.0**	**-0.1**
VTV	**Victorville**	**0.94**	**74**		**Pb**	**11 29 46.4**	**0.0**
CLTC	**Calectric**	**0.94**	**103**		**Pb**	**11 29 46.5**	**+0.2**
CLTC					**Sn**	**11 29 59.9**	**-0.2**
TEJ	**El Tejon**	**0.95**	**347**		**Pb**	**11 29 46.4**	**-0.1**
TEJ					**Sg**	**11 29 59.4**	**+0.2**
SBI	**Santa Barbara**	**0.96**	**212**		**Pb**	**11 29 46.7**	**0.0**
CFSC	**Central Fire S**	**0.97**	**102**		**Pb**	**11 29 47.0**	**+0.2**
RSBC	**Riverside Bore**	**0.97**	**110**		**Pb**	**11 29 46.5**	**-0.4**
RSBC	**Riverside Bore**	**0.97**	**110**		**Pb**	**11 29 46.4**	**-0.4**
HLNC	**Highland**	**1.02**	**100**		**Pb**	**11 29 47.9**	**+0.2**
BCW	**Bitter Crk WRg**	**1.03**	**308**		**Pb**	**11 29 47.9**	**0.0**
ELS	**Elsinore Mount**	**1.06**	**128**		**Pb**	**11 29 48.0**	**-0.3**
ELS	comp=E,5μm,0.9s			IAML		11 30 04.1	
ELS	comp=N,5μm,0.7s			IAML		11 30 04.5	
DTP	**Desert Tortois**	**1.07**	**26**		**Pb**	**11 29 48.6**	**0.0**
SBC	**Santa Barbara**	**1.07**	**278**		**Pb**	**11 29 48.3**	**-0.3**
LRMC	**Laurel Mtn Rad**	**1.32**	**27**		**Pb**	**11 29 52.8**	**-0.1**
LRMC	comp=E,3μm,0.3s			IAML		11 30 11.6	
LRMC	comp=N,2μm,0.4s			IAML		11 30 13.3	
ISA	**Isabella, Lake**	**1.36**	**358**		**Pb**	**11 29 53.6**	**+0.1**
CCCA	**Chr Cany lake**	**1.50**	**35**		**Pb**	**11 29 55.6**	**-0.3**
CCCA	comp=N,6μm,0.6s			IAML		11 30 20.6	
CCCA	comp=E,4μm,0.3s			IAML		11 30 20.6	
VES	**Vestal, Richgr**	**1.62**	**341**		**Pb**	**11 29 57.3**	**-0.7**
VES	comp=E,4μm,0.9s			IAML		11 30 23.4	
VES	comp=N,5μm,0.7s			IAML		11 30 26.6	
GSC	**Goldstone, Bar**	**1.66**	**53**		**Pb**	**11 29 58.1**	**-0.6**
GSC	comp=N,4μm,0.8s			IAML		11 30 24.6	
PFO	**Pinyon Flats O**	**1.77**	**112**	Pn	**Pn**	**11 29 58.9**	**+0.4**
PFO	comp=N,78nm,0.3s,baz=296,slow=16,SNR=306			Lg	Lg	11 30 24.1	
PFO	comp=N,91nm,0.3s,baz=16,slow=15,SNR=9.3 **Pinyon Flats O**	**1.77**	**112**		**Pn**	**11 29 58.9**	**+0.4**
DPP	**Dos Picos Cty**	**1.80**	**136**	IAML		11 30 24.6	
PMD	comp=E,2μm,0.8s **Palm Desert**	**1.82**	**110**		**Pn**	**11 29 59.7**	**+0.6**
PMD	comp=N,1μm,0.6s			IAML		11 30 28.4	
MPMC	**Manual Prospec**	**1.91**	**23**		**Pn**	**11 30 01.3**	**+0.8**
BORC	**Borrego Spring**	**1.97**	**121**		**Pn**	**11 30 01.4**	**+0.4**
BORC	comp=N,1μm,0.8s			IAML		11 30 30.2	
BORC	comp=E,1μm,1.0s			IAML		11 30 36.7	
BELC	**Belle Mtn. Jos**	**2.04**	**98**		**Pn**	**11 30 03.0**	**+0.9**
QSM	**Queen of Sheba**	**2.09**	**37**		**Pn**	**11 30 03.5**	**+0.8**
QSM	comp=E,2μm,1.0s			IAML		11 30 40.1	
QSM	comp=N,1μm,0.8s			IAML		11 30 40.1	
TJX	**Tijuana**	**2.13**	**147**		**Pn**	**11 30 03.7**	**+0.5**
BAR	**Barrett**	**2.19**	**137**		**Pn**	**11 30 04.4**	**+0.3**
BAR	comp=E,1μm,0.6s			IAML		11 30 36.0	
BAR	comp=N,1μm,0.5s			IAML		11 30 40.8	
GWY	**Greenwater Val**	**2.37**	**37**		**Pn**	**11 30 07.4**	**+0.7**
GWY	comp=E,1μm,0.7s			IAML		11 30 59.8	
GWY	comp=N,756nm,0.7s			IAML		11 31 03.3	
SHOC	**Shoshone, Teco**	**2.38**	**47**		**Pn**	**11 30 08.0**	**+1.2**
PKD	**Bear Valley Ra**	**2.38**	**314**	IAML		11 30 44.1	
PKD	comp=N,882nm,1.0s			IAML		11 30 52.3	
CBX	**Cerro Bola**	**2.47**	**143**		**Pn**	**11 30 08.7**	**+0.5**
CBX	comp=N,2μm,0.8s			IAML		11 30 52.0	
FURC	**Furnace Creek,**	**2.51**	**30**		**Pn**	**11 30 09.5**	**+1.0**
FURC	comp=N,1μm,1.0s			IAML		11 31 00.5	
FURC	comp=E,2μm,1.1s			IAML		11 31 02.6	
BC3	**Big Chuckawall**	**2.55**	**104**		**Pn**	**11 30 09.9**	**+0.7**
BC3	comp=N,953nm,1.0s			IAML		11 30 54.5	
BC3	comp=E,942nm,0.9s			IAML		11 30 57.3	
MTPC	**Mountain Pass**	**2.64**	**63**		**Pn**	**11 30 11.5**	**+1.0**
MTPC	comp=E,829nm,0.5s			IAML		11 30 54.3	
MTPC	comp=N,966nm,0.6s			IAML		11 30 54.6	
IRM	**Iron Mountain**	**2.72**	**92**		**Pn**	**11 30 12.1**	**+0.6**
IRM	comp=N,1μm,1.0s			IAML		11 30 56.1	
IRM	comp=E,920nm,0.7s			IAML		11 30 58.2	
PMPB	**Monarch Peak**	**2.72**	**315**		**Pn**	**11 30 12.1**	**+0.6**
PMPB	comp=N,959nm,1.0s			IAML		11 31 02.5	
PMPB	comp=E,1μm,1.0s			IAML		11 31 20.0	
GRAC	**Grapevine Rang**	**2.82**	**18**	IAML		11 31 18.0	
GRAC	comp=N,619nm,0.9s			IAML		11 31 22.3	
HULI	comp=E,531nm,1.3s **Fort Hunter Li**	**2.87**	**307**		**Pn**	**11 30 13.5**	**0.0**
HULI	comp=E,713nm,1.4s			IAML		11 31 20.6	
HULI	comp=N,640nm,1.2s			IAML		11 31 34.5	
ESJX	**Sierra Juarez**	**3.10**	**137**	IAML		11 31 13.7	
TPNV	comp=E,482nm,0.7s **Topopah Spring**	**3.18**	**33**		**Pn**	**11 30 19.4**	**+1.5**
TPNV	comp=E,457nm,1.1s			IAML		11 31 19.9	
TPNV	comp=E,466nm,0.8s			IAML		11 31 21.4	
BLYC	**Blythe**	**3.29**	**99**	IAML		11 31 15.5	
BLYC	comp=N,561nm,0.8s			IAML		11 31 22.5	
W13A	comp=E,579nm,0.9s **Hualapai Mount**	**3.82**	**77**	IAML		11 31 33.8	
W13A	comp=N,562nm,1.0s			IAML		11 31 37.7	
LHV	comp=E,430nm,1.3s **Little Huntoon**	**3.94**	**359**		**Pn**	**11 30 29.7**	**+1.5**
S11A	**Rachel**	**3.98**	**32**	IAML		11 31 44.4	
S11A	comp=N,451nm,2.1s			IAML		11 31 56.2	
MHC	comp=E,499nm,1.1s **Mount Hamilton**	**4.00**	**320**		**Pn**	**11 30 30.6**	**+1.5**
MHC	comp=N,254nm,1.4s			IAML		11 31 41.1	
MHC	comp=E,229nm,1.0s			IAML		11 31 55.4	
NVAR	**Mina Array Bea**	**4.12**	**1**	Pn	**Pn**	**11 30 32.3**	**+1.4**
NVAR	comp=E,0.5nm,0.3s,baz=266,slow=20,SNR=13			Pg	**Pb**	**11 30 38.1**	**-2.5**
NVAR	comp=E,0.9nm,0.3s,baz=181,slow=15,SNR=14			Lg	Lg	11 31 37.1	
NVAR	comp=E,2.2nm,0.3s,baz=185,slow=31,SNR=2.1			LR	LR	11 32 23.6	
PRN	comp=E,405nm,18.6s,baz=188,slow=43 **Pahroc Range**	**4.13**	**41**		**Pn**	**11 30 33.3**	**+2.3**
PRN	comp=N,281nm,0.9s			IAML		11 31 51.7	
PRN	comp=E,328nm,0.9s			IAML		11 31 52.2	
JRSC	**Jasper Ridge**	**4.38**	**316**	IAML		11 32 04.2	
JRSC	comp=E,139nm,1.9s			IAML		11 32 21.4	
Y14A	comp=N,146nm,1.5s **Wickenburg**	**4.51**	**93**	IAML		11 31 57.9	
Y14A	comp=E,240nm,0.9s			IAML		11 32 07.6	
ELK	comp=N,316nm,1.1s **Elko**	**6.91**	**21**	Pn	**Pn**	**11 31 10.3**	**+1.1**
ELK	comp=N,0.9nm,0.3s,baz=196,slow=13			Pg	**Pb**	**11 31 25.9**	**-2.3**
ELK	comp=N,0.8nm,0.3s,baz=198,slow=8.7,SNR=6.6			Lg	Lg	11 33 05.7	
YBH	comp=N,1.0nm,0.3s,baz=105,slow=22,SNR=3.1 **Yreka Blue Hor**	**8.15**	**337**	Pn	**Pn**	**11 31 25.9**	**-0.2**
YBH	comp=N,0.3nm,0.6s,baz=100,slow=19,SNR=1.0			Lg	Lg	11 33 33.6	
YBH	baz=303,slow=22			LR	LR	11 34 47.8	
ANMO	comp=N,104nm,19.0s,baz=222,slow=40 **Albuquerque**	**9.88**	**83**	Pn	**Pn**	**11 31 51.2**	**+1.2**
ANMO	comp=N,0.1nm,0.3s,baz=262,slow=17,SNR=2.2			Lg	Lg	11 34 37.3	
PDAR	comp=N,0.2nm,0.3s,baz=173,slow=17,SNR=7.5 **Pinedale Array**	**10.93**	**37**	Pn	**Pn**	**11 32 07.0**	**+2.7**
PDAR	comp=N,0.7nm,0.8s comp=N,0.1nm,0.3s,baz=216,slow=16,SNR=6.7			LR	LR	11 36 09.6	
LPIG	comp=N,47nm,21.4s,baz=216,slow=37 comp=N,0.5nm,0.6s **La Paz**	**12.39**	**143**	LR	LR	11 36 56.4	
TXAR	comp=N,264nm,18.8s,baz=338,slow=36 **Lajitas Array**	**13.49**	**108**	LR	LR	11 37 58.0	
NEW	comp=N,134nm,18.5s,baz=290,slow=38 **Newport**	**13.98**	**4**	Pn	**Pn**	**11 32 46.1**	**+0.3**
NEW	comp=N,0.1nm,0.3s,baz=182,slow=14,SNR=1.3			LR	LR	11 38 06.1	
LDM	comp=N,70nm,18.1s,baz=186,slow=37 comp=N,0.3nm,0.4s **Libby Dam**	**14.33**	**8**	Pn	**Pn**	**11 32 52.4**	**+1.9**
AGMN	**Agassiz Nation**	**21.87**	**43**	P	**P**	**11 34 20.4**	**+0.1**
AGMN	comp=Z,24nm,1.4s			IAmb	IAmb	11 34 29.1	
ULM	**Lac du Bonnet**	**22.94**	**39**	P	**P**	**11 34 32.7**	**+1.0**
ULM	comp=Z,4.9nm,0.8s,baz=216,slow=10,SNR=11			LR	LR	11 43 44.5	
ULM	comp=Z,56nm,18.7s,baz=229,slow=37 comp=Z,4.9nm,0.8s **Lac du Bonnet**	**22.94**	**39**	P	**P**	**11 34 32.6**	**+1.0**
ULM	comp=Z,6.3nm,0.9s			IAmb	IAmb	11 34 37.6	
FFC	**Flin Flon**	**23.43**	**24**	P	**P**	**11 34 37.3**	**+0.6**
FFC	comp=Z,8.3nm,1.1s			IAmb	IAmb	11 34 45.1	
DLBC	**Dease Lake**	**25.36**	**346**	LR	LR	11 45 05.9	
SADO	comp=Z,123nm,19.1s,baz=125,slow=37 **Sadowa**	**31.77**	**59**	LR	LR	11 49 36.8	
KDAK	comp=Z,44nm,18.6s,baz=262,slow=38 **Kodiak Island**	**32.79**	**326**	LR	LR	11 46 28.6	
ILAR	comp=Z,72nm,21.1s,baz=133,slow=31 **Eielson Array**	**35.04**	**339**	P	**P**	**11 36 18.3**	**-1.7**
SCHQ	comp=Z,0.5nm,1.0s,baz=156,slow=7.1,SNR=4.6 comp=Z,0.5nm,1.0s **Schefferville**	**40.96**	**44**	LR	LR	11 53 27.8	
RES	comp=Z,56nm,19.9s,baz=275,slow=35 **Resolute Bay**	**42.05**	**9**	LR	LR	11 57 19.8	
FRB	comp=Z,48nm,20.6s,baz=90,slow=40 **Frobisher Bay**	**42.29**	**30**	LR	LR	11 55 11.9	
ROSC	comp=Z,57nm,18.0s,baz=280,slow=36 **El Rosal**	**50.26**	**116**	LR	LR	12 03 23.9	
	comp=Z,37nm,19.2s,baz=71,slow=40						
SFJD	**Kangerlussuaq**	**50.30**	**28**	LR	LR	11 59 18.9	
PETK	comp=Z,38nm,18.9s,baz=330,slow=36 **Petropavlovsk-**	**59.95**	**316**	LR	LR	12 02 44.8	
BORG	comp=Z,19nm,18.0s,baz=73,slow=33 **Borgarnes**	**62.43**	**29**	LR	LR	12 06 49.4	
TIXI	comp=Z,35nm,18.8s,baz=319,slow=36 **Tiksi**	**64.47**	**341**	LR	LR	12 09 23.0	
NOA	comp=Z,29nm,18.7s,baz=82,slow=37 **NORSAR Array B**	**76.52**	**23**	LR	LR	12 14 24.1	
HFS	comp=Z,16nm,21.1s,baz=280,slow=35 **Hagfors**	**78.01**	**22**	LR	LR	12 15 06.3	
JCJ	comp=Z,29nm,18.7s,baz=332,slow=35 **Chichijima**	**82.31**	**297**	LR	LR	12 13 44.6	
DAVOX	comp=Z,8.0nm,19.1s,baz=58,slow=32 **Davos/Dischmat**	**86.85**	**33**	LR	LR	12 22 18.8	
VRAC	comp=Z,34nm,18.4s,baz=246,slow=36 **Vranov**	**87.66**	**28**	LR	LR	12 25 29.5	
AKASG	comp=Z,16nm,18.8s,baz=320,slow=38 **Malin Array Be**	**90.67**	**20**	LR	LR	12 22 02.5	
HHC	comp=Z,17nm,20.6s,baz=222,slow=35 **Hu-ho-hao-te**	**92.19**	**324**	*e*P	**P**	**11 42 37.3**	**-0.2**
HHC	comp=Z,14nm,0.7s			pmax	pmax		
HHC	comp=Z,34nm,5.5s			pmax	pmax		
MLR	**Muntele Rosu**	**94.28**	**24**	LR	LR	12 27 23.6	
	comp=Z,34nm,18.4s,baz=358,slow=37						

NOU 30 11:35:13.8,21°67S×168°90E,h0km,MLv3.2/6,Loyalty Islands,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**0.83**	**283**	P	Pg	11 35 29.7	0.0
MARNC	**Mare, Loyalty**	**0.83**	**283**	S	Sg	11 35 40.8	+0.3
YATNC	**Mamie plateau,**	**1.91**	**258**	P	Pn	11 35 46.6	-1.0
OUENC	**Ouen Island, N**	**2.05**	**248**	P	Pn	11 35 49.3	-0.3
ONTNC	**Ouen Toro**	**2.36**	**254**	P	Pn	11 35 54.4	+0.6
NOUC	**Port Laguerre**	**2.45**	**259**	P	Pn	11 35 55.2	+0.1

WEL 30 11:36:03.0±1.4,33°S±18°×18°0W±4°3,h12km,M3.9/7, mB4.5/4,ML3.9/9,MLv4.0/7,Mw(mB)3.7/4,Error ellipse: s-maj=59.6km s-min=10.5km az=111.3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.00**	**198**	P	Pn	11 37 19.2	+1.4
WMGZ				S	Sn	11 38 14.8	-0.7
HAZ	**Te Kaha**	**5.13**	**204**	P	Pn	11 37 18.4	-1.2
PUZ	**Puketiti**	**5.28**	**199**	P	Pn	11 37 21.9	+0.2
PUZ				S	Sn	11 38 23.0	+0.5
RUGZ	**Raukumara Rang**	**5.36**	**204**	P	Pn	11 37 23.0	+0.1
RUGZ				S	Sn	11 38 25.5	+1.0
TWGZ	**Tauwhareparae**	**5.46**	**201**	P	Pn	11 37 23.6	-0.5
TWGZ				S	Sn	11 38 29.1	+2.3
CNGZ	**Carnagh Statio**	**5.68**	**198**	P	Pn	11 37 27.7	+0.5
TKGZ	**Te Karaka**	**5.74**	**200**	P	Pn	11 37 27.8	-0.1
TKGZ				S	Sn	11 38 34.8	+1.1
MWZ	**Matawai**	**5.74**	**203**	P	Pn	11 37 28.2	+0.2
MWZ				S	Sn	11 38 34.7	+0.9
URZ	**Urewera**	**5.82**	**206**	P	Pn	11 37 28.8	-0.3
URZ				S	Sn	11 38 37.1	+1.3
RIGZ	**Rimuhau**	**6.01**	**200**	P	Pn	11 37 31.4	-0.3
MUGZ	**Murupara**	**6.14**	**208**	P	Pn	11 37 33.1	-0.4

*NOU **30** 11:37:17.8,20°37S×175°11W,h159km,mb4.3/9,Tonga Islands*
*IDC **30** 11:37:21.6±3.2,20°05S×175°69W,h236km±27km,mb3.3/6, mbtmp4.1/9,Error ellipse: s-maj=25.4km s-min=17.6km az=62.0*

ISC 30 11:37:19.1±1.0,20°4S±0°1×175°5W±0°1,h200km,n17, σ2s05/16,mb3.6/6,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.77**	**304**	P	**Pn**	**11 38 19.6**	**+1.5**
MSVF	**Nonsavu**	**6.62**	**292**	P	**Pn**	**11 38 57.6**	**+3.1**
MSVF	**Nonsavu**	**6.62**	**292**	P	**Pn**	**11 38 55.4**	**+0.9**
	17nm,0.9s,baz=143,slow=10,SNR=7.3						
DZM	**Mont Dzumac**	**16.89**	**261**	P	**P**	**11 41 02.7**	**-0.3**
	3.5nm,0.9s,baz=178,slow=16,SNR=1.3						
MXZ	**Matakaoa Point**	**17.93**	**196**	P	**Pn**	**11 41 17.7**	**+1.5**
URZ	**Urewera**	**18.92**	**198**	S	**S**	**11 44 45.4**	**-3.5**
	8.7nm,0.7s,baz=137,slow=21,SNR=5.7						
CTA	**Charters Tower**	**35.81**	**264**	P	**P**	**11 43 59.0**	**-0.6**
	1.8nm,0.4s,baz=96,slow=9.8,SNR=6.0						
	1.8nm,0.4s						
ASAR	**Alice Springs**	**46.80**	**256**	P	**P**	**11 45 27.2**	**-1.8**
	1.0nm,0.6s,baz=85,slow=8.5,SNR=23						
ASAR				PcP	**PcP**	**11 46 57.2**	**-1.7**
	0.8nm,0.6s,baz=100,slow=3.9,SNR=9.6						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**46.91**	**261**	P	**P**	**11 45 27.5**	**-2.4**
	0.8nm,0.3s,baz=96,slow=7.4,SNR=52						
WRA				PcP	**PcP**	**11 46 57.9**	**-1.4**
	0.4nm,0.5s,baz=100,slow=3.0,SNR=2.0						
	0.8nm,0.3s						
VNDA	**Vanda**	**58.24**	**186**	P	**P**	**11 46 54.6**	**+2.6**
	0.7nm,0.7s,baz=10,slow=4.2,SNR=5.5						
	0.7nm,0.7s						
QSPA	**South Pole Qui**	**69.68**	**180**	P	**P**	**11 48 08.6**	**+1.7**
	1.8nm,0.7s,baz=33,slow=0.9,SNR=11						
	1.8nm,0.7s						
NVAR	**Mina Array Bea**	**79.37**	**42**	P	**P**	**11 49 01.2**	**-1.9**
	0.2nm,0.5s,baz=220,slow=6.2,SNR=1.9						
	0.2nm,0.5s						
H03S2	**Juan Fernandez**	**84.14**	**124**	T	T	13 22 42.8	
	baz=249,slow=75,SNR=14						
H03S1	**Juan Fernandez**	**84.15**	**124**	T	T	13 22 41.5	
	baz=249,slow=75,SNR=13						
H03S3	**Juan Fernandez**	**84.15**	**124**	T	T	13 22 40.0	
	baz=249,slow=75,SNR=15						
BRTR	**Keskin Array B**	**148.45**	**314**	PKPbc	**PKPdf**	**11 56 38.8**	**+0.2**
	0.2nm,0.5s,baz=39,slow=4.0,SNR=1.9						
GERES	**GERESS Array B**	**150.66**	**348**	PKPbc	**PKPdf**	**11 56 42.3**	**+0.5**
	0.3nm,0.4s,baz=0.7,slow=7.8,SNR=3.5						

WEL 30 11:39:50.4±1.5,32°S±25°×18°0E±4°5,h453km±50km, M3.8/7,mB4.1/5,ML4.0/9,MLv4.2/7,Mw(mB)3.1/5,Error ellipse: s-maj=64.5km s-min=20.0km az=114.7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.54**	**192**	P	P	11 41 21.4	+1.4
HAZ	**Te Kaha**	**5.61**	**197**	P	P	11 41 21.2	+0.6
RUGZ	**Rauk

s-min=41.5km az=92.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.49**	**182**	Pn	Pn	11 45 14.0	+0.4
	30nm,0.4s,baz=3.5,slow=4.9,SNR=23						
PMG				Sn	Sn	11 45 53.2	-2.5
	6.8nm,0.3s,baz=188,slow=22,SNR=6.5						
WRA	**Warramunga Arr**	**18.80**	**221**	P	P	11 48 38.8	-0.5
	0.3nm,0.3s,baz=42,slow=12,SNR=8.4						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**21.87**	**215**	P	P	11 49 12.4	-0.2
	0.9nm,0.5s,baz=50,slow=8.4,SNR=19						
	0.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.37**	**238**	P	P	11 49 38.4	+0.3
	3.3nm,0.6s,baz=49,slow=9.6,SNR=10.0						
	3.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**30.87**	**38**	T	T	12 23 15.2	
	baz=220						
H11S2	**WAKE ISLAND Hy**	**30.88**	**38**	T	T	12 23 19.2	
	baz=220						
H11S1	**WAKE ISLAND Hy**	**30.89**	**38**	T	T	12 23 19.1	
	baz=220						
TORD	**Torodi Ar. Bea**	**145.34**	**285**	PKPbc	PKPbc	12 03 57.9	-0.9
	0.3nm,0.5s,baz=74,slow=4.5,SNR=5.1						

*AEIC **30** 11:46:14.8±2.4, 54.˚61N±0.˚05×161.˚05W±0.˚05, h26km±5km, Error ellipse: s-maj=7.7km s-min=4.0km az=189.0*

*IDC **30** 11:46:16.0±1.2, 55.˚87N×162.˚05W, h0km, mb3.7/11, mbtmp3.6/14, ML3.3/2, Error ellipse: s-maj=30.9km s-min=18.3km az=174.0*

*NEIC **30** 11:46:16.6±1.7, 54.˚69N±0.˚04×161.˚11W±0.˚05, h47km±8km, mb3.5/8, ML3.6/24, ML3.4(AEIC), Error ellipse: s-maj=6.5km s-min=4.1km az=198.0*

ISC 30 11:46:16.3±1.1, 54.˚71N±0.˚06×161.˚09W±0.˚04, h49km±10km, n111, σ1§01/113, mb3.8/11, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.63**	**315**		**Pn**	**11 46 27.9**	**-1.2**
DOL					**Sn**	**11 46 37.3**	**-1.0**
SDPT	**Sand Point**	**0.73**	**29**		**Pn**	**11 46 30.4**	**+0.1**
SDPT	**Sand Point**	**0.73**	**29**		**Sn**	**11 46 41.1**	**+0.5**
SDPT	**Sand Point**	**0.73**	**29**	IAML		11 46 41.6	
	comp=E,13µm,0.3s						
SDPT				IAML		11 46 41.6	
	comp=N,7µm,0.6s						
HAG	**Hague Volcano**	**0.77**	**322**		**Pn**	**11 46 30.6**	**-0.3**
PS4A	**Pavlof South-4**	**0.78**	**325**		**Pn**	**11 46 30.6**	**-0.4**
PS4A					**Sn**	**11 46 41.8**	**+0.1**
PVV	**Pavlof Volcano**	**0.78**	**329**		**Pn**	**11 46 30.7**	**-0.3**
DT1	**Dutton Round H**	**0.80**	**300**		**Pn**	**11 46 30.1**	**-1.1**
DT1					**Sn**	**11 46 41.0**	**-1.2**
DTNA	**Dutton South F**	**0.80**	**304**		**Pn**	**11 46 30.7**	**-0.7**
DTNA					**Sn**	**11 46 41.6**	**-0.7**
PS1A	**Pavlof South-1**	**0.81**	**332**		**Pn**	**11 46 31.2**	**-0.2**
PS1A					**Sn**	**11 46 42.8**	**+0.4**
CNBA	**Chernabura Isl**	**0.87**	**82**		**Pn**	**11 46 31.1**	**-1.2**
CNBA	**Chernabura Isl**	**0.87**	**82**		**Sn**	**11 46 42.2**	**-1.7**
PN7A	**Pavlof North-7**	**0.89**	**324**		**Pn**	**11 46 32.6**	**-0.1**
ISNN	**Isanotski Nort**	**1.56**	**276**		**Pn**	**11 46 41.9**	**+0.2**
ISNN					**Sn**	**11 47 02.0**	**+1.2**
VNKR	**Veniaminof 5**	**1.65**	**36**		**Pn**	**11 46 43.8**	**+1.0**
SSBA	**Shishaldin**	**1.76**	**273**		**Pn**	**11 46 44.5**	**+0.1**
SSBA					**Sn**	**11 47 06.8**	**+1.1**
VNSS	**Veniaminof 8**	**1.78**	**31**		**Pn**	**11 46 45.8**	**+1.0**
S14K	**Fog Glacier**	**1.80**	**28**		**Pn**	**11 46 46.3**	**+1.3**
VNFG	**Fog Glacier, M**	**1.80**	**28**		**Pn**	**11 46 47.2**	**+2.2**
VNFG	**Fog Glacier, M**	**1.80**	**28**		**Sn**	**11 47 08.9**	**+2.2**
VNFG	**Fog Glacier, M**	**1.80**	**28**		**Pn**	**11 46 46.4**	**+1.4**
VNFG	**Fog Glacier, M**	**1.80**	**28**	IAML		11 47 28.6	
	comp=N,899nm,0.6s						
ANPB	**Aniakchak Plen**	**2.63**	**36**		**Pn**	**11 46 57.3**	**+1.0**
AKSA	**Akutan Strait**	**2.75**	**260**		**Pn**	**11 46 58.9**	**+1.0**
AKSA					**Sn**	**11 47 31.7**	**+1.8**
AKUT	**Akutan**	**2.80**	**260**	Pn	**Pn**	**11 46 59.4**	**+0.8**
AKUT				IAML		11 47 45.2	
	comp=E,110nm,0.4s						
AKUT				IAML		11 47 47.1	
	comp=N,119nm,0.7s						
AHB	**Akutan Harbor**	**2.83**	**260**		**Pn**	**11 46 59.5**	**+0.5**
AHB					**Sn**	**11 47 33.5**	**+1.6**
AKBBA	**Akutan Broad B**	**2.90**	**260**		**Pn**	**11 47 00.7**	**+0.7**
AKGG	**Akutan Green G**	**2.91**	**262**		**Pn**	**11 47 00.7**	**+0.6**
UNV	**Unalaska Valle**	**3.29**	**257**	Pn	**Pn**	**11 47 05.8**	**+0.5**
UNV	**Unalaska Valle**	**3.29**	**257**		**Sn**	**11 47 42.8**	**-0.4**
MNAT	**Makushin Natee**	**3.38**	**258**		**Pn**	**11 47 06.6**	**0.0**
MNAT					**Sn**	**11 47 46.2**	**+0.7**
MREP	**Makushin Rep't**	**3.44**	**257**		**Pn**	**11 47 07.5**	**+0.1**
MGOD	**Makushin Gods**	**3.52**	**257**		**Pn**	**11 47 08.9**	**+0.4**
MGOD					**Sn**	**11 47 49.4**	**+0.6**
MAPS	**Pakushin South**	**3.55**	**258**		**Pn**	**11 47 09.0**	**+0.1**
MAPS					**Sn**	**11 47 50.2**	**+0.6**
SII	**Sitkinak Islan**	**4.33**	**62**	Pn	**Pn**	**11 47 20.5**	**+1.0**
SII				IAML		11 48 40.6	
	comp=N,106nm,0.6s						
SII				IAML		11 48 41.2	
	comp=E,109nm,0.7s						
O15K	**Ungalikthiuk R**	**4.53**	**8**	Pn	**Pn**	**11 47 22.8**	**+0.5**
O15K				IAML		11 48 46.7	
	comp=E,33nm,1.2s						
O15K				IAML		11 48 53.9	
	comp=N,28nm,0.9s						
O14K	**Tigyukauivet M**	**4.55**	**359**	Pn	**Pn**	**11 47 23.4**	**+0.8**
O14K				IAML		11 49 03.3	
	comp=N,32nm,1.0s						
P16K	**Nushagak River**	**4.65**	**20**	Pn	**Pn**	**11 47 25.4**	**+1.5**
MGLS	**Mageik Landsli**	**4.75**	**41**		**Pn**	**11 47 26.2**	**+0.8**
OHAK	**Old Harbor**	**5.05**	**57**	Pn	**Pn**	**11 47 29.1**	**-0.3**
OHAK				IAML		11 49 01.9	
	comp=N,42nm,1.1s						
OHAK				IAML		11 49 03.2	
	comp=E,39nm,0.9s						
O16K	**Kokwok River B**	**5.16**	**17**		**Pn**	**11 47 32.1**	**+1.2**
O16K				IAML		11 49 11.1	
	comp=E,16nm,0.7s						
N14K	**Kuskokwak Cree**	**5.24**	**357**		**Pn**	**11 47 32.6**	**+0.7**
N14K				IAML		11 48 54.3	
	comp=N,54nm,1.5s						
N15K	**Kwethluk River**	**5.50**	**5**		**Pn**	**11 47 36.2**	**+0.7**
O17K	**Koliganek Bris**	**5.52**	**21**		**Pn**	**11 47 36.3**	**+0.5**
KDAK	**Kodiak Island**	**5.65**	**54**	Pn	**Pn**	**11 47 37.1**	**-0.6**
	comp=N,0.5nm,0.3s,baz=212,slow=4.3,SNR=56						
KDAK				Sn	**Sn**	**11 48 38.8**	**-2.3**
	comp=N,0.5nm,0.3s,baz=352,slow=15,SNR=1.3						
KDAK				Lg	Lg	11 49 00.2	
	comp=N,1.4nm,0.3s,baz=63,slow=10,SNR=6.2						
	comp=N,1.5nm,0.2s						
KDAK	**Kodiak Island**	**5.65**	**54**	Pn	**Pn**	**11 47 37.8**	**+0.1**
SPIA	**Saint Paul Isl**	**5.71**	**299**	Pn	**Pn**	**11 47 39.2**	**+0.8**
M13K	**Dall Lake**	**5.85**	**349**		**Pn**	**11 47 41.4**	**+1.1**
Q19K	**Cape Douglas,**	**5.88**	**41**	Pn	**Pn**	**11 47 42.4**	**+1.6**
N16K	**Nishlik Lake**	**5.91**	**11**		**Pn**	**11 47 42.1**	**+0.8**
M14K	**Bethel**	**6.08**	**356**		**Pn**	**11 47 43.8**	**+0.4**
N17K	**Nushagak Hills**	**6.20**	**18**		**Pn**	**11 47 45.6**	**+0.5**
M11K	**Mekoryuk**	**6.32**	**336**		**Pn**	**11 47 47.1**	**+0.3**
M16K	**Timber Creek**	**6.43**	**9**		**Pn**	**11 47 49.5**	**+1.2**
L14K	**Kuka Creek**	**6.70**	**353**		**Pn**	**11 47 52.9**	**+0.9**
M17K	**Holitna River**	**6.98**	**15**		**Pn**	**11 47 56.5**	**+0.6**
L16K	**Owhat River**	**7.07**	**6**		**Pn**	**11 47 57.5**	**+0.5**
CNPM	**China Poot**	**7.21**	**44**	Pn	**Pn**	**11 48 00.1**	**+1.1**
K13K	**Kusilvak Mount**	**7.48**	**347**		**Pn**	**11 48 03.2**	**+0.5**
L17K	**Donlin**	**7.59**	**10**		**Pn**	**11 48 03.8**	**-0.4**
K15K	**Wolf Creek Mou**	**7.61**	**358**		**Pn**	**11 48 05.3**	**+0.8**
L18K	**Granite Mounta**	**7.87**	**15**		**Pn**	**11 48 08.0**	**-0.1**
M19K	**Big River Lodg**	**8.02**	**23**		**Pn**	**11 48 12.0**	**+1.8**
K17K	**Iditarod**	**8.16**	**9**		**Pn**	**11 48 12.3**	**+0.3**
J14K	**Nanvaranak Lak**	**8.16**	**352**		**Pn**	**11 48 12.4**	**+0.4**
L19K	**White Mountain**	**8.17**	**21**		**Pn**	**11 48 12.6**	**+0.5**
M20K	**Styx River**	**8.31**	**27**	Pn	**Pn**	**11 48 16.7**	**+2.5**
J16K	**Anvik River**	**8.60**	**1**		**Pn**	**11 48 17.9**	**-0.2**
J17K	**VABM Dome**	**8.77**	**6**		**Pn**	**11 48 19.7**	**-0.6**
P23K	**Montague Islan**	**9.09**	**49**		**Pn**	**11 48 24.4**	**-0.3**
PWL	**Port Wells**	**9.17**	**43**	Pn	**Pn**	**11 48 26.6**	**+0.8**
HIN	**Hinchinbrook I**	**9.68**	**48**		**Pn**	**11 48 33.3**	**+0.5**
GLI	**Glacier Island**	**9.68**	**45**		**Pn**	**11 48 32.0**	**-0.8**
J19K	**Poorman**	**9.71**	**14**		**Pn**	**11 48 33.4**	**+0.1**
FID	**Port Fidalgo**	**9.87**	**46**		**Pn**	**11 48 34.2**	**-1.2**
CAST	**Castle Rocks**	**9.87**	**24**	Pn	**Pn**	**11 48 37.0**	**+1.5**
J20K	**Nowinta River**	**10.12**	**18**		**Pn**	**11 48 39.7**	**+0.9**
SCM	**Sheep Creek Mo**	**10.15**	**40**		**Pn**	**11 48 40.2**	**+0.9**
KAIM	**Kayak Island**	**10.40**	**53**		**Pn**	**11 48 43.5**	**+0.8**
KLU	**Klutina**	**10.49**	**44**		**Pn**	**11 48 44.4**	**+0.4**
F15K	**North Star Dit**	**11.17**	**352**	Pn	**Pn**	**11 48 54.4**	**+1.3**
GLB	**Gilahina Butte**	**11.34**	**47**		**Pn**	**11 48 55.8**	**+0.4**
VRDI	**Verde Repeater**	**11.39**	**48**		**Pn**	**11 48 56.2**	**-0.1**
ILAR	**Eielson Array**	**12.33**	**29**	Pn	Pn	11 48 59.3	-10
	comp=N,0.1nm,0.6s,baz=220,slow=14,SNR=1.5						
M29M	**Somme Creek**	**14.05**	**47**		**Pn**	**11 49 32.6**	**+0.1**
L29M	**L29M**	**14.46**	**45**	Pn	**Pn**	**11 49 39.6**	**+1.7**
L29M				P	**P**	**11 49 46.9**	**+3.4**
I28M	**Miner Creek**	**14.97**	**36**	Pn	**Pn**	**11 49 45.5**	**+0.9**
I28M				IAmb	IAmb	11 49 53.9	
	comp=Z,1.5nm,0.8s						
J30M	**Hart River**	**15.82**	**42**	Pn	**Pn**	**11 49 56.4**	**+0.8**
I30M	**Mount Dempster**	**16.11**	**39**		**P**	**11 50 01.3**	**-0.6**
I30M				IAmb	IAmb	11 50 21.1	
	comp=Z,3.5nm,0.7s						
EPYK	**Eagle Plains**	**16.59**	**36**		**P**	**11 50 07.3**	**+0.2**
EPYK				IAmb	IAmb	11 50 25.6	
	comp=Z,2.9nm,0.8s						
H31M	**Peel River**	**17.14**	**39**		**P**	**11 50 14.2**	**+1.1**
H31M				IAmb	IAmb	11 50 18.9	
	comp=Z,4.9nm,1.1s						
MMPY	**Sheldon Lake,**	**17.27**	**51**		**P**	**11 50 15.5**	**+0.8**
INK	**Inuvik**	**18.68**	**32**	P	**P**	**11 50 28.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=273,slow=5.8,SNR=6.8						
	comp=Z,1.4nm,0.8s						
PETK	**Petropavlovsk-**	**24.09**	**283**	P	**P**	**11 51 26.5**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=75,slow=13,SNR=6.4						
	comp=Z,1.3nm,0.5s						
NVAR	**Mina Array Bea**	**33.01**	**102**	P	P	11 52 59.3	+12
	comp=Z,0.1nm,0.3s,baz=314,slow=10,SNR=1.8						
	comp=Z,0.1nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**42.54**	**228**	T	T	12 39 03.3	
	baz=27,slow=76,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	**42.55**	**228**	T	T	12 39 03.9	
	baz=27,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**42.56**	**228**	T	T	12 39 06.8	
	baz=27,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**43.71**	**227**	T	T	12 40 35.1	
	baz=27,slow=75,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**43.72**	**227**	T	T	12 40 32.3	
	baz=27,slow=75,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**43.73**	**227**	T	T	12 40 32.2	
	baz=27,slow=75,SNR=3.5						
TXAR	**Lajitas Array**	**47.95**	**98**	P	P	11 55 03.0	+13
	comp=Z,0.2nm,0.6s,baz=306,slow=3.9,SNR=3.5						
	comp=Z,0.2nm,0.6s						
KSRS	**Korea Array**	**49.94**	**281**	P	**P**	**11 55 04.7**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=58,slow=9.1,SNR=2.3						
	comp=Z,0.8nm,0.8s						
FINES	**FINESS Array B**	**64.05**	**356**	P	**P**	**11 56 43.4**	**-1.0**
	comp=Z,1.7nm,0.9s,baz=7.1,slow=7.7,SNR=3.7						
	comp=Z,1.7nm,0.9s						
HFS	**Hagfors**	**65.43**	**3**	P	**P**	**11 56 52.7**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=25,slow=4.9,SNR=6.0						
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**65.60**	**318**	P	**P**	**11 56 53.4**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=45,slow=6.4,SNR=4.6						
	comp=Z,0.4nm,0.6s						
EKA	**Eskdalemuir Ar**	**68.83**	**13**	P	**P**	**11 57 15.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=355,slow=5.2,SNR=1.7						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**74.60**	**353**	P	**P**	**11 57 49.0**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=11,slow=6.1,SNR=5.2						
	comp=Z,1.4nm,0.5s						
AKASG	**Malin Array Be**	**74.60**	**353**	IAmb	IAmb	11 57 58.1	
	comp=Z,4.5nm,1.5s						
ESDC	**Sonseca Array**	**83.96**	**18**	P	**P**	**11 58 41.5**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=339,slow=4.2,SNR=4.2						
	comp=Z,0.6nm,0.8s						
BRTR	**Keskin Array B**	**85.09**	**349**	P	**P**	**11 58 46.9**	**0.0**
	comp=Z,0.5nm,0.7s,baz=90,slow=3.7,SNR=4.0						
	comp=Z,0.5nm,0.7s						

*IDC **30** 13:09:50.0±0.6, 13.˚95N×93.˚55W, h0km, mb4.5/19, mbtmp4.5/24, ML4.0/4, MS3.7/42, Error ellipse: s-maj=22.9km s-min=11.8km az=45.0*

*NEIC **30** 13:09:51.6±2.3, 13.˚94N±0.˚06×93.˚59W±0.˚05, h10km±1km, mb4.8/341, Md4.8/86(MEX), Error ellipse: s-maj=11.2km s-min=7.9km az=205.0*

*GFZ **30** 13:09:53.8±0.2, 14.˚N±4.˚×9.˚3W±.˚, h10km, M4.9/25, mb4.7/25*

*MEX **30** 13:09:53.1±1.2, 13.˚84N×93.˚68W, h16km±37km, MD4.8*

*GCMT **30** 13:09:54.6±0.4, 14.˚07N±0.˚03×93.˚73W±0.˚03, h14km±1km, MW4.8/99, Moment Tensor Solution. s21,c21; s99,c132; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.18±.13; Mθθ1.06±.08; Mφφ1.12±.08; Mrθ-0.37±.18; Mθφ-0.77±.04; Mφr0.79±.19; Best double couple: Mo2.20000×10^16 NP1: φ=311.00000°, δ=34.00000°, λ=-100.00000°. NP2: φ=143.00000°, δ=57.00000°, λ=-84.00000°. Principal axes: T 2.0270, Plg11.0000°, Azm228.0000°; N 0.3460, Plg5.0000°, Azm319.0000°; P -2.3730, Plg77.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SNET **30** 13:09:55.5±2.4, 14.˚12N×93.˚40W, h110km, ML4.3, ML4.8, Presumed earthquake*

*GCG **30** 13:09:55.1±1.1, 13.˚94N×93.˚26W, h5km±19km, MD5.3, ML4.7, Presumed earthquake*

*CATAC **30** 13:09:56.3±0.5, 14.˚N±6.˚×9.˚3W±.˚, h75km±15km, M4.9/25, mb5.3/8, mB5.3/9, MLv4.9/25, Mw(mB)4.7/9, Error ellipse: s-maj=13.2km s-min=5.7km az=25.3, confirmed*

ISC 30 13:09:52.6±2.0, 14.˚03N±0.˚04×93.˚56W±0.˚04, h15km±11km, n699, σ1§64/593, mb4.8/176, MS3.8/40, 5C-6D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.53**	**55**	*i* P	**Pn**	**13 10 19.5**	**+0.1**
THIG				*e*S	**Sg**	**13 10 38.7**	**-3.3**
THIG		**1.53**	**55**		**Pn**	**13 10 19.5**	**+0.1**
THIG					**Sg**	**13 10 38.7**	**-3.3**
SMCA	**Catarina**	**1.66**	**60**	*i* P	**Pn**	**13 10 21.2**	**+0.1**
PATR	**El Naranjo**	**1.68**	**50**	*i* P	**Pn**	**13 10 21.2**	**-0.4**
PATR				*i* S	**Sb**	**13 10 43.2**	**-1.3**
CHUJ	**Union Juarez**	**1.76**	**53**	*i* P	**Pn**	**13 10 22.5**	**-0.3**
CHUJ				*i* S	**Sb**	**13 10 44.7**	**-2.1**
PAVE	**Pavencul**	**1.77**	**49**	*i* P	**Pn**	**13 10 22.8**	**-0.1**
PAVE				*i* S	**Sb**	**13 10 45.7**	**-1.4**
PAVE	**Pavencul**	**1.77**	**49**		**Pn**	**13 10 22.8**	**-0.1**
PAVE					**Sb**	**13 10 45.7**	**-1.4**
RTAL	**Retalhuleu**	**1.88**	**74**	P	**Pn**	**13 10 24.7**	**+0.5**
RTAL	**Retalhuleu**	**1.88**	**74**		**Pn**	**13 10 24.5**	**+0.4**
RTAL				Sn	**Sn**	**13 10 46.6**	**-1.0**
RTAL	**Retalhuleu**	**1.88**	**74**	↑*i* P	**Pn**	**13 10 24.6**	**+0.4**
RTAL				*e*S	**Sg**	**13 10 49.8**	**-3.2**
QUEO	**Labor Ovalle**	**2.15**	**67**	*i* P	**Pn**	**13 10 28.8**	**+0.6**
QUEO				IAML		13 11 01.0	
	comp=E,6µm,0.6s						
STG5	**El Palmar, Qui**	**2.18**	**80**	*i* P	**Pn**	**13 10 26.2**	**-2.2**
STG8	**El Palmar, Qui**	**2.19**	**79**	*i* P	**Pn**	**13 10 26.4**	**-2.2**
STG8				IAML		13 10 57.6	
	comp=N,5µm,0.3s						
HUEH	**Huehuetenango**	**2.37**	**57**	P	**Pn**	**13 10 32.8**	**+1.7**
HUEH				S	**Sb**	**13 11 03.0**	**-1.3**
HUEH	**Huehuetenango**	**2.37**	**57**		**Pn**	**13 10 32.8**	**+1.7**
HUEH	**Huehuetenango**	**2.37**	**57**	*i* P	**Pn**	**13 10 32.8**	**+1.7**
HUEH				IAML		13 11 10.2	
	comp=E,6µm,1.0s						
HUEH	**Huehuetenango**	**2.37**	**57**	↑*i* P	**Pn**	**13 10 32.6**	**+1.5**
HUEH				*e*S	**Sb**	**13 11 03.9**	**-0.5**
TGIG		**2.77**	**9**	*i* P	**Pn**	**13 10 37.7**	**+1.2**
TGIG				*e*S	**Sn**	**13 11 09.9**	**+0.2**
TGIG		**2.77**	**9**		**Pn**	**13 10 37.7**	**+1.2**
TGIG					**Sn**	**13 11 09.9**	**+0.2**
FG8	**Yepocapa, Chim**	**2.92**	**85**	*i* P	Pn	13 10 33.9	-4.7
FG16	**Alotenango, Sa**	**2.97**	**85**	*i* P	**Pn**	**13 10 35.1**	**-4.3**
HUIG	**Huatulco**	**3.01**	**305**	*e*P	Pn	13 10 36.7	-3.0
HUIG				*e*S	Sn	13 11 06.5	-9.1
HUIG	**Huatulco**	**3.01**	**305**		Pn	13 10 36.7	-3.0
HUIG					Sn	13 11 06.5	-9.1
PCG5	**San Vicente Pa**	**3.10**	**86**	*i* P	**Pn**	**13 10 37.7**	**-3.4**
PCG5				*i* S	Sn	13 11 08.2	-10
APG	**El Apazote**	**3.15**	**72**	Pn	**Pn**	**13 10 43.2**	**+1.3**
	comp=E,8.9nm,0.3s,baz=198,slow=13,SNR=198						
APG				Sn	**Sn**	**13 11 20.1**	**+0.7**
	comp=E,2.1nm,0.3s,baz=217,slow=17,SNR=7.1						
	comp=E,40nm,0.6s						
APG	**El Apazote**	**3.15**	**72**	*i* P	**Pn**	**13 10 43.4**	**+1.5**
CMIG	**Matias Romero**	**3.30**	**337**	Pn	**Pn**	**13 10 43.4**	**-0.4**
	comp=E,12nm,0.3s,baz=156,slow=10,SNR=131						
CMIG				Sn	**Sn**	**13 11 18.5**	**-4.3**
	comp=E,75nm,0.3s,baz=139,slow=14,SNR=30						
CMIG				LR	LR	13 12 05.1	
	comp=E,1µm,18.7s,baz=178,slow=40						
	comp=E,28nm,0.3s						
FAME	**Alcaldia de Sa**	**3.45**	**93**	P	**Pn**	**13 10 45.1**	**-0.7**
FAME				S	**Sn**	**13 11 23.0**	**-3.3**
SLOZ	**Alcaldia de Sa**	**3.67**	**90**	P	**Pn**	**13 10 49.7**	**+0.8**
SLOZ	**Alcaldia de Sa**	**3.67**	**90**	*e*P	**Pn**	**13 10 49.2**	**+0.4**
SLOZ				*e*S	**Sn**	**13 11 31.6**	**-0.3**
NUBE	**Las Nubes**	**3.67**	**91**	P	**Pn**	**13 10 49.9**	**+0.9**
NUBE	**Las Nubes**	**3.67**	**91**	*e*P	**Pn**	**13 10 49.0**	**0.0**
NUBE				*e*S	**Sn**	**13 11 29.6**	**-2.6**
RBDL	**Robledal**	**3.76**	**88**	↑*i* P	**Pn**	**13 10 50.9**	**+0.7**
RBDL				*e*S	**Sn**	**13 11 34.8**	**+0.4**
RTR	**El Retiro**	**3.80**	**91**	*e*P	**Pn**	**13 10 51.8**	**+0.9**
CEVE	**Cerro Verde**	**3.83**	**92**	P	**Pn**	**13 10 51.7**	**+0.5**
CEVE	**Cerro Verde**	**3.83**	**92**	*e*P	**Pn**	**13 10 51.5**	**+0.2**
CEVE				*e*S	**Sn**	**13 11 34.1**	**-2.0**
SBLS	**San Blas**	**3.83**	**92**	*e*P	**Pn**	**13 10 51.9**	**+0.6**
SBLS				*e*S	**Sn**	**13 11 34.8**	**-1.3**
SNJE	**San Jose**	**3.84**	**92**	*e*P	**Pn**	**13 10 51.8**	**+0.4**
SNJE				*e*P	Pb	13 10 52.4	-7.9
SNJE				*e*S	**Sn**	**13 11 35.8**	**-0.7**
UNIC	**Universidad Ca**	**3.90**	**90**	*e*P	**Pn**	**13 10 51.5**	**-0.5**
PEIG	**Puerto Escondi**	**3.98**	**300**	*e*P	Pn	13 10 50.5	-2.7
PEIG				*e*S	Sn	13 11 28.4	-11
PEIG	**Puerto Escondi**	**3.98**	**300**		Pn	13 10 50.5	-2.7
PEIG					Sn	13 11 28.4	-11
JAYA	**Jayaque - finc**	**4.01**	**95**	P	**Pn**	**13 10 52.7**	**-0.9**
JAYA				S	**Sn**	**13 11 36.8**	**-3.7**
JAYA	**Jayaque - finc**	**4.01**	**95**	*e*P	**Pn**	**13 10 53.6**	**-0.1**
JAYA				*e*S	**Sn**	**13 11 37.7**	**-2.8**
CEDA	**San Andres**	**4.05**	**93**	*e*P	**Pn**	**13 10 55.2**	**+1.1**
CEDA				*e*S	**Sn**	**13 11 41.1**	**-0.2**
MTO3	**Montecristo**	**4.09**	**84**	P	**Pn**	**13 10 55.1**	**+0.2**
MTO3	**Montecristo**	**4.09**	**84**		**Pn**	**13 10 55.0**	**+0.2**
MTO3	**Montecristo**	**4.09**	**84**	*e*P	**Pn**	**13 10 55.1**	**+0.2**
ESQI	**Esquipulas**	**4.12**	**82**	P	**Pn**	**13 10 55.9**	**+0.7**
ESQI	**Esquipulas**	**4.12**	**82**		**Pn**	**13 10 56.0**	**+0.8**
ESQI	**Esquipulas**	**4.12**	**82**	*i* P	**Pn**	**13 10 55.9**	**+0.7**
ESQI				*e*S	**Sn**	**13 11 40.4**	**-2.8**
PMON	**Piamonte**	**4.14**	**94**	P	**Pn**	**13 10 56.0**	**+0.7**
PMON	**Piamonte**	**4.14**	**94**	*e*P	**Pn**	**13 10 56.0**	**+0.7**
PMON				*e*S	**Sn**	**13 11 42.2**	**-1.3**
BOQS	**Boqueron**	**4.17**	**93**	*e*P	**Pn**	**13 10 56.5**	**+0.6**
UEES	**Universidad Ev**	**4.21**	**94**	‖*e*P	**Pn**	**13 10 57.1**	**+0.8**
UEES				*e*S	**Sn**	**13 11 43.6**	**-1.7**
NEUV	**Arroyo Zacate**	**4.25**	**330**	*e*P	**Pn**	**13 10 56.5**	**-0.4**
NEUV				*e*S	Sn	13 11 36.1	-10
NEUV	**Arroyo Zacate**	**4.25**	**330**		**Pn**	**13 10 56.5**	**-0.4**
NEUV					Sn	13 11 36.1	-10
OXLC	**Oaxaca**	**4.28**	**315**	*e*P	**Pn**	**13 10 55.4**	**-1.9**
OXLC				*e*S	**Sn**	**13 11 42.8**	**-4.3**
OXLC	**Oaxaca**	**4.28**	**315**		**Pn**	**13 10 55.4**	**-1.9**
OXLC					**Sn**	**13 11 42.8**	**-4.3**
LOMA	**Loma Larga**	**4.28**	**95**	*e*P	**Pn**	**13 10 57.9**	**+0.5**
LOMA				*e*S	**Sn**	**13 11 45.3**	**-1.9**
LOMA				IAML		13 11 51.4	
	comp=Z,520nm,0.4s						
OXIG	**Oaxaca**	**4.

CNGN Cerro Negro 6.85 102 P Pn 13 11 33.2 +0.6
PBCV Popocatepetl 6.88 317 eP Pn 13 11 35.8 +2.6
PBCV eS Sn 13 12 52.5 +1.1
MACN El Madrono 6.88 102 P Pn 13 11 33.6 +0.5
PPCU Popocatapetl 6.93 316 eP Pn 13 11 34.8 +0.7
PPCU eS Sn 13 12 52.9 -0.1
PBXN Popocatepetl 6.96 316 eP Pn 13 11 35.1 +0.7
PBXN eS Sn 13 12 57.5 +3.9
PBPN Popocatepetl 6.96 316 eP Pn 13 11 35.5 +0.9
PBPN eS Sn 13 12 55.6 +1.8
PPM Popocatepetl 6.98 317 eP Pn 13 11 36.7 +1.9
PPM eS Sn 13 12 53.6 -0.6
PPIG Popocatepetl 6.98 317 Pn 13 11 36.7 +1.9
PPIG Sn 13 12 53.6 -0.6
MEIG Mezcala 7.00 304 eP Pn 13 11 34.8 +0.2
MEIG eS Sn 13 12 44.6 -9.4
MEIG Mezcala 7.00 304 Pn 13 11 34.8 +0.2
MEIG Sn 13 12 44.6 -9.4
COPN Copaltepe 7.03 104 P Pn 13 11 35.3 +0.2
LIMN Finca el Limon 7.06 97 P Pn 13 11 35.8 +0.2
MOM2 El Cardon 7.07 102 P Pn 13 11 36.1 +0.5
CAIG El Cayaco 7.13 296 eP Pn 13 11 34.8 -1.5
CAIG eS Sn 13 12 44.2 -13
CAIG El Cayaco 7.13 296 Pn 13 11 34.8 -1.5
CAIG Sn 13 12 44.2 -13
YAIG Yautepec 7.14 313 eP Pn 13 11 38.7 +2.0
YAIG eS Sn 13 12 47.5 -10
YAIG Yautepec 7.14 313 Pn 13 11 38.7 +2.0
YAIG Sn 13 12 47.5 -10
PLIG Platanillo 7.17 308 eP Pn 13 11 38.1 +1.0
PLIG eS Sn 13 12 50.2 -8.1
PLIG Platanillo 7.17 308 Pn 13 11 38.1 +1.0
PLIG Sn 13 12 50.2 -8.1
MAVM Malinalco, Edo 7.51 312 eP Pn 13 11 43.1 +1.3
MAVM eS Sn 13 12 56.9 -10
MAVM Malinalco, Edo 7.51 312 Pn 13 11 43.1 +1.3
MAVM Sn 13 12 56.9 -10
AOVM Tlapan 7.59 314 eP Pn 13 11 44.1 +1.0
AOVM eS Sn 13 13 06.0 -3.3
AOVM Tlapan 7.59 314 Pn 13 11 44.1 +1.0
AOVM Sn 13 13 06.0 -3.3
INVM La Marquesa 7.65 314 eP Pn 13 11 42.5 -1.4
INVM eS Sn 13 13 00.9 -10
INVM La Marquesa 7.65 314 Pn 13 11 42.5 -1.4
INVM Sn 13 13 00.9 -10
MYIG Merida 7.80 27 eP Pn 13 11 46.1 +0.5
MYIG eS Sn 13 13 12.5 -1.1
MYIG Merida 7.80 27 Pn 13 11 46.1 +0.5
MYIG Sn 13 13 12.5 -1.1
BOAB BOACO BROADBAN 7.85 101 P Pn 13 11 46.0 -0.2
BOAB BOACO BROADBAN 7.85 101 Pn 13 11 46.2 0.0
BOAB BOACO BROADBAN 7.85 101 P Pn 13 11 42.2 -4.0
TEIG Tepich 7.97 39 eP Pn 13 11 47.0 -0.9
TEIG eS Sn 13 13 12.5 -5.4
TEIG Tepich 7.97 39 Pn 13 11 47.3 -0.6
TEIG Tepich 7.97 39 P Pn 13 11 47.2 -0.7
comp=Z,3µmcomp=Z,172nm,0.5s
TEIG S Sn 13 13 12.4 -5.4
comp=Z,3µmcomp=Z,172nm,0.5s
TEIG Tepich 7.97 39 P Pn 13 11 47.7 -0.2
DEIG Demacu 8.14 321 eP Pn 13 11 50.4 -0.1
DHIG Demacu 8.14 321 Pn 13 11 50.4 -0.1
ZIIG Zihuatanejo 8.40 296 eP Pn 13 11 53.4 -0.4
ZIIG eS Sn 13 13 23.7 -4.7
ZIIG Zihuatanejo 8.40 296 Pn 13 11 53.4 -0.4
ZIIG Sn 13 13 23.7 -4.7
JUD3 Juan Diaz 3 8.73 115 Pn 13 12 01.3 +2.8
JTS Las Juntas de 9.20 113 Pn Pn 13 12 03.5 -1.3
comp=Z,2.5nm,0.3s,baz=301,slow=11,SNR=8.9
JTS Sn Sn 13 13 41.6 -6.5
baz=247,slow=19
comp=Z,5.1nm,0.3s
JTS Las Juntas de 9.20 113 P Pn 13 12 09.0 +4.2
MOIG Morelia 9.21 309 eP Pn 13 12 05.2 0.0
MOIG Morelia 9.21 309 Pn 13 12 08.1 +2.9
RPIG Rio Verde 9.92 323 eP Pn 13 12 15.6 +0.8
RPIG Rio Verde 9.92 323 Pn 13 12 15.6 +0.8
GTIG Gomez Farias 10.45 330 eP Pn 13 12 21.6 -0.3
GTIG Gomez Farias 10.45 330 Pn 13 12 21.6 -0.3
PIRO Carate, Puerto 11.48 118 Pn 13 12 41.4 +5.3
BRU2 Volcan 11.86 115 P Pn 13 12 45.3 +3.9
ZAIG Zacatecas 12.19 317 P Pn 13 12 49.1 +3.1
CAIB Caibarien 15.80 56 Pn 13 13 33.6 -1.0
HPIG 17.12 320 P P 13 13 55.1 +1.9
TXAR Lajitas Array 17.88 330 P Pn 13 14 02.9 +2.0
comp=Z,0.2nm,0.3s,baz=156,slow=11,SNR=33
TXAR PcP PcP 13 18 36.4 -0.9
comp=Z,0.2nm,0.6s,baz=172,slow=3.8,SNR=4.1
TXAR LR LR 13 21 47.9
comp=Z,83nm,18.7s,baz=135,slow=40
comp=Z,3.7nm,0.7s
TXAR Lajitas Array 17.88 330 P P 13 14 04.2 +2.7
PIZC Pizarro, Choco 18.33 118 P P 13 14 12.3 +5.8
comp=Z,65nm,1.3s
LPIG La Paz 18.72 305 P P 13 14 11.8 +1.1
comp=Z,14nm,0.3s,baz=207,slow=2.3,SNR=8.7
LPIG LR LR 13 21 28.6
comp=Z,91nm,20.1s,baz=125,slow=37
UREC San Jos de Ur 18.76 108 P Pn 13 14 13.8 +2.0
comp=Z,348nmcomp=Z,24nm,1.0s
CBOC Ciudad Bolivar 19.08 113 P Pn 13 14 20.4 +4.6
comp=Z,493nmcomp=Z,23nm,1.0s
GUY2C Guyana, Caldas 19.94 114 P Pn 13 14 29.5 +3.1
comp=Z,444nmcomp=Z,34nm,1.1s
POPC Popayan, Colom 20.21 123 P Pn 13 14 30.7 +1.4
comp=Z,12nm,0.9s
NORC Norcasia 20.23 113 P Pn 13 14 31.7 +2.3
comp=Z,35nm,1.0s
OTAV Otavalo 20.28 131 eP P 13 14 30.9 +2.5
MIAR Mount Ida 20.43 360 P P 13 14 28.8 -0.6
MIAR IAmb IAmb 13 14 35.7
comp=Z,33nm,0.9s
MIAR Mount Ida 20.43 360 P P 13 14 30.7 +1.3
TULM Tulcn-Chalpat 20.46 129 P Pn 13 14 36.0 +3.6
comp=Z,16nm,1.2s
MNTX Cornudas Mount 20.66 330 P P 13 14 33.0 +1.1
OCAC Ocana 20.67 104 P P 13 14 34.3 +2.0
comp=Z,1µmcomp=Z,52nm,0.6s
ORTC Ortega, Tolima 20.68 117 P Pn 13 14 37.4 +2.8
comp=Z,458nmcomp=Z,39nm,0.8s
SPBC San Pablo de B 20.91 112 P Pn 13 14 39.2 +1.8
comp=Z,39nm,0.9s
ROSC El Rosal 21.04 114 P P 13 14 37.3 +0.7
comp=Z,8.0nm,0.4s,baz=221,slow=19,SNR=22
comp=Z,8.0nm,0.4s
ROSC El Rosal 21.04 114 P P 13 14 34.2 -2.3
ROSC IAmb IAmb 13 14 44.0
comp=Z,56nm,0.8s
ROSC El Rosal 21.04 114 P 13 14 42.1
comp=Z,830nmcomp=Z,93nm,1.1s
WMOK Wichita Mounta 21.16 348 P P 13 14 36.4 -0.8
WMOK Wichita Mounta 21.16 348 P P 13 14 37.5 +0.3
BARC Barichara 21.35 108 P P 13 14 43.1 +3.4
comp=Z,921nmcomp=Z,78nm,1.0s
PAMC Pamplona, Colo 21.54 106 P P 13 14 44.2 +2.2
FLOC Florencia 21.60 123 P P 13 14 45.1 +3.0
comp=Z,416nmcomp=Z,29nm,1.5s
FPAL Fort Paine 21.65 18 P P 13 14 42.6 +0.1
RUSC La Rusia 21.71 110 P P 13 14 44.9 +1.0
comp=Z,670nmcomp=Z,70nm,0.8s
FCAR Ozark Folk Cen 21.81 3 IAmb IAmb 13 14 49.3
comp=Z,32nm,0.9s
DEOK Depew 21.89 354 IAmb IAmb 13 14 47.9
comp=Z,30nm,0.8s
TUL3 Leonard 21.89 355 IAmb IAmb 13 14 48.9
comp=Z,26nm,0.6s
OK029 Liberty Lake 21.96 352 IAmb IAmb 13 14 49.0
comp=Z,37nm,0.8s
AMTX Amarillo 22.02 342 IAmb IAmb 13 14 50.8
comp=Z,51nm,1.0s
OK052 Battle Ridge R 22.07 353 IAmb IAmb 13 14 50.1
comp=Z,55nm,1.0s
RLO Rose Lookout 22.09 357 IAmb IAmb 13 14 52.7
comp=Z,22nm,1.0s
U38A Gravette 22.33 358 IAmb IAmb 13 14 54.1
comp=Z,48nm,1.0s
OK048 Pawnee Station 22.50 353 IAmb IAmb 13 14 54.5
comp=Z,44nm,0.9s
121A Cookes Peak, D 22.54 327 IAmb IAmb 13 15 09.5
comp=Z,31nm,1.0s
ELIS Ellis County 22.57 348 IAmb IAmb 13 14 57.8
comp=Z,33nm,0.6s
PH02 Texas Public H 22.57 342 IAmb IAmb 13 14 54.6
comp=Z,31nm,0.8s

WVT Waverly 22.60 12 P P 13 14 52.5 -0.3
WVT Waverly 22.60 12 P P 13 14 54.4 +1.7
CROK Carrier 22.73 351 IAmb IAmb 13 15 05.8
comp=Z,46nm,1.0s
PBMO Poplar Bluff 22.83 6 IAmb IAmb 13 14 58.4
comp=Z,31nm,0.7s
OK038 West end E0370 22.84 349 IAmb IAmb 13 14 59.1
comp=Z,32nm,0.7s
T35A Sooner Cattle 22.95 354 IAmb IAmb 13 14 57.8
comp=Z,21nm,0.7s
T42A Van Buren 23.02 5 IAmb IAmb 13 14 59.9
comp=Z,14nm,0.8s
SDV Santo Domingo 23.04 100 P 13 14 58.0 +0.3
SDV IAmb IAmb 13 15 04.0
comp=Z,20nm,0.7s
SDV Santo Domingo 23.04 100 eP P 13 14 59.8 +2.1
Y22A Socorro 23.25 331 IAmb IAmb 13 15 22.4
comp=Z,19nm,0.9s
TKL Tuckaleechee C 23.27 21 LR LR 13 25 06.6
comp=Z,137nm,21.5s,baz=202,slow=39
PTGC Puerto Gaitan, 23.28 113 P P 13 15 03.2 +3.3
T47A Sharon Grove 23.58 13 IAmb IAmb 13 15 05.5
comp=Z,20nm,0.7s
KMSC Kings Mountain 23.74 26 IAmb IAmb 13 15 08.5
comp=Z,18nm,1.2s
ALQ Albuquerque 23.86 333 IAmb IAmb 13 15 28.2
comp=Z,4.0nm,0.9s
ANMO Albuquerque 23.86 333 LR LR 13 25 26.9
comp=Z,82nm,19.6s,baz=129,slow=39
ANMO Albuquerque 23.86 333 P P 13 15 04.0 -1.6
ANMO Albuquerque 23.86 333 P P 13 15 07.0 +1.3
TASM ASL Pad, Albuq 23.86 333 IAmb IAmb 13 15 28.3
comp=Z,3.8nm,0.9s
FVM French Village 24.02 6 P P 13 15 04.4 -2.5
TUC Tucson 24.06 322 P P 13 15 07.2 -0.3
TUC IAmb IAmb 13 15 10.8
comp=Z,27nm,1.1s
TUC Tucson 24.06 322 P P 13 15 08.8 +1.4
R40A Maddies Statio 24.20 2 IAmb IAmb 13 15 19.9
comp=Z,18nm,1.1s
U54A Nelsons Funny 24.75 23 IAmb IAmb 13 15 16.1
comp=Z,15nm,0.9s
T25A Trinidad 24.97 339 IAmb IAmb 13 15 30.9
comp=Z,22nm,1.0s
U56A King 25.17 26 IAmb IAmb 13 15 20.9
comp=Z,25nm,1.3s
V58A Windy Hill, Pi 25.27 28 IAmb IAmb 13 15 18.8
comp=Z,29nm,0.9s
P40A Paris 25.44 3 IAmb IAmb 13 15 21.3
comp=Z,18nm,0.7s
SJG San Juan 26.64 78 LR LR 13 26 57.7
comp=Z,244nm,18.0s,baz=170,slow=39
MVCO Mesa Verde 26.66 333 IAmb IAmb 13 15 34.0
comp=Z,26nm,1.5s
MVCO Mesa Verde 26.66 333 P P 13 15 32.9 +1.8
N41A Harden Midland 26.69 5 IAmb IAmb 13 15 33.1
comp=Z,22nm,0.9s
T59A Double "B" Far 26.95 29 IAmb IAmb 13 15 33.5
comp=Z,27nm,0.9s
GLA Glamis 27.08 318 IAmb IAmb 13 15 37.3
comp=Z,14nm,1.1s
PV01 Paradox Valley 27.46 334 IAmb IAmb 13 15 41.6
comp=Z,16nm,1.2s
PV15 Paradox Valley 27.59 334 IAmb IAmb 13 15 54.2
comp=Z,18nm,1.3s
PV03 Paradox Valley 27.68 333 IAmb IAmb 13 15 43.2
comp=Z,15nm,1.2s
PV18 Skein Mesa, Pa 27.70 333 IAmb IAmb 13 15 43.4
comp=Z,24nm,1.3s
PV11 David Mesa, Pa 27.73 333 IAmb IAmb 13 15 43.7
comp=Z,17nm,1.1s
PV17 East Wray Mesa 27.75 333 IAmb IAmb 13 15 43.7
comp=Z,14nm,1.2s
PV16 Nyswonger Mesa 27.75 333 IAmb IAmb 13 15 43.9
comp=Z,15nm,1.2s
ISCO Idaho Springs 27.77 340 P P 13 15 43.0 +1.7
PV19 Morning Glory 27.78 333 IAmb IAmb 13 15 47.3
comp=Z,39nm,1.5s
PV20 West Nyswonger 27.80 333 IAmb IAmb 13 15 55.4
comp=Z,24nm,1.2s
PV04 Paradox Valley 27.82 334 IAmb IAmb 13 15 44.4
comp=Z,26nm,1.3s
PV10 Paradox Valley 27.86 333 IAmb IAmb 13 15 47.3
comp=Z,18nm,1.2s
BC3 Big Chuckawall 27.87 318 P P 13 15 40.2 -1.7
BC3 IAmb IAmb 13 15 44.6
comp=Z,16nm,1.1s
PV23 Carpenter Ridg 27.91 333 IAmb IAmb 13 15 45.3
comp=Z,19nm,1.1s
IRM Iron Mountain 27.99 319 P P 13 15 43.2 +0.3
L40A Anamosa 28.01 4 IAmb IAmb 13 15 47.7
comp=Z,14nm,0.6s
BELC Belle Mtn. Jos 28.44 318 P P 13 15 48.0 +1.0
PFO Pinyon Flats O 28.50 317 LR LR 13 27 56.6
comp=Z,95nm,21.6s,baz=132,slow=38
PKCU Pink Cliffs 28.68 328 IAmb IAmb 13 15 54.0
comp=Z,20nm,1.3s
P57A Homestead Farm 28.82 25 IAmb IAmb 13 15 52.0
comp=Z,11nm,1.1s
JFWS Jewell Farm 28.93 5 IAmb IAmb 13 15 54.8
comp=Z,12nm,0.7s
P17A Butcher Ranch, 29.52 332 IAmb IAmb 13 15 59.4
comp=Z,10nm,1.0s
ECSD EROS Data Cent 29.72 356 IAmb IAmb 13 15 59.0
comp=Z,7.8nm,0.8s
ECSD EROS Data Cent 29.72 356 P P 13 15 58.5 +0.3
SGC2 Sao Gabriel da 29.85 116 eP P 13 16 00.9 +1.3
CZSB Cruzeiro do Su 29.93 135 eP P 13 15 59.7 -0.5
I42A Draeger Farm, 30.03 7 IAmb IAmb 13 16 03.0
comp=Z,19nm,0.9s
PSUT Pine Spring 30.30 327 IAmb IAmb 13 16 06.8
comp=Z,9.1nm,1.0s
S11A Rachel 30.70 324 IAmb IAmb 13 16 10.6
comp=Z,17nm,1.1s
RSSD Black Hills 31.30 345 P P 13 16 14.3 +1.9
GMN Gold Mountain 31.35 322 P P 13 16 14.0 +1.1
HWUT Hardware Ranch 31.62 334 P P 13 16 17.3 +2.1
PDAR Pinedale Array 31.79 337 P P 13 16 17.9 +1.2
comp=Z,1.1nm,0.7s,baz=146,slow=9.0,SNR=9.8
PDAR PcP PcP 13 19 07.0 -0.7
comp=Z,0.3nm,0.4s,baz=151,slow=5.5,SNR=3.6
comp=Z,1.1nm,0.7s
PDAR Pinedale Array 31.79 337 P P 13 16 14.8 -2.0
HVU Hansel Valley 32.29 333 IAmb IAmb 13 16 23.9
comp=Z,13nm,0.9s
AHID Auburn Hatcher 32.39 336 IAmb IAmb 13 16 36.4
comp=Z,7.5nm,0.9s
AHID Auburn Hatcher 32.39 336 P P 13 16 22.9 +0.9
E38A The Farm, Brul 32.52 3 IAmb IAmb 13 16 24.2
comp=Z,11nm,1.0s
PKD Bear Valley Ra 32.59 317 IAmb IAmb 13 16 26.3
comp=Z,26nm,1.6s
NV11 Mina Array Sit 32.63 323 IAmb IAmb 13 16 27.4
comp=Z,16nm,1.1s
KSCT Kent School, K 32.64 28 IAmb IAmb 13 16 24.8
comp=Z,9.2nm,0.8s
ELK Elko 32.66 329 IAmb IAmb 13 16 27.5
comp=Z,9.1nm,1.1s
MDPB Devils Postpil 32.67 321 IAmb IAmb 13 16 27.5
comp=Z,7.5nm,0.9s
NVAR Mina Array Bea 32.71 323 P P 13 16 26.9 +2.0
comp=Z,8.7nm,0.9s,baz=143,slow=8.9,SNR=66
NVAR PcP PcP 13 19 11.0 +0.6
comp=Z,1.4nm,0.8s,baz=128,slow=3.9,SNR=7.8
NVAR LR LR 13 31 51.4
comp=Z,155nm,18.9s,baz=156,slow=40
comp=Z,8.7nm,0.9s
NVAR Mina Array Bea 32.71 323 P P 13 16 26.0 +1.1
NVAR PcP 13 19 11.2 +0.8
LHV Little Huntoon 32.72 322 IAmb IAmb 13 16 28.3
comp=Z,9.4nm,1.1s
LOHW Long Hollow 32.91 337 IAmb IAmb 13 16 29.0
comp=Z,8.0nm,0.8s
PMPB Monarch Peak 32.91 317 IAmb IAmb 13 16 29.1
comp=Z,25nm,1.2s
SADO Sadowa 33.01 19 LR LR 13 30 36.1
comp=Z,143nm,21.6s,baz=186,slow=38
BMN Battle Mountai 33.47 326 IAmb IAmb 13 16 34.3
comp=Z,7.0nm,0.9s
EYMN Ely 33.86 2 IAmb IAmb 13 16 39.7
comp=Z,9.2nm,1.2s
EYMN Ely 33.86 2 P P 13 16 33.8 -0.8
YNE Yellowstone No 33.89 339 IAmb IAmb 13 17 00.1
comp=Z,9.3nm,1.0s
PNTR Pine Nut 33.91 322 IAmb IAmb 13 16 38.5
comp=Z,8.1nm,0.8s
MHC Mount Hamilton 34.11 318 IAmb IAmb 13 16 39.7

comp=Z,13nm,1.4s
AGMN Agassiz Nation 34.22 357 P P 13 16 37.7 +0.1
MPK Martis Peak 34.30 322 IAmb IAmb 13 16 42.0
comp=Z,13nm,0.8s
HLID Hailey 34.44 333 IAmb IAmb 13 16 42.4
comp=Z,9.7nm,0.9s
HLID Hailey 34.44 333 P P 13 16 41.5 +1.7
LONY Lake Ozonia 34.51 24 IAmb IAmb 13 16 42.0
comp=Z,7.0nm,0.9s
BOAV Boa Vista 34.62 107 P P 13 16 40.1 -1.4
BOAV IAmb IAmb 13 16 46.0
comp=Z,13nm,1.3s
BOAV Boa Vista 34.62 107 eP P 13 16 42.2 +0.7
TBO Thunder Bay 34.69 5 IAmb IAmb 13 16 43.2
comp=Z,10.0nm,0.9s
DLMT Dillon 35.15 336 IAmb IAmb 13 16 49.0
comp=Z,18nm,0.9s
WVOR Wild Horse Val 35.64 327 IAmb IAmb 13 16 52.6
comp=Z,11nm,1.1s
WVOR Wild Horse Val 35.64 327 P P 13 16 51.5 +1.4
ULM Lac du Bonnet 36.17 357 P P 13 16 53.2 -1.2
comp=Z,6.4nm,0.8s,baz=166,slow=11,SNR=9.3
ULM PcP PcP 13 19 18.6 -1.2
comp=Z,5.2nm,0.8s,baz=155,slow=1.4,SNR=5.3
ULM LR LR 13 35 04.2
comp=Z,70nm,18.8s,baz=178,slow=42
comp=Z,6.4nm,0.8s
ULM Lac du Bonnet 36.17 357 P 13 16 52.8 -1.6
ULM IAmb IAmb 13 16 54.9
comp=Z,13nm,1.2s
PLID Pearl Lake 36.34 333 IAmb IAmb 13 16 58.3
comp=Z,15nm,0.8s
EGMT Eagleton 36.47 342 IAmb IAmb 13 16 59.6
comp=Z,23nm,1.4s
MACA Manacapuru-AM 36.80 115 eP P 13 17 01.6 +1.4
YBH Yreka Blue Hor 37.42 323 LR LR 13 34 06.2
comp=Z,124nm,18.2s,baz=152,slow=39
L04D Klamath Falls 37.50 324 IAmb IAmb 13 17 07.7
comp=Z,12nm,1.1s
KHMM Horse Mountain 37.51 321 IAmb IAmb 13 17 08.6
comp=Z,14nm,1.0s
F10A Beach Ranch, E 37.58 333 IAmb IAmb 13 17 08.2
comp=Z,15nm,0.8s
J04A Umpqua Nationa 38.05 325 IAmb IAmb 13 17 12.9
comp=Z,24nm,1.2s
G05A Wamic 38.99 328 IAmb IAmb 13 17 21.4
comp=Z,16nm,1.1s
H04A Detroit Lake 39.06 327 IAmb IAmb 13 17 20.8
comp=Z,19nm,1.0s
HOOD Mount Hood Mea 39.22 328 IAmb IAmb 13 17 23.7
comp=Z,41nm,1.2s
LPAZ La Paz 39.23 139 P P 13 17 21.1 -0.2
comp=Z,4.7nm,0.6s,baz=315,slow=8.3,SNR=3.8
LPAZ LR LR 13 32 10.4
comp=Z,76nm,20.0s,baz=298,slow=34
comp=Z,4.7nm,0.6s
LPAZ La Paz 39.23 139 P 13 17 16.8 -4.5
LPAZ La Paz 39.23 139 eP P 13 17 21.2 -0.1
LPAZ La Paz 39.23 139 P P 13 17 21.7 +0.4
NEW Newport 39.32 335 LR LR 13 35 57.4
comp=Z,143nm,18.1s,baz=130,slow=40
PB11 IPOC Station P 41.00 144 P P 13 17 36.6 +1.2
GO01 Chusmiza 41.19 144 P P 13 17 37.8 +0.4
MDP Montagnes des 41.25 98 LR LR 13 36 39.1
comp=Z,45nm,19.2s,baz=272,slow=39
ITTB Itaituba 41.74 113 eP P 13 17 42.6 +1.1
NLWA Neilton Lookou 41.75 329 IAmb IAmb 13 17 43.6
comp=Z,19nm,1.4s
A04D Lummi Island 42.11 331 IAmb IAmb 13 17 46.6
comp=Z,17nm,0.9s
EDM Edmonton 42.13 342 IAmb IAmb 13 17 46.0
comp=Z,26nm,1.4s
VILB Vilhena 42.55 128 eP P 13 17 48.5 +0.4
NPGB Novo Progresso 43.31 117 eP P 13 17 55.5 +1.3
SIV San Ignacio 43.83 132 P P 13 17 58.2 -0.1
comp=Z,11nm,1.0s,baz=300,slow=8.0,SNR=33
comp=Z,11nm,1.0s
FCC Fort Churchill 44.66 360 P P 13 18 05.2 +0.8
FCC IAmb IAmb 13 18 06.1
comp=Z,18nm,0.9s
CLDB Colider 44.88 122 eP P 13 18 07.4 +0.5
CLDB Colider 44.88 122 P P 13 18 12.0 +5.1
PTLB Pontes e Lacer 44.91 129 P P 13 18 06.4 -0.6
PTLB IAmb IAmb 13 18 09.7
comp=Z,13nm,1.0s
PTLB Pontes e Lacer 44.91 129 eP P 13 18 06.5 -0.5
BBSD Serra de San D 44.95 133 eP P 13 18 06.8 -0.5
SCHQ Schefferville 45.74 21 PcP PcP 13 19 50.7 -0.1
comp=Z,3.9nm,0.8s,baz=267,slow=2.4,SNR=4.4
SCHQ LR LR 13 38 51.3
comp=Z,174nm,19.4s,baz=214,slow=38
BBB Bella Bella 47.01 331 LR LR 13 40 50.9
comp=Z,53nm,18.7s,baz=128,slow=40
SALV Santo Antonio 47.80 127 eP P 13 18 28.9 -0.9
COIM Forte Coimbra 48.74 133 eP P 13 18 36.2 -0.7
SNDB Serra Nova Dou 49.22 120 eP P 13 18 41.1 +0.4
CO01 Juntas del Tor 49.25 153 P P 13 18 42.4 +1.3
CO03 El Pedregal 49.73 154 P P 13 18 45.1 +0.6
V35K Ketchikan 50.63 333 P P 13 18 53.0 +2.1
baz=129
YKA Yellowknife Ar 50.66 348 P P 13 18 51.3 +0.3
comp=Z,3.5nm,0.8s,baz=153,slow=7.5,SNR=11
YKA PcP PcP 13 20 08.1 -0.2
comp=Z,1.3nm,0.8s,baz=152,slow=3.1,SNR=4.1
YKA LR LR 13 43 12.5
comp=Z,46nm,19.3s,baz=257,slow=40
comp=Z,3.5nm,0.8s
YKAW3 Yellowknife Wh 50.73 348 P P 13 18 51.5 +0.1
YKAW3 IAmb IAmb 13 18 55.9
comp=Z,24nm,1.6s
SMTB Santa Maria do 50.97 114 eP P 13 18 54.4 +0.3
T35M Bob Quinn 51.12 335 P P 13 18 56.6 +1.9
baz=132
KOTAN Kotaneelee Air 51.16 341 P P 13 18 56.7 +1.9
baz=141
CRAG Craig 51.39 332 IAmb IAmb 13 18 59.6
comp=Z,16nm,1.1s
CRAG Craig 51.39 332 P P 13 18 58.4 +1.9
baz=128,SNR=6.6
TAOE Nuku Hiva Isla 51.51 247 eS S 13 26 09.3 -9.2
comp=Z,89nm,25.2s
TAOE eLR LR 13 33 17.3
comp=Z,146nm,27.7s
WRAK Wrangell Islan 51.64 334 P P 13 19 00.3 +1.9
baz=129
U33K Whale Pass 51.78 333 P P 13 19 01.4 +1.9
baz=128
DLBC Dease Lake 52.02 337 P P 13 19 01.8 +0.4
comp=Z,4.9nm,0.9s,baz=117,slow=5.4,SNR=14
DLBC PcP PcP 13 20 14.5 +1.0
comp=Z,1.8nm,0.8s,baz=200,slow=4.4,SNR=3.4
comp=Z,4.9nm,0.9s
DLBC Dease Lake 52.02 337 P P 13 19 03.6 +2.2
baz=133,SNR=11
S34M Telegraph Cree 52.10 336 P P 13 19 03.9 +2.0
baz=132
FRB Frobisher Bay 52.64 14 LR LR 13 43 41.0
comp=Z,98nm,18.7s,baz=191,slow=38
WTLY Watson Lake, Y 52.74 339 P P 13 19 08.2 +1.6
baz=135,SNR=8.2
Q32M Nakina River 53.24 336 IAmb IAmb 13 19 13.9
comp=Z,7.2nm,1.0s
Q32M Nakina River 53.24 336 P P 13 19 12.7 +2.1
baz=131,SNR=7.0
S32K Killisnoo 53.25 334 P P 13 19 12.2 +1.9
baz=128
SIT Sitka 53.33 333 P P 13 19 12.8 +1.9
baz=126
CPUP Villa Florida 53.39 139 LR LR 13 41 26.5
comp=Z,33nm,18.6s,baz=78,slow=36
CPUP Villa Florida 53.39 139 P 13 19 09.6 -2.2
CPUP IAmb IAmb 13 19 10.7
comp=Z,14nm,1.4s
BDFB Brasilia 53.82 122 P P 13 19 14.1 -1.3
comp=Z,5.5nm,0.8s,baz=307,slow=12,SNR=6.6
comp=Z,5.5nm,0.8s
P32M Atlin 54.22 336 P P 13 19 19.1 +1.6
baz=130
S31K Pelican 54.26 334 P P 13 19 19.8 +2.0
baz=126
P33M Teslin, Yukon 54.27 337 IAmb IAmb 13 19 20.7
comp=Z,9.0nm,1.4s
P33M Teslin, Yukon 54.27 337 P P 13 19 19.4 +1.5
baz=131,SNR=6.5
BI02 San Fabin de 54.62 158 P P 13 19 21.3 +0.5
SKAG Skagway 54.78 335 P P 13 19 23.1 +1.6
baz=128

SDBA **SAO DESIDERIO** 54.91 116 *e*P P 13 19 24.9 +1.7
N32M **Quiet Lake** 54.99 338 P P 13 19 24.6 +1.5
baz=131
PLBC **Pleasant Camp** 55.20 335 P P 13 19 26.3 +1.8
baz=127
MMPY **Sheldon Lake,** 55.35 340 IAmb IAmb 13 19 28.6
comp=Z,16nm,1.1s
MMPY **Sheldon Lake,** 55.35 340 P P 13 19 27.6 +1.9
baz=134,SNR=15
WHY **Whitehorse** 55.35 337 P P 13 19 26.8 +1.0
baz=129
ILON **Igloolik, Nuna** 55.81 5 P P 13 19 28.7 -0.1
P30M **Million Dollar** 55.84 335 P P 13 19 31.0 +1.8
baz=126
P29M **Windy Craggy** 55.87 335 P P 13 19 31.2 +1.8
baz=125
O30N **Mendenhall** 55.88 336 P P 13 19 31.1 +1.6
baz=128,SNR=6.6
N31M **Braeburn, Yuko** 56.21 337 IAmb IAmb 13 19 34.3
comp=Z,15nm,1.1s
N31M **Braeburn, Yuko** 56.21 337 P P 13 19 33.2 +1.4
baz=128,SNR=11
HYT **Haines Junctio** 56.47 336 IAmb IAmb 13 19 37.0
comp=Z,13nm,1.5s
HYT **Haines Junctio** 56.47 336 P P 13 19 35.6 +1.8
baz=126,SNR=7.6
O29M **Mount Kennedy** 56.60 335 IAmb IAmb 13 21 30.3
comp=Z,4.6nm,0.7s
O29M **Mount Kennedy** 56.60 335 P P 13 19 36.2 +1.4
baz=125
PSAL **Palomas, Salto** 56.61 143 *e*P P 13 19 33.8 -1.3
N30M **Aishikik Lake** 56.69 337 IAmb IAmb 13 19 38.2
comp=Z,7.3nm,1.1s
N30M **Aishikik Lake** 56.69 337 P P 13 19 36.8 +1.6
baz=127,SNR=7.4
YUK6 **Outpost Mounta** 56.88 336 P P 13 19 38.3 +1.4
baz=125
YUK4 **Talbot Arm** 57.23 336 P P 13 19 40.9 +1.6
baz=125
M30M **Minto, Yukon** 57.26 338 IAmb IAmb 13 19 41.5
comp=Z,15nm,1.6s
M30M **Minto, Yukon** 57.26 338 P P 13 19 40.4 +1.1
baz=128,SNR=7.6
O28M **Mount Upton** 57.52 335 P P 13 19 43.1 +1.6
baz=123
YUK8 **Steele Glacier** 57.64 336 P P 13 19 44.0 +1.8
baz=124,SNR=7.6
M29M **Somme Creek** 57.80 337 P P 13 19 44.7 +1.6
baz=126,SNR=25
LOGN **Logan Glacier** 57.89 335 IAmb IAmb 13 19 46.8
comp=Z,4.5nm,0.7s
L29M **L29M** 58.07 338 IAmb IAmb 13 19 47.2
comp=Z,9.2nm,0.9s
L29M **L29M** 58.07 338 P P 13 19 46.2 +1.2
baz=127,SNR=13
GRNC **Granite Creek** 58.15 334 IAmb IAmb 13 19 48.5
comp=Z,12nm,1.0s
YUK3 **Moose Creek** 58.19 336 P P 13 19 47.1 +1.0
baz=124
BARN **Barnard Glacie** 58.28 335 IAmb IAmb 13 19 49.0
comp=Z,6.1nm,1.0s
K29M **Barlow Dome** 58.30 339 IAmb IAmb 13 19 48.4
comp=Z,20nm,1.9s
K29M **Barlow Dome** 58.30 339 P P 13 19 47.4 +0.7
baz=128
J30M **Hart River** 58.34 340 IAmb IAmb 13 19 50.4
comp=Z,18nm,1.9s
J30M **Hart River** 58.34 340 P P 13 19 48.0 +1.0
baz=129
NBPN **Ponto Novo - B** 58.40 112 *e*P P 13 19 48.8 +0.7
PLCA **Paso Flores** 58.51 160 LR LR 13 40 15.9
comp=Z,45nm,18.8s,baz=346,slow=31
PLCA **Paso Flores** 58.51 160 P 13 19 48.5 +0.2
H31M **Peel River** 58.51 342 P P 13 19 49.6 +1.5
baz=132
SPB **Sao Paulo** 58.59 129 *e*P P 13 19 49.1 0.0
CPSB **Cacapava Do Su** 58.67 139 *e*P P 13 19 48.6 -1.0
CRQE **Cirque** 58.73 334 P P 13 19 50.4 +0.7
baz=120
I30M **Mount Dempster** 58.77 340 IAmb IAmb 13 19 51.6
comp=Z,16nm,1.6s
I30M **Mount Dempster** 58.77 340 P P 13 19 50.7 +0.7
baz=130
KAIM **Kayak Island** 58.90 333 P P 13 19 52.0 +1.2
baz=119
MCARA **McCarthy VSAT** 59.02 335 P P 13 19 52.9 +1.3
baz=121
M27K **Edge Creek, AK** 59.06 336 IAmb IAmb 13 19 54.5
comp=Z,4.8nm,1.0s
M27K **Edge Creek, AK** 59.06 336 P P 13 19 53.2 +1.2
baz=122
DAWY **Dawson** 59.09 338 P P 13 19 52.3 +0.2
baz=126
VRDI **Verde Repeater** 59.12 334 IAmb IAmb 13 19 55.0
comp=Z,7.1nm,1.1s
G31M **Satah River** 59.25 343 P 13 19 53.8 +0.8
G31M IAmb IAmb 13 19 54.6
comp=Z,12nm,1.1s
G31M **Satah River** 59.25 343 P P 13 19 53.5 +0.5
baz=133,SNR=6.0
GLB **Gilahina Butte** 59.37 335 IAmb IAmb 13 19 56.7
comp=Z,8.8nm,1.0s
BCAR **Beaver Creek A** 59.41 337 P 13 19 54.7 +0.3
L27K **Beaver Creek,** 59.43 337 IAmb IAmb 13 19 56.7
comp=Z,11nm,1.2s
L27K **Beaver Creek,** 59.43 337 P P 13 19 55.5 +1.1
baz=123,SNR=11
F31M **Tsiigehtchic** 59.45 343 P P 13 19 54.8 +0.4
baz=133
BMRM **Bremner River** 59.48 334 IAmb IAmb 13 19 57.4
comp=Z,15nm,1.4s
BMRM **Bremner River** 59.48 334 P P 13 19 56.1 +1.2
baz=119
M26K **Nabesna, AK** 59.53 336 IAmb IAmb 13 19 57.5
comp=Z,8.8nm,1.1s
M26K **Nabesna, AK** 59.53 336 P P 13 19 56.1 +0.9
baz=121,SNR=5.7
Q23K **Middleton Isla** 59.54 332 P P 13 19 55.7 +0.5
baz=116
EPYK **Eagle Plains** 59.62 341 PcP PcP 13 20 43.0 +0.2
EPYK IAmb IAmb 13 20 50.8
comp=Z,7.5nm,0.9s
EPYK **Eagle Plains** 59.62 341 P P 13 19 56.2 +0.6
baz=130
EYAK **Cordova Ski Ar** 59.77 333 P P 13 19 58.1 +1.3
baz=118
N25K **Chitina, Valde** 59.78 335 P P 13 19 58.0 +1.1
baz=119,SNR=6.2
G30M **tAoh Zraii Nji** 59.86 342 P P 13 19 58.4 +1.0
baz=131
SFJD **Kangerlussuaq** 59.95 18 LR LR 13 48 14.9
comp=Z,120nm,18.1s,baz=218,slow=38
INK **Inuvik** 59.99 344 P P 13 19 58.1 0.0
INK comp=Z,4.8nm,0.6s,baz=123,slow=9.0,SNR=6.4 LR LR 13 49 59.5
comp=Z,78nm,18.2s,baz=66,slow=40
comp=Z,4.8nm,0.6s
INK **Inuvik** 59.99 344 P P 13 19 58.8 +0.7
baz=134,SNR=6.8
L26K **Log Cabin Wild** 59.99 336 IAmb IAmb 13 20 00.6
comp=Z,9.1nm,1.2s
L26K **Log Cabin Wild** 59.99 336 P P 13 19 59.0 +0.7
baz=121,SNR=5.1
H29M **Whitestone** 60.04 341 IAmb IAmb 13 20 00.3
comp=Z,9.7nm,0.9s
H29M **Whitestone** 60.04 341 P P 13 19 59.3 +0.7
baz=128,SNR=7.3
I28M **Miner Creek** 60.09 340 P P 13 19 59.4 +0.3
baz=126
F30M **Barrier River** 60.15 343 IAmb IAmb 13 20 01.1
comp=Z,14nm,1.1s
F30M **Barrier River** 60.15 343 P P 13 20 00.2 +0.9
baz=131,SNR=6.2
P23K **Montague Islan** 60.27 332 P P 13 20 01.1 +1.0
baz=116
KLU **Klutina** 60.29 334 IAmb IAmb 13 20 02.8
comp=Z,9.6nm,0.9s
KLU **Klutina** 60.29 334 P P 13 20 01.6 +1.2
baz=118,SNR=6.1
G29M **Pine Creek** 60.36 341 P 13 20 01.1 +0.3
G29M IAmb IAmb 13 20 02.5
comp=Z,11nm,1.1s
G29M **Pine Creek** 60.36 341 P P 13 20 01.4 +0.6
baz=129,SNR=5.6
HARP **HAARP** 60.40 335 P P 13 20 02.4 +1.3
baz=119
GLI **Glacier Island** 60.51 333 P P 13 20 02.5 +0.6
baz=116
M24K **Tolsona, Glenn** 60.68 335 P P 13 20 03.7 +0.7
baz=118
I27K **Kandik River** 60.76 339 P P 13 20 04.1 +0.5
I27K IAmb IAmb 13 20 05.3
comp=Z,7.1nm,1.0s
I27K **Kandik River** 60.76 339 P P 13 20 04.0 +0.5
baz=124,SNR=7.6
PAX **Paxson** 60.80 336 P P 13 20 04.6 +0.7
baz=119,SNR=5.1
CMC01 **Camacan, BA** 60.90 117 *e*P P 13 20 05.5 +0.3
RIDG **Independent Ri** 60.94 337 P P 13 20 05.8 +0.9
baz=120,SNR=9.2
SJMB **Sao Joao De Ma** 61.00 121 *e*P P 13 20 06.1 +0.3
SCM **Sheep Creek Mo** 61.04 334 P P 13 20 05.9 +0.3
baz=117
PWL **Port Wells** 61.05 333 P P 13 20 06.2 +0.6
baz=115
H27K **Steamboat Moun** 61.08 340 IAmb IAmb 13 20 07.8
comp=Z,12nm,1.1s
H27K **Steamboat Moun** 61.08 340 P P 13 20 06.5 +0.8
baz=125,SNR=11
I26K **Coal Creek Min** 61.13 339 P P 13 20 06.5 +0.5
baz=122
M23K **Glacier View** 61.19 334 P P 13 20 07.1 +0.6
baz=116
SEW **Seward** 61.24 332 P P 13 20 07.4 +0.6
baz=114
E29M **Blow River** 61.26 343 IAmb IAmb 13 20 09.0
comp=Z,13nm,1.2s
E29M **Blow River** 61.26 343 P P 13 20 07.7 +0.8
baz=129,SNR=5.9
K24K **Donnelly Dome** 61.33 336 P P 13 20 08.3 +0.9
baz=119
KNK **Knik Glacier** 61.34 333 P P 13 20 08.3 +0.8
baz=115
F28M **Old Crow** 61.36 342 P P 13 20 08.5 +1.0
baz=127,SNR=21
G27K **Doyon Strip** 61.45 340 IAmb IAmb 13 20 09.8
comp=Z,5.8nm,0.9s
G27K **Doyon Strip** 61.45 340 P P 13 20 08.8 +0.6
baz=125,SNR=10
SML **Sawmill** 61.46 334 P P 13 20 08.9 +0.5
baz=116
WAT6 **Susitna Watana** 61.55 335 P P 13 20 09.7 +0.7
baz=117,SNR=8.4
J25K **Salcha River,** 61.58 337 IAmb IAmb 13 20 11.1
comp=Z,7.4nm,1.0s
J25K **Salcha River,** 61.58 337 P P 13 20 09.8 +0.7
baz=120,SNR=7.0
DHY **Denali Highway** 61.62 335 P P 13 20 09.9 +0.4
baz=117
BRSE **Bradley Lake S** 61.70 331 P P 13 20 10.3 +0.3
baz=112
PMR **Palmer** 61.71 333 IAmb IAmb 13 20 11.0
comp=Z,4.8nm,0.8s
PMR **Palmer** 61.71 333 P P 13 20 10.5 +0.6
baz=115
RC01 **Rabbit Creek A** 61.77 333 P P 13 20 10.8 +0.5
baz=114
E28M **Babbage River** 61.87 343 IAmb IAmb 13 20 12.5
comp=Z,7.9nm,1.1s
E28M **Babbage River** 61.87 343 P P 13 20 11.5 +0.5
baz=128
KDAK **Kodiak Island** 61.90 329 LR LR 13 46 54.4
comp=Z,34nm,18.5s,baz=100,slow=36
KDAK **Kodiak Island** 61.90 329 P P 13 20 11.9 +0.6
baz=110
RIB01 **Linhares ES** 61.95 121 *e*P P 13 20 12.5 +0.2
WAT1 **Susitna Watana** 61.99 335 P P 13 20 12.1 +0.2
baz=116
HDA **Harding Lake** 62.07 337 IAmb IAmb 13 20 13.7
comp=Z,11nm,1.2s
HDA **Harding Lake** 62.07 337 P P 13 20 12.8 +0.5
baz=118,SNR=6.0
OHAK **Old Harbor** 62.08 328 P P 13 20 13.1 +0.6
baz=108
PRP **Porcupine Dome** 62.09 338 P P 13 20 13.0 +0.4
baz=120
D28M **Stokes Point** 62.09 343 P P 13 20 12.9 +0.5
baz=129
HOM **Homer** 62.09 331 P P 13 20 12.8 +0.3
baz=111
M22K **Willow** 62.21 333 P P 13 20 13.9 +0.6
baz=114
ILAR **Eielson Array** 62.22 337 P P 13 20 13.6 +0.2
comp=Z,7.0nm,0.9s,baz=141,slow=4.2,SNR=57
ILAR LR LR 13 49 29.8
comp=Z,67nm,18.1s,baz=106,slow=38
comp=Z,7.0nm,0.9s
ILAR **Eielson Array** 62.22 337 P P 13 20 12.9 -0.5
E27K **Coleen River** 62.23 342 IAmb IAmb 13 20 15.4
comp=Z,10nm,0.9s
E27K **Coleen River** 62.23 342 P P 13 20 14.3 +0.9
baz=125,SNR=6.2
G26K **Porcupine Rive** 62.23 340 IAmb IAmb 13 20 15.0
comp=Z,6.8nm,1.1s
G26K **Porcupine Rive** 62.23 340 P P 13 20 14.1 +0.7
baz=123,SNR=6.0
CAPN **Captain Cook N** 62.28 332 P P 13 20 14.3 +0.6
baz=112
ALF01 **Guarapari-ES** 62.30 123 *e*P P 13 20 15.2 +0.7
SII **Sitkinak Islan** 62.34 327 P P 13 20 14.9 +0.5
baz=107
CCB **Clear Creek Bu** 62.51 337 IAmb IAmb 13 20 17.2
comp=Z,9.2nm,1.4s
WRH **Wood River Hil** 62.54 337 IAmb IAmb 13 20 27.4
comp=Z,5.0nm,1.0s
MCK **McKinley** 62.54 336 P P 13 20 16.1 +0.5
baz=116,SNR=6.4
POKR **Poker Plat Res** 62.59 337 P P 13 20 16.4 +0.5
baz=118
D27M **Malcolm River** 62.66 343 P P 13 20 16.6 +0.2
D27M IAmb IAmb 13 20 18.4
comp=Z,13nm,1.3s
D27M **Malcolm River** 62.66 343 P P 13 20 17.2 +0.8
baz=126,SNR=6.1
O20K **Slope Mountain** 62.71 331 P P 13 20 17.3 +0.6
baz=111
F26K **Sheenjek River** 62.75 341 P P 13 20 17.8 +0.9
baz=123,SNR=7.2
L22K **Petersville** 62.80 334 P P 13 20 17.7 +0.3
baz=114
Q19K **Cape Douglas,** 62.81 330 P P 13 20 17.9 +0.5
baz=109
SKT **Skwentna** 62.91 333 P P 13 20 18.5 +0.5
baz=112,SNR=5.7
G25K **Bearman Lake** 62.92 339 P P 13 20 19.0 +1.0
baz=120
SPCR **Spurr Chakacha** 62.92 332 P P 13 20 18.7 +0.5
baz=112
TRF **Thorofare Moun** 62.97 335 P P 13 20 19.0 +0.4
baz=114,SNR=6.7
NEA2 **Nenana** 62.98 336 P P 13 20 19.1 +0.7
baz=116
ISOG **Isortoq, Green** 63.06 22 *i* P P 13 20 19.4 +0.5
ISOG IAmb IAmb 13 20 19.7
comp=Z,20nm,1.1s
H24K **Noodor Dome** 63.09 338 P P 13 20 19.9 +0.7
baz=118,SNR=18
F25K **Christian Rive** 63.19 340 IAmb IAmb 13 20 22.3
comp=Z,14nm,1.3s
F25K **Christian Rive** 63.19 340 P P 13 20 21.0 +1.2
baz=121,SNR=7.4
I23K **Minto, Yukon-K** 63.33 337 P P 13 20 21.4 +0.7
baz=116,SNR=16
G24K **Hadweenzic Riv** 63.36 339 P P 13 20 21.8 +0.8
baz=119,SNR=8.6
Q18K **Katmai Hardscr** 63.40 329 P P 13 20 21.7 +0.2
baz=108
E25K **Arctic Village** 63.44 341 IAmb IAmb 13 20 24.8
comp=Z,13nm,1.4s
E25K **Arctic Village** 63.44 341 P P 13 20 22.1 +0.7
baz=121
PPLA **Purkeypile** 63.54 334 P P 13 20 22.6 +0.3
baz=112
O19K **Port Alsworth** 63.55 331 P P 13 20 22.4 +0.2
baz=109
PPT **Papeete** 63.56 242 LR LR 13 40 18.8
comp=Z,40nm,21.2s,baz=358,slow=29
PPT2 **Papeete2** 63.57 242 *e*LR LR 13 38 54.7
comp=Z,121nm,27.0s
PPT2 *e*LR LR 13 39 04.0
comp=Z,100nm,26.5s
M20K **Styx River** 63.58 333 IAmb IAmb 13 20 23.9
comp=Z,7.0nm,0.8s
M20K **Styx River** 63.58 333 P P 13 20 22.8 +0.2
baz=111,SNR=5.0
C27K **Jago River** 63.68 343 P P 13 20 23.9 +0.9
baz=124,SNR=8.6
CAST **Castle Rocks** 63.70 335 P P 13 20 23.2 0.0
baz=113,SNR=12
H23K **Yukon River** 63.70 338 P P 13 20 23.5 +0.3
baz=116
P18K **Big Mountain,** 63.73 330 P P 13 20 23.6 +0.1
baz=108
R17L **Mt. Peulik Vol** 63.79 328 P P 13 20 24.4 +0.5
baz=106
MLY **Manley** 63.81 337 P P 13 20 24.5 +0.5
baz=115,SNR=16
KULLO **Kullorsuaq** 63.82 10 *i* P P 13 20 24.7 +0.9
KULLO IAmb IAmb 13 20 25.6
comp=Z,11nm,0.8s
N19K **Bonanza Creek** 63.83 331 P P 13 20 24.4 +0.2
baz=109
TULEG **Thule** 63.85 6 *i* P P 13 20 27.6 +3.6
TULEG IAmb IAmb 13 20 28.3
comp=Z,14nm,1.0s
O18K **Koktuh Hills** 63.86 330 P P 13 20 24.8 +0.5
baz=108
F24K **Squaw Lake** 63.90 340 IAmb IAmb 13 20 50.8
comp=Z,5.5nm,1.2s
F24K **Squaw Lake** 63.90 340 P P 13 20 25.6 +1.1
baz=119
M19K **Big River Lodg** 64.15 333 P P 13 20 26.8 +0.6
baz=110
C26K **Camden Bay** 64.19 343 P P 13 20 27.7 +1.4
baz=123
Q16K **King Salmon** 64.23 329 P P 13 20 27.4 +0.6
baz=106
P17K **Kvichak River** 64.27 329 P P 13 20 27.3 +0.3
baz=107
G23K **Bananza Creek** 64.27 338 IAmb IAmb 13 20 28.8
comp=Z,8.0nm,1.1s
G23K **Bananza Creek** 64.27 338 P P 13 20 27.7 +0.8
baz=116,SNR=8.1
D25K **Kavik River** 64.31 342 P P 13 20 28.2 +1.0
baz=121,SNR=12
I21K **Tanana** 64.35 336 P P 13 20 27.8 +0.3
baz=114
E24K **Your Creek** 64.36 340 IAmb IAmb 13 20 29.4
comp=Z,5.8nm,1.4s
E24K **Your Creek** 64.36 340 P P 13 20 28.7 +1.1
baz=118
N18K **Kilae Creek** 64.44 331 P P 13 20 28.0 -0.1
baz=108
L19K **White Mountain** 64.44 333 P P 13 20 28.3 +0.1
baz=109
K20K **Telida** 64.51 334 P P 13 20 28.6 +0.1
baz=111
COLD **Coldfoot** 64.56 339 IAmb IAmb 13 20 31.3
comp=Z,12nm,1.2s
COLD **Coldfoot** 64.56 339 P P 13 20 30.0 +1.2
baz=116,SNR=10
M18K **Stony River** 64.66 332 P P 13 20 29.5 -0.1
baz=108
E23K **Chandalar** 64.73 340 P P 13 20 31.4 +1.4
baz=117,SNR=11
O17K **Koliganek Bris** 64.75 330 P P 13 20 30.4 +0.2
baz=106
J20K **Nowinta River** 64.83 335 IAmb IAmb 13 20 31.7
comp=Z,9.2nm,1.1s
J20K **Nowinta River** 64.83 335 P P 13 20 30.7 +0.1
baz=111,SNR=5.4
H21K **Melozitna Rive** 64.86 337 P P 13 20 31.5 +0.8
baz=113
CHNA **Chernabura Isl** 64.88 324 P P 13 20 31.0 0.0
baz=102
G22K **Bettles** 64.89 338 P P 13 20 31.7 +0.8
baz=115
TOLK **Toolik Lake Re** 64.98 340 P P 13 20 32.5 +0.9
baz=117
D24K **Happy Valley** 64.99 341 P P 13 20 32.2 +0.7
baz=118
P16K **Nushagak River** 64.99 329 P P 13 20 32.4 +0.7
baz=105
N17K **Nushagak Hills** 65.00 331 P P 13 20 32.0 +0.2
baz=106
I20K **Naaghedeneel** 65.19 336 P P 13 20 33.3 +0.4
baz=111
O16K **Kokwok River B** 65.19 330 P P 13 20 33.2 +0.2
baz=105
L18K **Granite Mounta** 65.27 333 P P 13 20 33.5 0.0
baz=108
F22K **John River** 65.37 339 P P 13 20 35.1 +1.0
baz=114,SNR=7.5
M17K **Holitna River** 65.37 332 P P 13 20 34.3 +0.1
baz=107
J19K **Poorman** 65.38 335 P P 13 20 34.2 0.0
baz=110,SNR=14
G21K **Allakaket** 65.45 338 P P 13 20 35.2 +0.5
baz=113
SDPT **Sand Point** 65.48 325 P P 13 20 35.0 +0.1
baz=101
D23K **Nanushuk River** 65.49 341 IAmb IAmb 13 20 36.9
comp=Z,9.3nm,1.1s
D23K **Nanushuk River** 65.49 341 P P 13 20 36.4 +1.5
baz=116,SNR=5.1
E22K **Anaktuvuk Pass** 65.51 340 P P 13 20 35.7 +0.7
baz=115
H20K **Anotleneega Mo** 65.60 336 P P 13 20 36.2 +0.6
baz=111
J18K **Innoko River** 65.67 334 P P 13 20 36.9 +0.9
baz=108
F21K **Alatna River** 65.72 338 P P 13 20 37.4 +1.1
baz=113,SNR=26
N16K **Nishlik Lake** 65.75 330 P P 13 20 37.3 +0.6
baz=105
C23K **Itkillik River** 65.86 341 P P 13 20 38.2 +1.0
baz=117,SNR=9.8
O15K **Ungalikthiuk R** 65.94 329 P P 13 20 38.3 +0.4
baz=103
L17K **Donlin** 65.97 332 P P 13 20 38.3 +0.2
baz=106
M16K **Timber Creek** 65.98 331 P P 13 20 38.3 +0.2
baz=105
K17K **Iditarod** 66.13 333 P P 13 20 39.3 +0.2
baz=106
GCSA **Galena City Sc** 66.14 335 P P 13 20 39.7 +0.7
baz=109
H19K **Roundabout Mou** 66.22 336 IAmb IAmb 13 20 40.7
comp=Z,11nm,1.0s
H19K **Roundabout Mou** 66.22 336 P P 13 20 39.8 +0.2
baz=109,SNR=10.0
E21K **Killik River** 66.37 339 P P 13 20 41.2 +0.7
baz=113
L16K **Owhat River** 66.39 332 P P 13 20 41.1 +0.4
baz=105
F20K **Avaraart Lake** 66.47 338 P P 13 20 41.7 +0.6
F20K **Avaraart Lake** 66.47 338 P P 13 20 41.9 +0.8
baz=111,SNR=11
G19K **Purcell Mounta** 66.67 337 P P 13 20 42.6 +0.2
baz=109,SNR=5.2
H18K **Honhosa River** 66.87 335 P P 13 20 44.1 +0.3
baz=107
C21K **Knifeblade Rid** 66.91 340 P P 13 20 44.7 +0.8
baz=112
B22K **Teshekpuk Lake** 66.95 341 P P 13 20 44.7 +0.6
baz=114
NEEM **North Greenlan** 66.95 9 *i* P P 13 20 45.1 +0.7
NEEM IAmb IAmb 13 20 47.9
comp=Z,28nm,1.1s
B21K **Ikpikpuk River** 67.04 341 P P 13 20 45.2 +0.5
baz=113
F19K **Shaleruckik Mo** 67.16 337 P P 13 20 45.2 -0.3
F19K IAmb IAmb 13 20 47.2
comp=Z,13nm,1.3s
F19K **Shaleruckik Mo** 67.16 337 P P 13 20 45.9 +0.4
baz=109,SNR=5.3
E19K **Redstone River** 67.16 338 P P 13 20 45.8 +0.2
baz=109
G18K **Tagagawik** 67.20 336 P P 13 20 46.5 +0.6
baz=107
J16K **Anvik River** 67.30 333 P P 13 20 47.2 +0.7
baz=104,SNR=7.2
L15K **Ungalak Mounta** 67.32 331 P P 13 20 47.2 +0.6
baz=103
M14K **Bethel** 67.34 330 P P 13 20 47.4 +0.7
baz=102
D20K **Etivluk River** 67.37 339 P P 13 20 47.7 +0.8
baz=110
H17K **Granite Mounta** 67.44 335 P P 13 20 48.2 +0.8
baz=106
K15K **Wolf Creek Mou** 67.48 332 P P 13 20 48.6 +0.9
baz=103
I17K **Unalakleet** 67.49 334 P P 13 20 48.7 +1.1
baz=105

A22K	**Sinclair Lake**	**67.69**	**342**	P		**P**	**13 20 49.6**	**+0.8**
	baz=113								
F18K	**Selawik**	**67.80**	**337**	P		**P**	**13 20 50.0**	**+0.5**
	baz=107								
L14K	**Kuka Creek**	**67.81**	**331**	P		**P**	**13 20 50.2**	**+0.5**
	baz=102								
D19K	**Kuna River**	**67.81**	**339**	P		**P**	**13 20 50.1**	**+0.4**
	baz=109								
G17K	**Kiwalik Mounta**	**67.89**	**336**	P		**P**	**13 20 50.6**	**+0.4**
	baz=105								
M13K	**Dall Lake**	**67.95**	**330**	P		**P**	**13 20 51.5**	**+1.0**
	baz=101								
B20K	**Meade River**	**68.00**	**341**	P		**P**	**13 20 52.0**	**+1.2**
	baz=110								
H16K	**Elim**	**68.33**	**334**	P		**P**	**13 20 53.7**	**+0.8**
	baz=103								
E18K	**Tukpahlearik C**	**68.39**	**338**	P		**P**	**13 20 54.1**	**+0.8**
	baz=106								
J14K	**Nanvaranak Lak**	**68.49**	**332**	P		**P**	**13 20 54.8**	**+0.9**
	baz=102								
C19K	**Lookout Ridge**	**68.51**	**339**	P		**P**	**13 20 55.1**	**+1.0**
	baz=108								
G16K	**Koyuk River**	**68.55**	**335**	P		**P**	**13 20 55.1**	**+0.8**
	baz=104								
UNV	**Unalaska Valle**	**68.73**	**323**	P		**P**	**13 20 56.1**	**+0.5**
	baz=95								
E17K	**Hotham Inlet**	**68.75**	**337**	P		**P**	**13 20 56.1**	**+0.5**
	baz=105								
C18K	**Utukok River**	**68.94**	**339**	P		**P**	**13 20 57.7**	**+0.9**
	baz=106								
G15K	**Niukluk**	**69.15**	**335**	P		**P**	**13 20 58.8**	**+0.7**
	baz=102								
A19K	**Wainwright**	**69.33**	**340**	P		**P**	**13 21 00.1**	**+1.0**
	baz=107								
M11K	**Mekoryuk**	**69.34**	**330**	P		**P**	**13 20 59.9**	**+0.6**
	baz=98								
D17K	**Noatak River**	**69.38**	**338**	P		**P**	**13 21 00.4**	**+0.9**
	baz=104								
RDOG	**Red Dog Mine**	**69.40**	**338**	P		**P**	**13 21 00.3**	**+0.8**
	baz=104								
F15K	**North Star Dit**	**69.55**	**335**	P		**P**	**13 21 01.3**	**+0.8**
	baz=102								
C17K	**DeLong Mountai**	**69.60**	**338**	P		**P**	**13 21 01.8**	**+1.0**
	baz=104								
BORG	**Borgarnes**	**69.84**	**26**	LR		LR	13 50 57.7		
	comp=Z,33nm,21.1s,baz=268,slow=35								
F14K	**Arctic Creek**	**70.19**	**335**	P		**P**	**13 21 05.3**	**+0.9**
	baz=100								
C16K	**Lisburne Hills**	**70.34**	**338**	P		**P**	**13 21 06.1**	**+0.8**
	baz=102								
TNA	**Tin City**	**70.86**	**335**	P		**P**	**13 21 09.3**	**+0.7**
	baz=98								
SPIA	**Saint Paul Isl**	**71.11**	**326**	P		**P**	**13 21 10.8**	**+0.6**
	baz=94								
DBG	**Daneborg**	**72.09**	**16**	*i* P		**P**	**13 21 15.8**	**0.0**
DBG				IAmb		IAmb	13 21 19.4		
	comp=Z,4.4nm,1.0s								
GAMB	**Gambell**	**72.28**	**333**	P		**P**	**13 21 17.7**	**+0.6**
	baz=94								
DAG	**Danmarks Havn**	**72.99**	**13**	*i* P		**P**	**13 21 21.5**	**+0.4**
DAG				IAmb		IAmb	13 21 22.1		
	comp=Z,11nm,0.9s								
RAR	**Rarotonga**	**73.82**	**243**	LR		LR	13 47 16.6		
	comp=Z,43nm,18.6s,baz=136,slow=30								
NOR	**Nord**	**74.30**	**9**	*i* P		**P**	**13 21 29.5**	**+0.7**
NOR				IAmb		IAmb	13 21 29.8		
	comp=Z,4.2nm,0.8s								
JMIC	**Jan Mayen**	**75.23**	**20**	LR		LR	13 55 37.6		
	comp=Z,44nm,18.1s,baz=313,slow=36								
EKA	**Eskdalemuir Ar**	**78.83**	**36**	P		**P**	**13 21 54.4**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=281,slow=6.0,SNR=9.0								
	comp=Z,3.0nm,0.8s								
SPITS	**Spitsbergen Ar**	**80.36**	**11**	LR		LR	14 00 59.5		
	comp=Z,42nm,18.7s,baz=292,slow=38								
ESDC	**Sonseca Array**	**80.89**	**51**	P		**P**	**13 22 06.5**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=284,slow=6.1,SNR=16								
ESDC				LR		LR	13 52 11.6		
	comp=Z,54nm,21.7s,baz=276,slow=31								
	comp=Z,2.2nm,0.8s								
ESDC	**Sonseca Array**	**80.89**	**51**	P		**P**	**13 22 05.5**	**-0.9**
MDT	**Midelt**	**81.67**	**58**	LR		LR	13 55 46.4		
	comp=Z,36nm,18.3s,baz=234,slow=34								
PMSA	**Palmer Station**	**81.70**	**168**	*eP*		**P**	**13 22 10.0**	**+0.1**
DOU	**Dourbes**	**84.52**	**40**	*dP*		**P**	**13 22 25.0**	**0.0**
BGES	**Gesves**	**84.75**	**39**	*dP*		**P**	**13 22 27.2**	**+1.0**
	comp=Z,5.8nm,1.1s								
NB2	**NORSAR Subarra**	**84.84**	**28**	P		**P**	**13 22 28.0**	**+1.5**
	comp=Z,14nm,1.1s,baz=293,slow=4.8								
NB2	**NORSAR Subarra**	**84.84**	**28**	P		**P**	**13 22 28.0**	**+1.5**
NOA	**NORSAR Array B**	**84.84**	**28**	P		**P**	**13 22 27.9**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=292,slow=4.8,SNR=7.6								
NOA				LR		LR	13 59 11.4		
	comp=Z,34nm,21.7s,baz=285,slow=35								
	comp=Z,2.4nm,0.8s								
BCLA	**Clavier**	**84.87**	**39**	*dP*		**P**	**13 22 28.0**	**+1.2**
HFS	**Hagfors**	**86.31**	**29**	LR		LR	13 59 21.3		
	comp=Z,42nm,21.9s,baz=298,slow=34								
ARCES	**ARCESS Array B**	**86.58**	**18**	LR		LR	14 02 12.1		
	comp=Z,34nm,18.2s,baz=286,slow=36								
DBIC	**Dimbokro**	**87.16**	**84**	P		**P**	**13 22 39.0**	**+0.2**
	comp=Z,6.8nm,0.8s,baz=270,slow=3.9,SNR=3.4								
DBIC				LR		LR	13 55 04.8		
	comp=Z,38nm,20.6s,baz=251,slow=31								
	comp=Z,6.8nm,0.8s								
TIXI	**Tiksi**	**89.91**	**348**	LR		LR	14 11 48.8		
	comp=Z,33nm,18.0s,baz=18,slow=41								
TIXI	**Tiksi**	**89.91**	**348**	P		**P**	**13 22 50.2**	**-0.5**
TIXI				IAmb		IAmb	13 22 51.3		
	comp=Z,11nm,1.1s								
GERES	**GERESS Array B**	**90.54**	**39**	P		**P**	**13 22 54.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=292,slow=7.4,SNR=5.1								
	comp=Z,0.4nm,0.3s								
GERES	**GERESS Array B**	**90.54**	**39**	P		**P**	**13 22 54.2**	**-0.1**
FINES	**FINESS Array B**	**91.11**	**25**	P		**P**	**13 22 56.4**	**-0.1**
	comp=Z,6.0nm,1.1s,baz=327,slow=5.9,SNR=3.8								
FINES				LR		LR	14 03 27.4		
	comp=Z,30nm,20.8s,baz=320,slow=35								
	comp=Z,6.0nm,1.1s								
TORD	**Torodi Ar. Bea**	**91.84**	**76**	P		**P**	**13 22 59.4**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=292,slow=5.3,SNR=3.3								
	comp=Z,0.6nm,0.7s								
KEST	**Kesra**	**92.08**	**53**	P		**P**	**13 23 02.8**	**+1.1**
	comp=Z,4.2nm,1.0s,baz=261,slow=4.7,SNR=5.4								
	comp=Z,4.2nm,1.0s								
VRAC	**Vranov**	**92.11**	**38**	LR		LR	14 06 59.9		
	comp=Z,37nm,18.1s,baz=288,slow=37								
MSVF	**Nonsavu**	**92.69**	**253**	LR		LR	13 53 37.2		
	comp=Z,59nm,20.6s,baz=176,slow=28								
NRIK	**Noril'sk**	**96.85**	**360**	LR		LR	14 10 24.5		
	comp=Z,49nm,19.9s,baz=5.5,slow=38								
AKASG	**Malin Array Be**	**98.53**	**33**	LR		LR	14 08 39.3		
	comp=Z,29nm,20.4s,baz=244,slow=36								
MLR	**Muntele Rosu**	**99.50**	**38**	LR		LR	14 05 14.1		
	comp=Z,34nm,21.8s,baz=6.5,slow=33								
KURBB	**Kurchatov Arra**	**115.26**	**6**	PKP		**PKiKP**	**13 28 32.8**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=325,slow=1.5,SNR=6.8								
KSRS	**Korea Array**	**115.64**	**324**	PKP		**PKiKP**	**13 28 34.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=32,slow=2.2,SNR=2.0								
MKAR	**Makanchi Array**	**119.35**	**3**	PKP		**PKPdf**	**13 28 40.3**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=29,slow=3.3,SNR=3.8								
HHC	**Hu-ho-hao-te**	**120.64**	**338**	*eP*		PKPdf	13 28 36.8	-7.6
BOSA	**Boshof**	**121.74**	**115**	PKP		**PKPdf**	**13 28 46.3**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=293,slow=1.0,SNR=3.9								
WMQ	**Urumqi**	**122.42**	**359**	*ePKP*		**PKPdf**	**13 28 45.5**	**-2.2**
WMQ				LR		LR			
	comp=Z,44nm,22.3s								
MAW	**Mawson**	**124.29**	**169**	PKP		**PKPdf**	**13 28 49.2**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=252,slow=3.2,SNR=3.1								
NJ2	**Nanjing**	**124.65**	**326**	*eP*		**PKPdf**	**13 28 51.5**	**-0.6**
NJ2				pmax		pmax			
	comp=Z,16nm,0.6s								
STKA	**Stephens Creek**	**126.75**	**241**	PKP		**PKPdf**	**13 28 55.4**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=67,slow=3.7,SNR=9.0								
WRA	**Warramunga Arr**	**133.93**	**256**	PKP		**PKPdf**	**13 29 09.1**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=85,slow=1.9,SNR=10								
ASAR	**Alice Springs**	**134.25**	**251**	PKP		**PKPdf**	**13 29 09.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=99,slow=1.8,SNR=8.1								
CMAR	**Chiang Mai Arr**	**145.45**	**339**	PKPbc		**PKPbc**	**13 29 30.9**	**0.0**
	comp=Z,20nm,0.8s,baz=342,slow=3.8,SNR=98								
CMAR	**Chiang Mai Arr**	**145.45**	**339**			**PKPbc**	**13 29 30.6**	**-0.3**

*IDC **30** 13:11:18.8±1.0,54.˝73N×161.˝21W,h0km, mb3.8/16, mbtmp3.8/20,ML3.5/4,MS2.8/4, Error ellipse: s-maj=26.5km s-min=15.1km az=169.0*
*AEIC **30** 13:11:23.3±2.0,54.˝58N±0.˝05×160.˝93W±0.˝05,h26km±4km, Error ellipse: s-maj=7.5km s-min=4.2km az=198.0*

*NEIC **30** 13:11:24.4±2.1,54.˝60N±0.˝06×160.˝96W±0.˝06, h44km±10km,mb3.6/4,ML3.8/24,ML3.7(AEIC), Error ellipse: s-maj=8.3km s-min=4.6km az=183.0*

ISC 30 13:11:24.5±1.0,**54.˝64N**±0.˝05×**160.˝87W**±0.˝03,**h44**km±9km, **n117,**σ1**833**/120,**mb3.8**/16,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.75**	**17**	P	**Pn**	**13 11 38.0**	**-0.6**
SDPT	**Sand Point**	**0.75**	**17**	S	**Sn**	**13 11 48.1**	**-0.7**
SDPT	**Sand Point**	**0.75**	**17**		**Pn**	**13 11 38.3**	**-0.3**
SDPT					**Sn**	**13 11 49.7**	**+0.9**
SDPT				IAML		13 11 51.2	
	comp=E,5μm,0.4s						
SDPT				IAML		13 11 51.4	
	comp=N,3μm,0.5s						
CNBA	**Chernabura Isl**	**0.76**	**76**		**Pn**	**13 11 37.6**	**-1.2**
CNBA	**Chernabura Isl**	**0.76**	**76**		**Sn**	**13 11 49.9**	**+0.7**
CNBA	**Chernabura Isl**	**0.76**	**76**	IAML		13 11 54.5	
	comp=N,867nm,0.7s						
CHNA	**Chernabura Isl**	**0.77**	**75**	P	**Pn**	**13 11 37.3**	**-1.5**
CHNA	**Chernabura Isl**	**0.77**	**75**	S	**Sn**	**13 11 46.7**	**-2.5**
DOL	**Dolgoi Island**	**0.77**	**312**		**Pn**	**13 11 37.6**	**-1.4**
DOL					**Sn**	**13 11 48.3**	**-1.1**
HAG	**Hague Volcano**	**0.91**	**319**		**Pn**	**13 11 40.1**	**-0.7**
PS4A	**Pavlof South-4**	**0.91**	**322**		**Pn**	**13 11 40.3**	**-0.5**
PS4A					**Sn**	**13 11 52.3**	**-0.5**
PVV	**Pavlof Volcano**	**0.91**	**325**		**Pn**	**13 11 40.2**	**-0.6**
PS1A	**Pavlof South-1**	**0.93**	**328**		**Pn**	**13 11 40.9**	**-0.3**
PS1A					**Sn**	**13 11 53.3**	**0.0**
DT1	**Dutton Round H**	**0.94**	**300**		**Pn**	**13 11 39.7**	**-1.6**
DT1					**Sn**	**13 11 51.8**	**-1.7**
DTNA	**Dutton South F**	**0.95**	**303**		**Pn**	**13 11 40.1**	**-1.3**
DTNA					**Sn**	**13 11 53.0**	**-0.8**
PN7A	**Pavlof North-7**	**1.03**	**321**		**Pn**	**13 11 42.4**	**-0.1**
PN7A					**Sn**	**13 11 56.7**	**+0.9**
VNKR	**Veniaminof 5**	**1.64**	**31**		**Pn**	**13 12 52.1**	**+1.3**
ISNN	**Isanotski Nort**	**1.70**	**278**		**Pn**	**13 11 51.3**	**-0.3**
ISNN					**Sn**	**13 12 12.8**	**+0.7**
VNSS	**Veniaminof 8**	**1.78**	**26**		**Pn**	**13 11 54.1**	**+1.1**
S14K	**Fog Glacier**	**1.81**	**24**		**Pn**	**13 11 54.8**	**+1.6**
VNFG	**Fog Glacier, M**	**1.81**	**24**		**Pn**	**13 11 53.9**	**+0.7**
VNFG	**Fog Glacier, M**	**1.81**	**24**		**Sn**	**13 12 18.9**	**+3.8**
VNFG	**Fog Glacier, M**	**1.81**	**24**		**Pn**	**13 11 55.0**	**+1.8**
SSBA	**Shishaldin**	**1.89**	**275**		**Pn**	**13 11 54.0**	**-0.3**
SSBA					**Sn**	**13 12 17.2**	**+0.2**
ANPB	**Aniakchak Plen**	**2.62**	**33**		**Pn**	**13 12 05.4**	**+1.2**
AKSA	**Akutan Strait**	**2.87**	**262**		**Pn**	**13 12 07.7**	**+0.1**
AKSA					**Sn**	**13 12 42.3**	**+1.4**
AKUT	**Akutan**	**2.91**	**262**	P	**Pn**	**13 12 09.4**	**+1.2**
AKUT	**Akutan**	**2.91**	**262**		**Pn**	**13 12 09.2**	**+1.0**
AKUT				IAML		13 12 54.9	
	comp=E,369nm,0.5s						
AKUT				IAML		13 13 01.5	
	comp=N,330nm,0.6s						
AHB	**Akutan Harbor**	**2.94**	**262**		**Pn**	**13 12 08.7**	**+0.1**
AHB					**Sn**	**13 12 43.8**	**+1.1**
ZRO	**Akutan Zero**	**3.04**	**262**		**Pn**	**13 12 09.9**	**-0.1**
ZRO					**Sn**	**13 12 46.4**	**+1.2**
LVA	**Lava Point**	**3.06**	**263**		**Pn**	**13 12 10.9**	**+0.7**
LVA				IAML		13 13 04.5	
	comp=E,264nm,0.7s						
UNV	**Unalaska Valle**	**3.40**	**259**	P	**Pn**	**13 12 14.9**	**0.0**
UNV	**Unalaska Valle**	**3.40**	**259**		**Pn**	**13 12 14.5**	**-0.4**
UNV	**Unalaska Valle**	**3.40**	**259**		**Sn**	**13 12 55.6**	**+1.6**
UNV	**Unalaska Valle**	**3.40**	**259**	IAML		13 13 03.4	
	comp=E,168nm,0.6s						
UNV				IAML		13 13 11.2	
	comp=N,125nm,0.8s						
MNAT	**Makushin Natee**	**3.49**	**260**		**Pn**	**13 12 16.2**	**-0.1**
MNAT					**Sn**	**13 12 59.0**	**+2.7**
MREP	**Makushin Rep't**	**3.55**	**259**		**Pn**	**13 12 17.2**	**+0.1**
MAPS	**Pakushin South**	**3.66**	**259**		**Pn**	**13 12 18.7**	**+0.2**
MAPS					**Sn**	**13 13 01.8**	**+1.4**
SII	**Sitkinak Islan**	**4.25**	**60**	P	**Pn**	**13 12 27.2**	**+0.6**
SII	**Sitkinak Islan**	**4.25**	**60**	Pn	**Pn**	**13 12 26.6**	**0.0**
SII				IAML		13 13 45.9	
	comp=E,138nm,0.8s						
O15K	**Ungalikthiuk R**	**4.59**	**7**	Pn	**Pn**	**13 12 31.7**	**+0.5**
O15K				IAML		13 13 54.8	
	comp=E,72nm,1.1s						
O15K				IAML		13 14 04.3	
	comp=N,69nm,0.8s						
O14K	**Tigyukauivet M**	**4.63**	**357**		**Pn**	**13 12 33.4**	**+1.5**
O14K				IAML		13 14 00.5	
	comp=N,65nm,0.8s						
O14K				IAML		13 14 00.6	
	comp=E,65nm,1.1s						
OHAK	**Old Harbor**	**4.99**	**56**	P	**Pn**	**13 12 36.2**	**-0.5**
OHAK	**Old Harbor**	**4.99**	**56**		**Pn**	**13 12 36.7**	**+0.1**
O16K	**Kokwok River B**	**5.19**	**16**		**Pn**	**13 12 41.8**	**+2.3**
O16K	**Kokwok River B**	**5.19**	**16**	IAML		13 14 36.0	
	comp=E,42nm,1.1s						
N14K	**Kuskokwak Cree**	**5.32**	**356**		**Pn**	**13 12 42.5**	**+1.3**
O17K	**Koliganek Bris**	**5.54**	**20**		**Pn**	**13 12 46.4**	**+2.1**
N15K	**Kwethluk River**	**5.56**	**4**		**Pn**	**13 12 46.8**	**+2.2**
KDAK	**Kodiak Island**	**5.59**	**52**	Pn	**Pn**	**13 12 43.7**	**-1.3**
	comp=E,0.4nm,0.3s,baz=94,slow=0.8,SNR=34						
KDAK				Sn	**Sn**	**13 13 46.4**	**-1.5**
	baz=136,slow=19						
KDAK				Lg	Lg	13 14 11.5	
	comp=E,1.8nm,0.3s,baz=311,slow=19,SNR=6.3						
KDAK				LR	LR	13 14 44.1	
	comp=E,23nm,18.0s,baz=229,slow=36						
	comp=E,4.4nm,0.8s						
KDAK	**Kodiak Island**	**5.59**	**52**	Pn	**Pn**	**13 12 45.7**	**+0.7**
SPIA	**Saint Paul Isl**	**5.86**	**300**	P	**Pn**	**13 12 49.7**	**+1.1**
SPIA	**Saint Paul Isl**	**5.86**	**300**	Pn	**Pn**	**13 12 49.8**	**+1.1**
M13K	**Dall Lake**	**5.94**	**348**		**Pn**	**13 12 52.5**	**+2.7**
N16K	**Nishlik Lake**	**5.96**	**10**		**Pn**	**13 12 52.4**	**+2.3**
M15K	**Kasigluk River**	**6.07**	**1**		**Pn**	**13 12 52.5**	**+0.9**
M14K	**Bethel**	**6.16**	**355**		**Pn**	**13 12 54.2**	**+1.5**
M11K	**Mekoryuk**	**6.44**	**336**		**Pn**	**13 12 57.2**	**+0.7**
M16K	**Timber Creek**	**6.48**	**8**		**Pn**	**13 12 59.2**	**+2.0**
L14K	**Kuka Creek**	**6.79**	**353**		**Pn**	**13 13 02.8**	**+1.4**
M17K	**Holitna River**	**7.02**	**14**		**Pn**	**13 13 06.6**	**+2.0**
L15K	**Ungalak Mounta**	**7.07**	**358**		**Pn**	**13 13 05.8**	**+0.6**
K13K	**Kusilvak Mount**	**7.58**	**346**		**Pn**	**13 13 13.6**	**+1.4**
L17K	**Donlin**	**7.64**	**9**		**Pn**	**13 13 13.9**	**+0.9**
K15K	**Wolf Creek Mou**	**7.69**	**358**		**Pn**	**13 13 15.0**	**+1.3**
L19K	**White Mountain**	**8.19**	**20**		**Pn**	**13 13 23.5**	**+2.8**
K17K	**Iditarod**	**8.21**	**8**		**Pn**	**13 13 22.1**	**+1.2**
SEW	**Seward**	**8.24**	**44**		**Pn**	**13 13 22.4**	**+1.2**
J14K	**Nanvaranak Lak**	**8.25**	**351**		**Pn**	**13 13 22.5**	**+1.1**
ATKA	**Atka Island**	**8.33**	**258**	P	**Pn**	**13 13 24.6**	**+2.1**
J16K	**Anvik River**	**8.67**	**1**		**Pn**	**13 13 28.7**	**+1.5**
J17K	**VABM Dome**	**8.83**	**5**		**Pn**	**13 13 30.6**	**+1.2**
P23K	**Montague Islan**	**9.04**	**48**		**Pn**	**13 13 32.6**	**+0.3**
PWL	**Port Wells**	**9.14**	**42**		**Pn**	**13 13 34.2**	**+0.6**
HIN	**Hinchinbrook I**	**9.63**	**47**		**Pn**	**13 13 41.0**	**+0.6**
FID	**Port Fidalgo**	**9.83**	**46**		**Pn**	**13 13 42.5**	**-0.5**
ADK	**Adak**	**9.87**	**260**	P	**Pn**	**13 13 45.2**	**+1.6**
J20K	**Nowinta River**	**10.15**	**17**		**Pn**	**13 13 49.3**	**+1.8**
KAIM	**Kayak Island**	**10.35**	**53**		**Pn**	**13 13 50.9**	**+0.8**
ILAR	**Eielson Array**	**12.33**	**29**	Pn	Pn	13 14 12.0	-5.2
	comp=E,0.1nm,0.3s,baz=218,slow=13,SNR=5.1						
	comp=E,0.1nm,0.4s						
I26K	**Coal Creek Min**	**13.83**	**32**	Pn	**Pn**	**13 14 36.7**	**-0.8**
M29M	**Somme Creek**	**14.01**	**47**		**Pn**	**13 14 40.8**	**+0.7**
S31K	**Pelican**	**14.04**	**66**		**Pn**	**13 14 41.0**	**+0.5**
E22K	**Anaktuvuk Pass**	**14.19**	**14**		**Pn**	**13 14 42.6**	**0.0**
SHEM	**Shemya Is, Ala**	**14.93**	**273**	Pn	**Pn**	**13 14 48.9**	**-3.5**
	comp=E,1.3nm,0.3s,baz=135,slow=11,SNR=5.4						
SHEM				LR	LR	13 20 37.4	
	comp=E,41nm,18.8s,baz=62,slow=38						
	comp=E,30nm,0.9s						
H29M	**Whitestone**	**15.94**	**34**		**P**	**13 15 06.6**	**-1.7**
G30M	**tAoh Zraii Nji**	**17.08**	**34**		**P**	**13 15 22.2**	**+1.2**
G30M				IAmb	IAmb	13 15 25.2	
	comp=Z,6.2nm,1.2s						
H31M	**Peel River**	**17.11**	**39**		**Pn**	**13 15 20.0**	**-0.1**
H31M				IAmb	IAmb	13 15 42.1	
	comp=Z,5.0nm,0.9s						
DLBC	**Dease Lake**	**17.34**	**65**	LR	LR	13 21 22.5	
	comp=Z,38nm,18.4s,baz=271,slow=34						
INK	**Inuvik**	**18.68**	**32**	P	**P**	**13 15 37.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=232,slow=15,SNR=4.7						
	comp=Z,2.9nm,1.1s						
PETK	**Petropavlovsk-**	**24.23**	**284**	P	**P**	**13 16 36.5**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=77,slow=13,SNR=22						
	comp=Z,2.7nm,0.5s						
PETK	**Petropavlovsk-**	**24.23**	**284**	P	**P**	**13 16 36.6**	**-0.2**
YKA	**Yellowknife Ar**	**24.87**	**53**	P	**P**	**13 16 44.6**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=274,slow=9.2,SNR=2.0						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**32.87**	**102**	P	**P**	**13 17 57.2**	**+2.9**
	comp=Z,1.3nm,0.7s,baz=295,slow=7.9,SNR=7.6						
	comp=Z,1.3nm,0.7s						
YAK	**Yakutsk**	**35.53**	**311**	LR	LR	13 33 47.5	
	comp=Z,37nm,19.9s,baz=100,slow=38						
H11N2	**WAKE ISLAND Hy**	**42.59**	**228**	T	T	14 04 21.1	
	baz=27,slow=76,SNR=21						
H11N3	**WAKE ISLAND Hy**	**42.59**	**228**	T	T	14 04 17.4	
	baz=27,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**42.60**	**228**	T	T	14 04 22.4	
	baz=27,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**43.75**	**227**	T	T	14 05 41.7	
	baz=27,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**43.77**	**227**	T	T	14 05 42.8	
	baz=27,slow=75,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**43.77**	**227**	T	T	14 05 42.9	
	baz=27,slow=75,SNR=6.8						
MJAR	**Matsushiro Arr**	**44.77**	**272**	P	**P**	**13 19 31.6**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=34,slow=7.5,SNR=2.6						
	comp=Z,0.8nm,0.5s						
TXAR	**Lajitas Array**	**47.81**	**98**	P	**P**	**13 19 59.4**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=320,slow=8.1,SNR=2.4						
	comp=Z,0.3nm,0.5s						
KSRS	**Korea Array**	**50.08**	**281**	P	**P**	**13 20 14.4**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=35,slow=9.5,SNR=3.6						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.98**	**322**	P	**P**	**13 21 51.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=16,slow=6.9,SNR=1.4						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**64.13**	**356**	P	**P**	**13 21 53.0**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=343,slow=6.0,SNR=3.7						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**64.13**	**356**	P	**P**	**13 21 53.2**	**-0.4**
BVAR	**Borovoye Array**	**64.61**	**329**	P	**P**	**13 21 57.2**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=59,slow=5.7,SNR=4.4						
	comp=Z,0.8nm,0.5s						
HFS	**Hagfors**	**65.49**	**3**	P	**P**	**13 22 02.5**	**0.0**
	comp=Z,2.0nm,0.7s,baz=319,slow=8.2,SNR=4.0						
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**65.74**	**318**	P	**P**	**13 22 04.0**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=40,slow=6.3,SNR=5.0						
	comp=Z,0.6nm,0.7s						
AKASG	**Malin Array Be**	**74.69**	**353**	P	**P**	**13 22 58.2**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=10,slow=6.2,SNR=4.8						
	comp=Z,0.3nm,0.3s						
KBZ	**Khabaz**	**79.93**	**343**	P	**P**	**13 23 27.8**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=78,slow=0.8,SNR=4.0						
	comp=Z,2.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**80.88**	**289**	P	**P**	**13 23 34.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=14,slow=5.7,SNR=6.7						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**83.99**	**18**	P	**P**	**13 23 49.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=327,slow=6.1,SNR=3.2						
	comp=Z,0.3nm,0.4s				

PSGCX	**Pisagua**		**5.32**	**8**	*eP*		**Pn**	**13 17 26.9**	**-1.0**
PSGCX					IAML			13 19 13.4	
	comp=Z,38nm,0.5s								
CFA	**Coronel Fontan**		**7.09**	**161**	Pn		**Pn**	**13 17 51.8**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=350,slow=13,SNR=15								
CFA					Sn		**Sn**	**13 19 17.4**	**+4.9**
	comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=3.5								
	comp=Z,0.9nm,0.3s								
LPAZ	**La Paz**		**8.95**	**17**	LR		LR	13 22 08.7	
	comp=Z,72nm,18.8s,baz=203,slow=40								
H03N1	**Juan Fernandez**		**11.02**	**218**	T		T	13 30 16.2	
	baz=44,slow=72,SNR=540								
H03N2	**Juan Fernandez**		**11.03**	**218**	T		T	13 30 16.8	
	baz=44,slow=72,SNR=1318								
H03N3	**Juan Fernandez**		**11.03**	**218**	T		T	13 30 17.4	
	baz=44,slow=72,SNR=183								
H03S3	**Juan Fernandez**		**11.30**	**216**	T		T	13 30 33.9	
	baz=53,slow=71,SNR=6.9								
H03S1	**Juan Fernandez**		**11.32**	**216**	T		T	13 30 33.1	
	baz=53,slow=71,SNR=8.1								
H03S2	**Juan Fernandez**		**11.32**	**216**	T		T	13 30 34.2	
	baz=53,slow=71,SNR=8.0								
CPUP	**Villa Florida**		**12.34**	**100**	Pn		**Pn**	**13 19 04.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=323,slow=11,SNR=7.7								
	comp=Z,0.5nm,0.4s								
SIV	**San Ignacio**		**12.78**	**48**	Pn		**Pn**	**13 19 11.5**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=235,slow=10.0,SNR=27								
	comp=Z,1.0nm,0.4s								
PLCA	**Paso Flores**		**15.80**	**179**	Pn		**Pn**	**13 19 47.7**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=321,slow=6.8,SNR=11								
	comp=Z,9.6nm,1.0s								
PLCA	**Paso Flores**		**15.80**	**179**	*eP*		**Pn**	**13 19 47.8**	**-3.1**
VNA2	**Neumayer--Watz**		**58.10**	**160**	⇑P		**P**	**13 26 01.9**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=283,slow=7.9								
SNAA	**Sanae**		**59.71**	**160**	⇑P		**P**	**13 26 13.1**	**+0.6**
	comp=Z,35nm,0.5s								
SNAA	**Sanae**		**59.71**	**160**	P		**P**	**13 26 12.3**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=270,slow=6.9,SNR=4.1								
	comp=Z,1.4nm,0.5s								
TROLL	**Troll, Antarti**		**61.43**	**160**	⇑P		**P**	**13 26 25.2**	**+0.9**
	comp=Z,57nm,0.4s								
QSPA	**South Pole Qui**		**65.31**	**180**	P		**P**	**13 26 47.9**	**-2.3**
	comp=Z,1.4nm,1.0s,baz=252,slow=7.1,SNR=3.1								
	comp=Z,1.4nm,1.0s								
ANMO	**Albuquerque**		**68.39**	**329**	LR		LR	13 54 55.7	
	comp=Z,24nm,18.1s,baz=84,slow=34								
TORD	**Torodi Ar. Bea**		**80.22**	**71**	P		**P**	**13 28 18.9**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=260,slow=5.0,SNR=11								
	comp=Z,1.8nm,0.7s								
MAW	**Mawson**		**81.61**	**164**	P		**P**	**13 28 26.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=227,slow=8.3,SNR=3.6								
	comp=Z,1.2nm,0.6s								
ASAR	**Alice Springs**		**126.07**	**208**	PKP		**PKiKP**	**13 35 12.1**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=112,slow=1.6,SNR=4.2								
H11S2	**WAKE ISLAND Hyd**		**26.41**	**275**	T		T	15 54 35.9	
	baz=108,slow=75,SNR=64								
H11S1	**WAKE ISLAND Hyd**		**26.42**	**275**	T		T	15 54 36.7	
	baz=108,slow=75,SNR=59								
H11S3	**WAKE ISLAND Hyd**		**26.43**	**275**	T		T	15 54 37.0	
	baz=108,slow=75,SNR=38								
H11N3	**WAKE ISLAND Hyd**		**26.59**	**277**	T		T	15 54 55.7	
	baz=108,slow=75,SNR=6.4								
H11N2	**WAKE ISLAND Hyd**		**26.60**	**277**	T		T	15 54 56.3	
	baz=108,slow=75,SNR=5.5								
H11N1	**WAKE ISLAND Hyd**		**26.60**	**277**	T		T	15 54 56.5	
	baz=108,slow=75,SNR=6.0								
WRA	**Warramunga Arr**		**129.11**	**211**	PKP		**PKiKP**	**13 35 18.1**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=172,slow=1.5,SNR=4.6								
KURBB	**Kurchatov Arra**		**145.17**	**35**	PKPbc		**PKPdf**	**13 35 46.1**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=297,slow=3.8,SNR=11								
ZALV	**Zalesovo Beam**		**145.79**	**26**	PKPbc		**PKPab**	**13 35 48.0**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=305,slow=5.2,SNR=6.4								
MKAR	**Makanchi Array**		**149.44**	**38**	PKPbc		**PKPbc**	**13 35 57.5**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=299,slow=2.5,SNR=5.8								

*IDC **30** 13:35:41.8±0.8,29.78N×95.02E,h0km,mb4.0/12, mbtmp4.0/15,ML4.1/3,MS3.4/13,Error ellipse: s-maj=23.0km s-min=14.8km az=55.0*

*BJI **30** 13:35:44.0,29.80N×95.12E,h6km,mB4.0/2,mb4.2/23, ML3.9/6,Ms3.8/13,Ms7 3.6/15*

*NEIC **30** 13:35:44.8±1.6,29.9N±0.1×95.14E±0.06,h10km±2km, mb4.1/17,Error ellipse: s-maj=20.3km s-min=5.0km az=18.0*

*NDI **30** 13:35:56.7±2.1,30.44N×94.11E,h10km,ML3.8,MW4.2, Presumed earthquake*

ISC 30 13:35:44.2±0.5,29.97N±0.05×95.23E±0.05,h10km,n65, σ1°91/62,mb4.1/13,MS3.3/10,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LSA	**Lhasa**	**3.56**	**267**			**Pn**	**13 36 39.4**	**-0.5**
LSA	**Lhasa**	**3.56**	**267**	*e*Pn		**Pn**	**13 36 37.8**	**-2.1**
LSA				Sn		**Sn**	**13 37 23.8**	**+1.5**
LSA				SMN				
	73nm,0.8s							
LSA				SME				
	67nm,0.7s							
TAWA	**Tawang**	**3.79**	**232**	*e*P		**Pb**	**13 36 51.9**	**+0.5**
TAWA				*i* x		x	13 36 53.5	
TAWA				*e*S		**Sn**	**13 37 31.4**	**+3.6**
TAWA				IAML			13 37 42.8	
	comp=E,1μm,0.5s							
TAWA				IAML			13 37 44.3	
	comp=N,1μm,0.6s							
GUWA	**GUWAHATI**	**4.89**	**221**	*e*P		**Pb**	**13 37 07.6**	**-2.4**
GUWA				*i* x		x	13 37 09.1	
GUWA				*e*S		**Sn**	**13 38 00.2**	**+5.7**
IMP	**Imphal**	**5.25**	**193**	*ex*		**Pn**	**13 37 02.3**	**-0.5**
IMP				*i* x		x	13 37 18.6	
IMP				*ex*		**Sn**	**13 38 10.1**	**+6.7**
IMP				*ex*		x	13 38 25.5	
IMP				*i* x		x	13 38 25.5	
IMP				IAML			13 38 30.8	
	comp=E,70nm,0.8s							
IMP				IAML			13 38 31.3	
	comp=N,43nm,0.9s							
SHL	**Shillong**	**5.29**	**215**	Pn		**Pn**	**13 37 01.6**	**-2.0**
SHL	**Shillong**	**5.29**	**215**	*e*P		**Pb**	**13 37 13.8**	**-3.2**
SHL				*i* x		x	13 37 19.6	
SHL				*e*S		**Sn**	**13 38 10.1**	**+5.3**
SHL				*i* x		x	13 38 23.0	
TNCH	**TengChong**	**5.72**	**149**	Pn		**Pn**	**13 37 10.5**	**+1.0**
TNCH				Sn		**Sn**	**13 38 15.3**	**0.0**
TNCH				Sg		**Sg**	**13 38 47.0**	**-1.0**
TNCH				SMN				
	comp=N,110nm,1.8s							
TNCH				SME				
	comp=N,130nm,1.9s							
TNCH				L		L		
	comp=N,170nm,6.6s							
MORE	**Moreh**	**5.77**	**188**	Pn		**Pn**	**13 37 10.0**	**0.0**
DHUB	**DHUBRI**	**6.08**	**231**	*ex*		**Pn**	**13 37 13.0**	**-1.1**
DHUB				*i* x		x	13 37 39.1	
EVN	**Everest**	**7.64**	**257**	Pn		**Pn**	**13 37 35.6**	**-0.6**
LZDM	**Lanzhou Array**	**9.28**	**48**	Pn		**Pn**	**13 38 00.5**	**+2.1**
	baz=232,slow=11							
LZDM				LR		LR	13 41 59.2	
	comp=N,240nm,20.4s,baz=270,slow=40							
	comp=N,34nm,0.4s							
SLVN	**Son La**	**11.62**	**136**			**Pn**	**13 38 30.9**	**+0.7**
CMAR	**Chiang Mai Arr**	**11.95**	**163**	Pn		**Pn**	**13 38 32.4**	**-2.3**
	comp=N,0.4nm,0.3s,baz=342,slow=14,SNR=6.2							
	comp=N,0.7nm,0.3s							
WMQ	**Urumqi**	**15.07**	**339**	*e*P		**P**	**13 39 22.8**	**+0.2**
WMQ				pmax		pmax		
	comp=N,8.0nm,1.1s							
WMQ				L		L		
	comp=N,230nm,11.1s							
WMQ				L		L		
	comp=N,140nm,14.7s							
WMQ				L		L		
	comp=N,100nm,16.5s							
LYN	**LuoYang**	**15.28**	**68**	P		**P**	**13 39 27.0**	**+2.1**
LYN				pmax		pmax		
	comp=N,26nm,0.8s							
WHN	**Wuhan**	**16.53**	**83**	P		**P**	**13 39 38.8**	**0.0**
HHC	**Hu-ho-hao-te**	**17.15**	**46**	*e*P		**P**	**13 39 46.0**	**+0.3**
HHC				pmax		pmax		
	comp=N,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=N,27nm,5.6s							
WUS	**Wushi**	**17.15**	**315**			**Pn**	**13 39 45.1**	**+1.0**
WUS				IAmb		IAmb	13 39 50.5	
	comp=Z,10nm,0.8s							
PDGK	**Podgornoye**	**18.32**	**321**			**Pn**	**13 39 57.9**	**-0.7**
TARG	**Taragay, Kyrgy**	**18.32**	**315**			**P**	**13 39 59.9**	**+0.9**
KSH2	**Kashi**	**18.57**	**305**	P		**Pn**	**13 40 03.0**	**+1.3**
KSH2				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KDJ	**Kajisay**	**18.93**	**315**			**P**	**13 40 05.4**	**-0.1**
NIL	**Nilore**	**19.03**	**287**			**P**	**13 40 03.2**	**-3.2**
NIL				IAmb		IAmb	13 40 10.3	
	comp=Z,8.8nm,0.8s							
MKAR	**Makanchi Array**	**19.58**	**333**	P		**P**	**13 40 13.1**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=148,slow=9.8,SNR=12							
MKAR				LR		LR	13 47 59.0	
	comp=Z,41nm,18.3s,baz=142,slow=38							
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**19.58**	**333**			**P**	**13 40 12.8**	**+0.5**
MAKZ	**Makanchi**	**19.71**	**332**			**P**	**13 40 14.7**	**+0.9**
SONM	**Songino Array**	**19.80**	**23**	P		**P**	**13 40 15.6**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=203,slow=10,SNR=14							
SONM				LR		LR	13 49 01.7	
	comp=Z,131nm,21.3s,baz=214,slow=40							
	comp=Z,3.3nm,0.8s							
SONM	**Songino Array**	**19.80**	**23**	P		**Pn**	**13 40 17.4**	**+1.0**
BOOM	**Boomskoye usch**	**19.90**	**314**	P		**P**	**13 40 16.5**	**+0.4**
BOOM				IAmb		IAmb	13 40 29.2	
	comp=Z,6.5nm,1.0s							
ULN	**Ulaanbaatar**	**20.05**	**24**	P		Pn	13 40 19.8	+0.4
ULN				IAmb		IAmb	13 40 24.7	
	comp=Z,6.7nm,0.9s							
AAK	**Ala-Archa**	**20.89**	**313**	P		**P**	**13 40 26.2**	**-0.6**
	comp=Z,3.2nm,0.3s,baz=150,slow=9.2,SNR=5.5							
	comp=Z,3.2nm,0.3s							
AAK	**Ala-Archa**	**20.89**	**313**			**P**	**13 40 25.8**	**-0.9**
AAK				IAmb		IAmb	13 40 41.4	
	comp=Z,8.1nm,0.9s							
BTK	**Batken**	**22.32**	**303**	P		**P**	**13 40 43.1**	**+1.0**
GAR	**Garm**	**22.37**	**300**			**P**	**13 40 43.4**	**+0.7**
TLY	**Talaya**	**22.57**	**14**	LR		LR	13 50 35.8	
	comp=Z,134nm,21.5s,baz=184,slow=39							
KBL	**Kabul**	**22.59**	**288**			**P**	**13 40 44.6**	**-0.5**
KBL				IAmb		IAmb	13 40 47.6	
	comp=Z,13nm,0.8s							
KKAR	**Karatay Array**	**23.69**	**310**	P		**P**	**13 40 56.5**	**+0.3**
SHAA	**Shahritus**	**23.72**	**296**			**P**	**13 40 55.8**	**-0.7**
SHAA				IAmb		IAmb	13 41 10.3	
	comp=Z,14nm,0.9s							
KURBB	**Kurchatov Arra**	**24.14**	**333**	P		**P**	**13 41 00.8**	**+0.6**
	comp=Z,5.8nm,0.8s,baz=146,slow=10,SNR=48							
	comp=Z,5.8nm,0.8s							
NACB	**Ninganchiao**	**24.15**	**97**	P		**P**	**13 41 00.6**	**0.0**
KURK	**Kurchatov**	**24.18**	**334**			**P**	**13 41 00.8**	**+0.2**
KURK				IAmb		IAmb	13 41 03.9	
	comp=Z,7.3nm,0.8s							
ZAA0	**Zalesovo Array**	**25.13**	**345**			**P**	**13 41 09.5**	**+0.3**
ZAA0				IAmb		IAmb	13 41 12.4	
	comp=Z,4.0nm,0.8s							
ZALV	**Zalesovo Beam**	**25.13**	**345**	P		**P**	**13 41 10.2**	**+1.1**
	comp=Z,4.5nm,0.7s,baz=169,slow=9.7,SNR=18							
ZALV				LR		LR	13 52 23.4	
	comp=Z,41nm,20.1s,baz=152,slow=40							
	comp=Z,4.5nm,0.7s							
ZALV	**Zalesovo Beam**	**25.13**	**345**			**P**	**13 41 09.6**	**+0.5**
PALK	**Pallekele**	**26.39**	**214**	LR		LR	13 51 47.5	
	comp=Z,39nm,20.6s,baz=18,slow=37							
HILR	**Hailar Array B**	**26.96**	**37**	P		**P**	**13 41 27.4**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=231,slow=9.5,SNR=4.0							
	comp=Z,1.3nm,0.5s							
KSRS	**Korea Array**	**28.10**	**66**	P		**P**	**13 41 36.5**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=260,slow=10.0,SNR=4.1							
	comp=Z,0.5nm,0.6s							
BVAR	**Borovoye Array**	**29.34**	**329**	P		**P**	**13 41 47.6**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=126,slow=10.0,SNR=11							
	comp=Z,3.3nm,0.8s							
JNU	**Nakatsue**	**30.45**	**75**	LR		LR	13 55 12.9	
	comp=Z,48nm,20.6s,baz=245,slow=38							
AB31	**Akbulak array**	**32.91**	**316**			**P**	**13 42 18.6**	**+0.2**
AB31				IAmb		IAmb	13 42 21.5	
	comp=Z,3.4nm,1.3s							
ABKAR	**Akbulak array**	**32.91**	**316**	P		**P**	**13 42 19.3**	**+0.8**
MJAR	**Matsushiro Arr**	**36.30**	**68**	LR		LR	13 57 49.7	
	comp=Z,26nm,18.5s,baz=315,slow=36							
LEM	**Lembang**	**38.47**	**160**	LR		LR	14 01 58.2	
	comp=Z,155nm,18.0s,baz=256,slow=41							
YAK	**Yakutsk**	**39.13**	**25**	LR		LR	14 00 42.5	
	comp=Z,86nm,19.1s,baz=262,slow=38							
ASAJ	**Asahikawa**	**39.81**	**56**	LR		LR	14 00 51.7	
	comp=Z,38nm,18.1s,baz=327,slow=38							
BRTR	**Keskin Array B**	**50.60**	**299**	P		**P**	**13 44 40.6**	**-2.8**
	comp=Z,0.8nm,0.8s,baz=127,slow=6.0,SNR=5.3							
	comp=Z,0.8nm,0.8s							
BRTR	**Keskin Array B**	**50.60**	**299**	P		**P**	**13 44 41.6**	**-1.9**
NOA	**NORSAR Array B**	**61.43**	**327**	LR		LR	14 14 37.8	
	comp=Z,26nm,18.4s,baz=85,slow=38							
WRA	**Warramunga Arr**	**62.30**	**138**	P		**P**	**13 46 05.9**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=327,slow=7.1,SNR=8.6							
	comp=Z,0.6nm,0.6s							
GERES	**GERESS Array B**	**62.77**	**313**	P		**P**	**13 46 07.2**	**-2.6**
	comp=Z,0.5nm,0.5s,baz=39,slow=6.8,SNR=4.1							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**64.99**	**141**	P		**P**	**13 46 24.0**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=326,slow=6.8,SNR=9.3							
	comp=Z,0.7nm,0.5s							
KDAK	**Kodiak Island**	**75.87**	**31**	LR		LR	14 22 03.7	
	comp=Z,33nm,21.0s,baz=278,slow=36							
TORD	**Torodi Ar. Bea**	**86.55**	**283**	P		**P**	**13 48 27.1**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=54,slow=4.0,SNR=4.3							
	comp=Z,1.2nm,0.9s							
MAW	**Mawson**	**100.27**	**192**	P		**Pdif**	**13 49 28.1**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=335,slow=4.6,SNR=3.5							

*NEIC **30** 13:48:18.5,34.30N×118.42W,h5km*

*PAS **30** 13:48:19.2±1.0,34.294N±0.009×118.436W±0.009, h7km±1km,Error ellipse: s-maj=1.3km s-min=1.0km az=190.0*

NEIC 30 13:48:18.6±0.6,34.288N±0.008×118.43W±0.01, h10km±2km,ML3.8/158,Mwr3.8/107,Mwr3.7/6(PAS),Error ellipse: s-maj=1.8km s-min=0.9km az=61.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; Mrr4.37; Mθθ-4.15; Mφφ-0.22; Mrθ0.28; Mθφ2.94; Mφr1.23; **Fault plane solution:** $M_0$5.33000×10^{14} **NP1:** φs99.5100°,δ46.32000°,λ62.73000°. **NP2:**φs316.24000°, δ50.00000°,λ115.63000°. **Principal axes:** T 4.8091, Plg71.0000°, Azm293.0000°; N 0.9220, Plg19.0000°, Azm119.0000°; P -5.7311, Plg2.0000°, Azm28.0000°;

Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DECC	**Green Verdugo**	**0.09**	**113**			Pg	13 48 23.8	+2.7
HLLC	**North Hollywoo**	**0.13**	**151**			Pb	13 48 24.9	+1.7
OAT	**Oat Mountain**	**0.16**	**290**			Pg	13 48 22.6	+0.4
OAT						Sg	13 48 25.8	+1.0
DJJ	**Donna J Jenkin**	**0.18**	**186**			Pb	13 48 25.8	+1.8
DJJ	**Donna J Jenkin**	**0.18**	**186**			Pg	13 48 22.8	+0.2
PDE	**Pardee, Santa**	**0.20**	**321**			Pg	13 48 23.5	+0.7
PDE						Sg	13 48 27.1	+1.4
GR2C	**Griffith Obs.**	**0.20**	**147**			Pg	13 48 23.3	+0.4
GR2C						Sg	13 48 26.8	+1.0
BLCC	**Black Canyon**	**0.20**	**257**			Pg	13 48 23.4	+0.4
BLCC						Sg	13 48 26.9	+1.0
TPRS	**Tripped Ranch**	**0.24**	**213**			Pg	13 48 24.0	+0.5
PASC	**Pasadena Art C**	**0.24**	**119**			Pg	13 48 23.6	+0.1
PASC				Sg		Sg	13 48 27.6	+0.8
PASC				IAML			13 48 28.3	
	comp=E,18μm,0.5s							
LCGC	**La Cienega, Cu**	**0.29**	**171**			Sb	13 48 31.1	+0.3
CBCC	**Caltech Broad**	**0.29**	**120**			Pg	13 48 25.1	+0.5
CBCC						Sb	13 48 30.1	-0.8
GSA	**Caltech--GSA**	**0.29**	**121**			Pg	13 48 23.5	-1.1
GSA						Sg	13 48 28.4	-0.2
USC	**University of**	**0.29**	**155**			Pb	13 48 25.3	-0.7
USC						Sb	13 48 30.6	-0.2
CRPC	**Caltech Rob'n**	**0.30**	**121**			Pg	13 48 25.2	+0.6
CRPC						Sb	13 48 30.0	-0.9
CRPC	**Caltech Rob'n**	**0.30**	**121**			Pg	13 48 25.2	+0.6
CRPC						Sb	13 48 30.2	-0.7
CACC	**Caltech Cellar**	**0.30**	**120**			Pg	13 48 25.1	+0.5
CACC						Sb	13 48 30.1	-0.9
BHPC	**Baldwin Hills**	**0.30**	**169**			Pb	13 48 25.6	-0.5
BHPC						Sb	13 48 31.4	+0.2
AGOC	**Agoura**	**0.31**	**243**			Pg	13 48 24.6	-0.3
AGOC						Sg	13 48 29.5	+0.5
MWC	**Mount Wilson**	**0.32**	**102**			Pg	13 48 25.3	+0.2
MWC						Sg	13 48 30.5	+1.1
MWC						IAML	13 48 30.8	
	comp=N,9μm,0.3s							
MWC						IAML	13 48 32.0	
	comp=E,12μm,0.7s							
CJV	**Casa Juvan**	**0.34**	**45**			Pg	13 48 25.5	0.0
CJV						Sg	13 48 30.6	+0.5
GVRC	**Garvey Reservo**	**0.35**	**132**			Sb	13 48 32.2	-0.3
LEOC	**Leona Valley**	**0.36**	**17**			Sg	13 48 31.0	+0.4
WTT2	**Watts, South G**	**0.37**	**156**			Pb	13 48 27.1	-0.1
WTT2						Sb	13 48 33.7	+0.7
OSI	**Osito Audit: C**	**0.40**	**324**			Sb	13 48 33.2	-1.0
OSI	**Osito Audit: C**	**0.40**	**324**			Pg	13 48 27.0	+0.4
OSI	**Osito Audit: C**	**0.40**	**324**	IAML			13 48 33.6	
	comp=E,11μm,0.6s							
OSI				IAML			13 48 35.1	
	comp=N,8μm,1.1s							
BTPC	**Burnt Peak**	**0.41**	**344**			Sg	13 48 33.0	+0.7
LRRC	**Littlerock Res**	**0.41**	**55**			Pg	13 48 26.9	+0.2
LRRC						Sg	13 48 33.0	+0.8
JNH	**Juniper Hills**	**0.43**	**68**			Pg	13 48 27.1	0.0
JNH						Sg	13 48 33.4	+0.6
FOXC	**Fox Airport**	**0.48**	**20**			Pg	13 48 27.9	-0.2
FOXC						Sg	13 48 34.8	+0.2
HOLC	**Holcomb Ridge**	**0.52**	**71**			Pg	13 48 28.8	0.0
HOLC						Sg	13 48 36.1	+0.5
DLAC	**Del Amo**	**0.52**	**147**			Sb	13 48 38.9	+1.5
RPV	**Rancho Palos V**	**0.54**	**177**			Sb	13 48 37.5	-0.5
PSRC	**Puddingstone R**	**0.56**	**110**			Sb	13 48 37.9	-0.6
FULC	**Fullerton**	**0.59**	**134**			Sn	13 48 41.2	-1.6
BREC	**Barre Substati**	**0.61**	**142**			Sn	13 48 41.7	-1.4
TPO	**Tropico Hills**	**0.61**	**16**			Sg	13 48 38.6	-0.1
TPO	**Tropico Hills**	**0.61**	**16**			Pg	13 48 30.4	-0.2
TPO				IAML			13 48 39.6	
	comp=N,2μm,0.5s							
TPO				IAML			13 48 45.6	
	comp=E,3μm,0.7s							
TMC	**Table Mountain**	**0.62**	**82**			Sb	13 48 39.7	-0.8
STCC	**Santa Clara**	**0.62**	**272**			Pb	13 48 31.3	-0.3
STCC						Sb	13 48 40.4	0.0
SBB	**Saddle Back Bu**	**0.64**	**51**			Sg	13 48 39.4	-0.1
BFSC	**Mount Baldy Ra**	**0.64**	**94**			Sg	13 48 39.6	0.0
BFSC	**Mount Baldy Ra**	**0.64**	**94**			Pg	13 48 30.9	-0.2
BFSC	**Mount Baldy Ra**	**0.64**	**94**	IAML			13 48 45.0	
	comp=E,2μm,0.7s							
BFSC				IAML			13 48 46.2	
	comp=N,3μm,0.5s							
THC	**Tehachapi Micr**	**0.65**	**343**			Sg	13 48 40.1	+0.3
CHNC	**Chino**	**0.69**	**115**			Pg	13 48 32.2	+0.3
EDW2	**Edwards Air Fo**	**0.69**	**31**			Sg	13 48 40.8	-0.4
LOK	**Lockwood Valle**	**0.70**	**309**			Pg	13 48 32.4	+0.2
LOK						Sb	13 48 43.0	+0.3
BCD	**Casitas Dam**	**0.76**	**276**			Pg	13 48 33.3	0.0
BCD						Sb	13 48 44.8	+0.5
MLSC	**Mira Loma**	**0.78**	**111**			Pg	13 48 33.4	-0.2
MLSC						Sb	13 48 44.3	-0.5
TJR	**Tejon Ranch**	**0.78**	**341**			Pg	13 48 33.5	-0.2
TJR						Sg	13 48 44.1	+0.1
MPI	**Mount Pinos, F**	**0.79**	**312**			Pg	13 48 33.8	-0.1
MPI						Sb	13 48 45.3	-0.1
FON	**Fontana**	**0.85**	**103**			Pg	13 48 34.8	-0.2
FON						Sb	13 48 46.4	-0.4
ADO	**Adelanto Recei**	**0.87**	**72**			Pg	13 48 35.1	-0.3
CIAC	**Catalina I. Ai**	**0.88**	**179**			Sb	13 48 48.3	+0.4
ARVC	**Arvin**	**0.90**	**339**			Sb	13 48 48.2	-0.1
HYS	**Haystack Butte**	**0.92**	**51**			Pg	13 48 35.9	-0.5
HYS						Sg	13 48 48.1	-0.1
ELS	**Elsinore Mount**	**1.05**	**127**			Pg	13 48 38.2	-0.7
ELS				IAML			13 48 54.4	
	comp=E,2μm,0.5s							
ELS				IAML			13 48 54.9	
	comp=N,3μm,0.4s							
SBC	**Santa Barbara**	**1.07**	**279**			Pb	13 48 38.4	-0.8
LRMC	**Laurel Mtn Rad**	**1.34**	**27**			Pn	13 48 43.3	-0.2
LRMC				IAML			13 49 02.1	
	comp=E,2μm,0.3s							
LRMC				IAML			13 49 02.8	
	comp=N,2μm,0.3s							
ISA	**Isabella, Lake**	**1.37**	**359**			Pn	13 48 43.7	-0.2
ISA				IAML			13 49 04.6	
	comp=E,1μm,0.5s							
CCCA	**Chr Cany lake**	**1.52**	**35**			Pn	13 48 45.5	-0.3
CCCA				IAML			13 49 12.8	
	comp=E,2μm,0.4s						

VTX	**Valle De La Tr**	**3.65**	**142**	IAML		13 50 40.7
	comp=N,118nm,0.1s					
W13A	**Hualapai Mount**	**3.83**	**77**	IAML		13 50 22.4
	comp=N,177nm,1.0s					
W13A				IAML		13 50 23.6
	comp=E,100nm,0.9s					
S11A	**Rachel**	**4.00**	**32**	IAML		13 50 32.8
	comp=N,147nm,0.9s					
S11A				IAML		13 50 46.9
	comp=E,173nm,1.2s					
MHC	**Mount Hamilton**	**4.01**	**320**	IAML		13 50 43.7
	comp=E,76nm,1.2s					
MHC				IAML		13 50 43.8
	comp=N,86nm,1.1s					
CMB	**Columbia Colle**	**4.06**	**338**	IAML		13 50 28.8
	comp=N,82nm,0.6s					
NV11	**Mina Array Sit**	**4.14**	**3**	IAML		13 50 35.1
	comp=E,108nm,1.1s					
PRN	**Pahroc Range**	**4.15**	**40**	IAML		13 50 41.4
	comp=N,123nm,0.6s					
PRN				IAML		13 50 42.4
	comp=E,129nm,0.7s					
WAKR	**Walker**	**4.29**	**349**	IAML		13 50 34.8
	comp=N,184nm,1.4s					
WAKR				IAML		13 50 39.5
	comp=E,130nm,0.8s					
Y14A	**Wickenburg**	**4.52**	**93**	IAML		13 50 57.7
	comp=N,76nm,2.0s					
KNB	**Kanab**	**5.32**	**58**	IAML		13 51 08.7
	comp=E,55nm,1.0s					
KNB				IAML		13 51 26.1
	comp=N,56nm,1.2s					

IDC 30 13:49:54.7±328.0, 57.76N×28.64E, h0km Error ellipse: s-maj=138.5km s-min=97.0km az=98.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.77**	**99**	I	I	14 22 00.0	
	baz=282,slow=304,SNR=2.2						
I37NO	**I37NO**	**12.19**	**343**	I	I	14 55 10.0	
	baz=150,slow=314,SNR=1.0						
I26DE	**FREYUNG INFRAS**	**12.60**	**231**	I	I	15 09 10.0	
	baz=40,slow=324,SNR=1.0						

*JMA **30** 13:58:25.4±0.2, 30.7N±0.9×142.2E±°, h53km, MV3.4/16, NEAR TORISHIMA IS*
*IDC **30** 13:58:26.3±2.8, 30.28N×140.79E, h0km, mb3.2/3, mbtmp3.2/5, ML2.3/2, Error ellipse: s-maj=120.4km s-min=22.3km az=69.0*
ISC 30 13:58:26.4±1.4, 30.74N±0.07×142.4E±0.3, h50km, n11, σ2s46/14, mb3.4/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.64**	**184**	*e*S	**Sn**	**14 00 01.2**	**-0.7**
JCJ	**Chichijima**	**3.64**	**184**	Pn	**Pn**	**13 59 20.4**	**+0.1**
	0.4nm,0.3s,baz=259,slow=20,SNR=2.3						
JCJ				Sn	**Sn**	**13 59 59.5**	**-2.5**
	3.6nm,0.3s,baz=297,slow=22,SNR=5.2 26nm,0.7s						
BSO1	**Boso 1**	**4.09**	**343**	*e*S	**Sn**	**14 00 13.4**	**+1.2**
JHO	**Hitachi**	**6.06**	**346**	*e*P	**Pn**	**13 59 54.5**	**+1.1**
JHO				*e*S	**Sn**	**14 00 57.2**	**-4.2**
JAG	**Ashikaga**	**6.19**	**337**	*e*S	**Sn**	**14 01 02.3**	**-2.4**
JFK	**Kawauchi**	**6.73**	**349**	*e*P	**Pn**	**14 00 03.9**	**+1.2**
JFK				*e*S	**Sn**	**14 01 13.3**	**-4.8**
MJAR	**Matsushiro Arr**	**6.77**	**330**	Pn	**Pn**	**14 00 04.7**	**+1.5**
	baz=137,slow=15,SNR=2.3 0.9nm,0.7s						
MKAR	**Makanchi Array**	**48.39**	**307**	P	**P**	**14 07 03.0**	**-0.4**
	0.2nm,0.5s,baz=98,slow=8.9,SNR=1.9 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**50.70**	**312**	P	**P**	**14 07 22.0**	**+1.2**
	0.3nm,0.8s,baz=78,slow=8.8,SNR=2.4 0.3nm,0.8s						
WRA	**Warramunga Arr**	**50.99**	**190**	P	**P**	**14 07 24.8**	**+1.6**
	0.3nm,0.7s,baz=6.2,slow=7.6,SNR=1.5						
ASAR	**Alice Springs**	**54.71**	**190**	P	**P**	**14 07 52.6**	**+1.9**
	0.3nm,0.9s,baz=8.3,slow=6.0,SNR=4.6 0.3nm,0.9s						

*SCB **30** 14:06:53.8±1.4, 21.43S×66.54W, h246km±15km, ML4.1/2, Error ellipse: s-maj=6.4km s-min=4.6km az=0.0*
*SJA **30** 14:06:54.5±1.9, 21.37S×66.59W, h250km, ML3.9, MW3.6*
*IDC **30** 14:06:58.3±2.8, 20.98S×66.32W, h259km±33km, mb3.3/3, mbtmp3.9/5, Error ellipse: s-maj=37.2km s-min=28.4km az=147.0*
ISC 30 14:06:55.0±0.8, 21.40S±0.04×66.52W±0.05, h219km, n41, σ1s69/57, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.83**	**80**	P	**Pn**	**14 07 28.6**	**+2.3**
YJA	**Yavi**	**1.21**	**130**	*e*P	**Pn**	**14 07 32.1**	**+3.5**
YJA	**Yavi**	**1.21**	**130**	P	**Pn**	**14 07 31.2**	**+2.6**
HJA	**Humahuaca**	**2.07**	**151**	*e*P	Pn	14 07 54.8	+19
PB09	**IPOC Station P**	**2.57**	**261**	*e*P	**Pn**	**14 07 43.2**	**+2.3**
PB09				*e*S	**S**	**14 08 19.3**	**+2.6**
PB09				IAML		14 08 20.8	
	comp=Z,92nm,0.2s						
PB09	**IPOC Station P**	**2.57**	**261**	P	**Pn**	**14 07 41.8**	**+0.8**
PB08	**IPOC Station P**	**2.77**	**296**	*e*P	**Pn**	**14 07 45.1**	**+1.7**
PB08				*e*S	**S**	**14 08 23.2**	**+2.1**
PB08	**IPOC Station P**	**2.77**	**296**	P	**Pn**	**14 07 44.3**	**+0.9**
SALTA		**2.82**	**177**	*e*P	**Pn**	**14 07 43.4**	**-0.7**
SALTA				*e*P		14 07 47.7	
SALTA				*e*S	**S**	**14 08 19.3**	**-3.1**
GO01	**Chusmiza**	**3.04**	**304**	*e*P	**Pn**	**14 07 48.0**	**+1.4**
GO01				*e*S	**S**	**14 08 30.6**	**+3.8**
GO01				IAML		14 08 33.4	
	comp=Z,75nm,0.1s						
GO01	**Chusmiza**	**3.04**	**304**	P	**Pn**	**14 07 47.5**	**+0.8**
PB03	**IPOC Station P**	**3.08**	**257**	*e*P	**Pn**	**14 07 47.5**	**+0.8**
PB03				*e*S	**S**	**14 08 25.3**	**-1.6**
PB03				IAML		14 08 27.5	
	comp=Z,381nm,0.2s						
SOEO	**Opoqueri**	**3.10**	**335**	P	**Pn**	**14 07 48.9**	**+1.6**
PB06	**IPOC Station P**	**3.12**	**245**	*e*P	**Pn**	**14 07 48.8**	**+1.6**
PB06				*e*S	**S**	**14 08 29.3**	**+1.5**
PB06				IAML		14 08 32.8	
	comp=Z,89nm,0.3s						
PB06	**IPOC Station P**	**3.12**	**245**	P	**Pn**	**14 07 48.4**	**+1.3**
PB02	**IPOC Station P**	**3.15**	**271**	*e*P	**Pn**	**14 07 48.1**	**+0.6**
PB02				*e*S	**S**	**14 08 27.6**	**-0.8**
PB02				IAML		14 08 29.0	
	comp=Z,586nm,0.4s						
PB02	**IPOC Station P**	**3.15**	**271**	P	**Pn**	**14 07 47.9**	**+0.4**
PB02				S	**S**	**14 08 28.0**	**-0.4**
PB02				IAML		14 08 33.1	
	comp=Z,253nm,0.3s						
PB07	**IPOC Station P**	**3.15**	**263**	*e*P	**Pn**	**14 07 48.3**	**+0.7**
PB07				*e*S	**S**	**14 08 28.2**	**-0.4**
PB07				IAML		14 08 29.6	
	comp=Z,169nm,0.2s						
PB11	**IPOC Station P**	**3.36**	**298**	*e*P	**Pn**	**14 07 50.5**	**+0.5**
PB11				*e*S	**S**	**14 08 32.5**	**-0.4**
PB11				IAML		14 08 33.9	
	comp=Z,198nm,0.2s						
PB11	**IPOC Station P**	**3.36**	**298**	P	**Pn**	**14 07 50.3**	**+0.3**
PB11				S	**S**	**14 08 32.9**	**-0.1**
PB11				IAML		14 08 33.8	
	comp=Z,254nm,0.4s						
AOEA	**Aiquile**	**3.42**	**21**	P	**Pn**	**14 07 51.9**	**+1.0**
TA02	**Huaiquique**	**3.56**	**288**	*e*P	**Pn**	**14 07 52.2**	**0.0**
TA02				*e*S	**S**	**14 08 35.0**	**-2.0**
TA02				IAML		14 08 35.9	
	comp=Z,298nm,0.1s						
PB05	**IPOC Station P**	**3.71**	**246**	*e*P	**Pn**	**14 07 54.5**	**+0.5**
PB05				*e*S	**S**	**14 08 39.0**	**-1.3**
PB16	**IPOC Station P**	**4.15**	**317**	*e*P	**Pn**	**14 08 00.8**	**+0.9**
PB16				*e*S	**S**	**14 08 53.1**	**+2.4**
PB16	**IPOC Station P**	**4.15**	**317**	P	**Pn**	**14 08 00.5**	**+0.6**
PB12	**IPOC Station P**	**4.53**	**307**	*e*P	**Pn**	**14 08 02.7**	**-1.5**
PB12				*e*S	**S**	**14 08 54.4**	**-4.1**
PB12				IAML		14 08 59.1	
	comp=Z,41nm,0.6s						
BBOJ	**La Paz, Jacaqu**	**4.68**	**340**	P	**Pn**	**14 08 07.6**	**+1.2**
SOEJ	**Jacaque**	**4.68**	**340**	P	**Pn**	**14 08 07.6**	**+1.2**
PB14	**IPOC Station P**	**4.81**	**227**	*e*P	**Pn**	**14 08 07.6**	**-0.2**
PB14				*e*S	**S**	**14 09 02.1**	**-3.0**
PB14				IAML		14 09 04.1	
	comp=Z,60nm,0.2s						
PB14	**IPOC Station P**	**4.81**	**227**	P	**Pn**	**14 08 07.5**	**-0.2**
BBOD	**La Paz, Gloria**	**5.13**	**337**	P	**Pn**	**14 08 13.0**	**+0.9**
LPAZ	**La Paz**	**5.31**	**343**	P	**Pn**	**14 08 15.0**	**+0.6**
	comp=Z,3.5nm,0.4s,baz=121,slow=5.1,SNR=9.8						
LPAZ				S	**S**	**14 09 15.8**	**-1.3**
	comp=Z,8.1nm,1.0s,baz=316,slow=12,SNR=8.5						
LPAZ	**La Paz**	**5.31**	**343**	*e*P	**Pn**	**14 08 15.7**	**+1.3**
LPAZ	**La Paz**	**5.31**	**343**	P	**Pn**	**14 08 15.5**	**+1.1**
BBSD	**Serra de San D**	**6.97**	**54**	P	**Pn**	**14 08 34.5**	**-0.6**
SIV	**San Ignacio**	**7.45**	**45**	P	**Pn**	**14 08 40.1**	**-1.2**
	comp=Z,15nm,0.6s,baz=222,slow=11,SNR=82						
SIV	**San Ignacio**	**7.45**	**45**	P	**Pn**	**14 08 40.5**	**-0.8**
QSPA	**South Pole Qui**	**68.79**	**180**	P	**P**	**14 17 35.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=117,slow=2.3,SNR=1.6 comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.23**	**69**	P	**P**	**14 18 11.2**	**-2.9**
	comp=Z,1.1nm,0.6s,baz=246,slow=5.6,SNR=5.2 comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**77.33**	**190**	P	**P**	**14 18 27.4**	**+2.5**
	comp=Z,0.9nm,0.8s,baz=124,slow=4.1,SNR=6.3 comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**144.22**	**37**	PKP	**PKPab**	**14 26 02.3**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=321,slow=1.7,SNR=3.6						

*IDC **30** 14:08:34.5±1.9, 17.54S×178.83W, h615km±19km, mb3.0/8, mbtmp4.0/10, Error ellipse: s-maj=66.6km s-min=17.1km az=149.0*
ISC 30 14:08:33.5±1.3, 17.6S±0.4×178.8W±0.3, h600km, n14, σ0s94/11, mb3.5/9, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.06**	**267**	P	**P**	**14 09 55.0**	**+1.9**
	6.0nm,0.5s,baz=242,slow=22,SNR=7.4						
DZM	**Mont Dzumac**	**14.62**	**250**	P	**P**	**14 11 37.6**	**-0.7**
	4.4nm,0.9s,baz=125,slow=14,SNR=1.2						
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**14 15 05.5**	**-0.4**
	1.9nm,0.7s,baz=78,slow=17,SNR=4.4 1.9nm,0.7s						
WRA	**Warramunga Arr**	**44.37**	**259**	P	**P**	**14 15 51.9**	**-0.4**
	0.5nm,0.4s,baz=96,slow=7.5,SNR=11 0.5nm,0.4s						
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**14 15 53.5**	**-0.2**
	2.7nm,0.5s,baz=86,slow=9.0,SNR=80 2.7nm,0.5s						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**14 19 39.0**	**-0.1**
	0.7nm,0.8s,baz=227,slow=9.0,SNR=3.6 0.7nm,0.8s						
SEY	**Seymchan**	**83.42**	**347**	P	**P**	**14 19 58.1**	**-0.4**
	0.8nm,0.4s,baz=205,slow=18,SNR=2.3 0.8nm,0.4s						
ILAR	**Eielson Array**	**85.68**	**13**	P	**P**	**14 20 08.9**	**-0.5**
	0.5nm,0.4s,baz=225,slow=5.0,SNR=9.4 0.5nm,0.4s						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**14 20 12.5**	**+0.1**
	0.7nm,0.7s,baz=235,slow=4.4,SNR=9.7 0.7nm,0.7s						
PDAR	**Pinedale Array**	**87.36**	**44**	P	**P**	**14 20 17.6**	**-0.5**
	0.4nm,0.5s,baz=183,slow=3.0,SNR=4.4 0.4nm,0.5s						
SNAA	**Sanae**	**90.89**	**179**	⇑P	P	14 20 42.4	+8.5
	comp=Z,16nm,0.2s						
VNA2	**Neumayer--Watz**	**91.48**	**177**	⇑P	P	14 20 21.7	-15
	comp=Z,0.6nm,0.2s,baz=311,slow=13						
BRTR	**Keskin Array B**	**144.35**	**315**	PKP	PKPbc	14 27 02.0	-0.7
	comp=Z,0.4nm,0.6s,baz=347,slow=3.8,SNR=3.7						
GERES	**GERESS Array B**	**147.25**	**345**	PKPbc	**PKPdf**	**14 27 08.6**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=2.4,slow=3.2,SNR=7.5						

*IDC **30** 14:14:47.6±1.5, 51.76N×151.44E, h504km±20km, mb2.8/10, mbtmp3.7/13, Error ellipse: s-maj=22.8km s-min=12.2km az=157.0*
ISC 30 14:14:48.4±0.8, 51.8N±0.2×151.5E±0.1, h518km, n13, σ0s76/13, mb3.3/9, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-Kul'dur**	**4.04**	**68**	P	**P**	**14 16 06.6**	**-1.6**
	9.7nm,0.6s,baz=282,slow=0.7,SNR=22 0.5nm,0.7s						
KLR	**Klukvennoye**	**12.80**	**266**	P	**P**	**14 17 35.2**	**+0.1**
	0.7nm,0.3s,baz=90,slow=3.7,SNR=2.5						
MJAR	**Matsushiro Arr**	**17.92**	**217**	P	**P**	**14 18 27.3**	**+0.1**
	1.4nm,0.6s,baz=13,slow=10,SNR=6.6						
HILR	**Hailar Array B**	**20.14**	**276**	P	**P**	**14 18 46.6**	**-0.5**
	1.0nm,0.3s,baz=74,slow=11,SNR=4.3 1.0nm,0.3s						
KSRS	**Korea Array**	**21.91**	**238**	P	**P**	**14 19 02.3**	**-0.9**
	0.5nm,0.5s,baz=45,slow=10,SNR=2.9 0.5nm,0.5s						
ILAR	**Eielson Array**	**33.44**	**43**	P	**P**	**14 20 43.8**	**+0.3**
	0.5nm,0.7s,baz=280,slow=11,SNR=8.2 0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**38.95**	**300**	P	**P**	**14 21 28.5**	**-0.7**
	0.5nm,0.4s,baz=81,slow=8.9,SNR=2.1 0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.85**	**292**	P	**P**	**14 22 08.3**	**+0.2**
	0.4nm,0.4s,baz=57,slow=8.8,SNR=4.9 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**43.92**	**299**	P	**P**	**14 22 09.3**	**+0.7**
	0.6nm,0.6s,baz=65,slow=8.3,SNR=6.2 0.6nm,0.6s						
YKA	**Yellowknife Ar**	**47.60**	**39**	P	**P**	**14 22 36.8**	**+0.4**
	0.9nm,0.5s,baz=303,slow=7.1,SNR=3.5 0.9nm,0.5s						
PDAR	**Pinedale Array**	**62.69**	**55**	P	**P**	**14 24 22.9**	**+0.6**
	0.3nm,0.3s,baz=326,slow=0.9,SNR=5.5 0.3nm,0.3s						
TXAR	**Lajitas Array**	**75.95**	**60**	P	**P**	**14 25 42.4**	**+0.5**
	0.2nm,0.5s,baz=282,slow=5.4,SNR=5.6 0.2nm,0.5s						
ASAR	**Alice Springs**	**76.70**	**197**	P	**P**	**14 25 46.3**	**+0.4**
	0.2nm,0.4s,baz=23,slow=7.0,SNR=4.2 0.2nm,0.4s						

*UPP **30** 14:18:45.6±0.0, 67.85N×20.21E, h0km, ML2.4, Confirmed Induced event*
*IDC **30** 14:18:45.9±1.1, 67.83N×20.29E, h0km, mbtmp3.0/4, ML2.4/4, Error ellipse: s-maj=21.1km s-min=8.6km az=120.0*
*HEL **30** 14:18:46.3±0.1, 67.85N×20.22E, h1km, ML2.4, ML2.4(UPP), Confirmed Induced event*
ISC 30 14:18:45.0±0.8, 67.83N±0.02×20.23E±0.02, h0km, n36, σ1s11/56, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**18**	P	**Pg**	**14 18 48.1**	**+0.7**
KUA				S	**Sg**	**14 18 49.9**	**+0.8**
KUA	**Kurravaara**	**0.13**	**18**	*i* P	**Pg**	**14 18 48.1**	**+0.7**
KUA				*i* S	**Sg**	**14 18 49.9**	**+0.8**
RATU	**Laukkuluspa**	**0.24**	**268**	P	**Pg**	**14 18 50.3**	**+0.7**
RATU				S	**Sg**	**14 18 53.8**	**+1.1**
RATU	**Laukkuluspa**	**0.24**	**268**	*i* P	**Pg**	**14 18 50.3**	**+0.7**
RATU				*i* S	**Sg**	**14 18 53.8**	**+1.1**
KOVU	**Salmi**	**0.39**	**356**	P	**Pg**	**14 18 52.9**	**+0.4**
KOVU				S	**Sg**	**14 18 58.1**	**+0.6**
KOVU	**Salmi**	**0.39**	**356**	*i* P	**Pg**	**14 18 52.9**	**+0.4**
KOVU				*i* S	**Sg**	**14 18 58.1**	**+0.6**
NIKU	**Nikkaluokta**	**0.46**	**275**	P	**Pg**	**14 18 54.1**	**+0.5**
NIKU				S	**Sg**	**14 19 00.5**	**+1.0**
NIKU	**Nikkaluokta**	**0.46**	**275**	*i* P	**Pg**	**14 18 54.1**	**+0.5**
NIKU				*i* S	**Sg**	**14 19 00.5**	**+1.0**
LANU	**Lannavaara**	**0.70**	**71**	*e*P	**Pg**	**14 18 58.9**	**+0.6**
LANU	**Lannavaara**	**0.70**	**71**	P	**Pg**	**14 18 58.9**	**+0.6**
LANU				S	**Sg**	**14 19 08.5**	**+1.1**
LANU	**Lannavaara**	**0.70**	**71**	*e*P	**Pg**	**14 18 58.9**	**+0.6**
LANU				*e*S	**Sg**	**14 19 08.4**	**+1.0**
DUNU	**Dundret**	**0.73**	**170**	P	**Pg**	**14 18 59.5**	**+0.6**
DUNU				S	**Sg**	**14 19 09.7**	**+1.4**
DUNU	**Dundret**	**0.73**	**170**	*i* P	**Pg**	**14 18 59.5**	**+0.6**
DUNU				*i* S	**Sg**	**14 19 09.7**	**+1.4**
MASU	**Masugnsbyn**	**0.78**	**118**	P	**Pg**	**14 19 00.5**	**+0.7**
MASU	**Masugnsbyn**	**0.78**	**118**	*i* P	**Pg**	**14 19 00.5**	**+0.7**
SALU	**Saltoluokta**	**0.80**	**236**	*e*P	**Pg**	**14 19 00.7**	**+0.4**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**	**14 19 00.7**	**+0.4**
SALU				S	**Sg**	**14 19 11.8**	**+1.1**
SALU	**Saltoluokta**	**0.80**	**236**	*i* P	**Pg**	**14 19 00.7**	**+0.4**
SALU				*i* S	**Sg**	**14 19 11.8**	**+1.1**
HEF	**Hetta**	**1.41**	**64**	*e*P	**Pn**	**14 19 11.6**	**-0.3**
HEF				*e*S	**Sg**	**14 19 30.0**	**-0.1**
ERTU	**Ertsjaerv**	**1.50**	**148**	P	**Pn**	**14 19 13.2**	**+0.2**
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	**Pn**	**14 19 13.2**	**+0.2**
ERTU				*e*S	**Sn**	**14 19 33.6**	**+0.5**
KLF	**Kolari**	**1.56**	**111**	*e*P	**Pn**	**14 19 14.0**	**+0.1**
KLF				*e*S	**Sb**	**14 19 35.2**	**+0.4**
HARU	**Harads**	**1.70**	**170**	P	**Pn**	**14 19 16.6**	**+0.8**
HARU	**Harads**	**1.70**	**170**	*e*P	**Pn**	**14 19 16.6**	**+0.8**
TOF	**Tornio**	**2.39**	**136**	*e*PB	**Pb**	**14 19 27.6**	**-1.1**
TOF				*e*SB	**Sb**	**14 19 58.9**	**+0.2**
SGF	**Sodankyl**	**2.44**	**96**	*e*PB	**Pb**	**14 19 28.3**	**-1.3**
SGF				*e*SB	**Sb**	**14 19 59.5**	**-0.7**
RNF	**Rovaniemi**	**2.56**	**116**	*e*PB	**Pb**	**14 19 30.4**	**-1.4**
RNF				*e*SG	**Sb**	**14 20 05.1**	**+1.4**
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P	**Pn**	**14 19 29.5**	**+1.6**
ARA0				*e*SB	**Sb**	**14 20 02.8**	**-1.3**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn	**Pn**	**14 19 29.1**	**+1.2**
	1.1nm,0.3s,baz=234,slow=14,SNR=44						
ARCES				Sn	**Sn**	**14 20 00.9**	**+1.1**
	2.9nm,0.3s,baz=231,slow=25,SNR=12 2.4nm,0.3s						
OUF	**Merijarvi**	**3.93**	**150**	smax	smax	14 20 52.3	
	comp=Z,5.0nm,0.4s						
KU1	**Kurvinen**	**4.35**	**117**	smax	smax	14 21 02.6	
	comp=Z,14nm,0.4s						
VAF	**Ylistaro**	**4.92**	**167**	smax	smax	14 21 25.2	
	comp=Z,3.0nm,0.3s						
RMF	**Romuvaara**	**5.37**	**128**	smax	smax	14 21 31.4	
	comp=Z,3.0nm,0.3s						
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**14 20 28.9**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=343,slow=14,SNR=4.8						
FINES				Sn	**Sn**	**14 21 44.0**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=341,slow=23,SNR=1.7						
FINES				Lg	Lg	14 22 18.6	
	comp=Z,0.4nm,0.3s,baz=346,slow=28,SNR=6.5 comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**14 20 39.1**	**-1.2**
	baz=26,slow=14,SNR=4.7						
NOA				Lg	Lg	14 22 47.0	
	comp=Z,0.1nm,0.3s,baz=49,slow=22,SNR=4.6 comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**14 20 45.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=22,slow=14,SNR=6.2						
HFS				Sn	**Sn**	**14 22 14.9**	**-4.4**
	comp=Z,0.3nm,0.3s,baz=21,slow=25,SNR=2.4 comp=Z,1.4nm,0.7s						

*NOU **30** 14:40:14.4, 39.13S×177.64E, h91km, MLv2.7/8, Off E. Coast of N. Island, N.Z.*
*WEL **30** 14:40:15.5±0.8, 39.5S±5.1×17.8E±°, h19km±6km, M2.7/8, ML2.8/8, MLv2.7/8, Error ellipse: s-maj=7.2km s-min=4.5km az=162.8*
ISC 30 14:40:14.8±1.2, 39.17S±0.05×177.82E±0.05, h28km±7km, n18, σ0s63/24, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	**0.07**	**75**	P	**Pb**	**14 40 20.6**	**+0.9**
KNZ	**Kokohu**	**0.19**	**322**	P	**Pb**	**14 40 20.1**	**-0.5**
KNZ				S	**Sb**	**14 40 24.1**	**-0.5**
PRGZ	**Paritu Road**	**0.25**	**11**	P	**Pb**	**14 40 21.7**	**+0.2**
RIGZ	**Rimuhau**	**0.47**	**354**	P	**Pb**	**14 40 24.8**	**+0.2**
RIGZ				S	**Sn**	**14 40 32.8**	**-0.2**
WHHZ	**Waihua**	**0.47**	**281**	P	**Pb**	**14 40 25.0**	**+0.5**
WHHZ				S	**Sn**	**14 40 32.8**	**-0.2**
RAHZ	**Arahi**	**0.63**	**294**	P	**Pb**	**14 40 27.5**	**+0.2**
RAHZ				S	**Sn**	**14 40 37.1**	**+0.1**
ARHZ	**Aropaoanui**	**0.65**	**262**	P	**Pn**	**14 40 28.4**	**+0.2**
ARHZ				S	**Sn**	**14 40 38.9**	**+1.4**
TKGZ	**Te Karaka**	**0.73**	**2**	P	**Pb**	**14 40 29.1**	**+0.2**
CNGZ	**Carnagh Statio**	**0.75**	**24**	P	**Pb**	**14 40 29.8**	**+0.5**
MTHZ	**Maungataniwha**	**0.83**	**292**	P	**Pb**	**14 40 30.5**	**-0.1**
MTHZ				S	**Sn**	**14 40 42.1**	**+0.1**
BKZ	**Black Stump Fm**	**1.03**	**270**	P	**Pn**	**14 40 33.8**	**+0.3**
BKZ	**Black Stump Fm**	**1.03**	**270**	S	**Sn**	**14 40 48.1**	**+1.0**
URZ	**Urewera**	**1.07**	**328**	P	**Pn**	**14 40 34.0**	**+0.1**
URZ	**Urewera**	**1.07**	**328**	S	**Sn**	**14 40 48.4**	**+0.6**
MXZ	**Matakaoa Point**	**1.65**	**13**	P	**Pn**	**14 40 41.9**	**0.0**
MXZ	**Matakaoa Point**	**1.65**	**13**	P	**Sb**	**14 41 03.9**	**-1.0**
BFZ	**Birch Farm**	**1.94**	**218**	P	**Pn**	**14 40 44.7**	**-1.2**
BFZ	**Birch Farm**	**1.94**	**218**	S	**Sn**	**14 41 09.1**	**-0.2**

*IDC **30** 15:03:47.3±1.5, 33.49N×141.38E, h0km, mb3.4/3, mbtmp3.6/8, ML3.3/4, MS2.1/1, Error ellipse: s-maj=31.9km s-min=19.0km az=67.0*
*NIED **30** 15:03:52.8, 33.66N×141.08E, h52km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.44; $M_{\theta\theta}$3.17; $M_{\phi\phi}$-2.73; $M_{r\theta}$-2.75; $M_{\theta\phi}$1.69; $M_{\phi r}$1.77; Fault plane solution: $M_0$4.73000×10^{14} NP1: ϕ_s212.00000°, δ46.00000°, λ-175.00000°. NP2: ϕ_s118.00000°, δ86.00000°, λ-44.00000°.*
*JMA **30** 15:03:52.8±0.2, 33.7N±0.5×141.1E±1.0, h52km, MV3.5/38, E OFF HACHIJOJIMA ISLAND*
ISC 30 15:03:49.8±1.7, 33.60N±0.04×141.35E±0.07, h29km±13km, n31, σ2s05/36, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.10**	**344**	P	**Pb**	**15 04 10.8**	**+0.9**
JHJ2	**Mitsune**	**1.37**	**250**	P	**Pb**	**15 04 13.8**	**-1.0**
BSO3	**Boso 3**	**1.39**	**330**	P	**Pb**	**15 04 14.4**	**-0.6**
JHJ	**Hachijo jima 2**	**1.40**	**250**	Pn	**Pn**	**15 04 13.7**	**+0.4**
	407nm,0.3s,baz=113,slow=22,SNR=246						
J

0.2nm,0.5s,baz=90,slow=7.6,SNR=4.1
0.2nm,0.5s
WRA Warramunga Arr 53.66 188 P **P 15 13 09.8 +1.0**
3.0nm,0.4s,baz=5.5,slow=7.4,SNR=1.6
ASAR Alice Springs 57.38 188 P **P 15 13 36.6 +1.1**
0.7nm,0.5s,baz=15,slow=13,SNR=22
0.7nm,0.5s

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*NEIC **30** 15:04:09.8±2.6,36°.25N±0°.02×106°.77W±0°.04,h11km±6km, mb3.7/3,ML4.3/128,Mwr3.7/56,Error ellipse: s-maj=4.1km s-min=3.4km az=88.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.82; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$4.70; $M_{r\theta}$-1.74; $M_{\theta\phi}$-1.34; $M_{r\phi}$0.11; Fault plane solution: M_o4.85000×10^{14} NP1:ϕ_s10.81000°,δ47.33000°, λ-54.02000°. NP2:ϕ_s143.84000°,δ53.49000°, λ-122.51000°. Principal axes: T 5.0322, Plg3.0000°, Azm256.0000°; N -0.3832, Plg26.0000°, Azm165.0000°; P -4.6490, Plg64.0000°, Azm353.0000°;*
*IDC **30** 15:04:09.1±0.8,36°.21N×107°.02W,h0km,mb3.3/2, mbtmp3.4/9,ML2.7/5,MS2.8/5 Error ellipse: s-maj=13.3km s-min=7.8km az=64.0*
*NEIC **30** 15:04:11.5,36°.20N×106°.76W,h10km*
ISC 30 15:04:09.8±1.4,36°.25N±0°.04×106°.79W±0°.04,h7km±11km, n135,σ1^{2}9/130,New Mexico

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
ANMO	**Albuquerque**	**1.32**	**168**	Pg	**Pg**		**15 04 35.6**	**+0.4**
	98nm,0.3s,baz=350,slow=11,SNR=1411							
ANMO				Lg	Lg		15 04 51.0	
	308nm,0.3s,baz=188,slow=21,SNR=64							
ANMO	**Albuquerque**	**1.32**	**168**		**Pg**		**15 04 35.3**	**+0.1**
ANMO	**Albuquerque**	**1.32**	**168**	Pn	**Pg**		**15 04 35.6**	**+0.4**
ANMO					**Sn**		**15 04 52.0**	**-0.8**
ANMO				IAML			15 04 53.5	
	744nm,0.2s							
ANMO				IAML			15 04 53.6	
	863nm,0.2s							
TASM	**ASL Pad, Albuq**	**1.32**	**168**		**Pg**		**15 04 35.6**	**+0.4**
TASM				IAML			15 04 53.7	
	2μm,0.2s							
TASM	**ASL Pad, Albuq**	**1.32**	**168**	Pn	**Pg**		**15 04 35.6**	**+0.4**
TASM					**Sg**		**15 04 52.4**	**0.0**
TASM				IAML			15 04 53.3	
	1μm,0.2s							
TASM				IAML			15 04 53.7	
	3μm,0.2s							
ALQ	**Albuquerque**	**1.33**	**168**	Pn	**Pg**		**15 04 35.6**	**+0.4**
ALQ					**Sn**		**15 04 52.2**	**-0.7**
ALQ	**Albuquerque**	**1.33**	**168**	Pn	**Pg**		**15 04 35.6**	**+0.4**
ALQ					**Sn**		**15 04 52.2**	**-0.7**
S22A	**4UR Ranch, Cre**	**1.50**	**359**		**Pb**		**15 04 38.0**	**0.0**
S22A				IAML			15 05 00.4	
	comp=E,3μm,0.1s							
S22A				IAML			15 05 01.2	
	comp=N,5μm,0.1s							
MVCO	**Mesa Verde**	**1.67**	**306**		**Pb**		**15 04 41.1**	**+0.1**
MVCO					**Sb**		**15 05 03.0**	**+0.6**
SDCO	**Great Sand Dun**	**1.82**	**34**		**Pb**		**15 04 43.4**	**-0.2**
SDCO					**Sb**		**15 05 05.7**	**-0.9**
LENM	**Lemitar**	**2.08**	**184**		**Pn**		**15 04 46.2**	**+1.0**
T25A	**Trinidad**	**2.11**	**64**		**Pb**		**15 04 47.4**	**-1.1**
T25A				IAML			15 05 19.2	
	comp=N,1μm,0.8s							
SBM	**South Baldy**	**2.29**	**188**		**Pn**		**15 04 49.5**	**+1.3**
CRNM	**Carthage**	**2.29**	**179**		**Pn**		**15 04 49.1**	**+1.0**
Y22A	**Socorro**	**2.31**	**184**		**Pn**		**15 04 49.7**	**+1.4**
PV01	**Paradox Valley**	**2.36**	**324**		**Pb**		**15 04 51.4**	**-1.3**
PV01				IAML			15 05 24.8	
	comp=E,874nm,0.4s							
PV01				IAML			15 05 26.1	
	comp=N,844nm,0.5s							
PV15	**Paradox Valley**	**2.49**	**328**		**Pb**		**15 04 53.2**	**-1.8**
PV15				IAML			15 05 35.9	
	comp=N,862nm,0.8s							
PV15				IAML			15 05 37.1	
	comp=E,916nm,0.9s							
PV02	**Paradox Valley**	**2.50**	**322**		**Pb**		**15 04 53.6**	**-1.5**
PV02				IAML			15 05 34.7	
	comp=E,2μm,0.5s							
PV13	**Radium Mtn., P**	**2.50**	**320**		**Pb**		**15 04 53.6**	**-1.6**
PV13				IAML			15 05 29.7	
	comp=N,2μm,0.8s							
PV13				IAML			15 05 30.4	
	comp=E,2μm,0.4s							
PV03	**Paradox Valley**	**2.59**	**321**		**Pb**		**15 04 54.6**	**-2.0**
PV03				IAML			15 05 33.8	
	comp=N,1μm,0.7s							
PV03				IAML			15 05 35.8	
	comp=E,725nm,0.4s							
PV05	**Paradox Valley**	**2.60**	**316**		**Pn**		**15 04 54.1**	**+1.8**
PV18	**Skein Mesa, Pa**	**2.62**	**320**		**Pb**		**15 04 55.1**	**-2.0**
PV18				IAML			15 05 31.8	
	comp=E,2μm,0.7s							
PV18				IAML			15 05 33.8	
	comp=N,2μm,0.6s							
PV12	**Saucer Basin,**	**2.62**	**323**		**Pb**		**15 04 55.1**	**-2.0**
PV12				IAML			15 05 36.2	
	comp=N,3μm,1.1s							
PV12				IAML			15 05 40.6	
	comp=E,2μm,1.3s							
PV11	**David Mesa, Pa**	**2.64**	**322**		**Pb**		**15 04 55.4**	**-2.0**
PV11				IAML			15 05 36.0	
	comp=E,2μm,0.7s							
PV07	**Paradox Valley**	**2.64**	**327**		**Pb**		**15 04 55.3**	**-2.2**
W18A	**Petrified Fore**	**2.65**	**246**		**Pn**		**15 04 55.1**	**+2.1**
W18A				IAML			15 05 39.3	
	comp=E,1μm,0.5s							
W18A				IAML			15 05 42.3	
	comp=N,1μm,0.7s							
PV17	**East Wray Mesa**	**2.67**	**320**		**Pb**		**15 04 55.9**	**-2.1**
PV17				IAML			15 05 34.1	
	comp=N,1μm,0.6s							
PV17				IAML			15 05 36.3	
	comp=E,1μm,0.7s							
PV16	**Nyswonger Mesa**	**2.67**	**321**		**Pb**		**15 04 55.8**	**-2.2**
PV16				IAML			15 05 35.5	
	comp=E,2μm,1.0s							
PV16				IAML			15 05 35.6	
	comp=N,2μm,0.9s							
PV19	**Morning Glory**	**2.70**	**320**		**Pb**		**15 04 56.0**	**-2.5**
PV19				IAML			15 05 34.7	
	comp=E,2μm,0.8s							
PV19				IAML			15 05 34.7	
	comp=N,2μm,0.8s							
PV20	**West Nyswonger**	**2.72**	**321**		**Pb**		**15 04 56.3**	**-2.5**
PV04	**Paradox Valley**	**2.73**	**323**	IAML			15 05 36.2	
	comp=N,939nm,0.8s							
PV04				IAML			15 05 37.2	
	comp=E,952nm,0.6s							
PV14	**Lion Creek, Pa**	**2.77**	**321**	IAML			15 05 45.0	
	comp=N,1μm,0.6s							
PV14				IAML			15 05 45.0	
	comp=E,1μm,0.7s							
PV10	**Paradox Valley**	**2.78**	**321**		**Pn**		**15 04 56.2**	**+1.3**
PV10				IAML			15 05 38.2	
	comp=N,2μm,0.6s							
PV22	**Blue Mesa, Par**	**2.78**	**326**		**Pb**		**15 04 57.5**	**-2.4**
PV23	**Carpenter Ridg**	**2.82**	**322**		**Pb**		**15 04 58.1**	**-2.5**
PV21	**Cone Mtn., Par**	**2.89**	**324**	IAML			15 05 49.4	
	comp=N,901nm,0.3s							
PV21				IAML			15 05 50.8	
	comp=E,802nm,0.4s							
X18A	**Snowflake**	**3.10**	**237**		**Pn**		**15 05 01.0**	**+1.8**
X18A				IAML			15 05 49.0	
	comp=N,759nm,0.7s							
X18A				IAML			15 05 54.6	
	comp=E,1μm,0.7s							
RTBA	**Rita Blanca**	**3.28**	**85**		**Pn**		**15 05 03.6**	**+1.9**
HMU	**Henry Mountain**	**3.58**	**299**		**Pn**		**15 05 07.9**	**+2.0**
ISCO	**Idaho Springs**	**3.67**	**14**		**Pn**		**15 05 09.3**	**+2.1**
WUAZ	**Wupatki**	**3.79**	**260**		**Pn**		**15 05 11.1**	**+2.4**
121A	**Cookes Peak, D**	**3.79**	**193**		**Pn**		**15 05 09.8**	**+1.0**
121A				IAML			15 06 11.6	
	comp=E,598nm,0.7s							
121A				IAML			15 06 13.1	
	comp=N,476nm,0.7s							
MSTX	**Muleshoe**	**4.00**	**123**		**Pn**		**15 05 12.8**	**+1.2**
CPRX	**Cap Rock**	**4.01**	**142**		**Pn**		**15 05 12.7**	**+0.9**
PH02	**Texas Public H**	**4.03**	**101**		**Pn**		**15 05 13.2**	**+1.3**
PH02				IAML			15 06 18.6	
	comp=N,557nm,1.0s							
PH02				IAML			15 06 21.1	
	comp=N,546nm,0.3s							
DUN6	**Lazy B Ranch**	**4.14**	**208**		**Pn**		**15 05 14.8**	**+1.3**
X16A	**Lo Mia Camp, P**	**4.21**	**246**	IAML			15 06 28.8	
	comp=E,427nm,0.5s							
X16A				IAML			15 06 37.6	
	comp=N,329nm,0.8s							
KSCO	**Kaye Shedlock'**	**4.31**	**49**		**Pn**		**15 05 16.7**	**+0.9**
KSCO				IAML			15 06 29.1	
	comp=N,479nm,0.7s							
P18A	**Preston Nutter**	**4.34**	**322**	IAML			15 06 30.9	
	comp=N,416nm,0.6s							
P18A				IAML			15 06 39.5	
	comp=E,346nm,0.7s							
Q16A	**Castle Valley**	**4.38**	**309**		**Pn**		**15 05 18.5**	**+1.6**
AMTX	**Amarillo**	**4.38**	**107**		**Pn**		**15 05 18.4**	**+1.6**
AMTX				IAML			15 06 32.1	
	comp=E,410nm,0.8s							
AMTX				IAML			15 06 35.8	
	comp=E,305nm,0.7s							
U15A	**North Rim**	**4.44**	**274**	IAML			15 06 30.1	
	comp=E,466nm,0.8s							
U15A				IAML			15 06 45.7	
	comp=N,439nm,1.0s							
EPT	**El Paso**	**4.47**	**177**		**Pn**		**15 05 18.9**	**+0.9**
P17A	**Butcher Ranch,**	**4.49**	**317**		**Pn**		**15 05 19.9**	**+1.7**
GDL2	**Guadalupe Moun**	**4.51**	**153**		**Pn**		**15 05 20.3**	**+1.8**
MTPU	**Mount Pierson**	**4.66**	**294**	IAML			15 06 45.6	
	comp=N,417nm,0.9s							
MNTX	**Cornudas Mount**	**4.68**	**165**		**Pn**		**15 05 21.8**	**+0.9**
RDMU	**Red Mountain**	**4.84**	**334**		**Pn**		**15 05 25.3**	**+2.2**
TPB11	**China Draw**	**4.87**	**151**		**Pn**		**15 05 24.2**	**+0.7**
TPB28		**4.95**	**157**		**Pn**		**15 05 24.2**	**-0.3**
128A	**Castleberry Fa**	**5.07**	**134**		**Pn**		**15 05 26.0**	**-0.3**
TCRU	**Three Creeks R**	**5.08**	**299**	IAML			15 06 54.4	
	comp=E,384nm,0.8s							
TCRU				IAML			15 06 57.7	
	comp=N,355nm,0.8s							
TUC	**Tucson**	**5.13**	**221**	Pn	**Pn**		**15 05 27.8**	**+0.8**
TUC	**Tucson**	**5.13**	**221**	IAML			15 06 50.9	
	comp=N,107nm,0.6s							
TUC				IAML			15 06 52.9	
	comp=N,128nm,0.8s							
MPU	**Maple Canyon**	**5.36**	**316**	Pn	**Pn**		**15 05 32.1**	**+1.8**
POST	**Post**	**5.39**	**124**		**Pn**		**15 05 31.1**	**+0.4**
PECS	**Pecos**	**5.44**	**153**		**Pn**		**15 05 30.6**	**-0.7**
DKNS	**Dickens**	**5.46**	**116**	Pn	**Pn**		**15 05 31.9**	**+0.3**
VHRN	**Van Horn**	**5.65**	**164**		**Pn**		**15 05 35.0**	**+0.7**
SN07	**Snyder 07**	**5.79**	**121**	Pn	**Pn**		**15 05 36.8**	**+0.7**
TPB01	**Permian Basin**	**5.85**	**154**		**Pn**		**15 05 37.7**	**+0.7**
W13A	**Hualapai Mount**	**5.88**	**261**		**Pn**		**15 05 40.0**	**+2.5**
CTU	**Camp Tracy**	**5.90**	**320**		**Pn**		**15 05 37.8**	**+0.1**
MNHN	**Monahans**	**5.93**	**144**		**Pn**		**15 05 38.8**	**+0.7**
229A	**Bryant Ranch,**	**5.94**	**134**		**Pn**		**15 05 38.5**	**+0.3**
ELIS	**Ellis County**	**5.97**	**90**		**Pn**		**15 05 40.6**	**+2.1**
OGNE	**Ogallala**	**5.99**	**37**		**Pn**		**15 05 40.4**	**+1.5**
TMB01	**Midkiff**	**6.01**	**138**		**Pn**		**15 05 39.3**	**+0.1**
TPB05	**Hovey Rd**	**6.05**	**150**		**Pn**		**15 05 39.8**	**+0.2**
TCUT	**Towne Canyon**	**6.06**	**325**		**Pn**		**15 05 41.2**	**+1.3**
PSUT	**Pine Spring**	**6.07**	**294**		**Pn**		**15 05 41.7**	**+1.7**
DUG	**Dugway, Tooele**	**6.16**	**312**		**Pn**		**15 05 42.1**	**+0.8**
APMT	**Aspermont**	**6.21**	**116**		**Pn**		**15 05 42.0**	**0.0**
NOKA	**Waynoka**	**6.35**	**84**		**Pn**		**15 05 43.9**	**+0.1**
SGCY	**Sterling City**	**6.38**	**131**		**Pn**		**15 05 43.5**	**-0.8**
K22A	**Casper**	**6.40**	**2**		**Pn**		**15 05 45.2**	**+0.6**
ALPN	**Alpine**	**6.42**	**155**		**Pn**		**15 05 45.7**	**+0.8**
OK038	**West end E0370**	**6.50**	**86**		**Pn**		**15 05 46.0**	**+0.2**
HWUT	**Hardware Ranch**	**6.52**	**327**		**Pn**		**15 05 47.1**	**+0.9**
SPUT	**South Promonto**	**6.71**	**321**		**Pn**		**15 05 49.5**	**+0.7**
PRN	**Pahroc Range**	**6.72**	**282**		**Pn**		**15 05 49.1**	**+0.1**
R32A	**Long Quarter,**	**6.80**	**69**	Pn	**Pn**		**15 05 50.0**	**+0.1**
BLYC	**Blythe**	**6.81**	**251**		**Pn**		**15 05 49.9**	**-0.2**
PD31	**Pinedale Array**	**6.85**	**343**		**Pn**		**15 05 51.8**	**+1.0**
PDAR	**Pinedale Array**	**6.85**	**343**	Pn	**Pn**		**15 05 52.5**	**+1.7**
	comp=N,1.9nm,0.3s,baz=154,slow=13,SNR=42							
PDAR				Lg	Lg		15 07 41.9	
	comp=N,0.8nm,0.3s,baz=158,slow=31,SNR=2.9							
PDAR				LR	LR		15 09 02.8	
	comp=N,41nm,19.2s,baz=164,slow=43							
PDAR	**Pinedale Array**	**6.85**	**343**		**Pn**		**15 05 51.7**	**+0.8**
ABTX	**Abilene, Hawle**	**6.92**	**119**		**Pn**		**15 05 51.2**	**-0.4**
OZNA	**Ozona**	**7.11**	**137**		**Pn**		**15 05 53.6**	**-0.6**
DANC	**Danby, Needles**	**7.19**	**260**		**Pn**		**15 05 56.2**	**+0.9**
HVU	**Hansel Valley**	**7.22**	**322**	Pn	**Pn**		**15 05 56.0**	**+0.1**
WTFS	**Witchita Falls**	**7.27**	**107**		**Pn**		**15 05 55.6**	**-0.7**
AHID	**Auburn Hatcher**	**7.31**	**334**		**Pn**		**15 05 58.3**	**+1.2**
KAN01	**Argonia South**	**7.32**	**80**		**Pn**		**15 05 56.5**	**-0.5**
TXAR	**Lajitas Array**	**7.38**	**158**	Pn	**Pn**		**15 06 00.7**	**+2.8**
	baz=341,slow=14,SNR=1.7							
TXAR				Lg	Lg		15 08 00.8	
	comp=N,3.1nm,0.3s,baz=340,slow=28,SNR=7.7							
TXAR				LR	LR		15 08 51.5	
	comp=N,98nm,18.1s,baz=4.5,slow=38							
	comp=N,0.1nm,0.5s							
TXAR	**Lajitas Array**	**7.38**	**158**		**Pn**		**15 05 57.2**	**-0.8**
SAND	**Sanderson**	**7.39**	**147**		**Pn**		**15 05 56.7**	**-1.4**
X34A	**Smith Ranch, M**	**7.50**	**100**		**Pn**		**15 05 58.6**	**-0.9**
TPNV	**Topopah Spring**	**7.64**	**278**		**Pn**		**15 06 02.0**	**+0.4**
SNOW	**Snow King Moun**	**7.82**	**338**		**Pn**		**15 06 04.1**	**-0.1**
OK048	**Pawnee Station**	**7.95**	**86**		**Pn**		**15 06 06.0**	**+0.3**
GWY	**Greenwater Val**	**7.98**	**272**		**Pn**		**15 06 07.0**	**+0.7**
ELK	**Elko**	**8.00**	**307**	Pn	**Pn**		**15 06 07.9**	**+1.3**
	comp=N,0.1nm,0.3s,baz=356,slow=22,SNR=1.5							
ELK				Lg	Lg		15 08 15.9	
	comp=N,0.6nm,0.3s,baz=30,slow=23,SNR=4.6							
	comp=N,0.3nm,0.3s							
QSM	**Queen of Sheba**	**8.16**	**271**		**Pn**		**15 06 10.1**	**+1.5**
T35A	**Sooner Cattle**	**8.30**	**82**		**Pn**		**15 06 11.1**	**+0.6**
YUH	**Yuha Desert**	**8.35**	**247**		**Pn**		**15 06 11.3**	**+0.2**
PFO	**Pinyon Flats O**	**8.36**	**254**	Pn	**Pn**		**15 06 12.0**	**+0.5**
	comp=N,1.5nm,0.3s,baz=59,slow=11,SNR=7.7							
PFO				Lg	Lg		15 08 28.3	
	comp=N,0.3nm,0.3s,baz=90,slow=16,SNR=4.0							
PFO				LR	LR		15 09 20.7	
	comp=N,29nm,19.6s,baz=58,slow=38							
PFO	**Pinyon Flats O**	**8.36**	**254**		**Pn**		**15 06 12.2**	**+0.8**
VTX	**Valle De La Tr**	**8.91**	**240**		**Pn**		**15 06 20.1**	**+1.2**
YNE	**Yellowstone No**	**9.09**	**345**		**Pn**		**15 06 22.7**	**+1.2**
NVAR	**Mina Array Bea**	**9.42**	**287**	Pn	**Pn**		**15 06 27.0**	**+0.9**
	comp=N,0.1nm,0.3s,baz=100,slow=13,SNR=1.6							
NVAR				Lg	Lg		15 08 59.0	
	baz=100,slow=30							
	comp=N,0.2nm,0.4s							
BOZ	**Bozeman (W)**	**10.03**	**340**	Pn	**Pn**		**15 06 36.2**	**+1.9**
PLID	**Pearl Lake**	**11.26**	**325**		**Pn**		**15 06 52.6**	**+1.5**
LYMT	**Lyon Mountain**	**11.47**	**341**		**Pn**		**15 06 54.8**	**+0.6**
BMO	**Blue Mountains**	**11.73**	**320**		**Pn**		**15 06 58.2**	**+0.7**
EGMT	**Eagleton**	**11.97**	**350**		**Pn**		**15 07 02.4**	**+1.6**
LPIG	**La Paz**	**12.48**	**195**	LR	LR		15 12 07.6	
	comp=N,38nm,19.6s,baz=16,slow=39							
YBH	**Yreka Blue Hor**	**13.53**	**299**	Pn	**Pn**		**15 07 25.1**	**+2.9**
	comp=N,0.3nm,0.3s,baz=84,slow=5.5,SNR=6.6							
	comp=N,0.6nm,0.3s							
YBH	**Yreka Blue Hor**	**13.53**	**299**		**Pn**		**15 07 23.5**	**+1.3**
ULM	**Lac du Bonnet**	**16.07**	**26**	Pn	**Pn**		**15 07 55.8**	**-0.2**
	comp=N,0.3nm,0.3s,baz=206,slow=11,SNR=11							
ULM				Lg	Lg		15 12 28.6	
	comp=N,0.1nm,0.3s,baz=148,slow=9.6,SNR=4.4							
	comp=N,3.8nm,0.6s							
ULM	**Lac du Bonnet**	**16.07**	**26**	P	**P**		**15 07 58.7**	**-0.8**
ULM				IAmb	IAmb		15 08 00.9	
	comp=Z,4.6nm,0.7s							
EPLO	**Experimental L**	**16.45**	**31**	P	**P**		**15 08 03.2**	**-0.4**
EPLO				IAmb	IAmb		15 08 05.3	
	comp=Z,5.2nm,0.8s							
BRAL	**Brewton**	**17.18**	**101**	P	**P**		**15 08 11.2**	**-0.7**
YKA	**Yellowknife Ar**	**26.72**	**352**	P	**P**		**15 09 50.6**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=161,slow=9.8,SNR=3.4							
	comp=Z,1.1nm,0.8s							
ILAR	**Eielson Array**	**37.16**	**333**	P	**P**		**15 11 21.2**	**+0.3**
	comp=Z,0.1nm,0.7s,baz=128,slow=7.7,SNR=1.9							
	comp=Z,0.1nm,0.7s							
SDV	**Santo Domingo**	**42.67**	**121**	LR	LR		15 29 04.4	
	comp=Z,38nm,21.8s,baz=308,slow=35							

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*BNS **30** 15:36:29.3±0.6,51°.36N×16°.79E,h10km,ML4.2*
*NEIC **30** 15:36:30.7±2.0,51°.60N±0°.05×16°.17E±0°.08,h5km±1km, mb4.2/28,ML4.0(VIE),Error ellipse: s-maj=9.2km s-min=8.5km az=35.0*
*MOS **30** 15:36:31.5±1.2,51°.60N×16°.16E,h10km,mb4.5/17,Error ellipse: s-maj=5.2km s-min=3.1km az=76.8*
*IPEC **30** 15:36:31.6±0.2,51°.57N×16°.22E,h1km,ML3.7/9,Error ellipse: s-maj=1.8km s-min=1.1km az=64.0*
*IDC **30** 15:36:32.9±0.4,51°.45N×16°.07E,h0km,mb4.1/20, mbtmp4.0/34,ML3.7/13,MS2.6/2,Error ellipse: s-maj=9.2km s-min=6.7km az=102.0*
*NAO **30** 15:36:32.9,51°.60N×16°.09E,h10km,MB2.9*
*DNK **30** 15:36:33.0±2.8,51°.64N×16°.33E,h0km,ML3.6,Presumed earthquake*
*MCSM **30** 15:36:33.0±0.2,52°N±2°×1°6E±°,h8km,mb4.2,mB5.0, MLv4.6,Mw(mB)4.3*
*BGR **30** 15:36:34.0±0.3,51°.46N×16°.16E,h1km,ML4.0/16,Error ellipse: s-maj=5.6km s-min=2.2km az=15.0*
*GFZ **30** 15:36:34.5±0.1,52°N±2°×1°6E±°,h10km,M4.1/33, mb4.3/33*
*UPP **30** 15:36:36.8±3.0,51°.77N×15°.62E,h0km,ML3.4,Presumed earthquake*
*BER **30** 15:36:36.4±3.3,51°.90N×16°.44E,h10km,ML3.0, mb4.1(USGS)*
ISC 30 15:36:31.2±0.3,51°.54N±0°.02×16°.13E±0°.01,h0km,n534, σ2^{2}09/669,mb4.2/32,11C-24D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KSP	**Ksiaz**	**0.71**	**171**	*e*Pg	**Pg**		**15 36 45.5**	**+0.7**
KSP				*e*Sg	**Sg**		**15 36 55.3**	**+1.4**
KSP	**Ksiaz**	**0.71**	**171**	*e*Pg	**Pg**		**15 36 45.7**	**+0.9**
KSP				*e*Sg	**Sg**		**15 36 55.2**	**+1.4**
KSP	**Ksiaz**	**0.71**	**171**	Pg	**Pg**		**15 36 45.1**	**+0.4**
KSP				Sg	**Sg**		**15 36 55.1**	**+1.2**
CHVC	**Chvalec**	**0.96**	**183**	*e*P	**Pg**		**15 36 50.5**	**+1.0**
CHVC				*e*			15 37 03.4	
CHVC	**Chvalec**	**0.96**	**183**	*e*PG	**Pg**		**15 36 50.5**	**+1.0**
CHVC				*e*SG	**Sg**		**15 37 03.4**	**+1.5**
OSTC	**Ostas**	**0.99**	**177**	*e*P	**Pg**		**15 36 50.8**	**+0.7**
OSTC				*e*			15 37 04.2	
OSTC				MLR	MLR			
	comp=Z,16μm,2.0s							
OSTC	**Ostas**	**0.99**	**177**	*e*PG	**Pg**		**15 36 50.8**	**+0.7**
OSTC				*e*SG	**Sg**		**15 37 04.2**	**+1.3**
OSTC				AMS	AMS		15 37 20.0	
	comp=Z,16μm,2.0s							
UPC	**Upice**	**1.04**	**184**	*e*P	**Pb**		**15 36 52.5**	**+0.5**
UPC				*e*			15 37 05.4	
UPC				smax	smax			
	comp=N,1μm,0.5s							
UPC				MLR	MLR			
	comp=Z,3μm,3.8s							
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pb**		**15 36 52.5**	**+0.5**
UPC				*e*SG	**Sg**		**15 37 05.4**	**+0.9**
	comp=Z,1μm,0.5s							
UPC				AMS	AMS		15 37 10.0	
	comp=Z,3μm,3.8s							
UPC	**Upice**	**1.04**	**184**	P	**Pg**		**15 36 51.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*P	**Pg**		**15 36 54.4**	**+0.2**
DPC				*e*			15 37 11.2	
DPC				smax	smax			
	comp=N,859nm,0.7s							
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**		**15 36 54.4**	**+0.2**
DPC				*e*SG	**Sg**		**15 37 11.2**	**+1.5**
	comp=N,859nm,0.7s							
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*Pg	**Pg**		**15 36 55.2**	**+1.0**
DPC				*e*Sg	**Sb**		**15 37 12.3**	**+1.4**
DPC	**Dobruska-Polom**	**1.20**	**174**	Pg	**Pg**		**15 36 54.1**	**0.0**
DPC				Sg	**Sg**		**15 37 10.7**	**+1.0**
DPC	**Dobruska-Polom**	**1.20**	**174**	P	**Pg**		**15 36 54.4**	**+0.2**
PIVO	**Bartosovice**	**1.39**	**169**	*e*Pg	**Pn**		**15 36 57.6**	**-0.2**
	baz=352							
PIVO				*e*Sg	**Sg**		**15 37 15.2**	**-0.4**
	comp=N,949nm,0.4s,baz=352							
PVCC	**Panska Ves**	**1.42**	**225**	*e*P	**Pb**		**15 36 59.6**	**+1.2**
PVCC				*e*			15 37 19.3	
PVCC				smax	smax			
	comp=N,2μm,0.9s							
PVCC				MLR	MLR			
	comp=Z,2μm,6.0s							
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pb**		**15 36 59.6**	**+1.2**
PVCC				*e*SG	**Sn**		**15 37 19.3**	**+1.8**
	comp=Z,2μm,0.9s							
PVCC				AMS	AMS		15 37 20.0	
	comp=Z,2μm,6.0s							
PVCC	**Panska Ves**	**1.42**	**225**	P	**Pb**		**15 36 59.1**	**+0.7**
KRLC	**Kraliky**	**1.53**	**164**	*e*P	**Pn**		**15 37 00.6**	**+0.9**
KRLC				*e*			15 37 20.4	
KRLC				smax	smax			
	comp=N,1μm,0.7s							
KRLC	**Kraliky**	**1.53**	**164**	*e*PG	**Pn**		**15 37 00.6**	**+0.9**
KRLC				*e*SG	**Sn**		**15 37 20.4**	**+0.1**
	comp=N,1μm,0.7s							
KRLC	**Kraliky**	**1.53**	**164**	P	**Pn**		**15 36 59.9**	**+0.2**
BRG	**Berggiesshubel**	**1.53**	**245**	P	**Pn**		**15 37 00.4**	**+0.7**
BRG	**Berggiesshubel**	**1.53**	**245**	*e*Pn	**Pb**		**15 37 00.7**	**+0.4**
BRG				*e*Pg	**Pg**		**15 37 02.6**	**+2.1**
BRG				*e*Sg	**Sg**

MORC *e*Pg **Pn** **15 37 07.0 +0.9**
MORC *e*Sg **Sb** **15 37 34.8 +1.3**
MORC Moravsky Berou 1.98 152 P **Pn** **15 37 06.2 +0.1**
OKC Ostrava-Krasne 2.14 142 *e*P **Pg** **15 37 12.3 +0.2**
OKC *e* 15 37 39.1
OKC smax smax
comp=N,2µm,1.0s
OKC Ostrava-Krasne 2.14 142 *e*PG **Pg** **15 37 12.3 +0.2**
OKC *e*SG **Sb** **15 37 39.1 +1.4**
comp=N,2µm,1.0s
OKC Ostrava-Krasne 2.14 142 *e*Pn **Pn** **15 37 08.2 +0.1**
OKC *e*Pg **Pg** **15 37 12.7 +0.6**
OKC *e*Sg **Sb** **15 37 39.1 +1.4**
OKC Ostrava-Krasne 2.14 142 P **Pn** **15 37 08.7 +0.6**
VRAC Vranov 2.26 172 ⇓P **Pn** **15 37 10.9 +1.1**
VRAC ⇓S **Sn** **15 37 39.5 +1.2**
VRAC Vranov 2.26 172 Pn **Pn** **15 37 10.9 +1.1**
comp=N,6.9nm,0.3s,baz=340,slow=14,SNR=57
VRAC Lg Lg 15 37 40.6
comp=N,18nm,0.3s,baz=78,slow=23,SNR=10
VRAC LR LR 15 38 17.7
comp=N,39nm,18.2s,baz=5.0,slow=48
comp=N,172nm,1.0s
VRAC Vranov 2.26 172 *e*Pn **Pn** **15 37 10.2 +0.5**
baz=354
VRAC *e*Sg **Sb** **15 37 42.7 +1.5**
comp=N,401nm,0.7s,baz=354
VRAC Vranov 2.26 172 P **Pn** **15 37 11.0 +1.3**
LNIZ Loecknitz 2.28 330 *e*Pn **Pn** **15 37 10.4 +0.4**
LNIZ Loecknitz 2.28 330 P **Pb** **15 37 11.8 -1.3**
TREC Trest 2.29 191 P **Pn** **15 37 11.4 +1.2**
TREC Trest 2.29 191 *e*SG **Sg** **15 37 44.8 +0.2**
TREC Trest 2.29 191 P **Pn** **15 37 11.4 +1.2**
KRUC Moravsky 2.49 176 *e*Pn **Pn** **15 37 13.6 +0.7**
baz=358
KRUC *e*Sg **Sb** **15 37 50.2 +2.3**
comp=N,432nm,0.9s,baz=358
KRUC Moravsky 2.49 176 P **Pn** **15 37 14.3 +1.4**
STAC Stalkov 2.57 192 *e*Pn **Pn** **15 37 15.0 +0.9**
baz=13
STAC *e*Sg **Sb** **15 37 53.1 +2.8**
comp=N,226nm,0.5s,baz=13
TANN Tannenbergstha 2.58 245 *e*Pn **Pn** **15 37 16.0 +1.8**
TANN *e*Pg **Pg** **15 37 22.1 +1.6**
TANN *e*Sg **Sg** **15 37 55.0 +1.0**
TANN Tannenbergstha 2.58 245 P **Pn** **15 37 16.0 +1.8**
WERD Werda 2.65 247 *e*Sg **Sg** **15 37 58.6 +2.3**
NKC Novy Kostel 2.67 242 *e*P **Pn** **15 37 17.6 +2.1**
NKC *e* 15 37 59.4
NKC smax smax
comp=N,642nm,0.3s
NKC MLR MLR
comp=Z,2µm,5.3s
NKC Novy Kostel 2.67 242 *e*PN **Pn** **15 37 17.6 +2.1**
NKC *e*PG **Pg** **15 37 23.1 +0.7**
NKC *e*SG **Sg** **15 37 59.4 +2.4**
comp=Z,642nm,0.3s
NKC AMS AMS 15 38 10.0
comp=Z,2µm,5.3s
NKC Novy Kostel 2.67 242 P **Pn** **15 37 17.7 +2.2**
OJC Ojcow 2.68 118 *e*Pn **Pn** **15 37 15.2 -0.3**
OJC *e*Pg **Pg** **15 37 22.6 +0.2**
OJC *e*Sg **Sg** **15 37 58.0 +0.9**
OJC Ojcow 2.68 118 P **Pn** **15 37 15.2 -0.3**
OJC Ojcow 2.68 118 **Pn** **15 37 14.6 -0.9**
OJC **Sb** **15 37 53.9 +0.6**
OJC Ojcow 2.68 118 *e*Pn **Pn** **15 37 15.3 -0.3**
OJC *e*Pg **Pg** **15 37 23.7 +1.3**
OJC *e*Sg **Sg** **15 37 58.2 +1.1**
OJC Ojcow 2.68 118 Pn **Pn** **15 37 14.9 -0.6**
OJC Ojcow 2.68 118 P **Pn** **15 37 15.2 -0.3**
JAVC Velka Javorina 2.87 159 *e*Pn **Pn** **15 37 18.4 +0.3**
baz=342
JAVC *e*Sg **Sb** **15 38 01.4 +2.6**
comp=Z,421nm,1.3s,baz=342
JAVC Velka Javorina 2.87 159 P **Pb** **15 37 21.4 -1.8**
WIMM Wimmelburg 2.89 271 P **Pb** **15 37 21.4 -2.0**
BEL Belsk 2.92 82 P **Pb** **15 37 22.3 -1.7**
BEL Belsk 2.92 82 P **Pb** **15 37 22.3 -1.7**
KHC Kasperske Hory 2.92 215 *e*P **Pn** **15 37 19.4 +0.6**
KHC *e* 15 37 54.8
KHC smax smax
comp=N,312nm,0.6s
KHC MLR MLR
comp=Z,900nm,4.9s
KHC Kasperske Hory 2.92 215 *e*PN **Pn** **15 37 19.4 +0.6**
KHC *e*PG **Pb** **15 37 25.8 +1.8**
KHC *e*SN **Sn** **15 37 54.8 +0.3**
KHC *e*SG **Sg** **15 38 04.2 -0.6**
comp=Z,312nm,0.6s
KHC AMS AMS 15 38 20.0
comp=Z,900nm,4.9s
KHC Kasperske Hory 2.92 215 **Pn** **15 37 18.3 -0.5**
KHC Kasperske Hory 2.92 215 Pn **Pn** **15 37 19.7 +0.9**
KHC Kasperske Hory 2.92 215 P **Pn** **15 37 19.9 +1.1**
CKRC Cesky Krumlov 2.97 204 *e*P **Pn** **15 37 20.7 +1.2**
CKRC *e* 15 38 05.0
CKRC smax smax
comp=N,281nm,0.5s
CKRC MLR MLR
comp=Z,1µm,4.8s
CKRC Cesky Krumlov 2.97 204 *e*PN **Pn** **15 37 20.7 +1.2**
CKRC *e*PG **Pg** **15 37 27.4 -0.6**
CKRC *e*SG **Sb** **15 38 05.0 +3.4**
comp=Z,281nm,0.5s
CKRC AMS AMS 15 38 20.0
comp=Z,1µm,4.8s
MOX Moxa 2.98 254 P **Pn** **15 37 21.5 +1.8**
MOX Moxa 2.98 254 *e*Pn **Pn** **15 37 21.4 +1.8**
MOX *e*Sg **Sg** **15 38 09.2 +2.3**
MOX Moxa 2.98 254 P **Pn** **15 37 21.5 +1.8**
ROTZ Rotzenmuhle 3.06 236 *e*Pn **Pn** **15 37 21.9 +1.1**
ROTZ *e*Sg **Sb** **15 38 07.5 +3.1**
I26DE FREYUNG INFRAS 3.11 211 I I 15 55 00.0
baz=29,slow=323,SNR=3.2
GEC2 GERESS Array S 3.12 211 P **Pn** **15 37 22.8 +1.1**
GEC2 GERESS Array S 3.12 211 **Pn** **15 37 22.0 +0.3**
GEC2 GERESS Array S 3.12 211 *e*Pn **Pn** **15 37 23.2 +1.5**
GEC2 *e*Sg **Sb** **15 38 08.9 +2.8**
GERES GERESS Array B 3.12 211 Pn **Pn** **15 37 22.8 +1.1**
comp=Z,9.6nm,0.5s,baz=29,slow=12,SNR=78
GERES Lg Lg 15 38 09.2
comp=Z,2.8nm,0.3s,baz=32,slow=26,SNR=7.7
GERES GERESS Array B 3.12 211 **Pn** **15 37 22.0 +0.3**
SMOL Smolenice 3.15 164 *e*P **Pg** **15 37 32.4 +1.0**
WET Wettzell 3.18 222 P **Pn** **15 37 23.9 +1.5**
WET Wettzell 3.18 222 *e*Pn **Pn** **15 37 23.4 +1.0**
WET *e*Sg **Sg** **15 38 14.7 +1.6**
WET Wettzell 3.18 222 P **Pn** **15 37 23.9 +1.5**
R9F13 Warsaw-Wawer 3.18 76 *e*P **Pg** **15 37 33.9 +1.8**
R9F13 *e*Pg **Pb** 15 37 40.9 +12
R9F13 *e*Sn **Sn** **15 37 54.5 -6.5**
R9F13 *e*Sg **Sg** **15 38 19.0 +5.7**
LANS Liptovska Anna 3.21 137 *e*P **Pg** **15 37 33.0 +0.3**
LANS Liptovska Anna 3.21 137 *e*PG **Pg** **15 37 33.0 +0.3**
LANS *e*SG **Sg** **15 38 15.2 +0.9**
MODS Modra-Piesok 3.26 166 *e*P **Pg** **15 37 34.4 +0.8**
MODS Modra-Piesok 3.26 166 P **Pn** **15 37 26.6 +3.1**
MODS Modra-Piesok 3.26 166 *e*PG **Pg** **15 37 34.4 +0.8**
MODS *e*SG **Sg** **15 38 18.0 +2.2**
NIE Niedzica 3.41 127 *e*Pn **Pn** **15 37 27.6 +2.0**
NIE *e*Pg **Pg** **15 37 37.3 +0.8**
NIE *e*Sg **Sg** **15 38 22.8 +2.2**
NIE Niedzica 3.41 127 Pn **Pn** **15 37 26.7 +1.1**
ASSE Asse, Remlinge 3.43 282 P **Pn** **15 37 29.6 +3.8**
WINA Alland / Wiene 3.44 181 *i* Pn **Pn** **15 37 27.8 +1.8**
SNR=18
VYHS Vyhne 3.52 149 *e*P **Pn** **15 37 28.0 +0.9**
VYHS *e* 15 38 20.5
VYHS Vyhne 3.52 149 P **Pn** **15 37 29.0 +1.9**
VYHS Vyhne 3.52 149 *e*PN **Pn** **15 37 28.0 +0.9**
VYHS *e*PG **Pg** **15 37 40.6 +2.1**
VYHS *e*SG **Sb** **15 38 20.5 +3.0**
GRB3 Grafenberg Arr 3.53 233 P **Pn** **15 37 29.5 +2.3**
GRA3 Grafenberg Arr 3.54 242 P **Pn** **15 37 29.3 +1.9**
GRA2 Grafenberg Arr 3.58 240 P **Pn** **15 37 29.4 +1.6**
GRB1 Grafenberg Arr 3.58 235 P **Pn** **15 37 29.7 +1.8**
GRB1 Grafenberg Arr 3.58 235 P **Pn** **15 37 29.7 +1.8**
GRB4 Grafenberg Arr 3.58 236 P **Pn** **15 37 30.1 +2.2**
CLZ Clausthal 3.59 277 *e*Pn **Pn** **15 37 30.7 +2.6**
CLZ *e*Sg **Sg** **15 38 32.0 +5.4**
CLZ Clausthal 3.59 277 P **Pn** **15 37 31.0 +2.9**

CONA Conrad Observa 3.62 183 *i* Pn **Pn** **15 37 29.7 +1.1**
comp=Z,16nm,0.7s,SNR=27
CONA *i* Sn **Sg** **15 38 25.2 -2.3**
comp=Z,150nm,0.4s
GRA1 Grafenberg Arr 3.63 241 **Pn** **15 37 28.6 -0.1**
GRA1 Grafenberg Arr 3.63 241 P **Pn** **15 37 30.5 +1.9**
GRF Grafenberg Arr 3.63 241 P **Pn** **15 37 28.6 -0.1**
GRF Grafenberg Arr 3.63 241 *e*Pn **Pn** **15 37 30.4 +1.8**
GRF *e*Sg **Sg** **15 38 28.7 +0.9**
GRFO Grafenberg 3.63 241 P **Pn** **15 37 29.0 +0.4**
GRFO Grafenberg 3.63 241 **Pn** **15 37 29.0 +0.4**
GRFO Grafenberg 3.63 241 P **Pn** **15 37 30.5 +1.9**
GRB2 Grafenberg Arr 3.65 233 P **Pn** **15 37 30.6 +1.8**
BSD Bornholm Skovb 3.65 349 *i* P **Pn** **15 37 29.8 +1.0**
BSD *i* S **Sn** **15 38 12.1 -0.4**
BSD IAML 15 38 15.5
comp=Z,28nm,0.3s
BSD Bornholm Skovb 3.65 349 *e*P **Pn** **15 37 31.5 +2.6**
BSD Bornholm Skovb 3.65 349 *i* P **Pn** **15 37 29.8 +1.0**
BSD *i* S **Sn** **15 38 12.1 -0.4**
BSD IAML 15 38 15.5
comp=Z,28nm,0.3s
GRB5 Grafenberg Arr 3.75 231 P **Pn** **15 37 31.6 +1.4**
GRC4 Grafenberg Arr 3.84 232 P **Pn** **15 37 32.7 +1.3**
RONA Rosalia, Austr 3.85 178 **Pn** **15 37 32.8 +1.2**
RONA **Sb** **15 38 30.8 +3.8**
RONA Rosalia, Austr 3.85 178 *i* Pn **Pn** **15 37 32.8 +1.2**
comp=Z,3.3nm,0.2s,SNR=8.0
RONA *i* Sn **Sb** **15 38 30.8 +3.8**
comp=Z,56nm,0.5s
SOP Sopron 3.87 176 P **Pn** **15 37 33.7 +1.8**
SOP Sopron 3.87 176 P **Pn** **15 37 33.7 +1.8**
MOA Molln 3.89 199 **Pn** **15 37 33.2 +1.0**
MOA **Sg** **15 38 34.4 -1.7**
MOA Molln 3.89 199 *i* Pn **Pn** **15 37 33.2 +1.0**
comp=Z,0.5nm,0.1s,SNR=39
MOA *i* Sn **Sg** **15 38 34.3 -1.7**
comp=Z,109nm,0.5s
MOA Molln 3.89 199 P **Pn** **15 37 33.3 +1.1**
STHS Stebnicka Huta 3.90 121 *e*PG **Pg** **15 37 47.4 +1.5**
STHS *e*SN Sn 15 38 07.1 -12
STHS *e*SG **Sg** **15 38 42.3 +5.9**
GRC1 Grafenberg Arr 3.90 231 P **Pn** **15 37 33.7 +1.4**
GRC1 Grafenberg Arr 3.90 231 P **Pn** **15 37 33.7 +1.4**
UBBA Unterbreizbach 3.92 262 P **Pn** **15 37 34.5 +2.0**
GRC3 Grafenberg Arr 3.94 229 P **Pn** **15 37 34.3 +1.4**
GRC2 Grafenberg Arr 4.06 231 P **Pn** **15 37 35.9 +1.4**
BIOA Bad Ischl, Aus 4.18 204 **Pn** **15 37 38.0 +1.8**
BIOA **Sn** **15 38 27.2 +1.4**
BIOA Bad Ischl, Aus 4.18 204 *i* Pn **Pn** **15 37 38.0 +1.8**
comp=Z,15nm,0.6s,SNR=16
BIOA *i* Sn **Sn** **15 38 27.2 +1.4**
comp=Z,44nm,0.5s
BSEG Bad Segeberg 4.27 306 P **Pn** **15 37 38.6 +1.3**
BSEG Bad Segeberg 4.27 306 P **Pn** **15 37 38.6 +1.3**
ARSA Arzberg 4.32 185 **Pn** **15 37 39.0 +0.9**
ARSA Arzberg 4.32 185 **Sg** **15 38 46.9 -2.8**
ARSA Arzberg 4.32 185 *i* Pn **Pn** **15 37 40.0 +2.0**
comp=Z,6.6nm,0.2s,SNR=9.8
ARSA *i* Sn **Sg** **15 38 46.9 -2.8**
comp=Z,185nm,0.7s
ARSA Arzberg 4.32 185 P **Pn** **15 37 40.1 +2.0**
RETH Rethem/Aller, 4.34 289 P **Pn** **15 37 41.4 +3.1**
PSZ Piszkesteto 4.37 145 ⇓P **Pn** **15 37 40.5 +1.6**
PSZ Piszkesteto 4.37 145 P **Pn** **15 37 39.5 +0.6**
PSZ Piszkesteto 4.37 145 **Pn** **15 37 39.5 +0.6**
PSZ Piszkesteto 4.37 145 *e*P **Pn** **15 37 41.3 +2.4**
PSZ Piszkesteto 4.37 145 P **Pn** **15 37 40.7 +1.9**
LUNU Lund 4.40 340 *i* P **Pn** **15 37 40.6 +1.5**
LUNU *i* S **Sn** **15 38 31.6 +0.7**
LUNU Lund 4.40 340 P **Pn** **15 37 39.7 +0.6**
LUNU S **Sn** **15 38 27.9 -3.1**
LUNU Lund 4.40 340 P **Pn** **15 37 39.7 +0.6**
LUNU *i* P Pb 15 37 40.6 -8.6
LUNU S **Sn** **15 38 27.9 -3.1**
LUNU *i* S Sb 15 38 31.6 -11
MPLH Magyarpolny 4.47 168 Pn **Pn** **15 37 41.1 +0.9**
MPLH Magyarpolny 4.47 168 P **Pn** **15 37 41.9 +1.7**
SESA Seetaler Alpe, 4.55 194 *i* Pn **Pn** **15 37 43.3 +1.9**
SNR=40
FUR Furstenfeldbru 4.61 225 P **Pn** **15 37 43.9 +1.8**
FUR Furstenfeldbru 4.61 225 P **Pn** **15 37 43.9 +1.8**
LESA Schwarzleotal 4.70 210 **Pn** **15 37 44.7 +1.4**
LESA **Sn** **15 38 42.9 +4.4**
LESA Schwarzleotal 4.70 210 *i* Pn **Pn** **15 37 44.7 +1.4**
comp=Z,2.6nm,0.2s,SNR=9.8
LESA *i* Sn **Sn** **15 38 42.9 +4.4**
comp=Z,6.9nm,0.3s
KOLS Kolonicke sedl 4.73 121 *e*P **Pn** **15 37 44.3 +0.6**
KOLS Kolonicke sedl 4.73 121 P **Pn** **15 37 45.3 +1.6**
KOLS Kolonicke sedl 4.73 121 *e*PN **Pn** **15 37 44.3 +0.6**
KOLS *e*PG Pg 15 38 06.7 +4.9
BLEU Blekinge 4.77 358 *i* P **Pn** **15 37 45.5 +1.3**
BLEU *i* S **Sn** **15 38 38.4 -1.9**
BLEU Blekinge 4.77 358 P **Pn** **15 37 45.5 +1.3**
baz=164
BLEU S **Sn** **15 38 38.2 -2.0**
BLEU Blekinge 4.77 358 *i* P **Pn** **15 37 45.5 +1.3**
BLEU P **Pn** **15 37 45.5 +1.3**
baz=164
BLEU S **Sn** **15 38 38.2 -2.0**
BLEU *i* S Sb 15 38 38.4 -15
KBA Koelnbreinsper 4.83 203 P **Pn** **15 37 46.6 +1.4**
KBA Koelnbreinsper 4.83 203 **Pn** **15 37 46.4 +1.2**
KBA **Sn** **15 38 46.5 +4.6**
KBA Koelnbreinsper 4.83 203 *i* Pn **Pn** **15 37 46.4 +1.2**
comp=Z,17nm,0.5s,SNR=26
KBA *e*Sn **Sn** **15 38 46.5 +4.6**
comp=Z,17nm,0.6s
KBA Koelnbreinsper 4.83 203 P **Pn** **15 37 46.6 +1.4**
BJUU Bjuv 4.90 339 *i* P **Pn** **15 37 46.8 +0.8**
BJUU *i* S **Sn** **15 38 40.4 -2.9**
BJUU Bjuv 4.90 339 P **Pn** **15 37 46.1 +0.2**
BJUU Bjuv 4.90 339 P **Pn** **15 37 46.1 +0.2**
BJUU *i* P Pb 15 37 46.8 -11
BJUU *i* S **Sn** **15 38 40.4 -2.9**
SOKA Soboth 4.92 189 **Pn** **15 37 48.8 +2.4**
SOKA **Sb** **15 38 56.5 -1.5**
SOKA Soboth 4.92 189 *i* Pn **Pn** **15 37 48.8 +2.4**
comp=Z,2.9nm,0.4s,SNR=6.4
SOKA *i* Sn **Sb** **15 38 56.5 -1.5**
comp=Z,14nm,0.7s
SUW Suwalki 4.94 57 P **Pn** **15 37 44.1 -2.5**
SUW Suwalki 4.94 57 **Pn** **15 37 44.1 -2.5**
SUW Suwalki 4.94 57 *e*P **Pn** **15 37 49.2 +2.6**
TNS Taunus Mts 5.04 258 P **Pn** **15 37 49.6 +1.6**
TNS Taunus Mts 5.04 258 P **Pn** **15 37 49.6 +1.6**
BEHE Becsehely 5.10 175 **Pn** **15 37 48.3 -0.4**
BEHE Becsehely 5.10 175 P **Pn** **15 37 51.9 +3.2**
GROS Grobnik 5.10 185 *i* Pn **Pn** **15 37 50.3 +1.4**
DEL Delary 5.11 346 *i* P **Pn** **15 37 49.7 +0.8**
DEL *i* S **Sn** **15 38 45.9 -2.6**
DEL Delary 5.11 346 P **Pn** **15 37 49.7 +0.8**
DEL Delary 5.11 346 *i* P **Pn** **15 37 49.7 +0.8**
DEL P **Pn** **15 37 49.7 +0.8**
DEL *i* S **Sn** **15 38 45.9 -2.6**
OBKA Obir 5.14 192 **Pn** **15 37 51.4 +1.9**
OBKA **Sb** **15 38 59.5 -4.9**
OBKA Obir 5.14 192 *i* Pn **Pn** **15 37 51.4 +1.9**
comp=Z,3.1nm,0.4s,SNR=8.0
OBKA *i* Sn **Sb** **15 38 59.5 -4.9**
comp=Z,29nm,0.6s
OBKA Obir 5.14 192 P **Pn** **15 37 51.0 +1.5**
WATA Walderalm 5.15 217 **Pn** **15 37 51.7 +2.1**
WATA **Sn** **15 38 50.2 +0.3**
WATA Walderalm 5.15 217 *i* Pn **Pn** **15 37 51.7 +2.1**
comp=Z,23nm,0.6s,SNR=12
WATA *e*Sn **Sn** **15 38 50.2 +0.3**
comp=Z,14nm,0.3s
MYKA Terra Mystica 5.18 199 **Pn** **15 37 50.7 +0.7**
MYKA **Sb** **15 38 59.5 -6.0**
MYKA Terra Mystica 5.18 199 *e*Pn **Pn** **15 37 50.7 +0.7**
comp=Z,2.4nm,0.4s
MYKA *e*Sn **Sb** **15 38 59.5 -6.0**
comp=Z,20nm,0.7s
WTTA Wattenberg 5.19 216 P **Pn** **15 37 52.6 +2.4**
WTTA Wattenberg 5.19 216 **Pn** **15 37 52.3 +2.1**
WTTA **Sn** **15 38 51.1 +0.3**
WTTA Wattenberg 5.19 216 *i* Pn **Pn** **15 37 52.3 +2.1**
comp=Z,17nm,0.6s,SNR=14
WTTA *i* Sn **Sn** **15 38 51.1 +0.3**
comp=Z,18nm,0.4s

WTTA Wattenberg 5.19 216 P **Pn** **15 37 52.6 +2.4**
IBBN Ibbenburen 5.24 282 P **Pn** **15 37 53.4 +2.8**
STU Stuttgart 5.25 241 P **Pn** **15 37 50.2 -0.6**
STU Stuttgart 5.25 241 **Pn** **15 37 50.2 -0.6**
STU Stuttgart 5.25 241 *e*P Pb 15 37 58.4 -5.3
ACOM Acomizza, Ital 5.29 200 P **Pn** **15 37 53.4 +1.8**
MOTA Moosalm 5.33 220 **Pn** **15 37 54.0 +2.0**
MOTA **Sn** **15 38 53.6 -0.6**
MOTA Moosalm 5.33 220 *i* Pn **Pn** **15 37 54.0 +2.0**
comp=Z,5.4nm,0.4s
MOTA *i* Sn **Sn** **15 38 53.6 -0.6**
comp=Z,15nm,0.5s
ABTA Abfaltersbach 5.35 208 **Pn** **15 37 54.9 +2.5**
ABTA **Sn** **15 38 59.0 +4.2**
ABTA Abfaltersbach 5.35 208 *i* Pn **Pn** **15 37 54.9 +2.5**
comp=Z,9.9nm,0.6s,SNR=18
ABTA *i* Sn **Sn** **15 38 59.0 +4.2**
comp=Z,23nm,0.8s
RETA Reutte 5.36 223 **Pn** **15 37 53.9 +1.5**
RETA **Sn** **15 38 55.3 +0.6**
RETA Reutte 5.36 223 *i* Pn **Pn** **15 37 53.9 +1.5**
comp=Z,3.2nm,0.2s,SNR=8.7
RETA *i* Sn **Sn** **15 38 55.3 +0.6**
comp=Z,14nm,0.3s
TRPA Tarpa 5.37 127 P **Pn** **15 37 53.3 +0.8**
PRED Cave del Predi 5.38 199 **Pn** **15 37 52.8 +0.2**
KOE Koeppel 5.42 261 *e*Pn **Pn** **15 37 54.3 +1.1**
VXJU Vaexsjoe 5.43 353 P **Pn** **15 37 54.9 +1.5**
VXJU Vaexsjoe 5.43 353 P **Pn** **15 37 54.9 +1.5**
SSRD Sdr. Stenderup 5.53 318 *i* S **Sn** **15 38 57.6 -1.2**
SSRD IAML 15 39 01.0
comp=Z,153nm,0.8s
SSRD Sdr. Stenderup 5.53 318 *i* S **Sn** **15 38 57.6 -1.2**
SSRD IAML 15 39 01.0
comp=Z,153nm,0.8s
FUSE Fusea 5.53 203 P **Pn** **15 37 56.7 +1.9**
BUG Bochum--Univer 5.54 272 P **Pn** **15 37 57.0 +2.3**
BUG Bochum--Univer 5.54 272 P **Pn** **15 37 57.0 +2.3**
HOBG Hohbusch 5.55 268 *e*Pn **Pn** **15 37 56.3 +1.4**
MORH Mrgy, Hungar 5.58 162 ⇑P **Pn** **15 37 57.6 +2.2**
MORH Mrgy, Hungar 5.58 162 P **Pn** **15 37 57.6 +2.2**
LJU Ljubljana 5.61 191 P **Pn** **15 37 59.5 +3.8**
LJU pmax pmax
comp=Z,125nm,1.1s
DRE Drenchia 5.62 198 P **Pn** **15 37 57.7 +1.7**
BGG Burgeitz 5.72 260 *e*Pn **Pn** **15 37 58.5 +1.2**
FETA Feichten 5.74 220 **Pn** **15 37 59.8 +2.1**
FETA **Sn** **15 38 56.9 -7.5**
FETA Feichten 5.74 220 *i* Pn **Pn** **15 37 59.8 +2.1**
comp=Z,5.4nm,0.6s
FETA *e*Sn **Sn** **15 38 56.9 -7.5**
comp=Z,9.8nm,0.9s
STAL STALIGIAL 5.75 204 **Pn** **15 37 57.4 -0.3**
WTSB Winterswijk 5.81 278 P **Pn** **15 38 01.6 +3.1**
SABO M.te Sabotino 5.81 198 **Pn** **15 37 58.5 -0.1**
FABU Falkenberg 5.82 341 *i* P **Pn** **15 37 59.9 +1.2**
FABU *i* S **Sn** **15 39 04.4 -1.6**
FABU Falkenberg 5.82 341 *i* P **Pn** **15 37 59.9 +1.2**
FABU *i* S **Sn** **15 39 04.4 -1.6**
DAVA Damuels 5.89 226 **Pn** **15 38 00.9 +1.0**
DAVA **Sn** **15 39 02.3 -5.8**
DAVA Damuels 5.89 226 *i* Pn **Pn** **15 38 00.9 +1.0**
comp=Z,3.2nm,0.3s,SNR=6.9
DAVA *i* Sn **Sn** **15 39 02.3 -5.8**
comp=Z,23nm,0.6s
DAVA Damuels 5.89 226 P **Pn** **15 38 01.1 +1.2**
GNOU Gnosjoe 5.92 347 P **Pn** **15 38 01.4 +1.4**
GNOU Gnosjoe 5.92 347 P **Pn** **15 38 01.4 +1.4**
STB Steinbach 5.93 264 *e*Pn **Pn** **15 38 01.7 +1.5**
BFO Black Forest 5.97 240 P **Pn** **15 38 00.3 -0.5**
BFO Black Forest 5.97 240 **Pn** **15 38 00.3 -0.5**
TRI Trieste 6.04 196 P **Pn** **15 38 00.2 -1.5**
TRI Trieste 6.04 196 Pn **Pn** **15 38 00.2 -1.5**
BOJS Bojanci 6.07 186 *i* Pn **Pn** **15 38 03.6 +1.5**
GBRS Gornja Briga 6.08 189 *i* Pn **Pn** **15 38 03.6 +1.3**
RNPP8 Varash 6.09 88 Pn **Pn** **15 38 03.0 +0.7**
RNPP9 Sopachiv 6.10 87 Pn **Pn** **15 38 02.7 +0.2**
HILG Hillesheim 6.11 262 *e*Pn **Pn** **15 38 03.6 +1.0**
RNPP5 Staryi Chortor 6.12 89 Pn **Pn** **15 38 03.3 +0.6**
PABE Paberze 6.13 47 **Pn** **15 38 01.1 -1.8**
PABE Paberze 6.13 47 *e*P **Pn** **15 38 05.7 +2.8**
PABE Paberze 6.13 47 P **Pn** **15 38 05.7 +2.8**
BMR Baia Mare 6.16 126 P **Pn** **15 38 04.5 +1.2**
BMR Baia Mare 6.16 126 P **Pn** **15 38 04.5 +1.2**
KLL Kalltalsperre 6.25 266 *e*Pn **Pn** **15 38 05.2 +0.6**
FUORN Ofenpass-Fuorn 6.25 220 **Pn** **15 38 04.9 +0.1**
FUORN Ofenpass-Fuorn 6.25 220 P **Pn** **15 38 07.5 +2.6**
DAVOX Davos/Dischmat 6.28 223 Pn **Pn** **15 38 07.0 +1.8**
comp=Z,1.0nm,0.3s,baz=18,slow=12,SNR=12
DAVOX Sn **Sn** **15 39 16.1 -1.6**
comp=Z,2.0nm,0.3s,baz=314,slow=22,SNR=2.6
DAVOX Lg Lg 15 39 45.5
comp=Z,1.1nm,0.3s,baz=162,slow=22,SNR=4.2
comp=Z,7.6nm,0.6s
DAVOX Davos/Dischmat 6.28 223 P **Pn** **15 38 07.0 +1.8**
DREG Dreilaegerbach 6.29 266 *e*Pn **Pn** **15 38 06.7 +1.5**
CGRP Cima Grappa 6.35 208 P **Pn** **15 38 08.6 +2.5**
ONAU Onsala 6.36 339 *i* P **Pn** **15 38 07.1 +1.2**
ONAU *i* S **Sn** **15 39 17.8 -1.4**
ONAU Onsala 6.36 339 *i* P **Pn** **15 38 07.1 +1.2**
ONAU *i* S **Sn** **15 39 17.8 -1.4**
BTNL Ternell 6.38 265 *d*P **Pn** **15 38 08.6 +2.3**
comp=Z,17nm,1.0s
SIRR Siria 6.42 143 ⇓P **Pn** **15 38 07.8 +1.0**
DRGR 6.42 135 ⇓P **Pn** **15 38 08.6 +1.6**
DRGR 6.42 135 P **Pn** **15 38 08.6 +1.6**
DRGR 6.42 135 P **Pn** **15 38 08.6 +1.6**
MEM Membach 6.45 266 P **Pn** **15 38 09.6 +2.3**
MEM Membach 6.45 266 *d*P **Pn** **15 38 09.3 +2.1**
comp=Z,31nm,1.0s
MEM *d*S **Sb** **15 39 37.6 -4.0**
comp=N,72nm,0.8s
MEM Membach 6.45 266 P **Pn** **15 38 09.6 +2.3**
HGN Heimansgroeve 6.46 267 P **Pn** **15 38 10.6 +3.1**
WLF Walferdange 6.62 257 P **Pn** **15 38 09.4 -0.3**
WLF Walferdange 6.62 257 **Pn** **15 38 09.3 -0.3**
WLF Walferdange 6.62 257 *d*P **Pn** **15 38 13.0 +3.3**
comp=Z,19nm,1.1s
WLF Walferdange 6.62 257 P **Pn** **15 38 14.2 +4.6**
ECH Echery 6.68 244 P **Pn** **15 38 10.3 -0.2**
ECH Echery 6.68 244 **Pn** **15 38 10.3 -0.2**
ECH Echery 6.68 244 P **Pn** **15 38 11.6 +1.0**
MARR Marisel-Cluj 6.69 134 ⇑P **Pn** **15 38 12.3 +1.6**
TUE Stuetta 6.75 224 **Pn** **15 38 11.2 -0.5**
TUE Stuetta 6.75 224 Pn **Pn** **15 38 12.7 +1.0**
comp=Z,1.1nmcomp=Z,1µmcomp=Z,44nm,1.8s
TUE Stuetta 6.75 224 P **Pn** **15 38 15.2 +3.5**
BLY Banja Luka 6.84 174 Pn **Pn** **15 38 12.4 -0.2**
BLY Banja Luka 6.84 174 P **Pn** **15 38 14.4 +1.8**
TEOL Teolo 6.86 207 Pn **Pn** **15 38 12.7 -0.3**
BCLA Clavier 6.93 265 *d*P **Pn** **15 38 14.8 +1.0**
comp=Z,18nm,0.8s
BZS Buzias 6.96 146 ⇓P **Pn** **15 38 15.9 +1.6**
BZS Buzias 6.96 146 P **Pn** **15 38 15.9 +1.6**
BZS Buzias 6.96 146 P **Pn** **15 38 16.4 +2.1**
SALO Salr 7.00 214 Pn **Pn** **15 38 13.0 -1.8**
TJOU Tjoern 7.00 340 *i* P **Pn** **15 38 18.0 +3.2**
TJOU Tjoern 7.00 340 *i* P **Pn** **15 38 18.0 +3.2**
RCHB Rochefort 7.04 263 *d*P **Pn** **15 38 17.8 +2.4**
RCHB *d*S **Sn** **15 39 31.5 -4.6**
comp=N,33nm,1.5s
RCHB Rochefort 7.04 263 P **Pn** **15 38 18.0 +2.6**
BUR08 Bucovina Ar. S 7.07 120 **Pn** **15 38 14.6 -1.3**
BURAR Bucovina Array 7.10 120 ⇑P **Pn** **15 38 17.4 +1.1**
BURAR Bucovina Array 7.10 120 P **Pn** **15 38 17.4 +1.1**
BURAR Bucovina Array 7.10 120 **Pn** **15 38 14.9 -1.4**
NACGM Naroch 7.23 58 *e*P **Pn** **15 38 20.1 +2.2**
comp=Z,43nm,1.0s,baz=248
MI28 MI28,Pidlybu 7.27 90 Pn **Pn** **15 38 18.2 -0.4**
BMRD Maredsous 7.29 265 *d*P **Pn** **15 38 21.2 +2.4**
comp=Z,9.4nm,0.7s
UCC Uccle 7.44 269 P **Pn** **15 38 19.0 -1.8**
UCC Uccle 7.44 269 Pn **Pn** **15 38 19.0 -1.8**
DOU Dourbes 7.45 263 *d*P **Pn** **15 38 19.6 -1.4**
DOU *d*S **Sn** **15 39 44.8 -1.3**
comp=E,26nm,0.8s
MI29 MI29, Kamyanyy 7.49 94 Pn **Pn** **15 38 22.0 +0.5**
comp=E,1.8nmcomp=E,163nm,1.0s
GZR Gura Zlata 7.57 142 ⇑P **Pn** **15 38 24.3 +1.5**
GZR Gura Zlata 7.57 142 P **Pn** **15 38 24.3 +1.5**
MI30 MI30,Zelenitsa 7.63 91 Pn **Pn** **15 38 23.0 -0.5**
comp=E,0.4nmcomp=E,62nm,0.6s

MNK Minsk 7.68 63 *i* P **Pn** **15 38 24.0 -0.2**
comp=E,19nm,0.7s
MNK *i* P **Pn** **15 38 24.0 -0.2**
comp=N,18nm,0.8s
MNK *i* P **Pn** **15 38 24.0 -0.2**
comp=Z,5.0nm,0.4s,baz=252
MNK *i* PP **PnPn** **15 38 31.8 +0.3**
MNK *i* PPP PPP 15 38 39.3
MNK *i* S **Sn** **15 39 50.7 -1.1**
MNK *i* SS **SnSn** **15 40 03.8 +1.0**
MNK *i* SSS SSS 15 40 14.9
MNK *i* LR LR 15 40 42.6
MNK *i* LRM MLR 15 41 13.9
comp=E,801nm,18.5s
MNK *i* LRM MLR 15 41 15.8
comp=N,656nm,19.9s
MNK *i* LRM MLR 15 41 21.1
comp=Z,48nm,19.3s
MNK Minsk 7.68 63 *i* P **Pn** **15 38 24.0 -0.2**
MNK *i* S **Sn** **15 39 50.7 -1.1**
MNK pmax pmax
comp=N,18nm,0.8s
MNK pmax pmax
comp=E,19nm,0.7s
MNK pmax pmax
comp=Z,5.0nm,0.4s
MNK MLR MLR
comp=E,801nm,19.0s
MNK MLR MLR
comp=N,656nm,20.0s
MNK MLR MLR
comp=Z,48nm,19.0s
MMK Mattmark 7.70 228 P **Pn** **15 38 27.1 +2.5**
MDVR Moldovita 7.73 149 ⇑P **Pn** **15 38 26.2 +1.3**
SENIN Lac Senin/Sane 7.78 232 **Pn** **15 38 25.5 -0.3**
HERR Herculane 7.88 145 ⇓P **Pn** **15 38 28.6 +1.8**
ZCCA Zocca 7.98 208 Pn **Pn** **15 38 27.3 -1.1**
STRU Stroemstad 8.02 341 *i* P **Pn** **15 38 29.5 +0.8**
STRU Stroemstad 8.02 341 *i* P **Pn** **15 38 29.5 +0.8**
HOMB Homborsund 8.04 330 *eP* **Pn** **15 38 28.5 -0.6**
HOMB *eS* **Sn** **15 39 55.0 -5.5**
HOMB Homborsund 8.04 330 *i* P **Pn** **15 38 28.1 -0.9**
HOMB *i* S **Sn** **15 39 56.2 -4.3**
BOB Bobbio (Coli) 8.12 216 P **Pn** **15 38 33.4 +3.2**
AK20 Malin Array Si 8.14 91 Pn **Pn** **15 38 30.4 -0.1**
AK19 Malin Array Si 8.15 91 Pn **Pn** **15 38 30.5 -0.1**
AK21 Malin Array Si 8.16 90 Pn **Pn** **15 38 30.8 +0.1**
KIEV Kiev 8.28 91 ⇓P **Pn** **15 38 32.8 +0.4**
KIEV Kiev 8.28 91 P **Pn** **15 38 32.7 +0.4**
KIEV Kiev 8.28 91 **Pn** **15 38 32.3 0.0**
KIEV Kiev 8.28 91 Pn **Pn** **15 38 31.5 -0.8**
comp=Z,2µmcomp=Z,183nm,0.7s
KIEV Kiev 8.28 91 P **Pn** **15 38 32.8 +0.4**
AKASG Malin Array Be 8.29 91 Pn **Pn** **15 38 32.1 -0.3**
comp=Z,6.1nm,0.3s,baz=283,slow=12,SNR=24
AKASG Sn **Sn** **15 40 01.2 -5.5**
comp=Z,3.9nm,0.3s,baz=268,slow=25,SNR=5.8
AKASG Lg Lg 15 40 55.0
comp=Z,1.0nm,0.3s,baz=281,slow=28,SNR=4.1
comp=Z,7.5nm,0.5s
AKASG Malin Array Be 8.29 91 *i* P **Pn** **15 38 32.0 -0.5**
AKASG pmax pmax
comp=Z,13nm,0.5s
AKASG Malin Array Be 8.29 91 **Pn** **15 38 30.9 -1.5**
AKBB Malin Array Si 8.29 91 *i* P **Pn** **15 38 32.7 +0.2**
AKBB Malin Array Si 8.29 91 **Pn** **15 38 31.4 -1.1**
AKBB Malin Array Si 8.29 91 Pn **Pn** **15 38 31.6 -0.9**
AK05 Malin Array Si 8.29 91 Pn **Pn** **15 38 31.9 -0.6**
AK06 Malin Array Si 8.29 92 Pn **Pn** **15 38 31.9 -0.7**
VOIR 8.51 132 ⇓P **Pn** **15 38 36.4 +0.8**
VOIR 8.51 132 P **Pn** **15 38 36.4 +0.8**
VOIR 8.51 132 P **Pn** **15 38 38.8 +3.1**
SORM Soroca 8.61 109 ⇓P **Pn** **15 38 37.8 +1.0**
SORM Soroca 8.61 109 P **Pn** **15 38 37.8 +1.0**
MURB Monte Urbino 8.64 198 **Pn** **15 38 36.8 -0.6**
PCP Piancastagn 8.65 219 P **Pn** **15 38 40.1 +2.6**
GUMA Gualdo di Mace 8.69 194 Pn **Pn** **15 38 36.7 -1.4**
HFS Hagfors 8.72 352 Pn **Pn** **15 38 39.4 +1.0**
comp=Z,0.7nm,0.3s,baz=166,slow=13,SNR=16
HFS Sn **Sn** **15 40 11.5 -5.7**
comp=Z,0.4nm,0.3s,baz=181,slow=23,SNR=1.5
HFS Lg Lg 15 41 11.7
comp=Z,0.4nm,0.3s,baz=176,slow=27,SNR=2.2
comp=Z,2.3nm,0.5s
FDMO Fiordimonte 8.76 195 Pn **Pn** **15 38 37.6 -1.4**
KONO Kongsberg 8.92 338 P **Pn** **15 38 37.8 -3.3**
KONO Kongsberg 8.92 338 *eP* **Pn** **15 38 41.9 +0.8**
KONO *eS* **Sn** **15 40 21.4 -0.8**
KONO Kongsberg 8.92 338 Pn **Pn** **15 38 37.8 -3.3**
NRCA Norcia 8.95 194 Pn **Pn** **15 38 41.0 -0.7**
RRL Rocca Remolon 9.09 227 P Pn 15 38 49.0 +5.3
VSU Vasula 9.22 37 P **Pn** **15 38 47.8 +2.6**
VSU pmax pmax
comp=Z,44nm,1.2s
VSU Vasula 9.22 37 *eP* **Pn** **15 38 46.7 +1.4**
VSU Vasula 9.22 37 P **Pn** **15 38 46.2 +1.0**
CESX Cesi 9.26 196 Pn **Pn** **15 38 43.9 -2.0**
PZZ Stroppo 9.27 224 P **Pn** **15 38 48.7 +2.6**
SAOF Saorge 9.51 221 P **Pn** **15 38 50.9 +1.6**
ORIF Oris-en-Rattie 9.52 230 P **Pn** **15 38 51.8 +2.3**
ISO Isola 9.56 223 P **Pn** **15 38 53.3 +3.3**
ISO Isola 9.56 223 P **Pn** **15 38 53.3 +3.3**
NC602 NORSAR Array S 9.56 346 *eP* **Pn** **15 38 49.8 -0.1**
NC602 *eS* **Sn** **15 40 35.4 -2.5**
NC602 NORSAR Array S 9.56 346 **Pn** **15 38 47.5 -2.4**
NORES NORESS Array B 9.56 346 P **Pn** **15 38 51.0 +1.1**
NORES pmax pmax
comp=Z,1.0nm,0.2s
CLF Chambon-Foret 9.63 254 Pn **Pn** **15 38 49.3 -1.6**
INTR Introdacqua 9.66 190 Pn **Pn** **15 38 50.9 -0.5**
ESCA l'Escarene 9.71 221 P **Pn** **15 38 52.5 +1.5**
NAO01 NORSAR Array S 9.77 345 Pn **Pn** **15 38 50.4 -2.3**
NC405 NORSAR Array S 9.90 347 Pn **Pn** **15 38 52.3 -2.2**
NB2 NORSAR Subarra 9.90 346 Pn **Pn** **15 38 54.7 +0.1**
comp=Z,1.0nm,0.6s,baz=162,slow=14
NB2 NORSAR Subarra 9.90 346 Pn **Pn** **15 38 54.7 +0.1**
NOA NORSAR Array B 9.90 346 Pn **Pn** **15 38 54.4 -0.2**
comp=Z,0.1nm,0.3s,baz=120,slow=16,SNR=9.4
NOA Sn **Sn** **15 40 39.4 -6.9**
comp=Z,0.1nm,0.3s,baz=254,slow=19,SNR=3.8
comp=Z,0.7nm,0.6s
SSB Saint Sauveur 9.92 235 P **Pn** **15 38 54.1 -0.9**
SSB Saint Sauveur 9.92 235 Pn **Pn** **15 38 54.1 -0.9**
CALF Calern 9.96 222 P **Pn** **15 38 57.8 +2.2**
NBO00 NORSAR Array S 9.96 345 Pn **Pn** **15 38 53.7 -1.7**
NC303 NORSAR Array S 10.05 347 Pn **Pn** **15 38 54.7 -1.9**
DOMB Dombas 11.21 343 *eP* **Pn** **15 39 13.9 +1.5**
DOMB *eS* **Sn** **15 41 16.7 -1.6**
FINES FINESS Array B 11.33 25 Pn **Pn** **15 39 13.9 -0.2**
comp=Z,1.0nm,0.3s,baz=200,slow=10.0,SNR=26
FINES Sn Sn 15 41 10.6 -11
comp=Z,1.4nm,0.3s,baz=206,slow=19,SNR=6.3
comp=Z,4.6nm,0.5s
FINES FINESS Array B 11.33 25 Pn **Pn** **15 39 11.8 -2.2**
FIA1 FINESS Array S 11.33 25 Pn **Pn** **15 39 12.4 -1.7**
AKN Aaknes 11.76 339 *eP* Pn 15 39 31.6 +12
MOL Molde 11.98 341 *eP* **Pn** **15 39 24.4 +1.4**
EKA Eskdalemuir Ar 12.10 296 Pn **Pn** **15 39 23.4 -1.2**
baz=106,slow=14
ESK Eskdalemuir 12.12 296 P **Pn** **15 39 22.1 -2.9**
ESK Eskdalemuir 12.12 296 Pn **Pn** **15 39 22.1 -2.9**
RDO Rodhopi 12.25 144 Pn **Pn** **15 39 25.7 -1.0**
LIT Litokhoron 12.27 156 P **Pn** **15 39 25.4 -1.6**
LIT Litokhoron 12.27 156 Pn **Pn** **15 39 25.4 -1.6**
OBN Obninsk 12.72 66 Pn Pn 15 39 28.1 -5.0
comp=Z,3.3nm,0.3s,baz=330,slow=8.1,SNR=5.6
comp=Z,11nm,0.4s
OBN Obninsk 12.72 66 ⇓*eP* **Pn** **15 39 31.5 -1.6**
OBN *eS* **Sn** **15 41 47.9 -7.4**
OBN pmax pmax
comp=Z,17nm,0.7s
OBN MLR MLR
comp=Z,60nm,6.0s
OBN Obninsk 12.72 66 Pn **Pn** **15 39 30.1 -2.9**
NSS Namsos 13.20 352 *eP* **Pn** **15 39 39.5 -0.2**
NSS *eS* Sn 15 41 57.6 -9.4
MOS Moscow 13.41 63 *eP* **Pn** **15 39 40.4 -2.1**
MOS *eS* **Sn** **15 42 07.3 -4.8**
LPSR Galich'ya Gora 14.05 77 *eP* **Pn** **15 39 47.3 -4.0**
LPSR pmax pmax
comp=Z,24nm,0.6s
VORR Voronezh 14.33 80 *eP* **Pn** **15 39 50.7 -4.5**
VORR pmax pmax
comp=Z,38nm,0.4s
VSR Storozhevoye 14.38 82 *eP* **Pn** **15 39 51.3 -4.5**
VSR pmax pmax
comp=Z,13nm,1.0s
VORD Divnogorie 14.51 83 *eP* Pn 15 39 52.4 -5.1
VORD pmax pmax
comp=Z,6.0nm,0.9s
LEIR Leirfjorden 14.69 355 *eP* **Pn** **15 39 59.0 -0.9**
LEIR *eS* **Sn** **15 42 38.6 -4.7**
MOR8 Moi Rana 14.70 357 *eP* **Pn** **15 40 00.3 +0.2**
MOR8 *eS* **Sn** **15 42 38.9 -4.6**
STOK Stokkvaagen 14.92 355 *eP* **Pn** **15 40 03.6 +0.6**
STOK *eS* **Sn** **15 42 49.1 +0.3**
KONS Konsvik 15.08 355 *eP* **Pn** **15 40 05.1 -0.1**
MDUB Mudurnu 15.21 131 **Pn** **15 40 02.7 -4.4**
MDUB IAmb IAmb 15 40 17.8
comp=Z,15nm,1.4s
VAGH Vaagaholmen 15.30 356 *eP* **Pn** **15 40 08.2 +0.1**
FAUS Fauske 15.89 359 *eP* **Pn** **15 40 17.2 +1.3**
KLMR Klimovskoe 15.92 45 *eP* **P** **15 40 18.5 -1.6**
KLMR 15 43 14.5
KLMR pmax pmax
comp=Z,19nm,1.3s
VRH Novokhopyorsk 15.96 81 *eP* **Pn** **15 40 11.7 -5.2**
VRH pmax pmax
comp=Z,35nm,0.9s
STEI Steigen 16.45 359 *eP* **P** **15 40 26.8 +1.0**
KEST Kesra 16.54 200 Pn **Pn** **15 40 23.7 -0.7**
comp=Z,0.1nm,0.3s,baz=32,slow=14,SNR=4.6
comp=Z,0.7nm,0.5s
KEST Kesra 16.54 200 **Pn** **15 40 23.1 -1.3**
LOF Lofoten 16.69 357 *eP* **Pn** **15 40 24.4 -1.6**
SGF Sodankyl 16.75 14 P **P** **15 40 31.9 +2.7**
SGF pmax pmax
comp=Z,16nm,1.5s
SGF Sodankyl 16.75 14 P **P** **15 40 28.2 -1.0**
BR106 Keskin Array S 16.95 127 P **Pn** **15 40 30.7 +1.0**
comp=Z,1.3nm,0.9s
BR131 Keskin Array S 16.97 127 *i* P **P** **15 40 33.0 +1.1**
BR131 Keskin Array S 16.97 127 **Pn** **15 40 28.1 -1.8**
BRTR Keskin Array B 16.97 127 Pn **Pn** **15 40 30.7 +0.8**
baz=319,slow=6.7,SNR=7.3
comp=Z,0.7nm,1.0s
BRTR Keskin Array B 16.97 127 **Pn** **15 40 27.2 -2.7**
KTK1 Kautokeino 17.85 8 *eP* **Pn** **15 40 39.9 -0.7**
JETT Jettan, Norway 18.19 5 *eP* **Pn** **15 40 44.4 -0.4**
TRO Tromso 18.20 3 P **Pn** **15 40 43.5 -1.4**
TRO Tromso 18.20 3 *eP* **Pn** **15 40 43.4 -1.4**
ESBB Sonseca Array 18.32 237 P **Pn** **15 40 43.2 -3.4**
ESDC Sonseca Array 18.32 237 Pn **Pn** **15 40 46.7 +0.1**
comp=Z,0.1nm,0.3s,baz=44,slow=8.2,SNR=7.9
comp=Z,1.2nm,1.0s
ESDC Sonseca Array 18.32 237 P **Pn** **15 40 43.6 -3.1**
ARCES ARCESS Array B 18.59 10 Pn **P** **15 40 47.7 -1.8**
comp=Z,0.6nm,0.3s,baz=194,slow=12,SNR=14
comp=Z,3.8nm,0.5s
ARCES ARCESS Array B 18.59 10 P **P** **15 40 44.5 -5.0**
ARCES IAmb IAmb 15 40 52.4
comp=Z,20nm,1.4s
LVZ Lovozero 18.73 22 P **P** **15 40 46.5 -4.6**
LVZ pmax pmax
comp=Z,24nm,1.2s
LVZ Lovozero 18.73 22 P **P** **15 40 46.5 -4.6**
LVZ IAmb IAmb 15 40 57.0
comp=Z,24nm,1.2s
BNN Bunyan 18.74 125 **P** **15 40 46.6 -4.9**
KEV Kevo 18.98 12 P **P** **15 40 49.6 -4.1**
KEV pmax pmax
comp=Z,29nm,1.3s
KEV Kevo 18.98 12 P **P** **15 40 49.6 -4.1**
KEV IAmb IAmb 15 40 57.4
comp=Z,29nm,1.3s
KIV Kislovodsk 19.33 103 *eP* **Pn** **15 41 00.2 +1.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s
BELG Belogornoye 19.35 75 P **Pn** **15 41 00.1 +1.1**
comp=Z,0.8nm,0.3s,baz=182,slow=2.3,SNR=4.7
comp=Z,29nm,0.9s
BELG Belogornoye 19.35 75 *i* P **Pn** **15 40 59.3 +0.4**
SHA1 Shidzhatmaz 19.43 103 *ceP* **Pn** **15 41 00.8 +0.6**
KBZ Khabaz 19.58 103 P **Pn** **15 41 02.8 +1.0**
comp=Z,0.2nm,0.3s,baz=317,slow=12,SNR=5.0
comp=Z,1.1nm,0.5s
KBZ Khabaz 19.58 103 *i* P **P** **15 41 01.3 +0.8**
KBZ pmax pmax
comp=Z,5.0nm,1.2s
KELT Kelkit 19.64 116 P **Pn** **15 41 05.4 +2.7**
ARPR Arapgir-MALATY 19.88 120 P **P** **15 40 60.0 -4.0**
KIRV Kirov 20.16 57 P Pn 15 41 08.2 -0.3
comp=Z,7.8nm,0.6s,baz=239,slow=8.5,SNR=4.1
comp=Z,7.8nm,0.6s
KIRV Kirov 20.16 57 *i* P Pn 15 41 08.5 0.0
GAZ Gaziantep 20.72 126 P **P** **15 41 09.6 -3.4**
GAZ IAmb IAmb 15 41 22.1
comp=Z,9.4nm,1.1s
EPOS Posof 20.77 108 P Pn 15 41 17.2 +1.2
GEVA Gevas 23.05 114 P **P** **15 41 34.8 -3.3**
GEVA IAmb IAmb 15 41 43.7
comp=Z,5.8nm,1.1s
MD01 Midelt array s 24.09 227 P **P** **15 41 45.8 -2.6**
MSBI Mazada 24.69 138 P **P** **15 41 56.5 +2.9**
GHAJ Ghor Haditha 24.79 137 P **P** **15 41 50.6 -3.9**
GHAJ Ghor Haditha 24.79 137 P **P** **15 41 58.0 +3.5**
ARTI Arti 25.02 62 P **P** **15 41 58.0 +1.5**
comp=Z,7.9nm,0.7s,baz=270,slow=6.0,SNR=11
comp=Z,7.9nm,0.7s
ARTI Arti 25.02 62 *d* P **P** **15 41 57.7 +1.2**
ARTI S **S** **15 46 20.2 -1.0**
ARTI pmax pmax
comp=Z,15nm,1.0s
ARTI Arti 25.02 62 P **P** **15 41 52.4 -4.1**
SCO Scoresbysund 25.73 331 P **P** **15 41 59.4 -3.4**
SCO pmax pmax
comp=Z,8.0nm,1.1s
SCO Scoresbysund 25.73 331 P **P** **15 41 59.4 -3.4**
SCO IAmb IAmb 15 42 08.1
comp=Z,7.8nm,1.1s
SCO Scoresbysund 25.73 331 P **P** **15 42 07.0 +4.2**
AKTO Aktyubinsk 26.14 76 P **P** **15 42 08.2 +1.5**
comp=Z,3.9nm,0.5s,baz=320,slow=7.9,SNR=7.8
AKTO LR LR 15 53 47.5
comp=Z,36nm,18.9s,baz=85,slow=40
comp=Z,3.9nm,0.5s
SVE Sverdlovsk 26.20 61 *eP* **P** **15 42 09.1 +1.9**
SVE pmax pmax
comp=Z,22nm,1.6s
AB31 Akbulak array 27.71 77 P **P** **15 42 16.7 -4.2**
ABKAR Akbulak array 27.71 77 P **P** **15 42 16.5 -4.3**
BVAR Borovoye Array 32.56 66 P **P** **15 43 06.3 +2.6**
comp=Z,3.8nm,0.6s,baz=303,slow=6.2,SNR=3.9
comp=Z,3.8nm,0.6s
NRIK Noril'sk 36.80 34 P **P** **15 43 43.1 +3.1**
comp=Z,1.4nm,0.6s,baz=270,slow=7.3,SNR=3.9
comp=Z,1.4nm,0.6s
NRIK Noril'sk 36.80 34 *i* P **P** **15 43 43.8 +3.7**
NRIK pmax pmax
comp=Z,5.0nm,1.2s
NRIK Noril'sk 36.80 34 P **P** **15 43 39.0 -1.1**
NRIK IAmb IAmb 15 43 45.1
comp=Z,4.1nm,1.1s
KKAR Karatay Array 37.05 81 P **P** **15 43 40.4 -2.2**
KKAR Karatay Array 37.05 81 P **P** **15 43 40.4 -2.2**
KURBB Kurchatov Arra 38.15 66 P **P** **15 43 53.5 +1.7**
comp=Z,2.6nm,0.9s,baz=299,slow=9.3,SNR=5.1
comp=Z,2.6nm,0.9s
KURK Kurchatov 38.16 66 P **P** **15 43 51.2 -0.7**
KURK pmax pmax
comp=Z,5.0nm,1.1s
KURK Kurchatov 38.16 66 P **P** **15 43 51.2 -0.7**
KURK IAmb IAmb 15 43 55.9
comp=Z,5.1nm,1.1s
SHAA Shahritus 38.77 90 P **P** **15 43 55.1 -2.1**
SHAA IAmb IAmb 15 44 01.4
comp=Z,5.2nm,0.9s
GAR Garm 39.26 87 P **P** **15 43 59.3 -2.1**
AAK Ala-Archa 39.75 79 *i* P **P** **15 44 06.1 +0.6**
AAK pmax pmax
comp=Z,12nm,1.3s
TORD Torodi Ar. Bea 40.03 202 P **P** **15 44 08.7 +0.8**
comp=Z,3.8nm,1.1s,baz=8.9,slow=7.8,SNR=9.2
comp=Z,3.8nm,1.1s
ZAA0 Zalesovo Array 40.17 59 P **P** **15 44 06.1 -2.5**
ZAA0 IAmb IAmb 15 44 12.9
comp=Z,5.8nm,1.1s
ZALV Zalesovo Beam 40.17 59 *i* P **P** **15 44 10.8 +2.2**
comp=Z,2.7nm,1.0s,baz=271,slow=10,SNR=3.5
comp=Z,2.7nm,1.0s
ZALV Zalesovo Beam 40.17 59 *i* P P 15 44 13.5 +4.9
ZALV pmax pmax
comp=Z,2.0nm,1.0s
ZALV Zalesovo Beam 40.17 59 P **P** **15 44 06.9 -1.7**
MK31 Makanchi Array 42.19 69 *ceP* **P** **15 44 29.6 +4.2**
TARG Taragay, Kyrgy 42.30 78 P **P** **15 44 24.1 -2.7**
TARG pmax pmax
comp=Z,8.0nm,1.5s
TARG Taragay, Kyrgy 42.30 78 P **P** **15 44 24.1 -2.7**
TARG IAmb IAmb 15 44 31.7
comp=Z,7.8nm,1.5s
PDGK Podgornoye 42.41 75 P **P** **15 44 25.3 -2.1**
PDGK Podgornoye 42.41 75 P **P** **15 44 25.2 -2.1**
KSH2 Kashi 42.44 83 P **P** **15 44 31.3 +3.6**
KSH2 pmax pmax
comp=Z,7.0nm,1.1s
DGZ Jazzator, Alta 43.62 63 *i* P **P** **15 44 38.8 +1.7**
DGZ pmax pmax
comp=Z,7.0nm,0.8s
DRLN Deer Lake 45.14 298 P **P** **15 44 46.5 -2.6**
SCHQ Schefferville 47.05 308 P **P** **15 45 04.3 +0.3**
comp=Z,2.5nm,0.8s,baz=52,slow=9.3,SNR=3.9
comp=Z,2.5nm,0.8s
SCHQ Schefferville 47.05 308 IAmb IAmb 15 45 07.2
comp=Z,3.8nm,0.9s
KNGR Kungurtug, Tuv 48.59 57 *i* P **P** **15 45 18.2 +2.1**
TLY Talaya 51.09 53 P **P** **15 45 36.3 +1.2**
comp=Z,6.8nm,0.6s,baz=30,slow=23,SNR=3.3
comp=Z,6.8nm,0.6s
TLY Talaya 51.09 53 P **P** **15 45 34.0 -1.1**
MBAR Mbarara 53.41 162 *ceP* **P** **15 45 56.1 +3.3**
MBAR pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 54.89 55 P **P** **15 46 05.6 +2.3**
comp=Z,1.3nm,0.8s,baz=282,slow=7.4,SNR=6.0
comp=Z,1.3nm,0.8s
SONM Songino Array 54.89 55 P **P** **15 46 02.3 -1.0**
SONM pmax pmax
comp=Z,7.0nm,1.3s
SONM Songino Array 54.89 55 P **P** **15 46 02.3 -1.0**
YAK Yakutsk 55.17 32 *eP* **P** **15 46 06.2 +1.3**
YAK pmax pmax
comp=Z,12nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,5.0nm,1.4s
YKA Yellowknife Ar 59.83 336 P **P** **15 46 40.1 +2.4**
comp=E,3.0nm,0.9s,baz=30,slow=7.0,SNR=6.9
comp=E,3.0nm,0.9s
YKA Yellowknife Ar 59.83 336 *ceP* **P** **15 46 40.7 +3.0**
YKA pmax pmax
comp=Z,3.0nm,0.9s
HHC Hu-ho-hao-te 62.35 58 *eP* **P** **15 46 55.0 -0.4**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,44nm,4.9s
ILAR Eielson Array 63.27 352 P **P** **15 47 02.8 +1.8**
comp=Z,0.2nm,0.7s,baz=15,slow=9.3,SNR=5.2
comp=Z,0.2nm,0.7s
ILAR Eielson Array 63.27 352 P **P** **15 47 01.5 +0.5**
ILAR Eielson Array 63.27 352 P **P** **15 47 01.5 +0.5**
KLR Kul'dur 65.62 40 *i* P **P** **15 47 18.0 +1.4**
KLR pmax pmax
comp=Z,5.0nm,1.2s
CMAR Chiang Mai Arr 71.34 84 P **P** **15 47 54.8 +2.0**
comp=Z,2.3nm,1.1s,baz=316,slow=7.0,SNR=9.1
comp=Z,2.3nm,1.1s
CMAR Chiang Mai Arr 71.34 84 *ceP* **P** **15 47 55.2 +2.4**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
CMAR Chiang Mai Arr 71.34 84 P **P** **15 47 53.1 +0.3**
KSRS Korea Array 73.24 51 P **P** **15 48 06.7 +2.9**
comp=Z,1.6nm,1.1s,baz=331,slow=4.9,SNR=5.7
comp=Z,1.6nm,1.1s
PDAR Pinedale Array 74.92 322 P **P** **15 48 16.2 +2.3**
comp=Z,0.8nm,0.5s,baz=65,slow=6.4,SNR=10
comp=Z,0.8nm,0.5s
PDAR Pinedale Array 74.92 322 P **P** **15 48 13.8 -0.1**
MJAR Matsushiro Arr 78.70 44 P **P** **15 48 37.0 +1.9**
comp=Z,0.7nm,0.6s,baz=322,slow=3.8,SNR=4.7
comp=Z,0.7nm,0.6s
MJAR Matsushiro Arr 78.70 44 P **P** **15 48 35.2 +0.1**
MJAR pmax pmax
comp=Z,3.0nm,1.3s
MJAR Matsushiro Arr 78.70 44 P **P** **15 48 35.2 +0.1**
MJAR IAmb IAmb 15 48 38.9
comp=Z,3.2nm,1.3s
BOSA Boshof 80.21 172 P **P** **15 48 44.5 +1.2**
comp=Z,2.5nm,0.9s,baz=238,slow=15,SNR=1.7
comp=Z,2.5nm,0.9s
BOSA Boshof 80.21 172 P **P** **15 48 43.4 +0.1**
BOSA pmax pmax
comp=Z,14nm,1.3s
BOSA Boshof 80.21 172 P **P** **15 48 43.4 +0.1**
ANMO Albuquerque 80.27 315 *ceP* P 15 48 48.8 +4.9
ANMO pmax pmax
comp=Z,3.0nm,1.3s
NVAR Mina Array Bea 81.95 325 P **P** **15 48 53.0 +0.2**
comp=Z,0.2nm,0.3s,baz=48,slow=4.4,SNR=3.6
comp=Z,0.2nm,0.3s
TXAR Lajitas Array 83.70 310 P **P** **15 49 04.8 +2.9**
comp=Z,0.5nm,0.5s,baz=68,slow=3.2,SNR=6.7
comp=Z,0.5nm,0.5s
TXAR Lajitas Array 83.70 310 P **P** **15 49 02.1 +0.2**
TXAR Lajitas Array 83.70 310 P **P** **15 49 02.1 +0.2**
ASAR Alice Springs 125.35 84 PKP **PKiKP** **15 55 34.7 +0.5**
comp=Z,0.5nm,0.9s,baz=333,slow=2.2,SNR=5.6

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*IDC **30** 15:36:35.0± 1.4, 50.66N× 87.73E, h0km, mb3.5/4, mbtmp3.7/10, ML3.5/6, MS2.4/1, Error ellipse: s-maj=21.1km s-min=15.4km az=57.0*
*ASRS **30** 15:36:35.0± 0.2, 50.6′N± 0.9× 8.7′E± , h10km, MLh4.2/15, Error ellipse: s-maj=2.6km s-min=2.0km az=83.8, confirmed*
*MOS **30** 15:36:38.3± 1.1, 50.31′N× 87.36E, h13km, mb4.0/1, Error ellipse: s-maj=8.9km s-min=5.1km az=84.9*
*NNC **30** 15:36:39.6± 1.8, 50.60′N× 87.08E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=17.5km s-min=8.4km az=101.0*

ISC 30 15:36:36.9± 1.1, 50.57′N± 0.02× 87.34′E± 0.02, h3km± 8km, n81, σT 1.9/77/117, mb3.4/3, 9C-12D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AKAR	**Aktash**	**0.30**	**144**	PG	**Pg**		**15 36 41.3**	**-1.4**
AKAR	**Aktash**	**0.30**	**144**	⇓Pg	**Pg**		**15 36 41.4**	**-1.4**
AKAR				Sg	**Sg**		**15 36 44.6**	**-2.1**
ULGR	**Ulagan, Altay**	**0.40**	**81**	PG	**Pg**		**15 36 43.6**	**-1.0**
ULGR	**Ulagan, Altay**	**0.40**	**81**	Pg	**Pg**		**15 36 43.6**	**-1.0**
ULGR				Sg	**Sg**		**15 36 48.3**	**-1.5**
TUNR	**Tungur**	**0.77**	**238**	PG	**Pg**		**15 36 51.6**	**+0.1**
TUNR							15 37 01.8	
TUNR	**Tungur**	**0.77**	**238**	Pg	**Pg**		**15 36 51.6**	**+0.1**
TUNR				Sg	**Sg**		**15 37 01.9**	**+0.4**
DGZ	**Jazzator, Alta**	**0.87**	**176**	PG	**Pg**		**15 36 52.0**	**-1.5**
DGZ							15 37 02.6	
DGZ	**Jazzator, Alta**	**0.87**	**176**	⇓Pg	**Pg**		**15 36 52.0**	**-1.5**
DGZ				Sg	**Sg**		**15 37 02.6**	**-2.1**
ELDR	**Elanda**	**1.03**	**310**	PG	**Pg**		**15 36 56.7**	**+0.1**
ELDR	**Elanda**	**1.03**	**310**	Pg	**Pg**		**15 36 56.6**	**0.0**
ELDR				Sg	**Sb**		**15 37 10.8**	**-0.4**
YALR	**Yailyu, Altay**	**1.22**	**8**	PG	**Pg**		**15 36 59.4**	**-0.8**
YALR	**Yailyu, Altay**	**1.22**	**8**	⇓Pg	**Pg**		**15 36 59.5**	**-0.8**
YALR				Sg	**Sg**		**15 37 15.6**	**-0.4**
ARTR	**Artybash**	**1.24**	**358**	PG	**Pg**		**15 36 59.9**	**-0.6**
ARTR	**Artybash**	**1.24**	**358**	Pg	**Pg**		**15 36 60.0**	**-0.6**
ARTR				Sg	**Sn**		**15 37 18.0**	**-0.2**
UKR	**Ust'-Kan**	**1.67**	**284**	PN	**Pb**		**15 37 08.5**	**+0.2**
UKR							15 37 32.5	
UKR	**Ust'-Kan**	**1.67**	**284**	Pg	**Pb**		**15 37 08.5**	**+0.2**
UKR				Sg	**Sg**		**15 37 32.6**	**+1.9**
TEL	**Teeli**	**1.87**	**75**	PN	**Pb**		**15 37 11.0**	**-0.7**
TEL							15 37 36.9	
TEL	**Teeli**	**1.87**	**75**	Pg	**Pb**		**15 37 11.1**	**-0.7**
TEL				Sg	**Sg**		**15 37 37.0**	**0.0**
TASR	**Tashtagol**	**2.22**	**8**	PN	**Pg**		**15 37 18.4**	**-1.1**
TASR							15 37 49.2	
TASR	**Tashtagol**	**2.22**	**8**	Pg	**Pg**		**15 37 18.4**	**-1.1**
TASR				Sg	**Sg**		**15 37 49.2**	**+1.0**
ELT	**Eltsovka**	**2.79**	**346**	PN	**Pb**		**15 37 28.3**	**+1.1**

ELT 15 38 03.7
ELT Eltsovka 2.79 346 Pg **Pb** **15 37 28.4 +1.1**
ELT Sg **Sg** **15 38 03.7 -2.6**
KALT2 Kaltan 2 2.84 360 Pg **Pg** **15 37 29.6 -1.7**
KALT2 Sg **Sg** **15 38 07.3 -0.8**
MALIN Malinovka, Kuz 2.86 359 PN **Pb** **15 37 28.9 +0.4**
MALIN 15 38 08.2
MALIN Malinovka, Kuz 2.86 359 Pg **Pb** **15 37 28.9 +0.4**
MALIN Sg **Sg** **15 38 08.3 -0.4**
TAIL Tailep, Kuzbas 2.89 358 PN **Pb** **15 37 29.9 +0.9**
TAIL 15 38 10.5
TAIL Tailep, Kuzbas 2.89 358 Pg **Pb** **15 37 30.0 +0.9**
TAIL Sg **Sg** **15 38 10.5 +0.9**
KALT3 Kaltan 3 2.95 1 Pg **Pb** **15 37 30.4 +0.3**
KALT3 Sg **Sg** **15 38 10.4 -1.3**
KIYZ Kiyzas, Kuzbas 3.01 5 Pg **Pb** **15 37 31.6 +0.6**
KIYZ Sg **Sg** **15 38 13.2 -0.3**
VEH Verkhnyaya Baz 3.26 33 PN **Pb** **15 37 35.5 +0.1**
VEH 15 38 17.6
VEH Verkhnyaya Baz 3.26 33 Pg **Pb** **15 37 35.6 +0.1**
VEH Sg **Sb** **15 38 17.7 +2.1**
DJO Djoy, Khakassi 3.28 46 PN **Pb** **15 37 36.8 +1.2**
DJO 15 38 17.8
DJO Djoy, Khakassi 3.28 46 Pg **Pb** **15 37 36.8 +1.2**
DJO Sg **Sb** **15 38 17.8 +1.9**
CERR Cheremushki 3.42 46 PN **Pb** **15 37 39.2 +1.2**
CERR 15 38 22.5
CERR Cheremushki 3.42 46 Pg **Pb** **15 37 39.2 +1.2**
CERR Sg **Sb** **15 38 22.6 +2.7**
VCHU Verkh-Chumysh, 3.44 351 PN **Pg** **15 37 40.6 -2.1**
VCHU 15 38 27.4
VCHU Verkh-Chumysh, 3.44 351 Pg **Pg** **15 37 40.6 -2.1**
VCHU Sg **Sg** **15 38 27.5 +0.1**
ERU Erunakovo, Kuz 3.58 0 PN **Pg** **15 37 43.1 -2.3**
ERU 15 38 30.3
ERU Erunakovo, Kuz 3.58 0 Pg **Pg** **15 37 43.2 -2.3**
ERU Sg **Sg** **15 38 30.3 -1.5**
ZAA0 Zalesovo Array 3.73 336 ⇑Pn **Pn** **15 37 36.4 +1.2**
7.8nm,0.3s
ZAA0 ⇓Lg Lg 15 38 34.3
212nm,0.8s
ZALV Zalesovo Beam 3.73 336 Pn **Pn** **15 37 36.0 +0.8**
8.4nm,0.3s,baz=155,slow=13,SNR=112
ZALV Lg Lg 15 38 32.4
10nm,0.3s,baz=147,slow=24,SNR=5.5
23nm,0.4s
ZALV Zalesovo Beam 3.73 336 *e*PN **Pn** **15 37 36.7 +1.5**
ZALV pmax pmax
comp=Z,8.0nm,0.3s
BJR3 Bachatsky-3 (S 3.74 349 PN **Pg** **15 37 47.2 -1.2**
BJR3 15 38 35.6
BJR3 Bachatsky-3 (S 3.74 349 Pg **Pg** **15 37 47.2 -1.2**
BJR3 Sg **Sg** **15 38 35.6 -1.2**
BJR1 Bachatsky 1, K 3.77 348 PN **Pb** **15 37 44.9 +1.0**
BJR1 15 38 34.9
BJR1 Bachatsky 1, K 3.77 348 Pg **Pb** **15 37 44.9 +1.0**
BJR1 Sg **Sg** **15 38 34.9 -2.8**
BJR2 Bachatsky-2, K 3.80 349 Sg **Sg** **15 38 37.2 -1.5**
SALR Pechorkino, Sa 3.99 346 PN **Pb** **15 37 49.3 +1.6**
SALR 15 38 42.8
SALR Pechorkino, Sa 3.99 346 Pg **Pb** **15 37 49.3 +1.6**
SALR Sg **Sg** **15 38 42.8 -2.0**
BSTK Bystrovka, Nov 4.92 326 Sg **Sg** **15 39 14.5 -0.4**
NVS Novosibirsk 4.96 331 Sg **Sg** **15 39 15.5 -0.5**
NVSII Novosibirsk 4.96 331 Sg **Sg** **15 39 15.8 -0.1**
MK31 Makanchi Array 5.04 223 ⇑Pn **Pn** **15 37 56.5 +3.2**
comp=Z,5.6nm,0.5s,baz=44,slow=13,SNR=272
MK31 ⇓Sn **Sn** **15 38 55.4 +3.3**
comp=Z,4.5nm,0.3s,baz=36,slow=24,SNR=5.7
MK31 ⇑Lg Lg 15 39 14.5
comp=Z,24nm,0.5s,baz=42,slow=29,SNR=5.2
MK31 Makanchi Array 5.04 223 Pn **Pn** **15 37 56.5 +3.2**
MK31 S **Sn** **15 38 55.4 +3.3**
MKAR Makanchi Array 5.04 223 Pn **Pn** **15 37 56.7 +3.3**
comp=Z,4.7nm,0.3s,baz=43,slow=12,SNR=171
MKAR Sn **Sn** **15 38 51.4 -0.7**
comp=Z,8.3nm,0.3s,baz=63,slow=25,SNR=8.9
MKAR Lg Lg 15 39 14.5
comp=Z,8.6nm,0.3s,baz=44,slow=32,SNR=10
MKAR LR LR 15 39 55.3
comp=Z,41nm,20.3s,baz=359,slow=38
comp=Z,7.7nm,0.3s
MAKZ Makanchi 5.17 225 ⇑Pn **Pn** **15 37 58.0 +2.9**
comp=Z,7.2nm,0.4s
MAKZ ⇓Sn **Sn** **15 38 57.4 +2.1**
comp=Z,64nm,1.1s
MAKZ ⇑Lg Lg 15 39 18.6
comp=Z,40nm,0.7s
MAKZ Makanchi 5.17 225 PN **Pn** **15 37 58.3 +3.2**
MAKZ S **Sn** **15 38 57.4 +2.1**
KURK Kurchatov 5.55 275 PN **Pn** **15 38 02.9 +2.6**
KURBB Kurchatov Arra 5.61 274 Pn **Pn** **15 38 02.9 +1.7**
comp=Z,1.1nm,0.3s,baz=87,slow=15,SNR=87
KURBB Lg Lg 15 39 32.9
comp=Z,2.0nm,0.3s,baz=90,slow=33,SNR=10.0
comp=Z,7.5nm,0.3s
KURBB Kurchatov Arra 5.61 274 ⇑Pn **Pn** **15 38 02.4 +1.3**
comp=Z,11nm,0.3s
KURBB ⇑Sn **Sn** **15 39 07.8 +1.7**
comp=Z,47nm,0.6s
KURBB ⇓Lg Lg 15 39 30.8
comp=Z,191nm,0.8s
KURBB Kurchatov Arra 5.61 274 PN **Pn** **15 38 02.4 +1.3**
KURBB S **Sn** **15 39 07.8 +1.7**
MINR Mina 6.02 41 PN **Pb** **15 38 25.5 +3.3**
MINR SG **Sg** **15 39 48.7 -1.2**
MINR Mina 6.02 41 Pg **Pb** **15 38 25.6 +3.3**
MINR Sg **Sg** **15 39 48.7 -1.2**
KNGR Kungurtug, Tuv 6.48 86 PN **Pb** **15 38 33.7 +3.4**
KNGR Kungurtug, Tuv 6.48 86 Pg **Pb** **15 38 33.7 +3.4**
KNGR Sg **Sg** **15 40 06.5 +1.6**
PDGK Podgornoye 9.01 220 ⇑Pn **Pn** **15 38 47.9 0.0**
comp=Z,6.2nm,0.8s
PDGK ⇓Sn **Sn** **15 40 28.8 -1.0**
comp=Z,12nm,0.6s
PDGK ⇓Lg Lg 15 41 21.4
comp=Z,33nm,1.3s
PDGK Podgornoye 9.01 220 P **Pn** **15 38 47.9 0.0**
PDGK S **Sn** **15 40 28.8 -1.0**
TLY Talaya 10.31 77 Lg Lg 15 41 53.6
comp=Z,0.1nm,0.3s,baz=203,slow=7.0,SNR=1.8
BVAR Borovoye Array 10.79 290 Pn **Pn** **15 39 12.1 +0.1**
comp=Z,0.1nm,0.3s,baz=101,slow=15,SNR=7.6
BVAR Sn **Sn** **15 41 07.5 -5.6**
comp=Z,0.1nm,0.3s,baz=102,slow=26,SNR=6.6
comp=Z,1.2nm,0.4s
AAK Ala-Archa 11.86 233 Sn **Sn** **15 41 35.7 -4.0**
comp=Z,0.5nm,0.3s,baz=275,slow=16,SNR=1.6
AAK Lg Lg 15 42 50.6
comp=Z,0.3nm,0.3s,baz=30,slow=22,SNR=4.0
SONM Songino Array 12.76 95 Lg Lg 15 43 12.6
comp=Z,0.2nm,0.3s,baz=271,slow=26,SNR=3.6
KK31 Karatay Array 13.71 243 ⇓Pn **Pn** **15 39 54.4 +2.4**
comp=Z,0.4nm,0.3s
KK31 ⇓Sn **Sn** **15 42 23.4 -1.3**
comp=Z,0.5nm,0.5s
KK31 ⇑Lg Lg 15 43 47.2
comp=Z,4.4nm,0.7s,baz=323,slow=8.8,SNR=6.0
KK31 Karatay Array 13.71 243 P **Pn** **15 39 54.4 +2.4**
KK31 S **Sn** **15 42 23.4 -1.3**
AB31 Akbulak array 17.66 276 ⇓Pn **Pn** **15 40 42.4 -1.3**
comp=Z,0.4nm,0.5s,baz=198,slow=17,SNR=4.5
ARTI Arti 18.11 300 P **P** **15 40 49.7 +0.1**
comp=Z,0.3nm,0.3s,baz=136,slow=13,SNR=1.9
comp=Z,1.4nm,0.4s
AKTO Aktyubinsk 18.61 281 P **P** **15 40 54.7 -0.4**
comp=Z,0.1nm,0.3s,baz=80,slow=8.2,SNR=4.1
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 38.60 275 P **P** **15 44 03.0 +1.8**
comp=Z,0.7nm,0.7s,baz=66,slow=9.0,SNR=6.0
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 38.60 275 *e*P P 15 44 06.8 +5.6
BRTR pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 77.22 275 P **P** **15 48 32.0 -0.3**
comp=Z,0.3nm,0.7s,baz=25,slow=3.8,SNR=2.0
comp=Z,0.3nm,0.7s
WRA Warramunga Arr 81.49 136 P **P** **15 48 52.9 -2.4**
comp=Z,0.3nm,0.8s,baz=342,slow=4.6,SNR=1.7
comp=Z,0.3nm,0.8s
ASAR Alice Springs 84.57 138 P **P** **15 49 09.4 -1.9**
comp=Z,0.4nm,0.9s,baz=326,slow=5.5,SNR=2.9
comp=Z,0.4nm,0.9s

*RSNC **30** 15:44:31.0±0.0, 12°N±1°×7°3W±°, h29km±2km, M4.3, mB5.3, mb5.2, ML3.9, MLv4.6, Mw(mB)4.7*
*FUNV **30** 15:44:31.4, 12°.09N×72°.69W, h29km, MW4.6, Presumed earthquake*
*CATAC **30** 15:44:32.7±0.5, 12°N±4°×7°3W±°, h1km, M5.0/6, mb5.3/4, mB5.2/5, MLv5.0/6, Mw(mB)4.6/5, MwMwp4.0/2, Mwp4.5/2, Error ellipse: s-maj=10.0km s-min=4.7km az=155.1, confirmed*
*IDC **30** 15:44:35.1±6.2, 11°.74N×72°.46W, h90km±48km, mb3.8/3, mbtmp4.4/4, MS2.9/6, Error ellipse: s-maj=45.3km s-min=38.3km az=140.0*
ISC 30 15:44:30.0±0.9, 11°.98N±0°.05×72°.76W±0°.04, h60km±11km, n64, σ1°75/90, MS2.8/4, 1D, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URIC	**Uribia, Colomb**	**0.80**	**110**	P	**Pn**	**15 44 46.2**	**+0.7**
URIC				S	**Sn**	**15 44 57.8**	**+0.9**
URIC	**Uribia, Colomb**	**0.80**	**110**	⇓*i*P	**Pn**	**15 44 46.0**	**+0.5**
URIC				*e*S	**Sn**	**15 44 57.8**	**+0.9**
URI	**Uribia**	**0.81**	**110**	P	**Pn**	**15 44 46.2**	**+0.7**
URI				S	**Sn**	**15 44 57.3**	**+0.3**
SMRC	**Santa Marta, M**	**1.65**	**241**	P	**Pn**	**15 44 55.5**	**-1.2**
SMRC				S	**Sn**	**15 45 14.4**	**-2.4**
ARGC	**Ariguani, Magd**	**2.56**	**215**	P	**Pn**	**15 45 09.0**	**-0.2**
ARGC				S	**Sn**	**15 45 37.6**	**-1.7**
SJCC	**San Jacinto, C**	**3.15**	**229**	P	**Pn**	**15 45 19.3**	**+2.1**
SJCC				S	**Sn**	**15 45 57.2**	**+3.5**
SJCC	**San Jacinto, C**	**3.15**	**229**	*e*P	**Pn**	**15 45 20.1**	**+2.9**
SJCC				*e*S	**Sn**	**15 45 56.0**	**+2.3**
SDV	**Santo Domingo**	**3.72**	**146**	*e*P	**Pn**	**15 45 26.5**	**+1.3**
SDV				*e*S	**Sn**	**15 46 07.6**	**-0.4**
OCAC	**Ocana**	**3.76**	**188**	P	**Pn**	**15 45 25.7**	**0.0**
OCAC				S	**Sn**	**15 46 08.3**	**-0.5**
PAMC	**Pamplona, Colo**	**4.61**	**179**	P	**Pn**	**15 45 38.3**	**+0.6**
PAMC				S	**Sn**	**15 46 30.9**	**+0.7**
LCBC	**Los crdobas,**	**4.71**	**229**	P	**Pn**	**15 45 40.0**	**+1.4**
UREC	**San Jos de Ur**	**5.01**	**213**	P	**Pn**	**15 45 44.6**	**+1.9**
UREC				S	**Sn**	**15 46 36.8**	**-2.6**
BRJC	**Barrancabermej**	**5.07**	**191**	P	**Pn**	**15 45 43.4**	**-0.1**
BRJC				S	**Sn**	**15 46 39.3**	**-1.5**
BARC	**Barichara**	**5.37**	**184**	P	**Pn**	**15 45 48.1**	**+0.2**
BARC				S	**Sn**	**15 46 49.0**	**+0.5**
APAC	**Apartado, Choc**	**5.53**	**223**	P	**Pn**	**15 45 49.7**	**-0.1**
	1μm107nm,0.7s						
APAC				S	**Sn**	**15 46 52.0**	**-0.1**
	1μm107nm,0.7s						
PTBC	**PUERTO BERRIO,**	**5.66**	**197**	P	**Pn**	**15 45 51.7**	**+0.1**
	4μm366nm,1.0s						
PTBC				S	**Sn**	**15 46 54.6**	**-0.7**
	4μm366nm,1.0s						
TACV	**Tcata**	**5.92**	**107**	*e*P	**Pn**	**15 45 55.6**	**+0.4**
TACV				*e*S	**Sn**	**15 46 57.0**	**-4.8**
DBBC	**Dabeiba**	**5.99**	**215**	P	**Pn**	**15 45 57.2**	**+1.0**
DBBC				S	**Sn**	**15 46 59.4**	**-4.1**
FUNV	**FUNVISIS**	**6.03**	**104**	*e*P	**Pn**	**15 45 55.6**	**-1.2**
FUNV				*e*S	**Sn**	**15 46 58.9**	**-5.7**
RUSC	**La Rusia**	**6.06**	**183**	P	**Pn**	**15 45 58.6**	**+1.1**
RUSC				S	**Sn**	**15 47 05.6**	**-0.2**
RUSC	**La Rusia**	**6.06**	**183**	P	**Pn**	**15 45 57.4**	**-0.1**
	3μm162nm,0.7s						
RUSC				S	**Sn**	**15 47 05.2**	**-0.6**
	3μm162nm,0.7s						
RUSC	**La Rusia**	**6.06**	**183**	*e*P	**Pn**	**15 45 58.2**	**+0.7**
RUSC				*e*S	**Sn**	**15 47 02.7**	**-3.0**
MEDEC	**Medelln, Ant**	**6.32**	**206**	P	**Pn**	**15 46 00.7**	**-0.1**
MEDEC				S	**Sn**	**15 47 12.3**	**+0.6**
HELC	**Santa Helena**	**6.37**	**206**	P	**Pn**	**15 46 04.2**	**+2.6**
HELC				S	**Sn**	**15 47 12.3**	**-0.9**
HELC	**Santa Helena**	**6.37**	**206**	*e*P	**Pn**	**15 46 03.0**	**+1.3**
HELC				*e*S	**Sn**	**15 47 10.8**	**-2.4**
SPBC	**San Pablo de B**	**6.42**	**192**	P	**Pn**	**15 46 01.6**	**-0.5**
	4μm265nm,0.6s						
SPBC				S	**Sn**	**15 47 13.8**	**-0.3**
	4μm265nm,0.6s						
NORC	**Norcasia**	**6.71**	**198**	P	**Pn**	**15 46 06.8**	**+0.8**
	3μm126nm,0.5s						
NORC				S	**Sn**	**15 47 24.3**	**+3.2**
	3μm126nm,0.5s						
SDDR	**Presa de Saban**	**7.10**	**11**	P	**Pn**	**15 46 12.8**	**+1.4**
	50nm,0.9s						
SDDR				S	**Sn**	**15 47 29.5**	**-1.3**
	50nm,0.9s						
GUY2C	**Guyana, Caldas**	**7.19**	**201**	P	**Pn**	**15 46 15.1**	**+2.1**
GUY2C				S	**Sn**	**15 47 32.4**	**-1.1**
ROSC	**El Rosal**	**7.26**	**192**	P	**Pn**	**15 46 15.7**	**+1.8**
	367nm,1.0s,baz=56,slow=6.3,SNR=72						
ROSC				S	**Sn**	**15 47 38.6**	**+3.5**
	42nm,0.4s,baz=215,slow=16,SNR=1.6						
ROSC	**El Rosal**	**7.26**	**192**	P	**Pn**	**15 46 14.7**	**+0.8**
	4μm465nm,1.0s						
ROSC				S	**Sn**	**15 47 36.1**	**+0.9**
	4μm465nm,1.0s						
CHIC	**Chingaza**	**7.37**	**188**	P	**Pn**	**15 46 16.0**	**+0.6**
	3μm265nm,0.6s						
CHIC				S	**Sn**	**15 47 37.7**	**-0.1**
	3μm265nm,0.6s						
CVER	**Cruz Verde, Cu**	**7.53**	**190**	P	**Pn**	**15 46 19.4**	**+1.8**
	453nm,0.8s						
MTDJ	**Mount Denham**	**7.73**	**324**	P	**Pn**	**15 46 19.6**	**-0.4**
MTDJ	**Mount Denham**	**7.73**	**324**	*e*P	**Pn**	**15 46 20.0**	**0.0**
PTGC	**Puerto Gaitan,**	**7.76**	**175**	P	**Pn**	**15 46 19.8**	**-0.6**
	2μm107nm,0.5s						
VILC	**Villavicencio,**	**7.87**	**187**	P	**Pn**	**15 46 23.3**	**+1.2**
GTBY	**Guantanamo Bay**	**8.22**	**344**	*e*P	**Pn**	**15 46 28.2**	**+1.6**
ORTC	**Ortega, Tolima**	**8.39**	**197**	P	**Pn**	**15 46 30.8**	**+1.8**
ORTC				S	**Sn**	**15 48 03.8**	**+1.4**
QMBU	**Quimbuelo**	**8.40**	**347**	*e*P	**Pn**	**15 46 30.8**	**+1.6**
RCC	**Rio Carpintero**	**8.45**	**341**	*e*P	**Pn**	**15 46 29.0**	**-0.8**
PRAC	**Prado**	**8.48**	**195**	P	**Pn**	**15 46 31.9**	**+1.6**
PRAC				S	**Sn**	**15 48 09.4**	**+4.8**
PRAC	**Prado**	**8.48**	**195**	P	**Pn**	**15 46 31.9**	**+1.6**
	1μm100nm,0.6s						
URMC	**La Uribe, Meta**	**8.82**	**191**	P	**Pn**	**15 46 36.7**	**+1.7**
	376nm,0.8s						
YAR	**Yar**	**9.03**	**338**	*e*P	**Pn**	**15 46 36.3**	**-1.4**
GUVC	**San Jose del G**	**9.38**	**179**	P	**Pn**	**15 46 40.8**	**-1.7**
JAMC	**Jamundi, Valle**	**9.53**	**204**	P	**Pn**	**15 46 45.6**	**+0.8**
	24nm,0.7s						
BETC	**Betania**	**9.61**	**196**	P	**Pn**	**15 46 46.7**	**+0.9**
MACC	**Macarena, Meta**	**9.83**	**186**	P	**Pn**	**15 46 47.7**	**-1.1**
	1μm147nm,0.7s						
GARC	**Garzon, Huila**	**10.10**	**196**	P	**Pn**	**15 46 53.2**	**+0.6**
	957nm37nm,0.5s						
POPC	**Popayan, Colom**	**10.15**	**203**	P	**Pn**	**15 46 53.4**	**+0.1**
	295nm22nm,0.6s						
CCCC	**Cccc**	**10.34**	**333**	*e*P	Pn	15 46 52.5	-3.1
BBAC	**Balboa, Cauca**	**10.85**	**205**	P	**Pn**	**15 47 02.3**	**-0.5**
JTS	**Las Juntas de**	**12.08**	**263**	LR	LR	15 51 28.8	
	comp=Z,36nm,21.9s,baz=58,slow=34						
ATAH	**Atahualpa**	**19.80**	**197**	LR	LR	15 58 17.1	
	comp=Z,51nm,21.4s,baz=1.1,slow=42						
CMIG	**Matias Romero**	**22.00**	**286**	LR	LR	15 57 33.5	
	comp=Z,34nm,21.1s,baz=116,slow=35						
TKL	**Tuckaleechee C**	**25.59**	**339**	LR	LR	16 00 04.8	
	comp=Z,34nm,21.6s,baz=209,slow=36						
LPAZ	**La Paz**	**28.46**	**171**	LR	LR	16 03 06.9	
	comp=Z,42nm,21.1s,baz=30,slow=40						
SIV	**San Ignacio**	**30.11**	**157**	P	**P**	**15 50 32.4**	**-1.7**
	3.1nm,0.8s,baz=354,slow=8.3,SNR=9.7						
	3.1nm,0.8s						
SADO	**Sadowa**	**33.13**	**352**	LR	LR	16 05 15.4	
	comp=Z,12nm,19.8s,baz=348,slow=37						
PLCA	**Paso Flores**	**52.49**	**178**	P	**P**	**15 53 37.2**	**+0.2**
	4.1nm,0.6s,baz=354,slow=8.5,SNR=19						
	4.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.42**	**80**	P	**P**	**15 55 51.7**	**+1.1**
	0.6nm,0.8s,baz=283,slow=4.1,SNR=2.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**152.14**	**242**	PKPbc	**PKiKP**	**16 04 21.3**	**+1.3**
	0.9nm,0.6s,baz=116,slow=2.3,SNR=20						
WRA	**Warramunga Arr**	**152.80**	**250**	PKPbc	**PKiKP**	**16 04 22.5**	**+1.1**
	0.6nm,0.6s,baz=100,slow=2.8,SNR=3.2						

*IDC **30** 15:52:42.1±0.9, 29°.83N×95°.09E, h0km, mb3.8/11, mbtmp3.7/14, ML4.0/3, MS3.0/4, Error ellipse: s-maj=24.2km s-min=18.2km az=44.0*
*NDI **30** 15:52:58.3±3.3, 30°.21N×94°.52E, h10km±455km, ML3.6, MW3.4, Presumed earthquake*

ISC 30 15:52:44.3±0.6, 30°.03N±0°.07×95°.24E±0°.09, h10km, n20, σ2°03/22, mb3.7/9, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAWA	**Tawang**	**3.82**	**231**	*e*P	**Pb**	**15 53 50.9**	**-1.2**
TAWA				*e*S	**Sn**	**15 54 32.3**	**+3.6**
TAWA				IAML		15 54 42.6	
	comp=E,370nm,0.5s						
TAWA				IAML		15 54 45.1	
	comp=N,576nm,0.8s						
GUWA	**GUWAHATI**	**4.94**	**220**	*e*P	**Pb**	**15 54 10.0**	**-0.9**
GUWA				*e*S	**Sn**	**15 55 01.7**	**+6.0**
GUWA				IAML		15 55 12.7	
	comp=E,75nm,0.8s						
GUWA				IAML		15 55 14.4	
	comp=N,44nm,0.0s						
IMP	**Imphal**	**5.30**	**193**	*e*P	**Pb**	**15 54 18.4**	**+1.3**
SHL	**Shillong**	**5.34**	**215**	*e*P	Pn	15 54 11.1	+6.8
SHL				*e*S	**Sn**	**15 55 04.8**	**-1.2**
SHL				*i* x	x	15 55 22.8	
SHL				IAML		15 55 24.0	
	comp=N,175nm,0.4s						
SHL				IAML		15 55 24.6	
	comp=E,71nm,0.4s						
DHUB	**DHUBRI**	**6.11**	**231**	*e*P	Pb	15 54 25.3	-5.6
CMAR	**Chiang Mai Arr**	**12.00**	**163**	Pn	**Pn**	**15 55 33.2**	**-2.3**
	comp=E,0.5nm,0.3s,baz=337,slow=14,SNR=4.8						
CMAR				LR	LR	16 00 44.3	
	comp=E,43nm,18.7s,baz=330,slow=41						
	comp=E,0.7nm,0.4s						
MKAR	**Makanchi Array**	**19.53**	**333**	P	**P**	**15 57 12.5**	**+0.6**
	comp=E,0.2nm,0.3s,baz=135,slow=12,SNR=6.0						
MKAR				PcP	**PcP**	**16 01 29.8**	**-2.3**
	comp=E,0.4nm,0.9s,baz=132,slow=4.3,SNR=2.4						
	comp=E,0.7nm,0.6s						
SONM	**Songino Array**	**19.75**	**23**	P	**P**	**15 57 15.5**	**+1.1**
	comp=E,0.3nm,0.3s,baz=206,slow=11,SNR=8.8						
SONM				LR	LR	16 05 47.6	
	comp=E,62nm,18.5s,baz=234,slow=39						
	comp=E,2.1nm,0.8s						
AAK	**Ala-Archa**	**20.85**	**313**	P	**P**	**15 57 26.0**	**-0.5**
	comp=E,1.6nm,0.3s,baz=153,slow=4.5,SNR=5.2						
	comp=E,1.6nm,0.3s						
TLY	**Talaya**	**22.52**	**14**	LR	LR	16 07 36.8	
	comp=E,36nm,19.1s,baz=224,slow=39						
KURBB	**Kurchatov Arra**	**24.09**	**333**	P	**P**	**15 58 01.1**	**+1.2**
	comp=E,2.4nm,0.8s,baz=145,slow=10,SNR=28						
KURBB				PcP	**PcP**	**16 01 40.6**	**-0.4**
	comp=E,0.3nm,1.0s,baz=144,slow=2.2,SNR=4.1						
	comp=E,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**25.07**	**345**	P	**P**	**15 58 09.7**	**+0.9**
	comp=E,2.9nm,0.6s,baz=167,slow=9.4,SNR=16						
ZALV				LR	LR	16 09 14.6	
	comp=E,26nm,19.9s,baz=228,slow=39						
	comp=E,2.9nm,0.6s						
HILR	**Hailar Array B**	**26.91**	**37**	P	**P**	**15 58 26.4**	**+0.8**
	comp=E,0.7nm,0.4s,baz=213,slow=11,SNR=5.3						
	comp=E,0.7nm,0.4s						
KSRS	**Korea Array**	**28.07**	**66**	P	**P**	**15 58 37.7**	**+1.7**
	comp=E,0.4nm,0.6s,baz=258,slow=9.9,SNR=2.4						
	comp=E,0.4nm,0.6s						
BVAR	**Borovoye Array**	**29.29**	**329**	P	**P**	**15 58 47.7**	**+1.0**
	comp=E,1.4nm,0.8s,baz=124,slow=9.2,SNR=2.3						
	comp=E,1.4nm,0.8s						
KLR	**Kul'dur**	**33.60**	**45**	P	**P**	**15 59 25.8**	**+1.2**
	comp=E,1.2nm,0.7s,baz=304,slow=5.0,SNR=4.0						
	comp=E,1.2nm,0.7s						
BRTR	**Keskin Array B**	**50.58**	**299**	P	**P**	**16 01 43.0**	**-0.4**
	comp=E,0.6nm,0.7s,baz=98,slow=5.5,SNR=4.4						
	comp=E,0.6nm,0.7s						
AKASG	**Malin Array Be**	**52.52**	**313**	P	**P**	**16 01 56.3**	**-1.3**
	comp=E,0.3nm,0.4s,baz=79,slow=6.4,SNR=4.0						
	comp=E,0.3nm,0.4s						
ASAR	**Alice Springs**	**65.03**	**141**	P	**P**	**16 03 23.9**	**-1.0**
	comp=E,0.2nm,0.6s,baz=322,slow=6.2,SNR=5.5						
	comp=E,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**86.54**	**283**	P	**P**	**16 05 27.2**	**-1.0**
	comp=E,0.6nm,0.8s,baz=86,slow=5.9,SNR=2.9						
	comp=E,0.6nm,0.8s						

*IDC **30** 15:54:11.4±2.4, 33°.64N×141°.32E, h41km±23km, mb3.1/3, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=18.7km s-min=11.3km az=104.0*
*JMA **30** 15:54:12.7±0.2, 33°.8N±0°.6×14°1E±°, h55km, MV3.5/38, E OFF HACHIJOJIMA ISLAND*
*NIED **30** 15:54:12.7, 33°.75N×141°.14E, h55km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.88; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-2.35; $M_{r\theta}$-0.96; $M_{\theta\phi}$0.38; $M_{r\phi}$0.81; Fault plane solution: $M_0$2.41000×10^{14} NP1: ϕ_s215.00000°, δ52.00000°, λ162.00000°. NP2: ϕ_s317.00000°, δ76.00000°, λ39.00000°*
ISC 30 15:54:10.4±1.1, 33°.65N±0°.06×141°.39E±0°.08, h41km, n32, σ1°44/34, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.06**	**341**	P	**Pn**	**15 54 29.6**	**+1.3**
BSO3	**Boso 3**	**1.36**	**328**	P	**Pn**	**15 54 33.6**	**+0.9**
JHJ2	**Mitsune**	**1.43**	**248**	P	**Pn**	**15 54 34.9**	**+1.1**
JHJ	**Hachijo jima 2**	**1.45**	**249**	P	**Pn**	**15 54 34.5**	**+0.4**
	366nm,0.3s,baz=257,slow=23,SNR=91						
JHJ				S	**Sn**	**15 54 50.6**	**-1.3**
	803nm,0.3s,baz=173,slow=23,SNR=8.0						
JHCJ	**Hachijojimakas**	**1.46**	**247**	P	**Pn**	**15 54 35.0**	**+0.8**
JHCJ				*e*S	**Sn**	**15 54 51.1**	**-1.0**
JMKN	**Mikurajimanish**	**1.52**	**280**	*i* P	**Pn**	**15 54 35.3**	**+0.1**
JMKN				*e*S	**Sn**	**15 54 52.4**	**-1.3**
JMYK	**Miyake Tsubota**	**1.59**	**285**	*i* P	**Pn**	**15 54 36.1**	**+0.1**
BSO4	**Boso 4**	**1.59**	**327**	P	**Pn**	**15 54 37.4**	**+1.3**
JAOM	**Aogashimamukai**	**1.81**	**230**	P	**Pn**	**15 54 40.7**	**+1.6**
JIM2	**Oshima 3**	**1.94**	**304**	P	**Pn**	**15 54 40.5**	**-0.4**
JKO	**Kozu shima**	**1.95**	**286**	*i* P	**Pn**	**15 54 41.1**	**+0.1**
JTHY	**Toshimahigashi**	**1.95**	**297**	P	**Pn**	**15 54 41.2**	**+0.1**
KTJ3	**Kamata3**	**2.31**	**304**	S	**Sn**	**15 55 09.7**	**-3.4**
JIZS	**Izushimoda**	**2.34**	**298**	P	**Pn**	**15 54 46.6**	**+0.2**
JOD2	**Odawara 2**	**2.49**	**311**	*i* P	**Pn**	**15 54 48.5**	**0.0**
JOD2				*e*S	**Sn**	**15 55 14.7**	**-3.0**
JGF	**Kuroka**	**3.

JAOM	Aogashimamukai	1.50	26	*eP*		Pn		16 04 15.8	+1.7
JHCJ	Hachijojimakas	2.07	19	*eP*		Pn		16 04 19.4	+2.2
JHJ	Hachijo jima 2	2.11	19	P		Pn		16 04 20.1	+2.7
	38nm,0.5s,baz=233,slow=20,SNR=8.1								
JHJ				S		S		16 05 04.9	+1.6
	49nm,0.5s,baz=112,slow=19,SNR=1.8								
JHJ2	Mitsune	2.11	19	P		Pn		16 04 21.1	+3.6
JTNC	Tanabenakahech	3.92	314	P		Pn		16 04 32.1	-0.1
JWY	Kouya	4.21	318	P		Pn		16 04 35.7	+0.7
JHU2	Hanno	4.72	3	S		S		16 05 40.6	-3.5
CBIJ	Chichi jima	4.89	144	*eP*		Pn		16 04 41.0	-0.9
CBIJ				*eS*		S		16 05 44.7	-2.9
JAG	Ashikaga	5.31	4	P		Pn		16 04 46.6	+0.5
JAG				*eS*		S		16 05 51.6	-3.7
MJAR	Matsushiro Arr	5.45	353	P		Pn		16 04 48.7	+1.1
	0.4nm,0.4s,baz=175,slow=11,SNR=2.5								
JHO	Hitachi	5.63	13	*eP*		Pn		16 04 50.6	+1.1
JHO				*eS*		S		16 05 59.8	-1.8
JFK	Kawauchi	6.43	14	*eS*		S		16 06 15.8	-1.6
MKAR	Makanchi Array	45.79	307	P		P		16 11 04.3	-0.3
	0.2nm,0.4s,baz=94,slow=9.7,SNR=4.8								
	0.2nm,0.4s								
KURBB	Kurchatov Arra	48.25	312	P		P		16 11 23.2	-0.1
	0.5nm,0.6s,baz=92,slow=6.7,SNR=8.0								
	0.5nm,0.6s								
WRA	Warramunga Arr	50.96	186	P		P		16 11 44.4	+0.7
	0.3nm,0.6s,baz=1.1,slow=7.4,SNR=0.5								
	0.3nm,0.6s								
BVAR	Borovoye Array	53.21	315	P		P		16 12 00.0	+0.4
	1.0nm,0.5s,baz=83,slow=7.4,SNR=2.7								
	1.0nm,0.5s								
ASAR	Alice Springs	54.69	186	P		P		16 12 11.2	+0.7
	0.4nm,1.0s,baz=7.4,slow=7.1,SNR=5.4								
	0.4nm,1.0s								
FINES	FINESS Array B	73.11	332	P		P		16 14 09.9	+1.3
	1.5nm,0.8s,baz=65,slow=4.7,SNR=2.1								
	1.5nm,0.8s								

BJI ***30*** *16:08:16.4,55˙.06N×159˙.06W,h7km,mB5.2/22,mb5.3/75, Ms4.9/49,Ms7 4.7/48*

AEIC ***30*** *16:08:18.8±2.1,54˙.84N±0˙.05×158˙.17W±0˙.05,h34km±3km, Error ellipse: s-maj=6.8km s-min=4.0km az=184.0*

MOS ***30*** *16:08:18.9±0.9,54˙.98N×158˙.46W,h29km,mb5.5/102, Error ellipse: s-maj=7.3km s-min=3.4km az=95.8*

NEIC ***30*** *16:08:18.1±1.6,54˙.87N±0˙.04×158˙.21W±0˙.04,h16km±3km, mb5.1/546,ML5.1/36,Mwr4.8/23,Mww4.8/32,ML5.0(AEIC), Error ellipse: s-maj=6.6km s-min=3.6km az=183.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.05; Mθθ0.15; Mϕϕ-1.20; Mrθ1.28; Mθϕ-0.76; Mrϕ1.25; Fault plane solution: M₀2.25000×10¹⁶ NP1: ϕs177.68000°,δ23.10000°,λ46.40000°. NP2:ϕs43.67000°, δ73.49000°,λ106.39000°. Principal axes: T 2.0908, Plg58.0000°, Azm336.0000°; N 0.2980, Plg16.0000°, Azm219.0000°; P -2.3888, Plg27.0000°, Azm121.0000°;*

NEIC ***30*** *16:08:19,54˙.87N×158˙.21W,h23km*

IDC ***30*** *16:08:19.2±2.3,54˙.96N×158˙.49W,h20km±13km,mb4.9/35, mbtmp5.0/41,ML4.7/6,MS4.2/85,Error ellipse: s-maj=12.5km s-min=8.8km az=168.0*

GFZ ***30*** *16:08:19.9±0.3,55˚N±3˚×15˚8W±˚,h19km±1km,M5.2/175, mb5.3/175,Mw4.8/57,Error ellipse: s-maj=6.4km s-min=3.9km az=1.0,confirmed*

NEIC ***30*** *16:08:20,54˙.93N×158˙.28W,h28km*

GCMT ***30*** *16:08:21.4±0.2,54˙.83N±0˙.02×158˙.20W±0˙.03,h36km±1km, MW4.9/95,Moment Tensor Solution. s51,c71; s95,c138; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.93±.12; Mθθ-1.00±.10; Mϕϕ-0.93±.08; Mrθ1.19±.10; Mθϕ-0.87; Mrϕ1.48; Mϕr1.54±.08; Best double couple: M₀2.87100×10¹⁶ NP1:ϕs234.00000°,δ24.00000°,λ103.00000°. NP2: ϕs40.00000°,δ66.00000°,λ84.00000°. Principal axes: T 2.7060, Plg68.0000°, Azm299.0000°; N 0.3300, Plg5.0000°, Azm42.0000°; P -3.0370, Plg21.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *16:08:24.6,54˙.93N×158˙.10W,h30km,Moment Tensor Solution. Duration: 1ŝ4 Moment tensor: Scale 10¹⁶Nm; Mrr1.32; Mθθ-0.80; Mϕϕ-0.52; Mrθ0.98; Mθϕ-0.87; Mrϕ1.48; Fault plane solution: M₀2.29000×10¹⁶ NP1: ϕs244.73000°,δ21.30000°,λ116.55000°. NP2: ϕs36.53000°,δ71.04000°,λ80.12000°. Principal axes: T 2.2160, Plg63.0000°, Azm291.0000°; N 0.1376, Plg9.0000°, Azm40.0000°; P -2.3537, Plg25.0000°, Azm134.0000°;*

ISC 30 16:08:18.7±0.3,54°93N±0˙.04×158°26W±0˙.03,h20km±2km, h21km:pP-P,n1459,σ1ˢ09/1279,mb5.1/486,MS4.3/113, 83C-32D,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.78	263		Pn	16 08 34.2	-0.3
CNBA				IAML		16 08 46.3	
	comp=N,60μm,0.9s						
CNBA				IAML		16 08 48.0	
	comp=E,65μm,1.1s						
CNBA	Chernabura Isl	0.78	263		Sn	16 08 45.3	-0.2
VNKR	Veniaminof 5	1.27	331		Pb	16 08 42.3	+0.3
SDPT	Sand Point	1.34	289		Pn	16 08 42.5	+0.3
SDPT					Sb	16 09 00.3	+0.5
SDPT				IAML		16 09 08.3	
	comp=N,24μm,1.0s						
SDPT				IAML		16 09 09.0	
	comp=E,28μm,1.2s						
VNSS	Veniaminof 8	1.47	333		Pb	16 08 45.3	-0.1
S14K	Fog Glacier	1.55	332		Pb	16 08 46.8	+0.1
S14K					Sb	16 09 07.8	+2.0
S14K					Sn	16 09 08.1	+3.5
VNFG	Fog Glacier, M	1.55	332		Pb	16 08 46.7	0.0
VNFG					Sb	16 09 06.9	+1.1
VNFG	Fog Glacier, M	1.55	332		Pb	16 08 46.7	0.0
BPBCA	Veniaminof	1.67	356		Pb	16 08 47.9	-0.8
CHIR	Chirikof Islan	1.75	58		Pn	16 08 47.8	0.0
CHIR				IAML		16 09 29.5	
	comp=N,20μm,0.9s						
CHIR				IAML		16 09 31.3	
	comp=E,22μm,0.7s						
CHIR	Chirikof Islan	1.75	58		Sn	16 09 08.2	-1.2
ANPB	Aniakchak Plen	1.88	360		Pn	16 08 50.6	+0.9
ANNW	Aniakchak Nort	2.04	1		Pn	16 08 53.3	+1.4
PS1A	Pavlof South-1	2.06	285		Pn	16 08 52.8	+0.7
PS1A					Sb	16 09 20.9	+0.4
DOL	Dolgoi Island	2.09	278		Pn	16 08 53.1	+0.6
DOL					Sb	16 09 22.6	+1.2
PS4A	Pavlof South-4	2.11	283		Sb	16 09 22.4	+0.5
PN7A	Pavlof North-7	2.21	285		Sb	16 09 25.5	+0.8
DTNA	Dutton South F	2.31	277		Sn	16 09 25.4	+2.0
DTNA					Sb	16 09 27.6	-0.2
DT1	Dutton Round H	2.33	276		Sb	16 09 28.1	0.0
SII	Sitkinak Islan	2.82	53		Pn	16 09 02.9	+0.3
SII				IAML		16 10 08.2	
	comp=E,13μm,0.8s						
PLBL	Peulik Blue Cr	2.89	15		Pn	16 09 04.7	+1.1
PLBL					Sb	16 09 44.5	+0.1
R17L	Mt. Peulik Vol	2.91	21		Pn	16 09 05.3	+1.5
PLK3	Peulik 3	2.98	21		Pn	16 09 06.3	+1.6
PLK1	Peulik 1	3.02	17		Pn	16 09 06.6	+1.3
PLK1					Sb	16 09 47.1	-1.0
PLK5	Peulik 5	3.17	13		Pn	16 09 09.3	+2.0
PLK5					Sn	16 09 48.4	+3.9
PLK5					Sb	16 09 49.5	-2.9
SSLS	Shishaldin Sou	3.33	269		Pn	16 09 10.8	+1.2
SSBA	Shishaldin	3.40	270		Sn	16 09 51.7	+1.5
SSBA					Sb	16 09 55.2	-3.8
KJL	Kejulik	3.47	24		Pn	16 09 12.5	+1.0
Q17K	Contact Creek	3.59	20		Pn	16 09 14.1	+0.8
OHAK	Old Harbor	3.61	48		Pn	16 09 13.7	+0.3
ACHA	Angle Creek He	3.67	25		Pn	16 09 14.9	+0.6
KABU	Katmai Buttres	3.73	25		Pn	16 09 16.2	+1.1
KABU					Pb	16 09 16.7	-7.2
KAKN	Katmai Knife C	3.81	26		Pn	16 09 17.4	+1.2
KAKN					Pb	16 09 17.6	-7.6
Q16K	King Salmon	3.86	13		Pn	16 09 17.9	+1.1
Q16K					Pb	16 09 18.3	-7.7
KAWH	Katmai	3.96	27		Pn	16 09 18.5	+0.4
KAWH					Pb	16 09 18.8	-8.9
P16K	Nushagak River	4.12	2		Pn	16 09 21.1	+0.8
Q18K	Katmai Hardscr	4.13	24		Pn	16 09 21.3	+0.6
KDAK	Kodiak Island	4.26	45		Pn	16 09 22.3	0.0
	comp=E,26nm,0.3s,baz=222,slow=5.8,SNR=250						
KDAK					Sn	16 10 07.7	-3.6
	comp=E,56nm,0.3s,baz=49,slow=20,SNR=5.6						
	comp=E,108nm,0.4s						
KDAK	Kodiak Island	4.26	45	*i* P	Pn	16 09 22.0	-0.3
KDAK	Kodiak Island	4.26	45		Pn	16 09 22.3	0.0
KDAK				IAML		16 11 03.1	
	comp=E,2μm,1.4s						
KDAK	Kodiak Island	4.26	45	P	Pn	16 09 22.6	+0.3
O15K	Ungalikthiuk R	4.35	349		Pn	16 09 24.2	+0.7
O15K				IAML		16 10 53.6	
	comp=E,2μm,1.0s						
O15K				IAML		16 10 57.9	
	comp=N,2μm,0.8s						
P17K	Kvichak River	4.39	12		Pn	16 09 24.7	+0.6
AKSA	Akutan Strait	4.41	263		Pn	16 09 24.9	+0.6
AKSA					Pb	16 09 25.4	-10
AKUT	Akutan	4.45	263		Pn	16 09 25.6	+0.7
AKUT				IAML		16 10 39.9	
	comp=E,1μm,1.3s						
AKUT				IAML		16 10 49.0	
	comp=N,2μm,1.1s						
AHB	Akutan Harbor	4.48	263		Pn	16 09 26.2	+0.8
AKBBA	Akutan Broad B	4.55	263		Pn	16 09 27.1	+0.8
AKGG	Akutan Green G	4.56	264		Pn	16 09 27.4	+0.9
AKV	Akutan Volcano	4.56	263		Pn	16 09 26.9	+0.4
ZRO	Akutan Zero	4.58	263		Pn	16 09 27.5	+0.8
LVA	Lava Point	4.59	264		Pn	16 09 27.6	+0.7
LVA				IAML		16 11 10.9	
	comp=N,2μm,0.8s						
AKRB	Akutan Reef Bi	4.62	263		Pn	16 09 28.2	+0.9
O14K	Tigyukauivet M	4.64	341		Pn	16 09 28.2	+0.8
O14K				IAML		16 11 00.5	
	comp=E,2μm,1.0s						
O14K				IAML		16 11 04.3	
	comp=N,2μm,1.1s						
O16K	Kokwok River B	4.68	1		Pn	16 09 28.4	+0.3
O16K				IAML		16 10 57.2	
	comp=E,1μm,1.0s						
Q19K	Cape Douglas,	4.74	30		Pn	16 09 29.2	+0.3
UNV	Unalaska Valle	4.94	261		Pn	16 09 31.9	+0.3
MNAT	Makushin Natee	5.03	261		Pn	16 09 33.0	+0.1
MGOD	Makushin Gods	5.17	261		Pn	16 09 35.1	+0.3
MAKS	Pakushin South	5.20	261		Pn	16 09 35.5	+0.3
O18K	Koktuh Hills	5.21	17		Pn	16 09 35.8	+0.5
O18K				IAML		16 11 17.5	
	comp=N,1μm,1.0s						
O18K				IAML		16 11 17.8	
	comp=E,907nm,1.0s						
N14K	Kuskokwak Cree	5.34	341		Pn	16 09 37.8	+0.7
N15K	Kwethluk River	5.35	350		Pn	16 09 37.7	+0.4
N17K	Nushagak Hills	5.64	5		Pn	16 09 41.7	+0.4
O19K	Port Alsworth	5.69	20		Pn	16 09 42.8	+0.9
ILS	Iliamna Low So	5.77	27		Pn	16 09 43.8	+0.7
ILSW	Iliamna Southw	5.77	26		Pn	16 09 43.6	+0.4
IVE	Iliamna Volcan	5.83	27		Pn	16 09 44.6	+0.7
N18K	Kilae Creek	5.91	11		Pn	16 09 45.2	+0.3
M15K	Kasigluk River	5.93	348		Pn	16 09 45.8	+0.6
HOM	Homer	5.94	34		Pn	16 09 45.5	+0.2
OKTU	Okmok Mt. Tuli	5.96	259		Pn	16 09 45.8	+0.1
OKNC	Okmok New Cone	5.98	260		Pn	16 09 46.4	+0.5
CNPM	China Poot	5.98	37		Pn	16 09 46.1	+0.2
O20K	Slope Mountain	5.99	28		Pn	16 09 46.7	+0.6
OKCE	Okmok Cone E	6.01	260		Pn	16 09 46.2	-0.2
M16K	Timber Creek	6.12	357		Pn	16 09 48.7	+0.8
M13K	Dall Lake	6.14	336		Pn	16 09 49.0	+0.9
N19K	Bonanza Creek	6.24	17		Pn	16 09 50.3	+0.8
RED	Redoubt Volcan	6.24	26		Pn	16 09 49.9	+0.3
BRLK	Bradley Lake	6.28	36		Pn	16 09 49.4	-0.6
BRSE	Bradley Lake S	6.31	37		Pn	16 09 50.3	-0.2
NCT	North Crescent	6.33	25		Pn	16 09 51.2	+0.5
RDJH	Redoubt Jeurge	6.38	25		Pn	16 09 52.2	+0.6
DFR	Drift River	6.41	25		Pn	16 09 52.7	+0.7
RDT	Redoubt	6.47	27		Pn	16 09 53.1	+0.4
M18K	Stony River	6.71	10		Pn	16 09 56.4	+0.5
L16K	Owhat River	6.83	355		Pn	16 09 57.5	-0.1
L14K	Kuka Creek	6.84	342		Pn	16 09 57.5	-0.2
M11K	Mekoryuk	6.93	325		Pn	16 09 59.5	+0.6
L15K	Ungalak Mounta	6.98	347		Pn	16 09 59.7	+0.1
SLKM	Skilak Lake	7.05	34		Pn	16 10 00.6	0.0
SPU	Mount Spurr	7.08	25		Pn	16 10 02.0	+0.9
SPIA	Saint Paul Isl	7.08	293		Pn	16 10 01.6	+0.6
CLCO	Concord Point,	7.12	257		Pn	16 10 01.5	0.0
SPCG	Spurr Capps Gl	7.18	25		Pn	16 10 03.2	+0.7
CLES	Cleveland East	7.20	258		Pn	16 10 03.0	+0.4
M19K	Big River Lodg	7.28	15		Pn	16 10 04.8	+1.0
L18K	Granite Mounta	7.36	6		Pn	16 10 05.0	+0.1
STLK	Strandline Lak	7.41	25		Pn	16 10 05.9	+0.3
M20K	Styx River	7.47	19		Pn	16 10 06.8	+0.4
K15K	Wolf Creek Mou	7.58	348		Pn	16 10 07.4	-0.5
RC01	Rabbit Creek A	7.65	33		Pn	16 10 08.8	0.0
P23K	Montague Islan	7.75	45		Pn	16 10 09.5	-0.6
K13K	Kusilvak Mount	7.78	337		Pn	16 10 11.0	+0.3
K17K	Iditarod	7.81	360		Pn	16 10 11.2	+0.2
MID	Middleton Isla	7.89	50		Pn	16 10 11.7	-0.3
SKT	Skwentna	7.90	24		Pn	16 10 12.2	-0.1
PWL	Port Wells	7.95	38		Pn	16 10 12.3	-0.6
PMR	Palmer	8.23	32	P	Pn	16 10 16.9	+0.2
PMR	Palmer	8.23	32		Pn	16 10 16.9	+0.2
KNK	Knik Glacier	8.30	35		Pn	16 10 17.6	-0.2
J14K	Nanvaranak Lak	8.31	343		Pn	16 10 17.9	+0.2
GLI	Glacier Island	8.41	40		Pn	16 10 18.0	-1.3
GHO	Glory Hole Cre	8.43	32		Pn	16 10 18.7	-0.9
J16K	Anvik River	8.47	353		Pn	16 10 19.8	-0.2
J17K	VABM Dome	8.51	357		Pn	16 10 20.3	-0.2
L22K	Petersville	8.55	24		Pn	16 10 21.1	-0.1
FID	Port Fidalgo	8.57	42		Pn	16 10 19.9	-1.5
J18K	Innoko River	8.60	5		Pn	16 10 21.5	-0.3
SML	Sawmill	8.64	33		Pn	16 10 22.2	-0.2
K20K	Telida	8.72	13		Pn	16 10 23.4	-0.1
EYAK	Cordova Ski Ar	8.74	45		Pn	16 10 25.9	-0.4
KAIM	Kayak Island	8.98	50		Pn	16 10 26.7	-0.4
SCM	Sheep Creek Mo	8.98	35	P	Pn	16 10 26.4	-0.8
SCM	Sheep Creek Mo	8.98	35		Pn	16 10 26.4	-0.8
CAST	Castle Rocks	9.08	18		Pn	16 10 28.8	+0.3
RAGM	Ragged Mountai	9.10	48		Pn	16 10 28.1	-0.6
J19K	Poorman	9.19	7		Pn	16 10 30.2	+0.2
KLU	Klutina	9.24	40		Pn	16 10 29.9	-0.8
WAT7	Susitna Watana	9.29	28		Pn	16 10 29.9	-1.5
WAT1	Susitna Watana	9.37	28		Pn	16 10 30.8	-1.7
WAT6	Susitna Watana	9.41	31		Pn	16 10 31.5	-1.5
BMRM	Bremner River	9.44	45		Pn	16 10 32.3	-1.1
TRF	Thorofare Moun	9.46	22		Pn	16 10 33.4	-0.4
CHUM	Lake Minchumin	9.47	16		Pn	16 10 34.6	+0.9
J20K	Nowinta River	9.51	11		Pn	16 10 34.7	+0.5
BERG	Berg Lake	9.52	49		Pn	16 10 34.0	-0.5
M24K	Tolsona, Glenn	9.56	36		Pn	16 10 35.1	0.0
KOSE	Korovin Southe	9.73	261		Pn	16 10 36.9	-0.5
RND	Reindeer	9.77	26	P	Pn	16 10 36.8	-1.1
RND	Reindeer	9.77	26		Pn	16 10 36.8	-1.1
KOFP	Korovin Flat P	9.79	261		Pn	16 10 39.1	+1.0
PS11	TAPS Pump St11	9.79	38		Pn	16 10 37.0	-1.1
KOWE	Korovin West	9.84	261		Pn	16 10 37.9	-1.0
ATKA	Atka Island	9.87	260		Pn	16 10 39.0	-0.2
GCSA	Galena City Sc	9.88	3		Pn	16 10 39.8	+0.6
DHY	Denali Highway	9.90	30		Pn	16 10 38.2	-1.5
CRQM	Cirque	9.94	48		Pn	16 10 39.6	-0.7
GLB	Gilahina Butte	10.02	44		Pn	16 10 40.6	-0.8
VRDI	Verde Repeater	10.05	45		Pn	16 10 40.8	-1.0
BARK	Barkley Ridge	10.06	51		Pn	16 10 40.8	-1.1
H17K	Granite Mounta	10.08	356		Pn	16 10 41.8	-0.2
BWN	Browne	10.28	22		Pn	16 10 44.4	-0.4
ANM	Nome	10.30	343	P	Pn	16 10 45.5	+0.4
ANM	Nome	10.30	343		Pn	16 10 45.5	+0.4
MCARA	McCarthy VSAT	10.31	45		Pn	16 10 44.9	-0.3
GRNC	Granite Creek	10.53	50		Pn	16 10 47.1	-1.3
MLY	Manley	10.80	17		Pn	16 10 50.2	-1.8
WRH	Wood River Hil	10.84	24		Pn	16 10 50.1	-2.4
MENT	Mentasta	10.97	37		Pn	16 10 53.5	-0.8
RIDG	Independent Ri	11.15	32		Pn	16 10 56.9	+0.1
GAMB	Gambell	11.19	328	Pn	Pn	16 10 57.9	+0.7
COLA	College	11.24	23	*i* P	Pn	16 10 54.3	-3.6
COLA	College	11.24	23	P	Pn	16 10 55.9	-2.0
O28M	Mount Upton	11.24	51	Pn	Pn	16 10 59.1	+0.8
F15K	North Star Dit	11.26	346		Pn	16 10 58.4	+0.2
IMAR	Indian Mountai	11.31	9		Pn	16 10 58.2	-0.6
IL31		11.38	25		Pn	16 10 56.7	-3.2
ILAR	Eielson Array	11.38	25	Pn	Pn	16 10 56.5	-3.5
	comp=E,1.9nm,0.3s,baz=214,slow=11,SNR=96						
ILAR					Sn	16 12 57.6	-8.7
	comp=E,1.9nm,0.3s,baz=223,slow=17,SNR=1.5						
ILAR				LR	LR	16 16 10.1	
	comp=E,717nm,18.6s,baz=217,slow=41						
ILAR				ScP	ScP	16 20 22.1	-1.3
	comp=E,0.6nm,0.8s,baz=312,slow=2.9,SNR=4.3						
	comp=E,9.4nm,0.6s						
ILAR	Eielson Array	11.38	25	P	Pn	16 10 56.9	-3.0
ILAR	Eielson Array	11.38	25		Pn	16 10 56.9	-3.0
ADK	Adak	11.41	262	P	Pn	16 11 00.1	-0.2
ADK	Adak	11.41	262	Pn	Pn	16 11 00.1	-0.2
ADK	Adak	11.41	262	P	Pn	16 11 00.3	0.0
KIWB	Kanaga Island	11.69	263	Pn	Pn	16 11 03.6	-0.6
BCAR	Beaver Creek A	11.74	39		Pn	16 11 04.3	-0.6
HYT	Haines Junctio	12.49	53		Pn	16 11 15.6	+0.4
M29M	Somme Creek	12.71	46		Pn	16 11 18.5	+0.4
N30M	Aishikik Lake	12.90	51		Pn	16 11 20.7	0.0
SIT	Sitka	13.00	71	P	Pn	16 11 20.7	-1.2
SIT	Sitka	13.00	71		Pn	16 11 20.6	-1.2
O30N	Mendenhall	13.13	55		Pn	16 11 23.5	-0.4
DAWY	Dawson	13.20	39		Pn	16 11 24.9	+0.2
SKAG	Skagway	13.20	61		Pn	16 11 24.1	-0.6
RDOG	Red Dog Mine	13.35	352		Pn	16 11 27.1	+0.4
M30M	Minto, Yukon	13.46	47		Pn	16 11 27.3	-1.1
N31M	Braeburn, Yuko	13.50	52		Pn	16 11 29.1	+0.3
E23K	Chandalar	13.78	14		Pn	16 11 33.0	+0.3
I28M	Miner Creek	13.87	33		Pn	16 11 33.6	-0.3
AMKA	Amchitka	13.91	264		Pn	16 11 32.1	-2.4
P32M	Atlin	14.04	61		Pn	16 11 36.0	-0.1
C19K	Lookout Ridge	14.24	358	P	Pn	16 11 40.4	+1.4
U33K	Whale Pass	14.26	75		Pn	16 11 37.9	-1.3
E25K	Arctic Village	14.50	19		Pn	16 11 39.0	-3.5
D23K	Nanushuk River	14.51	11		Pn	16 11 41.1	-1.4
P33M	Teslin, Yukon	14.58	58		Pn	16 11 44.0	+0.3
WRAK	Wrangell Islan	14.66	74		Pn	16 11 43.7	-1.0
H29M	Whitestone	14.86	33		Pn	16 11 46.4	-0.9
I30M	Mount Dempster	14.92	38		Pn	16 11 48.0	-0.2
B20K	Meade River	15.15	1	IAmb	IAmb	16 11 56.9	
	comp=Z,70nm,0.8s						
DIB	Dawson Inlet,	15.21	86	Pn	Pn	16 11 50.0	-2.0
H02S1	DAWSON INLET T	15.21	86	T	T	16 27 13.8	
	SNR=25						
H02S2	DAWSON INLET T	15.21	86	T	T	16 27 09.4	
	SNR=26						
S34M	Telegraph Cree	15.26	68		Pn	16 11 52.4	-0.3
E27K	Coleen River	15.40	24		Pn	16 11 53.2	-1.3
MOBC	Moresby Island	15.52	86	P	Pn	16 11 55.1	-1.0
MOBC				IAmb	IAmb	16 11 58.6	
	comp=Z,74nm,1.1s						
B22K	Teshekpuk Lake	15.62	6	IAmb	IAmb	16 12 01.8	
	comp=Z,84nm,0.8s						
T35M	Bob Quinn	15.77	71		Pn	16 11 58.7	-0.6
DLBC	Dease Lake	15.84	66	Pn	P	16 12 02.4	-1.6
	comp=Z,1.7nm,0.3s,baz=270,slow=13,SNR=18						
DLBC				Sn	Sn	16 14 51.7	-3.5
	comp=Z,0.4nm,0.3s,baz=136,slow=24,SNR=1.3						
DLBC				LR	LR	16 17 48.9	
	comp=Z,1μm,19.6s,baz=259,slow=36						
	comp=Z,16nm,0.6s						
H31M	Peel River	15.95	37	IAmb	IAmb	16 12 08.2	
	comp=Z,107nm,0.7s						
C27K	Jago River	16.15	18	P	Pn	16 12 04.2	+0.1
E28M	Babbage River	16.21	25		Pn	16 12 04.3	-0.6
HG4B	Hotspring	16.23	88	Pn	Pn	16 12 03.8	-1.5
SHEM	Shemya Is, Ala	16.43	274	Pn	Pn	16 12 06.1	-1.6
	comp=Z,7.5nm,0.3s,baz=40,slow=4.5,SNR=9.6						
SHEM				LR	LR	16 18 40.6	
	comp=Z,1μm,19.9s,baz=104,slow=38						
	comp=Z,58nm,0.7s						
SHEM	Shemya Is, Ala	16.43	274	Pn	Pn	16 12 05.8	-1.9
SMY	Shemya	16.43	274	P	Pn	16 12 05.9	-1.8
SMY				pmax	pmax		
	comp=Z,98nm,1.0s						
SMY	Shemya	16.43	274	Pn	Pn	16 12 05.9	-1.8
SMY				IAmb	IAmb	16 12 11.2	
	comp=Z,98nm,1.0s						
F30M	Barrier River	16.54	31	IAmb	IAmb	16 12 13.8	
	comp=Z,170nm,1.3s						
G31M	Satah River	16.59	34		Pn	16 12 08.2	-1.5
G31M				IAmb	IAmb	16 12 14.2	
	comp=Z,126nm,0.9s						
F31M	Tsiigehtchic	17.06	33		Pn	16 12 14.1	-1.5
INK	Inuvik	17.64	31	P	Pn	16 12 22.5	-0.3
	comp=Z,8.9nm,0.3s,baz=225,slow=11,SNR=57						
INK	

H04A **Detroit Lake** 25.16 99 IAmb IAmb 16 13 54.4
comp=Z,56nm,1.0s
G05A **Wamic** 25.33 97 IAmb IAmb 16 13 53.4
comp=Z,50nm,1.0s
WAH2 **Wahluke Slope** 25.48 93 IAmb IAmb 16 13 48.9
comp=Z,40nm,0.7s
I04A **Tendick Farm,** 25.58 101 P P 16 13 45.2 -0.9
PEA0B **Petropavlovsk-** 25.63 284 *i* P P 16 13 45.1 -1.3
PEA0B **Petropavlovsk-** 25.63 284 P P 16 13 45.0 -1.5
PETK **Petropavlovsk-** 25.63 284 P P 16 13 45.7 -0.7
comp=Z,86nm,0.8s,baz=75,slow=13,SNR=120
comp=Z,86nm,0.8s
PETK **Petropavlovsk-** 25.63 284 P P 16 13 45.5 -1.0
HAWA **Hanford** 25.70 93 IAmb IAmb 16 13 51.1
comp=Z,29nm,0.8s
F07A **Phinny Hill Vi** 25.75 95 P P 16 13 47.8 +0.2
F07A IAmb IAmb 16 14 01.6
comp=Z,34nm,0.8s
WIFE **Three Sisters-** 25.75 100 IAmb IAmb 16 13 54.3
comp=Z,55nm,0.9s
I05D **Terrebonne, OR** 25.86 99 IAmb IAmb 16 14 05.4
comp=Z,36nm,1.2s
BBOR **Butler Butte** 26.00 103 IAmb IAmb 16 13 57.4
comp=Z,32nm,1.0s
L02F **Cave Junction** 26.00 105 P P 16 13 51.3 +1.3
EDM **Edmonton** 26.06 75 IAmb IAmb 16 14 01.0
comp=Z,50nm,0.9s
SEY **Seymchan** 26.09 308 P P 16 13 49.0 -1.5
comp=Z,44nm,0.8s,baz=84,slow=9.1,SNR=58
SEY LR LR 16 25 20.4
comp=Z,2µm,18.2s,baz=127,slow=39
comp=Z,44nm,0.8s
SEY **Seymchan** 26.09 308 *i* P P 16 13 48.7 -1.8
NEW **Newport** 26.10 88 LR LR 16 22 27.2
comp=Z,762nm,21.4s,baz=294,slow=32
NEW **Newport** 26.10 88 P P 16 13 53.4 +2.6
NEW **Newport** 26.10 88 P P 16 13 53.5 +2.7
E09A **Wood Farm, Sta** 26.43 92 IAmb IAmb 16 14 08.0
comp=Z,47nm,1.1s
L04D **Klamath Falls** 26.65 103 P P 16 13 55.9 -0.1
L04D IAmb IAmb 16 14 10.9
comp=Z,80nm,1.5s
YBH **Yreka Blue Hor** 26.74 105 LR LR 16 22 02.3
comp=Z,2µm,21.9s,baz=316,slow=31
KHMM **Horse Mountain** 26.75 107 P P 16 13 57.1 +0.2
KMPM **Mount Pierce** 26.86 108 IAmb IAmb 16 14 13.1
comp=Z,28nm,1.0s
KMRM **Mail Ridge** 27.22 108 IAmb IAmb 16 14 09.7
comp=Z,26nm,0.8s
F10A **Beach Ranch, E** 27.26 92 P P 16 14 01.1 -0.3
MA2 **Magadan** 27.39 301 P P 16 14 01.2 -1.1
MA2 pmax pmax
comp=Z,114nm,1.9s
MA2 **Magadan** 27.39 301 P P 16 14 01.2 -1.1
MA2 IAmb IAmb 16 14 19.4
comp=Z,114nm,1.9s
BMO **Blue Mountains** 27.86 94 P P 16 14 09.3 +2.5
JTMT **Jette** 28.00 86 P P 16 14 06.2 -1.9
HATC **Hat Creek Radi** 28.05 105 IAmb IAmb 16 14 40.7
comp=Z,30nm,1.1s
O03E **Paynes Creek** 28.22 106 P P 16 14 10.1 +0.2
O03E IAmb IAmb 16 14 30.6
comp=Z,38nm,1.1s
HOPS **Hopland Field** 28.43 109 P P 16 14 11.2 -0.6
HOPS IAmb IAmb 16 14 24.5
comp=Z,24nm,1.1s
WVOR **Wild Horse Val** 28.58 99 P P 16 14 16.0 +2.8
WVOR **Wild Horse Val** 28.58 99 P P 16 14 16.0 +2.8
MPK **Martis Peak** 29.89 106 IAmb IAmb 16 14 29.0
comp=Z,33nm,1.0s
PAHR **Pah Rah Range** 29.97 104 IAmb IAmb 16 14 29.4
comp=Z,20nm,1.0s
JRSC **Jasper Ridge** 30.04 111 P P 16 14 25.1 -0.8
JRSC IAmb IAmb 16 14 29.4
comp=Z,26nm,0.9s
DLMT **Dillon** 30.28 89 P P 16 14 27.9 -0.4
HLID **Hailey** 30.30 94 P P 16 14 28.0 -0.5
HLID **Hailey** 30.30 94 P P 16 14 31.3 +2.8
BCYI **Bear Canyon** 30.43 92 IAmb IAmb 16 14 41.5
comp=Z,34nm,1.7s
EGMT **Eagleton** 30.46 83 P P 16 14 29.2 -0.5
EGMT IAmb IAmb 16 14 39.8
comp=Z,25nm,0.8s
CMB **Columbia Colle** 30.59 108 IAmb IAmb 16 14 43.0
comp=Z,27nm,1.4s
BOZ **Bozeman (W)** 30.71 88 P P 16 14 31.1 -0.9
BOZ pmax pmax
comp=Z,9.0nm,1.2s
BOZ **Bozeman (W)** 30.71 88 P P 16 14 31.1 -0.9
WAKR **Walker** 30.78 106 IAmb IAmb 16 14 45.2
comp=Z,19nm,1.0s
RES **Resolute Bay** 31.13 27 LR LR 16 29 48.3
comp=Z,534nm,18.4s,baz=325,slow=41
QLMT **Earthquake Lak** 31.26 89 P P 16 14 36.8 -0.2
BBGB **Big Mountain B** 31.29 110 IAmb IAmb 16 14 44.1
comp=Z,31nm,1.0s
YHL **Hebgen Lake** 31.39 89 P P 16 14 38.7 +0.4
YHL IAmb IAmb 16 14 41.9
comp=Z,15nm,0.9s
YHB **Horse Butte** 31.45 89 P P 16 14 38.2 -0.5
YHB IAmb IAmb 16 14 42.2
comp=Z,19nm,0.9s
NVAR **Mina Array Bea** 31.46 105 P P 16 14 41.1 +2.3
comp=Z,12nm,0.7s,baz=303,slow=8.6,SNR=88
NVAR ScP ScP 16 21 13.3 0.0
comp=Z,1.5nm,0.9s,baz=310,slow=1.7,SNR=5.7
NVAR LR LR 16 25 08.1
comp=Z,1µm,20.1s,baz=314,slow=32
comp=Z,12nm,0.7s
NVAR **Mina Array Bea** 31.46 105 P P 16 14 40.6 +1.7
NVAR ScP 16 21 11.8 -1.4
LHV **Little Huntoon** 31.48 105 IAmb IAmb 16 14 51.3
comp=Z,25nm,1.1s
NV11 **Mina Array Sit** 31.54 105 IAmb IAmb 16 14 51.5
comp=Z,15nm,1.0s
BLKN **Baker Lake** 31.56 47 P P 16 14 39.7 +0.6
BLKN IAmb IAmb 16 14 40.9
comp=Z,24nm,0.7s
MDPB **Devils Postpil** 31.60 107 IAmb IAmb 16 14 44.4
comp=Z,16nm,0.9s
ELK **Elko** 31.62 99 LR LR 16 25 55.5
comp=Z,1µm,19.1s,baz=297,slow=33
ELK **Elko** 31.62 99 P P 16 14 43.0 +2.8
FFC **Flin Flon** 31.67 67 P P 16 14 40.5 +0.2
FFC pmax pmax
comp=Z,7.0nm,1.1s
FFC **Flin Flon** 31.67 67 P P 16 14 40.5 +0.2
FFC **Flin Flon** 31.67 67 P P 16 14 41.2 +0.9
YNR **Norris Junctio** 31.76 89 P P 16 14 39.9 -1.6
YNR IAmb IAmb 16 14 46.1
comp=Z,27nm,0.9s
YNE **Yellowstone No** 31.98 88 IAmb IAmb 16 14 46.8
comp=Z,21nm,0.9s
YMP **Mirror Lake Pl** 32.05 88 P P 16 14 43.4 -0.7
YMP IAmb IAmb 16 14 56.0
comp=Z,25nm,1.1s
FLWY **Flagg Ranch** 32.13 90 IAmb IAmb 16 15 08.1
comp=Z,27nm,1.1s
TPH **Tonopah** 32.31 104 IAmb IAmb 16 14 58.3
comp=Z,21nm,1.0s
RLMT **Red Lodge** 32.34 87 P P 16 14 46.2 -0.3
RLMT IAmb IAmb 16 14 50.3
comp=Z,22nm,0.8s
HVU **Hansel Valley** 32.36 95 IAmb IAmb 16 14 50.5
comp=Z,18nm,0.9s
DSP **Deep Springs** 32.40 106 IAmb IAmb 16 14 51.4
comp=Z,16nm,0.9s
AHID **Auburn Hatcher** 32.70 92 IAmb IAmb 16 15 10.2
comp=Z,12nm,0.8s
AHID **Auburn Hatcher** 32.70 92 P P 16 14 52.4 +2.7
VES **Vestal, Richgr** 32.90 109 IAmb IAmb 16 15 03.1
comp=Z,38nm,1.0s
KEKH **Kekaha** 32.91 182 P P 16 14 49.8 -1.6
GRAC **Grapevine Rang** 33.00 106 IAmb IAmb 16 15 04.7
comp=Z,22nm,1.0s
HWUT **Hardware Ranch** 33.16 94 P P 16 14 56.5 +2.8
LAO **LASA Array** 33.20 82 P P 16 14 54.5 +0.6
LAO IAmb IAmb 16 15 05.5
comp=Z,48nm,1.4s
DUG **Dugway, Tooele** 33.37 97 P P 16 14 58.3 +2.9
DUG **Dugway, Tooele** 33.37 97 IAmb IAmb 16 14 59.2
comp=Z,15nm,0.9s
DUG **Dugway, Tooele** 33.37 97 P P 16 14 58.3 +2.9
S11A **Rachel** 33.45 103 IAmb IAmb 16 15 34.4
comp=Z,17nm,0.8s
KIP **Kipapa** 33.45 180 *ce* P P 16 14 57.2 +1.1
KIP pmax pmax
comp=Z,309nm,2.5s
WCT **Wildcat Mounta** 33.56 105 IAmb IAmb 16 15 09.3
comp=Z,25nm,1.5s
TCUT **Toone Canyon** 33.57 95 IAmb IAmb 16 15 30.6
comp=Z,15nm,0.9s
PDAR **Pinedale Array** 33.59 91 P P 16 14 59.4 +1.9
comp=Z,7.2nm,0.7s,baz=311,slow=4.8,SNR=79
PDAR LR LR 16 27 35.1
comp=Z,133nm,18.5s,baz=308,slow=34
comp=Z,7.2nm,0.7s
PDAR **Pinedale Array** 33.59 91 P P 16 14 58.1 +0.7
MPMC **Manual Prospec** 33.62 107 IAmb IAmb 16 15 09.8
comp=Z,21nm,1.1s
FURC **Furnace Creek,** 33.66 106 IAmb IAmb 16 15 02.0
comp=Z,19nm,0.9s
PSUT **Pine Spring** 33.90 100 IAmb IAmb 16 15 11.3
comp=Z,18nm,1.2s
LRMC **Laurel Mtn Rad** 33.93 108 IAmb IAmb 16 15 12.1
comp=Z,17nm,0.9s
GWY **Greenwater Val** 33.98 106 IAmb IAmb 16 15 12.7
comp=Z,20nm,0.9s
PRN **Pahroc Range** 34.01 103 IAmb IAmb 16 15 13.1
comp=Z,38nm,1.1s
QSM **Queen of Sheba** 34.03 107 IAmb IAmb 16 15 13.1
comp=Z,26nm,1.0s
TIXI **Tiksi** 34.07 327 P P 16 15 00.0 -0.9
comp=Z,58nm,0.9s,baz=104,slow=9.6,SNR=130
TIXI PcP PcP 16 17 38.3 +0.4
comp=Z,7.8nm,0.8s,baz=70,slow=3.4,SNR=5.8
TIXI LR LR 16 30 54.4
comp=Z,1µm,19.0s,baz=106,slow=40
comp=Z,58nm,0.9s
TIXI **Tiksi** 34.07 327 *e* P P 16 15 00.1 -0.9
TIXI pmax pmax
comp=Z,66nm,1.0s
TIXI **Tiksi** 34.07 327 P P 16 14 59.6 -1.4
TIXI PcP 16 17 38.6 +0.6
FCC **Fort Churchill** 34.10 57 P P 16 15 01.0 -0.4
FCC pmax pmax
comp=Z,24nm,1.0s
FCC **Fort Churchill** 34.10 57 P P 16 15 01.0 -0.4
FCC IAmb IAmb 16 15 15.4
comp=Z,24nm,1.0s
BSUT **Blindstream Ca** 34.32 95 IAmb IAmb 16 15 21.0
comp=Z,12nm,0.8s
GSC **Goldstone, Bar** 34.55 107 IAmb IAmb 16 15 17.7
comp=Z,17nm,1.2s
BFSC **Mount Baldy Ra** 34.87 109 IAmb IAmb 16 15 20.6
comp=Z,24nm,1.2s
TYV **Tymovskoe** 34.96 288 *e* P P 16 15 08.8 -0.1
TYV pmax pmax
comp=Z,200nm,3.6s
TYV pmax pmax
comp=Z,69nm,0.8s
RDMU **Red Mountain** 34.98 94 IAmb IAmb 16 15 21.2
comp=Z,59nm,1.6s
Q16A **Castle Valley** 35.16 97 IAmb IAmb 16 15 39.5
comp=Z,23nm,1.2s
P18A **Preston Nutter** 35.22 95 IAmb IAmb 16 15 23.5
comp=Z,26nm,1.3s
HUH **Hualalai** 35.23 176 P P 16 15 11.2 -0.7
K22A **Casper** 35.41 88 IAmb IAmb 16 15 16.4
comp=Z,15nm,0.8s
PKCU **Pink Cliffs** 35.53 100 IAmb IAmb 16 15 27.1
comp=Z,12nm,0.8s
KNB **Kanab** 35.54 101 P P 16 15 14.2 -0.1
KNB pmax pmax
comp=Z,9.0nm,0.9s
KNB **Kanab** 35.54 101 P P 16 15 14.2 -0.1
ILON **Igloolik, Nuna** 35.75 36 P P 16 15 15.8 +0.3
ILON IAmb IAmb 16 15 29.2
comp=Z,49nm,1.2s
RSSD **Black Hills** 35.94 84 P P 16 15 19.4 +1.6
RSSD pmax pmax
comp=Z,27nm,0.7s
RSSD **Black Hills** 35.94 84 P P 16 15 19.4 +1.6
RSSD IAmb IAmb 16 15 20.7
comp=Z,27nm,0.7s
RSSD **Black Hills** 35.94 84 P P 16 15 19.9 +2.2
RSSD **Black Hills** 35.94 84 P P 16 15 20.0 +2.2
RSSD PcP PcP 16 17 44.6 +0.4
BELC **Belle Mtn. Jos** 35.96 108 IAmb IAmb 16 15 29.4
comp=Z,16nm,1.1s
PFO **Pinyon Flats O** 36.00 109 LR LR 16 27 37.7
comp=Z,872nm,19.0s,baz=314,slow=32
PFO **Pinyon Flats O** 36.00 109 *i* P P 16 15 20.1 +1.9
PFO pmax pmax
comp=Z,12nm,0.8s
HMU **Henry Mountain** 36.08 98 IAmb IAmb 16 15 22.7
comp=Z,24nm,0.9s
DPP **Dos Picos Cty** 36.20 110 IAmb IAmb 16 15 31.9
comp=Z,17nm,1.0s
UGL **Uglegorsk** 36.21 286 *e* P P 16 15 20.4 +0.7
UGL pmax pmax
comp=Z,280nm,0.8s
BORC **Borrego Spring** 36.28 109 P P 16 15 20.8 +0.3
BORC IAmb IAmb 16 15 32.5
comp=Z,18nm,1.1s
IRM **Iron Mountain** 36.31 107 IAmb IAmb 16 15 32.8
comp=Z,37nm,1.1s
W13A **Hualapai Mount** 36.32 104 IAmb IAmb 16 15 33.0
comp=Z,22nm,1.2s
HAYD **Hayden** 36.35 92 IAmb IAmb 16 15 24.5
comp=Z,17nm,0.8s
E28A **Huff** 36.41 79 IAmb IAmb 16 15 32.0
comp=Z,26nm,1.0s
YAK **Yakutsk** 36.49 311 LR LR 16 31 35.0
comp=Z,864nm,20.1s,baz=73,slow=38
YAK **Yakutsk** 36.49 311 *ce* P P 16 15 20.5 -1.4
YAK pmax pmax
comp=Z,60nm,0.7s
YAK **Yakutsk** 36.49 311 P P 16 15 20.1 -1.8
YAK **Yakutsk** 36.49 311 P P 16 15 20.4 -1.6
YAK **Yakutsk** 36.49 311 P P 16 15 20.7 -1.2
YAK PcP PcP 16 17 45.1 0.0
PV23 **Carpenter Ridg** 36.72 96 IAmb IAmb 16 15 35.8
comp=Z,20nm,0.9s
PV10 **Paradox Valley** 36.75 96 IAmb IAmb 16 15 36.4
comp=Z,50nm,1.3s
PV04 **Paradox Valley** 36.82 96 IAmb IAmb 16 15 36.5
comp=Z,15nm,0.8s
PV20 **West Nyswonger** 36.82 96 IAmb IAmb 16 15 57.1
comp=Z,24nm,0.7s
PV19 **Morning Glory** 36.83 96 IAmb IAmb 16 15 36.6
comp=Z,24nm,0.7s
PV16 **Nyswonger Mesa** 36.87 96 IAmb IAmb 16 15 37.1
comp=Z,27nm,1.3s
CBX **Cerro Bola** 36.87 110 P P 16 15 25.4 -0.3
CBX IAmb IAmb 16 15 29.8
comp=Z,27nm,0.8s
PV11 **David Mesa, Pa** 36.90 96 IAmb IAmb 16 15 48.4
comp=Z,26nm,1.1s
PV18 **Skein Mesa, Pa** 36.92 96 IAmb IAmb 16 15 36.6
comp=Z,24nm,0.8s
PV05 **Paradox Valley** 36.92 96 IAmb IAmb 16 15 37.6
comp=Z,35nm,1.4s
PV12 **Saucer Basin,** 36.93 96 IAmb IAmb 16 15 52.1
comp=Z,21nm,0.9s
PV07 **Paradox Valley** 36.94 96 IAmb IAmb 16 15 37.6
comp=Z,40nm,1.6s
BLYC **Blythe** 36.96 107 IAmb IAmb 16 15 38.3
comp=Z,43nm,1.2s
YSS **Yuzhno-Sakhali** 37.00 283 *oe* P P 16 15 26.2 -0.3
YSS *e* S S 16 21 09.6 -1.0
YSS pmax pmax
comp=Z,30nm,1.1s
YSS pmax pmax
comp=Z,100nm,2.0s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS MLR MLR
comp=E,200nm,16.0s
YSS **Yuzhno-Sakhali** 37.00 283 P P 16 15 26.2 -0.3
YSS IAmb IAmb 16 15 29.9
comp=Z,30nm,0.9s
YSS **Yuzhno-Sakhali** 37.00 283 P P 16 15 26.9 +0.4
PV13 **Radium Mtn., P** 37.03 96 IAmb IAmb 16 15 30.2
comp=Z,35nm,1.0s
PV02 **Paradox Valley** 37.04 96 IAmb IAmb 16 15 39.1
comp=Z,30nm,0.8s
ULM **Lac du Bonnet** 37.07 71 P P 16 15 28.4 +1.4
comp=Z,3.5nm,0.6s,baz=293,slow=7.5,SNR=9.4
ULM LR LR 16 30 42.4
comp=Z,771nm,18.2s,baz=270,slow=36
comp=Z,3.5nm,0.6s
ULM **Lac du Bonnet** 37.07 71 *i* P P 16 15 26.5 -0.5
PV15 **Paradox Valley** 37.10 96 IAmb IAmb 16 15 38.7
comp=Z,20nm,0.7s
PV01 **Paradox Valley** 37.19 96 IAmb IAmb 16 15 33.2
comp=Z,18nm,0.7s
ISCO **Idaho Springs** 37.77 91 P P 16 15 34.8 +1.3
ISCO **Idaho Springs** 37.77 91 P P 16 15 34.8 +1.3
MVCO **Mesa Verde** 37.87 97 P P 16 15 33.8 -0.4
MVCO **Mesa Verde** 37.87 97 P P 16 15 36.1 +2.0
AGMN **Agassiz Nation** 38.14 73 P P 16 15 37.3 +1.2
GRNR **Gornyy** 38.38 292 *i* P P 16 15 37.2 -0.9
GRNR pmax pmax
comp=N,20nm,0.7s
GRNR pmax pmax
comp=Z,50nm,0.7s
GRNR MLR MLR
comp=N,200nm,15.0s
GRNR MLR MLR
comp=Z,310nm,15.0s
JKA **Kamikawa-asahi** 38.77 279 P P 16 15 41.0 -0.4
JKA IAmb IAmb 16 15 42.3
comp=Z,58nm,1.0s
JKA **Kamikawa-asahi** 38.77 279 P P 16 15 41.4 0.0
ASAJ **Asahikawa** 38.77 279 LR LR 16 33 33.8
comp=Z,232nm,18.5s,baz=68,slow=39
ASAJ **Asahikawa** 38.77 279 P P 16 15 41.0 -0.4
ASAJ pmax pmax
comp=Z,58nm,1.0s
OGNE **Ogallala** 39.09 87 IAmb IAmb 16 15 47.4
comp=Z,39nm,0.8s
ERM **Erimo** 39.76 276 *ce* P P 16 15 50.3 +0.6
ERM pmax pmax
comp=Z,48nm,1.0s
ERM **Erimo** 39.76 276 P P 16 15 48.8 -0.9
ERM IAmb IAmb 16 15 50.4
comp=Z,41nm,0.7s
ERM **Erimo** 39.76 276 P P 16 15 49.7 0.0
TUC **Tucson** 40.11 104 P P 16 15 55.7 +2.9
TUC **Tucson** 40.11 104 P P 16 15 55.8 +2.9
TUC **Tucson** 40.11 104 P P 16 15 55.7 +2.9
TUC pP sP 16 16 04.2 +2.5
ECSD **EROS Data Cent** 40.42 80 P P 16 15 55.6 +0.3
ECSD **EROS Data Cent** 40.42 80 P P 16 15 55.9 +0.6
NEEM **North Greenlan** 40.58 19 *i* P P 16 15 56.5 0.0
NEEM IAmb IAmb 16 15 57.5
comp=Z,101nm,1.0s
TASM **ASL Pad, Albuq** 40.63 98 IAmb IAmb 16 16 12.8
comp=Z,6.0nm,1.0s
ANMO **Albuquerque** 40.63 98 LR LR 16 31 53.8
comp=Z,612nm,18.2s,baz=302,slow=35
ANMO **Albuquerque** 40.63 98 *ce* P P 16 15 59.6 +2.3
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO **Albuquerque** 40.63 98 P P 16 15 58.4 +1.1
ANMO **Albuquerque** 40.63 98 P P 16 15 59.5 +2.2
ALQ **Albuquerque** 40.64 98 P P 16 15 57.1 -0.2
EYMN **Ely** 40.74 71 P P 16 15 58.1 +0.2
EYMN IAmb IAmb 16 16 18.6
comp=Z,24nm,0.7s
EYMN **Ely** 40.74 71 P P 16 15 58.9 +1.0
KULLO **Kullorsuaq** 40.77 24 P P 16 15 58.0 +0.2
KULLO **Kullorsuaq** 40.77 24 *i* P P 16 15 58.1 +0.4
KULLO IAmb IAmb 16 16 03.4
comp=Z,30nm,0.9s
DUN6 **Lazy B Ranch** 40.88 103 IAmb IAmb 16 16 02.9
comp=Z,31nm,0.8s
E38A **The Farm, Brul** 41.51 73 P P 16 16 04.2 +0.1
E38A IAmb IAmb 16 16 24.7
comp=Z,18nm,0.7s
ZEA **Zeya** 41.53 300 *e* P P 16 16 02.6 -1.6
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=N,200nm,15.0s
ZEA MLR MLR
comp=Z,400nm,15.0s
121A **Cookes Peak, D** 41.63 101 P P 16 16 06.9 +1.4
KLR **Kul'dur** 41.74 292 LR LR 16 34 30.1
comp=Z,412nm,19.0s,baz=63,slow=38
KLR **Kul'dur** 41.74 292 *c i* P P 16 16 03.7 -2.3
KLR pmax pmax
comp=Z,31nm,0.8s
JTM **Tenmabayashi** 41.75 276 IAmb IAmb 16 16 21.3
comp=Z,33nm,0.9s
CBKS **Cedar Bluff** 41.82 88 IAmb IAmb 16 16 18.0
comp=Z,54nm,1.2s
UPNV **Upernavik** 41.97 26 P P 16 16 08.2 +0.7
UPNV **Upernavik** 41.97 26 *i* P P 16 16 08.0 +0.4
UPNV IAmb IAmb 16 16 17.7
comp=Z,19nm,0.7s
I37A **Lemond, Waseca** 42.06 77 IAmb IAmb 16 16 18.8
comp=Z,58nm,1.2s
NOR **Nord** 42.16 8 P P 16 16 09.6 +0.5
NOR **Nord** 42.16 8 P P 16 16 09.6 +0.5
NOR **Nord** 42.16 8 *i* P P 16 16 09.2 +0.1
NOR IAmb IAmb 16 16 09.8
comp=Z,18nm,1.0s
FRB **Frobisher Bay** 42.89 41 LR LR 16 35 32.3
comp=Z,602nm,19.2s,baz=300,slow=38
FRB **Frobisher Bay** 42.89 41 P P 16 16 15.5 +0.4
FRB **Frobisher Bay** 42.89 41 P P 16 16 15.4 +0.4
G40A **Rib Lake** 43.07 74 P P 16 16 17.2 +0.4
AMTX **Amarillo** 43.42 93 IAmb IAmb 16 16 30.2
comp=Z,22nm,1.1s
NUUG **Nuugaatsiaq** 43.42 27 *e* P P 16 16 19.9 +0.6
NUUG IAmb IAmb 16 16 25.2
comp=Z,78nm,1.3s
HEH **HeiHe** 43.43 296 *e* P P 16 16 17.5 -2.2
HEH pmax pmax
comp=Z,20nm,0.8s
HEH L L
comp=Z,290nm,18.1s
HEH L L
comp=Z,510nm,18.4s
HEH L L
comp=Z,690nm,18.7s
MNTX **Cornudas Mount** 43.62 100 P P 16 16 24.0 +2.6
F42A **Maple Grove Fa** 43.90 72 P P 16 16 23.8 +0.3
F42A IAmb IAmb 16 16 33.5
comp=Z,22nm,0.7s
H11N2 **WAKE ISLAND Hy** 43.92 231 T T 17 03 46.6
baz=28,slow=76,SNR=15
H11N3 **WAKE ISLAND Hy** 43.93 231 T T 17 03 47.0
baz=28,slow=76,SNR=16
H11N1 **WAKE ISLAND Hy** 43.94 231 T T 17 03 48.0
baz=28,slow=76,SNR=17
TPB28 **44.14 99** IAmb IAmb 16 16 37.8
comp=Z,27nm,1.3s
TPB11 **China Draw** 44.21 98 IAmb IAmb 16 16 37.7
comp=Z,38nm,1.3s
CROK **Carrier** 44.41 89 IAmb IAmb 16 16 31.3
comp=Z,12nm,0.6s
VHRN **Van Horn** 44.52 100 IAmb IAmb 16 16 32.6
comp=Z,27nm,1.2s
JFWS **Jewell Farm** 44.53 76 IAmb IAmb 16 16 36.6
comp=Z,16nm,0.6s
L40A **Anamosa** 44.54 78 IAmb IAmb 16 16 37.3
comp=Z,29nm,1.2s
128A **Castleberry Fa** 44.59 96 IAmb IAmb 16 16 32.0
comp=Z,21nm,0.9s
I42A **Draeger Farm,** 44.65 74 IAmb IAmb 16 16 38.2
comp=Z,25nm,0.9s
USA0B **Ussuriysk Arra** 44.69 286 *i* P P 16 16 27.5 -2.3
USA0B **Ussuriysk Arra** 44.69 286 P P 16 16 27.9 -1.9
USRK **Ussuriysk Ar.** 44.69 286 P P 16 16 27.9 -1.8
comp=Z,5.8nm,0.8s,baz=58,slow=8.2,SNR=20
USRK PcP PcP 16 18 12.2 +0.2
comp=Z,1.2nm,0.5s,baz=57,slow=5.3,SNR=2.5
USRK LR LR 16 35 28.7
comp=Z,236nm,21.6s,baz=53,slow=37
comp=Z,5.8nm,0.8s
POST **Post** 44.83 95 IAmb IAmb 16 16 33.6
comp=Z,16nm,0.9s
H11S1 **WAKE ISLAND Hy** 45.08 230 T T 17 05 13.2
baz=28,slow=76,SNR=80
H11S2 **WAKE ISLAND Hy** 45.10 230 T T 17 05 14.2
baz=28,slow=76,SNR=87
H11S3 **WAKE ISLAND Hy** 45.10 230 T T 17 05 14.6
baz=28,slow=76,SNR=100
WMOK **Wichita Mounta** 45.20 91 P P 16 16 35.7 +1.7
WMOK **Wichita Mounta** 45.20 91 IAmb IAmb 16 16 46.9
comp=Z,15nm,0.7s
WMOK **Wichita Mounta** 45.20 91 P P 16 16 35.7 +1.7
TPB05 **Hovey Rd** 45.37 99 IAmb IAmb 16 16 49.6
comp=Z,5.8nm,0.7s

QUOK Quay 45.38 88 IAmb IAmb 16 16 45.4
comp=Z,26nm,0.9s
BOD Bodaibo 45.41 311 *e*P **P** **16 16 33.4 -2.0**
BOD pmax pmax
comp=Z,55nm,1.0s
VLA Vladivostok 45.44 285 *i* P **P** **16 16 34.6 -1.2**
VLA pmax pmax
comp=Z,43nm,1.4s
OK052 Battle Ridge R 45.45 88 P **P** **16 16 35.9 -0.1**
OK052 IAmb IAmb 16 16 46.8
comp=Z,19nm,0.7s
TMB01 Midkiff 45.52 97 IAmb IAmb 16 16 39.2
comp=Z,9.6nm,0.8s
E46A Sault Ste Mari 45.60 69 IAmb IAmb 16 16 49.7
comp=Z,20nm,0.8s
MDJ Mudanjiang 45.74 288 P **P** **16 16 36.3 -1.9**
MDJ IAmb IAmb 16 16 38.0
comp=Z,26nm,0.9s
MDJ Mudanjiang 45.74 288 P **P** **16 16 36.5 -1.7**
MDJ pmax pmax
comp=Z,37nm,0.9s
MDJ Mudanjiang 45.74 288 P **P** **16 16 37.0 -1.2**
MDJ Mudanjiang 45.74 288 P **P** **16 16 37.5 -0.7**
W35A Tecumseh 46.00 89 IAmb IAmb 16 16 50.2
comp=Z,12nm,0.7s
DAG Danmarks Havn 46.10 12 P **P** **16 16 40.8 +0.2**
DAG Danmarks Havn 46.10 12 P **P** **16 16 40.9 +0.3**
DAG Danmarks Havn 46.10 12 *i* P **P** **16 16 40.8 +0.2**
DAG IAmb IAmb 16 16 41.6
comp=Z,90nm,0.7s
SUMG Summit 46.19 21 P **P** **16 16 42.2 +0.3**
SUMG pmax pmax
comp=Z,45nm,1.1s
SUMG Summit 46.19 21 P **P** **16 16 42.2 +0.3**
SUMG Summit 46.19 21 P **P** **16 16 42.8 +1.0**
SUMG Summit 46.19 21 *i* P **P** **16 16 42.8 +1.0**
SUMG IAmb IAmb 16 16 52.8
comp=Z,23nm,0.9s
BNX BinXian 46.21 291 ⇑P **P** **16 16 41.0 -0.9**
BNX pmax pmax
comp=Z,53nm,0.9s
ABTX Abilene, Hawle 46.22 94 IAmb IAmb 16 16 51.8
comp=Z,43nm,1.4s
MAJO Matsushiro 46.27 274 *c i* P **P** **16 16 42.1 -0.4**
MAJO pmax pmax
comp=Z,85nm,1.1s
MAJO Matsushiro 46.27 274 P **P** **16 16 42.2 -0.3**
MAJO Matsushiro 46.27 274 P **P** **16 16 42.6 0.0**
MAJO Matsushiro 46.27 274 P **P** **16 16 42.5 0.0**
MAJO pP **sP** **16 16 51.7 +0.4**
MJAR Matsushiro Arr 46.27 274 P **P** **16 16 41.8 -0.6**
comp=Z,19nm,0.9s,baz=43,slow=6.1,SNR=62
MJAR PcP **PcP** **16 18 18.2 +0.5**
comp=Z,2.5nm,0.8s,baz=62,slow=3.7,SNR=3.6
MJAR LR LR 16 34 36.4
comp=Z,224nm,21.9s,baz=60,slow=34
comp=Z,19nm,0.9s
MJAR Matsushiro Arr 46.27 274 P **P** **16 16 41.9 -0.6**
MJAR IAmb IAmb 16 16 45.3
comp=Z,39nm,1.3s
KBS Kingsbay 46.27 3 *ce*P **P** **16 16 42.3 +0.4**
KBS pmax pmax
comp=Z,44nm,0.7s
KBS Kingsbay 46.27 3 *e*P **P** **16 16 43.3 +1.4**
KBS IAmb IAmb 16 16 44.3
comp=Z,38nm,0.8s
KBS Kingsbay 46.27 3 P **P** **16 16 42.9 +0.9**
KBS Kingsbay 46.27 3 P **P** **16 16 43.3 +1.4**
KBS Kingsbay 46.27 3 P **P** **16 16 43.3 +1.4**
KBS Kingsbay 46.27 3 *i* P **P** **16 16 43.2 +1.2**
PSTR Posyet 46.34 285 *i* P **P** **16 16 42.2 -0.7**
RLO Rose Lookout 46.36 87 IAmb IAmb 16 16 52.9
comp=Z,33nm,1.4s
TX31 Lajitas Ar. Si 46.37 100 IAmb IAmb 16 16 46.6
comp=Z,21nm,0.9s
TXAR Lajitas Array 46.37 100 P **P** **16 16 45.5 +2.1**
comp=Z,12nm,0.7s,baz=307,slow=5.6,SNR=139
TXAR PcP **PcP** **16 18 19.2 +1.0**
comp=Z,1.7nm,0.6s,baz=315,slow=3.1,SNR=2.0
TXAR ScP **ScP** **16 22 10.4 +0.3**
comp=Z,3.2nm,1.0s,baz=250,slow=2.5,SNR=11
TXAR LR LR 16 35 12.0
comp=Z,900nm,18.6s,baz=313,slow=35
comp=Z,12nm,0.7s
TXAR Lajitas Array 46.37 100 P **P** **16 16 44.8 +1.4**
TXAR 16 18 19.2
TXAR Lajitas Array 46.37 100 **ScP** **16 22 10.0 -0.1**
TXAR Lajitas Array 46.37 100 P **P** **16 16 44.8 +1.4**
R40A Maddies Static 46.47 82 IAmb IAmb 16 16 51.3
comp=Z,12nm,0.5s
U38A Gravette 46.53 86 IAmb IAmb 16 16 45.7
comp=Z,13nm,0.9s
OZNA Ozona 46.62 97 IAmb IAmb 16 16 47.2
comp=Z,11nm,0.6s
LPIG La Paz 46.77 111 LR LR 16 34 29.0
comp=Z,263nm,18.0s,baz=332,slow=34
SAND Sanderson 46.78 99 IAmb IAmb 16 17 01.0
comp=Z,24nm,1.6s
PLPT Palo Pinto 46.85 93 IAmb IAmb 16 17 02.3
comp=Z,16nm,0.9s
SFJD Kangerlussuaq 46.99 31 LR LR 16 38 45.6
comp=Z,296nm,18.1s,baz=314,slow=39
SFJD Kangerlussuaq 46.99 31 P **P** **16 16 47.4 -0.2**
SFJD pmax pmax
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 46.99 31 P **P** **16 16 47.4 -0.2**
SFJD Kangerlussuaq 46.99 31 P **P** **16 16 48.7 +1.0**
SFJD Kangerlussuaq 46.99 31 *i* P **P** **16 16 48.6 +1.0**
SFJD IAmb IAmb 16 16 49.5
comp=Z,23nm,0.8s
HPIG 47.08 104 IAmb IAmb 16 16 51.8
comp=Z,9.2nm,0.7s
HPIG 47.08 104 P **P** **16 16 51.5 +2.4**
SPITS Spitsbergen Ar 47.11 2 P **P** **16 16 48.4 -0.2**
comp=Z,16nm,0.6s,baz=4.8,slow=3.5,SNR=13
SPITS LR LR 16 37 14.8
comp=Z,312nm,18.0s,baz=348,slow=37
comp=Z,16nm,0.6s
NRIK Noril'sk 47.20 334 P **P** **16 16 49.2 -0.1**
comp=Z,66nm,0.8s,baz=54,slow=7.1,SNR=76
comp=Z,66nm,0.8s
NRIK Noril'sk 47.20 334 *c i* P **P** **16 16 48.8 -0.5**
NRIK pmax pmax
comp=Z,90nm,0.9s
NRIK Noril'sk 47.20 334 P **P** **16 16 49.0 -0.2**
CCM Cathedral Cave 47.22 82 P **P** **16 16 49.5 -0.3**
CCM AP **pP** **16 16 57.1 +0.9**
CCM Cathedral Cave 47.22 82 P **P** **16 16 49.5 -0.3**
CCM P **pP** **16 16 57.1 +0.9**
JGF Kuroka 47.42 274 P **P** **16 16 50.5 -1.0**
JGF Kuroka 47.42 274 P **P** **16 16 52.0 +0.4**
BRDY Brady 47.58 95 IAmb IAmb 16 17 02.4
comp=Z,21nm,1.5s
FVM French Village 47.73 81 IAmb IAmb 16 17 31.4
comp=Z,12nm,0.8s
HILR Hailar Array B 47.77 299 P **P** **16 16 52.9 -1.2**
comp=Z,1.1nm,0.3s,baz=62,slow=7.7,SNR=11
comp=Z,1.1nm,0.3s
INU Inuyama 47.80 274 P **P** **16 16 54.5 +0.2**
INU IAmb IAmb 16 16 56.0
comp=Z,19nm,1.0s
INU Inuyama 47.80 274 P **P** **16 16 54.2 -0.1**
JHJ Hachijo jima 2 47.80 269 LR LR 16 35 25.1
comp=Z,101nm,21.6s,baz=97,slow=34
HIA Hailar 47.96 299 P **P** **16 16 54.0 -1.5**
HIA pmax pmax
comp=Z,32nm,1.7s
HIA Hailar 47.96 299 P **P** **16 16 54.0 -1.5**
HIA IAmb IAmb 16 16 55.7
comp=Z,32nm,1.7s
HIA Hailar 47.96 299 P **P** **16 16 54.4 -1.1**
DBG Daneborg 48.01 14 P **P** **16 16 55.9 +0.4**
DBG Daneborg 48.01 14 *i* P **P** **16 16 55.4 -0.1**
DBG IAmb IAmb 16 16 56.5
comp=Z,48nm,0.8s
T42A Van Buren 48.01 83 IAmb IAmb 16 18 32.3
comp=Z,8.1nm,0.8s
VLDQ Val d'Or 48.09 63 IAmb IAmb 16 17 29.4
comp=Z,17nm,1.1s
FCAR Ozark Folk Cen 48.22 85 IAmb IAmb 16 17 06.0
comp=Z,27nm,1.4s
MIAR Mount Ida 48.34 87 P **P** **16 16 59.5 +0.9**
MIAR Mount Ida 48.34 87 IAmb IAmb 16 17 37.9
comp=Z,11nm,0.8s
MIAR Mount Ida 48.34 87 P **P** **16 16 59.5 +0.9**
P46A Rosedale 48.44 78 IAmb IAmb 16 17 07.8
comp=Z,21nm,0.8s
CN2 Changchun 48.53 290 P **P** **16 16 59.5 -0.4**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 L L
comp=Z,300nm,17.0s
CN2 L L
comp=Z,300nm,17.0s
CN2 L L
comp=Z,300nm,20.0s
NUUK Nuuk 48.53 34 P **P** **16 17 00.8 +1.1**
NUUK Nuuk 48.53 34 *i* P **P** **16 17 00.4 +0.8**
NUUK IAmb IAmb 16 17 01.4
comp=Z,27nm,0.8s
HOPEN Hopen 48.81 359 *e*P **P** **16 17 02.1 +0.4**
HOPEN IAmb IAmb 16 17 02.5
comp=Z,55nm,0.6s
SCHQ Schefferville 48.87 50 P **P** **16 17 02.8 +0.3**
comp=Z,5.7nm,0.6s,baz=292,slow=5.4,SNR=4.7
SCHQ LR LR 16 38 59.2
comp=Z,375nm,18.1s,baz=307,slow=38
comp=Z,5.7nm,0.6s
SCHQ Schefferville 48.87 50 IAmb IAmb 16 17 12.7
comp=Z,13nm,0.6s
BLO Bloomington 49.13 77 IAmb IAmb 16 17 14.6
comp=Z,21nm,0.8s
O48B Farmland 49.15 75 P **P** **16 17 04.1 -0.7**
SADO Sadowa 49.40 67 LR LR 16 37 37.9
comp=Z,235nm,19.8s,baz=347,slow=36
P48A Milroy 49.55 76 IAmb IAmb 16 17 17.2
comp=Z,38nm,1.2s
HHU Hamhung 50.00 285 P **P** **16 17 10.7 -0.5**
HKT Hockley 50.39 93 *i* P **P** **16 17 15.3 +1.1**
HKT pmax pmax
comp=Z,10.0nm,0.9s
WVT Waverly 50.51 81 P **P** **16 17 15.2 +0.1**
WVT pmax pmax
comp=Z,28nm,0.7s
WVT Waverly 50.51 81 P **P** **16 17 15.2 +0.1**
WVT Waverly 50.51 81 P **P** **16 17 16.0 +0.9**
WVT pP **pP** **16 17 22.6 +1.1**
WVT Waverly 50.51 81 P **P** **16 17 16.0 +0.9**
H06N1 SOCORRO T-PHAS 50.71 116 T T 17 12 21.3
SNR=24
JMN Monobe 50.76 275 P **P** **16 17 18.1 +1.0**
H06S1 SOCORRO T 50.83 116 T T 17 12 15.9
SNR=4.5
JCJ Chichijima 50.90 262 LR LR 16 36 48.3
comp=Z,120nm,21.8s,baz=36,slow=34
JCJ Chichijima 50.90 262 P **P** **16 17 16.3 -1.9**
JCJ Chichijima 50.90 262 P **P** **16 17 18.4 +0.2**
R50A Paris 50.98 77 IAmb IAmb 16 17 31.1
comp=Z,28nm,1.3s
SCO Scoresbysund 51.03 17 P **P** **16 17 19.9 +1.3**
SCO Scoresbysund 51.03 17 IAmb IAmb 16 17 32.3
comp=Z,28nm,1.1s
SCO Scoresbysund 51.03 17 P **P** **16 17 19.9 +1.3**
SCO Scoresbysund 51.03 17 *i* P **P** **16 17 19.3 +0.7**
SCO IAmb IAmb 16 17 20.8
comp=Z,7.4nm,0.6s
SOEG Soedalen 51.09 23 *e*P **P** **16 17 19.0 0.0**
SOEG IAmb IAmb 16 17 21.4
comp=Z,27nm,0.7s
P52A Corning 51.26 74 IAmb IAmb 16 17 25.4
comp=Z,18nm,0.7s
ISOG Isortoq, Green 51.32 28 P **P** **16 17 20.4 -0.4**
ISOG Isortoq, Green 51.32 28 *i* P **P** **16 17 20.1 -0.7**
ISOG IAmb IAmb 16 17 21.3
comp=Z,21nm,0.7s
LDAQ Lac Daran 51.32 59 P **P** **16 17 21.4 +0.2**
LDAQ IAmb IAmb 16 17 45.7
comp=Z,40nm,1.9s
CLTN Cedars of Leba 51.39 80 IAmb IAmb 16 17 31.1
comp=Z,17nm,0.7s
U49A Red Boiling Sp 51.41 79 IAmb IAmb 16 18 45.1
comp=Z,12nm,0.9s
KS19 Wonju Array Si 51.50 283 P **P** **16 17 22.8 +0.2**
KS19 IAmb IAmb 16 17 24.1
comp=Z,25nm,0.9s
KSRS Korea Array 51.50 282 P **P** **16 17 22.6 0.0**
comp=Z,26nm,1.0s,baz=53,slow=6.8,SNR=89
KSRS PcP **PcP** **16 18 37.4 +0.8**
comp=Z,3.6nm,0.8s,baz=46,slow=3.4,SNR=4.3
KSRS LR LR 16 37 46.7
comp=Z,124nm,21.8s,baz=45,slow=34
comp=Z,26nm,1.0s
KSAR Wonju Array Be 51.53 282 P **P** **16 17 22.7 -0.1**
KSAR Wonju Array Be 51.53 282 P **P** **16 17 22.7 -0.1**
PYAG Pyongyang 51.60 285 P **P** **16 17 23.3 +0.1**
PYAG AmB
comp=Z,106nm,0.9s
ANGG Ammassalik, Gr 51.62 27 IAmb IAmb 16 17 35.5
comp=Z,21nm,0.7s
ANGG Ammassalik, Gr 51.62 27 P **P** **16 17 22.8 -0.3**
ANGG Ammassalik, Gr 51.62 27 *i* P **P** **16 17 21.5 -1.5**
ANGG IAmb IAmb 16 17 23.2
comp=Z,16nm,0.5s
IVI Ivigtut 51.79 35 *i* P **P** **16 17 25.3 +1.0**
IVI IAmb IAmb 16 17 26.1
comp=Z,15nm,1.1s
S51A Beattyville 51.84 77 IAmb IAmb 16 17 45.3
comp=Z,11nm,0.7s
O54A Avella 51.85 72 IAmb IAmb 16 17 37.0
comp=Z,24nm,0.9s
CFNY Clifton-Fine, 51.97 65 P **P** **16 17 25.1 -0.8**
CFNY IAmb IAmb 16 17 38.4
comp=Z,59nm,1.8s
L56A Greenwood 52.03 69 P **P** **16 17 25.7 -0.8**
ZAIG Zacatecas 52.08 105 P **P** **16 17 29.4 +2.0**
X48A Hartselle 52.16 82 IAmb IAmb 16 17 35.2
comp=Z,9.6nm,0.6s
INCN Inchon 52.21 283 P **P** **16 17 27.8 -0.1**
INCN pmax pmax
comp=Z,39nm,1.0s
INCN Inchon 52.21 283 P **P** **16 17 27.8 -0.1**
INCN Inchon 52.21 283 P **P** **16 17 28.1 +0.2**
SWET Sewanee 52.24 81 IAmb IAmb 16 17 35.5
comp=Z,9.2nm,0.6s
HJU Haeju 52.32 285 P **P** **16 17 28.4 -0.2**
HJU S **S** **16 24 51.0 -1.7**
HJU AmB
comp=Z,233nm,1.0s
Z47A Carrollton 52.48 84 IAmb IAmb 16 17 31.2
comp=Z,19nm,0.6s
JMIC Jan Mayen 52.55 12 LR LR 16 39 59.6
comp=Z,211nm,21.4s,baz=44,slow=36
JMI Jan Mayen 52.58 12 *e*P P 16 17 20.3 -10
JMI IAmb IAmb 16 17 24.0
comp=Z,69nm,1.3s
TJN Taejon 52.58 282 P **P** **16 17 29.5 -1.1**
TJN pmax pmax
comp=Z,249nm,1.2s
TJN Taejon 52.58 282 P **P** **16 17 29.5 -1.1**
W50A Signal Mountai 52.61 80 IAmb IAmb 16 17 40.0
comp=Z,33nm,1.2s
TZTN Tazewell 52.65 78 IAmb IAmb 16 17 41.9
comp=Z,24nm,1.2s
J59A Piesco 52.73 65 P **P** **16 17 31.4 -0.3**
CPCT Cooper Cave 52.88 79 IAmb IAmb 16 17 42.4
comp=Z,32nm,1.6s
FPAL Fort Paine 52.91 81 IAmb IAmb 16 17 42.0
comp=Z,13nm,0.6s
JNU Nakatsue 52.92 276 LR LR 16 39 03.3
comp=Z,285nm,21.9s,baz=44,slow=35
Y49A Blount Mountai 52.95 82 IAmb IAmb 16 17 42.1
comp=Z,13nm,0.8s
D62A Allapoint, All 53.01 59 P **P** **16 17 33.0 -0.7**
TKL Tuckaleechee C 53.15 79 LR LR 16 39 48.9
comp=Z,680nm,19.3s,baz=326,slow=36
IRK Irkutsk 53.29 310 *e*P **P** **16 17 34.0 -1.6**
IRK pmax pmax
comp=Z,47nm,2.4s
XLT XiLinHaoTe 53.43 296 *e*P **P** **16 17 37.0 +0.1**
XLT sP pP 16 17 43.0 -0.3
XLT pmax pmax
comp=Z,190nm,0.7s
XLT pmax pmax
comp=Z,170nm,3.6s
XLT L L
comp=Z,280nm,17.0s
XLT L L
comp=Z,260nm,21.4s
W52A Murphy 53.47 79 IAmb IAmb 16 17 47.5
comp=Z,15nm,1.0s
U54A Nelsons Funny 53.63 77 IAmb IAmb 16 17 48.8
comp=Z,45nm,1.5s
V53A Saluda 53.69 78 IAmb IAmb 16 17 48.9
comp=Z,22nm,1.1s
TLY Talaya 53.96 310 LR LR 16 43 14.2
comp=Z,249nm,18.6s,baz=40,slow=39
TLY Talaya 53.96 310 *ce*P **P** **16 17 40.9 +0.3**
TLY pmax pmax
comp=Z,35nm,0.7s
TLY Talaya 53.96 310 P **P** **16 17 40.6 0.0**
TLY Talaya 53.96 310 P **P** **16 17 40.9 +0.3**
TLY Talaya 53.96 310 P **P** **16 17 40.9 +0.3**
TLY pP **sP** **16 17 49.6 +0.2**
DL2 Dalian 53.98 288 P **P** **16 17 40.5 -0.3**
DL2 S **S** **16 25 12.8 -2.5**
DL2 pmax pmax
comp=Z,54nm,0.8s
DL2 pmax pmax
comp=Z,200nm,4.3s
DL2 L L
comp=Z,370nm,20.8s
DL2 L L
comp=Z,390nm,17.6s
DL2 L L
comp=Z,500nm,21.4s
F64A Sherman 54.21 59 IAmb IAmb 16 17 59.1
comp=Z,13nm,1.1s
BATG Bathurst New B 54.34 57 IAmb IAmb 16 17 56.9
comp=Z,24nm,1.1s
JSU Suzuyama 54.35 275 IAmb IAmb 16 17 57.3
comp=Z,19nm,0.7s
152A Waverly Hall 54.78 82 IAmb IAmb 16 17 53.7
comp=Z,7.3nm,0.6s
KMSC Kings Mountain 54.90 77 IAmb IAmb 16 17 56.5
comp=Z,37nm,1.4s
ULN Ulaanbaatar 55.12 305 *ce*P **P** **16 17 48.9 -0.3**
ULN pmax pmax
comp=Z,29nm,0.9s
ULN Ulaanbaatar 55.12 305 P **P** **16 17 48.8 -0.4**
ULN **PcP** **16 18 49.7 -0.6**
ULN Ulaanbaatar 55.12 305 P **P** **16 17 47.9 -1.3**
ULN Ulaanbaatar 55.12 305 P **P** **16 17 49.2 0.0**
ULN Ulaanbaatar 55.12 305 P **P** **16 17 49.0 -0.1**
MOY Mondy 55.12 312 *e*P **P** **16 17 49.4 +0.3**
MOY pmax pmax
comp=Z,28nm,1.6s
VADS Vadso 55.13 357 *e*P **P** **16 17 48.7 -0.1**
VADS IAmb IAmb 16 18 00.3
comp=Z,43nm,1.1s
SONM Songino Array 55.45 305 P **P** **16 17 51.6 0.0**
comp=Z,40nm,0.7s,baz=48,slow=7.4,SNR=207
SONM PcP **PcP** **16 18 52.3 +0.7**
comp=Z,13nm,0.8s,baz=59,slow=2.2,SNR=6.5
SONM ScP **ScP** **16 22 50.3 +1.4**
comp=Z,1.7nm,1.1s,baz=48,slow=4.2,SNR=4.0
SONM LR LR 16 43 31.1
comp=Z,912nm,19.1s,baz=42,slow=38
comp=Z,40nm,0.7s
SONM Songino Array 55.45 305 P **P** **16 17 51.7 +0.1**
KEV Kevo 55.56 358 P **P** **16 17 51.4 -0.5**
KEV pmax pmax
comp=Z,35nm,0.9s
KEV Kevo 55.56 358 P **P** **16 17 51.4 -0.5**
KEV Kevo 55.56 358 P **P** **16 17 51.8 -0.1**
KEV Kevo 55.56 358 P **P** **16 17 51.7 -0.1**
KEV pP **sP** **16 18 00.7 -0.1**
JSC Jenkinsville 55.57 78 IAmb IAmb 16 18 02.5
comp=Z,16nm,1.1s
T59A Double "B" Far 55.69 73 IAmb IAmb 16 18 23.2
comp=Z,14nm,0.8s
TRO Tromso 55.73 1 P **P** **16 17 53.6 +0.5**
TRO Tromso 55.73 1 *e*P **P** **16 17 53.4 +0.3**
TRO IAmb IAmb 16 17 54.1
comp=Z,38nm,0.7s
ARA0 ARCESS Array S 55.81 358 *e*P **P** **16 17 53.7 -0.1**
ARA0 IAmb IAmb 16 17 54.1
comp=Z,29nm,1.0s
ARCES ARCESS Array B 55.81 358 P **P** **16 17 53.3 -0.5**
comp=Z,5.3nm,0.4s,baz=20,slow=7.1,SNR=53
ARCES LR LR 16 43 25.9
comp=Z,157nm,18.1s,baz=2.5,slow=38
comp=Z,5.3nm,0.4s
ARCES ARCESS Array B 55.81 358 P **P** **16 17 53.2 -0.5**
ARCES IAmb IAmb 16 17 54.3
comp=Z,24nm,1.0s
JETT Jettan, Norway 55.82 1 *e*P **P** **16 17 54.2 +0.4**
JETT IAmb IAmb 16 17 55.5
comp=Z,36nm,0.8s
BJI2 Beijing 56.13 293 P **P** **16 17 56.0 -0.4**
BJI2 S **S** **16 25 47.0 +2.8**
BJI2 pmax pmax
comp=Z,7.0nm,0.8s
BJI2 L L
comp=Z,120nm,18.6s
BJI2 L L
comp=Z,140nm,18.8s
BJI2 L L
comp=Z,250nm,19.0s
BORG Borgarnes 56.17 21 LR LR 16 44 13.3
comp=Z,216nm,19.2s,baz=333,slow=38
BORG Borgarnes 56.17 21 P **P** **16 17 58.7 +2.5**
KTK1 Kautokeino 56.37 359 *e*P **P** **16 17 57.8 +0.1**
KTK1 IAmb IAmb 16 17 58.1
comp=Z,24nm,1.0s
LOF Lofoten 57.10 4 *e*P **P** **16 18 02.8 -0.1**
LOF IAmb IAmb 16 18 05.4
comp=Z,12nm,0.7s
LVZ Lovozero 57.12 354 *ce*P **P** **16 18 03.7 +0.7**
LVZ pmax pmax
comp=Z,46nm,1.7s
LVZ Lovozero 57.12 354 P **P** **16 18 02.8 -0.2**
LVZ Lovozero 57.12 354 P **P** **16 18 02.9 -0.1**
comp=Z,1µmcomp=Z,54nm,1.0s
LVZ Lovozero 57.12 354 P **P** **16 18 03.3 +0.3**
STEI Steigen 57.36 3 *e*P **P** **16 18 04.7 0.0**
STEI IAmb IAmb 16 18 05.1
comp=Z,18nm,0.7s
KNGR Kungurtug, Tuv 57.39 313 *i* P **P** **16 18 04.4 -0.9**
KNGR pmax pmax
comp=Z,41nm,1.1s
APA Apatity 57.51 355 *e*P **P** **16 18 04.8 -1.0**
APA *e* 16 18 57.0
APA *e* 16 27 55.1
APA pmax pmax
comp=Z,12nm,1.0s
SGF Sodankyl 57.90 358 P **P** **16 18 08.9 +0.5**
SGF Sodankyl 57.90 358 P **P** **16 18 08.9 +0.5**
FAUS Fauske 57.91 3 *e*P **P** **16 18 08.6 +0.1**
FAUS IAmb IAmb 16 18 09.4
comp=Z,25nm,0.8s
HHC Hu-ho-hao-te 57.95 296 *e*P **P** **16 18 09.8 +0.4**
HHC pmax pmax
comp=Z,30nm,0.8s
HHC pmax pmax
comp=Z,73nm,4.3s
HHC L L
comp=Z,170nm,16.0s
HHC L L
comp=Z,270nm,17.7s
HHC L L
comp=Z,300nm,18.5s
TIA Tai'an 58.39 289 P **P** **16 18 12.0 -0.4**
TIA pmax pmax
comp=Z,20nm,1.0s
TIA L L
comp=Z,260nm,18.4s
TIA L L
comp=Z,330nm,22.6s
TIA L L
comp=Z,490nm,18.8s
TLIG Tlapa 58.48 105 IAmb IAmb 16 18 15.8
comp=Z,16nm,0.8s
VAGH Vaagaholmen 58.49 4 *e*P **P** **16 18 13.2 +0.5**
VAGH IAmb IAmb 16 18 13.5
comp=Z,15nm,0.8s
KONS Konsvik 58.72 4 *e*P **P** **16 18 14.4 +0.2**
KONS IAmb IAmb 16 18 19.2
comp=Z,17nm,0.9s
RAUS Rausandaksla 58.82 4 *e*P **P** **16 18 15.2 +0.3**
RAUS IAmb IAmb 16 18 15.8
comp=Z,50nm,1.1s
HNS HongShan 58.83 292 ⇑P **P** **16 18 16.0 +0.6**
HNS pmax pmax
comp=Z,110nm,0.9s
HNS L L
comp=Z,330nm,16.8s
HNS L L
comp=Z,290nm,16.2s

HNS L L
comp=Z,350nm,16.7s
STOK Stokkvaagen 58.88 4 *e*P **P 16 18 15.5 +0.2**
STOK IAmb IAmb 16 18 16.5
comp=Z,26nm,0.9s
BTO2 Baotou 58.89 298 *e*P **P 16 18 15.5 -0.5**
BTO2 pP **pP 16 18 20.3 -2.2**
BTO2 sP **sP 16 18 22.8 -2.2**
BTO2 pmax pmax
comp=Z,66nm,1.0s
BTO2 pmax pmax
comp=Z,360nm,7.6s
BTO2 L L
comp=Z,640nm,19.0s
BTO2 L L
comp=Z,720nm,16.7s
BTO2 L L
comp=Z,1μm,19.7s
MOR8 Moi Rana 59.10 3 *e*P **P 16 18 16.2 -0.7**
MOR8 IAmb IAmb 16 18 16.6
comp=Z,22nm,0.9s
LEIR Leirfjorden 59.11 4 *e*P **P 16 18 17.5 +0.6**
LEIR IAmb IAmb 16 18 18.0
comp=Z,30nm,1.2s
JOW Kunigami 59.11 273 LR LR 16 42 07.3
comp=Z,79nm,21.9s,baz=22,slow=34
MSF Maaselka 59.36 357 P **P 16 18 19.1 +0.4**
MSF Maaselka 59.36 357 P **P 16 18 19.1 +0.4**
ZAA0 Zalesovo Array 59.72 322 P **P 16 18 20.9 -0.5**
ZAA0 IAmb IAmb 16 18 35.2
comp=Z,12nm,0.8s
ZAA0 PcP **PcP 16 19 07.6 -0.5**
ZALV Zalesovo Beam 59.72 322 P **P 16 18 21.3 -0.1**
comp=Z,5.6nm,0.5s,baz=38,slow=6.1,SNR=40
ZALV PcP **PcP 16 19 08.6 +0.6**
comp=Z,9.3nm,0.7s,baz=42,slow=4.2,SNR=5.5
ZALV LR LR 16 46 12.4
comp=Z,932nm,19.1s,baz=30,slow=38
comp=Z,5.6nm,0.5s
ZALV Zalesovo Beam 59.72 322 P **P 16 18 21.0 -0.3**
ZALV PcP **PcP 16 19 08.0 -0.1**
GUMO Guam 60.18 250 LR LR 16 40 53.5
comp=Z,67nm,21.9s,baz=93,slow=32
OUL Oulu 60.27 358 P **P 16 18 25.2 +0.3**
OUL Oulu 60.27 358 P **P 16 18 25.2 +0.3**
NJ2 Nanjing 60.53 285 ⇑P **P 16 18 26.5 -0.7**
NJ2 pmax pmax
comp=Z,40nm,0.6s
NJ2 L L
comp=Z,890nm,21.3s
NJ2 L L
comp=Z,640nm,21.8s
NJ2 L L
comp=Z,930nm,16.7s
NSS Namsos 60.63 5 *e*P **P 16 18 27.8 +0.4**
NSS IAmb IAmb 16 18 28.3
comp=Z,34nm,1.0s
ADZR Andozero 60.79 352 *e*P **P 16 18 27.4 -1.0**
ADZR pmax pmax
comp=Z,49nm,0.6s
CMIG Matias Romero 60.92 102 LR LR 16 42 24.8
comp=Z,229nm,21.2s,baz=305,slow=34
LYN LuoYang 62.16 291 P **P 16 18 38.5 +0.3**
LYN pmax pmax
comp=Z,90nm,0.8s
LYN L L
comp=Z,410nm,22.0s
LYN L L
comp=Z,280nm,19.2s
LYN L L
comp=Z,480nm,18.2s
DGZ Jazzator, Alta 62.18 318 *i* P **P 16 18 37.9 -0.4**
DGZ pmax pmax
comp=Z,13nm,0.8s
MOL Molde 62.31 7 *e*P **P 16 18 39.5 +0.7**
MOL IAmb IAmb 16 18 51.3
comp=Z,23nm,1.1s
AKN Aaknes 62.66 8 *e*P **P 16 18 41.9 +0.7**
AKN IAmb IAmb 16 18 42.8
comp=Z,38nm,0.8s
DOMB Dombas 62.95 7 *e*P **P 16 18 43.4 +0.3**
DOMB IAmb IAmb 16 18 43.5
comp=Z,14nm,0.7s
FOO Floro 63.07 9 *e*P **P 16 18 44.2 +0.4**
FOO IAmb IAmb 16 18 45.3
comp=Z,20nm,0.9s
KLMR Klimovskoe 63.70 350 *e*P **P 16 18 46.3 -1.7**
KLMR pmax pmax
comp=Z,68nm,1.0s
NC204 NORSAR Array S 63.81 6 P **P 16 18 49.1 +0.3**
FINES FINESS Array B 63.92 358 P **P 16 18 49.4 -0.1**
comp=Z,26nm,0.7s,baz=7.4,slow=8.4,SNR=89
comp=Z,26nm,0.7s
FINES FINESS Array B 63.92 358 P **P 16 18 49.3 -0.2**
NB2 NORSAR Subarra 64.08 6 P **P 16 18 50.7 +0.1**
comp=Z,12nm,0.7s,baz=353,slow=6.9
NB2 NORSAR Subarra 64.08 6 P **P 16 18 50.7 +0.1**
NOA NORSAR Array B 64.08 6 P **P 16 18 50.9 +0.3**
comp=Z,10nm,0.7s,baz=354,slow=6.6,SNR=33
NOA LR LR 16 49 29.8
comp=Z,92nm,18.1s,baz=350,slow=39
comp=Z,10nm,0.7s
WHN Wuhan 64.18 287 P **P 16 18 52.5 +0.9**
ASK Askoy 64.19 9 *e*P P 16 18 46.4 -4.8
SVE Sverdlovsk 64.20 337 *de*P **P 16 18 51.6 +0.2**
SVE pmax pmax
comp=Z,44nm,0.8s
SKAR Skarslia 64.24 7 *e*P **P 16 18 52.5 +0.8**
SKAR IAmb IAmb 16 18 53.4
comp=Z,22nm,0.8s
NC602 NORSAR Array S 64.40 6 *e*P **P 16 18 52.9 +0.3**
XAN Xi'an 64.44 293 ⇑P **P 16 18 53.0 -0.4**
XAN pP pP 16 18 59.5 -0.5
XAN pmax pmax
comp=Z,41nm,1.1s
KURK Kurchatov 64.54 324 *ce*P **P 16 18 54.1 +0.4**
KURK pmax pmax
comp=Z,2.0nm,0.2s
KURK Kurchatov 64.54 324 P **P 16 18 53.6 -0.1**
KURK Kurchatov 64.54 324 P **P 16 18 53.9 +0.2**
KURK Kurchatov 64.54 324 P **P 16 18 54.0 +0.2**
KURBB Kurchatov Arra 64.65 324 P **P 16 18 54.5 0.0**
comp=Z,8.8nm,0.5s,baz=24,slow=6.4,SNR=82
KURBB PP **PP 16 21 10.7 -5.5**
comp=Z,3.3nm,0.9s,baz=46,slow=10,SNR=4.8
KURBB LR LR 16 51 00.1
comp=Z,159nm,19.0s,baz=142,slow=40
comp=Z,8.8nm,0.5s
KIRV Kirov 64.67 344 LR LR 16 52 14.9
comp=Z,416nm,18.1s,baz=14,slow=41
KIRV Kirov 64.67 344 *c i*P **P 16 18 53.8 -0.6**
GTA2 Gaotai 64.89 303 P **P 16 18 56.0 -0.3**
GTA2 sP pP 16 19 04.0 +1.1
GTA2 pmax pmax
comp=Z,44nm,1.0s
GTA2 pmax pmax
comp=Z,190nm,5.4s
GTA2 L L
comp=Z,450nm,17.1s
GTA2 L L
comp=Z,240nm,17.5s
GTA2 L L
comp=Z,720nm,18.7s
ZSN Zaisan 65.00 318 *c i*P **P 16 18 57.1 +0.3**
ZSN pmax pmax
comp=Z,21nm,0.8s
ZSN Zaisan 65.00 318 ⇑*i*P **P 16 18 57.2 +0.3**
comp=Z,21nm,0.8s
ARTI Arti 65.10 339 LR LR 16 50 35.0
comp=Z,338nm,19.7s,baz=21,slow=39
ARTI Arti 65.10 339 *c i*P **P 16 18 56.5 -0.7**
ARTI 16 19 29.2
ARTI 16 21 16.6
ARTI S **S 16 27 39.6 +1.4**
ARTI pmax pmax
comp=Z,55nm,0.7s
ARTI MLR MLR
comp=Z,348nm,19.0s
ARTI Arti 65.10 339 P **P 16 18 56.8 -0.4**
ARTI Arti 65.10 339 P **P 16 18 57.6 +0.4**
HFS Hagfors 65.11 4 P **P 16 18 57.6 +0.3**
comp=Z,16nm,0.6s,baz=0.0,slow=7.1,SNR=54
HFS LR LR 16 49 58.9
comp=Z,39nm,18.1s,baz=352,slow=38
comp=Z,16nm,0.6s
BVAR Borovoye Array 65.14 330 P **P 16 18 57.8 +0.2**
comp=Z,21nm,0.6s,baz=35,slow=7.2,SNR=81
BVAR PcP **PcP 16 19 31.1 +1.0**
comp=Z,22nm,0.7s,baz=42,slow=3.5,SNR=8.9
comp=Z,21nm,0.6s
LINV Loch Inver, As 65.20 15 *e*P **P 16 18 58.7 +0.9**
LINV IAmb IAmb 16 19 00.6
comp=Z,19nm,1.2s
BLS5 Blasjo 65.34 9 *e*P **P 16 19 00.0 +1.2**
BLS5 IAmb IAmb 16 19 00.7
comp=Z,33nm,0.9s
KONO Kongsberg 65.36 7 P **P 16 18 58.6 -0.3**
KONO pmax pmax
comp=Z,66nm,1.5s
KONO Kongsberg 65.36 7 *e*P **P 16 18 58.9 0.0**
KONO Kongsberg 65.36 7 P **P 16 18 58.6 -0.3**
KONO Kongsberg 65.36 7 P **P 16 18 58.5 -0.4**
KONO P **sP 16 19 09.1 +1.2**
LZH Lanzhou 65.50 298 *e*P **P 16 19 00.8 +0.4**
LZH sP sP 16 19 08.5 -0.9
LZH pmax pmax
comp=Z,50nm,1.3s
LZH pmax pmax
comp=Z,200nm,4.4s
LZH L L
comp=Z,370nm,13.7s
LZH L L
comp=Z,370nm,13.4s
LZH L L
comp=Z,490nm,14.8s
SSLB Suanglung 65.66 277 P **P 16 19 00.1 -1.3**
SSLB Suanglung 65.66 277 P **P 16 19 01.2 -0.2**
LZDM Lanzhou Array 65.68 298 P **P 16 19 01.5 -0.3**
comp=Z,4.4nm,0.4s,baz=36,slow=7.3,SNR=4.6
comp=Z,4.4nm,0.4s
YULB Yu-li 65.77 277 P **P 16 19 00.9 -1.2**
YULB IAmb IAmb 16 19 15.1
comp=Z,16nm,0.8s
ARBE Arbavere 65.94 358 P **P 16 19 03.2 +0.6**
MCD Coleburn Disti 66.03 14 *e*P **P 16 19 03.7 +0.5**
MCD IAmb IAmb 16 19 07.6
comp=Z,23nm,0.9s
MK31 Makanchi Array 66.53 319 *ce*P **P 16 19 06.2 -0.5**
MKAR Makanchi Array 66.53 319 P **P 16 19 06.3 -0.4**
comp=Z,16nm,0.7s,baz=44,slow=6.1,SNR=146
MKAR LR LR 16 50 40.6
comp=Z,695nm,18.9s,baz=23,slow=38
comp=Z,16nm,0.7s
MKAR Makanchi Array 66.53 319 P **P 16 19 06.2 -0.5**
MAKZ Makanchi 66.63 319 P **P 16 19 07.0 -0.3**
MAKZ Makanchi 66.63 319 P **P 16 19 06.9 -0.3**
MAKZ Makanchi 66.63 319 P **P 16 19 07.1 -0.3**
MAKZ Makanchi 66.63 319 P **P 16 19 07.2 -0.2**
DRUM Mains of Drumt 66.79 14 P **P 16 19 09.1 +1.0**
DRUM Mains of Drumt 66.79 14 *e*P **P 16 19 08.9 +0.8**
DRUM IAmb IAmb 16 19 09.6
comp=Z,61nm,0.5s
WMQ Urumqi 66.85 314 ⇑P **P 16 19 09.5 +0.7**
WMQ sP sP 16 19 18.5 +0.7
WMQ PcP **PcP 16 19 38.5 +1.0**
WMQ pmax pmax
comp=Z,33nm,0.9s
WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ L L
comp=Z,390nm,21.9s
WMQ L L
comp=Z,350nm,20.3s
WMQ L L
comp=Z,490nm,21.9s
VSU Vasula 66.89 357 *c i*P **P 16 19 08.1 -0.6**
VSU pmax pmax
comp=Z,69nm,0.9s
VSU Vasula 66.89 357 P **P 16 19 08.3 -0.4**
LAWE Loch Awe, Argy 66.98 16 *e*P **P 16 19 09.7 +0.3**
LAWE IAmb IAmb 16 19 10.9
comp=Z,14nm,0.7s
INVG Invergeldie, C 67.03 15 *e*P **P 16 19 09.9 +0.3**
INVG IAmb IAmb 16 19 11.2
comp=Z,9.6nm,0.8s
ENH Enshi 67.05 290 P **P 16 19 09.2 -1.0**
ENH Enshi 67.05 290 P **P 16 19 10.1 -0.1**
EAB Aberfoyle 67.22 15 *e*P **P 16 19 11.2 +0.4**
EAB IAmb IAmb 16 19 12.6
comp=Z,19nm,0.7s
ONAU Onsala 67.75 6 *i* P **P 16 19 14.8 +0.7**
IDGL Inch Island, C 67.76 18 *e*P **P 16 19 15.6 +1.3**
IDGL IAmb IAmb 16 19 16.5
comp=Z,16nm,0.7s
EKA Eskdalemuir Ar 68.22 15 P **P 16 19 18.0 +0.8**
comp=Z,13nm,0.6s,baz=334,slow=4.9,SNR=57
EKA LR LR 16 48 49.1
comp=Z,156nm,21.0s,baz=342,slow=36
comp=Z,13nm,0.6s
ESK Eskdalemuir 68.23 15 *e*P **P 16 19 18.0 +0.7**
ESK IAmb IAmb 16 19 18.9
comp=Z,9.7nm,0.7s
GAL1 Galloway 68.43 16 *e*P **P 16 19 19.2 +0.7**
GAL1 IAmb IAmb 16 19 20.3
comp=Z,26nm,0.8s
DEL Delary 68.78 5 *i* P **P 16 19 21.1 +0.5**
EDMD Edmundbyers 68.88 14 *e*P **P 16 19 22.0 +0.7**
EDMD IAmb IAmb 16 19 23.0
comp=Z,9.5nm,0.8s
MOS Moscow 68.93 350 *e*P **P 16 19 21.7 +0.1**
MOS *e* 16 21 52.8
MOS pmax pmax
comp=Z,32nm,0.7s
BLEU Blekinge 69.02 4 *i* P **P 16 19 22.3 +0.1**
BJUU Bjuv 69.13 5 *i* P **P 16 19 23.6 +0.8**
TDK Taldyqorghan 69.48 321 *e*P **P 16 19 25.8 +0.5**
TDK Taldyqorghan 69.48 321 *e*P **P 16 19 25.8 +0.5**
SSRD Sdr. Stenderup 69.51 7 *i* P **P 16 19 26.6 +1.5**
SSRD IAmb IAmb 16 19 28.2
comp=Z,167nm,0.8s
LUNU Lund 69.59 5 *i* P **P 16 19 26.3 +0.6**
CD2 Chengdu 69.61 295 P **P 16 19 26.8 +0.5**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 L L
comp=Z,450nm,12.7s
CD2 L L
comp=Z,330nm,15.2s
CD2 L L
comp=Z,420nm,13.3s
OBN Obninsk 69.65 351 ⇓P **P 16 19 25.4 -0.6**
OBN Obninsk 69.65 351 *c i*P **P 16 19 25.6 -0.4**
OBN *e**SP **pP 16 19 31.6 -1.0**
OBN *i* 16 19 48.6
OBN *eS* **S 16 28 25.7 -7.1**
OBN SS **SS 16 33 02.0 +2.3**
OBN pmax pmax
comp=Z,48nm,1.0s
OBN MLR MLR
comp=Z,149nm,18.0s
OBN Obninsk 69.65 351 P **P 16 19 25.6 -0.4**
OBN Obninsk 69.65 351 P **P 16 19 25.6 -0.4**
comp=Z,657nmcomp=Z,69nm,0.9s
OBN Obninsk 69.65 351 P **P 16 19 25.9 -0.1**
GOMU GeErMu 69.87 304 P **P 16 19 28.0 -0.2**
GOMU pP pP 16 19 31.5 -3.3
GOMU sP sP 16 19 35.5 -1.7
GOMU S **S 16 28 37.5 +0.6**
GOMU pmax pmax
comp=Z,11nm,0.8s
GOMU L L
comp=Z,290nm,17.2s
GOMU L L
comp=Z,360nm,17.5s
GOMU L L
comp=Z,520nm,17.4s
PABE Paberze 69.91 359 P **P 16 19 27.7 +0.1**
PABE Paberze 69.91 359 P **P 16 19 28.4 +0.7**
BSD Bornholm Skovb 70.18 4 *e*P **P 16 19 30.9 +1.6**
BSD IAmb IAmb 16 19 34.9
comp=Z,39nm,1.0s
LBWR Ladybower, Pea 70.31 15 *e*P **P 16 19 30.8 +0.6**
LBWR IAmb IAmb 16 19 33.1
comp=Z,17nm,0.8s
NACGM Naroch 70.45 357 *e*P **P 16 19 30.8 -0.2**
PDGK Podgornoye 70.52 319 P **P 16 19 31.9 +0.1**
PDGK Podgornoye 70.52 319 P **P 16 19 31.9 +0.1**
FOEL Foel Wylfa 70.58 16 P **P 16 19 33.0 +1.2**
FOEL Foel Wylfa 70.58 16 *e*P **P 16 19 32.8 +1.0**
FOEL IAmb IAmb 16 19 34.5
comp=Z,29nm,0.8s
SHLS Shalkode 70.67 319 *e*P **P 16 19 32.1 -0.6**
SHLS pmax pmax
comp=Z,25nm,0.8s
SHLS Shalkode 70.67 319 *e*P **P 16 19 32.2 -0.6**
comp=Z,25nm,0.8s
KPKS Kokpek 70.70 320 *e*P **P 16 19 33.4 +0.6**
KPKS Kokpek 70.70 320 *e*P **P 16 19 33.4 +0.6**
AKTO Aktyubinsk 70.72 336 LR LR 16 54 14.9
comp=Z,258nm,20.1s,baz=30,slow=39
MNK Minsk 70.82 356 *i* P **P 16 19 33.5 +0.2**
comp=E,25nm,0.8s
MNK *i* P **P 16 19 33.5 +0.2**
comp=N,12nm,0.6s
MNK *i* P **P 16 19 33.5 +0.2**
comp=Z,59nm,0.9s,baz=3.9
MNK *i* PcP **PcP 16 19 54.2 +0.4**
MNK *i* PP **PP 16 22 10.4 +1.0**
MNK *i* PPP PPP 16 23 52.7
MNK *i* S **S 16 28 49.2 +2.6**
MNK *i* SS **SS 16 33 17.4 -0.3**
MNK *i* SSS SSS 16 36 39.5
MNK *i* LQ LQ 16 45 28.8
MNK *i* LR LR 16 51 05.0
MNK *i* LRM MLR 16 53 38.5
comp=Z,125nm,20.6s
MNK *i* LRM MLR 16 53 55.2
comp=N,280nm,20.7s
MNK *i* LRM MLR 16 53 58.1
comp=E,182nm,20.7s
MNK Minsk 70.82 356 *i* P **P 16 19 33.4 +0.2**
MNK *i* 16 19 54.2
MNK *i* 16 22 10.3
MNK *i* PPP PPP 16 23 52.6
MNK *i* S **S 16 28 49.1 +2.6**
MNK *i* SS **SS 16 33 17.4 -0.3**
MNK pmax pmax
comp=N,12nm,0.6s
MNK pmax pmax
comp=E,25nm,0.8s
MNK pmax pmax
comp=Z,59nm,0.9s
MNK MLR MLR
comp=Z,125nm,21.0s
MNK MLR MLR
comp=N,280nm,21.0s
MNK MLR MLR
comp=E,182nm,21.0s
UZB Uzynbulak 70.85 319 *c i*P **P 16 19 34.2 +0.4**
UZB Uzynbulak 70.85 319 ⇑*i*P **P 16 19 34.2 +0.4**
BELG Belogornoye 70.91 344 LR LR 16 54 33.6
comp=E,314nm,19.0s,baz=335,slow=39
BELG Belogornoye 70.91 344 *c i*P **P 16 19 33.7 -0.1**
BELG pmax pmax
comp=Z,19nm,0.9s
HLM1 Long Mynd 70.99 16 *e*P **P 16 19 35.3 +0.9**
HLM1 IAmb IAmb 16 19 37.7
comp=Z,5.8nm,0.7s
BTLS Baital 71.00 324 *e*P **P 16 19 35.0 +0.6**
BTLS Baital 71.00 324 *e*P **P 16 19 35.1 +0.6**
CWF Charnwood Fore 71.01 15 P **P 16 19 35.8 +1.4**
BSEG Bad Segeberg 71.09 7 P **P 16 19 35.0 +0.1**
BSEG Bad Segeberg 71.09 7 P **P 16 19 36.0 +1.1**
SATY Saty 71.15 320 *c i*P **P 16 19 36.0 +0.4**
SATY Saty 71.15 320 ⇑*i*P **P 16 19 36.1 +0.4**
KUU Kurty 71.19 322 *e*P **P 16 19 36.2 +0.5**
KUU Kurty 71.19 322 *e*P **P 16 19 36.3 +0.5**
RSBS Rosebush, Pemb 71.23 17 *e*P **P 16 19 36.5 +0.7**
RSBS IAmb IAmb 16 19 37.9
comp=Z,20nm,0.8s
WACR West Acre 71.29 13 P **P 16 19 35.5 -0.6**
AB31 Akbulak array 71.36 335 *i* P **P 16 19 36.8 +0.2**
AB31 pmax pmax
comp=Z,38nm,0.6s
AB31 Akbulak array 71.36 335 P **P 16 19 36.4 -0.1**
ABKAR Akbulak array 71.36 335 P **P 16 19 36.9 +0.3**
SUW Suwalki 71.42 359 *e*P **P 16 19 37.7 +0.8**
SUW Suwalki 71.42 359 P **P 16 19 36.7 -0.1**
SUW Suwalki 71.42 359 P **P 16 19 36.7 -0.1**
MCH1 Michaelchurch 71.47 16 *e*P **P 16 19 37.9 +0.7**
MCH1 IAmb IAmb 16 19 39.3
comp=Z,13nm,0.9s
MDOK Medeo 71.57 321 *e*P **P 16 19 38.5 +0.4**
MDOK Medeo 71.57 321 *e*P **P 16 19 38.6 +0.4**
AAA Alma-Ata 71.58 321 *e*P **P 16 19 38.5 +0.4**
AAA pmax pmax
comp=Z,33nm,1.1s
AAA Alma-Ata 71.58 321 *e*P **P 16 19 38.6 +0.4**
comp=Z,33nm,1.1s
GYA Guiyang 71.58 290 ⇓P **P 16 19 39.0 +0.6**
GYA pmax pmax
comp=Z,29nm,0.8s
PRZ Przheval'sk 71.65 319 P **P 16 19 39.1 +0.3**
PRZ pmax pmax
comp=Z,31nm,0.9s
PRZ Przheval'sk 71.65 319 P **P 16 19 39.0 +0.3**
PRZ Przheval'sk 71.65 319 P **P 16 19 40.3 +1.6**
MONM Monmouth 71.66 16 *e*P **P 16 19 39.2 +0.9**
MONM IAmb IAmb 16 19 43.9
comp=Z,9.5nm,0.8s
TNSS Tian-Shan 71.71 321 *e*P **P 16 19 39.4 +0.1**
TNSS Tian-Shan 71.71 321 *e*P **P 16 19 39.5 +0.1**
STRD Stroud 71.82 15 *e*P **P 16 19 40.3 +1.0**
STRD IAmb IAmb 16 19 41.2
comp=Z,22nm,0.7s
KRVT Keravat (AS076 71.87 233 LR LR 16 48 35.8
comp=Z,27nm,18.7s,baz=256,slow=34
LPSR Galich'ya Gora 71.89 349 *e*P **P 16 19 39.4 -0.3**
LPSR pmax pmax
comp=Z,66nm,0.9s
MANU Manus Island 72.12 239 P **P 16 19 40.7 -0.8**
MANU IAmb IAmb 16 19 42.1
comp=Z,16nm,0.7s
SGDS Sogindy 72.18 322 ⇑*i*P **P 16 19 42.3 +0.5**
RETH Rethem/Aller, 72.21 8 P **P 16 19 42.8 +1.2**
TKM2 Tokmak 2 72.30 321 P **P 16 19 43.5 +0.9**
SNR=36
USP Ospenovka 72.39 322 P **P 16 19 43.9 +0.9**
SNR=14
KDJ Kajisay 72.41 320 P **P 16 19 43.5 +0.2**
KDJ pmax pmax
comp=Z,34nm,1.0s
KDJ Kajisay 72.41 320 P **P 16 19 43.5 +0.2**
KDJ Kajisay 72.41 320 P **P 16 19 44.2 +0.9**
WUS Wushi 72.44 318 P **P 16 19 44.1 +0.6**
WUS Wushi 72.44 318 P **P 16 19 44.4 +0.9**
TARG Taragay, Kyrgy 72.53 319 P **P 16 19 45.5 +1.3**
TARG Taragay, Kyrgy 72.53 319 P **P 16 19 45.5 +1.3**
CHMS Chumysh 72.54 322 P **P 16 19 44.6 +0.7**
SNR=35
BOOM Boomskoye usch 72.55 321 P **P 16 19 44.8 +0.7**
BOOM Boomskoye usch 72.55 321 P **P 16 19 44.8 +0.7**
BOOM Boomskoye usch 72.55 321 P **P 16 19 45.3 +1.2**
PPT Papeete 72.58 171 LR LR 16 44 28.3
comp=Z,124nm,19.2s,baz=346,slow=30
ULHL Ulahol 72.66 321 P **P 16 19 45.5 +0.7**
SNR=12
WTSB Winterswijk 72.75 10 P **P 16 19 45.9 +1.1**
KBK Karagaybulak 72.77 322 P **P 16 19 46.5 +1.1**
SNR=26
VORR Voronezh 72.78 349 *e*P **P 16 19 44.7 -0.3**
VORR pmax pmax
comp=Z,30nm,0.4s
CCA1 Carnmenellis 72.85 18 *e*P **P 16 19 46.5 +0.9**
CCA1 IAmb IAmb 16 19 48.1
comp=Z,19nm,0.9s
ASSE Asse, Remlinge 72.91 7 P **P 16 19 47.3 +1.5**
VRH Novokhopyorsk 72.93 347 *e*P **P 16 19 45.3 -0.7**
VRH pmax pmax
comp=Z,47nm,0.6s
AAK Ala-Archa 72.94 322 LR LR 16 54 26.4
comp=Z,1μm,18.1s,baz=24,slow=38
AAK Ala-Archa 72.94 322 P **P 16 19 47.5 +1.0**
SNR=18
AAK Ala-Archa 72.94 322 *ce*P **P 16 19 47.3 +0.9**
AAK pmax pmax
comp=Z,35nm,0.8s
AAK Ala-Archa 72.94 322 P **P 16 19 47.1 +0.6**
AAK Ala-Archa 72.94 322 P **P 16 19 47.5 +1.0**
AAK Ala-Archa 72.94 322 P **P 16 19 47.6 +1.2**
HNR Honiara 73.05 223 LR LR 16 46 32.4
comp=Z,5.6nm,20.2s,baz=87,slow=31
EKS2 Erkin-Say 73.18 323 P **P 16 19 48.8 +1.0**
SNR=42
CLZ Clausthal 73.18 7 P P **16 19 49.2 +1.7**

VSR	**Storozhevoye**	**73.23**	**349**	*e*P	**P**	**16 19 47.4 -0.3**
VSR				pmax	pmax	
	comp=Z,59nm,0.5s					
BUG	**Bochum--Univer**	**73.32**	**9**	P	**P**	**16 19 49.1 +0.9**
BUG	**Bochum--Univer**	**73.32**	**9**	P	**P**	**16 19 49.1 +0.9**
GTTG	**Gottingen**	**73.44**	**8**	P	**P**	**16 19 49.7 +0.7**
NRN	**Naryn**	**73.45**	**320**	P	**P**	**16 19 50.8 +1.2**
NRN				pmax	pmax	
	comp=Z,43nm,1.1s					
NRN	**Naryn**	**73.45**	**320**	P	**P**	**16 19 50.8 +1.2**
VORD	**Divnogorie**	**73.46**	**349**	*e*P	**P**	**16 19 46.2 -2.9**
VORD				pmax	pmax	
	comp=Z,50nm,0.9s					
WIMM	**Wimmelburg**	**73.58**	**7**	P	**P**	**16 19 50.6 +0.9**
UCC	**Uccle**	**73.65**	**11**	P	**P**	**16 19 50.0 -0.2**
UCC	**Uccle**	**73.65**	**11**	*d*P	**P**	**16 19 50.7 +0.5**
UCC	**Uccle**	**73.65**	**11**	P	**P**	**16 19 51.0 +0.8**
HGN	**Heimansgroeve**	**73.85**	**10**	P	**P**	**16 19 52.7 +1.3**
CLL	**Collm**	**73.88**	**6**⇑	*i*P	**P**	**16 19 51.9 +0.3**
CLL				*i*		16 20 02.7
CLL				pmax	pmax	
	comp=Z,16nm,0.9s					
CLL	**Collm**	**73.88**	**6**	IAmb	IAmb	16 19 53.9
	comp=Z,14nm,0.8s					
CLL	**Collm**	**73.88**	**6**	P	**P**	**16 19 52.1 +0.5**
	comp=Z,19nm,0.9s					
CLL	**Collm**	**73.88**	**6**⇑	*i*P	**P**	**16 19 51.9 +0.3**
	comp=Z,16nm,0.9s					
CLL				*i* (sP)	**sP**	**16 20 02.7 +2.1**
CLL				AMS	AMS	16 58 00.0
	comp=N,200nm,19.9s					
CLL				AMS	AMS	16 58 00.0
	comp=E,100nm,20.5s					
CLL				AMS	AMS	16 58 00.0
	comp=Z,200nm,20.1s					
KK31	**Karatay Array**	**73.90**	**325**	*i* P	**P**	**16 19 52.1 +0.3**
KK31				pmax	pmax	
	comp=Z,47nm,0.7s					
KKAR	**Karatay Array**	**73.90**	**325**	P	**P**	**16 19 52.1 +0.3**
KKAR	**Karatay Array**	**73.90**	**325**	P	**P**	**16 19 52.1 +0.3**
NEUB	**Neuenburg**	**73.91**	**7**	P	**P**	**16 19 53.0 +1.3**
RNPP9	**Sopachiv**	**73.97**	**357**	P	**P**	**16 19 52.4 +0.3**
BSTI	**Sart Tilman**	**73.99**	**11**	*d*P	**P**	**16 19 53.2 +1.0**
MEM	**Membach**	**74.01**	**10**	P	**P**	**16 19 53.2 +0.9**
MEM	**Membach**	**74.01**	**10**	*d*P	**P**	**16 19 53.2 +0.9**
	comp=Z,12nm,0.8s					
MEM	**Membach**	**74.01**	**10**	P	**P**	**16 19 53.2 +0.9**
BTNL	**Ternell**	**74.05**	**10**	*d*P	**P**	**16 19 53.1 +0.5**
	comp=Z,6.4nm,0.8s					
RNPP8	**Varash**	**74.05**	**357**	P	**P**	**16 19 52.7 +0.2**
BCLA	**Clavier**	**74.13**	**11**	*d*P	**P**	**16 19 53.5 +0.5**
BCLA				*d*PcP	**PcP**	**16 20 08.0 0.0**
BGES	**Gesves**	**74.14**	**11**	*d*P	**P**	**16 19 53.7 +0.6**
	comp=Z,9.2nm,1.0s					
PZH	**PanZhiHua**	**74.18**	**293**	P	**P**	**16 19 54.0 +0.1**
PZH				pmax	pmax	
	comp=Z,40nm,1.0s					
BMRD	**Maredsous**	**74.18**	**11**	*d*P	**P**	**16 19 54.1 +0.8**
	comp=Z,17nm,0.9s					
BRLS	**Boroldav**	**74.19**	**325**	*e*P	**P**	**16 19 55.2 +1.7**
BRLS	**Boroldav**	**74.19**	**325**	*e*P	**P**	**16 19 55.3 +1.7**
JSA	**Saint Aubin**	**74.33**	**16**	*e*P	**P**	**16 19 54.7 +0.5**
JSA				IAmb	IAmb	16 19 55.8
	comp=Z,24nm,0.7s					
BAIF	**Baives**	**74.36**	**12**	*e*P	**P**	**16 19 54.9 +0.5**
BAIF				pmax	pmax	
	comp=Z,15nm,0.7s					
DOU	**Dourbes**	**74.37**	**11**	*d*P	**P**	**16 19 55.0 +0.6**
	comp=Z,11nm,0.9s					
BRG	**Berggiesshubel**	**74.37**	**5**	P	**P**	**16 19 55.2 +0.8**
BRG	**Berggiesshubel**	**74.37**	**5**	P	**P**	**16 19 55.2 +0.8**
BRG	**Berggiesshubel**	**74.37**	**5**	*e*P	**P**	**16 19 55.0 +0.6**
BRG				Amp		16 19 56.8
	comp=Z,16nm,1.0s					
BRG	**Berggiesshubel**	**74.37**	**5**	S	**S**	**16 29 30.0 +2.7**
RCHB	**Rochefort**	**74.38**	**11**	*d*P	**P**	**16 19 55.1 +0.7**
	comp=Z,9.4nm,1.0s					
RCHB	**Rochefort**	**74.38**	**11**	P	**P**	**16 19 55.3 +0.9**
GIVF	**Givet**	**74.39**	**11**	*e*P	**P**	**16 19 54.9 +0.4**
GIVF				pmax	pmax	
	comp=Z,17nm,1.1s					
MI28	**Mi28,Pidlybu**	**74.40**	**356**	P	**P**	**16 19 53.7 -0.9**
MOX	**Moxa**	**74.46**	**7**	P	**P**	**16 19 55.8 +0.8**
MOX	**Moxa**	**74.46**	**7**	P	**P**	**16 19 55.8 +0.8**
AK21	**Malin Array Si**	**74.49**	**355**	P	**P**	**16 19 54.9 -0.2**
AK23	**Malin Array Si**	**74.50**	**355**	P	**P**	**16 19 55.0 -0.2**
KSP	**Ksiaz**	**74.50**	**4**	*e*P	**P**	**16 19 56.6 +1.4**
KSP	**Ksiaz**	**74.50**	**4**	P	**P**	**16 19 55.8 +0.6**
	comp=Z,18nm,1.0s					
AK04	**Malin Array Si**	**74.54**	**355**	P	**P**	**16 19 55.0 -0.4**
AKASG	**Malin Array Be**	**74.56**	**355**	P	**P**	**16 19 55.3 -0.2**
	comp=Z,40nm,0.6s,baz=9.0,slow=5.9,SNR=40					
AKASG				LR	LR	16 56 24.4
	comp=Z,136nm,19.0s,baz=10,slow=39					
	comp=Z,40nm,0.6s					
AKASG	**Malin Array Be**	**74.56**	**355**	P	**P**	**16 19 55.0 -0.5**
AKBB	**Malin Array Si**	**74.56**	**355**	*ce*P	**P**	**16 19 55.2 -0.2**
AKBB				pmax	pmax	
	comp=Z,60nm,0.7s					
AKBB	**Malin Array Si**	**74.56**	**355**	P	**P**	**16 19 55.3 -0.2**
KIEV	**Kiev**	**74.56**	**355**	⇓P	**P**	**16 19 55.3 -0.3**
KIEV	**Kiev**	**74.56**	**355**	P	**P**	**16 19 55.2 -0.3**
KIEV	**Kiev**	**74.56**	**355**	P	**P**	**16 19 55.3 -0.3**
KIEV	**Kiev**	**74.56**	**355**	P	**P**	**16 19 55.3 -0.3**
	comp=Z,3μmcomp=Z,362nm,1.3s					
KIEV	**Kiev**	**74.56**	**355**	P	**P**	**16 19 55.5 0.0**
KIEV	**Kiev**	**74.56**	**355**	P	**P**	**16 19 55.4 -0.1**
AK01	**Malin Array Si**	**74.57**	**355**	P	**P**	**16 19 55.2 -0.3**
ARK	**Arkit**	**74.57**	**323**	P	**P**	**16 19 56.7 +0.8**
ARK	**Arkit**	**74.57**	**323**	P	**P**	**16 19 56.7 +0.8**
HSKC	**Hora Svate Kat**	**74.61**	**5**	*e*P	**P**	**16 19 56.8 +1.0**
HSKC				AMS	AMS	16 58 30.0
	comp=Z,100nm,17.7s					
HSKC	**Hora Svate Kat**	**74.61**	**5**	P	**P**	**16 19 56.9 +1.0**
TNS	**Taunus Mts**	**74.63**	**9**	P	**P**	**16 19 57.1 +1.0**
TNS	**Taunus Mts**	**74.63**	**9**	P	**P**	**16 19 57.0 +1.0**
RICC	**Richard**	**74.70**	**5**	*e*P	**P**	**16 19 58.2 +1.8**
KMI2	**Kunming**	**74.73**	**292**	P	**P**	**16 20 00.5 +3.3**
KMI2				pmax	pmax	
	comp=Z,12nm,0.7s					
KMI2				pmax	pmax	
	comp=Z,140nm,8.4s					
KMI2				L	L	
	comp=Z,240nm,17.2s					
KMI2				L	L	
	comp=Z,280nm,15.1s					
KMI2				L	L	
	comp=Z,320nm,24.4s					
TANN	**Tannenbergstha**	**74.74**	**6**	P	**P**	**16 19 57.6 +1.0**
PVCC	**Panska Ves**	**74.74**	**5**	*e*P	**P**	**16 19 58.0 +1.4**
PVCC	**Panska Ves**	**74.74**	**5**	*e*P	**P**	**16 19 58.0 +1.4**
PVCC	**Panska Ves**	**74.74**	**5**	P	**P**	**16 19 57.7 +1.1**
OSTC	**Ostas**	**74.78**	**4**	*e*P	**P**	**16 19 57.9 +1.0**
OSTC	**Ostas**	**74.78**	**4**	*e*P	**P**	**16 19 57.9 +1.0**
UPC	**Upice**	**74.83**	**4**	P	**P**	**16 19 58.1 +1.0**
UPC	**Upice**	**74.83**	**4**	P	**P**	**16 19 58.1 +1.0**
CHM	**Chimkent**	**74.90**	**325**	*e*P	**P**	**16 19 58.1 +0.5**
CHM				pmax	pmax	
	comp=Z,24nm,0.5s					
CHM	**Chimkent**	**74.90**	**325**	*e*P	**P**	**16 19 58.2 +0.5**
	comp=Z,24nm,0.5s					
IUG	**Iuzhnay**	**74.91**	**325**	*c i*P	**P**	**16 19 58.3 +0.5**
IUG				pmax	pmax	
	comp=Z,38nm,0.7s					
IUG	**Iuzhnay**	**74.91**	**325**⇑	*i*P	**P**	**16 19 58.4 +0.5**
	comp=Z,38nm,0.7s					
NKC	**Novy Kostel**	**74.92**	**6**	P	**P**	**16 19 58.7 +1.0**
NKC	**Novy Kostel**	**74.92**	**6**	AMS	AMS	16 58 20.0
	comp=Z,200nm,24.4s					
NKC	**Novy Kostel**	**74.92**	**6**	P	**P**	**16 19 58.7 +1.0**
WLF	**Walferdange**	**74.96**	**10**	IAmb	IAmb	16 20 00.2
	comp=Z,22nm,1.0s					
WLF	**Walferdange**	**74.96**	**10**	*d*P	**P**	**16 19 59.1 +1.2**
	comp=Z,14nm,0.9s					
WLF	**Walferdange**	**74.96**	**10**	P	**P**	**16 19 59.4 +1.5**
ROSF	**Rostrenen**	**74.97**	**17**	*e*P	**P**	**16 19 59.5 +1.5**
ROSF				pmax	pmax	
	comp=Z,9.0nm,0.8s					
DPC	**Dobruska-Polom**	**74.99**	**4**	*e*P	**P**	**16 19 59.3 +1.2**
DPC				*e*		16 20 08.4
DPC				MLR	MLR	
	comp=Z,100nm,16.7s					
DPC	**Dobruska-Polom**	**74.99**	**4**	*e*P	**P**	**16 19 59.3 +1.2**
DPC				*ex*	x	16 20 08.4
DPC				AMS	AMS	16 57 50.0
	comp=Z,100nm,16.7s					
DPC	**Dobruska-Polom**	**74.99**	**4**	P	**P**	**16 19 58.9 +0.8**
	comp=Z,19nm,1.0s					
DPC	**Dobruska-Polom**	**74.99**	**4**	P	**P**	**16 19 59.3 +1.2**
FLN	**La Foliniere**	**75.00**	**15**	*e*P	**P**	**16 19 58.1 0.0**
FLN				pmax	pmax	
	comp=Z,14nm,0.8s					
TRKS	**Terek-Say**	**75.09**	**324**	P	**P**	**16 19 59.9 +0.9**
OJC	**Ojcow**	**75.21**	**1**	*e*P	**P**	**16 19 59.9 +0.5**
OJC	**Ojcow**	**75.21**	**1**	P	**P**	**16 19 59.8 +0.5**
OJC	**Ojcow**	**75.21**	**1**	P	**P**	**16 20 00.1 +0.8**
	comp=Z,18nm,1.1s					
OJC	**Ojcow**	**75.21**	**1**	P	**P**	**16 19 59.8 +0.5**
LDF	**La Druitiere**	**75.22**	**15**	*e*P	**P**	**16 19 59.4 0.0**
LDF				pmax	pmax	
	comp=Z,23nm,1.0s					
PRU	**Pruhonice**	**75.28**	**5**	*e*P	**P**	**16 20 00.6 +0.9**
PRU				MLR	MLR	
	comp=Z,100nm,16.7s					
PRU	**Pruhonice**	**75.28**	**5**	*e*P	**P**	**16 20 00.6 +0.9**
PRU				AMS	AMS	17 00 40.0
	comp=Z,100nm,16.7s					
PRU	**Pruhonice**	**75.28**	**5**	P	**P**	**16 20 00.7 +0.9**
KRLC	**Kraliky**	**75.28**	**3**	*e*P	**P**	**16 20 00.6 +0.8**
KRLC	**Kraliky**	**75.28**	**3**	*e*P	**P**	**16 20 00.6 +0.8**
KRLC	**Kraliky**	**75.28**	**3**	P	**P**	**16 20 00.8 +1.0**
GRR	**Gorron**	**75.31**	**15**	*e*P	**P**	**16 20 00.1 +0.2**
GRR				pmax	pmax	
	comp=Z,16nm,0.8s					
GRA3	**Grafenberg Arr**	**75.31**	**7**	P	**P**	**16 20 01.2 +1.3**
GRA1	**Grafenberg Arr**	**75.38**	**7**	P	**P**	**16 20 00.3 0.0**
GRA1				IAmb	IAmb	16 20 08.3
	comp=Z,12nm,0.7s					
GRA1	**Grafenberg Arr**	**75.38**	**7**	P	**P**	**16 20 01.5 +1.2**
GRF	**Grafenberg Arr**	**75.38**	**7**	P	**P**	**16 20 00.3 0.0**
GRF				pmax	pmax	
	comp=Z,13nm,0.7s					
GRFO	**Grafenberg**	**75.38**	**7**	P	**P**	**16 20 01.5 +1.2**
QUIF	**Quistinic**	**75.40**	**17**	*e*P	**P**	**16 19 59.9 -0.5**
QUIF				pmax	pmax	
	comp=Z,43nm,1.6s					
LUBAR	**Lubar, Ukraine**	**75.40**	**356**	P	**P**	**16 19 59.6 -0.8**
OHH	**Osh**	**75.41**	**322**	P	**P**	**16 20 00.2 -0.6**
OHH	**Osh**	**75.41**	**322**	P	**P**	**16 20 00.2 -0.6**
GRA2	**Grafenberg Arr**	**75.42**	**7**	P	**P**	**16 20 01.8 +1.3**
STEB	**Steborice**	**75.46**	**3**	*e*P	**P**	**16 20 01.6 +0.9**
OKC	**Ostrava-Krasne**	**75.56**	**2**	AMS	AMS	16 58 30.0
	comp=Z,200nm,19.1s					
OKC	**Ostrava-Krasne**	**75.56**	**2**	P	**P**	**16 20 02.3 +1.0**
MORC	**Moravsky Berou**	**75.61**	**3**	⇓P	**P**	**16 20 02.2 +0.6**
MORC	**Moravsky Berou**	**75.61**	**3**	P	**P**	**16 20 01.6 0.0**
MORC				pmax	pmax	
	comp=Z,9.0nm,0.9s					
MORC	**Moravsky Berou**	**75.61**	**3**	P	**P**	**16 20 01.6 0.0**
MORC	**Moravsky Berou**	**75.61**	**3**	*e*P	**P**	**16 20 02.1 +0.4**
MORC	**Moravsky Berou**	**75.61**	**3**	P	**P**	**16 20 02.4 +0.7**
KSH2	**Kashi**	**75.61**	**320**	P	**P**	**16 20 03.0 +1.0**
KSH2				PcP	**sP**	**16 20 11.8 +0.7**
KSH2				pmax	pmax	
	comp=Z,58nm,0.8s					
KSH2				L	L	
	comp=Z,760nm,17.9s					
KSH2				L	L	
	comp=Z,450nm,19.2s					
KSH2				L	L	
	comp=Z,1μm,20.3s					
GRB4	**Grafenberg Arr**	**75.62**	**7**	P	**P**	**16 20 02.9 +1.1**
GRB1	**Grafenberg Arr**	**75.71**	**7**	P	**P**	**16 20 03.4 +1.2**
GRB3	**Grafenberg Arr**	**75.77**	**7**	P	**P**	**16 20 03.7 +1.2**
KWP	**Kalwaria Pacla**	**75.81**	**359**	*e*P	**P**	**16 20 04.0 +1.2**
KWP	**Kalwaria Pacla**	**75.81**	**359**	P	**P**	**16 20 03.3 +0.5**
	comp=Z,41nm,0.9s					
ZVC	**Zvikov**	**75.81**	**5**	*e*P	**P**	**16 20 03.6 +0.8**
ZVC				*ex*	x	16 20 13.3
GRB2	**Grafenberg Arr**	**75.83**	**7**	P	**P**	**16 20 03.9 +1.0**
RAR	**Rarotonga**	**75.84**	**181**	LR	LR	16 47 52.5
	comp=Z,88nm,18.9s,baz=3.5,slow=31					
JAY	**Jayapura**	**75.90**	**244**	LR	LR	16 51 53.0
	comp=Z,61nm,19.4s,baz=22,slow=34					
TREC	**Trest**	**76.02**	**4**	P	**P**	**16 20 04.8 +0.8**
TREC	**Trest**	**76.02**	**4**	P	**P**	**16 20 04.8 +0.8**
NIE	**Niedzica**	**76.02**	**1**	*e*P	**P**	**16 20 04.3 +0.4**
NIE	**Niedzica**	**76.02**	**1**	P	**P**	**16 20 05.3 +1.3**
	comp=Z,8.1nm,1.1s					
MAUC	**Maruska**	**76.03**	**3**	*e*P	**P**	**16 20 05.3 +1.3**
STHS	**Stebnicka Huta**	**76.03**	**0**	*e*P	**P**	**16 20 05.1 +1.1**
STHS				pmax	pmax	
	comp=Z,24nm,0.7s					
STHS	**Stebnicka Huta**	**76.03**	**0**	*e*P	**P**	**16 20 05.1 +1.1**
WET	**Wettzell**	**76.03**	**6**	P	**P**	**16 20 05.1 +1.0**
VRAC	**Vranov**	**76.05**	**3**	⇓P	**P**	**16 20 05.1 +0.9**
VRAC	**Vranov**	**76.05**	**3**	P	**P**	**16 20 05.0 +0.9**
VRAC	**Vranov**	**76.05**	**3**	*e*P	**P**	**16 20 04.8 +0.7**
VRAC	**Vranov**	**76.05**	**3**	P	**P**	**16 20 05.1 +0.9**
KHC	**Kasperske Hory**	**76.09**	**6**	*c i*P	**P**	**16 20 05.5 +1.2**
KHC				pmax	pmax	
	comp=Z,23nm,1.1s					
KHC	**Kasperske Hory**	**76.09**	**6**	*e*P	**P**	**16 20 05.7 +1.3**
KHC				*ex*	x	16 20 20.0
KHC				AMS	AMS	16 59 30.0
	comp=Z,200nm,19.4s					
KHC	**Kasperske Hory**	**76.09**	**6**	IAmb	IAmb	16 20 06.7
	comp=Z,19nm,1.0s					
KHC	**Kasperske Hory**	**76.09**	**6**	P	**P**	**16 20 05.3 +0.9**
	comp=Z,22nm,1.0s					
KHC	**Kasperske Hory**	**76.09**	**6**	P	**P**	**16 20 05.6 +1.2**
CLF	**Chambon-Foret**	**76.11**	**13**	P	**P**	**16 20 06.0 +1.6**
CLF	**Chambon-Foret**	**76.11**	**13**	P	**P**	**16 20 05.8 +1.3**
CLF				pP	**PcP**	**16 20 15.4 -1.2**
GRC2	**Grafenberg Arr**	**76.21**	**7**	P	**P**	**16 20 05.3 +0.2**
LANS	**Liptovska Anna**	**76.28**	**2**	*e*P	**P**	**16 20 06.8 +1.3**
LANS	**Liptovska Anna**	**76.28**	**2**	*e*P	**P**	**16 20 06.8 +1.3**
KRUC	**Moravsky**	**76.28**	**4**	P	**P**	**16 20 05.7 +0.3**
KRUC	**Moravsky**	**76.28**	**4**	*e*P	**P**	**16 20 05.8 +0.3**
KRUC	**Moravsky**	**76.28**	**4**	P	**P**	**16 20 05.7 +0.3**
DAV	**Davao City (W)**	**76.30**	**263**	LR	LR	16 50 05.0
	comp=Z,112nm,21.9s,baz=3.0,slow=33					
CDF	**Champ du Feu**	**76.31**	**10**	*e*P	**P**	**16 20 06.0 +0.2**
CDF				pmax	pmax	
	comp=Z,13nm,0.9s					
GEC2	**GERESS Array S**	**76.38**	**5**	IAmb	IAmb	16 20 07.8
	comp=Z,8.8nm,0.8s					
GERES	**GERESS Array B**	**76.38**	**5**	P	**P**	**16 20 06.8 +0.7**
	comp=Z,6.7nm,0.7s,baz=343,slow=4.2,SNR=44					
	comp=Z,6.7nm,0.7s					
GERES	**GERESS Array B**	**76.38**	**5**	P	**P**	**16 20 06.3 +0.2**
GERES	**GERESS Array B**	**76.38**	**5**	P	**P**	**16 20 06.3 +0.2**
CKRC	**Cesky Krumlov**	**76.44**	**5**	*e*P	**P**	**16 20 07.2 +0.8**
CKRC				MLR	MLR	
	comp=Z,200nm,20.7s					
CKRC	**Cesky Krumlov**	**76.44**	**5**	*e*P	**P**	**16 20 07.2 +0.8**
CKRC				AMS	AMS	17 01 10.0
	comp=Z,200nm,20.7s					
BFO	**Black Forest**	**76.50**	**9**	P	**P**	**16 20 07.0 +0.3**
BFO				pmax	pmax	
	comp=Z,11nm,0.7s					
BFO	**Black Forest**	**76.50**	**9**	P	**P**	**16 20 07.0 +0.3**
BFO				IAmb	IAmb	16 20 08.2
	comp=Z,10nm,0.7s					
BFO	**Black Forest**	**76.50**	**9**	P	**P**	**16 20 07.5 +0.8**
ECH	**Echery**	**76.50**	**10**	P	**P**	**16 20 07.5 +0.8**
ECH	**Echery**	**76.50**	**10**	IAmb	IAmb	16 20 08.4
	comp=Z,17nm,0.8s					
ECH	**Echery**	**76.50**	**10**	P	**P**	**16 20 07.5 +0.8**
ECH	**Echery**	**76.50**	**10**	P	**P**	**16 20 07.7 +0.9**
ECH				pP	**PcP**	**16 20 17.2 -1.1**
KOLS	**Kolonicke sedl**	**76.51**	**360**	*e*P	**P**	**16 20 08.1 +1.3**
KOLS				pmax	pmax	
	comp=Z,13nm,0.8s					
KOLS	**Kolonicke sedl**	**76.51**	**360**	P	**P**	**16 20 08.3 +1.6**
KOLS	**Kolonicke sedl**	**76.51**	**360**	*e*P	**P**	**16 20 08.1 +1.3**
BTK	**Batken**	**76.51**	**323**	P	**P**	**16 20 07.6 +0.6**
BTK	**Batken**	**76.51**	**323**	P	**P**	**16 20 07.6 +0.6**
JAVC	**Velka Javorina**	**76.53**	**3**	*e*P	**P**	**16 20 08.6 +1.7**
JAVC	**Velka Javorina**	**76.53**	**3**	P	**P**	**16 20 09.0 +2.1**
HAU	**Haudompre**	**76.62**	**11**	*e*P	**P**	**16 20 07.6 +0.2**
HAU				pmax	pmax	
	comp=Z,17nm,0.8s					
DRK	**Karamyk**	**76.69**	**322**	P	**P**	**16 20 09.4 +1.1**
DRK	**Karamyk**	**76.69**	**322**	P	**P**	**16 20 09.4 +1.1**
KMPD	**K-Podol'skiy**	**76.81**	**357**	P	**P**	**16 20 08.1 -0.3**
UZHM	**Uzhgorod**	**76.81**	**360**	P	**P**	**16 20 09.2 +0.8**
VYHS	**Vyhne**	**76.92**	**2**	*e*P	**P**	**16 20 10.2 +1.1**
VYHS				pmax	pmax	
	comp=Z,22nm,1.3s					
VYHS	**Vyhne**	**76.92**	**2**	P	**P**	**16 20 10.4 +1.3**
VYHS	**Vyhne**	**76.92**	**2**	*e*P	**P**	**16 20 10.2 +1.1**
LSA	**Lhasa**	**76.94**	**303**	P	**P**	**16 20 09.6 -0.5**
LSA				pmax	pmax	
	comp=Z,20nm,0.8s					
LSA	**Lhasa**	**76.94**	**303**	P	**P**	**16 20 09.6 -0.5**
LSA				IAmb	IAmb	16 20 25.2
	comp=Z,20nm,0.8s					
LSA	**Lhasa**	**76.94**	**303**⇑	*i*P	**P**	**16 20 07.5 -2.6**
LSA				pmax	pmax	
	comp=Z,16nm,0.8s					
LSA	**Lhasa**	**76.94**	**303**	P	**P**	**16 20 11.3 +1.2**
MODS	**Modra-Piesok**	**77.00**	**3**	*e*P	**P**	**16 20 11.2 +1.6**
MODS				pmax	pmax	
	comp=Z,32nm,0.9s					
MODS	**Modra-Piesok**	**77.00**	**3**	P	**P**	**16 20 11.2 +1.6**
MODS	**Modra-Piesok**	**77.00**	**3**	*e*P	**P**	**16 20 11.2 +1.6**
LOR	**Lormes**	**77.06**	**12**	*e*P	**P**	**16 20 10.1 +0.2**
LOR				pmax	pmax	
	comp=Z,19nm,0.8s					
SLE	**Schleitheim**	**77.07**	**9**	P	**P**	**16 20 10.5 +0.5**
SLE	**Schleitheim**	**77.07**	**9**	P	**P**	**16 20 10.5 +0.5**
ABAH	**Abaujker**	**77.15**	**0**	P	**P**	**16 20 11.7 +1.4**
SORM	**Soroca**	**77.16**	**355**	⇓P	**P**	**16 20 10.1 -0.4**
SORM	**Soroca**	**77.16**	**355**	P	**P**	**16 20 10.0 -0.4**
SORM	**Soroca**	**77.16**	**355**	P	**P**	**16 20 10.0 -0.4**
	comp=Z,684nmcomp=Z,62nm,0.8s					
MFF	**Saint Martin d**	**77.16**	**15**	*e*P	**P**	**16 20 11.0 +0.5**
MFF				pmax	pmax	
	comp=Z,167nm,0.8s					
SLVN	**Son La**	**77.18**	**289**	P	**P**	**16 20 11.1 +0.1**
BAL3X	**Bal3x, Balta**	**77.30**	**355**	P	**P**	**16 20 11.4 +0.2**
TRPA	**Tarpa**	**77.31**	**359**	P	**P**	**16 20 12.4 +1.1**
BOURR	**Bourrignon**	**77.32**	**10**	P	**P**	**16 20 12.4 +1.0**
CONA	**Conrad Observa**	**77.40**	**4**	*i* pP	**P**	**16 20 12.8 +1.0**
	comp=Z,17nm,1.3s,SNR=11					
MOA	**Molln**	**77.40**	**5**	*i* pP	**P**	**16 20 12.8 +0.9**
	comp=Z,3.5nm,0.7s					
RJOB	**Jochberg**	**77.43**	**6**	P	**P**	**16 20 13.1 +1.0**
AVF	**Avril sur Loir**	**77.47**	**13**	*e*P	**P**	**16 20 12.3 +0.1**
AVF				pmax	pmax	
	comp=Z,22nm,0.6s					
PSZ	**Piszkesteto**	**77.52**	**1**	⇑P	**P**	**16 20 13.9 +1.4**
PSZ	**Piszkesteto**	**77.52**	**1**	P	**P**	**16 20 13.8 +1.4**
PSZ	**Piszkesteto**	**77.52**	**1**	IAmb	IAmb	16 20 15.0
	comp=Z,23nm,1.1s					
PSZ	**Piszkesteto**	**77.52**	**1**	P	**P**	**16 20 14.0 +1.4**
BIOA	**Bad Ischl, Aus**	**77.53**	**6**	*i* pP	**P**	**16 20 13.2 +0.6**
	comp=Z,11nm,1.1s					
RETA	**Reutte**	**77.54**	**8**	*i* pP	**P**	**16 20 13.8 +1.2**
	comp=Z,6.6nm,1.0s					
GAR	**Garm**	**77.63**	**323**	P	**P**	**16 20 13.7 +0.3**
BGF	**Bois d'Agland**	**77.63**	**13**	*e*P	**P**	**16 20 13.3 +0.2**
BGF				pmax	pmax	
	comp=Z,27nm,0.7s					
RONA	**Rosalia, Austr**	**77.64**	**4**	*i* pP	**P**	**16 20 14.1 +0.9**
	comp=Z,11nm,1.2s,SNR=5.2					
DAVA	**Damuels**	**77.67**	**8**	*i* pP	**P**	**16 20 14.2 +0.7**
	comp=Z,7.5nm,0.7s					
DAVA	**Damuels**	**77.67**	**8**	P	**P**	**16 20 14.2 +0.7**
MOTA	**Moosalm**	**77.70**	**7**	*i* pP	**P**	**16 20 14.4 +0.7**
	comp=Z,24nm,1.0s,SNR=8.8					
LESA	**Schwarzleotal**	**77.73**	**6**	*i* pP	**P**	**16 20 14.4 +0.7**
	comp=Z,6.1nm,0.5s,SNR=9.3					
WATA	**Waldeim**	**77.75**	**7**	*i* pP	**P**	**16 20 14.7 +0.8**
	comp=Z,29nm,1.2s					
BUR08	**Bucovina Ar. S**	**77.76**	**358**	IAmb	IAmb	16 20 15.6
	comp=Z,17nm,1.1s					
BURAR	**Bucovina Array**	**77.79**	**358**	⇓P	**P**	**16 20 14.2 +0.1**
BURAR	**Bucovina Array**	**77.79**	**358**	P	**P**	**16 20 14.1 +0.1**
BURAR	**Bucovina Array**	**77.79**	**358**	P	**P**	**16 20 14.6 +0.5**
BURAR				IAmb	IAmb	16 20 15.7
	comp=Z,14nm,0.7s					
WTTA	**Wattenberg**	**77.82**	**7**	P	**P**	**16 20 15.6 +1.2**
WTTA	**Wattenberg**	**77.82**	**7**	*i* pP	**P**	**16 20 15.3 +0.9**
	comp=Z,28nm,1.0s,SNR=7.1					
WTTA	**Wattenberg**	**77.82**	**7**	P	**P**	**16 20 15.6 +1.2**
SQTA	**Sankt Quirin**	**77.84**	**7**	*i* pP	**P**	**16 20 15.4 +1.0**
	comp=Z,31nm,0.9s,SNR=12					
BNALP	**Bannalp**	**77.95**	**9**	P	**P**	**16 20 16.3 +1.3**
CABF	**La Chapelle**	**77.97**	**11**	*e*P	**P**	**16 20 15.6 +0.5**
CABF				pmax	pmax	
	comp=Z,16nm,0.8s					

MORH **Mrgy, Hungar** 79.20 2 P P 16 20 22.1 +0.4
comp=Z,11nm,0.9s
MORH **Mrgy, Hungar** 79.20 2 P P 16 20 22.5 +0.8
CGRP **Cima Grappa** 79.21 7 P P 16 20 22.2 +0.1
SABO **M.te Sabotino** 79.23 6 IAmb IAmb 16 20 37.3
comp=Z,12nm,0.8s
GHRR 79.27 356 ⇓P P 16 20 23.0 +0.9
GHRR 79.27 356 P P 16 20 22.9 +0.8
GHRR 79.27 356 P P 16 20 23.3 +1.2
OZUR 79.29 357 ⇑P P 16 20 23.5 +1.2
PTJ **Puntijarka** 79.42 4 P P 16 20 23.8 +0.7
DOPR **Dopca** 79.43 357 ⇑P P 16 20 24.5 +1.4
VRI **Vrincioaia** 79.49 356 ⇓P P 16 20 24.1 +0.7
VRI **Vrincioaia** 79.49 356 P P 16 20 24.0 +0.7
VRI **Vrincioaia** 79.49 356 P P 16 20 23.8 +0.4
comp=Z,1µmcomp=Z,16nm,1.0s
VRI **Vrincioaia** 79.49 356 P P 16 20 24.2 +0.8
LABN **Labinsk** 79.50 346 *e*P P 16 20 22.7 -0.7
LABN *e* 16 23 19.4
LABN *e*S S 16 30 22.9 -0.5
LABN pmax pmax
comp=Z,22nm,0.7s
PLOR **Plostina** 79.51 357 ⇓P P 16 20 24.2 +0.6
PLOR **Plostina** 79.51 357 P P 16 20 24.1 +0.6
COVR **Voineasa-Covas** 79.53 357 ⇑P P 16 20 24.9 +1.3
VIVF **Saint-Julien-I** 79.54 12 *e*P P 16 20 24.1 +0.4
VIVF pmax pmax
comp=Z,12nm,0.9s
IMP **Imphal** 79.59 298 *e*P P 16 20 24.0 -0.3
IMP *i* x x 16 20 33.6
SWI **Sorong** 79.60 253 P P 16 20 24.5 +0.2
comp=Z,749nmcomp=Z,79nm,0.8s
SIJI **Sorong** 79.60 253 LR LR 16 50 50.6
comp=Z,60nm,20.6s,baz=192,slow=32
SIJI **Sorong** 79.60 253 P P 16 20 24.7 +0.4
comp=Z,556nmcomp=Z,68nm,0.8s
ORIF **Oris-en-Rattie** 79.62 11 *e*P P 16 20 24.7 +0.5
ORIF pmax pmax
comp=Z,7.0nm,0.6s
SAHR **Sahastru** 79.63 356 ⇑P P 16 20 25.4 +1.2
SHAA **Shahritus** 79.67 324 IAmb IAmb 16 20 37.9
comp=Z,89nm,1.2s
NEGRR **Negrea** 79.77 356 ⇑P P 16 20 25.2 +0.3
BZS **Buzias** 79.83 0 ⇑P P 16 20 25.3 +0.1
BZS **Buzias** 79.83 0 P P 16 20 25.2 +0.1
BZS **Buzias** 79.83 0 P P 16 20 26.0 +0.8
KVAR **Kislovodsk Arr** 79.89 345 LR LR 16 59 27.0
comp=Z,93nm,20.3s,baz=267,slow=38
KIV **Kislovodsk** 79.89 345 ⇑P P 16 20 26.7 +1.0
KIV **Kislovodsk** 79.89 345 *e*P P 16 20 26.4 +0.7
KIV pmax pmax
comp=Z,57nm,1.1s
KIV **Kislovodsk** 79.89 345 P P 16 20 25.7 0.0
KIV **Kislovodsk** 79.89 345 P P 16 20 26.4 +0.7
comp=Z,403nmcomp=Z,53nm,0.8s
KIV **Kislovodsk** 79.89 345 P P 16 20 26.7 +1.0
KIV **Kislovodsk** 79.89 345 P P 16 20 26.8 +1.1
MLR **Muntele Rosu** 79.89 357 ⇓P P 16 20 26.7 +0.9
MLR **Muntele Rosu** 79.89 357 LR LR 16 58 06.8
comp=Z,135nm,20.1s,baz=16,slow=37
MLR **Muntele Rosu** 79.89 357 P P 16 20 26.6 +0.9
MLR **Muntele Rosu** 79.89 357 IAmb IAmb 16 20 28.3
comp=Z,32nm,1.5s
MLR **Muntele Rosu** 79.89 357 P P 16 20 26.5 +0.8
comp=Z,13nm,1.5s
MLR **Muntele Rosu** 79.89 357 P P 16 20 27.2 +1.5
MORE **Moreh** 79.90 298 IAmb IAmb 16 20 46.0
comp=Z,12nm,0.6s
SIM **Simferopol'** 79.94 351 *e*P P 16 20 25.1 -0.7
SIM *e* 16 20 34.0
SIM pmax pmax
comp=Z,46nm,0.9s
VOIR 79.97 358 ⇑P P 16 20 26.9 +0.9
VOIR 79.97 358 P P 16 20 26.9 +0.9
VOIR 79.97 358 P P 16 20 26.9 +0.9
comp=Z,14nm,0.9s
VOIR 79.97 358 P P 16 20 27.0 +0.9
SHL **Shillong** 80.02 300 *e*P P 16 20 25.8 -0.9
MAK **Makhachkala** 80.04 341 *e*P P 16 20 22.0 -4.4
MAK *e* 16 23 24.0
MAK *e*PPP PPP 16 25 20.2
MAK *e*S S 16 30 24.3 -4.8
MAK *e*SSS SSS 16 38 58.5
MAK pmax pmax
comp=Z,175nm,0.9s
ARR **Arges** 80.05 358 P P 16 20 27.7 +1.2
GZR **Gura Zlata** 80.05 359 ⇑P P 16 20 27.4 +1.0
GZR **Gura Zlata** 80.05 359 P P 16 20 27.2 +0.7
KBZ **Khabaz** 80.08 345 P P 16 20 27.6 +1.1
comp=Z,30nm,0.8s,baz=11,slow=5.2,SNR=62
KBZ LR LR 17 01 18.1
comp=Z,149nm,18.3s,baz=7.0,slow=40
comp=Z,30nm,0.8s
KBZ **Khabaz** 80.08 345 *i* P P 16 20 26.5 0.0
KBZ pmax pmax
comp=Z,32nm,0.9s
SHA1 **Shidzhatmaz** 80.11 345 *ce*P P 16 20 28.2 +1.2
CFR **Carcaliu** 80.12 355 ⇓P P 16 20 27.0 +0.2
CFR **Carcaliu** 80.12 355 P P 16 20 26.9 +0.2
PGAV **Gavieira, Arco** 80.14 22 *e*P P 16 20 29.1 +2.1
NCK **Nalchik** 80.20 344 *i* P P 16 20 28.4 +1.1
NCK pmax pmax
comp=Z,83nm,0.7s
FRGS **Fruska Gora** 80.28 1⇑ *i*P P 16 20 28.1 +0.5
SJPF **Ste Jean** 80.39 17 *e*P P 16 20 27.5 -0.8
SJPF pmax pmax
comp=Z,3.0nm,0.6s
TPGR **Topolog** 80.43 355 ⇑P P 16 20 29.2 +0.7
EVN **Everest** 80.47 306 IAmb IAmb 16 20 51.7
comp=Z,26nm,0.9s
EVN **Everest** 80.47 306 P P 16 20 30.3 +0.6
ISO **Isola** 80.47 11 P P 16 20 30.4 +1.6
ISO **Isola** 80.47 11 P P 16 20 30.4 +1.6
ATE **Arette** 80.50 16 P P 16 20 30.7 +1.8
RUSF **Rustrel** 80.54 12 P P 16 20 31.4 +2.3
HERR **Herculane** 80.56 360 ⇑P P 16 20 29.7 +0.6
PBRG **Braganca** 80.62 21 *e*P P 16 20 30.7 +1.2
BLY **Banja Luka** 80.62 3 ⇓P P 16 20 30.0 +0.6
BLY **Banja Luka** 80.62 3 IAmb IAmb 16 20 30.6
comp=Z,8.8nm,0.5s
BLY **Banja Luka** 80.62 3⇑ *i*P P 16 20 30.0 +0.6
BLY **Banja Luka** 80.62 3 P P 16 20 29.7 +0.2
MDVR **Moldovita** 80.67 0 ⇓P P 16 20 30.7 +0.9
ZCCA **Zocca** 80.67 8 IAmb IAmb 16 20 59.9
comp=Z,17nm,1.0s
SOC **Sochi** 80.68 347 *e*P P 16 20 30.0 +0.2
SOC *e* 16 23 34.3
SOC *e*PPP PPP 16 25 24.5
SOC *e*S S 16 30 36.9 +1.1
SOC *e*SS SS 16 35 50.5 +3.3
SOC pmax pmax
comp=Z,31nm,0.9s
SOC MLR MLR
comp=Z,203nm,21.0s
MTLF **Montolieu** 80.70 14 *e*P P 16 20 30.4 +0.5
MTLF pmax pmax
comp=Z,25nm,0.8s
ETSF **Etsaut** 80.71 16 *e*P P 16 20 31.0 +0.9
ETSF pmax pmax
comp=Z,15nm,0.7s
EPF **Esparros** 80.72 16 *e*P P 16 20 29.9 -0.2
EPF pmax pmax
comp=Z,6.0nm,0.8s
VSLR **Vesyoloye** 80.75 347 *i* P P 16 20 30.5 +0.3
VSLR pmax pmax
comp=Z,39nm,1.0s
POLO **Lamas de Olo** 80.81 22 *e*P P 16 20 32.1 +1.5
VLC **Villacollemand** 80.81 8 P P 16 20 31.5 +0.9
TIRR **Tirgusor** 80.83 355 ⇓P P 16 20 31.1 +0.6
TIRR **Tirgusor** 80.83 355 P P 16 20 31.0 +0.5
TIRR pmax pmax
comp=Z,31nm,0.9s
TIRR **Tirgusor** 80.83 355 P P 16 20 31.0 +0.5
TIRR **Tirgusor** 80.83 355 P P 16 20 31.0 +0.5
comp=Z,466nmcomp=Z,43nm,0.9s
SBF **Sospel** 80.83 10 *e*P P 16 20 31.0 +0.3
SBF pmax pmax
comp=Z,23nm,0.8s
ESCA **l'Escarene** 80.86 10 P P 16 20 31.7 +0.9
TEKS **Tekeris** 80.88 2⇑ *i*P P 16 20 31.1 +0.2
PVRL **Vila Real** 80.92 22 *e*P P 16 20 32.7 +1.6
TSSA **Tissa** 80.92 316 *e*P P 16 20 32.0 +0.5
TSSA IAmb IAmb 16 20 35.4
comp=Z,39nm,1.0s
MVO **Moncorvo** 81.17 22 *e*P P 16 20 33.2 +0.7
CEST **Esterri de Car** 81.29 15 IAmb IAmb 16 20 36.0
comp=Z,15nm,0.9s
NIL **Nilore** 81.33 319 P P 16 20 33.8 +0.3
NIL pmax pmax
comp=Z,46nm,0.8s
NIL **Nilore** 81.33 319 P P 16 20 33.8 +0.3
NIL **Nilore** 81.33 319 P P 16 20 34.5 +1.0
DHRM **DHARAMSHALA** 81.37 316 *e*P P 16 20 33.3 -0.7
DHRM IAmb IAmb 16 20 39.8
comp=Z,24nm,0.7s
PVIS **Viseu** 81.41 22 *e*P P 16 20 35.2 +1.3
SDV **Santo Domingo** 81.43 87 LR LR 16 58 41.9
comp=Z,186nm,19.4s,baz=306,slow=37
BBLS **Lazi&#263i** 81.56 2⇑ *i*P P 16 20 35.8 +1.2
TBLG **Delisi** 81.73 343 P P 16 20 36.7 +1.2
MTE **Manteigas** 81.79 22 IAmb IAmb 16 21 02.6
comp=Z,17nm,1.0s
SEKA **Sheki** 81.80 341 P P 16 20 36.1 +0.2
BOVS **Bovan** 81.81 0 ⇑P P 16 20 36.1 +0.3
PCAS **Casmilo, Conde** 81.91 23 *e*P P 16 20 37.8 +1.4
CHTO **Chiang Mai** 81.92 291 P P 16 20 36.1 -0.6
CHTO pmax pmax
comp=Z,10.0nm,0.7s
CHTO **Chiang Mai** 81.92 291 P P 16 20 36.1 -0.6
CHTO IAmb IAmb 16 20 36.8
comp=Z,10nm,0.7s
CHTO **Chiang Mai** 81.92 291 P P 16 20 36.2 -0.6
CHTO **Chiang Mai** 81.92 291 P P 16 20 36.5 -0.3
CHTO **Chiang Mai** 81.92 291 P P 16 20 36.4 -0.3
SMLA **Simla** 82.00 315 *e*P P 16 20 35.7 -1.3
SMLA IAmb IAmb 16 20 39.5
comp=Z,43nm,0.5s
TRLG **Trialeti** 82.03 343 P P 16 20 39.3 +2.1
PLVB **Pleven** 82.03 358 ⇓P P 16 20 37.5 +0.6
PTH **Pithoragarh** 82.06 311 *e*P P 16 20 37.3 -0.3
PTH IAmb IAmb 16 20 51.2
comp=Z,17nm,0.6s
KBL **Kabul** 82.08 322 P P 16 20 36.5 -1.2
KBL pmax pmax
comp=Z,18nm,0.9s
KBL **Kabul** 82.08 322 P P 16 20 36.5 -1.2
KBL IAmb IAmb 16 20 37.7
comp=Z,18nm,0.8s
KBL **Kabul** 82.08 322 P P 16 20 36.9 -0.7
FDMO **Fiordimonte** 82.13 6 IAmb IAmb 16 20 41.9
comp=Z,17nm,0.7s
SJES **Sjenica** 82.17 1⇑ *i*P P 16 20 39.0 +1.1
CMAR **Chiang Mai Arr** 82.21 291 P P 16 20 38.5 +0.2
comp=Z,39nm,0.8s,baz=14,slow=5.3,SNR=100
CMAR LR LR 17 00 34.1
comp=Z,142nm,19.1s,baz=50,slow=38
comp=Z,39nm,0.8s
EPOS **Posof** 82.28 344 P P 16 20 39.9 +1.4
PGF **Pioggiola** 82.29 9 *e*P P 16 20 38.8 +0.3
PGF pmax pmax
comp=Z,25nm,0.7s
NRCA **Norcia** 82.33 6 IAmb IAmb 16 20 42.9
comp=Z,19nm,0.9s
PCBR **Castelo Branco** 82.34 22 *e*P P 16 20 39.5 +0.8
PSARD **Sardoal** 82.42 23 *e*P P 16 20 40.1 +1.0
BRY **Bratogost** 82.51 2⇑ *i*P P 16 20 39.9 +0.2
BRDH **Bariadhala** 82.54 299 LR LR 17 01 20.6
comp=Z,186nm,19.0s,baz=32,slow=39
ROSC **El Rosal** 82.58 92 LR LR 17 01 24.4
comp=Z,79nm,18.1s,baz=77,slow=38
NPW **Napyitaw** 82.62 294 P P 16 20 40.2 -0.1
TREB **Trebinje** 82.69 3⇑ *i*P P 16 20 39.4 -1.0
PMRV **Marv??o** 82.76 22 *e*P P 16 20 42.6 +1.7
AQU **L'Aquila** 82.83 6 P P 16 20 42.3 +1.0
AQU **L'Aquila** 82.83 6 IAmb IAmb 16 21 17.4
comp=Z,18nm,0.9s
AQU **L'Aquila** 82.83 6⇑ *i*P P 16 20 42.2 +1.0
AQU **L'Aquila** 82.83 6 P P 16 20 42.3 +1.0
comp=Z,18nm,0.8s
AQU **L'Aquila** 82.83 6 P P 16 20 42.5 +1.3
PMTG **Montargil** 82.92 23 *e*P P 16 20 42.4 +0.8
HCY **Herceg Novi** 82.96 2⇑ *i*P P 16 20 41.8 0.0
PDG **Podgorica** 82.99 2⇑ *i*P P 16 20 42.2 +0.3
PDG **Podgorica** 82.99 2⇑ *i*P P 16 20 42.3 +0.3
PDG **Podgorica** 82.99 2 P P 16 20 42.6 +0.6
PARRA **Arraiolos** 83.20 23 *e*P P 16 20 44.1 +0.9
INTR **Introdacqua** 83.20 6 IAmb IAmb 16 20 45.2
comp=Z,12nm,0.7s
ESBB **Sonseca Array** 83.23 20 IAmb IAmb 16 20 45.5
comp=Z,14nm,0.9s
ESDC **Sonseca Array** 83.23 20 P P 16 20 44.5 +1.1
comp=Z,13nm,0.9s,baz=341,slow=4.9,SNR=73
ESDC LR LR 17 00 30.5
comp=Z,92nm,19.2s,baz=322,slow=38
comp=Z,13nm,0.9s
ESDC **Sonseca Array** 83.23 20 P P 16 20 44.2 +0.8
DRME **Dracevica, Mon** 83.23 2⇑ *i*P P 16 20 43.7 +0.4
PESTR **Estremoz** 83.25 23 *e*P P 16 20 45.2 +1.8
GNI **Garni** 83.27 342 LR LR 17 04 08.5
comp=Z,208nm,18.4s,baz=18,slow=40
GNI **Garni** 83.27 342 *ce*P P 16 20 44.0 +0.3
GNI pmax pmax
comp=Z,14nm,0.8s
GNI **Garni** 83.27 342 P P 16 20 44.0 +0.3
GNI **Garni** 83.27 342 P P 16 20 45.7 +2.0
MOE **Montemor** 83.41 23 *e*P P 16 20 46.0 +1.7
SKO **Skopje** 83.47 0 *i* P P 16 20 45.7 +1.2
EVO **Evora** 83.48 23 *e*P P 16 20 47.6 +3.0
PEHC **Pehcevo** 83.66 359 *i* P P 16 20 45.9 +0.4
PHP **Peshkopia** 83.75 1 P P 16 20 46.7 +0.7
PHP **Peshkopia** 83.75 1 P P 16 20 46.6 +0.7
CTYL **Yalikoy Yolu** 83.81 355 P P 16 20 47.0 +0.8
comp=Z,38nm,0.9s
PLOUS **Minas do Lousa** 83.86 24 *e*P P 16 20 47.6 +1.0
LKRN **Lenkeran, Azer** 83.89 339 P P 16 20 48.0 +1.3
KLYT **Kilyos** 83.99 354 P P 16 20 47.8 +0.7
comp=Z,73nm,1.0s
PBAR **Barrancos** 84.03 22 *e*P P 16 20 48.5 +1.1
PBAR *i* IAmb IAmb 16 21 02.7
comp=Z,41nm,1.8s
KOPT **Kop Dagi** 84.07 346 P P 16 20 48.6 +0.7
NAX **Nakhchivan** 84.08 342 P P 16 20 48.9 +1.1
KELT **Kelkit** 84.11 347 P P 16 20 49.6 +1.5
VAY **Valandovo** 84.12 359 *i* P P 16 20 48.8 +1.0
PAOL **Paolisi** 84.22 5 IAmb IAmb 16 20 49.9
comp=Z,19nm,1.0s
RDO **Rodhopi** 84.24 357 P P 16 20 49.7 +1.3
PTEO **Sao Teotonio** 84.25 24 *e*P P 16 20 49.8 +1.3
SAHE **Sakarya_HENDEK** 84.27 353 ⇑P P 16 20 49.6 +0.9
KNT **Kendrikon** 84.28 359 P P 16 20 52.1 +3.5
TOKA **Tokat** 84.28 349 P P 16 20 49.2 +0.5
SRS **Serrai** 84.31 359 P P 16 20 49.8 +1.0
SRS **Serrai** 84.31 359 P P 16 20 49.8 +1.0
OHR **Ohrid** 84.33 1 *i* P P 16 20 49.9 +0.9
PCVE **Castro Verde** 84.33 23 *e*P P 16 20 50.1 +1.2
ALN **Alexandroupoli** 84.48 357 P P 16 20 50.6 +1.0
ALN **Alexandroupoli** 84.48 357 P P 16 20 50.6 +1.0
HRA **Herat** 84.48 327 P P 16 20 49.7 -0.3
HRA IAmb IAmb 16 20 57.7
comp=Z,10nm,1.0s
GRG **Griva** 84.49 360 P P 16 20 51.2 +1.5
GRG **Griva** 84.49 360 P P 16 20 51.2 +1.5
SOH **Sokhos** 84.61 359 P P 16 20 51.3 +0.9
SOH **Sokhos** 84.61 359 P P 16 20 51.3 +0.9
YLV **Yalova** 84.65 354 P P 16 20 51.6 +1.0
comp=Z,34nm,1.1s
MATE **Matera** 84.70 4 ⇑P P 16 20 51.9 +1.2
MATE **Matera** 84.70 4 P P 16 20 51.8 +1.1
BAND **Balkesir-Ban** 84.93 355 ⇑P P 16 20 52.6 +0.6
MARCO **Tramutola** 85.01 5 P P 16 20 53.4 +0.9
BR106 **Keskin Array S** 85.16 351 P P 16 20 54.3 +1.0
comp=Z,211nmcomp=Z,30nm,0.9s
BR131 **Keskin Array S** 85.17 351 *i* P P 16 20 54.0 +0.7
BRTR **Keskin Array B** 85.17 351 P P 16 20 54.4 +1.0
comp=Z,23nm,0.8s,baz=31,slow=2.9,SNR=125
BRTR LR LR 17 05 10.7
comp=Z,79nm,19.6s,baz=30,slow=40
comp=Z,23nm,0.8s
BRTR **Keskin Array B** 85.17 351 *i* P P 16 20 54.4 +1.0
BRTR pmax pmax
comp=Z,24nm,0.9s
BR105 **Keskin Array S** 85.18 351 P P 16 20 54.2 +0.8
comp=Z,246nmcomp=Z,37nm,0.9s
ARPR **Arapgir-MALATY** 85.28 347 P P 16 20 55.9 +2.0
LIT **Litokhoron** 85.34 359 P P 16 20 54.7 +0.7
LIT **Litokhoron** 85.34 359 P P 16 20 54.7 +0.7
VSL **Villasalto** 85.35 10 P P 16 20 55.1 +1.0
PAIG **Paliouri** 85.50 359 P P 16 20 52.9 -1.9
EZN **Ezine** 85.53 356 P P 16 20 55.5 +0.6
comp=Z,36nm,0.9s
SRN **Sarande** 85.55 1 P P 16 20 56.0 +1.0
BALY **Balya** 85.57 355 P P 16 20 56.0 +0.9
KEK **Kerkira** 85.72 2 P P 16 20 55.9 +0.1
KIRS **Kirsehir-Merke** 85.73 351 ⇑P P 16 20 57.0 +0.9
HAKT **HAKKARI** 85.97 343 P P 16 20 58.7 +1.3
XOR **Xorichti** 86.07 359 P P 16 20 58.1 +0.4
TIP **Timpagrande** 86.17 4 P P 16 20 58.7 +0.5
TIP **Timpagrande** 86.17 4 ⇓P P 16 20 58.5 +0.3
comp=Z,295nmcomp=Z,36nm,0.9s
TIP **Timpagrande** 86.17 4 P P 16 20 59.1 +0.9
AGG **Agios Georgios** 86.42 360 P P 16 20 59.6 +0.2
AGG **Agios Georgios** 86.42 360 P P 16 20 59.6 +0.2
LKD2 **Lefkada island** 86.65 1 P P 16 21 01.2 +0.7
ANDN **Andirin** 87.01 348 P P 16 21 04.1 +1.7
CEL **Celeste** 87.05 5 P P 16 21 01.4 -1.1
MTSU **Mount Surprise** 87.54 233 P P 16 21 05.9 +1.0
comp=Z,16nm,0.8s
MTSU **Mount Surprise** 87.54 233 P P 16 21 05.9 +1.0
CLTB **Caltabellotta** 87.57 7 P P 16 21 05.3 +0.2
AYDN **Tasoluk** 87.63 355 P P 16 21 06.3 +1.0
RAFF **Raffo Rosso** 88.00 6 IAmb IAmb 16 21 09.7
comp=Z,11nm,0.9s
ITM **Ithomi** 88.26 360 P P 16 21 08.8 +0.5
CTA **Charters Tower** 88.36 231 LR LR 16 57 45.8
comp=Z,48nm,19.6s,baz=29,slow=34
CTA **Charters Tower** 88.36 231 P P 16 21 09.8 +1.0
comp=Z,10nm,1.0s
CTA **Charters Tower** 88.36 231 P P 16 21 09.8 +1.0
CTAO **Charters Tower** 88.36 231 P P 16 21 08.7 -0.1
CTAO pmax pmax
comp=Z,14nm,0.8s
CTAO **Charters Tower** 88.36 231 P P 16 21 08.7 -0.1
BHPL **Bhopal** 88.79 311 *e*P P 16 21 09.5 -1.6
BHPL IAmb IAmb 16 21 15.8
comp=Z,20nm,1.2s
ARG **Arkhangelos** 89.06 355 P P 16 21 11.8 -0.2
ARG **Arkhangelos** 89.06 355 P P 16 21 11.8 -0.2
KEST **Kesra** 89.08 10 P P 16 21 13.2 +1.0
comp=Z,11nm,0.9s,baz=349,slow=4.3,SNR=8.5
KEST LR LR 17 05 56.1
comp=Z,90nm,19.1s,baz=351,slow=39
comp=Z,11nm,0.9s
KEST **Kesra** 89.08 10 IAmb IAmb 16 21 15.7
comp=Z,13nm,0.9s
NRDN **NARMADA NAGAR** 89.36 311 *ex* x 16 21 16.1
KAPI **Kappang** 89.47 261 LR LR 16 56 28.3
comp=Z,71nm,21.7s,baz=54,slow=32
RAGD **RAYAGADA** 89.48 304 *e*P P 16 21 14.5 +0.2
RAGD IAmb IAmb 16 21 15.5
comp=Z,19nm,1.0s
RAGD *i* pP pP 16 21 21.4 +0.4
MD01 **Midelt array s** 89.64 22 P P 16 21 15.0 0.0
MD31 **MD31** 89.64 22 IAmb IAmb 16 21 30.4
comp=Z,22nm,1.9s
MDT **Midelt** 89.72 22 LR LR 17 04 05.7
comp=Z,76nm,18.4s,baz=30,slow=37
CSS **Mathiatis** 89.92 351 P P 16 21 16.8 +0.7
comp=Z,21nm,1.0s
CSS **Mathiatis** 89.92 351 P P 16 21 16.8 +0.7
IMMV **Iera Moni Meta** 89.95 358 P P 16 21 17.1 +0.8
ATAH **Atahualpa** 90.00 102 LR LR 17 00 06.2
comp=Z,83nm,19.4s,baz=351,slow=34
CY604 **RAF Akrotiri,** 90.42 349 P P 16 21 18.6 +0.6
GVD **Gavdhos** 90.57 358 P P 16 21 19.6 +0.4
BATI **Baumata** 91.51 254 LR LR 17 06 52.1
comp=Z,192nm,18.5s,baz=216,slow=38
MMAI **Mount Meron Ar** 91.63 349 LR LR 17 09 56.6
comp=Z,48nm,18.3s,baz=6.0,slow=40
QIS **Mount Isa** 91.85 236 P P 16 21 25.2 +0.1
comp=Z,16nm,1.3s
QIS **Mount Isa** 91.85 236 P P 16 21 25.2 +0.1
ASF **Jabal al Asfar** 92.28 347 LR LR 17 05 29.5
comp=Z,48nm,21.8s,baz=26,slow=37
WR8 **Warramunga Arr** 93.84 240 P P 16 21 33.2 -1.1
WR8 IAmb IAmb 16 21 34.4
comp=Z,6.5nm,0.8s
WRA **Warramunga Arr** 93.91 241 P P 16 21 33.8 -0.8
comp=Z,5.8nm,0.8s,baz=39,slow=5.3,SNR=38
comp=Z,5.8nm,0.8s
WRA **Warramunga Arr** 93.91 241 *i* P P 16 21 33.9 -0.7
WRA pmax pmax
comp=Z,6.0nm,0.8s
WRA **Warramunga Arr** 93.91 241 IAmb IAmb 16 21 36.1
comp=Z,0.4nm,1.2s
MDP **Montagnes des** 94.74 74 LR LR 17 01 55.2
comp=Z,173nm,21.6s,baz=326,slow=34
EIL **Elat** 94.98 348 LR LR 17 10 33.1
comp=Z,38nm,18.4s,baz=73,slow=39
URZ **Urewera** 95.19 199 LR LR 16 56 27.5
comp=Z,69nm,21.8s,baz=0.5,slow=30
FITZ **Fitzroy Crossi** 96.91 248 LR LR 17 13 07.4
comp=Z,48nm,18.0s,baz=10,slow=40
ASAR **Alice Springs** 97.26 239 P P 16 21 49.3 -0.5
comp=Z,2.0nm,0.8s,baz=29,slow=4.8,SNR=26
ASAR PKKP PKKPbc 16 38 27.8 +0.9
comp=Z,0.2nm,0.6s,baz=223,slow=2.2,SNR=4.5
ASAR LR LR 17 00 15.5
comp=Z,106nm,21.7s,baz=15,slow=32
comp=Z,2.0nm,0.8s
AS09 **Alice Springs** 97.27 239 P Pdif 16 21 50.2 +0.3
comp=Z,4.5nm,0.9s
LEM **Lembang** 97.91 269 LR LR 17 02 21.9
comp=Z,54nm,20.0s,baz=58,slow=33
RAYN **Ar Rayn** 99.25 338 P Pdif 16 21 59.1 +0.1
RAYN pmax pmax
comp=Z,9.0nm,0.9s
RAYN **Ar Rayn** 99.25 338 P Pdif 16 21 59.1 +0.1
TORD **Torodi Ar. Bea** 110.10 21 PKKPab PKKPab 16 38 00.9 -3.0
comp=Z,1.0nm,0.9s,baz=175,slow=4.6,SNR=6.1
H03N2 **Juan Fernandez** 111.01 118 T T 18 27 40.8
baz=322,slow=76
H03N1 **Juan Fernandez** 111.02 118 T T 18 27 43.6
baz=322,slow=76
H03N3 **Juan Fernandez** 111.02 118 T T 18 27 30.4
baz=322
PLCA **Paso Flores** 120.88 118 PKP PKPdf 16 27 08.2 -0.4
comp=Z,1.8nm,0.9s,baz=144,slow=1.9,SNR=4.5
TSUM **Tsumeb** 144.20 7 P PKPbc 16 27 51.3 +0.2
QSPA **South Pole Qui** 144.71 180 PKP PKPab 16 27 51.2 0.0
comp=Z,12nm,0.8s,baz=49,slow=0.2,SNR=45
SOOWA **Sowa** 145.52 353 P PKPab 16 27 56.4 +0.9
BROLN **Tlhalogang** 145.96 351 P PKPab 16 27 57.1 -0.1
GRTLG **Ghanzi** 146.48 1 P PKPab 16 27 59.1 -0.1
KHWEE **KHWEE** 146.95 354 P PKPbc 16 28 00.2 +0.6
HOPE **Hope Point** 147.10 113 *i* PKIKP PKPdf 16 27 56.6 0.0
WIN **Windhoek** 147.50 8 PKP2 PKPbc 16 28 01.8 +0.6
WIN **Windhoek** 147.50 8 P PKPbc 16 28 01.7 +0.6
KOOLE **Kule** 148.09 3 P PKPbc 16 28 03.6 +0.9
LKGWB **Lokgwabe** 149.22 1 P PKPbc 16 28 06.2 +0.6
SKOMA **Sekoma** 149.58 356 P PKiKP 16 28 07.0 -0.4
LBTB **Lobatse** 149.99 353 P PKiKP 16 28 08.2 -0.1
MAKGR **Makgori** 150.83 354 P PKiKP 16 28 10.0 0.0
BOSA **Boshof** 153.58 353 PKPbc PKPbc 16 28 14.9 -0.6
comp=Z,5.6nm,0.8s,baz=3.8,slow=2.1,SNR=8.3
VNA1 **Neumayer--Stat** 159.47 152 ⇑PKPab PKPab 16 28 53.1 +1.0
comp=Z,3.5nm,1.2s
VNA2 **Neumayer--Watz** 159.55 153 ⇑PKPab PKPab 16 28 53.0 +0.5
comp=Z,4.2nm,0.6s,baz=279,slow=2.0
SNAA **Sanae** 160.17 157 ⇑PKPab PKPab 16 28 55.6 +0.3
comp=Z,34nm,0.5s
SNAA **Sanae** 160.17 157 PKPab PKPab 16 28 55.7 +0.4
comp=Z,1.3nm,0.6s,baz=222,slow=4.4,SNR=4.1
SNAA **Sanae** 160.17 157 PKP2 PKPab 16 28 54.6 -0.7
SNAA **Sanae** 160.17 157 PKPab 16 28 54.6 -0.7
TROLL **Troll, Antarti** 161.01 162 ⇑PKPab PKPab 16 28 58.5 -0.5
comp=Z,103nm,0.7s

IDC ***30*** *16:15:02.0± 1.2, 31°.79S× 178°.66W, h0km, mb4.0/3, mbtmp4.1/5, ML4.1/2, Error ellipse: s-maj=34.8km s-min=21.8km az=106.0*

NEIC ***30*** *16:15:05.3± 0.9, 31°.92S± 0°.07× 178°.4W± 0°.2, h35km± 2km, mb4.4/13, Error ellipse: s-maj=26.3km s-min=9.3km az=106.0*

WEL ***30*** *16:15:08.5± 1.2, 32°.5S± 9°.× 17°.9W± 1°.9, h12km, M4.4/7, mB4.9/5, ML4.4/11, MLv4.5/7, Mw(mB)4.2/5, Error ellipse: s-maj=25.9km s-min=8.9km az=107.1*

ISC 30 16:15:06.8± 0.7, 31°.92S± 0°.06× 178°.7W± 0°.1, h45km, n62, σ1§68/69, mb4.3/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.73**	**14**	Pn	**Pn**	**16 15 47.2**	**-0.9**
	55nm,0.3s,baz=102,slow=23,SNR=1.8						
RAO				Sn	**Sn**	**16 16 20.4**	**+0.4**
	78nm,0.3s,baz=97,slow=23,SNR=2.2						
	112nm,0.3s						
RAO	**Raoul Island**	**2.73**	**14**		**Pn**	**16 15 45.6**	**-2.5**
RAO				Sn	**Sn**	**16 16 17.4**	**-2.5**
MXZ	**Matakaoa Point**	**6.16**	**203**	Pn	**Pn**	**16 16 34.7**	**-0.4**
MXZ				Sn	**Sn**	**16 17 44.6**	**+0.3**
MXZ	**Matakaoa Point**	**6.16**	**203**	P	**Pn**	**16 16 36.4**	**+1.3**
MXZ				S	**Sn**	**16 17 43.6**	**-0.6**
WMGZ	**Waiomatatini S**	**6.36**	**201**	P	**Pn**	**16 16 38.8**	**+1.0**
WMGZ				S	**Sn**	**16 17 49.4**	**+0.2**
HAZ	**Te Kaha**	**6.52**	**206**	P	**Pn**	**16 16 41.0**	**+1.0**
HAZ				S	**Sn**	**16 17 55.3**	**+2.3**
PUZ	**Puketiti**	**6.64**	**202**	P	**Pn**	**16 16 41.5**	**-0.3**
PUZ				S	**Sn**	**16 17 56.6**	**+0.4**
RUGZ	**Raukumara Rang**	**6.74**	**205**	P	**Pn**	**16 16 44.0**	**+0.7**
TWGZ	**Tauwhareparae**	**6.82**	**203**	P	**Pn**	**16 16 45.1**	**+0.7**
TWGZ				S	**Sn**	**16 18 00.5**	**-0.2**
CNGZ	**Carnagh Statio**	**7.03**	**201**	P	**Pn**	**16 16 47.2**	**0.0**
MWZ	**Matawai**	**7.12**	**205**	P	**Pn**	**16 16 47.6**	**-0.8**
MWZ				S	**Sn**	**16 18 07.6**	**-0.4**
URZ	**Urewera**	**7.21**	**208**	Pn	**Pn**	**16 16 49.3**	**-0.3**
	1.6nm,0.3s,baz=246,slow=4.6,SNR=23						
URZ				Sn	**Sn**	**16 18 08.2**	**-2.0**
	2.8nm,0.3s,baz=56,slow=22,SNR=9.7						
	4.4nm,0.4s						
URZ	**Urewera**	**7.21**	**208**	P	**Pn**	**16 16 49.6**	**0.0**
URZ				S	**Sn**	**16 18 09.2**	**-1.0**
OUZ	**Omahuta**	**7.25**	**241**	P	**Pn**	**16 16 48.0**	**-2.2**
RIGZ	**Rimuhau**	**7.38**	**202**	P	**Pn**	**16 16 52.0**	**+0.2**
RIGZ				S	**Sn**	**16 18 12.3**	**-1.9**
TOZ	**Tahuroa Road**	**7.53**	**218**	Pn	**Pn**	**16 16 53.2**	**-0.7**
MUGZ	**Murupara**	**7.54**	**208**	P	**Pn**	**16 16 54.7**	**+0.6**
MUGZ				S	**Sn**	**16 18 17.6**	**-0.5**
PRGZ	**Paritu Road**	**7.54**	**201**	P	**Pn**	**16 16 56.3**	**+2.2**
PRGZ				S	**Sn**	**16 18 15.5**	**-2.7**
KNZ	**Kokohu**	**7.69**	**202**	P	**Pn**	**16 16 57.6**	**+1.4**
MTHZ	**Maungataniwha**	**7.83**	**207**	P	**Pn**	**16 16 59.2**	**+1.1**
MTHZ				S	**Sn**	**16 18 22.5**	**-2.9**
NMHZ	**Naumai**	**8.06**	**206**	P	**Pn**	**16 17 02.8**	**+1.5**
NMHZ				S	**Sn**	**16 18 29.8**	**-1.3**
MCHZ	**McNeill Hill**	**8.40**	**205**	P	**Pn**	**16 17 06.6**	**+0.7**
MCHZ				S	**Sn**	**16 18 38.1**	**-1.3**
KWHZ	**Kaweka Forest**	**8.49**	**207**	P	**Pn**	**16 17 07.5**	**+0.3**
OTVZ	**Oturere**	**8.58**	**211**	P	**Pn**	**16 17 10.2**	**+1.7**
KAHZ	**Kahuranaki**	**8.65**	**204**	P	**Pn**	**16 17 07.2**	**-2.2**
BHHZ	**Black Hill Sta**	**8.69**	**208**	P	**Pn**	**16 17 10.2**	**+0.4**
BFZ	**Birch Farm**	**9.66**	**204**	Pn	Pn	16 17 18.0	-5.2
MRZ	**Mangatainoka R**	**9.88**	**206**	Pn	Pn	16 17 20.2	-6.0
MSWZ	**Moikau Station**	**10.66**	**206**	Pn	Pn	16 17 31.2	-5.6
SNZO	**South Karori**	**10.78**	**208**	Pn	Pn	16 17 32.6	-5.8
PLWZ	**Palliser**	**10.79**	**205**	Pn	Pn	16 17 31.2	-7.5
TCW	**Tory Channel**	**10.81**	**209**	Pn	Pn	16 17 32.3	-7.4
TUWZ	**Tuamarina**	**11.19**	**210**	Pn	Pn	16 17 38.5	-5.6
NNZ	**Nelson**	**11.27**	**212**	Pn	**Pn**	**16 17 40.6**	**-4.4**
CMWZ	**Cape Campbell**	**11.35**	**208**	Pn	**Pn**	**16 17 42.1**	**-4.1**
CTZ	**Chatham Island**	**11.91**	**173**	Pn	**Pn**	**16 17 49.8**	**-4.0**
KHZ	**Kahutara**	**12.18**	**208**	Pn	**Pn**	**16 17 53.5**	**-4.0**
EIDS	**Eidsvold**	**27.29**	**276**	P	**P**	**16 20 44.0**	**-3.2**
EIDS				IAmb	IAmb	16 20 49.4	
	comp=Z,19nm,1.3s						
BBOO	**Buckleboo**	**38.04**	**256**	P	**P**	**16 22 21.3**	**+0.5**
COEN	**Coen**	**39.18**	**288**	P	**P**	**16 22 32.9**	**+2.3**
AS31	**Alice Springs**	**42.49**	**269**	P	**P**	**16 22 59.2**	**+1.3**
ASAR	**Alice Springs**	**42.49**	**269**	P	**P**	**16 22 59.5**	**+1.7**
	comp=Z,0.9nm,0.4s,baz=106,slow=7.2,SNR=24						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**42.49**	**269**	P	**P**	**16 22 58.9**	**+1.0**
WR8	**Warramunga Arr**	**43.47**	**274**	P	**P**	**16 23 06.6**	**+0.8**
WR8				IAmb	IAmb	16 23 38.8	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**43.62**	**274**	P	**P**	**16 23 08.2**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=113,slow=8.0,SNR=19						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**43.62**	**274**	P	**P**	**16 23 07.4**	**+0.5**
MTN	**Manton Dam**	**49.68**	**281**	P	**P**	**16 23 54.6**	**+0.2**
MTN				IAmb	IAmb	16 24 23.7	
	comp=Z,10nm,1.3s						
KNRA	**Kununurra**	**50.28**	**276**	P	**P**	**16 23 59.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**51.81**	**271**	P	**P**	**16 24 11.2**	**+0.7**
FITZ				IAmb	IAmb	16 24 31.2	
	comp=Z,1.8nm,1.2s						
CASY	**Casey**	**53.54**	**208**	P	**P**	**16 24 22.8**	**+0.3**
CASY				IAmb	IAmb	16 25 03.7	
	comp=Z,3.2nm,0.6s						
QSPA	**South Pole Qui**	**58.20**	**180**	P	**P**	**16 24 59.2**	**+3.2**
	comp=Z,1.2nm,0.6s,baz=45,slow=4.3,SNR=11						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**58.20**	**180**	P	**P**	**16 24 56.2**	**+0.1**
QSPA				IAmb	IAmb	16 25 04.1	
	comp=Z,3.5nm,1.2s						
BELA	**Belgrano 2**	**68.36**	**172**	P	**P**	**16 26 02.4**	**-0.6**
BELA				IAmb	IAmb	16 26 24.7	
	comp=Z,2.1nm,1.1s						
MAW	**Mawson**	**70.69**	**201**	P	**P**	**16 26 17.3**	**-0.2**
H03S2	**Juan Fernandez**	**80.10**	**124**	T	T	17 55 50.8	
	baz=237,slow=74,SNR=75						
H03S1	**Juan Fernandez**	**80.11**	**124**	T	T	17 55 59.0	
	baz=237,slow=74,SNR=62						
H03S3	**Juan Fernandez**	**80.11**	**124**	T	T	17 55 58.4	
	baz=237,slow=74,SNR=70						
KURK	**Kurchatov**	**121.68**	**313**		**PKiKP**	**16 33 56.7**	**+1.4**
KURBB	**Kurchatov Arra**	**121.72**	**313**	PKP	**PKiKP**	**16 33 56.7**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=126,slow=2.3,SNR=4.2						
FINES	**FINESS Array B**	**146.36**	**339**	PKPbc	**PKPbc**	**16 34 41.9**	**0.0**
	comp=Z,1.8nm,0.6s,baz=36,slow=3.5,SNR=6.0						
FINES	**FINESS Array B**	**146.36**	**339**		**PKPdf**	**16 34 40.9**	**+0.4**
HFS	**Hagfors**	**150.61**	**347**	PKPbc	**PKPbc**	**16 34 53.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=27,slow=2.5,SNR=1.3						

JMA 30 16:17:22.9±0.2, 31°.5N±0°.4×129°.3E±0°.8, h3km±2km, MV1.9/29, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.41**	**62**	P	Pg	16 17 31.2	+0.3
JSJ				*e*S	Sg	16 17 36.8	+0.6
JSU	**Suzuyama**	**1.00**	**89**	P	Pb	16 17 42.8	-0.1
JSU	**Suzuyama**	**1.00**	**89**	*e*P	Pg	16 17 42.2	+0.2
JSU				*e*S	Sg	16 17 55.6	+0.7
JHD	**Hondo**	**1.21**	**36**	*e*P	Pg	16 17 46.3	+0.1
JHD				*e*S	Sb	16 18 02.6	0.0
JFU	**Fukue jima 2**	**1.25**	**339**	*e*P	Pg	16 17 45.4	-1.5
JFU				*e*S	Sg	16 18 02.6	-0.6
JZO	**Okuchi**	**1.29**	**59**	*e*S	Sb	16 18 05.2	+0.3

PRU 30 16:19:04.8, 51°.46N×16°.17E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.88**	**185**	*e*PG	Pg	16 19 20.1	-1.5
UPC	**Upice**	**0.96**	**186**	*e*PG	Pg	16 19 22.0	-1.2
UPC				*e*SG	Sg	16 19 34.2	-1.4
DPC	**Dobruska-Polom**	**1.11**	**175**	*e*PG	Pg	16 19 25.1	-1.0
DPC				*e*SG	Sg	16 19 40.9	+0.3
PVCC	**Panska Ves**	**1.38**	**228**	*e*PG	Pg	16 19 28.7	-2.4
PVCC				*e*SG	Sb	16 19 49.4	-0.1
	comp=Z,9.4nm,0.3s						
KRLC	**Kraliky**	**1.44**	**164**	*e*PG	Pn	16 19 30.8	-1.4
BRG	**Berggiesshubel**	**1.52**	**248**	Pg	Pn	16 19 31.7	-1.5
BRG				Sg	Sg	16 19 52.2	-1.4
BRG				Amp		16 19 53.4	
	comp=Z,2.8nm,0.5s						

*IDC **30** 16:27:25.1±0.7, 6°.28N×125°.30E, h181km±5km, mb3.4/18, mbtmp4.0/20, Error ellipse: s-maj=29.4km s-min=11.0km az=73.0*
*NEIC **30** 16:27:25.0±1.9, 6°.35N±0°.06×125°.58E±0°.10, h179km±2km, mb4.2/36, Error ellipse: s-maj=14.5km s-min=8.2km az=71.0*
*MAN **30** 16:27:26.0, 6°.43N×125°.82E, h166km, MS3.9*
*DJA **30** 16:27:33.9±0.6, 6°.N±4°.×12°.6E±°, h216km±6km, M4.5/12, mb4.5/7, mB4.8/6, MLv4.7/12, Mw(mB)4.1/6*
ISC 30 16:27:24.5±0.5, 6°.36N±0°.04×125°.74E±0°.05, h180km±4km, n89, σ1§62/113, mb3.9/33, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.72**	**347**	P	**Pn**	**16 27 51.9**	**+1.5**
	133nm,0.3s,baz=225,slow=7.1,SNR=3.9						
DAV				S	**Sn**	**16 28 13.1**	**+2.7**
	407nm,0.4s,baz=287,slow=4.0,SNR=6.5						
DAV				LR	LR	16 28 16.5	
	comp=Z,28nm,19.1s,baz=128,slow=61						
DAV	**Davao City (W)**	**0.72**	**347**		**Pn**	**16 27 50.5**	**+0.1**
DAV				Sn	**Sn**	**16 28 11.6**	**+1.1**
DAV	**Davao City (W)**	**0.72**	**347**	P	**Sn**	**16 28 10.6**	**+0.2**
DMPH	**Davao City--Mi**	**0.75**	**342**	*e*P	**Pn**	**16 27 52.5**	**+1.9**
DMPH				*i* S	**Sn**	**16 28 12.4**	**+1.7**
GSPH	**General Santos**	**0.83**	**251**	*e*P	**Pn**	**16 27 52.5**	**+1.3**
GSPH				*i* S	**Sn**	**16 28 12.3**	**+0.7**
KCP	**Kidapawan**	**0.91**	**315**	*i* P	**Pn**	**16 27 53.5**	**+1.9**
KCP				*i* S	**Sn**	**16 28 14.1**	**+1.5**
CDOP	**Cateel, Davao**	**1.57**	**26**	*i* P	**Pn**	**16 27 57.9**	**+0.8**
CDOP				*i* S	**Sn**	**16 28 21.8**	**-0.7**
BUKP	**Musuan**	**1.65**	**336**	*i* P	**Pn**	**16 27 59.9**	**+1.9**
BUKP				*i* S	**Sn**	**16 28 25.9**	**+1.9**
CTBH	**Cotabato--PC H**	**1.71**	**300**	*i* P	**Pn**	**16 28 00.2**	**+1.7**
CTBH				*i* S	**Sn**	**16 28 26.6**	**+1.7**
BIPH	**Bislig**	**1.91**	**19**	*e*P	**Pn**	**16 28 01.8**	**+1.3**
BIPH				*e*S	**Sn**	**16 28 30.3**	**+1.6**
CGP	**Cagayan de Oro**	**2.32**	**333**	*e*P	**Pn**	**16 28 07.2**	**+2.1**
CGP				*e*S	**Sn**	**16 28 37.8**	**+0.9**
SGSI	**Sangihe**	**2.67**	**185**	P	**Pn**	**16 28 11.6**	**+2.4**
SGSI				S	**Sn**	**16 28 45.7**	**+1.7**
TSSP	**Tandag City**	**2.70**	**10**	*i* P	**Pn**	**16 28 10.5**	**+1.0**
TSSP				*e*S	**Sn**	**16 28 37.1**	**-7.6**
DCPH	**Dipolog City**	**3.24**	**313**	*e*P	**Pn**	**16 28 16.4**	**+0.3**
DCPH				*e*S	**Sn**	**16 29 01.4**	**+5.2**
PLP	**Palo**	**4.83**	**351**	*e*P	**Pn**	**16 28 37.8**	**+1.5**
MNI	**Manado**	**4.97**	**190**	P	**Pn**	**16 28 40.4**	**+2.3**
TNTI	**Ternate**	**5.79**	**164**		**Pn**	**16 28 49.5**	**+0.8**
TNTI				Sn	**Sn**	**16 29 53.3**	**-1.8**
TNTI	**Ternate**	**5.79**	**164**	P	**Pn**	**16 28 51.2**	**+2.5**
	0.9nm1μm54nm,0.5s						
TNTI				S	**Sn**	**16 29 54.3**	**-0.8**
	0.9nm1μm54nm,0.5s						
TOLI2	**Tolitoli**	**7.19**	**224**		**Pn**	**16 29 07.3**	**+0.1**
LUWI	**Luwuk**	**7.93**	**202**	Pn	**Pn**	**16 29 15.7**	**-1.2**
SIJI	**Sorong**	**9.06**	**142**	P	**Pn**	**16 29 33.9**	**+2.1**
	6.7nm,0.4s,baz=323,slow=19,SNR=23						
SIJI				S	**Sn**	**16 31 11.7**	**-1.3**
	3.7nm,0.6s,baz=202,slow=22,SNR=1.7						
NLAI	**Namlea**	**9.63**	**172**	P	**Pn**	**16 29 39.8**	**+0.5**
BATI	**Baumata**	**16.59**	**187**	P	**P**	**16 31 05.5**	**-0.9**
	28nm,0.4s,baz=2.9,slow=3.1,SNR=5.7						
TPUB	**Ta-pu**	**17.55**	**344**	P	**P**	**16 31 16.5**	**-0.3**
DLV	**Lat**	**17.91**	**289**		**P**	**16 31 19.4**	**-1.7**
MTN	**Manton Dam**	**19.82**	**164**	P	**P**	**16 31 42.5**	**+1.1**
MTN				IAmb	IAmb	16 32 23.5	
	comp=Z,11nm,1.4s						
KNRA	**Kununurra**	**22.10**	**172**	P	**P**	**16 32 05.9**	**+0.5**
KNRA				IAmb	IAmb	16 32 18.2	
	comp=Z,7.7nm,1.0s						
FITZ	**Fitzroy Crossi**	**24.31**	**180**	P	**P**	**16 32 25.2**	**-0.3**
WB0	**Warramunga Arr**	**27.33**	**162**	P	**P**	**16 32 51.9**	**-0.9**
WRA	**Warramunga Arr**	**27.47**	**162**	P	**P**	**16 32 54.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=342,slow=7.9,SNR=4.9						
	comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**27.47**	**162**	P	**P**	**16 32 53.8**	**-0.3**
WR8	**Warramunga Arr**	**27.54**	**162**	P	**P**	**16 32 54.6**	**-0.1**
WR8				IAmb	IAmb	16 33 16.4	
	comp=Z,8.8nm,1.4s						
MBWA	**Marble Bar**	**27.98**	**192**	P	**P**	**16 32 57.5**	**-1.1**
GSI	**Gunungsitoli**	**28.54**	**261**		**P**	**16 33 01.5**	**-2.2**
AS31	**Alice Springs**	**30.89**	**165**	P	**P**	**16 33 24.7**	**+0.4**
ASAR	**Alice Springs**	**30.89**	**165**	P	**P**	**16 33 25.9**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=339,slow=7.3,SNR=38						
ASAR				PcP	**PcP**	**16 36 17.5**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=342,slow=2.5,SNR=1.8						
ASAR				ScP	**ScP**	**16 39 42.8**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=322,slow=3.6,SNR=1.5						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**30.89**	**165**	P	**P**	**16 33 23.8**	**-0.6**
ASAR					**PcP**	**16 36 15.9**	**-0.8**
KSRS	**Korea Array**	**31.01**	**3**	P	**P**	**16 33 28.3**	**+3.2**
	comp=Z,0.5nm,0.5s,baz=184,slow=9.4,SNR=3.4						
	comp=Z,0.5nm,0.5s						
FORT	**Forrest**	**37.00**	**177**	P	**P**	**16 34 18.2**	**+1.4**
FORT				IAmb	IAmb	16 34 26.1	
	comp=Z,5.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**38.08**	**7**	P	**P**	**16 34 27.6**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=187,slow=8.8,SNR=5.5						
	comp=Z,0.9nm,0.6s						
NWAO	**Narrogin (SRO)**	**39.90**	**191**	P	**P**	**16 34 42.3**	**+1.3**
BBOO	**Buckleboo**	**40.17**	**166**	P	**P**	**16 34 44.8**	**+1.5**
BBOO				IAmb	IAmb	16 34 45.6	
	comp=Z,12nm,1.2s						
HILR	**Hailar Array B**	**43.34**	**354**	P	**P**	**16 35 09.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=168,slow=8.4,SNR=2.4						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**44.51**	**341**	P	**P**	**16 35 17.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=149,slow=8.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
KAAM	**Kaadhehdhoo**	**52.95**	**266**	P	**P**	**16 36 21.8**	**-1.1**
PETK	**Petropavlovsk-**	**53.40**	**23**	P	**P**	**16 36 27.9**	**+2.4**
	comp=Z,2.3nm,0.9s,baz=226,slow=7.6,SNR=2.6						
	comp=Z,2.3nm,0.9s						
PETK	**Petropavlovsk-**	**53.40**	**23**	P	**P**	**16 36 26.4**	**+0.9**
MKAR	**Makanchi Array**	**54.85**	**325**	P	**P**	**16 36 35.9**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=119,slow=7.3,SNR=28						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**54.85**	**325**	P	**P**	**16 36 35.7**	**-0.5**
MKAR					**PcP**	**16 37 35.9**	**-0.3**
MAKZ	**Makanchi**	**55.04**	**325**	P	**P**	**16 36 37.2**	**-0.3**
MAKZ				PcP	**PcP**	**16 37 36.5**	**-0.3**
YAK	**Yakutsk**	**55.63**	**2**	P	**P**	**16 36 42.3**	**+0.9**
KDJ	**Kajisay**	**55.74**	**318**	P	**P**	**16 36 42.7**	**-0.2**
ZAA0	**Zalesovo Array**	**57.81**	**333**	P	**P**	**16 36 55.6**	**-1.3**
ZALV	**Zalesovo Beam**	**57.81**	**333**	P	**P**	**16 36 56.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=132,slow=5.8,SNR=3.2						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**57.81**	**333**	P	**P**	**16 36 55.4**	**-1.6**
KURBB	**Kurchatov Arra**	**59.01**	**327**	P	**P**	**16 37 04.6**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=130,slow=6.4,SNR=23						
	comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**59.01**	**327**		**P**	**16 37 04.6**	**-0.7**
KURK				IAmb	IAmb	16 37 05.6	
	comp=Z,1.8nm,0.5s						
KBL	**Kabul**	**59.16**	**307**	P	**P**	**16 37 06.6**	**-0.4**
KBL				IAmb	IAmb	16 37 50.4	
	comp=Z,1.6nm,0.8s						
GAR	**Garm**	**59.44**	**312**	P	**P**	**16 37 07.1**	**-1.5**
GAR				IAmb	IAmb	16 37 09.2	
	comp=Z,3.9nm,0.5s						
KKAR	**Karatay Array**	**60.65**	**316**	P	**P**	**16 37 16.0**	**-0.8**
JOHN	**Johnston Islan**	**64.02**	**75**	P	**P**	**16 37 39.4**	**0.0**
BVAR	**Borovoye Array**	**64.59**	**327**	P	**P**	**16 37 41.8**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=114,slow=6.9,SNR=5.4						
	comp=Z,0.7nm,0.4s						
RAO	**Raoul Island**	**64.67**	**126**	P	**P**	**16 37 44.6**	**+1.2**
TUWZ	**Tuamarina**	**64.81**	**142**	P	**P**	**16 37 44.7**	**+0.6**
TIXI	**Tiksi**	**65.24**	**1**	P	**P**	**16 37 46.8**	**+0.5**
TIXI				IAmb	IAmb	16 37 47.7	
	comp=Z,3.0nm,0.8s						
UOSS	**Minazif**	**68.80**	**294**	P	**P**	**16 38 08.9**	**-0.8**
UOSS				IAmb	IAmb	16 38 09.7	
	comp=Z,2.5nm,0.6s						
AB31	**Akbulak array**	**69.50**	**320**	P	**P**	**16 38 12.6**	**-1.0**
AB31				pP	**pP**	**16 38 51.9**	**-4.7**
ABKAR	**Akbulak array**	**69.50**	**320**	P	**P**	**16 38 12.5**	**-1.1**
CASY	**Casey**	**73.30**	**186**	P	**P**	**16 38 36.3**	**+0.5**
CASY				IAmb	IAmb	16 39 05.0	
	comp=Z,5.8nm,1.5s						
RAYN	**Ar Rayn**	**78.56**	**293**	P	**P**	**16 39 06.5**	**-0.1**
RAYN				IAmb	IAmb	16 39 07.8	
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**80.47**	**313**	P	**P**	**16 39 16.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=262,slow=3.4,SNR=2.1						
	comp=Z,1.1nm,0.6s						
MLY	**Manley**	**81.53**	**25**	P	**P**	**16 39 24.4**	**+2.6**
C23K	**Itkillik River**	**81.87**	**20**	P	**P**	**16 39 25.1**	**+1.7**
C23K				IAmb	IAmb	16 39 49.6	
	comp=Z,4.4nm,1.3s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**16 39 31.2**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=270,slow=4.9,SNR=2.8						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**83.17**	**26**	P	**P**	**16 39 31.3**	**+1.2**
F28M	**Old Crow**	**85.84**	**23**	P	**P**	**16 39 44.0**	**+0.4**
F28M				IAmb	IAmb	16 40 02.6	
	comp=Z,2.6nm,1.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**87.60**	**310**	P	**P**	**16 39 51.5**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=83,slow=4.9,SNR=4.2						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**87.60**	**310**	P	**P**	**16 39 51.1**	**-1.7**
BRTR				pP	**pP**	**16 40 35.4**	**-2.0**
ARCES	**ARCESS Array B**	**87.65**	**340**	P	**P**	**16 39 51.9**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=64,slow=5.8,SNR=4.9						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**87.65**	**340**	P	**P**	**16 39 51.7**	**-0.6**
ARCES				IAmb	IAmb	16 40 03.6	
	comp=Z,6.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**87.72**	**349**	P	**P**	**16 39 53.2**	**+0.7**
	comp=Z,7.5nm,1.1s,baz=68,slow=5.2,SNR=2.0						
	comp=Z,7.5nm,1.1s						
HYT	**Haines Junctio**	**87.78**	**29**	P	**P**	**16 39 53.4**	**+0.2**
HYT				IAmb	IAmb	16 39 56.2	
	comp=Z,1.4nm,0.9s						
FIA1	**FINESS Array S**	**89.06**	**332**	P	**P**	**16 39 58.0**	**-1.0**
FINES	**FINESS Array B**	**89.06**	**332**	P	**P**	**16 39 58.2**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=72,slow=6.2,SNR=10						
	comp=Z,1.3nm,0.5s						
FINES	**FINESS Array B**	**89.06**	**332**	P	**P**	**16 39 58.1**	**-0.8**
FINES					**pP**	**16 40 42.8**	**-0.9**
AKASG	**Malin Array Be**	**89.24**	**321**	P	**P**	**16 39 58.4**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=76,slow=3.9,SNR=1.8						
	comp=Z,0.8nm,0.6s						
HFS	**Hagfors**	**95.25**	**332**	P	**P**	**16 40 25.9**	**-1.7**
	comp=Z,7.7nm,1.0s,baz=68,slow=5.2,SNR=2.2						
NB201	**NORSAR Array S**	**95.97**	**334**	P	**P**	**16 40 32.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**121.14**	**289**	PKP	**PKPdf**	**16 45 56.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=106,slow=3.2,SNR=4.3						

IDC 30 16:35:10.8±6.2, 7°.65N×102°.91W, h0km, mb3.6/4, mbtmp3.6/5, ML2.7/1, MS3.4/7, Error ellipse: s-maj=111.0km s-min=59.9km az=174.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**14.22**	**58**	Pn	Pn	16 38 34.8	+0.9
	baz=165,slow=14,SNR=5.9						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**21.59**	**358**	P	P	16 40 01.9	-0.4
	1.2nm,0.8s,baz=178,slow=14,SNR=8.7						
TXAR				LR	LR	16 47 21.0	
	comp=Z,129nm,19.3s,baz=163,slow=34						
	1.2nm,0.8s						
ANMO	**Albuquerque**	**27.36**	**354**	LR	LR	16 50 43.5	
	comp=Z,83nm,18.9s,baz=158,slow=34						
PFO	**Pinyon Flats O**	**28.72**	**336**	LR	LR	16 50 08.0	
	comp=Z,67nm,18.4s,baz=112,slow=31						
NVAR	**Mina Array Bea**	**33.65**	**338**	P	P	16 41 55.3	+1.6
	0.5nm,0.7s,baz=150,slow=8.9,SNR=2.7						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**35.47**	**352**	P	P	16 42 08.8	-0.6
	1.1nm,0.9s,baz=166,slow=8.6,SNR=7.7						
	1.1nm,0.9s						
H03N2	**Juan Fernandez**	**46.78**	**152**	T	T	17 34 44.3	
	baz=329,slow=77,SNR=53						
H03N1	**Juan Fernandez**	**46.79**	**152**	T	T	17 34 45.5	
	baz=329,slow=77,SNR=60						
H03N3	**Juan Fernandez**	**46.80**	**152**	T	T	17 34 23.7	
	baz=329,slow=77,SNR=13						
YKA	**Yellowknife Ar**	**55.41**	**353**	LR

PB09				IAML			16 39 39.2		
	comp=N,799nm,0.6s								
PB09	**IPOC Station P**	**3.24**	**322**		**Pn**		**16 38 58.6**	**+2.1**	
PB09				Sn	**Sn**		**16 39 37.0**	**+0.6**	
PB09	**IPOC Station P**	**3.24**	**322**	P	**Pn**		**16 38 59.1**	**+2.6**	
PB03	**IPOC Station P**	**3.36**	**313**	*eP*	**Pn**		**16 38 59.9**	**+1.8**	
PB03				*eS*	**Sn**		**16 39 38.9**	**-0.4**	
PB03				IAML			16 39 42.8		
	comp=Z,695nm,0.3s								
PB03	**IPOC Station P**	**3.36**	**313**	⇑*iP*	**Pn**		**16 38 59.7**	**+1.6**	
PB03				*eS*	**Sn**		**16 39 38.9**	**-0.4**	
PB03	**IPOC Station P**	**3.36**	**313**		**Pn**		**16 38 59.5**	**+1.4**	
PB03				Sn	**Sn**		**16 39 38.4**	**-0.9**	
PB03	**IPOC Station P**	**3.36**	**313**	P	**Pn**		**16 38 59.8**	**+1.8**	
AC01	**Pan de Azucar**	**3.63**	**240**	*eP*	**Pn**		**16 39 01.8**	**+0.6**	
AC01				*eS*	**Sn**		**16 39 44.5**	**-0.4**	
AC01				IAML			16 39 45.3		
	comp=Z,279nm,0.6s								
AC01	**Pan de Azucar**	**3.63**	**240**	⇑*iP*	**Pn**		**16 39 01.7**	**+0.6**	
AC01				*eS*	**Sn**		**16 39 44.0**	**-1.0**	
AC01	**Pan de Azucar**	**3.63**	**240**		**Pn**		**16 39 01.6**	**+0.4**	
AC01				Sn	**Sn**		**16 39 43.0**	**-2.0**	
AC01	**Pan de Azucar**	**3.63**	**240**	P	**Pn**		**16 39 01.9**	**+0.6**	
PB07	**IPOC Station P**	**3.68**	**315**	*eP*	**Pn**		**16 39 03.7**	**+1.6**	
PB07				*eS*	**Sn**		**16 39 46.3**	**-0.2**	
PB07				IAML			16 39 47.3		
	comp=Z,1µm,0.3s								
PB07	**IPOC Station P**	**3.68**	**315**	⇑*iP*	**Pn**		**16 39 03.5**	**+1.5**	
PB07				*eS*	**Sn**		**16 39 45.2**	**-1.2**	
PB07	**IPOC Station P**	**3.68**	**315**		**Pn**		**16 39 02.8**	**+0.8**	
PB07				Sn	**Sn**		**16 39 45.2**	**-1.2**	
PB07	**IPOC Station P**	**3.68**	**315**	P	**Pn**		**16 39 03.6**	**+1.5**	
TINO	**Tinogasta**	**3.70**	**186**	*eP*	**Pn**		**16 39 05.1**	**+2.9**	
PB02	**IPOC Station P**	**3.99**	**319**	*eP*	**Pn**		**16 39 07.2**	**+1.2**	
PB02				*eS*	**Sn**		**16 39 53.0**	**-0.4**	
PB02				IAML			16 39 54.7		
	comp=Z,1µm,0.3s								
PB02	**IPOC Station P**	**3.99**	**319**	*eP*	**Pn**		**16 39 06.8**	**+0.8**	
PB02				*eS*	**Sn**		**16 39 51.3**	**-2.1**	
PB02	**IPOC Station P**	**3.99**	**319**		**Pn**		**16 39 05.7**	**-0.3**	
PB02				Sn	**Sn**		**16 39 51.1**	**-2.3**	
PB02	**IPOC Station P**	**3.99**	**319**	P	**Pn**		**16 39 07.0**	**+1.1**	
GO03	**Copiapo**	**4.27**	**221**	*eP*	**Pn**		**16 39 10.0**	**+0.5**	
GO03				*eS*	**Sn**		**16 39 59.3**	**-0.5**	
GO03				IAML			16 40 01.9		
	comp=Z,255nm,0.6s								
GO03	**Copiapo**	**4.27**	**221**	*eP*	**Pn**		**16 39 09.9**	**+0.4**	
GO03				*eS*	**Sn**		**16 39 59.0**	**-0.9**	
GO03	**Copiapo**	**4.27**	**221**		**Pn**		**16 39 09.4**	**-0.1**	
GO03				Sn	**Sn**		**16 39 58.4**	**-1.4**	
GO03	**Copiapo**	**4.27**	**221**	P	**Pn**		**16 39 09.8**	**+0.3**	
PB08	**IPOC Station P**	**4.62**	**335**	*eP*	**Pn**		**16 39 16.2**	**+1.8**	
PB08				*eS*	**Sn**		**16 40 08.8**	**+0.2**	
PB08				IAML			16 40 16.1		
	comp=Z,161nm,0.4s								
PB08	**IPOC Station P**	**4.62**	**335**		**Pn**		**16 39 15.5**	**+1.1**	
PB08				Sn	**Sn**		**16 40 07.5**	**-1.1**	
PB08	**IPOC Station P**	**4.62**	**335**	P	**Pn**		**16 39 16.1**	**+1.7**	
TA02	**Huaiquique**	**4.96**	**325**	P	**Pn**		**16 39 18.7**	**+0.3**	
ACLC	**CERRO LA CRUZ**	**5.03**	**179**	*eP*	**Pn**		**16 39 21.3**	**+1.8**	
GO01	**Chusmiza**	**5.07**	**337**	*eP*	**Pn**		**16 39 22.4**	**+2.0**	
GO01				IAML			16 40 25.1		
	comp=Z,95nm,0.3s								
GO01	**Chusmiza**	**5.07**	**337**		**Pn**		**16 39 20.6**	**+0.2**	
GO01				Sn	**Sn**		**16 40 17.9**	**-1.3**	
GO01	**Chusmiza**	**5.07**	**337**	P	**Pn**		**16 39 21.5**	**+1.1**	
PB11	**IPOC Station P**	**5.17**	**332**		**Pn**		**16 39 20.7**	**-0.6**	
PB11				Sn	**Sn**		**16 40 18.0**	**-3.0**	
PB11	**IPOC Station P**	**5.17**	**332**	P	**Pn**		**16 39 21.3**	**0.0**	
AC04	**Llanos de Chal**	**5.22**	**222**	*eP*	**Pn**		**16 39 21.1**	**-0.7**	
AC04				*eS*	**Sn**		**16 40 19.4**	**-2.5**	
AC04				IAML			16 40 26.5		
	comp=Z,139nm,0.6s								
AC04	**Llanos de Chal**	**5.22**	**222**	*eP*	**Pn**		**16 39 21.4**	**-0.5**	
AC04	**Llanos de Chal**	**5.22**	**222**		**Pn**		**16 39 20.7**	**-1.1**	
AC04				Sn	**Sn**		**16 40 18.2**	**-3.8**	
AC04	**Llanos de Chal**	**5.22**	**222**	P	**Pn**		**16 39 22.6**	**+0.8**	
AC05	**El Transito**	**5.27**	**212**	*eP*	**Pn**		**16 39 22.8**	**+0.2**	
AC05				*eS*	**Sn**		**16 40 16.7**	**-6.7**	
AC05				IAML			16 40 24.9		
	comp=Z,81nm,0.3s								
AC05	**El Transito**	**5.27**	**212**		**Pn**		**16 39 22.5**	**-0.2**	
AC05				Sn	**Sn**		**16 40 20.8**	**-2.6**	
AC05	**El Transito**	**5.27**	**212**	P	**Pn**		**16 39 22.9**	**+0.3**	
PSGCX	**Pisagua**	**5.52**	**329**		**Pn**		**16 39 24.5**	**-1.4**	
PSGCX				Sn	**Sn**		**16 40 24.6**	**-4.6**	
PSGCX	**Pisagua**	**5.52**	**329**	P	**Pn**		**16 39 26.1**	**+0.3**	
LCO	**Las Campanas**	**5.63**	**214**		**Pn**		**16 39 26.0**	**-1.4**	
CO01	**Juntas del Tor**	**6.18**	**205**		**Pn**		**16 39 34.7**	**0.0**	
PB16	**IPOC Station P**	**6.41**	**339**		**Pn**		**16 39 37.6**	**-0.5**	
PB16	**IPOC Station P**	**6.41**	**339**	P	**Pn**		**16 39 38.6**	**+0.5**	
PB12	**IPOC Station P**	**6.47**	**332**	P	**Pn**		**16 39 37.6**	**-0.8**	
GO04	**Tololo Observa**	**6.65**	**209**		**Pn**		**16 39 39.2**	**-1.6**	
AP01	**Chacalluta**	**6.69**	**333**	Pn	Pn		16 39 37.1	-4.2	
PB18	**Visviri**	**7.11**	**341**	Pn	**Pn**		**16 39 44.5**	**-2.8**	
CO03	**El Pedregal**	**7.18**	**206**		**Pn**		**16 39 46.0**	**-1.7**	
CFA	**Coronel Fontan**	**7.27**	**188**	P	**Pn**		**16 39 48.9**	**0.0**	
	comp=Z,1.0nm,0.3s,baz=14,slow=17,SNR=16								
CFA				S	**Sn**		**16 41 07.3**	**-3.4**	
	comp=Z,3.1nm,0.2s,baz=277,slow=20,SNR=7.3								
CO06	**Fray Jorge**	**7.45**	**212**	Pn	**Pn**		**16 39 49.3**	**-1.9**	
LPAZ	**La Paz**	**8.10**	**353**	P	**Pn**		**16 40 01.0**	**+0.5**	
	comp=Z,2.8nm,0.3s,baz=165,slow=7.0,SNR=19								
LPAZ				S	**Sn**		**16 41 29.8**	**-1.8**	
	comp=Z,4.7nm,0.7s,baz=30,slow=21,SNR=6.2								
LPAZ	**La Paz**	**8.10**	**353**		**Pn**		**16 39 59.8**	**-0.7**	
LPAZ	**La Paz**	**8.10**	**353**	*eP*	**Pn**		**16 40 01.6**	**+1.1**	
LPAZ				*eS*	**Sn**		**16 41 29.7**	**-1.8**	
LPAZ	**La Paz**	**8.10**	**353**	P	**Pn**		**16 40 01.9**	**+1.4**	
CO04	**Los Peladeros**	**8.37**	**203**	Pn	**Pn**		**16 40 01.4**	**-2.1**	
CPUP	**Villa Florida**	**9.05**	**104**	P	**Pn**		**16 40 11.7**	**-0.7**	
	comp=Z,8.1nm,0.7s,baz=282,slow=13,SNR=20								
CPUP	**Villa Florida**	**9.05**	**104**	*eP*	**Pn**		**16 40 12.4**	**+0.1**	
CPUP	**Villa Florida**	**9.05**	**104**	P	**Pn**		**16 40 11.2**	**-1.1**	
MURT	**Porto Murtinho**	**9.15**	**75**	*eP*	**Pn**		**16 40 12.7**	**-1.0**	
BBSD	**Serra de San D**	**9.38**	**42**	*eP*	**Pn**		**16 40 15.8**	**-0.9**	
MT02	**Curacav**	**9.53**	**201**	Pn	Pn		16 40 14.3	-4.3	
COIM	**Forte Coimbra**	**9.71**	**65**	*eP*	**Pn**		**16 40 20.4**	**-0.7**	
SIV	**San Ignacio**	**10.08**	**35**	P	**Pn**		**16 40 24.5**	**-1.5**	
	comp=Z,5.2nm,0.6s,baz=212,slow=12,SNR=28								
SIV				S	**Sn**		**16 42 13.2**	**-4.8**	
	comp=Z,1.5nm,0.6s,baz=261,slow=6.0,SNR=3.5								
PSAL	**Palomas, Salto**	**10.74**	**131**	*eP*	**Pn**		**16 40 34.3**	**-0.1**	
AQDB	**Aquidauana**	**11.23**	**72**		**Pn**		**16 40 40.1**	**-0.9**	
AQDB	**Aquidauana**	**11.23**	**72**	*eP*	**Pn**		**16 40 43.2**	**+2.2**	
AQDB	**Aquidauana**	**11.23**	**72**	P	**Pn**		**16 40 43.2**	**+2.2**	
PTLB	**Pontes e Lacer**	**11.61**	**42**	*eP*	**Pn**		**16 40 45.9**	**0.0**	
ANCO	**Parque Anchore**	**12.68**	**143**	*eP*	**Pn**		**16 40 59.2**	**-0.2**	
TRCB	**Terra Rica**	**13.36**	**86**		**Pn**		**16 41 07.8**	**-0.5**	
TRCB	**Terra Rica**	**13.36**	**86**	*eP*	**Pn**		**16 41 09.3**	**+1.0**	
CPSB	**Cacapava Do Su**	**13.54**	**119**		**Pn**		**16 41 10.0**	**-0.4**	
CPSB	**Cacapava Do Su**	**13.54**	**119**	*eP*	**Pn**		**16 41 10.6**	**+0.2**	
CPSB	**Cacapava Do Su**	**13.54**	**119**	P	**Pn**		**16 41 10.8**	**+0.4**	
SALV	**Santo Antonio**	**13.62**	**54**	*eP*	**Pn**		**16 41 10.8**	**-0.8**	
PTGB	**Pitanga**	**13.69**	**95**	*eP*	**Pn**		**16 41 13.9**	**+1.4**	
ITAB	**Concordia**	**13.78**	**105**	Pn	**Pn**		**16 41 12.9**	**-0.6**	
H03S3	**Juan Fernandez**	**13.96**	**225**	P	**P**		**16 41 17.7**	**-0.4**	
	baz=89,slow=76,SNR=8.1								
H03S1	**Juan Fernandez**	**13.97**	**225**	P	**P**		**16 41 17.5**	**-0.7**	
	baz=89,slow=76,SNR=3.9								
H03S2	**Juan Fernandez**	**13.98**	**225**	P	**P**		**16 41 17.7**	**-0.6**	
	baz=89,slow=76,SNR=8.6								
LDASE	**Londrina, Braz**	**14.65**	**89**	*eP*	**Pn**		**16 41 24.1**	**-0.4**	
CNLB	**Canela**	**15.31**	**112**	*eP*	**Pn**		**16 41 32.4**	**-0.1**	
NNA	**Nana**	**15.40**	**321**	Pn	**Pn**		**16 41 28.8**	**-4.9**	
NNA				IAmb	IAmb		16 41 34.0		
	comp=Z,11nm,1.0s								
PLCA	**Paso Flores**	**16.57**	**189**	P	**Pn**		**16 41 48.9**	**+1.2**	
	comp=Z,2.1nm,0.9s,baz=13,slow=9.8,SNR=8.7								
PLCA	**Paso Flores**	**16.57**	**189**		**Pn**		**16 41 48.1**	**+0.4**	
PLCA				IAmb	IAmb		16 41 57.2		
	comp=Z,16nm,1.5s								
ARAG	**Araguaiana, MT**	**16.74**	**62**	*eP*	**P**		**16 41 49.6**	**+0.3**	
CLDB	**Colider**	**17.20**	**41**	*eP*	**P**		**16 41 54.2**	**-0.1**	
BB19B	**Bebedouro**	**17.45**	**83**	*eP*	**P**		**16 41 57.6**	**+0.6**	
VAO	**Valinhos**	**18.49**	**90**	P	**P**		**16 42 08.0**	**-0.5**	
VAO				IAmb	IAmb		16 42 08.9		
	comp=Z,17nm,0.8s								
VAO	**Valinhos**	**18.49**	**90**	*eP*	**P**		**16 42 08.0**	**-0.5**	
IPMB	**Ipameri, GO**	**18.72**	**74**	*eP*	**P**		**16 42 11.1**	**+0.2**	
LL02	**Futaleuf**	**19.17**	**191**	P	**P**		**16 42 14.6**	**-0.9**	
LL02				IAmb	IAmb		16 42 20.4		
	comp=Z,18nm,0.8s								
LL02	**Futaleuf**	**19.17**	**191**	P	**Pn**		**16 42 20.1**	**+1.7**	
SNDB	**Serra Nova Dou**	**19.41**	**53**	*eP*	**P**		**16 42 17.7**	**-0.7**	
CANS	**Sao Roque de M**	**19.58**	**82**	*eP*	**P**		**16 42 20.2**	**-0.1**	
BDFB	**Brasilia**	**19.91**	**68**	P	**P**		**16 42 23.6**	**-0.3**	
	comp=Z,4.4nm,0.5s,baz=264,slow=10,SNR=5.4								
BDFB	**Brasilia**	**19.91**	**68**	P	**P**		**16 42 24.3**	**+0.4**	
PMNB	**Patos De Minas**	**20.08**	**77**	*eP*	**P**		**16 42 26.2**	**+0.5**	
BSCB	**Bom Sucesso**	**20.87**	**85**	*eP*	**P**		**16 42 33.5**	**-0.5**	
TEFE	**Tefe**	**20.88**	**7**	*eP*	**P**		**16 42 33.6**	**-0.5**	
JANB	**Januaria**	**23.34**	**71**	*eP*	**P**		**16 42 57.0**	**-1.3**	
SGC2	**Sao Gabriel da**	**24.08**	**0**	*eP*	**P**		**16 43 05.1**	**+0.1**	
SMTB	**Santa Maria do**	**24.19**	**54**	*eP*	**P**		**16 43 05.8**	**-0.3**	
PRPB	**Parauapebas**	**24.55**	**45**	*eP*	**P**		**16 43 09.5**	**+0.2**	
BOAV	**Boa Vista**	**27.37**	**14**	P	**P**		**16 43 33.1**	**-1.5**	
BOAV				IAmb	IAmb		16 43 36.9		
	comp=Z,7.7nm,1.5s								
MG02	**Cerro Sombrero**	**28.41**	**183**	P	**P**		**16 43 42.7**	**-0.7**	
ORCD	**Orcadas**	**39.49**	**163**	P	**P**		**16 45 18.9**	**+0.3**	
ESPZ	**Base Esperanza**	**39.59**	**173**	P	**P**		**16 45 19.8**	**+0.4**	
ESPZ				IAmb	IAmb		16 45 45.2		
	comp=Z,13nm,1.3s								
OBIP	**Obispado Ponce**	**42.16**	**1**	P	**P**		**16 45 39.8**	**-1.2**	
CELP	**Cerrillos**	**42.20**	**1**	P	**P**		**16 45 39.4**	**-1.9**	
APG	**El Apagote**	**45.30**	**327**	P	**P**		**16 46 07.6**	**+1.2**	
	comp=Z,0.4nm,0.7s,baz=131,slow=5.4,SNR=3.7								
	comp=Z,0.4nm,0.7s								
TEIG	**Tepich**	**48.89**	**333**	P	**P**		**16 46 33.4**	**-0.4**	
SOR	**Soroa**	**49.36**	**341**	P	**P**		**16 46 36.5**	**-0.8**	
SOR				IAmb	IAmb		16 46 44.2		
	comp=Z,17nm,1.1s								
BELA	**Belgrano 2**	**55.68**	**172**	P	**P**		**16 47 23.8**	**+0.6**	
BELA				PcP	**PcP**		**16 48 20.7**	**+0.3**	
VNA1	**Neumayer--Stat**	**57.03**	**160**	⇑P	**P**		**16 47 33.4**	**+0.7**	
	comp=Z,2.4nm,0.4s								
VNA2	**Neumayer--Watz**	**57.40**	**160**	⇑P	**P**		**16 47 35.4**	**+0.1**	
	comp=Z,4.4nm,0.5s,baz=285,slow=6.7								
SNAA	**Sanae**	**59.03**	**161**	⇑P	**P**		**16 47 47.1**	**+0.3**	
	comp=Z,51nm,0.5s								
SNAA	**Sanae**	**59.03**	**161**	P	**P**		**16 47 47.6**	**+0.9**	
	comp=Z,2.6nm,0.7s,baz=285,slow=6.3,SNR=8.2								
	comp=Z,2.6nm,0.7s								
SNAA	**Sanae**	**59.03**	**161**	P	**P**		**16 47 46.7**	**0.0**	
TROLL	**Troll, Antarti**	**60.74**	**160**	⇓P	**P**		**16 47 59.8**	**+1.3**	
	comp=Z,239nm,0.5s								
TKL	**Tuckaleechee C**	**61.76**	**345**	P	**P**		**16 48 04.3**	**-1.2**	
WVT	**Waverly**	**63.29**	**341**	P	**P**		**16 48 15.6**	**0.0**	
WVT	**Waverly**	**63.29**	**341**	P	**P**		**16 48 13.2**	**-2.4**	
SAND	**Sanderson**	**63.63**	**326**	IAmb	IAmb		16 48 20.7		
	comp=Z,5.5nm,1.0s								
TXAR	**Lajitas Array**	**63.93**	**325**	P	**P**		**16 48 21.2**	**+1.1**	
	comp=Z,0.4nm,0.5s,baz=152,slow=8.9,SNR=8.3								
	comp=Z,0.4nm,0.5s								
ALPN	**Alpine**	**64.74**	**325**	IAmb	IAmb		16 48 27.7		
	comp=Z,2.4nm,0.6s								
TPB01	**Permian Basin**	**65.27**	**326**	IAmb	IAmb		16 48 31.5		
	comp=Z,6.2nm,0.8s								
VHRN	**Van Horn**	**65.77**	**325**	IAmb	IAmb		16 48 34.0		
	comp=Z,3.0nm,0.7s								
QSPA	**South Pole Qui**	**65.83**	**180**	P	**P**		**16 48 33.5**	**+1.4**	
	comp=Z,3.2nm,0.5s,baz=146,slow=6.5,SNR=43								
	comp=Z,3.2nm,0.5s								
QSPA	**South Pole Qui**	**65.83**	**180**	P	**P**		**16 48 33.4**	**+1.4**	
QSPA				IAmb	IAmb		16 48 34.0		
	comp=Z,4.0nm,0.6s								
TPB28		**66.22**	**326**	IAmb	IAmb		16 48 46.0		
	comp=Z,18nm,0.4s								
S39A	**Bolivar**	**66.48**	**338**	P	**P**		**16 48 36.5**	**+0.3**	
MNTX	**Cornudas Mount**	**66.70**	**325**	P	**P**		**16 48 37.7**	**-0.1**	
MNTX	**Cornudas Mount**	**66.70**	**325**	P	**P**		**16 48 38.5**	**+0.7**	
MSTX	**Muleshoe**	**67.21**	**328**	IAmb	IAmb		16 48 43.6		
	comp=Z,7.8nm,1.0s								
DBIC	**Dimbokro**	**68.01**	**71**	P	**P**		**16 48 45.5**	**-0.8**	
	comp=Z,6.5nm,1.0s,baz=137,slow=12,SNR=2.1								
	comp=Z,6.5nm,1.0s								
ALQ	**Albuquerque**	**69.80**	**326**	IAmb	IAmb		16 49 00.4		
	comp=Z,3.1nm,0.8s								
ANMO	**Albuquerque**	**69.81**	**326**		**P**		**16 48 58.4**	**+1.1**	
ANMO	**Albuquerque**	**69.81**	**326**	P	**P**		**16 48 59.7**	**+2.4**	
ISCO	**Idaho Springs**	**73.26**	**330**	P	**P**		**16 49 20.5**	**+2.5**	
VNDA	**Vanda**	**74.32**	**190**	P	**P**		**16 49 25.6**	**+2.3**	
	comp=Z,1.1nm,0.9s,baz=134,slow=6.1,SNR=3.6								
	comp=Z,1.1nm,0.9s								
TORD	**Torodi Ar. Bea**	**76.79**	**69**	P	**P**		**16 49 37.5**	**-0.9**	
	comp=Z,1.6nm,0.6s,baz=249,slow=5.7,SNR=9.7								
	comp=Z,1.6nm,0.6s								
PDAR	**Pinedale Array**	**77.42**	**329**	P	**P**		**16 49 42.9**	**+1.3**	
	comp=Z,0.9nm,0.6s,baz=132,slow=7.9,SNR=5.0								
	comp=Z,0.9nm,0.6s								
ULM	**Lac du Bonnet**	**78.55**	**342**	P	**P**		**16 49 48.0**	**+0.7**	
	comp=Z,2.6nm,0.5s,baz=169,slow=6.2,SNR=5.0								
	comp=Z,2.6nm,0.5s								
ULM	**Lac du Bonnet**	**78.55**	**342**	IAmb	IAmb		16 49 48.4		
	comp=Z,3.4nm,0.5s								
NVAR	**Mina Array Bea**	**78.77**	**321**	P	**P**		**16 49 51.0**	**+1.9**	
	comp=Z,0.5nm,0.5s,baz=155,slow=6.7,SNR=4.5								
	comp=Z,0.5nm,0.5s								
NVAR	**Mina Array Bea**	**78.77**	**321**	P	**P**		**16 49 51.0**	**+1.9**	
BOSA	**Boshof**	**80.64**	**117**	P	**P**		**16 49 59.8**	**+0.3**	
	comp=Z,2.3nm,0.8s,baz=237,slow=3.2,SNR=5.7								
	comp=Z,2.3nm,0.8s								
BOSA	**Boshof**	**80.64**	**117**	IAmb	IAmb		16 50 40.1		
	comp=Z,13nm,1.4s								
MAW	**Mawson**	**81.11**	**163**	P	**P**		**16 50 02.4**	**+1.5**	
	comp=Z,2.9nm,0.5s,baz=197,slow=5.6,SNR=6.5								
	comp=Z,2.9nm,0.5s								
MAW	**Mawson**	**81.11**	**163**	IAmb	IAmb		16 50 03.2		
	comp=Z,0.8nm,0.8s								
YKA	**Yellowknife Ar**	**94.44**	**340**	P	**P**		**16 51 05.4**	**+0.2**	
	comp=Z,0.8nm,0.5s,baz=147,slow=4.5,SNR=5.0								
	comp=Z,0.8nm,0.5s								
CTYL	**Yalikoy Yolu**	**109.58**	**53**	P	**Pdif**		**16 52 11.3**	**-2.0**	
ASAR	**Alice Springs**	**128.08**	**205**	PKP	**PKiKP**		**16 56 52.0**	**-0.3**	
	comp=Z,1.0nm,0.7s,baz=140,slow=1.7,SNR=12								
WRA	**Warramunga Arr**	**131.25**	**207**	PKP	**PKiKP**		**16 56 58.2**	**-0.4**	
	comp=Z,0.6nm,0.5s,baz=160,slow=1.6,SNR=12								
PETK	**Petropavlovsk-**	**135.85**	**322**	PKP	**PKiKP**		**16 57 06.8**	**0.0**	
	comp=Z,0.6nm,0.5s,baz=44,slow=1.5,SNR=4.7								
BVAR	**Borovoye Array**	**137.15**	**37**	PKP	**PKiKP**		**16 57 09.0**	**-0.5**	
	comp=Z,0.6nm,0.6s,baz=297,slow=1.9,SNR=3.3								
KURK	**Kurchatov**	**142.73**	**36**		**PKPdf**		**16 57 16.7**	**-1.1**	
KURBB	**Kurchatov Arra**	**142.73**	**36**	PKP	**PKPdf**		**16 57 16.7**	**-1.1**	
	comp=Z,0.8nm,0.6s,baz=300,slow=2.9,SNR=5.7								
ZALV	**Zalesovo Beam**	**143.77**	**28**	PKP	**PKPdf**		**16 57 18.6**	**-0.9**	
	comp=Z,3.0nm,0.6s,baz=296,slow=4.9,SNR=15								
KSH2	**Kashi**	**145.27**	**56**	PKPbc	**PKPab**		**16 57 24.0**	**+0.7**	
MKAR	**Makanchi Array**	**146.87**	**40**	PKPbc	**PKPab**		**16 57 28.1**	**-0.9**	
	comp=Z,4.1nm,0.6s,baz=327,slow=2.0,SNR=35								
MKAR	**Makanchi Array**	**146.87**	**40**		**PKPbc**		**16 57 26.3**	**-1.0**	
LEM	**Lembang**	**148.56**	**170**	PKPbc	**PKiKP**		**16 57 34.4**	**+0.1**	
	comp=Z,17nm,0.5s,baz=183,slow=2.7,SNR=5.1								
HILR	**Hailar Array B**	**154.30**	**350**	PKPab	**PKPab**		**16 58 00.9**	**+1.3**	
	comp=Z,1.4nm,0.5s,baz=18,slow=4.5,SNR=4.9								
MJAR	**Matsushiro Arr**	**155.12**	**305**	PKPab	**PKPab**		**16 58 05.1**	**+1.6**	
	comp=Z,1.7nm,0.8s,baz=74,slow=1.8,SNR=7.0								
SONM	**Songino Array**	**156.02**	**11**	PKPab	**PKPab**		**16 58 08.0**	**+0.9**	
	comp=Z,0.7nm,0.6s,baz=352,slow=4.0,SNR=3.4								
HHC	**Hu-ho-hao-te**	**163.53**	**4**	*eP*	**PKPdf**		**16 57 49.5**	**+1.8**	

*MAN **30** 16:47:01.0,3°.20N×126°.90E,h50km,MS4.2*
*DJA **30** 16:47:06.0±0.9,4°.N±8°×12°.7E±°,h10km,M4.0/8,mb4.5/1,MLv3.8/8*
*IDC **30** 16:47:07.1±5.3,3°.59N×126°.71E,h43km±54km,mb3.4/9,mbtmp3.7/10,ML3.9/1,MS2.7/1,Error ellipse: s-maj=49.0km s-min=16.7km az=84.0*
ISC 30 16:47:08.6±0.7,3°.51N±0°.05×126°.69E±0°.07,h53km,n21,
σ2ˢ33/25,mb3.7/9,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.17**	**279**	P	**Pn**	**16 47 27.5**	**-1.2**
SGSI				S	**Sn**	**16 47 45.4**	**+1.8**
MNI	**Manado**	**2.76**	**222**	P	**Pn**	**16 47 53.4**	**+3.0**
TNTI	**Ternate**	**2.80**	**166**	P	**Pn**	**16 47 51.3**	**+0.4**
GSPH	**General Santos**	**3.09**	**326**	*iP*	**Pn**	**16 47 53.5**	**-1.6**
GSPH				*iS*	**Sn**	**16 48 32.2**	**+1.2**
KCP	**Kidapawan**	**3.83**	**336**	*eP*	Pn	16 47 59.8	-5.3
CDOP	**Cateel, Davao**	**4.26**	**357**	*iP*	**Pn**	**16 48 09.4**	**-1.5**
CDOP				*iS*	**Sn**	**16 49 06.7**	**+7.4**
CTBH	**Cotabato--PC H**	**4.42**	**327**	*iP*	**Pn**	**16 48 12.7**	**-0.4**
BIPH	**Bislig**	**4.66**	**356**	*eP*	**Pn**	**16 48 15.7**	**-0.7**
BIPH				*eS*	**Sn**	**16 49 11.7**	**+2.5**
CGP	**Cagayan de Oro**	**5.30**	**338**	*eP*	**Pn**	**16 48 25.0**	**-0.2**
CGP				*eS*	**Sn**	**16 49 30.1**	**+5.1**
ZCP	**Zamboanga City**	**5.72**	**307**	*eP*	**Pn**	**16 48 30.1**	**-0.8**
SIJI	**Sorong**	**6.31**	**133**	P	**Pn**	**16 48 39.0**	**-0.1**
	2.5nm,0.3s,baz=340,slow=24,SNR=13						
SIJI				S	**Sn**	**16 49 49.2**	**-0.7**
	2.2nm,0.5s,baz=184,slow=22,SNR=1.3						
	5.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**21.49**	**183**	P	**P**	**16 51 53.8**	**+0.7**
	0.8nm,0.5s,baz=12,slow=10,SNR=1.0						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**24.48**	**162**	P	**P**	**16 52 21.9**	**-1.1**
	1.7nm,0.7s,baz=342,slow=10,SNR=7.7						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**27.91**	**166**	P	**P**	**16 52 54.1**	**+0.3**
	0.3nm,0.5s,baz=344,slow=8.2,SNR=6.1						
	0.3nm,0.5s						
KSRS	**Korea Array**	**33.80**	**2**	P	**P**	**16 53 43.8**	**-1.8**
	0.6nm,0.6s,baz=180,slow=9.4,SNR=3.4						
	0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**34.55**	**16**	LR	LR	17 10 25.0	
	comp=Z,11nm,18.6s,baz=238,slow=41						
STKA	**Stephens Creek**	**37.94**	**159

SVKR *e* 17 22 02.0
SVKR pmax pmax
comp=Z,248nm,0.4s
SVKR smax smax
comp=E,4μm,0.5s
SVKR Severomuysk 2.23 40 *e*Pn **Pn** **17 21 28.6 +0.5**
SVKR *e*Pg **Pg** **17 21 32.2 -1.6**
SVKR Pmax 17 21 39.6
comp=E,336nm,0.4s
SVKR *e*Sg **Sg** **17 22 02.4 -0.3**
SVKR *e*SgSg **SnSn** **17 22 08.9 +2.3**
SVKR max 17 22 11.2
comp=E,4μm,0.5s
KELR Kotokel 2.42 227 *e*Pn **Pb** **17 21 32.7 -1.9**
KELR *e*Pg **Pg** **17 21 36.4 -0.9**
KELR *e*Sn **Sb** **17 22 02.5 -1.9**
KELR *e*Sg **Sg** **17 22 08.0 -0.6**
ZRHB Zarechye 2.97 232 *e*Pn **Pn** **17 21 40.3 +2.1**
ZRHB *e*Pg **Pg** **17 21 46.0 -1.9**
ZRHB Pmax 17 22 14.6
comp=E,131nm,0.7s
ZRHB *e*Sg **Sg** **17 22 24.5 -1.9**
ZRHB Smax 17 22 33.8
comp=E,1μm,0.9s
TRG Tyrgan 3.23 240 *e*PN **Pn** **17 21 43.2 +1.3**
TRG *e* 17 21 50.2
TRG *e*S **Sn** **17 22 22.0 +1.5**
TRG *e* 17 22 31.5
TRG pmax pmax
comp=Z,32nm,0.3s
TRG smax smax
comp=E,424nm,0.3s
TRG Tyrgan 3.23 240 ⇑ *i*Pn **Pn** **17 21 43.3 +1.3**
TRG *e*Pg **Pb** **17 21 49.4 +0.8**
TRG Pmax 17 21 52.0
comp=E,35nm,0.4s
TRG *e*Sn **Sn** **17 22 21.4 +0.9**
TRG *e*Sg **Sg** **17 22 31.4 -3.5**
TRG Smax 17 22 34.4
comp=E,419nm,0.3s
NLYR Nelyaty 3.38 51 *e*Pn **Pn** **17 21 45.3 +1.4**
NLYR *e*Pg **Pb** **17 21 52.3 +1.3**
NLYR Pmax 17 21 59.0
comp=E,97nm,0.6s
NLYR *e*Sn **Sn** **17 22 24.2 +0.2**
NLYR *e*Sg **Sg** **17 22 37.3 -2.3**
NLYR Smax 17 22 53.0
comp=E,479nm,1.4s
FFNB Fofonovo 3.49 228 *e*Pg **Pg** **17 21 55.6 -2.3**
FFNB *e*Sn **Sn** **17 22 28.8 +2.0**
FFNB *e*Sg **Sg** **17 22 40.7 -2.4**
KAB Kabansk 3.54 229 *e*Sn **Sn** **17 22 27.7 -0.2**
KAB *e*Sg **Sg** **17 22 42.0 -2.6**
KAB Smax 17 23 06.5
comp=E,790nm,1.2s
STDB Stepnoy Dvoret 3.59 232 *e*Pn **Pn** **17 21 48.8 +2.1**
STDB *e*Pg **Pg** **17 21 56.8 -2.9**
STDB *e*Sn **Sn** **17 22 30.6 +1.5**
STDB *e*Sg **Sg** **17 22 44.3 -1.8**
HRMR Khuramsha 3.72 222 *e*Pn **Pn** **17 21 50.6 +2.0**
HRMR *e*Pg **Pb** **17 21 58.6 +1.7**
HRMR *e*PgPg **Pg** **17 22 01.8 -0.6**
HRMR max 17 22 07.0
comp=E,88nm,0.5s
HRMR *e*Sn **Sn** **17 22 33.8 +1.3**
HRMR *e*Sg **Sg** **17 22 48.3 -2.3**
HRMR Smax 17 23 00.3
comp=E,517nm,0.7s
BOD Bodaibo 3.78 25 *e*Pn **Pn** **17 21 51.5 +2.2**
BOD *e*Pg **Pb** **17 21 59.2 +1.4**
BOD Pmax 17 22 06.2
comp=E,42nm,0.7s
BOD *e* 17 22 29.0
BOD *e*Sg **Sg** **17 22 47.2 -5.2**
BOD Smax 17 22 53.3
comp=E,400nm,1.1s
BGT Bolshoye Golou 4.12 237 *e*Pn **Pn** **17 21 55.4 +1.3**
BGT *e*Pg **Pb** **17 22 05.4 +1.7**
BGT Pmax 17 22 19.7
comp=E,32nm,0.6s
BGT *e*Sn **Sn** **17 22 41.4 -0.9**
BGT *e*Sg **Sg** **17 22 59.4 -3.9**
BGT Smax 17 23 09.3
comp=E,172nm,0.8s
IRK Irkutsk 4.58 244 *e*PN **Pb** **17 22 12.3 +0.7**
IRK *e* 17 23 12.9
IRK pmax pmax
comp=Z,54nm,0.2s
IRK smax smax
comp=N,527nm,0.4s
IRK Irkutsk 4.58 244 *e*Sn **Sn** **17 22 51.4 -2.3**
IRK *e*Sg **Sg** **17 23 12.6 -5.6**
IRK Smax 17 23 16.4
comp=N,527nm,0.5s
IVK Ivanovka 4.76 239 *e*Pn **Pn** **17 22 04.1 +1.3**
IVK *e* 17 22 12.8
IVK *e*Pg **Pb** **17 22 17.4 +2.9**
IVK Pmax 17 22 31.3
comp=N,46nm,1.2s
IVK *e*Sn **Sn** **17 22 56.0 -2.0**
IVK *e* 17 23 15.2
IVK *e*Sg **Sg** **17 23 18.4 -5.4**
IVK Smax 17 23 19.6
comp=N,373nm,0.7s
CRS Chara 4.80 56 *e*PN **Pn** **17 22 05.8 +2.4**
CRS *e* 17 22 19.3
CRS *e* 17 23 21.5
CRS pmax pmax
comp=Z,50nm,0.9s
CRS smax smax
comp=E,246nm,1.0s
CRS Chara 4.80 56 *e*Pn **Pn** **17 22 05.5 +2.1**
CRS *e*Pg **Pg** **17 22 19.0 -4.0**
CRS *e* 17 22 23.7
CRS max 17 22 24.2
comp=E,47nm,0.7s
CRS *e*Sg **Sg** **17 23 02.0 +2.2**
CRS Smax 17 23 27.1
comp=E,243nm,0.9s
KPC Khapcheranga 4.83 169 *e*PN **Pn** **17 22 05.2 +1.4**
KPC *e* 17 22 19.2
KPC *e*S **Sn** **17 23 02.0 +2.2**
KPC *e* 17 23 22.2
KPC pmax pmax
comp=Z,17nm,0.5s
KPC smax smax
comp=E,348nm,1.5s
KPC Khapcheranga 4.83 169 *e*Pn **Pn** **17 22 06.2 +2.4**
KPC *e*Pg **Pg** **17 22 21.2 -2.3**
KPC Pmax 17 22 36.6
comp=E,22nm,0.9s
KPC *e*Sn **Sn** **17 23 01.6 +1.8**
KPC *e* 17 23 22.2
KPC *e*Sg **Sg** **17 23 24.9 -1.1**
KPC Smax 17 23 30.6
comp=E,343nm,1.2s
TLY Talaya 5.22 241 Pn **Pn** **17 22 09.4 +0.2**
comp=E,1.8nm,0.3s,baz=24,slow=6.9,SNR=11
TLY Lg Lg 17 23 31.0
comp=E,11nm,0.3s,baz=194,slow=19,SNR=10
comp=E,4.9nm,0.4s
TLY Talaya 5.22 241 *ce*PN **Pn** **17 22 09.9 +0.8**
TLY pmax pmax
comp=Z,4.0nm,0.6s
TLY Talaya 5.22 241 *e*Pn **Pn** **17 22 09.9 +0.8**
TLY *e*Pg **Pb** **17 22 24.8 +2.4**
TLY Pmax 17 22 36.5
comp=Z,15nm,0.6s
TLY *e*Sg **Sb** **17 23 31.4 +6.4**
TLY Smax 17 23 46.2
comp=Z,194nm,1.0s
TUP Tupik 5.24 87 *e*PN **Pn** **17 22 11.3 +1.9**
TUP *e* 17 22 26.1
TUP *e* 17 23 36.4
TUP pmax pmax
comp=Z,26nm,0.6s
TUP smax smax
comp=N,652nm,0.8s
TUP Tupik 5.24 87 *e*Pn **Pn** **17 22 11.4 +2.0**
TUP *e*Pg **Pg** **17 22 26.8 -4.5**
TUP Pmax 17 22 35.8
comp=N,29nm,0.8s
TUP *e*Sg **Sg** **17 23 36.4 -2.7**
TUP Smax 17 23 48.6
comp=N,650nm,0.8s
KHNR Khani 5.66 60 *e*Sg **Sg** **17 23 48.4 -4.3**
ZAK Zakamensk 6.22 232 *e*Pg Pg 17 22 44.5 -5.7
ZAK Pmax 17 23 24.2
comp=N,17nm,0.5s
ZAK *e*Sg **Sg** **17 24 05.1 -5.6**
ZAK Smax 17 24 22.8
comp=N,73nm,0.8s
YKLR Yuktali 6.43 66 *e*Pn **Pn** **17 22 27.7 +1.9**
YKLR *e* 17 23 35.0
YKLR *e*Sg **Sg** **17 24 11.2 -6.2**
MOY Mondy 6.63 249 *e*PN **Pn** **17 22 30.8 +2.2**
MOY *e* 17 22 50.4
MOY *e* 17 24 14.0
MOY pmax pmax
comp=Z,17nm,0.5s
MOY smax smax
comp=E,133nm,0.8s
ORL Orlik 6.93 259 *e*Pn **Pn** **17 22 33.7 +0.9**
ORL max 17 22 42.1
comp=E,35nm,1.2s
ORL *e* 17 23 05.0
ORL *e* 17 23 50.6
ORL *e*Sg **Sg** **17 24 24.6 -8.9**
ORL Smax 17 24 30.4
comp=E,184nm,1.2s
ULN Ulaanbaatar 7.04 202 *i*PN **Pn** **17 22 37.0 +2.8**
ULN Ulaanbaatar 7.04 202 *e*Pn **Pn** **17 22 36.6 +2.4**
ULN *e*Pg Pg 17 22 59.4 -6.3
ULN *e* 17 23 02.7
ULN max 17 23 08.4
comp=E,16nm,1.3s
ULN *e* 17 24 10.5
ULN *e*Sg **Sg** **17 24 32.0 -4.8**
ULN Smax 17 24 57.9
comp=E,140nm,2.3s
SONM Songino Array 7.22 205 Pn **Pn** **17 22 38.5 +1.8**
comp=E,0.7nm,0.3s,baz=15,slow=13,SNR=11
SONM Pg Pg 17 23 02.5 -6.7
comp=E,0.9nm,0.3s,baz=2.0,slow=19,SNR=4.4
SONM Lg Lg 17 24 39.2
comp=E,3.1nm,0.3s,baz=22,slow=28,SNR=6.1
SONM LR LR 17 25 16.0
comp=E,58nm,18.9s,baz=304,slow=37
comp=E,1.0nm,0.4s
SONM Songino Array 7.22 205 *e*PN **Pn** **17 22 39.4 +2.7**
SONM pmax pmax
comp=Z,1.0nm,0.3s
HILR Hailar Array B 7.30 129 Pn **Pn** **17 22 38.4 +0.8**
baz=310,slow=12
HILR Pg **Pg** **17 23 06.9 -3.8**
baz=322,slow=17
HILR Lg Lg 17 24 39.7
baz=325,slow=13
comp=Z,2.2nm,0.4s
HIA Hailar 7.50 130 *e* **Pn** **17 22 41.1 +0.6**
HIA *e*Pg Pg 17 23 08.7 -5.9
HIA Pmax 17 23 21.4
comp=Z,14nm,0.4s
HIA *e*Sn **Sn** **17 24 07.3 +1.7**
HIA *e*Sg **Sg** **17 24 46.8 -4.9**
HIA Smax 17 25 01.0
comp=Z,200nm,1.7s
CLNS Chul'man 8.23 67 *e*Pn **Pn** **17 22 51.9 +1.5**
CLNS *e* 17 24 54.6
CLNS *e*Sg **Sg** **17 25 07.9 -6.9**
ZEA Zeya 9.59 88 *e*P **Pn** **17 23 12.0 +3.0**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
YAK Yakutsk 12.40 45 Lg Lg 17 27 15.3
comp=Z,0.4nm,0.3s,baz=166,slow=23,SNR=5.9
YAK Yakutsk 12.40 45 *i*P **Pn** **17 23 48.3 +0.9**
KLR Kul'dur 13.84 104 Pn **Pn** **17 24 08.9 +1.8**
comp=Z,0.1nm,0.3s,baz=296,slow=13,SNR=4.2
KLR Lg Lg 17 28 09.3
comp=Z,0.3nm,0.3s,baz=201,slow=15,SNR=6.8
KLR LR LR 17 29 18.4
comp=Z,48nm,18.5s,baz=280,slow=36
comp=Z,0.8nm,0.4s
KLR Kul'dur 13.84 104 *i*P **Pn** **17 24 09.4 +2.3**
ZALV Zalesovo Beam 15.29 279 Pn **Pn** **17 24 25.7 -1.0**
comp=Z,0.6nm,0.6s,baz=78,slow=13,SNR=4.4
ZALV Lg Lg 17 28 46.1
comp=Z,0.1nm,0.3s,baz=73,slow=22,SNR=5.5
ZALV Zalesovo Beam 15.29 279 *i*P **Pn** **17 24 27.6 +0.8**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
NRIK Noril'sk 18.36 333 LR LR 17 33 14.1
comp=Z,41nm,21.2s,baz=154,slow=41
NRIK Noril'sk 18.36 333 *i*P **Pn** **17 25 03.5 -1.9**
NRIK pmax pmax
comp=Z,1.0nm,0.4s
TIXI Tiksi 18.92 17 P **Pn** **17 25 11.1 -1.0**
comp=Z,0.3nm,0.3s,baz=214,slow=11,SNR=2.6
TIXI Lg Lg 17 30 45.5
comp=Z,0.1nm,0.3s,baz=319,slow=20,SNR=5.9
comp=Z,0.9nm,0.5s
TIXI Tiksi 18.92 17 *i*P **Pn** **17 25 12.3 +0.1**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 19.64 259 *ce*P **Pn** **17 25 20.5 -0.6**
MKAR Makanchi Array 19.64 259 P **Pn** **17 25 20.6 -0.5**
comp=Z,0.1nm,0.3s,baz=57,slow=8.6,SNR=5.9
MKAR Lg Lg 17 31 10.3
baz=57,slow=32,SNR=2.9
comp=Z,0.6nm,0.7s
KURK Kurchatov 19.91 273 *i*P **P** **17 25 22.8 +0.2**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURBB Kurchatov Arra 20.00 272 P Pn 17 25 23.9 -1.4
comp=Z,0.3nm,0.3s,baz=64,slow=12,SNR=5.5
comp=Z,1.6nm,0.2s
KSRS Korea Array 20.59 139 P Pn 17 25 32.4 +0.3
comp=Z,0.2nm,0.4s,baz=328,slow=9.3,SNR=4.1
comp=Z,0.2nm,0.4s
BVAR Borovoye Array 23.82 283 P **P** **17 26 04.1 +0.1**
comp=Z,0.7nm,0.5s,baz=73,slow=11,SNR=25
comp=Z,0.7nm,0.5s
ARTI Arti 29.32 296 LR LR 17 41 01.8
comp=Z,14nm,19.7s,baz=152,slow=41
AKTO Aktyubinsk 31.90 285 LR LR 17 41 34.7
comp=Z,51nm,18.5s,baz=241,slow=39
ILAR Eielson Array 47.10 35 P **P** **17 29 23.9 +1.3**
comp=Z,0.6nm,0.7s,baz=293,slow=6.3,SNR=10.0
comp=Z,0.6nm,0.7s
ILAR Eielson Array 47.10 35 *e*P **P** **17 29 24.8 +2.2**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 52.02 287 P **P** **17 30 02.1 +1.4**
comp=Z,0.4nm,0.7s,baz=48,slow=7.6,SNR=2.9
comp=Z,0.4nm,0.7s
ASAR Alice Springs 80.26 159 P **P** **17 33 02.7 +1.0**
comp=Z,0.4nm,0.8s,baz=342,slow=4.9,SNR=2.9
comp=Z,0.4nm,0.8s

*IDC **30** 17:28:27.0±1.6, 3.°87N×126.°18E, h0km, mb3.3/3, mbtmp3.4/4, ML3.6/1, MS2.8/2, Error ellipse: s-maj=101.7km s-min=25.0km az=60.0*
*MAN **30** 17:28:30.0, 3.°86N×126.°50E, h13km, MS3.8*
ISC 30 17:28:33.5±0.9, 3.°80N±0.°07×126.°36E±0.°09, h45km, n12, σ1°59/15, mb3.1/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.67**	**328**	*i* P	**Pn**	**17 29 14.1**	**-0.1**
GSPH				*i* S	**Sn**	**17 29 43.6**	**-1.8**
KCP	**Kidapawan**	**3.43**	**338**	*e*P	**Pn**	**17 29 24.6**	**+0.1**
CDOP	**Cateel, Davao**	**3.96**	**1**	*i* P	**Pn**	**17 29 31.0**	**-0.8**
CDOP				*i* S	**Sn**	**17 30 18.4**	**+1.5**
CTBH	**Cotabato--PC H**	**4.00**	**328**	*i* P	**Pn**	**17 29 32.6**	**+0.3**
BIPH	**Bislig**	**4.36**	**0**	*e*P	**Pn**	**17 29 35.7**	**-1.5**
BIPH				*e*S	**Sn**	**17 30 30.2**	**+3.5**
ZCP	**Zamboanga City**	**5.28**	**306**	*e*P	**Pn**	**17 29 52.1**	**+2.2**
ZCP				*e*S	**Sn**	**17 30 48.0**	**-1.4**
SIJI	**Sorong**	**6.75**	**133**	Pn	**Pn**	**17 30 10.8**	**+0.7**
	1.1nm,0.3s,baz=324,slow=22,SNR=5.8						
SIJI				Sn	**Sn**	**17 31 24.8**	**-0.9**
	baz=236,slow=23						
	2.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**21.77**	**182**	LR	LR	17 44 13.8	
	comp=Z,59nm,19.3s,baz=6.0,slow=43						
WRA	**Warramunga Arr**	**24.86**	**162**	P	**P**	**17 33 52.1**	**+0.1**
	0.2nm,0.4s,baz=342,slow=10,SNR=5.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**28.27**	**165**	P	**P**	**17 34 23.2**	**+0.4**
	0.1nm,0.5s,baz=348,slow=9.1,SNR=4.3						
	0.1nm,0.5s						
MJAR	**Matsushiro Arr**	**34.36**	**17**	LR	LR	17 51 30.2	
	comp=Z,6.1nm,18.9s,baz=298,slow=40						
MKAR	**Makanchi Array**	**57.29**	**325**	P	**P**	**17 38 15.5**	**-1.2**
	0.2nm,0.4s,baz=119,slow=6.4,SNR=6.2						
	0.2nm,0.4s						

*IDC **30** 17:29:32.4±2.6, 22.°81N×12.°12W, h0km, mb3.7/3, mbtmp3.8/5, ML3.8/2, Error ellipse: s-maj=79.5km s-min=32.6km az=82.0*
ISC 30 17:29:30.5±1.6, 22.°82N±0.°09×12.°6W±0.°2, h10km, n13, σ2°67/15, mb3.7/3, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUK	**Oukaimeden**	**9.36**	**26**	P	**Pn**	**17 31 42.0**	**-3.7**
OUK				S	**Sn**	**17 33 28.2**	**-3.1**
TIO	**Tiouine**	**9.37**	**29**	P	**Pn**	**17 31 45.1**	**-0.7**
TIO				S	**Sn**	**17 33 32.7**	**+1.3**
ZGR	**Zagora**	**9.58**	**39**	P	**Pn**	**17 31 48.8**	**+0.1**
ZGR				S	**Sn**	**17 33 41.4**	**+4.8**
OUZM	**OUZ**	**9.59**	**32**	P	**Pn**	**17 31 46.2**	**-2.6**
OUZM				S	**Sn**	**17 33 34.1**	**-2.7**
I11CV	**MAIO ISLAND IN**	**12.52**	**235**	I	I	18 44 30.0	
	baz=50,slow=314,SNR=1.1						
TORD	**Torodi Ar. Bea**	**16.63**	**123**	Pn	**Pn**	**17 33 20.6**	**-3.3**
	0.4nm,0.3s,baz=313,slow=12,SNR=12						
	0.5nm,0.4s						
DBIC	**Dimbokro**	**17.70**	**154**	P	**Pn**	**17 33 36.4**	**-0.9**
	0.3nm,0.3s,baz=340,slow=12,SNR=1.4						
	1.5nm,0.4s						
I42PT	**GRACIOSA ISLAN**	**20.84**	**324**	I	I	19 37 50.0	
	baz=140,slow=321,SNR=1.8						
HFS	**Hagfors**	**41.60**	**20**	P	**P**	**17 37 19.0**	**+0.7**
	1.2nm,0.5s,baz=224,slow=10,SNR=5.8						
	1.2nm,0.5s						
BRTR	**Keskin Array B**	**42.46**	**56**	P	**P**	**17 37 27.1**	**+1.2**
	0.4nm,0.7s,baz=251,slow=10,SNR=3.1						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**76.93**	**45**	P	**P**	**17 41 25.5**	**+2.2**
	0.3nm,0.5s,baz=290,slow=5.9,SNR=1.4						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**149.11**	**91**	PKPbc	**PKiKP**	**17 49 22.4**	**+1.3**
	0.5nm,0.8s,baz=297,slow=2.2,SNR=4.8						
ASAR	**Alice Springs**	**149.24**	**98**	PKPbc	**PKiKP**	**17 49 22.6**	**+1.3**
	0.4nm,0.6s,baz=296,slow=1.9,SNR=8.0						

*ATH **30** 17:32:03.5, 34.°25N×25.°92E, h2km±1km, ML3.5/11, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*ISK **30** 17:32:03.1, 34.°30N×25.°89E, h5km, ML3.3/10*
*IDC **30** 17:32:03.8±1.1, 34.°32N×25.°80E, h0km, mb3.9/9, mbtmp3.8/16, ML3.3/8, MS2.9/3, Error ellipse: s-maj=20.0km s-min=13.8km az=9.0*
*THE **30** 17:32:04.7, 34.°N±51.°×2.°6E±2.°9, h4km±28km, M3.3/4, MLh3.3/4*
ISC 30 17:32:04.5±1.6, 34.°32N±0.°05×25.°87E±0.°03, h4km±10km, n52, σ0°85/66, mb3.9/8, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.84**	**20**	Pg	**Pb**	**17 32 20.9**	**-0.8**
ZKR				Sg	**Sb**	**17 32 33.6**	**+0.3**
ZKR	**Zakros**	**0.84**	**20**	P	**Pb**	**17 32 20.6**	**-1.0**
ZKR	**Zakros**	**0.84**	**20**	P	**Pb**	**17 32 20.6**	**-1.0**
ZKR				S	**Sb**	**17 32 32.9**	**-0.4**
STIA	**Sitia Lasithi**	**0.90**	**12**	P	**Pb**	**17 32 22.2**	**-0.4**
STIA				S	**Sn**	**17 32 36.0**	**-1.2**
SIT2	**Siteia**	**0.90**	**13**	P	**Pb**	**17 32 21.9**	**-0.8**
SIT2				S	**Sb**	**17 32 35.1**	**0.0**
NPS	**Neapolis**	**0.96**	**348**	P	**Pg**	**17 32 22.2**	**-0.7**
NPS				S	**Sb**	**17 32 36.7**	**0.0**
NPS	**Neapolis**	**0.96**	**348**	P	**Pb**	**17 32 23.3**	**-0.4**
NPS				S	**Sb**	**17 32 37.1**	**+0.3**
SIVA	**Sivas**	**1.11**	**309**	P	**Pg**	**17 32 25.2**	**-0.6**
SIVA				S	**Sb**	**17 32 41.6**	**+0.5**
SIVA	**Sivas**	**1.11**	**309**	P	**Pb**	**17 32 26.1**	**-0.1**
SIVA				S	**Sn**	**17 32 42.1**	**-0.5**
IACM	**Heraklion**	**1.18**	**327**	P	**Pn**	**17 32 28.5**	**+0.8**
IACM				S	**Sn**	**17 32 43.9**	**-0.3**
IDI	**Anoyia**	**1.25**	**320**	Pn	**Pg**	**17 32 27.9**	**-0.6**
	3.5nm,0.3s,baz=151,slow=14,SNR=28						
IDI				Sn	**Sn**	**17 32 46.5**	**+0.4**
	24nm,0.3s,baz=124,slow=23,SNR=7.8						
IDI	**Anoyia**	**1.25**	**320**	Pn	**Pn**	**17 32 28.9**	**+0.1**
IDI	**Anoyia**	**1.25**	**320**	P	**Pg**	**17 32 28.2**	**-0.4**
IDI	**Anoyia**	**1.25**	**320**	P	**Pn**	**17 32 29.8**	**+0.9**
IDI				S	**Sn**	**17 32 46.8**	**+0.6**
GVD	**Gavdhos**	**1.55**	**290**	Pn	**Pb**	**17 32 33.1**	**-0.7**
GVD				Sn	**Sg**	**17 32 55.9**	**+1.4**
GVD	**Gavdhos**	**1.55**	**290**	P	**Pb**	**17 32 33.2**	**-0.7**
GVD				S	**Sg**	**17 32 55.1**	**+0.6**
KARP	**Karpathos**	**1.62**	**41**	Pn	**Pb**	**17 32 34.2**	**-0.8**
VAM	**Vamos**	**1.75**	**309**	P	**Pb**	**17 32 36.1**	**-1.0**
IMMV	**Iera Moni Meta**	**1.92**	**307**	Pn	**Pb**	**17 32 39.2**	**-0.8**
IMMV	**Iera Moni Meta**	**1.92**	**307**	P	**Pn**	**17 32 37.0**	**-0.9**
IMMV	**Iera Moni Meta**	**1.92**	**307**	P	**Pn**	**17 32 38.4**	**+0.5**
THERA	**Ancient Thera,**	**2.06**	**351**	P	**Pn**	**17 32 40.4**	**+0.5**
SNT5	**Nea Kammeni, S**	**2.11**	**350**	P	**Pb**	**17 32 42.2**	**-1.1**
THR5	**Thira Island,**	**2.13**	**349**	Pn	**Pn**	**17 32 41.7**	**+0.9**
ANKY	**Antikythira Is**	**2.61**	**307**	P	**Pn**	**17 32 47.8**	**+0.5**
DAT	**Datca**	**2.78**	**30**	Pn	**Pn**	**17 32 50.5**	**+0.7**
BODT	**Bodrum**	**2.98**	**23**	Pn	**Pn**	**17 32 53.5**	**+1.0**
KTHA	**Kythira Island**	**3.00**	**311**	Pn	**Pn**	**17 32 53.7**	**+1.0**
TURN	**Turunc**	**3.12**	**38**	Pn	**Pn**	**17 32 55.5**	**+1.1**
VLI	**Veliai**	**3.38**	**316**	P	**Pn**	**17 32 58.7**	**+0.7**
YER	**Yerkesik**	**3.43**	**34**	Pn	**Pn**	**17 33 00.1**	**+1.4**
DION	**Dionisos Attik**	**4.06**	**338**	P	**Pn**	**17 33 07.8**	**+0.4**
MMAI	**Mount Meron Ar**	**8.06**	**97**	Pn	**Pn**	**17 34 04.5**	**+2.1**
	2.5nm,0.3s,baz=281,slow=13,SNR=3.3						
MMAI				Sn	**Sn**	**17 35 34.5**	**+0.5**
	1.8nm,0.3s,baz=281,slow=23,SNR=2.6						
	1.8nm,0.4s						
BRTR	**Keskin Array B**	**8.23**	**47**	Pn	**Pn**	**17 34 06.6**	**+1.9**
	0.1nm,0.3s,baz=235,slow=12,SNR=4.2						
BRTR				Sn	**Sn**	**17 35 39.1**	**+1.0**
	baz=224,slow=20,SNR=1.2						
EIL	**Elat**	**9.00**	**119**	Pn	**Pn**	**17 34 15.4**	**+0.2**
	0.7nm,0.3s,baz=300,slow=8.4,SNR=10						
EIL				Sn	**Sn**	**17 35 56.0**	**-1.1**
	0.3nm,0.3s,baz=344,slow=19,SNR=1.7						
	4.8nm,0.4s						
ASF	**Jabal al Asfar**	**9.48**	**100**	Pn	**Pn**	**17 34 23.3**	**+1.4**
	0.3nm,0.3s,baz=277,slow=4.7,SNR=3.6						
ASF				Sn	**Sn**	**17 36 07.1**	**-2.0**
	0.1nm,0.3s,baz=127,slow=20,SNR=1.9						
	1.5nm,0.6s						
MLR	**Muntele Rosu**	**11.15**	**0**	LR	LR	17 39 41.3	
	comp=Z,63nm,18.1s,baz=160,slow=41						
KVAR	**Kislovodsk Arr**	**16.19**	**49**	Pn	**P**	**17 35 56.2**	**0.0**
	baz=234,slow=19						
	2.3nm,0.9s						
KBZ	**Khabaz**	**16.20**	**50**	Pn	**P**	**17 35 57.1**	**+1.0**
	0.1nm,0.3s,baz=222,slow=5.1,SNR=6.0						
	3.8nm,0.9s						
VRAC	**Vranov**	**16.47**	**338**	LR	LR	17 43 35.5	
	comp=Z,39nm,18.2s,baz=134,slow=42						
AKASG	**Malin Array Be**	**16.55**	**8**	Pn	**Pn**	**17 35 56.8**	**-0.5**
	0.3nm,0.3s,baz=199,slow=11,SNR=1.7						
	0.1nm,0.2s						
GERES	**GERESS Array B**	**17.09**	**332**	P	**Pn**	**17 36 04.4**	**+0.2**
	baz=148,slow=7.8,SNR=6.3						
	0.5nm,0.7s						
BELG	**Belogornoye**	**23.85**	**34**	P	**P**	**17 37 18.8**	**+0.1**
	6.1nm,0.5s,baz=229,slow=9.5,SNR=3.7						
	6.1nm,0.5s						
ESDC	**Sonseca Array**	**24.35**	**291**	P	**P**	**17 37 22.8**	**-0.8**
	1.2nm,0.8s,baz=85,slow=8.3,SNR=9.0						
	1.2nm,0.8s						
FINES	**FINESS Array B**	**27.14**	**0**	P	**P**	**17 37 49.5**	**+1.1**
	3.8nm,1.0s,baz=167,slow=11,SNR=4.7						
	3.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.41**	**232**	P	**P**	**17 38 17.7**	**-0.3**
	1.6nm,0.7s,baz=37,slow=8.2,SNR=7.3						
	1.6nm,0.7s						
ARCES	**ARCESS Array B**	**35.26**	**360**	LR	LR	17 55 35.1	
	comp=Z,15nm,20.2s,baz=102,slow=40						
BVAR	**Borovoye Array**	**36.51**	**45**	P	**P**	**17 39 11.5**	**+0.8**
	1.1nm,0.8s,baz=240,slow=5.0,SNR=6.2						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**41.20**	**50**	P	**P**	**17 39 50.2**	**+0.2**
	0.8nm,0.2s,baz=276,slow=9.0,SNR=6.8						
	0.8nm,0.2s						

MKAR	Makanchi Array	43.76	56	P		P		17 40 11.1	+0.1
	1.1nm,0.7s,baz=272,slow=7.0,SNR=8.7								
	1.1nm,0.7s								
ZALV	Zalesovo Beam	45.17	46	P		P		17 40 22.0	-0.1
	1.0nm,0.5s,baz=283,slow=8.7,SNR=4.6								
	1.0nm,0.5s								
SONM	Songino Array	59.57	50	P		P		17 42 08.9	-0.4
	0.3nm,0.5s,baz=294,slow=11,SNR=3.6								
	0.3nm,0.5s								

*TEH **30** 17:34:53.9,27.˝64N×54.˝98E,h5km±39km, ML2.9, Presumed earthquake*
*DSN **30** 17:34:58.7±1.5,27.˝71N×57.˝02E,h15km, ML2.3/8, Error ellipse: s-maj=45.2km s-min=14.4km az=105.0*

ISC 30 17:34:53.7±1.0, 27.˚95N±0.˚06×55.˚11E±0.˚07, h10km, n15, σ0.˚94/16, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.09	120	Pg	Pn	17 35 16.4	+1.2
GENO	Geno	1.09	120	Pg	Pn	17 35 16.6	+1.4
KHL1	Khalili_Fars	1.63	259	Pg	Pg	17 35 25.1	0.0
LMD1	Lamerd	1.83	251	Pg	Pb	17 35 27.4	+0.1
SHME	Shamm	2.11	154	P	Pn	17 35 29.0	0.0
BANOM	Banah	2.28	152	P	Pn	17 35 31.4	-0.1
KHGB	Koh Gabri	2.69	26	Pn	Pg	17 35 45.1	-0.3
MSFE	Esma-Masafi	2.75	160	P	Pn	17 35 39.0	+1.1
MDH	Madha	2.85	158	P	Pn	17 35 39.4	+0.2
UOSS	Minazif	3.15	162	P	Pn	17 35 43.1	-0.3
HATD	Hatta, Dubai	3.25	163	P	Pn	17 35 46.3	+1.5
ASHO	Ashiyiah	3.37	165	P	Pn	17 35 46.7	+0.3
ASHO				S	Sn	17 36 25.9	-0.5
IMEH	Mehriz	3.45	353	Pn	Pb	17 35 55.8	+0.7
IBAF	Bafgh	3.65	6	Pn	Pb	17 35 57.3	-1.1
SOHO	SOHO	4.01	161	P	Pn	17 35 53.7	-1.5

*TAP **30** 17:44:59.6,24.˝08N×122.˝76E,h6km±1km, ML3.1, D*
*JMA **30** 17:44:59.0±0.2,24.˝0N±0.˚9×122.˝8E±0.˚6, h24km±3km, MV2.6/12, NEAR ISHIGAKIJIMA ISLAND*

ISC 30 17:44:57.7±1.4, 24.˚01N±0.˚05×122.˚85E±0.˚03, h6km±13km, n28, σ0.˚48/40, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	11	P	Pb	17 45 08.7	+0.6
JYNG				eS	Sb	17 45 15.3	+0.3
YOJ	Yonaguni jima	0.47	18	⇑iP	Pb	17 45 09.3	+0.8
YOJ				iS	Sb	17 45 16.1	+0.4
YOJ	Yonaguni jima	0.47	18	P	Pb	17 45 09.2	+0.8
YOJ				S	Sb	17 45 16.2	+0.4
EOS4	EOS4	0.50	283	P	Pg	17 45 08.0	+0.7
EOS3	EOS3	0.56	300	P	Pb	17 45 09.7	-0.2
EOS3				S	Sb	17 45 18.2	+0.1
EOS2	EOS2	0.70	306	⇓P	Pb	17 45 12.7	+0.4
EOS2				S	Sb	17 45 23.1	+1.0
IRIF	Iriomote-Funau	0.86	68	P	Pb	17 45 15.4	+0.3
IRIF				S	Sn	17 45 28.4	-1.0
HATJ	Hateruma jima	0.87	87	P	Pb	17 45 15.2	0.0
HATJ				eS	Sb	17 45 27.2	+0.1
EWUT	Wuta	1.07	294	P	Pg	17 45 17.9	-0.4
EWUT				S	Sg	17 45 31.8	-0.5
JKRS	Kuro-shima	1.08	78	P	Pn	17 45 19.3	-0.1
JKRS				eS	Sb	17 45 33.9	+0.7
TWC	Suao	1.09	303	iP	Pg	17 45 18.5	-0.3
TWC				iS	Sg	17 45 32.9	-0.1
NACB	Ninganchiao	1.16	278	eP	Pg	17 45 19.1	-1.0
EGS		1.18	315	P	Pg	17 45 19.9	-0.6
SHUL	Shoufeng	1.20	260	eP	Pn	17 45 21.5	+0.4
NDS	Dongshan	1.21	301	eP	Pg	17 45 20.8	-0.2
JIJ	Ishigaki jima	1.23	73	P	Pb	17 45 21.5	+0.1
JIJ				eS	Sn	17 45 38.4	0.0
NTC	Toucheng	1.26	312	eP	Pn	17 45 22.1	+0.3
LATG	Datong	1.32	294	P	Pn	17 45 22.6	-0.2
TIPB	Shuangxi	1.34	316	P	Pg	17 45 23.4	-0.1
NDT	Datong Townshi	1.36	296	eP	Pn	17 45 23.5	+0.2
FUSB	Fushanzhiwuyua	1.38	303	eP	Pg	17 45 24.2	0.0
SXI1	Grass Mountain	1.40	321	iP	Pb	17 45 24.1	-0.3
HGSD	Ruisui	1.41	249	eP	Pg	17 45 25.3	+0.6
NNS	Nan Shan	1.42	288	P	Pn	17 45 23.8	-0.4
WFSB	Wu-fen Shan	1.44	318	eP	Pb	17 45 24.8	-0.2
JISG	Ishigakijimahi	1.45	66	P	Pn	17 45 24.4	-0.1
JISG				S	Sb	17 45 43.4	-0.4
NWLT	Wulai	1.45	302	eP	Pb	17 45 25.1	-0.1
YHNB	Yeheng	1.50	296	eP	Pn	17 45 25.6	+0.4

*OSPL **30** 17:54:54.9±0.9, 18.˚30N×69.˚88W, h72km±4km, ML2.7, Presumed earthquake*
*SDD **30** 17:54:55.3±0.8, 18.˚37N×69.˚94W, h76km±7km, MD2.8, ML2.2, MW3.3, Presumed earthquake*

ISC 30 17:54:54.3±2.1, 18.˚35N±0.˚08×69.˚93W±0.˚07, h74km±12km, n13, σ0.˚60/22, 6C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDD	Santo Domingo	0.11	10	iP	Pn	17 55 05.0	0.0
SDD				eS	Sn	17 55 12.6	-0.3
SDD				IAML		17 55 14.0	
	comp=Z,4µm,0.1s						
LOSC1	San Cristbal	0.17	289	iP	Pn	17 55 05.3	+0.1
LOSC1				eS	Sn	17 55 13.4	+0.1
LOSC1				IAML		17 55 13.9	
	comp=Z,509nm,0.7s						
BANI	BANI	0.41	276	⇑iP	Pn	17 55 07.0	+0.3
BANI				⇑iSg	Sn	17 55 16.5	+0.5
BANI				IAML		17 55 19.5	
	comp=N,675nm,0.3s						
HATOM	Hato Mayor del	0.68	50	⇓iP	Pn	17 55 09.5	+0.2
HATOM				⇓iSg	Sn	17 55 20.3	-0.2
HATOM				IAML		17 55 20.4	
	comp=N,232nm,0.3s						
ABDR	Alto Bandera	0.80	305	⇑iP	Pn	17 55 10.8	-0.2
ABDR				IAML		17 55 38.6	
	comp=N,0.3nm,0.5s						
SC01	Santiago de lo	1.31	325	⇑iP	Pn	17 55 17.4	+0.5
SC01				⇑iSg	Sn	17 55 32.5	-1.4
SC01				IAML		17 55 33.3	
	comp=N,90nm,1.4s						
SC01	Santiago de lo	1.31	325	iP	Pn	17 55 17.1	+0.2
SC01				eS	Sn	17 55 34.3	+0.5
SC01				IAML		17 55 37.5	
	comp=Z,118nm,4.7s						
SDDR	Presa de Saban	1.43	296	⇑iP	Pn	17 55 18.7	+0.2
SDDR				IAML		17 56 18.1	
	comp=N,59nm,3.5s						
SDDR	Presa de Saban	1.43	296	iP	Pn	17 55 18.6	+0.1
SDDR				eS	Sn	17 55 37.0	+0.3
SDDR				IAML		17 55 39.3	
	comp=Z,364nm,0.2s						
LODU1	El Espartillar	1.46	270	iP	Pn	17 55 19.6	+0.7
LODU1				IAML		17 55 39.3	
	comp=Z,58nm,1.7s						
LONE3	El Aguacate, B	1.47	280	iP	Pn	17 55 19.2	+0.2
LONE3				IAML		17 55 38.6	
	comp=Z,18nm,1.7s						
LOVI	El Cajuil, Ovi	1.47	248	iP	Pn	17 55 18.9	-0.1
LOVI				eS	Sn	17 55 36.5	-1.1
LOVI				IAML		17 55 37.5	
	comp=Z,81nm,1.2s						
LOBH	Bahia de las A	1.69	254	iP	Pn	17 55 22.9	+1.0
LOBH				eS	Sn	17 55 42.1	-0.8
LOBH				IAML		17 55 43.3	
	comp=Z,69nm,1.6s						

IDC 30 18:04:44.8±2.0, 3.˚03N×125.˚22E, h0km, mb3.6/3, mbtmp3.7/3, Error ellipse: s-maj=141.2km s-min=24.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.99	179	P	P	18 09 30.7	+0.8
	1.0nm,0.3s,baz=0.0,slow=11,SNR=19						
	1.0nm,0.3s						
WRA	Warramunga Arr	24.52	159	P	P	18 10 05.6	-0.7
	0.6nm,0.4s,baz=333,slow=9.3,SNR=4.0						
ASAR	Alice Springs	27.84	163	P	P	18 10 36.1	-0.2
	0.1nm,0.3s,baz=337,slow=9.6,SNR=5.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	57.29	326	P	P	18 14 34.5	0.0
	0.3nm,0.3s,baz=123,slow=7.4,SNR=8.3						
	0.3nm,0.3s						

*NEIC **30** 18:09:28.6±1.5, 43.˚61N±0.˚04×105.˚34W±0.˚08, h0km±1km, ML3.2/48, Error ellipse: s-maj=11.1km s-min=2.6km az=237.0*
*IDC **30** 18:09:29.5±1.9, 43.˚88N×105.˚67W, h0km, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=52.5km s-min=9.5km az=149.0*

ISC 30 18:09:27.1±1.0, 43.˚83N±0.˚07×105.˚63W±0.˚04, h0km, n25, σ1.˚11/18, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.19	75		Pg	18 09 49.4	-0.6
K22A	Casper	1.34	209	Pg	Pn	18 09 52.9	-0.4
LAO	LASA Array	2.89	352		Pn	18 10 16.3	+1.8
LAO				IAML		18 11 18.7	
	98nm,2.7s						
LAO				IAML		18 11 23.3	
	84nm,1.2s						
RLMT	Red Lodge	2.91	298		Pg	18 10 22.0	-0.9
RLMT				IAML		18 11 28.5	
	50nm,1.7s						
RLMT				IAML		18 12 07.7	
	52nm,4.5s						
BW06	Boulder Array	3.06	251		Pb	18 10 22.2	-0.3
PD31	Pinedale Array	3.06	251		Pb	18 10 21.8	-0.7
PDAR	Pinedale Array	3.06	251	Pn	Pb	18 10 22.1	-0.5
	4.3nm,0.3s,baz=77,slow=16,SNR=22						
PDAR				Lg	Lg	18 11 05.3	
	9.9nm,0.3s,baz=67,slow=34,SNR=15						
	2.2nm,0.3s						
PDAR	Pinedale Array	3.06	251		Pb	18 10 21.9	-0.6
YNE	Yellowstone No	3.35	292		Pb	18 10 27.7	+0.1
YNE				IAML		18 11 33.1	
	comp=N,48nm,1.0s						
YNE				IAML		18 11 35.1	
	comp=E,38nm,0.9s						
YMP	Mirror Lake Pl	3.38	287		Pb	18 10 27.7	-0.3
YMP				IAML		18 11 39.7	
	comp=E,70nm,1.5s						
HAYD	Hayden	3.52	201		Pn	18 10 25.0	+1.7
HAYD				IAML		18 11 31.7	
	comp=N,42nm,1.2s						
LOHW	Long Hollow	3.61	268		Pb	18 10 31.6	-0.4
LOHW				IAML		18 11 54.9	
	comp=N,29nm,1.4s						
YPP	Pitchstone Pla	3.76	279		Pg	18 10 38.2	-0.9
YPP				IAML		18 12 55.7	
	comp=N,28nm,4.6s						
OGNE	Ogallala	3.92	136		Pn	18 10 26.9	-1.8
OGNE				IAML		18 11 32.4	
	comp=N,64nm,1.1s						
ISCO	Idaho Springs	4.02	180		Pn	18 10 31.1	+0.7
YHL	Hebgen Lake	4.11	286	IAML		18 11 55.2	
	comp=N,23nm,1.3s						
YHL				IAML		18 13 00.4	
	comp=E,23nm,4.8s						
O20A	White River Ci	4.17	209		Pn	18 10 32.9	+0.7
O20A				IAML		18 12 07.2	
	comp=E,43nm,1.2s						
RDMU	Red Mountain	4.38	223	IAML		18 12 22.8	
	comp=E,26nm,1.2s						
RDMU				IAML		18 13 20.1	
	comp=N,23nm,4.8s						
E28A	Huff	4.44	50		Pn	18 10 38.0	+2.2
BOZ	Bozeman (W)	4.63	295	Pn	Pb	18 10 44.1	-5.2
BOZ				IAML		18 13 19.0	
	comp=N,16nm,3.7s						
BOZ				IAML		18 13 47.0	
	comp=N,22nm,4.3s						
DGMT	Dagmar	4.75	12	Pn	Pn	18 10 45.5	+5.5
HWUT	Hardware Ranch	4.90	245	IAML		18 12 19.6	
	comp=N,24nm,1.3s						
BSUT	Blindstream Ca	5.03	231	IAML		18 12 31.6	
	comp=E,16nm,2.1s						
I56US	NEWPORT INFRAS	9.14	303	I	I	19 01 45.0	
	comp=E,0.1nm,1.4s,baz=117,slow=309,SNR=11						
ULM	Lac du Bonnet	9.25	43	Pn	Pn	18 11 41.5	-0.1
	comp=E,0.5nm,0.3s,baz=228,slow=11,SNR=4.5						
ULM				Lg	Lg	18 14 16.2	
	comp=E,0.4nm,0.3s,baz=342,slow=14,SNR=3.1						
	comp=E,1.0nm,0.4s						

IDC 30 18:23:37.3±304.0, 51.˚98N×31.˚99E, h0km, Error ellipse: s-maj=117.2km s-min=101.4km az=152.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	5.64	31	I	I	18 58 30.0	
	baz=214,slow=316,SNR=6.0						
I26DE	FREYUNG INFRAS	12.07	262	I	I	19 41 34.8	
	baz=64,slow=318,SNR=0.8						
I37NO	I37NO	18.29	345	I	I	20 11 18.7	
	baz=151,slow=316,SNR=0.9						
I48TN	KESRA INFRASON	22.84	234	I	I	20 40 27.3	
	baz=38,slow=315,SNR=3.2						

*IDC **30** 18:23:49.2±2.6, 13.˚95N×93.˚69W, h0km, mb3.9/4, mbtmp3.7/6, ML3.3/3, MS3.1/7, Error ellipse: s-maj=58.2km s-min=27.9km az=10.0*
*GCG **30** 18:23:50.9±1.1, 13.˚94N×93.˚49W, h2km±300km, MD4.9, Presumed earthquake*
*MEX **30** 18:23:52.7±0.4, 14.˚02N×93.˚72W, h10km, MD4.3*
*NEIC **30** 18:23:52.5±2.4, 14.˚22N±0.˚05×93.˚59W±0.˚04, h10km±2km, mb4.2/21, Md4.3/71(MEX), Error ellipse: s-maj=9.0km s-min=6.3km az=165.0*

ISC 30 18:23:48.9±2.9, 14.˚05N±0.˚06×93.˚72W±0.˚03, h1km±19km, n87, σ2.˚87/111, mb4.2/11, MS3.1/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.64	59	eP	Pn	18 24 16.9	-2.0
THIG				eS	Sb	18 24 39.3	-1.9
THIG		1.64	59		Pn	18 24 16.9	-2.0
THIG					Sb	18 24 39.3	-1.9
SMCA	Catarina	1.78	63	iP	Pb	18 24 20.7	-1.6
PATR	El Naranjo	1.78	53	eP	Pb	18 24 20.4	-2.1
PATR				eS	Sb	18 24 42.9	-2.6
PATR	El Naranjo	1.78	53		Pb	18 24 20.4	-2.1
PATR					Sb	18 24 42.9	-2.6
CHUJ	Union Juarez	1.87	56	eP	Pb	18 24 21.6	-2.4
CHUJ				eS	Sb	18 24 44.9	-3.2
PAVE	Pavencul	1.87	52	eP	Pb	18 24 22.0	-2.1
PAVE				eS	Sn	18 24 44.6	-2.1
PAVE	Pavencul	1.87	52		Pb	18 24 22.0	-2.1
PAVE					Sn	18 24 44.6	-2.1
RTAL	Retalhuleu	2.02	76		Pn	18 24 23.3	-0.7
STG5	El Palmar, Qui	2.32	81	iP	Pn	18 24 25.3	-3.0
STG8	El Palmar, Qui	2.33	80	iP	Pn	18 24 25.7	-2.9
HUEH	Huehuetenango	2.48	59		Pn	18 24 30.9	+0.1
TGIG		2.77	12	eP	Pb	18 24 37.0	-2.3
TGIG				eS	Sb	18 25 10.1	-3.7
TGIG		2.77	12		Pb	18 24 37.0	-2.3
TGIG					Sb	18 25 10.1	-3.7
HUIG	Huatulco	2.88	307	eP	Pn	18 24 36.4	+0.5
HUIG				eS	Sn	18 25 06.3	-4.8
HUIG	Huatulco	2.88	307		Pn	18 24 36.4	+0.5
HUIG					Sn	18 25 06.3	-4.8
FG8	Yepocapa, Chim	3.07	86	iP	Pn	18 24 33.3	-5.4
FG16	Alotenango, Sa	3.12	86	iP	Pn	18 24 34.5	-4.9
CMIG	Matias Romero	3.23	340	Pn	Pn	18 24 42.0	+1.3
	3.8nm,0.3s,baz=153,slow=11,SNR=31						
CMIG				Sn	Sn	18 25 18.0	-1.8
	13nm,0.3s,baz=126,slow=16,SNR=15						
CMIG				LR	LR	18 26 05.0	
	comp=Z,126nm,20.1s,baz=172,slow=41						
	19nm,0.6s						
APG	El Apazote	3.29	73	Pn	Pn	18 24 42.0	+0.2
	1.2nm,0.3s,baz=194,slow=13,SNR=36						
APG				Sn	Sn	18 25 21.5	-0.2
	0.2nm,0.3s,baz=210,slow=15,SNR=6.7						
APG	El Apazote	3.29	73	iP	Pn	18 24 42.6	+0.8
APG				iS	Sn	18 25 21.4	-0.3
PEIG	Puerto Escondi	3.84	301	eP	Pn	18 24 49.1	0.0
PEIG				eS	Sn	18 25 28.9	-6.1
PEIG	Puerto Escondi	3.84	301		Pn	18 24 49.1	0.0
PEIG					Sn	18 25 28.9	-6.1
NEUV	Arroyo Zacate	4.16	331	eP	Pn	18 24 54.5	+0.9
NEUV				eS	Sn	18 25 41.2	-1.6
NEUV	Arroyo Zacate	4.16	331		Pn	18 24 54.5	+0.9
NEUV					Sn	18 25 41.2	-1.6
OXIG	Oaxaca	4.18	316		Pn	18 24 55.2	+1.2
OXIG					Sn	18 25 41.5	-2.2
VHO	Vista Hermosa	4.18	316	eP	Pn	18 24 55.2	+1.2
VHO				eS	Sn	18 25 41.5	-2.2
MTO3	Montecristo	4.24	85		Pn	18 24 54.5	-0.4
YOIG	Yosondua	4.63	308	eP	Pn	18 25 03.2	+2.9
YOIG				eS	Sn	18 25 52.2	-2.6
YOIG	Yosondua	4.63	308		Pn	18 25 03.2	+2.9
YOIG					Sn	18 25 52.2	-2.6
PETF	Flores	4.68	52		Pn	18 25 01.4	+0.7
TXIG	Tlaxiaco	5.04	310	eP	Pn	18 25 09.8	+3.9
TXIG				eS	Sn	18 26 03.5	-1.4
TXIG	Tlaxiaco	5.04	310		Pn	18 25 09.8	+3.9
TXIG					Sn	18 26 03.5	-1.4
TOIG	Toxpalan	5.15	322	eP	Pn	18 25 10.2	+2.9
TOIG				eS	Sn	18 26 06.8	-0.7
TOIG	Toxpalan	5.15	322		Pn	18 25 10.2	+2.9
TOIG					Sn	18 26 06.8	-0.7
HLIG	Huajuapan de L	5.44	314	eP	Pn	18 25 15.7	+4.3
HLIG				eS	Sn	18 26 12.9	-1.8
HLIG	Huajuapan de L	5.44	314		Pn	18 25 15.7	+4.3
HLIG					Sn	18 26 12.9	-1.8
SCIG	Sabancuy	5.46	26	eP	Pn	18 25 13.1	+1.6
SCIG				eS	Sn	18 26 12.8	-2.1
SCIG	Sabancuy	5.46	26		Pn	18 25 13.1	+1.6
SCIG					Sn	18 26 12.8	-2.1
MGIG	Malinaltepec	5.70	304	eP	Pn	18 25 16.7	+1.8
MGIG				eS	Sn	18 26 18.7	-2.4
MGIG	Malinaltepec	5.70	304		Pn	18 25 16.7	+1.8
MGIG					Sn	18 26 18.7	-2.4
FTIG	Fresnillo de T	5.72	313	eP	Pn	18 25 19.5	+4.3
FTIG				eS	Sn	18 26 19.3	-2.3
FTIG	Fresnillo de T	5.72	313		Pn	18 25 19.5	+4.3
FTIG					Sn	18 26 19.3	-2.3
TLIG	Tlapa	5.83	307	eS	Sn	18 26 17.9	-6.4
TLIG	Tlapa	5.83	307		Sn	18 26 17.9	-6.4
CRIG	Cruz Grande	5.87	298	eP	Pn	18 25 19.5	+2.5
CRIG				eS	Sn	18 26 18.0	-7.0
CRIG	Cruz Grande	5.87	298		Pn	18 25 19.5	+2.5
CRIG					Sn	18 26 18.0	-7.0
JAUV	Jalcomulco	6.06	331	eP	Pn	18 25 20.6	+0.9
JAUV				eS	Sn	18 26 26.9	-2.8
JAUV	Jalcomulco	6.06	331		Pn	18 25 20.6	+0.9
JAUV					Sn	18 26 26.9	-2.8
PPM	Popocatepetl	6.86	317	eP	Pn	18 25 32.2	+1.0
PPM				eS	Sn	18 26 53.8	+3.7
PPIG	Popocatepetl	6.86	317		Pn	18 25 32.2	+1.0
PPIG					Sn	18 26 53.8	+3.6
PLIG	Platanillo	7.04	309	eP	Pn	18 25 33.8	+0.6
PLIG				eS	Sn	18 26 49.6	-4.3
PLIG	Platanillo	7.04	309		Pn	18 25 33.8	+0.6
PLIG					Sn	18 26 49.6	-4.3
ARIG	Puente Sto Nin	7.63	304	eP	Pn	18 25 45.2	+3.9
ARIG				eS	Sn	18 27 06.0	-2.5
ARIG	Puente Sto Nin	7.63	304		Pn	18 25 45.2	+3.9
ARIG					Sn	18 27 06.0	-2.5
BOAB	BOACO BROADBAN	8.00	101	Pn	Pn	18 25 45.5	-0.8
TEIG	Tepich	8.05	39		Pn	18 25 46.9	-0.1
ZIIG	Zihuatanejo	8.25	296	eP	Pn	18 25 52.8	+3.0
ZIIG	Zihuatanejo	8.25	296		Pn	18 25 52.8	+3.0
JUD3	Juan Diaz 3	8.88	115	Pn	Pn	18 26 00.5	+2.0
SAND	Sanderson	17.63	335	P	P	18 28 02.1	+5.1
TXAR	Lajitas Array	17.78	330	P	P	18 28 00.9	+2.1
	baz=149,slow=15,SNR=5.5						
	0.3nm,0.9s						
OZNA	Ozona	18.12	339	P	P	18 28 06.5	+4.0
LPIG	La Paz	18.58	305	LR	LR	18 35 36.3	
	comp=Z,28nm,18.3s,baz=237,slow=38						
MIAR	Mount Ida	20.41	0	P	Pn	18 28 33.5	+4.1
DKNS	Dickens	20.60	343	P	Pn	18 28 34.2	+2.4
WMOK	Wichita Mounta	21.10	348	P	P	18 28 38.5	+3.5
FNO	Franklin	21.38	352	P	P	18 28 44.1	+6.2
MSTX	Muleshoe	21.47	339	P	P	18 28 44.9	+5.9
MSTX				IAmb	IAmb	18 28 46.7	
	comp=Z,7.5nm,0.9s						
AMTX	Amarillo	21.95	342	P	P	18 28 48.0	+3.8
AMTX				IAmb	IAmb	18 28 51.3	
	comp=Z,6.1nm,0.7s						
HHAR	Hobbs	22.14	360	P	P	18 28 49.8	+3.7
HHAR				IAmb	IAmb	18 28 51.6	
	comp=Z,8.8nm,0.9s						
U38A	Gravette	22.30	359		P	18 28 51.5	+3.6
U38A				IAmb	IAmb	18 28 51.9	
	comp=Z,11nm,1.0s						
OK051	E0350 and S346	22.54	353	P	P	18 28 54.3	+4.0
SBM	South Baldy	23.29	331	P	P	18 29 03.5	+4.8
TKL	Tuckaleechee C	23.30	21	LR	LR	18 39 48.7	
	comp=Z,21nm,18.2s,baz=228,slow=41						
S39A	Bolivar	23.55	1	P	P	18 29 02.8	+2.0
S39A				IAmb	IAmb	18 29 04.9	
	comp=Z,7.3nm,0.9s						
RTBA	Rita Blanca	23.71	342	P	P	18 29 07.3	+4.7
RTBA				IAmb	IAmb	18 29 07.8	
	comp=Z,5.8nm,0.8s						
P40A	Paris	25.42	3	P	P	18 29 19.0	+0.9
P40A				IAmb	IAmb	18 29 19.4	
	comp=Z,5.5nm,0.7s						
NVAR	Mina Array Bea	32.60	323	P	P	18 30 22.0	-0.4
	comp=Z,0.3nm,0.3s,baz=131,slow=5.9,SNR=6.3						
	comp=Z,0.3nm,0.3s						
SADO	Sadowa	33.03	19	LR	LR	18 44 24.4	
	comp=Z,31nm,18.9s,baz=200,slow=37						
SCHQ	Schefferville	45.77	21	LR	LR	18 51 15.7	
	comp=Z,25nm,20.4s,baz=144,slow=36						
YKA	Yellowknife Ar	50.61	348	P	P	18 32 51.8	+2.7
	comp=Z,0.6nm,0.7s,baz=150,slow=7.1,SNR=2.6						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	62.14	337	P	P	18 34 13.5	+2.0
	comp=Z,0.8nm,0.9s,baz=155,slow=5.8,SNR=6.5						
	comp=Z,0.8nm,0.9s						
BORG	Borgarnes	69.89	26	LR	LR	19 06 10.0	
	comp=Z,17nm,18.1s,baz=256,slow=36						
PETK	Petropavlovsk-	89.66	325	P	P	18 36 47.8	-0.8
	comp=Z,4.2nm,1.1s,baz=46,slow=4.2,SNR=2.3						
	comp=Z,4.2nm,1.1s						
NRIK	Noril'sk	96.82	360	LR	LR	19 21 38.0	
	comp=Z,37nm,21.8s,baz=109,slow=36						
CMAR	Chiang Mai Arr	145.37	339	PKPbc	PKiKP	18 43 30.4	-3.2
	comp=Z,1.8nm,0.4s,baz=339,slow=2.8,SNR=9.8						

*IDC **30** 18:25:41.1±0.7, 14.˚00S×171.˚40E, h0km, mb4.1/14, mbtmp4.1/16, ML5.1/1, MS3.5/22, Error ellipse:

2.2nm,0.8s
H11S2 WAKE ISLAND Hy 32.65 352 T T 19 06 36.9
baz=171,slow=76,SNR=766
H11S3 WAKE ISLAND Hy 32.66 352 T T 19 06 36.9
baz=171,slow=76,SNR=466
H11S1 WAKE ISLAND Hy 32.67 352 T T 19 06 37.8
baz=171,slow=76,SNR=545
H11N1 WAKE ISLAND Hy 33.83 352 T T 19 08 05.1
baz=173,slow=76,SNR=256
H11N3 WAKE ISLAND Hy 33.83 352 T T 19 08 05.3
baz=173,slow=76,SNR=65
H11N2 WAKE ISLAND Hy 33.85 352 T T 19 08 06.4
baz=173,slow=76,SNR=105
WRA Warramunga Arr 35.88 255 P **P** **18 32 42.7 -0.4**
0.8nm,0.6s,baz=85,slow=9.0,SNR=8.9
0.8nm,0.6s
WRA Warramunga Arr 35.88 255 P **P** **18 32 41.6 -1.6**
AS31 Alice Springs 36.66 249 **P** **18 32 48.4 -1.4**
ASAR Alice Springs 36.66 249 P **P** **18 32 49.1 -0.8**
7.4nm,0.7s,baz=76,slow=9.3,SNR=72
7.4nm,0.7s
ASAR Alice Springs 36.66 249 P **P** **18 32 48.3 -1.6**
PPT2 Papeete2 37.66 101 *e*LR LR 18 43 12.4
91nm,27.8s
GUMO Guam 38.00 315 LR LR 18 47 36.7
comp=Z,70nm,19.1s,baz=120,slow=35
FITZ Fitzroy Crossi 44.08 258 LR LR 18 50 50.1
comp=Z,42nm,18.2s,baz=9.5,slow=34
FITZ Fitzroy Crossi 44.08 258 P **P** **18 33 50.2 -1.0**
MBWA Marble Bar 49.59 254 **P** **18 34 33.8 -0.5**
JCJ Chichijima 49.77 325 LR LR 18 51 50.4
comp=Z,30nm,21.6s,baz=142,slow=32
DAV Davao City (W) 50.08 292 LR LR 18 52 40.5
comp=Z,41nm,21.9s,baz=114,slow=32
JHJ Hachijo jima 2 55.77 328 LR LR 18 54 35.3
comp=Z,22nm,22.0s,baz=107,slow=31
MJAR Matsushiro Arr 59.26 329 P **P** **18 35 44.5 +0.2**
0.8nm,0.7s,baz=158,slow=8.2,SNR=5.3
MJAR LR LR 18 57 25.4
comp=Z,34nm,21.4s,baz=148,slow=32
0.8nm,0.7s
MJAR Matsushiro Arr 59.26 329 P **P** **18 35 44.0 -0.4**
JSU Suzuyama 59.95 320 **P** **18 35 49.0 -0.1**
ASAJ Asahikawa 63.56 337 LR LR 18 58 32.2
comp=Z,68nm,21.8s,baz=170,slow=31
VNDA Vanda 63.67 182 LR LR 18 59 00.3
comp=Z,36nm,21.5s,baz=309,slow=31
SBA Scott Base 63.87 181 P **P** **18 36 15.6 +0.8**
SBA IAmb IAmb 18 36 18.3
comp=Z,12nm,1.4s
KSRS Korea Array 65.52 323 P **P** **18 36 26.4 +0.3**
comp=Z,0.6nm,0.8s,baz=136,slow=6.1,SNR=2.4
comp=Z,0.6nm,0.8s
SHEM Shemya Is, Ala 66.53 2 LR LR 18 59 16.6
comp=Z,18nm,21.1s,baz=292,slow=30
PETK Petropavlovsk- 67.91 351 LR LR 19 01 49.3
comp=Z,53nm,19.1s,baz=161,slow=32
QSPA South Pole Qui 75.99 180 P **P** **18 37 29.6 0.0**
comp=Z,1.3nm,0.8s,baz=359,slow=7.6,SNR=4.1
QSPA LR LR 19 06 47.8
comp=Z,48nm,19.0s,baz=37,slow=32
comp=Z,1.3nm,0.8s
QSPA South Pole Qui 75.99 180 P **P** **18 37 28.6 -1.0**
QSPA IAmb IAmb 18 37 56.7
comp=Z,13nm,1.5s
KDAK Kodiak Island 77.47 19 LR LR 19 04 42.4
comp=Z,42nm,20.6s,baz=210,slow=30
SEY Seymchan 78.15 351 LR LR 19 09 57.8
comp=Z,61nm,20.2s,baz=150,slow=34
CMAR Chiang Mai Arr 78.36 292 P **P** **18 37 45.0 +1.4**
comp=Z,1.3nm,0.6s,baz=119,slow=4.3,SNR=10
comp=Z,1.3nm,0.6s
CMAR Chiang Mai Arr 78.36 292 **P** **18 37 43.6 0.0**
M16K Timber Creek 78.45 14 **P** **18 37 43.9 +0.8**
CHTO Chiang Mai 78.48 293 **P** **18 37 43.8 -0.4**
L19K White Mountain 80.46 15 IAmb IAmb 18 37 56.2
comp=Z,11nm,1.0s
KAIM Kayak Island 81.82 21 IAmb IAmb 18 38 04.2
comp=Z,4.8nm,0.8s
CAST Castle Rocks 82.20 16 IAmb IAmb 18 38 05.2
comp=Z,5.7nm,0.9s
J20K Nowinta River 82.31 14 IAmb IAmb 18 38 05.5
comp=Z,4.6nm,0.9s
BMRM Bremner River 82.52 20 IAmb IAmb 18 38 06.5
comp=Z,7.9nm,1.2s
YAK Yakutsk 82.59 342 LR LR 19 09 28.6
comp=Z,24nm,20.9s,baz=126,slow=32
CRQM Cirque 82.86 21 IAmb IAmb 18 38 08.4
comp=Z,8.9nm,1.0s
VRDI Verde Repeater 83.09 20 IAmb IAmb 18 38 15.5
comp=Z,10nm,1.3s
GLB Gilahina Butte 83.13 20 IAmb IAmb 18 38 17.0
comp=Z,5.8nm,1.1s
GRNC Granite Creek 83.32 21 IAmb IAmb 18 38 10.8
comp=Z,7.7nm,1.1s
NVAR Mina Array Bea 83.81 48 P **P** **18 38 12.0 -0.5**
comp=Z,0.5nm,0.6s,baz=221,slow=10,SNR=4.7
comp=Z,0.5nm,0.6s
NVAR Mina Array Bea 83.81 48 P **P** **18 38 10.5 -1.9**
MLY Manley 83.86 15 IAmb IAmb 18 38 20.2
comp=Z,4.2nm,1.1s
O28M Mount Upton 83.90 22 IAmb IAmb 18 38 13.9
comp=Z,6.5nm,1.0s
IMAR Indian Mountai 83.91 14 P **P** **18 38 12.3 +0.2**
NEA2 Nenana 83.94 16 IAmb IAmb 18 38 13.7
comp=Z,6.2nm,1.1s
P29M Windy Craggy 84.05 23 IAmb IAmb 18 38 14.5
comp=Z,8.3nm,1.1s
WRH Wood River Hil 84.11 16 IAmb IAmb 18 38 15.4
comp=Z,6.5nm,1.0s
CCB Clear Creek Bu 84.33 16 IAmb IAmb 18 38 15.8
comp=Z,4.4nm,0.8s
SONM Songino Array 84.37 322 P **P** **18 38 15.1 +0.2**
comp=Z,0.9nm,0.6s,baz=128,slow=4.6,SNR=10
comp=Z,0.9nm,0.6s
SONM Songino Array 84.37 322 **P** **18 38 15.8 +0.8**
SONM IAmb IAmb 18 38 16.6
comp=Z,5.3nm,1.3s
F20K Avaraart Lake 84.38 12 IAmb IAmb 18 38 16.5
comp=Z,5.5nm,1.1s
E19K Redstone River 84.43 12 IAmb IAmb 18 38 16.8
comp=Z,6.0nm,1.0s
M27K Edge Creek, AK 84.43 20 IAmb IAmb 18 38 16.6
comp=Z,7.8nm,1.0s
IL31 84.68 17 IAmb IAmb 18 38 16.6
comp=Z,7.1nm,0.8s
ILAR Eielson Array 84.68 17 P **P** **18 38 15.8 -0.1**
comp=Z,4.4nm,0.8s,baz=236,slow=5.6,SNR=47
comp=Z,4.4nm,0.8s
ILAR Eielson Array 84.68 17 P **P** **18 38 15.6 -0.4**
J25K Salcha River, 84.99 17 IAmb IAmb 18 38 18.7
comp=Z,4.8nm,1.0s
F21K Alatna River 85.00 13 IAmb IAmb 18 38 26.0
comp=Z,6.7nm,1.2s
GTA2 Gaotai 85.19 313 P **P** **18 38 20.8 +1.5**
GTA2 pP pP 18 38 26.8 -2.4
GTA2 pmax pmax
comp=Z,5.0nm,0.9s
G26K Porcupine Rive 87.16 16 IAmb IAmb 18 38 42.6
comp=Z,6.8nm,1.3s
KNB Kanab 87.34 51 IAmb IAmb 18 38 39.0
comp=Z,9.1nm,1.5s
U15A North Rim 87.54 52 IAmb IAmb 18 38 34.6
comp=Z,2.7nm,0.8s
MTPU Mount Pierson 88.16 50 IAmb IAmb 18 38 56.4
comp=Z,5.4nm,1.3s
BSUT Blindstream Ca 90.01 48 IAmb IAmb 18 38 44.7
comp=Z,3.4nm,0.9s
PDAR Pinedale Array 91.56 46 P **P** **18 38 49.6 -0.1**
comp=Z,0.2nm,0.4s,baz=277,slow=6.0,SNR=2.0
comp=Z,0.2nm,0.4s
PDAR Pinedale Array 91.56 46 P **P** **18 38 48.8 -0.9**
TPB28 92.34 58 IAmb IAmb 18 38 53.9
comp=Z,9.4nm,0.3s
TXAR Lajitas Array 92.44 61 P **P** **18 38 54.9 +0.9**
comp=Z,0.7nm,0.7s,baz=228,slow=5.5,SNR=11
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 92.44 61 P **P** **18 38 54.3 +0.3**
YKA Yellowknife Ar 95.12 27 P **P** **18 39 05.2 -0.2**
comp=Z,0.7nm,0.8s,baz=252,slow=4.1,SNR=2.0
comp=Z,0.7nm,0.8s
YKA Yellowknife Ar 95.12 27 P **P** **18 39 04.8 -0.6**
MKAR Makanchi Array 99.49 316 P **Pdif** **18 39 25.7 +0.2**
comp=Z,0.4nm,0.7s,baz=114,slow=4.5,SNR=2.5
comp=Z,0.4nm,0.7s
MKAR Makanchi Array 99.49 316 P **Pdif** **18 39 24.2 -1.4**
AKASG Malin Array Be 132.34 328 PKP **PKPdf** **18 44 55.1 -1.6**
comp=Z,0.2nm,0.3s,baz=94,slow=1.0,SNR=1.9
AKASG Malin Array Be 132.34 328 **PKPdf** **18 44 54.5 -2.1**
BRTR Keskin Array B 135.04 313 PKP **PKPdf** **18 45 02.4 +0.1**
comp=Z,0.3nm,0.7s,baz=116,slow=6.6,SNR=2.0
ESDC Sonseca Array 154.14 352 PKPab **PKPab** **18 45 57.5 +1.2**
comp=Z,0.8nm,0.8s,baz=0.1,slow=4.8,SNR=5.3
ESDC Sonseca Array 154.14 352 **PKPab** **18 45 58.2 +1.8**

IDC 30 18:32:16.7±2.2, 13°.84S×171°.26E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=130.2km s-min=28.4km az=148.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**32.44**	**352**	T	T	19 13 11.3	
	baz=171,slow=76,SNR=94						
H11S3	**WAKE ISLAND Hy**	**32.44**	**352**	T	T	19 13 11.8	
	baz=171,slow=76,SNR=36						
H11S1	**WAKE ISLAND Hy**	**32.45**	**352**	T	T	19 13 12.8	
	baz=171,slow=76,SNR=67						
H11N1	**WAKE ISLAND Hy**	**33.62**	**353**	T	T	19 14 40.8	
	baz=172,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**33.62**	**353**	T	T	19 14 41.3	
	baz=172,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**33.63**	**353**	T	T	19 14 42.1	
	baz=172,slow=76,SNR=14						
WRA	**Warramunga Arr**	**35.79**	**255**	P	P	18 39 18.5	+0.5
	0.8nm,0.9s,baz=86,slow=9.5,SNR=2.0						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**36.60**	**249**	P	P	18 39 24.4	-0.5
	1.5nm,0.8s,baz=75,slow=9.3,SNR=17						
	1.5nm,0.8s						
ILAR	**Eielson Array**	**84.53**	**17**	P	P	18 44 51.3	+0.1
	0.8nm,0.7s,baz=217,slow=4.8,SNR=8.9						
	0.8nm,0.7s						
TXAR	**Lajitas Array**	**92.47**	**61**	P	P	18 45 30.0	-0.2
	0.1nm,0.4s,baz=249,slow=5.1,SNR=1.9						
	0.1nm,0.4s						

*BJI **30** 18:38:37.5, 30°.30N×94°.92E, h6km, mB4.6/11, mb4.3/46, ML4.0/9, Ms4.1/38, Ms7 3.9/38*
*MOS **30** 18:38:37.4±1.0, 30°.30N×94°.90E, h18km, mb5.0/40, Error ellipse: s-maj=7.9km s-min=3.6km az=125.8*
*NEIC **30** 18:38:39.0±1.3, 30°.39N±0°.06×94°.75E±0°.06, h10km±1km, mb4.8/143, Error ellipse: s-maj=11.7km s-min=7.5km az=146.0*
*GFZ **30** 18:38:39.4±0.3, 30°.N±3°.×9°.5E±°, h10km, M4.6/29, mb4.7/29*
*NDI **30** 18:38:39.1±2.6, 30°.43N×94°.81E, h10km, mb4.9, ML3.8, MW4.4, Presumed earthquake*
*IDC **30** 18:38:42.6±2.8, 30°.36N×94°.84E, h44km±27km, mb4.0/25, mbtmp4.3/29, ML4.0/4, MS3.2/6, Error ellipse: s-maj=17.4km s-min=11.1km az=39.0*
ISC 30 18:38:38.4±0.6, 30°.38N±0°.04×94°.85E±0°.03, h9km±3km, h9km:pP-P, n557, σ1s19/541, mb4.7/136, MS3.3/7, 9C-4D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.28**	**259**	P	**Pn**	**18 39 30.1**	**-0.3**
LSA	**Lhasa**	**3.28**	**259**		**Pn**	**18 39 30.1**	**-0.3**
LSA	**Lhasa**	**3.28**	**259**	⇓ *i* Pn	**Pn**	**18 39 29.5**	**-0.9**
LSA				Sn	**Sn**	**18 40 12.0**	**+2.3**
TAWA	**Tawang**	**3.81**	**224**	*e*P	**Pn**	**18 39 38.8**	**+1.2**
TAWA				*i* x	x	18 39 49.1	
TAWA				IAML		18 40 45.8	
	comp=N,312nm,1.6s						
TAWA				IAML		18 40 51.3	
	comp=E,497nm,1.4s						
GUWA	**GUWAHATI**	**5.01**	**214**	*e*P	**Pn**	**18 39 54.6**	**+0.7**
GUWA				*i* x	x	18 40 09.1	
GUWA				*ex*	x	18 41 13.6	
SHL	**Shillong**	**5.46**	**209**	P	**Pn**	**18 39 59.5**	**-0.7**
SHL	**Shillong**	**5.46**	**209**		**Pn**	**18 39 59.5**	**-0.7**
SHL	**Shillong**	**5.46**	**209**	*e*P	**Pn**	**18 39 59.5**	**-0.7**
SHL				*i* x	x	18 40 17.1	
SHL				*ex*	x	18 41 24.4	
SHL				IAML		18 41 43.0	
	comp=E,108nm,1.4s						
SHL				IAML		18 41 43.7	
	comp=N,160nm,1.1s						
IMP	**Imphal**	**5.59**	**188**	*e*P	**Pn**	**18 40 02.3**	**+0.5**
GOMU	**GeErMu**	**5.80**	**360**	Pn	**Pn**	**18 40 03.0**	**-2.0**
GOMU				Sn	**Sn**	**18 41 11.5**	**-0.4**
GOMU				Sg	**Sb**	**18 41 36.0**	**+6.2**
GOMU				SMN			
	comp=N,28nm,1.7s						
GOMU				SME			
	comp=N,11nm,1.3s						
DHUB	**DHUBRI**	**6.10**	**226**	*e*P	**Pn**	**18 40 09.3**	**+0.5**
MORE	**Moreh**	**6.14**	**185**		**Pn**	**18 40 09.9**	**+0.6**
PZH	**PanZhiHua**	**7.19**	**121**	Pn	**Pn**	**18 40 24.5**	**+0.6**
PZH				Sn	**Sn**	**18 41 48.5**	**+2.7**
PZH				L	L		
	comp=N,890nm,7.7s						
PZH				L	L		
	comp=N,670nm,5.1s						
PZH				L	L		
	comp=N,540nm,7.7s						
EVN	**Everest**	**7.42**	**253**		**Pn**	**18 40 27.3**	**-0.3**
EVN	**Everest**	**7.42**	**253**	P	**Pn**	**18 40 28.8**	**+1.2**
CD2	**Chengdu**	**7.70**	**84**	Pn	**Pn**	**18 40 30.5**	**-0.2**
CD2				L	L		
	comp=N,2μm,6.3s						
CD2				L	L		
	comp=N,2μm,7.8s						
CD2				L	L		
	comp=N,2μm,7.4s						
KMI2	**Kunming**	**8.72**	**125**	P	**Pn**	**18 40 46.3**	**+1.3**
KMI2				S	**Sn**	**18 42 28.8**	**+5.2**
KMI2				SMN			
	comp=N,50nm,1.8s						
KMI2				SME			
	comp=N,47nm,2.1s						
KMI2				L	L		
	comp=N,880nm,5.9s						
KMI2				L	L		
	comp=N,1μm,4.6s						
KMI2				L	L		
	comp=N,430nm,11.7s						
LZDM	**Lanzhou Array**	**9.27**	**51**	P	**Pn**	**18 40 54.6**	**+2.1**
	baz=235,slow=14						
LZDM				LR	LR	18 44 36.0	
	comp=N,208nm,18.4s,baz=50,slow=38						
	comp=N,4.8nm,0.5s						
LZH	**Lanzhou**	**9.44**	**51**	*e*P	**Pn**	**18 40 58.5**	**+3.8**
LZH				sP		18 41 03.8	
LZH				pmax	pmax		
	comp=N,25nm,1.3s						
LZH				L	L		
	comp=N,770nm,10.0s						
LZH				L	L		
	comp=N,590nm,10.7s						
LZH				L	L		
	comp=N,590nm,10.3s						
GTA2	**Gaotai**	**9.94**	**23**	*e*P	**Pn**	**18 41 01.3**	**-0.2**
GTA2				sP		18 41 09.8	
GTA2				pmax	pmax		
	comp=N,2.0nm,0.7s						
GTA2				L	L		
	comp=N,500nm,9.5s						
GTA2				L	L		
	comp=N,340nm,10.2s						
GTA2				L	L		
	comp=N,510nm,9.5s						
GAYA	**Gaya**	**10.18**	**239**	*e*P	**Pn**	**18 41 04.0**	**-0.7**
NPW	**Naypyitaw**	**10.62**	**173**	P	**Pn**	**18 41 09.9**	**-0.9**
GYA	**Guiyang**	**11.11**	**108**	⇓ P	**Pn**	**18 41 18.3**	**+0.7**
GYA				pmax	pmax		
	comp=N,27nm,0.8s						
CHTO	**Chiang Mai**	**12.10**	**161**	P	**Pn**	**18 41 32.4**	**+1.3**
CHTO	**Chiang Mai**	**12.10**	**161**		**Pn**	**18 41 32.4**	**+1.3**
CHTO	**Chiang Mai**	**12.10**	**161**	P	Pn	18 41 39.6	+8.5
CHTO	**Chiang Mai**	**12.10**	**161**	P	**Pn**	**18 41 33.2**	**+2.1**
CMAR	**Chiang Mai Arr**	**12.44**	**162**	P	**Pn**	**18 41 36.2**	**+0.5**
	comp=N,0.2nm,0.3s,baz=332,slow=12,SNR=16						
	comp=N,2.2nm,0.9s						
BLSP	**Bilaspur**	**14.04**	**237**	*ex*	**P**	**18 42 05.5**	**0.0**
BLSP				IAmb	IAmb	18 42 07.0	
	comp=Z,33nm,0.7s						
WMQ	**Urumqi**	**14.57**	**339**	*e*P	**Pn**	**18 42 06.0**	**+1.2**
WMQ				sP	P	18 42 12.5	+1.1
WMQ				S	**Sn**	**18 44 47.8**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.9s						
WMQ				L	L		
	comp=Z,220nm,8.7s						
WMQ				L	L		
	comp=Z,180nm,7.7s						
WMQ				L	L		
	comp=Z,58nm,12.7s						
RAGD	**RAYAGADA**	**15.15**	**226**	*ex*	**Pn**	**18 42 10.1**	**-2.6**
RAGD				*i* x	x	18 42 21.4	
SMLA	**Simla**	**15.22**	**277**	*ex*	**Pn**	**18 42 11.6**	**-2.0**
LYN	**LuoYang**	**15.44**	**70**	P	**P**	**18 42 21.0**	**0.0**
LYN				pmax	pmax		
	comp=Z,30nm,0.5s						
BTO2	**Baotou**	**15.99**	**46**	*e*P	**Pn**	**18 42 22.5**	**-1.2**
BTO2				pP	**P**	**18 42 26.0**	**-1.3**
BTO2				sP	**pP**	**18 42 29.5**	**-1.6**
BTO2				PP	**sP**	**18 42 35.5**	**+2.6**
BTO2				S	**Sn**	**18 45 21.5**	**+0.3**
BTO2				sS	**S**	**18 45 26.0**	**-9.2**
BTO2				SS	**SnSn**	**18 45 39.0**	**+4.9**
BTO2				pmax	pmax		
	comp=Z,16nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,210nm,5.3s						
BTO2				L	L		
	comp=Z,410nm,12.0s						
BTO2				L	L		
	comp=Z,370nm,14.3s						
BTO2				L	L		
	comp=Z,430nm,12.1s						
TSSA	**Tissa**	**16.12**	**284**	*e*P	**Pn**	**18 42 24.2**	**-1.3**
THN	**Thein Dam**	**16.43**	**282**	*e*P	**Pn**	**18 42 30.6**	**+1.3**
GUNA	**GUNA**	**16.55**	**254**	*ex*	**Pn**	**18 42 27.0**	**-3.8**
GUNA				*i* x	x	18 42 36.4	
WUS	**Wushi**	**16.63**	**315**		**Pn**	**18 42 30.9**	**-0.9**
WHN	**Wuhan**	**16.82**	**84**	P	**Pn**	**18 42 32.8**	**-1.4**
BHPL	**Bhopal**	**17.09**	**250**	*e*P	**P**	**18 42 39.0**	**-0.4**
HHC	**Hu-ho-hao-te**	**17.11**	**48**	*e*P	**P**	**18 42 40.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,3.9s						
HHC				L	L		
	comp=Z,260nm,12.9s						
HHC				L	L		
	comp=Z,160nm,10.0s						
HHC				L	L		
	comp=Z,210nm,10.0s						
SHLS	**Shalkode**	**17.70**	**320**	*e*P	**Pn**	**18 42 43.4**	**-1.8**
SHLS	**Shalkode**	**17.70**	**320**	*e*P	**Pn**	**18 42 43.5**	**-1.8**
PDGK	**Podgornoye**	**17.80**	**321**	P	**Pn**	**18 42 41.8**	**-4.6**
PDGK	**Podgornoye**	**17.80**	**321**	Pn	**Pn**	**18 42 41.8**	**-4.6**
TARG	**Taragay, Kyrgy**	**17.80**	**314**	P	**Pn**	**18 42 47.2**	**+0.4**
TARG				pmax	pmax		
	comp=Z,39nm,1.2s						
TARG	**Taragay, Kyrgy**	**17.80**	**314**	P	**Pn**	**18 42 47.2**	**+0.4**
TARG	**Taragay, Kyrgy**	**17.80**	**314**	P	**P**	**18 42 48.8**	**+1.3**
PRZ	**Przheval'sk**	**17.88**	**317**	P	**P**	**18 42 48.9**	**+0.7**
PRZ	**Przheval'sk**	**17.88**	**317**	P	**P**	**18 42 48.9**	**+0.7**
HNS	**HongShan**	**17.90**	**62**	⇑ P	**P**	**18 42 49.3**	**+1.1**
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
HNS				L	L		
	comp=Z,230nm,11.3s						
HNS				L	L		
	comp=Z,280nm,10.6s						
UZB	**Uzynbulak**	**17.94**	**320**	*e*P	**P**	**18 42 49.8**	**+1.0**
UZB	**Uzynbulak**	**17.94**	**320**	*e*P	**P**	**18 42 49.9**	**+1.0**
KSH2	**Kashi**	**18.07**	**304**	P	**Pn**	**18 42 49.3**	**-0.6**
KSH2				pmax	pmax		
	comp=Z,13nm,1.3s						
AJM	**Ajmer**	**18.22**	**262**	*e*P	**Pn**	**18 42 50.5**	**-1.1**
AJM				IAmb	IAmb	18 42 55.7	
	comp=Z,38nm,0.8s						
SATY	**Saty**	**18.23**	**318**	*e*P	**P**	**18 42 53.0**	**+1.0**
SATY				*e*S	**S**	**18 46 18.8**	**-1.9**
SATY	**Saty**	**18.23**	**318**	*e*P	**P**	**18 42 53.1**	**+1.0**
SATY				*e*S	**S**	**18 46 18.9**	**-1.9**
KPKS	**Kokpek**	**18.33**	**320**	*e*P	**P**	**18 42 54.0**	**+0.9**
KPKS				*e*S	**S**	**18 46 21.0**	**-1.7**
KPKS	**Kokpek**	**18.33**	**320**	*e*P	**P**	**18 42 54.0**	**+0.9**
KPKS				*e*S	**S**	**18 46 21.0**	**-1.7**
KDJ	**Kajisay**	**18.41**	**314**	P	**Pn**	**18 42 54.4**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,80nm,1.6s						
KDJ	**Kajisay**	**18.41**	**314**	P	**Pn**	**18 42 54.4**	**+0.3**
KDJ				IAmb	IAmb	18 42 59.3	
	comp=Z,80nm,1.6s						
NIL	**Nilore**	**18.60**	**286**	P	**P**	**18 42 53.6**	**-2.4**
NIL				pmax	pmax		
	comp=Z,68nm,1.1s						
NIL	**Nilore**	**18.60**	**286**		**P**	**18 42 53.6**	**-2.4**
NIL				IAmb	IAmb	18 42 59.9	
	comp=Z,68nm,1.1s						
NIL	**Nilore**	**18.60**	**286**	P	**P**	**18 42 53.7**	**-2.4**
ZSN	**Zaisan**	**18.70**	**338**	*e*P	**Pn**	**18 42 58.5**	**+1.1**
ZSN				*e*S	**S**	**18 46 30.4**	**+0.4**
ZSN	**Zaisan**	**18.70**	**338**	*e*P	**Pn**	**18 42 58.6**	**+1.1**
ZSN				*e*S	**S**	**18 46 30.5**	**+0.4**
ULHL	**Ulahol**	**19.06**	**313**	P	**Pn**	**18 43 02.7**	**+0.7**
	SNR=6.2						
MK31	**Makanchi Array**	**19.06**	**333**	*ce*P	**P**	**18 43 01.4**	**+0.4**
MKAR	**Makanchi Array**	**19.06**	**333**	P	**P**	**18 43 00.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=142,slow=11,SNR=19						
MKAR				LR	LR	18 49 54.1	
	comp=Z,25nm,20.7s,baz=152,slow=35						
	comp=Z,2.9nm,0.7s						
MKAR	**Makanchi Array**	**19.06**	**333**	P	**P**	**18 42 59.3**	**-1.7**
TNSS	**Tian-Shan**	**19.07**	**316**	*e*P	**Pn**	**18 43 02.5**	**+0.3**
TNSS	**Tian-Shan**	**19.07**	**316**	*e*P	**Pn**	**18 43 02.6**	**+0.3**
MDOK	**Medeo**	**19.08**	**317**	*e*P	**Pn**	**18 43 02.5**	**+0.4**
MDOK				*e*S	**S**	**18 46 39.2**	**+1.2**
MDOK	**Medeo**	**19.08**	**317**	*e*P	**Pn**	**18 43 02.6**	**+0.4**
MDOK				*e*S	**S**	**18 46 39.2**	**+1.2**
AAA	**Alma-Ata**	**19.19**	**317**	*e*P	**Pn**	**18 43 03.8**	**+0.5**
AAA	**Alma-Ata**	**19.19**	**317**	*e*P	**Pn**	**18 43 03.9**	**+0.5**
MAKZ	**Makanchi**	**19.20**	**332**	P	**P**	**18 43 01.7**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,19nm,1.2s						
MAKZ	**Makanchi**	**19.20**	**332**		**P**	**18 43 01.7**	**-0.8**
MAKZ	**Makanchi**	**19.20**	**332**	P	**P**	**18 43 02.2**	**-0.3**
BOOM	**Boomskoye usch**	**19.38**	**314**	P	**P**	**18 43 05.0**	**+0.3**
BOOM				pmax	pmax		
	comp=Z,55nm,1.5s						
BOOM	**Boomskoye usch**	**19.38**	**314**		**P**	**18 43 05.0**	**+0.3**
TIA	**Tai'an**	**19.49**	**67**	P	**Pn**	**18 43 08.0**	**+1.0**
TIA				pmax	pmax		
	comp=Z,11nm,1.3s						
TDK	**Taldyqorghan**	**19.50**	**323**	*e*P	**Pn**	**18 43 07.0**	**0.0**
TDK	**Taldyqorghan**	**19.50**	**323**	*e*P	**Pn**	**18 43 07.1**	**0.0**
SONM	**Songino Array**	**19.56**	**24**	P	**P**	**18 43 06.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=36						
SONM				LR	LR	18 51 26.8	
	comp=Z,98nm,19.8s,baz=204,slow=39						
	comp=Z,9.3nm,1.0s						
SONM	**Songino Array**	**19.56**	**24**	P	**P**	**18 43 06.3**	**-0.3**
HYB	**Hyderabad**	**19.68**	**233**	*e*P	**P**	**18 43 07.5**	**-0.5**
HYB				*e*S	**Sn**	**18 46 59.2**	**+8.6**
ULN	**Ulaanbaatar**	**19.82**	**25**	*ce*P	**P**	**18 43 10.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
ULN	**Ulaanbaatar**	**19.82**	**25**		**P**	**18 43 09.6**	**+0.2**
ULN	**Ulaanbaatar**	**19.82**	**25**	P	**Pn**	**18 43 10.2**	**-0.7**
	comp=Z,41nm,1.1s						
ULN	**Ulaanbaatar**	**19.82**	**25**	P	**P**	**18 43 10.0**	**+0.6**
TKM2	**Tokmak 2**	**19.82**	**314**	P	**Pn**	**18 43 10.9**	**-0.2**
	SNR=7.0						
KBK	**Karagaybulak**	**20.09**	**313**	P	Pn	18 43 18.0	+3.8
	SNR=6.1						
AAK	**Ala-Archa**	**20.37**	**312**	P	**P**	**18 43 16.3**	**+0.9**
	comp=Z,42nm,1.2s,baz=133,slow=8.6,SNR=24						
	comp=Z,42nm,1.2s						
AAK	**Ala-Archa**	**20.37**	**312**	P	Pn	18 43 17.2	-0.3
	SNR=22						
AAK	**Ala-Archa**	**20.37**	**312**	*ce*P	Pn	18 43 17.1	-0.4
AAK				pmax	pmax		
	comp=Z,76nm,1.3s						
AAK	**Ala-Archa**	**20.37**	**312**	P	**P**	**18 43 15.8**	**+0.3**
AAK				IAmb	IAmb	18 43 22.0	
	comp=Z,78nm,1.3s						
AAK	**Ala-Archa**	**20.37**	**312**	P	Pn	18 43 17.3	-0.2
MANEM	**Manem**	**20.47**	**297**	P	**P**	**

comp=Z,107nm,1.2s
NJ2 Nanjing 20.59 79 *e*P **P** **18 43 18.5 +0.7**
NJ2 pmax pmax
comp=Z,22nm,0.6s
USP Ospenovka 20.69 314 P Pn 18 43 21.0 -0.1
SNR=9.0
SGDS Sogindy 20.71 315 *e*P **P** **18 43 20.2 +1.2**
ARSB Arslanbob 20.76 308 P **P** **18 43 19.6 -0.1**
ARSB pmax pmax
comp=Z,51nm,1.3s
ARSB Arslanbob 20.76 308 P **P** **18 43 19.6 -0.1**
ARSB IAmb IAmb 18 43 23.2
comp=Z,51nm,1.3s
EKS2 Erkin-Say 20.84 312 P **P** **18 43 21.6 +1.1**
SNR=14
DRK Karamyk 20.92 302 P **P** **18 43 21.1 -0.5**
DRK pmax pmax
comp=Z,44nm,1.1s
DRK Karamyk 20.92 302 P **P** **18 43 21.1 -0.5**
DRK IAmb IAmb 18 43 24.9
comp=Z,44nm,1.1s
JASL Jaisalmer 21.28 267 *e*P **P** **18 43 24.4 -0.9**
MOY Mondy 21.75 10 *e*P **P** **18 43 31.4 +1.2**
MOY pmax pmax
comp=Z,34nm,1.8s
BTK Batken 21.82 303 P **P** **18 43 30.8 -0.2**
BTK pmax pmax
comp=Z,48nm,1.0s
BTK Batken 21.82 303 P **P** **18 43 30.8 -0.2**
BTK IAmb IAmb 18 43 34.8
comp=Z,48nm,1.0s
GAR Garm 21.88 300 P **P** **18 43 30.7 -1.0**
GAR Garm 21.88 300 P **P** **18 43 31.1 -0.6**
BTLS Baital 21.93 318 *e*P **P** **18 43 33.2 +1.1**
BTLS Baital 21.93 318 *e*P **P** **18 43 33.2 +1.1**
KBL Kabul 22.14 288 P **P** **18 43 34.1 -0.6**
KBL pmax pmax
comp=Z,186nm,1.6s
KBL Kabul 22.14 288 P **P** **18 43 34.1 -0.6**
KBL Kabul 22.14 288 P **P** **18 43 34.6 -0.1**
TLY Talaya 22.26 15 LR LR 18 52 57.6
comp=Z,99nm,19.2s,baz=180,slow=38
TLY Talaya 22.26 15 P **P** **18 43 39.7 +4.2**
DZA Taraz 22.54 310 *e*P **P** **18 43 40.1 +1.4**
DZA pmax pmax
comp=Z,24nm,1.6s
DZA Taraz 22.54 310 *e*P **P** **18 43 40.1 +1.4**
comp=Z,24nm,1.6s
IRK Irkutsk 22.92 15 *e*P **P** **18 43 42.9 +0.3**
IRK pmax pmax
comp=Z,43nm,1.8s
IUG luzhnay 23.11 307 *e*P **P** **18 43 45.5 +0.7**
IUG *e*S **S** **18 47 58.9 +2.7**
IUG pmax pmax
comp=Z,21nm,1.4s
IUG luzhnay 23.11 307 *e*P **P** **18 43 45.5 +0.7**
comp=Z,21nm,1.4s
IUG *e*S **S** **18 47 59.0 +2.7**
KK31 Karatay Array 23.18 310 P **P** **18 43 45.3 0.0**
KK31 pmax pmax
comp=Z,23nm,1.2s
KK31 Karatay Array 23.18 310 P **P** **18 43 45.3 0.0**
KKAR Karatay Array 23.18 310 P **P** **18 43 45.1 -0.2**
KKAR Karatay Array 23.18 310 P **P** **18 43 45.0 -0.2**
SHAA Shahritus 23.24 295 P **P** **18 43 45.5 -0.6**
SHAA IAmb IAmb 18 43 49.6
comp=Z,95nm,1.3s
CHM Chimkent 23.47 307 *e*P **P** **18 43 49.6 +1.3**
CHM pmax pmax
comp=Z,25nm,1.4s
CHM Chimkent 23.47 307 *e*P **P** **18 43 49.7 +1.3**
comp=Z,25nm,1.4s
BRLS Boroldaу 23.59 309 *e*P **P** **18 43 50.7 +1.2**
BRLS Boroldaу 23.59 309 *e*P **P** **18 43 50.7 +1.2**
KURBB Kurchatov Arra 23.62 333 P **P** **18 43 48.6 -1.1**
comp=Z,12nm,1.1s,baz=143,slow=10,SNR=46
comp=Z,12nm,1.1s
KURK Kurchatov 23.66 334 *ce*P **P** **18 43 49.6 -0.5**
KURK pmax pmax
comp=Z,39nm,1.7s
KURK Kurchatov 23.66 334 P **P** **18 43 49.5 -0.5**
SALM Salem 24.23 223 *e*P **P** **18 43 56.6 +0.9**
ZAA0 Zalesovo Array 24.65 346 P **P** **18 43 58.7 -0.5**
ZAA0 IAmb IAmb 18 44 01.2
comp=Z,29nm,1.4s
ZALV Zalesovo Beam 24.65 346 P **P** **18 43 58.5 -0.6**
comp=Z,4.6nm,0.7s,baz=158,slow=8.5,SNR=24
comp=Z,4.6nm,0.7s
ZALV Zalesovo Beam 24.65 346 P **P** **18 43 58.1 -1.0**
SNY Shenyang 25.75 56 ‖P **P** **18 44 07.5 -1.8**
SNY pmax pmax
comp=Z,8.0nm,1.5s
SNY pmax pmax
comp=Z,71nm,11.1s
SNY L L
comp=Z,180nm,13.2s
SNY L L
comp=Z,180nm,22.7s
SNY L L
comp=Z,140nm,10.2s
KOD Kodaikanal 25.77 223 *e*P **P** **18 44 11.3 +1.4**
HILR Hailar Array B 26.83 37 P **P** **18 44 19.9 +0.8**
comp=Z,3.0nm,0.8s,baz=235,slow=9.0,SNR=8.2
comp=Z,3.0nm,0.8s
KSRS Korea Array 28.24 67 P **P** **18 44 32.7 +1.0**
comp=Z,0.4nm,0.6s,baz=260,slow=9.5,SNR=4.9
KSRS LR LR 18 54 51.7
comp=Z,27nm,21.5s,baz=245,slow=34
comp=Z,0.4nm,0.6s
BVAR Borovoye Array 28.82 329 P **P** **18 44 37.0 +0.3**
comp=Z,4.0nm,0.9s,baz=136,slow=9.6,SNR=16
BVAR PcP **PcP** **18 47 45.6 -0.6**
comp=Z,1.8nm,0.9s,baz=119,slow=2.9,SNR=5.1
comp=Z,4.0nm,0.9s
BNX BinXian 29.62 50 ⇑P **P** **18 44 43.8 -0.2**
BNX pmax pmax
comp=Z,6.0nm,1.1s
HEH HeiHe 31.42 42 *e*P **P** **18 44 59.3 -0.5**
HEH pmax pmax
comp=Z,5.0nm,1.2s
ABKAR Akbulak array 32.38 316 P **P** **18 45 08.0 -0.3**
ZEA Zeya 33.05 36 *e*P **P** **18 45 14.6 +0.6**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=Z,200nm,12.0s
AKTO Aktyubinsk 33.98 317 LR LR 18 59 16.8
comp=Z,36nm,21.5s,baz=229,slow=36
SVE Sverdlovsk 35.59 328 *e*P **P** **18 45 36.9 +0.9**
SVE pmax pmax
comp=Z,23nm,1.2s
ARTI Arti 36.42 326 *d i*P **P** **18 45 43.1 0.0**
ARTI 18 47 03.3
ARTI 18 48 05.5
ARTI S **S** **18 51 27.1 +2.6**
ARTI SS **SnSn** **18 53 51.1 -1.1**
ARTI pmax pmax
comp=Z,16nm,1.3s
ARTI Arti 36.42 326 P **P** **18 45 43.0 -0.1**
ARTI IAmb IAmb 18 45 45.4
comp=Z,26nm,1.4s
MJAR Matsushiro Arr 36.46 69 P **P** **18 45 42.1 -1.7**
comp=Z,0.8nm,0.8s,baz=270,slow=11,SNR=4.6
comp=Z,0.8nm,0.8s
MJAR Matsushiro Arr 36.46 69 P **P** **18 45 41.3 -2.4**
LKRN Lenkeran, Azer 38.51 295 P **P** **18 46 02.3 +1.2**
YAK Yakutsk 38.91 25 *e*P **P** **18 46 03.8 -0.2**
YAK *e**PP **pP** **18 46 08.5 +0.4**
YAK *e* 18 47 32.3
YAK *e*PPP PPP 18 47 54.3
YAK *e* 18 48 14.5
YAK *e*S **S** **18 52 03.2 +1.1**
YAK *e**SS **sS** **18 52 08.9 -0.1**
YAK *e*SSS SSS 18 55 12.4
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,27nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=Z,68nm,4.1s
YAK pmax pmax
comp=N,46nm,3.3s
YAK pmax pmax
comp=E,32nm,3.5s
YAK smax smax
comp=E,17nm,1.8s
YAK smax smax
comp=N,12nm,1.9s
YAK Yakutsk 38.91 25 P **P** **18 46 04.4 +0.4**
YAK IAmb IAmb 18 46 06.5
comp=Z,16nm,0.8s
YAK Yakutsk 38.91 25 P **P** **18 46 03.6 -0.4**
NRIK Noril'sk 39.23 356 P **P** **18 46 06.1 -0.5**
comp=Z,2.0nm,0.5s,baz=167,slow=8.4,SNR=9.8
comp=Z,2.0nm,0.5s
NRIK Noril'sk 39.23 356 *i*P **P** **18 46 05.2 -1.4**
NRIK pmax pmax
comp=Z,11nm,1.1s
AKT Akhty 39.29 300 *e*P **P** **18 46 06.6 -1.2**
AKT *e* 18 47 36.7
AKT *e*PPP PPP 18 48 00.4
AKT *e* 18 48 15.1
AKT pmax pmax
comp=Z,21nm,1.2s
SEKA Sheki 39.69 299 P **P** **18 46 12.9 +1.9**
YSS Yuzhno-Sakhali 40.23 52 *e*P **P** **18 46 16.4 +1.1**
YSS *e*S **S** **18 52 21.0 -1.4**
YSS 18 56 13.8
YSS pmax pmax
comp=Z,20nm,1.1s
GANJ Ganja 40.36 298 P **P** **18 46 18.4 +1.9**
KIRV Kirov 41.73 326 *e*P **P** **18 46 28.0 +0.5**
GOF Gofitskoye 42.80 305 *ce*P **P** **18 46 37.3 +0.9**
KBZ Khabaz 42.88 303 P **P** **18 46 37.9 +0.8**
comp=Z,2.9nm,0.9s,baz=88,slow=8.5,SNR=4.9
comp=Z,2.9nm,0.9s
KBZ Khabaz 42.88 303 *i*P **P** **18 46 37.3 +0.2**
KBZ pmax pmax
comp=Z,6.0nm,1.3s
KIV Kislovodsk 43.04 303 *e*P **P** **18 46 39.1 +0.6**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 43.04 303 P **P** **18 46 38.4 -0.1**
KIV IAmb IAmb 18 46 42.9
comp=Z,40nm,1.4s
KIV Kislovodsk 43.04 303 P **P** **18 46 40.2 +1.7**
comp=Z,16nm,1.3s
KIV Kislovodsk 43.04 303 P **P** **18 46 39.3 +0.8**
EPOS Posof 43.05 300 P **P** **18 46 40.1 +1.4**
SHA1 Shidzhatmaz 43.06 303 *i*P **P** **18 46 38.6 -0.2**
VRH Novokhopyorsk 44.16 314 *e*P **P** **18 46 48.1 +0.8**
VRH pmax pmax
comp=Z,17nm,1.0s
RAYN Ar Rayn 44.24 273 P **P** **18 46 48.5 +0.2**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
RAYN Ar Rayn 44.24 273 P **P** **18 46 48.5 +0.2**
RAYN Ar Rayn 44.24 273 P **P** **18 46 45.8 -2.6**
VSLR Vesyoloye 44.97 303 *i*P **P** **18 46 55.3 +1.4**
VSLR pmax pmax
comp=Z,58nm,1.2s
SOC Sochi 45.19 303 *e*P **P** **18 46 54.6 -1.1**
SOC *e* 18 48 40.9
SOC *e*PPP PPP 18 49 23.9
SOC *e*S **S** **18 53 34.5 -1.0**
SOC *e*SSS SSS 18 57 44.9
SOC pmax pmax
comp=Z,21nm,1.1s
SOC MLR MLR
comp=Z,62nm,23.0s
TIXI Tiksi 45.24 14 *ce*P **P** **18 46 56.2 +0.6**
TIXI pmax pmax
comp=Z,16nm,2.5s
TIXI Tiksi 45.24 14 P **P** **18 46 55.2 -0.3**
TIXI IAmb IAmb 18 46 56.7
comp=Z,24nm,1.8s
VORD Divnogorie 45.66 313 *e*P **P** **18 46 59.1 -0.1**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 45.76 314 *e*P **P** **18 46 59.0 -1.0**
VSR pmax pmax
comp=Z,17nm,1.1s
KELT Kelkit 45.77 298 P **P** **18 47 01.5 +0.9**
VORR Voronezh 45.78 314 *e*P **P** **18 47 00.2 +0.1**
VORR pmax pmax
comp=Z,28nm,0.5s
LPSR Galich'ya Gora 46.04 315 *e*P **P** **18 47 01.3 -0.9**
LPSR pmax pmax
comp=Z,17nm,0.9s
MOS Moscow 47.19 320 *e*P **P** **18 47 12.3 +1.1**
KLMR Klimovskoe 47.20 327 *e*P **P** **18 47 09.4 -1.8**
KLMR *e* 18 49 00.4
KLMR pmax pmax
comp=Z,33nm,1.2s
OBN Obninsk 47.71 319 *ce*P **P** **18 47 16.9 +1.7**
OBN *e**PP **pP** **18 47 18.5 -0.7**
OBN 18 48 46.0
OBN 18 49 09.2
OBN PPP PPP 18 49 54.0
OBN S **S** **18 54 17.0 +5.8**
OBN pmax pmax
comp=Z,33nm,1.7s
OBN MLR MLR
comp=Z,26nm,15.0s
GAZ Gaziantep 47.76 294 IAmb IAmb 18 47 18.2
comp=Z,7.5nm,0.9s
ANDN Andirin 48.37 295 P **P** **18 47 22.5 +1.7**
BNN Bunyan 48.56 297 IAmb IAmb 18 47 25.0
comp=Z,16nm,1.1s
BR131 Keskin Array S 50.11 298 *i*P **P** **18 47 33.7 -0.4**
BR131 Keskin Array S 50.11 298 P **P** **18 47 33.3 -0.8**
BRTR Keskin Array B 50.11 298 P **P** **18 47 33.6 -0.4**
comp=Z,3.3nm,0.8s,baz=80,slow=8.1,SNR=24
comp=Z,3.3nm,0.8s
BRTR Keskin Array B 50.11 298 P **P** **18 47 33.4 -0.8**
PETK Petropavlovsk- 50.27 44 P **P** **18 47 35.1 +0.2**
comp=Z,3.2nm,0.9s,baz=268,slow=7.4,SNR=3.2
comp=Z,3.2nm,0.9s
HRFI Mount Harif 51.14 286 P **P** **18 47 41.6 -0.2**
EIL Elat 51.31 285 P **P** **18 47 43.6 +0.4**
AKASG Malin Array Be 52.04 313 P **P** **18 47 47.5 -0.8**
comp=Z,5.7nm,0.8s,baz=79,slow=6.7,SNR=18
comp=Z,5.7nm,0.8s
AKASG Malin Array Be 52.04 313 P **P** **18 47 46.3 -1.9**
AKBB Malin Array Si 52.04 313 *i*P **P** **18 47 47.2 -1.0**
AKBB pmax pmax
comp=Z,19nm,1.1s
AKBB Malin Array Si 52.04 313 **P** **18 47 47.0 -1.2**
AKBB IAmb IAmb 18 47 50.4
comp=Z,16nm,1.1s
KIEV Kiev 52.05 313 P **P** **18 47 47.7 -0.6**
KIEV Kiev 52.05 313 **P** **18 47 47.7 -0.6**
KIEV Kiev 52.05 313 P **P** **18 47 47.4 -0.9**
ELL Elmali 53.58 295 P **P** **18 47 59.3 -0.7**
ELL pmax pmax
comp=Z,28nm,1.0s
ELL Elmali 53.58 295 P **P** **18 47 59.3 -0.7**
FINES FINESS Array B 53.72 326 P **P** **18 48 00.1 -0.4**
comp=Z,1.5nm,0.5s,baz=96,slow=7.4,SNR=14
comp=Z,1.5nm,0.5s
FINES FINESS Array B 53.72 326 P **P** **18 47 59.7 -0.8**
TESR Tescani 54.16 308 P **P** **18 48 03.7 -0.2**
VRI Vrincioaia 54.20 307 P **P** **18 48 04.9 +0.7**
VRI Vrincioaia 54.20 307 P **P** **18 48 04.9 +0.7**
BALY Balya 54.67 299 P **P** **18 48 07.4 -0.4**
MLR Muntele Rosu 54.80 307 P **P** **18 48 08.9 +0.1**
MLR pmax pmax
comp=Z,33nm,1.1s
MLR Muntele Rosu 54.80 307 P **P** **18 48 08.9 +0.1**
MLR Muntele Rosu 54.80 307 P **P** **18 48 09.6 +0.9**
BURAR Bucovina Array 54.97 309 P **P** **18 48 09.7 -0.2**
VOIR 55.43 307 P **P** **18 48 13.7 +0.4**
VOIR 55.43 307 P **P** **18 48 13.7 +0.4**
ALN Alexandroupoli 55.59 301 P **P** **18 48 13.8 -0.6**
ALN pmax pmax
comp=Z,16nm,1.2s
ALN Alexandroupoli 55.59 301 P **P** **18 48 13.8 -0.6**
ALN IAmb IAmb 18 48 17.0
comp=Z,16nm,1.2s
ARR Arges 55.73 307 P **P** **18 48 15.1 -0.3**
RDO Rodhopi 55.91 301 IAmb IAmb 18 48 18.8
comp=Z,13nm,1.2s
BMR Baia Mare 56.11 310 P **P** **18 48 18.7 +0.7**
KNRA Kununurra 56.24 140 P **P** **18 48 19.2 0.0**
KNRA IAmb IAmb 18 49 39.1
comp=Z,10nm,1.4s
LOT Lotru 56.31 307 P **P** **18 48 19.7 +0.1**
MBWA Marble Bar 56.55 152 P **P** **18 48 21.9 +0.5**
MBWA IAmb IAmb 18 49 17.9
comp=Z,16nm,1.1s
FITZ Fitzroy Crossi 56.59 144 P **P** **18 48 21.3 -0.3**
TRPA Tarpa 56.66 310 P **P** **18 48 22.1 +0.1**
KOLS Kolonicke sedl 56.70 311 *e*P **P** **18 48 21.8 -0.5**
KOLS pmax pmax
comp=Z,2.0nm,0.3s
KOLS Kolonicke sedl 56.70 311 *e*P **P** **18 48 21.8 -0.5**
SRS Serrai 57.35 302 P **P** **18 48 27.2 +0.2**
SRS Serrai 57.35 302 P **P** **18 48 27.2 +0.2**
BZS Buzias 57.76 307 P **P** **18 48 31.3 +1.5**
KNT Kendrikon 57.85 302 P **P** **18 48 31.2 +0.7**
KNT Kendrikon 57.85 302 P **P** **18 48 31.2 +0.7**
GRG Griva 58.27 302 P **P** **18 48 32.3 -1.1**
GRG Griva 58.27 302 P **P** **18 48 32.3 -1.1**
LIT Litokhoron 58.42 301 P **P** **18 48 33.0 -1.5**
LIT pmax pmax
comp=Z,12nm,0.9s
LIT Litokhoron 58.42 301 P **P** **18 48 33.0 -1.5**
LIT IAmb IAmb 18 48 36.1
comp=Z,12nm,0.9s
PSZ Piszkesteto 58.45 310 P **P** **18 48 34.4 -0.3**
PSZ pmax pmax
comp=Z,6.0nm,1.1s
PSZ Piszkesteto 58.45 310 P **P** **18 48 34.4 -0.3**
MORC Moravsky Berou 59.59 313 *e*P **P** **18 48 43.1 +0.6**
JAVC Velka Javorina 59.70 312 *e*P **P** **18 48 43.9 +0.6**
HFS Hagfors 59.86 325 P **P** **18 48 43.9 -0.2**
comp=Z,9.4nm,1.1s,baz=104,slow=11,SNR=4.2
comp=Z,9.4nm,1.1s
KRLC Kraliky 60.00 313 *e*P **P** **18 48 45.7 +0.4**
KRLC Kraliky 60.00 313 *e*P **P** **18 48 45.7 +0.4**
DPC Dobruska-Polom 60.23 314 *e*P **P** **18 48 47.0 +0.1**
DPC Dobruska-Polom 60.23 314 *e*P **P** **18 48 47.0 +0.1**
VRAC Vranov 60.29 312 P **P** **18 48 49.6 +2.3**
VRAC Vranov 60.29 312 *e*P **P** **18 48 48.1 +0.8**
KRUC Moravsky 60.47 312 P **P** **18 48 49.9 +1.4**
KRUC Moravsky 60.47 312 *e*P **P** **18 48 48.5 0.0**
NC405 NORSAR Array S 60.65 326 P **P** **18 48 49.4 -0.2**
SOP Sopron 60.69 311 P **P** **18 48 52.4 +2.4**
RONA Rosalia, Austr 60.86 311 *e*P **P** **18 48 50.9 -0.4**
comp=Z,8.7nm,1.4s
NB201 NORSAR Array S 60.87 326 P **P** **18 48 51.1 +0.1**
NB2 NORSAR Subarra 60.91 326 P **P** **18 48 50.0 -1.3**
comp=Z,4.6nm,0.8s,baz=79,slow=6.9
NOA NORSAR Array B 60.91 326 P **P** **18 48 50.0 -1.3**
comp=Z,2.3nm,0.7s,baz=79,slow=6.6,SNR=12
comp=Z,2.3nm,0.7s
NOA NORSAR Array B 60.91 326 P **P** **18 48 50.0 -1.3**
TREC Trest 61.00 313 P **P** **18 48 54.9 +2.8**
CONA Conrad Observa 61.09 311 *e*P **P** **18 48 53.0 +0.1**
comp=Z,1.9nm,0.5s
ARSA Arzberg 61.48 310 *e*pP **P** **18 48 56.4 +1.0**
comp=Z,0.7nm,0.3s
BRG Berggiesshubel 61.58 315 *e*P **P** **18 48 56.5 +0.5**
BRG Amp 18 48 58.0
comp=Z,3.8nm,0.9s
ZVC Zvikov 61.78 313 *e*P **P** **18 48 58.2 +0.8**
CKRC Cesky Krumlov 61.87 312 *e*P **P** **18 48 58.4 +0.4**
CKRC Cesky Krumlov 61.87 312 *e*P **P** **18 48 58.4 +0.4**
SOKA Soboth 61.96 310 *i*P **P** **18 48 58.4 -0.3**
comp=Z,8.3nm,1.6s
LODK Lodwar 62.11 257 P **P** **18 48 59.4 -0.8**
LODK IAmb IAmb 18 49 01.8
comp=Z,5.8nm,1.0s
MOA Molln 62.15 311 *e*P **P** **18 48 59.7 -0.2**
comp=Z,1.4nm,0.6s
GEC2 GERESS Array S 62.25 312 IAmb IAmb 18 49 02.5
comp=Z,6.1nm,1.1s
GERES GERESS Array B 62.25 312 P **P** **18 49 00.1 -0.6**
comp=Z,1.7nm,0.8s,baz=73,slow=4.6,SNR=15
comp=Z,1.7nm,0.8s
KHC Kasperske Hory 62.25 313 *e*P **P** **18 49 01.4 +0.8**
KHC Kasperske Hory 62.25 313 *e*P **P** **18 49 01.4 +0.8**
OBKA Obir 62.32 310 *i*pP **P** **18 49 02.1 +0.9**
comp=Z,3.4nm,0.9s
BIOA Bad Ischl, Aus 62.60 311 *e*P **P** **18 49 02.4 -0.5**
comp=Z,2.4nm,0.8s
WB0 Warramunga Arr 62.72 138 P **P** **18 49 03.0 -0.9**
WB0 IAmb IAmb 18 49 04.4
comp=Z,7.7nm,0.9s
WRA Warramunga Arr 62.82 138 P **P** **18 49 03.4 -1.3**
comp=Z,2.5nm,0.9s,baz=327,slow=7.6,SNR=12
comp=Z,2.5nm,0.9s
WRA Warramunga Arr 62.82 138 P **P** **18 49 02.4 -2.2**
MYKA Terra Mystica 62.89 310 *e*P **P** **18 49 04.7 -0.2**
comp=Z,0.8nm,0.4s
KBA Koelnbreinsper 62.96 311 *e*pP **P** **18 49 05.9 +0.4**
comp=Z,0.8nm,0.9s
LESA Schwarzleotal 63.30 311 *e*P **P** **18 49 07.4 -0.3**
comp=Z,14nm,1.3s
ABTA Abfaltersbach 63.60 310 *i*P **P** **18 49 08.4 -1.3**
comp=Z,4.7nm,1.0s
STAL STALIGIAL 63.61 310 P **P** **18 49 08.9 -0.9**
STAL IAmb IAmb 18 49 11.9
comp=Z,7.0nm,0.9s
CEL Celeste 63.85 301 P **P** **18 49 10.7 -0.8**
WTTA Wattenberg 64.02 311 *e*pP **P** **18 49 13.2 +0.6**
comp=Z,6.9nm,1.0s
WATA Walderalm 64.04 311 *i*P **P** **18 49 12.6 0.0**
comp=Z,2.4nm,0.6s
INTR Introdacqua 64.09 305 IAmb IAmb 18 49 20.6
comp=Z,7.3nm,1.0s
SQTA Sankt Quirin 64.31 311 *e*P **P** **18 49 13.4 -1.0**
comp=Z,3.7nm,0.9s
FDMO Fiordimonte 64.34 306 IAmb IAmb 18 49 17.7
comp=Z,5.7nm,1.0s
MOTA Moosalm 64.34 311 *i*P **P** **18 49 13.9 -0.7**
comp=Z,9.4nm,1.2s
NRCA Norcia 64.39 306 IAmb IAmb 18 49 18.1
comp=Z,5.6nm,1.0s
RETA Reutte 64.52 312 *i*P **P** **18 49 15.2 -0.5**
comp=Z,9.1nm,1.3s
FETA Feichten 64.69 311 *i*P **P** **18 49 15.9 -1.0**
comp=Z,10nm,1.4s
DAVA Damuels 65.15 312 *i*pP **P** **18 49 20.8 +0.9**
comp=Z,7.3nm,1.0s
ASAR Alice Springs 65.52 141 P **P** **18 49 21.3 -1.0**
comp=Z,2.6nm,0.7s,baz=324,slow=6.3,SNR=22
comp=Z,2.6nm,0.7s
ASAR Alice Springs 65.52 141 P **P** **18 49 21.5 -0.8**
ASAR Alice Springs 65.52 141 P **P** **18 49 21.5 -0.8**
C16K Lisburne Hills 65.66 24 P **P** **18 49 22.3 -0.3**
baz=291
RDOG Red Dog Mine 66.58 24 P **P** **18 49 27.8 -0.8**
baz=293
D17K Noatak River 66.66 24 P **P** **18 49 28.9 -0.2**
baz=293
WLF Walferdange 66.72 315 P **P** **18 49 30.2 +0.4**
WLF pmax pmax
comp=Z,25nm,1.3s
WLF Walferdange 66.72 315 P **P** **18 49 30.2 +0.4**
F15K North Star Dit 66.86 26 P **P** **18 49 30.0 -0.4**
baz=293
C18K Utukok River 66.93 23 P **P** **18 49 30.4 -0.4**
baz=294
SENIN Lac Senin/Sane 67.13 311 P **P** **18 49 32.0 -0.7**
SENIN IAmb IAmb 18 49 34.5
comp=Z,5.3nm,0.8s
C19K Lookout Ridge 67.26 22 P **P** **18 49 32.5 -0.5**
baz=296
B20K Meade River 67.62 21 P **P** **18 49 34.9 -0.3**
baz=297
F17K Baldwin Pennin 67.83 25 P **P** **18 49 37.2 +0.7**
F17K IAmb IAmb 18 49 48.8
comp=Z,11nm,1.1s
D19K Kuna River 68.01 22 IAmb IAmb 18 49 40.0
comp=Z,11nm,1.1s
D19K Kuna River 68.01 22 P **P** **18 49 37.6 0.0**
baz=297
H16K Elim 68.22 27 P **P** **18 49 38.6 -0.4**
baz=295
M11K Mekoryuk 68.29 32 P **P** **18 49 39.3 -0.1**
baz=293
F18K Selawik 68.34 24 P **P** **18 49 39.7 +0.1**
baz=296
K13K Kusilvak Mount 68.35 30 P **P** **18 49 40.2 +0.3**
baz=294
D20K Etivluk River 68.40 22 P **P** **18 49 40.1 0.0**
baz=298
G17K Kiwalik Mounta 68.46 26 P **P** **18 49 40.5 0.0**
baz=296
J14K Nanvaranak Lak 68.48 29 P **P** **18 49 40.7 0.0**
baz=295
B22K Teshekpuk Lake 68.58 20 P **P** **18 49 41.2 +0.1**

	baz=300							
B21K	**Ikpikpuk River**	**68.58**	**21**	P	**P**	**18 49 40.9**	**-0.3**	
	baz=300							
E20K	**Nigu River**	**68.75**	**22**	P	**P**	**18 49 42.2**	**-0.2**	
	baz=299							
C21K	**Knifeblade Rid**	**68.76**	**21**	P	**P**	**18 49 42.5**	**+0.1**	
	baz=300							
E19K	**Redstone River**	**68.79**	**23**	P	**P**	**18 49 42.7**	**+0.2**	
	baz=298							
F19K	**Shaleruckik Mo**	**68.90**	**24**	IAmb	IAmb	18 49 45.0		
	comp=Z,9.7nm,1.2s							
F19K	**Shaleruckik Mo**	**68.90**	**24**	P	**P**	**18 49 42.8**	**-0.3**	
	baz=298							
H17K	**Granite Mounta**	**68.99**	**26**	P	**P**	**18 49 43.8**	**0.0**	
H17K	**Granite Mounta**	**68.99**	**26**	P	**P**	**18 49 43.9**	**+0.1**	
	baz=297,SNR=6.5							
I17K	**Unalakleet**	**69.16**	**27**	P	**P**	**18 49 44.8**	**0.0**	
	baz=297							
E21K	**Killik River**	**69.38**	**22**	P	**P**	**18 49 45.8**	**-0.4**	
	baz=301							
L14K	**Kuka Creek**	**69.45**	**30**	P	**P**	**18 49 46.6**	**-0.1**	
	baz=296							
J16K	**Anvik River**	**69.47**	**28**	IAmb	IAmb	18 49 50.0		
	comp=Z,12nm,1.1s							
J16K	**Anvik River**	**69.47**	**28**	P	**P**	**18 49 46.9**	**+0.1**	
	baz=297							
G19K	**Purcell Mounta**	**69.47**	**24**	IAmb	IAmb	18 50 41.4		
	comp=Z,19nm,1.9s							
G19K	**Purcell Mounta**	**69.47**	**24**	P	**P**	**18 49 46.4**	**-0.4**	
	baz=299							
H18K	**Honhosa River**	**69.47**	**26**	P	**P**	**18 49 46.9**	**+0.1**	
	baz=298							
F20K	**Avaraart Lake**	**69.50**	**23**	P	**P**	**18 49 46.8**	**-0.1**	
	baz=300							
K15K	**Wolf Creek Mou**	**69.53**	**29**	P	**P**	**18 49 47.4**	**+0.2**	
	baz=296							
KEST	**Kesra**	**69.65**	**300**	P	**P**	**18 49 49.0**	**+0.5**	
	comp=Z,7.9nm,1.0s,baz=67,slow=6.1,SNR=7.6							
	comp=Z,7.9nm,1.0s							
C23K	**Itkillik River**	**69.66**	**20**	P	**P**	**18 49 48.3**	**+0.4**	
C23K	**Itkillik River**	**69.66**	**20**	P	**P**	**18 49 48.2**	**+0.4**	
	baz=303,SNR=10							
L15K	**Ungalak Mounta**	**69.82**	**30**	P	**P**	**18 49 49.2**	**+0.2**	
	baz=297							
EKA	**Eskdalemuir Ar**	**69.87**	**323**	P	**P**	**18 49 49.0**	**-0.4**	
	comp=Z,3.0nm,1.0s,baz=65,slow=6.2,SNR=4.2							
	comp=Z,3.0nm,1.0s							
H19K	**Roundabout Mou**	**70.00**	**25**	P	**P**	**18 49 50.2**	**+0.2**	
	baz=300,SNR=8.6							
J17K	**VABM Dome**	**70.03**	**27**	P	**P**	**18 49 50.9**	**+0.7**	
	baz=298							
M14K	**Bethel**	**70.03**	**31**	P	**P**	**18 49 50.8**	**+0.6**	
	baz=297							
D23K	**Nanushuk River**	**70.12**	**20**	P	**P**	**18 49 50.8**	**+0.1**	
	baz=303,SNR=7.5							
F21K	**Alatna River**	**70.17**	**23**	IAmb	IAmb	18 49 53.3		
	comp=Z,6.9nm,1.1s							
F21K	**Alatna River**	**70.17**	**23**	P	**P**	**18 49 52.0**	**+1.0**	
	baz=302,SNR=5.2							
GCSA	**Galena City Sc**	**70.22**	**26**	P	**P**	**18 49 52.7**	**+1.4**	
	baz=299							
F22K	**John River**	**70.45**	**22**	P	**P**	**18 49 53.9**	**+1.2**	
	baz=302							
N14K	**Kuskokwak Cree**	**70.53**	**31**	P	**P**	**18 49 53.1**	**-0.2**	
	baz=297							
G21K	**Allakaket**	**70.53**	**23**	P	**P**	**18 49 52.9**	**-0.3**	
G21K				IAmb	IAmb	18 49 55.7		
	comp=Z,5.7nm,1.1s							
D24K	**Happy Valley**	**70.57**	**20**	P	**P**	**18 49 53.4**	**0.0**	
	baz=305							
H20K	**Anotleneega Mo**	**70.58**	**25**	P	**P**	**18 49 53.1**	**-0.5**	
	baz=301							
M15K	**Kasigluk River**	**70.61**	**30**	P	**P**	**18 49 53.7**	**-0.1**	
	baz=298							
TOLK	**Toolik Lake Re**	**70.64**	**21**	P	**P**	**18 49 53.2**	**-0.8**	
	baz=304							
L16K	**Owhat River**	**70.66**	**29**	P	**P**	**18 49 54.0**	**-0.1**	
	baz=298							
K17K	**Iditarod**	**70.66**	**28**	P	**P**	**18 49 54.1**	**0.0**	
	baz=299,SNR=6.2							
IMAR	**Indian Mountai**	**70.73**	**24**	P	**P**	**18 49 54.3**	**-0.1**	
J18K	**Innoko River**	**70.92**	**27**	P	**P**	**18 49 56.0**	**+0.3**	
	baz=300,SNR=6.9							
L17K	**Donlin**	**70.94**	**28**	P	**P**	**18 49 55.8**	**-0.1**	
	baz=299							
E23K	**Chandalar**	**70.95**	**21**	P	**P**	**18 49 56.0**	**+0.1**	
	baz=304							
G22K	**Bettles**	**70.98**	**22**	P	**P**	**18 49 56.3**	**+0.3**	
	baz=303							
O14K	**Tigyukauivet M**	**71.03**	**32**	P	**P**	**18 49 56.4**	**+0.1**	
	baz=298							
J19K	**Poorman**	**71.08**	**26**	P	**P**	**18 49 57.2**	**+0.6**	
J19K				IAmb	IAmb	18 50 00.4		
	comp=Z,8.3nm,1.0s							
J19K	**Poorman**	**71.08**	**26**	P	**P**	**18 49 56.6**	**-0.1**	
	baz=301,SNR=5.5							
I20K	**Naaghedeneel**	**71.09**	**25**	P	**P**	**18 49 56.8**	**+0.2**	
	baz=301							
N15K	**Kwethluk River**	**71.12**	**31**	P	**P**	**18 49 57.1**	**+0.1**	
	baz=298							
D25K	**Kavik River**	**71.18**	**19**	P	**P**	**18 49 57.6**	**+0.4**	
D25K				IAmb	IAmb	18 50 01.1		
	comp=Z,6.8nm,0.9s							
D25K	**Kavik River**	**71.18**	**19**	P	**P**	**18 49 57.2**	**0.0**	
	baz=307,SNR=6.1							
M16K	**Timber Creek**	**71.21**	**30**	P	**P**	**18 49 58.1**	**+0.6**	
	baz=299							
C26K	**Camden Bay**	**71.22**	**18**	P	**P**	**18 49 57.5**	**+0.1**	
	baz=308							
H21K	**Melozitna Rive**	**71.23**	**24**	P	**P**	**18 49 57.6**	**0.0**	
	baz=302							
COLD	**Coldfoot**	**71.24**	**22**	P	**P**	**18 49 57.9**	**+0.3**	
	baz=304							
E24K	**Your Creek**	**71.29**	**21**	P	**P**	**18 49 58.1**	**+0.1**	
E24K				IAmb	IAmb	18 50 00.5		
	comp=Z,9.6nm,1.1s							
E24K	**Your Creek**	**71.29**	**21**	P	**P**	**18 49 58.0**	**+0.1**	
	baz=306,SNR=9.2							
J20K	**Nowinta River**	**71.54**	**26**	IAmb	IAmb	18 50 02.2		
	comp=Z,11nm,1.3s							
J20K	**Nowinta River**	**71.54**	**26**	P	**P**	**18 49 59.8**	**+0.4**	
	baz=302							
N16K	**Nishlik Lake**	**71.55**	**30**	P	**P**	**18 50 00.1**	**+0.5**	
	baz=299							
L18K	**Granite Mounta**	**71.56**	**28**	P	**P**	**18 49 59.8**	**+0.3**	
	baz=300							
G23K	**Bananza Creek**	**71.59**	**22**	P	**P**	**18 49 60.0**	**+0.2**	
	baz=305							
H22K	**Ishtalitna Cre**	**71.59**	**23**	P	**P**	**18 50 00.7**	**+0.9**	
	baz=304							
M17K	**Holitna River**	**71.66**	**29**	P	**P**	**18 50 00.9**	**+0.7**	
	baz=300							
O15K	**Ungalikthiuk R**	**71.72**	**32**	P	**P**	**18 50 01.1**	**+0.5**	
C27K	**Jago River**	**71.73**	**18**	IAmb	IAmb	18 50 03.3		
	comp=Z,9.8nm,1.0s							
C27K	**Jago River**	**71.73**	**18**	P	**P**	**18 50 00.9**	**+0.4**	
	baz=309,SNR=14							
I21K	**Tanana**	**71.78**	**24**	IAmb	IAmb	18 50 03.6		
	comp=Z,8.2nm,1.2s							
I21K	**Tanana**	**71.78**	**24**	P	**P**	**18 50 01.9**	**+1.1**	
	baz=303							
F24K	**Squaw Lake**	**71.80**	**21**	P	**P**	**18 50 01.9**	**+0.9**	
	baz=306							
K20K	**Telida**	**72.00**	**26**	IAmb	IAmb	18 50 05.7		
	comp=Z,8.9nm,1.2s							
K20K	**Telida**	**72.00**	**26**	P	**P**	**18 50 02.7**	**+0.5**	
	baz=302							
E25K	**Arctic Village**	**72.14**	**20**	IAmb	IAmb	18 50 05.6		
	comp=Z,7.7nm,1.3s							
E25K	**Arctic Village**	**72.14**	**20**	P	**P**	**18 50 04.1**	**+1.0**	
	baz=308							
N17K	**Nushagak Hills**	**72.21**	**30**	P	**P**	**18 50 04.4**	**+0.9**	
	baz=300							
H23K	**Yukon River**	**72.26**	**23**	P	**P**	**18 50 03.6**	**-0.1**	
	baz=305							
O16K	**Kokwok River B**	**72.28**	**31**	P	**P**	**18 50 04.2**	**+0.3**	
	baz=300							
M18K	**Stony River**	**72.28**	**28**	P	**P**	**18 50 03.9**	**-0.1**	
	baz=301							
MLY	**Manley**	**72.30**	**24**	P	**P**	**18 50 04.6**	**+0.5**	
	baz=304							
L19K	**White Mountain**	**72.32**	**28**	IAmb	IAmb	18 50 08.0		
	comp=Z,9.7nm,1.2s							
L19K	**White Mountain**	**72.32**	**28**	P	**P**	**18 50 04.8**	**+0.7**	
	baz=302							
CHUM	**Lake Minchumin**	**72.37**	**25**	P	**P**	**18 50 04.6**	**+0.2**	
	baz=303							
G24K	**Hadweenzic Riv**	**72.42**	**22**	P	**P**	**18 50 05.2**	**+0.5**	
	baz=307,SNR=5.1							
F25K	**Christian Rive**	**72.45**	**20**	IAmb	IAmb	18 50 08.0		
	comp=Z,7.8nm,1.2s							
F25K	**Christian Rive**	**72.45**	**20**	P	**P**	**18 50 04.9**	**0.0**	
	baz=308,SNR=7.3							
SUMG	**Summit**	**72.47**	**347**	P	**P**			
SUMG				pmax	pmax			
	comp=Z,7.0nm,1.2s							
SUMG	**Summit**	**72.47**	**347**	P	**P**	**18 50 05.3**	**0.0**	
INKA	**Innaminka**	**72.54**	**138**	P	**P**	**18 50 05.4**	**-0.4**	
M19K	**Big River Lodg**	**72.65**	**28**	P	**P**	**18 50 06.0**	**-0.1**	
	baz=302							
I23K	**Minto, Yukon-K**	**72.71**	**23**	IAmb	IAmb	18 50 07.3		
	comp=Z,20nm,1.9s							
I23K	**Minto, Yukon-K**	**72.71**	**23**	P	**P**	**18 50 05.9**	**-0.5**	
	baz=306							
CAST	**Castle Rocks**	**72.72**	**26**	P	**P**	**18 50 07.1**	**+0.6**	
CAST				IAmb	IAmb	18 50 09.8		
	comp=Z,8.3nm,1.1s							
CAST	**Castle Rocks**	**72.72**	**26**	P	**P**	**18 50 06.3**	**-0.2**	
	baz=304,SNR=5.4							
D27M	**Malcolm River**	**72.72**	**18**	IAmb	IAmb	18 50 09.0		
	comp=Z,7.2nm,1.2s							
D27M	**Malcolm River**	**72.72**	**18**	P	**P**	**18 50 06.1**	**-0.4**	
	baz=312							
H24K	**Noodor Dome**	**72.81**	**23**	P	**P**	**18 50 07.6**	**+0.5**	
	baz=307							
G25K	**Bearman Lake**	**72.82**	**21**	P	**P**	**18 50 07.6**	**+0.6**	
	baz=308							
F26K	**Sheenjek River**	**72.83**	**20**	P	**P**	**18 50 07.8**	**+0.6**	
F26K	**Sheenjek River**	**72.83**	**20**	P	**P**	**18 50 08.0**	**+0.8**	
	baz=309							
PPLA	**Purkeypile**	**72.97**	**26**	P	**P**	**18 50 08.6**	**+0.4**	
	baz=304							
NEA2	**Nenana**	**73.14**	**24**	P	**P**	**18 50 09.6**	**+0.6**	
	baz=306							
M20K	**Styx River**	**73.16**	**27**	P	**P**	**18 50 09.5**	**+0.2**	
	baz=303							
N19K	**Bonanza Creek**	**73.19**	**29**	P	**P**	**18 50 09.5**	**0.0**	
	baz=302							
P17K	**Kvichak River**	**73.22**	**31**	P	**P**	**18 50 09.9**	**+0.4**	
	baz=301							
E27K	**Coleen River**	**73.25**	**19**	IAmb	IAmb	18 50 12.2		
	comp=Z,6.5nm,1.1s							
E27K	**Coleen River**	**73.25**	**19**	P	**P**	**18 50 10.0**	**+0.4**	
	baz=311,SNR=10							
POKR	**Poker Flat Res**	**73.39**	**23**	P	**P**	**18 50 10.6**	**+0.1**	
	baz=307							
O18K	**Koktuh Hills**	**73.40**	**30**	P	**P**	**18 50 10.3**	**-0.4**	
	baz=302							
G26K	**Porcupine Rive**	**73.42**	**21**	IAmb	IAmb	18 50 13.7		
	comp=Z,15nm,1.4s							
G26K	**Porcupine Rive**	**73.42**	**21**	P	**P**	**18 50 10.8**	**+0.3**	
	baz=310,SNR=7.3							
E28M	**Babbage River**	**73.53**	**18**	IAmb	IAmb	18 50 14.9		
	comp=Z,7.6nm,0.9s							
E28M	**Babbage River**	**73.53**	**18**	P	**P**	**18 50 10.7**	**-0.6**	
	baz=313,SNR=9.1							
P18K	**Big Mountain,**	**73.64**	**30**	P	**P**	**18 50 12.1**	**0.0**	
	baz=302							
MCK	**McKinley**	**73.69**	**25**	P	**P**	**18 50 12.1**	**-0.1**	
	baz=306							
L22K	**Petersville**	**73.72**	**26**	P	**P**	**18 50 11.6**	**-0.9**	
	baz=305,SNR=9.3							
SKT	**Skwentna**	**73.74**	**27**	P	**P**	**18 50 12.2**	**-0.4**	
	baz=305,SNR=5.4							
PRP	**Porcupine Dome**	**73.78**	**22**	P	**P**	**18 50 12.3**	**-0.6**	
	baz=309							
ILAR	**Eielson Array**	**73.78**	**23**	P	**P**	**18 50 11.9**	**-0.8**	
	comp=Z,3.4nm,1.0s,baz=309,slow=5.9,SNR=23							
	comp=Z,3.4nm,1.0s							
ILAR	**Eielson Array**	**73.78**	**23**	P	**P**	**18 50 12.0**	**-0.8**	
ILAR	**Eielson Array**	**73.78**	**23**	P	**P**	**18 50 11.4**	**-1.4**	
STLK	**Strandline Lak**	**73.89**	**27**	IAmb	IAmb	18 50 15.2		
	comp=Z,9.4nm,1.4s							
CHNA	**Chernabura Isl**	**73.96**	**35**	P	**P**	**18 50 14.1**	**+0.2**	
	baz=300							
HDA	**Harding Lake**	**73.98**	**23**	P	**P**	**18 50 14.3**	**+0.3**	
	baz=308							
F28M	**Old Crow**	**74.12**	**19**	IAmb	IAmb	18 50 18.7		
	comp=Z,8.1nm,1.1s							
F28M	**Old Crow**	**74.12**	**19**	P	**P**	**18 50 15.0**	**+0.3**	
	baz=313,SNR=9.1							
E29M	**Blow River**	**74.12**	**18**	IAmb	IAmb	18 50 17.2		
	comp=Z,9.1nm,1.1s							
E29M	**Blow River**	**74.12**	**18**	P	**P**	**18 50 14.7**	**0.0**	
	baz=314							
G27K	**Doyon Strip**	**74.15**	**20**	P	**P**	**18 50 15.0**	**+0.1**	
	baz=312,SNR=6.6							
P19K	**Oil Pt**	**74.35**	**29**	P	**P**	**18 50 16.3**	**+0.1**	
	baz=304							
WAT1	**Susitna Watana**	**74.37**	**25**	P	**P**	**18 50 16.2**	**0.0**	
	baz=307							
J25K	**Salcha River,**	**74.39**	**23**	P	**P**	**18 50 16.3**	**-0.1**	
	baz=309							
H27K	**Steamboat Moun**	**74.57**	**20**	IAmb	IAmb	18 50 20.8		
	comp=Z,12nm,1.1s							
H27K	**Steamboat Moun**	**74.57**	**20**	P	**P**	**18 50 16.9**	**-0.5**	
	baz=312,SNR=16							
Q19K	**Cape Douglas,**	**74.58**	**30**	P	**P**	**18 50 17.6**	**0.0**	
	baz=304							
DHY	**Denali Highway**	**74.65**	**25**	P	**P**	**18 50 18.1**	**0.0**	
	baz=308							
WAT6	**Susitna Watana**	**74.82**	**25**	P	**P**	**18 50 19.1**	**0.0**	
	baz=308							
PMR	**Palmer**	**74.89**	**26**	P	**P**	**18 50 19.6**	**+0.4**	
	baz=307							
I27K	**Kandik River**	**74.96**	**21**	P	**P**	**18 50 20.1**	**+0.4**	
I27K				IAmb	IAmb	18 50 23.3		
	comp=Z,15nm,1.1s							
I27K	**Kandik River**	**74.96**	**21**	P	**P**	**18 50 19.9**	**+0.3**	
	baz=312,SNR=14							
SML	**Sawmill**	**75.07**	**26**	IAmb	IAmb	18 50 26.2		
	comp=Z,14nm,1.1s							
SML	**Sawmill**	**75.07**	**26**	P	**P**	**18 50 20.2**	**-0.2**	
	baz=307							
G29M	**Pine Creek**	**75.12**	**19**	IAmb	IAmb	18 50 23.1		
	comp=Z,21nm,1.6s							
G29M	**Pine Creek**	**75.12**	**19**	P	**P**	**18 50 20.8**	**+0.2**	
	baz=315							
RIDG	**Independent Ri**	**75.13**	**23**	IAmb	IAmb	18 50 22.0		
	comp=Z,11nm,1.2s							
RIDG	**Independent Ri**	**75.13**	**23**	P	**P**	**18 50 20.3**	**-0.3**	
	baz=310							
F30M	**Barrier River**	**75.23**	**18**	IAmb	IAmb	18 50 23.7		
	comp=Z,13nm,1.1s							
F30M	**Barrier River**	**75.23**	**18**	P	**P**	**18 50 21.5**	**+0.3**	
	baz=316							
KNK	**Knik Glacier**	**75.26**	**26**	P	**P**	**18 50 21.6**	**+0.2**	
	baz=307							
INK	**Inuvik**	**75.30**	**17**	IAmb	IAmb	18 50 24.1		
	comp=Z,11nm,1.1s							
INK	**Inuvik**	**75.30**	**17**	P	**P**	**18 50 21.5**	**+0.1**	
	baz=318							
M23K	**Glacier View**	**75.31**	**26**	P	**P**	**18 50 22.0**	**+0.3**	
	baz=308							
BRSE	**Bradley Lake S**	**75.34**	**28**	P	**P**	**18 50 22.3**	**+0.4**	
	baz=306							
PAX	**Paxson**	**75.40**	**24**	P	**P**	**18 50 22.6**	**+0.3**	
	baz=309							
SCM	**Sheep Creek Mo**	**75.43**	**26**	P	**P**	**18 50 22.7**	**+0.2**	
	baz=308							
H29M	**Whitestone**	**75.51**	**20**	IAmb	IAmb	18 50 26.6		
	comp=Z,11nm,1.2s							
H29M	**Whitestone**	**75.51**	**20**	P	**P**	**18 50 23.2**	**+0.4**	
	baz=314,SNR=8.5							
G30M	**tAoh Zraii Nji**	**75.58**	**18**	P	**P**	**18 50 23.1**	**-0.1**	
	baz=316,SNR=14							
I28M	**Miner Creek**	**75.58**	**21**	IAmb	IAmb	18 50 25.6		
	comp=Z,11nm,1.4s							
I28M	**Miner Creek**	**75.58**	**21**	P	**P**	**18 50 23.4**	**+0.1**	
	baz=313							
PWL	**Port Wells**	**75.64**	**27**	P	**P**	**18 50 23.8**	**+0.2**	
	baz=307							
M24K	**Tolsona, Glenn**	**75.69**	**25**	P	**P**	**18 50 24.8**	**+0.9**	
	baz=309							
EPYK	**Eagle Plains**	**75.88**	**19**	P	**P**	**18 50 25.4**	**+0.5**	
	baz=316							
F31M	**Tsiigehtchic**	**75.89**	**17**	P	**P**	**18 50 25.6**	**+0.7**	
	baz=318							
GLI	**Glacier Island**	**76.11**	**26**	P	**P**	**18 50 26.8**	**+0.5**	
	baz=308							
I29M	**Ogilvie Camp,**	**76.14**	**20**	P	**P**	**18 50 26.9**	**+0.5**	
	baz=315							
G31M	**Satah River**	**76.14**	**18**	IAmb	IAmb	18 50 28.0		
	comp=Z,8.8nm,1.0s							
G31M	**Satah River**	**76.14**	**18**	P	**P**	**18 50 26.7**	**+0.4**	
	baz=318							
STKA	**Stephens Creek**	**76.15**	**140**	P	**P**	**18 50 26.7**	**-0.1**	
	comp=Z,3.2nm,0.9s,baz=317,slow=4.5,SNR=4.8							
	comp=Z,3.2nm,0.9s							
KLU	**Klutina**	**76.17**	**26**	P	**P**	**18 50 26.5**	**-0.2**	
KLU				IAmb	IAmb	18 50 29.6		
	comp=Z,6.7nm,0.9s							
KLU	**Klutina**	**76.17**	**26**	P	**P**	**18 50 26.3**	**-0.4**	
	baz=309							
P23K	**Montague Islan**	**76.53**	**27**	P	**P**	**18 50 29.0**	**+0.3**	
	baz=308							
N25K	**Chitina, Valde**	**76.58**	**25**	P	**P**	**18 50 29.7**	**+0.7**	
	baz=310							
C36M	**Paulatuk**	**76.59**	**13**	P	**P**	**18 50 28.9**	**+0.1**	
	baz=326							
L27K	**Beaver Creek,**	**76.60**	**23**	IAmb	IAmb	18 50 32.0		
	comp=Z,12nm,1.3s							
L27K	**Beaver Creek,**	**76.60**	**23**	P	**P**	**18 50 29.5**	**+0.5**	
	baz=312							
BCAR	**Beaver Creek A**	**76.61**	**23**	P	**P**	**18 50 29.4**	**+0.3**	
M26K	**Nabesna, AK**	**76.64**	**24**	P	**P**	**18 50 30.1**	**+0.8**	
	baz=311							
DAWY	**Dawson**	**76.71**	**22**	P	**P**	**18 50 29.8**	**+0.1**	
	baz=314							
I30M	**Mount Dempster**	**76.80**	**20**	IAmb	IAmb	18 50 33.6		
	comp=Z,9.1nm,1.1s							
I30M	**Mount Dempster**	**76.80**	**20**	P	**P**	**18 50 30.4**	**+0.1**	
	baz=316							
EYAK	**Cordova Ski Ar**	**76.83**	**26**	P	**P**	**18 50 30.7**	**+0.4**	
	baz=310							
H31M	**Peel River**	**76.95**	**19**	P	**P**	**18 50 30.7**	**-0.3**	
	baz=318,SNR=8.5							
BMRM	**Bremner River**	**77.00**	**26**	IAmb	IAmb	18 50 34.6		
	comp=Z,9.2nm,0.9s							
BMRM	**Bremner River**	**77.00**	**26**	P	**P**	**18 50 31.6**	**+0.2**	
	baz=310							
M27K	**Edge Creek, AK**	**77.06**	**24**	P	**P**	**18 50 31.8**	**0.0**	
	baz=312							
J30M	**Hart River**	**77.29**	**20**	P	**P**	**18 50 33.3**	**+0.2**	
	baz=316							
MCARA	**McCarthy VSAT**	**77.30**	**25**	P	**P**	**18 50 33.4**	**+0.4**	
	baz=312							
BVCY	**Beaver Creek**	**77.37**	**23**	P	**P**	**18 50 33.3**	**-0.1**	
	baz=313							
ESDC	**Sonseca Array**	**77.42**	**309**	P	**P**	**18 50 33.1**	**-1.0**	
	comp=Z,3.2nm,1.1s,baz=48,slow=5.8,SNR=12							
	comp=Z,3.2nm,1.1s							
ESDC	**Sonseca Array**	**77.42**	**309**	P	**P**	**18 50 33.4**	**-0.7**	
ESDC				IAmb	IAmb	18 50 37.4		
	comp=Z,15nm,1.2s							
K29M	**Barlow Dome**	**77.45**	**21**	P	**P**	**18 50 34.0**	**0.0**	
K29M				IAmb	IAmb	18 50 36.3		
	comp=Z,8.4nm,1.2s							
K29M	**Barlow Dome**	**77.45**	**21**	P	**P**	**18 50 34.3**	**+0.4**	
	baz=316							
CRQE	**Cirque**	**77.70**	**25**	P	**P**	**18 50 35.6**	**+0.2**	
	baz=312							
KAIM	**Kayak Island**	**77.74**	**26**	P	**P**	**18 50 36.3**	**+0.9**	
	baz=311							
L29M	**L29M**	**77.78**	**22**	P	**P**	**18 50 36.1**	**+0.3**	
	baz=315							
YUK3	**Moose Creek**	**77.94**	**24**	P	**P**	**18 50 37.6**	**+0.8**	
	baz=314							
M29M	**Somme Creek**	**78.15**	**22**	P	**P**	**18 50 38.3**	**+0.4**	
	baz=315							
YUK8	**Steele Glacier**	**78.52**	**24**	P	**P**	**18 50 40.1**	**-0.1**	
	baz=314							
LSZ	**Lusaka**	**78.54**	**245**	P	**P**	**18 50 39.8**	**-0.9**	
LSZ				pmax	pmax			
	comp=Z,6.0nm,1.0s							
LSZ	**Lusaka**	**78.54**	**245**	P	**P**	**18 50 39.8**	**-0.9**	
LSZ				IAmb	IAmb	18 50 41.7		
	comp=Z,6.0nm,0.9s							
M30M	**Minto, Yukon**	**78.60**	**22**	P	**P**	**18 50 40.5**	**+0.2**	
	baz=316							
O28M	**Mount Upton**	**78.73**	**24**	P	**P**	**18 50 41.2**	**-0.1**	
	baz=314							
YUK4	**Talbot Arm**	**78.87**	**23**	P	**P**	**18 50 41.2**	**-0.7**	
	baz=315							
YUK6	**Outpost Mounta**	**79.25**	**23**	P	**P**	**18 50 44.3**	**+0.2**	
	baz=315							
N30M	**Aishikik Lake**	**79.31**	**23**	IAmb	IAmb	18 50 47.1		
	comp=Z,11nm,1.2s							
N30M	**Aishikik Lake**	**79.31**	**23**	P	**P**	**18 50 44.7**	**+0.5**	
	baz=316							
HYT	**Haines Junctio**	**79.63**	**23**	P	**P**	**18 50 46.1**	**+0.1**	
HYT	**Haines Junctio**	**79.63**	**23**	P	**P**	**18 50 45.9**	**-0.2**	
	baz=316							
M31M	**Drury Creek, Y**	**79.63**	**21**	P	**P**	**18 50 46.3**	**+0.4**	
	baz=318							
O29M	**Mount Kennedy**	**79.63**	**24**	P	**P**	**18 50 45.5**	**-0.6**	
	baz=315							
O30N	**Mendenhall**	**80.14**	**23**	P	**P**	**18 50 48.7**	**-0.1**	
	baz=317							
MMPY	**Sheldon Lake,**	**80.26**	**20**	P	**P**	**18 50 49.5**	**+0.2**	
	baz=321							
P30M	**Million Dollar**	**80.32**	**24**	P	**P**	**18 50 49.2**	**-0.5**	
	baz=317							
WHY	**Whitehorse**	**80.63**	**22**	P	**P**	**18 50 51.1**	**-0.3**	
	baz=318							
PLBC	**Pleasant Camp**	**81.02**	**24**	P	**P**	**18 50 52.9**	**-0.4**	
	baz=317							
SKAG	**Skagway**	**81.37**	**23**	P	**P**	**18 50 55.3**	**+0.2**	
	baz=318							
P33M	**Teslin, Yukon**	**81.64**	**22**	P	**P**	**18 50 56.4**	**-0.4**	
	baz=320							
P32M	**Atlin**	**81.82**	**23**	IAmb	IAmb	18 51 00.5		
	comp=Z,9.1nm,1.4s							
P32M	**Atlin**	**81.82**	**23**	P	**P**	**18 50 57.2**	**-0.4**	
	baz=319							
S31K	**Pelican**	**82.16**	**25**	P	**P**	**18 50 59.9**	**+0.5**	
	baz=317							
Q32M	**Nakina River**	**82.78**	**23**	P	**P**	**18 51 02.3**	**-0.6**	
	baz=320							
S32K	**Killisnoo**	**83.12**	**24**	P	**P**	**18 51 04.1**	**-0.3**	
	baz=319							
SIT	**Sitka**	**83.16**	**25**	P	**P**	**18 51 04.9**	**+0.2**	
	baz=318							
DLBC	**Dease Lake**	**83.92**	**22**	P	**P**	**18 51 08.8**	**+0.2**	
	baz=322							
S34M	**Telegraph Cree**	**83.97**	**23**	P	**P**	**18 51 09.4**	**+0.6**	
	baz=322							
YKA	**Yellowknife Ar**	**84.47**	**13**	P	**P**	**18 51 09.5**	**-1.7**	
	comp=Z,1.4nm,0.8s,baz=334,slow=6.2,SNR=4.2							
	comp=Z,1.4nm,0.8s							
YKA	**Yellow

AB31 ⇑S **Sn** **18 55 15.4 -2.7**
2.2nm,0.8s,baz=196,slow=25,SNR=3.6
KBZ **Khabaz** **13.21 304** Pn **Pn** **18 53 15.2 -2.7**
0.1nm,0.3s,baz=115,slow=4.8,SNR=1.7
0.7nm,0.5s
AKTO **Aktyubinsk** **13.21 0** ⇑P **Pn** **18 53 20.1 +2.1**
2.6nm,0.8s
AKTO ⇑S **Sn** **18 55 39.4 -5.6**
1.4nm,0.6s
AAK **Ala-Archa** **13.75 62** LR LR 18 59 56.0
comp=Z,33nm,19.1s,baz=289,slow=43
BVAR **Borovoye Array** **18.02 25** P **Pn** **18 54 21.0 +0.3**
baz=206,slow=13,SNR=5.7
1.4nm,0.6s
BRTR **Keskin Array B** **19.24 285** P **Pn** **18 54 37.3 +1.4**
baz=89,slow=11,SNR=2.3
0.2nm,0.5s
KURBB **Kurchatov Arra** **19.86 41** P **P** **18 54 42.7 +1.2**
baz=240,slow=12,SNR=4.1
0.5nm,0.9s
MKAR **Makanchi Array** **20.35 54** P **P** **18 54 48.1 +1.2**
0.2nm,0.4s,baz=244,slow=12,SNR=4.2
0.2nm,0.4s
AKASG **Malin Array Be** **24.54 312** P **P** **18 55 30.7 +0.7**
0.3nm,0.4s,baz=109,slow=8.2,SNR=1.8
0.3nm,0.4s
ZALV **Zalesovo Beam** **24.91 39** P **P** **18 55 35.3 +2.0**
0.8nm,0.5s,baz=241,slow=8.8,SNR=5.8
0.8nm,0.5s
TLY **Talaya** **35.03 51** LR LR 19 10 45.0
comp=Z,41nm,20.1s,baz=119,slow=35
MBAR **Mbarara** **45.31 220** LR LR 19 21 03.2
comp=Z,60nm,19.9s,baz=143,slow=40

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*IPGP **30** 19:16:48.0, 18°.92S×173°.36W, h50km, Mw5.5, Fault plane solution: NP1:φ=98.00000°, δ14.00000°, λ18.00000°. NP2:φ=351.00000°, δ86.00000°, λ103.00000°.*
*BJI **30** 19:16:48.8, 18°.88S×173°.48W, h10km, mB5.8/26, mb5.5/59, Ms5.2/54, Ms7 5.0/54*
*GFZ **30** 19:16:49.5±0.2, 19°.S±4°×17°.4W±°, h10km, M5.8/41, mb5.8/41*
*MOS **30** 19:16:49.1±1.0, 19°.04S×173°.64W, h15km, mb5.8/36, MS5.0/25, Error ellipse: s-maj=8.0km s-min=6.8km az=61.6*
*NEIC **30** 19:16:50.1±2.0, 19°.08S±0°.08×173°.34W±0°.07, h10km±1km, mb5.6/672, Ms_20 5.0/613, Mww5.7/15, Error ellipse: s-maj=15.0km s-min=9.6km az=156.0*
*GCMT **30** 19:16:57.1±0.1, 19°.13S±0°.01×173°.13W±0°.01, h12km, MW5.8/146, Moment Tensor Solution. s97,c143; s146,c245; Duration: 18 Moment tensor: Scale 10^17 Nm; Mrr-0.20±.02; Mθθ-0.12±.02; Mφφ0.32±.02; Mrθ-0.92±.05; Mrφ0.11±.02; Mθφ5.31±.05; Best double couple: Ms5.39700×10^17 NP1:φ=47.00000°, δ2.00000°, λ-34.00000°. NP2:φ170.00000°, δ89.00000°, λ-92.00000°. Principal axes: T 5.4340, Plg44.0000°, Azm262.0000°; N -0.0740, Plg2.0000°, Azm170.0000°; P -5.3610, Plg46.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **30** 19:16:57.3, 18°.16S×175°.32W, h49km±7km*
*NOU **30** 19:16:59.0, 19°.16S×173°.61W, h81km, ML5.6/187, Tonga Islands*
*IDC **30** 19:17:02.4±1.4, 19°.05S×173°.72W, h111km±12km, mb5.0/34, mbtmp5.4/36, MS4.8/62, Error ellipse: s-maj=10.7km s-min=8.3km az=139.0*
ISC 30 19:16:52.0±0.5, **19°.15S**±0°.04×**173°.34W**±0°.04, **h29**km±3km, **h29**km:**pP-P, n1810,** σ1**9**50/1296, **mb5.6**/463, **MS5.0**/400, **99C-67D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.22**	**89**	P	**Pn**	**19 17 40.0**	**-0.6**
NIUE				S	**Sn**	**19 18 12.7**	**-5.4**
NIUE	**Niue**	**3.22**	**89**		**Pn**	**19 17 39.8**	**-0.8**
NIUE				Sn	**Sn**	**19 18 12.7**	**-5.4**
NIUE	**Niue**	**3.22**	**89**	P	**Pn**	**19 17 40.5**	**-0.1**
NIUE				S	**Sn**	**19 18 12.0**	**-6.1**
NIUE	**Niue**	**3.22**	**89**	P	**Pn**	**19 17 40.1**	**-0.5**
LKBA	**Tubou, Lakemba**	**5.27**	**279**	P	**Pn**	**19 18 12.7**	**+3.9**
AFI	**Afiamalu**	**5.42**	**16**	P	**Pn**	**19 18 09.5**	**-1.4**
	699nm,0.5s,baz=34,slow=0.7,SNR=112						
AFI				S	Sn	19 19 02.6	-10
	1μm,0.3s,baz=43,slow=22,SNR=12						
AFI				LR	LR	19 20 31.1	
	comp=Z,7μm,19.3s,baz=214,slow=38						
AFI	**Afiamalu**	**5.42**	**16**	P	**Pn**	**19 18 10.0**	**-0.9**
AFI				S	Sn	19 19 01.9	-10
FUTU	**Fugatoga**	**6.64**	**316**	P	**Pn**	**19 18 30.0**	**+2.3**
TAVE	**Taveuni**	**6.71**	**290**	P	Pn	19 18 33.5	+5.0
DGTI	**Dogotuki**	**7.18**	**292**	P	Pn	19 18 39.8	+4.7
MSVF	**Nonsavu**	**8.29**	**278**	P	Pn	19 18 55.1	+4.7
MSVF	**Nonsavu**	**8.29**	**278**	P	Pn	19 18 56.1	+5.7
	756nm,1.1s,baz=119,slow=11,SNR=106						
RIZ	**Raoul Island**	**10.89**	**202**	P	**Pn**	**19 19 27.6**	**+1.7**
RIZ				S	**Sn**	**19 21 23.0**	**-3.8**
RAO	**Raoul Island**	**10.89**	**202**	P	**Pn**	**19 19 28.0**	**+2.1**
RAO	**Raoul Island**	**10.89**	**202**	P	**Pn**	**19 19 27.7**	**+1.8**
	270nm,0.3s,baz=32,slow=19,SNR=5.8						
RAO				S	**Sn**	**19 21 20.2**	**-6.6**
	2μm,0.6s,baz=267,slow=23,SNR=10						
RAO	**Raoul Island**	**10.89**	**202**	P	**Pn**	**19 19 27.0**	**+1.1**
RAO	**Raoul Island**	**10.89**	**202**		**Pn**	**19 19 27.0**	**+1.1**
RAO	**Raoul Island**	**10.89**	**202**	P	**Pn**	**19 19 26.5**	**+0.6**
RAO				S	**Sn**	**19 21 21.7**	**-5.2**
GLKZ	**Green Lake**	**10.90**	**202**	P	**Pn**	**19 19 27.4**	**+1.3**
GLKZ				S	**Sn**	**19 21 21.4**	**-5.6**
FUNA	**Funafuti**	**12.80**	**325**	P	Pn	19 19 55.8	+3.7
FUNA	**Funafuti**	**12.80**	**325**		**Pn**	**19 19 54.1**	**+2.0**
RAR	**Rarotonga**	**12.90**	**101**	P	**Pn**	**19 19 52.5**	**-0.9**
	2μm,0.8s,baz=273,slow=11,SNR=174						
RAR				S	Sn	19 22 06.1	-10
	63nm,0.3s,baz=14,slow=19,SNR=1.8						
RAR				LR	LR	19 23 44.5	
	comp=Z,4μm,21.3s,baz=258,slow=30						
RAR	**Rarotonga**	**12.90**	**101**		**Pn**	**19 19 52.3**	**-1.1**
RAR	**Rarotonga**	**12.90**	**101**	P	**Pn**	**19 19 52.5**	**-0.9**
RAR				S	Sn	19 22 02.5	-14
RAR	**Rarotonga**	**12.90**	**101**	P	**Pn**	**19 19 52.7**	**-0.7**
RTV	**Rentapao**	**17.36**	**272**	P	**P**	**19 20 54.4**	**+1.1**
DVP	**Devils Point**	**17.59**	**272**	P	**P**	**19 20 57.1**	**+1.2**
MARNC	**Mare, Loyalty**	**17.63**	**259**	P	**P**	**19 20 56.1**	**-0.2**
MARNC	**Mare, Loyalty**	**17.63**	**259**		**P**	**19 20 56.4**	**0.0**
YATNC	**Mamie plateau,**	**18.73**	**258**	P	**Pn**	**19 21 09.6**	**+0.5**
OUENC	**Ouen Island, N**	**18.82**	**257**	P	**Pn**	**19 21 10.0**	**-0.1**
OUENC	**Ouen Island, N**	**18.82**	**257**		**Pn**	**19 21 10.3**	**+0.3**
DZM	**Mont Dzumac**	**19.15**	**258**	P	**Pn**	**19 21 13.7**	**-0.5**
	527nm,0.9s,baz=86,slow=15,SNR=110						
DZM				LR	LR	19 27 30.8	
	comp=Z,9μm,21.8s,baz=111,slow=33						
ONTNC	**Ouen Toro**	**19.16**	**257**	P	**Pn**	**19 21 13.8**	**-0.4**
ONTNC	**Ouen Toro**	**19.16**	**257**		**P**	**19 21 12.5**	**-0.6**
NOUC	**Port Laguerre**	**19.28**	**258**	P	**P**	**19 21 14.8**	**+0.3**
GRZ	**Great Barrier**	**19.69**	**208**	P	**P**	**19 21 19.4**	**+0.6**
NFK	**Norfolk Island**	**19.71**	**236**	P	**Pn**	**19 21 20.0**	**-0.7**
	comp=Z,442nm,1.0s						
MXZ	**Matakaoa Point**	**19.75**	**200**	P	**Pn**	**19 21 23.8**	**+2.7**
MXZ				S	S	19 24 43.9	-17
OUZ	**Omahuta**	**19.75**	**213**	P	**Pn**	**19 21 20.7**	**-0.5**
WCZ	**Waipu Caves**	**19.95**	**210**	P	**Pn**	**19 21 24.1**	**+0.6**
WMGZ	**Waiomatatini S**	**19.95**	**199**	P	**Pn**	**19 21 25.1**	**+1.6**
WMGZ				S	S	19 24 49.1	-15
HAZ	**Te Kaha**	**20.10**	**201**	P	Pn	19 21 25.9	+0.7
HAZ				S	S	19 24 54.0	-14
PUZ	**Puketiti**	**20.23**	**199**	P	Pn	19 21 30.3	+3.4
PUZ				S	S	19 24 53.6	-17
WIAZ	**Waiheke Island**	**20.29**	**208**	P	Pn	19 21 28.9	+1.5
RUGZ	**Raukumara Rang**	**20.32**	**201**	P	Pn	19 21 28.5	+0.4
RUGZ				S	S	19 24 57.3	-15
MBAZ	**Motutapu North**	**20.37**	**208**	P	Pn	19 21 30.9	+2.5
WHRZ	**Whale Island**	**20.47**	**202**	P	Pn	19 21 34.4	+4.8
ETAZ	**East Tamaki Re**	**20.51**	**208**	P	Pn	19 21 32.5	+2.4
MKAZ	**Moumakai**	**20.54**	**207**	P	Pn	19 21 31.4	+1.1
TKGZ	**Te Karaka**	**20.70**	**200**	P	Pn	19 21 32.7	+0.5
MWZ	**Matawai**	**20.71**	**201**	P	Pn	19 21 32.9	+0.5
MWZ				S	S	19 25 03.7	-16
AWAZ	**Awhitu Peninsu**	**20.73**	**208**	P	Pn	19 21 34.2	+1.6
URZ	**Urewera**	**20.78**	**202**	P	Pn	19 21 32.8	-0.4
	comp=Z,753nm,0.9s,baz=9.4,slow=7.9,SNR=72						
URZ				S	S	19 25 06.0	-15
	comp=Z,21nm,0.6s,baz=19,slow=18,SNR=1.7						
	comp=Z,753nm,0.9s						
URZ	**Urewera**	**20.78**	**202**	P	**P**	**19 21 31.1**	**+0.5**
URZ	**Urewera**	**20.78**	**202**	P	Pn	19 21 32.9	-0.4
RAGZ	**Rawiri**	**20.89**	**201**	P	**P**	**19 21 32.0**	**0.0**
TOZ	**Tahuroa Road**	**20.93**	**205**		Pn	19 21 36.6	+1.7
TOZ	**Tahuroa Road**	**20.93**	**205**	P	Pn	19 21 36.4	+1.5
KOUNC	**Koumac, New Ca**	**21.09**	**262**	P	**P**	**19 21 33.3**	**-0.9**
KNZ	**Kokohu**	**21.29**	**200**	P	**P**	**19 21 39.0**	**+2.9**
TLZ	**Tolley Road**	**21.43**	**205**	P	**P**	**19 21 40.5**	**+2.8**
BKZ	**Black Stump Fm**	**21.81**	**202**	P	**P**	**19 21 43.6**	**+1.8**
BKZ	**Black Stump Fm**	**21.81**	**202**	P	**P**	**19 21 42.7**	**+0.9**
BKZ	**Black Stump Fm**	**21.81**	**202**	P	**P**	**19 21 43.8**	**+2.0**
HIZ	**Hauiti**	**21.86**	**206**	P	**P**	**19 21 44.7**	**+2.4**
HIZ	**Hauiti**	**21.86**	**206**		**P**	**19 21 46.3**	**+4.0**
HIZ	**Hauiti**	**21.86**	**206**	P	**P**	**19 21 46.5**	**+4.2**
HIZ	**Hauiti**	**21.86**	**206**	P	**P**	**19 21 45.9**	**+3.6**
NGZ	**Ngauruhoe**	**22.14**	**203**	P	**P**	**19 21 47.6**	**+2.1**
VRZ	**Vera Road**	**22.42**	**205**	P	**P**	**19 21 50.6**	**+2.3**
PXZ	**Pawanui**	**22.46**	**200**	P	**P**	**19 21 49.8**	**+1.1**
PPT	**Papeete**	**22.60**	**90**	P	**P**	**19 21 53.0**	**+2.5**
	comp=Z,156nm,1.1s,baz=264,slow=10,SNR=7.6						
PPT				LR	LR	19 28 12.1	
	comp=Z,3μm,20.6s,baz=254,slow=29						
PPTF	**Pamatai, Papee**	**22.61**	**90**	P	**P**	**19 21 53.3**	**+2.7**
PPTF	**Pamatai, Papee**	**22.61**	**90**	P	**P**	**19 21 50.9**	**+0.3**
PPTF	**Pamatai, Papee**	**22.61**	**90**	P	**P**	**19 21 53.1**	**+2.5**
TSZ	**Takapari Road**	**22.79**	**202**	P	**P**	**19 21 52.8**	**+0.6**
NEZ	**North Egmont**	**22.81**	**206**	P	**P**	**19 21 55.4**	**+2.9**
KHEZ	**Kahui Hut**	**22.87**	**206**	P	**P**	**19 21 55.1**	**+2.0**
BFZ	**Birch Farm**	**23.25**	**200**	P	**P**	**19 21 58.4**	**+1.5**
BFZ	**Birch Farm**	**23.25**	**200**	P	**P**	**19 21 58.2**	**+1.3**
BFZ				IAmb	IAmb	19 22 20.9	
	comp=Z,144nm,0.9s						
BFZ	**Birch Farm**	**23.25**	**200**	P	**P**	**19 21 58.4**	**+1.5**
BFZ	**Birch Farm**	**23.25**	**200**	P	**P**	**19 21 59.2**	**+2.3**
MRZ	**Mangatainoka R**	**23.46**	**202**	P	**P**	**19 21 58.9**	**0.0**
MRZ				IAmb	IAmb	19 22 19.6	
	comp=Z,190nm,1.2s						
MRZ	**Mangatainoka R**	**23.46**	**202**	P	**P**	**19 21 59.2**	**+0.2**
MSWZ	**Moikau Station**	**24.24**	**201**	P	**P**	**19 22 07.3**	**+0.9**
SNZO	**South Karori**	**24.34**	**202**	P	**P**	**19 22 09.9**	**+2.7**
CTZ	**Chatham Island**	**24.67**	**186**	P	**P**	**19 22 12.2**	**+2.0**
NNZ	**Nelson**	**24.76**	**204**	P	**P**	**19 22 11.0**	**0.0**
NNZ	**Nelson**	**24.76**	**204**	P	**P**	**19 22 13.0**	**+2.0**
TKNZ	**Takaka Hill**	**24.77**	**205**	P	**P**	**19 22 13.5**	**+2.3**
QRZ	**Quartz Range**	**24.77**	**206**	P	**P**	**19 22 12.3**	**+1.2**
QRZ	**Quartz Range**	**24.77**	**206**	P	**P**	**19 22 12.3**	**+1.2**
QRZ	**Quartz Range**	**24.77**	**206**	P	**P**	**19 22 14.5**	**+3.3**
QRZ	**Quartz Range**	**24.77**	**206**	P	**P**	**19 22 15.8**	**+4.6**
BSWZ	**Blackbirch Sta**	**25.00**	**203**	P	**P**	**19 22 17.5**	**+4.3**
MRNZ	**Matariki Terra**	**25.16**	**205**	P	**P**	**19 22 17.7**	**+3.1**
THZ	**Tophouse**	**25.41**	**205**	P	**P**	**19 22 21.9**	**+4.9**
THZ	**Tophouse**	**25.41**	**205**	P	**P**	**19 22 19.7**	**+2.7**
KHZ	**Kahutara**	**25.73**	**203**	P	**P**	**19 22 20.7**	**+0.9**
KHZ	**Kahutara**	**25.73**	**203**	P	**P**	**19 22 25.8**	**+6.0**
KHZ	**Kahutara**	**25.73**	**203**	P	**P**	**19 22 20.1**	**+0.3**
DSZ	**Denniston Nort**	**25.84**	**206**	P	**P**	**19 22 23.1**	**+2.2**
DSZ	**Denniston Nort**	**25.84**	**206**	P	**P**	**19 22 23.1**	**+2.2**
GVZ	**Greta Valley S**	**26.39**	**203**	P	**P**	**19 22 30.9**	**+5.1**
GVZ	**Greta Valley S**	**26.39**	**203**	P	**P**	**19 22 28.7**	**+2.8**
LTZ	**Lake Taylor**	**26.52**	**204**	P	**P**	**19 22 31.4**	**+4.3**
NGOA	**Tingoa Renbel**	**26.71**	**283**	P	**P**	**19 22 29.3**	**+0.3**
AMCZ	**Amberley**	**26.71**	**203**	P	**P**	**19 22 33.6**	**+4.9**
INZ	**Inchbonnie**	**26.80**	**205**	P	**P**	**19 22 34.2**	**+4.7**
OXZ	**Oxford**	**27.07**	**204**	P	**P**	**19 22 37.2**	**+5.2**
MQZ	**McQueen's Vall**	**27.17**	**203**	P	**P**	**19 22 38.0**	**+5.2**
MQZ				IAmb	IAmb	19 22 48.3	
	comp=Z,138nm,0.8s						
HNR	**Honiara**	**27.59**	**287**	P	**P**	**19 22 36.2**	**-0.7**
HNR	**Honiara**	**27.59**	**287**	LR	LR	19 32 01.1	
	comp=Z,114nm,20.3s,baz=202,slow=33						
HNR	**Honiara**	**27.59**	**287**	P	**P**	**19 22 33.1**	**-3.8**
HNR				pmax	pmax		
	comp=Z,152nm,1.1s						
HNR	**Honiara**	**27.59**	**287**	P	**P**	**19 22 34.8**	**-2.1**
LHI	**Lord Howe Isla**	**27.74**	**238**	P	**P**	**19 22 38.2**	**+0.2**
	comp=Z,109nm,2.9s						
RPZ	**Rata Peaks**	**27.79**	**205**	P	**P**	**19 22 39.8**	**+1.4**
RPZ	**Rata Peaks**	**27.79**	**205**	P	**P**	**19 22 41.2**	**+2.9**
	comp=Z,32nm,0.5s,baz=23,slow=4.2,SNR=62						
RPZ				LR	LR	19 33 59.7	
	comp=Z,294nm,21.7s,baz=44,slow=37						
	comp=Z,32nm,0.5s						
RPZ	**Rata Peaks**	**27.79**	**205**	P	**P**	**19 22 44.3**	**+5.9**
FOZ	**Fox Glacier**	**28.14**	**207**	P	**P**	19 22 46.2	+4.7
TATA	**Tatamba Isabel**	**28.15**	**289**	P	**P**	**19 22 39.9**	**-2.0**
LBZ	**Lake Benmore**	**28.69**	**205**	P	**P**	19 22 51.4	+5.0
LBZ				IAmb	IAmb	19 23 07.8	
	comp=Z,163nm,0.9s						
JCZ	**Jackson Bay**	**29.02**	**207**	P	**P**	**19 22 50.5**	**+1.1**
ODZ	**Otahua Downs**	**29.06**	**204**	P	**P**	**19 22 50.7**	**+1.0**
WKZ	**Wanaka**	**29.53**	**206**	P	**P**	19 22 59.0	+5.1
MLZ	**Mavora Lakes**	**30.34**	**205**	P	**P**	**19 23 02.3**	**+1.2**
DCZ	**Deep Cove**	**30.83**	**207**	P	**P**	**19 23 08.6**	**+3.3**
WHZ	**Wether Hill Ro**	**30.83**	**206**	P	**P**	**19 23 09.4**	**+4.0**
SYZ	**Scrubby Hill**	**30.89**	**204**	P	**P**	**19 23 07.1**	**+1.3**
AUBSH	**Beerwah State**	**31.90**	**250**	P	**P**	**19 23 13.6**	**-1.3**
TW1H	**Toowoomba 1 Ha**	**32.84**	**249**	P	**P**	**19 23 22.8**	**-0.6**
AUTOO	**Toowoomba Stat**	**32.85**	**249**	P	**P**	**19 23 22.7**	**-0.7**
GD1S	**Gladstone Soft**	**33.30**	**256**	P	**P**	**19 23 27.2**	**-0.1**
EIDS	**Eidsvold**	**33.44**	**253**	P	**P**	**19 23 26.6**	**-1.9**
EIDS	**Eidsvold**	**33.44**	**253**	P	**P**	**19 23 26.4**	**-2.1**
	comp=Z,74nm,0.9s						
EIDS	**Eidsvold**	**33.44**	**253**	P	**P**	**19 23 26.6**	**-1.9**
ARMA	**Armidale**	**33.60**	**244**	P	**P**	**19 23 29.4**	**-0.6**
ARMA	**Armidale**	**33.60**	**244**	P	**P**	**19 23 29.2**	**-0.8**
	comp=Z,135nm,1.0s						
ARMA	**Armidale**	**33.60**	**244**	P	**P**	**19 23 28.9**	**-1.1**
AUNRC	**North Rockhamp**	**33.88**	**256**	P	**P**	**19 23 30.3**	**-2.0**
AUPHS	**Peel High Scho**	**34.36**	**243**	P	**P**	**19 23 35.8**	**-0.7**
AUKHS	**Kincumber High**	**34.51**	**238**	P	**P**	**19 23 37.5**	**-0.2**
MGCD	**Mangrove Creek**	**34.66**	**239**	P	**P**	**19 23 38.8**	**-0.3**
MGCD	**Mangrove Creek**	**34.66**	**239**	P	**P**	**19 23 38.7**	**-0.3**
	comp=Z,228nm,1.1s						
SYDH	**Sydney Hard Ro**	**35.10**	**238**	P	**P**	**19 23 42.0**	**-0.8**
WOLH	**Wollongong Har**	**35.17**	**237**	P	**P**	**19 23 43.0**	**-0.4**
RMQ	**Roma**	**35.60**	**251**	P	**P**	**19 23 47.2**	**0.0**
RMQ	**Roma**	**35.60**	**251**	P	**P**	**19 23 46.4**	**-0.8**
	comp=Z,62nm,1.6s						
AUUHS	**Ulladulla High**	**35.77**	**236**	P	**P**	**19 23 48.0**	**-0.5**
JOHN	**Johnston Islan**	**35.85**	**6**	IAMs_20	IAMs_20	19 33 42.8	
	comp=Z,2μm,18.0s						
AUDCS	**Dubbo College**	**36.48**	**241**	P	**P**	**19 23 53.3**	**-1.3**
AULRC	**Lightning Ridg**	**36.57**	**246**	P	**P**	**19 23 53.8**	**-1.6**
CNB	**Canberra Mugne**	**36.62**	**236**	P	**P**	**19 23 55.4**	**-0.5**
	comp=Z,5.5nm,1.3s						
AUDAR	**Daramalan Coll**	**36.78**	**236**	P	**P**	**19 23 56.4**	**-0.8**
AUMHS	**Melrose High S**	**36.85**	**236**	P	**P**	**19 23 57.0**	**-0.8**
KRVT	**Keravat (AS076**	**36.87**	**289**	LR	LR	19 37 45.2	
	comp=Z,1μm,21.1s,baz=47,slow=34						
AUMTS	**Mt Stromlo**	**36.91**	**236**	P	**P**	**19 23 57.6**	**-0.7**
CAN	**Canberra**	**36.91**	**236**	P	**P**	**19 23 57.5**	**-0.8**
CAN	**Canberra**	**36.91**	**236**	P	**P**	**19 23 57.5**	**-0.8**
	comp=Z,192nm,1.3s						
CAN	**Canberra**	**36.91**	**236**	P	**P**	**19 23 57.4**	**-0.8**
CAN				pmax	pmax		
	comp=Z,208nm,1.1s						
CAN				MLR	MLR		
	comp=Z,3μm,22.0s						
CAN	**Canberra**	**36.91**	**236**	P	**P**	**19 23 57.4**	**-1.0**
CAN				IAmb	IAmb	19 23 58.9	
	comp=Z,208nm,1.1s						
CAN				IAMs_20	IAMs_20	19 35 59.7	
	comp=Z,3μm,22.0s						
AUAYR	**Ayr State High**	**36.98**	**263**	P	**P**	**19 23 57.7**	**-1.3**
MILA	**Mila**	**37.29**	**234**	P	**P**	**19 23 58.8**	**-2.8**
	comp=Z,28nm,1.4s						
AUSMG	**Snowy Mountain**	**37.52**	**235**	P	**P**	**19 24 03.1**	**-0.5**
CTA	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 05.8**	**-2.0**
CTA	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 06.0**	**-1.8**
	comp=Z,121nm,0.5s,baz=80,slow=9.6,SNR=201						
CTA				LR	LR	19 37 54.4	
	comp=Z,4μm,21.9s,baz=90,slow=33						
	comp=Z,121nm,0.5s						
CTA	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 06.1**	**-1.8**
	comp=Z,133nm,1.0s						
CTAO	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 05.8**	**-2.0**
CTAO	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 06.0**	**-1.8**
CTAO				pmax	pmax		
	comp=Z,573nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,4μm,22.0s						
CTAO	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 06.0**	**-1.8**
CTAO	**Charters Tower**	**38.01**	**262**	P	**P**	**19 24 06.2**	**-1.6**
CMSA	**Cobar Meteorol**	**38.82**	**243**	P	**P**	**19 24 12.6**	**-1.8**
CMSA	**Cobar Meteorol**	**38.82**	**243**	P	**P**	**19 24 12.9**	**-1.5**
	comp=Z,193nm,1.0s						
PMG	**Port Moresby**	**39.41**	**279**	P	**P**	**19 24 19.1**	**-0.4**
PMG	**Port Moresby**	**39.41**	**279**	P	**P**	**19 24 17.3**	**-2.2**
	comp=Z,208nm,1.0s,baz=107,slow=6.5,SNR=24						
PMG				LR	LR	19 38 33.4	
	comp=Z,3μm,20.4s,baz=80,slow=33						
	comp=Z,208nm,1.0s						
PMG	**Port Moresby**	**39.41**	**279**	*ce*P	**P**	**19 24 17.5**	**-2.0**
PMG				pmax	pmax		
	comp=Z,292nm,1.3s						
PMG	**Port Moresby**	**39.41**	**279**	P	**P**	**19 24 17.4**	**-2.2**
PMG	**Port Moresby**	**39.41**	**279**	IAMs_20	IAMs_20	19 38 22.2	
	comp=Z,3μm,18.0s						
PMG	**Port Moresby**	**39.41**	**279**	P	**P**	**19 24 18.0**	**-1.5**
	comp=Z,2μmcomp=Z,256nm,1.1s						
PMG	**Port Moresby**	**39.41**	**279**	P	**P**	**19 24 18.0**	**-1.5**
QLP	**Quilpie**	**39.65**	**251**	P	**P**	**19 24 19.2**	**-2.3**
QLP	**Quilpie**	**39.65**	**251**	P	**P**	**19 24 19.5**	**-2.0**
	comp=Z,297nm,1.3s						
QLP	**Quilpie**	**39.65**	**251**	P	**P**	**19 24 19.6**	**-1.9**
MTSU	**Mount Surprise**	**40.07**	**264**	P	**P**	**19 24 23.3**	**-1.8**
MTSU	**Mount Surprise**	**40.07**	**264**	P	**P**	**19 24 22.9**	**-2.2**
	comp=Z,96nm,1.1s						
MTSU	**Mount Surprise**	**40.07**	**264**	P	**P**	**19 24 23.0**	**-2.1**
CORO	**Coronation Par**	**40.25**	**228**	P	**P**	**19 24 26.8**	**+0.6**
AUMAG	**Moama Anglican**	**40.45**	**236**	P	**P**	**19 24 27.8**	**-0.2**
MOO	**Moorlands**	**40.59**	**226**	P	**P**	**19 24 28.8**	**-0.3**
MOO	**Moorlands**	**40.59**	**226**	P	**P**	**19 24 31.0**	**+2.0**
	comp=Z,103nm,2.9s						
MOO	**Moorlands**	**40.59**	**226**	P	**P**	**19 24 28.2**	**-0.9**
AUTAR	**Taroona High S**	**40.67**	**226**	P	**P**	**19 24 30.2**	**+0.5**
TAU	**Tasmania Unive**	**40.69**	**226**	P	**P**	**19 24 31.2**	**+1.4**
TAU	**Tasmania Unive**	**40.69**	**226**	P	**P**	**19 24 28.9**	**-0.9**
TAU				pmax	pmax		
	comp=Z,226nm,1.6s						
TAU	**Tasmania Unive**	**40.69**	**226**	P	**P**	**19 24 28.9**	**-0.9**
TAU				IAmb	IAmb	19 24 32.0	
	comp=Z,226nm,1.6s						
TAU	**Tasmania Unive**	**40.69**	**226**	P	**P**	**19 24 30.4**	**+0.6**
AUBRN	**Burnie High Sc**	**41.01**	**229**	P	**P**	**19 24 33.5**	**+1.0**
BRAT	**Ballarat**	**41.43**	**235**	P	**P**	**19 24 35.6**	**-0.4**
COEN	**Coen**	**41.92**	**270**	P	**P**	**19 24 39.9**	**-0.5**
COEN	**Coen**	**41.92**	**270**	P	**P**	**19 24 39.4**	**-1.0**
	comp=Z,69nm,1.3s						
COEN	**Coen**	**41.92**	**270**	P	**P**	**19 24 38.9**	**-1.5**
COEN	**Coen**	**41.92**	**270**	P	**P**	**19 24 39.3**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**42.22**	**331**	T	T	20 08 31.9	
	baz=144,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**42.24**	**331**	T	T	20 08 21.3	
	baz=144,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**42.24**	**331**	T	T	20 08 39.5	
	baz=144,slow=76,SNR=15						
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**19 24 41.8**	**-1.6**
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**19 24 42.2**	**-1.2**
	comp=Z,84nm,0.8s,baz=86,slow=8.5,SNR=104						
STKA				LR	LR	19 40 06.5	
	comp=Z,3μm,20.6s,baz=78,slow=33						
	comp=Z,84nm,0.8s						
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**19 24 42.4**	**-1.1**
	comp=Z,698nm,1.2s						
STKA	**Stephens Creek**	**42.32**	**243**	⇑*i*P	**P**	**19 24 42.0**	**-1.4**
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**19 24 42.4**	**-1.

WRKA **Warakurna** 54.06 253 P P 19 26 11.3 -2.9
comp=Z,150nm,1.4s
KNRA **Kununurra** 55.15 264 P P 19 26 20.6 -1.5
comp=Z,144nm,1.1s
FAKI **Fak Fak** 55.53 280 P P 19 26 24.4 -0.6
FAKI **Fak Fak** 55.53 280 IAMs_20 IAMs_20 19 49 07.7
comp=Z,1µm,20.0s
FAKI **Fak Fak** 55.53 280 P P 19 26 24.8 -0.2
comp=Z,117nm,1.4s
FAKI **Fak Fak** 55.53 280 P P 19 26 24.0 -1.0
DRV **Dumont d'Urvil** 56.12 200 P P 19 26 30.2 +1.9
SIJI **Sorong** 57.20 282 LR LR 19 49 26.0
comp=Z,1µm,21.9s,baz=104,slow=34
SIJI **Sorong** 57.20 282 P P 19 26 35.1 -1.8
comp=Z,4µmcomp=Z,384nm,1.2s
SWI **Sorong** 57.21 282 P P 19 26 35.3 -1.6
FITZ **Fitzroy Crossi** 57.57 260 P P 19 26 37.9 -1.5
FITZ **Fitzroy Crossi** 57.57 260 P P 19 26 38.0 -1.5
comp=Z,44nm,0.4s,baz=98,slow=5.5,SNR=347
FITZ S S 19 34 27.9 -7.9
comp=Z,5.5nm,1.0s,baz=184,slow=12,SNR=3.3
FITZ LR LR 19 49 43.5
comp=Z,3µm,21.8s,baz=87,slow=34
comp=Z,44nm,0.4s
FITZ **Fitzroy Crossi** 57.57 260 P P 19 26 38.4 -1.1
comp=Z,35nm,1.6s
FITZ **Fitzroy Crossi** 57.57 260 IAmb IAmb 19 26 39.6
comp=Z,139nm,1.9s
FITZ **Fitzroy Crossi** 57.57 260 P P 19 26 38.3 -1.1
RPN **Rapa Nui** 58.86 111 LR LR 19 45 43.7
comp=Z,1µm,20.8s,baz=314,slow=29
KMBL **Kambalda** 59.11 244 P P 19 26 49.0 -1.1
comp=Z,33nm,2.1s
SBA **Scott Base** 59.54 185 P P 19 26 56.2 +4.0
VNDA **Vanda** 59.68 186 P P 19 26 54.8 +1.7
comp=Z,12nm,1.0s,baz=8.9,slow=6.5,SNR=55
VNDA S S 19 34 58.1 -3.4
comp=Z,0.5nm,0.6s,baz=80,slow=16,SNR=4.2
VNDA LR LR 19 51 27.7
comp=Z,222nm,18.5s,baz=11,slow=35
comp=Z,12nm,1.0s
VNDA **Vanda** 59.68 186 P P 19 26 55.9 +2.8
NLAI **Namlea** 60.23 277 P P 19 26 57.2 -0.8
comp=Z,4µmcomp=Z,328nm,1.1s
SOEI **Soe** 60.88 269 P P 19 27 02.4 -0.1
SOEI **Soe** 60.88 269 P P 19 27 01.6 -0.9
SOEI **Soe** 60.88 269 P P 19 27 02.6 +0.1
comp=Z,4µmcomp=Z,257nm,0.9s
SOEI **Soe** 60.88 269 P P 19 27 02.7 +0.2
BATI **Baumata** 61.32 269 P P 19 27 01.9 -3.6
comp=Z,36nm,0.5s,baz=105,slow=7.0,SNR=18
BATI LR LR 19 53 22.1
comp=Z,1µm,21.2s,baz=127,slow=36
BATI **Baumata** 61.32 269 P P 19 27 02.3 -3.1
comp=Z,2µmcomp=Z,112nm,1.3s
TNTI **Ternate** 61.43 282 P P 19 27 04.6 -1.5
TNTI **Ternate** 61.43 282 P P 19 27 04.4 -1.7
TNTI **Ternate** 61.43 282 P P 19 27 04.8 -1.3
comp=Z,2µmcomp=Z,189nm,1.4s
TNTI **Ternate** 61.43 282 P P 19 27 05.0 -1.1
SANI **Sanana** 61.69 278 P P 19 27 06.5 -1.3
SANI **Sanana** 61.69 278 P P 19 27 06.6 -1.3
comp=Z,2µmcomp=Z,2µmcomp=Z,201nm,1.3s
SANI **Sanana** 61.69 278 P P 19 27 06.3 -1.6
AUALB **St Joseph's Co** 62.14 240 P P 19 27 11.0 +0.4
MBWA **Marble Bar** 62.44 256 P P 19 27 11.0 -1.8
MBWA **Marble Bar** 62.44 256 P P 19 27 11.5 -1.4
comp=Z,162nm,1.2s
MBWA **Marble Bar** 62.44 256 P P 19 27 11.2 -1.6
MBWA **Marble Bar** 62.44 256 P P 19 27 11.4 -1.4
MEEK **Meekatharra** 62.51 249 P P 19 27 11.6 -1.7
MEEK **Meekatharra** 62.51 249 P P 19 27 11.9 -1.4
comp=Z,80nm,1.4s
MEEK **Meekatharra** 62.51 249 P P 19 27 11.7 -1.5
KLBR **Kellerberrin** 62.60 244 P P 19 27 12.8 -1.0
KLBR **Kellerberrin** 62.60 244 P P 19 27 13.2 -0.6
comp=Z,272nm,1.4s
KLBR **Kellerberrin** 62.60 244 P P 19 27 13.2 -0.6
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 15.6 -0.1
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 15.8 +0.1
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 14.8 -0.9
comp=Z,77nm,1.1s,baz=104,slow=7.3,SNR=14
NWAO LR LR 19 53 32.4
comp=Z,1µm,19.8s,baz=92,slow=35
comp=Z,77nm,1.1s
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 15.2 -0.5
comp=Z,269nm,1.5s
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 15.3 -0.4
comp=Z,164nm,1.5s
NWAO **Narrogin (SRO)** 62.89 242 P P 19 27 13.8 -1.8
JCJ **Chichijima** 63.02 316 P P 19 27 15.7 -0.7
JCJ **Chichijima** 63.02 316 LR LR 19 50 28.3
comp=Z,2µm,20.6s,baz=140,slow=32
JCJ **Chichijima** 63.02 316 P P 19 27 15.8 -0.7
MMRI **Maumere** 63.12 270 P P 19 27 17.6 +0.1
comp=Z,2µmcomp=Z,107nm,1.4s
MMRI **Maumere** 63.12 270 P P 19 27 16.4 -1.1
BLDU **Ballidu** 63.60 245 P P 19 27 19.3 -1.2
BLDU **Ballidu** 63.60 245 P P 19 27 19.6 -0.9
comp=Z,120nm,1.7s
BLDU **Ballidu** 63.60 245 P P 19 27 19.6 -0.9
BBSI **Bau Bau** 63.76 273 P P 19 27 23.7 +2.0
comp=Z,2µmcomp=Z,63nm,1.2s
MUN **Mundaring** 63.86 243 P P 19 27 22.2 +0.1
MUN **Mundaring** 63.86 243 P P 19 27 22.4 +0.3
comp=Z,224nm,1.4s
MUN **Mundaring** 63.86 243 P P 19 27 22.4 +0.3
AUHAR **St Anne's Scho** 63.99 242 P P 19 27 23.6 +0.7
KDI **Kendari** 64.21 275 P P 19 27 24.5 -0.1
SGSI **Sangihe** 64.24 284 P P 19 27 23.9 -0.9
comp=Z,1µmcomp=Z,3µmcomp=Z,198nm,0.7s
MORW **Morawa** 64.40 246 P P 19 27 24.8 -0.9
MORW **Morawa** 64.40 246 P P 19 27 25.0 -0.7
comp=Z,112nm,1.5s
MORW **Morawa** 64.40 246 P P 19 27 25.0 -0.7
MORW **Morawa** 64.40 246 P P 19 27 24.9 -0.7
WSI **Waingapu** 64.66 268 P P 19 27 27.2 -0.4
KKSI **Kolaka, Sulawe** 65.05 274 P P 19 27 29.4 -0.7
comp=Z,2µmcomp=Z,63nm,0.6s
LUWI **Luwuk** 65.05 278 P P 19 27 29.9 -0.2
LUWI **Luwuk** 65.05 278 P P 19 27 29.0 -1.1
LUWI **Luwuk** 65.05 278 P P 19 27 30.0 -0.2
comp=Z,4µmcomp=Z,301nm,1.4s
LUWI **Luwuk** 65.05 278 P P 19 27 29.7 -0.4
H01W1 **Cape Leeuwin H** 65.22 240 P P 19 27 32.1 +1.4
baz=103,slow=9.6,SNR=5.7
H01W2 **Cape Leeuwin H** 65.23 240 P P 19 27 32.3 +1.6
baz=103,slow=9.6,SNR=4.6
H01W3 **Cape Leeuwin H** 65.23 240 P P 19 27 32.4 +1.6
baz=103,slow=9.6,SNR=6.2
BSSI **Bau Bau, Buton** 65.52 272 P P 19 27 32.7 -0.5
comp=Z,73nm,1.2s
WBSI **Waikabubak, Su** 65.52 268 P P 19 27 32.7 -0.5
comp=Z,2µmcomp=Z,96nm,1.0s
DAV **Davao City (W)** 65.56 287 LR LR 19 51 38.1
comp=Z,523nm,21.9s,baz=104,slow=32
APSI **Ampana** 66.15 278 P P 19 27 37.7 +0.5
comp=Z,3µmcomp=Z,172nm,1.5s
KAPI **Kappang** 66.57 273 P P 19 27 39.3 -0.6
KAPI **Kappang** 66.57 273 P P 19 27 38.2 -1.7
comp=Z,17nm,0.8s,baz=111,slow=5.1,SNR=6.7
KAPI LR LR 19 54 58.8
comp=Z,318nm,22.0s,baz=116,slow=34
comp=Z,17nm,0.8s
KAPI **Kappang** 66.57 273 *i* P P 19 27 37.7 -2.2
KAPI pmax pmax
comp=Z,126nm,2.7s
KAPI **Kappang** 66.57 273 P P 19 27 38.5 -1.4
KAPI IAmb IAmb 19 27 41.7
comp=Z,46nm,1.2s
KAPI **Kappang** 66.57 273 P P 19 27 40.9 +1.0
DBNI **Kabupaten Domp** 66.87 269 P P 19 27 40.2 -1.7
comp=Z,2µmcomp=Z,187nm,1.1s
SPSI **Sidrap Palu** 66.89 274 P P 19 27 40.4 -1.6
CASY **Casey** 67.06 205 P P 19 27 43.2 +1.1
CASY IAmb IAmb 19 27 44.9
comp=Z,69nm,1.2s
CASY **Casey** 67.06 205 IAMs_20 IAMs_20 19 52 43.0
comp=Z,702nm,18.0s
CASY **Casey** 67.06 205 P P 19 27 43.6 +1.4
GIRL **Giralia** 67.14 253 P P 19 27 44.3 +0.9
comp=Z,101nm,1.8s
PLAI **Plampang** 67.28 268 P P 19 27 43.4 -1.0
PLAI **Plampang** 67.28 268 P P 19 27 43.5 -1.0
comp=Z,3µmcomp=Z,212nm,1.8s
PLAI **Plampang** 67.28 268 P P 19 27 43.7 -0.8

TOLI2 **Tolitoli** 67.67 279 P P 19 27 45.1 -1.8
TOLI2 **Tolitoli** 67.67 279 P P 19 27 44.1 -2.8
TOLI2 IAmb IAmb 19 27 46.4
comp=Z,76nm,1.2s
TOLI2 **Tolitoli** 67.67 279 P P 19 27 44.7 -2.3
PCI **Palu** 67.85 277 P P 19 27 48.6 +0.5
comp=Z,3µmcomp=Z,256nm,1.1s
TWSI **Taliwang, Sumb** 68.15 268 P P 19 27 48.7 -1.3
comp=Z,3µmcomp=Z,203nm,1.8s
JHJ2 **Mitsune** 68.57 319 P P 19 27 52.6 +0.5
JHJ2 **Mitsune** 68.57 319 P P 19 27 51.3 -0.8
KHKI **Kahang-Kahang** 69.46 268 P P 19 27 59.0 +0.9
SRBI **Singaraja** 69.92 268 P P 19 28 02.3 +1.4
comp=Z,3µmcomp=Z,150nm,2.0s
JSG **Sagara** 70.62 319 P P 19 28 05.6 +0.9
JSG **Sagara** 70.62 319 P P 19 28 05.3 +0.6
JSG **Sagara** 70.62 319 P P 19 28 05.5 +0.7
KIWB **Kanaga Island** 70.77 357 P P 19 28 05.9 +0.6
KIWB IAmb IAmb 19 28 07.1
comp=Z,66nm,1.0s
ADK **Adak** 70.78 358 P P 19 28 05.7 +0.4
ADK **Adak** 70.78 358 P P 19 28 04.9 -0.4
ADK pmax pmax
comp=Z,64nm,1.0s
ADK **Adak** 70.78 358 P P 19 28 04.9 -0.4
ADK IAmb IAmb 19 28 06.2
comp=Z,64nm,1.0s
ADK **Adak** 70.78 358 P P 19 28 05.0 -0.4
JAGI **Jajag, Banyuwa** 70.81 267 P P 19 28 05.3 -1.1
JAGI **Jajag, Banyuwa** 70.81 267 P P 19 28 04.0 -2.4
JAGI **Jajag, Banyuwa** 70.81 267 P P 19 28 05.9 -0.5
comp=Z,116nm,1.7s
JAGI **Jajag, Banyuwa** 70.81 267 P P 19 28 05.0 -1.4
QSPA **South Pole Qui** 70.92 180 P P 19 28 08.6 +2.3
comp=Z,37nm,1.0s,baz=45,slow=2.7,SNR=45
QSPA LR LR 19 55 24.0
comp=Z,234nm,19.8s,baz=38,slow=32
comp=Z,37nm,1.0s
QSPA **South Pole Qui** 70.92 180 P P 19 28 08.1 +1.7
ATKA **Atka Island** 71.05 359 P P 19 28 07.2 +0.3
ATKA **Atka Island** 71.05 359 P P 19 28 07.0 +0.1
MYLDM **Lahad Datu** 71.28 283 P P 19 28 11.1 +1.9
MYLDM **Lahad Datu** 71.28 283 P P 19 28 10.9 +1.7
MYLDM **Lahad Datu** 71.28 283 P P 19 28 11.2 +2.0
comp=Z,3µmcomp=Z,174nm,1.6s
BLJI **Banyuglugur** 71.55 268 P P 19 28 10.8 -0.1
comp=Z,3µmcomp=Z,148nm,1.8s
JGF **Kuroka** 71.74 319 P P 19 28 11.2 -0.4
INU **Inuyama** 71.78 319 P P 19 28 11.9 +0.1
INU **Inuyama** 71.78 319 IAmb IAmb 19 28 13.1
comp=Z,64nm,1.1s
INU **Inuyama** 71.78 319 P P 19 28 11.8 0.0
MJAR **Matsushiro Arr** 71.84 321 P P 19 28 11.1 -1.0
comp=Z,37nm,1.0s,baz=157,slow=6.0,SNR=130
MJAR LR LR 19 54 06.2
comp=Z,617nm,21.8s,baz=125,slow=31
comp=Z,37nm,1.0s
MAJO **Matsushiro** 71.84 321 P P 19 28 11.8 -0.4
MAJO **Matsushiro** 71.84 321 *i* P P 19 28 11.7 -0.4
MAJO pmax pmax
comp=Z,81nm,1.2s
MAJO **Matsushiro** 71.84 321 P P 19 28 11.6 -0.6
MAJO IAmb IAmb 19 28 13.2
comp=Z,91nm,1.2s
MAJO **Matsushiro** 71.84 321 P P 19 28 12.1 -0.1
SHEM **Shemya Is, Ala** 72.40 352 P P 19 28 15.7 +0.7
comp=Z,60nm,1.1s,baz=90,slow=8.4,SNR=2.1
SHEM LR LR 19 56 19.6
comp=Z,1µm,19.7s,baz=134,slow=33
comp=Z,60nm,1.1s
SHEM **Shemya Is, Ala** 72.40 352 IAmb IAmb 19 28 41.3
comp=Z,57nm,0.8s
JOW **Kunigami** 72.76 307 P P 19 28 19.0 +1.2
JOW **Kunigami** 72.76 307 LR LR 19 54 09.7
comp=Z,722nm,21.8s,baz=90,slow=31
JMN **Monobe** 72.76 316 P P 19 28 18.4 +0.7
UNV **Unalaska Valle** 72.93 4 P P 19 28 19.1 +1.0
UNV **Unalaska Valle** 72.93 4 IAmb IAmb 19 28 19.2
comp=Z,120nm,1.3s
UNV **Unalaska Valle** 72.93 4 P P 19 28 18.0 -0.2
baz=187
ERM **Erimo** 72.93 328 IAMs_20 IAMs_20 19 56 08.2
comp=Z,813nm,20.0s
JTM **Tenmabayashi** 73.13 325 P P 19 28 20.9 +1.2
SNJI **Sawahan-Nganju** 73.27 267 P P 19 28 21.7 +0.3
comp=Z,3µmcomp=Z,231nm,1.4s
SJI **Sawahan** 73.28 267 P P 19 28 20.9 -0.4
comp=Z,6µmcomp=Z,382nm,1.6s
FARB **Farallon Islan** 73.73 40 IAmb IAmb 19 28 26.0
comp=Z,47nm,1.0s
HULI **Fort Hunter Li** 73.75 42 IAMs_20 IAMs_20 19 52 59.9
comp=Z,651nm,20.0s
JSU **Suzuyama** 73.77 312 P P 19 28 23.8 +0.1
WOJI **Wonogiri, Jawa** 74.05 267 P P 19 28 25.4 -0.3
comp=Z,439nm,1.4s
SAO **San Andreas Ge** 74.08 41 P P 19 28 27.3 +1.9
SAO **San Andreas Ge** 74.08 41 IAMs_20 IAMs_20 19 52 52.8
comp=Z,778nm,22.0s
PKD **Bear Valley Ra** 74.14 42 IAmb IAmb 19 28 28.7
comp=Z,67nm,1.4s
PKD IAMs_20 IAMs_20 19 52 09.3
comp=Z,762nm,22.0s
PMPB **Monarch Peak** 74.14 42 IAmb IAmb 19 28 52.0
comp=Z,87nm,1.3s
BBGB **Big Mountain B** 74.22 41 IAmb IAmb 19 28 29.8
comp=Z,84nm,1.2s
MHC **Mount Hamilton** 74.33 41 IAMs_20 IAMs_20 19 52 17.2
comp=Z,787nm,22.0s
UGM **Wanagama** 74.40 267 P P 19 28 27.7 -0.1
UGM **Wanagama** 74.40 267 P P 19 28 27.8 -0.1
comp=Z,368nm,1.5s
UGM **Wanagama** 74.40 267 P P 19 28 26.7 -1.1
JNU **Nakatsue** 74.41 314 LR LR 19 55 38.2
comp=Z,613nm,21.4s,baz=124,slow=31
CVS **Carmenet Viney** 74.48 39 IAmb IAmb 19 28 30.3
comp=Z,149nm,1.9s
CVS IAMs_20 IAMs_20 19 52 29.2
comp=Z,730nm,22.0s
OSI **Osito Audit: C** 74.50 44 IAMs_20 IAMs_20 19 52 30.9
comp=Z,812nm,22.0s
HOPS **Hopland Field** 74.53 38 IAmb IAmb 19 28 31.0
comp=Z,90nm,1.3s
HOPS IAMs_20 IAMs_20 19 53 08.7
comp=Z,933nm,21.0s
CBX **Cerro Bola** 74.55 47 IAmb IAmb 19 28 31.1
comp=Z,118nm,1.6s
PASC **Pasadena Art C** 74.60 45 IAMs_20 IAMs_20 19 52 33.4
comp=Z,827nm,22.0s
KCPM **Cahto Peak** 74.69 38 IAmb IAmb 19 28 32.1
comp=Z,105nm,1.4s
KCPM IAMs_20 IAMs_20 19 53 12.8
comp=Z,1µm,21.0s
MWC **Mount Wilson** 74.71 45 IAMs_20 IAMs_20 19 52 26.5
comp=Z,892nm,22.0s
SMRI **Semarang** 74.74 268 P P 19 28 29.8 +0.1
SMRI **Semarang** 74.74 268 P P 19 28 30.1 +0.3
comp=Z,237nm,1.3s
SMRI **Semarang** 74.74 268 P P 19 28 29.9 +0.1
JKA **Kamikawa-asahi** 74.74 329 P P 19 28 30.4 +1.4
ASAJ **Asahikawa** 74.75 329 LR LR 19 56 50.6
comp=Z,718nm,21.2s,baz=155,slow=32
ASAJ **Asahikawa** 74.75 329 P P 19 28 30.5 +1.4
ESJX **Sierra Juarez** 74.88 48 IAmb IAmb 19 28 33.4
comp=Z,66nm,1.1s
KMPM **Mount Pierce** 74.88 37 IAmb IAmb 19 28 33.2
comp=Z,110nm,1.2s
LPIG **La Paz** 74.96 57 LR LR 19 53 17.9
comp=Z,1µm,21.5s,baz=226,slow=29
BFSC **Mount Baldy Ra** 74.99 45 IAMs_20 IAMs_20 19 52 44.8
comp=Z,849nm,22.0s
TPO **Tropico Hills** 74.99 44 IAmb IAmb 19 28 33.6
comp=Z,131nm,1.4s
SDPT **Sand Point** 75.00 8 P P 19 28 30.6 +0.4
baz=193
JCC **Jacoby Creek,** 75.19 37 IAMs_20 IAMs_20 19 53 39.0
comp=Z,954nm,22.0s
BORC **Borrego Spring** 75.27 47 IAmb IAmb 19 28 35.1
comp=Z,64nm,1.3s
DNR **Dunn Ranch,Anz** 75.29 46 IAmb IAmb 19 28 35.5
comp=Z,65nm,1.1s
ISA **Isabella, Lake** 75.30 44 IAmb IAmb 19 28 35.5
comp=Z,74nm,1.2s
KHMM **Horse Mountain** 75.40 37 IAmb IAmb 19 28 36.3
comp=Z,62nm,1.2s
KHMM IAMs_20 IAMs_20 19 53 23.4
comp=Z,1µm,22.0s

PFO **Pinyon Flats O** 75.44 46 LR LR 19 53 42.6
comp=Z,654nm,21.0s,baz=254,slow=29
PFO **Pinyon Flats O** 75.44 46 *i* P P 19 28 34.5 +1.0
PFO pmax pmax
comp=Z,79nm,1.4s
PFO **Pinyon Flats O** 75.44 46 P P 19 28 34.3 +0.8
PFO **Pinyon Flats O** 75.44 46 IAMs_20 IAMs_20 19 53 20.7
comp=Z,685nm,21.0s
O02D **Mt. Diablo Mer** 75.48 38 IAmb IAmb 19 28 36.9
comp=Z,69nm,1.3s
KHBM **Hayfork Bally** 75.55 37 IAmb IAmb 19 28 37.0
comp=Z,115nm,1.8s
LRMC **Laurel Mtn Rad** 75.70 44 IAmb IAmb 19 28 37.6
comp=Z,58nm,1.3s
LRMC IAMs_20 IAMs_20 19 53 31.7
comp=Z,762nm,21.0s
PET **Petropavlovsk** 75.86 343 *ce* P P 19 28 34.4 -0.8
PET pmax pmax
comp=Z,15nm,1.3s
PET **Petropavlovsk** 75.86 343 P P 19 28 37.1 +1.9
PET IAmb IAmb 19 28 59.8
comp=Z,126nm,1.7s
CCCA **Chr Cany lake** 75.94 44 IAmb IAmb 19 28 39.2
comp=Z,112nm,1.4s
BELC **Belle Mtn. Jos** 75.97 46 IAMs_20 IAMs_20 19 53 26.9
comp=Z,713nm,22.0s
CWC **Cottonwood Cre** 76.02 43 IAmb IAmb 19 28 39.5
comp=Z,55nm,1.3s
S14K **Fog Glacier** 76.03 8 P P 19 28 36.5 +0.3
baz=193
SPIA **Saint Paul Isl** 76.07 2 P P 19 28 36.9 +0.6
baz=183
KPJI **Karang Pucung** 76.08 267 P P 19 28 36.8 -0.6
comp=Z,3µmcomp=Z,183nm,1.3s
O03E **Paynes Creek** 76.13 38 IAMs_20 IAMs_20 19 54 11.7
comp=Z,883nm,22.0s
BC3 **Big Chuckawall** 76.15 47 IAmb IAmb 19 28 40.7
comp=Z,105nm,1.6s
BC3 IAMs_20 IAMs_20 19 53 19.6
comp=Z,702nm,22.0s
CHIR **Chirikof Islan** 76.17 10 P P 19 28 37.1 +0.2
baz=197
MPMC **Manual Prospec** 76.17 44 IAmb IAmb 19 28 40.6
comp=Z,63nm,1.1s
MPMC IAMs_20 IAMs_20 19 53 47.1
comp=Z,780nm,22.0s
PEA0B **Petropavlovsk-** 76.20 343 *i* P P 19 28 38.2 +1.0
PETK **Petropavlovsk-** 76.20 343 P P 19 28 37.5 +0.3
comp=Z,22nm,0.9s,baz=118,slow=7.5,SNR=29
comp=Z,22nm,0.9s
PETK **Petropavlovsk-** 76.20 343 P P 19 28 37.2 +0.1
JTU **Tsushima** 76.22 314 P P 19 28 37.5 -0.2
M02C **Callahan** 76.24 37 IAmb IAmb 19 28 41.1
comp=Z,104nm,1.6s
M02C IAMs_20 IAMs_20 19 54 02.7
comp=Z,1µm,22.0s
TIN **Tinemaha, Big** 76.29 42 IAMs_20 IAMs_20 19 53 49.1
comp=Z,679nm,22.0s
L02F **Cave Junction** 76.32 36 IAmb IAmb 19 28 41.4
comp=Z,70nm,1.3s
PIX **Pinacate** 76.39 49 IAmb IAmb 19 28 41.4
comp=Z,60nm,1.1s
CMJI **Cimerak** 76.40 266 P P 19 28 38.2 -1.0
comp=Z,3µmcomp=Z,240nm,1.4s
WAKR **Walker** 76.41 41 IAmb IAmb 19 28 42.0
comp=Z,65nm,1.2s
TWGBT **Beinan** 76.42 300 P P 19 28 38.4 -0.7
TWG **Pinlang** 76.42 300 IAmb IAmb 19 28 52.6
comp=Z,79nm,1.3s
YULB **Yu-li** 76.51 301 P P 19 28 39.4 -0.2
YULB **Yu-li** 76.51 301 IAMs_20 IAMs_20 19 57 53.4
comp=Z,690nm,21.0s
QSM **Queen of Sheba** 76.52 44 IAmb IAmb 19 28 42.1
comp=Z,57nm,1.2s
YBH **Yreka Blue Hor** 76.54 37 LR LR 19 54 34.3
comp=Z,994nm,22.0s,baz=226,slow=29
YBH **Yreka Blue Hor** 76.54 37 IAmb IAmb 19 28 42.6
comp=Z,49nm,1.0s
M03C **McCloud** 76.58 37 IAmb IAmb 19 29 06.3
comp=Z,105nm,1.2s
NACB **Ninganchiao** 76.63 302 P P 19 28 39.5 -0.8
DSP **Deep Springs** 76.64 42 IAmb IAmb 19 28 43.3
comp=Z,79nm,1.4s
IRM **Iron Mountain** 76.64 46 IAmb IAmb 19 28 43.3
comp=Z,85nm,1.3s
HATC **Hat Creek Radi** 76.66 38 IAMs_20 IAMs_20 19 54 16.9
comp=Z,1µm,22.0s
PNTR **Pine Nut** 76.68 40 IAmb IAmb 19 28 43.3
comp=Z,67nm,1.0s
YSS **Yuzhno-Sakhali** 76.76 331 P P 19 28 40.8 +0.3
YSS **Yuzhno-Sakhali** 76.76 331 *ce* P P 19 28 41.3 +0.8
YSS *e* S S 19 38 19.2 -6.4
YSS *e** SS ScS 19 38 58.1 +3.4
YSS pmax pmax
comp=Z,60nm,1.2s
YSS pmax pmax
comp=Z,300nm,2.7s
YSS smax smax
comp=N,400nm,9.6s
YSS smax smax
comp=E,500nm,9.4s
YSS **Yuzhno-Sakhali** 76.76 331 P P 19 28 40.5 0.0
GWY **Greenwater Val** 76.78 44 IAmb IAmb 19 28 43.7
comp=Z,72nm,1.6s
FURC **Furnace Creek,** 76.82 44 IAmb IAmb 19 28 43.9
comp=Z,158nm,1.9s
FURC IAMs_20 IAMs_20 19 54 08.2
comp=Z,784nm,22.0s
LHV **Little Huntoon** 76.84 41 IAmb IAmb 19 28 44.4
comp=Z,82nm,1.2s
BLYC **Blythe** 76.84 47 IAmb IAmb 19 28 44.3
comp=Z,61nm,1.2s
SHOC **Shoshone, Teco** 76.88 44 IAMs_20 IAMs_20 19 53 54.8
comp=Z,760nm,22.0s
JCJI **Jatiwangi** 76.96 268 P P 19 28 42.4 0.0
SSLB **Suanglung** 76.97 301 P P 19 28 41.6 -0.7
SSLB **Suanglung** 76.97 301 IAmb IAmb 19 28 42.4
comp=Z,89nm,1.3s
SSLB IAMs_20 IAMs_20 19 58 20.7
comp=Z,815nm,21.0s
TPUB **Ta-pu** 77.01 300 P P 19 28 41.1 -1.4
TPUB **Ta-pu** 77.01 300 IAMs_20 IAMs_20 19 57 55.7
comp=Z,687nm,21.0s
YHNB **Yeheng** 77.04 302 P P 19 28 43.3 +0.6
YHNB **Yeheng** 77.04 302 IAMs_20 IAMs_20 19 57 48.5
comp=Z,943nm,21.0s
GMN **Gold Mountain** 77.06 43 IAmb IAmb 19 28 45.5
comp=Z,74nm,1.3s
NVAR **Mina Array Bea** 77.07 41 P P 19 28 44.2 +1.4
comp=Z,38nm,0.9s,baz=226,slow=9.0,SNR=147
NVAR LR LR 19 55 43.6
comp=Z,664nm,21.0s,baz=256,slow=30
comp=Z,38nm,0.9s
NVAR **Mina Array Bea** 77.07 41 P P 19 28 44.6 +1.8
L04D **Klamath Falls** 77.09 36 IAmb IAmb 19 28 45.4
comp=Z,89nm,1.1s
SII **Sitkinak Islan** 77.12 11 P P 19 28 42.6 +0.2
baz=199
MTPC **Mountain Pass** 77.12 45 IAmb IAmb 19 28 46.1
comp=Z,65nm,1.4s
NV11 **Mina Array Sit** 77.17 41 IAmb IAmb 19 28 46.0
comp=Z,108nm,1.2s
WCT **Wildcat Mounta** 77.17 43 IAmb IAmb 19 28 46.1
comp=Z,66nm,1.6s
PAHR **Pah Rah Range** 77.19 40 IAmb IAmb 19 28 46.1
comp=Z,47nm,1.1s
BBJI **Bungbulang** 77.25 266 P P 19 28 42.8 -1.3
BBJI **Bungbulang** 77.25 266 P P 19 28 43.1 -1.0
BBJI **Bungbulang** 77.25 266 P P 19 28 42.8 -1.3
comp=Z,2µmcomp=Z,160nm,1.4s
LEM **Lembang** 77.47 267 LR LR 20 02 26.4
comp=Z,529nm,21.9s,baz=126,slow=35
I03D **Drain, OR** 77.50 35 IAmb IAmb 19 28 47.6
comp=Z,84nm,1.4s
TPNV **Topopah Spring** 77.50 44 IAmb IAmb 19 28 48.2
comp=Z,65nm,1.3s
TPNV IAMs_20 IAMs_20 19 54 30.3
comp=Z,884nm,22.0s
I02E **Swisshome, OR** 77.51 34 IAmb IAmb 19 29 11.7
comp=Z,59nm,1.2s
OHAK **Old Harbor** 77.91 11 P P 19 28 48.0 +1.3
OHAK **Old Harbor** 77.91 11 IAmb IAmb 19 29 01.5
comp=Z,72nm,1.4s
OHAK **Old Harbor** 77.91 11 P P 19 28 47.2 +0.5
baz=199
Y14A **Wickenburg** 78.00 48 IAmb IAmb 19 28 50.8
comp=Z,50nm,1.1s

BUCK	**Buck Mountain**	78.03	34	IAmb	IAmb	19 29 14.4			
	comp=Z,67nm,1.2s								
XMI	**Christmas Isla**	78.19	263	P	**P**	**19 28 50.0 +0.7**			
K05A	**Summer Lake**	78.22	37	IAmb	IAmb	19 28 52.0			
	comp=Z,95nm,1.1s								
S11A	**Rachel**	78.23	43	IAmb	IAmb	19 29 15.6			
	comp=Z,104nm,1.2s								
CBJI	**Citeko**	78.33	267	P	**P**	**19 28 48.6 -1.4**			
	comp=Z,318nm,1.1s								
DBJI	**Dramaga**	78.38	267	P	**P**	**19 28 49.8 -0.6**			
	comp=Z,423nm,1.4s								
H04D	**Lebanon**	78.38	34	IAmb	IAmb	19 28 52.5			
	comp=Z,75nm,1.3s								
SKJI	**Sukabumi**	78.42	267	P	**P**	**19 28 50.0 -0.6**			
PRN	**Pahroc Range**	78.55	44	IAmb	IAmb	19 28 54.3			
	comp=Z,99nm,1.2s								
G03D	**McMinnville, O**	78.56	34	IAmb	IAmb	19 28 53.4			
	comp=Z,77nm,1.1s								
KDAK	**Kodiak Island**	78.56	11	LR	LR	19 56 26.8			
	comp=Z,959nm,21.7s,baz=213,slow=30								
KDAK	**Kodiak Island**	78.56	11	P	**P**	**19 28 50.8 +0.5**			
KDAK				pmax	pmax				
	comp=Z,215nm,1.8s								
KDAK				MLR	MLR				
	comp=Z,1µm,22.0s								
KDAK	**Kodiak Island**	78.56	11	P	**P**	**19 28 50.8 +0.5**			
KDAK	**Kodiak Island**	78.56	11	IAMs_20	IAMs_20	19 55 53.4			
	comp=Z,1µm,22.0s								
KDAK	**Kodiak Island**	78.56	11	P	**P**	**19 28 50.7 +0.4**			
	baz=200								
WIFE	**Three Sisters-**	78.57	35	IAmb	IAmb	19 28 53.7			
	comp=Z,62nm,1.2s								
TNG	**Tangerang**	78.59	267	P	**P**	**19 28 52.2 +0.7**			
	comp=Z,541nm,2.0s								
TPI	**Tanjungpandan**	78.72	271	P	**P**	**19 28 52.3 +0.1**			
	comp=Z,2µmcomp=Z,144nm,1.3s								
TUC	**Tucson**	78.72	50	P	**P**	**19 28 52.7 +0.8**			
TUC				pmax	pmax				
	comp=Z,57nm,1.1s								
TUC				MLR	MLR				
	comp=Z,500nm,21.0s								
TUC	**Tucson**	78.72	50	P	**P**	**19 28 52.7 +0.8**			
TUC				IAmb	IAmb	19 28 55.4			
	comp=Z,57nm,1.1s								
O14K	**Tigyukauivet M**	78.74	6	IAMs_20	IAMs_20	19 56 41.1			
	comp=Z,739nm,22.0s								
O14K	**Tigyukauivet M**	78.74	6	P	**P**	**19 28 51.5 +0.3**			
	baz=192								
H04A	**Detroit Lake**	78.78	34	IAmb	IAmb	19 28 54.1			
	comp=Z,133nm,1.8s								
O15K	**Ungalikthiuk R**	78.82	7	IAMs_20	IAMs_20	19 56 08.3			
	comp=Z,926nm,22.0s								
O15K	**Ungalikthiuk R**	78.82	7	P	**P**	**19 28 51.8 +0.1**			
	baz=193								
KSRS	**Korea Array**	78.87	316	P	**P**	**19 28 52.4 -0.1**			
	comp=Z,76nm,1.2s,baz=134,slow=5.8,SNR=121								
KSRS				LR	LR	19 58 05.6			
	comp=Z,439nm,21.8s,baz=140,slow=31								
	comp=Z,76nm,1.2s								
PINE	**Pine Mountain**	78.88	36	IAmb	IAmb	19 28 55.6			
	comp=Z,88nm,1.0s								
KSAR	**Wonju Array Be**	78.89	316	P	**P**	**19 28 53.4 +0.8**			
KSAR	**Wonju Array Be**	78.89	316	P	**P**	**19 28 53.4 +0.8**			
F03A	**Seaside**	78.89	33	IAmb	IAmb	19 28 55.2			
	comp=Z,85nm,1.3s								
P16K	**Nushagak River**	78.91	8	IAMs_20	IAMs_20	19 55 46.5			
	comp=Z,739nm,22.0s								
P16K	**Nushagak River**	78.91	8	P	**P**	**19 28 52.2 +0.1**			
	baz=195								
BMN	**Battle Mountai**	78.95	40	IAmb	IAmb	19 28 55.7			
	comp=Z,71nm,1.1s								
G04A	**Mulino**	78.97	34	IAmb	IAmb	19 28 56.4			
	comp=Z,51nm,0.9s								
Q18K	**Katmai Hardscr**	78.97	10	P	**P**	**19 28 52.8 +0.1**			
	baz=198								
SBJI	**Serang**	79.10	267	P	**P**	**19 28 54.0 -0.3**			
P17K	**Kvichak River**	79.28	9	IAMs_20	IAMs_20	20 01 44.4			
	comp=Z,631nm,19.0s								
P17K	**Kvichak River**	79.28	9	P	**P**	**19 28 54.5 +0.3**			
	baz=196								
WVOR	**Wild Horse Val**	79.32	38	P	**P**	**19 28 56.4 +1.4**			
WVOR	**Wild Horse Val**	79.32	38	IAmb	IAmb	19 28 57.6			
	comp=Z,52nm,1.0s								
WVOR				IAMs_20	IAMs_20	19 55 41.4			
	comp=Z,983nm,22.0s								
319A	**Douglas**	79.35	52	IAmb	IAmb	19 28 58.9			
	comp=Z,77nm,1.1s								
N14K	**Kuskokwak Cree**	79.36	6	IAMs_20	IAMs_20	19 56 49.4			
	comp=Z,650nm,22.0s								
N14K	**Kuskokwak Cree**	79.36	6	P	**P**	**19 28 55.1 +0.6**			
	baz=191								
CGJI	**Cibinong**	79.36	267	P	**P**	**19 28 54.5 -1.2**			
O16K	**Kokwok River B**	79.44	8	IAMs_20	IAMs_20	19 57 21.6			
	comp=Z,639nm,21.0s								
O16K	**Kokwok River B**	79.44	8	P	**P**	**19 28 55.0 0.0**			
	baz=195,SNR=12								
M11K	**Mekoryuk**	79.46	4	IAmb	IAmb	19 28 58.2			
	comp=Z,72nm,1.2s								
M11K	**Mekoryuk**	79.46	4	P	**P**	**19 28 55.5 +0.3**			
	baz=187								
Q19K	**Cape Douglas,**	79.46	10	IAMs_20	IAMs_20	19 57 11.2			
	comp=Z,956nm,21.0s								
Q19K	**Cape Douglas,**	79.46	10	P	**P**	**19 28 55.5 +0.2**			
	baz=199								
WISH	**Wishkah**	79.59	32	IAmb	IAmb	19 29 23.2			
	comp=Z,173nm,1.8s								
G05A	**Wamic**	79.61	34	IAmb	IAmb	19 29 22.1			
	comp=Z,89nm,1.5s								
P18K	**Big Mountain,**	79.65	9	P	**P**	**19 28 56.3 0.0**			
	baz=197								
M13K	**Dall Lake**	79.69	5	IAMs_20	IAMs_20	20 02 05.2			
	comp=Z,645nm,19.0s								
M13K	**Dall Lake**	79.69	5	P	**P**	**19 28 57.4 +1.0**			
	baz=190,SNR=5.4								
TYV	**Tymovskoe**	79.70	333	*e*P	**P**	**19 28 56.8 +0.1**			
TYV				*e*S	**S**	**19 38 53.5 -3.6**			
TYV				pmax	pmax				
	comp=Z,45nm,1.2s								
TYV				pmax	pmax				
	comp=Z,400nm,2.5s								
TYV				smax	smax				
	comp=N,400nm,5.8s								
TYV				smax	smax				
	comp=E,500nm,5.8s								
INCN	**Inchon**	79.74	316	P	**P**	**19 28 58.5 +1.2**			
INCN	**Inchon**	79.74	316	P	**P**	**19 28 58.1 +0.8**			
INCN				pmax	pmax				
	comp=Z,188nm,1.4s								
INCN				MLR	MLR				
	comp=Z,600nm,20.0s								
INCN	**Inchon**	79.74	316	P	**P**	**19 28 58.1 +0.8**			
INCN	**Inchon**	79.74	316	IAMs_20	IAMs_20	19 59 39.7			
	comp=Z,631nm,20.0s								
O17K	**Kolganek Bris**	79.75	8	P	**P**	**19 28 57.0 +0.3**			
	baz=196								
N15K	**Kwethluk River**	79.76	7	IAMs_20	IAMs_20	19 57 00.1			
	comp=Z,918nm,22.0s								
N15K	**Kwethluk River**	79.76	7	P	**P**	**19 28 57.6 +0.8**			
	baz=193								
C03A	**Quillayute Air**	79.77	31	IAmb	IAmb	19 29 00.7			
	comp=Z,121nm,1.3s								
KNB	**Kanab**	79.80	45	IAmb	IAmb	19 29 01.3			
	comp=Z,72nm,1.2s								
U15A	**North Rim**	79.84	46	IAmb	IAmb	19 29 01.7			
	comp=Z,95nm,1.3s								
HG4B	**Hotspring**	80.02	25	IAmb	IAmb	19 29 01.1			
	comp=Z,68nm,1.2s								
HOLB	**Holberg**	80.05	27	IAmb	IAmb	19 29 01.2			
	comp=Z,72nm,1.0s								
O18K	**Koktuh Hills**	80.09	9	IAmb	IAmb	19 29 00.5			
	comp=Z,91nm,1.0s								
O18K				IAMs_20	IAMs_20	19 57 18.9			
	comp=Z,634nm,21.0s								
O18K	**Koktuh Hills**	80.09	9	P	**P**	**19 28 59.4 +0.7**			
	baz=197								
PSTR	**Posyet**	80.13	322	*i* P	**P**	**19 28 58.8 -0.4**			
M14K	**Bethel**	80.14	6	IAmb	IAmb	19 29 14.6			
	comp=Z,170nm,1.4s								
M14K	**Bethel**	80.14	6	P	**P**	**19 28 59.8 +1.0**			
	baz=191,SNR=10								
BLSI	**Bandar Lampung**	80.17	268	P	**P**	**19 28 58.9 -1.2**			
	comp=Z,216nm,1.1s								
N16K	**Nishlik Lake**	80.21	7	P	**P**	**19 28 59.5 +0.2**			
	baz=194								
M15K	**Kasigluk River**	80.21	6	P	**P**	**19 29 00.0 +0.8**			
	baz=192,SNR=30								
P19K	**Oil Pt**	80.22	10	P	**P**	**19 28 59.5 +0.2**			
	baz=199								
BELA	**Belgrano 2**	80.30	172	P	**P**	**19 29 00.7 +0.9**			
ELK	**Elko**	80.35	41	LR	LR	20 01 14.4			
	comp=Z,280nm,18.1s,baz=202,slow=33								
ELK	**Elko**	80.35	41	P	**P**	**19 29 02.0 +1.2**			
ELK	**Elko**	80.35	41	IAMs_20	IAMs_20	19 56 33.7			
	comp=Z,639nm,22.0s								
MOBC	**Moresby Island**	80.38	24	IAmb	IAmb	19 29 25.8			
	comp=Z,86nm,1.5s								
PKCU	**Pink Cliffs**	80.38	45	IAmb	IAmb	19 29 05.2			
	comp=Z,120nm,1.2s								
USA0B	**Ussuriysk Arra**	80.41	323	*i* P	**P**	**19 29 01.1 +0.4**			
USA0B	**Ussuriysk Arra**	80.41	323	IAmb	IAmb	19 29 04.2			
	comp=Z,94nm,1.6s								
USRK	**Ussuriysk Ar.**	80.41	323	P	**P**	**19 29 01.0 +0.3**			
	comp=Z,9.0nm,0.9s,baz=136,slow=1.2,SNR=24								
USRK				LR	LR	20 00 13.5			
	comp=Z,868nm,20.3s,baz=134,slow=32								
	comp=Z,9.0nm,0.9s								
USRK	**Ussuriysk Ar.**	80.41	323	P	**P**	**19 29 00.7 0.0**			
USRK	**Ussuriysk Ar.**	80.41	323	P	**P**	**19 29 00.7 0.0**			
N17K	**Nushagak Hills**	80.46	8	P	**P**	**19 29 01.1 +0.5**			
	baz=196								
HHU	**Hamhung**	80.53	318	P	**P**	**19 29 02.5 +1.1**			
HHU				S	**S**	**19 39 07.3 +1.0**			
HHU				AmB					
	comp=Z,649nm,2.0s								
O19K	**Port Alsworth**	80.56	9	IAMs_20	IAMs_20	19 57 33.1			
	comp=Z,746nm,21.0s								
O19K	**Port Alsworth**	80.56	9	P	**P**	**19 29 01.6 +0.6**			
	baz=198,SNR=9.3								
HJU	**Haeju**	80.65	316	P	**P**	**19 29 02.6 +0.5**			
HJU				S	**S**	**19 39 08.3 +0.7**			
HJU				AmB					
	comp=Z,531nm,2.0s								
L14K	**Kuka Creek**	80.66	5	P	**P**	**19 29 02.9 +1.3**			
	baz=190,SNR=11								
ZAIG	**Zacatecas**	80.68	62	IAmb	IAmb	19 29 06.8			
	comp=Z,95nm,1.7s								
M16K	**Timber Creek**	80.72	7	IAmb	IAmb	19 29 05.0			
	comp=Z,106nm,0.9s								
M16K				IAMs_20	IAMs_20	19 57 27.6			
	comp=Z,837nm,22.0s								
M16K	**Timber Creek**	80.72	7	P	**P**	**19 29 03.0 +1.0**			
	baz=194,SNR=30								
O20K	**Slope Mountain**	80.72	10	P	**P**	**19 29 02.8 +0.6**			
	baz=200,SNR=7.7								
BRLK	**Bradley Lake**	80.73	11	IAMs_20	IAMs_20	19 58 06.4			
	comp=Z,871nm,20.0s								
BRSE	**Bradley Lake S**	80.74	11	P	**P**	**19 29 03.0 +0.9**			
	baz=202,SNR=9.8								
PMSA	**Palmer Station**	80.75	156	LR	LR	20 01 12.0			
	comp=Z,347nm,18.1s,baz=246,slow=33								
PMSA	**Palmer Station**	80.75	156	*e*P	**P**	**19 29 02.9 +0.6**			
N18K	**Kilae Creek**	80.79	9	IAMs_20	IAMs_20	19 58 24.2			
	comp=Z,584nm,20.0s								
N18K	**Kilae Creek**	80.79	9	P	**P**	**19 29 02.9 +0.6**			
	baz=197								
MTPU	**Mount Pierson**	80.79	44	IAmb	IAmb	19 29 07.3			
	comp=Z,75nm,1.2s								
KASI	**Kota Agung**	80.83	267	P	**P**	**19 29 02.8 -0.9**			
CBB	**Campbell River**	80.85	29	IAmb	IAmb	19 29 05.7			
	comp=Z,72nm,1.1s								
W18A	**Petrified Fore**	80.92	48	IAmb	IAmb	19 29 07.3			
	comp=Z,114nm,1.9s								
G08A	**Pilot Rock**	80.92	36	IAmb	IAmb	19 29 06.1			
	comp=Z,71nm,1.1s								
TCRU	**Three Creeks R**	80.92	44	IAmb	IAmb	19 29 07.4			
	comp=Z,69nm,1.1s								
RED	**Redoubt Volcan**	81.02	10	IAmb	IAmb	19 29 04.4			
	comp=Z,47nm,1.0s								
121A	**Cookes Peak, D**	81.02	51	IAmb	IAmb	19 29 08.3			
	comp=Z,62nm,1.3s								
K13K	**Kusilvak Mount**	81.10	4	P	**P**	**19 29 05.6 +1.7**			
	baz=188,SNR=6.4								
L15K	**Ungalak Mounta**	81.10	6	P	**P**	**19 29 05.5 +1.6**			
	baz=191,SNR=30								
N19K	**Bonanza Creek**	81.12	9	IAmb	IAmb	19 29 05.7			
	comp=Z,57nm,1.2s								
N19K				IAMs_20	IAMs_20	19 58 45.0			
	comp=Z,773nm,21.0s								
N19K	**Bonanza Creek**	81.12	9	P	**P**	**19 29 04.5 +0.3**			
	baz=198,SNR=14								
PYAG	**Pyongyang**	81.18	316	P	**P**	**19 29 06.2 +1.3**			
PYAG				S	**S**	**19 39 14.2 +1.1**			
PYAG				AmB					
	comp=Z,539nm,1.8s								
BBB	**Bella Bella**	81.19	26	LR	LR	19 57 46.2			
	comp=Z,590nm,20.8s,baz=221,slow=30								
BBB	**Bella Bella**	81.19	26	IAmb	IAmb	19 29 07.2			
	comp=Z,65nm,1.1s								
E07A	**Sunnyside**	81.24	34	IAmb	IAmb	19 29 07.8			
	comp=Z,58nm,1.0s								
M17K	**Holitna River**	81.28	8	IAmb	IAmb	19 29 07.3			
	comp=Z,52nm,0.9s								
M17K				IAMs_20	IAMs_20	19 58 08.1			
	comp=Z,724nm,21.0s								
M17K	**Holitna River**	81.28	8	P	**P**	**19 29 06.8 +1.8**			
	baz=195,SNR=15								
HAWA	**Hanford**	81.31	34	IAmb	IAmb	19 29 08.1			
	comp=Z,58nm,1.1s								
SEW	**Seward**	81.32	12	IAMs_20	IAMs_20	19 59 00.4			
	comp=Z,750nm,20.0s								
SEW	**Seward**	81.32	12	P	**P**	**19 29 06.0 +0.9**			
	baz=203,SNR=5.5								
L16K	**Owhat River**	81.34	7	IAmb	IAmb	19 29 07.6			
	comp=Z,53nm,1.1s								
L16K				IAMs_20	IAMs_20	19 57 58.8			
	comp=Z,812nm,22.0s								
L16K	**Owhat River**	81.34	7	P	**P**	**19 29 07.0 +1.8**			
	baz=193,SNR=22								
Q23K	**Middleton Isla**	81.35	14	P	**P**	**19 29 05.8 +0.5**			
	baz=206								
MID	**Middleton Isla**	81.35	14	IAMs_20	IAMs_20	19 57 59.2			
	comp=Z,726nm,21.0s								
PMBI	**Palembang**	81.39	270	P	**P**	**19 29 07.7 +1.1**			
PMBI	**Palembang**	81.39	270	IAMs_20	IAMs_20	20 04 45.1			
	comp=Z,712nm,21.0s								
PMBI	**Palembang**	81.39	270	P	**P**	**19 29 07.8 +1.1**			
	comp=Z,6µmcomp=Z,183nm,1.0s								
MDSI	**Maura Dua**	81.45	268	P	**P**	**19 29 05.4 -1.6**			
	comp=Z,2µmcomp=Z,131nm,1.7s								
WAH2	**Wahluke Slope**	81.52	34	IAmb	IAmb	19 29 09.1			
	comp=Z,89nm,1.5s								
SLKM	**Skilak Lake**	81.55	11	IAmb	IAmb	19 29 08.2			
	comp=Z,93nm,1.0s								
SLKM				IAMs_20	IAMs_20	19 59 02.5			
	comp=Z,639nm,21.0s								
BMO	**Blue Mountains**	81.57	37	P	**P**	**19 29 08.0 +1.0**			
BMO	**Blue Mountains**	81.57	37	IAMs_20	IAMs_20	19 57 17.8			
	comp=Z,997nm,22.0s								
M18K	**Stony River**	81.58	8	P	**P**	**19 29 07.4 +0.9**			
	baz=197,SNR=8.1								
EPT	**El Paso**	81.61	52	IAMs_20	IAMs_20	19 56 07.3			
	comp=Z,759nm,22.0s								
O22K	**Cooper Landing**	81.62	12	IAMs_20	IAMs_20	19 57 36.2			
	comp=Z,723nm,22.0s								
O22K	**Cooper Landing**	81.62	12	P	**P**	**19 29 07.4 +0.7**			
	baz=202								
CAPN	**Captain Cook N**	81.62	11	P	**P**	**19 29 07.8 +1.1**			
	baz=201								
P23K	**Montague Islan**	81.64	13	IAmb	IAmb	19 29 08.8			
	comp=Z,74nm,1.3s								
P23K	**Montague Islan**	81.64	13	P	**P**	**19 29 07.8 +1.0**			
	baz=205,SNR=6.0								
K15K	**Wolf Creek Mou**	81.70	6	IAMs_20	IAMs_20	20 03 27.5			
	comp=Z,595nm,19.0s								
K15K	**Wolf Creek Mou**	81.70	6	P	**P**	**19 29 09.0 +1.9**			
	baz=191,SNR=61								
CRAG	**Craig**	81.77	22	P	**P**	**19 29 09.3 +1.6**			
CRAG	**Craig**	81.77	22	IAmb	IAmb	19 29 10.7			
	comp=Z,69nm,1.3s								
CRAG	**Craig**	81.77	22	P	**P**	**19 29 09.2 +1.6**			
	baz=218,SNR=13								
SPCR	**Spurr Chakacha**	81.85	10	P	**P**	**19 29 08.2 +0.1**			
	baz=200								
L17K	**Donlin**	81.88	7	P	**P**	**19 29 10.3 +2.2**			
	baz=194,SNR=21								
EPH	**Ephrata**	81.89	34	IAmb	IAmb	19 29 10.8			
	comp=Z,63nm,1.1s								
Q16A	**Castle Valley**	81.93	44	IAmb	IAmb	19 29 35.9			
	comp=Z,76nm,1.6s								
J14K	**Nanvaranak Lak**	81.98	5	IAMs_20	IAMs_20	20 03 36.9			
	comp=Z,573nm,20.0s								
J14K	**Nanvaranak Lak**	81.98	5	P	**P**	**19 29 10.0 +1.4**			
	baz=189,SNR=6.0								
TLIG	**Tlapa**	82.00	68	IAmb	IAmb	19 29 13.7			
	comp=Z,103nm,1.4s								
MDJ	**Mudanjiang**	82.02	323	P	**P**	**19 29 10.3 +1.1**			
MDJ	**Mudanjiang**	82.02	323	IAmb	IAmb	19 29 13.0			
	comp=Z,110nm,1.4s								
MDJ				IAMs_20	IAMs_20	19 59 51.3			
	comp=Z,771nm,22.0s								
MDJ	**Mudanjiang**	82.02	323	P	**P**	**19 29 10.0 +0.8**			
MDJ				S	**S**	**19 39 23.8 +2.2**			
MDJ				pmax	pmax				
	comp=Z,68nm,1.8s								
MDJ				L	L				
	comp=Z,280nm,24.4s								
MDJ				L	L				
	comp=Z,550nm,19.6s								
MDJ				L	L				
	comp=Z,1µm,20.6s								
D08A	**Wollman Farm,**	82.06	34	IAmb	IAmb	19 29 12.0			
	comp=Z,71nm,1.1s								
E09A	**Wood Farm, Sta**	82.13	35	IAmb	IAmb	19 29 12.0			
	comp=Z,50nm,1.1s								
UNM	**Universidad Na**	82.16	66	IAMs_20	IAMs_20	19 56 09.6			
	comp=Z,864nm,22.0s								
L18K	**Granite Mounta**	82.16	8	IAMs_20	IAMs_20	19 58 23.6			
	comp=Z,748nm,22.0s								
L18K	**Granite Mounta**	82.16	8	P	**P**	**19 29 11.3 +1.7**			
	baz=196,SNR=17								
M19K	**Big River Lodg**	82.17	9	IAMs_20	IAMs_20	19 57 49.9			
	comp=Z,667nm,22.0s								
M19K	**Big River Lodg**	82.17	9	P	**P**	**19 29 10.2 +0.5**			
	baz=198,SNR=6.9								
RC01	**Rabbit Creek A**	82.18	11	IAmb	IAmb	19 29 11.0			
	comp=Z,57nm,1.1s								
RC01				IAMs_20	IAMs_20	19 59 01.1			
	comp=Z,574nm,21.0s								
RC01	**Rabbit Creek A**	82.18	11	P	**P**	**19 29 10.4 +0.7**			
	baz=202,SNR=6.8								
HIN	**Hinchinbrook I**	82.19	13	IAmb	IAmb	19 29 11.7			
	comp=Z,54nm,1.1s								
V35K	**Ketchikan**	82.20	23	IAmb	IAmb	19 29 12.7			
	comp=Z,69nm,1.3s								
V35K	**Ketchikan**	82.20	23	P	**P**	**19 29 11.5 +1.6**			
	baz=220,SNR=20								
KAIM	**Kayak Island**	82.23	14	IAmb	IAmb	19 29 12.6			
	comp=Z,67nm,1.1s								
KAIM	**Kayak Island**	82.23	14	P	**P**	**19 29 11.3 +1.3**			
	baz=208,SNR=18								
PWL	**Port Wells**	82.24	12	IAmb	IAmb	19 29 11.7			
	comp=Z,60nm,1.0s								
PWL				IAMs_20	IAMs_20	19 59 16.6			
	comp=Z,845nm,20.0s								
PWL	**Port Wells**	82.24	12	P	**P**	**19 29 10.5 +0.5**			
	baz=204,SNR=12								
U33K	**Whale Pass**	82.28	21	IAmb	IAmb	19 29 13.2			
	comp=Z,78nm,1.3s								
U33K	**Whale Pass**	82.28	21	P	**P**	**19 29 11.7 +1.5**			
	baz=218,SNR=18								
LHSI	**Lahat**	82.28	269	P	**P**	**19 29 10.9 -0.5**			
	comp=Z,2µmcomp=Z,168nm,1.8s								
VHRN	**Van Horn**	82.29	54	IAmb	IAmb	19 29 14.7			
	comp=Z,57nm,1.0s								
F10A	**Beach Ranch, E**	82.30	36	IAmb	IAmb	19 29 12.8			
	comp=Z,62nm,1.1s								
SIT	**Sitka**	82.30	20	P	**P**	**19 29 11.7 +1.3**			
SIT	**Sitka**	82.30	20	P	**P**	**19 29 11.5 +1.1**			
	baz=216,SNR=6.8								
M20K	**Styx River**	82.34	10	IAMs_20	IAMs_20	19 59 34.4			
	comp=Z,733nm,20.0s								
M20K	**Styx River**	82.34	10	P	**P**	**19 29 11.4 +0.8**			
	baz=199,SNR=8.7								
DSRI	**Dabo**	82.36	272	P	**P**	**19 29 12.5 +0.7**			
	comp=Z,3µmcomp=Z,216nm,1.5s								
L19K	**White Mountain**	82.37	9	P	**P**	**19 29 11.4 +0.6**			
	baz=198,SNR=9.6								
SPUT	**South Promonto**	82.41	42	IAmb	IAmb	19 29 14.4			
	comp=Z,54nm,1.3s								
GRNR	**Gornyy**	82.41	330⇑	*i* P	**P**	**19 29 11.8 +0.6**			
GRNR				pmax	pmax				
	comp=Z,20nm,1.2s								
MNTX	**Cornudas Mount**	82.42	53	IAmb	IAmb	19 29 15.1			
	comp=Z,72nm,1.2s								
MNTX				IAMs_20	IAMs_20	19 56 33.8			
	comp=Z,613nm,22.0s								
K17K	**Iditarod**	82.45	7	IAmb	IAmb	19 29 27.1			
	comp=Z,71nm,1.4s								
K17K				IAMs_20	IAMs_20	19 58 32.2			
	comp=Z,705nm,22.0s								
K17K	**Iditarod**	82.45	7	P	**P**	**19 29 12.8 +1.8**			
	baz=194,SNR=6.7								
PLID	**Pearl Lake**	82.45	37	IAmb	IAmb	19 29 14.2			
	comp=Z,101nm,1.8s								
PLID				IAMs_20	IAMs_20	19 57 55.1			
	comp=Z,930nm,22.0s								
SRU	**San Rafael Swe**	82.46	44	IAmb	IAmb	19 29 15.0			
	comp=Z,63nm,1.0s								
NJ2	**Nanjing**	82.47	308⇑	P	**P**	**19 29 12.8 +0.9**			
NJ2				pmax	pmax				
	comp=Z,110nm,1.6s								
NJ2				L	L				
	comp=Z,590nm,19.9s		

GHO Glory Hole Cre 82.96 11 IAmb IAmb 19 29 15.2
comp=Z,48nm,0.9s
DIV Divide 83.01 13 IAmb IAmb 19 29 16.0
comp=Z,61nm,1.1s
J17K VABM Dome 83.03 6 IAMs_20 IAMs_20 19 58 50.4
comp=Z,692nm,22.0s
J17K VABM Dome 83.03 6 P **P** **19 29 15.9 +1.9**
baz=194,SNR=11
BSUT Blindstream Ca 83.06 43 IAmb IAmb 19 29 18.2
comp=Z,38nm,1.0s
TPB28 83.07 53 IAmb IAmb 19 29 18.8
comp=Z,58nm,1.4s
H03S2 Juan Fernandez 83.10 123 T T 21 01 56.5
baz=250,slow=75,SNR=6.6
SML Sawmill 83.11 12 IAmb IAmb 19 29 29.3
comp=Z,52nm,1.3s
SML IAMs_20 IAMs_20 19 58 08.6
comp=Z,658nm,22.0s
SML Sawmill 83.11 12 P **P** **19 29 15.1 +0.5**
baz=204,SNR=6.1
H03S1 Juan Fernandez 83.11 123 T T 21 01 57.9
baz=250,slow=75,SNR=646
H03S3 Juan Fernandez 83.11 123 T T 21 01 56.7
baz=250,slow=75,SNR=578
BMRM Bremner River 83.12 14 IAmb IAmb 19 29 39.4
comp=Z,107nm,1.5s
BMRM IAMs_20 IAMs_20 19 59 16.9
comp=Z,801nm,20.0s
BMRM Bremner River 83.12 14 P **P** **19 29 15.3 +0.6**
baz=207,SNR=19
PV03 Paradox Valley 83.13 46 IAmb IAmb 19 29 18.5
comp=Z,75nm,1.1s
ALPN Alpine 83.14 55 IAmb IAmb 19 29 18.9
comp=Z,58nm,1.1s
ALQ Albuquerque 83.16 50 IAMs_20 IAMs_20 19 57 23.3
comp=Z,686nm,22.0s
ALQ Albuquerque 83.16 50 IAmb IAmb 19 29 19.3
comp=Z,159nm,1.8s
ALQ IAMs_20 IAMs_20 19 57 23.3
comp=Z,686nm,22.0s
ANMO Albuquerque 83.16 50 LR LR 19 57 56.2
comp=Z,658nm,22.0s,baz=226,slow=29
ANMO Albuquerque 83.16 50*ce*P **P** **19 29 16.3 +0.6**
ANMO pmax pmax
comp=Z,31nm,1.1s
ANMO Albuquerque 83.16 50 P **P** **19 29 17.0 +1.3**
ANMO Albuquerque 83.16 50 IAMs_20 IAMs_20 19 57 23.4
comp=Z,690nm,22.0s
PV04 Paradox Valley 83.17 46 IAmb IAmb 19 29 18.5
comp=Z,60nm,0.9s
M23K Glacier View 83.21 12 P **P** **19 29 15.5 +0.4**
baz=204
H03N2 Juan Fernandez 83.22 123 T T 21 02 00.8
baz=252,slow=73
KSI Kapahiang 83.22 268 P **P** **19 29 15.7 -0.6**
comp=Z,4μmcomp=Z,203nm,1.1s
H03N3 Juan Fernandez 83.22 123 T T 21 02 01.4
baz=252
U35K Hyder 83.23 23 P **P** **19 29 16.5 +1.3**
baz=221
H03N1 Juan Fernandez 83.23 123 T T 21 02 03.7
baz=252,slow=73
CRQM Cirque 83.27 14 IAmb IAmb 19 29 40.5
comp=Z,68nm,1.3s
CRQE Cirque 83.28 14 P **P** **19 29 16.6 +1.0**
baz=209,SNR=14
R31K City Hall, Gus 83.28 19 P **P** **19 29 16.7 +1.3**
baz=216
TPB01 Permian Basin 83.28 54 IAmb IAmb 19 29 19.5
comp=Z,44nm,1.0s
KLU Klutina 83.31 13 P **P** **19 29 16.5 +0.8**
baz=206,SNR=12
CUT Chulitna 83.31 11 P **P** **19 29 16.1 +0.6**
baz=202,SNR=6.8
PV22 Blue Mesa, Par 83.32 45 IAmb IAmb 19 29 19.5
comp=Z,46nm,1.0s
SCM Sheep Creek Mo 83.33 12 IAmb IAmb 19 29 17.6
comp=Z,49nm,0.9s
SCM IAMs_20 IAMs_20 19 59 50.4
comp=Z,700nm,20.0s
SCM Sheep Creek Mo 83.33 12 P **P** **19 29 16.5 +0.8**
baz=205,SNR=25
L22K Petersville 83.33 10 IAmb IAmb 19 29 17.0
comp=Z,49nm,1.0s
L22K Petersville 83.33 10 P **P** **19 29 15.5 -0.2**
baz=202,SNR=42
I17K Unalakleet 83.34 6 P **P** **19 29 17.0 +1.3**
baz=192
J18K Innoko River 83.36 7 IAmb IAmb 19 29 18.4
comp=Z,58nm,1.2s
J18K IAMs_20 IAMs_20 19 59 12.3
comp=Z,692nm,22.0s
J18K Innoko River 83.36 7 P **P** **19 29 16.8 +1.0**
baz=196,SNR=26
PV07 Paradox Valley 83.36 46 IAmb IAmb 19 29 19.6
comp=Z,53nm,1.1s
PECS Pecos 83.41 54 IAmb IAmb 19 29 20.2
comp=Z,59nm,1.6s
PV15 Paradox Valley 83.43 46 IAmb IAmb 19 29 19.9
comp=Z,62nm,1.0s
PPLA Purkeypile 83.45 10 IAMs_20 IAMs_20 20 00 19.7
comp=Z,889nm,20.0s
PPLA Purkeypile 83.45 10 P **P** **19 29 15.9 -0.5**
baz=200
BCYI Bear Canyon 83.51 39 IAmb IAmb 19 29 20.1
comp=Z,61nm,1.3s
TPB13 Reeves - Culbe 83.51 54 IAmb IAmb 19 29 20.8
comp=Z,54nm,1.1s
TPB11 China Draw 83.54 53 IAmb IAmb 19 29 21.2
comp=Z,102nm,1.6s
R32K Eaglecrest 83.54 19 P **P** **19 29 18.1 +1.3**
baz=217
JIS Juneau Island 83.59 20 P **P** **19 29 18.2 +1.2**
K20K Telida 83.61 9 IAmb IAmb 19 29 32.1
comp=Z,64nm,1.4s
K20K Telida 83.61 9 P **P** **19 29 18.1 +1.0**
baz=198,SNR=24
VRDI Verde Repeater 83.61 14 IAmb IAmb 19 29 19.6
comp=Z,38nm,1.1s
VRDI IAMs_20 IAMs_20 20 00 11.9
comp=Z,762nm,20.0s
TPB05 Hovey Rd 83.62 54 IAmb IAmb 19 29 21.1
comp=Z,43nm,1.0s
ANM Nome 83.67 3 P **P** **19 29 18.0 +0.7**
baz=188
KLR Kul'dur 83.68 327 P **P** **19 29 18.0 +0.2**
comp=Z,4.5nm,0.6s,baz=123,slow=3.3,SNR=15
KLR LR LR 20 00 53.7
comp=Z,514nm,22.0s,baz=166,slow=32
comp=Z,4.5nm,0.6s
KLR Kul'dur 83.68 327 *i* P **P** **19 29 17.3 -0.5**
KLR pmax pmax
comp=Z,4.0nm,0.6s
BESE Bessie Mountai 83.69 19 IAmb IAmb 19 29 43.1
comp=Z,52nm,1.3s
N25K Chitina, Valde 83.69 13 P **P** **19 29 18.7 +1.0**
baz=207,SNR=22
P29M Windy Craggy 83.70 17 IAmb IAmb 19 29 43.2
comp=Z,86nm,1.4s
P29M Windy Craggy 83.70 17 P **P** **19 29 19.2 +1.6**
baz=214,SNR=16
MASI Maura Aman, Be 83.72 269 P **P** **19 29 18.8 -0.1**
comp=Z,389nm,1.4s
GLB Gilahina Butte 83.72 14 IAMs_20 IAMs_20 19 59 33.8
comp=Z,642nm,20.0s
BTDF Bukit Timah Da 83.73 274 P **P** **19 29 19.6 +0.8**
BTDF Bukit Timah Da 83.73 274 P **P** **19 29 19.9 +1.1**
comp=Z,1μmcomp=Z,98nm,1.3s
NEW Newport 83.76 34 LR LR 19 58 57.7
comp=Z,1μm,21.8s,baz=220,slow=30
NEW Newport 83.76 34 P **P** **19 29 18.8 +0.5**
MYKOM Kota Tinggi 83.80 274 P **P** **19 29 19.9 +0.7**
MYKOM Kota Tinggi 83.80 274 P **P** **19 29 20.2 +1.0**
comp=Z,2μmcomp=Z,138nm,1.6s
M24K Tolsona, Glenn 83.81 12 IAMs_20 IAMs_20 20 00 45.1
comp=Z,698nm,20.0s
M24K Tolsona, Glenn 83.81 12 P **P** **19 29 19.7 +1.5**
baz=206,SNR=10
DL2 Dalian 83.83 315 P **P** **19 29 19.3 +0.5**
DL2 SKS **SKSac** **19 39 42.5 +2.8**
DL2 S **SKKSac** **19 39 44.8 +0.1**
DL2 pmax pmax
comp=Z,67nm,1.2s
DL2 pmax pmax
comp=Z,610nm,3.7s
DL2 L L
comp=Z,250nm,20.8s
DL2 L L
comp=Z,610nm,22.3s
DL2 L L
comp=Z,770nm,22.8s
LOGN Logan Glacier 83.84 15 IAmb IAmb 19 29 20.9
comp=Z,55nm,1.2s
MCARA McCarthy VSAT 83.85 14 IAMs_20 IAMs_20 19 59 07.2
comp=Z,751nm,21.0s
MCARA McCarthy VSAT 83.85 14 P **P** **19 29 19.5 +1.1**
baz=209,SNR=7.1
RDMU Red Mountain 83.85 43 IAmb IAmb 19 29 21.6
comp=Z,37nm,0.9s
BARN Barnard Glacie 83.89 15 IAmb IAmb 19 29 21.2
comp=Z,73nm,1.2s
WAT6 Susitna Watana 83.93 12 P **P** **19 29 19.7 +0.7**
baz=204,SNR=23
BNX BinXian 83.93 323 ⇑P **P** **19 29 19.5 +0.4**
BNX pP **PcP** **19 29 22.5 -0.6**
BNX PP **PP** **19 32 31.5 -1.7**
BNX S **S** **19 39 40.3 -0.7**
BNX SS **SS** **19 45 11.8 +1.9**
BNX pmax pmax
comp=Z,54nm,0.9s
BNX pmax pmax
comp=Z,270nm,4.2s
BNX L L
comp=Z,350nm,20.5s
BNX L L
comp=Z,450nm,19.4s
BNX L L
comp=Z,780nm,20.8s
PLBC Pleasant Camp 83.95 18 P **P** **19 29 20.1 +1.2**
baz=215,SNR=22
H16K Elim 83.95 5 P **P** **19 29 18.6 -0.2**
baz=191,SNR=6.5
CAST Castle Rocks 83.96 9 IAMs_20 IAMs_20 20 04 52.1
comp=Z,788nm,19.0s
CAST Castle Rocks 83.96 9 P **P** **19 29 18.2 -0.7**
baz=200,SNR=20
T35M Bob Quinn 83.96 22 IAmb IAmb 19 29 34.6
comp=Z,47nm,1.4s
T35M Bob Quinn 83.96 22 P **P** **19 29 20.8 +1.8**
baz=220,SNR=13
CN2 Changchun 83.99 320 P **P** **19 29 20.0 +0.5**
CN2 S **S** **19 39 36.0 -5.6**
CN2 pmax pmax
comp=Z,50nm,1.6s
CN2 pmax pmax
comp=Z,500nm,3.0s
CN2 L L
comp=Z,200nm,21.0s
CN2 L L
comp=Z,400nm,21.0s
CN2 L L
comp=Z,400nm,22.0s
O28M Mount Upton 84.00 16 IAmb IAmb 19 29 35.3
comp=Z,45nm,1.3s
O28M Mount Upton 84.00 16 P **P** **19 29 20.7 +1.2**
baz=211,SNR=8.3
WAT1 Susitna Watana 84.01 11 P **P** **19 29 19.8 +0.6**
baz=204
J19K Poorman 84.01 8 IAmb IAmb 19 29 35.9
comp=Z,85nm,1.6s
J19K IAMs_20 IAMs_20 19 59 31.4
comp=Z,758nm,22.0s
J19K Poorman 84.01 8 P **P** **19 29 20.6 +1.5**
baz=197,SNR=13
O29M Mount Kennedy 84.03 17 IAmb IAmb 19 29 44.9
comp=Z,101nm,1.5s
O29M IAMs_20 IAMs_20 19 58 28.0
comp=Z,952nm,22.0s
O29M Mount Kennedy 84.03 17 P **P** **19 29 20.9 +1.5**
baz=213,SNR=11
TPB06 Permian Basin 84.03 54 IAmb IAmb 19 29 22.5
comp=Z,61nm,1.6s
AHID Auburn Hatcher 84.05 41 IAmb IAmb 19 29 22.6
comp=Z,76nm,1.1s
SNY Shenyang 84.08 318 ⇑P **P** **19 29 20.8 +0.9**
SNY PP **PP** **19 32 34.8 +0.3**
SNY S **S** **19 39 43.5 +1.0**
SNY pmax pmax
comp=Z,53nm,1.8s
SNY pmax pmax
comp=Z,220nm,4.3s
SNY L L
comp=Z,140nm,24.5s
SNY L L
comp=Z,280nm,17.6s
SNY L L
comp=Z,330nm,19.7s
ESPZ Base Esperanza 84.13 156 IAmb IAmb 19 29 43.7
comp=Z,60nm,1.2s
G15K Niukluk 84.18 4 P **P** **19 29 21.4 +1.5**
baz=189,SNR=12
MNHN Monahans 84.24 54 IAmb IAmb 19 29 23.4
comp=Z,35nm,1.1s
SKAG Skagway 84.25 18 P **P** **19 29 21.8 +1.4**
SKAG Skagway 84.25 18 IAmb IAmb 19 29 47.2
comp=Z,72nm,1.3s
SKAG Skagway 84.25 18 P **P** **19 29 22.4 +2.0**
baz=216,SNR=16
S22A 4UR Ranch, Cre 84.26 47 IAMs_20 IAMs_20 19 57 59.3
comp=Z,775nm,22.0s
TRF Thorofare Moun 84.28 10 IAmb IAmb 19 29 21.6
comp=Z,38nm,0.9s
TRF Thorofare Moun 84.28 10 P **P** **19 29 20.6 -0.1**
baz=202,SNR=21
HARP HAARP 84.28 13 IAmb IAmb 19 29 22.8
comp=Z,25nm,0.8s
HARP IAMs_20 IAMs_20 20 00 08.6
comp=Z,824nm,20.0s
HARP HAARP 84.28 13 P **P** **19 29 21.4 +0.8**
baz=207
MAW Mawson 84.28 199 P **P** **19 29 21.5 +0.9**
comp=Z,31nm,1.1s,baz=118,slow=5.8,SNR=26
MAW LR LR 20 05 28.5
comp=Z,510nm,19.9s,baz=115,slow=34
comp=Z,31nm,1.1s
MAW Mawson 84.28 199 P **P** **19 29 22.3 +1.7**
comp=Z,7.9nm,1.0s
MAW Mawson 84.28 199 P **P** **19 29 22.0 +1.3**
P30M Million Dollar 84.32 17 P **P** **19 29 22.5 +1.7**
baz=214
QIZ Qiongzhong 84.36 292 P **P** **19 29 20.8 -1.1**
QIZ S **S** **19 39 46.8 +0.4**
QIZ pmax pmax
comp=Z,36nm,1.3s
QIZ pmax pmax
comp=Z,480nm,4.3s
QIZ L L
comp=Z,300nm,22.0s
QIZ L L
comp=Z,280nm,22.5s
QIZ L L
comp=Z,430nm,20.6s
CHUM Lake Minchumin 84.36 9 P **P** **19 29 20.9 +0.1**
baz=200,SNR=19
S34M Telegraph Cree 84.37 21 IAmb IAmb 19 29 24.1
comp=Z,50nm,1.2s
S34M Telegraph Cree 84.37 21 P **P** **19 29 22.8 +1.7**
baz=220,SNR=21
J20K Nowitna River 84.38 8 IAmb IAmb 19 29 23.4
comp=Z,82nm,1.2s
J20K Nowitna River 84.38 8 P **P** **19 29 22.2 +1.2**
baz=198,SNR=35
H17K Granite Mounta 84.45 6 IAMs_20 IAMs_20 19 59 48.1
comp=Z,647nm,22.0s
H17K Granite Mounta 84.45 6 P **P** **19 29 22.5 +1.2**
baz=193,SNR=13
DHY Denali Highway 84.45 12 P **P** **19 29 22.1 +0.6**
baz=205,SNR=12
RND Reindeer 84.48 11 IAMs_20 IAMs_20 20 00 58.9
comp=Z,850nm,20.0s
O20A White River Ci 84.50 44 IAmb IAmb 19 29 25.1
comp=Z,41nm,1.0s
F14K Arctic Creek 84.52 3 P **P** **19 29 22.8 +1.2**
baz=187
TNA Tin City 84.54 2 IAmb IAmb 19 29 23.8
comp=Z,70nm,1.1s
TNA Tin City 84.54 2 P **P** **19 29 23.1 +1.4**
baz=185
YUK8 Steele Glacier 84.55 16 P **P** **19 29 23.5 +1.3**
baz=212,SNR=21
FXWY Fox Creek 84.56 40 IAmb IAmb 19 29 25.5
comp=Z,49nm,1.2s
DLMT Dillon 84.57 38 IAmb IAmb 19 29 25.2
comp=Z,64nm,0.9s
DLMT IAMs_20 IAMs_20 19 59 12.3
comp=Z,934nm,22.0s
GCSA Galena City Sc 84.58 7 P **P** **19 29 23.5 +1.6**
baz=196
YUK6 Outpost Mounta 84.63 16 P **P** **19 29 23.9 +1.3**
baz=213,SNR=19
PAX Paxson 84.73 12 IAMs_20 IAMs_20 20 00 25.5
comp=Z,834nm,21.0s
PAX Paxson 84.73 12 P **P** **19 29 23.3 +0.4**
baz=206,SNR=15
M26K Nabesna, AK 84.75 14 IAmb IAmb 19 29 25.4
comp=Z,57nm,1.1s
M26K IAMs_20 IAMs_20 20 00 42.0
comp=Z,728nm,20.0s
M26K Nabesna, AK 84.75 14 P **P** **19 29 24.2 +1.2**
baz=209,SNR=39
HYT Haines Junctio 84.76 17 IAmb IAmb 19 29 48.7
comp=Z,61nm,1.3s
HYT Haines Junctio 84.76 17 P **P** **19 29 24.7 +1.6**
baz=214,SNR=20
MCK McKinley 84.77 11 IAMs_20 IAMs_20 19 59 44.5
comp=Z,944nm,22.0s
MCK McKinley 84.77 11 P **P** **19 29 23.7 +0.7**
baz=203,SNR=24
KRJI Kerinci 84.79 270 P **P** **19 29 24.8 +0.4**
comp=Z,139nm,1.3s
YUK3 Moose Creek 84.80 15 P **P** **19 29 24.6 +1.2**
baz=211,SNR=53
LOHW Long Hollow 84.81 40 IAmb IAmb 19 29 26.5
comp=Z,44nm,1.2s
Q32M Nakina River 84.81 20 IAmb IAmb 19 29 49.2
comp=Z,60nm,1.4s
Q32M Nakina River 84.81 20 P **P** **19 29 24.7 +1.2**
baz=219,SNR=17
BRWY Burwash Landin 84.81 16 P **P** **19 29 24.6 +1.3**
baz=212
H18K Honhosa River 84.81 6 IAmb IAmb 19 29 25.4
comp=Z,39nm,1.1s
H18K IAMs_20 IAMs_20 20 00 06.7
comp=Z,683nm,22.0s
H18K Honhosa River 84.81 6 P **P** **19 29 24.3 +1.2**
baz=194,SNR=14
LDM Libby Dam 84.83 35 IAmb IAmb 19 29 26.0
comp=Z,65nm,1.0s
F15K North Star Dit 84.85 4 P **P** **19 29 24.8 +1.5**
baz=188
P32M Atlin 84.85 19 IAmb IAmb 19 29 49.0
comp=Z,41nm,1.3s
P32M Atlin 84.85 19 P **P** **19 29 24.9 +1.3**
baz=217,SNR=17
YUK4 Talbot Arm 84.89 16 P **P** **19 29 25.6 +1.7**
baz=213,SNR=7.5
TMB01 Midkiff 84.91 54 IAmb IAmb 19 29 27.6
comp=Z,35nm,1.3s
I20K Naaghedeneel 84.92 8 IAMs_20 IAMs_20 20 00 09.6
comp=Z,770nm,22.0s
I20K Naaghedeneel 84.92 8 P **P** **19 29 25.0 +1.3**
baz=198
G17K Kiwalik Mounta 84.94 5 P **P** **19 29 25.0 +1.3**
baz=192,SNR=14
BUT Butte 84.96 38 IAmb IAmb 19 29 26.7
comp=Z,57nm,1.0s
M27K Edge Creek, AK 84.97 14 IAMs_20 IAMs_20 19 59 43.7
comp=Z,793nm,21.0s
M27K Edge Creek, AK 84.97 14 P **P** **19 29 25.5 +1.3**
baz=210,SNR=71
BW06 Boulder Array 85.01 42 IAmb IAmb 19 29 27.0
comp=Z,34nm,0.9s
PD31 Pinedale Array 85.01 42 IAmb IAmb 19 29 27.0
comp=Z,34nm,0.9s
PDAR Pinedale Array 85.01 42 P **P** **19 29 25.6 +0.7**
comp=Z,23nm,0.9s,baz=204,slow=3.3,SNR=109
PDAR LR LR 19 59 34.2
comp=Z,168nm,20.9s,baz=222,slow=30
comp=Z,23nm,0.9s
PDAR Pinedale Array 85.01 42 P **P** **19 29 25.1 +0.1**
128A Castleberry Fa 85.02 53 IAmb IAmb 19 29 28.2
comp=Z,60nm,1.2s
YHB Horse Butte 85.06 39 IAmb IAmb 19 29 28.3
comp=Z,64nm,1.0s
MENT Mentasta 85.07 13 P **P** **19 29 25.9 +1.4**
MENT Mentasta 85.07 13 IAmb IAmb 19 29 27.1
comp=Z,43nm,1.0s
CMIG Matias Romero 85.08 70 LR LR 19 58 04.2
comp=Z,750nm,20.5s,baz=214,slow=29
O30N Mendenhall 85.11 17 IAmb IAmb 19 29 50.3
comp=Z,67nm,1.2s
O30N IAMs_20 IAMs_20 20 00 36.4
comp=Z,707nm,20.0s
O30N Mendenhall 85.11 17 P **P** **19 29 26.0 +1.2**
baz=215,SNR=26
YFT Old Faithful 85.12 40 IAmb IAmb 19 29 29.3
comp=Z,39nm,1.1s
LL02 Futaleuf 85.15 134 IAmb IAmb 19 29 50.5
comp=Z,55nm,1.4s
DLBC Dease Lake 85.15 21 LR LR 19 59 55.6
comp=Z,459nm,21.5s,baz=210,slow=30
DLBC Dease Lake 85.15 21 P **P** **19 29 26.3 +1.3**
baz=221,SNR=11
YMR Madison River 85.16 39 IAmb IAmb 19 29 28.9
comp=Z,47nm,1.0s
SDSI Sungai Dareh 85.19 271 P **P** **19 29 25.3 -1.0**
comp=Z,64nm,1.4s
L26K Log Cabin Wild 85.22 13 IAmb IAmb 19 29 27.9
comp=Z,41nm,1.2s
L26K Log Cabin Wild 85.22 13 P **P** **19 29 26.7 +1.4**
baz=208,SNR=7.5
WHN Wuhan 85.24 304 ⇑P **P** **19 29 27.3 +1.2**
WHN sP **pwP** **19 29 40.0 -0.3**
WHN S **S** **19 39 56.5 +1.8**
WHN pmax pmax
comp=Z,450nm,1.6s
WHN L L
comp=Z,2μm,22.8s
229A Bryant Ranch, 85.25 54 IAmb IAmb 19 29 29.2
comp=Z,45nm,1.0s
BVCY Beaver Creek 85.25 15 P **P** **19 29 26.5 +1.1**
baz=211,SNR=12
BOZ Bozeman (W) 85.27 38 P **P** **19 29 27.6 +1.5**
BOZ Bozeman (W) 85.27 38 IAmb IAmb 19 29 28.7
comp=Z,53nm,1.0s
BOZ IAMs_20 IAMs_20 19 59 33.7
comp=Z,777nm,22.0s
WHY Whitehorse 85.36 18 P **P** **19 29 27.4 +1.3**
baz=216,SNR=11
CNSH ChangSha 85.38 302 P **P** **19 29 28.0 +1.2**
CNSH pmax pmax
comp=Z,44nm,1.3s
H19K Roundabout Mou 85.39 7 IAmb IAmb 19 29 28.9
comp=Z,91nm,1.4s
H19K IAMs_20 IAMs_20 20 00 12.8
comp=Z,653nm,22.0s
H19K Roundabout Mou 85.39 7 P **P** **19 29 27.2 +1.2**
baz=196,SNR=38
N30M Aishihik Lake 85.40 17 IAmb IAmb 19 29 51.5
comp=Z,58nm,1.6s
N30M IAMs_20 IAMs_20 20 00 17.2
comp=Z,641nm,20.0s
N30M Aishikik Lake 85.40 17 P **P** **19 29 27.6 +1.3**
baz=214,SNR=6.5
MSTX Muleshoe 85.40 52 IAMs_20 IAMs_20 19 58 53.9
comp=Z,706nm,22.0s
K24K Donnelly Dome 85.42 12 P **P** **19 29 27.6 +1.4**
baz=206
LKWY Lake 85.44 40 IAmb IAmb 19 29 31.0
comp=Z,46nm,1.1s
G18K Tagagawik 85.51 6 IAmb IAmb 19 29 28.2
comp=Z,36nm,0.9s
G18K Tagagawik 85.51 6 P **P** **19 29 27.6 +0.9**
baz=194,SNR=23
H20K Anotleneega Mo 85.54 8 P **P** **19 29 27.9 +1.1**
baz=198,SNR=30
NEA2 Nenana 85.54 10 IAmb IAmb 19 29 28.9
comp=Z,30nm,0.9s
NEA2 Nenana 85.54 10 P **P** **19 29 26.8 0.0**
baz=203,SNR=13
RIDG Independent Ri 85.55 12 IAmb IAmb 19 29 29.1
comp=Z,48nm,1.0s
RIDG Independent Ri 85.55 12 P **P** **19 29 27.8 +0.9**
baz=207,SNR=26
L27K Beaver Creek, 85.59 14 IAMs_20 IAMs_20 19 59 33.3
comp=Z,764nm,22.0s
L27K Beaver Creek, 85.59 14 P **P** **19 29 28.4 +1.2**
baz=210,SNR=30
WRH Wood River Hil 85.60 11 IAMs_20 IAMs_20 20 00 32.5
comp=Z,716nm,22.0s
833A Chaparral WMA, 85.60 58 IAmb IAmb 19 29 30.9
comp=Z,65nm,1.1s
BCAR Beaver Creek A 85.61 14 P **P** **19 29 27.6 +0.3**
P33M Teslin, Yukon 85.62 19 P **P** **19 29 28.6 +1.2**

baz=218,SNR=13
I21K Tanana 85.64 9 IAmb IAmb 19 29 29.2
comp=Z,36nm,1.0s
I21K Tanana 85.64 9 P **P** **19 29 28.2 +1.0**
baz=200,SNR=31
TIA Tai'an 85.67 311 P **P** **19 29 28.8 +0.7**
TIA SKS **SKSac** **19 39 51.0 -0.7**
TIA S **SKKSac** **19 40 00.3 +1.6**
TIA pmax pmax
comp=Z,46nm,1.5s
TIA pmax pmax
comp=Z,490nm,6.5s
TIA L L
comp=Z,370nm,19.7s
TIA L L
comp=Z,500nm,20.0s
TIA L L
comp=Z,770nm,24.0s
MLY Manley 85.68 9 IAmb IAmb 19 29 28.4
comp=Z,37nm,1.0s
MLY Manley 85.68 9 P **P** **19 29 27.8 +0.2**
baz=201,SNR=48
HDA Harding Lake 85.75 11 IAmb IAmb 19 29 29.6
comp=Z,61nm,0.9s
HDA Harding Lake 85.75 11 P **P** **19 29 28.5 +0.7**
baz=205,SNR=38
SGCY Sterling City 85.75 54 IAmb IAmb 19 29 30.8
comp=Z,47nm,1.1s
N31M Braeburn, Yuko 85.78 17 IAmb IAmb 19 29 53.6
comp=Z,72nm,1.2s
N31M IAMs_20 IAMs_20 20 01 18.2
comp=Z,657nm,20.0s
N31M Braeburn, Yuko 85.78 17 P **P** **19 29 29.6 +1.4**
baz=215,SNR=13
CCB Clear Creek Bu 85.81 11 IAMs_20 IAMs_20 20 00 27.0
comp=Z,722nm,22.0s
F17K Baldwin Pennin 85.81 5 IAmb IAmb 19 29 30.1
comp=Z,44nm,0.9s
F17K IAMs_20 IAMs_20 20 06 25.1
comp=Z,527nm,20.0s
F17K Baldwin Pennin 85.81 5 P **P** **19 29 29.3 +1.2**
baz=192,SNR=12
M29M Somme Creek 85.86 15 IAmb IAmb 19 29 31.2
comp=Z,41nm,1.2s
M29M Somme Creek 85.86 15 P **P** **19 29 29.8 +1.2**
baz=213,SNR=41
G19K Purcell Mounta 85.91 7 IAmb IAmb 19 29 30.6
comp=Z,43nm,0.9s
G19K IAMs_20 IAMs_20 20 00 29.7
comp=Z,630nm,22.0s
G19K Purcell Mounta 85.91 7 P **P** **19 29 29.9 +1.3**
baz=195,SNR=32
BKNI Bangkinang 85.97 272 P **P** **19 29 30.3 +0.2**
BKNI Bangkinang 85.97 272 P **P** **19 29 30.9 +0.8**
comp=Z,3µmcomp=Z,182nm,1.5s
H21K Melozitna Rive 85.97 8 P **P** **19 29 30.3 +1.4**
baz=199,SNR=23
I23K Minto, Yukon-K 86.01 10 IAmb IAmb 19 29 30.8
comp=Z,43nm,1.1s
I23K Minto, Yukon-K 86.01 10 P **P** **19 29 29.5 +0.4**
baz=203,SNR=28
COLA College 86.01 11 P **P** **19 29 29.4 +0.4**
COLA College 86.01 11 *i* P **P** **19 29 29.5 +0.4**
COLA pmax pmax
comp=Z,117nm,0.9s
COLA College 86.01 11 P **P** **19 29 29.1 0.0**
COLA College 86.01 11 IAMs_20 IAMs_20 20 00 33.3
comp=Z,946nm,22.0s
COLA College 86.01 11 P **P** **19 29 29.9 +0.8**
baz=204
ISCO Idaho Springs 86.09 46 P **P** **19 29 31.7 +1.2**
ILAR Eielson Array 86.09 11 P **P** **19 29 29.5 0.0**
comp=Z,14nm,0.8s,baz=214,slow=5.7,SNR=132
ILAR LR LR 20 02 35.0
comp=Z,367nm,20.9s,baz=190,slow=32
comp=Z,14nm,0.8s
ILAR Eielson Array 86.09 11 P **P** **19 29 29.3 -0.2**
F18K Selawik 86.10 5 P **P** **19 29 30.4 +0.9**
baz=193,SNR=16
PDSI Padang 86.11 270 P **P** **19 29 30.0 -0.9**
comp=Z,74nm,1.2s
LR05 Currie 86.13 131 IAmb IAmb 19 30 00.5
comp=Z,90nm,1.2s
LR05 IAMs_20 IAMs_20 20 02 25.6
comp=Z,663nm,19.0s
SEY Seymchan 86.13 345 P **P** **19 29 29.6 -0.1**
comp=Z,38nm,0.9s,baz=142,slow=5.2,SNR=55
comp=Z,38nm,0.9s
SEY Seymchan 86.13 345 *i* P **P** **19 29 30.6 +0.9**
SEY pmax pmax
comp=Z,60nm,1.0s
IMAR Indian Mountai 86.15 8 P **P** **19 29 30.3 +0.5**
JCT Junction City 86.17 56 P **P** **19 29 31.6 +0.8**
JCT Junction City 86.17 56 IAMs_20 IAMs_20 19 59 54.4
comp=Z,693nm,21.0s
J25K Salcha River, 86.23 12 IAmb IAmb 19 29 32.4
comp=Z,36nm,0.9s
J25K Salcha River, 86.23 12 P **P** **19 29 31.2 +0.9**
baz=206,SNR=43
N32M Quiet Lake 86.28 18 IAmb IAmb 19 29 56.8
comp=Z,79nm,1.4s
N32M Quiet Lake 86.28 18 P **P** **19 29 31.7 +1.0**
baz=218
POKR Poker Plat Res 86.31 11 P **P** **19 29 31.3 +0.7**
baz=204
PPI Padang Panjang 86.32 271 P **P** **19 29 32.0 +0.1**
K27K Chicken 86.38 13 IAMs_20 IAMs_20 20 00 53.1
comp=Z,849nm,21.0s
H22K Ishtalitna Cre 86.39 9 IAmb IAmb 19 29 32.7
comp=Z,39nm,0.9s
H22K Ishtalitna Cre 86.39 9 P **P** **19 29 32.1 +1.1**
baz=201
E17K Hotham Inlet 86.40 4 P **P** **19 29 32.3 +1.4**
baz=191,SNR=11
M30M Minto, Yukon 86.40 16 IAmb IAmb 19 29 33.6
comp=Z,75nm,1.7s
M30M Minto, Yukon 86.40 16 P **P** **19 29 32.1 +0.9**
baz=214,SNR=29
SN07 Snyder 07 86.43 53 IAmb IAmb 19 29 34.5
comp=Z,67nm,0.9s
KVTX Kingsville 86.50 59 IAMs_20 IAMs_20 20 08 41.4
comp=Z,745nm,19.0s
F19K Shaleruckik Mo 86.51 6 IAmb IAmb 19 29 33.2
comp=Z,47nm,0.9s
F19K IAMs_20 IAMs_20 20 01 34.5
comp=Z,632nm,22.0s
F19K Shaleruckik Mo 86.51 6 P **P** **19 29 32.3 +0.8**
baz=195,SNR=41
L29M L29M 86.51 15 P **P** **19 29 33.0 +1.3**
baz=213,SNR=61
RTBA Rita Blanca 86.53 50 IAmb IAmb 19 29 34.9
comp=Z,53nm,1.3s
HEH HeiHe 86.54 326 *e* P **P** **19 29 32.3 +0.2**
HEH pP **PcP** **19 29 35.5 +1.1**
HEH S **S** **19 40 07.5 +0.9**
HEH pmax pmax
comp=Z,36nm,1.8s
HEH L L
comp=Z,370nm,18.9s
HEH L L
comp=Z,280nm,19.4s
HEH L L
comp=Z,690nm,19.6s
H23K Yukon River 86.61 10 P **P** **19 29 32.2 +0.1**
baz=202
AMTX Amarillo 86.62 51 IAMs_20 IAMs_20 19 59 43.0
comp=Z,669nm,22.0s
G21K Allakaket 86.69 8 IAmb IAmb 19 29 47.9
comp=Z,49nm,1.1s
G21K IAMs_20 IAMs_20 20 00 53.3
comp=Z,601nm,22.0s
G21K Allakaket 86.69 8 P **P** **19 29 33.5 +1.1**
baz=199,SNR=33
M31M Drury Creek, Y 86.75 17 IAMs_20 IAMs_20 20 02 27.9
comp=Z,652nm,20.0s
M31M Drury Creek, Y 86.75 17 P **P** **19 29 33.6 +0.7**
baz=217,SNR=12
GO06 Curarrehue 86.75 131 IAmb IAmb 19 29 58.9
comp=Z,37nm,1.1s
GO06 IAMs_20 IAMs_20 19 58 43.0
comp=Z,656nm,21.0s
WTLY Watson Lake, Y 86.83 21 P **P** **19 29 34.2 +0.9**
baz=222
K22A Casper 86.87 43 IAMs_20 IAMs_20 20 00 39.3
comp=Z,597nm,22.0s
H24K Noodor Dome 86.89 10 P **P** **19 29 34.2 +0.7**
baz=204,SNR=6.1
D17K Noatak River 86.92 4 P **P** **19 29 34.9 +1.4**
baz=190
F20K Avaraart Lake 86.93 7 IAMs_20 IAMs_20 20 01 12.7
comp=Z,744nm,22.0s
F20K Avaraart Lake 86.93 7 P **P** **19 29 34.6 +1.0**
baz=197,SNR=35
PLCA Paso Flores 86.97 132 P **P** **19 29 36.9 +2.2**
comp=Z,5.3nm,0.9s,baz=236,slow=5.6,SNR=7.0
PLCA LR LR 20 03 29.7
comp=Z,335nm,18.0s,baz=236,slow=32
comp=Z,5.3nm,0.9s
PLCA Paso Flores 86.97 132 *e* P **P** **19 29 36.6 +1.9**
PRP Porcupine Dome 87.01 11 IAmb IAmb 19 29 49.4
comp=Z,69nm,1.1s
PRP IAMs_20 IAMs_20 20 06 34.8
comp=Z,546nm,19.0s
PRP Porcupine Dome 87.01 11 P **P** **19 29 35.6 +1.3**
baz=206,SNR=29
DAWY Dawson 87.02 14 P **P** **19 29 35.7 +1.5**
baz=212,SNR=39
735A Kenedy 87.09 58 IAMs_20 IAMs_20 20 00 03.9
comp=Z,670nm,22.0s
BRDY Brady 87.13 56 IAmb IAmb 19 29 38.1
comp=Z,32nm,1.0s
E19K Redstone River 87.17 6 IAmb IAmb 19 29 37.2
comp=Z,43nm,0.9s
E19K IAMs_20 IAMs_20 20 01 21.9
comp=Z,601nm,22.0s
E19K Redstone River 87.17 6 P **P** **19 29 36.2 +1.5**
baz=195,SNR=36
ABTX Abilene, Hawle 87.19 54 IAMs_20 IAMs_20 20 00 24.2
comp=Z,796nm,22.0s
LIRD Liard River Hi 87.24 22 P **P** **19 29 36.7 +1.4**
baz=224
K29M Barlow Dome 87.28 15 IAmb IAmb 19 30 01.2
comp=Z,93nm,1.5s
K29M Barlow Dome 87.28 15 P **P** **19 29 37.1 +1.6**
baz=214,SNR=37
RDOG Red Dog Mine 87.28 4 IAMs_20 IAMs_20 20 08 03.0
comp=Z,504nm,19.0s
RDOG Red Dog Mine 87.28 4 P **P** **19 29 36.7 +1.4**
baz=190
G22K Bettles 87.34 8 P **P** **19 29 37.0 +1.5**
baz=201
G23K Bananza Creek 87.36 9 IAmb IAmb 19 29 51.1
comp=Z,34nm,1.1s
G23K IAMs_20 IAMs_20 20 01 28.9
comp=Z,577nm,22.0s
G23K Bananza Creek 87.36 9 P **P** **19 29 37.5 +1.8**
baz=202,SNR=17
C16K Lisburne Hills 87.36 3 P **P** **19 29 37.1 +1.5**
baz=188
F21K Alatna River 87.37 8 IAMs_20 IAMs_20 20 01 26.2
comp=Z,639nm,22.0s
F21K Alatna River 87.37 8 P **P** **19 29 36.7 +1.0**
baz=199,SNR=12
MNSI Mandailing Nat 87.50 272 P **P** **19 29 37.1 -0.5**
comp=Z,48nm,1.0s
J29N Klondike Camp 87.62 14 IAmb IAmb 19 30 00.4
comp=Z,35nm,0.8s
J29N IAMs_20 IAMs_20 20 02 30.8
comp=Z,732nm,21.0s
J29N Klondike Camp 87.62 14 P **P** **19 29 38.8 +1.7**
baz=213
C17K DeLong Mountai 87.68 4 P **P** **19 29 38.2 +1.0**
baz=190
G24K Hadweenzic Riv 87.75 10 P **P** **19 29 37.9 +0.3**
baz=204
F22K John River 87.80 8 P **P** **19 29 39.0 +1.1**
baz=200,SNR=6.1
COLD Coldfoot 87.81 9 P **P** **19 29 39.4 +1.5**
baz=202,SNR=14
I27K Kandik River 87.85 13 P **P** **19 29 39.3 +1.1**
baz=210,SNR=12
HNS HongShan 87.94 311 ⇑P **P** **19 29 40.3 +1.2**
HNS S **S** **19 40 16.3 -4.2**
HNS pmax pmax
comp=Z,64nm,1.7s
HNS L L
comp=Z,360nm,21.0s
HNS L L
comp=Z,440nm,22.7s
HNS L L
comp=Z,750nm,21.6s
KULM Kulim 87.96 276 P **P** **19 29 41.3 +1.5**
KULM Kulim 87.96 276 P **P** **19 29 40.9 +1.1**
KULM IAMs_20 IAMs_20 20 13 46.2
comp=Z,509nm,20.0s
KULM Kulim 87.96 276 P **P** **19 29 41.5 +1.7**
comp=Z,2µmcomp=Z,88nm,1.8s
MMPY Sheldon Lake, 87.97 18 IAmb IAmb 19 30 04.4
comp=Z,42nm,1.3s
MMPY Sheldon Lake, 87.97 18 P **P** **19 29 40.3 +1.5**
baz=219,SNR=19
C18K Utukok River 87.99 4 P **P** **19 29 39.8 +1.1**
baz=192
BI02 San Fabin de 88.00 128 IAmb IAmb 19 30 04.5
comp=Z,27nm,1.1s
BI02 IAMs_20 IAMs_20 19 59 27.1
comp=Z,553nm,20.0s
FYU Fort Yukon 88.01 11 IAmb IAmb 19 31 08.5
comp=Z,43nm,1.6s
FYU IAMs_20 IAMs_20 20 01 11.1
comp=Z,553nm,22.0s
435B Jarrell 88.04 57 IAmb IAmb 19 29 44.0
comp=Z,34nm,0.9s
G25K Bearman Lake 88.04 10 P **P** **19 29 39.5 +0.6**
baz=206
E20K Nigu River 88.05 6 P **P** **19 29 40.3 +1.3**
baz=196,SNR=17
TGTN Hyland Airport 88.06 20 P **P** **19 29 41.0 +1.8**
baz=222
BJI2 Beijing 88.07 314 P **P** **19 29 40.8 +1.1**
BJI2 pmax pmax
comp=Z,20nm,2.2s
BJI2 pmax pmax
comp=Z,340nm,3.0s
BJI2 L L
comp=Z,130nm,21.0s
BJI2 L L
comp=Z,150nm,21.0s
BJI2 L L
comp=Z,270nm,23.7s
BJT Baijiatuau 88.08 314 P **P** **19 29 40.8 +1.1**
I28M Miner Creek 88.08 13 P **P** **19 29 40.2 +1.0**
baz=211,SNR=24
D19K Kuna River 88.09 6 IAMs_20 IAMs_20 20 07 10.3
comp=Z,550nm,20.0s
D19K Kuna River 88.09 6 P **P** **19 29 40.2 +1.0**
baz=194,SNR=5.9
GO05 Huane 88.12 126 IAmb IAmb 19 30 04.9
comp=Z,36nm,1.1s
GO05 IAMs_20 IAMs_20 19 59 16.4
comp=Z,839nm,21.0s
J30M Hart River 88.17 15 P **P** **19 29 41.1 +1.3**
baz=215
BILL Bilibino 88.21 352 IAMs_20 IAMs_20 20 07 51.5
comp=Z,750nm,19.0s
ML02 Panimavida 88.23 127 IAMs_20 IAMs_20 19 59 08.2
comp=Z,724nm,21.0s
APG El Apazote 88.31 74 LR LR 20 03 05.2
comp=Z,22nm,18.4s,baz=240,slow=31
I29M Ogilvie Camp, 88.36 14 IAmb IAmb 19 30 14.7
comp=Z,30nm,1.1s
I29M Ogilvie Camp, 88.36 14 P **P** **19 29 41.4 +0.9**
baz=213,SNR=12
LYN LuoYang 88.37 307 P **P** **19 29 42.0 +0.7**
LYN pmax pmax
comp=Z,78nm,1.3s
LYN L L
comp=Z,570nm,12.0s
LYN L L
comp=Z,380nm,11.7s
LYN L L
comp=Z,450nm,14.2s
H27K Steamboat Moun 88.42 12 IAmb IAmb 19 29 56.7
comp=Z,38nm,1.2s
H27K IAMs_20 IAMs_20 20 02 50.9
comp=Z,641nm,20.0s
H27K Steamboat Moun 88.42 12 P **P** **19 29 42.2 +1.4**
baz=210,SNR=22
ELIB Princess Elisa 88.43 185 *d* P **P** **19 29 41.7 +0.6**
comp=Z,18nm,1.1s
F24K Squaw Lake 88.43 10 P **P** **19 29 42.3 +1.5**
baz=204,SNR=6.7
D20K Etivluk River 88.45 6 P **P** **19 29 41.3 +0.4**
baz=196,SNR=8.2
E21K Killik River 88.47 7 IAMs_20 IAMs_20 20 08 14.3
comp=Z,530nm,19.0s
E21K Killik River 88.47 7 P **P** **19 29 42.1 +1.1**
baz=198
KOTAN Kotaneelee Air 88.48 22 P **P** **19 29 42.7 +1.5**
baz=226
C19K Lookout Ridge 88.56 5 IAmb IAmb 19 29 43.3
comp=Z,29nm,0.8s
C19K IAMs_20 IAMs_20 20 02 43.7
comp=Z,726nm,22.0s
C19K Lookout Ridge 88.56 5 P **P** **19 29 42.9 +1.5**
baz=193
G26K Porcupine Rive 88.61 11 IAmb IAmb 19 29 57.6
comp=Z,58nm,1.2s
G26K IAMs_20 IAMs_20 20 08 03.2
comp=Z,537nm,19.0s
G26K Porcupine Rive 88.61 11 P **P** **19 29 43.0 +1.3**
baz=208,SNR=28
ZEA Zeya 88.65 329 *e* P **P** **19 29 43.1 +1.0**
ZEA pmax pmax
comp=Z,300nm,3.0s
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,70nm,1.1s
E23K Chandalar 88.67 9 P **P** **19 29 43.2 +1.2**
baz=202,SNR=8.5
I30M Mount Dempster 88.70 15 P **P** **19 29 43.5 +1.2**
baz=215,SNR=7.1
WMOK Wichita Mounta 88.72 53 P **P** **19 29 44.5 +1.6**
WMOK Wichita Mounta 88.72 53 IAmb IAmb 19 29 45.5
comp=Z,46nm,1.6s
RPSI Rantau Prapat 88.74 273 IAMs_20 IAMs_20 20 14 02.8
comp=Z,643nm,20.0s
PSI Prapat 88.77 273 P **P** **19 29 43.7 -0.1**
PSI Prapat 88.77 273 P **P** **19 29 44.1 +0.3**
comp=Z,2µmcomp=Z,115nm,1.4s
E24K Your Creek 88.85 9 P **P** **19 29 44.1 +1.3**
baz=203,SNR=9.3
F25K Christian Rive 88.86 10 P **P** **19 29 44.6 +1.7**
baz=206,SNR=7.4
VA05 Santo Domingo 88.88 125 IAMs_20 IAMs_20 19 59 35.3
comp=Z,535nm,22.0s
G27K Doyon Strip 88.90 12 IAMs_20 IAMs_20 20 02 44.6
comp=Z,783nm,21.0s
G27K Doyon Strip 88.90 12 P **P** **19 29 44.5 +1.4**
baz=210,SNR=7.8
SYO Syowa Base 88.96 191 ⇑*i* P **P** **19 29 43.7 +0.2**
SYO Syowa Base 88.96 191 ⇓*i* P P 19 29 49.6 +6.1
ENH Enshi 88.97 302 P **P** **19 29 45.1 +0.9**
BO01 Tunca 89.00 126 IAMs_20 IAMs_20 19 59 40.7
comp=Z,794nm,21.0s
TROLL Troll, Antarti 89.03 179 ⇑P **P** **19 29 45.0 +1.0**
comp=Z,786nm,1.1s
OGNE Ogallala 89.04 46 IAMs_20 IAMs_20 20 02 02.8
comp=Z,542nm,22.0s
LAO LASA Array 89.05 39 IAMs_20 IAMs_20 20 02 06.7
comp=Z,751nm,22.0s
C21K Knifeblade Rid 89.06 7 P **P** **19 29 44.9 +1.1**
baz=198,SNR=7.7
H29M Whitestone 89.07 13 IAmb IAmb 19 29 59.4
comp=Z,53nm,1.3s
H29M IAMs_20 IAMs_20 20 02 05.3
comp=Z,823nm,22.0s
H29M Whitestone 89.07 13 P **P** **19 29 45.2 +1.4**
baz=213,SNR=15
MT01 Popeta 89.08 126 IAmb IAmb 19 30 09.5
comp=Z,74nm,1.2s
MT01 IAMs_20 IAMs_20 19 59 42.7
comp=Z,595nm,22.0s
BO02 Sierra Bellavi 89.08 127 IAmb IAmb 19 30 09.7
comp=Z,51nm,1.3s
VA01 Torpederas 89.09 125 IAMs_20 IAMs_20 20 05 19.2
comp=Z,497nm,21.0s
HKT Hockley 89.11 58 P **P** **19 29 46.1 +1.4**
HKT pmax pmax
comp=Z,69nm,1.6s
HKT MLR MLR
comp=Z,600nm,22.0s
HKT Hockley 89.11 58 P **P** **19 29 46.1 +1.4**
HKT IAmb IAmb 19 29 48.3
comp=Z,69nm,1.6s
HKT IAMs_20 IAMs_20 20 01 19.3
comp=Z,639nm,22.0s
MTO3 Montecristo 89.11 75 IAmb IAmb 19 29 48.5
comp=Z,57nm,1.6s
RSSD Black Hills 89.17 42 P **P** **19 29 45.2 +0.1**
RSSD pmax pmax
comp=Z,24nm,1.0s
RSSD MLR MLR
comp=Z,400nm,22.0s
RSSD Black Hills 89.17 42 ⇑P **P** **19 29 45.2 +0.1**
SNAA Sanae 89.18 177 ⇑P **P** **19 29 45.5 +0.9**
comp=Z,108nm,0.6s
SNAA Sanae 89.18 177 P **P** **19 29 45.6 +1.0**
comp=Z,9.5nm,1.1s,baz=231,slow=4.9,SNR=14
comp=Z,9.5nm,1.1s
SNAA Sanae 89.18 177 *ce* P **P** **19 29 43.9 -0.7**
SNAA pmax pmax
comp=Z,29nm,1.2s
F26K Sheenjek River 89.21 11 IAMs_20 IAMs_20 20 01 58.0
comp=Z,681nm,22.0s
F26K Sheenjek River 89.21 11 P **P** **19 29 46.4 +1.8**
baz=208,SNR=11
TOLK Toolik Lake Re 89.22 8 P **P** **19 29 45.7 +1.1**
baz=202
MT09 Talagante 89.31 126 IAmb IAmb 19 30 10.8
comp=Z,90nm,1.7s
MT09 IAMs_20 IAMs_20 19 59 48.9
comp=Z,560nm,21.0s
E25K Arctic Village 89.35 10 IAmb IAmb 19 30 02.1
comp=Z,64nm,1.9s
E25K Arctic Village 89.35 10 P **P** **19 29 46.5 +1.4**
baz=206,SNR=14
D23K Nanushuk River 89.37 8 IAMs_20 IAMs_20 20 03 13.2
comp=Z,630nm,22.0s
D23K Nanushuk River 89.37 8 P **P** **19 29 46.7 +1.5**
baz=201,SNR=12
MT02 Curacav 89.39 125 IAMs_20 IAMs_20 20 00 23.1
comp=Z,537nm,20.0s
OK038 West end E0370 89.46 51 IAmb IAmb 19 29 50.7
comp=Z,74nm,1.4s
B21K Ikpikpuk River 89.53 6 IAMs_20 IAMs_20 20 08 53.2
comp=Z,627nm,19.0s
B21K Ikpikpuk River 89.53 6 P **P** **19 29 46.9 +1.1**
baz=198
A19K Wainwright 89.53 4 P **P** **19 29 46.8 +1.0**
baz=192
GSI Gunungsitoli 89.56 272 P **P** **19 29 48.9 +1.5**
GSI Gunungsitoli 89.56 272 P **P** **19 29 49.9 +2.5**
comp=Z,228nm,2.0s
EPYK Eagle Plains 89.57 14 IAmb IAmb 19 30 02.6
comp=Z,80nm,1.6s
EPYK IAMs_20 IAMs_20 20 03 13.4
comp=Z,584nm,21.0s
EPYK Eagle Plains 89.57 14 P **P** **19 29 47.3 +1.1**
baz=214,SNR=6.1
VNA2 Neumayer--Watz 89.64 175 ⇑P **P** **19 29 47.9 +1.2**
comp=Z,12nm,0.5s,baz=190,slow=4.0
B20K Meade River 89.65 5 IAMs_20 IAMs_20 20 08 42.5
comp=Z,644nm,20.0s
B20K Meade River 89.65 5 P **P** **19 29 46.7 +0.3**
baz=195
H31M Peel River 89.67 15 P **P** **19 29 47.3 +0.6**
baz=217
TIY Taiyuan 89.70 310 *e* P **P** **19 29 49.0 +1.4**
TIY L L
comp=Z,280nm,22.2s
TIY L L
comp=Z,410nm,24.3s
TIY L L
comp=Z,590nm,25.5s
CBKS Cedar Bluff 89.71 49 IAmb IAmb 19 29 50.9
comp=Z,32nm,0.9s
CBKS IAMs_20 IAMs_20 20 01 44.7
comp=Z,593nm,22.0s
G29M Pine Creek 89.73 13 IAMs_20 IAMs_20 20 03 39.7
comp=Z,753nm,20.0s
G29M Pine Creek 89.73 13 P **P** **19 29 47.9 +1.0**
baz=213,SNR=12
D24K Happy Valley 89.80 9 P **P** **19 29 48.8 +1.6**
baz=203
VNA1 Neumayer--Stat 89.83 175 ⇑P **P** **19 29 48.8 +1.3**
comp=Z,28nm,1.0s
GYA Guiyang 89.84 298 ⇓P **P** **19 29 50.0 +1.4**
GYA sP pP 19 29 54.0 -2.4
GYA S **S** **19 40 44.3 +5.0**
GYA pmax pmax

comp=Z,40nm,1.8s
GYA pmax pmax
comp=Z,490nm,3.1s
GYA L L
comp=Z,220nm,18.0s
GYA L L
comp=Z,220nm,16.8s
GYA L L
comp=Z,380nm,23.8s
MT13 San Alfonso 89.86 126 IAmb IAmb 19 30 16.6
comp=Z,118nm,1.9s
MT13 IAMs_20 IAMs_20 19 59 44.5
comp=Z,797nm,21.0s
XLT XiLinHaoTe 89.89 317 *e*P **P** **19 29 48.8 +0.5**
XLT S **S** **19 40 40.0 +1.1**
XLT pmax pmax
comp=Z,23nm,1.1s
XLT L L
comp=Z,300nm,19.7s
XLT L L
comp=Z,340nm,21.3s
F28M Old Crow 89.94 12 P **P** **19 29 49.0 +1.1**
baz=212,SNR=17
CO06 Fray Jorge 89.98 122 IAMs_20 IAMs_20 19 59 48.7
comp=Z,817nm,22.0s
VA03 San Esteban 90.04 125 P **P** **19 29 50.7 +1.3**
KCSI Kotacane, Aceh 90.09 274 P **P** **19 29 50.6 +0.7**
E27K Coleen River 90.11 11 IAMs_20 IAMs_20 20 09 25.6
comp=Z,459nm,19.0s
E27K Coleen River 90.11 11 P **P** **19 29 50.0 +1.4**
baz=210,SNR=13
G30M tAoh Zraii Nji 90.19 14 IAMs_20 IAMs_20 20 03 20.7
comp=Z,591nm,21.0s
G30M tAoh Zraii Nji 90.19 14 P **P** **19 29 49.9 +0.8**
baz=215,SNR=14
MT08 Bocatoma Ro 90.19 126 P **P** **19 29 51.1 +0.8**
MT08 IAmb IAmb 19 30 20.5
comp=Z,75nm,1.9s
MT08 IAMs_20 IAMs_20 20 00 08.1
comp=Z,578nm,20.0s
C23K Itkillik River 90.19 8 IAMs_20 IAMs_20 20 03 05.9
comp=Z,745nm,22.0s
C23K Itkillik River 90.19 8 P **P** **19 29 49.9 +0.9**
baz=201,SNR=12
HIA Hailar 90.20 323 P **P** **19 29 50.5 +0.9**
HIA Hailar 90.20 323 IAmb IAmb 19 30 07.0
comp=Z,39nm,1.3s
HIA Hailar 90.20 323 IAMs_20 IAMs_20 20 06 27.9
comp=Z,615nm,20.0s
R32A Long Quarter, 90.28 49 IAmb IAmb 19 29 52.6
comp=Z,45nm,0.8s
R32A IAMs_20 IAMs_20 20 02 11.8
comp=Z,734nm,22.0s
D25K Kavik River 90.31 9 P **P** **19 29 50.5 +0.9**
baz=205,SNR=7.4
B22K Teshekpuk Lake 90.34 7 IAmb IAmb 19 31 58.6
comp=Z,100nm,1.9s
B22K IAMs_20 IAMs_20 20 03 25.8
comp=Z,652nm,21.0s
B22K Teshekpuk Lake 90.34 7 P **P** **19 29 50.8 +1.2**
baz=199,SNR=5.5
HILR Hailar Array B 90.34 323 P **P** **19 29 50.7 +0.5**
comp=Z,24nm,0.9s,baz=125,slow=7.8,SNR=29
HILR LR LR 20 06 34.3
comp=Z,574nm,20.2s,baz=110,slow=33
comp=Z,24nm,0.9s
SLVN Son La 90.39 292 P **P** **19 29 52.1 +1.0**
G31M Satah River 90.59 14 IAmb IAmb 19 29 52.5
comp=Z,41nm,1.1s
G31M Satah River 90.59 14 P **P** **19 29 51.9 +1.1**
baz=217,SNR=20
CO03 El Pedregal 90.67 123 IAmb IAmb 19 30 18.0
comp=Z,53nm,1.4s
CO03 IAMs_20 IAMs_20 20 05 55.9
comp=Z,609nm,18.0s
OK052 Battle Ridge R 90.70 52 IAmb IAmb 19 29 54.9
comp=Z,55nm,1.1s
NATX Nacogdoches 90.72 57 IAMs_20 IAMs_20 20 02 31.0
comp=Z,749nm,21.0s
OK048 Pawnee Station 90.76 52 IAmb IAmb 19 29 55.2
comp=Z,28nm,1.1s
F30M Barrier River 90.80 14 IAMs_20 IAMs_20 20 04 13.0
comp=Z,556nm,21.0s
F30M Barrier River 90.80 14 P **P** **19 29 53.0 +1.1**
baz=215,SNR=7.3
A22K Sinclair Lake 90.81 6 P **P** **19 29 52.9 +1.1**
baz=197
GO04 Tololo Observa 90.84 122 IAMs_20 IAMs_20 20 00 24.4
comp=Z,813nm,22.0s
WRGLY Wrigley 90.85 20 IAmb IAmb 19 30 07.4
comp=Z,58nm,1.5s
WRGLY Wrigley 90.85 20 P **P** **19 29 53.8 +1.6**
baz=226,SNR=5.1
XAN Xi'an 90.86 306 ⇑P **P** **19 29 54.0 +1.0**
XAN pP sP 19 30 01.8 -1.9
XAN pmax pmax
comp=Z,69nm,1.9s
E28M Babbage River 90.86 12 IAMs_20 IAMs_20 20 04 58.5
comp=Z,596nm,20.0s
E28M Babbage River 90.86 12 P **P** **19 29 53.6 +1.4**
baz=212,SNR=13
DEOK Depew 90.87 52 IAmb IAmb 19 29 55.6
comp=Z,54nm,1.1s
OK051 E0350 and S346 90.88 52 IAMs_20 IAMs_20 20 02 04.6
comp=Z,532nm,19.0s
TGUH Tegucigalpa,Un 90.90 76 IAMs_20 IAMs_20 20 00 36.6
comp=Z,510nm,22.0s
E29M Blow River 91.00 12 P **P** **19 29 53.6 +0.8**
baz=213,SNR=9.5
C27K Jago River 91.01 10 P **P** **19 29 54.0 +1.1**
baz=208,SNR=13
Z38A Mt. Pleasant 91.03 55 IAMs_20 IAMs_20 20 02 58.1
comp=Z,720nm,20.0s
C26K Camden Bay 91.08 9 P **P** **19 29 54.5 +1.4**
baz=207,SNR=7.4
F31M Tsiigehtchic 91.13 14 IAMs_20 IAMs_20 20 04 49.6
comp=Z,720nm,20.0s
F31M Tsiigehtchic 91.13 14 P **P** **19 29 54.4 +1.0**
baz=217,SNR=12
D27M Malcolm River 91.14 11 P **P** **19 29 54.7 +1.2**
baz=210,SNR=17
T35A Sooner Cattle 91.28 51 IAmb IAmb 19 29 58.1
comp=Z,46nm,1.0s
LCO Las Campanas 91.37 121 P **P** **19 29 56.5 +0.6**
LCO pmax pmax
comp=Z,76nm,1.4s
LCO MLR MLR
comp=Z,1μm,20.0s
LCO Las Campanas 91.37 121 P **P** **19 29 56.5 +0.6**
TUL3 Leonard 91.42 52 IAmb IAmb 19 29 58.2
comp=Z,28nm,0.8s
TUL3 IAMs_20 IAMs_20 20 02 36.3
comp=Z,561nm,22.0s
CO01 Juntas del Tor 91.48 122 IAmb IAmb 19 30 36.1
comp=Z,44nm,1.6s
CO01 IAMs_20 IAMs_20 20 00 56.3
comp=Z,731nm,21.0s
441A DeRidder 91.52 58 IAMs_20 IAMs_20 20 03 40.3
comp=Z,576nm,19.0s
HHC Hu-ho-hao-te 91.60 313 *e*P **P** **19 29 57.5 +1.1**
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,120nm,3.7s
MLSI Meulaboh, Aceh 91.62 274 P **P** **19 29 59.0 +2.0**
D28M Stokes Point 91.63 12 P **P** **19 29 55.8 +0.1**
baz=212
JTS Las Juntas de 91.81 80 LR LR 20 00 44.9
comp=Z,655nm,21.6s,baz=256,slow=28
JTS Las Juntas de 91.81 80 *i* P **P** **19 29 59.1 +1.3**
JTS pmax pmax
comp=Z,41nm,1.0s
JTS Las Juntas de 91.81 80 P **P** **19 29 58.1 +0.3**
JTS IAmb IAmb 19 30 01.4
comp=Z,36nm,0.9s
JTS Las Juntas de 91.81 80 IAMs_20 IAMs_20 20 00 22.9
comp=Z,660nm,22.0s
INK Inuvik 91.87 14 LR LR 20 05 26.3
comp=Z,621nm,20.6s,baz=232,slow=32
INK Inuvik 91.87 14 P **P** **19 29 57.7 +0.9**
INK Inuvik 91.87 14 IAmb IAmb 19 30 27.7
comp=Z,26nm,1.1s
INK Inuvik 91.87 14 P **P** **19 29 57.6 +0.9**
baz=217
BGNE Belgrade 91.89 47 IAMs_20 IAMs_20 20 03 39.3
comp=Z,585nm,22.0s
TEIG Tepich 92.04 69 P **P** **19 29 58.3 -0.4**
TEIG IAmb IAmb 19 30 01.6
comp=Z,53nm,1.3s
TEIG IAMs_20 IAMs_20 20 02 19.5
comp=Z,700nm,22.0s
KSU1 Kansas State U 92.06 49 IAMs_20 IAMs_20 20 03 48.8
comp=Z,574nm,21.0s
RLO Rose Lookout 92.10 52 IAmb IAmb 19 30 01.3
comp=Z,42nm,1.0s
NNA Nana 92.14 103 LR LR 20 01 22.6
comp=Z,364nm,19.2s,baz=260,slow=29
NNA Nana 92.14 103 IAMs_20 IAMs_20 20 00 59.8
comp=Z,543nm,21.0s
GO03 Copiapo 92.29 120 IAMs_20 IAMs_20 20 00 52.8
comp=Z,786nm,21.0s
CFA Coronel Fontan 92.30 124 LR LR 20 04 58.7
comp=Z,65nm,18.8s,baz=318,slow=31
ATAH Atahualpa 92.33 98 LR LR 20 03 20.3
comp=Z,343nm,18.8s,baz=258,slow=30
E28A Huff 92.38 41 IAMs_20 IAMs_20 20 04 24.9
comp=Z,594nm,22.0s
HDC Heredia 92.50 80 IAMs_20 IAMs_20 20 00 45.2
comp=Z,700nm,22.0s
YAK Yakutsk 92.56 337 P **P** **19 29 59.4 -0.6**
comp=Z,34nm,0.8s,baz=120,slow=1.9,SNR=19
YAK LR LR 20 08 00.3
comp=Z,227nm,20.4s,baz=128,slow=33
comp=Z,34nm,0.8s
YAK Yakutsk 92.56 337 *c i* P **P** **19 29 59.2 -0.9**
YAK *e* 19 30 02.9
YAK *e**PP **sP** **19 30 09.3 -1.5**
YAK *e* 19 33 36.5
YAK *e*PPP PPP 19 35 39.3
YAK *e*S **SKSac** **19 40 32.3 +1.1**
YAK *e* 19 40 58.0
YAK *e*SP SPn 19 42 18.3 +3.9
YAK *e*SS **SS** **19 47 14.0 -0.8**
YAK *e*SSS SSS 19 50 54.4
YAK pmax pmax
comp=Z,40nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,122nm,5.0s
YAK pmax pmax
comp=N,58nm,3.0s
YAK pmax pmax
comp=E,45nm,3.7s
YAK smax smax
comp=E,61nm,3.8s
YAK smax smax
comp=N,42nm,3.0s
YAK MLR MLR
comp=N,157nm,25.0s
YAK MLR MLR
comp=Z,172nm,16.0s
YAK MLR MLR
comp=E,101nm,16.0s
YAK Yakutsk 92.56 337 P **P** **19 29 59.0 -1.1**
MIAR Mount Ida 92.60 54 IAmb IAmb 19 30 27.2
comp=Z,60nm,1.9s
U38A Gravette 92.68 52 IAmb IAmb 19 30 03.8
comp=Z,27nm,0.9s
U38A IAMs_20 IAMs_20 20 03 14.4
comp=Z,490nm,22.0s
BTO2 Baotou 92.74 312 *e*P **P** **19 30 02.8 +1.1**
BTO2 S **S** **19 40 58.8 -6.2**
BTO2 SS **SS** **19 47 15.0 -3.7**
BTO2 pmax pmax
comp=Z,48nm,1.1s
BTO2 pmax pmax
comp=Z,640nm,6.6s
BTO2 L L
comp=Z,920nm,21.7s
BTO2 L L
comp=Z,800nm,21.2s
BTO2 L L
comp=Z,2μm,22.6s
HHAR Hobbs 92.95 53 IAmb IAmb 19 30 04.9
comp=Z,22nm,1.1s
PB14 IPOC Station P 93.30 117 P **P** **19 30 06.0 +1.1**
PB14 IAmb IAmb 19 30 08.8
comp=Z,46nm,1.2s
L34A Svendsen Farm, 93.33 47 IAMs_20 IAMs_20 20 04 02.4
comp=Z,512nm,22.0s
N35A Tabor 93.42 48 IAMs_20 IAMs_20 20 03 52.8
comp=Z,493nm,22.0s
545A Edgard 93.46 60 IAMs_20 IAMs_20 20 06 16.6
comp=Z,732nm,21.0s
YKA Yellowknife Ar 93.49 23 P **P** **19 30 05.0 +0.6**
comp=Z,3.0nm,0.9s,baz=235,slow=4.5,SNR=9.5
YKA LR LR 20 04 48.8
comp=Z,503nm,21.8s,baz=250,slow=31
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 93.49 23 P **P** **19 30 04.8 +0.4**
MDND Maddock 93.59 40 IAMs_20 IAMs_20 20 04 12.0
comp=Z,516nm,22.0s
143A Socs Landing, 93.64 57 IAMs_20 IAMs_20 20 04 23.2
comp=Z,628nm,20.0s
CD2 Chengdu 93.80 301 P **P** **19 30 08.3 +1.6**
CD2 S **S** **19 41 20.0 +5.4**
CD2 pmax pmax
comp=Z,30nm,1.4s
CD2 pmax pmax
comp=Z,470nm,3.8s
CD2 L L
comp=Z,200nm,11.0s
CD2 L L
comp=Z,390nm,15.9s
CD2 L L
comp=Z,550nm,19.0s
CMAR Chiang Mai Arr 93.84 288 P **P** **19 30 06.7 -0.4**
comp=Z,14nm,1.0s,baz=108,slow=2.9,SNR=44
CMAR LR LR 20 08 21.1
comp=Z,145nm,21.8s,baz=105,slow=33
comp=Z,14nm,1.0s
CMAR Chiang Mai Arr 93.84 288 P **P** **19 30 07.5 +0.4**
WHAR Wooly Hollow 93.85 54 IAmb IAmb 19 30 33.8
comp=Z,62nm,1.6s
ECSD EROS Data Cent 93.85 45 IAmb IAmb 19 30 09.5
comp=Z,54nm,1.1s
S39A Bolivar 93.92 52 IAmb IAmb 19 30 09.3
comp=Z,36nm,1.0s
CHTO Chiang Mai 93.95 288 P **P** **19 30 08.2 +0.6**
CHTO Chiang Mai 93.95 288 P **P** **19 30 08.0 +0.4**
CHTO pmax pmax
comp=Z,143nm,0.7s
CHTO Chiang Mai 93.95 288 P **P** **19 30 08.0 +0.4**
CHTO Chiang Mai 93.95 288 P **P** **19 30 08.5 +0.9**
PZH PanZhiHua 94.00 297 P **P** **19 30 08.5 +0.7**
PZH PanZhiHua 94.00 297 S **S** **19 41 24.0 +7.3**
PZH pmax pmax
comp=Z,640nm,0.9s
PZH LR LR
comp=N,250nm,22.2s
PZH LR LR
comp=E,380nm,21.8s
PZH LR LR
comp=Z,430nm,23.3s
TRQA Tornquist 94.11 133 *e*P **P** **19 30 09.2 +1.2**
PB05 IPOC Station P 94.14 116 IAmb IAmb 19 30 35.6
comp=Z,35nm,1.0s
VBMS Vicksburg 94.17 57 IAMs_20 IAMs_20 20 08 16.4
comp=Z,545nm,21.0s
P38A Dawn 94.46 50 IAmb IAmb 19 30 11.4
comp=Z,46nm,1.3s
P38A IAMs_20 IAMs_20 20 04 41.6
comp=Z,734nm,22.0s
OTAV Otavalo 94.69 91 *e*P **P** **19 30 11.5 -0.2**
PB06 IPOC Station P 94.74 116 IAmb IAmb 19 30 15.5
comp=Z,34nm,1.0s
PB06 IAMs_20 IAMs_20 20 01 50.6
comp=Z,667nm,21.0s
346A Big Creek Wild 94.74 59 IAMs_20 IAMs_20 20 05 35.5
comp=Z,731nm,22.0s
PB03 IPOC Station P 94.84 115 P **P** **19 30 12.8 +0.9**
PB03 IAmb IAmb 19 30 15.9
comp=Z,29nm,1.2s
F33A 5 Mile Ranch, 94.87 43 IAmb IAmb 19 30 13.7
comp=Z,35nm,1.3s
F33A IAMs_20 IAMs_20 20 05 15.9
comp=Z,664nm,22.0s
C36M Paulatuk 94.93 16 P **P** **19 30 11.3 +0.4**
baz=226
LCAR Lake Charles 94.99 54 IAmb IAmb 19 30 14.0
comp=Z,49nm,2.0s
N38A Joes South For 95.09 49 IAMs_20 IAMs_20 20 06 05.2
comp=Z,530nm,22.0s
FFC Flin Flon 95.18 33 P **P** **19 30 11.1 -1.3**
FFC pmax pmax
comp=Z,20nm,1.5s
FFC MLR MLR
comp=Z,1μm,22.0s
FFC Flin Flon 95.18 33 P **P** **19 30 11.1 -1.3**
T42A Van Buren 95.36 53 IAmb IAmb 19 30 39.8
comp=Z,39nm,1.7s
T42A IAMs_20 IAMs_20 20 04 58.5
comp=Z,626nm,22.0s
PB09 IPOC Station P 95.37 115 IAmb IAmb 19 30 39.7
comp=Z,25nm,1.1s
PSGCX Pisagua 95.45 113 IAMs_20 IAMs_20 20 02 36.2
comp=Z,601nm,22.0s
146A Union 95.48 58 IAMs_20 IAMs_20 20 05 21.0
comp=Z,580nm,22.0s
LZH Lanzhou 95.48 306 *e*P **P** **19 30 13.5 -0.9**
LZH pP sP 19 30 20.8 -4.3
LZH PP **PP** **19 34 01.8 -3.9**
LZH SKS **SKSac** **19 40 52.0 +3.3**
LZH S **S** **19 41 29.8 +0.5**
LZH pmax pmax
comp=Z,250nm,4.4s
LZH L L
comp=Z,380nm,18.6s
LZH L L
comp=Z,400nm,18.2s
LZH L L
comp=Z,460nm,19.9s
SCIA State Center 95.50 48 IAmb IAmb 19 30 16.6
comp=Z,37nm,0.9s
SCIA IAMs_20 IAMs_20 20 05 42.9
comp=Z,638nm,22.0s
P40A Paris 95.50 50 IAmb IAmb 19 30 16.1
comp=Z,22nm,1.0s
P40A IAMs_20 IAMs_20 20 05 36.2
comp=Z,647nm,21.0s
LZDM Lanzhou Array 95.55 306 LR LR 20 10 10.1
comp=Z,273nm,21.8s,baz=285,slow=34
CCM Cathedral Cave 95.59 52 P **P** **19 30 15.6 +0.9**
PB11 IPOC Station P 95.80 113 P **P** **19 30 17.3 +1.0**
AGMN Agassiz Nation 96.07 41 IAmb IAmb 19 30 17.8
comp=Z,26nm,1.1s
FVM French Village 96.18 52 IAmb IAmb 19 30 19.6
comp=Z,26nm,0.9s
Z47A Carrollton 96.44 57 IAMs_20 IAMs_20 20 09 46.6
comp=Z,428nm,20.0s
PB16 IPOC Station P 96.47 112 IAmb IAmb 19 30 47.4
comp=Z,49nm,1.8s
A36M Sachs Harbour 96.51 13 IAMs_20 IAMs_20 20 08 04.8
comp=Z,644nm,20.0s
N41A Harden Midland 96.76 49 IAMs_20 IAMs_20 20 06 14.4
comp=Z,594nm,22.0s
ULM Lac du Bonnet 96.79 39 P **P** **19 30 19.7 -0.1**
comp=Z,8.9nm,0.9s,baz=232,slow=5.2,SNR=15
ULM LR LR 20 07 22.2
comp=Z,962nm,22.0s,baz=236,slow=31
comp=Z,8.9nm,0.9s
ULM Lac du Bonnet 96.79 39 *i* P **P** **19 30 19.0 -0.8**
ULM Lac du Bonnet 96.79 39 IAmb IAmb 19 30 20.9
comp=Z,27nm,1.3s
SPMN Marine on St. 96.94 45 IAMs_20 IAMs_20 20 06 20.6
comp=Z,640nm,22.0s
S44A Carbondale 96.96 53 IAMs_20 IAMs_20 20 05 57.8
comp=Z,570nm,22.0s
T45A Paducah 97.21 53 IAMs_20 IAMs_20 20 05 54.4
comp=Z,639nm,22.0s
ULN Ulaanbaatar 97.25 318 *ce*P **P** **19 30 21.9 -0.3**
ULN pmax pmax
comp=Z,9.0nm,1.3s
ULN Ulaanbaatar 97.25 318 P **P** **19 30 21.9 -0.3**
ULN Ulaanbaatar 97.25 318 P Pdif 19 30 24.3 +2.0
P43A Skaggs, Pawnee 97.38 51 IAMs_20 IAMs_20 20 05 01.9
comp=Z,463nm,21.0s
451A Vernon 97.52 60 IAMs_20 IAMs_20 20 08 58.3
comp=Z,442nm,18.0s
X48A Hartselle 97.64 56 IAMs_20 IAMs_20 20 07 31.3
comp=Z,686nm,21.0s
SONM Songino Array 97.66 318 P **P** **19 30 22.8 -1.2**
comp=Z,1.0nm,0.6s,baz=112,slow=2.6,SNR=7.7
SONM LR LR 20 09 52.1
comp=Z,345nm,21.9s,baz=118,slow=33
comp=Z,1.0nm,0.6s
SONM Songino Array 97.66 318 P **P** **19 30 21.7 -2.2**
HDIL Hopedale 97.84 50 IAMs_20 IAMs_20 20 06 56.9
comp=Z,690nm,22.0s
EPLO Experimental L 97.88 40 IAmb IAmb 19 30 26.0
comp=Z,27nm,1.1s
JFWS Jewell Farm 97.91 47 IAMs_20 IAMs_20 20 07 47.6
comp=Z,526nm,21.0s
I40A Norwalk 97.97 46 IAmb IAmb 19 30 27.8
comp=Z,25nm,1.1s
I40A IAMs_20 IAMs_20 20 06 36.1
comp=Z,445nm,22.0s
E38A The Farm, Brul 98.22 44 IAmb IAmb 19 30 28.1
comp=Z,23nm,1.3s
E38A IAMs_20 IAMs_20 20 07 30.6
comp=Z,468nm,22.0s
352A Blakely 98.45 60 IAMs_20 IAMs_20 20 03 40.8
comp=Z,458nm,20.0s
LPAZ La Paz 98.47 110 P Pdif 19 30 30.9 +1.9
comp=Z,1.4nm,0.7s,baz=230,slow=4.5,SNR=6.9
LPAZ LR LR 20 05 17.7
comp=Z,728nm,21.9s,baz=265,slow=29
comp=Z,1.4nm,0.7s
LPAZ La Paz 98.47 110 *e*P **P** **19 30 28.5 -0.5**
553A Crawfordville 98.48 61 IAMs_20 IAMs_20 20 15 59.7
comp=Z,385nm,18.0s
TIXI Tiksi 98.61 344 LR LR 20 12 55.9
comp=Z,299nm,19.8s,baz=143,slow=34
TIXI Tiksi 98.61 344 *ce*P **P** **19 30 27.2 -0.3**
TIXI pmax pmax
comp=Z,14nm,1.1s
TIXI Tiksi 98.61 344 P **P** **19 30 27.1 -0.4**
TIXI IAmb IAmb 19 30 28.6
comp=Z,13nm,1.1s
G40A Rib Lake 98.69 45 IAmb IAmb 19 30 30.6
comp=Z,28nm,1.4s
EYMN Ely 98.69 42 IAmb IAmb 19 30 30.1
comp=Z,30nm,1.6s
P46A Rosedale 99.08 51 IAMs_20 IAMs_20 20 07 27.8
comp=Z,422nm,21.0s
I42A Draeger Farm, 99.14 47 IAMs_20 IAMs_20 20 07 21.1
comp=Z,632nm,22.0s
L44A Lake County Fo 99.32 49 IAMs_20 IAMs_20 20 07 11.2
comp=Z,446nm,22.0s
WCI Wyandotte Cave 99.35 53 IAMs_20 IAMs_20 20 06 47.2
comp=Z,555nm,22.0s
X51A Calhoun 99.41 57 IAMs_20 IAMs_20 20 07 54.9
comp=Z,587nm,21.0s
TIGA Tifton 99.53 60 IAMs_20 IAMs_20 20 09 21.5
comp=Z,446nm,22.0s
GTA2 Gaotai 99.61 308 *e*P **Pdif** **19 30 33.3 +0.4**
GTA2 sP pwP 19 30 44.8 -2.5
GTA2 pmax pmax
comp=Z,3.0nm,1.1s
GTA2 L L
comp=Z,270nm,20.0s
GTA2 L L
comp=Z,370nm,21.9s
GTA2 L L
comp=Z,810nm,23.2s
H43A Windswept, Lux 100.09 46 IAMs_20 IAMs_20 20 08 46.4
comp=Z,438nm,20.0s
GOGA Godfrey 100.19 58 IAMs_20 IAMs_20 20 10 08.7
comp=Z,497nm,22.0s
R49A Shelbyville 100.22 53 IAMs_20 IAMs_20 20 08 12.1
comp=Z,567nm,21.0s
F42A Maple Grove Fa 100.22 45 IAMs_20 IAMs_20 20 08 01.6
comp=Z,437nm,22.0s
W52A Murphy 100.29 56 IAMs_20 IAMs_20 20 07 58.2
comp=Z,728nm,22.0s
DWPF Disney Wildern 100.40 64 IAMs_20 IAMs_20 20 08 49.7
comp=Z,458nm,22.0s
N47A Urbana 100.55 50 IAMs_20 IAMs_20 20 07 34.7
comp=Z,480nm,22.0s
R50A Paris 100.85 53 IAMs_20 IAMs_20 20 08 31.9
comp=Z,638nm,22.0s
060A Indiantown 101.02 65 IAMs_20 IAMs_20 20 08 43.2
comp=Z,663nm,22.0s
I45A Fountain 101.03 47 IAMs_20 IAMs_20 20 08 39.2
comp=Z,494nm,21.0s
V53A Saluda 101.32 56 IAMs_20 IAMs_20 20 10 04.5
comp=Z,658nm,21.0s
O49A Covington 101.36 51 IAMs_20 IAMs_20 20 08 59.2
comp=Z,527nm,22.0s
Q51A Peebles 101.79 53 IAMs_20 IAMs_20 20 08 38.7

comp=Z,451nm,22.0s
J47A Sunmer 101.81 48 IAMs_20 IAMs_20 20 08 25.8
comp=Z,543nm,22.0s
U54A Nelsons Funny 102.32 56 IAMs_20 IAMs_20 20 09 23.9
comp=Z,502nm,22.0s
KMSC Kings Mountain 102.35 57 IAMs_20 IAMs_20 20 10 09.9
comp=Z,581nm,22.0s
AAM Ann Arbor 102.40 49 IAMs_20 IAMs_20 20 10 39.5
comp=Z,531nm,20.0s
Q52A Bidwell 102.59 53 IAMs_20 IAMs_20 20 09 14.8
comp=Z,638nm,22.0s
V55A Taylorsville 102.62 56 IAMs_20 IAMs_20 20 10 45.0
comp=Z,596nm,22.0s
NHSC New Hope 102.76 59 IAMs_20 IAMs_20 20 12 12.0
comp=Z,375nm,20.0s
E46A Sault Ste Mari 102.95 45 IAMs_20 IAMs_20 20 09 57.9
comp=Z,563nm,22.0s
N51A Ashland 102.99 51 IAMs_20 IAMs_20 20 09 46.3
comp=Z,577nm,22.0s
CPUP Villa Florida 103.19 124 *e*P **Pdif 19 30 48.9 -0.2**
O52A Adamsville 103.19 52 IAMs_20 IAMs_20 20 09 17.8
comp=Z,546nm,22.0s
P53A Whipple 103.38 53 IAMs_20 IAMs_20 20 10 03.7
comp=Z,451nm,22.0s
I49A Point Hope 103.39 48 IAMs_20 IAMs_20 20 10 00.6
comp=Z,439nm,21.0s
U56A King 103.40 56 IAMs_20 IAMs_20 20 11 31.5
comp=Z,473nm,21.0s
X58A Rowland 103.80 58 IAMs_20 IAMs_20 20 11 35.2
comp=Z,474nm,22.0s
M52A Chesterland 103.88 51 IAMs_20 IAMs_20 20 09 48.9
comp=Z,583nm,22.0s
N53A Lisbon 104.09 51 IAMs_20 IAMs_20 20 10 32.6
comp=Z,580nm,22.0s
V58A Windy Hill, Pi 104.26 57 IAMs_20 IAMs_20 20 10 43.5
comp=Z,682nm,22.0s
O54A Avella 104.29 52 IAMs_20 IAMs_20 20 16 22.0
comp=Z,364nm,18.0s
MCWV Mont Chateau 104.58 53 IAMs_20 IAMs_20 20 11 02.5
comp=Z,624nm,22.0s
R58B Mineral 105.71 55 IAMs_20 IAMs_20 20 12 23.7
comp=Z,564nm,21.0s
T59A Double "B" Far 105.75 56 IAMs_20 IAMs_20 20 13 12.9
comp=Z,489nm,21.0s
L56A Greenwood 106.78 51 IAMs_20 IAMs_20 20 12 14.6
comp=Z,574nm,22.0s
M57A Sunshine Farm, 106.95 51 IAMs_20 IAMs_20 20 11 37.1
comp=Z,505nm,22.0s
N58A Sunbury 107.16 52 IAMs_20 IAMs_20 20 13 15.8
comp=Z,474nm,22.0s
K57A Scipio Center 107.64 50 IAMs_20 IAMs_20 20 12 31.5
comp=Z,418nm,22.0s
BINY Binghamton 107.94 51 IAMs_20 IAMs_20 20 13 33.4
comp=Z,646nm,22.0s
J57A Williamstown 108.13 50 IAMs_20 IAMs_20 20 14 45.4
comp=Z,383nm,21.0s
L59A Walton 108.63 51 IAMs_20 IAMs_20 20 14 02.6
comp=Z,557nm,22.0s
LONY Lake Ozonia 109.33 48 IAMs_20 IAMs_20 20 14 54.8
comp=Z,466nm,22.0s
WMQ Urumqi 109.37 311 Pdif **Pdif 19 31 17.5 +1.4**
WMQ PP **PP 19 35 53.0 +3.3**
WMQ PPMZ
comp=Z,110nm,3.7s
WMQ L L
comp=Z,270nm,24.3s
WMQ L L
comp=Z,410nm,23.3s
WMQ L L
comp=Z,380nm,24.3s
J61A Chester 110.61 50 IAMs_20 IAMs_20 20 15 21.9
comp=Z,387nm,20.0s
HRV Adam Dziewonsk 111.23 51 IAMs_20 IAMs_20 20 15 42.5
comp=Z,548nm,22.0s
WES Weston 111.39 51 IAMs_20 IAMs_20 20 20 46.7
comp=Z,403nm,20.0s
ZSN Zaisan 111.75 314 *i* PKIKP **PKiKP 19 35 24.0 +0.1**
ZSN Zaisan 111.75 314 *e*PKiKP **PKiKP 19 35 24.1 +0.1**
I63A Otisfield 112.11 49 IAMs_20 IAMs_20 20 19 43.6
comp=Z,491nm,19.0s
HYB Hyderabad 112.18 281 *e*Pdif **Pdif 19 31 29.4 +0.2**
HYB *e*PP **PP 19 36 10.4 -0.2**
ZALV Zalesovo Beam 112.19 321 PKiKP **PKiKP 19 35 23.6 -0.8**
comp=Z,1.5nm,0.8s,baz=118,slow=2.2,SNR=5.3
G62A West of Eustis 112.25 48 IAMs_20 IAMs_20 20 15 21.2
comp=Z,509nm,20.0s
WVL Waterville 112.82 49 IAMs_20 IAMs_20 20 18 59.1
comp=Z,404nm,22.0s
D62A Allapoint, All 113.42 46 IAMs_20 IAMs_20 20 17 37.8
comp=Z,513nm,22.0s
MKAR Makanchi Array 113.46 313 PKKPbc PKKPbc 19 46 12.6 -0.1
comp=Z,0.9nm,0.9s,baz=287,slow=4.9,SNR=4.4
MKAR PKKP 19 46 33.0
comp=Z,2.0nm,0.9s,baz=274,slow=3.6,SNR=8.3
MAKZ Makanchi 113.68 313 IAMs_20 IAMs_20 20 20 01.9
comp=Z,379nm,21.0s
G65A Princeton 114.34 48 IAMs_20 IAMs_20 20 16 43.6
comp=Z,500nm,21.0s
SHLS Shalkode 115.26 309 *e*PKIKP **PKiKP 19 35 30.1 -0.8**
SHLS Shalkode 115.26 309 *e*PKP **PKiKP 19 35 30.1 -0.8**
NEEM North Greenlan 115.37 12 *i* P **PKiKP 19 35 30.2 -0.2**
UZB Uzynbulak 115.58 309 *e*PKIKP **PKiKP 19 35 31.3 -0.2**
UZB Uzynbulak 115.58 309 *e*PKP **PKiKP 19 35 31.3 -0.2**
KPKS Kokpek 115.84 310 *e*PKIKP **PKPdf 19 35 32.0 +0.1**
KPKS Kokpek 115.84 310 *e*PKP **PKPdf 19 35 32.0 +0.1**
KURK Kurchatov 115.96 318 PKIKP **PKPdf 19 35 31.1 -0.7**
KURK Kurchatov 115.96 318 **PKPdf 19 35 31.2 -0.7**
KURK Kurchatov 115.96 318 IAMs_20 IAMs_20 20 22 51.8
comp=Z,341nm,20.0s
KURBB Kurchatov Arra 116.02 318 PKP **PKPdf 19 35 31.1 -0.9**
comp=Z,2.7nm,0.9s,baz=94,slow=1.8,SNR=21
KURBB PKKPbc **PKKPbc 19 46 04.1 +0.2**
comp=Z,0.7nm,0.8s,baz=266,slow=4.4,SNR=6.9
SATY Saty 116.03 309 *e*PKIKP **PKPdf 19 35 32.2 -0.2**
SATY Saty 116.03 309 *e*PKP **PKPdf 19 35 32.2 -0.2**
TDK Taldyqorghan 116.10 311 *e*PKIKP **PKPdf 19 35 32.4 +0.1**
TDK Taldyqorghan 116.10 311 *e*PKP **PKPdf 19 35 32.5 +0.1**
MDOK Medeo 117.03 309 *e*PKIKP **PKPdf 19 35 34.2 -0.1**
MDOK *e* 19 36 43.1
MDOK Medeo 117.03 309 *e*PKP **PKPdf 19 35 34.2 -0.1**
MDOK *e*PP **PP 19 36 43.2 -1.1**
TNSS Tian-Shan 117.10 309 *e*PKIKP **PKPdf 19 35 34.3 -0.5**
TNSS Tian-Shan 117.10 309 *e*PKP **PKPdf 19 35 34.4 -0.5**
AAA Alma-Ata 117.13 309 *e*PKIKP **PKPdf 19 35 34.3 -0.1**
AAA Alma-Ata 117.13 309 *e*PKP **PKPdf 19 35 34.3 -0.1**
KSH2 Kashi 118.01 305 PKP **PKPdf 19 35 36.5 +0.1**
KSH2 L L
comp=Z,160nm,18.6s
KSH2 L L
comp=Z,260nm,19.9s
KSH2 L L
comp=Z,420nm,22.0s
SGDS Sogindy 118.80 310 *e*PKP **PKPdf 19 35 37.6 0.0**
ILULI Ilulissat 118.98 20 *i* P **PKPdf 19 35 36.2 -0.9**
BTLS Baital 119.19 311 *e*PKIKP **PKPdf 19 35 38.3 +0.1**
BTLS *e* 19 36 57.9
BTLS Baital 119.19 311 *e*PKP **PKPdf 19 35 38.3 +0.1**
BTLS *e*PP **PP 19 36 58.0 -1.0**
SFJD Kangerlussuaq 120.04 22 IAMs_20 IAMs_20 20 21 49.8
comp=Z,467nm,22.0s
KBS Kingsbay 120.12 359 *i* P **PKPdf 19 35 39.0 -0.1**
SPITS Spitsbergen Ar 120.74 358 PKP **PKPdf 19 35 40.2 -0.1**
comp=Z,13nm,0.8s,baz=7.1,slow=2.3,SNR=7.5
SUMG Summit 120.79 14 PKIKP **PKiKP 19 35 41.4 +0.2**
SUMG MLR MLR
comp=Z,800nm,22.0s
SUMG Summit 120.79 14 **PKiKP 19 35 41.4 +0.2**
SUMG Summit 120.79 14 *i* P **PKPdf 19 35 41.0 0.0**
BVAR Borovoye Array 120.84 321 PKP **PKPdf 19 35 41.0 -0.1**
comp=Z,12nm,0.9s,baz=108,slow=3.3,SNR=24
DAG Danmarks Havn 120.93 7 *i* P **PKPdf 19 35 40.1 -0.6**
DZA Taraz 121.22 309 *e*PKIKP **PKPdf 19 35 42.1 -0.1**
DZA Taraz 121.22 309 *e*PKP **PKPdf 19 35 42.2 -0.1**
KKAR Karatay Array 121.81 309 PKIKP **PKPdf 19 35 42.7 -0.6**
KKAR Karatay Array 121.81 309 **PKPdf 19 35 42.7 -0.6**
IUG luzhnay 122.22 308 *e*PKIKP **PKPdf 19 35 44.1 -0.2**
IUG *e* 19 37 18.9
IUG luzhnay 122.22 308 *e*PKP **PKPdf 19 35 44.2 -0.1**
IUG *e*PP **PP 19 37 18.1 -1.9**
BRLS Borolday 122.31 309 *e*PKIKP **PKPdf 19 35 44.6 +0.3**
BRLS *e* 19 37 20.6
BRLS Borolday 122.31 309 *e*PKP **PKPdf 19 35 44.6 +0.3**
BRLS *e*PP **PP 19 37 20.6 +0.2**
CHM Chimkent 122.52 308 *e*PKIKP **PKPdf 19 35 44.8 +0.1**
CHM Chimkent 122.52 308 *e*PKP **PKPdf 19 35 44.8 +0.1**

DBG Daneborg 122.90 8 *i* P **PKPdf 19 35 44.5 0.0**
KBL Kabul 123.08 299 PKIKP **PKPdf 19 35 46.4 +0.1**
KBL Kabul 123.08 299 **PKPdf 19 35 46.4 +0.1**
IVI Ivigtut 123.29 28 IAMs_20 IAMs_20 20 23 19.1
comp=Z,364nm,22.0s
ISOG Isortoq, Green 124.86 21 *i* P **PKPdf 19 35 47.9 -0.6**
SVE Sverdlovsk 125.31 327 *i* PKIKP **PKPdf 19 35 49.5 -0.1**
SVE pmax pmax
comp=Z,22nm,1.3s
SVE MLR MLR
comp=Z,566nm,24.0s
SCO Scoresbysund 125.87 11 PKIKP **PKiKP 19 35 50.9 +0.2**
SCO MLR MLR
comp=Z,400nm,20.0s
SCO Scoresbysund 125.87 11 **PKiKP 19 35 50.9 +0.2**
SCO IAMs_20 IAMs_20 20 25 10.5
comp=Z,418nm,20.0s
SCO Scoresbysund 125.87 11 *i* P **PKiKP 19 35 50.8 +0.1**
ARTI Arti 126.63 327 *i* PKIKP **PKPdf 19 35 52.3 +0.1**
ARTI 19 43 03.6
ARTI MLR MLR
comp=Z,503nm,21.0s
ARTI Arti 126.63 327 **PKPdf 19 35 52.2 +0.1**
SUR Sutherland 127.01 195 PKP **PKiKP 19 35 54.9 +0.4**
comp=Z,11nm,1.1s,baz=155,slow=2.0,SNR=5.5
NBPS Pedro II - PI 127.20 111 *e*P **PKiKP 19 35 55.3 +0.1**
KEV Kevo 127.89 351 IAMs_20 IAMs_20 20 36 05.8
comp=Z,411nm,19.0s
NBMA Muriti-CE 128.06 116 *e*P **PKiKP 19 35 57.2 +0.4**
ABKAR Akbulak array 128.07 318 **PKPdf 19 35 55.2 +0.1**
ARCES ARCESS Array B 128.30 352 PKP **PKPdf 19 35 54.7 -0.3**
comp=Z,5.2nm,0.8s,baz=29,slow=2.8,SNR=11
ARCES ARCESS Array B 128.30 352 **PKPdf 19 35 55.3 +0.3**
APA Apatity 128.68 347 *i* PKIKP **PKPdf 19 35 51.1 -4.6**
APA *e* 19 38 01.7
APA *e*PS **PS 19 48 09.8 -0.5**
APA pmax pmax
comp=Z,9.0nm,1.2s
APA MLR MLR
comp=Z,290nm,22.4s
NBMO Morrinhos-CE 128.94 111 *e*P **PKPdf 19 35 57.4 -0.5**
BOSA Boshof 129.23 201 PKP **PKPdf 19 35 58.4 +0.2**
comp=Z,4.6nm,1.1s,baz=150,slow=2.0,SNR=2.5
RCBR Riachuelo 131.29 116 IAMs_20 IAMs_20 20 32 37.2
comp=Z,327nm,18.0s
MAKGR Makgori 131.96 202 **PKPdf 19 36 03.4 -0.1**
KLMR Klimovskoe 132.30 339 *e*PKIKP **PKPdf 19 36 02.5 -0.3**
KLMR pmax pmax
comp=Z,31nm,1.4s
KLMR MLR MLR
comp=Z,361nm,20.0s
KHWEE KHWEE 135.22 205 **PKPdf 19 36 06.4 -3.2**
MATP Matopo 135.23 210 PKP **PKPdf 19 36 08.8 -0.9**
comp=Z,4.9nm,0.8s,baz=133,slow=2.2,SNR=9.3
FINES FINESS Array B 135.59 347 PKP **PKPdf 19 36 07.8 -1.2**
comp=Z,7.6nm,1.0s,baz=29,slow=4.4,SNR=9.1
MOS Moscow 136.66 335 *e*PKHKP PKPpre 19 35 55.6
MOS *e* 19 38 48.6
GRTLG Ghanzi 137.30 200 **PKPdf 19 36 13.8 +0.2**
OBN Obninsk 137.53 335 ⇓*e*PKIKP **PKPdf 19 36 12.1 -0.6**
OBN *i* 19 36 14.1
OBN *i* SS SS 19 57 01.0 -3.2
OBN pmax pmax
comp=Z,10.0nm,1.3s
OBN pmax pmax
comp=Z,15nm,1.6s
OBN Obninsk 137.53 335 IAMs_20 IAMs_20 20 34 35.6
comp=Z,260nm,22.0s
VRH Novokhopyorsk 137.75 327 *e*PKIKP **PKPdf 19 36 11.3 -1.9**
VRH pmax pmax
comp=Z,8.0nm,0.9s
NB2 NORSAR Subarra 138.03 357 PKP **PKPdf 19 36 07.7 -5.8**
comp=Z,2.7nm,0.6s,baz=15,slow=5.6
NOA NORSAR Array B 138.03 357 PKhKP PKPpre 19 36 06.7
comp=Z,1.0nm,0.8s,baz=36,slow=2.1,SNR=4.8
LPSR Galich'ya Gora 138.24 331 *e*PKIKP **PKPdf 19 36 13.1 -1.0**
LPSR pmax pmax
comp=Z,7.0nm,1.0s
MAK Makhachkala 138.28 314 *i* P **Pdif 19 33 11.4 -13**
MAK *i* 19 36 11.5
MAK *e*PPP PPP 19 42 03.2
MAK *e* 19 43 22.0
MAK *e*SS SS 19 57 07.4 -7.1
MAK *e*SSS SSS 20 02 18.6
MAK pmax pmax
comp=Z,154nm,1.5s
VORR Voronezh 138.71 329 *e*PKIKP **PKPdf 19 36 13.4 -1.6**
VORR pmax pmax
comp=Z,10.0nm,1.0s
HFS Hagfors 138.75 355 PKhKP PKPpre 19 36 07.3
comp=Z,4.4nm,0.8s,baz=125,slow=2.3,SNR=5.3
VSR Storozhevoye 139.02 329 *e*PKIKP **PKPdf 19 36 14.2 -1.4**
VSR pmax pmax
comp=Z,8.0nm,1.1s
LSZ Lusaka 139.76 213 PKIKP **PKPdf 19 36 17.6 -0.6**
LSZ Lusaka 139.76 213 **PKPdf 19 36 17.6 -0.6**
KBZ Khabaz 141.02 317 PKhKP PKPpre 19 36 13.2
comp=Z,2.6nm,0.9s,baz=38,slow=5.9,SNR=4.6
KBZ PP **PP 19 39 17.1 -3.5**
comp=Z,4.5nm,1.1s,baz=56,slow=11,SNR=6.1
KIV Kislovodsk 141.05 317 *e*PKIKP **PKPdf 19 36 19.4 -0.3**
KIV *i* 19 36 22.1
KIV *e* 19 39 18.0
KIV *e*SS SS 19 57 43.5 -3.5
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 141.05 317 IAMs_20 IAMs_20 20 38 15.5
comp=Z,333nm,21.0s
MNK Minsk 141.15 340 *i* PKP **PKPdf 19 36 17.2 -2.1**
comp=E,13nm,0.8s
MNK *i* PKP **PKPdf 19 36 17.2 -2.1**
comp=N,13nm,0.8s
MNK *i* PKP **PKPdf 19 36 17.2 -2.1**
comp=Z,12nm,0.8s,baz=33
MNK *i* PP **PP 19 39 19.5 -1.2**
MNK *i* PP **PP 19 39 19.5 -1.2**
MNK *i* PPP PPP 19 42 23.3
MNK *i* SKS **SKSdf 19 43 27.3 0.0**
MNK *i* SKKS **SKKSdf 19 52 49.8 -2.5**
MNK *i* SS **SS 19 57 49.5 +3.0**
MNK *i* SSS SSS 20 03 08.5
MNK *i* LQ LQ 20 31 32.3
MNK *i* LRM MLR 20 37 57.9
comp=N,225nm,22.8s
MNK *i* LRM MLR 20 38 02.7
comp=E,206nm,22.6s
MNK *i* LRM MLR 20 38 03.7
comp=Z,342nm,20.3s
MNK Minsk 141.15 340 *i* PKIKP **PKPdf 19 36 17.2 -2.1**
MNK *i* 19 39 19.5
MNK *i* PPP PPP 19 42 23.3
MNK *i* 19 43 27.3
MNK *i* SS SS 19 57 49.5 +2.9
MNK *i* SSS SSS 20 03 08.5
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=N,13nm,0.8s
MNK pmax pmax
comp=E,13nm,0.8s
MNK MLR MLR
comp=N,225nm,23.0s
MNK MLR MLR
comp=E,206nm,23.0s
MNK MLR MLR
comp=Z,342nm,20.0s
GNI Garni 141.24 311 IAMs_20 IAMs_20 20 45 48.7
comp=Z,227nm,20.0s
PABE Paberze 141.41 344 IAMs_20 IAMs_20 20 38 36.2
comp=Z,375nm,22.0s
ERBR Yeremizino-Bor 141.53 321 *i* PKIKP **PKPdf 19 36 16.9 -3.4**
ERBR *e* 19 36 23.6
ERBR pmax pmax
comp=Z,23nm,0.8s
LABN Labinsk 141.94 320 *i* PKIKP **PKiKP 19 36 23.8 -0.2**
LABN *e* 19 36 27.2
LABN pmax pmax
comp=Z,7.0nm,0.4s
KIBK Kibwezi 142.48 239 **PKPdf 19 36 20.9 -2.2**
BATM Batumi 142.77 315 ⇑P **PKPdf 19 36 20.0 -2.7**
BATM Batumi 142.77 315 ⇑PKIKP **PKPdf 19 36 20.0 -2.7**
SOC Sochi 143.11 319 *e*PKIKP **PKPdf 19 36 22.3 -0.9**
SOC *e* 19 39 32.4
SOC *e*SS SS 19 58 13.5 +2.9

SOC *e*SSS SSS 20 03 34.1
EKA Eskdalemuir Ar 143.11 9 PKhKP PKPpre 19 36 18.7
comp=Z,1.6nm,0.7s,baz=345,slow=2.6,SNR=8.4
RAYN Ar Rayn 143.63 284 ⇓PKIKP PKPbc 19 36 23.2 +0.9
RAYN Ar Rayn 143.63 284 PKPab 19 36 21.2 -0.2
RAYN Ar Rayn 143.63 284 IAMs_20 IAMs_20 20 35 35.8
comp=Z,346nm,22.0s
AKASG Malin Array Be 143.78 336 PKP PKPab 19 36 21.4 +0.4
comp=Z,3.5nm,0.5s,baz=43,slow=4.0,SNR=27
KIEV Kiev 143.79 336 ⇓P PKPab 19 36 21.6 +0.5
KIEV Kiev 143.79 336 ⇓PKIKP PKPbc 19 36 21.6 -0.2
ANN Anapa 143.83 322 *i* PKIKP PKiKP 19 36 36.4 +8.6
ANN pmax pmax
comp=Z,76nm,1.1s
KMBO Kilima Mbogo 143.83 240 *i* PKIKP PKPbc 19 36 24.4 +1.0
KOPT Kop Dagi 144.28 313 PKPbc 19 36 24.5 +0.4
KTUT Trabzon 144.34 315 ⇑P **PKPdf 19 36 27.4 +1.9**
LUBAR Lubar, Ukraine 144.97 336 PKP PKPbc 19 36 25.8 +0.3
R9F13 Warsaw-Wawer 145.10 344 *e*PKPdfc 19 36 27.0
R9F13 *e* 19 36 41.7
BSEG Bad Segeberg 145.16 356 *e*PKPbc **PKPdf 19 36 26.9 +0.4**
baz=12,slow=2.8
LBWR Ladybower, Pea 145.20 9 *e*P **PKPab 19 36 26.5 +0.2**
LMK Market Rasen 145.33 7 *e*P **PKPdf 19 36 27.0 +0.2**
STNC Stoke 145.43 9 *e*P **PKPab 19 36 27.6 +0.6**
FOEL Foel Wylfa 145.46 11 *e*P **PKPab 19 36 27.7 +0.5**
BEL Belsk 145.54 344 *e*PKP **PKPab 19 36 28.6 +1.1**
SIM Simferopol' 145.61 325 *e*PKIKP **PKPdf 19 36 27.8 +0.3**
SIM *e* 19 36 32.0
SIM pmax pmax
comp=Z,356nm,1.3s
BAL3X Bal3x, Balta 145.76 332 PKP **PKPdf 19 36 28.0 +0.3**
STBN Sutton Boningt 145.81 9 *e*P **PKPab 19 36 28.6 +0.2**
HLM1 Long Mynd 145.87 10 *e*P **PKPab 19 36 28.9 +0.2**
CWF Charnwood Fore 145.90 9 *e*P **PKPab 19 36 29.0 +0.1**
GORT1 Trebel 146.03 355 *e*PKPbc **PKPab 19 36 29.8 +0.6**
baz=12,slow=2.8
SORM Soroca 146.15 334 ⇑P **PKPbc 19 36 29.2 -0.1**
SORM Soroca 146.15 334 ⇑PKP2 **PKPbc 19 36 29.2 -0.1**
SORM Soroca 146.15 334 PKP **PKPdf 19 36 28.9 +0.6**
WACR West Acre 146.16 7 *e*P **PKPab 19 36 29.6 -0.2**
ARPR Arapgir-MALATY 146.19 313 IAMs_20 IAMs_20 20 47 39.3
comp=Z,310nm,21.0s
MCH1 Michaelchurch 146.35 11 *e*P **PKPbc 19 36 29.8 0.0**
RETH Rethem/Aller, 146.41 357 *e*PKPbc **PKPab 19 36 30.9 +0.1**
baz=12,slow=2.8
RETH *e*pPKPbc sPKPab 19 36 45.1 +3.7
MONM Monmouth 146.53 11 *e*P **PKPbc 19 36 30.6 +0.3**
FLTG Flechtingen 146.69 355 *e*PKPbc **PKPbc 19 36 30.9 +0.1**
baz=12,slow=2.8
PURM Purcari 146.69 330 ⇑P **PKPab 19 36 31.8 -0.2**
STRD Stroud 146.70 10 *e*P **PKPbc 19 36 30.2 -0.5**
IBBN Ibbenburen 146.89 359 *e*PKPbc **PKPab 19 36 32.2 -0.5**
baz=12,slow=2.8
ASSE Asse, Remlinge 146.93 355 *e*PKPbc **PKPab 19 36 32.4 -0.3**
baz=12,slow=2.8
IASR Iasi 147.22 333 ⇑P **PKPbc 19 36 32.8 +0.4**
CLZ Clausthal 147.24 356 *e*PKPbc **PKPab 19 36 33.5 -0.6**
baz=12,slow=2.8
OJC Ojcow 147.27 344 *e*PKP **PKPbc 19 36 32.7 +0.2**
KSP Ksiaz 147.46 349 *e*PKP **PKPab 19 36 34.4 -0.6**
BZK Bozkurt 147.51 320 ⇑P **PKPbc 19 36 34.4 +1.0**
CLL Collm 147.52 353 *e*PKIKP **PKPdf 19 36 31.0 +0.5**
CLL *i* 19 36 34.0
CLL pmax pmax
comp=Z,65nm,1.1s
CLL Collm 147.52 353 IAMs_20 IAMs_20 20 46 28.7
comp=Z,269nm,21.0s
CLL Collm 147.52 353 *e*PKPdf **PKPdf 19 36 31.0 +0.5**
CLL *i* PKPbc **PKPbc 19 36 34.0 +0.9**
CLL comp=Z,65nm,1.1s
i PKPab **PKiKP 19 36 35.7 +0.4**
CLL comp=Z,65nm,0.9s
i x x 19 36 47.8
CLL comp=Z,139nm,1.2s
i x x 19 36 55.0
CLL *e*SS SS 19 58 49.0 -10
CLL *ex* x 20 01 06.0
CLL *e*SSS SSS 20 04 38.0
CLL *ex* x 20 12 59.0
CLL AMS AMS 20 46 00.0
comp=Z,200nm,20.9s
GTTG Gottingen 147.56 356 *e*PKPbc **PKPbc 19 36 34.2 +1.0**
baz=12,slow=2.8
STHS Stebnicka Huta 147.61 342 *e*PKP2 **PKPab 19 36 36.6 +1.0**
STHS Stebnicka Huta 147.61 342 *e*PKP **PKPab 19 36 36.6 +1.0**
PRAR RASCA 147.64 335 ⇓P **PKPbc 19 36 34.2 +0.6**
KOLS Kolonicke sedl 147.72 341 *e*PKP2 **PKPab 19 36 36.3 +0.2**
KOLS Kolonicke sedl 147.72 341 *e*PKP **PKPab 19 36 36.3 +0.2**
CHVC Chvalec 147.75 349 *e*PKP2 **PKPbc 19 36 34.8 +1.0**
CHVC Chvalec 147.75 349⇑*e*PKP **PKPbc 19 36 34.8 +1.0**
OSTC Ostas 147.75 349 *e*PKP2 **PKPbc 19 36 32.7 -1.1**
OSTC Ostas 147.75 349⇑*e*PKP **PKPbc 19 36 32.7 -1.1**
NEUB Neuenburg 147.75 354 *e*PKPbc **PKPdf 19 36 32.1 +1.2**
baz=12,slow=2.8
NEUB *e*pPKPbc **sPKPab 19 36 48.7 +1.9**
BUG Bochum--Univer 147.77 359 *e*PKPbc **PKPbc 19 36 34.5 +0.8**
baz=12,slow=2.8
BRG Berggiesshubel 147.82 351 *e*PKPbc **PKPdf 19 36 31.8 +0.8**
baz=12,slow=2.8
BRG Bergdiesshubel 147.82 351 ⇓*e*PKPf 19 36 31.8
BRG Amp 19 36 33.8
comp=Z,9.4nm,1.2s
BRG ⇑PKPb 19 36 35.3
BRG Amp 19 36 36.2
comp=Z,26nm,1.0s
BRG PKPab **PKPab 19 36 37.5 +1.1**
BRG Amp 19 36 37.9
comp=Z,30nm,0.9s
BURAR Bucovina Array 147.82 336 ⇑P **PKPbc 19 36 35.2 +1.1**
BURAR Bucovina Array 147.82 336 ⇑PKP2 **PKPbc 19 36 35.3 +1.1**
BURAR Bucovina Array 147.82 336 **PKPdf 19 36 31.7 +0.4**
UPC Upice 147.83 349 *e*PKP2 **PKiKP 19 36 35.2 -0.8**
UPC *e*SS SS 19 58 57.5 -5.4
UPC Upice 147.83 349⇑*e*PKP **PKiKP 19 36 35.2 -0.8**
UPC *e*SS SS 19 58 57.5 -5.4
GIRR Girov 147.85 334 ⇓P **PKPbc 19 36 35.3 +1.1**
NIE Niedzica 147.87 343 *e*PKP **PKPbc 19 36 33.6 -0.6**
LODK Lodwar 147.90 244 **PKPdf 19 36 33.0 +0.6**
LODK IAMs_20 IAMs_20 20 36 48.9
comp=Z,342nm,20.0s
BIR Birlad 147.91 332 ⇓P **PKiKP 19 36 35.9 -0.3**
BIR Birlad 147.91 332 ⇓PKP2 **PKiKP 19 36 35.9 -0.3**
DPC Dobruska-Polom 147.93 348 *e*PKIKP **PKPdf 19 36 32.3 +1.0**
DPC MLR MLR
comp=Z,400nm,24.8s
DPC Dobruska-Polom 147.93 348 *e*PKPDF **PKPdf 19 36 32.3 +1.0**
DPC ⇑*e*PKP **PKiKP 19 36 35.5 -0.7**
DPC *e*SS SS 19 58 57.2 -6.8
DPC AMS AMS 20 41 30.0
comp=Z,400nm,24.8s
KASTN Kahler Asten 147.98 358 *e*PKPbc **PKPbc 19 36 35.4 +0.9**
baz=12,slow=2.8
KASTN *e*pPKPbc **sPKPab 19 36 49.1 +1.3**
STEB Steborice 148.02 346⇑*e*PKP **PKPbc 19 36 35.6 +1.1**
BIZ Bicaz 148.03 334 ⇑P **PKPbc 19 36 36.3 -0.2**
OKC Ostrava-Krasne 148.03 346 *e*PKP2 **PKiKP 19 36 35.8 -0.6**
OKC MLR MLR
comp=Z,300nm,17.2s
OKC Ostrava-Krasne 148.03 346⇑*e*PKP **PKiKP 19 36 35.8 -0.6**
OKC AMS AMS 20 42 40.0
comp=Z,300nm,17.2s
VLDR Vladesti 148.03 331 ⇑P **PKiKP 19 36 35.9 -0.6**
PVCC Panska Ves 148.06 350 *e*PKP2 **PKiKP 19 36 36.0 -0.4**
PVCC Panska Ves 148.06 350⇑*e*PKP **PKiKP 19 36 36.0 -0.4**
VARL Varlezi 148.09 331 ⇓P **PKPbc 19 36 35.6 +0.8**
KRLC Kraliky 148.10 348 *e*PKP2 **PKPbc 19 36 35.8 +1.0**
KRLC MLR MLR
comp=Z,400nm,13.2s
KRLC Kraliky 148.10 348⇑*e*PKP **PKPbc 19 36 35.8 +1.0**
KRLC AMS AMS 20 42 50.0
comp=Z,400nm,13.2s
TESR Tescani 148.14 333 ⇑P **PKPbc 19 36 35.9 +0.9**
HSKC Hora Svate Kat 148.15 352⇑*e*PKP **PKPbc 19 36 35.9 +1.0**
HSKC AMS AMS 20 46 40.0
comp=Z,400nm,23.7s
GHRR 148.17 332 ⇓P **PKiKP 19 36 37.0 +0.2**
CIDE Kastamonu/Cide 148.19 321 ⇓P **PKPbc 19 36 36.2 +1.0**
MORC Moravsky Berou 148.22 347 ⇑P **PKiKP 19 36 36.6 -0.2**
MORC Moravsky Berou 148.22 347 ⇑PKP2 **PKiKP 19 36 36.6 -0.2**
MORC Moravsky Berou 148.22 347 *e*PKP **PKPdf 19 36 32.5 +0.7**
MORC *e* 19 36 35.9
UBBA Unterbreizbach 148.28 356 *e*PKPbc **PKPbc 19 36 35.7 +0.6**

baz=12,slow=2.8
MOX Moxa 148.32 354 *e*PKPbc **PKPbc** 19 36 36.1 +0.7
baz=12,slow=2.8
LANS Liptovska Anna 148.34 344 *e*PKP2 **PKiKP** 19 36 37.7 +0.6
LANS Liptovska Anna 148.34 344 *e*PKP **PKiKP** 19 36 37.7 +0.6
UCC Uccle 148.36 3 PKiKP **PKPdf** 19 36 32.4 +0.5
UCC Uccle 148.36 3 *d*PKPdf **PKPdf** 19 36 32.4 +0.5
UCC Uccle 148.36 3 *d*PKP **PKPbc** 19 36 36.1 +0.8
COSR Cosmesti PH 148.37 332 ⇓P **PKiKP** 19 36 37.3 +0.2
ONR Baraj Valea Uz 148.39 333 ⇑P **PKiKP** 19 36 37.1 -0.1
IZVR Izvoarele 148.40 331 ⇑P **PKPbc** 19 36 35.8 +0.2
SCHL Schela 148.40 331 ⇑P **PKiKP** 19 36 37.8 +0.5
TUDR 148.41 331 ⇑P **PKiKP** 19 36 38.1 +0.8
BMR Baia Mare 148.41 338 ⇓P **PKiKP** 19 36 37.1 -0.1
BMR Baia Mare 148.41 338 ⇓PKP2 **PKiKP** 19 36 37.1 -0.1
PLN Plauen 148.43 353 *e*PKPbc **PKPbc** 19 36 36.5 +0.9
baz=12,slow=2.8
PLN *e*pPKPbc **sPKPab** 19 36 50.7 +1.2
PANC Panciu 148.43 332 ⇓P **PKiKP** 19 36 37.0 -0.3
SCHLR Schela 148.43 331 ⇑P **PKPbc** 19 36 34.1 -1.6
JURR Jurilovca 148.46 329 ⇓P **PKiKP** 19 36 37.0 -0.4
TANN Tannenbergstha 148.46 353 *e*PKPbc **PKPbc** 19 36 36.6 +0.8
baz=12,slow=2.8
CFR Carcaliu 148.51 330 ⇓P **PKiKP** 19 36 37.0 -0.4
CFR Carcaliu 148.51 330 ⇓PKP2 **PKiKP** 19 36 37.0 -0.4
MAUC Maruska 148.54 346⇑ *e*PKP **PKiKP** 19 36 37.1 -0.4
ODBI Odobesti 148.55 332 ⇑P **PKiKP** 19 36 37.7 +0.2
PRU Pruhonice 148.59 350 *e*PKP2 **PKPbc** 19 36 36.8 +0.8
PRU *e*SS SS 19 59 05.9 -5.4
PRU MLR MLR
comp=Z,400nm,21.4s
PRU Pruhonice 148.59 350⇑ *e*PKP **PKPbc** 19 36 36.8 +0.8
PRU *e*SS SS 19 59 05.9 -5.4
PRU AMS AMS 20 45 10.0
comp=Z,400nm,21.4s
ARCR ARCALIA 148.59 337 ⇓P **PKiKP** 19 36 37.5 -0.2
MEM Membach 148.60 1 *d*PKP **PKPdf** 19 36 33.9 +1.6
TPGR Topolog 148.61 331 ⇓P **PKPbc** 19 36 37.0 +0.7
VRI Vrincioaia 148.62 333 ⇑P **PKPbc** 19 36 37.6 +0.4
VRI Vrincioaia 148.62 333 ⇑PKP2 **PKPbc** 19 36 36.6 +0.4
BSTI Sart Tilman 148.62 1 *d*PKP **PKiKP** 19 36 37.0 -0.5
BTNL Ternell 148.63 1 *d*PKP **PKPbc** 19 36 35.1 -1.1
NKC Novy Kostel 148.64 353 *e*PKP2 **PKiKP** 19 36 37.3 -0.4
NKC MLR MLR
comp=Z,400nm,23.5s
NKC Novy Kostel 148.64 353⇑ *e*PKP **PKiKP** 19 36 37.3 -0.4
NKC AMS AMS 20 43 50.0
comp=Z,400nm,23.5s
PLOR Plostina 148.66 333 ⇑P **PKPbc** 19 36 35.7 -0.7
PLOR Plostina 148.66 333 ⇓PKP2 **PKPbc** 19 36 36.7 +0.3
SAHR Sahastru 148.74 332 ⇑P **PKPbc** 19 36 37.3 +0.7
CEI Carei 148.76 339 ⇓P **PKiKP** 19 36 38.1 +0.2
CEI Carei 148.76 339 ⇓PKP2 **PKiKP** 19 36 38.1 +0.2
TURR Turia 148.77 334 ⇓P **PKPbc** 19 36 37.4 +0.7
BCLA Clavier 148.78 2 *d*PKP **PKPab** 19 36 40.7 +0.5
BGES Gesves 148.81 2 *d*PKP **PKiKP** 19 36 38.1 +0.2
OZUR 148.83 334 ⇓P **PKPbc** 19 36 37.5 +0.6
BHOU Houvegnez 148.86 1 *d*PKPdf **PKPdf** 19 36 34.5 +1.7
BHOU *d*PKP **PKiKP** 19 36 37.9 -0.2
COVR Voineasa-Covas 148.86 333 ⇓P **PKPbc** 19 36 37.3 +0.4
VRAC Vranov 148.87 347 ⇑P **PKiKP** 19 36 37.9 -0.2
VRAC Vranov 148.87 347 ⇑PKP2 **PKiKP** 19 36 37.9 -0.2
VRAC Vranov 148.87 347 *e*PKP **PKPdf** 19 36 33.7 +0.9
VRAC *e* 19 36 37.9
BMRD Maredsous 148.88 2 *d*PKP **PKPdf** 19 36 33.7 +0.9
GRER 148.88 332 ⇓P **PKiKP** 19 36 38.2 -0.1
TIRR Tirgusor 148.91 329 ⇑P **PKPbc** 19 36 37.5 +0.5
TIRR Tirgusor 148.91 329 ⇑PKP2 **PKPbc** 19 36 37.5 +0.5
TNS Taunus Mts 148.96 358 *e*PKPbc **PKiKP** 19 36 38.1 -0.3
baz=12,slow=2.8
BR131 Keskin Array S 149.01 317 *i* PKIKP **PKPdf** 19 36 33.7 +0.1
BR131 Keskin Array S 149.01 317 **PKPdf** 19 36 32.4 -1.2
BRTR Keskin Array B 149.01 317 PKP **PKPdf** 19 36 33.2 -0.3
comp=Z,14nm,1.2s,baz=176,slow=2.3,SNR=9.7
BRTR PKPbc **PKPbc** 19 36 37.4 -0.2
comp=Z,23nm,1.0s,baz=45,slow=1.6,SNR=13
BRTR SKPbc 19 39 59.8
comp=Z,5.8nm,1.2s,baz=134,slow=4.0,SNR=3.7
BRTR Keskin Array B 149.01 317 PKHKP PKPpre 19 36 31.7
BRTR Keskin Array B 149.01 317 **PKPdf** 19 36 31.7 -1.9
TLBR Topalu 149.02 330 ⇑P **PKPbc** 19 36 37.6 +0.3
RCHB Rochefort 149.04 2 *d*PKP **PKPdf** 19 36 33.4 +0.4
MESR Meseseni 149.05 338 ⇑P **PKiKP** 19 36 39.0 +0.4
JAVC Velka Javorina 149.05 346 *e*PKP **PKPdf** 19 36 34.6 +1.4
JAVC *e* 19 36 39.4
DOU Dourbes 149.07 3 *d*PKP **PKiKP** 19 36 38.1 -0.4
TREC Trest 149.09 349 *e*PKP2 **PKiKP** 19 36 38.2 -0.4
TREC Trest 149.09 349⇑ *e*PKP **PKiKP** 19 36 38.2 -0.4
DOPR Dopca 149.10 334 ⇑P **PKiKP** 19 36 38.8 +0.1
VYHS Vyhne 149.11 344 *e*PKP2 **PKiKP** 19 36 38.6 -0.1
VYHS Vyhne 149.11 344 *e*PKP **PKiKP** 19 36 38.6 -0.1
MFTR Murfatlar 149.11 329 ⇓P **PKiKP** 19 36 38.8 0.0
KRUC Moravsky 149.14 347 *e*PKP **PKPdf** 19 36 33.9 +0.6
KRUC *e* 19 36 38.3
NEHR Nehoiu 149.15 333 ⇑P **PKiKP** 19 36 38.8 -0.1
KIRS Kirsehir-Merke 149.16 316 ⇓P **PKPbc** 19 36 38.7 +0.8
ZVC Zvikov 149.18 350⇑ *e*PKP **PKiKP** 19 36 38.6 -0.2
ZVC AMS AMS 20 45 00.0
comp=Z,400nm,19.9s
CJR Cluj-Napoca 149.19 337 ⇑P **PKPbc** 19 36 38.0 +0.3
CJR Cluj-Napoca 149.19 337 ⇑PKP2 **PKPbc** 19 36 38.0 +0.3
JSA Saint Aubin 149.19 11 *e*P **PKPbc** 19 36 38.1 +0.6
LTVH Ltavrtes, Hu 149.20 340 ⇑P **PKiKP** 19 36 38.8 0.0
MLR Muntele Rosu 149.25 333 ⇓P **PKiKP** 19 36 38.9 -0.3
MLR Muntele Rosu 149.25 333 PKIKP **PKPdf** 19 36 33.0 -0.7
MLR MLR MLR
comp=Z,500nm,22.0s
MLR Muntele Rosu 149.25 333 **PKPdf** 19 36 33.0 -0.7
ISR Istrita 149.28 332 ⇓P **PKPbc** 19 36 37.3 -0.7
ISR Istrita 149.28 332 ⇓PKP2 **PKPbc** 19 36 37.3 -0.7
MBAR Mbarara 149.28 233 PKP2 **PKiKP** 19 36 40.0 -0.3
MBAR MLR MLR
comp=Z,400nm,21.0s
MBAR Mbarara 149.28 233 **PKiKP** 19 36 40.0 -0.3
MANR Mangalia 149.29 328 ⇓P **PKiKP** 19 36 39.2 +0.1
GRF Grafenberg Arr 149.31 354 *e*PKPbc **PKiKP** 19 36 39.1 0.0
baz=12,slow=2.8
GRFO Grafenberg 149.31 354 PKP2 **PKiKP** 19 36 39.5 +0.5
GRFO MLR MLR
comp=Z,500nm,21.0s
GRFO Grafenberg 149.31 354 **PKiKP** 19 36 39.5 +0.5
AMRR Amara 149.31 330 ⇓P **PKiKP** 19 36 39.9 +0.8
AMRR Amara 149.31 330 ⇓PKP2 **PKiKP** 19 36 39.9 +0.8
PSZ Piszkesteto 149.35 342 ⇓P **PKiKP** 19 36 39.4 +0.2
PSZ Piszkesteto 149.35 342 ⇓PKP2 **PKiKP** 19 36 39.4 +0.2
PSZ Piszkesteto 149.35 342 IAMs_20 IAMs_20 20 44 35.4
comp=Z,343nm,22.0s
MDB Medias 149.37 335 ⇓P **PKiKP** 19 36 39.6 +0.3
MDB Medias 149.37 335 ⇓PKP2 **PKiKP** 19 36 39.6 +0.3
MARR Marisel-Cluj 149.39 337 ⇑P **PKPbc** 19 36 39.0 +0.7
SMOL Smolenice 149.43 346 *e*PKP2 **PKiKP** 19 36 39.5 +0.2
DRGR 149.44 338 ⇓P **PKiKP** 19 36 39.4 -0.1
DRGR 149.44 338 ⇓PKP2 **PKiKP** 19 36 39.4 -0.1
ICOR Ion Corvin 149.46 329 ⇓P **PKiKP** 19 36 39.2 -0.3
BORR Bors 149.50 339 ⇓P **PKiKP** 19 36 40.6 +1.1
WLF Walferdange 149.55 1 *d*PKPdf **PKPdf** 19 36 35.9 +2.0
WLF *d*PKP **PKiKP** 19 36 39.8 +0.3
WLF Walferdange 149.55 1 *e*PKPbc **PKiKP** 19 36 39.9 +0.4
baz=12,slow=2.8
KHC Kasperske Hory 149.57 351 *e*PKIKP **PKPdf** 19 36 34.9 +0.9
KHC *e* 19 36 39.8
KHC *e* 19 36 44.5
KHC *e*SS SS 19 59 20.2 -2.2
KHC MLR MLR
comp=Z,400nm,20.0s
KHC Kasperske Hory 149.57 351 *e*PKPDF **PKPdf** 19 36 34.9 +0.9
KHC ⇑*e*PKP **PKiKP** 19 36 39.8 +0.2
KHC *ex* x 19 36 44.5
KHC *ex* x 19 36 50.4
KHC *e*SS SS 19 59 20.2 -2.2
KHC AMS AMS 20 45 00.0
comp=Z,400nm,20.0s
MODS Modra-Piesok 149.60 346 *e*PKP2 **PKiKP** 19 36 40.4 +0.7
MODS Modra-Piesok 149.60 346 *e*PKP **PKiKP** 19 36 40.4 +0.7
PSN Preselentsi 149.64 328 P **PKiKP** 19 36 39.6 -0.3
LEHL Lehliu 149.65 331 ⇑P **PKiKP** 19 36 40.2 +0.3
WET Wettzell 149.66 352 *e*PKPbc **PKiKP** 19 36 40.0 +0.2
baz=12,slow=2.8
BEIL Beino 149.66 306 *e*P **PKPbc** 19 36 39.9 +0.6
VOIR 149.67 334 ⇑P **PKiKP** 19 36 39.8 -0.2
VOIR 149.67 334 ⇑PKP2 **PKiKP** 19 36 39.8 -0.2
CKRC Cesky Krumlov 149.76 350 *e*PKHKP PKPpre 19 36 35.4
CKRC *e* 19 36 39.9
CKRC MLR MLR
comp=Z,400nm,26.1s
CKRC Cesky Krumlov 149.76 350 *e*PKPDF **PKPdf** 19 36 35.4 +1.1
CKRC ⇑*e*PKP **pPKPdf** 19 36 39.9 -2.5
CKRC *ex* x 19 36 50.4
CKRC *e*SS SS 19 59 15.5 -8.9
CKRC AMS AMS 20 45 10.0
comp=Z,400nm,26.1s
CICN Clocanesti 149.77 330 ⇑P **PKiKP** 19 36 40.4 +0.3
BSZH Besenyszg 149.79 341 ⇓P **PKiKP** 19 36 40.9 +0.8
GEC2 GERESS Array S 149.83 351 *e*PKPbc **PKiKP** 19 36 40.1 -0.1
baz=12,slow=2.8
GERES GERESS Array B 149.83 351 PKPbc **PKPbc** 19 36 39.8 +0.5
comp=Z,3.2nm,0.9s,baz=24,slow=2.4,SNR=12
GERES GERESS Array B 149.83 351 PKHKP PKPpre 19 36 34.2
GERES GERESS Array B 149.83 351 **PKPdf** 19 36 34.2 -0.3
SRO Srobarova 149.87 344 *e*PKP2 **PKiKP** 19 36 40.6 +0.4
SRO Srobarova 149.87 344 *e*PKP **PKiKP** 19 36 40.6 +0.4
ARR Arges 149.90 334 ⇓P **PKPdf** 19 36 35.9 +1.3
ASF Jabal al Asfar 149.93 302 P **PKiKP** 19 36 41.1 +0.1
comp=Z,7μmcomp=Z,378nm,1.1s
HWQ Hawqa 149.95 306 *e*P **PKPbc** 19 36 40.4 +0.4
SAHE Sakarya_HENDEK 150.06 321 ⇑P **PKPbc** 19 36 40.5 +0.5
WINA Alland / Wiene 150.11 347 *i* pPKP **PKiKP** 19 36 41.3 +0.5
SNR=12
DEV Deva 150.15 337 ⇑P **PKiKP** 19 36 41.1 +0.2
DEV Deva 150.15 337 ⇑PKP2 **PKiKP** 19 36 41.1 +0.2
ZAHL Zahle 150.15 305 *e*P **PKiKP** 19 36 41.3 -0.1
LOT Lotru 150.18 335 ⇓P **PKPbc** 19 36 38.0 -2.3
SIRR Siria 150.26 339 ⇑P **PKiKP** 19 36 41.1 0.0
BHL Bhannes 150.31 306 *e*P **PKPbc** 19 36 41.4 +0.5
RCY Rachaya 150.32 305 *e*P **PKiKP** 19 36 41.9 +0.1
CONA Conrad Observa 150.33 347 *i* PKiKP **PKPbc** 19 36 40.4 -0.1
comp=Z,32nm,0.9s,SNR=13
NEF NEVSHA 150.34 329 P **PKiKP** 19 36 41.5 +0.1
PRD Provadia 150.35 328 P **PKiKP** 19 36 41.5 +0.1
QRWL Qaraoun 150.43 305 *e*P **PKiKP** 19 36 42.1 +0.2
HUMR Humele 150.43 333 ⇑P **PKPbc** 19 36 41.2 +0.4
SHBL Chebaa 150.45 304 *e*P **PKiKP** 19 36 42.2 +0.1
DQRL Deir Qamar 150.45 305 *e*P **PKiKP** 19 36 42.1 +0.1
RONA Rosalia, Austr 150.45 347 *i* PKiKP **PKPbc** 19 36 40.5 -0.3
comp=Z,32nm,0.8s,SNR=14
RAZG Razgrad 150.49 330 ⇑P **PKiKP** 19 36 41.8 +0.1
AMBH Ambrzfalva 150.50 340 ⇑P **PKiKP** 19 36 42.4 +0.8
HSUJ Al Zarqa 150.52 302 P **PKPbc** 19 36 40.3 -1.1
comp=Z,2μmcomp=Z,107nm,1.1s
GEM Giv'at Ha'Em 150.56 304 P **PKPbc** 19 36 41.5 +0.1
GZR Gura Zlata 150.61 337 ⇑P **PKPbc** 19 36 41.7 +0.5
GZR Gura Zlata 150.61 337 ⇑PKIKP **PKPbc** 19 36 41.7 +0.5
COPA Copaceanca 150.64 332 ⇑P **PKiKP** 19 36 41.8 -0.1
MOA Molln 150.71 350 *i* PKiKP **PKiKP** 19 36 41.9 -0.1
comp=Z,13nm,0.8s,SNR=5.8
FUR Furstenfeldbru 150.81 354 *e*PKPbc **PKPbc** 19 36 42.1 +0.5
baz=12,slow=2.8
MMAI Mount Meron Ar 150.84 304 PKPbc **PKPbc** 19 36 42.0 -0.1
comp=Z,41nm,0.6s,baz=68,slow=9.1,SNR=14
BZS Buzias 150.84 338 ⇑P **PKPbc** 19 36 41.6 -0.1
BZS Buzias 150.84 338 ⇓PKIKP **PKPdf** 19 36 37.6 +1.6
BFO Black Forest 150.86 358 PKIKP **PKPbc** 19 36 40.9 -0.8
BFO MLR MLR
comp=Z,300nm,22.0s
BFO Black Forest 150.86 358 **PKPbc** 19 36 40.9 -0.8
BFO IAMs_20 IAMs_20 20 42 10.1
comp=Z,337nm,22.0s
BFO Black Forest 150.86 358 *e*PKPbc **PKiKP** 19 36 42.4 +0.1
baz=12,slow=2.8
SWQJ Swaqa 150.89 300 P **PKiKP** 19 36 43.2 +0.2
comp=Z,139nmcomp=Z,13nm,0.8s
QRNJ Al-Qirein 150.94 303 P **PKiKP** 19 36 44.0 +1.1
comp=Z,59μmcomp=Z,8μm,0.9s
BIOA Bad Ischl, Aus 150.96 350 *e*PKiKP **PKPbc** 19 36 42.1 +0.2
comp=Z,20nm,1.0s
SZH Strazhitsa 150.97 330 P **PKiKP** 19 36 42.8 +0.1
ARSA Arzberg 151.04 347 *e*PKiKP **PKPbc** 19 36 41.9 -0.2
comp=Z,15nm,1.5s
SRE Strehaia 151.06 335 ⇑P **PKiKP** 19 36 43.5 +0.7
SRE Strehaia 151.06 335 ⇑PKIKP **PKiKP** 19 36 43.5 +0.7
HERR Herculane 151.18 336 ⇓P **PKiKP** 19 36 43.0 0.0
BANR Banloc 151.21 339 ⇑P **PKiKP** 19 36 43.9 +0.9
MORH Mrgy, Hungar 151.25 343 ⇑P **PKPbc** 19 36 42.9 +0.3
GHAJ Ghor Haditha 151.28 301 P **PKiKP** 19 36 43.7 +0.1
comp=Z,1μmcomp=Z,75nm,1.1s
JMB Yambol 151.28 298 P **PKiKP** 19 36 43.5 +0.2
DJES Djerdap 151.32 336 ⇑P **PKPbc** 19 36 41.1 -1.8
SALP Salfit 151.33 302 P **PKiKP** 19 36 44.8 +1.0
comp=Z,1μmcomp=Z,115nm,1.6s
SESA Seetaler Alpe, SNR=20 151.36 349 *i* pPKP **PKPdf** 19 36 37.4 +0.4
LESA Schwarzleotal 151.37 351 *i* PKiKP **PKPbc** 19 36 42.9 -0.1
comp=Z,15nm,1.7s
MSBI Mazada 151.44 301 P **PKiKP** 19 36 45.3 +1.4
comp=Z,209nmcomp=Z,16nm,1.3s
HSNJ Man 151.49 298 P **PKiKP** 19 36 45.4 +1.1
comp=Z,203nm,1.0s
PLVB Pleven 151.49 332 ⇑P **PKiKP** 19 36 44.1 +0.3
MDVR Moldovita 151.52 337 ⇑P **PKiKP** 19 36 43.9 0.0
RETA Reutte 151.53 354 *i* PKiKP **PKiKP** 19 36 43.8 +0.1
comp=Z,26nm,1.4s,SNR=9.9
WATA Walderalm 151.60 353 *i* PKiKP **PKPbc** 19 36 43.9 +0.4
comp=Z,21nm,0.9s,SNR=8.2
KBA Koelnbreinsper 151.61 350 *e*PKiKP **PKPbc** 19 36 43.4 -0.2
comp=Z,15nm,0.8s
CSS Mathiatis 151.62 309 **PKPbc** 19 36 43.8 -0.1
CSS Mathiatis 151.62 309 P **PKPab** 19 36 50.1 -2.4
comp=Z,1μmcomp=Z,99nm,1.1s
YTIR Yattir 151.62 301 P **PKiKP** 19 36 45.7 +1.2
comp=Z,1μmcomp=Z,65nm,1.2s
MOTA Moosalm 151.64 354 *i* PKiKP **PKPbc** 19 36 44.1 +0.4
comp=Z,37nm,1.0s,SNR=9.4
WTTA Wattenberg 151.66 353 *i* PKiKP **PKiKP** 19 36 44.4 +0.2
comp=Z,31nm,0.6s,SNR=16
SOKA Soboth 151.69 348 *i* PKiKP **PKPbc** 19 36 43.7 -0.1
comp=Z,17nm,0.9s,SNR=11
AMAZ Amatzia 151.73 301 P **PKiKP** 19 36 46.3 +1.7
comp=Z,2μmcomp=Z,134nm,1.4s
SQTA Sankt Quirin 151.75 353 *i* PKiKP **PKiKP** 19 36 44.4 +0.1
comp=Z,26nm,0.9s,SNR=9.9
VALD Valchedram 151.76 334 P **PKiKP** 19 36 44.8 +0.6
DAVA Damuels 151.81 355 *i* PKiKP **PKiKP** 19 36 44.7 +0.2
comp=Z,38nm,0.9s,SNR=13
MPEP Malo Peshtene 151.90 333 P **PKiKP** 19 36 44.9 +0.3
OBKA Obir 151.95 348 *i* PKiKP **PKPbc** 19 36 44.1 -0.2
comp=Z,7.5nm,0.8s,SNR=5.7
MYKA Terra Mystica 151.99 350 *i* PKiKP **PKPbc** 19 36 43.6 -0.8
comp=Z,14nm,0.8s,SNR=6.9
FETA Feichten 152.00 354 *i* pPKP **PKiKP** 19 36 45.2 +0.3
comp=Z,27nm,1.0s
ABTA Abfaltersbach 152.05 351 *i* PKiKP **PKPbc** 19 36 44.6 0.0
comp=Z,43nm,0.9s,SNR=7.4
HRFI Mount Harif 152.09 298 P **PKiKP** 19 36 49.0 +3.6
comp=Z,844nmcomp=Z,68nm,1.2s
EIL Elat 152.09 298 P **PKiKP** 19 36 50.4 +4.7
comp=Z,723nmcomp=Z,40nm,1.1s
KZIT Kziot 152.35 300 P **PKiKP** 19 36 50.9 +5.0
PGB Panagyurishte 152.38 331 P **PKiKP** 19 36 46.0 +0.4
ALN Alexandroupoli 152.70 327 PKIKP **PKPbc** 19 36 44.4 -1.6
ALN Alexandroupoli 152.70 327 **PKPbc** 19 36 44.4 -1.6
VTS Vitosha 152.72 333 P **PKiKP** 19 36 46.9 +0.4
PLNA Plana 152.75 332 P **PKiKP** 19 36 47.2 +0.7
BLY Banja Luka 153.00 343 ⇑P **PKiKP** 19 36 47.5 +0.7
BLY Banja Luka 153.00 343 IAMs_20 IAMs_20 20 48 52.0
comp=Z,342nm,21.0s
MMB Musomishta 153.34 331 P **PKPbc** 19 36 47.4 -0.1
KKB Krupnik 153.39 332 P **PKiKP** 19 36 48.0 +0.3
PEPC Pehcevo 153.54 332 *i* P **PKPdf** 19 36 43.9 +3.6
SSB Saint Sauveur 153.88 3 PKIKP **PKPdf** 19 36 40.0 -0.6
SSB MLR MLR
comp=Z,700nm,20.0s
SSB Saint Sauveur 153.88 3 **PKPdf** 19 36 40.0 -0.6
PGAV Gavieira, Arco 153.95 26 *e*PKPdf **PKPdf** 19 36 42.4 +1.5
PGAV *i* PKPab **PKPab** 19 37 03.2 +1.1
PGAV *e*LR LR 20 28 42.1
PGAV *i* IAMs_20 IAMs_20 20 38 56.1
comp=Z,409nm,24.0s
SKO Skopje 154.01 334 *i* P **PKPbc** 19 36 45.4 -3.5
VAY Valandovo 154.06 332 *i* P **PKPbc** 19 36 49.0 0.0
PDG Podgorica 154.45 338 ⇑P **PKPbc** 19 36 48.6 -1.2
POLO Lamas de Olo 154.64 26 *i* PKPab **PKPab** 19 37 03.8 -1.2
PMOZ Porto Moniz, M 154.67 53 *e*LR LR 20 29 15.0
PMOZ *i* IAMs_20 IAMs_20 20 36 50.9
comp=Z,296nm,34.2s
OHR Ohrid 154.99 334 *i* P **PKPdf** 19 36 42.8 +0.5
MVO Moncorvo 155.13 25 *e*PKPdf **PKPdf** 19 36 44.2 +1.7
MVO *i* PKPab **PKPab** 19 37 08.4 +1.2
MVO *e*LR LR 20 36 50.6
MVO *i* IAMs_20 IAMs_20 20 38 23.2
comp=Z,321nm,13.7s
PVIS Viseu 155.14 27 *i* PKPab **PKPab** 19 37 08.3 +1.1
PCAS Casmilo, Conde 155.41 29 *i* PKPab **PKPab** 19 37 09.4 +1.0
MTE Manteigas 155.55 27 *e*PKPdf **PKPdf** 19 36 44.6 +1.4
MTE *i* PKPab **PKPab** 19 37 10.5 +1.5
MTE *e*LR LR 20 34 31.7
MTE *i* IAMs_20 IAMs_20 20 40 09.1
comp=Z,372nm,22.0s
PSBE So Bento 155.70 30 *i* PKPab **PKPab** 19 37 11.3 +1.7
PSARD Sardoal 155.93 29 *i* iPKPab 19 37 07.8
PCBR Castelo Branco 156.04 28 *e*PKPdf **PKPdf** 19 36 45.4 +1.7
PCBR *i* PKPab **PKPab** 19 37 07.4 -3.6
PMRV Marv??o 156.42 28 *e*PKPdf **PKPdf** 19 36 45.8 +1.6
PMRV *e*LR LR 20 29 50.6
PMRV *i* IAMs_20 IAMs_20 20 38 29.3
comp=Z,353nm,22.0s
PESTR Estremoz 156.78 29 *e*LR LR 20 29 17.5
PESTR *i* IAMs_20 IAMs_20 20 44 14.8
comp=Z,148nm,20.0s
EVO Evora 156.85 30 *e*PKPdf **PKPdf** 19 36 46.4 +1.6
MATE Matera 156.90 340 ⇓P PKPdf 19 36 53.3 +8.6
PLOUS Minas do Lousa 157.05 32 *e*PKPdf **PKPdf** 19 36 47.1 +2.0
PLOUS *i* PKPab PKPab 19 37 07.0 -8.3
MESJ Messejana 157.29 32 *e*PKPdf **PKPdf** 19 36 46.1 +0.7
MESJ *e*PP **PP** 19 40 56.6 +1.9
MESJ IAMs_20 IAMs_20 20 40 33.2
comp=Z,422nm,23.4s
MESJ Messejana 157.29 32 *e*PKPdf **PKPdf** 19 36 47.2 +1.8
MESJ *i* PKPab PKPab 19 37 07.3 -9.2
MESJ Messejana 157.29 32 *e*PKIKP **PKPdf** 19 36 46.1 +0.7
MESJ *e* 19 40 56.6
ESDC Sonseca Array 157.58 22 PKP **PKPdf** 19 36 46.4 +0.6
comp=Z,1.3nm,0.9s,baz=350,slow=1.3,SNR=9.6
ESDC PKPab **PKPab** 19 37 16.5 -1.1
comp=Z,2.4nm,0.9s,baz=328,slow=2.8,SNR=6.4
ESDC Sonseca Array 157.58 22 **PKPdf** 19 36 47.3 +1.6
PBAR Barrancos 157.60 29 *e*PKPdf **PKPdf** 19 36 47.6 +1.9
PBAR *e*LR LR 20 34 47.1
PBAR *i* IAMs_20 IAMs_20 20 36 55.5
comp=Z,262nm,24.0s
PVAQ Vaqueiros 157.88 32 *e*LR LR 20 35 38.6
PVAQ *i* IAMs_20 IAMs_20 20 40 25.1
comp=Z,313nm,22.0s
DBIC Dimbokro 163.29 136 PKP **PKPdf** 19 36 52.6 -0.1
comp=Z,7.5nm,1.1s,baz=233,slow=3.5,SNR=2.1
TORD Torodi Ar. Bea 172.36 141 PKP **PKPdf** 19 36 57.5 -1.5
comp=Z,2.6nm,0.9s,baz=180,slow=0.6,SNR=11

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*NNC **30** 19:24:42.8₀0.5, 42°.67N×76°.22E, h1km, 3km, mb3.0, mpv3.4, Error ellipse: s-maj=4.1km s-min=1.9km az=168.0*
*KRNET **30** 19:24:42.6±0.1, 42°.63N×76°.25E, h25km, mb3.3*
*SOME **30** 19:24:42.8, 42°.67N×76°.23E, h15km*
*KNET **30** 19:24:43.3±0.4, 42°.61N×76°.15E, h14km±2km, ml2.4, Error ellipse: s-maj=3.9km s-min=1.8km az=49.0*

ISC 30 19:24:42.9±0.9, 42°.66N±0°.02×76°.22E±0°.01, h16km±7km, n70, σ1°.916/122, 35C-19D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOOM	**Boomskoye usch**	**0.27**	**231**	⇑*i*P	**Pg**	**19 24 49.2**	**+0.4**
BOOM				⇑*i*S	**Sg**	**19 24 53.5**	**+0.6**
ULHL	**Ulahol**	**0.41**	**178**	⇑P	**Pg**	**19 24 51.0**	**-0.3**
	161nm,0.2s,SNR=122						
ULHL				⇓S	**Sg**	**19 24 56.4**	**-0.6**
	895nm,0.2s						
ULHL	**Ulahol**	**0.41**	**178**	⇓*i*P	**Pg**	**19 24 51.0**	**-0.3**
ULHL				⇓*i*S	**Sg**	**19 24 56.7**	**-0.4**
TKM2	**Tokmak 2**	**0.53**	**300**	⇑P	**Pb**	**19 24 53.7**	**-0.2**
	279nm,0.1s,SNR=1704						
TKM2				⇑S	**Sb**	**19 25 01.4**	**-0.1**
	2μm,0.1s						
TKM2	**Tokmak 2**	**0.53**	**300**	⇓*i*P	**Pb**	**19 24 53.7**	**-0.2**
TKM2				⇓*i*S	**Sb**	**19 25 01.8**	**+0.3**
TNSS	**Tian-Shan**	**0.65**	**54**	P	**Pg**	**19 24 55.4**	**-0.5**
	8.1nm,0.2s						
TNSS				S	**Sg**	**19 25 04.5**	**-0.2**
	44nm,0.2s						
TNSS	**Tian-Shan**	**0.65**	**54**	*e*P	**Pg**	**19 24 55.4**	**-0.5**
	8.1nm,0.2s						
TNSS				*e*S	**Sg**	**19 25 04.5**	**-0.2**
	44nm,0.2s						
DGS	**Degeres**	**0.67**	**331**	P	**Pb**	**19 24 56.2**	**-0.1**
	54nm,0.1s						
DGS				S	**Sb**	**19 25 05.9**	**+0.5**
	112nm,0.2s						
DGS	**Degeres**	**0.67**	**331**	*e*P	**Pb**	**19 24 56.2**	**-0.1**
	54nm,0.1s						
DGS				*e*S	**Sb**	**19 25 05.9**	**+0.5**
	112nm,0.2s						
AAA	**Alma-Ata**	**0.75**	**43**	P	**Pb**	**19 24 57.6**	**0.0**
	61nm,0.1s						
AAA				S	**Sb**	**19 25 08.2**	**+0.5**
	14nm,0.1s						
AAA	**Alma-Ata**	**0.75**	**43**	*e*P	**Pb**	**19 24 57.6**	**0.0**
	61nm,0.1s						
AAA				*e*S	**Sb**	**19 25 08.2**	**+0.5**
	14nm,0.1s						
KNDC	**Almaty**	**0.78**	**44**	⇑P	**Pb**	**19 24 58.0**	**-0.1**
	6.2nm,0.2s						
KNDC				⇑S	**Sb**	**19 25 09.1**	**+0.6**
	140nm,0.6s						
MDOK	**Medeo**	**0.79**	**50**	Pg	**Pg**	**19 24 57.7**	**-0.6**
	30nm,0.3s						
MDOK				Lg	Lg	19 25 08.4	
	93nm,0.4s						
MDOK	**Medeo**	**0.79**	**50**	*e*P	**Pg**	**19 24 57.7**	**-0.6**
	30nm,0.3s						
MDOK				*e*S	**Sb**	**19 25 08.4**	**-0.5**
	93nm,0.4s						
KDJ	**Kajisay**	**0.89**	**126**	⇓*i*P	**Pb**	**19 24 58.8**	**-1.2**
KDJ				⇓*i*S	**Sg**	**19 25 10.5**	**-1.3**
KBK	**Karagaybulak**	**0.94**	**270**	⇓P	**Pb**	**19 25 01.0**	**+0.1**
	13nm,0.1s,SNR=27						
KBK				⇑S	**Sg**	**19 25 14.0**	**+0.5**
	49nm,0.1s						
KBK	**Karagaybulak**	**0.94**	**270**	⇑*i*P	**Pb**	**19 25 00.8**	**-0.1**
KBK				⇑*i*S	**Sg**	**19 25 13.9**	**+0.4**
ANVS	**Anan'yevo**	**1.07**	**83**	⇑*e*P	**Pb**	**19 25 01.9**	**-1.3**
ANVS				⇑*e*S	**Sb**	**19 25 16.3**	**-0.8**
KTBS	**Karatobe**	**1.11**	**18**	P	**Pb**	**19 25 02.7**	**-1.0**
	52nm,0.1s						
KTBS				S	**Sb**	**19 25 16.7**	**-1.2**
	82nm,0.2s						
KTBS	**Karatobe**	**1.11**	**18**	*e*P	**Pb**	**19 25 02.7**	**-1.0**
	52nm,0.1s						
KTBS				*e*S	**Sb**	**19 25 16.7**	**-1.2**

AAK				⇑S		Sg	19 25 24.0	-0.1	
	4.6nm,0.5s								
AAK	**Ala-Archa**	**1.27**	**270**	⇓*i*P		**Pn**	**19 25 06.4**	**+0.2**	
AAK				⇓*i*S		**Sn**	**19 25 23.7**	**+0.6**	
USP	**Ospenovka**	**1.40**	**296**	⇓P		**Pb**	**19 25 08.9**	**+0.1**	
	15nm,0.1s,SNR=11								
USP				⇑S		**Sg**	**19 25 28.3**	**+0.1**	
	40nm,0.1s								
USP	**Ospenovka**	**1.40**	**296**	⇑*i*P		**Pb**	**19 25 08.6**	**-0.1**	
USP				⇑*i*S		**Sg**	**19 25 27.5**	**-0.7**	
SGDS	**Sogindy**	**1.41**	**305**	P		**Pb**	**19 25 09.0**	**+0.1**	
	20nm,0.1s								
SGDS				S		**Sg**	**19 25 27.6**	**-0.9**	
	86nm,0.2s								
TARG	**Taragay, Kyrgy**	**1.50**	**128**	⇑*i*P		**Pn**	**19 25 09.4**	**-0.1**	
TARG				⇑*i*S		**Sn**	**19 25 28.7**	**-0.3**	
PRZ	**Przheval'sk**	**1.62**	**95**	⇓*i*P		**Pn**	**19 25 11.2**	**+0.2**	
PRZ				⇓*i*S		**Sb**	**19 25 32.3**	**-0.5**	
KURS	**Kuram**	**1.65**	**59**	P		**Pg**	**19 25 13.8**	**-0.8**	
	2.6nm,0.2s								
KURS				S		**Sg**	**19 25 35.9**	**-0.2**	
	5.9nm,0.1s								
KURS	**Kuram**	**1.65**	**59**	*e*P		**Pg**	**19 25 13.8**	**-0.8**	
	2.6nm,0.2s								
KURS				*e*S		**Sg**	**19 25 35.9**	**-0.2**	
	5.9nm,0.1s								
SATY	**Saty**	**1.66**	**75**	P		**Pb**	**19 25 13.2**	**+0.1**	
	6.0nm,0.1s								
SATY				S		**Sg**	**19 25 35.0**	**-1.3**	
	86nm,0.1s								
SATY	**Saty**	**1.66**	**75**	*e*P		**Pb**	**19 25 13.2**	**+0.1**	
	6.0nm,0.1s								
SATY				*e*S		**Sg**	**19 25 35.0**	**-1.3**	
	86nm,0.1s								
EKS2	**Erkin-Say**	**1.80**	**271**	⇑P		**Pb**	**19 25 15.8**	**+0.1**	
	6.3nm,0.1s,SNR=19								
EKS2				⇑S		**Sg**	**19 25 40.8**	**-0.2**	
	23nm,0.1s								
EKS2	**Erkin-Say**	**1.80**	**271**	⇑*e*P		**Pb**	**19 25 14.8**	**-0.8**	
EKS2				⇑*i*S		**Sb**	**19 25 38.2**	**+0.2**	
ARXS	**Arharly**	**1.94**	**36**	P		**Pb**	**19 25 17.8**	**-0.2**	
	16nm,0.2s								
ARXS				S		**Sb**	**19 25 42.8**	**+0.7**	
	80nm,0.2s								
ARXS	**Arharly**	**1.94**	**36**	*e*P		**Pb**	**19 25 17.8**	**-0.2**	
	16nm,0.2s								
ARXS				*e*S		**Sb**	**19 25 42.8**	**+0.7**	
	80nm,0.2s								
KPKS	**Kokpek**	**1.98**	**65**	Pg		**Pg**	**19 25 19.6**	**-1.2**	
	0.3nm,0.2s								
KPKS				Lg		Lg	19 25 45.8		
	55nm,0.2s								
KPKS	**Kokpek**	**1.98**	**65**	*e*P		**Pg**	**19 25 19.6**	**-1.2**	
	0.3nm,0.2s								
KPKS				*e*S		**Sg**	**19 25 45.8**	**-0.7**	
	55nm,0.2s								
UZB	**Uzynbulak**	**2.12**	**76**	Pg		**Pb**	**19 25 21.2**	**+0.2**	
	7.6nm,0.2s								
UZB				Lg		Lg	19 25 48.7		
	38nm,0.2s								
UZB	**Uzynbulak**	**2.12**	**76**	*e*P		**Pb**	**19 25 21.2**	**+0.2**	
UZB				*e*S		**Sg**	**19 25 48.7**	**-2.2**	
BLB	**Baldybastay**	**2.19**	**48**	Pg		**Pb**	**19 25 22.4**	**+0.3**	
	7.0nm,0.1s								
BLB				Lg		Lg	19 25 50.6		
	33nm,0.2s								
MRKS	**Merke**	**2.21**	**273**	Pg		**Pb**	**19 25 23.3**	**+0.8**	
	6.8nm,0.2s								
MRKS				Lg		Lg	19 25 52.5		
	51nm,0.4s								
MRKS	**Merke**	**2.21**	**273**	*e*P		**Pb**	**19 25 23.3**	**+0.8**	
	6.8nm,0.2s								
MRKS				*e*S		**Sg**	**19 25 52.5**	**-1.5**	
	51nm,0.4s								
SHLS	**Shalkode**	**2.43**	**77**	Pg		**Pg**	**19 25 32.1**	**+2.6**	
	3.4nm,0.2s								
SHLS				Lg		Lg	19 26 07.4		
	30nm,0.5s								
SHLS	**Shalkode**	**2.43**	**77**	*e*P		**Pg**	**19 25 32.1**	**+2.6**	
	3.4nm,0.2s								
SHLS				*e*S		**Sg**	**19 26 07.4**	**+6.3**	
	30nm,0.5s								
PDGK	**Podgornoye**	**2.49**	**73**	⇑Pg		**Pb**	**19 25 25.9**	**-1.4**	
	2.3nm,0.6s								
PDGK				⇓Lg		Lg	19 25 59.9		
	22nm,0.6s								
SALK	**Salom-Alik**	**2.52**	**226**	⇑*i*P		**Pn**	**19 25 24.8**	**+1.4**	
SALK				⇑*i*S		**Sn**	**19 25 55.3**	**+1.4**	
KNOS	**Konyrlen**	**2.74**	**51**	Pg		**Pb**	**19 25 31.9**	**+0.3**	
	1.0nm,0.1s								
KNOS				Lg		Lg	19 26 06.8		
	11nm,0.3s								
TDK	**Taldyqorghan**	**2.83**	**33**	Pg		**Pb**	**19 25 33.5**	**+0.5**	
	7.6nm,0.1s								
TDK				Lg		Lg	19 26 09.5		
	38nm,0.4s								
TDK	**Taldyqorghan**	**2.83**	**33**	*e*P		**Pb**	**19 25 33.5**	**+0.5**	
	7.6nm,0.1s								
TDK				*e*S		**Sb**	**19 26 09.5**	**+2.1**	
	38nm,0.4s								
BTLS	**Baital**	**2.85**	**327**	Pg		**Pb**	**19 25 34.2**	**+0.8**	
	4.3nm,0.2s								
BTLS				Lg		Lg	19 26 10.9		
	20nm,0.2s								
BTLS	**Baital**	**2.85**	**327**	*e*P		**Pb**	**19 25 34.2**	**+0.8**	
	4.3nm,0.2s								
BTLS				*e*S		**Sb**	**19 26 10.9**	**+2.7**	
	20nm,0.2s								
DJR	**Jarkent**	**3.09**	**56**	Pg		**Pb**	**19 25 37.8**	**+0.3**	
	2.7nm,0.4s								
DJR				Lg		Lg	19 26 17.0		
	6.4nm,0.3s								
DJR	**Jarkent**	**3.09**	**56**	*e*P		**Pb**	**19 25 37.8**	**+0.3**	
	2.7nm,0.4s								
DJR				*e*S		**Sb**	**19 26 17.0**	**+2.0**	
	6.4nm,0.3s								
KAPS	**Kapalarasan**	**3.47**	**40**	Pg		**Pb**	**19 25 45.4**	**+1.5**	
	2.6nm,0.1s								
KAPS				Lg		Lg	19 26 30.1		
	31nm,0.2s								
KAPS	**Kapalarasan**	**3.47**	**40**	*e*P		**Pb**	**19 25 45.4**	**+1.5**	
	2.6nm,0.1s								
KAPS				*e*S		**Sg**	**19 26 30.1**	**-4.1**	
	31nm,0.2s								
KK31	**Karatay Array**	**4.22**	**278**	⇑Pg		**Pb**	**19 25 58.5**	**+1.7**	
	0.5nm,0.3s,baz=92,slow=15,SNR=4.3								
KK31				⇑Lg		Lg	19 26 57.3		
	3.6nm,0.3s,baz=86,slow=31,SNR=19								
IUG	**Iuzhnay**	**4.61**	**266**	Pg		**Pg**	**19 26 08.2**	**-3.0**	
	2.2nm,0.2s								
IUG				Lg		Lg	19 27 09.1		
	12nm,0.5s								
IUG	**Iuzhnay**	**4.61**	**266**	*e*P		**Pg**	**19 26 08.2**	**-3.0**	
	2.2nm,0.2s								
IUG				*e*S		**Sg**	**19 27 09.1**	**-1.8**	
	12nm,0.5s								
KURBB	**Kurchatov Arra**	**8.12**	**10**	⇑Lg		Lg	19 29 04.1		
	2.2nm,0.7s								
KURK	**Kurchatov**	**8.23**	**11**	⇑Lg		Lg	19 29 06.5		
	0.6nm,0.8s								

*IDC **30** 19:28:37.2±0.9,24˚.99N×99˚.27E, h0km, mb3.8/8, mbtmp3.8/9, ML4.4/1, MS3.3/5, Error ellipse: s-maj=40.2km s-min=14.2km az=74.0*
*NEIC **30** 19:28:39.0±2.6,24˚.99N±0˚.09×99˚.25E±0˚.09, h10km±1km, mb4.3/9, Error ellipse: s-maj=19.3km s-min=6.2km az=223.0*
*BKK **30** 19:28:39.6±0.7,25˚.N±6˚×9˚.9E±˚, h10km, mB4.9/11, mb5.0/12, Mjma4.4/16, MLv4.7/10, Mw(mB)4.2/11*
ISC 30 19:28:39.1±0.6,**25˚.00N**±0˚.06×**99˚.22E**±0˚.04,**h17**km,**n44,** σ1§**60**/45,**mb4.1**/13,**MS3.3**/5,**1C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNCH	**TengChong**	**0.63**	**273**	Pg	**Pg**	**19 28 48.8**	**-2.9**
TNCH				Sg	**Sg**	**19 28 57.5**	**-2.7**
TNCH				smax	smax		
	comp=N,13μm,0.7s						
TNCH				smax	smax		
	comp=E,14μm,0.6s						
TNCH				LR	LR		
	comp=N,32μm,1.2s						
TNCH				LR	LR		
	comp=E,21μm,1.3s						
TNCH				LR	LR		
	comp=Z,1μm,2.7s						
PZH	**PanZhiHua**	**2.73**	**56**	Pg	**Pn**	**19 29 24.0**	**+1.7**
PZH				Sg	**Sb**	**19 29 58.0**	**-2.7**
PZH				smax	smax		
	comp=N,820nm,1.1s						
PZH				smax	smax		
	comp=E,590nm,1.2s						
KMI2	**Kunming**	**3.21**	**87**	⇑Pn	**Pn**	**19 29 28.5**	**-0.5**
KMI2				Pg	**Pg**	**19 29 38.8**	**-1.8**
KMI2				Sn	**Sn**	**19 30 05.0**	**-1.9**
KMI2				smax	smax		
	comp=N,570nm,1.0s						
KMI2				smax	smax		
	comp=E,300nm,1.1s						
MORE	**Moreh**	**4.54**	**261**		**Pn**	**19 29 47.1**	**0.0**
IMP	**Imphal**	**4.79**	**269**	*e*P	**Pn**	**19 29 52.6**	**+2.0**
CRAI	**Chiangrai**	**4.87**	**167**		**Pn**	**19 29 55.8**	**+4.1**
CMAI	**Chiengmai2**	**5.05**	**182**	P	**Pn**	**19 29 54.4**	**+0.2**
	comp=E,1.0nmcomp=E,1.6nmcomp=E,155nm,0.6s						
SLVN	**Son La**	**5.65**	**129**	Pn	**Pn**	**19 30 01.6**	**-0.8**
LAMP	**Lampang**	**6.46**	**176**	P	**Pn**	**19 30 12.9**	**-0.6**
	comp=E,1.4nmcomp=E,986nmcomp=E,100nm,0.6s						
CM31	**Chiang Mai Arr**	**6.52**	**182**	Pn	**Pn**	**19 30 15.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**6.52**	**182**	Pn	**Pn**	**19 30 15.6**	**+1.3**
	comp=E,2.3nm,0.3s,baz=2.8,slow=14,SNR=6.8						
CMAR				Pg	Pb	19 30 37.6	+5.5
	comp=E,12nm,0.3s,baz=356,slow=17,SNR=19						
CMAR				Lg	Lg	19 32 02.2	
	comp=E,6.3nm,0.3s,baz=325,slow=25,SNR=12						
CMAR				LR	LR	19 33 14.4	
	comp=E,75nm,21.2s,baz=0.0,slow=43						
	comp=E,4.9nm,0.4s						
CM09	**Chiang Mai Arr**	**6.53**	**182**	P	**Pn**	**19 30 14.5**	**0.0**
	comp=E,0.5nmcomp=E,1μmcomp=E,98nm,0.6s						
CM02	**Chiang Mai Arr**	**6.54**	**182**	P	**Pn**	**19 30 16.0**	**+1.4**
	comp=E,0.5nmcomp=E,655nmcomp=E,79nm,0.8s						
CM01	**Chiang Mai Arr**	**6.55**	**182**	P	**Pn**	**19 30 16.7**	**+1.9**
	comp=E,0.5nmcomp=E,853nmcomp=E,106nm,0.6s						
CM13	**Chiang Mai Arr**	**6.55**	**183**	P	**Pn**	**19 30 16.8**	**+2.0**
	comp=E,0.3nmcomp=E,60nm,0.7s						
CM04	**Chiang Mai Arr**	**6.57**	**182**	P	**Pn**	**19 30 17.2**	**+2.1**
	comp=E,0.5nmcomp=E,856nmcomp=E,91nm,0.5s						
CM05	**Chiang Mai Arr**	**6.57**	**182**	P	**Pn**	**19 30 16.0**	**+0.9**
	comp=E,0.4nmcomp=E,0.4nmcomp=E,846nmcomp=E,98nm,0.9s						
GUWA	**GUWAHATI**	**6.90**	**282**	*e*P	**Pn**	**19 30 19.3**	**-0.2**
UTTA	**Uttaradit**	**7.33**	**170**	P	**Pn**	**19 30 27.1**	**+1.7**
LSA	**Lhasa**	**8.56**	**305**		**Pn**	**19 30 45.2**	**+2.5**
EVN	**Everest**	**11.49**	**288**		**Pn**	**19 31 24.3**	**+1.3**
QIZ	**Qiongzhong**	**11.51**	**119**	P	**Pn**	**19 31 21.0**	**-1.7**
QIZ				S	**Sn**	**19 33 32.0**	**+1.1**
QIZ				LR	LR		
	comp=N,270nm,9.9s						
QIZ				LR	LR		
	comp=E,200nm,10.7s						
QIZ				LR	LR		
	comp=Z,250nm,9.1s						
WMQ	**Urumqi**	**21.00**	**336**	*e*P	**P**	**19 33 23.3**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				LR	LR		
	comp=N,230nm,13.3s						
WMQ				LR	LR		
	comp=E,260nm,19.3s						
WMQ				LR	LR		
	comp=Z,48nm,12.3s						
SONM	**Songino Array**	**23.49**	**12**	P	**P**	**19 33 48.9**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=195,slow=9.8,SNR=7.4						
SONM				LR	LR	19 44 15.3	
	comp=Z,100nm,19.3s,baz=116,slow=40						
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**23.49**	**12**	IAmb	IAmb	19 33 57.3	
	comp=Z,4.0nm,1.2s						
TARG	**Taragay, Kyrgy**	**24.35**	**318**		**P**	**19 33 57.3**	**+0.6**
TARG				IAmb	IAmb	19 34 27.5	
	comp=Z,14nm,1.2s						
PDGK	**Podgornoye**	**24.40**	**323**	P	**P**	**19 33 58.1**	**+1.3**
MKAR	**Makanchi Array**	**25.60**	**332**	P	**P**	**19 34 08.3**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=140,slow=9.9,SNR=14						
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**25.60**	**332**	P	**P**	**19 34 06.5**	**-1.0**
MAKZ	**Makanchi**	**25.75**	**332**	P	**P**	**19 34 08.2**	**-0.6**
MAKZ				IAmb	IAmb	19 34 12.6	
	comp=Z,7.0nm,1.4s						
MANEM	**Manem**	**26.55**	**305**	P	**P**	**19 34 15.5**	**-1.0**
MANEM				IAmb	IAmb	19 34 20.2	
	comp=Z,23nm,0.7s						
TLY	**Talaya**	**26.86**	**6**	LR	LR	19 45 49.0	
	comp=E,78nm,21.1s,baz=125,slow=38						
KURBB	**Kurchatov Arra**	**30.15**	**333**	P	**P**	**19 34 48.9**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=130,slow=10,SNR=5.3						
KURBB				LR	LR	19 46 19.4	
	comp=Z,38nm,19.1s,baz=163,slow=35						
	comp=Z,0.5nm,0.8s						
KURK	**Kurchatov**	**30.18**	**334**	P	**P**	**19 34 48.9**	**+0.5**
KURK	**Kurchatov**	**30.18**	**334**	IAmb	IAmb	19 35 32.8	
	comp=Z,4.7nm,0.8s						
ZAA0	**Zalesovo Array**	**30.85**	**343**	P	**P**	**19 34 54.6**	**+0.4**
ZAA0				IAmb	IAmb	19 34 56.2	
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**30.85**	**343**	P	**P**	**19 34 54.9**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=161,slow=11,SNR=8.9						
ZALV				LR	LR	19 46 23.2	
	comp=Z,106nm,21.1s,baz=102,slow=34						
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**30.85**	**343**	P	**P**	**19 34 54.4**	**+0.2**
WRAB	**Tennant Creek**	**56.24**	**139**	P	**P**	**19 38 17.5**	**-1.2**
WRA	**Warramunga Arr**	**56.24**	**139**	P	**P**	**19 38 18.2**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=327,slow=7.5,SNR=9.7						
	comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Ba**	**58.55**	**316**	P	**P**	**19 38 34.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=40,slow=3.3,SNR=1.9						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**58.55**	**316**	IAmb	IAmb	19 38 47.8	
	comp=Z,4.9nm,1.1s						
ASAR	**Alice Springs**	**58.91**	**142**	P	**P**	**19 38 38.9**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=330,slow=7.3,SNR=4.5						
	comp=Z,0.8nm,0.8s						
FINES	**FINESS Array B**	**60.33**	**328**	P	**P**	**19 38 49.3**	**+2.6**
	comp=Z,1.1nm,0.7s,baz=59,slow=14,SNR=1.8						
	comp=Z,1.1nm,0.7s						

*IDC **30** 19:32:20.3±2.2,2˚.18N×127˚.35E, h0km, mb3.4/4, mbtmp3.4/4, MS4.0/1, Error ellipse: s-maj=117.9km s-min=27.2km az=70.0*
*DJA **30** 19:32:29.2±0.9,2˚.N±4˚×12˚.7E±˚, h27km±9km, M3.1/6, MLv3.1/6*
ISC 30 19:32:28.6±1.6,**2˚.1N**±0˚.1×**127˚.1E**±0˚.2,**h63**km,**n7,** σ1§**69**/7, **mb3.2**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**169**	P	**Pn**	**19 32 51.6**	**+0.4**
TNTI				S	**Sn**	**19 33 09.1**	**+1.0**
MNI	**Manado**	**2.37**	**254**	P	**Pn**	**19 33 05.2**	**+0.1**
BATI	**Baumata**	**12.70**	**196**	LR	LR	19 40 35.7	
	comp=Z,646nm,20.5s,baz=316,slow=39						
FITZ	**Fitzroy Crossi**	**20.12**	**184**	P	**P**	**19 36 56.2**	**-1.3**
	3.2nm,1.0s,baz=18,slow=9.6,SNR=2.0						
	3.2nm,1.0s						
WRA	**Warramunga Arr**	**23.02**	**162**	P	**P**	**19 37 25.8**	**-2.7**
	0.4nm,0.4s,baz=342,slow=10,SNR=6.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.44**	**166**	P	**P**	**19 38 00.8**	**+1.0**
	0.2nm,0.7s,baz=354,slow=8.9,SNR=6.1						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**19 42 23.2**	**+0.5**
	0.5nm,0.9s,baz=118,slow=8.7,SNR=1.9						
	0.5nm,0.9s						

*IDC **30** 19:43:07.6±1.8,2˚.79S×101˚.20E, h0km, mb3.7/8, mbtmp3.7/8, MS4.3/6, Error ellipse: s-maj=80.4km s-min=21.9km az=51.0*
*NEIC **30** 19:43:26.4±1.5,2˚.7S±0˚.1×101˚.4E±0˚.1, h157km±8km, mb4.4/14, Error ellipse: s-maj=24.5km s-min=2.1km az=225.0*
*DJA **30** 19:43:29.1±0.3,2˚.S±3˚×10˚.2E±˚, h127km±3km, M3.5/24, MLv3.5/24*
ISC 30 19:43:25.3±0.6,**2˚.61S**±0˚.08×**101˚.47E**±0˚.10,**h150**km,**n48,** σ1§**56**/39,**mb4.0**/16,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**0.52**	**359**	P	**Pn**	**19 43 49.2**	**+2.3**
KRJI				S	**Sn**	**19 44 05.2**	**+1.8**
MASI	**Maura Aman, Be**	**0.93**	**124**	P	**Pn**	**19 43 51.2**	**+1.6**
UBSI	**University, Be**	**1.39**	**145**	P	**Pn**	**19 43 55.9**	**+2.1**
PPSI	**Pulau Pagai**	**1.46**	**264**	P	Pn	19 44 01.2	+6.7
KSI	**Kapahiang**	**1.52**	**133**	P	**Pn**	**19 43 56.9**	**+1.7**
SDSI	**Sungai Dareh**	**1.67**	**359**	P	**Pn**	**19 43 56.9**	**+0.2**
PDSI	**Padang**	**1.97**	**329**	P	**Pn**	**19 44 03.4**	**+3.3**
PDSI				S	**Sn**	**19 44 30.0**	**+3.2**
MNAI	**Manna**	**2.28**	**139**	Pn	**Pn**	**19 44 05.3**	**+1.5**
MNAI				Sn	**Sn**	**19 44 34.3**	**+0.8**
LHSI	**Lahat**	**2.38**	**120**	P	**Pn**	**19 44 05.5**	**+0.5**
PPI	**Padang Panjang**	**2.40**	**333**	P	Pn	19 44 10.8	+5.6
BKNI	**Bangkinang**	**2.95**	**352**		**Pn**	**19 44 13.0**	**+0.9**
BKNI	**Bangkinang**	**2.95**	**352**	P	**Pn**	**19 44 12.9**	**+0.9**
MDSI	**Maura Dua**	**3.28**	**125**	P	**Pn**	**19 44 16.8**	**+0.5**
GSI	**Gunungsitoli**	**5.50**	**315**	Pn	**Pn**	**19 44 48.6**	**+3.1**
GSI				Sn	**Sn**	**19 45 45.0**	**-3.1**
KULM	**Kulim**	**7.89**	**354**	Pn	**Pn**	**19 45 16.6**	**-0.7**
MMRI	**Maumere**	**21.51**	**107**	P	**P**	**19 48 02.4**	**-0.3**
PALK	**Pallekele**	**22.93**	**295**	P	**P**	**19 48 14.9**	**-1.8**
PALK				IAmb	IAmb	19 48 38.2	
	comp=Z,18nm,1.1s						
H08S2	**Diego Garcia H**	**29.28**	**259**	T	T	20 18 56.7	
	baz=81						
H08S3	**Diego Garcia H**	**29.28**	**259**	T	T	20 18 21.4	
	baz=81,slow=74						
H08S1	**Diego Carcia H**	**29.30**	**259**	T	T	20 19 04.7	
	baz=81,slow=74						
ENH	**Enshi**	**33.59**	**13**	P	**P**	**19 49 51.4**	**+0.1**
ENH				IAmb	IAmb	19 50 11.4	
	comp=Z,8.8nm,1.0s						
TATO	**Taipei**	**33.61**	**34**	P	**P**	**19 49 52.7**	**+1.2**
WRA	**Warramunga Arr**	**36.42**	**121**	P	**P**	**19 50 15.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=299,slow=8.7,SNR=2.3						
	comp=Z,0.3nm,0.3s						
WR8	**Warramunga Arr**	**36.56**	**121**	P	**P**	**19 50 17.1**	**+0.1**
WR8				IAmb	IAmb	19 50 28.0	
	comp=Z,7.9nm,1.4s						
ASAR	**Alice Springs**	**37.71**	**126**	P	**P**	**19 50 26.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=301,slow=8.5,SNR=2.3						
	comp=Z,0.1nm,0.3s						
SONM	**Songino Array**	**50.42**	**4**	P	**P**	**19 52 07.4**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=195,slow=9.5,SNR=5.8						
	comp=Z,0.5nm,0.5s						
MK31	**Makanchi Array**	**52.02**	**343**	P	**P**	**19 52 20.0**	**+0.6**
MKAR	**Makanchi Array**	**52.02**	**343**	P	**P**	**19 52 20.3**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=149,slow=8.8,SNR=12						
MKAR				LR	LR	20 19 34.5	
	comp=Z,255nm,21.9s,baz=98,slow=42						
	comp=Z,0.8nm,0.5s						
HRA	**Herat**	**52.08**	**318**	P	**P**	**19 52 19.3**	**-1.0**
HRA				IAmb	IAmb	19 52 21.4	
	comp=Z,2.7nm,0.5s						
KKAR	**Karatay Array**	**53.37**	**332**	P	**P**	**19 52 29.3**	**-0.1**
KURBB	**Kurchatov Arra**	**56.56**	**343**	P	**P**	**19 52 53.0**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=159,slow=6.6,SNR=6.6						
KURBB				LR	LR	20 19 50.4	
	comp=Z,349nm,21.9s,baz=152,slow=39						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**56.61**	**343**	P	**P**	**19 52 53.0**	**+0.6**
KURK	**Kurchatov**	**56.61**	**343**	IAmb	IAmb	19 52 55.4	
	comp=Z,2.4nm,1.1s						
ZALV	**Zalesovo Beam**	**58.05**	**348**	P	**P**	**19 53 02.9**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=150,slow=5.3,SNR=5.7						
	comp=Z,0.7nm,0.3s						
H04N2	**CROZET ISLANDS**	**61.19**	**217**	T	T	20 59 30.2	
	baz=60,slow=75,SNR=8.7						
H04N1	**CROZET ISLANDS**	**61.20**	**217**	T	T	20 59 34.8	
	baz=60,slow=75,SNR=6.0						
H04N3	**CROZET ISLANDS**	**61.20**	**217**	T	T	20 59 28.7	
	baz=60,slow=75,SNR=6.1						
BVAR	**Borovoye Array**	**61.27**	**339**	P	**P**	**19 53 25.1**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=142,slow=5.6,SNR=5.9						
	comp=Z,0.6nm,0.3s						
AB31	**Akbulak array**	**62.88**	**331**	P	**P**	**19 53 36.6**	**+1.2**
AB31				IAmb	IAmb	19 53 37.7	
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**62.88**	**331**	P	**P**	**19 53 36.8**	**+1.5**
CASY	**Casey**	**63.86**	**176**	P	**P**	**19 53 40.1**	**-1.4**
ARTI	**Arti**	**68.40**	**336**	LR	LR	20 27 17.8	
	comp=Z,378nm,21.7s,baz=68,slow=39						
ARTI	**Arti**	**68.40**	**336**	P	**P**	**19 54 11.6**	**+1.0**
ARTI				IAmb	IAmb	19 54 12.5	
	comp=Z,3.8nm,0.4s						
BELG	**Belogornoye**	**71.01**	**328**	LR	LR	20 31 30.1	
	comp=Z,104nm,19.1s,baz=81,slow=41						
KIRV	**Kirov**	**73.55**	**334**	LR	LR	20 32 20.5	
	comp=Z,321nm,20.6s,baz=57,slow=40						
BRTR	**Keskin Array B**	**74.82**	**312**	P	**P**	**19 54 49.1**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=97,slow=12,SNR=3.0						
	comp=Z,0.2nm,0.5s						
LBTB	**Lobatse**	**76.10**	**245**	LR	LR	20 24 54.9	
	comp=Z,131nm,18.1s,baz=142,slow=33						
GUMA	**Gualdo di Mace**	**90.40**	**313**	P	**P**	**19 56 07.1**	**-2.8**
GUMA				IAmb	IAmb	19 56 08.9	
	comp=Z,6.9nm,0.6s						

*SOF **30** 20:02:05.4,45˚.67N±0˚.02×26˚.72E±0˚.02, h150km±2km, MD3.0/4*
*BUC **30** 20:02:06.6±0.2,45˚.67N×26˚.73E, h140km±1km, ml3.5/58, Error ellipse: s-maj=1.4km s-min=1.1km az=5.0*

SCTR				⇓S		Sn	20 02 46.9	-0.6
TATR	**Tatarca**	**0.93**	**96**	⇓P		Pn	20 02 30.0	+0.7
TATR				⇑S		Sn	20 02 47.8	-0.4
PLAR	**PLOIESTI**	**0.93**	**213**	⇑P		Pn	20 02 29.9	+0.5
VLDR	**Vladesti**	**0.95**	**81**	⇑P		Pn	20 02 30.3	+0.8
VLDR				⇑S		Sn	20 02 48.1	-0.5
GISR	**Galati**	**0.96**	**105**	⇓P		Pn	20 02 30.5	+0.9
GISR				⇓S		Sn	20 02 47.9	-0.7
DOPR	**Dopca**	**0.98**	**286**	⇑P		Pn	20 02 30.5	+0.8
DOPR				⇓S		Sn	20 02 48.1	-0.9
GIUM	**Giurgiulesti**	**1.06**	**101**	⇑P		Pn	20 02 31.1	+0.8
GIUM				⇑S		Sn	20 02 49.2	-0.8
SULR		**1.08**	**198**	⇓P		Pn	20 02 30.9	+0.4
SULR				⇓S		Sn	20 02 50.3	-0.1
CFR	**Carcaliu**	**1.12**	**118**	⇓P		Pn	20 02 31.5	+0.7
CFR				⇑S		Sn	20 02 49.9	-1.1
AMRR	**Amara**	**1.17**	**159**	⇓P		Pn	20 02 32.0	+0.6
AMRR				⇓S		Sn	20 02 52.0	+0.1
VASR	**Vaslui**	**1.19**	**38**	⇑P		Pn	20 02 32.4	+0.9
VASR				⇑S		Sn	20 02 51.7	-0.6
VOIR		**1.21**	**258**	⇓P		Pn	20 02 32.4	+0.6
VOIR				⇑S		Sn	20 02 52.6	-0.2
VOIR		**1.21**	**258**	P		Pn	20 02 32.3	+0.5
LEHL	**Lehliu**	**1.23**	**177**	⇓S		Sn	20 02 52.8	0.0
GIRR	**Girov**	**1.26**	**353**	⇑P		Pn	20 02 33.4	+1.2
GIRR				⇓S		Sn	20 02 52.9	-0.6
MTUR	**Matau**	**1.27**	**249**	⇑P		Pn	20 02 32.9	+0.5
BIZ	**Bicaz**	**1.31**	**341**	⇑P		Pn	20 02 34.3	+1.6
INCR	**INCERC-Sediu C**	**1.33**	**198**	⇑S		Sn	20 02 54.3	-0.1
BUC1	**Bucharest**	**1.45**	**201**	⇑P		Pn	20 02 34.9	+0.9
BUC1				⇓S		Sn	20 02 56.6	0.0
TPGR	**Topolog**	**1.46**	**125**	⇓P		Pn	20 02 34.6	+0.4
TPGR				⇓S		Sn	20 02 55.8	-1.1
TLBR	**Topalu**	**1.48**	**141**	⇑P		Pn	20 02 35.1	+0.7
TLBR				⇑S		Sn	20 02 56.4	-0.8
ARR	**Arges**	**1.52**	**258**	⇓P		Pn	20 02 35.6	+0.8
ARR				⇓S		Sn	20 02 58.2	+0.2
CICN	**Ciocanesti**	**1.52**	**172**	⇑S		Sn	20 02 57.5	-0.4
CVDA	**Cernavoda**	**1.65**	**146**	⇑P		Pn	20 02 37.2	+1.1
CVDA				⇓S		Sn	20 02 59.3	-1.1
MDB	**Medias**	**1.70**	**286**	⇑P		Pn	20 02 37.8	+1.2
HUMR	**Humele**	**1.71**	**227**	⇑P		Pn	20 02 37.6	+0.8
HUMR				⇑S		Sn	20 03 01.3	-0.2
TIRR	**Tirgusor**	**1.72**	**136**	⇓P		Pn	20 02 37.6	+0.7
TIRR				⇓S		Sn	20 03 00.9	-0.8
TIRR	**Tirgusor**	**1.72**	**136**	P		Pn	20 02 37.5	+0.7
TIRR				S		Sn	20 03 00.5	-1.2
COPA	**Copaceanca**	**1.90**	**215**	⇑P		Pn	20 02 39.8	+0.9
COPA				⇑S		Sn	20 03 05.0	-0.3
KIS	**Kishinev**	**1.94**	**47**	⇑P		Pn	20 02 40.3	+1.1
MFTR	**Murfatlar**	**1.94**	**141**	⇓P		Pn	20 02 39.8	+0.5
MFTR				⇑S		Sn	20 03 05.3	-0.7
LOT	**Lotru**	**2.10**	**264**	⇓P		Pn	20 02 42.3	+1.0
LOT				⇓S		Sn	20 03 10.4	+0.9
BURAR	**Bucovina Array**	**2.18**	**332**	⇓P		Pn	20 02 44.5	+2.3
PSN	**Preselentsi**	**2.29**	**154**	P		Pn	20 02 44.6	+1.1
PURM	**Purcari**	**2.33**	**68**	⇓P		Pn	20 02 45.0	+1.2
PURM	**Purcari**	**2.33**	**68**	P		Pn	20 02 44.4	+0.6
SZH	**Strazhitsa**	**2.50**	**193**	P		Pn	20 02 47.0	+1.1
SZH				S		Sn	20 03 17.3	-0.6
PRD	**Provadia**	**2.59**	**169**	P		Pn	20 02 48.1	+1.1
SORM	**Soroca**	**2.67**	**24**	P		Pn	20 02 48.4	+0.4
SORM				S		Sn	20 03 19.8	-1.8
MARR	**Marisel-Cluj**	**2.69**	**292**	⇓P		Pn	20 02 49.7	+1.4
SRE	**Strehaia**	**2.71**	**249**	⇓P		Pn	20 02 49.1	+0.7
SRE				⇓S		Sn	20 03 21.9	-0.5
PLVB	**Pleven**	**2.77**	**214**	⇑P		Pn	20 02 50.9	+0.8
GZR	**Gura Zlata**	**2.80**	**265**	⇑P		Pn	20 02 51.5	+1.9
GZR				⇑S		Sn	20 03 26.4	+1.9
GZR	**Gura Zlata**	**2.80**	**265**	*eP*		Pn	20 02 51.3	+1.7
GZR				*eS*		Sn	20 03 25.3	+0.8
RMGR	**Halanga-Turnu**	**3.04**	**251**	⇓P		Pn	20 02 53.0	+0.4
NE56	**Odesa**	**3.05**	**70**	P		Pn	20 02 52.9	+0.2
VALD	**Valchedram**	**3.10**	**231**	P		Pn	20 02 54.0	+0.7
HERR	**Herculane**	**3.16**	**256**	⇑P		Pn	20 02 54.5	+0.5
MPEP	**Malo Peshtene**	**3.18**	**223**	P		Pn	20 02 55.3	+0.9
BLKB	**Belogradchik**	**3.57**	**236**	*eP*		Pn	20 02 59.3	-0.1
BLKB				*eS*		Sn	20 03 38.5	-3.4
BZS	**Buzias**	**3.59**	**270**	*eP*		Pn	20 03 00.9	+1.3
MDVR	**Moldovita**	**3.67**	**257**	*eP*		Pn	20 03 01.4	+0.8
MDVR				*eS*		Sn	20 03 42.0	-2.2
ZAGS	**Zajecar**	**3.72**	**241**	*eP*		Pn	20 03 01.3	0.0
ZAGS				*eS*		Sn	20 03 41.3	-4.1
BLSH	**Balsha**	**3.78**	**222**	P		Pn	20 03 03.8	+1.7
ZAPS	**Zavoj**	**3.81**	**232**	*eP*		Pn	20 03 02.9	+0.4
ZAPS				*eS*		Sn	20 03 44.2	-3.3
KUBS	**Kucevo**	**3.81**	**252**	*eP*		Pn	20 03 01.5	-1.0
KUBS				*eS*		Sn	20 03 44.3	-3.2
VRSS	**Vrsac**	**3.85**	**263**	*eP*		Pn	20 03 03.9	+0.9
VTS	**Vitosha**	**3.98**	**220**	P		Pn	20 03 07.3	+2.5
VTS	**Vitosha**	**3.98**	**220**	*eP*		Pn	20 03 06.9	+2.1
BOVS	**Bovan**	**4.14**	**242**	⇓P		Pn	20 03 07.6	+0.8
BOVS	**Bovan**	**4.14**	**242**	*eP*		Pn	20 03 07.3	+0.6
BOVS				*eS*		Sn	20 03 53.3	-1.8
BOSS	**Bosilegrad**	**4.43**	**225**	*eP*		Pn	20 03 12.8	+2.2
SELS	**Selova**	**4.72**	**240**	*eP*		Pn	20 03 15.1	+0.7
SELS				*eS*		Sn	20 04 08.2	-0.7

IDC ***30*** *20:03:59.5±1.6,7˚20S×129˚81E,h58^{km}±15^{km},mb4.0/18, mbtmp4.4/22,MS3.6/12,Error ellipse: s-maj=14.2km s-min=10.3km az=99.0*

NEIC ***30*** *20:04:02.0±2.0,7˚14S±0˚09×129˚70E±0˚06,h75^{km}±6^{km}, mb4.5/46,Error ellipse: s-maj=12.4km s-min=8.9km az=186.0*

GFZ ***30*** *20:04:02.5±0.2,7˚S±2˚×13˚0E±˚,h93^{km},M4.7/38, mb4.8/38*

DJA ***30*** *20:04:04.7±0.3,7˚S±3˚×13˚0E±˚,h87^{km}±17^{km},M4.9/20, mB5.3/18,mb5.1/20,MLv5.2/20,Mw(mB)4.7/18*

ISC 30 20:04:03.3±0.3,7˚29S±0˚04×129˚94E±0˚04,h10^{km},n204, σ2^{s}08/203,mb4.4/41,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.51**	**117**		**Pn**	**20 04 31.2**	**+1.5**
SAUI				Sn	**Sn**	**20 04 53.0**	**+3.2**
SAUI	**Saumlaki**	**1.51**	**117**	P	**Pn**	**20 04 32.3**	**+2.6**
BNDI	**Bandanaira**	**2.75**	**359**	P	**Pn**	**20 04 45.0**	**-0.7**
BNDI	**Bandanaira**	**2.75**	**359**	P	**Pn**	**20 04 44.7**	**-1.0**
BNDI	**Bandanaira**	**2.75**	**359**	P	**Pn**	**20 04 45.2**	**-0.5**
FAKI	**Fak Fak**	**4.91**	**28**	P	**Pn**	**20 05 13.3**	**-1.5**
FAKI	**Fak Fak**	**4.91**	**28**		**Pn**	**20 05 13.1**	**-1.7**
FAKI				Sn	**Sn**	**20 06 05.0**	**-5.5**
FAKI	**Fak Fak**	**4.91**	**28**	P	**Pn**	**20 05 13.3**	**-1.5**
FAKI	**Fak Fak**	**4.91**	**28**	P	**Pn**	**20 05 13.9**	**-0.9**
NLAI	**Namlea**	**4.92**	**325**	P	**Pn**	**20 05 15.7**	**+0.8**
DRS	**Darwin Rock St**	**5.20**	**170**	P	**Pn**	**20 05 18.4**	**-0.3**
DRS	**Darwin Rock St**	**5.20**	**170**	S	**Sn**	**20 06 14.7**	**-2.8**
MTN	**Manton Dam**	**5.65**	**168**		**Pn**	**20 05 24.9**	**+0.1**
MTN				Sn	**Sn**	**20 06 23.8**	**-4.5**
SOEI	**Soe**	**6.13**	**246**	P	**Pn**	**20 05 32.0**	**+0.5**
SOEI	**Soe**	**6.13**	**246**	S	**Sn**	**20 06 39.9**	**-0.4**
SOEI	**Soe**	**6.13**	**246**		**Pn**	**20 05 30.4**	**-1.1**
SOEI	**Soe**	**6.13**	**246**	P	**Pn**	**20 05 31.5**	**0.0**
	3μm347nm,0.7s						
SOEI	**Soe**	**6.13**	**246**	P	**Pn**	**20 05 32.0**	**+0.5**
SIJI	**Sorong**	**6.51**	**12**	P	**Pn**	**20 05 33.9**	**-2.6**
	48nm,0.2s,baz=190,slow=11,SNR=151						
SIJI				S	**Sn**	**20 06 44.8**	**-4.6**
	29nm,0.2s,baz=167,slow=23,SNR=1.4						
SIJI				LR	LR	20 08 03.6	
	comp=Z,362nm,21.4s,baz=201,slow=38						
SIJI	**Sorong**	**6.51**	**12**	P	**Pn**	**20 05 35.1**	**-1.5**
SIJI	**Sorong**	**6.51**	**12**	P	**Pn**	**20 05 34.5**	**-2.1**
SWI	**Sorong**	**6.51**	**12**	P	**Pn**	**20 05 35.2**	**-1.4**
	0.6nm4μm189nm,0.9s						
SWI	**Sorong**	**6.51**	**12**	P	**Pn**	**20 05 34.7**	**-1.9**
SANI	**Sanana**	**6.53**	**323**	P	**Pn**	**20 05 38.8**	**+2.0**
SANI	**Sanana**	**6.53**	**323**	P	**Pn**	**20 05 38.5**	**+1.7**
	0.8nm3μm226nm,1.5s						
SANI	**Sanana**	**6.53**	**323**	P	**Pn**	**20 05 37.4**	**+0.6**
BATI	**Baumata**	**6.85**	**244**	P	**Pn**	**20 05 37.0**	**-4.3**
	77nm,0.4s,baz=93,slow=4.6,SNR=40						
BATI				S	**Sn**	**20 06 51.3**	**-6.5**
	494nm,0.6s,baz=255,slow=23,SNR=9.6						
BATI	**Baumata**	**6.85**	**244**	P	**Pn**	**20 05 37.5**	**-3.7**
BATI	**Baumata**	**6.85**	**244**	P	**Pn**	**20 05 37.2**	**-4.0**
BBSI	**Bau Bau**	**7.54**	**283**	P	**Pn**	**20 05 53.0**	**+2.4**
	1.2nm5μm375nm,1.3s						
BBSI	**Bau Bau**	**7.54**	**283**	P	**Pn**	**20 05 51.5**	**+0.9**
MMRI	**Maumere**	**7.75**	**260**		**Pn**	**20 05 53.1**	**-0.4**
MMRI	**Maumere**	**7.75**	**260**	P	**Pn**	**20 05 55.2**	**+1.8**
	0.5nm2μm125nm,0.9s						
MMRI	**Maumere**	**7.75**	**260**	P	**Pn**	**20 05 53.7**	**+0.2**
KDI	**Kendari**	**8.00**	**294**	P	**Pn**	**20 05 58.5**	**+1.6**
	88nm,1.1s						
TNTI	**Ternate**	**8.41**	**342**	P	**Pn**	**20 06 03.6**	**+1.3**
TNTI	**Ternate**	**8.41**	**342**		**Pn**	**20 06 00.3**	**-2.1**
TNTI	**Ternate**	**8.41**	**342**	P	**Pn**	**20 06 03.7**	**+1.3**
KNRA	**Kununurra**	**8.42**	**188**		**Pn**	**20 06 00.8**	**-1.7**
BAKI	**Biak**	**8.62**	**46**	P	**Pn**	**20 06 07.1**	**+1.7**
KKSI	**Kolaka, Sulawe**	**8.81**	**290**	P	**Pn**	**20 06 08.4**	**+0.5**
WAMI	**Wamena**	**9.36**	**69**	P	**Pn**	**20 06 18.7**	**+3.4**
BSSI	**Bau Bau, Buton**	**9.46**	**276**	P	**Pn**	**20 06 18.1**	**+1.4**
	1μm170nm,1.0s						
LUWI	**Luwuk**	**9.46**	**311**	P	**Pn**	**20 06 18.9**	**+2.1**
LUWI	**Luwuk**	**9.46**	**311**		**Pn**	**20 06 12.8**	**-3.9**
LUWI	**Luwuk**	**9.46**	**311**	P	**Pn**	**20 06 16.1**	**-0.7**
WSI	**Waingapu**	**9.83**	**255**	P	**Pn**	**20 06 21.2**	**-0.5**
BKSI	**Bulukumba**	**9.96**	**281**	P	**Pn**	**20 06 26.3**	**+2.9**
KAPI	**Kappang**	**10.38**	**282**	P	**Pn**	**20 06 30.6**	**+1.3**
KAPI	**Kappang**	**10.38**	**282**	S	**Sn**	**20 08 27.0**	**+3.3**
KAPI	**Kappang**	**10.38**	**282**	P	**Pn**	**20 06 28.2**	**-1.1**
	22nm,0.6s,baz=112,slow=9.4,SNR=9.3						
KAPI				LR	LR	20 10 17.8	
	comp=Z,194nm,19.3s,baz=98,slow=37						
KAPI	**Kappang**	**10.38**	**282**		**Pn**	**20 06 25.6**	**-3.6**
KAPI	**Kappang**	**10.38**	**282**	P	**Pn**	**20 06 32.5**	**+3.2**
KAPI	**Kappang**	**10.38**	**282**	P	**Pn**	**20 06 29.1**	**-0.1**
SPSI	**Sidrap Palu**	**10.65**	**288**	P	**Pn**	**20 06 36.1**	**+3.2**
SPSI	**Sidrap Palu**	**10.65**	**288**	P	**Pn**	**20 06 32.2**	**-0.7**
WBSI	**Waikabubak, Su**	**10.70**	**257**	P	**Pn**	**20 06 31.9**	**-1.7**
GENI	**Genyem**	**11.20**	**66**	P	**Pn**	**20 06 41.9**	**+1.5**
GENI	**Genyem**	**11.20**	**66**	P	**Pn**	**20 06 41.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**11.54**	**201**	P	**Pn**	**20 06 42.5**	**-2.3**
FITZ	**Fitzroy Crossi**	**11.54**	**201**	P	**Pn**	**20 06 41.6**	**-3.3**
	51nm,0.4s,baz=34,slow=10,SNR=115						
FITZ				S	Sn	20 08 40.8	-11
	185nm,0.4s,baz=69,slow=20,SNR=7.9						
FITZ				LR	LR	20 12 06.7	
	comp=Z,300nm,18.2s,baz=22,slow=42						
FITZ	**Fitzroy Crossi**	**11.54**	**201**		**Pn**	**20 06 40.8**	**-4.0**
FITZ					Sn	20 08 39.6	-12
FITZ	**Fitzroy Crossi**	**11.54**	**201**	P	**Pn**	**20 06 42.1**	**-2.7**
JAY	**Jayapura**	**11.72**	**67**	P	**Pn**	**20 06 46.8**	**-0.6**
	35nm,0.7s,baz=218,slow=11,SNR=14						
JAY				S	**Sn**	**20 08 53.4**	**-3.0**
	37nm,0.8s,baz=36,slow=18,SNR=6.8						
PLAI	**Plampang**	**12.14**	**262**	P	**Pn**	**20 06 51.4**	**-1.6**
TOLI2	**Tolitoli**	**12.37**	**312**	P	**Pn**	**20 06 58.5**	**+2.5**
TOLI2	**Tolitoli**	**12.37**	**312**	S	**Sn**	**20 09 16.0**	**+3.8**
TOLI2	**Tolitoli**	**12.37**	**312**		**Pn**	**20 06 53.5**	**-2.5**
TOLI2	**Tolitoli**	**12.37**	**312**	P	**Pn**	**20 06 57.2**	**+1.1**
TWSI	**Taliwang, Sumb**	**13.02**	**263**	P	**Pn**	**20 07 03.5**	**-1.0**
WB0	**Warramunga Ar**	**13.14**	**161**	P	**Pn**	**20 07 02.8**	**-3.3**
WRAB	**Tennant Creek**	**13.28**	**162**	P	**Pn**	**20 07 05.2**	**-2.7**
WRAB	**Tennant Creek**	**13.28**	**162**	P	**Pn**	**20 07 04.7**	**-3.3**
WRAB	**Tennant Creek**	**13.28**	**162**	P	**Pn**	**20 07 05.5**	**-2.4**
WRA	**Warramunga Arr**	**13.29**	**162**	P	**Pn**	**20 07 05.2**	**-2.8**
	1μm,1.0s,baz=348,slow=13,SNR=11						
WRA				S	Sn	20 09 25.7	-8.5
	1μm,1.0s,baz=335,slow=21,SNR=8.4						
WB1	**Warramunga Ar.**	**13.30**	**162**	P	**Pn**	**20 07 05.4**	**-2.8**
WR8	**Warramunga Arr**	**13.35**	**161**	P	**Pn**	**20 07 05.0**	**-3.8**
COEN	**Coen**	**14.59**	**118**	P	**Pn**	**20 07 24.7**	**-0.2**
COEN	**Coen**	**14.59**	**118**		**Pn**	**20 07 23.2**	**-1.8**
COEN	**Coen**	**14.59**	**118**	P	**Pn**	**20 07 23.9**	**-1.1**
SRBI	**Singaraja**	**14.62**	**266**	P	**Pn**	**20 07 22.9**	**-2.4**
DAV	**Davao City (W)**	**14.91**	**343**	LR	LR	20 14 06.8	
	comp=Z,158nm,18.4s,baz=112,slow=41						
JAGI	**Jajag, Banyuwa**	**15.69**	**265**	Pn	**Pn**	**20 07 35.1**	**-3.7**
JAGI				IAmb	IAmb	20 08 18.5	
	comp=Z,77nm,1.4s						
QIS	**Mount Isa**	**16.18**	**146**	P	**Pn**	**20 07 44.0**	**-0.8**
QIS	**Mount Isa**	**16.18**	**146**	P	**Pn**	**20 07 44.1**	**-0.8**
BLJI	**Banyuglugur**	**16.22**	**267**	P	**Pn**	**20 07 43.5**	**-1.9**
AS31	**Alice Springs**	**16.73**	**167**	P	**Pn**	**20 07 50.3**	**-1.3**
ASAR	**Alice Springs**	**16.73**	**167**	P	**Pn**	**20 07 51.0**	**-0.6**
	comp=Z,5.3nm,0.4s,baz=344,slow=14,SNR=88						
ASAR				S	**Sn**	**20 10 50.6**	**-6.8**
	comp=Z,50nm,0.7s,baz=354,slow=27,SNR=6.7						
ASAR	**Alice Springs**	**16.73**	**167**	P	**Pn**	**20 07 51.1**	**-0.5**
AS01	**Alice Springs**	**16.73**	**167**	P	**P**	**20 07 53.5**	**+1.2**
AUALC	**St Philip's Co**	**16.74**	**167**	P	**P**	**20 07 53.5**	**+1.1**
MYLDM	**Lahad Datu**	**16.84**	**317**	P	**P**	**20 07 55.3**	**+1.7**
MYLDM	**Lahad Datu**	**16.84**	**317**	P	**P**	**20 07 54.3**	**+0.7**
MBWA	**Marble Bar**	**16.96**	**215**	P	**Pn**	**20 07 53.7**	**-0.8**
MBWA	**Marble Bar**	**16.96**	**215**	P	**Pn**	**20 07 52.3**	**-2.2**
MBWA				IAmb	IAmb	20 08 26.7	
	comp=Z,30nm,0.8s						
MBWA	**Marble Bar**	**16.96**	**215**	P	**Pn**	**20 07 52.3**	**-2.2**
PMG	**Port Moresby**	**17.16**	**98**	P	**P**	**20 08 00.4**	**+3.3**
	comp=Z,12nm,0.4s,baz=267,slow=7.2,SNR=6.7						
PMG				S	**Sn**	**20 11 01.2**	**-6.8**
	comp=Z,23nm,0.7s,baz=350,slow=23,SNR=7.8						
PMG				LR	LR	20 16 06.4	
	comp=Z,241nm,20.6s,baz=257,slow=42						
PMG	**Port Moresby**	**17.16**	**98**	IAmb	IAmb	20 08 11.4	
	comp=Z,38nm,0.8s						
MTSU	**Mount Surprise**	**17.67**	**129**	P	**Pn**	**20 08 04.3**	**+1.1**
MTSU	**Mount Surprise**	**17.67**	**129**	P	**Pn**	**20 08 04.0**	**+0.9**
CTA	**Charters Tower**	**20.30**	**130**	P	Pn	20 08 35.6	+1.4
	comp=Z,19nm,0.9s,baz=301,slow=11,SNR=14						
CTA				S	**S**	**20 12 16.9**	**+3.4**
	comp=Z,5.0nm,0.8s,baz=348,slow=19,SNR=1.7						
CTA				LR	LR	20 17 47.2	
	comp=Z,254nm,18.9s,baz=272,slow=40						
CTAO	**Charters Tower**	**20.30**	**130**	P	**P**	**20 08 32.7**	**+1.4**
CTAO	**Charters Tower**	**20.30**	**130**	P	Pn	20 08 34.1	0.0
CTAO				IAmb	IAmb	20 08 59.0	
	comp=Z,28nm,1.1s						
CTAO	**Charters Tower**	**20.30**	**130**	P	**P**	**20 08 31.9**	**+0.6**
MEEK	**Meekatharra**	**22.06**	**208**	P	**P**	**20 08 52.6**	**+2.5**
MEEK	**Meekatharra**	**22.06**	**208**	P	**P**	**20 08 50.9**	**+0.8**
BBJI	**Bungbulang**	**22.11**	**268**	P	**P**	**20 08 47.8**	**-3.0**
BBJI				IAmb	IAmb	20 08 55.3	
	comp=Z,13nm,0.6s						
BBJI	**Bungbulang**	**22.11**	**268**	P	**P**	**20 08 48.2**	**-2.6**
LEM	**Lembang**	**22.16**	**270**	P	**P**	**20 08 50.2**	**-1.2**
	comp=Z,26nm,0.7s,baz=69,slow=16,SNR=7.9						
LEM				LR	LR	20 18 16.6	
	comp=Z,168nm,20.5s,baz=151,slow=39						
	comp=Z,26nm,0.7s						
LEM	**Lembang**	**22.16**	**270**	P	**P**	**20 08 48.7**	**-2.7**
INKA	**Innaminka**	**22.77**	**155**	P	**P**	**20 09 00.6**	**+3.2**
INKA				IAmb	IAmb	20 09 41.8	
	comp=Z,15nm,0.8s						
FORT	**Forrest**	**23.44**	**184**	P	**P**	**20 09 05.4**	**+1.7**
FORT				IAmb	IAmb	20 09 43.4	
	comp=Z,22nm,0.8s						
QLP	**Quilpie**	**23.52**	**146**	P	**P**	**20 09 07.5**	**+3.0**
QLP	**Quilpie**	**23.52**	**146**	P	**P**	**20 09 05.8**	**+1.3**
CGJI	**Cibinong**	**24.08**	**270**	P	**P**	**20 09 06.2**	**-3.5**
MORW	**Morawa**	**25.32**	**209**	P	**P**	**20 09 23.8**	**+3.0**
MORW	**Morawa**	**25.32**	**209**	P	**P**	**20 09 23.3**	**+2.4**
MORW				IAmb	IAmb	20 09 57.8	
	comp=Z,19nm,0.9s						
MORW	**Morawa**	**25.32**	**209**	P	**P**	**20 09 21.6**	**+0.8**
BBOO	**Buckleboo**	**26.03**	**168**	P	**P**	**20 09 28.4**	**+1.3**
STKA	**Stephens Creek**	**26.77**	**158**	P	**P**	**20 09 35.6**	**+1.7**
STKA	**Stephens Creek**	**26.77**	**158**	P	**P**	**20 09 35.4**	**+1.5**
	comp=Z,2.2nm,0.4s,baz=328,slow=8.0,SNR=10						
STKA				LR	LR	20 21 29.7	
	comp=Z,218nm,18.0s,baz=332,slow=39						
	comp=Z,2.2nm,0.4s						
NWAO	**Narrogin (SRO)**	**28.11**	**203**	LR	LR	20 22 34.3	
	comp=Z,171nm,18.7s,baz=44,slow=40						
SDSI	**Sungai Dareh**	**29.12**	**281**	P	**P**	**20 09 53.0**	**-2.0**
HNR	**Honiara**	**29.76**	**96**	LR	LR	20 22 33.3	
	comp=Z,6.9nm,19.4s,baz=356,slow=37						
SSLB	**Suanglung**	**32.11**	**344**	P	**P**	**20 10 19.9**	**-1.3**
PBSI	**Pulau Batu**	**32.38**	**281**	P	**P**	**20 10 21.1**	**-2.7**
RPSI	**Rantau Prapat**	**32.50**	**287**	P	**P**	**20 10 24.9**	**+0.1**
JCJ	**Chichijima**	**36.18**	**19**	P	**P**	**20 10 55.5**	**-0.8**
SLVN	**Son La**	**38.24**	**319**	P	**P**	**20 11 12.6**	**-1.4**
CM31	**Chiang Mai Arr**	**39.87**	**310**	P	**P**	**20 11 26.4**	**-1.1**
CM31				IAmb	IAmb	20 11 30.1	
	comp=Z,12nm,1.2s						
CMAR	**Chiang Mai Arr**	**39.87**	**310**	P	**P**	**20 11 26.4**	**-1.1**
	comp=Z,2.7nm,0.7s,baz=141,slow=6.9,SNR=17						
	comp=Z,2.7nm,0.7s						
CHTO	**Chiang Mai**	**40.09**	**311**	P	**P**	**20 11 28.9**	**-0.4**
CHTO				IAmb	IAmb	20 11 31.6	
	comp=Z,7.5nm,0.9s						
CHTO	**Chiang Mai**	**40.09**	**311**	P	**P**	**20 11 29.3**	**+0.1**
JNU	**Nakatsue**	**40.19**	**1**	LR	LR	20 25 27.7	
	comp=Z,61nm,21.4s,baz=207,slow=32						
NJ2	**Nanjing**	**40.52**	**345**	*eP*	**P**	**20 11 35.0**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
NPW	**Naypyitaw**	**42.79**	**310**	P	**P**	**20 11 51.2**	**-0.1**
MJAR	**Matsushiro Arr**	**44.28**	**10**	P	**P**	**20 12 01.9**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=186,slow=9.4,SNR=15						
	comp=Z,2.2nm,0.6s						
MJAR	**Matsushiro Arr**	**44.28**	**10**	P	**P**	**20 12 01.8**	**-1.3**
MAJO	**Matsushiro**	**44.28**	**10**	P	**P**	**20 12 01.4**	**-1.7**
MAJO				IAmb	IAmb	20 12 03.1	
	comp=Z,4.6nm,0.7s						
MJB9	**Matsu-Tunnel**	**44.28**	**10**	P	**P**	**20 12 02.3**	**-0.8**
MJB9				IAmb	IAmb	20 12 04.1	
	comp=Z,4.5nm,0.7s						
KSRS	**Korea Array**	**44.55**	**358**	P	**P**	**20 12 05.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=175,slow=8.9,SNR=5.0						
KSRS				LR	LR	20 28 48.6	
	comp=Z,26nm,21.7s,baz=170,slow=34						
	comp=Z,0.5nm,0.5s						
MORE	**Moreh**	**46.80**	**313**	P	**P**	**20 12 21.2**	**-2.0**
MORE				IAmb	IAmb	20 12 59.3	
	comp=Z,7.5nm,1.0s						
SHL	**Shillong**	**49.35**	**313**	P	**P**	**20 12 41.0**	**-2.0**
HHC	**Hu-ho-hao-te**	**50.80**	**342**	*eP*	**P**	**20 12 56.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,47nm,5.1s						
USRK	**Ussuriysk Ar.**	**51.28**	**2**	P	**P**	**20 12 57.2**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=186,slow=7.6,SNR=8.8						
	comp=Z,2.2nm,0.5s						
FUTU	**Fugatoga**	**51.40**	**102**	P	**P**	**20 13 00.5**	**+2.1**
LSA	**Lhasa**	**52.37**	**317**	IAmb	IAmb	20 13 08.3	
	comp=Z,6.5nm,1.0s						
LSA	**Lhasa**	**52.37**	**317**	P	**P**	**20 13 05.6**	**-0.3**
GTA2	**Gaotai**	**54.28**	**331**	*eP*	**P**	**20 13 19.3**	**0.0**
GTA2				pmax	pmax		

1.3nm,0.4s,baz=48,slow=10.0,SNR=1.7
1.3nm,0.4s

DZM	**Mont Dzumac**	**25.03**	**133**	LR	LR	20 24 31.5	
	comp=Z,128nm,19.6s,baz=154,slow=31						
VNDA	**Vanda**	**72.32**	**177**	P	**P**	**20 22 47.3**	**+0.5**
	0.3nm,0.7s,baz=329,slow=6.0,SNR=1.9						
	0.3nm,0.7s						
QSPA	**South Pole Qui**	**84.37**	**180**	P	**P**	**20 23 53.4**	**-0.1**
	0.6nm,0.6s,baz=297,slow=1.6,SNR=6.2						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**85.17**	**23**	P	**P**	**20 23 56.9**	**-0.5**
	0.2nm,0.5s,baz=250,slow=4.9,SNR=4.0						
	0.2nm,0.5s						

*OTT **30** 20:18:48.2±0.0, 44°.95N×73°.91W, h18km, MN2.7/15, 25km southeast from Huntingdon, Qc Western Quebec Seismic Zone.*
*NEIC **30** 20:18:48.5±0.4, 44°.96N±0°.02×73°.92W±0°.01, h8km±6km, mb_Lg2.2/7, ML2.0/14, Error ellipse: s-maj=2.2km s-min=1.3km az=170.0*
ISC 30 20:18:47.9±0.9, 44°.96N±0°.02×73°.93W±0°.02, h15km±8km, n52, σ0s70/71, 1C-1D, New York

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FRNY	**Flat Rock**	**0.27**	**118**	⇑PG		**Pg**	**20 18 53.8**	**+0.1**
FRNY					SG	**Sg**	**20 18 57.6**	**0.0**
FRNY					Trac		20 18 57.9	
	comp=Z,109nm,0.2s							
RIGQ	**Rigaud**	**0.54**	**334**	PG		**Pg**	**20 18 58.7**	**+0.1**
RIGQ					SG	**Sg**	**20 19 06.2**	**+0.4**
LONY	**Lake Ozonia**	**0.58**	**234**			**Pg**	**20 18 59.2**	**-0.1**
LONY					Sg	**Sg**	**20 19 07.2**	**+0.2**
LONY					IAML		20 19 07.6	
	109nm,0.1s							
MNTQ	**Montreal, Queb**	**0.58**	**22**	⇓PG		**Pg**	**20 18 59.2**	**-0.1**
MNTQ					SG	**Sg**	**20 19 07.2**	**+0.1**
MNTQ					Trac		20 19 09.6	
	comp=Z,24nm,0.0s							
MNTQ	**Montreal, Queb**	**0.58**	**22**			**Pg**	**20 18 59.2**	**-0.1**
MNTQ					Sg	**Sg**	**20 19 07.1**	**+0.1**
MNTQ					IAML		20 19 08.0	
	comp=E,79nm,0.1s							
FLET	**Fletcher**	**0.73**	**109**	Pg		**Pg**	**20 19 01.7**	**-0.5**
FLET					Sg	**Sg**	**20 19 11.6**	**-0.3**
SJUQ	**Ste-Julie**	**0.74**	**35**	PG		**Pg**	**20 19 01.7**	**-0.6**
SJUQ					SG	**Sg**	**20 19 11.7**	**-0.2**
MRBQ	**Mirabel**	**0.84**	**357**	PG		**Pg**	**20 19 03.5**	**-0.7**
MRBQ					SG	**Sg**	**20 19 15.0**	**-0.2**
WBO	**Williamsburg**	**0.96**	**273**	PG		**Pb**	**20 19 05.8**	**-0.5**
WBO					SG	**Sb**	**20 19 18.9**	**+0.1**
WBO					Trac		20 19 23.7	
	comp=E,14nm,0.0s							
WBO	**Williamsburg**	**0.96**	**273**	Pg		**Pb**	**20 19 05.8**	**-0.5**
WBO					Sg	**Sb**	**20 19 18.5**	**-0.2**
WBO					IAML		20 19 23.4	
	comp=E,28nm,0.1s							
WBO					IAML		20 19 23.4	
	comp=N,36nm,0.2s							
NCB	**Newcomb**	**1.01**	**192**	Pg		**Pb**	**20 19 06.3**	**-0.9**
NCB					Sg	**Sb**	**20 19 19.9**	**-0.5**
NCB					IAML		20 19 24.7	
	comp=N,52nm,0.2s							
NCB					IAML		20 19 24.8	
	comp=E,45nm,0.1s							
CFNY	**Clifton-Fine,**	**1.13**	**226**	Pg		**Pb**	**20 19 08.8**	**-0.5**
CFNY					IAML		20 19 27.0	
	comp=E,28nm,0.2s							
CFNY					IAML		20 19 27.0	
	comp=N,29nm,0.2s							
ORIO	**Orleans, Innes**	**1.22**	**294**	PG		**Pb**	**20 19 10.7**	**0.0**
ORIO					SG	**Sg**	**20 19 27.3**	**-0.1**
ORIO					Trac		20 19 31.4	
	comp=N,15nm,0.1s							
MOQ	**Mont Orford**	**1.23**	**73**	PG		**Pn**	**20 19 10.5**	**-0.2**
MOQ					SG	**Sb**	**20 19 26.8**	**0.0**
MOQ					Trac		20 19 30.9	
	comp=N,15nm,0.1s							
GAC	**Glen Almond**	**1.32**	**305**	PG		**Pn**	**20 19 12.2**	**+0.3**
GAC					SG	**Sg**	**20 19 30.0**	**-0.6**
GAC					Trac		20 19 34.4	
	comp=N,13nm,0.1s							
TRQ	**Mont Tremblant**	**1.34**	**341**	PG		**Pn**	**20 19 11.9**	**-0.3**
TRQ					SG	**Sn**	**20 19 29.9**	**+0.2**
TRQ					Trac		20 19 31.3	
	comp=N,22nm,0.1s							
TRQ	**Mont Tremblant**	**1.34**	**341**			**Pn**	**20 19 11.8**	**-0.3**
DRMQ	**Drummondville**	**1.39**	**47**	PG		**Pb**	**20 19 13.9**	**+0.3**
DRMQ					SG	**Sb**	**20 19 31.8**	**+0.8**
J59A	**Piesco**	**1.55**	**196**			**Pn**	**20 19 15.3**	**+0.2**
LBNH	**Lisbon**	**1.60**	**116**			**Pb**	**20 19 16.9**	**-0.3**
BECQ	**Becancour**	**1.71**	**36**	PN		**Pn**	**20 19 18.0**	**+0.7**
BECQ					SG	**Sb**	**20 19 41.2**	**+0.7**
BECQ					Trac		20 19 46.0	
	comp=N,1.2nm,0.0s							
HNH	**Hanover**	**1.72**	**136**	Pn		**Pb**	**20 19 18.6**	**-0.7**
J61A	**Chester**	**1.89**	**148**	Pn		**Pn**	**20 19 20.6**	**+0.9**
DPQ	**Saint Jean**	**1.90**	**25**	PN		**Pn**	**20 19 20.5**	**+0.7**
DPQ					SN	**Sn**	**20 19 43.0**	**-0.4**
DPQ					LG	Lg	20 19 47.4	
DPQ					Trac		20 19 47.9	
	comp=N,7.8nm,0.1s							
H62A	**Milan**	**2.01**	**100**	Pn		**Pn**	**20 19 22.5**	**+1.1**
GRQ	**Grand Remous**	**2.13**	**321**	PN		**Pn**	**20 19 23.1**	**+0.1**
GRQ					SN	**Sn**	**20 19 49.0**	**-0.2**
GRQ					LG	Lg	20 19 55.6	
GRQ					Trac		20 19 59.9	
	comp=N,3.4nm,0.1s							
I62A	**Tamworth**	**2.15**	**119**	Pn		**Pn**	**20 19 23.9**	**+0.6**
J57A	**Williamstown**	**2.15**	**225**	Pn		**Pn**	**20 19 24.9**	**+1.7**
PLVO	**Plevna**	**2.24**	**273**	PN		**Pn**	**20 19 24.5**	**+0.1**
PLVO					SN	**Sn**	**20 19 51.7**	**-0.1**
PLVO					Trac		20 20 01.7	
	comp=N,6.2nm,0.1s							
PECO	**Prince Edward**	**2.43**	**246**	PN		**Pn**	**20 19 27.3**	**+0.3**
PECO					SN	**Sn**	**20 19 55.6**	**-0.8**
PECO					LG	Lg	20 20 03.1	
PECO					Trac		20 20 08.5	
	comp=N,6.4nm,0.1s							
PECO	**Prince Edward**	**2.43**	**246**	Pn		**Pn**	**20 19 29.2**	**+2.1**
PEMO	**Pembroke**	**2.45**	**288**	PN		**Pn**	**20 19 28.9**	**+1.5**
PEMO					SN	**Sn**	**20 19 56.6**	**-0.5**
PEMO					LG	Lg	20 20 05.3	
PEMO					Trac		20 20 07.6	
	comp=N,1.8nm,0.0s							
I63A	**Otisfield**	**2.56**	**110**	Pn		**Pn**	**20 19 29.8**	**+0.9**
CHRO	**Chalk River**	**2.66**	**295**	Trac			20 20 14.5	
	comp=N,2.1nm,0.1s							
L61B	**Northampton**	**2.67**	**160**	Pn		**Pn**	**20 19 31.3**	**+0.9**
L61B				IAmb_Lg			20 20 12.7	
	comp=Z,9.1nm,1.1s							
DELO	**Deloro Mine**	**2.67**	**262**	Trac			20 20 15.2	
	comp=Z,4.2nm,0.1s							
DELO	**Deloro Mine**	**2.67**	**262**	Pn		**Pn**	**20 19 31.2**	**+0.8**
DELO				IAmb_Lg			20 20 19.5	
	comp=Z,5.6nm,1.0s							
BCLQ	**Boischatel**	**2.75**	**43**	Trac			20 20 14.0	
	comp=Z,7.1nm,0.1s							
L59A	**Walton**	**2.89**	**197**	Pn		**Pn**	**20 19 35.0**	**+1.5**
L59A				IAmb_Lg			20 20 25.1	
	comp=Z,8.3nm,0.8s							
UNH	**University of**	**2.89**	**129**	Pn		**Pn**	**20 19 33.8**	**+0.3**
K57A	**Scipio Center**	**2.91**	**221**	Pn		**Pn**	**20 19 33.8**	**+0.1**
BINY	**Binghamton**	**3.14**	**209**	Pn		**Pn**	**20 19 37.7**	**+0.7**
KSCT	**Kent School, K**	**3.25**	**174**	Pn		**Pn**	**20 19 39.1**	**+0.7**
LDAQ	**Lac Daran**	**3.53**	**31**	Pn		**Pn**	**20 19 43.3**	**+1.0**
LMQ	**La Malbaie**	**3.59**	**43**	Pn		**Pn**	**20 19 43.9**	**+0.8**
KSPA	**Keystone Colle**	**3.66**	**202**	Pn		**Pn**	**20 19 44.9**	**+0.9**
KSPA				IAmb_Lg			20 20 46.3	
	comp=Z,7.0nm,0.9s							
SADO	**Sadowa**	**3.71**	**269**	Pn		**Pn**	**20 19 45.4**	**+0.6**
WSPT	**Westport, CT**	**3.81**	**173**	Pn		**Pn**	**20 19 46.9**	**+0.7**
L56A	**Greenwood**	**3.87**	**224**	Pn		**Pn**	**20 19 48.2**	**+1.3**
L56A				IAmb_Lg			20 20 51.2	
	comp=Z,7.0nm,0.7s							
G65A	**Princeton**	**4.51**	**85**	Pn		**Pn**	**20 19 55.4**	**-0.3**
N58A	**Sunbury**	**4.60**	**207**	Pn		**Pn**	**20 19 58.3**	**+1.4**
EMMW	**East Machias**	**4.61**	**91**	Pn		**Pn**	**20 19 57.6**	**+0.5**

*IDC **30** 20:29:09.2±1.5, 3°.53S×130°.89E, h0km, mb3.6/4, mbtmp3.5/7, ML3.3/3, Error ellipse: s-maj=72.7km s-min=21.7km az=83.0*
ISC 30 20:29:11.3±1.0, 3°.70S±0°.07×131°.2E±0°.3, h35km, n7, σ3s74/9, mb3.5/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.82**	**2**	Pn		**Pn**	**20 29 52.7**	**-1.2**
	2.4nm,0.3s,baz=186,slow=14,SNR=38							
SIJI					Sn	**Sn**	**20 30 23.1**	**-3.5**
	6.5nm,0.3s,baz=209,slow=22,SNR=16							
	5.8nm,0.2s							
FITZ	**Fitzroy Crossi**	**15.30**	**200**	Pn		**Pn**	**20 32 45.4**	**+0.5**
	0.1nm,0.3s,baz=18,slow=10.0,SNR=10.0							
FITZ					Sn	**Sn**	**20 35 28.1**	**-5.2**
	0.1nm,0.3s,baz=338,slow=20,SNR=1.8							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**16.43**	**169**	Pn		**P**	**20 33 05.6**	**+3.8**
	0.1nm,0.3s,baz=349,slow=11,SNR=5.7							
WRA					Sn	**Sn**	**20 35 56.3**	**-4.5**
	0.1nm,0.3s,baz=152,slow=28,SNR=4.9							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**20.02**	**173**	P		Pn	20 33 46.0	+2.8
	1.0nm,0.3s,baz=349,slow=11,SNR=33							
	1.0nm,0.3s							
MKAR	**Makanchi Array**	**66.17**	**326**	P		**P**	**20 39 57.3**	**+1.9**
	0.5nm,0.7s,baz=130,slow=8.0,SNR=4.3							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**70.36**	**327**	P		**P**	**20 40 23.3**	**+1.8**
	0.2nm,0.4s,baz=122,slow=5.4,SNR=5.1							
	0.2nm,0.4s							
BVAR	**Borovoye Array**	**75.94**	**327**	P		**P**	**20 40 55.5**	**+1.0**
	0.3nm,0.5s,baz=126,slow=7.3,SNR=1.9							
	0.3nm,0.5s							

*AEIC **30** 20:50:42.2±1.7, 51°.76N±0°.07×174°.31W±0°.09, h30km±8km, Error ellipse: s-maj=12.0km s-min=4.2km az=144.0*
NEIC 30 20:50:42.3±1.6, 51°.76N±0°.07×174°.29W±0°.09, h30km±13km, ML3.6/12, ML3.2(AEIC), **Error ellipse: s-maj=12.6km s-min=4.5km az=144.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.45**	**7**			Pb	20 50 51.8	0.0
ATKA					IAML		20 51 00.0	
	comp=E,6μm,0.2s							
ATKA	**Atka Island**	**0.45**	**7**			Sn	20 50 59.6	-0.1
KOFP	**Korovin Flat P**	**0.53**	**13**			Pb	20 50 53.1	-0.1
KOFP						Sn	20 51 02.2	+0.4
KOKL	**Mount Kliuchef**	**0.57**	**5**			Pb	20 50 53.8	-0.1
KOKL						Sn	20 51 02.6	-0.2
KOWE	**Korovin West**	**0.61**	**2**			Pb	20 50 54.3	-0.2
KOWE						Sn	20 51 03.6	-0.2
GSIG	**Igitkin Island**	**1.04**	**283**			Pn	20 51 00.1	-0.7
GSIG						Sn	20 51 14.3	-0.1
GSMY	**Great Sitkin M**	**1.13**	**285**			Pn	20 51 01.7	-0.4
GSTR	**Great Sitkin T**	**1.15**	**288**			Pn	20 51 02.3	0.0
GSTR					IAML		20 51 24.6	
	comp=E,1μm,0.3s							
GSTD	**Great Sitkin T**	**1.19**	**285**			Pn	20 51 02.5	-0.4
GSTD						Sn	20 51 18.4	+0.3
ETKA	**Kagalaska Isla**	**1.32**	**275**			Pn	20 51 04.1	-0.6
ADAG	**Mount Adagdak**	**1.45**	**280**			Pn	20 51 06.7	+0.3
ADAG						Sn	20 51 24.9	+0.5
ADK	**Adak**	**1.49**	**276**			Pn	20 51 07.0	0.0
ADK					IAML		20 51 30.2	
	comp=E,1μm,0.2s							
ADK	**Adak**	**1.49**	**276**			Sn	20 51 25.9	+0.4
KIWB	**Kanaga Island**	**1.78**	**274**			Pn	20 51 11.3	+0.3
KIWB					IAML		20 51 34.7	
	comp=N,560nm,0.6s							
KIWB					IAML		20 51 36.0	
	comp=E,557nm,0.4s							
KIWB	**Kanaga Island**	**1.78**	**274**			Sn	20 51 33.5	+1.0
KIKV	**Kanaga Island**	**1.79**	**275**			Sn	20 51 34.3	+1.4
TAFL	**Tanaga Flats**	**2.24**	**271**			Pn	20 51 18.1	+0.7
TASE	**Tanaga Southea**	**2.33**	**273**			Pn	20 51 19.4	+0.8
TASE						Sn	20 51 48.3	+2.1
TANO	**Tanaga North**	**2.38**	**275**			Pn	20 51 19.9	+0.7
GANE	**Gareloi Northe**	**2.79**	**273**			Pn	20 51 24.9	+0.1
GAKI	**Gareloi-Kavalg**	**2.83**	**268**			Pn	20 51 25.7	+0.4
GAKI						Pb	20 51 26.1	-5.9
AMKA	**Amchitka**	**4.02**	**267**			Pn	20 51 41.4	-0.3
UNV	**Unalaska Valle**	**5.16**	**63**	Pn		Pn	20 51 57.4	0.0
UNV				IAML			20 53 14.5	
	comp=E,33nm,0.9s							
SDPT	**Sand Point**	**8.97**	**61**	Pn		Pn	20 52 49.3	-0.3
CNBA	**Chernabura Isl**	**9.32**	**65**	Pn		Pn	20 52 53.7	-0.7
O14K	**Tigyukauivet M**	**10.52**	**39**	Pn		Pn	20 53 11.8	+1.1
N14K	**Kuskokwak Cree**	**10.80**	**36**	Pn		Pn	20 53 15.8	+1.1
O15K	**Ungalikthiuk R**	**11.05**	**42**	Pn		Pn	20 53 18.9	+0.7
M14K	**Bethel**	**11.30**	**32**	Pn		Pn	20 53 23.1	+1.6

IDC 30 21:27:09.8±562.0, 46°.21N×62°.93E, h0km, Error ellipse: s-maj=259.1km s-min=125.2km az=153.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**5.32**	**324**	I		I	21 57 50.0	
	baz=138,slow=310,SNR=6.0							
I46RU	**ZALESOVO INFRA**	**15.99**	**53**	I		I	23 08 30.0	
	baz=245,slow=316,SNR=1.8							
I43RU	**DUBNA INFRASONI**	**19.04**	**313**	I		I	23 23 45.0	
	baz=112,slow=328,SNR=4.2							

IDC 30 21:28:11.8±293.0, 52°.48N×33°.09E, h0km, Error ellipse: s-maj=132.7km s-min=101.2km az=14.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.88**	**28**	I		I	21 58 40.0	
	baz=212,slow=318,SNR=1.3							
I26DE	**FREYUNG INFRAS**	**12.81**	**261**	I		I	22 50 00.0	
	baz=66,slow=320,SNR=1.0							
I48TN	**KESRA INFRASON**	**23.68**	**235**	I		I	23 51 10.0	
	baz=38,slow=319,SNR=2.0							

*IDC **30** 22:42:51.3±2.7, 17°.67S×178°.58W, h595km±20km, mb3.4/4, mbtmp4.3/6, Error ellipse: s-maj=58.0km s-min=37.4km az=14.0*
ISC 30 22:42:48.5±2.3, 17°.2S±0°.4×178°.3W±0°.3, h600km, n7, σ0s35/7, mb3.9/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.52**	**260**	P		**P**	**22 44 11.3**	**+0.4**
	32nm,0.6s,baz=80,slow=2.0,SNR=28							
DZM	**Mont Dzumac**	**15.17**	**249**	P		**P**	**22 45 58.6**	**+0.3**
	3.0nm,0.7s,baz=72,slow=16,SNR=1.5							
STKA	**Stephens Creek**	**39.07**	**240**	P		**P**	**22 49 25.2**	**-0.4**
	4.4nm,0.6s,baz=81,slow=8.0,SNR=9.4							
	4.4nm,0.6s							
WRA	**Warramunga Arr**	**44.86**	**259**	P		**P**	**22 50 11.1**	**-0.1**
	1.7nm,0.7s,baz=94,slow=6.9,SNR=17							
	1.7nm,0.7s							
ASAR	**Alice Springs**	**45.09**	**254**	P		**P**	**22 50 12.8**	**-0.1**
	14nm,0.7s,baz=88,slow=8.4,SNR=142							
	14nm,0.7s							
QSPA	**South Pole Qui**	**72.88**	**180**	P		**P**	**22 53 17.7**	**+0.1**
	1.4nm,1.0s,baz=63,slow=4.5,SNR=2.5							
	1.4nm,1.0s							
BRTR	**Keskin Array B**	**144.33**	**316**	PKP		**PKiKP**	**23 01 21.4**	**-0.2**
	0.5nm,0.7s,baz=233,slow=1.4,SNR=4.0							

*IDC **30** 22:44:34.2±1.5, 53°.90N×163°.39W, h0km, mb3.8/16, mbtmp3.8/18, ML3.2/2, MS2.9/4, Error ellipse: s-maj=38.9km s-min=18.2km az=164.0*
*AEIC **30** 22:44:38.8±0.6, 54°.N±16°×16°.3W±3°.2, h23km±10km, Error ellipse: s-maj=3578.2km s-min=12.5km az=129.0*
*NEIC **30** 22:44:39.8±1.8, 53°.83N±0°.03×163°.26W±0°.05, h35km±2km, mb3.5/33, ML3.8/16, ML3.5(AEIC), Error ellipse: s-maj=6.7km s-min=3.1km az=218.0*
ISC 30 22:44:37.8±2.0, 53°.78N±0°.07×163°.20W±0°.04, h26km±13km, n159, σ1s47/170, mb3.9/16, Unimak Island region

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

ISNN	**Isanotski Nort**	**1.11**	**342**			**Pn**	**22 44 57.7**	**0.0**
ISNN						**Sb**	**22 45 11.0**	**-1.4**
SSBA	**Shishaldin**	**1.14**	**332**			**Pn**	**22 44 57.6**	**-0.6**
SSBA						**Sn**	**22 45 13.3**	**+0.4**
DT1	**Dutton Round H**	**1.44**	**22**			**Pn**	**22 45 02.3**	**+0.1**
DT1						**Sn**	**22 45 20.3**	**+0.1**
DTNA	**Dutton South F**	**1.48**	**21**			**Pn**	**22 45 03.3**	**+0.4**
DTNA						**Sn**	**22 45 22.1**	**+0.7**
AKSA	**Akutan Strait**	**1.52**	**285**			**Pn**	**22 45 03.3**	**0.0**
AKSA						**Sb**	**22 45 22.6**	**-1.6**
AKUT	**Akutan**	**1.56**	**284**			**Pn**	**22 45 03.6**	**-0.2**
AKUT					Sn	**Sn**	**22 45 23.1**	**-0.1**
AKUT					IAML		22 45 28.3	
	comp=N,739nm,0.5s							
AKUT					IAML		22 45 30.6	
	comp=E,745nm,0.7s							
DOL	**Dolgoi Island**	**1.58**	**29**			**Pn**	**22 45 04.4**	**+0.3**
DOL						**Sn**	**22 45 25.1**	**+1.4**
AHB	**Akutan Harbor**	**1.58**	**283**			**Pn**	**22 45 04.2**	**-0.1**
AHB						**Sb**	**22 45 24.8**	**-1.2**
AKBBA	**Akutan Broad B**	**1.65**	**282**			**Pn**	**22 45 05.3**	**+0.2**
AKV	**Akutan Volcano**	**1.67**	**283**			**Pn**	**22 45 06.0**	**+0.5**
AKLV	**Akutan Long Va**	**1.67**	**284**			**Pn**	**22 45 05.7**	**+0.3**
AKLV						**Sn**	**22 45 26.5**	**+0.3**
ZRO	**Akutan Zero**	**1.67**	**282**			**Pn**	**22 45 05.7**	**+0.2**
ZRO						**Sb**	**22 45 27.1**	**-1.5**
AKGG	**Akutan Green G**	**1.70**	**286**			**Pn**	**22 45 06.2**	**+0.3**
LVA	**Lava Point**	**1.72**	**284**			**Pn**	**22 45 05.7**	**-0.4**
LVA						**Sb**	**22 45 30.9**	**+1.0**
LVA					IAML		22 45 35.4	
	comp=E,612nm,0.6s							
PS4A	**Pavlof South-4**	**1.76**	**26**			**Pn**	**22 45 07.4**	**+0.8**
PS4A						**Sb**	**22 45 30.2**	**-0.8**
PN7A	**Pavlof North-7**	**1.80**	**22**			**Pn**	**22 45 07.8**	**+0.5**
PS1A	**Pavlof South-1**	**1.85**	**27**			**Pn**	**22 45 09.2**	**+1.2**
PS1A						**Sb**	**22 45 32.9**	**-0.9**
UNV	**Unalaska Valle**	**1.96**	**273**			**Pn**	**22 45 08.1**	**-1.3**
UNV					Sn	**Sn**	**22 45 31.6**	**-1.5**
MNAT	**Makushin Natee**	**2.07**	**274**			**Pn**	**22 45 11.0**	**+0.1**
MNAT						**Sn**	**22 45 36.9**	**+1.1**
MGOD	**Makushin Gods**	**2.18**	**272**			**Pn**	**22 45 12.9**	**+0.4**
MGOD						**Sn**	**22 45 39.5**	**+0.9**
MGOD						Lg	22 45 39.8	
SDPT	**Sand Point**	**2.23**	**44**			**Pn**	**22 45 14.2**	**+1.0**
SDPT					Sn	**Sn**	**22 45 41.7**	**+1.8**
SDPT					IAML		22 45 51.8	
	comp=E,541nm,0.8s							
SDPT					IAML		22 45 52.4	
	comp=N,707nm,0.9s							
CNBA	**Chernabura Isl**	**2.36**	**62**			**Pn**	**22 45 17.1**	**+2.2**
CNBA					Sn	**Sn**	**22 45 42.4**	**-0.6**
OKTU	**Okmok Mt. Tuli**	**2.91**	**264**			**Pn**	**22 45 23.6**	**+1.1**
VNKR	**Veniaminof 5**	**3.16**	**43**			**Pn**	**22 45 27.8**	**+1.9**
VNSS	**Veniaminof 8**	**3.27**	**40**			**Pn**	**22 45 29.7**	**+2.2**
S14K	**Fog Glacier**	**3.27**	**38**			**Pn**	**22 45 29.9**	**+2.4**
VNFG	**Fog Glacier, M**	**3.27**	**38**			**Pn**	**22 45 29.4**	**+1.9**
VNFG					IAML		22 46 40.8	
	comp=N,401nm,0.8s							
VNSG	**Veniaminof 6**	**3.34**	**44**			**Pn**	**22 45 30.1**	**+1.7**
CLCO	**Concord Point,**	**4.04**	**258**			**Pn**	**22 45 39.3**	**+1.4**
ANPB	**Aniakchak Plen**	**4.13**	**41**			**Pn**	**22 45 41.0**	**+1.8**
ANNE	**Aniakchak Nort**	**4.30**	**41**			**Pn**	**22 45 43.6**	**+2.1**
CHIR	**Chirikof Islan**	**4.84**	**62**	Pn		**Pn**	**22 45 47.4**	**-1.5**
CHIR					IAML		22 47 12.0	
	comp=N,72nm,1.0s							
CHIR					IAML		22 48 07.5	
	comp=E,69nm,0.9s							
SPIA	**Saint Paul Isl**	**5.26**	**313**	Pn		**Pn**	**22 45 55.6**	**+0.9**
O14K	**Tigyukauivet M**	**5.59**	**10**	Pn		**Pn**	**22 46 00.8**	**+1.6**
O15K	**Ungalikthiuk R**	**5.73**	**18**	Pn		**Pn**	**22 46 02.2**	**+1.1**
ANCK	**Angle Creek**	**6.19**	**41**			**Pn**	**22 46 09.0**	**+1.5**
N14K	**Kuskokwak Cree**	**6.22**	**7**			**Pn**	**22 46 09.4**	**+1.6**
O16K	**Kokwok River B**	**6.47**	**24**			**Pn**	**22 46 12.5**	**+1.2**
P17K	**Kvichak River**	**6.59**	**32**	Pn		**Pn**	**22 46 14.6**	**+1.6**
N15K	**Kwethluk River**	**6.63**	**14**			**Pn**	**22 46 15.0**	**+1.5**
M13K	**Dall Lake**	**6.66**	**359**			**Pn**	**22 46 16.7**	**+2.9**
ATKA	**Atka Island**	**6.83**	**261**	Pn		**Pn**	**22 46 14.5**	**-1.7**
M11K	**Mekoryuk**	**6.83**	**347**			**Pn**	**22 46 18.1**	**+2.0**
M14K	**Bethel**	**7.03**	**5**			**Pn**	**22 46 21.1**	**+2.2**
M15K	**Kasigluk River**	**7.07**	**10**			**Pn**	**22 46 20.1**	**+0.6**
KDAK	**Kodiak Island**	**7.21**	**52**	Pn		**Pn**	**22 46 20.5**	**-0.8**
	comp=E,0.6nm,0.3s,baz=196,slow=9.0,SNR=6.0							
KDAK					Sn	**Sn**	**22 47 36.5**	**-5.7**
	baz=318,slow=16							
	comp=E,4.3nm,0.7s							
KDAK	**Kodiak Island**	**7.21**	**52**	Pn		**Pn**	**22 46 22.4**	**+1.0**
Q19K	**Cape Douglas,**	**7.40**	**42**	Pn		**Pn**	**22 46 25.3**	**+1.2**
O18K	**Koktuh Hills**	**7.50**	**33**	Pn		**Pn**	**22 46 27.6**	**+2.1**
L14K	**Kuka Creek**	**7.59**	**2**			**Pn**	**22 46 27.8**	**+1.2**
M16K	**Timber Creek**	**7.62**	**16**			**Pn**	**22 46 28.0**	**+1.0**
GSIG	**Igitkin Island**	**7.91**	**262**			**Pn**	**22 46 32.3**	**+1.3**
L15K	**Ungalak Mounta**	**7.98**	**6**			**Pn**	**22 46 32.9**	**+1.0**
L16K	**Owhat River**	**8.20**	**13**			**Pn**	**22 46 36.2**	**+1.2**
K13K	**K

	comp=Z,4.4nm,1.4s								
N30M	**Aishikik Lake**	**15.87**	**51**	P	**P**	**22 48 23.2**	**+0.4**
N30M				IAmb	IAmb	22 48 26.4	
	comp=Z,3.8nm,0.7s								
I27K	**Kandik River**	**15.98**	**34**	Pn	**Pn**	**22 48 20.6**	**-0.1**
I27K				IAmb	IAmb	22 48 43.4	
	comp=Z,2.4nm,0.8s								
L29M	**L29M**	**16.00**	**44**	P	**P**	**22 48 26.1**	**+2.0**
L29M				IAmb	IAmb	22 48 28.4	
	comp=Z,5.4nm,0.9s								
F25K	**Christian Rive**	**16.20**	**24**	Pn	**Pn**	**22 48 24.4**	**+0.9**
G26K	**Porcupine Rive**	**16.21**	**28**	Pn	**Pn**	**22 48 23.1**	**-0.5**
D23K	**Nanushuk River**	**16.32**	**16**		**Pn**	**22 48 26.4**	**+1.6**
D23K				IAmb	IAmb	22 48 38.0	
	comp=Z,6.3nm,1.4s								
M30M	**Minto, Yukon**	**16.36**	**47**		**Pn**	**22 48 26.1**	**+0.5**
H27K	**Steamboat Moun**	**16.40**	**32**	Pn	**Pn**	**22 48 26.4**	**+0.4**
I28M	**Miner Creek**	**16.46**	**36**		**Pn**	**22 48 27.0**	**+0.2**
I28M				IAmb	IAmb	22 48 38.2	
	comp=Z,1.9nm,0.6s								
K29M	**Barlow Dome**	**16.56**	**42**	P	**P**	**22 48 32.4**	**+2.0**
K29M				IAmb	IAmb	22 48 36.9	
	comp=Z,2.9nm,0.7s								
F26K	**Sheenjek River**	**16.66**	**26**	Pn	**Pn**	**22 48 29.2**	**-0.1**
G27K	**Doyon Strip**	**16.73**	**30**	Pn	**Pn**	**22 48 30.2**	**+0.1**
C23K	**Itkillik River**	**17.11**	**15**	Pn	**Pn**	**22 48 34.8**	**0.0**
C23K				IAmb	IAmb	22 48 40.6	
	comp=Z,4.2nm,0.9s								
M31M	**Drury Creek, Y**	**17.31**	**49**		**Pn**	**22 48 38.0**	**+0.5**
M31M				IAmb	IAmb	22 48 45.9	
	comp=Z,5.5nm,1.1s								
J30M	**Hart River**	**17.35**	**41**		**Pn**	**22 48 38.8**	**+0.8**
J30M				IAmb	IAmb	22 48 49.0	
	comp=Z,3.0nm,0.8s								
D25K	**Kavik River**	**17.42**	**20**		**Pn**	**22 48 39.3**	**+0.5**
H29M	**Whitestone**	**17.43**	**35**		**Pn**	**22 48 38.1**	**-0.6**
H29M				IAmb	IAmb	22 48 50.3	
	comp=Z,3.3nm,0.7s								
I30M	**Mount Dempster**	**17.62**	**39**		**Pn**	**22 48 41.8**	**+0.4**
P33M	**Teslin, Yukon**	**17.64**	**56**		**Pn**	**22 48 41.6**	**0.0**
P33M				IAmb	IAmb	22 48 51.1	
	comp=Z,1.9nm,0.8s								
F28M	**Old Crow**	**17.79**	**30**	Pn	**Pn**	**22 48 42.3**	**-1.0**
G29M	**Pine Creek**	**17.93**	**33**		**Pn**	**22 48 43.9**	**-1.2**
G29M				IAmb	IAmb	22 48 46.4	
	comp=Z,4.3nm,0.9s								
EPYK	**Eagle Plains**	**18.07**	**35**	P	**Pn**	**22 48 47.2**	**+0.5**
EPYK				IAmb	IAmb	22 49 06.6	
	comp=Z,7.0nm,1.3s								
H31M	**Peel River**	**18.64**	**38**		**P**	**22 48 53.4**	**+0.1**
MMPY	**Sheldon Lake,**	**18.82**	**49**		**P**	**22 48 55.9**	**+0.5**
MMPY				IAmb	IAmb	22 49 11.6	
	comp=Z,2.5nm,0.9s								
PETK	**Petropavlovsk-**	**23.11**	**284**	P	**P**	**22 49 40.8**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=85,slow=12,SNR=5.5								
PETK				LR	LR	22 58 44.8	
	comp=Z,35nm,18.5s,baz=87,slow=37								
	comp=Z,1.8nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**41.00**	**226**	T	T	23 36 15.8	
	baz=26,slow=76,SNR=69								
H11N3	**WAKE ISLAND Hy**	**41.00**	**226**	T	T	23 36 12.9	
	baz=26,slow=76,SNR=65								
H11N1	**WAKE ISLAND Hy**	**41.01**	**226**	T	T	23 36 09.7	
	baz=26,slow=76,SNR=62								
H11S1	**WAKE ISLAND Hy**	**42.17**	**225**	T	T	23 37 43.3	
	baz=26,slow=76,SNR=65								
H11S2	**WAKE ISLAND Hy**	**42.18**	**225**	T	T	23 37 44.1	
	baz=26,slow=76,SNR=66								
H11S3	**WAKE ISLAND Hy**	**42.19**	**225**	T	T	23 37 39.8	
	baz=26,slow=76,SNR=60								
KSRS	**Korea Array**	**48.89**	**280**	P	**P**	**22 53 21.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=54,slow=7.9,SNR=6.2								
	comp=Z,0.9nm,0.6s								
TXAR	**Lajitas Array**	**49.08**	**95**	P	**P**	**22 53 24.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=328,slow=4.4,SNR=3.5								
	comp=Z,0.4nm,0.7s								
SONM	**Songino Array**	**53.71**	**303**	P	**P**	**22 53 57.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=39,slow=9.3,SNR=2.2								
	comp=Z,0.5nm,0.5s								
KURBB	**Kurchatov Arra**	**63.81**	**321**	P	**P**	**22 55 07.0**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=34,slow=7.0,SNR=10								
	comp=Z,1.4nm,0.9s								
BVAR	**Borovoye Array**	**64.62**	**327**	P	**P**	**22 55 12.6**	**0.0**
	comp=Z,2.4nm,0.6s,baz=39,slow=6.7,SNR=12								
	comp=Z,2.4nm,0.6s								
FINES	**FINESS Array B**	**64.89**	**355**	P	**P**	**22 55 13.1**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=22,slow=6.2,SNR=9.6								
	comp=Z,1.3nm,0.7s								
MKAR	**Makanchi Array**	**65.44**	**317**	P	**P**	**22 55 17.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=40,slow=6.0,SNR=5.6								
	comp=Z,0.3nm,0.4s								
NOA	**NORSAR Array B**	**65.44**	**3**	P	**P**	**22 55 17.2**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=356,slow=6.6,SNR=3.6								
	comp=Z,0.9nm,0.8s								
HFS	**Hagfors**	**66.41**	**2**	P	**P**	**22 55 23.5**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=26,slow=3.7,SNR=8.4								
	comp=Z,1.1nm,0.4s								
EKA	**Eskdalemuir Ar**	**70.02**	**12**	P	**P**	**22 55 46.0**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=350,slow=4.5,SNR=3.4								
	comp=Z,1.7nm,0.8s								
AKASG	**Malin Array Be**	**75.37**	**352**	P	**P**	**22 56 17.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=9.1,slow=5.9,SNR=2.3								
	comp=Z,0.6nm,0.5s								
PMG	**Port Moresby**	**75.61**	**231**	LR	LR	23 27 27.4	
	comp=Z,22nm,19.7s,baz=186,slow=34								
GERES	**GERESS Array B**	**77.72**	**2**	P	**P**	**22 56 33.0**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=354,slow=6.1,SNR=1.6								
	comp=Z,0.1nm,0.5s								
CMAR	**Chiang Mai Arr**	**79.85**	**287**	P	**P**	**22 56 42.2**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=58,slow=4.0,SNR=4.2								
	comp=Z,0.4nm,0.3s								
ESDC	**Sonseca Array**	**85.21**	**16**	P	**P**	**22 57 12.0**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=0.5,slow=4.4,SNR=4.2								
	comp=Z,0.5nm,0.9s								
BRTR	**Keskin Array B**	**85.75**	**347**	P	**P**	**22 57 15.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=326,slow=2.1,SNR=4.4								
	comp=Z,0.6nm,0.9s								

*TRN **30** 22:50:17.5, 12.°84N×60.°63W, h18km, MD3.0, South-east of St. Vincent, East of the Grenadines.*
*FUNV **30** 22:50:18.6, 12.°73N×60.°50W, h25km, MW3.7, Presumed earthquake*

ISC 30 22:50:17.9±2.0, 12.°79N±0.°06×60.°53W±0.°08, h18km±8km, n11, σ0s55/21, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCMP	**Grenada, Carri**	**0.93**	**251**	*eP*	**Pg**	**22 50 36.2**	**+0.2**
GCMP				*eS*	**Sn**	**22 50 49.3**	**+0.3**
GCMP	**Grenada, Carri**	**0.93**	**251**	*eP*	**Pn**	**22 50 36.0**	**-0.1**
GCMP				*eS*	**Sn**	**22 50 49.0**	**+0.1**
BBGH	**Gun Hill**	**1.01**	**69**	*eP*	**Pb**	**22 50 37.0**	**+0.1**
SLAC	**Saint Lucia, A**	**1.16**	**342**	*eP*	**Pn**	**22 50 38.9**	**-0.4**
SLAC				*eS*	**Sn**	**22 50 54.3**	**-0.4**
GRSS	**Sisters**	**1.17**	**245**	*eP*	**Pn**	**22 50 39.0**	**-0.4**
GRSS				*eS*	**Sn**	**22 50 54.4**	**-0.4**
GRGR	**Grenville**	**1.28**	**240**	*eP*	**Pn**	**22 50 40.2**	**-0.7**
GRGR				*eS*	**Sn**	**22 50 57.0**	**-0.7**
GRGR	**Grenville**	**1.28**	**240**	*eP*	**Pb**	**22 50 40.9**	**-0.1**
GRGR				*eS*	**Sb**	**22 50 58.3**	**+0.7**
SLBI	**Saint Lucia, B**	**1.30**	**341**	*eP*	**Pn**	**22 50 40.1**	**-1.2**
SLBI				*eS*	**Sn**	**22 50 57.5**	**-0.8**
BIM	**Bigot**	**1.80**	**343**	*eP*	**Pn**	**22 50 48.8**	**+0.6**
BIM				*eS*	**Sn**	**22 51 10.7**	**+0.1**
BIM	**Bigot**	**1.80**	**343**	*eP*	**Pn**	**22 50 47.8**	**-0.3**
BIM				*eS*	**Sn**	**22 51 10.4**	**-0.2**
SVN	**Savane Anatole**	**2.13**	**343**	*eP*	**Pn**	**22 50 53.3**	**+0.5**
SVN				*eS*	**Sn**	**22 51 19.2**	**+0.4**

*IDC **30** 22:59:46.1±0.9, 51.°11S×110.°38E, h0km, mb4.3/7, mbtmp4.3/8, ML1.9/1, MS3.6/6, Error ellipse: s-maj=45.6km s-min=16.6km az=104.0*

ISC 30 22:59:48.0±0.7, 51.°1S±0.°1×110.°6E±0.°3, h10km, n23, σ1s11/20, mb4.5/9, MS3.6/6, 4D, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.39**	**10**	T	T	23 20 28.5	
	baz=188,slow=73,SNR=32						
H01W1	**Cape Leeuwin H**	**16.40**	**10**	T	T	23 20 24.9	
	baz=188,slow=73,SNR=29						
H01W3	**Cape Leeuwin H**	**16.41**	**10**	T	T	23 20 25.9	
	baz=188,slow=73,SNR=26						
NWAO	**Narrogin (SRO)**	**18.80**	**17**	P	**Pn**	**23 04 08.3**	**+0.5**
	0.2nm,0.3s,baz=191,slow=10,SNR=3.1						
	9.1nm,1.0s						
STKA	**Stephens Creek**	**29.78**	**62**	PcP	**PcP**	**23 08 57.1**	**-0.9**
	1.6nm,0.6s,baz=153,slow=0.4,SNR=4.3						
VNDA	**Vanda**	**32.48**	**162**	P	**P**	**23 06 18.1**	**+0.1**
	1.2nm,0.8s,baz=299,slow=8.3,SNR=10						
VNDA				LR	LR	23 18 35.7	
	comp=Z,126nm,18.6s,baz=280,slow=35						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**32.77**	**42**	P	**P**	**23 06 22.0**	**+0.9**
	4.2nm,0.7s,baz=208,slow=7.9,SNR=44						
ASAR				PcP	**PcP**	**23 09 05.5**	**-0.7**
	0.6nm,0.6s,baz=200,slow=3.0,SNR=4.6						
	4.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**35.03**	**25**	LR	LR	23 19 17.7	
	comp=Z,65nm,18.6s,baz=191,slow=33						
WRA	**Warramunga Arr**	**36.27**	**40**	P	**P**	**23 06 52.2**	**+0.9**
	9.0nm,0.6s,baz=206,slow=8.6,SNR=46						
WRA				PcP	**PcP**	**23 09 15.2**	**-1.1**
	0.5nm,0.7s,baz=218,slow=2.9,SNR=2.4						
	9.0nm,0.6s						
QSPA	**South Pole Qui**	**39.02**	**180**	P	**P**	**23 07 14.2**	**-0.2**
	3.0nm,0.8s,baz=348,slow=2.7,SNR=9.4						
QSPA				LR	LR	23 22 39.7	
	comp=Z,130nm,18.4s,baz=296,slow=35						
	3.0nm,0.8s						
CTA	**Charters Tower**	**41.69**	**55**	LR	LR	23 23 59.7	
	comp=Z,58nm,18.7s,baz=214,slow=35						
TROLL	**Troll, Antarti**	**47.40**	**204**	⇓P	**P**	**23 08 23.5**	**+1.6**
	comp=Z,186nm,1.0s						
URZ	**Urewera**	**47.41**	**101**	LR	LR	23 26 14.5	
	comp=Z,52nm,18.2s,baz=238,slow=33						
SNAA	**Sanae**	**48.94**	**203**	⇓P	**P**	**23 08 35.5**	**+1.8**
	comp=Z,148nm,0.7s						
SNAA	**Sanae**	**48.94**	**203**	P	**P**	**23 08 33.2**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=134,slow=10.0,SNR=20						
	comp=Z,7.3nm,0.8s						
VNA2	**Neumayer--Watz**	**50.53**	**202**	⇓P	**P**	**23 08 47.5**	**+1.7**
	comp=Z,5.1nm,0.7s,baz=132,slow=7.8						
VNA2				pP	**pwP**	**23 08 51.7**	**-0.9**
	comp=Z,4.4nm,0.6s,baz=131,slow=6.8						
VNA1	**Neumayer--Stat**	**50.93**	**202**	⇓P	**P**	**23 08 50.8**	**+2.1**
	comp=Z,8.7nm,0.9s						
VNA1				pP	**pwP**	**23 08 54.6**	**-1.0**
	comp=Z,6.1nm,0.8s						
PALK	**Pallekele**	**63.62**	**326**	LR	LR	23 33 46.4	
	comp=Z,65nm,19.3s,baz=126,slow=32						
CMAR	**Chiang Mai Arr**	**70.02**	**348**	P	**P**	**23 10 59.1**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=170,slow=5.8,SNR=5.3						
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**89.48**	**14**	P	**P**	**23 12 45.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=203,slow=5.9,SNR=4.4						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**139.44**	**40**	PKP	**PKPdf**	**23 19 13.7**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=243,slow=4.0,SNR=3.3						
TXAR	**Lajitas Array**	**146.42**	**117**	PKPbc	**PKPbc**	**23 19 28.0**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=191,slow=5.1,SNR=6.5						
PDAR	**Pinedale Array**	**151.62**	**91**	PKPbc	**PKPbc**	**23 19 41.7**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=242,slow=3.2,SNR=4.8						

*KRNET **30** 23:08:52.7±0.1, 42.°36N×78.°19E, h17km, mb2.9*
*NNC **30** 23:08:53.6±0.7, 42.°47N×78.°19E, h0km, mb2.7, mpv3.1, Error ellipse: s-maj=5.4km s-min=2.4km az=167.0*
*SOME **30** 23:08:53.7, 42.°45N×78.°12E, h10km*

ISC 30 23:08:52.9±0.9, 42.°37N±0.°03×78.°14E±0.°02, h15km±7km, n42, σ1s76/75, 18C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.23**	**60**	⇑*iP*	**Pg**	**23 08 57.2**	**-0.9**
PRZ				⇑*iS*	**Sg**	**23 09 00.6**	**-1.0**
ANVS	**Anan'yevo**	**0.54**	**320**	⇓*iP*	**Pg**	**23 09 03.6**	**0.0**
ANVS				⇓*iS*	**Sg**	**23 09 12.0**	**+1.2**
TARG	**Taragay, Kyrgy**	**0.69**	**201**	⇑*iP*	**Pg**	**23 09 05.9**	**-0.5**
TARG				⇑*iS*	**Sg**	**23 09 15.6**	**0.0**
SATY	**Saty**	**0.72**	**16**	P	**Pg**	**23 09 05.9**	**-1.0**
	9.5nm,0.1s						
SATY				S	**Sg**	**23 09 14.5**	**-1.9**
	45nm,0.1s						
SATY	**Saty**	**0.72**	**16**	*eP*	**Pg**	**23 09 05.9**	**-1.0**
	9.5nm,0.1s						
SATY				*eS*	**Sg**	**23 09 14.5**	**-1.9**
	45nm,0.1s						
KDJ	**Kajisay**	**0.75**	**252**	⇑*iP*	**Pb**	**23 09 07.5**	**-0.3**
KDJ				⇑*iS*	**Sg**	**23 09 18.5**	**+1.1**
UZB	**Uzunbulak**	**1.01**	**40**	P	**Pb**	**23 09 10.8**	**-1.5**
	2.2nm,0.1s						
UZB				S	**Sb**	**23 09 22.9**	**-2.6**
	11nm,0.1s						
UZB	**Uzunbulak**	**1.01**	**40**	*eP*	**Pb**	**23 09 10.8**	**-1.5**
UZB				*eS*	**Sb**	**23 09 22.9**	**-2.6**
TNSS	**Tian-Shan**	**1.10**	**308**	P	**Pg**	**23 09 14.7**	**+0.5**
	1.1nm,0.1s						
TNSS				S	**Sn**	**23 09 29.4**	**+0.1**
	4.1nm,0.2s						
TNSS	**Tian-Shan**	**1.10**	**308**	*eP*	**Pg**	**23 09 14.7**	**+0.5**
	1.1nm,0.1s						
TNSS				*eS*	**Sn**	**23 09 29.4**	**+0.1**
	4.1nm,0.2s						
KURS	**Kuram**	**1.12**	**1**	P	**Pn**	**23 09 13.5**	**-0.6**
	2.8nm,0.1s						
KURS				S	**Sb**	**23 09 27.3**	**-1.0**
	1.7nm,0.2s						
KURS	**Kuram**	**1.12**	**1**	*eP*	**Pn**	**23 09 13.5**	**-0.6**
	2.8nm,0.1s						
KURS				*eS*	**Sb**	**23 09 27.4**	**-1.0**
	1.7nm,0.2s						
MDOK	**Medeo**	**1.13**	**315**	Pg	**Pb**	**23 09 14.9**	**+0.7**
	2.1nm,0.2s						
MDOK				Lg	Lg	23 09 29.7	
	33nm,0.5s						
MDOK	**Medeo**	**1.13**	**315**	*eP*	**Pb**	**23 09 14.9**	**+0.7**
	2.1nm,0.2s						
MDOK				*eS*	**Sn**	**23 09 29.7**	**+0.1**
	33nm,0.5s						
KPKS	**Kokpek**	**1.17**	**20**	P	**Pn**	**23 09 13.8**	**-1.0**
	0.4nm,0.3s						
KPKS				S	**Sb**	**23 09 28.0**	**-1.8**
	4.2nm,0.1s						
KPKS	**Kokpek**	**1.17**	**20**	*eP*	**Pn**	**23 09 13.8**	**-1.0**
	0.4nm,0.3s						
KPKS				*eS*	**Sb**	**23 09 28.0**	**-1.8**
	4.2nm,0.1s						
SHLS	**Shalkode**	**1.25**	**51**	P	**Pg**	**23 09 20.6**	**+3.5**
	3.4nm,0.1s						
SHLS				S	**Sg**	**23 09 39.8**	**+6.4**
	26nm,0.2s						
SHLS	**Shalkode**	**1.25**	**51**	*eP*	**Pg**	**23 09 20.6**	**+3.5**
	3.4nm,0.1s						
SHLS				*eS*	**Sg**	**23 09 39.8**	**+6.4**
	26nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**301**	P	**Pn**	**23 09 17.0**	**+0.2**
	5.5nm,0.1s						
IZV				S	**Sn**	**23 09 33.3**	**-0.8**
	57nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**301**	*eP*	**Pn**	**23 09 17.0**	**+0.2**
IZV				*eS*	**Sn**	**23 09 33.3**	**-0.8**
PDGK	**Podgornoye**	**1.38**	**46**	⇑P	**Pn**	**23 09 17.4**	**-0.4**
	1.1nm,0.5s						
PDGK				⇑S	**Sn**	**23 09 34.2**	**-1.7**
	4.4nm,0.5s						
ULHL	**Ulahol**	**1.41**	**266**	⇑*iP*	**Pb**	**23 09 19.5**	**+0.4**
ULHL				⇑*iS*	**Sg**	**23 09 38.9**	**+0.5**
BOOM	**Boomskoye usch**	**1.63**	**275**	⇑*iP*	**Pb**	**23 09 23.3**	**+0.5**
BOOM				⇑*iS*	**Sg**	**23 09 45.5**	**+0.1**
KTBS	**Karatobe**	**1.71**	**322**	P	**Pb**	**23 09 24.6**	**+0.5**
	3.7nm,0.1s						
KTBS				S	**Sb**	**23 09 46.5**	**+1.0**
	28nm,0.2s						
KTBS	**Karatobe**	**1.71**	**322**	*eP*	**Pb**	**23 09 24.6**	**+0.5**
	3.7nm,0.1s						
KTBS				*eS*	**Sb**	**23 09 46.5**	**+1.0**
	28nm,0.2s						
BLB	**Baldybastay**	**1.74**	**8**	P	**Pb**	**23 09 24.6**	**-0.1**
	32nm,0.2s						
BLB				S	**Sb**	**23 09 46.5**	**0.0**
	7.1nm,0.1s						
NRN	**Naryn**	**1.85**	**240**	⇑*iP*	**Pb**	**23 09 27.3**	**+0.7**
NRN				⇑*iS*	**Sg**	**23 09 52.4**	**-0.1**
ARXS	**Arharly**	**1.85**	**353**	P	**Pb**	**23 09 26.9**	**+0.3**
	10nm,0.1s						
ARXS				S	**Sb**	**23 09 50.4**	**+0.8**
	8.6nm,0.1s						
ARXS	**Arharly**	**1.85**	**353**	*eP*	**Pb**	**23 09 26.9**	**+0.3**
	10nm,0.1s						
ARXS				*eS*	**Sb**	**23 09 50.4**	**+0.8**
	8.6nm,0.1s						
DGS	**Degeres**	**1.94**	**297**	Pg	**Pg**	**23 09 29.7**	**-0.5**
	2.3nm,0.2s						
DGS				Lg	Lg	23 09 55.2	
	18nm,0.2s						
DGS	**Degeres**	**1.94**	**297**	*eP*	**Pg**	**23 09 29.7**	**-0.5**
	2.3nm,0.2s						
DGS				*eS*	**Sg**	**23 09 55.2**	**-0.3**
	18nm,0.2s						
TKM2	**Tokmak 2**	**1.95**	**287**	⇓*iP*	**Pb**	**23 09 28.6**	**+0.3**
TKM2				⇓*iS*	**Sb**	**23 09 54.7**	**+2.2**
KNOS	**Konyrlen**	**2.13**	**21**	Pg	**Pb**	**23 09 31.0**	**-0.3**
	8.4nm,0.1s						
KNOS				Lg	Lg	23 09 57.4	
	6.2nm,0.3s						
KRBS	**Karabastau**	**2.24**	**307**	Pg	**Pb**	**23 09 34.2**	**+1.1**
	3.0nm,0.2s						
KRBS				Lg	Lg	23 10 02.8	
	6.5nm,0.3s						
KRBS	**Karabastau**	**2.24**	**307**	*eP*	**Pb**	**23 09 34.2**	**+1.1**
	3.0nm,0.2s						
KRBS				*eS*	**Sb**	**23 10 02.8**	**+2.2**
	6.5nm,0.3s						
DJR	**Jarkent**	**2.30**	**31**	Pg	**Pb**	**23 09 34.2**	**0.0**
	6.6nm,0.2s						
DJR				Lg	Lg	23 10 02.7	
	9.2nm,0.3s						
DJR	**Jarkent**	**2.30**	**31**	*eP*	**Pb**	**23 09 34.2**	**0.0**
	6.6nm,0.2s						
DJR				*eS*	**Sb**	**23 10 02.7**	**+0.2**
	9.2nm,0.3s						
AAK	**Ala-Archa**	**2.71**	**277**	⇑Pg	**Pg**	**23 09 43.8**	**-1.0**
	1.8nm,0.7s						
AAK				⇑Lg	Lg	23 10 20.3	
	1.7nm,0.6s						
SGDS	**Sogindy**	**2.79**	**294**	Pg	**Pb**	**23 09 44.6**	**+2.1**
	4.0nm,0.4s						
SGDS				Lg	Lg	23 10 20.8	
	13nm,0.4s						
BTLS	**Baital**	**3.99**	**313**	Pg	**Pb**	**23 10 06.2**	**+3.3**
	1.0nm,0.2s						
BTLS				Lg	Lg	23 10 57.6	
	2.6nm,0.5s						
BTLS	**Baital**	**3.99**	**313**	*eP*	**Pb**	**23 10 06.2**	**+3.3**
	1.0nm,0.2s						
BTLS				*eS*	**Sg**	**23 10 57.6**	**-3.4**
	2.6nm,0.5s						
KK31	**Karatay Array**	**5.66**	**280**	⇑Pg	**Pg**	**23 10 38.3**	**-3.0**
	0.1nm,0.3s,baz=96,slow=15,SNR=3.7						
KK31				⇑Lg	Lg	23 11 53.9	
	0.3nm,0.5s,baz=96,slow=29,SNR=3.7						

*IDC **30** 23:30:48.1±2.7, 6.°20S×129.°77E, h129km±30km, mb3.1/3, mbtmp3.9/7, MS3.4/1, Error ellipse: s-maj=61.8km s-min=19.0km az=85.0*
*DJA **30** 23:30:52.7±0.9, 6.°5S±6.°×13.°0E±.°, h184km±16km, M4.4/9, mB5.1/3, mb4.3/3, MLv4.4/9, Mw(mB)4.5/3*

ISC 30 23:30:48.1±0.9, 6.°19S±0.°07×130.°2E±0.°2, h146km, n10, σ2s68/13, mb3.0/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.84**	**33**	P	**Pn**	**23 31 47.7**	**+1.4**
FAKI				S	**Sn**	**23 32 31.1**	**-0.4**
SIJI	**Sorong**	**5.39**	**12**	P	**Pn**	**23 32 07.3**	**+0.5**
	16nm,0.2s,baz=210,slow=20,SNR=22						
SIJI				S	**Sn**	**23 33 03.5**	**-4.6**
	165nm,0.2s,baz=256,slow=23,SNR=25						
SIJI	**Sorong**	**5.39**	**12**	P	**Pn**	**23 32 07.1**	**+0.3**
SWI	**Sorong**	**5.40**	**12**	P	**Pn**	**23 32 07.4**	**+0.6**
	0.6nm3um38nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.64**	**200**	P	**Pn**	**23 33 42.2**	**-0.7**
	1.3nm,0.4s,baz=30,slow=14,SNR=13						
FITZ				S	Sn	23 35 54.5	-8.2
	4.7nm,0.3s,baz=138,slow=23,SNR=12						
WRA	**Warramunga Arr**	**14.26**	**164**	P	**Pn**	**23 34 04.5**	**+1.0**
	2.2nm,0.4s,baz=339,slow=13,SNR=11						
WRA				S	Sn	23 36 33.5	-8.2
	2.5nm,0.4s,baz=334,slow=24,SNR=10.0						
WRA				LR	LR	23 40 25.1	
	comp=Z,153nm,20.5s,baz=196,slow=40						
ASAR	**Alice Springs**	**17.75**	**169**	P	**Pn**	**23 34 48.7**	**+2.4**
	6.2nm,0.6s,baz=347,slow=9.9,SNR=59						
ASAR				S	**S**	**23 37 55.8**	**-6.1**
	2.1nm,0.8s,baz=356,slow=28,SNR=6.7						
MKAR	**Makanchi Array**	**67.65**	**327**	P	**P**	**23 41 30.8**	**+1.4**
	0.1nm,0.5s,baz=115,slow=5.3,SNR=2.0						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**71.91**	**328**	P	**P**	**23 41 55.7**	**+0.4**
	0.2nm,0.8s,baz=134,slow=5.3,SNR=2.1						
	0.2nm,0.8s						
QSPA	**South Pole Qui**

THERA	**Ancient Thera,**	1.97	317	P		Pn	23 41 23.0	-0.1
THR8	**Santorini-Mono**	2.00	318	P		Pn	23 41 24.8	+1.4
THR8	**Santorini-Mono**	2.00	318	P		Pn	23 41 23.4	0.0
KLNA	**Kalymnos**	2.03	356	P		Pn	23 41 23.1	-0.8
THR9	**Santorini-Faro**	2.03	315	P		Pn	23 41 25.5	+1.6
THR9	**Santorini-Faro**	2.03	315	P		Pn	23 41 24.0	+0.1
SNT5	**Nea Kammeni, S**	2.04	317	P		Pb	23 41 26.2	-0.6
SNT5	**Nea Kammeni, S**	2.04	317	P		Pn	23 41 24.0	0.0
THR3	**Thira Island,**	2.04	317	P		Pb	23 41 26.4	-0.4
THR3	**Thira Island,**	2.04	317	P		Pn	23 41 24.6	+0.5
THR2	**Thira island,**	2.05	318	P		Pn	23 41 25.5	+1.4
THR2	**Thira island,**	2.05	318	P		Pn	23 41 24.0	-0.2
THR5	**Thira Island,**	2.08	316	P		Pn	23 41 26.2	+1.7
THR5	**Thira Island,**	2.08	316	P		Pn	23 41 24.9	+0.4
SAP3	**Santorini-Thir**	2.09	317	P		Pn	23 41 26.5	+1.8
SAP3	**Santorini-Thir**	2.09	317	P		Pn	23 41 24.7	-0.1
BODT	**Bodrum**	2.13	4	Pn		Pn	23 41 26.3	+0.9
BODT	**Bodrum**	2.13	4	P		Pn	23 41 26.2	+0.8
YKAV	**Yalikavak-Bodr**	2.19	3	Pn		Pn	23 41 27.3	+1.1
KSL	**Kastellorizon**	2.34	58	P		Pn	23 41 29.2	+1.0
YER	**Yerkesik**	2.39	23	Pn		Pn	23 41 30.5	+1.6
YER	**Yerkesik**	2.39	23	P		Pn	23 41 30.6	+1.6
AKAS	**Kas**	2.40	56	Pn		Pn	23 41 31.0	+1.9
AKAS	**Kas**	2.40	56	P		Pn	23 41 30.7	+1.6
VAM	**Vamos**	2.45	282	P		Pb	23 41 34.1	+0.4
VAM	**Vamos**	2.45	282	P		Pn	23 41 31.4	+1.7
GVD	**Gavdhos**	2.50	269	Pn		Pn	23 41 32.8	+2.4
GVD	**Gavdhos**	2.50	269	P		Pb	23 41 33.5	-1.1
GVD	**Gavdhos**	2.50	269	P		Pn	23 41 32.0	+1.6
GVD	**Gavdhos**	2.50	269	P		Pn	23 41 32.7	+2.3
CHNB	**Souda**	2.57	283	P		Pb	23 41 34.2	-1.6
CHAN	**Chania**	2.59	284	P		Pn	23 41 33.8	+2.1
CH01	**Chania**	2.61	284	P		Pn	23 41 34.5	+2.6
IMMV	**Iera Moni Meta**	2.63	283	Pn		Pn	23 41 34.4	+2.2
IMMV	**Iera Moni Meta**	2.63	283	P		Pb	23 41 35.4	-1.5
IMMV	**Iera Moni Meta**	2.63	283	P		Pb	23 41 36.4	-0.5
IMMV	**Iera Moni Meta**	2.63	283	P		Pn	23 41 34.2	+2.0
CAME	**Cameli-Denizli**	2.67	41	Pn		Pn	23 41 34.5	+1.6
GCAM	**G?zelcaml?**	2.77	2	Pn		Pn	23 41 34.9	+0.9
AYDN	**Tasoluk**	2.79	12	P		Pn	23 41 36.0	+1.5
MHLO	**Agia Marina, M**	2.83	309	P		Pn	23 41 36.8	+1.9
KNDR	**Palaiochora Ch**	2.89	277	P		Pb	23 41 39.0	-2.3
ELL	**Elmali**	2.90	50	Pn		Pn	23 41 38.2	+2.2
AYDB	**Zeytinkoy-Aydi**	3.08	11	Pn		Pn	23 41 39.9	+1.5
APMY	**Acipayam-Deniz**	3.09	34	Pn		Pn	23 41 39.5	+1.0
NAZL	**Nazilli-Aydin**	3.17	17	Pn		Pn	23 41 40.9	+1.3
ANKY	**Antikythira Is**	3.27	288	P		Pn	23 41 42.4	+1.6
ODEM	**Odemis-Izmir**	3.43	13	Pn		Pn	23 41 44.7	+1.5
BLCB	**Balcova**	3.45	359	Pn		Pn	23 41 44.9	+1.5
BLCB	**Balcova**	3.45	359	P		Pn	23 41 44.6	+1.2
CHOS	**Chios island**	3.56	346	Pn		Pn	23 41 44.8	+1.4
CHOS	**Chios island**	3.56	346	P		Pn	23 41 46.0	+1.0
KTHA	**Kythira Island**	3.57	293	Pn		Pn	23 41 47.2	+2.1
KTHA	**Kythira Island**	3.57	293	P		Pn	23 41 47.5	+2.4
VLY	**Voula,Athens**	3.97	318	P		Pn	23 41 52.7	+2.1
ATHU	**Athens Univers**	4.06	319	P		Pn	23 41 53.9	+2.1
DION	**Dionisos Attik**	4.06	322	P		Pn	23 41 54.1	+2.2
PTL	**Penteli**	4.08	321	P		Pn	23 41 54.5	+2.4
ATH	**Athens Observa**	4.10	319	P		Pn	23 41 54.5	+2.2
STFN	**Stefani**	4.34	319	P		Pn	23 41 58.2	+2.5
PRK	**Paraskevi**	4.36	351	P		Pn	23 41 57.6	+1.7
KYMI	**Kymi, Euboea I**	4.42	328	P		Pn	23 41 58.9	+2.1
ITM	**Ithomi**	4.78	300	P		Pn	23 42 06.2	+4.6
BALY	**Balya**	4.82	5	P		Pn	23 42 03.8	+1.4
EZN	**Ezine**	4.93	353	Pn		Pn	23 42 04.0	+0.2
	0.1nm19nm,1.1s							
CSS	**Mathiatis**	5.09	88	Pn		Pn	23 42 05.9	-0.1
	0.2nm461nm29nm,1.4s							
CSS					Sn	Sn	23 43 06.8	+1.9
	0.2nm461nm29nm,1.4s							
CSS	**Mathiatis**	5.09	88	P		Pn	23 42 06.4	+0.4
CSS	**Mathiatis**	5.09	88	P		Pn	23 42 06.1	0.0
CSS					S	Sn	23 43 03.4	-1.5
XOR	**Xorichti**	5.43	326	P		Pn	23 42 15.0	+4.3
AGG	**Agios Georgios**	5.61	318	P		Pn	23 42 16.6	+3.5
YLV	**Yalova**	5.90	17	Pn		Pn	23 42 20.4	+3.2
	0.1nm12nm,0.8s							
RDO	**Rodhopi**	6.33	349	P		Pn	23 42 23.2	+0.2
CTYL	**Yalikoy Yolu**	6.60	8	Pn		Pn	23 42 27.4	+0.7
	0.3nm5µm17nm,0.5s							
SRS	**Serrai**	6.78	337	P		Pn	23 42 34.2	+5.0
KIRS	**Kirsehir-Merke**	6.86	50	⇑P		Pn	23 42 32.3	+1.9
OFRI	**`Ofer**	6.93	107	P		Pn	23 42 29.9	-1.5
OFRI					S	Sn	23 43 49.1	-1.2
BR105	**Keskin Array S**	7.04	45	Pn		Pn	23 42 34.0	+1.1
	0.0nm50nm4.6nm,0.8s							
BR104	**Keskin Array S**	7.05	45	Pn		Pn	23 42 34.1	+1.1
	0.0nm46nm5.4nm,0.8s							
BR106	**Keskin Array S**	7.05	45	Pn		Pn	23 42 34.4	+1.4
	0.0nm44nm4.2nm,0.8s							
BRTR	**Keskin Array B**	7.06	45	Pn		Pn	23 42 34.7	+1.6
	0.3nm,0.3s,baz=216,slow=13,SNR=25							
BRTR					Sn	Sn	23 43 51.3	-2.1
	0.1nm,0.3s,baz=209,slow=25,SNR=5.8							
	2.1nm,0.7s							
GRG	**Griva**	7.08	330	P		Pn	23 42 36.6	+3.2
SLTI	**Sal'it**	7.12	110	P		Pn	23 42 31.9	-2.0
SLTI					S	Sn	23 43 53.2	-1.7
MMAI	**Mount Meron Ar**	7.13	103	Pn		Pn	23 42 34.2	+0.1
	3.0nm,0.3s,baz=278,slow=12,SNR=12							
MMAI					Sn	Sn	23 43 56.1	+0.8
	9.7nm,0.3s,baz=289,slow=28,SNR=6.6							
QRWL	**Qaraoun**	7.22	99	*e*P		Pn	23 42 35.9	+0.7
GEM	**Giv'at Ha'Em**	7.29	101	P		Pn	23 42 34.9	-1.2
GEM					S	Sn	23 43 57.5	-1.4
HWQ	**Hawqa**	7.30	93	*e*P		Pn	23 42 36.7	+0.3
KZIT	**Kziot**	7.31	121	P		Pn	23 42 35.5	-0.9
KZIT	**Kziot**	7.31	121	P		Pn	23 42 35.2	-1.3
KZIT					S	Sn	23 43 57.8	-1.7
SHBL	**Chebaa**	7.31	100	*e*P		Pn	23 42 36.4	-0.3
KNHM	**Kefar Nahum**	7.32	104	P		Pn	23 42 35.2	-1.3
KNHM					S	Sn	23 43 58.0	-1.7
NATI	**Neve Ativ**	7.33	101	P		Pn	23 42 35.8	-1.0
NATI					S	Sn	23 43 59.1	-0.8
MMLI	**Mount Malkishu**	7.34	107	P		Pn	23 42 35.8	-1.2
MMLI					S	Sn	23 43 59.1	-1.3
AMAZ	**Amatzia**	7.35	115	P		Pn	23 42 35.9	-1.1
AMAZ					S	Sn	23 43 58.8	-1.7
RCY	**Rachaya**	7.35	99	*e*P		Pn	23 42 37.0	-0.2
BEIL	**Beino**	7.46	90	*e*P		Pn	23 42 37.5	-1.1
YITV	**Yitav**	7.54	111	P		Pn	23 42 38.3	-1.3
YITV					S	Sn	23 44 03.7	-1.5
UJAP	**Al Uja**	7.57	111	P		Pn	23 42 39.9	-0.2
ALMO	**Almog**	7.64	112	P		Pn	23 42 39.3	-1.7
ALMO					S	Sn	23 44 05.9	-1.7
MZS	**Mizpe Shalem**	7.69	113	P		Pn	23 42 40.2	-1.5
MZS					S	Sn	23 44 07.3	-1.7
RMNI	**Mount Ramon**	7.74	122	P		Pn	23 42 40.8	-1.7
RMNI					S	Sn	23 44 08.9	-1.4
MSBI	**Mazada**	7.79	115	P		Pn	23 42 41.4	-1.6
MSBI					S	Sn	23 44 09.0	-2.1
GHAJ	**Ghor Haditha**	7.95	115	P		Pn	23 42 45.7	+0.5
GHAJ	**Ghor Haditha**	7.95	115	P		Pn	23 42 43.9	-1.3
GHAJ					S	Sn	23 44 13.5	-1.7
ZFRI	**Zfri**	8.06	121	P		Pn	23 42 45.1	-1.7
ZFRI					S	Sn	23 44 16.1	-1.8
HRFI	**Mount Harif**	8.27	124	P		Pn	23 42 50.2	+0.5
HRFI	**Mount Harif**	8.27	124	P		Pn	23 42 48.3	-1.3
HRFI					S	Sn	23 44 21.8	-1.4
EIL	**Elat**	8.44	126	Pn		Pn	23 42 52.5	+0.4
	0.8nm,0.3s,baz=316,slow=3.0,SNR=21							
EIL					Sn	Sn	23 44 25.6	-1.8
	2.3nm,0.3s,baz=60,slow=21,SNR=5.6							
	5.3nm,0.6s							
EIL	**Elat**	8.44	126	P		Pn	23 42 50.7	-1.3
ASF	**Jabal al Asfar**	8.60	106	Pn		Pn	23 42 54.2	-0.1
	0.5nm,0.3s,baz=303,slow=2.9,SNR=7.5							
ASF					Sn	Sn	23 44 32.9	+1.4
	0.3nm,0.3s,baz=73,slow=23,SNR=1.3							
	1.7nm,0.4s							
TIP	**Timpagrande**	9.31	300	⇓P		Pn	23 43 03.7	-0.3
TIP	**Timpagrande**	9.31	300	Pn		Pn	23 43 02.6	-1.4
	5.5nm,0.8s							
TIP	**Timpagrande**	9.31	300	P		Pn	23 43 03.5	-0.5
CEL	**Celeste**	9.63	293	Pn		Pn	23 43 08.0	-0.3
	9.3nm,0.6s							
CEL	**Celeste**	9.63	293	P		Pn	23 43 08.3	0.0
PDG	**Podgorica**	9.69	323	P		Pn	23 43 12.1	+3.0
MARCO	**Tramutola**	10.46	304	P		Pn	23 43 20.1	+0.4
VAE	**Valguarnera**	10.59	288	Pn		Pn	23 43 18.6	-2.8
	1.5nm,0.3s,baz=8.6,slow=12,SNR=5.9							
VAE					Sn	Sn	23 45 16.7	-3.4
	0.7nm,0.3s,baz=119,slow=22,SNR=1.8							
	1.6nm,0.4s							
MLR	**Muntele Rosu**	10.59	355	Pn		Pn	23 43 18.5	-3.0
	0.1nm,0.3s,baz=149,slow=10.0,SNR=1.3							
MLR					LR	LR	23 47 57.9	
	comp=Z,131nm,19.1s,baz=184,slow=41							
	0.3nm,0.4s							
KELT	**Kelkit**	10.94	58	P		Pn	23 43 30.1	+3.7
KIS	**Kishinev**	12.12	6	Pn		Pn	23 43 44.1	+1.7
	22nm,0.6s							
MPLH	**Magyarpolny**	14.20	332	Pn		Pn	23 44 12.0	+1.3
	10nm,1.1s							
KEST	**Kesra**	14.54	278	Pn		Pn	23 44 14.0	-1.6
	0.1nm,0.3s,baz=15,slow=9.7,SNR=3.6							
KEST					Sn	Sn	23 46 46.1	-11
	baz=320,slow=15,SNR=1.1							
KEST					LR	LR	23 50 59.5	
	comp=Z,54nm,20.7s,baz=47,slow=42							
	2.2nm,1.0s							
SOKA	**Soboth**	14.87	326	*e*P		P	23 44 27.0	+1.2
	4.4nm,1.6s							
GNI	**Garni**	14.91	64	LR		LR	23 51 23.0	
	comp=Z,85nm,18.6s,baz=286,slow=42							
OBKA	**Obir**	14.97	324	*e*P		P	23 44 29.8	+2.9
	0.8nm,0.7s							
KIV	**Kislovodsk**	15.01	48	⇓P		P	23 44 29.6	+2.3
KVAR	**Kislovodsk Arr**	15.01	48	Pn		P	23 44 25.1	-2.3
	baz=266,slow=19							
	0.8nm,0.5s							
KBZ	**Khabaz**	15.02	49	Pn		Pn	23 44 24.5	+2.6
	0.1nm,0.3s,baz=226,slow=7.6,SNR=23							
	0.6nm,0.6s							
ARSA	**Arzberg**	15.08	328	*e*P		P	23 44 30.2	+2.1
	0.6nm,0.7s							
RONA	**Rosalia, Austr**	15.11	331	*e*P		P	23 44 29.3	+0.9
	1.7nm,0.9s							
CONA	**Conrad Observa**	15.47	330	*i* Pn		Pn	23 44 29.2	+1.3
	3.0nm,1.5s							
MYKA	**Terra Mystica**	15.50	323	*e*pP		pP	23 44 34.7	0.0
	2.1nm,0.8s							
AK13	**Malin Array Si**	15.74	5	P		Pn	23 44 33.7	+2.4
AK14	**Malin Array Si**	15.76	5	P		Pn	23 44 34.0	+2.4
AK12	**Malin Array Si**	15.78	5	P		P	23 44 34.4	-1.3
AK16	**Malin Array Si**	15.80	5	P		P	23 44 34.7	-1.2
AK01	**Malin Array Si**	15.83	5	P		Pn	23 44 34.7	+2.3
AKASG	**Malin Array Be**	15.84	5	Pn		Pn	23 44 31.6	-1.0
	0.2nm,0.3s,baz=194,slow=12,SNR=4.1							
AKBB	**Malin Array Si**	15.84	5	P		Pn	23 44 34.9	+2.3
AK19	**Malin Array Si**	15.85	4	P		Pn	23 44 35.0	+2.3
AK22	**Malin Array Si**	15.89	5	P		P	23 44 35.9	-1.0
KBA	**Koelnbreinsper**	15.96	324	*e*pP		pP	23 44 39.6	-0.3
	1.7nm,0.7s							
MI28	**Mi28,Pidlybu**	16.00	1	P		Pn	23 44 35.3	+0.7
MOA	**Molln**	16.09	327	*i* P		Pn	23 44 38.1	+2.2
	2.7nm,0.9s							
ABTA	**Abfaltersbach**	16.15	321	*i* Pn		Pn	23 44 38.3	+1.6
	2.5nm,0.8s							
BIOA	**Bad Ischl, Aus**	16.26	326	*e*P		P	23 44 40.8	-0.3
	1.1nm,0.4s							
LESA	**Schwarzleotal**	16.52	323	*e*Pn		Pn	23 44 42.0	+0.5
	1.0nm,0.7s							
CKRC	**Cesky Krumlov**	16.81	330	*e*P		P	23 44 47.8	+0.6
WTTA	**Wattenberg**	16.94	321	*e*Pn		Pn	23 44 46.4	-0.5
	3.2nm,0.9s							
WATA	**Walderalm**	17.02	321	*e*P		P	23 44 50.2	+0.6
	4.1nm,0.9s							
GERES	**GERESS Array B**	17.09	329	Pn		Pn	23 44 47.8	-0.9
	baz=157,slow=11,SNR=11							
	0.8nm,0.7s							
SQTA	**Sankt Quirin**	17.13	321	*e*Pn		Pn	23 44 48.9	-0.3
	2.2nm,1.1s							
FETA	**Feichten**	17.26	319	*i* Pn		Pn	23 44 51.5	+0.7
	4.7nm,1.2s							
MOTA	**Moosalm**	17.27	321	*e*P		Pn	23 44 52.1	+1.1
	2.6nm,1.2s							
DPC	**Dobruska-Polom**	17.31	336	*e*P		P	23 44 52.9	+0.1
DPC	**Dobruska-Polom**	17.31	336	P		Pn	23 44 52.1	+0.7
	3.3nm,1.0s							
KHC	**Kasperske Hory**	17.36	329	*e*P		Pn	23 44 50.0	-2.0
KHC					AMS	AMS	23 52 00.0	
	comp=Z,100nm,14.3s							
RETA	**Reutte**	17.54	321	*e*Pn		Pn	23 44 54.6	+0.4
	0.7nm,0.6s							
DAVOX	**Davos/Dischmat**	17.57	318	LR		LR	23 52 13.6	
	comp=Z,58nm,19.8s,baz=280,slow=39							
DAVA	**Damuels**	17.88	319	*e*Pn		Pn	23 44 57.3	-1.2
	4.1nm,0.9s							
CALF	**Calern**	17.91	306	P		P	23 45 00.0	+0.5
CLL	**Collm**	19.29	332	P		Pn	23 45 15.8	+0.3
	2.8nm,0.8s							
CLL	**Collm**	19.29	332	*i* P		P	23 45 15.0	+0.5
CLL				*ex*		x	23 45 23.0	
CLL				*e*S		S	23 48 56.0	+3.2
CLL				*e*SSS		SSS	23 49 26.0	
MNK	**Minsk**	19.58	1	*i* P		P	23 45 18.2	+0.6
	comp=E,7.0nm,0.8s							
MNK				*i* P		P	23 45 18.2	+0.6
	comp=N,6.0nm,1.0s							
MNK				*i* P		P	23 45 18.2	+0.6
	comp=Z,5.0nm,1.0s,baz=182							
MNK				*i* PP		PnPn	23 45 31.9	-0.5
MNK				*i* PPP		PPP	23 45 40.6	
MNK				*i* S		Sn	23 48 56.5	-2.1
MNK				*i* SS		SnSn	23 49 09.7	-3.2
MNK				*i* SSS		SSS	23 49 27.5	
MNK				*i* LR		LR	23 51 48.2	
MNK				*i* LRM		MLR	23 53 12.5	
	comp=Z,26nm,15.6s							
MNK				*i* LRM		MLR	23 53 13.9	
	comp=E,67nm,19.0s							
MNK				*i* LRM		MLR	23 53 14.4	
	comp=N,54nm,14.1s							
TAM	**Tamanrasset**	22.40	243	P		P	23 45 49.8	+1.2
ESDC	**Sonseca Array**	25.11	290	P		P	23 46 13.6	-1.0
	comp=N,0.9nm,0.5s,baz=81,slow=9.4,SNR=20							
	comp=N,0.9nm,0.5s							
FINES	**FINESS Array B**	26.54	359	P		P	23 46 25.2	-2.1
	comp=N,1.1nm,0.8s,baz=160,slow=12,SNR=5.4							
	comp=N,1.1nm,0.8s							
HFS	**Hagfors**	26.69	345	P		P	23 46 26.7	-1.9
	comp=N,2.5nm,0.8s,baz=160,slow=4.7,SNR=8.6							
HFS					LR	LR	23 57 25.8	
	comp=N,46nm,19.6s,baz=156,slow=38							
	comp=N,2.5nm,0.8s							
AKTO	**Aktyubinsk**	27.24	46	LR		LR	00 01 29.0	
	comp=N,39nm,18.2s,baz=246,slow=46							
NOA	**NORSAR Array B**	28.06	344	P		P	23 46 39.5	-1.5
	comp=N,1.0nm,1.0s,baz=287,slow=15,SNR=2.0							
	comp=N,1.0nm,1.0s							
EKA	**Eskdalemuir Ar**	29.17	324	P		P	23 46 49.0	-1.8
	comp=N,0.2nm,0.3s,baz=122,slow=11,SNR=4.5							
	comp=N,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	31.61	233	P		P	23 47 13.9	+1.1
	comp=N,3.9nm,0.8s,baz=36,slow=9.8,SNR=7.1							
	comp=N,3.9nm,0.8s							
ARCES	**ARCESS Array B**	34.67	359	P		P	23 47 37.8	-1.3
	comp=N,2.9nm,1.1s,baz=164,slow=8.7,SNR=7.0							
	comp=N,2.9nm,1.1s							
BVAR	**Borovoye Array**	35.34	46	P		P	23 47 45.8	+0.8
	comp=N,0.6nm,0.6s,baz=252,slow=12,SNR=2.0							
	comp=N,0.6nm,0.6s							
ARK	**Arkit**	35.50	65	P		P	23 47 48.8	+2.2
KURBB	**Kurchatov Arra**	40.01	51	P		P	23 48 25.3	+0.8
	comp=N,2.5nm,0.6s,baz=276,slow=8.9,SNR=30							
	comp=N,2.5nm,0.6s							
KURK	**Kurchatov**	40.08	51	P		P	23 48 25.9	+0.9
BORG	**Borgarnes**	41.53	331	LR		LR	00 06 53.1	
	comp=N,18nm,19.0s,baz=209,slow=38							
MKAR	**Makanchi Array**	42.55	56	P		P	23 48 46.7	+1.2
	comp=N,4.8nm,0.6s,baz=281,slow=6.5,SNR=43							
	comp=N,4.8nm,0.6s							
ZALV	**Zalesovo Beam**	44.00	46	P		P	23 48 57.8	+0.7
	comp=N,1.6nm,0.4s,baz=267,slow=8.6,SNR=12							
	comp=N,1.6nm,0.4s							
SONM	**Songino Array**	58.38	51	P		P	23 50 46.0	+0.8
	comp=N,1.1nm,0.8s,baz=293,slow=7.4,SNR=6.1							
	comp=N,1.1nm,0.8s							
BOSA	**Boshof**	63.22	182	P		P	23 51 18.7	+0.4
	comp=N,5.8nm,1.3s,baz=351,slow=9.5,SNR=1.8							
	comp=N,5.8nm,1.3s							
SCHQ	**Schefferville**	64.40	320	P		P	23 51 24.5	-1.2
	comp=N,1.4nm,0.4s,baz=56,slow=4.4,SNR=8.0							
	comp=N,1.4nm,0.4s							
KSRS	**Korea Array**	77.13	53	P		P	23 52 44.6	+1.1
	comp=N,0.5nm,0.3s,baz=289,slow=3.7,SNR=2.4							
KSRS					LR	LR	00 29 53.1	
	comp=N,15nm,19.8s,baz=175,slow=38							
	comp=N,0.5nm,0.3s							
YKA	**Yellowknife Ar**	78.16	343	P		P	23 52 48.2	-0.5
	comp=N,0.9nm,0.7s,baz=32,slow=5.7,SNR=3.8							
	comp=N,0.9nm,0.7s							
QSPA	**South Pole Qui**	124.78	180	PKP		PKPdf	23 59 49.5	+0.7
	comp=N,0.8nm,0.9s,baz=246,slow=1.2,SNR=6.0							

IDC 30 23:59:23.7±60.0, 32°.36N×90°.56E, h0km, mb3.1/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=861.6km s-min=74.2km az=13.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	15.75	339	Pn	Pn	00 03 04.8	-2.0
	baz=146,slow=13,SNR=2.6						
	0.5nm,0.8s						
SONM	**Songino Array**	19.58	33	P	P	00 03 53.8	+0.4
	0.1nm,0.3s,baz=219,slow=11,SNR=4.3						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	21.97	351	P	P	00 04 18.2	-0.8
	0.6nm,0.6s,baz=171,slow=10,SNR=3.7						
	0.6nm,0.6s						

*IDC **31** 00:00:45.4±0.7, 59°.29S×24°.99W, h0km, mb4.1/8, mbtmp4.2/9, ML4.9/1, MS3.4/15, Error ellipse: s-maj=26.8km s-min=19.7km az=74.0*
*NEIC **31** 00:00:46.5±1.5, 59°.26S±0°.08×24°.8W±0°.1, h10km±1km, mb4.5/51, Error ellipse: s-maj=15.3km s-min=5.5km az=149.0*
ISC 31 00:00:46.3±0.5, 59°.30S±0°.08×24°.94W±0°.09, h10km, n121, σ0°88/106, mb4.5/28, MS3.5/13, 2C-4D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	8.08	303	Pn	Pn	00 02 50.9	+7.3
ORCD	**Orcadas**	10.01	253	Pn	Pn	00 03 16.3	+6.4
VNA1	**Neumayer--Stat**	13.33	155	P	Pn	00 03 54.2	-1.0
	comp=Z,9.1nm,0.2s						
VNA2	**Neumayer--Watz**	13.72	155	⇓P	Pn	00 03 58.9	-1.7
	comp=Z,29nm,0.5s,baz=318,slow=14						
VNA2				⇑S	Sn	00 06 15.5	-17
	comp=E,5.7nm,0.2s,baz=313,slow=18						
SNAA	**Sanae**	15.28	153	⇓P	Pn	00 04 20.1	-1.7
	comp=Z,326nm,0.4s						
SNAA				⇑S	Sn	00 06 52.9	-18
	comp=E,86nm,0.3s						
SNAA	**Sanae**	15.28	153	Pn	Pn	00 04 20.3	-1.5
	comp=E,4.4nm,0.3s,baz=317,slow=15,SNR=36						
SNAA				Sn	Sn	00 06 54.1	-17
	comp=E,0.8nm,0.3s,baz=325,slow=15,SNR=7.8						
SNAA				LR	LR	00 08 29.8	
	comp=E,62nm,19.4s,baz=68,slow=30						
	comp=E,14nm,0.4s						
SNAA	**Sanae**	15.28	153		Pn	00 04 20.5	-1.3
SNAA				IAmb	IAmb	00 04 24.0	
	comp=Z,17nm,0.5s						
ESPZ	**Base Esperanza**	15.80	241		Pn	00 04 25.4	-3.1
TROLL	**Troll, Antarti**	16.80	150	⇓P	Pn	00 04 39.5	-1.9
	comp=Z,159nm,0.2s						
TROLL				⇓S	Sn	00 07 30.2	-18
	comp=E,235nm,0.3s						
PMSA	**Palmer Station**	18.89	237	LR	LR	00 10 52.8	
	comp=E,145nm,20.4s,baz=78,slow=32						
BELA	**Belgrano 2**	18.94	186	P	P	00 05 07.7	+0.7
BELA				IAmb	IAmb	00 05 16.2	
	comp=Z,17nm,0.5s						
EFI	**East Falkland**	20.08	278		P	00 05 19.7	+0.1

	comp=Z,8.1nm,1.1s						
PB09	**IPOC Station P**	**48.84**	**300**	P	**P**	**00 09 32.2**	**+0.3**
PB09				IAmb	IAmb	00 09 48.3	
	comp=Z,4.8nm,1.0s						
PB03	**IPOC Station P**	**48.85**	**300**	P	**P**	**00 09 31.4**	**-0.6**
PB03				IAmb	IAmb	00 09 48.4	
	comp=Z,2.5nm,0.8s						
LBTB	**Lobatse**	**48.94**	**68**	P	**P**	**00 09 31.0**	**-1.6**
LBTB				IAmb	IAmb	00 09 40.2	
	comp=Z,4.7nm,1.1s						
PB07	**IPOC Station P**	**49.19**	**300**	P	**P**	**00 09 33.2**	**-1.4**
PB07				IAmb	IAmb	00 09 35.8	
	comp=Z,6.7nm,1.0s						
PB02	**IPOC Station P**	**49.55**	**300**	P	**P**	**00 09 36.7**	**-0.5**
PB02				IAmb	IAmb	00 09 51.9	
	comp=Z,7.2nm,0.9s						
TSUM	**Tsumeb**	**50.36**	**56**	LR	LR	00 27 06.1	
	comp=Z,45nm,18.3s,baz=166,slow=31						
GO01	**Chusmiza**	**50.69**	**302**	P	**P**	**00 09 45.2**	**-1.1**
PB11	**IPOC Station P**	**50.81**	**301**	P	**P**	**00 09 45.1**	**-1.8**
PB11				IAmb	IAmb	00 10 04.4	
	comp=Z,5.9nm,1.1s						
PB16	**IPOC Station P**	**52.00**	**302**	P	**P**	**00 09 55.2**	**-1.1**
PB12	**IPOC Station P**	**52.12**	**301**	P	**P**	**00 09 55.1**	**-1.5**
PB12				IAmb	IAmb	00 10 00.8	
	comp=Z,10nm,1.1s						
LPAZ	**La Paz**	**53.23**	**305**	P	**P**	**00 10 05.2**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=163,slow=2.9,SNR=7.3						
LPAZ				LR	LR	00 36 21.2	
	comp=Z,18nm,18.1s,baz=150,slow=40						
	comp=Z,1.0nm,0.5s						
LPAZ	**La Paz**	**53.23**	**305**		**S**	**00 10 04.9**	**-0.6**
MATP	**Matopo**	**54.23**	**68**	LR	LR	00 28 48.7	
	comp=Z,50nm,19.5s,baz=28,slow=31						
LSZ	**Lusaka**	**58.54**	**65**	P	**P**	**00 10 42.2**	**-0.7**
LSZ				IAmb	IAmb	00 11 02.1	
	comp=Z,3.8nm,0.9s						
BOAV	**Boa Vista**	**67.58**	**321**	P	**P**	**00 11 41.7**	**-1.1**
BOAV				IAmb	IAmb	00 11 42.9	
	comp=Z,2.1nm,0.8s						
MDP	**Montagnes des**	**67.87**	**330**	LR	LR	00 38 03.3	
	comp=Z,25nm,21.1s,baz=226,slow=33						
MBAR	**Mbarara**	**72.65**	**60**	LR	LR	00 42 30.0	
	comp=Z,26nm,18.7s,baz=186,slow=34						
ROSC	**El Rosal**	**74.87**	**308**	LR	LR	00 48 04.9	
	comp=Z,42nm,18.0s,baz=228,slow=38						
TORD	**Torodi Ar. Bea**	**75.36**	**27**	P	**P**	**00 12 30.9**	**+1.2**
	comp=Z,2.4nm,0.6s,baz=200,slow=6.5,SNR=20						
	comp=Z,4.4nm,0.6s						
SDV	**Santo Domingo**	**77.15**	**314**	LR	LR	00 47 21.0	
	comp=Z,30nm,20.7s,baz=72,slow=36						
URZ	**Urewera**	**81.09**	**197**	LR	LR	00 47 12.8	
	comp=Z,29nm,18.0s,baz=221,slow=34						
ASAR	**Alice Springs**	**95.52**	**161**	P	**P**	**00 14 10.6**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=187,slow=4.9,SNR=1.9						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**126.70**	**28**	PKP	**PKiKP**	**00 19 49.1**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=238,slow=2.6,SNR=1.4						
YKA	**Yellowknife Ar**	**139.36**	**315**	PKP	**PKPdf**	**00 20 12.2**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=129,slow=2.3,SNR=2.2						
P33M	**Teslin, Yukon**	**145.32**	**303**	P	**PKPdf**	**00 20 23.1**	**+0.3**
	baz=121,SNR=9.9						
P32M	**Atlin**	**145.38**	**302**	P	**PKPab**	**00 20 23.6**	**+0.6**
	baz=121,SNR=7.3						
MMPY	**Sheldon Lake,**	**145.87**	**308**	P	**PKPab**	**00 20 25.0**	**+0.2**
	baz=118						
HYT	**Haines Junctio**	**147.64**	**302**	P	**PKPbc**	**00 20 30.8**	**+1.2**
	baz=118						
N30M	**Aishikik Lake**	**147.75**	**304**	P	**PKPbc**	**00 20 30.7**	**+0.9**
	baz=117						
M30M	**Minto, Yukon**	**148.12**	**306**	P	**PKPbc**	**00 20 31.2**	**+0.5**
	baz=116,SNR=12						
H31M	**Peel River**	**148.46**	**312**	P	**PKPbc**	**00 20 31.3**	**-0.1**
	baz=112						
J30M	**Hart River**	**148.76**	**309**	P	**PKPbc**	**00 20 32.9**	**+0.6**
	baz=113,SNR=5.5						
M29M	**Somme Creek**	**148.77**	**305**	P	**PKPbc**	**00 20 33.4**	**+1.0**
	baz=115,SNR=12						
O28M	**Mount Upton**	**148.79**	**301**	P	**PKPbc**	**00 20 33.7**	**+1.0**
	baz=116						
YUK8	**Steele Glacier**	**148.83**	**302**	P	**PKiKP**	**00 20 33.8**	**-0.3**
	baz=116						
F31M	**Tsiigehtchic**	**148.83**	**315**	P	**PKPbc**	**00 20 31.8**	**-0.5**
	baz=110						
G31M	**Satah River**	**148.84**	**314**	P	**PKPbc**	**00 20 32.6**	**+0.3**
	baz=110						
L29M	**L29M**	**148.91**	**306**	P	**PKiKP**	**00 20 33.7**	**-0.3**
	baz=114,SNR=13						
K29M	**Barlow Dome**	**148.95**	**307**	P	**PKPbc**	**00 20 33.2**	**+0.3**
	baz=113,SNR=5.8						
I30M	**Mount Dempster**	**149.03**	**310**	P	**PKPbc**	**00 20 33.6**	**+0.5**
	baz=112,SNR=5.5						
INK	**Inuvik**	**149.05**	**317**	P	**PKPbc**	**00 20 33.5**	**+0.7**
	baz=109						
YUK3	**Moose Creek**	**149.34**	**303**	P	**PKPbc**	**00 20 34.2**	**+0.1**
	baz=115						
G30M	**tAoh Zraii Nji**	**149.59**	**314**	P	**PKPbc**	**00 20 34.6**	**+0.4**
	baz=109						
SONM	**Songino Array**	**149.61**	**90**	PKPbc	**PKiKP**	**00 20 36.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=222,slow=1.9,SNR=1.9						
F30M	**Barrier River**	**149.63**	**315**	P	**PKPbc**	**00 20 35.0**	**+0.7**
	baz=108						
DAWY	**Dawson**	**149.80**	**307**	P	**PKPbc**	**00 20 35.2**	**+0.4**
	baz=112						
CRQE	**Cirque**	**150.06**	**300**	P	**PKiKP**	**00 20 36.5**	**0.0**
	baz=115						
H29M	**Whitestone**	**150.15**	**312**	P	**PKPbc**	**00 20 36.2**	**+0.6**
	baz=109,SNR=5.4						
M27K	**Edge Creek, AK**	**150.19**	**303**	P	**PKPbc**	**00 20 35.8**	**-0.1**
	baz=113						
G29M	**Pine Creek**	**150.24**	**313**	P	**PKPbc**	**00 20 36.1**	**+0.3**
	baz=108,SNR=8.6						
KAIM	**Kayak Island**	**150.31**	**298**	P	**PKiKP**	**00 20 38.0**	**+1.1**
	baz=116						
L27K	**Beaver Creek,**	**150.44**	**305**	P	**PKPbc**	**00 20 36.9**	**+0.5**
	baz=112						
I28M	**Miner Creek**	**150.50**	**310**	P	**PKPbc**	**00 20 36.9**	**+0.3**
	baz=109						
M26K	**Nabesna, AK**	**150.69**	**303**	P	**PKiKP**	**00 20 38.8**	**+1.1**
	baz=112						
BMRM	**Bremner River**	**150.83**	**300**	P	**PKPbc**	**00 20 37.9**	**+0.5**
	baz=114						
N25K	**Chitina, Valde**	**151.08**	**301**	P	**PKiKP**	**00 20 38.9**	**+0.3**
	baz=113						
F28M	**Old Crow**	**151.13**	**314**	P	**PKiKP**	**00 20 38.7**	**+0.2**
	baz=105,SNR=5.4						
EYAK	**Cordova Ski Ar**	**151.17**	**298**	P	**PKiKP**	**00 20 39.6**	**+1.0**
	baz=114						
I27K	**Kandik River**	**151.22**	**310**	P	**PKiKP**	**00 20 39.0**	**+0.3**
	baz=108,SNR=7.4						
H27K	**Steamboat Moun**	**151.37**	**311**	P	**PKiKP**	**00 20 39.3**	**+0.3**
	baz=107,SNR=8.1						
KLU	**Klutina**	**151.62**	**300**	P	**PKiKP**	**00 20 40.8**	**+1.1**
	baz=112						
RIDG	**Independent Ri**	**151.95**	**305**	P	**PKiKP**	**00 20 40.7**	**+0.4**
	baz=109						
WAT6	**Susitna Watana**	**152.81**	**302**	P	**PKiKP**	**00 20 43.0**	**+0.8**
	baz=109						
ILAR	**Eielson Array**	**153.11**	**306**	PKPbc	**PKiKP**	**00 20 43.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=110,slow=1.4,SNR=12						

*MOS **31** 00:30:50.7,41˙.84N×46˙.58E,h8km,MPVA3.4*
*AZER **31** 00:30:51.1,41˙.67N×46˙.46E,h9km,ml2.6*
*DRS **31** 00:30:52.9,41˙.95N×46˙.57E,h6km*
*NORS **31** 00:30:52.5,41˙.79N×46˙.51E,h2km,MPVA3.5*

ISC 31 00:30:52.4±0.9,41˙.79N±0˙.02×46˙.51E±0˙.02,h9km±7km,
n56,σ1°26/111,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.17**	**151**	P	**Pg**	**00 30 56.0**	**0.0**
ZKTA				S	**Sg**	**00 30 59.5**	**+1.0**
TLTR	**Tlyarata**	**0.34**	**340**	*i* Pg	**Pg**	**00 30 58.6**	**-0.6**
TLTR				*e*Sg	**Sg**	**00 31 03.4**	**-0.4**
KMKR	**Kumukh**	**0.56**	**52**	*i* Pg	**Pg**	**00 31 03.0**	**-0.2**
KMKR				*e*Sg	**Sg**	**00 31 11.3**	**+0.7**
GNBR	**Gunib**	**0.69**	**29**	*i* Pg	**Pg**	**00 31 05.4**	**-0.3**
GNBR				*e*Sg	**Sg**	**00 31 14.9**	**+0.1**
XNZR	**Khunzakh**	**0.77**	**11**	*i* Pg	**Pg**	**00 31 07.3**	**+0.1**
XNZR				*e*Sg	**Sg**	**00 31 17.9**	**+0.6**
SEKA	**Sheki**	**0.77**	**138**	P	**Pg**	**00 31 06.3**	**-0.9**
SEKA				S	**Sb**	**00 31 19.5**	**+0.8**
ARKR	**Arakani**	**0.89**	**24**	*e*Pg	**Pg**	**00 31 08.1**	**-1.5**
ARKR				*e*Sg	**Sg**	**00 31 20.4**	**-0.8**
BTLR	**Botlikh**	**0.90**	**346**	*e*Pg	**Pg**	**00 31 09.1**	**-0.7**
BTLR				*e*Sg	**Sg**	**00 31 21.2**	**-0.4**
URKR	**Urkarakh**	**0.92**	**65**	*i* Pg	**Pg**	**00 31 09.4**	**-0.6**
URKR				*e*Sg	**Sg**	**00 31 22.6**	**+0.7**
UNCR	**Uncukul**	**0.95**	**13**	*e*Pg	**Pb**	**00 31 09.7**	**-1.3**
UNCR				*e*Sg	**Sb**	**00 31 22.9**	**-0.9**
AKT	**Akhty**	**0.96**	**108**	*e*Pg	**Pb**	**00 31 09.8**	**-1.5**
AKT				*e*Sg	**Sb**	**00 31 23.3**	**-0.9**
KRNR	**Karanay**	**1.08**	**16**	*e*Pg	**Pb**	**00 31 12.3**	**-1.0**
KRNR				*e*Sg	**Sb**	**00 31 26.9**	**-0.7**
SGKR	**Sergokala**	**1.09**	**51**	*e*Pg	**Pb**	**00 31 12.6**	**-0.7**
SGKR				*e*Sg	**Sb**	**00 31 27.9**	**+0.3**
MNGR	**Mingechevir, A**	**1.10**	**157**	P	**Pb**	**00 31 13.0**	**-0.5**
MNGR				S	**Sb**	**00 31 27.4**	**-0.6**
QZX	**Qazax, Azerbai**	**1.12**	**230**	P	**Pb**	**00 31 11.7**	**-2.4**
QZX				S	**Sb**	**00 31 28.2**	**-0.6**
BUJR	**Buynaksk**	**1.13**	**23**	*e*Pg	**Pb**	**00 31 13.1**	**-1.0**
BUJR				*e*Sg	**Sb**	**00 31 29.0**	**+0.1**
GANJ	**Ganja**	**1.15**	**187**	P	**Pn**	**00 31 11.8**	**-2.9**
GANJ				S	**Sb**	**00 31 27.5**	**-1.9**
DVE	**Vedeno**	**1.21**	**346**	*e*Pg	**Pn**	**00 31 14.9**	**-0.6**
DVE				*e*Sg	**Sb**	**00 31 31.4**	**+0.2**
GDB	**GEDABAY**	**1.21**	**209**	P	**Pn**	**00 31 12.4**	**-3.2**
GDB				S	**Sb**	**00 31 29.1**	**-2.2**
KSMR	**Kasumkent**	**1.22**	**98**	*e*Pg	**Pn**	**00 31 14.6**	**-1.1**
KSMR				*e*Sg	**Sb**	**00 31 31.7**	**+0.1**
DBC	**Dubki**	**1.26**	**11**	*e*Pg	**Pn**	**00 31 14.9**	**-1.3**
DBC				*e*Sg	**Sb**	**00 31 32.2**	**-0.4**
DLMR	**Dylym**	**1.29**	**4**	*e*Pg	**Pn**	**00 31 14.9**	**-1.6**
DLMR				*e*Sg	**Sb**	**00 31 32.2**	**-1.2**
QBL	**Gabala**	**1.30**	**130**	P	**Pn**	**00 31 16.3**	**-0.5**
QBL				S	**Sb**	**00 31 34.0**	**+0.1**
QSAR	**Qusar**	**1.34**	**101**	Pn	**Pn**	**00 31 17.0**	**-0.3**
QSAR				Sn	**Sg**	**00 31 38.1**	**+2.7**
XNQ	**Khinaliq**	**1.37**	**116**	Pn	**Pn**	**00 31 17.3**	**-0.6**
XNQ				Sn	**Sg**	**00 31 37.6**	**+1.2**
DRN	**Derbent**	**1.38**	**79**	*e*Pg	**Pn**	**00 31 17.5**	**-0.2**
DRN				*e*Sg	**Sb**	**00 31 36.5**	**+0.5**
MAK	**Makhachkala**	**1.39**	**32**	*e*Pg	**Pn**	**00 31 16.5**	**-1.4**
MAK				*e*Sg	**Sn**	**00 31 34.0**	**-2.4**
GROC	**Groznyy**	**1.51**	**340**	*e*Pg	**Pb**	**00 31 21.1**	**+0.5**
GROC				*e*Sg	**Sg**	**00 31 42.5**	**+1.5**
QUBA	**Quba, Azerbaij**	**1.55**	**105**	Pn	**Pn**	**00 31 20.9**	**+0.7**
QUBA				Sn	**Sg**	**00 31 43.8**	**+1.7**
IML	**Ismayilli**	**1.60**	**128**	Pn	**Pn**	**00 31 22.0**	**+1.1**
IML				Sn	**Sn**	**00 31 41.5**	**-0.2**
BRDA	**Brd**	**1.60**	**161**	Pn	**Pn**	**00 31 21.2**	**+0.4**
AGDM	**Agdam**	**1.74**	**165**	Pn	**Pn**	**00 31 22.6**	**-0.2**
AGDM				Sn	**Sn**	**00 31 46.0**	**+1.0**
ZRD	**Zardab**	**1.75**	**149**	Pn	**Pn**	**00 31 22.2**	**-0.6**
ZRD				Sn	**Sb**	**00 31 47.7**	**+1.1**
KMGR	**Komgaron**	**1.76**	**317**	*e*Pg	**Pb**	**00 31 26.1**	**+1.3**
KMGR				*e*Sg	**Sg**	**00 31 50.2**	**+1.2**
PQL	**Pirkuli**	**1.86**	**122**	Pg	**Pn**	**00 31 26.0**	**+1.4**
PQL				Sn	**Sb**	**00 31 51.7**	**+1.8**
KDMR	**Kurdemir**	**1.89**	**138**	Pn	**Pn**	**00 31 25.9**	**+1.1**
KDMR				Sn	**Sn**	**00 31 50.1**	**+1.3**
SIZA	**Siyzn**	**1.93**	**111**	Pn	**Pn**	**00 31 26.6**	**+1.2**
SIZA				Sn	**Sb**	**00 31 53.8**	**+1.8**
LACR	**Lac**	**1.94**	**303**	*e*Pg	**Pn**	**00 31 27.4**	**+1.7**
LACR				*e*Sg	**Sb**	**00 31 54.6**	**+2.1**
ATGJ	**Altiaghaj**	**2.05**	**116**	Pg	**Pn**	**00 31 28.9**	**+1.8**
ATGJ				Sg	**Sg**	**00 31 57.8**	**-0.4**
GNI	**Garni**	**2.11**	**220**	*i* Pn	**Pn**	**00 31 29.1**	**+1.0**
GNI				*e*Sn	**Sb**	**00 31 58.3**	**+0.9**
BTKR	**Batakoyurt**	**2.15**	**318**	*e*Pg	**Pn**	**00 31 29.3**	**+0.8**
BTKR				*e*Sg	**Sb**	**00 31 58.9**	**+0.6**
ARNR	**Ardon**	**2.16**	**311**	*e*Pg	**Pn**	**00 31 30.5**	**+1.9**
ARNR				*e*Sg	**Sg**	**00 32 01.4**	**-0.3**
BLQ	**Beylaqan**	**2.21**	**159**	Pn	**Pn**	**00 31 29.6**	**+0.3**
BLQ				Sn	**Sn**	**00 31 56.6**	**-0.1**
GBS	**Qobustan**	**2.22**	**123**	Pn	**Pn**	**00 31 30.3**	**+0.9**
GBS				Sn	**Sn**	**00 31 57.7**	**+0.7**
KORR	**Kora**	**2.23**	**306**	*e*Pg	**Pb**	**00 31 33.3**	**+0.5**
KORR				*e*Sg	**Sg**	**00 32 03.5**	**-0.5**
QRD	**Qoradiz**	**2.40**	**165**	Pg	**Pn**	**00 31 32.7**	**+0.8**
QRD				Sn	**Sn**	**00 32 02.0**	**+0.6**
HYR	**Heyderabad**	**2.42**	**212**	Pn	**Pn**	**00 31 33.6**	**+1.4**
HYR				Sn	**Sn**	**00 31 59.9**	**-2.0**
LSNR	**Lesken**	**2.48**	**308**	*e*Pn	**Pb**	**00 31 36.2**	**-0.9**
LSNR				*e*Sn	**Sb**	**00 32 10.7**	**+2.8**
SBZ	**Shahbuz**	**2.50**	**197**	Pg	**Pn**	**00 31 33.6**	**+0.3**
SBZ				Sg	**Sb**	**00 32 07.5**	**-0.8**
IGDI	**IGDIR**	**2.66**	**225**	Pg	**Pn**	**00 31 36.9**	**+1.4**
IGDI				Sn	**Sn**	**00 32 09.1**	**+1.1**
ORD	**Ordubad**	**2.88**	**188**	Pn	**Pn**	**00 31 37.2**	**-1.4**
ORD				Sn	**Sn**	**00 32 13.6**	**+0.2**
GLBA	**Clilabad**	**2.92**	**150**	Pn	**Pn**	**00 31 38.9**	**-0.1**
GLBA				Sn	**Sn**	**00 32 15.7**	**+1.6**
YRD	**Yardimli**	**3.16**	**155**	Pn	**Pn**	**00 31 42.3**	**-0.1**
YRD				Sn	**Sn**	**00 32 20.4**	**+0.1**
KBZ	**Khabaz**	**3.29**	**307**	*e*Pn	**Pn**	**00 31 47.9**	**+3.8**
KBZ				*e*Sn	**Sb**	**00 32 28.3**	**-2.9**
LRK	**Lerik**	**3.44**	**155**	Pn	**Pn**	**00 31 46.0**	**-0.3**
LRK				Sn	**Sn**	**00 32 27.9**	**+0.7**
SHA1	**Shidzhatmaz**	**3.44**	**306**	*i* Pn	**Pn**	**00 31 46.9**	**+0.4**
SHA1				*e*Sn	**Sn**	**00 32 28.9**	**+1.5**

*GFZ **31** 00:37:07.8±0.3,9˚S×115˚E±˚,h82km±9km,M4.2/8,*
mb4.2/6,Error ellipse: s-maj=11.7km s-min=5.0km az=6.3,
confirmed
*IDC **31** 00:37:08.5±2.8,8˚S×115˚E,h91km±23km,mb3.7/5,*
mbtmp4.0/6,MS3.3/1,Error ellipse: s-maj=24.1km
s-min=17.1km az=55.0
*NEIC **31** 00:37:08.2±0.7,9˚S×115˚E±0˙.07,h72km±8km,*
mb4.2/7,Error ellipse: s-maj=9.7km s-min=6.5km az=85.0
*DJA **31** 00:37:09.4±0.5,9˚S×115˚E±˚,h39km±11km,M4.6/13,*
mB5.7/1,mb5.0/4,MLv4.5/13,Mw(mB)5.2/1

ISC 31 00:37:08.4±0.7,9˚15S±0˙07×115˚07E±0˙04,h90km±7km,
n69,σ1°61/76,mb4.1/9,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.48**	**17**	P	**Pn**	**00 37 23.6**	**+0.6**
DNP	**Denpasar**	**0.48**	**17**	P	**Pn**	**00 37 23.9**	**+0.9**
RTBI	**Rangdo, Negare**	**0.69**	**349**	P	**Pn**	**00 37 25.4**	**+0.5**
RTBI				S	**Sn**	**00 37 38.1**	**+1.0**
RTBI	**Rangdo, Negare**	**0.69**	**349**	P	**Pn**	**00 37 25.5**	**+0.7**
KHKI	**Kahang-Kahang**	**0.94**	**34**	P	**Pn**	**00 37 29.8**	**+2.4**
KHKI				S	**Sn**	**00 37 45.0**	**+3.4**
JAGI	**Jajag, Banyuwa**	**1.13**	**306**	P	**Pn**	**00 37 30.0**	**+0.4**
JAGI	**Jajag, Banyuwa**	**1.13**	**306**		**Pn**	**00 37 29.9**	**+0.4**
JAGI				Sn	**Sn**	**00 37 45.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**1.13**	**306**	P	**Pn**	**00 37 30.2**	**+0.6**
JAGI				S	**Sn**	**00 37 45.5**	**0.0**
JAGI	**Jajag, Banyuwa**	**1.13**	**306**	P	**Pn**	**00 37 29.9**	**+0.3**
ABJI	**Asem Bagus**	**1.57**	**328**	P	**Pn**	**00 37 36.1**	**+1.0**
TWSI	**Taliwang, Sumb**	**1.84**	**77**	P	**Pn**	**00 37 38.1**	**-0.3**
TWSI				S	**Sn**	**00 38 02.6**	**+1.3**
TWSI	**Taliwang, Sumb**	**1.84**	**77**	P	**Pn**	**00 37 37.9**	**-0.5**
PLAI	**Plampang**	**2.69**	**83**	P	**Pn**	**00 37 50.6**	**+0.8**
PLAI	**Plampang**	**2.69**	**83**	P	**Pn**	**00 37 51.0**	**+1.2**
PLAI				S	**Sn**	**00 38 23.9**	**+2.3**
PLAI	**Plampang**	**2.69**	**83**	P	**Pn**	**00 37 50.6**	**+0.8**
SNJI	**Sawahan-Nganju**	**3.54**	**292**	P	**Pn**	**00 38 03.5**	**+2.1**
SJI	**Sawahan**	**3.56**	**293**	P	**Pn**	**00 38 02.6**	**+1.1**
PCJI	**Pacitan**	**3.96**	**283**	P	**Pn**	**00 38 05.1**	**+1.6**
WBSI	**Waikabubak, Su**	**4.29**	**97**	P	**Pn**	**00 38 08.8**	**-2.6**
WOJI	**Wonogiri, Jawa**	**4.30**	**287**	P	**Pn**	**00 38 13.1**	**+1.6**
UGM	**Wanagama**	**4.66**	**285**	P	**Pn**	**00 38 17.8**	**+1.4**
UGM	**Wanagama**	**4.66**	**285**	S	**Sn**	**00 39 11.3**	**+1.9**
UGM	**Wanagama**	**4.66**	**285**	Pn	**Pn**	**00 38 17.5**	**+1.1**
UGM	**Wanagama**	**4.66**	**285**	P	**Pn**	**00 38 17.4**	**+1.0**
BSSI	**Bau Bau, Buton**	**6.14**	**61**	P	**Pn**	**00 38 35.8**	**-0.9**
KAPI	**Kappang**	**6.20**	**49**	P	**Pn**	**00 38 30.0**	**+0.6**
KAPI	**Kappang**	**6.20**	**49**	P	**Pn**	**00 38 37.0**	**-0.3**
	18nm,0.4s,baz=208,slow=7.8,SNR=22						
KAPI				S	**Sn**	**00 39 44.4**	**-2.4**
	19nm,0.7s,baz=117,slow=21,SNR=12						
KAPI	**Kappang**	**6.20**	**49**	Pn	**Pn**	**00 38 37.1**	**-0.3**
KAPI					**Sn**	**00 39 46.1**	**-0.8**
KAPI	**Kappang**	**6.20**	**49**	P	**Pn**	**00 38 37.4**	**0.0**
KPJI	**Karang Pucung**	**6.34**	**286**	P	**Pn**	**00 38 42.2**	**+3.0**
	0.2nm38nm,0.4s						
KPJI	**Karang Pucung**	**6.34**	**286**	P	**Pn**	**00 38 40.4**	**+1.2**
SPSI	**Sidrap Palu**	**6.95**	**43**	P	**Pn**	**00 38 47.4**	**-0.2**
BBJI	**Bungbulang**	**7.53**	**282**	P	**Pn**	**00 38 56.5**	**+0.9**
BBJI	**Bungbulang**	**7.53**	**282**	Pn	**Pn**	**00 38 56.2**	**+0.6**
BBJI	**Bungbulang**	**7.53**	**282**	P	**Pn**	**00 38 55.6**	**0.0**
BATI	**Baumata**	**8.54**	**98**	P	Pn	00 39 03.6	-5.7
BATI				S	Sn	00 40 30.2	-14
	20nm,0.3s,baz=155,slow=2.2,SNR=1.6						
SOEI	**Soe**	**9.09**	**95**	Pn	**Pn**	**00 39 16.6**	**-0.4**
CGJI	**Cibinong**	**9.62**	**284**	P	**Pn**	**00 39 25.1**	**+1.0**
CGJI	**Cibinong**	**9.62**	**284**	P	**Pn**	**00 39 24.0**	**-0.1**
TOLI2	**Tolitoli**	**11.67**	**29**	Pn	**Pn**	**00 39 51.9**	**0.0**
MBWA	**Marble Bar**	**12.76**	**160**	P	**Pn**	**00 40 03.3**	**-3.2**
MBWA	**Marble Bar**	**12.76**	**160**	Pn	**Pn**	**00 40 02.2**	**-4.3**
MBWA	**Marble Bar**	**12.76**	**160**	P	**Pn**	**00 40 02.9**	**-3.6**
MNAI	**Manna**	**12.93**	**291**	P	**Pn**	**00 40 10.2**	**+1.4**
MNAI	**Manna**	**12.93**	**291**	Pn	**Pn**	**00 40 06.6**	**-2.2**
GIRL	**Giralia**	**13.45**	**183**	Pn	**Pn**	**00 40 14.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**13.59**	**132**	P	**Pn**	**00 40 16.6**	**-0.7**
	5.9nm,0.4s,baz=339,slow=7.0,SNR=16						
FITZ				S	Sn	00 42 34.8	-12
	5.0nm,0.5s,baz=350,slow=19,SNR=8.9						
FITZ	**Fitzroy Crossi**	**13.59**	**132**	Pn	**Pn**	**00 40 16.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**13.59**	**132**	P	**Pn**	**00 40 16.0**	**-1.4**
KNRA	**Kununurra**	**14.86**	**117**	Pn	**Pn**	**00 40 30.6**	**-3.3**
MTN	**Manton Dam**	**16.19**	**105**	Pn	**Pn**	**00 40 47.3**	**-3.3**
MTN				IAmb	IAmb	00 40 60.0	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**21.46**	**122**		**P**	**00 41 49.3**	**-0.4**
WB0				IAmb	IAmb	00 42 11.0	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**21.49**	**122**	P	**P**	**00 41 50.3**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=298,slow=8.9,SNR=9.8						
WRA				S	**S**	**00 45 43.1**	**-0.5**
	comp=Z,0.8nm,1.1s,baz=298,slow=20,SNR=2.2						
WRA				ScP	**ScP**	**00 49 17.1**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=288,slow=2.2,SNR=2.1						
WR8	**Warramunga Arr**	**21.63**	**122**	P	**P**	**00 41 51.4**	**-0.1**
WR8				IAmb	IAmb	00 42 28.8	
	comp=Z,13nm,1.4s						
ASAR	**Alice Springs**	**23.08**	**131**	P	**P**	**00 42 07.4**	**+0.8**
	comp=Z,4.6nm,0.6s,baz=307,slow=9.1,SNR=36						
ASAR				PcP	**PcP**	**00 45 53.3**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=317,slow=2.5,SNR=2.6						
ASAR				S	**S**	**00 46 14.8**	**+4.0**
	comp=Z,0.2nm,0.5s,baz=304,slow=23,SNR=1.0						
	comp=Z,4.6nm,0.6s						
ASAR	**Alice Springs**	**23.08**	**131**	P	**P**	**00 42 06.9**	**+0.3**
FORT	**Forrest**	**24.70**	**152**	P	**P**	**00 42 22.5**	**+1.3**
FORT				IAmb	IAmb	00 42 43.7	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	**30.51**	**144**	P	**P**	**00 43 13.6**	**+0.5**
STKA	**Stephens Creek**	**33.42**	**136**	P	**P**	**00 43 40.0**	**+1.3**
	comp=Z,2.9nm,0.5s,baz=307,slow=9.3,SNR=8.0						
	comp=Z,2.9nm,0.5s						
H08S2	**Diego Garcia H**	**42.13**	**269**	T	T	01 30 07.4	
	baz=95,slow=75,SNR=7.6						
H08S3	**Diego Garcia H**	**42.14**	**269**	T	T	01 30 09.6	
	baz=95,slow=75,SNR=13						
H08S1	**Diego Carcia H**	**42.15**	**269**	T	T	01 29 45.8	
	baz=95,slow=75,SNR=6.1

PLIG				*eS*	**Sn**	**01 21 15.2**	**-1.4**
PPM	**Popocatepetl**	**4.47**	**329**	*eP*	**Pn**	**01 20 29.2**	**+4.1**
PPM				*eS*	**Sn**	**01 21 23.0**	**+5.7**
LVIG	**Laguna Verde**	**4.48**	**357**	*eP*	**Pn**	**01 20 24.2**	**-0.6**
LVIG				*i S*	**Sn**	**01 21 10.5**	**-6.3**
LVIG	**Laguna Verde**	**4.48**	**357**		**Pn**	**01 20 20.5**	**-4.2**
LVIG					**Sn**	**01 21 10.5**	**-6.3**
YAIG	**Yautepec**	**4.54**	**323**	*eP*	**Pn**	**01 20 28.6**	**+2.9**
YAIG				*eS*	**Sn**	**01 21 15.4**	**-3.1**
MPVM	**San Francisco**	**4.78**	**326**	*eP*	Pn	01 20 34.0	+4.9
TLVM	**San Miguel Top**	**4.86**	**325**	*eP*	Pb	01 20 36.7	-5.7
MAVM	**Malinalco, Edo**	**4.86**	**320**	*eP*	**Pn**	**01 20 33.7**	**+3.4**
MZVM		**4.89**	**324**	*eP*	**Pn**	**01 20 33.7**	**+3.3**
ARIG	**Puente Sto Nin**	**5.00**	**308**	*eP*	**Pn**	**01 20 35.1**	**+3.1**
ARIG				*eS*	**Sn**	**01 21 25.0**	**-4.8**
AOVM	**Tlapan**	**5.00**	**324**	*eP*	**Pn**	**01 20 36.0**	**+3.6**
PBVM	**Pinon**	**5.01**	**327**	*eP*	**Pn**	**01 20 35.0**	**+2.8**
INVM	**La Marquesa**	**5.05**	**324**	*eP*	**Pn**	**01 20 37.0**	**+3.9**
CXUV	**Coxquihui**	**5.09**	**345**	*eP*	Pn	01 20 38.8	+5.5
CXUV				*eS*	**Sn**	**01 21 33.9**	**+1.8**
PTVM	**Pico Tres Padr**	**5.15**	**328**	*eP*	**Pn**	**01 20 35.8**	**+1.5**
TOVM	**TOLUCA**	**5.22**	**321**	*eP*	**Pn**	**01 20 38.5**	**+3.1**
APG	**El Apazote**	**5.55**	**92**	P	Pn	01 20 46.3	+6.5
	0.2nm,0.4s,baz=229,slow=22,SNR=4.2						
APG				S	**Sn**	**01 21 42.8**	**-0.8**
	1.0nm,0.5s,baz=116,slow=11,SNR=5.4						
ZIIG	**Zihuatanejo**	**5.58**	**296**	*eP*	Pn	01 20 45.4	+5.5
ZIIG				*eS*	**Sn**	**01 21 40.4**	**-3.6**
DEIG	**Demacu**	**5.72**	**332**	*eP*	**Pn**	**01 20 44.1**	**+2.0**
DEIG				*eS*	**Sn**	**01 21 47.9**	**-0.1**
PETF	**Flores**	**6.32**	**74**	Pn	**Pn**	**01 20 51.5**	**+1.4**
CTUV	**Llano Grande**	**6.54**	**342**	*eP*	Pb	01 21 04.0	-6.8
TEIG	**Tepich**	**9.04**	**56**	LR	LR	01 24 30.2	
	comp=Z,62nm,19.9s,baz=158,slow=43						
TEIG	**Tepich**	**9.04**	**56**	Pn	**Pn**	**01 21 26.6**	**-0.9**
TXAR	**Lajitas Array**	**15.64**	**335**	P	**Pn**	**01 22 59.3**	**+1.8**
	0.4nm,0.9s,baz=158,slow=14,SNR=14						
TXAR				LR	LR	01 29 04.4	
	comp=Z,90nm,19.2s,baz=142,slow=39						
TXAR	**Lajitas Array**	**15.64**	**335**	Pn	**P**	**01 23 01.1**	**-0.5**
TX31	**Lajitas Ar. Si**	**15.64**	**335**	P	**P**	**01 23 04.4**	**+2.8**
OZNA	**Ozona**	**16.26**	**345**	Pn	**P**	**01 23 07.9**	**-0.6**
ALPN	**Alpine**	**16.55**	**337**	Pn	**P**	**01 23 11.8**	**-0.1**
PECS	**Pecos**	**17.53**	**338**		**P**	**01 23 26.1**	**+3.5**
ODSA	**Odessa**	**17.78**	**342**		**P**	**01 23 28.1**	**+2.7**
ODSA				IAmb	IAmb	01 23 29.7	
	comp=Z,15nm,1.1s						
GDL2	**Guadalupe Moun**	**18.46**	**338**	P	**Pn**	**01 23 35.7**	**+2.7**
DKNS	**Dickens**	**18.85**	**348**	P	**Pn**	**01 23 38.1**	**+0.5**
WMOK	**Wichita Mounta**	**19.57**	**354**	P	**P**	**01 23 45.5**	**+0.6**
MSTX	**Muleshoe**	**19.58**	**344**	P	**Pn**	**01 23 47.6**	**+1.1**
MSTX				IAmb	IAmb	01 23 49.0	
	comp=Z,13nm,1.1s						
AMTX	**Amarillo**	**20.18**	**347**	P	Pn	01 23 54.0	+0.4
AMTX				IAmb	IAmb	01 23 55.4	
	comp=Z,4.8nm,0.8s						
121A	**Cookes Peak, D**	**20.19**	**331**	P	Pn	01 23 56.0	+2.1
121A				IAmb	IAmb	01 23 58.1	
	comp=Z,6.0nm,0.9s						
TUL3	**Leonard**	**20.60**	**1**	P	Pn	01 23 58.7	+0.3
TUL3				IAmb	IAmb	01 24 02.5	
	comp=Z,6.5nm,0.7s						
FCAR	**Ozark Folk Cen**	**20.90**	**9**	P	**P**	**01 24 00.4**	**+1.0**
FCAR				IAmb	IAmb	01 24 01.1	
	comp=Z,7.0nm,0.8s						
Y22A	**Socorro**	**21.01**	**334**	P	**P**	**01 24 04.6**	**+3.8**
Y22A				IAmb	IAmb	01 24 12.9	
	comp=Z,8.4nm,1.1s						
SBM	**South Baldy**	**21.14**	**334**	P	**P**	**01 24 06.7**	**+4.3**
TUC	**Tucson**	**21.57**	**325**	P	**P**	**01 24 11.1**	**+4.3**
TUC				IAmb	IAmb	01 24 19.7	
	comp=Z,4.8nm,0.9s						
ANMO	**Albuquerque**	**21.69**	**337**	LR	LR	01 31 52.3	
	comp=Z,21nm,18.7s,baz=156,slow=36						
PBMO	**Poplar Bluff**	**22.07**	**12**	P	**P**	**01 24 11.4**	**-0.5**
PBMO				IAmb	IAmb	01 24 15.9	
	comp=Z,9.8nm,0.9s						
T25A	**Trinidad**	**23.01**	**343**	P	**P**	**01 24 25.4**	**+3.2**
T25A				IAmb	IAmb	01 24 27.9	
	comp=Z,8.6nm,1.1s						
T47A	**Sharon Grove**	**23.14**	**19**	P	**P**	**01 24 24.7**	**+1.5**
CCM	**Cathedral Cave**	**23.16**	**10**	P	**P**	**01 24 24.1**	**+0.7**
CCM				IAmb	IAmb	01 24 25.8	
	comp=Z,5.4nm,0.8s						
X16A	**Lo Mia Camp, P**	**23.53**	**327**	P	**P**	**01 24 31.6**	**+4.1**
X16A				IAmb	IAmb	01 24 40.2	
	comp=Z,3.5nm,1.0s						
WUAZ	**Wupatki**	**24.35**	**329**	P	**P**	**01 24 38.7**	**+3.5**
PV02	**Paradox Valley**	**25.43**	**337**	P	**P**	**01 24 48.6**	**+3.6**
O49A	**Covington**	**26.94**	**20**	P	**P**	**01 24 58.7**	**+0.3**
PDAR	**Pinedale Array**	**29.75**	**340**	LR	LR	01 39 00.8	
	comp=Z,19nm,19.1s,baz=126,slow=41						
NVAR	**Mina Array Bea**	**30.23**	**324**	P	P	01 25 33.0	+5.0
	comp=Z,1.2nm,0.9s,baz=136,slow=6.2,SNR=5.2						
NVAR				LR	LR	01 38 31.8	
	comp=Z,24nm,20.8s,baz=79,slow=39						
	comp=Z,1.2nm,0.9s						
ELK	**Elko**	**30.34**	**331**	LR	LR	01 38 43.9	
	comp=Z,49nm,19.6s,baz=124,slow=39						
YBH	**Yreka Blue Hor**	**34.95**	**324**	LR	LR	01 40 46.0	
	comp=Z,32nm,18.2s,baz=171,slow=37						
LPAZ	**La Paz**	**41.82**	**137**	P	P	01 27 22.8	+15
	comp=Z,0.4nm,0.5s,baz=322,slow=6.5,SNR=5.7						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**60.13**	**338**	P	**P**	**01 29 22.6**	**-1.6**
	comp=Z,0.2nm,0.8s,baz=120,slow=7.2,SNR=6.4						
	comp=Z,0.2nm,0.8s						

*JMA **31** 01:42:03.5±0.1,24°.3N±0°.5×122°.0E±0°.3,h23km±2km, MV3.2/13, TAIWAN REGION*
*TAP **31** 01:42:04.2,24°.39N×121°.97E,h23km,ML3.8,B*
ISC 31 01:42:03.3±0.9,**24°34N**±0°.01×**122°06E**±0°.01,**h15**km±7km, **n134,**σ0°**78**/211,**2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.17**	**64**	*i* P	**Pb**	**01 42 09.2**	**+1.1**
EOS2				S	**Sb**	**01 42 13.9**	**+2.6**
EOS3	**EOS3**	**0.24**	**103**	*i* P	**Pb**	**01 42 10.4**	**+1.2**
EOS3				S	**Sb**	**01 42 15.8**	**+2.6**
EWUT	**Wuta**	**0.28**	**292**	‖ *i* P	**Pg**	**01 42 09.3**	**+0.1**
EWUT				S	**Sg**	**01 42 13.2**	**-0.1**
EAHA	**Aohua**	**0.29**	**268**	*i* P	**Pg**	**01 42 09.7**	**+0.1**
EAHA				S	**Sb**	**01 42 14.7**	**-0.2**
EHP	**Heping Village**	**0.29**	**264**	*eP*	**Pg**	**01 42 09.8**	**+0.3**
EHP				S	**Sb**	**01 42 14.8**	**-0.2**
EOS4	**EOS4**	**0.32**	**133**	*i* P	**Pb**	**01 42 11.2**	**+0.7**
TWC	**Suao**	**0.33**	**324**	*i* P	**Pg**	**01 42 10.2**	**0.0**
TWC				*i* S	**Sg**	**01 42 14.6**	**-0.2**
NDS	**Dongshan**	**0.43**	**313**	*i* P	**Pg**	**01 42 11.9**	**0.0**
NDS				*eS*	**Sg**	**01 42 17.6**	**-0.2**
ETL	**Fush Village**	**0.44**	**246**	*eP*	**Pb**	**01 42 12.7**	**-0.1**
NACB	**Ninganchiao**	**0.46**	**249**	P	**Pg**	**01 42 12.3**	**-0.2**
NACB	**Ninganchiao**	**0.46**	**249**	*i* P	**Pg**	**01 42 12.5**	**0.0**
ILA	**Ilan**	**0.51**	**326**	*i* P	**Pb**	**01 42 13.9**	**0.0**
ILA				*i* S	**Sg**	**01 42 20.4**	**+0.1**
EGS		**0.52**	**347**	*eP*	**Pb**	**01 42 13.9**	**-0.1**
EGS				*i* S	**Sg**	**01 42 20.3**	**-0.2**
LATG	**Datong**	**0.52**	**292**	*i* P	**Pg**	**01 42 13.7**	**0.0**
LATG				S	**Sg**	**01 42 20.9**	**+0.1**
ETLH	**Xiulin Townshi**	**0.55**	**256**	P	**Pg**	**01 42 14.1**	**-0.1**
HWA	**Hwalien**	**0.55**	**229**	*eP*	**Pn**	**01 42 16.4**	**-0.1**
NDT	**Datong Townshi**	**0.56**	**298**	P	**Pg**	**01 42 14.5**	**0.0**
NDT				*eS*	**Sg**	**01 42 21.7**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.60**	**314**	‖ *i* P	**Pg**	**01 42 15.2**	**0.0**
FUSB				*eS*	**Sg**	**01 42 22.6**	**-0.5**
NNSB	**Datong**	**0.62**	**278**	*eP*	**Pg**	**01 42 15.5**	**-0.1**
NNSB				S	**Sg**	**01 42 24.1**	**+0.1**
TEYL	**Yanliau Villag**	**0.63**	**222**	*eP*	**Pn**	**01 42 17.2**	**-0.5**
TEYL				*eS*	**Sn**	**01 42 28.6**	**+1.1**
NNS	**Nan Shan**	**0.64**	**279**	P	**Pg**	**01 42 15.8**	**-0.1**
NNS				S	**Sg**	**01 42 24.1**	**-0.1**
ETM	**Tongmen**	**0.64**	**234**	*eP*	**Pb**	**01 42 16.0**	**-0.2**
ETM				S	**Sn**	**01 42 27.5**	**-0.2**
TIPB	**Shuangxi**	**0.66**	**341**	*i* P	**Pb**	**01 42 16.5**	**-0.1**
TIPB				*eS*	**Sg**	**01 42 24.6**	**-0.5**
TWB1	**Santiao Chiao**	**0.67**	**354**	*i* P	**Pb**	**01 42 16.5**	**-0.1**
TWB1				S	**Sg**	**01 42 24.7**	**-0.6**
NWLT	**Wulai**	**0.67**	**311**	*i* P	**Pg**	**01 42 16.4**	**0.0**
NWLT				*i* S	**Sg**	**01 42 24.3**	**-1.0**
LXIB	**Xiulin Townshi**	**0.67**	**242**	*eP*	**Pb**	**01 42 16.7**	**-0.1**
LXIB				*eS*	**Sn**	**01 42 29.3**	**+0.6**
YHNB	**Yeheng**	**0.70**	**298**	P	**Pg**	**01 42 17.0**	**-0.2**
YHNB	**Yeheng**	**0.70**	**298**	S	**Sg**	**01 42 26.6**	**+0.1**
YHNB	**Yeheng**	**0.70**	**298**	P	**Pg**	**01 42 16.9**	**-0.2**
YHNB				S	**Sg**	**01 42 25.9**	**-0.6**
SHUL	**Shoufeng**	**0.72**	**220**	*eP*	**Pn**	**01 42 18.5**	**-0.3**
SHUL				S	**Sn**	**01 42 32.2**	**+2.7**
WHF	**Hehuan Shan**	**0.75**	**255**	*eP*	**Pg**	**01 42 18.0**	**-0.1**
WHF				*eS*	**Sn**	**01 42 30.8**	**-0.2**
SXI1	**Grass Mountain**	**0.77**	**347**	*i* P	**Pb**	**01 42 18.6**	**+0.2**
SXI1				S	**Sb**	**01 42 28.8**	**+0.1**
WFSB	**Wu-fen Shan**	**0.77**	**341**	*i* P	**Pn**	**01 42 19.0**	**-0.6**
WFSB				S	**Sb**	**01 42 28.7**	**+0.1**
TWA	**Mucha**	**0.77**	**326**	*eP*	**Pn**	**01 42 19.0**	**-0.6**
TWA				S	**Sg**	**01 42 27.7**	**-0.8**
ESL	**Shilin**	**0.78**	**228**	*eP*	**Pb**	**01 42 18.9**	**+0.4**
ESL				*eS*	**Sn**	**01 42 31.6**	**+0.5**
NHDH	**Xindian Distri**	**0.79**	**322**	*eP*	**Pg**	**01 42 17.8**	**-0.9**
TEGC	**Jichi Village**	**0.79**	**217**	*eP*	**Pn**	**01 42 19.3**	**-0.6**
JYNG	**Yonagunijimaku**	**0.81**	**82**	*eP*	**Pg**	**01 42 19.0**	**-0.1**
JYNG				*eS*	**Sb**	**01 42 30.3**	**+0.5**
TWT	**Tachien**	**0.81**	**264**	*eP*	**Pn**	**01 42 19.7**	**-0.6**
TWT				S	**Sn**	**01 42 32.2**	**0.0**
TATO	**Taipei**	**0.82**	**321**	P	**Pb**	**01 42 18.8**	**-0.4**
TATO	**Taipei**	**0.82**	**321**	S	**Sb**	**01 42 29.7**	**-0.3**
TDCB	**Techi**	**0.83**	**264**	P	**Pb**	**01 42 19.7**	**+0.3**
TDCB				*eS*	**Sn**	**01 42 31.5**	**-1.0**
TNOU	**National Taiwa**	**0.85**	**342**	*eP*	**Pg**	**01 42 20.1**	**+0.3**
TNOU				*eS*	**Sb**	**01 42 30.3**	**-0.5**
TAP	**Taipei**	**0.86**	**324**	*eP*	**Pn**	**01 42 20.5**	**-0.3**
TAP				*eS*	**Sg**	**01 42 31.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.87**	**82**	P	**Pg**	**01 42 20.2**	**0.0**
YOJ	**Yonaguni jima**	**0.87**	**82**	*eP*	**Pg**	**01 42 20.2**	**0.0**
YOJ				*eS*	**Sn**	**01 42 32.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.87**	**82**	P	**Pg**	**01 42 20.1**	**-0.2**
YOJ				*eS*	**Sg**	**01 42 32.0**	**+0.3**
WARBT	**Fenglin Townsh**	**0.88**	**225**	*eP*	**Pg**	**01 42 20.3**	**0.0**
OWD	**Renai**	**0.90**	**245**	*eP*	**Pg**	**01 42 20.9**	**+0.2**
OWD				*eS*	**Sn**	**01 42 34.6**	**+0.4**
NFF	**Wufeng Townshi**	**0.91**	**289**	*eP*	**Pg**	**01 42 21.0**	**+0.1**
KSHI	**Guanxi Townshi**	**0.92**	**298**	*eP*	**Pn**	**01 42 22.3**	**+0.7**
WUSB	**Renai**	**0.93**	**248**	*i* P	**Pn**	**01 42 21.7**	**-0.2**
WUSB				*eS*	**Sn**	**01 42 35.0**	**0.0**
ZUZH	**Zhuzihu**	**0.94**	**330**	*eP*	**Pn**	**01 42 22.3**	**+0.3**
ZUZH				*eS*	**Sb**	**01 42 33.8**	**+0.2**
YM08	**YM08**	**0.94**	**333**	*eP*	**Pn**	**01 42 22.2**	**+0.2**
YM08				*eS*	**Sn**	**01 42 34.9**	**-0.4**
TWS1	**Kuangyinshan**	**0.96**	**322**	*eP*	**Pn**	**01 42 22.4**	**+0.3**
TWS1				*eS*	**Sn**	**01 42 35.3**	**-0.1**
ANP	**Anpu**	**0.97**	**330**	*eP*	**Pn**	**01 42 22.4**	**-0.1**
NTST	**Danshui**	**0.99**	**326**	*eP*	**Pn**	**01 42 23.4**	**+0.8**
LIOB	**Emei**	**1.00**	**288**	*eP*	**Pn**	**01 42 23.3**	**+0.5**
NSTT	**Nanjuang**	**1.01**	**287**	*eP*	**Pn**	**01 42 23.7**	**+0.8**
NCUH	**Zhongli**	**1.01**	**308**	*eP*	**Pg**	**01 42 23.2**	**+0.3**
NCUH				*eS*	**Sn**	**01 42 37.4**	**+0.5**
TWY	**Chenhua**	**1.02**	**336**	*eP*	**Pg**	**01 42 23.3**	**+0.3**
TWY				*eS*	**Sn**	**01 42 37.4**	**+0.3**
WHP	**Taichung City**	**1.02**	**267**	*i* P	**Pn**	**01 42 23.8**	**+0.7**
WHP				*eS*	**Sn**	**01 42 37.6**	**+0.5**
VWDT	**VWDT**	**1.02**	**235**	*eP*	**Pg**	**01 42 23.2**	**+0.1**
VWDT				*eS*	**Sn**	**01 42 37.8**	**+0.7**
HGSD	**Ruisui**	**1.03**	**215**	*eP*	**Pb**	**01 42 22.7**	**0.0**
EHYH	**Wanrong**	**1.07**	**218**	*eP*	**Pn**	**01 42 23.5**	**-0.2**
EHY	**Hungye**	**1.07**	**219**	*eP*	**Pb**	**01 42 23.1**	**-0.4**
SBCB	**Hsinchu**	**1.08**	**295**	*eP*	**Pg**	**01 42 24.7**	**+0.6**
WCS	**Beigang Elemen**	**1.09**	**255**	*eP*	**Pg**	**01 42 24.5**	**+0.2**
SSLB	**Suanglung**	**1.15**	**242**	P	**Pb**	**01 42 24.8**	**-0.1**
SSLB	**Suanglung**	**1.15**	**242**	S	**Sn**	**01 42 40.1**	**-0.3**
SSLB	**Suanglung**	**1.15**	**242**	*eP*	**Pb**	**01 42 25.1**	**+0.2**
SMLT	**Sun Moon Lake**	**1.16**	**247**	*eP*	**Pg**	**01 42 25.6**	**0.0**
ECBN	**Changbin**	**1.16**	**209**	*eP*	**Pn**	**01 42 23.9**	**-1.0**
TWQ1	**Liyutan**	**1.18**	**271**	*eP*	**Pg**	**01 42 26.7**	**+0.7**
TWQ1				*eS*	**Sg**	**01 42 43.8**	**+2.4**
YULB	**Yu-li**	**1.18**	**217**	P	**Pn**	**01 42 23.9**	**-1.3**
YULB	**Yu-li**	**1.18**	**217**	S	**Sn**	**01 42 40.7**	**-0.2**
YULB	**Yu-li**	**1.18**	**217**	*eP*	**Pn**	**01 42 24.1**	**-1.0**
TYC	**Yuchr**	**1.18**	**249**	*eP*	**Pg**	**01 42 25.9**	**-0.2**
TWF1	**Yuli**	**1.21**	**216**	*eP*	**Pn**	**01 42 24.7**	**-0.9**
WHYT	**Xinyi Township**	**1.28**	**240**	*eP*	**Pg**	**01 42 27.8**	**-0.2**
TCU	**Taichung**	**1.28**	**262**	*eP*	**Pb**	**01 42 27.2**	**+0.2**
PCYT	**Pengchaiyu**	**1.28**	**0**	*eP*	**Pn**	**01 42 26.6**	**0.0**
WDJ	**Dajia District**	**1.30**	**271**	*eP*	**Pg**	**01 42 29.4**	**+1.1**
CHKH	**Chenggong**	**1.30**	**208**	*eP*	**Pn**	**01 42 26.4**	**-0.4**
FULB	**Fuli**	**1.34**	**212**	*eP*	**Pn**	**01 42 26.8**	**-0.6**
FULB				*eS*	**Sg**	**01 42 44.4**	**+0.8**
WNT	**Mingjian**	**1.34**	**250**	*eP*	**Pg**	**01 42 29.6**	**+0.5**
WNT				S	**Sg**	**01 42 48.8**	**+2.1**
CHKT	**Chengkung**	**1.39**	**207**	*eP*	**Pn**	**01 42 27.1**	**-1.0**
CHKT				*eS*	**Sn**	**01 42 43.9**	**-2.3**
WCHH	**Zhanghua**	**1.40**	**260**	*eP*	**Pg**	**01 42 30.0**	**-0.2**
ALS	**Alishan**	**1.42**	**235**	*i* P	**Pg**	**01 42 30.2**	**-0.4**
EHD	**Haiduan**	**1.42**	**214**	*eP*	**Pn**	**01 42 27.9**	**-0.7**
EHD				*eS*	**Sb**	**01 42 47.4**	**-0.1**
CHN5	**Tsauling**	**1.47**	**240**	*i* P	**Pg**	**01 42 31.0**	**-0.5**
CHN5				S	**Sg**	**01 42 51.6**	**+1.0**
ELDTW	**Lidau**	**1.49**	**220**	P	**Pn**	**01 42 28.8**	**-0.9**
ELDTW				S	**Sb**	**01 42 49.5**	**-0.1**
IRIF	**Iriomote-Funau**	**1.52**	**90**	P	**Pn**	**01 42 29.5**	**-0.4**
IRIF				S	**Sn**	**01 42 48.0**	**-1.4**
WDLH	**Douliu**	**1.54**	**245**	*eP*	**Pg**	**01 42 32.4**	**-0.4**
WDLH				*eS*	**Sg**	**01 42 54.7**	**+1.8**
WRL	**Guolierlin Hig**	**1.60**	**254**	*eP*	**Pg**	**01 42 32.7**	**+0.1**
WRL				*eS*	**Sg**	**01 42 55.6**	**+0.7**
WCKO	**Fanlu**	**1.61**	**236**	*eP*	**Pg**	**01 42 33.6**	**-0.6**
WCKO				*eS*	**Sg**	**01 42 56.6**	**+1.4**
HATJ	**Hateruma jima**	**1.62**	**100**	*eP*	**Pb**	**01 42 32.6**	**-0.2**
RLNB	**Erlin**	**1.62**	**254**	*eP*	**Pg**	**01 42 34.2**	**-0.2**
RLNB				*eS*	**Sg**	**01 42 56.0**	**+0.5**
STYH	**Taoyuan**	**1.66**	**226**	*eP*	**Pb**	**01 42 33.7**	**+0.2**
STYH				*eS*	**Sb**	**01 42 54.4**	**+0.2**
CHN4	**Tsaushan**	**1.67**	**234**	*eP*	**Pb**	**01 42 34.2**	**+0.6**
CHN4				*eS*	**Sg**	**01 42 58.1**	**+1.0**
TPUB	**Ta-pu**	**1.67**	**232**	P	**Pb**	**01 42 33.5**	**-0.3**
TPUB	**Ta-pu**	**1.67**	**232**	*eP*	**Pb**	**01 42 33.7**	**-0.1**
TPUB				*eS*	**Sg**	**01 42 57.0**	**-0.2**
WTP	**Ta-pu**	**1.72**	**231**	*eP*	**Pb**	**01 42 34.8**	**+0.3**
WTP				*eS*	**Sb**	**01 42 56.7**	**+0.8**
CHY	**Chiayi**	**1.72**	**241**	*i* P	**Pb**	**01 42 35.1**	**+0.5**
CHY				*eS*	**Sg**	**01 42 58.6**	**-0.1**
TWGBT	**Beinan**	**1.77**	**211**	P	**Pn**	**01 42 35.8**	**-1.1**
TWGBT	**Beinan**	**1.77**	**211**	*eP*	**Pn**	**01 42 33.0**	**-0.2**
TWG	**Pinlang**	**1.77**	**211**	*eP*	**Pn**	**01 42 32.4**	**-0.9**
JKRS	**Kuro-shima**	**1.78**	**93**	P	**Pn**	**01 42 33.7**	**+0.3**
JKRS				*eS*	**Sn**	**01 42 55.3**	**-0.5**
TWK	**Hsinying**	**1.79**	**234**	*eP*	**Pb**	**01 42 35.6**	**-0.3**
CHN1	**Nanshi**	**1.82**	**231**	*eP*	**Pb**	**01 42 36.3**	**0.0**
CHN1				*eS*	**Sg**	**01 43 01.7**	**-0.1**
SGST	**Jiashian**	**1.85**	**228**	*eP*	**Pb**	**01 42 35.8**	**-0.9**
SGST				*eS*	**Sg**	**01 43 02.2**	**-0.6**
WSL	**Shuilin Townsh**	**1.87**	**244**	*eP*	**Pb**	**01 42 36.7**	**-0.4**
WSL				*eS*	**Sg**	**01 43 02.8**	**-0.6**
JIJ	**Ishigaki jima**	**1.90**	**89**	*eP*	**Pn**	**01 42 34.5**	**-0.5**
JIJ				*eS*	**Sn**	**01 42 57.0**	**-1.8**
CHN8	**Yiju**	**1.96**	**240**	*eP*	**Pb**	**01 42 37.4**	**-1.3**
CHN8				*eS*	**Sg**	**01 43 05.0**	**-1.5**
ECL	**Taimali**	**2.01**	**211**	*eP*	**Pn**	**01 42 35.9**	**-0.8**
SSD	**Sandimen**	**2.06**	**220**	*eP*	**Pb**	**01 42 39.8**	**-0.6**
SSD				*eS*	**Sb**	**01 43 02.7**	**+1.4**
JISG	**Ishigakijimahi**	**2.06**	**83**	P	**Pn**	**01 42 36.2**	**-0.7**
JISG				*eS*	**Sn**	**01 43 01.3**	**-1.5**
MASBT	**Mashibuluo**	**2.17**	**218**	*eP*	**Pn**	**01 42 39.9**	**+1.1**
MASBT				*eS*	**Sb**	**01 43 08.9**	**+0.1**
TSCK	**Chigu Township**	**2.17**	**237**	*eP*	**Pb**	**01 42 41.0**	**-1.2**
TSCK				*eS*	**Sb**	**01 43 09.7**	**+0.8**
EAST	**Anshuo**	**2.25**	**210**	*eP*	**Pn**	**01 42 40.3**	**+0.4**
SCZT	**Fangliau**	**2.37**	**214**	*eP*	**Pb**	**01 42 44.1**	**-1.5**
SCZT				*eS*	**Sb**	**01 43 14.4**	**-0.2**
LYUB	**Lan-yu**	**2.37**	**191**	*eP*	**Pn**	**01 42 39.4**	**-2.2**
PNG	**Penghu**	**2.42**	**252**	*eP*	**Pn**	**01 42 42.7**	**+0.4**
PNG				*eS*	**Sn**	**01 43 12.9**	**+1.4**
PHUB	**P'eng-hu**	**2.42**	**251**	*eP*	**Pn**	**01 42 43.0**	**+0.7**
WDGT	**Dungji**	**2.45**	**244**	P	**Pn**	**01 42 43.9**	**+1.2**
WDGT				*eS*	**Sb**	**01 43 15.1**	**-1.9**
VWUC	**VWUC**	**2.46**	**286**	*eP*	**Pn**	**01 42 42.0**	**-0.8**
VWUC				*eS*	**Sn**	**01 43 11.8**	**-0.8**
TWKBT	**Hengchun**	**2.65**	**206**	*eP*	**Pn**	**01 42 44.5**	**-0.9**
VCHM	**Qimei**	**2.66**	**245**	*eP*	**Pn**	**01 42 46.7**	**+1.1**
VCHM				*eS*	**Sn**	**01 43 19.7**	**+2.1**
PTMZ	**Houxiangcun**	**2.77**	**285**	*eP*	**Pn**	**01 42 47.4**	**+0.4**
PTMZ				*eS*	**Sn**	**01 43 19.3**	**-0.8**
MHZQ	**Yeshan**	**3.26**	**303**	*eP*	**Pn**	**01 42 54.0**	**+0.2**
MHZQ				*eS*	**Sn**	**01 43 32.0**	**-0.3**
KNMB	**Chin-men Tao**	**3.35**	**273**	*eP*	**Pn**	**01 42 54.7**	**-0.4**
AXDP	**Jialang**	**3.77**	**279**	*eP*	**Pn**	**01 43 00.5**	**-0.3**
ZPLA	**Ao Xicun**	**3.96**	**265**	*eP*	**Pn**	**01 43 03.3**	**-0.2**
JOW	**Kunigami**	**6.13**	**65**	P	**Pn**	**01 43 34.5**	**+1.2**

*IDC **31** 01:55:00.8±1.1, 10°.02S×160°.29E, h0km, mb4.2/6, mbtmp4.2/6, MS3.4/4, Error ellipse: s-maj=29.4km s-min=13.7km az=77.0*
*NEIC **31** 01:55:02.1±1.6, 10°.10S±0°.10×160°.4E±0°.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=25.5km s-min=8.6km az=53.0*
ISC 31 01:55:05.7±1.0,**10°05S**±0°.08×**160°2E**±0°.2,**h32**km,**n25,** σ0°**84**/24,**mb4.3**/10,**MS3.4**/4,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.67**	**336**		**Pb**	**01 55 18.3**	**-0.7**
	8.0nm,0.3s,baz=236,slow=21,SNR=27						
HNR				Sn	**Sn**	**01 55 29.1**	**+0.8**
	39nm,0.3s,baz=122,slow=24,SNR=23						
HNR				LR	LR	01 55 32.6	
	comp=Z,5.9nm,19.4s,baz=229,slow=47						
HNR	**Honiara**	**0.67**	**336**		**Pn**	**01 55 20.0**	**+1.1**
RABL	**Rabaul**	**9.89**	**305**	Pn	**Pn**	**01 57 25.2**	**-0.5**
WR8	**Warramunga Arr**	**26.69**	**245**	P	**P**	**02 00 40.8**	**-1.4**
WR8				IAmb	IAmb	02 01 02.1	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**26.83**	**245**	P	**P**	**02 00 43.7**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=76,slow=9.3,SNR=15						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**26.83**	**245**	P	**P**	**02 00 42.0**	**-1.5**
STKA	**Stephens Creek**	**27.74

SSLB **Suanglung** 8.28 250 Pn **Pn** 02 13 43.3 -2.6
SSE **Sheshan** 8.36 302 P **Pn** 02 13 45.5 -1.5
SSE S **Sn** 02 15 21.3 +0.2
SSE pmax pmax
comp=Z,13nm,0.7s
SSE pmax pmax
comp=Z,93nm,3.5s
SSE L L
comp=N,380nm,12.4s
SSE L L
comp=E,460nm,12.0s
TPUB **Ta-pu** 8.75 248 P **Pn** 02 13 51.5 -0.9
TPUB **Ta-pu** 8.75 248 Pn **Pn** 02 13 50.2 -2.2
NJ2 **Nanjing** 10.57 302 *e*P **Pn** 02 14 17.5 +0.3
NJ2 pmax pmax
comp=Z,26nm,0.5s
NJ2 L L
comp=N,870nm,11.4s
NJ2 L L
comp=E,3μm,13.7s
NJ2 L L
comp=Z,4μm,11.8s
KSRS **Korea Array** 10.61 353 Pn **Pn** 02 14 18.5 +0.6
0.2nm,0.3s,baz=170,slow=14,SNR=12
KSRS LR LR 02 18 48.7
comp=Z,417nm,18.9s,baz=170,slow=40
2.3nm,0.7s
JHJ **Hachijo jima 2** 10.90 53 LR LR 02 17 22.0
comp=Z,47nm,19.0s,baz=280,slow=31
MAJO **Matsushiro** 12.17 36 *i* P **Pn** 02 14 37.7 -1.5
MJAR **Matsushiro Arr** 12.17 36 Pn **Pn** 02 14 41.5 +2.4
0.7nm,0.4s,baz=220,slow=13,SNR=1.4
DL2 **Dalian** 13.66 333 *e*P **Pn** 02 14 59.5 0.0
DL2 *e*S **Sn** 02 17 34.3 +3.4
DL2 pmax pmax
comp=Z,26nm,0.7s
DL2 pmax pmax
comp=Z,160nm,3.6s
DL2 L L
comp=N,1μm,14.7s
DL2 L L
comp=E,710nm,11.9s
DL2 L L
comp=Z,2μm,13.2s
HNS **HongShan** 16.28 314 ⇓P **P** 02 15 39.0 +1.6
HNS L L
comp=N,890nm,11.0s
HNS L L
comp=E,580nm,10.5s
HNS L L
comp=Z,1μm,12.0s
BJI2 **Beijing** 17.13 323 P **P** 02 15 46.5 -0.2
BJI2 pP **pP** 02 15 49.5 -0.8
BJI2 sP **pwP** 02 15 53.3 -1.1
BJI2 PP **PnPn** 02 16 01.5 +6.5
BJI2 S **Sn** 02 18 57.3 +2.0
BJI2 PcP **PcP** 02 20 30.5 +1.2
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
BJI2 pmax pmax
comp=Z,73nm,8.1s
BJI2 L L
comp=N,290nm,11.5s
BJI2 L L
comp=E,190nm,11.9s
BJI2 L L
comp=Z,310nm,11.9s
BJT **Baijiatuau** 17.13 323 P **Pn** 02 15 44.9 -0.2
BJT pmax pmax
comp=Z,11nm,0.9s
BJT **Baijiatuau** 17.13 323 P **Pn** 02 15 44.9 -0.2
CN2 **Changchun** 17.18 350 P **P** 02 15 47.5 +0.1
CN2 S **Sn** 02 18 57.5 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 L L
comp=Z,1μm,12.0s
CN2 L L
comp=Z,500nm,12.0s
CN2 L L
comp=Z,1μm,13.0s
USRK **Ussuriysk Ar.** 17.40 6 P **P** 02 15 50.0 +0.3
comp=Z,0.1nm,0.3s,baz=178,slow=10,SNR=8.2
comp=Z,3.1nm,0.7s
USRK **Ussuriysk Ar.** 17.40 6 P **Pn** 02 15 47.4 -1.1
XAN **Xi'an** 19.06 297 ⇑P **P** 02 16 08.5 +0.3
XAN pP pwP 02 16 18.0 +2.0
XAN S **Sn** 02 19 42.0 -0.2
XAN pmax pmax
comp=Z,18nm,0.5s
XAN pmax pmax
comp=Z,36nm,4.3s
XAN L L
comp=Z,460nm,12.4s
XAN L L
comp=Z,970nm,13.1s
XAN L L
comp=Z,1μm,12.4s
GUMO **Guam** 19.58 129 LR LR 02 24 01.0
comp=Z,109nm,18.1s,baz=38,slow=37
QIZ **Qiongzhong** 19.66 251 P **P** 02 16 14.0 -0.8
QIZ S **S** 02 19 56.0 -0.2
QIZ L L
comp=Z,420nm,15.7s
QIZ L L
comp=Z,230nm,14.2s
QIZ L L
comp=Z,380nm,20.1s
DAV **Davao City (W)** 20.05 191 LR LR 02 26 24.5
comp=Z,87nm,18.0s,baz=348,slow=44
ASAJ **Asahikawa** 20.21 28 P Pn 02 16 21.6 -0.9
comp=Z,9.4nm,0.7s,baz=224,slow=18,SNR=5.3
comp=Z,9.4nm,0.7s
HHC **Hu-ho-hao-te** 20.30 318 *e*P Pn 02 16 24.8 +1.0
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,93nm,4.4s
HHC L L
comp=Z,860nm,12.4s
HHC L L
comp=Z,780nm,12.3s
HHC L L
comp=Z,1μm,12.5s
BTO2 **Baotou** 21.27 315 *e*P **P** 02 16 33.0 +0.7
BTO2 pmax pmax
comp=Z,14nm,0.7s
BTO2 pmax pmax
comp=Z,190nm,6.6s
BTO2 L L
comp=Z,2μm,13.3s
BTO2 L L
comp=Z,1μm,11.8s
BTO2 L L
comp=Z,2μm,11.8s
KLR **Kul'dur** 22.38 4 *i* P **P** 02 16 41.5 -2.4
KLR pmax pmax
comp=Z,4.0nm,0.6s
YSS **Yuzhno-Sakhali** 22.62 24 *e*P **P** 02 16 47.0 +0.6
YSS *e*S **S** 02 20 49.0 -4.6
YSS pmax pmax
comp=Z,40nm,0.0s
YSS pmax pmax
comp=Z,100nm,2.4s
YSS MLR MLR
comp=Z,200nm,16.0s
YSS MLR MLR
comp=N,200nm,11.0s
YSS **Yuzhno-Sakhali** 22.62 24 **P** 02 16 45.4 -1.1
YSS IAmb IAmb 02 16 49.1
comp=Z,29nm,0.9s
YSS **Yuzhno-Sakhali** 22.62 24 P **P** 02 16 47.4 +1.0
CD2 **Chengdu** 22.83 286 P **P** 02 16 46.8 -2.1
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 L L
comp=Z,760nm,13.3s
CD2 L L
comp=Z,810nm,11.4s
CD2 L L
comp=Z,930nm,9.5s
LZH **Lanzhou** 23.63 299 *e*P **P** 02 16 55.5 -1.6
LZH sP pwP 02 17 04.0 -1.0
LZH pmax pmax
comp=Z,16nm,1.2s
LZH L L
comp=Z,490nm,12.0s
LZH L L
comp=Z,500nm,12.0s
LZH L L
comp=Z,780nm,11.3s
LZDM **Lanzhou Array** 23.71 299 P **P** 02 16 57.2 -0.9
comp=Z,4.9nm,0.4s,baz=126,slow=12,SNR=4.2
comp=Z,4.9nm,0.4s
KMI2 **Kunming** 24.04 272 P **P** 02 17 01.3 +0.1
KMI2 pmax pmax
comp=Z,13nm,1.3s
KMI2 L L
comp=Z,280nm,11.7s
KMI2 L L
comp=Z,900nm,11.2s
KMI2 L L
comp=Z,910nm,13.4s
PZH **PanZhiHua** 24.74 275 P **P** 02 17 07.0 -0.5
ULN **Ulaanbaatar** 27.30 326 *i* P **P** 02 17 29.3 -1.2
ULN pmax pmax
comp=Z,9.0nm,1.4s
ULN **Ulaanbaatar** 27.30 326 P **P** 02 17 29.2 -1.2
SONM **Songino Array** 27.61 325 P **P** 02 17 34.6 +1.4
comp=Z,3.3nm,1.0s,baz=135,slow=9.7,SNR=12
SONM LR LR 02 29 24.8
comp=Z,87nm,19.1s,baz=169,slow=39
comp=Z,3.3nm,1.0s
SONM **Songino Array** 27.61 325 P **P** 02 17 32.8 -0.4
GTA2 **Gaotai** 27.71 304 P **P** 02 17 33.0 -1.2
GTA2 sP pwP 02 17 41.8 -0.3
GTA2 pmax pmax
comp=Z,13nm,0.8s
GTA2 L L
comp=Z,490nm,14.3s
GTA2 L L
comp=Z,810nm,13.6s
GTA2 L L
comp=Z,1μm,14.3s
CMAR **Chiang Mai Arr** 29.31 260 P **P** 02 17 49.5 +1.1
comp=Z,1.4nm,0.3s,baz=67,slow=8.1,SNR=4.6
comp=Z,1.4nm,0.3s
CMAR **Chiang Mai Arr** 29.31 260 P **P** 02 17 48.9 +0.4
GOMU **GeErMu** 30.81 296 P **P** 02 18 01.8 -0.2
GOMU pP pP 02 18 04.8 -1.1
GOMU sP pwP 02 18 09.3 -0.7
GOMU S **S** 02 23 05.8 +0.6
GOMU pmax pmax
comp=Z,9.0nm,0.7s
GOMU L L
comp=Z,100nm,11.6s
GOMU L L
comp=Z,200nm,11.3s
GOMU L L
comp=Z,240nm,11.2s
TLY **Talaya** 31.50 329 LR LR 02 32 10.4
comp=Z,112nm,20.1s,baz=118,slow=39
PETK **Petropavlovsk-** 33.57 31 LR LR 02 33 53.7
comp=Z,57nm,18.3s,baz=223,slow=40
SHL **Shillong** 33.65 276 P **P** 02 18 25.9 -0.9
SHL pmax pmax
comp=Z,14nm,0.9s
SHL **Shillong** 33.65 276 P **P** 02 18 25.9 -0.9
SHL IAmb IAmb 02 18 27.1
comp=Z,14nm,0.9s
WMQ **Urumqi** 37.57 308 *e*P **P** 02 19 02.0 +1.9
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ L L
comp=Z,200nm,16.9s
WMQ L L
comp=Z,250nm,16.1s
WMQ L L
comp=Z,130nm,16.1s
SEY **Seymchan** 39.08 16 *i* P **P** 02 19 13.5 +1.0
SEY pmax pmax
comp=Z,8.0nm,1.0s
MK31 **Makanchi Array** 41.92 311 *c e*P **P** 02 19 35.1 -1.2
MKAR **Makanchi Array** 41.92 311 P **P** 02 19 35.2 -1.0
comp=Z,1.9nm,0.7s,baz=101,slow=9.8,SNR=11
MKAR PcP **PcP** 02 21 32.2 +0.5
comp=Z,0.9nm,0.6s,baz=96,slow=2.9,SNR=3.7
comp=Z,1.9nm,0.7s
MKAR **Makanchi Array** 41.92 311 P **P** 02 19 34.2 -2.1
SHEM **Shemya Is, Ala** 41.97 40 LR LR 02 40 12.2
comp=Z,14nm,19.0s,baz=104,slow=41
ZALV **Zalesovo Beam** 42.39 322 P **P** 02 19 38.1 -1.8
comp=Z,0.8nm,0.4s,baz=112,slow=8.7,SNR=5.1
ZALV PcP **PcP** 02 21 33.0 0.0
comp=Z,0.8nm,0.4s,baz=125,slow=3.9,SNR=4.1
ZALV LR LR 02 38 57.4
comp=Z,60nm,18.4s,baz=113,slow=39
comp=Z,0.8nm,0.4s
ZALV **Zalesovo Beam** 42.39 322 P **P** 02 19 37.4 -2.6
PDGK **Podgornoye** 43.38 306 P **P** 02 19 46.8 -1.5
PDGK **Podgornoye** 43.38 306 P **P** 02 19 46.8 -1.5
PRZ **Przheval'sk** 44.11 304 P **P** 02 19 54.8 +0.5
PRZ pmax pmax
comp=Z,7.0nm,0.6s
PRZ **Przheval'sk** 44.11 304 P **P** 02 19 54.8 +0.5
PRZ IAmb IAmb 02 19 56.1
comp=Z,7.0nm,0.6s
TARG **Taragay, Kyrgy** 44.51 303 P **P** 02 19 57.2 -0.5
TARG pmax pmax
comp=Z,12nm,1.1s
TARG **Taragay, Kyrgy** 44.51 303 P **P** 02 19 57.2 -0.5
TARG IAmb IAmb 02 20 10.0
comp=Z,12nm,1.1s
TARG **Taragay, Kyrgy** 44.51 303 P **P** 02 19 58.4 +0.7
TIXI **Tiksi** 44.80 360 LR LR 02 39 48.0
comp=Z,112nm,19.1s,baz=195,slow=38
TIXI **Tiksi** 44.80 360 *c e*P **P** 02 19 59.9 +0.8
TIXI pmax pmax
comp=Z,8.0nm,0.9s
TIXI **Tiksi** 44.80 360 P **P** 02 19 59.5 +0.4
KDJ **Kajisay** 44.99 304 P **P** 02 20 01.0 -0.3
KURK **Kurchatov** 45.10 316 ⇑*e*P **P** 02 20 00.3 -1.5
KURK pmax pmax
comp=Z,11nm,1.9s
KURK **Kurchatov** 45.10 316 P **P** 02 20 00.2 -1.5
KURK **Kurchatov** 45.10 316 P **P** 02 20 00.6 -1.2
KURBB **Kurchatov Arra** 45.14 316 P **P** 02 20 00.8 -1.3
comp=Z,2.6nm,0.6s,baz=103,slow=8.7,SNR=26
KURBB LR LR 02 40 44.4
comp=Z,138nm,19.3s,baz=174,slow=39
comp=Z,2.6nm,0.6s
SMLA **Simla** 45.58 288 *e*P **P** 02 20 06.6 +0.8
NRN **Naryn** 45.85 303 P **P** 02 20 07.7 -0.6
NRN pmax pmax
comp=Z,12nm,1.4s
NRN **Naryn** 45.85 303 P **P** 02 20 07.7 -0.6
NRN IAmb IAmb 02 20 18.3
comp=Z,12nm,1.4s
KSH2 **Kashi** 46.20 299 P **P** 02 20 12.0 +1.1
KSH2 sP pwP 02 20 20.0 +1.2
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
TSSA **Tissa** 46.20 291 *e*P **P** 02 20 11.3 +0.3
TSSA *i* x x 02 20 20.9
WRA **Warramunga Arr** 46.79 174 P **P** 02 20 16.8 +1.4
comp=Z,1.8nm,0.8s,baz=354,slow=7.9,SNR=7.5
comp=Z,1.8nm,0.8s
AAK **Ala-Archa** 47.00 304 LR LR 02 43 10.8
comp=Z,105nm,18.7s,baz=92,slow=40
NIL **Nilore** 48.50 292 P **P** 02 20 28.8 0.0
NIL pmax pmax
comp=Z,13nm,0.8s
NIL **Nilore** 48.50 292 P **P** 02 20 28.8 0.0
NIL **Nilore** 48.50 292 P **P** 02 20 29.7 +0.9
ARK **Arkit** 48.88 303 P **P** 02 20 32.3 +0.7
ARK **Arkit** 48.88 303 P **P** 02 20 32.3 +0.7
NRIK **Noril'sk** 48.97 342 P **P** 02 20 31.0 -0.7
comp=Z,1.3nm,0.3s,baz=117,slow=4.5,SNR=2.1
comp=Z,1.3nm,0.3s
NRIK **Noril'sk** 48.97 342 P **P** 02 20 31.0 -0.7
NRIK pmax pmax
comp=Z,4.0nm,0.9s
KK31 **Karatay Array** 49.92 305 P **P** 02 20 39.1 -0.4
KK31 pmax pmax
comp=Z,16nm,1.7s
KK31 **Karatay Array** 49.92 305 P **P** 02 20 39.1 -0.4
KK31 IAmb IAmb 02 20 50.2
comp=Z,16nm,1.6s
KKAR **Karatay Array** 49.92 305 P **P** 02 20 38.7 -0.8
KKAR **Karatay Array** 49.92 305 P **P** 02 20 38.6 -0.8
GAR **Garm** 50.28 300 P **P** 02 20 42.0 -0.4
GAR **Garm** 50.28 300 P **P** 02 20 43.0 +0.6
ASAR **Alice Springs** 50.44 175 P **P** 02 20 44.9 +1.4
comp=Z,1.3nm,0.8s,baz=355,slow=7.2,SNR=11
comp=Z,1.3nm,0.8s
BVAR **Borovoye Array** 50.52 318 P **P** 02 20 43.2 -0.6
comp=Z,2.0nm,0.6s,baz=76,slow=9.2,SNR=6.4
BVAR PcP **PcP** 02 22 01.8 +0.2
comp=Z,2.4nm,0.6s,baz=108,slow=3.9,SNR=6.8
comp=Z,2.0nm,0.6s
CHGR **Chuyangaron** 51.22 299 P **P** 02 20 49.4 0.0
CHGR pmax pmax
comp=Z,18nm,0.8s
CHGR **Chuyangaron** 51.22 299 P **P** 02 20 49.4 0.0
CHGR **Chuyangaron** 51.22 299 P **P** 02 20 50.0 +0.6
KBL **Kabul** 51.83 294 P **P** 02 20 53.7 -0.5
KBL pmax pmax
comp=Z,19nm,0.7s
KBL **Kabul** 51.83 294 P **P** 02 20 53.7 -0.5
KBL **Kabul** 51.83 294 P **P** 02 20 54.9 +0.7
SHAA **Shahritus** 52.15 298 P **P** 02 20 57.5 +1.2
SHAA IAmb IAmb 02 21 08.0
comp=Z,49nm,1.3s
AB31 **Akbulak array** 56.99 313 P **P** 02 21 30.4 -0.9
ABKAR **Akbulak array** 56.99 313 P **P** 02 21 30.9 -0.4
ARTI **Arti** 57.65 321 LR LR 02 48 32.3
comp=Z,42nm,21.7s,baz=71,slow=38
ARTI **Arti** 57.65 321 *c i*P **P** 02 21 34.8 -1.0
ARTI 02 22 24.5
ARTI S **S** 02 29 33.7 +0.3
ARTI SS **SS** 02 33 18.1 -5.2
ARTI pmax pmax
comp=Z,3.0nm,0.8s
ARTI MLR MLR
comp=Z,361nm,14.0s
AKTO **Aktyubinsk** 58.15 314 LR LR 02 47 07.3
comp=Z,57nm,19.6s,baz=128,slow=37
E19K **Redstone River** 59.08 26 P **P** 02 21 46.8 +1.3
D20K **Etivluk River** 59.40 24 P **P** 02 21 48.9 +1.0
B21K **Ikpikpuk River** 60.18 23 P **P** 02 21 54.4 +1.3
B21K IAmb IAmb 02 22 05.0
comp=Z,8.1nm,0.8s
DZM **Mont Dzumac** 60.42 140 LR LR 02 48 18.2
comp=Z,52nm,18.0s,baz=230,slow=36
E22K **Anaktuvuk Pass** 61.16 25 IAmb IAmb 02 22 11.7
comp=Z,6.2nm,0.8s
KDAK **Kodiak Island** 61.34 37 LR LR 02 48 43.5
comp=Z,18nm,21.7s,baz=257,slow=36
D23K **Nanushuk River** 61.56 24 P **P** 02 22 03.8 +1.3
D23K IAmb IAmb 02 22 14.9
comp=Z,8.4nm,1.0s
E23K **Chandalar** 61.98 25 IAmb IAmb 02 22 17.6
comp=Z,5.5nm,0.8s
H23K **Yukon River** 62.13 27 IAmb IAmb 02 22 19.0
comp=Z,7.2nm,0.8s
F24K **Squaw Lake** 62.67 25 IAmb IAmb 02 22 22.1
comp=Z,6.6nm,0.7s
H24K **Noodor Dome** 62.82 27 IAmb IAmb 02 22 23.4
comp=Z,6.0nm,0.9s
G24K **Hadweenzic Riv** 62.90 26 IAmb IAmb 02 22 23.9
comp=Z,4.8nm,0.8s
D25K **Kavik River** 63.08 23 IAmb IAmb 02 22 24.5
comp=Z,3.4nm,0.8s
ILAR **Eielson Array** 63.34 28 P **P** 02 22 14.2 -0.3
comp=Z,0.9nm,0.7s,baz=278,slow=5.9,SNR=8.5
ILAR LR LR 02 50 27.4
comp=Z,18nm,21.8s,baz=282,slow=37
comp=Z,0.9nm,0.7s
HDA **Harding Lake** 63.36 29 IAmb IAmb 02 22 25.1
comp=Z,7.2nm,0.8s
F25K **Christian Rive** 63.52 25 IAmb IAmb 02 22 28.3
comp=Z,4.5nm,0.8s
F26K **Sheenjek River** 64.08 25 P **P** 02 22 21.1 +1.8
F26K IAmb IAmb 02 22 32.0
comp=Z,8.0nm,0.8s
G26K **Porcupine Rive** 64.32 26 IAmb IAmb 02 22 33.4
comp=Z,5.0nm,1.1s
E27K **Coleen River** 64.96 24 IAmb IAmb 02 22 37.3
comp=Z,5.0nm,0.8s
I27K **Kandik River** 65.41 27 P **P** 02 22 29.0 +0.9
E28M **Babbage River** 65.63 24 IAmb IAmb 02 22 41.5
comp=Z,5.8nm,0.8s
BCAR **Beaver Creek A** 65.84 30 P **P** 02 22 32.0 +1.1
I28M **Miner Creek** 66.13 27 IAmb IAmb 02 22 44.9
comp=Z,5.7nm,0.8s
H29M **Whitestone** 66.58 26 IAmb IAmb 02 22 48.1
comp=Z,5.8nm,0.8s
MAK **Makhachkala** 66.59 308 *e*P **P** 02 22 31.8 -4.2
MAK *e*S **S** 02 31 21.8 -4.7
MAK *e*SS **SS** 02 35 43.9 +0.5
MAK pmax pmax
comp=Z,44nm,0.4s
KLMR **Klimovskoe** 66.87 328 *e*P **P** 02 22 36.3 -1.2
KLMR pmax pmax
comp=Z,20nm,1.6s
F30M **Barrier River** 67.23 24 P **P** 02 22 39.2 -0.4
F30M IAmb IAmb 02 22 52.1
comp=Z,10nm,1.1s
G30M **tAoh Zraii Nji** 67.23 25 IAmb IAmb 02 22 51.5
comp=Z,10.0nm,1.1s
L29M **L29M** 67.45 29 IAmb IAmb 02 22 53.7
comp=Z,6.2nm,0.8s
M29M **Somme Creek** 67.48 30 IAmb IAmb 02 22 53.8
comp=Z,3.6nm,0.8s
INK **Inuvik** 67.85 23 LR LR 02 55 11.6
comp=Z,20nm,18.2s,baz=239,slow=38
VRH **Novokhopyorsk** 68.16 317 *e*P **P** 02 22 43.9 -1.9
VRH pmax pmax
comp=Z,8.0nm,0.8s
SPITS **Spitsbergen Ar** 68.41 348 P **P** 02 22 46.3 -0.6
comp=Z,1.4nm,0.5s,baz=113,slow=2.2,SNR=4.8
comp=Z,1.4nm,0.5s
GOF **Gofitskoye** 69.08 311 *c e*P P 02 23 02.5 +11
LPSR **Galich'ya Gora** 69.42 319 *e*P **P** 02 22 52.7 -0.9
LPSR pmax pmax
comp=Z,11nm,0.9s
VORR **Voronezh** 69.53 318 *e*P **P** 02 22 53.8 -0.5
VORR pmax pmax
comp=Z,17nm,0.2s
KBZ **Khabaz** 69.59 309 P **P** 02 22 55.1 +0.4
comp=Z,4.5nm,0.8s,baz=109,slow=1.7,SNR=16
KBZ LR LR 02 58 10.6
comp=Z,64nm,18.3s,baz=132,slow=40
comp=Z,4.5nm,0.8s
KBZ **Khabaz** 69.59 309 *i* P **P** 02 22 54.1 -0.7
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV **Kislovodsk** 69.66 310 *e*P **P** 02 22 55.0 -0.5
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,30nm,17.0s
KIV **Kislovodsk** 69.66 310 P **P** 02 22 55.7 +0.3
KIV **Kislovodsk** 69.66 310 P **P** 02 22 54.9 -0.5
comp=Z,161nmcomp=Z,9.9nm,1.4s
KIV **Kislovodsk** 69.66 310 P **P** 02 22 56.3 +0.8
VSR **Storozhevoye** 69.70 318 *e*P **P** 02 22 54.3 -1.1
VSR pmax pmax
comp=Z,11nm,1.2s
SHA1 **Shidzhatmaz** 69.75 310 *i* P **P** 02 22 55.9 -0.2
ARCES **ARCESS Array B** 69.79 339 P **P** 02 22 55.8 +0.2
comp=Z,3.3nm,0.9s,baz=53,slow=11,SNR=5.3
ARCES LR LR 02 58 04.4
comp=Z,52nm,18.8s,baz=76,slow=40
comp=Z,3.3nm,0.9s
ARCES **ARCESS Array B** 69.79 339 P **P** 02 22 55.8 +0.2
ARCES pmax pmax
comp=Z,15nm,1.4s
OBN **Obninsk** 69.98 322 *e*P **P** 02 22 56.4 -0.6
OBN *e* 02 23 18.5
OBN *e* 02 25 28.1
OBN *e*PPP PPP 02 27 12.5
OBN pmax pmax
comp=Z,6.0nm,0.8s
EPOS **Posof** 70.41 307 P **P** 02 23 01.1 +1.0
HAKT **HAKKARI** 70.99 303 P **P** 02 23 04.7 +0.8
SOC **Sochi** 71.82 310 *e*P **P** 02 23 06.9 -1.5
SOC *e*PPP PPP 02 27 31.9
SOC *e*S **S** 02 32 19.8 -8.6
SOC *e*SSS SSS 02 40 17.5
SOC pmax pmax
comp=Z,13nm,0.8s
KOPT **Kop Dagi** 72.50 306 P **P** 02 23 13.6 +0.7
KOPT IAmb IAmb 02 23 24.6
comp=Z,5.3nm,0.8s
FINES **FINESS Array B** 72.83 331 P **P** 02 23 14.0 -0.1
comp=Z,2.7nm,0.7s,baz=63,slow=5.4,SNR=15
FINES LR LR 02 59 42.6
comp=Z,98nm,19.3s,baz=38,slow=40

	comp=Z,2.7nm,0.7s							
RAYN	**Ar Rayn**	**74.63**	**289**	P	**P**	**02 23 25.8**	**+0.3**	
RAYN				pmax	pmax			
	comp=Z,9.0nm,1.1s							
RAYN	**Ar Rayn**	**74.63**	**289**	P	**P**	**02 23 25.8**	**+0.3**	
RAYN				IAmb	IAmb	02 23 27.3		
	comp=Z,9.4nm,1.1s							
RAYN	**Ar Rayn**	**74.63**	**289**	P	**P**	**02 23 26.8**	**+1.3**	
MNK	**Minsk**	**74.87**	**324**	*i* P	**P**	**02 23 27.2**	**+1.0**	
	comp=E,7.0nm,0.9s							
MNK				*i* P	**P**	**02 23 27.2**	**+1.0**	
	comp=N,9.0nm,0.8s							
MNK				*i* P	**P**	**02 23 27.2**	**+1.0**	
	comp=Z,20nm,0.9s,baz=65							
MNK				*i* PP	**PP**	**02 26 15.6**	**+2.3**	
MNK				*i* PPP	PPP	02 28 02.6		
MNK				*i* S	**S**	**02 33 04.9**	**+2.3**	
MNK				*i* SS	**SS**	**02 37 54.7**	**+4.7**	
MNK				*i* SSS	SSS	02 41 17.1		
MNK				*i* LQ	LQ	02 51 48.2		
MNK				*i* LR	LR	02 57 08.6		
MNK				*i* LRM	MLR	02 59 51.4		
	comp=E,210nm,18.5s							
MNK				*i* LRM	MLR	02 59 53.4		
	comp=Z,190nm,15.1s							
MNK				*i* LRM	MLR	02 59 56.3		
	comp=N,195nm,16.4s							
MNK	**Minsk**	**74.87**	**324**	*i* P	**P**	**02 23 27.2**	**+1.0**	
MNK				*i*		02 26 15.5		
MNK				*i* PPP	PPP	02 28 02.6		
MNK				*i* S	**S**	**02 33 04.8**	**+2.3**	
MNK				*i* SS	**SS**	**02 37 54.7**	**+4.7**	
MNK				pmax	pmax			
	comp=N,9.0nm,0.8s							
MNK				pmax	pmax			
	comp=Z,20nm,0.9s							
MNK				pmax	pmax			
	comp=E,7.0nm,0.9s							
MNK				MLR	MLR			
	comp=E,210nm,18.0s							
MNK				MLR	MLR			
	comp=Z,190nm,15.0s							
MNK				MLR	MLR			
	comp=N,195nm,16.0s							
TOKA	**Tokat**	**75.25**	**308**	IAmb	IAmb	02 23 30.4		
	comp=Z,5.3nm,0.7s							
AK03	**Malin Array Si**	**75.73**	**320**	P	**P**	**02 23 31.0**	**-0.2**	
AK03	**Malin Array Si**	**75.73**	**320**	P	**P**	**02 23 30.8**	**-0.4**	
AKASG	**Malin Array Be**	**75.74**	**320**	P	**P**	**02 23 31.1**	**-0.1**	
	comp=Z,6.9nm,0.7s,baz=59,slow=6.3,SNR=24							
AKASG				LR	LR	02 59 30.8		
	comp=Z,149nm,18.4s,baz=46,slow=38							
	comp=Z,6.9nm,0.7s							
AKASG	**Malin Array Be**	**75.74**	**320**	P	**P**	**02 23 31.1**	**-0.1**	
AKASG				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AKASG	**Malin Array Be**	**75.74**	**320**	IAmb	IAmb	02 23 31.9		
	comp=Z,3.2nm,1.0s							
AKBB	**Malin Array Si**	**75.74**	**320**	*ce*P	**P**	**02 23 30.6**	**-0.7**	
AKBB				pmax	pmax			
	comp=Z,7.0nm,0.6s							
AKBB	**Malin Array Si**	**75.74**	**320**	IAmb	IAmb	02 23 31.6		
	comp=Z,8.5nm,0.7s							
AKBB	**Malin Array Si**	**75.74**	**320**	P	**P**	**02 23 31.1**	**-0.2**	
AK01	**Malin Array Si**	**75.75**	**320**	P	**P**	**02 23 31.1**	**-0.2**	
KIEV	**Kiev**	**75.75**	**320**	⇑P	**P**	**02 23 28.9**	**-2.4**	
KIEV	**Kiev**	**75.75**	**320**	P	**P**	**02 23 31.5**	**+0.2**	
KIEV	**Kiev**	**75.75**	**320**		**P**	**02 23 31.5**	**+0.2**	
KIEV	**Kiev**	**75.75**	**320**	P	**P**	**02 23 30.8**	**-0.5**	
	comp=Z,51nm,1.0s							
KIEV	**Kiev**	**75.75**	**320**	P	**P**	**02 23 31.1**	**-0.2**	
AK23	**Malin Array Si**	**75.77**	**320**	P	**P**	**02 23 31.2**	**-0.2**	
AK15	**Malin Array Si**	**75.80**	**320**	P	**P**	**02 23 31.4**	**-0.2**	
AK06	**Malin Array Si**	**75.80**	**320**	P	**P**	**02 23 31.4**	**-0.2**	
AK07	**Malin Array Si**	**75.81**	**320**	P	**P**	**02 23 31.5**	**-0.2**	
GAZ	**Gaziantep**	**75.95**	**305**	IAmb	IAmb	02 23 34.8		
	comp=Z,7.3nm,0.8s							
BNN	**Bunyan**	**76.28**	**307**	P	**P**	**02 23 35.1**	**+0.3**	
BNN				IAmb	IAmb	02 23 45.6		
	comp=Z,5.0nm,0.9s							
BAL3X	**Bal3x, Balta**	**76.69**	**317**	P	**P**	**02 23 36.3**	**-0.4**	
LUBAR	**Lubar, Ukraine**	**76.92**	**319**	P	**P**	**02 23 37.9**	**-0.1**	
RNPP9	**Sopachiv**	**77.32**	**321**	P	**P**	**02 23 40.1**	**-0.1**	
SORM	**Soroca**	**77.36**	**318**	P	**P**	**02 23 40.2**	**-0.3**	
	comp=Z,9.1nm,1.1s							
YKA	**Yellowknife Ar**	**77.47**	**25**	P	**P**	**02 23 40.1**	**-0.7**	
	comp=Z,1.2nm,0.9s,baz=308,slow=5.8,SNR=3.6							
YKA				LR	LR	02 59 46.5		
	comp=Z,17nm,19.5s,baz=309,slow=37							
	comp=Z,1.2nm,0.9s							
BR131	**Keskin Array S**	**77.49**	**308**	IAmb	IAmb	02 23 42.9		
	comp=Z,8.1nm,0.9s							
BRTR	**Keskin Array B**	**77.49**	**308**	P	**P**	**02 23 42.0**	**+0.4**	
	comp=Z,4.8nm,0.8s,baz=108,slow=4.6,SNR=39							
	comp=Z,4.8nm,0.8s							
BRTR	**Keskin Array B**	**77.49**	**308**	*ce*P	**P**	**02 23 42.0**	**+0.4**	
BRTR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BRTR	**Keskin Array B**	**77.49**	**308**	P	**P**	**02 23 41.6**	**0.0**	
BR104	**Keskin Array S**	**77.49**	**308**	P	**P**	**02 23 41.9**	**+0.3**	
	comp=Z,51nmcomp=Z,7.5nm,0.9s							
BR106	**Keskin Array S**	**77.50**	**308**	P	**P**	**02 23 41.9**	**+0.3**	
	comp=Z,55nmcomp=Z,7.8nm,1.1s							
BR105	**Keskin Array S**	**77.51**	**308**	P	**P**	**02 23 41.5**	**-0.2**	
	comp=Z,67nmcomp=Z,9.5nm,0.9s							
KIRS	**Kirsehir-Merke**	**77.54**	**308**	⇑P	**P**	**02 23 41.2**	**-0.6**	
KMPD	**K-Podol'skiy**	**78.29**	**319**	P	**P**	**02 23 45.3**	**-0.4**	
HFS	**Hagfors**	**78.74**	**333**	P	**P**	**02 23 47.9**	**0.0**	
	comp=Z,3.7nm,0.8s,baz=92,slow=5.0,SNR=4.4							
	comp=Z,3.7nm,0.8s							
TESR	**Tescani**	**79.12**	**317**	⇑P	**P**	**02 23 49.7**	**-0.6**	
TESR	**Tescani**	**79.12**	**317**	P	**P**	**02 23 50.3**	**0.0**	
	comp=Z,11nm,1.0s							
NB2	**NORSAR Subarra**	**79.20**	**334**	P	**P**	**02 23 50.1**	**-0.4**	
	comp=Z,1.6nm,0.7s,baz=48,slow=5.6							
NOA	**NORSAR Array B**	**79.20**	**334**	P	**P**	**02 23 50.1**	**-0.4**	
	comp=Z,1.6nm,0.7s,baz=50,slow=5.5,SNR=12							
NOA				LR	LR	03 02 04.3		
	comp=Z,26nm,18.7s,baz=45,slow=38							
	comp=Z,1.6nm,0.7s							
VRI	**Vrincioaia**	**79.38**	**316**	⇑P	**P**	**02 23 52.6**	**+0.9**	
VRI	**Vrincioaia**	**79.38**	**316**	P	**P**	**02 23 53.4**	**+1.7**	
VRI	**Vrincioaia**	**79.38**	**316**	P	**P**	**02 23 53.4**	**+1.7**	
SAHR	**Sahastru**	**79.47**	**316**	⇓P	**P**	**02 23 52.9**	**+0.6**	
BURAR	**Bucovina Array**	**79.47**	**318**	P	**P**	**02 23 52.1**	**-0.2**	
BURAR				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BURAR	**Bucovina Array**	**79.47**	**318**	P	**P**	**02 23 52.1**	**-0.2**	
CSS	**Mathiatis**	**79.72**	**304**	P	**P**	**02 23 53.5**	**-0.3**	
	comp=Z,10.0nm,0.9s							
TURR	**Turia**	**79.73**	**316**	⇑P	**P**	**02 23 55.0**	**+1.3**	
KWP	**Kalwaria Pacla**	**79.95**	**321**	P	**P**	**02 23 55.2**	**+0.4**	
	comp=Z,12nm,0.9s							
SUMG	**Summit**	**80.45**	**356**	P	**P**	**02 23 58.4**	**+0.8**	
SUMG				pmax	pmax			
	comp=Z,13nm,0.7s							
SUMG	**Summit**	**80.45**	**356**	P	**P**	**02 23 58.4**	**+0.8**	
SUMG	**Summit**	**80.45**	**356**	P	**P**	**02 23 59.2**	**+1.6**	
TRPA	**Tarpa**	**80.80**	**320**	P	**P**	**02 24 00.4**	**+1.1**	
ARR	**Arges**	**80.91**	**316**	⇓P	**P**	**02 24 00.9**	**+0.8**	
ARR	**Arges**	**80.91**	**316**	P	**P**	**02 24 01.5**	**+1.4**	
OJC	**Ojcow**	**81.27**	**322**	*e*P	**P**	**02 24 02.7**	**+0.8**	
OJC	**Ojcow**	**81.27**	**322**	P	**P**	**02 24 01.6**	**-0.2**	
OJC	**Ojcow**	**81.27**	**322**	P	**P**	**02 24 01.6**	**-0.2**	
OJC	**Ojcow**	**81.27**	**322**	P	**P**	**02 24 01.7**	**-0.1**	
	comp=Z,13nm,1.0s							
OJC	**Ojcow**	**81.27**	**322**	P	**P**	**02 24 02.9**	**+1.1**	
NIE	**Niedzica**	**81.41**	**321**	*e*P	**P**	**02 24 05.0**	**+2.4**	
STEB	**Steborice**	**82.52**	**323**	*e*P	**P**	**02 24 08.9**	**+0.5**	
VYHS	**Vyhne**	**82.72**	**321**	P	**P**	**02 24 11.3**	**+1.8**	
VYHS	**Vyhne**	**82.72**	**321**	*e*P	**P**	**02 24 10.7**	**+1.2**	
VYHS				*e*		02 24 20.5		
MORC	**Moravsky Berou**	**82.73**	**323**	*e*P	**P**	**02 24 10.0**	**+0.4**	
JAVC	**Velka Javorina**	**83.17**	**322**	*e*P	**P**	**02 24 15.1**	**+3.2**	
EDM	**Edmonton**	**83.46**	**33**	IAmb	IAmb	02 24 25.2		
	comp=Z,5.9nm,1.0s							
SMOL	**Smolenice**	**83.49**	**322**	*e*P	**P**	**02 24 15.7**	**+2.2**	
VRAC	**Vranov**	**83.51**	**323**	⇓P	**P**	**02 24 15.1**	**+1.5**	
VRAC	**Vranov**	**83.51**	**323**	P	**P**	**02 24 14.0**	**+0.4**	
	comp=Z,2.7nm,0.9s,baz=63,slow=4.9,SNR=7.6							
VRAC				LR	LR	03 06 11.4		
	comp=Z,39nm,20.6s,baz=56,slow=39							
	comp=Z,2.7nm,0.9s							
VRAC	**Vranov**	**83.51**	**323**	P	**P**	**02 24 14.0**	**+0.4**	
VRAC	**Vranov**	**83.51**	**323**	*e*P	**P**	**02 24 14.3**	**+0.7**	
VRAC	**Vranov**	**83.51**	**323**	P	**P**	**02 24 15.0**	**+1.5**	
MODS	**Modra-Piesok**	**83.65**	**322**	*e*P	**P**	**02 24 17.3**	**+3.0**	
MODS	**Modra-Piesok**	**83.65**	**322**	*e*P	**P**	**02 24 17.3**	**+3.0**	
KRUC	**Moravsky**	**83.75**	**322**	P	**P**	**02 24 15.9**	**+1.1**	
KRUC	**Moravsky**	**83.75**	**322**	*e*P	**P**	**02 24 15.3**	**+0.5**	
KRUC	**Moravsky**	**83.75**	**322**	P	**P**	**02 24 15.9**	**+1.1**	
BSEG	**Bad Segeberg**	**83.93**	**329**	P	**P**	**02 24 17.1**	**+1.5**	
BSEG	**Bad Segeberg**	**83.93**	**329**	P	**P**	**02 24 17.1**	**+1.5**	
BRG	**Berggiesshubel**	**84.01**	**325**	P	**P**	**02 24 16.8**	**+0.7**	
BRG	**Berggiesshubel**	**84.01**	**325**	P	**P**	**02 24 16.8**	**+0.7**	
BRG	**Berggiesshubel**	**84.01**	**325**	*e*P	**P**	**02 24 17.1**	**+1.0**	
BRG				Amp		02 24 17.6		
	comp=Z,2.7nm,0.9s							
MORH	**Mrgy, Hungar**	**84.06**	**319**	P	**P**	**02 24 17.4**	**+1.0**	
	comp=Z,2.1nm,1.1s							
G06A	**Carlson Farm,**	**84.07**	**42**	P	**P**	**02 24 16.9**	**+0.3**	
G06A				IAmb	IAmb	02 25 20.4		
	comp=Z,9.4nm,1.1s							
TREC	**Trest**	**84.11**	**323**	*e*P	**P**	**02 24 17.2**	**+0.5**	
TREC	**Trest**	**84.11**	**323**	*e*P	**P**	**02 24 17.2**	**+0.5**	
TREC	**Trest**	**84.11**	**323**	P	**P**	**02 24 17.9**	**+1.2**	
MPLH	**Magyarpolny**	**84.17**	**320**	P	**P**	**02 24 15.8**	**-1.2**	
PRU	**Pruhonice**	**84.22**	**324**	P	**P**	**02 24 18.7**	**+1.5**	
PRU	**Pruhonice**	**84.22**	**324**	P	**P**	**02 24 18.6**	**+1.5**	
CLL	**Collm**	**84.23**	**326**	*i* P	**P**	**02 24 18.2**	**+1.0**	
CLL				*i*		02 24 27.4		
CLL				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CLL	**Collm**	**84.23**	**326**	P	**P**	**02 24 17.3**	**+0.1**	
CLL	**Collm**	**84.23**	**326**	P	**P**	**02 24 17.9**	**+0.7**	
	comp=Z,11nm,0.8s							
CLL	**Collm**	**84.23**	**326**	*i* P	**P**	**02 24 18.2**	**+1.0**	
	comp=Z,7.0nm,0.7s							
CLL				*i* x	x	02 24 27.4		
	comp=Z,15nm,1.2s							
CLL				*e*S	S	02 34 54.0	+12	
HSKC	**Hora Svate Kat**	**84.43**	**325**	*e*P	**P**	**02 24 18.9**	**+0.6**	
GRG	**Griva**	**84.52**	**313**	P	**P**	**02 24 19.2**	**+0.2**	
GRG	**Griva**	**84.52**	**313**	P	**P**	**02 24 19.2**	**+0.2**	
RONA	**Rosalia, Austr**	**84.58**	**321**	*i* P	**P**	**02 24 19.8**	**+0.7**	
	comp=Z,2.5nm,1.0s							
PINE	**Pine Mountain**	**84.66**	**43**	P	**P**	**02 24 20.9**	**+1.2**	
PINE				IAmb	IAmb	02 24 32.5		
	comp=Z,6.1nm,0.9s							
CONA	**Conrad Observa**	**84.69**	**322**	*i* P	**P**	**02 24 20.4**	**+0.7**	
	comp=Z,6.3nm,1.3s							
ZVC	**Zvikov**	**84.72**	**324**	*e*P	**P**	**02 24 20.9**	**+1.2**	
CKRC	**Cesky Krumlov**	**85.02**	**323**	*e*P	**P**	**02 24 22.5**	**+1.2**	
CKRC	**Cesky Krumlov**	**85.02**	**323**	*e*P	**P**	**02 24 22.5**	**+1.2**	
NKC	**Novy Kostel**	**85.16**	**325**	*e*P	**P**	**02 24 23.2**	**+1.3**	
NKC	**Novy Kostel**	**85.16**	**325**	*e*P	**P**	**02 24 23.2**	**+1.3**	
NKC	**Novy Kostel**	**85.16**	**325**	P	**P**	**02 24 23.4**	**+1.5**	
CLZ	**Clausthal**	**85.21**	**327**	P	**P**	**02 24 23.8**	**+1.6**	
KHC	**Kasperske Hory**	**85.23**	**324**	*e*P	**P**	**02 24 23.2**	**+0.9**	
KHC	**Kasperske Hory**	**85.23**	**324**	*e*P	**P**	**02 24 23.2**	**+0.9**	
KHC	**Kasperske Hory**	**85.23**	**324**	P	**P**	**02 24 23.2**	**+0.9**	
ARSA	**Arzberg**	**85.27**	**321**	*i* P	**P**	**02 24 22.5**	**-0.1**	
	comp=Z,1.9nm,1.1s							
GERES	**GERESS Array B**	**85.33**	**323**	P	**P**	**02 24 23.5**	**+0.6**	
	comp=Z,1.8nm,0.8s,baz=42,slow=4.4,SNR=19							
	comp=Z,1.8nm,0.8s							
GERES	**GERESS Array B**	**85.33**	**323**	P	**P**	**02 24 23.1**	**+0.2**	
MOA	**Molln**	**85.61**	**322**	*i* PcP	**P**	**02 24 25.6**	**+1.4**	
	comp=Z,4.0nm,0.8s							
MOA	**Molln**	**85.61**	**322**	P	**P**	**02 24 26.0**	**+1.7**	
KBN	**Korca**	**85.74**	**314**	P	**P**	**02 24 27.7**	**+2.6**	
KBN	**Korca**	**85.74**	**314**	P	**P**	**02 24 27.7**	**+2.6**	
PDG	**Podgorica**	**85.75**	**316**	P	**P**	**02 24 26.0**	**+1.0**	
SOKA	**Soboth**	**85.87**	**321**	*i* PcP	**P**	**02 24 26.3**	**+0.7**	
	comp=Z,4.0nm,1.3s							
BORG	**Borgarnes**	**85.87**	**348**	LR	LR	03 04 35.8		
	comp=Z,25nm,18.9s,baz=351,slow=37							
BIOA	**Bad Ischl, Aus**	**86.05**	**322**	*e*PcP	**P**	**02 24 28.3**	**+1.9**	
	comp=Z,3.2nm,0.8s							
IBBN	**Ibbenburen**	**86.16**	**328**	P	**P**	**02 24 30.1**	**+3.3**	
OBKA	**Obir**	**86.24**	**321**	*i* P	**P**	**02 24 27.7**	**+0.2**	
	comp=Z,2.9nm,1.1s							
RJOB	**Jochberg**	**86.48**	**323**	P	**P**	**02 24 29.6**	**+1.0**	
KBA	**Koelnbreinsper**	**86.57**	**322**	P	**P**	**02 24 30.6**	**+1.4**	
KBA	**Koelnbreinsper**	**86.57**	**322**	*i* PcP	**P**	**02 24 30.1**	**+0.9**	
	comp=Z,3.3nm,1.0s							
KBA	**Koelnbreinsper**	**86.57**	**322**	P	**P**	**02 24 30.6**	**+1.4**	
MYKA	**Terra Mystica**	**86.67**	**322**	*i* P	**P**	**02 24 29.7**	**+0.2**	
	comp=Z,2.2nm,0.9s							
LESA	**Schwarzleotal**	**86.73**	**323**	*i* PcP	**P**	**02 24 30.6**	**+0.8**	
	comp=Z,7.5nm,0.9s							
ABTA	**Abfaltersbach**	**87.23**	**322**	*i* P	**P**	**02 24 32.1**	**-0.2**	
	comp=Z,3.6nm,1.0s							
WATA	**Walderalm**	**87.38**	**323**	*e*PcP	**P**	**02 24 33.4**	**+0.3**	
	comp=Z,2.2nm,0.7s							
WTTA	**Wattenberg**	**87.39**	**323**	P	**P**	**02 24 33.3**	**+0.1**	
WTTA	**Wattenberg**	**87.39**	**323**	*e*PcP	**P**	**02 24 34.2**	**+1.0**	
	comp=Z,2.6nm,0.7s							
WTTA	**Wattenberg**	**87.39**	**323**	P	**P**	**02 24 33.3**	**+0.1**	
STAL	**STALIGIAL**	**87.41**	**322**	IAmb	IAmb	02 24 46.5		
	comp=Z,5.2nm,1.0s							
FFC	**Flin Flon**	**87.51**	**27**	P	**P**	**02 24 33.7**	**+0.3**	
FFC				pmax	pmax			
	comp=Z,7.0nm,0.9s							
FFC	**Flin Flon**	**87.51**	**27**	P	**P**	**02 24 33.7**	**+0.3**	
FFC				IAmb	IAmb	02 24 45.2		
	comp=Z,6.7nm,0.9s							
FFC	**Flin Flon**	**87.51**	**27**	P	**P**	**02 24 34.7**	**+1.3**	
MOTA	**Moosalm**	**87.62**	**323**	*e*PcP	**P**	**02 24 35.0**	**+0.7**	
	comp=Z,3.5nm,0.9s							
SQTA	**Sankt Quirin**	**87.64**	**323**	*e*PcP	**P**	**02 24 34.7**	**+0.4**	
	comp=Z,4.1nm,1.1s							
RETA	**Reutte**	**87.72**	**323**	*e*PcP	**P**	**02 24 36.0**	**+1.4**	
	comp=Z,1.9nm,0.8s							
FETA	**Feichten**	**88.03**	**323**	*i* PcP	**P**	**02 24 36.4**	**+0.2**	
	comp=Z,4.7nm,1.6s							
DAVA	**Damuels**	**88.31**	**324**	*e*PcP	**P**	**02 24 37.6**	**0.0**	
	comp=Z,3.4nm,0.9s							
FUORN	**Ofenpass-Fuorn**	**88.53**	**323**	P	**P**	**02 24 39.9**	**+1.2**	
FRB	**Frobisher Bay**	**88.56**	**8**	LR	LR	03 06 42.7		
	comp=Z,76nm,20.4s,baz=336,slow=37							
DAVOX	**Davos/Dischmat**	**88.63**	**323**	P	**P**	**02 24 39.3**	**+0.1**	
	comp=Z,2.6nm,0.6s,baz=74,slow=5.1,SNR=9.4							
	comp=Z,2.6nm,0.6s							
DLMT	**Dillon**	**88.63**	**39**	IAmb	IAmb	02 24 51.3		
	comp=Z,4.8nm,0.7s							
EKA	**Eskdalemuir Ar**	**88.64**	**335**	P	**P**	**02 24 40.9**	**+2.2**	
	comp=Z,2.1nm,0.6s,baz=33,slow=5.6,SNR=9.8							
	comp=Z,2.1nm,0.6s							
FDMO	**Fiordimonte**	**89.13**	**319**	P	**P**	**02 24 41.6**	**+0.3**	
FDMO				IAmb	IAmb	02 24 52.6		
	comp=Z,6.0nm,0.9s							
NVAR	**Mina Array Bea**	**89.26**	**47**	P	**P**	**02 24 44.6**	**+2.2**	
	comp=Z,0.1nm,0.3s,baz=304,slow=5.1,SNR=2.0							
	comp=Z,0.1nm,0.3s							
AQU	**L'Aquila**	**89.36**	**318**	P	**P**	**02 24 43.9**	**+1.4**	
AQU	**L'Aquila**	**89.36**	**318**	P	**P**	**02 24 43.9**	**+1.4**	
PDAR	**Pinedale Array**	**91.97**	**39**	P	**P**	**02 24 56.0**	**+1.1**	
	comp=Z,0.6nm,0.9s,baz=316,slow=4.1,SNR=4.5							
	comp=Z,0.6nm,0.9s							
PFO	**Pinyon Flats O**	**93.23**	**50**	LR	LR	03 01 24.2		
	comp=Z,8.1nm,20.3s,baz=244,slow=32							
ULM	**Lac du Bonnet**	**93.34**	**27**	P	**P**	**02 25 01.0**	**+0.4**	
	comp=Z,1.8nm,1.0s,baz=293,slow=7.7,SNR=3.2							
ULM				LR	LR	03 09 42.1		
	comp=Z,19nm,18.1s,baz=21,slow=37							
	comp=Z,1.8nm,1.0s							
ULM	**Lac du Bonnet**	**93.34**	**27**	IAmb	IAmb	02 25 11.7		
	comp=Z,4.5nm,1.1s							
SCHQ	**Schefferville**	**97.42**	**9**	LR	LR	03 11 41.1		
	comp=Z,55nm,21.1s,baz=328,slow=37							

PRU 31 02:23:54.7,51.38N×16.22E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.80**	**188**	*e*P	Pg	02 24 09.3	-0.7
CHVC	**Chvalec**	**0.80**	**188**	*e*PG	Pg	02 24 09.3	-0.7
CHVC				*e*SG	Sg	02 24 20.8	+0.5
OSTC	**Ostas**	**0.82**	**180**	*e*P	Pg	02 24 10.1	-0.4
OSTC	**Ostas**	**0.82**	**180**	*e*PG	Pg	02 24 10.1	-0.4
OSTC				*e*SG	Sg	02 24 21.3	+0.2
	comp=Z,2.5nm,0.4s						
UPC	**Upice**	**0.88**	**189**	*e*P	Pg	02 24 11.7	+0.1
UPC	**Upice**	**0.88**	**189**	*e*PG	Pg	02 24 11.7	+0.1
UPC				*e*SG	Sg	02 24 23.2	+0.2
	comp=Z,8.9nm,0.4s						
DPC	**Dobruska-Polom**	**1.03**	**176**	*e*P	Pg	02 24 12.9	-1.6
DPC	**Dobruska-Polom**	**1.03**	**176**	*e*PG	Pg	02 24 12.9	-1.6
DPC				*e*SG	Sg	02 24 27.1	-0.7
PVCC	**Panska Ves**	**1.35**	**231**	*e*SG	Sg	02 24 37.8	-0.2
	comp=Z,16nm,0.3s						
KRLC	**Kraliky**	**1.35**	**164**	*e*SG	Sg	02 24 37.4	-0.8
	comp=Z,3.7nm,0.4s						
BRG	**Berggiesshubel**	**1.52**	**251**	Pg	Pn	02 24 23.4	+0.3
BRG	**Berggiesshubel**	**1.52**	**251**	P	Pg	02 24 30.8	+6.9
BRG				Amp		02 24 31.2	
	comp=Z,3.7nm,0.8s						
BRG	**Berggiesshubel**	**1.52**	**251**	Sg	Sg	02 24 43.5	-0.1
BRG				Amp		02 24 44.5	
	comp=Z,4.1nm,0.3s						
STEB	**Steborice**	**1.75**	**145**	*e*SG	Sn	02 24 49.1	-0.2
PRU	**Pruhonice**	**1.75**	**218**	*e*SG	Sn	02 24 49.8	+0.4
MORC	**Moravsky Berou**	**1.81**	**152**	*e*PN	Pn	02 24 25.2	-2.0
MORC				*e*SG	Sn	02 24 50.2	-0.7
HSKC	**Hora Svate Kat**	**1.92**	**247**	*e*SG	Sb	02 24 54.5	-0.7
VRAC	**Vranov**	**2.09**	**173**	*e*SG	Sb	02 24 59.8	-0.1
KRUC	**Moravsky**	**2.32**	**177**	*e*SG	Sb	02 25 07.6	+0.9
ZVC	**Zvikov**	**2.34**	**215**	*e*SG	Sb	02 25 08.3	+1.3
NKC	**Novy Kostel**	**2.65**	**246**	*e*SG	Sg	02 25 19.4	-0.5
KHC	**Kasperske Hory**	**2.82**	**218**	*e*SG	Sg	02 25 23.4	-1.8

NNC ***31*** *02:44:15.4±0.3,42.98N×75.92E,h0km±3km,mb2.8, mpv3.1,Error ellipse: s-maj=3.8km s-min=1.9km az=168.0*
KRNET ***31*** *02:44:15.6±0.1,42.98N×75.94E,h21km,mb2.7*
SOME ***31*** *02:44:16.0,42.97N×75.95E,h10km*

ISC 31 02:44:14.9±1.0,42.99N±0.02×75.95E±0.01,h15km±11km, n42,σ0s58/77,17C-7D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.26**	**256**	⇑*i*P	**Pb**	**02 44 21.8**	**+0.3**
TKM2				⇑*i*S	**Sb**	**02 44 25.8**	**-0.1**
DGS	**Degeres**	**0.29**	**334**	P	**Pb**	**02 44 22.3**	**+0.5**
	74nm,0.1s						
DGS				S	**Sb**	**02 44 26.5**	**0.0**
	129nm,0.1s						
DGS	**Degeres**	**0.29**	**334**	*e*P	**Pb**	**02 44 22.3**	**+0.5**
	74nm,0.1s						
DGS				*e*S	**Sb**	**02 44 26.5**	**0.0**
	129nm,0.1s						
MTBS	**Maitube**	**0.38**	**68**	P	**Pb**	**02 44 23.2**	**-0.2**
	5.9nm,0.0s						
MTBS				S	**Sb**	**02 44 29.3**	**0.0**
	78nm,0.2s						
MTBS	**Maitube**	**0.38**	**68**	*e*P	**Pb**	**02 44 23.6**	**+0.2**
	8.7nm,0.1s						
MTBS				*e*S	**Sb**	**02 44 29.3**	**0.0**
	78nm,0.2s						
IZV	**Izvestkoviy**	**0.49**	**84**	P	**Pb**	**02 44 25.7**	**+0.4**
	26nm,0.1s						
IZV				S	**Sb**	**02 44 33.0**	**+0.5**
	72nm,0.1s						
IZV	**Izvestkoviy**	**0.49**	**84**	*e*P	**Pb**	**02 44 25.8**	**+0.4**
IZV				*e*S	**Sb**	**02 44 33.0**	**+0.5**
BOOM	**Boomskoye usch**	**0.49**	**180**	⇑*e*P	**Pb**	**02 44 25.4**	**0.0**
BOOM				⇑*i*S	**Sb**	**02 44 32.1**	**-0.4**
KRBS	**Karabastau**	**0.74**	**345**	P	**Pb**	**02 44 30.1**	**+0.7**
	8.8nm,0.1s						
KRBS				S	**Sb**	**02 44 39.8**	**

UZB				*e*S		**Sg**	02 45 26.8	**-0.8**
KNOS	**Konyrlen**	**2.72**	**59**	Pg		**Pb**	02 45 04.1	**+0.8**
	0.8nm,0.1s							
KNOS				Lg		Lg	02 45 38.9	
	3.5nm,0.4s							
KK31	**Karatay Array**	**3.98**	**274**	⇓Pg		**Pg**	02 45 28.7	**-2.5**
	0.4nm,0.5s,baz=87,slow=13,SNR=4.0							
KK31				⇑Lg		Lg	02 46 21.4	
	1.8nm,0.6s							

WEL 31 03:02:47.8±0.3,**40˚S**±1˚×**17˚4E**±˚,**h12**km±3km,**M3.5**/25, **ML3.5**/25,**MLv3.5**/25,**Error ellipse: s-maj=2.7km s-min=1.8km az=84.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WCDS	**Wanganui Civil**	**0.55**	**68**	P	Pb	03 02 59.3	-0.2
WCDS				S	Sb	03 03 07.9	+0.5
WAZ	**Wanganui**	**0.60**	**51**	P	Pb	03 03 00.1	-0.3
LREZ	**Lake Rotokare**	**0.68**	**2**	P	Pb	03 03 01.4	-0.2
LREZ				S	Sb	03 03 11.8	+0.8
OHWZ	**Ohakea**	**0.72**	**96**	P	Pb	03 03 02.5	+0.1
OHWZ				S	Sb	03 03 12.7	+0.5
DUWZ	**D'Urville Isla**	**0.75**	**208**	P	Pg	03 03 02.1	-0.3
DUWZ				S	Sb	03 03 12.9	-0.2
PREZ	**Palmer Road**	**0.81**	**348**	P	Pg	03 03 03.7	+0.2
NMEZ	**Namu Road**	**0.82**	**332**	P	Pg	03 03 03.7	0.0
NMEZ				S	Sb	03 03 15.8	+0.7
KIW	**Kapiti Island**	**0.83**	**151**	P	Pg	03 03 03.9	+0.1
KIW				S	Sg	03 03 14.4	-0.2
HOCS	**Levin Horowhen**	**0.84**	**125**	P	Pb	03 03 04.4	0.0
KHEZ	**Kahui Hut**	**0.89**	**341**	P	Pg	03 03 05.1	+0.1
NEZ	**North Egmont**	**0.90**	**346**	P	Pn	03 03 05.9	-0.5
OGWZ	**Otaki Gorge**	**0.91**	**138**	P	Pb	03 03 05.6	+0.1
OGWZ				S	Sb	03 03 21.0	-0.5
NBEZ	**Newall Road No**	**0.96**	**335**	P	Pg	03 03 06.1	-0.1
NBEZ				S	Sb	03 03 19.8	+0.8
PNMS	**Monrad Interme**	**0.96**	**104**	P	Pn	03 03 07.0	-0.1
DREZ	**Durham Road**	**0.96**	**352**	P	Pg	03 03 06.1	-0.2
DREZ				S	Sn	03 03 20.3	-0.5
PKE	**Pukeiti**	**0.99**	**342**	P	Pg	03 03 06.7	-0.2
PWES	**Porirua West**	**1.04**	**161**	P	Pb	03 03 07.4	-0.4
PWES				S	Sb	03 03 21.0	-0.5
MRZ	**Mangatainoka R**	**1.05**	**120**	P	Pg	03 03 08.2	+0.1
MRZ				S	Sg	03 03 22.4	+0.5
VRZ	**Vera Road**	**1.06**	**16**	P	Pb	03 03 07.0	-1.1
VRZ				S	Sg	03 03 22.0	+0.1
MHEZ	**Mangahewa**	**1.06**	**358**	P	Pg	03 03 08.3	0.0
TCW	**Tory Channel**	**1.07**	**184**	P	Pb	03 03 07.6	-0.8
TCW				S	Sb	03 03 21.6	-0.8
POWZ	**Post Office Ro**	**1.09**	**104**	P	Pg	03 03 08.9	+0.1
POWZ				S	Sg	03 03 23.4	+0.3
CAW	**Cannon Point**	**1.10**	**152**	P	Pb	03 03 08.5	-0.3
MKBS	**Makara Bunker**	**1.11**	**167**	P	Pb	03 03 08.6	-0.5
MKBS				S	Sb	03 03 22.8	-0.7
MTVZ	**Mangateitei**	**1.13**	**48**	P	Pb	03 03 08.6	-0.8
PKVZ	**Pokaka**	**1.13**	**42**	P	Pb	03 03 08.7	-0.7
HOWZ	**Holdsworth Sta**	**1.15**	**131**	P	Pg	03 03 09.9	0.0
HOWZ				S	Sn	03 03 25.4	-0.2
WEL	**Wellington**	**1.18**	**166**	P	Pb	03 03 10.1	-0.2
WEL				S	Sb	03 03 25.3	-0.2
TSZ	**Takapari Road**	**1.22**	**87**	P	Pn	03 03 10.4	-0.4
WNVZ	**Wahianoa**	**1.24**	**50**	P	Pn	03 03 10.2	-1.0
MAVZ	**Matarangi**	**1.26**	**47**	P	Pn	03 03 10.8	-0.9
WHVZ	**Whangaehu Hut**	**1.27**	**48**	P	Pn	03 03 10.6	-1.0
PRWZ	**Pori Road**	**1.29**	**109**	P	Pg	03 03 12.7	+0.1
MOVZ	**Moawhango**	**1.29**	**56**	P	Pn	03 03 11.1	-0.7
COVZ	**Chateau Observ**	**1.30**	**44**	P	Pn	03 03 11.5	-0.5
TIWZ	**Tintock**	**1.31**	**119**	P	Pg	03 03 13.1	0.0
TUVZ	**Tukino**	**1.31**	**49**	P	Pn	03 03 12.0	-0.2
NNZ	**Nelson**	**1.32**	**215**	P	Pn	03 03 12.1	0.0
MTW	**Mount Morrison**	**1.33**	**140**	P	Pb	03 03 12.8	0.0
TUWZ	**Tuamarina**	**1.33**	**194**	P	Pn	03 03 11.4	-0.9
NGZ	**Ngauruhoe**	**1.35**	**45**	P	Pn	03 03 12.0	-0.6
SNVZ	**South Ngauruho**	**1.36**	**46**	P	Pn	03 03 12.5	-0.4
DVHZ	**Dannevirke**	**1.38**	**97**	P	Pg	03 03 14.0	-0.3
WTVZ	**West Tongariro**	**1.39**	**43**	P	Pn	03 03 12.5	-0.7
WTVZ				S	Sn	03 03 31.0	-0.5
OTVZ	**Oturere**	**1.39**	**46**	P	Pn	03 03 12.8	-0.5
OTVZ				S	Sn	03 03 30.3	-1.4
TKNZ	**Takaka Hill**	**1.40**	**230**	P	Pn	03 03 13.4	+0.1
PNHZ	**Pukenui**	**1.42**	**81**	P	Pb	03 03 14.0	-0.3
PNHZ				S	Sn	03 03 32.2	0.0
MSWZ	**Moikau Station**	**1.44**	**153**	P	Pn	03 03 14.0	+0.2
MSWZ				S	Sg	03 03 34.1	0.0
ETVZ	**East Tongariro**	**1.44**	**46**	P	Pn	03 03 13.5	-0.3
ETVZ				S	Sn	03 03 32.3	-0.4
NTVZ	**North Tongarir**	**1.44**	**44**	P	Pn	03 03 17.4	-0.5
NTVZ				S	Sn	03 03 32.2	-0.7
TMVZ	**Te Maari**	**1.45**	**45**	P	Pn	03 03 13.7	-0.3
BHHZ	**Black Hill Sta**	**1.45**	**64**	P	Pn	03 03 13.6	-0.4
PAWZ	**Paruwai Farm**	**1.47**	**148**	P	Pb	03 03 14.8	-0.4
PAWZ				S	Sg	03 03 35.6	+0.3
TMWZ	**Te Maipa**	**1.50**	**130**	P	Pb	03 03 15.8	0.0
BFZ	**Birch Farm**	**1.52**	**111**	P	Pb	03 03 15.9	-0.2
KATZ	**Kakaramea**	**1.55**	**42**	P	Pn	03 03 14.1	-1.3
KATZ				S	Sn	03 03 34.7	-0.7
QRZ	**Quartz Range**	**1.57**	**244**	P	Pn	03 03 14.7	-0.9
PLWZ	**Palliser**	**1.57**	**155**	P	Pn	03 03 16.1	+0.4
WPHZ	**Waipukurau**	**1.58**	**88**	P	Pg	03 03 17.9	-0.3
CPWZ	**Castlepoint**	**1.59**	**120**	P	Pg	03 03 20.2	+1.9
TRWZ	**Traveller**	**1.60**	**142**	P	Pb	03 03 17.8	+0.4
KRHZ	**Kereru**	**1.61**	**73**	P	Pb	03 03 17.5	0.0
BSWZ	**Blackbirch Sta**	**1.62**	**193**	P	Pn	03 03 16.0	-0.2
ANWZ	**Angora Road**	**1.64**	**102**	P	Pg	03 03 19.9	+0.7
HIZ	**Hauiti**	**1.67**	**13**	P	Pn	03 03 16.2	-0.7
RATZ	**Rangitukua**	**1.67**	**41**	P	Pn	03 03 17.7	+0.7
KWHZ	**Kaweka Forest**	**1.73**	**66**	P	Pb	03 03 19.4	-0.2
PRHZ	**Porangahau**	**1.73**	**95**	P	Pg	03 03 21.8	+0.7
MRNZ	**Matariki Terra**	**1.76**	**224**	P	Pn	03 03 18.8	+0.6
MCHZ	**McNeill Hill**	**1.92**	**69**	P	Pg	03 03 23.9	-0.7
KAHZ	**Kahuranaki**	**1.95**	**81**	P	Pn	03 03 22.1	+1.2
THZ	**Tophouse**	**1.97**	**214**	P	Pn	03 03 22.2	+1.0
TLZ	**Tolley Road**	**2.02**	**27**	P	Pn	03 03 20.9	-0.9
MRHZ	**Matea Rd**	**2.05**	**51**	P	Pb	03 03 23.9	-1.1
NMHZ	**Naumai**	**2.15**	**62**	P	Pg	03 03 28.0	-0.9
MTHZ	**Maungataniwha**	**2.30**	**57**	P	Pn	03 03 27.3	+1.7
KHZ	**Kahutara**	**2.36**	**195**	P	Pn	03 03 27.0	+0.6
DSZ	**Denniston Nort**	**2.52**	**230**	P	Pn	03 03 28.7	0.0
TOZ	**Tahuroa Road**	**2.56**	**20**	P	Pn	03 03 28.6	-0.6
URZ	**Urewera**	**2.83**	**49**	P	Pn	03 03 34.2	+1.2
RAGZ	**Rawiri**	**2.87**	**56**	P	Pb	03 03 40.6	+1.5
GVZ	**Greta Valley S**	**3.00**	**199**	P	Pn	03 03 35.1	-0.1
LTZ	**Lake Taylor**	**3.08**	**210**	P	Pn	03 03 36.8	+0.4
MKAZ	**Moumakai**	**3.09**	**12**	P	Pn	03 03 35.8	-0.7
INZ	**Inchbonnie**	**3.40**	**220**	P	Pn	03 03 41.7	+1.0
TMZ	**Timaru**	**4.92**	**209**	P	Pn	03 04 00.8	-0.9

*NEIC **31** 03:24:41.5±2.3, 18˚05N±0˚08×65˚14W±0˚08, h35km±2km, ML2.8/35,Md3.6/10(RSPR),Error ellipse: s-maj=13.9km s-min=12.0km az=13.0*

RSPR 31 03:24:38.1, 18˚03N×64˚80W, h29km±29km,**MD3.6**/10, **6C-10D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.01**	**276**		Pn	03 24 52.4	-3.9
HUMP					Sn	03 25 01.8	-7.8
HUMP	**Col San Antoni**	**1.01**	**276**	IAML		03 25 03.3	
	318nm,0.2s						
HUMP	**Col San Antoni**	**1.01**	**276**	⇑*eP*	Pn	03 24 52.4	-3.9
PDPR	**Patillas Dam,**	**1.17**	**269**		Pn	03 24 54.9	-3.6
PDPR					Sn	03 25 06.7	-6.7
PDPR	**Patillas Dam,**	**1.17**	**269**	IAML		03 25 07.8	
	221nm,0.1s						
PDPR	**Patillas Dam,**	**1.17**	**269**	⇓*eP*	Pn	03 24 54.9	-3.6
IGPR	**InterUniversit**	**1.25**	**267**		Pn	03 24 56.2	-3.4
IGPR					Sn	03 25 09.9	-5.6
IGPR	**InterUniversit**	**1.25**	**267**	⇑*eP*	Pn	03 24 56.2	-3.4
SJG	**San Juan**	**1.29**	**274**		Pn	03 24 57.1	-3.1
SJG	**San Juan**	**1.29**	**274**	IAML		03 25 13.8	
	186nm,0.2s						
SJG	**San Juan**	**1.29**	**274**	⇓*eP*	Pn	03 24 57.1	-3.1
ECPR	**Experimental S**	**1.52**	**281**		Pn	03 25 01.4	-1.9
ECPR					Sn	03 25 17.9	-4.2
ECPR	**Experimental S**	**1.52**	**281**	⇓*iP*	Pn	03 25 01.4	-1.9
CELP	**Cerrillos**	**1.70**	**272**		Pn	03 25 04.2	-1.6
CELP					Sn	03 25 22.7	-3.8
CELP	**Cerrillos**	**1.70**	**272**	⇑*eP*	Pn	03 25 04.2	-1.6
EMPR	**Esperanza - Ma**	**1.71**	**285**		Pn	03 25 05.7	-0.2
EMPR					Sn	03 25 25.5	-1.2
EMPR	**Esperanza - Ma**	**1.71**	**285**	⇑*eP*	Pn	03 25 05.7	-0.2
EMPR				*e*S	Sn	03 25 25.5	-1.2
OBIP	**Obispado Ponce**	**1.72**	**271**		Pn	03 25 04.4	-1.8
OBIP					Sn	03 25 25.4	-1.8
OBIP	**Obispado Ponce**	**1.72**	**271**	⇑*eP*	Pn	03 25 04.4	-1.8
OBIP				*e*S	Sn	03 25 25.4	-1.8
UUPR	**Utuado, UPR, P**	**1.84**	**277**		Pn	03 25 06.3	-1.5
UUPR	**Utuado, UPR, P**	**1.84**	**277**	⇓*eP*	Pn	03 25 06.6	-1.2
AOPR	**Arecibo Observ**	**1.89**	**280**		Pn	03 25 06.8	-1.6
AOPR	**Arecibo Observ**	**1.89**	**280**	⇓*eP*	Pn	03 25 07.8	-0.7
GBPR	**Guanica, Bosqu**	**1.98**	**269**		Pn	03 25 05.8	-3.9
GBPR					Sn	03 25 30.8	-2.8
GBPR	**Guanica, Bosqu**	**1.98**	**269**	⇓*eP*	Pn	03 25 05.8	-3.9
GBPR				*e*S	Sn	03 25 30.8	-2.8
MLPR	**Magueyes Islan**	**2.14**	**269**		Pn	03 25 10.2	-1.6
MLPR				IAML		03 25 41.9	
	56nm,1.4s						
MLPR	**Magueyes Islan**	**2.14**	**269**		Sn	03 25 36.3	-1.2
MLPR	**Magueyes Islan**	**2.14**	**269**	⇑*eP*	Pn	03 25 10.2	-1.6
LSP	**Las Mesas**	**2.18**	**274**		Pn	03 25 11.3	-1.2
LSP					Sn	03 25 37.4	-1.2
LSP	**Las Mesas**	**2.18**	**274**	⇓*eP*	Pn	03 25 11.3	-1.2
LSP				*e*S	Sn	03 25 37.4	-1.2
CRPR	**Cabo Rojo, PR**	**2.20**	**270**		Pn	03 25 10.5	-2.3
CRPR				IAML		03 25 45.0	
	59nm,1.1s						
CRPR				IAML		03 25 46.8	
	54nm,1.4s						
CRPR	**Cabo Rojo, PR**	**2.20**	**270**		Sn	03 25 39.1	+0.1
CRPR	**Cabo Rojo, PR**	**2.20**	**270**	⇓*eP*	Pn	03 25 13.0	+0.2
PRSN	**Puerto Rico Se**	**2.24**	**275**		Sn	03 25 38.3	-1.6
PRSN	**Puerto Rico Se**	**2.24**	**275**		Pn	03 25 12.3	-1.0
PRSN	**Puerto Rico Se**	**2.24**	**275**	⇓*eP*	Pn	03 25 13.5	+0.2
AGPR	**Aguadilla, PR**	**2.24**	**281**		Pn	03 25 12.3	-1.0
AGPR				IAML		03 25 42.2	
	141nm,1.1s						
AGPR				IAML		03 25 45.5	
	112nm,1.2s						
AGPR	**Aguadilla, PR**	**2.24**	**281**	⇓*eP*	Pn	03 25 12.9	-0.4

*BGSI **31** 03:35:05.0±1.6, 28˚37S×27˚24E, h178km±35km, ML3.5, Presumed earthquake*
*PRE **31** 03:35:07.9±0.9, 27˚91S×26˚75E, h2km, ML2.9, Presumed earthquake*

ISC 31 03:35:08.5±1.2,**27˚87S**±0˚03×**26˚73E**±0˚04,**h16**km±9km, **n28,σ2°42/55,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNKL	**Senekal, Frees**	**1.00**	**114**	*e*P	**Pg**	**03 35 26.1**	**-2.0**
SNKL				*e*S	**Sb**	**03 35 40.5**	**-0.2**
SNKL				IAML		03 35 41.5	
	comp=Z,300nm,0.3s						
BOSA	**Boshof**	**1.50**	**240**	*e*P	**Pg**	**03 35 37.1**	**-0.3**
BOSA				*e*S	**Sn**	**03 35 57.9**	**+3.8**
BOSA				IAML		03 36 00.8	
	comp=Z,93nm,0.5s						
WDLM	**Western Deep L**	**1.57**	**23**	*e*P	**Pg**	**03 35 38.7**	**0.0**
WDLM				*e*S	**Sg**	**03 35 59.2**	**0.0**
WDLM				IAML		03 36 01.2	
	comp=Z,829nm,0.2s						
HRAO	**HartRAO**	**2.15**	**24**	*e*P	**Pn**	**03 35 46.2**	**+2.4**
HRAO				*e*S	**Sn**	**03 36 14.0**	**+3.7**
HRAO				IAML		03 36 18.9	
	comp=Z,194nm,0.4s						
MAKGR	**Makgori**	**2.68**	**320**	*i* P	**Pb**	**03 35 55.9**	**-0.3**
MAKGR				*i* S	**Sg**	**03 36 33.7**	**-1.0**
MAKGR				IAML		03 36 44.8	
	comp=E,770nm,0.5s						
LBTB	**Lobatse**	**3.02**	**340**	*e*P	**Pn**	**03 35 58.3**	**+2.5**
LBTB				*e*S	**Sn**	**03 36 34.7**	**+3.0**
LBTB				IAML		03 36 52.1	
	comp=Z,104nm,0.2s						
PMBG	**Pietermaritzbu**	**3.70**	**117**	*e*P	**Pn**	**03 36 06.9**	**+1.8**
PMBG				*e*S	**Sn**	**03 36 49.0**	**+0.6**
PMBG				IAML		03 37 01.4	
	comp=Z,65nm,0.3s						
LEPH	**Lephalale, Lim**	**4.11**	**14**	*e*P	**Pn**	**03 36 13.6**	**+2.8**
LEPH				*e*S	**Sn**	**03 37 00.5**	**+1.9**
LEPH				IAML		03 37 21.8	
	comp=Z,50nm,0.3s						
SKOMA	**Sekoma**	**4.18**	**322**	*i* P	**Pn**	**03 36 14.6**	**+2.9**
PHPEN	**Phepeng**	**4.21**	**304**	*i* P	**Pn**	**03 36 16.2**	**+4.1**
PHPEN				*i* S	**Sn**	**03 37 07.1**	**+6.1**
PHPEN				IAML		03 37 31.7	
	comp=N,422nm,0.5s						
LPHEP	**Lephephe**	**4.56**	**350**	*i* P	**Pn**	**03 36 18.3**	**+1.4**
LPHEP				*i* S	**Sn**	**03 37 12.9**	**+3.3**
LPHEP				IAML		03 37 37.2	
	comp=N,25nm,0.4s						
PILG	**Pilgrimsrest,**	**4.62**	**52**	*e*P	**Pn**	**03 36 19.9**	**+2.1**
PILG				*e*S	**Sn**	**03 37 12.2**	**+0.9**
PILG				IAML		03 37 32.5	
	comp=N,70nm,0.4s						
KDWAN	**Kaudwane**	**4.85**	**337**	*i* P	**Pn**	**03 36 23.9**	**+3.0**
KDWAN				*i* S	**Sn**	**03 37 19.9**	**+3.1**
KDWAN				IAML		03 37 52.1	
	comp=N,117nm,0.3s						
BRAK	**Brakfontein**	**5.12**	**220**	*e*P	**Pn**	**03 36 26.5**	**+1.8**
BRAK				*e*S	**Sn**	**03 37 24.5**	**+1.0**
BRAK				IAML		03 38 00.7	
	comp=Z,20nm,0.5s						
ROOI	**Rooidraai Farm**	**5.37**	**210**	*e*P	**Pn**	**03 36 30.5**	**+2.5**
ROOI				*e*S	**Sn**	**03 37 29.4**	**-0.1**
ROOI				IAML		03 38 05.0	
	comp=Z,26nm,0.5s						
GRHM	**Grahamstown, E**	**5.39**	**183**	*e*P	**Pn**	**03 36 30.0**	**+1.6**
GRHM				*e*S	**Sn**	**03 37 30.2**	**+0.1**
GRHM				IAML		03 38 02.6	
	comp=Z,19nm,0.5s						
GRAN	**Grantham**	**5.92**	**221**	*e*P	**Pn**	**03 36 38.0**	**+2.4**
GRAN				*e*S	**Sn**	**03 37 42.2**	**-1.0**
GRAN				IAML		03 38 18.3	
	comp=Z,27nm,0.4s						
KHWEE	**KHWEE**	**6.01**	**349**	*i* P	**Pn**	**03 36 36.5**	**-0.5**
KHWEE				*i* S	**Sn**	**03 37 45.2**	**-0.4**
KHWEE				IAML		03 38 32.1	
	comp=E,193nm,0.3s						
FRAZ	**Fraserburg**	**6.14**	**228**	*e*P	**Pn**	**03 36 40.9**	**+2.3**
FRAZ				*e*S	**Sn**	**03 37 47.4**	**-1.1**
FRAZ				IAML		03 38 22.7	
	comp=Z,9.3nm,0.7s						
MERW	**Merweville**	**6.57**	**222**	*e*P	**Pn**	**03 36 46.5**	**+1.9**
MERW				*e*S	**Sn**	**03 37 57.7**	**-1.5**
MERW				IAML		03 38 16.6	
	comp=Z,14nm,0.7s						
BROLN	**Tlhalogang**	**6.77**	**5**	*i* P	**Pn**	**03 36 45.2**	**-2.1**
BROLN				*i* S	**Sn**	**03 38 00.2**	**-3.9**
BROLN				IAML		03 38 43.2	
	comp=N,10nm,0.4s						
SUR	**Sutherland**	**6.81**	**227**	*e*P	**Pn**	**03 36 50.0**	**+2.0**
SUR				*e*S	**Sn**	**03 38 04.1**	**-1.3**
SUR				IAML		03 38 22.8	
	comp=Z,11nm,0.5s						
SOOWA	**Sowa**	**7.29**	**356**	*i* P	**Pn**	**03 36 53.5**	**-1.0**
SOOWA				*i* S	**Sn**	**03 38 13.6**	**-3.4**
SOOWA				IAML		03 39 04.8	
	comp=E,106nm,0.6s						
MATJ	**Matjiesfontein**	**7.55**	**223**	*e*P	**Pn**	**03 37 00.6**	**+2.7**
MATJ				*e*S	**Sn**	**03 38 21.7**	**-1.5**
MATJ				IAML		03 38 55.2	
	comp=Z,11nm,0.4s						
GRTLG	**Ghanzi**	**8.20**	**321**	*i* P	**Pn**	**03 37 05.3**	**-1.6**
GRTLG				*i* S	**Sn**	**03 38 36.6**	**-2.7**
GRTLG				IAML		03 39 38.0	
	comp=E,18nm,0.3s						
PRTV	**Porterville,We**	**8.38**	**230**	*e*P	**Pn**	**03 37 12.0**	**+2.7**
PRTV				*e*S	**Sn**	**03 38 41.6**	**-2.0**
PRTV				IAML		03 39 32.4	
	comp=Z,12nm,0.8s						
CER	**Ceres**	**8.42**	**228**	*e*P	**Pn**	**03 37 11.9**	**+1.9**
CER				*e*S	**Sn**	**03 38 42.5**	**-2.2**
TSUM	**Tsumeb**	**12.03**	**314**	*e*P	**Pn**	**03 38 02.3**	**+2.8**
TSUM				*e*S	**Sn**	**03 40 09.9**	**-3.5**
TSUM				IAML		03 40 30.0	
	comp=Z,0.7nm,0.7s						

*NEIC **31** 03:45:46.9±1.1, 5˚38S±0˚09×147˚5E±0˚1, h196km±10km, mb4.3/15,Error ellipse: s-maj=20.5km s-min=10.9km az=62.0*
*IDC **31** 03:45:47.6±1.4, 5˚52S×147˚36E, h201km±10km, mb3.5/6, mbtmp4.2/10, MS2.5/1, Error ellipse: s-maj=17.1km s-min=11.7km az=89.0*

ISC 31 03:45:44.1±0.8,**5˚38S**±0˚07×**147˚54E**±0˚09,**h170**km,**n39, σ1°84/42,mb4.2/12,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.02**	**185**	S	**Sn**	**03 47 34.6**	**+1.6**
PMG	**Port Moresby**	**4.02**	**185**	P	**Pn**	**03 46 48.9**	**+3.7**
PMG	**Port Moresby**	**4.02**	**185**	S	**Sn**	**03 47 34.8**	**+1.8**
PMG	**Port Moresby**	**4.02**	**185**	P	**Pn**	**03 46 47.9**	**+2.7**
	54nm,0.4s,baz=204,slow=23,SNR=16						
PMG				S	**Sn**	**03 47 34.6**	**+1.6**
	75nm,0.4s,baz=214,slow=21,SNR=12						
PMG	**Port Moresby**	**4.02**	**185**		**Pn**	**03 46 48.2**	**+3.0**
JAY	**Jayapura**	**7.39**	**292**	P	**Pn**	**03 47 31.7**	**+2.3**
	5.2nm,0.3s,baz=342,slow=22,SNR=6.7						
JAY				S	**Sn**	**03 48 54.4**	**+1.9**
	baz=128,slow=19						
JAY				LR	LR	03 50 15.6	
	comp=Z,38nm,21.6s,baz=57,slow=37						
COEN	**Coen**	**9.55**	**206**	S	**Sn**	**03 49 45.3**	**+1.0**
COEN	**Coen**	**9.55**	**206**	Pn	**Pn**	**03 48 00.1**	**+2.1**
TATA	**Tatamba Isabel**	**12.54**	**104**	P	P	03 48 45.7	+4.0
CTA	**Charters Tower**	**14.68**	**185**	P	**P**	**03 49 05.9**	**+0.4**
	11nm,0.6s,baz=2.3,slow=12,SNR=12						
CTAO	**Charters Tower**	**14.68**	**185**	P	**P**	**03 49 06.6**	**+1.2**
QIS	**Mount Isa**	**16.95**	**206**	P	**Pn**	**03 49 31.4**	**0.0**
MTN	**Manton Dam**	**17.81**	**244**	P	**P**	**03 49 40.1**	**+0.1**
MTN				IAmb	IAmb	03 50 00.4	
	comp=Z,7.3nm,1.1s						
WR8	**Warramunga Arr**	**19.26**	**220**		**P**	**03 49 55.5**	**-0.3**
WRAB	**Tennant Creek**	**19.34**	**220**	P	**P**	**03 49 56.2**	**-0.5**
WRA	**Warramunga Arr**	**19.36**	**220**	P	**P**	**03 49 56.6**	**-0.2**
	comp=Z,6.4nm,0.4s,baz=45,slow=11,SNR=88						
WRA				S	**S**	**03 53 20.5**	**-6.3**
	comp=Z,1.6nm,0.8s,baz=38,slow=20,SNR=5.4						
WRA	**Warramunga Arr**	**19.36**	**220**		**P**	**03 49 55.1**	**-1.7**
EIDS	**Eidsvold**	**20.17**	**171**	P	**P**	**03 50 06.5**	**+1.0**
EIDS				IAmb	IAmb	03 50 07.6	
	comp=Z,15nm,1.1s						
KNRA	**Kununurra**	**21.09**	**240**	P	**P**	**03 50 15.5**	**+0.2**
AS01	**Alice Springs**	**22.41**	**214**	P	**P**	**03 50 28.3**	**-0.5**
AS31	**Alice Springs**	**22.43**	**215**	P	**P**	**03 50 28.8**	**-0.3**
AS31				IAmb	IAmb	03 50 29.6	
	comp=Z,2nm,0.5s						
ASAR	**Alice Springs**	**22.43**	**215**	P	**P**	**03 50 28.9**	**-0.1**
	comp=Z,10nm,0.5s,baz=46,slow=7.9,SNR=116						
ASAR				S	**S**	**03 54 19.0**	**-3.8**
	comp=Z,1.4nm,0.8s,baz=36,slow=23,SNR=6.3						
	comp=Z,10nm,0.5s						
INKA	**Innaminka**	**23.16**	**195**	P	**P**	**03 50 35.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.85**	**238**	P	**P**	**03 50 49.9**	**-1.2**
FITZ	**Fitzroy Crossi**	**24.85**	**238**	P	**P**	**03 50 50.1**	**-0.9**
FITZ				IAmb	IAmb	03 50 52.7	
	comp=Z,3.2nm,0.4s						
ARMA	**Armidale**	**25.21**	**172**	P	**P**	**03 50 56.5**	**+2.2**
ARMA	**Armidale**	**25.21**	**172**	P	**P**	**03 50 53.9**	**-0.4**
ARMA				IAmb	IAmb	03 51 00.5	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**26.95**	**191**	P	**P**	**03 51 09.0**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=1.3,slow=9.3,SNR=6.0						
	comp=Z,1.4nm,0.4s						
BBOO	**Buckleboo**	**29.32**	**200**	P	**P**	**03 51 29.2**	**-1.7**
BBOO				IAmb	IAmb	03 51 54.1	
	comp=Z,6.0nm,1.1s						
FORT	**Forrest**	**31.21**	**214**	P	**P**	**03 51 46.5**	**-1.1**
FORT				IAmb	IAmb	03 52 08.2	
	comp=Z,9.8nm,1.1s						
MORW	**Morawa**	**37.99**	**228**	P	**P**	**03 52 44.1**	**-1.6**
MORW				IAmb	IAmb	03 52 59.7	
	comp=Z,5.3nm,0.9s						
THZ	**Tophouse**	**42.71**	**152**	P	**P**	**03 53 24.3**	**-0.1**
VNDA	**Vanda**	**72.50**	**177**	P	**P**	**03 56 51.3**	**-0.5**
	comp=Z,1.4nm,0.6s,ba

KNRA					IAmb	IAmb	04 11 35.9		
	comp=Z,6.5nm,0.8s								
FITZ	**Fitzroy Crossi**	**53.28**	**264**		P	**P**	**04 11 51.5**	**-0.3**	
VNDA	**Vanda**	**55.02**	**185**		P	**P**	**04 12 06.1**	**+2.7**	
CASY	**Casey**	**61.56**	**206**		P	**P**	**04 12 49.5**	**+0.8**	
CASY					IAmb	IAmb	04 12 50.9		
	comp=Z,2.1nm,0.6s								
QSPA	**South Pole Qui**	**66.61**	**180**		P	**P**	**04 13 23.6**	**+1.9**	
	comp=Z,6.0nm,0.9s,baz=19,slow=0.6,SNR=14								
	comp=Z,6.0nm,0.9s								
QSPA	**South Pole Qui**	**66.61**	**180**		P	**P**	**04 13 23.7**	**+2.0**	
QSPA					IAmb	IAmb	04 13 24.6		
	comp=Z,17nm,1.3s								
KIWB	**Kanaga Island**	**75.00**	**0**		P	**P**	**04 14 11.4**	**-0.6**	
ADK	**Adak**	**75.03**	**0**		P	**P**	**04 14 11.5**	**-0.6**	
PETK	**Petropavlovsk-**	**79.28**	**345**		P	**P**	**04 14 35.1**	**-0.6**	
	comp=Z,3.3nm,0.7s,baz=139,slow=4.9,SNR=5.4								
	comp=Z,3.3nm,0.7s								
PETK	**Petropavlovsk-**	**79.28**	**345**		P	**P**	**04 14 35.4**	**-0.4**	
MPMC	**Manual Prospec**	**81.86**	**45**		P	**P**	**04 14 51.6**	**+1.5**	
NVAR	**Mina Array Bea**	**82.77**	**43**		P	**P**	**04 14 56.0**	**+1.1**	
	comp=Z,1.8nm,0.7s,baz=221,slow=8.4,SNR=22								
	comp=Z,1.8nm,0.7s								
NVAR	**Mina Array Bea**	**82.77**	**43**		P	**P**	**04 14 55.8**	**+1.0**	
H03S2	**Juan Fernandez**	**83.83**	**124**		T	T	05 47 03.8		
	baz=244,slow=75,SNR=28								
H03S1	**Juan Fernandez**	**83.84**	**124**		T	T	05 47 04.9		
	baz=244,slow=75,SNR=27								
H03S3	**Juan Fernandez**	**83.84**	**124**		T	T	05 46 59.1		
	baz=244,slow=75,SNR=21								
TUC	**Tucson**	**84.34**	**51**			**P**	**04 15 04.6**	**+1.8**	
TUC					IAmb	IAmb	04 15 05.5		
	comp=Z,6.3nm,0.8s								
TROLL	**Troll, Antarti**	**84.78**	**180**		P	**P**	**04 15 05.0**	**+0.6**	
	comp=Z,356nm,0.7s								
SNAA	**Sanae**	**85.04**	**178**		P	**P**	**04 15 06.1**	**+0.5**	
	comp=Z,22nm,0.4s								
SNAA	**Sanae**	**85.04**	**178**		P	**P**	**04 15 05.2**	**-0.4**	
	comp=Z,1.6nm,0.7s,baz=194,slow=3.1,SNR=4.3								
	comp=Z,1.6nm,0.7s								
SNAA	**Sanae**	**85.04**	**178**		P	**P**	**04 15 06.1**	**+0.5**	
SNAA					IAmb	IAmb	04 15 07.0		
	comp=Z,11nm,1.5s								
VNA2	**Neumayer--Watz**	**85.60**	**177**	⇑	P	**P**	**04 15 08.3**	**0.0**	
	comp=Z,3.9nm,0.6s,baz=192,slow=3.3								
VNA1	**Neumayer--Stat**	**85.82**	**176**		P	**P**	**04 15 10.3**	**+0.9**	
	comp=Z,8.5nm,1.1s								
PLCA	**Paso Flores**	**86.81**	**133**		P	**P**	**04 15 15.9**	**+1.0**	
	comp=Z,2.1nm,0.8s,baz=243,slow=9.0,SNR=3.6								
	comp=Z,2.1nm,0.8s								
TXAR	**Lajitas Array**	**88.15**	**57**		P	**P**	**04 15 21.6**	**+0.3**	
	comp=Z,1.1nm,0.8s,baz=211,slow=6.9,SNR=15								
	comp=Z,1.1nm,0.8s								
TXAR	**Lajitas Array**	**88.15**	**57**			**P**	**04 15 22.6**	**+1.2**	
ANMO	**Albuquerque**	**88.79**	**51**			**P**	**04 15 25.2**	**+0.8**	
ANMO					IAmb	IAmb	04 15 26.3		
	comp=Z,2.4nm,0.8s								
PDAR	**Pinedale Array**	**90.71**	**43**		P	**P**	**04 15 33.5**	**+0.3**	
	comp=Z,2.2nm,0.9s,baz=204,slow=3.6,SNR=18								
	comp=Z,2.2nm,0.9s								
PDAR	**Pinedale Array**	**90.71**	**43**			**P**	**04 15 33.1**	**0.0**	
ILAR	**Eielson Array**	**91.07**	**13**		P	**P**	**04 15 34.1**	**+0.1**	
	comp=Z,0.6nm,0.6s,baz=227,slow=5.7,SNR=8.0								
	comp=Z,0.6nm,0.6s								
BVAR	**Borovoye Array**	**121.72**	**319**		PKP	**PKPdf**	**04 21 20.4**	**-2.0**	
	comp=Z,8.8nm,0.5s,baz=48,slow=2.1,SNR=2.3								
NB2	**NORSAR Subarra**	**141.99**	**353**		PKP	**PKPdf**	**04 21 55.7**	**-4.6**	
	comp=Z,0.4nm,0.6s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**141.99**	**353**		PKhKP	PKPpre	04 21 55.1		
	comp=Z,0.9nm,0.8s,baz=15,slow=4.1,SNR=4.8								
HFS	**Hagfors**	**142.55**	**351**		PKhKP	PKPpre	04 21 56.9		
	comp=Z,2.3nm,0.4s,baz=67,slow=3.9,SNR=17								
AKASG	**Malin Array Be**	**145.88**	**330**		PKPbc	**PKPdf**	**04 22 07.8**	**+0.5**	
	comp=Z,13nm,0.5s,baz=45,slow=4.1,SNR=80								
AKASG	**Malin Array Be**	**145.88**	**330**		P	**PKPdf**	**04 22 07.4**	**+0.2**	
EKA	**Eskdalemuir Ar**	**147.88**	**6**		PKPbc	**PKPbc**	**04 22 13.1**	**-0.6**	
	comp=Z,1.6nm,0.6s,baz=333,slow=2.1,SNR=7.5								
BRTR	**Keskin Array B**	**149.22**	**309**		PKPbc	**PKPbc**	**04 22 17.6**	**-0.3**	
	comp=Z,3.1nm,0.7s,baz=138,slow=4.5,SNR=26								
BRTR	**Keskin Array B**	**149.22**	**309**		P	**PKPbc**	**04 22 17.4**	**-0.5**	
MMAI	**Mount Meron Ar**	**149.72**	**296**		PKPbc	**PKPbc**	**04 22 18.9**	**-0.4**	
	comp=Z,3.2nm,0.3s,baz=57,slow=3.1,SNR=5.5								
OSTC	**Ostas**	**150.97**	**342**	*ex*		x	04 22 28.2		
OSTC	**Ostas**	**150.97**	**342**	*eP*		**PKiKP**	**04 22 23.0**	**+0.9**	
STEB	**Steborice**	**151.05**	**340**	*ex*		x	04 22 28.7		
STEB	**Steborice**	**151.05**	**340**	*eP*		**PKiKP**	**04 22 22.8**	**+0.6**	
CLL	**Collm**	**151.08**	**347**	*i* PKPbc		**PKiKP**	**04 22 22.7**	**+0.5**	
	comp=Z,6.0nm,0.6s								
CLL				*i*	PKPmax		04 22 28.0		
	comp=Z,11nm,0.8s								
DPC	**Dobruska-Polom**	**151.12**	**342**	*eP*		**PKiKP**	**04 22 23.4**	**+1.0**	
KRLC	**Kraliky**	**151.23**	**341**	*eP*		**PKiKP**	**04 22 23.4**	**+0.7**	
MORC	**Moravsky Berou**	**151.26**	**340**	*e*PKP		**PKiKP**	**04 22 23.5**	**+0.8**	
BRG	**Berggiesshubel**	**151.27**	**345**⇑	*e*PKPb		**PKPbc**	**04 22 23.1**	**+0.9**	
BRG					Amp		04 22 23.9		
	comp=Z,3.6nm,0.7s								
BRG					PKPab	**PKPab**	**04 22 28.9**	**-2.1**	
BRG					Amp		04 22 29.6		
	comp=Z,8.8nm,0.7s								
MAUC	**Maruska**	**151.53**	**339**	*ex*		x	04 22 29.9		
MAUC	**Maruska**	**151.53**	**339**	*eP*		**PKiKP**	**04 22 24.8**	**+1.5**	
HSKC	**Hora Svate Kat**	**151.64**	**345**	*e*PDIFF		**PKPab**	**04 22 29.5**	**-3.1**	
KRUC	**Moravsky**	**152.25**	**340**	*e*PKP		**PKiKP**	**04 22 25.4**	**+0.7**	
KHC	**Kasperske Hory**	**152.97**	**344**	*ex*		x	04 22 32.6		
KHC	**Kasperske Hory**	**152.97**	**344**	*e*PDIFF		**PKiKP**	**04 22 29.6**	**+3.3**	
CKRC	**Cesky Krumlov**	**153.07**	**343**	*ex*		x	04 22 32.9		
CKRC	**Cesky Krumlov**	**153.07**	**343**	*e*PDIFF		**PKiKP**	**04 22 29.6**	**+3.1**	
GERES	**GERESS Array B**	**153.21**	**344**	PKPbc		**PKPbc**	**04 22 26.3**	**-0.4**	
	comp=Z,1.8nm,0.6s,baz=19,slow=2.8,SNR=14								
CONA	**Conrad Observa**	**153.42**	**340**	*e*PKiKP		**PKiKP**	**04 22 33.5**	**+6.2**	
	comp=Z,1.4nm,0.5s								
RONA	**Rosalia, Austr**	**153.48**	**339**	*i* PKiKP		**PKiKP**	**04 22 33.7**	**+6.3**	
	comp=Z,3.9nm,0.5s								
MOA	**Molln**	**153.97**	**342**	*e*PKiKP		**PKiKP**	**04 22 33.3**	**+4.9**	
	comp=Z,2.3nm,0.6s								
LESA	**Schwarzleotal**	**154.78**	**344**	*e*PKiKP		**PKiKP**	**04 22 34.7**	**+4.6**	
	comp=Z,0.4nm,0.3s								
SOKA	**Soboth**	**154.79**	**340**	*e*PKP		**PKiKP**	**04 22 32.7**	**+2.5**	
	comp=Z,1.8nm,1.1s								
RETA	**Reutte**	**155.17**	**347**	*e*PKP		**PKPdf**	**04 22 23.1**	**+1.3**	
	comp=Z,0.5nm,0.2s								
WTTA	**Wattenberg**	**155.19**	**345**	*i* PKP		**PKPdf**	**04 22 22.7**	**+0.7**	
	comp=Z,2.9nm,0.5s								
SQTA	**Sankt Quirin**	**155.33**	**346**	*e*PKP		**PKPdf**	**04 22 24.6**	**+2.4**	
	comp=Z,1.1nm,0.3s								
ABTA	**Abfaltersbach**	**155.45**	**344**	*i* PKP		**PKPdf**	**04 22 24.7**	**+2.5**	
	comp=Z,2.7nm,0.7s								
FETA	**Feichten**	**155.62**	**347**	*e*PKP		**PKPdf**	**04 22 24.7**	**+2.1**	
	comp=Z,0.7nm,0.4s								
TORD	**Torodi Ar. Bea**	**169.69**	**175**	PKP		**PKPdf**	**04 22 35.9**	**-1.0**	
	comp=Z,0.8nm,0.8s,baz=274,slow=0.5,SNR=3.8								
TORD					PKPab	**PKPab**	**04 23 53.1**	**+1.2**	
	comp=Z,0.8nm,0.6s,baz=176,slow=5.0,SNR=9.1								

*IDC **31** 04:09:50.7±1.2,18˚.40N×145˚.45E,h422km±13km, mb3.5/20,mbtmp4.3/23,Error ellipse: s-maj=16.3km s-min=10.0km az=78.0*
*NEIC **31** 04:09:52.0±1.8, 18˚.39N±0˚.10×145˚.32E±0˚.10, h428km±6km,mb4.2/50,Error ellipse: s-maj=15.4km s-min=11.9km az=225.0*

ISC 31 04:09:52.8±0.5,18˚.30N±0˚.07×145˚.2E±0˚.1,h450km,n88, σ1s23/87,mb4.1/51,1D,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DPSS	**Saipan**	**3.09**	**170**	P	**P**	**04 10**	**60.0**		**-0.7**
GUMO	**Guam**	**4.70**	**184**	P	**P**	**04 11**	**12.4**		**-2.0**
	71nm,0.3s,baz=340,slow=15,SNR=1.8								
GUMO				S	**S**	**04 12**	**17.9**		**-2.8**
	73nm,0.3s,baz=209,slow=22,SNR=5.4								
JCJ	**Chichijima**	**9.19**	**343**	P	**P**	**04 12**	**00.2**		**-0.8**
	39nm,0.5s,baz=225,slow=5.7,SNR=1.5								
JCJ				S	**S**	**04 13**	**44.9**		**-1.5**
	50nm,0.7s,baz=85,slow=23,SNR=1.7								
JGF	**Kuroka**	**18.58**	**340**	P	**P**	**04 13**	**40.6**		**-0.5**
MJAR	**Matsushiro Arr**	**19.19**	**343**	P	**P**	**04 13**	**44.6**		**-2.1**
	4.2nm,0.6s,baz=168,slow=9.6,SNR=13								
MJAR	**Matsushiro Arr**	**19.19**	**343**	P	**P**	**04 13**	**44.9**		**-1.8**
MAJO	**Matsushiro**	**19.19**	**343**	P	**P**	**04 13**	**45.8**		**-0.9**
MAJO					IAmb	IAmb	04 13 47.3		
	comp=Z,9.0nm,0.7s								
MJB9	**Matsu-Tunnel**	**19.20**	**343**	P	**P**	**04 13**	**46.7**		**0.0**
MJB9					IAmb	IAmb	04 13 48.3		
	comp=Z,8.8nm,0.7s								
JNU	**Nakatsue**	**19.58**	**322**	P	**P**	**04 13**	**45.3**		**-5.0**
	comp=Z,6.4nm,1.0s,baz=128,slow=12,SNR=3.2								
JNU				S	**S**	**04 17**	**00.7**		**-3.3**
	comp=Z,4.5nm,0.9s,baz=162,slow=6.1,SNR=3.6								
KSRS	**Korea Array**	**24.37**	**325**	P	**P**	**04 14**	**33.6**		**+0.1**
	comp=Z,3.8nm,0.8s,baz=142,slow=8.7,SNR=12								
	comp=Z,3.8nm,0.8s								
USRK	**Ussuriysk Ar.**	**28.11**	**340**	P	**P**	**04 15**	**05.8**		**-0.7**
	comp=Z,2.8nm,0.6s,baz=172,slow=7.7,SNR=7.2								
	comp=Z,2.8nm,0.6s								
USRK	**Ussuriysk Ar.**	**28.11**	**340**	P	**P**	**04 15**	**06.1**		**-0.4**
BNX	**BinXian**	**31.10**	**336**	⇓P	**P**	**04 15**	**34.0**		**+1.5**
BNX				pmax	pmax				
	comp=Z,7.0nm,0.8s								
HEH	**HeiHe**	**34.91**	**340**	*e*P	**P**	**04 16**	**05.5**		**+0.5**
HEH				pmax	pmax				
	comp=Z,16nm,0.8s								
HHC	**Hu-ho-hao-te**	**36.55**	**315**	*e*P	**P**	**04 16**	**20.0**		**+1.0**
HHC				pmax	pmax				
	comp=Z,8.0nm,0.5s								
HHC				pmax	pmax				
	comp=Z,47nm,5.4s								
HIA	**Hailar**	**37.09**	**332**	P	**P**	**04 16**	**23.3**		**+0.2**
HIA				IAmb	IAmb	04 16	25.4		
	comp=Z,9.7nm,1.1s								
HILR	**Hailar Array B**	**37.30**	**332**	P	**P**	**04 16**	**25.2**		**+0.3**
	comp=Z,1.2nm,0.5s,baz=128,slow=12,SNR=8.8								
HILR				PcP	**PcP**	**04 18**	**33.5**		**+0.6**
	comp=Z,0.5nm,0.4s,baz=127,slow=4.3,SNR=4.1								
	comp=Z,1.2nm,0.5s								
WB0	**Warramunga Arr**	**39.29**	**196**	P	**P**	**04 16**	**42.7**		**+1.1**
WR8	**Warramunga Arr**	**39.45**	**196**	P	**P**	**04 16**	**42.8**		**0.0**
WR8				IAmb	IAmb	04 17	16.6		
	comp=Z,20nm,1.4s								
WRA	**Warramunga Arr**	**39.48**	**196**	P	**P**	**04 16**	**44.1**		**+1.1**
	comp=Z,1.2nm,0.3s,baz=12,slow=7.8,SNR=5.1								
WRA				PcP	**PcP**	**04 18**	**40.2**		**+0.1**
	comp=Z,0.3nm,0.5s,baz=19,slow=3.2,SNR=1.9								
	comp=Z,1.2nm,0.3s								
WRA	**Warramunga Arr**	**39.48**	**196**	IAmb	IAmb	04 16	52.8		
	comp=Z,14nm,0.8s								
LZDM	**Lanzhou Array**	**40.57**	**304**	P	**P**	**04 16**	**54.2**		**+2.1**
	comp=Z,5.1nm,0.3s,baz=156,slow=7.8,SNR=4.0								
	comp=Z,5.1nm,0.3s								
FITZ	**Fitzroy Crossi**	**40.97**	**209**	P	**P**	**04 16**	**56.0**		**+1.0**
ASAR	**Alice Springs**	**43.15**	**195**	P	**P**	**04 17**	**13.2**		**+0.8**
	comp=Z,0.4nm,0.3s,baz=14,slow=6.7,SNR=7.2								
	comp=Z,0.4nm,0.3s								
SONM	**Songino Array**	**43.16**	**322**	P	**P**	**04 17**	**13.7**		**+1.4**
	comp=Z,1.8nm,0.5s,baz=140,slow=8.3,SNR=6.4								
SONM				PcP	**PcP**	**04 18**	**52.8**		**+0.6**
	comp=Z,0.8nm,0.5s,baz=102,slow=2.1,SNR=2.1								
	comp=Z,1.8nm,0.5s								
SONM	**Songino Array**	**43.16**	**322**	P	**P**	**04 17**	**13.3**		**+1.0**
CMAR	**Chiang Mai Arr**	**43.81**	**278**	P	**P**	**04 17**	**20.1**		**+2.5**
	comp=Z,2.1nm,0.5s,baz=70,slow=6.9,SNR=6.0								
	comp=Z,2.1nm,0.5s								
YAK	**Yakutsk**	**45.02**	**350**	P	**P**	**04 17**	**26.0**		**-0.3**
K13K	**Kusilvak Mount**	**55.73**	**26**	P	**P**	**04 18**	**46.2**		**+1.1**
K13K				IAmb	IAmb	04 18	57.3		
	comp=Z,11nm,1.4s								
O15K	**Ungalikthiuk R**	**56.74**	**30**	P	**P**	**04 18**	**53.1**		**+0.8**
O15K				IAmb	IAmb	04 19	18.7		
	comp=Z,26nm,1.4s								
L16K	**Owhat River**	**57.86**	**28**	P	**P**	**04 18**	**59.5**		**-0.3**
L16K				IAmb	IAmb	04 19	16.4		
	comp=Z,11nm,1.4s								
ZALV	**Zalesovo Beam**	**58.05**	**323**	P	**P**	**04 19**	**01.0**		**-0.3**
	comp=Z,0.9nm,0.4s,baz=91,slow=6.3,SNR=3.0								
	comp=Z,0.9nm,0.4s								
MKAR	**Makanchi Array**	**58.40**	**314**	P	**P**	**04 19**	**05.0**		**+1.1**
	comp=Z,2.1nm,0.5s,baz=91,slow=7.8,SNR=28								
MKAR				PcP	**PcP**	**04 19**	**49.0**		**0.0**
	comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=4.5								
	comp=Z,2.1nm,0.5s								
K17K	**Iditarod**	**58.75**	**27**	P	**P**	**04 19**	**07.1**		**+1.2**
K17K				IAmb	IAmb	04 19	08.0		
	comp=Z,4.5nm,0.8s								
F17K	**Baldwin Pennin**	**59.15**	**22**	P	**P**	**04 19**	**09.6**		**+1.0**
F17K				IAmb	IAmb	04 19	10.1		
	comp=Z,5.8nm,0.7s								
E18K	**Tukpahlearik C**	**59.83**	**21**	IAmb	IAmb	04 19	14.9		
	comp=Z,5.0nm,0.7s								
G18K	**Tagagawik**	**59.87**	**23**	P	**P**	**04 19**	**13.7**		**+0.3**
G18K				IAmb	IAmb	04 19	52.4		
	comp=Z,10nm,1.5s								
G19K	**Purcell Mounta**	**60.55**	**23**	P	**P**	**04 19**	**18.5**		**+0.5**
G19K				IAmb	IAmb	04 19	19.7		
	comp=Z,4.1nm,0.7s								
H19K	**Roundabout Mou**	**60.56**	**24**	P	**P**	**04 19**	**19.3**		**+1.4**
KURK	**Kurchatov**	**61.26**	**318**	P	**P**	**04 19**	**23.3**		**+0.4**
KURK				IAmb	IAmb	04 19	25.0		
	comp=Z,8.8nm,1.1s								
KURBB	**Kurchatov Arra**	**61.30**	**318**	P	**P**	**04 19**	**23.8**		**+0.6**
	comp=Z,8.4nm,0.5s,baz=97,slow=7.3,SNR=109								
	comp=Z,8.4nm,0.5s								
CAST	**Castle Rocks**	**61.66**	**27**	IAmb	IAmb	04 19	27.7		
	comp=Z,5.9nm,0.7s								
D20K	**Etivluk River**	**61.74**	**21**	P	**P**	**04 19**	**26.6**		**+0.8**
NRIK	**Noril'sk**	**61.82**	**340**	P	**P**	**04 19**	**26.8**		**+0.5**
	comp=Z,12nm,0.7s,baz=113,slow=8.6,SNR=10								
	comp=Z,12nm,0.7s								
BOOM	**Boomskoye usch**	**62.69**	**309**	P	**P**	**04 19**	**33.8**		**+1.1**
BOOM				IAmb	IAmb	04 19	34.8		
	comp=Z,5.5nm,0.6s								
KSH2	**Kashi**	**63.05**	**305**	P	**P**	**04 19**	**36.8**		**+1.8**
KSH2				pmax	pmax				
	comp=Z,6.0nm,0.8s								
D23K	**Nanushuk River**	**63.84**	**21**	P	**P**	**04 19**	**40.6**		**+1.2**
D23K				IAmb	IAmb	04 19	41.3		
	comp=Z,3.6nm,0.8s								
IL31		**64.20**	**26**	P	**P**	**04 19**	**40.4**		**-1.3**
ILAR	**Eielson Array**	**64.20**	**26**	P	**P**	**04 19**	**40.6**		**-1.2**
	comp=Z,1.3nm,0.7s,baz=252,slow=5.4,SNR=22								
	comp=Z,1.3nm,0.7s								
E24K	**Your Creek**	**64.36**	**22**	IAmb	IAmb	04 19	44.6		
	comp=Z,2.1nm,0.6s								
NIL	**Nilore**	**65.32**	**299**	P	**P**	**04 19**	**49.9**		**+0.4**
BVAR	**Borovoye Array**	**66.48**	**321**	P	**P**	**04 19**	**57.0**		**+0.6**
	comp=Z,5.2nm,0.4s,baz=94,slow=7.5,SNR=17								
	comp=Z,5.2nm,0.4s								
KK31	**Karatay Array**	**66.66**	**310**	P	**P**	**04 19**	**58.5**		**+0.7**
KK31				IAmb	IAmb	04 19	59.5		
	comp=Z,6.2nm,0.7s								
KKAR	**Karatay Array**	**66.66**	**310**	P	**P**	**04 19**	**58.7**		**+1.0**
I28M	**Miner Creek**	**67.21**	**26**	P	**P**	**04 20**	**01.1**		**+0.3**
L29M	**L29M**	**67.81**	**29**	P	**P**	**04 20**	**05.4**		**+0.9**
L29M				IAmb	IAmb	04 20	06.2		
	comp=Z,2.6nm,0.6s								
HYT	**Haines Junctio**	**68.00**	**31**	P	**P**	**04 20**	**07.0**		**+1.3**
EPYK	**Eagle Plains**	**68.60**	**25**	P	**P**	**04 20**	**09.6**		**+0.4**
EPYK				IAmb	IAmb	04 20	11.1		
	comp=Z,2.8nm,0.5s								
INK	**Inuvik**	**69.92**	**23**	P	**P**	**04 20**	**16.9**		**-0.1**
INK				IAmb	IAmb	04 20	17.9		
	comp=Z,2.9nm,0.8s								
ARTI	**Arti**	**73.22**	**325**	P	**P**	**04 20**	**37.2**		**+0.5**
AB31	**Akbulak array**	**73.31**	**317**	P	**P**	**04 20**	**37.1**		**-0.3**
AB31				IAmb	IAmb	04 20	38.2		
	comp=Z,5.5nm,1.0s								
ABKAR	**Akbulak array**	**73.31**	**317**	P	**P**	**04 20**	**37.0**		**-0.4**
YKA	**Yellowknife Ar**	**78.55**	**28**	P	**P**	**04 21**	**06.1**		**-0.1**
	comp=Z,1.0nm,0.5s,baz=290,slow=4.8,SNR=11								
	comp=Z,1.0nm,0.5s								
SPA0	**Spitsbergen Ar**	**79.48**	**351**	*eP*	**P**	**04 21**	**12.2**		**+1.3**
SPA0				IAmb	IAmb	04 21	16.3		
	comp=Z,40nm,1.7s								
VADS	**Vadso**	**81.28**	**342**	*eP*	**P**	**04 21**	**20.5**		**+0.1**
BEKR	**Beckworth**	**81.79**	**51**	P	**P**	**04 21**	**24.8**		**+0.8**
CMB	**Columbia Colle**	**82.30**	**53**	P	**P**	**04 21**	**26.7**		**+0.2**
ARCES	**ARCESS Array B**	**82.73**	**342**	P	**P**	**04 21**	**27.9**		**0.0**
	comp=Z,3.3nm,0.7s,baz=82,slow=8.0,SNR=13								
	comp=Z,3.3nm,0.7s								
KTK1	**Kautokeino**	**83.69**	**342**	*eP*	**P**	**04 21**	**30.8**		**-1.9**
NVAR	**Mina Array Bea**	**83.75**	**52**	P	**P**	**04 21**	**34.5**		**+0.5**
	comp=Z,1.7nm,0.7s,baz=268,slow=5.7,SNR=20								
	comp=Z,1.7nm,0.7s								
MFID	**Camas Ranch**	**83.92**	**46**	P	**P**	**04 21**	**35.2**		**+0.6**
MFID				IAmb	IAmb	04 21	35.6		
	comp=Z,2.4nm,0.8s								
JETT	**Jettan, Norway**	**84.16**	**343**	*eP*	**P**	**04 21**	**35.2**		**0.0**
JETT				IAmb	IAmb	04 21	35.4		
	comp=Z,12nm,0.7s								
TRO	**Tromso**	**84.52**	**344**	*eP*	**P**	**04 21**	**36.5**		**-0.3**
TRO				IAmb	IAmb	04 21	36.7		
	comp=Z,5.4nm,0.8s								
HLID	**Hailey**	**84.84**	**46**	P	**P**	**04 21**	**39.3**		**+0.1**
KBZ	**Khabaz**	**86.09**	**315**	P	**P**	**04 21**	**44.9**		**-0.1**
	comp=Z,2.0nm,0.8s,baz=144,slow=2.1,SNR=7.1								
	comp=Z,2.0nm,0.8s								
STEI	**Steigen**	**86.65**	**343**	*eP*	**P**	**04 21**	**46.6**		**-0.5**
STEI				IAmb	IAmb	04 21	47.1		
	comp=Z,7.6nm,0.8s								
FINES	**FINESS Array B**	**87.05**	**335**	P	**P**	**04 21**	**48.2**		**-1.0**
	comp=Z,2.0nm,0.7s,baz=57,slow=5.1,SNR=6.2								
	comp=Z,2.0nm,0.7s								
PDAR	**Pinedale Array**	**88.43**	**45**	P	**P**	**04 21**	**54.5**		**-1.9**
	comp=Z,0.1nm,0.5s,baz=272,slow=4.9,SNR=2.4								
	comp=Z,0.1nm,0.5s								
SRU	**San Rafael Swe**	**89.20**	**49**	P	**P**	**04 22**	**00.2**		**+0.2**
SRU				IAmb	IAmb	04 22	01.8		
	comp=Z,2.6nm,0.5s								
PV20	**West Nyswonger**	**90.62**	**49**	P	**P**	**04 22**	**07.0**		**+0.4**
PV20				IAmb	IAmb	04 22	10.7		
	comp=Z,2.9nm,0.6s								
AKBB	**Malin Array Si**	**91.36**	**325**	P	**P**	**04 22**	**07.5**		**-1.9**
KIEV	**Kiev**	**91.38**	**325**		**P**	**04 22**	**07.7**		**-1.8**
BR131	**Keskin Array S**	**94.05**	**314**	P	P	04 22	17.7		-4.6
BUR08	**Bucovina Ar. S**	**95.24**	**324**	P	P	04 22	21.8		-5.7
TORD	**Torodi Ar. Bea**	**132.34**	**308**	PKP	**PKPdf**	**04 28**	**15.4**		**-0.4**
	comp=Z,0.6nm,0.8s,baz=59,slow=0.8,SNR=4.2								
DBIC	**Dimbokro**	**141.43**	**307**	PKhKP	PKPpre	04 28	27.1		
	comp=Z,2.2nm,0.8s,baz=80,slow=4.4,SNR=1.3								
PLCA	**Paso Flores**	**142.07**	**134**	PKhKP	PKPpre	04 28	29.4		
	comp=Z,1.4nm,0.9s,baz=262,slow=7.1,SNR=1.7								
LPAZ	**La Paz**	**148.13**	**92**	PKPbc	**PKPbc**	**04 28**	**49.7**		**+1.1**
	comp=Z,4.0nm,0.6s,baz=311,slow=12,SNR=4.5								

*JMA **31** 04:16:46.0±0.2,26˚.N×123˚.7E±0˚.8,h179km±4km, MV3.7/19,NW OFF ISHIGAKIJIMA IS*

ISC 31 04:16:44.6±2.0,25˚.5N±0˚.1×123˚.67E±0˚.06,h189km±20km, n23,σ0s85/36,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JISG	**Ishigakijimahi**	**1.11**	**148**	P	**Pn**	**04 17**	**14.4**		**+0.3**

MT04	**Ro Olivares**	**2.10**	**83**	*i* P		**Pb**	**04 43 40.0**	**-1.7**
MT04				*i* S		**Sb**	**04 44 07.7**	**-0.3**
MT04				IAML			04 44 16.7	
	comp=Z,191nm,1.0s							
MT04	**Ro Olivares**	**2.10**	**83**⇑	*e*P		**Pn**	**04 43 39.2**	**+0.2**
MT04				IAML			04 44 17.5	
	comp=E,205nm,0.7s							
CO04	**Los Peladeros**	**2.14**	**41**	*e*P		**Pn**	**04 43 39.1**	**-0.5**
CO04				IAML			04 44 24.8	
	comp=E,251nm,0.5s							
MT08	**Bocatoma Ro**	**2.19**	**85**	*i* P		**Pb**	**04 43 41.6**	**-1.7**
MT08				*i* S		**Sb**	**04 44 09.8**	**-0.9**
MT08				IAML			04 44 17.4	
	comp=Z,127nm,1.6s							
MT08	**Bocatoma Ro**	**2.19**	**85**	*e*P		**Pn**	**04 43 40.9**	**+0.6**
MT08				IAML			04 44 18.9	
	comp=N,160nm,0.6s							
CO02	**Combarbal**	**2.82**	**30**	*i* P		**Pn**	**04 43 48.9**	**+0.1**
CO02				*i* S		**Sn**	**04 44 23.4**	**+0.2**
CO02				IAML			04 44 42.9	
	comp=Z,139nm,0.6s							
CO03	**El Pedregal**	**3.27**	**31**	*i* P		**Pn**	**04 43 55.5**	**+0.6**
CO03				*i* S		**Sn**	**04 44 34.6**	**+0.4**
CO03				IAML			04 44 56.3	
	comp=Z,71nm,0.6s							
RTLS	**Leoncito**	**3.37**	**57**	*i* P		**Pn**	**04 43 58.5**	**+2.0**
RTLS				IAML			04 44 58.4	
	comp=Z,243nm,0.7s							
GO04	**Tololo Observa**	**3.82**	**24**	*i* P		**Pn**	**04 44 03.2**	**+0.5**
GO04				*i* S		**Sn**	**04 44 47.5**	**-0.6**
GO04				IAML			04 45 22.1	
	comp=Z,69nm,0.5s							
CFA	**Coronel Fontan**	**4.24**	**62**	*i* P		**Pn**	**04 44 09.9**	**+1.7**
CFA				IAML			04 45 29.6	
	comp=Z,16nm,1.6s							
CO01	**Juntas del Tor**	**4.27**	**31**	*i* P		**Pn**	**04 44 10.0**	**+1.1**
CO01				*i* S		**Sn**	**04 44 59.9**	**+0.8**
CO01				IAML			04 45 31.3	
	comp=Z,27nm,1.1s							
ACDV	**Cuesta del Vie**	**4.59**	**41**	*i* P		**Pn**	**04 44 15.1**	**+1.9**
ACDV				IAML			04 45 33.9	
	comp=Z,18nm,1.2s							
AC05	**El Transito**	**5.23**	**23**	*i* P		**Pn**	**04 44 22.8**	**+0.8**
AC05				IAML			04 45 59.7	
	comp=Z,16nm,0.7s							

*SDD **31** 04:47:11.9±1.0, 18°.44N×70°.44W, h18km±3km, MD2.7, ML2.3, MW3.1, Presumed earthquake*
*OSPL **31** 04:47:12.3±1.1, 18°.43N×70°.48W, h0km±6km, ML2.7, Presumed earthquake*
ISC 31 04:47:10.9±1.1, 18'.45N±0'.04×70'.45W±0'.03, h18km±3km, n14, σ0°.40/23, 8C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BANI	**BANI**	**0.11**	**124**⇑	*i* P		**Pg**	**04 47 15.0**	**+0.2**
BANI				⇑*i* Sg		**Sg**	**04 47 17.9**	**+0.5**
BANI				IAML			04 47 18.6	
	comp=N,7μm,0.3s							
LOSC1	**San Cristbal**	**0.33**	**98**	*i* P		**Pb**	**04 47 18.2**	**-0.1**
LOSC1				*e*S		**Sb**	**04 47 23.9**	**+0.7**
LOSC1				IAML			04 47 26.7	
	comp=Z,2μm,0.8s							
ABDR	**Alto Bandera**	**0.40**	**335**⇑	*i* P		**Pg**	**04 47 19.4**	**+0.1**
ABDR				IAML			04 47 47.4	
	comp=N,0.3nm,0.3s							
NEDR	**Neiba UASD**	**0.92**	**272**⇑	*i* P		**Pb**	**04 47 28.3**	**0.0**
NEDR				⇑*i* Sg		**Sn**	**04 47 42.0**	**+0.4**
NEDR				IAML			04 47 44.8	
	comp=N,132nm,0.2s							
SDDR	**Presa de Saban**	**0.95**	**304**⇓	*i* P		**Pb**	**04 47 28.9**	**-0.1**
SDDR				⇓*i* Sg		**Sg**	**04 47 41.8**	**-0.3**
SDDR				IAML			04 47 44.6	
	comp=N,126nm,0.5s							
SDDR	**Presa de Saban**	**0.95**	**304**	*i* P		**Pb**	**04 47 28.6**	**-0.3**
SDDR				*e*S		**Sb**	**04 47 41.4**	**+0.2**
SDDR				IAML			04 47 44.8	
	comp=Z,3μm,0.2s							
LODU1	**El Espartillar**	**0.98**	**264**	*i* P		**Pn**	**04 47 29.4**	**-0.3**
LODU1				IAML			04 47 48.0	
	comp=Z,158nm,0.9s							
SC01	**Santiago de lo**	**1.01**	**345**⇑	*i* P		**Pn**	**04 47 30.3**	**+0.2**
SC01				IAML			04 47 55.4	
	comp=N,183nm,1.3s							
HATOM	**Hato Mayor del**	**1.07**	**72**⇓	*i* P		**Pb**	**04 47 30.3**	**-0.6**
HATOM				IAML			04 47 44.3	
	comp=N,196nm,0.3s							
HATOM				⇓*i* Sg		**Sb**	**04 47 44.4**	**-0.1**
LOVI	**El Cajuil, Ovi**	**1.09**	**233**	*i* P		**Pb**	**04 47 30.8**	**-0.4**
LOVI				*e*S		**Sn**	**04 47 45.6**	**-0.2**
LOVI				IAML			04 47 46.8	
	comp=Z,72nm,1.1s							
MADR	**Mao Valverde**	**1.27**	**331**⇑	*i* P		**Pn**	**04 47 32.9**	**-0.8**
MADR				⇑*i* Sg		**Sb**	**04 47 50.2**	**-0.1**
MADR				IAML			04 48 17.3	
	comp=N,316nm,3.8s							
LOBH	**Bahia de las A**	**1.27**	**243**	*i* P		**Pb**	**04 47 34.2**	**-0.1**
LOBH				IAML			04 47 56.9	
	comp=Z,78nm,1.6s							
LOPP1	**Punta Rusia, P**	**1.56**	**333**	*i* P		**Pb**	**04 47 39.4**	**0.0**
LOPP1				IAML			04 48 05.3	
	comp=Z,158nm,1.9s							
LODA1	**ITESIL, Dajabo**	**1.61**	**313**	*i* P		**Pb**	**04 47 40.4**	**+0.3**
LODA1				*e*S		**Sb**	**04 48 00.7**	**+0.7**

*SOME **31** 04:56:11.8, 39°.95N×75°.72E, h5km*
*KRNET **31** 04:56:12.4±0.1, 39°.85N×75°.58E, h7km, mb3.3*
*NNC **31** 04:56:15.7±2.5, 40°.08N×75°.71E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=18.7km s-min=12.3km az=163.0*
ISC 31 04:56:08.6±1.7, 39°.85N±0°.06×75°.72E±0°.03, h6km±12km, n41, σ1s41/64, 19C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRN	**Naryn**	**1.60**	**8**⇑	*i* P		**Pg**	**04 56 41.2**	**+2.0**
NRN				⇑*i* S		**Sg**	**04 57 02.6**	**+2.7**
SFK	**Sufi-Kurgan**	**1.71**	**276**⇓	*i* P		**Pg**	**04 56 41.7**	**+0.4**
SFK				⇓*i* S		**Sb**	**04 57 02.8**	**+0.5**
SALK	**Salom-Alik**	**1.78**	**306**⇑	*i* P		**Pg**	**04 56 43.2**	**+0.6**
SALK				⇑*i* S		**Sg**	**04 57 05.5**	**-0.2**
OHH	**Osh**	**2.34**	**288**⇑	*i* P		**Pb**	**04 56 50.5**	**-0.7**
OHH				⇑*i* S		**Sb**	**04 57 18.6**	**-1.9**
ULHL	**Ulahol**	**2.43**	**9**	P		**Pg**	**04 56 56.3**	**+1.2**
	SNR=13							
ULHL	**Ulahol**	**2.43**	**9**⇓	*i* P		**Pb**	**04 56 53.5**	**+0.8**
ULHL				⇓*i* S		**Sb**	**04 57 23.5**	**+0.5**
TARG	**Taragay, Kyrgy**	**2.46**	**40**⇑	*i* P		**Pg**	**04 56 54.6**	**-1.1**
TARG				⇑*i* S		**Sg**	**04 57 25.7**	**-1.9**
KDJ	**Kajisay**	**2.53**	**25**⇓	*i* P		**Pb**	**04 56 55.4**	**+0.8**
KDJ				⇓*i* S		**Sb**	**04 57 26.9**	**+0.8**
UCH	**Uchtor**	**2.54**	**339**	P		**Pb**	**04 56 55.6**	**+0.7**
	SNR=6.2							
ARSB	**Arslanbob**	**2.55**	**306**⇓	*i* P		**Pb**	**04 56 53.9**	**-0.9**
ARSB				⇓*i* S		**Sb**	**04 57 24.0**	**-2.5**
BOOM	**Boomskoye usch**	**2.64**	**4**⇓	*i* P		**Pb**	**04 56 56.4**	**0.0**
BOOM				⇓*i* S		**Sb**	**04 57 28.7**	**-0.5**
KBK	**Karagaybulak**	**2.86**	**349**	P		**Pg**	**04 57 04.8**	**+1.3**
	SNR=13							
AAK	**Ala-Archa**	**2.93**	**342**	P		**Pb**	**04 57 01.3**	**-0.1**
	SNR=9.7							
AAK	**Ala-Archa**	**2.93**	**342**	⇑Pn		**Pb**	**04 57 00.9**	**-0.4**
	3.4nm,0.4s							
AAK				⇑Lg		Lg	04 57 39.1	
	13nm,0.7s							
DRK	**Karamyk**	**3.04**	**264**⇑	*e*P		**Pn**	**04 57 00.2**	**+2.7**
DRK				⇑*e*S		**Sn**	**04 57 35.2**	**+0.8**
FRU1	**Bishkek**	**3.07**	**345**⇑	*e*P		**Pb**	**04 57 02.0**	**-1.6**
FRU1				⇑*e*S		**Sb**	**04 57 38.4**	**-2.9**
TKM2	**Tokmak 2**	**3.07**	**358**	P		**Pb**	**04 57 03.5**	**-0.2**
	SNR=24							
TKM2	**Tokmak 2**	**3.07**	**358**⇓	*i* P		**Pb**	**04 57 02.3**	**-1.4**
TKM2				⇓*i* S		**Sb**	**04 57 38.6**	**-2.9**
EKS2	**Erkin-Say**	**3.17**	**333**	P		**Pg**	**04 57 09.4**	**+0.2**
	SNR=9.3							
CHMS	**Chumysh**	**3.23**	**347**	P		**Pb**	**04 57 05.1**	**-1.2**
	SNR=5.9							
ANVS	**Anan'yevo**	**3.28**	**26**⇓	*e*P		**Pb**	**04 57 05.9**	**-1.4**
ANVS				⇓*e*S		**Sb**	**04 57 44.6**	**-2.9**
TNSS	**Tian-Shan**	**3.32**	**16**	Pg		**Pg**	**04 57 12.7**	**+0.5**
	1.2nm,0.1s							
TNSS				Lg		Lg	04 57 56.5	
	5.4nm,0.6s							
TNSS	**Tian-Shan**	**3.32**	**16**	*e*P		**Pg**	**04 57 12.7**	**+0.5**
	1.2nm,0.1s							
TNSS				*e*S		**Sg**	**04 57 56.5**	**+1.4**
	5.4nm,0.6s							
PRZ	**Przheval'sk**	**3.32**	**37**⇑	*e*P		**Pb**	**04 57 07.0**	**-1.0**
PRZ				⇑*e*S		**Sb**	**04 57 46.4**	**-2.3**
DGS	**Degeres**	**3.39**	**1**	*e*P		**Pg**	**04 57 14.2**	**+0.7**
	7.6nm,0.5s							
DGS				*e*S		**Sg**	**04 57 59.0**	**+1.5**
	9.1nm,0.4s							
MRKS	**Merke**	**3.45**	**328**	Pg		**Pg**	**04 57 14.1**	**-0.5**
	15nm,0.2s							
MRKS				Lg		Lg	04 57 59.5	
	14nm,0.3s							
MRKS	**Merke**	**3.45**	**328**	*e*P		**Pg**	**04 57 14.0**	**-0.5**
	15nm,0.2s							
MRKS				*e*S		**Sg**	**04 57 59.0**	**-0.3**
	14nm,0.3s							
ARK	**Arkit**	**3.45**	**306**⇑	*e*P		**Pb**	**04 57 06.3**	**-3.8**
ARK				⇑*e*S		**Sn**	**04 57 45.3**	**+1.1**
MDOK	**Medeo**	**3.46**	**16**	Pg		**Pg**	**04 57 14.8**	**0.0**
	6.3nm,0.3s							
MDOK				Lg		Lg	04 58 00.2	
	28nm,0.7s							
USP	**Ospenovka**	**3.53**	**345**	P		**Pb**	**04 57 09.5**	**-2.0**
	SNR=5.0							
SGDS	**Sogindy**	**3.69**	**348**	Pg		**Pg**	**04 57 19.3**	**0.0**
	8.8nm,0.4s							
SGDS				Lg		Lg	04 58 08.2	
	21nm,0.6s							
SATY	**Saty**	**3.79**	**31**	Pg		**Pg**	**04 57 21.3**	**+0.1**
	4.1nm,0.5s							
SATY				Lg		Lg	04 58 11.3	
	19nm,0.8s							
SATY	**Saty**	**3.79**	**31**	*e*P		**Pg**	**04 57 21.3**	**+0.1**
	4.1nm,0.5s							
SATY				*e*S		**Sg**	**04 58 11.3**	**+1.0**
	19nm,0.8s							
KRBS	**Karabastau**	**3.84**	**360**	Pg		**Pg**	**04 57 21.8**	**-0.3**
	4.8nm,0.4s							
KRBS				Lg		Lg	04 58 12.5	
	36nm,0.4s							
KRBS	**Karabastau**	**3.84**	**360**	*e*P		**Pg**	**04 57 21.8**	**-0.3**
	4.8nm,0.4s							
KRBS				*e*S		**Sg**	**04 58 12.5**	**+0.5**
	36nm,0.4s							
KTBS	**Karatobe**	**3.93**	**10**	Pg		**Pg**	**04 57 22.7**	**-1.1**
	0.4nm,0.2s							
KTBS				Lg		Lg	04 58 14.4	
	14nm,0.8s							
KTBS	**Karatobe**	**3.93**	**10**	*e*P		**Pg**	**04 57 22.7**	**-1.1**
	0.4nm,0.2s							
KTBS				*e*S		**Sg**	**04 58 14.1**	**-0.6**
	14nm,0.8s							
KURS	**Kuram**	**4.07**	**26**	*e*P		**Pg**	**04 57 26.7**	**+0.1**
	3.9nm,0.8s							
KURS				*e*S		**Sg**	**04 58 20.3**	**+1.0**
	6.2nm,0.7s							
KPKS	**Kokpek**	**4.24**	**31**	Pg		**Pg**	**04 57 27.9**	**-2.0**
	0.3nm,0.2s							
KPKS				Lg		Lg	04 58 23.9	
	18nm,0.7s							
KPKS	**Kokpek**	**4.24**	**31**	*e*P		**Pg**	**04 57 28.6**	**-1.3**
	0.3nm,0.2s							
KPKS				*e*S		**Sg**	**04 58 23.9**	**-0.9**
	18nm,0.7s							
KK31	**Karatay Array**	**5.08**	**311**⇑	Pg		**Pg**	**04 57 44.9**	**-1.0**
	3.1nm,0.7s,baz=74,slow=8.2,SNR=4.0							
KK31				⇓Lg		Lg	04 58 51.2	
	2.2nm,0.6s,baz=120,slow=28							

*BJI **31** 05:16:20.1, 30°.31N×142°.60E, h10km, mB4.7/20, mb4.6/62, Ms4.7/58, MS7 4.4/58*
*IDC **31** 05:16:27.0±0.4, 30°.53N×141°.69E, h0km, mb4.4/35, mbtmp4.4/40, ML3.6/6, Error ellipse: s-maj=12.3km s-min=9.4km az=53.0*
*MOS **31** 05:16:27.4±1.2, 30°.57N×141°.79E, h12km, mb5.1/52, MS4.2/7, Error ellipse: s-maj=8.3km s-min=4.1km az=119.4*
*JMA **31** 05:16:29.0±0.2, 30°.7N±0°.8×14°.2E±°, h45km, MV4.7/33, MW5.0/33, NEAR TORISHIMA IS*
*GFZ **31** 05:16:29.4±0.2, 31°.N±3°×14°.2E±°, h10km, M4.8/22, mb5.0/22*
*NEIC **31** 05:16:29.4±1.6, 30°.63N±0°.06×142°.0E±0°.1, h10km±1km, mb4.9/71, Mww4.9/19, Error ellipse: s-maj=15.3km s-min=8.9km az=76.0*
*NIED **31** 05:16:29.0, 30°.67N×142°.24E, h45km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr1.18; Mθθ0.08; Mφφ-1.26; Mrθ-2.37; Mθφ0.42; Mφr2.25; Fault plane solution: M0 3.52000×10^16 NP1: φs186.00000°, δ14.00000°, λ139.00000°. NP2: φs316.00000°, δ81.00000°, λ79.00000°.*
*GCMT **31** 05:16:34.5±0.2, 30°.60N±0°.02×141°.82E±0°.01, h18km, MW5.0/98, Moment Tensor Solution. s48,c66; s98,c153; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.03±.14; Mθθ-0.33±.08; Mφφ-2.70±.09; Mrθ-2.84±.26; Mθφ1.21±.06; Mφr1.28±.18; Best double couple: M0 4.37800×10^16 NP1: φs177.00000°, δ30.00000°, λ132.00000°. NP2: φs311.00000°, δ68.00000°, λ69.00000°. Principal axes: T 4.6880, Plg61.0000°, Azm189.0000°; N -0.6160, Plg20.0000°, Azm319.0000°; P -4.0690, Plg20.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 05:16:29.7±0.5, 30°.58N±0°.03×141°.92E±0°.05, h16km±2km, h16km:pP-P, n552, σ1s37/591, mb4.9/126, MS4.5/25, 18C-1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAOM	**Aogashimamukai**	**2.63**	**316**	A		A	05 17 12.3	
	comp=N,11nm,6.0s,comp=E,14nm,6.5s							
JHCJ	**Hachijojimakas**	**3.07**	**324**	*e*P		**Pn**	**05 17 17.5**	**-0.1**
JHJ2	**Mitsune**	**3.09**	**325**	Pn		**Pn**	**05 17 17.1**	**-0.8**
JHJ	**Hachijo jima 2**	**3.12**	**325**	Pn		**Pn**	**05 17 16.4**	**-1.9**
	comp=E,18nm,0.3s,baz=96,slow=10,SNR=7.5							
JHJ				Sn		**Sn**	**05 17 52.0**	**-3.1**
	comp=E,111nm,0.3s,baz=163,slow=19,SNR=8.1							
	comp=E,50nm,0.3s							
CBIJ	**Chichi jima**	**3.48**	**176**	P		**Pn**	**05 17 23.0**	**-0.3**
JCJ	**Chichijima**	**3.48**	**176**	Pn		**Pn**	**05 17 20.8**	**-2.4**
	comp=E,28nm,0.3s,baz=12,slow=20,SNR=24							
JCJ				Sn		**Sn**	**05 18 02.8**	**-1.3**
	comp=E,117nm,0.3s,baz=287,slow=19,SNR=7.1							
	comp=E,89nm,0.4s							
JCJ	**Chichijima**	**3.48**	**176**			**Pn**	**05 17 22.7**	**-0.5**
JCJ	**Chichijima**	**3.48**	**176**	P		**Pn**	**05 17 24.9**	**+1.7**
JMKN	**Mikurajimanish**	**3.85**	**330**	*e*P		**Pn**	**05 17 28.9**	**+0.6**
JHH2	**Haha-jima-NKT2**	**3.94**	**177**	*e*P		**Pn**	**05 17 31.0**	**+1.5**
JHH2				A		A	05 17 31.0	
	comp=N,5.0nm,8.1s,comp=E,6.0nm,7.1s							
JHH2				*e*S		**Sn**	**05 18 16.2**	**+0.7**
JMYK	**Miyake Tsubota**	**4.01**	**331**	*e*P		**Pn**	**05 17 31.0**	**+0.6**
JMYK				A		A	05 17 31.0	
	comp=N,6.0nm,3.4s,comp=E,6.0nm,5.2s							
JMYK				*e*S		**Sn**	**05 18 15.9**	**-1.3**
BSO1	**Boso 1**	**4.14**	**349**	P		**Pn**	**05 17 31.8**	**+0.1**
BSO1				*e*S		**Sn**	**05 18 19.4**	**-0.2**
BSO3	**Boso 3**	**4.37**	**345**	P		**Pn**	**05 17 34.9**	**-0.4**
BSO4	**Boso 4**	**4.59**	**344**	P		**Pn**	**05 17 39.8**	**+1.3**
JSG	**Sagara**	**5.16**	**323**	Pn		**Pn**	**05 17 46.1**	**-0.2**
JOD2	**Odawara 2**	**5.24**	**334**	*e*P		**Pn**	**05 17 47.2**	**-0.2**
JRY	**Ryogami san**	**5.98**	**336**	P		**Pn**	**05 17 58.9**	**+1.2**
JRY				*e*S		**Sn**	**05 19 06.4**	**+0.6**
JGF	**Kuroka**	**6.30**	**324**			**Pn**	**05 18 02.8**	**+0.8**
JGF	**Kuroka**	**6.30**	**324**	P		**Pn**	**05 18 06.6**	**+4.5**
MJAR	**Matsushiro Arr**	**6.70**	**333**	Pn		**Pn**	**05 18 07.0**	**-0.5**
	comp=E,1.1nm,0.3s,baz=151,slow=11,SNR=56							
MJAR				Sn		**Sn**	**05 19 22.2**	**-1.3**
	comp=E,0.5nm,0.3s,baz=165,slow=15,SNR=4.0							
	comp=E,36nm,0.8s							
MJAR	**Matsushiro Arr**	**6.70**	**333**	P		**Pn**	**05 18 08.2**	**+0.7**
MJAR	**Matsushiro Arr**	**6.70**	**333**			**Pn**	**05 18 08.2**	**+0.7**
MAJO	**Matsushiro**	**6.71**	**333**	P		**Pn**	**05 18 09.2**	**+1.6**
MAJO	**Matsushiro**	**6.71**	**333**			**Pn**	**05 18 08.3**	**+0.8**
MAJO	**Matsushiro**	**6.71**	**333**	P		**Pn**	**05 18 09.2**	**+1.6**
MJB9	**Matsu-Tunnel**	**6.71**	**333**			**Pn**	**05 18 09.0**	**+1.4**
JFK	**Kawauchi**	**6.82**	**353**	P		**Pn**	**05 18 08.0**	**-1.2**
JMN	**Monobe**	**7.51**	**297**			**Pn**	**05 18 21.2**	**+2.7**
JMK	**Ichinoseki**	**8.37**	**356**	*e*P		**Pn**	**05 18 29.3**	**-1.1**
JMK				*e*S		**Sn**	**05 19 56.6**	**-8.0**
JNU	**Nakatsue**	**9.73**	**288**	Pn		**Pn**	**05 18 47.6**	**-1.4**
	comp=E,0.2nm,0.3s,baz=79,slow=12,SNR=8.4							
JSU	**Suzuyama**	**9.88**	**278**	Pn		**Pn**	**05 18 54.0**	**+2.8**
JSU	**Suzuyama**	**9.88**	**278**	P		**Pn**	**05 18 55.5**	**+4.3**
JTM	**Tenmabayashi**	**10.21**	**356**			**Pn**	**05 18 53.3**	**-2.3**
JTM	**Tenmabayashi**	**10.21**	**356**	P		**Pn**	**05 18 54.0**	**-1.5**
ERM	**Erimo**	**11.45**	**5**	*e*P		**Pn**	**05 19 09.3**	**-3.3**
ERM				pmax	pmax			
	comp=Z,51nm,1.3s							
ERM	**Erimo**	**11.45**	**5**			**Pn**	**05 19 09.9**	**-2.7**
ERM	**Erimo**	**11.45**	**5**	P		**Pn**	**05 19 09.5**	**-3.1**
KSRS	**Korea Array**	**13.48**	**304**	Pn		**Pn**	**05 19 40.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=115,slow=13,SNR=16							
KSRS				Sn		**Sn**	**05 22 10.6**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=126,slow=39,SNR=13							
	comp=Z,1.3nm,0.8s							
KSAR	**Wonju Array Be**	**13.50**	**304**	P		**Pn**	**05 19 40.3**	**-0.3**
KSAR	**Wonju Array Be**	**13.50**	**304**			**Pn**	**05 19 40.3**	**-0.3**
JKA	**Kamikawa-asahi**	**13.52**	**2**			**Pn**	**05 19 38.3**	**-2.5**
ASAJ	**Asahikawa**	**13.52**	**2**	Pn		**Pn**	**05 19 38.3**	**-2.6**
	comp=Z,1.8nm,0.3s,baz=214,slow=16,SNR=8.2							
ASAJ				Sn		Sn	05 22 00.9	-10
	comp=Z,1.6nm,0.3s,baz=6.3,slow=18,SNR=4.8							
KS19	**Wonju Array Si**	**13.54**	**304**	Pn		**Pn**	**05 19 41.2**	**+0.1**
INCN	**Inchon**	**14.42**	**303**	P		**Pn**	**05 19 53.6**	**+0.4**
INCN	**Inchon**	**14.42**	**303**	Pn		**Pn**	**05 19 53.6**	**+0.4**
PSTR	**Posyet**	**14.97**	**327**	*e*P		**Pn**	**05 20 00.1**	**-0.6**
USRK	**Ussuriysk Ar.**	**15.70**	**333**	Pn		**Pn**	**05 20 09.3**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=139,slow=7.9,SNR=9.6							
	comp=Z,2.2nm,0.7s							
USA0B	**Ussuriysk Arra**	**15.70**	**333**	*i* P		**Pn**	**05 20 07.9**	**-2.3**
USA0B	**Ussuriysk Arra**	**15.70**	**333**			**Pn**	**05 20 09.8**	**-0.4**
YSS	**Yuzhno-Sakhali**	**16.36**	**2**	*e*P		**Pn**	**05 20 16.8**	**-1.8**
YSS				*e*S		**Sn**	**05 23 14.9**	**-4.9**
YSS				pmax	pmax			
	comp=Z,50nm,0.8s							
YSS				pmax	pmax			
	comp=Z,100nm,2.7s							
YSS	**Yuzhno-Sakhali**	**16.36**	**2**			**Pn**	**05 20 15.9**	**-2.7**
YSS	**Yuzhno-Sakhali**	**16.36**	**2**	P		**Pn**	**05 20 17.1**	**-1.5**
MDJ	**Mudanjiang**	**17.05**	**329**	P		**Pn**	**05 20 26.5**	**-0.9**
MDJ				pmax	pmax			
	comp=Z,7.0nm,0.9s							
GUMO	**Guam**	**17.13**	**170**	P		**Pn**	**05 20 27.5**	**-1.0**
	comp=Z,512nm,1.1s,baz=57,slow=2.2,SNR=11							
GUMO	**Guam**	**17.13**	**170**	P		**Pn**	**05 20 29.0**	**+0.5**
GUMO				pmax	pmax			
	comp=Z,558nm,1.1s							
GUMO	**Guam**	**17.13**	**170**			**Pn**	**05 20 29.0**	**+0.5**
GUMO	**Guam**	**17.13**	**170**	P		**P**	**05 20 31.2**	**+1.1**
CN2	**Changchun**	**18.57**	**320**	P		**P**	**05 20 39.0**	**-6.9**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CN2				LR	LR			
	comp=N,1μm,15.0s							
CN2				LR	LR			
	comp=E,1μm,15.0s							
CN2				LR	LR			
	comp=Z,700nm,17.0s							
DL2	**Dalian**	**18.60**	**302**	*e*P		**Pn**	**05 20 48.8**	**+2.2**
DL2				S		**S**	**05 24 17.0**	**-0.9**
DL2				pmax	pmax			
	comp=Z,26nm,0.8s							
DL2				pmax	pmax			
	comp=Z,330nm,5.1s							
DL2				L	L			
	comp=Z,2μm,17.4s							
DL2				L	L			
	comp=Z,1μm,17.9s							
DL2				L	L			
	comp=Z,2μm,14.7s							
BNX	**BinXian**	**18.91**	**327**⇑	P		**P**	**05 20 49.5**	**-0.1**
BNX				pP		**pP**	**05 20 52.8**	**+0.4**
BNX				sP		**sP**	**05 20 54.0**	**+0.1**
BNX				S		**Sn**	**05 24 22.5**	**+1.0**
BNX				sS		**sS**	**05 24 29.8**	**+1.1**
BNX				pmax	pmax			
	comp=Z,21nm,0.8s							
BNX				pmax	pmax			
	comp=Z,78nm,3.8s							
BNX				L	L			
	comp=Z,910nm,14.5s							
BNX				L	L			
	comp=Z,870nm,13.5s							
BNX				L	L			
	comp=Z,1μm,15.3s							
YULB	**Yu-li**	**19.71**	**254**			**P**	**05 20 58.5**	**-0.1**
YULB				IAmb		IAmb	05 21 11.1	
	comp=Z,139nm,1.5s							
YULB	**Yu-li**	**19.71**	**254**	P		**P**	**05 20 58.2**	**-0.4**
NJ2	**Nanjing**	**19.76**	**280**	*e*P		**P**	**05 20 59.8**	**+0.8**
NJ2				pmax	pmax			
	comp=Z,40nm,0.8s							
SSLB	**Suanglung**	**19.83**	**255**			**P**	**05 20 59.8**	**-0.1**
SSLB	**Suanglung**	**19.83**	**255**	P		**P**	**05 21 00.3**	**+0.4**
TYV	**Tymovskoe**	**20.27**	**1**	*e*P		Pn	05 21 06.5

XLT L L
comp=N,110nm,16.2s
XLT L L
comp=N,180nm,12.8s
XLT L L
comp=N,510nm,15.7s
H11N2 WAKE ISLAND Hy 25.00 110 T T 05 48 06.9
baz=305,slow=74,SNR=10
H11N1 WAKE ISLAND Hy 25.00 110 T T 05 48 02.2
baz=305,slow=74,SNR=10.0
H11N3 WAKE ISLAND Hy 25.02 110 T T 05 48 01.1
baz=305,slow=74,SNR=8.1
LYN LuoYang 25.09 287 P **P** **05 21 52.0 -1.7**
LYN pP pP 05 21 55.5 -1.2
LYN sS sS 05 26 26.8 +3.1
LYN SS SnSn 05 27 25.8 +19
LYN pmax pmax
comp=N,26nm,1.0s
LYN L L
comp=N,690nm,16.5s
LYN L L
comp=N,720nm,16.5s
LYN L L
comp=N,1μm,19.2s
HILR Hailar Array B 25.28 325 P **P** **05 21 55.2 -0.1**
comp=N,81nm,1.2s,baz=133,slow=10,SNR=25
HILR S **S** **05 26 21.0 +0.6**
comp=N,1.1nm,0.3s,baz=128,slow=11,SNR=2.2
comp=N,81nm,1.2s
PETK Petropavlovsk- 25.28 23 P **P** **05 21 56.3 +1.1**
comp=N,4.0nm,0.9s,baz=235,slow=5.1,SNR=3.8
comp=N,4.0nm,0.9s
ZEA Zeya 25.47 340 *e*P **P** **05 21 57.8 +0.9**
ZEA *e*S **S** **05 26 18.5 -4.7**
ZEA pmax pmax
comp=N,30nm,0.9s
ZEA pmax pmax
comp=Z,60nm,1.0s
ZEA smax smax
comp=N,200nm,16.0s
H11S3 WAKE ISLAND Hy 25.48 112 T T 05 48 35.7
baz=304,slow=74,SNR=25
H11S1 WAKE ISLAND Hy 25.48 112 T T 05 48 36.2
baz=304,slow=74,SNR=28
H11S2 WAKE ISLAND Hy 25.49 112 T T 05 48 33.8
baz=304,slow=74,SNR=42
PET Petropavlovsk 25.54 24 *e*P **P** **05 21 59.9 +2.5**
PET *e*S **S** **05 26 24.1 -0.2**
PET *e*SS **SnSn** **05 27 25.5 +7.8**
PET pmax pmax
comp=Z,100nm,4.8s
PET pmax pmax
comp=Z,27nm,1.4s
PET pmax pmax
comp=Z,300nm,3.3s
PET MLR MLR
comp=Z,500nm,19.0s
PET Petropavlovsk 25.54 24 P **P** **05 21 57.0 -0.5**
PET lAmb lAmb 05 22 14.3
comp=Z,40nm,1.2s
HHC Hu-ho-hao-te 26.57 301 *e*P **P** **05 22 08.0 +0.8**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,79nm,4.0s
HHC L L
comp=Z,1μm,18.2s
HHC L L
comp=Z,940nm,18.0s
HHC L L
comp=Z,1μm,18.2s
BTO2 Baotou 27.80 300 *e*P **P** **05 22 17.0 -1.3**
BTO2 S **S** **05 27 00.5 -0.2**
BTO2 pmax pmax
comp=Z,26nm,0.9s
BTO2 pmax pmax
comp=Z,180nm,5.2s
BTO2 L L
comp=Z,3μm,17.5s
BTO2 L L
comp=Z,2μm,17.8s
BTO2 L L
comp=Z,3μm,14.5s
QIZ Qiongzhong 31.20 256 P **P** **05 22 48.0 -0.4**
QIZ S **S** **05 27 55.0 +0.8**
QIZ L L
comp=Z,330nm,9.6s
QIZ L L
comp=Z,510nm,13.7s
QIZ L L
comp=Z,650nm,21.2s
ULN Ulaanbaatar 31.71 313*ce*P **P** **05 22 53.9 +1.1**
ULN pmax pmax
comp=Z,20nm,1.3s
ULN Ulaanbaatar 31.71 313 **P** **05 22 52.8 -0.1**
ULN lAmb lAmb 05 22 59.2
comp=Z,14nm,0.9s
ULN Ulaanbaatar 31.71 313 P **P** **05 22 54.2 +1.4**
ULN Ulaanbaatar 31.71 313 P **P** **05 22 53.6 +0.7**
SONM Songino Array 32.12 313 P **P** **05 22 54.9 -1.5**
comp=Z,3.1nm,0.8s,baz=120,slow=8.5,SNR=10
comp=Z,3.1nm,0.8s
SONM Songino Array 32.12 313 P **P** **05 22 56.2 -0.2**
SONM pmax pmax
comp=Z,10.0nm,1.0s
SONM Songino Array 32.12 313 P **P** **05 22 56.2 -0.2**
SONM lAmb lAmb 05 23 21.8
comp=Z,10nm,1.0s
LZH Lanzhou 32.14 290 *e*P **P** **05 22 55.3 -1.5**
LZH pP pP 05 23 00.3 +0.5
LZH pmax pmax
comp=Z,22nm,1.2s
LZH L L
comp=Z,660nm,15.1s
LZH L L
comp=Z,600nm,14.8s
LZH L L
comp=Z,650nm,14.8s
LZDM Lanzhou Array 32.27 290 P **P** **05 22 56.2 -1.8**
comp=Z,3.3nm,0.4s,baz=96,slow=22,SNR=5.6
comp=Z,3.3nm,0.4s
YAK Yakutsk 32.46 349 *e*P **P** **05 22 57.7 -1.3**
YAK *e**PP **pP** **05 23 01.0 -1.3**
YAK *e* 05 24 04.4
YAK *e*S **S** **05 28 13.1 +0.2**
YAK *e**SS **sS** **05 28 19.1 +0.9**
YAK *e*SS **SnSn** **05 30 06.9 +0.7**
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,7.0nm,1.2s
YAK pmax pmax
comp=N,59nm,2.7s
YAK pmax pmax
comp=Z,122nm,4.7s
YAK pmax pmax
comp=E,45nm,2.9s
YAK smax smax
comp=E,64nm,3.1s
YAK smax smax
comp=N,38nm,3.0s
YAK MLR MLR
comp=N,245nm,17.0s
YAK MLR MLR
comp=E,271nm,24.0s
YAK Yakutsk 32.46 349 P **P** **05 22 59.0 0.0**
CD2 Chengdu 32.70 281 P **P** **05 23 00.0 -1.5**
CD2 pmax pmax
comp=E,20nm,0.9s
CD2 L L
comp=E,1μm,17.1s
CD2 L L
comp=E,1μm,15.9s
CD2 L L
comp=E,1μm,15.2s
TNTI Ternate 32.71 208 P **P** **05 23 01.7 +0.1**
TNTI lAmb lAmb 05 23 18.2
comp=Z,26nm,1.1s
SEY Seymchan 33.06 9 *i* P **P** **05 23 04.8 +0.6**
SEY pmax pmax
comp=Z,20nm,1.5s
IRK Irkutsk 35.01 319 *e*P **P** **05 23 21.8 +0.5**
IRK pmax pmax
comp=Z,30nm,1.6s
TLY Talaya 35.15 318*ce*P **P** **05 23 24.3 +1.7**
TLY pmax pmax
comp=Z,31nm,1.3s
TLY Talaya 35.15 318 P **P** **05 23 22.9 +0.3**
TLY lAmb lAmb 05 23 28.4
comp=Z,21nm,1.1s
TLY Talaya 35.15 318 P **P** **05 23 23.6 +1.0**
GTA2 Gaotai 35.38 296 P **P** **05 23 23.0 -1.9**
GTA2 pP pP 05 23 27.0 -1.0
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 L L
comp=Z,370nm,16.2s
GTA2 L L
comp=Z,770nm,17.5s
GTA2 L L
comp=Z,790nm,19.4s
KNGR Kungurtug, Tuv 38.49 314 *i* P **P** **05 23 51.8 +0.7**
KNGR pmax pmax
comp=Z,9.0nm,1.1s
GOMU GeErMu 39.43 291 P **P** **05 23 58.3 -1.2**
GOMU pP pP 05 24 01.5 -1.1
GOMU sP sP 05 24 06.0 +2.1
GOMU S **S** **05 30 01.8 +0.8**
GOMU pmax pmax
comp=Z,32nm,1.1s
GOMU L L
comp=Z,160nm,10.4s
GOMU L L
comp=Z,380nm,10.8s
GOMU L L
comp=Z,540nm,10.6s
BILL Bilibino 40.13 14 *i* P **P** **05 24 04.7 +0.3**
BILL pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 40.54 263 P **P** **05 24 06.8 -1.7**
CHTO Chiang Mai 40.54 263 P **P** **05 24 10.1 +1.6**
CHTO Chiang Mai 40.54 263 P **P** **05 24 06.8 -1.7**
CMAR Chiang Mai Arr 40.70 263 P **P** **05 24 07.8 -2.0**
comp=Z,1.3nm,0.3s,baz=64,slow=8.4,SNR=8.4
CMAR PcP **PcP** **05 26 09.5 -1.8**
comp=Z,1.7nm,0.3s,baz=88,slow=3.4,SNR=2.2
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 40.70 263*ce*P **P** **05 24 11.8 +2.0**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
TIXI Tiksi 41.73 354 *e*P **P** **05 24 17.7 +0.1**
TIXI pmax pmax
comp=Z,14nm,1.8s
GAMB Gambell 44.12 28 P **P** **05 24 35.4 -1.6**
baz=244
COEN Coen 44.30 178 **P** **05 24 39.0 +0.1**
COEN lAmb lAmb 05 24 51.6
comp=Z,35nm,1.2s
COEN Coen 44.30 178 P **P** **05 24 40.5 +1.6**
WMQ Urumqi 44.42 303 *e*P P 05 24 32.3 -7.6
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ LR LR
comp=N,830nm,24.1s
WMQ LR LR
comp=E,430nm,24.2s
WMQ LR LR
comp=Z,170nm,21.9s
DGZ Jazzator, Alta 44.74 311 *i* P **P** **05 24 41.7 -0.8**
DGZ pmax pmax
comp=Z,27nm,1.1s
M11K Mekoryuk 45.27 33 P **P** **05 24 46.1 -0.1**
baz=253
ZSN Zaisan 46.36 308 *e*P **P** **05 24 54.0 -1.1**
ZSN pmax pmax
comp=Z,7.0nm,1.3s
ZSN Zaisan 46.36 308 *e*P **P** **05 24 54.0 -1.1**
comp=Z,7.0nm,1.3s
K13K Kusilvak Mount 46.44 32 P **P** **05 24 55.8 +0.3**
baz=253
M13K Dall Lake 46.64 34 P **P** **05 24 57.7 +0.7**
baz=256
ZAA0 Zalesovo Array 46.75 317 **P** **05 24 57.5 -0.6**
ZAA0 lAmb lAmb 05 25 01.1
comp=Z,21nm,1.8s
ZALV Zalesovo Beam 46.75 317 P **P** **05 24 57.7 -0.3**
comp=Z,1.8nm,0.7s,baz=92,slow=7.5,SNR=8.6
ZALV PcP **PcP** **05 26 30.6 -0.6**
comp=Z,0.9nm,0.5s,baz=108,slow=4.7,SNR=1.6
comp=Z,1.8nm,0.7s
ZALV Zalesovo Beam 46.75 317 *i* P **P** **05 24 57.5 -0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 46.75 317 **P** **05 24 57.0 -1.0**
F14K Arctic Creek 46.93 27 P **P** **05 24 59.2 -0.1**
baz=248
J14K Nanvaranak Lak 47.17 31 P **P** **05 25 01.5 +0.3**
baz=253
L14K Kuka Creek 47.19 33 P **P** **05 25 02.2 +0.9**
baz=255
N14K Kuskokwak Cree 47.33 35 P **P** **05 25 03.1 +0.7**
baz=258
M14K Bethel 47.38 34 P **P** **05 25 04.1 +1.3**
baz=257
G15K Niukluk 47.66 28 P **P** **05 25 06.3 +1.3**
baz=251
F15K North Star Dit 47.67 27 P **P** **05 25 05.5 +0.5**
baz=250
L15K Ungalak Mounta 47.82 32 P **P** **05 25 05.6 -0.7**
baz=256
K15K Wolf Creek Mou 47.95 32 P **P** **05 25 08.1 +0.8**
K15K lAmb lAmb 05 25 23.6
comp=Z,25nm,1.4s
K15K Wolf Creek Mou 47.95 32 P **P** **05 25 07.1 -0.2**
baz=256
M15K Kasigluk River 47.98 34 P **P** **05 25 06.9 -0.6**
baz=258
O15K Ungalikthiuk R 48.12 36 P **P** **05 25 09.7 +1.1**
O15K Ungalikthiuk R 48.12 36 P **P** **05 25 08.2 -0.4**
baz=260
MK31 Makanchi Array 48.13 307*ce*P **P** **05 25 09.0 0.0**
MKAR Makanchi Array 48.13 307 P **P** **05 25 08.1 -0.9**
comp=Z,4.8nm,0.6s,baz=88,slow=8.7,SNR=21
MKAR S **S** **05 32 06.5 -0.6**
comp=Z,0.1nm,0.5s,baz=84,slow=13,SNR=1.7
comp=Z,4.8nm,0.6s
MKAR Makanchi Array 48.13 307 *i* P **P** **05 25 08.5 -0.5**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 48.13 307 P **P** **05 25 08.4 -0.6**
N15K Kwethluk River 48.16 35 P **P** **05 25 08.5 -0.4**
baz=259
H16K Elim 48.28 29 P **P** **05 25 09.3 -0.5**
baz=253
MAKZ Makanchi 48.35 307 P **P** **05 25 10.2 -0.4**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 48.35 307 **P** **05 25 10.2 -0.4**
MAKZ lAmb lAmb 05 25 14.7
comp=Z,8.3nm,0.8s
MAKZ Makanchi 48.35 307 P **P** **05 25 10.6 0.0**
C16K Lisburne Hills 48.38 23 P **P** **05 25 10.2 -0.2**
baz=247
G16K Koyuk River 48.47 28 P **P** **05 25 10.8 -0.3**
baz=252
J16K Anvik River 48.61 31 P **P** **05 25 12.0 -0.4**
baz=256
I17K Unalakleet 48.73 30 P **P** **05 25 12.4 -0.7**
baz=255
L16K Owhat River 48.77 33 P **P** **05 25 13.2 -0.4**
baz=258
N16K Nishlik Lake 48.87 34 P **P** **05 25 13.5 -0.9**
baz=260
M16K Timber Creek 48.88 34 P **P** **05 25 14.0 -0.4**
baz=259
D17K Noatak River 48.95 24 P **P** **05 25 14.2 -0.7**
baz=250
P16K Nushagak River 49.03 36 P **P** **05 25 15.6 0.0**
baz=262
O16K Kokwok River B 49.06 36 P **P** **05 25 16.2 +0.4**
baz=261
G17K Kiwalik Mounta 49.18 28 P **P** **05 25 16.3 -0.3**
baz=254
C17K DeLong Mountai 49.19 24 P **P** **05 25 17.5 +0.7**
baz=249
E17K Hotham Inlet 49.20 25 P **P** **05 25 17.5 +0.7**
baz=251
KPJI Karang Pucung 49.21 226 P **P** **05 25 16.8 -0.7**
comp=Z,26nm,1.4s
F17K Baldwin Pennin 49.22 26 P **P** **05 25 17.0 +0.1**
baz=252
J17K VABM Dome 49.31 31 P **P** **05 25 17.7 0.0**
J17K lAmb lAmb 05 25 38.4
comp=Z,17nm,1.2s
J17K VABM Dome 49.31 31 P **P** **05 25 18.5 +0.8**
baz=257
H17K Granite Mounta 49.33 28 P **P** **05 25 18.6 +0.9**
baz=255
NRIK Noril'sk 49.34 338 P **P** **05 25 17.8 0.0**
comp=Z,8.0nm,0.9s,baz=108,slow=8.4,SNR=10
NRIK S **S** **05 32 21.6 -1.8**
comp=Z,1.5nm,0.4s,baz=112,slow=5.4,SNR=1.6
comp=Z,8.0nm,0.9s
NRIK Noril'sk 49.34 338 *i* P **P** **05 25 17.7 -0.1**
NRIK pmax pmax
comp=Z,17nm,1.1s
NRIK Noril'sk 49.34 338 P **P** **05 25 18.3 +0.5**
L17K Donlin 49.40 32 P **P** **05 25 19.6 +1.2**
baz=259
K17K Iditarod 49.51 32 P **P** **05 25 20.2 +0.9**
K17K lAmb lAmb 05 25 50.8
comp=Z,18nm,1.1s
K17K Iditarod 49.51 32 P **P** **05 25 19.6 +0.4**
baz=258
M17K Holitna River 49.67 33 P **P** **05 25 21.8 +1.4**
baz=260
E18K Tukpahlearik C 49.76 25 P **P** **05 25 21.7 +0.7**
baz=252
P17K Kvichak River 49.84 36 P **P** **05 25 22.4 +0.6**
baz=263
F18K Selawik 49.88 26 P **P** **05 25 22.0 +0.1**
baz=254
C18K Utukok River 49.94 24 P **P** **05 25 23.1 +0.6**
baz=251
H18K Honhosa River 50.02 28 P **P** **05 25 23.7 +0.6**
baz=256
Q17K Contact Creek 50.03 38 P **P** **05 25 23.4 0.0**
baz=264
G18K Tagagawik 50.08 27 P **P** **05 25 24.4 +0.8**
baz=256
L18K Granite Mounta 50.16 32 P **P** **05 25 25.1 +1.0**
baz=260
MDSI Maura Dua 50.17 233 P **P** **05 25 23.4 -1.4**
comp=Z,709nmcomp=Z,23nm,1.0s
N18K Kilae Creek 50.30 34 P **P** **05 25 25.7 +0.3**
baz=262
J18K Innoko River 50.36 31 P **P** **05 25 25.6 -0.1**
J18K Innoko River 50.36 31 P **P** **05 25 25.5 -0.2**
baz=259
PDGK Podgornoye 50.40 303 P **P** **05 25 25.3 -1.2**
PDGK Podgornoye 50.40 303 **P** **05 25 25.3 -1.2**
KURK Kurchatov 50.42 313*ce*P **P** **05 25 25.8 -0.5**
KURK pmax pmax
comp=Z,39nm,1.3s
KURK Kurchatov 50.42 313 **P** **05 25 25.6 -0.8**
KURK lAmb lAmb 05 25 31.5
comp=Z,20nm,0.8s
KURK Kurchatov 50.42 313 P **P** **05 25 25.7 -0.7**
SHLS Shalkode 50.45 303 *e*P **P** **05 25 23.2 -3.6**
SHLS pmax pmax
comp=Z,1.0nm,0.1s
SHLS Shalkode 50.45 303 *e*P **P** **05 25 23.2 -3.6**
comp=Z,0.9nm,0.1s
M18K Stony River 50.45 33 P **P** **05 25 26.3 0.0**
baz=262
P18K Big Mountain, 50.48 36 P **P** **05 25 27.6 +0.9**
baz=264
KURBB Kurchatov Arra 50.48 312 P **P** **05 25 25.9 -0.9**
comp=Z,14nm,0.8s,baz=90,slow=8.0,SNR=43
KURBB S **S** **05 32 40.8 +0.8**
comp=Z,0.1nm,0.4s,baz=85,slow=12,SNR=1.9
comp=Z,14nm,0.8s
A19K Wainwright 50.51 22 P **P** **05 25 26.4 -0.2**
baz=250
Q18K Katmai Hardscr 50.52 37 P **P** **05 25 26.5 -0.6**
baz=265
GCSA Galena City Sc 50.54 29 P **P** **05 25 26.6 -0.3**
baz=258
O18K Koktuh Hills 50.54 36 P **P** **05 25 26.8 -0.3**
baz=264
C19K Lookout Ridge 50.64 23 P **P** **05 25 28.8 +1.1**
C19K lAmb lAmb 05 25 53.9
comp=Z,19nm,1.1s
C19K Lookout Ridge 50.64 23 P **P** **05 25 27.6 -0.2**
baz=252
F19K Shaleruckik Mo 50.66 26 P **P** **05 25 27.9 +0.1**
baz=256
WRAB Tennant Creek 50.75 189*ce*P **P** **05 25 29.1 +0.1**
WRAB pmax pmax
comp=Z,43nm,1.3s
WRAB Tennant Creek 50.75 189 P **P** **05 25 28.4 -0.7**
WRAB Tennant Creek 50.75 189 P **P** **05 25 29.0 -0.1**
WRA Warramunga Arr 50.76 189 P **P** **05 25 28.1 -1.0**
comp=Z,23nm,0.9s,baz=9.4,slow=7.8,SNR=53
comp=Z,23nm,0.9s
WRA Warramunga Arr 50.76 189 P **P** **05 25 28.3 -0.8**
WRA pmax pmax
comp=Z,3.0nm,1.1s
WRA Warramunga Arr 50.76 189 P **P** **05 25 28.3 -0.8**
G19K Purcell Mounta 50.76 27 P **P** **05 25 28.1 -0.6**
baz=257
UZB Uzynbulak 50.77 303 *e*P **P** **05 25 27.9 -1.3**
UZB Uzynbulak 50.77 303 *e*P **P** **05 25 28.0 -1.3**
FITZ Fitzroy Crossi 50.87 200 P **P** **05 25 29.8 -0.1**
FITZ Fitzroy Crossi 50.87 200 P **P** **05 25 29.9 -0.1**
H19K Roundabout Mou 50.88 28 P **P** **05 25 29.2 -0.3**
baz=258
QIS Mount Isa 50.89 183 P **P** **05 25 30.3 +0.2**
J19K Poorman 50.94 30 P **P** **05 25 29.9 -0.1**
J19K Poorman 50.94 30 P **P** **05 25 29.4 -0.6**
baz=260
D19K Kuna River 50.97 24 P **P** **05 25 30.5 +0.2**
D19K lAmb lAmb 05 25 39.5
comp=Z,15nm,1.2s
D19K Kuna River 50.97 24 P **P** **05 25 30.1 -0.2**
baz=254
TDK Taldyqorghan 50.98 305 *e*P **P** **05 25 29.5 -1.2**
TDK Taldyqorghan 50.98 305 *e*P **P** **05 25 29.5 -1.2**
L19K White Mountain 51.00 33 P **P** **05 25 30.9 +0.3**
baz=262
N19K Bonanza Creek 51.01 34 P **P** **05 25 30.5 -0.2**
baz=264
E19K Redstone River 51.02 26 P **P** **05 25 31.4 +0.8**
E19K lAmb lAmb 05 25 42.8
comp=Z,11nm,1.0s
E19K Redstone River 51.02 26 P **P** **05 25 30.2 -0.4**
baz=256,SNR=8.4
O19K Port Alsworth 51.02 35 P **P** **05 25 31.3 +0.6**
baz=264
SATY Saty 51.23 303 *e*P **P** **05 25 31.4 -1.3**
SATY Saty 51.23 303 *e*P **P** **05 25 31.4 -1.3**
Q19K Cape Douglas, 51.26 37 P **P** **05 25 32.4 -0.1**
baz=266
F20K Avaraart Lake 51.49 26 P **P** **05 25 34.2 +0.1**
baz=258
H20K Anotleneega Mo 51.52 28 P **P** **05 25 34.2 -0.2**
baz=260
K20K Telida 51.52 31 P **P** **05 25 34.0 -0.5**
baz=262
D20K Etivluk River 51.56 24 P **P** **05 25 33.9 -0.8**
baz=255
I20K Naagheneel 51.56 29 P **P** **05 25 35.5 +0.8**
baz=260
E20K Nigu River 51.60 25 P **P** **05 25 35.6 +0.6**
baz=256
J20K Nowinta River 51.60 30 P **P** **05 25 35.3 +0.3**
J20K lAmb lAmb 05 25 41.4
comp=Z,28nm,1.4s
J20K Nowinta River 51.60 30 P **P** **05 25 35.6 +0.6**
baz=261,SNR=9.8
B20K Meade River 51.72 23 P **P** **05 25 36.7 +0.9**
baz=254
KDAK Kodiak Island 51.75 38 P **P** **05 25 35.9 -0.3**
baz=268
M20K Styx River 51.77 33 P **P** **05 25 36.6 +0.2**
baz=264
O20K Slope Mountain 51.86 35 P **P** **05 25 36.5 -0.6**
baz=266
TARG Taragay, Kyrgy 51.87 301 P **P** **05 25 37.8 -0.1**
TARG Taragay, Kyrgy 51.87 301 P **P** **05 25 37.8 -0.1**
MDOK Medeo 52.19 303 *e*P **P** **05 25 38.6 -1.4**
MDOK Medeo 52.19 303 *e*P **P** **05 25 38.6 -1.4**
G21K Allakaket 52.25 27 P **P** **05 25 40.0 +0.2**
baz=260
KDJ Kajisay 52.26 302 P **P** **05 25 39.8 -0.7**
AAA Alma-Ata 52.28 303 *e*P **P** **05 25 39.3 -1.2**
AAA Alma-Ata 52.28 303 *e*P **P** **05 25 39.3 -1.2**
TNSS Tian-Shan 52.29 303 *e*P **P** **05 25 39.3 -1.6**

TNSS **Tian-Shan** 52.29 303 *e*P P 05 25 39.4 -1.6
C21K **Knifeblade Rid** 52.31 24 P P 05 25 40.3 0.0
baz=257
PPLA **Purkeypile** 52.31 32 P P 05 25 40.9 +0.4
baz=264
HOM **Homer** 52.33 36 P P 05 25 41.8 +1.3
baz=267
CHUM **Lake Minchumin** 52.36 31 P P 05 25 40.9 +0.2
baz=263
F21K **Alatna River** 52.39 26 P P 05 25 41.6 +0.8
baz=260
H21K **Melozitna Rive** 52.40 28 P P 05 25 42.1 +1.2
baz=261
CAST **Castle Rocks** 52.41 31 P P 05 25 41.8 +0.7
baz=264
E21K **Killik River** 52.44 25 P P 05 25 42.4 +1.2
baz=258
B21K **Ikpikpuk River** 52.48 23 P P 05 25 42.7 +1.3
baz=257
SKT **Skwentna** 52.53 33 P P 05 25 42.4 +0.4
SKT **Skwentna** 52.53 33 P P 05 25 43.4 +1.4
baz=265
KUU **Kurty** 52.59 304 *e*P P 05 25 41.7 -1.0
KUU **Kurty** 52.59 304 *e*P P 05 25 41.7 -1.0
I21K **Tanana** 52.67 29 P P 05 25 44.5 +1.6
baz=263,SNR=7.6
L22K **Petersville** 52.93 32 P P 05 25 45.2 +0.3
baz=266
H22K **Ishtalitna Cre** 53.01 28 P P 05 25 46.6 +1.2
baz=263,SNR=7.2
G22K **Bettles** 53.10 27 P P 05 25 46.7 +0.6
baz=262
BOOM **Boomskoye usch** 53.11 302 P P 05 25 46.5 -0.2
BOOM pmax pmax
comp=Z,7.0nm,0.8s
BOOM **Boomskoye usch** 53.11 302 P 05 25 46.5 -0.2
E22K **Anaktuvuk Pass** 53.17 25 P P 05 25 47.0 +0.4
baz=260
MLY **Manley** 53.17 29 P P 05 25 47.2 +0.5
baz=264,SNR=8.1
TRF **Thorofare Moun** 53.22 31 P P 05 25 47.0 -0.3
baz=265
NRN **Naryn** 53.25 301 P P 05 25 47.6 -0.4
NRN pmax pmax
comp=Z,19nm,1.3s
NRN **Naryn** 53.25 301 P 05 25 47.6 -0.4
NRN IAmb IAmb 05 25 51.1
comp=Z,19nm,1.3s
BWN **Browne** 53.64 30 P P 05 25 50.0 -0.1
PMR **Palmer** 53.65 34 P P 05 25 49.4 -0.8
PMR pmax pmax
comp=Z,19nm,1.4s
PMR **Palmer** 53.65 34 P 05 25 49.4 -0.8
PMR IAmb IAmb 05 26 04.1
comp=Z,19nm,1.4s
PMR **Palmer** 53.65 34 P P 05 25 50.3 +0.2
baz=268
COLD **Coldfoot** 53.65 27 P P 05 25 50.5 +0.4
baz=263
G23K **Bananza Creek** 53.66 27 P P 05 25 51.0 +0.7
baz=263,SNR=6.9
D23K **Nanushuk River** 53.72 24 P P 05 25 51.2 +0.6
baz=261
H23K **Yukon River** 53.75 28 P P 05 25 51.7 +0.7
baz=264,SNR=5.5
I23K **Minto, Yukon-K** 53.77 29 P P 05 25 52.2 +1.2
baz=265
MCK **McKinley** 53.84 31 P P 05 25 50.9 -0.7
baz=266
NEA2 **Nenana** 53.84 30 P P 05 25 51.3 -0.3
NEA2 IAmb IAmb 05 25 57.4
comp=Z,15nm,1.1s
NEA2 **Nenana** 53.84 30 P P 05 25 52.1 +0.5
baz=266,SNR=13
RND **Reindeer** 53.86 31 P P 05 25 51.0 -0.9
RND pmax pmax
comp=Z,14nm,1.1s
RND **Reindeer** 53.86 31 P P 05 25 51.0 -0.9
RND IAmb IAmb 05 26 07.0
comp=Z,14nm,1.1s
C23K **Itkillik River** 53.88 23 P P 05 25 52.4 +0.7
baz=260
SGDS **Sogindy** 53.89 304 *e*P P 05 25 51.1 -1.2
KNK **Knik Glacier** 53.97 34 P P 05 25 52.8 +0.3
baz=269
WAT1 **Susitna Watana** 53.97 32 P P 05 25 52.2 -0.3
baz=268
E23K **Chandalar** 53.98 26 P P 05 25 53.1 +0.5
baz=263
PWL **Port Wells** 54.01 35 P P 05 25 53.0 +0.1
baz=269
BTLS **Baital** 54.04 306 *e*P P 05 25 52.2 -1.1
BTLS **Baital** 54.04 306 *e*P P 05 25 52.2 -1.1
SML **Sawmill** 54.04 33 P P 05 25 53.1 0.0
SML pmax pmax
comp=Z,12nm,1.0s
SML **Sawmill** 54.04 33 P P 05 25 53.1 0.0
SML IAmb IAmb 05 26 23.4
comp=Z,12nm,1.0s
SML **Sawmill** 54.04 33 P P 05 25 52.7 -0.4
baz=268
KSH2 **Kashi** 54.04 298 P P 05 25 53.5 -0.1
KSH2 pP pP 05 25 56.8 -0.1
KSH2 pmax pmax
comp=Z,18nm,1.1s
KSH2 L L
comp=Z,780nm,20.6s
KSH2 L L
comp=Z,310nm,19.9s
KSH2 L L
comp=Z,290nm,20.3s
TOLK **Toolik Lake Re** 54.07 25 P P 05 25 54.4 +1.2
baz=262
AAK **Ala-Archa** 54.13 303 *ce*P P 05 25 54.6 +0.4
AAK pmax pmax
comp=Z,8.0nm,1.3s
AAK **Ala-Archa** 54.13 303 P P 05 25 53.8 -0.5
AAK IAmb IAmb 05 25 57.5
comp=Z,35nm,2.0s
AAK **Ala-Archa** 54.13 303 P P 05 25 53.8 -0.5
WAT6 **Susitna Watana** 54.34 32 P P 05 25 55.7 +0.3
baz=268,SNR=6.7
COLA **College** 54.38 30 P P 05 25 59.9 +4.4
COLA **College** 54.38 30 P P 05 25 59.9 +4.4
CCB **Clear Creek Bu** 54.39 30 P P 05 25 56.1 +0.6
D24K **Happy Valley** 54.41 24 P P 05 25 56.2 +0.6
baz=263
H24K **Noodor Dome** 54.44 28 P P 05 25 56.4 +0.5
baz=266,SNR=6.6
P23K **Montague Islan** 54.47 36 P P 05 25 56.1 -0.1
baz=271
AS31 **Alice Springs** 54.48 189 P P 05 25 56.0 -0.7
ASAR **Alice Springs** 54.48 189 P P 05 25 55.7 -1.0
comp=Z,17nm,1.1s,baz=10.0,slow=5.8,SNR=44
comp=Z,17nm,1.1s
SCM **Sheep Creek Mo** 54.51 33 P P 05 25 56.2 -0.4
SCM pmax pmax
comp=Z,21nm,1.2s
SCM **Sheep Creek Mo** 54.51 33 P P 05 25 56.2 -0.4
SCM IAmb IAmb 05 26 11.8
comp=Z,21nm,1.2s
SCM **Sheep Creek Mo** 54.51 33 P P 05 25 56.8 +0.2
baz=269
DHY **Denali Highway** 54.52 32 P P 05 25 57.2 +0.5
baz=268
F24K **Squaw Lake** 54.57 26 P P 05 25 56.6 -0.3
baz=265
POKR **Poker Plat Res** 54.58 29 P P 05 25 56.9 -0.1
baz=267
GLI **Glacier Island** 54.62 35 P P 05 25 57.4 +0.1
baz=270
G24K **Hadweenzic Riv** 54.66 27 P P 05 25 58.3 +0.8
baz=266
HDA **Harding Lake** 54.75 30 P P 05 25 58.0 -0.2
HDA **Harding Lake** 54.75 30 P P 05 25 59.3 +1.1
baz=268
ILAR **Eielson Array** 54.79 30 P P 05 25 58.8 +0.3
comp=Z,4.2nm,0.8s,baz=270,slow=7.5,SNR=28
comp=Z,4.2nm,0.8s
SMLA **Simla** 54.84 288 *e*P P 05 25 58.8 -0.6
KLU **Klutina** 55.18 34 P P 05 26 02.2 +0.8
KLU IAmb IAmb 05 26 21.2
comp=Z,9.9nm,1.0s
KLU **Klutina** 55.18 34 P P 05 26 02.3 +0.8
baz=271
G25K **Bearman Lake** 55.21 27 P P 05 26 02.7 +1.2
baz=267

K24K **Donnelly Dome** 55.25 31 P P 05 26 02.5 +0.6
baz=269
D25K **Kavik River** 55.29 24 P P 05 26 03.6 +1.5
baz=265
BVAR **Borovoye Array** 55.36 316 P P 05 26 01.9 -0.8
comp=Z,3.4nm,0.8s,baz=90,slow=7.2,SNR=9.7
comp=Z,3.4nm,0.8s
PAX **Paxson** 55.38 32 P P 05 26 03.9 +1.0
baz=270
PRP **Porcupine Dome** 55.39 29 P P 05 26 03.2 +0.2
baz=268
F25K **Christian Rive** 55.44 26 P P 05 26 03.7 +0.5
baz=267
J25K **Salcha River,** 55.44 30 P P 05 26 03.7 +0.4
baz=269
E25K **Arctic Village** 55.49 26 P P 05 26 04.5 +0.9
baz=266,SNR=8.7
HARP **HAARP** 55.53 33 P P 05 26 04.6 +0.7
baz=271
THN **Thein Dam** 55.60 290 *e*P P 05 26 02.9 -2.0
RIDG **Independent Ri** 55.66 31 P P 05 26 04.7 -0.2
baz=270
N25K **Chitina, Valde** 55.81 34 P P 05 26 06.8 +0.8
baz=272
BMRM **Bremner River** 55.83 34 P P 05 26 06.7 +0.6
baz=272
C26K **Camden Bay** 55.85 24 P P 05 26 06.8 +0.8
baz=266
F26K **Sheenjek River** 56.01 26 P P 05 26 08.4 +1.1
baz=268,SNR=6.6
G26K **Porcupine Rive** 56.13 27 P P 05 26 08.9 +0.8
baz=269,SNR=6.0
C27K **Jago River** 56.25 24 P P 05 26 09.1 +0.2
baz=267
L26K **Log Cabin Wild** 56.35 32 P P 05 26 10.2 +0.5
baz=272,SNR=6.9
DZA **Taraz** 56.36 304 *e*P P 05 26 09.0 -1.2
DZA pmax pmax
comp=Z,8.0nm,0.8s
DZA **Taraz** 56.36 304 *e*P P 05 26 09.1 -1.2
comp=Z,7.8nm,0.8s
I26K **Coal Creek Min** 56.38 29 P P 05 26 10.8 +0.9
baz=271
M26K **Nabesna, AK** 56.54 33 P P 05 26 11.5 +0.4
baz=273
MCARA **McCarthy VSAT** 56.58 34 P P 05 26 12.2 +0.9
baz=273
CRQE **Cirque** 56.59 35 P P 05 26 12.1 +0.5
baz=274
QLP **Quilpie** 56.88 178 P P 05 26 14.2 +0.3
KK31 **Karatay Array** 56.91 304 P P 05 26 13.7 -0.3
KK31 pmax pmax
comp=Z,12nm,0.9s
KK31 **Karatay Array** 56.91 304 P P 05 26 13.7 -0.3
KK31 IAmb IAmb 05 26 18.3
comp=Z,12nm,0.8s
KKAR **Karatay Array** 56.91 304 P P 05 26 13.4 -0.6
KKAR **Karatay Array** 56.91 304 P P 05 26 13.4 -0.6
G27K **Doyon Strip** 56.97 27 P P 05 26 14.4 +0.3
baz=271
E27K **Coleen River** 56.98 26 P P 05 26 15.1 +0.9
baz=270,SNR=7.1
I27K **Kandik River** 57.02 29 P P 05 26 14.5 0.0
I27K IAmb IAmb 05 26 37.0
comp=Z,11nm,1.2s
I27K **Kandik River** 57.02 29 P P 05 26 15.6 +1.0
baz=272
H27K **Steamboat Moun** 57.04 28 P P 05 26 14.9 +0.3
H27K IAmb IAmb 05 26 37.2
comp=Z,18nm,1.2s
H27K **Steamboat Moun** 57.04 28 P P 05 26 15.7 +1.1
baz=272,SNR=11
L27K **Beaver Creek,** 57.04 32 P P 05 26 15.3 +0.6
baz=273,SNR=12
M27K **Edge Creek, AK** 57.06 33 P P 05 26 15.2 +0.3
baz=274
D27M **Malcolm River** 57.21 24 P P 05 26 16.3 +0.5
baz=270
NIL **Nilore** 57.26 293 P P 05 26 16.2 -0.4
NIL pmax pmax
comp=Z,34nm,1.1s
NIL **Nilore** 57.26 293 P P 05 26 16.2 -0.4
NIL **Nilore** 57.26 293 P P 05 26 16.0 -0.6
MANEM **Manem** 57.39 297 P P 05 26 17.4 -0.5
MANEM IAmb IAmb 05 26 23.1
comp=Z,87nm,0.9s
BRLS **Boroday** 57.40 304 *e*P P 05 26 17.5 0.0
BRLS **Boroday** 57.40 304 *e*P P 05 26 17.5 0.0
BVCY **Beaver Creek** 57.53 33 P P 05 26 18.1 0.0
baz=275
F28M **Old Crow** 57.65 26 P P 05 26 19.8 +0.9
baz=272
I28M **Miner Creek** 57.73 29 P P 05 26 20.3 +0.7
I28M IAmb IAmb 05 26 44.1
comp=Z,11nm,1.2s
I28M **Miner Creek** 57.73 29 P P 05 26 19.9 +0.4
baz=273
CHM **Chimkent** 57.74 303 *e*P P 05 26 18.7 -1.2
CHM pmax pmax
comp=Z,7.0nm,0.6s
CHM **Chimkent** 57.74 303 *e*P P 05 26 18.8 -1.2
comp=Z,6.7nm,0.6s
E28M **Babbage River** 57.74 25 P P 05 26 20.4 +0.9
baz=272,SNR=14
YUK3 **Moose Creek** 57.77 33 P P 05 26 20.5 +0.4
baz=275,SNR=8.3
D28M **Stokes Point** 58.00 24 P P 05 26 21.8 +0.6
baz=272
O28M **Mount Upton** 58.00 34 P P 05 26 22.3 +0.5
baz=276
GAR **Garm** 58.04 299 P P 05 26 21.8 -0.4
PINM **Pinnacle** 58.05 35 P P 05 26 22.8 +1.0
baz=276
DAWY **Dawson** 58.06 31 P P 05 26 22.0 +0.2
baz=275,SNR=7.4
H29M **Whitestone** 58.32 28 P P 05 26 24.1 +0.5
baz=274
E29M **Blow River** 58.35 25 P P 05 26 24.3 +0.5
baz=273,SNR=9.2
G29M **Pine Creek** 58.40 27 P P 05 26 25.1 +0.9
baz=274,SNR=9.9
I29M **Ogilvie Camp,** 58.41 29 P P 05 26 25.3 +1.1
baz=275,SNR=8.3
BRWY **Burwash Landin** 58.49 34 P P 05 26 25.1 +0.2
baz=277
PNL **Peninsula** 58.53 36 P P 05 26 25.3 +0.2
baz=278
M29M **Somme Creek** 58.64 32 P P 05 26 26.7 +0.7
baz=277,SNR=15
YUK4 **Talbot Arm** 58.68 34 P P 05 26 26.9 +0.4
baz=277
L29M **L29M** 58.71 32 P P 05 26 27.4 +1.0
baz=276,SNR=19
O29M **Mount Kennedy** 58.85 35 P P 05 26 27.6 +0.1
baz=278
YUK6 **Outpost Mounta** 58.87 34 P P 05 26 27.5 -0.3
baz=278
K29M **Barlow Dome** 58.90 31 P P 05 26 27.7 -0.1
baz=277,SNR=11
EPYK **Eagle Plains** 58.97 28 P P 05 26 28.0 -0.2
baz=276,SNR=18
CHGR **Chuyangaron** 59.00 299 *i* P P 05 26 27.7 -1.2
CHGR pmax pmax
comp=Z,118nm,0.9s
CHGR **Chuyangaron** 59.00 299 P P 05 26 28.5 -0.4
G30M **tAoh Zrail Nji** 59.10 27 P P 05 26 28.7 -0.4
baz=276,SNR=11
F30M **Barrier River** 59.21 26 P P 05 26 29.2 -0.5
baz=276,SNR=7.3
I30M **Mount Dempster** 59.23 29 P P 05 26 29.4 -0.7
baz=277
HYT **Haines Junctio** 59.30 34 P P 05 26 31.3 +0.7
baz=278
J30M **Hart River** 59.33 30 P P 05 26 30.7 -0.1
baz=277
P29M **Windy Craggy** 59.37 36 P P 05 26 31.9 +0.9
baz=279
M30M **Minto, Yukon** 59.39 32 P P 05 26 31.5 +0.4
baz=278,SNR=11
N30M **Aishikik Lake** 59.41 33 P P 05 26 31.8 +0.6
baz=278
P30M **Million Dollar** 59.68 35 P P 05 26 33.3 +0.1
baz=279
G31M **Satah River** 59.87 27 P P 05 26 34.2 -0.1
baz=278
INK **Inuvik** 59.98 25 P P 05 26 35.4 +0.5
comp=Z,3.9nm,0.9s,baz=268,slow=4.8,SNR=24
comp=Z,3.9nm,0.9s
INK **Inuvik** 59.98 25 P P 05 26 34.9 0.0
baz=278
INK **Inuvik** 59.98 25 P P 05 26 36.2 +1.2
O30N **Mendenhall** 60.00 34 P P 05 26 35.3 0.0
baz=280
H31M **Peel River** 60.00 28 P P 05 26 36.1 +0.8
baz=278
F31M **Tsiigehtchic** 60.01 26 P P 05 26 35.9 +0.7
baz=278
N31M **Braeburn, Yuko** 60.03 33 P P 05 26 36.9 +1.4
baz=279
PLBC **Pleasant Camp** 60.09 36 P P 05 26 35.9 0.0
baz=280
KBL **Kabul** 60.31 295 P P 05 26 37.0 -1.1
KBL pmax pmax
comp=Z,17nm,0.9s
KBL **Kabul** 60.31 295 P P 05 26 37.0 -1.1
SVE **Sverdlovsk** 60.35 321 *e*P P 05 26 38.4 +0.7
SVE pmax pmax
comp=Z,27nm,1.2s
S31K **Pelican** 60.43 37 P P 05 26 38.9 +0.7
baz=281
M31M **Drury Creek, Y** 60.55 32 P P 05 26 40.2 +1.1
M31M IAmb IAmb 05 27 03.6
comp=Z,7.1nm,1.1s
M31M **Drury Creek, Y** 60.55 32 P P 05 26 39.7 +0.6
baz=280
WHY **Whitehorse** 60.60 34 P P 05 26 38.8 -0.7
baz=281
SKAG **Skagway** 60.60 36 P P 05 26 39.8 +0.5
baz=281
SIT **Sitka** 61.09 38 P P 05 26 43.4 +0.6
baz=282
N32M **Quiet Lake** 61.37 33 P P 05 26 44.0 -0.7
baz=282
P32M **Atlin** 61.38 35 P P 05 26 44.1 -0.7
baz=282
S32K **Killisnoo** 61.40 38 P P 05 26 44.8 0.0
baz=283
ARTI **Arti** 61.66 321 *c i* P P 05 26 46.4 -0.2
ARTI 05 27 28.7
ARTI 05 28 58.8
ARTI S S 05 35 09.9 +1.6
ARTI pmax pmax
comp=Z,17nm,0.9s
ARTI **Arti** 61.66 321 P P 05 26 46.7 0.0
P33M **Teslin, Yukon** 61.69 34 P P 05 26 47.6 +0.7
P33M IAmb IAmb 05 27 08.9
comp=Z,7.2nm,1.1s
P33M **Teslin, Yukon** 61.69 34 P P 05 26 47.4 +0.5
baz=283
CMSA **Cobar Meteorol** 61.88 176 P P 05 26 48.2 0.0
MMPY **Sheldon Lake,** 61.90 32 P P 05 26 48.4 +0.2
baz=283,SNR=6.1
STKA **Stephens Creek** 62.12 180 P P 05 26 48.6 -1.2
comp=Z,4.5nm,0.9s,baz=9.3,slow=11,SNR=5.2
comp=Z,4.5nm,0.9s
STKA **Stephens Creek** 62.12 180 *i* P P 05 26 49.7 -0.2
Q32M **Nakina River** 62.25 36 P P 05 26 50.1 -0.7
baz=284
FORT **Forrest** 62.43 193 P P 05 26 51.8 -0.2
FORT IAmb IAmb 05 27 02.0
comp=Z,12nm,0.9s
U33K **Whale Pass** 62.49 39 P P 05 26 51.4 -0.8
baz=284
AB31 **Akbulak array** 62.53 313 P 05 26 52.0 -0.6
AB31 IAmb IAmb 05 26 59.1
comp=Z,7.9nm,0.8s
ABKAR **Akbulak array** 62.53 313 P P 05 26 52.3 -0.3
CRAG **Craig** 62.66 40 P P 05 26 52.7 -0.6
baz=285
S34M **Telegraph Cree** 63.09 37 P P 05 26 56.2 0.0
baz=285
C36M **Paulatuk** 63.13 23 P P 05 26 55.8 -0.5
baz=285
DLBC **Dease Lake** 63.51 36 P P 05 27 00.4 +1.3
comp=Z,1.7nm,0.8s,baz=290,slow=4.7,SNR=4.1
comp=Z,1.7nm,0.8s
DLBC **Dease Lake** 63.51 36 P P 05 26 57.5 -1.5
baz=286
T35M **Bob Quinn** 63.80 38 P P 05 27 00.9 -0.1
baz=286
WRGLY **Wrigley** 65.17 30 P P 05 27 10.0 +0.3
baz=289
LIRD **Liard River Hi** 65.18 34 P P 05 27 10.1 +0.2
baz=288
HRA **Herat** 65.64 297 P 05 27 13.1 -0.6
KIRV **Kirov** 65.70 325 P P 05 27 13.2 0.0
SPITS **Spitsbergen Ar** 66.92 349 P P 05 27 21.9 +1.1
comp=Z,6.0nm,0.9s,baz=59,slow=12,SNR=3.6
comp=Z,6.0nm,0.9s
BELG **Belogornoye** 68.87 319 *i* P P 05 27 32.7 -0.7
BELG pmax pmax
comp=Z,7.0nm,1.3s
YKA **Yellowknife Ar** 69.20 29 P P 05 27 34.6 -0.7
comp=Z,1.9nm,0.8s,baz=295,slow=6.4,SNR=8.4
comp=Z,1.9nm,0.8s
YKA **Yellowknife Ar** 69.20 29 *ce*P P 05 27 35.7 +0.4
YKA pmax pmax
comp=Z,2.0nm,0.8s
KLMR **Klimovskoe** 69.47 329 *e*P P 05 27 35.3 -1.7
KLMR *e* 05 30 07.2
KLMR pmax pmax
comp=Z,27nm,1.3s
KLMR MLR MLR
comp=Z,250nm,17.0s
ARCES **ARCESS Array B** 70.19 340 P P 05 27 42.1 +0.8
comp=Z,4.0nm,0.9s,baz=63,slow=5.5,SNR=5.4
comp=Z,4.0nm,0.9s
GNW **Green Mountain** 71.40 45 P P 05 27 49.4 +0.3
GNW IAmb IAmb 05 28 05.0
comp=Z,8.2nm,1.2s
NEEM **North Greenlan** 71.93 3 *i* P P 05 27 52.9 +0.7
NEEM IAmb IAmb 05 27 57.6
comp=Z,16nm,1.0s
DAG **Danmarks Havn** 72.22 355 *i* P P 05 27 55.0 +1.5
DAG IAmb IAmb 05 27 58.7
comp=Z,15nm,1.0s
VRH **Novokhopyorsk** 72.70 320 *e*P P 05 27 56.7 0.0
VRH pmax pmax
comp=Z,7.0nm,0.6s
MAK **Makhachkala** 72.84 310 *e*P P 05 27 53.5 -4.3
MAK *e* 05 30 36.5
MAK *e*S S 05 37 18.1 -5.2
MAK *e*SS SS 05 42 03.5 +0.7
MAK *e*SSS SSS 05 45 20.2
MAK pmax pmax
comp=Z,119nm,1.4s
MAK MLR MLR
comp=Z,782nm,16.0s
LTY **Liberty** 72.85 45 P P 05 27 58.3 +0.5
H04A **Detroit Lake** 73.05 48 P P 05 27 59.8 +0.8
H04A IAmb IAmb 05 28 20.1
comp=Z,24nm,1.4s
B08A **Colville Reser** 73.16 44 P P 05 27 58.9 -0.7
I04A **Tendick Farm,** 73.29 49 P P 05 27 59.4 -1.1
I04A IAmb IAmb 05 28 15.7
comp=Z,12nm,1.2s
AKT **Akhty** 73.34 309 *e*P P 05 28 00.2 -0.7
AKT *e* 05 28 16.5
AKT pmax pmax
comp=Z,25nm,0.8s
AKT MLR MLR
comp=Z,414nm,21.0s
OBN **Obninsk** 73.55 325 *ce*P P 05 28 01.5 -0.2
OBN *i* 05 28 14.8
OBN *e* 05 30 45.7
OBN *e*PPP PPP 05 32 31.2
OBN *e*S SKiKP 05 37 32.6 +1.2
OBN *e*SS SS 05 42 16.4 +3.5
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,339nm,17.0s
LPSR **Galich'ya Gora** 73.57 322 *e*P P 05 27 59.8 -2.1
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SEKA **Sheki** 73.82 308 P P 05 28 04.9 +1.2
LKRN **Lenkeran, Azer** 73.84 306 P P 05 28 05.3 +1.6
VORR **Voronezh** 73.86 321 *e*P P 05 28 02.9 -0.7
VORR pmax pmax
comp=Z,66nm,0.4s
YBH **Yreka Blue Hor** 74.02 51 P P 05 28 06.5 +1.6
comp=Z,2.0nm,0.7s,baz=301,slow=5.2,SNR=8.3
comp=Z,2.0nm,0.7s

VSR	**Storozhevoye**	**74.11**	**320**	*e*P		**P**		**05 28 04.6**	**-0.5**
VSR					pmax	pmax			
	comp=E,8,0nm,0.5s								
VORD	**Divnogorie**	**74.16**	**320**	*e*P		**P**		**05 28 04.2**	**-1.2**
VORD					pmax	pmax			
	comp=E,7,0nm,0.9s								
NEW	**Newport**	**74.51**	**43**	P		**P**		**05 28 09.3**	**+1.7**
	comp=E,4.5nm,1.0s,baz=303,slow=7.5,SNR=7.3								
	comp=E,4.5nm,1.0s								
GANJ	**Ganja**	**74.67**	**308**	P		**P**		**05 28 09.9**	**+1.3**
DBG	**Daneborg**	**74.71**	**355**	*i* P		**P**		**05 28 09.4**	**+1.3**
DBG				IAmb		IAmb		05 28 13.3	
	comp=E,5.5nm,1.1s								
FINES	**FINESS Array B**	**74.73**	**333**	P		**P**		**05 28 08.3**	**-0.2**
	comp=E,2.5nm,0.5s,baz=60,slow=5.5,SNR=13								
	comp=E,2.5nm,0.5s								
GOF	**Gofitskoye**	**74.77**	**313**	*ce*P		P		05 28 19.4	+10
KBZ	**Khabaz**	**75.48**	**312**	P		**P**		**05 28 12.5**	**-0.7**
	comp=E,4.9nm,0.7s,baz=60,slow=4.6,SNR=10								
	comp=E,4.9nm,0.7s								
KBZ	**Khabaz**	**75.48**	**312**	*i* P		**P**		**05 28 12.0**	**-1.2**
KBZ					pmax	pmax			
	comp=E,14nm,0.9s								
KIV	**Kislovodsk**	**75.51**	**313**	*e*P		**P**		**05 28 14.1**	**+0.6**
KIV				*e*S		**S**		**05 37 55.3**	**+1.8**
KIV					pmax	pmax			
	comp=E,14nm,1.1s								
KIV					MLR	MLR			
	comp=E,132nm,18.0s								
SHA1	**Shidzhatmaz**	**75.63**	**312**	*ce*P		**P**		**05 28 16.5**	**+2.1**
NAX	**Nakhchivan**	**75.91**	**307**	P		**P**		**05 28 17.4**	**+1.6**
GNI	**Garni**	**75.97**	**308**	*i* P		**P**		**05 28 16.2**	**0.0**
GNI					pmax	pmax			
	comp=E,31nm,1.3s								
SUMG	**Summit**	**77.12**	**0**	*i* P		**P**		**05 28 24.4**	**+2.0**
SUMG					IAmb	IAmb		05 28 30.4	
	comp=E,22nm,1.3s								
VSLR	**Vesyoloye**	**77.43**	**313**	*i* P		**P**		**05 28 24.5**	**+0.3**
VSLR					pmax	pmax			
	comp=E,25nm,0.7s								
SOC	**Sochi**	**77.57**	**313**	*e*P		**P**		**05 28 26.6**	**+1.6**
SOC				*e*S		**S**		**05 38 18.3**	**+2.5**
SOC				*e*SSS		SSS		05 46 40.0	
SOC					pmax	pmax			
	comp=E,7,0nm,0.6s								
SOC					MLR	MLR			
	comp=E,160nm,17.0s								
MNK	**Minsk**	**78.09**	**327**	*i* P		**P**		**05 28 29.2**	**+1.5**
	comp=E,31nm,0.9s								
MNK				*i* P		**P**		**05 28 29.2**	**+1.5**
	comp=N,34nm,0.9s								
MNK				*i* P		**P**		**05 28 29.2**	**+1.5**
	comp=Z,13nm,0.6s,baz=53								
MNK				*i* PP		**PP**		**05 31 26.1**	**+2.5**
MNK				*i* PPP		PPP		05 33 13.3	
MNK				*i* S		**S**		**05 38 24.5**	**+3.4**
MNK				*i* SSS		SSS		05 46 51.9	
MNK				*i* SSS		SSS		05 46 51.9	
MNK				*i* LQ		LQ		05 57 53.6	
MNK				*i* LR		LR		06 03 50.8	
MNK				*i* LRM		MLR		06 05 04.5	
MNK				*i* LRM		MLR		06 05 04.5	
MNK				*i* LRM		MLR		06 05 04.5	
MNK	**Minsk**	**78.09**	**327**	*i* P		**P**		**05 28 29.2**	**+1.5**
MNK				*i*				05 31 26.0	
MNK				*i* PPP		PPP		05 33 13.2	
MNK				*i* S		**S**		**05 38 24.5**	**+3.4**
MNK					pmax	pmax			
	comp=Z,13nm,0.6s								
MNK					pmax	pmax			
	comp=E,31nm,0.9s								
MNK					pmax	pmax			
	comp=N,34nm,0.9s								
LHV	**Little Huntoon**	**78.51**	**52**	P		**P**		**05 28 30.7**	**+0.4**
NVAR	**Mina Array Bea**	**78.56**	**52**	P		**P**		**05 28 32.2**	**+1.3**
	comp=N,3.3nm,0.6s,baz=307,slow=6.6,SNR=22								
	comp=N,3.3nm,0.6s								
GURO	**Guroymak-BITLI**	**78.58**	**308**	P		**P**		**05 28 31.4**	**+0.6**
FFC	**Flin Flon**	**78.92**	**32**	P		**P**		**05 28 32.6**	**+0.4**
FFC					pmax	pmax			
	comp=Z,7,0nm,1.1s								
FFC	**Flin Flon**	**78.92**	**32**	P		**P**		**05 28 32.6**	**+0.4**
ELK	**Elko**	**79.42**	**49**	P		**P**		**05 28 37.5**	**+1.9**
	comp=Z,1.7nm,1.0s,baz=279,slow=4.3,SNR=6.4								
	comp=Z,1.7nm,1.0s								
AKASG	**Malin Array Be**	**79.68**	**323**	P		**P**		**05 28 35.9**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=53,slow=5.6,SNR=9.8								
AKASG					PP	**PP**		**05 31 36.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=48,slow=7.7,SNR=4.3								
	comp=Z,0.4nm,0.3s								
AKASG	**Malin Array Be**	**79.68**	**323**	*ce*P		**P**		**05 28 38.7**	**+2.2**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.4s								
AKBB	**Malin Array Si**	**79.68**	**323**	*ce*P		**P**		**05 28 36.1**	**-0.4**
AKBB					pmax	pmax			
	comp=Z,14nm,1.5s								
KIEV	**Kiev**	**79.70**	**323**	P		**P**		**05 28 37.1**	**+0.5**
HFS	**Hagfors**	**80.14**	**336**	P		**P**		**05 28 38.6**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=45,slow=4.3,SNR=6.3								
	comp=Z,2.9nm,0.8s								
NB2	**NORSAR Subarra**	**80.30**	**338**	P		**P**		**05 28 39.7**	**0.0**
	comp=Z,6.1nm,1.0s,baz=43,slow=5.6								
NOA	**NORSAR Array B**	**80.30**	**338**	P		**P**		**05 28 38.3**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=42,slow=5.4,SNR=11								
	comp=Z,1.8nm,0.7s								
PDAR	**Pinedale Array**	**81.91**	**45**	P		**P**		**05 28 49.6**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=306,slow=4.0,SNR=16								
	comp=Z,2.4nm,0.8s								
PDAR	**Pinedale Array**	**81.91**	**45**	P		**P**		**05 28 49.2**	**+0.3**
PFO	**Pinyon Flats O**	**82.30**	**56**	*i* P		**P**		**05 28 49.1**	**-1.9**
PFO					pmax	pmax			
	comp=Z,24nm,1.6s								
BR131	**Keskin Array S**	**83.48**	**313**	*i* P		**P**		**05 28 56.6**	**-0.4**
BRTR	**Keskin Array B**	**83.48**	**313**	P		**P**		**05 28 56.5**	**-0.4**
	comp=Z,8.5nm,1.0s,baz=91,slow=4.5,SNR=39								
	comp=Z,8.5nm,1.0s								
BRTR	**Keskin Array B**	**83.48**	**313**	*ce*P		**P**		**05 28 57.4**	**+0.4**
BRTR					pmax	pmax			
	comp=Z,9.0nm,1.0s								
BRTR	**Keskin Array B**	**83.48**	**313**			**P**		**05 28 56.8**	**-0.2**
RAYN	**Ar Rayn**	**83.55**	**293**	P		**P**		**05 28 57.3**	**-0.2**
RAYN					pmax	pmax			
	comp=Z,28nm,1.0s								
RAYN	**Ar Rayn**	**83.55**	**293**	P		**P**		**05 28 57.3**	**-0.2**
BUR08	**Bucovina Ar. S**	**83.64**	**323**			**P**		**05 28 57.8**	**+0.1**
ULM	**Lac du Bonnet**	**84.66**	**33**	P		**P**		**05 29 02.9**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=315,slow=10.0,SNR=3.4								
	comp=Z,1.0nm,0.7s								
ULM	**Lac du Bonnet**	**84.66**	**33**	*i* P		**P**		**05 29 01.5**	**-1.1**
PV20	**West Nyswonger**	**84.80**	**48**	P		**P**		**05 29 04.4**	**+0.6**
ISCO	**Idaho Springs**	**86.05**	**46**	P		**P**		**05 29 12.1**	**+1.9**
MMAI	**Mount Meron Ar**	**86.07**	**306**	P		**P**		**05 29 09.4**	**-0.7**
	baz=65,slow=6.8,SNR=4.2								
KRLC	**Kraliky**	**86.14**	**328**	*e*P		P		05 29 15.8	+5.7
KRLC	**Kraliky**	**86.14**	**328**	*e*P		P		05 29 15.8	+5.7
DPC	**Dobruska-Polom**	**86.15**	**329**	*e*P		P		05 29 17.4	+7.3
DPC	**Dobruska-Polom**	**86.15**	**329**	*e*P		P		05 29 17.4	+7.3
VYHS	**Vyhne**	**86.28**	**326**	*e*P		**P**		**05 29 14.8**	**+4.0**
BRG	**Berggiesshubel**	**86.82**	**330**	*e*S		**S**		**05 39 50.0**	**-0.6**
BRG	**Berggiesshubel**	**86.82**	**330**	SS		SS		05 45 37.0	+5.8
CLL	**Collm**	**86.90**	**331**	*e*P		**P**		**05 29 15.0**	**+1.3**
CLL				*e*S		**S**		**05 39 50.0**	**-1.3**
CLL					pmax	pmax			
	comp=Z,11nm,1.5s								
CLL	**Collm**	**86.90**	**331**	*e*P		**P**		**05 29 15.0**	**+1.3**
	comp=Z,11nm,1.5s								
CLL				*e*S		**S**		**05 39 50.0**	**-1.3**
CLL				*e*PS		**PnS**		**05 40 48.0**	**-2.7**
CLL				*e*PPS		PPS		05 41 12.0	
CLL				*e*SS		**SS**		**05 45 36.0**	**+3.6**
CLL				*e*SSS		SSS		05 49 00.0	
CLL				*e*SSSS				05 52 00.0	
CLL					AMS	AMS		06 04 00.0	
	comp=N,100nm,20.3s								
CLL					AMS	AMS		06 04 00.0	
	comp=E,200nm,20.1s								
MODS	**Modra-Piesok**	**87.11**	**327**	*e*P		**P**		**05 29 15.3**	**+0.5**
MODS	**Modra-Piesok**	**87.11**	**327**	*e*P		**P**		**05 29 15.3**	**+0.5**
KHC	**Kasperske Hory**	**88.26**	**329**	*e*P		**P**		**05 29 23.6**	**+3.2**
KHC	**Kasperske Hory**	**88.26**	**329**	*e*P		**P**		**05 29 23.6**	**+3.2**
ANMO	**Albuquerque**	**88.42**	**50**	P		**P**		**05 29 22.2**	**+0.7**
	comp=E,1.0nm,1.0s,baz=287,slow=6.5,SNR=3.8								
	comp=E,1.0nm,1.0s								
GERES	**GERESS Array B**	**88.42**	**329**	P		**P**		**05 29 21.1**	**-0.1**
	comp=E,0.2nm,0.3s,baz=45,slow=1.5,SNR=1.8								
	comp=E,0.2nm,0.3s								
EKA	**Eskdalemuir Ar**	**89.35**	**341**	P		**P**		**05 29 25.8**	**+0.6**
	comp=E,1.2nn,0.8s,baz=198,slow=28,SNR=1.9								
	comp=E,1.2nn,0.8s								
TXAR	**Lajitas Array**	**93.70**	**53**	P		**P**		**05 29 47.4**	**+1.3**
	comp=E,3.5nn,0.9s,baz=316,slow=4.7,SNR=27								
	comp=E,3.5nn,0.9s								
TXAR	**Lajitas Array**	**93.70**	**53**	P		**P**		**05 29 46.6**	**+0.5**
QSPA	**South Pole Qui**	**120.34**	**180**	PKP		**PKiKP**		**05 35 19.8**	**+0.3**
	comp=E,2.1nn,1.0s,baz=334,slow=2.0,SNR=3.6								
TORD	**Torodi Ar. Bea**	**122.09**	**313**	PKP		**PKPdf**		**05 35 23.6**	**-0.8**
	comp=E,1.0nn,0.9s,baz=34,slow=2.5,SNR=9.5								
TROLL	**Troll, Antarti**	**133.21**	**196**	PKPdf		**PKiKP**		**05 35 44.6**	**-0.6**
	comp=Z,243nn,1.2s								
SNAA	**Sanae**	**134.67**	**195**	PKP		**PKiKP**		**05 35 47.5**	**-0.5**
	comp=Z,3.3nn,1.1s,baz=108,slow=5.0,SNR=4.3								
VNA2	**Neumayer--Watz**	**136.21**	**194**	⇑PKPdf		**PKPdf**		**05 35 46.8**	**-2.7**
	comp=Z,2.3nn,0.6s,baz=210,slow=0.4								
LPAZ	**La Paz**	**149.09**	**69**	PKPbc		**PKPbc**		**05 36 16.8**	**-1.8**
	comp=E,2.9nn,0.9s,baz=344,slow=1.3,SNR=3.9								
PLCA	**Paso Flores**	**151.88**	**120**	PKPbc		**PKPbc**		**05 36 23.9**	**-0.1**
	comp=Z,5.6nn,1.1s,baz=292,slow=1.8,SNR=4.2								

*IDC **31** 05:33:17.7±1.0,38.63N×38.10E,h0km,mb3.7/6, mbtmp3.6/11,ML3.3/6,MS2.8/4,Error ellipse: s-maj=14.8km s-min=11.0km az=162.0*
*ISK **31** 05:33:18.2,38.69N×38.11E,h5km,ML3.9/17*
*AFAD **31** 05:33:18.6,38.70N×38.07E,h7km±1km,ML3.9*

ISC 31 05:33:18.5±1.2,38.70N±0.02×38.09E±0.02,h3km±10km, n64,σ1°00/69,mb3.7/5,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.21**	**330**	P	**Pg**	**05 33 23.0**	**+0.5**
HEKM				S	**Sg**	**05 33 26.2**	**+0.9**
AKCD	**Akcadag**	**0.43**	**198**	P	**Pb**	**05 33 27.6**	**-1.1**
AKCD				S	**Sb**	**05 33 35.3**	**-0.3**
AKCD				IAML		05 33 38.0	
	comp=N,7μm,0.2s						
AKCD				IAML		05 33 41.0	
	comp=E,7μm,0.6s						
ARPR	**Arapgir-MALATY**	**0.44**	**26**	Pg	**Pb**	**05 33 27.8**	**-1.1**
ARPR				Sg	**Sb**	**05 33 35.1**	**-0.8**
MAYA	**Malatya/Merkez**	**0.46**	**145**	P	**Pb**	**05 33 28.1**	**-1.1**
MAYA				S	**Sb**	**05 33 34.9**	**-1.6**
MDIV		**0.62**	**357**	P	**Pg**	**05 33 30.5**	**+0.1**
MDIV				S	**Sg**	**05 33 37.1**	**-1.4**
CUGUR	**Gurin_SVAS**	**0.64**	**272**	P	**Pg**	**05 33 30.9**	**+0.1**
CUGUR				S	**Sg**	**05 33 40.0**	**+0.8**
CUGUR				IAML		05 33 44.0	
	comp=N,9μm,0.6s						
CUGUR				IAML		05 33 44.0	
	comp=E,8μm,0.5s						
ELZG	**Elazig**	**0.73**	**106**	P	**Pb**	**05 33 33.0**	**-0.9**
ESGZ	**Sivrice-Elazig**	**0.81**	**109**	Pg	**Pb**	**05 33 34.2**	**-1.0**
ESGZ				Sg	**Sb**	**05 33 46.4**	**-0.2**
ILIC	**ilic-Erzincan**	**0.84**	**26**	Pg	**Pb**	**05 33 35.4**	**-0.3**
MDYL	**Doganyol-Malat**	**0.84**	**117**	Pg	**Pb**	**05 33 35.5**	**-0.2**
ELBS	**KAHRAMANMARAS**	**0.84**	**244**	P	**Pb**	**05 33 35.2**	**-0.6**
ELZ	**Elazig**	**0.87**	**90**	P	**Pb**	**05 33 35.4**	**-0.9**
AZEY	**Adyaman-Merk**	**0.90**	**172**	P	**Pb**	**05 33 36.4**	**-0.3**
AKCA	**Adyaman/G¶**	**0.96**	**199**	P	**Pb**	**05 33 37.3**	**-0.4**
AKCA				S	**Sn**	**05 33 53.1**	**0.0**
NARI	**Adyaman-Kaht**	**0.97**	**147**	P	**Pn**	**05 33 40.6**	**+1.6**
ESIJ	**Sivrice-Elazig**	**0.99**	**104**	Pg	**Pb**	**05 33 38.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.01**	**108**	Pg	**Pb**	**05 33 37.9**	**-0.7**
CNGT	**ngs**	**1.06**	**117**	P	**Pb**	**05 33 39.3**	**-0.2**
CUAYA	**Sivas-Altinyay**	**1.19**	**299**	P	**Pg**	**05 33 40.2**	**-1.1**
TNCL	**Tunceli-Merkez**	**1.21**	**69**	P	**Pn**	**05 33 43.2**	**+0.9**
ATAB	**Bozova**	**1.24**	**172**	P	**Pn**	**05 33 42.9**	**+0.2**
HANM	**anlurfa/Hi**	**1.28**	**151**	P	**Pn**	**05 33 43.9**	**+0.7**
MDNT	**Maden**	**1.28**	**103**	P	**Pn**	**05 33 45.0**	**+1.6**
SARI	**SarD1z-Kayseri**	**1.34**	**258**	Pn	**Pg**	**05 33 44.9**	**+0.7**
KOVA	**Elazig, Kovanc**	**1.35**	**89**	P	**Pg**	**05 33 44.1**	**-0.1**
SCER	**sogukcermik**	**1.38**	**327**	P	**Pn**	**05 33 44.0**	**-0.8**
URFA	**Urfa**	**1.38**	**155**	Pn	**Pn**	**05 33 44.2**	**-0.5**
GZT	**Gaziantep**	**1.41**	**197**	P	**Pg**	**05 33 46.8**	**+1.4**
KAHM	**Kahramanmaras,**	**1.47**	**217**	P	**Pg**	**05 33 47.4**	**+0.8**
SVSK	**Karacayir**	**1.48**	**325**	Pn	**Pg**	**05 33 47.3**	**+0.4**
SUSE	**Susehri**	**1.51**	**3**	P	**Pg**	**05 33 47.6**	**+0.2**
KMRS	**Kahramanmaras**	**1.52**	**219**	Pn	**Pg**	**05 33 47.7**	**+0.1**
ERZN	**Erzincan**	**1.55**	**55**	Pn	**Pg**	**05 33 48.2**	**+0.1**
EUZM	**Uzumlu**	**1.60**	**51**	P	**Pg**	**05 33 49.5**	**+0.3**
GAZ	**Gaziantep**	**1.68**	**205**	Pn	**Pg**	**05 33 49.9**	**-0.7**
KELT	**Kelkit**	**1.70**	**32**	P	**Pg**	**05 33 50.7**	**-0.5**
ALUC	**Giresun/Alucra**	**1.72**	**18**	P	**Pg**	**05 33 51.5**	**0.0**
SAIM	**ADANA**	**1.74**	**246**	P	**Pg**	**05 33 51.1**	**-0.6**
BNN	**Bunyan**	**1.76**	**276**	Pn	**Pb**	**05 33 51.2**	**-0.3**
DYBB	**Diyarbakir**	**1.77**	**114**	Pn	**Pb**	**05 33 50.9**	**-0.8**
TOKT	**Tokat**	**2.01**	**324**	Pn	**Pb**	**05 33 54.5**	**-1.2**
BNGB	**Bingl**	**2.04**	**81**	Pn	**Pb**	**05 33 55.5**	**-0.7**
YEDI	**Yedisu-Bingol**	**2.05**	**68**	Pn	**Pb**	**05 33 55.3**	**-1.1**
KOZT	**Kozan**	**2.16**	**236**	Pn	**Pb**	**05 33 57.2**	**-1.0**
YOZ	**Yozgat**	**2.35**	**294**	Pn	**Pn**	**05 33 59.1**	**+1.0**
KARO	**Karlova-Bingo**	**2.38**	**74**	Pn	**Pn**	**05 33 59.8**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.50**	**102**	Pn	**Pb**	**05 34 01.7**	**-2.3**
KOZK	**Kozakli-Nevseh**	**2.56**	**282**	Pn	**Pn**	**05 34 02.0**	**+1.0**
KTUT	**Trabzon**	**2.62**	**29**	Pn	**Pn**	**05 34 03.3**	**+1.6**
VRTB	**Varto-Mus**	**2.66**	**79**	Pn	**Pn**	**05 34 03.8**	**+1.4**
BRTR	**Keskin Array B**	**3.61**	**288**	Pn	**Pn**	**05 34 16.1**	**+0.8**
	1.0nm,0.3s,baz=111,slow=16,SNR=30						
BRTR				Lg	Lg	05 35 11.6	
	2.4nm,0.3s,baz=110,slow=25,SNR=5.9						
	3.9nm,0.5s						
GNI	**Garni**	**5.35**	**72**	Pn	**Pn**	**05 34 40.5**	**+1.1**
	1.2nm,0.3s,baz=227,slow=19,SNR=3.4						
GNI				Lg	Lg	05 36 10.2	
	1.2nm,0.3s,baz=240,slow=20,SNR=1.4						
	4.4nm,0.3s						
MMAI	**Mount Meron Ar**	**6.08**	**202**	Pn	**Pn**	**05 34 47.6**	**-1.6**
	4.0nm,0.3s,baz=20,slow=17,SNR=1.1						
MMAI				Lg	Lg	05 36 32.8	
	1.3nm,0.3s,baz=20,slow=26,SNR=1.4						
KBZ	**Khabaz**	**6.19**	**34**	Pn	**Pn**	**05 34 53.8**	**+3.1**
	0.1nm,0.3s,baz=65,slow=8.7,SNR=2.2						
KBZ				Lg	Lg	05 36 28.2	
	0.2nm,0.3s,baz=60,slow=23,SNR=1.4						
KBZ				LR	LR	05 37 53.2	
	comp=Z,30nm,18.8s,baz=259,slow=44						
	0.8nm,0.5s						
ASF	**Jalal Asfar**	**6.59**	**189**	Pn	**Pn**	**05 34 55.7**	**-0.6**
	0.3nm,0.3s,baz=354,slow=10,SNR=5.8						
ASF				Lg	Lg	05 36 42.4	
	0.2nm,0.3s,baz=9.0,slow=19,SNR=1.4						
ASF				LR	LR	05 37 55.5	
	comp=Z,100nm,18.4s,baz=27,slow=43						
	8.1nm,1.1s						
EIL	**Elat**	**9.38**	**197**	LR	LR	05 39 43.5	
	comp=Z,127nm,18.0s,baz=75,slow=41						
MLR	**Muntele Rosu**	**11.28**	**311**	LR	LR	05 40 55.1	
	comp=Z,48nn,19.7s,baz=96,slow=40						
AKASG	**Malin Array Be**	**13.54**	**335**	Pn	**Pn**	**05 36 31.7**	**+0.4**
	0.5nm,0.3s,baz=144,slow=12,SNR=6.0						
	0.2nm,0.2s						
GERES	**GERESS Array B**	**20.24**	**308**	P	Pn	05 37 55.8	-0.8
	1.2nm,0.8s,baz=108,slow=8.7,SNR=10						
	1.2nm,0.8s						
ARTI	**Arti**	**22.23**	**31**	P	**P**	**05 38 15.4**	**-0.7**
	2.5nm,0.3s,baz=232,slow=6.0,SNR=4.5						
	2.5nm,0.3s						
KEST	**Kesra**	**23.04**	**272**	P	**P**	**05 38 25.5**	**+0.5**
	2.2nm,0.9s,baz=67,slow=16,SNR=4.7						
	2.2nm,0.9s						
FINES	**FINESS Array B**	**23.96**	**346**	P	**P**	**05 38 34.6**	**+1.0**
	1.1nm,0.6s,baz=162,slow=9.5,SNR=4.2						
	1.1nm,0.6s						
HFS	**Hagfors**	**26.40**	**332**	P	**P**	**05 38 57.2**	**+1.3**
	3.0nm,0.9s,baz=129,slow=13,SNR=2.4						
	3.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**32.09**	**315**	P	**P**	**05 39 45.7**	**-0.8**
	0.4nm,0.5s,baz=108,slow=9.2,SNR=1.3						
	0.4nm,0.5s						

*AZER **31** 05:51:58.7,41.68N×46.47E,h14km,ml2.1*
*MOS **31** 05:51:58.1,41.82N×46.54E,h18km,MPVA3.3*
*DRS **31** 05:51:59.5,41.89N×46.56E,h6km*
*NORS **31** 05:51:59.9,41.82N×46.43E,h6km,MPVA3.3*

ISC 31 05:51:59.3±0.9,41.80N±0.02×46.52E±0.03,h17km±6km, n22,σ0°84/42,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.18**	**154**	P	**Pg**	**05 52 03.6**	**-0.2**
ZKTA				S	**Sg**	**05 52 07.2**	**+0.4**
TLTR	**Tlyarata**	**0.33**	**338**	*i* Pg	**Pg**	**05 52 06.2**	**-0.2**
TLTR				*e*Sg	**Sg**	**05 52 11.1**	**-0.1**
KMKR	**Kumukh**	**0.55**	**52**	*i* Pg	**Pb**	**05 52 10.5**	**-0.1**
KMKR				*e*Sg	**Sb**	**05 52 18.3**	**+0.1**
GNBR	**Gunib**	**0.68**	**29**	*e*Pg	**Pb**	**05 52 13.0**	**+0.3**
GNBR				*e*Sg	**Sb**	**05 52 22.5**	**+0.6**
XNZR	**Khunzakh**	**0.76**	**11**	*i* Pg	**Pn**	**05 52 14.8**	**-0.6**
XNZR				*e*Sg	**Sn**	**05 52 26.0**	**-0.6**
SEKA	**Sheki**	**0.78**	**139**	P	**Pg**	**05 52 14.8**	**+0.3**
SEKA				S	**Sn**	**05 52 27.0**	**0.0**
ARKR	**Arakani**	**0.88**	**24**	*e*Pg	**Pb**	**05 52 16.6**	**+0.4**
ARKR				*e*Sg	**Sn**	**05 52 28.6**	**-0.8**
BTLR	**Botlikh**	**0.89**	**346**	*e*Pg	**Pb**	**05 52 16.6**	**+0.2**
BTLR				*e*Sg	**Sb**	**05 52 28.7**	**+0.6**
URKR	**Urkarakh**	**0.91**	**66**	*e*Pg	**Pb**	**05 52 16.9**	**+0.1**
URKR				*e*Sg	**Sn**	**05 52 29.7**	**-0.6**
UNCR	**Uncukul**	**0.94**	**13**	*e*Pg	**Pg**	**05 52 16.9**	**-0.6**
UNCR				*e*Sg	**Sb**	**05 52 29.7**	**+0.3**
AKT	**Akhty**	**0.96**	**109**	*e*Pg	**Pb**	**05 52 16.9**	**-0.7**
AKT				*e*Sg	**Sg**	**05 52 29.8**	**-0.8**
KRNR	**Karanay**	**1.07**	**16**	*e*Pg	**Pg**	**05 52 19.6**	**-0.4**
KRNR				*e*Sg	**Sn**	**05 52 33.9**	**-0.3**
QZX	**Qazax, Azerbai**	**1.14**	**230**	P	**Pn**	**05 52 19.6**	**-1.0**
QZX				S	**Sb**	**05 52 35.7**	**+0.6**
GANJ	**Ganja**	**1.16**	**187**	P	**Pn**	**05 52 19.4**	**-1.5**
GANJ				S	**Sb**	**05 52 35.0**	**-0.7**
GDB	**GEDABAY**	**1.22**	**208**	P	**Pn**	**05 52 20.0**	**-1.8**
GDB				S	**Sb**	**05 52 36.3**	**-1.3**
DBC	**Dubki**	**1.24**	**11**	*e*Pg	**Pg**	**05 52 23.6**	**+0.3**
DBC				*e*Sg	**Sg**	**05 52 40.5**	**+0.9**
XNQ	**Khinaliq**	**1.37**	**117**	Pn	**Pb**	**05 52 24.8**	**+0.2**
XNQ				Sn	**Sg**	**05 52 43.7**	**+0.1**
IML	**Ismayilli**	**1.61**	**128**	Sn	**Sb**	**05 52 49.0**	**+0.4**
AGDM	**Agdam**	**1.75**	**165**	Sn	**Sn**	**05 52 51.8**	**+1.0**
PQL	**Pirkuli**	**1.86**	**122**	Pn	**Pn**	**05 52 31.9**	**+1.3**
PQL				Sn	**Sb**	**05 52 56.3**	**+0.3**
LACR	**Lac**	**1.94**	**303**	*e*Pg	**Pb**	**05 52 35.0**	**+0.7**
LACR				*e*Sg	**Sg**	**05 53 00.9**	**-0.9**
GNI	**Garni**	**2.13**	**220**	*e*Pg	**Pn**	**05 52 36.6**	**+2.3**
GNI				*e*Sg	**Sb**	**05 53 05.2**	**+1.5**

*ASRS **31** 06:04:57.0±0.9,54.16N×86.36E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 31 06:04:55.9±3.2,54.21N×86.68E,h0km,mbtmp2.6/2, ML2.5/2,Error ellipse: s-maj=25.3km s-min=16.3km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.13**	**257**	I	I	06 11 10.0	
	baz=73,slow=317,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.13**	**257**	Pg	Pg	06 05 17.2	-0.4
	1.1nm,0.3s,baz=74,slow=16,SNR=7.8						
ZALV				Lg	Lg	06 05 32.7	
	2.7nm,0.3s,baz=77,slow=34,SNR=16						
KURBB	**Kurchatov Arra**	**6.15**	**238**	Pn	Pn	06 06 30.2	+2.3
	baz=54,slow=14,SNR=3.9						
KURBB		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.40**	**222**	*eP*	**Pn**	**06 06 50.8**	**-1.3**
BIPH				*eS*	**Sn**	**06 06 56.9**	**-2.0**
CDOP	**Cateel, Davao**	**0.72**	**195**	*i* P	**Pn**	**06 06 55.3**	**-0.8**
CDOP				*eS*	**Sn**	**06 07 05.2**	**-0.9**
BUTP	**Butuan**	**1.10**	**296**	*eP*	**Pn**	**06 07 02.4**	**+1.0**
BUTP				*eS*	**Sn**	**06 07 20.8**	**+5.3**
BUKP	**Musuan**	**1.66**	**249**	*eP*	**Pn**	**06 07 11.8**	**+2.7**
BUKP				*eS*	**Sn**	**06 07 34.2**	**+5.0**
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 14.2**	**+4.0**
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 13.4**	**+3.2**
	8μm,0.5s,baz=50,slow=3.3,SNR=128						
DAV				S	**Sn**	**06 07 38.3**	**+7.1**
	48μm,0.8s,baz=72,slow=20,SNR=9.5						
DAV				LR	LR	06 08 16.1	
	comp=Z,205μm,18.4s,baz=27,slow=50						
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 13.7**	**+3.5**
DAV				S	**Sn**	**06 07 38.4**	**+7.1**
DAV	**Davao City (W)**	**1.75**	**217**		**Pn**	**06 07 13.2**	**+3.0**
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 14.7**	**+4.5**
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 14.1**	**+3.9**
DAV	**Davao City (W)**	**1.75**	**217**	P	**Pn**	**06 07 13.0**	**+2.8**
DDMP	**Don Marcelino,**	**2.53**	**201**	*eP*	**Pn**	**06 07 22.8**	**+1.9**
DDMP				*eS*	**Sn**	**06 07 53.1**	**+2.5**
TBP	**Tagbilaran**	**2.98**	**294**	*eP*	**Pn**	**06 07 29.8**	**+2.6**
TBP				*eS*	**Sn**	**06 08 09.9**	**+4.2**
LSIP	**Lazi, Siquijor**	**3.03**	**283**	*eP*	**Pn**	**06 07 30.1**	**+2.3**
LSIP				*eS*	**Sn**	**06 08 06.5**	**+3.6**
PLP	**Palo**	**3.12**	**329**	*eP*	**Pn**	**06 07 29.4**	**+0.3**
PLP				*eS*	**Sn**	**06 08 12.0**	**+6.8**
LLP	**Lapu-Lapu**	**3.20**	**305**	*eP*	**Pn**	**06 07 34.1**	**+3.9**
LLP				*eS*	**Sn**	**06 08 13.1**	**+6.1**
PAGZ	**Pagadian**	**3.27**	**259**	*i* P	**Pn**	**06 07 35.0**	**+3.9**
PAGZ				*eS*	**Sn**	**06 08 11.6**	**+2.7**
IPIL	**Ipil**	**4.07**	**261**	*eP*	**Pn**	**06 07 46.0**	**+3.8**
IPIL				*eS*	**Sn**	**06 08 34.4**	**+5.8**
ZCP	**Zamboanga City**	**4.77**	**251**	*eP*	Pn	06 07 57.1	+5.4
MMPH	**Masbate**	**4.85**	**323**	*eP*	**Pn**	**06 07 56.0**	**+3.1**
SGSI	**Sangihe**	**4.89**	**193**	P	**Pn**	**06 07 57.7**	**+4.3**
AUQP	**San Andres**	**6.18**	**321**	*eP*	Pn	06 08 17.2	+6.1
AUQP				*eS*	Sn	06 09 39.5	+19
GAMI	**Galela, Maluku**	**6.70**	**170**	P	**Pn**	**06 08 20.2**	**+1.9**
LQP	**Lukban**	**7.50**	**319**	*eP*	**Pn**	**06 08 32.5**	**+3.2**
TNTI	**Ternate**	**7.70**	**174**	P	**Pn**	**06 08 35.3**	**+3.4**
TNTI	**Ternate**	**7.70**	**174**		**Pn**	**06 08 34.5**	**+2.5**
TNTI	**Ternate**	**7.70**	**174**	P	**Pn**	**06 08 35.7**	**+3.8**
TNTI	**Ternate**	**7.70**	**174**	P	**Pn**	**06 08 35.1**	**+3.2**
	4.9nm10μm752nm,0.8s						
TNTI	**Ternate**	**7.70**	**174**	P	**Pn**	**06 08 33.5**	**+1.6**
PPR	**Puerto Princes**	**7.90**	**280**	*i* P	**Pn**	**06 08 38.9**	**+4.2**
MYLDM	**Lahad Datu**	**8.71**	**248**	P	Pn	06 08 50.7	+4.9
MYLDM	**Lahad Datu**	**8.71**	**248**	S	**Sn**	**06 10 27.4**	**+4.6**
MYLDM	**Lahad Datu**	**8.71**	**248**		Pn	06 08 52.0	+6.1
MYLDM	**Lahad Datu**	**8.71**	**248**	P	Pn	06 08 53.8	+8.0
MYLDM	**Lahad Datu**	**8.71**	**248**	P	Pn	06 08 54.8	+9.0
TOLI2	**Tolitoli**	**9.35**	**219**	S	**Sn**	**06 10 42.4**	**+3.8**
TOLI2	**Tolitoli**	**9.35**	**219**		**Pn**	**06 08 54.7**	**0.0**
PALP	**Palanan**	**9.46**	**335**	*i* P	**Pn**	**06 08 51.7**	**-4.4**
PALP				*i* S	Sn	06 10 31.2	-10
SMPP	**San Manuel, Pa**	**9.58**	**323**	*i* P	**Pn**	**06 09 02.6**	**+4.8**
SMPP				*eS*	Sn	06 10 17.3	-27
LUWI	**Luwuk**	**10.21**	**202**	P	**Pn**	**06 09 11.0**	**+4.6**
LUWI	**Luwuk**	**10.21**	**202**	S	**Sn**	**06 11 03.2**	**+3.6**
LUWI	**Luwuk**	**10.21**	**202**		**Pn**	**06 09 09.3**	**+2.9**
LUWI	**Luwuk**	**10.21**	**202**	P	Pn	06 09 13.3	+6.9
	16μm15μm733nm,1.0s						
LUWI	**Luwuk**	**10.21**	**202**	P	**Pn**	**06 09 07.6**	**+1.2**
SWI	**Sorong**	**10.37**	**153**	P	**Pn**	**06 09 09.4**	**+0.8**
	13μm4μm355nm,0.6s						
SIJI	**Sorong**	**10.38**	**153**	P	**Pn**	**06 09 08.7**	**0.0**
	205nm,0.5s,baz=334,slow=14,SNR=29						
SIJI				S	**Sn**	**06 10 58.4**	**-5.3**
	30nm,0.3s,baz=350,slow=17,SNR=7.7						
SIJI				LR	LR	06 13 26.5	
	comp=Z,8μm,20.5s,baz=308,slow=39						
SIJI	**Sorong**	**10.38**	**153**	P	**Pn**	**06 09 09.4**	**+0.7**
	11μm7μm277nm,0.8s						
SANI	**Sanana**	**10.48**	**184**	P	**Pn**	**06 09 10.7**	**+0.6**
SANI	**Sanana**	**10.48**	**184**	P	**Pn**	**06 09 11.3**	**+1.2**
PACPP	**Pamplona Cagay**	**11.16**	**333**	*eP*	**Pn**	**06 09 21.4**	**+2.0**
PCI	**Palu**	**11.52**	**216**	P	Pn	06 09 30.9	+6.5
	5μm189nm,1.0s						
NLAI	**Namlea**	**11.65**	**178**	P	**Pn**	**06 09 29.3**	**+3.2**
	5μm444nm,1.2s						
KRAI	**Karang Ratu**	**11.86**	**171**	P	**Pn**	**06 09 30.9**	**+2.0**
	8μm4μm180nm,0.7s						
MSAI	**Masohi**	**11.97**	**169**	P	Pn	06 09 39.6	+9.1
AAI	**Ambon**	**12.19**	**173**	P	**P**	**06 09 42.7**	**-2.3**
FAKI	**Fak Fak**	**12.64**	**153**	P	**Pn**	**06 09 40.6**	**+1.0**
FAKI	**Fak Fak**	**12.64**	**153**		**Pn**	**06 09 39.9**	**+0.2**
FAKI	**Fak Fak**	**12.64**	**153**	P	**Pn**	**06 09 42.6**	**+3.0**
FAKI	**Fak Fak**	**12.64**	**153**	P	**Pn**	**06 09 40.8**	**+1.2**
	8μm6μm312nm,0.7s						
FAKI	**Fak Fak**	**12.64**	**153**	P	**Pn**	**06 09 39.3**	**-0.3**
KDI	**Kendari**	**12.99**	**198**	P	**Pn**	**06 09 48.1**	**+3.7**
	9μm5μm136nm,1.0s						
BAKI	**Biak**	**13.48**	**135**	P	**Pn**	**06 09 53.4**	**+2.3**
	19μm9μm605nm,1.5s						
KKSI	**Kolaka, Sulawe**	**13.51**	**202**	P	**P**	**06 10 01.1**	**+1.4**
BKB	**Balikpapan**	**13.70**	**226**	P	**P**	**06 09 59.0**	**-2.8**
BKB	**Balikpapan**	**13.70**	**226**	P	**P**	**06 10 00.6**	**-1.2**
BKB	**Balikpapan**	**13.70**	**226**	P	**Pn**	**06 09 53.2**	**-0.9**
KMPI	**Kaimana, Papua**	**13.98**	**149**	P	**P**	**06 10 02.9**	**-1.9**
SPSI	**Sidrap Palu**	**14.13**	**209**	P	**P**	**06 10 04.0**	**-2.5**
	13μm6μm149nm,1.0s						
BBSI	**Bau Bau**	**14.46**	**196**	P	P	06 10 25.3	+15
KAPI	**Kappang**	**15.06**	**207**	P	**P**	**06 10 16.5**	**-0.4**
KAPI	**Kappang**	**15.06**	**207**	P	**Pn**	**06 10 12.5**	**+0.2**
	36nm,0.8s,baz=30,slow=8.4,SNR=26						
KAPI				LR	LR	06 16 29.1	
	comp=Z,5μm,20.9s,baz=33,slow=39						
KAPI	**Kappang**	**15.06**	**207**	*i* P	**Pn**	**06 10 12.7**	**+0.4**
KAPI	**Kappang**	**15.06**	**207**	P	**Pn**	**06 10 13.4**	**+1.1**
KAPI				S	**Sn**	**06 13 05.5**	**+7.4**
KAPI	**Kappang**	**15.06**	**207**		**Pn**	**06 10 14.3**	**+2.0**
KAPI	**Kappang**	**15.06**	**207**	P	**P**	**06 10 16.0**	**-0.9**
KAPI	**Kappang**	**15.06**	**207**	P	**Pn**	**06 10 12.9**	**+0.6**
TWGBT	**Beinan**	**15.22**	**340**	P	**P**	**06 10 18.4**	**-0.2**
TWG	**Pinlang**	**15.22**	**340**		**Pn**	**06 10 15.6**	**+1.2**
TWG	**Pinlang**	**15.22**	**340**	P	**P**	**06 10 17.6**	**-1.1**
TWG	**Pinlang**	**15.22**	**340**	P	**Pn**	**06 10 15.1**	**+0.7**
YULB	**Yu-li**	**15.68**	**342**	P	**Pn**	**06 10 21.9**	**+1.6**
YULB	**Yu-li**	**15.68**	**342**		**Pn**	**06 10 20.6**	**+0.2**
YULB	**Yu-li**	**15.68**	**342**	P	**Pn**	**06 10 19.1**	**-1.2**
BSSI	**Bau Bau, Buton**	**15.76**	**203**	P	**P**	**06 10 27.2**	**+2.5**
TPUB	**Ta-pu**	**15.82**	**339**	P	**Pn**	**06 10 23.7**	**+1.6**
TPUB	**Ta-pu**	**15.82**	**339**		**Pn**	**06 10 23.3**	**+1.2**
TPUB	**Ta-pu**	**15.82**	**339**	P	**Pn**	**06 10 21.6**	**-0.5**
SMPI	**Sarmi**	**15.92**	**130**	P	**Pn**	**06 10 24.3**	**+0.9**
	15μm753nm,1.6s						
SSLB	**Suanglung**	**16.16**	**341**	P	**P**	**06 10 28.6**	**-0.5**
SSLB	**Suanglung**	**16.16**	**341**		**Pn**	**06 10 26.9**	**+0.4**
SSLB	**Suanglung**	**16.16**	**341**	P	**Pn**	**06 10 27.1**	**+0.6**
SSLB	**Suanglung**	**16.16**	**341**	P	**Pn**	**06 10 25.2**	**-1.2**
YOJ	**Yonaguni jima**	**16.26**	**348**	P	**P**	**06 10 31.5**	**+1.3**
YOJ	**Yonaguni jima**	**16.26**	**348**	P	**P**	**06 10 32.6**	**+2.4**
JMJ	**Miyako jima 2**	**16.29**	**356**	P	**P**	**06 10 33.2**	**+2.7**
NACB	**Ninganchiao**	**16.33**	**343**	P	**Pn**	**06 10 29.7**	**+1.1**
NACB	**Ninganchiao**	**16.33**	**343**		**Pn**	**06 10 29.2**	**+0.6**
NACB	**Ninganchiao**	**16.33**	**343**	P	**Pn**	**06 10 28.0**	**-0.6**
FUSS	**Fushou**	**16.50**	**342**	P	**P**	**06 10 33.2**	**+0.1**
YHNB	**Yeheng**	**16.86**	**343**	P	**P**	**06 10 37.5**	**+0.6**
YHNB	**Yeheng**	**16.86**	**343**		**P**	**06 10 36.5**	**-0.4**
YHNB	**Yeheng**	**16.86**	**343**	P	**Pn**	**06 10 35.9**	**+0.6**
SAUI	**Saumlaki**	**17.01**	**164**	P	**P**	**06 10 41.0**	**+2.5**
SAUI	**Saumlaki**	**17.01**	**164**	P	**P**	**06 10 38.3**	**-0.2**
SAUI				IAmb	IAmb	06 10 42.6	
	comp=Z,518nm,0.6s						
SAUI	**Saumlaki**	**17.01**	**164**	P	**P**	**06 10 39.6**	**+1.1**
SAUI	**Saumlaki**	**17.01**	**164**	P	**P**	**06 10 39.4**	**+0.9**
GENI	**Genyem**	**17.42**	**129**	P	**P**	**06 10 43.5**	**+0.5**
GENI	**Genyem**	**17.42**	**129**	P	**P**	**06 10 43.9**	**+0.8**
	comp=Z,7μmcomp=Z,256nm,0.9s						
GENI	**Genyem**	**17.42**	**129**	P	**P**	**06 10 43.5**	**+0.5**
MMRI	**Maumere**	**17.56**	**195**	P	**P**	**06 10 45.4**	**+0.8**
MMRI	**Maumere**	**17.56**	**195**	P	**P**	**06 10 45.7**	**+1.1**
MMRI	**Maumere**	**17.56**	**195**	P	**P**	**06 10 44.8**	**+0.2**
MMRI	**Maumere**	**17.56**	**195**	P	**P**	**06 10 49.3**	**+4.7**
	comp=Z,9μmcomp=Z,5μmcomp=Z,411nm,1.1s						
MMRI	**Maumere**	**17.56**	**195**	P	**P**	**06 10 45.7**	**+1.1**
KNMB	**Chin-men Tao**	**17.73**	**335**	P	**Pn**	**06 10 46.2**	**+0.1**
JAY	**Jayapura**	**17.79**	**127**	P	**Pn**	**06 10 46.2**	**-0.7**
	comp=Z,52nm,0.8s,baz=290,slow=9.5,SNR=9.5						
JAY				S	**S**	**06 14 08.7**	**-0.9**
	comp=Z,11nm,1.1s,baz=346,slow=18,SNR=1.1						
JAY				LR	LR	06 16 12.6	
	comp=Z,11μm,21.9s,baz=308,slow=32						
JAY	**Jayapura**	**17.79**	**127**	P	**Pn**	**06 10 46.6**	**-0.3**
JAY	**Jayapura**	**17.79**	**127**	P	**P**	**06 10 49.6**	**+2.4**
JMZ	**Minamidaito 2**	**17.79**	**14**	P	**Pn**	**06 10 46.0**	**-0.7**
QZH2	**Quanzhou**	**18.08**	**336**	P	**P**	**06 10 48.0**	**-2.2**
QZH2				S	**Sn**	**06 14 07.8**	**-3.3**
QZH2				pmax	pmax		
	comp=Z,2μm,5.9s						
QZH2				L	L		
	comp=Z,5μm,17.2s						
QZH2				L	L		
	comp=Z,4μm,19.9s						
QZH2				L	L		
	comp=Z,7μm,21.6s						
DLV	**Lat**	**18.18**	**282**	P	**Pn**	**06 10 54.0**	**+2.2**
DLV	**Lat**	**18.18**	**282**	P	**Pn**	**06 10 55.7**	**+3.9**
DLV	**Lat**	**18.18**	**282**	P	**Pn**	**06 10 52.5**	**+0.7**
HKPS	**Hong Kong Po S**	**18.23**	**320**	P	**Pn**	**06 10 53.0**	**+0.8**
SOEI	**Soe**	**18.27**	**187**	P	**Pn**	**06 10 56.1**	**+3.3**
SOEI	**Soe**	**18.27**	**187**	P	**Pn**	**06 10 54.3**	**+1.5**
SOEI	**Soe**	**18.27**	**187**	P	**Pn**	**06 10 56.1**	**+3.3**
	comp=Z,15μmcomp=Z,9μmcomp=Z,661nm,0.8s						
SOEI	**Soe**	**18.27**	**187**	P	**P**	**06 10 52.6**	**+0.1**
JOW	**Kunigami**	**18.32**	**5**	P	**Pn**	**06 10 56.9**	**+3.7**
JOW	**Kunigami**	**18.32**	**5**	LR	LR	06 17 14.1	
	comp=Z,10μm,21.2s,baz=182,slow=35						
JOW	**Kunigami**	**18.32**	**5**	P	**Pn**	**06 10 53.8**	**+0.6**
JOW				IAmb	IAmb	06 10 59.8	
	comp=Z,957nm,1.5s						
JOW	**Kunigami**	**18.32**	**5**	P	**Pn**	**06 10 56.8**	**+3.6**
JOW	**Kunigami**	**18.32**	**5**	P	**P**	**06 10 52.0**	**-0.9**
GUMO	**Guam**	**18.61**	**73**	P	**P**	**06 10 54.6**	**-1.5**
	comp=Z,160nm,0.9s,baz=261,slow=5.0,SNR=5.3						
GUMO				S	**S**	**06 14 27.8**	**+1.7**
	comp=Z,17nm,0.5s,baz=253,slow=19,SNR=0.8						
GUMO				LR	LR	06 16 37.7	
	comp=Z,7μm,20.6s,baz=208,slow=32						
GUMO	**Guam**	**18.61**	**73**	P	**P**	**06 10 55.9**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,648nm,1.4s						
GUMO	**Guam**	**18.61**	**73**	P	**P**	**06 10 55.9**	**-0.2**
GUMO				IAmb	IAmb	06 11 00.7	
	comp=Z,648nm,1.4s						
GUMO	**Guam**	**18.61**	**73**	P	**P**	**06 10 55.6**	**-0.5**
BATI	**Baumata**	**18.80**	**189**	P	**P**	**06 10 58.6**	**+0.3**
	comp=Z,204nm,0.4s,baz=73,slow=3.2,SNR=17						
BATI				S	**S**	**06 14 32.2**	**+2.2**
	comp=Z,135nm,0.7s,baz=68,slow=19,SNR=4.1						
BATI				LR	LR	06 19 30.9	
	comp=Z,5μm,20.9s,baz=356,slow=41						
BATI	**Baumata**	**18.80**	**189**	P	**P**	**06 10 57.7**	**-0.6**
PLAI	**Plampang**	**19.32**	**207**	P	**Pn**	**06 11 07.2**	**+1.8**
PLAI	**Plampang**	**19.32**	**207**	P	**Pn**	**06 11 06.7**	**+1.3**
	comp=Z,11μmcomp=Z,326nm,0.8s						
PLAI	**Plampang**	**19.32**	**207**	P	**Pn**	**06 11 05.3**	**-0.1**
QIZ	**Qiongzhong**	**19.36**	**305**	P	**Pn**	**06 11 05.8**	**0.0**
QIZ	**Qiongzhong**	**19.36**	**305**	P	**Pn**	**06 11 05.8**	**0.0**
QIZ				pmax	pmax		
	comp=Z,220nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,2μm,9.5s						
QIZ				L	L		
	comp=Z,6μm,14.9s						
QIZ				L	L		
	comp=Z,7μm,16.3s						
QIZ				L	L		
	comp=Z,11μm,20.0s						
WBSI	**Waikabubak, Su**	**19.39**	**202**	P	**Pn**	**06 11 08.4**	**+2.2**
	comp=Z,9μmcomp=Z,200nm,1.1s						
BASI	**Baing, Sumba**	**19.53**	**198**	P	**Pn**	**06 11 09.5**	**+1.7**
	comp=Z,4μmcomp=Z,310nm,0.7s						
GZH2	**Guangzhou**	**19.54**	**322**	P	**P**	**06 11 05.5**	**-0.8**
GZH2				pmax	pmax		
	comp=Z,220nm,0.8s						
GZH2				L	L		
	comp=Z,7μm,18.2s						
GZH2				L	L		
	comp=Z,9μm,18.0s						
GZH2				L	L		
	comp=Z,18μm,19.8s						
TWSI	**Taliwang, Sumb**	**19.67**	**210**	P	**Pn**	**06 11 10.4**	**+0.9**
	comp=Z,14μmcomp=Z,5μmcomp=Z,242nm,1.2s						
DPSS	**Saipan**	**19.91**	**69**	P	**P**	**06 11 10.6**	**+0.2**
DPSS	**Saipan**	**19.91**	**69**	P	**Pn**	**06 11 13.8**	**+1.4**
KMMI	**Kalianget**	**19.93**	**220**	P	**Pn**	**06 11 13.7**	**+1.1**
	comp=Z,12μmcomp=Z,7μmcomp=Z,331nm,1.1s						
SRBI	**Singaraja**	**20.01**	**215**	P	Pn	06 11 14.7	+1.2
	comp=Z,11μmcomp=Z,5μmcomp=Z,163nm,0.8s						
KHKI	**Kahang-Kahang**	**20.02**	**214**	P	Pn	06 11 16.9	+3.3
JAGI	**Jajag, Banyuwa**	**20.93**	**217**	P	Pn	06 11 23.4	-1.1
JAGI	**Jajag, Banyuwa**	**20.93**	**217**	P	**P**	**06 11 22.2**	**+0.8**
JAGI	**Jajag, Banyuwa**	**20.93**	**217**	P	Pn	06 11 25.7	+1.2
JAGI	**Jajag, Banyuwa**	**20.93**	**217**	P	Pn	06 11 26.1	+1.6
JAGI	**Jajag, Banyuwa**	**20.93**	**217**	P	**P**	**06 11 23.0**	**+1.5**
DRS	**Darwin Rock St**	**21.21**	**168**	P	**P**	**06 11 24.9**	**+0.5**
MTN	**Manton Dam**	**21.66**	**168**	P	**P**	**06 11 29.7**	**+0.5**
	comp=Z,181nm,0.6s,comp=Z,0.0nm						
MTN	**Manton Dam**	**21.66**	**168**	P	**P**	**06 11 29.5**	**+0.3**
MTN				IAmb	IAmb	06 11 34.4	
	comp=Z,120nm,0.6s						
MTN	**Manton Dam**	**21.66**	**168**	P	**P**	**06 11 29.7**	**+0.5**
KDU	**Kakadu**	**21.82**	**164**	P	**P**	**06 11 30.9**	**-0.1**
	comp=Z,149nm,0.9s						
SJI	**Sawahan**	**21.88**	**223**	P	**P**	**06 11 33.9**	**+2.1**
	comp=Z,10μmcomp=Z,393nm,1.6s						
SNJI	**Sawahan-Nganju**	**21.92**	**223**	P	**P**	**06 11 34.2**	**+1.9**
	comp=Z,11μmcomp=Z,4μmcomp=Z,226nm,1.5s						
TPI	**Tanjungpandan**	**21.97**	**240**	P	**P**	**06 11 34.5**	**+1.9**
	comp=Z,12μmcomp=Z,4μmcomp=Z,267nm,1.0s						
SMRI	**Semarang**	**22.32**	**227**	P	**P**	**06 11 38.2**	**+1.7**
SMRI				IAmb	IAmb	06 11 41.5	
	comp=Z,358nm,1.2s						
SMRI				IAMs_20	IAMs_20	06 20 39.5	
	comp=Z,9μm,20.0s						
WOJI	**Wonogiri, Jawa**	**22.53**	**224**	P	**P**	**06 11 40.6**	**+1.9**
	comp=Z,148nm,1.1s						
UGM	**Wanagama**	**22.86**	**225**	P	**P**	**06 11 44.1**	**+1.9**
PPBI	**Pangkal Pinang**	**23.00**	**244**	P	**P**	**06 11 47.8**	**+4.2**
SSE	**Sheshan**	**23.07**	**348**	P	**P**	**06 11 43.8**	**-0.2**
SSE				S	**S**	**06 15 52.0**	**+0.2**
SSE				pmax	pmax		
	comp=Z,80nm,1.4s						
SSE				pmax	pmax		
	comp=Z,620nm,5.8s						
SSE				L	L		
	comp=Z,1μm,17.5s						
SSE				L	L		
	comp=Z,790nm,17.9s						
JSU	**Suzuyama**	**23.18**	**8**	P	**P**	**06 11 45.2**	**-0.1**
JSU				IAmb	IAmb	06 11 48.6	
	comp=Z,193nm,1.0s						
JSU	**Suzuyama**	**23.18**	**8**	P	**P**	**06 11 46.5**	**+1.2**
JSU	**Suzuyama**	**23.18**	**8**	P	**P**	**06 11 46.2**	**+1.0**
CNSH	**ChangSha**	**23.47**	**328**	P	**P**	**06 11 43.3**	**-4.8**
CNSH				S	**S**	**06 15 52.0**	**-6.6**
CNSH				pmax	pmax		
	comp=Z,460nm,6.9s						
CNSH				L	L		
	comp=Z,5μm,19.9s						
CNSH				L	L		
	comp=Z,3μm,20.3s						
CNSH				L	L		
	comp=Z,4μm,18.8s						
MYKOM	**Kota Tinggi**	**23.63**	**255**	P	**P**	**06 11 51.7**	**+2.0**
MYKOM	**Kota Tinggi**	**23.63**	**255**	P	**P**	**06 11 50.7**	**+1.0**
MYKOM				IAmb	IAmb	06 11 54.6	
	comp=Z,177nm,1.0s						
MYKOM	**Kota Tinggi**	**23.63**	**255**	P	**P**	**06 11 51.7**	**+2.0**
JCJ	**Chichijima**	**23.66**	**37**	P	**P**	**06 11 51.9**	**+2.0**
JCJ	**Chichijima**	**23.66**	**37**	LR	LR	06 19 01.2	
	comp=Z,6μm,21.9s,baz=237,slow=31						
JCJ	**Chichijima**	**23.66**	**37**	P	**P**	**06 11 48.9**	**-1.0**
JCJ	**Chichijima**	**23.66**	**37**	P	**P**	**06 11 49.5**	**-0.4**
JCJ	**Chichijima**	**23.66**	**37**	P	**P**	**06 11 49.5**	**-0.4**
BTDF	**Bukit Timah Da**	**23.83**	**254**	P	**P**	**06 11 53.9**	**+2.3**
KNRA	**Kununurra**	**24.10**	**175**	P	**P**	**06 11 54.1**	**+0.2**
	comp=Z,160nm,1.4s,comp=Z,0.0nm						
KNRA	**Kununurra**	**24.10**	**175**	P	**P**	**06 11 54.2**	**+0.3**
KNRA				IAmb	IAmb	06 11 58.2	
	comp=Z,803nm,1.9s						
NJ2	**Nanjing**	**24.54**	**344**	⇑P	**P**	**06 11 57.5**	**-0.4**
NJ2				pP	**pP**	**06 12 09.8**	**+0.6**
NJ2				S	**S**	**06 16 16.5**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,180nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,2μm,5.2s						
NJ2				L	L		
	comp=Z,6μm,19.0s						
NJ2				L	L		
	comp=Z,7μm,17.5s						
NJ2				L	L		
	comp=Z,9μm,18.6s						
BBJI	**Bungbulang**	**24.67**	**231**	P	**P**	**06 12 01.2**	**+1.8**
BBJI	**Bungbulang**	**24.67**	**231**	P	**P**	**06 12 00.9**	**+1.6**
BBJI				IAmb	IAmb	06 12 12.2	
	comp=Z,181nm,1.4s						
WHN	**Wuhan**	**24.77**	**334**	⇓P	**P**	**06 11 59.5**	**-0.5**
WHN				sP	**sP**	**06 12 15.5**	**-0.6**
WHN				pmax	pmax		
	comp=Z,75nm,0.8s						
WHN				pmax	pmax		
	comp=Z,3μm,14.8s						
WHN				L	L		
	comp=Z,18μm,23.5s						
WHN				L	L		
	comp=Z,10μm,14.5s						
WHN				L	L		
	comp=Z,22μm,19.7s						
JNU	**Nakatsue**	**24.83**	**9**	LR	LR	06 21 31.5	
	comp=Z,3μm,21.2s,baz=173,slow=36						
SLVN	**Son La**	**25.36**	**303**	P	**P**	**06 12 05.9**	**+0.4**
SLVN				IAMs_20	IAMs_20	06 23 28.3	
	comp=Z,10μm,19.0s						
KULM	**Kulim**	**25.98**	**265**	P	**P**	**06 12 13.1**	**+1.9**
KULM	**Kulim**	**25.98**	**265**	IAMs_20	IAMs_20	06 23 20.2	
	comp=Z,7μm,20.0s						
KULM	**Kulim**	**25.98**	**265**	P	**P**	**06 12 13.3**	**+2.1**
JMN	**Monobe**	**26.00**	**14**	P	**P**	**06 12 13.2**	**+2.0**
JMN	**Monobe**	**26.00**	**14**	P	**P**	**06 12 11.9**	**+0.7**
JMN				IAmb	IAmb	06 12 23.6	
	comp=Z,363nm,1.1s						
JTU	**Tsushima**	**26.04**	**5**	P	**P**	**06 12 14.4**	**+2.9**
GYA	**Guiyang**	**26.05**	**316**	⇑P	**P**	**06 12 13.8**	**+2.0**
GYA				S	**S**	**06 16 40.5**	**+0.4**
GYA				pmax	pmax		
	comp=Z,41nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.43**	**182**	P	**P**	**06 12 16.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**26.43**	**182**	P	**P**	**06 12 15.2**	**0.0**
	comp=Z,93nm,1.4s						
FITZ	**Fitzroy Crossi**	**26.43**	**182**	P	**P**	**06 12 15.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**26.43**	**182**	P	**P**	**06 12 16.1**	**+1.0**
BKNI	**Bangkinang**	**26.75**	**254**	P	**P**	**06 12 19.1**	**+0.9**
BKNI				IAmb	IAmb	06 12 23.1	
	comp=Z,248nm,1.1s						
BKNI	**Bangkinang**	**26.75**	**254**	P	**P**	**06 12 19.7**	**+1.6**
MNAI	**Manna**	**26.83**	**242**	P	**P**	**06 12 21.0**	**+2.1**
ENH	**Enshi**	**26.97**	**326**	P	**P**	**06 12 19.0**	**-1.0**
PMG	**Port Moresby**	**27.09**	**131**	P	**P**	**06 12 21.4**	**+0.2**
PMG	**Port Moresby**	**27.09**	**131**	*ce*P	**P**	**06 12 19.8**	**-1.4**
PMG				pmax	pmax		
	comp=Z,60nm,0.6s						
PMG	**Port Moresby**	**27.09**	**131**	P	**P**	**06 12 20.5**	**-0.6**
PMG				IAmb	IAmb	06 12 23.4	
	comp=Z,75nm,0.6s						
PMG	**Port Moresby**	**27.09**	**131**	P

WB0	**Warramunga Arr**	**29.09**	**165**	P	**P**	**06 12 37.9**	**-1.1**
WC1	**Warramunga Arr**	**29.23**	**165**	P	**P**	**06 12 39.6**	**-0.6**
WRAB	**Tennant Creek**	**29.24**	**165**	P	**P**	**06 12 39.2**	**-1.1**
WRAB	**Tennant Creek**	**29.24**	**165**	*ce*P	**P**	**06 12 40.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,69nm,1.3s						
WRAB	**Tennant Creek**	**29.24**	**165**	P	**P**	**06 12 39.7**	**-0.6**
WRAB	**Tennant Creek**	**29.24**	**165**	P	**P**	**06 12 39.9**	**-0.4**
WRA	**Warramunga Arr**	**29.25**	**165**	P	**P**	**06 12 39.7**	**-0.7**
	comp=Z,18nm,0.6s,baz=344,slow=8.9,SNR=78						
WRA				PcP	**PcP**	**06 15 47.0**	**+0.2**
	comp=Z,7.7nm,0.7s,baz=337,slow=2.4,SNR=3.2						
WRA				S	**S**	**06 17 24.1**	**-6.2**
	comp=Z,19nm,1.0s,baz=345,slow=16,SNR=6.8						
WRA				ScP	**ScP**	**06 19 23.6**	**-1.4**
	comp=Z,13nm,0.7s,baz=341,slow=3.5,SNR=9.3						
WRA				P3KPbc		06 44 43.3	
	comp=Z,0.8nm,0.6s,baz=163,slow=3.9,SNR=8.9						
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**29.25**	**165**	*i* P	**P**	**06 12 39.2**	**-1.2**
WRA				pmax	pmax		
	comp=Z,20nm,0.6s						
WRA	**Warramunga Arr**	**29.25**	**165**	P	**P**	**06 12 39.5**	**-0.9**
WR8	**Warramunga Arr**	**29.30**	**165**	P	**P**	**06 12 40.5**	**-0.3**
WR8				IAmb	IAmb	06 13 20.9	
	comp=Z,79nm,0.9s						
HJU	**Haeju**	**29.44**	**359**	P	**P**	**06 12 42.7**	**+0.8**
HJU				S	**S**	**06 17 33.3**	**+0.3**
HJU				AmB			
	comp=Z,305nm,2.5s						
HJU				AMS	AMS		
	comp=Z,2µm,12.9s						
PZH	**PanZhiHua**	**29.64**	**310**	P	**P**	**06 12 47.8**	**+3.9**
PZH				pP	**sP**	**06 12 59.5**	**-1.3**
PZH				PP	**PnPn**	**06 13 43.5**	**+3.2**
PZH				S	S	06 17 24.0	-13
PZH				pmax	pmax		
	comp=Z,60nm,0.9s						
PZH				pmax	pmax		
	comp=Z,590nm,8.9s						
PZH				L	L		
	comp=Z,3µm,24.3s						
PZH				L	L		
	comp=Z,4µm,21.0s						
PZH				L	L		
	comp=Z,6µm,24.5s						
LHMI	**Lhok Sumawe**	**29.64**	**266**	P	**P**	**06 12 46.5**	**+2.6**
LHMI	**Lhok Sumawe**	**29.64**	**266**	P	**P**	**06 12 45.2**	**+1.3**
GSI	**Gunungsitoli**	**29.79**	**258**	P	**P**	**06 12 48.6**	**+3.3**
GSI	**Gunungsitoli**	**29.79**	**258**	P	**P**	**06 12 45.9**	**+0.6**
GSI				IAmb	IAmb	06 12 48.9	
	comp=Z,291nm,1.2s						
GSI	**Gunungsitoli**	**29.79**	**258**	P	**P**	**06 12 46.1**	**+0.8**
MAJO	**Matsushiro**	**29.86**	**19**	*i* P	**P**	**06 12 44.8**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,21nm,0.9s						
MAJO	**Matsushiro**	**29.86**	**19**	P	**P**	**06 12 45.0**	**-0.6**
MAJO	**Matsushiro**	**29.86**	**19**	P	**P**	**06 12 45.3**	**-0.3**
MJAR	**Matsushiro Arr**	**29.86**	**19**	P	**P**	**06 12 43.9**	**-1.7**
	comp=Z,7.7nm,0.9s,baz=201,slow=7.2,SNR=16						
MJAR				S	**S**	**06 17 34.1**	**-5.5**
	comp=Z,0.5nm,0.3s,baz=179,slow=13,SNR=1.0						
MJAR				ScP	**ScP**	**06 19 26.5**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=181,slow=3.3,SNR=5.6						
MJAR				LR	LR	06 24 42.7	
	comp=Z,3µm,20.3s,baz=194,slow=36						
	comp=Z,7.7nm,0.9s						
MJAR	**Matsushiro Arr**	**29.86**	**19**	P	**P**	**06 12 45.0**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,62nm,1.6s						
MJAR	**Matsushiro Arr**	**29.86**	**19**	P	**P**	**06 12 45.0**	**-0.6**
MJB9	**Matsu-Tunnel**	**29.86**	**19**	P	**P**	**06 12 45.7**	**+0.1**
XAN	**Xi'an**	**30.21**	**330**	⇓P	**P**	**06 12 47.0**	**-1.8**
XAN				S	**S**	**06 17 39.8**	**-5.5**
XAN				pmax	pmax		
	comp=Z,55nm,1.1s						
XAN				pmax	pmax		
	comp=Z,460nm,5.9s						
XAN				L	L		
	comp=Z,4µm,17.5s						
XAN				L	L		
	comp=Z,5µm,18.9s						
XAN				L	L		
	comp=Z,7µm,17.9s						
MBWA	**Marble Bar**	**30.23**	**193**	P	**P**	**06 12 50.1**	**+1.1**
MBWA	**Marble Bar**	**30.23**	**193**	P	**P**	**06 12 49.4**	**+0.5**
	comp=Z,88nm,1.4s						
MBWA	**Marble Bar**	**30.23**	**193**	P	**P**	**06 12 49.6**	**+0.6**
MBWA	**Marble Bar**	**30.23**	**193**	P	**P**	**06 12 49.2**	**+0.3**
MBWA	**Marble Bar**	**30.23**	**193**	P	**P**	**06 12 49.5**	**+0.5**
PYAG	**Pyongyang**	**30.45**	**359**	P	**P**	**06 12 51.7**	**+1.0**
PYAG				S	**S**	**06 17 49.3**	**+0.6**
PYAG				AmB			
	comp=Z,270nm,1.5s						
PYAG				AMS	AMS		
	comp=Z,1µm,14.2s						
DL2	**Dalian**	**30.62**	**352**	P	**P**	**06 12 53.0**	**+0.7**
DL2				pP	**pP**	**06 13 01.8**	**-1.4**
DL2				sP	**sP**	**06 13 09.3**	**+1.2**
DL2				PcP	**PcP**	**06 15 50.8**	**+0.9**
DL2				S	**S**	**06 17 51.3**	**-0.2**
DL2				pmax	pmax		
	comp=Z,280nm,0.9s						
DL2				pmax	pmax		
	comp=Z,850nm,4.7s						
DL2				L	L		
	comp=Z,4µm,17.1s						
DL2				L	L		
	comp=Z,1µm,14.5s						
DL2				L	L		
	comp=Z,5µm,18.7s						
HNS	**HongShan**	**30.75**	**341**	⇑P	**P**	**06 12 52.8**	**-0.6**
HNS				PcP	**PcP**	**06 15 51.5**	**+1.2**
HNS				S	**S**	**06 17 53.8**	**+0.3**
HNS				pmax	pmax		
	comp=Z,57nm,1.0s						
HNS				L	L		
	comp=Z,4µm,19.1s						
HNS				L	L		
	comp=Z,4µm,17.5s						
HNS				L	L		
	comp=Z,5µm,19.1s						
CD2	**Chengdu**	**30.88**	**319**	P	**P**	**06 12 53.8**	**-0.9**
CD2				S	**S**	**06 17 57.5**	**+1.7**
CD2				pmax	pmax		
	comp=Z,110nm,0.7s						
CD2				pmax	pmax		
	comp=Z,420nm,4.3s						
CD2				L	L		
	comp=Z,8µm,18.4s						
CD2				L	L		
	comp=Z,12µm,18.4s						
CD2				L	L		
	comp=Z,13µm,16.5s						
HHU	**Hamhung**	**31.32**	**1**	P	**P**	**06 12 59.0**	**+0.6**
HHU				S	**S**	**06 18 03.0**	**+0.6**
HHU				AmB			
	comp=Z,855nm,1.7s						
HHU				AMS	AMS		
	comp=Z,3µm,14.4s						
TNCH	**TengChong**	**31.44**	**305**	⇑P	**P**	**06 13 00.3**	**+0.4**
TNCH				pP	sP	06 13 14.5	-2.2
TNCH				sP	pP	06 13 20.3	+8.8
TNCH				PP	**PP**	**06 14 08.0**	**-3.5**
TNCH				S	**S**	**06 18 04.5**	**-0.5**
TNCH				pmax	pmax		
	comp=Z,160nm,1.1s						
TNCH				pmax	pmax		
	comp=Z,640nm,2.8s						
TNCH				L	L		
	comp=Z,2µm,17.6s						
TNCH				L	L		
	comp=Z,2µm,15.3s						
TNCH				L	L		
	comp=Z,6µm,19.2s						
PATS	**Pohnpei**	**31.44**	**91**	P	**P**	**06 12 59.9**	**+0.1**
	comp=Z,308nm,1.6s						
PATS	**Pohnpei**	**31.44**	**91**	P	**P**	**06 13 00.2**	**+0.3**
PATS	**Pohnpei**	**31.44**	**91**	P	**P**	**06 13 00.7**	**+0.9**
SUJ	**Sinuiju**	**31.55**	**357**	P	**P**	**06 13 01.9**	**+1.5**
QIS	**Mount Isa**	**31.55**	**156**	P	**P**	**06 13 01.0**	**+0.3**
QIS	**Mount Isa**	**31.55**	**156**	P	**P**	**06 13 00.7**	**+0.1**
	comp=Z,245nm,0.9s						
QIS	**Mount Isa**	**31.55**	**156**	P	**P**	**06 13 00.8**	**+0.1**
NPW	**Naypyitaw**	**31.57**	**294**	P	**P**	**06 13 02.1**	**+1.3**
MTSU	**Mount Surprise**	**31.69**	**147**	P	**P**	**06 13 02.7**	**+0.7**
	comp=Z,49nm,0.8s						
MTSU	**Mount Surprise**	**31.69**	**147**	P	**P**	**06 13 03.1**	**+1.1**
TIY	**Taiyuan**	**31.81**	**338**	P	**P**	**06 13 02.5**	**-0.4**
TIY				S	**S**	**06 18 08.0**	**-2.3**
TIY				pmax	pmax		
	comp=Z,420nm,12.1s						
TIY				L	L		
	comp=Z,3µm,19.9s						
TIY				L	L		
	comp=Z,1µm,16.5s						
TIY				L	L		
	comp=Z,2µm,22.0s						
AS15	**Alice Springs**	**32.71**	**168**	P	**P**	**06 13 10.5**	**-0.3**
	comp=Z,55nm,0.9s						
AS31	**Alice Springs**	**32.73**	**168**	P	**P**	**06 13 10.7**	**-0.4**
AS31	**Alice Springs**	**32.73**	**168**	P	**P**	**06 13 10.5**	**-0.6**
ASAR	**Alice Springs**	**32.73**	**168**	P	**P**	**06 13 10.2**	**-0.8**
	comp=Z,12nm,0.3s,baz=345,slow=9.2,SNR=158						
ASAR				PcP	**PcP**	**06 15 56.1**	**+0.1**
	comp=Z,6.9nm,0.6s,baz=346,slow=2.6,SNR=2.5						
ASAR				S	**S**	**06 18 20.0**	**-4.8**
	comp=Z,11nm,1.0s,baz=354,slow=25,SNR=5.3						
ASAR				ScP	**ScP**	**06 19 34.7**	**-1.8**
	comp=Z,20nm,0.7s,baz=344,slow=3.3,SNR=18						
ASAR				LR	LR	06 28 44.3	
	comp=Z,2µm,18.7s,baz=344,slow=40						
ASAR				P3KPbc		06 44 26.3	
	comp=Z,0.5nm,0.6s,baz=159,slow=4.0,SNR=5.4						
	comp=Z,12nm,0.3s						
ASAR	**Alice Springs**	**32.73**	**168**	P	**P**	**06 13 11.0**	**-0.1**
ASAR	**Alice Springs**	**32.73**	**168**	P	**P**	**06 13 10.9**	**-0.1**
AS01	**Alice Springs**	**32.74**	**168**	P	**P**	**06 13 10.6**	**-0.5**
BJI2	**Beijing**	**32.76**	**345**	P	**P**	**06 13 10.0**	**-1.1**
BJI2				pP	**pP**	**06 13 21.3**	**-1.2**
BJI2				sP	**sP**	**06 13 27.3**	**-0.3**
BJI2				PcP	**PcP**	**06 15 56.8**	**+1.1**
BJI2				S	**S**	**06 18 23.0**	**-1.9**
BJI2				pmax	pmax		
	comp=Z,60nm,1.2s						
BJI2				pmax	pmax		
	comp=Z,290nm,5.6s						
BJI2				L	L		
	comp=Z,800nm,19.4s						
BJI2				L	L		
	comp=Z,590nm,21.7s						
BJI2				L	L		
	comp=Z,1µm,19.6s						
BJT	**Baijiatuan**	**32.76**	**345**	P	**P**	**06 13 10.9**	**-0.2**
BJT	**Baijiatuan**	**32.76**	**345**	P	**P**	**06 13 10.0**	**-1.1**
BJT				pmax	pmax		
	comp=Z,129nm,1.1s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJT	**Baijiatuan**	**32.76**	**345**		**P**	**06 13 10.0**	**-1.1**
BJT				IAmb	IAmb	06 13 12.0	
	comp=Z,129nm,1.1s						
BJT	**Baijiatuan**	**32.76**	**345**	P	**P**	**06 13 10.6**	**-0.5**
BJT	**Baijiatuan**	**32.76**	**345**	P	**P**	**06 13 11.0**	**-0.1**
BJT				PcP	**PcP**	**06 15 53.8**	**-2.0**
GIRL	**Giralia**	**33.23**	**201**	P	**P**	**06 13 17.1**	**+1.8**
	comp=Z,71nm,1.4s						
SNY	**Shenyang**	**33.32**	**356**	⇑P	**P**	**06 13 16.0**	**+0.1**
SNY				S	**S**	**06 18 34.5**	**+1.0**
SNY				pmax	pmax		
	comp=Z,380nm,0.9s						
SNY				pmax	pmax		
	comp=Z,820nm,3.5s						
SNY				L	L		
	comp=Z,2µm,17.7s						
SNY				L	L		
	comp=Z,1µm,14.7s						
SNY				L	L		
	comp=Z,4µm,19.6s						
WRKA	**Warakurna**	**33.36**	**177**	P	**P**	**06 13 15.2**	**-1.3**
	comp=Z,41nm,1.1s						
PBA	**Port Blair**	**33.50**	**278**	P	**P**	**06 13 18.3**	**+0.4**
PSTR	**Posyet**	**34.23**	**5**	*i* P	**P**	**06 13 25.0**	**+1.2**
CTA	**Charters Tower**	**34.34**	**146**	P	**P**	**06 13 26.7**	**+1.6**
CTA	**Charters Tower**	**34.34**	**146**	LR	LR	06 30 18.3	
	comp=Z,2µm,18.0s,baz=324,slow=41						
CTAO	**Charters Tower**	**34.34**	**146**	P	**P**	**06 13 26.3**	**+1.2**
CTAO	**Charters Tower**	**34.34**	**146**	P	**P**	**06 13 26.0**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,316nm,1.9s						
CTAO				MLR	MLR		
	comp=Z,3µm,20.0s						
CTAO	**Charters Tower**	**34.34**	**146**	P	**P**	**06 13 26.0**	**+0.9**
CTAO				IAmb	IAmb	06 13 29.3	
	comp=Z,316nm,1.9s						
CTAO	**Charters Tower**	**34.34**	**146**	P	**P**	**06 13 25.7**	**+0.6**
CTAO				pP	**pP**	**06 13 35.2**	**-0.7**
LZDM	**Lanzhou Array**	**34.43**	**326**	P	**P**	**06 13 24.4**	**-1.7**
	comp=Z,4µm,1.1s,baz=155,slow=11,SNR=77						
LZDM				PcP	**PcP**	**06 16 01.8**	**+0.8**
	comp=Z,9.1nm,0.7s,baz=145,slow=3.5,SNR=2.2						
LZDM				S	**S**	**06 18 51.5**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=136,slow=27,SNR=0.5						
LZDM				LR	LR	06 28 24.2	
	comp=Z,5µm,19.1s,baz=140,slow=38						
LZH	**Lanzhou**	**34.44**	**326**	*e*P	**P**	**06 13 25.8**	**-0.2**
LZH				pP	pP	06 13 37.0	-0.7
LZH				sP	sP	06 13 42.5	-0.4
LZH				PcP	**PcP**	**06 16 01.8**	**+1.0**
LZH				S	**S**	**06 18 52.3**	**+0.9**
LZH				pmax	pmax		
	comp=Z,84nm,1.3s						
LZH				pmax	pmax		
	comp=Z,390nm,4.8s						
LZH				L	L		
	comp=Z,5µm,15.8s						
LZH				L	L		
	comp=Z,6µm,15.1s						
LZH				L	L		
	comp=Z,8µm,14.1s						
MORE	**Moreh**	**34.62**	**301**	P	**P**	**06 13 27.1**	**-0.4**
MORE				IAmb	IAmb	06 13 28.4	
	comp=Z,80nm,0.8s						
MORE				IAMs_20	IAMs_20	06 29 28.9	
	comp=Z,5µm,18.0s						
JTM	**Tenmabayashi**	**34.64**	**19**	P	**P**	**06 13 28.0**	**+0.6**
VLA	**Vladivostok**	**34.81**	**7**	*i* P	**P**	**06 13 30.2**	**+1.4**
VLA				pmax	pmax		
	comp=Z,247nm,1.4s						
HHC	**Hu-ho-hao-te**	**34.90**	**340**	*e*P	**P**	**06 13 29.8**	**-0.1**
HHC				pP	pP	06 13 41.5	+0.3
HHC				S	**S**	**06 18 56.8**	**-1.5**
HHC				SS	**SnSn**	**06 21 14.5**	**-1.4**
HHC				pmax	pmax		
	comp=Z,50nm,1.0s						
HHC				pmax	pmax		
	comp=Z,380nm,6.4s						
HHC				L	L		
	comp=Z,2µm,16.9s						
HHC				L	L		
	comp=Z,2µm,16.7s						
HHC				L	L		
	comp=Z,3µm,16.9s						
IMP	**Imphal**	**35.14**	**302**	*e*P	**P**	**06 13 31.2**	**-0.9**
IMP				*i* x	x	06 24 55.2	
CN2	**Changchun**	**35.20**	**359**	P	**P**	**06 13 32.5**	**+0.3**
CN2				sP	sP	06 13 54.3	+6.1
CN2				PcP	**PcP**	**06 16 03.5**	**+0.9**
CN2				S	**S**	**06 19 01.5**	**-1.0**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,600nm,4.0s						
CN2				L	L		
	comp=Z,2µm,17.0s						
CN2				L	L		
	comp=Z,1µm,17.0s						
CN2				L	L		
	comp=Z,2µm,19.0s						
MOKO	**MOKOCHONG**	**35.25**	**304**	*e*P	**P**	**06 13 32.2**	**-0.9**
KOHI	**KOHIMA**	**35.35**	**303**	*e*P	**P**	**06 13 32.8**	**-1.2**
KOHI				*i* x	x	06 24 40.7	
BTO2	**Baotou**	**35.41**	**338**	*e*P	**P**	**06 13 31.8**	**-2.5**
BTO2				sP	**sP**	**06 13 54.0**	**+3.3**
BTO2				PP	**PnPn**	**06 14 52.8**	**-1.1**
BTO2				S	**S**	**06 19 01.0**	**-5.2**
BTO2				pmax	pmax		
	comp=Z,25nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,860nm,9.7s						
BTO2				L	L		
	comp=Z,6µm,19.9s						
BTO2				L	L		
	comp=Z,4µm,18.4s						
BTO2				L	L		
	comp=Z,6µm,22.9s						
MEEK	**Meekatharra**	**35.77**	**192**	P	**P**	**06 13 37.7**	**+0.4**
MEEK	**Meekatharra**	**35.77**	**192**	P	**P**	**06 13 37.7**	**+0.4**
	comp=Z,282nm,1.2s						
MEEK	**Meekatharra**	**35.77**	**192**	P	**P**	**06 13 38.1**	**+0.8**
USA0B	**Ussuriysk Arra**	**35.89**	**7**	*i* P	**P**	**06 13 39.3**	**+1.2**
USA0B	**Ussuriysk Arra**	**35.89**	**7**	P	**P**	**06 13 39.5**	**+1.4**
USA0B				IAmb	IAmb	06 13 41.0	
	comp=Z,147nm,0.9s						
USRK	**Ussuriysk Ar.**	**35.89**	**7**	P	**P**	**06 13 38.4**	**+0.3**
	comp=Z,76nm,0.8s,baz=188,slow=7.3,SNR=115						
USRK				PcP	**PcP**	**06 16 04.7**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=194,slow=1.2,SNR=1.5						
USRK				S	**S**	**06 19 14.3**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=172,slow=29,SNR=1.9						
USRK				LR	LR	06 27 11.0	
	comp=Z,2µm,21.9s,baz=178,slow=34						
	comp=Z,76nm,0.8s						
USRK	**Ussuriysk Ar.**	**35.89**	**7**	P	**P**	**06 13 38.2**	**+0.1**
MDJ	**Mudanjiang**	**36.09**	**4**	P	**P**	**06 13 40.7**	**+0.9**
MDJ				IAMs_20	IAMs_20	06 31 06.0	
	comp=Z,3µm,19.0s						
MDJ	**Mudanjiang**	**36.09**	**4**	P	**P**	**06 13 40.5**	**+0.7**
MDJ				S	**S**	**06 19 16.3**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,280nm,1.8s						
MDJ				L	L		
	comp=Z,3µm,19.3s						
MDJ				L	L		
	comp=Z,2µm,19.9s						
MDJ				L	L		
	comp=Z,4µm,19.1s						
MDJ	**Mudanjiang**	**36.09**	**4**	P	**P**	**06 13 41.3**	**+1.4**
MDJ	**Mudanjiang**	**36.09**	**4**	P	**P**	**06 13 42.1**	**+2.3**
SILR	**SILCHAR**	**36.09**	**301**	*e*P	**P**	**06 13 40.6**	**+0.4**
BRDH	**Bariadhala**	**36.42**	**297**	P	**P**	**06 13 43.5**	**+0.6**
	comp=Z,1µm,0.9s,baz=83,slow=7.7,SNR=62						
BRDH				PcP	**PcP**	**06 16 08.0**	**+1.4**
	comp=Z,56nm,0.5s,baz=77,slow=19,SNR=1.8						
BRDH				S	**S**	**06 19 23.8**	**+2.1**
	comp=Z,70nm,0.3s,baz=66,slow=20,SNR=9.4						
BRDH				LR	LR	06 30 34.6	
	comp=Z,4µm,18.1s,baz=152,slow=39						
ERM	**Erimo**	**36.45**	**21**	P	**P**	**06 13 45.9**	**+3.0**
ERM	**Erimo**	**36.45**	**21**	*ce*P	**P**	**06 13 45.7**	**+2.8**
ERM				pmax	pmax		
	comp=Z,72nm,1.7s						
ERM	**Erimo**	**36.45**	**21**	P	**P**	**06 13 43.9**	**+1.0**
ERM	**Erimo**	**36.45**	**21**	IAMs_20	IAMs_20	06 26 35.8	
	comp=Z,4µm,22.0s						
JEM	**Erimo**	**36.45**	**21**	P	**P**	**06 13 45.9**	**+3.0**
XLT	**XiLinHaoTe**	**36.46**	**347**	*e*P	**P**	**06 13 42.3**	**-0.8**
XLT				pP	pP	06 13 55.5	+0.8
XLT				sP	sP	06 14 04.8	+5.1
XLT				PcP	**PcP**	**06 16 07.0**	**+0.5**
XLT				S	**S**	**06 19 19.0**	**-3.0**
XLT				sS	sS	06 19 44.5	+3.1
XLT				ScS	**ScS**	**06 23 50.5**	**-5.5**
XLT				pmax	pmax		
	comp=Z,160nm,0.9s						
XLT				pmax	pmax		
	comp=Z,450nm,10.0s						
XLT				L	L		
	comp=Z,230nm,18.3s						
XLT				L	L		
	comp=Z,1µm,16.6s						
XLT				L	L		
	comp=Z,4µm,18.3s						
BELO	**BELONIA**	**36.76**	**298**	⇑*i* x	x	06 13 47.8	
BELO				*i* x	x	06 29 55.6	
TATA	**Tatamba Isabel**	**37.06**	**116**	P	**P**	**06 13 49.3**	**+0.8**
BNX	**BinXian**	**37.13**	**1**	⇑P	**P**	**06 13 49.0**	**+0.4**
BNX				pP	**sP**	**06 14 04.5**	**-0.3**
BNX				sP	pwP	06 14 11.5	+8.0
BNX				PP	**PnPn**	**06 15 16.0**	**+1.4**
BNX				S	**S**	**06 19 31.3**	**-0.6**
BNX				pmax	pmax		
	comp=Z,79nm,0.9s						
BNX				pmax	pmax		
	comp=Z,340nm,5.9s						
BNX				L	L		
	comp=Z,3µm,17.3s						
BNX				L	L		
	comp=Z,2µm,16.7s						
BNX				L	L		
	comp=Z,5µm,19.2s						
SHL	**Shillong**	**37.15**	**302**	P	**P**	**06 13 49.4**	**0.0**
SHL				pmax	pmax		
	comp=Z,544nm,0.7s						
SHL	**Shillong**	**37.15**	**302**	P	**P**	**06 13 49.2**	**-0.2**
	SNR=25						
SHL	**Shillong**	**37.15**	**302**	P	**P**	**06 13 49.4**	**0.0**
SHL	**Shillong**	**37.15**	**302**	*e*P	**P**	**06 13 49.5**	**+0.1**
SHL				IAmb	IAmb	06 13 52.1	
	comp=Z,319nm,1.1s						
GUWA	**GUWAHATI**	**37.54**	**302**	*e*P	**P**	**06 13 52.6**	**+0.2**
HNR	**Honiara**	**37.66**	**117**	LR	LR	06 27 50.2	
	comp=Z,140nm,21.1s,baz=22,slow=34						
TAWA	**Tawang**	**37.93**	**305**	*e*P	**P**	**06 13 57.2**	**+1.1**
ASAJ	**Asahikawa**	**38.13**	**19**	LR	LR	06 29 42.6	
	comp=Z,3µm,19.5s,baz=210,slow=36						
ASAJ	**Asahikawa**	**38.13**	**19**	P	**P**	**06 13 58.3**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,209nm,1.3s						
JKA	**Kamikawa-asahi**	**38.13**	**19**	P	**P**	**06 13 58.3**	**+1.1**
JKA				IAmb	IAmb	06 14 02.3	
	comp=Z,209nm,1.3s						
INKA	**Innaminka**	**38.52**	**160**	P	**P**	**06 14 00.7**	**+0.1**
MORW	**Morawa**	**38.70**	**195**	P	**P**	**06 14 02.4**	**+0.3**
MORW	**Morawa**	**38.70**	**195**	P	**P**	**06 14 02.7**	**+0.6**
	comp=Z,157nm,1.2s						
MORW	**Morawa**	**38.70**	**195**	P	**P**	**06 14 02.4**	**+0.3**
MORW				IAmb	IAmb	06 14 05.1	
	comp=Z,146nm,1.1s						
MORW	**Morawa**	**38.70**	**195**	P	**P**	**06 14 03.0**	**+0.9**
MORW				pP	**pP**	**06 14 12.4**	**-1.7**
QLP	**Quilpie**	**38.82**	**154**	P	**P**	**06 14 03.6**	**+0.4**
QLP	**Quilpie**	**38.82**	**154**	P	**P**	**06 14 02.7**	**-0.5**
	comp=Z,143nm,1.7s						
QLP	**Quilpie**	**38.82**	**154**	P	**P**	**06 14 02.9**	**-0.2**
QLP				pP	**pP**	**06 14 13.1**	**-1.6**
DHUB	**DHUBRI**	**38.90**	**301**	*e*P	**P**	**06 14 04.4**	**+0.5**
FORT	**Forrest**	**39.06**	**178**	P	**P**	**06 14 05.4**	**+0.3**
	comp=Z,142nm,0.7s						
FORT	**Forrest**	**39.06**	**178**	P	**P**	**06 14 05.2**	**+0.1**
FORT				IAmb	IAmb	06 14 07.0	
	comp=Z,79nm,0.7s						
GTA2	**Gaotai**	**39.13**	**326**	P	**P**	**06 14 05.0**	**-0.8**
GTA2				pP	pP	06 14 18.0	+0.3
GTA2				PP	**PP**	**06 15 37.0**	**+0.8**
GTA2				PcP	**PcP**	**06 16 16.0**	**+1.2**
GTA2				S	**S**	**06 19 58.0**	**-4.7**
GTA2				SS	**SS**	**06 22 47.0**	**-10**
GTA2				ScS	**ScS**	**06 24 10.0**	**-1.5**
GTA2				pmax	pmax		
	comp=Z,150nm,0.9s						
GTA2				pmax	pmax		
	comp=Z,580nm,10.5s						
GTA2				L	L		
	comp=Z,3µm,19.7s						
GTA2				L	L		
	comp=Z,3µm,21.6s						
GTA2				L	L		
	comp=Z,5µm,21.6s						
YUK	**Yuzh-Kuril'sk**	**39.18**	**22**	*d i* P	**P**	**06 14 08.0**	**+2.0**
YUK				*i*		06 15 38.6	
YUK				*i* S	**S**	**06 20 03.6**	**+0.6**
YUK				SS	**SS**	**06 22 45.1**	**-12**
YUK				*e*SSS	SSS	06 23 24.1	
YUK				pmax	pmax		
	comp=N,100nm,1.1s						
YUK				pmax	pmax		
	comp=E,145nm,1.1s						
YUK

comp=Z,3µm,20.0s
LSA Lhasa 39.37 307 P **P** **06 14 09.1 +0.8**
LSA Lhasa 39.37 307 P **P** **06 14 08.9 +0.6**
LSA pmax pmax
comp=Z,279nm,1.5s
LSA MLR MLR
comp=Z,3µm,19.0s
LSA Lhasa 39.37 307 **P** **06 14 08.9 +0.6**
LSA IAmb IAmb 06 14 11.3
comp=Z,279nm,1.5s
LSA Lhasa 39.37 307⇓ *i*P **P** **06 14 05.5 -2.8**
LSA S **S** **06 20 01.5 -5.7**
LSA pmax pmax
comp=Z,110nm,1.2s
LSA L L
comp=Z,570nm,21.9s
LSA L L
comp=Z,2µm,18.3s
LSA L L
comp=Z,3µm,20.5s
LSA Lhasa 39.37 307 P **P** **06 14 09.6 +1.2**
LSA Lhasa 39.37 307 P **P** **06 14 10.2 +1.9**
GOMU GeErMu 39.99 318 P **P** **06 14 13.0 -0.3**
GOMU S **S** **06 20 10.0 -6.2**
GOMU pmax pmax
comp=Z,72nm,0.9s
GOMU L L
comp=Z,5µm,16.0s
GOMU L L
comp=Z,5µm,15.7s
GOMU L L
comp=Z,9µm,15.3s
BLDU Ballidu 40.02 193 P **P** **06 14 14.2 +1.1**
BLDU Ballidu 40.02 193 P **P** **06 14 14.1 +0.9**
H11S3 WAKE ISLAND Hy 40.12 71 T T 06 57 29.0
baz=262,slow=74,SNR=2017
H11S1 WAKE ISLAND Hy 40.13 71 T T 06 57 30.5
baz=262,slow=74,SNR=893
H11S2 WAKE ISLAND Hy 40.14 71 T T 06 57 21.6
baz=262,slow=74,SNR=693
H11N1 WAKE ISLAND Hy 40.51 70 T T 06 57 59.6
baz=265,slow=74,SNR=1082
H11N2 WAKE ISLAND Hy 40.52 70 T T 06 58 06.3
baz=265,slow=74,SNR=501
H11N3 WAKE ISLAND Hy 40.53 70 T T 06 58 04.2
baz=265,slow=74,SNR=817
YSS Yuzhno-Sakhali 40.74 17 *oe*P **P** **06 14 20.4 +1.6**
YSS *e**PP **pwP** **06 14 36.9 +1.8**
YSS *e* 06 15 54.0
YSS *e*S **S** **06 20 26.9 +0.7**
YSS *e*SS **SS** **06 23 30.6 +2.4**
YSS pmax pmax
comp=Z,400nm,4.6s
YSS pmax pmax
comp=N,300nm,4.1s
YSS pmax pmax
comp=E,200nm,5.1s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS pmax pmax
comp=Z,300nm,4.4s
YSS pmax pmax
comp=N,300nm,3.2s
YSS smax smax
comp=E,400nm,3.3s
YSS Yuzhno-Sakhali 40.74 17 P **P** **06 14 18.8 0.0**
YSS IAmb IAmb 06 14 22.0
comp=Z,141nm,1.4s
YSS Yuzhno-Sakhali 40.74 17 P **P** **06 14 20.2 +1.4**
KLBR Kellerberrin 40.74 192 P **P** **06 14 19.9 +0.8**
KLBR Kellerberrin 40.74 192 P **P** **06 14 19.8 +0.7**
KUR Kuril'sk 40.96 23 P **P** **06 14 20.5 -0.2**
KUR *e*PPP PPP 06 16 19.1
KUR *e*S **S** **06 20 28.7 -0.8**
KUR *e*SS **SS** **06 23 31.8 -0.9**
KUR *e*SSS SSS 06 23 59.6
KUR pmax pmax
comp=Z,1µm,11.2s
KUR MLR MLR
comp=Z,1µm,17.0s
KUR MLR MLR
comp=E,1µm,19.0s
KUR MLR MLR
comp=N,700nm,15.0s
HIA Hailar 41.06 353 P **P** **06 14 21.2 -0.3**
HIA pmax pmax
comp=Z,71nm,0.9s
HIA MLR MLR
comp=Z,3µm,18.0s
HIA Hailar 41.06 353 **P** **06 14 21.2 -0.3**
HIA Hailar 41.06 353 IAMs_20 IAMs_20 06 34 18.4
comp=Z,3µm,18.0s
HIA Hailar 41.06 353 P **P** **06 14 21.7 +0.2**
HIA Hailar 41.06 353 P **P** **06 14 22.1 +0.6**
HIA pP **pP** **06 14 30.4 -2.3**
HIA PcP **PcP** **06 16 21.9 +1.3**
BWNR Bhubaneshwar 41.11 291⇑ *i*P **P** **06 14 23.6 +1.3**
BWNR IAmb IAmb 06 14 25.7
comp=Z,98nm,0.8s
EIDS Eidsvold 41.22 145 P **P** **06 14 23.7 +0.6**
EIDS Eidsvold 41.22 145 P **P** **06 14 22.9 -0.3**
EIDS Eidsvold 41.22 145 P **P** **06 14 23.4 +0.3**
EIDS pP **pP** **06 14 32.9 -1.1**
HILR Hailar Array B 41.34 353 P **P** **06 14 24.0 +0.1**
comp=Z,121nm,0.9s,baz=166,slow=11,SNR=146
HILR PcP **PcP** **06 16 22.2 +0.5**
comp=Z,46nm,0.6s,baz=154,slow=4.8,SNR=17
HILR ScP **ScP** **06 20 09.0 +0.8**
comp=Z,0.9nm,0.4s,baz=163,slow=5.6,SNR=4.3
HILR LR LR 06 34 19.8
comp=Z,2µm,18.6s,baz=105,slow=40
comp=Z,121nm,0.9s
MUN Mundaring 41.45 193 P **P** **06 14 25.7 +0.9**
HEH HeiHe 41.64 1 *e*P **P** **06 14 26.8 +0.6**
HEH PcP **PcP** **06 16 23.0 +0.5**
HEH S **S** **06 20 38.3 -1.3**
HEH pmax pmax
comp=Z,110nm,0.8s
HEH pmax pmax
comp=Z,1µm,6.1s
HEH L L
comp=Z,3µm,18.5s
HEH L L
comp=Z,1µm,16.1s
HEH L L
comp=Z,4µm,17.8s
BOK Bokaro 41.81 296⇑ *i*P **P** **06 14 29.6 +1.6**
BOK IAmb IAmb 06 14 31.8
comp=Z,641nm,1.5s
BOK *i* x x 06 16 12.2
BOK *ex* x 06 20 58.2
BBOO Buckleboo 42.03 168 P **P** **06 14 30.0 +0.3**
BBOO Buckleboo 42.03 168 P **P** **06 14 29.9 +0.2**
BBOO IAmb IAmb 06 14 31.3
comp=Z,193nm,0.7s
BBOO Buckleboo 42.03 168 P **P** **06 14 30.2 +0.5**
NWAO Narrogin (SRO) 42.14 192 P **P** **06 14 31.8 +1.3**
NWAO Narrogin (SRO) 42.14 192 LR LR 06 35 44.5
comp=Z,1µm,18.6s,baz=10,slow=41
NWAO Narrogin (SRO) 42.14 192 P **P** **06 14 31.3 +0.8**
NWAO pmax pmax
comp=Z,334nm,1.0s
NWAO Narrogin (SRO) 42.14 192 P **P** **06 14 31.7 +1.3**
NWAO Narrogin (SRO) 42.14 192 P **P** **06 14 31.3 +0.8**
UGL Uglegorsk 42.49 15 *e*P **P** **06 14 35.4 +2.3**
UGL *e*S **S** **06 20 52.6 +0.5**
UGL pmax pmax
comp=Z,200nm,1.1s
UGL smax smax
comp=E,2µm,4.0s
UGL MLR MLR
comp=E,2µm,19.0s
UGL MLR MLR
comp=N,2µm,20.0s
UGL MLR MLR
comp=Z,3µm,18.0s
STKA Stephens Creek 42.61 161 P **P** **06 14 34.3 0.0**
STKA Stephens Creek 42.61 161 P **P** **06 14 34.3 0.0**
comp=Z,37nm,0.4s,baz=337,slow=9.4,SNR=104
STKA ScP **ScP** **06 20 12.6 -0.8**
comp=Z,7.0nm,0.7s,baz=335,slow=8.6,SNR=4.2
STKA S **S** **06 20 52.5 -1.7**
comp=Z,4.8nm,0.9s,baz=344,slow=18,SNR=1.4
STKA LR LR 06 35 54.2
comp=Z,1µm,21.0s,baz=341,slow=41
comp=Z,37nm,0.4s
STKA Stephens Creek 42.61 161 *i*P **P** **06 14 34.5 +0.2**
STKA Stephens Creek 42.61 161 P **P** **06 14 34.7 +0.4**
ULN Ulaanbaatar 42.61 341 *ce*P **P** **06 14 33.8 -0.6**
ULN pmax pmax
comp=Z,83nm,1.0s
ULN Ulaanbaatar 42.61 341 P **P** **06 14 33.9 -0.5**
ULN S **S** **06 20 52.4 -2.0**
ULN Ulaanbaatar 42.61 341 P **P** **06 14 34.3 -0.1**
ULN Ulaanbaatar 42.61 341 IAMs_20 IAMs_20 06 33 48.4
comp=Z,3µm,20.0s
ULN Ulaanbaatar 42.61 341 P **P** **06 14 34.1 -0.4**
ULN Ulaanbaatar 42.61 341 P **P** **06 14 34.0 -0.4**
ULN PcP **PcP** **06 16 26.2 +0.2**
GAYA Gaya 42.65 297 *e*P **P** **06 14 35.6 +0.8**
SONM Songino Array 42.81 340 P **P** **06 14 34.9 -1.0**
comp=Z,22nm,0.9s,baz=154,slow=8.6,SNR=54
SONM PcP **PcP** **06 16 25.5 -1.1**
comp=Z,19nm,0.8s,baz=158,slow=3.1,SNR=6.8
SONM ScP **ScP** **06 20 14.7 +0.5**
comp=Z,3.3nm,0.7s,baz=156,slow=2.9,SNR=4.5
SONM LR LR 06 34 16.8
comp=Z,3µm,20.4s,baz=154,slow=39
comp=Z,22nm,0.9s
SONM Songino Array 42.81 340 P **P** **06 14 35.2 -0.8**
SONM pmax pmax
comp=Z,127nm,1.5s
SONM Songino Array 42.81 340 P **P** **06 14 35.2 -0.8**
GRNR Gornyy 42.93 9⇑ *i*P **P** **06 14 38.9 +2.2**
GRNR pmax pmax
comp=Z,50nm,1.3s
RAGD RAYAGADA 43.14 289⇑ *i*P **P** **06 14 40.5 +1.5**
RAGD IAmb IAmb 06 14 43.2
comp=Z,86nm,1.1s
STMR SITAMARHI 43.15 300 *e*P **P** **06 14 40.0 +1.1**
HTT Hallett 43.29 165 P **P** **06 14 40.9 +1.0**
CMSA Cobar Meteorol 43.78 156 P **P** **06 14 44.6 +0.8**
CMSA Cobar Meteorol 43.78 156 P **P** **06 14 44.3 +0.5**
TYV Tymovskoe 44.29 15 *e*P **P** **06 14 50.5 +2.9**
TYV *e*S **S** **06 21 23.6 +5.3**
TYV pmax pmax
comp=Z,800nm,4.3s
TYV pmax pmax
comp=Z,56nm,1.3s
TYV smax smax
comp=N,800nm,4.6s
TYV smax smax
comp=E,700nm,4.6s
TYV smax smax
comp=N,20nm,1.8s
TYV smax smax
comp=E,22nm,1.8s
GKPR Gorakhpur 44.72 300 *e*P **P** **06 14 52.3 +0.8**
H01W3 Cape Leeuwin H 44.72 195 P **P** **06 14 51.8 +0.8**
H01W1 Cape Leeuwin H 44.72 195 P **P** **06 14 51.8 +0.8**
SNR=5.3
VAR Varanasi 44.73 297 *e*P **P** **06 14 52.0 +0.4**
H01W2 Cape Leeuwin H 44.73 195 P **P** **06 14 51.9 +0.8**
BLSP Bilaspur 44.79 293 *e*P **P** **06 14 52.6 +0.5**
ZEA Zeya 45.13 1 *e*P **P** **06 14 55.0 +0.7**
ZEA *e* 06 16 34.7
ZEA *e*S **S** **06 21 26.6 -3.9**
ZEA *e*SS **ScS** **06 24 47.2 -0.2**
ZEA pmax pmax
comp=N,100nm,6.3s
ZEA pmax pmax
comp=Z,300nm,6.2s
ZEA pmax pmax
comp=N,30nm,1.3s
ZEA pmax pmax
comp=Z,50nm,1.7s
ZEA pmax pmax
comp=N,200nm,6.1s
ZEA pmax pmax
comp=Z,400nm,6.2s
ZEA smax smax
comp=N,200nm,8.0s
PALK Pallekele 45.49 272 P **P** **06 14 57.2 -0.6**
comp=N,41nm,0.9s,baz=83,slow=8.0,SNR=12
PALK LR LR 06 34 04.6
comp=N,2µm,21.9s,baz=92,slow=36
comp=N,41nm,0.9s
PALK Pallekele 45.49 272 *i*P **P** **06 14 58.8 +1.0**
SNR=6.5
PALK Pallekele 45.49 272 *i*P **P** **06 14 58.3 +0.5**
PALK pmax pmax
comp=Z,141nm,1.5s
PALK Pallekele 45.49 272 P **P** **06 14 58.4 +0.5**
PALK Pallekele 45.49 272 P **P** **06 14 58.6 +0.7**
PALK IAmb IAmb 06 15 00.3
comp=Z,140nm,1.4s
PALK Pallekele 45.49 272 P **P** **06 14 59.2 +1.4**
VJD Vijayawada 45.51 285 *e*P P 06 15 04.6 +6.7
ARMA Armidale 45.52 149 P **P** **06 14 59.0 +1.1**
ARMA Armidale 45.52 149 P **P** **06 14 58.8 +0.9**
ARMA pP **pP** **06 15 09.1 -0.5**
MALK Mahakanadarawa 45.56 273 P **P** **06 14 58.9 +0.5**
HALK Hakmana 45.62 270 P **P** **06 14 58.8 0.0**
ALBI Allahabad 45.78 297 *e*P **P** **06 14 59.6 -0.3**
NKL Nikolayevsk 45.98 12 *e*P **P** **06 14 59.8 -1.2**
NKL *e*S **S** **06 21 42.8 +0.1**
NKL pmax pmax
comp=N,213nm,1.2s
NKL pmax pmax
comp=E,196nm,1.2s
NKL pmax pmax
comp=Z,657nm,1.6s
NKL smax smax
comp=E,391nm,3.0s
NKL smax smax
comp=N,361nm,2.9s
NKL MLR MLR
comp=E,4µm,12.0s
NKL MLR MLR
comp=N,5µm,18.0s
NKL MLR MLR
comp=Z,8µm,21.0s
TARA Tarawa 46.63 96 IAMs_20 IAMs_20 06 31 10.3
comp=Z,3µm,21.0s
LKN LUCKNOW 46.93 299 *e*P **P** **06 15 09.1 +0.2**
TLY Talaya 47.03 341 P **P** **06 15 09.1 -0.3**
comp=Z,66nm,0.8s,baz=141,slow=13,SNR=58
TLY PcP **PcP** **06 16 41.2 +0.3**
comp=Z,16nm,0.9s,baz=162,slow=6.4,SNR=1.9
TLY S **S** **06 21 59.2 +1.3**
comp=Z,5.2nm,0.7s,baz=163,slow=14,SNR=3.1
TLY LR LR 06 36 52.8
comp=Z,2µm,20.3s,baz=141,slow=39
comp=Z,66nm,0.8s
TLY Talaya 47.03 341 *ce*P **P** **06 15 09.0 -0.3**
TLY pmax pmax
comp=Z,179nm,1.7s
TLY Talaya 47.03 341 P **P** **06 15 08.7 -0.6**
TLY S **S** **06 21 56.1 -1.8**
TLY Talaya 47.03 341 P **P** **06 15 09.0 -0.3**
TLY IAmb IAmb 06 15 10.5
comp=Z,69nm,0.7s
TLY Talaya 47.03 341 P **P** **06 15 09.2 -0.1**
TLY Talaya 47.03 341 P **P** **06 15 09.2 -0.1**
BNDA BANDA 47.12 297 *e*P **P** **06 15 10.6 +0.2**
IRK Irkutsk 47.30 341 *e*P **P** **06 15 11.0 -0.5**
IRK *e*S **S** **06 22 07.9 +6.1**
IRK pmax pmax
comp=Z,113nm,1.8s
NGP Nagpur 47.51 291 *e*P **P** **06 15 13.7 +0.1**
NGP *i* x x 06 15 24.3
HYB Hyderabad 47.57 286 *e*P **P** **06 15 14.3 +0.2**
HYB Hyderabad 47.57 286 *e*P **P** **06 15 13.8 -0.3**
HYB *e*PcP **PcP** **06 16 42.8 -0.8**
HYB *e*S **S** **06 22 08.2 +1.5**
MGBR Mount Gambier 47.78 165 P **P** **06 15 16.1 +0.8**
MGBR IAmb IAmb 06 15 21.1
comp=Z,132nm,1.7s
MOY Mondy 47.93 339 *e*P **P** **06 15 16.2 -0.2**
MOY pmax pmax
comp=Z,96nm,1.7s
PTH Pithoragarh 48.25 302⇑ *i*P **P** **06 15 18.7 -0.7**
CAN Canberra 48.42 155 P **P** **06 15 21.9 +1.6**
CAN Canberra 48.42 155 P **P** **06 15 21.2 +0.9**
CAN pmax pmax
comp=Z,47nm,1.0s
CAN Canberra 48.42 155 P **P** **06 15 21.2 +0.9**
CAN IAmb IAmb 06 15 23.2
comp=Z,47nm,1.0s
CAN Canberra 48.42 155 P **P** **06 15 21.4 +1.1**
KNGR Kungurtug, Tuv 48.42 336 *i*P **P** **06 15 19.5 -0.8**
KNGR pmax pmax
comp=Z,41nm,1.0s
SKR Severo-Kuril's 48.64 25 *e*P **P** **06 15 23.0 +1.3**
SKR *e* 06 17 17.7
SKR *e*S **S** **06 22 27.5 +6.9**
SKR *e*SS **ScS** **06 25 16.2 +5.8**
SKR pmax pmax
comp=Z,600nm,7.5s
WMQ Urumqi 48.84 323⇑ P **P** **06 15 23.5 -0.1**
WMQ pP pP 06 15 36.8 +1.3
WMQ PcP **PcP** **06 16 48.5 +0.8**
WMQ ScP **ScP** **06 20 38.3 -1.0**
WMQ S **S** **06 22 23.3 -0.7**
WMQ ScS **ScS** **06 25 10.3 -2.1**
WMQ pmax pmax
comp=Z,57nm,1.1s
WMQ pmax pmax
comp=Z,550nm,7.7s
WMQ L L
comp=Z,5µm,21.3s
WMQ L L
comp=Z,4µm,19.5s
WMQ L L
comp=Z,3µm,20.3s
WMQ Urumqi 48.84 323 P **P** **06 15 24.2 +0.6**
WMQ PcP **PcP** **06 16 48.6 +0.9**
JOSI Joshimath 49.05 303 *e*P **P** **06 15 25.7 +0.1**
BHPL Bhopal 49.31 293⇑ *i*P **P** **06 15 27.2 -0.2**
BHPL IAmb IAmb 06 15 29.5
comp=Z,52nm,0.5s
BHPL *i* x x 06 15 40.2
NOUC Port Laguerre 49.36 129 P **P** **06 15 28.5 +0.8**
DZM Mont Dzumac 49.46 129 LR LR 06 36 01.3
comp=Z,888nm,21.4s,baz=336,slow=36
AGRA Agra 49.59 299⇑ *i*P **P** **06 15 28.6 -0.9**
AGRA *i* x x 06 17 23.4
GUNA GUNA 49.62 295⇑ *i*P **P** **06 15 29.6 -0.1**
YATNC Mamie plateau, 49.80 128 P **P** **06 15 33.2 +2.2**
OUENC Ouen Island, N 49.95 129 P **P** **06 15 33.7 +1.5**
OUENC Ouen Island, N 49.95 129 P **P** **06 15 33.1 +0.9**
OUENC IAmb IAmb 06 15 34.7
comp=Z,73nm,1.1s
MILA Mila 49.98 156 P **P** **06 15 33.0 +0.8**
UTK UTTARKASHI 50.02 303 *e*P **P** **06 15 33.0 +0.1**
BOD Bodaibo 50.18 351 *e*P **P** **06 15 33.3 -0.1**
BOD pmax pmax
comp=Z,185nm,1.0s
HNLY HANLEY 50.19 306⇑ *i*P **P** **06 15 34.6 +0.1**
HNLY IAmb IAmb 06 15 37.7
comp=Z,30nm,0.5s
MARNC Mare, Loyalty 50.38 127 P **P** **06 15 35.2 -0.2**
LHI Lord Howe Isla 50.45 144 P P 06 15 27.9 -7.9
NDI New Delhi 50.55 300 *e*P **P** **06 15 35.3 -1.4**
NDI IAmb IAmb 06 15 37.5
comp=Z,104nm,0.7s
NPLP NPLP New Delhi 50.57 300 *e*P **P** **06 15 36.0 -0.9**
SONA Sohna 50.58 300 *e*P **P** **06 15 35.5 -1.4**
KUDL Kundal 51.05 299⇑ *i*P **P** **06 15 39.5 -0.9**
PEA0B Petropavlovsk- 51.12 24 *i*P **P** **06 15 42.4 +1.8**
PEA0B Petropavlovsk- 51.12 24 P **P** **06 15 41.1 +0.5**
PEA0B IAmb IAmb 06 15 49.2
comp=Z,199nm,1.4s
PETK Petropavlovsk- 51.12 24 P **P** **06 15 40.2 -0.4**
comp=Z,13nm,0.6s,baz=224,slow=6.6,SNR=14
PETK PcP **PcP** **06 16 55.7 -0.1**
comp=Z,5.4nm,0.6s,baz=227,slow=6.9,SNR=0.9
PETK ScP **ScP** **06 20 48.8 0.0**
comp=Z,5.3nm,0.9s,baz=219,slow=6.8,SNR=4.2
PETK S **S** **06 22 58.2 +2.9**
comp=Z,0.8nm,0.5s,baz=242,slow=7.0,SNR=1.3
comp=Z,13nm,0.6s
PETK Petropavlovsk- 51.12 24 P **P** **06 15 40.8 +0.2**
PETK Petropavlovsk- 51.12 24 P **P** **06 15 40.8 +0.2**
SMLA Simla 51.19 303 *e*P **P** **06 15 41.6 +0.1**
PET Petropavlovsk 51.44 24 *e*P **P** **06 15 44.0 +1.1**
PET *e**PP **pwP** **06 15 59.5 +0.9**
PET *e*S **S** **06 22 59.3 -0.3**
PET *e* 06 25 28.2
PET 06 28 15.8
PET pmax pmax
comp=Z,500nm,5.2s
PET pmax pmax
comp=Z,68nm,1.7s
PET pmax pmax
comp=Z,400nm,14.4s
PET MLR MLR
comp=Z,900nm,18.0s
PET MLR MLR
comp=Z,900nm,15.0s
PET Petropavlovsk 51.44 24 P **P** **06 15 44.6 +1.7**
PET IAmb IAmb 06 15 55.5
comp=Z,122nm,1.3s
PET Petropavlovsk 51.44 24 P **P** **06 15 43.1 +0.2**
BHK Bhakra 51.91 303 *e*P **P** **06 15 47.2 +0.4**
DHRM DHARAMSHALA 52.20 304 *e*P **P** **06 15 48.8 -0.4**
AJM Ajmer 52.34 297⇑ *i*P **P** **06 15 49.5 -0.7**
DGZ Jazzator, Alta 52.47 329 *i*P **P** **06 15 50.8 -0.1**
DGZ pmax pmax
comp=Z,38nm,0.7s
TSSA Tissa 52.48 305 *e*P **P** **06 15 50.6 -0.7**
TSSA IAmb IAmb 06 15 53.4
comp=Z,200nm,0.7s
ZSN Zaisan 52.52 325 *e*P **P** **06 15 50.9 -0.2**
ZSN *e*S **S** **06 23 12.5 -2.3**
ZSN Zaisan 52.52 325 *e*P **P** **06 15 51.0 -0.2**
ZSN *e*S **S** **06 23 12.6 -2.3**
THN Thein Dam 52.69 304 *e*P **P** **06 15 52.1 -0.6**
UDPR Udaipur 52.87 294⇑ *i*P **P** **06 15 54.5 +0.4**
UDPR IAmb IAmb 06 15 56.5
comp=Z,187nm,0.7s
WUS Wushi 53.03 316 P **P** **06 15 54.7 -0.5**
WUS Wushi 53.03 316 P **P** **06 15 55.5 +0.3**
WUS pP **pP** **06 16 03.7 -3.9**
WUS PcP **PcP** **06 17 03.2 -0.2**
YAK Yakutsk 53.49 2 LR LR 06 39 09.0
comp=Z,2µm,20.6s,baz=176,slow=36
YAK Yakutsk 53.49 2⇑ *i*P **P** **06 15 58.3 +0.3**
YAK *e**PP **pP** **06 16 09.9 +0.3**
YAK *e* 06 17 05.0
YAK *e* 06 17 56.2
YAK *e*S **S** **06 23 27.8 +0.4**
YAK *e**SS **sS** **06 23 45.2 0.0**
YAK *e* 06 25 42.1
YAK *e*SS **SS** **06 27 07.0 -1.0**
YAK *e*SSS SSS 06 28 56.7
YAK pmax pmax
comp=Z,241nm,1.8s
YAK pmax pmax
comp=N,190nm,1.9s
YAK pmax pmax
comp=E,54nm,1.7s
YAK pmax pmax
comp=Z,617nm,8.9s
YAK pmax pmax
comp=E,63nm,2.1s
YAK pmax pmax
comp=N,89nm,1.9s
YAK smax smax
comp=N,459nm,3.3s
YAK smax smax
comp=E,165nm,3.0s
YAK MLR MLR
comp=E,2µm,27.0s
YAK Yakutsk 53.49 2 P **P** **06 15 58.2 +0.3**
YAK Yakutsk 53.49 2 P **P** **06 15 58.8 +0.8**
JMU Jammu 53.53 305 *e*P **P** **06 15 59.0 +0.1**
SRGN SRI GANGA NAGA 53.66 301 *e*P **P** **06 15 59.7 -0.1**
MK31 Makanchi Array 53.66 323 *i*P **P** **06 15 58.6 -1.0**
MKAR Makanchi Array 53.66 323 P **P** **06 15 58.4 -1.2**
comp=E,74nm,0.7s,baz=122,slow=7.9,SNR=236
MKAR PcP **PcP** **06 17 04.4 -1.1**
comp=E,25nm,0.7s,baz=112,slow=5.3,SNR=5.0
MKAR ScP **ScP** **06 20 58.4 -1.5**
comp=E,2.4nm,0.8s,baz=136,slow=4.6,SNR=3.1
MKAR S **S** **06 23 29.9 -0.4**
comp=E,1.3nm,0.8s,baz=108,slow=18,SNR=3.1
MKAR LR LR 06 40 49.4
comp=E,3µm,20.1s,baz=112,slow=38
MKAR PKPPKP **P'P'df** **06 46 13.9 -7.3**
comp=E,0.7nm,0.9s,baz=290,slow=4.2,SNR=3.5
MKAR P4KPbc 06 53 20.1
comp=E,1.5nm,0.6s,baz=124,slow=2.8,SNR=5.8
comp=E,74nm,0.7s
MKAR Makanchi Array 53.66 323 *i*P **P** **06 15 58.7 -0.8**

MKAR pmax pmax
comp=Z,75nm,0.6s
MKAR Makanchi Array 53.66 323 P **P** **06 15 58.8 -0.8**
MKAR PcP **PcP** **06 17 05.5 0.0**
SHLS Shalkode 53.70 318 *e*P **P** **06 15 57.8 -2.2**
SHLS pmax pmax
comp=Z,44nm,0.8s
SHLS Shalkode 53.70 318 *e*P **P** **06 15 57.8 -2.2**
comp=Z,44nm,0.8s
PDGK Podgornoye 53.76 318 P **P** **06 15 59.5 -1.0**
PDGK Podgornoye 53.76 318 P **P** **06 15 59.5 -1.0**
BKNR BIKÂNER 53.80 298 *e*P **P** **06 16 00.7 -0.2**
MAKZ Makanchi 53.85 323 P **P** **06 16 00.0 -1.0**
MAKZ Makanchi 53.85 323 P **P** **06 16 00.3 -0.7**
MAKZ IAmb IAmb 06 16 02.6
comp=Z,60nm,0.8s
MAKZ PcP **PcP** **06 17 05.8 -0.4**
MAKZ IAMs_20 IAMs_20 06 40 02.0
comp=Z,4µm,21.0s
MAKZ Makanchi 53.85 323 P **P** **06 16 00.2 -0.8**
MAKZ Makanchi 53.85 323 P **P** **06 16 00.5 -0.5**
MAKZ PcP **PcP** **06 17 05.7 -0.6**
UZB Uzynbulak 53.98 318*c i*P **P** **06 16 01.9 -0.2**
UZB *e*S **S** **06 23 32.5 -2.6**
UZB pmax pmax
comp=Z,35nm,0.7s
UZB Uzynbulak 53.98 318⇑ *i*P **P** **06 16 01.9 -0.2**
comp=Z,35nm,0.7s
UZB *e*S **S** **06 23 32.5 -2.6**
MOO Moorlands 54.05 161 P **P** **06 16 04.1 +1.7**
MOO Moorlands 54.05 161 P **P** **06 16 03.6 +1.3**
PRZ Przheval'sk 54.12 317 P **P** **06 16 04.0 +0.8**
MA2 Magadan 54.16 15 P **P** **06 16 05.0 +2.1**
MA2 Magadan 54.16 15 P **P** **06 16 05.0 +2.1**
MA2 PcP **PcP** **06 17 08.5 +1.4**
TARG Taragay, Kyrgy 54.22 316 P **P** **06 16 03.8 -0.4**
TARG 06 17 08.1
TARG pmax pmax
comp=Z,44nm,0.9s
TARG Taragay, Kyrgy 54.22 316 P **P** **06 16 03.8 -0.4**
TARG IAmb IAmb 06 16 19.5
comp=Z,44nm,0.9s
TARG PcP **PcP** **06 17 08.1 -0.1**
TARG Taragay, Kyrgy 54.22 316 P **P** **06 16 04.7 +0.5**
KPKS Kokpek 54.34 318 *e*P **P** **06 16 04.6 -0.1**
KPKS *e*S **S** **06 23 37.5 -2.3**
KPKS Kokpek 54.34 318 *e*P **P** **06 16 04.7 -0.1**
KPKS *e*S **S** **06 23 37.5 -2.3**
SATY Saty 54.36 318*c i*P **P** **06 16 04.6 -0.2**
SATY *e*S **S** **06 23 37.5 -2.5**
SATY pmax pmax
comp=Z,55nm,0.8s
SATY Saty 54.36 318⇑ *i*P **P** **06 16 04.7 -0.2**
comp=Z,56nm,0.8s
SATY *e*S **S** **06 23 37.5 -2.5**
TAU Tasmania Unive 54.52 161 P **P** **06 16 06.6 +0.9**
TAU Tasmania Unive 54.52 161 P **P** **06 16 06.8 +1.1**
TAU pmax pmax
comp=Z,35nm,0.9s
TAU Tasmania Unive 54.52 161 P **P** **06 16 06.8 +1.1**
ASAI AK-SAY(Kyrgyzs 54.80 315 P **P** **06 16 08.3 0.0**
KDJ Kajisay 54.81 316 P **P** **06 16 08.3 +0.1**
KSH2 Kashi 54.86 312 P **P** **06 16 09.0 +0.4**
KSH2 S **S** **06 23 43.5 -3.5**
KSH2 pmax pmax
comp=Z,53nm,1.5s
KSH2 pmax pmax
comp=Z,420nm,4.8s
KSH2 L L
comp=Z,3µm,18.5s
KSH2 L L
comp=Z,4µm,16.8s
KSH2 L L
comp=Z,5µm,17.5s
NIL Nilore 55.03 305 P **P** **06 16 09.7 -0.1**
NIL pmax pmax
comp=Z,660nm,0.8s
NIL Nilore 55.03 305 P **P** **06 16 09.4 -0.4**
NIL Nilore 55.03 305 P **P** **06 16 09.7 -0.1**
NIL Nilore 55.03 305 P **P** **06 16 09.6 -0.1**
TDK Taldyqorghan 55.19 320*c i*P **P** **06 16 10.7 0.0**
TDK pmax pmax
comp=Z,57nm,0.8s
TDK Taldyqorghan 55.19 320⇑ *i*P **P** **06 16 10.8 0.0**
comp=Z,57nm,0.8s
MDOK Medeo 55.30 317 *e*P **P** **06 16 11.5 -0.3**
MDOK *e*S **S** **06 23 50.2 -2.6**
MDOK Medeo 55.30 317 *e*P **P** **06 16 11.5 -0.3**
MDOK *e*S **S** **06 23 50.3 -2.6**
TNSS Tian-Shan 55.32 317 *e*P **P** **06 16 11.6 -0.5**
TNSS Tian-Shan 55.32 317 *e*P **P** **06 16 11.7 -0.5**
NRN Naryn 55.36 315 P **P** **06 16 11.8 -0.5**
NRN pmax pmax
comp=Z,31nm,0.5s
NRN Naryn 55.36 315 P **P** **06 16 11.8 -0.5**
NRN IAmb IAmb 06 16 14.9
comp=Z,31nm,0.5s
AAA Alma-Ata 55.41 317 *e*P **P** **06 16 12.3 -0.1**
AAA pmax pmax
comp=Z,75nm,0.8s
AAA Alma-Ata 55.41 317 *e*P **P** **06 16 12.3 -0.1**
comp=Z,75nm,0.8s
ULHL Ulahol 55.49 316 P **P** **06 16 14.0 +0.8**
SNR=8.9
JASL Jaisalmer 55.71 297 *e*P **P** **06 16 15.0 +0.3**
BOOM Boomskoye usch 55.79 316 P **P** **06 16 15.1 -0.2**
BOOM pmax pmax
comp=Z,65nm,1.3s
BOOM Boomskoye usch 55.79 316 P **P** **06 16 15.1 -0.2**
BOOM IAmb IAmb 06 16 16.9
comp=Z,65nm,1.3s
BOOM Boomskoye usch 55.79 316 P **P** **06 16 15.3 0.0**
KUU Kurty 56.07 318 *e*P **P** **06 16 17.0 0.0**
KUU pmax pmax
comp=Z,80nm,0.9s
KUU Kurty 56.07 318 *e*P **P** **06 16 17.0 0.0**
comp=Z,80nm,0.9s
MIDW Midway 56.15 62 IAMs_20 IAMs_20 06 36 31.7
comp=Z,3µm,21.0s
TKM2 Tokmak 2 56.19 317 P **P** **06 16 17.8 -0.3**
SNR=75
ZAA0 Zalesovo Array 56.35 332 P **P** **06 16 17.4 -1.5**
ZAA0 IAmb IAmb 06 16 20.1
comp=Z,62nm,0.8s
ZALV Zalesovo Beam 56.35 332 P **P** **06 16 17.5 -1.3**
comp=Z,54nm,0.7s,baz=122,slow=7.1,SNR=46
ZALV PcP **PcP** **06 17 14.4 -1.2**
comp=Z,20nm,0.6s,baz=133,slow=4.4,SNR=4.1
ZALV ScP **ScP** **06 21 10.5 -1.1**
comp=Z,3.5nm,0.8s,baz=128,slow=2.4,SNR=2.9
ZALV S **S** **06 24 05.3 -0.8**
comp=Z,1.2nm,0.5s,baz=141,slow=9.3,SNR=4.1
ZALV LR LR 06 43 05.9
comp=Z,2µm,19.5s,baz=130,slow=39
ZALV PKPPKP **P'P'df** **06 46 13.7 -3.1**
comp=Z,0.5nm,0.4s,baz=276,slow=4.1,SNR=1.8
ZALV PKP2bc **P'P'bc** **06 46 26.3 -3.3**
comp=Z,1.0nm,0.6s,baz=320,slow=4.3,SNR=4.1
comp=Z,54nm,0.7s
BHUJ Bhuj 56.40 292 *e*P **P** **06 16 21.0 +1.3**
KBK Karagaybulak 56.54 316 P **P** **06 16 21.6 +1.0**
SNR=32
UCH Uchtor 56.68 315 P **P** **06 16 22.9 +0.9**
SNR=16
CHMS Chumysh 56.80 316 P **P** **06 16 21.7 -0.6**
SNR=24
AAK Ala-Archa 56.84 316 P **P** **06 16 21.2 -1.5**
comp=Z,10nm,0.5s,baz=113,slow=8.5,SNR=27
AAK S **S** **06 24 15.5 +2.2**
comp=Z,2.6nm,0.6s,baz=174,slow=18,SNR=1.6
AAK LR LR 06 42 38.2
comp=Z,6µm,21.8s,baz=100,slow=38
comp=Z,10nm,0.5s
AAK Ala-Archa 56.84 316 P **P** **06 16 23.6 +0.8**
SNR=11
AAK Ala-Archa 56.84 316 *i*P **P** **06 16 22.7 0.0**
SNR=16
AAK Ala-Archa 56.84 316*ce*P **P** **06 16 23.4 +0.7**
AAK pmax pmax
comp=Z,71nm,1.7s
AAK Ala-Archa 56.84 316 P **P** **06 16 22.1 -0.6**
AAK Ala-Archa 56.84 316 P **P** **06 16 23.0 +0.3**
AAK Ala-Archa 56.84 316 P **P** **06 16 23.0 +0.3**
SGDS Sogindy 57.05 317 *e*P **P** **06 16 23.8 -0.3**
USP Ospenovka 57.06 317 P **P** **06 16 23.8 -0.4**
SNR=67
MSVF Nonsavu 57.08 117 P **P** **06 16 26.9 +2.3**
MSVF Nonsavu 57.08 117 LR LR 06 37 53.5
comp=Z,2µm,21.2s,baz=332,slow=33
MSVF Nonsavu 57.08 117 *i* P **P** **06 16 26.2 +1.6**
MSVF pmax pmax
comp=Z,262nm,0.9s
MSVF Nonsavu 57.08 117 P **P** **06 16 26.4 +1.7**
MSVF Nonsavu 57.08 117 IAMs_20 IAMs_20 06 37 41.2
comp=Z,2µm,20.0s
MSVF Nonsavu 57.08 117 P **P** **06 16 26.1 +1.4**
MANEM Manem 57.28 309 P **P** **06 16 26.3 +0.3**
MANEM IAmb IAmb 06 16 29.0
comp=Z,339nm,1.0s
EKS2 Erkin-Say 57.34 316 P **P** **06 16 26.3 0.0**
SNR=67
SEY Seymchan 57.46 14 LR LR 06 41 30.5
comp=Z,757nm,19.6s,baz=198,slow=36
SEY Seymchan 57.46 14 *i* P **P** **06 16 29.1 +2.6**
SEY pmax pmax
comp=Z,210nm,1.7s
KURK Kurchatov 57.73 326*ce*P **P** **06 16 27.8 -0.9**
KURK pmax pmax
comp=Z,255nm,1.3s
KURK Kurchatov 57.73 326 P **P** **06 16 27.7 -0.9**
KURK S **S** **06 24 23.2 -1.1**
KURK Kurchatov 57.73 326 P **P** **06 16 27.5 -1.2**
KURK Kurchatov 57.73 326 IAMs_20 IAMs_20 06 43 03.5
comp=Z,2µm,19.0s
KURK Kurchatov 57.73 326 P **P** **06 16 27.7 -0.9**
DRK Karamyk 57.74 312 P **P** **06 16 29.1 -0.2**
DRK pmax pmax
comp=Z,89nm,0.8s
DRK Karamyk 57.74 312 P **P** **06 16 29.1 -0.2**
DRK IAmb IAmb 06 16 30.9
comp=Z,89nm,0.8s
DRK Karamyk 57.74 312 P **P** **06 16 29.6 +0.3**
KURBB Kurchatov Arra 57.74 326 P **P** **06 16 27.4 -1.3**
comp=Z,89nm,0.6s,baz=125,slow=6.5,SNR=458
KURBB ScP **ScP** **06 21 17.3 -0.4**
comp=Z,1.7nm,0.9s,baz=125,slow=4.1,SNR=1.7
KURBB S **S** **06 24 24.5 +0.1**
comp=Z,2.9nm,1.0s,baz=136,slow=12,SNR=6.5
KURBB LR LR 06 43 13.5
comp=Z,2µm,19.2s,baz=164,slow=38
KURBB PKPPKP **P'P'df** **06 46 09.3 -5.6**
comp=Z,1.3nm,0.8s,baz=269,slow=3.9,SNR=8.6
KURBB PKP2bc **P'P'bc** **06 46 23.5 -3.2**
comp=Z,1.1nm,0.9s,baz=284,slow=3.1,SNR=4.3
comp=Z,89nm,0.6s
BTLS Baital 58.03 318 *e*P **P** **06 16 30.8 -0.1**
BTLS *e*S **S** **06 24 26.1 -2.3**
BTLS pmax pmax
comp=Z,22nm,0.7s
BTLS Baital 58.03 318 *e*P **P** **06 16 30.8 -0.1**
comp=Z,22nm,0.7s
BTLS *e*S **S** **06 24 26.1 -2.3**
ARK Arkit 58.33 314 P **P** **06 16 33.6 +0.4**
SHEM Shemya Is, Ala 58.47 32 LR LR 06 40 01.9
comp=Z,688nm,19.7s,baz=250,slow=34
SMY Shemya 58.47 32 P **P** **06 16 35.4 +1.7**
SMY pmax pmax
comp=Z,177nm,1.2s
SMY Shemya 58.47 32 P **P** **06 16 35.4 +1.7**
BTK Batken 58.63 312 P **P** **06 16 34.7 -0.5**
KBL Kabul 58.64 305 P **P** **06 16 34.8 -0.8**
KBL pmax pmax
comp=Z,210nm,0.8s
KBL Kabul 58.64 305 P **P** **06 16 34.9 -0.7**
SNR=87
KBL S **S** **06 24 36.5 -0.6**
KBL Kabul 58.64 305 P **P** **06 16 34.8 -0.7**
KBL Kabul 58.64 305 P **P** **06 16 34.9 -0.7**
GAR Garm 58.71 311 P **P** **06 16 35.0 -0.9**
GAR Garm 58.71 311 P **P** **06 16 35.2 -0.7**
DZA Taraz 59.12 315 *e*P **P** **06 16 38.5 0.0**
DZA pmax pmax
comp=Z,51nm,0.8s
DZA Taraz 59.12 315 *e*P **P** **06 16 38.5 0.0**
comp=Z,51nm,0.8s
CHGR Chuyangaron 59.49 310 *i* P **P** **06 16 40.7 -0.6**
CHGR pmax pmax
comp=Z,210nm,0.8s
CHGR Chuyangaron 59.49 310 P **P** **06 16 40.4 -0.9**
CHGR Chuyangaron 59.49 310 P **P** **06 16 40.5 -0.8**
KK31 Karatay Array 59.76 315 P **P** **06 16 42.2 -0.7**
KK31 pmax pmax
comp=Z,126nm,0.8s
KK31 Karatay Array 59.76 315 P **P** **06 16 42.1 -0.7**
KKAR Karatay Array 59.76 315 P **P** **06 16 42.2 -0.7**
KKAR Karatay Array 59.76 315 P **P** **06 16 42.1 -0.7**
IUG Iuzhnay 59.80 314 *e*P **P** **06 16 43.4 0.0**
SHAA Shahritus 60.02 309 P **P** **06 16 44.0 -0.9**
SHAA IAmb IAmb 06 17 11.1
comp=Z,82nm,0.8s
CHM Chimkent 60.16 314 *e*P **P** **06 16 45.5 -0.1**
CHM pmax pmax
comp=Z,40nm,0.7s
CHM Chimkent 60.16 314 *e*P **P** **06 16 45.6 -0.1**
comp=Z,40nm,0.7s
BRLS Boroldoy 60.20 315*c i*P **P** **06 16 46.1 +0.1**
BRLS pmax pmax
comp=Z,56nm,0.8s
BRLS Boroldoy 60.20 315⇑ *i*P **P** **06 16 46.2 +0.1**
comp=Z,56nm,0.8s
AMKA Amchitka 60.65 35 P **P** **06 16 49.9 +1.0**
AMKA IAmb IAmb 06 17 00.9
comp=Z,67nm,1.2s
OUZ Omahuta 62.06 137 P **P** **06 17 00.6 +2.0**
OUZ Omahuta 62.06 137 P **P** **06 17 00.9 +2.4**
KIWB Kanaga Island 62.87 35 P **P** **06 17 04.5 +0.8**
KIWB IAmb IAmb 06 17 09.3
comp=Z,141nm,1.5s
WCZ Waipu Caves 62.97 138 P **P** **06 17 07.0 +2.3**
TIXI Tiksi 63.12 1 LR LR 06 45 48.0
comp=Z,2µm,20.1s,baz=194,slow=37
TIXI Tiksi 63.12 1*ce*P **P** **06 17 05.3 +0.2**
TIXI pmax pmax
comp=Z,401nm,1.7s
TIXI Tiksi 63.12 1 P **P** **06 17 05.2 +0.1**
ADK Adak 63.15 35 P **P** **06 17 07.5 +1.9**
ADK Adak 63.15 35 P **P** **06 17 06.3 +0.7**
ADK pmax pmax
comp=Z,119nm,1.4s
ADK Adak 63.15 35 P **P** **06 17 06.2 +0.7**
ADK IAmb IAmb 06 17 08.8
comp=Z,119nm,1.4s
ADK Adak 63.15 35 P **P** **06 17 06.8 +1.2**
BVAR Borovoye Array 63.33 326 P **P** **06 17 05.5 -1.3**
comp=Z,174nm,0.7s,baz=118,slow=8.3,SNR=428
BVAR PcP **PcP** **06 17 42.8 -0.8**
comp=Z,32nm,0.7s,baz=119,slow=5.2,SNR=4.3
BVAR S **S** **06 25 35.4 -0.5**
comp=Z,0.7nm,0.4s,baz=116,slow=13,SNR=4.6
BVAR PKP2bc **P'P'bc** **06 46 07.1 -5.9**
comp=Z,0.4nm,0.4s,baz=241,slow=1.5,SNR=4.3
comp=Z,174nm,0.7s
HRA Herat 64.15 304 P **P** **06 17 12.2 -0.6**
HRA IAmb IAmb 06 17 14.7
comp=Z,88nm,0.9s
MSZ Milford Sound 64.69 149 P **P** **06 17 18.1 +2.3**
ATKA Atka Island 64.69 36 P **P** **06 17 17.4 +1.7**
ATKA Atka Island 64.69 36 IAMs_20 IAMs_20 06 40 32.6
comp=Z,3µm,22.0s
JCZ Jackson Bay 64.72 148 P **P** **06 17 18.9 +2.8**
QRZ Quartz Range 64.73 143 P **P** **06 17 17.4 +1.3**
QRZ Quartz Range 64.73 143 P **P** **06 17 17.4 +1.3**
TOZ Tahuroa Road 64.75 139 P **P** **06 17 17.8 +1.5**
TOZ IAmb IAmb 06 17 19.5
comp=Z,43nm,0.8s
TOZ Tahuroa Road 64.75 139 P **P** **06 17 18.6 +2.3**
HIZ Hauiti 64.78 140 P **P** **06 17 18.5 +2.0**
HIZ Hauiti 64.78 140 P **P** **06 17 18.7 +2.1**
DCZ Deep Cove 64.85 150 P **P** **06 17 17.9 +1.2**
DSZ Denniston Nort 64.87 144 P **P** **06 17 18.8 +1.6**
BILL Bilibino 65.02 15*ce*P **P** **06 17 19.4 +1.8**
BILL pmax pmax
comp=Z,244nm,1.7s
BILL Bilibino 65.02 15 P **P** **06 17 18.8 +1.2**
AFI Afiamalu 65.04 110 LR LR 06 40 53.3
comp=Z,3µm,20.8s,baz=284,slow=32
VRZ Vera Road 65.07 140 P **P** **06 17 20.9 +2.5**
TKNZ Takaka Hill 65.11 143 P **P** **06 17 19.0 +0.4**
RAO Raoul Island 65.23 128 LR LR 06 44 23.5
comp=Z,516nm,20.4s,baz=175,slow=35
MLZ Mavora Lakes 65.27 149 P **P** **06 17 20.6 +1.1**
NNZ Nelson 65.47 143 P **P** **06 17 21.6 +0.7**
THZ Tophouse 65.53 144 P **P** **06 17 21.7 +0.4**
THZ IAmb IAmb 06 17 22.3
comp=Z,58nm,0.8s
THZ Tophouse 65.53 144 P **P** **06 17 21.4 +0.1**
WHZ Wether Hill Ro 65.54 150 P **P** **06 17 21.6 +0.3**
WAZ Wanganui 65.58 141 P **P** **06 17 23.8 +2.1**
NGZ Ngauruhoe 65.64 140 P **P** **06 17 24.4 +2.1**
FWVZ Far West T-bar 65.65 140 P **P** **06 17 25.0 +2.6**
TMVZ Te Maari 65.67 140 P **P** **06 17 24.8 +2.4**
OTVZ Oturere 65.67 140 P **P** **06 17 24.8 +2.3**
TRVZ Turoa 65.67 140 P **P** **06 17 24.2 +1.6**
LBZ Lake Benmore 65.68 147 P **P** **06 17 23.2 +0.9**
LBZ IAmb IAmb 06 17 25.2
comp=Z,106nm,1.0s
LBZ Lake Benmore 65.68 147 P **P** **06 17 23.4 +1.1**
ETVZ East Tongariro 65.69 140 P **P** **06 17 25.0 +2.5**
WHVZ Whangaehu Hut 65.69 140 P **P** **06 17 26.4 +3.7**
RPZ Rata Peaks 65.71 146 P **P** **06 17 23.5 +1.0**
RPZ Rata Peaks 65.71 146 LR LR 06 43 26.9
comp=Z,318nm,21.9s,baz=283,slow=34
RPZ Rata Peaks 65.71 146 P **P** **06 17 23.5 +1.0**
RPZ Rata Peaks 65.71 146 P **P** **06 17 23.0 +0.6**
EAZ Earnscleugh 65.78 148 P **P** **06 17 25.0 +2.1**
JLN Jalan Bani Buh 65.79 290 P **P** **06 17 22.5 -0.8**
LTZ Lake Taylor 65.80 145 P **P** **06 17 23.5 +0.4**
LTZ IAmb IAmb 06 17 27.1
comp=Z,37nm,0.9s
LTZ Lake Taylor 65.80 145 P **P** **06 17 23.5 +0.4**
NRIK Noril'sk 65.82 346 P **P** **06 17 22.4 -0.4**
comp=Z,164nm,0.7s,baz=137,slow=7.9,SNR=182
NRIK S **S** **06 26 06.2 +0.1**
comp=Z,16nm,1.1s,baz=90,slow=1.0,SNR=42
NRIK LR LR 06 50 03.6
comp=Z,2µm,18.6s,baz=143,slow=40
comp=Z,164nm,0.7s
NRIK Noril'sk 65.82 346 *i* P **P** **06 17 22.0 -0.8**
NRIK pmax pmax
comp=Z,466nm,1.5s
MOVZ Moawhango 65.87 140 P **P** **06 17 24.9 +1.2**
TUWZ Tuamarina 65.94 143 P **P** **06 17 24.1 +0.2**
OXZ Oxford 66.01 145 P **P** **06 17 24.7 +0.3**
OXZ IAmb IAmb 06 17 25.6
comp=Z,40nm,0.7s
OXZ Oxford 66.01 145 P **P** **06 17 24.7 +0.3**
URZ Urewera 66.10 138 P **P** **06 17 26.3 +1.3**
URZ Urewera 66.10 138 LR LR 06 44 15.3
comp=Z,2µm,21.5s,baz=298,slow=34
URZ Urewera 66.10 138 P **P** **06 17 26.0 +0.9**
BHHZ Black Hill Sta 66.11 140 P **P** **06 17 26.3 +1.1**
TMZ Timaru 66.12 147 P **P** **06 17 25.7 +0.6**
BKZ Black Stump Fm 66.20 139 P **P** **06 17 27.0 +1.3**
BKZ Black Stump Fm 66.20 139 P **P** **06 17 26.8 +1.0**
BKZ Black Stump Fm 66.20 139 P **P** **06 17 27.1 +1.3**
WBK Wadi Bani Khal 66.20 291 P **P** **06 17 25.5 -0.6**
MTHZ Maungataniwha 66.25 139 P **P** **06 17 27.1 +1.0**
HAZ Te Kaha 66.27 138 P **P** **06 17 27.5 +1.4**
KHZ Kahutara 66.30 144 P **P** **06 17 27.7 +1.5**
KHZ Kahutara 66.30 144 P **P** **06 17 26.2 0.0**
KWHZ Kaweka Forest 66.30 140 P **P** **06 17 27.7 +1.3**
RUGZ Raukumara Rang 66.31 138 P **P** **06 17 27.3 +0.7**
SNZO South Karori 66.33 142 P **P** **06 17 26.8 +0.4**
GVZ Greta Valley S 66.35 145 P **P** **06 17 27.2 +0.6**
ODZ Otahua Downs 66.36 147 P **P** **06 17 27.6 +1.0**
NMHZ Naumai 66.37 139 P **P** **06 17 29.1 +2.3**
TSZ Takapari Road 66.37 141 P **P** **06 17 27.4 +0.6**
KRHZ Kereru 66.39 140 P **P** **06 17 28.0 +1.0**
MWZ Matawai 66.42 138 P **P** **06 17 28.1 +1.0**
RAGZ Rawiri 66.43 138 P **P** **06 17 28.4 +1.1**
PNHZ Pukenui 66.44 140 P **P** **06 17 28.5 +1.2**
TUZ Tuapeka 66.44 149 P **P** **06 17 28.2 +1.1**
RAHZ Arahi 66.45 139 P **P** **06 17 29.1 +1.8**
MRZ Mangatainoka R 66.48 141 P **P** **06 17 27.3 -0.1**
MCHZ McNeill Hill 66.49 140 P **P** **06 17 29.4 +1.8**
MXZ Matakaoa Point 66.52 137 IAMs_20 IAMs_20 06 44 26.7
comp=Z,2µm,21.0s
WSAR Wadi Sarin 66.52 292 P **P** **06 17 27.2 -0.9**
ARHZ Aropaoanui 66.58 139 P **P** **06 17 29.6 +1.5**
MQN McQueen's Vall 66.60 145 P **P** **06 17 28.9 +0.8**
TWGZ Tawhareparae 66.63 138 P **P** **06 17 30.1 +1.6**
TKGZ Te Karaka 66.68 138 P **P** **06 17 30.6 +1.8**
MSWZ Moikau Station 66.72 142 P **P** **06 17 28.9 -0.1**
PUZ Puketiti 66.76 138 P **P** **06 17 30.0 +0.7**
RIGZ Rimuhau 66.77 138 P **P** **06 17 30.5 +1.1**
KAHZ Kahuranaki 66.80 140 P **P** **06 17 31.4 +1.9**
KNZ Kokohu 66.89 139 P **P** **06 17 30.7 +0.6**
BFZ Birch Farm 66.91 141 P **P** **06 17 31.1 +0.9**
BFZ Birch Farm 66.91 141 P **P** **06 17 30.4 +0.2**
PXZ Pawanui 66.92 140 P **P** **06 17 31.4 +1.2**
CNGZ Carnagh Statio 66.94 138 P **P** **06 17 31.6 +1.2**
BIDO Bidbid 66.99 292 P **P** **06 17 30.3 -0.8**
SNR=9.9
JMDO Jabal Madar 67.00 291 P **P** **06 17 29.9 -1.3**
SMDO Samad 67.06 291 P **P** **06 17 30.5 -1.2**
MHTO MHTO 67.13 289 P **P** **06 17 31.2 -0.9**
SNR=7.0
HOQ Hoqain 67.74 292 P **P** **06 17 34.7 -1.1**
SNR=8.0
BSY Bisya 67.84 291 P **P** **06 17 35.5 -1.0**
NIUE Niue 68.25 114 P **P** **06 17 41.5 +2.4**
SOHO SOHO 68.45 293 *i* P **P** **06 17 39.0 -1.3**
SNR=13
SOHO SOHO 68.45 293 P **P** **06 17 39.1 -1.1**
AB31 Akbulak array 68.45 320 *i* P **P** **06 17 38.9 -0.9**
AB31 pmax pmax
comp=Z,61nm,0.6s
AB31 Akbulak array 68.45 320 P **P** **06 17 38.8 -1.0**
AB31 IAmb IAmb 06 17 40.6
comp=Z,102nm,0.8s
ABKAR Akbulak array 68.45 320 P **P** **06 17 38.6 -1.2**
ARQ Araqi 68.46 292 P **P** **06 17 39.5 -0.9**
SPIA Saint Paul Isl 68.50 31 P **P** **06 17 42.8 +2.8**
baz=252
MDH Madha 68.67 294 P **P** **06 17 40.4 -1.2**
MDH Madha 68.67 294 P **P** **06 17 40.7 -1.0**
UOSS Minazif 68.75 293 P **P** **06 17 40.9 -1.3**
UOSS Minazif 68.75 293 P **P** **06 17 41.2 -1.0**
UOSS Minazif 68.75 293 P **P** **06 17 40.9 -1.3**
MASF Masafi 68.80 294 P **P** **06 17 41.7 -0.8**
HATD Hatta, Dubai 68.82 293 *i* P **P** **06 17 42.0 -0.6**
SNR=10
HATD Hatta, Dubai 68.82 293 P **P** **06 17 41.8 -0.8**
SHME Shamm 68.82 295 P **P** **06 17 41.9 -0.6**
SHME Shamm 68.82 295 P **P** **06 17 41.9 -0.6**
ASHO Ashiyiah 68.89 293 *i* P **P** **06 17 42.5 -0.6**
SNR=8.3
ASHO Ashiyiah 68.89 293 P **P** **06 17 42.5 -0.6**
ALNE Al Ain 69.17 292 *i* P **P** **06 17 43.7 -1.1**
SNR=37
ALNE Al Ain 69.17 292 P **P** **06 17 44.3 -0.5**
SNR=10
NAZ Nazwa, Dubai 69.25 293 *i* P **P** **06 17 44.4 -0.9**
SNR=9.0
NAZ Nazwa, Dubai 69.25 293 P **P** **06 17 44.3 -0.9**
UMQ Umm Al-Quwin 69.25 294 P **P** **06 17 44.7 -0.6**
FAQ Al Faqa, Dubai 69.31 293 *i* P **P** **06 17 44.9 -0.8**
SNR=8.1
FAQ Al Faqa, Dubai 69.31 293 P **P** **06 17 45.1 -0.6**
SHAO Shalim 69.42 286 P **P** **06 17 46.4 0.0**
ASUD Al Ashush, Dub 69.55 293 *i* P **P** **06 17 47.0 -0.1**
SNR=9.6
ASUD Al Ashush, Dub 69.55 293 P **P** **06 17 46.7 -0.4**
SNR=6.1
UNV Unalaska Valle 69.62 36 P **P** **06 17 49.0 +2.1**
UNV Unalaska Valle 69.62 36 P **P** **06 17 47.8 +0.9**
UNV Unalaska Valle 69.62 36 P **P** **06 17 48.7 +1.8**
baz=256,SNR=11
UMZA Um Al Zommool 69.72 291 P **P** **06 17 47.0 -1.2**
AJN Ajban 69.86 293 *i* P **P** **06 17 48.3 -0.7**
SNR=7.7
AJN Ajban 69.86 293 P **P** **06 17 47.8 -1.2**
SNR=5.7
SVE Sverdlovsk 69.90 328*de*P **P** **06 17 47.8 -0.8**
SVE *e*S **S** **06 26 49.2 -6.0**
SVE pmax pmax
comp=Z,435nm,1.0s
SVE MLR MLR
comp=Z,1µm,22.0s
AKTO Aktyubinsk 69.92 321 P **P** **06 17 47.4 -1.5**
comp=Z,96nm,1.0s,baz=102,slow=6.9,SNR=128
AKTO S **S** **06 26 55.1 -0.6**
comp=Z,1.7nm,0.5s,baz=180,slow=20,SNR=6.1

AKTO LR LR 06 50 56.7
comp=Z,4µm,19.4s,baz=103,slow=38
comp=Z,96nm,1.0s
DMTO DMTO 70.08 286 P **P** **06 17 50.1 -0.3**
AKUT Akutan 70.11 35 P **P** **06 17 51.4 +1.5**
GAMB Gambell 70.13 25 P **P** **06 17 52.4 +2.5**
baz=248
RBK Rabkut 70.80 286 P **P** **06 17 54.3 -0.6**
MZWR Madinat Zayed 70.88 292 P **P** **06 17 54.3 -1.0**
ARTI Arti 70.99 327 P **P** **06 17 53.4 -1.9**
comp=Z,128nm,0.8s,baz=99,slow=4.6,SNR=135
ARTI S **S** **06 27 05.7 -2.2**
comp=Z,1.0nm,0.4s,baz=105,slow=20,SNR=6.0
ARTI LR LR 06 51 16.2
comp=Z,1µm,20.7s,baz=109,slow=38
comp=Z,128nm,0.8s
ARTI Arti 70.99 327 *c i* P **P** **06 17 53.6 -1.7**
ARTI 06 18 15.9
ARTI 06 20 30.9
ARTI PPP PPP 06 22 09.7
ARTI S **S** **06 27 02.8 -5.2**
ARTI 06 27 53.3
ARTI pmax pmax
comp=Z,154nm,0.8s
ARTI MLR MLR
comp=Z,1µm,22.0s
ARTI Arti 70.99 327 P **P** **06 17 54.0 -1.3**
ARTI IAMs_20 IAMs_20 06 51 05.0
comp=Z,1µm,20.0s
ARTI Arti 70.99 327 P **P** **06 17 54.3 -1.0**
WHFO Wadi Hawf 71.19 286 P **P** **06 17 56.4 -0.9**
MZR Muzera 71.27 291 *i* P **P** **06 17 56.8 -0.8**
SNR=64
MZR Muzera 71.27 291 P **P** **06 17 56.9 -0.7**
SNR=26
M11K Mekoryuk 71.47 29 P **P** **06 18 01.2 +3.1**
M11K Mekoryuk 71.47 29 P **P** **06 18 01.1 +3.0**
baz=254
M11K S **S** **06 27 19.1 +5.8**
baz=254
GHWR Ruwais 71.80 292 P **P** **06 17 59.9 -0.8**
JRN Qarnain Island 71.80 293 P **P** **06 17 59.7 -1.1**
SNR=8.6
MSEY Mahe Island 72.14 262 P **P** **06 18 02.5 -0.6**
TNA Tin City 72.29 23 P **P** **06 18 05.3 +2.4**
baz=251
TNA S **S** **06 27 25.8 +3.3**
baz=251
K13K Kusilvak Mount 72.61 28 P **P** **06 18 07.7 +2.8**
baz=255,SNR=27
K13K S **S** **06 27 30.7 +4.4**
baz=255
M13K Dall Lake 72.85 29 P **P** **06 18 07.8 +1.5**
M13K IAmb IAmb 06 18 11.7
comp=Z,207nm,1.4s
M13K Dall Lake 72.85 29 P **P** **06 18 09.0 +2.7**
baz=257,SNR=9.8
M13K S **SKiKP** **06 27 33.2 -3.0**
baz=257
SLWR Sila 72.88 293 P **P** **06 18 06.5 -0.7**
F14K Arctic Creek 72.89 24 P **P** **06 18 09.0 +2.5**
baz=252
F14K S **SKiKP** **06 27 35.1 -1.1**
baz=252
ANM Nome 73.01 25 P **P** **06 18 09.8 +2.5**
baz=254
ANM S **SKiKP** **06 27 36.0 -0.3**
baz=254
J14K Nanvaranak Lak 73.31 27 P **P** **06 18 10.9 +1.9**
J14K IAmb IAmb 06 18 13.8
comp=Z,93nm,1.4s
J14K Nanvaranak Lak 73.31 27 P **P** **06 18 11.5 +2.5**
baz=256,SNR=11
J14K S **SKiKP** **06 27 38.9 +2.1**
baz=256
SDPT Sand Point 73.36 35 P **P** **06 18 11.8 +2.4**
SDPT Sand Point 73.36 35 P **P** **06 18 09.8 +0.3**
SDPT IAmb IAmb 06 18 23.8
comp=Z,116nm,0.9s
SDPT Sand Point 73.36 35 P **P** **06 18 11.2 +1.8**
baz=261
L14K Kuka Creek 73.38 28 P **P** **06 18 10.3 +0.9**
L14K Kuka Creek 73.38 28 P **P** **06 18 12.0 +2.6**
baz=257,SNR=42
L14K S **SKiKP** **06 27 39.0 +2.1**
baz=257
N14K Kuskokwak Cree 73.55 30 P **P** **06 18 12.8 +2.3**
baz=258,SNR=9.9
N14K S **SKiKP** **06 27 39.5 +2.3**
baz=258
M14K Bethel 73.59 29 P **P** **06 18 13.3 +2.6**
baz=258,SNR=31
M14K S **S** **06 27 40.5 +3.0**
baz=258
F15K North Star Dit 73.63 24 P **P** **06 18 13.1 +2.3**
baz=254,SNR=8.8
F15K S **S** **06 27 39.9 +2.1**
baz=254
O14K Tigyukauivet M 73.63 31 P **P** **06 18 13.1 +2.1**
baz=259,SNR=9.8
O14K S **S** **06 27 39.7 +1.7**
baz=259
G15K Niukluk 73.68 24 P **P** **06 18 13.2 +2.1**
baz=255,SNR=6.6
G15K S **S** **06 27 40.8 +2.4**
baz=255
CNBA Chernabura Isl 73.78 35 IAMs_20 IAMs_20 06 47 51.9
comp=Z,1µm,20.0s
CHNA Chernabura Isl 73.78 35 P **P** **06 18 13.8 +1.9**
baz=262
CHNA S **S** **06 27 41.3 +1.5**
baz=262
SAKB Bahrain 73.87 295 P **P** **06 18 12.6 -0.5**
L15K Ungalak Mounta 74.01 28 P **P** **06 18 15.4 +2.2**
baz=258,SNR=23
L15K S **S** **06 27 44.3 +2.1**
baz=258
S14K Fog Glacier 74.02 34 P **P** **06 18 15.3 +1.9**
baz=261
C16K Lisburne Hills 74.11 21 P **P** **06 18 15.6 +2.0**
baz=253
C16K S **S** **06 27 46.5 +3.4**
baz=253
K15K Wolf Creek Mou 74.12 27 P **P** **06 18 16.4 +2.6**
baz=258,SNR=24
K15K S **S** **06 27 46.8 +3.4**
baz=258
M15K Kasigluk River 74.19 29 P **P** **06 18 16.5 +2.3**
baz=259,SNR=27
M15K S **S** **06 27 46.4 +2.1**
baz=259
H16K Elim 74.33 25 P **P** **06 18 17.2 +2.2**
baz=256,SNR=7.9
H16K S **S** **06 27 47.8 +2.0**
baz=256
O15K Ungalikthiuk R 74.34 31 P **P** **06 18 16.0 +0.8**
O15K IAmb IAmb 06 18 19.8
comp=Z,68nm,1.1s
O15K Ungalikthiuk R 74.34 31 P **P** **06 18 17.4 +2.2**
baz=260,SNR=11
O15K S **S** **06 27 47.3 +1.2**
baz=260
N15K Kwethluk River 74.38 30 P **P** **06 18 16.9 +1.5**
N15K Kwethluk River 74.38 30 P **P** **06 18 17.7 +2.3**
baz=260,SNR=23
N15K S **S** **06 27 48.9 +2.4**
baz=260
J16K Anvik River 74.74 27 P **P** **06 18 19.8 +2.4**
baz=258,SNR=31
J16K S **S** **06 27 53.9 +3.5**
baz=258
D17K Noatak River 74.77 22 P **P** **06 18 20.0 +2.5**
baz=255,SNR=54
D17K S **S** **06 27 53.5 +3.1**
baz=255
I17K Unalakleet 74.83 26 P **P** **06 18 20.3 +2.5**
baz=258,SNR=28
I17K S **S** **06 27 54.7 +3.4**
baz=258
RDOG Red Dog Mine 74.92 22 P **P** **06 18 19.9 +1.5**
RDOG Red Dog Mine 74.92 22 P **P** **06 18 20.7 +2.3**
baz=255,SNR=17
RDOG S **S** **06 27 55.0 +2.7**
baz=255
C17K DeLong Mountai 74.94 21 P **P** **06 18 20.7 +2.3**
baz=255,SNR=25
C17K S **S** **06 27 54.5 +2.1**
baz=255
L16K Owhat River 74.96 28 P **P** **06 18 20.5 +1.8**
L16K Owhat River 74.96 28 P **P** **06 18 20.9 +2.2**
baz=260,SNR=47
L16K S **S** **06 27 55.4 +2.6**
baz=260
E17K Hotham Inlet 75.08 23 P **P** **06 18 21.9 +2.6**
baz=256,SNR=41
E17K S **S** **06 27 56.4 +2.4**
baz=256
M16K Timber Creek 75.08 29 P **P** **06 18 22.0 +2.5**
baz=260,SNR=26
M16K S **S** **06 27 56.7 +2.4**
baz=260
N16K Nishlik Lake 75.08 30 P **P** **06 18 22.0 +2.5**
baz=261,SNR=23
N16K S **S** **06 27 57.0 +2.6**
baz=261
F17K Baldwin Pennin 75.15 23 P **P** **06 18 21.4 +1.7**
F17K IAmb IAmb 06 18 24.5
comp=Z,230nm,1.8s
F17K Baldwin Pennin 75.15 23 P **P** **06 18 22.1 +2.4**
baz=257,SNR=18
F17K S **S** **06 27 58.2 +3.4**
baz=257
G17K Kiwalik Mounta 75.19 24 P **P** **06 18 22.3 +2.4**
baz=258,SNR=28
G17K S **S** **06 27 58.4 +3.1**
baz=258
LKRN Lenkeran, Azer 75.28 308 P **P** **06 18 22.1 +1.1**
O16K Kokwok River B 75.28 31 P **P** **06 18 22.9 +2.3**
baz=262,SNR=30
O16K S **S** **06 27 59.2 +2.7**
baz=262
H17K Granite Mounta 75.37 25 P **P** **06 18 23.0 +2.0**
baz=259,SNR=32
H17K S **S** **06 28 00.8 +3.4**
baz=259
J17K VABM Dome 75.44 27 P **P** **06 18 22.9 +1.5**
J17K IAmb IAmb 06 18 26.5
comp=Z,182nm,1.6s
J17K VABM Dome 75.44 27 P **P** **06 18 24.2 +2.8**
baz=260,SNR=36
J17K S **S** **06 28 01.2 +3.0**
baz=260
L17K Donlin 75.58 28 P **P** **06 18 25.1 +2.8**
baz=261,SNR=47
L17K S **S** **06 28 03.6 +3.8**
baz=261
E18K Tukpahlearik C 75.62 22 S **S** **06 28 03.0 +3.0**
baz=257
K17K Iditarod 75.67 27 P **P** **06 18 25.4 +2.6**
baz=261,SNR=38
K17K S **S** **06 28 04.9 +4.2**
baz=261
C18K Utukok River 75.69 21 P **P** **06 18 23.8 +1.0**
C18K IAmb IAmb 06 18 26.2
comp=Z,229nm,1.6s
C18K Utukok River 75.69 21 P **P** **06 18 24.9 +2.0**
baz=256,SNR=31
C18K S **S** **06 28 02.6 +1.7**
baz=256
O17K Koliganek Bris 75.81 30 P **P** **06 18 25.8 +2.3**
baz=262,SNR=14
O17K S **S** **06 28 04.6 +2.3**
baz=262
F18K Selawik 75.81 23 P **P** **06 18 25.5 +2.0**
baz=258,SNR=28
F18K S **S** **06 28 04.9 +2.8**
baz=258
N17K Nushagak Hills 75.87 30 P **P** **06 18 26.7 +2.8**
baz=262,SNR=19
N17K S **S** **06 28 06.6 +3.6**
baz=262
M17K Holitna River 75.87 29 P **P** **06 18 27.0 +3.1**
baz=262,SNR=17
M17K S **S** **06 28 06.6 +3.6**
baz=262
Q16K King Salmon 75.90 32 P **P** **06 18 25.5 +1.4**
baz=263
R17L Mt. Peulik Vol 75.93 33 P **P** **06 18 25.9 +1.5**
baz=264
H18K Honhosa River 76.06 25 IAMs_20 IAMs_20 06 49 40.4
comp=Z,1µm,22.0s
H18K Honhosa River 76.06 25 P **P** **06 18 27.2 +2.3**
baz=260,SNR=14
H18K S **S** **06 28 07.4 +2.4**
baz=260
P17K Kvichak River 76.07 31 P **P** **06 18 27.6 +2.5**
baz=263,SNR=12
P17K S **S** **06 28 08.0 +2.8**
baz=263
G18K Tagagawik 76.07 24 P **P** **06 18 25.8 +0.8**
G18K IAmb IAmb 06 18 28.3
comp=Z,76nm,1.4s
G18K Tagagawik 76.07 24 P **P** **06 18 27.0 +2.0**
baz=260,SNR=27
G18K S **S** **06 28 07.7 +2.6**
baz=260
A19K Wainwright 76.10 20 P **P** **06 18 27.9 +2.8**
baz=256,SNR=7.3
A19K S **S** **06 28 07.6 +2.5**
baz=256
AKT Akhty 76.12 311 *e* P **P** **06 18 24.8 -1.1**
AKT *e* 06 18 37.5
AKT *e* PP **sP** **06 18 43.3 -0.2**
AKT *e* 06 21 22.7
AKT *e* PPP PPP 06 23 04.7
AKT *e* S **S** **06 28 04.1 -2.7**
AKT *e* SS **SKKSac** **06 28 34.8 +0.7**
AKT pmax pmax
comp=Z,76nm,0.7s
AKT MLR MLR
comp=Z,2µm,21.0s
KIRV Kirov 76.14 328 P **P** **06 18 24.7 -0.8**
comp=Z,127nm,0.6s,baz=97,slow=4.8,SNR=72
KIRV S **S** **06 28 02.3 -3.7**
comp=Z,4.1nm,0.5s,baz=138,slow=12,SNR=1.1
KIRV LR LR 06 54 33.1
comp=Z,1µm,21.5s,baz=102,slow=38
comp=Z,127nm,0.6s
KIRV Kirov 76.14 328 *i* P **P** **06 18 23.8 -1.7**
CHIR Chirikof Islan 76.15 35 P **P** **06 18 27.7 +2.1**
baz=265
Q17K Contact Creek 76.25 32 P **P** **06 18 27.3 +1.0**
baz=264
KBD Kabd 76.28 298 P **P** **06 18 25.9 -1.1**
MAK Makhachkala 76.32 312 *d i* P **P** **06 18 26.1 -0.7**
MAK *e* PP **sP** **06 18 42.5 -1.9**
MAK *e* 06 21 20.9
MAK *e* PPP PPP 06 23 07.7
MAK *e* S **S** **06 28 06.0 -2.5**
MAK *e* SS **SKKSac** **06 28 35.2 0.0**
MAK *e* SS **SS** **06 33 01.6 -1.5**
MAK *e* SSS SSS 06 36 25.8
MAK pmax pmax
comp=Z,127nm,1.2s
MAK MLR MLR
comp=Z,2µm,19.0s
L18K Granite Mounta 76.34 28 P **P** **06 18 28.2 +1.7**
L18K IAmb IAmb 06 18 31.6
comp=Z,94nm,1.4s
L18K Granite Mounta 76.34 28 P **P** **06 18 29.2 +2.6**
baz=262,SNR=21
L18K S **S** **06 28 10.0 +2.0**
baz=262
C19K Lookout Ridge 76.36 21 P **P** **06 18 29.0 +2.4**
baz=258,SNR=78
C19K S **S** **06 28 09.9 +1.7**
baz=258
J18K Innoko River 76.50 27 P **P** **06 18 28.7 +1.2**
J18K IAmb IAmb 06 18 31.9
comp=Z,93nm,1.6s
J18K Innoko River 76.50 27 P **P** **06 18 29.5 +2.0**
baz=262,SNR=23
J18K S **S** **06 28 11.5 +1.6**
baz=262
SEKA Sheki 76.52 310 P **P** **06 18 28.3 +0.2**
N18K Kilae Creek 76.52 30 P **P** **06 18 28.9 +1.3**
N18K IAmb IAmb 06 18 32.6
comp=Z,93nm,1.4s
N18K Kilae Creek 76.52 30 P **P** **06 18 30.2 +2.5**
baz=263,SNR=26
N18K S **S** **06 28 13.2 +3.0**
baz=263
F19K Shaleruckik Mo 76.59 23 P **P** **06 18 28.9 +1.0**
F19K Shaleruckik Mo 76.59 23 P **P** **06 18 29.7 +1.8**
baz=260,SNR=19
F19K S **S** **06 28 11.2 +0.5**
baz=260
MNGR Mingechevir, A 76.60 310 P **P** **06 18 29.3 +0.8**
GCSA Galena City Sc 76.62 25 P **P** **06 18 30.0 +2.0**
baz=261,SNR=13
GCSA S **S** **06 28 12.9 +2.0**
baz=261
BELG Belogornoye 76.62 322 P **P** **06 18 26.8 -1.5**
comp=Z,106nm,1.0s,baz=105,slow=0.6,SNR=56
BELG LR LR 06 55 41.0
comp=Z,1µm,18.9s,baz=95,slow=38
comp=Z,106nm,1.0s
BELG Belogornoye 76.62 322 *c i* P **P** **06 18 26.6 -1.7**
BELG pmax pmax
comp=Z,41nm,1.3s
M18K Stony River 76.65 29 P **P** **06 18 31.0 +2.6**
baz=263,SNR=34
M18K S **S** **06 28 15.0 +3.5**
baz=263
P18K Big Mountain, 76.71 31 P **P** **06 18 30.2 +1.4**
baz=264
P18K S **S** **06 28 12.7 +0.3**
baz=264
G19K Purcell Mounta 76.75 24 P **P** **06 18 31.1 +2.3**
baz=261,SNR=35
G19K S **S** **06 28 13.7 +1.2**
baz=261
Q18K Katmai Hardscr 76.75 32 P **P** **06 18 30.1 +1.0**
baz=264,SNR=6.6
Q18K S **S** **06 28 11.5 -1.4**
baz=264
D19K Kuna River 76.76 21 P **P** **06 18 30.2 +1.3**
D19K Kuna River 76.76 21 P **P** **06 18 30.9 +2.0**
baz=259,SNR=84
D19K S **S** **06 28 13.5 +0.9**
baz=259
O18K Koktuh Hills 76.77 30 P **P** **06 18 31.4 +2.4**
baz=264,SNR=26
O18K S **S** **06 28 15.9 +3.0**
baz=264
E19K Redstone River 76.91 23 P **P** **06 18 31.9 +2.2**
baz=260,SNR=69
E19K S **S** **06 28 15.6 +1.5**
baz=260
H19K Roundabout Mou 76.91 25 P **P** **06 18 30.6 +0.8**
H19K IAmb IAmb 06 18 33.7
comp=Z,225nm,1.6s
H19K Roundabout Mou 76.91 25 P **P** **06 18 32.1 +2.3**
baz=262,SNR=68
H19K S **S** **06 28 17.3 +3.1**
baz=262
SII Sitkinak Islan 77.01 34 P **P** **06 18 32.2 +1.6**
baz=266
SII S **S** **06 28 17.9 +2.2**
baz=266
J19K Poorman 77.05 26 P **P** **06 18 32.9 +2.4**
baz=263,SNR=21
J19K S **S** **06 28 18.6 +2.8**
baz=263
GANJ Ganja 77.18 310 P **P** **06 18 31.9 +0.1**
L19K White Mountain 77.19 28 P **P** **06 18 34.0 +2.6**
baz=264,SNR=19
L19K S **S** **06 28 19.6 +2.2**
baz=264
N19K Bonanza Creek 77.22 30 P **P** **06 18 34.0 +2.3**
baz=264,SNR=23
N19K S **S** **06 28 21.2 +3.2**
baz=264
O19K Port Alsworth 77.25 30 P **P** **06 18 33.6 +2.0**
baz=265,SNR=8.4
O19K S **S** **06 28 20.5 +2.5**
baz=265
D20K Etivluk River 77.34 21 P **P** **06 18 34.4 +2.3**
baz=261,SNR=60
D20K S **S** **06 28 20.5 +1.6**
baz=261
B20K Meade River 77.37 20 P **P** **06 18 34.7 +2.5**
baz=260
B20K S **S** **06 28 20.6 +1.6**
baz=260
M19K Big River Lodg 77.37 28 P **P** **06 18 35.3 +2.8**
baz=264
M19K S **S** **06 28 21.8 +2.3**
baz=264
F20K Avaraart Lake 77.42 23 P **P** **06 18 34.8 +2.3**
baz=262
F20K S **S** **06 28 21.7 +2.1**
baz=262
E20K Nigu River 77.42 22 P **P** **06 18 34.6 +2.0**
baz=261,SNR=66
E20K S **S** **06 28 21.2 +1.4**
baz=261
Q19K Cape Douglas, 77.48 32 P **P** **06 18 33.5 +0.4**
Q19K Cape Douglas, 77.48 32 P **P** **06 18 34.1 +1.0**
baz=266,SNR=6.1
OHAK Old Harbor 77.55 33 P **P** **06 18 35.9 +2.5**
OHAK Old Harbor 77.55 33 P **P** **06 18 34.8 +1.4**
OHAK IAmb IAmb 06 18 36.2
comp=Z,46nm,0.8s
OHAK Old Harbor 77.55 33 P **P** **06 18 35.2 +1.7**
baz=266,SNR=10
OHAK S **S** **06 28 22.2 +0.8**
baz=266
H20K Anotleneega Mo 77.56 25 P **P** **06 18 35.3 +1.9**
baz=263,SNR=38
H20K S **S** **06 28 24.1 +2.8**
baz=263
I20K Naaghedeneel 77.64 25 P **P** **06 18 35.5 +1.7**
I20K IAmb IAmb 06 18 37.8
comp=Z,205nm,1.5s
I20K Naaghedeneel 77.64 25 P **P** **06 18 36.1 +2.3**
baz=264,SNR=18
I20K S **S** **06 28 25.4 +3.3**
baz=264
K20K Telida 77.67 27 P **P** **06 18 36.3 +2.2**
baz=264
K20K S **S** **06 28 25.8 +3.2**
baz=264
J20K Nowinta River 77.72 26 P **P** **06 18 36.6 +2.4**
baz=264,SNR=46
J20K S **S** **06 28 26.4 +3.3**
baz=264
P19K Oil Pt 77.75 31 P **P** **06 18 35.6 +1.0**
baz=266
P19K S **S** **06 28 21.9 -1.6**
baz=266
A21K Barrow 77.78 19 P **P** **06 18 37.0 +2.5**
baz=260
A21K S **S** **06 28 25.3 +2.0**
baz=260
NAX Nakhchivan 77.83 308 P **P** **06 18 37.0 +1.4**
KDAK Kodiak Island 77.96 33 LR LR 06 49 52.5
comp=Z,2µm,20.6s,baz=243,slow=33
KDAK Kodiak Island 77.96 33 P **P** **06 18 37.5 +1.8**
baz=267
KDAK S **S** **06 28 27.4 +1.6**
baz=267
M20K Styx River 77.97 29 P **P** **06 18 38.6 +2.7**
baz=266
M20K S **S** **06 28 28.3 +2.3**
baz=266
RAR Rarotonga 78.00 114 LR LR 06 47 06.7
comp=Z,1µm,21.9s,baz=285,slow=31
C21K Knifeblade Rid 78.06 21 P **P** **06 18 38.4 +2.3**
baz=262,SNR=16
C21K S **S** **06 28 28.5 +1.9**
baz=262
O20K Slope Mountain 78.08 30 P **P** **06 18 37.4 +0.9**
baz=266
O20K S **S** **06 28 28.6 +1.4**
baz=266
B21K Ikpikpuk River 78.18 21 IAMs_20 IAMs_20 06 54 37.3
comp=Z,1µm,22.0s
B21K Ikpikpuk River 78.18 21 P **P** **06 18 39.1 +2.4**
baz=262
B21K S **S** **06 28 30.0 +2.2**
baz=262
G21K Allakaket 78.23 24 P **P** **06 18 39.0 +1.9**
baz=264,SNR=49
G21K S **S** **06 28 30.8 +2.3**
baz=264
A22K Sinclair Lake 78.25 19 P **P** **06 18 39.2 +2.1**
baz=262
A22K S **S** **06 28 29.8 +1.3**
baz=262
E21K Killik River 78.26 22 P **P** **06 18 39.3 +2.0**
baz=263

E21K S **S** **06 28 29.1 +0.2**
baz=263
F21K **Alatna River** **78.31 23** P **P** **06 18 39.4 +1.8**
baz=264,SNR=14
F21K S **S** **06 28 30.2 +0.8**
baz=264
SPCR **Spurr Chakacha** **78.36 29** P **P** **06 18 39.3 +1.3**
baz=266
TBLG **Delisi** **78.37 311** P **P** **06 18 38.4 0.0**
GNI **Garni** **78.40 309** P **P** **06 18 38.1 -0.6**
comp=Z,25nm,0.8s,baz=90,slow=20,SNR=23
GNI S **S** **06 28 34.9 +3.3**
comp=Z,7.7nm,0.4s,baz=108,slow=20,SNR=1.7
GNI LR LR 06 57 23.2
comp=Z,1μm,22.0s,baz=84,slow=39
comp=Z,25nm,0.8s
GNI **Garni** **78.40 309** P **P** **06 18 39.0 +0.2**
GNI **Garni** **78.40 309** *i* P **P** **06 18 39.2 +0.5**
GNI pmax pmax
comp=Z,169nm,1.7s
GNI **Garni** **78.40 309** P **P** **06 18 39.3 +0.5**
GNI **Garni** **78.40 309** P **P** **06 18 38.9 +0.2**
comp=Z,1μmcomp=Z,70nm,0.9s
H21K **Melozitna Rive** **78.43 25** P **P** **06 18 40.3 +2.0**
baz=265,SNR=44
H21K S **S** **06 28 33.0 +2.3**
baz=265
SPU **Mount Spurr** **78.43 29** P **P** **06 18 38.3 -0.1**
PPLA **Purkeypile** **78.48 28** P **P** **06 18 40.3 +1.6**
baz=266
PPLA S **S** **06 28 32.7 +1.1**
baz=266
CHUM **Lake Minchumin** **78.50 26** P **P** **06 18 40.8 +2.2**
baz=266
CHUM S **S** **06 28 32.5 +1.2**
baz=266
HOM **Homer** **78.55 31** IAMs_20 IAMs_20 06 49 06.6
comp=Z,1μm,22.0s
HOM **Homer** **78.55 31** P **P** **06 18 39.9 +1.0**
baz=267
CAST **Castle Rocks** **78.56 27** P **P** **06 18 40.9 +1.9**
baz=266
CAST S **S** **06 28 32.6 +0.4**
baz=266
RAYN **Ar Rayn** **78.56 292** *i* P **P** **06 18 38.5 -1.4**
SNR=64
RAYN **Ar Rayn** **78.56 292** P **P** **06 18 38.5 -1.4**
RAYN **Ar Rayn** **78.56 292** P **P** **06 18 38.7 -1.2**
RAYN **Ar Rayn** **78.56 292** IAMs_20 IAMs_20 06 59 53.4
comp=Z,1μm,19.0s
B22K **Teshekpuk Lake** **78.68 20** P **P** **06 18 41.5 +2.0**
baz=263,SNR=10
B22K S **S** **06 28 34.6 +1.5**
baz=263
SKT **Skwentna** **78.73 28** P **P** **06 18 41.0 +1.0**
baz=267,SNR=28
SKT S **S** **06 28 32.5 -1.6**
baz=267
I21K **Tanana** **78.73 25** P **P** **06 18 42.2 +2.4**
baz=266,SNR=38
I21K S **S** **06 28 35.7 +1.8**
baz=266
CNPM **China Poot** **78.75 31** IAMs_20 IAMs_20 06 50 04.0
comp=Z,2μm,21.0s
F22K **John River** **78.84 23** P **P** **06 18 42.9 +2.4**
baz=265
F22K S **S** **06 28 36.6 +1.5**
baz=265
CAPN **Captain Cook N** **78.85 30** P **P** **06 18 42.9 +2.3**
baz=267
BRLK **Bradley Lake** **78.94 31** IAMs_20 IAMs_20 06 49 17.7
comp=Z,2μm,22.0s
BRSE **Bradley Lake S** **79.01 31** P **P** **06 18 42.7 +1.1**
baz=268
BRSE S **S** **06 28 35.4 -1.8**
baz=268
E22K **Anaktuvuk Pass** **79.03 22** P **P** **06 18 43.8 +2.3**
baz=265
E22K S **S** **06 28 37.6 +0.5**
baz=265
H22K **Ishtalitna Cre** **79.04 24** P **P** **06 18 44.0 +2.4**
baz=266,SNR=51
H22K S **S** **06 28 39.2 +2.1**
baz=266
G22K **Bettles** **79.06 23** P **P** **06 18 43.4 +1.8**
baz=266
G22K S **S** **06 28 39.9 +2.6**
baz=266
KTH **Kantishna Hill** **79.09 27** IAMs_20 IAMs_20 06 55 58.8
comp=Z,962nm,19.0s
L22K **Petersville** **79.11 28** P **P** **06 18 43.2 +1.1**
baz=267,SNR=42
L22K S **S** **06 28 35.9 -2.3**
baz=267
MLY **Manley** **79.25 25** P **P** **06 18 44.6 +1.8**
baz=267,SNR=49
MLY S **S** **06 28 40.1 +0.6**
baz=267
CUT **Chulitna** **79.34 28** P **P** **06 18 43.8 +0.6**
baz=268,SNR=9.4
CUT S **S** **06 28 38.5 -1.9**
baz=268
TRF **Thorofare Moun** **79.37 27** P **P** **06 18 44.9 +1.2**
baz=268,SNR=23
TRF S **S** **06 28 39.2 -1.9**
baz=268
M22K **Willow** **79.39 29** P **P** **06 18 44.3 +0.8**
baz=268,SNR=14
M22K S **S** **06 28 39.3 -1.6**
baz=268
D23K **Nanushuk River** **79.51 21** P **P** **06 18 46.7 +2.6**
baz=266,SNR=64
D23K S **S** **06 28 44.2 +2.2**
baz=266
GOF **Gofitskoye** **79.53 314** *ce* P **P** **06 18 43.9 -0.8**
O22K **Cooper Landing** **79.54 30** IAMs_20 IAMs_20 06 49 55.9
comp=Z,1μm,22.0s
O22K **Cooper Landing** **79.54 30** P **P** **06 18 45.2 +0.8**
baz=269
RC01 **Rabbit Creek A** **79.55 29** IAMs_20 IAMs_20 06 53 36.0
comp=Z,1μm,21.0s
RC01 **Rabbit Creek A** **79.55 29** P **P** **06 18 45.8 +1.3**
baz=269
RC01 S **S** **06 28 40.7 -2.0**
baz=269
COLD **Coldfoot** **79.59 23** P **P** **06 18 46.8 +2.2**
baz=267,SNR=49
COLD S **S** **06 28 44.9 +2.0**
baz=267
C23K **Itkillik River** **79.59 20** IAMs_20 IAMs_20 06 55 20.5
comp=Z,1μm,22.0s
C23K **Itkillik River** **79.59 20** P **P** **06 18 46.5 +2.0**
baz=266,SNR=69
C23K S **S** **06 28 44.1 +1.3**
baz=266
G23K **Bananza Creek** **79.63 24** P **P** **06 18 47.4 +2.5**
baz=267,SNR=56
G23K S **S** **06 28 46.2 +2.7**
baz=267
SEW **Seward** **79.67 30** P **P** **06 18 46.4 +1.3**
baz=269
SEW S **S** **06 28 43.5 -0.5**
baz=269
KBZ **Khabaz** **79.67 313** P **P** **06 18 44.3 -1.1**
comp=Z,17nm,0.8s,baz=94,slow=7.7,SNR=38
comp=Z,17nm,0.8s
KBZ **Khabaz** **79.67 313** *i* P **P** **06 18 44.3 -1.1**
KBZ pmax pmax
comp=Z,44nm,1.3s
H23K **Yukon River** **79.79 25** P **P** **06 18 48.1 +2.5**
baz=268
H23K S **S** **06 28 47.6 +2.5**
baz=268
KVAR **Kislovodsk Arr** **79.81 313** P **P** **06 18 45.3 -1.0**
comp=Z,19nm,0.7s,baz=90,slow=20,SNR=5.8
KVAR S **S** **06 28 45.2 -1.2**
comp=Z,1,7nm,0.3s,baz=157,slow=9.4,SNR=2.0
comp=Z,19nm,0.7s
KIV **Kislovodsk** **79.82 313** ⇑P **P** **06 18 45.5 -0.9**
KIV **Kislovodsk** **79.82 313** *i* P **P** **06 18 45.6 -0.8**
SNR=18
KIV **Kislovodsk** **79.82 313** *e* P **P** **06 18 45.6 -0.8**
KIV *e* S **S** **06 28 43.0 -3.4**
KIV pmax pmax
comp=Z,62nm,3.6s
KIV pmax pmax
comp=Z,73nm,1.0s
KIV MLR MLR
comp=Z,2μm,19.0s
KIV **Kislovodsk** **79.82 313** P **P** **06 18 45.5 -0.8**
KIV **Kislovodsk** **79.82 313** P **P** **06 18 46.3 -0.1**
comp=Z,759nmcomp=Z,84nm,0.8s
KIV **Kislovodsk** **79.82 313** P **P** **06 18 46.8 +0.4**
I23K **Minto, Yukon-K** **79.84 25** P **P** **06 18 47.0 +1.1**
I23K IAmb IAmb 06 18 49.5
comp=Z,41nm,0.7s
I23K **Minto, Yukon-K** **79.84 25** P **P** **06 18 47.8 +1.9**
baz=268,SNR=55
I23K S **S** **06 28 45.7 +0.2**
baz=268
SHA1 **Shidzhatmaz** **79.85 313** *i* P **P** **06 18 45.6 -1.1**
E23K **Chandalar** **79.85 22** P **P** **06 18 47.7 +1.6**
E23K IAmb IAmb 06 18 50.0
comp=Z,152nm,1.2s
E23K **Chandalar** **79.85 22** P **P** **06 18 48.8 +2.8**
baz=267,SNR=95
E23K S **S** **06 28 48.2 +2.4**
baz=267
PMR **Palmer** **79.85 29** P **P** **06 18 48.0 +2.0**
PMR **Palmer** **79.85 29** P **P** **06 18 46.9 +0.9**
baz=269,SNR=22
PMR S **S** **06 28 43.4 -2.4**
baz=269
TOLK **Toolik Lake Re** **79.89 22** P **P** **06 18 48.4 +2.2**
baz=267,SNR=34
TOLK S **S** **06 28 48.2 +2.0**
baz=267
NEA2 **Nenana** **79.95 26** P **P** **06 18 47.7 +1.2**
baz=269,SNR=28
NEA2 S **S** **06 28 46.1 -0.8**
baz=269
MCK **McKinley** **79.99 27** P **P** **06 18 47.9 +1.1**
baz=269,SNR=43
MCK S **S** **06 28 46.3 -1.0**
baz=269
WAT1 **Susitna Watana** **80.14 28** P **P** **06 18 48.8 +1.1**
baz=269
WAT1 S **S** **06 28 46.9 -2.2**
baz=269
KNK **Knik Glacier** **80.17 29** IAMs_20 IAMs_20 06 50 31.5
comp=Z,1μm,22.0s
KNK **Knik Glacier** **80.17 29** P **P** **06 18 49.4 +1.5**
baz=270,SNR=16
KNK S **S** **06 28 48.4 -1.0**
baz=270
D24K **Happy Valley** **80.19 21** P **P** **06 18 50.2 +2.5**
baz=268
D24K S **S** **06 28 51.1 +1.9**
baz=268
PWL **Port Wells** **80.23 30** P **P** **06 18 49.2 +1.1**
baz=270,SNR=24
PWL S **S** **06 28 48.7 -1.3**
baz=270
SML **Sawmill** **80.24 29** P **P** **06 18 49.7 +1.5**
baz=270,SNR=31
SML S **S** **06 28 49.8 -0.3**
baz=270
VRH **Novokhopyorsk** **80.26 321** *e* P **P** **06 18 46.8 -1.6**
VRH *e* S **S** **06 28 45.0 -5.5**
VRH pmax pmax
comp=Z,300nm,1.7s
VRH pmax pmax
comp=Z,62nm,0.6s
VRH smax smax
comp=E,100nm,1.4s
E24K **Your Creek** **80.28 22** P **P** **06 18 50.4 +2.1**
baz=268
E24K S **S** **06 28 53.2 +2.9**
baz=268
H24K **Noodor Dome** **80.47 25** P **P** **06 18 51.8 +2.4**
baz=269,SNR=40
H24K S **S** **06 28 54.2 +1.9**
baz=269
COLA **College** **80.47 26** P **P** **06 18 51.1 +1.8**
COLA **College** **80.47 26** P **P** **06 18 49.7 +0.4**
COLA **College** **80.47 26** P **P** **06 18 50.3 +1.0**
baz=270
F24K **Squaw Lake** **80.49 23** P **P** **06 18 52.0 +2.5**
baz=269,SNR=32
F24K S **S** **06 28 55.2 +2.6**
baz=269
CCB **Clear Creek Bu** **80.49 26** IAMs_20 IAMs_20 06 54 39.7
comp=Z,1μm,22.0s
WAT6 **Susitna Watana** **80.52 28** P **P** **06 18 51.1 +1.3**
baz=270,SNR=57
WAT6 S **S** **06 28 52.1 -1.1**
baz=270
M23K **Glacier View** **80.53 29** P **P** **06 18 51.4 +1.6**
baz=270,SNR=17
M23K S **S** **06 28 54.0 +1.0**
baz=270
G24K **Hadweenzic Riv** **80.64 24** P **P** **06 18 52.4 +2.2**
baz=270,SNR=54
G24K S **S** **06 28 57.3 +3.2**
baz=270
POKR **Poker Plat Res** **80.65 25** P **P** **06 18 51.4 +1.1**
baz=270
POKR S **S** **06 28 54.9 +0.7**
baz=270
DHY **Denali Highway** **80.68 27** P **P** **06 18 51.8 +1.1**
baz=270,SNR=28
DHY S **S** **06 28 53.8 -1.1**
baz=270
P23K **Montague Islan** **80.70 31** P **P** **06 18 52.4 +1.7**
baz=271,SNR=15
P23K S **S** **06 28 56.5 +1.7**
baz=271
SCM **Sheep Creek Mo** **80.71 29** P **P** **06 18 52.3 +1.5**
baz=271,SNR=35
SCM S **S** **06 28 54.7 -0.4**
baz=271
GLI **Glacier Island** **80.84 30** P **P** **06 18 52.8 +1.4**
baz=271,SNR=14
GLI S **S** **06 28 55.4 -0.9**
baz=271
HDA **Harding Lake** **80.86 26** P **P** **06 18 51.9 +0.4**
baz=270,SNR=35
ILAR **Eielson Array** **80.89 26** P **P** **06 18 50.6 -1.0**
comp=Z,7.8nm,0.6s,baz=271,slow=5.1,SNR=62
ILAR S **S** **06 28 56.5 -0.2**
comp=Z,0.2nm,0.7s,baz=262,slow=6.6,SNR=1.7
ILAR PKKPbc **PKKPbc** **06 37 29.3 -2.8**
comp=Z,1.7nm,0.9s,baz=91,slow=1.8,SNR=15
ILAR PKPPKP **P'P'df** **06 45 33.6 -1.6**
comp=Z,1.1nm,1.1s,baz=46,slow=2.6,SNR=5.8
ILAR LR LR 06 55 53.4
comp=Z,703nm,20.2s,baz=239,slow=36
comp=Z,7.8nm,0.6s
D25K **Kavik River** **81.06 21** P **P** **06 18 54.6 +2.2**
baz=270
HIN **Hinchinbrook I** **81.14 30** IAMs_20 IAMs_20 06 51 36.4
comp=Z,2μm,21.0s
FID **Port Fidalgo** **81.14 30** IAMs_20 IAMs_20 06 50 57.6
comp=Z,1μm,22.0s
G25K **Bearman Lake** **81.19 24** P **P** **06 18 55.7 +2.6**
baz=271,SNR=35
LABN **Labinsk** **81.19 314** *e* P **P** **06 18 51.9 -1.7**
LABN *e**PP **sP** **06 19 10.9 -0.4**
LABN *e*S **S** **06 28 55.1 -5.5**
LABN pmax pmax
comp=Z,29nm,1.0s
LABN MLR MLR
comp=Z,2μm,19.0s
LABN MLR MLR
comp=E,2μm,20.0s
KLMR **Klimovskoe** **81.25 330** *e* P **P** **06 18 51.7 -1.8**
KLMR pmax pmax
comp=Z,292nm,1.6s
KLMR MLR MLR
comp=Z,1μm,18.0s
Q23K **Middleton Isla** **81.25 31** P **P** **06 18 55.5 +2.0**
baz=272
ERBR **Yeremizino-Bor** **81.31 315** *e* P **P** **06 18 53.0 -1.2**
ERBR *e**PP **sP** **06 19 12.2 +0.3**
ERBR *e*S **S** **06 28 57.7 -4.0**
ERBR pmax pmax
comp=Z,99nm,1.1s
ERBR MLR MLR
comp=N,852nm,15.0s
ERBR MLR MLR
comp=Z,2μm,20.0s
ERBR MLR MLR
comp=E,4μm,22.0s
F25K **Christian River** **81.35 23** P **P** **06 18 56.6 +2.5**
baz=271,SNR=40
E25K **Arctic Village** **81.37 22** IAMs_20 IAMs_20 06 53 05.6
comp=Z,1μm,22.0s
E25K **Arctic Village** **81.37 22** P **P** **06 18 56.7 +2.6**
baz=271,SNR=66
K24K **Donnelly Dome** **81.39 27** IAMs_20 IAMs_20 06 57 42.4
comp=Z,1μm,19.0s
K24K **Donnelly Dome** **81.39 27** P **P** **06 18 55.6 +1.3**
baz=272
KLU **Klutina** **81.39 29** P **P** **06 18 56.0 +1.5**
baz=272,SNR=17
PRP **Porcupine Dome** **81.45 25** IAMs_20 IAMs_20 06 52 54.9
comp=Z,1μm,22.0s
PRP **Porcupine Dome** **81.45 25** P **P** **06 18 55.1 +0.4**
baz=272,SNR=15
DIV **Divide** **81.48 29** IAMs_20 IAMs_20 06 48 51.9
comp=Z,1μm,22.0s
EYAK **Cordova Ski Ar** **81.51 30** P **P** **06 18 56.8 +1.8**
baz=272,SNR=8.7
J25K **Salcha River,** **81.54 26** P **P** **06 18 55.6 +0.5**
baz=272,SNR=17
PAX **Paxson** **81.55 27** P **P** **06 18 57.0 +1.7**
baz=272,SNR=29
C26K **Camden Bay** **81.56 20** P **P** **06 18 57.7 +2.6**
baz=272,SNR=33
ADZR **Andozero** **81.71 333** *e* P **P** **06 18 54.7 -1.2**
ADZR pmax pmax
comp=Z,102nm,1.4s
HARP **HAARP** **81.72 28** P **P** **06 18 58.3 +2.3**
baz=272,SNR=5.7
VSLR **Vesyoloye** **81.77 313** *i* P **P** **06 18 56.0 -0.7**
VSLR pmax pmax
comp=Z,75nm,0.8s
VORD **Divnogorie** **81.80 320** *e* P **P** **06 18 53.1 -3.5**
VORD pmax pmax
comp=Z,60nm,0.9s
RIDG **Independent Ri** **81.80 27** P **P** **06 18 58.2 +1.7**
baz=272,SNR=38
VORR **Voronezh** **81.81 321** *e* P **P** **06 18 55.3 -1.4**
VORR *e*S **S** **06 29 10.5 +3.8**
VORR pmax pmax
comp=Z,99nm,0.4s
VORR pmax pmax
comp=Z,100nm,0.4s
VORR smax smax
comp=N,200nm,0.5s
VSR **Storozhevoye** **81.86 321** *e* P **P** **06 18 55.2 -1.8**
VSR *e*S **S** **06 29 07.7 +0.5**
VSR pmax pmax
comp=Z,54nm,0.8s
VSR pmax pmax
comp=Z,100nm,0.9s
VSR smax smax
comp=N,100nm,1.2s
VSR MLR MLR
comp=Z,1μm,26.0s
F26K **Sheenjek River** **81.92 23** IAMs_20 IAMs_20 06 52 46.2
comp=Z,1μm,22.0s
F26K **Sheenjek River** **81.92 23** P **P** **06 18 59.3 +2.2**
baz=273,SNR=29
LPSR **Galich'ya Gora** **81.93 322** *e* P **P** **06 18 55.5 -1.8**
LPSR *e*S **S** **06 29 01.1 -6.8**
LPSR pmax pmax
comp=Z,100nm,1.0s
LPSR pmax pmax
comp=Z,92nm,0.8s
LPSR smax smax
comp=N,200nm,1.4s
LPSR MLR MLR
comp=Z,1μm,18.0s
SOC **Sochi** **81.99 313** *e* P **P** **06 18 56.3 -1.5**
SOC *e* 06 21 59.8
SOC *e*PPP PPP 06 23 58.2
SOC *e*S **S** **06 29 05.4 -3.4**
SOC *e*SS **SS** **06 34 29.5 +1.4**
SOC *e*SSS SSS 06 37 49.4
SOC pmax pmax
comp=Z,35nm,0.7s
SOC MLR MLR
comp=Z,1μm,18.0s
C27K **Jago River** **81.99 21** P **P** **06 18 59.6 +2.3**
baz=273,SNR=48
N25K **Chitina, Valde** **82.02 29** P **P** **06 18 59.9 +2.2**
baz=273,SNR=19
RAGM **Ragged Mountai** **82.05 30** IAMs_20 IAMs_20 06 54 16.1
comp=Z,2μm,20.0s
BMRM **Bremner River** **82.05 29** IAMs_20 IAMs_20 06 50 51.2
comp=Z,2μm,22.0s
BMRM **Bremner River** **82.05 29** P **P** **06 18 59.8 +1.9**
baz=273,SNR=22
G26K **Porcupine Rive** **82.10 23** P **P** **06 19 00.6 +2.8**
baz=273
KTUT **Trabzon** **82.14 310** ⇓P **P** **06 18 58.2 -0.5**
KAIM **Kayak Island** **82.20 31** P **P** **06 19 01.1 +2.5**
baz=273,SNR=13
ATD **Arta Tunnel** **82.29 281** LR LR 06 54 32.3
comp=Z,8.6nm,21.2s,baz=68,slow=35
ATD **Arta Tunnel** **82.29 281** P **P** **06 19 00.1 +0.1**
GLB **Gilahina Butte** **82.41 29** IAMs_20 IAMs_20 06 52 38.5
comp=Z,1μm,22.0s
I26K **Coal Creek Min** **82.45 25** IAMs_20 IAMs_20 06 53 02.4
comp=Z,1μm,22.0s
I26K **Coal Creek Min** **82.45 25** P **P** **06 19 01.1 +1.3**
baz=274
MOS **Moscow** **82.50 325** *e* P **P** **06 18 58.6 -1.6**
MOS *e**PP **pP** **06 19 12.8 -0.1**
MOS *e* 06 22 08.4
MOS *e*S **S** **06 29 13.2 -0.3**
MOS pmax pmax
comp=Z,94nm,0.7s
MOS MLR MLR
comp=Z,2μm,20.0s
L26K **Log Cabin Wild** **82.52 27** IAMs_20 IAMs_20 06 52 45.3
comp=Z,1μm,22.0s
L26K **Log Cabin Wild** **82.52 27** P **P** **06 19 02.4 +2.1**
baz=274,SNR=19
BERG **Berg Lake** **82.53 30** IAMs_20 IAMs_20 06 54 26.9
comp=Z,1μm,20.0s
VRDI **Verde Repeater** **82.59 29** IAMs_20 IAMs_20 06 55 08.5
comp=Z,1μm,21.0s
M26K **Nabesna, AK** **82.72 28** IAMs_20 IAMs_20 06 57 35.8
comp=Z,991nm,20.0s
M26K **Nabesna, AK** **82.72 28** P **P** **06 19 03.3 +2.0**
baz=274,SNR=25
CRQM **Cirque** **82.78 30** IAMs_20 IAMs_20 06 56 42.1
comp=Z,999nm,21.0s
MCARA **McCarthy VSAT** **82.79 29** IAMs_20 IAMs_20 06 55 15.6
comp=Z,1μm,21.0s
MCARA **McCarthy VSAT** **82.79 29** P **P** **06 19 03.7 +2.0**
baz=274,SNR=8.3
CRQE **Cirque** **82.80 30** P **P** **06 19 03.8 +1.9**
baz=274,SNR=16
ABPO **Ambohimpanom** **82.84 250** IAMs_20 IAMs_20 06 52 10.2
comp=Z,1μm,21.0s
E27K **Coleen River** **82.85 22** IAMs_20 IAMs_20 06 54 12.8
comp=Z,1μm,22.0s
E27K **Coleen River** **82.85 22** P **P** **06 19 04.3 +2.4**
baz=275,SNR=54
TGL **Tana Glacier** **82.93 30** IAMs_20 IAMs_20 06 56 36.5
comp=Z,958nm,20.0s
G27K **Doyon Strip** **82.95 24** P **P** **06 19 04.7 +2.3**
baz=275,SNR=34
LVZ **Lovozero** **82.95 338** *i* P **P** **06 19 01.3 -1.1**
LVZ pmax pmax
comp=Z,243nm,1.5s
LVZ **Lovozero** **82.95 338** IAMs_20 IAMs_20 07 00 10.8
comp=Z,1μm,18.0s
LVZ **Lovozero** **82.95 338** P **P** **06 19 02.4 0.0**
comp=Z,2μmcomp=Z,155nm,1.4s
LVZ **Lovozero** **82.95 338** P **P** **06 19 02.3 0.0**
LVZ pP **pP** **06 19 11.8 -3.4**
D27M **Malcolm River** **82.99 21** P **P** **06 19 05.1 +2.5**
baz=275
K27K **Chicken** **83.01 26** IAMs_20 IAMs_20 06 53 27.2
comp=Z,1μm,22.0s
H27K **Steamboat Moun** **83.05 24** P **P** **06 19 05.5 +2.5**
baz=275,SNR=52
I27K **Kandik River** **83.07 25** P **P** **06 19 05.7 +2.6**
baz=275,SNR=178
OBN **Obninsk** **83.14 325** ⇑P **P** **06 19 02.5 -1.0**
OBN **Obninsk** **83.14 325** P **P** **06 19 02.5 -1.0**
comp=Z,30nm,0.5s,baz=99,slow=6.8,SNR=16
OBN LR LR 06 58 17.0
comp=Z,2μm,18.9s,baz=83,slow=37
comp=Z,30nm,0.5s
OBN **Obninsk** **83.14 325** *c* *i* P **P** **06 19 02.1 -1.4**
OBN *e* 06 19 08.8
OBN *e**PP **sP** **06 19 21.4 +0.3**
OBN *e* 06 22 14.5

OBN *e*PPP PPP 06 24 06.2
OBN *e*S **S** **06 29 17.3 -2.8**
OBN *e*SS **SS** **06 34 43.4 -1.3**
OBN *e*SSS SSS 06 38 08.3
OBN pmax pmax
comp=Z,133nm,1.6s
OBN MLR MLR
comp=Z,2µm,19.0s
OBN **Obninsk** **83.14 325** IAMs_20 IAMs_20 06 58 04.7
comp=Z,2µm,19.0s
L27K **Beaver Creek,** **83.21 27** P **P** **06 19 06.3 +2.5**
baz=275,SNR=69
M27K **Edge Creek, AK** **83.25 28** IAMs_20 IAMs_20 06 57 48.7
comp=Z,1µm,21.0s
M27K **Edge Creek, AK** **83.25 28** P **P** **06 19 06.5 +2.3**
baz=275,SNR=31
ARPR **Arapgir-MALATY** **83.40 308** IAMs_20 IAMs_20 07 00 47.9
comp=Z,2µm,21.0s
APA **Apatity** **83.45 337** *e*P **P** **06 19 03.6 -1.3**
APA *e* 06 22 16.1
APA *e*S **S** **06 29 23.2 +0.3**
APA *e* 06 30 11.2
APA *e*SS **SS** **06 34 49.9 +1.2**
APA pmax pmax
comp=Z,84nm,1.2s
GRNC **Granite Creek** **83.46 30** IAMs_20 IAMs_20 06 52 39.4
comp=Z,1µm,21.0s
YAH **Yahtse** **83.50 30** IAMs_20 IAMs_20 06 53 07.5
comp=Z,2µm,22.0s
ANN **Anapa** **83.52 314** *e*P **P** **06 19 04.4 -1.3**
ANN *e*PP **sP** **06 19 23.1 -0.4**
ANN *e*S **S** **06 29 19.2 -5.2**
ANN pmax pmax
comp=Z,130nm,0.8s
ANN MLR MLR
comp=E,991nm,20.0s
ANN MLR MLR
comp=N,893nm,21.0s
ANN MLR MLR
comp=Z,1µm,19.0s
F28M **Old Crow** **83.56 23** P **P** **06 19 07.6 +2.1**
baz=276,SNR=103
E28M **Babbage River** **83.57 22** IAMs_20 IAMs_20 06 54 36.7
comp=Z,1µm,22.0s
E28M **Babbage River** **83.57 22** P **P** **06 19 08.0 +2.5**
baz=277,SNR=93
BVCY **Beaver Creek** **83.71 28** P **P** **06 19 09.0 +2.5**
baz=276,SNR=19
D28M **Stokes Point** **83.77 21** P **P** **06 19 08.8 +2.3**
baz=277,SNR=5.4
I28M **Miner Creek** **83.78 25** P **P** **06 19 09.2 +2.4**
baz=277,SNR=284
VOI **Vohitsoka** **83.81 247** P **P** **06 19 07.9 +0.1**
LOGN **Logan Glacier** **83.82 30** IAMs_20 IAMs_20 06 51 43.8
comp=Z,1µm,22.0s
YUK3 **Moose Creek** **83.97 29** P **P** **06 19 10.3 +2.3**
baz=277,SNR=70
DAWY **Dawson** **84.18 26** P **P** **06 19 10.9 +2.1**
baz=277,SNR=72
E29M **Blow River** **84.19 22** P **P** **06 19 10.4 +1.7**
baz=278,SNR=53
O28M **Mount Upton** **84.22 30** IAMs_20 IAMs_20 06 53 55.5
comp=Z,1µm,22.0s
O28M **Mount Upton** **84.22 30** P **P** **06 19 11.8 +2.5**
baz=277,SNR=16
PCA **Pinnacle** **84.27 30** IAMs_20 IAMs_20 06 51 51.9
comp=Z,1µm,22.0s
PINM **Pinnacle** **84.27 30** P **P** **06 19 11.7 +2.4**
baz=277,SNR=15
H29M **Whitestone** **84.32 24** P **P** **06 19 11.3 +1.9**
baz=278,SNR=115
G29M **Pine Creek** **84.36 23** P **P** **06 19 11.5 +1.9**
baz=278,SNR=147
YUK8 **Steele Glacier** **84.36 29** P **P** **06 19 12.4 +2.3**
baz=277,SNR=30
I29M **Ogilvie Camp,** **84.47 25** P **P** **06 19 12.3 +2.1**
baz=278,SNR=116
HOPEN **Hopen** **84.51 347** *e*P **P** **06 19 10.6 +0.4**
HOPEN IAmb IAmb 06 19 11.4
comp=Z,182nm,1.5s
HOPEN *e*S **S** **06 29 35.7 +2.5**
VADS **Vadso** **84.55 340** *e*P **P** **06 19 10.0 -0.5**
VADS IAmb IAmb 06 19 11.6
comp=Z,74nm,0.6s
VADS *e*S **S** **06 29 34.9 +1.1**
J29N **Klondike Camp** **84.64 26** IAMs_20 IAMs_20 06 54 48.2
comp=Z,1µm,22.0s
J29N **Klondike Camp** **84.64 26** P **P** **06 19 13.6 +2.5**
baz=278
BRWY **Burwash Landin** **84.70 29** P **P** **06 19 13.9 +2.4**
baz=278
PNL **Peninsula** **84.75 31** P **P** **06 19 14.2 +2.5**
baz=278,SNR=14
M29M **Somme Creek** **84.82 28** IAMs_20 IAMs_20 06 57 15.1
comp=Z,973nm,22.0s
M29M **Somme Creek** **84.82 28** P **P** **06 19 14.7 +2.6**
baz=278,SNR=41
L29M **L29M** **84.87 27** IAMs_20 IAMs_20 06 55 11.5
comp=Z,1µm,22.0s
L29M **L29M** **84.87 27** P **P** **06 19 15.1 +2.8**
baz=279,SNR=96
YUK4 **Talbot Arm** **84.89 29** P **P** **06 19 15.3 +2.6**
baz=278,SNR=8.4
EPYK **Eagle Plains** **84.96 24** P **P** **06 19 14.1 +1.5**
baz=280,SNR=56
K29M **Barlow Dome** **85.03 26** IAMs_20 IAMs_20 06 54 25.6
comp=Z,962nm,22.0s
K29M **Barlow Dome** **85.03 26** P **P** **06 19 15.5 +2.3**
baz=279,SNR=35
K29M S **S** **06 29 41.5 +2.4**
baz=279
G30M **tAoh Zraii Nji** **85.05 23** P **P** **06 19 14.5 +1.4**
baz=280,SNR=53
O29M **Mount Kennedy** **85.07 30** IAMs_20 IAMs_20 06 51 57.1
comp=Z,1µm,21.0s
O29M **Mount Kennedy** **85.07 30** P **P** **06 19 15.9 +2.4**
baz=278,SNR=8.8
O29M S **S** **06 29 42.8 +3.1**
baz=278
YUK6 **Outpost Mounta** **85.08 29** P **P** **06 19 16.2 +2.5**
baz=279,SNR=13
YUK6 S **S** **06 29 43.1 +3.2**
baz=279
F30M **Barrier River** **85.11 22** P **P** **06 19 15.3 +2.0**
baz=280,SNR=41
I30M **Mount Dempster** **85.29 25** IAMs_20 IAMs_20 06 55 21.4
comp=Z,987nm,22.0s
I30M **Mount Dempster** **85.29 25** P **P** **06 19 16.2 +1.8**
baz=280,SNR=12
I30M S **S** **06 29 43.6 +2.0**
baz=280
ASF **Jabal al Asfar** **85.32 302** LR LR 07 02 08.5
comp=Z,1µm,21.8s,baz=28,slow=39
ASF **Jabal al Asfar** **85.32 302** P **P** **06 19 16.0 +0.7**
MSF **Maaselka** **85.41 336** P **P** **06 19 14.0 -0.9**
KEV **Kevo** **85.42 340** P **P** **06 19 14.4 -0.4**
KEV **Kevo** **85.42 340** IAMs_20 IAMs_20 07 03 25.1
comp=Z,1µm,18.0s
J30M **Hart River** **85.42 25** IAMs_20 IAMs_20 06 59 42.9
comp=Z,903nm,20.0s
J30M **Hart River** **85.42 25** P **P** **06 19 17.1 +2.0**
baz=280,SNR=40
J30M S **S** **06 29 46.1 +3.2**
baz=280
HYT **Haines Junctio** **85.52 29** P **P** **06 19 18.0 +2.3**
baz=279,SNR=21
HYT S **S** **06 29 45.8 +1.8**
baz=279
M30M **Minto, Yukon** **85.56 27** IAMs_20 IAMs_20 06 57 26.8
comp=Z,973nm,22.0s
M30M **Minto, Yukon** **85.56 27** P **P** **06 19 18.0 +2.2**
baz=280,SNR=44
M30M S **S** **06 29 49.2 +5.0**
baz=280
P29M **Windy Craggy** **85.59 30** IAMs_20 IAMs_20 06 51 58.9
comp=Z,1µm,22.0s
P29M **Windy Craggy** **85.59 30** P **P** **06 19 18.3 +2.4**
baz=279,SNR=12
P29M S **S** **06 29 49.6 +5.1**
baz=279
N30M **Aishikik Lake** **85.61 29** IAMs_20 IAMs_20 06 53 09.2
comp=Z,1µm,22.0s
N30M **Aishikik Lake** **85.61 29** P **P** **06 19 18.6 +2.5**
baz=280,SNR=24
N30M S **S** **06 29 49.2 +4.4**
baz=280
BEIL **Beino** **85.62 304** *e*P **P** **06 19 16.9 +0.2**

INK **Inuvik** **85.81 22** LR LR 07 01 49.9
comp=Z,409nm,18.9s,baz=271,slow=39
INK **Inuvik** **85.81 22** P **P** **06 19 18.2 +1.5**
baz=282,SNR=31
INK S **S** **06 29 47.7 +1.5**
baz=282
G31M **Satah River** **85.81 23** P **P** **06 19 18.0 +1.2**
baz=282,SNR=34
G31M S **S** **06 29 47.5 +1.2**
baz=282
SPA0 **Spitsbergen Ar** **85.83 349** *e*P **P** **06 19 16.3 -0.4**
SPA0 IAmb IAmb 06 19 17.5
comp=Z,125nm,0.9s
SPA0 *e* 06 29 47.3
SPITS **Spitsbergen Ar** **85.83 349** P **P** **06 19 16.2 -0.5**
comp=Z,60nm,0.7s,baz=79,slow=7.5,SNR=62
SPITS LR LR 07 01 53.6
comp=Z,1µm,21.5s,baz=57,slow=39
comp=Z,60nm,0.7s
HWQ **Hawqa** **85.85 304** *e*P **P** **06 19 17.8 -0.1**
SIM **Simferopol'** **85.85 315** *e*P **P** **06 19 16.8 -0.7**
SIM pmax pmax
comp=Z,221nm,0.9s
P30M **Million Dollar** **85.90 30** P **P** **06 19 19.5 +2.0**
baz=280
P30M S **S** **06 29 52.0 +4.4**
baz=280
F31M **Tsiigehtchic** **85.91 22** P **P** **06 19 18.4 +1.1**
baz=282,SNR=35
F31M S **S** **06 29 48.5 +1.3**
baz=282
HSUJ **Al Zarqa** **85.92 302** P **P** **06 19 19.2 +1.0**
ZAHL **Zahle** **85.95 303** *e*P **P** **06 19 18.4 0.0**
ARA0 **ARCESS Array S** **85.98 340** *e*P **P** **06 19 16.9 -0.8**
ARA0 IAmb IAmb 06 19 18.5
comp=Z,105nm,0.7s
ARA0 *e* 06 29 47.7
ARCES **ARCESS Array B** **85.98 340** P **P** **06 19 16.5 -1.2**
comp=Z,93nm,0.7s,baz=76,slow=4.9,SNR=171
ARCES S **SKSac** **06 29 36.8 -2.9**
comp=Z,1.5nm,0.9s,baz=50,slow=21,SNR=1.7
ARCES LR LR 07 03 52.4
comp=Z,952nm,18.1s,baz=80,slow=40
comp=Z,93nm,0.7s
ARCES **ARCESS Array B** **85.98 340** P **P** **06 19 16.6 -1.1**
ARCES pmax pmax
comp=Z,96nm,0.7s
ARCES **ARCESS Array B** **85.98 340** P **P** **06 19 16.6 -1.1**
H31M **Peel River** **86.01 24** P **P** **06 19 19.3 +1.3**
baz=282,SNR=19
H31M S **S** **06 29 49.8 +1.4**
baz=282
RCY **Rachaya** **86.04 303** *e*P **P** **06 19 19.1 +0.2**
SGF **Sodankyl** **86.09 338** P **P** **06 19 17.3 -0.9**
SHBL **Chebaa** **86.13 303** *e*P **P** **06 19 19.3 -0.1**
BHL **Bhannes** **86.14 304** *e*P **P** **06 19 19.2 -0.1**
SWQJ **Swaqa** **86.14 301** P **P** **06 19 20.7 +1.3**
QRWL **Qaraoun** **86.16 303** *e*P **P** **06 19 19.2 -0.2**
O30N **Mendenhall** **86.21 29** IAMs_20 IAMs_20 06 52 46.0
comp=Z,943nm,22.0s
O30N **Mendenhall** **86.21 29** P **P** **06 19 21.1 +2.1**
baz=280,SNR=13
O30N S **S** **06 29 55.9 +5.3**
baz=280
GEM **Giv'at Ha'Em** **86.22 303** P **P** **06 19 20.5 +0.9**
N31M **Braeburn, Yuko** **86.22 28** IAMs_20 IAMs_20 06 55 28.4
comp=Z,1µm,21.0s
N31M **Braeburn, Yuko** **86.22 28** P **P** **06 19 21.4 +2.3**
baz=281,SNR=23
N31M S **S** **06 29 55.2 +4.5**
baz=281
DQRL **Deir Qamar** **86.23 303** *e*P **P** **06 19 19.5 -0.3**
PLBC **Pleasant Camp** **86.31 31** P **P** **06 19 21.4 +1.9**
baz=280,SNR=7.3
PLBC S **S** **06 29 56.4 +4.9**
baz=280
KBS **Kingsbay** **86.34 350** P **P** **06 19 19.2 0.0**
KBS **Kingsbay** **86.34 350** *e*P **P** **06 19 19.0 -0.3**
KBS IAmb IAmb 06 19 19.6
comp=Z,38nm,0.9s
KBS *e*PP **PP** **06 22 41.0 +0.7**
KBS *e* 06 29 52.0
KBS **Kingsbay** **86.34 350** IAMs_20 IAMs_20 07 02 50.1
comp=Z,1µm,19.0s
KBS **Kingsbay** **86.34 350** *i*P **P** **06 19 19.2 0.0**
BZK **Bozkurt** **86.34 312** ⇑P **P** **06 19 19.2 -0.8**
BZK **Bozkurt** **86.34 312** P **P** **06 19 19.3 -0.7**
comp=Z,2µmcomp=Z,143nm,0.9s
QRNJ **Al-Qirein** **86.41 302** P **P** **06 19 21.6 +1.1**
MMAI **Mount Meron Ar** **86.46 303** P **P** **06 19 22.1 +1.2**
comp=Z,50nm,0.7s,baz=59,slow=12,SNR=23
MMAI LR LR 07 03 46.8
comp=Z,685nm,20.2s,baz=70,slow=40
comp=Z,50nm,0.7s
BJO1 **Bjornoya** **86.53 345** *e*SKSac **SKSac** **06 29 43.0 +0.1**
GHAJ **Ghor Haditha** **86.55 301** IAMs_20 IAMs_20 07 02 17.2
comp=Z,1µm,22.0s
GHAJ **Ghor Haditha** **86.55 301** P **P** **06 19 21.7 +0.5**
HSNJ **Maan** **86.59 300** P **P** **06 19 22.6 +0.9**
LISJ **El Lisan** **86.64 301** P **P** **06 19 22.4 +0.8**
S31K **Pelican** **86.65 32** IAMs_20 IAMs_20 06 54 34.0
comp=Z,953nm,21.0s
S31K **Pelican** **86.65 32** P **P** **06 19 23.5 +2.4**
baz=281
S31K S **S** **06 29 58.6 +3.8**
baz=281
PPT **Papeete** **86.67 108** LR LR 06 51 41.9
comp=Z,337nm,21.3s,baz=266,slow=31
FURI **Furi** **86.70 278** IAMs_20 IAMs_20 06 58 39.6
comp=Z,978nm,20.0s
MSBI **Mazada** **86.73 301** P **P** **06 19 22.7 +0.6**
M31M **Drury Creek, Y** **86.73 28** P **P** **06 19 22.2 +0.7**
M31M IAmb IAmb 06 19 34.5
comp=Z,88nm,1.9s
M31M IAMs_20 IAMs_20 06 53 55.7
comp=Z,1µm,22.0s
M31M **Drury Creek, Y** **86.73 28** P **P** **06 19 23.5 +2.0**
baz=282,SNR=11
M31M S **S** **06 29 59.3 +3.7**
baz=282
KIRS **Kirsehir-Merke** **86.81 309** ⇑P **P** **06 19 21.4 -1.1**
WHY **Whitehorse** **86.81 29** P **P** **06 19 23.9 +1.9**
baz=282,SNR=14
WHY S **S** **06 30 02.1 +5.5**
baz=282
R31K **City Hall, Gus** **86.82 31** P **P** **06 19 23.6 +1.7**
baz=281
R31K S **S** **06 30 01.3 +4.9**
baz=281
SKAG **Skagway** **86.83 30** P **P** **06 19 24.2 +2.2**
baz=281
SKAG S **S** **06 30 01.6 +5.1**
baz=281
OUL **Oulu** **86.86 335** P **P** **06 19 21.1 -0.9**
KTK1 **Kautokeino** **86.89 339** *e*P **P** **06 19 20.6 -1.6**
KTK1 IAmb IAmb 06 19 21.8
comp=Z,46nm,1.0s
KTK1 *e*PP **PP** **06 22 43.9 -1.2**
YTIR **Yattir** **86.93 301** P **P** **06 19 23.9 +0.7**
BR131 **Keskin Array S** **86.93 310** *e*P **P** **06 19 21.3 -1.9**
BR131 **Keskin Array S** **86.93 310** P **P** **06 19 21.1 -2.0**
SNR=25
BRTR **Keskin Array B** **86.93 310** P **P** **06 19 21.8 -1.3**
comp=Z,16nm,0.7s,baz=113,slow=4.6,SNR=96
BRTR PP **PP** **06 22 48.2 +1.8**
comp=Z,4.4nm,1.0s,baz=94,slow=5.1,SNR=5.6
BRTR S **SKSac** **06 29 43.8 -3.3**
comp=Z,0.3nm,0.8s,baz=128,slow=9.3,SNR=2.1
BRTR PKKPbc **PKKPbc** **06 37 15.9 -1.4**
comp=Z,0.5nm,0.6s,baz=250,slow=1.5,SNR=4.4
BRTR LR LR 07 03 19.3
comp=Z,632nm,21.8s,baz=62,slow=39
comp=Z,16nm,0.7s
BRTR **Keskin Array B** **86.93 310** *i*P **P** **06 19 21.2 -1.9**
BRTR pmax pmax
comp=Z,15nm,0.7s
BR104 **Keskin Array S** **86.93 310** P **P** **06 19 21.1 -2.0**
comp=Z,209nmcomp=Z,28nm,1.0s
BR106 **Keskin Array S** **86.95 310** P **P** **06 19 21.3 -1.9**
comp=Z,196nmcomp=Z,24nm,0.8s
AMAZ **Amatzia** **87.07 301** P **P** **06 19 24.5 +0.7**
CIDE **Kastamonu/Cide** **87.13 312** ⇑P **P** **06 19 22.4 -1.4**
HRFI **Mount Harif** **87.18 300** P **P** **06 19 24.7 +0.3**
AQBJ **Aqaba** **87.21 299** P **P** **06 19 25.0 +0.5**
BESE **Bessie Mountai** **87.25 31** IAMs_20 IAMs_20 06 54 56.6
comp=Z,1µm,22.0s

SIT **Sitka** **87.30 33** P **P** **06 19 26.5 +2.2**
baz=281
SIT S **S** **06 30 06.9 +5.8**
baz=281
EIL **Elat** **87.31 299** LR LR 07 05 11.0
comp=Z,1µm,19.5s,baz=82,slow=40
EIL **Elat** **87.31 299** P **P** **06 19 25.2 +0.2**
R32K **Eaglecrest** **87.48 32** P **P** **06 19 27.4 +2.2**
baz=282
R32K S **S** **06 30 06.9 +4.1**
baz=282
A36M **Sachs Harbour** **87.51 17** P **P** **06 19 25.9 +0.9**
baz=290,SNR=11
A36M S **S** **06 30 03.8 +1.2**
baz=290
N32M **Quiet Lake** **87.57 29** IAMs_20 IAMs_20 06 55 35.9
comp=Z,931nm,22.0s
N32M **Quiet Lake** **87.57 29** P **P** **06 19 27.6 +1.9**
baz=283
N32M S **S** **06 30 08.1 +4.4**
baz=283
KZIT **Kziot** **87.60 301** P **P** **06 19 26.6 +0.2**
P32M **Atlin** **87.61 30** IAMs_20 IAMs_20 06 55 33.1
comp=Z,2µm,21.0s
P32M **Atlin** **87.61 30** P **P** **06 19 27.3 +1.5**
baz=283
P32M S **S** **06 30 08.1 +3.9**
baz=283
S32K **Killisnoo** **87.62 32** P **P** **06 19 27.1 +1.3**
baz=282
S32K S **S** **06 30 08.7 +4.5**
baz=282
FINES **FINESS Array B** **87.62 332** P **P** **06 19 24.0 -1.8**
comp=Z,72nm,0.6s,baz=77,slow=5.8,SNR=180
FINES S **SKSac** **06 29 54.9 +4.9**
comp=Z,2.6nm,1.1s,baz=28,slow=24,SNR=1.4
FINES LR LR 07 02 37.8
comp=Z,2µm,20.0s,baz=77,slow=38
comp=Z,72nm,0.6s
FINES **FINESS Array B** **87.62 332** *i*P **P** **06 19 24.2 -1.6**
FINES pmax pmax
comp=Z,72nm,0.6s
JETT **Jettan, Norway** **87.70 340** *e*P **P** **06 19 24.8 -1.3**
JETT IAmb IAmb 06 19 26.1
comp=Z,122nm,0.7s
CSS **Mathiatis** **87.89 305** P **P** **06 19 26.2 -1.5**
comp=Z,1µmcomp=Z,110nm,0.7s
P33M **Teslin, Yukon** **87.91 29** P **P** **06 19 28.2 +0.9**
P33M IAMs_20 IAMs_20 06 55 41.0
comp=Z,2µm,22.0s
P33M **Teslin, Yukon** **87.91 29** P **P** **06 19 28.9 +1.6**
baz=283,SNR=8.1
P33M S **S** **06 30 11.6 +4.6**
baz=283
VSU **Vasula** **87.97 329** *i*P **P** **06 19 25.6 -1.9**
VSU pmax pmax
comp=Z,243nm,0.9s
MMPY **Sheldon Lake,** **88.05 27** P **P** **06 19 29.9 +2.0**
baz=285,SNR=12
MMPY S **S** **06 30 11.5 +3.2**
baz=285
VNDA **Vanda** **88.12 173** P **P** **06 19 27.4 -0.3**
comp=Z,37nm,1.1s,baz=319,slow=5.2,SNR=126
VNDA S **SKSac** **06 29 51.3 -1.0**
comp=Z,0.6nm,0.8s,baz=285,slow=20,SNR=3.2
VNDA LR LR 06 58 40.0
comp=Z,675nm,20.0s,baz=340,slow=35
comp=Z,37nm,1.1s
MAW **Mawson** **88.15 200** P **P** **06 19 27.1 -0.9**
comp=Z,4.7nm,0.5s,baz=61,slow=8.9,SNR=12
MAW LR LR 06 55 12.4
comp=Z,563nm,21.0s,baz=56,slow=33
comp=Z,4.7nm,0.5s
AK08 **Malin Array Si** **88.16 321** P **P** **06 19 26.8 -1.7**
AK03 **Malin Array Si** **88.16 321** P **P** **06 19 26.4 -2.2**
AKASG **Malin Array Be** **88.16 321** P **P** **06 19 26.4 -2.2**
comp=Z,31nm,0.8s,baz=54,slow=5.4,SNR=68
AKASG S **S** **06 30 00.8 -8.8**
comp=Z,0.1nm,0.3s,baz=78,slow=8.8,SNR=6.0
AKASG LR LR 07 03 35.0
comp=Z,1µm,19.5s,baz=64,slow=39
comp=Z,31nm,0.8s
AKASG **Malin Array Be** **88.16 321** *i*P **P** **06 19 26.6 -2.0**
AKASG pmax pmax
comp=Z,34nm,0.7s
AKBB **Malin Array Si** **88.16 321** *i*P **P** **06 19 26.9 -1.7**
AKBB pmax pmax
comp=Z,50nm,0.9s
AKBB **Malin Array Si** **88.16 321** P **P** **06 19 26.7 -1.9**
TRO **Tromso** **88.17 341** *e*P **P** **06 19 26.9 -1.3**
TRO IAmb IAmb 06 19 27.6
comp=Z,95nm,1.5s
TRO *e*SKSac **SKSac** **06 29 52.1 -0.9**
AK01 **Malin Array Si** **88.17 321** P **P** **06 19 26.7 -1.9**
KIEV **Kiev** **88.17 321** ⇑P **P** **06 19 27.3 -1.3**
KIEV **Kiev** **88.17 321** *i*P **P** **06 19 27.1 -1.5**
SNR=9.2
KIEV **Kiev** **88.17 321** P **P** **06 19 27.3 -1.3**
AK02 **Malin Array Si** **88.18 321** P **P** **06 19 26.7 -2.0**
AK05 **Malin Array Si** **88.19 321** P **P** **06 19 26.9 -1.8**
MNK **Minsk** **88.20 325** *i*P **P** **06 19 28.3 -0.4**
comp=E,40nm,0.8s
MNK *i*P **P** **06 19 28.3 -0.4**
comp=N,57nm,1.0s
MNK *i*P **P** **06 19 28.3 -0.4**
comp=Z,120nm,0.9s,baz=78
MNK *i*pP **sP** **06 19 47.6 +1.0**
MNK *i*PP **PP** **06 22 57.9 +1.9**
MNK *i*PPP PPP 06 24 48.5
MNK *i*S **SKSac** **06 29 50.0 -3.8**
MNK *i*sS **pS** **06 30 24.8 -1.6**
MNK *i*SS **SS** **06 35 59.0 -0.1**
MNK *i*SSS SSS 06 39 33.3
MNK *i*LQ LQ 06 53 22.6
MNK *i*LQ LQ 06 53 27.2
MNK *i*LR LR 06 59 31.4
MNK *i*LRM MLR 07 01 33.0
comp=N,2µm,18.4s
MNK *i*LRM MLR 07 01 37.1
comp=Z,2µm,19.4s
MNK **Minsk** **88.20 325** *i*P **P** **06 19 28.3 -0.4**
MNK *i**PP **sP** **06 19 47.6 +1.0**
MNK *i* 06 22 57.8
MNK *i*PPP PPP 06 24 48.5
MNK *i*S **SKSac** **06 29 50.0 -3.8**
MNK *i*SS **SS** **06 35 58.9 -0.1**
MNK *i*SSS SSS 06 39 33.3
MNK pmax pmax
comp=Z,120nm,0.9s
MNK pmax pmax
comp=N,57nm,1.0s
MNK pmax pmax
comp=E,40nm,0.8s
MNK MLR MLR
comp=N,2µm,18.0s
MNK MLR MLR
comp=Z,2µm,19.0s
MNK MLR MLR
comp=E,1µm,19.0s
NOR **Nord** **88.38 355** *i*P **P** **06 19 27.8 -1.2**
NOR IAmb IAmb 06 19 29.9
comp=Z,23nm,0.8s
BAL3X **Bal3x, Balta** **88.45 318** P **P** **06 19 28.4 -1.6**
Q32M **Nakina River** **88.47 31** IAMs_20 IAMs_20 06 55 41.1
comp=Z,856nm,20.0s
Q32M **Nakina River** **88.47 31** P **P** **06 19 31.8 +1.6**
baz=284
Q32M S **S** **06 30 18.3 +5.6**
baz=284
PURM **Purcari** **88.53 317** ⇓P **P** **06 19 29.4 -1.0**
U33K **Whale Pass** **88.69 33** P **P** **06 19 32.8 +1.9**
baz=283
U33K S **S** **06 30 20.2 +5.8**
baz=283
C36M **Paulatuk** **88.80 20** P **P** **06 19 31.7 +0.5**
baz=291,SNR=6.4
C36M S **S** **06 30 15.2 +0.3**
baz=291
CRAG **Craig** **88.84 34** P **P** **06 19 33.7 +2.0**
baz=283
CRAG S **S** **06 30 19.8 +4.0**
baz=283
KIBK **Kibwezi** **88.94 267** P **P** **06 19 32.9 -0.2**
SNR=9.8
SBA **Scott Base** **89.03 172** P **P** **06 19 33.9 +1.9**
WRAK **Wrangell Islan** **89.04 33** P **P** **06 19 34.5 +1.9**

WRAK baz=284 S S 06 30 22.9 +5.2

MI28 Mi28,Pidlybu baz=284 89.08 321 P P 06 19 30.4 -2.5
SORM Soroca 89.23 318 ⇓P P 06 19 32.2 -1.5
SORM Soroca 89.23 318 P P 06 19 32.1 -1.5
SORM Soroca comp=Z,923nmcomp=Z,67nm,1.0s 89.23 318 P P 06 19 31.9 -1.8
LUBAR Lubar, Ukraine 89.24 320 P P 06 19 31.7 -2.0
S34M Telegraph Cree baz=285,SNR=5.2 89.31 31 P P 06 19 35.7 +1.8

S34M baz=285 S S 06 30 25.0 +4.8

KMBO Kilima Mbogo comp=Z,736nm,18.8s,baz=109,slow=36 89.55 269 LR LR 07 00 13.0
KMBO Kilima Mbogo 89.55 269 *i* P P 06 19 35.9 -0.3
JURR Jurilovca 89.55 315 ⇑P P 06 19 34.3 -1.0
BCK Bucak 89.66 308 P P 06 19 33.5 -2.5
V35K Ketchikan baz=284 89.71 34 P P 06 19 37.3 +1.6

V35K baz=284 S S 06 30 28.7 +4.8

H02S1 DAWSON INLET T SNR=10 89.74 36 P P 06 19 36.7 +0.8

H02S1 SNR=14 T T 07 59 39.3

H02S2 DAWSON INLET T SNR=10 89.74 36 P P 06 19 36.7 +0.8

H02S2 SNR=14 T T 07 59 39.2

DLBC Dease Lake comp=Z,597nm,21.2s,baz=270,slow=33 89.74 31 LR LR 06 56 26.1
DLBC Dease Lake baz=286,SNR=6.4 89.74 31 P P 06 19 37.6 +1.6

DLBC baz=286 S S 06 30 29.1 +4.7

TPGR Topolog 89.85 315 ⇑P P 06 19 35.7 -1.0
WTLY Watson Lake, Y baz=287,SNR=8.3 89.88 29 P P 06 19 38.3 +1.8

WTLY baz=287 S S 06 30 28.9 +3.4

TIRR Tirgusor 89.94 315 ⇑P P 06 19 36.1 -1.0
TIRR Tirgusor 89.94 315 P P 06 19 36.0 -1.0
TIRR Tirgusor comp=Z,876nm,22.0s 89.94 315 IAMs_20 IAMs_20 07 06 25.3
TIRR Tirgusor comp=Z,673nmcomp=Z,54nm,0.9s 89.94 315 P P 06 19 35.8 -1.3
MANR Mangalia 89.94 314 ⇑P P 06 19 36.3 -0.8
CFR Carcaliu 89.98 316 ⇑P P 06 19 36.2 -1.1
CFR Carcaliu 89.98 316 P P 06 19 36.1 -1.1
T35M Bob Quinn baz=286 90.02 32 P P 06 19 38.6 +1.4

T35M baz=286 S S 06 30 32.0 +5.1

STEI Steigen 90.04 339 *eP* P 06 19 35.0 -2.0

STEI comp=Z,118nm,0.7s IAmb IAmb 06 19 36.5

RNPP9 Sopachiv 90.07 322 P P 06 19 36.2 -1.3
RNPP8 Varash 90.11 322 P P 06 19 36.3 -1.4
FAUS Fauske 90.23 339 *eP* P 06 19 36.0 -1.9

FAUS comp=Z,316nm,1.5s IAmb IAmb 06 19 37.4

FAUS *eSKSac* **SKSac** 06 30 04.7 -0.6
PSN Preselentsi 90.30 314 P P 06 19 37.9 -0.9
KMPD K-Podol'skiy 90.37 319 P P 06 19 36.8 -2.2
LOF Lofoten 90.54 340 *eP* P 06 19 37.8 -1.5

LOF comp=Z,32nm,0.7s IAmb IAmb 06 19 39.3

LOF *eSKSac* **SKSac** 06 30 06.2 -0.8
GIRR Girov 90.71 318 ⇑P P 06 19 39.8 -0.8
TESR Tescani 90.71 317 ⇑P P 06 19 39.3 -1.3
VRI Vrincioaia 90.80 316 ⇑P P 06 19 40.8 -0.3
VRI Vrincioaia 90.80 316 P P 06 19 40.8 -0.3
VRI Vrincioaia comp=Z,1µmcomp=Z,46nm,1.5s 90.80 316 P P 06 19 40.6 -0.5
PLOR Plostina 90.86 316 ⇑P P 06 19 40.8 -0.7
PLOR Plostina 90.86 316 P P 06 19 40.7 -0.7
SAHR Sahastru 90.86 316 ⇓P P 06 19 41.0 -0.5
PRD Provadia 90.92 314 P P 06 19 41.1 -0.6
ONER Baraj Valea Uz 90.92 317 ⇑P P 06 19 41.1 -0.5
BIZ Bicaz 90.98 318 ⇑P P 06 19 41.0 -0.9
NEF NEVSHA 90.99 314 P P 06 19 41.2 -0.8
SUW Suwalki comp=Z,2µm,20.0s 91.00 325 *eP* P 06 19 40.6 -1.2

SUW *eL* L 07 03 13.0

BAND Balkesir-Ban 91.01 311 ⇑P P 06 19 40.7 -1.4
MOR8 Moi Rana 91.02 338 *eP* P 06 19 38.9 -2.8

MOR8 comp=Z,77nm,0.7s IAmb IAmb 06 19 40.1

MOR8 *eSKSac* **SKSac** 06 30 09.0 -0.9
RAUS Rausandaksla 91.06 338 *eP* P 06 19 40.1 -1.8

RAUS comp=Z,102nm,0.8s IAmb IAmb 06 19 41.2

RAUS *eSKSac* **SKSac** 06 30 11.0 +0.8
NEHR Nehoiu 91.20 316 ⇓P P 06 19 42.4 -0.6
VAGH Vaagaholmen 91.22 339 *eP* P 06 19 40.6 -1.9

VAGH comp=Z,148nm,1.5s IAmb IAmb 06 19 41.9

WRGLY Wrigley baz=292 91.26 25 P P 06 19 44.1 +1.4

WRGLY baz=292 S S 06 30 39.0 +1.2

KONS Konsvik 91.37 338 *eP* P 06 19 41.8 -1.4

KONS comp=Z,237nm,1.8s IAmb IAmb 06 19 42.6

LIRD Liard River Hi baz=289 91.39 29 P P 06 19 44.7 +1.1

LIRD baz=289 S S 06 30 42.7 +3.3

BURAR Bucovina Array 91.40 318 ⇑P P 06 19 43.4 -0.6
BURAR Bucovina Array 91.40 318 P P 06 19 43.4 -0.6
MLR Muntele Rosu 91.42 316 ⇑P P 06 19 43.4 -0.7
MLR Muntele Rosu comp=Z,2µm,19.8s,baz=60,slow=39 91.42 316 LR LR 07 06 36.2
MLR Muntele Rosu 91.42 316 P P 06 19 43.4 -0.7
MLR Muntele Rosu comp=Z,29nm,1.3s 91.42 316 P P 06 19 43.3 -0.8
STOK Stokkvaagen 91.48 338 *eP* P 06 19 42.3 -1.5

STOK comp=Z,43nm,0.8s IAmb IAmb 06 19 43.0

STOK *eSKSac* **SKSac** 06 30 12.1 -0.3
LEIR Leirfjorden 91.54 338 *eP* P 06 19 42.2 -1.8

LEIR comp=Z,112nm,0.7s IAmb IAmb 06 19 43.5

LEIR *eSKSac* **SKSac** 06 30 12.7 -0.1
SZH Strazhitsa 91.92 314 P P 06 19 45.5 -0.8
VOIR 92.05 316 ⇑P P 06 19 45.6 -1.4
VOIR 92.05 316 P P 06 19 45.6 -1.4
KOTAN Kotaneelee Air baz=291 92.12 28 P P 06 19 48.2 +1.4

KOTAN baz=291 S S 06 30 47.6 +1.8

ARR Arges 92.35 316 ⇑P P 06 19 47.5 -0.9
EZN Ezine comp=Z,5µmcomp=Z,51nm,1.1s 92.45 311 P P 06 19 47.0 -1.8
KWP Kalwaria Pacla 92.49 321 *eP* P 06 19 48.5 -0.3
DAG Danmarks Havn 92.56 352 P P 06 19 48.0 -0.6
DAG Danmarks Havn 92.56 352 *i* P P 06 19 48.2 -0.4

DAG comp=Z,88nm,0.8s IAmb IAmb 06 19 48.9

BBB Bella Bella comp=Z,328nm,18.7s,baz=274,slow=35 92.57 36 LR LR 07 01 04.9
NSS Namsos 92.66 337 *eP* P 06 19 47.0 -2.3

NSS comp=Z,62nm,0.6s IAmb IAmb 06 19 49.1

KARP Karpathos comp=Z,1µm,21.0s 92.74 306 IAMs_20 IAMs_20 07 08 53.5
KARP Karpathos comp=Z,218nm,1.1s 92.74 306 P P 06 19 49.4 -0.9
PLVB Pleven 92.85 314 ⇓P P 06 19 50.0 -0.6
LOT Lotru 92.92 317 ⇑P P 06 19 49.3 -1.8
KOLS Kolonicke sedl 92.95 320 *eP* P 06 19 51.1 +0.1

KOLS comp=Z,24nm,0.9s pmax pmax

KOLS Kolonicke sedl 92.95 320 *eP* P 06 19 51.1 +0.1
BEL Belsk 93.02 323 *eP* P 06 19 50.8 -0.4

BEL comp=Z,2µm,20.6s *eL* L 07 04 18.6

MARR Marisel-Cluj 93.03 318 ⇓P P 06 19 50.4 -1.1
RZN Rozhen 93.18 313 P P 06 19 51.1 -1.3
RES Resolute Bay comp=Z,418nm,18.9s,baz=325,slow=38 93.18 10 LR LR 07 06 09.4
STHS Stebnicka Huta 93.46 321 *eP* P 06 19 53.4 +0.1

STHS comp=Z,33nm,0.9s pmax pmax

STHS Stebnicka Huta 93.46 321 *eP* P 06 19 53.4 +0.1
MPEP Malo Peshtene 93.48 315 P P 06 19 52.7 -0.8
GZR Gura Zlata 93.61 317 ⇑P P 06 19 53.2 -0.9
GZR Gura Zlata 93.61 317 P P 06 19 53.2 -0.9
VALD Valchedram 93.61 315 P P 06 19 54.1 0.0
HFS Hagfors comp=Z,55nm,0.6s,baz=74,slow=5.1,SNR=98 93.79 332 P P 06 19 53.0 -1.6

HFS comp=Z,2µm,19.9s,baz=62,slow=38 LR LR 07 06 17.9

HFS Hagfors comp=Z,55nm,0.6s 93.79 332 P P 06 19 53.0 -1.6
BLSH Balsha 93.93 314 P P 06 19 55.5 -0.2
MMB Musomishta 93.94 313 P P 06 19 54.0 -1.7
HERR Herculane 93.99 316 ⇑P P 06 19 54.8 -1.0
VTS Vitosha 94.03 314 P P 06 19 55.3 -1.0
NIE Niedzica 94.05 321 *eP* P 06 19 56.2 +0.2
NIE Niedzica comp=Z,283nmcomp=Z,27nm,1.1s 94.05 321 P P 06 19 55.9 -0.2
OUR Ouranopolis 94.07 312 P P 06 19 54.5 -1.8
OJC Ojcow 94.11 322 *eP* P 06 19 55.7 -0.6

OJC comp=Z,1µm,21.1s *eL* L 07 04 52.7

OJC Ojcow comp=Z,679nmcomp=Z,66nm,1.1s 94.11 322 P P 06 19 55.5 -0.8
SIRR Siria 94.11 318 ⇑P P 06 19 55.6 -0.8
NEEM North Greenlan 94.20 359 *i* P P 06 19 57.0 +0.4

NEEM comp=Z,49nm,0.8s IAmb IAmb 06 19 58.0

KKB Krupnik 94.31 313 P P 06 19 55.9 -1.5
PEHC Pehcevo 94.49 313 *i* P P 06 19 56.7 -1.6
MDVR Moldovita 94.50 316 ⇑P P 06 19 57.4 -0.8
NC602 NORSAR Array S 94.50 333 *eP* P 06 19 56.0 -1.8

NC602 comp=Z,43nm,1.3s IAmb IAmb 06 19 57.0

NC602 *eSKSac* **SKSac** 06 30 28.0 -1.4
NORES NORESS Array B 94.50 333 P P 06 19 56.7 -1.1

NORES comp=Z,5.0nm,0.5s pmax pmax

NB2 NORSAR Subarra comp=Z,41nm,0.8s,baz=65,slow=4.6 94.51 334 P P 06 19 55.7 -2.2
NB2 NORSAR Subarra 94.51 334 P P 06 19 55.7 -2.2
NOA NORSAR Array B comp=Z,20nm,0.6s,baz=64,slow=4.5,SNR=137 94.51 334 P P 06 19 55.5 -2.4

NOA comp=Z,1µm,21.9s,baz=55,slow=38 LR LR 07 05 45.0

IDI Anoyia comp=Z,591nm,20.4s,baz=78,slow=40 94.61 307 LR LR 07 09 18.3
TULEG Thule comp=Z,841nm,22.0s 94.64 4 IAMs_20 IAMs_20 07 00 45.4
LANS Liptovska Anna 94.65 321 *eP* P 06 19 59.2 +0.4

LANS comp=Z,10.0nm,0.8s pmax pmax

LANS Liptovska Anna 94.65 321 *eP* P 06 19 59.2 +0.4
BOVS Bovan 94.83 315 ⇑P P 06 19 58.9 -0.8
DBG Daneborg 94.84 351 *i* P P 06 19 58.8 -0.3

DBG comp=Z,63nm,1.0s IAmb IAmb 06 19 59.8

VAY Valandovo 94.85 313 *i* P P 06 19 57.9 -1.9
DOMB Dombas 94.96 335 *eP* P 06 19 58.4 -1.5

DOMB comp=Z,322nm,2.1s IAmb IAmb 06 19 59.6

BSD Bornholm Skovb 95.18 328 *i* P P 06 19 59.8 -1.3

BSD *i* P **PcP** 06 19 60.0 -1.3

BSD comp=Z,83nm,1.1s IAmb IAmb 06 20 00.7

BSD comp=Z,83nm,1.1s IAmb IAmb 06 20 00.7

DEL Delary 95.19 329 *i* P P 06 20 00.0 -1.0
JNE Jan Mayen East 95.19 347 *eP* P 06 20 00.9 +0.2

JNE comp=Z,68nm,1.0s IAmb IAmb 06 20 01.7

JNW Jan Mayen West 95.19 347 *eP* P 06 20 00.7 0.0

JNW comp=Z,170nm,1.0s IAmb IAmb 06 20 02.3

OSL Oslo 95.22 333 *eP* P 06 19 59.8 -1.3

OSL comp=Z,120nm,0.7s IAmb IAmb 06 20 00.9

YKA Yellowknife Ar comp=Z,8.6nm,0.8s,baz=299,slow=4.4,SNR=59 95.24 24 P P 06 20 01.0 -0.1

YKA PKiKP **PKiKP** 06 24 42.5 +0.6

YKA comp=Z,0.4nm,0.7s,baz=292,slow=1.5,SNR=4.5 PKKPbc **PKKPdf** 06 36 53.5 -2.7

YKA comp=Z,2.8nm,0.6s,baz=120,slow=2.6,SNR=32 LR LR 07 02 51.3

YKA Yellowknife Ar comp=Z,490nm,21.9s,baz=296,slow=35 comp=Z,8.6nm,0.8s 95.24 24 *i* P P 06 20 02.0 +0.9

YKA comp=Z,9.0nm,0.8s pmax pmax

JMIC Jan Mayen 95.24 347 *eP* P 06 20 01.8 +0.8

JMIC comp=Z,52nm,0.8s IAmb IAmb 06 20 03.0

OKC Ostrava-Krasne comp=Z,800nm,16.8s 95.24 322 AMS AMS 07 06 00.0

VYHS Vyhne 95.26 321 *eP* P 06 20 00.8 -0.8
MOL Molde 95.32 336 *eP* P 06 20 00.5 -1.0

MOL comp=Z,40nm,0.7s IAmb IAmb 06 20 02.0

JMI Jan Mayen 95.33 347 *eP* P 06 20 02.2 +0.8

JMI comp=Z,28nm,0.9s IAmb IAmb 06 20 03.5

STRU Stroemstad 95.41 332 *i* P P 06 20 00.8 -1.2
STEB Steborice 95.44 322 *eP* P 06 20 01.6 -0.8
SKO Skopje 95.49 314 *i* P P 06 20 00.2 -2.6
FABU Falkenberg 95.55 330 *i* P P 06 20 01.2 -1.5
MAUC Maruska 95.60 322 *eP* P 06 20 03.1 0.0
MORC Moravsky Berou 95.63 322 ⇑P P 06 20 03.0 -0.4
MORC Moravsky Berou 95.63 322 P P 06 20 02.9 -0.4
MORC Moravsky Berou 95.63 322 *eP* P 06 20 02.4 -0.9
TJOU Tjoern 95.64 331 *i* P P 06 20 01.4 -1.7
AKN Aaknes 95.74 336 *eP* P 06 20 02.3 -1.1

AKN comp=Z,94nm,0.8s IAmb IAmb 06 20 03.7

LUNU Lund 95.75 328 *i* P P 06 20 01.4 -2.2
ONAU Onsala 95.78 330 *i* P P 06 20 02.2 -1.5
BJUU Bjuv 95.78 329 *i* P P 06 20 02.3 -1.5
SRO Srobarova 95.81 320 *eP* P 06 20 04.2 +0.1

SRO comp=Z,39nm,1.5s pmax pmax

SRO Srobarova 95.81 320 *eP* P 06 20 04.2 +0.1
KONO Kongsberg 95.86 333 P P 06 20 02.6 -1.4
KONO Kongsberg 95.86 333 *eP* P 06 20 02.5 -1.5

KONO comp=Z,31nm,0.9s IAmb IAmb 06 20 03.1

KONO *ePP* **PP** 06 23 57.0 +1.0
KONO *eSKSac* **SKSac** 06 30 35.3 -1.4
KONO *eScS* **ScS** 06 31 19.2 -0.1
KONO Kongsberg 95.86 333 IAMs_20 IAMs_20 07 06 12.3
JAVC Velka Javorina comp=Z,1µm,22.0s 95.86 321 *eP* P 06 20 04.4 0.0
MBAR Mbarara comp=Z,891nm,20.8s,baz=72,slow=34 95.91 270 LR LR 07 01 51.8
MBAR Mbarara comp=Z,978nm,20.0s 95.91 270 P P 06 20 04.6 -0.9
MBAR Mbarara 95.91 270 IAMs_20 IAMs_20 07 01 39.9
SKAR Skarslia 95.94 334 *eP* P 06 20 03.1 -1.3

SKAR comp=Z,27nm,0.8s IAmb IAmb 06 20 04.7

SKAR *ePP* **PP** 06 23 57.0 +0.3
SKAR *eSKSac* **SKSac** 06 30 38.9 +1.7
KRLC Kraliky comp=Z,1µm,22.0s 95.99 322 AMS AMS 07 05 30.0
KSP Ksiaz comp=Z,2µm,20.5s 96.00 323 *eP* P 06 20 04.7 -0.3

KSP *eL* L 07 06 30.9

KSP Ksiaz comp=Z,853nmcomp=Z,52nm,1.1s 96.00 323 P P 06 20 04.4 -0.5
MORH Mrgy, Hungar 96.12 318 ⇑P P 06 20 04.4 -1.1
MORH Mrgy, Hungar comp=Z,231nmcomp=Z,11nm,1.4s 96.12 318 P P 06 20 04.3 -1.2
SMOL Smolenice 96.13 321 *eP* P 06 20 05.4 -0.2
OSTC Ostas comp=Z,2µm,20.2s 96.15 323 AMS AMS 07 06 20.0
DPC Dobruska-Polom 96.17 323 *eP* P 06 20 05.3 -0.5

DPC comp=Z,1µm,21.8s MLR MLR

DPC Dobruska-Polom 96.17 323 *eP* P 06 20 05.3 -0.5

DPC comp=Z,1µm,21.8s AMS AMS 07 05 40.0

DPC Dobruska-Polom comp=Z,378nmcomp=Z,30nm,1.1s 96.17 323 P P 06 20 05.2 -0.5
OHR Ohrid 96.19 313 *i* P P 06 20 04.1 -1.9
RGN Rugen comp=Z,1µm,19.0s 96.25 327 IAMs_20 IAMs_20 07 06 59.0

MODS Modra-Piesok 96.28 321 *eP* P 06 20 06.0 -0.2

MODS comp=Z,39nm,1.3s pmax pmax

MODS Modra-Piesok 96.28 321 *eP* P 06 20 06.0 -0.2
UPC Upice comp=Z,2µm,20.0s 96.29 323 AMS AMS 07 06 30.0
IVA Berane 96.32 315 ⇑*i* P P 06 20 04.8 -1.8
VRAC Vranov 96.37 322 ⇓P P 06 20 06.3 -0.4

VRAC Vranov comp=Z,938nm,18.8s,baz=82,slow=38 96.37 322 LR LR 07 07 12.4

VRAC Vranov 96.37 322 P P 06 20 06.2 -0.4
VRAC Vranov 96.37 322 *eP* P 06 20 06.0 -0.6
PLE Pljevlja 96.53 315 ⇑*i* P P 06 20 07.2 -0.4
KRUC Moravsky 96.58 322 *eP* P 06 20 06.7 -0.9
KOME Kolasin 96.59 315 ⇑*i* P P 06 20 05.9 -2.0
HYA Hoyanger 96.59 335 *eP* P 06 20 06.2 -1.1

HYA comp=Z,31nm,0.9s IAmb IAmb 06 20 06.8

HYA *ePP* **PP** 06 24 00.6 -0.9
HYA *eSKSac* **SKSac** 06 30 38.9 -1.4
HYA *eScS* **ScS** 06 31 26.4 +1.2
SYO Syowa Base 96.79 201 ⇓*eP* P 06 20 07.0 -0.9
SYO Syowa Base 96.79 201 ⇑*i* P P 06 20 08.8 +0.9
RUE Ruedersdorf comp=Z,89nm,1.0s,baz=64,slow=4.6 96.83 325 *eP* P 06 20 08.5 -0.1
FOO Floro 96.83 336 *eP* P 06 20 07.8 -0.6

FOO comp=Z,23nm,0.8s IAmb IAmb 06 20 08.3

FOO *ePP* **PP** 06 24 04.3 +0.9
FOO *eSKSac* **SKSac** 06 30 42.6 +1.0
PDG Podgorica 96.90 315 ⇓P P 06 20 07.6 -1.5

PDG Podgorica comp=Z,1µm,20.0s 96.90 315 IAMs_20 IAMs_20 07 10 52.5

PDG Podgorica 96.90 315 ⇑*i* P P 06 20 07.7 -1.5
UPM Unac-Piva 96.90 315 ⇑*i* P P 06 20 07.9 -1.5
HOMB Homborsund 97.01 332 *i* P P 06 20 08.0 -1.3
NKME Niksic 97.01 315 ⇑*i* P P 06 20 08.2 -1.5
DRME Dracevica, Mon 97.03 314 ⇑*i* P P 06 20 08.2 -1.5
ODD1 Odda 97.04 334 *eP* P 06 20 08.6 -0.9

ODD1 comp=Z,17nm,0.9s IAmb IAmb 06 20 09.0

ULC Ulcinj 97.05 314 ⇑*i* P P 06 20 08.1 -1.8
TREC Trest 97.05 322 *eP* P 06 20 09.6 -0.1

TREC comp=Z,1µm,18.6s MLR MLR

TREC Trest 97.05 322 *eP* P 06 20 09.6 -0.1

TREC comp=Z,1µm,18.6s AMS AMS 07 07 00.0

KULLO Kullorsuaq 97.06 1 *i* P P 06 20 09.2 0.0

KULLO comp=Z,36nm,1.0s IAmb IAmb 06 20 10.0

CEME Cevo 97.10 315 ⇑*i* P P 06 20 08.5 -1.7
WINA Alland / Wiene SNR=8.1 97.12 321 *i* PcP P 06 20 10.1 0.0
RONA Rosalia, Austr comp=Z,9.0nm,1.0s 97.13 320 *i* P P 06 20 09.0 -1.1
PVCC Panska Ves 97.14 323 P P 06 20 07.1 -3.0

PVCC Panska Ves comp=Z,2µm,20.1s 97.14 323 AMS AMS 07 06 50.0

BUM Brajici-Budva 97.20 315 ⇑*i* P P 06 20 08.7 -1.9
SUE Sulen 97.24 335 *eP* P 06 20 09.5 -0.7

SUE comp=Z,45nm,1.1s IAmb IAmb 06 20 10.3

BRY Bratogost 97.25 315 ⇑*i* P P 06 20 09.3 -1.6
CONA Conrad Observa comp=Z,28nm,1.6s,SNR=13 97.32 321 *i* P P 06 20 10.3 -0.8
BER Bergen 97.36 335 *eP* P 06 20 10.3 -0.5

BER comp=Z,127nm,1.6s IAmb IAmb 06 20 10.7

ASK Askoy 97.36 335 *eP* P 06 20 09.9 -0.9

ASK comp=Z,23nm,0.9s IAmb IAmb 06 20 10.3

ASK *ePP* **PP** 06 24 07.9 +0.5
PRU Pruhonice 97.36 323 *eP* P 06 20 10.9 -0.2

PRU *e* 06 31 35.9

PRU Pruhonice comp=Z,2µm,20.2s 97.36 323 *eP* P 06 20 10.9 -0.2

PRU *eSKS* **SKSac** 06 30 55.0 +10
PRU *ex* x 06 31 35.9

PRU comp=Z,2µm,20.2s AMS AMS 07 07 00.0

BLS5 Blasjo comp=Z,92nm,0.8s 97.37 334 IAmb IAmb 06 20 11.2

BLS5 *ePP* **PP** 06 24 07.9 +0.3
BLS5 *eSKSac* **SKSac** 06 30 42.6 -2.0
BRG Berggiesshubel comp=Z,50nm,1.2s,baz=64,slow=4.6 97.37 324 *eP* P 06 20 10.8 -0.3
BRG Berggiesshubel 97.37 324 *i* P P 06 20 10.7 -0.3

BRG Amp 06 20 12.8

BRG Berggiesshubel comp=Z,33nm,1.1s 97.37 324 P Pdif 06 20 19.4 +8.2

BRG Amp 06 20 23.3

BRG Berggiesshubel comp=Z,4.6nm,0.8s 97.37 324 PP PP 06 24 11.0 +3.1
BRG Berggiesshubel 97.37 324 P PKiKP 06 24 37.5 -8.4

BRG Amp 06 24 41.6

BRG Berggiesshubel comp=Z,3.4nm,1.1s 97.37 324 ⇑SKSa **SKSac** 06 30 42.0 -2.9
BRG Berggiesshubel 97.37 324 S S 06 31 35.0 +3.0
BRG Berggiesshubel 97.37 324 SP SP 06 32 56.0 +2.6
BRG Berggiesshubel 97.37 324 SS SS 06 38 19.0 +8.6
RICC Richard comp=Z,2µm,21.2s 97.41 324 AMS AMS 07 06 50.0
HCY Herceg Novi 97.43 315 ⇑*i* P P 06 20 09.6 -2.0
MUD Monsted U'grnd 97.55 330 *i* P P 06 20 10.9 -0.8

MUD comp=Z,34nm,1.0s IAmb IAmb 06 20 11.7

SNART Snartemo 97.57 332 *eP* P 06 20 11.0 -0.8

SNART comp=Z,11nm,1.5s IAmb IAmb 06 20 11.6

SNART Snartemo 97.57 332 *i* P P 06 20 11.1 -0.8
KOGS Kog 97.60 319 *i* Pdiff P 06 20 11.4 -0.8
CLL Collm 97.74 325 *i* P P 06 20 12.0 -0.8

CLL *eS* **S** 06 31 32.0 -3.1

CLL pmax pmax

CLL comp=Z,47nm,1.4s MLR MLR

CLL Collm comp=Z,2µm,19.9s 97.74 325 *eP* P 06 20 12.2 -0.6
CLL Collm comp=Z,38nm,1.3s,baz=64,slow=4.6 97.74 325 P P 06 20 11.9 -0.8
CLL Collm comp=Z,30nm,1.4s 97.74 325 *i* P P 06 20 12.0 -0.8

CLL comp=Z,47nm,1.4s *ePP* **PP** 06 24 09.0 -1.7

CLL *ePPlp* 06 24 25.0

CLL *eSKSac* **SKSac** 06 30 55.0 +8.2

CLL *eS* **S** 06 31 32.0 -3.1

CLL *ePS* **PS** 06 33 04.0 +0.5

CLL *ePPS* PPS 06 33 48.0

CLL *eSS* **SS** 06 38 24.0 +8.5

CLL *ex* x 06 39 48.0

CLL *eSSS* SSS 06 41 57.0

CLL *eSSSS* 06 45 30.0

CLL AMS AMS 07 10 00.0

CLL comp=N,800nm,21.5s AMS AMS 07 10 00.0

CLL comp=E,1µm,20.4s AMS AMS 07 10 00.0

SSRD Sdr. Stenderup comp=Z,2µm,19.9s 97.77 329 *i* P P 06 20 12.2 -0.6

SSRD comp=Z,79nm,1.0s IAmb IAmb 06 20 13.1

HSKC Hora Svate Kat comp=Z,2µm,19.3s 97.78 324 *eP* Pdif 06 20 14.8 +1.8

HSKC AMS AMS 07 07 10.0

ARSA Arzberg comp=Z,7.8nm,0.9s 97.78 320 *i* P P 06 20 12.1 -1.0
ZVC Zvikov 97.78 322 *eP* P 06 20 12.7 -0.3
CKRC Cesky Krumlov 97.95 322 *eSKS* **SKSac** 06 30 58.5 +10

CKRC *ex* x 06 31 36.1

CKRC comp=Z,1µm,23.3s AMS AMS 07 06 00.0

GORT1 Trebel comp=Z,62nm,1.2s,baz=64,slow=4.6 97.99 327 *eP* P 06 20 13.7 0.0
KMY Karmoy 98.01 334 *eP* P 06 20 13.0 -0.7

KMY comp=Z,62nm,1.0s IAmb IAmb 06 20 14.0

COR Corvallis comp=Z,1µm,20.0s 98.05 43 IAMs_20 IAMs_20 06 58 09.5
BSEG Bad Segeberg comp=Z,19nm,0.9s,baz=64,slow=4.6 98.11 328 *eP* P 06 20 14.1 -0.2
KHC Kasperske Hory 98.27 322 *eP* P 06 20 14.4 -0.9

KHC *e* 06 31 40.3
KHC MLR MLR
comp=Z,1µm,19.5s
KHC Kasperske Hory 98.27 322 *e*P **P** **06 20 14.4 -0.9**
KHC *e*SKS **pSKSac** **06 31 04.2 -3.3**
KHC *e*S **ScS** **06 31 40.3 +0.3**
KHC AMS AMS 07 07 30.0
comp=Z,1µm,19.5s
KHC Kasperske Hory 98.27 322 P **P** **06 20 14.7 -0.6**
comp=Z,29nm,1.2s
SOKA Soboth 98.30 320 *i* P **P** **06 20 14.6 -0.9**
comp=Z,9.6nm,0.7s,SNR=9.2
GEC2 GERESS Array S 98.31 322 *e*P **P** **06 20 15.1 -0.4**
comp=Z,34nm,1.0s,baz=64,slow=4.6
GERES GERESS Array B 98.31 322 P **P** **06 20 14.5 -1.0**
comp=Z,17nm,0.8s,baz=65,slow=4.9,SNR=107
comp=Z,17nm,0.8s
FLTG Flechtingen 98.31 326 *e*P **P** **06 20 14.5 -0.8**
comp=Z,29nm,1.0s,baz=64,slow=4.6
MOA Molln 98.35 321 *e*P **P** **06 20 15.3 -0.3**
comp=Z,46nm,1.2s,SNR=6.7
QSPA South Pole Qui 98.36 180 P **P** **06 20 14.7 -0.6**
comp=Z,20nm,1.1s,baz=342,slow=2.3,SNR=28
QSPA PKKPbc **PKKPbc** **06 36 46.0 -3.5**
comp=Z,4.8nm,0.9s,baz=161,slow=1.6,SNR=16
QSPA LR LR 07 04 33.7
comp=Z,792nm,21.2s,baz=351,slow=35
comp=Z,20nm,1.1s
QSPA South Pole Qui 98.36 180 IAMs_20 IAMs_20 07 04 21.8
comp=Z,940nm,21.0s
SCO Scoresbysund 98.38 350 IAMs_20 IAMs_20 07 10 08.1
comp=Z,778nm,21.0s
SCO Scoresbysund 98.38 350 *i* P Pdif 06 20 15.3 +0.2
SCO IAmb IAmb 06 20 16.6
comp=Z,28nm,1.1s
TANN Tannenbergstha 98.42 324 *e*P **P** **06 20 15.7 -0.3**
comp=Z,29nm,1.3s,baz=64,slow=4.6
SESA Seetaler Alpe, 98.44 320 *i* PcP **P** **06 20 15.6 -0.6**
SNR=15
NEUB Neuenburg 98.49 325 *e*P **P** **06 20 15.7 -0.4**
comp=Z,38nm,0.9s,baz=64,slow=4.6
NKC Novy Kostel 98.50 324 P **P** **06 20 15.8 -0.4**
NKC Novy Kostel 98.50 324 AMS AMS 07 07 40.0
comp=Z,2µm,18.9s
SUMG Summit 98.53 356 IAMs_20 IAMs_20 07 11 12.0
comp=Z,832nm,19.0s
SUMG Summit 98.53 356 *i* P Pdif 06 20 17.1 +0.8
SUMG IAmb IAmb 06 20 18.4
comp=Z,17nm,1.3s
PLN Plauen 98.57 324 *e*P **P** **06 20 16.2 -0.3**
comp=Z,17nm,1.4s,baz=64,slow=4.6
OBKA Obir 98.67 320 *i* Pdiff **P** **06 20 16.2 -1.0**
comp=Z,10nm,0.9s,SNR=7.4
WET Wettzell 98.69 323 *e*P **P** **06 20 17.1 0.0**
comp=Z,46nm,1.5s,baz=64,slow=4.6
BIOA Bad Ischl, Aus 98.80 321 *i* Pdiff **P** **06 20 17.1 -0.5**
comp=Z,12nm,0.8s
MOX Moxa 98.82 324 *e*P **P** **06 20 17.3 -0.3**
comp=Z,67nm,1.6s,baz=64,slow=4.6
MOX *e*L L 07 07 56.0
comp=Z,1µm,21.0s
CLZ Clausthal 99.01 326 *e*P **Pdif** **06 20 18.4 0.0**
comp=Z,46nm,0.9s,baz=64,slow=4.6
KHMM Horse Mountain 99.01 46 IAMs_20 IAMs_20 07 00 35.4
comp=Z,814nm,19.0s
CEY Cerknica 99.04 319 *i* Pdiff **Pdif** **06 20 17.6 -1.1**
RETH Rethem/Aller, 99.16 327 *e*P **Pdif** **06 20 18.9 -0.1**
comp=Z,30nm,1.3s,baz=64,slow=4.6
MYKA Terra Mystica 99.21 320 *i* Pdiff **Pdif** **06 20 18.0 -1.6**
comp=Z,9.1nm,1.5s
KBA Koelnbreinsper 99.22 321 *i* Pdiff **Pdif** **06 20 17.8 -1.9**
comp=Z,6.7nm,0.6s,SNR=7.1
MATE Matera 99.29 314 ⇓P **Pdif** **06 20 18.0 -1.9**
CADS Cadrg 99.30 320 *i* Pdiff **Pdif** **06 20 18.5 -1.4**
GTTG Gottingen 99.36 326 *e*P **Pdif** **06 20 20.1 0.0**
comp=Z,34nm,0.8s,baz=64,slow=4.6
YBH Yreka Blue Hor 99.44 45 LR LR 06 57 05.0
comp=Z,738nm,22.0s,baz=300,slow=30
GRF Grafenberg Arr 99.45 324 *e*P **Pdif** **06 20 20.5 0.0**
comp=Z,60nm,1.6s,baz=64,slow=4.6
GRF *e*L L 07 08 36.0
comp=Z,1µm,19.7s
KHBM Hayfork Bally 99.45 46 IAMs_20 IAMs_20 07 02 43.1
comp=Z,753nm,20.0s
LESA Schwarzleotal 99.50 321 *i* Pdiff **Pdif** **06 20 20.0 -0.9**
comp=Z,17nm,0.7s,SNR=8.4
UBBA Unterbreizbach 99.67 325 *e*P **Pdif** **06 20 20.9 -0.3**
comp=Z,13nm,0.8s,baz=64,slow=4.6
FUSE Fusea 99.70 320 P **Pdif** **06 20 20.4 -1.2**
TIP Timpagrande 99.74 312 ⇓P **Pdif** **06 20 21.0 -1.0**
TIP Timpagrande 99.74 312 IAMs_20 IAMs_20 07 13 01.9
comp=Z,830nm,20.0s
TIP Timpagrande 99.74 312 P **Pdif** **06 20 21.1 -1.0**
HAWA Hanford 99.84 40 IAMs_20 IAMs_20 06 57 15.8
comp=Z,1µm,22.0s
ABTA Abfaltersbach 99.88 320 *i* Pdiff **Pdif** **06 20 20.9 -1.6**
comp=Z,25nm,1.3s,SNR=7.0
WTTA Wattenberg 100.21 321 *i* Pdiff **Pdif** **06 20 23.1 -1.1**
comp=Z,28nm,0.7s,SNR=13
WATA Walderalm 100.22 321 *i* Pdiff **Pdif** **06 20 23.2 -1.0**
comp=Z,11nm,0.6s,SNR=6.0
IBBN Ibbenburen 100.23 327 *e*P **Pdif** **06 20 23.7 -0.2**
comp=Z,70nm,1.3s,baz=64,slow=4.6
LSZ Lusaka 100.28 256 P **Pdif** **06 20 23.7 -1.3**
KASTN Kahler Asten 100.39 326 *e*P **Pdif** **06 20 24.5 -0.1**
comp=Z,18nm,0.9s,baz=64,slow=4.6
SQTA Sankt Quirin 100.50 321 *i* Pdiff **Pdif** **06 20 24.5 -0.8**
comp=Z,18nm,0.7s,SNR=7.9
MOTA Moosalm 100.51 321 *i* Pdiff **Pdif** **06 20 24.4 -1.0**
comp=Z,20nm,0.8s,SNR=9.9
NEW Newport 100.56 38 IAMs_20 IAMs_20 06 58 54.5
comp=Z,746nm,22.0s
RETA Reutte 100.66 322 *i* Pdiff **Pdif** **06 20 25.5 -0.5**
comp=Z,5.9nm,0.9s
CEL Celeste 100.68 311 IAMs_20 IAMs_20 07 14 30.0
comp=Z,777nm,20.0s
TNS Taunus Mts 100.82 325 *e*P **Pdif** **06 20 26.7 +0.1**
comp=Z,42nm,1.3s,baz=64,slow=4.6
FETA Feichten 100.88 321 *i* Pdiff **Pdif** **06 20 26.6 -0.5**
comp=Z,24nm,1.2s,SNR=8.6
BUG Bochum--Univer 100.91 326 *e*P **Pdif** **06 20 26.6 -0.2**
comp=Z,37nm,1.0s,baz=64,slow=4.6
SUTB Sutter Butte 100.97 47 IAMs_20 IAMs_20 06 58 13.6
comp=Z,1µm,21.0s
STU Stuttgart 101.05 323 IAMs_20 IAMs_20 07 12 17.3
comp=Z,1µm,20.0s
ORV Oroville 101.07 47 IAMs_20 IAMs_20 06 57 59.0
comp=Z,1µm,21.0s
DAVA Damuels 101.29 322 *i* Pdiff **Pdif** **06 20 28.4 -0.5**
comp=Z,9.1nm,0.8s,SNR=5.0
BMO Blue Mountains 101.90 41 IAMs_20 IAMs_20 06 57 47.1
comp=Z,748nm,22.0s
BTNL Ternell 101.95 326 *d*Pdif **Pdif** **06 20 31.5 -0.1**
WVOR Wild Horse Val 102.00 43 IAMs_20 IAMs_20 07 02 43.2
comp=Z,1µm,20.0s
MEM Membach 102.01 326 *d*Pdif **Pdif** **06 20 31.5 -0.3**
ELIB Princess Elisa 102.13 198 *d*PP **PP** **06 24 43.2 -0.8**
BHOU Houvegnez 102.14 326 *d*Pdif **Pdif** **06 20 31.9 -0.5**
BSTI Sart Tilman 102.27 326 *d*Pdif **Pdif** **06 20 32.7 -0.3**
WLF Walferdange 102.39 325 *d*Pdif **Pdif** **06 20 33.7 +0.1**
comp=Z,28nm,1.0s
WLF Walferdange 102.39 325 *e*P **Pdif** **06 20 34.0 +0.5**
comp=Z,37nm,0.9s,baz=64,slow=4.6
ILULI Ilulissat 102.47 359 IAMs_20 IAMs_20 07 12 27.3
comp=Z,771nm,19.0s
BCLA Clavier 102.49 326 *d*Pdif **Pdif** **06 20 34.0 0.0**
HULI Fort Hunter Li 102.50 50 IAMs_20 IAMs_20 06 57 05.2
comp=Z,1µm,21.0s
ECH Echery 102.50 323 IAMs_20 IAMs_20 07 10 35.9
comp=Z,1µm,20.0s
BGES Gesves 102.63 326 *d*Pdif **Pdif** **06 20 34.1 -0.5**
RCHB Rochefort 102.67 326 *d*Pdif **Pdif** **06 20 34.4 -0.4**
UCC Uccle 102.82 327 *d*Pdif **Pdif** **06 20 34.6 -0.8**
BMRD Maredsous 102.85 326 *d*Pdif **Pdif** **06 20 35.1 -0.4**
DOU Dourbes 103.05 326 *d*Pdif **Pdif** **06 20 36.2 -0.2**
PKD Bear Valley Ra 103.05 50 IAMs_20 IAMs_20 06 57 31.9
comp=Z,1µm,22.0s
MSO Missoula 103.13 38 IAMs_20 IAMs_20 06 59 33.5
comp=Z,777nm,22.0s
MFID Camas Ranch 103.47 42 IAMs_20 IAMs_20 07 03 09.9
comp=Z,628nm,20.0s
NVAR Mina Array Bea 103.80 47 Pdiff **Pdif** **06 20 41.8 +1.4**
comp=Z,1.6nm,0.7s,baz=298,slow=4.5,SNR=15
NVAR PKiKP **PKiKP** **06 24 58.6 +0.4**
comp=Z,1.3nm,0.7s,baz=298,slow=4.0,SNR=5.9
NVAR PKKPbc **PKKPbc** **06 36 31.0 -1.2**
comp=Z,3.8nm,0.8s,baz=96,slow=2.9,SNR=16

EKA Eskdalemuir Ar 103.97 333 Pdiff **Pdif** **06 20 40.1 -0.3**
comp=Z,1.3nm,0.5s,baz=56,slow=2.0,SNR=7.7
VES Vestal, Richgr 104.19 50 IAMs_20 IAMs_20 06 58 20.0
comp=Z,1µm,22.0s
HLID Hailey 104.33 41 IAMs_20 IAMs_20 07 05 18.2
comp=Z,644nm,20.0s
DLMT Dillon 104.65 39 IAMs_20 IAMs_20 07 00 07.8
comp=Z,986nm,22.0s
SFJD Kangerlussuaq 104.69 359 IAMs_20 IAMs_20 07 13 25.8
comp=Z,667nm,20.0s
ISA Isabella, Lake 104.72 50 IAMs_20 IAMs_20 06 58 47.0
comp=Z,1µm,22.0s
OSI Osito Audit: C 104.92 51 IAMs_20 IAMs_20 06 59 17.9
comp=Z,1µm,22.0s
EGMT Eagleton 105.01 35 IAMs_20 IAMs_20 07 02 08.0
comp=Z,989nm,22.0s
ELK Elko 105.02 44 PKKPbc PKKPbc 06 36 25.6 -3.0
comp=Z,3.1nm,0.8s,baz=151,slow=0.7,SNR=8.5
ELK Elko 105.02 44 IAMs_20 IAMs_20 07 04 28.1
comp=Z,985nm,19.0s
FFC Flin Flon 105.08 27 IAMs_20 IAMs_20 07 07 49.6
comp=Z,743nm,21.0s
BOZ Bozeman (W) 105.13 38 IAMs_20 IAMs_20 07 00 45.5
comp=Z,723nm,22.0s
PASC Pasadena Art C 105.49 51 IAMs_20 IAMs_20 07 01 58.2
comp=Z,918nm,20.0s
SSB Saint Sauveur 105.50 322 IAMs_20 IAMs_20 07 16 30.3
comp=Z,829nm,20.0s
MWC Mount Wilson 105.57 51 IAMs_20 IAMs_20 06 59 58.3
comp=Z,983nm,21.0s
BFSC Mount Baldy Ra 105.87 51 IAMs_20 IAMs_20 07 00 08.2
comp=Z,963nm,22.0s
KEST Kesra 106.48 311 PKiKP **PKiKP** **06 25 00.7 -2.4**
comp=Z,4.2nm,1.0s,baz=0.0,slow=3.0,SNR=4.3
DUG Dugway, Tooele 106.92 44 IAMs_20 IAMs_20 07 05 27.4
comp=Z,706nm,20.0s
PFO Pinyon Flats O 107.03 51 IAMs_20 IAMs_20 06 58 20.1
comp=Z,839nm,22.0s
HWUT Hardware Ranch 107.10 42 IAMs_20 IAMs_20 07 02 55.9
comp=Z,943nm,22.0s
BELC Belle Mtn. Jos 107.24 51 IAMs_20 IAMs_20 06 59 29.3
comp=Z,805nm,22.0s
LAO LASA Array 107.75 35 IAMs_20 IAMs_20 07 03 55.5
comp=Z,784nm,21.0s
IRM Iron Mountain 107.82 50 IAMs_20 IAMs_20 07 01 57.2
comp=Z,918nm,22.0s
PDAR Pinedale Array 107.83 40 Pdiff **Pdif** **06 21 00.9 +2.7**
comp=Z,0.3nm,0.6s,baz=297,slow=5.3,SNR=3.7
PDAR PKiKP **PKiKP** **06 25 05.9 +0.3**
comp=Z,0.4nm,0.6s,baz=303,slow=3.4,SNR=4.9
PDAR PKKPbc **PKKPbc** **06 36 18.1 -2.0**
comp=Z,2.6nm,0.9s,baz=129,slow=1.6,SNR=16
PDAR PKKPab **PKKPdf** **06 36 31.8 -1.5**
comp=Z,4.1nm,0.8s,baz=119,slow=2.5,SNR=25
DGMT Dagmar 107.85 33 IAMs_20 IAMs_20 07 05 10.7
comp=Z,822nm,22.0s
TROLL Troll, Antarti 108.16 196 PKiKP **PKiKP** **06 25 05.3 +0.2**
comp=Z,323nm,1.1s
TROLL ⇓PKKPbc **PKKPbc** **06 36 16.7 -3.1**
comp=Z,94nm,0.7s
MAHO Mahon 108.28 317 IAMs_20 IAMs_20 07 17 23.6
comp=Z,734nm,20.0s
GLA Glamis 108.51 51 IAMs_20 IAMs_20 07 04 36.1
comp=Z,736nm,21.0s
SNAA Sanae 109.75 195 PKiKP **PKiKP** **06 25 07.9 -0.1**
comp=Z,1.8nm,0.7s,baz=153,slow=2.7,SNR=3.3
SNAA PKKPbc **PKKPbc** **06 36 12.5 -2.1**
comp=Z,1.4nm,0.6s,baz=293,slow=7.7,SNR=4.6
K22A Casper 109.80 39 IAMs_20 IAMs_20 07 03 16.1
comp=Z,1µm,22.0s
O20A White River Ci 110.02 42 IAMs_20 IAMs_20 07 02 53.2
comp=Z,1µm,22.0s
NRS Nasarsuaq 110.30 356 IAMs_20 IAMs_20 07 16 56.0
comp=Z,821nm,21.0s
IVI Ivigtut 110.41 357 IAMs_20 IAMs_20 07 19 36.0
comp=Z,947nm,19.0s
RSSD Black Hills 110.48 36 IAMs_20 IAMs_20 07 03 58.2
comp=Z,728nm,22.0s
MDND Maddock 110.65 31 IAMs_20 IAMs_20 07 10 25.5
comp=Z,752nm,20.0s
ULM Lac du Bonnet 110.84 28 PKiKP **PKiKP** **06 25 10.8 +0.2**
comp=Z,1.9nm,0.6s,baz=323,slow=5.1,SNR=5.2
ULM PKKPbc **PKKPbc** **06 36 08.8 -1.5**
comp=Z,1.8nm,0.4s,baz=122,slow=5.1,SNR=5.1
E28A Huff 110.89 33 IAMs_20 IAMs_20 07 05 37.0
comp=Z,837nm,22.0s
VNA2 Neumayer--Watz 111.37 195 PKiKP **PKiKP** **06 25 11.3 +0.2**
comp=Z,5.6nm,0.6s,baz=107,slow=2.3
VNA2 ⇓PKKPbc **PKKPbc** **06 36 06.5 -2.7**
comp=Z,2.5nm,0.6s,baz=316,slow=5.3
VNA1 Neumayer--Stat 111.77 195 PKiKP **PKiKP** **06 25 11.9 +0.2**
comp=Z,7.9nm,1.0s
TUC Tucson 111.91 50 IAMs_20 IAMs_20 07 05 58.5
comp=Z,580nm,20.0s
SUSD Miller 113.18 34 IAMs_20 IAMs_20 07 07 07.9
comp=Z,743nm,22.0s
F33A 5 Mile Ranch, 113.68 31 IAMs_20 IAMs_20 07 14 07.8
comp=Z,679nm,21.0s
ESDC Sonseca Array 113.80 320 PP **PP** **06 26 07.5 -2.0**
comp=Z,1.2nm,0.4s,baz=60,slow=7.7,SNR=7.6
ESDC PKKPbc **PKKPbc** **06 35 58.7 -1.6**
comp=Z,0.9nm,0.9s,baz=235,slow=4.5,SNR=5.3
ANMO Albuquerque 113.86 46 PKKPbc PKKPbc 06 35 59.9 -0.2
comp=Z,0.7nm,0.5s,baz=99,slow=4.6,SNR=2.0
ANMO Albuquerque 113.86 46 IAMs_20 IAMs_20 07 04 19.5
comp=Z,1µm,22.0s
ALQ Albuquerque 113.86 46 IAMs_20 IAMs_20 07 04 19.6
comp=Z,1µm,22.0s
ALQ Albuquerque 113.86 46 IAMs_20 IAMs_20 07 04 19.6
comp=Z,1µm,22.0s
K30B Basset 113.93 36 IAMs_20 IAMs_20 07 05 37.9
comp=Z,656nm,22.0s
PAB San Pablo 114.12 320 IAMs_20 IAMs_20 07 21 41.6
comp=Z,782nm,21.0s
TAM Tamanrasset 114.53 300 IAMs_20 IAMs_20 07 18 23.1
comp=Z,730nm,22.0s
MVO Moncorvo 114.80 323 *e*PKP PKPdf 06 25 19.4 +0.8
MVO *e*LR LR 07 07 10.7
MVO *i* IAMs_20 IAMs_20 07 19 24.6
comp=Z,645nm,18.0s
ECSD EROS Data Cent 114.92 33 IAMs_20 IAMs_20 07 08 45.9
comp=Z,728nm,22.0s
PGAV Gavieira, Arco 115.03 324 *e*LR LR 07 06 26.9
PGAV *i* IAMs_20 IAMs_20 07 22 20.7
comp=Z,450nm,20.0s
POLO Lamas de Olo 115.12 324 *e*PKP **PKPdf** **06 25 19.9 +0.6**
EPT El Paso 115.39 49 IAMs_20 IAMs_20 07 07 52.3
comp=Z,757nm,20.0s
E38A The Farm, Brul 115.47 28 IAMs_20 IAMs_20 07 15 33.6
comp=Z,553nm,20.0s
EDA Edea 115.50 278 IAMs_20 IAMs_20 07 12 03.6
comp=Z,732nm,21.0s
BGNE Belgrade 115.57 36 IAMs_20 IAMs_20 07 10 14.4
comp=Z,674nm,22.0s
MTE Manteigas 115.58 323 *e*PKP **PKPdf** **06 25 20.9 +0.7**
MTE *e*LR LR 07 07 02.4
MTE *i* IAMs_20 IAMs_20 07 20 04.7
comp=Z,888nm,20.0s
SPMN Marine on St. 115.87 30 IAMs_20 IAMs_20 07 23 06.5
comp=Z,620nm,19.0s
PCBR Castelo Branco 115.89 322 *e*PKP **PKPdf** **06 25 21.4 +0.8**
SCHQ Schefferville 115.92 9 PKP **PKiKP** **06 25 20.2 -0.1**
comp=Z,2.7nm,0.6s,baz=337,slow=0.8,SNR=7.4
SCHQ PP **PP** **06 26 23.6 +0.1**
comp=Z,4.2nm,0.9s,baz=349,slow=9.5,SNR=5.2
SCHQ PKKPbc **PKKPbc** **06 35 51.0 -2.6**
comp=Z,4.4nm,0.9s,baz=140,slow=7.9,SNR=4.9
PMRV Marv??o 116.08 322 *e*PKP **PKPdf** **06 25 21.7 +0.6**
PMRV *e*LR LR 07 07 40.0
PMRV *i* IAMs_20 IAMs_20 07 19 49.3
comp=Z,629nm,22.0s
CBKS Cedar Bluff 116.22 39 IAMs_20 IAMs_20 07 11 26.0
comp=Z,611nm,20.0s
L34A Svendsen Farm, 116.22 35 IAMs_20 IAMs_20 07 12 12.5
comp=Z,585nm,21.0s
I37A Lemond, Waseca 116.43 31 IAMs_20 IAMs_20 07 10 14.4
comp=Z,822nm,21.0s
PBAR Barrancos 116.62 320 *e*PKP **PKiKP** **06 25 22.9 +0.8**
PARRA Arraiolos 116.86 321 *e*PKP **PKiKP** **06 25 23.1 +0.6**
EVO Evora 117.02 321 *e*PKP **PKiKP** **06 25 23.6 +0.8**
H06N1 SOCORRO T-PHAS 117.04 64 T T 08 33 38.4
SNR=5.4
G40A Rib Lake 117.09 28 IAMs_20 IAMs_20 07 10 44.7
comp=Z,831nm,22.0s
R32A Long Quarter, 117.10 39 IAMs_20 IAMs_20 07 15 17.2
comp=Z,584nm,20.0s
MOE Montemor 117.23 321 *e*PKP **PKiKP** **06 25 24.0 +0.7**
N35A Tabor 117.37 35 IAMs_20 IAMs_20 07 08 59.8
comp=Z,865nm,22.0s
PVAQ Vaqueiros 117.51 320 *e*PKP **PKiKP** **06 25 24.4 +0.6**
PVAQ *e*LR LR 07 07 13.1
PVAQ *i* IAMs_20 IAMs_20 07 20 42.0
comp=Z,716nm,20.0s
MESJ Messejana 117.57 321 *e*PKPdf **PKiKP** **06 25 24.2 +0.2**
MESJ IAMs_20 IAMs_20 07 14 35.2
comp=Z,796nm,24.2s
MESJ Messejana 117.57 321 *e*PKP **PKiKP** **06 25 24.8 +0.9**
MESJ Messejana 117.57 321 *e*PKIKP **PKiKP** **06 25 24.2 +0.2**
PLOUS Minas do Lousa 117.58 321 *e*PKP **PKiKP** **06 25 24.9 +0.9**
PCVE Castro Verde 117.58 320 *e*PKP **PKiKP** **06 25 24.9 +0.9**
F42A Maple Grove Fa 117.67 27 IAMs_20 IAMs_20 07 17 10.7
comp=Z,631nm,21.0s
I40A Norwalk 117.91 30 IAMs_20 IAMs_20 07 15 48.5
comp=Z,535nm,20.0s
KSU1 Kansas State U 117.95 37 IAMs_20 IAMs_20 07 13 02.5
comp=Z,695nm,20.0s
SCIA State Center 118.00 33 IAMs_20 IAMs_20 07 14 48.2
comp=Z,729nm,20.0s
MORF Marmelete 118.17 320 *e*PKPdf **PKiKP** **06 25 25.5 +0.3**
MORF IAMs_20 IAMs_20 07 19 58.3
comp=Z,658nm,20.6s
MORF Marmelete 118.17 320 *e*PKP **PKiKP** **06 25 25.8 +0.6**
MORF Marmelete 118.17 320 *e*PKIKP **PKiKP** **06 25 25.5 +0.3**
TXAR Lajitas Array 118.71 50 PKP **PKiKP** **06 25 27.1 +0.6**
comp=Z,3.2nm,0.8s,baz=302,slow=2.6,SNR=33
TXAR PKKPbc **PKKPbc** **06 35 38.9 -4.0**
comp=Z,0.8nm,0.8s,baz=130,slow=4.0,SNR=5.7
TXAR PKKPab **PKKPab** **06 35 47.9 +2.0**
comp=Z,1.5nm,0.9s,baz=126,slow=6.4,SNR=5.3
TXAR SKKPbc SKKPbc 06 39 22.9 -3.2
comp=Z,0.7nm,1.0s,baz=134,slow=3.2,SNR=4.0
I42A Draeger Farm, 118.73 29 IAMs_20 IAMs_20 07 11 55.1
comp=Z,828nm,21.0s
N38A Joes South For 118.76 34 IAMs_20 IAMs_20 07 16 53.5
comp=Z,566nm,22.0s
E46A Sault Ste Mari 118.81 24 IAMs_20 IAMs_20 07 19 30.6
comp=Z,709nm,22.0s
JFWS Jewell Farm 118.81 30 IAMs_20 IAMs_20 07 12 11.4
comp=Z,806nm,21.0s
H43A Windswept, Lux 118.82 27 IAMs_20 IAMs_20 07 17 19.4
comp=Z,556nm,21.0s
L40A Anamosa 118.94 31 IAMs_20 IAMs_20 07 13 31.9
comp=Z,762nm,22.0s
P38A Dawn 119.39 35 IAMs_20 IAMs_20 07 11 54.4
comp=Z,597nm,20.0s
AVE Averroes 119.73 316 IAMs_20 IAMs_20 07 24 45.6
comp=Z,747nm,21.0s
L42A Oliver, Polo 119.77 31 IAMs_20 IAMs_20 07 12 25.9
comp=Z,798nm,21.0s
I45A Fountain 119.85 27 IAMs_20 IAMs_20 07 18 02.6
comp=Z,643nm,20.0s
K43A Burlington 119.91 29 IAMs_20 IAMs_20 07 12 49.3
comp=Z,585nm,21.0s
N41A Harden Midland 120.10 32 IAMs_20 IAMs_20 07 11 38.9
comp=Z,667nm,21.0s
P40A Paris 120.29 34 IAMs_20 IAMs_20 07 11 01.0
comp=Z,788nm,21.0s
L44A Lake County Fo 120.51 29 IAMs_20 IAMs_20 07 12 36.2
comp=Z,784nm,21.0s
S39A Bolivar 120.82 36 IAMs_20 IAMs_20 07 20 31.4
comp=Z,522nm,21.0s
JCT Junction City 120.97 47 IAMs_20 IAMs_20 07 11 23.0
comp=Z,813nm,21.0s
R40A Maddies Statio 121.02 35 IAMs_20 IAMs_20 07 16 11.6
comp=Z,533nm,21.0s
HDIL Hopedale 121.03 31 IAMs_20 IAMs_20 07 12 19.2
comp=Z,921nm,22.0s
M44A Midewin, Midew 121.04 30 IAMs_20 IAMs_20 07 13 39.4
comp=Z,732nm,21.0s
J47A Sunmer 121.11 26 IAMs_20 IAMs_20 07 20 43.8
comp=Z,811nm,21.0s
TORD Torodi Ar. Bea 121.24 291 PKP **PKPdf** **06 25 30.1 -1.5**
comp=Z,17nm,0.7s,baz=51,slow=1.8,SNR=77
TORD PP **PP** **06 27 01.5 -0.8**
comp=Z,2.6nm,0.7s,baz=69,slow=4.8,SNR=4.4
I49A Point Hope 121.39 25 IAMs_20 IAMs_20 07 20 59.1
comp=Z,850nm,22.0s
P43A Skaggs, Pawnee 121.58 32 IAMs_20 IAMs_20 07 12 35.9
comp=Z,530nm,22.0s
CCM Cathedral Cave 121.77 35 IAMs_20 IAMs_20 07 19 01.3
comp=Z,594nm,19.0s
SADO Sadowa 122.12 21 PKKPbc PKKPbc 06 35 27.6 -3.0
comp=Z,2.2nm,0.6s,baz=185,slow=7.1,SNR=4.4
SFIN Lafayette 122.27 30 IAMs_20 IAMs_20 07 12 25.0
comp=Z,734nm,22.0s
AAM Ann Arbor 122.38 26 IAMs_20 IAMs_20 07 20 03.2
comp=Z,785nm,22.0s
K50A Casco 122.43 25 IAMs_20 IAMs_20 07 21 43.7
comp=Z,627nm,22.0s
T42A Van Buren 122.57 36 IAMs_20 IAMs_20 07 28 23.6
comp=Z,513nm,19.0s
P46A Rosedale 122.79 31 IAMs_20 IAMs_20 07 13 58.9
comp=Z,758nm,21.0s
D62A Allapoint, All 122.95 13 IAMs_20 IAMs_20 07 23 09.2
comp=Z,854nm,21.0s
S44A Carbondale 123.13 34 IAMs_20 IAMs_20 07 19 43.2
comp=Z,590nm,21.0s
N49A Columbus Grove 123.24 28 IAMs_20 IAMs_20 07 14 46.4
comp=Z,587nm,21.0s
O48B Farmland 123.31 29 IAMs_20 IAMs_20 07 19 03.4
comp=Z,686nm,22.0s
735A Kenedy 123.32 47 IAMs_20 IAMs_20 07 16 07.0
comp=Z,581nm,20.0s
M50A Fremont 123.37 26 IAMs_20 IAMs_20 07 20 20.6
comp=Z,816nm,22.0s
LONY Lake Ozonia 123.78 18 IAMs_20 IAMs_20 07 25 00.6
comp=Z,501nm,20.0s
P48A Milroy 123.80 30 IAMs_20 IAMs_20 07 13 35.4
comp=Z,742nm,22.0s
M52A Chesterland 123.98 25 IAMs_20 IAMs_20 07 23 09.7
comp=Z,768nm,21.0s
N51A Ashland 124.06 26 IAMs_20 IAMs_20 07 20 51.8
comp=Z,818nm,22.0s
HKT Hockley 124.10 45 IAMs_20 IAMs_20 07 11 41.1
comp=Z,694nm,22.0s
WCI Wyandotte Cave 124.31 31 IAMs_20 IAMs_20 07 18 12.1
comp=Z,667nm,20.0s
ACSO Alum Creek Sta 124.34 27 IAMs_20 IAMs_20 07 15 33.5
comp=Z,746nm,22.0s
G62A West of Eustis 124.36 15 IAMs_20 IAMs_20 07 27 12.6
comp=Z,753nm,20.0s
J57A Williamstown 124.41 20 IAMs_20 IAMs_20 07 20 36.4
comp=Z,656nm,22.0s
PKME Peaks-Kenny Pk 124.61 14 IAMs_20 IAMs_20 07 18 57.3
comp=Z,733nm,21.0s
H62A Milan 124.80 15 IAMs_20 IAMs_20 07 27 23.3
comp=Z,711nm,20.0s
N53A Lisbon 124.81 25 IAMs_20 IAMs_20 07 21 41.6
comp=Z,693nm,20.0s
T47A Sharon Grove 124.81 33 IAMs_20 IAMs_20 07 14 11.6
comp=Z,869nm,22.0s
K57A Scipio Center 124.83 21 IAMs_20 IAMs_20 07 19 24.6
comp=Z,722nm,21.0s
R49A Shelbyville 124.83 30 IAMs_20 IAMs_20 07 23 19.7
comp=Z,608nm,20.0s
J59A Piesco 124.84 19 IAMs_20 IAMs_20 07 25 54.8
comp=Z,626nm,21.0s
LBNH Lisbon 124.90 16 IAMs_20 IAMs_20 07 20 00.1
comp=Z,611nm,20.0s
O52A Adamsville 124.95 26 IAMs_20 IAMs_20 07 21 31.4
comp=Z,683nm,22.0s
L56A Greenwood 124.97 22 IAMs_20 IAMs_20 07 21 42.6
comp=Z,750nm,22.0s
WVT Waverly 125.05 34 IAMs_20 IAMs_20 07 22 02.1
comp=Z,532nm,22.0s
Q51A Peebles 125.14 28 IAMs_20 IAMs_20 07 24 22.7
comp=Z,759nm,22.0s
WVL Waterville 125.19 14 IAMs_20 IAMs_20 07 26 43.5
comp=Z,530nm,19.0s
R50A Paris 125.25 30 IAMs_20 IAMs_20 07 16 09.9
comp=Z,723nm,20.0s
HNH Hanover 125.29 17 IAMs_20 IAMs_20 07 19 49.5
comp=Z,793nm,22.0s
OXF Oxford 125.30 37 IAMs_20 IAMs_20 07 13 04.1
comp=Z,825nm,22.0s
143A Socs Landing, 125.32 40 IAMs_20 IAMs_20 07 19 42.0
comp=Z,669nm,20.0s
I62A Tamworth 125.40 16 IAMs_20 IAMs_20 07 28 19.3
comp=Z,629nm,19.0s
I63A Otisfield 125.44 15 IAMs_20 IAMs_20 07 18 20.2
comp=Z,684nm,21.0s
BINY Binghamton 125.48 21 IAMs_20 IAMs_20 07 25 21.9
comp=Z,582nm,20.0s
J61A Chester 125.55 17 IAMs_20 IAMs_20 07 27 19.2
comp=Z,669nm,20.0s
P53A Whipple 125.66 27 IAMs_20 IAMs_20 07 27 17.3

comp=Z,675nm,19.0s
Q52A Bidwell 125.69 28 IAMs_20 IAMs_20 07 16 21.2
comp=Z,803nm,22.0s
L59A Walton 125.81 20 IAMs_20 IAMs_20 07 20 18.5
comp=Z,722nm,21.0s
M57A Sunshine Farm, 125.83 22 IAMs_20 IAMs_20 07 21 47.2
comp=Z,668nm,20.0s
V48A Smith Brothers 125.89 34 IAMs_20 IAMs_20 07 19 05.3
comp=Z,515nm,22.0s
S51A Beattyville 126.12 30 IAMs_20 IAMs_20 07 25 25.7
comp=Z,759nm,20.0s
VBMS Vicksburg 126.20 39 IAMs_20 IAMs_20 07 15 39.3
comp=Z,742nm,20.0s
Q54A Coxs Mills 126.32 26 IAMs_20 IAMs_20 07 24 27.7
comp=Z,762nm,22.0s
L61B Northampton 126.33 18 IAMs_20 IAMs_20 07 27 35.0
comp=Z,535nm,20.0s
PMOZ Porto Moniz, M 126.39 322 *e*LR LR 07 10 10.5
PMOZ *i* IAMs_20 IAMs_20 07 30 58.8
comp=Z,449nm,18.0s
N58A Sunbury 126.42 22 IAMs_20 IAMs_20 07 22 03.7
comp=Z,738nm,20.0s
HRV Adam Dziewonsk 126.61 17 IAMs_20 IAMs_20 07 30 24.2
comp=Z,560nm,20.0s
X48A Hartselle 126.71 35 IAMs_20 IAMs_20 07 18 36.1
comp=Z,631nm,21.0s
WES Weston 126.78 17 IAMs_20 IAMs_20 07 21 02.9
comp=Z,542nm,20.0s
Q56A Snyder Ridge, 126.98 25 IAMs_20 IAMs_20 07 27 12.1
comp=Z,703nm,20.0s
TZTN Tazewell 127.00 30 IAMs_20 IAMs_20 07 16 31.1
comp=Z,650nm,21.0s
S54A Dingess, Beckl 127.07 28 IAMs_20 IAMs_20 07 25 25.8
comp=Z,648nm,20.0s
W50A Signal Mountai 127.11 33 IAMs_20 IAMs_20 07 20 15.5
comp=Z,664nm,21.0s
R55A Marlinton 127.21 26 IAMs_20 IAMs_20 07 25 06.3
comp=Z,780nm,21.0s
PAL Palisades 127.25 19 IAMs_20 IAMs_20 07 25 54.6
comp=Z,715nm,20.0s
WSPT Westport, CT 127.29 19 IAMs_20 IAMs_20 07 22 45.5
comp=Z,620nm,21.0s
L64A Middleborough 127.33 16 IAMs_20 IAMs_20 07 29 46.5
comp=Z,724nm,20.0s
N62A Caumsett State 127.46 19 IAMs_20 IAMs_20 07 25 30.1
comp=Z,658nm,20.0s
M63A Gales Ferry 127.48 18 IAMs_20 IAMs_20 07 22 14.4
comp=Z,489nm,19.0s
Y49A Blount Mountai 127.50 35 IAMs_20 IAMs_20 07 18 34.1
comp=Z,639nm,21.0s
M65A Busby, Falmout 127.73 16 IAMs_20 IAMs_20 07 29 13.1
comp=Z,701nm,20.0s
X51A Calhoun 127.84 33 IAMs_20 IAMs_20 07 24 10.7
comp=Z,639nm,22.0s
U54A Nelsons Funny 127.86 29 IAMs_20 IAMs_20 07 27 52.9
comp=Z,735nm,20.0s
W52A Murphy 127.93 32 IAMs_20 IAMs_20 07 20 03.0
comp=Z,821nm,20.0s
BLA Blacksburg 127.96 27 IAMs_20 IAMs_20 07 27 42.2
comp=Z,727nm,20.0s
V53A Saluda 128.05 31 IAMs_20 IAMs_20 07 15 41.1
comp=Z,905nm,22.0s
P61A Hammonton 128.14 21 IAMs_20 IAMs_20 07 27 32.2
comp=Z,763nm,20.0s
R58B Mineral 128.44 25 IAMs_20 IAMs_20 07 20 17.6
comp=Z,762nm,22.0s
CBN Corbin Frederi 128.44 24 IAMs_20 IAMs_20 07 27 22.5
comp=Z,675nm,20.0s
V55A Taylorsville 128.69 29 IAMs_20 IAMs_20 07 17 28.8
comp=Z,697nm,20.0s
152A Waverly Hall 129.33 35 IAMs_20 IAMs_20 07 17 54.6
comp=Z,815nm,22.0s
DBIC Dimbokro 129.34 286 PKP **PKPdf 06 25 47.2 +0.1**
comp=Z,14nm,0.6s,baz=73,slow=2.9,SNR=18
GOGA Godfrey 129.46 33 IAMs_20 IAMs_20 07 20 24.7
comp=Z,733nm,22.0s
154A Montrose 130.27 33 IAMs_20 IAMs_20 07 27 38.0
comp=Z,632nm,20.0s
Y57A Sumter 130.57 30 IAMs_20 IAMs_20 07 30 11.6
comp=Z,690nm,20.0s
257A Skidaway Islan 131.87 32 IAMs_20 IAMs_20 07 23 44.3
comp=Z,740nm,22.0s
TEIG Tepich 135.36 50 IAMs_20 IAMs_20 07 17 51.4
comp=Z,739nm,22.0s
JTS Las Juntas de 143.45 60 IAMs_20 IAMs_20 07 21 06.0
comp=Z,440nm,20.0s
HDC Heredia 144.31 60 IAMs_20 IAMs_20 07 22 42.8
comp=Z,617nm,21.0s
HDC Heredia 144.31 60 *e*P **PKPab 06 26 11.1 -1.8**
PLCA Paso Flores 144.43 157 PKP PKPbc 06 26 12.7 -0.1
comp=Z,39nm,1.0s,baz=209,slow=3.9,SNR=38
PLCA SKPbc **SKPbc 06 29 49.3 -0.6**
comp=Z,5.1nm,0.8s,baz=260,slow=3.5,SNR=4.1
PLCA Paso Flores 144.43 157 *e*P PKPbc 06 26 13.3 +0.5
BO02 Sierra Bellavi 149.32 151 IAMs_20 IAMs_20 07 24 38.2
comp=Z,581nm,21.0s
VA05 Santo Domingo 149.82 149 IAMs_20 IAMs_20 07 33 14.6
comp=Z,549nm,19.0s
MT01 Popeta 149.84 149 IAMs_20 IAMs_20 07 24 10.1
comp=Z,560nm,22.0s
MT02 Curacav 150.38 149 IAMs_20 IAMs_20 07 23 46.3
comp=Z,624nm,21.0s
CO04 Los Peladeros 151.42 148 IAMs_20 IAMs_20 07 36 43.9
comp=Z,564nm,21.0s
OTAV Otavalo 153.55 72 *e*P **PKPdf 06 26 28.1 -2.1**
ANCO Parque Anchore 153.98 171 *e*P **PKPdf 06 26 30.4 +0.8**
ROSC El Rosal 155.27 58 PKP **PKPdf 06 26 32.8 +0.4**
comp=Z,12nm,0.8s,baz=321,slow=6.5,SNR=12
SDV Santo Domingo 155.64 45 *e*P **PKPdf 06 26 32.2 -0.5**
NNA Nana 156.65 101 PKP **PKPdf 06 26 35.1 +1.3**
comp=Z,10nm,0.8s,baz=270,slow=1.0,SNR=3.2
NNA Nana 156.65 101 IAMs_20 IAMs_20 07 25 34.2
comp=Z,567nm,21.0s
PSAL Palomas, Salto 157.17 171 *e*P **PKPdf 06 26 35.4 +1.5**
CPSB Cacapava Do Su 158.19 180 *e*P **PKPdf 06 26 35.5 +0.2**
CZSB Cruzeiro do Su 160.85 89 *e*P **PKPdf 06 26 38.7 0.0**
ITAB Concordia 161.31 183 *e*P **PKPdf 06 26 39.6 +0.7**
CPUP Villa Florida 161.85 169 PKP **PKPdf 06 26 40.0 +0.5**
comp=Z,10nm,1.2s,baz=213,slow=1.4,SNR=8.3
CPUP PKPab **PKPab 06 27 25.2 +0.2**
comp=Z,20nm,1.1s,baz=194,slow=6.1,SNR=13
CPUP Villa Florida 161.85 169 *e*P **PKPdf 06 26 40.1 +0.6**
RCBR Riachuelo 162.47 277 PKPab **PKPab 06 27 28.5 +0.1**
comp=Z,3.7nm,0.9s,baz=76,slow=18,SNR=3.6
SJPY San Joaquin 163.37 171 *e*P **PKPdf 06 26 41.7 +0.6**
RIB01 Linhares ES 163.44 228 *e*P **PKPdf 06 26 41.7 +0.5**
NBPA Parau_RN 163.64 278 *e*P **PKPdf 06 26 41.1 -0.4**
LPAZ La Paz 163.64 120 PKP **PKPdf 06 26 42.7 +0.5**
comp=Z,13nm,1.0s,baz=243,slow=2.3,SNR=42
LPAZ PKPab **PKPab 06 27 35.1 +1.0**
comp=Z,8.3nm,0.9s,baz=260,slow=2.5,SNR=4.3
LPAZ La Paz 163.64 120 *e*P **PKPdf 06 26 43.8 +1.5**
PTGB Pitanga 163.81 184 *e*P **PKPdf 06 26 41.3 -0.3**
BSFB Barra de Sao F 164.07 228 *e*P **PKPdf 06 26 41.9 +0.1**
SJMB Sao Joao De Ma 164.40 228 *e*P **PKPdf 06 26 42.3 +0.2**
GUA01 Guaratinga, BA 164.51 237 *e*P **PKPdf 06 26 42.6 +0.4**
FRTB Fartura 164.78 193 *e*P **PKPdf 06 26 43.2 +0.9**
CMC01 Camacan, BA 164.82 242 *e*P **PKPdf 06 26 43.1 +0.6**
NBTA Tacaratu-PE 164.86 266 *e*P **PKPdf 06 26 42.6 -0.1**
NBIT Itapeh - BA 164.93 244 *e*P **PKPdf 06 26 43.5 +0.9**
LDASE Londrina, Braz 165.02 188 *e*P **PKPdf 06 26 43.5 +0.9**
BSCB Bom Sucesso 165.04 213 *e*P **PKPdf 06 26 43.1 +0.4**
NBMA Muriti-CE 165.49 273 *e*P **PKPdf 06 26 43.4 +0.1**
MURT Porto Murtinho 166.28 163 *e*P **PKPdf 06 26 44.2 +0.6**
DIAM Diamantina, MG 166.43 223 *e*P **PKPdf 06 26 44.3 +0.3**
MDP Montagnes des 166.49 357 PKP **PKPdf 06 26 43.6 -0.4**
comp=Z,12nm,1.0s,baz=24,slow=4.2,SNR=7.9
MDP PKPab **PKPab 06 27 45.7 +0.1**
comp=Z,8.1nm,0.7s,baz=5.2,slow=3.3,SNR=8.7
NBPN Ponto Novo - B 166.80 259 *e*P **PKPdf 06 26 44.5 +0.3**
BOAV Boa Vista 167.06 34 *e*P **PKPdf 06 26 44.3 -0.1**
NBPS Pedro II - PI 167.47 288 *e*P **PKPdf 06 26 43.4 -1.4**
COIM Forte Coimbra 167.86 160 *e*P **PKPdf 06 26 45.5 +0.8**
AQDB Aquidauana 167.87 170 *e*P **PKPdf 06 26 45.0 +0.2**
PMNB Patos De Minas 167.95 213 *e*P **PKPdf 06 26 45.5 +0.4**
BBSD Serra de San D 168.84 142 *e*P **PKPdf 06 26 46.3 +0.8**
JANB Januaria 168.98 233 *e*P **PKPdf 06 26 45.8 0.0**
IPMB Ipameri, GO 169.31 207 *e*P **PKPdf 06 26 44.4 -1.5**
SIV San Ignacio 169.41 136 PKP **PKPdf 06 26 46.3 +0.4**
comp=Z,15nm,1.1s,baz=214,slow=1.0,SNR=43
SDBA SAO DESIDERIO 170.80 244 *e*P **PKPdf 06 26 46.7 -0.1**
PP1B Ponte de Pedra 170.82 171 *e*P **PKPdf 06 26 46.7 0.0**
MACA Manacapuru-AM 171.01 54 *e*P **PKPdf 06 26 46.6 -0.3**
PTLB Pontes e Lacer 171.07 141 *e*P **PKPdf 06 26 47.3 +0.5**
BDFB Brasília 171.16 216 PKP **PKPdf 06 26 47.1 +0.1**
comp=Z,6.3nm,0.9s,baz=121,slow=5.9,SNR=6.2
BDFB PKPab **PKPab 06 28 06.7 +0.1**
comp=Z,36nm,1.2s,baz=108,slow=4.1,SNR=13
BDFB PP **PP 06 31 55.6 -0.7**
comp=Z,6.1nm,0.9s,baz=142,slow=11,SNR=4.2
VILB Vilhena 171.96 124 *e*P **PKPdf 06 26 47.0 -0.4**
SALV Santo Antonio 172.29 163 *e*P **PKPdf 06 26 47.7 +0.3**
ARAG Araguaiana, MT 172.66 192 *e*P **PKPdf 06 26 47.7 +0.1**
SMTB Santa Maria do 174.27 266 *e*P **PKPdf 06 26 47.9 -0.4**
ITTB Itaituba 175.29 30 *e*P **PKPdf 06 26 48.1 -0.5**
PRDB Parauapebas 175.79 303 *e*P **PKPdf 06 26 47.9 -0.9**
SNDB Serra Nova Dou 175.97 210 *e*P **PKPdf 06 26 48.2 -0.5**
CLDB Colider 176.63 135 *e*P **PKPdf 06 26 47.7 -1.2**

*IDC **31** 06:10:05.8±4.5,30°.48N×94°.89E,h0km,mb3.7/6, mbtmp3.7/8,ML4.3/1,Error ellipse: s-maj=79.4km s-min=39.6km az=163.0*
*NEIC **31** 06:10:06.9±1.8,30°.3N±0°.1×95°.0E±0°.1,h10km±2km, mb4.3/12,Error ellipse: s-maj=24.9km s-min=7.2km az=145.0*
ISC 31 06:10:08.2±1.1,30°.4N±0°.1×95°.0E±0°.1,h23km,n23, σ0s.95/22,mb4.1/11,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.42**	**260**			**Pn**	**06 11 00.8**	**+0.2**
SHL	**Shillong**	**5.51**	**211**	Pn		**Pn**	**06 11 29.0**	**-0.1**
LZDM	**Lanzhou Array**	**9.17**	**50**	Pn		**Pn**	**06 12 19.2**	**-0.2**
	baz=246,slow=13 1.4nm,0.3s							
WUS	**Wushi**	**16.75**	**315**	P		**P**	**06 14 03.6**	**-0.1**
TARG	**Taragay, Kyrgy**	**17.93**	**314**	P		**P**	**06 14 18.1**	**+1.1**
MKAR	**Makanchi Array**	**19.16**	**333**	P		**P**	**06 14 29.2**	**-0.7**
	0.4nm,0.5s,baz=137,slow=13,SNR=4.2							
AAK	**Ala-Archa**	**20.50**	**312**	P		**P**	**06 14 43.9**	**-0.9**
	1.3nm,0.3s,baz=134,slow=13,SNR=7.3 1.3nm,0.3s							
AAK	**Ala-Archa**	**20.50**	**312**	P		Pn	06 14 46.2	-0.8
BTK	**Batken**	**21.96**	**303**	P		**P**	**06 15 01.9**	**+1.4**
BTK				IAmb		IAmb	06 15 12.2	
	comp=Z,7.5nm,0.9s							
GAR	**Garm**	**22.02**	**300**	P		**P**	**06 15 00.7**	**-0.5**
GAR				IAmb		IAmb	06 15 09.1	
	comp=Z,11nm,1.0s							
KBL	**Kabul**	**22.30**	**288**	P		**P**	**06 15 04.9**	**+0.6**
KBL				IAmb		IAmb	06 15 06.9	
	comp=Z,10nm,0.9s							
CHGR	**Chuyangaron**	**22.81**	**298**	P		**P**	**06 15 08.3**	**-1.3**
CHGR				IAmb		IAmb	06 15 17.1	
	comp=Z,16nm,1.0s							
SHAA	**Shahritus**	**23.39**	**295**	P		**P**	**06 15 16.2**	**+0.7**
SHAA				IAmb		IAmb	06 15 37.5	
	comp=Z,9.3nm,1.0s							
KURBB	**Kurchatov Arra**	**23.72**	**333**	P		**P**	**06 15 16.0**	**-2.4**
	comp=Z,1.2nm,0.9s,baz=143,slow=10,SNR=9.0 comp=Z,1.2nm,0.9s							
ZAA0	**Zalesovo Array**	**24.71**	**345**	P		**P**	**06 15 27.0**	**-0.5**
ZAA0				IAmb		IAmb	06 15 49.0	
	comp=Z,2.9nm,0.6s							
ZALV	**Zalesovo Beam**	**24.71**	**345**	P		**P**	**06 15 28.5**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=157,slow=4.2,SNR=4.7 comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**24.71**	**345**	P		**P**	**06 15 26.6**	**-0.9**
BVAR	**Borovoye Array**	**28.92**	**329**	P		**P**	**06 16 05.8**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=138,slow=11,SNR=4.2 comp=Z,0.5nm,0.3s							
BRTR	**Keskin Array B**	**50.26**	**298**	P		**P**	**06 19 02.7**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=97,slow=7.4,SNR=4.8 comp=Z,0.5nm,0.8s							
AKASG	**Malin Array Be**	**52.17**	**313**	P		**P**	**06 19 16.4**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=78,slow=6.7,SNR=5.7 comp=Z,1.4nm,0.8s							
M16K	**Timber Creek**	**71.16**	**30**	P		**P**	**06 21 25.0**	**+0.2**
H21K	**Melozitna Rive**	**71.20**	**24**	P		**P**	**06 21 25.6**	**+0.7**
I23K	**Minto, Yukon-K**	**72.68**	**24**	P		**P**	**06 21 34.6**	**+0.8**

*IPEC **31** 06:20:23.8±0.2,51°.62N×16°.09E,h1km,ML2.1/8,Error ellipse: s-maj=2.0km s-min=1.2km az=63.0*
*VIE **31** 06:20:24.2±0.6,51°.56N×15°.92E,h0km,ml2.5/1,Error ellipse: s-maj=4.7km s-min=3.5km az=40.0 91 km NW of Wroclaw Suspected Mining induced.*
ISC 31 06:20:24.6±1.2,51°.55N±0°.05×15°.94E±0°.03,h0km,n31, σ0s.75/54,Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**162**	*e*Pg		**Pb**	**06 20 41.4**	**+0.9**
KSP				*e*Sg		**Sg**	**06 20 49.6**	**+1.1**
CHVC	**Chvalec**	**0.97**	**176**	*e*PG		**Pg**	**06 20 43.4**	**+0.2**
CHVC				*e*SG		**Sb**	**06 20 57.6**	**0.0**
	comp=Z,13nm,0.4s							
OSTC	**Ostas**	**1.01**	**170**	*e*PG		**Pb**	**06 20 44.5**	**-0.5**
OSTC				*e*SG		**Sb**	**06 20 58.9**	**0.0**
	comp=Z,21nm,0.3s							
UPC	**Upice**	**1.05**	**177**	*e*PG		**Pb**	**06 20 45.2**	**-0.4**
UPC				*e*SG		**Sg**	**06 20 58.8**	**+0.5**
	comp=Z,64nm,0.5s							
DPC	**Dobruska-Polom**	**1.23**	**168**	*e*PG		**Pg**	**06 20 48.0**	**-0.2**
DPC				*e*SG		**Sb**	**06 21 05.0**	**-0.1**
	comp=Z,20nm,0.4s							
PVCC	**Panska Ves**	**1.34**	**221**	*e*PG		**Pb**	**06 20 50.7**	**+0.1**
PVCC				*e*SG		**Sn**	**06 21 09.3**	**+0.2**
	comp=Z,102nm,0.3s							
PIVO	**Bartosovice**	**1.42**	**164**	*e*Pg		**Pn**	**06 20 50.7**	**-1.0**
	baz=349							
PIVO				*e*Sg		**Sg**	**06 21 09.5**	**-0.8**
	32nm,0.2s,baz=349							
BRG	**Berggiesshubel**	**1.43**	**242**	Pg		**Pb**	**06 20 52.1**	**0.0**
BRG				Sg		**Sn**	**06 21 11.2**	**0.0**
BRG				Amp			06 21 12.6	
	comp=Z,40nm,0.5s							
RICC	**Richard**	**1.54**	**230**	*e*SG		**Sg**	**06 21 14.6**	**+0.6**
	comp=Z,53nm,0.4s							
KRLC	**Kraliky**	**1.57**	**160**	*e*PG		**Pn**	**06 20 53.6**	**-0.2**
KRLC				*e*SG		**Sg**	**06 21 15.2**	**+0.1**
	comp=Z,31nm,0.6s							
ANAC	**Anensky vrch**	**1.74**	**148**	*e*Pn		**Pn**	**06 20 55.4**	**-0.8**
	baz=333							
ANAC				*e*Sg		**Sn**	**06 21 18.3**	**-0.8**
	comp=Z,13nm,0.2s,baz=333							
RYBC	**Ceska Rybna**	**1.75**	**177**	*e*Pn		**Pn**	**06 20 56.2**	**0.0**
	baz=0.4							
RYBC				*e*Sg		**Sg**	**06 21 20.5**	**-0.3**
	comp=Z,17nm,0.2s,baz=0.4							
PRU	**Pruhonice**	**1.80**	**210**	*e*SG		**Sg**	**06 21 22.6**	**+0.2**
	comp=Z,15nm,0.3s							
HSKC	**Hora Svate Kat**	**1.84**	**240**	*e*PG		**Pb**	**06 20 58.8**	**-0.4**
HSKC				*e*SG		**Sg**	**06 21 24.1**	**+0.4**
	comp=Z,41nm,0.7s							
CLL	**Collm**	**1.85**	**264**	*e*Pn		**Pn**	**06 20 57.0**	**-0.6**
CLL				*e*Pg		**Pb**	**06 20 59.0**	**-0.3**
CLL				*e*Sg		**Sg**	**06 21 24.0**	**-0.1**
	comp=Z,14nm,0.4s							
STEB	**Steborice**	**2.00**	**144**	*e*PG		**Pb**	**06 21 01.3**	**-0.5**
STEB				*e*SG		**Sb**	**06 21 27.8**	**+0.6**
	comp=Z,25nm,0.3s							
MORC	**Moravsky Berou**	**2.05**	**149**	*e*Pn		**Pn**	**06 20 59.5**	**-0.9**
	baz=334							
MORC				*e*Sg		**Sb**	**06 21 28.1**	**-0.7**
	comp=Z,12nm,0.4s,baz=334							
TREC	**Trest**	**2.28**	**187**	*e*SG		**Sg**	**06 21 37.4**	**-0.4**
VRAC	**Vranov**	**2.29**	**169**	*e*Pn		**Pn**	**06 21 03.1**	**-0.5**
	baz=352							
VRAC				*e*Sg		**Sg**	**06 21 37.0**	**-1.0**
	comp=Z,13nm,0.5s,baz=352							
ZVC	**Zvikov**	**2.39**	**208**	*e*SG		**Sg**	**06 21 41.0**	**-0.4**
KRUC	**Moravsky**	**2.51**	**173**	*e*Pg		**Pb**	**06 21 10.5**	**0.0**
	baz=356							
KRUC				*e*Sg		**Sg**	**06 21 44.1**	**-1.2**
	comp=Z,7.9nm,0.5s,baz=356							
KRUC	**Moravsky**	**2.51**	**173**	*e*PG		**Pb**	**06 21 10.6**	**0.0**
KRUC				*e*SG		**Sg**	**06 21 44.2**	**-1.1**
STAC	**Stalkov**	**2.56**	**189**	*e*Pn		**Pn**	**06 21 07.5**	**+0.1**
	baz=11							
STAC				*e*Sg		**Sg**	**06 21 46.4**	**-0.4**
	comp=Z,6.6nm,0.2s,baz=11							
NKC	**Novy Kostel**	**2.57**	**240**	*e*SG		**Sg**	**06 21 47.0**	**-0.3**
	comp=Z,35nm,0.4s							
OJC	**Ojcow**	**2.79**	**117**	*e*Pg		**Pg**	**06 21 19.1**	**+1.1**
OJC				*e*Sg		**Sg**	**06 21 53.0**	**-1.1**
KHC	**Kasperske Hory**	**2.86**	**213**	*e*PN		**Pn**	**06 21 12.5**	**+1.0**
KHC				*e*PG		**Pb**	**06 21 17.6**	**+1.1**
KHC				*e*SG		**Sg**	**06 21 56.3**	**0.0**
	comp=Z,7.4nm,0.6s							
CKRC	**Cesky Krumlov**	**2.93**	**202**	*e*SG		**Sg**	**06 21 57.5**	**-1.2**
MODS	**Modra-Piesok**	**3.30**	**164**	*e*SG		**Sg**	**06 22 12.3**	**+1.8**
MODS				*e*			06 26 12.6	
MODS	**Modra-Piesok**	**3.30**	**164**	*e*			06 26 12.6	
LANS	**Liptovska Anna**	**3.30**	**135**	*e*SG		**Sg**	**06 22 12.8**	**+2.2**
CONA	**Conrad Observa**	**3.63**	**181**	*i* Pn		**Pn**	**06 21 21.4**	**-0.8**
	comp=Z,1.7nm,0.3s							
CONA				*e*Sn		**Sn**	**06 22 06.4**	**+0.7**
	comp=Z,2.7nm,0.3s							

BER 31 06:27:18.5±2.2,79°.50N×3°.26E,h10km,Mw3.0, Confirmed Earthquake,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.73**	**105**	*e*P		Pn	06 27 47.2	-1.4
KBS				*e*S		Sn	06 28 05.8	-4.9
KBS				IAMLHF			06 28 13.9	
	comp=Z,2.7nm,0.2s							
SPA0	**Spitsbergen Ar**	**2.87**	**111**	*e*P		Pn	06 28 03.6	-0.6
SPA0				*e*S		Sn	06 28 35.0	-3.8
SPA0				IAMLHF			06 28 40.4	
	comp=Z,0.7nm,0.1s							
DAG	**Danmarks Havn**	**5.25**	**250**	*e*S		Sn	06 29 31.0	-6.3

IDC 31 06:39:29.1±0.9,53°.95N×84°.61E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=5.1km s-min=1.6km az=94.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.12**	**92**	I		I	06 40 05.0	
	baz=272,slow=313							
ZALV	**Zalesovo Beam**	**0.12**	**92**	Pg		Pg	06 39 31.1	-0.4
	19nm,0.3s,baz=274,slow=18,SNR=272							
ZALV				Lg		Lg	06 39 33.6	
	26nm,0.3s,baz=272,slow=39,SNR=229							
KURBB	**Kurchatov Arra**	**5.00**	**231**	Pn		Pn	06 40 47.2	+1.8
	baz=49,slow=14,SNR=8.6							
KURBB				Lg		Lg	06 42 09.0	
	baz=40,slow=30,SNR=5.3 0.7nm,0.6s							
MKAR	**Makanchi Array**	**7.32**	**193**	Pn		Pn	06 41 17.7	+0.5
	0.1nm,0.3s,baz=8.8,slow=14,SNR=2.5							
MKAR				Sn		Sn	06 42 40.3	-0.7
	0.2nm,0.3s,baz=16,slow=27,SNR=2.3							
MKAR				Lg		Lg	06 43 24.4	
	0.2nm,0.3s,baz=16,slow=32,SNR=2.5 0.2nm,0.4s							

*IDC **31** 07:24:53.9±3.9,53°.51N×90°.95E,h0km,mbtmp2.9/3, ML2.5/3,Error ellipse: s-maj=36.1km s-min=34.3km az=165.0*
ASRS 31 07:24:48.0±1.9,53°.79N×91°.10E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.72**	**275**	I		I	07 46 30.0	
	0.2nm,1.0s,baz=90,slow=317,SNR=5.9							
ZALV	**Zalesovo Beam**	**3.72**	**275**	Pn		Pb	07 25 53.7	-0.9
	1.0nm,0.3s,baz=94,slow=15,SNR=5.7							
ZALV				Sn		Sb	07 26 40.3	+0.1
	0.4nm,0.3s,baz=96,slow=28,SNR=1.6 1.0nm,0.3s							
KURBB	**Kurchatov Arra**	**8.34**	**253**	Pn		Pn	07 26 53.6	+3.5
	0.1nm,0.3s,baz=65,slow=15,SNR=6.0							
KURBB				Sn		Sn	07 28 24.5	-0.5
	baz=65,slow=24,SNR=2.0							
KURBB				Lg		Lg	07 29 14.9	
	baz=64,slow=34,SNR=4.4 0.4nm,0.4s							
MKAR	**Makanchi Array**	**8.98**	**222**	Pn		Pn	07 27 01.5	+2.6
	0.1nm,0.3s,baz=31,slow=15,SNR=3.4							
MKAR				Lg		Lg	07 29 31.4	
	0.1nm,0.3s,baz=46,slow=46,SNR=2.8 0.3nm,0.5s							

*IDC **31** 07:26:13.7±1.7,30°.85S×71°.46W,h0km,mb3.9/1, mbtmp3.6/3,ML3.7/2,Error ellipse: s-maj=78.6km s-min=33.1km az=153.0*
*GUC **31** 07:26:18.9±0.8,30°.31S×71°.58W,h39km±2km,ML4.0*
ISC 31 07:26:15.8±1.3,30°.25S±0°.03×71°.81W±0°.06,h19km±4km, n44,σ1s69/46,4C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.88**	**85**	*e*P		**Pb**	**07 26 33.2**	**+0.6**
GO04				*e*S		**Sb**	**07 26 43.4**	**-0.6**
CO03	**El Pedregal**	**1.13**	**122**	*e*P		**Pn**	**07 26 36.4**	**-0.4**
CO03				*e*S		**Sb**	**07 26 49.0**	**-2.3**
CO03				IAML			07 26 51.0	
	comp=E,4μm,0.3s							
CO02	**Combarbal**	**1.18**	**144**	*e*P		**Pn**	**07 26 37.6**	**+0.1**
CO02				*e*S		**Sb**	**07 26 51.6**	**-1.1**
CO02				IAML			07 26 52.6	
	comp=N,16μm,0.6s							
CO01	**Juntas del Tor**	**1.51**	**80**	*e*P		**Pb**	**07 26 43.7**	**+0.2**
CO01				*e*S		**Sn**	**07 27 01.1**	**-0.4**
CO01				IAML			07 27 05.0	
	comp=N,2μm,0.4s							
LCO	**Las Campanas**	**1.57**	**38**	*e*P		**Pg**	**07 26 44.9**	**-1.2**
LCO				*e*S		**Sg**	**07 27 05.6**	**-1.0**
CO04	**Los Peladeros**	**1.93**	**158**	*e*P		**Pn**	**07 26 49.4**	**+1.5**
CO04				*e*S		**Sn**	**07 27 12.5**	**+0.7**
CO04				IAML			07 27 18.9	
	comp=N,2μm,0.1s							
AC05	**El Transito**	**1.94**	**44**	*e*P		**Pb**	**07 26 50.7**	**0.0**
AC05				*e*S		**Sb**	**07 27 15.2**	**+0.6**
AC05				IAML			07 27 18.9	
	comp=N,1μm,0.6s							
AC04	**Llanos de Chal**	**2.13**	**18**	*e*P		**Pb**	**07 26 53.1**	**-0.8**
AC04				*e*S		**Sb**	**07 27 19.5**	**-0.5**
AC04				IAML			07 27 30.2	
	comp=E,493nm,0.3s							
AC04				IAML			07 27 32.1	
	comp=N,531nm,0.4s							
VA03	**San Esteban**	**2.73**	**157**	*e*P		**Pn**	**07 27 01.4**	**+2.7**
VA03				IAML			07 27 41.4	
	comp=N,1μm,0.4s							
VA01	**Torpederas**	**2.77**	**177**	*e*P		**Pn**	**07 26 59.8**	**+0.6**
ROCH	**El Roble**	**2.80**	**166**	*e*P		**Pn**	**07 27 01.4**	**+1.6**
ROCH				*e*P		**Pb**	**07 27 03.7**	**-1.7**
ROCH				IAML			07 27 46.0	
	comp=N,2μm,0.5s							
GO03	**Copiapo**	**2.98**	**28**	*e*P		**Pb**	**07 27 04.6**	**-

MT01				IAML			07 28 10.9	
	comp=E,232nm,0.3s							
MT13	**San Alfonso**	**3.72**	**160**	*eP*	**Pn**	**07 27 14.8**	**+2.4**	
BO04	**La Punta**	**3.87**	**165**	*eP*	**Pn**	**07 27 15.8**	**+1.5**	
AC02	**Maricunga**	**4.14**	**35**	*eP*	**Pn**	**07 27 21.8**	**+3.3**	
TCA	**Tanti**	**6.30**	**102**	*eP*	**Pn**	**07 27 49.2**	**+1.3**	
H03N1	**Juan Fernandez**	**6.83**	**240**	Pn	**Pn**	**07 27 55.6**	**+0.9**	
	baz=68,slow=74							
H03N1				T	T	07 35 04.0		
	baz=68,slow=72,SNR=2839							
H03N2	**Juan Fernandez**	**6.84**	**240**	Pn	**Pn**	**07 27 55.7**	**+0.8**	
	baz=193,slow=74							
H03N2				T	T	07 35 11.6		
	baz=68,slow=72,SNR=2164							
H03N3	**Juan Fernandez**	**6.84**	**240**	Pn	**Pn**	**07 27 55.4**	**+0.5**	
H03N3				T	T	07 34 55.8		
	baz=68,slow=72,SNR=14							
CPUP	**Villa Florida**	**13.34**	**77**	Pn	**Pn**	**07 29 23.6**	**-0.7**	
	comp=E,0.1nm,0.3s,baz=246,slow=20,SNR=1.6							
	comp=E,0.4nm,0.3s							
LPAZ	**La Paz**	**14.30**	**14**	Pn	**P**	**07 29 45.2**	**+0.1**	
	comp=E,0.1nm,0.3s,baz=193,slow=13,SNR=6.4							
	comp=E,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**82.76**	**70**	P	**P**	**07 38 39.2**	**+0.2**	
	comp=E,0.7nm,0.7s,baz=241,slow=4.2,SNR=3.5							
	comp=E,0.7nm,0.7s							
H11S2	**WAKE ISLAND Hyl**	**25.94**	**272**	T	T	10 04 03.0		
	baz=115,slow=75,SNR=19							
H11S1	**WAKE ISLAND Hyl**	**25.95**	**272**	T	T	10 04 01.8		
	baz=115,slow=75,SNR=26							
H11S3	**WAKE ISLAND Hyl**	**25.95**	**272**	T	T	10 04 06.9		
	baz=115,slow=75,SNR=20							
H11N3	**WAKE ISLAND Hyl**	**26.25**	**273**	T	T	10 04 30.0		
	baz=117							
H11N1	**WAKE ISLAND Hyl**	**26.27**	**273**	T	T	10 04 32.5		
	baz=117							
H11N2	**WAKE ISLAND Hyl**	**26.27**	**273**	T	T	10 04 30.0		
	baz=117							
ZALV	**Zalesovo Beam**	**150.90**	**29**	PKPbc	**PKiKP**	**07 46 08.4**	**+1.1**	
	comp=E,1.7nm,0.6s,baz=316,slow=4.0,SNR=5.1							

*IDC **31** 07:45:27.4±0.7,51°.23N×168°.57W, h0km, mb3.9/24, mbtmp4.0/24, Error ellipse: s-maj=23.0km s-min=12.8km az=3.0*
*NEIC **31** 07:45:29.8±1.1,51°.41N±0°.04×168°.64W±0°.08, h10km±2km, mb4.1/28,ML3.7/16,ML3.6(AEIC), Error ellipse: s-maj=8.5km s-min=7.1km az=258.0*
*AEIC **31** 07:45:31.1±1.3,51°.32N±0°.04×168°.57W±0°.09, h19km±5km, Error ellipse: s-maj=8.1km s-min=6.3km az=93.0*

ISC 31 07:45:29.5±3.9,51°.36N±0°.06×168°.57W±0°.05, h12km±24km, n133, σ1§10/144, mb4.0/28, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**1.59**	**334**		**Pn**	**07 45 57.3**	**-0.1**
CLCO					**Sn**	**07 46 17.2**	**-0.8**
CLCO					**Sb**	**07 46 17.9**	**-0.9**
CLES	**Cleveland East**	**1.68**	**331**	Pn	**Pn**	**07 45 58.6**	**+0.1**
CLES				IAML		07 46 21.9	
	comp=N,988nm,0.6s						
CLES				IAML		07 46 29.4	
	comp=E,756nm,0.4s						
OKTU	**Okmok Mt. Tuli**	**2.05**	**9**		**Pn**	**07 46 03.8**	**0.0**
OKTU					**Sn**	**07 46 29.2**	**-0.1**
OKCE	**Okmok Cone E**	**2.08**	**7**		**Pn**	**07 46 04.2**	**0.0**
OKFG	**Magazine Ridge**	**2.09**	**11**		**Pn**	**07 46 04.0**	**-0.3**
OKNC	**Okmok New Cone**	**2.12**	**7**		**Pn**	**07 46 05.0**	**+0.4**
OKNC					**Sn**	**07 46 31.6**	**+0.8**
OKNC					**Sb**	**07 46 32.9**	**-1.0**
MGOD	**Makushin Gods**	**2.65**	**22**		**Pn**	**07 46 12.1**	**+0.1**
MGOD					**Sn**	**07 46 43.5**	**-0.5**
MREP	**Makushin Rep't**	**2.69**	**24**		**Pn**	**07 46 12.8**	**+0.2**
MNAT	**Makushin Natee**	**2.77**	**24**		**Pn**	**07 46 14.2**	**+0.5**
MNAT					**Sn**	**07 46 47.0**	**-0.1**
MNAT					**Sb**	**07 46 47.2**	**-5.6**
UNV	**Unalaska Valle**	**2.79**	**26**	P	**Pn**	**07 46 13.6**	**-0.2**
UNV	**Unalaska Valle**	**2.79**	**26**	S	**Sn**	**07 46 47.1**	**-0.2**
UNV	**Unalaska Valle**	**2.79**	**26**	Pn	**Pn**	**07 46 13.9**	**+0.1**
UNV	**Unalaska Valle**	**2.79**	**26**		**Sn**	**07 46 47.8**	**+0.4**
ZRO	**Akutan Zero**	**3.15**	**29**		**Pn**	**07 46 19.1**	**+0.2**
AKRB	**Akutan Reef Bi**	**3.16**	**28**		**Pn**	**07 46 19.6**	**+0.6**
AKBBA	**Akutan Broad B**	**3.17**	**29**		**Pn**	**07 46 19.6**	**+0.5**
LVA	**Lava Point**	**3.20**	**28**	Pn	**Pn**	**07 46 18.5**	**-1.0**
LVA				IAML		07 47 11.0	
	comp=E,199nm,0.7s						
LVA				IAML		07 47 13.9	
	comp=N,303nm,0.7s						
AKLV	**Akutan Long Va**	**3.22**	**28**		**Pn**	**07 46 20.0**	**+0.1**
AKUT	**Akutan**	**3.26**	**30**	P	**Pn**	**07 46 20.1**	**-0.2**
AKUT	**Akutan**	**3.26**	**30**	S	**Sn**	**07 46 58.7**	**-0.2**
AKUT	**Akutan**	**3.26**	**30**	Pn	**Pn**	**07 46 20.2**	**0.0**
KOSE	**Korovin Southe**	**3.54**	**288**		**Pn**	**07 46 24.3**	**+0.1**
KOFP	**Korovin Flat P**	**3.55**	**287**		**Pn**	**07 46 24.3**	**-0.1**
ATKA	**Atka Island**	**3.59**	**286**	P	**Pn**	**07 46 24.1**	**-0.8**
ATKA	**Atka Island**	**3.59**	**286**	P	**Sn**	**07 47 05.1**	**-2.1**
ATKA	**Atka Island**	**3.59**	**286**		**Pn**	**07 46 24.0**	**-0.8**
ATKA				IAML		07 47 04.9	
	comp=N,75nm,0.9s						
ATKA				IAML		07 47 12.0	
	comp=E,72nm,0.8s						
KOKV	**Korovin Volcan**	**3.61**	**288**		**Pn**	**07 46 24.9**	**-0.3**
KOKL	**Mount Kliuchef**	**3.62**	**288**		**Pn**	**07 46 25.3**	**-0.1**
KOWE	**Korovin West**	**3.66**	**288**		**Pn**	**07 46 25.5**	**-0.4**
GSIG	**Igitkin Island**	**4.62**	**281**		**Pn**	**07 46 38.1**	**-0.9**
GSMY	**Great Sitkin M**	**4.71**	**281**		**Pn**	**07 46 39.9**	**-0.3**
GSTR	**Great Sitkin T**	**4.71**	**282**		**Pn**	**07 46 40.1**	**-0.2**
GSTD	**Great Sitkin T**	**4.76**	**281**		**Pn**	**07 46 40.4**	**-0.6**
GSCK	**Great Sitkin C**	**4.77**	**281**		**Pn**	**07 46 40.6**	**-0.5**
GSSP	**Great Sitkin S**	**4.78**	**282**		**Pn**	**07 46 41.4**	**+0.1**
ETKA	**Kagalaska Isla**	**4.91**	**279**		**Pn**	**07 46 42.0**	**-0.9**
ADAG	**Mount Adagdak**	**5.04**	**280**		**Pn**	**07 46 44.9**	**+0.2**
ADK	**Adak**	**5.08**	**279**	P	**Pn**	**07 46 44.6**	**-0.8**
ADK	**Adak**	**5.08**	**279**	S	**Sn**	**07 47 40.7**	**-3.2**
ADK	**Adak**	**5.08**	**279**		**Pn**	**07 46 44.3**	**-1.0**
ADK				IAML		07 47 43.1	
	comp=E,70nm,0.3s						
ADK				IAML		07 47 46.4	
	comp=E,115nm,0.7s						
DT1	**Dutton Round H**	**5.32**	**43**		**Pn**	**07 46 49.3**	**+0.6**
KIRH	**Kanaga Island**	**5.34**	**279**		**Pn**	**07 46 49.0**	**+0.1**
DTNA	**Dutton South F**	**5.36**	**43**		**Pn**	**07 46 49.7**	**+0.5**
KIWB	**Kanaga Island**	**5.37**	**279**		**Pn**	**07 46 48.9**	**-0.5**
KIKV	**Kanaga Island**	**5.38**	**279**		**Pn**	**07 46 49.4**	**-0.2**
KIMD	**Kanaga Island**	**5.42**	**278**		**Pn**	**07 46 49.7**	**-0.3**
TAFP	**Tanaga Falls P**	**5.89**	**279**		**Pn**	**07 46 56.2**	**-0.3**
SPIA	**Saint Paul Isl**	**5.91**	**351**	Pn	**Pn**	**07 46 57.9**	**+1.2**
TASE	**Tanaga Southea**	**5.92**	**278**		**Pn**	**07 46 57.0**	**0.0**
TANO	**Tanaga North**	**5.97**	**279**		**Pn**	**07 46 57.5**	**-0.1**
SDPT	**Sand Point**	**6.28**	**47**	P	**Pn**	**07 47 02.9**	**+1.2**
SDPT	**Sand Point**	**6.28**	**47**	Pn	**Pn**	**07 47 01.9**	**+0.2**
GAEA	**Gareloi East**	**6.36**	**278**		**Pn**	**07 47 02.5**	**-0.4**
GANE	**Gareloi Northe**	**6.38**	**278**		**Pn**	**07 47 02.7**	**-0.5**
GAKI	**Gareloi-Kavalg**	**6.41**	**276**		**Pn**	**07 47 03.2**	**-0.3**
CNBA	**Chernabura Isl**	**6.42**	**54**	Pn	**Pn**	**07 47 03.1**	**-0.6**
CHNA	**Chernabura Isl**	**6.43**	**54**	P	**Pn**	**07 47 04.5**	**+0.7**
VNFG	**Fog Glacier, M**	**7.26**	**44**		**Pn**	**07 47 16.5**	**+1.1**
CEPE	**Semis' Perret**	**7.35**	**279**		**Pn**	**07 47 15.8**	**-0.8**
AMKA	**Amchitka**	**7.59**	**275**	Pn	**Pn**	**07 47 18.9**	**-0.9**
O15K	**Ungalikthiuk R**	**9.28**	**29**	Pn	**Pn**	**07 47 43.8**	**+0.9**
SII	**Sitkinak Islan**	**9.94**	**53**	P	**Pn**	**07 47 53.0**	**+1.0**
SII	**Sitkinak Islan**	**9.94**	**53**	Pn	**Pn**	**07 47 51.5**	**-0.4**
N15K	**Kwethluk River**	**10.03**	**25**	Pn	**Pn**	**07 47 54.4**	**+1.3**
O16K	**Kokwok River B**	**10.15**	**32**	Pn	**Pn**	**07 47 56.5**	**+1.6**
OHAK	**Old Harbor**	**10.68**	**51**	P	**Pn**	**07 48 03.0**	**+1.0**
OHAK	**Old Harbor**	**10.68**	**51**	Pn	**Pn**	**07 48 02.4**	**+0.4**
K13K	**Kusilvak Mount**	**10.81**	**10**	Pn	**Pn**	**07 48 05.1**	**+1.2**
KDAK	**Kodiak Island**	**11.27**	**49**	Pn	**Pn**	**07 48 08.6**	**-1.6**
	comp=E,1.1nm,0.3s,baz=231,slow=6.0,SNR=31						
KDAK				Sn	**Sn**	**07 50 10.1**	**-5.8**
	baz=300,slow=20						
KDAK	**Kodiak Island**	**11.27**	**49**	Pn	**Pn**	**07 48 09.2**	**-0.9**
K15K	**Wolf Creek Mou**	**11.61**	**17**	Pn	**Pn**	**07 48 14.8**	**+0.1**
N19K	**Bonanza Creek**	**12.28**	**34**	Pn	**Pn**	**07 48 25.4**	**+1.4**
K17K	**Iditarod**	**12.66**	**22**	Pn	**Pn**	**07 48 30.6**	**+1.5**
L19K	**White Mountain**	**13.16**	**29**	Pn	**Pn**	**07 48 35.9**	**-0.1**
SLKM	**Skilak Lake**	**13.72**	**41**	Pn	**Pn**	**07 48 43.4**	**-0.2**
SKT	**Skwentna**	**14.12**	**35**	Pn	**Pn**	**07 48 49.9**	**+0.9**
PMR	**Palmer**	**14.78**	**39**	Pn	**Pn**	**07 48 58.3**	**+0.3**
SML	**Sawmill**	**15.21**	**39**	Pn	**Pn**	**07 49 03.2**	**-0.6**
SML				IAmb	IAmb	07 49 28.1	
	comp=Z,5.9nm,1.0s						
F19K	**Shaleruckik Mo**	**16.43**	**15**	Pn	**Pn**	**07 49 20.3**	**+0.8**
BERG	**Berg Lake**	**16.53**	**47**		**Pn**	**07 49 20.0**	**-0.8**
BERG				IAmb	IAmb	07 49 22.4	
	comp=Z,15nm,0.5s						
PAX	**Paxson**	**16.97**	**38**	Pn	**Pn**	**07 49 26.5**	**+0.1**
VRDI	**Verde Repeater**	**16.97**	**45**	Pn	**Pn**	**07 49 25.7**	**-1.0**
VRDI				IAmb	IAmb	07 49 35.2	
	comp=Z,12nm,1.1s						
I23K	**Minto, Yukon-K**	**17.01**	**28**		**Pn**	**07 49 26.6**	**-0.2**
ILAR	**Eielson Array**	**17.53**	**32**	P	**Pn**	**07 49 30.9**	**-2.4**
	comp=Z,0.7nm,0.7s,baz=233,slow=11,SNR=8.5						
ILAR				PcP	**PcP**	**07 54 12.4**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=224,slow=2.5,SNR=1.6						
GRNC	**Granite Creek**	**17.55**	**47**	Pn	**Pn**	**07 49 33.2**	**-0.6**
GRNC				IAmb	IAmb	07 49 45.6	
	comp=Z,11nm,0.8s						
F21K	**Alatna River**	**17.58**	**20**	P	**P**	**07 49 35.1**	**0.0**
F21K				IAmb	IAmb	07 49 47.9	
	comp=Z,7.4nm,1.0s						
BARN	**Barnard Glacie**	**17.71**	**46**	P	**Pn**	**07 49 35.9**	**+0.1**
H2AK	**Noodor Dome**	**17.93**	**28**		**Pn**	**07 49 38.2**	**-0.1**
J25K	**Salcha River,**	**17.94**	**33**	P	**Pn**	**07 49 38.3**	**-0.2**
BCAR	**Beaver Creek A**	**18.47**	**40**	P	**P**	**07 49 45.0**	**+0.1**
B21K	**Ikpikpuk River**	**19.47**	**15**	P	**P**	**07 49 55.8**	**+0.1**
B21K				IAmb	IAmb	07 50 05.7	
	comp=Z,6.4nm,0.7s						
C23K	**Itkillik River**	**20.36**	**18**		**P**	**07 50 05.7**	**+0.3**
C23K				IAmb	IAmb	07 50 16.3	
	comp=Z,12nm,0.7s						
PEA0B	**Petropavlovsk-**	**20.62**	**288**	P	**P**	**07 50 06.1**	**-2.3**
PETK	**Petropavlovsk-**	**20.62**	**288**	P	**P**	**07 50 08.4**	**0.0**
	comp=Z,0.9nm,0.4s,baz=79,slow=11,SNR=4.9						
	comp=Z,0.9nm,0.4s						
F28M	**Old Crow**	**21.52**	**30**	P	**P**	**07 50 18.6**	**+0.6**
F28M				IAmb	IAmb	07 50 32.6	
	comp=Z,4.2nm,0.8s						
EPYK	**Eagle Plains**	**21.93**	**35**	P	**P**	**07 50 23.2**	**+0.7**
F31M	**Tsiigehtchic**	**23.46**	**34**	P	**P**	**07 50 39.3**	**+0.9**
F31M				IAmb	IAmb	07 50 42.8	
	comp=Z,7.5nm,0.9s						
YKA	**Yellowknife Ar**	**30.54**	**48**	P	**P**	**07 51 42.8**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=273,slow=8.8,SNR=15						
	comp=Z,1.4nm,0.7s						
H04A	**Detroit Lake**	**31.30**	**84**	P	**P**	**07 51 50.3**	**+1.1**
WIFE	**Three Sisters-**	**31.84**	**85**		**P**	**07 51 55.2**	**+1.0**
O02D	**Mt. Diablo Mer**	**33.32**	**91**	P	**P**	**07 52 08.6**	**+1.6**
O02D				IAmb	IAmb	07 52 10.1	
	comp=Z,6.0nm,1.2s						
O03E	**Paynes Creek**	**33.87**	**90**		**P**	**07 52 11.9**	**+0.1**
BEKR	**Beckworth**	**35.02**	**90**	P	**P**	**07 52 22.4**	**+0.5**
BEKR				IAmb	IAmb	07 52 32.8	
	comp=Z,2.6nm,1.0s						
PAHR	**Pah Rah Range**	**35.72**	**89**		**P**	**07 52 28.7**	**+0.8**
PNTR	**Pine Nut**	**35.95**	**90**	P	**P**	**07 52 31.1**	**+1.1**
NVAR	**Mina Array Bea**	**37.16**	**90**	P	**P**	**07 52 41.0**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=306,slow=8.0,SNR=19						
NVAR				PcP	**PcP**	**07 55 00.3**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=318,slow=3.8,SNR=3.6						
	comp=Z,2.4nm,0.8s						
PDAR	**Pinedale Array**	**40.11**	**78**	P	**P**	**07 53 05.5**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=303,slow=8.1,SNR=18						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**40.11**	**78**	P	**P**	**07 53 05.9**	**+0.9**
MAJO	**Matsushiro**	**40.17**	**270**	P	**P**	**07 53 05.3**	**0.0**
MAJO				IAmb	IAmb	07 53 15.7	
	comp=Z,3.8nm,0.7s						
MJAR	**Matsushiro Arr**	**40.17**	**270**	P	**P**	**07 53 05.0**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=49,slow=8.0,SNR=6.6						
	comp=Z,1.3nm,0.6s						
MJAR	**Matsushiro Arr**	**40.17**	**270**	P	**P**	**07 53 05.8**	**+0.5**
HILR	**Hailar Array B**	**43.98**	**297**	P	**P**	**07 53 38.0**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=65,slow=8.3,SNR=5.2						
	comp=Z,0.4nm,0.3s						
ULM	**Lac du Bonnet**	**44.19**	**62**	P	**P**	**07 53 37.1**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=300,slow=8.1,SNR=4.6						
	comp=Z,1.9nm,0.7s						
KSRS	**Korea Array**	**46.03**	**278**	P	**P**	**07 53 54.6**	**+2.0**
	comp=Z,0.3nm,0.4s,baz=46,slow=6.0,SNR=1.4						
	comp=Z,0.3nm,0.4s						
SPITS	**Spitsbergen Ar**	**50.69**	**359**	P	**P**	**07 54 28.8**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=336,slow=6.3,SNR=5.5						
	comp=Z,1.8nm,0.6s						
SONM	**Songino Array**	**52.25**	**302**	P	**P**	**07 54 41.3**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=64,slow=6.6,SNR=4.2						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**52.25**	**302**	P	**P**	**07 54 41.8**	**+1.5**
SONM				IAmb	IAmb	07 54 46.0	
	comp=Z,2.2nm,1.3s						
TXAR	**Lajitas Array**	**52.27**	**89**	P	**P**	**07 54 40.7**	**0.0**
	comp=Z,1.0nm,0.6s,baz=316,slow=7.1,SNR=19						
TXAR				PcP	**PcP**	**07 55 51.7**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=326,slow=2.6,SNR=1.7						
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**58.98**	**354**	P	**P**	**07 55 27.4**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=21,slow=8.7,SNR=4.1						
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**63.56**	**319**	P	**P**	**07 56 00.2**	**+0.7**
	comp=Z,3nm,0.7s,baz=44,slow=6.8,SNR=26						
	comp=Z,2.3nm,0.7s						
BVAR	**Borovoye Array**	**64.81**	**325**	P	**P**	**07 56 08.9**	**+1.3**
	comp=Z,3.4nm,0.5s,baz=58,slow=7.5,SNR=11						
	comp=Z,3.4nm,0.5s						
MKAR	**Makanchi Array**	**64.86**	**314**	P	**P**	**07 56 07.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=48,slow=5.8,SNR=6.7						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**66.94**	**352**	P	**P**	**07 56 21.4**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=14,slow=8.6,SNR=4.3						
	comp=Z,1.4nm,0.7s						
NOA	**NORSAR Array B**	**67.95**	**0**	P	**P**	**07 56 28.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=358,slow=6.2,SNR=3.5						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**68.84**	**359**	P	**P**	**07 56 34.3**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=5.7,slow=4.3,SNR=2.2						
	comp=Z,1.7nm,0.7s						
AKASG	**Malin Array Be**	**77.19**	**349**	P	**P**	**07 57 23.6**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=12,slow=5.2,SNR=4.1						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**77.33**	**284**	P	**P**	**07 57 23.5**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=41,slow=7.4,SNR=1.3						
	comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**86.77**	**232**	P	**P**	**07 58 11.4**	**-2.0**
	comp=Z,0.7nm,1.0s,baz=29,slow=5.3,SNR=2.7						
	comp=Z,0.7nm,1.0s						
BRTR	**Keskin Array B**	**87.23**	**343**	P	**P**	**07 58 16.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=343,slow=1.5,SNR=2.6						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**88.34**	**12**	P	**P**	**07 58 20.3**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=352,slow=5.3,SNR=1.4						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**90.13**	**231**	P	**P**	**07 58 27.9**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=33,slow=5.0,SNR=30						
	comp=Z,2.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**115.20**	**10**	PKP	**PKiKP**	**08 04 09.7**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=352,slow=3.5,SNR=1.3						
QSPA	**South Pole Qui**	**141.12**	**180**	PKhKP	PKPpre	08 04 49.6	
	comp=Z,0.4nm,0.7s,baz=54,slow=4.0,SNR=1.3						

RSNC 31 07:47:52.5±0.0,7°.41N×73°.76W, h7km±1km, M1.3, ML1.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRJC	**Barrancabermej**	**0.43**	**178**	P	Pg	07 48 00.4	-0.5
BRJC				S	Sg	07 48 06.3	-0.4
VMM09	**Lebrija**	**0.55**	**121**	P	Pg	07 48 02.5	-0.6
VMM09				S	Sg	07 48 09.9	-0.3
OCAC	**Ocana**	**0.93**	**28**	P	Pg	07 48 08.8	-1.6
OCAC				S	Sg	07 48 21.0	-1.6
BARC	**Barichara**	**0.99**	**145**	P	Pg	07 48 10.7	-0.9
BARC				S	Sg	07 48 23.5	-1.1
PAMC	**Pamplona, Colo**	**1.05**	**94**	P	Pg	07 48 11.1	-1.7
PAMC				S	Sg	07 48 24.5	-2.0
PTBC	**PUERTO BERRIO,**	**1.11**	**219**	P	Pg	07 48 11.3	-2.5
PTBC				S	Sg	07 48 26.3	-1.9
RUSC	**La Rusia**	**1.65**	**156**	P	Pn	07 48 21.2	-1.2
RUSC				S	Sn	07 48 43.0	-1.1

*ASRS **31** 08:00:14.0±0.8,54°.25N×86°.82E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 08:00:12.8±3.3,54°.40N×86°.80E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=27.3km s-min=20.9km az=29.0, Southwestern Siberia

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

I46RU	**ZALESOVO INFRA**	**1.25**	**250**	I	I	08 08 20.0		
	baz=67,slow=315,SNR=2.3							
ZALV	**Zalesovo Beam**	**1.25**	**250**	Pg	Pn	08 00 37.7	+0.3	
	1.6nm,0.3s,baz=71,slow=9.5,SNR=6.7							
ZALV				Lg	Lg	08 00 51.6		
	4.4nm,0.3s,baz=30,slow=15,SNR=13							
KURBB	**Kurchatov Arra**	**6.30**	**237**	Pn	Pn	08 01 47.4	+0.5	
	baz=55,slow=14,SNR=5.4							
KURBB				Sn	Sn	08 03 00.1	+0.5	
	baz=68,slow=31,SNR=1.3							
KURBB				Lg	Lg	08 03 34.2		
	baz=51,slow=34,SNR=1.7							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**8.13**	**202**	Pn	Pn	08 02 12.6	+0.5	
	0.2nm,0.3s,baz=25,slow=14,SNR=1.5							
	0.2nm,0.4s							

*IDC **31** 08:09:02.8±1.7,33°.41S×178°.28W, h0km, mb4.1/3, mbtmp4.1/4, ML3.4/1, Error ellipse: s-maj=44.4km s-min=33.3km az=60.0*
*WEL **31** 08:09:06.2±1.8,34°S±16°×17°8W±2°8, h162km±74km, M4.3/7, mB4.3/3, ML4.0/6, MLv4.4/7, Mw(mB)3.4/3, Error ellipse: s-maj=36.3km s-min=20.2km az=96.2*

ISC 31 08:09:05.9±1.1,33°.53S±0°.08×178°.1W±0°.1, h34km, n18, σ1§64/32, mb4.1/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.26**	**2**	S	**Sn**	**08 10 53.3**	**-3.5**
WMGZ	**Waiomatatini S**	**5.15**	**213**	P	**Pn**	**08 10 20.1**	**-0.4**
WMGZ				S	**Sn**	**08 11 18.7**	**0.0**
HAZ	**Te Kaha**	**5.40**	**218**	P	**Pn**	**08 10 23.4**	**-0.6**
HAZ				S	**Sn**	**08 11 25.8**	**+0.8**
PUZ	**Puketiti**	**5.42**	**212**	P	**Pn**	**08 10 21.8**	**-2.6**
PUZ				S	**Sn**	**08 11 24.5**	**-1.1**
RUGZ	**Raukumara Rang**	**5.62**	**217**	P	**Pn**	**08 10 26.5**	**-0.5**
RUGZ				S	**Sn**	**08 11 30.1**	**-0.4**
TWGZ	**Tauwhareparae**	**5.64**	**214**	P	**Pn**	**08 10 27.8**	**+0.5**
TWGZ				S	**Sn**	**08 11 30.3**	**-0.6**
TKGZ	**Te Karaka**	**5.91**	**213**	P	**Pn**	**08 10 30.8**	**-0.1**
TKGZ				S	**Sn**	**08 11 35.8**	**-1.6**
MWZ	**Matawai**	**5.98**	**215**	P	**Pn**	**08 10 30.0**	**-1.9**
MWZ				S	**Sn**	**08 11 38.2**	**-1.0**
URZ	**Urewera**	**6.13**	**218**	Pn	**Pn**	**08 10 33.0**	**-0.9**
	0.9nm,0.3s,baz=24,slow=20,SNR=10						
URZ				Sn	**Sn**	**08 11 40.2**	**-2.6**
	2.5nm,0.3s,baz=150,slow=20,SNR=8.7						
	9.4nm,0.8s						
URZ	**Urewera**	**6.13**	**218**	P	**Pn**	**08 10 32.9**	**-1.1**
URZ				S	**Sn**	**08 11 41.0**	**-1.8**
RAGZ	**Rawiri**	**6.16**	**215**	P	**Pn**	**08 10 33.3**	**-1.2**
RAGZ				S	**Sn**	**08 11 42.3**	**-1.5**
RIGZ	**Rimuhau**	**6.17**	**212**	P	**Pn**	**08 10 32.8**	**-1.8**
RIGZ				S	**Sn**	**08 11 42.1**	**-1.8**
MTHZ	**Maungataniwha**	**6.72**	**216**	P	**Pn**	**08 10 42.4**	**+0.3**
MTHZ				S	**Sn**	**08 11 55.2**	**-2.2**
CTZ	**Chatham Island**	**10.25**	**174**	P	**Pn**	**08 11 27.8**	**-2.6**
CTZ				S	Sn	08 13 10.8	-13
ASAR	**Alice Springs**	**42.98**	**270**	P	**P**	**08 17 02.6**	**+

JTM **Tenmabayashi** 10.10 357 P **Pn** 08 40 10.5 -0.3
JTM **Tenmabayashi** 10.10 357 **Pn** 08 40 09.6 -1.2
JTM **Tenmabayashi** 10.10 357 P **Pn** 08 40 09.6 -1.2
ERM **Erimo** 11.38 5 P **Pn** 08 40 27.0 -1.2
ERM **Erimo** 11.38 5⇑ *i*P **Pn** 08 40 26.6 -1.6
ERM **Erimo** 11.38 5 Pn **Pn** 08 40 26.9 -1.4
ERM **Erimo** 11.38 5 P **Pn** 08 40 26.4 -1.8
JEM **Erimo** 11.38 5 P **Pn** 08 40 29.0 +0.8
JOW **Kunigami** 12.40 255 LR LR 08 45 17.5
comp=Z,448nm,19.1s,baz=42,slow=37
KSRS Korea Array 13.28 304 Pn **Pn** **08 40 54.2 -0.1**
0.3nm,0.3s,baz=116,slow=13,SNR=7.6
KSRS Sn Sn 08 43 09.2 -13
0.4nm,0.3s,baz=240,slow=20,SNR=3.5
KSRS LR LR 08 46 03.1
comp=Z,274nm,18.3s,baz=105,slow=38
0.7nm,0.5s
ASAJ Asahikawa 13.44 3 Pn **Pn** **08 40 55.6 -0.8**
1.3nm,0.3s,baz=201,slow=11,SNR=14
ASAJ Sn Sn 08 43 15.2 -11
0.6nm,0.3s,baz=162,slow=33,SNR=2.5
ASAJ LR LR 08 47 00.6
comp=Z,188nm,20.3s,baz=188,slow=41
4.7nm,0.5s
JKA Kamikawa-asahi 13.44 3 **Pn** **08 40 53.0 -3.4**
JKA Kamikawa-asahi 13.44 3 P **Pn** **08 40 54.6 -1.8**
INCN Inchon 14.22 303 P **Pn** **08 41 07.9 +0.8**
INCN Inchon 14.22 303 Pn **Pn** **08 41 07.9 +0.8**
USRK Ussuriysk Ar. 15.54 333 Pn **Pn** **08 41 24.5 -0.3**
2.1nm,0.7s,baz=332,slow=16,SNR=2.5
USRK LR LR 08 47 11.7
comp=Z,171nm,19.3s,baz=154,slow=37
YSS Yuzhno-Sakhali 16.27 3 *e*P **Pn** **08 41 35.4 +1.1**
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=Z,300nm,14.0s
CN2 Changchun 18.38 320 P **Pn** **08 41 57.8 -2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 L L
comp=Z,200nm,13.0s
CN2 L L
comp=Z,200nm,13.0s
CN2 L L
comp=Z,200nm,13.0s
DL2 Dalian 18.41 302 *e*P **Pn** **08 42 02.5 +1.6**
DL2 *e*S **S** **08 45 30.3 -0.9**
DL2 pmax pmax
comp=Z,20nm,1.0s
DL2 pmax pmax
comp=Z,170nm,5.2s
DL2 L L
comp=Z,300nm,17.2s
DL2 L L
comp=Z,320nm,18.6s
DL2 L L
comp=Z,430nm,19.2s
BNX BinXian 18.73 327 ⇑P **P** **08 42 03.0 -1.5**
BNX pmax pmax
comp=Z,7.0nm,0.6s
YHNB Yeheng 18.97 257 P **P** **08 42 06.1 -1.3**
YHNB IAmb IAmb 08 42 50.1
comp=Z,64nm,1.5s
NACB Ninganchiao 18.99 255 P **Pn** **08 42 09.8 +1.6**
YULB Yu-li 19.57 253 P **Pn** **08 42 15.0 -0.1**
YULB Yu-li 19.57 253 P **P** **08 42 13.2 -0.6**
NJ2 Nanjing 19.57 280 *e*P **Pn** **08 42 15.5 +0.4**
NJ2 pmax pmax
comp=Z,26nm,0.5s
SSLB Suanglung 19.68 255 **P** **08 42 15.8 +0.8**
SSLB IAmb IAmb 08 42 18.2
comp=Z,68nm,1.2s
SSLB Suanglung 19.68 255 P **P** **08 42 15.9 +0.8**
KLR Kul'dur 20.01 341 P **P** **08 42 17.9 -0.6**
comp=Z,2.9nm,0.5s,baz=155,slow=7.3,SNR=7.3
comp=Z,2.9nm,0.5s
KLR Kul'dur 20.01 341⇓ *e*P **P** **08 42 17.2 -1.3**
KLR pmax pmax
comp=Z,7.0nm,0.8s
HEH HeiHe 22.31 335 *e*P **P** **08 42 42.5 -0.7**
HEH pmax pmax
comp=Z,10.0nm,0.7s
BJI2 Beijing 22.76 301 P **P** **08 42 46.8 -1.4**
BJI2 pP **sP** **08 42 51.0 +0.1**
BJI2 sP **pwP** **08 42 53.5 -1.2**
BJI2 S **S** **08 46 51.0 -6.1**
BJI2 pmax pmax
comp=Z,4.0nm,0.6s
BJI2 pmax pmax
comp=Z,59nm,5.4s
BJI2 L L
comp=Z,73nm,18.2s
BJI2 L L
comp=Z,120nm,17.9s
BJI2 L L
comp=Z,190nm,19.0s
HNS HongShan 23.32 294 ⇓P **P** **08 42 52.5 -1.4**
HNS S **S** **08 47 02.8 -3.7**
HNS pmax pmax
comp=Z,14nm,0.7s
HNS L L
comp=Z,190nm,18.3s
HNS L L
comp=Z,340nm,17.5s
HNS L L
comp=Z,380nm,18.3s
WHN Wuhan 23.54 277 P **P** **08 43 03.3 +7.1**
HIA Hailar 24.91 324 P **P** **08 43 08.0 -0.8**
HILR Hailar Array B 25.10 325 P **P** **08 43 09.3 -1.3**
comp=Z,5.5nm,0.4s,baz=129,slow=12,SNR=8.7
comp=Z,5.5nm,0.4s
H11N2 WAKE ISLAND Hy 25.20 110 T T 09 09 23.9
baz=300
H11N1 WAKE ISLAND Hy 25.20 110 T T 09 09 23.0
baz=300,slow=74,SNR=7.5
H11N3 WAKE ISLAND Hy 25.21 110 T T 09 09 23.9
baz=300,slow=74,SNR=6.7
ZEA Zeya 25.32 340 *e*P **P** **08 43 15.2 +2.8**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA MLR MLR
comp=N,100nm,16.0s
ZEA MLR MLR
comp=E,100nm,16.0s
ZEA MLR MLR
comp=Z,100nm,14.0s
PET Petropavlovsk 25.52 24⇑ *e*P **P** **08 43 12.4 -1.8**
PET pmax pmax
comp=Z,27nm,1.3s
H11S3 WAKE ISLAND Hy 25.68 112 T T 09 09 53.5
baz=304,slow=74,SNR=18
H11S1 WAKE ISLAND Hy 25.68 112 T T 09 09 55.6
baz=304,slow=74,SNR=24
H11S2 WAKE ISLAND Hy 25.69 112 T T 09 09 54.2
baz=304,slow=74,SNR=20
HHC Hu-ho-hao-te 26.38 301 *e*P **P** **08 43 22.5 +0.2**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,84nm,4.2s
HHC L L
comp=Z,170nm,14.7s
HHC L L
comp=Z,290nm,14.3s
HHC L L
comp=Z,320nm,14.9s
ULN Ulaanbaatar 31.52 313 *d i*P **P** **08 44 09.3 +1.3**
ULN pmax pmax
comp=Z,4.0nm,0.6s
ULN Ulaanbaatar 31.52 313 **P** **08 44 08.4 +0.3**
ULN IAmb IAmb 08 44 09.9
comp=Z,4.6nm,0.6s
ULN Ulaanbaatar 31.52 313 P **P** **08 44 08.9 +0.8**
SONM Songino Array 31.92 313 P **P** **08 44 11.6 0.0**
comp=Z,3.0nm,0.7s,baz=120,slow=8.8,SNR=11
SONM LR LR 08 57 04.3
comp=Z,140nm,21.9s,baz=3.5,slow=36
comp=Z,3.0nm,0.7s
SONM Songino Array 31.92 313 P **P** **08 44 12.2 +0.6**
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 31.92 313 P **P** **08 44 12.2 +0.6**
SHEM Shemya Is, Ala 32.28 38 LR LR 08 54 56.4
comp=Z,28nm,21.9s,baz=40,slow=32
SEY Seymchan 32.99 9⇓ *e*P **P** **08 44 18.2 -2.4**
SEY pmax pmax
comp=Z,4.0nm,1.1s
TLY Talaya 34.96 318 *c i*P **P** **08 44 39.0 +1.1**
TLY pmax pmax
comp=Z,8.0nm,0.9s
TLY Talaya 34.96 318 P **P** **08 44 38.5 +0.6**
TLY IAmb IAmb 08 44 40.0
comp=Z,5.6nm,0.8s
TLY Talaya 34.96 318 P **P** **08 44 39.2 +1.3**
GTA2 Gaotai 35.18 296 P **P** **08 44 39.5 -0.6**
GTA2 pmax pmax
comp=Z,11nm,0.8s
GTA2 L L
comp=Z,140nm,14.9s
GTA2 L L
comp=Z,260nm,16.2s
GTA2 L L
comp=Z,240nm,17.5s
PZH PanZhiHua 35.22 273 P **P** **08 44 40.3 -0.2**
KNGR Kungurtug, Tuv 38.30 314⇓ *e*P **P** **08 45 06.4 0.0**
KNGR pmax pmax
comp=Z,3.0nm,0.6s
BILL Bilibino 40.08 14⇑ *e*P **P** **08 45 22.1 +1.1**
BILL pmax pmax
comp=Z,9.0nm,1.3s
CMAR Chiang Mai Arr 40.53 263 P **P** **08 45 24.2 -1.1**
comp=Z,0.8nm,0.3s,baz=70,slow=5.5,SNR=4.6
CMAR LR LR 09 02 44.2
comp=Z,92nm,20.2s,baz=95,slow=37
comp=Z,0.8nm,0.3s
WMQ Urumqi 44.22 303 *e*P **P** **08 45 56.3 +1.1**
WMQ PP **PP** **08 47 38.8 +0.7**
WMQ pmax pmax
comp=Z,12nm,0.7s
COEN Coen 44.40 178 P **P** **08 45 58.0 +1.3**
COEN IAmb IAmb 08 45 59.4
comp=Z,11nm,1.0s
MTN Manton Dam 44.45 195 P **P** **08 45 56.1 -1.0**
MTN Manton Dam 44.45 195 P **P** **08 45 56.2 -0.9**
DGZ Jazzator, Alta 44.55 311 *c e*P **P** **08 45 58.2 +0.4**
DGZ pmax pmax
comp=Z,7.0nm,0.8s
ZALV Zalesovo Beam 46.56 317 P **P** **08 46 13.1 -0.3**
comp=Z,1.4nm,0.4s,baz=103,slow=6.8,SNR=4.7
ZALV PcP **PcP** **08 47 47.6 +0.1**
comp=Z,2.2nm,0.6s,baz=81,slow=4.5,SNR=4.9
ZALV LR LR 09 07 07.2
comp=Z,115nm,18.4s,baz=149,slow=38
comp=Z,1.4nm,0.4s
ZALV Zalesovo Beam 46.56 317 *i* P **P** **08 46 14.1 +0.7**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 47.94 307 *c i*P **P** **08 46 24.5 +0.1**
MKAR Makanchi Array 47.94 307 P **P** **08 46 24.5 +0.1**
comp=Z,3.9nm,0.6s,baz=90,slow=9.5,SNR=42
MKAR LR LR 09 07 32.0
comp=Z,80nm,18.2s,baz=82,slow=37
comp=Z,3.9nm,0.6s
MKAR Makanchi Array 47.94 307 **P** **08 46 24.0 -0.4**
MAKZ Makanchi 48.15 307 P **P** **08 46 25.8 -0.2**
MAKZ pmax pmax
comp=Z,5.0nm,0.5s
MAKZ Makanchi 48.15 307 **P** **08 46 25.8 -0.2**
MAKZ IAmb IAmb 08 46 26.5
comp=Z,5.0nm,0.5s
MAKZ Makanchi 48.15 307 P **P** **08 46 26.3 +0.3**
NRIK Noril'sk 49.19 338⇑ *e*P **P** **08 46 33.6 0.0**
NRIK pmax pmax
comp=Z,7.0nm,1.6s
LEM Lembang 49.57 227 LR LR 09 09 46.7
comp=Z,76nm,18.8s,baz=156,slow=39
MDSI Maura Dua 50.08 232 P **P** **08 46 40.2 -0.9**
PDGK Podgornoye 50.20 303 P **P** **08 46 41.5 -0.4**
PDGK Podgornoye 50.20 303 P **P** **08 46 41.5 -0.4**
KURK Kurchatov 50.23 312 *c i*P **P** **08 46 41.2 -0.6**
KURK pmax pmax
comp=Z,15nm,1.0s
KURK Kurchatov 50.23 312 **P** **08 46 41.6 -0.2**
KURK IAmb IAmb 08 46 42.3
comp=Z,9.3nm,0.8s
KURK Kurchatov 50.23 312 P **P** **08 46 40.7 -1.1**
KURBB Kurchatov Arra 50.29 312 P **P** **08 46 41.9 -0.4**
comp=Z,6.9nm,0.8s,baz=89,slow=7.4,SNR=64
KURBB LR LR 09 08 54.2
comp=Z,119nm,18.2s,baz=166,slow=37
comp=Z,6.9nm,0.8s
LWLI Liwa 50.55 232 P **P** **08 46 46.0 +1.2**
CTAO Charters Tower 50.66 174 P **P** **08 46 48.6 +3.3**
WUS Wushi 50.70 300 P **P** **08 46 46.0 +0.2**
WRAB Tennant Creek 50.81 189 *c e*P **P** **08 46 45.9 -0.6**
WRAB pmax pmax
comp=Z,21nm,2.1s
WRAB Tennant Creek 50.81 189 P **P** **08 46 45.1 -1.3**
WR8 Warramunga Arr 50.82 189 P **P** **08 46 45.7 -0.8**
WRA Warramunga Arr 50.82 189 P **P** **08 46 46.1 -0.4**
comp=Z,6.8nm,0.6s,baz=7.1,slow=7.7,SNR=118
comp=Z,6.8nm,0.6s
WRA Warramunga Arr 50.82 189 *i* P **P** **08 46 46.0 -0.6**
WRA pmax pmax
comp=Z,7.0nm,0.6s
WRA Warramunga Arr 50.82 189 P **P** **08 46 45.6 -1.0**
QIS Mount Isa 50.98 183 P **P** **08 46 47.2 -0.5**
GSI Gunungsitoli 50.98 244 P **P** **08 46 47.9 0.0**
E19K Redstone River 51.01 26 P **P** **08 46 48.0 +0.5**
PRZ Przheval'sk 51.11 302 P **P** **08 46 49.2 +0.3**
PRZ Przheval'sk 51.11 302 P **P** **08 46 49.2 +0.3**
ANVS Anan'yevo 51.60 302 P **P** **08 46 49.8 -2.7**
KDAK Kodiak Island 51.79 38 LR LR 09 07 18.1
comp=Z,56nm,21.6s,baz=231,slow=34
ASAI AK-SAY(Kyrgyzs 52.76 300 P **P** **08 47 01.1 -0.2**
BOOM Boomskoye usch 52.91 302 P **P** **08 47 01.0 -1.2**
BOOM Boomskoye usch 52.91 302 P **P** **08 47 02.0 -0.2**
FUNA Funafuti 53.02 131 P **P** **08 47 01.0 -2.1**
KSH2 Kashi 53.84 298 P **P** **08 47 10.0 +0.9**
KSH2 pmax pmax
comp=Z,8.0nm,0.9s
AAK Ala-Archa 53.93 303 LR LR 09 11 02.6
comp=Z,97nm,19.2s,baz=50,slow=37
AAK Ala-Archa 53.93 303⇓ *e*P **P** **08 47 09.9 +0.2**
AAK pmax pmax
comp=Z,2.0nm,0.5s
AS31 Alice Springs 54.55 189 P **P** **08 47 13.5 -0.6**
AS31 IAmb IAmb 08 47 15.1
comp=Z,2.0nm,0.4s
ASAR Alice Springs 54.55 189 P **P** **08 47 13.7 -0.5**
comp=Z,2.3nm,0.5s,baz=3.5,slow=6.1,SNR=68
comp=Z,2.3nm,0.5s
ILAR Eielson Array 54.80 30 P **P** **08 47 15.0 -0.5**
comp=Z,0.6nm,0.7s,baz=258,slow=5.9,SNR=7.6
comp=Z,0.6nm,0.7s
ILAR Eielson Array 54.80 30 P **P** **08 47 15.0 -0.5**
BVAR Borovoye Array 55.17 316 P **P** **08 47 18.4 0.0**
comp=Z,2.6nm,0.5s,baz=97,slow=7.7,SNR=10
comp=Z,2.6nm,0.5s
ARK Arkit 55.94 302 P **P** **08 47 25.2 +1.0**
ARK Arkit 55.94 302 P **P** **08 47 25.2 +1.0**
F26K Sheenjek River 56.01 26 **P** **08 47 25.0 +0.8**
F26K IAmb IAmb 08 47 33.9
comp=Z,5.8nm,1.4s
KKAR Karatay Array 56.71 304 P **P** **08 47 29.1 -0.4**
KKAR Karatay Array 56.71 304 P **P** **08 47 29.1 -0.4**
H27K Steamboat Moun 57.04 28 **P** **08 47 31.2 -0.4**
NIL Nilore 57.06 292 P **P** **08 47 31.9 -0.3**
NIL pmax pmax
comp=Z,20nm,0.7s
NIL Nilore 57.06 292 P **P** **08 47 31.9 -0.3**
NIL Nilore 57.06 292 P **P** **08 47 32.6 +0.4**
GAR Garm 57.84 299 P **P** **08 47 37.5 -0.2**
GAR Garm 57.84 299 P **P** **08 47 36.7 -1.0**
G29M Pine Creek 58.40 27 P **P** **08 47 42.1 +1.1**
G29M IAmb IAmb 08 48 01.0
comp=Z,4.5nm,0.9s
M29M Somme Creek 58.65 32 P **P** **08 47 43.7 +0.7**
M29M IAmb IAmb 08 48 03.9
comp=Z,3.4nm,0.8s
L29M L29M 58.73 32 **P** **08 47 44.8 +1.3**
L29M IAmb IAmb 08 48 04.3
comp=Z,5.5nm,0.9s
CHGR Chuyangaron 58.80 299 *c e*P **P** **08 47 44.6 +0.2**
CHGR pmax pmax
comp=Z,33nm,0.5s
CHGR Chuyangaron 58.80 299 P **P** **08 47 44.4 -0.1**
CHGR Chuyangaron 58.80 299 P **P** **08 47 44.7 +0.3**
M30M Minto, Yukon 59.40 32 P **P** **08 47 49.2 +1.1**
SHAA Shahritus 59.90 298 P **P** **08 47 52.5 +0.5**
SHAA IAmb IAmb 08 47 53.6
comp=Z,49nm,1.3s
KBL Kabul 60.11 295 P **P** **08 47 54.0 +0.3**
KBL pmax pmax
comp=Z,9.0nm,0.9s
KBL Kabul 60.11 295 P **P** **08 47 54.0 +0.3**
KBL IAmb IAmb 08 47 54.6
comp=Z,8.6nm,0.9s
KBL Kabul 60.11 295 P **P** **08 47 53.3 -0.3**
PALK Pallekele 61.44 261 LR LR 09 15 02.8
comp=Z,28nm,20.5s,baz=116,slow=36
ARTI Arti 61.48 321 LR LR 09 16 07.9
comp=Z,55nm,18.1s,baz=90,slow=38
ARTI Arti 61.48 321 *c i*P **P** **08 48 02.1 -0.2**
ARTI pmax pmax
comp=Z,18nm,0.8s
STKA Stephens Creek 62.21 180 P **P** **08 48 07.9 +0.4**
comp=Z,1.4nm,0.8s,baz=7.1,slow=5.9,SNR=6.3
comp=Z,1.4nm,0.8s
AB31 Akbulak array 62.34 313 P **P** **08 48 08.1 -0.2**
AB31 IAmb IAmb 08 48 09.4
comp=Z,5.5nm,0.7s
ABKAR Akbulak array 62.34 313 P **P** **08 48 07.7 -0.5**
DLBC Dease Lake 63.54 36 LR LR 09 16 35.6
comp=Z,20nm,19.2s,baz=178,slow=37
KIRV Kirov 65.52 325⇓ *i*P **P** **08 48 29.7 +0.7**
BBB Bella Bella 66.52 42 LR LR 09 16 18.7
comp=Z,15nm,19.8s,baz=212,slow=35
BELG Belogornoye 68.69 319 *c i*P **P** **08 48 49.0 -0.2**
BELG pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 69.21 29 P **P** **08 48 53.2 +0.9**
comp=Z,0.3nm,0.6s,baz=350,slow=3.9,SNR=2.7
comp=Z,0.3nm,0.6s
KLMR Klimovskoe 69.30 329 *e*P **P** **08 48 51.9 -1.0**
KLMR pmax pmax
comp=Z,9.0nm,0.7s
ARCES ARCESS Array B 70.04 340 P **P** **08 48 57.2 -0.2**
comp=Z,3.3nm,0.8s,baz=56,slow=9.0,SNR=8.4
ARCES LR LR 09 24 20.5
comp=Z,44nm,18.4s,baz=84,slow=40
comp=Z,3.3nm,0.8s
AKT Akhty 73.14 308 *e*P **P** **08 49 16.5 -0.2**
AKT *e* 08 49 32.2
AKT pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 73.37 325⇓ *e*P **P** **08 49 16.9 -0.7**
OBN *e* 08 49 32.3
OBN *e*PPP PPP 08 53 45.0
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,63nm,16.0s
YBH Yreka Blue Hor 74.10 51 LR LR 09 15 45.5
comp=Z,34nm,20.6s,baz=291,slow=31
FINES FINESS Array B 74.57 333 P **P** **08 49 24.7 +0.2**
comp=Z,4.8nm,0.6s,baz=62,slow=5.1,SNR=28
FINES LR LR 09 24 29.2
comp=Z,35nm,18.1s,baz=208,slow=38
comp=Z,4.8nm,0.6s
KBZ Khabaz 75.29 312 P **P** **08 49 29.5 +0.5**
comp=Z,5.5nm,0.8s,baz=74,slow=3.7,SNR=17
comp=Z,5.5nm,0.8s
KBZ Khabaz 75.29 312 *c i*P **P** **08 49 29.6 +0.6**
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KIV Kislovodsk 75.32 312 *e*P **P** **08 49 28.7 -0.6**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,41nm,18.0s
SHA1 Shidzhatmaz 75.44 312⇓ *e*P **P** **08 49 31.5 +1.3**
VSU Vasula 76.08 331⇑ *e*P **P** **08 49 32.4 -0.8**
VSU pmax pmax
comp=Z,22nm,0.9s
RAR Rarotonga 76.27 125 LR LR 09 18 27.9
comp=Z,51nm,19.7s,baz=287,slow=32
VSLR Vesyoloye 77.24 313⇓ *i*P **P** **08 49 41.0 +0.9**
VSLR pmax pmax
comp=Z,15nm,0.7s
MNK Minsk 77.92 327 *i* P **P** **08 49 44.1 +0.4**
comp=E,18nm,1.1s
MNK *i* P **P** **08 49 44.1 +0.4**
comp=N,15nm,0.8s
MNK *i* P **P** **08 49 44.1 +0.4**
comp=Z,12nm,0.8s,baz=54
MNK *i* PP **PP** **08 52 39.7 +0.8**
MNK *i* PPP PPP 08 54 28.6
MNK *i* S **S** **08 59 39.5 +2.7**
MNK *i* SS **SS** **09 04 42.0 +5.5**
MNK *i* SSS SSS 09 08 05.3
MNK *i* LQ LQ 09 19 06.5
MNK *i* LR LR 09 25 22.3
MNK *i* LRM MLR 09 27 30.7
comp=N,173nm,28.9s
MNK *i* LRM MLR 09 27 46.1
comp=Z,55nm,17.2s
MNK *i* LRM MLR 09 27 53.1
comp=E,171nm,20.5s
MNK Minsk 77.92 327 *i* P **P** **08 49 44.1 +0.4**
MNK *i* 08 52 39.7
MNK *i* PPP PPP 08 54 28.6
MNK *i* S **S** **08 59 39.5 +2.7**
MNK *i* SS **SS** **09 04 42.0 +5.5**
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=E,18nm,1.1s
MNK MLR MLR
comp=N,173nm,29.0s
MNK MLR MLR
comp=Z,55nm,17.0s
MNK MLR MLR
comp=E,171nm,20.0s
NVAR Mina Array Bea 78.64 52 P **P** **08 49 49.2 +0.8**
comp=E,0.8nm,0.6s,baz=292,slow=5.9,SNR=4.0
NVAR LR LR 09 22 17.6
comp=E,34nm,19.0s,baz=298,slow=34
comp=E,0.8nm,0.6s
AKASG Malin Array Be 79.50 323 P **P** **08 49 52.1 -0.3**
comp=E,1.5nm,0.5s,baz=52,slow=5.8,SNR=8.4
comp=E,1.5nm,0.5s
AKBB Malin Array Si 79.50 323 *c i*P **P** **08 49 52.2 -0.3**
AKBB pmax pmax
comp=Z,5.0nm,0.7s
HFS Hagfors 79.99 336 P **P** **08 49 54.8 -0.2**
comp=Z,3.3nm,0.6s,baz=22,slow=1.6,SNR=8.1
comp=Z,2.3nm,0.6s
NB2 NORSAR Subarra 80.15 338 P **P** **08 49 55.9 0.0**
comp=Z,2.0nm,0.7s,baz=40,slow=5.6
NB2 NORSAR Subarra 80.15 338 P **P** **08 49 55.2 -0.7**
NOA NORSAR Array B 80.15 338 P **P** **08 49 55.8 -0.1**
comp=Z,2.2nm,0.7s,baz=41,slow=5.4,SNR=15
NOA LR LR 09 28 39.3
comp=Z,40nm,19.3s,baz=40,slow=38
comp=Z,2.2nm,0.7s
PDAR Pinedale Array 81.97 45 P **P** **08 50 07.5 +1.3**
comp=Z,0.3nm,0.6s,baz=247,slow=2.1,SNR=5.6
comp=Z,0.3nm,0.6s
PFO Pinyon Flats O 82.39 55 LR LR 09 26 36.0
comp=Z,51nm,18.2s,baz=228,slow=36
BR131 Keskin Array S 83.28 312 *c i*P **P** **08 50 13.2 +0.2**
BRTR Keskin Array B 83.28 312 P **P** **08 50 13.3 +0.4**
comp=Z,3.4nm,0.8s,baz=109,slow=4.0,SNR=26
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 83.28 312 *c e*P **P** **08 50 13.3 +0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
RAYN Ar Rayn 83.35 293 P **P** **08 50 13.9 +0.5**
RAYN pmax pmax
comp=Z,12nm,0.7s
RAYN Ar Rayn 83.35 293 P **P** **08 50 13.9 +0.5**
MLR Muntele Rosu 84.42 320 LR LR 09 30 36.3
comp=Z,51nm,19.5s,baz=130,slow=38
ULM Lac du Bonnet 84.68 33 LR LR 09 29 59.7
comp=Z,13nm,18.9s,baz=194,slow=37
PV10 Paradox Valley 84.80 48 P **P** **08 50 21.2 +0.3**
PV10 IAmb IAmb 08 50 29.8
comp=Z,6.8nm,0.9s
PV19 Morning Glory 84.87 48 P **P** **08 50 21.2 0.0**
PV01 Paradox Valley 85.24 48 P **P** **08 50 23.1 +0.1**
PV01 IAmb IAmb 08 50 31.9
comp=Z,5.0nm,1.4s

MMAI	**Mount Meron Ar**	**85.87**	**306**	LR	LR	09 31 08.4	
	comp=Z,21nm,18.9s,baz=111,slow=37						
VRAC	**Vranov**	**86.60**	**328**	LR	LR	09 32 18.5	
	comp=Z,35nm,18.6s,baz=28,slow=38						
GERES	**GERESS Array B**	**88.25**	**329**	P	**P**	**08 50 36.7**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=218,slow=41,SNR=2.7						
	comp=Z,0.4nm,0.4s						
ANMO	**Albuquerque**	**88.49**	**50**	LR	LR	09 28 34.3	
	comp=Z,40nm,18.4s,baz=307,slow=34						
LPIG	**La Paz**	**92.11**	**60**	LR	LR	09 27 26.5	
	comp=Z,25nm,19.0s,baz=272,slow=32						
TXAR	**Lajitas Array**	**93.78**	**53**	P	**P**	**08 51 04.0**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=300,slow=3.2,SNR=8.2						
	comp=Z,1.0nm,0.9s						
QSPA	**South Pole Qui**	**120.43**	**180**	PKP	**PKPdf**	**08 56 36.3**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=296,slow=5.9,SNR=1.4						
TORD	**Torodi Ar. Bea**	**121.90**	**313**	PKP	**PKPdf**	**08 56 40.3**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=80,slow=1.1,SNR=1.8						
VNA2	**Neumayer--Watz**	**136.26**	**194**	⇓PKPdf	**PKPdf**	**08 57 07.6**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=122,slow=1.0						
LPAZ	**La Paz**	**149.22**	**69**	PKPbc	**PKPbc**	**08 57 36.4**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=13,slow=5.1,SNR=6.9						

*MEX **31** 08:47:57.6±0.4, 14.°18N×92.°39W, h74km±15km, MD3.8*
*GCG **31** 08:47:59.1±1.5, 14.°16N×92.°19W, h27km±12km, MD3.9,*
Presumed earthquake
ISC 31 08:47:52.4±2.9, 13.°9N±0.°1×92.°4W±0.°1, h29km±14km, n15, σ1§28/23, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.93**	**48**	*eP*			**Pn**	**08 48 12.1**	**+2.6**
RTAL				*eS*			**Sn**	**08 48 23.6**	**+1.6**
SMCA	**Catarina**	**1.00**	**19**	*i P*			**Pb**	**08 48 11.9**	**+0.7**
SMCA				*i S*			**Sb**	**08 48 22.9**	**-1.2**
THIG		**1.01**	**8**	*eP*			**Pb**	**08 48 11.6**	**+0.3**
THIG				*eS*			**Sb**	**08 48 22.8**	**-1.4**
STG5	**El Palmar, Qui**	**1.14**	**64**	*i P*			**Pb**	**08 48 14.0**	**+0.4**
STG8	**El Palmar, Qui**	**1.16**	**62**	*i P*			**Pb**	**08 48 14.7**	**+0.7**
PATR	**El Naranjo**	**1.22**	**8**	*eP*			**Pn**	**08 48 14.5**	**+0.7**
PATR				*eS*			**Sn**	**08 48 27.4**	**-2.0**
CHUJ	**Union Juarez**	**1.22**	**14**	*eP*			**Pn**	**08 48 14.6**	**+0.8**
CHUJ				*eS*			**Sn**	**08 48 28.4**	**-1.1**
QUEO	**Labor Ovalle**	**1.29**	**42**	*i P*			**Pb**	**08 48 17.4**	**+1.1**
QUEO				*i S*			**Sn**	**08 48 31.6**	**+0.2**
PAVE	**Pavencul**	**1.30**	**10**	*eP*			**Pn**	**08 48 15.8**	**+0.9**
PAVE				*eS*			**Sn**	**08 48 29.5**	**-2.0**
HUEH	**Huehuetenango**	**1.66**	**32**	*eP*			**Pb**	**08 48 22.7**	**+0.3**
HUEH	**Huehuetenango**	**1.66**	**32**	*i P*			**Pb**	**08 48 23.1**	**+0.7**
FG8	**Yepocapa, Chim**	**1.82**	**79**	*i P*			**Pn**	**08 48 20.8**	**-1.2**
FG16	**Alotenango, Sa**	**1.88**	**78**	*i P*			**Pn**	**08 48 22.3**	**-0.4**
APG	**El Apazote**	**2.18**	**60**	*i P*			**Pb**	**08 48 31.0**	**-0.3**
TGIG		**2.94**	**347**	*eP*			**Pn**	**08 48 38.6**	**+1.3**
TGIG				*eS*			**Sn**	**08 49 10.9**	**-0.8**

SSNC 31 08:48:35.2±1.9, 18.°29N×81.°38W, h5km±36km, MD3.8,
Presumed earthquake, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**4.02**	**19**	*eP*			Pn	08 49 34.2	-3.2
MGV				*eS*			Sn	08 50 19.1	-5.8
CCCC	**Cccc**	**4.46**	**49**	*eP*			Pn	08 49 48.5	+4.9
CCCC				*eS*			Sb	08 50 44.0	-4.3
CCCC				IAML				08 50 47.1	
	comp=E,1.1nm,0.1s								
CCCC				IAML				08 50 47.2	
	comp=N,1.9nm,0.2s								
CAIB	**Caibarien**	**4.54**	**23**	*eP*			Pn	08 49 43.8	-0.8
CAIB				*eS*			Sn	08 50 34.2	-3.7
CAIB				IAML				08 50 37.3	
	comp=N,7.4nm,0.1s								
CAIB				IAML				08 50 37.6	
	comp=E,2.4nm,0.0s								
SOR	**Soroa**	**4.73**	**341**	*eP*			Pn	08 49 46.1	-1.1
CAMR	**Camarioca**	**4.74**	**0**	*eP*			Pn	08 49 46.6	-0.8
CHIV	**Chivirico**	**4.98**	**70**	*eP*			Pn	08 49 51.0	+0.3
YAR	**Yar**	**5.17**	**66**	*eP*			Pn	08 49 56.1	+2.9
MARVS	**Santiago de Cu**	**5.45**	**71**	*eP*			Pn	08 50 01.1	+4.0
RCC	**Rio Carpintero**	**5.63**	**72**	*eP*			Pn	08 49 58.0	-1.6
RCC				*eS*			Sn	08 51 00.2	-4.4

TAP 31 08:59:45.4, 23.°08N×120.°91E, h8km, ML2.5, 4C-1D, C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.15**	**42**	*i P*			Pg	08 59 48.8	+0.2
ELDTW				*eS*			Sg	08 59 50.8	-0.1
STYH	**Taoyuan**	**0.15**	**308**	P			Pg	08 59 49.1	+0.5
STYH				*i S*			Sg	08 59 51.4	+0.6
STYT	**Tauyuan**	**0.16**	**302**	⇑*i P*			Pg	08 59 49.1	+0.3
STYT				S			Sg	08 59 51.7	+0.5
SLGT	**Liugui**	**0.25**	**251**	⇓P			Pb	08 59 51.5	-0.7
SLGT				S			Sb	08 59 55.3	-1.5
LONT	**Longtian**	**0.27**	**130**	⇑*i P*			Pb	08 59 51.5	-0.9
LONT				S			Sg	08 59 55.5	+1.3
EHD	**Haiduan**	**0.28**	**75**	*i P*			Pg	08 59 51.5	+0.5
EHD				*eS*			Sg	08 59 55.1	+0.3
ECS	**Chishang**	**0.29**	**86**	*eP*			Pb	08 59 52.2	-0.6
ECS				S			Sb	08 59 56.2	-1.4
TWG	**Pinlang**	**0.30**	**149**	*eP*			Pb	08 59 52.5	-0.5
TWG				S			Sb	08 59 57.1	-1.0
SGST	**Jiashian**	**0.30**	**271**	*i P*			Pg	08 59 51.7	+0.4
SGST				S			Sg	08 59 56.4	+1.2
TWGBT	**Beinan**	**0.30**	**148**	P			Pb	08 59 52.5	-0.5
TWGBT				S			Sb	08 59 56.9	-1.4
WTP	**Ta-pu**	**0.32**	**302**	*eP*			Pb	08 59 53.0	-0.3
WTP				*eS*			Sb	08 59 58.0	-0.7
TPUB	**Ta-pu**	**0.34**	**311**	*i P*			Pb	08 59 53.4	-0.3
CHN1	**Nanshi**	**0.36**	**287**	*eP*			Pb	08 59 54.2	+0.1
CHN1				*eS*			Sb	09 00 00.3	+0.3
FULB	**Fuli**	**0.38**	**71**	*i P*			Pb	08 59 53.9	-0.4
FULB				*i S*			Sb	08 59 59.4	-0.9
EDH	**Donghe**	**0.38**	**106**	P			Pb	08 59 54.0	-0.3
EDH				S			Sb	09 00 00.1	-0.3
TTN	**Taitung**	**0.39**	**145**	P			Pb	08 59 54.5	-0.1
TTN				S			Sb	09 00 00.9	+0.2
CHN4	**Tsaushan**	**0.40**	**313**	*eP*			Pb	08 59 54.6	-0.1
SNST	**Tainan City**	**0.40**	**291**	*eP*			Pb	08 59 55.2	+0.5
SSD	**Sandimen**	**0.42**	**218**	*i P*			Pg	08 59 54.1	+0.6
SSD				*eS*			Sg	08 59 59.3	+0.4
CHKT	**Chengkung**	**0.42**	**87**	*eP*			Pb	08 59 55.4	+0.3
CHKT				S			Sb	09 00 02.2	+0.6
SCST	**Cishan**	**0.43**	**244**	P			Pb	08 59 54.8	-0.3
SCST				*eS*			Sb	09 00 02.7	+1.0
TWK	**Hsinying**	**0.43**	**296**	*eP*			Pb	08 59 56.2	+1.0
TWK				*eS*			Sb	09 00 03.0	+1.1
ALS	**Alishan**	**0.44**	**348**	*i P*			Pg	08 59 54.4	+0.3
ALS				S			Sg	09 00 01.1	+1.2
TSMG	**Majia**	**0.44**	**213**	⇑*i P*			Pg	08 59 54.5	+0.6
TSMG				*eS*			Sg	08 59 59.9	+0.1
TWF1	**Yuli**	**0.45**	**53**	*eP*			Pg	08 59 54.4	+0.3
TWF1				S			Sb	09 00 02.9	+0.4
WCKO	**Fanlu**	**0.46**	**322**	P			Pg	08 59 54.8	+0.6
WCKO				S			Sb	09 00 03.1	+0.5
CHKH	**Chenggong**	**0.46**	**76**	P			Pb	08 59 55.4	-0.4
CHKH				S			Sb	09 00 02.9	+0.1
EYUL	**Yuli**	**0.47**	**55**	P			Pg	08 59 54.5	+0.1
EYUL				S			Sb	09 00 02.1	-0.8
YULB	**Yu-li**	**0.48**	**49**	*eP*			Pg	08 59 54.5	-0.2
YULB				*eS*			Sg	09 00 01.3	+0.4
ECL	**Taimali**	**0.48**	**175**	*eP*			Pb	08 59 55.7	-0.4
ECL				*eS*			Sg	09 00 01.9	+0.9
CHN3	**Shinhua**	**0.50**	**270**	P			Pb	08 59 57.1	+0.7
CHN3				*eS*			Sb	09 00 05.4	+1.5
SHHT	**Tainan City**	**0.52**	**264**	P			Pb	08 59 56.5	-0.2
SHHT				S			Sb	09 00 04.5	+0.1
SGLT	**Jiouru**	**0.52**	**228**	P			Pg	08 59 55.8	+0.4
SGLT				S			Sb	09 00 04.9	+0.5
MASBT	**Mashibuluo**	**0.53**	**209**	*i P*			Pg	08 59 56.2	+0.6
MASBT				*eS*			Sg	09 00 02.9	+0.4
ECBN	**Changbin**	**0.55**	**64**	P			Pb	08 59 57.5	+0.2
ECBN				S			Sb	09 00 06.0	+0.6
CHN5	**Tsauling**	**0.56**	**338**	*eP*			Pb	08 59 57.8	+0.3
CHN5				S			Sb	09 00 06.4	+0.7
EHY	**Hungye**	**0.57**	**42**	*eP*			Pg	08 59 56.4	0.0
EHY				*eS*			Sb	09 00 05.2	-0.8
EHYH	**Wanrong**	**0.58**	**44**	P			Pb	08 59 57.2	-0.6
EHYH				S			Sb	09 00 06.5	+0.4
CHY	**Chiayi**	**0.61**	**313**	P			Pb	08 59 58.0	-0.3
CHY				S			Sb	09 00 07.9	+0.9
WHYT	**Xinyi Township**	**0.62**	**355**	P			Pb	08 59 58.0	-0.4
WHYT				*eS*			Sg	09 00 06.0	+0.6
HGSD	**Ruisui**	**0.63**	**49**	P			Pb	08 59 59.0	+0.3
HGSD				S			Sb	09 00 08.9	+1.3
ICHU	**Yijhu**	**0.64**	**296**	P			Pb	08 59 58.9	0.0
ICHU				S			Sb	09 00 09.1	+1.1
LDUT	**Ludao**	**0.66**	**128**	P			Pb	08 59 59.2	+0.2
LDUT				S			Sb	09 00 09.7	+1.4
EAST	**Anshuo**	**0.69**	**185**	P			Pb	08 59 59.9	+0.2
EAST				*eS*			Sb	09 00 08.9	-0.5
WDLH	**Douliu**	**0.70**	**331**	P			Pb	08 59 59.8	0.0
WDLH				S			Sb	09 00 10.5	+0.9
VWDT	**VWDT**	**0.71**	**18**	P			Pb	08 59 59.5	-0.5
VWDT				S			Sb	09 00 11.0	+1.1
SSLB	**Suanglung**	**0.71**	**3**	P			Pb	08 59 59.9	-0.1
SSLB				S			Sb	09 00 11.3	+1.4
TAWH	**Dawu Township**	**0.73**	**181**	P			Pg	08 59 59.9	+0.4
TAWH				*eS*			Sb	09 00 10.4	-0.2
SCZT	**Fangliau**	**0.75**	**201**	P			Pg	09 00 00.1	+0.3
SCZT				*eS*			Sg	09 00 09.9	+0.4
EGFH	**Guangfu**	**0.76**	**39**	P			Pg	09 00 00.3	+0.4
EGFH				S			Sb	09 00 12.2	+0.9
TSCK	**Chigu Township**	**0.76**	**275**	P			Pb	09 00 00.4	-0.4
TSCK				S			Sb	09 00 12.3	+1.0
WSL	**Shuilin Townsh**	**0.77**	**306**	P			Pb	09 00 01.0	+0.1
WSL				S			Sb	09 00 12.8	+1.2
WTK	**Tuku**	**0.77**	**322**	P			Pg	09 00 00.5	+0.3
WTK				S			Sn	09 00 13.1	-1.3
WARBT	**Fenglin Townsh**	**0.78**	**35**	P			Pb	09 00 01.0	-0.2
WARBT				S			Sb	09 00 13.0	+1.1
SMLT	**Sun Moon Lake**	**0.80**	**360**	P			Pb	09 00 02.1	+0.5
SMLT				S			Sn	09 00 14.0	-1.3
WNT	**Mingjian**	**0.82**	**346**	P			Pb	09 00 01.9	0.0
WNT				S			Sn	09 00 14.7	-0.9
TYC	**Yuchr**	**0.82**	**357**	P			Pn	09 00 02.6	-0.7
TYC				S			Sn	09 00 14.9	-0.8
SLIU	**Shizi**	**0.86**	**187**	P			Pb	09 00 02.9	+0.3
SLIU				*eS*			Sn	09 00 16.4	-0.2
ESL	**Shilin**	**0.88**	**33**	P			Pb	09 00 03.0	+0.1
ESL				*eS*			Sg	09 00 13.7	0.0
OWD	**Renai**	**0.91**	**16**	P			Pb	09 00 03.6	+0.1
OWD				S			Sn	09 00 17.1	-0.8
SHUL	**Shoufeng**	**0.93**	**40**	P			Pb	09 00 03.8	+0.1
SHUL				S			Sb	09 00 17.2	+1.0
WUSB	**Renai**	**0.93**	**12**	P			Pb	09 00 03.9	0.0
WUSB				S			Sn	09 00 18.4	-0.2
DPDB	**Guoxing**	**0.95**	**1**	P			Pb	09 00 04.7	+0.5
DPDB				S			Sn	09 00 18.1	-0.9
WCS	**Beigang Elemen**	**0.98**	**0**	P			Pn	09 00 05.0	-0.4
WCS				S			Sn	09 00 19.0	-0.5
WWF	**Wufeng**	**0.98**	**349**	*eP*			Pg	09 00 03.1	-1.1
WWF				S			Sn	09 00 19.3	-0.2
ETM	**Tongmen**	**1.03**	**31**	P			Pb	09 00 05.4	-0.1
ETM				S			Sn	09 00 20.6	-0.3
LXIB	**Xiulin Townshi**	**1.05**	**26**	*eP*			Pg	09 00 05.7	+0.1
LXIB				*eS*			Sn	09 00 21.9	+0.5
WHF	**Hehuan Shan**	**1.11**	**17**	P			Pg	09 00 06.8	0.0
WHF				*eS*			Sn	09 00 23.7	+0.3
WDGT	**Dungji**	**1.16**	**279**	P			Pn	09 00 08.0	+0.1
WDGT				*eS*			Sg	09 00 22.8	0.0
TWD	**Chiawan**	**1.18**	**32**	P			Pb	09 00 08.0	-0.1
TWD				S			Sn	09 00 25.1	+0.6
TDCB	**Techi**	**1.19**	**11**	*eP*			Pg	09 00 06.7	-1.6
TDCB				S			Sn	09 00 25.7	+0.7
WHP	**Taichung City**	**1.20**	**2**	P			Pn	09 00 09.1	+0.2
WHP				*eS*			Sn	09 00 27.6	+2.6
FUSS	**Fushou**	**1.21**	**15**	P			Pg	09 00 08.5	0.0
FUSS				*eS*			Sn	09 00 27.7	+2.2
LYUB	**Lan-yu**	**1.24**	**150**	P			Pn	09 00 08.9	-0.1
LYUB				*eS*			Sb	09 00 25.0	-0.1
ETLH	**Xiulin Townshi**	**1.24**	**25**	⇑P			Pg	09 00 09.4	+0.2
ETLH				S			Sn	09 00 26.9	+0.8
NACB	**Ninganchiao**	**1.26**	**30**	P			Pb	09 00 09.5	+0.1
NACB				*eS*			Sn	09 00 28.3	+1.9
PHUB	**P'eng-hu**	**1.30**	**290**	*eS*			Sn	09 00 27.6	+0.1
PNG	**Penghu**	**1.33**	**292**	P			Pn	09 00 09.8	-0.5
PNG				S			Sg	09 00 29.1	+0.8
VCHM	**Qimei**	**1.37**	**276**	P			Pn	09 00 10.5	-0.3
VCHM				S			Sg	09 00 29.9	+0.5
NNSB	**Datong**	**1.41**	**18**	P			Pg	09 00 12.5	0.0
NNSB				*eS*			Sg	09 00 32.3	+1.4
NNSH	**Datong**	**1.41**	**18**	*eP*			Pg	09 00 12.7	+0.1
NNSH				*eS*			Sg	09 00 33.4	+2.5
ENA	**Nanau**	**1.55**	**29**	P			Pn	09 00 13.4	+0.1
ENA				S			Sg	09 00 35.5	+0.4
LATG	**Datong**	**1.56**	**21**	P			Pb	09 00 14.6	0.0
LATG				S			Sg	09 00 35.1	-0.4
NFF	**Wufeng Townshi**	**1.56**	**7**	P			Pb	09 00 14.1	-0.4
NFF				S			Sg	09 00 35.1	-0.4
LIOB	**Emei**	**1.56**	**4**	P			Pn	09 00 13.8	+0.3
LIOB				S			Sb	09 00 35.1	+0.6
YHNB	**Yeheng**	**1.64**	**15**	*eP*			Pg	09 00 16.5	-0.4
SBCB	**Hsinchu**	**1.71**	**2**	S			Sn	09 00 37.9	+0.3
FUSB	**Fushanzhiwuyua**	**1.79**	**20**	*eP*			Pg	09 00 19.5	-0.2
FUSB				*eS*			Sg	09 00 43.4	+0.5

*GII **31** 09:17:00.8±0.0, 26.°854N±0.°002×34.°424E±0.°001, h0km,*
Mws3.0, confirmed
*HLW **31** 09:17:02.1, 26.°66N×34.°90E, h21km±2km, Md2.6, Ml2.9*
*SGS **31** 09:17:03.5, 26.°90N×34.°96E, h13km, Ml2.6*
ISC 31 09:17:01.2±1.5, 26.°68N±0.°03×34.°95E±0.°04, h24km±15km,
n58, σ0§98/78, Red Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NQSR	**New Quseer**	**0.83**	**228**	P			**Pb**	**09 17 17.0**	**0.0**
NQSR				S			**Sb**	**09 17 27.2**	**-0.6**
NSFG	**Safaga**	**0.91**	**276**	P			**Pb**	**09 17 18.0**	**-0.3**
NSFG				S			**Sb**	**09 17 30.3**	**+0.3**
MWLHS	**Almuwaylih**	**1.18**	**25**	P			**Pn**	**09 17 21.1**	**-1.1**
DESA	**DESA**	**1.36**	**52**	P			**Pn**	**09 17 24.5**	**-0.3**
DESA				S			**Sn**	**09 17 40.4**	**-1.7**
NADB	**Abo Dabab**	**1.39**	**197**	P			**Pn**	**09 17 25.4**	**+0.3**
NADB				S			**Sn**	**09 17 41.6**	**-1.1**
KRABS	**KRABS**	**1.45**	**11**	P			**Pn**	**09 17 24.8**	**-1.1**
KRABS				S			**Sn**	**09 17 40.9**	**-3.2**
AYUS	**`Aynunah**	**1.54**	**11**	P			**Pn**	**09 17 26.2**	**-1.0**
TR1	**Tor 1**	**1.59**	**326**	P			**Pn**	**09 17 27.7**	**-0.2**
EWJHS	**Al Wajh**	**1.61**	**108**	P			**Pn**	**09 17 27.7**	**-0.5**
RSHS		**1.62**	**355**	P			**Pn**	**09 17 27.3**	**-1.1**
RSHS				S			**Sn**	**09 17 45.1**	**-3.4**
SHQRE	**Shigry**	**1.63**	**42**	P			**Pn**	**09 17 28.8**	**+0.2**
WTBKS	**WTBKS**	**1.65**	**31**	P			**Pn**	**09 17 28.6**	**-0.1**
BDAS	**Al Bad`**	**1.75**	**4**	P			**Pn**	**09 17 29.4**	**-0.8**
URD06	**Shuwaq**	**1.79**	**64**	P			**Pn**	**09 17 31.3**	**+0.4**
URD06				S			**Sn**	**09 17 52.2**	**-0.7**
BIDS	**Bi'r al Bayda'**	**1.81**	**83**	P			**Pn**	**09 17 31.1**	**+0.2**
URD05	**Al Faraah**	**1.88**	**72**	P			**Pn**	**09 17 32.3**	**+0.3**
TR2	**Tor 2**	**2.02**	**328**	P			**Pn**	**09 17 34.2**	**+0.4**
HKAT	**Jabal Katrina**	**2.03**	**335**	P			**Pn**	**09 17 34.5**	**+0.4**
HKAT				S			**Sn**	**09 17 57.5**	**-1.2**
TBKS	**Tabuk**	**2.09**	**42**	P			**Pn**	**09 17 35.7**	**+0.9**
URD04	**Abu Rakah**	**2.10**	**78**	P			**Pn**	**09 17 35.7**	**+0.6**
JLOS		**2.11**	**13**	P			**Pn**	**09 17 35.1**	**-0.1**
URD12	**Shuwaq**	**2.17**	**60**	P			**Pn**	**09 17 36.7**	**+0.7**
URD03	**Al Ula**	**2.24**	**90**	P			**Pn**	**09 17 37.6**	**+0.7**
HAGS	**Hagol**	**2.29**	**179**	P			**Pn**	**09 17 37.9**	**+0.4**
HAGS				S			**Sn**	**09 18 03.8**	**-1.1**
URD15	**Abu Rakah**	**2.31**	**75**	P			**Pn**	**09 17 38.8**	**+0.9**
HAQS	**Haql**	**2.37**	**359**	P			**Pn**	**09 17 38.7**	**+0.1**
JMOS	**Jabal al Moall**	**2.49**	**3**	P			**Pn**	**09 17 40.5**	**+0.3**
HRDS	**Abu Rudays**	**2.50**	**325**	P			**Pn**	**09 17 41.1**	**+0.7**
NEDF	**New Edfo**	**2.53**	**226**	P			**Pn**	**09 17 41.5**	**+0.7**
URD14	**Abu Rakah**	**2.60**	**72**	P			**Pn**	**09 17 43.1**	**+1.1**
HQLS		**2.62**	**2**	P			**Pn**	**09 17 42.3**	**+0.2**
QLABS	**Al Qalibar**	**2.90**	**65**	P			**Pn**	**09 17 47.6**	**+1.5**
BRNS	**Bernies**	**2.91**	**195**	P			**Pn**	**09 17 47.1**	**+1.1**
EIL	**Elat**	**2.98**	**0**	P			**Pn**	**09 17 47.1**	**0.0**
EIL	**Elat**	**2.98**	**0**	P			**Pn**	**09 17 47.5**	**+0.5**
EIL				S			**Sn**	**09 18 22.7**	**+0.6**
AQBJ	**Aqaba**	**3.04**	**2**	P			**Pn**	**09 17 48.3**	**+0.4**
ASUT		**3.10**	**284**	P			**Pn**	**09 17 49.4**	**+0.7**
YTVT	**Yotvata**	**3.21**	**2**	P			**Pn**	**09 17 50.9**	**+0.7**
YTVT				S			**Sn**	**09 18 28.5**	**+1.0**
HRFI	**Mount Harif**	**3.35**	**1**	P			**Pn**	**09 17 51.8**	**-0.3**
HRFI				S			**Sn**	**09 18 32.1**	**+0.9**
AKUR	**Kurkur**	**3.40**	**216**	P			**Pn**	**09 17 53.3**	**+0.6**
AKUR				S			**Sn**	**09 18 30.2**	**-2.1**
NAHD	**NAHD**	**3.47**	**215**	P			**Pn**	**09 17 54.4**	**+0.6**
KASR	**Kasr**	**3.49**	**209**	P			**Pn**	**09 17 55.0**	**+1.0**
NNMR	**New North Mara**	**3.64**	**217**	P			**Pn**	**09 17 56.7**	**+0.6**
SUZ	**Suez**	**3.67**	**330**	P			**Pn**	**09 17 57.6**	**+1.1**
NBNS	**Bani Suef**	**3.78**	**302**	P			**Pn**	**09 17 58.6**	**+0.6**
NSKD	**New Sinn el Ka**	**3.79**	**218**	P			**Pn**	**09 17 58.9**	**+0.6**
ZFRI	**Zfri**	**3.87**	**3**	P			**Pn**	**09 18 00.1**	**+0.8**
ZFRI				S			**Sn**	**09 18 45.0**	**+1.0**
NGMR	**NGMR**	**3.89**	**217**	P			**Pn**	**09 18 00.3**	**+0.7**
RMNI	**Mount Ramon**	**3.91**	**358**	P			**Pn**	**09 17 59.1**	**+0.3**
RMNI				S			**Sn**	**09 18 45.3**	**+0.2**
KZIT	**Kziot**	**4.24**	**354**	P			**Pn**	**09 18 04.0**	**-0.4**
KZIT				S			**Sn**	**09 18 52.5**	**-0.7**
ASHG	**Umm Shaghir**	**4.52**	**222**	P			**Pn**	**09 18 08.9**	**+0.7**
MSBI	**Mazada**	**4.63**	**4**	P			**Pn**	**09 18 10.7**	**+1.0**
MSBI				S			**Sn**	**09 19 03.8**	**+1.1**
GHAJ	**Ghor Haditha**	**4.64**	**7**	P			**Pn**	**09 18 10.1**	**+0.2**
GHAJ	**Ghor Haditha**	**4.64**	**7**	P			**Pn**	**09 18 10.8**	**+1.0**
GHAJ				S			**Sn**	**09 19 05.0**	**+2.0**
YTIR	**Yattir**	**4.67**	**2**	P			**Pn**	**09 18 10.6**	**+0.2**
SLTI	**Sal'it**	**5.55**	**1**	P			**Pn**	**09 18 21.9**	**-0.4**
SLTI				S			**Sn**	**09 19 25.9**	**+0.6**
MMLI	**Mount Malkishu**	**5.76**	**4**	P			**Pn**	**09 18 26.3**	**+1.0**
MMLI				S			**Sn**	**09 19 32.0**	**+1.4**

*TAP **31** 09:18:36.0, 24.°00N×121.°01E, h16km, ML4.0, B*
*JMA **31** 09:18:35.8±0.3, 24.°0N±0.°2×121.°0E±0.°7, h4km±4km,*
MV3.8/13, TAIWAN REGION
ISC 31 09:18:36.4±0.7, 24.°01N±0.°01×121.°01E±0.°01, h17km±4km,
n155, σ0§83/261, 2C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WPL	**Puli Township**	**0.05**	**277**	P			**Pg**	**09 18 39.1**	**-0.5**
DPDB	**Guoxing**	**0.09**	**289**	*eP*			**Pg**	**09 18 39.5**	**-0.4**
WUSB	**Renai**	**0.10**	**98**	P			**Pg**	**09 18 39.8**	**-0.3**
WUSB				S			**Sg**	**09 18 42.5**	**0.0**
WCS	**Beigang Elemen**	**0.11**	**299**	⇑*i P*			**Pg**	**09 18 39.6**	**-0.4**
WCS				S			**Sg**	**09 18 42.6**	**+0.2**
OWD	**Renai**	**0.16**	**109**	*i P*			**Pg**	**09 18 40.6**	**-0.1**
OWD				S			**Sg**	**09 18 44.1**	**+0.4**
SMLT	**Sun Moon Lake**	**0.16**	**221**	*i P*			**Pg**	**09 18 40.4**	**-0.4**
SMLT				S			**Sg**	**09 18 44.0**	**+0.3**
TYC	**Yuchr**	**0.17**	**235**	*i P*			**Pg**	**09 18 40.4**	**-0.5**
SSLB	**Suanglung**	**0.22**	**194**	P			**Pg**	**09 18 41.0**	**-0.7**
SSLB	**Suangl

TPUB	**Ta-pu**	**0.79**	**207**	P	**Pb**	**09 18 52.1**	**+0.4**
TPUB	**Ta-pu**	**0.79**	**207**	*i* P	**Pb**	**09 18 51.5**	**-0.2**
TPUB				S	**Sb**	**09 19 02.6**	**+0.5**
ENA	**Nanau**	**0.79**	**57**	*e*P	**Pg**	**09 18 49.6**	**-2.2**
ENA				*e*S	**Sg**	**09 19 00.7**	**-1.5**
HSN	**Hsinchu**	**0.79**	**357**	*e*P	**Pn**	**09 18 52.9**	**0.0**
HSN				*i* S	**Sn**	**09 19 05.1**	**+0.7**
ECBN	**Changbin**	**0.80**	**150**	*e*P	**Pn**	**09 18 52.7**	**-0.2**
ECBN				*e*S	**Sn**	**09 19 04.5**	**+0.2**
WSF	**Szhu**	**0.81**	**243**	*i* P	**Pg**	**09 18 51.8**	**-0.5**
WSF				S	**Sb**	**09 19 03.5**	**+0.8**
ELDTW	**Lidau**	**0.81**	**180**	*e*P	**Pb**	**09 18 52.1**	**-0.1**
ELDTW				S	**Sb**	**09 19 03.3**	**+0.4**
EWUT	**Wuta**	**0.82**	**58**	*i* P	**Pb**	**09 18 52.1**	**-0.3**
EWUT				*i* S	**Sg**	**09 19 02.7**	**-0.7**
WTP	**Ta-pu**	**0.84**	**206**	*e*P	**Pb**	**09 18 52.7**	**+0.1**
WTP				*i* S	**Sb**	**09 19 03.8**	**+0.1**
FULB	**Fuli**	**0.84**	**162**	P	**Pn**	**09 18 53.3**	**-0.3**
FULB				*e*S	**Sn**	**09 19 05.3**	**-0.3**
STYH	**Taoyuan**	**0.86**	**195**	*e*P	**Pb**	**09 18 53.0**	**+0.1**
STYH				*e*S	**Sb**	**09 19 04.3**	**+0.2**
WSL	**Shuilin Townsh**	**0.87**	**236**	*i* P	**Pg**	**09 18 52.7**	**-0.6**
EHD	**Haiduan**	**0.87**	**168**	P	**Pb**	**09 18 53.2**	**0.0**
EHD				*e*S	**Sb**	**09 19 05.4**	**+0.9**
TWK	**Hsinying**	**0.88**	**213**	*e*P	**Pb**	**09 18 53.1**	**-0.2**
TWK				S	**Sb**	**09 19 05.4**	**+0.6**
CHKH	**Chenggong**	**0.88**	**157**	*e*P	**Pn**	**09 18 53.9**	**-0.1**
CHKH				*e*S	**Sn**	**09 19 07.4**	**+0.9**
NWLT	**Wulai**	**0.89**	**30**	*i* P	**Pg**	**09 18 53.0**	**-0.8**
NWLT				*e*S	**Sg**	**09 19 03.9**	**-1.6**
NDS	**Dongshan**	**0.90**	**46**	P	**Pg**	**09 18 53.2**	**-0.6**
NDS				*e*S	**Sb**	**09 19 05.3**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.92**	**35**	*e*P	**Pg**	**09 18 53.5**	**-0.8**
ECS	**Chishang**	**0.93**	**168**	*e*P	**Pn**	**09 18 54.5**	**-0.2**
ECS				*e*S	**Sn**	**09 19 08.5**	**+0.9**
CHN1	**Nanshi**	**0.93**	**209**	P	**Pb**	**09 18 54.0**	**-0.2**
CHN1				*i* S	**Sb**	**09 19 06.9**	**+0.7**
CHKT	**Chengkung**	**0.96**	**160**	P	**Pn**	**09 18 55.5**	**+0.4**
CHKT				S	**Sn**	**09 19 09.5**	**+1.1**
NCUH	**Zhongli**	**0.97**	**9**	*e*P	**Pb**	**09 18 55.3**	**+0.4**
NCUH				S	**Sb**	**09 19 08.6**	**+1.2**
TWC	**Suao**	**0.97**	**52**	*i* P	**Pb**	**09 18 55.0**	**+0.2**
TWC				*e*S	**Sb**	**09 19 07.8**	**+0.4**
CHN8	**Yiju**	**0.99**	**228**	*e*P	**Pg**	**09 18 54.9**	**-0.7**
CHN8				*i* S	**Sn**	**09 19 09.0**	**-0.1**
SGST	**Jiashian**	**1.00**	**203**	P	**Pg**	**09 18 55.0**	**-0.8**
SGST				S	**Sb**	**09 19 09.2**	**+1.0**
ILA	**Ilan**	**1.01**	**41**	*e*P	**Pn**	**09 18 56.0**	**+0.2**
TATO	**Taipei**	**1.06**	**24**	P	**Pn**	**09 18 57.4**	**+0.9**
TATO	**Taipei**	**1.06**	**24**	S	**Sn**	**09 19 11.7**	**+0.8**
NHDH	**Xindian Distri**	**1.06**	**26**	*e*P	**Pn**	**09 18 57.6**	**+1.0**
NHDH				*e*S	**Sn**	**09 19 12.1**	**+1.1**
SLGT	**Liugui**	**1.06**	**199**	P	**Pn**	**09 18 57.0**	**+0.4**
SLGT				*e*S	**Sn**	**09 19 12.2**	**+1.2**
SSHA	**Shanhua**	**1.09**	**218**	*e*P	**Pn**	**09 18 57.1**	**+0.2**
SSHA				*e*S	**Sn**	**09 19 13.4**	**+1.7**
CHN3	**Shinhua**	**1.10**	**213**	*e*P	**Pn**	**09 18 57.9**	**+0.8**
CHN3				*e*S	**Sn**	**09 19 14.3**	**+2.4**
TWA	**Mucha**	**1.10**	**28**	*e*P	**Pn**	**09 18 57.6**	**+0.5**
TWA				*e*S	**Sn**	**09 19 13.4**	**+1.5**
TAP	**Taipei**	**1.12**	**23**	*e*P	**Pn**	**09 18 58.1**	**+0.7**
TAP				*e*S	**Sn**	**09 19 13.9**	**+1.4**
TWS1	**Kuangyinshan**	**1.15**	**19**	*e*P	**Pn**	**09 18 59.8**	**+2.0**
TWS1				*e*S	**Sn**	**09 19 15.8**	**+2.6**
TWG	**Pinlang**	**1.18**	**177**	*e*P	**Pg**	**09 18 58.8**	**-0.5**
TWG				S	**Sn**	**09 19 14.6**	**+0.7**
EGS		**1.18**	**45**	*e*P	**Pg**	**09 18 59.7**	**+0.4**
TWGBT	**Beinan**	**1.18**	**177**	P	**Pn**	**09 18 58.5**	**+0.2**
TWGBT	**Beinan**	**1.18**	**177**	S	**Sn**	**09 19 15.1**	**+1.1**
TWGBT	**Beinan**	**1.18**	**177**	P	**Pg**	**09 18 58.8**	**-0.5**
TWGBT				*e*S	**Sn**	**09 19 14.6**	**+0.6**
EOS2	**EOS2**	**1.19**	**69**	*e*P	**Pg**	**09 18 59.9**	**+0.5**
EOS4	**EOS4**	**1.20**	**84**	*e*P	**Pg**	**09 18 58.6**	**-0.9**
TSCK	**Chigu Township**	**1.21**	**225**	*e*P	**Pb**	**09 18 58.3**	**-0.5**
TSCK				S	**Sn**	**09 19 15.0**	**+0.5**
TIPB	**Shuangxi**	**1.21**	**37**	*e*P	**Pn**	**09 18 59.0**	**+0.3**
TIPB				*e*S	**Sn**	**09 19 16.1**	**+1.3**
NTST	**Danshui**	**1.22**	**19**	*e*P	**Pg**	**09 19 01.0**	**+1.0**
EOS3	**EOS3**	**1.22**	**77**	*e*P	**Pg**	**09 19 00.0**	**-0.1**
ZUZH	**Zhuzihu**	**1.25**	**23**	*i* P	**Pn**	**09 18 59.1**	**-0.1**
ZUZH				S	**Sg**	**09 19 16.1**	**-0.9**
ANP	**Anpu**	**1.26**	**21**	*e*P	**Pn**	**09 18 59.5**	**0.0**
ANP				*e*S	**Sn**	**09 19 17.4**	**+1.3**
WFSB	**Wu-fen Shan**	**1.27**	**33**	*e*P	**Pg**	**09 19 00.3**	**-0.7**
WFSB				S	**Sn**	**09 19 18.2**	**+2.1**
YM08	**YM08**	**1.29**	**24**	*e*P	**Pn**	**09 18 59.8**	**+0.1**
TWM1	**Shoushan**	**1.30**	**205**	*e*P	**Pg**	**09 19 01.6**	**+0.1**
TWM1				*e*S	**Sg**	**09 19 19.4**	**+1.0**
SSD	**Sandimen**	**1.30**	**196**	*e*P	**Pg**	**09 19 00.7**	**-0.9**
SSD				*e*S	**Sg**	**09 19 18.7**	**+0.1**
TNOU	**National Taiwa**	**1.33**	**31**	*e*P	**Pg**	**09 19 01.5**	**-0.7**
TWB1	**Santiao Chiao**	**1.34**	**41**	*e*P	**Pg**	**09 19 01.5**	**-0.8**
TWB1				S	**Sg**	**09 19 19.4**	**-0.3**
SXI1	**Grass Mountain**	**1.34**	**36**	*e*P	**Pg**	**09 19 02.0**	**-0.3**
TWY	**Chenhua**	**1.37**	**23**	*e*P	**Pb**	**09 19 01.5**	**-0.2**
ECL	**Taimali**	**1.40**	**182**	*e*P	**Pg**	**09 19 02.5**	**-1.0**
ECL				*e*S	**Sg**	**09 19 20.8**	**-1.0**
PNG	**Penghu**	**1.41**	**252**	*e*P	**Pn**	**09 19 01.0**	**-0.3**
PNG				*e*S	**Sn**	**09 19 18.7**	**-0.7**
PHUB	**P'eng-hu**	**1.41**	**250**	P	**Pn**	**09 19 00.4**	**-0.9**
PHUB				S	**Sn**	**09 19 18.5**	**-1.0**
MASBT	**Mashibuluo**	**1.43**	**194**	*e*P	**Pb**	**09 19 02.5**	**-0.2**
MASBT				*e*S	**Sg**	**09 19 22.0**	**-0.7**
WDGT	**Dungji**	**1.45**	**239**	*e*P	**Pn**	**09 19 01.7**	**-0.2**
WDGT				*e*S	**Sb**	**09 19 21.5**	**+0.5**
SSPT	**Xinbi**	**1.57**	**195**	*e*P	**Pg**	**09 19 06.3**	**-0.4**
EAST	**Anshuo**	**1.62**	**185**	*e*P	**Pb**	**09 19 05.2**	**-0.8**
EAST				*e*S	**Sb**	**09 19 26.7**	**+0.5**
VCHM	**Qimei**	**1.66**	**242**	*e*P	**Pn**	**09 19 04.2**	**-0.5**
VCHM				*e*S	**Sn**	**09 19 25.6**	**0.0**
SCZT	**Fangliau**	**1.67**	**193**	P	**Pn**	**09 19 05.7**	**+0.9**
SCZT				S	**Sg**	**09 19 29.0**	**-1.2**
VWUC	**VWUC**	**1.73**	**305**	*e*P	**Pn**	**09 19 04.2**	**-1.6**
JYNG	**Yonagunijimaku**	**1.82**	**75**	*e*P	**Pn**	**09 19 07.9**	**+1.0**
JYNG				*e*S	**Sb**	**09 19 31.3**	**-0.5**
YOJ	**Yonaguni jima**	**1.88**	**76**	*e*P	**Pn**	**09 19 09.2**	**+1.3**
YOJ	**Yonaguni jima**	**1.88**	**76**	*e*P	**Pn**	**09 19 09.1**	**+1.3**
PTMZ	**Houxiangcun**	**2.01**	**301**	*e*P	**Pn**	**09 19 07.4**	**-2.2**
LAY	**Lan-yu**	**2.02**	**166**	*e*P	**Pn**	**09 19 09.5**	**-0.2**
LAY				*e*S	**Sn**	**09 19 28.1**	**+1.3**
LYUB	**Lan-yu**	**2.06**	**165**	*e*P	**Pn**	**09 19 09.4**	**-0.9**
TWKBT	**Hengchun**	**2.06**	**185**	*e*P	**Pn**	**09 19 11.1**	**+0.8**
MATB	**Ma-tsu**	**2.35**	**336**	*e*P	**Pn**	**09 19 12.8**	**-1.4**
KNM	**Kinmen**	**2.39**	**280**	*e*P	**Pn**	**09 19 15.2**	**+0.4**
KNMB	**Chin-men Tao**	**2.44**	**281**	*e*P	**Pn**	**09 19 14.1**	**-1.4**
IRIF	**Iriomote-Funau**	**2.50**	**82**	*e*P	**Pn**	**09 19 18.0**	**+1.6**
IRIF				*e*S	**Sn**	**09 19 47.8**	**+1.2**
HATJ	**Hateruma jima**	**2.55**	**88**	*e*S	**Sn**	**09 19 49.1**	**+1.4**
JKRS	**Kuro-shima**	**2.75**	**85**	*e*P	**Pn**	**09 19 21.7**	**+2.0**
JKRS				*e*S	**Sn**	**09 19 53.9**	**+1.4**
MHZQ	**Yeshan**	**2.75**	**320**	*e*P	**Pn**	**09 19 19.7**	**-0.2**
LYJJ	**Jianjiangzhen**	**2.78**	**336**	*e*P	**Pn**	**09 19 18.5**	**-1.7**
JIJ	**Ishigaki jima**	**2.88**	**82**	*e*P	**Pn**	**09 19 21.9**	**+0.4**
JIJ				*e*S	**Sn**	**09 19 55.8**	**0.0**
AXDP	**Jialang**	**2.91**	**288**	*e*P	**Pn**	**09 19 20.8**	**-1.3**
ZPLA	**Ao Xicun**	**2.99**	**269**	*e*P	**Pn**	**09 19 21.9**	**-1.2**
JISG	**Ishigakijimahi**	**3.06**	**78**	*e*P	**Pn**	**09 19 25.0**	**+0.9**
JISG				*e*S	**Sn**	**09 20 00.8**	**+0.4**
DSXP	**Dongshan**	**3.30**	**266**	*e*P	**Pn**	**09 19 25.7**	**-1.6**
SXFK	**Yanhouchang**	**3.87**	**309**	*e*P	**Pn**	**09 19 33.8**	**-1.5**

ASRS ***31*** *09:52:29.8±0.3,52˚N±2˚×9˚8E±˚, h5km, MLh4.6/7, Error ellipse: s-maj=4.3km s-min=2.9km az=35.2, confirmed*
MOS ***31*** *09:52:34.6±1.4,51˚.75N×98˚.18E, h10km, mb4.4/8, Error ellipse: s-maj=8.0km s-min=6.6km az=171.9*
IDC ***31*** *09:52:36.4±0.8,51˚.69N×98˚.30E, h0km, mb3.8/6, mbtmp3.6/13, ML3.4/7, MS2.9/4, Error ellipse: s-maj=24.7km s-min=9.8km az=6.0*
NEIC ***31*** *09:52:37.3±1.4,51˚.7N±0˚.1×98˚.20E±0˚.07, h10km±1km, mb4.1/25, Error ellipse: s-maj=18.2km s-min=7.1km az=357.0*
NNC ***31*** *09:52:48.3±1.9,50˚.83N×97˚.53E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=18.8km s-min=15.5km az=14.0*
ISC 31 09:52:36.7±0.4,51˚.86N±0˚.03×98˚.32E±0˚.03,h10km,n130,
σ2s02/148,mb4.2/18,11C-11D,Tuva-Buryatia-Mongolia
border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.14**	**53**	*e*PG		Pn	09 52 56.3	-2.6
ORL				pmax	pmax			
	comp=Z,1μm,0.2s							
KNGR	**Kungurtug, Tuv**	**1.35**	**202**	⇓*i*PG		**Pn**	**09 53 00.3**	**-1.4**
KNGR				*e*S		**Sn**	**09 53 18.8**	**-1.0**
KNGR	**Kungurtug, Tuv**	**1.35**	**202**	⇓Pg		**Pb**	**09 53 00.1**	**-2.1**
KNGR				Sg		**Sn**	**09 53 19.5**	**-0.3**
TDJR	**Todzha**	**1.47**	**293**	PG		**Pn**	**09 53 00.3**	**-3.0**
TDJR							09 53 18.6	
TDJR	**Todzha**	**1.47**	**293**	Pg		**Pn**	**09 53 00.3**	**-3.0**
TDJR				Sg		**Sn**	**09 53 18.7**	**-4.0**
MOY	**Mondy**	**1.67**	**96**	PN		**Pn**	**09 53 06.7**	**+0.5**
MOY							09 53 29.7	
MOY	**Mondy**	**1.67**	**96**	⇑Pg		**Pn**	**09 53 06.6**	**+0.5**
MOY				Sg		**Sn**	**09 53 29.7**	**+2.1**
ARS	**Arshan**	**2.54**	**87**	*e*PN		**Pb**	**09 53 22.5**	**+0.1**
ARS				*e*			09 53 55.7	
ARS				pmax	pmax			
	comp=Z,478nm,0.3s							
ARS				smax	smax			
	comp=E,7μm,0.7s							
TLY	**Talaya**	**3.31**	**91**	Pn		**Pn**	**09 53 30.2**	**+1.6**
	comp=E,26nm,0.3s,baz=272,slow=13,SNR=120							
TLY				Lg	Lg		09 54 19.7	
	comp=E,131nm,0.3s,baz=214,slow=18,SNR=37							
	comp=E,15nm,0.3s							
TLY	**Talaya**	**3.31**	**91**	*e*PN		**Pb**	**09 53 35.2**	**-0.3**
TLY				*e*			09 54 19.1	
TLY				pmax	pmax			
	comp=Z,123nm,0.5s							
TLY				smax	smax			
	comp=N,2μm,0.8s							
TLY	**Talaya**	**3.31**	**91**	Pn		**Pn**	**09 53 30.0**	**+1.4**
TLY	**Talaya**	**3.31**	**91**	Pg		**Pb**	**09 53 34.6**	**-0.9**
TLY				Sg		**Sb**	**09 54 18.9**	**+3.1**
IRK	**Irkutsk**	**3.69**	**82**	*e*PN		**Pb**	**09 53 41.3**	**-0.7**
IRK				*e*			09 54 28.6	
IRK				pmax	pmax			
	comp=Z,167nm,0.2s							
IRK				smax	smax			
	comp=N,3μm,1.0s							
IVK	**Ivanovka**	**3.78**	**88**	*e*PN		**Pb**	**09 53 44.0**	**+0.5**
IVK				*e*			09 54 32.1	
IVK				pmax	pmax			
	comp=Z,148nm,0.4s							
IVK				smax	smax			
	comp=N,1μm,0.6s							
MINR	**Mina**	**3.92**	**323**	PN		**Pn**	**09 53 38.5**	**+1.6**
MINR							09 54 34.6	
MINR	**Mina**	**3.92**	**323**	Pn		**Pn**	**09 53 38.5**	**+1.6**
MINR				Pg		**Pb**	**09 53 43.6**	**-2.3**
MINR				Sg		**Sb**	**09 54 34.7**	**+1.4**
LSTR	**Listvyanka**	**4.04**	**87**	*e*PN		**Pb**	**09 53 48.1**	**+0.3**
LSTR				*e*			09 54 39.3	
LSTR				pmax	pmax			
	comp=Z,53nm,0.7s							
LSTR				smax	smax			
	comp=N,799nm,1.2s							
CERR	**Cheremushki**	**4.35**	**286**	PN		**Pn**	**09 53 41.6**	**-1.2**
CERR							09 53 52.8	
CERR							09 54 43.1	
CERR	**Cheremushki**	**4.35**	**286**	Pn		**Pn**	**09 53 41.6**	**-1.2**
CERR				Pg		**Pb**	**09 53 52.9**	**-0.3**
CERR				Sg		**Sb**	**09 54 43.2**	**-2.5**
BGT	**Bolshoye Golou**	**4.39**	**85**	*e*PN		**Pb**	**09 53 54.7**	**+0.9**
BGT				*e*			09 54 51.4	
BGT				pmax	pmax			
	comp=Z,149nm,0.6s							
BGT				smax	smax			
	comp=N,2μm,0.6s							
DJO	**Djoy, Khakassi**	**4.46**	**285**	PN		**Pn**	**09 53 43.2**	**-1.0**
DJO							09 53 54.1	
DJO							09 54 46.6	
DJO	**Djoy, Khakassi**	**4.46**	**285**	Pn		**Pn**	**09 53 43.3**	**-1.0**
DJO				Pg		**Pb**	**09 53 54.1**	**-0.9**
DJO				Sg		**Sb**	**09 54 46.6**	**-2.1**
TRG	**Tyrgan**	**5.01**	**76**	*e*PN		**Pn**	**09 53 51.7**	**-0.2**
TRG				*e*			09 54 06.3	
TRG				*e*S		**Sn**	**09 54 49.7**	**-0.1**
TRG				*e*			09 55 11.9	
TRG				pmax	pmax			
	comp=Z,95nm,0.6s							
TRG				smax	smax			
	comp=N,1μm,0.9s							
VEH	**Verkhnyaya Baz**	**5.08**	**289**	PN		**Pb**	**09 54 03.8**	**-1.8**
VEH							09 55 08.3	
VEH	**Verkhnyaya Baz**	**5.08**	**289**	Pg		**Pb**	**09 54 03.9**	**-1.8**
VEH				Sg		**Sb**	**09 55 08.3**	**+1.6**
TEL	**Teeli**	**5.15**	**264**	PN		**Pn**	**09 53 51.0**	**-2.8**
TEL							09 54 05.7	
TEL							09 55 08.8	
TEL	**Teeli**	**5.15**	**264**	Pn		**Pn**	**09 53 51.1**	**-2.8**
TEL				Pg		**Pb**	**09 54 05.7**	**-1.1**
TEL				Sg		**Sb**	**09 55 08.9**	**+0.2**
GZLN	**Zheleznogorsk**	**5.26**	**331**	PN		**Pb**	**09 54 06.2**	**-2.4**
GZLN							09 55 14.4	
GZLN	**Zheleznogorsk**	**5.26**	**331**	Pg		**Pb**	**09 54 06.3**	**-2.4**
GZLN				Sg		**Sb**	**09 55 14.5**	**+2.6**
SHTK	**Zheleznogorsk-**	**5.27**	**330**	PN		**Pb**	**09 54 06.2**	**-2.6**
SHTK							09 55 12.9	
SHTK	**Zheleznogorsk-**	**5.27**	**330**	Pg		**Pb**	**09 54 06.3**	**-2.6**
SHTK				Sg		**Sb**	**09 55 13.0**	**+0.8**
OGRR	**Ongureny**	**5.91**	**69**	*e*PN		**Pn**	**09 54 06.2**	**+2.0**
OGRR				*e*			09 54 23.6	
OGRR				*e*			09 55 36.9	
OGRR				pmax	pmax			
	comp=Z,53nm,0.8s							
OGRR				smax	smax			
	comp=E,542nm,0.6s							
LUZB	**Luzhba, Kemero**	**6.00**	**291**	PN		**Pb**	**09 54 19.4**	**-1.8**
LUZB							09 55 35.0	
LUZB	**Luzhba, Kemero**	**6.00**	**291**	Pg		**Pb**	**09 54 19.4**	**-1.8**
LUZB				Sg		**Sb**	**09 55 35.1**	**+2.0**
TASR	**Tashtagol**	**6.47**	**282**	Pg		**Pb**	**09 54 29.4**	**+0.2**
TASR				Sg		**Sb**	**09 55 51.1**	**+4.6**
CUR	**Chagan-Uzun**	**6.54**	**258**	Sg		**Sb**	**09 55 53.9**	**+5.2**
SONM	**Songino Array**	**6.59**	**124**	Pn		**Pn**	**09 54 15.0**	**+1.2**
	comp=E,0.2nm,0.3s,baz=301,slow=15,SNR=3.6							
SONM				Lg	Lg		09 56 01.9	
	comp=E,6.7nm,0.3s,baz=303,slow=27,SNR=8.2							
SONM				LR	LR		09 57 08.0	
	comp=E,97nm,19.6s,baz=312,slow=42							
	comp=E,0.5nm,0.3s							
SONM	**Songino Array**	**6.59**	**124**	PN		**Pn**	**09 54 16.3**	**+2.6**
SONM	**Songino Array**	**6.59**	**124**	Pn		**Pn**	**09 54 16.3**	**+2.6**
KIYZ	**Kiyzas, Kuzbas**	**6.64**	**289**	Sg		**Sb**	**09 55 55.8**	**+4.3**
YALR	**Yailyu, Altay**	**6.64**	**273**	Pg		**Pb**	**09 54 35.0**	**+2.8**
YALR				Sg		**Sb**	**09 55 58.4**	**+6.8**
ULN	**Ulaanbaatar**	**6.91**	**122**	*de*PN		**Pn**	**09 54 16.6**	**-1.6**
ULN				*i*			09 54 40.2	
DGZ	**Jazzator, Alta**	**7.24**	**257**	*e*PN		**Pn**	**09 54 18.7**	**-3.9**
ZAA0	**Zalesovo Array**	**8.43**	**290**	⇓Pn		Pb	09 54 51.8	-11
	comp=E,2.6nm,0.6s							
ZAA0				⇑Lg	Lg		09 57 13.1	
	comp=E,62nm,0.9s							
ZAA0	**Zalesovo Array**	**8.43**	**290**	Pn		**Pn**	**09 54 39.2**	**+0.5**
ZALV	**Zalesovo Beam**	**8.43**	**290**	Pn		**Pn**	**09 54 39.8**	**+1.0**
	comp=E,0.3nm,0.3s,baz=96,slow=14,SNR=2.0							
ZALV				Lg	Lg		09 56 50.8	
	comp=E,1.9nm,0.3s,baz=99,slow=22,SNR=9.6							
ZALV				LR	LR		09 57 53.8	
	comp=E,47nm,20.0s,baz=119,slow=37							
	comp=E,0.9nm,0.4s							
ZALV	**Zalesovo Beam**	**8.43**	**290**	P		**Pn**	**09 54 39.1**	**+0.3**
ZALV	**Zalesovo Beam**	**8.43**	**290**	Pn		**Pn**	**09 54 39.1**	**+0.3**
MK31	**Makanchi Array**	**11.62**	**250**	⇓Pn		**Pn**	**09 55 24.8**	**+2.4**
	comp=E,0.4nm,0.6s,baz=70,slow=11,SNR=6.7							
MK31				⇑Pg			09 56 06.2	
	comp=E,1.6nm,0.7s,baz=70,slow=9.1,SNR=4.1							
MK31				⇑Lg	Lg		09 58 32.7	
	comp=E,15nm,1.1s,baz=65,slow=28,SNR=5.1							
MK31	**Makanchi Array**	**11.62**	**250**	⇓*e*P		**Pn**	**09 55 20.3**	**-2.1**
MK31	**Makanchi Array**	**11.62**	**250**	Pn		**Pn**	**09 55 20.4**	**-2.1**
MKAR	**Makanchi Array**	**11.62**	**250**	Pn		**Pn**	**09 55 22.4**	**0.0**
	comp=E,0.2nm,0.3s,baz=65,slow=14,SNR=6.1							
MKAR				Lg	Lg		09 58 35.9	
	comp=E,0.3nm,0.3s,baz=66,slow=26,SNR=3.6							
MKAR				LR	LR		10 00 00.0	
	comp=E,73nm,19.2s,baz=58,slow=38							
	comp=E,0.2nm,0.4s							
MKAR	**Makanchi Array**	**11.62**	**250**	*i* P		**Pn**	**09 55 22.7**	**+0.3**
MKAR	**Makanchi Array**	**11.62**	**250**			**Pn**	**09 55 21.6**	**-0.8**
MAKZ	**Makanchi**	**11.79**	**251**	⇓Pn		**Pn**	**09 55 27.3**	**+2.4**
	comp=E,2.1nm,1.1s							
MAKZ				⇓Pg			09 56 09.7	
	comp=E,6.6nm,1.1s							
MAKZ				⇑Lg	Lg		09 58 38.0	
	comp=E,30nm,1.2s							
MAKZ	**Makanchi**	**11.79**	**251**	P		**Pn**	**09 55 23.9**	**-0.9**
MAKZ	**Makanchi**	**11.79**	**251**	Pn		**Pn**	**09 55 23.9**	**-0.9**
KURK	**Kurchatov**	**12.39**	**272**	⇓Pn		Pn	09 55 38.1	+5.2
	comp=E,1.0nm,1.1s							
KURK				⇑Sn		**Sn**	**09 57 56.0**	**+5.1**
	comp=E,0.8nm,0.7s							
KURK				⇑Lg	Lg		09 59 08.3	
	comp=E,7.9nm,0.9s							
KURK	**Kurchatov**	**12.39**	**272**	*e*P		**Pn**	**09 55 30.4**	**-2.5**
KURK	**Kurchatov**	**12.39**	**272**			**Pn**	**09 55 32.3**	**-0.6**
KURBB	**Kurchatov Arra**	**12.46**	**272**	Pn		**Pn**	**09 55 35.5**	**+1.5**
	comp=E,0.1nm,0.3s,baz=76,slow=14,SNR=5.0							
KURBB				Lg	Lg		09 58 59.9	
	baz=73,slow=33,SNR=4.1							
	comp=E,0.8nm,0.8s							
KURBB	**Kurchatov Arra**	**12.46**	**272**	⇑Pn		Pn	09 55 40.3	+6.3
	comp=E,2.5nm,0.8s							
KURBB				⇑Sn		**Sn**	**09 57 57.5**	**+4.8**
	comp=E,6.2nm,0.7s							
KURBB				⇑Lg	Lg		09 59 11.3	
	comp=E,48nm,0.9s							
KURBB	**Kurchatov Arra**	**12.46**	**272**	P		Pn	09 55 40.3	+6.3
KURBB				S		**Sn**	**09 57 57.5**	**+4.8**
HILR	**Hailar Array B**	**13.77**	**91**	Lg	Lg		09 59 51.9	
	baz=280,slow=17							
PDGK	**Podgornoye**	**15.27**	**243**	P		**Pn**	**09 56 10.4**	**-1.9**
PDGK	**Podgornoye**	**15.27**	**243**	Pn		**Pn**	**09 56 10.4**	**-1.9**
PRZ	**Przheval'sk**	**16.43**	**243**	P		**Pn**	**09 56 25.1**	**-2.3**
PRZ				pmax	pmax			
	comp=E,9.0nm,0.3s							
PRZ	**Przheval'sk**	**16.43**	**243**	Pn		**Pn**	**09 56 25.1**	**-2.3**
PRZ				lAmb	lAmb		09 56 53.2	
	comp=E,9.2nm,0.3s							
WUS	**Wushi**	**16.87**	**238**			**Pn**	**09 56 31.3**	**-1.7**
WUS				lAmb	lAmb		09 56 39.0	
	comp=Z,5.2nm,0.9s							
BVAR	**Borovoye Array**	**17.03**	**285**	Pn		**Pn**	**09 56 33.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=84,slow=16,SNR=1.7							
	comp=Z,0.5nm,0.3s							
BJT	**Baijiatuan**	**17.10**	**127**	P		**Pn**	**09 56 34.7**	**-1.0**
BJT				pmax	pmax			
	comp=E,7.0nm,1.1s							
BJT	**Baijiatuan**	**17.10**	**127**	Pn		**Pn**	**09 56 34.6**	**-1.0**
BJT				lAmb	lAmb		09 56 42.5	
	comp=Z,7.2nm,1.1s							
TARG	**Taragay, Kyrgy**	**17.26**	**242**	P		**Pn**	**09 56 36.4**	**-1.7**
TARG				pmax	pmax			
	comp=Z,3.0nm,1.0s							
TARG	**Taragay, Kyrgy**	**17.26**	**242**			**Pn**	**09 56 36.4**	**-1.7**
KDJ	**Kajisay**	**17.34**	**244**	P		**Pn**	**09 56 37.5**	**-1.3**
KDJ				pmax	pmax			
	comp=E,5.0nm,0.9s							
KDJ	**Kajisay**	**17.34**	**244**			**Pn**	**09 56 37.5**	**-1.3**
KDJ				lAmb	lAmb		09 56 44.7	
	comp=E,5.3nm,0.9s							
BOOM	**Boomskoye usch**	**17.81**	**247**	P		**

BR131	**Keskin Array S**	**45.26**	**281**	P	**P**	**10 00 54.7**	**+0.4**
BR131				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BR131	**Keskin Array S**	**45.26**	**281**	P	**P**	**10 00 54.7**	**+0.4**
BR131				IAmb	IAmb	10 00 58.6	
	comp=Z,2.2nm,1.0s						
BRTR	**Keskin Array B**	**45.26**	**281**	P	**P**	**10 00 55.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=56,slow=6.5,SNR=5.6						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**45.26**	**281**	P	**P**	**10 00 54.9**	**+0.6**
BRTR	**Keskin Array B**	**45.26**	**281**	P	**P**	**10 00 54.9**	**+0.6**
NOA	**NORSAR Array B**	**45.53**	**317**	P	**P**	**10 00 57.4**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=60,slow=7.8,SNR=3.6						
	comp=Z,0.8nm,0.7s						
E19K	**Redstone River**	**48.38**	**30**	P	**P**	**10 01 20.3**	**+2.1**
E19K				IAmb	IAmb	10 01 48.2	
	comp=Z,5.2nm,1.5s						
CLL	**Collm**	**50.03**	**305**	P	**P**	**10 01 31.8**	**+0.9**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	**Collm**	**50.03**	**305**	P	**P**	**10 01 31.8**	**+0.9**
IMAR	**Indian Mountai**	**50.39**	**30**	P	**P**	**10 01 34.1**	**+0.6**
BLY	**Banja Luka**	**51.80**	**296**	P	**P**	**10 01 45.6**	**+1.2**
F28M	**Old Crow**	**53.17**	**24**	P	**P**	**10 01 55.4**	**+1.1**
F28M				IAmb	IAmb	10 01 59.5	
	comp=Z,3.1nm,0.8s						
IL31		**53.32**	**29**	P	**P**	**10 01 56.7**	**+1.4**
IL31				IAmb	IAmb	10 02 20.9	
	comp=Z,3.8nm,1.5s						
ILAR	**Eielson Array**	**53.32**	**29**	P	**P**	**10 01 58.6**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=310,slow=5.9,SNR=5.2						
	comp=Z,0.4nm,0.8s						

BJI ***31*** *10:02:12.7,8.˚97S×153.˚30E,h20km,mB5.2/49,mb4.9/67, Ms5.2/75,Ms7 5.0/73*

MOS ***31*** *10:02:15.2±1.3,8.˚86S×152.˚72E,h14km,mb5.5/43, MS4.7/8,Error ellipse: s-maj=7.6km s-min=5.5km az=103.5*

IPGP ***31*** *10:02:16.0,8.˚72S×152.˚72E,h26km,Mw5.7,Fault plane solution: NP1:φs137.00000°,δ62.00000°,λ.4.00000°. NP2:φs45.00000°,δ86.00000°,λ.152.00000°.*

ISC-PP ***31*** *10:02:16,8.˚82S×152.˚78E,h44km±5km,Mwppsm5.8, Moment Tensor Solution. s41 Moment tensor: Scale 10¹⁷Nm; Mrr0.61±.16; Mθθ-0.04±.18; Mφφ-0.58±.23; Mrθ0.26±.24; Mθφ-0.03±.30; Mφr-0.27±.16; Fault plane solution: M₀5.62000×10¹⁷ NP1:φs182.50000°,δ45.50000°, λ.59.70000°. NP2:φs42.40000°,δ52.00000°,λ117.20000°.*

NEIC ***31*** *10:02:16.9,8.˚73S×152.˚72E,h10km*

NEIC ***31*** *10:02:16.8,8.˚74S×152.˚73E,h10km*

NEIC ***31*** *10:02:16.0±0.8,8.˚82S±0.˚07×152.˚78E±0.˚08,h10km±1km, mb5.2/218,Ms_20 5.1/543,Mwb5.5/77,Mww5.6/17,Error ellipse: s-maj=13.0km s-min=11.7km az=72.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.07; Mθθ2.30; Mφφ-2.38; Mrθ0.71; Mθφ0.08; Mφr0.23; Fault plane solution: M₀2.46000×10¹⁷ NP1:φs43.00000°, δ82.29000°,λ164.50000°. NP2:φs135.13000°,δ74.65000°, λ8.00000°. Principal axes: T 2.5160, Plg16.0000°, Azm358.0000°; N -0.1171, Plg73.0000°, Azm197.0000°; P -2.3988, Plg5.0000°, Azm90.0000°;*

GFZ ***31*** *10:02:18.1±0.2,9.˚5S±2.˚1×15.˚3E±.˚1,h10km,M5.2/49, mb5.3/49*

GFZ ***31*** *10:02:18.1,8.˚76S×152.˚72E,h20km,Mw5.5/70,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.51; Mθθ1.84; Mφφ-2.36; Mrθ-1.11; Mθφ-0.33; Mφr-0.18; Fault plane solution: M₀2.44535×10¹⁷ NP1: φs323.32089°,δ65.45576°,λ17.64664°. NP2: φs225.79324°,δ73.99307°,λ154.39586°. Principal axes: T 2.4807, Plg29.2562°, Azm182.7553°; N -0.0722, Plg60.0931°, Azm15.8756°; P -2.4084, Plg5.6667°, Azm275.9416°;*

PTWC ***31*** *10:02:19,8.˚80S×152.˚60E,h22km,Mwp5.7/14, D'ENTRECASTEAUX ISLANDS REGION*

GCMT ***31*** *10:02:21.0±0.1,8.˚82S±0.˚01×152.˚62E±0.˚01,h19km, MW5.6/165,Moment Tensor Solution. s128,c230; s165,c313; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr0.19±.03; Mθθ2.90±.03; Mφφ-3.08±.03; Mrθ0.72±.07; Mθφ-0.44±.03; Mφr0.59±.07; Best double couple: M₀3.16300×10¹⁷ NP1:φs139.00000°,δ73.00000°, λ2.00000°. NP2:φs49.00000°,δ88.00000°,λ163.00000°. Principal axes: T 3.0910, Plg13.0000°, Azm3.0000°; N 0.1520, Plg73.0000°, Azm223.0000°; P -3.2350, Plg11.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***31*** *10:02:21.3±2.1,8.˚88S×152.˚76E,h68km±19km,mb4.6/32, mbtmp4.9/34,MS4.8/52,Error ellipse: s-maj=12.6km s-min=10.4km az=85.0*

IDC ***31*** *10:02:23.2±2.1,8.˚88S×152.˚76E,h68km±19km,mb4.6/32, mbtmp4.9/34,MS4.8/52,Error ellipse: s-maj=12.6km s-min=10.4km az=85.0*

NEIC ***31*** *10:02:25,8.˚93S×152.˚72E,h24km,Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10¹⁷Nm; Mrr-0.24; Mθθ2.12; Mφφ-1.88; Mrθ0.03; Mθφ-1.10; Mφr1.37; Fault plane solution: M₀2.67000×10¹⁷ NP1: φs242.97000°,δ65.19000°,λ-165.53000°. NP2: φs146.79000°,δ76.89000°,λ-25.53000°. Principal axes: T 2.4422, Plg8.0000°, Azm197.0000°; N 0.4060, Plg62.0000°, Azm301.0000°; P -2.8482, Plg27.0000°, Azm103.0000°;*

ISC 31 10:02:16.6±0.2,8.80S±0.˚03×152.˚78E±0.˚03,h10km, h10km:pP-P,n1020,σ1s62/706,mb5.1/214,MS5.1/359, 18C-11D,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.62**	**352**		**Pn**	**10 03 25.5**	**-1.0**
RABL	**Rabaul**	**4.62**	**352**	P	**Pn**	**10 03 26.0**	**-0.5**
PMG	**Port Moresby**	**5.58**	**263**	P	**Pn**	**10 03 42.5**	**+2.8**
	176nm,0.5s,baz=56,slow=8.3,SNR=34						
PMG				S	**Sn**	**10 04 50.0**	**+6.0**
	687nm,0.9s,baz=166,slow=9.9,SNR=3.2						
PMG				LR	LR	10 05 52.2	
	comp=Z,34μm,18.5s,baz=34,slow=38						
PMG	**Port Moresby**	**5.58**	**263**	P	**Pn**	**10 03 40.0**	**+0.3**
PMG	**Port Moresby**	**5.58**	**263**	Pn	**Pn**	**10 03 39.6**	**-0.1**
PMG	**Port Moresby**	**5.58**	**263**	P	**Pn**	**10 03 42.6**	**+2.9**
PMG	**Port Moresby**	**5.58**	**263**	P	**Pn**	**10 03 43.2**	**+3.5**
TATA	**Tatamba Isabel**	**6.96**	**87**	P	Pn	10 04 03.4	+4.7
TATA	**Tatamba Isabel**	**6.96**	**87**	S	Sb	10 05 30.3	-1.1
TATA	**Tatamba Isabel**	**6.96**	**87**	P	**Pn**	**10 04 01.9**	**+3.2**
HNR	**Honiara**	**7.11**	**96**	P	**Pn**	**10 04 05.0**	**+4.3**
HNR	**Honiara**	**7.11**	**96**	P	**Pn**	**10 04 04.4**	**+3.7**
	11nm,0.6s,baz=23,slow=3.1,SNR=20						
HNR				LR	LR	10 06 16.6	
	comp=Z,1μm,21.9s,baz=10.0,slow=33						
HNR	**Honiara**	**7.11**	**96**	P	Pn	10 04 05.5	+4.8
HNR	**Honiara**	**7.11**	**96**	P	**Pn**	**10 04 04.5**	**+3.7**
NGOA	**Tingoa Renbel**	**7.68**	**112**	P	**Pn**	**10 04 12.2**	**+3.7**
NGOA	**Tingoa Renbel**	**7.68**	**112**	S	**Sb**	**10 05 54.3**	**-7.2**
NGOA	**Tingoa Renbel**	**7.68**	**112**	P	**Pn**	**10 04 12.3**	**+3.7**
MANU	**Manus Island**	**8.60**	**321**	Pn	**Pn**	**10 04 22.6**	**+1.4**
COEN	**Coen**	**10.72**	**241**	P	Pn	10 04 42.5	-7.8
COEN	**Coen**	**10.72**	**241**	P	**Pn**	**10 04 50.8**	**+0.5**
	comp=Z,37nm,0.8s						
COEN	**Coen**	**10.72**	**241**		**Pn**	**10 04 50.3**	**0.0**
COEN	**Coen**	**10.72**	**241**	P	**Pn**	**10 04 50.5**	**+0.2**
COEN	**Coen**	**10.72**	**241**	P	**Pn**	**10 04 54.0**	**+3.7**
MTSU	**Mount Surprise**	**12.40**	**221**	P	**Pn**	**10 05 11.9**	**-1.4**
MTSU	**Mount Surprise**	**12.40**	**221**	P	**Pn**	**10 05 14.1**	**+0.8**
	comp=Z,28nm,0.7s						
MTSU	**Mount Surprise**	**12.40**	**221**	P	**Pn**	**10 05 13.7**	**+0.4**
CTA	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 18.5**	**-1.3**
CTA	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 18.1**	**-1.7**
	comp=Z,17nm,0.4s,baz=24,slow=15,SNR=41						
CTA				LR	LR	10 09 32.8	
	comp=Z,4μm,20.8s,baz=24,slow=34						
CTAO	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 17.9**	**-1.9**
CTAO	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 18.1**	**-1.7**
CTAO	**Charters Tower**	**12.88**	**209**		**Pn**	**10 05 18.1**	**-1.7**
CTAO	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 19.2**	**-0.6**
CTAO	**Charters Tower**	**12.88**	**209**	P	**Pn**	**10 05 19.6**	**-0.2**
JAY	**Jayapura**	**13.53**	**297**	P	**Pn**	**10 05 28.7**	**-0.1**
	comp=Z,13nm,0.5s,baz=94,slow=5.1,SNR=13						
JAY				S	**Sn**	**10 07 56.8**	**-2.6**
	comp=Z,34nm,1.0s,baz=329,slow=19,SNR=2.8						
GENI	**Genyem**	**13.97**	**295**	P	**Pn**	**10 05 36.3**	**+1.5**
	comp=Z,7μmcomp=Z,2μmcomp=Z,153nm,0.8s						
GENI	**Genyem**	**13.97**	**295**	P	**Pn**	**10 05 34.7**	**-0.1**
KOUNC	**Koumac, New Ca**	**16.13**	**138**	P	**P**	**10 06 12.3**	**+5.5**
KOUNC	**Koumac, New Ca**	**16.13**	**138**	Pn	**Pn**	**10 06 02.8**	**-0.7**
PATS	**Pohnpei**	**16.48**	**20**	P	**Pn**	**10 06 10.0**	**+1.9**
	comp=Z,118nm,1.5s						
EIDS	**Eidsvold**	**16.56**	**185**	P	**Pn**	**10 06 10.5**	**+1.5**
EIDS	**Eidsvold**	**16.56**	**185**	P	**Pn**	**10 06 10.6**	**+1.6**
	comp=Z,72nm,2.3s,comp=Z,0.0nm						
EIDS	**Eidsvold**	**16.56**	**185**		**Pn**	**10 06 09.6**	**+0.6**
EIDS	**Eidsvold**	**16.56**	**185**	P	**Pn**	**10 06 08.3**	**-0.7**
EIDS	**Eidsvold**	**16.56**	**185**	P	**Pn**	**10 06 10.7**	**+1.6**
QIS	**Mount Isa**	**17.28**	**226**	P	**Pn**	**10 06 14.5**	**-3.6**
QIS	**Mount Isa**	**17.28**	**226**	P	**Pn**	**10 06 19.1**	**+1.0**
	comp=Z,174nm,0.8s						
QIS	**Mount Isa**	**17.28**	**226**	P	**Pn**	**10 06 19.6**	**+1.5**
QIS	**Mount Isa**	**17.28**	**226**	P	**Pn**	**10 06 19.7**	**+1.5**
RMQ	**Roma**	**18.00**	**192**	P	**P**	**10 06 29.8**	**+2.3**
	comp=Z,70nm,1.6s						
RMQ	**Roma**	**18.00**	**192**	P	**P**	**10 06 32.3**	**+4.8**
BAKI	**Biak**	**18.23**	**294**	P	P	10 06 38.0	+7.8
DZM	**Mont Dzumac**	**18.63**	**137**	P	**P**	**10 06 34.8**	**+0.3**
	comp=Z,32nm,0.7s,baz=328,slow=8.2,SNR=33						
ONTNC	**Ouen Toro**	**18.79**	**137**	P	**P**	**10 06 35.1**	**-1.1**
OUENC	**Ouen Island, N**	**19.13**	**137**	P	**Pn**	**10 06 45.5**	**+4.7**
OUENC	**Ouen Island, N**	**19.13**	**137**	P	**P**	**10 06 38.6**	**-1.4**
MARNC	**Mare, Loyalty**	**19.36**	**132**		**P**	**10 06 40.9**	**-1.6**
QLP	**Quilpie**	**19.46**	**204**	P	**P**	**10 06 44.6**	**+1.1**
QLP	**Quilpie**	**19.46**	**204**	P	**P**	**10 06 44.6**	**+1.1**
	comp=Z,336nm,0.9s,comp=Z,0.0nm						
QLP	**Quilpie**	**19.46**	**204**	P	**P**	**10 06 44.5**	**+1.1**
KDU	**Kakadu**	**20.32**	**257**	P	**P**	**10 06 51.9**	**-1.0**
	comp=Z,122nm,1.1s						
WR0	**Warramunga Arr**	**20.84**	**236**	P	**P**	**10 06 57.3**	**-1.3**
WR0				IAmb	IAmb	10 07 08.9	
	comp=Z,114nm,0.8s						
WB0	**Warramunga Arr**	**20.86**	**237**	P	**P**	**10 06 57.5**	**-1.4**
WR8	**Warramunga Arr**	**20.87**	**236**	P	**P**	**10 06 58.2**	**-0.7**
WR8				IAmb	IAmb	10 07 09.2	
	comp=Z,116nm,0.9s						
WRAB	**Tennant Creek**	**20.98**	**236**	*c i*P	**P**	**10 06 59.9**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,133nm,0.9s						
WRAB	**Tennant Creek**	**20.98**	**236**	P	**P**	**10 06 59.4**	**-0.8**
WRAB	**Tennant Creek**	**20.98**	**236**	P	**P**	**10 06 59.9**	**-0.3**
WRA	**Warramunga Arr**	**20.99**	**236**	P	**P**	**10 06 59.8**	**-0.5**
	comp=Z,32nm,0.6s,baz=61,slow=11,SNR=138						
	comp=Z,32nm,0.6s						
WRA	**Warramunga Arr**	**20.99**	**236**	*i* P	**P**	**10 06 59.7**	**-0.6**
WRA				pmax	pmax		
	comp=Z,32nm,0.6s						
WRA	**Warramunga Arr**	**20.99**	**236**	P	**P**	**10 06 58.0**	**-2.4**
FAKI	**Fak Fak**	**21.23**	**285**	P	**P**	**10 07 01.9**	**-1.0**
FAKI	**Fak Fak**	**21.23**	**285**	P	**P**	**10 07 09.5**	**+6.6**
	comp=Z,5μmcomp=Z,147nm,1.1s						
ARMA	**Armidale**	**21.54**	**183**	P	**P**	**10 07 09.1**	**+2.9**
ARMA	**Armidale**	**21.54**	**183**	P	**P**	**10 07 08.7**	**+2.5**
	comp=Z,82nm,1.8s,comp=Z,0.0nm						
ARMA	**Armidale**	**21.54**	**183**		**P**	**10 07 05.0**	**-1.2**
ARMA	**Armidale**	**21.54**	**183**	P	**P**	**10 07 08.9**	**+2.7**
MTN	**Manton Dam**	**21.63**	**257**	P	**P**	**10 07 06.6**	**-0.6**
	comp=Z,76nm,0.8s,comp=Z,0.0nm						
MTN	**Manton Dam**	**21.63**	**257**		**P**	**10 07 06.2**	**-1.0**
MTN				IAmb	IAmb	10 07 13.6	
	comp=Z,71nm,0.9s						
DRS	**Darwin Rock St**	**21.80**	**259**	P	P	10 06 58.5	-11
INKA	**Innaminka**	**22.00**	**210**		**P**	**10 07 10.4**	**-0.7**
SIJI	**Sorong**	**22.82**	**289**	LR	LR	10 18 31.1	
	comp=Z,7μm,18.1s,baz=110,slow=42						
SIJI	**Sorong**	**22.82**	**289**	P	**P**	**10 07 21.7**	**+1.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,215nm,0.9s						
AS17	**Alice Springs**	**23.27**	**228**	P	**P**	**10 07 24.3**	**-0.3**
	comp=Z,62nm,1.0s						
AS01	**Alice Springs**	**23.30**	**228**	P	**P**	**10 07 20.0**	**-4.9**
AS01	**Alice Springs**	**23.30**	**228**	P	**P**	**10 07 25.3**	**+0.4**
	comp=Z,81nm,0.9s						
AS15	**Alice Springs**	**23.32**	**229**	P	**P**	**10 07 25.7**	**+0.7**
	comp=Z,85nm,1.1s						
AS09	**Alice Springs**	**23.33**	**228**	P	**P**	**10 07 25.8**	**+0.6**
	comp=Z,87nm,1.1s						
AS31	**Alice Springs**	**23.34**	**228**	P	**P**	**10 07 24.4**	**-0.8**
	comp=Z,18nm,0.8s						
AS31	**Alice Springs**	**23.34**	**228**	P	**P**	**10 07 23.7**	**-1.5**
ASAR	**Alice Springs**	**23.34**	**228**	P	**P**	**10 07 25.0**	**-0.3**
	comp=Z,50nm,0.8s,baz=66,slow=7.1,SNR=114						
ASAR				LR	LR	10 16 05.4	
	comp=Z,5μm,18.6s,baz=51,slow=35						
	comp=Z,50nm,0.8s						
ASAR	**Alice Springs**	**23.34**	**228**	P	**P**	**10 07 24.7**	**-0.6**
CMSA	**Cobar Meteorol**	**23.57**	**195**	P	**P**	**10 07 25.3**	**-2.1**
CMSA	**Cobar Meteorol**	**23.57**	**195**	P	**P**	**10 07 25.8**	**-1.6**
	comp=Z,84nm,0.9s						
CMSA	**Cobar Meteorol**	**23.57**	**195**	P	**P**	**10 07 26.1**	**-1.3**
GUMO	**Guam**	**23.59**	**340**	P	**P**	**10 07 28.1**	**+0.5**
	comp=Z,82nm,0.9s,baz=152,slow=8.0,SNR=4.1						
GUMO				LR	LR	10 15 07.7	
	comp=Z,1μm,21.7s,baz=168,slow=32						
	comp=Z,82nm,0.9s						
MGCD	**Mangrove Creek**	**24.34**	**183**	P	**P**	**10 07 35.9**	**+1.2**
MGCD	**Mangrove Creek**	**24.34**	**183**	P	**P**	**10 07 34.9**	**+0.2**
	comp=Z,126nm,0.7s						
MGCD	**Mangrove Creek**	**24.34**	**183**	P	**P**	**10 07 36.1**	**+1.4**
KNRA	**Kununurra**	**24.43**	**251**	P	**P**	**10 07 34.7**	**-0.9**
	comp=Z,100nm,0.8s,comp=Z,0.0nm						
KNRA	**Kununurra**	**24.43**	**251**		**P**	**10 07 34.1**	**-1.6**
STKA	**Stephens Creek**	**25.21**	**203**	P	**P**	**10 07 41.5**	**-1.1**
STKA	**Stephens Creek**	**25.21**	**203**	P	**P**	**10 07 41.5**	**-1.1**
	comp=Z,263nm,1.2s						
STKA	**Stephens Creek**	**25.21**	**203**	P	**P**	**10 07 41.2**	**-1.4**
	comp=Z,30nm,0.6s,baz=7.9,slow=8.4,SNR=50						
STKA				LR	LR	10 17 22.7	
	comp=Z,1μm,19.6s,baz=17,slow=36						
	comp=Z,30nm,0.6s						
STKA	**Stephens Creek**	**25.21**	**203**	*c i*P	**P**	**10 07 42.1**	**-0.4**
STKA	**Stephens Creek**	**25.21**	**203**	P	**P**	**10 07 42.4**	**-0.2**
FUNA	**Funafuti**	**26.12**	**91**	P	**P**	**10 07 50.0**	**-1.0**
MSVF	**Nonsavu**	**26.12**	**112**	P	**P**	**10 07 51.2**	**0.0**
	comp=Z,6.9nm,0.8s,baz=116,slow=19,SNR=3.8						
MSVF				LR	LR	10 16 30.1	
	comp=Z,4μm,20.2s,baz=278,slow=32						
	comp=Z,6.9nm,0.8s						
MSVF	**Nonsavu**	**26.12**	**112**	P	**P**	**10 07 49.6**	**-1.6**
MSVF				IAmb	IAmb	10 08 18.7	
	comp=Z,113nm,1.6s						
CNB	**Canberra Magne**	**26.58**	**186**	P	**P**	**10 07 55.6**	**+0.6**
	comp=Z,1.4nm,1.2s						
CAN	**Canberra**	**26.63**	**187**	P	**P**	**10 07 55.7**	**+0.3**
CAN	**Canberra**	**26.63**	**187**	P	**P**	**10 07 55.7**	**+0.3**
	comp=Z,45nm,0.8s						
CAN	**Canberra**	**26.63**	**187**	P	**P**	**10 07 54.2**	**-1.3**
CAN				pmax	pmax		
	comp=Z,195nm,1.8s						
CAN				MLR	MLR		
	comp=Z,5μm,18.0s						
CAN	**Canberra**	**26.63**	**187**	P	**P**	**10 07 54.2**	**-1.3**
CAN				IAMs_20	IAMs_20	10 18 06.3	
	comp=Z,5μm,18.0s						
CAN	**Canberra**	**26.63**	**187**	P	**P**	**10 07 55.8**	**+0.3**
TNTI	**Ternate**	**27.04**	**289**	P	**P**	**10 07 57.9**	**-1.5**
TNTI				IAmb	IAmb	10 08 28.1	
	comp=Z,49nm,1.0s						
TNTI	**Ternate**	**27.04**	**289**	P	**P**	**10 08 06.0**	**+6.6**
	comp=Z,2μmcomp=Z,1μmcomp=Z,50nm,1.1s						
TNTI	**Ternate**	**27.04**	**289**	P	**P**	**10 08 04.5**	**+5.1**
HTT	**Hallett**	**27.65**	**206**	P	**P**	**10 08 03.0**	**-1.7**
HTT	**Hallett**	**27.65**	**206**	P	**P**	**10 08 03.7**	**-0.9**
	comp=Z,17nm,0.9s						
HTT	**Hallett**	**27.65**	**206**	P	**P**	**10 08 04.8**	**+0.1**
HTT	**Hallett**	**27.65**	**206**	P	**P**	**10 08 04.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**27.93**	**248**	P	**P**	**10 08 06.5**	**-0.7**
	comp=Z,9.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.93**	**248**	P	**P**	**10 08 06.3**	**-0.9**
	comp=Z,27nm,0.6s,baz=81,slow=7.2,SNR=42						
FITZ				LR	LR	10 19 01.8	
	comp=Z,4μm,18.4s,baz=79,slow=36						
	comp=Z,27nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.93**	**248**	P	**P**	**10 08 05.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**27.93**	**248**	P	**P**	**10 08 06.5**	**-0.7**
SOEI	**Soe**	**28.15**	**266**	P	**P**	**10 08 07.3**	**-2.1**
SOEI	**Soe**	**28.15**	**266**	P	**P**	**10 08 10.6**	**+1.1**
MILA	**Mila**	**28.32**	**186**	P	**P**	**10 08 12.4**	**+1.8**
	comp=Z,12nm,1.3s						
WRKA	**Warakurna**	**28.37**	**232**	P	**P**	**10 08 08.9**	**-2.3**
	comp=Z,13nm,0.7s						
BBOO	**Buckleboo**	**28.47**	**211**	P	**P**	**10 08 09.6**	**-2.3**
BBOO	**Buckleboo**	**28.47**	**211**	P	**P**	**10 08 12.0**	**+0.1**
	comp=Z,94nm,1.1s						
BBOO	**Buckleboo**	**28.47**	**211**	P	**P**	**10 08 10.5**	**-1.5**
BBOO	**Buckleboo**	**28.47**	**211**	P	**P**	**10 08 14.2**	**+2.2**
BATI	**Baumata**	**28.74**	**265**	P	**P**	**10 08 12.9**	**-1.7**
	comp=Z,40nm,0.6s,baz=230,slow=5.1,SNR=3.8						
BATI				LR	LR	10 21 16.9	
	comp=Z,12μm,19.7s,baz=105,slow=40						
	comp=Z,40nm,0.6s						
TOO	**Toolangi**	**29.39**	**192**	P	**P**	**10 08 19.2**	**-0.9**
TOO				pmax	pmax		
	comp=Z,15nm,1.6s						
TOO	**Toolangi**	**29.39**	**192**	P	**P**	**10 08 19.2**	**-0.9**
ARPS	**Mount Arapiles**	**29.57**	**198**	P	**P**	**10 08 24.5**	**+2.9**
	comp=Z,23nm,1.8s						
MMRI	**Maumere**	**30.18**	**268**	P	**P**	**10 08 25.9**	**-1.4**
MMRI				IAMs_20	IAMs_20	10 22 42.3	
	comp=Z,5μm,19.0s						
MMRI	**Maumere**	**30.18**	**268**	P	**P**	**10 08 32.0**	**+4.6**
	comp=Z,173nm,1.4s						
MMRI	**Maumere**	**30.18**	**268**	P	**P**	**10 08 30.5**	**+3.1**
LUWI	**Luwuk**	**30.85**	**283**	P	**P**	**10 08 31.2**	**-2.0**
LUWI	**Luwuk**	**30.85**	**283**	P	P	10 08 43.3	+10
FORT	**Forrest**	**31.78**	**223**	P	**P**	**10 08 40.7**	**-0.6**
	comp=Z,32nm,1.0s						
FORT	**Forrest**	**31.78**	**223**	P	**P**	**10 08 39.2**	**-2.1**
FORT				IAmb	IAmb	10 08 49.7	
	comp=Z,23nm,0.8s						
APSI	**Ampana**	**31.96**	**282**	P	P	10 08 50.5	+7.4
OUZ	**Omahuta**	**32.47**	**147**	P	**P**	**10 08 50.7**	**+3.4**
KAPI	**Kappang**	**32.99**	**274**	LR	LR	10 24 35.9	
	comp=Z,2μm,18.5s,baz=128,slow=40						
KAPI	**Kappang**	**32.99**	**274**	P	**P**	**10 08 50.2**	**-1.9**
KAPI				pmax	pmax		
	comp=Z,150nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,2μm,19.0s						
KAPI	**Kappang**	**32.99**	**274**	P	**P**	**10 08 50.2**	**-1.9**
KAPI	**Kappang**	**32.99**	**274**	P	**P**	**10 08 53.1**	**+1.0**
	comp=Z,2μmcomp=Z,1μmcomp=Z,96nm,1.4s						
KAPI	**Kappang**	**32.99**	**274**	P	**P**	**10 08 52.9**	**+0.8**
TOLI2	**Tolitoli**	**33.37**	**286**	P	**P**	**10 08 53.0**	**-2.4**
TOLI2				IAmb	IAmb	10 10 00.2	
	comp=Z,29nm,1.0s						
MOO	**Moorlands**	**33.87**	**187**	P	P	10 09 06.1	+6.7
MBWA	**Marble Bar**	**34.12**	**245**	P	P	10 08 52.3	-10
MBWA	**Marble Bar**	**34.12**	**245**	P	**P**	**10 09 01.7**	**-0.2**
	comp=Z,32nm,1.1s						
MBWA	**Marble Bar**	**34.12**	**245**		**P**	**10 08 59.4**	**-2.5**
MBWA				IAmb	IAmb	10 09 22.6	
	comp=Z,21nm,0.8s						
MBWA	**Marble Bar**	**34.12**	**245**	IAMs_20	IAMs_20	10 23 11.0	
	comp=Z,3μm,20.0s						
MBWA	**Marble Bar**	**34.12**	**245**	P	**P**	**10 09 03.0**	**+1.1**
RAO	**Raoul Island**	**34.20**	**130**	LR	LR	10 20 22.5	
	comp=Z,1μm,18.9s,baz=107,slow=32						
TAU	**Tasmania Unive**	**34.31**	**187**	P	**P**	**10 09 03.5**	**+0.3**
TAU	**Tasmania Unive**	**34.31**	**187**	P	**P**	**10 09 01.7**	**-1.5**
TAU				pmax	pmax		
	comp=Z,55nm,1.2s						
TAU	**Tasmania Unive**	**34.31**	**187**	P	**P**	**10 09 01.7**	**-1.5**
TAU				IAmb	IAmb	10 09 08.4	
	comp=Z,55nm,1.2s						
PLAI	**Plampang**	**34.58**	**267**	P	**P**	**10 09 07.3**	**+1.4**
	comp=Z,115nm,1.1s						
PLAI	**Plampang**	**34.58**	**267**	P	**P**	**10 09 05.2**	**-0.7**
AFI	**Afiamalu**	**35.10**	**102**	LR	LR	10 20 47.8	
	comp=Z,3μm,21.6s,baz=278,slow=32						
AFI	**Afiamalu**	**35.10**	**102**	IAMs_20	IAMs_20	10 20 45.9	
	comp=Z,3μm,20.0s						
QRZ	**Quartz Range**	**36.40**	**154**	IAMs_20	IAMs_20	10 21 03.8	
	comp=Z,3μm,19.0s						
KMBL	**Kambalda**	**36.47**	**228**	P	**P**	**10 09 21.2**	**-0.8**
	comp=Z,23nm,0.9s						
URZ	**Urewera**	**36.62**	**147**	P	**P**	**10 09 25.7**	**+2.6**
URZ	**Urewera**	**36.62**	**147**	LR	LR	10 22 57.3	
	comp=Z,5μm,18.6s,baz=322,slow=34						
TKNZ	**Takaka Hill**

MCQ pmax pmax
comp=Z,203nm,1.6s
MCQ Macquarie Isla 45.85 175 P **P** **10 10 36.2 -2.5**
JMN Monobe 45.95 338 P **P** **10 10 38.8 -1.0**
JMN Monobe 45.95 338 P **P** **10 10 40.8 +0.9**
JGF Kuroka 46.49 343 P **P** **10 10 43.2 -1.0**
JGF IAmb IAmb 10 10 54.6
comp=Z,25nm,0.9s
JGF Kuroka 46.49 343 P **P** **10 10 44.5 +0.4**
JNU Nakatsue 46.61 334 P **P** **10 10 45.2 +0.1**
comp=Z,62nm,0.9s,baz=127,slow=0.6,SNR=37
comp=Z,62nm,0.9s
MJAR Matsushiro Arr 47.13 344 P **P** **10 10 48.4 -0.7**
comp=Z,10nm,0.8s,baz=168,slow=7.9,SNR=33
MJAR LR LR 10 27 52.9
comp=Z,727nm,22.0s,baz=172,slow=32
comp=Z,10nm,0.8s
MJAR Matsushiro Arr 47.13 344 P **P** **10 10 47.9 -1.2**
MJAR IAmb IAmb 10 11 04.3
comp=Z,12nm,0.8s
MAJO Matsushiro 47.13 344*c i* P **P** **10 10 48.8 -0.3**
MAJO pmax pmax
comp=Z,15nm,0.7s
MAJO Matsushiro 47.13 344 P **P** **10 10 47.7 -1.4**
MAJO Matsushiro 47.13 344 P **P** **10 10 49.0 -0.1**
MJB9 Matsu-Tunnel 47.14 344 P **P** **10 10 48.0 -1.1**
MJB9 IAmb IAmb 10 11 15.6
comp=Z,25nm,0.8s
QZH2 Quanzhou 47.27 316 P P 10 10 55.5 +5.2
QZH2 S **S** **10 17 44.5 +0.7**
QZH2 L L
comp=Z,2µm,19.9s
QZH2 L L
comp=Z,1µm,16.1s
QZH2 L L
comp=Z,2µm,16.8s
RAR Rarotonga 47.29 111 LR LR 10 26 57.9
comp=Z,717nm,20.5s,baz=275,slow=31
PMBI Palembang 48.08 274 IAMs_20 IAMs_20 10 31 21.5
comp=Z,3µm,22.0s
LWLI Liwa 48.48 271 P P 10 11 07.1 +7.0
TPRI Tanjung Pinang 49.03 279 P P 10 11 11.5 +7.3
MYKOM **Kota Tinggi 49.88 280** P **P** **10 11 08.9 -1.8**
MYKOM IAmb IAmb 10 12 44.7
comp=Z,58nm,1.5s
SSE Sheshan 49.90 324 P **P** **10 11 10.0 -0.5**
SSE S **S** **10 18 21.0 +0.3**
SSE pmax pmax
comp=Z,8.0nm,1.3s
SSE pmax pmax
comp=Z,130nm,3.5s
SSE L L
comp=Z,1µm,20.6s
SSE L L
comp=Z,1µm,19.8s
JTM Tenmabayashi 50.51 348 P **P** **10 11 14.0 -0.9**
JTM Tenmabayashi 50.51 348 P **P** **10 11 14.9 0.0**
QIZ Qiongzhong 50.55 303 P **P** **10 11 14.8 -0.9**
QIZ S **S** **10 18 29.5 -0.8**
QIZ L L
comp=Z,830nm,17.7s
QIZ L L
comp=Z,640nm,19.1s
QIZ L L
comp=Z,1µm,21.6s
TJN Taejon 50.89 333*c i* P **P** **10 11 18.0 +0.1**
TJN Taejon 50.89 333 P **P** **10 11 16.3 -1.6**
KSRS Korea Array 51.56 335 P **P** **10 11 22.9 +0.1**
comp=Z,16nm,0.8s,baz=154,slow=8.4,SNR=69
KSRS LR LR 10 30 10.9
comp=Z,627nm,21.4s,baz=150,slow=32
comp=Z,16nm,0.8s
KSRS Korea Array 51.56 335 P **P** **10 11 23.0 +0.1**
KSAR Wonju Array Be 51.56 335 P **P** **10 11 22.3 -0.6**
KSAR Wonju Array Be 51.56 335 **P** **10 11 22.3 -0.6**
KS19 Wonju Array Si 51.62 335 P **P** **10 11 22.5 -0.9**
KS19 IAmb IAmb 10 11 38.2
comp=Z,19nm,0.8s
NJ2 Nanjing 51.96 323 *e*P **P** **10 11 25.8 -0.2**
NJ2 pmax pmax
comp=Z,45nm,0.5s
NJ2 L L
comp=Z,7µm,24.5s
NJ2 L L
comp=Z,6µm,20.6s
NJ2 L L
comp=Z,6µm,21.3s
INCN Inchon 52.14 334 P **P** **10 11 26.2 -1.1**
INCN pmax pmax
comp=Z,50nm,1.3s
INCN MLR MLR
comp=Z,1µm,19.0s
INCN Inchon 52.14 334 P **P** **10 11 26.2 -1.1**
INCN IAmb IAmb 10 11 35.1
comp=Z,50nm,1.2s
INCN Inchon 52.14 334 P **P** **10 11 26.9 -0.4**
BKNI Bangkinang 52.32 277 IAMs_20 IAMs_20 10 35 04.1
comp=Z,2µm,21.0s
PDSI Padang 52.66 276 P P 10 11 40.1 +8.5
PPI Padang Panjang 52.80 276 P **P** **10 11 33.9 +1.3**
comp=Z,32nm,1.2s
JKA Kamikawa-asahi 53.47 351 P **P** **10 11 36.2 -0.7**
JKA Kamikawa-asahi 53.47 351 P **P** **10 11 38.5 +1.5**
ASAJ Asahikawa 53.47 351 P **P** **10 11 37.8 +0.9**
comp=Z,21nm,0.9s,baz=232,slow=16,SNR=11
ASAJ LR LR 10 32 11.2
comp=Z,412nm,21.6s,baz=182,slow=33
comp=Z,21nm,0.9s
WHN Wuhan 53.76 318 P P 10 11 47.8 +8.5
WHN S **S** **10 19 17.8 +3.9**
WHN LR LR
comp=N,4µm,18.2s
WHN LR LR
comp=E,5µm,20.4s
WHN LR LR
comp=Z,5µm,20.1s
KULM Kulim 53.82 283 P **P** **10 11 38.3 -1.8**
KULM IAmb IAmb 10 12 06.9
comp=Z,19nm,1.0s
RPSI Rantau Prapat 54.88 280 IAMs_20 IAMs_20 10 37 25.9
comp=Z,2µm,20.0s
PSTR Posyet 54.99 340⇓*e*P **P** **10 11 46.8 -1.3**
VLA Vladivostok 55.06 341⇓*e*P **P** **10 11 48.5 -0.1**
VLA pmax pmax
comp=Z,21nm,0.7s
DL2 Dalian 55.60 331 P **P** **10 11 53.5 +1.0**
DL2 pmax pmax
comp=Z,35nm,0.9s
DL2 pmax pmax
comp=Z,150nm,7.8s
DL2 L L
comp=Z,1µm,19.4s
DL2 L L
comp=Z,2µm,18.5s
DL2 L L
comp=Z,1µm,19.0s
TIA Tai'an 55.93 325 P **P** **10 11 54.0 -1.0**
TIA S **S** **10 19 45.0 +2.0**
TIA pmax pmax
comp=Z,13nm,1.0s
TIA pmax pmax
comp=Z,200nm,8.0s
TIA L L
comp=Z,2µm,21.4s
TIA L L
comp=Z,2µm,22.4s
TIA L L
comp=Z,1µm,19.0s
USA0B Ussuriysk Arra 56.01 342 P **P** **10 11 54.6 -0.8**
USA0B pmax pmax
comp=Z,21nm,1.2s
USA0B Ussuriysk Arra 56.01 342 P **P** **10 11 54.6 -0.8**
USA0B IAmb IAmb 10 12 18.9
comp=Z,21nm,1.1s
USRK Ussuriysk Ar. 56.01 342 P **P** **10 11 56.1 +0.8**
comp=Z,12nm,0.9s,baz=152,slow=6.8,SNR=12
USRK LR LR 10 35 52.8
comp=Z,384nm,18.2s,baz=162,slow=36
comp=Z,12nm,0.9s
USRK Ussuriysk Ar. 56.01 342 **P** **10 11 54.4 -0.9**
YSS Yuzhno-Sakhali 56.22 352 *e*P **P** **10 11 56.8 0.0**
YSS *e* 10 12 56.2
YSS *e*S **S** **10 19 42.2 -4.1**
YSS pmax pmax
comp=Z,200nm,6.1s
YSS pmax pmax
comp=Z,20nm,0.8s
SLVN Son La 56.55 303 P **P** **10 11 58.1 -1.7**
SLVN IAmb IAmb 10 12 24.4
comp=Z,27nm,1.2s
PPT Papeete 56.62 105 LR LR 10 31 06.5
comp=Z,1µm,21.7s,baz=264,slow=30
PPT2 Papeete2 56.62 105 *e*PKP1 **P** **10 12 02.1 +1.7**
comp=Z,162nm,27.2s
PPT2 *e*S **S** **10 19 49.9 -3.1**
comp=Z,2µm,27.0s
PPT2 *e*LQ LQ 10 26 07.9
comp=Z,5µm,33.0s
PPT2 *e*LR LR 10 28 31.9
comp=Z,6µm,29.2s
PPT2 *e*LR LR 10 28 33.1
comp=Z,4µm,32.2s
GYA Guiyang 56.84 309 ⇓P P 10 11 57.5 -4.3
GYA pmax pmax
comp=Z,15nm,0.6s
ENH Enshi 56.89 315 IAMs_20 IAMs_20 10 32 54.7
comp=Z,1µm,20.0s
TBI Tubuai 57.01 112 *e*S **S** **10 19 56.6 -1.2**
comp=Z,7µm,30.5s
TBI *e*LQ LQ 10 26 24.7
comp=Z,16µm,39.8s
TBI *e*LR LR 10 28 38.8
comp=Z,5µm,30.5s
TBI *e*LR LR 10 28 40.0
comp=Z,22µm,29.2s
SNY Shenyang 57.05 334 ⇑P **P** **10 11 59.5 -3.3**
SNY S **S** **10 20 01.3 +3.7**
SNY pmax pmax
comp=Z,10.0nm,0.7s
SNY pmax pmax
comp=Z,140nm,3.9s
SNY L L
comp=Z,520nm,15.6s
SNY L L
comp=Z,520nm,17.0s
SNY L L
comp=Z,970nm,15.9s
MDJ Mudanjiang 57.14 340 P **P** **10 12 03.0 -0.4**
MDJ IAmb IAmb 10 12 13.2
comp=Z,14nm,0.8s
MDJ Mudanjiang 57.14 340 P **P** **10 12 03.5 +0.1**
MDJ pmax pmax
comp=Z,14nm,1.2s
MDJ Mudanjiang 57.14 340 P **P** **10 12 03.8 +0.4**
CN2 Changchun 57.93 337 P **P** **10 12 08.8 -0.2**
CN2 S **S** **10 20 07.0 -2.1**
CN2 SS **SS** **10 23 58.3 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 L L
comp=Z,800nm,18.0s
CN2 L L
comp=Z,400nm,18.0s
CN2 L L
comp=Z,800nm,18.0s
HNS HongShan 58.14 325 ⇓P **P** **10 12 10.5 -0.1**
HNS S **S** **10 20 08.3 -3.8**
HNS pmax pmax
comp=Z,18nm,0.9s
HNS L L
comp=Z,2µm,20.7s
HNS L L
comp=Z,2µm,20.7s
HNS L L
comp=Z,1µm,22.3s
DRV Dumont d'Urvil 58.44 186 P **P** **10 12 11.3 -0.9**
BNX BinXian 58.87 339 ⇓P **P** **10 12 15.8 +0.3**
BNX pP **pP** **10 12 19.0 +0.9**
BNX PP **PP** **10 14 26.0 +0.1**
BNX S **S** **10 20 20.0 -1.3**
BNX SS **SS** **10 24 17.0 +1.9**
BNX pmax pmax
comp=Z,15nm,1.0s
BNX pmax pmax
comp=Z,190nm,6.5s
BNX L L
comp=Z,320nm,16.7s
BNX L L
comp=Z,240nm,19.4s
BNX L L
comp=Z,770nm,20.5s
BJI2 Beijing 59.20 328 P **P** **10 12 17.8 -0.2**
BJI2 pP **pP** **10 12 22.0 +1.5**
BJI2 sP **pwP** **10 12 25.0 +1.8**
BJI2 S **S** **10 20 24.3 -1.5**
BJI2 pmax pmax
comp=Z,2.0nm,0.7s
BJI2 pmax pmax
comp=Z,85nm,9.5s
BJI2 L L
comp=Z,340nm,22.7s
BJI2 L L
comp=Z,320nm,22.6s
BJI2 L L
comp=Z,630nm,23.3s
BJT Baijiatuau 59.20 328 P **P** **10 12 17.5 -0.5**
BJT pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuau 59.20 328 P **P** **10 12 17.5 -0.5**
KMI2 Kunming 59.25 306 P **P** **10 12 19.5 +0.6**
KMI2 PP **PP** **10 14 35.0 +5.1**
KMI2 S **S** **10 20 28.5 +1.0**
KMI2 pmax pmax
comp=Z,25nm,1.0s
KMI2 pmax pmax
comp=Z,300nm,9.5s
KMI2 L L
comp=Z,1µm,25.0s
KMI2 L L
comp=Z,590nm,25.8s
KMI2 L L
comp=Z,1µm,24.2s
XAN Xi'an 59.52 318 ⇓P **P** **10 12 20.0 -0.4**
XAN pP pwP 10 12 30.5 +4.8
XAN S **S** **10 20 27.5 -2.8**
XAN pmax pmax
comp=Z,13nm,0.7s
XAN pmax pmax
comp=Z,320nm,8.9s
XAN L L
comp=Z,1µm,19.0s
XAN L L
comp=Z,1µm,18.3s
XAN L L
comp=Z,3µm,20.6s
CMAR Chiang Mai Arr 59.61 297 P **P** **10 12 20.8 -0.5**
comp=Z,7.7nm,0.9s,baz=119,slow=5.1,SNR=15
comp=Z,7.7nm,0.9s
CMAR Chiang Mai Arr 59.61 297 *i* P **P** **10 12 21.7 +0.5**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 59.61 297 P **P** **10 12 20.0 -1.2**
TIY Taiyuan 59.67 324 P **P** **10 12 21.0 -0.4**
TIY S **S** **10 20 31.5 -0.7**
TIY pmax pmax
comp=Z,190nm,8.8s
TIY L L
comp=Z,2µm,23.4s
TIY L L
comp=Z,2µm,24.0s
TIY L L
comp=Z,1µm,23.4s
CHTO Chiang Mai 59.75 298 P **P** **10 12 20.3 -1.8**
CHTO pmax pmax
comp=Z,18nm,0.9s
CHTO Chiang Mai 59.75 298 P **P** **10 12 20.3 -1.8**
CHTO IAmb IAmb 10 12 40.2
comp=Z,18nm,0.9s
CHTO Chiang Mai 59.75 298 P **P** **10 12 22.4 +0.2**
comp=Z,23nm,0.9s
CHTO Chiang Mai 59.75 298 P **P** **10 12 22.4 +0.2**
TYV Tymovskoe 60.06 353 *e*P **P** **10 12 24.0 +0.4**
TYV *e*S **S** **10 20 36.0 -0.4**
TYV pmax pmax
comp=Z,100nm,3.8s
TYV pmax pmax
comp=Z,11nm,0.8s
TYV smax smax
comp=N,400nm,7.0s
TYV smax smax
comp=E,100nm,7.0s
KLR Kul'dur 60.66 344 P **P** **10 12 27.8 +0.1**
comp=E,9.0nm,0.9s,baz=174,slow=5.3,SNR=20
KLR LR LR 10 37 44.9
comp=E,576nm,20.1s,baz=170,slow=35
comp=E,9.0nm,0.9s
KLR Kul'dur 60.66 344*c i* P **P** **10 12 27.8 +0.1**
KLR pmax pmax
comp=Z,19nm,1.1s
PZH PanZhiHua 60.69 307 P **P** **10 12 30.0 +1.4**
PZH S **S** **10 20 46.5 +0.8**
PZH pmax pmax
comp=Z,20nm,1.3s
PZH L L
comp=Z,840nm,20.4s
PZH L L
comp=Z,400nm,18.6s
PZH L L
comp=Z,890nm,24.9s
CD2 Chengdu 61.35 312 P **P** **10 12 36.3 +3.4**
CD2 S **S** **10 20 51.5 -2.4**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,390nm,7.1s
CD2 L L
comp=Z,1µm,14.6s
CD2 L L
comp=Z,830nm,15.2s
CD2 L L
comp=Z,1µm,22.2s
PET Petropavlovsk 61.78 4 *e*P **P** **10 12 33.6 -1.7**
PET *e* 10 14 54.5
PET *e*S **S** **10 20 57.0 -1.3**
PET *e*PS **PnS** **10 21 18.5 +5.7**
PET *e*SSS SSS 10 27 44.3
PET pmax pmax
comp=Z,34nm,2.0s
PET pmax pmax
comp=Z,100nm,10.4s
PET MLR MLR
comp=Z,400nm,16.0s
PET MLR MLR
comp=Z,300nm,20.0s
PET Petropavlovsk 61.78 4 P **P** **10 12 34.4 -0.9**
PET Petropavlovsk 61.78 4 P **P** **10 12 33.4 -1.9**
comp=Z,23nm,0.9s
PEA0B Petropavlovsk- 61.80 3⇑*e*P **P** **10 12 36.4 +0.9**
PEA0B Petropavlovsk- 61.80 3 P **P** **10 12 34.9 -0.6**
PETK Petropavlovsk- 61.80 3 P **P** **10 12 35.9 +0.4**
comp=Z,17nm,0.9s,baz=188,slow=4.2,SNR=17
PETK LR LR 10 33 53.1
comp=Z,760nm,21.9s,baz=193,slow=30
comp=Z,17nm,0.9s
PETK Petropavlovsk- 61.80 3 P **P** **10 12 35.5 0.0**
XLT XiLinHaoTe 62.10 331 *e*P P 10 12 47.0 +9.2
XLT pP pwP 10 12 52.5 +9.5
XLT S S 10 21 12.3 +9.3
XLT XiLinHaoTe 62.10 331 SS SS 10 25 15.0 +8.9
XLT pmax pmax
comp=Z,25nm,0.9s
XLT AMB AMB
comp=Z,140nm,7.2s
XLT LR LR
comp=N,55nm,20.8s
XLT LR LR
comp=E,640nm,23.8s
XLT LR LR
comp=Z,960nm,21.7s
HHC Hu-ho-hao-te 62.29 326 *e*P **P** **10 12 39.8 +0.7**
HHC S **S** **10 21 04.5 -1.0**
HHC ScS **SKSac** **10 22 29.5 -2.1**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,54nm,4.2s
HHC L L
comp=Z,580nm,17.6s
HHC L L
comp=Z,540nm,17.2s
HHC L L
comp=Z,510nm,18.0s
NPW Naypyitaw 62.56 298 P **P** **10 12 41.6 +0.4**
TNCH TengChong 62.62 304 ⇑P **P** **10 12 40.0 -1.8**
TNCH pP pP 10 12 45.0 +0.7
TNCH S **S** **10 21 08.3 -2.1**
TNCH pmax pmax
comp=Z,58nm,0.8s
TNCH pmax pmax
comp=Z,200nm,3.5s
TNCH L L
comp=Z,490nm,13.6s
TNCH L L
comp=Z,530nm,17.6s
TNCH L L
comp=Z,840nm,19.7s
HEH HeiHe 62.82 342 *e*P **P** **10 12 41.8 -0.5**
HEH pP **pP** **10 12 45.3 +0.4**
HEH S **S** **10 21 09.3 -2.2**
HEH sS **sS** **10 21 20.5 +5.0**
HEH pmax pmax
comp=Z,17nm,0.9s
HEH L L
comp=Z,390nm,17.9s
HEH L L
comp=Z,500nm,16.1s
HEH L L
comp=Z,720nm,16.2s
BTO2 Baotou 63.17 325 *e*P **P** **10 12 48.3 +3.3**
BTO2 S **S** **10 21 21.3 +4.7**
BTO2 pmax pmax
comp=Z,17nm,0.7s
BTO2 pmax pmax
comp=Z,260nm,5.6s
BTO2 L L
comp=Z,2µm,19.7s
BTO2 L L
comp=Z,2µm,21.0s
BTO2 L L
comp=Z,2µm,18.9s
SHEM Shemya Is, Ala 63.94 14 LR LR 10 36 04.4
comp=Z,1µm,21.6s,baz=212,slow=32
LZH Lanzhou 64.10 317 *e*P **P** **10 12 51.5 +0.2**
LZH sP pwP 10 12 57.5 +0.9
LZH S **S** **10 21 28.0 -0.4**
LZH sS sS 10 21 42.3 +10
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,140nm,4.8s
LZH L L
comp=Z,600nm,15.5s
LZH L L
comp=Z,850nm,16.2s
LZH L L
comp=Z,1µm,15.5s
LZDM Lanzhou Array 64.12 317 P **P** **10 12 51.3 -0.4**
comp=Z,4.5nm,0.5s,baz=147,slow=6.2,SNR=4.5
LZDM LR LR 10 40 39.8
comp=Z,597nm,18.8s,baz=90,slow=36
comp=Z,4.5nm,0.5s
CASY Casey 64.22 198 P **P** **10 12 54.8 +3.4**
HIA Hailar 64.66 337 P **P** **10 12 55.0 +0.5**
HILR Hailar Array B 64.89 337 P **P** **10 12 55.1 -0.9**
comp=Z,1.6nm,0.5s,baz=137,slow=7.2,SNR=6.0
HILR LR LR 10 39 23.5
comp=Z,492nm,20.4s,baz=95,slow=34
comp=Z,1.6nm,0.5s
KIWB Kanaga Island 65.71 20 **P** **10 13 00.5 -0.7**
MORE Moreh 65.81 301 P **P** **10 13 01.2 -1.3**
ADK Adak 65.89 20 P **P** **10 13 03.4 +1.0**
ZEA Zeya 65.94 344 *e*P **P** **10 13 03.2 +0.5**
ZEA *e*S **S** **10 21 51.3 +1.2**
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA smax smax
comp=N,300nm,14.6s
TAOE Nuku Hiva Isla 66.19 96 *e*PKP1 **P** **10 13 06.7 +1.4**
comp=N,114nm,26.8s
TAOE *e*S **S** **10 21 52.5 -2.3**
comp=N,340nm,28.2s
TAOE *e*SS **SS** **10 26 10.5 -0.4**
comp=N,433nm,30.6s
TAOE *e*LQ LQ 10 29 52.3

comp=N,2µm,29.5s
TAOE eLR LR 10 32 57.6
comp=N,2µm,22.3s
ATKA Atka Island 67.03 21 P P 10 13 09.0 -0.6
MA2 Magadan 68.17 359 P P 10 13 15.8 -0.9
comp=N,5.4nm,0.7s,baz=180,slow=11,SNR=2.2
MA2 LR LR 10 41 33.4
comp=N,178nm,20.1s,baz=179,slow=34
comp=N,5.4nm,0.7s
MA2 Magadan 68.17 359 P P 10 13 15.8 -0.9
MA2 pmax pmax
comp=Z,88nm,1.8s
MA2 Magadan 68.17 359 P P 10 13 15.8 -0.9
SHL Shillong 68.34 302 P P 10 13 17.3 -1.5
SHL pmax pmax
comp=Z,90nm,1.2s
SHL Shillong 68.34 302 P 10 13 17.3 -1.5
GTA2 Gaotai 68.66 318 P P 10 13 20.5 0.0
GTA2 S S 10 22 20.0 -3.7
GTA2 SS SS 10 26 53.0 +4.5
GTA2 pmax pmax
comp=Z,15nm,1.0s
GTA2 pmax pmax
comp=Z,150nm,5.7s
GTA2 L L
comp=Z,390nm,16.2s
GTA2 L L
comp=Z,640nm,17.5s
GTA2 L L
comp=Z,860nm,19.7s
VNDA Vanda 68.86 178 P P 10 13 20.0 -0.8
comp=Z,1.6nm,0.6s,baz=340,slow=4.1,SNR=5.6
VNDA LR LR 10 41 20.2
comp=Z,647nm,18.7s,baz=358,slow=34
comp=Z,1.6nm,0.6s
VNDA Vanda 68.86 178 P P 10 13 20.1 -0.8
VNDA pmax pmax
comp=Z,7.0nm,1.0s
VNDA Vanda 68.86 178 P P 10 13 20.1 -0.8
ULN Ulaanbaatar 69.37 329*c i* P P 10 13 24.8 +0.1**
ULN pmax pmax
comp=Z,10.0nm,0.9s
ULN Ulaanbaatar 69.37 329 P P 10 13 24.2 -0.6
ULN IAmb IAmb 10 13 44.1
comp=Z,12nm,0.8s
ULN Ulaanbaatar 69.37 329 IAMs_20 IAMs_20 10 46 21.0
comp=Z,880nm,18.0s
ULN Ulaanbaatar 69.37 329 P P 10 13 25.3 +0.5
comp=Z,1µmcomp=Z,66nm,0.8s
ULN Ulaanbaatar 69.37 329 P P 10 13 25.2 +0.5
SONM Songino Array 69.69 329 P P 10 13 26.8 +0.2
comp=Z,13nm,0.9s,baz=139,slow=6.0,SNR=46
SONM LR LR 10 43 55.6
comp=Z,840nm,20.3s,baz=131,slow=36
comp=Z,13nm,0.9s
SONM Songino Array 69.69 329 P P 10 13 25.7 -1.0
SONM IAmb IAmb 10 13 46.0
comp=Z,14nm,0.7s
LSA Lhasa 70.50 306*e* P P 10 13 28.3 -4.2
LSA S S **10 22 40.0 -6.4**
LSA L L
comp=Z,260nm,20.5s
LSA L L
comp=Z,490nm,20.5s
LSA L L
comp=Z,730nm,22.6s
LSA Lhasa 70.50 306 P P 10 13 34.7 +2.3
UNV Unalaska Valle 71.25 24 IAMs_20 IAMs_20 10 41 15.3
comp=Z,1µm,18.0s
SEY Seymchan 71.52 360 LR LR 10 40 44.6
comp=Z,221nm,21.6s,baz=156,slow=32
SEY Seymchan 71.52 360*ce* P P **10 13 37.4 +0.1**
SEY pmax pmax
comp=Z,12nm,0.9s
YAK Yakutsk 72.86 349 P P 10 13 45.2 -0.2
comp=Z,13nm,0.6s,baz=163,slow=1.1,SNR=2.2
YAK LR LR 10 44 43.4
comp=Z,351nm,21.1s,baz=161,slow=35
comp=Z,13nm,0.6s
YAK Yakutsk 72.86 349*e* P P **10 13 44.6 -0.7**
YAK *e**PP **pP 10 13 48.7 +0.7**
YAK *e* 10 13 59.5
YAK *e* 10 16 25.6
YAK *e* PPP PPP 10 18 08.5
YAK *e* S S **10 23 11.2 -0.2**
YAK *e* 10 23 49.3
YAK *e* SS SS **10 27 51.9 0.0**
YAK pmax pmax
comp=Z,11nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,212nm,8.1s
YAK pmax pmax
comp=N,81nm,5.0s
YAK pmax pmax
comp=E,95nm,7.3s
YAK smax smax
comp=N,146nm,5.4s
YAK smax smax
comp=E,66nm,5.0s
YAK MLR MLR
comp=E,325nm,25.0s
YAK MLR MLR
comp=N,110nm,16.0s
YAK Yakutsk 72.86 349 P P 10 13 44.8 -0.5
YAK IAmb IAmb 10 13 59.9
comp=Z,28nm,0.9s
TLY Talaya 73.52 331 P P 10 13 49.3 -0.3
comp=Z,4.9nm,0.9s,baz=127,slow=7.2,SNR=8.0
TLY LR LR 10 46 10.8
comp=Z,658nm,19.8s,baz=124,slow=36
comp=Z,4.9nm,0.9s
TLY Talaya 73.52 331*c i* P P **10 13 49.2 -0.3**
TLY pmax pmax
comp=Z,13nm,1.4s
TLY Talaya 73.52 331 P P 10 13 48.4 -1.1
TLY Talaya 73.52 331 P P 10 13 50.0 +0.5
IRK Irkutsk 73.57 331*eP* P **10 13 49.4 -0.4**
IRK *eS* S **10 23 14.3 -5.6**
IRK pmax pmax
comp=Z,31nm,1.5s
PALK Pallekele 73.58 280 LR LR 10 50 40.6
comp=Z,682nm,19.1s,baz=119,slow=39
PALK Pallekele 73.58 280 IAMs_20 IAMs_20 10 48 57.5
comp=Z,895nm,20.0s
MOY Mondy 74.81 330*eP* P **10 13 55.6 -1.6**
MOY pmax pmax
comp=Z,20nm,1.1s
M11K Mekoryuk 76.20 20 IAMs_20 IAMs_20 10 42 14.2
comp=Z,870nm,20.0s
M11K Mekoryuk 76.20 20 P P 10 14 05.8 +1.0
baz=222
O14K Tigyukauivet M 77.13 22 P P 10 14 09.2 -0.9
O14K IAmb IAmb 10 14 40.5
comp=Z,31nm,0.9s
O14K IAMs_20 IAMs_20 10 42 25.0
comp=Z,945nm,21.0s
O14K Tigyukauivet M 77.13 22 P P 10 14 11.3 +1.2
baz=227
M13K Dall Lake 77.19 21 P P 10 14 11.7 +1.4
baz=225
GAMB Gambell 77.22 15 IAMs_20 IAMs_20 10 45 14.9
comp=Z,1µm,20.0s
CHIR Chirikof Islan 77.23 27 P P 10 14 12.0 +1.3
baz=233
BILL Bilibino 77.25 5*d i* P P **10 14 11.3 +0.7**
BILL pmax pmax
comp=Z,32nm,1.0s
N14K Kuskokwak Cree 77.44 22 P P 10 14 13.0 +1.2
baz=226
O15K Ungalikthiuk R 77.63 23 IAMs_20 IAMs_20 10 42 14.0
comp=Z,1µm,22.0s
O15K Ungalikthiuk R 77.63 23 P P 10 14 14.0 +1.1
baz=228
HYB Hyderabad 77.80 290*e* P P **10 14 13.4 -1.3**
HYB *eS* S **10 24 06.9 -1.1**
K13K Kusilvak Mount 77.85 19 P P 10 14 13.8 -0.2
K13K IAmb IAmb 10 14 31.0
comp=Z,13nm,0.9s
K13K Kusilvak Mount 77.85 19 P P 10 14 15.2 +1.1
baz=223
M14K Bethel 77.92 21 P P 10 14 15.7 +1.2
baz=226
R17L Mt. Peulik Vol 78.02 25 P P 10 14 16.1 +0.9
baz=232
L14K Kuka Creek 78.08 20 P P 10 14 15.2 -0.1
L14K IAmb IAmb 10 14 26.9
comp=Z,22nm,1.1s
L14K Kuka Creek 78.08 20 P P 10 14 16.5 +1.2
baz=225
N15K Kwethluk River 78.19 22 IAmb IAmb 10 14 33.5
comp=Z,21nm,1.0s
N15K IAMs_20 IAMs_20 10 43 08.0
comp=Z,1µm,21.0s
N15K Kwethluk River 78.19 22 P P 10 14 17.1 +1.1
baz=228
P16K Nushagak River 78.25 24 IAMs_20 IAMs_20 10 42 55.4
comp=Z,909nm,22.0s
SII Sitkinak Islan 78.32 27 P P 10 14 17.8 +1.0
baz=234
M15K Kasigluk River 78.33 21 P P 10 14 17.9 +1.1
baz=227
O16K Kokwok River B 78.57 23 IAMs_20 IAMs_20 10 43 38.0
comp=Z,825nm,21.0s
O16K Kokwok River B 78.57 23 P P 10 14 19.2 +1.1
baz=230
Q17K Contact Creek 78.61 25 P P 10 14 19.3 +0.8
baz=232
WMQ Urumqi 78.66 318*eP* P **10 14 19.5 +0.4**
WMQ pP pP 10 14 23.0 +1.3
WMQ PcP **PcP 10 14 29.0 +1.0**
WMQ S S **10 24 16.3 -0.1**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,99nm,3.9s
WMQ L L
comp=Z,510nm,20.5s
WMQ L L
comp=Z,440nm,20.5s
WMQ L L
comp=Z,500nm,24.7s
L15K Ungalak Mounta 78.73 20 P P 10 14 20.1 +1.1
baz=226
J14K Nanvaranak Lak 78.80 19 P P 10 14 20.6 +1.3
baz=224
ACHA Angle Creek He 78.82 25 IAmb IAmb 10 14 36.9
comp=Z,16nm,0.8s
N16K Nishlik Lake 78.89 22 P P 10 14 21.0 +1.1
baz=229
O17K Koliganek Bris 79.08 23 P P 10 14 22.0 +1.2
baz=231
OHAK Old Harbor 79.11 27 P P 10 14 22.4 +1.3
baz=234
K15K Wolf Creek Mou 79.14 20 P 10 14 20.7 -0.5
K15K IAmb IAmb 10 14 37.6
comp=Z,27nm,0.9s
K15K IAMs_20 IAMs_20 10 43 54.0
comp=Z,849nm,21.0s
K15K Wolf Creek Mou 79.14 20 P P 10 14 22.6 +1.4
baz=226
M16K Timber Creek 79.18 22 IAmb IAmb 10 14 55.5
comp=Z,33nm,0.9s
M16K Timber Creek 79.18 22 P P 10 14 22.9 +1.4
baz=229
Q18K Katmai Hardscr 79.22 25 P P 10 14 23.0 +1.2
baz=233
L16K Owhat River 79.45 21 P P 10 14 24.3 +1.4
baz=228
N17K Nushagak Hills 79.52 23 IAMs_20 IAMs_20 10 43 13.1
comp=Z,1µm,22.0s
N17K Nushagak Hills 79.52 23 P P 10 14 24.4 +1.1
baz=230
TNA Tin City 79.63 16 IAMs_20 IAMs_20 10 46 58.6
comp=Z,845nm,20.0s
TNA Tin City 79.63 16 P P 10 14 25.1 +1.3
baz=220
KDAK Kodiak Island 79.74 26 IAMs_20 IAMs_20 10 43 21.0
comp=Z,884nm,22.0s
KDAK Kodiak Island 79.74 26 P P 10 14 25.6 +1.1
baz=235
O18K Koktuh Hills 79.87 24 IAMs_20 IAMs_20 10 44 30.4
comp=Z,842nm,21.0s
O18K Koktuh Hills 79.87 24 P P 10 14 26.4 +1.1
baz=232
Q19K Cape Douglas, 79.95 25 IAMs_20 IAMs_20 10 44 48.6
comp=Z,902nm,21.0s
Q19K Cape Douglas, 79.95 25 P P 10 14 26.9 +1.1
baz=234
M17K Holitna River 79.99 22 IAMs_20 IAMs_20 10 44 03.4
comp=Z,904nm,22.0s
M17K Holitna River 79.99 22 P P 10 14 27.2 +1.4
baz=230
F14K Arctic Creek 79.99 16 P P 10 14 27.1 +1.4
baz=221
N18K Kilae Creek 80.11 23 P P 10 14 27.9 +1.3
baz=232
J16K Anvik River 80.14 19 IAmb IAmb 10 14 51.6
comp=Z,21nm,1.0s
J16K Anvik River 80.14 19 P P 10 14 28.0 +1.4
baz=227
L17K Donlin 80.15 21 P P 10 14 28.1 +1.4
baz=229
G15K Niukluk 80.28 17 P P 10 14 28.6 +1.2
baz=223
O19K Port Alsworth 80.43 24 IAMs_20 IAMs_20 10 44 46.3
comp=Z,796nm,21.0s
O19K Port Alsworth 80.43 24 P P 10 14 29.4 +1.2
baz=233
I17K Unalakleet 80.52 19 IAMs_20 IAMs_20 10 44 26.4
comp=Z,756nm,19.0s
I17K Unalakleet 80.52 19 P P 10 14 30.0 +1.4
baz=227
K17K Iditarod 80.53 21 IAmb IAmb 10 14 53.0
comp=Z,19nm,1.0s
K17K Iditarod 80.53 21 P P 10 14 30.0 +1.3
baz=229
P19K Oil Pt 80.55 25 P P 10 14 30.1 +1.2
baz=234
H16K Elim 80.56 18 P P 10 14 29.7 +0.9
baz=225
F15K North Star Dit 80.63 16 IAMs_20 IAMs_20 10 44 32.2
comp=Z,885nm,20.0s
F15K North Star Dit 80.63 16 P P 10 14 30.1 +0.9
baz=223
M18K Stony River 80.64 22 P P 10 14 30.7 +1.3
baz=232
J17K VABM Dome 80.72 20 IAmb IAmb 10 15 08.6
comp=Z,31nm,1.3s
J17K VABM Dome 80.72 20 P P 10 14 31.1 +1.3
baz=228
N19K Bonanza Creek 80.74 23 IAmb IAmb 10 14 53.8
comp=Z,46nm,1.9s
N19K IAMs_20 IAMs_20 10 46 23.4
comp=Z,816nm,21.0s
N19K Bonanza Creek 80.74 23 P P 10 14 31.0 +1.0
baz=233
L18K Granite Mounta 80.79 21 IAmb IAmb 10 14 54.4
comp=Z,19nm,1.1s
L18K IAMs_20 IAMs_20 10 49 37.5
comp=Z,855nm,19.0s
L18K Granite Mounta 80.79 21 P P 10 14 31.3 +1.2
baz=231
O20K Slope Mountain 81.05 24 P P 10 14 32.6 +0.9
baz=235
QSPA South Pole Qui 81.19 180 P P 10 14 30.9 -1.6
comp=Z,7.7nm,0.7s,baz=324,slow=0.4,SNR=61
comp=Z,7.7nm,0.7s
QSPA South Pole Qui 81.19 180 P P 10 14 30.8 -1.6
QSPA IAmb IAmb 10 15 16.3
comp=Z,32nm,1.1s
QSPA South Pole Qui 81.19 180 IAMs_20 IAMs_20 10 49 01.1
comp=Z,883nm,20.0s
HOM Homer 81.21 25 IAMs_20 IAMs_20 10 45 49.9
comp=Z,851nm,22.0s
HOM Homer 81.21 25 P P 10 14 33.5 +1.0
baz=236
DGZ Jazzator, Alta 81.25 323*eP* P **10 14 32.0 -1.1**
DGZ pmax pmax
comp=Z,21nm,1.1s
CNPM China Poot 81.31 25 P 10 14 33.1 +0.1
L19K White Mountain 81.44 22 IAmb IAmb 10 14 57.9
comp=Z,17nm,1.0s
L19K IAMs_20 IAMs_20 10 44 32.7
comp=Z,929nm,22.0s
L19K White Mountain 81.44 22 P P 10 14 34.7 +1.1
baz=232
H17K Granite Mounta 81.49 18 IAmb IAmb 10 14 56.6
comp=Z,21nm,1.4s
H17K Granite Mounta 81.49 18 P P 10 14 34.9 +1.1
baz=227
J18K Innoko River 81.57 21 P P 10 14 35.3 +1.0
baz=230,SNR=6.7
BRLK Bradley Lake 81.59 25 IAMs_20 IAMs_20 10 46 02.5
comp=Z,1µm,22.0s
BRSE Bradley Lake S 81.64 25 P P 10 14 35.6 +0.9
baz=236
G17K Kiwalik Mounta 81.65 18 P P 10 14 35.6 +0.9
baz=227
TIXI Tiksi 81.83 353 LR LR 10 50 11.2
comp=Z,108nm,19.8s,baz=176,slow=35
TIXI Tiksi 81.83 353*eP* P **10 14 36.5 +1.1**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
MAW Mawson 81.90 203 P P 10 14 35.0 -1.0
comp=Z,0.9nm,0.4s,baz=99,slow=6.8,SNR=6.8
comp=Z,0.9nm,0.4s
MAW Mawson 81.90 203 P P 10 14 35.0 -1.0
MAW Mawson 81.90 203 P P 10 14 34.4 -1.5
MAW Mawson 81.90 203 P P 10 14 41.5 +5.6
M20K Styx River 81.91 23 IAmb IAmb 10 15 09.7
comp=Z,18nm,1.2s
M20K IAMs_20 IAMs_20 10 45 24.1
comp=Z,857nm,20.0s
M20K Styx River 81.91 23 P P 10 14 37.0 +0.8
baz=234
ZSN Zaisan 81.91 321*eP* P **10 14 38.1 +1.7**
ZSN Zaisan 81.91 321*eP* P **10 14 38.1 +1.7**
CAPN Captain Cook N 82.04 24 P P 10 14 37.7 +0.9
baz=236
H18K Honhosa River 82.12 19 P P 10 14 38.1 +1.0
baz=229
F17K Baldwin Pennin 82.13 17 IAmb IAmb 10 15 15.2
comp=Z,16nm,0.9s
F17K Baldwin Pennin 82.13 17 P P 10 14 38.1 +1.0
baz=226,SNR=5.3
SLKM Skilak Lake 82.28 25 IAmb IAmb 10 15 06.2
comp=Z,18nm,0.7s
SLKM IAMs_20 IAMs_20 10 46 59.2
comp=Z,764nm,19.0s
J19K Poorman 82.28 20 P P 10 14 39.0 +1.0
baz=232
GCSA Galena City Sc 82.34 19 P P 10 14 39.2 +1.0
baz=230,SNR=8.2
C16K Lisburne Hills 82.36 15 P P 10 14 39.3 +1.1
baz=222
SEW Seward 82.38 25 P P 10 14 39.4 +0.8
baz=238
E17K Hotham Inlet 82.41 16 P P 10 14 39.6 +1.0
baz=225,SNR=8.2
K20K Telida 82.44 21 IAMs_20 IAMs_20 10 45 52.1
comp=Z,998nm,21.0s
K20K Telida 82.44 21 P P 10 14 39.9 +1.0
baz=233,SNR=8.5
O22K Cooper Landing 82.47 25 IAMs_20 IAMs_20 10 47 03.2
comp=Z,1µm,21.0s
O22K Cooper Landing 82.47 25 P P 10 14 39.9 +0.9
baz=237
D17K Noatak River 82.51 16 P P 10 14 40.2 +1.1
baz=224
G18K Tagagawik 82.53 18 P P 10 14 40.2 +0.9
baz=228
SKT Skwentna 82.58 23 IAMs_20 IAMs_20 10 45 21.0
comp=Z,890nm,22.0s
SKT Skwentna 82.58 23 P P 10 14 40.2 +0.6
baz=236
F18K Selawik 82.70 17 P P 10 14 41.2 +1.1
baz=227
RC01 Rabbit Creek A 82.80 24 IAMs_20 IAMs_20 10 46 46.8
comp=Z,791nm,21.0s
RC01 Rabbit Creek A 82.80 24 P P 10 14 41.7 +0.9
baz=237
RDOG Red Dog Mine 82.82 15 IAMs_20 IAMs_20 10 48 39.9
comp=Z,752nm,20.0s
RDOG Red Dog Mine 82.82 15 P P 10 14 41.8 +1.1
baz=224
PPLA Purkeypile 82.86 22 IAMs_20 IAMs_20 10 46 15.2
comp=Z,951nm,21.0s
PPLA Purkeypile 82.86 22 P P 10 14 41.9 +0.7
baz=235
J20K Nowinta River 82.91 21 IAMs_20 IAMs_20 10 51 14.5
comp=Z,705nm,19.0s
J20K Nowinta River 82.91 21 P P 10 14 42.4 +1.2
baz=233,SNR=9.1
H19K Roundabout Mou 82.98 19 IAmb IAmb 10 15 01.7
comp=Z,20nm,0.9s
H19K Roundabout Mou 82.98 19 P P 10 14 42.7 +1.2
baz=230,SNR=8.4
E18K Tukpahlearik C 82.99 16 IAMs_20 IAMs_20 10 46 16.6
comp=Z,906nm,22.0s
E18K Tukpahlearik C 82.99 16 P P 10 14 42.8 +1.2
baz=226
C17K DeLong Mountai 83.05 15 P P 10 14 42.9 +1.0
baz=224
I20K Naaghedeneel 83.17 20 P P 10 14 43.6 +1.1
baz=232
G19K Purcell Mounta 83.17 18 IAmb IAmb 10 15 06.4
comp=Z,12nm,0.8s
G19K Purcell Mounta 83.17 18 P P 10 14 43.6 +1.0
baz=230,SNR=7.1
L22K Petersville 83.18 23 IAMs_20 IAMs_20 10 46 25.9
comp=Z,756nm,19.0s
L22K Petersville 83.18 23 P P 10 14 42.2 -0.6
baz=235,SNR=7.1
CAST Castle Rocks 83.20 22 IAmb IAmb 10 15 05.8
comp=Z,11nm,0.8s
CAST IAMs_20 IAMs_20 10 46 14.2
comp=Z,864nm,22.0s
CAST Castle Rocks 83.20 22 P P 10 14 42.9 +0.1
baz=235
P23K Montague Islan 83.20 26 P P 10 14 43.7 +0.9
baz=239
PWL Port Wells 83.25 25 IAMs_20 IAMs_20 10 47 04.9
comp=Z,885nm,21.0s
PWL Port Wells 83.25 25 P P 10 14 43.9 +0.8
baz=238,SNR=12
CUT Chulitna 83.31 23 IAMs_20 IAMs_20 10 45 33.3
comp=Z,822nm,22.0s
CUT Chulitna 83.31 23 P P 10 14 44.1 +0.8
baz=237
MK31 Makanchi Array 83.31 319*c i* P P **10 14 43.1 -0.7**
MK31 Makanchi Array 83.31 319 P P 10 14 42.6 -1.1
MK31 IAmb IAmb 10 14 49.0
comp=Z,15nm,1.0s
MKAR Makanchi Array 83.31 319 P P 10 14 42.9 -0.9
comp=Z,7.4nm,0.9s,baz=107,slow=5.0,SNR=47
MKAR LR LR 10 51 23.8
comp=Z,532nm,19.1s,baz=101,slow=35
comp=Z,7.4nm,0.9s
MKAR Makanchi Array 83.31 319 P 10 14 43.0 -0.8
PMR Palmer 83.32 24 P P 10 14 43.0 -0.4
PMR pmax pmax
comp=Z,10.0nm,0.9s
PMR Palmer 83.32 24 P 10 14 43.0 -0.4
PMR IAmb IAmb 10 15 05.0
comp=Z,9.9nm,0.9s
PMR Palmer 83.32 24 P P 10 14 43.6 +0.3
baz=238,SNR=6.1
Q23K Middleton Isla 83.38 27 P P 10 14 44.4 +0.7
baz=240
CHUM Lake Minchumin 83.38 21 P P 10 14 44.5 +0.8
baz=235
F19K Shaleruckik Mo 83.41 18 IAmb IAmb 10 15 21.2
comp=Z,10nm,0.9s
F19K Shaleruckik Mo 83.41 18 P P 10 14 44.3 +0.5
baz=229,SNR=8.6
H20K Anotleneega Mo 83.47 19 P P 10 14 44.8 +0.6
baz=232
KNK Knik Glacier 83.49 24 P P 10 14 45.0 +0.7
baz=238
GHO Glory Hole Cre 83.50 24 P P 10 14 44.1 -0.3
GHO IAmb IAmb 10 15 24.5
comp=Z,15nm,1.0s
MAKZ Makanchi 83.52 319 P P 10 14 43.8 -1.0
MAKZ pmax pmax
comp=Z,23nm,0.9s
MAKZ MLR MLR
comp=Z,600nm,20.0s
MAKZ Makanchi 83.52 319 P 10 14 43.8 -1.0
MAKZ Makanchi 83.52 319 P P 10 14 44.0 -0.8
C18K Utukok River 83.69 15 IAmb IAmb 10 15 01.5
comp=Z,27nm,1.2s
C18K IAMs_20 IAMs_20 10 46 53.0
comp=Z,918nm,21.0s
C18K Utukok River 83.69 15 P P 10 14 46.0 +0.8
baz=226
KTH Kantishna Hill 83.70 22 IAmb IAmb 10 15 38.9
comp=Z,10.0nm,0.9s
KTH IAMs_20 IAMs_20 10 46 40.6
comp=Z,788nm,20.0s

SML	Sawmill	83.75	24	IAMs_20	IAMs_20	10 46 45.0		
	comp=Z,808nm,21.0s							
SML	Sawmill	83.75	24	P	P	10 14 46.3	+0.6	
	baz=238,SNR=12							
GLI	Glacier Island	83.78	25	P	P	10 14 46.5	+0.6	
	baz=240							
HIN	Hinchinbrook I	83.79	26	IAmb	IAmb	10 15 10.3		
	comp=Z,27nm,1.2s							
HIN				IAMs_20	IAMs_20	10 47 45.2		
	comp=Z,1µm,21.0s							
TRF	Thorofare Moun	83.88	22	P	P	10 14 45.9	-0.6	
TRF				IAmb	IAmb	10 15 17.4		
	comp=Z,13nm,1.0s							
TRF				IAMs_20	IAMs_20	10 46 36.3		
	comp=Z,895nm,22.0s							
TRF	Thorofare Moun	83.88	22	P	P	10 14 47.2	+0.7	
	baz=236							
FID	Port Fidalgo	83.98	26	IAmb	IAmb	10 15 08.8		
	comp=Z,18nm,1.1s							
E19K	Redstone River	83.98	17	IAMs_20	IAMs_20	10 46 24.8		
	comp=Z,730nm,21.0s							
E19K	Redstone River	83.98	17	P	P	10 14 47.7	+1.0	
	baz=230							
M23K	Glacier View	83.99	24	P	P	10 14 47.8	+0.9	
	baz=239							
SHLS	Shalkode	84.02	315	eP	P	10 14 47.5	-0.1	
SHLS				pmax	pmax			
	comp=Z,7.0nm,0.7s							
SHLS	Shalkode	84.02	315	eP	P	10 14 47.5	-0.1	
	comp=Z,6.7nm,0.7s							
IMAR	Indian Mountai	84.14	19	P	P	10 14 47.1	-0.4	
F20K	Avaraart Lake	84.17	18	IAmb	IAmb	10 15 08.1		
	comp=Z,14nm,1.2s							
F20K	Avaraart Lake	84.17	18	P	P	10 14 48.6	+1.0	
	baz=231							
SCM	Sheep Creek Mo	84.17	24	P	P	10 14 47.4	-0.5	
SCM				pmax	pmax			
	comp=Z,22nm,1.0s							
SCM	Sheep Creek Mo	84.17	24	P	P	10 14 47.4	-0.5	
SCM				IAmb	IAmb	10 15 22.1		
	comp=Z,22nm,1.0s							
SCM				IAMs_20	IAMs_20	10 46 56.2		
	comp=Z,1µm,21.0s							
SCM	Sheep Creek Mo	84.17	24	P	P	10 14 48.6	+0.7	
	baz=239,SNR=7.6							
EYAK	Cordova Ski Ar	84.19	26	P	P	10 14 46.5	-1.4	
EYAK				IAmb	IAmb	10 15 04.1		
	comp=Z,13nm,1.1s							
EYAK	Cordova Ski Ar	84.19	26	P	P	10 14 48.7	+0.8	
	baz=241							
WAT1	Susitna Watana	84.21	23	P	P	10 14 47.8	-0.2	
	baz=238							
H21K	Melozitna Rive	84.25	20	P	P	10 14 49.1	+0.9	
	baz=234							
I21K	Tanana	84.25	20	IAmb	IAmb	10 15 12.7		
	comp=Z,9.4nm,0.8s							
I21K				IAMs_20	IAMs_20	10 50 53.1		
	comp=Z,778nm,20.0s							
I21K	Tanana	84.25	20	P	P	10 14 49.2	+1.0	
	baz=235							
UZB	Uzynbulak	84.33	315	eP	P	10 14 50.5	+1.3	
UZB	Uzynbulak	84.33	315	eP	P	10 14 50.5	+1.3	
WAT6	Susitna Watana	84.39	24	P	P	10 14 49.6	+0.5	
	baz=239							
RND	Reindeer	84.40	23	IAmb	IAmb	10 15 11.8		
	comp=Z,11nm,0.8s							
RND				IAMs_20	IAMs_20	10 46 28.9		
	comp=Z,971nm,22.0s							
D19K	Kuna River	84.41	16	IAmb	IAmb	10 15 05.2		
	comp=Z,13nm,1.0s							
D19K				IAMs_20	IAMs_20	10 50 32.2		
	comp=Z,730nm,20.0s							
D19K	Kuna River	84.41	16	P	P	10 14 49.7	+0.8	
	baz=229							
C19K	Lookout Ridge	84.43	15	IAmb	IAmb	10 15 22.8		
	comp=Z,20nm,0.9s							
C19K				IAMs_20	IAMs_20	10 47 50.5		
	comp=Z,1µm,20.0s							
C19K	Lookout Ridge	84.43	15	P	P	10 14 49.9	+0.9	
	baz=227,SNR=7.7							
ZAA0	Zalesovo Array	84.45	327		P	10 14 47.5	-1.8	
ZAA0				IAmb	IAmb	10 14 51.6		
	comp=Z,12nm,0.8s							
ZALV	Zalesovo Beam	84.45	327	P	P	10 14 47.6	-1.8	
	comp=Z,11nm,0.6s,baz=113,slow=5.5,SNR=24							
ZALV				LR	LR	10 51 11.6		
	comp=Z,476nm,21.5s,baz=116,slow=35							
	comp=Z,11nm,0.6s							
ZALV	Zalesovo Beam	84.45	327		P	10 14 47.4	-2.0	
DIV	Divide	84.47	25	IAmb	IAmb	10 15 17.4		
	comp=Z,12nm,1.0s							
G21K	Allakaket	84.54	19	P	P	10 14 50.5	+0.9	
	baz=233							
MCK	McKinley	84.54	22	P	P	10 14 49.1	-0.6	
MCK				pmax	pmax			
	comp=Z,38nm,1.1s							
MCK	McKinley	84.54	22	P	P	10 14 49.1	-0.6	
MCK				IAMs_20	IAMs_20	10 47 18.8		
	comp=Z,761nm,21.0s							
MCK	McKinley	84.54	22	P	P	10 14 49.5	-0.2	
	baz=238,SNR=13							
PRZ	Przheval'sk	84.57	314	P	P	10 14 51.5	+1.0	
BWN	Browne	84.58	22	IAMs_20	IAMs_20	10 47 10.5		
	comp=Z,814nm,21.0s							
KLU	Klutina	84.58	25	IAmb	IAmb	10 15 30.6		
	comp=Z,23nm,1.0s							
KLU	Klutina	84.58	25	P	P	10 14 51.0	+1.1	
	baz=241,SNR=12							
MLY	Manley	84.60	21	IAMs_20	IAMs_20	10 50 03.3		
	comp=Z,669nm,18.0s							
MLY	Manley	84.60	21	P	P	10 14 50.5	+0.5	
	baz=236,SNR=9.5							
KPKS	Kokpek	84.66	315	eP	P	10 14 52.1	+1.3	
KPKS	Kokpek	84.66	315	eP	P	10 14 52.2	+1.3	
SATY	Saty	84.73	315	eP	P	10 14 52.4	+1.2	
SATY	Saty	84.73	315	eP	P	10 14 52.5	+1.2	
TARG	Taragay, Kyrgy	84.77	313	P	P	10 14 54.4	+2.5	
DHY	Denali Highway	84.79	23	IAmb	IAmb	10 15 08.9		
	comp=Z,11nm,0.8s							
DHY	Denali Highway	84.79	23	P	P	10 14 51.7	+0.5	
	baz=239,SNR=10							
E20K	Nigu River	84.80	17	P	P	10 14 51.6	+0.7	
	baz=231,SNR=12							
A19K	Wainwright	84.81	14	P	P	10 14 51.8	+1.0	
	baz=226							
H22K	Ishtalitna Cre	84.87	20	IAmb	IAmb	10 15 23.6		
	comp=Z,21nm,1.5s							
H22K				IAMs_20	IAMs_20	10 50 26.4		
	comp=Z,717nm,20.0s							
H22K	Ishtalitna Cre	84.87	20	P	P	10 14 52.0	+0.8	
	baz=235							
BMRM	Bremner River	84.89	26	P	P	10 14 52.0	+0.5	
	baz=242							
NEA2	Nenana	84.96	22	IAmb	IAmb	10 15 14.4		
	comp=Z,8.7nm,0.8s							
NEA2	Nenana	84.96	22	P	P	10 14 52.4	+0.7	
	baz=238							
F21K	Alatna River	84.97	18	P	P	10 14 52.5	+0.7	
	baz=233							
D20K	Etivluk River	84.97	16	IAmb	IAmb	10 15 08.2		
	comp=Z,21nm,1.2s							
D20K				IAMs_20	IAMs_20	10 48 50.0		
	comp=Z,791nm,20.0s							
D20K	Etivluk River	84.97	16	P	P	10 14 52.5	+0.7	
	baz=230							
BERG	Berg Lake	85.01	26	IAmb	IAmb	10 15 08.7		
	comp=Z,21nm,1.0s							
BERG				IAMs_20	IAMs_20	10 52 35.5		
	comp=Z,715nm,19.0s							
I23K	Minto, Yukon-K	85.15	21	P	P	10 14 53.4	+0.8	
	baz=237							
N25K	Chitina, Valde	85.19	25	P	P	10 14 53.7	+0.6	
	baz=242							
WRH	Wood River Hil	85.25	22	IAmb	IAmb	10 15 15.9		
	comp=Z,9.4nm,0.8s							
WRH				IAMs_20	IAMs_20	10 52 40.5		
	comp=Z,777nm,19.0s							
TDK	Taldyqorghan	85.31	317	eP	P	10 14 55.3	+1.4	
TDK				pmax	pmax			
	comp=Z,12nm,0.7s							
TDK	Taldyqorghan	85.31	317	eP	P	10 14 55.4	+1.4	
	comp=Z,12nm,0.7s							
KDJ	Kajisay	85.33	314	P	P	10 14 53.0	-1.4	
KDJ				pmax	pmax			
	comp=Z,30nm,1.0s							
KDJ	Kajisay	85.33	314		P	10 14 53.0	-1.4	
KDJ	Kajisay	85.33	314	P	P	10 14 54.0	-0.4	
HARP	HAARP	85.34	24	IAMs_20	IAMs_20	10 48 15.1		
	comp=Z,951nm,20.0s							
HARP	HAARP	85.34	24	P	P	10 14 54.4	+0.7	
	baz=241							
G22K	Bettles	85.42	19	P	P	10 14 55.0	+1.1	
	baz=235							
CRQM	Cirque	85.43	26	IAmb	IAmb	10 15 10.7		
	comp=Z,13nm,1.0s							
CRQM				IAMs_20	IAMs_20	10 46 53.9		
	comp=Z,749nm,21.0s							
CRQE	Cirque	85.44	26	P	P	10 14 55.2	+0.8	
	baz=243							
GLB	Gilahina Butte	85.45	26	IAmb	IAmb	10 15 10.7		
	comp=Z,19nm,1.1s							
GLB				IAMs_20	IAMs_20	10 48 57.0		
	comp=Z,726nm,20.0s							
H23K	Yukon River	85.46	20	IAmb	IAmb	10 15 39.0		
	comp=Z,46nm,2.0s							
H23K				IAMs_20	IAMs_20	10 50 22.0		
	comp=Z,682nm,20.0s							
H23K	Yukon River	85.46	20	P	P	10 14 55.2	+0.9	
	baz=237							
ASAI	AK-SAY(Kyrgyzs	85.48	312	P	P	10 14 58.5	+3.2	
PAX	Paxson	85.49	24	IAMs_20	IAMs_20	10 47 40.0		
	comp=Z,744nm,20.0s							
PAX	Paxson	85.49	24	P	P	10 14 55.4	+0.8	
	baz=241							
VRDI	Verde Repeater	85.50	26	IAMs_20	IAMs_20	10 48 27.4		
	comp=Z,927nm,21.0s							
F22K	John River	85.55	18	P	P	10 14 55.7	+1.1	
	baz=234							
COLA	College	85.55	22	ceP	P	10 14 53.4	-1.2	
COLA				pmax	pmax			
	comp=Z,15nm,0.9s							
COLA	College	85.55	22	P	P	10 14 53.9	-0.8	
E21K	Killik River	85.56	17	IAmb	IAmb	10 15 26.4		
	comp=Z,17nm,1.1s							
E21K	Killik River	85.56	17	P	P	10 14 55.8	+1.1	
	baz=233							
HDA	Harding Lake	85.64	22	IAMs_20	IAMs_20	10 47 28.9		
	comp=Z,798nm,22.0s							
HDA	Harding Lake	85.64	22	P	P	10 14 55.9	+0.8	
	baz=240							
B20K	Meade River	85.67	15	IAMs_20	IAMs_20	10 50 46.3		
	comp=Z,890nm,20.0s							
B20K	Meade River	85.67	15	P	P	10 14 56.1	+1.0	
	baz=230							
MDOK	Medeo	85.72	315	eP	P	10 14 57.4	+1.2	
MDOK	Medeo	85.72	315	eP	P	10 14 57.5	+1.2	
KSH2	Kashi	85.72	310	P	P	10 14 58.5	+2.2	
KSH2				S	S	10 25 29.3	0.0	
KSH2				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KSH2				pmax	pmax			
	comp=Z,170nm,8.6s							
KSH2				L	L			
	comp=Z,370nm,16.5s							
KSH2				L	L			
	comp=Z,400nm,19.2s							
KSH2				L	L			
	comp=Z,640nm,22.0s							
TNSS	Tian-Shan	85.75	315	eP	P	10 14 57.7	+1.0	
TNSS	Tian-Shan	85.75	315	eP	P	10 14 57.7	+1.0	
MCARA	McCarthy VSAT	85.76	26	IAMs_20	IAMs_20	10 48 34.2		
	comp=Z,831nm,21.0s							
MCARA	McCarthy VSAT	85.76	26	P	P	10 14 56.5	+0.7	
	baz=243							
C21K	Knifeblade Rid	85.77	17	P	P	10 14 56.6	+1.0	
	baz=232							
K24K	Donnelly Dome	85.78	23	P	P	10 14 56.6	+0.7	
	baz=241							
G23K	Bananza Creek	85.79	20	IAMs_20	IAMs_20	10 51 26.6		
	comp=Z,720nm,20.0s							
G23K	Bananza Creek	85.79	20	P	P	10 14 56.7	+0.9	
	baz=236							
AAA	Alma-Ata	85.82	315	eP	P	10 14 57.9	+1.3	
AAA				pmax	pmax			
	comp=Z,9.0nm,0.5s							
AAA	Alma-Ata	85.82	315	eP	P	10 14 58.0	+1.3	
	comp=Z,8.7nm,0.5s							
POKR	Poker Plat Res	85.83	22	P	P	10 14 56.7	+0.6	
	baz=239							
IL31		85.85	22	P	P	10 14 55.2	-0.9	
ILAR	Eielson Array	85.85	22	P	P	10 14 54.9	-1.3	
	comp=Z,2.9nm,0.8s,baz=248,slow=5.4,SNR=28							
	comp=Z,2.9nm,0.8s							
ILAR	Eielson Array	85.85	22	P	P	10 14 55.3	-0.9	
ILAR	Eielson Array	85.85	22		P	10 14 55.3	-0.9	
YAH	Yahtse	85.87	27	IAMs_20	IAMs_20	10 49 13.0		
	comp=Z,887nm,20.0s							
NRN	Naryn	86.00	313	P	P	10 14 56.1	-1.8	
NRN				pmax	pmax			
	comp=Z,6.0nm,1.0s							
NRN	Naryn	86.00	313	P	P	10 14 56.1	-1.8	
COLD	Coldfoot	86.02	19	IAMs_20	IAMs_20	10 47 57.6		
	comp=Z,691nm,21.0s							
COLD	Coldfoot	86.02	19	P	P	10 14 58.0	+1.0	
	baz=236							
H24K	Noodor Dome	86.05	21	P	P	10 14 58.2	+1.0	
	baz=238							
B21K	Ikpikpuk River	86.11	16	IAMs_20	IAMs_20	10 48 00.9		
	comp=Z,849nm,21.0s							
B21K	Ikpikpuk River	86.11	16	P	P	10 14 58.3	+1.0	
	baz=232							
RIDG	Independent Ri	86.11	23	IAmb	IAmb	10 15 38.5		
	comp=Z,18nm,1.3s							
RIDG	Independent Ri	86.11	23	P	P	10 14 58.2	+0.6	
	baz=241							
BARN	Barnard Glacie	86.21	26	IAmb	IAmb	10 15 15.0		
	comp=Z,10nm,0.9s							
NIL	Nilore	86.21	305	P	P	10 15 01.2	+2.5	
M26K	Nabesna, AK	86.23	25	P	P	10 14 59.5	+1.3	
	baz=243							
BOOM	Boomskoye usch	86.32	314	P	P	10 14 58.2	-1.0	
BOOM				pmax	pmax			
	comp=Z,18nm,0.7s							
BOOM	Boomskoye usch	86.32	314	P	P	10 14 58.2	-1.0	
BOOM				IAmb	IAmb	10 15 17.5		
	comp=Z,18nm,0.7s							
BOOM	Boomskoye usch	86.32	314	P	P	10 14 58.8	-0.4	
J25K	Salcha River,	86.34	22	IAmb	IAmb	10 15 30.3		
	comp=Z,16nm,1.0s							
J25K				IAMs_20	IAMs_20	10 48 02.2		
	comp=Z,976nm,22.0s							
J25K	Salcha River,	86.34	22	P	P	10 14 59.2	+0.6	
	baz=241							
L26K	Log Cabin Wild	86.37	24	P	P	10 14 59.6	+0.8	
	baz=243							
LOGN	Logan Glacier	86.40	27	IAmb	IAmb	10 15 32.6		
	comp=Z,13nm,1.1s							
LOGN				IAMs_20	IAMs_20	10 50 01.1		
	comp=Z,648nm,20.0s							
KUU	Kurty	86.41	315	eP	P	10 15 00.8	+1.4	
KUU				pmax	pmax			
	comp=Z,8.0nm,0.8s							
KUU	Kurty	86.41	315	eP	P	10 15 00.8	+1.4	
	comp=Z,8.4nm,0.8s							
PINM	Pinnacle	86.43	28	P	P	10 15 00.1	+0.9	
	baz=246							
G24K	Hadweenzic Riv	86.64	20	IAMs_20	IAMs_20	10 51 29.1		
	comp=Z,663nm,20.0s							
G24K	Hadweenzic Riv	86.64	20	P	P	10 15 00.9	+0.8	
	baz=239							
PNL	Peninsula	86.65	28	P	P	10 15 00.9	+0.7	
	baz=246							
E23K	Chandalar	86.66	19	P	P	10 15 01.0	+0.7	
	baz=237							
M27K	Edge Creek, AK	86.68	25	IAmb	IAmb	10 15 17.5		
	comp=Z,18nm,0.9s							
M27K	Edge Creek, AK	86.68	25	P	P	10 15 01.0	+0.5	
	baz=244							
PRP	Porcupine Dome	86.72	22	IAMs_20	IAMs_20	10 46 40.4		
	comp=Z,721nm,22.0s							
O28M	Mount Upton	86.74	27	P	P	10 15 01.3	+0.4	
	baz=246							
D23K	Nanushuk River	86.84	18	IAmb	IAmb	10 15 21.2		
	comp=Z,16nm,0.8s							
D23K				IAMs_20	IAMs_20	10 49 17.5		
	comp=Z,981nm,20.0s							
D23K	Nanushuk River	86.84	18	P	P	10 15 02.0	+1.0	
	baz=236,SNR=7.6							
A22K	Sinclair Lake	86.87	15	P	P	10 15 01.7	+0.7	
	baz=232							
B22K	Teshekpuk Lake	86.87	16	P	P	10 15 01.8	+0.8	
	baz=233							
KURK	Kurchatov	86.89	322	eP	P	10 15 01.2	-0.4	
KURK				pmax	pmax			
	comp=Z,14nm,1.2s							
KURK	Kurchatov	86.89	322		P	10 15 00.0	-1.6	
KURK	Kurchatov	86.89	322	P	P	10 15 01.5	-0.1	
KURBB	Kurchatov Arra	86.92	322	P	P	10 14 59.8	-1.9	
	comp=Z,3.0nm,0.9s,baz=110,slow=4.2,SNR=15							
KURBB				LR	LR	10 53 03.9		
	comp=Z,520nm,20.2s,baz=150,slow=35							
	comp=Z,3.0nm,0.9s							
F24K	Squaw Lake	86.93	19	IAmb	IAmb	10 15 12.8		
	comp=Z,11nm,1.0s							
F24K				IAMs_20	IAMs_20	10 52 03.7		
	comp=Z,651nm,20.0s							
F24K	Squaw Lake	86.93	19	P	P	10 15 02.3	+0.8	
	baz=238,SNR=8.6							
TOLK	Toolik Lake Re	87.00	18	P	P	10 15 02.5	+0.7	
	baz=237							
L27K	Beaver Creek,	87.01	24	IAmb	IAmb	10 15 43.0		
	comp=Z,20nm,1.5s							
L27K	Beaver Creek,	87.01	24	P	P	10 15 02.6	+0.6	
	baz=244							
BCAR	Beaver Creek A	87.03	25	P	P	10 15 01.3	-0.8	
E24K	Your Creek	87.03	19	IAMs_20	IAMs_20	10 48 53.4		
	comp=Z,783nm,21.0s							
E24K	Your Creek	87.03	19	P	P	10 15 02.9	+0.9	
	baz=238							
YUK3	Moose Creek	87.04	26	P	P	10 15 03.3	+0.9	
	baz=246							
BVCY	Beaver Creek	87.13	25	P	P	10 15 03.8	+1.3	
	baz=245							
YUK8	Steele Glacier	87.14	27	P	P	10 15 03.6	+0.7	
	baz=246							
G25K	Bearman Lake	87.14	20	P	P	10 15 03.4	+1.0	
	baz=240							
O29M	Mount Kennedy	87.28	28	IAmb	IAmb	10 15 47.5		
	comp=Z,28nm,1.6s							
O29M	Mount Kennedy	87.28	28	P	P	10 15 03.7	+0.2	
	baz=247							
K27K	Chicken	87.34	24	IAmb	IAmb	10 15 38.4		
	comp=Z,16nm,1.0s							
K27K				IAMs_20	IAMs_20	10 49 40.7		
	comp=Z,967nm,20.0s							
FYU	Fort Yukon	87.34	21	IAmb	IAmb	10 15 21.6		
	comp=Z,9.6nm,0.8s							
C23K	Itkillik River	87.36	17	IAMs_20	IAMs_20	10 52 37.0		
	comp=Z,702nm,20.0s							
AAK	Ala-Archa	87.39	314	LR	LR	10 53 45.1		
	comp=Z,893nm,21.1s,baz=104,slow=35							
AAK	Ala-Archa	87.39	314	eP	P	10 15 06.0	+1.6	
AAK				pmax	pmax			
	comp=Z,11nm,1.1s							
AAK	Ala-Archa	87.39	314	IAMs_20	IAMs_20	10 53 34.0		
	comp=Z,879nm,21.0s							
AAK	Ala-Archa	87.39	314	P	P	10 15 06.1	+1.6	
P29M	Windy Craggy	87.41	28	P	P	10 15 04.9	+1.0	
	baz=248							
SGDS	Sogindy	87.49	314	eP	P	10 15 06.0	+1.2	
BRWY	Burwash Landin	87.50	27	P	P	10 15 05.4	+1.0	
	baz=247							
D24K	Happy Valley	87.51	18	IAMs_20	IAMs_20	10 49 36.9		
	comp=Z,825nm,21.0s							
D24K	Happy Valley	87.51	18	P	P	10 15 05.5	+1.4	
	baz=238							
S31K	Pelican	87.53	30	IAmb	IAmb	10 15 49.1		
	comp=Z,32nm,1.6s							
S31K	Pelican	87.53	30	P	P	10 15 05.8	+1.3	
	baz=249							
YUK6	Outpost Mounta	87.63	27	P	P	10 15 06.0	+0.8	
	baz=247							
YUK4	Talbot Arm	87.66	27	P	P	10 15 06.7	+1.3	
	baz=247							
SIT	Sitka	87.68	31	P	P	10 15 06.3	+1.1	
	baz=250							
F25K	Christian Rive	87.71	20	IAMs_20	IAMs_20	10 49 57.3		
	comp=Z,682nm,20.0s							
F25K	Christian Rive	87.71	20	P	P	10 15 06.5	+1.2	
	baz=240							
P30M	Million Dollar	87.96	28	P	P	10 15 07.6	+1.0	
	baz=249							
HYT	Haines Junctio	87.97	27	IAmb	IAmb	10 15 15.1		
	comp=Z,13nm,0.9s							
HYT	Haines Junctio	87.97	27	P	P	10 15 07.7	+0.9	
	baz=248,SNR=21							
E25K	Arctic Village	87.99	19	P	P	10 15 07.8	+1.2	
	baz=241							
PLBC	Pleasant Camp	88.00	29	P	P	10 15 07.6	+0.9	
	baz=249							
G26K	Porcupine Rive	88.03	21	IAMs_20	IAMs_20	10 54 31.9		
	comp=Z,681nm,19.0s							
G26K	Porcupine Rive	88.03	21	P	P	10 15 07.9	+1.2	
	baz=242,SNR=15							
M29M	Somme Creek	88.17	26	IAmb	IAmb	10 15 41.2		
	comp=Z,12nm,0.9s							
M29M	Somme Creek	88.17	26	P	P	10 15 08.6	+0.9	
	baz=247,SNR=12							
S32K	Killisnoo	88.20	31	IAmb	IAmb	10 15 52.3		
	comp=Z,16nm,1.3s							
S32K				IAMs_20	IAMs_20	10 46 37.9		
	comp=Z,717nm,22.0s							
S32K	Killisnoo	88.20	31	P	P	10 15 08.2	+0.6	
	baz=251							
I27K	Kandik River	88.20	22	IAmb	IAmb	10 15 23.6		
	comp=Z,23nm,1.2s							
I27K				IAMs_20	IAMs_20	10 49 08.6		
	comp=Z,733nm,22.0s							
I27K	Kandik River	88.20	22	P	P	10 15 08.9	+1.3	
	baz=244,SNR=12							
F26K	Sheenjek River	88.26	20	IAMs_20	IAMs_20	10 52 19.9		
	comp=Z,670nm,20.0s							
F26K	Sheenjek River	88.26	20	P	P	10 15 08.8	+1.0	
	baz=242							
BTLS	Baital	88.29	316	eP	P	10 15 09.8	+1.4	
BTLS	Baital	88.29	316	eP	P	10 15 09.9	+1.4	
CRAG	Craig	88.32	33	P	P	10 15 08.8	+0.5	
	baz=252							
D25K	Kavik River	88.34	18	IAMs_20	IAMs_20	10 49 52.0		
	comp=Z,737nm,21.0s							
D25K	Kavik River	88.34	18	P	P	10 15 08.8	+0.6	
	baz=240							
N30M	Aishikik Lake	88.39	27	P	P	10 15 09.7	+1.0	
	baz=248							
DAWY	Dawson	88.42	24	P	P	10 15 08.1	-0.6	
DAWY				IAmb	IAmb	10 15 18.4		
	comp=Z,20nm,1.1s							
DAWY	Dawson	88.42	24	P	P	10 15 09.9	+1.2	
	baz=246,SNR=9.7							
BESE	Bessie Mountai	88.43	30	IAMs_20	IAMs_20	10 49 06.9		
	comp=Z,674nm,19.0s							
R32K	Eaglecrest	88.50	30	IAMs_20	IAMs_20	10 47 40.7		
	comp=Z,695nm,21.0s							
R32K	Eaglecrest	88.50	30	P	P	10 15 10.3	+1.2	
	baz=251							
SKAG	Skagway	88.50	29	P	P	10 15 10.4	+1.3	
	baz=250							
H27K	Steamboat Moun	88.51	22	IAmb	IAmb	10 15 26.0		
	comp=Z,13nm,0.9s							
H27K	Steamboat Moun	88.51	22	P	P	10 15 10.2	+1.1	
	baz=244,SNR=11							
U33K	Whale Pass	88.52	33	IAMs_20	IAMs_20	10 49 24.6		
	comp=Z,804nm,20.0s							
U33K	Whale Pass	88.52	33	P	P	10 15 10.5	+1

WRAK	Wrangell Islan		89.03	32	P		P			10 15 12.4	+0.8	
	baz=253											
J29N	Klondike Camp		89.05	24	IAMs_20		IAMs_20			10 49 38.0		
	comp=Z,812nm,22.0s											
C26K	Camden Bay		89.08	18	P		P			10 15 12.8	+1.2	
	baz=241											
K29M	Barlow Dome		89.10	25	IAmb		IAmb			10 15 28.9		
K29M	comp=Z,24nm,1.1s				IAMs_20		IAMs_20			10 50 34.3		
	comp=Z,634nm,20.0s											
K29M	Barlow Dome		89.10	25	P		P			10 15 13.2	+1.3	
	baz=248,SNR=30											
V35K	Ketchikan		89.10	34	P		P			10 15 13.2	+1.3	
	baz=253											
WHY	Whitehorse		89.12	28	P		P			10 15 12.9	+0.7	
	baz=250											
C27K	Jago River		89.31	18	IAmb		IAmb			10 15 29.6		
C27K	comp=Z,12nm,0.9s				IAMs_20		IAMs_20			10 50 08.6		
	comp=Z,918nm,22.0s											
C27K	Jago River		89.31	18	P		P			10 15 13.5	+0.8	
	baz=242											
P32M	Atlin		89.32	29	IAmb		IAmb			10 16 20.9		
	comp=Z,30nm,1.9s											
P32M					IAMs_20		IAMs_20			10 49 19.4		
	comp=Z,681nm,19.0s											
P32M	Atlin		89.32	29	P		P			10 15 13.9	+0.9	
	baz=252											
E27K	Coleen River		89.34	20	IAmb		IAmb			10 15 30.6		
	comp=Z,13nm,1.1s											
E27K					IAMs_20		IAMs_20			10 53 02.5		
	comp=Z,648nm,20.0s											
E27K	Coleen River		89.34	20	P		P			10 15 14.0	+1.1	
	baz=244											
I29M	Ogilvie Camp,		89.36	23	P		P			10 15 12.1	-1.0	
I29M					IAmb		IAmb			10 15 30.7		
	comp=Z,10nm,1.0s											
I29M	Ogilvie Camp,		89.36	23	P		P			10 15 14.0	+0.9	
	baz=247,SNR=6.9											
BTK	Batken		89.50	311	P		P			10 15 16.8	+2.4	
H29M	Whitestone		89.67	22	IAMs_20		IAMs_20			10 50 25.4		
	comp=Z,711nm,21.0s											
F28M	Old Crow		89.69	21	P		P			10 15 15.1	+0.5	
	baz=246											
DZA	Taraz		89.71	313	*e*P		P			10 15 16.4	+1.2	
DZA					pmax		pmax					
	comp=Z,3.0nm,0.3s											
DZA	Taraz		89.71	313	*e*P		P			10 15 16.5	+1.2	
	comp=Z,3.2nm,0.3s											
NRIK	Noril'sk		89.72	341	P		P			10 15 12.4	-2.2	
	comp=Z,5.4nm,0.8s,baz=126,slow=5.4,SNR=5.8											
NRIK					LR		LR			10 57 32.3		
	comp=Z,185nm,18.1s,baz=127,slow=37											
	comp=Z,5.4nm,0.8s											
NRIK	Noril'sk		89.72	341	*i*P		P			10 15 16.3	+1.7	
NRIK					pmax		pmax					
	comp=Z,10.0nm,1.2s											
Q32M	Nakina River		89.83	30	P		P			10 15 16.3	+0.7	
	baz=253											
J30M	Hart River		89.85	24	IAmb		IAmb			10 15 55.7		
	comp=Z,11nm,1.0s											
J30M	Hart River		89.85	24	P		P			10 15 16.5	+1.0	
	baz=249,SNR=8.5											
M31M	Drury Creek, Y		89.85	27	IAMs_20		IAMs_20			10 50 53.4		
	comp=Z,905nm,21.0s											
M31M	Drury Creek, Y		89.85	27	P		P			10 15 16.6	+1.2	
	baz=251											
P33M	Teslin, Yukon		89.94	29	IAMs_20		IAMs_20			10 50 19.9		
	comp=Z,682nm,19.0s											
P33M	Teslin, Yukon		89.94	29	P		P			10 15 16.9	+0.9	
	baz=252											
D27M	Malcolm River		90.00	19	IAMs_20		IAMs_20			10 53 43.1		
	comp=Z,639nm,20.0s											
D27M	Malcolm River		90.00	19	P		P			10 15 17.2	+1.2	
	baz=245											
I30M	Mount Dempster		90.06	23	P		P			10 15 17.5	+1.0	
	baz=249											
G29M	Pine Creek		90.07	22	IAMs_20		IAMs_20			10 51 34.9		
	comp=Z,634nm,20.0s											
G29M	Pine Creek		90.07	22	P		P			10 15 17.6	+1.2	
	baz=248											
S34M	Telegraph Cree		90.10	31	IAMs_20		IAMs_20			10 50 12.1		
	comp=Z,583nm,19.0s											
S34M	Telegraph Cree		90.10	31	P		P			10 15 17.8	+1.2	
	baz=254											
N32M	Quiet Lake		90.11	28	P		P			10 15 17.9	+1.2	
	baz=252											
E28M	Babbage River		90.21	20	P		P			10 15 18.4	+1.4	
	baz=246											
T35M	Bob Quinn		90.30	32	IAMs_20		IAMs_20			10 50 31.5		
	comp=Z,777nm,19.0s											
KK31	Karatay Array		90.34	313	P		P			10 15 17.2	-1.0	
KK31	Karatay Array		90.34	313			P			10 15 17.2	-1.0	
KKAR	Karatay Array		90.34	313	P		P			10 15 16.6	-1.6	
KKAR	Karatay Array		90.34	313	P		P			10 15 16.6	-1.6	
EPYK	Eagle Plains		90.35	22	IAMs_20		IAMs_20			10 56 07.3		
	comp=Z,669nm,19.0s											
EPYK	Eagle Plains		90.35	22	P		P			10 15 18.6	+0.9	
	baz=249											
CHGR	Chuyangaron		90.49	309	*e*P		P			10 15 19.3	+0.3	
CHGR					pmax		pmax					
	comp=Z,14nm,0.8s											
CHGR	Chuyangaron		90.49	309	P		P			10 15 24.4	+5.4	
E29M	Blow River		90.68	20	P		P			10 15 20.2	+1.1	
	baz=248											
KCPM	Cahto Peak		90.70	50	IAMs_20		IAMs_20			10 51 55.2		
	comp=Z,722nm,19.0s											
G30M	tAoh Zraii Nji		90.75	22	P		P			10 15 20.4	+0.9	
	baz=249											
D28M	Stokes Point		90.76	19	P		P			10 15 20.6	+1.2	
	baz=247											
FARB	Farallon Islan		90.78	52	IAMs_20		IAMs_20			10 50 26.6		
	comp=Z,918nm,20.0s											
DLBC	Dease Lake		90.80	31	P		P			10 15 20.1	+0.1	
	comp=Z,0.5nm,0.5s,baz=203,slow=7.2,SNR=5.3											
	comp=Z,0.5nm,0.5s											
DLBC	Dease Lake		90.80	31	P		P			10 15 20.7	+0.7	
	baz=255											
KHMM	Horse Mountain		90.81	49	IAMs_20		IAMs_20			11 00 17.0		
	comp=Z,647nm,18.0s											
BRLS	Boroldav		90.81	313	*e*P		P			10 15 21.7	+1.3	
BRLS	Boroldav		90.81	313	*e*P		P			10 15 21.8	+1.3	
CHM	Chimkent		90.85	313	*e*P		P			10 15 21.7	+1.2	
CHM	Chimkent		90.85	313	*e*P		P			10 15 21.8	+1.2	
MCCM	Marconi Confer		90.95	52	IAMs_20		IAMs_20			10 50 32.2		
	comp=Z,889nm,20.0s											
HOPS	Hopland Field		90.96	51	IAMs_20		IAMs_20			10 51 09.2		
	comp=Z,771nm,18.0s											
H31M	Peel River		91.06	23	IAMs_20		IAMs_20			10 51 12.2		
	comp=Z,900nm,21.0s											
H31M	Peel River		91.06	23	P		P			10 15 21.9	+0.9	
	baz=251											
F30M	Barrier River		91.14	21	IAmb		IAmb			10 16 00.1		
	comp=Z,9.1nm,0.9s											
F30M					IAMs_20		IAMs_20			10 56 29.0		
	comp=Z,725nm,20.0s											
F30M	Barrier River		91.14	21	P		P			10 15 22.2	+0.9	
	baz=250											
KHBM	Hayfork Bally		91.15	49	IAMs_20		IAMs_20			11 00 18.1		
	comp=Z,708nm,18.0s											
MMPY	Sheldon Lake,		91.37	27	P		P			10 15 23.4	+0.9	
	baz=254											
O02D	Mt. Diablo Mer		91.39	50	IAMs_20		IAMs_20			10 52 30.4		
	comp=Z,791nm,20.0s											
G31M	Satah River		91.46	22	IAmb		IAmb			10 15 55.7		
	comp=Z,11nm,1.1s											
G31M	Satah River		91.46	22	P		P			10 15 23.8	+1.1	
	baz=251											
YBH	Yreka Blue Hor		91.72	48	LR		LR			10 51 42.3		
	comp=Z,998nm,19.5s,baz=259,slow=32											
COR	Corvallis		91.81	45	IAMs_20		IAMs_20			10 53 21.1		
	comp=Z,748nm,20.0s											
F31M	Tsiigehtchic		91.82	22	P		P			10 15 25.4	+1.0	
	baz=252											
WTLY	Watson Lake, Y		91.85	29	IAmb		IAmb			10 16 03.7		
	comp=Z,15nm,1.2s											
WTLY	Watson Lake, Y		91.85	29	P		P			10 15 25.6	+0.9	
	baz=256											
INK	Inuvik		92.17	21	P		P			10 15 26.7	+0.7	
	baz=252											
BVAR	Borovoye Array		92.41	323	P		P			10 15 25.5	-2.0	
	comp=Z,2.8nm,0.8s,baz=96,slow=7.7,SNR=6.4											
	comp=Z,2.8nm,0.8s											
WELL	Weller Preserv		92.67	52	IAMs_20		IAMs_20			10 51 25.7		
	comp=Z,616nm,20.0s											
ELIB	Princess Elisa		92.94	194	*d*P		P			10 15 29.5	-0.3	
	comp=Z,12nm,1.0s											
LIRD	Liard River Hi		93.01	30	P		P			10 15 30.7	+0.5	
	baz=258											
OSI	Osito Audit: C		93.70	56	IAMs_20		IAMs_20			10 52 06.3		
	comp=Z,668nm,19.0s											
ISA	Isabella, Lake		94.05	55	IAMs_20		IAMs_20			10 50 12.4		
	comp=Z,657nm,20.0s											
PASC	Pasadena Art C		94.08	56	IAMs_20		IAMs_20			10 52 16.4		
	comp=Z,780nm,19.0s											
KOTAN	Kotaneelee Air		94.17	30	P		P			10 15 35.7	+0.2	
	baz=260											
MWC	Mount Wilson		94.19	56	IAMs_20		IAMs_20			10 52 39.4		
	comp=Z,679nm,20.0s											
TIN	Tinemaha, Big		94.43	53	IAMs_20		IAMs_20			10 52 15.4		
	comp=Z,658nm,20.0s											
CWC	Cottonwood Cre		94.47	54	IAMs_20		IAMs_20			10 53 59.5		
	comp=Z,805nm,19.0s											
BFSC	Mount Baldy Ra		94.52	56	IAMs_20		IAMs_20			10 52 50.1		
	comp=Z,711nm,20.0s											
NVAR	Mina Array Bea		94.56	52	LR		LR			10 53 21.7		
	comp=Z,871nm,19.5s,baz=262,slow=32											
WVOR	Wild Horse Val		94.82	48	IAMs_20		IAMs_20			10 53 52.2		
	comp=Z,765nm,20.0s											
MPMC	Manual Prospec		94.89	54	IAMs_20		IAMs_20			10 53 55.8		
	comp=Z,736nm,18.0s											
PFO	Pinyon Flats O		95.44	57	LR		LR			10 52 39.5		
	comp=Z,705nm,19.9s,baz=262,slow=32											
FURC	Furnace Creek,		95.45	54	IAMs_20		IAMs_20			10 54 30.4		
	comp=Z,638nm,19.0s											
C36M	Paulatuk		95.75	21	P		P			10 15 42.6	+0.2	
	baz=261											
A36M	Sachs Harbour		95.82	18	IAMs_20		IAMs_20			10 56 57.8		
	comp=Z,677nm,21.0s											
A36M	Sachs Harbour		95.82	18	P		P			10 15 42.9	+0.2	
	baz=260											
SHOC	Shoshone, Teco		95.85	55	IAMs_20		IAMs_20			10 51 17.3		
	comp=Z,754nm,18.0s											
BELC	Belle Mtn. Jos		95.86	57	IAMs_20		IAMs_20			10 52 52.6		
	comp=Z,743nm,19.0s											
TPNV	Topopah Spring		95.99	54	IAMs_20		IAMs_20			10 54 58.8		
	comp=Z,657nm,20.0s											
BC3	Big Chuckawall		96.27	57	IAMs_20		IAMs_20			10 53 05.5		
	comp=Z,702nm,20.0s											
MFID	Camas Ranch		96.98	47	IAMs_20		IAMs_20			11 03 25.4		
	comp=Z,514nm,18.0s											
PLID	Pearl Lake		97.02	46	IAMs_20		IAMs_20			10 56 48.2		
	comp=Z,537nm,20.0s											
ELK	Elko		97.17	50	LR		LR			10 52 59.2		
	comp=Z,378nm,21.4s,baz=263,slow=31											
HLID	Hailey		98.02	47	IAMs_20		IAMs_20			10 56 03.9		
	comp=Z,652nm,21.0s											
SNAA	Sanae		98.09	188	LR		LR			10 58 16.3		
	comp=Z,764nm,21.6s,baz=138,slow=34											
MSO	Missoula		98.59	44	IAMs_20		IAMs_20			10 51 54.5		
	comp=Z,678nm,22.0s											
ARTI	Arti		99.69	326	LR		LR			11 00 53.8		
	comp=Z,850nm,21.0s,baz=97,slow=35											
ARTI	Arti		99.69	326	*e*P		Pdif			10 16 03.9	+3.4	
ARTI					pmax		pmax					
	comp=Z,12nm,1.5s											
AKTO	Aktyubinsk		99.75	320	LR		LR			11 01 08.4		
	comp=Z,785nm,20.1s,baz=74,slow=35											
WUAZ	Wupatki		99.79	55	IAMs_20		IAMs_20			10 56 53.7		
	comp=Z,635nm,18.0s											
LPIG	La Paz		99.81	67	LR		LR			10 56 04.0		
	comp=Z,442nm,18.8s,baz=256,slow=32											
HWUT	Hardware Ranch		100.00	49	IAMs_20		IAMs_20			10 57 00.4		
	comp=Z,706nm,20.0s											
AHID	Auburn Hatcher		100.39	48	IAMs_20		IAMs_20			10 56 41.8		
	comp=Z,513nm,19.0s											
MVCO	Mesa Verde		102.19	54	IAMs_20		IAMs_20			10 55 03.2		
	comp=Z,496nm,20.0s											
S22A	4UR Ranch, Cre		103.53	53	IAMs_20		IAMs_20			10 57 53.4		
	comp=Z,722nm,20.0s											
EPT	El Paso		103.66	59	IAMs_20		IAMs_20			10 59 39.6		
	comp=Z,556nm,18.0s											
ALQ	Albuquerque		103.79	56	IAMs_20		IAMs_20			10 57 54.5		
	comp=Z,510nm,20.0s											
ALQ	Albuquerque		103.79	56	IAMs_20		IAMs_20			10 57 55.5		
	comp=Z,508nm,20.0s											
ANMO	Albuquerque		103.79	56	IAMs_20		IAMs_20			10 57 55.5		
	comp=Z,507nm,20.0s											
LAO	LASA Array		103.89	44	IAMs_20		IAMs_20			10 55 03.8		
	comp=Z,754nm,22.0s											
ISCO	Idaho Springs		104.48	51	IAMs_20		IAMs_20			11 04 59.4		
	comp=Z,656nm,19.0s											
MNTX	Cornudas Mount		104.61	60	IAMs_20		IAMs_20			11 00 28.9		
	comp=Z,558nm,19.0s											
DGMT	Dagmar		105.17	42	IAMs_20		IAMs_20			10 56 46.5		
	comp=Z,720nm,21.0s											
T25A	Trinidad		105.46	54	IAMs_20		IAMs_20			10 57 11.5		
	comp=Z,518nm,21.0s											
FFC	Fort Peck		105.93	36	IAMs_20		IAMs_20			11 02 33.2		
	comp=Z,474nm,19.0s											
OGNE	Ogallala		107.18	50	IAMs_20		IAMs_20			11 01 44.6		
	comp=Z,565nm,20.0s											
MDND	Maddock		108.29	43	IAMs_20		IAMs_20			10 59 08.1		
	comp=Z,597nm,21.0s											
SUSD	Miller		109.14	46	IAMs_20		IAMs_20			11 03 40.1		
	comp=Z,504nm,20.0s											
RAYN	Ar Rayn		109.25	292	IAMs_20		IAMs_20			11 09 26.6		
	comp=Z,503nm,21.0s											
ABTX	Abilene, Hawle		109.48	59	IAMs_20		IAMs_20			11 03 43.5		
	comp=Z,508nm,19.0s											
R32A	Long Quarter,		109.91	52	IAMs_20		IAMs_20			11 01 50.1		
	comp=Z,610nm,20.0s											
BGNE	Belgrade		110.06	49	IAMs_20		IAMs_20			11 05 11.8		
	comp=Z,529nm,20.0s											
KIV	Kislovodsk		110.50	314	*i* PKIKP		PKiKP			10 20 49.7	0.0	
KIV					pmax		pmax					
	comp=Z,4.0nm,0.9s											
KIV					MLR		MLR					
	comp=Z,308nm,21.0s											
KIV	Kislovodsk		110.50	314	IAMs_20		IAMs_20			11 10 14.7		
	comp=Z,439nm,19.0s											
F33A	5 Mile Ranch,		110.82	44	IAMs_20		IAMs_20			10 59 30.3		
	comp=Z,610nm,22.0s											
ECSD	EROS Data Cent		110.91	47	IAMs_20		IAMs_20			11 04 26.8		
	comp=Z,463nm,20.0s											
OK029	Liberty Lake		111.11	55	IAMs_20		IAMs_20			11 03 24.4		
	comp=Z,509nm,19.0s											
ATD	Arta Tunnel		111.12	279	IAMs_20		IAMs_20			11 07 17.5		
	comp=Z,500nm,20.0s											
T35A	Kenedy		111.17	63	IAMs_20		IAMs_20			11 00 21.0		
	comp=Z,619nm,20.0s											
N35A	Sooner Cattle		111.78	54	IAMs_20		IAMs_20			11 04 46.8		
	comp=Z,464nm,20.0s											
N35A	Tabor		112.01	50	IAMs_20		IAMs_20			11 07 04.4		
	comp=Z,445nm,19.0s											
HKT	Hockley		112.85	61	IAMs_20		IAMs_20			11 02 01.2		
	comp=Z,583nm,20.0s											
I37A	Lemond, Waseca		113.16	46	IAMs_20		IAMs_20			11 04 32.2		
	comp=Z,639nm,20.0s											
SPMN	Marine on St.		113.34	44	IAMs_20		IAMs_20			11 00 57.0		
	comp=Z,510nm,22.0s											
SCIA	State Center		113.66	48	IAMs_20		IAMs_20			11 06 33.8		
	comp=Z,505nm,19.0s											
NATX	Nacogdoches		113.74	59	IAMs_20		IAMs_20			11 15 22.5		
	comp=Z,446nm,18.0s											
P38A	Dawn		113.78	51	IAMs_20		IAMs_20			11 05 53.4		
	comp=Z,595nm,19.0s											
N38A	Joes South For		113.83	49	IAMs_20		IAMs_20			11 08 26.4		
	comp=Z,470nm,20.0s											
FURI	Furi		114.97	276	IAMs_20		IAMs_20			11 08 01.4		
	comp=Z,484nm,19.0s											
L40A	Anamosa		115.09	48	IAMs_20		IAMs_20			11 07 22.7		
	comp=Z,444nm,20.0s											
G40A	Rib Lake		115.13	44	IAMs_20		IAMs_20			11 02 03.3		
	comp=Z,577nm,22.0s											
I40A	Norwalk		115.15	46	IAMs_20		IAMs_20			11 05 52.9		
	comp=Z,588nm,21.0s											
N41A	Harden Midland		115.62	49	IAMs_20		IAMs_20			11 07 59.9		
	comp=Z,464nm,19.0s											
JFWS	Jewell Farm		115.62	47	IAMs_20		IAMs_20			11 06 41.6		
	comp=Z,545nm,21.0s											
CCM	Cathedral Cave		115.79	52	IAMs_20		IAMs_20			11 05 29.7		
	comp=Z,619nm,20.0s											
T42A	Van Buren		116.07	53	IAMs_20		IAMs_20			11 04 14.3		
	comp=Z,439nm,20.0s											
I42A	Draeger Farm,		116.35	45	IAMs_20		IAMs_20			11 02 52.6		
	comp=Z,553nm,21.0s											
143A	Socs Landing,		116.40	58	IAMs_20		IAMs_20			11 04 23.7		
	comp=Z,546nm,21.0s											
HDIL	Hopedale		116.82	49	IAMs_20		IAMs_20			11 12 34.5		
	comp=Z,392nm,18.0s											
P43A	Skaggs, Pawnee		116.83	50	IAMs_20		IAMs_20			11 07 35.0		
	comp=Z,416nm,20.0s											
H43A	Windswept, Lux		117.00	44	IAMs_20		IAMs_20			11 18 45.8		
	comp=Z,400nm,19.0s											
K43A	Burlington		117.04	46	IAMs_20		IAMs_20			11 06 54.2		
	comp=Z,535nm,20.0s											
VBMS	Vicksburg		117.20	58	IAMs_20		IAMs_20			11 11 45.0		
	comp=Z,513nm,20.0s											
L44A	Lake County Fo		117.47	47	IAMs_20		IAMs_20			11 05 38.5		
	comp=Z,508nm,21.0s											
LODK	Lodwar		117.60	269	IAMs_20		IAMs_20			11 11 30.2		
	comp=Z,478nm,18.0s											
ILULI	Ilulissat		117.68	9	IAMs_20		IAMs_20			11 07 49.9		
	comp=Z,504nm,20.0s											
KIEV	Kiev		117.70	323	IAMs_20		IAMs_20			11 11 01.0		
	comp=Z,453nm,22.0s											
GHAJ	Ghor Haditha		117.74	301	IAMs_20		IAMs_20			11 14 45.0		
	comp=Z,471nm,21.0s											
BRTR	Keskin Array B		117.90	310	PKP		PKPdf			10 21 02.5	-1.5	
	comp=Z,0.8nm,0.9s,baz=114,slow=3.0,SNR=4.2											
T45A	Paducah		118.00	53	IAMs_20		IAMs_20			11 08 21.4		
	comp=Z,501nm,19.0s											
I45A	Fountain		118.18	45	IAMs_20		IAMs_20			11 16 44.0		
	comp=Z,560nm,19.0s											
PABE	Paberze		118.51	330	IAMs_20		IAMs_20			11 16 28.4		
	comp=Z,449nm,20.0s											
P46A	Rosedale		118.58	50	IAMs_20		IAMs_20			11 07 52.3		
	comp=Z,492nm,20.0s											
WVT	Waverly		118.81	54	IAMs_20		IAMs_20			11 08 16.9		
	comp=Z,594nm,20.0s											
CSS	Mathiatis		119.06	305	IAMs_20		IAMs_20			11 20 34.8		
	comp=Z,387nm,20.0s											
Z47A	Carrollton		119.11	57	IAMs_20		IAMs_20			11 13 30.4		
	comp=Z,497nm,20.0s											
T47A	Sharon Grove		119.22	53	IAMs_20		IAMs_20			11 14 18.6		
	comp=Z,537nm,19.0s											
SUW	Suwalki		119.63	328	IAMs_20		IAMs_20			11 12 05.2		
	comp=Z,547nm,22.0s											
X48A	Hartselle		119.75	55	IAMs_20		IAMs_20			11 20 31.5		
	comp=Z,413nm,18.0s											
P48A	Milroy		119.96	49	IAMs_20		IAMs_20			11 08 40.5		
	comp=Z,487nm,20.0s											
O48B	Farmland		119.96	48	IAMs_20		IAMs_20			11 15 21.5		
	comp=Z,431nm,19.0s											
LRAL	Lakeview Retre		120.03	57	IAMs_20		IAMs_20			11 10 08.0		
	comp=Z,510nm,19.0s											
TEIG	Tepich		120.10	72	IAMs_20		IAMs_20			11 02 24.9		
	comp=Z,593nm,22.0s											
U49A	Red Boiling Sp		120.36	53	IAMs_20		IAMs_20			11 09 07.4		
	comp=Z,550nm,20.0s											
R49A	Shelbyville		120.43	51	IAMs_20		IAMs_20			11 06 38.2		
	comp=Z,630nm,22.0s											
AAM	Ann Arbor		120.48	46	IAMs_20		IAMs_20			11 11 11.1		
	comp=Z,512nm,19.0s											
N49A	Columbus Grove		120.50	47	IAMs_20		IAMs_20			11 21 30.6		
	comp=Z,483nm,18.0s											
I49A	Point Hope		120.56	44	IAMs_20		IAMs_20			11 05 32.9		
	comp=Z,550nm,21.0s											
O49A	Covington		120.58	48	IAMs_20		IAMs_20			11 05 02.0		
	comp=Z,465nm,22.0s											
NOA	NORSAR Array B		120.63	339	PKP		PKPdf			10 21 06.7	-1.8	
	comp=Z,0.6nm,0.7s,baz=48,slow=2.0

comp=Z,0.7nm,0.7s,baz=20,slow=3.3,SNR=5.3
PAB San Pablo 143.18 330 IAMs_20 IAMs_20 11 28 36.9
comp=Z,455nm,21.0s
POLO Lamas de Olo 143.28 335 *e*PKPdf PKPbc 10 21 49.4 +0.8
PVIS Viseu 143.87 335 *e*PKPdff 10 21 50.7
MTE Manteigas 143.98 334 *e*PKPdf PKPab 10 21 51.2 +1.1
MTE Manteigas 143.98 334 PKPdf PKPab 10 21 49.6 -0.5
SMRT St. Maarten 144.00 71 PKPdf PKPab 10 21 48.5 -2.2
SEUS St. Eustatius 144.18 72 **PKPab 10 21 49.8 -1.6**
PCBR Castelo Branco 144.41 333 *e*PKPdf **PKPab 10 21 51.4 -0.2**
MACA Manacapuru-AM 144.59 108 **PKPab 10 21 51.0 -2.1**
PCAS Casmilo, Conde 144.68 335 *e*PKPbc **PKPab 10 21 53.2 +0.6**
PMRV Marv??o 144.71 333 *e*PKPbc **PKPab 10 21 52.2 -0.6**
PSARD Sardoal 144.91 334 *e*PKPbc **PKPab 10 21 53.1 -0.4**
PMTG Montargil 145.37 334 *e*PKPbc **PKPbc 10 21 54.1 -1.0**
PARRA Arraiolos 145.50 333 *e*PKPbc **PKPdf 10 21 55.2 -0.2**
PBAR Barrancos 145.55 331 *e*PKPbc **PKPdf 10 21 55.4 -0.1**
TAM Tamanrasset 145.66 298 PKP2 **PKPdf 10 21 53.1 -3.3**
TAM Tamanrasset 145.66 298 PKPdf **PKPdf 10 21 53.1 -3.3**
EVO Evora 145.72 333 *e*PKPdf **PKPdf 10 21 56.4 +0.6**
MESJ Messejana 146.38 332 *e*PKPdf **PKPdf 10 21 55.9 -1.1**
MESJ IAMs_20 IAMs_20 11 20 18.2
comp=Z,478nm,20.9s
MESJ Messejana 146.38 332 *e*PKP2 **PKPdf 10 21 55.9 -1.1**
PVAQ Vaqueiros 146.49 331 *e*PKPdf **PKPdf 10 21 57.9 +0.7**
MORF Marmelete 147.01 332 *e*PKPdf **PKPdf 10 21 56.9 -1.2**
MORF Marmelete 147.01 332 *e*PKIKP **PKPdf 10 21 56.9 -1.2**
BDFB Brasília 148.16 140 PKPbc **PKPdf 10 22 02.9 +2.2**
comp=Z,12nm,0.7s,baz=219,slow=3.2,SNR=14
AVE Averroes 149.52 326 IAMs_20 IAMs_20 11 21 15.2
comp=Z,357nm,21.0s
TORD Torodi Ar. Bea 151.29 281 PKPbc **PKPbc 10 22 10.3 -1.2**
comp=Z,13nm,1.0s,baz=62,slow=2.4,SNR=23

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*VAO **31** 10:03:33.7±0.3, 14°.10S×72°.82W, h57km, mb4.9, Presumed earthquake*
*NEIC **31** 10:03:34.4±1.5, 14°.14S±0°.07×72°.87W±0°.08, h56km±5km, mb4.9/338, Mww5.0/14, Error ellipse: s-maj=13.1km s-min=7.3km az=53.0*
*GFZ **31** 10:03:35.3±0.1, 14°.1S±2°×7°.3W±°, h72km, M4.8/43, mb4.8/43*
*IDC **31** 10:03:36.6±0.5, 14°.07S×72°.92W, h83km±3km, mb4.2/18, mbtmp4.6/24, MS3.7/15, Error ellipse: s-maj=15.9km s-min=7.6km az=41.0*
*GCMT **31** 10:03:39.4±0.3, 14°.07S±0°.02×72°.83W±0°.02, h73km±2km, MW5.0/90, Moment Tensor Solution. s59,c63; s90,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.91±.13; $M_{\theta\theta}$0.03±.12; $M_{\phi\phi}$3.89±.14; $M_{r\theta}$0.53±.09; $M_{r\phi}$-1.96±.10; $M_{\theta\phi}$0.66±.12; Best double couple: M_o4.41200×10^{16} NP1:ϕ_s325.00000°, δ44.00000°, λ-108.00000°. NP2: ϕ_s169.00000°, δ49.00000°, λ-73.00000°. Principal axes: T 4.7290, Plg3.0000°, Azm248.0000°; N -0.6250, Plg13.0000°, Azm338.0000°; P -4.0950, Plg77.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 10:03:34.8±0.3, 14°.14S±0°.04×72°.88W±0°.05, h68km±3km, h68km:pP-P, n440, σ1§40/340, mb4.9/163, 2C-4D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
NNA	**Nana**	**4.41**	**298**	P		**Pn**	**10 04 39.6**	**+0.3**
	310nm,0.3s,baz=115,slow=10.0,SNR=31							
NNA				S		**Sn**	**10 05 28.5**	**-1.0**
	406nm,0.4s,baz=276,slow=13,SNR=8.4							
NNA				LR		LR	10 06 13.2	
	comp=Z,1μm,20.2s,baz=160,slow=36							
NNA	**Nana**	**4.41**	**298**			**Pn**	**10 04 39.5**	**+0.2**
NNA					Sn	**Sn**	**10 05 31.2**	**+1.8**
NNA	**Nana**	**4.41**	**298**	P		**Pn**	**10 04 39.4**	**+0.1**
NNA				S		**Sn**	**10 05 28.6**	**-0.9**
NNA	**Nana**	**4.41**	**298**	P		**Pn**	**10 04 39.8**	**+0.5**
PB18	**Visviri**	**4.75**	**137**			Pn	10 04 48.7	+4.4
PB18					Sn	**Sn**	**10 05 38.1**	**-0.3**
PB18	**Visviri**	**4.75**	**137**	P		**Pn**	**10 04 45.7**	**+1.3**
AP01	**Chacalluta**	**4.87**	**150**			**Pn**	**10 04 46.3**	**+0.8**
AP01					Sn	**Sn**	**10 05 41.1**	**+0.5**
AP01	**Chacalluta**	**4.87**	**150**	P		**Pn**	**10 04 46.6**	**+1.1**
LPAZ	**La Paz**	**5.06**	**116**	P		**Pn**	**10 04 52.2**	**+3.5**
	122nm,0.4s,baz=312,slow=11,SNR=348							
LPAZ				S		**Sn**	**10 05 49.3**	**+3.1**
	88nm,0.8s,baz=22,slow=25,SNR=8.3							
LPAZ				LR		LR	10 07 13.8	
	comp=Z,463nm,20.1s,baz=314,slow=42							
LPAZ	**La Paz**	**5.06**	**116**			**Pn**	**10 04 52.5**	**+3.8**
LPAZ	**La Paz**	**5.06**	**116**	P		**Pn**	**10 04 52.3**	**+3.5**
	7μm2μm263nm,0.8s							
PB12	**IPOC Station P**	**5.08**	**152**			**Pn**	**10 04 48.3**	**-0.3**
PB12					Sn	**Sn**	**10 05 46.0**	**-0.1**
PB12	**IPOC Station P**	**5.08**	**152**	P		**Pn**	**10 04 48.5**	**-0.1**
PB16	**IPOC Station P**	**5.29**	**143**			**Pn**	**10 04 54.0**	**+2.2**
PB16	**IPOC Station P**	**5.29**	**143**	P		**Pn**	**10 04 52.8**	**+1.0**
PSGCX	**Pisagua**	**6.04**	**154**			**Pn**	**10 05 00.3**	**-1.3**
PSGCX	**Pisagua**	**6.04**	**154**	P		**Pn**	**10 04 59.3**	**-2.4**
CZSB	**Cruzeiro do Su**	**6.37**	**2**			**Pn**	**10 05 05.5**	**-0.5**
CZSB	**Cruzeiro do Su**	**6.37**	**2**	P		**Pn**	**10 05 05.6**	**-0.5**
	5μm446nm,0.6s							
CZSB				S		**Sn**	**10 06 16.0**	**-1.4**
	5μm446nm,0.6s							
CZSB	**Cruzeiro do Su**	**6.37**	**2**	*e*P		**Pn**	**10 05 05.4**	**-0.7**
PB11	**IPOC Station P**	**6.39**	**152**			**Pn**	**10 05 05.0**	**-1.5**
PB11	**IPOC Station P**	**6.39**	**152**	P		Pn	10 05 01.6	-4.9
GO01	**Chusmiza**	**6.54**	**148**			**Pn**	**10 05 09.2**	**+0.4**
GO01	**Chusmiza**	**6.54**	**148**	P		**Pn**	**10 05 07.2**	**-1.6**
TA02	**Huaiquique**	**6.64**	**157**	P		**Pn**	**10 05 08.3**	**-1.5**
PB08	**IPOC Station P**	**6.96**	**150**			**Pn**	**10 05 13.7**	**-0.7**
PB08	**IPOC Station P**	**6.96**	**150**	P		**Pn**	**10 05 13.7**	**-0.7**
PB02	**IPOC Station P**	**7.69**	**159**			**Pn**	**10 05 22.1**	**-2.1**
PB02	**IPOC Station P**	**7.69**	**159**	P		**Pn**	**10 05 22.2**	**-2.1**
PB07	**IPOC Station P**	**8.07**	**160**			**Pn**	**10 05 27.3**	**-2.2**
PB07	**IPOC Station P**	**8.07**	**160**	P		**Pn**	**10 05 27.9**	**-1.6**
PB09	**IPOC Station P**	**8.37**	**156**			**Pn**	**10 05 32.6**	**-1.0**
PB09	**IPOC Station P**	**8.37**	**156**	P		**Pn**	**10 05 32.2**	**-1.4**
PB03	**IPOC Station P**	**8.41**	**160**			**Pn**	**10 05 31.7**	**-2.5**
PB03	**IPOC Station P**	**8.41**	**160**	P		**Pn**	**10 05 32.0**	**-2.2**
ATAH	**Atahualpa**	**8.81**	**322**	P		**Pn**	**10 05 41.4**	**+1.4**
	2.4nm,0.4s,baz=167,slow=5.7,SNR=9.9							
ATAH				S		**Sn**	**10 07 14.4**	**-3.6**
	26nm,0.9s,baz=65,slow=22,SNR=1.3							
PB05	**IPOC Station P**	**9.04**	**164**			**Pn**	**10 05 39.1**	**-3.6**
PB05	**IPOC Station P**	**9.04**	**164**	P		**Pn**	**10 05 39.3**	**-3.4**
PB06	**IPOC Station P**	**9.09**	**160**			**Pn**	**10 05 40.3**	**-3.0**
PB14	**IPOC Station P**	**10.70**	**168**			**Pn**	**10 06 01.5**	**-3.9**
SIV	**San Ignacio**	**11.56**	**101**	P		**Pn**	**10 06 16.0**	**-1.0**
	42nm,0.7s,baz=282,slow=12,SNR=66							
SIV				LR		LR	10 11 15.9	
	comp=Z,594nm,19.6s,baz=293,slow=40							
SALTA		**11.78**	**149**	P		**Pn**	**10 06 20.1**	**-0.4**
MCRA	**Macar, Loja**	**11.95**	**324**	P		**Pn**	**10 06 20.4**	**-2.0**
	297nm11nm,0.8s							
AC01	**Pan de Azucar**	**12.14**	**170**	Pn		**Pn**	**10 06 22.8**	**-2.2**
BBSD	**Serra de San D**	**12.20**	**106**	*e*P		**Pn**	**10 06 24.5**	**-1.3**
VILB	**Vilhena**	**12.39**	**86**			**Pn**	**10 06 26.9**	**-1.5**
VILB	**Vilhena**	**12.39**	**86**	*e*P		**Pn**	**10 06 25.7**	**-2.7**
AC02	**Maricunga**	**13.12**	**165**			**Pn**	**10 06 36.4**	**-2.3**
AC02	**Maricunga**	**13.12**	**165**	P		**Pn**	**10 06 35.6**	**-3.0**
PTLB	**Pontes e Lacer**	**13.36**	**97**			**Pn**	**10 06 38.9**	**-2.7**
PTLB	**Pontes e Lacer**	**13.36**	**97**	*e*P		**Pn**	**10 06 38.8**	**-2.7**
PTLC	**Puerto Leguiza**	**14.34**	**352**	P		Pn	10 06 49.5	-5.0
SLOR	**San Lorenzo -**	**14.43**	**337**	Pn		**Pn**	**10 06 55.3**	**-0.8**
AC05	**El Transito**	**14.83**	**171**			**Pn**	**10 06 59.4**	**-1.5**
AC05	**El Transito**	**14.83**	**171**	P		**Pn**	**10 06 57.3**	**-3.6**
LCO	**Las Campanas**	**14.94**	**173**	Pn		**Pn**	**10 07 01.1**	**-1.4**
OTAV	**Otavalo**	**15.31**	**338**	Pn		**Pn**	**10 07 04.4**	**-3.1**
OTAV	**Otavalo**	**15.31**	**338**	P		**P**	**10 07 11.0**	**+0.1**
	335nm9.6nm,0.8s							
OTAV	**Otavalo**	**15.31**	**338**	*e*P		**Pn**	**10 07 04.4**	**-3.1**
OTAV	**Otavalo**	**15.31**	**338**	P		**P**	**10 07 11.0**	**+0.1**
COIM	**Forte Coimbra**	**15.53**	**114**	*e*P		**Pn**	**10 07 07.1**	**-2.6**
FLOC	**Florencia**	**15.86**	**350**	P		**P**	**10 07 19.8**	**+3.3**
CO01	**Juntas del Tor**	**15.98**	**171**	Pn		**Pn**	**10 07 15.0**	**-0.6**
CO01	**Juntas del Tor**	**15.98**	**171**	P		**Pn**	**10 07 13.8**	**-1.9**
GO04	**Tololo Observa**	**16.08**	**173**	Pn		**Pn**	**10 07 13.8**	**-3.1**
MACC	**Macarena, Meta**	**16.20**	**357**	P		**Pn**	**10 07 17.4**	**-0.9**
	476nm33nm,0.8s							
MACA	**Manacapuru-AM**	**16.25**	**49**			**Pn**	**10 07 15.3**	**-3.5**
MACA	**Manacapuru-AM**	**16.25**	**49**	*e*P		**Pn**	**10 07 15.3**	**-3.5**
GARC	**Garzon, Huila**	**16.42**	**351**	P		**P**	**10 07 24.6**	**+1.6**
	646nm47nm,1.1s							
CO06	**Fray Jorge**	**16.50**	**176**	Pn		**Pn**	**10 07 20.3**	**-1.7**
BBAC	**Balboa, Cauca**	**16.62**	**345**	P		**P**	**10 07 25.4**	**+0.2**
	521nm29nm,1.0s							
SALV	**Santo Antonio**	**16.70**	**98**	*e*P		**Pn**	**10 07 22.3**	**-2.2**
CO03	**El Pedregal**	**16.75**	**173**	Pn		**Pn**	**10 07 24.1**	**-1.0**
CO03	**El Pedregal**	**16.75**	**173**	P		**P**	**10 07 25.9**	**-0.4**
POPC	**Popayan, Colom**	**16.99**	**347**	P		**P**	**10 07 30.4**	**+1.1**
	379nm23nm,1.5s							
CLDB	**Colider**	**16.99**	**81**	*e*P		**Pn**	**10 07 26.5**	**-1.6**
CLDB	**Colider**	**16.99**	**81**	P		**Pn**	**10 07 26.8**	**-1.4**
CO02	**Combarbal**	**17.08**	**174**			**Pn**	**10 07 27.9**	**-1.3**
AQDB	**Aquidauana**	**17.57**	**113**			**P**	**10 07 35.1**	**-0.3**
AQDB	**Aquidauana**	**17.57**	**113**	*e*P		**Pn**	**10 07 34.3**	**-0.9**
AQDB	**Aquidauana**	**17.57**	**113**	P		**P**	**10 07 36.0**	**+0.6**
ZON	**Zonda**	**17.75**	**168**			**Pn**	**10 07 36.0**	**-1.5**
PRAC	**Prado**	**17.84**	**353**	P		**Pn**	**10 07 40.9**	**+2.3**
	1μm54nm,2.0s							
CFA	**Coronel Fontan**	**17.90**	**167**	P		**Pn**	**10 07 39.4**	**+0.1**
	14nm,0.7s,baz=343,slow=12,SNR=36							
CO04	**Los Peladeros**	**17.91**	**175**			**P**	**10 07 38.2**	**-1.2**
CO04	**Los Peladeros**	**17.91**	**175**	P		**Pn**	**10 07 39.0**	**-0.6**
CVER	**Cruz Verde, Cu**	**18.57**	**356**	P		**Pn**	**10 07 50.1**	**+2.2**
	2μm76nm,0.9s							
CHIC	**Chingaza**	**18.66**	**357**	P		Pn	10 07 58.6	+10
VA03	**San Esteban**	**18.67**	**174**	P		**P**	**10 07 46.5**	**-1.0**
VA03	**San Esteban**	**18.67**	**174**	P		**Pn**	**10 07 48.6**	**+0.1**
VA01	**Torpederas**	**18.84**	**177**	P		**P**	**10 07 49.1**	**-0.1**
ROSC	**El Rosal**	**18.91**	**356**	P		**Pn**	**10 07 52.3**	**+0.5**
	21nm,0.8s,baz=171,slow=8.0,SNR=8.3							
ROSC				LR		LR	10 17 01.6	
	comp=Z,203nm,20.0s,baz=212,slow=43							
ROSC	**El Rosal**	**18.91**	**356**	P		**Pn**	**10 07 51.4**	**-0.3**
ROSC	**El Rosal**	**18.91**	**356**	P		**Pn**	**10 07 53.0**	**+1.2**
	649nm39nm,1.3s							
CPUP	**Villa Florida**	**18.95**	**132**	P		**Pn**	**10 07 51.5**	**-0.4**
	27nm,0.9s,baz=309,slow=12,SNR=52							
CPUP				LR		LR	10 16 57.8	
	comp=Z,106nm,20.2s,baz=304,slow=42							
CPUP	**Villa Florida**	**18.95**	**132**			**Pn**	**10 07 50.6**	**-1.3**
CPUP	**Villa Florida**	**18.95**	**132**	*e*P		**Pn**	**10 07 51.3**	**-0.6**
CPUP	**Villa Florida**	**18.95**	**132**	P		**P**	**10 07 49.9**	**-0.6**
PEL	**Peldehue**	**19.03**	**174**	P		**P**	**10 07 51.1**	**-0.3**
PEL	**Peldehue**	**19.03**	**174**	P		**Pn**	**10 07 51.7**	**-1.1**
MT02	**Curacav**	**19.11**	**176**	P		**P**	**10 07 50.1**	**-2.1**
SJPY	**San Joaquin**	**19.13**	**127**	*e*P		**Pn**	**10 07 52.9**	**-1.1**
MT16	**COHEN**	**19.33**	**174**	P		**P**	**10 07 53.5**	**-1.2**
GUY2C	**Guyana, Caldas**	**19.39**	**353**	P		**Pn**	**10 07 59.1**	**+1.5**
	1μm122nm,1.5s							
MT03	**Universidad Ad**	**19.39**	**174**	P		**P**	**10 07 54.8**	**-0.6**
MT08	**Bocatoma Ro**	**19.40**	**173**	P		**P**	**10 07 54.4**	**-1.3**
VA05	**Santo Domingo**	**19.47**	**177**	P		**P**	**10 07 55.0**	**-1.1**
VA05	**Santo Domingo**	**19.47**	**177**	P		**Pn**	**10 07 56.6**	**-1.4**
ITTB	**Itaituba**	**19.49**	**62**	*e*P		**P**	**10 07 56.5**	**-0.1**
MT09	**Talagante**	**19.63**	**175**	P		**P**	**10 07 56.6**	**-1.4**
MT13	**San Alfonso**	**19.66**	**174**	P		**P**	**10 07 57.7**	**-0.7**
SPBC	**San Pablo de B**	**19.69**	**356**	P		**P**	**10 07 58.8**	**0.0**
	527nm43nm,1.1s							
MT01	**Popeta**	**19.70**	**176**	P		**P**	**10 07 58.4**	**-0.3**
BO04	**La Punta**	**19.87**	**174**	P		**P**	**10 07 60.0**	**-0.6**
CBOC	**Ciudad Bolivar**	**20.11**	**351**	P		**P**	**10 08 04.5**	**+1.1**
	511nm44nm,1.1s							
BO01	**Tunca**	**20.23**	**176**	P		**P**	**10 08 03.9**	**-0.6**
BO03	**Pichilemu**	**20.29**	**178**	P		**P**	**10 08 05.3**	**+0.3**
ARAG	**Araguaiana, MT**	**20.42**	**97**	*e*P		**P**	**10 08 07.4**	**+0.8**
BOAV	**Boa Vista**	**20.49**	**38**			**P**	**10 08 07.4**	**+0.1**
BOAV					IAmb	IAmb	10 08 09.4	
	comp=Z,101nm,1.1s							
BOAV	**Boa Vista**	**20.49**	**38**	P		**P**	**10 08 07.2**	**-0.2**
	comp=Z,881nmcomp=Z,83nm,0.9s							
BOAV	**Boa Vista**	**20.49**	**38**	*e*P		**P**	**10 08 07.1**	**-0.2**
BARC	**Barichara**	**20.59**	**359**	P		**P**	**10 08 07.6**	**-1.1**
	comp=Z,620nmcomp=Z,33nm,1.6s							
PTBC	**PUERTO BERRIO,**	**20.60**	**356**	P		**P**	**10 08 07.2**	**-1.3**
	comp=Z,780nmcomp=Z,76nm,1.4s							
BO02	**Sierra Bellavi**	**20.66**	**175**	P		**P**	**10 08 09.0**	**-0.1**
BO02	**Sierra Bellavi**	**20.66**	**175**	P		**P**	**10 08 08.2**	**-0.8**
GO05	**Hualane**	**20.80**	**178**			**P**	**10 08 10.4**	**-0.2**
GO05	**Hualane**	**20.80**	**178**	P		**P**	**10 08 08.8**	**-1.8**
BRJC	**Barrancabermej**	**20.99**	**358**	P		**P**	**10 08 14.3**	**+1.6**
	comp=Z,1μmcomp=Z,58nm,0.9s							
TRCB	**Terra Rica**	**21.03**	**117**	P		**P**	**10 08 13.0**	**-0.2**
TRCB					IAmb	IAmb	10 08 17.3	
	comp=Z,45nm,0.7s							
TRCB	**Terra Rica**	**21.03**	**117**	*e*P		**P**	**10 08 11.4**	**-1.8**
TRCB	**Terra Rica**	**21.03**	**117**	P		**P**	**10 08 12.3**	**-0.9**
SNDB	**Serra Nova Dou**	**21.14**	**87**	*e*P		**P**	**10 08 15.0**	**+0.6**
PAMC	**Pamplona, Colo**	**21.34**	**0**	P		**P**	**10 08 19.3**	**+2.4**
ML02	**Panimavida**	**21.58**	**177**	P		**P**	**10 08 17.4**	**-1.4**
ML02					IAmb	IAmb	10 08 24.1	
	comp=Z,58nm,0.9s							
ML02	**Panimavida**	**21.58**	**177**	P		**P**	**10 08 19.2**	**+0.4**
PAYG	**Puerto Ayora**	**21.80**	**306**	P		**P**	**10 08 20.3**	**-1.2**
PAYG					IAmb	IAmb	10 08 44.6	
	comp=Z,40nm,1.1s							
PSAL	**Palomas, Salto**	**21.94**	**143**	*e*P		**P**	**10 08 22.7**	**-0.1**
APAC	**Apartado, Choc**	**22.20**	**350**	P		**P**	**10 08 27.3**	**+1.7**
	comp=Z,50nm,1.1s							
OCAC	**Ocana**	**22.23**	**359**	P		**P**	**10 08 26.4**	**+0.2**
PTGB	**Pitanga**	**22.25**	**121**	*e*P		**P**	**10 08 25.4**	**-0.8**
BI02	**San Fabin de**	**22.48**	**177**			**P**	**10 08 27.9**	**-0.7**
BI02					IAmb	IAmb	10 08 31.1	
	comp=Z,47nm,1.1s							
BI02	**San Fabin de**	**22.48**	**177**	P		**P**	**10 08 29.7**	**+1.1**
LDASE	**Londrina, Braz**	**22.55**	**117**	*e*P		**P**	**10 08 28.0**	**-1.4**
SDV	**Santo Domingo**	**22.98**	**6**	LR		LR	10 18 47.4	
	comp=Z,138nm,19.8s,baz=192,slow=40							
SDV	**Santo Domingo**	**22.98**	**6**	P		**P**	**10 08 32.9**	**-1.3**
SDV	**Santo Domingo**	**22.98**	**6**	*e*P		**P**	**10 08 32.1**	**-2.0**
ITAB	**Concordia**	**23.34**	**127**			**P**	**10 08 37.3**	**0.0**
ITAB					IAmb	IAmb	10 09 02.1	
	comp=Z,114nm,1.5s							
ITAB	**Concordia**	**23.34**	**127**	*e*P		**P**	**10 08 36.1**	**-1.1**
ITAB	**Concordia**	**23.34**	**127**	P		**P**	**10 08 36.5**	**-0.8**
IPMB	**Ipameri, GO**	**24.01**	**102**	*e*P		**P**	**10 08 42.3**	**-1.2**
PRPB	**Parauapebas**	**24.03**	**73**	*e*P		**P**	**10 08 44.2**	**+0.5**
BDFB	**Brasilia**	**24.08**	**97**	P		**P**	**10 08 45.6**	**+1.4**
	comp=Z,4.3nm,0.8s,baz=259,slow=10,SNR=4.6							
BDFB				LR		LR	10 18 57.4	
	comp=Z,181nm,21.1s,baz=237,slow=38							
	comp=Z,4.3nm,0.8s							
BDFB	**Brasilia**	**24.08**	**97**	P		**P**	**10 08 44.8**	**+0.5**
CPSB	**Cacapava Do Su**	**24.14**	**135**			**P**	**10 08 44.6**	**+0.1**
CPSB					IAmb	IAmb	10 08 50.6	
	comp=Z,47nm,0.7s							
CPSB	**Cacapava Do Su**	**24.14**	**135**	*e*P		**P**	**10 08 44.4**	**-0.2**
CPSB	**Cacapava Do Su**	**24.14**	**135**	P		**P**	**10 08 44.7**	**+0.1**
ANCO	**Parque Anchore**	**24.17**	**149**	*e*P		**P**	**10 08 44.8**	**+0.1**
BB19B	**Bebedouro**	**24.20**	**110**	*e*P		**P**	**10 08 43.1**	**-2.1**
SMTB	**Santa Maria do**	**25.32**	**81**	*e*P		**P**	**10 08 54.6**	**-0.9**
GO06	**Curarrehue**	**25.38**	**177**			**P**	**10 08 55.5**	**-0.3**
GO06					IAmb	IAmb	10 08 57.1	
	comp=Z,33nm,0.8s							
GO06	**Curarrehue**	**25.38**	**177**	P		**P**	**10 08 56.2**	**+0.4**
PMNB	**Patos De Minas**	**25.74**	**103**	*e*P		**P**	**10 08 59.6**	**+0.3**
LR05	**Currie**	**26.01**	**178**			**P**	**10 09 00.8**	**-0.6**
LR05					IAmb	IAmb	10 09 24.9	
	comp=Z,60nm,1.2s							
HDC	**Heredia**	**26.44**	**334**	P		**P**	**10 09 03.9**	**-1.8**
HDC					IAmb	IAmb	10 09 31.0	
	comp=Z,20nm,0.6s							
PLCA	**Paso Flores**	**26.58**	**176**	P		**P**	**10 09 06.7**	**+0.1**
	comp=Z,11nm,0.8s,baz=352,slow=9.3,SNR=33							
	comp=Z,11nm,0.8s							
PLCA	**Paso Flores**	**26.58**	**176**			**P**	**10 09 07.0**	**+0.3**
PLCA	**Paso Flores**	**26.58**	**176**	*e*P		**P**	**10 09 06.7**	**+0.1**
PLCA	**Paso Flores**	**26.58**	**176**	P		**P**	**10 09 07.1**	**+0.5**
JTS	**Las Juntas de**	**27.06**	**333**	LR		LR	10 19 31.5	
	comp=Z,116nm,19.2s,baz=163,slow=35							
SDBA	**SAO DESIDERIO**	**27.28**	**90**	*e*P		**P**	**10 09 13.7**	**+0.5**
BSCB	**Bom Sucesso**	**27.62**	**108**	*e*P		**P**	**10 09 15.8**	**-0.4**
JANB	**Januaria**	**27.66**	**96**	*e*P		**P**	**10 09 15.9**	**-0.6**
MDP	**Montagnes des**	**27.72**	**48**	LR		LR	10 20 25.0	
	comp=Z,411nm,18.8s,baz=231,slow=36							
DIAM	**Diamantina, MG**	**28.34**	**102**	*e*P		**P**	**10 09 22.6**	**-0.1**
LL02	**Futaleuf**	**28.97**	**178**			**P**	**10 09 27.3**	**-0.6**
LL02					IAmb	IAmb	10 09 53.0	
	comp=Z,86nm,2.0s							
NBPN	**Ponto Novo - B**	**32.06**	**88**	*e*P		**P**	**10 09 55.4**	**-0.1**
NBPS	**Pedro II - PI**	**32.46**	**76**	*e*P		**P**	**10 10 00.4**	**+1.4**
PDPR	**Patillas Dam,**	**32.66**	**12**	P		**P**	**10 10 01.0**	**+0.4**
SJG	**San Juan**	**32.72**	**12**	LR		LR	10 24 27.6	
	comp=Z,76nm,21.3s,baz=203,slow=38							
ECPR	**Experimental S**	**32.88**	**11**	P		**P**	**10 10 02.9**	**+0.4**
RCBR	**Riachuelo**	**37.30**	**81**	LR		LR	10 26 13.2	
	comp=Z,78nm,19.9s,baz=251,slow=36							
CMIG	**Matias Romero**	**37.88**	**324**	LR		LR	10 25 46.7	
	comp=Z,45nm,20.7s,baz=136,slow=35							
ZAIG	**Zacatecas**	**46.80**	**321**	IAmb		IAmb	10 12 22.5	
	comp=Z,18nm,1.5s							
152A	**Waverly Hall**	**47.90**	**347**	IAmb		IAmb	10 12 06.8	
	comp=Z,8.4nm,0.8s							
LRAL	**Lakeview Retre**	**48.80**	**344**	IAmb		IAmb	10 12 13.7	
	comp=Z,12nm,1.1s							
Z47A	**Carrollton**	**49.25**	**343**	IAmb		IAmb	10 12 17.0	
	comp=Z,21nm,1.1s							
FPAL	**Fort Paine**	**49.90**	**346**			**P**	**10 12 21.3**	**-0.3**
FPAL				IAmb		IAmb	10 12 21.8	
	comp=Z,7.8nm,1.0s							
X48A	**Hartselle**	**50.16**	**345**	IAmb		IAmb	10 12 23.8	
	comp=Z,13nm,1.0s							
W50A	**Signal Mountai**	**50.46**	**347**	IAmb		IAmb	10 12 26.2	
	comp=Z,17nm,1.1s							
TKL	**Tuckaleechee C**	**50.58**	**349**	LR		LR	10 36 12.5	
	comp=Z,61nm,18.2s,baz=128,slow=39							
SWET	**Sewanee**	**50.62**	**346**	IAmb		IAmb	10 12 27.2	
	comp=Z,11nm,0.8s							
V48A	**Smith Brothers**	**51.33**	**345**	IAmb		IAmb	10 12 32.5	
	comp=Z,18nm,0.9s							
HPIG		**51.77**	**322**	IAmb		IAmb	10 12 37.8	
	comp=Z,8.7nm,0.9s							
HPIG		**51.77**	**322**	P		**P**	**10 12 36.7**	**+0.7**
WVT	**Waverly**	**51.95**	**345**	P		**P**	**10 12 36.1**	**-0.8**
WVT				IAmb		IAmb	10 12 36.3	
	comp=Z,10.0nm,0.8s							
WVT	**Waverly**	**51.95**	**345**	P		**P**	**10 12 35.4**	**-1.5**
WVT				pP		**pP**	**10 12 55.7**	**+0.5**
WVT	**Waverly**	**51.95**	**345**	P		**P**	**10 12 35.2**	**-1.7**
UALR	**University of**	**52.03**	**340**	P		**P**	**10 12 37.6**	**0.0**
UALR				IAmb		IAmb	10 12 38.2	
	comp=Z,20nm,0.9s							
MIAR	**Mount Ida**	**52.26**	**338**	P		**P**	**10 12 39.2**	**0.0**
UTMT	**University of**	**52.42**	**344**	P		**P**	**10 12 40.2**	**-0.2**
TXAR	**Lajitas Array**	**52.45**	**326**	P		**P**	**10 12 41.2**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=147,slow=8.6,SNR=73							
	comp=Z,5.7nm,0.8s							
TX31	**Lajitas Ar. Si**	**52.45**	**326**			**P

	comp=Z,9.2nm,1.0s						
HAYD	**Hayden**	**63.04**	**331**	IAmb	IAmb	10 13 57.3	
	comp=Z,15nm,1.1s						
SRU	**San Rafael Swe**	**63.56**	**328**	IAmb	IAmb	10 14 00.1	
	comp=Z,13nm,0.9s						
Q16A	**Castle Valley**	**63.76**	**327**	IAmb	IAmb	10 14 02.8	
	comp=Z,38nm,1.8s						
P18A	**Preston Nutter**	**63.81**	**329**	IAmb	IAmb	10 14 02.2	
	comp=Z,13nm,1.0s						
P17A	**Butcher Ranch,**	**63.95**	**328**	P	**P**	**10 14 01.4 +0.3**	
P17A				IAmb	IAmb	10 14 02.7	
	comp=Z,18nm,1.0s						
EYMN	**Ely**	**63.99**	**346**	IAmb	IAmb	10 14 23.3	
	comp=Z,11nm,1.1s						
EYMN	**Ely**	**63.99**	**346**	P	**P**	**10 13 59.8 -1.2**	
RDMU	**Red Mountain**	**64.19**	**330**	IAmb	IAmb	10 14 04.1	
	comp=Z,20nm,0.9s						
TBO	**Thunder Bay**	**64.20**	**348**	IAmb	IAmb	10 14 24.9	
	comp=Z,8.4nm,1.0s						
TCRU	**Three Creeks R**	**64.21**	**326**	IAmb	IAmb	10 14 05.0	
	comp=Z,13nm,1.0s						
K22A	**Casper**	**64.40**	**333**	IAmb	IAmb	10 14 05.3	
	comp=Z,14nm,0.9s						
RSSD	**Black Hills**	**64.56**	**336**	P	**P**	**10 14 04.9 -0.2**	
RSSD				IAmb	IAmb	10 14 06.7	
	comp=Z,25nm,1.7s						
RSSD	**Black Hills**	**64.56**	**336**	P	**P**	**10 14 05.3 +0.3**	
BSUT	**Blindstream Ca**	**64.75**	**329**	IAmb	IAmb	10 14 08.5	
	comp=Z,14nm,1.0s						
PRN	**Pahroc Range**	**64.80**	**324**	IAmb	IAmb	10 14 42.3	
	comp=Z,9.9nm,1.1s						
MPU	**Maple Canyon**	**64.81**	**328**	IAmb	IAmb	10 14 08.6	
	comp=Z,16nm,1.2s						
QSM	**Queen of Sheba**	**64.89**	**322**	IAmb	IAmb	10 14 08.9	
	comp=Z,11nm,1.2s						
PSUT	**Pine Spring**	**64.92**	**325**	IAmb	IAmb	10 14 09.7	
	comp=Z,9.7nm,1.0s						
NLU	**North Lily Min**	**64.99**	**328**	IAmb	IAmb	10 14 10.0	
	comp=Z,9.9nm,1.1s						
LRMC	**Laurel Mtn Rad**	**65.06**	**321**	IAmb	IAmb	10 14 10.5	
	comp=Z,11nm,1.4s						
FURC	**Furnace Creek,**	**65.22**	**322**	IAmb	IAmb	10 14 33.9	
	comp=Z,19nm,1.1s						
WCT	**Wildcat Mounta**	**65.30**	**322**	P	**P**	**10 14 10.7 +0.9**	
WCT				IAmb	IAmb	10 14 12.3	
	comp=Z,8.6nm,1.0s						
AGMN	**Agassiz Nation**	**65.43**	**343**	IAmb	IAmb	10 14 32.8	
	comp=Z,8.3nm,0.8s						
AGMN	**Agassiz Nation**	**65.43**	**343**	P	**P**	**10 14 09.9 -0.4**	
AGMN				pP	**pP**	**10 14 31.6 +2.2**	
TCUT	**Toone Canyon**	**65.52**	**329**	IAmb	IAmb	10 14 14.6	
	comp=Z,16nm,0.9s						
DUG	**Dugway, Tooele**	**65.56**	**327**	IAmb	IAmb	10 14 13.7	
	comp=Z,20nm,1.0s						
DUG	**Dugway, Tooele**	**65.56**	**327**	P	**P**	**10 14 12.6 +1.1**	
ISA	**Isabella, Lake**	**65.67**	**320**	IAmb	IAmb	10 14 36.8	
	comp=Z,14nm,1.4s						
BW06	**Boulder Array**	**65.87**	**331**	P	**P**	**10 14 13.5 0.0**	
BW06				IAmb	IAmb	10 14 14.7	
	comp=Z,13nm,1.4s						
PD31	**Pinedale Array**	**65.87**	**331**		**P**	**10 14 13.5 0.0**	
PD31				IAmb	IAmb	10 14 14.7	
	comp=Z,13nm,1.4s						
PDAR	**Pinedale Array**	**65.87**	**331**	P	**P**	**10 14 13.3 -0.2**	
PDAR	comp=Z,2.3nm,0.8s,baz=156,slow=7.6,SNR=21			pP	**pP**	**10 14 34.6 +1.9**	
	comp=Z,1.4nm,0.8s,baz=134,slow=8.6,SNR=4.0 comp=Z,2.3nm,0.8s						
PDAR	**Pinedale Array**	**65.87**	**331**		**P**	**10 14 13.6 0.0**	
HWUT	**Hardware Ranch**	**65.96**	**329**	IAmb	IAmb	10 14 15.4	
	comp=Z,13nm,1.0s						
HWUT	**Hardware Ranch**	**65.96**	**329**	P	**P**	**10 14 14.3 +0.2**	
GMN	**Gold Mountain**	**66.02**	**322**	IAmb	IAmb	10 14 16.8	
	comp=Z,14nm,1.4s						
EPLO	**Experimental L**	**66.14**	**345**	IAmb	IAmb	10 14 37.6	
	comp=Z,20nm,1.2s						
SPUT	**South Promonto**	**66.18**	**328**	IAmb	IAmb	10 14 38.9	
	comp=Z,14nm,1.1s						
BGU	**Big Grassy Mou**	**66.20**	**328**	IAmb	IAmb	10 14 17.2	
	comp=Z,9.2nm,1.1s						
DSP	**Deep Springs**	**66.48**	**322**	IAmb	IAmb	10 14 19.8	
	comp=Z,20nm,1.7s						
TPH	**Tonopah**	**66.51**	**323**	IAmb	IAmb	10 14 19.9	
	comp=Z,10nm,1.1s						
AHID	**Auburn Hatcher**	**66.60**	**330**	P	**P**	**10 14 18.4 +0.2**	
AHID				IAmb	IAmb	10 14 19.4	
	comp=Z,12nm,1.0s						
AHID	**Auburn Hatcher**	**66.60**	**330**	P	**P**	**10 14 18.4 +0.2**	
HVU	**Hansel Valley**	**66.69**	**329**	IAmb	IAmb	10 14 20.1	
	comp=Z,12nm,0.9s						
ULM	**Lac du Bonnet**	**67.22**	**344**	P	**P**	**10 14 20.7 -1.0**	
	comp=Z,3.5nm,0.8s,baz=176,slow=6.0,SNR=7.4 comp=Z,3.5nm,0.8s						
ULM	**Lac du Bonnet**	**67.22**	**344**		**P**	**10 14 21.2 -0.4**	
ULM				IAmb	IAmb	10 14 43.9	
	comp=Z,13nm,1.1s						
FXWY	**Fox Creek**	**67.23**	**331**	IAmb	IAmb	10 14 23.7	
	comp=Z,10nm,1.0s						
ELK	**Elko**	**67.24**	**326**	P	**P**	**10 14 22.6 +0.2**	
	comp=Z,2.9nm,0.9s,baz=128,slow=3.5,SNR=10 comp=Z,2.9nm,0.9s						
ELK	**Elko**	**67.24**	**326**	P	**P**	**10 14 22.2 -0.1**	
NV11	**Mina Array Sit**	**67.30**	**323**	P	**P**	**10 14 22.4 -0.3**	
NVAR	**Mina Array Bea**	**67.38**	**323**	P	**P**	**10 14 23.5 +0.2**	
	comp=Z,1.8nm,0.9s,baz=132,slow=6.7,SNR=15						
NVAR				pP	**pP**	**10 14 45.0 +2.6**	
	comp=Z,2.2nm,0.8s,baz=150,slow=6.2,SNR=5.8 comp=Z,1.8nm,0.9s						
LHV	**Little Huntoon**	**67.38**	**322**	IAmb	IAmb	10 15 56.3	
	comp=Z,11nm,0.9s						
FLWY	**Flagg Ranch**	**67.42**	**331**	P	**P**	**10 14 24.3 +1.0**	
RLMT	**Red Lodge**	**67.57**	**333**	IAmb	IAmb	10 14 25.9	
	comp=Z,17nm,1.2s						
YPP	**Pitchstone Pla**	**67.61**	**331**	IAmb	IAmb	10 14 30.1	
	comp=Z,14nm,1.5s						
LKWY	**Lake**	**67.65**	**332**	IAmb	IAmb	10 14 27.6	
	comp=Z,16nm,0.9s						
YMP	**Mirror Lake Pl**	**67.67**	**332**	IAmb	IAmb	10 14 37.1	
	comp=Z,15nm,1.1s						
YMR	**Madison River**	**67.99**	**332**	IAmb	IAmb	10 14 29.4	
	comp=Z,18nm,1.0s						
WAKR	**Walker**	**68.10**	**322**	IAmb	IAmb	10 14 30.5	
	comp=Z,13nm,1.4s						
YHB	**Horse Butte**	**68.16**	**332**	IAmb	IAmb	10 14 30.3	
	comp=Z,15nm,0.9s						
YHL	**Hebgen Lake**	**68.22**	**332**	IAmb	IAmb	10 14 31.1	
	comp=Z,26nm,1.1s						
DGMT	**Dagmar**	**68.26**	**338**	IAmb	IAmb	10 14 30.3	
	comp=Z,22nm,1.1s						
GCMT	**Greycliff**	**68.27**	**333**	P	**P**	**10 14 29.2 +0.6**	
VNA1	**Neumayer--Stat**	**68.45**	**161**	⇓P	**P**	**10 14 30.2 +1.1**	
	comp=Z,39nm,0.9s						
PNTR	**Pine Nut**	**68.58**	**323**	IAmb	IAmb	10 14 33.4	
	comp=Z,26nm,1.5s						
VNA2	**Neumayer--Watz**	**68.81**	**161**	⇓P	**P**	**10 14 32.1 +0.6**	
	comp=Z,20nm,0.7s,baz=284,slow=7.0						
VNA2	**Neumayer--Watz**	**68.81**	**161**	P	**P**	**10 14 32.3 +0.8**	
HLID	**Hailey**	**68.82**	**329**	P	**P**	**10 14 33.3 +1.2**	
PAHR	**Pah Rah Range**	**68.86**	**323**	IAmb	IAmb	10 14 34.9	
	comp=Z,20nm,1.1s						
SCHQ	**Schefferville**	**68.89**	**4**	P	**P**	**10 14 31.5 -0.6**	
	comp=Z,3.7nm,0.9s,baz=216,slow=4.5,SNR=4.2 comp=Z,3.7nm,0.9s						
BOZ	**Bozeman (W)**	**69.00**	**332**	IAmb	IAmb	10 14 34.8	
	comp=Z,12nm,1.1s						
DLMT	**Dillon**	**69.27**	**331**	IAmb	IAmb	10 14 36.7	
	comp=Z,13nm,1.2s						
MFID	**Camas Ranch**	**69.44**	**328**	IAmb	IAmb	10 14 38.1	
	comp=Z,24nm,1.0s						
BEKR	**Beckworth**	**69.53**	**323**	P	**P**	**10 14 37.3 +0.7**	
ORV	**Oroville**	**70.01**	**322**	IAmb	IAmb	10 14 41.9	
	comp=Z,34nm,1.4s						
EGMT	**Eagleton**	**70.06**	**335**	IAmb	IAmb	10 14 40.9	
	comp=Z,11nm,1.0s						
WVOR	**Wild Horse Val**	**70.25**	**326**	P	**P**	**10 14 41.3 +0.4**	
SNAA	**Sanae**	**70.43**	**162**	⇓P	**P**	**10 14 42.2 +0.7**	
	comp=Z,880nm,0.7s						
SNAA	**Sanae**	**70.43**	**162**	P	**P**	**10 14 42.2 +0.7**	
	comp=Z,31nm,0.7s,baz=278,slow=5.7,SNR=94 comp=Z,31nm,0.7s						
SNAA	**Sanae**	**70.43**	**162**		**P**	**10 14 42.2 +0.7**	
SNAA	**Sanae**	**70.43**	**162**	P	**P**	**10 14 42.4 +0.8**	
DBIC	**Dimbokro**	**70.58**	**78**	P	**P**	**10 14 43.3 0.0**	
	comp=Z,3.8nm,0.8s,baz=280,slow=8.9,SNR=5.8						
DBIC				LR	LR	10 43 44.6	
	comp=Z,116nm,20.2s,baz=257,slow=34 comp=Z,3.8nm,0.8s						

DBIC	**Dimbokro**	**70.58**	**78**	P	**P**	**10 14 43.6 +0.3**	
DBIC				IAmb	IAmb	10 16 43.0	
	comp=Z,25nm,1.3s						
HATC	**Hat Creek Radi**	**70.78**	**323**	IAmb	IAmb	10 14 45.4	
	comp=Z,14nm,1.1s						
MSO	**Missoula**	**70.98**	**332**	IAmb	IAmb	10 14 47.5	
	comp=Z,19nm,1.2s						
K05A	**Summer Lake**	**71.69**	**325**	IAmb	IAmb	10 15 25.8	
	comp=Z,36nm,1.6s						
KHBM	**Hayfork Bally**	**71.73**	**322**	IAmb	IAmb	10 14 52.1	
	comp=Z,24nm,1.2s						
YBH	**Yreka Blue Hor**	**72.09**	**323**	P	**P**	**10 14 51.3 -0.7**	
	comp=Z,3.0nm,0.9s,baz=108,slow=11,SNR=11 comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**72.09**	**323**		**P**	**10 14 52.0 0.0**	
TROLL	**Troll, Antarti**	**72.15**	**162**	⇓P	**P**	**10 14 52.9 +0.9**	
	comp=Z,773nm,0.7s						
PINE	**Pine Mountain**	**72.41**	**326**	IAmb	IAmb	10 14 56.5	
	comp=Z,15nm,1.1s						
J04A	**Umpqua Nationa**	**72.70**	**325**	IAmb	IAmb	10 14 57.6	
	comp=Z,22nm,1.0s						
L02F	**Cave Junction**	**72.84**	**323**	IAmb	IAmb	10 14 58.4	
	comp=Z,15nm,1.2s						
I05D	**Terrebonne, OR**	**72.98**	**326**	IAmb	IAmb	10 14 59.6	
	comp=Z,14nm,0.9s						
WIFE	**Three Sisters-**	**73.07**	**325**	IAmb	IAmb	10 15 00.0	
	comp=Z,10nm,0.9s						
I04A	**Tendick Farm,**	**73.22**	**325**	IAmb	IAmb	10 14 60.0	
	comp=Z,11nm,1.0s						
K02D	**Willamette Mer**	**73.25**	**323**	IAmb	IAmb	10 15 01.8	
	comp=Z,20nm,1.2s						
HAWA	**Hanford**	**73.39**	**328**	IAmb	IAmb	10 15 01.7	
	comp=Z,12nm,1.1s						
NEW	**Newport**	**73.51**	**331**	P	**P**	**10 15 00.3 +0.1**	
	comp=Z,1.6nm,0.8s,baz=143,slow=6.3,SNR=5.8 comp=Z,1.6nm,0.8s						
NEW	**Newport**	**73.51**	**331**	P	**P**	**10 15 00.8 +0.6**	
G05A	**Wamic**	**73.56**	**327**	IAmb	IAmb	10 15 11.2	
	comp=Z,23nm,1.3s						
HOOD	**Mount Hood Mea**	**73.79**	**326**	IAmb	IAmb	10 15 04.5	
	comp=Z,17nm,1.1s						
BUCK	**Buck Mountain**	**73.80**	**325**	IAmb	IAmb	10 15 03.8	
	comp=Z,14nm,0.9s						
EPH	**Ephrata**	**74.08**	**329**	IAmb	IAmb	10 15 06.0	
	comp=Z,16nm,1.4s						
G04A	**Mulino**	**74.16**	**326**	IAmb	IAmb	10 15 05.8	
	comp=Z,20nm,1.0s						
LTY	**Liberty**	**74.56**	**328**	IAmb	IAmb	10 15 08.4	
	comp=Z,13nm,1.3s						
D05A	**Enumclaw**	**75.19**	**328**	IAmb	IAmb	10 15 12.2	
	comp=Z,21nm,0.9s						
NLWA	**Neilton Lookou**	**76.30**	**327**	IAmb	IAmb	10 15 18.9	
	comp=Z,18nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.67**	**73**	P	**P**	**10 15 29.0 -1.2**	
	comp=Z,9.3nm,0.8s,baz=256,slow=5.1,SNR=36						
TORD				pP	**pP**	**10 15 50.9 +1.0**	
	comp=Z,5.6nm,0.9s,baz=256,slow=5.2,SNR=4.1						
TORD				sP	**sP**	**10 16 01.0 +3.2**	
	comp=Z,12nm,1.0s,baz=260,slow=5.7,SNR=5.6 comp=Z,9.3nm,0.8s						
MD31	**MD31**	**80.03**	**52**	P	**P**	**10 15 38.2 +0.9**	
MD31				IAmb	IAmb	10 16 01.2	
	comp=Z,14nm,1.2s						
SBA	**Scott Base**	**82.34**	**191**	P	**P**	**10 15 50.1 +1.3**	
SBA				IAmb	IAmb	10 16 19.4	
	comp=Z,19nm,1.2s						
YKA	**Yellowknife Ar**	**83.03**	**342**	P	**P**	**10 15 51.8 -0.6**	
	comp=Z,6.8nm,0.8s,baz=139,slow=5.3,SNR=63 comp=Z,6.8nm,0.8s						
VNDA	**Vanda**	**83.40**	**190**	P	**P**	**10 15 55.4 +1.2**	
	comp=Z,6.6nm,0.9s,baz=118,slow=4.1,SNR=6.2 comp=Z,6.6nm,0.9s						
VNDA	**Vanda**	**83.40**	**190**	P	**P**	**10 15 55.1 +0.9**	
VNDA				IAmb	IAmb	10 15 57.0	
	comp=Z,11nm,1.0s						
VNDA	**Vanda**	**83.40**	**190**	P	**P**	**10 15 55.5 +1.2**	
ESDC	**Sonseca Array**	**83.40**	**46**	P	**P**	**10 15 55.0 +0.1**	
	comp=Z,2.4nm,0.8s,baz=256,slow=5.0,SNR=20						
ESDC				pP	**pP**	**10 16 17.9 +2.9**	
	comp=Z,8.5nm,1.0s,baz=252,slow=5.9,SNR=13						
ESDC				sP	**sP**	**10 16 24.8 +1.8**	
	comp=Z,9.6nm,1.0s,baz=258,slow=4.8,SNR=9.0 comp=Z,2.4nm,0.8s						
ESDC	**Sonseca Array**	**83.40**	**46**		**P**	**10 15 55.9 +1.0**	
SYO	**Syowa Base**	**84.68**	**160**	⇑*i*P	**P**	**10 16 01.5 +0.7**	
TAM	**Tamanrasset**	**85.04**	**65**		**P**	**10 16 04.4 +0.7**	
T35M	**Bob Quinn**	**85.22**	**332**	P	**P**	**10 16 04.9 +1.3**	
T35M				IAmb	IAmb	10 16 05.1	
	comp=Z,9.0nm,1.0s						
TSUM	**Tsumeb**	**85.88**	**109**		**P**	**10 16 08.6 +0.6**	
KOOLE	**Kule**	**87.35**	**113**	P	**P**	**10 16 15.8 +0.7**	
R32K	**Eaglecrest**	**87.85**	**332**	IAmb	IAmb	10 16 18.8	
	comp=Z,22nm,1.6s						
LKGWB	**Lokgwabe**	**87.98**	**114**		**P**	**10 16 21.0 +2.9**	
SUMG	**Summit**	**89.44**	**10**		**P**	**10 16 24.8 +0.6**	
RES	**Resolute Bay**	**89.71**	**354**	LR	LR	11 03 03.8	
	comp=Z,125nm,18.9s,baz=260,slow=40						
BOSA	**Boshof**	**90.29**	**119**	P	**P**	**10 16 28.5 -0.4**	
	comp=Z,5.7nm,1.0s,baz=282,slow=7.1,SNR=4.8 comp=Z,5.7nm,1.0s						
MAW	**Mawson**	**92.42**	**164**	P	**P**	**10 16 38.2 +0.5**	
	comp=Z,16nm,0.9s,baz=218,slow=7.3,SNR=10.0 comp=Z,16nm,0.9s						
MAW	**Mawson**	**92.42**	**164**	P	**P**	**10 16 38.4 +0.6**	
MAW				IAmb	IAmb	10 16 39.5	
	comp=Z,3.2nm,0.9s						
A36M	**Sachs Harbour**	**92.66**	**346**	P	**P**	**10 16 38.5 -0.1**	
E29M	**Blow River**	**94.22**	**340**	IAmb	IAmb	10 16 47.4	
	comp=Z,5.8nm,0.9s						
GERES	**GERESS Array B**	**98.28**	**42**	pP	pP	10 17 25.9 +0.7	
	comp=Z,0.3nm,0.2s,baz=260,slow=2.3,SNR=1.8						
KBZ	**Khabaz**	**118.23**	**48**	PKP	**PKPdf**	**10 22 14.2 -0.2**	
	comp=Z,4.2nm,0.8s,baz=305,slow=0.4,SNR=8.0						
KBZ				pPKP	**sPKPdf**	**10 22 39.1 -3.9**	
	comp=Z,4.4nm,0.8s,baz=230,slow=4.8,SNR=4.8						
ARTI	**Arti**	**123.89**	**30**	PKP	**PKiKP**	**10 22 25.3 +0.1**	
	comp=Z,2.6nm,0.5s,baz=215,slow=4.9,SNR=4.5						
AB31	**Akbulak array**	**127.98**	**38**		**PKiKP**	**10 22 34.0 +0.5**	
ABKAR	**Akbulak array**	**127.98**	**38**		**PKiKP**	**10 22 33.7 +0.2**	
BVAR	**Borovoye Array**	**131.53**	**29**	PKP	**PKiKP**	**10 22 40.1 -0.5**	
	comp=Z,3.2nm,0.8s,baz=294,slow=1.5,SNR=10						
BVAR				pPKP	**sPKPdf**	**10 23 04.0 -4.2**	
	comp=Z,3.9nm,0.9s,baz=242,slow=3.2,SNR=4.2						
ASAR	**Alice Springs**	**134.20**	**215**	PKP	**PKPdf**	**10 22 45.2 -0.4**	
	comp=Z,2.0nm,0.7s,baz=127,slow=1.8,SNR=19						
AS31	**Alice Springs**	**134.20**	**215**		**PKPdf**	**10 22 45.5 -0.2**	
ZAA0	**Zalesovo Array**	**136.58**	**19**		**PKPdf**	**10 22 49.8 +0.8**	
ZALV	**Zalesovo Beam**	**136.58**	**19**	PKP	**PKPdf**	**10 22 49.6 +0.7**	
	comp=Z,21nm,0.8s,baz=300,slow=2.5,SNR=40						
ZALV				pPKP	**sPKPdf**	**10 23 13.5 -4.2**	
	comp=Z,12nm,0.8s,baz=309,slow=2.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**136.58**	**19**		**PKPdf**	**10 22 46.4 -2.6**	
WR8	**Warramunga Arr**	**136.72**	**219**		**PKPdf**	**10 22 50.5 +0.1**	
WRA	**Warramunga Arr**	**136.83**	**219**	PKP	**PKPdf**	**10 22 50.6 0.0**	
	comp=Z,6.5nm,1.0s,baz=145,slow=2.0,SNR=22						
WRA				pPKP	**pPKPdf**	**10 23 13.8 +2.2**	
	comp=Z,3.6nm,1.0s,baz=145,slow=1.5,SNR=3.5						
WRA	**Warramunga Arr**	**136.83**	**219**		**PKPdf**	**10 22 49.6 -0.9**	
KURK	**Kurchatov**	**136.83**	**26**		**PKiKP**	**10 22 50.8 -0.6**	
KURBB	**Kurchatov Arra**	**136.86**	**26**	PKP	**PKiKP**	**10 22 50.5 -0.9**	
	comp=Z,3.3nm,0.8s,baz=307,slow=2.8,SNR=20						
KURBB				pPKP	**sPKPdf**	**10 23 14.4 -3.9**	
	comp=Z,2.6nm,0.8s,baz=303,slow=2.6,SNR=5.0						
MKAR	**Makanchi Array**	**141.38**	**28**	PKhKP	PKPpre	10 22 52.5	
	comp=Z,1.9nm,0.8s,baz=317,slow=3.0,SNR=16						
MKAR				PKP	**PKPdf**	**10 22 58.6 +0.6**	
	comp=Z,2.5nm,0.8s,baz=349,slow=2.5,SNR=11						
KSH2	**Kashi**	**142.70**	**42**	PKP	**PKPdf**	**10 23 00.5 -0.3**	
KSH2				sPKP	sPKPdf	10 23 25.5 -3.9	
HILR	**Hailar Array B**	**143.19**	**346**	PKP	PKPbc	10 22 58.4 +0.1	
	comp=Z,1.1nm,0.4s,baz=66,slow=3.7,SNR=7.1						
USRK	**Ussuriysk Ar.**	**143.29**	**330**	PKP	PKPbc	10 22 58.7 0.0	
	comp=Z,4.9nm,0.9s,baz=111,slow=0.9,SNR=13						
USRK	**Ussuriysk Ar.**	**143.29**	**330**		PKPbc	10 22 59.1 +0.5	
MDJ	**Mudanjiang**	**144.10**	**332**	PKPdf	PKPbc	10 23 01.1 +0.1	
BNX	**BinXian**	**144.14**	**336**	⇑P	**PKPab**	**10 23 00.5 -0.2**	
BNX				pmax	pmax		
	comp=Z,18nm,1.2s						
MTN	**Manton Dam**	**144.16**	**223**		PKPbc	10 23 02.1 +0.1	
MJAR	**Matsushiro Arr**	**144.38**	**314**	PKP	**PKPab**	**10 23 00.8 -1.1**	
	comp=Z,4.9nm,0.9s,baz=85,slow=1.6,SNR=15						
MJAR	**Matsushiro Arr**	**144.38**	**314**		**PKPab**	**10 23 01.8 -0.1**	
MJB9	**Matsu-Tunnel**	**144.38**	**314**		PKPbc	10 23 02.8 +0.6	
JSG	**Sagara**	**145.31**	**312**	PKPbc	**PKPbc**	**10 23 03.1 -2.0**	
JGF	**Kuroka**	**145.45**	**314**	PKPdf	**PKPdf**	**10 23 04.8 -0.8**	
WMQ	**Urumqi**	**146.06**	**26**	*e*PKPbc	**PKPab**	**10 23 08.0 0.0**	
WMQ				pPKP	pPKPdf	10 23 23.8 -3.6	
WMQ				sPKP	sPKPdf	10 23 31.3 -3.8	
ULN	**Ulaanbaatar**	**146.37**	**0**	PKPbc	**PKPbc**	**10 23 08.2 0.0**	
SONM	**Songino Array**	**146.40**	**1**	PKPbc	**PKPbc**	**10 23 07.7 -0.6**	
	comp=Z,18nm,0.9s,baz=326,slow=1.5,SNR=65						
KSRS	**Korea Array**	**150.30**	**325**	PKP	**PKPdf**	**10 23 14.6 +1.1**	
	comp=Z,16nm,0.9s,baz=43,slow=1.1,SNR=28						
KSRS				PKPbc	**PKiKP**	**10 23 19.1 -0.3**	
	comp=Z,3.2nm,0.8s,baz=29,slow=1.3,SNR=5.0						
KSAR	**Wonju Array Be**	**150.33**	**325**		**PKPdf**	**10 23 13.2 -0.2**	
JNU	**Nakatsue**	**151.29**	**315**	PKPbc	**PKPbc**	**10 23 20.8 -0.4**	
	comp=Z,14nm,0.9s,baz=106,slow=5.7,SNR=8.1						
BJT	**Baijiatuan**	**153.02**	**345**		**PKiKP**	**10 23 25.1 +0.1**	
HHC	**Hu-ho-hao-te**	**153.10**	**353**	*e*P	**PKPdf**	**10 23 19.8 +2.1**	
HHC				LR	LR		
	comp=N,490nm,19.0s						
HHC				LR	LR		
	comp=E,260nm,19.2s						
HHC				LR	LR		
	comp=Z,230nm,19.4s						
GTA2	**Gaotai**	**153.93**	**13**	PKPbc	**PKPdf**	**10 23 20.3 +1.3**	
TIA	**Tai'an**	**156.26**	**340**	PKP	**PKPdf**	**10 23 23.0 +0.9**	
TIA				sPKP	**sPKPdf**	**10 23 46.5 -4.5**	
NJ2	**Nanjing**	**159.18**	**331**	*e*P	**PKPdf**	**10 23 26.3 +0.5**	
NJ2				pmax	pmax		
	comp=Z,28nm,1.1s						
PZH	**PanZhiHua**	**166.71**	**21**	PKP	**PKPdf**	**10 23 34.3 +0.9**	
CMAR	**Chiang Mai Arr**	**171.05**	**60**	PKP	**PKPdf**	**10 23 36.0 -0.2**	
	comp=Z,0.7nm,0.3s,baz=322,slow=1.0,SNR=9.1						
CMAR				pPKP	**pPKPdf**	**10 24 00.0 +2.5**	
	comp=Z,1.9nm,0.9s,baz=287,slow=1.5,SNR=2.4						
CMAR	**Chiang Mai Arr**	**171.05**	**60**		**PKPdf**	**10 23 36.8 +0.6**	

*IDC **31** 10:06:43.0±1.5, 19°.75S×173°.46W, h0km, mb3.9/4, mbtmp4.1/6, ML3.4/2, Error ellipse: s-maj=48.2km s-min=27.9km az=149.0*

ISC 31 10:06:46.5±1.0, 19°.55S±0°.1×173°.3W±0°.1, h25km, n10, σ2°.22/8, mb4.0/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.76**	**15**	Pn	**Pn**	**10 08 11.8**	**+1.2**
	1.2nm,0.3s,baz=39,slow=21,SNR=1.3						
AFI				Sn	**Sn**	**10 09 13.0**	**-2.9**
	7.0nm,0.3s,baz=269,slow=22,SNR=6.3 11nm,0.5s						
RAR	**Rarotonga**	**12.78**	**100**	Pn	**Pn**	**10 09 45.9**	**-0.8**
	1.4nm,0.3s,baz=257,slow=6.7,SNR=10 24nm,0.9s						
ASAR	**Alice Springs**	**49.06**	**255**	P	**P**	**10 15 30.5**	**-1.4**
	1.8nm,0.8s,baz=93,slow=8.4,SNR=6.6 1.8nm,0.8s						
WRA	**Warramunga Arr**	**49.13**	**260**	P	**P**	**10 15 30.2**	**-2.4**
	1.1nm,0.8s,baz=97,slow=7.8,SNR=10 1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**72.16**	**321**	P	**P**	**10 18 10.1**	**+0.9**
	1.3nm,0.7s,baz=143,slow=6.6,SNR=4.8 1.3nm,0.7s						
H03S2	**Juan Fernandez**	**82.85**	**123**	T	T	11 51 49.2	
	baz=249,slow=75,SNR=4.6						
H03S1	**Juan Fernandez**	**82.86**	**123**	T	T	11 51 55.9	
	baz=249,slow=75,SNR=6.6						
H03S3	**Juan Fernandez**	**82.87**	**123**	T	T	11 51 51.9	
	baz=249,slow=75,SNR=5.3						
ILAR	**Eielson Array**	**86.44**	**11**	P	**P**	**10 19 28.4**	**+2.0**
	0.4nm,0.8s,baz=209,slow=4.8,SNR=2.2 0.4nm,0.8s						
BRTR	**Keskin Array B**	**149.32**	**317**	PKPbc	**PKiKP**	**10 26 36.0**	**+1.3**
	0.7nm,0.7s,baz=112,slow=3.2,SNR=6.2						

*TAP **31** 10:07:58.6, 23°.99N×121°.03E, h14km, ML3.6, A*
*JMA **31** 10:07:58.9±0.2, 24°.0N±0°.5×12°1E±°, h4km, TAIWAN REGION*

ISC 31 10:07:59.3±0.8, 23°.998N±0°.010×121°.02E±0°.01, h18km±3km, n192, σ0°.91/353, 2C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WPL	**Puli Township**	**0.06**	**284**	⇑*i*P	**Pg**	**10 08 02.1**	**-0.5**
WPL				S	**Sg**	**10 08 03.8**	**-1.1**
DPDB	**Guoxing**	**0.09**	**293**	⇑P	**Pg**

NNSH	Datong	0.54	38	P	Pg	10 08 09.6	-0.6
NNSH				eS	Sg	10 08 16.8	-0.8
NNS	Nan Shan	0.55	36	P	Pg	10 08 09.8	-0.6
NNS				S	Sb	10 08 18.0	-0.1
TEYL	Yanliau Villag	0.55	104	*i* P	Pb	10 08 10.4	0.0
TEYL				eS	Sn	10 08 20.5	-0.5
NACB	Ninganchiao	0.56	72	P	Pg	10 08 09.7	-0.7
NACB	Ninganchiao	0.56	72	S	Sb	10 08 18.4	+0.2
NACB	Ninganchiao	0.56	72	*i* P	Pg	10 08 10.0	-0.4
NACB				S	Sb	10 08 18.0	-0.2
TEGC	Jichi Village	0.56	121	P	Pb	10 08 11.1	+0.5
TEGC				S	Sb	10 08 20.0	+1.8
EHY	Hungye	0.56	150	eP	Pb	10 08 10.5	-0.2
EHY				S	Sb	10 08 18.3	-0.1
NMLH	Miaoli	0.57	339	⇓P	Pb	10 08 11.6	+0.7
NMLH				S	Sb	10 08 20.7	+2.0
ETL	Fush Village	0.58	74	eP	Pg	10 08 10.1	-0.7
ETL				eS	Sg	10 08 17.9	-0.7
EHYH	Wanrong	0.58	149	P	Pb	10 08 10.8	-0.3
EHYH				eS	Sg	10 08 18.3	-0.5
WRL	Guolierlin Hig	0.59	261	P	Pb	10 08 10.9	-0.2
WRL				eS	Sb	10 08 19.0	-0.2
RLNB	Erlin	0.61	260	eP	Pb	10 08 11.5	0.0
RLNB				*i* S	Sb	10 08 20.9	+1.2
HGSD	Ruisui	0.63	143	*i* P	Pb	10 08 12.2	+0.4
HGSD				eS	Sb	10 08 22.1	+1.9
NSTT	Nanjuang	0.63	359	*i* P	Pb	10 08 11.9	+0.1
NSTT				*i* S	Sb	10 08 20.4	+0.1
NFF	Wufeng Townshi	0.64	8	eP	Pb	10 08 11.8	-0.2
NFF				S	Sb	10 08 21.0	+0.4
LIOB	Emei	0.65	360	*i* P	Pb	10 08 12.3	+0.2
LIOB				S	Sb	10 08 21.1	+0.3
WTK	Tuku	0.65	242	P	Pb	10 08 11.9	-0.3
WTK				S	Sb	10 08 21.6	+0.7
YULB	Yu-li	0.66	157	P	Pg	10 08 11.7	-0.6
YULB	Yu-li	0.66	157	*i* P	Pb	10 08 12.0	-0.3
YULB				eS	Sb	10 08 21.4	+0.3
WCKO	Fanlu	0.67	214	eP	Pb	10 08 12.4	-0.1
WCKO				S	Sb	10 08 22.2	+0.7
CHN2	Minshiung	0.68	227	eP	Pb	10 08 12.6	-0.1
CHN2				eS	Sb	10 08 23.4	+1.7
WTCT	Ta-ch'eng	0.69	259	eP	Pg	10 08 10.8	-2.0
WTCT				eS	Sb	10 08 22.9	+1.0
TWF1	Yuli	0.69	158	*i* P	Pb	10 08 12.7	-0.2
TWF1				eS	Sg	10 08 21.8	-0.4
NJN	Zhunan	0.70	349	P	Pg	10 08 12.6	-0.5
NJN				S	Sb	10 08 24.0	+1.8
EYUL	Yuli	0.70	157	P	Pg	10 08 12.6	-0.6
EYUL				S	Sb	10 08 22.4	0.0
LATG	Datong	0.71	41	*i* P	Pg	10 08 12.4	-0.9
LATG				eS	Sg	10 08 21.9	-0.8
EHP	Heping Village	0.73	65	P	Pb	10 08 13.8	+0.3
EHP				S	Sb	10 08 24.6	+1.3
CHY	Chiayi	0.74	228	eP	Pb	10 08 13.7	0.0
CHY				*i* S	Sb	10 08 23.9	+0.6
EAHA	Aohua	0.74	63	eP	Pg	10 08 13.3	-0.5
EAHA				S	Sb	10 08 23.6	+0.2
NJD	Zhudong	0.74	5	P	Pb	10 08 14.5	+0.8
NJD				S	Sn	10 08 26.1	+0.4
NSK	Sanguang	0.74	25	eP	Pg	10 08 13.2	-0.7
NSK				eS	Sg	10 08 22.5	-1.3
YHNB	Yeheng	0.74	26	P	Pg	10 08 13.1	-0.9
YHNB	Yeheng	0.74	26	*i* P	Pg	10 08 13.3	-0.6
YHNB				eS	Sg	10 08 22.5	-1.4
WMLT	Mailiao	0.75	255	P	Pb	10 08 13.9	0.0
WMLT				S	Sb	10 08 24.7	+0.9
CHN4	Tsaushan	0.75	211	eP	Pb	10 08 13.8	+0.8
CHN4				eS	Sn	10 08 26.6	+0.5
NDT	Datong Townshi	0.75	37	P	Pg	10 08 13.5	-0.6
NDT				S	Sb	10 08 25.0	+1.1
HSN1	Hsinchu	0.78	0	P	Pn	10 08 15.3	-0.1
HSN1				eS	Sn	10 08 27.2	+0.6
TPUB	Ta-pu	0.78	207	P	Pg	10 08 14.0	-0.6
TPUB	Ta-pu	0.78	207	P	Pb	10 08 14.2	-0.2
TPUB				S	Sb	10 08 25.3	+0.6
ECBN	Changbin	0.79	150	eP	Pn	10 08 16.6	+1.1
ECBN				eS	Sn	10 08 27.6	+0.8
ENA	Nanau	0.79	57	⇓eP	Pg	10 08 12.2	-2.6
KSHI	Guanxi Townshi	0.79	11	eP	Pn	10 08 15.8	+0.2
KSHI				eS	Sn	10 08 27.7	+0.7
SBCB	Hsinchu	0.79	358	eP	Pn	10 08 15.7	+0.1
SBCB				eS	Sn	10 08 27.6	+0.6
HSN	Hsinchu	0.80	357	eP	Pn	10 08 15.7	-0.1
HSN				*i* S	Sn	10 08 27.9	+0.6
ELDTW	Lidau	0.81	180	P	Pb	10 08 15.8	+0.1
ELDTW				S	Sb	10 08 25.7	+0.2
WSF	Szhu	0.81	244	*i* P	Pb	10 08 14.8	-0.1
WSF				*i* S	Sb	10 08 26.6	+1.0
EWUT	Wuta	0.82	57	eS	Sg	10 08 25.5	-0.9
FULB	Fuli	0.83	162	*i* P	Pn	10 08 16.2	-0.1
FULB				eS	Sn	10 08 28.9	+0.8
WTP	Ta-pu	0.83	206	eP	Pb	10 08 15.4	+0.1
WTP				S	Sb	10 08 27.2	+0.9
STYH	Taoyuan	0.85	195	eP	Pb	10 08 15.7	+0.1
STYH				S	Sb	10 08 27.5	+0.7
EHD	Haiduan	0.86	168	eP	Pb	10 08 16.1	+0.3
EHD				eS	Sb	10 08 28.4	+1.3
STYT	Tauyuan	0.86	196	P	Pb	10 08 15.9	+0.1
STYT				S	Sb	10 08 27.4	+0.3
WSL	Shuilin Townsh	0.86	237	P	Pg	10 08 15.6	-0.6
WSL				eS	Sb	10 08 28.4	+1.3
CHKH	Chenggong	0.87	157	P	Pn	10 08 16.4	+0.1
CHKH				eS	Sn	10 08 30.6	+1.6
TWK	Hsinying	0.88	214	P	Pn	10 08 16.9	+0.1
TWK				eS	Sn	10 08 29.8	+0.6
NWLT	Wulai	0.89	30	*i* P	Pg	10 08 15.9	-0.8
NWLT				eS	Sg	10 08 27.0	-1.6
NDS	Dongshan	0.90	45	*i* P	Pg	10 08 16.1	-0.7
NDS				eS	Sb	10 08 28.6	+0.5
SNST	Tainan City	0.91	212	P	Pb	10 08 17.0	+0.4
SNST				S	Sb	10 08 29.7	+1.3
ECS	Chishang	0.92	168	P	Pb	10 08 16.6	-0.1
ECS				S	Sn	10 08 30.2	+0.1
FUSB	Fushanzhiwuyua	0.92	34	eP	Pg	10 08 16.4	-0.9
FUSB				S	Sb	10 08 30.2	+1.5
CHN1	Nanshi	0.93	209	eP	Pb	10 08 17.4	+0.5
CHN1				*i* S	Sb	10 08 29.7	+0.8
ICHU	Yijhu	0.93	227	P	Pg	10 08 16.3	-1.1
ICHU				S	Sb	10 08 29.6	+0.7
CHKT	Chengkung	0.95	160	S	Pn	10 08 16.3	+0.2
CHKT				eS	Sn	10 08 32.2	+1.3
TWC	Suao	0.97	51	P	Pb	10 08 17.8	+0.1
TWC				eS	Sb	10 08 31.0	+0.8
NCUH	Zhongli	0.98	9	eP	Pn	10 08 19.7	+1.5
NCUH				S	Sn	10 08 31.9	+0.3
CHN8	Yiju	0.98	229	eP	Pg	10 08 17.3	-1.1
CHN8				*i* S	Sn	10 08 32.0	+0.2
SGST	Jiashian	0.99	204	eP	Pb	10 08 18.1	+0.1
SGST				*i* S	Sb	10 08 31.9	+1.1
NHW	Xinwu Township	1.00	2	P	Pb	10 08 18.6	+0.3
NHW				S	Sn	10 08 33.2	+0.9
ILA	Ilan	1.01	41	eP	Pn	10 08 20.6	+2.0
ILA				eS	Sn	10 08 34.1	+1.7
NTY	Taoyuan	1.03	14	P	Pg	10 08 18.6	-0.8
NTY				eS	Sn	10 08 34.3	+1.4
EDH	Donghe	1.05	165	P	Pg	10 08 18.8	-1.0
EDH				S	Sn	10 08 34.1	+0.6
SLGT	Liugui	1.06	199	P	Pg	10 08 18.8	-1.0
SLGT				S	Sn	10 08 34.0	+0.4
TATO	Taipei	1.06	24	P	Pn	10 08 19.7	+0.3
TATO	Taipei	1.06	24	S	Sb	10 08 33.8	+1.0
TATO	Taipei	1.06	24	P	Pb	10 08 19.4	+0.1
TATO				S	Sn	10 08 35.3	+1.6
NHDH	Xindian Distri	1.07	26	P	Pn	10 08 19.9	+0.5
NHDH				eS	Sn	10 08 36.5	+2.7
BACT	New Taipei Cit	1.07	21	P	Pg	10 08 19.0	-1.0
BACT				S	Sb	10 08 34.0	+1.1
SSHA	Shanhua	1.09	218	P	Pb	10 08 19.7	+0.1
SSHA				S	Sn	10 08 34.8	+0.5
LONT	Longtian	1.09	175	P	Pn	10 08 20.1	+0.4
LONT				S	Sn	10 08 35.1	+0.7
CHN3	Shinhua	1.10	213	P	Pg	10 08 19.8	-0.8
CHN3				eS	Sn	10 08 37.1	+2.6
TWA	Mucha	1.11	28	P	Pb	10 08 20.1	+0.2
TWA				eS	Sn	10 08 36.5	+1.7
SCLT	Jiali	1.11	223	P	Pg	10 08 20.0	-0.9
SCLT				eS	Sn	10 08 36.3	+1.3
TAP	Taipei	1.13	23	P	Pb	10 08 19.6	-0.7
TAP				S	Sn	10 08 36.3	+1.0
SHHT	Tainan City	1.15	212	P	Pb	10 08 20.5	-0.2
SHHT				S	Sn	10 08 37.2	+1.3
NHY	Taipei	1.15	26	P	Pb	10 08 20.1	-0.6
NHY				S	Sn	10 08 36.6	+0.7
TWS1	Kuangyinshan	1.16	18	eP	Pn	10 08 21.4	+0.7
TWS1				*i* S	Sn	10 08 37.3	+1.3
TWG	Pinlang	1.17	178	eP	Pn	10 08 21.8	+0.9
TWG				*i* S	Sn	10 08 37.7	+1.3
TWGBT	Beinan	1.18	177	P	Pn	10 08 21.4	+0.5
TWGBT	Beinan	1.18	177	S	Sn	10 08 38.1	+1.6
TWGBT	Beinan	1.18	177	eP	Pn	10 08 21.9	+1.0
TWGBT				S	Sn	10 08 37.9	+1.4
EOS2	EOS2	1.19	69	eP	Pg	10 08 22.5	+0.3
EOS2				eS	Sn	10 08 38.9	+2.3
EGS		1.19	44	eS	Sn	10 08 38.6	+1.9
EOS4	EOS4	1.20	84	eP	Pg	10 08 22.2	-0.2
EOS4				S	Sn	10 08 38.1	+1.6
TAI1	Yung-k'ang	1.20	217	eP	Pb	10 08 19.1	-2.4
TAI1				eS	Sn	10 08 39.8	+2.8
TSCK	Chigu Township	1.20	225	eP	Pb	10 08 21.0	-0.6
TSCK				S	Sg	10 08 37.7	-0.6
SCST	Cishan	1.21	204	P	Pg	10 08 22.1	-0.6
SCST				S	Sn	10 08 38.4	+1.2
TIPB	Shuangxi	1.22	37	eP	Pg	10 08 22.7	-0.2
EOS3	EOS3	1.22	76	P	Pg	10 08 22.4	-0.5
EOS3				S	Sg	10 08 38.1	-0.8
NTST	Danshui	1.23	19	P	Pn	10 08 22.1	+0.5
NTST				S	Sn	10 08 38.9	+1.1
TTN	Taitung	1.24	174	eP	Pn	10 08 20.7	-1.1
TAI	Tainan	1.25	217	P	Pn	10 08 21.9	-0.1
TAI				eS	Sb	10 08 38.2	0.0
ZUZH	Zhuzihu	1.25	22	eP	Pn	10 08 22.3	+0.1
ZUZH				*i* S	Sb	10 08 38.8	+0.5
ANP	Anpu	1.27	21	eP	Pn	10 08 20.8	-1.5
ANP				eS	Sb	10 08 38.3	-0.5
WFSB	Wu-fen Shan	1.27	33	eP	Pg	10 08 24.9	+1.0
TWM1	Shoushan	1.29	205	P	Pn	10 08 22.2	-0.3
YM08	YM08	1.29	24	eP	Pg	10 08 23.8	-0.6
YM08				eS	Sb	10 08 38.8	-0.7
SSD	Sandimen	1.30	196	eP	Pg	10 08 23.7	-0.6
SSD				eS	Sn	10 08 40.9	+1.4
TSMG	Majia	1.33	195	eP	Pg	10 08 24.2	-0.8
TSMG				eS	Sg	10 08 42.2	-0.3
TNOU	National Taiwa	1.34	31	P	Pb	10 08 24.0	+0.1
TNOU				S	Sb	10 08 41.3	+0.6
TWB1	Santiao Chiao	1.34	41	eP	Pg	10 08 25.3	+0.2
SXI1	Grass Mountain	1.34	35	eP	Pg	10 08 24.9	-0.3
TWY	Chenhua	1.38	22	P	Pn	10 08 23.9	+0.2
TWY				eS	Sg	10 08 43.5	-0.4
LDUT	Ludao	1.38	162	⇓P	Pn	10 08 22.9	-0.9
LDUT				S	Sb	10 08 41.7	-0.3
ECL	Taimali	1.40	182	eP	Pg	10 08 25.6	-0.7
ECL				eS	Sg	10 08 43.6	-0.9
PNG	Penghu	1.41	253	eP	Pn	10 08 23.9	-0.2
PNG				*i* S	Sn	10 08 42.1	-0.1
PHUB	P'eng-hu	1.41	250	eP	Pn	10 08 23.8	-0.3
PHUB				eS	Sn	10 08 43.0	+0.7
MASBT	Mashibuluo	1.42	194	eP	Pg	10 08 25.9	-0.9
MASBT				eS	Sg	10 08 45.5	+0.1
WDGT	Dungji	1.45	240	eP	Pn	10 08 24.7	+0.1
WDGT				*i* S	Sn	10 08 43.5	+0.3
SSPT	Xinbi	1.56	195	P	Pn	10 08 26.9	+0.6
SSPT				eS	Sg	10 08 48.4	-1.4
EAST	Anshuo	1.61	186	eP	Pb	10 08 29.0	+0.3
TAW	Tawu	1.64	184	P	Pn	10 08 27.9	+0.6
TAW				S	Sn	10 08 48.5	+0.7
TAWH	Dawu Township	1.66	184	P	Pn	10 08 28.7	+1.2
TAWH				S	Sn	10 08 49.4	+1.1
VCHM	Qimei	1.66	242	P	Pn	10 08 27.8	+0.3
VCHM				S	Sn	10 08 48.6	+0.3
SCZT	Fangliau	1.66	193	eP	Pb	10 08 29.5	+0.1
VWUC	VWUC	1.74	305	eP	Pn	10 08 27.0	-1.6
VWUC				eS	Sn	10 08 50.2	-0.1
WLCH	Liuqiu	1.74	200	P	Pn	10 08 28.4	-0.3
WLCH				eS	Sn	10 08 51.0	+0.6
TWP	Hsiaoliuchiu	1.75	200	eP	Pn	10 08 29.5	+0.6
SLIU	Shizi	1.79	187	eP	Pn	10 08 30.1	+0.8
SLIU				S	Sn	10 08 52.8	+1.3
YOJ	Yonaguni jima	1.88	75	P	Pn	10 08 31.0	+0.4
YOJ	Yonaguni jima	1.88	75	S	Sb	10 08 56.5	+0.2
YOJ	Yonaguni jima	1.88	75	eP	Pn	10 08 28.1	-2.5
PCYT	Pengchaiyu	1.89	30	P	Pn	10 08 31.4	+0.7
PCYT				S	Sn	10 08 55.2	+1.2
HEN	Hengchun	2.00	187	P	Pn	10 08 33.2	+1.0
LAY	Lan-yu	2.01	166	eP	Pn	10 08 32.3	+0.1
LAY				eS	Sn	10 08 57.6	+0.4
PTMZ	Houxiangcun	2.02	301	eP	Pn	10 08 30.7	-1.8
LYUB	Lan-yu	2.05	165	eP	Pn	10 08 32.7	-0.3
LYUB				eS	Sn	10 08 58.8	+0.6
TWKBT	Hengchun	2.06	185	P	Pn	10 08 33.3	+0.3
TWKBT				eS	Sn	10 08 59.8	+1.5
TSEB	Hengchuen, Pin	2.09	183	P	Pn	10 08 33.6	+0.2
TSEB				S	Sn	10 08 59.9	+0.8
MSUT	Lienchiang	2.38	336	P	Pn	10 08 37.6	+0.2
MSUT				eS	Sn	10 09 04.9	-1.3
KNM	Kinmen	2.40	281	eP	Pn	10 08 38.4	+0.7
KNM				eS	Sn	10 09 09.2	+2.6
KNMB	Chin-men Tao	2.44	281	eP	Pn	10 08 36.4	-2.0
MHZQ	Yeshan	2.76	320	eP	Pn	10 08 42.6	-0.1
MHZQ				eS	Sn	10 09 14.4	-1.3
LYJJ	Jianjiangzhen	2.78	336	eP	Pn	10 08 43.9	+0.8
LYJJ				eS	Sn	10 09 15.0	-1.2
AXDP	Jialang	2.92	289	eP	Pn	10 08 43.2	-1.7
AXDP				eS	Sn	10 09 18.6	-0.9
ZPLA	Ao Xicun	2.99	269	eP	Pn	10 08 44.8	-1.1
ZPLA				eS	Sn	10 09 20.1	-1.2
XPSS	Dashiqiu	3.01	346	eP	Pn	10 08 45.7	-0.5
SXFK	Yanhouchang	3.88	309	eP	Pn	10 08 59.2	+1.1
SXFK				eS	Sn	10 09 42.0	-1.3
JOW	Kunigami	7.14	65	eP	Pn	10 09 43.3	+0.4

IDC 31 10:15:58.2±1.9, 7°.07S×151°.89E, h0km, mb3.6/3, mbtmp3.7/4, ML1.6/1, Error ellipse: s-maj=98.3km s-min=24.6km az=135.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.22	243	Pn	Pn	10 17 18.7	+1.1
	1.4nm,0.3s,baz=6.8,slow=15,SNR=1.9						
PMG				Sn	Sn	10 18 20.6	+2.0
	4.9nm,0.3s,baz=325,slow=22,SNR=6.8						
	6.7nm,0.3s						
WRA	**Warramunga Arr**	21.30	231	P	P	10 20 47.4	+0.7
	0.8nm,0.8s,baz=54,slow=9.8,SNR=6.7						
	0.8nm,0.8s						
ASAR	**Alice Springs**	23.89	224	P	P	10 21 12.7	-1.1
	1.3nm,0.5s,baz=58,slow=9.3,SNR=39						
	1.3nm,0.5s						
ILAR	**Eielson Array**	84.59	22	P	P	10 28 33.4	+0.2
	0.6nm,0.7s,baz=267,slow=6.2,SNR=8.0						
	0.6nm,0.7s						

IDC 31 10:19:39.9±2.1, 15°.77S×176°.53W, h0km, mb3.6/4, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=197.0km s-min=26.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	4.95	69	Pn	Pn	10 20 54.8	-0.8
	3.2nm,0.3s,baz=129,slow=3.9,SNR=5.3						
AFI				Sn	Sn	10 21 44.5	-9.2
	1.8nm,0.3s,baz=202,slow=22,SNR=1.4						
	20nm,0.6s						
ASAR	**Alice Springs**	47.13	252	P	P	10 28 14.1	-0.3
	0.9nm,0.7s,baz=87,slow=8.1,SNR=10						
	0.9nm,0.7s						
NVAR	**Mina Array Bea**	76.64	43	P	P	10 31 33.1	0.0
	0.3nm,0.5s,baz=243,slow=4.9,SNR=4.4						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	83.33	57	P	P	10 32 10.3	+1.1
	0.1nm,0.7s,baz=251,slow=4.9,SNR=4.1						
	0.1nm,0.7s						
PDAR	**Pinedale Array**	84.56	43	P	P	10 32 14.9	-0.6
	0.4nm,0.7s,baz=260,slow=6.9,SNR=4.5						
	0.4nm,0.7s						

*IDC **31** 10:23:25.5±1.5, 2°.64N×66°.50E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=46.3km s-min=31.7km az=34.0*

*NEIC **31** 10:23:27.1±0.8, 2°.6N±0°.2×66°.5E±0°.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=26.2km s-min=18.7km az=199.0*

ISC 31 10:23:27.5±0.9, 2°.6N±0°.1×66°.5E±0°.1, h20km, n38, σ0s.68/32, mb4.3/13, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	6.84	107	Pn	Pn	10 25 07.1	+0.3
HYB	**Hyderabad**	18.94	38	eP	P	10 27 47.2	-0.3
HYB				eS	S	10 31 22.7	+0.8
GAR	**Garm**	36.43	5	P	P	10 30 29.9	-1.2
GAR				IAmb	IAmb	10 30 34.2	
	comp=Z,15nm,1.4s						
BTK	**Batken**	37.53	5	P	P	10 30 39.7	-0.6
BTK				IAmb	IAmb	10 30 48.0	
	comp=Z,7.2nm,1.5s						
AB31	**Akbulak array**	46.85	354	P	P	10 31 56.2	+0.1
AB31				IAmb	IAmb	10 31 58.7	
	comp=Z,6.8nm,1.5s						
ABKAR	**Akbulak array**	46.85	354	P	P	10 31 56.1	0.0
BR131	**Keskin Array S**	47.49	325	P	P	10 32 02.1	+0.6
BRTR	**Keskin Array B**	47.49	325	P	P	10 32 02.3	+0.8
	comp=Z,0.4nm,0.8s,baz=140,slow=9.3,SNR=2.9						
	comp=Z,0.4nm,0.8s						
BRTR	**Keskin Array B**	47.49	325	P	P	10 32 01.7	+0.2
KURBB	**Kurchatov Arra**	48.96	10	P	P	10 32 13.3	+0.9
	comp=Z,0.8nm,1.0s,baz=204,slow=7.7,SNR=2.8						
	comp=Z,0.8nm,1.0s						
KURK	**Kurchatov**	49.07	10	P	P	10 32 13.2	0.0
ENH	**Enshi**	49.14	51	P	P	10 32 13.8	-0.5
H04N2	**CROZET ISLANDS**	50.23	193	T	T	11 26 18.8	
	baz=19,slow=75,SNR=21						
H04N1	**CROZET ISLANDS**	50.23	193	T	T	11 26 19.9	
	baz=19,slow=75,SNR=24						
H04N3	**CROZET ISLANDS**	50.25	193	T	T	11 26 18.9	
	baz=19,slow=75,SNR=28						
ZAA0	**Zalesovo Array**	53.39	13	P	P	10 32 45.4	-0.2
ZAA0				IAmb	IAmb	10 32 46.4	
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	53.39	13	P	P	10 32 45.4	-0.2
	comp=Z,1.2nm,0.6s,baz=194,slow=10,SNR=2.0						
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	53.39	13	P	P	10 32 45.7	+0.1
SONM	**Songino Array**	56.70	31	P	P	10 33 10.5	+0.7
	comp=Z,0.8nm,0.9s,baz=225,slow=8.2,SNR=5.7						
	comp=Z,0.8nm,0.9s						
H01W3	**Cape Leeuwin H**	58.14	134	T	T	11 36 13.2	
	baz=300,slow=75,SNR=6.5						
H01W2	**Cape Leeuwin H**	58.15	134	T	T	11 36 13.8	
	baz=300,slow=75,SNR=7.7						
H01W1	**Cape Leeuwin H**	58.16	134	T	T	11 36 13.4	
	baz=300,slow=75,SNR=8.3						
FDMO	**Fiordimonte**	62.15	318	P	P	10 33 48.4	+0.9
FDMO				IAmb	IAmb	10 33 49.4	
	comp=Z,5.0nm,1.1s						
TEOL	**Teolo**	64.05	320	P	P	10 34 00.1	0.0
GEC2	**GERESS Array S**	64.36	324	P	P	10 34 02.2	+0.1
GEC2				IAmb	IAmb	10 34 12.3	
	comp=Z,3.9nm,1.5s						
GERES	**GERESS Array B**	64.36	324	P	P	10 34 02.1	0.0
JSU	**Suzuyama**	66.58	57	P	P	10 34 17.0	+0.2
HFS	**Hagfors**	70.06	335	P	P	10 34 38.2	+0.3
	comp=Z,3.4nm,0.8s,baz=141,slow=7.3,SNR=3.9						
	comp=Z,3.4nm,0.8s						
ASAR	**Alice Springs**	70.50	116	P	P	10 34 42.2	+0.8
	comp=Z,0.6nm,0.8s,baz=268,slow=5.6,SNR=3.6						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	70.50	116	P	P	10 34 41.5	+0.1
AS31	**Alice Springs**	70.50	116	P	P	10 34 41.3	-0.1
ESDC	**Sonseca Array**	73.35	311	P	P	10 34 59.0	+0.8
	comp=Z,2.1nm,0.9s,baz=83,slow=4.3,SNR=9.8						
	comp=Z,2.1nm,0.9s						
PDAR	**Pinedale Array**	134.73	356	PKP	PKiKP	10 42 46.4	-0.5
	comp=Z,0.5nm,1.0s,baz=318,slow=3.2,SNR=2.7						
NVAR	**Mina Array Bea**	138.97	6	PKhKP	PKPpre	10 42 46.2	
	comp=Z,0.4nm,0.7s,baz=332,slow=3.9,SNR=3.9						
MNTX	**Cornudas Mount**	145.06	348		PKPbc	10 43 02.1	-1.5
CBX	**Cerro Bola**	145.18	5	PKPbc	PKPbc	10 43 02.9	-1.2
TUC	**Tucson**	145.22	356	PKPbc	PKPbc	10 43 02.7	-1.4
TXAR	**Lajitas Array**	146.90	344	PKPbc	PKiKP	10 43 11.5	-0.5
	comp=Z,3.3nm,0.9s,baz=61,slow=2.3,SNR=32						

*GCG **31** 10:26:56.6±1.7, 13°.90N×89°.46W, h13km±891km, MD3.5, Presumed earthquake*
*SNET **31** 10:26:56.4±1.1, 13°.93N×89°.44W, h6km±4km, ML1.6, Presumed earthquake*
*CATAC **31** 10:26:57.1±0.3, 14°.1°×8°.9W±°., h4km±1km, M2.1/11, MLv2.1/11, Error ellipse: s-maj=2.9km s-min=2.0km az=43.9, confirmed*

ISC 31 10:26:56.8±0.8, 13°.92N±0°.02×89°.43W±0°.02, h10km±6km, n33, σ0s.56/52, 2C-4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEDA	**San Andres**	0.12	164	P	Pg	10 26 59.6	-0.2
CEDA	**San Andres**	0.12

ISC 31 10:28:42.2±1.4, 7.70S±0.10×128.5E±0.1, h151km, n6, σ2°83/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.40**	**242**	P	**Pn**	**10 30 01.4**	**+0.4**
	99nm,0.7s,baz=126,slow=1.4,SNR=20						
BATI				S	**Sn**	**10 31 01.7**	**-0.9**
	27nm,0.3s,baz=52,slow=23,SNR=5.5						
FITZ	**Fitzroy Crossi**	**10.71**	**195**	P	**Pn**	**10 31 13.5**	**+1.9**
	2.9nm,0.3s,baz=16,slow=11,SNR=28						
FITZ				S	**Sn**	**10 33 08.8**	**-1.3**
	7.8nm,0.7s,baz=292,slow=21,SNR=8.9						
WRA	**Warramunga Arr**	**13.42**	**156**	P	**P**	**10 31 50.4**	**-0.5**
	0.2nm,0.3s,baz=332,slow=13,SNR=12						
WRA				S	**Sn**	**10 34 11.2**	**-4.2**
	1.9nm,0.7s,baz=328,slow=21,SNR=8.1						
ASAR	**Alice Springs**	**16.70**	**163**	P	**Pn**	**10 32 32.7**	**+5.2**
	0.7nm,0.6s,baz=336,slow=9.7,SNR=16						
ASAR				S	**S**	**10 35 31.8**	**-1.4**
	0.6nm,0.5s,baz=316,slow=22,SNR=5.0						
MKAR	**Makanchi Array**	**68.01**	**328**	P	**P**	**10 39 23.8**	**-1.3**
	0.5nm,0.5s,baz=124,slow=7.7,SNR=6.7						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**72.34**	**329**	P	**P**	**10 39 50.6**	**-0.7**
	0.6nm,0.3s,baz=129,slow=4.9,SNR=5.9						
	0.6nm,0.3s						

*IDC **31** 10:35:26.4±1.9, 6.79S×129.21E, h198km±23km, mb3.2/1, mbtmp4.2/6, Error ellipse: s-maj=32.0km s-min=16.3km az=88.0*

ISC 31 10:35:22.0±0.9, 6.89S±0.06×129.2E±0.1, h150km, n6, σ2°28/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.33**	**19**	P	**Pn**	**10 36 56.5**	**+3.3**
	5.1nm,0.2s,baz=211,slow=23,SNR=8.2						
SIJI				S	**Sn**	**10 38 01.9**	**-2.7**
	23nm,0.2s,baz=239,slow=22,SNR=12						
BATI	**Baumata**	**6.38**	**239**	P	Pn	10 36 59.0	+5.0
	33nm,0.4s,baz=173,slow=15,SNR=2.7						
BATI				S	**Sn**	**10 38 05.7**	**-0.3**
	22nm,0.4s,baz=283,slow=20,SNR=2.2						
FITZ	**Fitzroy Crossi**	**11.67**	**197**	P	**P**	**10 38 09.9**	**-1.4**
	3.3nm,0.3s,baz=12,slow=9.8,SNR=22						
FITZ				S	**Sn**	**10 40 15.7**	**+2.6**
	1.8nm,0.4s,baz=299,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**13.90**	**159**	P	**P**	**10 38 34.7**	**-1.5**
	1.5nm,0.3s,baz=337,slow=12,SNR=17						
WRA				S	**Sn**	**10 41 05.9**	**-1.1**
	0.9nm,0.3s,baz=333,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**17.29**	**165**	P	**Pn**	**10 39 16.4**	**+1.9**
	4.9nm,0.5s,baz=345,slow=10,SNR=60						
ASAR				S	**S**	**10 42 25.8**	**-0.3**
	0.4nm,0.5s,baz=316,slow=16,SNR=4.4						
MKAR	**Makanchi Array**	**67.70**	**327**	P	**P**	**10 46 01.9**	**-1.3**
	0.3nm,0.3s,baz=116,slow=8.2,SNR=4.8						
	0.3nm,0.3s						

*HEL **31** 10:44:49.4±0.0, 64.30N×26.71E, h0km, ML0.7, Explosion*
*IDC **31** 10:44:50.5±1.4, 64.26N×27.03E, h0km, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=51.1km s-min=10.2km az=92.0*

ISC 31 10:44:47.7±0.8, 64°29N±0°03×26°70E±0°03, h0km, n15, σ0°81/28, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUF	**Merijarvi**	**0.86**	**276**	*e*P	**Pb**	**10 45 05.0**	**-0.5**
OUF				*e*S	**Sb**	**10 45 16.1**	**-1.4**
OBF4	**Vikkela, Lumij**	**0.87**	**308**	*e*P	**Pb**	**10 45 04.9**	**-0.7**
OBF4				*e*S	**Sg**	**10 45 16.1**	**+0.5**
OUL	**Oulu**	**0.87**	**337**	*e*P	**Pb**	**10 45 04.8**	**-0.8**
OUL				*e*S	**Sg**	**10 45 15.8**	**+0.1**
NIF	**Nilsia**	**1.03**	**151**	*e*P	**Pb**	**10 45 08.1**	**-0.2**
NIF				*e*S	**Sb**	**10 45 21.4**	**-0.9**
OBF0	**Syolatti, Pyha**	**1.09**	**282**	*e*P	**Pb**	**10 45 08.9**	**-0.5**
OBF0				*e*S	**Sg**	**10 45 23.0**	**+0.3**
RMF	**Romuvaara**	**1.41**	**91**	*e*P	**Pb**	**10 45 14.5**	**-0.3**
RMF				*e*S	**Sg**	**10 45 32.6**	**-0.4**
KU2	**Taivalkoski**	**1.57**	**24**	*e*P	**Pb**	**10 45 17.1**	**-0.5**
KU2				*e*S	**Sn**	**10 45 37.1**	**-0.7**
SUF	**Sumiainen**	**1.59**	**189**	*e*P	**Pg**	**10 45 18.0**	**-0.1**
SUF				*e*S	**Sg**	**10 45 38.9**	**+0.1**
SUF				smax	smax	10 45 39.9	
	comp=Z,0.2nm,0.1s						
RANF	**Ranua**	**1.74**	**1**	*e*P	**Pb**	**10 45 19.9**	**-0.5**
RANF				*e*S	**Sn**	**10 45 41.8**	**-0.1**
KU1	**Kurvinen**	**1.77**	**42**	*e*P	**Pb**	**10 45 20.2**	**-0.7**
KU1				*e*S	**Sb**	**10 45 43.0**	**-0.6**
KU1				smax	smax	10 45 44.2	
	comp=Z,0.3nm,0.1s						
TOF	**Tornio**	**2.06**	**332**	*e*PB	**Pb**	**10 45 25.1**	**-0.8**
TOF				*e*S	**Sb**	**10 45 50.9**	**-1.1**
TOF				smax	smax	10 45 53.0	
	comp=Z,0.3nm,0.1s						
KU6	**Riekki**	**2.21**	**36**	*e*PB	**Pb**	**10 45 27.6**	**-0.8**
KU6				*e*SB	**Sb**	**10 45 55.5**	**-0.7**
KU6				smax	smax	10 46 00.0	
	comp=Z,0.3nm,0.1s						
FINES	**FINESS Array B**	**2.87**	**186**	Pn	**Pb**	**10 45 38.8**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=12,slow=14,SNR=28						
FINES				Sn	**Sb**	**10 46 14.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=12,slow=23,SNR=15						
	comp=Z,3.2nm,0.4s						
ARCES	**ARCESS Array B**	**5.29**	**355**	Pn	**Pn**	**10 46 10.3**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=1.0						
ARCES				Sn	**Sn**	**10 47 09.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=180,slow=22,SNR=1.5						
ARCES				Lg	Lg	10 47 30.6	
	comp=Z,0.1nm,0.3s,baz=175,slow=31,SNR=1.8						
	comp=Z,0.8nm,0.8s						
I37NO	**I37NO**	**5.78**	**330**	I	I	11 21 20.0	
	baz=144,slow=328,SNR=3.0						

*BGR **31** 10:47:21.9, 17.44S×177.79W, h530km*
*NEIC **31** 10:48:18.4±1.4, 17.8S±0.1×178.8W±0.1, h531km±6km, mb4.5/378, Error ellipse: s-maj=15.9km s-min=13.3km az=147.0*
*GFZ **31** 10:48:18.1±0.1, 18°S±3°×17°9W±°, h532km, M4.6/35, mb4.6/35*
*NOU **31** 10:48:18.9, 17.83S×178.68W, h539km, ML4.3/73, Fiji Islands Region*
*IDC **31** 10:48:20.2±0.7, 17.88S×178.88W, h557km±6km, mb3.9/23, mbtmp4.7/26, Error ellipse: s-maj=10.8km s-min=8.5km az=151.0*

ISC 31 10:48:19.2±0.3, 17.80S±0.06×178.72W±0.05, h550km, n805, σ0°80/665, mb4.5/207, 18C-33D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.44**	**192**	P	**P**	**10 49 23.3**	**-1.2**
LKBA	**Tubou, Lakemba**	**0.44**	**192**	S	**S**	**10 50 15.9**	**-1.8**
TAVE	**Taveuni**	**1.57**	**314**	P	**P**	**10 49 26.7**	**-0.6**
TAVE	**Taveuni**	**1.57**	**314**	S	**S**	**10 50 21.7**	**-0.8**
DGTI	**Dogotuki**	**2.10**	**315**	P	**P**	**10 49 27.7**	**-1.8**
DGTI	**Dogotuki**	**2.10**	**315**	S	**S**	**10 50 25.2**	**-1.3**
MSVF	**Nonsavu**	**3.08**	**271**	P	**P**	**10 49 34.9**	**0.0**
MSVF	**Nonsavu**	**3.08**	**271**	P	**P**	**10 49 35.1**	**+0.2**
	88nm,0.8s,baz=110,slow=5.5,SNR=43						
MSVF				S	**S**	**10 50 37.4**	**+1.0**
	48nm,1.0s,baz=118,slow=24,SNR=22						
FUTU	**Fugatoga**	**3.52**	**9**	P	**P**	**10 49 36.1**	**-1.7**
FUTU	**Fugatoga**	**3.52**	**9**	P	**P**	**10 49 35.9**	**-1.9**
FUTU	**Fugatoga**	**3.52**	**9**	P	**P**	**10 49 36.2**	**-1.5**
AFI	**Afiamalu**	**7.72**	**61**	P	P	10 50 10.5	-3.8
	166nm,0.6s,baz=63,slow=2.2,SNR=20						
AFI				S	**S**	**10 51 42.1**	**-6.5**
	11nm,0.4s,baz=263,slow=23,SNR=1.3						
NIUE	**Niue**	**8.44**	**100**	P	**P**	**10 50 20.6**	**-0.7**
NIUE	**Niue**	**8.44**	**100**	S	**S**	**10 51 59.8**	**-1.7**
NIUE	**Niue**	**8.44**	**100**		**P**	**10 50 20.7**	**-0.7**
NIUE	**Niue**	**8.44**	**100**	P	**P**	**10 50 20.8**	**-0.6**
FUNA	**Funafuti**	**9.44**	**347**	P	**P**	**10 50 30.1**	**-1.5**
FUNA	**Funafuti**	**9.44**	**347**	P	**P**	**10 50 29.5**	**-2.1**
MARNC	**Mare, Loyalty**	**13.01**	**252**	P	**P**	**10 51 06.0**	**-2.2**
OUENC	**Ouen Island, N**	**14.32**	**249**	P	**P**	**10 51 20.8**	**-0.9**
DZM	**Mont Dzumac**	**14.59**	**251**	P	**P**	**10 51 22.8**	**-1.7**
	26nm,0.8s,baz=117,slow=23,SNR=15						
ONTNC	**Ouen Toro**	**14.64**	**250**	P	**P**	**10 51 23.2**	**-1.8**
NOUC	**Port Laguerre**	**14.72**	**251**	P	**P**	**10 51 25.4**	**-0.4**
KOUNC	**Koumac, New Ca**	**16.29**	**258**	P	**P**	**10 51 41.5**	**-0.1**
KOUNC	**Koumac, New Ca**	**16.29**	**258**	S	**S**	**10 54 28.4**	**+1.8**
KOUNC	**Koumac, New Ca**	**16.29**	**258**	P	**P**	**10 51 40.8**	**-0.8**
RAR	**Rarotonga**	**18.18**	**104**	P	**P**	**10 51 59.4**	**+0.6**
	19nm,0.9s,baz=247,slow=3.5,SNR=3.8						
RAR	**Rarotonga**	**18.18**	**104**		**P**	**10 51 59.6**	**+0.8**
OUZ	**Omahuta**	**18.65**	**200**	P	**P**	**10 52 03.6**	**+0.7**
URZ	**Urewera**	**20.71**	**189**	P	**P**	**10 52 19.8**	**-1.7**
URZ	**Urewera**	**20.71**	**189**	P	**P**	**10 52 19.3**	**-2.2**
	28nm,0.8s,baz=35,slow=3.8,SNR=9.7						
	28nm,0.8s						
URZ	**Urewera**	**20.71**	**189**	P	**P**	**10 52 19.6**	**-2.0**
BKZ	**Black Stump Fm**	**21.69**	**190**	P	**P**	**10 52 29.3**	**-1.2**
QRZ	**Quartz Range**	**24.15**	**196**	P	**P**	**10 52 52.3**	**0.0**
QRZ	**Quartz Range**	**24.15**	**196**	P	**P**	**10 52 51.7**	**-0.6**
KHZ	**Kahutara**	**25.41**	**193**	P	**P**	**10 53 02.1**	**-1.3**
RPZ	**Rata Peaks**	**27.24**	**196**	P	**P**	**10 53 18.4**	**-1.1**
PPT	**Papeete**	**27.75**	**94**	P	**P**	**10 53 24.8**	**+0.4**
	18nm,0.6s,baz=225,slow=11,SNR=6.6						
	18nm,0.6s						
PPTF	**Pamatai, Papee**	**27.76**	**94**	P	**P**	**10 53 24.7**	**+0.2**
PPTF	**Pamatai, Papee**	**27.76**	**94**	P	**P**	**10 53 23.8**	**-0.7**
TW1H	**Toowoomba 1 Ha**	**28.67**	**245**	P	**P**	**10 53 32.5**	**+0.2**
AUTOO	**Toowoomba Stat**	**28.67**	**245**	P	**P**	**10 53 33.3**	**+1.0**
EIDS	**Eidsvold**	**29.03**	**250**	P	**P**	**10 53 35.4**	**0.0**
EIDS	**Eidsvold**	**29.03**	**250**	P	**P**	**10 53 34.9**	**-0.5**
EIDS	**Eidsvold**	**29.03**	**250**	P	**P**	**10 53 34.5**	**-0.9**
ARMA	**Armidale**	**29.74**	**239**	P	**P**	**10 53 42.5**	**+0.9**
ARMA	**Armidale**	**29.74**	**239**	S	**S**	**10 58 00.0**	**+0.4**
ARMA	**Armidale**	**29.74**	**239**		**P**	**10 53 42.0**	**+0.3**
ARMA	**Armidale**	**29.74**	**239**	P	**P**	**10 53 42.2**	**+0.6**
AUPHS	**Peel High Scho**	**30.56**	**239**	P	**P**	**10 53 49.5**	**+0.9**
MGCD	**Mangrove Creek**	**31.12**	**235**	P	**P**	**10 53 53.0**	**-0.3**
RMQ	**Roma**	**31.27**	**248**	P	**P**	**10 53 54.1**	**-0.6**
SYDH	**Sydney Hard Ro**	**31.61**	**234**	P	**P**	**10 53 58.0**	**+0.6**
AULRC	**Lightning Ridg**	**32.52**	**243**	P	**P**	**10 54 05.7**	**+0.4**
AUDCS	**Dubbo College**	**32.74**	**238**	P	**P**	**10 54 08.4**	**+1.3**
CTA	**Charters Tower**	**33.18**	**260**	P	**P**	**10 54 11.3**	**+0.3**
CTA	**Charters Tower**	**33.18**	**260**	P	**P**	**10 54 10.2**	**-0.7**
	15nm,0.7s,baz=89,slow=11,SNR=9.7						
	15nm,0.7s						
CTAO	**Charters Tower**	**33.18**	**260**	P	**P**	**10 54 11.3**	**+0.3**
CTAO	**Charters Tower**	**33.18**	**260**	P	**P**	**10 54 10.8**	**-0.2**
CTAO	**Charters Tower**	**33.18**	**260**	P	**P**	**10 54 09.9**	**-1.1**
PATS	**Pohnpei**	**33.38**	**315**	P	**P**	**10 54 11.5**	**-1.2**
AUDAR	**Daramalan Coll**	**33.40**	**232**	P	**P**	**10 54 12.9**	**+0.2**
AUMHS	**Melrose High S**	**33.48**	**232**	P	**P**	**10 54 13.9**	**+0.5**
AUMTS	**Mt Stromlo**	**33.54**	**232**	P	**P**	**10 54 14.4**	**+0.6**
CAN	**Canberra**	**33.54**	**232**	P	**P**	**10 54 14.3**	**+0.5**
CAN	**Canberra**	**33.54**	**232**	P	**P**	**10 54 14.1**	**+0.3**
CAN	**Canberra**	**33.54**	**232**	P	**P**	**10 54 14.1**	**+0.3**
MILA	**Mila**	**34.13**	**229**	P	**P**	**10 54 18.4**	**-0.5**
PMG	**Port Moresby**	**34.15**	**280**	P	**P**	**10 54 18.4**	**-0.8**
CMSA	**Cobar Meteorol**	**34.95**	**240**	P	**P**	**10 54 25.9**	**+0.2**
CMSA	**Cobar Meteorol**	**34.95**	**240**	P	**P**	**10 54 25.3**	**-0.3**
MTSU	**Mount Surprise**	**35.13**	**264**	P	**P**	**10 54 28.1**	**+0.7**
MTSU	**Mount Surprise**	**35.13**	**264**	P	**P**	**10 54 25.9**	**-1.4**
QLP	**Quilpie**	**35.30**	**249**	P	**P**	**10 54 28.8**	**+0.2**
QLP	**Quilpie**	**35.30**	**249**	P	**P**	**10 54 28.3**	**-0.3**
JOHN	**Johnston Islan**	**35.49**	**15**	P	**P**	**10 54 29.8**	**-0.5**
GLAD	**Gladstone**	**36.72**	**224**	P	**P**	**10 54 40.4**	**+0.2**
COEN	**Coen**	**36.81**	**270**	P	**P**	**10 54 41.1**	**-0.2**
COEN					IAmb	IAmb	10 54 42.5
	comp=Z,11nm,0.8s						
COEN	**Coen**	**36.81**	**270**	P	**P**	**10 54 40.4**	**-0.9**
AUMAG	**Moama Anglican**	**37.04**	**233**	P	**P**	**10 54 43.2**	**+0.4**
CORO	**Coronation Par**	**37.52**	**224**	P	**P**	**10 54 46.8**	**+0.1**
MOO	**Moorlands**	**37.97**	**222**	P	**P**	**10 54 50.3**	**0.0**
TAU	**Tasmania Unive**	**38.12**	**222**	P	**P**	**10 54 51.7**	**+0.2**
TAU	**Tasmania Unive**	**38.12**	**222**	P	**P**	**10 54 50.9**	**-0.6**
BRAT	**Ballarat**	**38.16**	**231**	P	**P**	**10 54 52.4**	**+0.5**
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**10 54 54.5**	**+0.3**
	comp=Z,33nm,0.6s,baz=88,slow=9.4,SNR=80						
	comp=Z,33nm,0.6s						
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**10 54 54.7**	**+0.4**
INKA	**Innaminka**	**38.52**	**248**	P	**P**	**10 54 55.5**	**+0.5**
INKA					IAmb	IAmb	10 54 56.4
	comp=Z,15nm,0.9s						
QIS	**Mount Isa**	**39.39**	**259**	P	**P**	**10 55 01.1**	**-1.1**
HTT	**Hallett**	**40.95**	**239**	P	**P**	**10 55 15.3**	**+0.8**
AUMBR	**Murray Bridge**	**41.03**	**237**	P	**P**	**10 55 15.5**	**+0.5**
AUJCS	**Jamestown Cent**	**41.16**	**240**	P	**P**	**10 55 16.6**	**+0.5**
AUMAR	**Marden Senior**	**41.49**	**237**	P	**P**	**10 55 18.9**	**+0.2**
BBOO	**Buckleboo**	**43.20**	**241**	P	**P**	**10 55 32.2**	**0.0**
BBOO	**Buckleboo**	**43.20**	**241**		**P**	**10 55 32.0**	**-0.1**
BBOO	**Buckleboo**	**43.20**	**241**	P	**P**	**10 55 32.1**	**-0.1**
DAH	**Dandelion**	**43.31**	**33**	P	**P**	**10 55 33.5**	**-0.1**
KHLU	**Kahalu`u**	**43.40**	**32**	P	**P**	**10 55 34.2**	**+0.3**
KHLU	**Kahalu`u**	**43.40**	**32**	P	**P**	**10 55 33.8**	**-0.1**
KEKH	**Kekaha**	**43.70**	**26**	P	**P**	**10 55 35.1**	**-0.9**
POHA	**Pohakuloa**	**43.72**	**32**	P	**P**	**10 55 35.9**	**-0.7**
AUCAS	**Cummins Area S**	**43.72**	**239**	P	**P**	**10 55 36.7**	**+0.6**
JOKA	**Jonika Flow**	**43.72**	**33**	P	**P**	**10 55 36.5**	**+0.1**
HLK	**Haleakala**	**44.20**	**31**	P	**P**	**10 55 40.5**	**+0.2**
HLK	**Haleakala**	**44.20**	**31**	P	**P**	**10 55 40.4**	**+0.1**
WR8	**Warramunga Arr**	**44.21**	**259**	P	**P**	**10 55 39.0**	**-1.2**
WB0	**Warramunga Arr**	**44.33**	**260**	P	**P**	**10 55 40.0**	**-1.2**
WB0					IAmb	IAmb	10 55 40.8
	comp=Z,11nm,0.9s						
WRAB	**Tennant Creek**	**44.35**	**259**	P	**P**	**10 55 40.4**	**-0.9**
WRAB	**Tennant Creek**	**44.35**	**259**	P	**P**	**10 55 39.4**	**-1.9**
WRA	**Warramunga Arr**	**44.36**	**259**	P	**P**	**10 55 39.9**	**-1.5**
	comp=Z,7.6nm,0.8s,baz=96,slow=7.1,SNR=87						
WRA				S	**S**	**11 01 31.0**	**-5.3**
	comp=Z,1.6nm,0.9s,baz=92,slow=13,SNR=6.6						
	comp=Z,7.6nm,0.8s						
WRA	**Warramunga Arr**	**44.36**	**259**	P	**P**	**10 55 40.2**	**-1.2**
AS01	**Alice Springs**	**44.50**	**254**	P	**P**	**10 55 42.1**	**-0.3**
AS31	**Alice Springs**	**44.54**	**254**	P	**P**	**10 55 42.2**	**-0.5**
ASAR	**Alice Springs**	**44.54**	**254**	P	**P**	**10 55 42.1**	**-0.6**
	comp=Z,72nm,0.7s,baz=88,slow=8.2,SNR=1005						
ASAR				ScP	**ScP**	**11 00 14.8**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=105,slow=4.3,SNR=4.9						
ASAR				S	**S**	**11 01 35.0**	**-3.7**
	comp=Z,9.2nm,1.0s,baz=85,slow=16,SNR=33						
	comp=Z,72nm,0.7s						
ASAR	**Alice Springs**	**44.54**	**254**		**P**	**10 55 42.5**	**-0.3**
AUALC	**St Philip's Co**	**44.56**	**254**	P	**P**	**10 55 42.6**	**-0.2**
GUMO	**Guam**	**47.58**	**309**	P	**P**	**10 56 05.7**	**-0.1**
FORT	**Forrest**	**49.79**	**245**	P	**P**	**10 56 21.5**	**-0.5**
KNRA	**Kununurra**	**50.21**	**264**	P	**P**	**10 56 24.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.76**	**261**	P	**P**	**10 56 44.1**	**+0.5**
MBWA	**Marble Bar**	**57.82**	**256**	P	**P**	**10 57 18.6**	**-0.2**
KLBR	**Kellerberrin**	**58.62**	**243**	P	**P**	**10 57 24.3**	**+0.2**
MORW	**Morawa**	**60.26**	**246**	P	**P**	**10 57 34.9**	**-0.1**
MORW					IAmb	IAmb	10 57 36.3
	comp=Z,15nm,1.1s						
VNDA	**Vanda**	**60.53**	**185**	P	**P**	**10 57 37.0**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=10,slow=7.4,SNR=7.5						
	comp=Z,2.1nm,0.8s						
VNDA	**Vanda**	**60.53**	**185**	P	**P**	**10 57 37.1**	**+1.1**
JHJ2	**Mitsune**	**64.28**	**322**	P	**P**	**10 58 01.5**	**+0.7**
CASY	**Casey**	**66.11**	**205**	P	**P**	**10 58 12.3**	**+0.5**
JGF	**Kuroka**	**67.47**	**322**	P	**P**	**10 58 21.1**	**+0.3**
JGF					IAmb	IAmb	10 58 21.5
	comp=Z,9.2nm,0.8s						
MJAR	**Matsushiro Arr**	**67.65**	**324**	P	**P**	**10 58 21.3**	**-0.5**
	comp=Z,10nm,0.7s,baz=157,slow=6.2,SNR=40						
	comp=Z,10nm,0.7s						
MJAR	**Matsushiro Arr**	**67.65**	**324**		**P**	**10 58 21.6**	**-0.1**
MAJO	**Matsushiro**	**67.65**	**324**	P	**P**	**10 58 21.8**	**0.0**
MAJO	**Matsushiro**	**67.65**	**324**		**P**	**10 58 21.8**	**0.0**
MAJO					IAmb	IAmb	10 58 22.4
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	**67.65**	**324**	P	**P**	**10 58 21.7**	**-0.1**
MJB9	**Matsu-Tunnel**	**67.65**	**324**	P	**P**	**10 58 22.7**	**+0.9**
MJB9					IAmb	IAmb	10 58 23.4
	comp=Z,15nm,0.8s						
JMN	**Monobe**	**68.32**	**319**	P	**P**	**10 58 27.0**	**+1.0**
AMKA	**Amchitka**	**68.90**	**359**	P	**P**	**10 58 28.9**	**0.0**
JSU	**Suzuyama**	**69.15**	**315**	P	**P**	**10 58 30.2**	**-0.8**
JSU					IAmb	IAmb	10 58 32.3
	comp=Z,16nm,1.1s						
KIWB	**Kanaga Island**	**69.37**	**1**		**P**	**10 58 31.4**	**-0.4**
ADK	**Adak**	**69.41**	**1**		**P**	**10 58 31.6**	**-0.5**
GSTR	**Great Sitkin T**	**69.64**	**2**	P	**P**	**10 58 33.5**	**+0.1**
ATKA	**Atka Island**	**69.82**	**3**	P	**P**	**10 58 34.5**	**+0.1**
ATKA	**Atka Island**	**69.82**	**3**		**P**	**10 58 33.8**	**-0.6**
SHEM	**Shemya Is, Ala**	**70.51**	**355**	P	**P**	**10 58 38.0**	**-0.5**
SMY	**Shemya**	**70.51**	**355**	P	**P**	**10 58 38.0**	**-0.5**
JKA	**Kamikawa-asahi**	**71.04**	**332**		**P**	**10 58 43.0**	**+1.1**
JKA					IAmb	IAmb	10 58 43.9
	comp=Z,17nm,1.0s						
TPUB	**Ta-pu**	**71.95**	**303**	P	**P**	**10 58 47.4**	**-0.4**
UNV	**Unalaska Valle**	**72.12**	**8**	P	**P**	**10 58 47.3**	**-0.6**
UNV	**Unalaska Valle**	**72.12**	**8**	P	**P**	**10 58 47.6**	**-0.3**
	baz=192						
QSPA	**South Pole Qui**	**72.25**	**180**	P	**P**	**10 58 49.2**	**+0.3**
	comp=Z,13nm,0.9s,baz=29,slow=1.8,SNR=42						
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**72.25**	**180**	P	**P**	**10 58 49.8**	**+0.9**
QSPA					IAmb	IAmb	10 58 50.6
	comp=Z,15nm,0.9s						
PET	**Petropavlovsk**	**73.20**	**346**	P	**P**	**10 58 54.5**	**+0.4**
PEA0B	**Petropavlovsk-**	**73.50**	**345**	P	**P**	**10 58 56.4**	**+0.5**
PETK	**Petropavlovsk-**	**73.50**	**345**	P	**P**	**10 58 56.1**	**+0.2**
	comp=Z,15nm,0.8s,baz=130,slow=6.9,SNR=18						
	comp=Z,15nm,0.8s						
PETK	**Petropavlovsk-**	**73.50**	**345**	P	**P**	**10 58 56.6**	**+0.7**
CHNA	**Chernabura Isl**	**74.16**	**11**	P	**P**	**10 58 59.2**	**-0.3**
	baz=199						
KSRS	**Korea Array**	**74.43**	**318**	P	**P**	**10 59 02.1**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=137,slow=6.4,SNR=12						
	comp=Z,1.7nm,0.7s						
KSAR	**Wonju Array Be**	**74.44**	**318**		**P**	**10 59 01.8**	**+0.2**
SPIA	**Saint Paul Isl**	**75.03**	**5**	P	**P**	**10 59 04.3**	**0.0**
	baz=188						
INCN	**Inchon**	**75.27**	**318**	P	**P**	**10 59 06.7**	**+0.4**
INCN					IAmb	IAmb	10 59 38.8
	comp=Z,7.2nm,0.6s						
CHIR	**Chirikof Islan**	**75.89**	**13**	P	**P**	**10 59 08.8**	**-0.4**
	baz=203						
USRK	**Ussuriysk Ar.**	**76.36**	**326**	P	**P**	**10 59 13.4**	**+1.3**
	comp=Z,4.9nm,0.7s,baz=116,slow=3.4,SNR=5.8						
	comp=Z,4.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.36**	**326**	P	**P**	**10 59 12.8**	**+0.7**
USA0B	**Ussuriysk Arra**	**76.36**	**326**	P	**P**	**10 59 12.5**	**+0.4**
SAO	**San Andreas Ge**	**76.55**	**44**	IAmb	IAmb	10 59 15.5	
	comp=Z,14nm,0.9s						
PMPB	**Monarch Peak**	**76.67**	**45**	IAmb	IAmb	10 59 16.5	
	comp=Z,21nm,1.0s						
PKD	**Bear Valley Ra**	**76.70**	**45**	P	**P**	**10 59 15.4**	**+1.2**
PKD					IAmb	IAmb	10 59 16.3
	comp=Z,19nm,1.2s						
MHC	**Mount Hamilton**	**76.75**	**43**	IAmb	IAmb	10 59 16.9	
	comp=Z,15nm,1.1s						
HOPS	**Hopland Field**	**76.79**	**41**	P	**P**	**10 59 14.3**	**-0.3**
HOPS					IAmb	IAmb	10 59 29.9
	comp=Z,18nm,1.2s						
SII	**Sitkinak Islan**	**76.89**	**14**	P	**P**	**10 59 15.3**	**+0.6**
SII	**Sitkinak Islan**	**76.89**	**14**	P	**P**	**10 59 14.2**	**-0.5**
	baz=204						
KMPM	**Mount Pierce**	**76.99**	**40**	P	**P**	**10 59 16.1**	**+0.3**
KMPM					IAmb	IAmb	10 59 18.2
	comp=Z,23nm,1.0s						
R17L	**Mt. Peulik Vol**	**77.42**	**12**	P	**P**	**10 59 17.1**	**-0.5**
	baz=202						
MWC	**Mount Wilson**	**77.48**	**48**	IAmb	IAmb	10 59 20.4	
	comp=Z,13nm,0.8s						
KHMM	**Horse Mountain**	**77.50**	**40**	IAmb	IAmb	10 59 21.1	
	comp=Z,14nm

CN2	**Changchun**	**79.76**	**322**	P	**P**	**10 59 30.5**	**+0.1**		
CN2	comp=Z,20nm,1.2s			pmax	pmax				
BNX	**BinXian**	**79.84**	**325**	⇑P	**P**	**10 59 31.0**	**+0.3**		
BNX	comp=Z,26nm,0.9s			pmax	pmax				
113A	**Mohawk Valley,**	**79.85**	**51**		**P**	**10 59 32.4**	**+1.3**		
L14K	**Kuka Creek**	**79.91**	**8**	IAmb	IAmb	10 59 32.3			
	comp=Z,14nm,1.1s								
L14K	**Kuka Creek**	**79.91**	**8**	P	**P**	**10 59 31.0**	**+0.3**		
	baz=195								
BUCK	**Buck Mountain**	**79.93**	**37**	P	**P**	**10 59 32.4**	**+1.0**		
BUCK	comp=Z,17nm,1.1s			IAmb	IAmb	10 59 33.5			
N17K	**Nushagak Hills**	**79.97**	**11**	P	**P**	**10 59 31.1**	**0.0**		
	baz=201								
KVN	**Kaiserville**	**80.02**	**44**		**P**	**10 59 33.1**	**+1.0**		
TPH	**Tonopah**	**80.08**	**45**	IAmb	IAmb	10 59 34.5			
	comp=Z,14nm,1.1s								
M16K	**Timber Creek**	**80.14**	**10**	P	**P**	**10 59 32.9**	**+1.0**		
	baz=199,SNR=13								
O19K	**Port Alsworth**	**80.20**	**12**	P	**P**	**10 59 31.8**	**-0.4**		
	baz=204								
K13K	**Kusilvak Mount**	**80.25**	**7**	IAmb	IAmb	10 59 34.2			
	comp=Z,26nm,1.3s								
K13K	**Kusilvak Mount**	**80.25**	**7**	P	**P**	**10 59 32.8**	**+0.3**		
	baz=194								
H04D	**Lebanon**	**80.27**	**37**	IAmb	IAmb	10 59 35.1			
	comp=Z,20nm,1.2s								
HOM	**Homer**	**80.28**	**14**	P	**P**	**10 59 32.4**	**-0.2**		
	baz=206								
K05A	**Summer Lake**	**80.30**	**39**	P	**P**	**10 59 34.7**	**+1.2**		
K05A	comp=Z,24nm,1.0s			IAmb	IAmb	10 59 35.8			
N18K	**Kilae Creek**	**80.35**	**11**	P	**P**	**10 59 32.5**	**-0.6**		
	baz=202								
L15K	**Ungalak Mounta**	**80.39**	**8**	P	**P**	**10 59 33.3**	**0.0**		
	baz=197,SNR=5.9								
O20K	**Slope Mountain**	**80.44**	**13**	P	**P**	**10 59 32.9**	**-0.7**		
	baz=205								
WIFE	**Three Sisters-**	**80.53**	**38**	IAmb	IAmb	10 59 36.6			
	comp=Z,15nm,1.0s								
BRSE	**Bradley Lake S**	**80.56**	**14**	P	**P**	**10 59 34.0**	**-0.2**		
	baz=207								
L16K	**Owhat River**	**80.71**	**9**	IAmb	IAmb	10 59 36.7			
	comp=Z,27nm,1.2s								
L16K	**Owhat River**	**80.71**	**9**	P	**P**	**10 59 35.5**	**+0.6**		
	baz=198,SNR=9.3								
RED	**Redoubt Volcan**	**80.72**	**13**	IAmb	IAmb	10 59 35.2			
	comp=Z,23nm,1.0s								
N19K	**Bonanza Creek**	**80.74**	**12**	IAmb	IAmb	10 59 35.4			
	comp=Z,15nm,1.0s								
N19K	**Bonanza Creek**	**80.74**	**12**	P	**P**	**10 59 34.4**	**-0.8**		
	baz=203,SNR=8.4								
M17K	**Holitna River**	**80.75**	**10**	P	**P**	**10 59 35.9**	**+0.8**		
	baz=200,SNR=12								
PINE	**Pine Mountain**	**80.89**	**38**		**P**	**10 59 37.6**	**+1.1**		
I05D	**Terrebonne, OR**	**80.97**	**38**	IAmb	IAmb	10 59 38.7			
	comp=Z,17nm,1.1s								
K15K	**Wolf Creek Mou**	**80.98**	**8**	P	**P**	**10 59 37.2**	**+0.9**		
	baz=196,SNR=22								
M18K	**Stony River**	**81.11**	**11**	P	**P**	**10 59 37.2**	**+0.2**		
	baz=202,SNR=5.8								
DIB	**Dawson Inlet,**	**81.16**	**26**		**P**	**10 59 37.5**	**+0.2**		
DIB	comp=Z,14nm,1.1s			IAmb	IAmb	10 59 39.3			
J14K	**Nanvaranak Lak**	**81.17**	**7**	P	**P**	**10 59 37.4**	**+0.2**		
	baz=195								
SEW	**Seward**	**81.18**	**14**	IAmb	IAmb	10 59 37.8			
	comp=Z,12nm,0.9s								
SEW	**Seward**	**81.18**	**14**	P	**P**	**10 59 36.9**	**-0.4**		
	baz=208								
PRN	**Pahroc Range**	**81.21**	**46**		**P**	**10 59 39.7**	**+1.4**		
PRN	comp=Z,18nm,1.0s			IAmb	IAmb	10 59 40.8			
L17K	**Donlin**	**81.30**	**10**	P	**P**	**10 59 39.0**	**+1.1**		
	baz=200,SNR=13								
BMN	**Battle Mountai**	**81.33**	**43**	IAmb	IAmb	10 59 40.8			
	comp=Z,18nm,1.0s								
SLKM	**Skilak Lake**	**81.36**	**14**	P	**P**	**10 59 38.4**	**+0.1**		
Q23K	**Middleton Isla**	**81.36**	**16**	P	**P**	**10 59 37.9**	**-0.4**		
	baz=211								
HOOD	**Mount Hood Mea**	**81.37**	**37**	IAmb	IAmb	10 59 40.5			
	comp=Z,23nm,1.2s								
NLWA	**Neilton Lookou**	**81.39**	**34**	IAmb	IAmb	10 59 40.8			
	comp=Z,15nm,1.1s								
G05A	**Wamic**	**81.51**	**37**	P	**P**	**10 59 40.0**	**+0.5**		
G05A	comp=Z,13nm,1.0s			IAmb	IAmb	10 59 41.2			
WVOR	**Wild Horse Val**	**81.52**	**40**	P	**P**	**10 59 40.5**	**+0.8**		
WVOR	comp=Z,21nm,1.0s			IAmb	IAmb	10 59 41.8			
WVOR	**Wild Horse Val**	**81.52**	**40**	P	**P**	**10 59 40.8**	**+1.1**		
SPCR	**Spurr Chakacha**	**81.55**	**13**	P	**P**	**10 59 38.2**	**-1.1**		
	baz=205								
SPU	**Mount Spurr**	**81.56**	**13**	IAmb	IAmb	10 59 40.6			
	comp=Z,8.9nm,0.8s								
P23K	**Montague Islan**	**81.58**	**15**	P	**P**	**10 59 38.7**	**-0.7**		
	baz=210								
L18K	**Granite Mounta**	**81.64**	**10**	P	**P**	**10 59 40.6**	**+0.9**		
	baz=201,SNR=14								
K17K	**Iditarod**	**81.85**	**9**	P	**P**	**10 59 41.1**	**+0.4**		
	baz=200,SNR=6.5								
TUC	**Tucson**	**81.87**	**52**		**P**	**10 59 42.3**	**+0.7**		
TUC	comp=Z,16nm,1.1s			IAmb	IAmb	10 59 44.7			
TUC	**Tucson**	**81.87**	**52**	P	**P**	**10 59 43.5**	**+1.9**		
STLK	**Strandline Lak**	**81.90**	**13**	IAmb	IAmb	10 59 40.8			
	comp=Z,15nm,0.9s								
G06A	**Carlson Farm,**	**81.90**	**37**	P	**P**	**10 59 42.2**	**+0.7**		
G06A	comp=Z,12nm,1.1s			IAmb	IAmb	10 59 43.2			
L19K	**White Mountain**	**81.93**	**11**	IAmb	IAmb	10 59 43.2			
	comp=Z,16nm,1.0s								
L19K	**White Mountain**	**81.93**	**11**	P	**P**	**10 59 41.4**	**+0.2**		
	baz=203,SNR=10								
M20K	**Styx River**	**81.98**	**12**	P	**P**	**10 59 41.6**	**+0.1**		
	baz=204								
RC01	**Rabbit Creek A**	**81.98**	**14**	P	**P**	**10 59 41.3**	**-0.1**		
	baz=208								
GNW	**Green Mountain**	**82.05**	**34**	IAmb	IAmb	10 59 43.9			
	comp=Z,10.0nm,0.9s								
J16K	**Anvik River**	**82.06**	**8**	P	**P**	**10 59 42.3**	**+0.5**		
	baz=197,SNR=10.0								
PWL	**Port Wells**	**82.11**	**14**	P	**P**	**10 59 41.5**	**-0.6**		
	baz=209,SNR=9.7								
J08A	**Circle Bar Ran**	**82.12**	**40**		**P**	**10 59 43.4**	**+0.7**		
J08A	comp=Z,17nm,0.9s			IAmb	IAmb	10 59 44.7			
HIN	**Hinchinbrook I**	**82.16**	**15**	IAmb	IAmb	10 59 43.0			
	comp=Z,15nm,1.0s								
CBB	**Campbell River**	**82.27**	**31**	IAmb	IAmb	10 59 44.9			
	comp=Z,12nm,1.0s								
LCMT	**Little Creek M**	**82.27**	**47**	P	**P**	**10 59 44.3**	**+0.6**		
LCMT	comp=Z,10nm,0.9s			IAmb	IAmb	10 59 45.9			
KAIM	**Kayak Island**	**82.31**	**17**	P	**P**	**10 59 43.2**	**+0.1**		
	baz=213								
X16A	**Lo Mia Camp, P**	**82.34**	**50**	IAmb	IAmb	10 59 46.8			
	comp=Z,15nm,1.0s								
BBB	**Bella Bella**	**82.36**	**29**	P	**P**	**10 59 44.8**	**+1.2**		
	comp=Z,4.5nm,0.8s,baz=237,slow=6.1,SNR=5.5 comp=Z,4.5nm,0.8s								
BBB	**Bella Bella**	**82.36**	**29**	IAmb	IAmb	10 59 52.2			
	comp=Z,21nm,1.3s								
J17K	**VABM Dome**	**82.38**	**9**	IAmb	IAmb	10 59 45.0			
	comp=Z,15nm,1.2s								
J17K	**VABM Dome**	**82.38**	**9**	P	**P**	**10 59 43.9**	**+0.5**		
	baz=199,SNR=7.7								
SKT	**Skwentna**	**82.39**	**13**	P	**P**	**10 59 41.9**	**-1.6**		
	baz=206								
GLI	**Glacier Island**	**82.43**	**15**	P	**P**	**10 59 43.0**	**-0.7**		
	baz=210,SNR=6.3								
CCUT	**Cedar City**	**82.45**	**47**		**P**	**10 59 45.5**	**+0.8**		
EYAK	**Cordova Ski Ar**	**82.48**	**16**	P	**P**	**10 59 44.5**	**+0.6**		
EYAK	**Cordova Ski Ar**	**82.48**	**16**	IAmb	IAmb	10 59 44.6			
	comp=Z,9.9nm,0.9s								
EYAK	**Cordova Ski Ar**	**82.48**	**16**	P	**P**	**10 59 43.4**	**-0.5**		
	baz=211,SNR=5.5								
M22K	**Willow**	**82.49**	**13**	P	**P**	**10 59 43.5**	**-0.5**		
	baz=207,SNR=5.2								
CRAG	**Craig**	**82.54**	**24**	P	**P**	**10 59 45.9**	**+1.6**		
CRAG	**Craig**	**82.54**	**24**	IAmb	IAmb	10 59 46.3			
	comp=Z,14nm,1.2s								
CRAG	**Craig**	**82.54**	**24**	P	**P**	**10 59 44.7**	**+0.4**		
	baz=223								
KNK	**Knik Glacier**	**82.56**	**14**	IAmb	IAmb	10 59 45.1			
	comp=Z,17nm,0.8s								
KNK	**Knik Glacier**	**82.56**	**14**	P	**P**	**10 59 44.1**	**-0.3**		
	baz=209								
PMR	**Palmer**	**82.57**	**14**	P	**P**	**10 59 44.8**	**+0.5**		
PMR	**Palmer**	**82.57**	**14**	IAmb	IAmb	10 59 44.9			
	comp=Z,30nm,1.3s								
PMR	**Palmer**	**82.57**	**14**	P	**P**	**10 59 43.9**	**-0.4**		
	baz=208								
KNB	**Kanab**	**82.57**	**47**	IAmb	IAmb	10 59 47.7			
	comp=Z,12nm,1.0s								
PSUT	**Pine Spring**	**82.59**	**46**		**P**	**10 59 46.1**	**+0.8**		
I17K	**Unalakleet**	**82.62**	**8**	P	**P**	**10 59 45.2**	**+0.6**		
	baz=197								
SZCU	**Shurtz Canyon**	**82.66**	**47**	IAmb	IAmb	10 59 48.2			
	comp=Z,13nm,1.1s								
U15A	**North Rim**	**82.67**	**48**	IAmb	IAmb	10 59 48.5			
	comp=Z,19nm,0.9s								
ELK	**Elko**	**82.78**	**43**	IAmb	IAmb	10 59 48.1			
	comp=Z,8.9nm,0.9s								
J18K	**Innoko River**	**82.80**	**10**	IAmb	IAmb	10 59 46.8			
	comp=Z,19nm,0.8s								
J18K	**Innoko River**	**82.80**	**10**	P	**P**	**10 59 45.7**	**+0.2**		
	baz=201,SNR=18								
MXC	**Moxie City**	**82.87**	**36**	IAmb	IAmb	10 59 48.1			
	comp=Z,11nm,1.1s								
SIT	**Sitka**	**82.89**	**22**	P	**P**	**10 59 46.4**	**+0.4**		
	baz=221								
WUAZ	**Wupatki**	**82.90**	**49**		**P**	**10 59 47.2**	**+0.3**		
WUAZ	comp=Z,16nm,1.1s			IAmb	IAmb	10 59 50.0			
G08A	**Pilot Rock**	**82.91**	**38**	IAmb	IAmb	10 59 48.5			
	comp=Z,12nm,1.0s								
SML	**Sawmill**	**82.94**	**14**	IAmb	IAmb	11 00 00.2			
	comp=Z,11nm,1.0s								
SML	**Sawmill**	**82.94**	**14**	P	**P**	**10 59 45.6**	**-0.7**		
	baz=209								
DIV	**Divide**	**82.97**	**15**	IAmb	IAmb	10 59 47.1			
	comp=Z,18nm,0.8s								
U33K	**Whale Pass**	**83.01**	**24**	IAmb	IAmb	10 59 48.6			
	comp=Z,18nm,1.1s								
U33K	**Whale Pass**	**83.01**	**24**	P	**P**	**10 59 47.1**	**+0.4**		
	baz=223,SNR=6.4								
V35K	**Ketchikan**	**83.03**	**25**	IAmb	IAmb	10 59 48.7			
	comp=Z,11nm,1.0s								
V35K	**Ketchikan**	**83.03**	**25**	P	**P**	**10 59 47.5**	**+0.6**		
	baz=225,SNR=6.1								
CUT	**Chulitna**	**83.04**	**13**	P	**P**	**10 59 46.1**	**-0.6**		
	baz=207,SNR=6.3								
L22K	**Petersville**	**83.04**	**13**	P	**P**	**10 59 45.8**	**-1.0**		
	baz=207,SNR=19								
LTY	**Liberty**	**83.05**	**36**	IAmb	IAmb	10 59 48.7			
	comp=Z,9.0nm,1.0s								
M23K	**Glacier View**	**83.07**	**14**	P	**P**	**10 59 46.1**	**-0.8**		
	baz=210								
PPLA	**Purkeypile**	**83.09**	**12**	P	**P**	**10 59 45.4**	**-1.8**		
	baz=205								
E07A	**Sunnyside**	**83.11**	**37**	P	**P**	**10 59 47.8**	**+0.4**		
E07A	comp=Z,15nm,0.9s			IAmb	IAmb	10 59 49.4			
BMRM	**Bremner River**	**83.14**	**16**		**P**	**10 59 47.6**	**+0.3**		
BMRM	comp=Z,16nm,0.8s			IAmb	IAmb	10 59 48.1			
BMRM	**Bremner River**	**83.14**	**16**	P	**P**	**10 59 46.8**	**-0.6**		
	baz=212,SNR=7.8								
H16K	**Elim**	**83.15**	**7**	P	**P**	**10 59 47.4**	**+0.1**		
	baz=196								
K20K	**Telida**	**83.16**	**11**	P	**P**	**10 59 47.3**	**0.0**		
	baz=204,SNR=20								
HAWA	**Hanford**	**83.19**	**37**	IAmb	IAmb	10 59 49.8			
	comp=Z,16nm,0.9s								
SCM	**Sheep Creek Mo**	**83.20**	**14**	P	**P**	**10 59 47.4**	**-0.3**		
	baz=210,SNR=23								
HNS	**HongShan**	**83.23**	**313**	⇓P	**P**	**10 59 49.5**	**+1.2**		
KLU	**Klutina**	**83.25**	**15**	IAmb	IAmb	10 59 48.7			
	comp=Z,11nm,1.1s								
KLU	**Klutina**	**83.25**	**15**	P	**P**	**10 59 47.5**	**-0.4**		
	baz=211,SNR=5.7								
S31K	**Pelican**	**83.26**	**21**		**P**	**10 59 48.8**	**+0.9**		
S31K	comp=Z,19nm,1.0s			IAmb	IAmb	10 59 49.5			
S31K	**Pelican**	**83.26**	**21**	P	**P**	**10 59 48.3**	**+0.4**		
	baz=220,SNR=8.5								
DUN6	**Lazy B Ranch**	**83.26**	**53**	IAmb	IAmb	10 59 51.0			
	comp=Z,15nm,1.0s								
G15K	**Niukluk**	**83.30**	**6**	P	**P**	**10 59 48.1**	**+0.1**		
	baz=194								
CRQE	**Cirque**	**83.36**	**17**	P	**P**	**10 59 48.3**	**-0.2**		
	baz=214,SNR=8.6								
S32K	**Killisnoo**	**83.47**	**22**	P	**P**	**10 59 49.2**	**+0.2**		
	baz=222								
J19K	**Poorman**	**83.48**	**10**	P	**P**	**10 59 49.2**	**+0.3**		
	baz=202,SNR=6.4								
BJI2	**Beijing**	**83.50**	**315**	P	**P**	**10 59 50.3**	**+0.8**		
BJI2	comp=Z,5.0nm,0.6s			pmax	pmax				
MTPU	**Mount Pierson**	**83.50**	**47**	IAmb	IAmb	10 59 53.1			
	comp=Z,14nm,1.1s								
TNA	**Tin City**	**83.51**	**4**	P	**P**	**10 59 49.4**	**+0.4**		
	baz=190								
E08A	**Dider Farm, El**	**83.52**	**37**	IAmb	IAmb	10 59 51.3			
	comp=Z,10nm,0.8s								
WRAK	**Wrangell Islan**	**83.53**	**24**	IAmb	IAmb	10 59 51.1			
	comp=Z,16nm,1.1s								
WRAK	**Wrngell Islan**	**83.53**	**24**	P	**P**	**10 59 49.5**	**+0.2**		
	baz=224,SNR=8.5								
LYN	**LuoYang**	**83.53**	**309**	P	**P**	**10 59 51.0**	**+1.1**		
LYN	comp=Z,28nm,0.9s			pmax	pmax				
F14K	**Arctic Creek**	**83.55**	**5**	P	**P**	**10 59 49.3**	**+0.1**		
	baz=192								
PNL	**Peninsula**	**83.55**	**19**	P	**P**	**10 59 49.3**	**-0.1**		
	baz=217								
CAST	**Castle Rocks**	**83.58**	**12**	P	**P**	**10 59 47.9**	**-1.5**		
	baz=205,SNR=33								
PCA	**Pinnacle**	**83.64**	**18**	IAmb	IAmb	10 59 50.8			
	comp=Z,12nm,1.0s								
PINM	**Pinnacle**	**83.64**	**18**	P	**P**	**10 59 49.5**	**-0.4**		
	baz=216								
VRDI	**Verde Repeater**	**83.66**	**16**		**P**	**10 59 50.3**	**+0.2**		
VRDI	comp=Z,18nm,1.1s			IAmb	IAmb	10 59 50.9			
N25K	**Chitina, Valde**	**83.68**	**16**	P	**P**	**10 59 50.0**	**0.0**		
	baz=212,SNR=24								
EPH	**Ephrata**	**83.70**	**36**	IAmb	IAmb	10 59 52.0			
	comp=Z,14nm,0.9s								
H17K	**Granite Mounta**	**83.73**	**8**	P	**P**	**10 59 49.9**	**-0.2**		
	baz=198								
WAT6	**Susitna Watana**	**83.75**	**14**	P	**P**	**10 59 50.1**	**-0.4**		
	baz=210,SNR=22								
MFID	**Camas Ranch**	**83.78**	**41**	IAmb	IAmb	10 59 53.0			
	comp=Z,14nm,1.1s								
WAT1	**Susitna Watana**	**83.79**	**13**	P	**P**	**10 59 50.0**	**-0.6**		
	baz=209								
MAW	**Mawson**	**83.86**	**200**	P	**P**	**10 59 50.9**	**+0.1**		
	comp=Z,3.8nm,0.7s,baz=128,slow=9.6,SNR=6.4 comp=Z,3.8nm,0.7s								
MAW	**Mawson**	**83.86**	**200**	P	**P**	**10 59 51.2**	**+0.3**		
J20K	**Nowinta River**	**83.90**	**11**	IAmb	IAmb	10 59 52.0			
	comp=Z,14nm,0.9s								
J20K	**Nowinta River**	**83.90**	**11**	P	**P**	**10 59 50.7**	**-0.2**		
	baz=203,SNR=13								
MCARA	**McCarthy VSAT**	**83.91**	**16**	P	**P**	**10 59 51.2**	**+0.2**		
MCARA	comp=Z,16nm,1.0s			IAmb	IAmb	10 59 52.2			
MCARA	**McCarthy VSAT**	**83.91**	**16**	P	**P**	**10 59 50.9**	**-0.2**		
	baz=214								
D08A	**Wollman Farm,**	**83.92**	**36**	IAmb	IAmb	10 59 53.3			
	comp=Z,14nm,0.9s								
KTH	**Kantishna Hill**	**83.93**	**12**	IAmb	IAmb	10 59 51.0			
	comp=Z,15nm,0.9s								
F15K	**North Star Dit**	**83.93**	**6**	P	**P**	**10 59 51.1**	**0.0**		
	baz=193								
CHUM	**Lake Minchumin**	**83.96**	**11**	P	**P**	**10 59 50.3**	**-0.9**		
	baz=205,SNR=10.0								
TRF	**Thorofare Moun**	**83.97**	**12**	P	**P**	**10 59 50.6**	**-0.9**		
	baz=207,SNR=26								
LOGN	**Logan Glacier**	**84.01**	**18**	IAmb	IAmb	10 59 52.8			
	comp=Z,17nm,1.0s								
P29M	**Windy Craggy**	**84.05**	**20**	IAmb	IAmb	10 59 53.5			
	comp=Z,17nm,0.9s								
P29M	**Windy Craggy**	**84.05**	**20**	P	**P**	**10 59 52.2**	**+0.4**		
	baz=219,SNR=7.8								
R32K	**Eaglecrest**	**84.09**	**22**	P	**P**	**10 59 52.2**	**+0.1**		
	baz=222								
DUG	**Dugway, Tooele**	**84.11**	**45**	P	**P**	**10 59 53.1**	**+0.3**		
JIS	**Juneau Island**	**84.14**	**22**	P	**P**	**10 59 53.1**	**+0.9**		
H18K	**Honhosa River**	**84.14**	**8**	P	**P**	**10 59 51.8**	**-0.4**		
	baz=199								
G17K	**Kiwalik Mounta**	**84.17**	**7**	P	**P**	**10 59 52.2**	**-0.1**		
	baz=197								
O28M	**Mount Upton**	**84.20**	**18**	P	**P**	**10 59 52.7**	**-0.2**		
	baz=216								
HARP	**HAARP**	**84.21**	**15**	P	**P**	**10 59 53.0**	**+0.4**		
HARP	**HAARP**	**84.21**	**15**	P	**P**	**10 59 52.6**	**0.0**		
	baz=212,SNR=5.7								
DHY	**Denali Highway**	**84.27**	**14**	IAmb	IAmb	10 59 53.0			
	comp=Z,6.0nm,0.8s								
DHY	**Denali Highway**	**84.27**	**14**	P	**P**	**10 59 52.4**	**-0.6**		
	baz=210,SNR=9.8								
O29M	**Mount Kennedy**	**84.31**	**19**	IAmb	IAmb	10 59 54.7			
	comp=Z,13nm,1.4s								
PLBC	**Pleasant Camp**	**84.36**	**20**	P	**P**	**10 59 53.9**	**+0.6**		
	baz=220,SNR=11								
I20K	**Naaghedeneel**	**84.41**	**10**	P	**P**	**10 59 53.7**	**+0.2**		
	baz=203								
MCK	**McKinley**	**84.50**	**13**	P	**P**	**10 59 53.4**	**-0.6**		
	baz=208,SNR=9.6								
PLID	**Pearl Lake**	**84.55**	**39**		**P**	**10 59 55.3**	**+0.4**		
PAX	**Paxson**	**84.62**	**15**	IAmb	IAmb	10 59 54.9			
	comp=Z,9.8nm,1.0s								
PAX	**Paxson**	**84.62**	**15**	P	**P**	**10 59 53.9**	**-0.7**		
	baz=212,SNR=8.8								
P30M	**Million Dollar**	**84.67**	**20**	P	**P**	**10 59 55.6**	**+0.6**		
	baz=220								
SKAG	**Skagway**	**84.70**	**21**	P	**P**	**10 59 56.8**	**+1.8**		
SKAG	**Skagway**	**84.70**	**21**	IAmb	IAmb	10 59 58.0			
	comp=Z,12nm,1.2s								
SKAG	**Skagway**	**84.70**	**21**	P	**P**	**10 59 55.9**	**+0.9**		
	baz=221								
YUK8	**Steele Glacier**	**84.74**	**18**	P	**P**	**10 59 55.5**	**0.0**		
	baz=217,SNR=12								
HLID	**Hailey**	**84.74**	**41**		**P**	**10 59 56.6**	**+0.7**		
HLID	comp=Z,8.4nm,0.9s			IAmb	IAmb	10 59 58.1			
HLID	**Hailey**	**84.74**	**41**	P	**P**	**10 59 56.1**	**+0.2**		
T35M	**Bob Quinn**	**84.75**	**24**	P	**P**	**10 59 56.3**	**+0.9**		
	baz=226								
M26K	**Nabesna, AK**	**84.76**	**16**	P	**P**	**10 59 55.3**	**0.0**		
	baz=214,SNR=18								
H19K	**Roundabout Mou**	**84.78**	**9**	P	**P**	**10 59 55.1**	**-0.1**		
	baz=201								
G18K	**Tagagawik**	**84.81**	**8**	P	**P**	**10 59 55.1**	**-0.3**		
	baz=199								
YUK6	**Outpost Mounta**	**84.88**	**19**	P	**P**	**10 59 56.3**	**+0.1**		
	baz=218								
HVU	**Hansel Valley**	**84.91**	**43**	P	**P**	**10 59 57.2**	**+0.5**		
YUK3	**Moose Creek**	**84.93**	**17**	P	**P**	**10 59 56.2**	**-0.1**		
	baz=216,SNR=22								
H20K	**Anotleneega Mo**	**84.99**	**10**	P	**P**	**10 59 56.6**	**+0.3**		
	baz=203								
F17K	**Baldwin Pennin**	**85.01**	**7**	P	**P**	**10 59 56.7**	**+0.4**		
	baz=197								
BRWY	**Burwash Landin**	**85.02**	**18**	P	**P**	**10 59 56.8**	**+0.2**		
	baz=218								
M27K	**Edge Creek, AK**	**85.02**	**16**	P	**P**	**10 59 56.8**	**+0.1**		
	baz=215,SNR=24								
MENT	**Mentasta**	**85.02**	**15**	P	**P**	**10 59 57.0**	**+0.4**		
MENT	**Mentasta**	**85.02**	**15**	P	**P**	**10 59 56.5**	**0.0**		
MENT	comp=Z,9.6nm,0.8s			IAmb	IAmb	10 59 57.6			
HYT	**Haines Junctio**	**85.05**	**19**	IAmb	IAmb	10 59 58.3			
	comp=Z,7.5nm,1.0s								
HYT	**Haines Junctio**	**85.05**	**19**	P	**P**	**10 59 57.2**	**+0.3**		
	baz=219,SNR=7.6								
CTU	**Camp Tracy**	**85.06**	**45**	P	**P**	**10 59 57.2**	**-0.3**		
S34M	**Telegraph Cree**	**85.06**	**23**	P	**P**	**10 59 57.7**	**+0.9**		
	baz=225,SNR=13								
YUK4	**Talbot Arm**	**85.11**	**18**	P	**P**	**10 59 57.6**	**+0.3**		
	baz=218								
SRU	**San Rafael Swe**	**85.16**	**46**	IAmb	IAmb	10 59 59.8			
	comp=Z,5.5nm,0.8s								
L26K	**Log Cabin Wild**	**85.19**	**15**	IAmb	IAmb	10 59 58.4			
	comp=Z,7.3nm,0.8s								
L26K	**Log Cabin Wild**	**85.19**	**15**	P	**P**	**10 59 57.5**	**+0.1**		
	baz=214,SNR=7.7								
I21K	**Tanana**	**85.20**	**11**	IAmb	IAmb	10 59 58.1			
	comp=Z,19nm,1.2s								
I21K	**Tanana**	**85.20**	**11**	P	**P**	**10 59 56.9**	**-0.4**		
	baz=205								
NEA2	**Nenana**	**85.23**	**12**	P	**P**	**10 59 57.5**	**0.0**		
	baz=208								
G19K	**Purcell Mounta**	**85.26**	**9**	P	**P**	**10 59 57.3**	**-0.3**		
	baz=201,SNR=5.3								
K24K	**Donnelly Dome**	**85.26**	**14**	P	**P**	**10 59 57.2**	**-0.5**		
	baz=211								
MLY	**Manley**	**85.30**	**12**	P	**P**	**10 59 56.7**	**-1.2**		
	baz=207,SNR=7.7								
BVCY	**Beaver Creek**	**85.34**	**17**	P	**P**	**10 59 58.3**	**+0.2**		
	baz=216,SNR=9.0								
P32M	**Atlin**	**85.35**	**21**	IAmb	IAmb	10 59 59.9			
	comp=Z,6.2nm,0.8s								
P32M	**Atlin**	**85.35**	**21**	P	**P**	**10 59 58.8**	**+0.5**		
	baz=222,SNR=8.6								
F18K	**Selawik**	**85.35**	**8**	P	**P**	**10 59 58.6**	**+0.7**		
	baz=198								
Q32M	**Nakina River**	**85.39**	**22**	IAmb	IAmb	11 00 00.4			
	comp=Z,9.8nm,0.8s								
Q32M	**Nakina River**	**85.39**	**22**	P	**P**	**10 59 59.1**	**+0.5**		
	baz=224,SNR=13								
RIDG	**Independent Ri**	**85.43**	**14**	IAmb	IAmb	10 59 59.3			
	comp=Z,14nm,0.9s								
RIDG	**Independent Ri**	**85.43**	**14**	P	**P**	**10 59 58.0**	**

H22K Ishtalitna Cre 85.95 11 P P 11 00 00.6 -0.3
baz=206
PV04 Paradox Valley 85.96 48 IAmb IAmb 11 00 03.0
comp=Z,7.7nm,1.1s
PV12 Saucer Basin, 86.00 48 IAmb IAmb 11 00 03.8
comp=Z,8.6nm,1.0s
E18K Tukpahlearik C 86.02 7 P P 11 00 01.1 -0.1
baz=197
D17K Noatak River 86.03 6 P P 11 00 01.3 +0.1
baz=195
M29M Somme Creek 86.03 18 IAmb IAmb 11 00 03.9
comp=Z,4.9nm,0.8s
M29M Somme Creek 86.03 18 P P 11 00 01.6 +0.1
baz=218,SNR=10
POKR Poker Plat Res 86.03 13 P P 11 00 00.1 -1.2
baz=210
J25K Salcha River, 86.05 14 IAmb IAmb 11 00 02.7
comp=Z,9.1nm,1.1s
J25K Salcha River, 86.05 14 P P 11 00 01.2 -0.3
baz=212,SNR=14
N31M Braeburn, Yuko 86.09 19 P P 11 00 02.0 +0.3
N31M IAmb IAmb 11 00 03.2
comp=Z,16nm,1.1s
N31M Braeburn, Yuko 86.09 19 P P 11 00 02.1 +0.3
baz=220,SNR=9.3
P33M Teslin, Yukon 86.11 21 P P 11 00 02.7 +0.8
P33M Teslin, Yukon 86.11 21 P P 11 00 02.2 +0.3
baz=223,SNR=7.3
G21K Allakaket 86.16 10 P P 11 00 01.3 -0.5
baz=204
TX31 Lajitas Ar. Si 86.19 58 P 11 00 03.5 +0.5
TX31 IAmb IAmb 11 00 06.1
comp=Z,15nm,1.0s
TXAR Lajitas Array 86.19 58 P P 11 00 05.2 +2.2
comp=Z,6.5nm,0.8s,baz=219,slow=6.0,SNR=85
comp=Z,6.5nm,0.8s
TXAR Lajitas Array 86.19 58 P 11 00 04.1 +1.1
H23K Yukon River 86.23 12 P P 11 00 02.0 -0.3
baz=208
ALQ Albuquerque 86.26 52 IAmb IAmb 11 00 05.2
comp=Z,6.0nm,1.1s
ANMO Albuquerque 86.26 52 P P 11 00 04.0 +0.6
ANMO Albuquerque 86.26 52 P 11 00 04.2 +0.8
ANMO IAmb IAmb 11 00 06.8
comp=Z,6.6nm,1.1s
ANMO Albuquerque 86.26 52 P P 11 00 04.7 +1.4
HILR Hailar Array B 86.27 325 P P 11 00 02.5 -0.3
comp=Z,1.1nm,0.5s,baz=127,slow=9.5,SNR=7.5
comp=Z,1.1nm,0.5s
F20K Avaraart Lake 86.31 9 P P 11 00 02.0 -0.5
baz=202,SNR=5.2
MCMT McKenzie Canyo 86.35 41 P P 11 00 04.5 +0.9
C16K Lisburne Hills 86.38 5 P P 11 00 02.6 -0.3
baz=193
RDOG Red Dog Mine 86.39 6 P P 11 00 03.0 +0.1
baz=195
AHID Auburn Hatcher 86.47 43 P P 11 00 05.5 +1.3
E19K Redstone River 86.48 8 P P 11 00 03.0 -0.4
baz=200
H24K Noodor Dome 86.57 12 P P 11 00 03.5 -0.4
baz=209
M30M Minto, Yukon 86.62 18 IAmb IAmb 11 00 05.3
comp=Z,9.8nm,0.8s
M30M Minto, Yukon 86.62 18 P P 11 00 04.2 0.0
baz=220,SNR=20
L29M L29M 86.65 17 IAmb IAmb 11 00 06.0
comp=Z,16nm,1.1s
L29M L29M 86.65 17 P P 11 00 04.8 +0.5
baz=218,SNR=16
N32M Quiet Lake 86.71 20 P P 11 00 05.0 +0.4
baz=223
DLMT Dillon 86.77 40 IAmb IAmb 11 00 07.5
comp=Z,11nm,0.9s
C17K DeLong Mountai 86.77 6 P P 11 00 05.2 +0.5
baz=195
PRP Porcupine Dome 86.79 13 P P 11 00 04.6 -0.4
baz=211,SNR=6.0
F21K Alatna River 86.81 10 P P 11 00 04.7 -0.3
baz=204
G22K Bettles 86.86 10 P P 11 00 04.9 -0.2
baz=206
G23K Bananza Creek 86.93 11 IAmb IAmb 11 00 06.5
comp=Z,8.2nm,1.3s
G23K Bananza Creek 86.93 11 P P 11 00 05.5 -0.1
baz=207,SNR=5.6
HHC Hu-ho-hao-te 86.99 315 *e*P P 11 00 06.5 0.0
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,89nm,4.1s
SNOW Snow King Moun 87.02 43 IAmb IAmb 11 00 09.0
comp=Z,13nm,0.9s
DAWY Dawson 87.07 16 P P 11 00 06.7 +0.4
DAWY IAmb IAmb 11 00 07.5
comp=Z,13nm,1.3s
DAWY Dawson 87.07 16 P P 11 00 06.1 -0.2
baz=217,SNR=8.5
M31M Drury Creek, Y 87.07 19 P P 11 00 05.9 -0.4
baz=222,SNR=5.1
C18K Utukok River 87.14 6 P P 11 00 05.9 -0.6
baz=197
S22A 4UR Ranch, Cre 87.16 49 IAmb IAmb 11 00 09.9
comp=Z,6.6nm,1.0s
LOHW Long Hollow 87.19 42 IAmb IAmb 11 00 09.5
comp=Z,6.4nm,0.9s
O20A White River Ci 87.19 46 IAmb IAmb 11 00 09.5
comp=Z,6.5nm,1.1s
F22K John River 87.28 10 P P 11 00 06.8 -0.4
baz=205
D19K Kuna River 87.34 7 P P 11 00 06.9 -0.6
baz=200
YHB Horse Butte 87.34 41 IAmb IAmb 11 00 10.9
comp=Z,12nm,1.0s
COLD Coldfoot 87.36 11 IAmb IAmb 11 00 08.8
comp=Z,10nm,0.9s
COLD Coldfoot 87.36 11 P P 11 00 07.5 -0.1
baz=207,SNR=17
E20K Nigu River 87.37 8 P P 11 00 07.4 -0.2
baz=201
K29M Barlow Dome 87.40 17 P P 11 00 07.7 -0.2
baz=219,SNR=9.9
G24K Hadweenzic Riv 87.41 12 P P 11 00 07.9 +0.1
G24K Hadweenzic Riv 87.41 12 P P 11 00 07.4 -0.4
baz=210
YFT Old Faithful 87.43 42 P P 11 00 09.3 +0.6
YMR Madison River 87.45 41 P P 11 00 09.7 +0.9
YMR IAmb IAmb 11 00 11.4
comp=Z,12nm,1.0s
WTLY Watson Lake, Y 87.47 23 P P 11 00 08.4 +0.2
baz=227
BOZ Bozeman (W) 87.47 40 IAmb IAmb 11 00 10.8
comp=Z,11nm,1.2s
BW06 Boulder Array 87.48 44 IAmb IAmb 11 00 10.4
comp=Z,6.1nm,0.8s
PD31 Pinedale Array 87.48 44 P 11 00 09.5 +0.5
PD31 IAmb IAmb 11 00 10.3
comp=Z,6.0nm,0.8s
PDAR Pinedale Array 87.48 44 P P 11 00 09.4 +0.5
comp=Z,2.9nm,0.5s,baz=213,slow=3.2,SNR=38
comp=Z,2.9nm,0.5s
H17A Grant Village 87.57 42 IAmb IAmb 11 00 13.1
comp=Z,10nm,1.0s
LYMT Lyon Mountain 87.74 39 P P 11 00 10.5 +0.4
G25K Bearman Lake 87.74 12 P P 11 00 09.2 0.0
baz=211
D20K Etivluk River 87.74 8 P P 11 00 09.2 -0.1
baz=201
C19K Lookout Ridge 87.75 7 IAmb IAmb 11 00 10.2
comp=Z,6.8nm,0.9s
C19K Lookout Ridge 87.75 7 P P 11 00 09.1 -0.3
baz=198
I27K Kandik River 87.75 15 IAmb IAmb 11 00 10.5
comp=Z,10nm,1.4s
I27K Kandik River 87.75 15 P P 11 00 09.0 -0.4
baz=215
E21K Killik River 87.85 9 P P 11 00 09.3 -0.5
baz=204
LIRD Liard River Hi 88.01 24 P P 11 00 10.9 +0.2
baz=229
HAYD Hayden 88.03 46 IAmb IAmb 11 00 13.7
comp=Z,6.0nm,1.0s
I28M Miner Creek 88.04 15 IAmb IAmb 11 00 10.9
comp=Z,5.8nm,1.1s
I28M Miner Creek 88.04 15 P P 11 00 10.5 -0.3
baz=217
F24K Squaw Lake 88.04 11 IAmb IAmb 11 00 11.9
comp=Z,7.0nm,0.8s
F24K Squaw Lake 88.04 11 P P 11 00 10.6 -0.2
baz=209,SNR=11
SDCO Great Sand Dun 88.12 49 P P 11 00 12.3 +0.2
E23K Chandalar 88.21 11 P 11 00 11.6 -0.1
E23K IAmb IAmb 11 00 12.6
comp=Z,7.5nm,0.9s
E23K Chandalar 88.21 11 P P 11 00 11.5 -0.1
baz=208,SNR=9.0
YNE Yellowstone No 88.21 41 IAmb IAmb 11 00 14.8
comp=Z,9.6nm,1.0s
H27K Steamboat Moun 88.29 14 P 11 00 12.4 +0.5
H27K IAmb IAmb 11 00 13.2
comp=Z,6.5nm,1.1s
H27K Steamboat Moun 88.29 14 P P 11 00 11.8 -0.1
baz=215
J30M Hart River 88.30 17 P P 11 00 12.0 -0.1
baz=220
MMPY Sheldon Lake, 88.37 20 P P 11 00 12.9 +0.5
baz=224,SNR=22
G26K Porcupine Rive 88.38 13 P P 11 00 12.3 0.0
baz=213,SNR=14
I29M Ogilvie Camp, 88.38 16 P P 11 00 12.3 -0.1
baz=218
C21K Knifeblade Rid 88.40 8 P P 11 00 12.4 0.0
baz=203,SNR=6.4
E24K Your Creek 88.42 11 P P 11 00 12.6 +0.1
baz=209,SNR=5.5
F25K Christian Rive 88.54 12 IAmb IAmb 11 00 14.6
comp=Z,9.0nm,1.1s
F25K Christian Rive 88.54 12 P P 11 00 13.2 +0.1
baz=211,SNR=7.9
CMAR Chiang Mai Arr 88.57 290 P P 11 00 15.7 +1.4
comp=Z,2.6nm,0.7s,baz=114,slow=2.9,SNR=12
comp=Z,2.6nm,0.7s
MSTX Muleshoe 88.66 54 IAmb IAmb 11 00 16.1
comp=Z,11nm,1.1s
RLMT Red Lodge 88.73 42 IAmb IAmb 11 00 17.0
comp=Z,9.1nm,1.1s
TOLK Toolik Lake Re 88.73 10 P P 11 00 14.0 0.0
baz=208
G27K Doyon Strip 88.73 14 P P 11 00 13.8 -0.2
baz=215
I30M Mount Dempster 88.78 16 P P 11 00 14.0 -0.4
baz=220,SNR=5.3
D23K Nanushuk River 88.84 10 P P 11 00 14.2 -0.1
baz=207,SNR=11
B21K Ikpikpuk River 88.85 8 IAmb IAmb 11 00 14.9
comp=Z,4.3nm,0.8s
B21K Ikpikpuk River 88.85 8 P P 11 00 14.5 +0.1
baz=203
B20K Meade River 88.89 7 P P 11 00 14.4 -0.2
baz=200
F26K Sheenjek River 88.93 13 P P 11 00 15.1 +0.2
baz=213,SNR=6.3
E25K Arctic Village 89.01 12 IAmb IAmb 11 00 16.5
comp=Z,8.0nm,1.1s
E25K Arctic Village 89.01 12 P P 11 00 15.1 -0.2
baz=211,SNR=6.2
H29M Whitestone 89.04 15 IAmb IAmb 11 00 16.4
comp=Z,9.8nm,0.9s
H29M Whitestone 89.04 15 P P 11 00 15.3 -0.1
baz=218,SNR=8.8
ELIB Princess Elisa 89.23 187 *d*P P 11 00 16.2 -0.3
comp=Z,4.7nm,0.8s
ELIB *d*pP pP 11 02 16.4 -0.1
KOTAN Kotaneelee Air 89.27 24 P P 11 00 16.6 +0.1
baz=231
D24K Happy Valley 89.32 10 P P 11 00 16.8 +0.2
baz=208
EPYK Eagle Plains 89.58 16 P P 11 00 17.8 -0.2
baz=220,SNR=7.5
C23K Itkillik River 89.63 9 P P 11 00 17.8 -0.2
baz=207,SNR=5.7
G29M Pine Creek 89.68 15 IAmb IAmb 11 00 19.1
comp=Z,9.2nm,1.1s
G29M Pine Creek 89.68 15 P P 11 00 18.0 -0.3
baz=218
B22K Teshekpuk Lake 89.68 8 P P 11 00 17.9 -0.3
baz=204
H31M Peel River 89.78 17 IAmb IAmb 11 00 19.4
comp=Z,8.0nm,1.1s
H31M Peel River 89.78 17 P P 11 00 18.4 -0.5
baz=222
F28M Old Crow 89.80 14 P P 11 00 18.7 -0.2
baz=217
E27K Coleen River 89.88 13 P P 11 00 19.2 0.0
baz=215,SNR=5.2
D25K Kavik River 89.89 11 IAmb IAmb 11 00 19.7
comp=Z,5.2nm,1.0s
D25K Kavik River 89.89 11 P P 11 00 18.5 -0.8
baz=211,SNR=6.0
G30M tAoh Zrail Nji 90.18 15 P P 11 00 20.2 -0.5
baz=220,SNR=12
A21K Barrow 90.19 7 P P 11 00 20.2 -0.3
baz=201
TROLL Troll, Antarti 90.41 180 ⇓P P 11 00 21.8 -0.2
comp=Z,290nm,0.9s
TROLL ⇑pP pP 11 02 20.8 -1.5
comp=Z,70nm,0.8s
ABTX Abilene, Hawle 90.61 56 P 11 00 24.1 +0.6
G31M Satah River 90.64 16 P 11 00 22.8 +0.1
G31M Satah River 90.64 16 P P 11 00 22.3 -0.4
baz=222,SNR=13
C27K Jago River 90.65 12 IAmb IAmb 11 00 24.6
comp=Z,5.0nm,0.9s
C27K Jago River 90.65 12 P P 11 00 22.4 -0.3
baz=213
E28M Babbage River 90.67 13 P P 11 00 23.1 +0.2
E28M IAmb IAmb 11 00 23.9
comp=Z,8.3nm,1.1s
E28M Babbage River 90.67 13 P P 11 00 22.6 -0.3
baz=217,SNR=8.2
SNAA Sanae 90.71 179 P P 11 00 22.6 -0.7
comp=Z,1.9nm,0.8s,baz=195,slow=4.2,SNR=4.8
comp=Z,1.9nm,0.8s
SNAA Sanae 90.71 179 P P 11 00 23.2 -0.1
SNAA IAmb IAmb 11 00 23.9
comp=Z,4.3nm,1.1s
F30M Barrier River 90.77 15 P P 11 00 23.1 -0.3
baz=220
E29M Blow River 90.87 14 IAmb IAmb 11 00 25.1
comp=Z,7.2nm,1.4s
E29M Blow River 90.87 14 P P 11 00 23.4 -0.4
baz=218
D27M Malcolm River 90.88 13 P 11 00 24.6 +0.7
D27M IAmb IAmb 11 00 26.2
comp=Z,7.4nm,1.2s
D27M Malcolm River 90.88 13 P P 11 00 23.8 -0.1
baz=216
F31M Tsiigehtchic 91.16 16 P P 11 00 24.9 -0.2
baz=222,SNR=16
VNA2 Neumayer--Watz 91.30 177 ⇓P P 11 00 25.7 -0.2
comp=Z,4.4nm,0.9s,baz=183,slow=2.9
VNA2 Neumayer--Watz 91.30 177 P P 11 00 26.3 +0.3
LAO LASA Array 91.32 41 P 11 00 27.6 +1.1
VNA1 Neumayer--Stat 91.53 177 P P 11 00 27.3 +0.3
comp=Z,7.1nm,0.8s
VNA1 ⇑pP pP 11 02 25.0 -2.2
comp=Z,4.7nm,1.0s
RSSD Black Hills 91.69 44 P P 11 00 28.7 +0.3
RSSD IAmb IAmb 11 00 29.7
comp=Z,7.7nm,1.0s
RSSD Black Hills 91.69 44 P P 11 00 27.1 -1.3
OGNE Ogallala 91.84 48 P P 11 00 29.6 +0.5
INK Inuvik 91.86 15 P P 11 00 28.2 -0.1
INK Inuvik 91.86 15 P P 11 00 27.6 -0.7
baz=222
INK Inuvik 91.86 15 P P 11 00 28.1 -0.2
SONM Songino Array 93.28 319 P P 11 00 34.7 -0.8
comp=Z,0.6nm,0.6s,baz=99,slow=4.7,SNR=6.6
comp=Z,0.6nm,0.6s
SONM Songino Array 93.28 319 P P 11 00 35.8 +0.2
SONM IAmb IAmb 11 00 36.5
comp=Z,3.5nm,1.2s
YKA Yellowknife Ar 94.36 25 P P 11 00 39.6 -0.3
comp=Z,2.6nm,0.8s,baz=244,slow=4.6,SNR=16
comp=Z,2.6nm,0.8s
YKA Yellowknife Ar 94.36 25 P P 11 00 40.2 +0.4
GTA2 Gaotai 94.81 310 *e*P P 11 00 43.3 +0.6
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
A36M Sachs Harbour 96.45 15 P P 11 00 49.1 0.0
baz=230
ZALV Zalesovo Beam 107.97 322 PKiKP PKiKP 11 05 44.3 0.0
comp=Z,0.8nm,0.6s,baz=150,slow=3.3,SNR=3.6
MKAR Makanchi Array 108.85 314 PKiKP PKiKP 11 05 45.8 -0.5
comp=Z,0.5nm,0.6s,baz=62,slow=1.0,SNR=6.8
BVAR Borovoye Array 116.58 321 PKP PKPdf 11 06 00.5 -0.3
comp=Z,2.1nm,0.5s,baz=48,slow=2.2,SNR=8.2

ARTI Arti 122.71 326 PKP PKPdf 11 06 12.4 0.0
comp=Z,4.4nm,0.5s,baz=209,slow=0.5,SNR=6.9
ARTI Arti 122.71 326 PKPdf 11 06 11.8 -0.6
AKTO Aktyubinsk 124.60 319 PKP PKPdf 11 06 15.6 -0.7
comp=Z,1.2nm,0.3s,baz=132,slow=1.0,SNR=6.9
ARCES ARCESS Array B 126.16 350 PKP PKPdf 11 06 18.6 -0.2
comp=Z,3.8nm,0.8s,baz=34,slow=1.7,SNR=10.0
FINES FINESS Array B 133.01 344 PKP PKPdf 11 06 31.6 -0.3
comp=Z,1.5nm,0.6s,baz=35,slow=7.0,SNR=5.2
NOA NORSAR Array B 136.24 353 PKP PKPdf 11 06 39.2 +1.2
comp=Z,0.7nm,0.7s,baz=12,slow=3.9,SNR=2.8
AKASG Malin Array Be 140.33 332 PKP PKPdf 11 06 47.2 +1.5
comp=Z,0.8nm,0.4s,baz=40,slow=3.1,SNR=4.6
AK13 Malin Array Si 140.47 332 PKP PKPdf 11 06 47.5 +1.5
EKA Eskdalemuir Ar 142.38 4 PKhKP PKPpre 11 06 45.8
comp=Z,0.7nm,0.4s,baz=349,slow=2.4,SNR=4.1
GAZ Gaziantep 143.04 309 PKPab 11 06 49.8 +1.1
BZK Bozkurt 143.15 318 ⇑P PKPab 11 06 49.7 +0.8
BZK Bozkurt 143.15 318 PKPdf PKPbc 11 06 50.1 +0.9
BZK Bozkurt 143.15 318 PKP PKPab 11 06 49.8 +0.9
BSEG Bad Segeberg 143.26 351 *e*PKPbc PKPab 11 06 49.0 +0.1
baz=16,slow=2.9
BNN Bunyan 143.37 312 PKPab 11 06 51.0 +1.0
LODK Lodwar 143.68 251 PKPab 11 06 51.5 -0.3
KWP Kalwaria Pacla 143.86 336 PKP PKPbc 11 06 51.3 +0.1
VASR Vaslui 143.87 329 ⇓P PKPab 11 06 52.5 +1.1
GORT1 Trebel 144.02 350 *e*PKPbc PKPbc 11 06 51.8 +0.3
baz=16,slow=2.9
VLDR Vladesti 144.27 327 ⇑P **PKPab** **11 06 54.2 +1.3**
GIRR Girov 144.27 330 ⇑P PKPbc 11 06 53.5 +0.9
BUR08 Bucovina Ar. S 144.37 332 PKPbc 11 06 53.4 +0.4
BURAR Bucovina Array 144.38 332 ⇓P PKPbc 11 06 53.9 +0.8
BURAR Bucovina Array 144.38 332 PKPbc 11 06 53.4 +0.3
OJC Ojcow 144.41 339 *e*PKP PKPbc 11 06 53.0 0.0
OJC Ojcow 144.41 339 PKPbc 11 06 53.1 +0.1
OJC Ojcow 144.41 339 PKP PKPbc 11 06 52.9 0.0
SCTR Scanteiesti 144.43 327 ⇓P **PKPab** **11 06 54.4 +0.8**
GHRR 144.46 328 ⇓P **PKPab** **11 06 54.9 +1.2**
BIZ Bicaz 144.47 330 ⇑P PKPbc 11 06 54.2 +1.0
BR131 Keskin Array S 144.50 315 **PKPdf** **11 06 53.5 -0.1**
BRTR Keskin Array B 144.50 315 PKP **PKPdf** **11 06 53.6 -0.1**
comp=Z,6.6nm,0.8s,baz=113,slow=2.7,SNR=53
BRTR Keskin Array B 144.50 315 **PKPdf** **11 06 53.0 -0.7**
BR104 Keskin Array S 144.51 315 PKP **PKPdf** **11 06 53.5 -0.2**
BR106 Keskin Array S 144.51 315 PKP **PKPdf** **11 06 53.4 -0.3**
BR105 Keskin Array S 144.52 315 PKP **PKPdf** **11 06 53.3 -0.4**
TESR Tescani 144.52 329 ⇓P **PKPdf** **11 06 53.8 +0.5**
TESR Tescani 144.52 329 PKP **PKPdf** **11 06 53.5 +0.2**
RETH Rethem/Aller, 144.56 352 *e*PKPbc **PKPdf** **11 06 53.5 +0.4**
baz=16,slow=2.9
KIRS Kirsehir-Merke 144.59 314 ⇑P **PKPdf** **11 06 53.8 +0.1**
KOLS Kolonicke sedl 144.59 336 *e*PKP **PKPdf** **11 06 54.1 +0.8**
FLTG Flechtingen 144.66 349 *e*PKPbc **PKPdf** **11 06 53.5 +0.2**
baz=16,slow=2.9
CFR Carcaliu 144.69 326 ⇓P **PKPdf** **11 06 54.4 +0.9**
TPGR Topolog 144.75 326 ⇓P **PKPdf** **11 06 54.5 +0.8**
NIE Niedzica 144.92 338 *e*PKP PKPbc 11 06 55.3 +0.8
NIE Niedzica 144.92 338 PKP **PKPdf** **11 06 54.8 +0.9**
KSP Ksiaz 144.93 343 *e*PKP **PKPdf** **11 06 55.0 +1.2**
KSP Ksiaz 144.93 343 PKP **PKPdf** **11 06 54.7 +0.9**
VRI Vrincioaia 144.94 328 ⇑P PKPbc 11 06 55.6 +0.9
ASSE Asse, Remlinge 144.95 350 *e*PKPbc **PKPdf** **11 06 54.8 +1.0**
baz=16,slow=2.9
PLOR Plostina 144.99 329 ⇑P **PKPdf** **11 06 54.9 +0.8**
TIRR Tirgusor 145.01 325 ⇑P **PKPdf** **11 06 55.2 +1.1**
TIRR Tirgusor 145.01 325 PKPdf **PKPdf** **11 06 53.9 -0.3**
TIRR Tirgusor 145.01 325 PKP **PKPdf** **11 06 54.7 +0.5**
TLBR Topalu 145.15 326 ⇓P **PKPbc** **11 06 56.2 +0.8**
IBBN Ibbenburen 145.19 353 *e*PKPbc **PKPdf** **11 06 55.5 +1.3**
baz=16,slow=2.9
OSTC Ostas 145.21 343 *e*PKP **PKPbc** **11 06 55.9 +0.5**
COVR Voineasa-Covas 145.21 329 ⇑P **PKPdf** **11 06 55.6 +1.1**
CHVC Chvalec 145.22 343 *e*PKP **PKPbc** **11 06 56.5 +1.1**
OZUR 145.23 330 ⇑P **PKPab** **11 06 57.2 +0.4**
CLZ Clausthal 145.28 350 *e*PKPbc **PKPbc** **11 06 56.0 +0.4**
baz=16,slow=2.9
CLL Collm 145.29 347 PKPdf **PKPdf** **11 06 55.0 +0.6**
CLL Collm 145.29 347 *e*PKPbc **PKPdf** **11 06 55.7 +1.3**
baz=16,slow=2.9
CLL Collm 145.29 347 PKP **PKPdf** **11 06 55.1 +0.6**
CLL Collm 145.29 347 ⇑*i*PKPbc **PKPdf** **11 06 55.6 +1.2**
comp=Z,30nm,1.0s
CLL *i* PKPab **PKPab** **11 06 57.1 +0.4**
comp=Z,18nm,1.0s
CLL *i* PKiKP **PKiKP** **11 06 58.9 +0.3**
comp=Z,9.0nm,0.9s
UPC Upice 145.31 343 *e*PKP **PKPbc** **11 06 56.4 +0.8**
STEB Steborice 145.31 341 *e*PKP **PKPdf** **11 06 55.4 +0.9**
BOSR Bodos 145.31 330 ⇓P **PKPbc** **11 06 57.0 +1.1**
DPC Dobruska-Polom 145.36 343 *e*PKP **PKPdf** **11 06 56.1 +1.4**
DPC Dobruska-Polom 145.36 343 PKP **PKPdf** **11 06 55.2 +0.5**
KRLC Kraliky 145.48 342 *e*PKP **PKPbc** **11 06 57.5 +1.3**
BRG Berggiesshubel 145.49 346 *e*PKPbc **PKPbc** **11 06 56.6 +0.4**
baz=16,slow=2.9
BRG Berggiesshubel 145.49 346 *e*PKP **PKPdf** **11 06 56.0 +1.2**
BRG Amp 11 06 57.7
comp=Z,17nm,0.9s
MORC Moravsky Berou 145.52 341 ⇓P **PKPdf** **11 06 55.6 +0.7**
MORC Moravsky Berou 145.52 341 PKPdf **PKPdf** **11 06 55.3 +0.3**
MORC Moravsky Berou 145.52 341 *e*PKP **PKPdf** **11 06 55.9 +0.9**
DOPR Dopca 145.52 330 ⇑P **PKPbc** **11 06 57.3 +0.8**
ISR Istrita 145.55 328 ⇑P **PKPbc** **11 06 57.8 +1.2**
MLR Muntele Rosu 145.59 329 ⇑P **PKPdf** **11 06 55.5 +0.2**
MLR Muntele Rosu 145.59 329 PKPdf **PKPdf** **11 06 55.5 +0.2**
GTTG Gottingen 145.63 350 *e*PKPbc **PKPbc** **11 06 56.9 +0.4**
baz=16,slow=2.9
NEUB Neuenburg 145.64 348 *e*PKPbc **PKPbc** **11 06 56.9 +0.3**
baz=16,slow=2.9
PVCC Panska Ves 145.66 345 *e*PKP **PKPbc** **11 06 57.8 +1.2**
MDUB Mudurnu 145.74 317 PKPbc **PKPdf** **11 06 57.2 +1.6**
CJR Cluj-Napoca 145.79 332 ⇑P **PKPbc** **11 06 57.8 +0.6**
MAUC Maruska 145.79 341 *e*PKP **PKPbc** **11 06 58.3 +1.2**
MMAI Mount Meron Ar 145.84 303 PKPbc **PKPbc** **11 06 58.4 +0.5**
comp=Z,16nm,0.7s,baz=39,slow=8.6,SNR=6.9
HSKC Hora Svate Kat 145.86 346 *e*PKP **PKPbc** **11 06 57.5 +0.2**
MARR Marisel-Cluj 146.03 333 ⇓P **PKPbc** **11 06 58.6 +0.6**
DRGR 146.11 333 ⇓P **PKPbc** **11 06 58.8 +0.6**
PRU Pruhonice 146.16 345 *e*PKP **PKPbc** **11 06 58.6 +0.5**
GHAJ Ghor Haditha 146.19 300 PKPbc **PKPdf** **11 06 58.5 +1.9**
KASTN Kahler Asten 146.19 352 *e*PKPbc **PKPbc** **11 06 58.5 +0.3**
baz=16,slow=2.9
MOX Moxa 146.21 348 *e*PKPbc **PKPbc** **11 06 58.5 +0.3**
baz=16,slow=2.9
VYHS Vyhne 146.21 339 *e*PKP **PKPbc** **11 06 59.1 +0.8**
VRAC Vranov 146.22 342 *e*PKP **PKPbc** **11 06 58.3 0.0**
PLN Plauen 146.25 347 *e*PKPbc **PKPbc** **11 06 58.7 +0.3**
baz=16,slow=2.9
TANN Tannenbergstha 146.25 347 *e*PKPbc **PKPbc** **11 06 58.7 +0.3**
baz=16,slow=2.9
JAVC Velka Javorina 146.28 340 *e*PKP **PKPbc** **11 06 58.8 +0.3**
ARR Arges 146.32 330 ⇓P **PKPbc** **11 06 59.4 +0.6**
PSZ Piszkesteto 146.32 337 ⇓P **PKPbc** **11 06 58.8 +0.1**
PSZ Piszkesteto 146.32 337 PKPdf **PKPdf** **11 06 54.8 -1.6**
PSZ PKPbc **PKPbc** **11 06 58.5 -0.2**
PSZ PKPab **PKPab** **11 07 02.0 +1.0**
NKC Novy Kostel 146.43 347 *e*PKP **PKiKP** **11 07 01.9 +0.8**
KRUC Moravsky 146.50 342 *e*PKP **PKPbc** **11 06 58.9 -0.1**
ZVC Zvikov 146.76 345 *e*PKP **PKPbc** **11 07 00.8 +1.1**
ZVC *ex* x 11 07 03.0
CSS Mathiatis 146.78 307 **PKPdf** **11 06 59.7 +2.2**
MODS Modra-Piesok 146.84 340 *e*PKP **PKPbc** **11 07 00.9 +0.9**
SIRR Siria 146.97 334 ⇓P **PKPbc** **11 07 01.2 +0.8**
SRO Srobarova 146.98 339 *e*PKP **PKPbc** **11 07 02.0 +1.7**
UCC Uccle 146.99 356 PKPdf **PKPdf** **11 06 57.0 -0.3**
UCC Uccle 146.99 356 *d*PKP **PKPbc** **11 07 00.5 +0.2**
MEM Membach 147.05 354 *d*PKP **PKPbc** **11 07 01.0 +0.6**
BTNL Ternell 147.06 354 *d*PKP **PKPbc** **11 07 00.5 -0.1**
BSTI Sart Tilman 147.12 355 *d*PKP **PKPbc** **11 07 01.0 +0.4**
TNS Taunus Mts 147.15 352 *e*PKPbc **PKPbc** **11 07 01.2 +0.4**
baz=16,slow=2.9
GZR Gura Zlata 147.16 332 ⇓P **PKPbc** **11 07 00.9 -0.1**
GRA1 Grafenberg Arr 147.19 348 PKPbc **PKPbc** **11 07 01.6 +0.7**
KHC Kasperske Hory 147.20 345 *e*PKP **PKPbc** **11 07 00.8 -0.2**
KHC *ex* x 11 07 04.7
KHC Kasperske Hory 147.20 345 **PKPbc** **11 07 01.7 +0.7**
BCLA Clavier 147.30 355 *d*PKP **PKPbc** **11 07 00.4 -0.7**
CKRC Cesky Krumlov 147.30 344 *e*PKP **PKPbc** **11 07 01.7 +0.5**
GEC2 GERESS Array S 147.43 345 **PKPbc** **11 07 01.6 0.0**
GEC2 GERESS Array S 147.43 345 *e*PKPbc **PKPbc** **11 07 01.9 +0.3**
baz=16,slow=2.9
GERES GERESS Array B 147.43 345 PKPbc **PKPbc** **11 07 02.3 +0.6**
comp=Z,7.6nm,0.6s,baz=4.1,slow=1.9,SNR=52
GERES GERESS Array B 147.43 345 **PKPbc** **11 07 01.7 +0.1**

WINA	**Alland / Wiene**	**147.45**	**341**	*i* PKP	**PKPbc**	**11 07 02.5 +0.9**
	SNR=6.8					
BMRD	**Maredsous**	**147.46**	**356**	*d*PKP	**PKPbc**	**11 07 02.1 +0.6**
BZS	**Buzias**	**147.51**	**333**	⇓P	**PKPbc**	**11 07 02.4 +0.6**
RCHB	**Rochefort**	**147.57**	**355**	*d*PKP	**PKPbc**	**11 07 01.7 -0.1**
CONA	**Conrad Observa**	**147.67**	**342**	*i* PKP	**PKPbc**	**11 07 02.9 +0.6**
	comp=Z,14nm,0.7s,SNR=12					
DOU	**Dourbes**	**147.67**	**356**	*d*PKP	**PKPbc**	**11 07 02.3 +0.2**
HERR	**Herculane**	**147.72**	**331**	⇓P	**PKPbc**	**11 07 02.3 0.0**
RONA	**Rosalia, Austr**	**147.74**	**341**	*i* PKP	**PKPbc**	**11 07 02.8 +0.3**
	comp=Z,14nm,0.7s,SNR=8.6					
WLF	**Walferdange**	**147.97**	**354**	*d*PKP	**PKPbc**	**11 07 04.0 +1.2**
WLF	**Walferdange**	**147.97**	**354**	*e*PKPbc	**PKPbc**	**11 07 03.8 +1.0**
	baz=16,slow=2.9					
MOA	**Molln**	**148.20**	**343**	*i* PKP	**PKPbc**	**11 07 04.0 +0.4**
	comp=Z,8.3nm,0.9s,SNR=5.1					
ARSA	**Arzberg**	**148.38**	**341**	*i* PKP	**PKPbc**	**11 07 04.8 +0.8**
	comp=Z,2.8nm,0.6s					
BIOA	**Bad Ischl, Aus**	**148.51**	**344**	*i* PKP	**PKPbc**	**11 07 03.8 -0.6**
	comp=Z,15nm,1.4s					
SESA	**Seetaler Alpe,**	**148.79**	**342**	*i* PKP	**PKPbc**	**11 07 05.0 -0.2**
	SNR=20					
LESA	**Schwarzleotal**	**149.01**	**345**	*i* PKP	**PKPbc**	**11 07 05.2 -0.5**
	comp=Z,6.7nm,0.4s,SNR=6.8					
BFO	**Black Forest**	**149.01**	**351**	*e*PKPbc	**PKPbc**	**11 07 05.8 +0.2**
	baz=16,slow=2.9					
SOKA	**Soboth**	**149.04**	**341**	*i* PKP	**PKPbc**	**11 07 05.3 -0.4**
	comp=Z,9.6nm,0.9s,SNR=9.6					
PERS	**Pernice**	**149.05**	**341**	*i* PKPbc	**PKPbc**	**11 07 05.2 -0.5**
KBA	**Koelnbreinsper**	**149.16**	**344**	*i* PKP	**PKPbc**	**11 07 05.3 -0.8**
	comp=Z,8.1nm,0.5s,SNR=9.7					
OBKA	**Obir**	**149.34**	**342**	*i* PKP	**PKPbc**	**11 07 05.4 -1.0**
	comp=Z,7.2nm,1.0s					
WATA	**Walderalm**	**149.35**	**346**	*i* PKP	**PKPbc**	**11 07 06.6 0.0**
	comp=Z,13nm,0.5s					
RETA	**Reutte**	**149.39**	**347**	*i* PKP	**PKPbc**	**11 07 06.9 +0.3**
	comp=Z,6.3nm,0.5s					
WTTA	**Wattenberg**	**149.41**	**346**	*i* PKP	**PKPbc**	**11 07 06.7 0.0**
	comp=Z,17nm,0.5s,SNR=8.4					
MOTA	**Moosalm**	**149.45**	**347**	*i* PKP	**PKPbc**	**11 07 06.8 0.0**
	comp=Z,21nm,1.1s,SNR=6.8					
MYKA	**Terra Mystica**	**149.49**	**343**	*i* PKP	**PKPbc**	**11 07 05.9 -0.8**
	comp=Z,2.6nm,0.4s,SNR=6.9					
SQTA	**Sankt Quirin**	**149.54**	**347**	*i* PKP	**PKPbc**	**11 07 07.2 +0.2**
	comp=Z,29nm,1.3s,SNR=6.9					
ABTA	**Abfaltersbach**	**149.68**	**345**	*i* PKP	**PKPbc**	**11 07 06.6 -0.6**
	comp=Z,15nm,0.6s,SNR=10					
PRED	**Cave del Predi**	**149.68**	**343**		**PKPbc**	**11 07 07.5 +0.3**
DAVA	**Damuels**	**149.75**	**348**	*i* PKP	**PKPbc**	**11 07 08.1 +0.6**
	comp=Z,19nm,1.0s,SNR=5.9					
LJU	**Ljubljana**	**149.76**	**342**	*i* PKPbc	**PKPbc**	**11 07 07.2 -0.2**
FETA	**Feichten**	**149.84**	**347**	*i* PKP	**PKPbc**	**11 07 07.8 +0.1**
	comp=Z,22nm,1.2s,SNR=6.7					
BLY	**Banja Luka**	**150.01**	**337**	⇓P	**PKPbc**	**11 07 08.9 +1.0**
BOJS	**Bojanci**	**150.02**	**340**	*i* PKPbc	**PKPbc**	**11 07 08.2 +0.3**
ESDC	**Sonseca Array**	**157.73**	**11**	PKPab	**PKPab**	**11 07 49.3 0.0**
	comp=Z,1.9nm,0.9s,baz=351,slow=3.8,SNR=11					
KEST	**Kesra**	**160.76**	**340**	PKPab	**PKPab**	**11 08 02.7 0.0**
	comp=Z,1.5nm,0.8s,baz=336,slow=4.8,SNR=4.7					
TORD	**Torodi Ar. Bea**	**175.36**	**185**	PKP	**PKPdf**	**11 07 25.9 -1.2**
	comp=Z,1.0nm,0.9s,baz=212,slow=3.1,SNR=4.0					

*ATH **31** 10:48:46.1,39˚.71N×20˚.31E,h20km±1km,ML2.6/7, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*TIR **31** 10:48:47.1,39˚.65N×20˚.29E,h18km,Ml2.5/4*
*THE **31** 10:48:47.8,40˚N±1˚×20˚.4E±1˚.0,h0km±2km,M2.4/10, MLh2.4/10*

ISC 31 10:48:47.0±0.8,39˚.69N±0˚.03×20˚.34E±0˚.02,h16km±6km, n28,σ0:62/49,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.15**	**183**	P	**Pg**	**10 48 50.9**	**-0.2**
IGT				S	**Sg**	**10 48 54.3**	**+0.6**
IGT				AML	AML	10 48 55.5	
	12nm,0.3s						
IGT	**Igoumenitsa**	**0.15**	**183**	P	**Pg**	**10 48 50.8**	**-0.2**
IGT				S	**Sg**	**10 48 54.4**	**+0.8**
IGT	**Igoumenitsa**	**0.15**	**183**	P	**Pg**	**10 48 50.8**	**-0.2**
IGT				S	**Sg**	**10 48 54.4**	**+0.8**
SRN	**Sarande**	**0.33**	**306**	P	**Pb**	**10 48 54.5**	**-0.1**
SRN				S	**Sb**	**10 48 59.9**	**+0.3**
SRN				AML	AML	10 49 04.6	
	1.0nm,0.3s						
SRN	**Sarande**	**0.33**	**306**	P	**Pb**	**10 48 54.5**	**-0.1**
SRN				S	**Sb**	**10 48 60.0**	**+0.3**
JAN	**Janina**	**0.39**	**94**	P	**Pg**	**10 48 54.7**	**-0.3**
JAN				S	**Sb**	**10 49 00.7**	**-0.8**
JAN	**Janina**	**0.39**	**94**	P	**Pg**	**10 48 54.7**	**-0.3**
JAN				S	**Sb**	**10 49 01.0**	**-0.5**
PRGA	**Parga**	**0.40**	**174**	P	**Pg**	**10 48 54.9**	**-0.2**
PRGA				S	**Sb**	**10 49 02.0**	**+0.4**
KEK	**Kerkira**	**0.42**	**274**	P	**Pg**	**10 48 55.2**	**-0.3**
KEK				S	**Sb**	**10 49 02.4**	**+0.1**
KEK	**Kerkira**	**0.42**	**274**	P	**Pg**	**10 48 54.5**	**-1.0**
KEK				S	**Sg**	**10 48 59.9**	**-1.3**
PRMD	**Pramanda**	**0.60**	**105**	P	**Pb**	**10 48 58.9**	**-0.3**
PRMD				S	**Sb**	**10 49 07.8**	**+0.3**
PRMD	**Pramanda**	**0.60**	**105**	P	**Pg**	**10 48 58.8**	**-0.1**
PRMD				S	**Sb**	**10 49 07.9**	**+0.3**
PENT	**Pentalofos**	**0.80**	**50**	P	**Pb**	**10 49 02.0**	**-0.6**
TETR	**Tetrakomo, Epi**	**0.80**	**115**	P	**Pg**	**10 49 02.3**	**-0.3**
TETR				S	**Sb**	**10 49 13.7**	**+0.5**
TETR	**Tetrakomo, Epi**	**0.80**	**115**	P	**Pg**	**10 49 02.0**	**-0.6**
KPRO	**Kipourio**	**0.83**	**71**	P	**Pg**	**10 49 02.2**	**-1.0**
KPRO				S	**Sb**	**10 49 14.5**	**+0.4**
KPRO	**Kipourio**	**0.83**	**71**	P	**Pg**	**10 49 02.1**	**-1.1**
LKD2	**Lefkada island**	**0.93**	**165**	P	**Pb**	**10 49 04.5**	**-0.3**
LKD2				S	**Sn**	**10 49 19.1**	**+0.6**
LKD2				AML	AML	10 49 25.5	
	0.8nm,0.4s						
LKD2	**Lefkada island**	**0.93**	**165**	P	**Pb**	**10 49 04.2**	**-0.5**
LKD2				S	**Sn**	**10 49 18.9**	**+0.4**
LKD2	**Lefkada island**	**0.93**	**165**	P	**Pb**	**10 49 04.0**	**-0.8**
KBN	**Korca**	**1.00**	**20**	P	**Pn**	**10 49 06.5**	**0.0**
KBN				S	**Sn**	**10 49 21.0**	**+0.7**
KBN				AML	AML	10 49 22.2	
	0.4nm,0.6s						
AMPL	**Ampelaki**	**1.02**	**138**	P	**Pn**	**10 49 06.7**	**+0.1**
AMPL				S	**Sn**	**10 49 21.7**	**+1.0**
AMPL	**Ampelaki**	**1.02**	**138**	P	**Pb**	**10 49 06.1**	**-0.2**
KZN	**Kozani**	**1.26**	**60**	P	**Pn**	**10 49 09.1**	**-1.0**
THL	**Klokotos Trika**	**1.30**	**95**	P	**Pg**	**10 49 11.8**	**-0.2**
THL				S	**Sg**	**10 49 29.8**	**+0.9**
TYRN	**Tyrnavos**	**1.46**	**88**	P	**Pb**	**10 49 13.7**	**-0.1**
TYRN				S	**Sg**	**10 49 34.0**	**0.0**
OHR	**Ohrid**	**1.47**	**14**	*i* Pn	**Pg**	**10 49 16.8**	**+1.6**
PLEV	**Plevrona-Mesol**	**1.52**	**147**	P	**Pg**	**10 49 16.6**	**+0.4**
PLEV				S	**Sg**	**10 49 35.6**	**-0.3**

DJA 31 11:13:59.5±2.3,1˚N±5˚×12˚6E±˚,h30km±25km,M3.5/10, MLv3.5/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.05**	**112**	P	Pn	11 14 18.1	-0.1
TNTI				S	Sb	11 14 32.8	+0.2
MNI	**Manado**	**1.57**	**280**	P	Pn	11 14 25.9	+0.5

*IDC **31** 11:20:07.3±0.5,32˚.94N×86˚.77E,h0km,mb4.4/28, mbtmp4.4/32,ML3.7/4,MS3.8/39,Error ellipse: s-maj=15.3km s-min=11.0km az=32.0*
*MOS **31** 11:20:08.2±1.0,33˚.03N×86˚.82E,h11km,mb5.0/37,Error ellipse: s-maj=7.3km s-min=3.4km az=121.4*
*BJI **31** 11:20:09.6,33˚.07N×86˚.85E,h8km,mB4.6/13,mb4.5/56, ML4.0/1,Ms4.4/53,Ms7 4.1/52*
*NEIC **31** 11:20:10.2±1.3,33˚.07N±0˚.07×86˚.7E±0˚.1,h10km±1km, mb4.7/137,Error ellipse: s-maj=15.5km s-min=10.3km az=243.0*
*GFZ **31** 11:20:11.5±0.2,33˚N±4˚×8˚7E±˚,h10km,M4.5/24, mb4.7/24*
*GCMT **31** 11:20:13.2±0.4,33˚.01N±0˚.04×86˚.70E±0˚.03,h27km±1km, MW4.9/76,Moment Tensor Solution. s16,c17; s76,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.35±.20; $M_{\theta\theta}$0.50±.12; $M_{\phi\phi}$1.84±.12; $M_{r\theta}$-0.34±.24; $M_{\theta\phi}$0.86±.08; $M_{\phi r}$0.80±.17; Best double couple: M_o2.45700×10^{16} NP1:ϕ_s192.00000°,δ54.00000°,λ-107.00000°. NP2:*

T 2.3350, Plg7.0000°, Azm294.0000°; N 0.2380, Plg14.0000°, Azm202.0000°; P -2.5790, Plg75.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
*NDI **31** 11:20:14.8±2.1,33˚.01N×86˚.75E,h24km±21km,ML4.1, MW4.2,Presumed earthquake*

ISC 31 11:20:09.4±0.5,33˚.03N±0˚.04×86˚.76E±0˚.03,h7km±3km, h8km:pP-P,n624,σ1:39/574,mb4.7/151,MS3.8/47, 17C-14D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.01**	**130**	*e*Pn	**Pn**	**11 21 25.8**	**+0.4**
LSA				*e*Lg	Lg	11 23 37.6	
	comp=N,2μm,4.4s						
LSA				*e*Lg	Lg	11 24 04.3	
	comp=E,2μm,4.9s						
LSA				*e*Lg	Lg	11 24 16.6	
	comp=Z,2μm,5.5s						
EVN	**Everest**	**5.05**	**179**	Pn	**Pn**	**11 21 26.5**	**+0.4**
HNLY	**HANLEY**	**6.55**	**270**	*e*P	**Pn**	**11 21 48.9**	**+2.3**
HNLY				*e*Lg	Lg	11 23 37.6	
HNLY				*i* x	x	11 24 04.3	
HNLY				*e*x	x	11 24 16.6	
PTH	**Pithoragarh**	**6.57**	**240**	*e*P	**Pn**	**11 21 50.0**	**+3.3**
GOMU	**GeErMu**	**7.36**	**62**	Pn	**Pn**	**11 21 58.5**	**+1.0**
GOMU				Sn	**Sn**	**11 23 25.0**	**+3.6**
GOMU				L	L		
	comp=N,2μm,12.3s						
GOMU				L	L		
	comp=E,480nm,12.4s						
GOMU				L	L		
	comp=Z,580nm,12.7s						
UTK	**UTTARKASHI**	**7.43**	**254**	*e*P	**Pn**	**11 22 01.1**	**+2.7**
UTK				*e*Lg	Lg	11 24 03.3	
UTK				*e*x	x	11 24 25.2	
DHUB	**DHUBRI**	**7.53**	**157**	*e*P	**Pn**	**11 22 03.0**	**+3.4**
DHUB				*e*S	**Sn**	**11 23 21.1**	**-4.1**
GUW	**GUWAHATI**	**8.05**	**147**	*e*P	**Pn**	**11 22 10.1**	**+3.3**
SMLA	**Simla**	**8.36**	**259**	*e*P	**Pn**	**11 22 11.3**	**+0.4**
SMLA				*i* x	x	11 22 53.7	
SMLA				*i* x	x	11 24 46.3	
SMLA				*e*x	x	11 25 38.4	
SHL	**Shillong**	**8.67**	**148**	P	**Pn**	**11 22 16.3**	**+0.8**
SHL	**Shillong**	**8.67**	**148**		**Pn**	**11 22 16.3**	**+0.8**
SHL	**Shillong**	**8.67**	**148**	*e*P	**Pn**	**11 22 17.6**	**+2.2**
DHRM	**DHARAMSHALA**	**8.86**	**268**	*e*P	**Pn**	**11 22 20.6**	**+2.6**
DHRM				IAML		11 23 07.6	
	comp=N,58nm,0.4s						
DHRM				IAML		11 23 07.7	
	comp=E,53nm,0.4s						
DHRM				*i* x	x	11 25 12.3	
DHRM				*e*x	x	11 25 36.3	
TSSA	**Tissa**	**8.92**	**272**	*e*P	**Pn**	**11 22 21.6**	**+2.8**
TSSA				IAML		11 24 05.6	
	comp=N,210nm,1.9s						
TSSA				IAML		11 24 06.6	
	comp=E,92nm,0.4s						
TSSA				*i* x	x	11 25 27.9	
THN	**Thein Dam**	**9.29**	**269**	*e*P	**Pn**	**11 22 26.4**	**+2.7**
MOKO	**MOKOCHONG**	**9.49**	**133**	*e*P	**Pn**	**11 22 29.7**	**+3.0**
KOHI	**KOHIMA**	**9.70**	**137**	*e*P	**Pn**	**11 22 31.1**	**+1.7**
KUDL	**Kundal**	**10.10**	**244**	*e*P	**Pn**	**11 22 37.3**	**+2.5**
WUS	**Wushi**	**10.13**	**326**		**Pn**	**11 22 34.8**	**-0.6**
WMQ	**Urumqi**	**10.80**	**4**	*e*P	**Pn**	**11 22 48.5**	**+4.0**
WMQ				sP		11 22 54.0	
WMQ				pmax	pmax		
	comp=E,11nm,0.9s						
WMQ				L	L		
	comp=E,380nm,12.7s						
WMQ				L	L		
	comp=E,420nm,11.5s						
KSH2	**Kashi**	**10.92**	**307**	P	**Pn**	**11 22 48.8**	**+2.7**
KSH2				pmax	pmax		
	comp=E,8.0nm,1.3s						
KSH2				L	L		
	comp=E,1μm,15.5s						
KSH2				L	L		
	comp=E,790nm,19.2s						
KSH2				L	L		
	comp=E,1μm,23.0s						
MORE	**Moreh**	**10.98**	**141**		**Pn**	**11 22 48.0**	**+1.2**
BRDH	**Bariadhala**	**11.18**	**156**	LR	LR	11 28 13.6	
	comp=E,532nm,19.9s,baz=346,slow=44						
TARG	**Taragay, Kyrgy**	**11.23**	**323**	P	**Pn**	**11 22 50.3**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.23**	**323**		**Pn**	**11 22 50.3**	**-0.3**
TARG	**Taragay, Kyrgy**	**11.23**	**323**	P	**Pn**	**11 22 52.3**	**+1.7**
NIL	**Nilore**	**11.32**	**277**	P	**Pn**	**11 22 51.3**	**-0.2**
NIL	**Nilore**	**11.32**	**277**		**Pn**	**11 22 50.6**	**-0.9**
NIL	**Nilore**	**11.32**	**277**	P	**Pn**	**11 22 51.3**	**-0.2**
ASAI	**AK-SAY(Kyrgyzs**	**11.35**	**317**	P	**Pn**	**11 22 54.7**	**+2.4**
SHLS	**Shalkode**	**11.63**	**333**	*e*P	**Pn**	**11 22 55.1**	**-0.7**
SHLS	**Shalkode**	**11.63**	**333**	*e*P	**Pn**	**11 22 55.2**	**-0.7**
PDGK	**Podgornoye**	**11.76**	**333**	P	**Pn**	**11 22 57.7**	**0.0**
PDGK	**Podgornoye**	**11.76**	**333**		**Pn**	**11 22 57.6**	**0.0**
UZB	**Uzynbulak**	**11.79**	**331**	*e*P	**Pn**	**11 22 59.7**	**+1.6**
UZB	**Uzynbulak**	**11.79**	**331**	*e*P	**Pn**	**11 22 59.7**	**+1.6**
KDJ	**Kajisay**	**11.84**	**323**	P	**Pn**	**11 22 59.4**	**+0.6**
KDJ	**Kajisay**	**11.84**	**323**		**Pn**	**11 22 59.4**	**+0.6**
KDJ	**Kajisay**	**11.84**	**323**	P	**Pn**	**11 23 01.2**	**+2.4**
SATY	**Saty**	**11.98**	**329**	*e*P	**Pn**	**11 23 02.4**	**+1.8**
SATY	**Saty**	**11.98**	**329**	*e*P	**Pn**	**11 23 02.4**	**+1.8**
NRN	**Naryn**	**11.99**	**317**	P	**Pn**	**11 23 02.5**	**+1.5**
NRN	**Naryn**	**11.99**	**317**		**Pn**	**11 23 02.5**	**+1.5**
KPKS	**Kokpek**	**12.19**	**331**	*e*P	**Pn**	**11 23 05.1**	**+1.6**
KPKS	**Kokpek**	**12.19**	**331**	*e*P	**Pn**	**11 23 05.1**	**+1.6**
GTA2	**Gaotai**	**12.31**	**55**	*e*P	**Pn**	**11 23 07.0**	**+1.8**
GTA2				sP		11 23 19.5	
GTA2				pmax	pmax		
	comp=E,5.0nm,1.0s						
GTA2				L	L		
	comp=E,1μm,13.6s						
GTA2				L	L		
	comp=E,560nm,12.7s						
GTA2				L	L		
	comp=E,440nm,18.7s						
TNSS	**Tian-Shan**	**12.63**	**325**	*e*P	**Pn**	**11 23 11.3**	**+1.6**
TNSS	**Tian-Shan**	**12.63**	**325**	*e*P	**Pn**	**11 23 11.3**	**+1.6**
MDOK	**Medeo**	**12.67**	**326**	*e*P	**Pn**	**11 23 12.0**	**+1.8**
MDOK	**Medeo**	**12.67**	**326**	*e*P	**Pn**	**11 23 12.0**	**+1.8**
BOOM	**Boomskoye usch**	**12.74**	**321**	P	**Pn**	**11 23 11.2**	**+0.1**
BOOM	**Boomskoye usch**	**12.74**	**321**	Pn	**Pn**	**11 23 11.2**	**+0.1**
BOOM	**Boomskoye usch**	**12.74**	**321**	P	**Pn**	**11 23 11.9**	**+0.8**
MANEM	**Manem**	**13.11**	**294**	Pn	**Pn**	**11 23 16.0**	**-0.3**
OHH	**Osh**	**13.46**	**308**	P	**Pn**	**11 23 23.1**	**+2.3**
OHH	**Osh**	**13.46**	**308**	P	**Pn**	**11 23 23.1**	**+2.3**
TDK	**Taldyqorghan**	**13.60**	**334**	*e*P	**Pn**	**11 23 24.2**	**+1.6**
TDK	**Taldyqorghan**	**13.60**	**334**	*e*P	**Pn**	**11 23 24.2**	**+1.6**
AAK	**Ala-Archa**	**13.62**	**318**	Pn	**Pn**	**11 23 24.9**	**+1.8**
	comp=E,0.5nm,0.3s,baz=130,slow=15,SNR=13						
AAK				LR	LR	11 29 09.3	
	comp=E,338nm,21.1s,baz=136,slow=40 comp=E,2.2nm,0.5s						
AAK	**Ala-Archa**	**13.62**	**318**	*d*P	**Pn**	**11 23 26.7**	**+3.6**
AAK	**Ala-Archa**	**13.62**	**318**	P	**Pn**	**11 23 27.0**	**+3.8**
DRK	**Karamyk**	**13.67**	**302**	P	**Pn**	**11 23 26.3**	**+2.3**
SGDS	**Sogindy**	**14.10**	**321**	*e*P	**Pn**	**11 23 31.5**	**+2.0**
MK31	**Makanchi Array**	**14.17**	**347**	*c* P	**Pn**	**11 23 29.6**	**-0.8**
MKAR	**Makanchi Array**	**14.17**	**347**	Pn	**Pn**	**11 23 29.6**	**-0.8**
	comp=E,0.1nm,0.3s,baz=159,slow=14,SNR=19						
MKAR				LR	LR	11 29 53.9	
	comp=E,224nm,20.8s,baz=153,slow=41 comp=E,4.3nm,0.8s						
MKAR	**Makanchi Array**	**14.17**	**347**		**Pn**	**11 23 28.5**	**-1.9**
MAKZ	**Makanchi**	**14.24**	**347**	P	**Pn**	**11 23 31.9**	**+0.5**
LZDM	**Lanzhou Array**	**14.27**	**73**	Pn	**P**	**11 23 39.2**	**-0.4**
	baz=232,slow=7.0						
LZH	**Lanzhou**	**14.41**	**73**	*e*P	**Pn**	**11 23 34.3**	**+0.4**
LZH				sP	P	11 23 43.3	+2.4
LZH				pmax	pmax		
	comp=E,18nm,1.3s						
LZH				L	L		
	comp=E,1μm,16.1s						
LZH				L	L		
	comp=E,580nm,14.1s						
LZH				L	L		
	comp=E,610nm,15.8s						
ZSN	**Zaisan**	**14.48**	**355**	*e*P	**Pn**	**11 23 35.6**	**+0.9**
ZSN	**Zaisan**	**14.48**	**355**	*e*P	**Pn**	**11 23 35.6**	**+0.9**
PZH	**PanZhiHua**	**14.54**	**113**	P	**Pn**	**11 23 38.0**	**+2.3**
PZH				S	**Sn**	**11 26 25.0**	**+7.8**
PZH				pmax	pmax		
	comp=E,20nm,0.9s						
PZH				L	L		
	comp=E,580nm,10.0s						
PZH				L	L		
	comp=E,940nm,11.5s						
PZH				L	L		
	comp=E,1μm,12.2s						
GAR	**Garm**	**14.57**	**299**		**Pn**	**11 23 35.0**	**-1.2**
GAR	**Garm**	**14.57**	**299**	P	**Pn**	**11 23 37.2**	**+1.1**
CD2	**Chengdu**	**14.59**	**94**	P	**P**	**11 23 40.0**	**-2.8**
CD2				pmax	pmax		
	comp=E,20nm,0.7s						
CD2				L	L		
	comp=E,1μm,9.5s						
CD2				L	L		
	comp=E,2μm,12.3s						
CD2				L	L		
	comp=E,2μm,9.9s						
BTK	**Batken**	**14.60**	**303**	P	**Pn**	**11 23 35.6**	**-0.8**
BTK	**Batken**	**14.60**	**303**		**Pn**	**11 23 35.6**	**-0.8**
BTK	**Batken**	**14.60**	**303**	P	**Pn**	**11 23 37.0**	**+0.6**
ARK	**Arkit**	**14.64**	**311**	P	**Pn**	**11 23 38.8**	**+1.7**
KBL	**Kabul**	**14.81**	**281**	P	**Pn**	**11 23 36.3**	**-3.2**
KBL	**Kabul**	**14.81**	**281**	P	**Pn**	**11 23 37.6**	**-1.8**
CHGR	**Chuyangaron**	**15.33**	**296**	⇓*e*P	**Pn**	**11 23 46.0**	**-0.3**
CHGR	**Chuyangaron**	**15.33**	**296**		**Pn**	**11 23 44.7**	**-1.6**
CHGR	**Chuyangaron**	**15.33**	**296**	P	**Pn**	**11 23 44.8**	**-1.6**
BTLS	**Baital**	**15.52**	**324**	*e*P	**Pn**	**11 23 50.5**	**+2.0**
BTLS	**Baital**	**15.52**	**324**	*e*P	**Pn**	**11 23 50.6**	**+2.0**
DZA	**Taraz**	**15.63**	**313**	*e*P	**P**	**11 23 52.6**	**-1.7**
DZA	**Taraz**	**15.63**	**313**	*e*P	**P**	**11 23 52.6**	**-1.7**
KMI2	**Kunming**	**16.02**	**115**	P	**P**	**11 24 00.0**	**+1.1**
KMI2				S	**Sn**	**11 26 47.5**	**-5.9**
KMI2				pmax	pmax		
	comp=E,16nm,0.7s						
KMI2				L	L		
	comp=E,550nm,9.9s						
KMI2				L	L		
	comp=E,610nm,9.7s						
KMI2				L	L		
	comp=E,760nm,24.1s						
KK31	**Karatay Array**	**16.25**	**313**	P	**Pn**	**11 23 57.6**	**-0.5**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KK31	**Karatay Array**	**16.25**	**313**		**Pn**	**11 23 57.6**	**-0.5**
KKAR	**Karatay Array**	**16.25**	**313**	P	**Pn**	**11 23 58.4**	**+0.3**
KKAR	**Karatay Array**	**16.25**	**313**		**Pn**	**11 23 58.4**	**+0.3**
CHM	**Chimkent**	**16.42**	**309**	*e*P	**P**	**11 24 02.8**	**-0.3**
CHM	**Chimkent**	**16.42**	**309**	*e*P	**P**	**11 24 02.8**	**-0.3**
BRLS	**Boroldoy**	**16.63**	**312**	*e*P	**P**	**11 24 04.9**	**-0.5**
BRLS	**Boroldoy**	**16.63**	**312**	*e*P	**P**	**11 24 05.0**	**-0.5**
DGZ	**Jazzator, Alta**	**16.67**	**2**	⇑*e*P	**Pn**	**11 24 02.8**	**-0.7**
HYB	**Hyderabad**	**17.21**	**207**	*e*P	**Pn**	**11 24 10.9**	**+0.5**
HYB				*e*S	**S**	**11 27 32.5**	**+1.0**
CHTO	**Chiang Mai**	**17.88**	**139**	P	**Pn**	**11 24 18.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**17.88**	**139**	P	**Pn**	**11 24 18.0**	**-0.7**
CHTO	**Chiang Mai**	**17.88**	**139**	P	**P**	**11 24 20.1**	**+0.8**
	comp=Z,7.3nm,1.2s						
CHTO	**Chiang Mai**	**17.88**	**139**	P	**P**	**11 24 20.4**	**+1.0**
CM31	**Chiang Mai Arr**	**18.17**	**140**	P	**Pn**	**11 24 22.2**	**0.0**
CMAR	**Chiang Mai Arr**	**18.17**	**140**	P	**Pn**	**11 24 21.1**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=320,slow=14,SNR=28						
CMAR				LR	LR	11 31 13.2	
	comp=Z,158nm,18.3s,baz=320,slow=37 comp=Z,4.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.17**	**140**	P	**Pn**	**11 24 21.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**18.17**	**140**	P	**Pn**	**11 24 21.4**	**-0.8**
KURBB	**Kurchatov Arra**	**18.60**	**343**	P	**P**	**11 24 26.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=26						
KURBB				LR	LR	11 32 44.8	
	comp=Z,264nm,18.2s,baz=180,slow=40 comp=Z,5.7nm,0.8s						
KURK	**Kurchatov**	**18.66**	**344**	*c i*P	**P**	**11 24 27.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**18.66**	**344**	P	**P**	**11 24 26.3**	**-1.4**
KURK	**Kurchatov**	**18.66**	**344**	P	**P**	**11 24 27.2**	**-0.5**
KNGR	**Kungurtug, Tuv**	**19.27**	**21**	⇑*e*P	**Pn**	**11 24 35.8**	**+0.3**
KNGR				pmax	pmax		
	comp=Z,13nm,1.0s						
BTO2	**Baotou**	**20.00**	**61**	*e*P	**Pn**	**11 24 43.5**	**-0.8**
BTO2				S	**S**	**11 28 24.5**	**-3.2**
BTO2				pmax	pmax		
	comp=Z,12nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,230nm,8.9s						
BTO2				L	L		
	comp=Z,970nm,9.2s

BJI2 L L
comp=Z,130nm,11.4s
QIZ Qiongzhong 24.92 118 P P 11 25 34.0 +0.8
QIZ S S 11 29 58.8 +2.0
QIZ L L
comp=Z,310nm,10.6s
QIZ L L
comp=Z,300nm,10.0s
QIZ L L
comp=Z,380nm,14.8s
TIA Tai'an 25.14 74 P P 11 25 36.8 +1.7
TIA pmax pmax
comp=Z,24nm,1.2s
TIA L L
comp=Z,470nm,12.9s
TIA L L
comp=Z,360nm,14.6s
TIA L L
comp=Z,310nm,13.2s
AB31 Akbulak array 25.71 317 P P 11 25 40.1 +0.1
AB31 IAmb IAmb 11 25 43.5
comp=Z,16nm,0.9s
ABKAR Akbulak array 25.71 317 P 11 25 40.6 +0.6
NJ2 Nanjing 27.02 83 eP P 11 25 52.0 -0.1
NJ2 pmax pmax
comp=Z,24nm,0.8s
AKTO Aktyubinsk 27.37 318 P P 11 25 54.1 -0.9
comp=Z,5.5nm,1.0s,baz=135,slow=9.8,SNR=6.8
AKTO LR LR 11 36 22.9
comp=Z,90nm,21.1s,baz=77,slow=36
comp=Z,5.5nm,1.0s
DL2 Dalian 28.71 68 P P 11 26 08.0 +0.9
DL2 S S 11 30 57.5 +1.1
DL2 pmax pmax
comp=Z,30nm,1.2s
DL2 pmax pmax
comp=Z,48nm,4.0s
DL2 L L
comp=Z,370nm,17.4s
DL2 L L
comp=Z,180nm,18.1s
DL2 L L
comp=Z,410nm,17.1s
HILR Hailar Array B 29.48 46 P P 11 26 12.6 -1.3
comp=Z,2.4nm,0.5s,baz=236,slow=8.0,SNR=7.0
comp=Z,2.4nm,0.5s
SVE Sverdlovsk 29.80 331 eP P 11 26 17.4 +0.8
SVE pmax pmax
comp=Z,12nm,1.0s
ARTI Arti 30.47 329 P P 11 26 21.7 -0.9
comp=Z,4.3nm,0.6s,baz=143,slow=4.0,SNR=5.6
ARTI LR LR 11 40 00.8
comp=Z,232nm,19.5s,baz=120,slow=39
comp=Z,4.3nm,0.6s
ARTI Arti 30.47 329 di P P 11 26 22.6 +0.1
ARTI 11 27 16.6
ARTI 11 29 17.1
ARTI S S 11 31 24.3 +0.6
ARTI SS SnSn 11 33 00.3 +1.1
ARTI pmax pmax
comp=Z,5.0nm,0.8s
ARTI Arti 30.47 329 P P 11 26 21.5 -1.0
ARTI IAmb IAmb 11 26 23.2
comp=Z,7.4nm,0.5s
CN2 Changchun 31.90 59 P P 11 26 35.5 +0.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 L L
comp=Z,400nm,10.0s
CN2 L L
comp=Z,400nm,10.0s
CN2 L L
comp=Z,600nm,10.0s
AKT Akhty 31.97 297 eP P 11 26 37.0 +0.9
AKT ePPP PPP 11 27 52.9
AKT pmax pmax
comp=Z,10.0nm,0.8s
INCN Inchon 32.69 71 P P 11 26 42.3 -0.1
INCN pmax pmax
comp=Z,25nm,0.7s
INCN Inchon 32.69 71 P P 11 26 42.3 -0.1
INCN Inchon 32.69 71 P P 11 26 42.8 +0.4
TJN Taejon 33.38 73 P P 11 26 47.8 -0.5
TJN pmax pmax
comp=Z,80nm,0.9s
TJN Taejon 33.38 73 P P 11 26 47.8 -0.5
BNX BinXian 33.53 56 ⇓P P 11 26 51.3 +1.8
BNX pmax pmax
comp=Z,7.0nm,1.0s
KS19 Wonju Array Si 33.67 71 IAmb IAmb 11 26 53.7
comp=Z,8.3nm,0.8s
KSAR Wonju Array Be 33.69 71 P P 11 26 50.9 -0.1
KSAR Wonju Array Be 33.69 71 P 11 26 50.9 -0.1
KSRS Korea Array 33.72 71 P P 11 26 50.5 -0.7
comp=Z,6.0nm,0.7s,baz=270,slow=8.4,SNR=34
KSRS LR LR 11 40 52.1
comp=Z,85nm,21.8s,baz=290,slow=37
comp=Z,6.0nm,0.7s
BELG Belogornoye 34.11 316 deP P 11 26 54.7 +0.3
BELG pmax pmax
comp=Z,5.0nm,1.0s
GNI Garni 34.23 294 ceP P 11 26 58.8 +2.9
GNI pmax pmax
comp=Z,36nm,1.7s
NCK Nalchik 35.12 300⇑ eP P 11 27 04.5 +1.1
NCK pmax pmax
comp=Z,30nm,1.7s
KBZ Khabaz 35.63 300 LR LR 11 45 18.3
comp=Z,152nm,18.3s,baz=97,slow=42
KIRV Kirov 35.72 327 LR LR 11 42 52.0
comp=Z,99nm,19.3s,baz=119,slow=38
KIRV Kirov 35.72 327 deP P 11 27 08.5 +0.3
EPOS Posof 35.73 297 P P 11 27 11.3 +2.5
KIV Kislovodsk 35.80 301 eP P 11 27 13.6 +4.3
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,102nm,16.0s
SHA1 Shidzhatmaz 35.81 300⇑ eP P 11 27 10.8 +1.2
JOW Kunigami 36.33 89 LR LR 11 42 54.6
comp=Z,110nm,21.0s,baz=178,slow=38
NRIK Noril'sk 36.36 0 P P 11 27 13.5 -0.3
comp=Z,16nm,0.9s,baz=151,slow=6.3,SNR=11
NRIK LR LR 11 43 34.5
comp=Z,141nm,18.9s,baz=190,slow=39
comp=Z,16nm,0.9s
NRIK Noril'sk 36.36 0 di P P 11 27 13.4 -0.3
NRIK pmax pmax
comp=Z,14nm,0.8s
NRIK Noril'sk 36.36 0 P P 11 27 13.3 -0.4
NRIK IAmb IAmb 11 27 16.0
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 36.64 59 P P 11 27 16.5 +0.1
comp=Z,4.3nm,1.0s,baz=246,slow=6.3,SNR=6.7
USRK LR LR 11 42 57.2
comp=Z,152nm,19.8s,baz=256,slow=37
comp=Z,4.3nm,1.0s
JNU Nakatsue 36.76 77 LR LR 11 43 12.5
comp=Z,121nm,18.0s,baz=296,slow=38
KLR Kul'dur 36.95 50 LR LR 11 44 18.8
comp=Z,147nm,18.9s,baz=260,slow=39
KLR Kul'dur 36.95 50 ceP P 11 27 19.5 +0.5
KLR pmax pmax
comp=Z,17nm,1.0s
VRH Novokhopyorsk 37.33 313 eP P 11 27 22.1 -0.1
VRH pmax pmax
comp=Z,22nm,0.7s
KELT Kelkit 38.43 295 P P 11 27 34.1 +2.2
VORD Divnogorie 38.80 312 eP P 11 27 33.8 -0.7
VORD pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 38.92 312 eP P 11 27 35.4 -0.1
VSR pmax pmax
comp=Z,14nm,0.6s
VORR Voronezh 38.97 313 eP P 11 27 35.1 -0.8
VORR pmax pmax
comp=Z,62nm,0.4s
ARPR Arapgir-MALATY 39.24 293 P P 11 27 41.4 +2.8
LPSR Galich'ya Gora 39.30 314 eP P 11 27 38.9 +0.2
LPSR pmax pmax
comp=Z,24nm,0.7s
ANN Anapa 39.58 302 eP P 11 27 42.6 +1.5
ANN e*PP pP 11 27 45.6 +0.7
ANN eS S 11 33 47.2 +3.1
ANN pmax pmax
comp=Z,24nm,0.8s
YAK Yakutsk 39.79 30 eP P 11 27 42.7 +0.1
YAK e*PP pP 11 27 45.7 -0.7
YAK e 11 29 12.0
YAK ePPP PPP 11 29 36.3
YAK e 11 29 48.9
YAK eS S 11 33 46.5 -0.3
YAK eSS SS 11 36 38.6 -3.7
YAK e 11 37 47.5
YAK pmax pmax
comp=Z,7.0nm,0.7s
YAK pmax pmax
comp=N,2.0nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax
comp=Z,76nm,3.1s
YAK pmax pmax
comp=E,50nm,3.2s
YAK pmax pmax
comp=N,159nm,9.9s
YAK smax smax
comp=N,35nm,3.2s
YAK smax smax
comp=E,50nm,3.8s
TOKA Tokat 40.53 295 P P 11 27 49.5 +0.3
MOS Moscow 40.69 319 eP P 11 27 50.8 +0.6
MOS pmax pmax
comp=Z,38nm,0.7s
OBN Obninsk 41.15 318 ci P P 11 27 54.9 +1.0
OBN e 11 29 30.0
OBN e 11 29 53.5
OBN ePPP PPP 11 29 56.2
OBN pmax pmax
comp=Z,41nm,1.8s
OBN MLR MLR
comp=Z,98nm,19.0s
OBN Obninsk 41.15 318 P P 11 27 55.0 +1.0
comp=Z,27nm,0.6s
BNN Bunyan 41.19 293 P P 11 27 54.0 -0.8
ASF Jabal al Asfar 41.69 283 LR LR 11 48 45.1
comp=Z,120nm,19.6s,baz=26,slow=41
SIM Simferopol' 41.93 302 eP P 11 28 01.6 +1.0
SIM pmax pmax
comp=Z,43nm,1.1s
MJB9 Matsu-Tunnel 41.99 70 P P 11 28 01.4 +0.2
MJB9 IAmb IAmb 11 28 03.7
comp=Z,10nm,0.8s
MAJO Matsushiro 41.99 70 ci P P 11 28 00.5 -0.7
MAJO pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 41.99 70 P P 11 28 00.3 -0.9
MAJO IAmb IAmb 11 28 02.7
comp=Z,11nm,0.8s
MAJO Matsushiro 41.99 70 P P 11 28 01.2 -0.1
MJAR Matsushiro Arr 41.99 70 P P 11 28 00.9 -0.4
comp=Z,9.6nm,0.9s,baz=284,slow=9.2,SNR=26
MJAR LR LR 11 46 24.2
comp=Z,69nm,18.2s,baz=248,slow=38
comp=Z,9.6nm,0.9s
MJAR Matsushiro Arr 41.99 70 P P 11 28 01.2 -0.1
MJAR Matsushiro Arr 41.99 70 P P 11 28 01.2 -0.1
MMAI Mount Meron Ar 42.70 285 LR LR 11 50 35.1
comp=Z,136nm,18.1s,baz=84,slow=43
BR104 Keskin Array S 42.77 295 P P 11 28 08.1 +0.5
comp=Z,25nmcomp=Z,2.9nm,1.1s
BR131 Keskin Array S 42.77 295 ci P P 11 28 08.5 +0.9
BR131 Keskin Array S 42.77 295 P P 11 28 07.1 -0.6
BRTR Keskin Array B 42.77 295 P P 11 28 07.9 +0.3
comp=Z,2.6nm,0.9s,baz=112,slow=9.5,SNR=18
BRTR PcP PcP 11 29 58.0 -1.0
comp=Z,1.3nm,0.8s,baz=117,slow=4.7,SNR=6.6
BRTR LR LR 11 49 11.3
comp=Z,110nm,20.9s,baz=132,slow=41
comp=Z,2.6nm,0.9s
BRTR Keskin Array B 42.77 295 i P P 11 28 08.5 +0.9
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 42.77 295 P P 11 28 07.5 -0.1
BR106 Keskin Array S 42.78 295 P P 11 28 08.3 +0.5
comp=Z,28nmcomp=Z,3.9nm,1.0s
BR106 pP pP 11 28 11.1 -0.5
comp=Z,28nmcomp=Z,3.9nm,1.0s
BR105 Keskin Array S 42.78 295 P P 11 28 08.3 +0.5
comp=Z,3.5nm,1.1s
EIL Elat 44.01 280 LR LR 11 49 26.8
comp=Z,175nm,20.4s,baz=93,slow=40
EIL Elat 44.01 280 P P 11 28 19.7 +2.1
JHJ Hachijo jima 2 44.02 75 LR LR 11 47 27.3
comp=Z,72nm,18.3s,baz=274,slow=37
KZIT Kziot 44.09 282 P P 11 28 20.7 +2.4
YSS Yuzhno-Sakhali 44.19 55 eP P 11 28 20.4 +1.6
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,200nm,13.0s
ASAJ Asahikawa 44.27 59 LR LR 11 47 55.9
comp=Z,132nm,18.3s,baz=336,slow=38
DAV Davao City (W) 44.28 117 LR LR 11 48 46.3
comp=Z,115nm,18.7s,baz=302,slow=39
LEM Lembang 44.32 150 LR LR 11 50 14.6
comp=Z,108nm,19.0s,baz=321,slow=41
AK08 Malin Array Si 45.12 311 P P 11 28 26.6 +0.4
AK08 pP pP 11 28 28.8 -1.2
AKASG Malin Array Be 45.14 311 P P 11 28 26.7 +0.4
comp=Z,6.5nm,0.8s,baz=83,slow=7.2,SNR=25
AKASG LR LR 11 51 22.3
comp=Z,142nm,18.5s,baz=78,slow=42
comp=Z,6.5nm,0.8s
AKASG Malin Array Be 45.14 311 P P 11 28 26.0 -0.3
AKASG IAmb IAmb 11 28 31.2
comp=Z,11nm,1.4s
AKBB Malin Array Si 45.14 311 deP P 11 28 26.3 0.0
AKBB pmax pmax
comp=Z,14nm,0.7s
AKBB Malin Array Si 45.14 311 P P 11 28 26.6 +0.3
AK03 Malin Array Si 45.14 311 P P 11 28 26.9 +0.6
AK01 Malin Array Si 45.14 311 P P 11 28 26.6 +0.2
KIEV Kiev 45.15 311 P P 11 28 26.8 +0.4
KIEV Kiev 45.15 311 P P 11 28 26.6 +0.2
comp=Z,79nm,1.0s
KIEV Kiev 45.15 311 P P 11 28 26.8 +0.4
AK02 Malin Array Si 45.15 311 P P 11 28 26.8 +0.4
AK07 Malin Array Si 45.15 311 P P 11 28 26.9 +0.5
AK05 Malin Array Si 45.15 311 P P 11 28 26.8 +0.4
AK06 Malin Array Si 45.15 311 P P 11 28 27.0 +0.5
AK11 Malin Array Si 45.17 311 P P 11 28 27.0 +0.4
AK04 Malin Array Si 45.17 311 P P 11 28 26.9 +0.3
AK12 Malin Array Si 45.18 311 P P 11 28 27.1 +0.4
AK14 Malin Array Si 45.21 311 P P 11 28 27.3 +0.4
AK16 Malin Array Si 45.21 311 P P 11 28 27.3 +0.4
AK22 Malin Array Si 45.23 311 P P 11 28 27.3 +0.2
AK18 Malin Array Si 45.24 311 P P 11 28 27.4 +0.3
AK13 Malin Array Si 45.24 311 P P 11 28 27.5 +0.3
AK17 Malin Array Si 45.24 311 P P 11 28 27.5 +0.3
AK21 Malin Array Si 45.25 311 P P 11 28 27.3 +0.1
AK19 Malin Array Si 45.27 311 P P 11 28 27.7 +0.3
AK19 pP pP 11 28 30.2 -1.0
AK20 Malin Array Si 45.27 311 P P 11 28 27.6 +0.2
SORM Soroca 45.77 307 P P 11 28 31.2 -0.2
comp=Z,12nm,1.0s
LVZ Lovozero 45.78 335 ⇓eP P 11 28 31.8 +0.5
LVZ pmax pmax
comp=Z,30nm,1.3s
YLV Yalova 45.87 297 P P 11 28 33.1 +0.7
MNK Minsk 46.06 316 i P P 11 28 34.3 +0.7
comp=E,18nm,0.7s
MNK i P P 11 28 34.3 +0.7
comp=N,9.0nm,0.6s
MNK i P P 11 28 34.3 +0.7
comp=Z,27nm,0.8s,baz=92
MNK i PP PP 11 30 24.0 +2.6
MNK i PPP PPP 11 31 05.4
MNK i S S 11 35 20.9 +1.8
MNK i SS SS 11 38 47.5 +3.8
MNK i SSS SSS 11 39 40.2
MNK i LRM MLR 11 50 21.1
comp=Z,88nm,17.7s
MNK i LRM MLR 11 50 50.5
comp=E,201nm,20.3s
MNK Minsk 46.06 316 i P P 11 28 34.2 +0.7
MNK i 11 30 23.9
MNK i PPP PPP 11 31 05.3
MNK i S S 11 35 20.9 +1.8
MNK i SSS SSS 11 39 40.1
MNK pmax pmax
comp=N,9.0nm,0.6s
MNK pmax pmax
comp=Z,27nm,0.8s
MNK pmax pmax
comp=E,18nm,0.7s
MNK MLR MLR
comp=Z,88nm,18.0s
MNK MLR MLR
comp=E,201nm,20.0s
MNK MLR MLR
comp=N,153nm,16.0s
LUBAR Lubar, Ukraine 46.09 310 P P 11 28 33.8 -0.1
MI28 Mi28,Pidlybu 46.12 311 P P 11 28 33.7 -0.4
NACGM Naroch 46.72 317 eP P 11 28 40.4 +1.7
comp=Z,24nm,0.9s,baz=92
VSU Vasula 46.99 321 ⇓eP P 11 28 40.5 -0.3
VSU pmax pmax
comp=Z,42nm,2.3s
KMPD K-Podol'skiy 47.00 308 P P 11 28 40.8 -0.2
KMPD pP pP 11 28 44.0 -0.9
TESR Tescani 47.04 305 P P 11 28 42.3 +0.8
VRI Vrincioaia 47.06 304 P P 11 28 42.9 +1.3
VRI Vrincioaia 47.06 304 P P 11 28 43.1 +1.5
MLR Muntele Rosu 47.64 304 LR LR 11 52 58.8
comp=Z,209nm,18.0s,baz=46,slow=41
MLR Muntele Rosu 47.64 304 P P 11 28 48.1 +1.8
FINES FINESS Array B 47.67 325 P P 11 28 46.4 +0.3
comp=Z,2.0nm,0.6s,baz=99,slow=12,SNR=5.9
comp=Z,2.0nm,0.6s
FINES FINESS Array B 47.67 325 P P 11 28 46.1 0.0
JCJ Chichijima 47.88 82 LR LR 11 50 36.0
comp=Z,85nm,18.2s,baz=266,slow=38
BURAR Bucovina Array 47.91 307 P P 11 28 48.1 -0.2
BURAR PCP PcP 11 30 17.5 +0.8
BURAR pmax pmax
comp=Z,5.0nm,0.9s
BURAR Bucovina Array 47.91 307 P P 11 28 48.1 -0.2
BURAR IAmb IAmb 11 28 50.1
comp=Z,4.5nm,0.9s
BURAR PcP PcP 11 30 17.5 +0.8
BUR08 Bucovina Ar. S 47.92 307 IAmb IAmb 11 28 51.3
comp=Z,5.2nm,1.0s
KAPI Kappang 49.09 134 LR LR 11 52 41.3
comp=Z,82nm,18.1s,baz=298,slow=40
MA2 Magadan 49.13 37 LR LR 11 49 37.0
comp=Z,52nm,18.9s,baz=5.0,slow=36
MA2 Magadan 49.13 37 i P P 11 28 55.2 -2.2
ARCES ARCESS Array B 49.47 336 P P 11 28 57.9 -1.9
comp=Z,7.2nm,1.1s,baz=116,slow=8.7,SNR=6.8
ARCES LR LR 11 51 44.2
comp=Z,153nm,18.1s,baz=154,slow=38
comp=Z,7.2nm,1.1s
ARCES ARCESS Array B 49.47 336 P P 11 29 00.5 +0.7
ARCES pmax pmax
comp=Z,18nm,1.5s
ARCES ARCESS Array B 49.47 336 P P 11 29 00.5 +0.7
ARCES IAmb IAmb 11 29 03.4
comp=Z,18nm,1.4s
SEY Seymchan 50.13 33 i P P 11 29 06.4 +1.4
SEY pmax pmax
comp=Z,14nm,1.5s
BZS Buzias 50.63 305 P P 11 29 11.0 +2.0
LIT Litokhoron 51.11 297 IAmb IAmb 11 29 14.8
comp=Z,14nm,1.3s
VYHS Vyhne 52.04 309 eP P 11 29 20.5 +0.9
MORC Moravsky Berou 52.68 310 P P 11 29 28.7 +4.4
MORC Moravsky Berou 52.68 310 IAmb IAmb 11 29 28.9
comp=Z,9.9nm,1.2s
MORC Moravsky Berou 52.68 310 eP P 11 29 25.6 +1.3
VRAC Vranov 53.37 310 LR LR 11 55 09.9
comp=Z,129nm,20.3s,baz=73,slow=39
VRAC Vranov 53.37 310 eP P 11 29 29.3 -0.1
KRUC Moravsky 53.54 310 P P 11 29 32.5 +1.9
KRUC Moravsky 53.54 310 eP P 11 29 31.6 +1.0
HFS Hagfors 53.69 324 P P 11 29 31.2 -0.4
comp=Z,6.8nm,0.6s,baz=82,slow=11,SNR=18
comp=Z,6.8nm,0.6s
SIJI Sorong 53.78 120 LR LR 11 55 30.9
comp=Z,46nm,18.0s,baz=330,slow=40
RONA Rosalia, Austr 53.86 308 epP P 11 29 34.3 +1.3
comp=Z,3.4nm,0.7s
CONA Conrad Observa 54.10 308 epP P 11 29 35.4 +0.6
comp=Z,12nm,1.1s
ARSA Arzberg 54.47 308 IAmb IAmb 11 29 42.3
comp=Z,9.6nm,1.3s
ARSA Arzberg 54.47 308 i pP P 11 29 38.6 +1.2
comp=Z,7.2nm,1.2s
NC405 NORSAR Array S 54.59 325 P P 11 29 37.5 -0.5
NC303 NORSAR Array S 54.74 325 P 11 29 39.1 -0.1
NC303 IAmb IAmb 11 29 40.9
comp=Z,14nm,1.2s
BRG Berggiesshubel 54.76 312 eP P 11 29 40.2 +0.7
BRG Amp 11 29 42.3
comp=Z,3.6nm,0.7s
NB2 NORSAR Subarra 54.83 325 P P 11 29 39.5 -0.4
comp=Z,2.4nm,0.6s,baz=84,slow=7.4
NOA NORSAR Array B 54.83 325 P P 11 29 39.5 -0.4
comp=Z,3.9nm,0.7s,baz=84,slow=7.3,SNR=17
NOA LR LR 11 54 40.9
comp=Z,105nm,21.2s,baz=220,slow=38
comp=Z,3.9nm,0.7s
SOKA Soboth 54.92 307 i pP P 11 29 41.6 +0.8
comp=Z,15nm,1.0s
MOA Molln 55.17 309 i P P 11 29 42.3 -0.2
comp=Z,5.7nm,0.8s
CLL Collm 55.27 313 ePx Px 11 29 46.0
OBKA Obir 55.28 307 epP P 11 29 44.2 +0.8
comp=Z,5.5nm,1.5s
GEC2 GERESS Array S 55.32 310 IAmb IAmb 11 29 45.7
comp=Z,5.9nm,0.8s
GERES GERESS Array B 55.32 310 P P 11 29 44.5 +0.7
comp=Z,3.4nm,0.7s,baz=77,slow=5.9,SNR=24
comp=Z,3.4nm,0.7s
GERES GERESS Array B 55.32 310 P P 11 29 43.6 -0.1
KHC Kasperske Hory 55.34 310 ci P P 11 29 44.9 +1.1
KHC pmax pmax
comp=Z,9.0nm,1.7s
BATI Baumata 55.54 134 LR LR 11 56 05.3
comp=Z,104nm,18.4s,baz=176,slow=39
SOEI Soe 55.56 133 P P 11 29 55.2 +9.4
BIOA Bad Ischl, Aus 55.62 308 epP P 11 29 46.9 +1.1
comp=Z,2.8nm,0.7s
TIP Timpagrande 55.62 298 IAmb IAmb 11 29 47.6
comp=Z,9.5nm,1.2s
MYKA Terra Mystica 55.86 307 epP P 11 29 48.4 +0.8
comp=Z,2.0nm,1.0s
BILL Bilibino 55.93 27 ⇑eP P 11 29 48.9 +1.2
BILL pmax pmax
comp=Z,9.0nm,0.9s
KBA Koelnbreinsper 55.95 308 epP P 11 29 49.1 +0.7
comp=Z,5.6nm,1.1s
LODK Lodwar 56.26 250 P P 11 29 51.4 +0.5
LODK IAmb IAmb 11 29 52.8
comp=Z,8.5nm,1.2s
LESA Schwarzleotal 56.31 308 i pP P 11 29 51.8 +0.9
comp=Z,6.8nm,1.0s
ABTA Abfaltersbach 56.59 308 i P P 11 29 53.0 +0.2
comp=Z,4.3nm,1.0s
WTTA Wattenberg 57.04 308 i pP P 11 29 56.6 +0.5
comp=Z,5.5nm,0.7s
WATA Walderalm 57.06 308 epP P 11 29 56.7 +0.5
comp=Z,3.5nm,0.8s
FDMO Fiordimonte 57.18 303 IAmb IAmb 11 29 58.5
comp=Z,14nm,1.2s
NRCA Norcia 57.22 303 IAmb IAmb 11 29 58.7
comp=Z,5.2nm,0.9s
SQTA Sankt Quirin 57.33 308 i P P 11 29 58.5 +0.4
comp=Z,4.5nm,0.7s
MOTA Moosalm 57.37 309 i pP P 11 29 58.9 +0.5
comp=Z,8.0nm,1.2s
RETA Reutte 57.55 309 epP P 11 30 00.3 +0.7
comp=Z,2.8nm,0.5s
FETA Feichten 57.70 308 eP P 11 29 59.7 -1.0
comp=Z,6.7nm,1.3s
DAVA Damuels 58.19 309 i P P 11 30 04.1 0.0
comp=Z,6.6nm,0.9s
TUE Stuetta 58.76 308 IAmb IAmb 11 30 09.0
comp=Z,4.4nm,0.9s
JAY Jayapura 61.95 114 LR LR 11 55 42.9
comp=Z,42nm,21.5s,baz=8.0,slow=34
KEST Kesra 62.33 296 P P 11 30 32.4 -0.2
comp=Z,7.5nm,1.0s,baz=66,slow=9.4,SNR=12
comp=Z,7.5nm,1.0s
KEST Kesra 62.33 296 P P 11 30 32.5 -0.2
MBAR Mbarara 62.37 249 P P 11 30 32.8 -0.4
MBAR pmax pmax

comp=Z,18nm,1.3s
MBAR Mbarara 62.37 249 P P 11 30 32.8 -0.4
EKA Eskdalemuir Ar 63.52 320 P P 11 30 39.2 -0.9
comp=Z,0.7nm,0.5s,baz=67,slow=6.2,SNR=1.8
EKA LR LR 11 59 14.2
comp=Z,174nm,19.2s,baz=190,slow=37
comp=Z,0.7nm,0.5s
GAMB Gambell 65.71 29 P P 11 30 54.1 -0.2
baz=296
C16K Lisburne Hills 65.96 23 P P 11 30 55.1 -0.7
baz=299
A19K Wainwright 66.30 20 P P 11 30 57.5 -0.4
baz=302
TNA Tin City 66.36 26 P P 11 30 57.2 -1.2
baz=298
C17K DeLong Mountai 66.56 22 P P 11 30 58.5 -1.1
baz=301
A21K Barrow 66.91 18 P P 11 31 01.1 -0.7
baz=305
D17K Noatak River 66.99 23 P P 11 31 01.9 -0.5
baz=301
C18K Utukok River 67.09 22 P P 11 31 02.6 -0.5
baz=302
C19K Lookout Ridge 67.33 21 P P 11 31 03.9 -0.7
baz=304
B20K Meade River 67.52 20 P P 11 31 05.1 -0.6
baz=305
A22K Sinclair Lake 67.53 18 P P 11 31 04.3 -1.4
baz=307
E17K Hotham Inlet 67.73 23 P P 11 31 06.0 -1.1
baz=302
BORG Borgarnes 67.78 334 LR LR 12 01 21.8
comp=Z,62nm,18.8s,baz=139,slow=36
ANM Nome 67.79 26 P P 11 31 06.9 -0.7
baz=300
E18K Tukpahlearik C 67.94 23 P P 11 31 07.8 -0.7
baz=303
G15K Niukluk 68.06 26 P P 11 31 08.8 -0.4
baz=301
D19K Kuna River 68.12 21 P P 11 31 08.5 -1.1
baz=305
SUMG Summit 68.20 345 P P 11 31 10.3 -0.2
SUMG pmax pmax
comp=Z,12nm,1.1s
SUMG Summit 68.20 345 P 11 31 10.3 -0.2
F17K Baldwin Pennin 68.27 24 P P 11 31 09.8 -0.6
baz=303
B22K Teshekpuk Lake 68.34 18 P P 11 31 10.1 -0.7
baz=308
D20K Etivluk River 68.44 21 P P 11 31 10.5 -1.1
baz=306
B21K Ikpikpuk River 68.46 19 P P 11 31 11.0 -0.6
baz=308
C21K Knifeblade Rid 68.70 20 P P 11 31 11.7 -1.5
baz=308
F18K Selawik 68.71 23 P P 11 31 12.0 -1.2
baz=304
E20K Nigu River 68.83 21 P P 11 31 13.0 -1.1
baz=307
H16K Elim 68.91 26 P P 11 31 13.8 -0.7
baz=303
G17K Kiwalik Mounta 68.99 24 P P 11 31 14.1 -0.9
baz=304
E19K Redstone River 68.99 22 P P 11 31 14.0 -1.0
baz=306
F19K Shaleruckik Mo 69.19 22 P P 11 31 15.3 -0.9
baz=306
E21K Killik River 69.38 20 P P 11 31 16.9 -0.5
baz=308
SPIA Saint Paul Isl 69.39 35 P P 11 31 16.4 -1.1
baz=299
C23K Itkillik River 69.41 18 P P 11 31 16.3 -1.2
baz=311
K13K Kusilvak Mount 69.43 29 P P 11 31 16.9 -0.9
baz=302
J14K Nanvaranak Lak 69.43 28 P P 11 31 16.6 -1.1
baz=302
G18K Tagagawik 69.45 24 P P 11 31 16.6 -1.3
baz=305
WRA Warramunga Arr 69.56 132 P P 11 31 18.2 -0.9
comp=Z,4.0nm,1.1s,baz=326,slow=6.5,SNR=15
comp=Z,4.0nm,1.1s
WRA Warramunga Arr 69.56 132 *i* P P 11 31 19.0 -0.2
WRA pmax pmax
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 69.56 132 P P 11 31 18.5 -0.6
H17K Granite Mounta 69.57 25 IAmb IAmb 11 31 20.5
comp=Z,9.7nm,1.1s
H17K Granite Mounta 69.57 25 P P 11 31 17.8 -0.8
baz=305,SNR=5.1
M11K Mekoryuk 69.60 30 P P 11 31 17.8 -1.0
baz=301
F20K Avaraart Lake 69.71 22 P P 11 31 17.8 -1.6
baz=308
G19K Purcell Mounta 69.82 23 IAmb IAmb 11 31 23.3
comp=Z,7.1nm,1.2s
G19K Purcell Mounta 69.82 23 P P 11 31 18.8 -1.4
baz=307
I17K Unalakleet 69.89 26 P P 11 31 18.8 -1.7
baz=304
D23K Nanushuk River 69.96 19 P P 11 31 19.6 -1.4
baz=311
H18K Honhosa River 69.98 24 P P 11 31 20.0 -1.2
baz=306
J16K Anvik River 70.26 26 P P 11 31 22.1 -0.8
baz=305
F21K Alatna River 70.29 21 P P 11 31 21.5 -1.5
baz=309
ESDC Sonseca Array 70.32 305 P P 11 31 23.0 -0.8
comp=Z,2.2nm,0.8s,baz=55,slow=6.6,SNR=14
comp=Z,2.2nm,0.8s
D24K Happy Valley 70.33 18 P P 11 31 21.9 -1.4
baz=313
H19K Roundabout Mou 70.40 23 P P 11 31 22.1 -1.6
baz=307
K15K Wolf Creek Mou 70.47 27 P P 11 31 22.8 -1.4
baz=304
TOLK Toolik Lake Re 70.48 19 P P 11 31 22.9 -1.3
baz=312
F22K John River 70.49 20 P P 11 31 22.4 -1.9
baz=310
L14K Kuka Creek 70.55 29 P P 11 31 22.8 -1.8
baz=304
G21K Allakaket 70.73 22 P P 11 31 23.9 -1.9
baz=310
GCSA Galena City Sc 70.73 24 P P 11 31 24.1 -1.6
baz=307
J17K VABM Dome 70.76 26 P P 11 31 24.2 -1.7
baz=306
C26K Camden Bay 70.78 17 P P 11 31 24.7 -1.2
baz=316
M13K Dall Lake 70.78 30 P P 11 31 25.0 -1.1
baz=303
L15K Ungalak Mounta 70.83 28 P P 11 31 24.9 -1.5
baz=304
D25K Kavik River 70.85 18 IAmb IAmb 11 31 50.0
comp=Z,4.2nm,1.1s
D25K Kavik River 70.85 18 P P 11 31 25.2 -1.2
baz=315
E23K Chandalar 70.86 19 P P 11 31 25.3 -1.3
baz=312
TAM Tamanrasset 70.91 285 P P 11 31 26.4 -1.3
TAM pmax pmax
comp=Z,10.0nm,0.8s
TAM Tamanrasset 70.91 285 P P 11 31 26.4 -1.3
H20K Anotleneega Mo 70.94 23 P P 11 31 25.9 -1.1
baz=309
E24K Your Creek 71.16 19 P P 11 31 27.1 -1.3
baz=313
M14K Bethel 71.17 29 P P 11 31 26.9 -1.5
baz=304
COLD Coldfoot 71.25 20 P P 11 31 27.5 -1.4
baz=312
C27K Jago River 71.28 17 IAmb IAmb 11 31 30.4
comp=Z,3.4nm,0.8s
C27K Jago River 71.28 17 P P 11 31 27.2 -1.9
baz=317
K17K Iditarod 71.45 26 P P 11 31 29.2 -1.0
baz=307
H21K Melozitna Rive 71.50 22 IAmb IAmb 11 31 33.6
comp=Z,5.2nm,1.2s
H21K Melozitna Rive 71.50 22 P P 11 31 29.1 -1.3
baz=310
I20K Naaghedeneel 71.51 23 P P 11 31 29.1 -1.4
baz=309
J18K Innoko River 71.57 25 IAmb IAmb 11 31 35.4
comp=Z,5.0nm,1.0s
J18K Innoko River 71.57 25 P P 11 31 30.1 -0.8
baz=308
L16K Owhat River 71.60 27 P P 11 31 30.1 -0.9
baz=306
J19K Poorman 71.63 24 IAmb IAmb 11 31 34.8
comp=Z,9.7nm,1.1s
J19K Poorman 71.63 24 P P 11 31 29.9 -1.3
baz=308,SNR=7.1
G23K Bananza Creek 71.65 21 P P 11 31 30.1 -1.2
baz=312
F24K Squaw Lake 71.71 19 P P 11 31 30.7 -1.0
baz=314
M15K Kasigluk River 71.71 29 P P 11 31 30.9 -0.8
baz=305
N14K Kuskokwak Cree 71.75 30 P P 11 31 30.2 -1.7
baz=305
H22K Ishtalitna Cre 71.79 22 P P 11 31 30.7 -1.4
baz=311
L17K Donlin 71.80 27 P P 11 31 30.9 -1.3
baz=307
E25K Arctic Village 71.91 18 P P 11 31 31.6 -1.2
baz=316
J20K Nowinta River 72.02 24 IAmb IAmb 11 31 39.7
comp=Z,4.7nm,0.8s
J20K Nowinta River 72.02 24 P P 11 31 32.0 -1.5
baz=310
I21K Tanana 72.08 22 P P 11 31 31.9 -2.0
baz=311
AS31 Alice Springs 72.10 135 P P 11 31 34.0 -0.6
ASAR Alice Springs 72.10 135 P P 11 31 33.8 -0.8
comp=Z,2.1nm,0.9s,baz=320,slow=6.1,SNR=14
comp=Z,2.1nm,0.9s
ASAR Alice Springs 72.10 135 P P 11 31 34.0 -0.6
ASAR Alice Springs 72.10 135 P P 11 31 34.0 -0.6
M16K Timber Creek 72.21 28 P P 11 31 33.1 -1.7
baz=306
D27M Malcolm River 72.22 16 P P 11 31 33.0 -1.7
baz=319
N15K Kwethluk River 72.26 29 P P 11 31 33.1 -2.0
baz=306
F25K Christian Rive 72.27 19 P P 11 31 33.1 -2.0
baz=316
O14K Tigyukauivet M 72.31 30 P P 11 31 33.8 -1.5
baz=305
L18K Granite Mounta 72.34 26 P P 11 31 33.7 -1.8
baz=308
G24K Hadweenzic Riv 72.40 20 IAmb IAmb 11 32 14.1
comp=Z,8.1nm,1.5s
G24K Hadweenzic Riv 72.40 20 P P 11 31 34.0 -1.8
baz=314
H23K Yukon River 72.40 21 P P 11 31 34.6 -1.2
baz=313
K20K Telida 72.57 24 IAmb IAmb 11 31 40.5
comp=Z,5.2nm,0.8s
K20K Telida 72.57 24 P P 11 31 35.5 -1.3
baz=310
M17K Holitna River 72.57 27 P P 11 31 35.3 -1.6
baz=308
MLY Manley 72.57 22 P P 11 31 35.7 -1.2
baz=312
F26K Sheenjek River 72.59 18 P P 11 31 35.3 -1.7
baz=317
N16K Nishlik Lake 72.61 28 P P 11 31 35.4 -1.8
baz=307
G25K Bearman Lake 72.74 19 P P 11 31 36.3 -1.5
baz=316
CHUM Lake Minchumin 72.82 23 P P 11 31 36.8 -1.5
baz=311
E27K Coleen River 72.87 17 IAmb IAmb 11 31 55.0
comp=Z,6.0nm,1.4s
E27K Coleen River 72.87 17 P P 11 31 36.6 -2.0
baz=319
H24K Noodor Dome 72.89 21 P P 11 31 36.8 -2.0
baz=314
A36M Sachs Harbour 72.91 10 P P 11 31 36.7 -1.9
baz=332
I23K Minto, Yukon-K 72.92 22 P P 11 31 36.9 -2.0
baz=313
UNV Unalaska Valle 72.92 36 P P 11 31 37.6 -1.5
baz=303
O15K Ungalikthiuk R 72.96 30 P P 11 31 37.7 -1.5
baz=306
L19K White Mountain 73.04 26 IAmb IAmb 11 31 43.6
comp=Z,8.6nm,1.1s
L19K White Mountain 73.04 26 P P 11 31 38.9 -0.8
baz=310
E28M Babbage River 73.04 16 P P 11 31 37.8 -1.8
baz=321
M18K Stony River 73.12 26 P P 11 31 38.9 -1.2
baz=309
N17K Nushagak Hills 73.20 28 P P 11 31 40.0 -0.6
baz=304
CAST Castle Rocks 73.21 24 IAmb IAmb 11 31 45.6
comp=Z,11nm,1.2s
CAST Castle Rocks 73.21 24 P P 11 31 39.5 -1.1
baz=311,SNR=11
G26K Porcupine Rive 73.24 19 P P 11 31 39.5 -1.2
baz=317
NEA2 Nenana 73.39 22 IAmb IAmb 11 31 44.3
comp=Z,5.3nm,0.8s
NEA2 Nenana 73.39 22 P P 11 31 40.6 -1.1
baz=314
O16K Kokwok River B 73.41 29 P P 11 31 40.2 -1.6
baz=308
PPLA Purkeypile 73.52 24 P P 11 31 41.5 -1.2
baz=311
POKR Poker Plat Res 73.53 21 P P 11 31 41.4 -1.1
baz=315
COLA College 73.57 21 *de*P P 11 31 42.4 -0.3
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA College 73.57 21 P P 11 31 42.2 -0.5
COLA College 73.57 21 P P 11 31 41.4 -1.3
baz=314
E29M Blow River 73.59 16 IAmb IAmb 11 31 45.0
comp=Z,3.8nm,0.8s
E29M Blow River 73.59 16 P P 11 31 41.3 -1.5
baz=322
N18K Kilae Creek 73.61 27 P P 11 31 42.1 -0.9
baz=309
O17K Koliganek Bris 73.70 28 P P 11 31 42.6 -1.0
baz=308
F28M Old Crow 73.73 17 P P 11 31 42.8 -0.9
baz=321
TRF Thorofare Moun 73.78 23 P P 11 31 43.6 -0.6
baz=313
PRP Porcupine Dome 73.80 20 P P 11 31 43.9 -0.4
baz=316
M20K Styx River 73.86 25 IAmb IAmb 11 31 46.6
comp=Z,8.8nm,1.0s
M20K Styx River 73.86 25 P P 11 31 43.7 -0.9
baz=311,SNR=6.2
G27K Doyon Strip 73.90 18 P P 11 31 43.4 -1.3
baz=319
ILAR Eielson Array 73.94 21 P P 11 31 44.2 -0.6
comp=Z,2.3nm,0.9s,baz=308,slow=4.7,SNR=19
comp=Z,2.3nm,0.9s
MCK McKinley 74.03 22 P P 11 31 44.6 -0.9
baz=314
N19K Bonanza Creek 74.05 27 P P 11 31 44.4 -1.3
baz=310
HDA Harding Lake 74.18 21 P P 11 31 44.6 -1.7
baz=315
L22K Petersville 74.25 24 P P 11 31 45.3 -1.5
baz=313
P17K Kvichak River 74.33 28 P P 11 31 46.1 -1.1
baz=309
SKT Skwentna 74.36 25 P P 11 31 46.5 -0.9
baz=312,SNR=9.5
H27K Steamboat Moun 74.38 18 P P 11 31 46.3 -1.2
baz=319
O18K Koktuh Hills 74.39 28 P P 11 31 46.8 -0.9
baz=310
J25K Salcha River, 74.50 21 P P 11 31 46.8 -1.5
baz=317
O19K Port Alsworth 74.52 27 P P 11 31 47.0 -1.3
baz=310
Q16K King Salmon 74.56 29 P P 11 31 47.3 -1.3
baz=309
STLK Strandline Lak 74.57 25 IAmb IAmb 11 31 51.5
comp=Z,5.9nm,1.1s
INK Inuvik 74.61 14 P P 11 31 47.3 -1.4
baz=326
P18K Big Mountain, 74.68 28 P P 11 31 47.4 -2.0
baz=310
F30M Barrier River 74.69 16 IAmb IAmb 11 31 52.1
comp=Z,6.3nm,0.9s
F30M Barrier River 74.69 16 P P 11 31 47.7 -1.6
baz=324
G29M Pine Creek 74.73 17 P P 11 31 48.7 -0.8
baz=322
WAT1 Susitna Watana 74.79 23 P P 11 31 48.3 -1.6
baz=314
S14K Fog Glacier 74.81 32 P P 11 31 48.6 -1.6
baz=307
I27K Kandik River 74.83 19 P P 11 31 49.0 -1.2
baz=320
SDPT Sand Point 74.95 33 P P 11 31 49.7 -1.2
baz=307
K24K Donnelly Dome 74.97 21 P P 11 31 50.4 -0.6
baz=316
DHY Denali Highway 74.99 22 P P 11 31 49.8 -1.4
baz=315,SNR=5.3
G30M tAoh Zraii Nji 75.11 16 IAmb IAmb 11 31 52.5
comp=Z,6.7nm,1.1s
G30M tAoh Zraii Nji 75.11 16 P P 11 31 50.9 -0.8
baz=324
Q17K Contact Creek 75.14 29 P P 11 31 51.0 -1.1
baz=310
H29M Whitestone 75.20 17 P P 11 31 51.3 -0.9
baz=322
WAT6 Susitna Watana 75.23 23 P P 11 31 51.4 -1.2
baz=315
O20K Slope Mountain 75.23 26 P P 11 31 51.3 -1.3
baz=312
Q18K Katmai Hardscr 75.25 28 P P 11 31 51.4 -1.4
baz=310
F31M Tsiigehtchic 75.29 15 P P 11 31 51.8 -0.8
baz=326
P19K Oil Pt 75.29 27 P P 11 31 51.7 -1.2
baz=311
RIDG Independent Ri 75.30 21 IAmb IAmb 11 31 54.7
comp=Z,7.0nm,0.9s
RIDG Independent Ri 75.30 21 P P 11 31 51.7 -1.2
baz=317
R17L Mt. Peulik Vol 75.35 30 P P 11 31 51.8 -1.4
baz=309
I28M Miner Creek 75.40 18 P P 11 31 52.1 -1.4
baz=321
GHO Glory Hole Cre 75.40 24 IAmb IAmb 11 31 58.4
comp=Z,11nm,1.2s
C36M Paulatuk 75.45 11 P P 11 31 52.2 -1.3
baz=334
PMR Palmer 75.46 24 P P 11 31 52.7 -1.0
baz=314
EPYK Eagle Plains 75.48 17 P P 11 31 53.5 -0.4
baz=323
SML Sawmill 75.58 24 P P 11 31 54.0 -0.5
baz=315,SNR=7.2
RC01 Rabbit Creek A 75.59 25 P P 11 31 54.1 -0.4
baz=314
G31M Satah River 75.60 15 IAmb IAmb 11 31 56.2
comp=Z,8.0nm,0.8s
G31M Satah River 75.60 15 P P 11 31 53.7 -0.7
baz=325
Q19K Cape Douglas, 75.61 28 P P 11 31 54.1 -0.6
baz=311
CHNA Chernabura Isl 75.67 33 P P 11 31 55.0 -0.1
baz=308
PAX Paxson 75.67 22 P P 11 31 55.0 -0.1
baz=317
KNK Knik Glacier 75.81 24 P P 11 31 55.1 -0.7
baz=315
I29M Ogilvie Camp, 75.89 18 P P 11 31 55.6 -0.6
baz=322
SCM Sheep Creek Mo 75.90 23 P P 11 31 55.6 -0.8
baz=316
BRSE Bradley Lake S 76.16 26 P P 11 31 56.9 -0.9
baz=313
PWL Port Wells 76.25 24 P P 11 31 58.1 -0.2
baz=315
L26K Log Cabin Wild 76.29 21 P P 11 31 58.2 -0.3
baz=318
SEW Seward 76.38 25 P P 11 31 58.6 -0.4
baz=314
I30M Mount Dempster 76.49 17 IAmb IAmb 11 32 01.5
comp=Z,5.0nm,0.8s
I30M Mount Dempster 76.49 17 P P 11 31 59.1 -0.6
baz=324
H31M Peel River 76.50 16 IAmb IAmb 11 32 02.3
comp=Z,6.1nm,0.9s
H31M Peel River 76.50 16 P P 11 31 58.8 -0.9
baz=325
KLU Klutina 76.61 23 IAmb IAmb 11 32 03.5
comp=Z,3.5nm,0.8s
KLU Klutina 76.61 23 P P 11 31 60.0 -0.4
baz=317
DAWY Dawson 76.63 19 IAmb IAmb 11 32 01.4
comp=Z,7.0nm,1.4s
DAWY Dawson 76.63 19 P P 11 32 00.4 -0.1
baz=322
GLI Glacier Island 76.66 24 P P 11 32 00.2 -0.5
baz=316
L27K Beaver Creek, 76.71 21 IAmb IAmb 11 32 04.3
comp=Z,10nm,1.3s
L27K Beaver Creek, 76.71 21 P P 11 31 60.0 -1.0
baz=320,SNR=12
BCAR Beaver Creek A 76.72 21 P P 11 32 00.3 -0.7
KDAK Kodiak Island 76.79 28 P P 11 32 00.5 -0.9
baz=312
CHIR Chirikof Islan 76.82 31 P P 11 32 01.3 -0.3
baz=310
M26K Nabesna, AK 76.86 21 IAmb IAmb 11 32 04.4
comp=Z,5.0nm,1.1s
M26K Nabesna, AK 76.86 21 P P 11 32 00.8 -1.0
baz=319
OHAK Old Harbor 76.88 29 P P 11 32 01.0 -0.9
baz=312
SII Sitkinak Islan 76.95 30 P P 11 32 01.6 -0.7
baz=311
N25K Chitina, Valde 76.95 23 P P 11 32 01.5 -0.9
baz=318,SNR=9.7
J30M Hart River 77.03 18 P P 11 32 01.8 -1.0
baz=324
M27K Edge Creek, AK 77.24 21 IAmb IAmb 11 32 07.5
comp=Z,6.0nm,1.0s
M27K Edge Creek, AK 77.24 21 P P 11 32 03.0 -1.0
baz=320,SNR=5.9
K29M Barlow Dome 77.31 18 IAmb IAmb 11 32 09.7
comp=Z,3.4nm,0.8s
K29M Barlow Dome 77.31 18 P P 11 32 03.8 -0.6
baz=323
EYAK Cordova Ski Ar 77.36 24 P P 11 32 04.1 -0.4
baz=317
BMRM Bremner River 77.43 23 IAmb IAmb 11 32 08.0
comp=Z,11nm,1.2s
BMRM Bremner River 77.43 23 P P 11 32 04.2 -0.8
baz=318
BVCY Beaver Creek 77.50 21 P P 11 32 05.2 -0.2
baz=321
VRDI Verde Repeater 77.61 22 IAmb IAmb 11 32 09.3
comp=Z,7.8nm,1.2s
MCARA McCarthy VSAT 77.62 22 P P 11 32 06.0 0.0
baz=319
L29M L29M 77.73 19 P P 11 32 05.9 -0.8
baz=323
Q23K Middleton Isla 77.97 25 P P 11 32 07.4 -0.5
baz=317
CRQE Cirque 78.08 23 P P 11 32 07.9 -0.9
baz=319
YUK3 Moose Creek 78.11 21 P P 11 32 08.0 -1.0
baz=321
M29M Somme Creek 78.17 20 IAmb IAmb 11 32 15.2
comp=Z,3.6nm,0.8s
M29M Somme Creek 78.17 20 P P 11 32 08.7 -0.5
baz=322,SNR=7.6
KAIM Kayak Island 78.26 24 P P 11 32 09.4 -0.2
baz=318
GRNC Granite Creek 78.52 22 IAmb IAmb 11 32 14.8
comp=Z,14nm,1.5s
M30M Minto, Yukon 78.53 19 P P 11 32 10.1 -1.0
baz=324
LOGN Logan Glacier 78.69 22 IAmb IAmb 11 32 31.5
comp=Z,8.3nm,0.9s
TORD Torodi Ar. Bea 78.87 278 P P 11 32 12.6 -1.1
comp=Z,2.2nm,0.8s,baz=45,slow=4.5,SNR=12
comp=Z,2.2nm,0.8s
N30M Aishikik Lake 79.35 20 P P 11 32 15.4 -0.2
baz=324
YUK6 Outpost Mounta 79.39 21 P P 11 32 15.4 -0.7
baz=323
M31M Drury Creek, Y 79.48 18 P P 11 32 16.0 -0.3
baz=326
PINM Pinnacle 79.49 22 P P 11 32 16.1 -0.4
baz=321
N31M Braeburn, Yuko 79.69 19 P P 11 32 17.1 -0.4
baz=325,SNR=12

HYT	**Haines Junctio**	**79.74**	**20**	P	**P**	**11 32 17.2**	**-0.7**	
	baz=324,SNR=10.0							
MMPY	**Sheldon Lake,**	**79.92**	**17**	P	**P**	**11 32 18.1**	**-0.6**	
	baz=328							
O30N	**Mendenhall**	**80.19**	**20**	IAmb	IAmb	11 32 24.2		
	comp=Z,6.2nm,1.1s							
O30N	**Mendenhall**	**80.19**	**20**	P	**P**	**11 32 19.7**	**-0.5**	
	baz=325,SNR=6.6							
WHY	**Whitehorse**	**80.62**	**19**	P	**P**	**11 32 22.3**	**-0.3**	
	baz=326							
P29M	**Windy Craggy**	**80.63**	**21**	IAmb	IAmb	11 32 24.9		
	comp=Z,7.9nm,1.2s							
P29M	**Windy Craggy**	**80.63**	**21**	P	**P**	**11 32 21.9**	**-0.7**	
	baz=323							
N32M	**Quiet Lake**	**80.70**	**18**	P	**P**	**11 32 22.4**	**-0.6**	
	baz=327							
WRGLY	**Wrigley**	**81.09**	**13**	P	**P**	**11 32 24.4**	**-0.5**	
	baz=335							
PLBC	**Pleasant Camp**	**81.19**	**21**	P	**P**	**11 32 24.9**	**-0.6**	
	baz=324							
SKAG	**Skagway**	**81.49**	**20**	IAmb	IAmb	11 32 30.9		
	comp=Z,11nm,1.2s							
SKAG	**Skagway**	**81.49**	**20**	P	**P**	**11 32 26.7**	**-0.4**	
	baz=325							
P33M	**Teslin, Yukon**	**81.56**	**19**	IAmb	IAmb	11 32 29.5		
	comp=Z,7.7nm,1.1s							
P33M	**Teslin, Yukon**	**81.56**	**19**	P	**P**	**11 32 27.2**	**-0.4**	
	baz=327,SNR=11							
P32M	**Atlin**	**81.84**	**19**	IAmb	IAmb	11 32 32.5		
	comp=Z,7.8nm,1.2s							
P32M	**Atlin**	**81.84**	**19**	P	**P**	**11 32 28.3**	**-0.7**	
	baz=327,SNR=6.7							
S31K	**Pelican**	**82.45**	**22**	P	**P**	**11 32 32.1**	**0.0**	
	baz=325							
WTLY	**Watson Lake, Y**	**82.69**	**17**	P	**P**	**11 32 33.4**	**0.0**	
	baz=331							
R32K	**Eaglecrest**	**82.71**	**21**	IAmb	IAmb	11 32 37.3		
	comp=Z,8.8nm,1.1s							
R32K	**Eaglecrest**	**82.71**	**21**	P	**P**	**11 32 33.6**	**+0.1**	
	baz=326							
STKA	**Stephens Creek**	**82.73**	**135**	P	**P**	**11 32 32.8**	**-1.1**	
	comp=Z,3.2nm,0.8s,baz=331,slow=9.0,SNR=4.3							
STKA				LR	LR	12 18 27.1		
	comp=Z,28nm,19.5s,baz=350,slow=42							
	comp=Z,3.2nm,0.8s							
STKA	**Stephens Creek**	**82.73**	**135**	⇓*eP*	**P**	**11 32 32.5**	**-1.4**	
Q32M	**Nakina River**	**82.77**	**19**	IAmb	IAmb	11 32 35.9		
	comp=Z,4.7nm,1.1s							
Q32M	**Nakina River**	**82.77**	**19**	P	**P**	**11 32 33.7**	**-0.4**	
	baz=328							
YKAW3	**Yellowknife Wh**	**83.20**	**10**	IAmb	IAmb	11 32 37.3		
	comp=Z,3.8nm,1.0s							
YKA	**Yellowknife Ar**	**83.27**	**10**	P	**P**	**11 32 35.2**	**-1.1**	
	comp=Z,3.5nm,1.0s,baz=341,slow=4.6,SNR=18							
	comp=Z,3.5nm,1.0s							
YKA	**Yellowknife Ar**	**83.27**	**10**	*i* P	**P**	**11 32 35.7**	**-0.6**	
YKA				pmax	pmax			
	comp=Z,4.0nm,1.0s							
YKA	**Yellowknife Ar**	**83.27**	**10**		**P**	**11 32 35.5**	**-0.8**	
YKAW1	**Yellowknife Wh**	**83.30**	**10**	IAmb	IAmb	11 32 37.4		
	comp=Z,3.9nm,0.8s							
S32K	**Killisnoo**	**83.36**	**21**	P	**P**	**11 32 36.9**	**+0.1**	
	baz=326							
SIT	**Sitka**	**83.47**	**22**	P	**P**	**11 32 37.2**	**-0.3**	
	baz=326							
DLBC	**Dease Lake**	**83.83**	**18**	P	**P**	**11 32 39.4**	**0.0**	
	baz=330,SNR=6.4							
LIRD	**Liard River Hi**	**83.96**	**16**	P	**P**	**11 32 39.7**	**-0.2**	
	baz=333							
S34M	**Telegraph Cree**	**83.98**	**19**	IAmb	IAmb	11 32 42.3		
	comp=Z,5.0nm,1.0s							
S34M	**Telegraph Cree**	**83.98**	**19**	P	**P**	**11 32 39.7**	**-0.3**	
	baz=329							
BOSA	**Boshof**	**84.61**	**231**	P	**P**	**11 32 42.7**	**-1.1**	
	comp=Z,1.8nm,0.8s,baz=79,slow=5.2,SNR=2.0							
	comp=Z,1.8nm,0.8s							
WRAK	**Wrangell Islan**	**84.91**	**21**	P	**P**	**11 32 44.7**	**-0.1**	
	baz=328							
U33K	**Whale Pass**	**84.93**	**21**	IAmb	IAmb	11 32 46.9		
	comp=Z,7.0nm,1.0s							
U33K	**Whale Pass**	**84.93**	**21**	P	**P**	**11 32 45.0**	**+0.2**	
	baz=327							
T35M	**Bob Quinn**	**85.03**	**19**	IAmb	IAmb	11 32 48.2		
	comp=Z,5.8nm,1.1s							
T35M	**Bob Quinn**	**85.03**	**19**	P	**P**	**11 32 45.2**	**-0.3**	
	baz=330							
CRAG	**Craig**	**85.48**	**21**	P	**P**	**11 32 47.5**	**-0.1**	
	baz=327							
V35K	**Ketchikan**	**86.06**	**21**	P	**P**	**11 32 50.6**	**+0.1**	
	baz=329							
DBIC	**Dimbokro**	**87.76**	**276**	P	**P**	**11 32 59.9**	**+0.4**	
	comp=Z,2.8nm,0.6s,baz=42,slow=2.9,SNR=5.8							
	comp=Z,2.8nm,0.6s							
DBIC	**Dimbokro**	**87.76**	**276**	P	**P**	**11 32 58.6**	**-1.0**	
TROLL	**Troll, Antarti**	**119.30**	**201**	⇑PKPdf	**PKPdf**	**11 38 58.1**	**-0.4**	
	comp=Z,122nm,0.8s							
VNA2	**Neumayer--Watz**	**122.16**	**203**	⇑PKPdf	**PKPdf**	**11 39 02.9**	**-0.9**	
	comp=Z,2.7nm,0.7s,baz=59,slow=2.3							
VNA1	**Neumayer--Stat**	**122.41**	**203**	⇑PKPdf	**PKPdf**	**11 39 03.7**	**-0.6**	
	comp=Z,3.4nm,1.0s							
QSPA	**South Pole Qui**	**122.81**	**180**	PKP	**PKPdf**	**11 39 02.5**	**-2.8**	
	comp=Z,1.5nm,0.9s,baz=243,slow=2.0,SNR=6.0							
PTLB	**Pontes e Lacer**	**144.53**	**291**	PKPdf	**PKPab**	**11 39 44.8**	**-0.7**	
SLOR	**San Lorenzo -**	**145.01**	**334**	PKPbc	**PKPab**	**11 39 45.3**	**-2.6**	
CPSB	**Cacapava Do Su**	**146.18**	**264**	PKPdf	**PKPdf**	**11 39 49.4**	**-0.2**	
CPUP	**Villa Florida**	**148.20**	**273**	PKPbc	**PKPdf**	**11 39 52.8**	**-0.3**	
	comp=Z,4.7nm,0.8s,baz=152,slow=3.4,SNR=10							
LPAZ	**La Paz**	**151.85**	**300**	PKP	**PKPdf**	**11 39 58.5**	**-1.4**	
	comp=Z,3.9nm,0.9s,baz=75,slow=2.3,SNR=3.8							
LPAZ				PKPbc	**pPKPdf**	**11 40 04.3**	**+0.3**	
	comp=Z,2.2nm,0.8s,baz=26,slow=4.1,SNR=5.0							
LPAZ	**La Paz**	**151.85**	**300**	PKPdf	**PKPdf**	**11 39 57.7**	**-2.2**	

BER 31 11:36:56.3±0.4, 60°71'N×5°55'E, h0km, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASK	**Askoy**	**0.28**	**218**	*eP*	Pg	11 37 01.4	-0.3
ASK				*eS*	Sg	11 37 05.5	+0.1
SUE	**Sulen**	**0.52**	**313**	*eP*	Pg	11 37 05.6	-0.7
SUE				*eS*	Sg	11 37 12.6	-0.4
HYA	**Hoyanger**	**0.56**	**34**	*eP*	Pg	11 37 06.0	-0.9
HYA				*eS*	Sg	11 37 13.8	-0.3
FOO	**Floro**	**0.93**	**345**	*eP*	Pg	11 37 12.8	-1.2
FOO				*eS*	Sg	11 37 25.2	-0.8

BGS 31 11:37:08.3±0.8, 56°21'N×4°95'W, h7km±197km, ML0.5, 2C, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAWE	**Loch Awe, Argy**	**0.26**	**282**	⇑*iP*	Pg	11 37 13.7	+0.4
LAWE				*eS*	Sg	11 37 17.4	+0.5
LAWE				IAML		11 37 17.7	
	comp=E,10.0nm,0.1s						
LAWE				IAML		11 37 17.7	
	comp=N,9.5nm,0.1s						
EAB	**Aberfoyle**	**0.34**	**93**	⇑*iP*	Pg	11 37 15.2	+0.3
EAB				*eS*	Sg	11 37 19.7	+0.3
EAB				IAML		11 37 20.3	
	comp=N,6.7nm,0.1s						
EAB				IAML		11 37 20.3	
	comp=E,3.8nm,0.1s						
INVG	**Invergeldie, C**	**0.55**	**66**	*eP*	Pg	11 37 19.3	+0.4
INVG				*eS*	Sg	11 37 26.0	-0.1

*KOLA **31** 11:42:07.5, 64°54'N×30°65'E, h0km, ML2.3, Error ellipse: s-maj=15.5km s-min=13.0km az=140.0, Karelia*
*HEL **31** 11:42:08.4±0.1, 64°67'N×30°75'E, h0km, ML1.9, Explosion*
*IDC **31** 11:42:10.3±2.3, 64°66N×30°48E, h0km, mbtmp3.1/3, ML2.1/3, Error ellipse: s-maj=32.7km s-min=9.4km az=104.0*

ISC 31 11:42:07.0±0.9, 64°71N±0°03×30°75E±0°05, h0km, n26, σ1§06/39, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.61**	**216**	*eP*	**Pg**	**11 42 18.7**	**+0.1**
RMF				*eS*	**Sg**	**11 42 26.0**	**-0.5**
KU1	**Kurvinen**	**1.00**	**330**	*eP*	**Pb**	**11 42 27.0**	**-0.1**
KU1				*eS*	**Sb**	**11 42 40.3**	**-0.6**
KU6	**Riekki**	**1.37**	**345**	*eP*	**Pb**	**11 42 33.7**	**+0.1**
KU6				*eS*	**Sn**	**11 42 51.9**	**-0.4**
MSF	**Maaselka**	**1.41**	**330**	*eP*	**Pb**	**11 42 34.1**	**-0.1**
MSF				*eS*	**Sn**	**11 42 52.8**	**-0.4**
KU2	**Taivalkoski**	**1.47**	**315**	*eP*	**Pb**	**11 42 35.1**	**0.0**
KU2				*eS*	**Sn**	**11 42 54.2**	**-0.4**
OLKF	**Oulanka, Finla**	**1.72**	**341**	*eP*	**Pb**	**11 42 39.4**	**-0.1**
OLKF				*eS*	**Sg**	**11 43 02.1**	**0.0**
JOF	**Joensuu**	**1.81**	**172**	*eP*	**Pn**	**11 42 40.7**	**+1.3**
NIF	**Nilsia**	**1.85**	**226**	*eP*	**Pn**	**11 42 40.6**	**+0.7**
NIF				*eSG*	**Sn**	**11 43 04.4**	**+0.4**
NIF				smax	smax	11 43 06.6	
	comp=Z,5.0nm,0.1s						
OUL	**Oulu**	**2.10**	**283**	*eP*	**Pb**	**11 42 45.0**	**-1.0**
OUL				*eSB*	**Sb**	**11 43 12.6**	**-0.1**
OUL				smax	smax	11 43 15.6	
	comp=Z,6.0nm,0.1s						
RANF	**Ranua**	**2.12**	**310**	*eP*	**Pb**	**11 42 45.5**	**-0.8**
RANF				*eS*	**Sb**	**11 43 12.5**	**-0.5**
KVDA	**Kovda**	**2.18**	**23**	P	**Pb**	**11 42 47.2**	**0.0**
KVDA				S	**Sg**	**11 43 16.7**	**-0.2**
OBF4	**Vikkela, Lumij**	**2.42**	**275**	*e*PB	**Pb**	**11 42 50.6**	**-0.8**
OBF4				*e*SG	**Sb**	**11 43 22.8**	**+1.0**
OBF4				smax	smax	11 43 26.5	
	comp=Z,4.8nm,0.1s						
OUF	**Merijarvi**	**2.62**	**265**	*eP*	**Pn**	**11 42 51.8**	**+1.2**
OUF				*e*SB	**Sb**	**11 43 27.0**	**-0.5**
OUF				smax	smax	11 43 34.5	
	comp=Z,4.9nm,0.1s						
SUF	**Sumiainen**	**2.86**	**228**	*eP*	**Pb**	**11 42 57.5**	**-1.3**
APA0	**Apatity Array**	**3.05**	**16**	P	**Pn**	**11 42 58.8**	**+2.3**
APA0				S	**Sb**	**11 43 37.3**	**-2.6**
KEF	**Keuruu**	**3.67**	**229**	*eP*	**Pn**	**11 43 07.1**	**+2.2**
FINES	**FINESS Array B**	**3.90**	**215**	Pn	**Pn**	**11 43 09.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=38,slow=13,SNR=6.2						
FINES				Lg	Lg	11 44 08.0	
	comp=Z,1.1nm,0.3s,baz=40,slow=29,SNR=8.5						
	comp=Z,2.4nm,0.9s						
VAF	**Ylistaro**	**3.94**	**249**	*eP*	**Pn**	**11 43 10.9**	**+2.2**
TERR	**Teriberka**	**4.83**	**19**	S	**Sn**	**11 44 16.2**	**-1.2**
LANU	**Lannavaara**	**4.86**	**318**	*eP*	**Pn**	**11 43 21.6**	**+0.3**
ARCES	**ARCESS Array B**	**5.26**	**339**	Pn	**Pn**	**11 43 27.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=15						
ARCES				Lg	Lg	11 44 53.2	
	comp=Z,0.4nm,0.3s,baz=162,slow=32,SNR=6.4						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**5.26**	**339**	P	**Pn**	**11 43 27.9**	**+1.0**
ARCES				S	**Sn**	**11 44 30.0**	**+1.9**
VADS	**Vadso**	**5.47**	**355**	S	**Sn**	**11 44 32.7**	**-0.3**
I37NO	**I37NO**	**6.48**	**318**	I	I	12 19 30.0	
	baz=128,slow=322,SNR=3.8						
AAL	**Aland**	**6.74**	**233**	*eP*	**Pn**	**11 43 46.5**	**-0.6**
HFS	**Hagfors**	**9.13**	**248**	Pn	**Pn**	**11 44 19.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=7.3						
HFS				Lg	Lg	11 46 54.4	
	comp=Z,0.2nm,0.3s,baz=55,slow=28,SNR=2.0						
	comp=Z,3.4nm,1.1s						

*MDD **31** 11:44:17.6±2.0, 36°95N×10°53W, h0km, mb_Lg2.5/6, Error ellipse: s-maj=14.1km s-min=12.0km az=9.0*
*INMG **31** 11:44:17.0±1.6, 37°04N×10°76W, h10km, ML1.7, Error ellipse: s-maj=9.1km s-min=6.5km az=85.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Abissal do Tejo*
*CNRM **31** 11:44:19.1, 36°59N×10°46W, h56km*

ISC 31 11:44:16.5±4.0, 37°1N±0°1×10°6W±0°2, h10km, n28, σ0§70/38, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.44**	**88**	*eP*	**Pn**	**11 44 42.1**	**-0.6**
PFVI				*eS*	**Sn**	**11 45 01.4**	**-0.2**
PFVI				*i* IAML		11 45 02.8	
PFVI				*i* IAML		11 45 03.2	
PFVI				*i* IAML		11 45 03.4	
PFVI	**Vila Bisbo**	**1.44**	**88**	P	**Pn**	**11 44 41.9**	**-0.7**
PFVI				S	**Sn**	**11 45 00.5**	**-1.1**
PTEO	**Sao Teotonio**	**1.58**	**73**	*eP*	**Pn**	**11 44 44.6**	**0.0**
PTEO				*eS*	**Sn**	**11 45 05.9**	**+0.8**
PTEO				*i* IAML		11 45 06.9	
PTEO				*i* IAML		11 45 09.8	
PTEO				*i* IAML		11 45 09.9	
PLOUS	**Minas do Lousa**	**1.99**	**61**	*eP*	**Pn**	**11 44 50.6**	**+0.5**
PLOUS				*eS*	**Sn**	**11 45 15.5**	**+0.4**
PLOUS				*i* IAML		11 45 17.5	
PLOUS				*i* IAML		11 45 17.5	
PLOUS				*i* IAML		11 45 18.9	
MESJ	**Messejana**	**2.06**	**68**	*eS*	**Sn**	**11 45 17.5**	**+0.7**
MESJ				*i* IAML		11 45 21.5	
MESJ				*i* IAML		11 45 24.2	
PCVE	**Castro Verde**	**2.13**	**75**	*eP*	**Pn**	**11 44 53.0**	**+0.9**
PCVE				*eS*	**Sn**	**11 45 19.1**	**+0.4**
PCVE				*i* IAML		11 45 20.8	
PCVE				*i* IAML		11 45 21.6	
PCVE				*i* IAML		11 45 23.3	
PMAFR	**Mafra**	**2.14**	**29**	*eS*	**Sn**	**11 45 19.0**	**+0.2**
PBDV	**Barranco-do-Ve**	**2.16**	**85**	*eP*	**Pn**	**11 44 53.7**	**+1.1**
PBDV				*eS*	**Sn**	**11 45 20.3**	**+0.8**
PBDV				*i* IAML		11 45 22.1	
PBDV				*i* IAML		11 45 22.7	
PBDV				*i* IAML		11 45 25.2	
MOE	**Montemor**	**2.30**	**51**	*eP*	**Pn**	**11 44 54.2**	**-0.2**
MOE				*eS*	**Sn**	**11 45 23.3**	**+0.5**
MOE				*i* IAML		11 45 23.8	
MOE				*i* IAML		11 45 24.0	
MOE				*i* IAML		11 45 26.6	
PVAQ	**Vaqueiros**	**2.34**	**82**	*eP*	**Pn**	**11 44 55.4**	**+0.4**
PVAQ				*eS*	**Sn**	**11 45 24.2**	**+0.3**
PVAQ				*i* IAML		11 45 26.3	
PVAQ				*i* IAML		11 45 26.9	
PVAQ				*i* IAML		11 45 27.7	
PVAQ	**Vaqueiros**	**2.34**	**82**	P	**Pn**	**11 44 54.9**	**-0.1**
PVAQ				S	**Sn**	**11 45 24.4**	**+0.5**
EVO	**Evora**	**2.52**	**55**	*eS*	**Sn**	**11 45 28.4**	**+0.2**
EVO				*i* IAML		11 45 31.3	
EVO				*i* IAML		11 45 31.3	
EVO				*i* IAML		11 45 31.4	
EGRO	**El Granado**	**2.55**	**79**	Sn	**Sn**	**11 45 28.5**	**-0.4**
EGRO				*i* IVmb_Lg		11 45 32.1	
PARRA	**Arraiolos**	**2.67**	**49**	*eP*	**Pn**	**11 44 59.3**	**-0.2**
PARRA				*eS*	**Sn**	**11 45 31.6**	**-0.4**
PARRA				*i* IAML		11 45 34.8	
PARRA				*i* IAML		11 45 35.2	
PARRA				*i* IAML		11 45 35.9	
PMTG	**Montargil**	**2.73**	**43**	*eP*	**Pn**	**11 45 00.4**	**0.0**
PMTG				*eS*	**Sn**	**11 45 33.5**	**0.0**
PMTG				*i* IAML		11 45 36.7	
PMTG				*i* IAML		11 45 37.6	
PMTG				*i* IAML		11 45 38.9	
PESTR	**Estremoz**	**2.98**	**53**	*eS*	**Sn**	**11 45 40.6**	**+0.9**
PBAR	**Barrancos**	**3.05**	**68**	*eP*	**Pn**	**11 45 06.1**	**+1.4**
PBAR				*eS*	**Sn**	**11 45 40.5**	**-0.7**
PBAR				*i* IAML		11 45 42.4	
PBAR				*i* IAML		11 45 44.8	
PBAR				*i* IAML		11 45 45.7	
PSARD	**Sardoal**	**3.16**	**37**	*eS*	**Sn**	**11 45 43.8**	**-0.4**
EMIN	**Mina Concepcio**	**3.22**	**77**	Sn	**Sn**	**11 45 45.1**	**-0.4**
EMIN				*i* IVmb_Lg		11 45 47.2	
EBAD	**Badajoz**	**3.31**	**59**	Sn	**Sn**	**11 45 46.8**	**-0.8**
EBAD				*i* IVmb_Lg		11 45 50.3	
PMRV	**Marv??o**	**3.45**	**47**	*eP*	**Pn**	**11 45 10.2**	**-0.1**
PMRV				*eS*	**Sn**	**11 45 50.4**	**-0.9**
PMRV				*i* IAML		11 45 52.5	
PMRV				*i* IAML		11 45 52.6	
PMRV				*i* IAML		11 45 52.8	
ESPR	**Espera**	**3.83**	**92**	Sn	**Sn**	**11 46 00.9**	**+0.4**
ESPR				*i* IVmb_Lg		11 46 02.7	
ECAB	**El Cabril**	**4.25**	**75**	Pn	**Pn**	**11 45 21.3**	**0.0**
ECAB				Sn	**Sn**	**11 46 09.2**	**-1.8**
ECAB				*i* IVmb_Lg		11 46 11.6	
EADA	**Adamuz**	**4.92**	**76**	Sn	**Sn**	**11 46 26.4**	**-1.1**
EADA				*i* IVmb_Lg		11 46 30.2	
OUK	**Oukaimeden**	**6.31**	**158**	P	Pn	11 45 43.0	-6.8
OUK				S	Sn	11 46 48.9	-13
MD31	**MD31**	**6.41**	**129**	S	Pn	11 45 44.9	-6.0
MD31				S	Sn	11 46 52.5	-12
MDT	**Midelt**	**6.54**	**129**	P	Pn	11 45 46.6	-6.1
MDT				S	Sn	11 46 55.7	-12
OUZM	**OUZ**	**6.96**	**151**	P	Pn	11 45 52.1	-6.5
OUZM				S	Sn	11 47 06.6	-11

*CATAC **31** 11:58:50.8±0.7, 13°N±4°×8°9W±°, h32km±5km, M3.3/12, MLv3.3/12, Error ellipse: s-maj=9.6km s-min=3.4km az=16.4, confirmed*
*SNET **31** 11:58:50.6±1.8, 12°92N×88°90W, h30km, ML3.4, Presumed earthquake*
*GCG **31** 11:58:53.4±1.0, 13°08N×88°99W, h57km±14km, MD3.6, Presumed earthquake*

ISC 31 11:58:50.2±1.8, 12°88N±0°08×88°90W±0°03, h31km±12km, n45, σ0§54/65, 3C-10D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.67**	**10**	P	**Pn**	**11 59 03.8**	**+0.2**
TECO	**Alcaldia de Te**	**0.67**	**10**	⇓*iP*	**Pn**	**11 59 03.6**	**+0.1**
TECO				*eS*	**Sn**	**11 59 12.8**	**-0.2**
TECA	**Tecapa**	**0.72**	**32**	⇓*iP*	**Pn**	**11 59 04.8**	**+0.3**
LALI	**Alcalda de L**	**0.73**	**326**	S	**Sn**	**11 59 14.2**	**-0.4**
LALI	**Alcalda de L**	**0.73**	**326**	*i* S	**Sn**	**11 59 14.1**	**-0.4**
LALI	**Alcalda de L**	**0.73**	**326**	*e*S	**Sn**	**11 59 14.3**	**-0.3**
COEG	**Centro de Oper**	**0.74**	**1**	P	**Pb**	**11 59 04.6**	**0.0**
COEG	**Centro de Oper**	**0.74**	**1**	⇓*eP*	**Pb**	**11 59 04.7**	**0.0**
COEG				*eS*	**Sn**	**11 59 14.7**	**-0.1**
LFRS	**El Faro**	**0.76**	**348**	*eP*	**Pb**	**11 59 04.9**	**-0.2**
PANCS	**Alcalda de**	**0.78**	**340**	S	**Sn**	**11 59 15.5**	**-0.4**
LCY	**Lacayo**	**0.80**	**47**	*eP*	**Pb**	**11 59 05.6**	**-0.1**
LOMA	**Loma Larga**	**0.81**	**341**	P	**Pb**	**11 59 05.8**	**-0.1**
LOMA				S	**Sn**	**11 59 16.6**	**-0.1**
LOMA	**Loma Larga**	**0.81**	**341**	⇑*eP*	**Pb**	**11 59 05.9**	**-0.1**
LOMA				⇓*eS*	**Sn**	**11 59 17.1**	**+0.5**
PACA	**Pacayal**	**0.81**	**44**	P	**Pb**	**11 59 06.1**	**+0.1**
PACA	**Pacayal**	**0.81**	**44**	⇓*eP*	**Pb**	**11 59 05.9**	**0.0**
PACA				*eS*	**Sn**	**11 59 17.4**	**+0.6**
PQSS	**Presa 15 de Se**	**0.81**	**24**	S	**Sn**	**11 59 16.9**	**+0.3**
PQSS	**Presa 15 de Se**	**0.81**	**24**	*eP*	**Pb**	**11 59 05.9**	**+0.1**
PQSS				*eS*	**Sn**	**11 59 17.2**	**+0.6**
RANC	**El Ranchito**	**0.81**	**47**	P	**Pb**	**11 59 06.0**	**+0.1**
RANC				S	**Sn**	**11 59 17.4**	**+0.6**
RANC	**El Ranchito**	**0.81**	**47**	*eP*	**Pn**	**11 59 02.6**	**-3.1**
VSM	**San Miguel**	**0.82**	**48**	⇑*eP*	**Pb**	**11 59 06.3**	**+0.2**
PAVA	**Las Pavas**	**0.83**	**357**	P	**Pb**	**11 59 06.2**	**0.0**
PAVA	**Las Pavas**	**0.83**	**357**	⇓*eP*	**Pb**	**11 59 06.2**	**0.0**
PAVA				*eS*	**Sb**	**11 59 17.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.84**	**11**	S	**Sb**	**11 59 17.8**	**+0.5**
SCLA	**Alcaldia de Sa**	**0.84**	**11**	*eP*	**Pb**	**11 59 06.2**	**-0.1**
INTP	**Intipuca**	**0.88**	**69**	*eP*	**Pn**	**11 59 06.7**	**+0.1**
INTP				*eS*	**Sn**	**11 59 18.3**	**-0.1**
LFU	**La Fuente**	**0.89**	**346**	*eS*	**Sb**	**11 59 18.6**	**-0.2**
UEES	**Universidad Ev**	**0.90**	**338**	P	**Pb**	**11 59 07.8**	**+0.4**
UEES				S	**Sb**	**11 59 18.8**	**-0.2**
UEES	**Universidad Ev**	**0.90**	**338**	⇓*iP*	**Pb**	**11 59 07.9**	**+0.5**
PMON	**Piamonte**	**0.92**	**334**	P	**Pn**	**11 59 07.1**	**-0.1**
PMON	**Piamonte**	**0.92**	**334**	*eP*	**Pb**	**11 59 07.6**	**-0.2**
PMON				⇓*eS*	**Sb**	**11 59 19.3**	**-0.4**
PMON				*eS*	**Sn**	**11 59 19.6**	**+0.1**
BOQS	**Boqueron**	**0.93**	**337**	*eP*	**Pb**	**11 59 07.7**	**-0.3**
BOQS				*eS*	**Sb**	**11 59 20.6**	**+0.6**
JAYA	**Jayaque - finc**	**0.94**	**325**	P	**Pn**	**11 59 07.6**	**+0.1**
JAYA	**Jayaque - finc**	**0.94**	**325**	*i* P	**Pb**	**11 59 08.3**	**+0.2**
JAYA				*i* S	**Sn**	**11 59 19.4**	**-0.5**
JAYA	**Jayaque - finc**	**0.94**	**325**	*eP*	**Pb**	**11 59 08.2**	**+0.2**
JAYA				*eS*	**Sb**	**11 59 19.7**	**-0.6**
LCND	**La Caada**	**1.07**	**66**	⇓*eP*	**Pb**	**11 59 10.3**	**+0.1**
CNCH	**Conchagua**	**1.11**	**69**	P	**Pn**	**11 59 10.3**	**+0.5**
CNCH	**Conchagua**	**1.11**	**69**	⇑*iP*	**Pn**	**11 59 10.1**	**+0.3**
CNCH				*eS*	**Sb**	**11 59 24.9**	**-0.2**
SBLS	**San Blas**	**1.19**	**324**	*eP*	**Pb**	**11 59 11.7**	**-0.6**
SBLS				*eP*	**Pn**	**11 59 11.9**	**+1.0**
SBLS				⇓*eS*	**Sb**	**11 59 26.6**	**-0.5**
UNIC	**Universidad Ca**	**1.27**	**330**	*eP*	**Pn**	**11 59 12.2**	**+0.3**
NUBE	**Las Nubes**	**1.33**	**320**	P	**Pn**	**11 59 13.3**	**+0.5**
NUBE	**Las Nubes**	**1.33**	**320**	*i* P	**Pn**	**11 59 13.1**	**+0.3**
NUBE				*i* S	**Sn**	**11 59 29.1**	**-0.6**
NUBE	**Las Nubes**	**1.33**	**320**	*eP*	**Pn**	**11 59 13.1**	**+0.3**
NUBE				*eS*	**Sn**	**11 59 29.4**	**-0.2**
FAME	**Alcaldia de Sa**	**1.45**	**312**	P	**Pn**	**11 59 15.0**	**+0.6**
MTO3	**Montecristo**	**1.58**	**344**	P	**Pn**	**11 59 16.5**	**+0.2**
SARH	**Santa Rosa de**	**1.89**	**4**	*i* P	**Pn**	**11 59 21.0**	**+0.5**

*SOME **31** 12:25:52.3, 42°23N×81°60E, h0km*
*NNC **31** 12:25:59.0±5.3, 42°40N×81°46E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=45.9km s-min=23.5km

KTK1				SN		**Sb**	**12 31 23.7**	**+0.2**
SALU	**Saltoluokta**	**1.79**	**271**	*eP*		**Pg**	**12 31 06.1**	**-0.4**
RAJF	**Raja-Jooseppi**	**2.22**	**59**	PG		**Pn**	**12 31 10.7**	**+0.4**
RAJF				SG		**Sn**	**12 31 40.1**	**+1.7**
ARA0	**ARCESS Array S**	**2.30**	**21**	*eP*		**Pn**	**12 31 11.6**	**+0.2**
ARA0	**ARCESS Array S**	**2.30**	**21**	PG		**Pn**	**12 31 11.5**	**+0.1**
ARA0				SG		**Sn**	**12 31 41.4**	**+1.1**
ARCES	**ARCESS Array B**	**2.30**	**21**	Pn		Pg	12 31 42.9	+27
	comp=Z,0.3nm,0.3s,baz=191,slow=14,SNR=13							
ARCES				Sn		Sg	12 32 12.7	+27
	comp=Z,1.2nm,0.3s,baz=202,slow=28,SNR=20							
	comp=Z,2.3nm,0.7s							
I37NO	**I37NO**	**2.37**	**317**	I		I	12 45 40.0	
	comp=Z,0.1nm,0.7s,baz=132,slow=321,SNR=16							
KU2	**Taivalkoski**	**2.66**	**128**	PB		**Pn**	**12 31 17.9**	**+1.6**
OLKF	**Oulanka, Finla**	**2.71**	**111**	PB		**Pn**	**12 31 17.4**	**+0.4**
OLKF				smax		smax	12 31 50.7	
	comp=Z,1.1nm,0.2s							
OLKF				SG		**Sn**	**12 31 51.9**	**+1.6**
OBF4	**Vikkela, Lumij**	**2.73**	**162**	PB		**Pn**	**12 31 18.5**	**+1.2**
OBF4				smax		smax	12 31 53.3	
	comp=Z,0.6nm,0.2s							
KEV	**Kevo**	**2.74**	**29**	SB		**Sn**	**12 31 50.7**	**-0.5**
KU6	**Riekki**	**3.02**	**114**	PN		**Pn**	**12 31 21.2**	**-0.1**
KU6				smax		smax	12 31 59.8	
	comp=Z,0.5nm,0.2s							
KU1	**Kurvinen**	**3.17**	**123**	PN		**Pn**	**12 31 23.3**	**-0.1**
FINES	**FINESS Array B**	**6.13**	**167**	Pn		Pg	12 32 37.1	+7.5
	comp=Z,0.3nm,0.3s,baz=356,slow=13,SNR=7.4							
	comp=Z,1.2nm,0.4s							

*NNC **31** 13:13:41.4±4.9, 36°.83N×70°.50E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=40.2km s-min=36.0km az=178.0*

ISC 31 13:13:35.6±1.6, 36°.2N±0°.1×70°.7E±0°.2, h100km, n8, σ2^{9}19/11, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TSSA	**Tissa**	**5.60**	**125**	IAML			13 16 03.1	
	comp=N,46nm,0.3s							
THN	**Thein Dam**	**5.60**	**130**	*eS*		**Sn**	**13 16 01.1**	**+1.5**
THN				IAML			13 16 03.3	
	comp=N,37nm,0.1s							
DHRM	**DHARAMSHALA**	**6.07**	**129**	*eP*		**Pn**	**13 15 03.0**	**-0.1**
DHRM				*eS*		**Sn**	**13 16 11.8**	**+0.5**
DHRM				IAML			13 16 14.2	
	comp=N,50nm,0.2s							
DHRM				IAML			13 16 14.5	
	comp=E,84nm,0.4s							
KK31	**Karatay Array**	**6.91**	**359**	⇑P		**Pn**	**13 15 16.8**	**+2.6**
	comp=E,9.1nm,0.4s,baz=181,slow=13,SNR=124							
KK31				⇓S		**Sn**	**13 16 29.0**	**-2.3**
	comp=E,2.7nm,0.4s,baz=183,slow=24,SNR=6.0							
AAK	**Ala-Archa**	**7.08**	**23**	⇓P		**Pn**	**13 15 18.2**	**+1.6**
	comp=E,0.8nm,0.4s							
AAK				⇓S		**Sn**	**13 16 35.8**	**+0.2**
	comp=E,3.5nm,0.6s							
SMLA	**Simla**	**7.38**	**131**	*ex*		x	13 16 05.6	
SMLA				*eS*		**Sn**	**13 16 41.8**	**-0.9**
SMLA				IAML			13 16 45.5	
	comp=N,27nm,0.2s							
SMLA				IAML			13 16 45.8	
	comp=E,27nm,0.2s							
KLP	**Kalpa**	**7.80**	**124**	*eS*		**Sn**	**13 16 49.9**	**-3.6**
AB31	**Akbulak array**	**15.25**	**332**	⇓P		**P**	**13 17 08.1**	**+0.2**
	comp=E,0.9nm,0.7s,baz=131,slow=12,SNR=9.2							
AB31				⇑S		**Sn**	**13 19 50.9**	**-2.7**
	comp=E,0.6nm,0.5s,baz=174,slow=21,SNR=3.5							

*IDC **31** 13:15:18.9±1.7, 24°.01S×66°.89W, h163km±18km, mb3.3/1, mbtmp3.8/5, Error ellipse: s-maj=57.0km s-min=13.5km az=96.0*

*SJA **31** 13:15:19.9±0.7, 23°.97S×66°.83W, h219km±6km, ML3.8, MW3.8*

*GUC **31** 13:15:21.4±0.6, 23°.92S×66°.89W, h210km±8km, ML4.3*

*NEIC **31** 13:15:21.2±1.3, 23°.96S±0°.08×66°.8W±0°.1, h203km±9km, mb4.3/2, ML4.3(GUC), Error ellipse: s-maj=16.8km s-min=10.8km az=82.0*

ISC 31 13:15:21.3±0.7, 23°.97S±0°.04×66°.87W±0°.04, h206km±7km, n65, σ1^{8}50/87, 4C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SALTA		**0.54**	**117**	*eP*		Pn	13 15 44.0	-5.8
SALTA				*eP*			13 15 49.9	
SLA	**San Lorenzo**	**1.45**	**121**	*eP*		**Pn**	**13 15 55.7**	**+0.4**
SLA				*eS*		**S**	**13 16 21.8**	**+0.5**
SLA	**San Lorenzo**	**1.45**	**121**	⇓*iP*		**Pn**	**13 15 55.5**	**+0.3**
HJA	**Humahuaca**	**1.54**	**61**	*eP*		**Pn**	**13 15 55.9**	**-0.4**
AF01	**San Pedro de A**	**1.58**	**310**	*eP*		Pn	13 15 43.5	-13
AF01				*eS*		**S**	**13 16 27.8**	**+4.2**
AF01				IAML			13 16 38.6	
	comp=Z,170nm,0.3s							
AF01	**San Pedro de A**	**1.58**	**310**	*eP*		**Pn**	**13 15 57.8**	**+1.2**
AF01	**San Pedro de A**	**1.58**	**310**			**Pn**	**13 15 57.9**	**+1.4**
AF01				Sn		**S**	**13 16 26.5**	**+3.0**
YJA	**Yavi**	**2.18**	**35**	*eP*		**Pn**	**13 16 02.9**	**+0.3**
YJA				*eS*		**S**	**13 16 34.4**	**+0.1**
YJA	**Yavi**	**2.18**	**35**	*eP*		**Pn**	**13 16 02.5**	**-0.1**
FSA	**Cafayete**	**2.28**	**159**	*eP*		**Pn**	**13 16 03.5**	**+0.3**
FSA				*eS*		**S**	**13 16 35.1**	**-0.6**
PB06	**IPOC Station P**	**2.79**	**296**	*eP*		**Pn**	**13 16 09.4**	**+0.5**
PB06				*eS*		**S**	**13 16 46.0**	**+0.3**
PB06				IAML			13 16 46.8	
	comp=Z,235nm,0.1s							
PB06	**IPOC Station P**	**2.79**	**296**	⇑*iP*		**Pn**	**13 16 09.4**	**+0.5**
PB06				*eS*		**S**	**13 16 44.9**	**-0.7**
PB06				IAML			13 16 46.4	
	comp=N,433nm,0.3s							
PB06	**IPOC Station P**	**2.79**	**296**			**Pn**	**13 16 09.6**	**+0.6**
PB06				Sn		**S**	**13 16 44.8**	**-0.8**
PB09	**IPOC Station P**	**3.08**	**314**	*eP*		**Pn**	**13 16 13.4**	**+1.0**
PB09				*eS*		**S**	**13 16 52.5**	**+0.7**
PB09				IAML			13 16 53.2	
	comp=Z,176nm,0.6s							
PB09	**IPOC Station P**	**3.08**	**314**	⇑*iP*		**Pn**	**13 16 13.1**	**+0.7**
PB09				*eS*		**S**	**13 16 51.1**	**-0.7**
PB09	**IPOC Station P**	**3.08**	**314**			**Pn**	**13 16 13.2**	**+0.8**
AHML	**Horco Molle**	**3.12**	**154**	*eP*		**Pn**	**13 16 11.8**	**-0.9**
AHML				*eS*		**S**	**13 16 51.0**	**-1.5**
PB05	**IPOC Station P**	**3.26**	**289**	*eP*		**Pn**	**13 16 14.5**	**+0.1**
PB05				*eS*		**S**	**13 16 54.1**	**-1.4**
PB05				IAML			13 16 56.8	
	comp=Z,132nm,0.6s							
PB05	**IPOC Station P**	**3.26**	**289**	*eP*		**Pn**	**13 16 14.4**	**+0.1**
PB05	**IPOC Station P**	**3.26**	**289**	Pn		**Pn**	**13 16 14.6**	**+0.1**
PB03	**IPOC Station P**	**3.28**	**305**	*eP*		**Pn**	**13 16 14.8**	**+0.1**
PB03				*eS*		**S**	**13 16 54.7**	**-1.3**
PB03				IAML			13 16 58.7	
	comp=Z,193nm,0.3s							
PB03	**IPOC Station P**	**3.28**	**305**	⇑*iP*		**Pn**	**13 16 14.7**	**+0.1**
PB03	**IPOC Station P**	**3.28**	**305**	Pn		**Pn**	**13 16 14.8**	**+0.1**
PB14	**IPOC Station P**	**3.29**	**258**	*eP*		**Pn**	**13 16 15.5**	**+0.5**
PB14				*eS*		**S**	**13 16 55.7**	**-0.7**
PB14				IAML			13 16 58.4	
	comp=Z,155nm,0.5s							
PB14	**IPOC Station P**	**3.29**	**258**	*eP*		**Pn**	**13 16 15.5**	**+0.5**
PB14	**IPOC Station P**	**3.29**	**258**			**Pn**	**13 16 15.4**	**+0.5**
AC02	**Maricunga**	**3.51**	**215**	*eP*		**Pn**	**13 16 18.9**	**+1.1**
AC02				*eS*		**S**	**13 17 02.5**	**+1.0**
AC02				IAML			13 17 36.1	
	comp=Z,183nm,0.8s							
AC02	**Maricunga**	**3.51**	**215**	*eP*		**Pn**	**13 16 18.9**	**+1.1**
AC02	**Maricunga**	**3.51**	**215**			**Pn**	**13 16 18.6**	**+0.9**
PB07	**IPOC Station P**	**3.57**	**308**	*eP*		**Pn**	**13 16 18.1**	**-0.1**
PB07				*eS*		**S**	**13 17 01.2**	**-1.1**
PB07				IAML			13 17 03.5	
	comp=Z,144nm,0.3s							
PB07	**IPOC Station P**	**3.57**	**308**	⇑*iP*		**Pn**	**13 16 18.2**	**0.0**
PB07	**IPOC Station P**	**3.57**	**308**	Pn		**Pn**	**13 16 18.2**	**0.0**
PB02	**IPOC Station P**	**3.85**	**313**	*eP*		**Pn**	**13 16 21.2**	**-0.3**
PB02				*eS*		**S**	**13 17 06.3**	**-2.1**
PB02				IAML			13 17 12.6	
	comp=Z,184nm,0.4s							
PB02	**IPOC Station P**	**3.85**	**313**	*eP*		**Pn**	**13 16 21.0**	**-0.6**
PB02	**IPOC Station P**	**3.85**	**313**			**Pn**	**13 16 21.0**	**-0.6**
AC01	**Pan de Azucar**	**4.02**	**237**	*eP*		**Pn**	**13 16 23.1**	**-0.3**
AC01				*eS*		**S**	**13 17 09.2**	**-2.8**
AC01				IAML			13 17 11.3	
	comp=Z,80nm,0.5s							
AC01	**Pan de Azucar**	**4.02**	**237**	*eP*		**Pn**	**13 16 22.9**	**-0.5**
AC01	**Pan de Azucar**	**4.02**	**237**	Pn		**Pn**	**13 16 23.3**	**-0.2**
TINO	**Tinogasta**	**4.12**	**189**	*eP*		**Pn**	**13 16 26.1**	**+1.2**
TINO				*eS*		**S**	**13 17 14.5**	**0.0**
PB08	**IPOC Station P**	**4.36**	**330**	*eP*		**Pn**	**13 16 28.4**	**+0.2**
PB08				*eS*		**S**	**13 17 21.0**	**+0.6**
PB08				IAML			13 17 23.7	
	comp=Z,65nm,0.5s							
PB08	**IPOC Station P**	**4.36**	**330**	*eP*		**Pn**	**13 16 28.3**	**+0.1**
PB08	**IPOC Station P**	**4.36**	**330**			**Pn**	**13 16 27.8**	**-0.4**
GO03	**Copiapo**	**4.71**	**219**	Pn		**Pn**	**13 16 31.9**	**-0.3**
GO01	**Chusmiza**	**4.80**	**333**	*eP*		**Pn**	**13 16 33.9**	**+0.1**
GO01				*eS*		**S**	**13 17 29.9**	**-0.6**
GO01				IAML			13 17 35.0	
	comp=Z,41nm,0.5s							
GO01	**Chusmiza**	**4.80**	**333**	Pn		**Pn**	**13 16 33.6**	**-0.2**
VCA	**Vinchina**	**4.89**	**194**	*eP*		**Pn**	**13 16 31.1**	**-3.5**
VCA				*eS*		**S**	**13 17 34.6**	**+2.5**
PB11	**IPOC Station P**	**4.93**	**328**	*eS*		**S**	**13 17 30.1**	**-2.8**
PB11				IAML			13 17 34.3	
	comp=Z,76nm,0.5s							
PB11	**IPOC Station P**	**4.93**	**328**			**Pn**	**13 16 33.6**	**-1.5**
PSGCX	**Pisagua**	**5.30**	**325**			**Pn**	**13 16 37.5**	**-2.4**
AC04	**Llanos de Chal**	**5.66**	**221**	Pn		**Pn**	**13 16 44.2**	**0.0**
AC05	**El Transito**	**5.72**	**212**	Pn		**Pn**	**13 16 44.8**	**-0.4**
PB16	**IPOC Station P**	**6.13**	**336**			**Pn**	**13 16 50.0**	**-0.8**
CFA	**Coronel Fontan**	**7.70**	**189**	P		**Pn**	**13 17 08.5**	**-2.1**
	comp=Z,3.9nm,0.3s,baz=16,slow=11,SNR=48							
CFA				S		**S**	**13 18 30.8**	**-6.9**
	comp=Z,4.9nm,0.2s,baz=133,slow=21,SNR=7.4							
LPAZ	**La Paz**	**7.74**	**351**	P		**Pn**	**13 17 11.0**	**-0.8**
	comp=Z,8.0nm,0.3s,baz=162,slow=9.3,SNR=37							
LPAZ				S		**S**	**13 18 36.2**	**-3.4**
	comp=Z,4.9nm,1.0s,baz=341,slow=13,SNR=2.1							
LPAZ	**La Paz**	**7.74**	**351**	Pn		**Pn**	**13 17 10.3**	**-1.4**
SIV	**San Ignacio**	**9.63**	**35**	P		**Pn**	**13 17 34.7**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=198,slow=10,SNR=6.0							
SIV				S		S	13 19 13.1	-11
	comp=Z,1.3nm,0.7s,baz=219,slow=10,SNR=4.1							
CPSB	**Cacapava Do Su**	**13.55**	**121**	P		**P**	**13 18 26.9**	**-0.8**
TRQA	**Tornquist**	**14.65**	**165**	Pn		**Pn**	**13 18 37.0**	**-1.9**
PLCA	**Paso Flores**	**17.00**	**190**	P		**Pn**	**13 19 07.8**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=356,slow=12,SNR=3.6							
ORCD	**Orcadas**	**39.81**	**163**	P		**P**	**13 22 35.0**	**+0.9**
ORCD				IAmb		IAmb	13 22 38.1	
	comp=Z,14nm,0.8s							
TXAR	**Lajitas Array**	**63.73**	**324**	P		**P**	**13 25 31.3**	**0.0**
QSPA	**South Pole Qui**	**66.23**	**180**	P		**P**	**13 25 49.4**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=295,slow=1.1,SNR=13							
	comp=Z,0.4nm,0.4s							
QSPA	**South Pole Qui**	**66.23**	**180**	P		**P**	**13 25 49.3**	**+2.4**
QSPA				IAmb		IAmb	13 26 08.3	
	comp=Z,4.8nm,1.4s							
WRA	**Warramunga Arr**	**131.70**	**207**	PKP		**PKiKP**	**13 34 12.1**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=160,slow=1.7,SNR=5.3							
MKAR	**Makanchi Array**	**146.43**	**40**	PKPbc		**PKPab**	**13 34 39.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=316,slow=3.2,SNR=5.2							

*NNC **31** 13:29:11.9±2.5, 49°.96N×78°.65E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=62.5km s-min=8.4km az=74.0, Suspected Mining explosion.*

*IDC **31** 13:29:14.2±1.0, 50°.08N×78°.78E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=13.5km s-min=6.1km az=63.0*

ISC 31 13:29:07.0±1.0, 50°.43N±0°.06×79°.80E±0°.07, h0km, n9, σ0^{8}89/12, 8C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KURK	**Kurchatov**	**0.80**	**291**	⇑P		**Pn**	**13 29 26.7**	**+1.1**
	1.3nm,0.4s							
KURK				⇑S		**Sn**	**13 29 38.1**	**-0.2**
	7.4nm,1.2s							
KURBB	**Kurchatov Arra**	**0.83**	**284**	Pg		**Pn**	**13 29 25.0**	**-0.9**
	0.8nm,0.3s,baz=164,slow=18,SNR=52							
KURBB				Lg		Lg	13 29 33.6	
	0.6nm,0.3s,baz=162,slow=33,SNR=14							
KURBB	**Kurchatov Arra**	**0.83**	**284**	⇑P		**Pn**	**13 29 25.1**	**-0.9**
	6.7nm,0.3s							
KURBB				⇓S		**Sg**	**13 29 34.0**	**+0.3**
	42nm,0.7s							
MAKZ	**Makanchi**	**3.90**	**157**	⇑Pg		**Pb**	**13 30 17.7**	**+1.0**
	2.4nm,1.0s							
MAKZ				⇑Lg		Lg	13 31 13.1	
	3.7nm,0.8s							
MK31	**Makanchi Array**	**4.00**	**155**	⇑Pn		**Pb**	**13 30 17.2**	**-1.1**
	0.1nm,0.4s,baz=316,slow=9.1,SNR=7.5							
MK31				⇑Pg		**Pg**	**13 30 24.2**	**+0.6**
	0.2nm,0.3s,baz=332,slow=15,SNR=7.8							
MK31				⇑Lg		Lg	13 31 19.6	
	3.9nm,0.7s,baz=334,slow=28,SNR=19							
MKAR	**Makanchi Array**	**4.00**	**155**	Pn		**Pb**	**13 30 17.5**	**-0.8**
	0.1nm,0.3s,baz=334,slow=13,SNR=8.9							
MKAR				Pg		**Pg**	**13 30 24.2**	**+0.7**
	0.3nm,0.3s,baz=328,slow=14,SNR=9.0							
MKAR				Sn		**Sb**	**13 31 06.7**	**-0.5**
	0.1nm,0.3s,baz=336,slow=23,SNR=5.3							
MKAR				Lg		Lg	13 31 20.4	
	0.4nm,0.3s,baz=330,slow=27,SNR=8.3							
	0.1nm,0.3s							
I46RU	**ZALESOVO INFRA**	**4.69**	**39**	I		I	14 09 10.0	
	baz=227,slow=312,SNR=7.8							
ZALV	**Zalesovo Beam**	**4.69**	**39**	Pn		**Pg**	**13 30 37.0**	**+0.3**
	0.3nm,0.3s,baz=228,slow=14,SNR=3.8							
	0.6nm,0.3s							
I31KZ	**AKTYUBINSK INF**	**13.87**	**278**	I		I	14 43 50.0	
	baz=86,slow=317,SNR=4.0							

*ASRS **31** 13:51:31.8±0.2, 51°.1×8°.7E±°, h10km, MLh4.5/19, Error ellipse: s-maj=2.7km s-min=2.1km az=71.4, confirmed*

*NNC **31** 13:51:35.8±1.1, 50°.59N×87°.17E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=9.6km s-min=5.4km az=96.0*

*SOME **31** 13:51:41.2, 49°.88N×87°.83E, h15km*

ISC 31 13:51:34.0±0.7, 50°.56N±0°.02×87°.44E±0°.02, h10km, n32, σ1^{9}91/62, 17C-14D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHBI	**Chibit, Altay**	**0.25**	**171**	Pg		**Pg**	**13 51 37.6**	**-1.5**
CHBI				Sg		**Sg**	**13 51 40.7**	**-1.8**
AKAR	**Aktash**	**0.27**	**154**	⇓Pg		**Pg**	**13 51 38.0**	**-1.4**
AKAR				Sg		**Sg**	**13 51 41.2**	**-1.9**
ULGR	**Ulagan, Altay**	**0.34**	**79**	⇑Pg		**Pg**	**13 51 40.2**	**-0.5**
ULGR				Sg		**Sg**	**13 51 44.9**	**-0.4**
CUR	**Chagan-Uzun**	**0.74**	**128**	⇑Pg		**Pg**	**13 51 46.8**	**-1.5**
CUR				Sg		**Sg**	**13 51 57.3**	**-0.7**
TUNR	**Tungur**	**0.82**	**241**	⇑Pg		**Pg**	**13 51 48.3**	**-1.4**
TUNR				Sg		**Sg**	**13 51 58.7**	**-1.7**
DGZ	**Jazzator, Alta**	**0.86**	**180**	⇓Pg		**Pg**	**13 51 48.7**	**-1.9**
DGZ				Sg		**Sg**	**13 51 59.0**	**-2.7**
ELDR	**Elanda**	**1.08**	**308**	Pg		**Pg**	**13 51 53.2**	**-1.6**
ELDR				Sg		**Sg**	**13 52 07.5**	**-1.3**
YALR	**Yailyu, Altay**	**1.22**	**5**	⇓Pg		**Pn**	**13 51 56.0**	**-1.1**
YALR				Sg		**Sb**	**13 52 12.3**	**-0.5**
ARTR	**Artybash**	**1.24**	**355**	⇓Pg		**Pn**	**13 51 56.5**	**-0.9**
ARTR				Sg		**Sn**	**13 52 14.0**	**-0.3**
GALT	**Gorno-Altaysk,**	**1.69**	**327**	Pg		**Pb**	**13 52 04.2**	**-0.8**
GALT				Sg		**Sg**	**13 52 28.2**	**+0.1**
UKR	**Ust'-Kan**	**1.74**	**284**	⇑Pg		**Pb**	**13 52 04.9**	**-1.1**
UKR				Sg		**Sg**	**13 52 29.7**	**0.0**
TEL	**Teeli**	**1.81**	**74**	Pg		**Pb**	**13 52 07.4**	**+0.2**
TEL				Sg		**Sg**	**13 52 32.5**	**+0.4**
TASR	**Tashtagol**	**2.22**	**7**	Pg		**Pb**	**13 52 15.0**	**+0.8**
TASR				Sg		**Sg**	**13 52 45.3**	**0.0**
ELT	**Eltsovka**	**2.81**	**345**	⇓Pg		**Pb**	**13 52 21.3**	**-2.8**
ELT				Sg		**Sb**	**13 52 59.7**	**+1.1**
KALT2	**Kaltan 2**	**2.85**	**359**	⇑Pg		**Pb**	**13 52 23.1**	**-1.7**
KALT2				Sg		**Sg**	**13 53 04.4**	**-0.9**
KIYZ	**Kiyzas, Kuzbas**	**3.01**	**4**	Pn		**Pn**	**13 52 24.0**	**+2.4**
KIYZ				Pg		**Pb**	**13 52 27.6**	**0.0**
KIYZ				Sg		**Sb**	**13 53 07.0**	**+2.7**
VEH	**Verkhnyaya Baz**	**3.23**	**32**	Pg		**Pb**	**13 52 32.1**	**+0.6**
VEH				Sg		**Sb**	**13 53 13.9**	**+2.9**
LUZB	**Luzhba, Kemero**	**3.23**	**16**	Pg		**Pb**	**13 52 31.9**	**+0.5**
LUZB				Sg		**Sg**	**13 53 15.2**	**-2.5**
DJO	**Djoy, Khakassi**	**3.24**	**45**	Pg		**Pg**	**13 52 33.9**	**-2.0**
DJO				Sg		**Sg**	**13 53 14.6**	**-3.3**
CERR	**Cheremushki**	**3.38**	**46**	Pg		**Pg**	**13 52 36.4**	**-2.2**
CERR				Sg		**Sg**	**13 53 18.8**	**-3.5**
ZSN	**Zaisan**	**3.54**	**210**	*eP*		**Pn**	**13 52 32.1**	**+3.1**
	105nm,0.6s							
ZSN				*eS*		**Sb**	**13 53 15.8**	**-4.0**
	178nm,0.9s							
ZAA0	**Zalesovo Array**	**3.76**	**336**	⇑Pn		**Pn**	**13 52 32.4**	**+0.5**
	18nm,0.4s							
ZAA0				⇑Lg		Lg	13 53 32.3	
	369nm,0.8s							
SALR	**Pechorkino, Sa**	**4.01**	**345**	Pg		**Pb**	**13 52 45.2**	**+0.6**
SALR				Sg		**Sg**	**13 53 37.8**	**-4.8**
SEM	**Semipalatinsk**	**4.59**	**271**	*eP*		**Pb**	**13 52 55.5**	**+0.7**
	42nm,0.4s							
SEM				*eS*		**Sb**	**13 53 53.4**	**+3.2**
	285nm,0.7s							
MK31	**Makanchi Array**	**5.08**	**224**	⇓Pn		**Pn**	**13 52 53.1**	**+2.9**
	11nm,0.7s,baz=45,slow=12,SNR=418							
MK31				⇑Sn		**Sn**	**13 53 51.5**	**+2.6**
	19nm,0.5s,baz=65,slow=29,SNR=6.3							
MK31				⇓Lg		Lg	13 54 12.6	
	49nm,0.6s,baz=43,slow=32,SNR=5.8							
MAKZ	**Makanchi**	**5.21**	**226**	⇑Pn		**Pn**	**13 52 54.5**	**+2.6**
	12nm,0.5s							
MAKZ				⇑Sn		**Sn**	**13 53 54.0**	**+1.9**
	108nm,1.1s							
MAKZ				⇑Lg		Lg	13 54 16.6	
	98nm,0.8s							
KURK	**Kurchatov**	**5.62**	**275**	⇑Pn		**Pn**	**13 52 58.7**	**+1.2**
	0.8nm,0.2s							
KURK				⇓Sn		**Sn**	**13 54 02.3**	**+0.4**
	4.6nm,0.3s							
KURK				⇓Lg		Lg	13 54 27.1	
	51nm,0.6s							
KURBB	**Kurchatov Arra**	**5.68**	**274**	⇑Pn		**Pn**	**13 52 59.4**	**+1.1**
	17nm,0.3s							
KURBB				⇓Sn		**Sn**	**13 54 04.9**	**+1.4**
	100nm,0.8s							
KURBB				⇑Lg		Lg	13 54 29.0	
	359nm,0.8s							
DJR	**Jarkent**	**8.10**	**223**	*eP*		**Pn**	**13 53 34.2**	**+2.5**
	8.1nm,0.2s							
DJR				*eS*		**Sn**	**13 55 02.2**	**-1.1**
	17nm,0.6s							
PDGK	**Podgornoye**	**9.04**	**220**	⇓Pn		**Pn**	**13 53 45.0**	**+0.4**
	6.4nm,0.4s							
PDGK				⇓Sn		**Sn**	**13 55 28.3**	**+1.7**
	25nm,0.6s							
PDGK				⇑Lg		Lg	13 56 19.5	
	58nm,1.4s							
AAK	**Ala-Archa**	**11.91**	**233**	⇑Lg		Lg	13 57 48.2	
	27nm,1.3s							
KK31	**Karatay Array**	**13.76**	**244**	⇑Pn		**Pn**	**13 54 50.6**	**+1.5**
	0.4nm,0.3s,baz=52,slow=13,SNR=7.8							
KK31				⇓Sn		**Sn**	**13 57 22.1**	**+0.2**
	1.2nm,0.5s							
KK31				⇓Lg		Lg	13 58 47.3	
	6.4nm,0.7s,baz=56,slow=30,SNR=3.9							

*BJI **31** 13:57:28.6, 42°.98N×138°.44E, h267km, mB4.4/5, mb4.5/29*

*MOS **31** 13:57:34.4±0.9, 43°.11N×137°.77E, h275km, mb4.7/35, Error ellipse: s-maj=6.8km s-min=4.7km az=119.2*

*NEIC **31** 13:57:35.1±1.3, 42°.98N±0°.07×137°.71E±0°.09, h269km±6km, mb4.2/43, Error ellipse: s-maj=10.8km s-min=9.4km az=160.0*

*JMA **31** 13:57:35.0±0.3, 43°.N±1°×13°.8E±°, h289km±2km, MV4.4/35, EASTERN SEA OF JAPAN*

*GFZ **31** 13:57:35.6±0.2, 43°.N±3°×13°.8E±°, h272km, M4.4/37, mb4.7/37*

*SKHL **31** 13:57:35.3±0.6, 43°.00N×137°.80E, h290km±5km, mb5.1/2, msh5.2/3*

*NIED **31** 13:57:35.0, 42°.95N×137°.90E, h289km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=2.14; $M_{\theta\theta}$=1.93; $M_{\phi\phi}$=0.21; $M_{r\theta}$=-1.63; $M_{\theta\phi}$=-2.93; $M_{\phi r}$=0.17; Fault plane solution: $M_0$3.82000×10^{15} NP1: ϕ_s342.00000°, δ48.00000°, λ-33.00000°. NP2:ϕ_s95.00000°, δ66.00000°, λ-133.00000°.*

*IDC **31** 13:57:35.6±0.7, 43°.12N×137°.70E, h270km±7km, mb4.0/32, mbtmp4.6/42 Error ellipse: s-maj=7.9km s-min=7.4km az=155.0*

**ISC 31 13:57:35.1±0.4, 43°.00N±0°.04×137°.84E±0°.04,

YSS **Yuzhno-Sakhali** 5.27 40 Pn 13 58 55.5 +0.9
YSS **Yuzhno-Sakhali** 5.27 40 P Pn 13 58 55.9 +1.2
YSS **Yuzhno-Sakhali** 5.27 40 *i* P Pn 13 58 55.7 +1.1
YSS AMB AMB 13 58 57.4
comp=E,360nm,0.5s
YSS *e*S **S** 13 59 59.5 +1.0
RUSJ Misakicho 5.50 76 *e*P Pn 13 58 58.6 +1.2
RUSJ *e*S **S** 14 00 03.2 -0.3
NMR Nemuro--Hokkai 5.78 84 *e*P Pn 13 58 59.7 -1.1
NMR *e*S **S** 14 00 03.9 -5.9
NMR Nemuro--Hokkai 5.78 84 *e*P Pn 13 58 59.8 -1.1
NEM2 Nemuro 2 5.79 84 P Pn 13 58 59.8 -1.3
YUK Yuzh-Kuril'sk 5.92 77 *e*P Pn 13 59 03.0 +0.4
YUK *e*S **S** 14 00 10.7 -2.3
YUK pmax pmax
comp=Z,206nm,0.6s
YUK pmax pmax
comp=N,31nm,0.4s
YUK pmax pmax
comp=E,42nm,0.4s
YUK smax smax
comp=N,385nm,0.4s
YUK smax smax
comp=E,890nm,0.4s
YUK Yuzh-Kuril'sk 5.92 77 *i* P Pn 13 59 03.1 +0.4
YUK AMB AMB 13 59 05.0
comp=E,180nm,0.3s
YUK AMB AMB 13 59 08.1
comp=E,450nm,1.2s
YUK *i* S **S** 14 00 11.7 -1.3
YUK A A 14 00 18.2
comp=E,2μm,2.0s
YUK A A 14 00 18.2
comp=E,1μm,2.0s
YUK A A 14 00 18.2
comp=E,590nm,0.5s
YUK A A 14 00 18.2
comp=E,940nm,0.5s
MDJ Mudanjiang 6.18 288 P Pn 13 59 05.6 -0.2
MDJ Mudanjiang 6.18 288 Pn 13 59 05.0 -0.8
MDJ Mudanjiang 6.18 288 P Pn 13 59 05.8 0.0
MDJ pmax pmax
comp=E,33nm,1.0s
MDJ Mudanjiang 6.18 288 P Pn 13 59 06.0 +0.2
MJB9 Matsu-Tunnel 6.46 177 Pn 13 59 07.3 -2.1
MAJO Matsushiro 6.46 177 P Pn 13 59 08.7 -0.7
MAJO Matsushiro 6.46 177 P Pn 13 59 06.1 -3.3
MAJO Matsushiro 6.46 177 Pn 13 59 06.1 -3.3
MAJO Matsushiro 6.46 177 P Pn 13 59 08.9 -0.5
MJAR Matsushiro Arr 6.46 177 P Pn 13 59 10.3 +0.9
comp=E,7.4nm,0.4s,baz=2.2,slow=12,SNR=23
MJAR Matsushiro Arr 6.46 177 P Pn 13 59 09.6 +0.2
MJAR Matsushiro Arr 6.46 177 Pn Pn 13 59 09.6 +0.2
UGL Uglegorsk 6.75 24 *e*P Pn 13 59 13.2 +0.5
JGF Kuroka 7.40 183 S S 14 00 47.2 +0.6
JGF Kuroka 7.40 183 Pn 13 59 21.2 +0.1
JGF Kuroka 7.40 183 P Pn 13 59 21.8 +0.7
KLR Kul'dur 7.53 328 P Pn 13 59 21.9 -0.5
comp=E,4.1nm,0.4s,baz=137,slow=11,SNR=14
KLR Kul'dur 7.53 328 *d* *i* P Pn 13 59 21.6 -0.8
KLR pmax pmax
comp=Z,10.0nm,0.9s
KLR Kul'dur 7.53 328 *e*P Pn 13 59 21.6 -0.8
KUR Kuril'sk 7.55 69 ⇑ *i* P Pn 13 59 22.9 +0.2
KUR *e*S **S** 14 00 51.8 +2.2
KUR pmax pmax
comp=E,16nm,0.5s
KUR pmax pmax
comp=Z,62nm,0.5s
KUR pmax pmax
comp=N,11nm,0.3s
KUR smax smax
comp=E,59nm,0.4s
KUR smax smax
comp=N,34nm,0.2s
KUR Kuril'sk 7.55 69 *i* P Pn 13 59 22.8 +0.1
KUR AMB AMB 13 59 23.7
comp=N,70nm,0.4s
KUR *e*S **S** 14 00 50.8 +1.2
KUR A A 14 00 56.0
comp=N,50nm,0.4s
KUR A A 14 00 56.0
comp=N,60nm,0.4s
REI Reidovoe 7.66 69 *e*P Pn 13 59 25.8 +1.7
REI *e*S **S** 14 00 53.5 +1.4
GRNR Gornyy 7.83 353 ⇑ *i* P Pn 13 59 26.0 -0.1
GRNR pmax pmax
comp=Z,10.0nm,0.7s
GRNR Gornyy 7.83 353 *e*P Pn 13 59 26.0 -0.1
BNX BinXian 7.96 294 ⇓ P Pn 13 59 27.5 -0.3
BNX S **S** 14 00 56.3 -2.7
BNX pmax pmax
comp=Z,36nm,0.8s
TYV Tymovskoe 8.52 21 *e*P Pn 13 59 32.0 -2.7
TYV *e*S **S** 14 01 05.1 -6.6
TYV pmax pmax
comp=Z,100nm,2.5s
TYV pmax pmax
comp=Z,21nm,1.0s
TYV smax smax
comp=N,12nm,1.4s
TYV smax smax
comp=E,14nm,1.4s
TYV smax smax
comp=N,100nm,3.5s
TYV smax smax
comp=E,100nm,3.5s
TYV Tymovskoe 8.52 21 *e*P Pn 13 59 35.9 +1.2
TYV AMB AMB 13 59 48.2
comp=E,20nm,0.6s
TYV AMB AMB 13 59 50.8
comp=E,130nm,2.7s
TYV *e*S **S** 14 01 08.9 -2.8
TYV A A 14 01 09.3
comp=E,10.0nm,1.6s
TYV A A 14 01 09.3
comp=E,10.0nm,1.6s
TYV A A 14 01 35.9
comp=E,100nm,18.0s
TYV A A 14 01 35.9
comp=E,1μm,18.0s
CN2 Changchun 9.06 279 P Pn 13 59 40.3 -1.3
CN2 pmax pmax
comp=E,10.0nm,0.6s
KSRS Korea Array 9.39 237 P Pn 13 59 46.6 +0.8
comp=E,16nm,0.7s,baz=53,slow=12,SNR=100
KSAR Wonju Array Be 9.42 237 P Pn 13 59 46.5 +0.4
KSAR Wonju Array Be 9.42 237 Pn 13 59 46.5 +0.4
KSAR Wonju Array Be 9.42 237 *e*P Pn 13 59 46.5 +0.4
JMN Monobe 9.77 200 P Pn 13 59 52.4 +1.8
JMN Monobe 9.77 200 S S 14 01 44.0 +3.2
JMN Monobe 9.77 200 Pn 13 59 51.2 +0.6
JMN Monobe 9.77 200 P Pn 13 59 51.4 +0.8
JHJ Hachijo jima 2 9.99 171 P Pn 13 59 51.1 -2.1
comp=E,75nm,0.3s,baz=252,slow=19,SNR=17
JHJ S S 14 01 35.2 -11
comp=E,139nm,0.4s,baz=173,slow=23,SNR=11
HEH HeiHe 10.19 319 *e*P Pn 13 59 54.3 -1.3
HEH pmax pmax
comp=E,48nm,0.8s
TJN Taejon 10.43 234 P Pn 14 00 00.0 +1.3
TJN Taejon 10.43 234 *c* *i* P Pn 13 59 59.6 +0.9
TJN Taejon 10.43 234 Pn Pn 13 59 55.7 -3.0
JNU Nakatsue 11.28 211 P Pn 14 00 10.3 +1.0
comp=E,36nm,0.6s,baz=22,slow=1.8,SNR=49
ZEA Zeya 12.83 331 *e*P Pn 14 00 27.9 -0.1
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA Zeya 12.83 331 *e*P Pn 14 00 27.9 -0.1
JSU Suzuyama 12.89 209 P P 14 00 29.7 -0.6
JSU Suzuyama 12.89 209 Pn 14 00 28.8 -0.2
JSU Suzuyama 12.89 209 P Pn 14 00 29.2 +0.2
DL2 Dalian 12.92 257 P Pn 14 00 29.3 0.0
DL2 sP 14 01 32.0
DL2 S **S** 14 02 53.5 +0.8
DL2 PcP **PcP** 14 05 42.0 +2.2
DL2 ScS **ScS** 14 12 24.0 +1.0
DL2 pmax pmax
comp=Z,60nm,0.9s
DL2 pmax pmax
comp=Z,160nm,5.2s
HIA Hailar 14.01 303 P Pn 14 00 40.2 -2.2
HIA Hailar 14.01 303 P Pn 14 00 41.7 -0.7
HILR Hailar Array B 14.11 304 P P 14 00 42.8 -0.7
comp=Z,19nm,0.5s,baz=113,slow=13,SNR=39
XLT XiLinHaoTe 15.83 281 *e*P P 14 01 02.5 -0.1
XLT pmax pmax
comp=Z,18nm,0.6s
JCJ Chichijima 16.26 166 P P 14 01 05.8 -1.6
comp=Z,65nm,0.4s,baz=291,slow=22,SNR=21
JCJ S **S** 14 03 55.2 -8.5
comp=Z,50nm,0.4s,baz=290,slow=22,SNR=7.3
JCJ Chichijima 16.26 166 P P 14 01 07.4 0.0
PETK Petropavlovsk- 16.63 46 P P 14 01 11.2 0.0
comp=Z,7.0nm,0.8s,baz=226,slow=9.3,SNR=11
PETK Petropavlovsk- 16.63 46 P P 14 01 11.6 +0.4
PETK Petropavlovsk- 16.63 46 P P 14 01 11.6 +0.4
MA2 Magadan 18.40 21 P P 14 01 30.0 -0.2
comp=Z,12nm,0.7s,baz=214,slow=11,SNR=10
MA2 Magadan 18.40 21 *d* *i* P P 14 01 30.2 0.0
MA2 pmax pmax
comp=Z,19nm,0.9s
MA2 Magadan 18.40 21 P P 14 01 30.5 +0.3
MA2 IAmb IAmb 14 01 31.4
comp=Z,14nm,0.8s
MA2 Magadan 18.40 21 *e*P P 14 01 30.2 0.0
YAK Yakutsk 19.66 349 P P 14 01 41.8 -1.8
comp=Z,8.0nm,0.3s,baz=150,slow=4.8,SNR=7.6
YAK S **S** 14 05 04.4 -5.6
comp=Z,8.3nm,0.6s,baz=348,slow=23,SNR=12
YAK Yakutsk 19.66 349 *e*P P 14 01 41.3 -2.3
YAK *e*S **S** 14 05 05.9 -4.1
YAK pmax pmax
comp=Z,7.0nm,0.7s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,1.0nm,1.4s
YAK smax smax
comp=E,155nm,3.0s
YAK smax smax
comp=N,74nm,1.5s
YAK Yakutsk 19.66 349 P P 14 01 41.0 -2.6
YAK IAmb IAmb 14 01 42.6
comp=Z,11nm,0.8s
YAK Yakutsk 19.66 349 *e*P P 14 01 42.0 -1.6
BTO2 Baotou 20.91 273 *e*P P 14 01 57.3 +0.3
BTO2 S **S** 14 05 32.5 +0.3
BTO2 pmax pmax
comp=Z,7.0nm,0.5s
BTO2 pmax pmax
comp=Z,120nm,4.0s
BTO2 L L
comp=Z,180nm,8.6s
BTO2 L L
comp=Z,130nm,10.0s
BTO2 L L
comp=Z,140nm,4.4s
SEY Seymchan 21.70 18 P P 14 02 03.0 -1.1
comp=Z,8.0nm,0.7s,baz=213,slow=16,SNR=12
comp=Z,8.0nm,0.7s
SEY Seymchan 21.70 18 ⇑ *e*P P 14 02 02.9 -1.1
SEY pmax pmax
comp=Z,8.0nm,0.7s
SEY Seymchan 21.70 18 *e*P P 14 02 02.9 -1.1
ULN Ulaanbaatar 22.06 293 *d* *i* P P 14 02 06.0 -1.7
ULN pmax pmax
comp=Z,8.0nm,1.7s
ULN Ulaanbaatar 22.06 293 *e*P P 14 02 06.0 -1.7
SONM Songino Array 22.50 293 P P 14 02 10.1 -1.6
comp=Z,1.8nm,0.4s,baz=97,slow=8.6,SNR=7.2
comp=Z,1.8nm,0.4s
SONM Songino Array 22.50 293 P P 14 02 10.1 -1.6
SONM pmax pmax
comp=Z,9.0nm,1.3s
SONM Songino Array 22.50 293 P 14 02 10.1 -1.6
SONM IAmb IAmb 14 02 12.3
comp=Z,8.9nm,1.3s
TLY Talaya 24.55 303 ⇑ *e*P P 14 02 31.0 +0.9
TLY pmax pmax
comp=Z,6.0nm,0.8s
KNGR Kungurtug, Tuv 28.34 300 ⇓ *e*P P 14 03 04.9 +0.9
KNGR pmax pmax
comp=Z,4.0nm,1.1s
TIXI Tiksi 29.06 354 ⇓ *e*P P 14 03 08.6 -1.2
TIXI pmax pmax
comp=Z,7.0nm,0.6s
TIXI Tiksi 29.06 354 P 14 03 08.7 -1.1
TIXI Tiksi 29.06 354 *e*P P 14 03 08.6 -1.2
KIWB Kanaga Island 31.27 58 P P 14 03 30.9 +1.4
DGZ Jazzator, Alta 34.87 299 ⇓ *i* P P 14 04 00.9 +0.1
DGZ pmax pmax
comp=Z,8.0nm,0.6s
ZAA0 Zalesovo Array 36.00 307 P 14 04 09.6 -0.5
ZALV Zalesovo Beam 36.00 307 P P 14 04 09.4 -0.6
comp=Z,22nm,0.5s,baz=87,slow=9.0,SNR=93
ZALV PcP **PcP** 14 06 30.2 +0.3
comp=Z,3.6nm,0.4s,baz=88,slow=2.2,SNR=12
ZALV ScP **ScP** 14 09 49.6 0.0
comp=Z,1.3nm,0.4s,baz=69,slow=3.3,SNR=7.8
comp=Z,22nm,0.5s
NRIK Noril'sk 36.71 333 P P 14 04 15.3 -0.5
comp=Z,6.3nm,0.3s,baz=112,slow=7.7,SNR=12
comp=Z,6.3nm,0.3s
NRIK Noril'sk 36.71 333 *de*P P 14 04 15.2 -0.5
NRIK pmax pmax
comp=Z,12nm,0.8s
NRIK Noril'sk 36.71 333 P 14 04 15.3 -0.5
NRIK IAmb IAmb 14 04 16.2
comp=Z,12nm,0.8s
MK31 Makanchi Array 38.84 295 *d* *i* P P 14 04 33.1 -0.8
MK31 Makanchi Array 38.84 295 P P 14 04 33.0 -1.0
MK31 IAmb IAmb 14 04 34.8
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 38.84 295 P P 14 04 33.2 -0.8
comp=Z,3.7nm,0.6s,baz=82,slow=10,SNR=32
MKAR ScP **ScP** 14 09 59.7 -0.8
comp=Z,1.0nm,0.8s,baz=72,slow=4.0,SNR=5.9
comp=Z,3.7nm,0.6s
MAKZ Makanchi 39.04 296 P P 14 04 35.0 -0.6
MAKZ pmax pmax
comp=Z,11nm,1.2s
MAKZ Makanchi 39.04 296 P 14 04 35.0 -0.6
MAKZ IAmb IAmb 14 04 36.1
comp=Z,11nm,1.2s
MAKZ Makanchi 39.04 296 P P 14 04 34.2 -1.4
KURK Kurchatov 40.25 302 *d* *i* P P 14 04 44.6 -0.8
KURK pmax pmax
comp=Z,22nm,0.8s
KURK Kurchatov 40.25 302 P 14 04 44.8 -0.6
KURK IAmb IAmb 14 04 45.6
comp=Z,21nm,0.8s
KURK Kurchatov 40.25 302 P P 14 04 44.9 -0.6
KURK Kurchatov 40.25 302 *e*P P 14 04 44.6 -0.8
KURBB Kurchatov Arra 40.33 302 P P 14 04 45.4 -0.6
comp=Z,9.6nm,0.4s,baz=79,slow=8.8,SNR=82
KURBB PcP **PcP** 14 06 43.4 -0.1
comp=Z,2.2nm,0.5s,baz=85,slow=3.3,SNR=8.4
comp=Z,9.6nm,0.4s
CHTO Chiang Mai 40.65 246 P P 14 04 51.3 +2.2
CHTO Chiang Mai 40.65 246 P P 14 04 48.9 -0.2
CMAR Chiang Mai Arr 40.91 246 P P 14 04 51.1 0.0
comp=Z,1.1nm,0.4s,baz=33,slow=7.1,SNR=10
comp=Z,1.1nm,0.4s
CMAR Chiang Mai Arr 40.91 246 *i* P P 14 04 53.7 +2.6
D20K Etiviluk River 41.97 30 IAmb IAmb 14 05 08.3
comp=Z,4.7nm,1.2s
WUS Wushi 42.76 288 P P 14 05 06.1 +0.1
IMAR Indian Mountai 43.07 34 P P 14 05 08.9 +0.9
TARG Taragay, Kyrgy 43.54 290 P P 14 05 12.6 +0.1
TARG Taragay, Kyrgy 43.54 290 IAmb IAmb 14 05 14.0
comp=Z,13nm,0.8s
TARG Taragay, Kyrgy 43.54 290 P P 14 05 12.6 +0.1
KDJ Kajisay 43.82 291 P P 14 05 14.8 +0.3
KDJ Kajisay 43.82 291 IAmb IAmb 14 05 15.2
comp=Z,13nm,1.0s
KDJ Kajisay 43.82 291 P P 14 05 14.8 +0.3
OHAK Old Harbor 44.43 46 P P 14 05 19.8 +1.0
OHAK IAmb IAmb 14 05 51.1
comp=Z,32nm,1.4s
BOOM Boomskoye usch 44.53 291 P P 14 05 19.8 -0.2
BOOM pmax pmax
comp=Z,41nm,1.3s
BOOM Boomskoye usch 44.53 291 P 14 05 19.8 -0.2
BOOM Boomskoye usch 44.53 291 P P 14 05 20.4 +0.4
TKM2 Tokmak 2 44.59 292 P P 14 05 21.0 +0.4
SNR=53
BVAR Borovoye Array 44.64 307 P P 14 05 20.8 +0.2
comp=Z,23nm,0.3s,baz=77,slow=9.9,SNR=122
BVAR PcP **PcP** 14 06 58.4 +0.4
comp=Z,2.7nm,0.6s,baz=144,slow=2.7,SNR=3.9
comp=Z,23nm,0.3s
L22K Petersville 44.71 39 P P 14 05 22.1 +1.0
L22K IAmb IAmb 14 05 25.8
comp=Z,5.1nm,1.2s
KBK Karagaybulak 45.14 292 P P 14 05 25.2 +0.4
SNR=23
USP Ospenovka 45.21 293 P P 14 05 25.1 -0.1
SNR=11
F24K Squaw Lake 45.27 31 P P 14 05 26.7 +1.4
AAK Ala-Archa 45.45 292 P P 14 05 27.3 0.0
SNR=6.1
AAK Ala-Archa 45.45 292 *d* *i* P P 14 05 27.2 -0.1
AAK pmax pmax
comp=Z,5.0nm,0.4s
AAK Ala-Archa 45.45 292 P 14 05 26.7 -0.6
AAK Ala-Archa 45.45 292 P P 14 05 27.3 0.0
AAK Ala-Archa 45.45 292 *e*P P 14 05 27.2 -0.1
COLA College 45.63 35 *ce*P P 14 05 30.1 +2.0
EKS2 Erkin-Say 45.93 293 P P 14 05 30.7 -0.3
SNR=14
ILAR Eielson Array 46.06 35 P P 14 05 32.6 +1.2
comp=Z,1.3nm,0.5s,baz=269,slow=5.0,SNR=43
comp=Z,1.3nm,0.5s
ILAR Eielson Array 46.06 35 P P 14 05 32.7 +1.3
KSH2 Kashi 46.16 287 P P 14 05 32.8 0.0
KSH2 pmax pmax
comp=Z,6.0nm,0.7s
PRP Porcupine Dome 46.49 34 IAmb IAmb 14 05 37.6
comp=Z,2.9nm,0.6s
F26K Sheenjek River 46.66 31 P 14 05 38.4 +2.3
RIDG Independent Ri 47.13 36 IAmb IAmb 14 05 42.0
comp=Z,4.0nm,0.5s
ARK Arkit 47.51 292 P P 14 05 43.7 +0.5
ARK Arkit 47.51 292 P P 14 05 43.7 +0.5
KK31 Karatay Array 47.95 294 IAmb IAmb 14 05 46.8
comp=Z,14nm,0.7s
KKAR Karatay Array 47.95 294 P P 14 05 45.9 -0.4
KKAR Karatay Array 47.95 294 P 14 05 45.9 -0.4
TRKS Terek-Say 48.18 292 P P 14 05 48.4 +0.1
DRK Karamyk 48.63 290 P P 14 05 51.8 -0.1
DRK Karamyk 48.63 290 P P 14 05 51.8 -0.1
SVE Sverdlovsk 48.93 315 *e*P P 14 05 54.2 +0.7
SVE pmax pmax
comp=Z,41nm,0.7s
SVE Sverdlovsk 48.93 315 *e*P P 14 05 54.2 +0.7
BTK Batken 49.05 291 P P 14 05 54.3 -0.5
BTK Batken 49.05 291 P P 14 05 54.3 -0.5
GAR Garm 49.87 290 P P 14 06 00.8 -0.3
ARTI Arti 50.25 315 P P 14 06 03.7 +0.3
comp=Z,48nm,0.5s,baz=74,slow=4.4,SNR=80
ARTI Arti 50.25 315 *d* *i* P P 14 06 03.6 +0.2
ARTI pmax pmax
comp=Z,33nm,0.5s
ARTI Arti 50.25 315 P 14 06 03.8 +0.3
NIL Nilore 50.40 282 P P 14 06 05.6 +0.6
NIL Nilore 50.40 282 P P 14 06 05.6 +0.6
G31M Satah River 50.56 31 P P 14 06 06.7 +1.1
G31M IAmb IAmb 14 06 07.0
comp=Z,5.8nm,0.5s
CHGR Chuyangaron 50.83 290 *d* *i* P P 14 06 07.8 -0.4
CHGR pmax pmax
comp=Z,60nm,0.7s
CHGR Chuyangaron 50.83 290 P P 14 06 07.8 -0.4
AKTO Aktyubinsk 52.75 308 P P 14 06 22.2 +0.3
comp=Z,6.4nm,0.5s,baz=71,slow=7.4,SNR=21
comp=Z,6.4nm,0.5s
KBL Kabul 52.95 285 P P 14 06 22.7 -1.2
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 52.95 285 P 14 06 22.7 -1.2
KBL IAmb IAmb 14 06 24.2
comp=Z,13nm,0.8s
KBL Kabul 52.95 285 P P 14 06 23.3 -0.6
HOPEN Hopen 53.58 344 *e*P P 14 06 28.4 +0.9
HOPEN IAmb IAmb 14 06 29.2
comp=Z,15nm,0.9s
KIRV Kirov 53.88 320 P P 14 06 30.3 +0.3
comp=Z,32nm,0.4s,baz=123,slow=2.3,SNR=11
comp=Z,32nm,0.4s
SPITS Spitsbergen Ar 54.12 347 P P 14 06 31.5 0.0
comp=Z,0.7nm,0.3s,baz=72,slow=8.0,SNR=6.4
comp=Z,0.7nm,0.3s
VADS Vadso 56.01 337 *e*P P 14 06 45.3 +0.3
VADS IAmb IAmb 14 06 46.0
comp=Z,21nm,0.8s
KLMR Klimovskoe 57.27 325 *e*P P 14 06 53.1 -0.9
KLMR *e**PP **pP** 14 07 51.7 -1.7
KLMR pmax pmax
comp=Z,27nm,1.4s
ARA0 ARCESS Array S 57.44 337 *e*P P 14 06 55.4 +0.4
ARCES ARCESS Array B 57.44 337 P P 14 06 55.1 0.0
comp=Z,2.8nm,0.4s,baz=56,slow=8.0,SNR=17
comp=Z,2.8nm,0.4s
ARCES ARCESS Array B 57.44 337 P P 14 06 55.2 +0.1
ARCES pmax pmax
comp=Z,18nm,1.5s
ARCES ARCESS Array B 57.44 337 P P 14 06 55.2 +0.1
ARCES IAmb IAmb 14 06 56.0
comp=Z,18nm,1.4s
BELG Belogornoye 57.63 313 P P 14 06 56.9 +0.2
comp=Z,44nm,0.7s,baz=45,slow=1.4,SNR=13
comp=Z,44nm,0.7s
BELG Belogornoye 57.63 313 *d* *i* P P 14 06 56.8 +0.2
BELG pmax pmax
comp=Z,8.0nm,0.8s
KTK1 Kautokeino 58.41 337 *e*P P 14 07 02.1 +0.4
KTK1 IAmb IAmb 14 07 02.4
comp=Z,10.0nm,1.0s
JETT Jettan, Norway 58.83 339 *e*P P 14 07 05.0 +0.3
JETT IAmb IAmb 14 07 05.0
comp=Z,15nm,1.1s
TRO Tromso 59.18 339 *e*P P 14 07 06.5 -0.4
TRO IAmb IAmb 14 07 07.4
comp=Z,13nm,0.8s
DAG Danmarks Havn 59.58 354 *i* P P 14 07 09.5 -0.1
DAG IAmb IAmb 14 07 10.1
comp=Z,2.9nm,0.7s
NEEM North Greenlan 59.70 2 *i* P P 14 07 11.5 +0.8
NEEM IAmb IAmb 14 07 12.5
comp=Z,7.6nm,0.6s
OUL Oulu 60.03 333 P P 14 07 12.9 +0.1
OUL pmax pmax
comp=Z,22nm,0.7s
OUL Oulu 60.03 333 P P 14 07 12.3 -0.5
YKA Yellowknife Ar 60.05 31 P P 14 07 13.7 +0.7
comp=Z,0.4nm,0.4s,baz=309,slow=6.4,SNR=9.7
YKA PcP **PcP** 14 07 57.1 +1.2
comp=Z,0.5nm,0.6s,baz=316,slow=3.7,SNR=4.9
comp=Z,0.4nm,0.4s
STEI Steigen 61.33 339 *e*P P 14 07 21.4 -0.1
VRH Novokhopyorsk 61.38 315 *e*P P 14 07 20.0 -2.1
VRH pmax pmax
comp=Z,10.0nm,0.8s
FAUS Fauske 61.70 338 *e*P P 14 07 24.4 +0.4
FAUS IAmb IAmb 14 07 24.6
comp=Z,16nm,0.8s
OBN Obninsk 61.72 320 *ce*P P 14 07 24.4 +0.2
OBN *e* 14 08 01.1
OBN *e**PP **pP** 14 08 23.8 -0.8
OBN *e**SP **sP** 14 08 53.8 -0.5
OBN *e* 14 09 42.6
OBN *e*PPP PPP 14 11 14.9
OBN pmax pmax
comp=Z,12nm,0.6s
OBN Obninsk 61.72 320 *e*P P 14 07 24.4 +0.2
LPSR Galich'ya Gora 62.02 317 *e*P P 14 07 24.3 -2.0
LPSR pmax pmax
comp=Z,10.0nm,0.9s
FIA1 FINESS Array S 62.27 330 P P 14 07 27.7 -0.1
FINES FINESS Array B 62.27 330 P P 14 07 27.8 -0.1
comp=Z,11nm,0.4s,baz=38,slow=8.2,SNR=98
comp=Z,11nm,0.4s
KULLO Kullorsuaq 62.27 5 *i* P P 14 07 25.3 -2.3
KULLO IAmb IAmb 14 07 28.4
comp=Z,13nm,0.6s
VORR Voronezh 62.41 316 *e*P P 14 07 26.9 -2.0
VORR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 62.69 316 *e*P P 14 07 28.8 -2.0
VSR pmax pmax
comp=Z,10.0nm,0.8s

WRA	Warramunga Arr	62.71 184	P	P	14 07 31.1	-0.1
	comp=Z,1.3nm,0.5s,baz=1.1,slow=7.3,SNR=41					
	comp=Z,1.3nm,0.5s					
WRA	Warramunga Arr	62.71 184	P	P	14 07 30.8	-0.4
WRA	Warramunga Arr	62.71 184	P	P	14 07 30.8	-0.4
WR8	Warramunga Arr	62.72 184	P	P	14 07 31.2	-0.1
WR8			IAmb	IAmb	14 07 35.7	
	comp=Z,6.8nm,1.2s					
WR0	Warramunga Arr	62.72 183	P	P	14 07 30.7	-0.6
WR0			IAmb	IAmb	14 07 31.9	
	comp=Z,11nm,1.4s					
VAGH	Vaagaholmen	62.72 338	eP	P	14 07 30.5	-0.2
VAGH			IAmb	IAmb	14 07 31.0	
	comp=Z,7.7nm,0.6s					
RAUS	Rausandaksla	62.73 338	eP	P	14 07 30.7	-0.1
RAUS			IAmb	IAmb	14 07 31.0	
	comp=Z,7.8nm,0.5s					
VORD	Divnogorie	62.77 315	eP	P	14 07 29.5	-1.8
VORD			pmax	pmax		
	comp=Z,10.0nm,0.9s					
MOR8	Moi Rana	62.81 338	eP	P	14 07 29.9	-1.5
MOR8			IAmb	IAmb	14 07 30.6	
	comp=Z,20nm,0.7s					
KONS	Konsvik	62.94 338	eP	P	14 07 31.9	-0.2
STOK	Stokkvaagen	63.09 338	eP	P	14 07 33.0	-0.1
LEIR	Leirfjorden	63.22 338	eP	P	14 07 33.6	-0.4
AKT	Akhty	63.42 303	eP	P	14 07 35.4	-0.5
AKT			pmax	pmax		
	comp=Z,17nm,1.2s					
AKT			MLR	MLR		
	comp=Z,68nm,12.0s					
VSU	Vasula	63.94 327	d iP	P	14 07 37.8	-1.0
VSU			pmax	pmax		
	comp=Z,24nm,0.8s					
SUMG	Summit	64.69 359	P	P	14 07 45.6	+1.6
SUMG			pmax	pmax		
	comp=Z,16nm,0.5s					
SUMG	Summit	64.69 359	P	P	14 07 43.7	-0.3
SUMG	Summit	64.69 359	i P	P	14 07 45.7	+1.8
SUMG			IAmb	IAmb	14 07 46.0	
	comp=Z,11nm,0.5s					
NCK	Nalchik	64.75 307	⇓eP	P	14 07 45.0	+0.7
NCK			pmax	pmax		
	comp=Z,12nm,0.6s					
KIV	Kislovodsk	65.01 307	eP	P	14 07 47.2	+1.1
KIV			pmax	pmax		
	comp=Z,41nm,1.1s					
KIV	Kislovodsk	65.01 307	P	P	14 07 45.9	-0.2
KIV	Kislovodsk	65.01 307	eP	P	14 07 47.2	+1.1
KBZ	Khabaz	65.02 307	P	P	14 07 46.5	+0.5
	comp=Z,6.9nm,0.7s,baz=23,slow=4.3,SNR=21					
	comp=Z,6.9nm,0.7s					
KBZ	Khabaz	65.02 307	d iP	P	14 07 46.4	+0.4
KBZ			pmax	pmax		
	comp=Z,9.0nm,0.9s					
KBZ	Khabaz	65.02 307	eP	P	14 07 46.4	+0.4
SCO	Scoresbysund	65.88 353	i P	P	14 07 51.7	+0.7
MNK	Minsk	66.05 323	i P	P	14 07 53.2	+0.8
	comp=E,26nm,1.2s					
MNK			i P	P	14 07 53.2	+0.8
	comp=N,17nm,0.8s					
MNK			i P	P	14 07 53.2	+0.8
	comp=Z,18nm,0.5s,baz=49					
MNK			i pP	pP	14 08 55.5	+1.9
MNK			i PP	PP	14 10 22.9	+1.9
MNK			i PPP	PPP	14 12 02.0	
MNK			i S	S	14 16 19.1	+1.5
MNK			i SS	SS	14 20 40.2	+2.5
MNK			i SSS	SSS	14 23 57.4	
MNK			i LRM	MLR	14 39 42.4	
MNK			i LRM	MLR	14 39 42.4	
MNK			i LRM	MLR	14 39 42.4	
	comp=Z,11nm,14.2s					
MNK	Minsk	66.05 323	i P	P	14 07 53.1	+0.8
MNK			i *PP	pP	14 08 55.4	+1.9
MNK			i		14 10 22.8	
MNK			i PPP	PPP	14 12 02.0	
MNK			i S	S	14 16 19.1	+1.5
MNK			i SS	SS	14 20 40.2	+2.5
MNK			pmax	pmax		
	comp=N,17nm,0.8s					
MNK			pmax	pmax		
	comp=E,26nm,1.2s					
MNK			pmax	pmax		
	comp=Z,18nm,0.5s					
MNK			MLR	MLR		
	comp=Z,11nm,14.0s					
AS31	Alice Springs	66.44 184	P	P	14 07 55.7	+0.5
ASAR	Alice Springs	66.44 184	P	P	14 07 56.5	+1.3
	comp=Z,0.9nm,0.4s,baz=1.6,slow=6.1,SNR=17					
	comp=Z,0.9nm,0.4s					
ASAR	Alice Springs	66.44 184	P	P	14 07 55.9	+0.7
ASAR	Alice Springs	66.44 184	P	P	14 07 55.9	+0.7
EPOS	Posof	66.45 305	P	P	14 07 56.6	+1.2
DOMB	Dombas	67.49 337	eP	P	14 08 01.5	+0.1
DOMB			IAmb	IAmb	14 08 01.7	
	comp=Z,15nm,0.6s					
MOL	Molde	67.50 338	eP	P	14 08 02.1	+0.7
HFS	Hagfors	67.53 333	P	P	14 08 01.5	-0.1
	comp=Z,9.8nm,0.3s,baz=35,slow=5.4,SNR=119					
	comp=Z,9.8nm,0.3s					
NB2	NORSAR Subarra	67.62 335	P	P	14 08 02.1	-0.2
	comp=Z,5.3nm,0.4s,baz=37,slow=6.5					
NB2	NORSAR Subarra	67.62 335	P	P	14 08 02.1	-0.2
NOA	NORSAR Array B	67.62 335	P	P	14 08 02.3	0.0
	comp=Z,5.2nm,0.5s,baz=45,slow=5.0,SNR=42					
	comp=Z,5.2nm,0.5s					
NORES	NORESS Array B	67.76 335	P	P	14 08 02.8	-0.2
NORES			pmax	pmax		
	comp=Z,1.0nm,0.2s					
NC602	NORSAR Array S	67.76 335	eP	P	14 08 02.8	-0.2
AKASG	Malin Array Be	67.94 319	P	P	14 08 04.1	-0.2
	comp=Z,4.2nm,0.4s,baz=47,slow=6.1,SNR=30					
	comp=Z,4.2nm,0.4s					
AKASG	Malin Array Be	67.94 319	P	P	14 08 04.4	+0.1
AKASG			IAmb	IAmb	14 08 04.8	
	comp=Z,2.3nm,0.6s					
AKBB	Malin Array Si	67.94 319	d iP	P	14 08 03.9	-0.4
AKBB			pmax	pmax		
	comp=Z,9.0nm,0.7s					
KIEV	Kiev	67.95 319	P	P	14 08 03.9	-0.5
KIEV			pmax	pmax		
	comp=Z,54nm,0.8s					
KIEV	Kiev	67.95 319	P	P	14 08 04.2	-0.2
AKN	Aaknes	67.97 337	eP	P	14 08 04.8	+0.4
AKN			IAmb	IAmb	14 08 06.7	
	comp=Z,5.8nm,0.7s					
OSL	Oslo	68.64 334	eP	P	14 08 09.1	+0.6
SKAR	Skarslia	68.79 336	eP	P	14 08 10.1	+0.6
SKAR			IAmb	IAmb	14 08 10.6	
	comp=Z,5.9nm,0.5s					
SOEG	Soedalen	68.82 356	i P	P	14 08 10.2	+0.8
SOEG			IAmb	IAmb	14 08 10.8	
	comp=Z,9.3nm,0.4s					
FOO	Floro	68.99 338	eP	P	14 08 11.1	+0.5
HYA	Hoyanger	69.02 337	eP	P	14 08 11.2	+0.5
HYA			IAmb	IAmb	14 08 11.4	
	comp=Z,13nm,0.6s					
STRU	Stroemstad	69.19 334	i P	P	14 08 12.0	+0.1
KONO	Kongsberg	69.22 335	eP	P	14 08 12.3	+0.3
KELT	Kelkit	69.36 306	P	P	14 08 14.1	+0.6
SUE	Sulen	69.51 338	eP	P	14 08 14.2	+0.5
SUE			IAmb	IAmb	14 08 15.1	
	comp=Z,20nm,1.1s					
BLEU	Blekinge	69.67 330	i P	P	14 08 14.2	-0.6
TJOU	Tjoern	69.83 333	i P	P	14 08 15.5	-0.3
ASK	Askoy	69.86 337	eP	P	14 08 16.4	+0.5
ASK			IAmb	IAmb	14 08 17.1	
	comp=Z,13nm,0.6s					
BER	Bergen	69.90 337	eP	P	14 08 17.0	+0.8
BER			IAmb	IAmb	14 08 17.3	
	comp=Z,18nm,0.7s					
ODD1	Odda	69.91 336	eP	P	14 08 17.1	+0.8
ODD1			IAmb	IAmb	14 08 17.4	
	comp=Z,7.7nm,0.8s					
ONAU	Onsala	70.22 332	i P	P	14 08 17.6	-0.6
DEL	Delary	70.25 331	i P	P	14 08 18.0	-0.3
FABU	Falkenberg	70.25 332	i P	P	14 08 17.8	-0.5
BLS5	Blasjo	70.36 336	eP	P	14 08 19.7	+0.7
ARPR	Arapgir-MALATY	70.58 306	P	P	14 08 22.1	+1.3
HOMB	Homborsund	70.66 334	i P	P	14 08 20.7	0.0
BJUU	Bjuv	70.86 331	i P	P	14 08 22.7	+0.7
KMY	Karmoy	70.89 336	eP	P	14 08 23.1	+1.0
KMY			IAmb	IAmb	14 08 23.1	
	comp=Z,6.1nm,0.5s					

BSD	Bornholm Skovb	70.91 329	IAmb	IAmb	14 08 23.0		
	comp=Z,16nm,0.6s						
BSD	Bornholm Skovb	70.91 329	i P	P	14 08 22.4	+0.1	
SNART	Snartemo	71.01 335	eP	P	14 08 23.3	+0.5	
SNART			IAmb	IAmb	14 08 24.0		
	comp=Z,1.5nm,0.8s						
SNART	Snartemo	71.01 335	i P	P	14 08 23.6	+0.8	
LUNU	Lund	71.05 330	i P	P	14 08 23.4	+0.3	
KOLS	Kolonicke sedl	72.42 321	eP	P	14 08 32.0	+0.6	
KOLS	Kolonicke sedl	72.42 321	eP	P	14 08 32.0	+0.6	
STHS	Stebnicka Huta	72.53 322	eP	P	14 08 32.5	+0.4	
STHS	Stebnicka Huta	72.53 322	eP	P	14 08 32.5	+0.4	
OJC	Ojcow	72.59 324	eP	P	14 08 33.0	+0.6	
OJC	Ojcow	72.59 324	P	P	14 08 33.2	+0.8	
OJC	Ojcow	72.59 324	P	P	14 08 33.2	+0.8	
ANDN	Andirin	72.75 305	P	P	14 08 34.8	+1.1	
BR131	Keskin Array S	72.91 309	d iP	P	14 08 34.8	+0.1	
BRTR	Keskin Array B	72.91 309	P	P	14 08 34.9	+0.2	
	comp=Z,2.8nm,0.7s,baz=79,slow=3.6,SNR=22						
BRTR			PP	PP	14 11 19.8	-0.7	
	comp=Z,0.5nm,0.8s,baz=76,slow=5.2,SNR=5.0						
	comp=Z,2.8nm,0.7s						
BRTR	Keskin Array B	72.91 309		P	14 08 34.8	+0.1	
LANS	Liptovska Anna	73.52 323	eP	P	14 08 38.2	+0.3	
LANS	Liptovska Anna	73.52 323	eP	P	14 08 38.2	+0.3	
NVAR	Mina Array Bea	73.58 53	P	P	14 08 40.6	+1.9	
	comp=Z,1.6nm,0.7s,baz=293,slow=4.9,SNR=10						
	comp=Z,1.6nm,0.7s						
NVAR	Mina Array Bea	73.58 53	P	P	14 08 40.4	+1.7	
KSP	Ksiaz	73.61 326	eP	P	14 08 39.0	+0.7	
OSTC	Ostas	73.86 326	eP	P	14 08 40.3	+0.5	
OSTC	Ostas	73.86 326	eP	P	14 08 40.3	+0.5	
MORC	Moravsky Berou	73.89 324	P	P	14 08 41.0	+1.0	
MORC			pmax	pmax			
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	73.89 324	eP	P	14 08 40.5	+0.5	
MORC	Moravsky Berou	73.89 324	P	P	14 08 41.0	+1.0	
CHVC	Chvalec	73.90 326	eP	P	14 08 40.6	+0.5	
CHVC	Chvalec	73.90 326	eP	P	14 08 40.6	+0.5	
DPC	Dobruska-Polom	73.97 325	eP	P	14 08 41.4	+0.9	
DPC	Dobruska-Polom	73.97 325	eP	P	14 08 41.4	+0.9	
UPC	Upice	73.98 326	eP	P	14 08 38.2	-2.3	
UPC	Upice	73.98 326	eP	P	14 08 38.2	-2.3	
KRLC	Kraliky	73.99 325	eP	P	14 08 40.6	0.0	
KRLC	Kraliky	73.99 325	eP	P	14 08 40.6	0.0	
VYHS	Vyhne	74.29 323	eP	P	14 08 43.2	+0.9	
JAVC	Velka Javorina	74.53 324	eP	P	14 08 45.3	+1.6	
BRG	Berggiesshubel	74.54 327	P	P	14 08 44.2	+0.5	
BRG	Berggiesshubel	74.54 327	P	P	14 08 44.2	+0.5	
BRG	Berggiesshubel	74.54 327	eP	P	14 08 44.1	+0.4	
BRG			Amp		14 08 44.6		
	comp=Z,4.6nm,0.7s						
BRG	Berggiesshubel	74.54 327	P	P	14 08 46.0	+2.3	
BRG			Amp		14 08 46.6		
	comp=Z,4.5nm,0.6s						
PVCC	Panska Ves	74.56 326	eP	P	14 08 44.6	+0.8	
PVCC	Panska Ves	74.56 326	eP	P	14 08 44.6	+0.8	
CLL	Collm	74.58 328	⇓i P	P	14 08 44.1	+0.2	
CLL			pmax	pmax			
	comp=Z,11nm,0.6s						
CLL	Collm	74.58 328	⇓i P	P	14 08 44.1	+0.2	
	comp=Z,11nm,0.6s						
VRAC	Vranov	74.65 325	P	P	14 08 44.9	+0.6	
	comp=Z,4.1nm,0.7s,baz=46,slow=8.7,SNR=4.5						
	comp=Z,4.1nm,0.7s						
VRAC	Vranov	74.65 325	eP	P	14 08 45.0	+0.6	
KRUC	Moravsky	74.92 324	P	P	14 08 46.3	+0.4	
KRUC	Moravsky	74.92 324	eP	P	14 08 46.6	+0.7	
KRUC	Moravsky	74.92 324	P	P	14 08 46.3	+0.4	
HSKC	Hora Svate Kat	74.95 327	eP	P	14 08 46.7	+0.6	
PRU	Pruhonice	74.98 326	eP	P	14 08 46.9	+0.7	
PRU	Pruhonice	74.98 326	eP	P	14 08 46.9	+0.7	
TREC	Trest	75.13 325	P	P	14 08 47.2	+0.1	
TREC	Trest	75.13 325	P	P	14 08 47.2	+0.1	
PDAR	Pinedale Array	75.39 45	P	P	14 08 50.1	+1.1	
	comp=Z,2.4nm,0.7s,baz=311,slow=2.0,SNR=25						
	comp=Z,2.4nm,0.7s						
PDAR	Pinedale Array	75.39 45		P	14 08 49.7	+0.7	
ZVC	Zvikov	75.55 326	eP	P	14 08 50.5	+1.0	
ULM	Lac du Bonnet	75.97 32	P	P	14 08 52.2	+0.4	
	comp=Z,5.7nm,0.4s,baz=323,slow=5.4,SNR=15						
	comp=Z,5.7nm,0.4s						
ULM	Lac du Bonnet	75.97 32	P	P	14 08 52.3	+0.4	
CKRC	Cesky Krumlov	75.98 325	eP	P	14 08 52.3	+0.3	
CKRC	Cesky Krumlov	75.98 325	eP	P	14 08 52.3	+0.3	
RONA	Rosalia, Austr	76.00 324	eP	P	14 08 53.3	+1.2	
	comp=Z,3.0nm,0.5s						
CONA	Conrad Observa	76.02 324	i P	P	14 08 53.6	+1.4	
	comp=Z,3.2nm,0.6s						
KHC	Kasperske Hory	76.05 326	eP	P	14 08 52.7	+0.4	
KHC	Kasperske Hory	76.05 326	eP	P	14 08 52.7	+0.4	
KHC	Kasperske Hory	76.05 326	P	P	14 08 53.3	+1.0	
GERES	GERESS Array B	76.22 326	P	P	14 08 53.7	+0.3	
	comp=Z,1.8nm,0.6s,baz=37,slow=5.0,SNR=12						
	comp=Z,1.8nm,0.6s						
MMAI	Mount Meron Ar	76.36 302	P	P	14 08 54.8	+0.4	
	comp=Z,4.4nm,0.3s,baz=28,slow=7.5,SNR=11						
	comp=Z,4.4nm,0.3s						
RDO	Rodhopi	76.40 314	P	P	14 08 55.3	+0.9	
GRA2	Grafenberg Arr	76.52 327	P	P	14 08 55.8	+0.8	
EKA	Eskdalemuir Ar	76.59 338	P	P	14 08 55.5	+0.4	
	comp=Z,1.1nm,0.3s,baz=23,slow=5.8,SNR=17						
	comp=Z,1.1nm,0.3s						
ARSA	Arzberg	76.68 324	eP	P	14 08 56.1	+0.2	
	comp=Z,3.9nm,1.1s						
BIOA	Bad Ischl, Aus	77.15 325	eP	P	14 08 59.5	+1.1	
	comp=Z,2.1nm,0.4s						
SOKA	Soboth	77.34 324	i P	P	14 08 60.0	+0.3	
	comp=Z,5.6nm,1.0s						
LESA	Schwarzleotal	77.76 325	eP	P	14 09 02.8	+0.9	
	comp=Z,3.3nm,0.8s						
MYKA	Terra Mystica	77.98 324	eP	P	14 09 03.4	+0.3	
	comp=Z,1.7nm,0.4s						
MOTA	Moosalm	78.47 326	i P	P	14 09 06.7	+0.8	
	comp=Z,10nm,1.0s						
RETA	Reutte	78.50 326	i P	P	14 09 06.8	+0.9	
	comp=Z,5.0nm,0.8s						
SQTA	Sankt Quirin	78.53 326	eP	P	14 09 06.4	+0.2	
	comp=Z,2.6nm,1.0s						
HRFI	Mount Harif	78.61 300	P	P	14 09 07.3	+0.5	
PHP	Peshkopia	78.62 317	P	P	14 09 06.9	+0.2	
PHP	Peshkopia	78.62 317	P	P	14 09 06.9	+0.2	
PDG	Podgorica	78.64 318	P	P	14 09 07.0	+0.3	
FETA	Feichten	78.88 326	eP	P	14 09 08.0	-0.1	
	comp=Z,3.1nm,0.9s						
DAVA	Damuels	79.01 327	i P	P	14 09 08.9	0.0	
	comp=Z,8.1nm,0.7s						
DAVA	Damuels	79.01 327	P	P	14 09 09.7	+0.8	
FUORN	Ofenpass-Fuorn	79.40 326	P	P	14 09 11.9	+0.9	
SCHQ	Schefferville	80.29 14	P	P	14 09 15.6	+0.2	
	comp=Z,1.7nm,0.7s,baz=333,slow=4.5,SNR=2.6						
	comp=Z,1.7nm,0.7s						
SCHQ	Schefferville	80.29 14	P	P	14 09 15.5	+0.2	
SCHQ			IAmb	IAmb	14 09 43.2		
	comp=Z,4.8nm,1.1s						
CEL	Celeste	83.48 318	P	P	14 09 32.9	+0.6	
TX31	Lajitas Ar. Si	88.53 50	P	P	14 09 58.2	+1.1	
TX31			IAmb	IAmb	14 09 59.0		
	comp=Z,1.2nm,0.7s						
TXAR	Lajitas Array	88.53 50	P	P	14 09 58.5	+1.4	
	comp=Z,0.7nm,0.5s,baz=290,slow=3.0,SNR=9.6						
	comp=Z,0.7nm,0.5s						
TORD	Torodi Ar. Bea	111.20 314	PP	PP	14 16 14.8	-4.9	
	comp=Z,1.4nm,0.8s,baz=12,slow=6.8,SNR=5.6						
TROLL	Troll, Antarti	143.90 202	PKPdf	PKPbc	14 16 35.9	+0.6	
	comp=Z,97nm,0.6s						
BELA	Belgrano 2	144.88 183	PKPbc	PKPdf	14 16 38.0	0.0	
LPAZ	La Paz	145.37 48	PKPbc	PKPab	14 16 42.6	+0.2	
	comp=Z,2.2nm,0.4s,baz=1.4,slow=3.9,SNR=10						
LPAZ	La Paz	145.37 48	PKP2	PKPab	14 16 42.3	-0.1	
LPAZ	La Paz	145.37 48		PKPab	14 16 42.3	-0.1	
SNAA	Sanae	145.51 201	PKPbc	PKPbc	14 16 39.8	-0.2	
	comp=Z,0.9nm,0.6s,baz=213,slow=5.5,SNR=3.6						
PB12	IPOC Station P	145.99 53	PKPab	PKPab	14 16 44.6	+0.6	
VNA2	Neumayer--Watz	147.13 200	⇓PKPdf	PKPbc	14 16 44.8	+0.2	
	comp=Z,6.3nm,0.6s,baz=112,slow=3.2						
GO01	Chusmiza	147.47 53	PKPab	PKiKP	14 16 49.2	-0.3	

*BER **31** 14:00:17.8±0.7, 67.76N×34.03E, h0km, Suspected explosion*
*KOLA **31** 14:00:22.0±0.6, 68.07N±0.02×33.40E±0.10, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*IDC **31** 14:00:23.8±2.1, 68.03N×33.03E, h0km, mbtmp3.1/3, ML1.1/2, Error ellipse: s-maj=23.3km s-min=12.7km az=72.0*

*HEL **31** 14:00:23.0±0.2, 67.81N×33.50E, h0km, ML1.6, Explosion*

ISC 31 14:00:20.6±0.8, 68.09N±0.03×33.61E±0.04, h0km, n29, σ1°43/41, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	Lovozero	0.44	115	PG	Pb	14 00 31.2	0.0
LVZ				SG	Sg	14 00 33.1	-1.5
APA	Apatity	0.53	188	P	Pg	14 00 31.0	+0.4
APA				S	Sg	14 00 38.2	+0.8
APA0	Apatity Array	0.54	206	P	Pg	14 00 30.2	-0.6
APA0				S	Sg	14 00 37.7	-0.1
TERR	Teriberka	1.25	25	P	Pb	14 00 44.9	0.0
TERR				S	Sn	14 01 02.9	+0.2
KVDA	Kovda	1.43	192	P	Pn	14 00 47.2	-0.5
KVDA				S	Sb	14 01 06.8	+0.1
RAJF	Raja-Jooseppi	2.01	284	PG	Pg	14 01 00.1	+1.1
OLKF	Oulanka, Finla	2.42	225	PG	Pn	14 01 02.3	+1.0
OLKF				smax	smax	14 01 28.1	
	comp=Z,2.8nm,0.2s						
KU6	Riekki	2.53	217	PG	Pn	14 01 04.6	+1.8
	baz=42						
KU6				smax	smax	14 01 30.6	
	comp=Z,2.3nm,0.2s						
VADS	Vadso	2.55	325	eP	Pn	14 01 03.0	0.0
VADS				eS	Sb	14 01 37.4	-1.4
KEV	Kevo	2.91	308	eP	Pn	14 01 08.6	+0.5
KEV				eS	Sn	14 01 45.0	+1.3
KEV	Kevo	2.91	308	PN	Pn	14 01 10.4	+2.3
	baz=126						
KEV				SN	Sn	14 01 45.4	+1.6
KU1	Kurvinen	3.00	214	PB	Pn	14 01 11.6	+2.4
ARA0	ARCESS Array S	3.28	300	eP	Pn	14 01 12.6	-0.5
ARA0	ARCESS Array S	3.28	300	SN	Sb	14 01 58.4	-1.6
ARCES	ARCESS Array B	3.28	300	Pn	Pn	14 01 12.8	-0.4
	comp=Z,0.1nm,0.3s,baz=119,slow=14,SNR=12						
ARCES				Sn	Sn	14 01 52.5	-0.4
	comp=Z,0.3nm,0.3s,baz=111,slow=23,SNR=1.8						
ARCES				Lg	Lg	14 02 02.7	
	comp=Z,0.3nm,0.3s,baz=120,slow=36,SNR=1.5						
	comp=Z,0.4nm,0.2s						
ARCES	ARCESS Array B	3.28	300	P	Pn	14 01 12.7	-0.4
ARCES				S	Sn	14 01 52.0	-0.9
HEF	Hetta	3.72	280	eP	Pn	14 01 17.7	-1.5
HEF	Hetta	3.72	280	PN	Pn	14 01 22.3	+3.1
HEF				SB	Sb	14 02 11.4	-1.1
KLF	Kolari	3.78	261	PG	Pb	14 01 28.0	0.0
KTK1	Kautokeino	3.92	288	eP	Pn	14 01 21.1	-0.9
KTK1	Kautokeino	3.92	288	SB	Sb	14 02 20.2	+1.9
TOF	Tornio	4.15	245	PN	Pn	14 01 25.0	-0.1
	baz=51						
RMF	Romuvaara	4.16	203	PN	Pn	14 01 26.0	+0.8
LANU	Lannavaara	4.36	275	PN	Pn	14 01 28.8	+0.8
LANU				SB	Sb	14 02 31.2	+0.3
ERTU	Ertsjaerv	4.68	256	PN	Pn	14 01 32.1	-0.3
ERTU				SN	Sn	14 02 24.7	-2.6
I37NO	I37NO	5.58	287	I	I	14 29 30.0	
	comp=Z,0.2nm,0.3s,baz=16,slow=32,SNR=1.3						
	comp=Z,1.8nm,0.9s						
FAUS	Fauske	6.99	273	S	Sn	14 03 19.5	-4.5
FINES	FINESS Array B	7.40	209	Pn	Pn	14 02 09.4	-0.3
	baz=14,slow=15,SNR=2.0						
FINES				Lg	Lg	14 04 09.8	
	comp=Z,0.2nm,0.3s,baz=16,slow=32,SNR=1.3						
	comp=Z,1.8nm,0.9s						
SPITS	Spitsbergen Ar	11.22	342	Pn	Pn	14 03 02.7	+0.8
	comp=Z,1.1nm,0.7s,baz=140,slow=20,SNR=1.0						

*IDC **31** 14:40:25.1±0.5, 13.92N×145.03E, h137km±3km, mb3.4/11, mbtmp3.8/11, Error ellipse: s-maj=26.6km s-min=14.0km az=92.0*

*NEIC **31** 14:40:26.7±1.3, 13.87N±0.09×144.9E±0.2, h140km±4km, mb4.3/20, Error ellipse: s-maj=25.5km s-min=9.3km az=111.0*

ISC 31 14:40:26.8±0.5, 13.88N±0.08×144.9E±0.1, h150km, n46, σ0.96/43, mb4.0/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.29	181	P	Pn	14 40 46.2	-1.1
	880nm,0.3s,baz=312,slow=3.1,SNR=1230						
GUMO				S	Sn	14 41 00.2	-2.7
	2µm,0.3s,baz=68,slow=22,SNR=18						
GUMO	Guam	0.29	181		Pn	14 40 46.3	-1.0
GUMO					Sn	14 41 00.3	-2.6
DPSS	Saipan	1.62	33	Pn	Pn	14 40 57.6	0.0
DPSS				Sn	Sn	14 41 19.6	-1.6
H11S3	WAKE ISLAND Hy	21.44	75	T	T	15 06 49.9	
	baz=263,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	21.45	75	T	T	15 06 48.2	
	baz=263,slow=75,SNR=5.8						
H11S2	WAKE ISLAND Hy	21.45	75	T	T	15 06 33.9	
	baz=263,slow=75,SNR=4.4						
H11N1	WAKE ISLAND Hy	21.85	72	T	T	15 08 11.4	
	baz=258,slow=75,SNR=3.1						
H11N2	WAKE ISLAND Hy	21.86	72	T	T	15 08 11.7	
	baz=258,slow=75,SNR=4.8						
H11N3	WAKE ISLAND Hy	21.87	72	T	T	15 08 20.0	
	baz=258,slow=75,SNR=4.5						
JNU	Nakatsue	23.01	329	P	P	14 45 19.1	+0.5
	1.2nm,0.6s,baz=63,slow=4.5,SNR=1.6						
	1.2nm,0.6s						
KSRS	Korea Array	27.92	330	P	P	14 46 01.9	-0.9
	0.2nm,0.4s,baz=156,slow=9.5,SNR=2.1						
	0.2nm,0.4s						
WB0	Warramunga Arr	34.99	197	P	P	14 47 04.9	0.0
WB0				IAmb	IAmb	14 47 19.3	
	comp=Z,5.5nm,1.2s						
WB2	Warramunga Arr	35.17	197	P	P	14 47 06.7	+0.3
WB2				IAmb	IAmb	14 47 48.8	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	35.17

	comp=Z,4.8nm,1.4s								
ILAR	**Eielson Array**	**68.30**	**25**	P		**P**		**14 51 09.6**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=251,slow=5.7,SNR=16								
	comp=Z,0.5nm,0.4s								
BVAR	**Borovoye Array**	**69.70**	**322**	P		**P**		**14 51 20.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=116,slow=8.6,SNR=4.3								
	comp=Z,0.5nm,0.5s								
AB31	**Akbulak array**	**76.33**	**318**	P		**P**		**14 51 59.4**	**+0.1**
ABKAR	**Akbulak array**	**76.33**	**318**	P		**P**		**14 51 59.4**	**+0.1**
YKA	**Yellowknife Ar**	**82.60**	**27**	P		**P**		**14 52 31.2**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=278,slow=4.6,SNR=2.4								
	comp=Z,0.4nm,0.7s								
YKA	**Yellowknife Ar**	**82.60**	**27**	P		**P**		**14 52 32.6**	**-0.3**
NVAR	**Mina Array Bea**	**86.73**	**51**	P		**P**		**14 52 54.5**	**0.0**
	comp=Z,1.2nm,0.6s,baz=276,slow=5.9,SNR=8.6								
	comp=Z,1.2nm,0.6s								
LPAZ	**La Paz**	**148.06**	**99**	PKPbc		**PKPbc**		**14 59 56.9**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=298,slow=8.3,SNR=2.3								

IDC 31 15:01:39.5±5.0, 25°.11S×178°.24W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=249.5km s-min=68.7km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.09**	**271**	P	P	15 08 18.9	+1.6
	5.2nm,0.9s,baz=106,slow=7.4,SNR=1.4						
	5.2nm,0.9s						
ASAR	**Alice Springs**	**43.43**	**261**	P	P	15 09 44.4	-0.1
	0.2nm,0.4s,baz=101,slow=7.5,SNR=9.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.93**	**267**	P	P	15 09 47.3	-1.2
	0.6nm,0.5s,baz=104,slow=7.9,SNR=13						
	0.6nm,0.5s						
BRTR	**Keskin Array B**	**149.58**	**306**	PKPbc	PKPbc	15 21 31.0	-0.3
	0.2nm,0.5s,baz=68,slow=2.9,SNR=2.0						

*IDC **31** 15:01:39.0±1.5, 12°.08N×125°.09E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=43.8km s-min=29.4km az=82.0*
*MAN **31** 15:01:48.0, 11°.42N×125°.17E, h83km, MS4.1*

ISC 31 15:01:42.1±0.8, 12°.02N±0°.05×125°.70E±0°.07, h36km, n23, σ2s81/21, mb3.7/7, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.10**	**220**	*i* P	**Pn**	**15 02 02.3**	**+1.4**
PLP				*e*S	**Sn**	**15 02 12.7**	**-2.3**
MMPH	**Masbate**	**2.06**	**280**	*e*P	**Pn**	**15 02 12.9**	**-1.1**
MMPH				*e*S	**Sn**	**15 02 38.6**	**+0.2**
LLP	**Lapu-Lapu**	**2.40**	**225**	*e*P	Pn	15 02 28.4	+10
LLP				*e*S	**Sn**	**15 02 52.2**	**+5.3**
TBP	**Tagbilaran**	**2.93**	**218**	*e*P	**Pn**	**15 02 24.9**	**-1.2**
BUTP	**Butuan**	**3.03**	**181**	*e*P	**Pn**	**15 02 29.2**	**+1.7**
BUTP				*e*S	**Sn**	**15 03 03.6**	**+1.1**
LSIP	**Lazi, Siquijor**	**3.51**	**216**	*e*P	**Pn**	**15 02 31.3**	**-2.9**
LSIP				*i* S	Sn	15 03 00.2	-14
GQP	**Guinayangan**	**3.68**	**301**	*e*P	Pn	15 02 41.6	+5.1
BIPH	**Bislig**	**3.86**	**170**	*e*P	**Pn**	**15 02 40.2**	**+1.3**
BIPH				*e*S	**Sn**	**15 03 18.4**	**-4.7**
CDOP	**Cateel, Davao**	**4.27**	**170**	*i* P	**Pn**	**15 02 43.8**	**-0.8**
CDOP				*e*S	**Sn**	**15 03 28.2**	**-4.9**
PALP	**Palanan**	**5.93**	**328**	*e*P	Pn	15 03 15.5	+8.1
PALP				*e*S	**Sn**	**15 04 15.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**26.58**	**287**	P	**P**	**15 07 13.3**	**-3.7**
	0.6nm,0.5s,baz=94,slow=9.8,SNR=2.3						
	0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**26.89**	**23**	P	**P**	**15 07 23.7**	**+4.0**
	0.5nm,0.5s,baz=191,slow=9.7,SNR=2.1						
	0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**29.92**	**180**	P	**P**	**15 07 49.9**	**+3.1**
	2.9nm,1.1s,baz=15,slow=12,SNR=2.6						
	2.9nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**40.00**	**76**	T	T	15 52 49.9	
	baz=269						
H11S1	**WAKE ISLAND Hy**	**40.01**	**76**	T	T	15 52 37.8	
	baz=269						
H11S2	**WAKE ISLAND Hy**	**40.02**	**76**	T	T	15 52 37.5	
	baz=269						
H11N1	**WAKE ISLAND Hy**	**40.27**	**74**	T	T	15 52 57.9	
	baz=266,slow=75,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**40.28**	**74**	T	T	15 53 00.5	
	baz=266,slow=75,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**40.29**	**74**	T	T	15 52 55.8	
	baz=266,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	**50.31**	**322**	P	**P**	**15 10 35.7**	**+0.5**
	0.4nm,0.5s,baz=106,slow=7.1,SNR=7.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**54.33**	**325**	P	**P**	**15 11 05.0**	**+0.1**
	0.7nm,0.4s,baz=125,slow=7.0,SNR=11						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**59.92**	**325**	P	**P**	**15 11 43.5**	**-1.0**
	0.2nm,0.3s,baz=106,slow=9.1,SNR=2.3						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**84.10**	**332**	P	**P**	**15 14 08.2**	**-0.8**
	1.4nm,0.8s,baz=90,slow=5.6,SNR=3.9						
	1.4nm,0.8s						

IDC 31 15:08:06.1±2.3, 4°.10S×131°.35E, h198km±51km, mb2.7/1, mbtmp3.5/4, Error ellipse: s-maj=200.4km s-min=16.9km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.21**	**359**	P	Pn	15 08 58.5	+0.4
	7.8nm,0.3s,baz=185,slow=11,SNR=54						
SIJI				S	Sn	15 09 38.9	-0.1
	7.8nm,0.2s,baz=231,slow=23,SNR=10						
WRA	**Warramunga Arr**	**16.02**	**170**	P	P	15 11 40.2	-0.3
	0.4nm,0.3s,baz=352,slow=12,SNR=10						
WRA				S	S	15 14 24.8	-14
	0.5nm,1.0s,baz=358,slow=23,SNR=1.6						
ASAR	**Alice Springs**	**19.61**	**173**	P	P	15 12 21.4	+1.8
	2.5nm,0.6s,baz=342,slow=11,SNR=58						
ASAR				S	S	15 15 48.9	-1.3
	0.3nm,0.9s,baz=348,slow=23,SNR=1.8						
MKAR	**Makanchi Array**	**66.57**	**326**	P	P	15 18 35.0	0.0
	0.1nm,0.4s,baz=107,slow=7.4,SNR=1.6						
	0.1nm,0.4s						

*BER **31** 15:15:48.5±1.1, 67°.49N×34°.38E, h0km, Suspected explosion*
*HEL **31** 15:15:49.5±1.5, 67°.80N×33°.53E, h0km, ML2.4, Explosion*
*KOLA **31** 15:15:49.0±0.3, 67°.66N±0°.02×34°.09E±0°.08, h0km, M3.0(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **31** 15:15:50.4±1.3, 67°.67N×34°.05E, h0km, mb3.6/1, mbtmp3.5/7, ML2.8/5, Error ellipse: s-maj=14.8km s-min=9.1km az=84.0*
*UPP **31** 15:15:50.0±2.9, 67°.57N×33°.89E, h0km, ML2.0, Presumed earthquake*

ISC 31 15:15:47.8±1.0, 67°.61N±0°.04×34°.07E±0°.05, h0km, n38, σ2s05/61, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.26**	**261**	P	**Pg**	**15 15 54.3**	**+1.5**
APA				S	**Sg**	**15 15 57.9**	**+1.8**
APA0	**Apatity Array**	**0.41**	**270**	P	**Pg**	**15 15 56.6**	**+0.8**
APA0				S	**Sg**	**15 16 03.0**	**+1.9**
KVDA	**Kovda**	**1.04**	**207**	P	**Pg**	**15 16 08.6**	**+1.0**
KVDA				S	**Sg**	**15 16 22.4**	**+1.4**
TERR	**Teriberka**	**1.64**	**13**	P	**Pn**	**15 16 17.3**	**-0.6**
TERR				S	**Sn**	**15 16 38.2**	**-1.5**
VRF	**Varrio**	**1.71**	**277**	PG	**Pn**	**15 16 15.2**	**-3.6**
	baz=86						
VRF				smax	smax	15 16 34.3	
	comp=Z,44nm,0.2s						
KU6	**Riekki**	**2.30**	**228**	PN	**Pn**	**15 16 25.9**	**-1.0**
	baz=43						
KU6				smax	smax	15 16 57.1	
	comp=Z,21nm,0.2s						
KU6				SG	**Sb**	**15 17 00.3**	**+1.3**
VADS	**Vadso**	**3.04**	**328**	*e*P	**Pn**	**15 16 38.0**	**+0.8**
VADS				*e*S	**Sn**	**15 17 15.3**	**+1.1**
VADS	**Vadso**	**3.04**	**328**	P	**Pn**	**15 16 37.4**	**+0.3**
VADS				S	**Sn**	**15 17 12.4**	**-1.8**
KEV	**Kevo**	**3.36**	**313**	*e*P	**Pn**	**15 16 42.2**	**+0.7**
KEV				*e*S	**Sn**	**15 17 22.5**	**+0.5**
KEV	**Kevo**	**3.36**	**313**	PN	**Pn**	**15 16 39.8**	**-1.7**
KEV				SB	**Sn**	**15 17 22.7**	**+0.7**
ARCES	**ARCESS Array B**	**3.69**	**305**	Pn	**Pn**	**15 16 47.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=9.1						
ARCES				Pg	**Pb**	**15 16 55.6**	**+1.8**
	comp=Z,7.9nm,0.3s,baz=118,slow=18,SNR=22						
ARCES				Sn	**Sn**	**15 17 29.3**	**-0.8**
	comp=Z,7.3nm,0.3s,baz=120,slow=26,SNR=15						
ARCES				Lg	Lg	15 17 40.0	
	comp=Z,8.3nm,0.3s,baz=113,slow=28,SNR=9.1						
	comp=Z,12nm,0.3s						
ARCES	**ARCESS Array B**	**3.69**	**305**	P	**Pn**	**15 16 45.9**	**-0.1**
ARCES				S	**Sn**	**15 17 29.1**	**-1.0**
RMF	**Romuvaara**	**3.81**	**208**	PN	**Pn**	**15 16 48.6**	**+1.0**
	baz=33						
RMF				SN	**Sn**	**15 17 34.9**	**+1.9**
HEF	**Hetta**	**4.00**	**286**	PN	**Pn**	**15 16 47.8**	**-2.5**
	baz=103						
HEF				SB	**Sn**	**15 17 37.5**	**-0.2**
TOF	**Tornio**	**4.14**	**253**	PN	**Pn**	**15 16 53.5**	**+1.2**
TOF				SG	**Sb**	**15 17 53.7**	**+1.6**
KTK1	**Kautokeino**	**4.26**	**294**	*e*P	**Pn**	**15 16 55.0**	**+1.2**
KTK1				*e*S	**Sn**	**15 17 43.2**	**-1.0**
OBF4	**Vikkela, Lumij**	**4.59**	**236**	PN	**Pn**	**15 17 00.6**	**+2.2**
LANU	**Lannavaara**	**4.60**	**281**	*e*P	**Pn**	**15 16 59.0**	**+0.5**
LANU				*e*S	**Sn**	**15 17 50.5**	**-2.0**
LANU	**Lannavaara**	**4.60**	**281**	P	**Pn**	**15 16 58.8**	**+0.3**
LANU				S	**Sn**	**15 17 50.2**	**-2.3**
LANU	**Lannavaara**	**4.60**	**281**	*e*P	**Pn**	**15 16 58.6**	**+0.1**
ERTU	**Ertsjaerv**	**4.77**	**263**	P	**Pn**	**15 17 01.5**	**+0.7**
	baz=54						
ERTU				S	**Sn**	**15 17 56.8**	**+0.1**
JOF	**Joensuu**	**4.85**	**195**	*e*P	**Pn**	**15 17 01.5**	**-0.5**
KUA	**Kurravaara**	**5.22**	**280**	P	**Pn**	**15 17 07.6**	**+0.5**
KOVU	**Salmi**	**5.29**	**283**	*e*P	**Pn**	**15 17 08.5**	**+0.5**
KOVU				*e*S	**Sn**	**15 18 08.4**	**-1.1**
KOVU	**Salmi**	**5.29**	**283**	P	**Pn**	**15 17 08.7**	**+0.7**
KOVU				S	**Sn**	**15 18 08.3**	**-1.1**
HARU	**Harads**	**5.36**	**260**	P	**Pn**	**15 17 08.6**	**-0.3**
I37NO	**I37NO**	**5.91**	**291**	I	I	15 49 40.0	
	baz=98,slow=321,SNR=4.3						
SUF	**Sumiainen**	**5.94**	**218**	*e*P	**Pn**	**15 17 18.6**	**+1.8**
VAF	**Ylistaro**	**6.61**	**231**	*e*P	**Pn**	**15 17 26.6**	**+0.4**
KEF	**Keuruu**	**6.72**	**220**	*e*P	**Pn**	**15 17 28.3**	**+0.8**
FINES	**FINESS Array B**	**7.08**	**213**	Pn	**Pn**	**15 17 34.2**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=27,slow=13,SNR=25						
FINES				Sn	**Sn**	**15 18 51.9**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=34,slow=21,SNR=6.6						
FINES				Lg	Lg	15 19 26.7	
	comp=Z,2.7nm,0.3s,baz=34,slow=28,SNR=10						
	comp=Z,1.2nm,0.3s						
FAUS	**Fauske**	**7.21**	**277**	S	**Sn**	**15 18 51.9**	**-4.8**
MEF	**Metsahovi**	**8.55**	**214**	*e*P	**Pn**	**15 17 52.5**	**-0.2**
HFS	**Hagfors**	**11.64**	**240**	Pn	**Pn**	**15 18 33.9**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=44,slow=12,SNR=5.1						
HFS				Sn	**Sn**	**15 20 39.3**	**-6.2**
	comp=Z,0.4nm,0.3s,baz=51,slow=21,SNR=6.3						
HFS				Lg	Lg	15 21 50.5	
	comp=Z,0.7nm,0.3s,baz=53,slow=30,SNR=5.4						
	comp=Z,0.6nm,0.4s						
SPITS	**Spitsbergen Ar**	**11.73**	**342**	Pn	**Pn**	**15 18 34.1**	**-2.1**
	baz=138,slow=15						
SPITS				Sn	Sn	15 20 36.2	-11
	baz=139,slow=17						
	comp=Z,0.5nm,0.3s						
NOA	**NORSAR Array B**	**11.84**	**247**	Pn	**Pn**	**15 18 36.8**	**-0.9**
	baz=88,slow=18,SNR=5.5						
NOA				Sn	**Sn**	**15 20 42.9**	**-7.4**
	baz=48,slow=24,SNR=1.7						
NOA				Lg	Lg	15 22 00.7	
	comp=Z,0.1nm,0.3s,baz=35,slow=23,SNR=4.6						
	comp=Z,0.4nm,0.7s						
AKASG	**Malin Array Be**	**17.13**	**191**	Pn	**Pn**	**15 19 43.6**	**-4.7**
	comp=Z,0.5nm,0.3s,baz=9.2,slow=12,SNR=4.6						
AKTO	**Aktyubinsk**	**20.93**	**133**	P	**P**	**15 20 33.6**	**+1.9**
	comp=Z,1.9nm,0.6s,baz=340,slow=5.6,SNR=6.9						
	comp=Z,1.9nm,0.6s						

*GUC **31** 15:33:10.8±0.4, 17°.95S×69°.43W, h141km±1km, ML3.1*
*IDC **31** 15:33:13.2±2.4, 18°.12S×68°.49W, h138km±62km, mb3.5/3, mbtmp3.9/3, Error ellipse: s-maj=199.5km s-min=24.9km az=117.0*

ISC 31 15:33:11.0±1.0, 17°.87S±0°.06×69°.43W±0°.09, h143km±7km, n16, σ0s87/24, 4C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**0.29**	**350**	↑*e*P	**Pn**	**15 33 31.8**	**+0.4**
PB18				*e*S	**Sn**	**15 33 47.8**	**+1.0**
PB16	**IPOC Station P**	**0.47**	**189**	↑*e*P	**Pn**	**15 33 32.2**	**0.0**
PB16				*e*S	**Sn**	**15 33 48.4**	**+0.1**
AP01	**Chacalluta**	**1.00**	**240**	↓*e*P	**Pn**	**15 33 34.7**	**-0.4**
AP01				*e*S	**Sn**	**15 33 54.1**	**+0.6**
AP01				IAML		15 33 54.8	
	comp=E,930nm,0.3s						
PB12	**IPOC Station P**	**1.13**	**229**	↑*e*P	**Pn**	**15 33 36.0**	**-0.4**
PB12				*e*S	**Sn**	**15 33 55.4**	**-0.4**
PB12				IAML		15 33 56.7	
	comp=E,321nm,0.5s						
PX02	**IPOC Station P**	**1.31**	**214**	*e*P	**Pn**	**15 33 37.5**	**-0.7**
PX02				*e*S	**Sn**	**15 33 57.4**	**-1.6**
PX02				IAML		15 33 59.6	
	comp=N,168nm,0.5s						
GO01	**Chusmiza**	**1.80**	**173**	*e*P	**Pn**	**15 33 44.1**	**+0.2**
GO01				*e*S	**Sn**	**15 34 09.1**	**0.0**
GO01				IAML		15 34 10.3	
	comp=N,214nm,0.5s						
PSGCX	**Pisagua**	**1.84**	**201**	↑*e*P	**Pn**	**15 33 43.4**	**-0.6**
PSGCX				*e*S	**Sn**	**15 34 08.0**	**-1.3**
PB11	**IPOC Station P**	**1.89**	**187**	*e*P	**Pn**	**15 33 44.2**	**-0.4**
PB11				*e*S	**Sn**	**15 34 09.5**	**-0.9**
PB11				IAML		15 34 11.6	
	comp=E,219nm,0.4s						
LPAZ	**La Paz**	**2.00**	**38**	P	**Pn**	**15 33 46.0**	**-0.4**
	comp=E,56nm,0.3s,baz=200,slow=1.3,SNR=432						
LPAZ				S	**Sn**	**15 34 12.2**	**-1.3**
	comp=E,47nm,0.5s,baz=119,slow=25,SNR=22						
PB08	**IPOC Station P**	**2.27**	**173**	↓*e*P	**Pn**	**15 33 49.4**	**0.0**
PB08				*e*S	**Sn**	**15 34 18.6**	**-0.3**
PB08				IAML		15 34 23.6	
	comp=N,114nm,0.1s						
PB02	**IPOC Station P**	**3.46**	**187**	*e*P	**Pn**	**15 34 04.0**	**-0.1**
H03N1	**Juan Fernandez**	**17.69**	**207**	T	T	15 55 24.4	
	baz=226						
H03N2	**Juan Fernandez**	**17.70**	**207**	T	T	15 55 25.0	
	baz=35						
PLCA	**Paso Flores**	**22.80**	**182**	P	**P**	**15 38 02.6**	**+1.1**
	comp=N,1.9nm,1.0s,baz=3.5,slow=9.7,SNR=3.4						
	comp=N,1.9nm,1.0s						
QSPA	**South Pole Qui**	**72.30**	**180**	P	**P**	**15 44 22.2**	**+1.5**
	comp=N,1.4nm,1.1s,baz=234,slow=0.7,SNR=6.5						
	comp=N,1.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**76.63**	**71**	P	**P**	**15 44 45.0**	**-1.4**
	comp=N,0.5nm,0.3s,baz=256,slow=5.9,SNR=12						
	comp=N,0.5nm,0.3s						

*VIE **31** 15:44:07.5±1.6, 51°.44N×16°.20E, h0km, mb2.2/3, ml2.4/3, Error ellipse: s-maj=10.6km s-min=8.9km az=40.0 68 km NW of Wroclaw Suspected Mining induced.*

PRU 31 15:44:08.0, 51°.57N×16°.18E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg	Pg	15 44 20.8	-1.2
KSP				*e*Sg	Sg	15 44 29.2	-2.2
CHVC	**Chvalec**	**0.99**	**185**	*e*PG	Pg	15 44 26.3	-0.6
CHVC				*e*SG	Sg	15 44 40.2	+0.6
	comp=Z,13nm,0.6s						
OSTC	**Ostas**	**1.01**	**179**	*e*PG	Pg	15 44 26.4	-1.0
OSTC				*e*SG	Sg	15 44 40.7	+0.1
	comp=Z,8.4nm,0.3s						
UPC	**Upice**	**1.07**	**186**	*e*PG	Pg	15 44 27.3	-1.2
UPC				*e*SG	Sg	15 44 40.9	-1.4
	comp=Z,35nm,0.4s						
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG	Pg	15 44 29.3	-2.1
DPC				*e*SG	Sg	15 44 47.3	0.0
	comp=Z,7.1nm,0.5s						
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG	Pn	15 44 34.3	-1.3
PVCC				*e*SG	Sg	15 44 54.7	-0.1
	comp=Z,30nm,0.2s						
KRLC	**Kraliky**	**1.54**	**165**	*e*PG	Pn	15 44 35.7	-1.1
KRLC				*e*SG	Sg	15 44 56.5	-1.1
	comp=Z,25nm,0.9s						
BRG	**Berggiesshubel**	**1.57**	**244**	Pg	Pn	15 44 37.0	-0.1
BRG				Sg	Sn	15 44 57.4	-0.7
BRG				Amp		15 45 01.5	
	comp=Z,18nm,0.5s						
RICC	**Richard**	**1.67**	**233**	*e*PG	Pn	15 44 37.8	-0.7
RICC				*e*SG	Sb	15 45 00.9	-0.2
PRU	**Pruhonice**	**1.90**	**214**	*e*PG	Pn	15 44 41.5	-0.1
PRU				*e*SG	Sg	15 45 08.6	-0.2
	comp=Z,5.4nm,0.3s						
STEB	**Steborice**	**1.93**	**148**	*e*PG	Pb	15 44 43.0	-0.9
STEB				*e*SG	Sg	15 45 09.7	-0.1
	comp=Z,13nm,0.5s						
HSKC	**Hora Svate Kat**	**1.98**	**242**	*e*PG	Pn	15 44 43.0	+0.2
HSKC				*e*SG	Sb	15 45 10.5	+0.3
	comp=Z,8.7nm,0.4s						
MORC	**Moravsky Berou**	**1.99**	**154**	*e*PN	Pn	15 44 41.4	-1.6
MORC				*e*SG	Sn	15 45 07.1	-1.6
CLL	**Collm**	**2.01**	**264**	*e*Pn	Pb	15 44 45.0	-0.3
CLL				*i* Pg	Pg	15 44 47.3	+0.9
CLL				*i* x	x	15 44 50.1	
CLL				*e*Sg	Sg	15 45 13.0	+0.6
	comp=Z,8.0nm,0.5s						
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*SG	Sg	15 45 15.7	-0.9
	comp=Z,8.7nm,0.8s						
VRAC	**Vranov**	**2.28**	**173**	*e*PN	Pn	15 44 45.7	-1.2
VRAC				*e*SG	Sb	15 45 17.2	-1.5
TREC	**Trest**	**2.32**	**191**	*e*PG	Pb	15 44 49.4	-1.3
TREC				*e*SG	Sb	15 45 20.7	+0.8
	comp=Z,5.2nm,0.3s						
MAUC	**Maruska**	**2.44**	**154**	*e*PN	Pn	15 44 49.0	-0.2
MAUC				*e*PG	Pb	15 44 51.9	-0.9
MAUC				*e*SG	Sg	15 45 26.0	-0.5
	comp=Z,7.9nm,0.4s						
ZVC	**Zvikov**	**2.48**	**212**	*e*PN	Pn	15 44 48.6	-1.1
ZVC				*e*SN	Sn	15 45 20.2	-0.5
ZVC				*e*SG	Sg	15 45 27.4	-0.3
	comp=Z,4.4nm,0.7s						
KRUC	**Moravsky**	**2.52**	**177**	*e*PG	Pb	15 44 52.5	-1.5
NKC	**Novy Kostel**	**2.72**	**242**	*e*PG	Pb	15 44 56.7	-0.7
NKC				*e*SG	Sg	15 45 35.0	-0.2
	comp=Z,11nm,0.3s						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	Pn	15 44 56.5	+0.3
KHC				*e*PG	Pb	15 45 00.8	-0.7
KHC				*e*SN	Sn	15 45 32.3	-0.1
KHC				*e*SG	Sg	15 45 41.5	-1.4
	comp=Z,1.9nm,0.4s						
CKRC	**Cesky Krumlov**	**3.00**	**204**	*e*PN	Pn	15 44 56.3	-0.6
CKRC				*e*SG	Sg	15 45 43.1	-1.4
CONA	**Conrad Observa**	**3.65**	**183**	*e*Pn	Pn	15 45 02.8	-3.0
	comp=Z,0.4nm,0.3s						
CONA				*e*Sg	Sg	15 46 03.0	-2.2
	comp=Z,1.3nm,0.2s						
MOA	**Molln**	**3.93**	**199**	*e*Sg	Sg	15 46 13.2	-0.8
	comp=Z,1.3nm,0.3s						
ARSA	**Arzberg**	**4.34**	**186**	*e*Sg	Sg	15 46 27.3	-0.2
	comp=Z,1.1nm,0.4s						

*DJA **31** 15:49:44.6±0.5, 4°.S±3°×13°.9E±°, h20km±4km, M4.0/6, mb4.8/1, MLv3.5/6*
*IDC **31** 15:49:47.5±2.4, 4°.18S×139°.40E, h124km±43km, mb2.9/2, mbtmp3.4/5, Error ellipse: s-maj=96.3km s-min=18.4km az=108.0*

ISC 31 15:49:45.3±1.0, 4°.4S±0°.1×139°.4E±0°.3, h100km, n7, σ3s04/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.95**	**23**	P	**Pn**	**15 50 17.5**	**+0.3**
JAY	**Jayapura**	**2.28**	**35**	P	**Pn**	**15 50 21.2**	**-0.3**
	5.4nm,0.3s,baz=212,slow=14,SNR=24						
JAY				S	**Sn**	**15 50 50.1**	**+0.8**
	19nm,0.4s,baz=76,slow=23,SNR=11						
JAY	**Jayapura**	**2.28**	**35**	P	**Pn**	**15 50 22.0**	**+0.5**
WRA	**Warramunga Arr**	**16.22**	**197**	P	**P**	**15 53 30.9**	**+2.3**
	0.6nm,0.5s,baz=21,slow=12,SNR=10						
WRA				S	Sn	15 56 11.4	-16
	0.2nm,0.4s,baz=18,slow=22,SNR=1.7						
FITZ	**Fitzroy Crossi**	**19.15**	**224**	P	**P**	**15 54 03.4**	**+2.6**
	2.0nm,0.9s,baz=32,slow=11,SNR=2.1						
FITZ				S	S	15 57 22.9	-10
	1.2nm,0.7s,baz=195,slow=2.6,SNR=1.2						
ASAR	**Alice Springs**	**19.88**	**195**	P	**P**	**15 54 11.5**	**+2.8**
	0.4nm,0.6s,baz=22,slow=9.6,SNR=10.0						
ASAR				S	**S**	**15 57 41.7**	**-5.5**
	0.4nm,0.8s,baz=17,slow=25,SNR=2.4						
	0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**40.74**	**359**	P	**P**	**15 57 14.2**	**-2.2**
	0.5nm,0.5s,baz=193,slow=9.4,SNR=4.3						
	0.5nm,0.5s						

*TEH **31** 15:50:25.1, 34°.05N×45°.30E, h8km±67km, ML2.5, Presumed earthquake*
*ISN **31** 15:50:30.6±0.8, 34°.05N×45°.30E, h8km, ML2.5, Presumed earthquake*

ISC 31 15:50:27.4±1.7, 34°.04N±0°.09×45°.44E±0°.07, h10km, n8, σ1s73/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.76**	**123**	Pg	**Pg**	**15 50 41.9**	**-0.2**
IGHG	**Ghaleghazi**	**0.98**	**73**	Pg	**Pb**	**15 50 46.2**	**-0.4**
IDHR	**Dehrash**	**1.02**	**50**	Pg	**

CEDE	Laguna Cedeo	1.59	85	*e*P		Pn	15 59 12.1 +0.6
NANN	Nandasmo	1.59	7	P		Pb	15 59 12.8 -0.6
SABN	Sabanita	1.60	5	P		Pn	15 59 12.5 +0.9
MASN	Masaya	1.63	5	S		Sb	15 59 34.0 -0.4
MGAN	Managua	1.78	2	S		Sb	15 59 38.7 0.0
COPN	Copaltepe	1.84	351	P		Pn	15 59 14.7 -0.2
COPN	Copaltepe	1.84	351	*e*P		Pn	15 59 13.7 -1.1
APYN	Apoyeque	1.87	359	S		Sb	15 59 40.7 -0.5
VPL2	V. Platanar	1.90	91	*e*P		Pn	15 59 16.7 +0.9
ACON	Acoyapa	1.95	35	P		Pn	15 59 16.5 0.0
VPL3	V. Platanar	1.97	90	*e*P		Pn	15 59 16.4 -0.3
LEVN	Ruinas Leon Vi	2.06	352	P		Pn	15 59 19.6 +1.7
MOM2	El Cardon	2.08	355	P		Pn	15 59 18.6 +0.4
MACN	El Madrono	2.13	350	P		Pn	15 59 19.4 +0.4
MOM3	MOM3	2.15	355	P		Pn	15 59 19.7 +0.5
CNGA	Al SSO del Vol	2.16	350	P		Pn	15 59 20.2 +0.8
BOAB	BOACO BROADBAN	2.18	17	P		Pn	15 59 19.8 +0.3
PICV	PH. Pirrs	2.21	109	*e*P		Pb	15 59 23.0 -0.9
LCR2	La Lucha 2	2.35	105	P		Pn	15 59 23.7 +1.6
PKGN	Cerro Pekin	2.39	344	S		Sn	15 59 51.9 +0.7
PIEC	Cerro El Cedra	2.43	107	*e*P		Pn	15 59 24.8 +1.6
ABRB	Las Abras (San	2.58	97	*e*P		Pn	15 59 23.8 -1.5
CSGN	Cosiguina Volc	2.88	335	P		Pn	15 59 29.9 +0.6
CSGN				S		Sn	16 00 02.1 -1.3
DRK0	Durika	3.21	109	*e*P		Pn	15 59 26.0 -7.9

BJI ***31*** *16:04:14.8, 5˚.48S×152˚.29E, h53km, mB5.1/33, mb5.2/77, Ms4.9/65, Ms7 4.7/66*

IDC ***31*** *16:04:17.0±1.2, 5˚.52S×151˚.72E, h35km±8km, mb4.8/23, mbtmp5.0/25, ML3.7/3, MS4.5/56, Error ellipse: s-maj=12.7km s-min=8.9km az=108.0*

DJA ***31*** *16:04:17.9±0.6, 5˚.3S×15˚.2E±˚, h42km±5km, M5.3/51, mb5.3/51, mB5.7/24, MLv5.7/1, Mw(mB)5.2/24, MwMwp4.9/2, Mwp5.2/2*

MOS ***31*** *16:04:17.1±0.8, 5˚.24S×151˚.63E, h37km, mb5.5/36, MS4.7/5, Error ellipse: s-maj=8.7km s-min=5.4km az=111.4*

NEIC ***31*** *16:04:18.1±2.5, 5˚.61S±0˚.05×151˚.79E±0˚.07, h35km±1km, mb5.3/419, Mww5.2/19, Error ellipse: s-maj=12.7km s-min=9.0km az=103.0*

GFZ ***31*** *16:04:19.0±0.1, 5˚.3S±2˚×15˚2E±˚, h52km, M5.1/61, mb5.3/61*

GCMT ***31*** *16:04:19.1±0.1, 5˚.76S±0˚.01×151˚.86E±0˚.01, h30km, MW5.2/123, Moment Tensor Solution. s109,c184; s123,c221; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; Mrr0.67±.02; Mθθ-0.74±.01; Mφφ0.06±.01; Mrθ0.55±.02; Mθφ-0.24±.01; Mφr-0.11±.02; Best double couple: M=0.93000×10^{17} NP1:φs236.00000°, δ31.00000°, λ59.00000°. NP2:φs91.00000°, δ64.00000°, λ107.00000°. Principal axes: T 0.8990, Plg66.0000°, Azm33.0000°; N 0.0610, Plg15.0000°, Azm264.0000°; P -0.9600, Plg18.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 16:04:18.7±0.4, 5˚.53S±0˚.03×151˚.89E±0˚.04, h52km±2km, h53km: pP-P, n1114, σ1s23/959, mb5.3/299, MS4.6/83, 53C-29D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.22	6	LR		LR	16 05 25.5	
	comp=Z,34μm,20.6s,baz=222,slow=55							
I40PG	Keravat	1.23	6	Pg		Pn	16 04 40.0	+0.4
	baz=162,slow=15							
RABL	Rabaul	1.35	12			Pn	16 04 41.5	+0.2
RABL				Sn		Sn	16 05 02.0	+3.8
KAVG	Kavieng	3.12	340	P		Pn	16 05 06.4	+1.0
ALOT	Alotau	4.94	196	P		Pn	16 05 32.0	+1.5
MANU	Manus Island	5.69	307			Pn	16 05 40.0	-0.7
PMG	Port Moresby	6.07	230	S		Sn	16 06 54.7	+0.6
PMG	Port Moresby	6.07	230	P		Pn	16 05 47.1	+1.2
PMG	Port Moresby	6.07	230	S		Sn	16 06 54.8	+0.6
PMG	Port Moresby	6.07	230	Pn		Pn	16 05 45.1	-0.8
	30nm,0.3s,baz=54,slow=7.6,SNR=99							
PMG				Sn		Sn	16 06 53.3	-0.9
	42nm,0.3s,baz=1.0,slow=16,SNR=9.8							
PMG	Port Moresby	6.07	230	*ce*P		Pn	16 05 46.8	+0.9
PMG				pmax		pmax		
	comp=Z,1μm,1.0s							
PMG	Port Moresby	6.07	230			Pn	16 05 43.3	-2.7
PMG	Port Moresby	6.07	230	P		Pn	16 05 46.2	+0.3
PMG	Port Moresby	6.07	230	P		Pn	16 05 46.4	+0.5
TATA	Tatamba Isabel	8.36	110	P		Pn	16 06 17.7	+0.4
SAVO	Savo Central	8.64	116	P		Pn	16 06 32.7	+2.2
HNR	Honiara	8.88	116	P		Pn	16 06 25.4	+0.9
HNR	Honiara	8.88	116	Pn		Pn	16 06 25.1	+0.6
	comp=Z,0.4nm,0.3s,baz=337,slow=2.1,SNR=12							
HNR				Sn		Sn	16 08 04.6	+1.5
	comp=Z,0.1nm,0.3s,baz=259,slow=15,SNR=1.4							
HNR				LR		LR	16 09 23.9	
	comp=Z,132nm,21.2s,baz=10,slow=34							
HNR	Honiara	8.88	116			Pn	16 06 24.2	-0.2
HNR	Honiara	8.88	116	P		Pn	16 06 25.3	+0.8
NGOA	Tingoa Renbel	10.06	127	P		Pn	16 06 43.4	+2.8
JAY	Jayapura	11.55	285	Pn		Pn	16 06 58.2	-2.9
	comp=Z,0.4nm,0.3s,baz=124,slow=6.1,SNR=5.9							
JAY				LR		LR	16 10 59.5	
	comp=Z,4μm,18.6s,baz=93,slow=35							
	comp=Z,4.3nm,0.8s							
COEN	Coen	11.99	225	P		Pn	16 07 09.0	+1.9
COEN	Coen	11.99	225	P		Pn	16 07 06.8	-0.3
COEN	Coen	11.99	225			Pn	16 07 05.1	-1.9
GENI	Genyem	12.05	284	P		Pn	16 07 09.9	+2.1
GENI	Genyem	12.05	284	P		Pn	16 07 06.7	-1.1
	comp=Z,3μmcomp=Z,165nm,1.6s							
GENI	Genyem	12.05	284	P		Pn	16 07 07.9	0.0
MTSU	Mount Surprise	14.55	210	P		Pn	16 07 42.2	+0.4
MTSU	Mount Surprise	14.55	210	P		Pn	16 07 40.8	-1.0
	comp=Z,73nm,1.0s							
MTSU	Mount Surprise	14.55	210	P		Pn	16 07 40.0	-1.7
CTA	Charters Tower	15.48	200	Pn		Pn	16 07 52.5	-1.3
	comp=Z,0.5nm,0.3s,baz=22,slow=12,SNR=17							
CTA				LR		LR	16 13 29.6	
	comp=Z,3μm,19.4s,baz=25,slow=36							
	comp=Z,11nm,1.1s							
CTAO	Charters Tower	15.48	200	P		P	16 07 55.7	-1.6
CTAO	Charters Tower	15.48	200	P		P	16 07 56.3	-1.0
CTAO	Charters Tower	15.48	200			Pn	16 07 50.8	-3.0
CTAO	Charters Tower	15.48	200	P		Pn	16 07 52.9	-0.8
BAKI	Biak	16.33	285	P		Pn	16 08 04.3	-0.3
	comp=Z,1μmcomp=Z,126nm,1.1s							
AUNRC	North Rockhamp	17.77	184	P		P	16 08 24.2	+1.6
GD1S	Gladstone Soft	18.22	182	P		Pn	16 08 29.2	+1.2
QIS	Mount Isa	19.12	217	P		P	16 08 38.0	+0.4
QIS	Mount Isa	19.12	217	P		Pn	16 08 38.3	-0.5
	comp=Z,170nm,1.0s							
QIS	Mount Isa	19.12	217	P		Pn	16 08 38.2	-0.7
EIDS	Eidsvold	19.75	182	P		P	16 08 44.9	+0.6
EIDS	Eidsvold	19.75	182	P		P	16 08 44.9	+0.6
	comp=Z,170nm,1.1s							
EIDS	Eidsvold	19.75	182			P	16 08 43.9	-0.5
EIDS				IAmb		IAmb	16 08 48.8	
	comp=Z,137nm,0.9s							
EIDS	Eidsvold	19.75	182	P		P	16 08 45.1	+0.8
GUMO	Guam	20.23	340	P		Pn	16 08 51.5	-0.5
GUMO	Guam	20.23	340	P		P	16 08 49.7	0.0
	comp=Z,274nm,0.9s,baz=179,slow=7.4,SNR=12							
GUMO				LR		LR	16 15 26.1	
	comp=Z,282nm,19.5s,baz=148,slow=33							
	comp=Z,274nm,0.9s							
GUMO	Guam	20.23	340			P	16 08 47.2	-2.5
GUMO	Guam	20.23	340	P		P	16 08 49.5	-0.2
KDU	Kakadu	20.44	248	P		P	16 08 52.1	+0.2
	comp=Z,78nm,1.2s							
RMQ	Roma	21.06	188	P		P	16 09 00.0	+1.5
RMQ	Roma	21.06	188	P		P	16 09 00.2	+1.7
	comp=Z,59nm,1.3s							
RMQ	Roma	21.06	188	P		P	16 08 59.2	+0.7
SIJI	Sorong	21.10	282	P		P	16 08 58.3	-0.8
	comp=Z,67nm,0.9s,baz=62,slow=7.5,SNR=18							
	comp=Z,67nm,0.9s							
SIJI	Sorong	21.10	282	P		P	16 08 59.5	+0.4
	comp=Z,74nm,0.9s							
SWI	Sorong	21.11	282	P		P	16 08 59.6	+0.4
	comp=Z,107nm,0.9s							
AUBSH	Beerwah State	21.24	177	P		P	16 09 03.7	+3.3
NOUC	Port Laguerre	21.59	141	P		P	16 09 06.1	+1.9
DZM	Mont Dzumac	21.65	141	P		P	16 09 06.7	+1.7
	comp=Z,16nm,0.7s,baz=308,slow=10,SNR=19							
DZM				LR		LR	16 16 49.8	
	comp=Z,3μm,19.4s,slow=35							
	comp=Z,16nm,0.7s							
MTN	Manton Dam	21.73	249	P		P	16 09 06.2	+0.4
	comp=Z,30nm,0.5s							
MTN	Manton Dam	21.73	249			P	16 09 04.3	-1.5
DRS	Darwin Rock St	21.83	250	P		P	16 09 09.0	+2.2
TW1H	Toowoomba 1 Ha	21.90	180	P		P	16 09 07.7	+0.1
AUTOO	Toowoomba Stat	21.90	180	P		P	16 09 07.4	-0.2
WB0	Warramunga Arr	22.14	229	P		P	16 09 09.6	-0.6
WB0				IAmb		IAmb	16 09 26.7	
	comp=Z,128nm,1.0s							
WR8	Warramunga Arr	22.18	228	P		P	16 09 10.4	-0.1
WR8				IAmb		IAmb	16 09 13.9	
	comp=Z,84nm,0.8s							
QLP	Quilpie	22.18	198	P		P	16 09 11.5	+1.0
QLP	Quilpie	22.18	198	P		P	16 09 10.8	+0.3
	comp=Z,327nm,1.2s							
QLP	Quilpie	22.18	198	P		P	16 09 10.8	+0.3
WRAB	Tennant Creek	22.27	228	P		P	16 09 12.0	+0.3
WRAB	Tennant Creek	22.27	228	*de*P		P	16 09 11.5	-0.2
WRAB				pmax		pmax		
	comp=Z,102nm,0.8s							
WRAB	Tennant Creek	22.27	228	P		P	16 09 11.4	-0.2
WRA	Warramunga Arr	22.29	228	P		P	16 09 11.3	-0.5
	comp=Z,77nm,0.8s,baz=52,slow=10.0,SNR=92							
WRA				S		S	16 13 11.5	-2.4
	comp=Z,40nm,1.1s,baz=55,slow=16,SNR=12							
WRA				ScP		ScP	16 16 42.7	+3.0
	comp=Z,4.3nm,0.8s,baz=50,slow=2.6,SNR=7.7							
	comp=Z,77nm,0.8s							
WRA	Warramunga Arr	22.29	228	P		P	16 09 09.4	-2.4
WRA						ScP	16 16 42.6	+3.0
GC1S	Gold Coast 1 S	22.57	176	P		P	16 09 16.0	+1.4
AULRC	Lightning Ridg	24.06	188	P		P	16 09 29.2	0.0
INKA	Innaminka	24.50	204			P	16 09 32.7	-0.5
INKA				IAmb		IAmb	16 09 36.0	
	comp=Z,96nm,0.8s							
ARMA	Armidale	24.76	181	P		P	16 09 37.2	+1.5
ARMA	Armidale	24.76	181	P		P	16 09 36.7	+1.0
	comp=Z,55nm,1.3s							
ARMA	Armidale	24.76	181	P		P	16 09 36.4	+0.7
KNRA	Kununurra	24.84	244	P		P	16 09 36.7	+0.2
	comp=Z,175nm,1.1s							
KNRA	Kununurra	24.84	244			P	16 09 36.1	-0.3
KNRA				IAmb		IAmb	16 09 41.2	
	comp=Z,137nm,0.8s							
AS17	Alice Springs	24.95	222	P		P	16 09 38.0	+0.6
	comp=Z,243nm,0.9s							
AS01	Alice Springs	24.97	222	P		P	16 09 39.3	+1.7
AS01	Alice Springs	24.97	222	P		P	16 09 38.3	+0.7
	comp=Z,227nm,0.9s							
AS15	Alice Springs	24.98	222	P		P	16 09 38.4	+0.7
	comp=Z,195nm,1.0s							
AS09	Alice Springs	25.00	222	P		P	16 09 38.5	+0.6
	comp=Z,216nm,0.9s							
AS31	Alice Springs	25.00	222	P		P	16 09 38.1	+0.2
	comp=Z,55nm,0.9s							
AS31	Alice Springs	25.00	222			P	16 09 37.7	-0.2
AS31				IAmb		IAmb	16 09 41.1	
	comp=Z,40nm,0.7s							
ASAR	Alice Springs	25.00	222	P		P	16 09 37.3	-0.6
	comp=Z,130nm,0.8s,baz=56,slow=8.9,SNR=314							
ASAR				PcP		PcP	16 13 13.5	+1.5
	comp=Z,6.2nm,0.8s,baz=53,slow=3.2,SNR=4.8							
ASAR				S		S	16 13 58.1	-0.3
	comp=Z,30nm,1.2s,baz=42,slow=16,SNR=10							
ASAR				ScP		ScP	16 16 49.8	+2.9
	comp=Z,3.6nm,0.7s,baz=55,slow=2.8,SNR=8.6							
ASAR				LR		LR	16 19 14.0	
	comp=Z,1μm,21.6s,baz=64,slow=36							
	comp=Z,130nm,0.8s							
ASAR	Alice Springs	25.00	222	P		P	16 09 37.8	-0.1
ASAR	Alice Springs	25.00	222	P		P	16 09 37.8	-0.1
AUALC	St Philip's Co	25.04	222	P		P	16 09 39.7	+1.5
TNTI	Ternate	25.28	284	P		P	16 09 59.6	+19
AUPHS	Peel High Scho	25.46	182	P		P	16 09 43.1	+1.2
CMSA	Cobar Meteorol	26.52	192	P		P	16 09 51.3	-0.2
CMSA	Cobar Meteorol	26.52	192	P		P	16 09 51.2	-0.3
	comp=Z,55nm,0.9s							
CMSA	Cobar Meteorol	26.52	192	P		P	16 09 51.4	-0.2
AUDCS	Dubbo College	26.74	186	P		P	16 09 56.0	+2.5
SOEI	Soe	27.69	260	P		P	16 10 04.1	+1.8
SOEI	Soe	27.69	260			P	16 10 01.9	-0.4
SOEI	Soe	27.69	260	P		P	16 10 04.9	+2.6
	comp=Z,2μmcomp=Z,143nm,0.8s							
SOEI	Soe	27.69	260	P		P	16 10 01.6	-0.7
STKA	Stephens Creek	27.93	199	P		P	16 10 06.0	+1.9
STKA	Stephens Creek	27.93	199	P		P	16 10 05.8	+1.7
	comp=Z,124nm,0.9s							
STKA	Stephens Creek	27.93	199	P		P	16 10 03.4	-0.7
	comp=Z,5.5nm,0.8s,baz=2.4,slow=7.2,SNR=8.8							
STKA				LR		LR	16 21 32.5	
	comp=Z,1μm,18.9s,baz=19,slow=37							
	comp=Z,5.5nm,0.8s							
STKA	Stephens Creek	27.93	199	*c*	*i*P	P	16 10 08.4	+4.3
STKA	Stephens Creek	27.93	199	P		P	16 10 04.7	+0.6
BATI	Baumata	28.33	259	P		P	16 10 05.0	-3.0
FITZ	Fitzroy Crossi	28.52	242	LR		LR	16 23 23.1	
	comp=Z,756nm,18.9s,baz=83,slow=40							
FITZ	Fitzroy Crossi	28.52	242	P		P	16 10 08.9	-0.6
FITZ	Fitzroy Crossi	28.52	242	P		P	16 10 09.1	-0.4
DAV	Davao City (W)	29.08	295	LR		LR	16 21 32.1	
	comp=Z,2μm,18.3s,baz=104,slow=36							
MMRI	Maumere	29.58	262	P		P	16 10 19.7	+0.7
MMRI	Maumere	29.58	262	P		P	16 10 17.5	-1.5
MMRI				IAmb		IAmb	16 10 19.6	
	comp=Z,87nm,1.0s							
MMRI	Maumere	29.58	262	P		P	16 10 19.4	+0.4
	comp=Z,62nm,1.0s							
MMRI	Maumere	29.58	262	P		P	16 10 17.8	-1.2
CAN	Canberra	29.77	185	P		P	16 10 19.5	-1.0
CAN				pmax		pmax		
	comp=Z,21nm,1.1s							
CAN	Canberra	29.77	185	P		P	16 10 19.5	-1.0
WRKA	Warakurna	29.80	227	P		P	16 10 19.1	-1.8
	comp=Z,21nm,0.8s							
AUJCS	Jamestown Cent	30.18	203	P		P	16 10 26.6	+2.4
HTT	Hallett	30.27	202	P		P	16 10 26.8	+1.8
HTT	Hallett	30.27	202	P		P	16 10 27.2	+2.2
	comp=Z,26nm,0.9s							
HTT	Hallett	30.27	202	P		P	16 10 24.8	-0.2
	comp=Z,10nm,0.9s							
HTT	Hallett	30.27	202	P		P	16 10 24.8	-0.2
BBOO	Buckleboo	30.90	207	P		P	16 10 31.2	+0.7
BBOO	Buckleboo	30.90	207	P		P	16 10 30.1	-0.4
	comp=Z,28nm,1.5s							
BBOO	Buckleboo	30.90	207	P		P	16 10 29.1	-1.3
WSI	Waingapu	31.57	261	P		P	16 10 36.1	-0.5
AUMBR	Murray Bridge	31.68	200	P		P	16 10 39.0	+1.8
KAPI	Kappang	32.00	269	LR		LR	16 25 52.1	
	comp=Z,335nm,21.6s,baz=95,slow=41							
AUCAS	Cummins Area S	32.28	206	P		P	16 10 43.8	+1.2
PCI	Palu	32.32	277	P		P	16 10 45.0	+1.8
	comp=Z,2μmcomp=Z,42nm,1.0s							
ARPS	Mount Arapiles	32.43	195	P		P	16 10 44.1	+0.2
	comp=Z,28nm,0.9s							
WBSI	Waikabubak, Su	32.46	261	P		P	16 10 43.8	-0.7
BRAT	Ballarat	32.69	192	P		P	16 10 48.0	+1.9
FORT	Forrest	33.66	219	P		P	16 10 54.5	-0.2
	comp=Z,38nm,0.8s							
FORT	Forrest	33.66	219	P		P	16 10 54.0	-0.6
FORT				IAmb		IAmb	16 11 16.3	
	comp=Z,30nm,0.9s							
JCJ	Chichijima	33.76	344	LR		LR	16 23 09.6	
	comp=Z,786nm,21.9s,baz=161,slow=34							
PLAI	Plampang	33.99	262	P		P	16 10 59.1	+1.3
MBWA	Marble Bar	34.83	240	P		P	16 11 04.7	-0.2
MBWA	Marble Bar	34.83	240	P		P	16 11 04.5	-0.4
	comp=Z,45nm,0.9s							
MBWA	Marble Bar	34.83	240	P		P	16 11 05.3	+0.4
MBWA	Marble Bar	34.83	240	P		P	16 11 04.7	-0.2
MBWA	Marble Bar	34.83	240	P		P	16 11 03.7	-1.2
CORO	Coronation Par	36.02	186	P		P	16 11 17.2	+2.3
MOO	Moorlands	37.00	186	P		P	16 11 24.4	+1.2
	comp=Z,108nm,1.2s							
RAO	Raoul Island	37.03	133	LR		LR	16 24 22.1	
	comp=Z,931nm,20.1s,baz=147,slow=32							
TAU	Tasmania Unive	37.45	186	P		P	16 11 27.2	+0.2
JAGI	Jajag, Banyuwa	37.56	263	P		P	16 11 29.5	+1.1
JAGI	Jajag, Banyuwa	37.56	263	P		P	16 11 26.1	-2.3
JAGI				IAmb		IAmb	16 11 43.1	
	comp=Z,52nm,0.9s							
JAGI	Jajag, Banyuwa	37.56	263	P		P	16 11 43.0	+15
JAGI	Jajag, Banyuwa	37.56	263	P		P	16 11 25.6	-2.8
MEEK	Meekatharra	38.04	233	P		P	16 11 33.5	+1.1
MEEK	Meekatharra	38.04	233	P		P	16 11 33.1	+0.7
	comp=Z,77nm,0.7s							
MEEK	Meekatharra	38.04	233	P		P	16 11 31.6	-0.8
KMBL	Kambalda	38.10	224	P		P	16 11 33.5	+0.8
	comp=Z,15nm,1.0s							
JOW	Kunigami	39.47	326	P		P	16 11 45.2	+1.0
JOW	Kunigami	39.47	326	LR		LR	16 24 57.5	
	comp=Z,1μm,21.6s,baz=186,slow=32							
JOW	Kunigami	39.47	326	P		P	16 11 44.9	+0.7
JOW	Kunigami	39.47	326	P		P	16 11 43.5	-0.7
URZ	Urewera	39.83	148	LR		LR	16 26 16.8	
	comp=Z,1μm,19.6s,baz=332,slow=33							
SJI	Sawahan	39.90	265	P		P	16 11 54.9	+6.8
SNJI	Sawahan-Nganju	39.91	265	P		P	16 11 49.3	+1.0
	comp=Z,41nm,1.7s							
JHJ	Hachijo jima 2	40.12	344	LR		LR	16 25 33.3	
	comp=Z,520nm,21.6s,baz=182,slow=32							
TUWZ	Tuamarina	40.81	154	P		P	16 11 55.4	+0.3
KLBR	Kellerberrin	41.15	227	P		P	16 11 59.0	+0.9
KLBR	Kellerberrin	41.15	227	P		P	16 12 02.7	+4.6
	comp=Z,100nm,1.0s							
KLBR	Kellerberrin	41.15	227	P		P	16 11 57.9	-0.2
MORW	Morawa	41.19	231	P		P	16 11 59.0	+0.6
MORW	Morawa	41.19	231	P		P	16 12 01.8	+3.4
	comp=Z,25nm,0.7s							
MORW	Morawa	41.19	231	P		P	16 11 58.5	+0.1
MORW	Morawa	41.19	231	P		P	16 11 58.2	-0.2
BLDU	Ballidu	41.42	229	P		P	16 12 03.0	+2.7
BLDU	Ballidu	41.42	229	P		P	16 12 04.3	+4.0
	comp=Z,54nm,0.9s							
BLDU	Ballidu	41.42	229	P		P	16 11 59.6	-0.8
YULB	Yu-li	41.45	315	P		P	16 12 01.8	+1.1
YULB	Yu-li	41.45	315	P		P	16 12 00.5	-0.1
YULB				IAmb		IAmb	16 12 03.0	
	comp=Z,48nm,0.7s							
YULB	Yu-li	41.45	315	P		P	16 11 59.5	-1.2
RPZ	Rata Peaks	41.61	159	LR		LR	16 27 01.7	
	comp=Z,371nm,21.6s,baz=270,slow=33							
NACB	Ninganchiao	41.75	316	P		P	16 12 04.3	+1.2
NACB	Ninganchiao	41.75	316	P		P	16 12 02.6	-0.4
TPUB	Ta-pu	41.87	314	P		P	16 12 04.8	+0.7
TPUB	Ta-pu	41.87	314	P		P	16 12 03.5	-0.6
TPUB				IAmb		IAmb	16 12 05.1	
	comp=Z,55nm,0.8s							
TPUB	Ta-pu	41.87	314	P		P	16 12 02.9	-1.2
SSLB	Suanglung	41.95	315	P		P	16 12 05.5	+0.8
SSLB	Suanglung	41.95	315	P		P	16 12 04.2	-0.5
JSU	Suzuyama	42.13	332	P		P	16 12 08.3	+2.3
JSU	Suzuyama	42.13	332	P		P	16 12 05.3	-0.7
YHNB	Yeheng	42.23	317	P		P	16 12 08.2	+1.2
YHNB	Yeheng	42.23	317	P		P	16 12 07.2	+0.1
YHNB	Yeheng	42.23	317	P		P	16 12 06.1	-1.0
NWAO	Narrogin (SRO)	42.23	225	LR		LR	16 30 34.4	
	comp=Z,1μm,19.7s,baz=88,slow=38							
TATO	Taipei	42.35	317	P		P	16 12 09.2	+1.3
MUN	Mundaring	42.48	227	P		P	16 12 11.6	+2.7
MUN	Mundaring	42.48	227	P		P	16 12 13.7	+4.7
	comp=Z,58nm,0.9s							
MUN	Mundaring	42.48	227	P		P	16 12 13.6	+4.7
JMN	Monobe	42.60	338	P		P	16 12 09.8	-0.1
JMN	Monobe	42.60	338	P		P	16 12 10.3	+0.4
JMN				IAmb		IAmb	16 12 13.9	
	comp=Z,51nm,1.0s							
JMN	Monobe	42.60	338	P		P	16 12 08.9	-1.0
KPJI	Karang Pucung	42.71	265	P		P	16 12 12.2	+1.1
	comp=Z,58nm,0.7s							
JGF	Kuroka	43.13	343	P		P	16 12 14.8	+0.7
JNU	Nakatsue	43.30	334	LR		LR	16 28 55.5	
	comp=Z,429nm,20.4s,baz=183,slow=34							
MJAR	Matsushiro Arr	43.77	344	P		P	16 12 16.1	-3.1
	comp=Z,9.9nm,0.9s,baz=168,slow=8.3,SNR=12							
MJAR				PcP		PcP	16 14 05.5	+0.2
	comp=Z,4.6nm,0.7s,baz=161,slow=4.2,SNR=6.8							
MJAR				ScP		ScP	16 17 55.0	+2.3
	comp=Z,2.3nm,1.0s,baz=172,slow=4.4,SNR=5.1							
MJAR				LR		LR	16 29 19.5	
	comp=Z,647nm,20.7s,baz=176,slow=34							
MJAR	Matsushiro Arr	43.77	344	P		P	16 12 17.6	-1.6
MJAR							16 14 05.3	
MJAR				pmax		pmax		
	comp=Z,6.0nm,0.9s							
MJAR	Matsushiro Arr	43.77	344	P		P	16 12 17.6	-1.6
MJAR						PcP	16 14 05.3	0.0
M

comp=Z,3µm,19.1s
PPI Padang Panjang 51.65 274 P **P** **16 13 20.3 -0.4**
comp=Z,50nm,0.9s
VLA Vladivostok 51.70 341⇓*e*P **P** **16 13 19.4 -1.1**
VLA pmax pmax
comp=Z,15nm,0.9s
DL2 Dalian 52.34 330 P **P** **16 13 25.8 +0.4**
DL2 S **S** **16 20 48.3 +1.1**
DL2 pmax pmax
comp=Z,47nm,1.1s
DL2 pmax pmax
comp=Z,200nm,5.3s
DL2 L L
comp=Z,490nm,19.5s
DL2 L L
comp=Z,300nm,18.1s
DL2 L L
comp=Z,800nm,19.4s
USA0B Ussuriysk Arra 52.65 342*c i*P **P** **16 13 26.7 -0.8**
USRK Ussuriysk Ar. 52.65 342 P **P** **16 13 26.9 -0.7**
comp=Z,6.5nm,0.9s,baz=172,slow=8.6,SNR=12
USRK LR LR 16 35 38.5
comp=Z,290nm,18.1s,baz=167,slow=36
comp=Z,6.5nm,0.9s
USRK Ussuriysk Ar. 52.65 342 P **P** **16 13 26.5 -1.1**
TIA Tai'an 52.77 325 P **P** **16 13 28.5 -0.1**
TIA PcP **PcP** **16 14 38.0 +0.4**
TIA pmax pmax
comp=Z,21nm,1.0s
TIA L L
comp=Z,520nm,18.6s
TIA L L
comp=Z,360nm,15.5s
TIA L L
comp=Z,700nm,18.1s
YSS Yuzhno-Sakhali 52.88 352 *e*P **P** **16 13 30.8 +1.6**
YSS *e*S **S** **16 20 55.2 +1.0**
YSS pmax pmax
comp=Z,20nm,1.1s
MDJ Mudanjiang 53.79 340 P **P** **16 13 36.4 +0.5**
ENH Enshi 53.99 314 P **P** **16 13 39.3 +1.5**
ENH Enshi 53.99 314 P **P** **16 13 37.8 +0.1**
SLVN Son La 54.09 301 P **P** **16 13 40.5 +1.9**
SLVN Son La 54.09 301 IAmb IAmb 16 13 48.8
comp=Z,25nm,1.2s
GYA Guiyang 54.12 308 ⇓P **P** **16 13 39.8 +0.9**
GYA pmax pmax
comp=Z,20nm,0.9s
LYN LuoYang 54.50 320 P **P** **16 13 41.5 +0.2**
LYN sS sS 16 21 38.5 -1.4
LYN pmax pmax
comp=Z,37nm,1.0s
LYN L L
comp=Z,920nm,21.3s
LYN L L
comp=Z,1µm,22.0s
LYN L L
comp=Z,2µm,23.4s
CN2 Changchun 54.59 337 P **P** **16 13 41.3 -0.5**
CN2 S **S** **16 21 17.0 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 L L
comp=Z,300nm,18.0s
CN2 L L
comp=Z,400nm,18.0s
CN2 L L
comp=Z,400nm,18.0s
HNS HongShan 54.99 324 ⇑P **P** **16 13 44.5 -0.3**
HNS S **S** **16 21 26.8 +3.6**
HNS L L
comp=Z,510nm,17.9s
HNS L L
comp=Z,520nm,18.0s
HNS L L
comp=Z,860nm,22.4s
BNX BinXian 55.52 339 ⇓P **P** **16 13 47.5 -1.0**
BNX pP **pP** **16 14 01.8 -1.2**
BNX PP **PP** **16 15 51.5 -1.6**
BNX S **S** **16 21 32.8 +2.8**
BNX sS **sS** **16 21 54.5 +0.7**
BNX pmax pmax
comp=Z,18nm,1.0s
BNX pmax pmax
comp=Z,59nm,4.9s
BNX L L
comp=Z,170nm,22.1s
BNX L L
comp=Z,140nm,18.3s
BNX L L
comp=Z,250nm,19.4s
BJI2 Beijing 55.99 327 P **P** **16 13 51.8 -0.1**
BJI2 pP **sP** **16 14 08.5 -4.2**
BJI2 sP pP 16 14 15.0 +8.4
BJI2 S **S** **16 21 35.0 -1.4**
BJI2 pmax pmax
comp=Z,57nm,3.9s
BJI2 L L
comp=Z,230nm,19.5s
BJI2 L L
comp=Z,140nm,21.0s
BJI2 L L
comp=Z,370nm,20.7s
XAN Xi'an 56.53 317 ⇓P **P** **16 13 56.0 0.0**
XAN pmax pmax
comp=Z,45nm,1.2s
XAN pmax pmax
comp=Z,240nm,5.3s
XAN L L
comp=Z,600nm,22.0s
XAN L L
comp=Z,800nm,21.0s
XAN L L
comp=Z,1µm,20.6s
XAN Xi'an 56.53 317 P **P** **16 13 55.9 -0.1**
TIY Taiyuan 56.55 323 P **P** **16 13 56.3 +0.2**
TIY L L
comp=Z,480nm,21.3s
TIY L L
comp=Z,400nm,21.3s
TIY L L
comp=Z,750nm,25.4s
KMI2 Kunming 56.65 305 P **P** **16 13 58.0 +0.8**
KMI2 pmax pmax
comp=Z,20nm,1.4s
KMI2 L L
comp=Z,190nm,20.2s
KMI2 L L
comp=Z,320nm,17.9s
KMI2 L L
comp=Z,400nm,20.0s
KLR Kul'dur 57.29 344 LR LR 16 35 43.1
comp=Z,472nm,21.8s,baz=172,slow=33
KLR Kul'dur 57.29 344*c i*P **P** **16 13 59.8 -1.2**
KLR pmax pmax
comp=Z,15nm,0.9s
CM31 Chiang Mai Arr 57.37 296 IAmb IAmb 16 14 03.8
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 57.37 296 P **P** **16 14 02.5 +0.4**
comp=Z,11nm,0.8s,baz=130,slow=5.6,SNR=61
CMAR LR LR 16 38 56.1
comp=Z,201nm,18.6s,baz=120,slow=36
CMAR PKPPKP **P'P'df** **16 43 50.4 -0.6**
comp=Z,0.5nm,0.5s,baz=275,slow=1.9,SNR=1.8
CMAR PKP2bc **P'P'bc** **16 44 02.8 -0.3**
comp=Z,2.8nm,1.0s,baz=266,slow=3.9,SNR=7.7
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 57.37 296 P **P** **16 14 01.5 -0.7**
CHTO Chiang Mai 57.49 296 P **P** **16 14 04.2 +1.2**
CHTO Chiang Mai 57.49 296 P **P** **16 14 02.9 -0.1**
CHTO pmax pmax
comp=Z,21nm,1.0s
CHTO Chiang Mai 57.49 296 P **P** **16 14 02.9 -0.1**
CHTO IAmb IAmb 16 14 05.0
comp=Z,21nm,1.0s
CHTO Chiang Mai 57.49 296 P **P** **16 14 03.1 +0.1**
comp=Z,25nm,1.4s
CHTO Chiang Mai 57.49 296 P **P** **16 14 01.9 -1.1**
CHTO Chiang Mai 57.49 296 P **P** **16 14 03.1 +0.1**
PZH PanZhiHua 58.05 306 P **P** **16 14 07.0 0.0**
PZH S **S** **16 22 06.0 +1.6**
PZH L L
comp=Z,200nm,17.1s
PZH L L
comp=Z,290nm,13.2s
PZH L L
comp=Z,370nm,17.3s
PPT2 Papeete2 58.38 107 *e*P **P** **16 14 06.7 -2.6**
comp=Z,88nm,24.2s
PPT2 *e*S **S** **16 22 01.8 -7.0**
comp=Z,116nm,24.0s
PPT2 *e*SS SS 16 25 52.0 -10
comp=Z,111nm,26.8s
PPT2 *e*LQ LQ 16 28 55.7
comp=Z,538nm,27.5s
PPT2 *e*LR LR 16 31 20.2
comp=Z,267nm,22.5s
PPT2 *e*LR LR 16 31 29.4
comp=Z,213nm,24.0s
CD2 Chengdu 58.53 311 P **P** **16 14 10.0 -0.1**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 L L
comp=Z,640nm,15.9s
CD2 L L
comp=Z,770nm,18.4s
CD2 L L
comp=Z,1µm,20.3s
PET Petropavlovsk 58.61 5 *e*P **P** **16 14 08.7 -1.4**
PET *e*S **S** **16 22 08.7 -1.7**
PET *e**SS **sS** **16 22 37.5 +2.5**
PET *e*SSS SSS 16 28 18.5
PET pmax pmax
comp=Z,100nm,19.6s
PET MLR MLR
comp=Z,200nm,20.0s
PEA0B Petropavlovsk- 58.62 4⇑*e*P **P** **16 14 09.9 -0.4**
PETK Petropavlovsk- 58.62 4 P **P** **16 14 10.5 +0.3**
comp=Z,5.1nm,0.7s,baz=156,slow=5.9,SNR=20
PETK LR LR 16 35 25.1
comp=Z,426nm,20.8s,baz=189,slow=32
comp=Z,5.1nm,0.7s
PETK Petropavlovsk- 58.62 4 P **P** **16 14 10.4 +0.1**
XLT XiLinHaoTe 58.84 330 *e*P **P** **16 14 12.0 -0.1**
XLT sP sP 16 14 33.0 +0.1
XLT S **S** **16 22 18.5 +4.6**
XLT sS sS 16 22 40.3 +2.3
XLT pmax pmax
comp=Z,53nm,0.9s
XLT pmax pmax
comp=Z,86nm,4.8s
XLT L L
comp=Z,310nm,20.4s
XLT L L
comp=Z,590nm,23.4s
TBI Tubuai 59.09 114 *e*S **S** **16 22 10.0 -7.8**
comp=Z,1µm,27.8s
TBI *e*LQ LQ 16 29 13.7
comp=Z,5µm,34.2s
TBI *e*LR LR 16 31 42.9
comp=Z,2µm,33.8s
HHC Hu-ho-hao-te 59.11 325 *e*P **P** **16 14 14.3 +0.2**
HHC S **S** **16 22 17.0 -0.6**
HHC sS sS 16 22 43.5 +1.7
HHC SS **SS** **16 26 16.5 +3.8**
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,64nm,4.1s
HHC L L
comp=Z,460nm,18.6s
HHC L L
comp=Z,340nm,18.6s
HHC L L
comp=Z,710nm,18.5s
HEH HeiHe 59.46 342 *e*P **P** **16 14 14.5 -1.6**
HEH pmax pmax
comp=Z,12nm,0.9s
HEH L L
comp=Z,210nm,18.1s
HEH L L
comp=Z,200nm,20.7s
HEH L L
comp=Z,290nm,19.9s
BTO2 Baotou 60.02 324 *e*P **P** **16 14 20.8 +0.5**
BTO2 pP **pP** **16 14 33.8 -1.2**
BTO2 S **S** **16 22 31.0 +1.6**
BTO2 pmax pmax
comp=Z,49nm,0.7s
BTO2 pmax pmax
comp=Z,220nm,5.0s
BTO2 L L
comp=Z,960nm,12.1s
BTO2 L L
comp=Z,820nm,14.1s
BTO2 L L
comp=Z,1µm,19.7s
TNCH TengChong 60.10 303 ⇑P **P** **16 14 20.8 -0.4**
TNCH pP sP 16 14 39.8 -2.1
TNCH PP **PP** **16 16 35.8 +1.4**
TNCH S **S** **16 22 29.5 -1.5**
TNCH pmax pmax
comp=Z,43nm,0.8s
TNCH pmax pmax
comp=Z,140nm,2.9s
TNCH L L
comp=Z,400nm,23.0s
NPW Naypyitaw 60.30 296 P **P** **16 14 22.0 -0.5**
SHEM Shemya Is, Ala 61.02 15 LR LR 16 36 15.3
comp=Z,732nm,21.9s,baz=176,slow=31
LZH Lanzhou 61.12 317 *e*P **P** **16 14 29.0 +1.0**
LZH pP sP 16 14 45.3 -3.3
LZH sS sS 16 23 02.3 -6.1
LZH pmax pmax
comp=Z,46nm,1.3s
LZH L L
comp=Z,390nm,15.8s
LZH L L
comp=Z,430nm,14.8s
LZH L L
comp=Z,470nm,15.8s
LZDM Lanzhou Array 61.16 316 P **P** **16 14 27.8 -0.6**
comp=Z,38nm,0.9s,baz=123,slow=7.3,SNR=8.3
comp=Z,38nm,0.9s
HIA Hailar 61.33 337 P **P** **16 14 29.3 +0.3**
HILR Hailar Array B 61.56 337 P **P** **16 14 29.9 -0.7**
comp=Z,5.1nm,0.6s,baz=134,slow=11,SNR=13
comp=Z,5.1nm,0.6s
DRV Dumont d'Urvil 61.59 185 P **P** **16 14 31.0 +0.6**
ZEA Zeya 62.58 344 *e*P **P** **16 14 36.8 -0.4**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ADK Adak 63.17 21 P **P** **16 14 41.4 +0.3**
ADK pmax pmax
comp=Z,20nm,1.0s
ADK Adak 63.17 21 P **P** **16 14 41.4 +0.3**
ADK IAmb IAmb 16 15 26.2
comp=Z,20nm,0.9s
MORE Moreh 63.38 300 IAmb IAmb 16 14 42.3
comp=Z,20nm,0.9s
ATKA Atka Island 64.34 22 P **P** **16 14 48.4 -0.4**
ATKA IAmb IAmb 16 15 24.2
comp=Z,30nm,0.8s
MA2 Magadan 64.90 359 P **P** **16 14 55.0 +2.6**
MA2 Magadan 64.90 359 LR LR 16 42 45.7
comp=Z,264nm,19.4s,baz=176,slow=36
MA2 Magadan 64.90 359*ce*P **P** **16 14 52.6 +0.2**
MA2 pmax pmax
comp=Z,22nm,0.8s
MA2 Magadan 64.90 359 P **P** **16 14 52.9 +0.5**
MA2 IAmb IAmb 16 14 54.5
comp=Z,20nm,0.8s
MA2 Magadan 64.90 359 P **P** **16 14 51.7 -0.7**
BRDH Bariadhala 65.19 298 LR LR 16 43 00.3
comp=Z,155nm,20.9s,baz=147,slow=36
GTA2 Gaotai 65.65 318 P **P** **16 14 58.3 +0.5**
GTA2 pmax pmax
comp=Z,24nm,1.1s
GTA2 L L
comp=Z,170nm,18.4s
GTA2 L L
comp=Z,340nm,20.3s
GTA2 L L
comp=Z,420nm,20.3s
SHL Shillong 65.90 301 P **P** **16 14 59.5 -0.3**
SHL pmax pmax
comp=Z,53nm,1.5s
ULN Ulaanbaatar 66.14 329*c i*P **P** **16 15 01.2 +0.4**
ULN pmax pmax
comp=Z,36nm,1.0s
ULN Ulaanbaatar 66.14 329 P **P** **16 15 01.1 +0.2**
ULN IAmb IAmb 16 15 02.3
comp=Z,36nm,1.1s
ULN Ulaanbaatar 66.14 329 P **P** **16 15 01.0 +0.2**
ULN Ulaanbaatar 66.14 329 P **P** **16 15 00.7 -0.1**
ULN Ulaanbaatar 66.14 329 P **P** **16 15 01.1 +0.4**
SONM Songino Array 66.46 328 P **P** **16 15 03.2 +0.3**
comp=Z,24nm,0.7s,baz=139,slow=5.3,SNR=76
SONM PKPPKP **P'P'df** **16 43 35.1 +0.9**
comp=Z,0.5nm,0.6s,baz=186,slow=1.5,SNR=3.8
SONM LR LR 16 44 27.4
comp=Z,507nm,19.6s,baz=134,slow=36
comp=Z,24nm,0.7s
SONM Songino Array 66.46 328 P **P** **16 15 03.0 +0.1**
SONM IAmb IAmb 16 15 04.2
comp=Z,62nm,1.3s
CASY Casey 67.06 197 P **P** **16 15 06.7 +0.6**
CASY Casey 67.06 197 P **P** **16 15 06.1 -0.1**
CASY Casey 67.06 197 P **P** **16 15 06.1 -0.1**
TAOE Nuku Hiva Isla 67.44 97 *e*LR LR 16 35 20.6
comp=Z,318nm,24.6s
GOMU GeErMu 67.58 313 P **P** **16 15 11.3 +0.8**
GOMU S **S** **16 24 06.0 +2.0**
GOMU pmax pmax
comp=Z,16nm,1.0s
GOMU L L
comp=Z,240nm,18.4s
GOMU L L
comp=Z,410nm,18.0s
GOMU L L
comp=Z,730nm,18.2s
LSA Lhasa 67.90 305⇑*i*P **P** **16 15 08.5 -4.3**
LSA pmax pmax
comp=Z,26nm,0.9s
SEY Seymchan 68.27 0 LR LR 16 41 09.0
comp=Z,238nm,21.9s,baz=156,slow=32
SEY Seymchan 68.27 0⇑*e*P **P** **16 15 14.3 +0.5**
SEY pmax pmax
comp=Z,10.0nm,1.1s
YAK Yakutsk 69.51 349 LR LR 16 44 50.8
comp=Z,199nm,20.6s,baz=158,slow=35
YAK Yakutsk 69.51 349 *e*P **P** **16 15 20.4 -1.1**
YAK *e**PP **pP** **16 15 30.1 -6.6**
YAK *e* 16 15 42.7
YAK *e* 16 17 52.3
YAK *e*PPP PPP 16 19 35.2
YAK *e*S **S** **16 24 26.0 +1.0**
YAK *e**SS **pS** **16 24 43.4 +0.4**
YAK *e* 16 25 18.0
YAK *e*SS **SS** **16 28 54.8 +1.2**
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=Z,60nm,4.5s
YAK pmax pmax
comp=N,59nm,5.3s
YAK pmax pmax
comp=E,35nm,3.3s
YAK smax smax
comp=E,41nm,3.8s
YAK smax smax
comp=N,33nm,4.0s
YAK MLR MLR
comp=Z,351nm,27.0s
YAK MLR MLR
comp=N,105nm,16.0s
YAK MLR MLR
comp=E,92nm,19.0s
YAK Yakutsk 69.51 349 P **P** **16 15 20.3 -1.2**
YAK IAmb IAmb 16 15 26.2
comp=Z,21nm,0.7s
YAK Yakutsk 69.51 349 P **P** **16 15 20.6 -0.9**
TLY Talaya 70.25 330 LR LR 16 47 09.2
comp=Z,295nm,18.5s,baz=125,slow=37
TLY Talaya 70.25 330*c i*P **P** **16 15 26.0 -0.4**
TLY pmax pmax
comp=Z,23nm,0.9s
TLY Talaya 70.25 330 P **P** **16 15 26.4 0.0**
TLY IAmb IAmb 16 15 27.9
comp=Z,22nm,1.0s
TLY Talaya 70.25 330 P **P** **16 15 26.7 +0.3**
TLY Talaya 70.25 330 P **P** **16 15 26.7 +0.3**
IRK Irkutsk 70.30 331 *e*P **P** **16 15 25.3 -1.3**
IRK pmax pmax
comp=Z,46nm,1.2s
EVN Everest 70.94 302 IAmb IAmb 16 15 32.9
comp=Z,25nm,0.9s
CCD Concordia, Ant 71.43 188 P **P** **16 15 35.4 +1.8**
MOY Mondy 71.57 329 *e*P **P** **16 15 34.2 -0.3**
MOY pmax pmax
comp=Z,42nm,1.8s
VNDA Vanda 72.14 178 P **P** **16 15 38.1 +0.8**
comp=Z,2.3nm,1.0s,baz=333,slow=7.3,SNR=12
VNDA LR LR 16 45 38.6
comp=Z,292nm,18.6s,baz=340,slow=34
comp=Z,2.3nm,1.0s
VNDA Vanda 72.14 178 P **P** **16 15 39.1 +1.7**
VNDA pmax pmax
comp=Z,8.0nm,1.0s
VNDA Vanda 72.14 178 P **P** **16 15 39.1 +1.7**
VNDA Vanda 72.14 178 P **P** **16 15 37.0 -0.3**
PALK Pallekele 72.16 279 LR LR 16 52 44.5
comp=Z,133nm,18.1s,baz=105,slow=40
SDPT Sand Point 72.27 26 P **P** **16 15 39.0 +0.6**
baz=230
CHNA Chernabura Isl 72.34 27 P **P** **16 15 39.4 +0.6**
baz=231
SBA Scott Base 72.70 177 P **P** **16 15 41.5 +0.8**
KNGR Kungurtug, Tuv 72.80 327*d i*P **P** **16 15 42.5 +0.7**
KNGR pmax pmax
comp=Z,58nm,0.8s
S14K Fog Glacier 73.26 26 P **P** **16 15 45.0 +0.6**
baz=231
M11K Mekoryuk 73.45 20 P **P** **16 15 46.4 +1.2**
baz=224
BILL Bilibino 74.09 6*ce*P **P** **16 15 50.1 +1.2**
BILL pmax pmax
comp=Z,23nm,0.9s
BILL Bilibino 74.09 6 P **P** **16 15 50.4 +1.4**
GAMB Gambell 74.32 16 P **P** **16 15 51.6 +1.3**
baz=218
O14K Tigyukauivet M 74.47 23 P **P** **16 15 52.3 +1.1**
baz=229
M13K Dall Lake 74.47 21 IAmb IAmb 16 15 55.0
comp=Z,30nm,0.9s
M13K Dall Lake 74.47 21 P **P** **16 15 52.7 +1.4**
baz=227
CHIR Chirikof Islan 74.75 28 P **P** **16 15 54.0 +1.1**
baz=235
N14K Kuskokwak Cree 74.75 22 P **P** **16 15 54.3 +1.4**
baz=228
O15K Ungalikthiuk R 74.99 23 IAmb IAmb 16 15 56.0
comp=Z,30nm,1.1s
O15K Ungalikthiuk R 74.99 23 P **P** **16 15 54.9 +0.7**
baz=230,SNR=8.5
K13K Kusilvak Mount 75.08 20 P **P** **16 15 56.4 +1.7**
baz=225,SNR=5.1
M14K Bethel 75.21 21 IAmb IAmb 16 15 58.5
comp=Z,34nm,0.9s
M14K Bethel 75.21 21 P **P** **16 15 56.7 +1.3**
baz=228,SNR=8.6
L14K Kuka Creek 75.35 21 IAmb IAmb 16 15 59.4
comp=Z,30nm,0.8s
L14K Kuka Creek 75.35 21 P **P** **16 15 57.6 +1.3**
baz=227,SNR=16
R17L Mt. Peulik Vol 75.47 26 P **P** **16 15 57.7 +0.6**
baz=234
N15K Kwethluk River 75.52 23 IAmb IAmb 16 16 00.3
comp=Z,21nm,0.8s
N15K Kwethluk River 75.52 23 P **P** **16 15 58.1 +0.8**
baz=230,SNR=7.5
M15K Kasigluk River 75.64 22 P **P** **16 15 58.8 +0.8**
baz=229,SNR=9.6
WMQ Urumqi 75.66 318 ⇑P **P** **16 15 59.0 +0.4**
WMQ SKS **SKSac** **16 25 59.3 -5.3**
WMQ pmax pmax
comp=Z,22nm,1.1s
WMQ pmax pmax
comp=Z,100nm,4.9s
WMQ L L
comp=Z,230nm,23.5s
WMQ L L

comp=Z,270nm,16.1s
WMQ L L
comp=Z,220nm,22.3s
SII Sitkinak Islan 75.83 27 P **P** **16 16 02.5 +3.3**
SII Sitkinak Islan 75.83 27 P **P** **16 15 59.8 +0.6**
baz=236
HYB Hyderabad 75.87 289 *e*P **P** **16 16 00.2 -0.1**
HYB *e*S **S** **16 25 40.6 +1.3**
O16K Kokwok River B 75.94 24 P **P** **16 16 00.0 +0.3**
baz=232
L15K Ungalak Mounta 76.00 21 P **P** **16 16 00.8 +0.8**
baz=228,SNR=5.3
J14K Nanvaranak Lak 76.02 19 IAmb IAmb 16 16 03.7
comp=Z,26nm,0.9s
J14K Nanvaranak Lak 76.02 19 P **P** **16 16 02.1 +2.0**
baz=226,SNR=13
Q17K Contact Creek 76.05 25 P **P** **16 16 00.6 +0.1**
baz=234
N16K Nishlik Lake 76.22 23 P **P** **16 16 02.3 +0.9**
baz=231,SNR=7.0
ACHA Angle Creek He 76.26 26 IAmb IAmb 16 16 03.6
comp=Z,22nm,0.8s
P17K Kvichak River 76.37 25 P **P** **16 16 02.6 +0.5**
baz=233
K15K Wolf Creek Mou 76.40 20 IAmb IAmb 16 16 05.5
comp=Z,35nm,0.8s
K15K Wolf Creek Mou 76.40 20 P **P** **16 16 03.4 +1.1**
baz=228,SNR=18
O17K Koliganek Bris 76.45 24 P **P** **16 16 03.2 +0.6**
baz=233,SNR=12
M16K Timber Creek 76.50 22 IAmb IAmb 16 16 06.1
comp=Z,33nm,0.8s
M16K Timber Creek 76.50 22 P **P** **16 16 04.0 +1.1**
baz=231,SNR=18
OHAK Old Harbor 76.61 27 P **P** **16 16 04.4 +0.9**
OHAK Old Harbor 76.61 27 IAmb IAmb 16 16 05.0
comp=Z,29nm,0.8s
OHAK Old Harbor 76.61 27 P **P** **16 16 04.1 +0.6**
baz=237,SNR=6.6
Q18K Katmai Hardscr 76.65 25 P **P** **16 16 03.9 0.0**
baz=235,SNR=17
ANM Nome 76.74 18 P **P** **16 16 06.0 +1.9**
baz=224
L16K Owhat River 76.75 22 P **P** **16 16 05.2 +1.0**
baz=230,SNR=12
N17K Nushagak Hills 76.87 23 P **P** **16 16 06.2 +1.2**
baz=232,SNR=7.7
P18K Big Mountain, 76.99 25 P **P** **16 16 06.8 +1.0**
baz=234
F14K Arctic Creek 77.12 17 P **P** **16 16 07.6 +1.3**
baz=223
KDAK Kodiak Island 77.23 27 LR LR 16 46 17.7
comp=Z,77nm,19.8s,baz=228,slow=33
KDAK Kodiak Island 77.23 27 P **P** **16 16 07.5 +0.4**
KDAK pmax pmax
comp=Z,36nm,1.0s
KDAK Kodiak Island 77.23 27 P **P** **16 16 07.5 +0.4**
KDAK IAmb IAmb 16 16 09.1
comp=Z,36nm,0.9s
KDAK Kodiak Island 77.23 27 P **P** **16 16 07.4 +0.4**
baz=237
KDAK Kodiak Island 77.23 27 P **P** **16 16 08.1 +1.1**
KDAK Kodiak Island 77.23 27 P **P** **16 16 07.9 +0.9**
O18K Koktuh Hills 77.26 24 P **P** **16 16 07.8 +0.5**
baz=234
M17K Holitna River 77.31 22 IAmb IAmb 16 16 11.0
comp=Z,18nm,0.8s
M17K Holitna River 77.31 22 P **P** **16 16 08.7 +1.3**
baz=232,SNR=12
J16K Anvik River 77.38 20 P **P** **16 16 09.2 +1.5**
baz=229,SNR=6.8
Q19K Cape Douglas, 77.39 26 P **P** **16 16 08.0 0.0**
baz=236,SNR=7.6
G15K Niukluk 77.44 18 P **P** **16 16 09.3 +1.2**
baz=225
L17K Donlin 77.45 22 P **P** **16 16 09.5 +1.3**
baz=231,SNR=12
N18K Kilae Creek 77.47 23 IAmb IAmb 16 16 10.9
comp=Z,24nm,1.0s
N18K Kilae Creek 77.47 23 P **P** **16 16 09.0 +0.6**
baz=234,SNR=18
I17K Unalakleet 77.74 19 P **P** **16 16 11.0 +1.2**
baz=228
H16K Elim 77.75 18 P **P** **16 16 10.8 +1.0**
baz=227
F15K North Star Dit 77.77 17 P **P** **16 16 11.0 +1.1**
baz=224
K17K Iditarod 77.81 21 IAmb IAmb 16 16 13.6
comp=Z,22nm,0.8s
K17K Iditarod 77.81 21 P **P** **16 16 11.4 +1.2**
baz=231,SNR=14
O19K Port Alsworth 77.83 24 P **P** **16 16 11.2 +0.9**
baz=235
J17K VABM Dome 77.97 20 P **P** **16 16 12.1 +1.0**
baz=230,SNR=18
P19K Oil Pt 77.97 25 P **P** **16 16 11.4 +0.2**
baz=236
M18K Stony River 77.98 23 P **P** **16 16 12.0 +0.8**
baz=234,SNR=8.8
L18K Granite Mounta 78.09 22 P **P** **16 16 13.0 +1.2**
baz=233,SNR=16
N19K Bonanza Creek 78.11 24 P **P** **16 16 12.7 +0.7**
baz=235,SNR=10
DGZ Jazzator, Alta 78.12 323*c i*P **P** **16 16 12.1 -0.3**
DGZ pmax pmax
comp=Z,35nm,0.8s
O20K Slope Mountain 78.47 25 P **P** **16 16 14.1 +0.1**
baz=237,SNR=16
TIXI Tiksi 78.50 353 LR LR 16 53 19.0
comp=Z,188nm,18.5s,baz=178,slow=38
TIXI Tiksi 78.50 353‖ *e*P **P** **16 16 13.9 +0.1**
TIXI pmax pmax
comp=Z,11nm,1.1s
TIXI Tiksi 78.50 353 P **P** **16 16 13.1 -0.7**
HOM Homer 78.65 26 P **P** **16 16 15.5 +0.6**
baz=238,SNR=7.0
H17K Granite Mounta 78.69 19 P **P** **16 16 16.0 +0.9**
baz=229,SNR=12
L19K White Mountain 78.76 23 IAmb IAmb 16 16 18.1
comp=Z,20nm,0.8s
L19K White Mountain 78.76 23 P **P** **16 16 16.7 +1.2**
baz=234,SNR=17
G17K Kiwalik Mounta 78.83 18 P **P** **16 16 17.0 +1.2**
baz=228,SNR=9.0
J18K Innoko River 78.84 21 P **P** **16 16 16.6 +0.7**
baz=232,SNR=17
ZSN Zaisan 78.84 320*c i*P **P** **16 16 15.9 -0.4**
ZSN Zaisan 78.84 320‖ *i*P **P** **16 16 16.0 -0.4**
BRLK Bradley Lake 79.04 26 IAmb IAmb 16 16 18.4
comp=Z,28nm,0.7s
BRSE Bradley Lake S 79.09 26 P **P** **16 16 18.3 +1.0**
baz=238,SNR=5.6
M20K Styx River 79.26 23 P **P** **16 16 19.2 +0.8**
baz=236,SNR=13
F17K Baldwin Pennin 79.28 17 IAmb IAmb 16 16 26.5
comp=Z,20nm,0.8s
F17K Baldwin Pennin 79.28 17 P **P** **16 16 19.2 +1.0**
baz=228,SNR=9.9
H18K Honhosa River 79.33 19 P **P** **16 16 19.8 +1.2**
baz=231
C16K Lisburne Hills 79.44 15 P **P** **16 16 20.3 +1.3**
baz=223
E17K Hotham Inlet 79.55 17 P **P** **16 16 20.5 +0.8**
baz=227,SNR=15
J19K Poorman 79.55 21 P **P** **16 16 20.7 +0.9**
baz=233,SNR=8.0
GCSA Galena City Sc 79.57 20 P **P** **16 16 20.9 +1.1**
baz=232
D17K Noatak River 79.62 16 P **P** **16 16 20.8 +0.8**
baz=226,SNR=6.7
SLKM Skilak Lake 79.71 25 IAmb IAmb 16 16 21.9
comp=Z,39nm,0.7s
G18K Tagagawik 79.72 18 P **P** **16 16 21.5 +0.9**
baz=230,SNR=8.7
K20K Telida 79.74 22 P **P** **16 16 21.7 +0.9**
baz=235
SEW Seward 79.83 26 IAmb IAmb 16 16 22.8
comp=Z,33nm,0.9s
SEW Seward 79.83 26 P **P** **16 16 21.8 +0.5**
baz=240,SNR=12
F18K Selawik 79.87 18 P **P** **16 16 22.3 +0.9**
baz=229,SNR=8.3
O22K Cooper Landing 79.91 25 P **P** **16 16 22.4 +0.7**
baz=239
RDOG Red Dog Mine 79.92 16 IAmb IAmb 16 16 25.4
comp=Z,22nm,0.9s
RDOG Red Dog Mine 79.92 16 P **P** **16 16 22.5 +0.8**
baz=226

SKT Skwentna 79.95 24 P **P** **16 16 21.5 -0.5**
baz=237
E18K Tukpahlearik C 80.13 17 P **P** **16 16 23.5 +0.7**
baz=228
C17K DeLong Mountai 80.15 15 P **P** **16 16 23.5 +0.6**
baz=225,SNR=5.6
J20K Nowinta River 80.19 21 P **P** **16 16 23.9 +0.7**
baz=235,SNR=18
PPLA Purkeypile 80.19 23 P **P** **16 16 23.9 +0.5**
baz=237
H19K Roundabout Mou 80.20 19 P **P** **16 16 23.5 +0.3**
baz=232,SNR=18
RC01 Rabbit Creek A 80.21 25 IAmb IAmb 16 16 24.6
comp=Z,29nm,1.1s
RC01 Rabbit Creek A 80.21 25 P **P** **16 16 23.8 +0.4**
baz=239,SNR=5.8
MK31 Makanchi Array 80.28 319*c i*P **P** **16 16 23.5 -0.6**
MKAR Makanchi Array 80.28 319 P **P** **16 16 23.6 -0.5**
comp=Z,19nm,0.9s,baz=107,slow=5.2,SNR=125
MKAR PP **PP** **16 19 26.2 -1.2**
comp=Z,2.5nm,1.0s,baz=111,slow=7.9,SNR=3.3
MKAR PKKPbc **PKKPbc** **16 35 07.7 -1.1**
comp=Z,0.6nm,0.8s,baz=300,slow=2.7,SNR=5.1
MKAR LR LR 16 52 07.3
comp=Z,337nm,19.8s,baz=89,slow=36
comp=Z,19nm,0.9s
G19K Purcell Mounta 80.37 19 P **P** **16 16 24.7 +0.5**
baz=232,SNR=9.8
M22K Willow 80.39 24 IAmb IAmb 16 16 45.9
comp=Z,25nm,0.8s
M22K Willow 80.39 24 P **P** **16 16 24.4 0.0**
baz=239
I20K Naaghedeneel 80.43 20 P **P** **16 16 25.3 +0.8**
baz=234
MAKZ Makanchi 80.48 319 P **P**
MAKZ pmax pmax
comp=Z,34nm,1.0s
MAKZ Makanchi 80.48 319 P **P** **16 16 24.1 -1.0**
MAKZ IAmb IAmb 16 16 26.0
comp=Z,34nm,0.9s
MAKZ Makanchi 80.48 319 P **P** **16 16 24.9 -0.3**
MAKZ Makanchi 80.48 319 P **P** **16 16 24.9 -0.3**
CAST Castle Rocks 80.51 22 P **P** **16 16 25.0 0.0**
baz=237,SNR=18
L22K Petersville 80.54 23 P **P** **16 16 24.2 -1.0**
baz=238,SNR=12
F19K Shalaluckik Mo 80.59 18 P **P** **16 16 25.9 +0.6**
baz=231
P23K Montague Islan 80.67 26 IAmb IAmb 16 16 27.5
comp=Z,32nm,1.1s
P23K Montague Islan 80.67 26 P **P** **16 16 26.2 +0.3**
baz=242
CHUM Lake Minchumin 80.68 22 P **P** **16 16 26.2 +0.4**
baz=236,SNR=9.4
H20K Anotleneega Mo 80.70 20 P **P** **16 16 26.4 +0.5**
baz=234,SNR=7.1
PMR Palmer 80.72 25 P **P** **16 16 28.8 +2.7**
PMR Palmer 80.72 25 P **P** **16 16 26.5 +0.5**
baz=240
WUS Wushi 80.74 313 IAmb IAmb 16 16 28.2
comp=Z,21nm,0.8s
C18K Utukok River 80.79 16 P **P** **16 16 26.9 +0.5**
baz=227
Q23K Middleton Isla 80.88 27 P **P** **16 16 27.3 +0.3**
baz=243
KNK Knik Glacier 80.91 25 IAmb IAmb 16 16 28.8
comp=Z,45nm,1.4s
KNK Knik Glacier 80.91 25 P **P** **16 16 27.7 +0.5**
baz=240
SHLS Shalkode 81.10 315 *e*P **P** **16 16 26.6 -2.1**
SHLS pmax pmax
comp=Z,20nm,1.0s
SHLS Shalkode 81.10 315 *e*P **P** **16 16 26.7 -2.1**
comp=Z,20nm,1.0s
E19K Redstone River 81.15 18 IAmb IAmb 16 16 31.9
comp=Z,30nm,0.8s
E19K Redstone River 81.15 18 P **P** **16 16 28.8 +0.5**
baz=231
SML Sawmill 81.16 25 IAmb IAmb 16 16 29.9
comp=Z,28nm,0.8s
SML Sawmill 81.16 25 P **P** **16 16 28.6 +0.1**
baz=240,SNR=17
TRF Thorofare Moun 81.21 23 P **P** **16 16 28.9 0.0**
baz=238
GLI Glacier Island 81.23 26 IAmb IAmb 16 16 30.2
comp=Z,28nm,0.8s
GLI Glacier Island 81.23 26 P **P** **16 16 29.2 +0.4**
baz=242,SNR=14
ZAA0 Zalesovo Array 81.25 327 IAmb IAmb 16 16 28.8
comp=Z,16nm,0.7s
ZALV Zalesovo Beam 81.25 327 P **P** **16 16 27.7 -1.4**
comp=Z,12nm,0.5s,baz=109,slow=5.4,SNR=68
ZALV LR LR 16 52 13.9
comp=Z,374nm,20.3s,baz=118,slow=36
comp=Z,12nm,0.5s
HIN Hinchinbrook I 81.26 26 IAmb IAmb 16 16 30.7
comp=Z,57nm,1.4s
F20K Avaraart Lake 81.36 18 P **P** **16 16 30.0 +0.6**
baz=233,SNR=22
UZB Uzynbulak 81.41 315*c i*P **P** **16 16 29.9 -0.5**
UZB Uzynbulak 81.41 315‖ *i*P **P** **16 16 30.0 -0.5**
FID Port Fidalgo 81.43 26 IAmb IAmb 16 16 31.3
comp=Z,29nm,0.9s
H21K Mebozitna Rive 81.50 20 P **P** **16 16 30.9 +0.7**
baz=236,SNR=9.7
I21K Tanana 81.52 21 P **P** **16 16 31.0 +0.8**
baz=237,SNR=17
C19K Lookout Ridge 81.53 16 P **P** **16 16 30.8 +0.5**
baz=229
D19K Kuna River 81.55 17 P **P** **16 16 30.9 +0.5**
baz=230
WAT1 Susitna Watana 81.57 24 P **P** **16 16 30.7 0.0**
baz=240
SCM Sheep Creek Mo 81.58 25 P **P** **16 16 31.1 +0.3**
baz=241,SNR=8.2
EYAK Cordova Ski Ar 81.66 26 P **P** **16 16 33.6 +2.5**
EYAK Cordova Ski Ar 81.66 26 P **P** **16 16 31.4 +0.3**
baz=243
PRZ Przheval'sk 81.67 314 P **P** **16 16 33.4 +1.5**
PRZ Przheval'sk 81.67 314 P **P** **16 16 33.4 +1.5**
KPKS Kokpek 81.73 315 *e*P **P** **16 16 31.6 -0.4**
KPKS Kokpek 81.73 315 *e*P **P** **16 16 31.7 -0.4**
G21K Allakaket 81.75 19 P **P** **16 16 31.9 +0.4**
baz=235
WAT6 Susitna Watana 81.78 24 P **P** **16 16 32.0 +0.1**
baz=241,SNR=7.8
SATY Saty 81.82 315 *e*P **P** **16 16 32.1 -0.4**
SATY Saty 81.82 315 *e*P **P** **16 16 32.1 -0.4**
MCK McKinley 81.88 23 IAmb IAmb 16 16 37.1
comp=Z,32nm,1.1s
MCK McKinley 81.88 23 P **P** **16 16 31.8 -0.4**
baz=240,SNR=7.0
MLY Manley 81.88 21 IAmb IAmb 16 16 34.2
comp=Z,17nm,0.6s
MLY Manley 81.88 21 P **P** **16 16 32.5 +0.2**
baz=238,SNR=43
A19K Wainwright 81.89 15 P **P** **16 16 33.0 +1.0**
baz=227
TARG Taragay, Kyrgy 81.90 313 P **P** **16 16 33.7 +0.3**
TARG Taragay, Kyrgy 81.90 313 P **P** **16 16 33.7 +0.3**
DIV Divide 81.92 26 IAmb IAmb 16 16 34.3
comp=Z,32nm,1.3s
E20K Nigu River 81.95 17 P **P** **16 16 33.3 +0.7**
baz=232
KAIM Kayak Island 81.98 27 IAmb IAmb 16 16 35.0
comp=Z,29nm,0.8s
KAIM Kayak Island 81.98 27 P **P** **16 16 33.6 +0.8**
baz=244,SNR=6.2
KLU Klutina 82.02 25 IAmb IAmb 16 16 54.5
comp=Z,22nm,1.0s
KLU Klutina 82.02 25 P **P** **16 16 34.1 +1.0**
baz=243,SNR=14
RAGM Ragged Mountai 82.06 27 IAmb IAmb 16 16 35.3
comp=Z,29nm,1.0s
D20K Etivluk River 82.11 17 P **P** **16 16 33.9 +0.5**
baz=232
H22K Ishtalitna Cre 82.12 20 P **P** **16 16 33.7 +0.2**
baz=237,SNR=8.5
DHY Denali Highway 82.16 24 P **P** **16 16 34.1 +0.2**
baz=241,SNR=11
F21K Alatna River 82.17 19 P **P** **16 16 34.0 +0.3**
baz=235,SNR=6.6
NEA2 Nenana 82.27 22 P **P** **16 16 33.3 -0.9**
baz=239,SNR=17
TDK Taldyqorghan 82.34 317 *e*P **P** **16 16 34.8 -0.2**
TDK pmax pmax
comp=Z,26nm,0.9s

TDK Taldyqorghan 82.34 317 *e*P **P** **16 16 34.9 -0.2**
comp=Z,26nm,0.9s
BMRM Bremner River 82.35 26 IAmb IAmb 16 16 49.8
comp=Z,40nm,1.3s
BMRM Bremner River 82.35 26 P **P** **16 16 35.1 +0.3**
baz=244,SNR=8.0
I23K Minto, Yukon-K 82.44 21 P **P** **16 16 35.3 +0.2**
baz=239,SNR=7.3
KDJ Kajisay 82.45 314 P **P** **16 16 36.4 +0.5**
KDJ Kajisay 82.45 314 P **P** **16 16 36.4 +0.5**
BERG Berg Lake 82.50 27 IAmb IAmb 16 16 37.6
comp=Z,40nm,0.9s
N25K Chitina, Valde 82.64 26 P **P** **16 16 36.8 +0.4**
baz=244,SNR=7.9
G22K Bettles 82.64 19 P **P** **16 16 36.6 +0.5**
baz=237
E21K Killik River 82.72 18 P **P** **16 16 37.1 +0.5**
baz=234,SNR=20
H23K Yukon River 82.73 21 IAmb IAmb 16 16 39.4
comp=Z,66nm,2.0s
H23K Yukon River 82.73 21 P **P** **16 16 37.0 +0.3**
baz=239
F22K John River 82.75 19 P **P** **16 16 37.5 +0.8**
baz=236,SNR=12
HARP HAARP 82.75 25 IAmb IAmb 16 17 03.4
comp=Z,19nm,1.0s
HARP HAARP 82.75 25 P **P** **16 16 37.3 +0.5**
baz=243
B20K Meade River 82.77 16 P **P** **16 16 37.2 +0.5**
baz=231
MDOK Medeo 82.81 315 *e*P **P** **16 16 37.3 -0.4**
MDOK Medeo 82.81 315 *e*P **P** **16 16 37.3 -0.4**
TNSS Tian-Shan 82.84 314 *e*P **P** **16 16 37.5 -0.7**
TNSS Tian-Shan 82.84 314 *e*P **P** **16 16 37.5 -0.7**
COLA College 82.86 22 P **P** **16 16 38.8 +1.6**
COLA College 82.86 22*c i*P **P** **16 16 36.3 -0.9**
COLA pmax pmax
comp=Z,22nm,0.8s
COLA College 82.86 22 P **P** **16 16 37.1 -0.1**
COLA IAmb IAmb 16 16 38.6
comp=Z,26nm,0.6s
COLA College 82.86 22 P **P** **16 16 36.6 -0.7**
PAX Paxson 82.88 24 P **P** **16 16 37.2 -0.4**
baz=243,SNR=5.5
GLB Gilahina Butte 82.90 26 IAmb IAmb 16 16 39.4
comp=Z,75nm,1.7s
C21K Knifeblade Rid 82.91 17 P **P** **16 16 38.2 +0.7**
baz=234,SNR=7.9
CRQM Cirque 82.91 27 IAmb IAmb 16 16 39.7
comp=Z,40nm,1.3s
CRQE Cirque 82.93 27 P **P** **16 16 38.5 +0.5**
baz=245,SNR=9.0
KSH2 Kashi 82.94 310 P **P** **16 16 38.5 0.0**
KSH2 pP pP 16 16 53.3 -0.4
KSH2 S **SKSac** **16 26 55.0 -1.2**
KSH2 pmax pmax
comp=Z,15nm,1.0s
KSH2 pmax pmax
comp=Z,230nm,5.7s
KSH2 L L
comp=Z,170nm,16.5s
KSH2 L L
comp=Z,160nm,16.1s
KSH2 L L
comp=Z,220nm,16.1s
VRDI Verde Repeater 82.97 26 IAmb IAmb 16 16 39.9
comp=Z,54nm,1.6s
HDA Harding Lake 82.97 23 P **P** **16 16 37.3 -0.6**
baz=241,SNR=10
G23K Bananza Creek 83.02 20 P **P** **16 16 38.6 +0.4**
baz=238,SNR=24
TGL Tana Glacier 83.05 27 IAmb IAmb 16 16 40.4
comp=Z,17nm,1.0s
POKR Poker Plat Res 83.13 22 P **P** **16 16 38.9 +0.1**
baz=241
ULHL Ulahol 83.16 314 P **P** **16 16 40.3 +0.7**
SNR=8.3
IL31 83.17 22 IAmb IAmb 16 16 40.0
comp=Z,13nm,0.7s
ILAR Eielson Array 83.17 22 P **P** **16 16 38.4 -0.6**
comp=Z,11nm,0.7s,baz=248,slow=5.4,SNR=101
ILAR LR LR 16 51 17.1
comp=Z,432nm,19.7s,baz=258,slow=34
comp=Z,11nm,0.7s
ILAR Eielson Array 83.17 22 P **P** **16 16 38.2 -0.7**
E22K Anaktuvuk Pass 83.21 18 P **P** **16 16 39.8 +0.7**
baz=236
MCARA McCarthy VSAT 83.22 26 IAmb IAmb 16 17 06.2
comp=Z,17nm,0.9s
MCARA McCarthy VSAT 83.22 26 P **P** **16 16 39.9 +0.6**
baz=245
B21K Ikpikpuk River 83.23 16 P **P** **16 16 40.1 +1.0**
baz=234,SNR=5.7
COLD Coldfoot 83.24 19 IAmb IAmb 16 19 14.2
comp=Z,11nm,0.5s
COLD Coldfoot 83.24 19 P **P** **16 16 39.9 +0.7**
baz=238
H24K Noodor Dome 83.33 21 P **P** **16 16 40.4 +0.7**
baz=240,SNR=13
BOOM Boomskoye usch 83.43 314 P **P** **16 16 41.4 +0.4**
BOOM Boomskoye usch 83.43 314 IAmb IAmb 16 16 42.8
comp=Z,35nm,0.8s
RIDG Independent Ri 83.48 24 P **P** **16 16 40.7 0.0**
baz=243,SNR=12
KUU Kurty 83.48 315 *e*P **P** **16 16 40.8 -0.2**
KUU pmax pmax
comp=Z,42nm,1.3s
KUU Kurty 83.48 315 *e*P **P** **16 16 40.8 -0.2**
comp=Z,42nm,1.3s
GRNC Granite Creek 83.52 27 IAmb IAmb 16 16 42.8
comp=Z,10nm,0.6s
MENT Mentasta 83.59 25 P **P** **16 16 43.2 +2.1**
NIL Nilore 83.64 305 P **P** **16 16 41.0 -1.0**
NIL pmax pmax
comp=Z,41nm,0.9s
NIL Nilore 83.64 305 P **P** **16 16 41.0 -1.0**
NIL Nilore 83.64 305 P **P** **16 16 41.5 -0.6**
M26K Nabesna, AK 83.66 25 P **P** **16 16 42.1 +0.5**
baz=245
J25K Salcha River, 83.67 23 IAmb IAmb 16 16 43.2
comp=Z,22nm,0.6s
J25K Salcha River, 83.67 23 P **P** **16 16 41.4 -0.1**
baz=243,SNR=52
BARN Barnard Glacie 83.69 27 IAmb IAmb 16 16 44.0
comp=Z,20nm,0.6s
A21K Barrow 83.74 15 P **P** **16 16 41.8 +0.2**
baz=232
L26K Log Cabin Wild 83.78 25 P **P** **16 16 42.6 +0.4**
baz=245,SNR=6.2
TKM2 Tokmak 2 83.78 314 P **P** **16 16 43.0 +0.2**
SNR=5.5
KURK Kurchatov 83.78 322*c i*P **P** **16 16 40.7 -1.6**
KURK pmax pmax
comp=Z,48nm,1.1s
KURK Kurchatov 83.78 322 P **P** **16 16 41.8 -0.6**
KURK Kurchatov 83.78 322 P **P** **16 16 41.5 -0.8**
KURBB Kurchatov Arra 83.81 322 P **P** **16 16 41.9 -0.6**
comp=Z,21nm,1.1s,baz=107,slow=4.2,SNR=63
comp=Z,21nm,1.1s
E23K Chandalar 83.87 19 P **P** **16 16 43.1 +0.5**
baz=238,SNR=20
G24K Hadweenzic Riv 83.89 20 P **P** **16 16 42.9 +0.3**
baz=241,SNR=17
PCA Pinnacle 83.96 28 IAmb IAmb 16 16 45.0
comp=Z,16nm,0.6s
PINM Pinnacle 83.96 28 P **P** **16 16 43.7 +0.5**
baz=248,SNR=6.2
B22K Teshekpuk Lake 83.99 16 IAmb IAmb 16 17 15.2
comp=Z,31nm,1.6s
B22K Teshekpuk Lake 83.99 16 P **P** **16 16 43.5 +0.5**
baz=235
D23K Nanushuk River 84.02 18 P **P** **16 16 43.7 +0.5**
baz=237,SNR=61
PRP Porcupine Dome 84.03 22 P **P** **16 16 43.4 -0.1**
baz=243
M27K Edge Creek, AK 84.12 25 IAmb IAmb 16 16 46.2
comp=Z,18nm,0.7s
M27K Edge Creek, AK 84.12 25 P **P** **16 16 44.6 +0.6**
baz=246,SNR=31
F24K Squaw Lake 84.16 20 IAmb IAmb 16 16 47.7
comp=Z,20nm,0.7s
F24K Squaw Lake 84.16 20 P **P** **16 16 45.0 +1.0**
baz=240,SNR=39
KBK Karagaybulak 84.18 314 P **P** **16 16 45.2 +0.3**
SNR=16
TOLK Toolik Lake Re 84.19 18 P **P** **16 16 44.8 +0.7**
baz=238,SNR=17

PNL **Peninsula** 84.20 28 P P 16 16 47.2 +2.9
PNL **Peninsula** 84.20 28 P P 16 16 45.2 +0.8
baz=249,SNR=14
E24K **Your Creek** 84.24 19 P P 16 16 45.4 +1.0
baz=240,SNR=12
O28M **Mount Upton** 84.24 27 IAmb IAmb 16 16 46.9
comp=Z,20nm,1.2s
O28M **Mount Upton** 84.24 27 P P 16 16 45.6 +0.7
baz=248,SNR=9.2
CHMS **Chumysh** 84.40 314 P P 16 16 45.7 -0.1
SNR=41
G25K **Bearman Lake** 84.40 21 P P 16 16 46.1 +1.0
baz=242,SNR=8.3
UCH **Uchtor** 84.40 313 P P 16 16 47.6 +1.3
SNR=6.7
L27K **Beaver Creek,** 84.42 25 P P 16 16 46.4 +1.0
baz=246,SNR=12
QSPA **South Pole Qui** 84.44 180 P P 16 16 45.8 +0.2
comp=Z,9.6nm,1.1s,baz=27,slow=2.3,SNR=28
QSPA PKKPbc **PKKPbc** 16 34 57.4 -2.9
comp=Z,0.8nm,0.6s,baz=147,slow=5.9,SNR=8.1
QSPA LR LR 16 51 32.1
comp=Z,104nm,21.7s,baz=14,slow=34
comp=Z,9.6nm,1.1s
QSPA **South Pole Qui** 84.44 180 P P 16 16 46.0 +0.4
QSPA IAmb IAmb 16 16 52.4
comp=Z,15nm,0.9s
QSPA **South Pole Qui** 84.44 180 P P 16 16 45.5 -0.1
BCAR **Beaver Creek A** 84.44 25 P P 16 16 45.8 +0.3
FRU1 **Bishkek** 84.45 314 P P 16 16 46.6 +0.6
FRU1 pmax pmax
comp=Z,35nm,1.0s
FRU1 **Bishkek** 84.45 314 P P 16 16 46.6 +0.6
FRU1 IAmb IAmb 16 16 47.4
comp=Z,35nm,1.0s
YUK3 **Moose Creek** 84.50 26 P P 16 16 47.0 +0.9
baz=248,SNR=12
AAK **Ala-Archa** 84.51 314 LR LR 16 54 32.8
comp=Z,252nm,20.5s,baz=103,slow=36
AAK **Ala-Archa** 84.51 314 P P 16 16 46.7 +0.3
SNR=14
AAK **Ala-Archa** 84.51 314 P P 16 16 46.5 0.0
AAK pmax pmax
comp=Z,29nm,1.0s
AAK **Ala-Archa** 84.51 314 P P 16 16 46.5 0.0
AAK IAmb IAmb 16 16 47.8
comp=Z,29nm,0.9s
AAK **Ala-Archa** 84.51 314 P P 16 16 46.8 +0.3
AAK **Ala-Archa** 84.51 314 P P 16 16 47.3 +0.9
C23K **Itkillik River** 84.51 17 IAmb IAmb 16 16 49.1
comp=Z,15nm,0.8s
C23K **Itkillik River** 84.51 17 P P 16 16 46.6 +1.0
baz=237,SNR=12
MAW **Mawson** 84.56 203 LR LR 16 51 40.2
comp=Z,346nm,21.1s,baz=82,slow=34
BVCY **Beaver Creek** 84.58 26 P P 16 16 47.3 +1.1
baz=247,SNR=16
SGDS **Sogindy** 84.59 314 ⇑*iP* P 16 16 46.4 -0.4
comp=Z,16nm,1.1s
FYU **Fort Yukon** 84.62 21 IAmb IAmb 16 16 49.0
comp=Z,15nm,0.7s
YUK8 **Steele Glacier** 84.63 27 P P 16 16 48.0 +1.2
baz=248,SNR=19
USP **Ospenovka** 84.64 314 P P 16 16 47.0 +0.1
SNR=65
D24K **Happy Valley** 84.68 18 IAmb IAmb 16 16 50.1
comp=Z,20nm,0.8s
D24K **Happy Valley** 84.68 18 P P 16 16 47.5 +1.0
baz=239
O29M **Mount Kennedy** 84.82 28 IAmb IAmb 16 17 42.3
comp=Z,14nm,0.5s
O29M **Mount Kennedy** 84.82 28 P P 16 16 48.9 +1.4
baz=249,SNR=5.5
F25K **Christian Rive** 84.95 20 P P 16 16 48.9 +0.9
baz=242,SNR=9.5
P29M **Windy Craggy** 84.98 29 P P 16 16 49.5 +1.2
baz=250,SNR=11
BRWY **Burwash Landin** 84.99 27 P P 16 16 49.6 +1.3
baz=249
EKS2 **Erkin-Say** 85.03 314 P P 16 16 49.5 +0.5
SNR=27
YUK6 **Outpost Mounta** 85.14 27 P P 16 16 50.5 +1.1
baz=250,SNR=5.5
YUK4 **Talbot Arm** 85.15 27 P P 16 16 50.9 +1.6
baz=249,SNR=13
S31K **Pelican** 85.18 31 P P 16 16 50.4 +1.2
baz=252,SNR=7.3
E25K **Arctic Village** 85.22 19 P P 16 16 50.1 +0.8
baz=242,SNR=7.9
G26K **Porcupine Rive** 85.30 21 IAmb IAmb 16 16 53.1
comp=Z,22nm,0.8s
G26K **Porcupine Rive** 85.30 21 P P 16 16 50.8 +1.1
baz=244,SNR=40
OHH **Osh** 85.33 311 P P 16 16 49.2 -1.3
OHH **Osh** 85.33 311 P P 16 16 49.2 -1.3
BTLS **Baital** 85.34 316 *eP* P 16 16 50.1 -0.3
BTLS pmax pmax
comp=Z,14nm,1.0s
BTLS **Baital** 85.34 316 *eP* P 16 16 50.2 -0.3
comp=Z,14nm,1.0s
SIT **Sitka** 85.36 32 P P 16 16 51.4 +1.3
SIT **Sitka** 85.36 32 IAmb IAmb 16 16 52.8
comp=Z,48nm,1.4s
SIT **Sitka** 85.36 32 P P 16 16 51.6 +1.5
baz=252,SNR=8.9
HYT **Haines Junctio** 85.50 28 IAmb IAmb 16 16 54.5
comp=Z,25nm,1.0s
HYT **Haines Junctio** 85.50 28 P P 16 16 52.3 +1.4
baz=250,SNR=20
F26K **Sheenjek River** 85.51 20 IAmb IAmb 16 16 55.2
comp=Z,19nm,1.4s
F26K **Sheenjek River** 85.51 20 P P 16 16 51.9 +1.2
baz=244,SNR=11
P30M **Million Dollar** 85.52 28 P P 16 16 52.3 +1.3
baz=251
D25K **Kavik River** 85.53 18 IAmb IAmb 16 16 54.9
comp=Z,15nm,0.9s
D25K **Kavik River** 85.53 18 P P 16 16 51.5 +0.7
baz=242,SNR=27
I27K **Kandik River** 85.53 22 IAmb IAmb 16 17 30.2
comp=Z,26nm,1.2s
I27K **Kandik River** 85.53 22 P P 16 16 51.7 +0.8
baz=246,SNR=13
PLBC **Pleasant Camp** 85.58 29 P P 16 16 52.0 +0.8
baz=251
M29M **Somme Creek** 85.62 26 IAmb IAmb 16 16 56.5
comp=Z,16nm,0.9s
M29M **Somme Creek** 85.62 26 P P 16 16 52.6 +1.1
baz=249,SNR=29
DAWY **Dawson** 85.82 24 IAmb IAmb 16 16 54.9
comp=Z,42nm,1.6s
DAWY **Dawson** 85.82 24 P P 16 16 53.5 +1.1
baz=248,SNR=6.8
H27K **Steamboat Moun** 85.82 22 IAmb IAmb 16 16 55.5
comp=Z,16nm,0.7s
H27K **Steamboat Moun** 85.82 22 P P 16 16 53.3 +1.0
baz=246,SNR=34
S32K **Killisnoo** 85.87 31 IAmb IAmb 16 16 55.4
comp=Z,39nm,1.2s
S32K **Killisnoo** 85.87 31 P P 16 16 53.8 +1.2
baz=253,SNR=10
N30M **Aishikik Lake** 85.90 27 IAmb IAmb 16 16 55.7
comp=Z,27nm,1.5s
N30M **Aishikik Lake** 85.90 27 P P 16 16 53.8 +0.9
baz=251,SNR=5.6
L29M **L29M** 86.00 25 IAmb IAmb 16 16 55.8
comp=Z,31nm,1.4s
L29M **L29M** 86.00 25 P P 16 16 54.6 +1.2
baz=250,SNR=16
G27K **Doyon Strip** 86.01 21 P P 16 16 54.1 +0.9
baz=246,SNR=17
SKAG **Skagway** 86.09 29 P P 16 16 56.2 +2.5
SKAG **Skagway** 86.09 29 IAmb IAmb 16 16 56.5
comp=Z,23nm,1.2s
SKAG **Skagway** 86.09 29 P P 16 16 55.0 +1.3
baz=252
CRAG **Craig** 86.09 33 P P 16 16 56.1 +2.3
CRAG **Craig** 86.09 33 P P 16 16 55.0 +1.2
baz=254,SNR=6.6
I28M **Miner Creek** 86.12 23 IAmb IAmb 16 16 56.1
comp=Z,9.8nm,0.7s
I28M **Miner Creek** 86.12 23 P P 16 16 54.3 +0.4
baz=248,SNR=19
O30N **Mendenhall** 86.13 28 IAmb IAmb 16 16 56.7
comp=Z,32nm,1.1s
O30N **Mendenhall** 86.13 28 P P 16 16 55.2 +1.2
baz=252,SNR=16
R32K **Eaglecrest** 86.14 31 IAmb IAmb 16 16 56.8
comp=Z,19nm,1.2s
R32K **Eaglecrest** 86.14 31 P P 16 16 55.4 +1.4
baz=253,SNR=7.6
ARK **Arkit** 86.18 312 P P 16 16 54.0 -0.8
ARK **Arkit** 86.18 312 P P 16 16 55.0 +0.2
JIS **Juneau Island** 86.21 31 P P 16 16 57.0 +2.7
C26K **Camden Bay** 86.26 18 P P 16 16 55.5 +1.1
baz=243,SNR=7.8
U33K **Whale Pass** 86.27 33 P P 16 16 56.2 +1.6
baz=254,SNR=20
NRIK **Noril'sk** 86.36 341 P P 16 16 54.0 -0.8
comp=Z,9.6nm,0.8s,baz=84,slow=5.8,SNR=10
NRIK LR LR 16 57 25.7
comp=Z,214nm,18.4s,baz=114,slow=37
comp=Z,9.6nm,0.8s
NRIK **Noril'sk** 86.36 341 *c iP* P 16 16 54.1 -0.8
NRIK pmax pmax
comp=Z,12nm,0.9s
M30M **Minto, Yukon** 86.40 26 IAmb IAmb 16 16 57.8
comp=Z,30nm,1.4s
M30M **Minto, Yukon** 86.40 26 P P 16 16 56.2 +0.9
baz=251,SNR=19
J29N **Klondike Camp** 86.44 24 P P 16 16 56.8 +1.3
baz=249
N31M **Braeburn, Yuko** 86.50 27 IAmb IAmb 16 16 58.6
comp=Z,25nm,0.8s
N31M **Braeburn, Yuko** 86.50 27 P P 16 16 57.1 +1.4
baz=252,SNR=20
C27K **Jago River** 86.50 18 IAmb IAmb 16 16 59.6
comp=Z,29nm,0.8s
C27K **Jago River** 86.50 18 P P 16 16 56.9 +1.3
baz=244,SNR=30
K29M **Barlow Dome** 86.51 25 IAmb IAmb 16 16 58.4
comp=Z,20nm,0.8s
K29M **Barlow Dome** 86.51 25 P P 16 16 57.0 +1.2
baz=250,SNR=25
E27K **Coleen River** 86.59 20 IAmb IAmb 16 16 59.6
comp=Z,19nm,0.8s
E27K **Coleen River** 86.59 20 P P 16 16 57.2 +1.1
baz=246,SNR=18
WHY **Whitehorse** 86.66 28 P P 16 16 57.6 +0.9
baz=253,SNR=13
BTK **Batken** 86.72 311 P P 16 16 57.2 -0.2
BTK **Batken** 86.72 311 IAmb IAmb 16 16 58.2
comp=Z,16nm,1.1s
BTK **Batken** 86.72 311 P P 16 16 57.2 -0.2
I29M **Ogilvie Camp,** 86.72 23 P P 16 16 57.5 +0.8
baz=249,SNR=9.3
WRAK **Wrangell Islan** 86.76 33 P P 16 16 58.6 +1.5
baz=255,SNR=20
V35K **Ketchikan** 86.89 34 P P 16 16 58.9 +1.2
baz=256,SNR=28
P32M **Atlin** 86.91 29 IAmb IAmb 16 17 00.4
comp=Z,24nm,1.0s
P32M **Atlin** 86.91 29 P P 16 16 59.1 +1.2
baz=254,SNR=19
GAR **Garm** 86.92 309 IAmb IAmb 16 16 59.0
comp=Z,29nm,1.2s
GAR **Garm** 86.92 309 P P 16 16 57.8 -0.7
F28M **Old Crow** 86.96 21 IAmb IAmb 16 17 01.7
comp=Z,14nm,0.8s
F28M **Old Crow** 86.96 21 P P 16 16 58.8 +0.9
baz=248,SNR=16
H29M **Whitestone** 87.00 22 P P 16 16 58.6 +0.5
baz=249
D27M **Malcolm River** 87.22 19 P P 16 17 00.5 +1.3
baz=247,SNR=8.0
KBL **Kabul** 87.23 305 P P 16 16 58.9 -1.3
KBL pmax pmax
comp=Z,9.0nm,1.1s
KBL **Kabul** 87.23 305 P P 16 16 58.5 -1.7
J30M **Hart River** 87.25 24 IAmb IAmb 16 17 01.9
comp=Z,18nm,0.8s
J30M **Hart River** 87.25 24 P P 16 17 00.6 +1.2
baz=251,SNR=28
M31M **Drury Creek, Y** 87.35 27 IAmb IAmb 16 17 01.8
comp=Z,25nm,1.2s
M31M **Drury Creek, Y** 87.35 27 P P 16 17 00.6 +0.7
baz=253,SNR=16
G29M **Pine Creek** 87.38 22 IAmb IAmb 16 17 15.6
comp=Z,18nm,1.1s
G29M **Pine Creek** 87.38 22 P P 16 17 00.5 +0.6
baz=250,SNR=8.9
I30M **Mount Dempster** 87.44 24 P P 16 17 00.9 +0.6
baz=251,SNR=15
E28M **Babbage River** 87.45 20 IAmb IAmb 16 17 02.8
comp=Z,53nm,1.6s
E28M **Babbage River** 87.45 20 P P 16 17 01.5 +1.3
baz=248,SNR=5.4
Q32M **Nakina River** 87.46 30 IAmb IAmb 16 17 03.5
comp=Z,16nm,0.8s
Q32M **Nakina River** 87.46 30 P P 16 17 02.0 +1.3
baz=255,SNR=22
KK31 **Karatay Array** 87.47 314 IAmb IAmb 16 17 02.5
comp=Z,14nm,1.4s
KKAR **Karatay Array** 87.47 314 P P 16 16 59.9 -1.0
KKAR **Karatay Array** 87.47 314 P P 16 16 59.9 -1.0
P33M **Teslin, Yukon** 87.52 29 IAmb IAmb 16 17 03.0
comp=Z,22nm,1.1s
P33M **Teslin, Yukon** 87.52 29 P P 16 17 01.6 +0.8
baz=254,SNR=18
N32M **Quiet Lake** 87.65 28 P P 16 17 02.7 +1.3
baz=254
EPYK **Eagle Plains** 87.68 22 IAmb IAmb 16 17 03.2
comp=Z,21nm,0.7s
EPYK **Eagle Plains** 87.68 22 P P 16 17 01.9 +0.5
baz=251,SNR=13
CHGR **Chuyangaron** 87.76 309 ⇓*iP* P 16 17 01.8 -0.7
CHGR pmax pmax
comp=Z,43nm,0.9s
CHGR **Chuyangaron** 87.76 309 P P 16 17 02.3 -0.2
S34M **Telegraph Cree** 87.78 31 P P 16 17 03.9 +1.9
baz=256,SNR=39
E29M **Blow River** 87.94 20 IAmb IAmb 16 17 24.9
comp=Z,26nm,1.6s
E29M **Blow River** 87.94 20 P P 16 17 03.1 +0.6
baz=250
BRLS **Borolday** 87.94 313 *eP* P 16 17 03.0 -0.1
BRLS **Borolday** 87.94 313 *eP* P 16 17 03.1 -0.1
CHM **Chimkent** 88.00 313 *eP* P 16 17 03.1 -0.3
CHM pmax pmax
comp=Z,15nm,0.8s
CHM **Chimkent** 88.00 313 *eP* P 16 17 03.2 -0.3
comp=Z,15nm,0.8s
T35M **Bob Quinn** 88.02 32 P P 16 17 04.8 +1.6
baz=257,SNR=21
G30M **tAoh Zraii Nji** 88.07 22 IAmb IAmb 16 17 33.5
comp=Z,15nm,1.2s
G30M **tAoh Zraii Nji** 88.07 22 P P 16 17 03.6 +0.3
baz=251
BBB **Bella Bella** 88.22 37 LR LR 16 53 36.4
comp=Z,215nm,18.4s,baz=244,slow=34
BBB **Bella Bella** 88.22 37 P P 16 17 04.2 +0.1
SHAA **Shahritus** 88.41 308 IAmb IAmb 16 17 14.2
comp=Z,14nm,0.9s
H31M **Peel River** 88.42 23 IAmb IAmb 16 17 06.6
comp=Z,13nm,0.6s
H31M **Peel River** 88.42 23 P P 16 17 05.4 +0.5
baz=253,SNR=10
F30M **Barrier River** 88.43 21 IAmb IAmb 16 17 06.7
comp=Z,41nm,1.5s
F30M **Barrier River** 88.43 21 P P 16 17 05.2 +0.3
baz=252,SNR=10
DLBC **Dease Lake** 88.47 31 LR LR 16 50 35.7
comp=Z,607nm,20.6s,baz=240,slow=31
DLBC **Dease Lake** 88.47 31 P P 16 17 06.8 +1.4
baz=257,SNR=30
G31M **Satah River** 88.78 22 IAmb IAmb 16 17 08.2
comp=Z,11nm,0.7s
G31M **Satah River** 88.78 22 P P 16 17 07.0 +0.5
baz=253,SNR=9.5
MMPY **Sheldon Lake,** 88.86 27 IAmb IAmb 16 17 09.0
comp=Z,20nm,1.2s
MMPY **Sheldon Lake,** 88.86 27 P P 16 17 07.9 +0.8
baz=256,SNR=15
KMPM **Mount Pierce** 88.98 49 IAmb IAmb 16 17 16.8
comp=Z,17nm,0.9s
F31M **Tsiigehtchic** 89.13 22 P P 16 17 08.3 +0.2
baz=253,SNR=5.3
BVAR **Borovoye Array** 89.28 323 P P 16 17 08.0 -1.2
comp=Z,32nm,0.8s,baz=104,slow=4.6,SNR=99
BVAR PP **PP** 16 20 39.6 -0.8
comp=Z,0.8nm,0.7s,baz=107,slow=9.2,SNR=2.4
comp=Z,32nm,0.8s
BVAR **Borovoye Array** 89.28 323 P P 16 17 08.0 -1.2
KCPM **Cahto Peak** 89.29 50 IAmb IAmb 16 17 19.1
comp=Z,13nm,0.9s
KHMM **Horse Mountain** 89.34 49 IAmb IAmb 16 17 18.3
comp=Z,26nm,1.0s
WTLY **Watson Lake, Y** 89.45 29 P P 16 17 10.9 +1.0
baz=258,SNR=15
INK **Inuvik** 89.45 21 LR LR 16 57 43.3
comp=Z,167nm,18.2s,baz=256,slow=36
INK **Inuvik** 89.45 21 P P 16 17 10.3 +0.7
INK **Inuvik** 89.45 21 IAmb IAmb 16 17 11.8
comp=Z,20nm,1.3s
INK **Inuvik** 89.45 21 P P 16 17 09.9 +0.3
baz=254,SNR=9.6
INK **Inuvik** 89.45 21 P P 16 17 10.3 +0.7
L02F **Cave Junction** 89.63 48 IAmb IAmb 16 17 14.6
comp=Z,16nm,0.9s
O02D **Mt. Diablo Mer** 89.96 50 IAmb IAmb 16 17 19.0
comp=Z,14nm,0.8s
YBH **Yreka Blue Hor** 90.21 48 LR LR 16 50 18.3
comp=Z,357nm,21.9s,baz=288,slow=31
BBOR **Butler Butte** 90.38 47 IAmb IAmb 16 17 17.3
comp=Z,18nm,1.2s
LIRD **Liard River Hi** 90.66 30 P P 16 17 16.2 +0.7
baz=260
ORV **Oroville** 90.87 51 IAmb IAmb 16 17 20.0
comp=Z,10nm,0.9s
AFDM **Forest Hills D** 91.21 51 IAmb IAmb 16 17 22.0
comp=Z,20nm,1.1s
PKD **Bear Valley Ra** 91.24 54 IAmb IAmb 16 17 27.7
comp=Z,20nm,1.1s
CMB **Columbia Colle** 91.58 52 IAmb IAmb 16 17 22.9
comp=Z,22nm,1.4s
BEKR **Beckworth** 91.78 50 IAmb IAmb 16 17 23.8
comp=Z,21nm,1.2s
KOTAN **Kotaneelee Air** 91.79 30 P P 16 17 21.6 +0.9
baz=262
G06A **Carlson Farm,** 92.11 45 IAmb IAmb 16 17 24.6
comp=Z,18nm,1.2s
LTY **Liberty** 92.28 43 IAmb IAmb 16 17 25.1
comp=Z,16nm,0.9s
WAKR **Walker** 92.36 52 IAmb IAmb 16 17 27.1
comp=Z,9.9nm,0.9s
MXC **Moxie City** 92.47 44 IAmb IAmb 16 17 26.5
comp=Z,17nm,1.1s
WRGLY **Wrigley** 92.48 27 IAmb IAmb 16 17 25.8
comp=Z,13nm,0.8s
WRGLY **Wrigley** 92.48 27 P P 16 17 24.5 +0.7
baz=263
PAHR **Pah Rah Range** 92.51 51 IAmb IAmb 16 17 27.3
comp=Z,24nm,1.2s
F07A **Phinny Hill Vi** 92.66 44 IAmb IAmb 16 17 27.6
comp=Z,21nm,1.0s
SYO **Syowa Base** 92.69 199 ‖*eP* P 16 17 24.0 -0.7
HAWA **Hanford** 92.98 44 P P 16 17 27.9 +1.4
A36M **Sachs Harbour** 93.01 18 P P 16 17 27.0 +1.0
baz=262
C36M **Paulatuk** 93.03 21 P P 16 17 27.1 +0.9
baz=262
NVAR **Mina Array Bea** 93.24 52 P P 16 17 29.4 +1.2
comp=Z,12nm,0.8s,baz=256,slow=6.2,SNR=70
NVAR PP **PP** 16 21 13.1 +0.7
comp=Z,0.8nm,0.8s,baz=253,slow=8.4,SNR=5.1
NVAR LR LR 16 55 15.1
comp=Z,668nm,18.8s,baz=262,slow=33
comp=Z,12nm,0.8s
CWC **Cottonwood Cre** 93.27 54 IAmb IAmb 16 17 31.1
comp=Z,24nm,1.4s
B08A **Colville Reser** 93.27 42 IAmb IAmb 16 17 29.6
comp=Z,16nm,0.8s
WVOR **Wild Horse Val** 93.30 48 P P 16 17 28.9 +0.6
WVOR **Wild Horse Val** 93.30 48 P P 16 17 28.9 +0.6
BFSC **Mount Baldy Ra** 93.44 56 IAmb IAmb 16 17 32.0
comp=Z,24nm,1.5s
KVN **Kaiserville** 93.45 51 IAmb IAmb 16 17 31.7
comp=Z,12nm,1.0s
D08A **Wollman Farm,** 93.45 43 IAmb IAmb 16 17 30.9
comp=Z,21nm,1.0s
MPMC **Manual Prospec** 93.72 54 IAmb IAmb 16 17 33.4
comp=Z,20nm,1.3s
LNOR **Lincton Mounta** 93.80 44 P P 16 17 31.6 +1.2
LNOR IAmb IAmb 16 17 32.4
comp=Z,13nm,1.1s
TPH **Tonopah** 94.07 52 IAmb IAmb 16 17 34.6
comp=Z,15nm,0.9s
QSM **Queen of Sheba** 94.21 54 IAmb IAmb 16 17 35.3
comp=Z,27nm,1.2s
BMN **Battle Mountai** 94.22 50 IAmb IAmb 16 17 35.2
comp=Z,14nm,1.2s
GSC **Goldstone, Bar** 94.22 55 IAmb IAmb 16 20 22.2
comp=Z,11nm,0.8s
PFO **Pinyon Flats O** 94.40 57 LR LR 16 51 55.5
comp=Z,398nm,21.6s,baz=260,slow=30
PFO **Pinyon Flats O** 94.40 57 P P 16 17 35.4 +1.9
PFO pmax pmax
comp=Z,9.0nm,1.1s
PFO **Pinyon Flats O** 94.40 57 P P 16 17 35.4 +1.9
PFO IAmb IAmb 16 17 37.6
comp=Z,8.9nm,1.1s
BORC **Borrego Spring** 94.41 57 IAmb IAmb 16 17 37.6
comp=Z,9.1nm,1.0s
WCT **Wildcat Mounta** 94.46 54 IAmb IAmb 16 17 36.5
comp=Z,19nm,0.9s
PMD **Palm Desert** 94.47 57 IAmb IAmb 16 17 37.7
comp=Z,13nm,1.1s
NEW **Newport** 94.74 42 LR LR 16 55 58.2
comp=Z,498nm,19.1s,baz=270,slow=33
NEW **Newport** 94.74 42 P P 16 17 35.4 +0.7
NEW **Newport** 94.74 42 IAmb IAmb 16 17 36.6
comp=Z,22nm,1.0s
NEW **Newport** 94.74 42 P P 16 17 35.5 +0.9
TPNV **Topopah Spring** 94.77 53 IAmb IAmb 16 17 38.0
comp=Z,21nm,1.1s
YUH **Yuha Desert** 94.78 58 IAmb IAmb 16 17 40.4
comp=Z,15nm,1.1s
S11A **Rachel** 95.21 53 IAmb IAmb 16 17 39.8
comp=Z,9.1nm,0.9s
BC3 **Big Chuckawall** 95.24 57 IAmb IAmb 16 17 42.4
comp=Z,13nm,1.0s
MTPC **Mountain Pass** 95.25 55 IAmb IAmb 16 17 40.4
comp=Z,26nm,1.5s
PLID **Pearl Lake** 95.36 45 IAmb IAmb 16 17 39.7
comp=Z,14nm,0.9s
AB31 **Akbulak array** 95.42 319 IAmb IAmb 16 17 37.1
comp=Z,8.5nm,0.9s
ABKAR **Akbulak array** 95.42 319 P P 16 17 35.1 -2.5
MFID **Camas Ranch** 95.42 47 IAmb IAmb 16 17 40.4
comp=Z,23nm,1.4s
IRM **Iron Mountain** 95.52 56 IAmb IAmb 16 17 42.8
comp=Z,24nm,1.4s
ELK **Elko** 95.75 50 LR LR 16 54 50.4
comp=Z,459nm,20.4s,baz=269,slow=32
ELK **Elko** 95.75 50 IAmb IAmb 16 17 43.4
comp=Z,11nm,1.2s
PRN **Pahroc Range** 95.75 53 IAmb IAmb 16 17 42.7
comp=Z,18nm,1.0s
ELIB **Princess Elisa** 95.88 194 *dP* P 16 17 39.2 -0.4
comp=Z,4.0nm,1.0s
LDM **Libby Dam** 95.95 42 IAmb IAmb 16 17 43.5
comp=Z,18nm,1.4s
HLID **Hailey** 96.45 47 IAmb IAmb 16 17 45.7
comp=Z,8.0nm,0.8s
HLID **Hailey** 96.45 47 P P 16 17 43.9 +1.2
YKA **Yellowknife Ar** 96.49 28 P P 16 17 42.5 +0.3
comp=Z,4.1nm,0.8s,baz=274,slow=4.7,SNR=26
YKA PKiKP **PKiKP** 16 22 19.9 +0.5
comp=Z,0.6nm,0.6s,baz=280,slow=0.7,SNR=4.6
YKA LR LR 16 55 16.2
comp=Z,290nm,21.8s,baz=287,slow=32
comp=Z,4.1nm,0.8s
YKA **Yellowknife Ar** 96.49 28 P P 16 17 42.3 +0.1
ARTI **Arti** 96.51 326 LR LR 17 00 46.4
comp=Z,714nm,21.7s,baz=96,slow=35
ARTI **Arti** 96.51 326 *c iP* P 16 17 39.9 -2.5
ARTI 16 21 34.9
ARTI S **SKSac** 16 28 12.1 -2.6
ARTI SP **SP** 16 30 21.0 +2.2
ARTI SS **SS** 16 35 34.3 +0.9
ARTI pmax pmax
comp=Z,12nm,0.9s
YKAW1 **Yellowknife Wh** 96.54 28 IAmb IAmb 16 17 45.2
comp=Z,20nm,1.4s
W13A **Hualapai Mount** 96.60 55 IAmb IAmb 16 17 46.9
comp=Z,9.6nm,1.1s
AKTO **Aktyubinsk** 96.69 320 LR LR 17 02 19.0
comp=Z,365nm,19.1s,baz=64,slow=36
PSUT **Pine Spring** 96.74 52 IAmb IAmb 16 17 49.1
comp=Z,10nm,0.9s
LCMT **Little Creek M** 97.18 54 IAmb IAmb 16 17 49.3
comp=Z,11nm,1.1s
BCYI **Bear Canyon** 97.19 46 IAmb IAmb 16 17 48.3
comp=Z,7.2nm,0.8s

SZCU	Shurtz Canyon	97.32	53	IAmb	IAmb	16 17 50.0		
	comp=Z,17nm,1.3s							
HVU	Hansel Valley	97.63	49	IAmb	IAmb	16 17 50.8		
	comp=Z,15nm,0.9s							
DLMT	Dillon	97.78	45	IAmb	IAmb	16 20 06.7		
	comp=Z,5.2nm,0.6s							
U15A	North Rim	97.93	54	IAmb	IAmb	16 17 53.2		
	comp=Z,7.6nm,1.1s							
PKCU	Pink Cliffs	97.93	53	IAmb	IAmb	16 17 53.7		
	comp=Z,20nm,1.2s							
MTPU	Mount Pierson	98.04	52	IAmb	IAmb	16 17 53.9		
	comp=Z,17nm,1.4s							
BOZ	Bozeman (W)	98.45	45	IAmb	IAmb	16 17 53.8		
	comp=Z,6.1nm,0.8s							
HWUT	Hardware Ranch	98.53	49	P	Pdif	16 17 52.6	+0.4	
WUAZ	Wupatki	98.66	55	IAmb	IAmb	16 17 56.5		
	comp=Z,8.5nm,1.2s							
YHB	Horse Butte	98.77	46	IAmb	IAmb	16 17 55.8		
	comp=Z,7.5nm,0.8s							
YHL	Hebgen Lake	98.78	46	IAmb	IAmb	16 17 58.6		
	comp=Z,14nm,1.1s							
Q16A	Castle Valley	98.84	52	IAmb	IAmb	16 17 55.9		
	comp=Z,8.1nm,1.1s							
AHID	Auburn Hatcher	98.87	48	IAmb	IAmb	16 17 55.5		
	comp=Z,11nm,1.1s							
AHID	Auburn Hatcher	98.87	48	P	Pdif	16 17 54.7	+1.0	
FXWY	Fox Creek	98.91	47	IAmb	IAmb	16 17 56.1		
	comp=Z,9.3nm,0.9s							
FLWY	Flagg Ranch	99.14	46	IAmb	IAmb	16 17 57.3		
	comp=Z,10nm,0.9s							
P17A	Butcher Ranch,	99.17	51	IAmb	IAmb	16 17 57.5		
	comp=Z,8.6nm,1.0s							
LPIG	La Paz	99.34	67	LR	LR	16 56 00.4		
	comp=Z,327nm,20.1s,baz=257,slow=31							
PDAR	Pinedale Array	100.00	48	P	Pdif	16 17 58.8	0.0	
	comp=Z,7.1nm,0.8s,baz=252,slow=2.8,SNR=51							
PDAR				PP	PP	16 22 03.6	-0.9	
	comp=Z,0.7nm,0.5s,baz=264,slow=5.7,SNR=6.8							
TROLL	Troll, Antarti	100.09	189	PKKPbc	PKKPbc	16 34 14.5	-5.0	
	comp=Z,101nm,0.8s							
SNAA	Sanae	101.19	188	PKKPbc	PKKPbc	16 34 13.1	-3.1	
	comp=Z,69nm,0.8s							
VNA2	Neumayer--Watz	102.46	187	⇑PKKPbc	PKKPbc	16 34 08.3	-4.1	
	comp=Z,3.2nm,0.8s,baz=343,slow=4.4							
ANMO	Albuquerque	102.69	56	⇓*e*P	Pdif	16 18 12.6	+1.7	
ANMO				pmax	pmax			
	comp=Z,3.0nm,1.3s							
VNA1	Neumayer--Stat	102.82	187	PKKPbc	PKKPbc	16 34 08.4	-2.9	
	comp=Z,5.7nm,1.0s							
BELG	Belogornoye	103.06	322	⇑*i*P	Pdif	16 18 10.5	-1.2	
BELG				pmax	pmax			
	comp=Z,3.0nm,0.9s							
RSSD	Black Hills	103.93	46	P	Pdif	16 18 15.6	-0.6	
TXAR	Lajitas Array	105.27	61	Pdiff	Pdif	16 18 22.6	+0.2	
	comp=Z,0.1nm,0.3s,baz=295,slow=4.3,SNR=1.4							
TXAR				PKiKP	PKiKP	16 22 36.6	+0.2	
	comp=Z,0.4nm,0.7s,baz=248,slow=1.3,SNR=4.2							
TXAR				PP	PP	16 22 42.6	-1.6	
	comp=Z,0.9nm,1.1s,baz=258,slow=5.9,SNR=4.6							
TXAR				PKKPab	PKKPab	16 34 18.1	-1.6	
	comp=Z,0.9nm,0.8s,baz=126,slow=6.4,SNR=5.4							
ARCES	ARCESS Array B	107.29	343	PKiKP	PKiKP	16 22 37.6	-1.3	
	comp=Z,3.1nm,0.9s,baz=85,slow=1.4,SNR=4.1							
ULM	Lac du Bonnet	108.37	39	Pdiff	Pdif	16 18 36.2	+0.8	
	comp=Z,4.3nm,1.0s,baz=162,slow=2.9,SNR=4.6							
OBN	Obninsk	108.84	327	*i* P	Pdif	16 18 36.2	-1.2	
OBN				*e*		16 23 09.8		
OBN				*e*PPP	PPP	16 25 26.7		
OBN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
FINES	FINESS Array B	111.33	335	Pdiff	Pdif	16 18 47.3	-1.1	
	comp=Z,1.0nm,0.7s,baz=20,slow=4.6,SNR=2.0							
FINES				PKiKP	PKiKP	16 22 46.8	+0.2	
	comp=Z,2.0nm,0.7s,baz=96,slow=3.8,SNR=8.2							
VSU	Vasula	112.50	332	*c i* PKIKP	PKiKP	16 22 49.1	+0.2	
MNK	Minsk	113.73	328	*i* P	Pdif	16 18 56.8	-2.4	
MNK				*i* P	Pdif	16 18 56.8	-2.4	
MNK				*i* P	Pdif	16 18 56.8	-2.4	
	baz=65							
MNK				*i* pP	pPdif	16 19 14.0	-0.7	
MNK				*i* PP	PP	16 23 41.7	-2.6	
MNK				*i* PPP	PPP	16 26 06.4		
MNK				*i* SKS	SKSdf	16 29 57.8	-1.3	
MNK				*i* SS	SS	16 39 26.8	-1.6	
MNK				*i* SKKS	SKKSdf	16 41 00.9	-5.4	
MNK				*i* SSS	SSS	16 43 41.5		
MNK				*i* LQ	LQ	17 04 25.9		
MNK				*i* LRM	MLR	17 11 07.3		
	comp=Z,411nm,21.1s							
MNK				*i* LRM	MLR	17 11 29.5		
	comp=N,312nm,21.6s							
MNK				*i* LRM	MLR	17 11 30.7		
	comp=E,259nm,20.6s							
MNK	Minsk	113.73	328	*i* P	Pdif	16 18 56.7	-2.4	
MNK				*i*		16 23 41.6		
MNK				*i* PPP	PPP	16 26 06.3		
MNK				*i*		16 29 57.8		
MNK				*i* SS	SS	16 39 26.7	-1.7	
MNK				*i* SSS	SSS	16 43 41.4		
MNK				MLR	MLR			
	comp=Z,411nm,21.0s							
MNK				MLR	MLR			
	comp=N,312nm,22.0s							
MNK				MLR	MLR			
	comp=E,259nm,21.0s							
AKASG	Malin Array Be	114.55	324	PKP	PKiKP	16 22 52.8	-0.3	
	comp=E,5.3nm,0.8s,baz=63,slow=2.3,SNR=12							
AKBB	Malin Array Si	114.55	324	⇓*i* PKIKP	PKiKP	16 22 52.7	-0.3	
KIRS	Kirsehir-Merke	115.04	311	⇓P	PKiKP	16 22 53.8	-0.7	
BR131	Keskin Array S	115.10	311	*d i* PKIKP	PKiKP	16 22 54.2	-0.5	
BRTR	Keskin Array B	115.10	311	PKP	PKiKP	16 22 54.0	-0.7	
	comp=E,2.9nm,0.8s,baz=115,slow=0.6,SNR=21							
BRTR				PKKPbc	PKKPbc	16 33 31.9	+0.5	
	comp=E,0.1nm,0.4s,baz=200,slow=6.1,SNR=3.6							
BRTR	Keskin Array B	115.10	311	PKIKP	PKiKP	16 22 54.0	-0.7	
PURM	Purcari	115.69	319	⇑P	PKiKP	16 22 55.3	-0.1	
SORM	Soroca	116.07	322	⇓P	PKiKP	16 22 55.8	-0.2	
SORM	Soroca	116.07	322	⇓PKIKP	PKiKP	16 22 55.8	-0.2	
SAHE	Sakarya_HENDEK	116.85	313	⇓P	PKiKP	16 22 58.3	+0.4	
HFS	Hagfors	117.01	338	PKP	PKPdf	16 22 57.4	-0.1	
	comp=E,3.8nm,1.1s,baz=142,slow=5.1,SNR=4.5							
NB2	NORSAR Subarra	117.28	340	PKPdf	PKPdf	16 22 57.2	-0.9	
	comp=Z,1.1nm,0.7s,baz=45,slow=1.9							
NOA	NORSAR Array B	117.28	340	PKP	PKPdf	16 22 57.5	-0.6	
	comp=Z,1.8nm,0.8s,baz=68,slow=1.8,SNR=11							
BIZ	Bicaz	117.94	321	⇓P	PKiKP	16 23 00.6	+0.8	
VRI	Vrincioaia	117.97	320	⇑P	PKPdf	16 22 59.4	-0.4	
VRI	Vrincioaia	117.97	320	⇑PKIKP	PKPdf	16 22 59.4	-0.4	
BURAR	Bucovina Array	118.21	322	⇑P	PKiKP	16 23 00.9	+0.5	
BURAR	Bucovina Array	118.21	322	⇑PKIKP	PKiKP	16 23 00.9	+0.5	
BURAR	Bucovina Array	118.21	322		PKiKP	16 23 01.8	+1.4	
BOSA	Boshof	118.47	233	PKP	PKPdf	16 23 01.1	-0.4	
	comp=Z,1.7nm,0.7s,baz=169,slow=3.2,SNR=4.3							
BOSA				PKKPbc	PKKPbc	16 33 19.8	+0.5	
	comp=Z,2.0nm,0.8s,baz=303,slow=6.1,SNR=3.5							
MLR	Muntele Rosu	118.62	320	⇑P	PKPdf	16 23 01.1	-0.2	
MLR	Muntele Rosu	118.62	320	⇑PKIKP	PKPdf	16 23 01.1	-0.2	
BAND	Balkesir-Ban	119.00	313	⇑P	PKPdf	16 23 02.1	+0.1	
VOIR		119.22	320	⇑P	PKiKP	16 23 03.6	+1.2	
KOLS	Kolonicke sedl	119.37	324	*e*PKIKP	PKiKP	16 23 03.6	+1.1	
KOLS	Kolonicke sedl	119.37	324	*e*PKP	PKiKP	16 23 03.6	+1.1	
ARR	Arges	119.52	320	⇓P	PKiKP	16 23 04.1	+1.1	
HUMR	Humele	119.63	319	⇑P	PKPdf	16 23 03.2	+0.2	
PLCA	Paso Flores	119.74	144	PKP	PKiKP	16 23 04.3	+0.7	
	comp=Z,2.2nm,0.7s,baz=314,slow=1.6,SNR=8.2							
PLCA				PKKPbc	PKKPbc	16 33 13.7	-1.2	
	comp=Z,2.0nm,0.9s,baz=79,slow=4.1,SNR=3.7							
PLVB	Pleven	120.33	318	⇓P	PKiKP	16 23 05.0	+0.5	
RDO	Rodhopi	120.55	315		PKPdf	16 23 04.7	-0.2	
GZR	Gura Zlata	120.69	321	⇑P	PKPdf	16 23 04.5	-0.6	
GZR	Gura Zlata	120.69	321	⇑PKIKP	PKPdf	16 23 04.5	-0.6	
LANS	Liptovska Anna	120.87	326	*e*PKIKP	PKiKP	16 23 06.8	+1.3	
LANS	Liptovska Anna	120.87	326	*e*PKP	PKiKP	16 23 06.8	+1.3	
SIRR	Siria	120.99	322	⇑P	PKiKP	16 23 06.4	+0.6	
HERR	Herculane	121.14	320	⇓P	PKPdf	16 23 05.5	-0.4	
PSZ	Piszkesteto	121.25	324	⇓P	PKiKP	16 23 06.5	+0.2	
PSZ	Piszkesteto	121.25	324	PKIKP	PKPdf	16 23 06.2	0.0	
BZS	Buzias	121.32	321	⇑P	PKiKP	16 23 06.9	+0.5	
BZS	Buzias	121.32	321	⇑PKIKP	PKiKP	16 23 06.9	+0.5	
STEB	Steborice	121.38	327	*e*PKPDF	PKPdf	16 23 06.5	+0.2	
VYHS	Vyhne	121.56	325	*e*PKIKP	PKPdf	16 23 06.8	+0.1	
VYHS	Vyhne	121.56	325	*e*PKP	PKPdf	16 23 06.8	+0.1	
MORC	Moravsky Berou	121.59	327	⇑P	PKiKP	16 23 07.0	+0.2	
MORC	Moravsky Berou	121.59	327	⇑PKIKP	PKiKP	16 23 07.0	+0.2	
MORC	Moravsky Berou	121.59	327	*e*PKP	PKiKP	16 23 07.1	+0.2	
MAUC	Maruska	121.66	326	*e*PKPDF	PKiKP	16 23 07.5	+0.5	
SCHQ	Schefferville	121.83	25	PKP	PKiKP	16 23 07.6	+0.4	
	comp=Z,2.0nm,0.7s,baz=308,slow=2.8,SNR=4.2							
KRLC	Kraliky	121.84	328	*e*PKIKP	PKiKP	16 23 07.5	+0.2	
KRLC	Kraliky	121.84	328	*e*PKPDF	PKiKP	16 23 07.5	+0.2	
OSTC	Ostas	121.86	328	*e*PKIKP	PKiKP	16 23 07.6	+0.3	
OSTC	Ostas	121.86	328	*e*PKPDF	PKiKP	16 23 07.6	+0.3	
SRS	Serrai	121.92	316	PKIKP	PKPdf	16 23 06.6	-1.0	
DPC	Dobruska-Polom	121.92	328	*e*PKIKP	PKPdf	16 23 06.7	-0.7	
DPC	Dobruska-Polom	121.92	328	*e*PKPDF	PKPdf	16 23 06.7	-0.7	
UPC	Upice	122.00	328	*e*PKIKP	PKiKP	16 23 08.0	+0.4	
UPC	Upice	122.00	328	*e*PKPDF	PKiKP	16 23 08.0	+0.4	
JAVC	Velka Javorina	122.03	326	PKP	PKiKP	16 23 09.2	+1.4	
BOVS	Bovsan	122.15	319	⇑P	PKPdf	16 23 07.7	-0.2	
SRO	Srobarova	122.22	325	*e*PKIKP	PKiKP	16 23 09.0	+0.9	
SRO	Srobarova	122.22	325	*e*PKP	PKiKP	16 23 09.0	+0.9	
VRAC	Vranov	122.37	327	⇑P	PKPdf	16 23 07.0	-1.2	
VRAC	Vranov	122.37	327	⇑PKIKP	PKPdf	16 23 07.0	-1.2	
VRAC	Vranov	122.37	327	*e*PKP	PKiKP	16 23 09.0	+0.6	
KNT	Kendrikon	122.39	316	PKIKP	PKiKP	16 23 09.9	+1.2	
MODS	Modra-Piesok	122.51	326	*e*PKIKP	PKiKP	16 23 09.7	+1.0	
MODS	Modra-Piesok	122.51	326	*e*PKP	PKiKP	16 23 09.7	+1.0	
BSEG	Bad Segeberg	122.56	334	PKIKP	PKiKP	16 23 09.5	+1.0	
KRUC	Moravsky	122.62	327	PKIKP	PKiKP	16 23 09.1	+0.2	
KRUC	Moravsky	122.62	327	*e*PKP	PKiKP	16 23 09.0	+0.2	
FRGS	Fruska Gora	122.66	321	*e*P	PKPdf	16 23 08.4	-0.5	
PVCC	Panska Ves	122.73	329	*e*PKIKP	PKiKP	16 23 09.5	+0.5	
PVCC	Panska Ves	122.73	329	*e*PKPDF	PKiKP	16 23 09.5	+0.5	
GRG	Griva	122.81	316	PKIKP	PKPdf	16 23 08.1	-1.2	
BRG	Berggiesshubel	122.84	330	PKIKP	PKPdf	16 23 09.2	+0.2	
BRG	Berggiesshubel	122.84	330	*e*PKPdf	PKPdf	16 23 09.2	+0.2	
	baz=51,slow=2.0							
BRG	Berggiesshubel	122.84	330	⇓*i*PKPf		16 23 09.7		
BRG	Berggiesshubel	122.84	330	Amp		16 23 10.4		
	comp=Z,11nm,0.9s							
MORH	Mrgy, Hungar	122.85	323	⇑P	PKiKP	16 23 09.8	+0.5	
MORH	Mrgy, Hungar	122.85	323	*e*P	PKPdf	16 23 09.1	0.0	
BLA	Blacksburg	122.92	49	PKIKP	PKiKP	16 23 10.3	+0.4	
BLA	Blacksburg	122.92	49		PKiKP	16 23 10.3	+0.4	
TREC	Trest	122.97	327	*e*PKIKP	PKPdf	16 23 09.2	-0.2	
TREC	Trest	122.97	327	*e*PKPDF	PKPdf	16 23 09.2	-0.2	
CLL	Collm	123.04	331	*i* PKIKP	PKPdf	16 23 09.6	+0.2	
CLL				*e*		16 23 24.0		
CLL				pmax	pmax			
	comp=Z,12nm,0.9s							
CLL				MLR	MLR			
	comp=Z,300nm,19.6s							
CLL	Collm	123.04	331	*e*PKPdf	PKPdf	16 23 09.3	-0.1	
	baz=51,slow=2.0							
CLL	Collm	123.04	331	*i* PKPdf	PKPdf	16 23 09.6	+0.2	
	comp=Z,12nm,0.9s							
CLL				*e*PP	PP	16 24 48.0	-0.6	
CLL				*ex*	x	16 33 12.0		
CLL				*e*PS	PS	16 34 46.0	+0.3	
CLL				*e*PPS	PPS	16 36 13.0		
CLL				*ex*	x	16 37 11.0		
CLL				*e*SS	SS	16 41 36.0	+7.3	
CLL				*e*SSS	SSS	16 46 00.0		
CLL				*ex*	x	16 47 36.0		
CLL				AMS	AMS	17 18 00.0		
	comp=N,200nm,20.0s							
CLL				AMS	AMS	17 18 00.0		
	comp=E,200nm,21.6s							
CLL				AMS	AMS	17 18 00.0		
	comp=Z,300nm,19.6s							
L56A	Greenwood	123.04	42		PKiKP	16 23 10.5	+0.5	
PRU	Pruhonice	123.07	329	*e*PKIKP	PKiKP	16 23 10.0	+0.3	
PRU	Pruhonice	123.07	329	*e*PKPDF	PKiKP	16 23 10.0	+0.3	
LIT	Litokhoron	123.09	315	PKIKP	PKPdf	16 23 09.3	-0.6	
TEKS	Tekeris	123.12	321	*e*P	PKPdf	16 23 09.4	-0.4	
FLTG	Flechtingen	123.22	332	*e*PKPdf	PKPdf	16 23 09.7	0.0	
	baz=51,slow=2.0							
BO02	Sierra Bellavi	123.23	138		PKiKP	16 23 11.6	+1.0	
HSKC	Hora Svate Kat	123.26	330	*e*PKPDF	PKPdf	16 23 10.1	+0.2	
WINA	Alland / Wiene	123.33	326	*i* PKiKP	PKiKP	16 23 10.9	+0.6	
	SNR=6.8							
RONA	Rosalia, Austr	123.43	326	*i* PKiKP	PKiKP	16 23 10.6	+0.1	
	comp=Z,12nm,1.0s							
SJES	Sjenica	123.44	319	*e*P	PKPdf	16 23 10.4	-0.2	
BBLS	Lazi&#263i	123.53	320	*e*P	PKPdf	16 23 10.5	-0.2	
CONA	Conrad Observa	123.55	326	*i* PKiKP	PKPdf	16 23 10.8	+0.2	
	comp=Z,7.1nm,0.8s,SNR=5.3							
ZVC	Zvikov	123.58	328	*e*PKPDF	PKPdf	16 23 10.5	0.0	
ASSE	Asse, Remlinge	123.62	332	*e*PKPdf	PKPdf	16 23 10.7	+0.3	
	baz=51,slow=2.0							
AGG	Agios Georgios	123.63	314	PKIKP	PKPdf	16 23 10.4	-0.6	
NEUB	Neuenburg	123.70	331	*e*PKPdf	PKPdf	16 23 10.8	+0.1	
	baz=51,slow=2.0							
RETH	Rethem/Aller,	123.80	334	*e*PKPdf	PKiKP	16 23 11.1	+0.1	
	baz=51,slow=2.0							
PHP	Peshkopia	123.84	317	PKIKP	PKPdf	16 23 10.8	-0.5	
TANN	Tannenbergstha	123.87	330	*e*PKPdf	PKPdf	16 23 11.2	+0.1	
	baz=51,slow=2.0							
CKRC	Cesky Krumlov	123.88	328	*e*PKIKP	PKPdf	16 23 11.3	+0.2	
CKRC	Cesky Krumlov	123.88	328	*e*PKPDF	PKPdf	16 23 11.3	+0.2	
CLZ	Clausthal	123.95	332	*e*PKPdf	PKiKP	16 23 11.7	+0.2	
	baz=51,slow=2.0							
PLN	Plauen	123.97	330	*e*PKPdf	PKPdf	16 23 11.3	+0.1	
	baz=51,slow=2.0							
NKC	Novy Kostel	123.99	330	*e*PKIKP	PKiKP	16 23 11.8	+0.2	
NKC	Novy Kostel	123.99	330	*e*PKPDF	PKiKP	16 23 11.8	+0.2	
LDAQ	Lac Daran	123.99	34		PKPdf	16 23 11.7	+0.3	
KBN	Korca	124.06	316	PKIKP	PKPdf	16 23 12.0	+0.2	
KHC	Kasperske Hory	124.08	328	*e*PKIKP	PKPdf	16 23 11.6	+0.1	
KHC	Kasperske Hory	124.08	328	*e*PKPDF	PKPdf	16 23 11.6	+0.1	
ARSA	Arzberg	124.11	325	*e*PKiKP	PKiKP	16 23 12.0	+0.1	
	comp=Z,4.4nm,0.9s							
MOX	Moxa	124.14	331	PKIKP	PKPdf	16 23 11.2	-0.3	
MOX	Moxa	124.14	331	*e*PKPdf	PKPdf	16 23 11.6	+0.1	
	baz=51,slow=2.0							
MOX				*e*L	L	17 18 27.8		
	comp=Z,299nm,22.0s							
MT13	San Alfonso	124.18	137		PKiKP	16 23 12.9	+0.3	
GEC2	GERESS Array S	124.19	328	*e*PKPdf	PKPdf	16 23 11.7	-0.1	
	baz=51,slow=2.0							
GERES	GERESS Array B	124.19	328	PKP	PKPdf	16 23 12.1	+0.3	
	comp=Z,8.0nm,0.7s,baz=68,slow=0.7,SNR=76							
GERES				SKP	SKPdf	16 26 44.5	+1.5	
	comp=Z,0.9nm,0.8s,baz=20,slow=6.5,SNR=4.5							
PDG	Podgorica	124.30	319	⇑P	PKiKP	16 23 12.5	+0.1	
PDG	Podgorica	124.30	319	*e*P	PKPdf	16 23 12.2	+0.2	
GTTG	Gottingen	124.34	332	*e*PKPdf	PKiKP	16 23 12.3	+0.1	
	baz=51,slow=2.0							
WET	Wettzell	124.44	329	PKIKP	PKPdf	16 23 11.9	-0.3	
WET	Wettzell	124.44	329	*e*PKPdf	PKPdf	16 23 12.3	+0.1	
	baz=51,slow=2.0							
DRME	Dracevica, Mon	124.45	319	*e*P	PKPdf	16 23 11.9	-0.5	
MOA	Molln	124.47	327	*i* PKiKP	PKPdf	16 23 12.3	0.0	
	comp=Z,4.3nm,0.8s							
BLY	Banja Luka	124.48	322	*e*P	PKPdf	16 23 12.3	0.0	
BRY	Bratogost	124.54	320	*e*P	PKPdf	16 23 12.6	-0.1	
ITM	Ithomi	124.62	312		PKPdf	16 23 12.5	-0.4	
SOKA	Soboth	124.71	325	*i* PKiKP	PKPdf	16 23 12.8	0.0	
	comp=Z,10nm,0.9s,SNR=8.4							
SESA	Seelaler Alpe,	124.73	326	*i* PKiKP	PKPdf	16 23 12.6	-0.5	
	SNR=11							
LMQ	La Malbaie	124.74	34		PKPdf	16 23 13.1	+0.4	
FLET	Fletcher	124.77	38		PKPdf	16 23 13.1	+0.2	
HCY	Herceg Novi	124.78	319	*e*P	PKPdf	16 23 12.3	-0.7	
BIOA	Bad Ischl, Aus	124.91	327	*i* PKiKP	PKPdf	16 23 12.9	-0.3	
	comp=Z,7.7nm,1.2s							
GRB1	Grafenberg Arr	124.92	329	PKIKP	PKPdf	16 23 09.2	-3.9	
GRF	Grafenberg Arr	124.94	330	*e*L	L	17 17 33.4		
	comp=Z,271nm,21.8s							
OBKA	Obir	125.08	325	*i* PKiKP	PKPdf	16 23 13.2	-0.4	
	comp=Z,4.2nm,0.9s							
KASTN	Kahler Asten	125.28	333	*e*PKPdf	PKPdf	16 23 14.1	+0.3	
	baz=51,slow=2.0							
LJU	Ljubljana	125.36	325	*i* PKPdf	PKPdf	16 23 14.2	+0.2	
KBA	Koelnbreinsper	125.43	326	*i* PKiKP	PKPdf	16 23 14.1	-0.2	
	comp=Z,9.6nm,1.2s							
MYKA	Terra Mystica	125.53	326	*i* PKiKP	PKPdf	16 23 14.0	-0.4	
	comp=Z,4.9nm,0.8s							
CEY	Cerknica	125.59	324	*i* PKPdf	PKPdf	16 23 14.1	-0.4	
LESA	Schwarzleotal	125.59	327	*i* PKiKP	PKPdf	16 23 14.4	-0.1	
	comp=Z,9.2nm,0.8s,SNR=6.6							
ABTA	Abfaltersbach	125.09	326	*i* PKP	PKPdf	16 23 14.6	-0.9	
	comp=Z,15nm,0.9s,SNR=8.2							
WATA	Walderalm	126.24	327	*i* PKiKP	PKPdf	16 23 16.1	+0.3	
	comp=Z,18nm,1.1s							
WTTA	Wattenberg	126.25	327	PKIKP	PKPdf	16 23 16.1	+0.2	
WTTA	Wattenberg	126.25	327	*i* PKiKP	PKPdf	16 23 16.0	+0.1	
	comp=Z,24nm,0.9s,SNR=9.7							
STAL	STALIGIAL	126.27	326		PKPdf	16 23 15.2	-0.6	
EKA	Eskdalemuir Ar	126.45	343	PKP	PKPdf	16 23 16.1	+0.3	
	comp=Z,1.7nm,0.5s,baz=12,slow=2.2,SNR=8.6							
MOTA	Moosalm	126.48	328	*i* PKiKP	PKPdf	16 23 16.4	+0.1	
	comp=Z,22nm,1.0s,SNR=9.4							
SQTA	Sankt Quirin	126.51	327	*i* PKiKP	PKPdf	16 23 16.6	+0.3	
	comp=Z,20nm,1.0s,SNR=7.4							
STU	Stuttgart	126.55	330	*e*PKPdf	PKPdf	16 23 16.3	+0.1	
	baz=51,slow=2.0							
RETA	Reutte	126.58	328	*i* PKiKP	PKPdf	16 23 16.5	+0.1	
	comp=Z,5.8nm,1.0s							
MEM	Membach	126.78	333	PKIKP	PKiKP	16 23 17.5	+0.4	
MEM	Membach	126.78	333	*d*PKP	PKPdf	16 23 16.7	+0.1	
MATE	Matera	126.82	318	⇓P	PKPdf	16 23 17.1	+0.2	
F64A	Sherman	126.83	34		PKiKP	16 23 17.6	+0.3	
FETA	Feichten	126.89	328	*i* PKiKP	PKPdf	16 23 17.4	+0.3	
	comp=Z,18nm,1.0s,SNR=9.6							
DAVA	Damuels	127.17	328	*i* PKiKP	PKPdf	16 23 17.9	+0.3	
	comp=Z,14nm,0.8s,SNR=7.1							
WLF	Walferdange	127.39	333	PKIKP	PKiKP	16 23 19.3	+1.0	
WLF	Walferdange	127.39	333	*d*PKP	PKiKP	16 23 18.9	+0.6	
WLF	Walferdange	127.39	333	*e*PKPdf	PKiKP	16 23 18.7	+0.4	
	baz=51,slow=2.0							
TIP	Timpagrande	127.48	316	⇑P	PKiKP	16 23 19.3	+0.3	
TIP	Timpagrande	127.48	316		PKPdf	16 23 18.6	+0.2	
BMRD	Maredsous	127.55	334	*d*PKP	PKiKP	16 23 18.7	+0.1	
SLE	Schleitheim	127.57	330	PKIKP	PKPdf	16 23 18.3	+0.1	
DOU	Dourbes	127.78	334	*d*PKP	PKiKP	16 23 19.4	+0.4	
ECH	Echery	127.93	331	PKIKP	PKiKP	16 23 19.4	-0.1	
AQU	L'Aquila	128.08	321	PKIKP	PKPdf	16 23 16.6	-2.8	
AQU	L'Aquila	128.08	321	*e*P	PKPdf	16 23 16.1	-3.3	
CEL	Celeste	128.51	316		PKPdf	16 23 20.3	-0.1	
LOR	Lormes	130.18	332	PKIKP	PKiKP	16 23 23.9	-0.1	
PGF	Pioggiola	130.62	324	PKIKP	PKiKP	16 23 25.6	+0.4	
ISO	Isola	130.69	327	PKIKP	PKPdf	16 23 24.9	+0.6	
ORIF	Oris-

s-maj=19.3km s-min=13.7km az=89.0
*NEIC **31** 16:17:16.2±2.3,8.78S±0.08×152.71E±0.06,h10km±1km, mb4.7/45, Error ellipse: s-maj=14.7km s-min=8.3km az=146.0*
*GCMT **31** 16:17:19.2±0.3,8.78S±0.02×152.60E±0.01,h15km±1km, MW4.8/92, Moment Tensor Solution. s12,c12; s92,c125; Duration: 0 Moment tensor: Scale 10^16^Nm; Mr0.25±.10; Mθθ 1.89±.07; Mφφ-2.14±.09; Mrθ 1.28±.28; Mθφ 0.01±.07; Mφr0.40±.25; Best double couple: M0 2.40800×10^16^ NP1:φs42.00000°,δ78.00000°,λ151.00000°. NP2: φs42.00000°,δ78.00000°,λ151.00000°. Principal axes: T 2.6000, Plg29.0000°, Azm357.0000°; N -0.3810, Plg59.0000°, Azm202.0000°; P -2.2160, Plg11.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **31** 16:17:21.9±0.6,9°S±5°×15°E±°,h40km±6km,M4.8/23, mb5.0/23,mB5.4/6,MLv4.7/2,Mw(mB)4.8/6*

ISC 31 16:17:16.3±0.5,8.81S±0.06×152.67E±0.06,h10km,n120, σ1§68/89,mb4.7/47,MS3.9/15,1C,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.61**	**354**	Pn	**Pn**	**16 18 23.1**	**-3.1**
PMG	**Port Moresby**	**5.47**	**263**	Pn	**Pn**	**16 18 39.6**	**+1.6**
	12nm,0.3s,baz=65,slow=7.1,SNR=31						
PMG				Sn	**Sb**	**16 19 50.8**	**-7.0**
	3.5nm,0.3s,baz=88,slow=9.8,SNR=1.4						
PMG				LR	LR	16 20 51.2	
	comp=Z,2μm,18.3s,baz=69,slow=40						
	24nm,0.3s						
PMG	**Port Moresby**	**5.47**	**263**		**Pn**	**16 18 40.4**	**+2.4**
PMG	**Port Moresby**	**5.47**	**263**	P	**Pn**	**16 18 40.9**	**+2.9**
TATA	**Tatamba Isabel**	**7.07**	**87**	P	Pn	16 19 04.6	+4.6
HNR	**Honiara**	**7.22**	**95**	Pn	**Pn**	**16 19 02.9**	**+0.9**
	0.2nm,0.3s,baz=175,slow=11,SNR=5.6						
COEN	**Coen**	**10.62**	**240**	P	**Pn**	**16 19 50.4**	**+1.7**
COEN	**Coen**	**10.62**	**240**	Pn	**Pn**	**16 19 48.7**	**0.0**
CTA	**Charters Tower**	**12.81**	**208**	P	**Pn**	**16 20 18.8**	**0.0**
CTA	**Charters Tower**	**12.81**	**208**	Pn	**Pn**	**16 20 18.3**	**-0.4**
	1.3nm,0.3s,baz=17,slow=14,SNR=20						
CTA				LR	LR	16 24 43.3	
	comp=Z,487nm,18.9s,baz=14,slow=35						
	2.9nm,0.3s						
CTAO	**Charters Tower**	**12.81**	**208**	P	**Pn**	**16 20 18.7**	**0.0**
CTAO	**Charters Tower**	**12.81**	**208**	Pn	**Pn**	**16 20 18.3**	**-0.4**
JAY	**Jayapura**	**13.44**	**297**	Pn	**Pn**	**16 20 27.4**	**+0.1**
	2.2nm,0.3s,baz=75,slow=4.5,SNR=19						
	7.3nm,0.5s						
GENI	**Genyem**	**13.88**	**296**	P	**Pn**	**16 20 35.5**	**+2.2**
	55nm,0.9s						
KOUNC	**Koumac, New Ca**	**16.19**	**137**	Pn	**Pn**	**16 20 59.6**	**-4.5**
QIS	**Mount Isa**	**17.19**	**226**	P	**P**	**16 21 18.7**	**+0.3**
BAKI	**Biak**	**18.14**	**294**	P	**P**	**16 21 31.7**	**+2.8**
	88nm,1.2s						
DZM	**Mont Dzumac**	**18.69**	**136**	P	**Pn**	**16 21 36.5**	**+1.1**
	0.2nm,0.3s,baz=26,slow=9.1,SNR=4.5						
	22nm,1.0s						
QLP	**Quilpie**	**19.40**	**203**	P	**Pn**	**16 21 44.5**	**+0.7**
WB0	**Warramunga Arr**	**20.77**	**236**		**P**	**16 21 57.7**	**+0.1**
WR8	**Warramunga Ar**	**20.77**	**236**		**P**	**16 21 57.7**	**0.0**
WR8				IAmb	IAmb	16 22 05.6	
	comp=Z,25nm,0.8s						
WRAB	**Tennant Creek**	**20.88**	**236**	P	**P**	**16 22 00.5**	**+1.6**
WRAB	**Tennant Creek**	**20.88**	**236**	P	**P**	**16 21 58.0**	**-0.9**
WRA	**Warramunga Arr**	**20.90**	**236**	P	**P**	**16 21 59.6**	**+0.5**
	comp=Z,14nm,0.9s,baz=60,slow=11,SNR=46						
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**20.90**	**236**	P	**P**	**16 21 58.4**	**-0.7**
FAKI	**Fak Fak**	**21.13**	**285**	P	P	16 22 10.2	+8.6
MTN	**Manton Dam**	**21.52**	**257**		**P**	**16 22 06.1**	**+0.3**
INKA	**Innaminka**	**21.94**	**209**		**P**	**16 22 09.8**	**-0.3**
SIJI	**Sorong**	**22.72**	**289**	LR	LR	16 32 13.3	
	comp=Z,448nm,18.2s,baz=60,slow=40						
SIJI	**Sorong**	**22.72**	**289**	P	**P**	**16 22 21.0**	**+2.3**
	comp=Z,49nm,1.0s						
SWI	**Sorong**	**22.73**	**289**	P	**P**	**16 22 19.9**	**+1.2**
	comp=Z,1μmcomp=Z,57nm,0.9s						
AS01	**Alice Springs**	**23.22**	**228**	P	**P**	**16 22 26.2**	**+2.4**
AS31	**Alice Springs**	**23.25**	**228**		**P**	**16 22 22.4**	**-1.7**
ASAR	**Alice Springs**	**23.25**	**228**	P	**P**	**16 22 24.7**	**+0.6**
	comp=Z,5.3nm,0.9s,baz=60,slow=8.9,SNR=30						
	comp=Z,5.3nm,0.9s						
ASAR	**Alice Springs**	**23.25**	**228**		**P**	**16 22 22.3**	**-1.9**
GUMO	**Guam**	**23.56**	**341**	LR	LR	16 32 15.9	
	comp=Z,145nm,18.3s,baz=168,slow=38						
KNRA	**Kununurra**	**24.32**	**251**		**P**	**16 22 34.9**	**+0.4**
KNRA				IAmb	IAmb	16 22 39.2	
	comp=Z,22nm,0.9s						
STKA	**Stephens Creek**	**25.16**	**203**	P	**P**	**16 22 41.8**	**-0.1**
	comp=Z,8.6nm,0.6s,baz=32,slow=13,SNR=18						
STKA				LR	LR	16 32 24.5	
	comp=Z,320nm,18.1s,baz=3.2,slow=36						
	comp=Z,8.6nm,0.6s						
MSVF	**Nonsavu**	**26.22**	**112**	LR	LR	16 32 28.8	
	comp=Z,334nm,18.1s,baz=343,slow=35						
CAN	**Canberra**	**26.60**	**187**	P	**P**	**16 22 54.7**	**-0.2**
CAN				IAmb	IAmb	16 23 11.6	
	comp=Z,28nm,1.4s						
HTT	**Hallett**	**27.59**	**205**	P	**P**	**16 23 07.4**	**+3.5**
FITZ	**Fitzroy Crossi**	**27.82**	**248**	LR	LR	16 35 13.5	
	comp=Z,446nm,18.1s,baz=79,slow=39						
BBOO	**Buckleboo**	**28.40**	**210**	P	**P**	**16 23 14.6**	**+3.5**
BBOO	**Buckleboo**	**28.40**	**210**	P	**P**	**16 23 09.2**	**-1.9**
BBOO				IAmb	IAmb	16 23 15.2	
	comp=Z,16nm,0.9s						
BATI	**Baumata**	**28.63**	**265**	LR	LR	16 37 35.7	
	comp=Z,753nm,18.2s,baz=111,slow=43						
KDI	**Kendari**	**30.24**	**277**	P	P	16 23 44.4	+17
H11S3	**WAKE ISLAND Hy**	**30.45**	**27**	T	T	16 55 40.7	
	baz=208,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**30.46**	**27**	T	T	16 55 39.4	
	baz=208,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**30.47**	**27**	T	T	16 55 38.8	
	baz=208,slow=76,SNR=21						
KAPI	**Kappang**	**32.88**	**274**	LR	LR	16 39 35.8	
	comp=Z,159nm,18.2s,baz=116,slow=41						
URZ	**Urewera**	**36.67**	**147**	LR	LR	16 37 01.1	
	comp=Z,328nm,18.7s,baz=328,slow=32						
RPZ	**Rata Peaks**	**38.30**	**158**	LR	LR	16 39 17.4	
	comp=Z,57nm,18.9s,baz=185,slow=34						
JMN	**Monobe**	**45.91**	**338**	P	**P**	**16 25 39.3**	**-0.1**
MJAR	**Matsushiro Arr**	**47.11**	**344**	P	**P**	**16 25 47.8**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=172,slow=7.5,SNR=8.7						
	comp=Z,1.9nm,0.6s						
MJAR	**Matsushiro Arr**	**47.11**	**344**	P	**P**	**16 25 47.0**	**-1.7**
MAJO	**Matsushiro**	**47.11**	**344**	P	**P**	**16 25 47.3**	**-1.4**
MAJO				IAmb	IAmb	16 25 58.7	
	comp=Z,6.7nm,0.8s						
RAR	**Rarotonga**	**47.39**	**111**	LR	LR	16 41 43.2	
	comp=Z,101nm,20.8s,baz=282,slow=31						
KSRS	**Korea Array**	**51.52**	**335**	P	**P**	**16 26 22.9**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=154,slow=8.3,SNR=20						
KSRS				LR	LR	16 46 38.1	
	comp=Z,89nm,20.0s,baz=155,slow=34						
	comp=Z,4.3nm,0.8s						
KSAR	**Wonju Array Be**	**51.53**	**335**	P	**P**	**16 26 21.7**	**-0.7**
KS19	**Wonju Array Si**	**51.59**	**335**	P	**P**	**16 26 21.7**	**-1.2**
KS19				IAmb	IAmb	16 26 31.8	
	comp=Z,9.8nm,0.9s						
NJ2	**Nanjing**	**51.90**	**323**	*e*P	**P**	**16 26 26.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,31nm,0.6s						
JKA	**Kamikawa-asahi**	**53.46**	**351**	P	**P**	**16 26 33.7**	**-3.0**
USRK	**Ussuriysk Ar.**	**55.98**	**342**	P	**P**	**16 26 55.6**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=162,slow=9.7,SNR=7.6						
	comp=Z,2.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**55.98**	**342**	P	**P**	**16 26 55.1**	**+0.2**
PPT	**Papeete**	**56.73**	**105**	LR	LR	16 46 16.9	
	comp=Z,86nm,21.4s,baz=293,slow=31						
PPT2	**Papeete2**	**56.73**	**105**	*e*LQ	LQ	16 41 07.9	
	comp=Z,347nm,32.8s						
PPT2				*e*LR	LR	16 43 23.1	
	comp=Z,226nm,33.0s						
PPT2				*e*LR	LR	16 43 24.2	
	comp=Z,420nm,31.2s						
TBI	**Tubuai**	**57.11**	**112**	*e*LR	LR	16 43 30.0	
	comp=Z,2μm,28.5s						
BNX	**BinXian**	**58.84**	**340**	⇑P	**P**	**16 27 15.8**	**+0.7**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**59.52**	**297**	P	**P**	**16 27 20.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=122,slow=5.0,SNR=8.3						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**59.52**	**297**	P	**P**	**16 27 19.0**	**-1.4**
PZH	**PanZhiHua**	**60.61**	**307**	P	**P**	**16 27 30.5**	**+2.7**
PZH				S	**S**	**16 35 45.0**	**+0.5**
PZH				pmax	pmax		
	comp=Z,200nm,4.3s						
PZH				LR	LR		
	comp=N,200nm,16.7s						
PZH				LR	LR		
	comp=E,250nm,18.2s						
PZH				LR	LR		
	comp=Z,370nm,18.0s						
PETK	**Petropavlovsk-**	**61.82**	**3**	P	**P**	**16 27 35.9**	**+0.6**
	comp=Z,5.7nm,0.9s,baz=214,slow=6.4,SNR=4.8						
	comp=Z,5.7nm,0.9s						
PETK	**Petropavlovsk-**	**61.82**	**3**	P	**P**	**16 27 35.8**	**+0.5**
XLT	**XiLinHaoTe**	**62.06**	**331**	*e*P	**P**	**16 27 41.0**	**+3.7**
XLT				pP	sP	16 27 45.5	+4.4
XLT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**62.23**	**326**	*e*P	**P**	**16 27 41.5**	**+3.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.1s						
HEH	**HeiHe**	**62.79**	**342**	*e*P	**P**	**16 27 41.8**	**-0.1**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LZH	**Lanzhou**	**64.03**	**317**	*e*P	**P**	**16 27 51.5**	**+0.9**
LZH				sP	sP	16 27 59.0	+4.6
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
HILR	**Hailar Array B**	**64.86**	**337**	P	**P**	**16 27 55.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=120,slow=5.2,SNR=2.3						
	comp=Z,0.7nm,0.3s						
TAOE	**Nuku Hiva Isla**	**66.30**	**96**	*e*LR	LR	16 47 53.8	
	comp=Z,182nm,22.0s						
SHL	**Shillong**	**68.26**	**302**	P	**P**	**16 28 18.1**	**0.0**
GTA2	**Gaotai**	**68.59**	**318**	*e*P	**P**	**16 28 20.5**	**+0.7**
GTA2				sP	sP	16 28 29.0	+5.4
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA2				LR	LR		
	comp=N,170nm,18.1s						
GTA2				LR	LR		
	comp=E,290nm,20.6s						
GTA2				LR	LR		
	comp=Z,420nm,19.4s						
VNDA	**Vanda**	**68.86**	**178**	P	**P**	**16 28 20.8**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=292,slow=6.3,SNR=4.1						
	comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**68.86**	**178**	P	**P**	**16 28 21.8**	**+1.1**
ULN	**Ulaanbaatar**	**69.33**	**329**	P	**P**	**16 28 25.7**	**+1.5**
SONM	**Songino Array**	**69.64**	**329**	P	**P**	**16 28 26.7**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=144,slow=5.5,SNR=15						
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**69.64**	**329**	P	**P**	**16 28 26.2**	**+0.1**
SONM				IAmb	IAmb	16 28 44.1	
	comp=Z,5.3nm,0.8s						
KDAK	**Kodiak Island**	**79.80**	**26**	LR	LR	16 59 53.4	
	comp=Z,140nm,19.6s,baz=244,slow=32						
QSPA	**South Pole Qui**	**81.18**	**180**	P	**P**	**16 29 31.0**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=329,slow=1.1,SNR=9.0						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**81.18**	**180**	P	**P**	**16 29 32.0**	**-0.2**
QSPA				IAmb	IAmb	16 29 57.0	
	comp=Z,7.8nm,1.1s						
L19K	**White Mountain**	**81.49**	**22**	P	**P**	**16 29 33.6**	**-0.1**
J20K	**Nowata River**	**82.96**	**21**	IAmb	IAmb	16 30 16.6	
	comp=Z,6.2nm,1.2s						
H19K	**Roundabout Mou**	**83.02**	**19**	IAmb	IAmb	16 29 53.1	
	comp=Z,6.7nm,1.0s						
G19K	**Purcell Mounta**	**83.22**	**18**	IAmb	IAmb	16 29 49.5	
	comp=Z,6.8nm,1.1s						
MKAR	**Makanchi Array**	**83.25**	**319**	P	**P**	**16 29 42.4**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=99,slow=5.4,SNR=11						
	comp=Z,1.1nm,0.8s						
F19K	**Shieruckik Mo**	**83.46**	**18**	IAmb	IAmb	16 30 21.6	
	comp=Z,4.4nm,0.9s						
MAKZ	**Makanchi**	**83.46**	**319**	P	**P**	**16 29 43.6**	**-0.7**
ZAA0	**Zalesovo Array**	**84.40**	**327**		**P**	**16 29 47.0**	**-1.8**
ZAA0				IAmb	IAmb	16 29 53.0	
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**84.40**	**327**	P	**P**	**16 29 47.6**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=119,slow=5.2,SNR=13						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**84.40**	**327**	P	**P**	**16 29 47.0**	**-1.8**
RND	**Reindeer**	**84.45**	**23**	IAmb	IAmb	16 30 01.4	
	comp=Z,4.3nm,0.9s						
D19K	**Kuna River**	**84.45**	**16**	IAmb	IAmb	16 30 06.9	
	comp=Z,4.3nm,0.9s						
C19K	**Lookout Ridge**	**84.47**	**15**	IAmb	IAmb	16 30 05.9	
	comp=Z,5.7nm,0.9s						
DHY	**Denali Highway**	**84.85**	**23**	P	**P**	**16 29 50.1**	**-1.0**
DHY				IAmb	IAmb	16 30 25.9	
	comp=Z,6.6nm,1.2s						
KSH2	**Kashi**	**85.64**	**311**	P	P	16 30 01.0	+5.3
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**85.90**	**22**	P	**P**	**16 29 55.0**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=262,slow=3.7,SNR=6.3						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**85.90**	**22**	P	**P**	**16 29 54.3**	**-1.9**
J25K	**Salcha River,**	**86.39**	**22**	IAmb	IAmb	16 30 42.2	
	comp=Z,5.1nm,1.1s						
M27K	**Edge Creek, AK**	**86.74**	**25**	IAmb	IAmb	16 30 36.4	
	comp=Z,5.8nm,1.0s						
KURK	**Kurchatov**	**86.83**	**322**	P	**P**	**16 30 00.7**	**-0.3**
KURBB	**Kurchatov Arra**	**86.86**	**322**	P	**P**	**16 30 00.4**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=110,slow=3.9,SNR=5.4						
	comp=Z,0.5nm,0.5s						
D23K	**Nanushuk River**	**86.89**	**18**	IAmb	IAmb	16 30 15.5	
	comp=Z,4.3nm,0.8s						
BCAR	**Beaver Creek A**	**87.08**	**25**	P	**P**	**16 30 02.9**	**+0.8**
HYT	**Haines Junctio**	**88.03**	**27**		**P**	**16 30 07.6**	**+0.8**
M29M	**Somme Creek**	**88.22**	**26**	IAmb	IAmb	16 30 33.4	
	comp=Z,4.2nm,1.0s						
H27K	**Steamboat Moun**	**88.56**	**22**	IAmb	IAmb	16 30 36.8	
	comp=Z,5.3nm,1.2s						
L29M	**L29M**	**88.62**	**25**		**P**	**16 30 09.6**	**+0.2**
L29M				IAmb	IAmb	16 30 17.6	
	comp=Z,4.2nm,1.0s						
BVAR	**Borovoye Array**	**92.35**	**323**	P	**P**	**16 30 26.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=108,slow=9.4,SNR=2.3						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	**94.65**	**52**	P	**P**	**16 30 38.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=257,slow=7.4,SNR=2.4						
	comp=Z,0.4nm,0.5s						
BDFB	**Brasilia**	**148.22**	**140**	PKPbc	**PKiKP**	**16 37 04.8**	**-0.7**
	comp=Z,2.3nm,0.4s,baz=215,slow=5.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**151.19**	**281**	PKPbc	**PKPbc**	**16 37 10.4**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=74,slow=2.2,SNR=8.6						

IDC 31 16:32:50.7±1.8,5.78S×130.59E,h0km,mb3.4/1, mbtmp3.6/5,ML3.5/4,Error ellipse: s-maj=77.0km s-min=24.7km az=86.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.92**	**8**	Pn	Pn	16 34 07.2	+1.2
	2.5nm,0.3s,baz=190,slow=18,SNR=16						
SIJI				Sn	Sn	16 34 55.4	-8.3
	2.7nm,0.3s,baz=242,slow=23,SNR=8.0						
	7.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**13.17**	**201**	Pn	Pn	16 36 00.9	+1.8
	0.2nm,0.3s,baz=21,slow=8.2,SNR=21						
FITZ				Sn	Sn	16 38 24.1	-2.3
	0.3nm,0.3s,baz=140,slow=15,SNR=3.0						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**14.55**	**166**	Pn	Pn	16 36 16.5	-1.5
	0.1nm,0.3s,baz=347,slow=15,SNR=9.3						
WRA				Sn	Sn	16 38 48.9	-11
	0.4nm,0.3s,baz=337,slow=22,SNR=9.1						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**18.07**	**170**	P	Pn	16 37 03.5	+0.2
	0.2nm,0.3s,baz=347,slow=12,SNR=24						
ASAR				Sn	Sn	16 40 17.1	-8.7
	0.1nm,0.3s,baz=352,slow=26,SNR=7.1						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**67.54**	**326**	P	P	16 43 48.4	-0.5
	0.1nm,0.4s,baz=125,slow=7.6,SNR=4.1						
	0.1nm,0.4s						

*MOS **31** 16:45:07.4±0.9,30.34N×94.88E,h10km,mb5.0/49, MS4.4/7,Error ellipse: s-maj=7.1km s-min=3.4km az=124.9*
*IDC **31** 16:45:07.1±0.5,30.26N×94.80E,h0km,mb4.4/31, mbtmp4.4/35,ML3.9/4,Error ellipse: s-maj=14.9km s-min=9.5km az=48.0*
*NDI **31** 16:45:07.8±2.3,30.58N×94.93E,h10km,mb4.4,ML4.0, MW4.5,Presumed earthquake*
*BJI **31** 16:45:08.1,30.37N×94.84E,h6km,mB4.8/10,mb4.4/48, ML4.1/11,Ms4.1/38,Ms7.3/38*
*NEIC **31** 16:45:09.9±1.6,30.43N±0.08×94.8E±0.1,h10km±1km, mb4.9/176,Error ellipse: s-maj=15.2km s-min=14.1km az=84.0*
*GFZ **31** 16:45:10.1±0.3,30°N±3°×9°5E±°,h10km,M4.7/23, mb4.8/23*

ISC 31 16:45:09.4±0.3,30.36N±0.03×94.86E±0.03,h10km,n689, σ1§09/650,mb4.9/202,MS4.5/19,19C-12D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.28**	**259**	P	**Pn**	**16 46 01.5**	**+0.1**
LSA	**Lhasa**	**3.28**	**259**		**Pn**	**16 46 01.5**	**+0.1**
LSA	**Lhasa**	**3.28**	**259**	*e*Pn	**Pn**	**16 45 58.8**	**-2.6**
LSA				Sn	**Sn**	**16 46 43.0**	**+2.3**
LSA				SMN			
	110nm,3.4s						
LSA				SME			
	130nm,2.6s						
TAWA	**Tawang**	**3.80**	**224**	*e*P	**Pn**	**16 46 09.4**	**+1.0**
TAWA				*i* x	x	16 46 19.7	
TAWA				*e*S	**Sn**	**16 46 53.5**	**+0.1**
MOKO	**MOKOCHONG**	**4.04**	**184**	*e*P	**Pn**	**16 46 12.8**	**+1.3**
MOKO				*e*S	**Sn**	**16 47 00.3**	**+1.5**
KOHI	**KOHIMA**	**4.67**	**188**	*e*P	**Pn**	**16 46 20.8**	**+0.7**
KOHI				*e*S	**Sn**	**16 47 16.4**	**+2.0**
KOHI				IAML		16 47 17.4	
	comp=N,211nm,0.5s						
GUWA	**GUWAHATI**	**5.00**	**215**	*ex*	**Pb**	**16 46 38.6**	**+1.5**
SHL	**Shillong**	**5.45**	**210**	P	**Pn**	**16 46 30.7**	**-0.2**
SHL	**Shillong**	**5.45**	**210**		**Pn**	**16 46 30.7**	**-0.2**
SHL	**Shillong**	**5.45**	**210**	*e*P	**Pn**	**16 46 30.8**	**-0.2**
SHL				*i* x	**Pg**	**16 46 52.7**	**-1.2**
IMP	**Imphal**	**5.57**	**189**	*e*P	**Pn**	**16 46 33.0**	**+0.6**
GOMU	**GeErMu**	**5.82**	**360**	Pn	**Pn**	**16 46 36.0**	**-0.2**
GOMU				Pg	Pg	16 46 55.8	-5.2
GOMU				Sn	**Sn**	**16 47 43.5**	**+0.3**
GOMU				Sg	**Sb**	**16 48 06.5**	**+5.3**
DHUB	**DHUBRI**	**6.09**	**226**	*e*P	**Pn**	**16 46 40.4**	**+0.8**
MORE	**Moreh**	**6.12**	**185**		**Pn**	**16 46 41.3**	**+1.3**
MORE				Sn	**Sn**	**16 47 54.4**	**+4.3**
TNCH	**TengChong**	**6.22**	**148**	Pn	**Pn**	**16 46 41.0**	**-0.5**
TNCH				Sg	**Sg**	**16 48 25.0**	**-4.3**
TNCH				SMN			
	comp=N,220nm,1.4s						
TNCH				SME			
	comp=N,270nm,1.7s						
TNCH				L	L		
	comp=N,460nm,8.5s						
PZH	**PanZhiHua**	**7.17**	**121**	P	Pn	16 46 59.5	+5.0
PZH				S	Sb	16 48 32.5	-7.4
PZH				LR	LR		
	comp=N,860nm,4.1s						
PZH				LR	LR		
	comp=E,660nm,3.8s						
PZH				LR	LR		
	comp=Z,490nm,7.9s						
EVN	**Everest**	**7.43**	**253**		**Pn**	**16 46 59.7**	**+1.2**
CD2	**Chengdu**	**7.69**	**84**	Pn	**Pn**	**16 47 02.8**	**+1.3**
CD2				L	L		
	comp=Z,2μm,7.3s						
CD2				L	L		
	comp=Z,1μm,6.4s						
CD2				L	L		
	comp=Z,2μm,8.8s						
KMI2	**Kunming**	**8.70**	**125**	P	**Pn**	**16 47 17.5**	**+1.9**
KMI2				SMN			
	comp=Z,70nm,1.8s						
KMI2				SME			
	comp=Z,54nm,1.6s						
KMI2				L	L		
	comp=Z,960nm,5.1s						
KMI2				L	L		
	comp=Z,600nm,5.9s						
KMI2				L	L		
	comp=Z,450nm,11.4s						
LZDM	**Lanzhou Array**	**9.27**	**51**	Pn	**Pn**	**16 47 25.5**	**+2.0**
	baz=229,slow=11						
	comp=Z,2.5nm,0.3s						
LZH	**Lanzhou**	**9.44**	**50**	*e*P	Pn	16 47 30.8	+5.1
LZH				pP		16 47 34.3	
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				L	L		
	comp=Z,570nm,9.6s						
LZH				L	L		
	comp=Z,590nm,10.3s						
LZH				L	L		
	comp=Z,500nm,10.3s						
GTA2	**Gaotai**	**9.95**	**22**	*e*P	**Pn**	**16 47 34.5**	**+1.9**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA2				L	L		
	comp=Z,550nm,9.8s						
GTA2				L	L		
	comp=Z,340nm,9.2s						
GTA2				L	L		
	comp=Z,570nm,12.4s						
GAYA	**Gaya**	**10.18**	**239**	*e*P	**Pn**	**16 47 35.0**	**-0.6**
GAYA				IAmb	IAmb	16 47 37.7	
	comp=Z,12nm,0.5s						
GYA	**Guiyang**	**11.09**	**108**	⇓P	**Pn**	**16 47 49.0**	**+0.7**
GYA				pmax	pmax		
	comp=Z,44nm,0.8s						
CMAR	**Chiang Mai Arr**	**12.42**	**162**	Pn	**Pn**	**16 48 03.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=333,slow=13,SNR=11						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**12.42**	**162**	*i* P

HHC L L
comp=Z,270nm,8.7s
HHC L L
comp=Z,170nm,9.7s
HHC L L
comp=Z,290nm,10.8s
QIZ Qiongzhong 17.66 126 P **P** **16 49 17.3 +0.7**
QIZ S **Sn** **16 52 37.0 +4.5**
QIZ L L
comp=Z,420nm,10.5s
QIZ L L
comp=Z,320nm,10.7s
QIZ L L
comp=Z,320nm,7.7s
SHLS Shalkode 17.72 320 *e*P **Pn** **16 49 13.1 -3.2**
SHLS Shalkode 17.72 320 *e*P **Pn** **16 49 13.2 -3.2**
PDGK Podgornoye 17.82 321 P **Pn** **16 49 16.1 -1.5**
PDGK Podgornoye 17.82 321 **Pn** **16 49 16.1 -1.5**
TARG Taragay, Kyrgy 17.82 314 P **P** **16 49 18.2 -0.5**
TARG pmax pmax
comp=Z,58nm,1.2s
TARG Taragay, Kyrgy 17.82 314 **P** **16 49 18.2 -0.5**
HNS HongShan 17.90 62 ⇑P **P** **16 49 20.0 +1.0**
HNS pmax pmax
comp=Z,15nm,0.9s
HNS L L
comp=Z,270nm,11.9s
HNS L L
comp=Z,250nm,11.2s
UZB Uzynbulak 17.96 320 *e*P **Pn** **16 49 19.0 -0.3**
UZB Uzynbulak 17.96 320 *e*P **Pn** **16 49 19.1 -0.3**
KSH2 Kashi 18.09 304 P **Pn** **16 49 19.8 -1.2**
KSH2 pmax pmax
comp=Z,15nm,1.3s
KSH2 L L
comp=Z,110nm,10.3s
KSH2 L L
comp=Z,250nm,16.1s
KSH2 L L
comp=Z,210nm,16.5s
SATY Saty 18.25 318 *e*P **Pn** **16 49 22.6 -0.3**
SATY Saty 18.25 318 *e*P **Pn** **16 49 22.7 -0.3**
KPKS Kokpek 18.35 320 *e*P **Pn** **16 49 23.8 -0.3**
KPKS Kokpek 18.35 320 *e*P **Pn** **16 49 23.8 -0.3**
NIL Nilore 18.61 286 P **P** **16 49 24.3 -2.7**
NIL Nilore 18.61 286 P **P** **16 49 24.3 -2.7**
ZSN Zaisan 18.73 338 *e*P **Pn** **16 49 28.2 -0.3**
ZSN Zaisan 18.73 338 *e*P **Pn** **16 49 28.3 -0.3**
NRN Naryn 18.81 311 P **Pn** **16 49 30.0 0.0**
NRN pmax pmax
comp=Z,25nm,1.4s
NRN Naryn 18.81 311 P **Pn** **16 49 30.0 0.0**
MK31 Makanchi Array 19.08 333*c i*P **P** **16 49 31.1 -1.0**
MKAR Makanchi Array 19.08 333 P **P** **16 49 30.9 -1.3**
comp=Z,0.3nm,0.3s,baz=147,slow=11,SNR=50
MKAR S **S** **16 53 08.4 -0.2**
comp=Z,0.3nm,0.7s,baz=155,slow=20,SNR=1.9
MKAR PcP **PcP** **16 53 56.5 +0.1**
comp=Z,0.9nm,1.0s,baz=176,slow=6.7,SNR=3.6
comp=Z,7.8nm,0.9s
MKAR Makanchi Array 19.08 333 P **P** **16 49 30.3 -1.8**
TNSS Tian-Shan 19.09 316 *e*P **P** **16 49 32.4 -0.2**
TNSS Tian-Shan 19.09 316 *e*P **P** **16 49 32.4 -0.2**
MDOK Medeo 19.11 317 *e*P **P** **16 49 32.7 +0.2**
MDOK *e*S **Sn** **16 53 06.0 -1.3**
MDOK Medeo 19.11 317 *e*P **P** **16 49 32.7 +0.2**
MDOK *e*S **Sn** **16 53 06.1 -1.3**
MAKZ Makanchi 19.22 332 P **P** **16 49 32.6 -1.0**
MAKZ pmax pmax
comp=Z,29nm,1.2s
MAKZ Makanchi 19.22 332 **P** **16 49 32.6 -1.0**
MAKZ Makanchi 19.22 332 P **P** **16 49 32.9 -0.7**
BOOM Boomskoye usch 19.40 314 P **Pn** **16 49 37.1 +0.2**
BOOM pmax pmax
comp=Z,41nm,1.2s
BOOM Boomskoye usch 19.40 314 P **Pn** **16 49 37.1 +0.2**
TIA Tai'an 19.49 67 P **Pn** **16 49 38.8 +1.0**
TIA pmax pmax
comp=Z,18nm,1.2s
TDK Taldyqorghan 19.52 323 *e*P **P** **16 49 36.9 0.0**
TDK Taldyqorghan 19.52 323 *e*P **P** **16 49 36.9 0.0**
SONM Songino Array 19.57 24 P **Pn** **16 49 38.3 -0.6**
comp=Z,0.3nm,0.3s,baz=212,slow=11,SNR=32
comp=Z,12nm,1.0s
SONM Songino Array 19.57 24 P **P** **16 49 37.7 +0.2**
UDPR Udaipur 19.62 258 *e*P **P** **16 49 37.4 -0.7**
UDPR IAmb IAmb 16 49 41.3
comp=Z,25nm,0.7s
HYB Hyderabad 19.67 233 *e*P **P** **16 49 39.2 +0.5**
HYB *e*S **Sn** **16 53 31.5 +10**
ULN Ulaanbaatar 19.83 25⇓*e*P **P** **16 49 40.5 +0.1**
ULN pmax pmax
comp=Z,18nm,1.1s
ULN Ulaanbaatar 19.83 25 P **P** **16 49 40.6 +0.1**
ULN Ulaanbaatar 19.83 25 P **P** **16 49 40.2 -0.2**
comp=Z,58nm,1.1s
ULN Ulaanbaatar 19.83 25 P **P** **16 49 40.7 +0.3**
TKM2 Tokmak 2 19.84 314 P **Pn** **16 49 41.4 -0.8**
SNR=6.8
BJI2 Beijing 19.86 55 P **P** **16 49 38.5 -2.1**
BJI2 PP **PnPn** **16 49 56.3 +0.1**
BJI2 S **S** **16 53 16.0 -8.3**
BJI2 pmax pmax
comp=Z,2.0nm,0.5s
BJI2 pmax pmax
comp=Z,52nm,9.2s
BJI2 L L
comp=Z,160nm,7.7s
BJI2 L L
comp=Z,180nm,7.7s
BJI2 L L
comp=Z,250nm,8.3s
KUU Kurty 19.95 318 *e*P **P** **16 49 41.7 +0.1**
KUU Kurty 19.95 318 *e*P **P** **16 49 41.8 +0.1**
KBK Karagaybulak 20.11 313 P Pn 16 49 48.7 +3.4
SNR=11
DGZ Jazzator, Alta 20.12 346⇓*e*P Pn 16 49 44.4 -0.9
DGZ pmax pmax
comp=Z,38nm,1.4s
KNGR Kungurtug, Tuv 20.32 5⇑*e*P Pn 16 49 47.6 -0.1
KNGR pmax pmax
comp=Z,30nm,1.6s
AAK Ala-Archa 20.39 313 P **P** **16 49 45.8 -0.7**
comp=Z,42nm,1.1s,baz=129,slow=10,SNR=43
comp=Z,42nm,1.1s
AAK Ala-Archa 20.39 313 P Pn 16 49 47.9 -0.7
SNR=26
AAK Ala-Archa 20.39 313*ce*P Pn 16 49 47.9 -0.7
AAK pmax pmax
comp=Z,113nm,1.3s
AAK Ala-Archa 20.39 313 P Pn 16 49 47.6 -1.0
AAK IAmb IAmb 16 49 52.8
comp=Z,113nm,1.3s
AAK Ala-Archa 20.39 313 P Pn 16 49 48.0 -0.6
CHMS Chumysh 20.41 314 P **P** **16 49 47.2 +0.6**
SNR=36
MANEM Manem 20.49 297 P **P** **16 49 48.7 +1.0**
MANEM IAmb IAmb 16 49 52.6
comp=Z,141nm,1.2s
NJ2 Nanjing 20.59 79 *e*P **P** **16 49 49.5 +0.9**
NJ2 pmax pmax
comp=Z,24nm,0.9s
USP Ospenovka 20.71 314 P **P** **16 49 50.4 +0.6**
SNR=27
SGDS Sogindy 20.73 315 *e*P **P** **16 49 50.1 0.0**
SGDS *e*S **S** **16 53 41.3 -0.2**
EKS2 Erkin-Say 20.86 312 P **P** **16 49 52.6 +1.1**
SNR=21
XLT XiLinHaoTe 21.57 45 *e*P **P** **16 50 00.5 +1.3**
XLT pP pP 16 50 04.0 +0.9
XLT sP sP 16 50 08.3 +3.5
XLT PP **PnPn** **16 50 24.3 +4.7**
XLT S **S** **16 53 58.5 +0.2**
XLT SS **SnSn** **16 54 25.8 +3.9**
XLT pmax pmax
comp=Z,21nm,1.2s
XLT L L
comp=Z,140nm,7.2s
XLT L L
comp=Z,190nm,8.5s
MOY Mondy 21.77 10 *e*P **P** **16 50 01.7 +0.4**
MOY pmax pmax
comp=Z,48nm,1.7s
BTK Batken 21.84 303 P **P** **16 50 01.8 -0.3**
BTK pmax pmax
comp=Z,75nm,1.1s
BTK Batken 21.84 303 IAmb **P** 16 50 05.5
comp=Z,75nm,1.1s
GAR Garm 21.90 300 P **P** **16 50 01.4 -1.4**
GAR Garm 21.90 300 P **P** **16 50 01.9 -0.9**
BTLS Baital 21.95 318 *e*P **P** **16 50 03.3 +0.1**
BTLS *e*S **S** **16 54 05.3 -0.2**
BTLS Baital 21.95 318 *e*P **P** **16 50 03.3 +0.1**
BTLS *e*S **S** **16 54 05.4 -0.2**
KBL Kabul 22.16 288 P **P** **16 50 05.1 -0.6**
KBL pmax pmax
comp=Z,112nm,1.2s
KBL Kabul 22.16 288 P **P** **16 50 05.1 -0.6**
KBL Kabul 22.16 288 P **P** **16 50 05.5 -0.3**
TLY Talaya 22.27 15⇑*e*P **P** **16 50 06.6 0.0**
TLY pmax pmax
comp=Z,13nm,1.1s
TLY Talaya 22.27 15 P **P** **16 50 06.8 +0.2**
DZA Taraz 22.56 310 *e*P **P** **16 50 10.0 +0.3**
DZA Taraz 22.56 310 *e*P **P** **16 50 10.1 +0.3**
CHGR Chuyangaron 22.68 298*d i*P **P** **16 50 09.8 -1.4**
CHGR pmax pmax
comp=Z,362nm,1.4s
CHGR Chuyangaron 22.68 298 P **P** **16 50 10.1 -1.1**
CHGR Chuyangaron 22.68 298 P **P** **16 50 10.4 -0.8**
IRK Irkutsk 22.94 15 *e*P **P** **16 50 14.0 +0.4**
IRK pmax pmax
comp=Z,506nm,1.6s
KK31 Karatay Array 23.20 310 IAmb IAmb 16 50 19.7
comp=Z,37nm,1.3s
KKAR Karatay Array 23.20 310 P **P** **16 50 15.8 -0.6**
KKAR Karatay Array 23.20 310 P **P** **16 50 15.8 -0.6**
SHAA Shahritus 23.26 295 IAmb IAmb 16 50 19.8
comp=Z,101nm,1.1s
CHM Chimkent 23.49 307 *e*P **P** **16 50 19.9 +0.5**
CHM Chimkent 23.49 307 *e*P **P** **16 50 19.1 -0.3**
BRLS Borolday 23.61 309 *e*P **P** **16 50 21.1 +0.5**
BRLS Borolday 23.61 309 *e*P **P** **16 50 21.1 +0.5**
KURBB Kurchatov Arra 23.65 333 P **P** **16 50 19.9 -0.9**
comp=Z,4.3nm,0.2s,baz=144,slow=10,SNR=52
KURBB PcP **PcP** **16 54 04.2 -1.0**
comp=Z,3.7nm,0.2s,baz=155,slow=2.0,SNR=5.8
KURBB S **S** **16 54 38.3 +3.1**
comp=Z,3.2nm,0.2s,baz=143,slow=17,SNR=4.0
comp=Z,4.3nm,0.2s
KURK Kurchatov 23.69 334*d i*P **P** **16 50 19.3 -1.8**
KURK pmax pmax
comp=Z,42nm,1.3s
KURK Kurchatov 23.69 334 P **P** **16 50 20.1 -1.0**
KURK IAmb IAmb 16 50 23.3
comp=Z,28nm,1.1s
KURK Kurchatov 23.69 334 P **P** **16 50 20.3 -0.9**
ZAA0 Zalesovo Array 24.67 346 P **P** **16 50 29.4 -0.8**
ZAA0 IAmb IAmb 16 50 32.0
comp=Z,49nm,1.6s
ZALV Zalesovo Beam 24.67 346 P **P** **16 50 29.6 -0.6**
comp=Z,5.8nm,0.6s,baz=160,slow=9.5,SNR=28
ZALV PcP **PcP** **16 54 07.0 -0.3**
comp=Z,0.4nm,0.3s,baz=116,slow=5.0,SNR=3.6
comp=Z,5.8nm,0.6s
ZALV Zalesovo Beam 24.67 346 P **P** **16 50 29.1 -1.1**
HILR Hailar Array B 26.84 37 P **P** **16 50 50.8 +0.7**
comp=Z,4.8nm,0.7s,baz=223,slow=10,SNR=8.7
comp=Z,4.8nm,0.7s
CN2 Changchun 27.67 53 P **P** **16 50 57.0 -0.5**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 L L
comp=Z,200nm,10.0s
CN2 L L
comp=Z,200nm,10.0s
CN2 L L
comp=Z,300nm,10.0s
KSRS Korea Array 28.24 67 P **P** **16 51 02.0 -0.6**
comp=Z,0.5nm,0.6s,baz=273,slow=11,SNR=7.0
comp=Z,0.5nm,0.6s
BVAR Borovoye Array 28.84 329 P **P** **16 51 07.7 -0.1**
comp=Z,7.6nm,0.8s,baz=138,slow=9.1,SNR=23
BVAR PcP **PcP** **16 54 16.9 -0.2**
comp=Z,2.5nm,0.9s,baz=105,slow=3.4,SNR=5.7
comp=Z,7.6nm,0.8s
BNX BinXian 29.63 50 ⇑P **P** **16 51 13.8 -1.1**
BNX pmax pmax
comp=Z,9.0nm,1.8s
BNX pmax pmax
comp=Z,100nm,4.7s
HEH HeiHe 31.43 41 *e*P **P** **16 51 31.8 +1.1**
HEH pmax pmax
comp=Z,6.0nm,1.1s
ABKAR Akbulak array 32.40 316 P **P** **16 51 37.9 -1.4**
ZEA Zeya 33.06 36 *e*P **P** **16 51 45.7 +0.8**
ZEA pmax pmax
comp=Z,20nm,1.0s
KLR Kul'dur 33.60 45*ce*P **P** **16 51 50.6 +0.9**
KLR pmax pmax
comp=Z,13nm,1.1s
SVE Sverdlovsk 35.61 328 *e*P **P** **16 52 08.0 +1.0**
SVE pmax pmax
comp=Z,31nm,1.2s
ARTI Arti 36.44 326*c i*P **P** **16 52 14.1 0.0**
ARTI 16 53 32.8
ARTI 16 54 36.9
ARTI S **S** **16 57 55.3 -0.3**
ARTI SS **SnSn** **17 00 20.5 -3.0**
ARTI pmax pmax
comp=Z,22nm,1.2s
ARTI Arti 36.44 326 P **P** **16 52 13.6 -0.5**
ARTI IAmb IAmb 16 52 16.2
comp=Z,32nm,1.4s
MJAR Matsushiro Arr 36.46 68 P **P** **16 52 14.6 0.0**
comp=Z,1.0nm,0.9s,baz=271,slow=11,SNR=4.7
comp=Z,1.0nm,0.9s
LKRN Lenkeran, Azer 38.53 295 P **P** **16 52 35.0 +2.9**
YAK Yakutsk 38.92 25 *e*P **P** **16 52 34.0 -1.0**
YAK *e**PP **pP** **16 52 37.1 -2.2**
YAK *e* 16 54 44.6
YAK *e*S **S** **16 58 33.1 0.0**
YAK *e**SS **sS** **16 58 41.3 +0.8**
YAK *e* 17 02 44.4
YAK pmax pmax
comp=N,3.0nm,1.6s
YAK pmax pmax
comp=Z,9.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK pmax pmax
comp=Z,68nm,5.5s
YAK pmax pmax
comp=N,177nm,14.2s
YAK pmax pmax
comp=E,47nm,4.9s
YAK smax smax
comp=E,50nm,5.2s
YAK smax smax
comp=N,49nm,4.8s
YAK MLR MLR
comp=Z,122nm,24.0s
YAK Yakutsk 38.92 25 P **P** **16 52 34.1 -1.0**
YAK IAmb IAmb 16 52 36.8
comp=Z,26nm,1.1s
YAK Yakutsk 38.92 25 P **P** **16 52 34.3 -0.7**
NRIK Noril'sk 39.24 356 P **P** **16 52 37.5 -0.1**
comp=Z,6.6nm,1.0s,baz=160,slow=6.6,SNR=13
comp=Z,6.6nm,1.0s
NRIK Noril'sk 39.24 356*d i*P **P** **16 52 37.6 -0.1**
NRIK pmax pmax
comp=Z,19nm,1.3s
AKT Akhty 39.31 300 *e*P **P** **16 52 39.1 +0.3**
AKT *e* 16 54 09.4
AKT *e*PPP PPP 16 54 30.3
AKT pmax pmax
comp=Z,19nm,1.0s
SEKA Sheki 39.71 299 P **P** **16 52 43.9 +1.9**
MNGR Mingechevir, A 39.80 299 P **P** **16 52 46.9 +4.3**
YSS Yuzhno-Sakhali 40.24 52 *e*P **P** **16 52 47.4 +1.2**
YSS pmax pmax
comp=Z,10.0nm,1.0s
GANJ Ganja 40.38 298 P **P** **16 52 49.9 +2.4**
BELG Belogornoye 40.79 316*c i*P **P** **16 52 50.6 -0.1**
BELG pmax pmax
comp=Z,6.0nm,1.2s
NAX Nakhchivan 41.07 296 P **P** **16 52 56.0 +2.7**
GNI Garni 41.60 298 PP **PP** **16 54 33.5 -0.3**
comp=Z,3.4nm,0.5s,baz=116,slow=7.8,SNR=3.1
KIRV Kirov 41.75 326⇓*e*P **P** **16 52 59.0 +0.5**
NCK Nalchik 42.39 303⇑*i*P **P** **16 53 05.7 +1.7**
NCK pmax pmax
comp=Z,32nm,1.4s
GOF Gofitskoye 42.82 305*ce*P **P** **16 53 08.2 +0.7**
KBZ Khabaz 42.90 303 P **P** **16 53 07.5 -0.6**
comp=Z,3.5nm,0.9s,baz=70,slow=8.8,SNR=6.3
comp=Z,3.5nm,0.9s
KBZ Khabaz 42.90 303⇓*e*P **P** **16 53 07.1 -1.0**
KBZ pmax pmax
comp=Z,8.0nm,1.2s
KIV Kislovodsk 43.06 303 *e*P **P** **16 53 10.2 +0.7**
KIV pmax pmax
comp=Z,28nm,1.1s
KIV Kislovodsk 43.06 303 P **P** **16 53 09.5 0.0**
KIV Kislovodsk 43.06 303 P **P** **16 53 10.3 +0.7**
comp=Z,25nm,1.3s
KIV Kislovodsk 43.06 303 P **P** **16 53 11.0 +1.5**
VRH Novokhopyorsk 44.18 314 *e*P **P** **16 53 18.2 -0.1**
VRH pmax pmax
comp=Z,32nm,1.2s
RAYN Ar Rayn 44.25 273 P **P** **16 53 18.3 -1.0**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 44.25 273 P **P** **16 53 18.3 -1.0**
RAYN Ar Rayn 44.25 273 P **P** **16 53 19.4 +0.1**
LABN Labinsk 44.47 304 *e*P **P** **16 53 21.0 +0.3**
LABN *e**PP **pP** **16 53 24.0 -1.0**
LABN *e*S **S** **16 59 55.9 +0.2**
LABN pmax pmax
comp=Z,16nm,0.5s
ERBR Yeremizino-Bor 44.64 306 *e*P **P** **16 53 22.3 +0.2**
ERBR *e**PP **pP** **16 53 25.6 -0.8**
ERBR *e*S **S** **16 59 58.3 +0.1**
ERBR pmax pmax
comp=Z,31nm,1.1s
VSLR Vesyoloye 44.99 303⇓*e*P **P** **16 53 24.7 -0.2**
VSLR pmax pmax
comp=Z,59nm,1.2s
SOC Sochi 45.21 303 *e*P **P** **16 53 27.6 +0.9**
SOC *e* 16 55 10.0
SOC *e*PPP PPP 16 55 51.7
SOC *e*S **S** **17 00 06.0 -0.6**
SOC *e*SS **ScS** **17 03 24.7 +0.9**
SOC *e*SSS SSS 17 04 23.9
SOC pmax pmax
comp=Z,21nm,0.8s
SOC MLR MLR
comp=Z,103nm,18.0s
TIXI Tiksi 45.25 14⇑*e*P **P** **16 53 25.8 -0.8**
TIXI pmax pmax
comp=Z,13nm,1.4s
VORD Divnogorie 45.68 313 *e*P **P** **16 53 28.8 -1.4**
VORD pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 45.78 314 *e*P **P** **16 53 31.3 +0.2**
VSR pmax pmax
comp=Z,21nm,0.9s
VORR Voronezh 45.80 314 *e*P **P** **16 53 30.8 -0.4**
VORR pmax pmax
comp=Z,38nm,0.4s
LPSR Galich'ya Gora 46.06 315 *e*P **P** **16 53 33.1 -0.1**
LPSR pmax pmax
comp=Z,38nm,1.2s
ARPR Arapgir-MALATY 46.62 297 P P 16 53 32.9 -5.2
ANN Anapa 46.81 305 *e*P **P** **16 53 39.8 +0.6**
ANN *e**PP **pP** **16 53 43.2 -0.3**
ANN *e* 16 55 29.8
ANN *e*S **S** **17 00 30.2 +0.8**
ANN pmax pmax
comp=Z,39nm,1.0s
MA2 Magadan 47.20 35⇑*e*P **P** **16 53 42.5 +0.4**
MA2 pmax pmax
comp=Z,15nm,1.1s
MOS Moscow 47.21 320 *e*P **P** **16 53 42.7 +0.5**
MOS pmax pmax
comp=Z,58nm,1.1s
KLMR Klimovskoe 47.22 327 *e*P **P** **16 53 40.8 -1.4**
KLMR *e* 16 55 31.4
KLMR pmax pmax
comp=Z,64nm,1.3s
OBN Obninsk 47.73 319*ce*P **P** **16 53 46.5 +0.2**
OBN *e* 16 55 15.3
OBN *e* 16 55 37.9
OBN *e*PPP PPP 16 56 23.6
OBN pmax pmax
comp=Z,28nm,1.2s
OBN MLR MLR
comp=Z,401nm,21.0s
OBN Obninsk 47.73 319 P **P** **16 53 46.4 +0.2**
comp=Z,18nm,1.4s
BNN Bunyan 48.57 297 P **P** **16 53 53.5 +0.2**
SEY Seymchan 48.74 31⇓*e*P **P** **16 53 54.1 +0.2**
SEY pmax pmax
comp=Z,14nm,1.8s
ASF Jabal al Asfar 49.05 288 P **P** **16 53 56.0 -1.0**
comp=Z,10.0nm,1.1s,baz=301,slow=10,SNR=6.7
comp=Z,10.0nm,1.1s
ASF Jabal al Asfar 49.05 288 P **P** **16 53 56.0 -1.0**
BZK Bozkurt 49.54 301 P **P** **16 54 00.0 -0.3**
comp=Z,32nm,1.1s
BR131 Keskin Array S 50.13 298⇓*e*P **P** **16 54 04.8 -0.3**
BR131 Keskin Array S 50.13 298 P **P** **16 54 04.2 -0.9**
BRTR Keskin Array B 50.13 298 P **P** **16 54 04.3 -0.8**
comp=Z,4.1nm,1.0s,baz=140,slow=7.9,SNR=24
BRTR PP **PP** **16 56 02.2 +2.1**
comp=Z,1.6nm,1.1s,baz=60,slow=9.5,SNR=4.2
comp=Z,4.1nm,1.0s
BRTR Keskin Array B 50.13 298 *i* P **P** **16 54 03.7 -1.4**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 50.13 298 **P** **16 54 03.5 -1.6**
BR104 Keskin Array S 50.13 298 P **P** **16 54 04.8 -0.3**
comp=Z,37nmcomp=Z,4.7nm,1.1s
BR106 Keskin Array S 50.14 298 P **P** **16 54 04.4 -0.8**
comp=Z,44nmcomp=Z,5.5nm,1.0s
BR105 Keskin Array S 50.15 298 P **P** **16 54 04.4 -0.8**
comp=Z,47nmcomp=Z,5.2nm,1.1s
PET Petropavlovsk 50.85 44⇓*e*P **P** **16 54 08.1 -2.0**
PET pmax pmax
comp=Z,23nm,1.0s
EIL Elat 51.33 285 P **P** **16 54 12.9 -1.2**
comp=Z,13nm,1.2s,baz=136,slow=8.7,SNR=4.3
comp=Z,13nm,1.2s
EIL Elat 51.33 285 P **P** **16 54 13.5 -0.6**
APA Apatity 51.47 334 *e*P **P** **16 54 13.5 -1.1**
APA *e* 16 55 29.8
APA *e*S S 17 01 24.2 -10
MDUB Mudurnu 51.85 300 P **P** **16 54 17.4 -0.6**
BAL3X Bal3x, Balta 52.01 309 P **P** **16 54 18.6 -0.3**
AK09 Malin Array Si 52.02 313 P **P** **16 54 18.7 -0.3**
AK08 Malin Array Si 52.04 313 P **P** **16 54 18.9 -0.2**
AK10 Malin Array Si 52.05 313 P **P** **16 54 19.0 -0.1**
AKASG Malin Array Be 52.06 313 P **P** **16 54 18.4 -0.8**
comp=Z,14nm,1.0s,baz=80,slow=6.6,SNR=26
comp=Z,14nm,1.0s
AKASG Malin Array Be 52.06 313 *i* P **P** **16 54 18.3 -0.9**
AKASG pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 52.06 313*c i*P **P** **16 54 18.5 -0.7**
AKBB pmax pmax
comp=Z,29nm,1.1s
AKBB Malin Array Si 52.06 313 P **P** **16 54 18.9 -0.3**
AK03 Malin Array Si 52.06 313 P **P** **16 54 18.9 -0.3**
AK01 Malin Array Si 52.06 313 P **P** **16 54 19.3 0.0**
KIEV Kiev 52.07 313 P **P** **16 54 19.5 +0.2**
KIEV pmax pmax
comp=Z,82nm,1.2s
MNK Minsk 52.72 318 *i* P **P** **16 54 24.9 +0.8**
comp=E,19nm,0.8s
MNK *i* P **P** **16 54 24.9 +0.8**
comp=N,16nm,0.9s
MNK *i* P **P** **16 54 24.9 +0.8**
comp=Z,22nm,0.9s,baz=88
MNK *i* PP **PP** **16 56 24.4 +1.3**
MNK *i* PPP PPP 16 57 27.0
MNK *i* S **S** **17 01 52.6 +0.8**
MNK *i* SS **SS** **17 05 31.6 +1.6**
MNK *i* SSS SSS 17 07 18.1
MNK *i* LR LR 17 16 23.4
MNK *i* LRM MLR 17 19 22.1
comp=Z,64nm,18.3s
MNK Minsk 52.72 318 *i* P **P** **16 54 24.9 +0.8**
MNK *i* 16 56 24.4
MNK *i* PPP PPP 16 57 26.9

MNK *i* S **S** **17 01 52.6 +0.8**
MNK *i* SS **SS** **17 05 31.6 +1.6**
MNK *i* SSS SSS 17 07 18.1
MNK pmax pmax
comp=E,19nm,0.8s
MNK pmax pmax
comp=Z,22nm,0.9s
MNK pmax pmax
comp=N,16nm,0.9s
MNK MLR MLR
comp=Z,64nm,18.0s
SORM Soroca 52.83 310 P **P** **16 54 24.7 -0.3**
MI28 Mi28,Pidlybu 53.03 313 P **P** **16 54 25.8 -0.6**
LUBAR Lubar, Ukraine 53.05 312 P **P** **16 54 26.4 -0.2**
YLV Yalova 53.20 300 P **P** **16 54 27.6 -0.4**
comp=Z,16nm,1.1s
VSU Vasula 53.34 323 *i* P **P** **16 54 28.1 -0.4**
VSU pmax pmax
comp=Z,54nm,1.5s
NACGM Naroch 53.35 318 *e*P **P** **16 54 29.1 +0.4**
comp=Z,24nm,1.1s,baz=88
ELL Elmali 53.59 295 P **P** **16 54 31.7 +0.7**
ELL pmax pmax
comp=Z,139nm,1.2s
FINES FINESS Array B 53.75 326 P **P** **16 54 30.9 -0.6**
comp=Z,5.0nm,0.9s,baz=90,slow=5.9,SNR=8.1
comp=Z,5.0nm,0.9s
FINES FINESS Array B 53.75 326 *i* P **P** **16 54 31.8 +0.3**
FINES pmax pmax
comp=Z,5.0nm,0.9s
CTYL Yalikoy Yolu 53.84 301 P **P** **16 54 32.4 -0.1**
comp=Z,11nm,0.9s
KMPD K-Podol'skiy 54.03 310 P **P** **16 54 33.6 -0.2**
SGF Sodankyl 54.05 334 P **P** **16 54 35.5 +1.9**
SGF pmax pmax
comp=Z,15nm,1.3s
SGF Sodankyl 54.05 334 P **P** **16 54 34.0 +0.4**
RNPP9 Sopachiv 54.10 314 P **P** **16 54 34.0 -0.3**
RNPP5 Staryi Chortor 54.12 314 P **P** **16 54 34.1 -0.3**
RNPP8 Varash 54.13 314 P **P** **16 54 34.3 -0.2**
VRI Vrincioaia 54.22 307 P **P** **16 54 35.7 +0.4**
VRI Vrincioaia 54.22 307 P **P** **16 54 35.1 -0.2**
comp=Z,596nmcomp=Z,26nm,1.3s
VRI Vrincioaia 54.22 307 P **P** **16 54 35.7 +0.4**
ARCES ARCESS Array B 54.69 336 P **P** **16 54 38.2 -0.2**
comp=Z,2.4nm,0.9s,baz=82,slow=9.2,SNR=2.2
comp=Z,2.4nm,0.9s
MLR Muntele Rosu 54.82 307 P **P** **16 54 39.7 -0.1**
comp=Z,26nm,1.0s,baz=86,slow=8.2,SNR=19
MLR Muntele Rosu 54.82 307 P **P** **16 54 39.1 -0.7**
comp=Z,39nm,1.2s
MLR Muntele Rosu 54.82 307 P **P** **16 54 40.5 +0.7**
BURAR Bucovina Array 54.99 309 P **P** **16 54 41.6 +0.7**
BURAR pmax pmax
comp=Z,5.0nm,1.2s
BURAR Bucovina Array 54.99 309 P **P** **16 54 41.6 +0.7**
BILL Bilibino 55.28 26 ⇑ *i* P **P** **16 54 43.6 +1.0**
BILL pmax pmax
comp=Z,12nm,1.4s
VOIR 55.45 307 P **P** **16 54 44.5 +0.2**
VOIR 55.45 307 P **P** **16 54 43.9 -0.4**
VOIR 55.45 307 P **P** **16 54 44.5 +0.2**
LVV L'vov 55.46 312 P **P** **16 54 44.5 +0.3**
ALN Alexandroupoli 55.61 301 P **P** **16 54 45.0 -0.4**
EZN Ezine 55.64 300 P **P** **16 54 45.4 -0.2**
comp=Z,19nm,1.3s
RDO Rodhopi 55.93 301 IAmb IAmb 16 54 49.5
comp=Z,19nm,1.2s
KWP Kalwaria Pacla 56.34 312 P **P** **16 54 49.9 -0.6**
comp=Z,47nm,1.3s
TRSU Trosnyk 56.41 310 P **P** **16 54 52.3 +1.3**
TRPA Tarpa 56.69 310 P **P** **16 54 53.6 +0.7**
SRS Serrai 57.37 302 P **P** **16 54 56.8 -1.2**
PAIG Paliouri 57.59 300 P **P** **16 54 58.0 -1.5**
BZS Buzias 57.78 307 P **P** **16 55 02.2 +1.4**
BZS pmax pmax
comp=Z,5.0nm,1.3s
BZS Buzias 57.78 307 P **P** **16 55 01.3 +0.6**
KNT Kendrikon 57.87 302 P **P** **16 55 02.8 +1.3**
IDI Anoyia 57.90 295 P **P** **16 55 01.3 -0.5**
comp=Z,14nm,1.1s,baz=284,slow=7.7,SNR=2.9
comp=Z,14nm,1.1s
NIE Niedzica 57.92 312 P **P** **16 55 01.4 -0.3**
comp=Z,4.7nm,1.4s
OJC Ojcow 58.09 313 P **P** **16 55 02.8 -0.1**
OJC Ojcow 58.09 313 P **P** **16 55 02.5 -0.4**
comp=Z,13nm,1.3s
OJC Ojcow 58.09 313 P **P** **16 55 02.8 -0.1**
GRG Griva 58.28 302 P **P** **16 55 03.2 -1.2**
LIT Litokhoron 58.43 301 P **P** **16 55 04.9 -0.6**
PSZ Piszkesteto 58.47 310 P **P** **16 55 07.7 +2.1**
PSZ pmax pmax
comp=Z,5.0nm,1.2s
IMMV Iera Moni Meta 58.56 295 P **P** **16 55 06.5 +0.1**
AGG Agios Georgios 58.84 300 P **P** **16 55 05.9 -2.4**
VYHS Vyhne 59.04 311 *e*P **P** **16 55 11.9 +2.3**
VYHS Vyhne 59.04 311 *e*P **P** **16 55 11.9 +2.3**
OKC Ostrava-Krasne 59.21 313 AMS AMS 17 15 20.0
comp=Z,300nm,19.4s
MAUC Maruska 59.51 312 *e*P **P** **16 55 12.9 +0.1**
MORC Moravsky Berou 59.61 313 P **P** **16 55 14.8 +1.3**
MORC Moravsky Berou 59.61 313 IAmb IAmb 16 55 15.8
comp=Z,13nm,1.3s
MORC Moravsky Berou 59.61 313 *e*P **P** **16 55 13.8 +0.3**
MORC Moravsky Berou 59.61 313 P **P** **16 55 14.5 +1.0**
MORH Mrgy, Hungar 59.67 309 P **P** **16 55 13.1 -0.8**
comp=Z,6.8nm,1.3s
MORH Mrgy, Hungar 59.67 309 P **P** **16 55 13.5 -0.4**
JAVC Velka Javorina 59.72 312 *e*P **P** **16 55 15.4 +1.1**
HFS Hagfors 59.88 325 P **P** **16 55 15.1 +0.1**
comp=Z,7.6nm,1.1s,baz=2.8,slow=9.1,SNR=6.8
comp=Z,7.6nm,1.1s
KRLC Kraliky 60.02 313 *e*P **P** **16 55 15.9 -0.4**
KRLC MLR MLR
comp=Z,400nm,19.4s
KRLC Kraliky 60.02 313 *e*P **P** **16 55 15.9 -0.4**
KRLC AMS AMS 17 16 10.0
comp=Z,400nm,19.4s
MODS Modra-Piesok 60.08 311 *e*P **P** **16 55 19.5 +2.8**
MODS Modra-Piesok 60.08 311 *e*P **P** **16 55 19.5 +2.8**
KSP Ksiaz 60.16 314 P **P** **16 55 17.0 -0.2**
comp=Z,6.9nm,1.4s
PDG Podgorica 60.19 304 P **P** **16 55 17.4 0.0**
PDG IAmb IAmb 16 55 18.6
comp=Z,15nm,1.2s
MPLH Magyarpolny 60.19 310 P **P** **16 55 17.3 -0.1**
comp=Z,26nm,1.4s
DPC Dobruska-Polom 60.25 314 *e*P **P** **16 55 18.0 +0.1**
DPC MLR MLR
comp=Z,400nm,25.3s
DPC Dobruska-Polom 60.25 314 *e*P **P** **16 55 18.0 +0.1**
DPC AMS AMS 17 15 30.0
comp=Z,400nm,25.3s
DPC Dobruska-Polom 60.25 314 P **P** **16 55 17.5 -0.4**
comp=Z,7.7nm,1.6s
OSTC Ostas 60.27 314 AMS AMS 17 15 30.0
comp=Z,300nm,16.6s
VRAC Vranov 60.31 312 P **P** **16 55 20.3 +2.0**
VRAC Vranov 60.31 312 *e*P **P** **16 55 18.7 +0.4**
CHVC Chvalec 60.37 314 AMS AMS 17 15 40.0
comp=Z,400nm,23.0s
UPC Upice 60.41 314 *e*P **P** **16 55 19.7 +0.8**
UPC Upice 60.41 314 *e*P **P** **16 55 19.7 +0.8**
UPC AMS AMS 17 15 30.0
comp=Z,500nm,28.3s
KRUC Moravsky 60.49 312 P **P** **16 55 20.8 +1.3**
KRUC Moravsky 60.49 312 *e*P **P** **16 55 19.4 -0.1**
NC602 NORSAR Array S 60.83 326 P **P** **16 55 22.1 +0.5**
NORES NORESS Array B 60.83 326 P **P** **16 55 22.4 +0.8**
NORES pmax pmax
comp=Z,3.0nm,0.7s
RONA Rosalia, Austr 60.88 311 *i* P **P** **16 55 22.2 0.0**
comp=Z,13nm,1.3s
NB2 NORSAR Subarra 60.93 326 P **P** **16 55 20.9 -1.4**
comp=Z,14nm,1.2s,baz=80,slow=6.9
NB2 NORSAR Subarra 60.93 326 P **P** **16 55 21.1 -1.2**
NB2 pmax pmax
comp=Z,13nm,1.3s
NOA NORSAR Array B 60.93 326 P **P** **16 55 21.3 -1.0**
comp=Z,7.0nm,1.0s,baz=79,slow=6.6,SNR=16
comp=Z,7.0nm,1.0s
TREC Trest 61.02 313 P **P** **16 55 25.2 +2.1**
TREC Trest 61.02 313 AMS AMS 17 15 30.0
comp=Z,400nm,23.1s
NC204 NORSAR Array S 61.10 327 P **P** **16 55 23.0 -0.5**
NC204 IAmb IAmb 16 55 25.0
comp=Z,13nm,0.9s
CONA Conrad Observa 61.11 311 *i* pP **P** **16 55 24.8 +1.0**
comp=Z,22nm,1.4s,SNR=15
PVCC Panska Ves 61.30 314 AMS AMS 17 17 10.0
comp=Z,300nm,24.1s
PRU Pruhonice 61.45 314 *e*P **P** **16 55 26.7 +0.7**
PRU MLR MLR
comp=Z,400nm,23.6s
PRU Pruhonice 61.45 314 *e*P **P** **16 55 26.7 +0.7**
PRU AMS AMS 17 17 50.0
comp=Z,400nm,23.6s
ARSA Arzberg 61.50 310 *i* P **P** **16 55 26.9 +0.5**
comp=Z,4.9nm,1.1s
PTJ Puntijarka 61.56 309 P **P** **16 55 28.0 +1.1**
BRG Berggiesshubel 61.60 315 *e*P **P** **16 55 27.9 +0.9**
BRG Amp 16 55 29.3
comp=Z,6.4nm,1.0s
ZVC Zvikov 61.80 313 *e*P **P** **16 55 28.9 +0.5**
ZVC AMS AMS 17 17 20.0
comp=Z,400nm,23.1s
CKRC Cesky Krumlov 61.89 312 *e*P **P** **16 55 29.3 +0.3**
CKRC MLR MLR
comp=Z,500nm,24.8s
CKRC Cesky Krumlov 61.89 312 *e*P **P** **16 55 29.3 +0.3**
CKRC AMS AMS 17 16 30.0
comp=Z,500nm,24.8s
CRES Cresnjevec Ost 61.92 309 *i* P **P** **16 55 29.0 -0.3**
SOKA Soboth 61.98 310 *i* P **P** **16 55 29.9 +0.2**
comp=Z,14nm,1.5s,SNR=7.6
HSKC Hora Svate Kat 61.98 314 AMS AMS 17 19 00.0
comp=Z,300nm,15.0s
CLL Collm 62.07 315 *e*P **P** **16 55 30.0 -0.1**
CLL Collm 62.07 315 *e*P **P** **16 55 30.0 -0.1**
MOA Molln 62.17 311 *i* P **P** **16 55 30.9 0.0**
comp=Z,11nm,1.4s,SNR=5.3
GEC2 GERESS Array S 62.27 312 **P** **16 55 31.7 0.0**
GEC2 IAmb IAmb 16 55 33.4
comp=Z,15nm,1.3s
GERES GERESS Array B 62.27 312 P **P** **16 55 31.4 -0.2**
comp=Z,3.4nm,1.0s,baz=63,slow=3.6,SNR=23
comp=Z,3.4nm,1.0s
KHC Kasperske Hory 62.27 313 ⇑ *e*P **P** **16 55 31.6 0.0**
KHC pmax pmax
comp=Z,8.0nm,1.4s
KHC Kasperske Hory 62.27 313 *e*P **P** **16 55 31.4 -0.2**
KHC AMS AMS 17 17 30.0
comp=Z,400nm,21.5s
KHC Kasperske Hory 62.27 313 P **P** **16 55 31.1 -0.5**
comp=Z,5.5nm,1.6s
OBKA Obir 62.34 310 *i* P **P** **16 55 32.3 +0.1**
comp=Z,7.9nm,1.4s
BIOA Bad Ischl, Aus 62.62 311 *i* pP **P** **16 55 34.7 +0.7**
comp=Z,4.5nm,1.1s
CEY Cerknica 62.64 309 *i* P **P** **16 55 33.6 -0.5**
NKC Novy Kostel 62.69 314 AMS AMS 17 16 30.0
comp=Z,300nm,24.4s
WRA Warramunga Arr 62.80 138 P **P** **16 55 34.2 -1.2**
comp=Z,2.4nm,0.9s,baz=326,slow=7.3,SNR=12
comp=Z,2.4nm,0.9s
MYKA Terra Mystica 62.91 310 *e*pP **P** **16 55 37.0 +1.1**
comp=Z,3.9nm,1.1s
TIP Timpagrande 62.94 301 P **P** **16 55 35.7 -0.5**
comp=Z,5.8nm,1.1s
KBA Koelnbreinsper 62.98 311 *e*pP **P** **16 55 37.5 +1.0**
comp=Z,3.8nm,0.7s
SABO M.te Sabotino 63.12 309 P **P** **16 55 36.9 -0.4**
LESA Schwarzleotal 63.32 311 *i* P **P** **16 55 37.9 -0.7**
comp=Z,21nm,1.3s,SNR=10
ABTA Abtersbach 63.62 310 *i* P **P** **16 55 40.8 +0.1**
comp=Z,5.4nm,1.0s
STAL STALIGIAL 63.63 310 IAmb IAmb 16 55 42.1
comp=Z,11nm,1.0s
CEL Celeste 63.87 301 P **P** **16 55 42.8 +0.3**
CEL Celeste 63.87 301 P **P** **16 55 41.8 -0.6**
comp=Z,320nmcomp=Z,39nm,1.1s
WTTA Wattenberg 64.04 311 *i* P **P** **16 55 44.0 +0.4**
comp=Z,7.7nm,1.0s
WATA Walderalm 64.06 311 *e*P **P** **16 55 43.2 -0.4**
comp=Z,8.9nm,1.4s
INTR Introdacqua 64.11 305 IAmb IAmb 16 55 46.8
comp=Z,16nm,1.3s
SQTA Sankt Quirin 64.33 311 *i* P **P** **16 55 45.6 +0.2**
comp=Z,8.4nm,1.1s
AQU L'Aquila 64.36 306 P **P** **16 55 45.0 -0.5**
comp=Z,13nm,1.0s
FDMO Fiordimonte 64.36 306 IAmb IAmb 16 55 47.3
comp=Z,13nm,1.2s
MOTA Moosalm 64.36 311 *e*P **P** **16 55 45.9 +0.3**
comp=Z,10nm,1.2s
NRCA Norcia 64.41 306 IAmb IAmb 16 55 48.9
comp=Z,11nm,1.2s
RETA Reutte 64.54 312 *i* P **P** **16 55 47.3 +0.6**
comp=Z,12nm,1.3s
GAMB Gambell 64.69 29 P **P** **16 55 46.5 -0.7**
baz=288
FETA Feichten 64.71 311 *i* P **P** **16 55 48.3 +0.4**
comp=Z,11nm,1.2s,SNR=6.7
DAVA Damuels 65.17 312 *i* pP **P** **16 55 51.5 +0.6**
comp=Z,9.3nm,1.1s
ASAR Alice Springs 65.50 141 P **P** **16 55 51.9 -1.1**
comp=Z,2.5nm,0.7s,baz=324,slow=6.3,SNR=24
comp=Z,2.5nm,0.7s
TNA Tin City 65.66 27 P **P** **16 55 53.1 -0.4**
baz=290
C16K Lisburne Hills 65.67 24 P **P** **16 55 53.1 -0.5**
baz=291
TUE Stuetta 65.78 311 IAmb IAmb 16 56 07.9
comp=Z,11nm,1.2s
TUE Stuetta 65.78 311 P **P** **16 55 54.6 -0.3**
comp=Z,25nm,1.1s
BFO Black Forest 65.83 313 P **P** **16 55 54.6 -0.4**
BFO pmax pmax
comp=Z,10.0nm,1.2s
BFO Black Forest 65.83 313 P **P** **16 55 54.6 -0.4**
BFO IAmb IAmb 16 55 56.7
comp=Z,10nm,1.2s
F14K Arctic Creek 66.31 27 P **P** **16 55 57.7 0.0**
baz=291
C17K DeLong Mountai 66.34 23 P **P** **16 55 57.6 -0.3**
baz=293
A19K Wainwright 66.34 21 P **P** **16 55 57.8 -0.1**
baz=294
RDOG Red Dog Mine 66.60 24 P **P** **16 55 59.2 -0.4**
baz=293
D17K Noatak River 66.68 24 P **P** **16 55 59.8 -0.2**
baz=293
WLF Walferdange 66.74 315 P **P** **16 56 02.9 +2.2**
WLF pmax pmax
comp=Z,22nm,1.5s
F15K North Star Dit 66.87 26 P **P** **16 56 01.4 0.0**
baz=293
C18K Utukok River 66.94 23 IAmb IAmb 16 56 03.9
comp=Z,6.9nm,1.1s
C18K Utukok River 66.94 23 P **P** **16 56 01.9 +0.1**
baz=294
ANM Nome 67.03 28 P **P** **16 56 02.2 -0.1**
baz=292
SENIN Lac Senin/Sane 67.15 311 IAmb IAmb 16 56 04.9
comp=Z,7.1nm,0.9s
A21K Barrow 67.19 19 P **P** **16 56 02.7 -0.5**
baz=297
C19K Lookout Ridge 67.28 22 P **P** **16 56 04.0 +0.1**
baz=296
E17K Hotham Inlet 67.37 24 P **P** **16 56 04.6 +0.1**
baz=294
G15K Niukluk 67.39 27 P **P** **16 56 04.9 +0.3**
baz=293
SPIA Saint Paul Isl 67.56 36 P **P** **16 56 05.7 -0.1**
baz=292
B20K Meade River 67.64 21 P **P** **16 56 06.3 +0.2**
baz=297
E18K Tukpahlearik C 67.66 24 P **P** **16 56 06.5 +0.2**
baz=295
A22K Sinclair Lake 67.81 19 P **P** **16 56 07.5 +0.3**
baz=299
F17K Baldwin Pennin 67.85 25 P **P** **16 56 07.8 +0.4**
baz=295
D19K Kuna River 68.03 22 IAmb IAmb 16 56 10.8
comp=Z,9.9nm,1.1s
D19K Kuna River 68.03 22 P **P** **16 56 09.2 +0.5**
baz=297
H16K Elim 68.24 27 P **P** **16 56 10.1 +0.1**
baz=295
M11K Mekoryuk 68.30 32 P **P** **16 56 10.3 0.0**
baz=293
F18K Selawik 68.35 24 P **P** **16 56 11.2 +0.6**
baz=296,SNR=6.1
K13K Kusilvak Mount 68.36 30 P **P** **16 56 11.1 +0.4**
baz=294
D20K Etivluk River 68.41 22 P **P** **16 56 11.4 +0.4**
baz=298
G17K Kiwalik Mounta 68.47 26 P **P** **16 56 11.8 +0.4**
baz=296
J14K Nanvaranak Lak 68.50 29 P **P** **16 56 12.0 +0.4**
baz=295
B22K Teshekpuk Lake 68.59 20 P **P** **16 56 12.3 +0.3**
baz=300,SNR=5.3
B21K Ikpikpuk River 68.60 21 IAmb IAmb 16 56 14.7
comp=Z,16nm,1.2s
B21K Ikpikpuk River 68.60 21 P **P** **16 56 12.5 +0.4**
baz=300
E20K Nigu River 68.77 22 P **P** **16 56 13.7 +0.4**
baz=299
C21K Knifeblade Rid 68.78 21 P **P** **16 56 14.0 +0.7**
baz=300,SNR=7.4
E19K Redstone River 68.81 23 IAmb IAmb 16 56 15.5
comp=Z,8.1nm,1.2s
E19K Redstone River 68.81 23 P **P** **16 56 14.1 +0.6**
baz=298
F19K Shaleruckik Mo 68.91 24 IAmb IAmb 16 56 15.8
comp=Z,8.3nm,1.1s
F19K Shaleruckik Mo 68.91 24 P **P** **16 56 14.5 +0.4**
baz=298
H17K Granite Mounta 69.00 26 P **P** **16 56 15.1 +0.3**
baz=297,SNR=8.6
G18K Tagagawik 69.03 25 P **P** **16 56 15.5 +0.6**
baz=298
I17K Unalakleet 69.17 27 P **P** **16 56 16.4 +0.6**
baz=297
SSB Saint Sauveur 69.34 311 IAmb IAmb 16 56 19.0
comp=Z,7.2nm,1.1s
E21K Killik River 69.39 22 IAmb IAmb 16 56 19.7
comp=Z,11nm,1.0s
E21K Killik River 69.39 22 P **P** **16 56 17.4 +0.3**
baz=301,SNR=11
L14K Kuka Creek 69.47 30 IAmb IAmb 16 56 19.9
comp=Z,17nm,1.3s
L14K Kuka Creek 69.47 30 P **P** **16 56 17.7 +0.1**
baz=296
J16K Anvik River 69.48 28 P **P** **16 56 17.5 -0.2**
baz=297,SNR=10
G19K Purcell Mounta 69.48 24 IAmb IAmb 16 56 19.1
comp=Z,14nm,1.4s
G19K Purcell Mounta 69.48 24 P **P** **16 56 17.1 -0.6**
baz=299
H18K Honhosa River 69.49 26 IAmb IAmb 16 56 19.8
comp=Z,14nm,1.2s
H18K Honhosa River 69.49 26 P **P** **16 56 17.9 +0.2**
baz=298
F20K Avaraart Lake 69.52 23 P **P** **16 56 17.9 0.0**
baz=300
K15K Wolf Creek Mou 69.54 29 P **P** **16 56 18.0 0.0**
baz=296
M13K Dall Lake 69.58 31 P **P** **16 56 18.2 -0.1**
baz=296
KEST Kesra 69.67 300 P **P** **16 56 18.6 -0.9**
comp=Z,15nm,1.2s,baz=58,slow=4.1,SNR=11
comp=Z,15nm,1.2s
C23K Itkillik River 69.68 20 P **P** **16 56 19.6 +0.8**
baz=303,SNR=11
L15K Ungalak Mounta 69.83 30 P **P** **16 56 20.4 +0.5**
baz=297
EKA Eskdalemuir Ar 69.89 323 P **P** **16 56 19.9 -0.4**
comp=Z,2.8nm,1.0s,baz=48,slow=9.6,SNR=2.5
comp=Z,2.8nm,1.0s
H19K Roundabout Mou 70.01 25 P **P** **16 56 21.0 0.0**
baz=300,SNR=10
J17K VABM Dome 70.04 27 IAmb IAmb 16 56 24.1
comp=Z,14nm,1.1s
J17K VABM Dome 70.04 27 P **P** **16 56 21.4 +0.3**
baz=298,SNR=6.2
M14K Bethel 70.04 31 P **P** **16 56 21.2 0.0**
baz=297
D23K Nanushuk River 70.14 20 P **P** **16 56 22.1 +0.4**
D23K IAmb IAmb 16 56 24.3
comp=Z,17nm,1.2s
D23K Nanushuk River 70.14 20 P **P** **16 56 21.6 0.0**
baz=303,SNR=11
F21K Alatna River 70.18 23 IAmb IAmb 16 56 24.1
comp=Z,9.8nm,1.2s
F21K Alatna River 70.18 23 P **P** **16 56 22.4 +0.4**
baz=302,SNR=9.4
GCSA Galena City Sc 70.24 26 P **P** **16 56 22.3 0.0**
baz=299
E22K Anaktuvuk Pass 70.24 21 IAmb IAmb 16 56 24.5
comp=Z,9.1nm,1.1s
E22K Anaktuvuk Pass 70.24 21 P **P** **16 56 22.1 -0.2**
baz=303
F22K John River 70.46 22 P **P** **16 56 23.4 -0.3**
baz=302
N14K Kuskokwak Cree 70.54 31 P **P** **16 56 24.3 +0.1**
baz=297
G21K Allakaket 70.55 23 IAmb IAmb 16 56 26.0
comp=Z,9.4nm,1.2s
G21K Allakaket 70.55 23 P **P** **16 56 24.0 -0.2**
baz=302
D24K Happy Valley 70.58 20 IAmb IAmb 16 56 26.6
comp=Z,10nm,1.1s
D24K Happy Valley 70.58 20 P **P** **16 56 24.5 +0.1**
baz=305
H20K Anotleneega Mo 70.60 25 P **P** **16 56 25.3 +0.8**
baz=301,SNR=5.8
M15K Kasigluk River 70.63 30 P **P** **16 56 25.5 +0.7**
baz=298
TOLK Toolik Lake Re 70.65 21 P **P** **16 56 25.4 +0.5**
baz=304,SNR=7.8
L16K Owhat River 70.67 29 P **P** **16 56 25.7 +0.7**
baz=298
K17K Iditarod 70.67 28 P **P** **16 56 25.6 +0.6**
baz=299,SNR=8.2
IMAR Indian Mountai 70.74 24 P **P** **16 56 24.3 -1.1**
UNV Unalaska Valle 70.84 38 P **P** **16 56 26.6 +0.4**
baz=295
J18K Innoko River 70.94 27 IAmb IAmb 16 56 28.8
comp=Z,14nm,1.1s
J18K Innoko River 70.94 27 P **P** **16 56 27.3 +0.7**
baz=300,SNR=6.0
L17K Donlin 70.96 28 P **P** **16 56 28.0 +1.2**
baz=299,SNR=5.2
E23K Chandalar 70.97 21 P **P** **16 56 27.5 +0.7**
baz=304,SNR=6.0
G22K Bettles 71.00 22 P **P** **16 56 27.8 +0.9**
baz=303
O14K Tigvkauivet M 71.04 32 P **P** **16 56 27.8 +0.5**
baz=298
J19K Poorman 71.09 26 P **P** **16 56 28.3 +0.7**
J19K IAmb IAmb 16 56 30.7
comp=Z,13nm,1.0s
J19K Poorman 71.09 26 P **P** **16 56 28.3 +0.7**
baz=301,SNR=11
I20K Naaghedeneel 71.10 25 P **P** **16 56 28.2 +0.7**
baz=301
N15K Kwethluk River 71.14 31 P **P** **16 56 28.5 +0.6**
baz=298
D25K Kavik River 71.19 19 IAmb IAmb 16 56 30.4
comp=Z,13nm,1.2s
D25K Kavik River 71.19 19 P **P** **16 56 28.9 +0.7**
baz=307,SNR=11
M16K Timber Creek 71.22 30 P **P** **16 56 28.9 +0.5**
baz=299
C26K Camden Bay 71.24 18 P **P** **16 56 28.9 +0.6**
baz=308
H21K Melozitna Rive 71.25 24 IAmb IAmb 16 56 30.9
comp=Z,9.5nm,1.2s
H21K Melozitna Rive 71.25 24 P **P** **16 56 29.5 +1.0**
baz=302,SNR=14
COLD Coldfoot 71.25 22 P **P** **16 56 29.2 +0.7**
baz=304
E24K Your Creek 71.31 21 IAmb IAmb 16 56 31.3
comp=Z,12nm,1.1s
E24K Your Creek 71.31 21 P **P** **16 56 29.1 +0.2**
baz=306,SNR=12
J20K Nowinta River 71.55 26 IAmb IAmb 16 56 33.0
comp=Z,13nm,1.2s
J20K Nowinta River 71.55 26 P **P** **16 56 30.1 -0.2**
baz=302,SNR=5.5
N16K Nishlik Lake 71.57 30 P **P** **16 56 30.8 +0.3**
baz=299
L18K Granite Mounta 71.57 28 P **P** **16 56 30.7 +0.2**
baz=300
G23K Bananza Creek 71.61 22 P **P** **16 56 30.7 +0.1**
baz=305
H22K Ishtalitna Cre 71.61 23 P **P** **16 56 30.5 -0.2**
baz=304
M17K Holitna River 71.67 29 IAmb IAmb 16 56 34.0

	comp=Z,18nm,1.2s								
M17K	**Holitna River**	71.67	29	P		P		16 56 31.3	+0.2
	baz=300,SNR=5.3								
O15K	**Ungalikthiuk R**	71.73	32	P		P		16 56 31.0	-0.5
	baz=299								
C27K	**Jago River**	71.75	18	P		P		16 56 31.4	-0.1
	baz=309,SNR=13								
I21K	**Tanana**	71.79	24	P		P		16 56 32.1	+0.3
	baz=303,SNR=5.9								
F24K	**Squaw Lake**	71.82	21	P		P		16 56 32.3	+0.3
	baz=306								
K20K	**Telida**	72.01	26	IAmb		IAmb		16 56 35.9	
	comp=Z,14nm,1.2s								
K20K	**Telida**	72.01	26	P		P		16 56 33.4	+0.3
	baz=302,SNR=9.4								
E25K	**Arctic Village**	72.16	20	IAmb		IAmb		16 56 36.4	
	comp=Z,13nm,1.3s								
E25K	**Arctic Village**	72.16	20	P		P		16 56 33.8	-0.1
	baz=308								
N17K	**Nushagak Hills**	72.22	30	P		P		16 56 34.1	-0.3
	baz=300								
H23K	**Yukon River**	72.27	23	P		P		16 56 34.2	-0.5
	baz=305								
O16K	**Kokwok River B**	72.30	31	IAmb		IAmb		16 56 37.2	
	comp=Z,17nm,1.1s								
O16K	**Kokwok River B**	72.30	31	P		P		16 56 34.6	-0.2
	baz=300								
M18K	**Stony River**	72.30	28	P		P		16 56 34.5	-0.3
	baz=301,SNR=5.5								
MLY	**Manley**	72.31	24	P		P		16 56 36.1	+1.1
MLY				IAmb		IAmb		16 56 37.3	
	comp=Z,9.8nm,1.2s								
MLY	**Manley**	72.31	24	P		P		16 56 35.2	+0.2
	baz=304,SNR=8.9								
L19K	**White Mountain**	72.33	28	IAmb		IAmb		16 56 37.8	
	comp=Z,13nm,1.1s								
L19K	**White Mountain**	72.33	28	P		P		16 56 34.9	-0.2
	baz=302,SNR=6.4								
CHUM	**Lake Minchumin**	72.39	25	P		P		16 56 35.0	-0.4
	baz=303								
G24K	**Hadweenzic Riv**	72.44	22	P		P		16 56 35.2	-0.5
	baz=307,SNR=5.9								
F25K	**Christian Rive**	72.46	20	IAmb		IAmb		16 56 38.8	
	comp=Z,8.3nm,1.1s								
F25K	**Christian Rive**	72.46	20	P		P		16 56 35.5	-0.4
	baz=308,SNR=8.8								
SUMG	**Summit**	72.49	347	P		P		16 56 36.5	+0.2
SUMG				pmax		pmax			
	comp=Z,10.0nm,1.1s								
SUMG	**Summit**	72.49	347			P		16 56 36.5	+0.2
SUMG				IAmb		IAmb		16 56 39.2	
	comp=Z,9.7nm,1.1s								
CEST	**Esterri de Car**	72.60	309	IAmb		IAmb		16 56 39.0	
	comp=Z,14nm,1.3s								
O17K	**Koliganek Bris**	72.64	30	P		P		16 56 36.6	-0.3
	baz=301								
N18K	**Kilae Creek**	72.69	29	P		P		16 56 37.4	+0.1
	baz=301								
I23K	**Minto, Yukon-K**	72.73	23	P		P		16 56 37.1	-0.2
	baz=306								
CAST	**Castle Rocks**	72.73	26	IAmb		IAmb		16 56 40.6	
	comp=Z,14nm,1.2s								
CAST	**Castle Rocks**	72.73	26	P		P		16 56 37.3	-0.1
	baz=304,SNR=14								
D27M	**Malcolm River**	72.73	18	P		P		16 56 37.0	-0.5
	baz=312								
H24K	**Noodor Dome**	72.82	23	P		P		16 56 37.5	-0.5
	baz=307								
G25K	**Bearman Lake**	72.83	21	P		P		16 56 37.9	0.0
	baz=308								
F26K	**Sheenjek River**	72.85	20	P		P		16 56 37.9	-0.1
	baz=309								
PPLA	**Purkeypile**	72.98	26	P		P		16 56 38.6	-0.5
	baz=304,SNR=7.5								
KTH	**Kantishna Hill**	73.09	25	IAmb		IAmb		16 56 42.5	
	comp=Z,24nm,1.5s								
BORG	**Borgarnes**	73.10	336	*i* P		P		16 56 39.6	+0.1
NEA2	**Nenana**	73.15	24	IAmb		IAmb		16 56 41.9	
	comp=Z,12nm,1.1s								
NEA2	**Nenana**	73.15	24	P		P		16 56 39.7	-0.2
	baz=306,SNR=9.3								
M20K	**Styx River**	73.17	27	IAmb		IAmb		16 56 45.6	
	comp=Z,10.0nm,1.1s								
M20K	**Styx River**	73.17	27	P		P		16 56 39.9	-0.3
	baz=303								
N19K	**Bonanza Creek**	73.21	29	P		P		16 56 40.1	-0.3
	baz=302								
P17K	**Kvichak River**	73.23	31	P		P		16 56 40.3	0.0
	baz=301								
D28M	**Stokes Point**	73.26	17	P		P		16 56 40.1	-0.3
	baz=314								
E27K	**Coleen River**	73.26	19	IAmb		IAmb		16 56 43.0	
	comp=Z,13nm,1.1s								
E27K	**Coleen River**	73.26	19	P		P		16 56 40.3	-0.3
	baz=311,SNR=6.3								
S14K	**Fog Glacier**	73.27	34	P		P		16 56 41.0	+0.2
	baz=300								
SDPT	**Sand Point**	73.27	35	P		P		16 56 41.1	+0.4
	baz=299								
TRF	**Thorofare Moun**	73.38	25	P		P		16 56 42.0	+0.5
	baz=305								
POKR	**Poker Plat Res**	73.40	23	P		P		16 56 41.1	-0.3
	baz=307								
COLA	**College**	73.41	23*c*	*i* P		P		16 56 42.6	+1.3
COLA				pmax		pmax			
	comp=Z,18nm,1.3s								
O18K	**Koktuh Hills**	73.42	30	P		P		16 56 41.5	0.0
	baz=302								
G26K	**Porcupine Rive**	73.43	21	IAmb		IAmb		16 56 44.5	
	comp=Z,20nm,1.3s								
G26K	**Porcupine Rive**	73.43	21	P		P		16 56 41.7	+0.3
	baz=310,SNR=12								
E28M	**Babbage River**	73.55	18	IAmb		IAmb		16 56 45.1	
	comp=Z,12nm,1.1s								
E28M	**Babbage River**	73.55	18	P		P		16 56 41.9	-0.3
	baz=313,SNR=6.6								
P18K	**Big Mountain,**	73.65	30	P		P		16 56 43.1	+0.1
	baz=302								
MCK	**McKinley**	73.71	25	P		P		16 56 43.2	0.0
	baz=306								
L22K	**Petersville**	73.73	26	IAmb		IAmb		16 56 45.6	
	comp=Z,13nm,1.0s								
L22K	**Petersville**	73.73	26	P		P		16 56 43.3	-0.1
	baz=305								
SKT	**Skwentna**	73.75	27	IAmb		IAmb		16 56 45.6	
	comp=Z,12nm,1.1s								
SKT	**Skwentna**	73.75	27	P		P		16 56 43.6	+0.2
	baz=305,SNR=7.8								
PRP	**Porcupine Dome**	73.79	22	IAmb		IAmb		16 56 46.8	
	comp=Z,11nm,1.1s								
PRP	**Porcupine Dome**	73.79	22	P		P		16 56 43.8	0.0
	baz=309,SNR=9.2								
ILAR	**Eielson Array**	73.80	23	P		P		16 56 42.7	-1.0
	comp=Z,3.9nm,1.0s,baz=287,slow=4.4,SNR=31								
ILAR				PP		PP		16 59 27.3	-0.4
	comp=Z,0.4nm,0.7s,baz=310,slow=6.0,SNR=3.5								
	comp=Z,3.9nm,1.0s								
ILAR	**Eielson Array**	73.80	23			P		16 56 42.0	-1.7
SPCR	**Spurr Chakacha**	73.92	28	P		P		16 56 44.7	+0.2
	baz=304								
Q17K	**Contact Creek**	73.96	31	P		P		16 56 44.7	-0.2
	baz=302								
CHNA	**Chernabura Isl**	73.97	35	P		P		16 56 45.1	+0.2
	baz=300								
R17L	**Mt. Peulik Vol**	74.08	32	P		P		16 56 45.5	0.0
	baz=302								
F28M	**Old Crow**	74.13	19	IAmb		IAmb		16 56 48.5	
	comp=Z,11nm,1.1s								
F28M	**Old Crow**	74.13	19	P		P		16 56 45.6	0.0
	baz=313,SNR=12								
E29M	**Blow River**	74.14	18	IAmb		IAmb		16 56 48.0	
	comp=Z,15nm,1.2s								
E29M	**Blow River**	74.14	18	P		P		16 56 45.1	-0.5
	baz=314,SNR=5.2								
Q18K	**Katmai Hardscr**	74.15	31	P		P		16 56 45.7	-0.3
	baz=303								
G27K	**Doyon Strip**	74.16	20	P		P		16 56 46.0	+0.2
	baz=312,SNR=10								
P19K	**Oil Pt**	74.37	29	P		P		16 56 47.1	0.0
	baz=304								
O20K	**Slope Mountain**	74.38	29	P		P		16 56 47.1	-0.2
	baz=304								
WAT1	**Susitna Watana**	74.38	25	P		P		16 56 47.2	0.0
	baz=307								
J25K	**Salcha River,**	74.41	23	P		P		16 56 47.5	+0.1
	baz=309								
H27K	**Steamboat Moun**	74.58	20	IAmb		IAmb		16 56 51.0	
	comp=Z,20nm,1.1s								
H27K	**Steamboat Moun**	74.58	20	P		P		16 56 47.9	-0.5
	baz=312,SNR=17								
Q19K	**Cape Douglas,**	74.59	30	P		P		16 56 48.1	-0.3
	baz=304								
CAPN	**Captain Cook N**	74.59	28	P		P		16 56 48.3	-0.1
	baz=305								
DHY	**Denali Highway**	74.66	25	IAmb		IAmb		16 57 04.0	
	comp=Z,19nm,1.9s								
DHY	**Denali Highway**	74.66	25	P		P		16 56 49.1	+0.2
	baz=308								
K24K	**Donnelly Dome**	74.78	24	IAmb		IAmb		16 56 51.1	
	comp=Z,19nm,1.0s								
K24K	**Donnelly Dome**	74.78	24	P		P		16 56 49.3	-0.1
	baz=309								
WAT6	**Susitna Watana**	74.83	25	P		P		16 56 50.2	+0.3
	baz=308								
PMR	**Palmer**	74.91	26	P		P		16 56 50.3	+0.2
	baz=307								
RC01	**Rabbit Creek A**	74.97	27	P		P		16 56 50.9	+0.3
	baz=306								
I27K	**Kandik River**	74.98	21	P		P		16 56 50.5	-0.2
	baz=312,SNR=19								
SML	**Sawmill**	75.08	26	P		P		16 56 51.6	+0.3
	baz=307,SNR=7.6								
RIDG	**Independent Ri**	75.14	23	IAmb		IAmb		16 56 53.3	
	comp=Z,12nm,1.1s								
RIDG	**Independent Ri**	75.14	23	P		P		16 56 52.1	+0.5
	baz=310,SNR=7.4								
G29M	**Pine Creek**	75.14	19	IAmb		IAmb		16 56 53.9	
	comp=Z,13nm,1.3s								
G29M	**Pine Creek**	75.14	19	P		P		16 56 52.0	+0.5
	baz=315								
F30M	**Barrier River**	75.25	18	IAmb		IAmb		16 56 55.1	
	comp=Z,16nm,1.1s								
F30M	**Barrier River**	75.25	18	P		P		16 56 52.7	+0.6
	baz=316,SNR=6.9								
KNK	**Knik Glacier**	75.27	26	P		P		16 56 52.2	-0.1
	baz=307								
INK	**Inuvik**	75.32	17	IAmb		IAmb		16 56 54.9	
	comp=Z,14nm,1.1s								
INK	**Inuvik**	75.32	17	P		P		16 56 52.4	-0.1
	baz=318,SNR=6.1								
BRSE	**Bradley Lake S**	75.36	28	P		P		16 56 53.4	+0.6
	baz=306								
PAX	**Paxson**	75.41	24	P		P		16 56 53.1	-0.1
	baz=309								
SCM	**Sheep Creek Mo**	75.44	26	IAmb		IAmb		16 56 55.4	
	comp=Z,17nm,1.4s								
SCM	**Sheep Creek Mo**	75.44	26	P		P		16 56 53.7	+0.3
	baz=308								
H29M	**Whitestone**	75.53	20	IAmb		IAmb		16 56 55.7	
	comp=Z,19nm,1.2s								
H29M	**Whitestone**	75.53	20	P		P		16 56 53.9	+0.2
	baz=314,SNR=7.8								
G30M	**tAch Zraii Nji**	75.59	18	P		P		16 56 54.3	+0.2
	baz=316,SNR=18								
I28M	**Miner Creek**	75.60	21	IAmb		IAmb		16 56 56.3	
	comp=Z,12nm,1.2s								
I28M	**Miner Creek**	75.60	21	P		P		16 56 54.6	+0.3
	baz=313,SNR=7.8								
PWL	**Port Wells**	75.65	27	P		P		16 56 54.7	+0.2
	baz=307								
SII	**Sitkinak Islan**	75.66	32	P		P		16 56 54.5	-0.1
	baz=304								
SEW	**Seward**	75.67	28	P		P		16 56 54.8	+0.2
	baz=307								
KDAK	**Kodiak Island**	75.70	31	P		P		16 56 55.1	+0.3
	baz=305								
OHAK	**Old Harbor**	75.70	31	P		P		16 56 55.0	+0.2
	baz=304								
HARP	**HAARP**	75.89	25	P		P		16 56 55.7	-0.1
	baz=310								
EPYK	**Eagle Plains**	75.89	19	IAmb		IAmb		16 56 57.3	
	comp=Z,11nm,1.1s								
EPYK	**Eagle Plains**	75.89	19	P		P		16 56 56.2	+0.3
	baz=316								
F31M	**Tsiigehtchic**	75.91	17	IAmb		IAmb		16 56 58.1	
	comp=Z,10nm,1.2s								
F31M	**Tsiigehtchic**	75.91	17	P		P		16 56 56.2	+0.4
	baz=318								
STKA	**Stephens Creek**	76.13	140	P		P		16 56 56.4	-1.2
	comp=Z,4.2nm,0.9s,baz=352,slow=6.3,SNR=6.4								
	comp=Z,4.2nm,0.9s								
I29M	**Ogilvie Camp,**	76.15	20	P		P		16 56 57.7	+0.4
	baz=315								
G31M	**Satah River**	76.16	18	P		P		16 56 57.3	+0.1
	baz=318,SNR=6.0								
KLU	**Klutina**	76.18	26	IAmb		IAmb		16 57 00.4	
	comp=Z,14nm,1.1s								
KLU	**Klutina**	76.18	26	P		P		16 56 57.3	-0.3
	baz=309,SNR=7.8								
P23K	**Montague Islan**	76.55	27	P		P		16 56 59.5	-0.1
	baz=308								
N25K	**Chitina, Valde**	76.60	25	P		P		16 56 59.4	-0.6
	baz=310,SNR=6.6								
C36M	**Paulatuk**	76.61	13	P		P		16 56 59.6	-0.1
	baz=326								
L27K	**Beaver Creek,**	76.61	23	IAmb		IAmb		16 57 02.8	
	comp=Z,14nm,1.2s								
L27K	**Beaver Creek**	76.61	23	P		P		16 56 59.6	-0.4
	baz=312,SNR=14								
BCAR	**Beaver Creek A**	76.62	23			P		16 57 00.0	0.0
M26K	**Nabesna, AK**	76.65	24	P		P		16 57 00.2	0.0
	baz=311								
DAWY	**Dawson**	76.72	22	P		P		16 57 00.7	+0.1
	baz=314								
I30M	**Mount Dempster**	76.82	20	IAmb		IAmb		16 57 03.4	
	comp=Z,11nm,1.1s								
I30M	**Mount Dempster**	76.82	20	P		P		16 57 00.9	-0.3
	baz=316,SNR=13								
EYAK	**Cordova Ski Ar**	76.84	26	P		P		16 57 01.2	0.0
	baz=310								
H31M	**Peel River**	76.97	19	P		P		16 57 01.7	-0.2
	baz=318,SNR=15								
BMRM	**Bremner River**	77.01	26	IAmb		IAmb		16 57 04.4	
	comp=Z,21nm,1.3s								
BMRM	**Bremner River**	77.01	26	P		P		16 57 02.0	-0.2
	baz=310,SNR=5.9								
M27K	**Edge Creek, AK**	77.07	24	IAmb		IAmb		16 57 06.1	
	comp=Z,8.5nm,1.1s								
M27K	**Edge Creek, AK**	77.07	24	P		P		16 57 02.5	-0.2
	baz=312,SNR=9.2								
J30M	**Hart River**	77.30	20	P		P		16 57 03.3	-0.7
	baz=316								
MCARA	**McCarthy VSAT**	77.32	25	P		P		16 57 04.1	+0.2
	baz=312								
Q23K	**Middleton Isla**	77.32	27	P		P		16 57 03.9	0.0
	baz=309								
BVCY	**Beaver Creek**	77.38	23	P		P		16 57 04.1	-0.2
	baz=313								
ESBB	**Sonseca Array**	77.44	309	IAmb		IAmb		16 57 07.9	
	comp=Z,10nm,1.2s								
ESDC	**Sonseca Array**	77.44	309	P		P		16 57 04.7	-0.4
	comp=Z,6.0nm,1.2s,baz=49,slow=4.4,SNR=22								
	comp=Z,6.0nm,1.2s								
ESDC	**Sonseca Array**	77.44	309			P		16 57 05.1	0.0
K29M	**Barlow Dome**	77.47	21	IAmb		IAmb		16 57 07.1	
	comp=Z,8.6nm,1.1s								
K29M	**Barlow Dome**	77.47	21	P		P		16 57 04.0	-0.9
	baz=316,SNR=6.6								
CRQE	**Cirque**	77.71	25	P		P		16 57 05.8	-0.5
	baz=312								
KAIM	**Kayak Island**	77.75	26	P		P		16 57 06.0	-0.4
	baz=311								
L29M	**L29M**	77.80	22	P		P		16 57 06.5	-0.2
	baz=315								
TGL	**Tana Glacier**	77.80	25	IAmb		IAmb		16 57 09.5	
	comp=Z,12nm,1.1s								
YUK3	**Moose Creek**	77.96	24	P		P		16 57 06.6	-1.2
	baz=314								
M29M	**Somme Creek**	78.16	22	P		P		16 57 08.0	-0.7
	baz=315,SNR=6.6								
TAM	**Tamanrasset**	78.29	290	P		P		16 57 11.6	+1.4
TAM				pmax		pmax			
	comp=Z,4.0nm,1.0s								
LSZ	**Lusaka**	78.54	245	P		P		16 57 10.4	-1.1
LSZ				pmax		pmax			
	comp=Z,12nm,1.2s								
LSZ	**Lusaka**	78.54	245			P		16 57 10.4	-1.1
LSZ				IAmb		IAmb		16 57 12.5	
	comp=Z,12nm,1.2s								
M30M	**Minto, Yukon**	78.61	22	P		P		16 57 10.9	-0.2
	baz=316								
BRWY	**Burwash Landin**	78.73	23	P		P		16 57 11.0	-0.8
	baz=315								
MVO	**Moncorvo**	78.74	311	*e*P		P		16 57 13.5	+1.2
O28M	**Mount Upton**	78.75	24	P		P		16 57 11.7	-0.6
	baz=314								
YUK4	**Talbot Arm**	78.88	23	P		P		16 57 12.2	-0.6
	baz=315								
PINM	**Pinnacle**	79.19	25	P		P		16 57 14.1	-0.4
	baz=314								
YUK6	**Outpost Mounta**	79.26	23	P		P		16 57 14.3	-0.7
	baz=315								
N30M	**Aishikik Lake**	79.32	23	P		P		16 57 15.1	0.0
	baz=316								
MTE	**Manteigas**	79.46	311	*e*P		P		16 57 17.9	+1.6
MTE	**Manteigas**	79.46	311	IAmb		IAmb		16 57 18.9	
	comp=Z,15nm,1.1s								
PVIS	**Viseu**	79.53	311	*e*P		P		16 57 18.2	+1.6
HYT	**Haines Junctio**	79.64	23	P		P		16 57 16.5	-0.4
	baz=316,SNR=7.4								
O29M	**Mount Kennedy**	79.64	24	P		P		16 57 16.5	-0.5
	baz=315								
M31M	**Drury Creek, Y**	79.65	21	P		P		16 57 16.4	-0.4
	baz=318								
N31M	**Braeburn, Yuko**	79.73	22	IAmb		IAmb		16 57 19.8	
	comp=Z,20nm,1.3s								
PNL	**Peninsula**	79.80	25	P		P		16 57 17.2	-0.5
	baz=315								
O30N	**Mendenhall**	80.16	23	P		P		16 57 19.3	-0.4
	baz=317								
PBAR	**Barrancos**	80.27	309	*e*P		P		16 57 21.7	+1.2
MMPY	**Sheldon Lake,**	80.27	20	P		P		16 57 19.7	-0.5
	baz=321								
PSARD	**Sardoal**	80.28	310	*e*P		P		16 57 22.6	+2.0
P30M	**Million Dollar**	80.34	24	P		P		16 57 20.4	-0.2
	baz=317								
P29M	**Windy Craggy**	80.42	24	P		P		16 57 20.6	-0.4
	baz=316								
PARRA	**Arraiolos**	80.61	309	*e*P		P		16 57 23.1	+0.7
WHY	**Whitehorse**	80.64	22	P		P		16 57 22.0	-0.3
	baz=318								
EVO	**Evora**	80.74	309	*e*P		P		16 57 24.5	+1.4
N32M	**Quiet Lake**	80.85	21	IAmb		IAmb		16 57 26.0	
	comp=Z,14nm,1.0s								
N32M	**Quiet Lake**	80.85	21	P		P		16 57 23.3	0.0
	baz=320								
PBEJ	**Beja**	80.90	309	*e*P		P		16 57 25.7	+1.7
PLBC	**Pleasant Camp**	81.03	24	P		P		16 57 24.1	-0.1
	baz=317								
PMAFR	**Mafra**	81.36	310	*e*P		P		16 57 28.1	+1.7
SKAG	**Skagway**	81.39	23	P		P		16 57 26.1	0.0
	baz=318								
P33M	**Teslin, Yukon**	81.65	22	P		P		16 57 27.5	-0.1
	baz=320								
P32M	**Atlin**	81.83	23	P		P		16 57 28.5	-0.1
	baz=319								
S31K	**Pelican**	82.18	25	P		P		16 57 30.1	-0.2
	baz=317								
Q32M	**Nakina River**	82.80	23	P		P		16 57 33.5	-0.4
	baz=320								
S32K	**Killisnoo**	83.14	24	P		P		16 57 35.5	+0.2
	baz=319								
SIT	**Sitka**	83.18	25	P		P		16 57 35.2	-0.3
	baz=318								
DLBC	**Dease Lake**	83.94	22	P		P		16 57 40.5	+1.0
	comp=Z,3.9nm,1.1s,baz=306,slow=4.6,SNR=6.4								
	comp=Z,3.9nm,1.1s								
DLBC	**Dease Lake**	83.94	22	P		P		16 57 39.3	-0.2
	baz=322								
S34M	**Telegraph Cree**	83.99	23	P		P		16 57 39.1	-0.6
	baz=322								
KOTAN	**Kotaneelee Air**	84.33	18	P		P		16 57 41.2	-0.2
	baz=327								
YKA	**Yellowknife Ar**	84.49	13	P		P		16 57 41.1	-1.0
	comp=Z,1.7nm,0.9s,baz=340,slow=5.1,SNR=8.5								
	comp=Z,1.7nm,0.9s								
YKA	**Yellowknife Ar**	84.49	13	*i* P		P		16 57 42.5	+0.3
YKA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
YKA	**Yellowknife Ar**	84.49	13			P		16 57 40.9	-1.2
U33K	**Whale Pass**	84.69	25	P		P		16 57 42.9	-0.4
	baz=320								
T35M	**Bob Quinn**	85.02	23	P		P		16 57 45.0	0.0
	baz=322								
CRAG	**Craig**	85.18	25	P		P		16 57 45.4	-0.3
	baz=320								
V35K	**Ketchikan**	85.84	25	P		P		16 57 48.8	-0.2
	baz=321								
TORD	**Torodi Ar. Bea**	86.15	283	P		P		16 57 50.5	-0.8
	comp=Z,7.9nm,1.1s,baz=60,slow=3.6,SNR=22								
TORD				PP		PP		17 01 08.7	-2.9
	comp=Z,1.1nm,1.0s,baz=55,slow=4.7,SNR=3.6								
	comp=Z,7.9nm,1.1s								
LBTB	**Lobatse**	86.20	238	P		P		16 57 50.8	-0.6
LBTB				pmax		pmax			
	comp=Z,14nm,1.1s								
LBTB	**Lobatse**	86.20	238	P		P		16 57 50.8	-0.6
LBTB				IAmb		IAmb		16 57 53.0	
	comp=Z,14nm,1.1s								
BOSA	**Boshof**	88.55	236	P		P		16 58 01.3	-1.4
	comp=Z,1.5nm,0.8s,baz=124,slow=3.6,SNR=1.8								
	comp=Z,1.5nm,0.8s								
SCHQ	**Schefferville**	93.70	350	P		P		16 58 26.6	+0.4
	comp=Z,2.3nm,0.8s,baz=23,slow=13,SNR=2.8								
	comp=Z,2.3nm,0.8s								
TXAR	**Lajitas Array**	118.07	18	PKP		PKPdf		17 03 57.1	-0.1
	comp=Z,0.1nm,0.4s,baz=213,slow=1.5,SNR=3.1								
QSPA	**South Pole Qui**	120.15	180	PKP		PKPdf		17 03 59.0	-0.8
	comp=Z,1.6nm,1.0s,baz=242,slow=3.6,SNR=4.0								
ROSC	**El Real**	143.50	342	PKP		PKPbc		17 04 44.4	+1.7
	comp=Z,6.7nm,0.3s,baz=113,slow=19,SNR=4.3								
LPAZ	**La Paz**	159.06	308	PKPab		PKPab		17 05 45.4	-0.3
	comp=Z,0.9nm,0.4s,baz=349,slow=5.2,SNR=2.5								

*FCIAR **31** 16:46:56.0, 77°.84N×8°.75E, h10km, station OMEGA has station magnitude of 3.30*
*IDC **31** 16:47:03.6±1.6, 78°.56N×7°.76E, h0km, mb3.2/2, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=33.7km s-min=16.5km az=12.0*
*KOLA **31** 16:47:04.4, 78°.40N×8°.37E, h0km, ML2.2, Error ellipse: s-maj=14.5km s-min=9.

BJO1	**Bjornoya**	**4.69**	**140**	*eP*	**Pn**	**16 48 15.4**	**+2.6**
BJO1	**Bjornoya**	**4.69**	**140**	*eP*	**Pn**	**16 48 12.3**	**-0.5**
BJO1				*eS*	**Sn**	**16 49 02.3**	**-5.0**
BEAR	**Bear Island, N**	**4.70**	**140**	Pn	**Pn**	**16 48 14.4**	**+1.4**
	baz=332,slow=18						
BEAR				Sn	**Sn**	**16 49 04.6**	**-2.9**
	baz=332,slow=37						
DAG	**Danmarks Havn**	**5.89**	**267**	*eP*	**Pn**	**16 48 27.2**	**-2.1**
DAG				*eS*	Sn	16 49 26.8	-10
DAG	**Danmarks Havn**	**5.89**	**267**	*i P*	**Pn**	**16 48 27.0**	**-2.3**
DAG				*i S*	Sn	16 49 26.3	-11
OMEGA	**Omega**	**7.49**	**53**	*eP*	**Pn**	**16 48 50.0**	**-1.2**
	comp=Z,7.8nm,2.3s						
OMEGA				*eS*	**Sn**	**16 50 13.8**	**-2.4**
DBG	**Daneborg**	**7.70**	**253**	*eS*	Sn	16 50 10.6	-11
DBG	**Daneborg**	**7.70**	**253**	*i P*	**Pn**	**16 48 53.0**	**-1.1**
DBG				*i S*	Sn	16 50 09.6	-12
JNW	**Jan Mayen West**	**8.48**	**218**	*eP*	**Pn**	**16 49 05.8**	**+1.1**
JMIC	**Jan Mayen**	**8.53**	**218**	*eP*	**Pn**	**16 49 06.1**	**+0.6**
ARA0	**ARCESS Array S**	**10.07**	**142**	Pn	**Pn**	**16 49 28.6**	**+2.1**
	baz=346,slow=12						
ARA0	**ARCESS Array S**	**10.07**	**142**	Pn	**Pn**	**16 49 28.6**	**+2.1**
ARCES	**ARCESS Array B**	**10.07**	**142**	Pn	**Pn**	**16 49 28.7**	**+2.2**
	baz=344,slow=12,SNR=6.0						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**41.52**	**93**	P	**P**	**16 54 51.8**	**+2.6**
	comp=Z,0.2nm,0.6s,baz=330,slow=7.5,SNR=2.2						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**65.64**	**297**	P	**P**	**16 57 48.4**	**+2.2**
	comp=Z,0.1nm,0.4s,baz=26,slow=5.4,SNR=2.2						
	comp=Z,0.1nm,0.4s						

CATAC ***31*** *16:55:12.1±1.2, 12°N±2°×7°3W±°, h23km±9km, M4.7/6, mb4.7/5, mB5.1/4, MLv4.8/6, Mw(mB)4.5/4, Error ellipse: s-maj=9.4km s-min=5.0km az=96.5, confirmed*
RSNC ***31*** *16:55:14.9±0.0, 12°N±3°×7°3W±°, h29km±6km, M4.0, mb4.8, mB5.1, ML3.4, MLv4.2, Mw(mB)4.4, MwMwp7.5, Mwp7.2*
FUNV ***31*** *16:55:15.6, 12°.15N×72°.61W, h26km, MW4.5, Presumed earthquake*

ISC 31 16:55:14.4±1.0, 12°.01N±0°.06×72°.82W±0°.04, h35km, n42, σ1§52/71, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**0.87**	**111**	P		**Pn**	**Pn**	**16 55 30.2**	**0.0**
URIC				S		**Sn**	**Sn**	**16 55 41.7**	**+0.1**
URIC	**Uribia, Colomb**	**0.87**	**111**	*eP*		**Pn**	**Pn**	**16 55 30.2**	**0.0**
URIC				*eS*		**Sn**	**Sn**	**16 55 40.3**	**-1.3**
URI	**Uribia**	**0.87**	**111**	P		**Pn**	**Pn**	**16 55 29.7**	**-0.5**
SMRC	**Santa Marta, M**	**1.61**	**239**	P		**Pn**	**Pn**	**16 55 39.4**	**-0.9**
SMRC				S		**Sn**	**Sn**	**16 55 58.0**	**-1.9**
ARGC	**Ariguani, Magd**	**2.56**	**213**	P		**Pn**	**Pn**	**16 55 53.3**	**-0.1**
ARGC				S		**Sn**	**Sn**	**16 56 23.9**	**+0.6**
SDV	**Santo Domingo**	**3.78**	**145**	*eP*		**Pn**	**Pn**	**16 56 11.2**	**+0.8**
SDV				*eS*		**Sn**	**Sn**	**16 56 52.5**	**-1.3**
OCAC	**Ocana**	**3.78**	**187**	P		**Pn**	**Pn**	**16 56 09.6**	**-0.8**
OCAC				S		**Sn**	**Sn**	**16 56 54.2**	**+0.5**
PAMC	**Pamplona, Colo**	**4.64**	**178**	P		**Pn**	**Pn**	**16 56 22.2**	**-0.3**
PAMC				S		**Sn**	**Sn**	**16 57 14.7**	**-0.8**
LCBC	**Los crdobas,**	**4.69**	**228**	P		**Pn**	**Pn**	**16 56 25.1**	**+2.4**
LCBC				S		**Sn**	**Sn**	**16 57 16.1**	**+0.2**
UREC	**San Jos de Ur**	**5.00**	**212**	P		**Pn**	**Pn**	**16 56 28.0**	**+0.9**
UREC				S		**Sn**	**Sn**	**16 57 20.9**	**-2.8**
BRJC	**Barrancabermej**	**5.09**	**190**	P		**Pn**	**Pn**	**16 56 27.6**	**-0.6**
	0.8nm5µm279nm,0.7s								
BRJC				S		**Sn**	**Sn**	**16 57 25.9**	**+0.1**
	0.8nm5µm279nm,0.7s								
BARC	**Barichara**	**5.40**	**184**	P		**Pn**	**Pn**	**16 56 32.9**	**+0.2**
BARC				S		**Sn**	**Sn**	**16 57 33.7**	**0.0**
APAC	**Apartado, Choc**	**5.51**	**223**	P		**Pn**	**Pn**	**16 56 35.2**	**+1.2**
	36nm,0.7s								
PTBC	**PUERTO BERRIO,**	**5.67**	**197**	P		**Pn**	**Pn**	**16 56 35.5**	**-0.7**
	1µm104nm,0.8s								
PTBC				S		**Sn**	**Sn**	**16 57 40.4**	**+0.2**
	1µm104nm,0.8s								
DBBC	**Dabeiba**	**5.98**	**214**	P		**Pn**	**Pn**	**16 56 40.3**	**-0.3**
DBBC				S		**Sn**	**Sn**	**16 57 43.0**	**-4.9**
TACV	**Tcata**	**5.99**	**108**	*eP*		**Pn**	**Pn**	**16 56 38.6**	**-2.0**
RUSC	**La Rusia**	**6.08**	**182**	P		**Pn**	**Pn**	**16 56 42.8**	**+0.4**
RUSC				S		**Sn**	**Sn**	**16 57 51.3**	**+0.2**
RUSC	**La Rusia**	**6.08**	**182**	P		**Pn**	**Pn**	**16 56 42.1**	**-0.3**
	1µm47nm,0.7s								
RUSC				S		**Sn**	**Sn**	**16 57 51.2**	**+0.2**
	1µm47nm,0.7s								
RUSC	**La Rusia**	**6.08**	**182**	*eP*		**Pn**	**Pn**	**16 56 43.2**	**+0.8**
RUSC				*eS*		**Sn**	**Sn**	**16 57 49.7**	**-1.4**
HELC	**Santa Helena**	**6.37**	**205**	P		**Pn**	**Pn**	**16 56 49.4**	**+3.2**
HELC				S		**Sn**	**Sn**	**16 57 59.5**	**+1.6**
HELC	**Santa Helena**	**6.37**	**205**	P		**Pn**	**Pn**	**16 56 48.3**	**+2.1**
HELC				S		**Sn**	**Sn**	**16 57 59.2**	**+1.3**
HELC	**Santa Helena**	**6.37**	**205**	*eP*		**Pn**	**Pn**	**16 56 49.2**	**+2.9**
HELC				*eS*		**Sn**	**Sn**	**16 57 57.4**	**-0.5**
SPBC	**San Pablo de B**	**6.44**	**191**	P		**Pn**	**Pn**	**16 56 45.8**	**-1.1**
	2µm85nm,0.6s								
SPBC				S		**Sn**	**Sn**	**16 57 58.8**	**-0.4**
	2µm85nm,0.6s								
NORC	**Norcasia**	**6.72**	**198**	P		**Pn**	**Pn**	**16 56 51.0**	**+0.3**
	943nm50nm,0.5s								
NORC				S		**Sn**	**Sn**	**16 58 06.3**	**+0.2**
	943nm50nm,0.5s								
CBOC	**Ciudad Bolivar**	**6.87**	**208**	P		**Pn**	**Pn**	**16 56 54.7**	**+1.8**
	738nm21nm,0.5s								
SDDR	**Presa de Saban**	**7.09**	**12**	S		**Sn**	**Sn**	**16 58 14.3**	**-0.8**
SDDR	**Presa de Saban**	**7.09**	**12**	P		**Pn**	**Pn**	**16 56 57.3**	**+1.6**
	35nm,1.7s								
GUY2C	**Guyana, Caldas**	**7.20**	**201**	P		**Pn**	**Pn**	**16 56 59.0**	**+1.4**
	944nm97nm,0.6s								
GUY2C				S		**Sn**	**Sn**	**16 58 19.8**	**+1.4**
	944nm97nm,0.6s								
ROSC	**El Rosal**	**7.28**	**192**	P		**Pn**	**Pn**	**16 56 59.1**	**+0.4**
	881nm117nm,0.9s								
ROSC				S		**Sn**	**Sn**	**16 58 23.1**	**+2.8**
	881nm117nm,0.9s								
CHIC	**Chingaza**	**7.39**	**187**	P		**Pn**	**Pn**	**16 57 00.0**	**-0.2**
	799nm86nm,0.6s								
CHIC				S		**Sn**	**Sn**	**16 58 21.9**	**-1.2**
	799nm86nm,0.6s								
BCIP	**Isla Barro Col**	**7.45**	**248**	P		**Pn**	**Pn**	**16 57 00.4**	**-0.3**
	31nm,1.6s								
CVER	**Cruz Verde, Cu**	**7.54**	**190**	P		**Pn**	**Pn**	**16 57 03.1**	**+0.7**
	144nm,0.9s								
MTDJ	**Mount Denham**	**7.67**	**324**	P		**Pn**	**Pn**	**16 57 04.0**	**+0.2**
	51nm,1.2s								
PTGC	**Puerto Gaitan,**	**7.79**	**175**	P		**Pn**	**Pn**	**16 57 03.7**	**-1.7**
	61nm,0.4s								
PTGC				S		**Sn**	**Sn**	**16 58 28.5**	**-4.0**
	61nm,0.4s								
VILC	**Villavicencio,**	**7.90**	**186**	P		**Pn**	**Pn**	**16 57 07.2**	**+0.3**
ORTC	**Ortega, Tolima**	**8.40**	**197**	P		**Pn**	**Pn**	**16 57 14.6**	**+0.8**
	622nm34nm,0.5s								
ORTC				S		**Sn**	**Sn**	**16 58 48.0**	**+0.5**
	622nm34nm,0.5s								
PRAC	**Prado**	**8.49**	**194**	P		**Pn**	**Pn**	**16 57 16.7**	**+1.7**
PRAC				S		**Sn**	**Sn**	**16 58 53.9**	**+4.1**
PRAC	**Prado**	**8.49**	**194**	P		**Pn**	**Pn**	**16 57 15.6**	**+0.6**
	29nm,0.9s								
PRAC				S		**Sn**	**Sn**	**16 58 51.7**	**+1.9**
	29nm,0.9s								
URMC	**La Uribe, Meta**	**8.84**	**190**	P		**Pn**	**Pn**	**16 57 20.7**	**+0.8**
	111nm,0.8s								
JAMC	**Jamundi, Valle**	**9.54**	**204**	P		**Pn**	**Pn**	**16 57 29.5**	**0.0**
MACC	**Macarena, Meta**	**9.86**	**186**	P		**Pn**	**Pn**	**16 57 31.6**	**-2.1**
FLOC	**Florencia**	**10.73**	**195**	P		**Pn**	**Pn**	**16 57 46.2**	**+0.5**
FLOC				S		**Sn**	**Sn**	**16 59 45.3**	**+0.5**

IDC 31 16:59:44.9±2.1, 53°.01N×160°.02E, h0km, mb3.4/2, mbtmp3.4/2, MS4.1/1, Error ellipse: s-maj=61.8km s-min=20.7km az=173.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**1.41**	**275**	Pn		Pn	Pn	17 00 11.2	-0.6
	0.4nm,0.3s,baz=88,slow=20,SNR=12								
PETK				Sn		Sn	Sn	17 00 33.2	+2.2
	0.4nm,0.3s,baz=168,slow=35,SNR=1.7								
YKA	**Yellowknife Ar**	**43.26**	**42**	P		P	P	17 07 48.0	+0.6
	0.5nm,0.7s,baz=284,slow=7.3,SNR=2.7								
	0.5nm,0.7s								
AAK	**Ala-Archa**	**55.08**	**296**	LR		LR		17 32 44.3	
	comp=Z,170nm,19.8s,baz=82,slow=36								
NVAR	**Mina Array Bea**	**55.81**	**70**	P		P	P	17 09 23.4	-0.5
	0.2nm,0.4s,baz=326,slow=9.4,SNR=2.5								
	0.2nm,0.4s								

IDC ***31*** *17:04:24.5±0.9, 26°.48N×130°.29E, h0km, mb4.4/27, mbtmp4.4/33, ML4.3/5, MS3.9/39, Error ellipse: s-maj=22.9km s-min=14.2km az=162.0*
MOS ***31*** *17:04:24.1±1.5, 26°.47N×130°.27E, h10km, mb5.1/49, MS4.1/4, Error ellipse: s-maj=7.4km s-min=4.4km az=106.8*
NEIC ***31*** *17:04:25.5±2.4, 26°.45N±0°.06×130°.09E±0°.04, h10km±1km, mb5.0/302, Mww4.7/10, Error ellipse: s-maj=10.8km s-min=5.0km az=202.0*
BJI ***31*** *17:04:26.8, 26°.74N×130°.02E, h6km, mB4.6/20, mb4.5/60, Ms4.4/46, Ms7 4.2/45*
JMA ***31*** *17:04:28.3±0.1, 26°.6N±0°.4×130°.2E±0°.4, h55km, MD4.5/25, MV4.9/25, NEAR MINAMI-DAITOJIMA IS*
JMA Felt I J1 at NEAR MINAMI-DAITOJIMA IS.
NIED ***31*** *17:04:28.3, 26°.64N×130°.17E, h55km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=6.69; Mθθ5.09; Mϕϕ 1.59; Mrθ=0.81; Mθϕ3.54; Mϕr3.05; Fault plane solution: M₀7.67000×10¹⁵ NP1:φ₀79.00000°, δ45.00000°, λ=-58.00000°. NP2:φ₀217.00000°, δ53.00000°, λ=-118.00000°.*
GCMT ***31*** *17:04:30.5±0.3, 26°.72N±0°.02×130°.28E±0°.03, h17km±1km, MW4.8/79, Moment Tensor Solution. s29, c36; s79, c131; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.74±.13; Mθθ 1.40±.08; Mϕϕ 0.34±.08; Mrθ=-0.02±.16; Mϕθ 0.85±.04; Mϕr 0.14±.22; Best double couple: M₀1.81100×10¹⁶ NP1:φ₀66.00000°, δ44.00000°, λ=-83.00000°. NP2: φ₀236.00000°, δ46.00000°, λ=-97.00000°. Principal axes: T 1.8710, Plg1.0000°, Azm331.0000°; N -0.1190, Plg5.0000°, Azm241.0000°; P -1.7520, Plg85.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 17:04:27.3±0.5, 26°.51N±0°.03×130°.23E±0°.03, h20km±2km, h20km:pP-P, n727, σ1§91/635, mb4.9/237, MS4.0/44, 15C-20D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.10**	**120**	*i* P		**Pg**	**Pg**	**17 04 49.5**	**+0.7**
JKDJ				A		A	A	17 04 49.5	
	comp=N,52nm,2.6s,comp=E,55nm,0.6s								
JKDJ				S		**Sg**	**Sg**	**17 05 05.3**	**+2.0**
JMZ	**Minamidaito 2**	**1.12**	**127**	P		**Pg**	**Pg**	**17 04 49.8**	**+0.7**
JMZ	**Minamidaito 2**	**1.12**	**127**			**Pg**	**Pg**	**17 04 49.6**	**+0.5**
JMZ				Sn		**Sg**	**Sg**	**17 05 04.3**	**+0.4**
JMZ	**Minamidaito 2**	**1.12**	**127**	*i* P		**Pg**	**Pg**	**17 04 49.8**	**+0.7**
JMZ				A		A	A	17 04 49.8	
	comp=N,40nm,3.6s,comp=E,30nm,4.0s								
JMZ				*eS*		**Sg**	**Sg**	**17 05 05.1**	**+1.2**
JYRO	**Yoronjima**	**1.68**	**288**	*i* P		**Pn**	**Pn**	**17 04 54.6**	**-0.9**
JYRO				S		**Sn**	**Sn**	**17 05 13.6**	**-2.9**
JOKE	**Okinoerabujima**	**1.71**	**300**	*eP*		**Pn**	**Pn**	**17 04 55.0**	**-1.0**
JOKE				*eS*		**Sn**	**Sn**	**17 05 14.1**	**-3.3**
JTK	**Tokunoshima**	**1.71**	**318**	*i* P		**Pn**	**Pn**	**17 04 54.8**	**-1.3**
JTK				A		A	A	17 04 54.8	
	comp=N,8.0nm,2.3s,comp=E,8.0nm,0.8s								
JTK				S		**Sn**	**Sn**	**17 05 12.8**	**-4.5**
JOW	**Kunigami**	**1.78**	**281**	P		**Pn**	**Pn**	**17 04 56.4**	**-0.6**
JOW	**Kunigami**	**1.78**	**281**	LR		LR	LR	17 05 47.6	
	comp=E,2µm,20.4s,baz=289,slow=45								
JOW	**Kunigami**	**1.78**	**281**			**Pn**	**Pn**	**17 04 56.4**	**-0.6**
JOW				Sn		**Sn**	**Sn**	**17 05 15.3**	**-3.8**
JOW	**Kunigami**	**1.78**	**281**	*i* P		**Pn**	**Pn**	**17 04 56.4**	**-0.6**
JOW				A		A	A	17 04 56.4	
	comp=N,11nm,1.5s,comp=E,11nm,0.3s								
JOW				S		**Sn**	**Sn**	**17 05 16.6**	**-2.5**
JZK	**Kikaishima**	**1.81**	**353**	*eP*		**Pn**	**Pn**	**17 04 56.4**	**-1.1**
JZK				A		A	A	17 04 56.4	
	comp=N,14nm,7.0s,comp=E,14nm,4.9s								
JZK				*eS*		**Sn**	**Sn**	**17 05 17.2**	**-2.8**
JAMN	**Amaminishikomi**	**1.97**	**332**	*i* P		**Pn**	**Pn**	**17 04 57.9**	**-1.7**
JAMN				*eS*		**Sn**	**Sn**	**17 05 19.0**	**-4.7**
JAM	**Amami Oshima**	**1.98**	**344**	*i* P		**Pn**	**Pn**	**17 04 58.2**	**-1.4**
JAM				A		A	A	17 04 58.2	
	comp=N,7.0nm,1.5s,comp=E,4.0nm,1.0s								
JAM				S		**Sn**	**Sn**	**17 05 19.4**	**-4.5**
JNTH	**Nagotoyohara**	**1.98**	**271**	*i* P		**Pn**	**Pn**	**17 04 59.2**	**-0.6**
JNTH				S		**Sn**	**Sn**	**17 05 21.8**	**-2.1**
JIH	**Iheya**	**2.09**	**285**	*i* P		**Pn**	**Pn**	**17 05 00.7**	**-0.6**
JIH				A		A	A	17 05 00.7	
	comp=N,7.0nm,0.9s,comp=E,8.0nm,1.2s								
JIH				*eS*		**Sn**	**Sn**	**17 05 24.8**	**-2.0**
JJT3	**Tamagusuku3**	**2.23**	**261**	*eP*		**Pn**	**Pn**	**17 05 03.5**	**+0.3**
JJT3				*eS*		**Sn**	**Sn**	**17 05 29.3**	**-0.8**
JAGN	**Aguni-jima**	**2.68**	**272**	P		**Pn**	**Pn**	**17 05 09.1**	**-0.3**
JAGN				A		A	A	17 05 09.1	
	comp=N,4.0nm,1.5s,comp=E,3.0nm,1.1s								
JAGN				*eS*		**Sn**	**Sn**	**17 05 38.4**	**-2.8**
JTAJ	**Takarajima**	**2.79**	**341**	P		**Pn**	**Pn**	**17 05 09.0**	**-1.9**
JTAJ				*eS*		**Sn**	**Sn**	**17 05 38.1**	**-5.8**
JKE	**Kume jima 2**	**3.10**	**267**	P		**Pn**	**Pn**	**17 05 14.3**	**-0.8**
JKE				*eS*		**Sn**	**Sn**	**17 05 49.1**	**-2.4**
JNN	**Nakanoshima**	**3.34**	**355**	*eP*		**Pn**	**Pn**	**17 05 16.8**	**-1.6**
JNN				*eS*		**Sn**	**Sn**	**17 05 52.5**	**-5.0**
JYAK	**Yakushimahirau**	**3.73**	**4**	*eP*		**Pn**	**Pn**	**17 05 22.5**	**-1.2**
JYAK				S		**Sn**	**Sn**	**17 06 01.5**	**-5.6**
JMTN	**Minamitane**	**3.92**	**8**	*eP*		**Pn**	**Pn**	**17 05 24.9**	**-1.5**
JMTN				*eS*		**Sn**	**Sn**	**17 06 07.2**	**-4.6**
JKC	**Kuchinoerabu**	**3.94**	**360**	*eP*		**Pn**	**Pn**	**17 05 25.7**	**-1.0**
JKC				*eS*		**Sn**	**Sn**	**17 06 06.6**	**-5.8**
JTN	**Tanegashima 3**	**4.18**	**9**	*eP*		**Pn**	**Pn**	**17 05 28.5**	**-1.5**
JTN				*eS*		**Sn**	**Sn**	**17 06 13.2**	**-5.2**
JMJ	**Miyako jima 2**	**4.76**	**250**	P		**Pn**	**Pn**	**17 05 38.4**	**+0.4**
JSU	**Suzuyama**	**4.99**	**2**	P		**Pn**	**Pn**	**17 05 39.7**	**-1.4**
JSU	**Suzuyama**	**4.99**	**2**			**Pn**	**Pn**	**17 05 39.1**	**-2.0**
JNU	**Nakatsue**	**6.62**	**5**	Pn		**Pn**	**Pn**	**17 06 03.0**	**-0.5**
	comp=E,5.2nm,0.3s,baz=187,slow=4.6,SNR=80								
JNU				Sn		**Sn**	**Sn**	**17 07 11.0**	**-7.4**
	comp=E,4.8nm,0.3s,baz=179,slow=22,SNR=6.5								
JNU				LR		LR		17 08 46.7	
	comp=E,540nm,22.0s,baz=196,slow=40								
	comp=E,36nm,0.6s								
YOJ	**Yonaguni jima**	**6.84**	**254**	P		**Pn**	**Pn**	**17 06 06.7**	**+0.2**
YOJ	**Yonaguni jima**	**6.84**	**254**	P		**Pn**	**Pn**	**17 06 04.7**	**-1.8**
YOJ	**Yonaguni jima**	**6.84**	**254**	Pn		**Pn**	**Pn**	**17 06 04.1**	**-2.4**
JMN	**Monobe**	**7.86**	**23**	P		**Pn**	**Pn**	**17 06 19.2**	**-1.4**
JMN	**Monobe**	**7.86**	**23**			**Pn**	**Pn**	**17 06 19.5**	**-1.1**
JTU	**Tsushima**	**8.02**	**355**	P		**Pn**	**Pn**	**17 06 22.7**	**-0.1**
NACB	**Ninganchiao**	**8.15**	**255**	P		**Pn**	**Pn**	**17 06 22.4**	**-2.2**
NACB	**Ninganchiao**	**8.15**	**255**	Pn		**Pn**	**Pn**	**17 06 21.2**	**-3.4**
YHNB	**Yeheng**	**8.20**	**259**	P		**Pn**	**Pn**	**17 06 24.8**	**-0.6**
YHNB	**Yeheng**	**8.20**	**259**			**Pn**	**Pn**	**17 06 21.0**	**-4.3**
YULB	**Yu-li**	**8.68**	**251**	P		**Pn**	**Pn**	**17 06 30.8**	**-1.1**
YULB	**Yu-li**	**8.68**	**251**	Pn		**Pn**	**Pn**	**17 06 27.6**	**-4.3**
SSLB	**Suanglung**	**8.83**	**254**	P		**Pn**	**Pn**	**17 06 34.5**	**+0.5**
SSLB	**Suanglung**	**8.83**	**254**			**Pn**	**Pn**	**17 06 29.7**	**-4.3**
TWG	**Pinlang**	**9.10**	**248**			**Pn**		17 06 31.9	-5.7
SSE	**Sheshan**	**9.16**	**302**	P		**Pn**	**Pn**	**17 06 36.0**	**-2.3**
SSE				S		**Sn**	**Sn**	**17 08 20.0**	**-0.8**
SSE				pmax		pmax	pmax		
	comp=E,11nm,0.8s								
SSE				pmax		pmax	pmax		
	comp=E,110nm,3.6s								
SSE				L		L	L		
	comp=E,960nm,16.0s								
SSE				L		L	L		
	comp=E,360nm,16.5s								
TPUB	**Ta-pu**	**9.28**	**252**	P		**Pn**	**Pn**	**17 06 37.8**	**-2.3**
TPUB	**Ta-pu**	**9.28**	**252**	Pn		**Pn**	Pn	17 06 34.8	-5.3
TJN	**Taejon**	**10.14**	**347**	*ceP*		**Pn**	**Pn**	**17 06 52.4**	**+0.6**
TJN	**Taejon**	**10.14**	**347**			**Pn**	**Pn**	**17 06 51.1**	**-0.6**
JHJ	**Hachijo jima 2**	**10.59**	**49**	Pn		**Pn**	**Pn**	**17 06 57.4**	**-0.6**
	comp=E,21nm,0.3s,baz=128,slow=12,SNR=7.1								
JHJ				LR		LR	LR	17 10 40.2	
	comp=E,454nm,18.5s,baz=296,slow=36								
	comp=E,47nm,0.3s								
JHJ2	**Mitsune**	**10.61**	**49**	P		**Pn**	**Pn**	**17 07 01.0**	**+2.8**
JHJ2	**Mitsune**	**10.61**	**49**	Pn		**Pn**	**Pn**	**17 06 59.3**	**+1.1**
JCJ	**Chichijima**	**10.69**	**84**	Pn		**Pn**	**Pn**	**17 06 57.6**	**-1.9**
	comp=E,6.2nm,0.3s,baz=266,slow=21,SNR=5.1								
JCJ				Sn		Sn	Sn	17 08 48.8	-10
	comp=E,0.4nm,0.3s,baz=310,slow=21,SNR=1.5								
JCJ				LR		LR	LR	17 10 22.9	
	comp=E,267nm,18.3s,baz=222,slow=34								
	comp=E,23nm,0.4s								
JCJ	**Chichijima**	**10.69**	**84**				**Pn**	**17 06 58.2**	**-1.2**
JGF	**Kuroka**	**10.93**	**32**	P			**Pn**	**17 07 04.0**	**+1.4**
JGF	**Kuroka**	**10.93**	**32**				**Pn**	**17 07 02.9**	**+0.2**
KSAR	**Wonju Array Be**	**11.08**	**350**	P			**Pn**	**17 07 03.8**	**-0.9**
KSAR	**Wonju Array Be**	**11.08**	**350**				**Pn**	**17 07 03.8**	**-0.9**
KSRS	**Korea Array**	**11.09**	**350**	Pn			**Pn**	**17 07 06.0**	**+1.2**
	comp=E,1.0nm,0.3s,baz=168,slow=14,SNR=85								
KSRS				LR			LR	17 11 50.7	
	comp=E,346nm,18.2s,baz=175,slow=40								
	comp=E,18nm,0.8s								
KSRS	**Korea Array**	**11.09**	**350**	P			**Pn**	**17 07 06.0**	**+1.2**
KS19	**Wonju Array Si**	**11.14**	**350**				**Pn**	**17 07 05.2**	**-0.4**
INCN	**Inchon**	**11.36**	**345**	P			**Pn**	**17 07 07.8**	**-0.7**
INCN	**Inchon**	**11.36**	**345**				**Pn**	**17 07 07.8**	**-0.7**
NJ2	**Nanjing**	**11.36**	**302**	*eP*			**Pn**	**17 07 07.0**	**-1.6**
NJ2				pmax			pmax		
	comp=E,19nm,0.5s								
NJ2				L			L		
	comp=E,5µm,15.2s								
NJ2				L			L		
	comp=E,2µm,15.2s								
NJ2				L			L		
	comp=E,3µm,10.9s								
MAJO	**Matsushiro**	**12.09**	**32**	*eP*			**Pn**	**17 07 20.3**	**+1.8**
MAJO	**Matsushiro**	**12.09**	**32**	Pn			**Pn**	**17 07 18.1**	**-0.4**
MJAR	**Matsushiro Arr**	**12.09**	**32**	Pn			**Pn**	**17 07 17.7**	**-0.9**
	comp=E,0.5nm,0.3s,baz=199,slow=12,SNR=8.0								
MJAR				LR			LR	17 12 03.4	
	comp=E,261nm,18.9s,baz=212,slow=38								
MJAR	**Matsushiro Arr**	**12.09**	**32**	P			**Pn**	**17 07 19.3**	**+0.8**
MJAR	**Matsushiro Arr**	**12.09**	**32**	Pn			**Pn**	**17 07 19.3**	**+0.8**
MJB9	**Matsu-Tunnel**	**12.09**	**32**				**Pn**	**17 07 18.6**	**+0.1**
DL2	**Dalian**	**14.32**	**332**	*eP*			**Pn**	**17 07 49.0**	**+0.1**
DL2				*eS*			**Sn**	**17 10 30.5**	**+3.4**
DL2				pmax			pmax		
	comp=E,34nm,1.0s								
DL2				pmax			pmax		
	comp=E,240nm,5.6s								
DL2				L			L		
	comp=E,490nm,19.7s								
DL2				L			L		
	comp=E,620nm,18.3s								
DL2				L			L		
	comp=E,740nm,17.6s								
PSTR	**Posyet**	**16.11**	**2**	*eP*			**Pn**	**17 08 12.0**	**-0.6**
SNY	**Shenyang**	**16.23**	**342**	P			**Pn**	**17 08 15.5**	**-1.7**
SNY				pmax			pmax		
	comp=E,44nm,1.2s								
VLA	**Vladivostok**	**16.63**	**4**	*eP*			**Pn**	**17 08 18.1**	**-1.1**
VLA				pmax			pmax		
	comp=Z,69nm,1.4s								
JTM	**Tenmabayashi**	**16.84**	**30**	Pn			**Pn**	**17 08 21.3**	**-0.5**
HNS	**HongShan**	**17.05**	**313**	P			**Pn**	**17 08 24.0**	**-0.5**
HNS				S			**Sn**	**17 11 28.5**	**-5.0**
HNS				pmax			pmax		
	comp=Z,93nm,1.0s								
HNS				L			L		
	comp=Z,580nm

comp=Z,490nm,11.6s
HHC L L
comp=Z,690nm,11.8s
HHC L L
comp=Z,890nm,12.6s
BTO2 Baotou 22.04 315 *e*P **P 17 09 19.5 -1.3**
BTO2 pP **pP 17 09 24.0 -0.9**
BTO2 pmax pmax
comp=Z,61nm,0.9s
BTO2 pmax pmax
comp=Z,200nm,4.4s
BTO2 L L
comp=Z,900nm,12.7s
BTO2 L L
comp=Z,660nm,10.3s
BTO2 L L
comp=Z,1μm,12.6s
YSS Yuzhno-Sakhali 22.69 23 *e*P **P 17 09 28.2 +0.7**
YSS pmax pmax
comp=Z,30nm,1.3s
YSS MLR MLR
comp=Z,200nm,14.0s
YSS Yuzhno-Sakhali 22.69 23 P 17 09 28.1 +0.7
YSS IAmb IAmb 17 09 45.4
comp=Z,71nm,1.4s
KLR Kul'dur 22.72 3 LR LR 17 18 38.6
comp=Z,216nm,18.7s,baz=181,slow=38
KLR Kul'dur 22.72 3*c e*P **P 17 09 27.6 -0.2**
KLR pmax pmax
comp=Z,31nm,1.4s
CD2 Chengdu 23.61 287 P **P 17 09 36.5 -0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 L L
comp=Z,820nm,8.9s
CD2 L L
comp=Z,720nm,11.4s
CD2 L L
comp=Z,880nm,13.3s
MYLDM Lahad Datu 23.99 210 P **P 17 09 39.0 -1.7**
HILR Hailar Array B 24.40 343 P **P 17 09 46.3 +1.9**
comp=Z,2.6nm,0.6s,baz=143,slow=11,SNR=5.9
comp=Z,2.6nm,0.6s
LZH Lanzhou 24.42 299 *e*P **P 17 09 46.0 +1.1**
LZH sP pwP 17 09 54.8 -1.3
LZH S **S 17 14 02.3 -1.6**
LZH pmax pmax
comp=Z,24nm,1.2s
LZH pmax pmax
comp=Z,180nm,4.1s
LZH L L
comp=Z,920nm,12.4s
LZH L L
comp=Z,420nm,11.7s
LZH L L
comp=Z,500nm,12.0s
LZDM Lanzhou Array 24.51 299 P **P 17 09 46.4 +0.6**
comp=Z,3.2nm,0.3s,baz=151,slow=6.8,SNR=5.4
comp=Z,3.2nm,0.3s
SLVN Son La 24.59 264 P **P 17 09 45.2 -1.1**
KMI2 Kunming 24.76 273 P **P 17 09 52.5 +4.4**
KMI2 S **S 17 14 11.8 +2.2**
KMI2 pmax pmax
comp=Z,20nm,0.9s
KMI2 L L
comp=Z,320nm,13.1s
KMI2 L L
comp=Z,340nm,16.4s
KMI2 L L
comp=Z,530nm,12.9s
TNTI Ternate 25.74 187 P **P 17 09 54.0 -2.7**
TYV Tymovskoe 26.11 18 *e*P P 17 10 07.1 +7.4
TYV pmax pmax
comp=Z,21nm,1.1s
TYV pmax pmax
comp=Z,100nm,2.4s
TOLI2 Tolitoli 26.84 201 P **P 17 10 03.7 -2.9**
TOLI2 IAmb IAmb 17 10 23.9
comp=Z,28nm,0.8s
ZEA Zeya 27.29 356 *e*P **P 17 10 11.4 +1.0**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.9s
ULN Ulaanbaatar 28.01 326⇑ *e*P **P 17 10 17.6 +0.5**
ULN pmax pmax
comp=Z,6.0nm,1.3s
ULN Ulaanbaatar 28.01 326 P **P 17 10 14.9 -2.2**
CRAI Chiangrai 28.07 263 P **P 17 10 13.8 -4.0**
LUWI Luwuk 28.32 196 P **P 17 10 16.5 -3.4**
SONM Songino Array 28.33 325 P **P 17 10 21.0 +1.2**
comp=Z,2.2nm,0.6s,baz=144,slow=10,SNR=14
SONM PcP **PcP 17 13 31.0 -1.5**
comp=Z,0.5nm,0.7s,baz=134,slow=4.2,SNR=2.2
SONM LR LR 17 23 00.8
comp=Z,249nm,18.2s,baz=122,slow=39
comp=Z,2.2nm,0.6s
SONM Songino Array 28.33 325 P 17 10 18.5 -1.4
GTA2 Gaotai 28.50 305 *e*P **P 17 10 20.8 -0.7**
GTA2 pP pP 17 10 25.5 -0.5
GTA2 pmax pmax
comp=Z,3.0nm,0.9s
GTA2 L L
comp=Z,810nm,15.6s
GTA2 L L
comp=Z,550nm,16.8s
GTA2 L L
comp=Z,450nm,18.7s
CHTO Chiang Mai 29.82 262 P **P 17 10 31.7 -1.5**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 29.82 262 P **P 17 10 31.7 -1.5**
CMAR Chiang Mai Arr 29.94 261 P **P 17 10 35.4 +1.1**
comp=Z,0.3nm,0.4s,baz=69,slow=7.8,SNR=7.7
CMAR PcP **PcP 17 13 35.5 -1.4**
comp=Z,1.0nm,0.7s,baz=81,slow=1.3,SNR=5.6
comp=Z,0.3nm,0.4s
CMAR Chiang Mai Arr 29.94 261 P P 17 10 33.0 -1.4
TLY Talaya 32.19 328 LR LR 17 25 14.5
comp=Z,247nm,19.4s,baz=116,slow=39
MORE Moreh 32.48 274 P **P 17 10 53.9 -2.8**
PATS Pohnpei 33.12 121 P **P 17 11 01.2 -1.1**
PEA0B Petropavlovsk- 33.54 30‖ *e*P **P 17 11 06.2 +0.6**
PEA0B Petropavlovsk- 33.54 30 P **P 17 11 04.9 -0.7**
PETK Petropavlovsk- 33.54 30 P **P 17 11 04.1 -1.5**
comp=Z,5.5nm,0.8s,baz=282,slow=1.4,SNR=5.5
PETK LR LR 17 26 51.2
comp=Z,121nm,18.6s,baz=219,slow=40
comp=Z,5.5nm,0.8s
PETK Petropavlovsk- 33.54 30 P **P 17 11 05.0 -0.6**
PETK Petropavlovsk- 33.54 30 P **P 17 11 05.0 -0.6**
PET Petropavlovsk 33.92 31 P **P 17 11 08.0 -0.8**
PET IAmb IAmb 17 11 10.4
comp=Z,33nm,1.1s
PET Petropavlovsk 33.92 31 P **P 17 11 09.4 +0.5**
comp=Z,35nm,1.7s
PET pP **pP 17 11 13.6 0.0**
comp=Z,35nm,1.7s
KULM Kulim 35.25 238 P **P 17 11 18.0 -2.8**
KULM IAmb IAmb 17 11 30.1
comp=Z,33nm,1.4s
YAK Yakutsk 35.52 360 P **P 17 11 22.8 +0.2**
comp=Z,17nm,0.7s,baz=334,slow=1.2,SNR=13
YAK PcP **PcP 17 13 52.1 +0.7**
comp=Z,2.8nm,0.3s,baz=232,slow=1.1,SNR=4.0
YAK LR LR 17 26 27.5
comp=Z,131nm,18.5s,baz=166,slow=37
comp=Z,17nm,0.7s
YAK Yakutsk 35.52 360 *e*P **P 17 11 21.9 -0.7**
YAK *e**PP **pP 17 11 26.0 -1.1**
YAK *e* 17 12 38.0
YAK *e*PPP PPP 17 12 56.0
YAK *e* 17 13 50.3
YAK *e*S **S 17 16 58.3 +1.5**
YAK *e**SS **sS 17 17 05.5 +1.2**
YAK *e*SS **SnSn 17 19 18.3 +1.0**
YAK *e* 17 21 37.7
YAK pmax pmax
comp=Z,20nm,0.8s
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.6s
YAK pmax pmax
comp=Z,64nm,3.8s
YAK pmax pmax
comp=N,30nm,3.1s
YAK pmax pmax
comp=E,49nm,5.8s
YAK smax smax
comp=N,55nm,3.2s
YAK smax smax
comp=E,60nm,2.4s
YAK Yakutsk 35.52 360 P 17 11 22.3 -0.3
YAK IAmb IAmb 17 11 23.3
comp=Z,24nm,0.8s
YAK **PcP 17 13 51.4 -0.1**
MA2 Magadan 35.98 18 LR LR 17 27 32.9
comp=Z,97nm,18.1s,baz=197,slow=39
MA2 Magadan 35.98 18 P **P 17 11 25.7 -0.9**
MA2 pmax pmax
comp=Z,16nm,1.1s
MA2 Magadan 35.98 18 P **P 17 11 25.7 -0.9**
WMQ Urumqi 38.35 308 *e*P **P 17 11 49.3 +2.2**
WMQ sP sP 17 11 54.0 +0.6
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ L L
comp=Z,560nm,19.3s
WMQ L L
comp=Z,230nm,19.3s
WMQ L L
comp=Z,220nm,23.5s
SEY Seymchan 39.25 16 P **P 17 11 54.2 0.0**
comp=Z,3.7nm,0.8s,baz=195,slow=6.8,SNR=6.0
comp=Z,3.7nm,0.8s
SEY Seymchan 39.25 16*de*P **P 17 11 55.0 +0.8**
SEY pmax pmax
comp=Z,8.0nm,1.0s
DGZ Jazzator, Alta 40.14 317⇑ *e*P **P 17 12 04.5 +2.5**
DGZ pmax pmax
comp=Z,5.0nm,2.1s
ZSN Zaisan 41.12 313 *e*P **P 17 12 12.7 +2.7**
ZSN Zaisan 41.12 313 *e*P **P 17 12 12.7 +2.7**
MK31 Makanchi Array 42.70 311⇓ *e*P **P 17 12 23.0 +0.1**
MKAR Makanchi Array 42.70 311 P **P 17 12 23.3 +0.4**
comp=Z,1.6nm,0.7s,baz=94,slow=10,SNR=14
MKAR PcP **PcP 17 14 14.3 -0.2**
comp=Z,1.9nm,0.9s,baz=91,slow=3.4,SNR=4.5
comp=Z,1.6nm,0.7s
MKAR Makanchi Array 42.70 311 *i* P **P 17 12 24.2 +1.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 42.70 311 P 17 12 21.3 -1.6
MAKZ Makanchi 42.91 311 P **P 17 12 23.0 -1.6**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 42.91 311 P 17 12 23.0 -1.6
ZAA0 Zalesovo Array 43.12 322 P **P 17 12 25.3 -0.8**
ZALV Zalesovo Beam 43.12 322 P **P 17 12 26.7 +0.5**
comp=Z,1.8nm,0.6s,baz=107,slow=9.5,SNR=7.5
ZALV PcP **PcP 17 14 16.3 +0.6**
comp=Z,1.4nm,0.7s,baz=82,slow=3.1,SNR=3.8
ZALV LR LR 17 31 52.4
comp=Z,134nm,18.6s,baz=112,slow=38
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 43.12 322 P 17 12 24.0 -2.2
ZALV **PcP 17 14 16.1 +0.4**
PDGK Podgornoye 44.17 306 P **P 17 12 31.6 -3.3**
PDGK Podgornoye 44.17 306 P 17 12 31.6 -3.3
SHLS Shalkode 44.17 306 *e*P **P 17 12 35.2 +0.2**
SHLS Shalkode 44.17 306 *e*P **P 17 12 35.2 +0.2**
UZB Uzynbulak 44.49 306 *e*P **P 17 12 40.0 +2.5**
UZB Uzynbulak 44.49 306 *e*P **P 17 12 40.1 +2.5**
FITZ Fitzroy Crossi 44.56 186 P **P 17 12 35.1 -3.0**
KPKS Kokpek 44.77 306 *e*P **P 17 12 42.0 +2.4**
KPKS Kokpek 44.77 306 *e*P **P 17 12 42.1 +2.4**
PRZ Przheval'sk 44.90 305 P **P 17 12 38.3 -2.6**
PRZ pmax pmax
comp=Z,24nm,1.4s
PRZ Przheval'sk 44.90 305 P P 17 12 38.2 -2.6
PRZ IAmb IAmb 17 12 43.6
comp=Z,24nm,1.4s
SATY Saty 44.94 305 *e*P **P 17 12 43.3 +2.3**
SATY Saty 44.94 305 *e*P **P 17 12 43.4 +2.3**
TDK Taldyqorghan 45.11 308 *e*P **P 17 12 45.2 +2.9**
TDK Taldyqorghan 45.11 308 *e*P **P 17 12 45.3 +2.9**
TIXI Tiksi 45.19 359 P **P 17 12 42.2 -0.2**
comp=Z,2.2nm,0.6s,baz=171,slow=5.9,SNR=6.0
TIXI LR LR 17 32 17.9
comp=Z,144nm,20.5s,baz=191,slow=37
comp=Z,2.2nm,0.6s
TIXI Tiksi 45.19 359⇑ *i* P **P 17 12 43.1 +0.7**
TIXI pmax pmax
comp=Z,9.0nm,1.1s
TIXI Tiksi 45.19 359 P 17 12 40.9 -1.5
TARG Taragay, Kyrgy 45.30 303 P **P 17 12 41.3 -3.1**
TARG pmax pmax
comp=Z,9.0nm,1.2s
TARG Taragay, Kyrgy 45.30 303 P P 17 12 41.3 -3.1
KDJ Kajisay 45.79 304 P **P 17 12 45.6 -2.3**
KDJ pmax pmax
comp=Z,6.0nm,1.0s
KDJ Kajisay 45.79 304 P P 17 12 45.6 -2.3
KURK Kurchatov 45.86 316*ce*P **P 17 12 48.1 0.0**
KURK pmax pmax
comp=Z,15nm,1.0s
KURK Kurchatov 45.86 316 P 17 12 46.4 -1.7
KURBB Kurchatov Arra 45.90 316 P **P 17 12 48.9 +0.5**
comp=Z,1.3nm,0.3s,baz=103,slow=8.2,SNR=15
KURBB LR LR 17 32 48.0
comp=Z,204nm,21.0s,baz=182,slow=37
comp=Z,1.3nm,0.3s
MDOK Medeo 45.94 305 *e*P **P 17 12 51.3 +2.3**
MDOK Medeo 45.94 305 *e*P **P 17 12 51.3 +2.3**
TNSS Tian-Shan 46.00 305 *e*P **P 17 12 52.1 +2.3**
TNSS Tian-Shan 46.00 305 *e*P **P 17 12 52.1 +2.3**
WRAB Tennant Creek 46.34 175 P **P 17 12 50.0 -2.1**
WRAB pmax pmax
comp=Z,42nm,1.3s
WRAB Tennant Creek 46.34 175 P 17 12 50.0 -2.1
WRA Warramunga Arr 46.34 175 *i* P **P 17 12 50.7 -1.5**
WRA pmax pmax
comp=Z,14nm,0.8s
WR8 Warramunga Arr 46.37 174 P P 17 12 49.9 -2.5
KIWB Kanaga Island 46.71 43 P P 17 12 54.5 -0.3
BILL Bilibino 46.85 18*de*P **P 17 12 56.3 +0.6**
BILL pmax pmax
comp=Z,16nm,1.4s
KSH2 Kashi 46.99 300 P P 17 13 03.0 +5.6
KSH2 pmax pmax
comp=Z,4.0nm,1.4s
ADK Adak 47.00 43 P **P 17 12 56.7 -0.3**
ADK pmax pmax
comp=Z,24nm,1.2s
ADK Adak 47.00 43 P **P 17 12 56.7 -0.3**
ADK IAmb IAmb 17 13 34.0
comp=Z,24nm,1.2s
GSTR Great Sitkin T 47.42 42 P **P 17 13 00.1 -0.2**
SGDS Sogindy 47.71 306 *e*P **P 17 13 05.3 +2.5**
AAK Ala-Archa 47.79 305⇑ *e*P **P 17 13 06.0 +2.4**
AAK pmax pmax
comp=Z,5.0nm,1.2s
BTLS Baital 48.20 308 *e*P **P 17 13 08.9 +2.5**
BTLS Baital 48.20 308 *e*P **P 17 13 08.9 +2.5**
ATKA Atka Island 48.57 43 P **P 17 13 09.7 +0.5**
CTA Charters Tower 48.86 160 LR LR 17 33 05.1
comp=Z,100nm,19.5s,baz=16,slow=35
ARSB Arslanbob 48.92 303 P **P 17 13 09.6 -2.7**
ARSB pmax pmax
comp=Z,5.0nm,1.0s
ARSB Arslanbob 48.92 303 P P 17 13 09.6 -2.7
NIL Nilore 49.30 293 P **P 17 13 12.0 -3.1**
NIL pmax pmax
comp=Z,13nm,0.8s
NIL Nilore 49.30 293 P P 17 13 12.0 -3.1
NIL IAmb IAmb 17 13 30.4
comp=Z,13nm,0.8s
NRIK Noril'sk 49.55 342 P **P 17 13 16.4 -0.1**
comp=Z,3.4nm,0.7s,baz=117,slow=13,SNR=5.6
NRIK LR LR 17 37 15.0
comp=Z,69nm,18.4s,baz=160,slow=40
comp=Z,3.4nm,0.7s
NRIK Noril'sk 49.55 342*ce*P **P 17 13 16.8 +0.4**
NRIK pmax pmax
comp=Z,9.0nm,1.3s
NRIK Noril'sk 49.55 342 P **P 17 13 14.0 -2.5**
DZA Taraz 50.12 305 *e*P **P 17 13 24.1 +2.8**
DZA Taraz 50.12 305 *e*P **P 17 13 24.1 +2.8**
BTK Batken 50.62 301 P **P 17 13 22.8 -2.3**
BTK pmax pmax
comp=Z,6.0nm,0.9s
BTK Batken 50.62 301 P **P 17 13 22.8 -2.3**
KK31 Karatay Array 50.72 305 P **P 17 13 24.2 -1.6**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 50.72 305 P P 17 13 24.2 -1.6
KKAR Karatay Array 50.72 305 P P 17 13 24.3 -1.5
KKAR Karatay Array 50.72 305 P P 17 13 24.3 -1.5
GAR Garm 51.08 300 P **P 17 13 27.3 -1.4**
GAR IAmb IAmb 17 14 10.2
comp=Z,24nm,0.8s
BRLS Borolday 51.21 305 *e*P **P 17 13 33.1 +3.6**
BRLS Borolday 51.21 305 *e*P **P 17 13 33.2 +3.6**
BVAR Borovoye Array 51.27 318 P **P 17 13 29.3 -0.4**
comp=Z,7.6nm,0.9s,baz=94,slow=8.9,SNR=26
BVAR PcP **PcP 17 14 44.8 +0.2**
comp=Z,3.4nm,0.8s,baz=88,slow=4.5,SNR=2.3
comp=Z,7.6nm,0.9s
CHM Chimkent 51.41 304 *e*P **P 17 13 33.6 +2.6**
CHM pmax pmax
comp=Z,9.0nm,0.7s
CHM Chimkent 51.41 304 *e*P **P 17 13 33.7 +2.6**
comp=Z,8.8nm,0.7s
SPIA Saint Paul Isl 51.70 37 P **P 17 13 34.3 +1.5**
baz=260
CHGR Chuyangaron 52.01 300⇑ *e*P **P 17 13 38.9 +3.3**
CHGR pmax pmax
comp=Z,32nm,1.2s
CHGR Chuyangaron 52.01 300 P P 17 13 35.0 -0.7
GAMB Gambell 52.53 28 P **P 17 13 39.9 +1.0**
baz=253
KBL Kabul 52.63 294 P **P 17 13 39.4 -1.0**
KBL pmax pmax
comp=Z,27nm,1.0s
KBL Kabul 52.63 294 P **P 17 13 39.4 -1.0**
KBL IAmb IAmb 17 13 56.2
comp=Z,26nm,0.9s
SHAA Shahritus 52.95 298 P **P 17 13 41.6 -1.0**
SHAA IAmb IAmb 17 13 58.2
comp=Z,43nm,1.3s
UNV Unalaska Valle 53.38 41 P **P 17 13 46.7 +1.3**
baz=266
M11K Mekoryuk 54.31 33 P **P 17 13 53.0 +1.0**
baz=261
TNA Tin City 54.58 27 P **P 17 13 55.0 +1.1**
baz=256
F14K Arctic Creek 55.20 27 P **P 17 13 59.8 +1.3**
baz=258
K13K Kusilvak Mount 55.29 31 IAmb IAmb 17 14 02.3
comp=Z,28nm,1.3s
K13K Kusilvak Mount 55.29 31 P **P 17 14 00.4 +1.3**
baz=262
ANM Nome 55.41 28 P **P 17 14 01.3 +1.3**
baz=259
M13K Dall Lake 55.72 33 P **P 17 14 03.3 +1.1**
baz=264
J14K Nanvaranak Lak 55.91 31 IAmb IAmb 17 14 06.6
comp=Z,26nm,1.3s
J14K Nanvaranak Lak 55.91 31 P **P 17 14 04.7 +1.1**
baz=262,SNR=5.2
F15K North Star Dit 55.94 27 IAmb IAmb 17 14 06.9
comp=Z,21nm,1.1s
F15K North Star Dit 55.94 27 P **P 17 14 04.8 +1.0**
baz=259
G15K Niukluk 56.06 28 P **P 17 14 05.9 +1.3**
baz=260
L14K Kuka Creek 56.14 32 P **17 14 05.8 +0.6**
L14K Kuka Creek 56.14 32 P **P 17 14 06.5 +1.3**
baz=264,SNR=10
C16K Lisburne Hills 56.22 24 P **P 17 14 06.6 +0.9**
baz=257
M14K Bethel 56.43 33 P **17 14 08.3 +1.0**
M14K IAmb IAmb 17 14 10.4
comp=Z,17nm,0.8s
M14K Bethel 56.43 33 P **P 17 14 08.3 +1.0**
baz=265,SNR=5.1
N14K Kuskokwak Cree 56.50 34 P **P 17 14 08.8 +1.0**
baz=266
O14K Tigyukauivet M 56.66 35 P **P 17 14 09.8 +0.8**
baz=266
L15K Ungalak Mounta 56.75 32 P **P 17 14 10.4 +0.8**
baz=265
H16K Elim 56.76 28 P **P 17 14 10.3 +0.7**
baz=262
K15K Wolf Creek Mou 56.79 31 P **P 17 14 10.7 +0.9**
baz=264
D17K Noatak River 56.93 25 P **P 17 14 11.5 +0.8**
baz=259
SDPT Sand Point 56.95 40 P **P 17 14 12.1 +1.0**
baz=270
C17K DeLong Mountai 57.05 24 P **P 17 14 12.7 +1.0**
baz=259
M15K Kasigluk River 57.05 33 P **P 17 14 12.9 +1.2**
baz=266
RDOG Red Dog Mine 57.06 24 P **P 17 14 12.9 +1.2**
baz=259
SVE Sverdlovsk 57.14 322 *e*P **P 17 14 15.2 +2.8**
SVE pmax pmax
comp=Z,17nm,1.5s
E17K Hotham Inlet 57.30 26 P **P 17 14 14.3 +0.9**
baz=261
N15K Kwethluk River 57.31 34 P **P 17 14 14.4 +0.8**
baz=267
J16K Anvik River 57.31 30 P **P 17 14 14.2 +0.6**
baz=264
I17K Unalakleet 57.34 29 P **P 17 14 14.5 +0.8**
baz=264
O15K Ungalikthiuk R 57.40 35 P **P 17 14 15.0 +0.8**
baz=268
F17K Baldwin Pennin 57.43 26 P **P 17 14 15.2 +0.9**
baz=262
CHNA Chernabura Isl 57.46 40 P **P 17 14 15.1 +0.4**
baz=271
S14K Fog Glacier 57.48 38 P **P 17 14 15.3 +0.3**
baz=270
G17K Kiwalik Mounta 57.54 27 P **P 17 14 15.4 +0.3**
baz=263
L16K Owhat River 57.71 32 P **P 17 14 16.8 +0.5**
baz=266
AB31 Akbulak array 57.77 313 **P 17 14 17.0 0.0**
AB31 IAmb IAmb 17 14 23.8
comp=Z,12nm,0.9s
ABKAR Akbulak array 57.77 313 P 17 14 17.4 +0.5
H17K Granite Mounta 57.79 28 IAmb IAmb 17 14 20.0
comp=Z,13nm,1.2s
H17K Granite Mounta 57.79 28 P **P 17 14 17.6 +0.7**
baz=264
C18K Utukok River 57.80 24 P **P 17 14 17.1 +0.1**
baz=260
E18K Tukpahlearik C 57.82 25 P **P 17 14 17.6 +0.5**
baz=262
M16K Timber Creek 57.92 33 P **P 17 14 17.9 0.0**
M16K IAmb IAmb 17 14 20.8
comp=Z,12nm,1.1s
M16K Timber Creek 57.92 33 P **P 17 14 18.5 +0.7**
baz=267
N16K Nishlik Lake 57.98 34 P **P 17 14 19.8 +1.4**
baz=268
J17K VABM Dome 58.01 30 **P 17 14 19.2 +0.8**
J17K IAmb IAmb 17 14 21.7
comp=Z,16nm,1.0s
J17K VABM Dome 58.01 30 P **P 17 14 20.5 +2.1**
baz=266,SNR=9.5
F18K Selawik 58.08 26 P **P 17 14 20.8 +1.9**
baz=263
A19K Wainwright 58.11 22 P **P 17 14 21.0 +2.0**
baz=260
HRA Herat 58.18 296 P **P 17 14 19.0 -1.4**
HRA IAmb IAmb 17 14 35.9
comp=Z,14nm,1.1s
L17K Donlin 58.29 32 P **P 17 14 22.2 +1.8**
baz=267,SNR=8.9
O16K Kokwok River B 58.30 35 P **P 17 14 21.9 +1.4**
baz=269
K17K Iditarod 58.32 31 IAmb IAmb 17 14 23.9
comp=Z,13nm,0.8s
K17K Iditarod 58.32 31 P **P 17 14 22.6 +2.0**
baz=267,SNR=7.1
P16K Nushagak River 58.34 35 P **P 17 14 22.4 +1.6**
baz=269
ARTI Arti 58.39 322 LR LR 17 41 14.7
comp=Z,160nm,21.8s,baz=92,slow=38
ARTI Arti 58.39 322*c i*P P 17 14 26.4 +5.2
ARTI 17 15 11.0
ARTI 17 16 29.6
ARTI S S 17 22 35.1 +12
ARTI SS **SS 17 26 24.6 +10**

ARTI				pmax	pmax		
	comp=Z,14nm,1.7s						
ARTI	**Arti**	**58.39**	**322**	P	**P**	**17 14 21.1**	**-0.1**
ARTI				IAmb	IAmb	17 14 35.4	
	comp=Z,9.0nm,0.9s						
G18K	**Tagagawik**	**58.41**	**27**	P	**P**	**17 14 22.7**	**+1.5**
	baz=265,SNR=5.8						
C19K	**Lookout Ridge**	**58.44**	**23**	IAmb	IAmb	17 14 24.8	
	comp=Z,14nm,1.4s						
C19K	**Lookout Ridge**	**58.44**	**23**	P	**P**	**17 14 23.3**	**+1.9**
	baz=262						
H18K	**Honhosa River**	**58.46**	**28**	IAmb	IAmb	17 14 24.4	
	comp=Z,16nm,1.2s						
H18K	**Honhosa River**	**58.46**	**28**	P	**P**	**17 14 23.4**	**+1.8**
	baz=265						
M17K	**Holitna River**	**58.67**	**32**		**P**	**17 14 24.6**	**+1.6**
M17K				IAmb	IAmb	17 14 26.5	
	comp=Z,18nm,0.9s						
M17K	**Holitna River**	**58.67**	**32**	P	**P**	**17 14 24.9**	**+1.9**
	baz=268,SNR=7.5						
N17K	**Nushagak Hills**	**58.77**	**33**	IAmb	IAmb	17 14 26.7	
	comp=Z,7.2nm,0.8s						
N17K	**Nushagak Hills**	**58.77**	**33**	P	**P**	**17 14 25.6**	**+1.8**
	baz=269						
O17K	**Koliganek Bris**	**58.81**	**34**	P	**P**	**17 14 25.6**	**+1.6**
	baz=270						
F19K	**Shaleruckik Mo**	**58.85**	**26**	P	**P**	**17 14 25.8**	**+1.6**
	baz=265						
D19K	**Kuna River**	**58.89**	**24**	P	**P**	**17 14 26.4**	**+1.8**
	baz=264						
AKTO	**Aktyubinsk**	**58.92**	**315**	LR	LR	17 39 23.1	
	comp=Z,127nm,21.9s,baz=202,slow=36						
L18K	**Granite Mounta**	**59.05**	**32**	IAmb	IAmb	17 14 29.1	
	comp=Z,12nm,1.0s						
L18K	**Granite Mounta**	**59.05**	**32**	P	**P**	**17 14 27.3**	**+1.6**
	baz=269,SNR=9.5						
GCSA	**Galena City Sc**	**59.06**	**29**	P	**P**	**17 14 27.1**	**+1.4**
	baz=267						
G19K	**Purcell Mounta**	**59.07**	**27**	P	**P**	**17 14 27.1**	**+1.3**
	baz=266						
J18K	**Innoko River**	**59.07**	**30**	P	**P**	**17 14 27.5**	**+1.6**
	baz=268,SNR=5.2						
E19K	**Redstone River**	**59.12**	**25**	P	**P**	**17 14 27.9**	**+1.8**
	baz=265						
P17K	**Kvichak River**	**59.14**	**35**	P	**P**	**17 14 28.1**	**+1.7**
	baz=271						
R17L	**Mt. Peulik Vol**	**59.21**	**37**	P	**P**	**17 14 28.6**	**+1.6**
	baz=272						
BBOO	**Buckleboo**	**59.25**	**174**	P	**P**	**17 14 26.4**	**-0.9**
H19K	**Roundabout Mou**	**59.29**	**28**	IAmb	IAmb	17 14 30.5	
	comp=Z,14nm,1.1s						
H19K	**Roundabout Mou**	**59.29**	**28**	P	**P**	**17 14 29.3**	**+2.1**
	baz=267,SNR=9.8						
B20K	**Meade River**	**59.41**	**22**	P	**P**	**17 14 29.8**	**+1.8**
	baz=264						
N18K	**Kilae Creek**	**59.41**	**33**	IAmb	IAmb	17 14 31.0	
	comp=Z,7.9nm,1.0s						
N18K	**Kilae Creek**	**59.41**	**33**	P	**P**	**17 14 30.1**	**+1.9**
	baz=270						
M18K	**Stony River**	**59.44**	**32**	P	**P**	**17 14 30.3**	**+1.9**
	baz=270,SNR=6.1						
Q17K	**Contact Creek**	**59.45**	**36**	P	**P**	**17 14 30.4**	**+1.7**
	baz=272						
D20K	**Etivluk River**	**59.46**	**24**	P	**P**	**17 14 30.3**	**+1.8**
	baz=265						
J19K	**Poorman**	**59.58**	**29**	IAmb	IAmb	17 14 32.4	
	comp=Z,16nm,1.0s						
J19K	**Poorman**	**59.58**	**29**	P	**P**	**17 14 31.1**	**+1.7**
	baz=268,SNR=16						
E20K	**Nigu River**	**59.58**	**24**	P	**P**	**17 14 31.1**	**+1.7**
	baz=266						
F20K	**Avaraart Lake**	**59.67**	**26**	P	**P**	**17 14 31.9**	**+2.0**
	baz=267						
A21K	**Barrow**	**59.74**	**21**	P	**P**	**17 14 32.6**	**+2.4**
	baz=263						
ACHA	**Angle Creek He**	**59.74**	**36**	IAmb	IAmb	17 14 32.4	
	comp=Z,12nm,0.9s						
O18K	**Koktuh Hills**	**59.76**	**34**	IAmb	IAmb	17 14 33.9	
	comp=Z,12nm,0.8s						
O18K	**Koktuh Hills**	**59.76**	**34**	P	**P**	**17 14 32.4**	**+1.7**
	baz=271						
P18K	**Big Mountain,**	**59.76**	**35**	P	**P**	**17 14 32.7**	**+1.9**
	baz=272						
Q18K	**Katmai Hardscr**	**59.90**	**36**	P	**P**	**17 14 33.9**	**+2.2**
	baz=272						
L19K	**White Mountain**	**59.90**	**32**	IAmb	IAmb	17 14 34.8	
	comp=Z,10nm,1.0s						
L19K	**White Mountain**	**59.90**	**32**	P	**P**	**17 14 33.7**	**+2.1**
	baz=270,SNR=7.3						
H20K	**Anotleneega Mo**	**59.94**	**28**	P	**P**	**17 14 33.9**	**+2.1**
	baz=268						
I20K	**Naaghedeneel**	**60.09**	**29**	P	**P**	**17 14 35.3**	**+2.5**
	baz=269,SNR=13						
N19K	**Bonanza Creek**	**60.10**	**33**	P	**P**	**17 14 34.5**	**+1.4**
	baz=271						
C21K	**Knifeblade Rid**	**60.16**	**23**	P	**P**	**17 14 35.3**	**+2.0**
	baz=266,SNR=6.3						
J20K	**Nowinta River**	**60.23**	**29**	P	**P**	**17 14 35.8**	**+2.0**
	baz=270,SNR=20						
A22K	**Sinclair Lake**	**60.24**	**21**	P	**P**	**17 14 35.5**	**+1.8**
	baz=265						
B21K	**Ikpikpuk River**	**60.25**	**23**		**P**	**17 14 35.2**	**+1.4**
B21K				IAmb	IAmb	17 14 37.0	
	comp=Z,16nm,0.9s						
B21K	**Ikpikpuk River**	**60.25**	**23**	P	**P**	**17 14 35.8**	**+1.9**
	baz=266,SNR=8.1						
K20K	**Telida**	**60.26**	**30**	P	**P**	**17 14 36.3**	**+2.2**
	baz=270,SNR=20						
E21K	**Killik River**	**60.41**	**24**	P	**P**	**17 14 36.7**	**+1.6**
	baz=268,SNR=5.2						
IMAR	**Indian Mountai**	**60.42**	**27**	P	**P**	**17 14 35.7**	**+0.6**
IMAR				PcP	**PcP**	**17 15 21.1**	**+1.3**
SII	**Sitkinak Islan**	**60.45**	**38**	P	**P**	**17 14 36.5**	**+1.0**
	baz=274						
G21K	**Allakaket**	**60.53**	**27**	P	**P**	**17 14 37.5**	**+1.7**
	baz=269						
F21K	**Alatna River**	**60.55**	**26**		**P**	**17 14 36.2**	**+0.2**
F21K	**Alatna River**	**60.55**	**26**	P	**P**	**17 14 37.5**	**+1.5**
	baz=269						
Q19K	**Cape Douglas,**	**60.59**	**35**	P	**P**	**17 14 37.7**	**+1.2**
	baz=273						
B22K	**Teshekpuk Lake**	**60.71**	**22**	IAmb	IAmb	17 14 39.3	
	comp=Z,11nm,0.9s						
B22K	**Teshekpuk Lake**	**60.71**	**22**	P	**P**	**17 14 38.6**	**+1.7**
	baz=267,SNR=5.0						
M20K	**Styx River**	**60.72**	**32**	P	**P**	**17 14 39.0**	**+1.6**
	baz=272,SNR=5.4						
P19K	**Oil Pt**	**60.77**	**34**	P	**P**	**17 14 38.8**	**+1.2**
	baz=273						
H21K	**Melozitna Rive**	**60.81**	**28**	P	**P**	**17 14 39.8**	**+2.1**
	baz=270,SNR=18						
OHAK	**Old Harbor**	**60.89**	**37**	P	**P**	**17 14 38.7**	**+0.3**
OHAK	**Old Harbor**	**60.89**	**37**	P	**P**	**17 14 39.4**	**+1.0**
	baz=274						
RED	**Redoubt Volcan**	**60.96**	**34**	IAmb	IAmb	17 14 41.1	
	comp=Z,12nm,0.8s						
CHUM	**Lake Minchumin**	**61.04**	**30**	P	**P**	**17 14 41.0**	**+1.7**
	baz=272,SNR=8.1						
O20K	**Slope Mountain**	**61.05**	**34**	P	**P**	**17 14 40.8**	**+1.2**
	baz=273						
F22K	**John River**	**61.06**	**25**	P	**P**	**17 14 41.4**	**+2.0**
	baz=270,SNR=7.6						
PPLA	**Purkeypile**	**61.12**	**31**	P	**P**	**17 14 42.1**	**+2.0**
	baz=272,SNR=7.2						
CAST	**Castle Rocks**	**61.15**	**30**	P	**P**	**17 14 41.9**	**+1.7**
	baz=272,SNR=26						
I21K	**Tanana**	**61.15**	**28**	P	**P**	**17 14 42.2**	**+2.1**
	baz=271,SNR=16						
SPCR	**Spurr Chakacha**	**61.19**	**33**	P	**P**	**17 14 42.2**	**+1.6**
	baz=273						
E22K	**Anaktuvuk Pass**	**61.21**	**25**	P	**P**	**17 14 42.3**	**+1.8**
	baz=270						
KDAK	**Kodiak Island**	**61.23**	**37**	P	**P**	**17 14 40.7**	**0.0**
	comp=Z,14nm,0.7s,baz=256,slow=6.7,SNR=17						
	comp=Z,14nm,0.7s						
KDAK	**Kodiak Island**	**61.23**	**37**	P	**P**	**17 14 41.7**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,18nm,0.8s						
KDAK	**Kodiak Island**	**61.23**	**37**	P	**P**	**17 14 41.7**	**+1.0**
KDAK	**Kodiak Island**	**61.23**	**37**	P	**P**	**17 14 42.2**	**+1.5**
	baz=275						
SPU	**Mount Spurr**	**61.27**	**33**	IAmb	IAmb	17 14 44.2	
	comp=Z,10nm,0.9s						
G22K	**Bettles**	**61.33**	**26**	P	**P**	**17 14 42.5**	**+1.3**
	baz=271						
H22K	**Ishtalitna Cre**	**61.39**	**27**	P	**P**	**17 14 42.6**	**+0.9**
	baz=271,SNR=21						
SKT	**Skwentna**	**61.47**	**32**	IAmb	IAmb	17 14 44.5	

	comp=Z,11nm,1.0s						
SKT	**Skwentna**	**61.47**	**32**	P	**P**	**17 14 43.6**	**+1.2**
	baz=273,SNR=11						
D23K	**Nanushuk River**	**61.63**	**24**	IAmb	IAmb	17 14 46.8	
	comp=Z,17nm,1.1s						
D23K	**Nanushuk River**	**61.63**	**24**	P	**P**	**17 14 44.8**	**+1.5**
	baz=270,SNR=13						
C23K	**Itkillik River**	**61.65**	**23**	IAmb	IAmb	17 14 46.5	
	comp=Z,13nm,1.2s						
C23K	**Itkillik River**	**61.65**	**23**	P	**P**	**17 14 44.8**	**+1.4**
	baz=270						
KTH	**Kantishna Hill**	**61.67**	**30**	IAmb	IAmb	17 14 48.1	
	comp=Z,9.4nm,1.1s						
MLY	**Manley**	**61.68**	**28**	IAmb	IAmb	17 14 47.1	
	comp=Z,17nm,1.1s						
MLY	**Manley**	**61.68**	**28**	P	**P**	**17 14 45.5**	**+1.8**
	baz=272,SNR=20						
CAPN	**Captain Cook N**	**61.73**	**33**	P	**P**	**17 14 45.9**	**+1.9**
	baz=274						
L22K	**Petersville**	**61.80**	**31**	P	**P**	**17 14 45.8**	**+1.2**
	baz=274,SNR=17						
G23K	**Bananza Creek**	**61.92**	**26**		**P**	**17 14 45.8**	**+0.5**
G23K				IAmb	IAmb	17 14 48.6	
	comp=Z,15nm,1.4s						
G23K	**Bananza Creek**	**61.92**	**26**	P	**P**	**17 14 46.6**	**+1.3**
	baz=272,SNR=9.2						
TRF	**Thorofare Moun**	**61.96**	**30**	IAmb	IAmb	17 15 05.0	
	comp=Z,7.5nm,1.0s						
TRF	**Thorofare Moun**	**61.96**	**30**	P	**P**	**17 14 46.7**	**+0.9**
	baz=274						
BRSE	**Bradley Lake S**	**62.02**	**34**	P	**P**	**17 14 46.5**	**+0.4**
	baz=275						
E23K	**Chandalar**	**62.03**	**25**	IAmb	IAmb	17 14 49.5	
	comp=Z,11nm,1.1s						
E23K	**Chandalar**	**62.03**	**25**	P	**P**	**17 14 47.2**	**+1.1**
	baz=272,SNR=9.0						
TOLK	**Toolik Lake Re**	**62.03**	**24**	P	**P**	**17 14 47.3**	**+1.3**
	baz=271,SNR=5.0						
CUT	**Chulitna**	**62.04**	**31**	P	**P**	**17 14 47.0**	**+1.0**
	baz=274						
H23K	**Yukon River**	**62.15**	**27**	P	**P**	**17 14 49.2**	**+2.3**
	baz=273						
M22K	**Willow**	**62.16**	**32**	P	**P**	**17 14 48.4**	**+1.5**
	baz=275						
I23K	**Minto, Yukon-K**	**62.26**	**28**	IAmb	IAmb	17 14 50.8	
	comp=Z,12nm,1.1s						
I23K	**Minto, Yukon-K**	**62.26**	**28**	P	**P**	**17 14 49.5**	**+2.0**
	baz=274,SNR=11						
D24K	**Happy Valley**	**62.29**	**24**	P	**P**	**17 14 49.5**	**+1.9**
	baz=272						
RC01	**Rabbit Creek A**	**62.40**	**33**	P	**P**	**17 14 49.7**	**+1.1**
	baz=275						
NEA2	**Nenana**	**62.42**	**29**	P	**P**	**17 14 50.2**	**+1.6**
	baz=274,SNR=16						
E24K	**Your Creek**	**62.46**	**25**	P	**P**	**17 14 50.8**	**+1.9**
	baz=273,SNR=8.1						
O22K	**Cooper Landing**	**62.46**	**33**	P	**P**	**17 14 49.4**	**+0.5**
	baz=276						
MCK	**McKinley**	**62.54**	**30**	P	**P**	**17 14 50.5**	**+1.0**
	baz=275,SNR=12						
SEW	**Seward**	**62.63**	**34**	P	**P**	**17 14 50.6**	**+0.5**
	baz=276						
PMR	**Palmer**	**62.64**	**32**	P	**P**	**17 14 51.1**	**+1.0**
	baz=276						
F24K	**Squaw Lake**	**62.71**	**25**	IAmb	IAmb	17 14 53.8	
	comp=Z,6.8nm,0.8s						
F24K	**Squaw Lake**	**62.71**	**25**	P	**P**	**17 14 52.4**	**+1.8**
	baz=274,SNR=16						
GHO	**Glory Hole Cre**	**62.72**	**32**	IAmb	IAmb	17 14 52.9	
	comp=Z,9.4nm,0.8s						
WAT1	**Susitna Watana**	**62.79**	**31**	P	**P**	**17 14 51.7**	**+0.5**
	baz=275						
H24K	**Noodor Dome**	**62.83**	**27**	IAmb	IAmb	17 14 55.0	
	comp=Z,19nm,1.3s						
H24K	**Noodor Dome**	**62.83**	**27**	P	**P**	**17 14 53.5**	**+2.1**
	baz=274,SNR=13						
WRH	**Wood River Hil**	**62.85**	**29**	IAmb	IAmb	17 14 54.4	
	comp=Z,8.4nm,1.1s						
COLA	**College**	**62.92**	**28***de*	P	**P**	**17 14 53.6**	**+1.7**
COLA				pmax	pmax		
	comp=Z,11nm,1.4s						
COLA	**College**	**62.92**	**28**	P	**P**	**17 14 53.8**	**+1.8**
	baz=275						
G24K	**Hadweenzic Riv**	**62.93**	**26**	IAmb	IAmb	17 14 55.1	
	comp=Z,7.7nm,0.9s						
G24K	**Hadweenzic Riv**	**62.93**	**26**	P	**P**	**17 14 53.9**	**+1.9**
	baz=274,SNR=7.4						
KNK	**Knik Glacier**	**62.98**	**32**	P	**P**	**17 14 53.4**	**+1.0**
	baz=276						
SML	**Sawmill**	**63.00**	**32**	IAmb	IAmb	17 14 54.8	
	comp=Z,12nm,0.9s						
SML	**Sawmill**	**63.00**	**32**	P	**P**	**17 14 53.8**	**+1.2**
	baz=276,SNR=6.7						
KIRV	**Kirov**	**63.06**	**325**	LR	LR	17 45 10.0	
	comp=Z,261nm,18.2s,baz=87,slow=39						
KIRV	**Kirov**	**63.06**	**325**⇓	*e*P	**P**	**17 14 54.8**	**+1.9**
POKR	**Poker Plat Res**	**63.08**	**28**	P	**P**	**17 14 54.5**	**+1.5**
	baz=275						
PWL	**Port Wells**	**63.10**	**33**	P	**P**	**17 14 54.2**	**+1.0**
	baz=277						
D25K	**Kavik River**	**63.15**	**23**	IAmb	IAmb	17 14 56.5	
	comp=Z,7.4nm,1.0s						
D25K	**Kavik River**	**63.15**	**23**	P	**P**	**17 14 54.8**	**+1.3**
	baz=274,SNR=7.1						
WAT6	**Susitna Watana**	**63.19**	**31**	P	**P**	**17 14 54.8**	**+0.8**
	baz=276,SNR=11						
DHY	**Denali Highway**	**63.30**	**30**	P	**P**	**17 14 55.3**	**+0.6**
	baz=276						
ILAR	**Eielson Array**	**63.34**	**28**	P	**P**	**17 14 55.3**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=283,slow=6.0,SNR=14						
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**63.34**	**28**		**P**	**17 14 54.2**	**-0.5**
HDA	**Harding Lake**	**63.35**	**29**	P	**P**	**17 14 55.5**	**+0.7**
	baz=276,SNR=6.6						
G25K	**Bearman Lake**	**63.47**	**26**	P	**P**	**17 14 57.7**	**+2.2**
	baz=276,SNR=7.1						
SCM	**Sheep Creek Mo**	**63.47**	**32**	P	**P**	**17 14 56.9**	**+1.1**
	baz=277,SNR=9.2						
E25K	**Arctic Village**	**63.55**	**25**	IAmb	IAmb	17 14 59.8	
	comp=Z,15nm,1.4s						
E25K	**Arctic Village**	**63.55**	**25**	P	**P**	**17 14 58.3**	**+2.2**
	baz=275						
F25K	**Christian Rive**	**63.57**	**25**	IAmb	IAmb	17 15 00.2	
	comp=Z,11nm,1.2s						
F25K	**Christian Rive**	**63.57**	**25**	P	**P**	**17 14 58.0**	**+1.7**
	baz=276,SNR=10.0						
C26K	**Camden Bay**	**63.62**	**23**	P	**P**	**17 14 58.7**	**+2.2**
	baz=275						
P23K	**Montague Islan**	**63.66**	**34**	P	**P**	**17 14 58.3**	**+1.4**
	baz=278						
FYU	**Fort Yukon**	**63.83**	**26**	IAmb	IAmb	17 15 02.6	
	comp=Z,18nm,1.2s						
PRP	**Porcupine Dome**	**63.83**	**28**	IAmb	IAmb	17 15 01.5	
	comp=Z,9.2nm,1.1s						
PRP	**Porcupine Dome**	**63.83**	**28**	P	**P**	**17 14 59.7**	**+1.5**
	baz=277,SNR=10.0						
K24K	**Donnelly Dome**	**63.93**	**29**	P	**P**	**17 14 58.5**	**-0.2**
K24K	**Donnelly Dome**	**63.93**	**29**	P	**P**	**17 15 00.8**	**+2.1**
	baz=277,SNR=5.0						
J25K	**Salcha River,**	**64.01**	**29**		**P**	**17 14 59.2**	**-0.1**
J25K				PcP	**PcP**	**17 15 35.0**	**+0.5**
J25K	**Salcha River,**	**64.01**	**29**	P	**P**	**17 15 01.1**	**+1.9**
	baz=277						
FID	**Port Fidalgo**	**64.02**	**33**	IAmb	IAmb	17 15 01.5	
	comp=Z,12nm,1.0s						
C27K	**Jago River**	**64.06**	**23**	IAmb	IAmb	17 15 02.8	
	comp=Z,7.0nm,0.8s						
C27K	**Jago River**	**64.06**	**23**	P	**P**	**17 15 01.6**	**+2.2**
	baz=276,SNR=7.2						
F26K	**Sheenjek River**	**64.12**	**25**	IAmb	IAmb	17 15 03.8	
	comp=Z,17nm,1.2s						
F26K	**Sheenjek River**	**64.12**	**25**	P	**P**	**17 15 02.4**	**+2.4**
	baz=277,SNR=11						
KLU	**Klutina**	**64.18**	**32**	IAmb	IAmb	17 15 03.0	
	comp=Z,14nm,1.2s						
KLU	**Klutina**	**64.18**	**32**	P	**P**	**17 15 01.9**	**+1.5**
	baz=278,SNR=6.9						
PAX	**Paxson**	**64.18**	**30**	IAmb	IAmb	17 15 03.0	
	comp=Z,9.4nm,1.1s						
PAX	**Paxson**	**64.18**	**30**	P	**P**	**17 15 01.7**	**+1.2**
	baz=278,SNR=9.0						
RIDG	**Independent Ri**	**64.35**	**29**	IAmb	IAmb	17 15 04.4	
	comp=Z,21nm,1.3s						
RIDG	**Independent Ri**	**64.35**	**29**	P	**P**	**17 15 02.3**	**+0.8**
	baz=278,SNR=7.4						
G26K	**Porcupine Rive**	**64.36**	**26**	P	**P**	**17 15 03.8**	**+2.4**
	baz=278,SNR=7.1						
EYAK	**Cordova Ski Ar**	**64.40**	**33**	IAmb	IAmb	17 15 04.5	

	comp=Z,7.5nm,0.9s						
EYAK	**Cordova Ski Ar**	**64.40**	**33**	P	**P**	**17 15 03.5**	**+1.7**
	baz=279						
HARP	**HAARP**	**64.40**	**31**	P	**P**	**17 15 03.7**	**+1.9**
	baz=279						
N25K	**Chitina, Valde**	**64.79**	**32**	P	**P**	**17 15 06.2**	**+1.8**
	baz=279,SNR=7.2						
BMRM	**Bremner River**	**64.89**	**32**	P	**P**	**17 15 06.6**	**+1.6**
	baz=280,SNR=13						
MENT	**Mentasta**	**64.97**	**30**	IAmb	IAmb	17 15 08.6	
	comp=Z,17nm,1.1s						
E27K	**Coleen River**	**65.01**	**24**	IAmb	IAmb	17 15 08.6	
	comp=Z,6.3nm,0.8s						
E27K	**Coleen River**	**65.01**	**24**	P	**P**	**17 15 07.9**	**+2.2**
	baz=279,SNR=5.4						
BELG	**Belogornoye**	**65.08**	**318***ce*	P	**P**	**17 15 05.7**	**-0.6**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
D27M	**Malcolm River**	**65.08**	**23**	IAmb	IAmb	17 15 09.6	
	comp=Z,10nm,1.2s						
D27M	**Malcolm River**	**65.08**	**23**	P	**P**	**17 15 08.1**	**+2.0**
	baz=279						
L26K	**Log Cabin Wild**	**65.13**	**30**	IAmb	IAmb	17 15 09.6	
	comp=Z,20nm,1.2s						
KAIM	**Kayak Island**	**65.16**	**34**	P	**P**	**17 15 08.9**	**+2.1**
	baz=280,SNR=5.0						
G27K	**Doyon Strip**	**65.21**	**26**	P	**P**	**17 15 09.4**	**+2.4**
	baz=280						
H27K	**Steamboat Moun**	**65.36**	**26**	P	**P**	**17 15 10.7**	**+2.7**
	baz=280,SNR=5.0						
VRDI	**Verde Repeater**	**65.39**	**32**	IAmb	IAmb	17 15 11.0	
	comp=Z,14nm,0.9s						
M26K	**Nabesna, AK**	**65.40**	**31**	P	**P**	**17 15 10.3**	**+1.9**
	baz=280,SNR=20						
I27K	**Kandik River**	**65.43**	**27**	P	**P**	**17 15 10.5**	**+2.0**
	baz=280,SNR=22						
K27K	**Chicken**	**65.52**	**29**	P	**P**	**17 15 09.6**	**+0.6**
K27K				IAmb	IAmb	17 15 12.1	
	comp=Z,18nm,1.2s						
MCARA	**McCarthy VSAT**	**65.57**	**32**	P	**P**	**17 15 11.1**	**+1.7**
	baz=281,SNR=5.5						
CRQE	**Cirque**	**65.66**	**33**	P	**P**	**17 15 11.6**	**+1.5**
	baz=281,SNR=9.0						
E28M	**Babbage River**	**65.69**	**24**	P	**P**	**17 15 12.3**	**+2.2**
	baz=281						
F28M	**Old Crow**	**65.75**	**25**	IAmb	IAmb	17 15 13.9	
	comp=Z,8.2nm,1.0s						
F28M	**Old Crow**	**65.75**	**25**	P	**P**	**17 15 12.8**	**+2.3**
	baz=281,SNR=5.8						
L27K	**Beaver Creek,**	**65.80**	**30**	IAmb	IAmb	17 15 14.0	
	comp=Z,9.4nm,1.1s						
L27K	**Beaver Creek,**	**65.80**	**30**	P	**P**	**17 15 12.6**	**+1.7**
	baz=281,SNR=12						
BCAR	**Beaver Creek A**	**65.82**	**30**	P	**P**	**17 15 10.4**	**-0.7**
D28M	**Stokes Point**	**65.84**	**23**	P	**P**	**17 15 12.6**	**+1.6**
	baz=281						
M27K	**Edge Creek, AK**	**65.92**	**31**	IAmb	IAmb	17 15 14.6	
	comp=Z,11nm,1.0s						
M27K	**Edge Creek, AK**	**65.92**	**31**	P	**P**	**17 15 13.5**	**+1.7**
	baz=281,SNR=14						
I28M	**Miner Creek**	**66.15**	**27**	IAmb	IAmb	17 15 17.4	
	comp=Z,16nm,1.1s						
I28M	**Miner Creek**	**66.15**	**27**	P	**P**	**17 15 15.5**	**+2.4**
	baz=282,SNR=16						
BARN	**Barnard Glacie**	**66.28**	**32**	IAmb	IAmb	17 15 16.9	
	comp=Z,8.0nm,0.9s						
GRNC	**Granite Creek**	**66.30**	**32**	IAmb	IAmb	17 15 16.9	
	comp=Z,9.2nm,1.1s						
E29M	**Blow River**	**66.33**	**24**	P	**P**	**17 15 16.1**	**+2.0**
	baz=282						
BVCY	**Beaver Creek**	**66.37**	**31**	P	**P**	**17 15 16.7**	**+2.1**
	baz=282						
G29M	**Pine Creek**	**66.60**	**25**	IAmb	IAmb	17 15 19.3	
	comp=Z,17nm,1.1s						
G29M	**Pine Creek**	**66.60**	**25**	P	**P**	**17 15 18.4**	**+2.5**
	baz=283,SNR=8.1						
H29M	**Whitestone**	**66.61**	**26**	IAmb	IAmb	17 15 18.8	
	comp=Z,9.1nm,0.9s						
H29M	**Whitestone**	**66.61**	**26**	P	**P**	**17 15 17.9**	**+1.8**
	baz=283,SNR=9.8						
DAWY	**Dawson**	**66.67**	**29**	IAmb	IAmb	17 15 19.2	
	comp=Z,13nm,1.4s						
DAWY	**Dawson**	**66.67**	**29**	P	**P**	**17 15 18.1**	**+1.7**
	baz=283						
YUK3	**Moose Creek**	**66.69**	**31**	P	**P**	**17 15 18.6**	**+1.7**
	baz=283,SNR=15						
I29M	**Ogilvie Camp,**	**66.83**	**27**	IAmb	IAmb	17 15 19.9	
	comp=Z,7.9nm,1.0s						
I29M	**Ogilvie Camp,**	**66.83**	**27**	P	**P**	**17 15 19.4**	**+1.9**
	baz=283						
O28M	**Mount Upton**	**67.04**	**32**	IAmb	IAmb	17 15 22.2	
	comp=Z,14nm,0.9s						
O28M	**Mount Upton**	**67.04**	**32**	P	**P**	**17 15 21.1**	**+1.9**
	baz=283,SNR=12						
J29N	**Klondike Camp**	**67.08**	**28**	P	**P**	**17 15 21.4**	**+2.3**
	baz=284						
YUK8	**Steele Glacier**	**67.13**	**32**	P	**P**	**17 15 21.9**	**+2.2**
	baz=284,SNR=7.3						
PINM	**Pinnacle**	**67.17**	**33**	P	**P**	**17 15 21.5**	**+1.7**
	baz=284,SNR=6.3						
EPYK	**Eagle Plains**	**67.23**	**26**	IAmb	IAmb	17 15 22.2	
	comp=Z,9.4nm,0.8s						
EPYK	**Eagle Plains**	**67.23**	**26**	P	**P**	**17 15 21.4**	**+1.4**
	baz=284,SNR=5.6						
G30M	**tAoh Zraii Nji**	**67.27**	**25**	IAmb	IAmb	17 15 22.7	
	comp=Z,18nm,1.1s						
G30M	**tAoh Zraii Nji**	**67.27**	**25**	P	**P**	**17 15 21.2**	**+1.0**
	baz=284,SNR=6.8						
F30M	**Barrier River**	**67.28**	**24**	P	**P**	**17 15 22.0**	**+1.7**
	baz=284,SNR=6.4						
L29M	**L29M**	**67.44**	**29**	P	**P**	**17 15 23.6**	**+2.2**
	baz=284,SNR=18						
BRWY	**Burwash Landin**	**67.45**	**31**	P	**P**	**17 15 23.2**	**+1.8**
	baz=284						
M29M	**Somme Creek**	**67.45**	**30**	IAmb	IAmb	17 15 25.2	
	comp=Z,10nm,1.1s						
M29M	**Somme Creek**	**67.45**	**30**	P	**P**	**17 15 24.0**	**+2.5**
	baz=284,SNR=16						
K29M	**Barlow Dome**	**67.52**	**29**		**P**	**17 15 24.5**	**+2.5**
K29M				IAmb	IAmb	17 15 25.9	
	comp=Z,12nm,1.2s						
K29M	**Barlow Dome**	**67.52**	**29**	P	**P**	**17 15 23.4**	**+1.4**
	baz=284,SNR=12						
KLMR	**Klimovskoe**	**67.57**	**328**	*e*P	**P**	**17 15 21.9**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
YUK4	**Talbot Arm**	**67.64**	**31**	P	**P**	**17 15 24.7**	**+1.8**
	baz=284,SNR=6.5						
I30M	**Mount Dempster**	**67.65**	**27**	P	**P**	**17 15 24.5**	**+1.7**
	baz=285,SNR=7.7						
PNL	**Peninsula**	**67.69**	**33**	P	**P**	**17 15 24.9**	**+1.9**
	baz=284,SNR=7.3						
J30M	**Hart River**	**67.84**	**28**	P	**P**	**17 15 25.9**	**+1.9**
	baz=285						
YUK6	**Outpost Mounta**	**67.87**	**32**	P	**P**	**17 15 25.8**	**+1.4**
	baz=285,SNR=8.1						
INK	**Inuvik**	**67.92**	**24**	P	**P**	**17 15 26.0**	**+1.8**
	baz=286						
O29M	**Mount Kennedy**	**67.93**	**32**	IAmb	IAmb	17 15 28.2	
	comp=Z,14nm,1.1s						
O29M	**Mount Kennedy**	**67.93**	**32**	P	**P**	**17 15 26.6**	**+2.0**
	baz=285,SNR=7.0						
G31M	**Satah River**	**68.03**	**25**	P	**P**	**17 15 26.1**	**+1.2**
	baz=286						
F31M	**Tsiigehtchic**	**68.08**	**24**	P	**P**	**17 15 26.4**	**+1.2**
	baz=286						
M30M	**Minto, Yukon**	**68.17**	**30**	P	**P**	**17 15 28.0**	**+2.0**
	baz=286,SNR=8.3						
HYT	**Haines Junctio**	**68.31**	**32**	IAmb	IAmb	17 15 30.4	
	comp=Z,13nm,1.0s						
HYT	**Haines Junctio**	**68.31**	**32**	P	**P**	**17 15 29.1**	**+2.1**
	baz=286,SNR=14						
H31M	**Peel River**	**68.31**	**26**	IAmb	IAmb	17 15 29.4	
	comp=Z,12nm,0.9s						
H31M	**Peel River**	**68.31**	**26**	P	**P**	**17 15 28.0**	**+1.2**
	baz=286,SNR=5.9						
N30M	**Aishikik Lake**	**68.33**	**31**	IAmb	IAmb	17 15 30.4	
	comp=Z,13nm,1.3s						
N30M	**Aishikik Lake**	**68.33**	**31**	P	**P**	**17 15 29.0**	**+1.9**
	baz=286,SNR=6.2						
APA	**Apatity**	**68.34**	**336**	*e*P	**P**	**17 15 26.2**	**-0.7**
APA				*e*		17 15 53.1	
APA				*e*SS	SS	17 28 48.8	-0.6
P29M	**Windy Craggy**	**68.52**	**33**	P	**P**	**17 15 30.3**	**+2.1**
	baz=286,SNR=8.4						
P30M	**Million Dollar**	**68.76**	**32**	P	**P**	**17 15 31.6**	**+1.9**
	baz=286						
VRH	**Novokhopyorsk**	**68.92**	**318**	*e*P	**P**	**17 15 31.2**	**+0.4**

VRH pmax pmax
comp=Z,16nm,0.8s
SPITS Spitsbergen Ar 68.92 348 P P 17 15 31.3 +0.9
comp=Z,7.7nm,0.9s,baz=108,slow=5.5,SNR=5.7
SPITS LR LR 17 47 24.7
comp=Z,75nm,21.6s,baz=38,slow=37
comp=Z,7.7nm,0.9s
N31M Braeburn, Yuko 68.93 31 IAmb IAmb 17 15 34.1
comp=Z,16nm,1.1s
N31M Braeburn, Yuko 68.93 31 P P 17 15 32.6 +1.9
baz=287,SNR=5.9
O30N Mendenhall 68.99 32 P P 17 15 33.0 +1.9
baz=287,SNR=6.4
PLBC Pleasant Camp 69.24 33 P P 17 15 34.4 +1.8
baz=287
M31M Drury Creek, Y 69.34 30 IAmb IAmb 17 15 36.4
comp=Z,8.6nm,1.1s
M31M Drury Creek, Y 69.34 30 P P 17 15 34.9 +1.6
baz=288,SNR=5.6
A36M Sachs Harbour 69.39 19 P P 17 15 35.2 +1.8
baz=292
WHY Whitehorse 69.59 32 P P 17 15 36.7 +1.7
baz=288,SNR=7.2
SKAG Skagway 69.74 33 IAmb IAmb 17 15 39.0
comp=Z,11nm,1.3s
SKAG Skagway 69.74 33 P P 17 15 38.0 +2.3
baz=286
S31K Pelican 69.75 35 P P 17 15 37.7 +1.9
baz=288
MOS Moscow 69.94 323 *eP* P 17 15 50.2 +13
NCK Nalchik 69.96 309‖ *eP* **P 17 15 37.7 +0.3**
NCK pmax pmax
comp=Z,9.0nm,0.5s
LPSR Galich'ya Gora 70.16 320 *eP* **P 17 15 38.5 +0.1**
LPSR pmax pmax
comp=Z,17nm,0.7s
GNI Garni 70.18 306 LR LR 17 48 37.4
comp=Z,48nm,19.0s,baz=62,slow=38
N32M Quiet Lake 70.27 31 P P 17 15 40.3 +1.2
baz=289
VORR Voronezh 70.28 319 *eP* **P 17 15 39.5 +0.3**
VORR pmax pmax
comp=Z,29nm,0.4s
KBZ Khabaz 70.37 310 P **P 17 15 41.6 +1.8**
comp=Z,9.4nm,0.9s,baz=101,slow=4.6,SNR=19
KBZ LR LR 17 49 28.7
comp=Z,104nm,18.2s,baz=34,slow=38
comp=Z,9.4nm,0.9s
KBZ Khabaz 70.37 310 *d iP* **P 17 15 41.4 +1.6**
KBZ pmax pmax
comp=Z,13nm,0.9s
ARCES ARCESS Array B 70.40 339 P **P 17 15 40.3 +0.7**
comp=Z,6.6nm,0.9s,baz=36,slow=6.8,SNR=9.5
ARCES LR LR 17 51 20.3
comp=Z,105nm,19.1s,baz=54,slow=40
comp=Z,6.6nm,0.9s
ARCES ARCESS Array B 70.40 339 P 17 15 39.5 -0.2
KIV Kislovodsk 70.44 310 *eP* **P 17 15 42.2 +1.7**
KIV *eS* **S 17 24 53.4 +0.9**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,76nm,17.0s
KIV Kislovodsk 70.44 310 P 17 15 40.2 -0.3
KIV Kislovodsk 70.44 310 P **P 17 15 40.5 0.0**
comp=Z,14nm,1.0s
VSR Storozhevoye 70.45 318 *eP* **P 17 15 40.7 +0.5**
VSR pmax pmax
comp=Z,10.0nm,0.4s
P32M Atlin 70.48 32 P P 17 15 41.9 +1.6
baz=289
SIT Sitka 70.50 35 IAmb IAmb 17 15 43.3
comp=Z,8.4nm,1.0s
SIT Sitka 70.50 35 P P 17 15 42.6 +2.2
baz=289
R32K Eaglecrest 70.52 34 P P 17 15 42.6 +2.1
baz=289
MMPY Sheldon Lake, 70.59 29 IAmb IAmb 17 15 44.4
comp=Z,17nm,1.5s
MMPY Sheldon Lake, 70.59 29 P P 17 15 43.2 +2.3
baz=290,SNR=8.6
P33M Teslin, Yukon 70.70 32 IAmb IAmb 17 15 44.9
comp=Z,11nm,1.2s
P33M Teslin, Yukon 70.70 32 P P 17 15 43.7 +1.9
baz=290,SNR=12
OBN Obninsk 70.70 323 *de*P **P 17 15 42.1 +0.4**
OBN *e* 17 16 02.7
OBN *e* 17 18 19.8
OBN *e*PPP PPP 17 20 01.2
OBN pmax pmax
comp=Z,23nm,1.4s
OBN MLR MLR
comp=Z,152nm,15.0s
OBN Obninsk 70.70 323 P P 17 15 41.4 -0.3
comp=Z,17nm,1.2s
S32K Killisnoo 70.75 35 P P 17 15 43.7 +1.8
baz=289
C36M Paulatuk 70.79 21 P P 17 15 43.4 +1.5
baz=294
Q32M Nakina River 71.39 33 P P 17 15 47.7 +1.6
baz=290
U33K Whale Pass 71.96 36 P P 17 15 50.8 +1.6
baz=291
CRAG Craig 72.19 36 P P 17 15 52.8 +2.1
baz=291
WRAK Wrangell Islan 72.26 35 P P 17 15 52.5 +1.4
baz=291
S34M Telegraph Cree 72.33 34 P P 17 15 53.6 +2.2
baz=292,SNR=5.0
VSLR Vesyoloye 72.42 310‖ *eP* **P 17 15 54.6 +2.3**
VSLR pmax pmax
comp=Z,23nm,1.0s
WTLY Watson Lake, Y 72.61 31 P P 17 15 55.1 +1.9
baz=293
DLBC Dease Lake 72.67 33 P P 17 15 55.7 +2.1
baz=292,SNR=6.1
V35K Ketchikan 73.04 36 P P 17 15 57.3 +1.5
baz=292
T35M Bob Quinn 73.12 34 P P 17 15 58.1 +1.9
baz=293
KOPT Kop Dagi 73.29 307 pP 17 16 01.2 -1.6
DIB Dawson Inlet, 73.37 39 IAmb IAmb 17 16 00.2
comp=Z,9.5nm,0.8s
FINES FINESS Array B 73.50 331 P P 17 15 59.1 +0.8
comp=Z,8.5nm,0.7s,baz=72,slow=6.2,SNR=20
FINES LR LR 17 51 22.2
comp=Z,110nm,20.1s,baz=56,slow=38
comp=Z,8.5nm,0.7s
FINES FINESS Array B 73.50 331 P P 17 15 58.5 +0.2
WRGLY Wrigley 73.63 27 IAmb IAmb 17 16 02.0
comp=Z,13nm,1.1s
WRGLY Wrigley 73.63 27 P P 17 16 00.7 +1.6
baz=296
VSU Vasula 74.47 328 *d iP* **P 17 16 04.2 +0.2**
VSU pmax pmax
comp=Z,25nm,0.9s
RES Resolute Bay 74.93 11 LR LR 17 52 11.7
comp=Z,56nm,19.2s,baz=29,slow=38
RAYN Ar Rayn 75.42 289 P P 17 16 10.1 -0.2
RAYN pmax pmax
comp=Z,8.0nm,1.1s
RAYN Ar Rayn 75.42 289 P 17 16 10.1 -0.2
MNK Minsk 75.59 324 *i P* **P 17 16 12.4 +1.7**
comp=E,15nm,0.8s
MNK *i* P **P 17 16 12.4 +1.7**
comp=N,19nm,1.0s
MNK *i* P **P 17 16 12.4 +1.7**
comp=Z,15nm,0.9s,baz=64
MNK *i* PP **PP 17 18 59.4 -0.2**
MNK *i* PPP PPP 17 20 46.7
MNK *i* S **S 17 25 54.7 +4.2**
MNK *i* SS **SS 17 30 47.4 +6.6**
MNK *i* SSS SSS 17 34 10.0
MNK *i* LQ LQ 17 44 21.6
MNK *i* LR LR 17 50 17.3
MNK *i* LRM MLR 17 53 18.3
comp=E,163nm,18.3s
MNK Minsk 75.59 324 *i P* **P 17 16 12.3 +1.7**
MNK *i* 17 18 59.4
MNK *i* PPP PPP 17 20 46.7
MNK *i* S **S 17 25 54.6 +4.2**
MNK *i* SS **SS 17 30 47.4 +6.6**
MNK pmax pmax
comp=Z,15nm,0.9s
MNK pmax pmax
comp=N,19nm,1.0s
MNK pmax pmax
comp=E,15nm,0.8s
MNK MLR MLR
comp=E,163nm,18.0s
MNK MLR MLR
comp=N,219nm,17.0s
MNK MLR MLR
comp=Z,211nm,16.0s
NEEM North Greenlan 76.28 0 *i* P **P 17 16 15.4 +0.8**
AK03 Malin Array Si 76.47 320 P **P 17 16 15.2 -0.5**
AKASG Malin Array Be 76.48 320 P **P 17 16 16.4 +0.6**
comp=Z,3.6nm,0.6s,baz=54,slow=6.3,SNR=18
AKASG LR LR 17 52 25.7
comp=Z,230nm,18.6s,baz=66,slow=38
comp=Z,3.6nm,0.6s
AKASG Malin Array Be 76.48 320 P **P 17 16 15.8 +0.1**
AKBB Malin Array Si 76.48 320 *de*P **P 17 16 16.2 +0.5**
AKBB pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 76.48 320 P 17 16 14.7 -1.0
AKBB Malin Array Si 76.48 320 P **P 17 16 15.7 0.0**
AK09 Malin Array Si 76.48 320 P **P 17 16 15.1 -0.6**
AK01 Malin Array Si 76.49 320 P **P 17 16 15.1 -0.7**
KIEV Kiev 76.49 320 P **P 17 16 15.8 0.0**
comp=Z,40nm,0.9s
AK04 Malin Array Si 76.50 320 P P 17 16 15.3 -0.6
AK10 Malin Array Si 76.51 320 P P 17 16 16.4 +0.5
AK12 Malin Array Si 76.54 320 P P 17 16 15.8 -0.3
AK21 Malin Array Si 76.55 320 P P 17 16 16.0 -0.1
AK07 Malin Array Si 76.56 320 P P 17 16 16.4 +0.2
BAL3X Bal3x, Balta 77.44 317 P P 17 16 21.2 0.0
YKAW3 Yellowknife Wh 77.47 25 IAmb IAmb 17 16 23.7
comp=Z,12nm,1.2s
YKA Yellowknife Ar 77.51 25 P P 17 16 22.8 +1.5
comp=Z,3.5nm,0.7s,baz=302,slow=5.5,SNR=14
comp=Z,3.5nm,0.7s
YKA Yellowknife Ar 77.51 25 P P 17 16 21.8 +0.5
LUBAR Lubar, Ukraine 77.67 320 P P 17 16 21.6 -0.8
RNPP9 Sopachiv 78.05 322 P P 17 16 25.3 +0.8
SORM Soroca 78.11 318 P P 17 16 24.8 -0.1
comp=Z,9.8nm,1.1s
BR131 Keskin Array S 78.27 309 *c iP* **P 17 16 27.7 +1.5**
BRTR Keskin Array B 78.27 309 P P 17 16 27.6 +1.5
comp=Z,7.7nm,0.9s,baz=101,slow=3.9,SNR=25
comp=Z,3.7nm,0.9s
BRTR Keskin Array B 78.27 309 P P 17 16 26.0 -0.2
BR106 Keskin Array S 78.29 309 P P 17 16 26.6 +0.3
comp=Z,42nmcomp=Z,5.5nm,1.3s
ASF Jabal al Asfar 78.99 300 LR LR 17 56 39.9
comp=Z,52nm,18.2s,baz=205,slow=40
KMPD K-Podol'skiy 79.04 319 P P 17 16 29.4 -0.6
HFS Hagfors 79.40 333 P P 17 16 29.9 -1.9
comp=Z,3.1nm,0.8s,baz=94,slow=7.9,SNR=5.1
HFS LR LR 17 56 23.1
comp=Z,162nm,18.1s,baz=40,slow=39
NC405 NORSAR Array S 79.61 334 IAmb IAmb 17 16 34.4
comp=Z,20nm,1.1s
MMAI Mount Meron Ar 79.78 302 LR LR 17 56 25.5
comp=Z,30nm,18.9s,baz=36,slow=39
NB2 NORSAR Subarra 79.85 334 P P 17 16 34.3 0.0
comp=Z,0.8nm,0.6s,baz=49,slow=5.6
NOA NORSAR Array B 79.85 334 P P 17 16 34.4 0.0
comp=Z,3.1nm,0.9s,baz=53,slow=5.1,SNR=9.7
NOA LR LR 17 54 07.9
comp=Z,72nm,20.6s,baz=50,slow=37
comp=Z,3.1nm,0.9s
VRI Vrincioaia 80.13 316 P P 17 16 35.7 -0.4
comp=Z,14nm,1.4s
BURAR Bucovina Array 80.22 318 P P 17 16 36.6 0.0
BURAR pmax pmax
comp=Z,3.0nm,1.0s
BURAR Bucovina Array 80.22 318 P P 17 16 36.6 0.0
YLV Yalova 80.85 311 P P 17 16 39.7 -0.4
comp=Z,9.2nm,1.1s
NLWA Neilton Lookou 80.86 41 P P 17 16 40.9 +1.0
NLWA IAmb IAmb 17 16 43.9
comp=Z,22nm,1.4s
SUMG Summit 80.88 357 P P 17 16 40.5 +0.5
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 80.88 357 P 17 16 40.5 +0.5
SUMG IAmb IAmb 17 16 42.6
comp=Z,9.4nm,0.9s
SUMG Summit 80.88 357 *i* P **P 17 16 42.1 +2.1**
BUCK Buck Mountain 82.97 44 pP 17 16 55.0 -1.3
I03D Drain, OR 83.00 45 IAmb IAmb 17 16 55.9
comp=Z,14nm,1.0s
RDO Rodhopi 83.15 313 IAmb IAmb 17 16 54.3
comp=Z,12nm,1.4s
VYHS Vyhne 83.45 321 *eP* **P 17 16 55.5 +2.0**
VYHS Vyhne 83.45 321 *eP* **P 17 16 55.5 +2.0**
MORC Moravsky Berou 83.46 323 *eP* **P 17 16 55.4 +1.8**
I04A Tendick Farm, 83.54 44 P 17 16 55.5 +1.4
I04A IAmb IAmb 17 16 58.0
comp=Z,8.8nm,0.9s
WIFE Three Sisters- 83.77 44 IAmb IAmb 17 16 58.5
comp=Z,8.7nm,0.8s
DPC Dobruska-Polom 83.79 324 P **P 17 16 56.1 +0.8**
comp=Z,3.5nm,2.2s
HAWA Hanford 83.92 41 P 17 16 57.3 +1.4
HAWA IAmb IAmb 17 16 59.4
comp=Z,16nm,1.2s
E08A Dider Farm, El 84.14 41 IAmb IAmb 17 17 00.4
comp=Z,10nm,0.7s
VRAC Vranov 84.23 323 LR LR 17 58 23.8
comp=Z,135nm,18.0s,baz=58,slow=38
VRAC Vranov 84.23 323 *eP* **P 17 16 59.3 +1.8**
NEW Newport 84.28 38 IAmb IAmb 17 17 00.9
comp=Z,10nm,0.9s
MODS Modra-Piesok 84.39 322 *eP* **P 17 17 00.5 +2.2**
KRUC Moravsky 84.48 323 *eP* **P 17 17 00.2 +1.4**
MORH Mrgy, Hungar 84.81 320 P **P 17 17 00.5 +0.1**
comp=Z,4.5nm,1.3s
G08A Pilot Rock 84.85 41 IAmb IAmb 17 17 04.4
comp=Z,8.7nm,1.2s
LNOR Lincton Mounta 84.93 41 IAmb IAmb 17 17 04.8
comp=Z,7.2nm,1.0s
CLL Collm 84.94 326 P **P 17 17 02.0 +1.0**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 84.94 326 *eP* **P 17 17 02.0 +1.0**
comp=Z,6.0nm,0.9s
K05A Summer Lake 85.04 44 IAmb IAmb 17 17 05.8
comp=Z,11nm,1.1s
LDM Libby Dam 85.16 37 IAmb IAmb 17 17 05.8
comp=Z,13nm,1.2s
RONA Rosalia, Austr 85.31 322 *ep*P pP 17 17 06.4 -1.6
comp=Z,1.3nm,0.5s
CONA Conrad Observa 85.42 322 *ep*P pP 17 17 06.1 -2.4
comp=Z,8.3nm,1.1s
F10A Beach Ranch, E 85.49 40 IAmb IAmb 17 17 20.7
comp=Z,5.3nm,0.6s
O03E Paynes Creek 85.72 47 IAmb IAmb 17 17 07.9
comp=Z,8.7nm,1.1s
ARSA Arzberg 86.00 322 *i* PcP **P 17 17 07.4 +1.0**
comp=Z,4.3nm,1.0s
GERES GERESS Array B 86.05 324 P **P 17 17 07.9 +1.2**
comp=Z,1.0nm,0.7s,baz=18,slow=1.7,SNR=7.4
BMO Blue Mountains 86.07 41 IAmb IAmb 17 17 10.2
comp=Z,15nm,1.3s
ORV Oroville 86.31 47 IAmb IAmb 17 17 10.6
comp=Z,9.6nm,1.1s
MOA Molln 86.34 323 *i* pP pP 17 17 10.2 -2.9
comp=Z,2.8nm,0.7s
WVOR Wild Horse Val 86.60 44 IAmb IAmb 17 17 13.2
comp=Z,12nm,1.2s
SOKA Soboth 86.60 321 *i* pP **P 17 17 11.3 +1.8**
comp=Z,7.4nm,1.7s
BIOA Bad Ischl, Aus 86.77 323 *ep*P pP 17 17 12.5 -2.6
comp=Z,2.1nm,0.8s
MSO Missoula 86.86 38 IAmb IAmb 17 17 13.7
comp=Z,8.1nm,0.9s
BEKR Beckworth 86.89 47 P P 17 17 11.6 +0.4
BEKR IAmb IAmb 17 17 14.0
comp=Z,10nm,0.9s
OBKA Obir 86.97 321 *ep*P **P 17 17 13.1 +1.7**
comp=Z,2.7nm,0.8s
MYKA Terra Mystica 87.41 322 *ep*P pP 17 17 16.9 -1.4
comp=Z,1.2nm,0.4s
LESA Schwarzleotal 87.45 323 *i* PcP **PcP 17 17 14.8 -0.8**
comp=Z,4.2nm,1.1s
FFC Flin Flon 87.53 27 P P 17 17 14.7 +1.0
FFC pmax pmax
comp=Z,20nm,1.0s
FFC Flin Flon 87.53 27 P P 17 17 14.7 +1.0
PAHR Pah Rah Range 87.61 46 IAmb IAmb 17 17 17.7
comp=Z,12nm,1.2s
MFID Camas Ranch 87.76 42 P 17 17 16.2 +0.9
CMB Columbia Colle 87.85 48 IAmb IAmb 17 17 18.6
comp=Z,6.2nm,0.9s
ABTA Abfaltersbach 87.96 322 *i* PcP **P 17 17 16.3 +0.3**
comp=Z,3.7nm,1.0s
MOTA Moosalm 88.35 324 *i* pP pP 17 17 22.1 -0.8
comp=Z,3.4nm,0.7s
SQTA Sankt Quirin 88.37 323 *ep*P **P 17 17 19.6 +1.6**
comp=Z,2.8nm,1.0s
RETA Reutte 88.44 324 *i* pP **P 17 17 19.9 +1.6**
comp=Z,3.8nm,1.2s
HLID Hailey 88.52 41 IAmb IAmb 17 17 22.9
comp=Z,9.2nm,0.9s
BMN Battle Mountai 88.59 45 IAmb IAmb 17 17 23.2
comp=Z,14nm,1.4s
FETA Feichten 88.75 323 *i* pP pP 17 17 24.8 -0.1
comp=Z,5.3nm,1.2s
FRB Frobisher Bay 88.84 8 LR LR 17 59 30.0
comp=Z,81nm,19.5s,baz=40,slow=37
BOZ Bozeman (W) 88.89 38 IAmb IAmb 17 17 23.9
comp=Z,9.5nm,1.0s
NVAR Mina Array Bea 89.01 47 P **P 17 17 23.1 +1.7**
comp=Z,1.8nm,0.7s,baz=289,slow=5.3,SNR=11
comp=Z,1.8nm,0.7s
NVAR Mina Array Bea 89.01 47 P **P 17 17 22.0 +0.6**
DAVA Damuels 89.03 324 *e*PcP **P 17 17 21.7 +0.5**
comp=Z,7.6nm,1.0s
FUORN Ofenpass-Fuorn 89.25 323 IAmb IAmb 17 17 37.6
comp=Z,10nm,1.2s
EKA Eskdalemuir Ar 89.28 335 P **P 17 17 23.0 +1.1**
comp=Z,0.2nm,0.4s,baz=25,slow=4.6,SNR=3.6
EKA LR LR 18 02 44.4
comp=Z,104nm,18.6s,baz=184,slow=39
comp=Z,0.2nm,0.4s
DAVOX Davos/Dischmat 89.35 324 LR LR 18 01 03.8
comp=Z,149nm,19.2s,baz=81,slow=38
RLMT Red Lodge 90.48 38 IAmb IAmb 17 17 31.8
comp=Z,9.7nm,0.8s
BGU Big Grassy Mou 90.91 43 IAmb IAmb 17 17 33.4
comp=Z,5.2nm,1.0s
AHID Auburn Hatcher 90.93 40 IAmb IAmb 17 17 33.8
comp=Z,8.1nm,1.0s
CEL Celeste 90.97 314 P **P 17 17 30.5 +0.2**
GWY Greenwater Val 91.34 48 IAmb IAmb 17 17 36.5
comp=Z,9.0nm,1.4s
DUG Dugway, Tooele 91.47 43 IAmb IAmb 17 17 36.6
comp=Z,10nm,1.1s
PRN Pahroc Range 91.71 46 IAmb IAmb 17 17 37.7
comp=Z,6.7nm,1.1s
BW06 Boulder Array 91.81 40 IAmb IAmb 17 17 37.3
comp=Z,7.3nm,0.9s
PD31 Pinedale Array 91.82 40 IAmb IAmb 17 17 37.3
comp=Z,7.4nm,0.9s
PDAR Pinedale Array 91.82 40 P **P 17 17 36.0 +1.7**
comp=Z,5.3nm,0.9s,baz=325,slow=1.8,SNR=38
comp=Z,5.3nm,0.9s
PDAR Pinedale Array 91.82 40 P **P 17 17 35.7 +1.3**
PSUT Pine Spring 91.82 45 IAmb IAmb 17 17 37.8
comp=Z,5.8nm,0.9s
NLU North Lily Min 92.07 43 IAmb IAmb 17 17 39.4
comp=Z,11nm,1.1s
MTPC Mountain Pass 92.49 48 IAmb IAmb 17 17 41.1
comp=Z,9.7nm,1.3s
BSUT Blindsteam Ca 92.51 42 IAmb IAmb 17 17 41.9
comp=Z,4.7nm,1.0s
PFO Pinyon Flats O 92.94 50 LR LR 17 55 19.0
comp=Z,58nm,18.6s,baz=33,slow=33
MTPU Mount Pierson 93.16 44 IAmb IAmb 17 17 45.0
comp=Z,7.5nm,0.9s
Q16A Castle Valley 93.26 43 IAmb IAmb 17 17 45.1
comp=Z,7.3nm,1.0s
SRU San Rafael Swe 93.54 43 IAmb IAmb 17 17 45.1
comp=Z,4.7nm,0.7s
BC3 Big Chuckawall 93.60 50 IAmb IAmb 17 17 46.2
comp=Z,10nm,1.0s
W13A Hualapai Mount 93.82 48 IAmb IAmb 17 17 47.2
comp=Z,8.7nm,1.0s
U15A North Rim 94.07 46 IAmb IAmb 17 17 49.9
comp=Z,8.1nm,1.1s
PV21 Cone Mtn., Par 94.82 43 IAmb IAmb 17 17 52.9
comp=Z,6.0nm,1.0s
Y14A Wickenburg 95.09 48 IAmb IAmb 17 17 53.0
comp=Z,7.7nm,1.0s
SCHQ Schefferville 97.67 10 LR LR 18 05 54.3
comp=Z,72nm,19.2s,baz=72,slow=38
TXAR Lajitas Array 104.16 47 Pdiff **Pdif 17 18 31.8 +1.7**
comp=Z,0.4nm,0.7s,baz=336,slow=2.7,SNR=3.8
R40A Maddies Statio 104.24 33 Pdif 17 18 27.6 -2.6
SYO Syowa Base 114.69 203‖ *eP* **Pdif 17 19 13.0 -2.7**
TORD Torodi Ar. Bea 116.33 302 PKP **PKPdf 17 23 10.1 -0.2**
comp=Z,0.8nm,0.7s,baz=42,slow=2.7,SNR=3.8
ABD La Joyeuse, An 135.78 16 PKPdf 17 23 43.7 -3.6

MEX 31 17:04:35.6±0.5, 18°.34N×100°.11W, h52km±6km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.23**	**256**	*eP*			Pn	17 04 42.8	-1.6
ARIG				*eS*			Sn	17 04 49.3	-1.5
PLIG	**Platanillo**	**0.58**	**84**	*eP*			Pn	17 04 46.2	-1.8
PLIG				*eS*			Sn	17 04 55.1	-2.0
MEIG	**Mezcala**	**0.62**	**131**	*eP*			Pn	17 04 46.7	-1.9
MEIG				*eS*			Sn	17 04 55.9	-2.1
YAIG	**Yautepec**	**1.12**	**62**	*eP*			Pn	17 04 53.5	-1.6
YAIG				*eS*			Sn	17 05 07.7	-1.9
CAIG	**El Cayaco**	**1.29**	**187**	*i P*			Pn	17 04 54.3	-3.0
CAIG				*eS*			Sn	17 05 11.3	-2.2
DAIG	**Los Arroyos**	**1.38**	**161**	*eP*			Pn	17 04 56.7	-1.8
DAIG				*eS*			Sn	17 05 13.2	-2.6
ZIIG	**Zihuatanejo**	**1.48**	**241**	*eP*			Pn	17 04 58.0	-1.8
ZIIG				*i S*			Sn	17 05 11.1	-7.0
TLIG	**Tlapa**	**1.66**	**117**	*eP*			Pn	17 05 01.5	-1.0
TLIG				*i S*			Sn	17 05 21.1	-1.6
MGIG	**Malinaltepec**	**1.79**	**128**	*eP*			Pn	17 05 03.0	-1.2
CRIG	**Cruz Grande**	**1.85**	**149**	*eP*			Pn	17 05 03.1	-1.8
CRIG				*eS*			Sn	17 05 25.1	-1.9
FTIG	**Fresnillo de T**	**1.93**	**102**	*eP*			Pn	17 05 25.3	-0.8
FTIG				*eS*			Sn	17 05 26.4	-3.0
FTIG	**Fresnillo de T**	**1.93**	**102**	*eP*			Pn	17 05 05.3	-0.8
FTIG				*i S*			Sn	17 05 11.4	-18
HLIG	**Huajuapan de L**	**2.25**	**103**	*eP*			Pn	17 05 09.9	-0.8
HLIG				*eS*			Sn	17 05 34.6	-2.8
HLIG	**Huajuapan de L**	**2.25**	**103**	*eP*			Pn	17 05 10.0	-0.6
HLIG				*eS*			Sn	17 05 17.0	-20
TXIG	**Tlaxiaco**	**2.48**	**115**	*eP*			Pn	17 05 13.2	-0.7
TXIG				*eS*			Sn	17 05 40.8	-2.2
TXIG	**Tlaxiaco**	**2.48**	**115**	*eP*			Pn	17 05 13.5	-0.3
YOIG	**Yosondua**	**2.86**	**121**	*eP*			Pn	17 05 18.6	-0.4
YOIG				*eS*			Sn	17 05 48.4	-3.9
YOIG	**Yosondua**	**2.86**	**121**	*eP*			Pn	17 05 19.0	+0.1
TOIG	**Toxpalan**	**2.91**	**94**	*eP*			Pn	17 05 19.1	-0.4
TOIG				*i S*			Sn	17 05 55.0	+1.7

*MOS **31** 17:05:59.2±0.8, 7°.51S×156°.84E, h405km, mb5.5/53, Error ellipse: s-maj=8.1km s-min=5.5km az=113.6*
*BJI **31** 17:06:00.2, 7°.17S×156°.79E, h397km, mB5.2/21, mb5.4/81*
*NEIC **31** 17:06:00.7±1.7, 7°.50S±0°.07×156°.81E±0°.07, h403km±4km, mb5.3/488, Mww5.2/11, Error ellipse: s-maj=11.4km s-min=8.5km az=218.0*
*IDC **31** 17:06:01.3±0.4, 7°.60S×156°.78E, h412km±3km, mb4.9/31, mbtmp5.7/34, Error ellipse: s-maj=9.9km s-min=6.3km az=98.0*
*GFZ **31** 17:06:01.8±0.4, 7°.S±.3°×15°.7E±°, h423km±5km, M5.1/41, mb5.5/41*
*GFZ **31** 17:06:01.7, 7°.55S×156°.79E, h414km, Mw5.3/40, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-6.39; $M_{\theta\theta}$5.55; $M_{\phi\phi}$0.83; $M_{r\theta}$-6.08; $M_{\theta\phi}$2.37; $M_{\phi r}$-4.56; Fault plane solution: $M_0$9.97685×10^{16} NP1:ϕ_s56.62429°, δ70.04350°, λ-97.58569°. NP2:ϕ_s257.93950°, δ21.29450°, λ-70.02128°. Principal axes: T 9.9339, Plg24.6762°, Azm152.5204°; N 0.0853, Plg7.1277°, Azm59.2268°; P -10.0192, Plg64.1804°, Azm314.2487°;*
*GCMT **31** 17:06:02.7±0.3, 7°.60S±0°.03×156°.64E±0°.03, h414km±1km, MW5.3/108, Moment Tensor Solution. s108,c164; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.65±.03; $M_{\theta\theta}$0.47±.04; $M_{\phi\phi}$0.17±.04; $M_{r\theta}$-0.85±.04; $M_{\theta\phi}$0.27±.04; $M_{\phi r}$-0.38±.04; Best double couple: $M_0$1.13500×10^{17} NP1:ϕ_s235.00000°, δ17.00000°,*

λ-100.00000°. NP2:φ65.00000°,δ73.00000°, λ-87.00000°. Principal axes: T 1.1250, Plg28.0000°, Azm152.0000°; N 0.0200, Plg3.0000°, Azm244.0000°; P -1.1450, Plg62.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function

DJA ***31*** *17:06:02.6±0.4,8°S±2°×15°7E±°,h424km±4km,M5.1/188, mb5.4/188,mB5.6/101,MLv4.6/1,Mw(mB)5.1/101*

ISC 31 17:06:00.6±0.2,**7.51S**±0.03×**156.81E**±0.03,**h411**km±2km, **h412km:pP-P,n1493,**σ**1$27/1463,mb5.3**/392,**56C-76D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TATA	**Tatamba Isabel**	**3.09**	**107**	P		**P**	**17 07 05.3**	**0.0**
TATA	**Tatamba Isabel**	**3.09**	**107**	S		**S**	**17 07 57.5**	**-0.3**
HNR	**Honiara**	**3.64**	**122**	P		**P**	**17 07 10.0**	**0.0**
HNR	**Honiara**	**3.64**	**122**	S		**S**	**17 08 04.7**	**-1.7**
HNR	**Honiara**	**3.64**	**122**	P		**P**	**17 07 09.7**	**-0.3**
	240nm,0.7s,baz=21,slow=1.4,SNR=475							
HNR				S		**S**	**17 08 03.8**	**-2.6**
	242nm,0.9s,baz=278,slow=23,SNR=6.6							
HNR	**Honiara**	**3.64**	**122**			**P**	**17 07 09.6**	**-0.3**
HNR				Sn		**S**	**17 08 03.2**	**-3.2**
HNR	**Honiara**	**3.64**	**122**	P		**P**	**17 07 09.8**	**-0.1**
NGOA	**Tingoa Renbel**	**5.14**	**142**	P		**P**	**17 07 25.3**	**+0.9**
RABL	**Rabaul**	**5.68**	**305**			**P**	**17 07 29.7**	**-0.3**
RABL				Sn		**S**	**17 08 39.9**	**-3.3**
BULU	**Kimbe**	**6.74**	**287**	P		**P**	**17 07 43.3**	**+1.2**
PMG	**Port Moresby**	**9.73**	**258**	P		**P**	**17 08 17.7**	**+2.7**
PMG	**Port Moresby**	**9.73**	**258**	P		**P**	**17 08 17.1**	**+2.0**
	15nm,0.3s,baz=13,slow=1.6,SNR=23							
PMG				S		**S**	**17 10 02.7**	**-3.3**
	88nm,0.9s,baz=55,slow=19,SNR=3.4							
PMG	**Port Moresby**	**9.73**	**258**	*c*	*i*	**P**	**17 08 17.6**	**+2.6**
PMG	**Port Moresby**	**9.73**	**258**			**P**	**17 08 15.8**	**+0.7**
PMG				S		**S**	**17 10 03.1**	**-2.8**
PMG	**Port Moresby**	**9.73**	**258**	P		**P**	**17 08 19.3**	**+4.3**
	143nm,0.7s							
PMG	**Port Moresby**	**9.73**	**258**	P		**P**	**17 08 18.0**	**+2.9**
MANU	**Manus Island**	**10.86**	**300**	P		**P**	**17 08 30.0**	**+2.4**
MANU				S		**S**	**17 10 29.1**	**+0.1**
PATS	**Pohnpei**	**14.33**	**6**	P		**P**	**17 09 07.2**	**+1.7**
PATS	**Pohnpei**	**14.33**	**6**	P		**P**	**17 09 07.2**	**+1.7**
	comp=Z,862nm,1.1s							
PATS	**Pohnpei**	**14.33**	**6**			**P**	**17 09 06.5**	**+1.0**
PATS	**Pohnpei**	**14.33**	**6**	P		**P**	**17 09 07.4**	**+1.8**
COEN	**Coen**	**14.85**	**243**	P		**P**	**17 09 13.9**	**+2.8**
COEN	**Coen**	**14.85**	**243**	S		**S**	**17 11 50.6**	**+1.8**
COEN	**Coen**	**14.85**	**243**	P		**P**	**17 09 14.2**	**+3.0**
	comp=Z,149nm,0.7s							
COEN	**Coen**	**14.85**	**243**			**P**	**17 09 13.4**	**+2.2**
COEN	**Coen**	**14.85**	**243**	P		**P**	**17 09 14.5**	**+3.3**
KOUNC	**Koumac, New Ca**	**14.85**	**152**	P		**P**	**17 09 11.2**	**+0.1**
KOUNC	**Koumac, New Ca**	**14.85**	**152**			**P**	**17 09 11.2**	**+0.1**
DVP	**Devils Point**	**15.03**	**134**	P		**P**	**17 09 13.4**	**+0.3**
DVP	**Devils Point**	**15.03**	**134**	S		**S**	**17 11 52.2**	**-0.2**
MTSU	**Mount Surprise**	**16.11**	**228**	P		**P**	**17 09 27.3**	**+2.6**
MTSU	**Mount Surprise**	**16.11**	**228**	P		**P**	**17 09 27.5**	**+2.8**
	comp=Z,157nm,0.7s							
MTSU	**Mount Surprise**	**16.11**	**228**	P		**P**	**17 09 27.6**	**+2.9**
CTA	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 26.8**	**+1.6**
CTA	**Charters Tower**	**16.16**	**218**	S		**S**	**17 12 16.8**	**+2.3**
CTA	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 26.6**	**+1.4**
	comp=Z,392nm,0.5s,baz=36,slow=10,SNR=994							
CTA				S		**S**	**17 12 15.8**	**+1.3**
	comp=Z,54nm,1.0s,baz=21,slow=20,SNR=10.0							
CTA	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 27.1**	**+1.9**
	comp=Z,260nm,0.6s							
CTAO	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 26.8**	**+1.6**
CTAO	**Charters Tower**	**16.16**	**218**	S		**S**	**17 12 16.8**	**+2.3**
CTAO	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 26.8**	**+1.6**
CTAO	**Charters Tower**	**16.16**	**218**			**P**	**17 09 26.8**	**+1.6**
CTAO	**Charters Tower**	**16.16**	**218**	P		**P**	**17 09 27.2**	**+1.9**
JAY	**Jayapura**	**16.79**	**286**	P		**P**	**17 09 31.5**	**-0.5**
	comp=Z,217nm,0.6s,baz=137,slow=4.5,SNR=371							
JAY				S		**S**	**17 12 23.4**	**-3.6**
	comp=Z,22nm,0.9s,baz=316,slow=18,SNR=9.5							
JAY	**Jayapura**	**16.79**	**286**	P		**P**	**17 09 31.4**	**-0.7**
	comp=Z,2μmcomp=Z,278nm,0.9s							
RK1H	**Rockhampton Ha**	**16.91**	**200**	P		**P**	**17 09 34.4**	**+1.2**
GD1S	**Gladstone Soft**	**17.12**	**198**	P		**P**	**17 09 36.5**	**+1.2**
NOUC	**Port Laguerre**	**17.15**	**149**	P		**P**	**17 09 35.3**	**-0.4**
NOUC	**Port Laguerre**	**17.15**	**149**	S		**S**	**17 12 35.9**	**+2.1**
DZM	**Mont Dzumac**	**17.20**	**148**	P		**P**	**17 09 36.8**	**+0.4**
	comp=Z,304nm,0.5s,baz=253,slow=8.0,SNR=577							
DZM				ScP		**ScP**	**17 16 52.7**	**+0.5**
	comp=Z,60nm,1.0s,baz=153,slow=2.3,SNR=12							
GENI	**Genyem**	**17.28**	**286**	P		**P**	**17 09 36.4**	**-0.8**
	comp=Z,177nm,0.6s							
GENI	**Genyem**	**17.28**	**286**	P		**P**	**17 09 36.7**	**-0.5**
ONTNC	**Ouen Toro**	**17.40**	**149**	P		**P**	**17 09 37.9**	**-0.5**
ONTNC	**Ouen Toro**	**17.40**	**149**			**P**	**17 09 37.5**	**-0.9**
YATNC	**Mamie plateau,**	**17.43**	**147**	P		**P**	**17 09 38.5**	**-0.2**
MARNC	**Mare, Loyalty**	**17.61**	**143**	P		**P**	**17 09 40.5**	**-0.2**
MARNC	**Mare, Loyalty**	**17.61**	**143**			**P**	**17 09 39.8**	**-0.9**
OUENC	**Ouen Island, N**	**17.69**	**148**	P		**P**	**17 09 41.1**	**-0.4**
OUENC	**Ouen Island, N**	**17.69**	**148**			**P**	**17 09 41.1**	**-0.4**
EIDS	**Eidsvold**	**18.58**	**196**	P		**P**	**17 09 50.8**	**0.0**
EIDS	**Eidsvold**	**18.58**	**196**	S		**S**	**17 13 03.2**	**+3.1**
EIDS	**Eidsvold**	**18.58**	**196**	P		**P**	**17 09 51.2**	**+0.4**
	comp=Z,684nm,0.9s							
EIDS	**Eidsvold**	**18.58**	**196**	P		**P**	**17 09 50.7**	**0.0**
EIDS	**Eidsvold**	**18.58**	**196**	P		**P**	**17 09 51.3**	**+0.5**
RMQ	**Roma**	**20.37**	**201**	P		**P**	**17 10 09.0**	**+1.3**
RMQ	**Roma**	**20.37**	**201**	P		**P**	**17 10 09.1**	**+1.3**
	comp=Z,93nm,0.8s							
RMQ	**Roma**	**20.37**	**201**	P		**P**	**17 10 09.8**	**+2.1**
TW1H	**Toowoomba 1 Ha**	**20.45**	**192**	P		**P**	**17 10 08.9**	**+0.4**
QIS	**Mount Isa**	**21.11**	**230**	P		**P**	**17 10 15.4**	**+0.8**
QIS	**Mount Isa**	**21.11**	**230**	S		**S**	**17 13 42.7**	**+1.2**
QIS	**Mount Isa**	**21.11**	**230**	P		**P**	**17 10 15.2**	**+0.7**
	comp=Z,157nm,0.6s							
QIS	**Mount Isa**	**21.11**	**230**	P		**P**	**17 10 15.4**	**+0.8**
BAKI	**Biak**	**21.57**	**286**	P		**P**	**17 10 21.5**	**+2.7**
FUNA	**Funafuti**	**22.19**	**94**	P		**P**	**17 10 24.7**	**+0.3**
FUNA	**Funafuti**	**22.19**	**94**	P		**P**	**17 10 25.1**	**+0.7**
QLP	**Quilpie**	**22.42**	**211**	P		**P**	**17 10 26.6**	**+0.2**
QLP	**Quilpie**	**22.42**	**211**	S		**S**	**17 14 03.3**	**+1.0**
QLP	**Quilpie**	**22.42**	**211**	P		**P**	**17 10 26.8**	**+0.4**
	comp=Z,580nm,0.6s							
QLP	**Quilpie**	**22.42**	**211**	P		**P**	**17 10 26.9**	**+0.4**
MSVF	**Nonsavu**	**23.06**	**118**	P		**P**	**17 10 32.9**	**+0.6**
MSVF	**Nonsavu**	**23.06**	**118**	S		**S**	**17 14 13.0**	**+0.4**
MSVF	**Nonsavu**	**23.06**	**118**	*de*	P	**P**	**17 10 32.2**	**-0.1**
MSVF				pmax		pmax		
	comp=Z,80nm,0.9s							
MSVF	**Nonsavu**	**23.06**	**118**	P		**P**	**17 10 32.5**	**+0.2**
MSVF				IAmb		IAmb	17 10 35.9	
	comp=Z,58nm,0.8s							
MSVF	**Nonsavu**	**23.06**	**118**	P		**P**	**17 10 33.0**	**+0.6**
ARMA	**Armidale**	**23.30**	**191**	P		**P**	**17 10 34.8**	**+0.4**
ARMA	**Armidale**	**23.30**	**191**	P		**P**	**17 10 35.3**	**+0.9**
	comp=Z,405nm,0.7s							
ARMA	**Armidale**	**23.30**	**191**	P		**P**	**17 10 34.9**	**+0.4**
ARMA	**Armidale**	**23.30**	**191**	P		**P**	**17 10 35.5**	**+1.1**
LHI	**Lord Howe Isla**	**23.98**	**175**	P		**P**	**17 10 39.8**	**-0.5**
	comp=Z,82nm,0.9s							
LHI	**Lord Howe Isla**	**23.98**	**175**	P		**P**	**17 10 40.5**	**+0.2**
LHI				IAmb		IAmb	17 10 41.8	
	comp=Z,63nm,0.8s							
GUMO	**Guam**	**24.08**	**330**	P		**P**	**17 10 42.0**	**+0.6**
GUMO	**Guam**	**24.08**	**330**	P		**P**	**17 10 42.1**	**+0.6**
	comp=Z,522nm,0.8s,baz=163,slow=1.0,SNR=29							
	comp=Z,522nm,0.8s							
GUMO	**Guam**	**24.08**	**330**	P		**P**	**17 10 41.6**	**+0.2**
GUMO	**Guam**	**24.08**	**330**	P		**P**	**17 10 42.1**	**+0.7**
KDU	**Kakadu**	**24.50**	**256**	P		**P**	**17 10 45.3**	**+0.1**
	comp=Z,63nm,0.7s							
FAKI	**Fak Fak**	**24.88**	**279**	P		**P**	**17 10 48.3**	**-0.3**
FAKI	**Fak Fak**	**24.88**	**279**	P		**P**	**17 10 48.5**	**-0.1**
FAKI				IAmb		IAmb	17 10 53.4	
	comp=Z,84nm,1.1s							
WR0	**Warramunga Arr**	**24.88**	**238**	P		**P**	**17 10 48.9**	**+0.3**
WR8	**Warramunga Arr**	**24.91**	**238**	P		**P**	**17 10 49.1**	**+0.2**
WR8				IAmb		IAmb	17 10 50.3	
	comp=Z,96nm,0.7s							
WB0	**Warramunga Arr**	**24.92**	**238**	P		**P**	**17 10 49.1**	**+0.2**
WB0				IAmb		IAmb	17 10 50.3	
	comp=Z,65nm,0.5s							
WB9	**Warramunga Arr**	**24.94**	**238**	P		**P**	**17 10 49.4**	**+0.3**
WRAB	**Tennant Creek**	**25.03**	**238**	P		**P**	**17 10 49.9**	**0.0**
WRAB	**Tennant Creek**	**25.03**	**238**	*d*	*i*P	**P**	**17 10 50.1**	**+0.2**
WRAB				pmax		pmax		
	comp=Z,83nm,0.7s							
WRAB	**Tennant Creek**	**25.03**	**238**	P		**P**	**17 10 50.4**	**+0.4**
WRAB				IAmb		IAmb	17 10 51.3	
	comp=Z,72nm,0.7s							
WRAB	**Tennant Creek**	**25.03**	**238**	P		**P**	**17 10 50.3**	**+0.4**
WB2	**Warramunga Arr**	**25.03**	**238**	P		**P**	**17 10 50.3**	**+0.4**
WR1	**Warramunga Arr**	**25.04**	**238**	P		**P**	**17 10 50.4**	**+0.4**
WRA	**Warramunga Arr**	**25.04**	**238**	P		**P**	**17 10 50.2**	**+0.2**
	comp=Z,90nm,0.4s,baz=63,slow=8.8,SNR=562							
WRA				PcP		**PcP**	**17 14 12.9**	**+0.8**
	comp=Z,21nm,0.7s,baz=66,slow=2.1,SNR=11							
WRA				S		**S**	**17 14 40.7**	**-3.2**
	comp=Z,41nm,0.6s,baz=64,slow=15,SNR=16							
WRA				ScP		**ScP**	**17 17 13.2**	**+1.7**
	comp=Z,11nm,1.1s,baz=66,slow=2.8,SNR=5.3							
WRA				ScS		**ScS**	**17 21 00.9**	**0.0**
	comp=Z,4.5nm,0.8s,baz=69,slow=5.8,SNR=7.6							
	comp=Z,90nm,0.4s							
WRA	**Warramunga Arr**	**25.04**	**238**	P		**P**	**17 10 50.1**	**+0.1**
WRA	**Warramunga Arr**	**25.04**	**238**	P		**P**	**17 10 50.1**	**+0.1**
WRA						**PcP**	**17 14 12.5**	**+0.5**
DPSS	**Saipan**	**25.11**	**334**	P		**P**	**17 10 50.4**	**-0.2**
INKA	**Innaminka**	**25.23**	**215**	P		**P**	**17 10 51.7**	**+0.2**
FUTU	**Fugatoga**	**25.51**	**107**	P		**P**	**17 10 54.6**	**+0.4**
FUTU				IAmb		IAmb	17 10 56.4	
	comp=Z,151nm,1.1s							
MTN	**Manton Dam**	**25.81**	**256**	P		**P**	**17 10 57.4**	**+0.4**
	comp=Z,112nm,0.9s							
MTN	**Manton Dam**	**25.81**	**256**	P		**P**	**17 10 57.1**	**+0.2**
MTN				IAmb		IAmb	17 10 58.7	
	comp=Z,70nm,0.7s							
DRS	**Darwin Rock St**	**25.97**	**257**	P		**P**	**17 10 58.9**	**+0.6**
CMSA	**Cobar Meteorol**	**26.06**	**202**	P		**P**	**17 10 58.8**	**-0.1**
CMSA	**Cobar Meteorol**	**26.06**	**202**	P		**P**	**17 10 59.1**	**+0.2**
	comp=Z,191nm,0.6s							
CMSA	**Cobar Meteorol**	**26.06**	**202**	P		**P**	**17 10 59.2**	**+0.3**
MGCD	**Mangrove Creek**	**26.11**	**191**	P		**P**	**17 11 00.4**	**+1.1**
MGCD	**Mangrove Creek**	**26.11**	**191**	P		**P**	**17 11 00.4**	**+1.1**
	comp=Z,310nm,0.8s							
MGCD	**Mangrove Creek**	**26.11**	**191**	P		**P**	**17 11 00.6**	**+1.2**
SIJI	**Sorong**	**26.30**	**283**	P		**P**	**17 11 01.7**	**+0.4**
	comp=Z,120nm,0.7s							
SWI	**Sorong**	**26.31**	**283**	P		**P**	**17 11 01.9**	**+0.6**
	comp=Z,1μcomp=Z,161nm,0.7s							
SYDH	**Sydney Hard Ro**	**26.72**	**191**	P		**P**	**17 11 05.4**	**+0.7**
AS17	**Alice Springs**	**27.15**	**231**	P		**P**	**17 11 08.5**	**-0.2**
	comp=Z,49nm,0.8s							
AS01	**Alice Springs**	**27.18**	**231**	P		**P**	**17 11 08.6**	**-0.4**
AS15	**Alice Springs**	**27.20**	**231**	P		**P**	**17 11 08.9**	**-0.2**
	comp=Z,61nm,0.5s							
AS09	**Alice Springs**	**27.21**	**231**	P		**P**	**17 11 09.1**	**-0.2**
	comp=Z,55nm,0.6s							
AS31	**Alice Springs**	**27.22**	**231**	P		**P**	**17 11 09.1**	**-0.2**
	comp=Z,18nm,0.4s							
ASAR	**Alice Springs**	**27.22**	**231**	P		**P**	**17 11 08.9**	**-0.4**
	comp=Z,21nm,0.4s,baz=61,slow=9.2,SNR=899							
ASAR				pP		**pP**	**17 12 22.6**	**+1.0**
	comp=Z,11nm,0.8s,baz=58,slow=9.3,SNR=2.0							
ASAR				PcP		**PcP**	**17 14 18.1**	**+1.0**
	comp=Z,7.2nm,0.5s,baz=60,slow=3.4,SNR=4.6							
ASAR				S		**S**	**17 15 14.7**	**-3.4**
	comp=Z,33nm,1.0s,baz=56,slow=14,SNR=11							
ASAR				ScP		**ScP**	**17 17 19.1**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=51,slow=3.0,SNR=3.4							
ASAR				ScS		**ScS**	**17 21 04.5**	**-5.9**
	comp=Z,2.3nm,1.1s,baz=52,slow=4.8,SNR=4.5							
ASAR				P3KPbc			17 43 32.1	
	comp=Z,1.4nm,0.8s,baz=238,slow=4.2,SNR=9.1							
	comp=Z,21nm,0.4s							
ASAR	**Alice Springs**	**27.22**	**231**	P		**P**	**17 11 08.4**	**-0.9**
ASAR						**PcP**	**17 14 17.7**	**+0.6**
WOLH	**Wollongong Har**	**27.32**	**191**	P		**P**	**17 11 10.9**	**+0.9**
STKA	**Stephens Creek**	**28.09**	**208**	P		**P**	**17 11 16.9**	**+0.1**
STKA	**Stephens Creek**	**28.09**	**208**	P		**P**	**17 11 16.7**	**-0.1**
	comp=Z,19nm,0.4s,baz=48,slow=11,SNR=60							
STKA				PcP		**PcP**	**17 14 19.7**	**+0.6**
	comp=Z,12nm,0.7s,baz=36,slow=4.2,SNR=3.3							
STKA				S		**S**	**17 15 30.1**	**-1.2**
	comp=Z,7.3nm,0.8s,baz=298,slow=22,SNR=1.5							
STKA				ScP		**ScP**	**17 17 22.2**	**+1.7**
	comp=Z,22nm,0.9s,baz=45,slow=2.2,SNR=9.8							
	comp=Z,19nm,0.4s							
STKA	**Stephens Creek**	**28.09**	**208**	P		**P**	**17 11 16.8**	**-0.1**
	comp=Z,234nm,1.0s							
STKA	**Stephens Creek**	**28.09**	**208**	*c*	*i*P	**P**	**17 11 16.5**	**-0.3**
STKA	**Stephens Creek**	**28.09**	**208**	P		**P**	**17 11 16.9**	**+0.1**
WAKE	**Wake Island**	**28.34**	**20**	P		**P**	**17 11 18.4**	**-0.7**
WAKE				IAmb		IAmb	17 12 11.5	
	comp=Z,286nm,1.3s							
CNB	**Canberra Magne**	**28.51**	**193**	P		**P**	**17 11 21.6**	**+1.1**
	comp=Z,5.1nm,0.8s							
CAN	**Canberra**	**28.59**	**193**	P		**P**	**17 11 22.1**	**+0.8**
CAN	**Canberra**	**28.59**	**193**	P		**P**	**17 11 22.2**	**+1.0**
	comp=Z,134nm,1.1s							
CAN	**Canberra**	**28.59**	**193**	P		**P**	**17 11 21.8**	**+0.5**
CAN				pmax		pmax		
	comp=Z,87nm,0.8s							
CAN	**Canberra**	**28.59**	**193**	P		**P**	**17 11 21.8**	**+0.5**
CAN				IAmb		IAmb	17 11 23.2	
	comp=Z,87nm,0.8s							
CAN	**Canberra**	**28.59**	**193**	P		**P**	**17 11 22.4**	**+1.0**
KNRA	**Kununurra**	**28.62**	**251**	P		**P**	**17 11 21.9**	**+0.2**
	comp=Z,95nm,0.8s							
KNRA	**Kununurra**	**28.62**	**251**	P		**P**	**17 11 21.6**	**-0.1**
KNRA				IAmb		IAmb	17 11 22.7	
	comp=Z,67nm,0.7s							
NLAI	**Namlea**	**29.88**	**277**	P		**P**	**17 11 34.3**	**+1.6**
	comp=Z,2μcomp=Z,107nm,0.9s							
MILA	**Mila**	**30.22**	**192**	P		**P**	**17 11 36.9**	**+1.4**
	comp=Z,41nm,1.0s							
TNTI	**Ternate**	**30.50**	**284**	P		**P**	**17 11 38.2**	**+0.1**
TNTI	**Ternate**	**30.50**	**284**	P		**P**	**17 11 40.8**	**+2.6**
	comp=Z,63nm,0.9s							
TNTI	**Ternate**	**30.50**	**284**	P		**P**	**17 11 39.4**	**+1.3**
HTT	**Hallett**	**30.65**	**210**	P		**P**	**17 11 39.3**	**0.0**
HTT	**Hallett**	**30.65**	**210**	P		**P**	**17 11 39.5**	**+0.2**
	comp=Z,22nm,1.0s							
HTT	**Hallett**	**30.65**	**210**	P		**P**	**17 11 39.4**	**+0.1**
SANI	**Sanana**	**31.18**	**278**	P		**P**	**17 11 45.4**	**+1.3**
	comp=Z,2μcomp=Z,189nm,1.0s							
SANI	**Sanana**	**31.18**	**278**	P		**P**	**17 11 44.7**	**+0.6**
AFI	**Afiamalu**	**31.49**	**104**	P		**P**	**17 11 46.5**	**-0.3**
AFI				pmax		pmax		
	comp=Z,239nm,1.0s							
AFI	**Afiamalu**	**31.49**	**104**	P		**P**	**17 11 46.5**	**-0.3**
OUZ	**Omahuta**	**31.59**	**153**	P		**P**	**17 11 48.8**	**+1.5**
OUZ	**Omahuta**	**31.59**	**153**	P		**P**	**17 11 49.0**	**+1.6**
TOO	**Toolangi**	**31.64**	**197**	P		**P**	**17 11 48.8**	**+1.0**
	comp=Z,31nm,1.1s							
BBOO	**Buckleboo**	**31.70**	**215**	P		**P**	**17 11 47.9**	**-0.4**
BBOO	**Buckleboo**	**31.70**	**215**	P		**P**	**17 11 48.3**	**+0.1**
	comp=Z,105nm,1.0s							
BBOO	**Buckleboo**	**31.70**	**215**	IAmb		IAmb	17 11 49.1	
	comp=Z,102nm,1.1s							
BBOO	**Buckleboo**	**31.70**	**215**	P		**P**	**17 11 48.4**	**+0.1**
BRAT	**Ballarat**	**32.11**	**199**	P		**P**	**17 11 53.1**	**+1.4**
FITZ	**Fitzroy Crossi**	**32.11**	**248**	P		**P**	**17 11 51.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**32.11**	**248**	P		**P**	**17 11 51.1**	**-1.0**
	comp=Z,26nm,0.6s							
FITZ	**Fitzroy Crossi**	**32.11**	**248**	P		**P**	**17 11 50.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**32.11**	**248**	P		**P**	**17 11 51.3**	**-0.7**
RAO	**Raoul Island**	**32.15**	**135**	P		**P**	**17 11 51.6**	**-0.6**
RAO				pmax		pmax		
	comp=Z,787nm,0.9s							
RAO	**Raoul Island**	**32.15**	**135**	P		**P**	**17 11 51.6**	**-0.6**
RAO	**Raoul Island**	**32.15**	**135**	P		**P**	**17 11 53.0**	**+0.7**
ARPS	**Mount Arapiles**	**32.16**	**203**	P		**P**	**17 11 53.0**	**+0.8**
	comp=Z,198nm,1.0s							
SOEI	**Soe**	**32.24**	**264**	P		**P**	**17 11 54.0**	**+0.6**
SOEI	**Soe**	**32.24**	**264**	P		**P**	**17 11 52.5**	**-0.9**
SOEI				IAmb		IAmb	17 12 09.2	
	comp=Z,80nm,0.7s							
SOEI	**Soe**	**32.24**	**264**	P		**P**	**17 11 54.2**	**+0.8**
	comp=Z,111nm,0.9s							
SOEI	**Soe**	**32.24**	**264**	P		**P**	**17 11 54.2**	**+0.8**
WRKA	**Warakurna**	**32.33**	**234**	P		**P**	**17 11 52.1**	**-1.8**
	comp=Z,57nm,1.2s							
WCZ	**Waipu Caves**	**32.53**	**153**	P		**P**	**17 11 57.2**	**+1.8**
BATI	**Baumata**	**32.85**	**263**	P		**P**	**17 11 56.0**	**-2.5**
	comp=Z,2μcomp=Z,218nm,0.8s							
MNI	**Manado**	**33.11**	**284**	P		**P**	**17 12 00.8**	**+0.1**
	comp=Z,3μcomp=Z,216nm,0.5s							
SGSI	**Sangihe**	**33.14**	**289**	P		**P**	**17 12 01.9**	**+1.0**
MGBR	**Mount Gambier**	**33.49**	**204**	P		**P**	**17 12 04.5**	**+0.9**
BBSI	**Bau Bau**	**34.07**	**271**	P		**P**	17 12 13.9	+5.0
KDI	**Kendari**	**34.19**	**274**	P		**P**	**17 12 10.3**	**+0.4**
	comp=Z,76nm,0.8s							
MMRI	**Maumere**	**34.24**	**266**	P		**P**	**17 12 10.2**	**-0.1**
MMRI	**Maumere**	**34.24**	**266**	P		**P**	**17 12 09.6**	**-0.7**
MMRI	**Maumere**	**34.24**	**266**	P		**P**	**17 12 10.1**	**-0.2**
MMRI	**Maumere**	**34.24**	**266**	P		**P**	**17 12 10.2**	**-0.1**
GLAD	**Gladstone**	**34.24**	**192**	P		**P**	**17 12 11.2**	**+1.3**
NIUE	**Niue**	**34.28**	**113**	P		**P**	**17 12 11.8**	**+1.3**
NIUE	**Niue**	**34.28**	**113**	P		**P**	**17 12 11.0**	**+0.5**
NIUE	**Niue**	**34.28**	**113**	P		**P**	**17 12 11.9**	**+1.4**
LUWI	**Luwuk**	**34.53**	**279**	P		**P**	**17 12 13.7**	**+1.0**
LUWI	**Luwuk**	**34.53**	**279**	P		**P**	**17 12 12.7**	**-0.1**
LUWI				pP		**pP**	**17 13 25.4**	**-1.9**
LUWI	**Luwuk**	**34.53**	**279**	P		**P**	**17 12 13.5**	**+0.8**
	comp=Z,4μcomp=Z,439nm,1.0s							
LUWI	**Luwuk**	**34.53**	**279**	P		**P**	**17 12 13.8**	**+1.1**
TOZ	**Tahuroa Road**	**34.53**	**153**	P		**P**	**17 12 13.7**	**+1.3**
TOZ				IAmb		IAmb	17 12 15.0	
	comp=Z,228nm,0.9s							
TOZ	**Tahuroa Road**	**34.53**	**153**	P		**P**	**17 12 14.0**	**+1.6**
TGRZ	**Tauranga**	**34.87**	**152**	P		**P**	**17 12 16.8**	**+1.5**
CORO	**Coronation Par**	**34.88**	**193**	P		**P**	**17 12 17.1**	**+1.9**
HIZ	**Hauiti**	**34.90**	**155**	P		**P**	**17 12 17.3**	**+1.7**
HIZ	**Hauiti**	**34.90**	**155**	P		**P**	**17 12 16.6**	**+1.0**
HIZ	**Hauiti**	**34.90**	**155**	P		**P**	**17 12 17.6**	**+2.0**
HIZ	**Hauiti**	**34.90**	**155**	P		**P**	**17 12 17.7**	**+2.2**
TLZ	**Tolley Road**	**35.04**	**154**	P		**P**	**17 12 18.6**	**+1.8**
KARZ	**Kaharoa**	**35.10**	**153**	P		**P**	**17 12 18.9**	**+1.6**
KKSI	**Kolaka, Sulawe**	**35.12**	**273**	P		**P**	**17 12 18.7**	**+0.9**
	comp=Z,4μcomp=Z,415nm,1.1s							
NGRZ	**Ngongotaha**	**35.14**	**153**	P		**P**	**17 12 19.7**	**+2.0**
NBEZ	**Newall Road No**	**35.15**	**157**	P		**P**	**17 12 20.0**	**+2.4**
LIRZ	**Lichensteins R**	**35.15**	**153**	P		**P**	**17 12 19.6**	**+1.9**
UTU	**Utuhina**	**35.21**	**153**	P		**P**	**17 12 19.9**	**+1.8**
DREZ	**Durham Road**	**35.21**	**156**	P		**P**	**17 12 20.7**	**+2.6**
OMRZ	**Omania**	**35.23**	**153**	P		**P**	**17 12 20.0**	**+1.6**
KUTZ	**Kaahu Road**	**35.30**	**154**	P		**P**	**17 12 20.7**	**+1.7**
GRRZ	**Galatos Road**	**35.31**	**153**	P		**P**	**17 12 21.0**	**+1.9**
HSRZ	**Hossack Road**	**35.34**	**153**	P		**P**	**17 12 21.6**	**+2.3**
VRZ

comp=Z,177nm,0.8s
JCJ Chichijima 37.21 338 P **P** **17 12 34.0 -1.0**
ANWZ Angora Road 37.22 155 P **P** **17 12 35.2 +0.4**
SNZO South Karori 37.23 158 P **P** **17 12 34.9 0.0**
SNZO South Karori 37.23 158 P **P** **17 12 34.7 -0.2**
SNZO IAmb IAmb 17 12 36.4
comp=Z,139nm,0.7s
SNZO South Karori 37.23 158 P **P** **17 12 35.4 +0.5**
TIWZ Tintock 37.24 156 P **P** **17 12 35.0 -0.1**
BFZ Birch Farm 37.31 155 P **P** **17 12 35.4 -0.2**
BFZ Birch Farm 37.31 155 IAmb IAmb 17 12 36.7
comp=Z,332nm,1.4s
BFZ Birch Farm 37.31 155 P **P** **17 12 35.6 0.0**
BFZ Birch Farm 37.31 155 P **P** **17 12 35.1 -0.6**
INZ Inchbonnie 37.37 162 P **P** **17 12 35.5 -0.6**
INZ IAmb IAmb 17 12 39.0
comp=Z,205nm,1.1s
INZ Inchbonnie 37.37 162 P **P** **17 12 36.6 +0.5**
PCI Palu 37.43 278 P **P** **17 12 38.7 +1.6**
comp=Z,3µmcomp=Z,253nm,1.1s
WVZ Waitaha Valley 37.48 163 P **P** **17 12 37.0 0.0**
MSWZ Moikau Station 37.53 157 P **P** **17 12 37.1 -0.4**
FOZ Fox Glacier 37.65 164 P **P** **17 12 38.0 -0.3**
FOZ IAmb IAmb 17 12 40.1
comp=Z,144nm,0.8s
FOZ Fox Glacier 37.65 164 P **P** **17 12 39.1 +0.8**
LTZ Lake Taylor 37.68 161 IAmb IAmb 17 12 41.0
comp=Z,165nm,0.8s
LTZ Lake Taylor 37.68 161 P **P** **17 12 39.5 +0.8**
KHZ Kahutara 37.77 160 P **P** **17 12 38.9 -0.5**
KHZ Kahutara 37.77 160 P **P** **17 12 39.0 -0.5**
KHZ Kahutara 37.77 160 P **P** **17 12 39.3 -0.1**
GVZ Greta Valley S 38.09 161 P **P** **17 12 42.2 +0.1**
OXZ Oxford 38.10 162 P **P** **17 12 41.5 -0.6**
OXZ Oxford 38.10 162 P **P** **17 12 42.1 0.0**
DBNI Kabupaten Domp 38.13 266 P **P** **17 12 41.8 -1.0**
comp=Z,123nm,0.6s
AMCZ Amberley 38.16 161 P **P** **17 12 42.0 -0.6**
RPZ Rata Peaks 38.16 163 P **P** **17 12 42.7 +0.1**
RPZ Rata Peaks 38.16 163 P **P** **17 12 43.3 +0.7**
MSZ Milford Sound 38.27 167 P **P** **17 12 45.3 +1.9**
MBWA Marble Bar 38.28 245 P **P** **17 12 43.0 -1.0**
MBWA Marble Bar 38.28 245 P **P** **17 12 43.3 -0.6**
comp=Z,173nm,1.0s
MBWA Marble Bar 38.28 245 P **P** **17 12 43.0 -1.0**
MBWA IAmb IAmb 17 12 44.2
comp=Z,106nm,0.6s
MBWA Marble Bar 38.28 245 P **P** **17 12 43.5 -0.5**
MBWA Marble Bar 38.28 245 P **P** **17 12 43.3 -0.6**
LBZ Lake Benmore 38.54 165 IAmb IAmb 17 12 47.7
comp=Z,126nm,0.8s
LBZ Lake Benmore 38.54 165 P **P** **17 12 45.6 -0.2**
MQZ McQueen's Vall 38.63 162 IAmb IAmb 17 12 48.6
comp=Z,113nm,0.8s
MQZ McQueen's Vall 38.63 162 P **P** **17 12 46.7 +0.3**
PLAI Plampang 38.65 265 P **P** **17 12 45.7 -1.4**
PLAI Plampang 38.65 265 P **P** **17 12 46.1 -1.0**
PLAI Plampang 38.65 265 P **P** **17 12 46.4 -0.7**
WKZ Wanaka 38.66 166 P **P** **17 12 47.1 +0.3**
WKZ IAmb IAmb 17 12 48.1
comp=Z,90nm,0.8s
WKZ Wanaka 38.66 166 P **P** **17 12 47.2 +0.5**
TMZ Timaru 38.76 164 P **P** **17 12 47.1 -0.4**
DCZ Deep Cove 38.86 168 IAmb IAmb 17 12 49.6
comp=Z,101nm,0.9s
DCZ Deep Cove 38.86 168 P **P** **17 12 48.8 +0.6**
MLZ Mavora Lakes 38.97 167 P **P** **17 12 49.7 +0.5**
EAZ Earnscleugh 39.11 166 P **P** **17 12 50.3 0.0**
ODZ Otahua Downs 39.27 164 P **P** **17 12 51.5 -0.2**
ODZ Otahua Downs 39.27 164 P **P** **17 12 51.8 +0.1**
WHZ Wether Hill Ro 39.43 168 IAmb IAmb 17 12 53.7
comp=Z,103nm,0.8s
WHZ Wether Hill Ro 39.43 168 P **P** **17 12 53.2 +0.3**
PYZ Puysegur Point 39.44 169 P **P** **17 12 53.6 +0.5**
PYZ Puysegur Point 39.44 169 P **P** **17 12 53.4 +0.4**
TWSI Taiwang, Sumb 39.53 265 P **P** **17 12 53.3 -1.0**
comp=Z,2µmcomp=Z,175nm,1.0s
TUZ Tuapeka 39.87 166 P **P** **17 12 56.9 +0.4**
HHSZ Highcliff Hill 40.04 165 P **P** **17 12 58.9 +1.0**
MYLDM Lahad Datu 40.25 287 P **P** **17 13 02.0 +1.9**
MYLDM Lahad Datu 40.25 287 P **P** **17 13 01.4 +1.3**
MYLDM IAmb IAmb 17 13 03.5
comp=Z,290nm,1.5s
MYLDM Lahad Datu 40.25 287 P **P** **17 13 02.3 +2.2**
comp=Z,1µmcomp=Z,84nm,0.8s
MYLDM Lahad Datu 40.25 287 P **P** **17 13 02.5 +2.4**
KMBL Kambalda 40.30 229 P **P** **17 13 00.7 +0.3**
comp=Z,58nm,0.7s
SYZ Scrubby Hill 40.30 167 P **P** **17 12 59.7 -0.3**
SYZ Scrubby Hill 40.30 167 P **P** **17 13 00.3 +0.3**
APZ The Paps 40.34 168 P **P** **17 12 59.9 -0.4**
KHKI Kahang-Kahang 40.80 266 P **P** **17 13 04.2 -0.4**
comp=Z,126nm,0.8s
MEEK Meekatharra 40.94 238 P **P** **17 13 05.5 -0.1**
MEEK Meekatharra 40.94 238 P **P** **17 13 05.9 +0.3**
comp=Z,187nm,0.8s
MEEK Meekatharra 40.94 238 P **P** **17 13 05.9 +0.3**
RTBI Rangdo, Negare 41.46 266 P **P** **17 13 09.2 -0.7**
comp=Z,205nm,0.8s
JAGI Jajag, Banyuwa 42.24 266 P **P** **17 13 14.4 -1.7**
JAGI Jajag, Banyuwa 42.24 266 P **P** **17 13 13.8 -2.2**
JAGI Jajag, Banyuwa 42.24 266 P **P** **17 13 14.2 -1.9**
JAGI Jajag, Banyuwa 42.24 266 P **P** **17 13 14.6 -1.5**
BLJI Banyuglugur 42.82 267 P **P** **17 13 19.9 -0.8**
comp=Z,154nm,0.6s
CTZ Chatham Island 42.92 152 P **P** **17 13 21.8 +0.8**
CTZ Chatham Island 42.92 152 P **P** **17 13 21.5 +0.5**
CTZ IAmb IAmb 17 13 22.9
comp=Z,78nm,0.9s
CTZ Chatham Island 42.92 152 P **P** **17 13 21.9 +0.8**
JHJ2 Mitsune 43.51 339 P **P** **17 13 25.9 +0.1**
JHJ2 Mitsune 43.51 339 P **P** **17 13 25.5 -0.2**
JHJ2 Mitsune 43.51 339 P **P** **17 13 27.1 +1.3**
JHJ Hachijo jima 2 43.53 339 P **P** **17 13 25.6 -0.3**
comp=Z,321nm,0.7s,baz=199,slow=11,SNR=14
comp=Z,321nm,0.7s
KLBR Kellerberrin 43.55 231 P **P** **17 13 25.8 -0.4**
KLBR Kellerberrin 43.55 231 P **P** **17 13 26.1 -0.1**
comp=Z,361nm,0.5s
KLBR Kellerberrin 43.55 231 P **P** **17 13 26.2 -0.1**
GIRL Giralia 43.59 245 P **P** **17 13 27.3 +0.7**
comp=Z,74nm,1.8s
MORW Morawa 43.93 235 P **P** **17 13 29.2 -0.1**
MORW Morawa 43.93 235 P **P** **17 13 29.4 +0.1**
comp=Z,77nm,1.2s
MORW Morawa 43.93 235 P **P** **17 13 28.9 -0.3**
MORW Morawa 43.93 235 P **P** **17 13 29.4 +0.1**
JOW Kunigami 43.94 322 IAmb IAmb 17 13 32.5
comp=Z,123nm,0.9s
JOW Kunigami 43.94 322 P **P** **17 13 28.6 -0.6**
BLDU Ballidu 43.98 233 P **P** **17 13 29.6 +0.1**
BLDU Ballidu 43.98 233 P **P** **17 13 29.8 +0.2**
comp=Z,40nm,2.0s
BLDU Ballidu 43.98 233 P **P** **17 13 29.7 +0.2**
RAR Rarotonga 44.05 113 P **P** **17 13 31.5 +1.2**
RAR Rarotonga 44.05 113 P **P** **17 13 30.5 +0.2**
RAR pmax pmax
comp=Z,84nm,1.0s
RAR Rarotonga 44.05 113 P **P** **17 13 30.5 +0.2**
RAR IAmb IAmb 17 13 31.8
comp=Z,84nm,0.9s
RAR Rarotonga 44.05 113 P **P** **17 13 31.4 +1.2**
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 33.5 -0.2**
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 33.6 -0.2**
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 34.2 +0.5**
comp=Z,222nm,0.8s
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 34.2 +0.5**
comp=Z,140nm,0.5s
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 33.5 -0.2**
NWAO pmax pmax
comp=Z,96nm,0.6s
NWAO Narrogin (SRO) 44.52 230 P **P** **17 13 33.5 -0.2**
NWAO IAmb IAmb 17 13 34.7
comp=Z,96nm,0.6s
SJI Sawahan 44.63 267 P **P** **17 13 34.7 -0.3**
comp=Z,263nm,0.7s
SNJI Sawahan-Nganju 44.63 267 P **P** **17 13 35.5 +0.4**
comp=Z,3µmcomp=Z,215nm,1.1s
MUN Mundaring 44.91 232 P **P** **17 13 36.7 -0.1**
MUN Mundaring 44.91 232 P **P** **17 13 37.3 +0.5**
comp=Z,57nm,0.8s
WOJI Wonogiri, Jawa 45.46 266 P **P** **17 13 42.4 +1.1**
comp=Z,141nm,1.1s
YOJ Yonaguni jima 45.78 315 P **P** **17 13 45.2 +1.6**
YOJ Yonaguni jima 45.78 315 P **P** **17 13 45.6 +2.0**
YOJ pmax pmax
comp=Z,477nm,0.8s
SMRI Semarang 45.98 267 P **P** **17 13 45.0 -0.4**
SMRI IAmb IAmb 17 13 46.7
comp=Z,118nm,0.8s
SMRI Semarang 45.98 267 P **P** **17 13 45.9 +0.5**
comp=Z,186nm,0.9s
SMRI Semarang 45.98 267 P **P** **17 13 42.9 -2.5**
YOGI Yogyakarta 46.08 266 P **P** **17 13 47.0 +0.9**
TWG Pinlang 46.17 312 P **P** **17 13 46.5 -0.2**
JSU Suzuyama 46.26 328 P **P** **17 13 48.4 +1.2**
JSU Suzuyama 46.26 328 P **P** **17 13 47.5 +0.3**
JSU IAmb IAmb 17 13 49.0
comp=Z,78nm,0.7s
JSU PcP **PcP** **17 15 15.7 +0.9**
YULB Yu-li 46.35 312 P **P** **17 13 48.5 +0.5**
YULB Yu-li 46.35 312 P **P** **17 13 48.3 +0.3**
YULB IAmb IAmb 17 13 50.9
comp=Z,184nm,0.8s
YULB Yu-li 46.35 312 P **P** **17 13 48.8 +0.8**
JMN Monobe 46.43 333 P **P** **17 13 50.0 +1.5**
JMN Monobe 46.43 333 IAmb IAmb 17 13 51.3
comp=Z,215nm,0.9s
NACB Ninganchiao 46.61 314 P **P** **17 13 51.1 +1.1**
NACB Ninganchiao 46.61 314 P **P** **17 13 51.6 +1.7**
JGF Kuroka 46.63 338 P **P** **17 13 50.8 +0.8**
TPUB Ta-pu 46.78 312 P **P** **17 13 51.7 +0.3**
TPUB Ta-pu 46.78 312 P **P** **17 13 51.4 0.0**
SSLB Suanglung 46.84 313 P **P** **17 13 52.7 +0.9**
SSLB Suanglung 46.84 313 IAmb IAmb 17 13 53.7
comp=Z,192nm,0.8s
YHNB Yeheng 47.07 314 P **P** **17 13 54.9 +1.3**
MJAR Matsushiro Arr 47.17 339 P **P** **17 13 54.1 0.0**
comp=Z,42nm,0.7s,baz=172,slow=8.6,SNR=215
MJAR PcP **PcP** **17 15 18.6 +0.6**
comp=Z,16nm,0.8s,baz=163,slow=4.5,SNR=7.2
comp=Z,42nm,0.7s
MJAR Matsushiro Arr 47.17 339 P **P** **17 13 53.5 -0.5**
MJAR **pP** **17 15 15.7 +0.9**
MAJO Matsushiro 47.17 339 P **P** **17 13 54.4 +0.3**
MAJO Matsushiro 47.17 339*d* iP **P** **17 13 54.3 +0.2**
MAJO pmax pmax
comp=Z,41nm,0.4s
MAJO Matsushiro 47.17 339 P **P** **17 13 54.1 +0.1**
MAJO IAmb IAmb 17 13 54.9
comp=Z,98nm,0.5s
MAJO pP **pP** **17 15 15.3 +0.5**
MAJO Matsushiro 47.17 339 P **P** **17 13 54.6 +0.5**
MAJO Matsushiro 47.17 339 P **P** **17 13 54.5 +0.5**
MAJO PcP **PcP** **17 15 19.1 +1.1**
MJB9 Matsu-Tunnel 47.17 339 IAmb IAmb 17 13 55.9
comp=Z,94nm,0.5s
TATO Taipei 47.18 314 P **P** **17 13 55.7 +1.4**
TATO Taipei 47.18 314 P **P** **17 13 54.2 -0.1**
TATO Taipei 47.18 314 P **P** **17 13 55.8 +1.4**
KPJI Karang Pucung 47.46 267 P **P** **17 13 57.0 +0.4**
comp=Z,218nm,0.7s
JCJI Jatiwangi 48.17 268 P **P** **17 14 02.3 +0.3**
BBJI Bungbulang 48.72 267 P **P** **17 14 04.8 -1.4**
BBJI Bungbulang 48.72 267 P **P** **17 14 04.3 -1.9**
BBJI Bungbulang 48.72 267 P **P** **17 14 05.1 -1.1**
comp=Z,53nm,0.6s
BBJI Bungbulang 48.72 267 P **P** **17 14 05.2 -1.1**
TPI Tanjungpandan 49.16 273 P **P** **17 14 10.2 +0.7**
comp=Z,84nm,1.1s
JTU Tsushima 49.19 330 P **P** **17 14 10.3 +1.0**
CBJI Citeko 49.58 268 P **P** **17 14 11.4 -1.2**
comp=Z,174nm,1.1s
DBJI Dramaga 49.67 268 P **P** **17 14 12.9 -0.4**
comp=Z,94nm,1.3s
SKJI Sukabumi 49.83 267 P **P** **17 14 14.1 -0.4**
comp=Z,3µmcomp=Z,369nm,0.9s
JTM Tenmabayashi 50.20 344 P **P** **17 14 17.4 +0.8**
JTM Tenmabayashi 50.20 344 P **P** **17 14 16.6 -0.1**
JTM IAmb IAmb 17 14 18.1
comp=Z,86nm,0.5s
JTM PcP **PcP** **17 15 27.4 -1.5**
CGJI Cibinong 50.72 268 P **P** **17 14 19.3 -1.7**
PPBI Pangkal Pinang 50.74 273 P **P** **17 14 22.5 +1.3**
ERM Erimo 50.84 347 P **P** **17 14 23.1 +1.7**
ERM Erimo 50.84 347*ce* P **P** **17 14 22.5 +1.1**
ERM pmax pmax
comp=Z,46nm,1.4s
ERM Erimo 50.84 347 P **P** **17 14 22.3 +0.9**
JEM Erimo 50.84 347 P **P** **17 14 23.1 +1.7**
HKPS Hong Kong Po S 51.22 306 P **P** **17 14 26.0 +1.5**
HKPS Hong Kong Po S 51.22 306 IAmb IAmb 17 14 27.7
comp=Z,153nm,0.8s
TJN Taejon 51.67 330 P **P** **17 14 28.8 +1.2**
TJN Taejon 51.67 330*d* iP **P** **17 14 28.7 +1.2**
TJN Taejon 51.67 330 P **P** **17 14 28.7 +1.1**
TJN PcP **PcP** **17 15 35.1 +0.6**
DLV Lat 51.79 292 P **P** **17 14 28.7 -0.4**
DLV IAmb IAmb 17 14 31.1
comp=Z,121nm,0.8s
KASI Kota Agung 51.99 269 P **P** **17 14 28.3 -2.0**
comp=Z,103nm,0.7s
KSRS Korea Array 52.25 331 P **P** **17 14 33.0 +1.3**
comp=Z,102nm,0.9s,baz=150,slow=7.9,SNR=350
KSRS PcP **PcP** **17 15 37.5 +0.8**
comp=Z,11nm,0.7s,baz=164,slow=3.2,SNR=11
comp=Z,102nm,0.9s
YUK Yuzh-Kuril'sk 52.25 350*d* iP **P** **17 14 32.6 +1.0**
KSAR Wonju Array Be 52.26 331 P **P** **17 14 32.5 +0.7**
KSAR 17 15 37.4
KSAR Wonju Array Be 52.26 331 P **P** **17 14 32.5 +0.7**
KSAR PcP **PcP** **17 15 37.4 +0.7**
KS19 Wonju Array Si 52.31 331 IAmb IAmb 17 14 34.2
comp=Z,127nm,0.9s
MDSI Maura Dua 52.41 270 P **P** **17 14 32.0 -1.3**
comp=Z,74nm,1.1s
DSRI Dabo 52.53 275 P **P** **17 14 34.4 +0.1**
comp=Z,999nmcomp=Z,87nm,1.0s
INCN Inchon 52.90 330 P **P** **17 14 37.6 +1.1**
INCN PCP **PcP** **17 15 38.5 -0.8**
INCN pmax pmax
comp=Z,285nm,1.0s
INCN Inchon 52.90 330 P **P** **17 14 37.6 +1.1**
INCN PcP **PcP** **17 15 38.5 -0.8**
INCN Inchon 52.90 330 P **P** **17 14 38.3 +1.8**
ASAJ Asahikawa 52.97 347 P **P** **17 14 39.3 +2.5**
comp=Z,26nm,0.5s,baz=212,slow=10,SNR=92
comp=Z,26nm,0.5s
KUR Kuril'sk 53.11 352*de* P **P** **17 14 39.0 +1.2**
LHSI Lahat 53.13 271 P **P** **17 14 37.5 -1.0**
comp=Z,55nm,0.9s
PPTF Pamatai, Papee 53.14 106 P **P** **17 14 38.6 0.0**
PPTF IAmb IAmb 17 14 57.8
comp=Z,432nm,1.8s
QIZ Qiongzhong 53.27 300 P **P** **17 14 41.2 +1.7**
QIZ Qiongzhong 53.27 300 pP **P** **17 14 41.5 +2.0**
NJ2 Nanjing 53.47 319 ⇓P **P** **17 14 42.3 +1.7**
NJ2 pmax pmax
comp=Z,310nm,0.8s
MNAI Manna 53.63 270 P **P** **17 14 40.8 -1.4**
MNAI Manna 53.63 270 P **P** **17 14 40.7 -1.5**
MYKOM Kota Tinggi 53.63 278 P **P** **17 14 41.6 -0.6**
MYKOM Kota Tinggi 53.63 278 P **P** **17 14 42.6 +0.4**
OVEH Oceanview Est 53.72 60 P **P** **17 14 43.8 +0.9**
OVEH IAmb IAmb 17 14 45.0
comp=Z,204nm,0.9s
SPT South Point 53.72 60 P **P** **17 14 43.3 +0.6**
KHLH Kahului Airpor 53.91 57 P **P** **17 14 45.2 +1.2**
KHLH IAmb IAmb 17 14 46.7
comp=Z,133nm,1.0s
WOH Wood Valley 53.98 60 P **P** **17 14 44.7 +0.1**
POHA Pohakuloa 54.17 59 P **P** **17 14 46.4 +0.2**
EGSI Enggano, Bengk 54.21 269 P **P** **17 14 45.9 -0.4**
comp=Z,266nm,0.9s
MASI Maura Aman, Be 54.48 271 P **P** **17 14 47.1 -1.2**
comp=Z,248nm,0.7s
VLA Vladivostok 55.25 338*c* iP **P** **17 14 54.9 +1.8**
VLA pmax pmax
comp=Z,124nm,1.4s
CNSH ChangSha 55.26 312 P **P** **17 14 55.5 +2.1**
CNSH S **S** **17 22 08.0 +3.1**
CNSH pmax pmax
comp=Z,110nm,0.9s
PSTR Posyet 55.26 337*d* iP **P** **17 14 54.8 +1.6**
WHN Wuhan 55.57 315 ⇓P **P** **17 14 56.8 +1.2**
WHN pmax pmax
comp=Z,250nm,0.8s
SDSI Sungai Dareh 55.58 274 P **P** **17 14 55.3 -0.7**
comp=Z,3µmcomp=Z,373nm,1.1s
YSS Yuzhno-Sakhali 55.65 348 P **P** **17 14 57.0 +1.3**
YSS Yuzhno-Sakhali 55.65 348*ce* P **P** **17 14 57.1 +1.3**
YSS *e* 17 15 51.0
YSS *e* 17 16 23.5
YSS pmax pmax
comp=Z,70nm,0.9s
YSS Yuzhno-Sakhali 55.65 348 P **P** **17 14 56.1 +0.4**
YSS Yuzhno-Sakhali 55.65 348 P **P** **17 14 57.0 +1.3**
USA0B Ussuriysk Arra 56.15 339 P **P** **17 14 59.8 +0.4**
USA0B 17 15 51.4
USA0B pmax pmax
comp=Z,116nm,1.1s
USA0B Ussuriysk Arra 56.15 339 P **P** **17 14 59.8 +0.4**
USA0B IAmb IAmb 17 15 02.1
comp=Z,115nm,1.1s
USA0B PcP **PcP** **17 15 51.4 -0.2**
USRK Ussuriysk Ar. 56.15 339 P **P** **17 15 00.8 +1.5**
comp=Z,62nm,0.8s,baz=156,slow=7.2,SNR=69
USRK PcP **PcP** **17 15 52.8 +1.2**
comp=Z,6.4nm,0.6s,baz=155,slow=4.4,SNR=2.4
comp=Z,62nm,0.8s
USRK Ussuriysk Ar. 56.15 339 P **P** **17 14 59.5 +0.2**
USRK PcP **PcP** **17 15 51.2 -0.4**
BKNI Bangkinang 56.15 275 P **P** **17 14 59.1 -0.9**
BKNI IAmb IAmb 17 15 00.9
comp=Z,134nm,0.7s
BKNI Bangkinang 56.15 275 P **P** **17 15 00.1 +0.1**
comp=Z,2µmcomp=Z,219nm,0.9s
PDSI Padang 56.53 274 P **P** **17 15 01.3 -1.4**
comp=Z,1µmcomp=Z,133nm,0.6s
DL2 Dalian 56.56 327 P **P** **17 15 03.5 +1.2**
DL2 PcP **PcP** **17 15 55.5 +2.2**
DL2 PcS **PcS** **17 19 55.3 +0.7**
DL2 pmax pmax
comp=Z,220nm,0.8s
PPI Padang Panjang 56.66 274 P **P** **17 15 02.7 -0.9**
comp=Z,2µmcomp=Z,161nm,1.0s
TIA Tai'an 57.27 322 P **P** **17 15 07.8 +0.5**
TIA PcP **PcP** **17 15 57.5 +1.3**
TIA ScP **ScP** **17 19 18.8 +2.9**
TIA pmax pmax
comp=Z,77nm,0.9s
MDJ Mudanjiang 57.40 337 IAmb IAmb 17 15 10.7
comp=Z,101nm,1.2s
MDJ Mudanjiang 57.40 337 P **P** **17 15 09.0 +1.0**
MDJ pmax pmax
comp=Z,70nm,1.2s
MDJ Mudanjiang 57.40 337 P **P** **17 15 09.3 +1.3**
KULM Kulim 57.46 281 P **P** **17 15 08.9 -0.1**
KULM Kulim 57.46 281 IAmb IAmb 17 15 09.8
comp=Z,77nm,0.7s
KULM Kulim 57.46 281 P **P** **17 15 08.7 -0.3**
comp=Z,119nm,0.9s
MNSI Mandailing Nat 57.67 276 P **P** **17 15 09.2 -1.3**
comp=Z,256nm,0.8s
SKR Severo-Kuril's 57.96 359⇓*e* P **P** **17 15 11.8 +0.1**
CN2 Changchun 58.43 334 P **P** **17 15 16.3 +1.2**
CN2 PcP **PcP** **17 16 01.5 +0.8**
CN2 pmax pmax
comp=Z,50nm,1.0s
RPSI Rantau Prapat 58.64 278 P **P** **17 15 15.1 -2.0**
RPSI PcP **PcP** **17 15 59.3 -2.9**
PSI Prapat 58.66 278 P **P** **17 15 15.1 -2.3**
PSI 17 15 59.3
PSI pmax pmax
comp=Z,26nm,0.8s
PSI Prapat 58.66 278 P **P** **17 15 15.9 -1.5**
ENH Enshi 58.91 312 P **P** **17 15 19.6 +0.8**
ENH Enshi 58.91 312 IAmb IAmb 17 15 20.5
comp=Z,141nm,1.0s
ENH Enshi 58.91 312 P **P** **17 15 19.5 +0.8**
ENH pP **pP** **17 16 44.4 -0.6**
BNX BinXian 59.19 336 ⇓P **P** **17 15 21.0 +0.8**
BNX PcP **PcP** **17 16 04.3 +0.7**
BNX PP **PP** **17 17 39.3 +2.4**
BNX S **S** **17 22 58.8 +3.8**
BNX sS **sS** **17 25 26.8 -1.2**
BNX pmax pmax
comp=Z,140nm,1.0s
GYA Guiyang 59.20 307 ⇓P **P** **17 15 22.3 +1.5**
GYA pmax pmax
comp=Z,91nm,0.9s
LYN LuoYang 59.20 318⇓*i* P **P** **17 15 21.3 +0.8**
LYN pmax pmax
comp=Z,92nm,1.2s
TYV Tymovskoe 59.41 350 *e*P **P** **17 15 22.4 +0.8**
TYV pmax pmax
comp=Z,60nm,0.9s
TYV pmax pmax
comp=Z,300nm,2.9s
HNS HongShan 59.51 322 ⇓P **P** **17 15 23.8 +1.2**
HNS pmax pmax
comp=Z,200nm,1.3s
GSI Gunungsitoli 59.73 276 P **P** **17 15 23.9 -0.6**
GSI Gunungsitoli 59.73 276 P **P** **17 15 23.6 -0.9**
comp=Z,279nm,0.9s
KCSI Kotacane, Aceh 59.92 278 P **P** **17 15 23.7 -2.1**
comp=Z,110nm,0.7s
DRV Dumont d'Urvil 60.18 188 P **P** **17 15 27.4 +0.9**
DRV pP **pP** **17 16 52.1 +0.6**
PET Petropavlovsk 60.32 1 P **P** **17 15 28.2 +0.6**
PET Petropavlovsk 60.32 1 *e*P **P** **17 15 26.7 -0.9**
PET *e**SP **sP** **17 17 36.7 -1.2**
PET *e*S **S** **17 23 11.2 +2.2**
PET pmax pmax
comp=Z,300nm,1.6s
PET pmax pmax
comp=Z,145nm,0.9s
PET pmax pmax
comp=Z,100nm,17.8s
PET Petropavlovsk 60.32 1 P **P** **17 15 28.0 +0.4**
PET IAmb IAmb 17 15 29.7
comp=Z,113nm,0.9s
PET Petropavlovsk 60.32 1 P **P** **17 15 28.5 +0.9**
comp=Z,1µmcomp=Z,128nm,1.3s
BJI2 Beijing 60.35 325 P **P** **17 15 28.8 +0.6**
BJI2 PcP **PcP** **17 16 07.5 -1.0**
BJI2 pP **pwP** **17 16 56.3 -1.2**
BJI2 sP **sP** **17 17 39.5 +1.5**
BJI2 pmax pmax
comp=Z,23nm,1.3s
PEA0B Petropavlovsk- 60.39 1*d* iP **P** **17 15 29.4 +1.3**
PETK Petropavlovsk- 60.39 1 P **P** **17 15 29.5 +1.3**
comp=Z,51nm,0.5s,baz=141,slow=6.2,SNR=401
comp=Z,51nm,0.5s
PETK Petropavlovsk- 60.39 1 P **P** **17 15 28.9 +0.7**
PETK PcP **PcP** **17 16 07.0 -1.4**
KLR Kul'dur 60.61 341*d* iP **P** **17 15 30.9 +1.2**
KLR pmax pmax
comp=Z,89nm,1.1s
GRNR Gornyy 60.67 345⇓*i* P **P** **17 15 31.6 +1.5**
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=Z,50nm,1.0s
LHMI Lhok Sumawe 61.05 280 P **P** **17 15 32.6 -0.7**
LHMI IAmb IAmb 17 15 34.0
comp=Z,109nm,1.0s
TIY Taiyuan 61.12 321 P **P** **17 15 34.5 +1.1**
TIY pmax pmax
comp=Z,69nm,0.9s
XAN Xi'an 61.33 315 ⇓P **P** **17 15 35.8 +0.9**
XAN pmax pmax
comp=Z,230nm,0.7s
XAN Xi'an 61.33 315 P **P** **17 15 35.6 +0.8**
XAN pP **pP** **17 17 00.9 -0.6**
MLSI Meulaboh, Aceh 61.40 279 P **P** **17 15 34.2 -1.4**
comp=Z,2µmcomp=Z,233nm,0.8s
AMKA Amchitka 61.77 16 P **P** **17 15 37.4 +0.1**
AMKA IAmb IAmb 17 15 38.8
comp=Z,91nm,0.8s
SHEM Shemya Is, Ala 61.79 12 P **P** **17 15 38.3 +1.0**
comp=Z,83nm,0.6s,baz=68,slow=2.4,SNR=24
comp=Z,83nm,0.6s
SMY Shemya 61.79 12 P **P** **17 15 37.7 +0.3**
SMY pmax pmax
comp=Z,148nm,1.0s
SMY Shemya 61.79 12 P **P** **17 15 37.7 +0.3**
SMY IAmb IAmb 17 15 39.4
comp=Z,148nm,1.0s
KMI2 Kunming 61.80 304 ⇓P **P** **17 15 40.5 +2.1**
KMI2 PcP **PcP** **17 16 17.0 +2.0**
KMI2 pmax pmax
comp=Z,110nm,1.0s

CM31	**Chiang Mai Arr**	**62.63**	**295**		IAmb	IAmb	17 15 46.5		
	comp=Z,137nm,1.1s								
CMAR	**Chiang Mai Arr**	**62.63**	**295**		P	**P**	**17 15 45.3**	**+1.6**	
	comp=Z,49nm,0.9s,baz=118,slow=5.0,SNR=202								
CMAR					PcP	**PcP**	**17 16 19.8**	**+1.4**	
	comp=Z,12nm,0.8s,baz=91,slow=3.4,SNR=7.2								
	comp=Z,49nm,0.9s								
CMAR	**Chiang Mai Arr**	**62.63**	**295**	*ce*	P	**P**	**17 15 45.2**	**+1.6**	
CMAR					pmax	pmax			
	comp=Z,52nm,0.8s								
CMAR	**Chiang Mai Arr**	**62.63**	**295**		P	**P**	**17 15 44.1**	**+0.5**	
CMAR					PcP	**PcP**	**17 16 19.7**	**+1.4**	
CHTO	**Chiang Mai**	**62.75**	**296**		P	**P**	**17 15 45.7**	**+1.3**	
CHTO	**Chiang Mai**	**62.75**	**296**		P	**P**	**17 15 44.6**	**+0.2**	
CHTO							17 16 19.4		
CHTO					pmax	pmax			
	comp=Z,118nm,1.2s								
CHTO	**Chiang Mai**	**62.75**	**296**		P	**P**	**17 15 44.6**	**+0.2**	
CHTO					IAmb	IAmb	17 15 46.8		
	comp=Z,118nm,1.1s								
CHTO					PcP	**PcP**	**17 16 19.4**	**+0.6**	
CHTO	**Chiang Mai**	**62.75**	**296**		P	**P**	**17 15 45.3**	**+0.9**	
	comp=Z,1µmcomp=Z,102nm,1.2s								
CHTO	**Chiang Mai**	**62.75**	**296**		P	**P**	**17 15 45.8**	**+1.5**	
CHTO					PcP	**PcP**	**17 16 20.3**	**+1.5**	
HEH	**HeiHe**	**62.94**	**339**	*eP*		**P**	**17 15 46.0**	**+1.0**	
HEH					pmax	pmax			
	comp=Z,160nm,0.9s								
XLT	**XiLinHaoTe**	**63.04**	**328**	*eP*		**P**	**17 15 47.0**	**+1.1**	
XLT					PcP	**PcP**	**17 16 20.0**	**+0.5**	
XLT					pmax	pmax			
	comp=Z,330nm,0.8s								
PZH	**PanZhiHua**	**63.18**	**305**		P	**P**	**17 15 48.0**	**+0.8**	
PZH					pmax	pmax			
	comp=Z,60nm,0.9s								
ADK	**Adak**	**63.38**	**18**		P	**P**	**17 15 48.6**	**+0.8**	
ADK	**Adak**	**63.38**	**18**		P	**P**	**17 15 47.6**	**-0.2**	
ADK					pmax	pmax			
	comp=Z,199nm,0.9s								
ADK	**Adak**	**63.38**	**18**		P	**P**	**17 15 47.6**	**-0.2**	
ADK	**Adak**	**63.38**	**18**		P	**P**	**17 15 48.8**	**+1.1**	
CD2	**Chengdu**	**63.52**	**310**	⇓P		**P**	**17 15 50.5**	**+1.3**	
CD2					pmax	pmax			
	comp=Z,250nm,0.7s								
CD2					pmax	pmax			
	comp=Z,900nm,3.7s								
HHC	**Hu-ho-hao-te**	**63.58**	**323**	*eP*		**P**	**17 15 51.0**	**+1.5**	
HHC					pmax	pmax			
	comp=Z,55nm,0.9s								
HHC					pmax	pmax			
	comp=Z,110nm,3.6s								
GSTR	**Great Sitkin T**	**63.76**	**18**		P	**P**	**17 15 50.7**	**+0.5**	
GSTR					IAmb	IAmb	17 15 53.3		
	comp=Z,124nm,1.1s								
ATKA	**Atka Island**	**64.44**	**19**		P	**P**	**17 15 54.8**	**+0.2**	
BTO2	**Baotou**	**64.53**	**322**	*eP*		**P**	**17 15 57.3**	**+1.7**	
BTO2					pP	**pwP**	**17 17 27.0**	**+2.0**	
BTO2					PP	**PP**	**17 18 18.5**	**-5.5**	
BTO2					S	**S**	**17 24 01.0**	**-0.8**	
BTO2					pmax	pmax			
	comp=Z,110nm,0.9s								
BTO2					pmax	pmax			
	comp=Z,270nm,5.3s								
BTO2					L	L			
	comp=Z,130nm,5.2s								
BTO2					L	L			
	comp=Z,200nm,8.3s								
BTO2					L	L			
	comp=Z,230nm,15.5s								
HIA	**Hailar**	**65.16**	**334**		IAmb	IAmb	17 16 01.7		
	comp=Z,63nm,0.9s								
HIA	**Hailar**	**65.16**	**334**		P	**P**	**17 16 00.7**	**+1.4**	
TNCH	**TengChong**	**65.28**	**302**		P	**P**	**17 16 02.0**	**+1.2**	
TNCH					pP	pP	17 17 27.8	-0.9	
TNCH					S	S	**17 24 10.0**	**-1.5**	
TNCH					SS	**SS**	**17 28 32.5**	**-1.4**	
TNCH					pmax	pmax			
	comp=Z,190nm,0.9s								
HILR	**Hailar Array B**	**65.37**	**334**		P	**P**	**17 16 02.0**	**+1.4**	
	comp=Z,26nm,0.7s,baz=135,slow=7.8,SNR=24								
	comp=Z,26nm,0.7s								
ZEA	**Zeya**	**65.93**	**341**	*eP*		**P**	**17 16 05.7**	**+1.7**	
ZEA					pmax	pmax			
	comp=E,20nm,0.8s								
ZEA					pmax	pmax			
	comp=N,50nm,0.9s								
ZEA					pmax	pmax			
	comp=Z,120nm,1.1s								
LZH	**Lanzhou**	**65.95**	**315**	*eP*		**P**	**17 16 06.0**	**+1.2**	
LZH					PcP	**PcP**	**17 16 34.0**	**+2.2**	
LZH					pP	pP	17 17 33.5	+0.6	
LZH					pmax	pmax			
	comp=Z,180nm,1.3s								
LZDM	**Lanzhou Array**	**65.99**	**315**		P	**P**	**17 16 07.2**	**+2.0**	
	comp=Z,51nm,0.6s,baz=140,slow=5.8,SNR=31								
	comp=Z,51nm,0.6s								
CASY	**Casey**	**66.67**	**199**		P	**P**	**17 16 08.0**	**-0.5**	
MA2	**Magadan**	**67.04**	**357**		P	**P**	**17 16 11.4**	**+0.6**	
MA2	**Magadan**	**67.04**	**357**		P	**P**	**17 16 11.5**	**+0.6**	
	comp=Z,69nm,0.8s,baz=159,slow=6.8,SNR=34								
	comp=Z,69nm,0.8s								
MA2	**Magadan**	**67.04**	**357**	*di*	P	**P**	**17 16 11.4**	**+0.6**	
MA2					pmax	pmax			
	comp=Z,131nm,1.0s								
MA2	**Magadan**	**67.04**	**357**		P	**P**	**17 16 10.7**	**-0.2**	
MA2	**Magadan**	**67.04**	**357**		P	**P**	**17 16 11.5**	**+0.6**	
	comp=Z,1µmcomp=Z,151nm,1.1s								
MA2	**Magadan**	**67.04**	**357**		P	**P**	**17 16 11.6**	**+0.7**	
UNV	**Unalaska Valle**	**68.50**	**22**		P	**P**	**17 16 20.0**	**+0.1**	
UNV	**Unalaska Valle**	**68.50**	**22**		IAmb	IAmb	17 16 21.1		
	comp=Z,54nm,0.9s								
UNV	**Unalaska Valle**	**68.50**	**22**		P	**P**	**17 16 20.1**	**+0.2**	
	baz=220								
MORE	**Moreh**	**68.60**	**300**		IAmb	IAmb	17 16 21.5		
	comp=Z,74nm,0.9s								
AKUT	**Akutan**	**69.00**	**23**		P	**P**	**17 16 23.2**	**+0.3**	
SPIA	**Saint Paul Isl**	**69.86**	**18**		P	**P**	**17 16 29.2**	**+1.1**	
SPIA	**Saint Paul Isl**	**69.86**	**18**		P	**P**	**17 16 29.2**	**+1.1**	
	baz=215								
VNDA	**Vanda**	**70.03**	**179**		P	**P**	**17 16 29.9**	**+1.0**	
	comp=Z,18nm,0.9s,baz=336,slow=6.6,SNR=105								
VNDA					pP	**pP**	**17 17 57.6**	**+0.5**	
	comp=Z,5.4nm,0.9s,baz=352,slow=8.3,SNR=3.8								
	comp=Z,18nm,0.9s								
VNDA	**Vanda**	**70.03**	**179**		P	**P**	**17 16 29.4**	**+0.5**	
VNDA	**Vanda**	**70.03**	**179**		P	**P**	**17 16 29.8**	**+1.0**	
VNDA					pP	**pP**	**17 17 59.0**	**+1.9**	
CCD	**Concordia, Ant**	**70.17**	**189**		P	**P**	**17 16 31.1**	**+0.9**	
CCD					pP	**pP**	**17 17 59.5**	**+0.9**	
SEY	**Seymchan**	**70.32**	**358**		P	**P**	**17 16 31.6**	**+0.9**	
	comp=Z,54nm,0.9s,baz=168,slow=6.1,SNR=56								
	comp=Z,54nm,0.9s								
SEY	**Seymchan**	**70.32**	**358**	*di*	P	**P**	**17 16 31.9**	**+1.1**	
SEY					pmax	pmax			
	comp=Z,126nm,1.2s								
ULN	**Ulaanbaatar**	**70.41**	**327**	*di*	P	**P**	**17 16 33.4**	**+1.5**	
ULN					pmax	pmax			
	comp=Z,184nm,1.2s								
ULN	**Ulaanbaatar**	**70.41**	**327**		P	**P**	**17 16 32.5**	**+0.7**	
ULN					PcP	**PcP**	**17 16 50.2**	**-0.2**	
ULN	**Ulaanbaatar**	**70.41**	**327**		P	**P**	**17 16 33.4**	**+1.5**	
ULN	**Ulaanbaatar**	**70.41**	**327**		P	**P**	**17 16 33.9**	**+2.0**	
GTA2	**Gaotai**	**70.42**	**316**		P	**P**	**17 16 34.0**	**+1.9**	
GTA2					S	**S**	**17 25 14.3**	**+3.1**	
GTA2					pmax	pmax			
	comp=Z,210nm,0.8s								
SBA	**Scott Base**	**70.50**	**178**		P	**P**	**17 16 33.2**	**+1.5**	
SBA					pmax	pmax			
	comp=Z,46nm,1.1s								
SBA	**Scott Base**	**70.50**	**178**		P	**P**	**17 16 33.2**	**+1.5**	
SBA	**Scott Base**	**70.50**	**178**		P	**P**	**17 16 33.8**	**+2.1**	
SONM	**Songino Array**	**70.75**	**327**		P	**P**	**17 16 35.7**	**+1.8**	
	comp=Z,85nm,0.8s,baz=136,slow=5.4,SNR=314								
SONM					pP	**pwP**	**17 18 05.9**	**0.0**	
	comp=Z,9.6nm,1.0s,baz=109,slow=4.0,SNR=3.5								
	comp=Z,85nm,0.8s								
SONM	**Songino Array**	**70.75**	**327**		P	**P**	**17 16 35.2**	**+1.4**	
SONM					IAmb	IAmb	17 16 36.8		
	comp=Z,123nm,1.0s								
SONM					PcP	**PcP**	**17 16 51.7**	**-0.1**	
SHL	**Shillong**	**71.11**	**300**		P	**P**	**17 16 37.0**	**+0.5**	
SHL					pmax	pmax			
	comp=Z,211nm,1.1s								
CNBA	**Chernabura Isl**	**71.96**	**25**		IAmb	IAmb	17 18 01.9		
	comp=Z,158nm,1.7s								
CHNA	**Chernabura Isl**	**71.97**	**25**		P	**P**	**17 16 41.1**	**+0.4**	
	baz=226								
SDPT	**Sand Point**	**71.97**	**24**		P	**P**	**17 16 40.3**	**-0.4**	
SDPT	**Sand Point**	**71.97**	**24**		IAmb	IAmb	17 16 41.6		
	comp=Z,92nm,0.8s								
SDPT	**Sand Point**	**71.97**	**24**		P	**P**	**17 16 40.7**	**0.0**	
	baz=225,SNR=5.6								
YAK	**Yakutsk**	**72.45**	**347**		P	**P**	**17 16 44.4**	**+1.0**	
	comp=Z,222nm,0.8s,baz=126,slow=1.5,SNR=131								
YAK					pP	**pwP**	**17 18 14.6**	**-0.8**	
	comp=Z,30nm,0.9s,baz=84,slow=2.7,SNR=3.1								
	comp=Z,222nm,0.8s								
YAK	**Yakutsk**	**72.45**	**347**	*di*	P	**P**	**17 16 44.3**	**+1.0**	
YAK				*e*			17 16 56.9		
YAK				*e**	PP	**pwP**	**17 18 15.8**	**+0.4**	
YAK				*e*	PPP	PPP	17 21 18.7		
YAK				*eS*		**SKiKP**	**17 25 34.2**	**+0.1**	
YAK				*e*			17 26 08.4		
YAK				*eSS*		**SS**	**17 30 23.5**	**+1.6**	
YAK				*eSSS*		SSS	17 33 46.9		
YAK					pmax	pmax			
	comp=Z,305nm,1.1s								
YAK					pmax	pmax			
	comp=E,27nm,1.4s								
YAK					pmax	pmax			
	comp=N,58nm,1.5s								
YAK					pmax	pmax			
	comp=Z,136nm,4.3s								
YAK					pmax	pmax			
	comp=E,37nm,2.9s								
YAK					pmax	pmax			
	comp=N,39nm,2.0s								
YAK					smax	smax			
	comp=N,51nm,4.2s								
YAK					smax	smax			
	comp=E,35nm,3.3s								
YAK	**Yakutsk**	**72.45**	**347**		P	**P**	**17 16 43.8**	**+0.4**	
YAK	**Yakutsk**	**72.45**	**347**		P	**P**	**17 16 44.4**	**+1.0**	
GOMU	**GeErMu**	**72.53**	**312**		P	**P**	**17 16 46.3**	**+1.4**	
GOMU					pmax	pmax			
	comp=E,19nm,0.9s								
S14K	**Fog Glacier**	**73.00**	**24**		P	**P**	**17 16 47.4**	**+0.6**	
	baz=226,SNR=6.2								
LSA	**Lhasa**	**73.05**	**304**		IAmb	IAmb	17 16 51.0		
	comp=Z,58nm,0.8s								
LSA	**Lhasa**	**73.05**	**304**	⇓*i*	P	**P**	**17 16 45.5**	**-2.7**	
LSA					pmax	pmax			
	comp=Z,73nm,0.8s								
LSA	**Lhasa**	**73.05**	**304**		P	**P**	**17 16 50.2**	**+2.1**	
M11K	**Mekoryuk**	**73.70**	**18**		IAmb	IAmb	17 16 52.9		
	comp=Z,42nm,0.8s								
M11K	**Mekoryuk**	**73.70**	**18**		P	**P**	**17 16 52.3**	**+1.8**	
	baz=218,SNR=5.2								
BOD	**Bodaibo**	**73.76**	**338**	*eP*		**P**	**17 16 51.2**	**+0.2**	
BOD					pmax	pmax			
	comp=Z,139nm,1.4s								
TLY	**Talaya**	**74.43**	**329**	*di*	P	**P**	**17 16 56.3**	**+1.3**	
TLY					pmax	pmax			
	comp=Z,101nm,1.0s								
TLY	**Talaya**	**74.43**	**329**		P	**P**	**17 16 56.0**	**+0.9**	
TLY					IAmb	IAmb	17 16 57.5		
	comp=Z,82nm,1.0s								
TLY	**Talaya**	**74.43**	**329**		P	**P**	**17 16 56.5**	**+1.5**	
IRK	**Irkutsk**	**74.43**	**330**	*eP*		**P**	**17 16 54.5**	**-0.5**	
IRK					pmax	pmax			
	comp=Z,118nm,1.8s								
O14K	**Tigyukauivet M**	**74.48**	**21**		P	**P**	**17 16 56.5**	**+1.5**	
	baz=223,SNR=29								
M13K	**Dall Lake**	**74.63**	**19**		P	**P**	**17 16 57.6**	**+1.7**	
	baz=221,SNR=20								
N14K	**Kuskokwak Cree**	**74.82**	**20**		P	**P**	**17 16 58.3**	**+1.3**	
	baz=223,SNR=12								
O15K	**Ungalikthiuk R**	**74.94**	**21**		IAmb	IAmb	17 16 59.8		
	comp=Z,63nm,1.1s								
O15K	**Ungalikthiuk R**	**74.94**	**21**		P	**P**	**17 16 58.4**	**+0.7**	
	baz=225,SNR=14								
GAMB	**Gambell**	**74.97**	**14**		IAmb	IAmb	17 17 00.2		
	comp=Z,141nm,1.4s								
GAMB	**Gambell**	**74.97**	**14**		P	**P**	**17 16 58.6**	**+0.9**	
	baz=212								
R17L	**Mt. Peulik Vol**	**75.20**	**24**		P	**P**	**17 17 00.1**	**+0.9**	
	baz=228								
M14K	**Bethel**	**75.34**	**20**		P	**P**	**17 17 01.4**	**+1.5**	
	baz=222,SNR=54								
K13K	**Kusilvak Mount**	**75.38**	**18**		P	**P**	**17 17 01.1**	**+1.0**	
K13K					IAmb	IAmb	17 17 02.9		
	comp=Z,67nm,0.9s								
K13K	**Kusilvak Mount**	**75.38**	**18**		P	**P**	**17 17 01.9**	**+1.8**	
	baz=220,SNR=20								
SII	**Sitkinak Islan**	**75.41**	**26**		P	**P**	**17 17 01.3**	**+0.9**	
SII	**Sitkinak Islan**	**75.41**	**26**		P	**P**	**17 17 01.4**	**+1.0**	
	baz=231,SNR=12								
P16K	**Nushagak River**	**75.51**	**22**		P	**P**	**17 17 01.3**	**+0.4**	
	baz=227,SNR=6.9								
L14K	**Kuka Creek**	**75.54**	**19**		P	**P**	**17 17 02.7**	**+1.7**	
	baz=222,SNR=50								
N15K	**Kwethluk River**	**75.55**	**21**		IAmb	IAmb	17 17 03.7		
	comp=Z,96nm,0.9s								
N15K	**Kwethluk River**	**75.55**	**21**		P	**P**	**17 17 02.7**	**+1.6**	
	baz=224,SNR=32								
BILL	**Bilibino**	**75.67**	**4**	*di*	P	**P**	**17 17 02.7**	**+1.1**	
BILL					pmax	pmax			
	comp=Z,245nm,1.0s								
BILL	**Bilibino**	**75.67**	**4**		P	**P**	**17 17 02.2**	**+0.6**	
BILL	**Bilibino**	**75.67**	**4**		P	**P**	**17 17 03.2**	**+1.6**	
M15K	**Kasigluk River**	**75.72**	**20**		P	**P**	**17 17 03.3**	**+1.2**	
	baz=224,SNR=54								
Q16K	**King Salmon**	**75.78**	**23**		P	**P**	**17 17 02.6**	**+0.2**	
	baz=228								
MOY	**Mondy**	**75.80**	**328**	*eP*		**P**	**17 17 04.2**	**+1.3**	
MOY					pmax	pmax			
	comp=Z,120nm,1.5s								
Q17K	**Contact Creek**	**75.81**	**24**		P	**P**	**17 17 03.3**	**+0.5**	
	baz=229								
O16K	**Kokwok River B**	**75.86**	**22**		P	**P**	**17 17 03.0**	**+0.1**	
	baz=226,SNR=10								
ACHA	**Angle Creek He**	**76.00**	**24**		IAmb	IAmb	17 17 05.4		
	comp=Z,53nm,1.0s								
L15K	**Ungalak Mounta**	**76.18**	**19**		P	**P**	**17 17 05.6**	**+1.0**	
	baz=223,SNR=23								
OHAK	**Old Harbor**	**76.21**	**25**		P	**P**	**17 17 05.5**	**+0.7**	
OHAK	**Old Harbor**	**76.21**	**25**		P	**P**	**17 17 05.8**	**+0.9**	
	baz=231,SNR=17								
P17K	**Kvichak River**	**76.21**	**23**		IAmb	IAmb	17 17 05.6		
	comp=Z,44nm,0.7s								
P17K	**Kvichak River**	**76.21**	**23**		P	**P**	**17 17 04.6**	**-0.3**	
	baz=228,SNR=10								
N16K	**Nishlik Lake**	**76.23**	**21**		P	**P**	**17 17 06.9**	**+1.9**	
	baz=226,SNR=35								
J14K	**Nanvaranak Lak**	**76.34**	**18**		P	**P**	**17 17 07.4**	**+2.0**	
	baz=221,SNR=37								
O17K	**Koliganek Bris**	**76.36**	**22**		P	**P**	**17 17 06.2**	**+0.6**	
	baz=227,SNR=26								
Q18K	**Katmai Hardscr**	**76.41**	**24**		P	**P**	**17 17 06.5**	**+0.4**	
	baz=229,SNR=51								
M16K	**Timber Creek**	**76.55**	**20**		P	**P**	**17 17 08.3**	**+1.6**	
M16K	**Timber Creek**	**76.55**	**20**		P	**P**	**17 17 08.3**	**+1.6**	
	baz=225,SNR=69								
K15K	**Wolf Creek Mou**	**76.62**	**19**		P	**P**	**17 17 08.7**	**+1.7**	
	baz=223,SNR=78								
P18K	**Big Mountain,**	**76.81**	**23**		P	**P**	**17 17 08.2**	**0.0**	
	baz=229,SNR=8.4								
N17K	**Nushagak Hills**	**76.84**	**21**		P	**P**	**17 17 09.9**	**+1.6**	
	baz=227,SNR=35								
KDAK	**Kodiak Island**	**76.85**	**25**		P	**P**	**17 17 09.3**	**+0.9**	
	comp=Z,79nm,0.8s,baz=222,slow=3.3,SNR=42								
	comp=Z,79nm,0.8s								
KDAK	**Kodiak Island**	**76.85**	**25**		P	**P**	**17 17 09.1**	**+0.7**	
KDAK	**Kodiak Island**	**76.85**	**25**		P	**P**	**17 17 09.3**	**+0.9**	
	baz=232								
KDAK	**Kodiak Island**	**76.85**	**25**		P	**P**	**17 17 09.5**	**+1.1**	
L16K	**Owhat River**	**76.86**	**20**		P	**P**	**17 17 09.0**	**+0.6**	
L16K					IAmb	IAmb	17 17 10.7		
	comp=Z,67nm,0.8s								
L16K	**Owhat River**	**76.86**	**20**		P	**P**	**17 17 09.8**	**+1.4**	
	baz=225,SNR=53								
O18K	**Koktuh Hills**	**77.12**	**23**		P	**P**	**17 17 10.1**	**+0.2**	
	baz=229,SNR=11								
Q19K	**Cape Douglas,**	**77.14**	**24**		P	**P**	**17 17 10.5**	**+0.5**	
	baz=231,SNR=16								
KNGR	**Kungurtug, Tuv**	**77.14**	**326**	*di*	P	**P**	**17 17 11.7**	**+1.4**	
KNGR					pmax	pmax			
	comp=Z,110nm,1.3s								
ANM	**Nome**	**77.22**	**16**		P	**P**	**17 17 12.0**	**+1.7**	
	baz=218,SNR=7.3								
PALK	**Pallekele**	**77.30**	**279**		P	**P**	**17 17 13.1**	**+1.2**	
PALK					pmax	pmax			
	comp=Z,92nm,0.8s								
PALK	**Pallekele**	**77.30**	**279**		P	**P**	**17 17 13.1**	**+1.2**	
PALK	**Pallekele**	**77.30**	**279**		P	**P**	**17 17 13.4**	**+1.5**	
	comp=Z,81nm,1.1s								
PALK	**Pallekele**	**77.30**	**279**		P	**P**	**17 17 13.6**	**+1.7**	
PALK					pP	**pP**	**17 18 42.2**	**+0.5**	
M17K	**Holitna River**	**77.35**	**21**		IAmb	IAmb	17 17 14.2		
	comp=Z,74nm,0.9s								
M17K	**Holitna River**	**77.35**	**21**		P	**P**	**17 17 12.9**	**+1.9**	
	baz=227,SNR=32								
TNA	**Tin City**	**77.36**	**14**		IAmb	IAmb	17 17 13.6		
	comp=Z,99nm,1.3s								
TNA	**Tin City**	**77.36**	**14**		P	**P**	**17 17 12.3**	**+1.2**	
	baz=216								
N18K	**Kilae Creek**	**77.41**	**22**		P	**P**	**17 17 13.3**	**+1.8**	
	baz=228,SNR=54								
L17K	**Donlin**	**77.56**	**20**		P	**P**	**17 17 14.2**	**+2.0**	
	baz=226,SNR=37								
J16K	**Anvik River**	**77.64**	**18**		P	**P**	**17 17 14.6**	**+1.9**	
	baz=223,SNR=61								
F14K	**Arctic Creek**	**77.69**	**15**		P	**P**	**17 17 14.4**	**+1.5**	
	baz=218								
P19K	**Oil Pt**	**77.76**	**23**		P	**P**	**17 17 14.2**	**+0.8**	
	baz=231								
G15K	**Niukluk**	**77.92**	**16**		P	**P**	**17 17 15.4**	**+1.3**	
	baz=220,SNR=9.5								
K17K	**Iditarod**	**77.97**	**19**		IAmb	IAmb	17 17 17.2		
	comp=Z,91nm,1.0s								
K17K	**Iditarod**	**77.97**	**19**		P	**P**	**17 17 16.1**	**+1.7**	
	baz=226,SNR=36								
M18K	**Stony River**	**77.98**	**21**		P	**P**	**17 17 16.4**	**+1.9**	
	baz=228,SNR=46								
N19K	**Bonanza Creek**	**78.02**	**22**		IAmb	IAmb	17 17 16.7		
	comp=Z,51nm,1.0s								
N19K	**Bonanza Creek**	**78.02**	**22**		P	**P**	**17 17 15.6**	**+0.7**	
	baz=230,SNR=29								
I17K	**Unalakleet**	**78.05**	**18**		P	**P**	**17 17 16.9**	**+2.1**	
	baz=223,SNR=18								
H16K	**Elim**	**78.15**	**17**		P	**P**	**17 17 16.7**	**+1.3**	
	baz=222								
L18K	**Granite Mounta**	**78.17**	**20**		P	**P**	**17 17 17.4**	**+1.9**	
	baz=227,SNR=62								
J17K	**VABM Dome**	**78.19**	**19**		IAmb	IAmb	17 17 18.5		
	comp=Z,78nm,0.9s								
J17K	**VABM Dome**	**78.19**	**19**		P	**P**	**17 17 17.5**	**+1.8**	
	baz=225,SNR=50								
O20K	**Slope Mountain**	**78.27**	**23**		P	**P**	**17 17 16.6**	**+0.4**	
	baz=231,SNR=31								
F15K	**North Star Dit**	**78.31**	**15**		IAmb	IAmb	17 17 18.9		
	comp=Z,110nm,1.3s								
F15K	**North Star Dit**	**78.31**	**15**		P	**P**	**17 17 17.6**	**+1.3**	
	baz=219,SNR=15								
HOM	**Homer**	**78.39**	**24**		P	**P**	**17 17 18.0**	**+1.2**	
	baz=232,SNR=16								
CNPM	**China Poot**	**78.48**	**24**		P	**P**	**17 17 17.6**	**+0.3**	
L19K	**White Mountain**	**78.78**	**21**		P	**P**	**17 17 20.6**	**+1.7**	
	baz=229,SNR=89								
BRSE	**Bradley Lake S**	**78.81**	**24**		P	**P**	**17 17 20.1**	**+1.0**	
	baz=233,SNR=14								
J18K	**Innoko River**	**79.01**	**19**		P	**P**	**17 17 21.1**	**+1.0**	
	baz=227,SNR=20								
H17K	**Granite Mounta**	**79.05**	**17**		IAmb	IAmb	17 17 22.2		
	comp=Z,41nm,0.8s								
H17K	**Granite Mounta**	**79.05**	**17**		P	**P**	**17 17 21.7**	**+1.5**	
	baz=224,SNR=30								
SPCR	**Spurr Chakacha**	**79.12**	**23**		P	**P**	**17 17 20.8**	**0.0**	
	baz=232								
M20K	**Styx River**	**79.21**	**22**		IAmb	IAmb	17 17 23.6		
	comp=Z,80nm,1.3s								
M20K	**Styx River**	**79.21**	**22**		P	**P**	**17 17 22.2**	**+1.0**	
	baz=231,SNR=26								
G17K	**Kiwalik Mounta**	**79.24**	**17**		P	**P**	**17 17 22.9**	**+1.6**	
	baz=223,SNR=26								
CAPN	**Captain Cook N**	**79.27**	**23**		P	**P**	**17 17 23.2**	**+1.8**	
	baz=233								
SEW	**Seward**	**79.55**	**24**		P	**P**	**17 17 24.0**	**+1.1**	
	baz=234,SNR=23								
O22K	**Cooper Landing**	**79.66**	**24**		P	**P**	**17 17 24.6**	**+1.0**	
	baz=234,SNR=8.8								
H18K	**Honhosa River**	**79.66**	**18**		P	**P**	**17 17 24.2**	**+0.7**	
	baz=225,SNR=11								
J19K	**Poorman**	**79.72**	**19**		P	**P**	**17 17 24.3**	**+0.5**	
J19K					IAmb	IAmb	17 17 26.5		
	comp=Z,65nm,1.4s								
J19K	**Poorman**	**79.72**	**19**		P	**P**	**17 17 25.2**	**+1.4**	
	baz=228,SNR=28								
F17K	**Baldwin Pennin**	**79.77**	**16**		IAmb	IAmb	17 17 26.6		
	comp=Z,61nm,0.8s								
F17K	**Baldwin Pennin**	**79.77**	**16**		P	**P**	**17 17 25.5**	**+1.5**	
	baz=222								
K20K	**Telida**	**79.82**	**20**		IAmb	IAmb	17 17 27.0		
	comp=Z,54nm,1.0s								
K20K	**Telida**	**79.82**	**20**		P	**P**	**17 17 25.8**	**+1.4**	
	baz=230,SNR=39								
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comp=Z,97nm,1.1s
KNK Knik Glacier 80.70 23 P **P** **17 17 30.2 +1.1**
baz=235,SNR=17
G19K Purcell Mounta 80.73 17 P **P** **17 17 30.6 +1.5**
baz=226,SNR=101
CHUM Lake Minchumin 80.77 20 P **P** **17 17 30.3 +1.0**
baz=231,SNR=45
C17K DeLong Mountai 80.82 14 P **P** **17 17 30.9 +1.3**
baz=220,SNR=61
HIN Hinchinbrook I 80.93 25 P **P** **17 17 30.8 +0.5**
GLI Glacier Island 80.95 24 P **P** **17 17 31.3 +0.9**
baz=236,SNR=32
H20K Anotleneega Mo 80.96 18 P **P** **17 17 31.6 +1.2**
baz=228,SNR=35
SML Sawmill 80.98 23 P **P** **17 17 31.6 +1.1**
baz=235,SNR=64
F19K Shaleruckik Mo 81.02 17 IAmb IAmb 17 17 32.6
comp=Z,49nm,0.8s
F19K Shaleruckik Mo 81.02 17 P **P** **17 17 31.5 +1.0**
baz=226
KTH Kantishna Hill 81.05 21 IAmb IAmb 17 17 31.8
comp=Z,69nm,0.9s
TIXI Tiksi 81.12 351 P **P** **17 17 31.3 +0.3**
comp=Z,7.5nm,0.4s,baz=158,slow=5.8,SNR=30
comp=Z,7.5nm,0.4s
TIXI Tiksi 81.12 351 *d* iP **P** **17 17 31.1 +0.1**
TIXI pmax pmax
comp=Z,39nm,1.0s
TIXI Tiksi 81.12 351 P **P** **17 17 30.7 -0.3**
FID Port Fidalgo 81.13 25 IAmb IAmb 17 17 33.2
comp=Z,101nm,1.1s
HYB Hyderabad 81.14 289 *e*P **P** **17 17 32.5 +0.2**
HYB *e*S **S** **17 27 08.2 +0.4**
M23K Glacier View 81.21 23 P **P** **17 17 32.6 +0.8**
baz=236,SNR=14
TRF Thorofare Moun 81.21 21 IAmb IAmb 17 17 34.1
comp=Z,45nm,0.6s
TRF Thorofare Moun 81.21 21 P **P** **17 17 31.7 -0.2**
baz=233,SNR=49
EYAK Cordova Ski Ar 81.33 25 IAmb IAmb 17 17 34.5
comp=Z,73nm,1.1s
EYAK Cordova Ski Ar 81.33 25 P **P** **17 17 33.3 +1.1**
baz=238,SNR=14
SCM Sheep Creek Mo 81.39 23 P **P** **17 17 33.8 +1.1**
baz=236,SNR=36
C18K Utukok River 81.43 14 IAmb IAmb 17 17 34.9
comp=Z,99nm,1.1s
C18K Utukok River 81.43 14 P **P** **17 17 33.9 +1.1**
baz=222,SNR=55
WAT1 Susitna Watana 81.48 22 P **P** **17 17 33.8 +0.7**
baz=235
KAIM Kayak Island 81.56 26 IAmb IAmb 17 17 36.2
comp=Z,80nm,0.9s
KAIM Kayak Island 81.56 26 P **P** **17 17 35.2 +1.6**
baz=239,SNR=16
E19K Redstone River 81.61 16 P **P** **17 17 35.2 +1.5**
baz=226
DIV Divide 81.63 24 IAmb IAmb 17 17 36.2
comp=Z,94nm,1.1s
IMAR Indian Mountai 81.64 18 P **P** **17 17 34.3 +0.5**
WAT6 Susitna Watana 81.65 23 P **P** **17 17 34.8 +0.7**
baz=236,SNR=39
I21K Tanana 81.69 19 IAmb IAmb 17 17 37.7
comp=Z,54nm,0.8s
I21K Tanana 81.69 19 P **P** **17 17 35.4 +1.3**
baz=231,SNR=69
RND Reindeer 81.71 22 IAmb IAmb 17 17 35.6
comp=Z,64nm,0.9s
H21K Melozitna Rive 81.73 19 P **P** **17 17 35.5 +1.2**
baz=230,SNR=29
F20K Avaraart Lake 81.75 17 IAmb IAmb 17 17 37.0
comp=Z,34nm,0.9s
F20K Avaraart Lake 81.75 17 P **P** **17 17 35.9 +1.5**
baz=228,SNR=53
KLU Klutina 81.76 24 P **P** **17 17 36.1 +1.4**
baz=237,SNR=76
MCK McKinley 81.87 21 P **P** **17 17 35.3 +0.2**
baz=234,SNR=85
BWN Browne 81.94 21 IAmb IAmb 17 17 38.6
comp=Z,80nm,0.8s
MLY Manley 82.01 20 IAmb IAmb 17 17 37.6
comp=Z,57nm,1.1s
MLY Manley 82.01 20 P **P** **17 17 36.4 +0.6**
baz=232,SNR=82
BMRM Bremner River 82.02 25 P **P** **17 17 37.0 +1.1**
baz=239,SNR=47
G21K Allakaket 82.06 18 IAmb IAmb 17 17 38.2
comp=Z,32nm,0.8s
G21K Allakaket 82.06 18 P **P** **17 17 37.1 +1.1**
baz=230
DHY Denali Highway 82.07 22 IAmb IAmb 17 17 39.9
comp=Z,33nm,0.9s
DHY Denali Highway 82.07 22 P **P** **17 17 37.0 +0.7**
baz=236,SNR=40
D19K Kuna River 82.10 15 IAmb IAmb 17 17 38.4
comp=Z,86nm,0.9s
D19K Kuna River 82.10 15 P **P** **17 17 37.3 +1.1**
baz=225
C19K Lookout Ridge 82.16 14 P **P** **17 17 38.0 +1.5**
baz=224,SNR=66
NEA2 Nenana 82.33 21 IAmb IAmb 17 17 38.4
comp=Z,72nm,0.9s
NEA2 Nenana 82.33 21 P **P** **17 17 37.2 -0.2**
baz=234,SNR=82
H22K Ishtalitna Cre 82.33 19 IAmb IAmb 17 17 39.8
comp=Z,45nm,1.1s
H22K Ishtalitna Cre 82.33 19 P **P** **17 17 38.6 +1.2**
baz=232,SNR=36
N25K Chitina, Valde 82.36 24 P **P** **17 17 39.1 +1.3**
baz=239,SNR=57
E20K Nigu River 82.45 16 P **P** **17 17 39.5 +1.5**
baz=227
QSPA South Pole Qui 82.47 180 P **P** **17 17 39.0 +0.6**
comp=Z,31nm,0.5s,baz=266,slow=0.4,SNR=567
QSPA pP **pP** **17 19 10.4 +0.4**
comp=Z,27nm,1.1s,baz=8.9,slow=0.3,SNR=7.5
QSPA PKKPbc **PKKPbc** **17 36 01.3 -3.9**
comp=Z,3.0nm,0.7s,baz=243,slow=0.6,SNR=15
comp=Z,31nm,0.5s
QSPA South Pole Qui 82.47 180 P **P** **17 17 38.2 -0.1**
QSPA IAmb IAmb 17 17 39.9
comp=Z,93nm,1.4s
QSPA South Pole Qui 82.47 180 P **P** **17 17 38.9 +0.6**
QSPA pP **pP** **17 19 10.9 +0.8**
F21K Alatna River 82.53 17 P **P** **17 17 39.3 +0.9**
baz=230,SNR=41
CRQE Cirque 82.55 25 P **P** **17 17 39.9 +1.1**
baz=240,SNR=24
I23K Minto, Yukon-K 82.55 20 P **P** **17 17 38.9 +0.4**
baz=234,SNR=29
HARP HAARP 82.55 23 IAmb IAmb 17 17 40.9
comp=Z,46nm,0.8s
HARP HAARP 82.55 23 P **P** **17 17 39.8 +1.2**
baz=238,SNR=5.8
GLB Gilahina Butte 82.60 25 IAmb IAmb 17 17 41.1
comp=Z,81nm,0.9s
WRH Wood River Hil 82.60 21 IAmb IAmb 17 17 39.8
comp=Z,52nm,0.9s
A19K Wainwright 82.62 13 P **P** **17 17 40.2 +1.5**
baz=222,SNR=23
VRDI Verde Repeater 82.64 25 IAmb IAmb 17 17 41.4
comp=Z,61nm,1.0s
D20K Etivluk River 82.65 16 IAmb IAmb 17 17 41.4
comp=Z,100nm,1.2s
D20K Etivluk River 82.65 16 P **P** **17 17 40.2 +1.2**
baz=226
DGZ Jazzator, Alta 82.65 322 *d* iP **P** **17 17 40.4 +0.8**
DGZ pmax pmax
comp=Z,121nm,1.0s
TGL Tana Glacier 82.67 25 IAmb IAmb 17 17 41.6
comp=Z,62nm,1.0s
PAX Paxson 82.74 23 P **P** **17 17 40.2 +0.6**
baz=238,SNR=11
CCB Clear Creek Bu 82.80 21 IAmb IAmb 17 17 40.6
comp=Z,47nm,0.8s
H23K Yukon River 82.89 20 IAmb IAmb 17 17 42.4
comp=Z,66nm,0.9s
H23K Yukon River 82.89 20 P **P** **17 17 41.3 +1.0**
baz=234
MCARA McCarthy VSAT 82.90 25 IAmb IAmb 17 17 42.8
comp=Z,71nm,1.0s
MCARA McCarthy VSAT 82.90 25 P **P** **17 17 41.5 +1.2**
baz=240,SNR=21
COLA College 82.91 21 *d* iP **P** **17 17 40.3 0.0**
COLA pmax pmax
comp=Z,143nm,0.9s
COLA College 82.91 21 P **P** **17 17 40.3 0.0**
G22K Bettles 82.93 18 P **P** **17 17 41.5 +1.1**
baz=232
HDA Harding Lake 82.97 21 IAmb IAmb 17 17 41.3
comp=Z,52nm,1.2s
HDA Harding Lake 82.97 21 P **P** **17 17 40.7 0.0**
baz=236,SNR=29
K24K Donnelly Dome 83.07 22 P **P** **17 17 41.4 +0.1**
K24K IAmb IAmb 17 17 45.2
comp=Z,39nm,0.8s
K24K Donnelly Dome 83.07 22 P **P** **17 17 42.2 +1.0**
baz=237,SNR=12
F22K John River 83.10 18 P **P** **17 17 42.6 +1.4**
baz=231,SNR=26
E21K Killik River 83.18 16 P **P** **17 17 42.9 +1.2**
baz=229,SNR=66
IL31 83.20 21 IAmb IAmb 17 17 42.5
comp=Z,57nm,0.9s
ILAR Eielson Array 83.20 21 P **P** **17 17 41.5 -0.4**
comp=Z,20nm,0.5s,baz=257,slow=5.3,SNR=304
ILAR PKKPbc **PKKPbc** **17 35 59.0 -4.1**
comp=Z,0.8nm,0.6s,baz=341,slow=1.6,SNR=8.8
comp=Z,20nm,0.5s
ILAR Eielson Array 83.20 21 P **P** **17 17 41.0 -0.8**
ILAR pP **pP** **17 19 10.9 -3.1**
POKR Poker Plat Res 83.20 21 P **P** **17 17 41.5 -0.4**
baz=236
G23K Bananza Creek 83.27 19 IAmb IAmb 17 17 44.5
comp=Z,36nm,0.9s
G23K Bananza Creek 83.27 19 P **P** **17 17 43.5 +1.3**
baz=233,SNR=56
BARN Barnard Glacie 83.31 25 IAmb IAmb 17 17 45.2
comp=Z,61nm,1.0s
RIDG Independent Ri 83.39 22 IAmb IAmb 17 17 44.9
comp=Z,67nm,1.2s
RIDG Independent Ri 83.39 22 P **P** **17 17 43.8 +0.9**
baz=238,SNR=18
B20K Meade River 83.41 14 P **P** **17 17 44.0 +1.3**
baz=226,SNR=53
M26K Nabesna, AK 83.42 24 IAmb IAmb 17 17 45.4
comp=Z,33nm,0.9s
M26K Nabesna, AK 83.42 24 P **P** **17 17 44.2 +1.2**
baz=240,SNR=33
C21K Knifeblade Rid 83.43 16 P **P** **17 17 44.7 +1.8**
baz=228,SNR=76
H24K Noodor Dome 83.46 20 P **P** **17 17 42.9 -0.2**
baz=235,SNR=30
PCA Pinnacle 83.47 27 IAmb IAmb 17 17 45.8
comp=Z,50nm,0.8s
PINM Pinnacle 83.47 27 P **P** **17 17 44.8 +1.4**
baz=243,SNR=18
ZSN Zaisan 83.50 320 *d* iP **P** **17 17 44.6 +0.9**
ZSN pmax pmax
comp=Z,44nm,1.2s
ZSN Zaisan 83.50 320 ⇓ *i*P **P** **17 17 44.7 +0.9**
comp=Z,44nm,1.2s
COLD Coldfoot 83.53 18 IAmb IAmb 17 17 46.3
comp=Z,98nm,1.7s
COLD Coldfoot 83.53 18 P **P** **17 17 44.9 +1.5**
baz=233,SNR=22
L26K Log Cabin Wild 83.59 23 P **P** **17 17 45.2 +1.3**
baz=240,SNR=11
E22K Anaktuvuk Pass 83.60 17 P **P** **17 17 45.0 +1.2**
baz=231
J25K Salcha River, 83.66 22 IAmb IAmb 17 17 46.0
comp=Z,63nm,0.9s
J25K Salcha River, 83.66 22 P **P** **17 17 44.9 +0.7**
baz=238,SNR=86
PNL Peninsula 83.66 27 P **P** **17 17 45.2 +0.9**
PNL Peninsula 83.66 27 P **P** **17 17 45.4 +1.1**
baz=244,SNR=19
B21K Ikpikpuk River 83.79 15 IAmb IAmb 17 17 47.2
comp=Z,84nm,0.9s
B21K Ikpikpuk River 83.79 15 P **P** **17 17 46.1 +1.4**
baz=228,SNR=52
O28M Mount Upton 83.81 26 IAmb IAmb 17 17 48.0
comp=Z,43nm,1.0s
O28M Mount Upton 83.81 26 P **P** **17 17 46.9 +1.5**
baz=243,SNR=26
M27K Edge Creek, AK 83.85 24 P **P** **17 17 46.7 +1.4**
M27K pP **pP** **17 19 17.1 -0.5**
M27K Edge Creek, AK 83.85 24 P **P** **17 17 47.1 +1.8**
baz=241,SNR=101
G24K Hadweenzic Riv 84.08 19 IAmb IAmb 17 17 48.6
comp=Z,59nm,1.1s
G24K Hadweenzic Riv 84.08 19 P **P** **17 17 47.5 +1.3**
baz=235,SNR=40
PRP Porcupine Dome 84.09 21 P **P** **17 17 45.5 -0.9**
baz=237,SNR=17
YUK3 Moose Creek 84.16 25 P **P** **17 17 48.4 +1.4**
baz=242,SNR=53
E23K Chandalar 84.21 18 IAmb IAmb 17 17 49.6
comp=Z,116nm,1.4s
E23K Chandalar 84.21 18 P **P** **17 17 48.3 +1.4**
baz=233,SNR=53
L27K Beaver Creek, 84.21 24 IAmb IAmb 17 17 49.8
comp=Z,34nm,0.9s
L27K Beaver Creek, 84.21 24 P **P** **17 17 48.5 +1.5**
baz=241,SNR=32
YUK8 Steele Glacier 84.23 26 P **P** **17 17 49.0 +1.6**
baz=243,SNR=47
BVCY Beaver Creek 84.29 24 P **P** **17 17 48.9 +1.6**
baz=242,SNR=19
O29M Mount Kennedy 84.31 27 IAmb IAmb 17 17 50.6
comp=Z,56nm,1.1s
O29M Mount Kennedy 84.31 27 P **P** **17 17 49.1 +1.5**
baz=244,SNR=27
P29M Windy Craggy 84.41 28 IAmb IAmb 17 17 50.8
comp=Z,53nm,0.9s
P29M Windy Craggy 84.41 28 P **P** **17 17 49.6 +1.6**
baz=245,SNR=26
F24K Squaw Lake 84.42 19 IAmb IAmb 17 17 50.9
comp=Z,76nm,1.3s
F24K Squaw Lake 84.42 19 P **P** **17 17 49.7 +1.8**
baz=235,SNR=52
S31K Pelican 84.43 30 P **P** **17 17 49.8 +1.8**
baz=246,SNR=38
D23K Nanushuk River 84.45 17 P **P** **17 17 50.1 +2.1**
baz=232,SNR=86
A21K Barrow 84.45 14 P **P** **17 17 49.0 +1.1**
baz=226
SIT Sitka 84.53 31 IAmb IAmb 17 17 51.2
comp=Z,44nm,1.0s
SIT Sitka 84.53 31 P **P** **17 17 50.2 +1.6**
baz=247,SNR=12
E24K Your Creek 84.56 18 P **P** **17 17 49.8 +1.2**
baz=234,SNR=23
TOLK Toolik Lake Re 84.57 17 P **P** **17 17 50.0 +1.4**
baz=233,SNR=27
B22K Teshekpuk Lake 84.57 15 IAmb IAmb 17 17 50.8
comp=Z,81nm,1.1s
B22K Teshekpuk Lake 84.57 15 P **P** **17 17 49.6 +1.1**
baz=230,SNR=26
G25K Bearman Lake 84.57 20 P **P** **17 17 50.0 +1.5**
baz=237,SNR=50
BRWY Burwash Landin 84.58 26 P **P** **17 17 50.8 +2.0**
baz=244,SNR=16
K27K Chicken 84.59 23 IAmb IAmb 17 17 53.2
comp=Z,40nm,1.0s
A22K Sinclair Lake 84.62 14 P **P** **17 17 50.1 +1.3**
baz=228,SNR=6.5
YUK6 Outpost Mounta 84.69 26 P **P** **17 17 51.3 +1.7**
baz=244,SNR=29
YUK4 Talbot Arm 84.74 26 P **P** **17 17 52.1 +2.3**
baz=244,SNR=51
FYU Fort Yukon 84.76 20 IAmb IAmb 17 17 53.5
comp=Z,29nm,0.9s
P30M Million Dollar 84.97 27 P **P** **17 17 52.6 +1.8**
baz=246
PLBC Pleasant Camp 84.97 28 P **P** **17 17 52.2 +1.4**
baz=246
MK31 Makanchi Array 84.98 318 *d* iP **P** **17 17 52.0 +0.9**
MKAR Makanchi Array 84.98 318 P **P** **17 17 52.0 +0.9**
comp=Z,80nm,0.7s,baz=99,slow=5.9,SNR=656
comp=Z,80nm,0.7s
MKAR Makanchi Array 84.98 318 *ce*P **P** **17 17 52.0 +0.9**
MKAR pmax pmax
comp=Z,81nm,0.7s
MKAR Makanchi Array 84.98 318 P **P** **17 17 51.1 0.0**
MKAR pP **pP** **17 19 23.1 -1.5**
C23K Itkillik River 85.00 16 P **P** **17 17 52.4 +1.8**
baz=232,SNR=52
HYT Haines Junctio 85.02 27 P **P** **17 17 52.9 +1.8**
baz=245,SNR=104
S32K Killisnoo 85.06 30 IAmb IAmb 17 17 53.9
comp=Z,107nm,1.6s
S32K Killisnoo 85.06 30 P **P** **17 17 52.7 +1.6**
baz=248,SNR=14
CRAG Craig 85.08 32 P **P** **17 17 52.9 +1.6**
baz=249,SNR=5.1
D24K Happy Valley 85.09 17 IAmb IAmb 17 17 53.9
comp=Z,74nm,1.1s
D24K Happy Valley 85.09 17 P **P** **17 17 52.9 +1.8**
baz=234
F25K Christian Rive 85.18 19 IAmb IAmb 17 17 54.6
comp=Z,41nm,1.1s
F25K Christian Rive 85.18 19 P **P** **17 17 53.5 +1.9**
baz=237,SNR=32
MAKZ Makanchi 85.19 318 P **P** **17 17 52.2 +0.1**
MAKZ **pP** **17 19 23.8 -2.0**
MAKZ Makanchi 85.19 318 P **P** **17 17 52.9 +0.7**
M29M Somme Creek 85.30 25 IAmb IAmb 17 17 55.2
comp=Z,43nm,0.9s
M29M Somme Creek 85.30 25 P **P** **17 17 53.9 +1.5**
baz=244,SNR=67
U33K Whale Pass 85.31 32 IAmb IAmb 17 17 55.0
comp=Z,25nm,0.8s
U33K Whale Pass 85.31 32 P **P** **17 17 53.6 +1.2**
baz=249,SNR=8.8
R32K Eaglecrest 85.39 30 IAmb IAmb 17 17 55.7
comp=Z,56nm,1.2s
R32K Eaglecrest 85.39 30 P **P** **17 17 54.6 +1.7**
baz=248,SNR=11
G26K Porcupine Rive 85.45 20 P **P** **17 17 55.0 +2.1**
baz=239,SNR=80
SKAG Skagway 85.46 28 P **P** **17 17 54.9 +1.8**
baz=247,SNR=23
N30M Aishikik Lake 85.47 26 IAmb IAmb 17 17 56.1
comp=Z,56nm,1.1s
N30M Aishikik Lake 85.47 26 P **P** **17 17 54.8 +1.6**
baz=245,SNR=44
E25K Arctic Village 85.49 19 IAmb IAmb 17 17 56.0
comp=Z,37nm,1.1s
E25K Arctic Village 85.49 19 P **P** **17 17 54.9 +1.7**
baz=237,SNR=22
I27K Kandik River 85.53 21 P **P** **17 17 55.2 +1.8**
baz=238,SNR=78
ZAA0 Zalesovo Array 85.61 326 IAmb IAmb 17 17 54.3
comp=Z,41nm,0.7s
ZALV Zalesovo Beam 85.61 326 P **P** **17 17 53.7 -0.3**
comp=Z,56nm,0.7s,baz=113,slow=5.4,SNR=186
comp=Z,56nm,0.7s
ZALV Zalesovo Beam 85.61 326 *i* P **P** **17 17 53.7 -0.3**
ZALV pmax pmax
comp=Z,57nm,0.7s
ZALV Zalesovo Beam 85.61 326 P **P** **17 17 53.1 -0.9**
O30N Mendenhall 85.63 27 IAmb IAmb 17 17 56.6
comp=Z,74nm,0.9s
O30N Mendenhall 85.63 27 P **P** **17 17 55.5 +1.5**
baz=246,SNR=69
DAWY Dawson 85.65 23 IAmb IAmb 17 17 56.9
comp=Z,60nm,1.1s
DAWY Dawson 85.65 23 P **P** **17 17 55.7 +1.7**
baz=243,SNR=36
WUS Wushi 85.67 312 IAmb IAmb 17 17 56.9
comp=Z,39nm,0.7s
F26K Sheenjek River 85.72 19 IAmb IAmb 17 17 57.6
comp=Z,116nm,1.7s
F26K Sheenjek River 85.72 19 P **P** **17 17 56.3 +2.0**
baz=238,SNR=34
L29M L29M 85.73 24 IAmb IAmb 17 17 57.4
comp=Z,80nm,1.0s
L29M L29M 85.73 24 P **P** **17 17 56.3 +1.9**
baz=244,SNR=56
WRAK Wrangell Islan 85.82 32 P **P** **17 17 55.8 +0.9**
baz=250,SNR=10
V35K Ketchikan 85.84 33 IAmb IAmb 17 17 57.1
comp=Z,27nm,0.9s
V35K Ketchikan 85.84 33 P **P** **17 17 55.7 +0.7**
baz=251,SNR=14
H27K Steamboat Moun 85.87 21 IAmb IAmb 17 17 58.0
comp=Z,74nm,1.1s
H27K Steamboat Moun 85.87 21 P **P** **17 17 57.0 +1.9**
baz=241,SNR=68
D25K Kavik River 85.91 17 P **P** **17 17 56.4 +1.2**
baz=236,SNR=78
SHLS Shalkode 85.96 314 *d* iP **P** **17 17 55.4 -0.7**
SHLS *e*S **SKSac** **17 27 39.3 -2.8**
SHLS pmax pmax
comp=Z,19nm,0.6s
SHLS Shalkode 85.96 314 ⇓ *i*P **P** **17 17 55.4 -0.7**
comp=Z,19nm,0.6s
SHLS *e*S **SKSac** **17 27 39.4 -2.8**
N31M Braeburn, Yuko 86.05 26 P **P** **17 17 57.9 +1.9**
baz=247,SNR=69
M30M Minto, Yukon 86.06 25 IAmb IAmb 17 17 58.8
comp=Z,54nm,1.1s
M30M Minto, Yukon 86.06 25 P **P** **17 17 57.5 +1.5**
baz=246,SNR=67
I28M Miner Creek 86.07 22 P **P** **17 17 57.4 +1.3**
baz=242,SNR=40
G27K Doyon Strip 86.10 20 IAmb IAmb 17 17 59.2
comp=Z,44nm,1.1s
G27K Doyon Strip 86.10 20 P **P** **17 17 58.0 +1.8**
baz=241,SNR=56
WHY Whitehorse 86.13 27 P **P** **17 17 57.9 +1.4**
baz=247,SNR=30
P32M Atlin 86.27 29 IAmb IAmb 17 17 59.8
comp=Z,69nm,1.1s
P32M Atlin 86.27 29 P **P** **17 17 58.6 +1.5**
baz=248,SNR=56
UZB Uzunbulak 86.27 314 *d* iP **P** **17 17 58.2 +0.6**
UZB pmax pmax
comp=Z,35nm,1.2s
UZB Uzunbulak 86.27 314 ⇓ *i*P **P** **17 17 58.2 +0.6**
comp=Z,35nm,1.2s
J29N Klondike Camp 86.28 23 P **P** **17 17 59.4 +2.3**
baz=244,SNR=8.4
K29M Barlow Dome 86.29 24 P **P** **17 17 59.1 +1.9**
baz=245,SNR=123
KPKS Kokpek 86.59 314 *e*P **P** **17 17 59.8 +0.7**
KPKS Kokpek 86.59 314 *e*P **P** **17 17 59.8 +0.7**
I29M Ogilvie Camp, 86.64 22 P **P** **17 18 00.1 +1.4**
baz=244,SNR=82
C26K Camden Bay 86.66 17 P **P** **17 18 01.1 +2.5**
baz=238,SNR=26
SATY Saty 86.69 314 *d* iP **P** **17 18 00.2 +0.6**
SATY pmax pmax
comp=Z,24nm,0.8s
SATY Saty 86.69 314 ⇓ *i*P **P** **17 18 00.3 +0.6**
comp=Z,24nm,0.8s
Q32M Nakina River 86.74 29 P **P** **17 18 00.9 +1.4**
baz=250,SNR=16
E27K Coleen River 86.80 19 P **P** **17 18 01.5 +2.1**
baz=241,SNR=62
TARG Taragay, Kyrgy 86.82 313 IAmb IAmb 17 18 02.9
comp=Z,27nm,0.7s
C27K Jago River 86.86 18 P **P** **17 18 01.6 +2.0**
baz=239,SNR=67
P33M Teslin, Yukon 86.92 28 P **P** **17 18 01.1 +0.9**
baz=249,SNR=24
M31M Drury Creek, Y 86.94 26 P **P** **17 18 00.7 +0.5**
M31M IAmb IAmb 17 18 02.3
comp=Z,37nm,0.9s
M31M Drury Creek, Y 86.94 26 P **P** **17 18 01.3 +1.1**
baz=248,SNR=34
S34M Telegraph Cree 86.95 31 IAmb IAmb 17 18 03.4
comp=Z,29nm,0.9s
S34M Telegraph Cree 86.95 31 P **P** **17 18 01.6 +1.3**
baz=251,SNR=24
H29M Whitestone 87.00 22 IAmb IAmb 17 18 03.1
comp=Z,98nm,1.9s
H29M Whitestone 87.00 22 P **P** **17 18 01.7 +1.3**
baz=244,SNR=12
J30M Hart River 87.07 23 IAmb IAmb 17 18 03.9
comp=Z,51nm,0.9s
J30M Hart River 87.07 23 P **P** **17 18 02.8 +1.8**
baz=246,SNR=42
F28M Old Crow 87.10 20 IAmb IAmb 17 18 03.8
comp=Z,42nm,1.0s
F28M Old Crow 87.10 20 P **P** **17 18 02.6 +1.8**
baz=242,SNR=24
T35M Bob Quinn 87.10 32 P **P** **17 18 02.1 +1.0**
baz=252,SNR=8.2
N32M Quiet Lake 87.13 27 P **P** **17 18 02.7 +1.5**
baz=249
TDK Taldyqorghan 87.14 316 *d* iP **P** **17 18 02.2 +0.7**
TDK pmax pmax
comp=Z,93nm,1.2s
TDK Taldyqorghan 87.14 316 ⇓ *i*P **P** **17 18 02.3 +0.7**
comp=Z,93nm,1.2s
I30M Mount Dempster 87.32 23 IAmb IAmb 17 18 04.5
comp=Z,61nm,0.9s
I30M Mount Dempster 87.32 23 P **P** **17 18 03.5 +1.5**
baz=246,SNR=74
G29M Pine Creek 87.43 21 P **P** **17 18 04.0 +1.6**
baz=244,SNR=55
D27M Malcolm River 87.51 18 IAmb IAmb 17 18 05.5

	comp=Z,42nm,0.8s									
D27M	**Malcolm River**	87.51	18	P		**P**	17 18 04.8	+2.0		
	baz=241,SNR=33									
EPYK	**Eagle Plains**	87.67	22	P		**P**	17 18 05.0	+1.4		
	baz=246,SNR=44									
E28M	**Babbage River**	87.67	19	P		**P**	17 18 04.2	+0.7		
E28M	**Babbage River**	87.67	19	P		**P**	17 18 05.3	+1.8		
	baz=243,SNR=28									
DLBC	**Dease Lake**	87.67	30	P		**P**	17 18 05.0	+1.2		
	baz=252,SNR=17									
MDOK	**Medeo**	87.68	314	*e*P		**P**	17 18 04.9	+0.6		
MDOK				*e*S		**SKSac**	17 27 51.5	-1.1		
MDOK	**Medeo**	87.68	314	*e*P		**P**	17 18 04.9	+0.6		
MDOK				*e*S		**SKSac**	17 27 51.5	-1.1		
M02C	**Callahan**	87.72	48	P		**P**	17 18 05.3	+0.8		
M02C				pP		**pP**	17 19 34.7	-3.0		
TNSS	**Tian-Shan**	87.73	314	*e*P		**P**	17 18 05.1	+0.3		
TNSS	**Tian-Shan**	87.73	314	*e*P		**P**	17 18 05.1	+0.3		
HULI	**Fort Hunter Li**	87.91	53	IAmb		IAmb	17 18 08.8			
	comp=Z,57nm,0.9s									
KSH2	**Kashi**	87.95	310	P		**P**	17 18 07.0	+1.3		
KSH2				pmax		pmax				
	comp=Z,52nm,1.1s									
ULHL	**Ulahol**	88.07	313	P		**P**	17 18 07.4	+1.2		
	SNR=16									
NRN	**Naryn**	88.08	312	IAmb		IAmb	17 18 08.8			
	comp=Z,37nm,1.2s									
G30M	**tAoh Zraii Nji**	88.10	21	IAmb		IAmb	17 18 07.9			
	comp=Z,90nm,1.2s									
G30M	**tAoh Zraii Nji**	88.10	21	P		**P**	17 18 06.6	+1.0		
	baz=246,SNR=36									
E29M	**Blow River**	88.11	20	IAmb		IAmb	17 18 08.0			
	comp=Z,73nm,1.6s									
E29M	**Blow River**	88.11	20	P		**P**	17 18 06.7	+1.1		
	baz=244,SNR=14									
M03C	**McCloud**	88.24	48	P		**P**	17 18 07.8	+0.9		
M03C				IAmb		IAmb	17 18 09.2			
	comp=Z,35nm,0.9s									
M03C						**pP**	17 19 39.2	-1.0		
D28M	**Stokes Point**	88.25	19	P		**P**	17 18 07.4	+1.3		
	baz=244									
H31M	**Peel River**	88.33	23	IAmb		IAmb	17 18 08.9			
	comp=Z,38nm,0.9s									
H31M	**Peel River**	88.33	23	P		**P**	17 18 07.8	+1.1		
	baz=248,SNR=24									
BOOM	**Boomskoye usch**	88.34	313	P		**P**	17 18 07.8	+0.4		
BOOM				pmax		pmax				
	comp=Z,59nm,0.8s									
BOOM	**Boomskoye usch**	88.34	313	P		**P**	17 18 07.8	+0.4		
BOOM				IAmb		IAmb	17 18 09.7			
	comp=Z,59nm,0.8s									
KURK	**Kurchatov**	88.35	322	*d* iP		**P**	17 18 06.7	-0.3		
KURK				pmax		pmax				
	comp=Z,64nm,1.3s									
KURK	**Kurchatov**	88.35	322	P		**P**	17 18 06.6	-0.4		
KURK				IAmb		IAmb	17 18 08.1			
	comp=Z,69nm,1.2s									
KURK	**Kurchatov**	88.35	322	P		**P**	17 18 07.3	+0.3		
KURBB	**Kurchatov Arra**	88.38	321	P		**P**	17 18 07.2	0.0		
	comp=Z,18nm,0.8s,baz=105,slow=3.3,SNR=74									
KURBB				PP		**PP**	17 21 42.0	0.0		
	comp=Z,5.5nm,1.0s,baz=104,slow=7.7,SNR=4.9									
KURBB				SKKPbc		SKKPbc	17 38 48.2	-1.2		
	comp=Z,0.3nm,0.3s,baz=285,slow=2.9,SNR=5.6									
	comp=Z,18nm,0.8s									
MMPY	**Sheldon Lake,**	88.45	26	P		**P**	17 18 08.7	+1.4		
	baz=250,SNR=26									
F30M	**Barrier River**	88.51	21	IAmb		IAmb	17 18 09.9			
	comp=Z,74nm,1.0s									
F30M	**Barrier River**	88.51	21	P		**P**	17 18 08.8	+1.4		
	baz=246,SNR=30									
TKM2	**Tokmak 2**	88.67	313	P		**P**	17 18 09.8	+0.7		
	SNR=19									
G31M	**Satah River**	88.78	22	IAmb		IAmb	17 18 11.1			
	comp=Z,70nm,1.0s									
G31M	**Satah River**	88.78	22	P		**P**	17 18 10.0	+1.3		
	baz=248,SNR=37									
NIL	**Nilore**	88.79	304	P		**P**	17 18 09.3	-0.3		
NIL				pmax		pmax				
	comp=Z,149nm,1.7s									
NIL	**Nilore**	88.79	304	P		**P**	17 18 09.2	-0.3		
KBK	**Karagaybulak**	89.09	313	P		**P**	17 18 11.8	+0.8		
	SNR=15									
F31M	**Tsiigehtchic**	89.17	21	IAmb		IAmb	17 18 12.6			
	comp=Z,127nm,1.6s									
F31M	**Tsiigehtchic**	89.17	21	P		**P**	17 18 11.5	+1.1		
	baz=248,SNR=15									
J05D	**Fort Rock, OR**	89.28	46	IAmb		IAmb	17 18 14.2			
	comp=Z,36nm,1.3s									
CHMS	**Chumnysh**	89.30	313	P		**P**	17 18 12.1	+0.4		
	SNR=36									
FRU1	**Bishkek**	89.35	313	IAmb		IAmb	17 18 13.9			
	comp=Z,40nm,1.0s									
AAK	**Ala-Archa**	89.42	313	P		**P**	17 18 13.3	+0.9		
	SNR=15									
AAK	**Ala-Archa**	89.42	313	*d* iP		**P**	17 18 13.2	+0.8		
AAK				pmax		pmax				
	comp=Z,35nm,0.9s									
AAK	**Ala-Archa**	89.42	313	P		**P**	17 18 12.4	0.0		
AAK				IAmb		IAmb	17 18 14.2			
	comp=Z,29nm,0.8s									
AAK	**Ala-Archa**	89.42	313	P		**P**	17 18 13.6	+1.1		
SGDS	**Sogindy**	89.47	314	*e*P		**P**	17 18 13.1	+0.5		
INK	**Inuvik**	89.57	20	IAmb		IAmb	17 18 14.3			
	comp=Z,63nm,1.3s									
INK	**Inuvik**	89.57	20	P		**P**	17 18 13.0	+0.7		
	baz=248,SNR=28									
VES	**Vestal, Richgr**	89.60	54	IAmb		IAmb	17 18 15.4			
	comp=Z,44nm,1.0s									
NRIK	**Noril'sk**	89.81	341	P		**P**	17 18 13.1	-0.3		
	comp=Z,28nm,0.9s,baz=114,slow=4.1,SNR=36									
	comp=Z,28nm,0.9s									
NRIK	**Noril'sk**	89.81	341	*c* iP		**P**	17 18 12.7	-0.7		
NRIK				pmax		pmax				
	comp=Z,53nm,1.2s									
NRIK	**Noril'sk**	89.81	341	IAmb		IAmb	17 18 14.2			
	comp=Z,57nm,1.2s									
LIRD	**Liard River Hi**	89.90	30	P		**P**	17 18 14.8	+0.7		
	baz=255									
EKS2	**Erkin-Say**	89.94	313	P		**P**	17 18 15.8	+0.9		
	SNR=31									
PASC	**Pasadena Art C**	90.06	56	IAmb		IAmb	17 21 26.2			
	comp=Z,25nm,0.6s									
TPO	**Tropico Hills**	90.13	55	IAmb		IAmb	17 18 19.0			
	comp=Z,53nm,1.3s									
MWC	**Mount Wilson**	90.17	56	IAmb		IAmb	17 18 19.5			
	comp=Z,67nm,1.1s									
BTLS	**Baital**	90.17	315	*e*P		**P**	17 18 16.4	+0.7		
BTLS	**Baital**	90.17	315	*e*P		**P**	17 18 16.4	+0.7		
LHV	**Little Huntoon**	90.44	52	IAmb		IAmb	17 18 20.3			
	comp=Z,31nm,1.0s									
TIN	**Tinemaha, Big**	90.47	53	IAmb		IAmb	17 18 20.8			
	comp=Z,64nm,0.9s									
CWC	**Cottonwood Cre**	90.49	53	IAmb		IAmb	17 18 20.2			
	comp=Z,29nm,1.1s									
BFSC	**Mount Baldy Ra**	90.50	56	IAmb		IAmb	17 18 20.2			
	comp=Z,31nm,1.3s									
NVAR	**Mina Array Bea**	90.63	51	P		**P**	17 18 20.1	+1.9		
	comp=Z,23nm,0.9s,baz=244,slow=6.5,SNR=69									
NVAR				pP		**pwP**	17 19 55.1	-1.0		
	comp=Z,1.8nm,0.9s,baz=237,slow=8.0,SNR=3.6									
	comp=Z,23nm,0.9s									
NVAR	**Mina Array Bea**	90.63	51	P		**P**	17 18 18.8	+0.6		
NVAR						**pP**	17 19 51.4	-0.4		
LRMC	**Laurel Mtn Rad**	90.67	54	IAmb		IAmb	17 18 21.3			
	comp=Z,39nm,1.0s									
MANEM	**Manem**	90.68	308	IAmb		IAmb	17 18 22.2			
	comp=Z,17nm,0.8s									
DSP	**Deep Springs**	90.72	53	IAmb		IAmb	17 18 21.4			
	comp=Z,29nm,0.9s									
NV11	**Mina Array Sit**	90.74	51	IAmb		IAmb	17 18 21.4			
	comp=Z,32nm,1.0s									
E07A	**Sunnyside**	90.83	43	IAmb		IAmb	17 18 20.5			
	comp=Z,28nm,1.1s									
DRK	**Karamyk**	90.89	310	P		**P**	17 18 20.2	+0.7		
DRK				pmax		pmax				
	comp=Z,66nm,0.9s									
DRK	**Karamyk**	90.89	310	P		**P**	17 18 20.2	+0.7		
MPMC	**Manual Prospec**	90.91	54	IAmb		IAmb	17 18 22.3			
	comp=Z,28nm,1.1s									
WVOR	**Wild Horse Val**	91.01	47	P		**P**	17 18 21.1	+1.3		
WVOR	**Wild Horse Val**	91.01	47	IAmb		IAmb	17 18 22.2			
	comp=Z,28nm,0.9s									
HAWA	**Hanford**	91.03	43	IAmb		IAmb	17 18 21.4			
	comp=Z,22nm,1.0s									
KOTAN	**Kotaneelee Air**	91.08	29	P		**P**	17 18 20.3	+0.7		
	baz=257,SNR=6.5									

EPH	**Ephrata**	91.14	43	IAmb		IAmb	17 18 21.5			
	comp=Z,38nm,1.2s									
GRAC	**Grapevine Rang**	91.14	53	IAmb		IAmb	17 18 23.2			
	comp=Z,23nm,0.8s									
GSC	**Goldstone, Bar**	91.35	55	P		**P**	17 18 22.1	+0.6		
GSC						**pP**	17 19 53.4	-1.6		
QSM	**Queen of Sheba**	91.39	54	IAmb		IAmb	17 18 24.1			
	comp=Z,29nm,0.9s									
TPH	**Tonopah**	91.42	52	IAmb		IAmb	17 18 24.4			
	comp=Z,24nm,0.9s									
WCT	**Wildcat Mounta**	91.70	53	IAmb		IAmb	17 18 25.7			
	comp=Z,33nm,0.9s									
BTK	**Batken**	91.72	310	P		**P**	17 18 22.6	-0.5		
BTK				pmax		pmax				
	comp=Z,51nm,1.0s									
BTK	**Batken**	91.72	310	P		**P**	17 18 22.6	-0.5		
BTK				IAmb		IAmb	17 18 24.6			
	comp=Z,51nm,1.0s									
DZA	**Taraz**	91.75	313	*e*P		**P**	17 18 23.7	+0.6		
DZA				pmax		pmax				
	comp=Z,13nm,0.7s									
DZA	**Taraz**	91.75	313	*e*P		**P**	17 18 23.8	+0.6		
	comp=Z,13nm,0.7s									
SHOC	**Shoshone, Teco**	91.86	54	P		**P**	17 18 24.2	+0.4		
SHOC				IAmb		IAmb	17 18 26.9			
	comp=Z,51nm,1.1s									
GAR	**Garm**	91.96	309	IAmb		IAmb	17 18 25.8			
	comp=Z,61nm,1.2s									
E09A	**Wood Farm, Sta**	91.99	44	IAmb		IAmb	17 18 26.2			
	comp=Z,26nm,1.0s									
TPNV	**Topopah Spring**	92.02	53	IAmb		IAmb	17 18 27.3			
	comp=Z,28nm,0.9s									
WRGLY	**Wrigley**	92.05	26	IAmb		IAmb	17 18 26.0			
	comp=Z,46nm,0.9s									
WRGLY	**Wrigley**	92.05	26	P		**P**	17 18 24.9	+1.0		
	baz=258,SNR=12									
KBL	**Kabul**	92.37	304	P		**P**	17 18 25.0	-1.3		
KBL				pmax		pmax				
	comp=Z,22nm,0.8s									
KBL	**Kabul**	92.37	304	P		**P**	17 18 25.0	-1.3		
KBL				IAmb		IAmb	17 18 26.6			
	comp=Z,22nm,0.8s									
KK31	**Karatay Array**	92.38	313	IAmb		IAmb	17 18 27.2			
	comp=Z,38nm,1.1s									
KKAR	**Karatay Array**	92.38	313	P		**P**	17 18 25.5	-0.5		
KKAR	**Karatay Array**	92.38	313	P		**P**	17 18 25.5	-0.5		
IRM	**Iron Mountain**	92.55	56	IAmb		IAmb	17 18 30.8			
	comp=Z,36nm,1.6s									
CHGR	**Chuyangaron**	92.81	308	*d* iP		**P**	17 18 28.2	+0.1		
CHGR				pmax		pmax				
	comp=Z,39nm,1.1s									
CHGR	**Chuyangaron**	92.81	308	IAmb		IAmb	17 18 30.4			
	comp=Z,34nm,1.1s									
BRLS	**Borolday**	92.86	313	*e*P		**P**	17 18 28.5	+0.3		
BRLS				pmax		pmax				
	comp=Z,21nm,2.4s									
CHM	**Chimkent**	92.94	312	*e*P		**P**	17 18 29.0	+0.5		
CHM				pmax		pmax				
	comp=Z,9.0nm,0.6s									
CHM	**Chimkent**	92.94	312	*e*P		**P**	17 18 29.0	+0.5		
	comp=Z,9.2nm,0.6s									
PRN	**Pahroc Range**	93.03	53	IAmb		IAmb	17 18 32.8			
	comp=Z,34nm,1.1s									
C36M	**Paulatuk**	93.15	20	P		**P**	17 18 29.5	+0.6		
	baz=257,SNR=5.5									
ELK	**Elko**	93.30	50	P		**P**	17 18 31.8	+1.3		
A36M	**Sachs Harbour**	93.38	18	P		**P**	17 18 30.7	+0.8		
	baz=256									
SHAA	**Shahritus**	93.48	307	IAmb		IAmb	17 18 35.2			
	comp=Z,19nm,0.8s									
W13A	**Hualapai Mount**	93.69	55	P		**P**	17 18 31.9	-0.5		
W13A						**pP**	17 20 03.2	-3.0		
BVAR	**Borovoye Array**	93.79	323	P		**P**	17 18 31.7	-0.5		
	comp=Z,46nm,0.7s,baz=102,slow=5.0,SNR=138									
BVAR				pP		**pP**	17 20 09.5	+2.5		
	comp=Z,4.2nm,0.8s,baz=84,slow=7.6,SNR=3.4									
BVAR				PP		**PP**	17 22 18.6	-5.6		
	comp=Z,3.2nm,0.8s,baz=94,slow=8.9,SNR=4.0									
	comp=Z,46nm,0.7s									
LCMT	**Little Creek M**	94.42	53	P		**P**	17 18 36.7	+1.1		
LCMT				pP		**pP**	17 20 07.4	-1.9		
ELIB	**Princess Elisa**	95.12	193	*d*P		**P**	17 18 38.2	+0.1		
HVU	**Hansel Valley**	95.25	49	IAmb		IAmb	17 18 41.7			
	comp=Z,24nm,1.5s									
YKA	**Yellowknife Ar**	95.95	28	P		**P**	17 18 42.5	+0.8		
	comp=Z,20nm,0.8s,baz=264,slow=4.7,SNR=78									
YKA				pP		**pwP**	17 20 19.1	-0.6		
	comp=Z,2.1nm,0.7s,baz=260,slow=4.6,SNR=6.8									
	comp=Z,20nm,0.8s									
YKA	**Yellowknife Ar**	95.95	28	P		**P**	17 18 41.6	-0.1		
YKA						**pP**	17 20 16.2	+0.5		
YKAW3	**Yellowknife Wh**	95.95	28	IAmb		IAmb	17 18 43.8			
	comp=Z,29nm,0.9s									
YKAW1	**Yellowknife Wh**	96.00	28	IAmb		IAmb	17 18 44.0			
	comp=Z,33nm,0.9s									
RDMU	**Red Mountain**	97.57	50	IAmb		IAmb	17 18 52.2			
	comp=Z,14nm,1.4s									
PDAR	**Pinedale Array**	97.71	48	P		**P**	17 18 50.5	0.0		
	comp=Z,3.5nm,0.8s,baz=259,slow=3.0,SNR=13									
PDAR				pP		**pP**	17 20 25.4	+1.0		
	comp=Z,2.7nm,0.9s,baz=256,slow=2.4,SNR=6.0									
	comp=Z,3.5nm,0.8s									
PDAR	**Pinedale Array**	97.71	48	P		**P**	17 18 50.2	-0.2		
PDAR						**pP**	17 20 24.3	-0.1		
PV23	**Carpenter Ridg**	97.88	52	IAmb		IAmb	17 18 56.0			
	comp=Z,9.4nm,0.9s									
HRA	**Herat**	97.95	304	IAmb		IAmb	17 18 52.3			
	comp=Z,15nm,0.9s									
RLMT	**Red Lodge**	98.03	46	IAmb		IAmb	17 22 41.3			
	comp=Z,12nm,1.1s									
PV12	**Saucer Basin,**	98.04	52	IAmb		IAmb	17 18 56.1			
	comp=Z,14nm,1.2s									
TROLL	**Troll, Antarti**	98.87	188	⇓Pdiff		Pdif	17 18 54.8	-0.1		
	comp=Z,51nm,0.4s									
TROLL				⇓SKSac		**SKSac**	17 28 52.9	+0.5		
	comp=N,154nm,1.4s									
TROLL				⇓PKKPbc		**PKKPbc**	17 35 20.2	-3.3		
	comp=Z,89nm,0.6s									
SVE	**Sverdlovsk**	99.62	326	*e*P		**Pdif**	17 18 57.6	-0.7		
SVE				pmax		pmax				
	comp=Z,11nm,0.7s									
SNAA	**Sanae**	99.84	186	⇑SKSac		**SKSac**	17 28 56.6	-0.5		
	comp=N,55nm,1.2s									
SNAA	**Sanae**	99.84	186	PKKPbc		PKKPbc	17 35 16.6	-4.1		
	comp=N,0.9nm,0.6s,baz=14,slow=2.8,SNR=6.5									
ARTI	**Arti**	100.88	326	*c* iP		**Pdif**	17 19 02.4	-1.5		
ARTI							17 23 19.0			
ARTI				S		**SKSac**	17 29 00.0	-2.3		
ARTI				SP		SP	17 31 43.5	+5.0		
ARTI				SS		**SS**	17 37 08.3	-5.7		
ARTI				pmax		pmax				
	comp=Z,17nm,0.9s									
VNA2	**Neumayer--Watz**	101.01	185	⇑Pdiff		**Pdif**	17 19 06.2	+2.0		
	comp=Z,1.4nm,0.6s,baz=192,slow=5.4									
VNA2				⇑PKiKP		**PKiKP**	17 23 27.1	+0.2		
	comp=Z,3.7nm,0.6s,baz=166,slow=2.1									
VNA2				⇑SKSac		**SKSac**	17 29 02.8	+0.2		
	comp=N,5.1nm,1.1s,baz=312,slow=3.6									
VNA2				⇓PKKPbc		**PKKPbc**	17 35 13.7	-3.6		
	comp=Z,1.7nm,0.6s,baz=337,slow=4.8									
TXAR	**Lajitas Array**	101.92	62	PKKPbc		PKKPbc	17 35 10.0	-3.2		
	comp=Z,1.3nm,0.8s,baz=97,slow=4.5,SNR=9.0									
KLMR	**Klimovskoe**	109.62	332	*e*P		**Pdif**	17 19 40.5	-2.1		
KLMR				pmax		pmax				
	comp=Z,16nm,1.1s									
ARCES	**ARCESS Array B**	110.59	344	PKiKP		**PKiKP**	17 23 44.8	+0.1		
	comp=Z,1.9nm,0.5s,baz=87,slow=0.7,SNR=14									
VRH	**Novokhopyorsk**	111.43	322	*e*PKiKP		**PKiKP**	17 23 46.8	+0.1		
VRH				pmax		pmax				
	comp=Z,10.0nm,0.5s									
KBZ	**Khabaz**	112.38	314	PKiKP		**PKiKP**	17 23 49.6	+0.9		
	comp=Z,0.9nm,0.6s,baz=90,slow=1.0,SNR=3.9									
RAYN	**Ar Rayn**	112.47	292	⇓PKiKP		**PKiKP**	17 23 50.2	+0.6		
KIV	**Kislovodsk**	112.49	314	*i* PKiKP		**PKiKP**	17 23 49.9	+0.8		
KIV				*e*			17 24 41.8			
KIV				*e*SS		SS	17 39 49.8	-1.2		
KIV				pmax		pmax				
	comp=Z,6.0nm,1.0s									
LPSR	**Galich'ya Gora**	112.69	324	*e*PKiKP		**PKiKP**	17 23 49.5	+0.4		
LPSR				pmax		pmax				
	comp=Z,21nm,0.9s									
VORR	**Voronezh**	112.81	323	*e*PKiKP		**PKiKP**	17 23 49.8	+0.5		
VORR				pmax		pmax				
	comp=Z,47nm,0.5s									
VSR	**Storozhevoye**	112.97	323	*e*PKiKP		**PKiKP**	17 23 47.0	-2.7		
VSR				pmax		pmax				

	comp=Z,6.0nm,0.4s									
OBN	**Obninsk**	113.15	327	*i* PKiKP		**PKiKP**	17 23 49.8	-0.1		
OBN				*e*			17 24 46.1			
OBN				*e*PPP		PPP	17 27 13.9			
OBN				pmax		pmax				
	comp=Z,5.0nm,0.8s									
STEI	**Steigen**	114.44	345	*e*P		PKPdf	17 23 51.8	-0.2		
LOF	**Lofoten**	114.72	346	*e*P		**PKiKP**	17 23 52.7	+0.2		
FAUS	**Fauske**	114.83	345	*e*P		PKPdf	17 23 52.7	0.0		
FINES	**FINESS Array B**	115.14	336	PKP		**PKPdf**	17 23 53.5	0.0		
	comp=Z,3.3nm,0.3s,baz=120,slow=4.1,SNR=27									
FINES	**FINESS Array B**	115.14	336			**PKPdf**	17 23 53.1	-0.4		
E46A	**Sault Ste Mari**	115.17	42			**PKPdf**	17 23 53.4	-0.7		
PLCA	**Paso Flores**	115.21	142	PKP		**PKiKP**	17 23 54.7	+0.2		
	comp=Z,1.2nm,0.9s,baz=288,slow=2.4,SNR=3.4									
PLCA				SKP		**SKPdf**	17 26 50.4	0.0		
	comp=Z,6.7nm,1.1s,baz=168,slow=0.7,SNR=5.4									
PLCA				PKKPbc		**PKKPbc**	17 34 32.0	-0.1		
	comp=Z,5.4nm,0.9s,baz=51,slow=4.8,SNR=8.4									
VAGH	**Vaagaholmen**	115.85	345	*e*P		**PKPdf**	17 23 54.6	-0.1		
KONS	**Konsvik**	116.06	345	*e*P		**PKPdf**	17 23 55.2	+0.1		
STOK	**Stokkvaagen**	116.22	345	*e*P		**PKPdf**	17 23 55.5	+0.1		
LEIR	**Leirfjorden**	116.36	344	*e*P		**PKPdf**	17 23 55.6	-0.2		
VSU	**Vasula**	116.49	333	⇑*i*PKiKP		**PKPdf**	17 23 55.3	-0.9		
NSS	**Namsos**	117.88	344	*e*P		**PKiKP**	17 23 59.0	+0.2		
152A	**Waverly Hall**	117.93	57			**PKPdf**	17 23 59.3	-0.5		
MNK	**Minsk**	117.96	329	*i* PKP		**PKPdf**	17 23 58.9	-0.2		
	comp=E,11nm,0.8s									
MNK				*i* PKP		**PKPdf**	17 23 58.9	-0.2		
	comp=N,14nm,0.8s									
MNK				*i* PKP		**PKPdf**	17 23 58.9	-0.2		
	comp=Z,16nm,0.7s,baz=61									
MNK				*i* PP		**PP**	17 25 21.7	+1.7		
MNK				*i* pPKP		**pPKPdf**	17 25 40.0	+0.9		
MNK				*i* PPP		PPP	17 27 56.6			
MNK				*i* SKS		**SKSdf**	17 30 30.2	-1.1		
MNK				*i* SS		**SS**	17 41 05.3	+4.5		
MNK				*i* SKKS		**SKKSdf**	17 41 16.6	-6.0		
MNK				*i* SSS		SSS	17 45 34.0			
MNK				*i* LRM		MLR	18 14 46.7			
	comp=N,158nm,27.7s									
MNK				*i* LRM		MLR	18 14 51.5			
	comp=E,165nm,24.2s									
MNK				*i* LRM		MLR	18 15 42.5			
	comp=Z,53nm,20.3s									
MNK	**Minsk**	117.96	329	*i* PKiKP		**PKPdf**	17 23 58.9	-0.2		
MNK				*i*			17 25 21.6			
MNK				*i* PPP		PPP	17 27 56.6			
MNK				*i*			17 30 30.2			
MNK				*i* SS		SS	17 41 05.3	+4.5		
MNK				*i*			17 41 16.6			
MNK				*i* SSS		SSS	17 45 34.0			
MNK				pmax		pmax				
	comp=E,11nm,0.8s									
MNK				pmax		pmax				
	comp=N,14nm,0.8s									
MNK				pmax		pmax				
	comp=Z,16nm,0.7s									
MNK				MLR		MLR				
	comp=E,165nm,24.0s									
MNK				MLR		MLR				
	comp=Z,53nm,20.0s									
AKASG	**Malin Array Be**	119.00	325	PKP		**PKPdf**	17 24 01.3	0.0		
	comp=Z,15nm,0.6s,baz=61,slow=2.2,SNR=52									
AKASG				PP		**PP**	17 25 22.3	-4.9		
	comp=Z,0.6nm,0.4s,baz=59,slow=6.7,SNR=4.9									
AKASG				SKP		**SKPdf**	17 26 57.3	+0.2		
	comp=Z,3.4nm,0.8s,baz=61,slow=2

ODD1	Odda	123.07 343	*e*P	PKiKP	17 24 09.8	+0.7	
NEHR	Nehoiu	123.08 320	⇑P	PKPdf	17 24 09.4	0.0	
CICN	Ciocanesti	123.13 319	⇓P	PKiKP	17 24 09.6	0.0	
DEL	Delary	123.17 336	*i* P	PKiKP	17 24 09.5	+0.1	
FABU	Falkenberg	123.24 337	*i* P	PKiKP	17 24 09.5	0.0	
ONAU	Onsala	123.25 338	*i* P	PKPdf	17 24 09.2	0.0	
MLR	Muntele Rosu	123.27 320	⇑P	PKiKP	17 24 10.4	+0.3	
MLR	Muntele Rosu	123.27 320	⇑PKIKP	PKiKP	17 24 10.4	+0.3	
DOPR	Dopca	123.41 321	⇑P	PKiKP	17 24 11.3	+1.0	
BLS5	Blasjo	123.51 342	*e*P	PKiKP	17 24 10.6	+0.6	
ARCR	ARCALIA	123.52 323	⇑P	PKiKP	17 24 10.6	+0.2	
BSD	Bornholm Skovb	123.68 335	*i* P	PKiKP	17 24 10.9	+0.5	
RAZG	Razgrad	123.73 318	⇑P	PKiKP	17 24 11.6	+0.7	
BJUU	Bjuv	123.78 337	*i* P	PKiKP	17 24 10.8	+0.2	
HOMB	Homborsund	123.78 340	*e*P	PKiKP	17 24 10.8	+0.3	
HOMB	Homborsund	123.78 340	*i* P	PKiKP	17 24 10.7	+0.2	
KOLS	Kolonicke sedl	123.79 326	*e*PKIKP	PKiKP	17 24 12.1	+1.2	
KOLS	Kolonicke sedl	123.79 326	*e*PKP	PKiKP	17 24 12.1	+1.2	
VOIR		123.86 321	⇑P	PKPdf	17 24 10.9	0.0	
VOIR		123.86 321	⇑PKIKP	PKPdf	17 24 10.9	0.0	
BAND	Balkesir-Ban	123.89 314	⇓P	PKiKP	17 24 11.8	+0.4	
KMY	Karmoy	124.05 343	*e*P	PKiKP	17 24 11.6	+0.6	
SKOMA	Sekoma	124.12 234	P	PKiKP	17 24 12.8	+0.4	
ARR	Arges	124.15 321	⇑P	PKiKP	17 24 12.2	+0.4	
SNART	Snartemo	124.15 341	*e*P	PKiKP	17 24 11.7	+0.4	
SNART	Snartemo	124.15 341	*i* P	PKiKP	17 24 11.3	+0.1	
LSZ	Lusaka	124.28 246	P	PKiKP	17 24 13.7	+0.8	
HUMR	Humele	124.31 320	⇑P	PKiKP	17 24 12.4	+0.4	
OJC	Ojcow	124.43 328	*e*PKPdf	PKiKP	17 24 12.2	+0.2	
OTAV	Otavalo	124.44 95	*e*P	PKPdf	17 24 11.8	-1.6	
MARR	Marisel-Cluj	124.46 323	⇑P	PKiKP	17 24 12.9	+0.5	
D62A	Allapoint, All	124.52 37		PKPdf	17 24 11.3	-0.6	
NIE	Niedzica	124.62 327	*e*PKPdf	PKiKP	17 24 13.5	+1.0	
LLD	Lille Linde	124.64 336	*i* P	PKiKP	17 24 13.2	+1.0	
PLVB	Pleven	125.05 319	⇓P	PKiKP	17 24 14.2	+0.7	
HRV	Adam Dziewonsk	125.06 42	⇑PKIKP	PKiKP	17 24 13.7	+0.1	
LANS	Liptovska Anna	125.22 327	*e*PKIKP	PKiKP	17 24 15.4	+1.6	
LANS	Liptovska Anna	125.22 327	*e*PKP	PKiKP	17 24 15.4	+1.6	
OKC	Ostrava-Krasne	125.52 328	*e*PKIKP	PKiKP	17 24 15.3	+1.0	
OKC	Ostrava-Krasne	125.52 328	*e*PKPDF	PKiKP	17 24 15.3	+1.0	
SIRR	Siria	125.53 323	⇑P	PKiKP	17 24 14.8	+0.4	
MBAR	Mbarara	125.62 264	P	PKiKP	17 24 16.6	+0.9	
STEB	Steborice	125.66 329	*e*PKPDF	PKiKP	17 24 14.8	+0.3	
PSZ	Piszkesteto	125.68 326	⇑P	PKiKP	17 24 15.3	+0.6	
PSZ	Piszkesteto	125.68 326	⇑PKIKP	PKiKP	17 24 15.3	+0.6	
KSP	Ksiaz	125.84 330	*e*PKPdf	PKiKP	17 24 15.4	+0.5	
MORC	Moravsky Berou	125.87 329	⇑P	PKiKP	17 24 15.9	+0.9	
MORC	Moravsky Berou	125.87 329	⇑PKIKP	PKiKP	17 24 15.9	+0.9	
MORC	Moravsky Berou	125.87 329	*e*PKP	PKiKP	17 24 15.3	+0.3	
BZS	Buzias	125.89 322	⇑P	PKiKP	17 24 15.5	+0.4	
BZS	Buzias	125.89 322	⇑PKIKP	PKiKP	17 24 15.5	+0.4	
VYHS	Vyhne	125.94 327	*e*PKIKP	PKiKP	17 24 15.3	+0.1	
VYHS	Vyhne	125.94 327	*e*PKP	PKiKP	17 24 15.3	+0.1	
RUE	Ruedersdorf	125.96 333	*e*PKPdf	PKiKP	17 24 15.5	+0.5	
	baz=46,slow=1.9						
MAUC	Maruska	125.97 328	*e*PKPDF	PKPdf	17 24 14.9	+0.1	
OSTC	Ostas	126.06 330	*e*PKIKP	PKiKP	17 24 16.4	+1.0	
OSTC	Ostas	126.06 330	*e*PKPDF	PKiKP	17 24 16.4	+1.0	
KRLC	Kraliky	126.08 329	*e*PKIKP	PKiKP	17 24 16.1	+0.7	
KRLC	Kraliky	126.08 329	*e*PKPDF	PKiKP	17 24 16.1	+0.7	
CHVC	Chvalec	126.12 330	*e*PKIKP	PKiKP	17 24 16.2	+0.7	
CHVC	Chvalec	126.12 330	*e*PKPDF	PKiKP	17 24 16.2	+0.7	
DPC	Dobruska-Polom	126.14 330	*e*PKIKP	PKiKP	17 24 16.6	+1.0	
DPC	Dobruska-Polom	126.14 330	*e*PKPDF	PKiKP	17 24 16.6	+1.0	
UPC	Upice	126.20 330	*e*PKIKP	PKiKP	17 24 16.2	+0.6	
UPC	Upice	126.20 330	*e*PKPDF	PKiKP	17 24 16.2	+0.6	
MDVR	Moldovita	126.25 321	⇓P	PKPdf	17 24 15.7	+0.2	
JAVC	Velka Javorina	126.35 328	*e*PKP	PKiKP	17 24 17.7	+1.7	
BSEG	Bad Segeberg	126.41 336	*e*PKPdf	PKiKP	17 24 16.5	+0.6	
	baz=46,slow=1.9						
LKGWB	Lokgwabe	126.48 233	P	PKiKP	17 24 17.1	0.0	
VRAC	Vranov	126.65 329	⇑P	PKiKP	17 24 17.0	+0.4	
VRAC	Vranov	126.65 329	*e*PKP	PKiKP	17 24 17.1	+0.5	
GORT1	Trebel	126.69 335	*e*PKPdf	PKiKP	17 24 17.1	+0.7	
	baz=46,slow=1.9						
BOVS	Bovan	126.82 320	⇑P	PKiKP	17 24 17.0	-0.1	
PB11	IPOC Station P	126.84 121		PKPdf	17 24 15.2	-2.2	
MODS	Modra-Piesok	126.85 327	*e*PKIKP	PKiKP	17 24 17.9	+0.9	
MODS	Modra-Piesok	126.85 327	*e*PKP	PKiKP	17 24 17.8	+0.8	
PVCC	Panska Ves	126.89 331	*e*PKIKP	PKPdf	17 24 16.6	+0.2	
PVCC	Panska Ves	126.89 331	*e*PKPDF	PKPdf	17 24 16.6	+0.2	
KRUC	Moravsky	126.90 328	*e*PKP	PKiKP	17 24 17.4	+0.4	
BRG	Berggiesshubel	126.96 331	*e*PKPdf	PKiKP	17 24 17.4	+0.3	
	baz=46,slow=1.9						
BRG	Berggiesshubel	126.96 331	P	PKiKP	17 24 22.7	+5.6	
BRG			Amp		17 24 24.9		
	comp=Z,4.8nm,0.9s						
BRG			⇓pPKPf		17 25 53.9		
BRG			Amp		17 25 54.3		
	comp=Z,1.7nm,0.8s						
RICC	Richard	127.11 331	*e*PKPDF	PKiKP	17 24 18.2	+0.8	
CLL	Collm	127.11 332	⇓*i*PKIKP	PKiKP	17 24 17.3	-0.1	
CLL			*e*		17 25 57.0		
CLL			pmax	pmax			
	comp=Z,25nm,0.9s						
CLL	Collm	127.11 332	*e*PKPdf	PKiKP	17 24 17.5	+0.1	
	baz=46,slow=1.9						
CLL	Collm	127.11 332	⇓*i*PKPdf	PKiKP	17 24 17.3	-0.1	
	comp=Z,25nm,0.9s						
CLL			*ep*PKPdf	pPKPdf	17 25 57.0	+0.3	
CLL			*e*PP	PP	17 26 22.0	+0.9	
CLL			*e*SKPdf	SKiKP	17 27 15.0	+1.4	
FLTG	Flechtingen	127.19 334	*e*PKPdf	PKiKP	17 24 17.6	+0.2	
	baz=46,slow=1.9						
TREC	Trest	127.22 329	*e*PKIKP	PKiKP	17 24 18.3	+0.6	
TREC	Trest	127.22 329	*e*PKPDF	PKiKP	17 24 18.3	+0.6	
PRU	Pruhonice	127.25 330	*e*PKIKP	PKPdf	17 24 17.5	+0.4	
PRU	Pruhonice	127.25 330	*e*PKPDF	PKPdf	17 24 17.5	+0.4	
MORH	Mrgy, Hungar	127.33 324	⇓P	PKiKP	17 24 18.4	+0.5	
HSKC	Hora Svate Kat	127.38 331	*e*PKPDF	PKPdf	17 24 17.8	+0.4	
ASSE	Asse, Remlinge	127.57 334	*e*PKPdf	PKiKP	17 24 18.6	+0.4	
	baz=46,slow=1.9						
WINA	Alland / Wiene	127.65 328	*i* PKiKP	PKiKP	17 24 19.3	+0.7	
	SNR=9.7						
RETH	Rethem/Aller,	127.68 336	*e*PKPdf	PKiKP	17 24 18.9	+0.5	
	baz=46,slow=1.9						
NEUB	Neuenburg	127.74 333	*e*PKPdf	PKiKP	17 24 18.8	+0.2	
	baz=46,slow=1.9						
RONA	Rosalia, Austr	127.78 327	*i* PKP	PKiKP	17 24 18.9	0.0	
	comp=Z,19nm,1.0s,SNR=9.7						
RONA			*e*SKP	SKPdf	17 27 09.2	-4.8	
	comp=Z,5.7nm,1.0s						
ZVC	Zvikov	127.78 330	*e*PKPDF	PKiKP	17 24 19.5	+0.7	
GRTLG	Ghanzi	127.83 236	P	PKiKP	17 24 20.2	+0.3	
CONA	Conrad Observa	127.88 328	*i* PKP	PKPdf	17 24 18.9	+0.4	
	comp=Z,22nm,1.4s,SNR=10						
CONA			*e*SKP	SKPdf	17 27 07.8	-6.4	
	comp=Z,7.8nm,1.0s						
CLZ	Clausthal	127.91 334	*e*PKPdf	PKiKP	17 24 19.5	+0.5	
	baz=46,slow=1.9						
PB18	Visviri	127.92 119		PKPdf	17 24 22.1	-4.2	
TANN	Tannenbergstha	127.97 332	*e*PKPdf	PKiKP	17 24 19.4	+0.2	
	baz=46,slow=1.9						
PLN	Plauen	128.06 332	*e*PKPdf	PKiKP	17 24 19.5	+0.2	
	baz=46,slow=1.9						
NKC	Novy Kostel	128.10 332	*e*PKIKP	PKiKP	17 24 19.8	+0.3	
NKC	Novy Kostel	128.10 332	*e*PKPDF	PKiKP	17 24 19.8	+0.3	
CKRC	Cesky Krumlov	128.12 329	*e*PKIKP	PKiKP	17 24 19.7	+0.2	
CKRC	Cesky Krumlov	128.12 329	*e*PKPDF	PKiKP	17 24 19.7	+0.2	
MOX	Moxa	128.21 332	*e*PKPdf	PKiKP	17 24 19.8	+0.1	
	baz=46,slow=1.9						
KHC	Kasperske Hory	128.29 330	*e*PKIKP	PKiKP	17 24 20.0	+0.1	
KHC	Kasperske Hory	128.29 330	*e*PKPDF	PKiKP	17 24 20.0	+0.1	
GTTG	Gottingen	128.30 334	*e*PKPdf	PKiKP	17 24 20.1	+0.4	
	baz=46,slow=1.9						
CZSB	Cruzeiro do Su	128.36 106	*e*P	PKPdf	17 24 18.9	-1.4	
GEC2	GERESS Array S	128.41 330	*e*PKPdf	PKiKP	17 24 20.2	0.0	
	baz=46,slow=1.9						
GERES	GERESS Array B	128.41 330	PKP	PKiKP	17 24 20.5	+0.2	
	comp=Z,8.8nm,0.8s,baz=146,slow=2.6,SNR=4.1						
GERES			SKPbc	SKiKP	17 26 59.5	-17	
	comp=Z,0.4nm,0.4s,baz=90,slow=2.0,SNR=1.9						
GERES	GERESS Array B	128.41 330		PKPdf	17 24 19.3	-0.2	
ARSA	Arzberg	128.47 327	*i* PKP	PKPdf	17 24 19.8	+0.1	
	comp=Z,4.8nm,0.9s						
ARSA			*e*SKP	SKPdf	17 27 08.1	-7.2	
	comp=Z,6.5nm,1.1s						
WET	Wettzell	128.63 330	*e*PKPdf	PKiKP	17 24 20.8	+0.2	
	baz=46,slow=1.9						
IBBN	Ibbenburen	128.66 336	*e*PKPdf	PKiKP	17 24 20.8	+0.3	
	baz=46,slow=1.9						
MOA	Molln	128.76 328	*e*PKP	PKiKP	17 24 20.6	-0.2	
	comp=Z,7.0nm,0.8s						
MOA			*e*SKP	SKPdf	17 27 11.3	-4.5	
	comp=Z,4.8nm,0.8s						
PDG	Podgorica	128.97 320	⇓P	PKPdf	17 24 20.7	+0.1	
GRF	Grafenberg Arr	129.05 332	*e*PKPdf	PKiKP	17 24 21.5	+0.2	
	baz=46,slow=1.9						
SESA	Seetaler Alpe,	129.07 327	*i* PKiKP	PKiKP	17 24 22.2	+0.4	
	SNR=9.0						
SOKA	Soboth	129.09 327	*i* PKiKP	PKiKP	17 24 21.7	+0.1	
	comp=Z,15nm,1.2s,SNR=11						
SOKA			*i* SKP	SKPbc	17 27 06.0	+3.2	
	comp=Z,7.4nm,1.0s						
ROSC	El Rosal	129.12 90	PKP	PKPdf	17 24 22.1	-0.1	
	comp=Z,16nm,0.5s,baz=127,slow=10,SNR=6.2						
ROSC			SKPbc	SKPbc	17 27 06.9	+2.6	
	comp=Z,41nm,0.7s,baz=105,slow=18,SNR=14						
BIOA	Bad Ischl, Aus	129.19 328	*i* PKP	PKPdf	17 24 21.3	+0.4	
	comp=Z,14nm,1.5s,SNR=5.9						
KASTN	Kahler Asten	129.21 335	*e*PKPdf	PKiKP	17 24 21.9	+0.2	
	baz=46,slow=1.9						
PSAL	Palomas, Salto	129.42 141	*e*P	PKPdf	17 24 19.7	-2.2	
OBKA	Obir	129.45 327	*i* PKiKP	PKiKP	17 24 22.8	+0.4	
	comp=Z,10nm,1.3s,SNR=6.5						
OBKA			*e*SKP	SKPbc	17 27 07.1	+2.9	
	comp=Z,5.2nm,0.9s						
LPAZ	La Paz	129.63 118	PKP	PKiKP	17 24 24.1	-0.2	
	comp=Z,8.5nm,0.9s,baz=353,slow=0.9,SNR=25						
LPAZ			SKPbc	SKPbc	17 27 08.7	+2.2	
	comp=Z,52nm,1.0s,baz=267,slow=2.3,SNR=61						
LPAZ	La Paz	129.63 118	PKIKP	PKPdf	17 24 24.1	-2.8	
LPAZ	La Paz	129.63 118		PKPdf	17 24 23.4	-3.5	
LPAZ	La Paz	129.63 118	*e*P	PKPdf	17 24 21.4	-2.1	
BOJS	Bojanci	129.68 325	*i* PKPdf	PKiKP	17 24 22.6	-0.2	
BOJS			*i* SKPbc	SKPbc	17 27 07.1	+2.2	
EKA	Eskdalemuir Ar	129.71 345	PKP	PKiKP	17 24 22.4	-0.1	
	comp=Z,4.2nm,0.7s,baz=21,slow=2.9,SNR=10.0						
EKA			SKPbc	SKPab	17 27 04.2	-0.4	
	comp=Z,3.3nm,0.8s,baz=46,slow=3.1,SNR=5.0						
KBA	Koelnbreinsper	129.74 328	*e*PKiKP	PKiKP	17 24 23.3	+0.3	
	comp=Z,7.9nm,0.9s						
LJU	Ljubljana	129.75 326	*i* PKPdf	PKPdf	17 24 22.5	+0.5	
LESA	Schwarzleotal	129.86 329	*i* PKP	PKPdf	17 24 22.1	-0.2	
	comp=Z,8.8nm,0.6s,SNR=8.3						
LESA			*e*SKP	SKPab	17 27 07.1	+1.4	
	comp=Z,5.9nm,1.1s						
MYKA	Terra Mystica	129.87 327	*i* PKP	PKPdf	17 24 22.3	-0.1	
	comp=Z,8.3nm,0.8s						
MYKA			*e*SKP	SKPab	17 27 08.1	+2.4	
	comp=Z,1.4nm,0.5s						
CEY	Cerknica	130.00 326	*i* PKPdf	PKPdf	17 24 22.9	+0.3	
TRI	Trieste	130.38 326	PKIKP	PKPdf	17 24 21.9	-1.3	
TRI	Trieste	130.38 326		PKPdf	17 24 21.1	-2.1	
ABTA	Abfaltersbach	130.39 328	*i* PKP	PKPdf	17 24 22.7	-0.7	
	comp=Z,9.8nm,0.7s,SNR=9.0						
ABTA			*i* SKP	SKPab	17 27 09.1	+1.2	
	comp=Z,9.8nm,1.0s						
WATA	Walderalm	130.48 329	*i* PKP	PKPdf	17 24 23.8	+0.2	
	comp=Z,7.4nm,0.7s,SNR=6.1						
WATA			*e*SKP	SKPab	17 27 11.3	+3.0	
	comp=Z,6.2nm,1.1s						
WTTA	Wattenberg	130.50 329	*i* PKP	PKPdf	17 24 23.9	+0.3	
	comp=Z,13nm,0.8s,SNR=9.2						
WTTA			*e*SKP	SKPab	17 27 11.9	+3.4	
	comp=Z,10nm,1.3s						
MEM	Membach	130.66 336	*d*PKP	PKiKP	17 24 24.3	-0.2	
MOTA	Moosalm	130.71 330	*i* PKP	PKPdf	17 24 24.1	+0.1	
	comp=Z,15nm,0.7s,SNR=8.6						
MOTA			*i* SKP	SKPab	17 27 10.9	+1.6	
	comp=Z,8.0nm,0.8s						
SQTA	Sankt Quirin	130.74 329	*i* PKP	PKPdf	17 24 24.4	+0.4	
	comp=Z,7.9nm,0.8s,SNR=8.5						
SQTA			*e*SKP	SKPab	17 27 12.3	+2.9	
	comp=Z,4.5nm,0.8s						
RETA	Reutte	130.79 330	*i* PKP	PKPdf	17 24 24.4	+0.4	
	comp=Z,4.7nm,0.9s						
RETA			*e*SKP	SKPab	17 27 11.3	+1.7	
	comp=Z,5.7nm,1.0s						
FETA	Feichten	131.12 330	*i* PKP	PKPdf	17 24 25.0	+0.2	
	comp=Z,9.9nm,0.7s,SNR=8.7						
FETA			*i* SKP	SKPab	17 27 12.5	+1.4	
	comp=Z,13nm,1.0s,SNR=5.2						
UCC	Uccle	131.16 337	*d*PKP	PKiKP	17 24 25.5	0.0	
WLF	Walferdange	131.32 335	*d*PKP	PKiKP	17 24 26.3	+0.4	
BFO	Black Forest	131.36 332	PKIKP	PKPdf	17 24 24.5	-0.6	
BFO	Black Forest	131.36 332		PKPdf	17 24 24.5	-0.6	
BFO	Black Forest	131.36 332	*e*PKPdf	PKiKP	17 24 25.8	-0.3	
	baz=46,slow=1.9						
DAVA	Damuels	131.36 330	*i* PKP	PKPdf	17 24 24.3	-0.9	
	comp=Z,12nm,0.7s,SNR=7.2						
DAVA			*i* SKP	SKPab	17 27 13.7	+1.6	
	comp=Z,20nm,1.0s						
BMRD	Maredsous	131.40 336	*d*PKP	PKiKP	17 24 26.1	+0.1	
MATE	Matera	131.53 319	⇓P	PKiKP	17 24 26.5	-0.1	
DOU	Dourbes	131.63 336	*d*PKP	PKiKP	17 24 26.4	-0.1	
TSUM	Tsumeb	131.85 236		PKPdf	17 24 25.6	-1.4	
TIP	Timpagrande	132.26 318	⇑P	PKiKP	17 24 28.0	-0.2	
TIP	Timpagrande	132.26 318		PKPdf	17 24 26.2	-0.9	
CPSB	Cacapava Do Su	132.42 144	*e*P	PKPdf	17 24 26.7	-0.9	
CPUP	Villa Florida	132.78 137	PKP	PKPdf	17 24 28.4	0.0	
	comp=Z,1.6nm,0.8s,baz=298,slow=4.5,SNR=4.7						
CPUP			SKPbc	SKPab	17 27 18.6	-0.1	
	comp=Z,9.5nm,1.0s,baz=239,slow=5.1,SNR=12						
CPUP			SKKPbc	SKKPbc	17 36 37.1	-0.8	
	comp=Z,0.5nm,0.3s,baz=153,slow=11,SNR=3.0						
CPUP	Villa Florida	132.78 137	*e*P	PKPdf	17 24 28.4	0.0	
SDV	Santo Domingo	133.04 85		PKPdf	17 24 28.0	-1.4	
SDV	Santo Domingo	133.04 85	*e*P	PKPdf	17 24 27.6	-1.8	
MURT	Porto Murtinho	135.50 131	*e*P	PKPdf	17 24 32.1	-1.4	
BBSD	Serra de San D	135.61 124	*e*P	PKPdf	17 24 34.2	+0.3	
COIM	Forte Coimbra	136.39 129	*e*P	PKPdf	17 24 34.1	-1.2	
PTGB	Pitanga	137.36 140	*e*P	PKPdf	17 24 37.8	+0.7	
PTLB	Pontes e Lacer	137.71 123	*e*P	PKPdf	17 24 35.3	-2.5	
VILB	Vilhena	137.98 119	*e*P	PKPdf	17 24 36.7	-1.7	
TRCB	Terra Rica	138.31 137	*e*P	PKPdf	17 24 37.1	-1.7	
KEST	Kesra	139.08 318	PKhKP	PKPpre	17 24 31.4		
	comp=Z,4.3nm,0.7s,baz=274,slow=4.0,SNR=11						
KEST			SKPbc	SKPbc	17 27 36.4	+0.7	
	comp=Z,8.8nm,0.8s,baz=352,slow=0.5,SNR=8.8						
SALV	Santo Antonio	140.29 126	*e*P	PKPdf	17 24 41.1	-1.4	
BOAV	Boa Vista	142.48 96		PKPdf	17 24 42.8	-3.7	
BOAV	Boa Vista	142.48 96	*e*P	PKPdf	17 24 43.2	-3.3	
CLDB	Colider	142.76 119	*e*P	PKPdf	17 24 46.4	-0.6	
PBRG	Braganca	142.86 339	*e*PKP	PKPdf	17 24 44.4	-2.0	
PGAV	Gavieira, Arco	143.23 341	*e*PKP	PKPbc	17 24 45.6	+0.8	
PCAB	Cabril	143.38 341	*e*PKP	PKPdf	17 24 46.4	-0.9	
ARAG	Araguaiana, MT	143.45 129	*e*P	PKPab	17 24 46.0	+0.1	
MVO	Moncorvo	143.53 339	*e*PKP	PKPdf	17 24 46.9	-0.8	
POLO	Lamas de Olo	143.61 340	*e*PKP	PKPdf	17 24 47.1	-0.7	
ESDC	Sonseca Array	143.62 335	PKP	PKPbc	17 24 46.8	+0.7	
	comp=Z,37nm,0.9s,baz=21,slow=3.2,SNR=204						
ESDC			SKPbc	SKiKP	17 27 48.9	+1.0	
	comp=Z,1.5nm,1.1s,baz=27,slow=4.2,SNR=2.7						
ESDC			SKKPbc	SKKPbc	17 35 57.9	+0.2	
	comp=Z,5.0nm,1.0s,baz=223,slow=4.5,SNR=25						
ESDC	Sonseca Array	143.62 335		PKPab	17 24 45.6	-0.4	
ESDC				SKPbc	17 27 45.6	-1.4	
PVRL	Vila Real	143.67 340	*e*PKP	PKPdf	17 24 47.3	-0.6	
PAB	San Pablo	143.89 335	PKIKP	PKPbc	17 24 47.8	+0.8	
PAB	San Pablo	143.89 335		PKPab	17 24 46.1	-0.9	
PTO	Porto	144.08 341	*e*PKP	PKPdf	17 24 48.7	+0.2	
PVIS	Viseu	144.23 340	*e*PKP	PKPdf	17 24 49.2	+0.4	
MTE	Manteigas	144.39 339	*e*PKP	PKPdf	17 24 49.8	+0.6	
IPMB	Ipameri, GO	144.62 136	*e*P	PKPbc	17 24 49.3	-0.6	
NPGB	Novo Progresso	144.81 114	*e*P	PKPdf	17 24 49.3	-1.2	
PCBR	Castelo Branco	144.86 339	*e*PKP	PKPab	17 24 51.1	+0.7	
PCAS	Casmilo, Conde	145.03 340	*e*PKP	PKPab	17 24 51.4	+0.4	
PMRV	Marv??o	145.19 338	*e*PKP	PKPab	17 24 52.4	+0.6	
PSARD	Sardoal	145.32 339	*e*PKP	PKPab	17 24 52.7	+0.5	
ITTB	Itaituba	145.45 109	*e*P	PKPdf	17 24 52.0	+0.3	
PSBE	So Bento	145.61 340	*e*PKP	PKPab	17 24 53.6	+0.3	
PESTR	Estremoz	145.76 338	*e*PKP	PKPab	17 24 53.7	-0.2	
PMTG	Montargil	145.81 339	*e*PKP	PKPab	17 24 53.8	-0.3	
PARRA	Arraiolos	145.97 339	*e*PKP	PKPab	17 24 54.4	-0.4	
SNDB	Serra Nova Dou	146.00 124	*e*P	PKPdf	17 24 50.8	-1.8	
PBAR	Barrancos	146.15 337	*e*PKP	PKPab	17 24 55.0	-0.5	
EVO	Evora	146.21 338	*e*PKP	PKPab	17 24 55.2	-0.4	
PMAFR	Mafra	146.28 340	*e*PKP	PKPab	17 24 55.4	-0.6	
BDFB	Brasilia	146.33 133	PKPbc	PKPdf	17 24 53.1	-0.1	
	comp=Z,15nm,0.7s,baz=221,slow=2.0,SNR=14						
BDFB			pPKPbc	pPKPab	17 26 33.8	+0.1	
	comp=Z,13nm,0.9s,baz=190,slow=4.6,SNR=4.7						
BDFB			SKPbc	SKPbc	17 27 53.3	-0.7	
	comp=Z,11nm,1.0s,baz=58,slow=1.5,SNR=4.2						
BDFB	Brasilia	146.33 133		PKPdf	17 24 53.5	+0.3	
MOE	Montemor	146.34 339	*e*PKP	PKPab	17 24 55.6	-0.6	
PBEJ	Beja	146.60 338	*e*PKP	PKPab	17 24 56.6	-0.7	
EDA	Edea	146.62 265	PKPdf	PKPdf	17 24 50.6	-3.1	
EDA				PKPbc	17 24 55.3	-0.6	
PLOUS	Minas do Lousa	146.80 338	*e*PKP	PKiKP	17 24 56.9	-1.0	
MESJ	Messejana	146.90 338	*e*PKP	PKPdf	17 24 53.7	+0.3	
MESJ	Messejana	146.90 338	*e*PKP	PKiKP	17 24 57.2	-0.9	
PCVE	Castro Verde	147.01 338	*e*PKP	PKiKP	17 24 57.7	-0.7	
PVAQ	Vaqueiros	147.09 337	*e*PKP	PKiKP	17 24 57.8	-0.7	
PBDV	Barranco-do-Ve	147.31 337	*e*PKP	PKiKP	17 24 58.7	-0.3	
PTEO	Sao Teotonio	147.34 338	*e*PKP	PKiKP	17 24 58.6	-0.4	
DIAM	Diamantina, MG	147.35 142	*e*P	PKPdf	17 24 53.5	-1.4	
MORF	Marmelete	147.53 338	*e*PKP	PKPdf	17 24 54.9	+0.4	
MORF	Marmelete	147.53 338	*e*PKP	PKiKP	17 24 59.0	-0.5	
MORF	Marmelete	147.53 338	PKHKP	PKPpre	17 24 52.1		
MORF					17 24 58.3		
MORF	Marmelete	147.53 338	PKPdf	PKPdf	17 24 52.1	-2.4	
MORF				PKPbc	17 24 58.3	+0.6	
PFVI	Vila Bisbo	147.75 338	*e*PKP	PKiKP	17 24 59.6	-0.3	
SJMB	Sao Joao De Ma	148.48 146	*e*P	PKPdf	17 24 56.2	-0.3	
JANB	Januaria	149.32 137	*e*P	PKPdf	17 24 56.7	-1.4	
ARCA	Araçuai, MG	149.50 143	*e*P	PKPdf	17 24 58.8	+0.6	
PRPB	Parauapebas	150.16 116	*e*P	PKPdf	17 24 57.7	-1.7	
SDBA	SAO DESIDERIO	150.72 132	*e*P	PKPdf	17 25 01.1	+0.9	
SMTB	Santa Maria do	150.75 123	*e*P	PKPdf	17 24 58.5	-1.8	
CMC01	Camacan, BA	152.10 145	*e*P	PKPdf	17 25 02.4	+0.2	
TORD	Torodi Ar. Bea	154.90 285	PKP	PKPdf	17 25 06.3	+0.1	
	comp=Z,3.2nm,0.7s,baz=33,slow=1.7,SNR=19						
TORD			PKPbc	PKiKP	17 25 14.9	-0.3	
	comp=Z,15nm,0.7s,baz=56,slow=2.4,SNR=33						
TORD	

N47A	**Urbana**	**8.26 141**	Pn	**Pn**	**17 18 16.0**	**+1.6**
KSU1	**Kansas State U**	**8.89 201**	IAmb_Lg		17 20 59.9	
	comp=Z,16nm,0.9s					
O48B	**Farmland**	**9.01 141**		**Pn**	**17 18 24.4**	**-0.3**
OLIL	**Olney**	**9.35 158**		**Pn**	**17 18 30.5**	**+1.2**
OGNE	**Ogallala**	**9.43 229**	IAmb_Lg		17 21 17.2	
	comp=Z,17nm,1.0s					
CPCT	**Cooper Cave**	**13.46 151**		**Pn**	**17 19 24.8**	**-0.8**
I56US	**NEWPORT INFRAS**	**16.47 282**	I	I	18 56 20.0	
	baz=86,slow=308,SNR=3.2					

*IDC **31** 17:18:12.0±1.2,3°.82S×151°.31E,h0km,mb3.9/10, mbtmp3.9/11,ML1.4/1,MS3.6/14,Error ellipse: s-maj=44.3km s-min=20.1km az=109.0*

ISC 31 17:18:15.4±1.2,3°.38S±0°.1×151°.3E±0°.3,h21km,n27, σ0s87/12,mb3.9/10,MS3.6/13,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.91 216**		Pn	**Pn**	**17 19 56.0**	**+0.5**
	0.4nm,0.3s,baz=226,slow=19,SNR=1.4						
	5.9nm,0.5s						
JAY	**Jayapura**	**10.66 277**		LR	LR	17 23 57.0	
	comp=Z,454nm,20.8s,baz=83,slow=32						
SIJI	**Sorong**	**20.23 278**		LR	LR	17 29 24.8	
	comp=Z,334nm,19.5s,baz=28,slow=33						
WRA	**Warramunga Arr**	**23.03 225**		P	**P**	**17 23 18.1**	**-1.2**
	3.3nm,1.0s,baz=48,slow=10,SNR=11						
	3.3nm,1.0s						
ASAR	**Alice Springs**	**25.92 219**		P	**P**	**17 23 46.4**	**+0.1**
	1.5nm,0.7s,baz=52,slow=8.4,SNR=10						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**29.36 197**		LR	LR	17 35 30.1	
	comp=Z,189nm,21.3s,baz=20,slow=35						
KAPI	**Kappang**	**31.48 267**		LR	LR	17 40 07.7	
	comp=Z,49nm,18.7s,baz=77,slow=42						
JCJ	**Chichijima**	**31.97 345**		LR	LR	17 37 30.1	
	comp=Z,75nm,19.3s,baz=157,slow=36						
MJAR	**Matsushiro Arr**	**41.97 344**		LR	LR	17 42 47.5	
	comp=Z,75nm,18.6s,baz=175,slow=35						
RPZ	**Rata Peaks**	**43.41 159**		LR	LR	17 42 02.7	
	comp=Z,50nm,20.9s,baz=20,slow=33						
LEM	**Lembang**	**43.59 264**		LR	LR	17 48 06.4	
	comp=Z,90nm,18.1s,baz=34,slow=41						
RAR	**Rarotonga**	**50.54 114**		LR	LR	17 45 53.4	
	comp=Z,54nm,19.8s,baz=294,slow=33						
KLR	**Kul'dur**	**55.50 345**		LR	LR	17 48 28.2	
	comp=Z,44nm,20.4s,baz=186,slow=33						
CMAR	**Chiang Mai Arr**	**56.11 295**		P	**P**	**17 27 54.9**	**+1.2**
	0.6nm,0.3s,baz=124,slow=5.1,SNR=4.7						
CMAR				LR	LR	17 52 49.7	
	comp=Z,56nm,18.4s,baz=90,slow=37						
	0.6nm,0.3s						
PETK	**Petropavlovsk-**	**56.97 5**		LR	LR	17 50 11.3	
	comp=Z,39nm,20.1s,baz=182,slow=34						
PPT2	**Papeete2**	**59.45 108**		eLR	LR	17 46 04.6	
	119nm,26.5s						
TBI	**Tubuai**	**60.32 115**		eLR	LR	17 46 33.5	
	1μm,35.0s						
SONM	**Songino Array**	**64.71 328**		P	**P**	**17 28 50.7**	**-1.5**
	0.4nm,0.5s,baz=90,slow=3.0,SNR=3.5						
SONM				LR	LR	17 58 08.5	
	comp=Z,59nm,18.0s,baz=131,slow=37						
	0.4nm,0.5s						
TAOE	**Nuku Hiva Isla**	**68.24 98**		eLR	LR	17 50 13.1	
	282nm,26.0s						
TLY	**Talaya**	**68.49 330**		LR	LR	18 00 40.4	
	comp=Z,48nm,18.7s,baz=132,slow=37						
MKAR	**Makanchi Array**	**78.61 319**		P	**P**	**17 30 15.0**	**-0.7**
	0.6nm,1.0s,baz=111,slow=6.6,SNR=3.9						
	0.6nm,1.0s						
ZALV	**Zalesovo Beam**	**79.51 327**		P	**P**	**17 30 20.8**	**+0.4**
	0.2nm,0.3s,baz=129,slow=2.1,SNR=3.9						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**81.82 22**		P	**P**	**17 30 33.1**	**+0.5**
	1.1nm,0.6s,baz=246,slow=5.6,SNR=14						
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**82.11 322**		P	**P**	**17 30 34.8**	**+0.4**
	0.3nm,0.2s,baz=113,slow=5.2,SNR=2.2						
	0.3nm,0.2s						
NRIK	**Noril'sk**	**84.56 341**		P	**P**	**17 30 46.9**	**+0.3**
	1.9nm,0.2s,baz=100,slow=8.1,SNR=4.4						
	1.9nm,0.2s						
QSPA	**South Pole Qui**	**86.13 180**		P	**P**	**17 30 54.6**	**-0.2**
	1.8nm,1.1s,baz=63,slow=2.3,SNR=2.2						
	1.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**148.58 289**		PKPbc	**PKPbc**	**17 38 01.5**	**-0.4**
	0.7nm,0.8s,baz=59,slow=0.8,SNR=3.3						

*IDC **31** 17:20:40.5±1.3,3°.72S×151°.46E,h0km,mb3.9/10, mbtmp3.9/11,ML1.9/1,MS3.9/1,Error ellipse: s-maj=44.9km s-min=20.7km az=108.0*

ISC 31 17:20:46.0±1.2,3°.7S±0°.1×151°.4E±0°.3,h35km,n13, σ1s04/12,mb3.8/10,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.04 217**		Pn	**Pn**	**17 22 27.2**	**+0.5**
	1.1nm,0.3s,baz=352,slow=6.2,SNR=3.9						
	25nm,0.8s						
WRA	**Warramunga Arr**	**23.17 225**		P	**P**	**17 25 47.5**	**-2.2**
	3.3nm,1.0s,baz=49,slow=10,SNR=9.6						
	3.3nm,1.0s						
ASAR	**Alice Springs**	**26.05 219**		P	**P**	**17 26 17.2**	**+0.9**
	1.0nm,0.8s,baz=58,slow=9.1,SNR=4.8						
	1.0nm,0.8s						
JOW	**Kunigami**	**37.74 325**		LR	LR	17 40 00.7	
	comp=Z,167nm,21.3s,baz=188,slow=31						
CMAR	**Chiang Mai Arr**	**56.19 295**		P	**P**	**17 30 23.3**	**+0.5**
	0.9nm,0.3s,baz=101,slow=5.8,SNR=5.0						
	0.9nm,0.3s						
SONM	**Songino Array**	**64.70 328**		P	**P**	**17 31 21.5**	**+0.8**
	0.3nm,0.5s,baz=151,slow=6.6,SNR=1.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**78.63 319**		P	**P**	**17 32 45.1**	**+0.7**
	0.6nm,0.8s,baz=122,slow=6.0,SNR=4.9						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**79.51 327**		P	**P**	**17 32 47.8**	**-1.2**
	0.2nm,0.4s,baz=93,slow=7.2,SNR=1.6						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**81.70 22**		P	**P**	**17 33 00.8**	**+0.3**
	0.6nm,0.6s,baz=246,slow=5.6,SNR=8.9						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**82.12 322**		P	**P**	**17 33 03.0**	**0.0**
	0.3nm,0.2s,baz=106,slow=5.3,SNR=4.2						
	0.3nm,0.2s						
NRIK	**Noril'sk**	**84.52 341**		P	**P**	**17 33 14.0**	**-1.0**
	1.8nm,0.3s,baz=100,slow=4.4,SNR=5.8						
	1.8nm,0.3s						
QSPA	**South Pole Qui**	**86.22 180**		P	**P**	**17 33 23.8**	**+0.1**
	1.2nm,1.0s,baz=312,slow=3.9,SNR=2.7						
	1.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**148.67 289**		PKPbc	**PKPbc**	**17 40 30.4**	**-0.2**
	1.7nm,0.9s,baz=56,slow=3.4,SNR=6.2						

*JMA **31** 17:20:48.0±0.1,23°.8N±0°.3×121°.7E±0°.6,h47km±1km, MV2.9/15,TAIWAN REGION*
*TAP **31** 17:20:48.4,23°.87N×121°.70E,h49km,ML3.7,C*

ISC 31 17:20:48.6±1.2,23°.87N±0°.02×121°.71E±0°.02,h45km±4km, n164,σ1s40/315,1C-14D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.10 272**	*i*	P	**Pn**	**17 20 56.5**	**+0.7**
TEYL				S	**Sn**	**17 21 02.5**	**+1.6**
SHUL	**Shoufeng**	**0.16 241**	*i*	P	**Pn**	**17 20 56.6**	**+0.5**
SHUL				S	**Sn**	**17 21 03.5**	**+2.1**
TEGC	**Jichi Village**	**0.22 225**	*i*	P	**Pn**	**17 20 57.0**	**+0.4**
TEGC				*e*S	**Sn**	**17 21 02.9**	**+0.7**
ETM	**Tongmen**	**0.22 297**	ǁ*i*	P	**Pn**	**17 20 56.6**	**-0.1**
ETM				*i* S	**Sn**	**17 21 03.9**	**+1.6**
TWD	**Chiawan**	**0.24 334**	*i*	P	**Pn**	**17 20 56.8**	**0.0**
TWD				S	**Sn**	**17 21 03.6**	**+1.2**
ESL	**Shilin**	**0.26 259**	ǁ*i*	P	**Pn**	**17 20 56.7**	**-0.2**
ESL				*i* S	**Sn**	**17 21 02.6**	**-0.2**
ETL	**Fush Village**	**0.30 345**	*i*	P	**Pn**	**17 20 57.5**	**+0.1**
ETL				*i* S	**Sn**	**17 21 05.2**	**+1.7**
LXIB	**Xiulin Townshi**	**0.31 300**	ǁ*i*	P	**Pn**	**17 20 57.2**	**-0.4**
LXIB				S	**Sn**	**17 21 04.2**	**+0.2**
EGFH	**Guangfu**	**0.33 233**	*i*	P	**Pn**	**17 20 57.4**	**-0.2**
EGFH				*i* S	**Sn**	**17 21 04.6**	**+0.7**
NACB	**Ninganchiao**	**0.33 341**		P	**Pn**	**17 20 57.3**	**-0.3**
NACB	**Ninganchiao**	**0.33 341**	ǁ*i*	P	**Pn**	**17 20 57.4**	**-0.2**
NACB				*i* S	**Sn**	**17 21 04.3**	**+0.4**
WARBT	**Fenglin Townsh**	**0.33 244**	ǁ*i*	P	**Pn**	**17 20 57.2**	**-0.4**
WARBT				*i* S	**Sn**	**17 21 03.7**	**-0.4**
ETLH	**Xiulin Townshi**	**0.40 328**	ǁ*i*	P	**Pn**	**17 20 58.2**	**-0.3**
ETLH				*i* S	**Sn**	**17 21 05.5**	**+0.1**
HGSD	**Ruisui**	**0.46 215**	*i*	P	**Pn**	**17 20 59.4**	**+0.3**
HGSD				*i* S	**Sn**	**17 21 08.8**	**+2.4**
EAHA	**Aohua**	**0.46 3**	*i*	P	**Pn**	**17 20 58.9**	**-0.2**
EAHA				*i* S	**Sn**	**17 21 07.3**	**+0.7**
WHF	**Hehuan Shan**	**0.49 304**	ǁ*i*	P	**Pn**	**17 20 59.7**	**-0.3**
WHF				*i* S	**Sn**	**17 21 07.5**	**-0.5**
EHYH	**Wanrong**	**0.50 222**	*i*	P	**Pn**	**17 20 59.0**	**-0.6**
EHYH				*i* S	**Sn**	**17 21 06.8**	**-0.5**
OWD	**Renai**	**0.50 280**	ǁ*i*	P	**Pn**	**17 20 59.7**	**0.0**
OWD				*i* S	**Sn**	**17 21 07.4**	**-0.2**
EHY	**Hungye**	**0.51 225**	*i*	P	**Pn**	**17 20 59.0**	**-0.7**
EHY				*i* S	**Sn**	**17 21 06.7**	**-0.8**
VWDT	**VWDT**	**0.53 258**	*i*	P	**Pn**	**17 21 00.1**	**+0.1**
VWDT				S	**Sn**	**17 21 08.3**	**+0.1**
WUSB	**Renai**	**0.56 283**	ǁ*i*	P	**Pn**	**17 21 00.6**	**+0.1**
WUSB				*i* S	**Sn**	**17 21 08.8**	**-0.2**
ENA	**Nanau**	**0.56 3**	*i*	P	**Pn**	**17 20 58.4**	**-2.0**
ENA				S	**Sn**	**17 21 08.6**	**-0.2**
ECBN	**Changbin**	**0.60 204**	*i*	P	**Pn**	**17 21 00.7**	**-0.1**
ECBN				*i* S	**Sn**	**17 21 11.6**	**+2.1**
YULB	**Yu-li**	**0.60 219**		P	**Pn**	**17 21 00.1**	**-0.8**
YULB	**Yu-li**	**0.60 219**		S	**Sn**	**17 21 08.2**	**-1.6**
YULB	**Yu-li**	**0.60 219**	*i*	P	**Pn**	**17 21 00.2**	**-0.8**
YULB				S	**Sn**	**17 21 09.4**	**-0.4**
EOS4	**EOS4**	**0.61 65**	*i*	P	**Pn**	**17 21 01.1**	**+0.4**
EOS4				*i* S	**Sn**	**17 21 10.6**	**+1.3**
TWT	**Tachien**	**0.62 308**	*i*	P	**Pn**	**17 21 01.8**	**+0.5**
TWT				*i* S	**Sn**	**17 21 10.8**	**+0.5**
EYUL	**Yuli**	**0.63 215**	*i*	P	**Pn**	**17 21 00.9**	**-0.3**
EYUL				*e*S	**Sn**	**17 21 10.2**	**-0.1**
NNSB	**Datong**	**0.64 332**	ǁ*i*	P	**Pn**	**17 21 01.3**	**-0.2**
NNSB				*i* S	**Sn**	**17 21 11.1**	**+0.4**
NNSH	**Datong**	**0.64 332**	*i*	P	**Pn**	**17 21 01.3**	**-0.2**
NNSH				*i* S	**Sn**	**17 21 11.0**	**+0.3**
TDCB	**Techi**	**0.64 307**	ǁ*i*	P	**Pn**	**17 21 01.7**	**+0.2**
TDCB				*i* S	**Sn**	**17 21 10.8**	**+0.1**
TWF1	**Yuli**	**0.64 217**	*i*	P	**Pn**	**17 21 00.8**	**-0.6**
TWF1				*i* S	**Sn**	**17 21 10.0**	**-0.5**
NNS	**Nan Shan**	**0.65 332**	ǁ*i*	P	**Pn**	**17 21 01.6**	**-0.1**
NNS				*i* S	**Sn**	**17 21 11.4**	**+0.3**
LATG	**Datong**	**0.69 346**	*i*	P	**Pn**	**17 21 01.8**	**-0.4**
LATG				*e*S	**Sn**	**17 21 12.5**	**+0.6**
EOS3	**EOS3**	**0.69 53**	*e*	P	**Pn**	**17 21 02.8**	**+0.8**
EOS3				*e*S	**Sn**	**17 21 13.7**	**+2.0**
SSLB	**Suanglung**	**0.70 264**		P	**Pn**	**17 21 02.1**	**-0.1**
SSLB	**Suanglung**	**0.70 264**		P	**Pn**	**17 21 02.2**	**0.0**
SSLB				*e*S	**Sn**	**17 21 12.7**	**+0.7**
EOS2	**EOS2**	**0.73 41**	*i*	P	**Pn**	**17 21 03.5**	**+1.1**
EOS2				S	**Sn**	**17 21 14.5**	**+2.1**
CHKH	**Chenggong**	**0.73 203**	*i*	P	**Pn**	**17 21 03.0**	**+0.4**
CHKH				*i* S	**Sn**	**17 21 14.2**	**+1.5**
SMLT	**Sun Moon Lake**	**0.74 272**	*i*	P	**Pn**	**17 21 03.1**	**+0.3**
SMLT				*i* S	**Sn**	**17 21 13.6**	**+0.4**
TWC	**Suao**	**0.75 10**	*i*	P	**Pn**	**17 21 03.3**	**+0.4**
TWC				*i* S	**Sn**	**17 21 14.3**	**+1.1**
NDT	**Datong Townshi**	**0.76 346**	*i*	P	**Pn**	**17 21 03.1**	**+0.1**
NDT				*e*S	**Sn**	**17 21 14.1**	**+0.7**
WCS	**Beigang Elemen**	**0.76 285**	*i*	P	**Pn**	**17 21 03.5**	**+0.6**
WCS				*i* S	**Sn**	**17 21 14.1**	**+0.7**
NDS	**Dongshan**	**0.77 0**	*i*	P	**Pn**	**17 21 02.9**	**-0.2**
NDS				*e*S	**Sn**	**17 21 14.6**	**+1.0**
FULB	**Fuli**	**0.77 210**	*i*	P	**Pn**	**17 21 03.0**	**-0.1**
FULB				*i* S	**Sn**	**17 21 15.2**	**+1.6**
TYC	**Yuchr**	**0.78 273**	*i*	P	**Pn**	**17 21 04.0**	**+0.7**
TYC				S	**Sn**	**17 21 15.2**	**+1.3**
WHYT	**Xinyi Township**	**0.80 258**	*i*	P	**Pn**	**17 21 04.2**	**+0.6**
WHYT				*i* S	**Sn**	**17 21 15.5**	**+0.9**
WHP	**Taichung City**	**0.81 301**	*i*	P	**Pn**	**17 21 04.5**	**+0.7**
WHP				*i* S	**Sn**	**17 21 15.7**	**+0.9**
CHKT	**Chengkung**	**0.83 203**	*i*	P	**Pn**	**17 21 03.5**	**-0.4**
CHKT				*i* S	**Sn**	**17 21 15.9**	**+0.9**
EHD	**Haiduan**	**0.85 213**	*i*	P	**Pn**	**17 21 03.0**	**-1.3**
EHD				S	**Sn**	**17 21 16.2**	**+0.5**
YHNB	**Yeheng**	**0.86 339**		P	**Pn**	**17 21 04.4**	**0.0**
YHNB	**Yeheng**	**0.86 339**	ǁ*i*	P	**Pn**	**17 21 04.5**	**+0.1**
YHNB				S	**Sn**	**17 21 16.4**	**+0.5**
NSK	**Sanguang**	**0.87 338**	ǁ*i*	P	**Pn**	**17 21 04.7**	**+0.1**
NSK				*i* S	**Sn**	**17 21 16.1**	**-0.1**
ECS	**Chishang**	**0.89 211**	*i*	P	**Pn**	**17 21 04.1**	**-0.7**
ECS				S	**Sn**	**17 21 18.4**	**+1.8**
ILA	**Ilan**	**0.90 2**	*i*	P	**Pn**	**17 21 05.5**	**+0.6**
ILA				S	**Sn**	**17 21 19.8**	**+3.0**
FUSB	**Fushanzhiwuyua**	**0.90 353**	*i*	P	**Pn**	**17 21 04.8**	**-0.1**
FUSB				*e*S	**Sn**	**17 21 17.6**	**+0.7**
WJS	**Zhushan**	**0.90 267**	*i*	P	**Pn**	**17 21 05.8**	**+0.8**
WJS				*i* S	**Sn**	**17 21 18.7**	**+1.8**
ALS	**Alishan**	**0.90 247**	ǁ*i*	P	**Pn**	**17 21 05.6**	**+0.4**
ALS				*i* S	**Sn**	**17 21 18.1**	**+0.8**
ELDTW	**Lidau**	**0.93 224**	*i*	P	**Pn**	**17 21 04.6**	**-0.8**
ELDTW				*i* S	**Sn**	**17 21 17.1**	**-0.5**
NWLT	**Wulai**	**0.93 348**	*i*	P	**Pn**	**17 21 05.3**	**0.0**
NWLT				S	**Sn**	**17 21 18.2**	**+0.7**
NFF	**Wufeng Townshi**	**0.94 325**	*i*	P	**Pn**	**17 21 06.3**	**+0.8**
NFF				*i* S	**Sn**	**17 21 19.1**	**+1.3**
WNT	**Mingjian**	**0.94 271**	*i*	P	**Pn**	**17 21 06.6**	**+1.2**
WNT				*i* S	**Sn**	**17 21 19.8**	**+2.0**
EDH	**Donghe**	**0.96 203**	*i*	P	**Pn**	**17 21 05.8**	**0.0**
EDH				S	**Sn**	**17 21 19.7**	**+1.4**
CHN5	**Tsauling**	**0.98 254**	*i*	P	**Pn**	**17 21 06.5**	**+0.4**
CHN5				*i* S	**Sn**	**17 21 21.0**	**+2.1**
TWQ1	**Liyutan**	**0.98 299**	*i*	P	**Pn**	**17 21 06.7**	**+0.6**
TWQ1				*i* S	**Sn**	**17 21 20.2**	**+1.4**
TCU	**Taichung**	**0.99 287**	*i*	P	**Pn**	**17 21 07.2**	**+1.1**
TCU				*i* S	**Sn**	**17 21 21.1**	**+2.1**
EGS		**1.00 12**	*i*	P	**Pn**	**17 21 08.1**	**+1.9**
EGS				S	**Sn**	**17 21 22.2**	**+3.1**
NSTT	**Nanjuang**	**1.00 320**	*i*	P	**Pn**	**17 21 07.3**	**+1.0**
NSTT				*i* S	**Sn**	**17 21 20.7**	**+1.5**
LIOB	**Emei**	**1.00 321**	*i*	P	**Pn**	**17 21 07.4**	**+1.1**
LIOB				*i* S	**Sn**	**17 21 21.7**	**+2.3**
KSHI	**Guanxi Townshi**	**1.03 332**	*i*	P	**Pn**	**17 21 08.0**	**+1.3**
KSHI				*i* S	**Sn**	**17 21 22.4**	**+2.5**
WGK	**Gukeng**	**1.07 261**	*i*	P	**Pn**	**17 21 07.9**	**+0.7**
WGK				*i* S	**Sn**	**17 21 23.9**	**+3.0**
WCHH	**Zhanghua**	**1.08 282**	*i*	P	**Pn**	**17 21 08.4**	**+1.1**
WCHH				S	**Sn**	**17 21 23.8**	**+2.7**
WCH1	**Changhua City**	**1.08 281**	*i*	P	**Pn**	**17 21 08.5**	**+1.2**
WCH1				*i* S	**Sn**	**17 21 24.0**	**+2.7**
WDL	**Douliou City**	**1.08 262**	*i*	P	**Pn**	**17 21 08.5**	**+1.1**
WDL				*i* S	**Sn**	**17 21 24.6**	**+3.3**
WDLH	**Douliu**	**1.09 261**	*i*	P	**Pn**	**17 21 08.2**	**+0.8**
WDLH				*i* S	**Sn**	**17 21 23.3**	**+1.9**
WDJ	**Dajia District**	**1.09 296**	*i*	P	**Pn**	**17 21 08.2**	**+0.7**
WDJ				*i* S	**Sn**	**17 21 23.1**	**+1.7**
LONT	**Longtian**	**1.09 209**	*i*	P	**Pn**	**17 21 06.5**	**-1.0**
LONT				S	**Sn**	**17 21 21.0**	**-0.5**
WCKO	**Fanlu**	**1.10 248**	*i*	P	**Pn**	**17 21 08.7**	**+1.1**
WCKO				*i* S	**Sn**	**17 21 23.7**	**+2.0**
STYH	**Taoyuan**	**1.10 231**	*i*	P	**Pn**	**17 21 08.3**	**+0.7**
STYH				*i* S	**Sn**	**17 21 23.7**	**+2.0**
NHDH	**Xindian Distri**	**1.11 351**	*i*	P	**Pn**	**17 21 08.2**	**+0.5**
NHDH				*i* S	**Sn**	**17 21 22.9**	**+1.1**
TIPB	**Shuangxi**	**1.11 5**	*i*	P	**Pn**	**17 21 08.5**	**+0.8**
TIPB				*i* S	**Sn**	**17 21 23.9**	**+2.0**
TWA	**Mucha**	**1.12 354**	*i*	P	**Pn**	**17 21 08.1**	**+0.2**
TWA				*i* S	**Sn**	**17 21 23.1**	**+1.0**
TATO	**Taipei**	**1.12 350**		P	**Pn**	**17 21 08.2**	**+0.2**
TATO	**Taipei**	**1.12 350**		S	**Sn**	**17 21 23.2**	**+0.9**
SBCB	**Hsinchu**	**1.14 324**	*i*	P	**Pn**	**17 21 09.2**	**+1.1**
SBCB				S	**Sn**	**17 21 25.5**	**+3.0**
TPUB	**Ta-pu**	**1.14 241**		P	**Pn**	**17 21 09.1**	**+0.9**
TPUB	**Ta-pu**	**1.14 241**	*i*	P	**Pn**	**17 21 08.8**	**+0.6**
TPUB				*i* S	**Sn**	**17 21 24.5**	**+1.8**
CHN4	**Tsaushan**	**1.15 244**	*i*	P	**Pn**	**17 21 09.3**	**+1.0**
CHN4				*i* S	**Sn**	**17 21 25.3**	**+2.5**
HSN	**Hsinchu**	**1.15 324**		P	**Pn**	**17 21 09.2**	**+0.9**
HSN				*i* S	**Sn**	**17 21 25.8**	**+2.9**
TWB1	**Santiao Chiao**	**1.17 12**	*i*	P	**Pn**	**17 21 08.6**	**+0.1**
TWB1				*i* S	**Sn**	**17 21 25.6**	**+2.4**
CHN2	**Minshiung**	**1.18 254**	*i*	P	**Pn**	**17 21 09.9**	**+1.2**
CHN2				*i* S	**Sn**	**17 21 27.1**	**+3.4**
WTP	**Ta-pu**	**1.18 239**	*i*	P	**Pn**	**17 21 09.5**	**+0.8**
WTP				*i* S	**Sn**	**17 21 26.0**	**+2.3**
TAP	**Taipei**	**1.18 351**	*e*	P	**Pn**	**17 21 07.3**	**-1.5**
TAP				S	**Sn**	**17 21 22.9**	**-0.8**
TWGBT	**Beinan**	**1.19 209**		P	**Pn**	**17 21 08.2**	**-0.7**
TWGBT	**Beinan**	**1.19 209**	*i*	P	**Pn**	**17 21 07.6**	**-1.3**
TWGBT				S	**Sn**	**17 21 23.4**	**-0.5**
TWG	**Pinlang**	**1.19 210**	*i*	P	**Pn**	**17 21 07.8**	**-1.1**
TWG				S	**Sn**	**17 21 22.8**	**-1.1**
NCUH	**Zhongli**	**1.20 336**	*i*	P	**Pn**	**17 21 09.7**	**+0.7**
NCUH				S	**Sn**	**17 21 26.9**	**+2.8**
WFSB	**Wu-fen Shan**	**1.20 3**	*i*	P	**Pn**	**17 21 09.6**	**+0.6**
WFSB				S	**Sn**	**17 21 26.3**	**+2.2**
LDUT	**Ludao**	**1.21 191**	*i*	P	**Pn**	**17 21 08.1**	**-1.0**
LDUT				*i* S	**Sn**	**17 21 23.8**	**-0.5**
TTN	**Taitung**	**1.22 205**		P	**Pn**	**17 21 09.5**	**+0.2**
TTN				*e*S	**Sn**	**17 21 24.8**	**+0.2**
WRL	**Guolierlin Hig**	**1.22 272**	*i*	P	**Pn**	**17 21 10.1**	**+0.8**
WRL				*i* S	**Sn**	**17 21 27.7**	**+3.0**
WTK	**Tuku**	**1.23 262**	*i*	P	**Pn**	**17 21 10.6**	**+1.3**
WTK				*i* S	**Sn**	**17 21 27.6**	**+2.9**
SXI1	**Grass Mountain**	**1.23 7**	*i*	P	**Pn**	**17 21 09.6**	**+0.1**
SXI1				*i* S	**Sn**	**17 21 27.1**	**+2.1**
CHY	**Chiayi**	**1.24 253**	*i*	P	**Pn**	**17 21 10.4**	**+0.9**
CHY				*i* S	**Sn**	**17 21 26.9**	**+1.9**
RLNB	**Erlin**	**1.24 271**	*i*	P	**Pn**	**17 21 10.3**	**+0.9**
RLNB				*i* S	**Sn**	**17 21 27.3**	**+2.2**
TWS1	**Kuangyinshan**	**1.26 348**	*i*	P	**Pn**	**17 21 10.6**	**+0.8**
TWS1				*i* S	**Sn**	**17 21 27.0**	**+1.5**
JYNG	**Yonagunijimaku**	**1.27 62**	*e*	P	**Pn**	**17 21 10.2**	**+0.3**
JYNG				*e*S	**Sn**	**17 21 26.6**	**+0.8**
TWK	**Hsinying**	**1.27 242**	*i*	P	**Pn**	**17 21 10.8**	**+0.8**
TWK				*i* S	**Sn**	**17 21 28.3**	**+2.4**
CHN1	**Nanshi**	**1.28 238**	*i*	P	**Pn**	**17 21 11.1**	**+1.0**
CHN1				*i* S	**Sn**	**17 21 28.2**	**+2.1**
TNOU	**National Taiwa**	**1.28 2**		P	**Pn**	**17 21 10.3**	**+0.2**
TNOU				S	**Sn**	**17 21 27.3**	**+1.2**
NHW	**Xinwu Township**	**1.29 332**		P	**Pn**	**17 21 10.8**	**+0.6**
NHW				S	**Sn**	**17 21 27.6**	**+1.3**
SGST	**Jiashian**	**1.30 233**	*i*	P	**Pn**	**17 21 10.4**	**0.0**
SGST				*i* S	**Sn**	**17 21 28.0**	**+1.5**
ZUZH	**Zhuzihu**	**1.30 353**	*i*	P	**Pn**	**17 21 10.3**	**-0.1**
ZUZH				*i* S	**Sn**	**17 21 26.8**	**+0.1**
SLGT	**Liugui**	**1.31 229**	*i*	P	**Pn**	**17 21 11.7**	**+1.2**
SLGT				*i* S	**Sn**	**17 21 29.2**	**+2.4**
WTCT	**Ta-ch'eng**	**1.31 270**	*i*	P	**Pn**	**17 21 11.2**	**+0.7**
WTCT				*i* S	**Sn**	**17 21 29.3**	**+2.5**
NTST	**Danshui**	**1.32 350**	*i*	P	**Pn**	**17 21 10.8**	**+0.2**
NTST				*i* S	**Sn**	**17 21 28.8**	**+1.9**
YM08	**YM08**	**1.32 355**	*i*	P	**Pn**	**17 21 10.2**	**-0.5**
YM08				*e*S	**Sn**	**17 21 26.8**	**-0.3**
ANP	**Anpu**	**1.33 352**	*i*	P	**Pn**	**17 21 11.2**	**+0.4**
ANP				*e*S	**Sn**	**17 21 27.7**	**+0.4**
YOJ	**Yonaguni jima**	**1.33 63**	P		**Pn**	**17 21 10.9**	**+0.2**
YOJ	**Yonaguni jima**	**1.33 63**	*i*	P	**Pn**	**17 21 11.0**	**+0.2**
YOJ				S	**Sn**	**17 21 27.7**	**+0.5**
WSF	**Szhu**	**1.38 261**	*i*	P	**Pn**	**17 21 12.2**	**+0.8**
WSF				*i* S	**Sn**	**17 21 30.9**	**+2.3**

KOUNC	**Koumac, New Ca**	**3.98 228**	S		**Sn**	**17 36 30.1**	**0.0**
KOUNC	**Koumac, New Ca**	**3.98 228**			**Pn**	**17 35 44.0**	**-0.2**
KOUNC				Sn	**Sn**	**17 36 28.1**	**-2.0**
YATNC	**Mamie plateau,**	**4.16 187**	P		**Pn**	**17 35 45.5**	**-1.2**
DZM	**Mont Dzumac**	**4.25 193**	Pn		**Pn**	**17 35 48.0**	**+0.1**
	10nm,0.3s,baz=44,slow=10,SNR=95						
DZM				Sn	**Sn**	**17 36 35.0**	**-1.8**
	5.9nm,0.3s,baz=303,slow=23,SNR=1.5						
	28nm,0.3s						
NOUC	**Port Laguerre**	**4.31 194**	P		**Pn**	**17 35 49.0**	**+0.4**
NOUC	**Port Laguerre**	**4.31 194**	S		**Sn**	**17 36 36.6**	**-1.6**
ONTNC	**Ouen Toro**	**4.47 192**	P		**Pn**	**17 35 51.5**	**+0.6**
ONTNC	**Ouen Toro**	**4.47 192**	S		**Sn**	**17 36 42.2**	**-0.1**
ONTNC	**Ouen Toro**	**4.47 192**			**Pn**	**17 35 50.6**	**-0.3**
ONTNC				Sn	**Sn**	**17 36 42.3**	**-0.1**
OUENC	**Ouen Island, N**	**4.52 187**	P		**Pn**	**17 35 51.7**	**+0.1**
OUENC	**Ouen Island, N**	**4.52 187**	Pn		**Pn**	**17 35 50.7**	**-0.9**
OUENC				Sn	**Sn**	**17 36 43.7**	**+0.2**
HNR	**Honiara**	**11.14 318**	Pn		**Pn**	**17 37 22.5**	**0.0**
	0.2nm,0.3s,baz=292,slow=18,SNR=3.8						
HNR				Sn	**Sn**	**17 39 19.2**	**-7.3**
	baz=352,slow=7.7						
	1.5nm,0.6s						
HNR	**Honiara**	**11.14 318**			**Pn**	**17 37 21.1**	**-1.4**
TATA	**Tatamba Isabel**	**12.04 321**	P		**Pn**	**17 37 36.6**	**+1.8**
EIDS	**Eidsvold**	**16.92 241**	P		**P**	**17 38 41.4**	**-0.4**
CTA	**Charters Tower**	**20.16 260**	P		**P**	**17 39 16.1**	**-1.4**
	0.1nm,0.3s,baz=83,slow=12,SNR=1.6						
CTA				LR	LR	17 46 39.1	
	comp=Z,32nm,19.7s,baz=45,slow=36						
	5.4nm,1.0s						
CTAO	**Charters Tower**	**20.16 260**	P		**P**	**17 39 16.3**	**-1.2**
CTAO			IAmb		IAmb	17 39 46.2	
	comp=Z,22nm,1.2s						
SYDH	**Sydney Hard Ro**	**21.75 220**	P		**P**	**17 39 35.2**	**+0.7**
QLP	**Quilpie**	**23.13 244**	P		**P**	**17 39 50.8**	**+1.6**
CMSA	**Cobar Meteorol**	**23.91 231**	P		**P**	**17 39 57.4**	**+0.6**
TCW	**Tory Channel**	**23.95 167**	P		**P**	**17 39 57.3**	**+0.3**
INZ	**Inchbonnie**	**24.97 173**	P		**P**	**17 40 07.3**	**+1.1**
GVZ	**Greta Valley S**	**25.42 170**	P		**P**	**17 40 11.2**	**+0.8**
STKA	**Stephens Creek**	**27.18 234**	P		**P**	**17 40 26.8**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=68,slow=11,SNR=4.1						
	comp=Z,1.6nm,0.8s						
WR8	**Warramunga Arr**	**31.21 261**	P		**P**	**17 41 02.3**	**-0.1**
WB0	**Warramunga Arr**	**31.32 261**	P		**P**	**17 41 02.9**	**-0.4**
WB0			IAmb		IAmb	17 41 27.2	
	comp=Z,8.0nm,1.2s						
WRAB	**Tennant Creek**	**31.35 261**	P		**P**	**17 41 03.1**	**-0.5**
WRA	**Warramunga Arr**	**31.36 261**	P		**P**	**17 41 03.7**	**0.0**
	comp=Z,1.8nm,0.7s,baz=88,slow=8.7,SNR=24						
	comp=Z,1.8nm,0.7s						
AS01	**Alice Springs**	**31.79 254**	P		**P**	**17 41 07.5**	**0.0**
AS31	**Alice Springs**	**31.83 254**	P		**P**	**17 41 07.8**	**0.0**
AS31			IAmb		IAmb	17 41 08.9	
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**31.83 254**	P		**P**	**17 41 08.1**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=78,slow=8.9,SNR=47						
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**31.83 254**	P		**P**	**17 41 07.7**	**-0.2**
KNRA	**Kununurra**	**37.06 268**	P		**P**	**17 41 53.0**	**-0.2**
KNRA			IAmb		IAmb	17 42 29.9	
	comp=Z,5.0nm,1.1s						
FAKI	**Fak Fak**	**37.58 289**	P		**P**	**17 41 57.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**39.70 263**	P		**P**	**17 42 16.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**39.70 263**	P		**P**	**17 42 15.5**	**+0.1**
MAJO	**Matsushiro**	**60.80 333**	P		**P**	**17 44 55.2**	**+0.4**
ERM	**Erimo**	**63.71 340**	P		**P**	**17 45 14.7**	**+0.6**
QSPA	**South Pole Qui**	**72.14 180**	P		**P**	**17 46 08.6**	**+1.4**
	comp=Z,1.7nm,0.9s,baz=41,slow=7.0,SNR=4.1						
	comp=Z,1.7nm,0.9s						
QSPA	**South Pole Qui**	**72.14 180**	P		**P**	**17 46 07.6**	**+0.5**
LZDM	**Lanzhou Array**	**80.62 312**	LR		LR	18 21 38.5	
	comp=Z,51nm,20.1s,baz=150,slow=35						
BELA	**Belgrano 2**	**83.56 175**	P		**P**	**17 47 11.2**	**+0.9**
BELA			IAmb		IAmb	17 47 24.7	
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**85.15 324**	P		**P**	**17 47 22.8**	**+3.9**
	comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=4.1						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**85.15 324**	P		**P**	**17 47 20.9**	**+1.9**
SONM			IAmb		IAmb	17 47 43.8	
	comp=Z,3.7nm,1.5s						
ELK	**Elko**	**92.28 48**	LR		LR	18 19 37.8	
	comp=Z,104nm,21.1s,baz=75,slow=29						

*IDC **31** 17:48:25.4±1.1,3.°93S×151.°50E, h0km, mb4.2/13, mbtmp4.2/14, ML2.0/1, MS3.7/44, Error ellipse: s-maj=40.1km s-min=16.8km az=113.0*
*NEIC **31** 17:48:27.6±1.0,3.°91S±0.°08×151.°35E±0.°05, h10km±1km, mb4.5/41, Error ellipse: s-maj=14.1km s-min=7.1km az=196.0*
*GCMT **31** 17:48:30.6±0.2,3.°75S±0.°03×151.°17E±0.°03, h13km±1km, MW4.8/96, Moment Tensor Solution. s23,c25; s96,c136; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.86±.13; Mθθ 1.12±.08; Mφφ 0.73±.08; Mrθ-0.09±.25; Mrφ 0.74±.04; Mθφ-0.18±.21; Best double couple: M0 1.78900×10^16^ NP1:φ,δ 235.00000°,δ 42.00000°,λ-86.00000°. NP2: φ,δ 50.00000°,δ 48.00000°,λ-93.00000°. Principal axes: T 1.7040, Plg3.0000°, Azm142.0000°; N 0.1680, Plg3.0000°, Azm52.0000°; P -1.8740, Plg86.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 17:48:28.6±0.5,3.°93S±0.°07×151.°39E±0.°06, h21km, n100, σ 0.°91/67, mb4.5/33, MS3.8/39, 1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.81**	**108**		**Pn**	**17 48 44.7**	**-0.2**
RABL				Sg	**Sb**	**17 48 55.1**	**+0.5**
MANU	**Manus Island**	**4.43**	**295**		**Pn**	**17 49 33.3**	**-1.4**
PMG	**Port Moresby**	**6.87**	**217**	Pn	**Pn**	**17 50 10.4**	**+2.2**
	1.5nm,0.3s,baz=55,slow=4.4,SNR=6.2						
PMG				LR	LR	17 52 22.4	
	comp=Z,306nm,19.7s,baz=30,slow=34						
	14nm,0.8s						
PMG	**Port Moresby**	**6.87**	**217**		**Pn**	**17 50 06.8**	**-1.4**
HNR	**Honiara**	**10.10**	**123**	LR	LR	17 54 59.4	
	comp=Z,69nm,21.3s,baz=16,slow=39						
HNR	**Honiara**	**10.10**	**123**	Pn	**Pn**	**17 50 50.9**	**-1.7**
JAY	**Jayapura**	**10.75**	**277**	LR	LR	17 54 32.3	
	comp=Z,1um,19.5s,baz=68,slow=34						
CTA	**Charters Tower**	**16.82**	**197**	LR	LR	17 58 37.8	
	comp=Z,87nm,19.7s,baz=16,slow=36						
GUMO	**Guam**	**18.57**	**340**	LR	LR	17 58 43.5	
	comp=Z,64nm,21.9s,baz=152,slow=33						
FAKI	**Fak Fak**	**19.13**	**272**		**P**	**17 52 49.8**	**-0.8**
WR8	**Warramunga Arr**	**22.91**	**225**	P	**P**	**17 53 31.0**	**-0.3**
WB2	**Warramunga Arr**	**23.00**	**225**	P	**P**	**17 53 32.0**	**-0.3**
WB2				IAmb	IAmb	17 54 05.5	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**23.01**	**225**	P	**P**	**17 53 32.7**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=50,slow=10,SNR=22						
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**23.01**	**225**	P	**P**	**17 53 30.1**	**-2.3**
KNRA	**Kununurra**	**25.13**	**241**	P	**P**	**17 53 52.6**	**+0.2**
KNRA				IAmb	IAmb	17 54 15.5	
	comp=Z,11nm,1.3s						
INKA	**Innaminka**	**25.76**	**202**	P	**P**	**17 53 58.1**	**+0.1**
AS31	**Alice Springs**	**25.88**	**219**		**P**	**17 53 59.2**	**-0.1**
ASAR	**Alice Springs**	**25.88**	**219**	P	**P**	**17 54 00.1**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=54,slow=8.9,SNR=23						
ASAR				LR	LR	18 05 46.0	
	comp=Z,134nm,18.3s,baz=19,slow=40						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**25.88**	**219**		**P**	**17 53 59.2**	**-0.1**
DAV	**Davao City (W)**	**27.98**	**293**	LR	LR	18 04 34.3	
	comp=Z,60nm,18.9s,baz=122,slow=34						
BATI	**Baumata**	**28.20**	**256**	LR	LR	18 07 24.1	
	comp=Z,270nm,20.7s,baz=164,slow=40						
FITZ	**Fitzroy Crossi**	**28.87**	**239**	P	**P**	**17 54 25.6**	**-0.4**
	comp=Z,4.5nm,0.8s,baz=75,slow=6.7,SNR=6.1						
FITZ				LR	LR	18 07 44.7	
	comp=Z,188nm,18.7s,baz=25,slow=40						
	comp=Z,4.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.87**	**239**	P	**P**	**17 54 25.1**	**-0.9**
STKA	**Stephens Creek**	**29.28**	**197**	LR	LR	18 05 43.0	
	comp=Z,241nm,21.5s,baz=23,slow=35						
MSVF	**Nonsavu**	**29.50**	**120**	LR	LR	18 05 36.9	
	comp=Z,390nm,21.7s,baz=341,slow=35						
KAPI	**Kappang**	**31.56**	**267**	LR	LR	18 09 59.2	
	comp=Z,31nm,20.3s,baz=71,slow=41						
JCJ	**Chichijima**	**32.10**	**344**	LR	LR	18 06 42.6	
	comp=Z,129nm,21.2s,baz=162,slow=34						
FORT	**Forrest**	**34.60**	**217**	P	**P**	**17 55 15.8**	**-0.4**
FORT				IAmb	IAmb	17 55 38.8	
	comp=Z,9.7nm,1.1s						
JOW	**Kunigami**	**37.88**	**325**	LR	LR	18 07 56.5	
	comp=Z,261nm,22.0s,baz=200,slow=31						
JHJ	**Hachijo jima 2**	**38.46**	**344**	LR	LR	18 08 31.1	
	comp=Z,165nm,21.2s,baz=250,slow=31						
NIUE	**Niue**	**40.65**	**115**	P	**P**	**17 56 06.6**	**-1.1**
URZ	**Urewera**	**41.44**	**149**	LR	LR	18 10 57.3	
	comp=Z,155nm,21.1s,baz=289,slow=33						
JNU	**Nakatsue**	**41.66**	**334**	LR	LR	18 11 43.8	
	comp=Z,83nm,19.6s,baz=150,slow=34						
MJAR	**Matsushiro Arr**	**42.11**	**344**	LR	LR	18 12 28.1	
	comp=Z,90nm,21.0s,baz=172,slow=34						
RPZ	**Rata Peaks**	**43.27**	**159**	LR	LR	18 12 60.0	
	comp=Z,86nm,18.9s,baz=17,slow=34						
LEM	**Lembang**	**43.66**	**264**	LR	LR	18 18 15.4	
	comp=Z,72nm,19.3s,baz=107,slow=41						
ASAJ	**Asahikawa**	**48.48**	**352**	LR	LR	18 15 39.3	
	comp=Z,69nm,20.5s,baz=199,slow=34						
RAR	**Rarotonga**	**50.42**	**114**	LR	LR	18 15 59.2	
	comp=Z,110nm,21.0s,baz=286,slow=33						
BNX	**BinXian**	**53.86**	**339**	⇓P	**P**	**17 57 51.5**	**+1.3**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.6s						
CMAR	**Chiang Mai Arr**	**56.24**	**295**	P	**P**	**17 58 09.9**	**+2.1**
	comp=Z,0.8nm,0.4s,baz=118,slow=5.1,SNR=9.1						
	comp=Z,0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**56.24**	**295**		**P**	**17 58 07.6**	**-0.2**
PEA0B	**Petropavlovsk-**	**57.08**	**5**	P	**P**	**17 58 13.3**	**+0.1**
PETK	**Petropavlovsk-**	**57.08**	**5**	P	**P**	**17 58 14.1**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=187,slow=6.7,SNR=2.2						
PETK				LR	LR	18 17 47.0	
	comp=Z,72nm,20.8s,baz=180,slow=31						
	comp=Z,2.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.08**	**5**	P	**P**	**17 58 13.3**	**+0.1**
HEH	**HeiHe**	**57.80**	**342**	*e*P	**P**	**17 58 16.5**	**-1.8**
SHEM	**Shemya Is, Ala**	**59.63**	**16**	LR	LR	18 20 47.0	
	comp=Z,56nm,19.1s,baz=146,slow=33						
MA2	**Magadan**	**63.32**	**360**	LR	LR	18 22 23.1	
	comp=Z,79nm,21.5s,baz=193,slow=32						
ULN	**Ulaanbaatar**	**64.53**	**329**	P	**P**	**17 59 04.6**	**+0.4**
ULN				IAmb	IAmb	17 59 11.0	
	comp=Z,2.8nm,1.1s						
SONM	**Songino Array**	**64.85**	**328**	P	**P**	**17 59 07.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=152,slow=6.6,SNR=3.7						
SONM				LR	LR	18 25 32.3	
	comp=Z,130nm,21.8s,baz=137,slow=34						
	comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**64.85**	**328**	P	**P**	**17 59 06.2**	**-0.1**
YAK	**Yakutsk**	**67.86**	**349**	P	**P**	**17 59 26.0**	**+0.9**
	comp=Z,5.4nm,0.6s,baz=137,slow=12,SNR=6.4						
YAK				LR	LR	18 26 37.6	
	comp=Z,63nm,21.8s,baz=154,slow=34						
	comp=Z,5.4nm,0.6s						
YAK	**Yakutsk**	**67.86**	**349**	P	**P**	**17 59 25.8**	**+0.7**
TLY	**Talaya**	**68.63**	**330**	LR	LR	18 30 18.2	
	comp=Z,56nm,18.4s,baz=114,slow=37						
PALK	**Pallekele**	**71.41**	**279**	LR	LR	18 32 52.4	
	comp=Z,26nm,18.4s,baz=116,slow=37						
VNDA	**Vanda**	**73.74**	**178**	LR	LR	18 28 30.5	
	comp=Z,45nm,19.4s,baz=314,slow=33						
L14K	**Kuka Creek**	**74.05**	**21**	P	**P**	**18 00 03.5**	**+0.9**
L14K				IAmb	IAmb	18 00 11.0	
	comp=Z,5.5nm,0.9s						
K15K	**Wolf Creek Mou**	**75.09**	**21**	P	**P**	**18 00 08.1**	**-0.7**
K15K				IAmb	IAmb	18 00 16.3	
	comp=Z,5.4nm,1.0s						
M16K	**Timber Creek**	**75.22**	**23**	P	**P**	**18 00 11.1**	**+1.5**
ANM	**Nome**	**75.38**	**18**	P	**P**	**18 00 11.1**	**+0.8**
L16K	**Owhat River**	**75.46**	**22**	P	**P**	**18 00 10.8**	**-0.1**
L16K				IAmb	IAmb	18 00 22.2	
	comp=Z,8.1nm,1.4s						
M17K	**Holitna River**	**76.04**	**23**	P	**P**	**18 00 14.2**	**0.0**
KDAK	**Kodiak Island**	**76.05**	**27**	LR	LR	18 30 58.5	
	comp=Z,41nm,18.6s,baz=0,slow=34						
TIXI	**Tiksi**	**76.86**	**353**	LR	LR	18 34 27.8	
	comp=Z,29nm,19.5s,baz=196,slow=36						
H17K	**Granite Mounta**	**77.36**	**19**	P	**P**	**18 00 22.2**	**+0.6**
H17K				IAmb	IAmb	18 00 30.0	
	comp=Z,3.9nm,0.9s						
L19K	**White Mountain**	**77.50**	**23**	P	**P**	**18 00 23.1**	**+0.6**
L19K				IAmb	IAmb	18 00 30.6	
	comp=Z,5.0nm,0.8s						
CNPM	**China Poot**	**77.55**	**26**	P	**P**	**18 00 23.1**	**+0.2**
G18K	**Tagagawik**	**78.38**	**19**	P	**P**	**18 00 28.7**	**+1.4**
G18K				IAmb	IAmb	18 00 37.9	
	comp=Z,10nm,1.5s						
MKAR	**Makanchi Array**	**78.75**	**319**	P	**P**	**18 00 29.0**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=114,slow=7.0,SNR=1.2						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**78.75**	**319**	P	**P**	**18 00 29.6**	**-0.2**
G19K	**Purcell Mounta**	**79.03**	**19**		**P**	**18 00 32.2**	**+1.3**
G19K				IAmb	IAmb	18 00 39.2	
	comp=Z,6.0nm,1.0s						
CAST	**Castle Rocks**	**79.24**	**22**	P	**P**	**18 00 32.6**	**+0.5**
CAST				IAmb	IAmb	18 00 50.7	
	comp=Z,5.2nm,1.2s						
F19K	**Shaleruckik Mo**	**79.24**	**18**	P	**P**	**18 00 32.4**	**+0.4**
F19K				IAmb	IAmb	18 00 45.8	
	comp=Z,5.8nm,1.1s						
ZAA0	**Zalesovo Array**	**79.66**	**327**	P	**P**	**18 00 33.9**	**-0.6**
ZALV	**Zalesovo Beam**	**79.66**	**327**	P	**P**	**18 00 33.3**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=1.9						
ZALV				LR	LR	18 34 54.9	
	comp=Z,59nm,20.5s,baz=120,slow=35						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**79.66**	**327**	P	**P**	**18 00 34.1**	**-0.4**
E19K	**Redstone River**	**79.79**	**18**		**P**	**18 00 35.8**	**+0.8**
IMAR	**Indian Mountai**	**80.05**	**20**	P	**P**	**18 00 36.9**	**+0.5**
SCM	**Sheep Creek Mo**	**80.36**	**25**	P	**P**	**18 00 38.3**	**+0.1**
SCM				IAmb	IAmb	18 00 52.5	
	comp=Z,6.2nm,0.8s						
RND	**Reindeer**	**80.49**	**23**	P	**P**	**18 00 38.8**	**-0.1**
RND				IAmb	IAmb	18 00 49.8	
	comp=Z,5.9nm,1.0s						
MLY	**Manley**	**80.59**	**21**		**P**	**18 00 39.9**	**+0.5**
MLY				IAmb	IAmb	18 00 46.6	
	comp=Z,3.3nm,0.8s						
E21K	**Killik River**	**81.37**	**18**	P	**P**	**18 00 43.7**	**+0.3**
CCB	**Clear Creek Bu**	**81.49**	**22**	P	**P**	**18 00 44.2**	**+0.2**
ILAR	**Eielson Array**	**81.90**	**22**	P	**P**	**18 00 45.7**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=245,slow=5.6,SNR=11						
ILAR				LR	LR	18 32 52.8	
	comp=Z,47nm,19.5s,baz=295,slow=33						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**81.90**	**22**	P	**P**	**18 00 46.0**	**-0.2**
KURBB	**Kurchatov Arra**	**82.25**	**322**	LR	LR	18 36 44.8	
	comp=Z,83nm,20.8s,baz=171,slow=35						
J25K	**Salcha River,**	**82.41**	**23**		**P**	**18 00 49.4**	**+0.4**
F24K	**Squaw Lake**	**82.83**	**20**	P	**P**	**18 00 52.2**	**+1.1**
F24K				IAmb	IAmb	18 00 59.5	
	comp=Z,2.9nm,0.8s						
M27K	**Edge Creek, AK**	**82.91**	**26**	P	**P**	**18 00 52.6**	**+0.8**
M27K				IAmb	IAmb	18 01 03.8	
	comp=Z,3.2nm,0.8s						
AAK	**Ala-Archa**	**83.05**	**314**	LR	LR	18 37 58.4	
	comp=Z,92nm,20.9s,baz=106,slow=36						
G26K	**Porcupine Rive**	**84.00**	**21**	P	**P**	**18 00 58.6**	**+1.5**
G26K				IAmb	IAmb	18 01 05.2	
	comp=Z,2.8nm,0.8s						
NRIK	**Noril'sk**	**84.70**	**341**	P	**P**	**18 01 01.3**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=115,slow=8.3,SNR=4.3						
NRIK				LR	LR	18 38 26.8	
	comp=Z,50nm,20.1s,baz=148,slow=35						
	comp=Z,2.0nm,0.5s						
NRIK	**Noril'sk**	**84.70**	**341**	IAmb	IAmb	18 01 08.5	
	comp=Z,2.9nm,0.6s						
MAW	**Mawson**	**85.82**	**203**	LR	LR	18 37 15.7	
	comp=Z,84nm,20.1s,baz=86,slow=34						
QSPA	**South Pole Qui**	**86.02**	**180**	P	**P**	**18 01 08.3**	**+0.8**
	comp=Z,4.4nm,1.1s,baz=279,slow=1.1,SNR=5.9						
QSPA				LR	LR	18 36 22.3	
	comp=Z,44nm,21.5s,baz=261,slow=33						
	comp=Z,4.4nm,1.1s						
QSPA	**South Pole Qui**	**86.02**	**180**		**P**	**18 01 08.0**	**+0.5**
PFO	**Pinyon Flats O**	**93.95**	**57**	LR	LR	18 38 05.6	
	comp=Z,30nm,18.2s,baz=34,slow=32						
ARTI	**Arti**	**94.92**	**326**	P	**P**	**18 01 48.9**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=90,slow=5.1,SNR=3.1						
ARTI				LR	LR	18 43 45.1	
	comp=Z,137nm,21.7s,baz=110,slow=35						
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**95.16**	**320**	LR	LR	18 45 38.8	
	comp=Z,56nm,19.7s,baz=84,slow=36						
LPIG	**La Paz**	**99.17**	**66**	LR	LR	18 43 03.1	
	comp=Z,56nm,18.0s,baz=244,slow=33						
KIRV	**Kirov**	**99.58**	**329**	LR	LR	18 46 48.8	
	comp=Z,37nm,21.6s,baz=72,slow=35						

*IDC **31** 17:52:48.6±1.5,30.°28N×94.°98E, h0km, mb3.4/4, mbtmp3.4/6, ML3.2/2, Error ellipse: s-maj=70.3km s-min=20.9km az=64.0*

ISC 31 17:52:52.0±1.6,30.°3N±0.°2×95.°0E±0.°4, h23km, n6, σ 0.°96/6, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.21**	**333**	P	**P**	**17 57 14.3**	**-0.1**
	baz=142,slow=12,SNR=3.6						
	0.2nm,0.6s						
SONM	**Songino Array**	**19.58**	**23**	P	**P**	**17 57 18.6**	**+0.2**
	0.1nm,0.3s,baz=218,slow=9.1,SNR=7.3						
	2.1nm,1.1s						
KURBB	**Kurchatov Arra**	**23.77**	**333**	P	**P**	**17 58 02.6**	**-0.1**
	0.4nm,0.2s,baz=155,slow=11,SNR=5.4						
	0.4nm,0.2s						
ZALV	**Zalesovo Beam**	**24.77**	**346**	P	**P**	**17 58 11.7**	**-0.1**
	0.4nm,0.5s,baz=148,slow=8.5,SNR=2.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**62.65**	**138**	P	**P**	**18 03 13.8**	**-1.2**
	0.4nm,0.8s,baz=338,slow=5.7,SNR=1.9						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**65.35**	**141**	P	**P**	**18 03 33.9**	**+1.2**
	0.6nm,1.1s,baz=321,slow=6.3,SNR=8.1						
	0.6nm,1.1s						

*IDC **31** 17:55:32.5±0.7,31.°96N×93.°51E, h0km, mb3.8/15, mbtmp3.8/19, ML4.2/5, MS3.2/2, Error ellipse: s-maj=23.4km s-min=14.7km az=56.0*
*NEIC **31** 17:55:33.5±2.4,31.°97N±0.°05×93.°53E±0.°07, h10km±1km, mb4.2/21, Error ellipse: s-maj=12.5km s-min=4.6km az=127.0*
*BJI **31** 17:55:34.5,31.°91N×93.°39E, h10km, mb4.0/7, ML3.5/8, Ms3.9/7, Ms7 3.6/8*

ISC 31 17:55:33.7±0.4,31.°99N±0.°05×93.°47E±0.°06, h10km, n57, σ 18.°32/58, mb4.1/21, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.03**	**222**		**Pn**	**17 56 21.8**	**-0.5**
LSA					**Sb**	**17 57 05.8**	**+0.4**
LSA	**Lhasa**	**3.03**	**222**	*e*Pn	**Pn**	**17 56 22.3**	**0.0**
LSA				Sn	**Sb**	**17 57 06.5**	**+1.1**
LSA				SMN			
	190nm,0.7s						
LSA				SME			
	310nm,1.0s						
SHL	**Shillong**	**6.55**	**193**		**Pn**	**17 57 09.7**	**-0.7**
EVN	**Everest**	**7.03**	**237**		**Pn**	**17 57 17.2**	**-0.2**
MORE	**Moreh**	**7.76**	**174**		**Pn**	**17 57 26.5**	**-0.3**
TNCH	**TengChong**	**8.23**	**146**	*e*P	**Pn**	**17 57 36.5**	**+3.0**
TNCH				S	**Sn**	**17 59 11.0**	**+4.3**
TNCH				pmax	pmax		
	comp=Z,38nm,2.3s						
TNCH				L	L		
	comp=N,360nm,6.3s						
TNCH				L	L		
	comp=E,270nm,6.1s						
TNCH				L	L		
	comp=Z,150nm,7.3s						
GTA2	**Gaotai**	**9.06**	**33**	*e*P	Pn	17 57 50.0	+5.3
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LZDM	**Lanzhou Array**	**9.37**	**62**	Pn	**Pn**	**17 57 47.9**	**-1.1**
	baz=230,slow=11						
	3.6nm,0.4s						
BRDH	**Bariadhala**	**9.42**	**190**	Pn	**Pn**	**17 57 47.5**	**-2.1**
	9.3nm,0.3s,baz=291,slow=12,SNR=3.6						
BRDH				Sn	**Sn**	**17 59 31.9**	**-3.6**
	12nm,0.3s,baz=78,slow=21,SNR=1.7						
CMAR	**Chiang Mai Arr**	**14.35**	**159**	Pn	**Pn**	**17 58 55.0**	**-2.1**
	0.5nm,0.3s,baz=337,slow=11,SNR=7.4						
	0.7nm,0.4s						
WUS	**Wushi**	**14.67**	**313**	Pn	**Pn**	**17 59 02.3**	**+0.9**
PDGK	**Podgornoye**	**15.81**	**320**		**Pn**	**17 59 15.6**	**-0.9**
TARG	**Taragay, Kyrgy**	**15.84**	**312**	Pn	**Pn**	**17 59 16.9**	**-0.4**
PRZ	**Przheval'sk**	**15.91**	**315**	Pn	**Pn**	**17 59 17.4**	**-0.4**
PRZ				IAmb	IAmb	17 59 54.5	
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**17.10**	**333**	P	**Pn**	**17 59 33.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=146,sl

AS31				IAmb	IAmb	18 06 59.3	
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	**67.50**	**140**	P	**P**	**18 06 30.3**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=320,slow=6.2,SNR=13						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**67.50**	**140**	P	**P**	**18 06 29.5**	**-0.7**
J14K	**Nanvaranak Lak**	**67.65**	**29**	P	**P**	**18 06 30.7**	**+0.1**
C23K	**Itkillik River**	**68.55**	**20**	P	**P**	**18 06 35.1**	**-1.0**
C23K				IAmb	IAmb	18 06 43.8	
	comp=Z,4.2nm,1.1s						
H22K	**Ishtalitna Cre**	**70.59**	**23**	P	**P**	**18 06 47.2**	**-1.6**
H22K				IAmb	IAmb	18 07 12.8	
	comp=Z,4.0nm,1.2s						
ESDC	**Sonseca Array**	**75.50**	**308**	P	**P**	**18 07 19.6**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=54,slow=6.3,SNR=4.3						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**84.64**	**282**	P	**P**	**18 08 09.9**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=46,slow=2.5,SNR=6.9						
	comp=Z,0.8nm,0.5s						

BJI ***31*** *17:55:53.1, 41˚.04N× 140˚.31E, h159km, mB4.5/8, mb4.7/50*
MOS ***31*** *17:55:54.9± 0.9, 41˚.23N× 140˚.27E, h157km, mb5.0/44, Error ellipse: s-maj=6.1km s-min=4.2km az=116.3*
IDC ***31*** *17:55:55.9± 0.9, 41˚.24N× 140˚.25E, h152km± 7km, mb4.3/30, mbtmp4.7/39, Error ellipse: s-maj=10.5km s-min=7.7km az=114.0*
NEIC ***31*** *17:55:55.7± 2.0, 41˚.30N± 0˚.05× 140˚.22E± 0˚.10, h148km± 5km, mb4.5/191, Error ellipse: s-maj=10.9km s-min=7.3km az=112.0*
NIED ***31*** *17:55:56.5, 41˚.22N× 140˚.31E, h150km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr=2.06; Mθθ 0.61; Mφφ 1.45; Mrθ=0.91; Mθφ=2.39; Mφr=1.59; Fault plane solution: M0 3.53000×10^15 NP1: φs 108.00000°, δ 51.00000°, λ=143.00000°. NP2: φs 352.00000°, δ 63.00000°, λ=46.00000°.*
GFZ ***31*** *17:55:56.3± 0.3, 41˚.2N± 0˚.3× 140˚.3E± 0˚.7, h150km, MD4.4/40, MV4.2/40, TSUGARU PENINSULA REGION*
ISC 31 17:55:55.6± 0.4, 41˚.23N± 0˚.03× 140˚.24E± 0˚.04, h155km± 3km, h155km pP-P, n744, σ1 49/710, mb4.5/188, 38C-54D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSI2	**Shiura 2**	**0.22**	**142**	⇓P	**Pn**	**17 56 16.8**	**+0.2**
JSI2				A	A	17 56 16.8	
	comp=N,12nm,0.7s,comp=E,38nm,1.0s						
JSI2				⇓S	**Sn**	**17 56 32.3**	**-0.2**
JSR	**Shiriuchi**	**0.33**	**25**	⇓P	**Pn**	**17 56 17.1**	**+0.2**
JSR				A	A	17 56 17.1	
	comp=N,4.0nm,1.0s,comp=E,4.0nm,5.4s						
JSR				⇓S	**Sn**	**17 56 32.4**	**-0.7**
JOMM	**Oshimamatsumae**	**0.34**	**330**	P	**Pn**	**17 56 17.5**	**+0.6**
JOMM				A	A	17 56 17.5	
	comp=N,8.0nm,0.9s,comp=E,11nm,0.9s						
JOMM				S	**Sn**	**17 56 33.6**	**+0.4**
JHHS	**Hirosakihyakuz**	**0.58**	**171**	A	A	17 56 18.3	
	comp=N,17nm,0.7s,comp=E,31nm,1.3s						
JOT	**Ohata**	**0.63**	**76**	⇓P	**Pn**	**17 56 18.4**	**+0.2**
JOT				A	A	17 56 18.4	
	comp=N,8.0nm,4.1s,comp=E,4.0nm,2.1s						
JIW	**Iwasaki**	**0.66**	**195**	P	**Pn**	**17 56 19.0**	**+0.5**
JIW				A	A	17 56 19.0	
	comp=N,8.0nm,1.0s,comp=E,14nm,4.1s						
JIW				*eS*	**Sn**	**17 56 36.2**	**+0.3**
JTM	**Tenmabayashi**	**0.77**	**125**		**Pn**	**17 56 19.1**	**0.0**
JTM				Sn	**Sn**	**17 56 35.2**	**-1.8**
JTM	**Tenmabayashi**	**0.77**	**125**	P	**Pn**	**17 56 19.4**	**+0.2**
JTM	**Tenmabayashi**	**0.77**	**125**	⇓P	**Pn**	**17 56 19.3**	**+0.2**
JAHD	**Aomorihigashid**	**0.83**	**87**	A	A	17 56 19.7	
	comp=N,29nm,1.6s,comp=E,28nm,1.4s						
JKB	**Kayabe**	**0.89**	**42**	⇓P	**Pn**	**17 56 20.4**	**+0.5**
JKB				⇓*eS*	**Sn**	**17 56 38.4**	**-0.2**
JYM2	**Yakumo 2**	**0.89**	**6**	P	**Pn**	**17 56 20.6**	**+0.6**
JYM2				A	A	17 56 20.6	
	comp=N,2.0nm,0.7s,comp=E,4.0nm,0.8s						
JYM2				*eS*	**Sn**	**17 56 38.9**	**+0.1**
JNTW	**Noshirotokiwa**	**0.96**	**183**	A	A	17 56 21.0	
	comp=N,22nm,3.0s,comp=E,30nm,3.0s						
JOSM	**Okushiri--Mats**	**1.02**	**326**	⇓*eP*	**Pn**	**17 56 21.6**	**+0.6**
JAH	**Hinai**	**1.08**	**164**	⇓P	**Pn**	**17 56 21.9**	**+0.3**
JAH				⇓*eS*	**Sn**	**17 56 41.8**	**+0.4**
JHST	**Hiyamasetana**	**1.22**	**347**	P	**Pn**	**17 56 23.8**	**+1.0**
JHST				*eS*	**Sn**	**17 56 45.0**	**+1.3**
JANG	**Nango**	**1.29**	**131**	⇓P	**Pn**	**17 56 23.0**	**-0.6**
JKEN	**Kujiedanarisaw**	**1.52**	**132**	A	A	17 56 25.9	
	comp=N,10.0nm,0.4s,comp=E,8.0nm,0.5s						
JOG3	**Oga3**	**1.58**	**214**	A	A	17 56 24.8	
	comp=N,12nm,0.9s,comp=E,16nm,2.4s						
JYW	**Yuwa**	**1.69**	**181**	A	A	17 56 28.2	
	comp=N,21nm,1.1s,comp=E,11nm,0.8s						
JEW	**Eniwo**	**1.85**	**29**	P	**Pn**	**17 56 30.3**	**+1.1**
JRG	**Rokugo**	**1.86**	**170**	A	A	17 56 30.0	
	comp=N,7.0nm,1.2s,comp=E,7.0nm,1.9s						
JIAM	**Iburiatsuma**	**1.88**	**42**	A	A	17 56 30.1	
	comp=N,19nm,1.1s,comp=E,25nm,0.9s						
JOM	**Ohasama**	**1.93**	**155**	⇓P	**Pn**	**17 56 29.8**	**-0.5**
JOM				⇓*eS*	**Sn**	**17 56 55.7**	**-1.2**
JSHD	**Hidakashinhida**	**2.04**	**54**	A	A	17 56 31.9	
	comp=N,12nm,2.6s,comp=E,11nm,2.1s						
JNBK	**Urakawa-nobuka**	**2.16**	**60**	P	**Pn**	**17 56 32.9**	**+0.1**
JNBK				A	A	17 56 32.9	
	comp=N,8.0nm,0.3s,comp=E,8.0nm,1.0s						
JYK	**Kaneyama**	**2.31**	**178**	⇓P	**Pn**	**17 56 34.8**	**+0.1**
ERM	**Erimo**	**2.33**	**69**	*d* iP	**Pn**	**17 56 35.0**	**+0.2**
ERM	**Erimo**	**2.33**	**69**		**Pn**	**17 56 34.8**	**0.0**
ERM				Sn	**Sn**	**17 57 01.9**	**-3.2**
ERM	**Erimo**	**2.33**	**69**	P	**Pn**	**17 56 35.2**	**+0.4**
JMK	**Ichinoseki**	**2.40**	**161**	⇓P	**Pn**	**17 56 35.1**	**-0.7**
JCH	**Churui**	**2.71**	**58**	A	A	17 56 40.1	
	comp=N,4.0nm,0.8s,comp=E,6.0nm,1.1s						
JAR	**Ashorobuto**	**3.34**	**51**	A	A	17 56 48.2	
	comp=N,4.0nm,1.1s,comp=E,4.0nm,0.7s						
ASAJ	**Asahikawa**	**3.37**	**30**	P	**Pn**	**17 56 49.0**	**+1.2**
	comp=E,447nm,0.3s,baz=216,slow=15,SNR=2148						
ASAJ				S	**Sn**	**17 57 27.6**	**-0.7**
	comp=E,104nm,0.6s,baz=127,slow=28,SNR=3.7						
JKA	**Kamikawa-asahi**	**3.37**	**30**		**Pn**	**17 56 48.1**	**+0.3**
JKA				Sn	**Sn**	**17 57 25.8**	**-2.6**
JKA	**Kamikawa-asahi**	**3.37**	**30**	P	**Pn**	**17 56 48.5**	**+0.6**
NMR	**Nemuro--Hokkai**	**4.60**	**60**	⇑*iP*	**Pn**	**17 57 01.8**	**-1.9**
NMR				*eS*	**Sn**	**17 57 50.6**	**-6.3**
RUSJ	**Misakicho**	**4.68**	**50**	⇑*iP*	**Pn**	**17 57 04.8**	**0.0**
RUSJ				*eS*	**Sn**	**17 57 58.8**	**0.0**
MJB9	**Matsu-Tunnel**	**4.94**	**199**		**Pn**	**17 57 09.9**	**+1.6**
MAJO	**Matsushiro**	**4.94**	**199**	*c iP*	**Pn**	**17 57 09.3**	**+0.9**
MAJO	**Matsushiro**	**4.94**	**199**		**Pn**	**17 57 09.1**	**+0.8**
MAJO	**Matsushiro**	**4.94**	**199**	P	**Pn**	**17 57 09.5**	**+1.1**
MJAR	**Matsushiro Arr**	**4.94**	**199**	P	**Pn**	**17 57 09.4**	**+1.0**
	comp=E,21nm,0.4s,baz=6.5,slow=15,SNR=219						
MJAR				S	**Sn**	**17 58 06.9**	**+1.8**
	comp=E,7.5nm,0.6s,baz=25,slow=15,SNR=0.8						
MJAR	**Matsushiro Arr**	**4.94**	**199**	Pn	**Pn**	**17 57 09.7**	**+1.3**
MJAR					**Sn**	**17 58 05.7**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**5.01**	**54**	*e*P	**Pn**	**17 57 08.6**	**-0.5**
YUK				*eS*	**Sn**	**17 58 02.3**	**-4.2**
YUK				pmax	pmax		
	comp=N,313nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,195nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,4μm,0.6s						
YSS	**Yuzhno-Sakhali**	**6.00**	**17**	*o*e P	**Pn**	**17 57 22.8**	**+0.5**
YSS				*eS*	**Sn**	**17 58 28.5**	**-1.7**
YSS				pmax	pmax		
	comp=Z,140nm,0.6s						
YSS				pmax	pmax		
	comp=Z,200nm,3.1s						
YSS				smax	smax		
	comp=N,200nm,2.0s						
YSS				smax	smax		
	comp=E,100nm,2.0s						
YSS				smax	smax		
	comp=N,80nm,1.0s						
YSS				smax	smax		
	comp=E,40nm,1.0s						
YSS	**Yuzhno-Sakhali**	**6.00**	**17**		**Pn**	**17 57 22.3**	**+0.1**
YSS				Sn	**Sn**	**17 58 25.8**	**-4.4**
YSS	**Yuzhno-Sakhali**	**6.00**	**17**	P	**Pn**	**17 57 22.9**	**+0.6**
JGF	**Kuroka**	**6.06**	**203**		**Pn**	**17 57 23.7**	**+0.5**
JGF	**Kuroka**	**6.06**	**203**	P	**Pn**	**17 57 24.3**	**+1.1**
VLA	**Vladivostok**	**6.49**	**290**	*c iP*	**Pn**	**17 57 30.7**	**+2.0**
VLA				pmax	pmax		
	comp=Z,72nm,0.7s						
JSG	**Sagara**	**6.74**	**195**		**Pn**	**17 57 31.7**	**-0.5**
JSG				Sn	**Sn**	**17 58 47.8**	**-0.2**
USA0B	**Ussuriysk Arra**	**6.76**	**299**	*d iP*	**Pn**	**17 57 34.1**	**+1.7**
USA0B	**Ussuriysk Arra**	**6.76**	**299**		**Pn**	**17 57 31.6**	**-0.7**
USRK	**Ussuriysk Ar.**	**6.76**	**299**	P	**Pn**	**17 57 34.2**	**+1.8**
	comp=Z,27nm,0.6s,baz=94,slow=13,SNR=59						
KUR	**Kuril'sk**	**6.86**	**52**	*e*P	**Pn**	**17 57 33.1**	**-0.6**
KUR				*eS*	**Sn**	**17 58 49.0**	**-1.6**
KUR				pmax	pmax		
	comp=Z,71nm,0.4s						
KUR				pmax	pmax		
	comp=N,30nm,0.3s						
KUR				pmax	pmax		
	comp=E,10.0nm,0.3s						
KUR				smax	smax		
	comp=N,99nm,0.3s						
KUR				smax	smax		
	comp=E,82nm,0.3s						
PSTR	**Posyet**	**7.17**	**285**	*c iP*	**Pn**	**17 57 40.1**	**+2.2**
JHJ	**Hachijo jima 2**	**8.10**	**183**	P	Pn	17 57 45.5	-4.9
	comp=E,79nm,0.3s,baz=333,slow=18,SNR=21						
JHJ				S	Sn	17 59 11.6	-9.1
	comp=E,119nm,0.3s,baz=71,slow=23,SNR=9.6						
JHJ2	**Mitsune**	**8.11**	**182**	Pn	Pn	17 57 45.4	-5.1
JHJ2				Sn	Sn	17 59 09.6	-11
MDJ	**Mudanjiang**	**8.51**	**297**		**Pn**	**17 57 53.2**	**-2.4**
MDJ	**Mudanjiang**	**8.51**	**297**	P	**Pn**	**17 57 57.5**	**+1.8**
MDJ				pmax	pmax		
	comp=E,57nm,1.5s						
JMN	**Monobe**	**9.03**	**216**		Pn	17 57 57.5	-5.2
JMN	**Monobe**	**9.03**	**216**	P	**Pn**	**17 58 04.8**	**+2.1**
TYV	**Tymovskoe**	**9.78**	**9**	*e*P	**Pn**	**17 58 13.6**	**+1.2**
TYV				*eS*	**Sn**	**18 00 00.6**	**-0.1**
TYV				pmax	pmax		
	comp=Z,56nm,0.5s						
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				smax	smax		
	comp=N,100nm,2.3s						
TYV				smax	smax		
	comp=E,200nm,2.3s						
TYV				smax	smax		
	comp=N,14nm,1.6s						
TYV				smax	smax		
	comp=E,18nm,1.6s						
GRNR	**Gornyy**	**9.90**	**346**	⇓*iP*	**Pn**	**17 58 15.1**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,60nm,12.0s						
KLR	**Kul'dur**	**9.98**	**326**	P	**Pn**	**17 58 14.7**	**-0.4**
	comp=E,3.8nm,0.6s,baz=164,slow=11,SNR=11						
KLR	**Kul'dur**	**9.98**	**326**	*c*e P	**Pn**	**17 58 15.3**	**+0.1**
KLR				pmax	pmax		
	comp=Z,17nm,1.5s						
KSRS	**Korea Array**	**10.25**	**252**	P	**Pn**	**17 58 19.2**	**+0.4**
	comp=Z,4.6nm,1.0s,baz=69,slow=13,SNR=14						
KS19	**Wonju Array Si**	**10.27**	**253**	Pn	**Pn**	**17 58 17.4**	**-1.7**
BNX	**BinXian**	**10.35**	**300**	⇓P	**Pn**	**17 58 20.5**	**+0.4**
BNX				S	**Sn**	**18 00 14.5**	**-0.1**
BNX				pmax	pmax		
	comp=Z,34nm,0.9s						
BNX				L	L		
	comp=Z,230nm,4.6s						
BNX				L	L		
	comp=Z,62nm,9.7s						
JNU	**Nakatsue**	**11.00**	**226**	P	**Pn**	**17 58 29.7**	**+0.9**
	comp=Z,4.9nm,0.6s,baz=61,slow=3.3,SNR=9.9						
TJN	**Taejon**	**11.15**	**248**	P	**Pn**	**17 58 27.1**	**-3.5**
TJN	**Taejon**	**11.15**	**248**	Pn	**Pn**	**17 58 27.1**	**-3.5**
CN2	**Changchun**	**11.21**	**288**	P	**Pn**	**17 58 31.8**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JSU	**Suzuyama**	**12.49**	**222**		**Pn**	**17 58 46.7**	**-1.4**
JSU	**Suzuyama**	**12.49**	**222**	P	**Pn**	**17 58 48.5**	**+0.5**
HEH	**HeiHe**	**12.70**	**320**	*e*P	**Pn**	**17 58 51.3**	**+0.8**
HEH				pmax	pmax		
	comp=Z,16nm,0.7s						
JCJ	**Chichijima**	**14.19**	**173**	P	Pn	17 59 03.4	-6.3
	comp=Z,27nm,0.4s,baz=353,slow=19,SNR=11						
JCJ				S	Sn	18 01 31.2	-16
	comp=Z,34nm,0.4s,baz=280,slow=18,SNR=5.7						
JCJ	**Chichijima**	**14.19**	**173**		Pn	17 59 03.6	-6.0
DL2	**Dalian**	**14.44**	**267**	P	**P**	**17 59 14.0**	**-1.1**
DL2				pmax	pmax		
	comp=Z,40nm,1.3s						
ZEA	**Zeya**	**15.25**	**330**	*e*P	**Pn**	**17 59 22.7**	**+0.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
HIA	**Hailar**	**16.48**	**306**	*de*P	**P**	**17 59 36.2**	**-1.5**
HIA				pmax	pmax		
	comp=Z,15nm,0.6s						
HIA	**Hailar**	**16.48**	**306**		**P**	**17 59 35.9**	**-1.8**
HIA				IAmb	IAmb	17 59 38.6	
	comp=Z,17nm,0.6s						
HILR	**Hailar Array B**	**16.59**	**307**	P	**P**	**17 59 38.0**	**-0.9**
	comp=Z,26nm,0.4s,baz=111,slow=12,SNR=42						
PEA0B	**Petropavlovsk-**	**16.74**	**39**	P	**P**	**17 59 38.4**	**-2.1**
PEA0B				pmax	pmax		
	comp=Z,44nm,1.4s						
PEA0B	**Petropavlovsk-**	**16.74**	**39**	P	**P**	**17 59 38.4**	**-2.1**
PEA0B				IAmb	IAmb	18 00 12.9	
	comp=Z,44nm,1.4s						
PETK	**Petropavlovsk-**	**16.74**	**39**	P	**P**	**17 59 40.1**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=233,slow=9.1,SNR=11						
PETK	**Petropavlovsk-**	**16.74**	**39**	P	**P**	**17 59 37.8**	**-2.6**
JOW	**Kunigami**	**17.42**	**218**		**P**	**17 59 46.7**	**-1.5**
JOW				IAmb	IAmb	17 59 59.9	
	comp=Z,75nm,1.5s						
XLT	**XiLinHaoTe**	**17.98**	**287**	*e*P	**Pn**	**17 59 55.0**	**-0.8**
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
BJI2	**Beijing**	**18.30**	**274**	P	**P**	**17 59 56.0**	**-1.6**
BJI2				sP	**sP**	**18 00 40.8**	**-1.6**
BJI2				S	**S**	**18 03 09.5**	**-9.1**
BJI2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI2				pmax	pmax		
	comp=Z,32nm,5.1s						
BJI2				L	L		
	comp=Z,79nm,8.0s						
BJI2				L	L		
	comp=Z,47nm,9.9s						
BJI2				L	L		
	comp=Z,59nm,10.2s						
BJT	**Baijiatuau**	**18.30**	**274**	P	**P**	**17 59 56.2**	**-1.5**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuau**	**18.30**	**274**		**P**	**17 59 56.1**	**-1.5**
TIA	**Tai'an**	**18.70**	**262**	P	**P**	**18 00 02.0**	**0.0**
TIA				pmax	pmax		
	comp=Z,22nm,0.5s						
NJ2	**Nanjing**	**19.41**	**249**	*e*P	**P**	**18 00 08.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,29nm,0.7s						
MA2	**Magadan**	**19.51**	**16**	P	**P**	**18 00 10.4**	**-0.1**
	comp=Z,5.4nm,0.3s,baz=205,slow=10,SNR=6.6						
MA2	**Magadan**	**19.51**	**16**	*de*P	**P**	**18 00 10.0**	**-0.5**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	**Magadan**	**19.51**	**16**	P	**P**	**18 00 08.8**	**-1.7**
MA2	**Magadan**	**19.51**	**16**	P	**P**	**18 00 10.2**	**-0.3**
	comp=Z,16nm,0.8s						
HHC	**Hu-ho-hao-te**	**21.59**	**279**	*e*P	**P**	**18 00 31.5**	**-1.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,65nm,3.6s						
YAK	**Yakutsk**	**21.78**	**347**	P	**P**	**18 00 33.4**	**-1.3**
	comp=Z,24nm,0.5s,baz=282,slow=1.5,SNR=11						
YAK				S	**S**	**18 04 20.4**	**-4.5**
	comp=Z,18nm,0.8s,baz=71,slow=20,SNR=21						
	comp=Z,24nm,0.5s						
YAK	**Yakutsk**	**21.78**	**347**	*e*P	**P**	**18 00 32.8**	**-1.9**
YAK				*e**PP	**pP**	**18 01 02.9**	**+1.3**
YAK				*eS*	**S**	**18 04 22.1**	**-2.8**
YAK				*e**SS	**sS**	**18 05 14.2**	**+1.2**
YAK				*e*		18 11 31.2	
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,32nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=E,164nm,2.7s						
YAK				smax	smax		
	comp=N,287nm,1.9s						
YAK	**Yakutsk**	**21.78**	**347**		**P**	**18 00 31.9**	**-2.8**
YAK	**Yakutsk**	**21.78**	**347**	P	**P**	**18 00 32.9**	**-1.9**
YOJ	**Yonaguni jima**	**22.05**	**226**	P	**P**	**18 00 35.3**	**-2.5**
YOJ				pmax	pmax		
	comp=Z,238nm,1.5s						
YOJ	**Yonaguni jima**	**22.05**	**226**	P	**P**	**18 00 35.3**	**-2.5**
TATO	**Taipei**	**22.49**	**230**	P	**P**	**18 00 39.5**	**-2.7**
YHNB	**Yeheng**	**22.79**	**229**	P	**P**	**18 00 42.8**	**-2.2**
YHNB				IAmb	IAmb	18 01 10.5	
	comp=Z,38nm,1.2s						
SEY	**Seymchan**	**22.90**	**14**	*d* iP	**P**	**18 00 45.6**	**0.0**
SEY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NACB	**Ninganchiao**	**23.06**	**228**	P	**P**	**18 00 43.5**	**-3.9**
NACB				IAmb	IAmb	18 01 26.1	
	comp=Z,19nm,1.2s						
BOD	**Bodaibo**	**23.55**	**324**	*e*P	**P**	**18 00 50.5**	**-1.0**
BOD				pmax	pmax		
	comp=Z,83nm,0.7s						
SSLB	**Suanglung**	**23.72**	**229**	P	**P**	**18 00 51.2**	**-2.2**
YULB	**Yu-li**	**23.84**	**228**	P	**P**	**18 00 51.3**	**-3.2**
YULB				IAmb	IAmb	18 00 55.7	
	comp=Z,22nm,1.4s						
TPUB	**Ta-pu**	**24.29**	**229**	P	**P**	**18 00 56.6**	**-1.9**
TPUB				IAmb	IAmb	18 01 01.7	
	comp=Z,34nm,1.2s						
TWG	**Pinlang**	**24.42**	**227**	P	**P**	**18 00 59.5**	**-0.2**
TWG				IAmb	IAmb	18 01 04.2	
	comp=Z,28nm,1.3s						
ULN	**Ulaanbaatar**	**24.43**	**297**	*de*P	**P**	**18 01 00.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**24.43**	**297**		**P**	**18 00 57.8**	**-2.1**
ULN	**Ulaanbaatar**	**24.43**	**297**	P	**P**	**18 00 59.5**	**-0.3**
SONM	**Songino Array**	**24.87**	**297**	P	**P**	**18 01 03.6**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=99,slow=9.6,SNR=15						
SONM				ScP	**ScP**	**18 07 59.6**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=83,slow=1.4,SNR=5.2						
	comp=Z,3.6nm,0.5s						
SONM	**Songino Array**	**24.87**	**297**		**P**	**18 01 03.2**	**-0.6**
TLY	**Talaya**	**27.02**	**305**	P	**P**	**18 01 22.6**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=89,slow=4.9,SNR=7.4						
	comp=Z,4.9nm,0.8s						
TLY	**Talaya**	**27.02**	**305**	*d* iP	**P**	**18 01 23.7**	**+0.7**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**27.02**	**305**		**P**	**18 01 21.8**	**-1.2**
TLY				IAmb	IAmb	18 01 26.5	
	comp=Z,8.7nm,1.0s						
TLY	**Talaya**	**27.02**	**305**	P	**P**	**18 01 23.9**	**+0.9**
GTA2	**Gaotai**	**30.70**	**280**	P	**P**	**18 01 55.3**	**-0.5**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA2				L	L		
	comp=Z,120nm,12.7s						
GTA2				L	L		
	comp=Z,110nm,13.6s						
GTA2				L	L		
	comp=Z,150nm,18.7s						
TIXI	**Tiksi**	**31.02**	**353**	⇓*eP*	**P**	**18 01 56.5**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**31.02**	**353**	P	**P**	**18 01 56.7**	**-1.3**
CD2	**Chengdu**	**31.03**	**262**	P	**P**	**18 01 57.3**	**-1.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				L	L		
	comp=Z,270nm,10.8s						
CD2				L	L		
	comp=Z,390nm,10.2s						
CD2				L	L		
	comp=Z,300nm,15.2s						
PZH	**PanZhiHua**	**34.87**	**257**	P	**P**	**18 02 31.0**	**-1.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
SPIA	**Saint Paul Isl**	**35.18**	**46**	P	**P**	**18 02 35.1**	**+0.9**
	baz=265						
GAMB	**Gambell**	**35.69**	**35**	P	**P**	**18 02 38.8**	**+0.3**
	baz=254						
UNV	**Unalaska Valle**	**37.23**	**52**	P	**P**	**18 02 52.4**	**+0.7**
	baz=272						
DGZ	**Jazzator, Alta**	**37.31**	**301**	*d* iP	**P**	**18 02 54.3**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,49nm,0.7s						
M11K	**Mekoryuk**	**37.59**	**41**	P	**P**	**18 02 54.8**	**+0.1**
	baz=264						
TNA	**Tin City**	**37.73**	**32**	P	**P**	**18 02 57.0**	**+1.2**
TNA	**Tin City**	**37.73**	**32**	P	**P**	**18 02 56.4**	**+0.7**
	baz=256						
PATS	**Pohnpei**	**37.85**	**150**	P	**P**	**18 02 57.4**	**+0.1**
WMQ	**Urumqi**	**38.27**	**292**	*e*P	**P**	**18 03 02.5**	**+1.8**
WMQ				pP	pwP	18 03 36.3	+0.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
F14K	**Arctic Creek**	**38.35**	**33**	P	**P**	**18 03 01.3**	**+0.3**
	baz=258						
ZAA0	**Zalesovo Array**	**38.50**	**309**		**P**	**18 03 02.9**	**+0.6**
ZALV	**Zalesovo Beam**	**38.50**	**309**	P	**P**	**18 03 03.2**	**+0.9**
	comp=Z,21nm,0.5s,baz=91,slow=10,SNR=83						
ZALV				PcP	**PcP**	**18 05 12.6**	**+0.7**
	comp=Z,5.4nm,0.6s,baz=106,slow=2.3,SNR=13						
ZALV				ScP	**ScP**	**18 08 45.5**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=92,slow=4.6,SNR=6.3						
	com

C16K IAmb IAmb 18 03 38.2
comp=Z,18nm,1.4s
C16K Lisburne Hills 39.40 28 P **P 18 03 10.9 +1.3**
baz=255
M14K Bethel 39.71 41 **P 18 03 12.4 +0.1**
M14K IAmb IAmb 18 03 15.4
comp=Z,11nm,0.7s
M14K Bethel 39.71 41 P **P 18 03 13.6 +1.3**
baz=268
N14K Kuskokwak Cree 39.82 42 P **P 18 03 13.5 +0.3**
N14K Kuskokwak Cree 39.82 42 P **P 18 03 14.5 +1.3**
baz=269
H16K Elim 39.92 34 P **P 18 03 15.5 +1.5**
baz=263
L15K Ungalak Mounta 39.98 39 P **P 18 03 15.9 +1.4**
baz=267
K15K Wolf Creek Mou 40.00 38 P **P 18 03 16.0 +1.2**
baz=266
O14K Tigyukauivet M 40.02 43 P **P 18 03 15.8 +0.8**
O14K IAmb IAmb 18 03 24.7
comp=Z,23nm,1.2s
O14K Tigyukauivet M 40.02 43 P **P 18 03 16.5 +1.6**
baz=270
D17K Noatak River 40.09 30 P **P 18 03 16.9 +1.5**
baz=258
C17K DeLong Mountai 40.23 28 P **P 18 03 18.2 +1.7**
baz=257
RDOG Red Dog Mine 40.23 29 P **P 18 03 18.1 +1.6**
baz=258
M15K Kasigluk River 40.33 41 P **P 18 03 18.8 +1.4**
baz=269
E17K Hotham Inlet 40.45 31 P **P 18 03 20.2 +1.8**
baz=260
J16K Anvik River 40.50 37 P **P 18 03 20.5 +1.7**
baz=266
I17K Unalakleet 40.51 36 P **P 18 03 20.5 +1.7**
baz=265
F17K Baldwin Pennin 40.58 32 P **P 18 03 21.1 +1.7**
baz=262
N15K Kwethluk River 40.62 42 P **P 18 03 22.0 +2.2**
N15K IAmb IAmb 18 03 30.1
comp=Z,9.7nm,0.9s
N15K Kwethluk River 40.62 42 P **P 18 03 21.6 +1.8**
baz=270
SDPT Sand Point 40.63 49 P **P 18 03 22.1 +2.2**
baz=275
G17K Kiwalik Mounta 40.69 33 P **P 18 03 22.6 +2.2**
baz=263
O15K Ungalikthiuk R 40.77 43 P **P 18 03 22.7 +1.7**
baz=271
H17K Granite Mounta 40.94 34 P **P 18 03 24.4 +2.0**
baz=265
L16K Owhat River 40.94 39 P **P 18 03 24.2 +1.8**
baz=269
C18K Utukok River 40.97 28 P **P 18 03 24.1 +1.4**
baz=259
E18K Tukpahlearik C 40.98 30 P **P 18 03 24.0 +1.3**
baz=261
S14K Fog Glacier 41.06 47 P **P 18 03 24.6 +1.0**
baz=275
LSA Lhasa 41.11 270 IAmb IAmb 18 03 27.5
comp=Z,5.3nm,0.7s
M16K Timber Creek 41.18 40 P **P 18 03 26.2 +1.8**
M16K IAmb IAmb 18 03 27.0
comp=Z,7.0nm,0.5s
M16K Timber Creek 41.18 40 P **P 18 03 25.6 +1.2**
baz=270,SNR=5.8
CHNA Chernabura Isl 41.19 50 P **P 18 03 24.6 +0.1**
baz=276
J17K VABM Dome 41.19 37 P **P 18 03 26.2 +1.8**
baz=267
MK31 Makanchi Array 41.23 298 P **P 18 03 25.7 +0.7**
MK31 pmax pmax
comp=Z,36nm,0.8s
MK31 Makanchi Array 41.23 298 P **P 18 03 25.7 +0.7**
MKAR Makanchi Array 41.23 298 P **P 18 03 25.8 +0.7**
comp=Z,30nm,0.7s,baz=84,slow=9.7,SNR=225
MKAR ScP **ScP 18 08 56.0 0.0**
comp=Z,0.8nm,0.7s,baz=58,slow=5.0,SNR=5.7
comp=Z,30nm,0.7s
MKAR Makanchi Array 41.23 298 *ce*P **P 18 03 25.7 +0.7**
MKAR pmax pmax
comp=Z,31nm,0.6s
MKAR Makanchi Array 41.23 298 **P 18 03 25.1 +0.1**
F18K Selawik 41.23 32 P **P 18 03 25.0 +0.3**
baz=263
N16K Nishlik Lake 41.28 41 P **P 18 03 26.2 +0.9**
baz=271
A19K Wainwright 41.34 26 P **P 18 03 25.7 +0.2**
baz=257
MAKZ Makanchi 41.43 298 P **P 18 03 27.2 +0.5**
MAKZ pmax pmax
comp=Z,45nm,0.8s
MAKZ Makanchi 41.43 298 **P 18 03 27.2 +0.5**
MAKZ Makanchi 41.43 298 P **P 18 03 27.7 +1.0**
L17K Donlin 41.51 39 P **P 18 03 27.4 +0.4**
baz=269
K17K Iditarod 41.52 38 IAmb IAmb 18 03 30.4
comp=Z,8.1nm,1.0s
K17K Iditarod 41.52 38 P **P 18 03 27.3 +0.2**
baz=269
G18K Tagagawik 41.56 33 P **P 18 03 27.9 +0.5**
baz=265
H18K Honhosa River 41.61 34 P **P 18 03 28.8 +0.9**
baz=266
C19K Lookout Ridge 41.63 28 P **P 18 03 28.9 +0.9**
baz=260
O16K Kokwok River B 41.64 42 P **P 18 03 29.5 +1.3**
baz=272
CHTO Chiang Mai 41.65 250 P **P 18 03 30.0 +1.3**
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 41.65 250 **P 18 03 29.9 +1.3**
CHTO IAmb IAmb 18 03 30.8
comp=Z,11nm,0.8s
CHTO Chiang Mai 41.65 250 P **P 18 03 27.9 -0.8**
MORE Moreh 41.68 261 **P 18 03 29.9 +1.0**
P16K Nushagak River 41.72 43 P **P 18 03 30.0 +1.2**
baz=273
CMAR Chiang Mai Arr 41.88 250 P **P 18 03 32.1 +1.5**
comp=Z,3.5nm,0.7s,baz=47,slow=7.4,SNR=18
comp=Z,3.5nm,0.7s
CMAR Chiang Mai Arr 41.88 250 P **P 18 03 31.8 +1.1**
M17K Holitna River 41.92 40 P **P 18 03 32.6 +2.2**
M17K IAmb IAmb 18 03 33.8
comp=Z,13nm,1.0s
M17K Holitna River 41.92 40 P **P 18 03 31.6 +1.2**
baz=271
F19K Shaleruckik Mo 42.00 31 P **P 18 03 32.1 +1.1**
baz=264
N17K Nushagak Hills 42.06 41 P **P 18 03 32.3 +0.7**
baz=272
D19K Kuna River 42.06 29 P **P 18 03 32.2 +0.7**
baz=262
O17K Koliganek Bris 42.14 42 P **P 18 03 33.1 +1.0**
baz=273
G19K Purcell Mounta 42.22 33 P **P 18 03 33.5 +0.7**
baz=266
GCSA Galena City Sc 42.22 35 P **P 18 03 33.9 +1.1**
baz=268
J18K Innoko River 42.25 37 P **P 18 03 34.0 +0.9**
baz=269
L18K Granite Mounta 42.26 38 P **P 18 03 34.0 +0.8**
baz=271
E19K Redstone River 42.27 31 P **P 18 03 33.8 +0.6**
baz=264
Q16K King Salmon 42.43 44 P **P 18 03 35.2 +0.6**
baz=274
H19K Roundabout Mou 42.44 33 IAmb IAmb 18 03 43.5
comp=Z,13nm,1.1s
H19K Roundabout Mou 42.44 33 P **P 18 03 35.4 +0.9**
baz=267
P17K Kvichak River 42.51 43 P **P 18 03 36.0 +0.9**
baz=274
B20K Meade River 42.62 27 IAmb IAmb 18 03 42.9
comp=Z,13nm,0.8s
B20K Meade River 42.62 27 P **P 18 03 37.1 +1.2**
baz=262
D20K Etivluk River 42.64 29 IAmb IAmb 18 03 43.3
comp=Z,7.1nm,0.5s
D20K Etivluk River 42.64 29 P **P 18 03 37.3 +1.1**
baz=264,SNR=6.3
R17L Mt. Peulik Vol 42.68 45 P **P 18 03 37.5 +0.9**
baz=276
M18K Stony River 42.69 39 P **P 18 03 37.5 +0.9**
baz=272
N18K Kilae Creek 42.69 41 **P 18 03 39.0 +2.3**

N18K IAmb IAmb 18 03 46.9
comp=Z,7.2nm,0.8s
N18K Kilae Creek 42.69 41 P **P 18 03 37.8 +1.1**
baz=273
KURK Kurchatov 42.71 304 *d*/P **P 18 03 37.3 +0.4**
KURK pmax pmax
comp=Z,41nm,0.7s
KURK Kurchatov 42.71 304 **PcP 18 05 26.4 +0.8**
KURK Kurchatov 42.71 304 **P 18 03 37.4 +0.5**
KURK Kurchatov 42.71 304 P **P 18 03 37.8 +0.8**
SHL Shillong 42.73 264 P **P 18 03 38.1 +0.4**
SHL pmax pmax
comp=Z,13nm,0.8s
SHL Shillong 42.73 264 IAmb IAmb 18 03 38.4
comp=Z,13nm,1.0s
E20K Nigu River 42.75 29 P **P 18 03 38.0 +0.9**
baz=264
J19K Poorman 42.75 36 P **P 18 03 38.6 +1.5**
baz=270
KURBB Khatov Arra 42.79 304 P **P 18 03 38.3 +0.7**
comp=Z,27nm,0.4s,baz=79,slow=8.8,SNR=222
KURBB PcP **PcP 18 05 26.4 +0.5**
comp=Z,2.2nm,0.6s,baz=78,slow=3.4,SNR=4.7
comp=Z,27nm,0.4s
F20K Avaraart Lake 42.82 31 P **P 18 03 38.5 +0.9**
baz=266
Q17K Contact Creek 42.87 44 P **P 18 03 39.5 +1.2**
baz=276
NPW Naypyitaw 43.03 254 P **P 18 03 41.1 +1.3**
O18K Koktuh Hills 43.08 42 P **P 18 03 41.1 +1.2**
baz=274
H20K Anotleneega Mo 43.09 34 P **P 18 03 41.2 +1.3**
baz=269,SNR=5.7
P18K Big Mountain, 43.11 43 P **P 18 03 41.7 +1.7**
baz=275
L19K White Mountain 43.12 38 P **P 18 03 42.4 +2.2**
baz=272
ACHA Angle Creek He 43.17 44 P **P 18 03 42.1 +1.4**
ACHA IAmb IAmb 18 03 47.8
comp=Z,17nm,1.5s
I20K Naaghedeneel 43.25 35 P **P 18 03 43.4 +2.3**
baz=270
Q18K Katmai Hardscr 43.29 44 P **P 18 03 43.2 +1.6**
baz=276
C21K Knifeblade Rid 43.34 28 P **P 18 03 44.0 +2.2**
baz=265
N19K Bonanza Creek 43.37 40 P **P 18 03 43.9 +1.7**
baz=274
J20K Nowinta River 43.40 35 IAmb IAmb 18 03 45.2
comp=Z,8.6nm,0.9s
J20K Nowinta River 43.40 35 P **P 18 03 44.6 +2.3**
baz=271,SNR=8.9
K20K Telida 43.45 37 P **P 18 03 44.4 +1.7**
baz=272,SNR=5.6
B21K Ikpikpuk River 43.45 28 IAmb IAmb 18 03 50.0
comp=Z,9.3nm,0.8s
B21K Ikpikpuk River 43.45 28 P **P 18 03 44.5 +1.9**
baz=264,SNR=6.3
IMAR Indian Mountai 43.57 33 P **P 18 03 45.0 +1.4**
E21K Killik River 43.58 29 P **P 18 03 45.5 +1.8**
baz=266
G21K Allakaket 43.68 32 P **P 18 03 46.3 +1.8**
baz=269
F21K Alatna River 43.71 31 P **P 18 03 46.5 +1.8**
baz=268
B22K Teshekpuk Lake 43.92 27 P **P 18 03 48.2 +1.8**
baz=265
M20K Styx River 43.95 39 IAmb IAmb 18 04 25.2
comp=Z,19nm,0.7s
M20K Styx River 43.95 39 P **P 18 03 48.9 +2.0**
baz=274
H21K Melozitna Rive 43.95 33 P **P 18 03 49.0 +2.2**
baz=270
Q19K Cape Douglas, 43.97 43 P **P 18 03 48.8 +1.9**
baz=277
P19K Oil Pt 44.10 42 P **P 18 03 49.7 +1.7**
baz=276
PDGK Podgornoye 44.12 294 P **P 18 03 48.5 0.0**
PDGK Podgornoye 44.12 294 **P 18 03 48.5 0.0**
SHLS Shalkode 44.19 294 *e*P **P 18 03 47.4 -1.7**
SHLS pmax pmax
comp=Z,9.0nm,0.5s
SHLS Shalkode 44.19 294 *e*P **P 18 03 47.4 -1.7**
comp=Z,9.3nm,0.5s
F22K John River 44.22 31 P **P 18 03 50.2 +1.4**
baz=269
I21K Tanana 44.31 34 P **P 18 03 51.8 +2.3**
baz=272
PPLA Purkeypile 44.32 37 P **P 18 03 51.4 +1.6**
baz=274
TDK Taldyqorghan 44.33 296 *e*P **P 18 03 50.9 +0.9**
TDK pmax pmax
comp=Z,20nm,1.1s
TDK Taldyqorghan 44.33 296 *e*P **P 18 03 51.0 +0.9**
comp=Z,20nm,1.1s
CAST Castle Rocks 44.34 37 IAmb IAmb 18 04 33.8
comp=Z,12nm,0.5s
CAST Castle Rocks 44.34 37 P **P 18 03 51.6 +1.7**
baz=273,SNR=9.2
O20K Slope Mountain 44.36 41 P **P 18 03 51.5 +1.5**
baz=276
E22K Anaktuvuk Pass 44.37 30 P **P 18 03 51.1 +1.0**
baz=269
OHAK Old Harbor 44.38 45 P **P 18 03 51.5 +1.4**
baz=279
G22K Bettles 44.48 32 P **P 18 03 52.5 +1.7**
baz=270
UZB Uzunbulak 44.50 294 *e*P **P 18 03 52.3 +0.7**
UZB pmax pmax
comp=Z,5.0nm,0.4s
UZB Uzunbulak 44.50 294 *e*P **P 18 03 52.4 +0.8**
comp=Z,5.3nm,0.4s
FAKI Fak Fak 44.54 191 P **P 18 03 52.8 +0.9**
H22K Ishtalitna Cre 44.54 33 P **P 18 03 52.8 +1.4**
baz=271
KPKS Kokpek 44.63 294 *e*P **P 18 03 53.3 +0.8**
KPKS Kokpek 44.63 294 *e*P **P 18 03 53.4 +0.8**
KDAK Kodiak Island 44.67 45 P **P 18 03 54.0 +1.5**
baz=279
SKT Skwentna 44.70 39 P **P 18 03 54.6 +2.0**
baz=275
D23K Nanushuk River 44.80 29 P **P 18 03 54.8 +1.4**
baz=269
MLY Manley 44.84 34 P **P 18 03 55.5 +1.7**
baz=273,SNR=6.6
SATY Saty 44.96 294 *e*P **P 18 03 56.0 +0.9**
SATY pmax pmax
comp=Z,6.0nm,0.5s
SATY Saty 44.96 294 *e*P **P 18 03 56.0 +0.9**
comp=Z,5.9nm,0.5s
COLD Coldfoot 44.98 31 P **P 18 03 56.0 +1.2**
baz=271
L22K Petersville 45.00 38 P **P 18 03 56.7 +1.6**
baz=275,SNR=5.4
CAPN Captain Cook N 45.00 40 P **P 18 03 56.4 +1.4**
baz=277
G23K Bananza Creek 45.07 32 P **P 18 03 56.5 +0.9**
baz=272
TRF Thorofare Moun 45.14 36 P **P 18 03 57.8 +1.4**
baz=275
PRZ Przheval'sk 45.16 293 P **P 18 03 56.4 -0.4**
PRZ pmax pmax
comp=Z,28nm,0.9s
PRZ Przheval'sk 45.16 293 P **P 18 03 56.4 -0.4**
E23K Chandalar 45.19 30 P **P 18 03 57.9 +1.3**
baz=271
TOLK Toolik Lake Re 45.20 29 P **P 18 03 57.8 +1.1**
baz=270
H23K Yukon River 45.30 33 P **P 18 03 58.6 +1.3**
baz=273
BRSE Bradley Lake S 45.34 42 P **P 18 03 59.2 +1.4**
baz=278
I23K Minto, Yukon-K 45.41 34 IAmb IAmb 18 04 42.7
comp=Z,9.2nm,0.6s
I23K Minto, Yukon-K 45.41 34 P **P 18 03 59.4 +1.2**
baz=274
D24K Happy Valley 45.47 28 IAmb IAmb 18 04 09.1
comp=Z,5.0nm,0.6s
D24K Happy Valley 45.47 28 P **P 18 03 60.0 +1.3**
baz=270
NEA2 Nenana 45.58 35 P **P 18 04 01.5 +2.0**
baz=275
E24K Your Creek 45.62 30 P **P 18 04 01.4 +1.5**
baz=272
TARG Taragay, Kyrgy 45.84 292 P **P 18 04 03.2 +0.8**
TARG pmax pmax
comp=Z,30nm,0.8s
TARG Taragay, Kyrgy 45.84 292 P **P 18 04 04.0 +1.6**
MDOK Medeo 45.85 294 *e*P **P 18 04 03.1 +0.9**
MDOK Medeo 45.85 294 *e*P **P 18 04 03.2 +0.9**
F24K Squaw Lake 45.87 31 P **P 18 04 03.9 +2.0**
baz=273
PMR Palmer 45.87 39 P **P 18 04 03.6 +1.7**
PMR pmax pmax
comp=Z,512nm,0.4s
SEW Seward 45.93 41 P **P 18 04 04.6 +2.2**
baz=279
AAA Alma-Ata 45.93 295 *e*P **P 18 04 03.5 +0.8**
AAA pmax pmax
comp=Z,21nm,0.8s
AAA Alma-Ata 45.93 295 *e*P **P 18 04 03.6 +0.8**
comp=Z,21nm,0.8s
TNSS Tian-Shan 45.97 294 *e*P **P 18 04 04.0 +0.6**
TNSS Tian-Shan 45.97 294 *e*P **P 18 04 03.1 -0.3**
H24K Noodor Dome 45.98 33 P **P 18 04 05.3 +2.6**
baz=275,SNR=7.6
WRH Wood River Hil 46.01 35 IAmb IAmb 18 04 45.6
comp=Z,6.8nm,0.5s
COLA College 46.08 34 ⇓*i*P **P 18 04 05.7 +2.3**
COLA pmax pmax
comp=Z,9.0nm,0.6s
COLA College 46.08 34 P **P 18 04 05.7 +2.3**
baz=276
G24K Hadweenzic Riv 46.08 32 P **P 18 04 05.6 +2.2**
baz=274
KUU Kurty 46.09 296 *e*P **P 18 04 04.9 +1.0**
KUU Kurty 46.09 296 *e*P **P 18 04 04.9 +1.0**
KDJ Kajisay 46.13 293 P **P 18 04 04.4 0.0**
KDJ pmax pmax
comp=Z,24nm,1.1s
KDJ Kajisay 46.13 293 P **P 18 04 04.4 0.0**
KDJ IAmb IAmb 18 04 06.6
comp=Z,24nm,1.1s
POKR Poker Plat Res 46.23 34 P **P 18 04 07.1 +2.4**
baz=276
D25K Kavik River 46.34 28 P **P 18 04 07.4 +1.9**
baz=273
PWL Port Wells 46.36 40 P **P 18 04 07.8 +2.0**
baz=279
WAT6 Susitna Watana 46.39 37 P **P 18 04 08.0 +1.9**
baz=278
DHY Denali Highway 46.49 37 P **P 18 04 08.5 +1.6**
baz=278
IL31 46.50 34 IAmb IAmb 18 04 09.9
comp=Z,5.9nm,0.6s
ILAR Eielson Array 46.50 34 P **P 18 04 08.1 +1.3**
comp=Z,3.0nm,0.6s,baz=277,slow=6.3,SNR=27
comp=Z,3.0nm,0.6s
ILAR Eielson Array 46.50 34 **P 18 04 07.0 +0.2**
HDA Harding Lake 46.51 35 IAmb IAmb 18 04 47.0
comp=Z,8.5nm,0.5s
HDA Harding Lake 46.51 35 P **P 18 04 08.5 +1.6**
baz=277,SNR=5.3
G25K Bearman Lake 46.62 32 P **P 18 04 09.9 +2.3**
baz=275
E25K Arctic Village 46.71 30 P **P 18 04 10.7 +2.3**
baz=274
F25K Christian Rive 46.72 30 P **P 18 04 11.1 +2.5**
baz=275
BOOM Boomskoye usch 46.86 294 P **P 18 04 10.7 +0.6**
BOOM pmax pmax
comp=Z,27nm,0.8s
BOOM Boomskoye usch 46.86 294 P **P 18 04 10.7 +0.6**
TKM2 Tokmak 2 46.94 295 P **P 18 04 12.3 +1.5**
SNR=29
P23K Montague Islan 46.96 41 P **P 18 04 12.7 +2.3**
baz=280
PRP Porcupine Dome 46.98 33 IAmb IAmb 18 04 13.6
comp=Z,12nm,0.6s
PRP Porcupine Dome 46.98 33 P **P 18 04 12.4 +1.8**
baz=277,SNR=19
K24K Donnelly Dome 47.10 36 P **P 18 04 13.2 +1.8**
baz=278
BVAR Borovoye Array 47.14 309 P **P 18 04 12.9 +1.0**
comp=Z,19nm,0.5s,baz=72,slow=9.0,SNR=106
BVAR PcP **PcP 18 05 41.9 +0.9**
comp=Z,2.1nm,0.5s,baz=68,slow=3.6,SNR=3.8
comp=Z,19nm,0.5s
J25K Salcha River, 47.16 34 IAmb IAmb 18 04 47.8
comp=Z,4.9nm,0.5s
J25K Salcha River, 47.16 34 P **P 18 04 13.8 +1.8**
baz=278
BTLS Baital 47.24 298 *e*P **P 18 04 13.6 +0.8**
BTLS Baital 47.24 298 *e*P **P 18 04 13.6 +0.8**
C27K Jago River 47.26 28 IAmb IAmb 18 04 15.2
comp=Z,6.5nm,0.5s
C27K Jago River 47.26 28 P **P 18 04 14.3 +1.7**
baz=275,SNR=7.7
F26K Sheenjek River 47.28 30 IAmb IAmb 18 04 16.1
comp=Z,7.6nm,0.6s
F26K Sheenjek River 47.28 30 P **P 18 04 14.9 +2.1**
baz=276,SNR=12
PAX Paxson 47.37 37 P **P 18 04 15.5 +1.9**
baz=279
SGDS Sogindy 47.40 296 *e*P **P 18 04 14.9 +0.8**
KLU Klutina 47.41 39 P **P 18 04 16.0 +2.0**
baz=280
KBK Karagaybulak 47.48 295 P **P 18 04 16.3 +1.4**
SNR=30
CHMS Chumysh 47.49 295 P **P 18 04 16.8 +2.0**
SNR=5.2
G26K Porcupine Rive 47.51 31 **P 18 04 15.8 +1.2**
G26K IAmb IAmb 18 04 17.9
comp=Z,7.0nm,0.7s
G26K Porcupine Rive 47.51 31 P **P 18 04 16.8 +2.3**
baz=277,SNR=10
RIDG Independent Ri 47.52 36 P **P 18 04 16.6 +1.8**
baz=279
USP Ospenovka 47.56 296 P **P 18 04 17.8 +2.5**
SNR=5.1
HARP HAARP 47.60 37 P **P 18 04 17.3 +1.9**
baz=280
EYAK Cordova Ski Ar 47.67 40 P **P 18 04 17.8 +2.0**
baz=281
AAK Ala-Archa 47.80 295 P **P 18 04 18.7 +1.4**
comp=Z,4.5nm,0.4s,baz=133,slow=2.9,SNR=9.1
comp=Z,4.5nm,0.4s
AAK Ala-Archa 47.80 295 P **P 18 04 18.3 +0.9**
AAK Ala-Archa 47.80 295 P **P 18 04 17.9 +0.6**
AAK Ala-Archa 47.80 295 **P 18 04 17.9 +0.6**
AAK IAmb IAmb 18 04 19.5
comp=Z,12nm,0.9s
AAK Ala-Archa 47.80 295 P **P 18 04 18.2 +0.9**
N25K Chitina, Valde 48.01 38 P **P 18 04 20.5 +1.9**
baz=281
BMRM Bremner River 48.13 39 P **P 18 04 21.2 +1.7**
baz=282
E27K Coleen River 48.18 29 P **P 18 04 21.6 +1.8**
baz=278
D27M Malcolm River 48.27 28 P **P 18 04 21.9 +1.5**
baz=278
EKS2 Erkin-Say 48.28 295 P **P 18 04 21.9 +0.9**
SNR=12
L26K Log Cabin Wild 48.31 36 P **P 18 04 23.0 +2.2**
baz=281
G27K Doyon Strip 48.36 31 P **P 18 04 23.2 +2.1**
baz=279
GLB Gilahina Butte 48.41 39 IAmb IAmb 18 05 07.0
comp=Z,13nm,0.7s
KSH2 Kashi 48.41 290 P **P 18 04 23.5 +1.4**
KSH2 pmax pmax
comp=Z,11nm,1.0s
KAIM Kayak Island 48.45 41 P **P 18 04 24.2 +2.4**
baz=283
H27K Steamboat Moun 48.51 32 P **P 18 04 24.8 +2.5**
baz=280,SNR=6.8
I27K Kandik River 48.58 33 P **P 18 04 25.0 +2.1**
baz=280
M26K Nabesna, AK 48.59 37 IAmb IAmb 18 04 53.1
comp=Z,4.8nm,0.6s
M26K Nabesna, AK 48.59 37 P **P 18 04 25.0 +2.0**
baz=282
MCARA McCarthy VSAT 48.79 39 P **P 18 04 26.4 +1.9**
baz=283
E28M Babbage River 48.87 29 P **P 18 04 26.6 +1.6**
baz=279
CRQE Cirque 48.90 39 P **P 18 04 27.2 +1.7**
baz=283
F28M Old Crow 48.91 30 P **P 18 04 27.1 +1.7**
baz=280
L27K Beaver Creek, 48.98 36 IAmb IAmb 18 04 29.0
comp=Z,5.2nm,0.6s
L27K Beaver Creek, 48.98 36 P **P 18 04 27.7 +1.8**

baz=282,SNR=13
BCAR Beaver Creek A 49.00 36 P 18 04 28.1 +2.0
M27K Edge Creek, AK 49.11 37 IAmb IAmb 18 04 37.6
comp=Z,5.8nm,0.8s
M27K Edge Creek, AK 49.11 37 P P 18 04 29.0 +1.9
baz=283,SNR=8.6
I28M Miner Creek 49.30 33 IAmb IAmb 18 04 38.2
comp=Z,6.2nm,0.9s
I28M Miner Creek 49.30 33 P P 18 04 30.5 +2.2
baz=282,SNR=10
ARSB Arslanbob 49.34 294 IAmb IAmb 18 04 32.5
comp=Z,22nm,1.0s
E29M Blow River 49.50 29 P P 18 04 31.5 +1.8
baz=281
BARN Barnard Glacie 49.51 39 IAmb IAmb 18 04 41.7
comp=Z,8.2nm,0.6s
GRNC Granite Creek 49.55 39 IAmb IAmb 18 04 42.2
comp=Z,5.5nm,0.8s
G29M Pine Creek 49.75 31 P P 18 04 33.9 +2.2
baz=282
H29M Whitestone 49.76 32 IAmb IAmb 18 04 34.8
comp=Z,3.6nm,0.6s
H29M Whitestone 49.76 32 P P 18 04 34.0 +2.2
baz=282
DZA Taraz 49.85 296 *e*P **P 18 04 33.7 +0.9**
DZA Taraz 49.85 296 *e*P **P 18 04 33.7 +0.9**
comp=Z,5.4nm,0.6s
YUK3 Moose Creek 49.90 38 P P 18 04 34.9 +1.8
baz=284
I29M Ogilvie Camp, 49.98 33 P P 18 04 35.7 +2.3
baz=283
O28M Mount Upton 50.28 39 P P 18 04 37.9 +1.8
baz=285
KK31 Karatay Array 50.32 297 IAmb IAmb 18 04 37.9
comp=Z,8.8nm,0.7s
KKAR Karatay Array 50.32 297 P P 18 04 36.3 -0.1
KKAR Karatay Array 50.32 297 P P 18 04 36.3 -0.1
YUK8 Steele Glacier 50.34 38 P P 18 04 38.5 +2.0
baz=285
EPYK Eagle Plains 50.38 31 P P 18 04 38.4 +1.9
baz=284,SNR=11
G30M tAoh Zraii Nji 50.43 30 IAmb IAmb 18 04 39.0
comp=Z,3.8nm,0.6s
G30M tAoh Zraii Nji 50.43 30 P P 18 04 38.5 +1.7
baz=284,SNR=6.9
F30M Barrier River 50.45 30 IAmb IAmb 18 04 40.3
comp=Z,9.9nm,1.2s
F30M Barrier River 50.45 30 P P 18 04 39.2 +2.3
baz=284
L29M L29M 50.60 36 IAmb IAmb 18 04 50.9
comp=Z,3.7nm,0.6s
L29M L29M 50.60 36 P P 18 04 40.0 +1.8
baz=285
M29M Somme Creek 50.63 36 P P 18 04 40.4 +1.9
baz=285
K29M Barlow Dome 50.68 35 IAmb IAmb 18 04 41.9
comp=Z,5.5nm,0.6s
K29M Barlow Dome 50.68 35 P P 18 04 40.7 +1.9
baz=285,SNR=9.3
PMG Port Moresby 50.79 171 *d* *i*P **P 18 04 38.3 -1.7**
PMG pmax pmax
comp=Z,39nm,1.1s
I30M Mount Dempster 50.80 33 IAmb IAmb 18 04 42.7
comp=Z,7.8nm,0.8s
I30M Mount Dempster 50.80 33 P P 18 04 41.5 +1.8
baz=285,SNR=13
BRLS Borolday 50.80 297 *e*P **P 18 04 42.2 +2.2**
BRLS Borolday 50.80 297 *e*P **P 18 04 42.2 +2.2**
YUK4 Talbot Arm 50.85 38 P P 18 04 42.2 +2.0
baz=286
PNL Peninsula 50.97 40 P P 18 04 42.8 +1.9
baz=287
J30M Hart River 50.99 33 P P 18 04 42.7 +1.6
baz=285
IUG luzhnay 51.03 296 *e*P **P 18 04 42.5 +0.8**
IUG luzhnay 51.03 296 *e*P **P 18 04 42.6 +0.8**
YUK6 Outpost Mounta 51.09 38 P P 18 04 44.0 +1.9
baz=287
INK Inuvik 51.10 28 IAmb IAmb 18 04 44.0
comp=Z,4.8nm,0.6s
INK Inuvik 51.10 28 P P 18 04 43.5 +1.8
baz=285
O29M Mount Kennedy 51.18 39 P P 18 04 44.3 +1.7
baz=287
G31M Satah River 51.19 30 IAmb IAmb 18 04 44.5
comp=Z,5.7nm,0.6s
G31M Satah River 51.19 30 P P 18 04 43.6 +1.2
baz=285
CHM Chimkent 51.25 296 *e*P **P 18 04 44.0 +0.8**
CHM pmax pmax
comp=Z,7.0nm,0.7s
CHM Chimkent 51.25 296 *e*P **P 18 04 44.1 +0.8**
comp=Z,7.3nm,0.7s
F31M Tsiigehtchic 51.25 30 P P 18 04 44.2 +1.4
baz=285
M30M Minto, Yukon 51.34 36 P P 18 04 45.8 +2.1
baz=287
BTK Batken 51.36 293 IAmb IAmb 18 04 49.7
comp=Z,4.7nm,0.5s
SVE Sverdlovsk 51.44 316 *ce*P **P 18 04 45.8 +1.4**
SVE pmax pmax
comp=Z,28nm,0.8s
H31M Peel River 51.46 32 P P 18 04 46.0 +1.4
H31M IAmb IAmb 18 04 47.4
comp=Z,6.8nm,0.6s
H31M Peel River 51.46 32 P P 18 04 46.4 +1.9
baz=286,SNR=5.4
HYT Haines Junctio 51.53 38 IAmb IAmb 18 04 58.2
comp=Z,14nm,1.0s
HYT Haines Junctio 51.53 38 P P 18 04 47.6 +2.4
baz=287,SNR=7.5
P29M Windy Craggy 51.78 40 P P 18 04 49.4 +2.5
baz=288,SNR=5.3
MANEM Manem 51.86 290 IAmb IAmb 18 04 52.0
comp=Z,37nm,0.8s
P30M Million Dollar 52.00 39 P P 18 04 51.3 +2.7
baz=288
N31M Braeburn, Yuko 52.12 37 P P 18 04 51.8 +2.3
baz=288
GAR Garm 52.17 292 P P 18 04 50.9 +0.6
O30N Mendenhall 52.20 38 P P 18 04 52.8 +2.7
baz=288
PLBC Pleasant Camp 52.50 40 P P 18 04 54.7 +2.5
baz=289
M31M Drury Creek, Y 52.52 36 P P 18 04 54.9 +2.6
baz=289
NIL Nilore 52.55 285 P P 18 04 54.1 +1.1
NIL pmax pmax
comp=Z,27nm,0.9s
NIL Nilore 52.55 285 P 18 04 54.1 +1.1
NIL Nilore 52.55 285 P P 18 04 54.8 +1.8
ARTI Arti 52.76 316 P P 18 04 55.1 +0.9
comp=Z,39nm,0.6s,baz=80,slow=3.9,SNR=62
comp=Z,39nm,0.6s
ARTI Arti 52.76 316 *d* *i*P **P 18 04 55.1 +0.9**
ARTI pmax pmax
comp=Z,36nm,0.7s
ARTI Arti 52.76 316 P 18 04 54.8 +0.6
CHGR Chuyangaron 53.13 292 *d* *i*P **P 18 04 57.8 +0.4**
CHGR pmax pmax
comp=Z,37nm,0.6s
CHGR Chuyangaron 53.13 292 P P 18 04 57.7 +0.4
N32M Quiet Lake 53.46 37 P P 18 05 01.4 +2.1
baz=290
P32M Atlin 53.72 39 P P 18 05 03.6 +2.4
baz=291
MMPY Sheldon Lake, 53.75 35 P P 18 05 03.7 +2.3
baz=291
R32K Eaglecrest 53.81 41 P P 18 05 04.2 +2.4
baz=292
SIT Sitka 53.85 42 P P 18 05 04.5 +2.4
baz=292
P33M Teslin, Yukon 53.92 38 IAmb IAmb 18 05 15.4
comp=Z,4.2nm,0.7s
P33M Teslin, Yukon 53.92 38 P P 18 05 04.9 +2.2
baz=291
S32K Killisnoo 54.08 42 P P 18 05 05.8 +2.1
baz=292
SHAA Shahritus 54.36 291 IAmb IAmb 18 05 09.4
comp=Z,32nm,0.7s
ABKAR Akbulak array 54.60 308 P 18 05 07.9 +0.2
Q32M Nakina River 54.65 39 P P 18 05 10.9 +2.8
baz=293
KBL Kabul 55.16 288 P P 18 05 11.9 -0.3
KBL pmax pmax
comp=Z,9.0nm,0.7s
KBL Kabul 55.16 288 P 18 05 11.9 -0.3
KBL IAmb IAmb 18 05 14.4
comp=Z,8.7nm,0.7s
KBL Kabul 55.16 288 P P 18 05 12.4 +0.3
U33K Whale Pass 55.34 43 P P 18 05 15.5 +2.6
baz=294
HOPEN Hopen 55.75 345 *e*P **P 18 05 16.8 +1.3**
HOPEN IAmb IAmb 18 05 16.9
comp=Z,7.4nm,0.7s
DLBC Dease Lake 55.93 39 P P 18 05 19.3 +2.2
baz=294
KIRV Kirov 56.38 321 P P 18 05 21.0 +0.8
comp=Z,39nm,0.6s,baz=61,slow=5.4,SNR=7.0
comp=Z,39nm,0.6s
KIRV Kirov 56.38 321 *d* *i*P **P 18 05 21.0 +0.8**
BJO1 Bjornoya 58.18 344 *e*P **P 18 05 33.3 +0.7**
VADS Vadso 58.33 338 *e*P **P 18 05 34.6 +1.0**
VADS IAmb IAmb 18 05 34.8
comp=Z,29nm,1.2s
KLMR Klimovskoe 59.74 326 *e*P **P 18 05 42.3 -1.2**
KLMR *e* 18 07 54.7
KLMR pmax pmax
comp=Z,9.0nm,0.8s
ARA0 ARCESS Array S 59.76 338 *e*P **P 18 05 44.3 +0.7**
ARCES ARCESS Array B 59.76 338 P P 18 05 44.1 +0.6
comp=Z,2.1nm,0.5s,baz=58,slow=7.9,SNR=27
comp=Z,2.1nm,0.5s
ARCES ARCESS Array B 59.76 338 P P 18 05 44.2 +0.6
ARCES pmax pmax
comp=Z,12nm,1.5s
ARCES ARCESS Array B 59.76 338 IAmb IAmb 18 05 44.9
comp=Z,12nm,1.4s
HRA Herat 60.07 291 P 18 05 47.5 +1.0
BELG Belogornoye 60.15 315 P P 18 05 47.0 +0.7
comp=Z,36nm,0.7s,baz=262,slow=1.3,SNR=12
comp=Z,36nm,0.7s
BELG Belogornoye 60.15 315 *d* *i*P **P 18 05 47.1 +0.7**
BELG pmax pmax
comp=Z,5.0nm,0.8s
YKA Yellowknife Ar 60.66 31 P P 18 05 50.7 +0.9
comp=Z,0.6nm,0.5s,baz=301,slow=6.8,SNR=4.9
comp=Z,0.6nm,0.5s
KTK1 Kautokeino 60.72 338 *e*P **P 18 05 50.9 +0.9**
KTK1 IAmb IAmb 18 05 51.4
comp=Z,9.3nm,0.6s
WRA Warramunga Arr 61.10 186 P P 18 05 53.1 -0.1
comp=Z,1.5nm,0.5s,baz=3.3,slow=7.1,SNR=37
comp=Z,1.5nm,0.5s
WRA Warramunga Arr 61.10 186 *i* P **P 18 05 53.0 -0.2**
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 61.10 186 P P 18 05 52.8 -0.5
NEEM North Greenlan 61.39 3 *i* P **P 18 05 55.8 +1.0**
NEEM IAmb IAmb 18 05 56.2
comp=Z,13nm,1.0s
TRO Tromso 61.46 340 *e*P **P 18 05 55.8 +0.8**
DAG Danmarks Havn 61.52 355 P P 18 05 55.9 +0.6
DAG pmax pmax
comp=Z,12nm,0.7s
DAG Danmarks Havn 61.52 355 P P 18 05 56.1 +0.7
DAG Danmarks Havn 61.52 355 *i* P **P 18 05 55.6 +0.3**
DAG IAmb IAmb 18 05 56.5
comp=Z,8.0nm,0.6s
STEI Steigen 63.61 340 *e*P **P 18 06 09.8 +0.5**
STEI IAmb IAmb 18 06 10.2
comp=Z,8.1nm,0.7s
VRH Novokhopyorsk 63.89 316 *e*P **P 18 06 11.0 -0.4**
VRH pmax pmax
comp=Z,20nm,0.5s
FAUS Fauske 64.00 339 *e*P **P 18 06 12.5 +0.6**
FAUS IAmb IAmb 18 06 13.1
comp=Z,14nm,0.7s
OBN Obninsk 64.22 322 P P 18 06 13.4 0.0
comp=Z,13nm,0.6s,baz=56,slow=12,SNR=5.0
comp=Z,13nm,0.6s
OBN Obninsk 64.22 322 *de*P **P 18 06 13.7 +0.3**
OBN *i* *PP **pP 18 06 50.6 +0.6**
OBN *i* *SP **sP 18 07 06.6 -0.2**
OBN *e* 18 08 37.1
OBN *e*PPP PPP 18 10 10.3
OBN pmax pmax
comp=Z,14nm,0.7s
OBN Obninsk 64.22 322 IAmb IAmb 18 06 14.6
comp=Z,26nm,0.7s
LPSR Galich'ya Gora 64.53 319 *e*P **P 18 06 15.5 0.0**
LPSR pmax pmax
comp=Z,21nm,0.8s
FIA1 FINESS Array S 64.69 331 P 18 06 16.8 +0.4
FINES FINESS Array B 64.69 331 P P 18 06 17.1 +0.6
comp=Z,19nm,0.6s,baz=37,slow=9.3,SNR=60
comp=Z,19nm,0.6s
FINES FINESS Array B 64.69 331 P P 18 06 16.4 0.0
ASAR Alice Springs 64.83 186 P P 18 06 18.1 +0.3
comp=Z,0.4nm,0.5s,baz=6,2.slow=6.8,SNR=14
VORR Voronezh 64.92 318 *e*P **P 18 06 18.1 0.0**
VORR pmax pmax
comp=Z,28nm,0.4s
RAUS Rausandaksla 65.03 339 *e*P **P 18 06 18.9 +0.3**
RAUS IAmb IAmb 18 06 19.1
comp=Z,6.9nm,0.5s
MOR8 Moi Rana 65.12 339 *e*P **P 18 06 18.2 -1.0**
VSR Storozhevoye 65.20 317 *e*P **P 18 06 20.1 +0.2**
VSR pmax pmax
comp=Z,16nm,0.5s
KONS Konsvik 65.23 339 *e*P **P 18 06 20.2 +0.4**
STOK Stokkvaagen 65.38 339 *e*P **P 18 06 21.3 +0.5**
LEIR Leirfjorden 65.53 339 *e*P **P 18 06 22.1 +0.3**
AKT Akhty 65.89 305 *e*P **P 18 06 24.8 +0.1**
AKT pmax pmax
comp=Z,9.0nm,0.7s
VSU Vasula 66.39 328 *c* *i*P **P 18 06 27.1 -0.3**
VSU pmax pmax
comp=Z,57nm,2.2s
SUMG Summit 66.49 360 P P 18 06 29.1 +0.8
SUMG pmax pmax
comp=Z,10.0nm,0.6s
SUMG Summit 66.49 360 P 18 06 29.1 +0.8
SUMG Summit 66.49 360 P P 18 06 30.6 +2.3
SUMG Summit 66.49 360 *i* P **P 18 06 30.0 +1.7**
SUMG IAmb IAmb 18 06 30.7
comp=Z,9.7nm,0.6s
COCO West Island 66.54 227 P P 18 06 30.6 +1.8
COCO pmax pmax
comp=Z,245nm,0.5s
COCO West Island 66.54 227 P P 18 06 30.6 +1.8
NSS Namsos 67.04 338 *e*P **P 18 06 32.6 +1.2**
NCK Nalchik 67.24 308 ǁ *e*P **P 18 06 34.2 +1.1**
NCK pmax pmax
comp=Z,7.0nm,0.4s
KVAR Kislovodsk Arr 67.50 309 P P 18 06 35.2 +0.4
comp=Z,6.6nm,0.9s,baz=73,slow=20,SNR=5.4
comp=Z,6.6nm,0.9s
KIV Kislovodsk 67.51 309 ⇓P **P 18 06 37.1 +2.2**
KIV Kislovodsk 67.51 309 P P 18 06 36.9 +2.0
KIV Kislovodsk 67.51 309 *e*P **P 18 06 36.1 +1.2**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV Kislovodsk 67.51 309 P P 18 06 34.5 -0.4
KIV Kislovodsk 67.51 309 P P 18 06 36.3 +1.5
KBZ Khabaz 67.52 309 P P 18 06 35.8 +1.1
comp=Z,9.1nm,0.9s,baz=50,slow=5.0,SNR=16
comp=Z,9.1nm,0.9s
KBZ Khabaz 67.52 309 *d* *i*P **P 18 06 35.8 +1.1**
KBZ pmax pmax
comp=Z,11nm,0.9s
NACGM Naroch 68.74 325 *e*P **P 18 06 43.4 +1.2**
comp=Z,23nm,0.9s,baz=48
SHME Shamm 69.11 287 P P 18 06 45.9 +0.9
SHME P PcP 18 06 46.4 -21
UOSS Minazif 69.72 286 P P 18 06 49.9 +1.1
NC405 NORSAR Array S 69.77 336 P P 18 06 48.7 +0.3
BMO Blue Mountains 69.77 48 P P 18 06 50.4 +1.5
BMO Blue Mountains 69.77 48 P P 18 06 50.4 +1.5
NC303 NORSAR Array S 69.78 336 IAmb IAmb 18 06 50.1
comp=Z,9.4nm,0.9s
MOL Molde 69.81 339 *e*P **P 18 06 49.9 +1.2**
DOMB Dombas 69.81 338 *e*P **P 18 06 49.5 +0.8**
DOMB IAmb IAmb 18 06 50.0
comp=Z,7.6nm,0.8s
HATD Hatta, Dubai 69.85 286 P P 18 06 50.6 +1.1
HFS Hagfors 69.90 335 P P 18 06 49.6 +0.3
comp=Z,8.0nm,0.4s,baz=35,slow=5.4,SNR=69
comp=Z,8.0nm,0.4s
NC204 NORSAR Array S 69.92 337 P P 18 06 50.0 +0.5
NB201 NORSAR Array S 69.94 336 IAmb IAmb 18 06 56.5
comp=Z,22nm,1.4s
SOHO SOHO 69.97 285 P P 18 06 50.9 +0.7
NB2 NORSAR Subarra 69.97 336 P P 18 06 50.0 +0.3
comp=Z,5.6nm,0.6s,baz=37,slow=6.5
NB2 NORSAR Subarra 69.97 336 P P 18 06 46.7 -3.0
NB2 NORSAR Subarra 69.97 336 P P 18 06 50.0 +0.3
NOA NORSAR Array B 69.97 336 P P 18 06 50.2 +0.5
comp=Z,6.9nm,0.7s,baz=39,slow=6.2,SNR=38
comp=Z,6.9nm,0.7s
ASHO Ashiyiah 69.98 286 P P 18 06 51.1 +0.7
NAZ Nazwa, Dubai 70.09 286 P P 18 06 51.8 +0.8
NC602 NORSAR Array S 70.11 336 *e*P **P 18 06 51.0 +0.5**
NORES NORESS Array B 70.11 336 P P 18 06 51.1 +0.6
NBO00 NORSAR Array S 70.11 336 IAmb IAmb 18 06 52.0
comp=Z,11nm,0.8s
FAQ Al Faqa, Dubai 70.28 286 P P 18 06 52.8 +0.6
AKASG Malin Array Be 70.44 321 P P 18 06 53.0 +0.3
comp=Z,3.4nm,0.3s,baz=45,slow=7.0,SNR=30
comp=Z,3.4nm,0.3s
AKASG Malin Array Be 70.44 321 *ce*P **P 18 06 53.0 +0.3**
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG Malin Array Be 70.44 321 IAmb IAmb 18 06 54.3
comp=Z,5.0nm,1.0s
AKBB Malin Array Si 70.44 321 *ce*P **P 18 06 52.8 +0.1**
AKBB pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 70.44 321 IAmb IAmb 18 06 53.9
comp=Z,10nm,0.9s
KIEV Kiev 70.45 321 ⇓P **P 18 06 53.2 +0.4**
KIEV Kiev 70.45 321 ⇓P **P 18 06 53.2 +0.4**
ASUD Al Ashush, Dub 70.55 286 P P 18 06 54.8 +1.0
ALNE Al Ain 70.58 285 P P 18 06 54.7 +0.7
OSL Oslo 70.99 336 *e*P **P 18 06 57.3 +1.4**
OSL IAmb IAmb 18 06 57.3
comp=Z,15nm,1.0s
GURO Guroymak-BITLI 71.15 305 IAmb IAmb 18 06 59.8
comp=Z,13nm,1.0s
HYA Hoyanger 71.33 338 *e*P **P 18 06 59.0 +1.1**
STRU Stroemstad 71.56 335 *i* P **P 18 07 00.0 +0.7**
KONO Kongsberg 71.57 336 *e*P **P 18 07 00.4 +1.1**
SUE Sulen 71.81 339 *e*P **P 18 07 02.0 +1.3**
BLEU Blekinge 72.09 331 *i* P **P 18 07 02.3 -0.2**
ASK Askoy 72.17 338 *e*P **P 18 07 04.0 +1.2**
TJOU Tjoern 72.21 334 *i* P **P 18 07 03.7 +0.6**
ODJ1 Odda 72.24 337 *e*P **P 18 07 04.5 +1.1**
SORM Soroca 72.59 319 ⇑P **P 18 07 05.6 0.0**
SORM Soroca 72.59 319 ⇑P **P 18 07 05.6 0.0**
ONAU Onsala 72.61 334 *i* P **P 18 07 05.5 0.0**
FABU Falkenberg 72.65 333 *i* P **P 18 07 05.8 0.0**
DEL Delary 72.66 332 *i* P **P 18 07 05.8 -0.1**
MZR Muzera 72.88 286 P P 18 07 08.2 +0.5
KVN Kaiserville 72.95 53 P P 18 07 09.7 +1.5
KVN Kaiserville 72.95 53 P P 18 07 09.7 +1.5
NVAR Mina Array Bea 73.22 54 P P 18 07 11.7 +1.9
comp=Z,0.9nm,0.5s,baz=305,slow=6.9,SNR=4.7
comp=Z,0.9nm,0.5s
NVAR Mina Array Bea 73.22 54 P P 18 07 11.1 +1.3
BJUU Bjuv 73.27 332 *i* P **P 18 07 10.1 +0.7**
BSD Bornholm Skovb 73.33 331 *i* P **P 18 07 10.1 +0.3**
BSD IAmb IAmb 18 07 10.8
comp=Z,31nm,1.1s
LUNU Lund 73.46 332 *i* P **P 18 07 11.3 +0.7**
GIRR Girov 74.31 319 ⇓P **P 18 07 17.3 +1.6**
BUR08 Bucovina Ar. S 74.46 321 IAmb IAmb 18 07 18.6
comp=Z,8.8nm,0.7s
BURAR Bucovina Array 74.47 320 ⇓P **P 18 07 17.9 +1.1**
BURAR Bucovina Array 74.47 320 ⇓P **P 18 07 17.9 +1.1**
BURAR Bucovina Array 74.47 320 P P 18 07 17.4 +0.6
BURAR IAmb IAmb 18 07 19.0
comp=Z,11nm,0.7s
BIZ Bicaz 74.52 320 ⇓P **P 18 07 18.4 +1.5**
TESR Tescani 74.55 319 ⇑P **P 18 07 18.4 +1.3**
BNN Bunyan 74.70 308 IAmb IAmb 18 07 20.5
comp=Z,5.4nm,0.8s
CFR Carcaliu 74.72 317 ⇓P **P 18 07 18.9 +0.8**
CFR Carcaliu 74.72 317 ⇓P **P 18 07 18.9 +0.8**
ONER Baraj Valea Uz 74.80 319 ⇑P **P 18 07 20.4 +1.9**
VRI Vrincioaia 74.96 318 ⇑P **P 18 07 21.6 +2.1**
VRI Vrincioaia 74.96 318 ⇑P **P 18 07 21.6 +2.1**
PLOR Plostina 75.01 318 ⇑P **P 18 07 21.1 +1.3**
PLOR Plostina 75.01 318 ⇑P **P 18 07 21.1 +1.3**
OJC Ojcow 75.06 325 *e*P **P 18 07 21.2 +1.2**
OJC Ojcow 75.06 325 P P 18 07 21.5 +1.5
SAHR Sahastru 75.08 318 ⇑P **P 18 07 21.9 +1.7**
TURR Turia 75.18 319 ⇑P **P 18 07 23.0 +2.2**
OZUR 75.27 319 ⇓P **P 18 07 23.2 +1.9**
TRPA Tarpa 75.37 322 P P 18 07 23.1 +1.4
PDAR Pinedale Array 75.38 46 P P 18 07 23.4 +1.1
comp=Z,0.8nm,0.3s,baz=231,slow=0.7,SNR=11
comp=Z,0.8nm,0.3s
PDAR Pinedale Array 75.38 46 P P 18 07 22.8 +0.5
BR131 Keskin Array S 75.42 310 P P 18 07 23.1 +0.7
BR131 Keskin Array S 75.42 310 P P 18 07 23.1 +0.7
BRTR Keskin Array B 75.42 310 P P 18 07 23.1 +0.7
comp=Z,1.5nm,0.6s,baz=95,slow=4.0,SNR=14
BRTR PP **PP 18 10 13.1 +0.2**
comp=Z,0.5nm,0.7s,baz=86,slow=5.2,SNR=3.8
comp=Z,1.5nm,0.6s
BRTR Keskin Array B 75.42 310 P P 18 07 22.1 -0.2
DOPR Dopca 75.56 319 ⇑P **P 18 07 23.7 +0.8**
MLR Muntele Rosu 75.62 319 ⇓P **P 18 07 18.8 -4.6**
MLR Muntele Rosu 75.62 319 ⇓P **P 18 07 18.8 -4.6**
ICOR Ion Corvin 75.63 317 ⇓P **P 18 07 25.0 +1.7**
KIRS Kirsehir-Merke 75.65 310 ⇑P **P 18 07 24.5 +0.9**
LANS Liptovska Anna 76.00 324 *e*P **P 18 07 27.6 +2.2**
LANS Liptovska Anna 76.00 324 *e*P **P 18 07 27.6 +2.2**
VOIR 76.10 319 ⇑P **P 18 07 28.0 +1.9**
VOIR 76.10 319 ⇑P **P 18 07 28.0 +1.9**
VOIR 76.10 319 P P 18 07 27.7 +1.6
STEB Steborice 76.14 326 *e*P **P 18 07 27.2 +1.1**
MARR Marisel-Cluj 76.15 321 ⇓P **P 18 07 27.8 +1.5**
ARR Arges 76.35 319 ⇑P **P 18 07 29.8 +2.3**
ARR Arges 76.35 319 P P 18 07 29.3 +1.8
MORC Moravsky Berou 76.36 326 ⇑P **P 18 07 29.1 +1.7**
MORC Moravsky Berou 76.36 326 ⇑P **P 18 07 29.1 +1.7**
MORC Moravsky Berou 76.36 326 IAmb IAmb 18 07 29.7
comp=Z,7.8nm,1.0s
MORC Moravsky Berou 76.36 326 *e*P **P 18 07 28.5 +1.1**
MORC Moravsky Berou 76.36 326 P P 18 07 27.2 -0.2
DPC Dobruska-Polom 76.44 327 *e*P **P 18 07 29.7 +1.9**
DPC Dobruska-Polom 76.44 327 *e*P **P 18 07 29.7 +1.9**
DPC Dobruska-Polom 76.44 327 P P 18 07 29.5 +1.7
UPC Upice 76.44 327 *e*P **P 18 07 29.3 +1.5**
UPC Upice 76.44 327 *e*P **P 18 07 29.3 +1.5**
KRLC Kraliky 76.45 326 *e*P **P 18 07 29.3 +1.4**
KRLC Kraliky 76.45 326 *e*P **P 18 07 29.3 +1.4**
LOT Lotru 76.72 320 ⇑P **P 18 07 31.4 +1.8**
PSZ Piszkesteto 76.73 323 ⇑P **P 18 07 31.2 +1.7**
PSZ Piszkesteto 76.73 323 ⇑P **P 18 07 31.2 +1.7**
PSZ Piszkesteto 76.73 323 IAmb IAmb 18 07 32.0
comp=Z,8.0nm,1.0s
PSZ Piszkesteto 76.73 323 P P 18 07 28.8 -0.7
VYHS Vyhne 76.77 324 *e*P **P 18 07 31.3 +1.6**
VYHS Vyhne 76.77 324 *e*P **P 18 07 31.3 +1.6**
JAVC Velka Javorina 77.00 325 *e*P **P 18 07 33.4 +2.3**
PVCC Panska Ves 77.01 328 *e*P **P 18 07 32.5 +1.5**
PVCC Panska Ves 77.01 328 *e*P **P 18 07 32.5 +1.5**
CLL Collm 77.02 329 *i* P **P 18 07 31.8 +0.8**
CLL pmax pmax
comp=Z,8.0nm,0.5s
CLL Collm 77.02 329 *i* P **P 18 07 31.8 +0.8**
comp=Z,8.0nm,0.5s
VRAC Vranov 77.12 326 P P 18 07 33.1 +1.5
VRAC Vranov 77.12 326 *e*P **P 18 07 33.1 +1.5**
SIRR Siria 77.14 321 ⇓P **P 18 07 33.1 +1.3**
KRUC Moravsky 77.39 326 P P 18 07 34.6 +1.4
KRUC Moravsky 77.39 326 *e*P **P 18 07 34.5 +1.4**
HSKC Hora Svate Kat 77.40 328 *e*P **P 18 07 34.4 +1.2**
PRU Pruhonice 77.44 328 *e*P **P 18 07 34.3 +0.9**
PRU Pruhonice 77.44 328 *e*P **P 18 07 34.3 +0.9**
TREC Trest 77.59 327 *e*P **P 18 07 35.5 +1.2**
TREC Trest 77.59 327 *e*P **P 18 07 35.5 +1.2**
BZS Buzias 77.64 321 ⇑P **P 18 07 34.9 +0.3**
BZS Buzias 77.64 321 ⇑P **P 18 07 34.9 +0.3**
HERR Herculane 77.79 320 ⇓P **P 18 07 36.7 +1.3**
ZVC Zvikov 78.01 327 *e*P **P 18 07 37.6 +1.0**
RAYN Ar Rayn 78.26 291 P P 18 07 38.8 +0.3
RAYN Ar Rayn 78.26 291 ⇑P **P 18 07 39.3 +0.9**
RAYN Ar Rayn 78.26 291 P P 18 07 38.3 -0.2
RAYN IAmb IAmb 18 07 39.3
comp=Z,3.5nm,0.6s
CKRC Cesky Krumlov 78.45 327 *e*P **P 18 07 39.5 +0.5**

CKRC	**Cesky Krumlov**	**78.45**	**327**	*e*P		**P**		**18 07 39.5**	**+0.5**
RONA	**Rosalia, Austr**	**78.48**	**325**	*i* P		**P**		**18 07 41.0**	**+1.7**
	comp=Z,4.8nm,0.7s								
CONA	**Conrad Observa**	**78.49**	**325**	*i* P		**P**		**18 07 40.8**	**+1.5**
	comp=Z,3.0nm,0.6s								
KHC	**Kasperske Hory**	**78.50**	**327**	⇓*e*P		**P**		**18 07 40.7**	**+1.4**
KHC				pmax	pmax				
	comp=Z,11nm,1.4s								
KHC	**Kasperske Hory**	**78.50**	**327**	*e*P		**P**		**18 07 40.4**	**+1.1**
KHC	**Kasperske Hory**	**78.50**	**327**	IAmb	IAmb			18 07 41.5	
	comp=Z,17nm,1.5s								
GERES	**GERESS Array B**	**78.68**	**327**	P		**P**		**18 07 41.1**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=37,slow=5.8,SNR=14								
GERES				PP		**PP**		**18 10 39.1**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=73,slow=7.2,SNR=2.0								
	comp=Z,1.5nm,0.5s								
GERES	**GERESS Array B**	**78.68**	**327**	P		**P**		**18 07 40.3**	**-0.1**
EKA	**Eskdalemuir Ar**	**78.88**	**340**	P		**P**		**18 07 42.0**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=24,slow=5.7,SNR=11								
	comp=Z,0.6nm,0.3s								
EKA	**Eskdalemuir Ar**	**78.88**	**340**	P		**P**		**18 07 42.0**	**+0.8**
RDO	**Rodhopi**	**78.91**	**316**	IAmb	IAmb			18 07 43.8	
	comp=Z,7.7nm,1.0s								
GRA1	**Grafenberg Arr**	**78.99**	**329**	IAmb	IAmb			18 07 44.3	
	comp=Z,11nm,0.7s								
ARSA	**Arzberg**	**79.16**	**325**	*e*P		**P**		**18 07 43.1**	**+0.1**
	comp=Z,1.3nm,0.7s								
MOA	**Molln**	**79.23**	**326**	*e*P		**P**		**18 07 45.6**	**+2.3**
	comp=Z,7.7nm,1.5s								
BIOA	**Bad Ischl, Aus**	**79.61**	**327**	*i* P		**P**		**18 07 46.6**	**+1.2**
	comp=Z,2.8nm,0.6s								
SESA	**Seetaler Alpe,**	**79.68**	**326**	*i* P		**P**		**18 07 47.3**	**+1.3**
	SNR=7.2								
SOKA	**Soboth**	**79.82**	**325**	*i* P		**P**		**18 07 47.4**	**+0.8**
	comp=Z,9.5nm,1.2s,SNR=7.8								
OBKA	**Obir**	**80.16**	**325**	*i* P		**P**		**18 07 49.2**	**+0.8**
	comp=Z,3.2nm,0.6s								
KBA	**Koelnbreinsper**	**80.22**	**326**	*e*PcP		**P**		**18 07 51.3**	**+2.5**
	comp=Z,6.6nm,0.6s								
LESA	**Schwarzleotal**	**80.22**	**327**	*i* P		**P**		**18 07 49.9**	**+1.2**
	comp=Z,6.4nm,1.0s								
MYKA	**Terra Mystica**	**80.45**	**326**	*i* P		**P**		**18 07 50.3**	**+0.4**
	comp=Z,4.8nm,0.5s								
WATA	**Walderalm**	**80.75**	**327**	*i* P		**P**		**18 07 52.3**	**+0.7**
	comp=Z,2.9nm,0.6s								
WTTA	**Wattenberg**	**80.78**	**327**	*i* P		**P**		**18 07 53.1**	**+1.3**
	comp=Z,4.5nm,0.7s								
ABTA	**Abfaltersbach**	**80.83**	**327**	*e*P		**P**		**18 07 52.7**	**+0.7**
	comp=Z,3.9nm,1.4s								
BMRD	**Maredsous**	**80.85**	**333**	*d*P		**P**		**18 07 52.6**	**+0.7**
	comp=Z,6.5nm,0.8s								
MOTA	**Moosalm**	**80.93**	**328**	*i* P		**P**		**18 07 53.0**	**+0.4**
	comp=Z,10.0nm,0.9s								
RETA	**Reutte**	**80.95**	**328**	*i* P		**P**		**18 07 53.5**	**+0.9**
	comp=Z,7.4nm,0.7s								
SQTA	**Sankt Quirin**	**80.99**	**328**	*i* P		**P**		**18 07 53.7**	**+0.9**
	comp=Z,4.6nm,0.6s								
STAL	**STALIGIAL**	**81.14**	**326**	IAmb	IAmb			18 07 53.9	
	comp=Z,9.8nm,0.6s								
BFO	**Black Forest**	**81.21**	**330**	P		**P**		**18 07 54.3**	**+0.4**
BFO				pmax	pmax				
	comp=Z,10.0nm,1.1s								
BFO	**Black Forest**	**81.21**	**330**	P		**P**		**18 07 54.3**	**+0.4**
BFO				IAmb	IAmb			18 07 55.6	
	comp=Z,10nm,1.1s								
FETA	**Feichten**	**81.34**	**328**	*i* P		**P**		**18 07 55.4**	**+0.7**
	comp=Z,2.6nm,0.6s								
DAVA	**Damuels**	**81.46**	**328**	*i* P		**P**		**18 07 56.0**	**+0.6**
	comp=Z,8.7nm,0.7s								
ECH	**Echery**	**81.75**	**330**	IAmb	IAmb			18 07 58.2	
	comp=Z,5.7nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**81.85**	**328**	IAmb	IAmb			18 07 59.6	
	comp=Z,12nm,0.6s								
FDMO	**Fiordimonte**	**83.54**	**324**	P		**P**		**18 08 06.2**	**+0.1**
FDMO				IAmb	IAmb			18 08 08.0	
	comp=Z,20nm,1.5s								
ITM	**Ithomi**	**83.72**	**315**	P		**P**		**18 08 06.7**	**-0.4**
INTR	**Introdacqua**	**83.98**	**323**	IAmb	IAmb			18 08 09.9	
	comp=Z,14nm,1.2s								
SSB	**Saint Sauveur**	**85.19**	**330**	P		**P**		**18 08 14.8**	**+0.4**
SSB				pmax	pmax				
	comp=Z,7.0nm,0.8s								
SSB	**Saint Sauveur**	**85.19**	**330**	P		**P**		**18 08 14.8**	**+0.4**
SSB				IAmb	IAmb			18 08 16.0	
	comp=Z,7.0nm,0.8s								
TXAR	**Lajitas Array**	**88.26**	**52**	P		**P**		**18 08 29.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=301,slow=3.4,SNR=3.6								
ESDC	**Sonseca Array**	**93.13**	**333**	P		**P**		**18 08 51.7**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=14,slow=5.1,SNR=10.0								
	comp=Z,0.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**113.72**	**315**	PP		**PP**		**18 15 03.9**	**-6.2**
	comp=Z,2.1nm,1.2s,baz=25,slow=6.8,SNR=5.5								
QSPA	**South Pole Qui**	**130.97**	**180**	PKP		**PKPdf**		**18 14 46.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=3.0,SNR=1.4								
QSPA	**South Pole Qui**	**130.97**	**180**			**PKPdf**		**18 14 47.5**	**0.0**
TROLL	**Troll, Antarti**	**142.89**	**200**	P		**PKPdf**		**18 15 07.0**	**-2.4**
	comp=Z,60nm,0.6s								
SNAA	**Sanae**	**144.45**	**199**	P		**PKPdf**		**18 15 11.9**	**-0.2**
SNAA	**Sanae**	**144.45**	**199**	PKP	PKPbc			18 15 11.0	-0.1
	comp=Z,2.4nm,0.6s,baz=94,slow=3.1,SNR=8.9								
SNAA	**Sanae**	**144.45**	**199**	PKIKP		**PKPdf**		**18 15 12.1**	**0.0**
SNAA	**Sanae**	**144.45**	**199**			**PKPdf**		**18 15 12.1**	**0.0**

*IDC **31** 17:56:28.0±3.3,36°.20N×69°.54E,h0km,mb3.6/5, mbtmp3.7/9,ML3.2/4,Error ellipse: s-maj=61.1km s-min=25.3km az=138.0*

ISC 31 17:56:44.3±2.7,36°.6N±0°.2×71°.0E±0°.3,h188km,n12, σ1§48/13,mb3.5/4,2C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.56**	**357**	⇓P		Pn	**Pn**	**17 58 20.0**	**+1.3**
	7.4nm,0.5s,baz=184,slow=12,SNR=178								
KK31				⇓S		Sn	Sn	17 59 30.1	-3.2
	57nm,0.7s,baz=189,slow=24,SNR=7.0								
AAK	**Ala-Archa**	**6.64**	**23**	Pn		Pn	**Pn**	**17 58 20.5**	**+0.6**
	2.1nm,0.3s,baz=167,slow=5.8,SNR=5.3								
AAK				Sn		Sn	**Sn**	**17 59 34.3**	**-1.2**
	1.3nm,0.3s,baz=340,slow=22,SNR=14								
	3.7nm,0.3s								
AAK	**Ala-Archa**	**6.64**	**23**	⇑P			**Pn**	**17 58 22.4**	**+2.5**
	0.6nm,0.4s								
AAK				⇑S			**Sn**	**17 59 33.6**	**-1.9**
	4.7nm,0.6s								
KURBB	**Kurchatov Arra**	**15.07**	**19**	Pn		Pn	**Pn**	**18 00 08.5**	**+0.9**
	baz=213,slow=10,SNR=5.7								
	0.3nm,0.2s								
BVAR	**Borovoye Array**	**16.48**	**359**	Pn		P	**P**	**18 00 22.7**	**-1.4**
	baz=160,slow=9.1,SNR=4.6								
	1.3nm,0.7s								
AKTO	**Aktyubinsk**	**16.75**	**330**	Pn		P		18 00 18.2	-8.9
	0.1nm,0.3s,baz=145,slow=11,SNR=1.5								
	0.4nm,0.4s								
ARTI	**Arti**	**21.61**	**341**	P		P	**P**	**18 01 18.6**	**-0.6**
	1.5nm,0.5s,baz=173,slow=8.1,SNR=3.4								
	1.5nm,0.5s								
ARCES	**ARCESS Array B**	**41.11**	**338**	P		P	**P**	**18 04 10.2**	**+0.8**
	0.5nm,0.5s,baz=118,slow=9.5,SNR=4.5								
	0.5nm,0.5s								
HFS	**Hagfors**	**43.05**	**322**	P		P	**P**	**18 04 25.1**	**0.0**
	1.2nm,0.6s,baz=106,slow=11,SNR=2.2								
	1.2nm,0.6s								
NB2	**NORSAR Subarra**	**44.36**	**323**	P		P	**P**	**18 04 36.7**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=94,slow=7.9								
NOA	**NORSAR Array B**	**44.36**	**323**	P		P	**P**	**18 04 36.6**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=96,slow=7.7,SNR=5.2								
	comp=Z,0.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**65.74**	**269**	P		P	**P**	**18 07 07.7**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=49,slow=5.8,SNR=2.0								
	comp=Z,0.2nm,0.5s								

*NOU **31** 18:09:39.3,38°.73S×178°.26E,h21km,MLv3.7/12,Off E. Coast of N. Island, N.Z.*
*WEL **31** 18:09:41.8±0.6,39°.5±3°×17°.8E±°,h44km±5km,M3.1/30, ML3.0/13,MLv3.1/30,Error ellipse: s-maj=6.2km s-min=3.8km az=95.0*

ISC 31 18:09:40.9±1.5,38°.67S±0°.03×178°.22E±0°.06,h57km±6km, n94,σ0§80/106,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GKBS	**Kaiti Beach**	**0.15**	**266**	P		**Pn**	**Pn**	**18 09 49.8**	**+0.1**
GKBS				S		**Sn**	**Sn**	**18 09 56.6**	**+0.6**
GISS	**Gisborne 2ZG**	**0.16**	**272**	P		**Pn**	**Pn**	**18 09 49.8**	**+0.1**
GISS				S		**Sn**	**Sn**	**18 09 56.3**	**+0.3**
GHHS	**Gisborne Hospi**	**0.16**	**280**	P		**Pn**	**Pn**	**18 09 49.7**	**-0.1**
GHHS				S		**Sn**	**Sn**	**18 09 56.1**	**0.0**
CNGZ	**Carnagh Statio**	**0.19**	**356**	P		**Pn**	**Pn**	**18 09 49.7**	**-0.2**
GWTS	**Gisborne Waipa**	**0.24**	**281**	P		**Pn**	**Pn**	**18 09 50.2**	**0.0**
GWTS				S		**Sn**	**Sn**	**18 09 57.6**	**+0.8**
TBAS	**Tolaga Bay Are**	**0.30**	**11**	P		**Pn**	**Pn**	**18 09 51.3**	**+0.6**
RIGZ	**Rimuhau**	**0.36**	**264**	P		**Pn**	**Pn**	**18 09 51.1**	**-0.1**
RIGZ				S		**Sn**	**Sn**	**18 09 58.1**	**-0.6**
PRGZ	**Paritu Road**	**0.37**	**227**	P		**Pn**	**Pn**	**18 09 51.6**	**+0.4**
TKGZ	**Te Karaka**	**0.38**	**308**	P		**Pn**	**Pn**	**18 09 50.7**	**-0.5**
TKGZ				S		**Sn**	**Sn**	**18 09 57.2**	**-1.6**
TWGZ	**Tauwhareparae**	**0.53**	**339**	P		**Pn**	**Pn**	**18 09 52.9**	**-0.1**
TWGZ				S		**Sn**	**Sn**	**18 10 01.3**	**-0.3**
MHGZ	**Mahia Peninsul**	**0.54**	**207**	P		**Pn**	**Pn**	**18 09 54.3**	**+1.2**
MHGZ				S		**Sn**	**Sn**	**18 10 04.3**	**+2.4**
KNZ	**Kokohu**	**0.56**	**231**	P		**Pn**	**Pn**	**18 09 53.6**	**+0.4**
KNZ				S		**Sn**	**Sn**	**18 10 02.6**	**+0.5**
PUZ	**Puketiti**	**0.60**	**2**	P		**Pn**	**Pn**	**18 09 53.7**	**-0.1**
MWZ	**Matawai**	**0.64**	**301**	P		**Pn**	**Pn**	**18 09 53.7**	**-0.6**
MWZ				S		**Sn**	**Sn**	**18 10 02.2**	**-1.8**
RAGZ	**Rawiri**	**0.66**	**285**	P		**Pn**	**Pn**	**18 09 54.2**	**-0.3**
RAGZ				S		**Sn**	**Sn**	**18 10 03.3**	**-1.1**
RUGZ	**Raukumara Rang**	**0.83**	**328**	P		**Pn**	**Pn**	**18 09 56.1**	**-0.5**
WMGZ	**Waiomatatini S**	**0.86**	**10**	P		**Pn**	**Pn**	**18 09 57.4**	**+0.4**
WMGZ				S		**Sn**	**Sn**	**18 10 09.6**	**+0.8**
WHHZ	**Waihua**	**0.87**	**242**	P		**Pn**	**Pn**	**18 09 57.9**	**+0.8**
RAHZ	**Arahi**	**0.92**	**254**	P		**Pn**	**Pn**	**18 09 58.2**	**+0.4**
URZ	**Urewera**	**0.97**	**295**	P		**Pn**	**Pn**	**18 09 57.8**	**-0.5**
URZ	**Urewera**	**0.97**	**295**	S		**Sn**	**Sn**	**18 10 11.7**	**+0.5**
URZ	**Urewera**	**0.97**	**295**	P		**Pn**	**Pn**	**18 09 58.1**	**-0.2**
HAZ	**Te Kaha**	**0.98**	**339**	P		**Pn**	**Pn**	**18 09 58.4**	**-0.1**
MTHZ	**Maungataniwha**	**1.10**	**260**	P		**Pn**	**Pn**	**18 10 00.4**	**+0.3**
MXZ	**Matakaoa Point**	**1.11**	**3**	P		**Pn**	**Pn**	**18 10 00.6**	**+0.4**
MXZ	**Matakaoa Point**	**1.11**	**3**	S		**Sn**	**Sn**	**18 10 15.6**	**+1.0**
MXZ	**Matakaoa Point**	**1.11**	**3**	P		**Pn**	**Pn**	**18 10 00.8**	**+0.6**
ARHZ	**Aropaoanui**	**1.13**	**238**	P		**Pn**	**Pn**	**18 10 01.2**	**+0.8**
MUGZ	**Murupara**	**1.16**	**279**	P		**Pn**	**Pn**	**18 10 01.2**	**+0.4**
NMHZ	**Naumai**	**1.19**	**249**	P		**Pn**	**Pn**	**18 10 02.0**	**+0.7**
WHRZ	**Whale Island**	**1.28**	**309**	P		**Pn**	**Pn**	**18 10 03.5**	**+1.0**
EDRZ	**Edgecumbe**	**1.30**	**295**	P		**Pn**	**Pn**	**18 10 03.2**	**+0.4**
CKHZ	**Cape Kidnapper**	**1.33**	**222**	P		**Pn**	**Pn**	**18 10 03.8**	**+0.6**
RRRZ	**Republican Roa**	**1.38**	**283**	P		**Pn**	**Pn**	**18 10 04.5**	**+0.6**
MARZ	**Manawahe**	**1.40**	**299**	P		**Pn**	**Pn**	**18 10 04.4**	**+0.2**
WIZ	**White Island**	**1.40**	**324**	P		**Pn**	**Pn**	**18 10 03.9**	**-0.3**
MCHZ	**McNeill Hill**	**1.42**	**237**	P		**Pn**	**Pn**	**18 10 05.2**	**+0.8**
TARZ	**Mount Tarawera**	**1.42**	**287**	P		**Pn**	**Pn**	**18 10 05.2**	**+0.8**
MRHZ	**Matea Rd**	**1.42**	**263**	P		**Pn**	**Pn**	**18 10 05.1**	**+0.6**
BKZ	**Black Stump Fm**	**1.44**	**249**	P		**Pn**	**Pn**	**18 10 05.1**	**+0.4**
BKZ	**Black Stump Fm**	**1.44**	**249**	S		**Sn**	**Sn**	**18 10 23.1**	**+0.5**
BKZ	**Black Stump Fm**	**1.44**	**249**	P		**Pn**	**Pn**	**18 10 05.3**	**+0.6**
PRRZ	**Plateau Road**	**1.45**	**276**	P		**Pn**	**Pn**	**18 10 05.0**	**+0.3**
ALRZ	**Allen Road**	**1.48**	**274**	P		**Pn**	**Pn**	**18 10 05.6**	**+0.5**
HLRZ	**Highlands Stat**	**1.53**	**285**	P		**Pn**	**Pn**	**18 10 07.2**	**+1.3**
KAHZ	**Kahuranaki**	**1.53**	**223**	P		**Pn**	**Pn**	**18 10 06.5**	**+0.5**
OMRZ	**Omania**	**1.56**	**291**	P		**Pn**	**Pn**	**18 10 06.8**	**+0.4**
KWHZ	**Kaweka Forest**	**1.59**	**241**	P		**Pn**	**Pn**	**18 10 07.4**	**+0.6**
KARZ	**Kaharoa**	**1.69**	**292**	P		**Pn**	**Pn**	**18 10 08.1**	**0.0**
NGRZ	**Ngongotaha**	**1.70**	**289**	P		**Pn**	**Pn**	**18 10 09.1**	**+0.9**
PXZ	**Pawanui**	**1.72**	**217**	P		**Pn**	**Pn**	**18 10 08.3**	**-0.1**
KRHZ	**Kereru**	**1.74**	**235**	P		**Pn**	**Pn**	**18 10 08.9**	**+0.2**
TGRZ	**Tauranga**	**1.81**	**301**	P		**Pn**	**Pn**	**18 10 09.4**	**-0.3**
BHHZ	**Black Hill Sta**	**1.87**	**243**	P		**Pn**	**Pn**	**18 10 11.2**	**+0.6**
RITZ	**Rihia Road**	**1.87**	**260**	P		**Pn**	**Pn**	**18 10 11.3**	**+0.8**
KUTZ	**Kaahu Road**	**1.89**	**275**	P		**Pn**	**Pn**	**18 10 11.2**	**+0.4**
WPHZ	**Waipukurau**	**1.96**	**224**	P		**Pn**	**Pn**	**18 10 11.7**	**-0.1**
PNHZ	**Pukenui**	**2.00**	**231**	P		**Pn**	**Pn**	**18 10 12.0**	**-0.3**
PRHZ	**Porangahau**	**2.01**	**217**	P		**Pn**	**Pn**	**18 10 11.9**	**-0.5**
ETVZ	**East Tongariro**	**2.02**	**256**	P		**Pn**	**Pn**	**18 10 13.0**	**+0.5**
TMVZ	**Te Maari**	**2.02**	**256**	P		**Pn**	**Pn**	**18 10 13.1**	**+0.5**
NTVZ	**North Tongarir**	**2.03**	**257**	P		**Pn**	**Pn**	**18 10 13.5**	**+0.7**
OTVZ	**Oturere**	**2.06**	**255**	P		**Pn**	**Pn**	**18 10 13.7**	**+0.6**
MOVZ	**Moawhango**	**2.06**	**248**	P		**Pn**	**Pn**	**18 10 13.8**	**+0.6**
NGZ	**Ngauruhoe**	**2.11**	**255**	P		**Pn**	**Pn**	**18 10 14.4**	**+0.5**
TLZ	**Tolley Road**	**2.13**	**278**	P		**Pn**	**Pn**	**18 10 14.3**	**+0.1**
WHVZ	**Whangaehu Hut**	**2.14**	**253**	P		**Pn**	**Pn**	**18 10 15.0**	**+0.6**
WNVZ	**Wahianoa**	**2.15**	**251**	P		**Pn**	**Pn**	**18 10 15.0**	**+0.5**
MAVZ	**Matarangi**	**2.16**	**253**	P		**Pn**	**Pn**	**18 10 14.6**	**-0.1**
FWVZ	**Far West T-bar**	**2.16**	**254**	P		**Pn**	**Pn**	**18 10 15.2**	**+0.5**
TSZ	**Takapari Road**	**2.24**	**231**	P		**Pn**	**Pn**	**18 10 15.0**	**-0.5**
ANWZ	**Angora Road**	**2.24**	**217**	P		**Pn**	**Pn**	**18 10 14.8**	**-0.8**
MTVZ	**Mangateitei**	**2.26**	**251**	P		**Pn**	**Pn**	**18 10 16.5**	**+0.6**
DVHZ	**Dannevirke**	**2.28**	**224**	P		**Pn**	**Pn**	**18 10 15.6**	**-0.4**
PKVZ	**Pokaka**	**2.33**	**254**	P		**Pn**	**Pn**	**18 10 17.6**	**+0.8**
BFZ	**Birch Farm**	**2.52**	**217**	P		**Pn**	**Pn**	**18 10 18.9**	**+0.4**
BFZ	**Birch Farm**	**2.52**	**217**	S		**Sn**	**Sn**	**18 10 49.3**	**+0.4**
BFZ	**Birch Farm**	**2.52**	**217**	P		**Pn**	**Pn**	**18 10 18.3**	**-1.1**
POWZ	**Post Office Ro**	**2.56**	**227**	P		**Pn**	**Pn**	**18 10 19.7**	**-0.3**
PRWZ	**Pori Road**	**2.56**	**222**	P		**Pn**	**Pn**	**18 10 19.6**	**-0.4**
HIZ	**Hauiti**	**2.64**	**272**	P		**Pn**	**Pn**	**18 10 22.0**	**+0.9**
HIZ	**Hauiti**	**2.64**	**272**	P		**Pn**	**Pn**	**18 10 22.0**	**+0.9**
WAZ	**Wanganui**	**2.74**	**246**	P		**Pn**	**Pn**	**18 10 23.9**	**+1.5**
VRZ	**Vera Road**	**2.74**	**259**	P		**Pn**	**Pn**	**18 10 23.2**	**+0.8**
TIWZ	**Tintock**	**2.77**	**220**	P		**Pn**	**Pn**	**18 10 21.9**	**-0.9**
MRZ	**Mangatainoka R**	**2.85**	**225**	P		**Pn**	**Pn**	**18 10 22.8**	**-1.0**
TMWZ	**Te Maipa**	**3.02**	**216**	P		**Pn**	**Pn**	**18 10 24.7**	**-1.6**
HOWZ	**Holdsworth Sta**	**3.05**	**222**	P		**Pn**	**Pn**	**18 10 25.3**	**-1.4**
OGWZ	**Otaki Gorge**	**3.18**	**227**	P		**Pn**	**Pn**	**18 10 27.1**	**-1.4**
MTW	**Mount Morrison**	**3.25**	**219**	P		**Pn**	**Pn**	**18 10 27.6**	**-1.7**
TRWZ	**Traveller**	**3.35**	**215**	P		**Pn**	**Pn**	**18 10 28.3**	**-2.4**
SNZO	**South Karori**	**3.78**	**225**	P		**Pn**	**Pn**	**18 10 34.9**	**-1.6**
QRZ	**Quartz Range**	**4.89**	**242**	P		**Pn**	**Pn**	**18 10 50.9**	**-0.9**
KHZ	**Kahutara**	**5.17**	**222**	P		**Pn**	**Pn**	**18 10 55.3**	**-0.3**

*IDC **31** 18:35:33.8±3.8,28°.58N×142°.46E,h0km,mb3.6/4, mbtmp3.6/5,ML2.6/1,Error ellipse: s-maj=132.8km s-min=20.7km az=78.0*

ISC 31 18:35:37.5±3.5,28°.5N±0°.2×142°.3E±0°.9,h25km,n6, σ1§07/7,mb3.8/4,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.44**	**185**	Pn		Pn	**Pn**	**18 36 01.7**	**-0.4**
	2.4nm,0.3s,baz=15,slow=20,SNR=6.3								
JCJ				Sn		Sn	**Sn**	**18 36 19.4**	**-0.8**
	7.5nm,0.3s,baz=350,slow=20,SNR=6.2								
MJAR	**Matsushiro Arr**	**8.70**	**338**	Pn		Pn	**Pn**	**18 37 40.4**	**-1.4**
	0.1nm,0.3s,baz=161,slow=12,SNR=5.8								
	0.4nm,0.3s								
WRA	**Warramunga Arr**	**48.81**	**190**	P		P	**P**	**18 44 21.5**	**+0.8**
	0.5nm,0.5s,baz=13,slow=8.6,SNR=7.1								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**49.66**	**309**	P		P	**P**	**18 44 27.6**	**+0.5**
	0.1nm,0.6s,baz=79,slow=7.6,SNR=2.0								
	0.1nm,0.6s								
KURBB	**Kurchatov Arra**	**52.12**	**314**	P		P	**P**	**18 44 45.4**	**-0.2**
	0.7nm,0.2s,baz=89,slow=7.6,SNR=1.3								
	0.7nm,0.2s								
BVAR	**Borovoye Array**	**57.07**	**317**	P		P	**P**	**18 45 22.5**	**+1.0**
	0.5nm,0.5s,baz=91,slow=8.6,SNR=3.7								
	0.5nm,0.5s								

*IDC **31** 18:43:52.2±0.7,51°.08N×168°.51W,h0km,mb3.9/23, mbtmp3.9/23,MS3.1/8,Error ellipse: s-maj=22.5km s-min=15.5km az=4.0*
*NEIC **31** 18:43:54.0±2.3,51°.40N±0°.04×168°.63W±0°.08,h10km±1km, mb4.0/106,ML3.7/16,ML3.5(AEIC),Error ellipse: s-maj=8.3km s-min=6.5km az=86.0*
*AEIC **31** 18:43:57.1±1.7,51°.34N±0°.07×168°.55W±0°.08,h30km±5km, Error ellipse: s-maj=10.9km s-min=7.4km az=170.0*

ISC 31 18:43:54.3±0.5,51°.42N±0°.05×168°.49W±0°.05,h10km, n222,σ1§35/193,mb3.9/28,MS2.9/8,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**1.56**	**331**				**Pb**	**18 44 22.6**	**-0.7**
CLCO							**Sb**	**18 44 43.0**	**-0.1**
CLCO							**Sg**	**18 44 43.7**	**-0.9**
CLES	**Cleveland East**	**1.65**	**329**				**Pn**	**18 44 23.5**	**+0.2**
CLES						Sn	**Sn**	**18 44 42.6**	**-1.9**
CLES						IAML		18 44 49.4	
	comp=N,1μm,0.9s								
CLES						IAML		18 44 50.6	
	comp=E,1μm,0.5s								
OKTU	**Okmok Mt. Tuli**	**1.99**	**8**				**Pn**	**18 44 28.9**	**+1.0**
OKTU							**Sn**	**18 44 53.4**	**+0.5**
OKTU							**Sb**	**18 44 54.7**	**-0.6**
OKCE	**Okmok Cone E**	**2.02**	**6**				**Pn**	**18 44 29.4**	**+0.9**
OKCE							**Sn**	**18 44 54.3**	**+0.6**
OKCE							**Sb**	**18 44 54.7**	**-1.6**
OKFG	**Magazine Ridge**	**2.02**	**10**				**Pn**	**18 44 29.4**	**+0.9**
OKNC	**Okmok New Cone**	**2.05**	**6**				**Pb**	**18 44 30.2**	**-1.4**
OKNC							**Sn**	**18 44 55.1**	**+0.6**
MAPS	**Pakushin South**	**2.57**	**21**				**Pn**	**18 44 36.9**	**+0.9**
MAPS							**Sn**	**18 45 07.8**	**+0.5**
MAPS							**Sb**	**18 45 09.0**	**-3.1**
MGOD	**Makushin Gods**	**2.58**	**22**				**Pn**	**18 44 37.0**	**+0.9**
MGOD							**Sn**	**18 45 08.4**	**+1.0**
MREP	**Makushin Rep't**	**2.62**	**23**				**Pn**	**18 44 37.7**	**+1.0**
MREP							**Sn**	**18 45 09.5**	**+1.0**
MNAT	**Makushin Natee**	**2.70**	**23**				**Sn**	**18 45 12.0**	**+1.5**
UNV	**Unalaska Valle**	**2.71**	**26**	P			**Pn**	**18 44 39.7**	**+1.8**
UNV	**Unalaska Valle**	**2.71**	**26**				**Sn**	**18 44 38.5**	**+0.7**
UNV				Sn			**Sn**	**18 45 11.9**	**+1.2**
ZRO	**Akutan Zero**	**3.08**	**29**				**Pn**	**18 44 43.1**	**+1.3**
ZRO							**Pb**	**18 44 44.8**	**-4.3**
ZRO							**Sn**	**18 45 21.5**	**+1.6**
AKRB	**Akutan Reef Bi**	**3.09**	**28**				**Pn**	**18 44 43.3**	**+1.2**
AKRB							**Pb**	**18 44 44.6**	**-4.6**
AKRB							**Sn**	**18 45 21.9**	**+1.9**
AKBBA	**Akutan Broad B**	**3.10**	**29**				**Pn**	**18 44 44.4**	**+1.1**
AKBBA							Pb	18 44 44.6	-4.9
AKBBA							**Sn**	**18 45 22.0**	**+1.7**
LVA	**Lava Point**	**3.12**	**28**	Pn			**Pn**	**18 44 45.0**	**+1.4**
LVA				IAML				18 45 30.4	
	comp=E,192nm,0.7s								
AKUT	**Akutan**	**3.18**	**30**	P			**Pn**	**18 44 46.9**	**+2.6**
AKUT	**Akutan**	**3.18**	**30**	Pn			**Pn**	**18 44 45

comp=Z,12nm,0.9s
IMAR Indian Mountai 16.41 22 Pn 18 47 43.4 -1.1
MLY Manley 16.44 27 Pn 18 47 43.4 -1.5
BERG Berg Lake 16.45 47 IAmb IAmb 18 47 55.1
comp=Z,18nm,1.2s
GLB Gilahina Butte 16.83 44 Pn 18 47 47.8 -2.0
GLB IAmb IAmb 18 47 59.2
comp=Z,12nm,0.9s
VRDI Verde Repeater 16.90 45 IAmb IAmb 18 48 00.3
comp=Z,24nm,1.3s
G21K Allakaket 16.91 21 IAmb IAmb 18 47 57.2
comp=Z,10.0nm,1.1s
H22K Ishtalitna Cre 16.93 25 P 18 47 52.0 -0.9
E19K Redstone River 17.02 15 IAmb IAmb 18 47 58.0
comp=Z,8.9nm,0.9s
ILAR Eielson Array 17.45 32 P Pn 18 47 55.9 -1.6
comp=Z,0.9nm,1.0s,baz=234,slow=12,SNR=5.3
GRNC Granite Creek 17.47 47 IAmb IAmb 18 48 09.4
comp=Z,1.3nm,0.9s
F21K Alatna River 17.51 20 IAmb IAmb 18 48 04.6
comp=Z,9.2nm,1.0s
BARN Barnard Glacie 17.63 46 P Pn 18 47 59.3 -0.7
LOGN Logan Glacier 17.85 48 IAmb IAmb 18 48 11.8
comp=Z,8.9nm,1.0s
G23K Bananza Creek 17.91 24 IAmb IAmb 18 48 09.0
comp=Z,12nm,1.2s
M27K Edge Creek, AK 18.05 42 IAmb IAmb 18 48 13.2
comp=Z,17nm,1.1s
O28M Mount Upton 18.21 48 IAmb IAmb 18 48 18.5
comp=Z,7.4nm,0.9s
COLD Coldfoot 18.26 23 IAmb IAmb 18 48 12.7
comp=Z,17nm,1.0s
D20K Etivluk River 18.27 14 IAmb IAmb 18 48 10.6
comp=Z,8.3nm,0.8s
PNL Peninsula 18.29 52 P P 18 48 12.2 +4.2
BCAR Beaver Creek A 18.40 40 Pn 18 48 07.8 -1.4
E21K Killik River 18.46 17 IAmb IAmb 18 48 13.5
comp=Z,9.7nm,0.9s
O29M Mount Kennedy 18.84 50 IAmb IAmb 18 48 25.4
comp=Z,8.9nm,1.1s
E23K Chandalar 19.05 22 IAmb IAmb 18 48 21.0
comp=Z,11nm,0.8s
P29M Windy Craggy 19.10 53 P 18 48 15.4 -1.5
P29M IAmb IAmb 18 48 32.9
comp=Z,7.8nm,0.5s
FYU Fort Yukon 19.14 29 IAmb IAmb 18 48 23.8
comp=Z,8.1nm,0.8s
B20K Meade River 19.39 12 IAmb IAmb 18 49 05.3
comp=Z,18nm,1.5s
B21K Ikpikpuk River 19.40 15 IAmb IAmb 18 48 31.3
comp=Z,5.7nm,0.6s
HYT Haines Junctio 19.49 49 P 18 48 20.8 -0.5
D23K Nanushuk River 19.55 19 IAmb IAmb 18 48 25.1
comp=Z,7.9nm,1.0s
F25K Christian Rive 19.72 26 IAmb IAmb 18 48 30.2
comp=Z,6.6nm,1.1s
I27K Kandik River 19.74 34 IAmb IAmb 18 48 34.7
comp=Z,4.9nm,0.7s
DAWY Dawson 19.81 39 IAmb IAmb 18 48 32.2
comp=Z,12nm,1.3s
N30M Aishikik Lake 19.86 47 IAmb IAmb 18 48 32.2
comp=Z,9.7nm,0.8s
L29M L29M 19.93 42 P 18 48 24.8 -1.3
D24K Happy Valley 20.10 21 P P 18 48 27.2 -0.5
E25K Arctic Village 20.11 25 IAmb IAmb 18 48 33.9
comp=Z,6.0nm,0.9s
H27K Steamboat Moun 20.12 32 P 18 48 26.9 -1.1
O30N Mendenhall 20.15 50 P P 18 48 27.8 -0.6
O30N IAmb IAmb 18 48 38.9
comp=Z,9.1nm,0.8s
F26K Sheenjek River 20.21 27 P 18 48 28.8 -0.2
B22K Teshekpuk Lake 20.23 15 IAmb IAmb 18 48 33.9
comp=Z,11nm,0.9s
I28M Miner Creek 20.25 35 IAmb IAmb 18 48 47.7
comp=Z,5.5nm,0.6s
C23K Itkillik River 20.29 18 P 18 48 29.1 -0.7
M30M Minto, Yukon 20.32 44 P 18 48 30.8 +0.6
M30M IAmb IAmb 18 48 36.8
comp=Z,8.7nm,1.0s
K29M Barlow Dome 20.47 41 P 18 48 31.4 -0.5
K29M IAmb IAmb 18 48 36.8
comp=Z,6.3nm,1.1s
PETK Petropavlovsk- 20.65 288 P P 18 48 34.8 +0.9
comp=Z,3.2nm,0.7s,baz=83,slow=13,SNR=5.3
comp=Z,3.2nm,0.7s
D25K Kavik River 20.79 22 IAmb IAmb 18 48 38.6
comp=Z,8.0nm,1.1s
I29M Ogilvie Camp, 20.81 36 IAmb IAmb 18 48 50.9
comp=Z,4.5nm,0.6s
H29M Whitestone 21.20 34 IAmb IAmb 18 48 45.2
comp=Z,9.2nm,0.8s
I30M Mount Dempster 21.48 38 IAmb IAmb 18 48 48.4
comp=Z,4.3nm,0.8s
G29M Pine Creek 21.67 33 P 18 48 44.3 -0.4
D27M Malcolm River 22.12 26 IAmb IAmb 18 49 18.4
comp=Z,5.1nm,0.9s
E28M Babbage River 22.13 28 IAmb IAmb 18 49 05.6
comp=Z,4.4nm,0.8s
E29M Blow River 22.50 30 IAmb IAmb 18 49 07.6
comp=Z,5.0nm,0.6s
F31M Tsiigehtchic 23.39 34 P P 18 49 02.3 -0.4
INK Inuvik 23.85 32 LR LR 19 00 35.6
comp=Z,39nm,18.4s,baz=138,slow=42
MA2 Magadan 24.13 306 LR LR 18 58 43.6
comp=Z,16nm,19.5s,baz=71,slow=37
YKA Yellowknife Ar 30.47 48 P P 18 50 09.0 +2.2
comp=Z,1.0nm,0.8s,baz=270,slow=8.0,SNR=4.0
comp=Z,1.0nm,0.8s
K05A Summer Lake 33.05 86 P P 18 50 29.1 -0.9
TIXI Tiksi 33.83 330 LR LR 19 05 57.2
comp=Z,24nm,18.9s,baz=150,slow=39
YAK Yakutsk 34.21 312 LR LR 19 06 20.5
comp=Z,15nm,18.2s,baz=318,slow=39
J08A Circle Bar Ran 34.22 84 P 18 50 39.2 -0.9
WVOR Wild Horse Val 34.61 85 P P 18 50 42.8 -0.6
PAHR Pah Rah Range 35.68 90 P 18 50 52.0 -0.6
H11N2 WAKE ISLAND Hy 37.07 221 T T 19 34 31.9
baz=24
H11N3 WAKE ISLAND Hy 37.07 221 T T 19 34 32.5
baz=24
H11N1 WAKE ISLAND Hy 37.09 221 T T 19 34 20.6
baz=24
NVAR Mina Array Bea 37.11 90 P P 18 51 03.1 -1.9
comp=Z,1.5nm,0.7s,baz=292,slow=8.9,SNR=8.5
comp=Z,1.5nm,0.7s
NVAR Mina Array Bea 37.11 90 P P 18 51 03.9 -1.1
H11S1 WAKE ISLAND Hy 38.25 220 T T 19 35 35.3
baz=23,slow=76,SNR=7.0
H11S2 WAKE ISLAND Hy 38.26 220 T T 19 35 19.7
baz=23,slow=76,SNR=6.6
H11S3 WAKE ISLAND Hy 38.26 220 T T 19 35 20.3
baz=23,slow=76,SNR=6.3
PRN Pahroc Range 39.77 89 P 18 51 26.5 -0.8
PRN IAmb IAmb 18 51 29.7
comp=Z,5.7nm,1.0s
PDAR Pinedale Array 40.05 79 P P 18 51 30.4 +0.7
comp=Z,0.6nm,0.2s,baz=293,slow=6.5,SNR=1.1
comp=Z,0.6nm,0.2s
PDAR Pinedale Array 40.05 79 P P 18 51 29.6 -0.1
MJAR Matsushiro Arr 40.22 270 P P 18 51 30.0 -0.8
comp=Z,0.9nm,0.7s,baz=43,slow=7.3,SNR=6.5
comp=Z,0.9nm,0.7s
MJAR Matsushiro Arr 40.22 270 IAmb IAmb 18 52 02.9
comp=Z,3.8nm,1.5s
SPITS Spitsbergen Ar 50.63 359 P P 18 52 54.8 +2.0
comp=Z,3.1nm,0.8s,baz=48,slow=1.2,SNR=2.5
comp=Z,3.1nm,0.8s
TXAR Lajitas Array 52.22 89 P P 18 53 05.8 +0.4
comp=Z,0.6nm,0.6s,baz=309,slow=5.8,SNR=7.0
comp=Z,0.6nm,0.6s
TXAR Lajitas Array 52.22 89 P P 18 53 05.5 0.0
SONM Songino Array 52.26 302 P P 18 53 06.8 +1.3
comp=Z,0.3nm,0.4s,baz=71,slow=6.2,SNR=3.9
comp=Z,0.3nm,0.4s
SONM Songino Array 52.26 302 P P 18 53 05.4 -0.1
SONM IAmb IAmb 18 53 37.4
comp=Z,3.4nm,1.5s
ZALV Zalesovo Beam 58.49 318 P P 18 53 51.2 +1.0
comp=Z,0.4nm,0.4s,baz=33,slow=8.6,SNR=2.7
ZALV LR LR 19 21 32.9
comp=Z,12nm,18.1s,baz=86,slow=38
comp=Z,0.4nm,0.4s
ZALV Zalesovo Beam 58.49 318 P P 18 53 49.7 -0.5
ARCES ARCESS Array B 58.92 354 P P 18 53 53.8 +0.9
comp=Z,1.3nm,0.7s,baz=0.0,slow=9.0,SNR=1.6
ARCES LR LR 19 22 16.2
comp=Z,7.6nm,18.5s,baz=122,slow=39
comp=Z,1.3nm,0.7s
KURK Kurchatov 63.44 319 P P 18 54 24.8 +0.9
KURBB Kurchatov Arra 63.55 319 P P 18 54 26.1 +1.5
comp=Z,1.7nm,0.7s,baz=48,slow=7.1,SNR=17
comp=Z,1.7nm,0.7s
BVAR Borovoye Array 64.79 325 P P 18 54 34.5 +1.8
comp=Z,2.7nm,0.5s,baz=51,slow=7.2,SNR=16
comp=Z,2.7nm,0.5s
MKAR Makanchi Array 64.85 314 P P 18 54 34.0 +0.8
comp=Z,0.5nm,0.7s,baz=55,slow=4.6,SNR=5.1
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 64.85 314 P P 18 54 32.9 -0.3
FINES FINESS Array B 66.88 352 P P 18 54 48.0 +2.1
comp=Z,2.3nm,0.9s,baz=7.8,slow=15,SNR=4.5
comp=Z,2.3nm,0.9s
FINES FINESS Array B 66.88 352 P P 18 54 46.9 +0.9
NOA NORSAR Array B 67.89 0 P P 18 54 53.5 +1.1
comp=Z,0.4nm,0.6s,baz=1.6,slow=2.4,SNR=3.0
comp=Z,0.4nm,0.6s
HFS Hagfors 68.79 359 P P 18 54 59.7 +1.7
comp=Z,1.4nm,0.8s,baz=29,slow=3.7,SNR=7.5
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 77.15 349 P P 18 55 48.8 +1.1
comp=Z,0.5nm,0.5s,baz=18,slow=6.2,SNR=2.0
comp=Z,0.5nm,0.5s
AKASG Malin Array Be 77.15 349 IAmb IAmb 18 56 26.9
comp=Z,2.2nm,1.0s
CMAR Chiang Mai Arr 77.36 284 P P 18 55 49.1 -0.3
comp=Z,0.4nm,0.6s,baz=40,slow=5.5,SNR=2.3
comp=Z,0.4nm,0.6s
GERES GERESS Array B 80.09 359 P P 18 56 05.3 +1.2
comp=Z,0.2nm,0.6s,baz=356,slow=6.1,SNR=1.4
comp=Z,0.2nm,0.6s
WRA Warramunga Arr 86.85 232 P P 18 56 36.4 -2.6
comp=Z,0.6nm,0.8s,baz=29,slow=5.2,SNR=3.0
comp=Z,0.6nm,0.8s
BRTR Keskin Array B 87.19 343 P P 18 56 41.4 +0.7
comp=Z,0.1nm,0.4s,baz=28,slow=3.4,SNR=1.8
comp=Z,0.1nm,0.4s
ESDC Sonseca Array 88.28 12 P P 18 56 48.2 +2.4
comp=Z,0.2nm,1.0s,baz=17,slow=4.2,SNR=1.3
comp=Z,0.2nm,1.0s
ASAR Alice Springs 90.21 231 P P 18 56 53.5 -1.4
comp=Z,1.8nm,0.7s,baz=32,slow=4.7,SNR=31
comp=Z,1.8nm,0.7s
STKA Stephens Creek 93.83 221 LR LR 19 36 47.3
comp=Z,58nm,19.8s,baz=270,slow=34
MDT Midelt 94.94 14 LR LR 19 45 59.5
comp=Z,36nm,18.1s,baz=224,slow=39
TORD Torodi Ar. Bea 115.14 11 PKP PKiKP 19 02 34.3 -1.6
comp=Z,0.4nm,0.9s,baz=320,slow=4.4,SNR=1.8
VNDA Vanda 129.99 188 PKP PKPdf 19 03 02.4 0.0
comp=Z,0.3nm,0.3s,baz=13,slow=4.5,SNR=11
QSPA South Pole Qui 141.18 180 PKhKP PKPpre 19 03 14.8
comp=Z,0.4nm,0.6s,baz=327,slow=4.6,SNR=1.2
QSPA PKP **PKPdf 19 03 22.3 -1.3**
comp=Z,2.1nm,1.1s,baz=214,slow=2.1,SNR=5.2

*NEIC **31** 18:58:07.8±1.7, 43.55N±0.05×105.32W±0.07, h0km±1km, ML3.2/50, Error ellipse: s-maj=10.0km s-min=7.4km az=321.0*
*IDC **31** 18:58:11.2±2.0, 43.73N×105.50W, h0km, mbtmp3.3/2, ML2.0/1, Error ellipse: s-maj=49.4km s-min=10.2km az=150.0*
ISC 31 18:58:08.0±1.1, 43.54N±0.05×105.31W±0.05, h0km, n37, σ1s94/36, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.09**	**57**			**Pg**	**18 58 29.0**	**+0.1**
K22A	**Casper**	**1.26**	**226**			**Pn**	**18 58 35.2**	**+2.2**
BW06	**Boulder Array**	**3.21**	**258**			**Pn**	**18 59 02.3**	**+2.4**
BW06				IAML			18 59 56.9	
	31nm,0.7s							
BW06				IAML			19 00 06.0	
	38nm,0.8s							
PD31	**Pinedale Array**	**3.21**	**258**			**Pn**	**18 59 02.7**	**+2.8**
PDAR	**Pinedale Array**	**3.21**	**258**	Pn		**Pb**	**18 59 04.2**	**-1.7**
	1.5nm,0.4s,baz=74,slow=17,SNR=19							
PDAR				Lg		Lg	18 59 49.6	
	11nm,0.3s,baz=71,slow=33,SNR=11							
PDAR	**Pinedale Array**	**3.21**	**258**			**Pn**	**18 59 02.3**	**+2.4**
LAO	**LASA Array**	**3.22**	**349**			**Pn**	**18 59 01.3**	**+1.5**
LAO				IAML			19 00 21.4	
	87nm,0.9s							
RLMT	**Red Lodge**	**3.25**	**300**			**Pn**	**18 59 02.3**	**+1.8**
RLMT				IAML			18 59 59.3	
	29nm,0.8s							
HAYD	**Hayden**	**3.35**	**206**			**Pn**	**18 59 02.5**	**+0.7**
HAYD				IAML			19 00 08.6	
	comp=E,38nm,1.0s							
HAYD				IAML			19 00 18.3	
	comp=N,36nm,0.7s							
OGNE	**Ogallala**	**3.55**	**136**			**Pn**	**18 59 05.8**	**+1.3**
YNE	**Yellowstone No**	**3.68**	**295**			**Pn**	**18 59 07.0**	**+0.6**
YNE				IAML			19 00 12.5	
	comp=E,42nm,0.4s							
YNE				IAML			19 00 16.8	
	comp=N,41nm,0.7s							
YMP	**Mirror Lake PI**	**3.69**	**291**			**Pn**	**18 59 08.1**	**+1.5**
YMP				IAML			19 00 11.1	
	comp=E,60nm,0.8s							
YMP				IAML			19 00 13.5	
	comp=N,61nm,0.8s							
ISCO	**Idaho Springs**	**3.74**	**184**			**Pn**	**18 59 08.2**	**+0.9**
GCMT	**Greycliff**	**3.84**	**307**			**Pn**	**18 59 09.1**	**+0.6**
LOHW	**Long Hollow**	**3.85**	**273**			**Pn**	**18 59 09.6**	**+0.9**
LOHW				IAML			19 00 15.2	
	comp=N,23nm,0.8s							
FLWY	**Flagg Ranch**	**3.94**	**280**			**Pn**	**18 59 11.2**	**+1.2**
FLWY				IAML			19 00 31.3	
	comp=N,33nm,1.1s							
SNOW	**Snow King Moun**	**3.97**	**271**			**Pn**	**18 59 11.5**	**+1.2**
SNOW				IAML			19 00 23.6	
	comp=N,38nm,1.0s							
SNOW				IAML			19 00 46.5	
	comp=N,30nm,0.9s							
O20A	**White River Ci**	**4.05**	**214**			**Pn**	**18 59 15.2**	**+3.8**
O20A				IAML			19 00 27.6	
	comp=N,43nm,0.9s							
O20A				IAML			19 01 03.3	
	comp=N,31nm,1.1s							
FXWY	**Fox Creek**	**4.16**	**273**			**Pn**	**18 59 14.0**	**+1.0**
FXWY				IAML			19 01 09.5	
	comp=N,27nm,0.1s							
K30B	**Basset**	**4.26**	**100**			**Pn**	**18 59 14.8**	**+0.6**
AHID	**Auburn Hatcher**	**4.31**	**262**			**Pn**	**18 59 19.8**	**+4.8**
AHID				IAML			19 01 10.0	
	comp=N,36nm,0.1s							
RDMU	**Red Mountain**	**4.34**	**228**			**Pn**	**18 59 19.8**	**+4.3**
RDMU				IAML			19 00 36.5	
	comp=E,21nm,0.8s							
RDMU				IAML			19 00 41.0	
	comp=N,24nm,1.0s							
KSCO	**Kaye Shedlock'**	**4.95**	**155**			**Pn**	**18 59 25.7**	**+1.9**
DGMT	**Dagmar**	**4.99**	**9**			**Pn**	**18 59 26.1**	**+1.8**
HWUT	**Hardware Ranch**	**5.01**	**249**			**Pn**	**18 59 26.3**	**+1.7**
HWUT				IAML			19 01 04.8	
	comp=N,17nm,1.0s							
HWUT				IAML			19 01 15.4	
	comp=N,16nm,0.9s							
TCUT	**Toone Canyon**	**5.13**	**244**			**Pn**	**18 59 26.2**	**-0.1**
DLMT	**Dillon**	**5.53**	**292**			**Pn**	**18 59 31.3**	**-0.4**
PV22	**Blue Mesa, Par**	**5.65**	**209**			**Pn**	**18 59 32.7**	**-0.7**
PV07	**Paradox Valley**	**5.69**	**208**			**Pn**	**18 59 33.1**	**-0.9**
P17A	**Butcher Ranch,**	**5.76**	**227**			**Pn**	**18 59 34.7**	**-0.1**
PV12	**Saucer Basin,**	**5.85**	**208**			**Pn**	**18 59 34.9**	**-1.3**
SRU	**San Rafael Swe**	**5.92**	**223**			**Pn**	**18 59 35.1**	**-2.0**
PV03	**Paradox Valley**	**5.92**	**208**			**Pn**	**18 59 36.4**	**-0.8**
PV02	**Paradox Valley**	**5.93**	**207**			**Pn**	**18 59 34.6**	**-2.7**
PV01	**Paradox Valley**	**5.94**	**206**			**Pn**	**18 59 37.2**	**-0.2**
ULM	**Lac du Bonnet**	**9.31**	**41**	Pn		**Pn**	**19 00 24.0**	**+0.6**
	comp=N,0.3nm,0.3s,baz=238,slow=9.5,SNR=2.9							
ULM				Lg		Lg	19 02 58.3	
	comp=N,0.2nm,0.3s,baz=143,slow=21,SNR=1.9							
	comp=N,1.5nm,0.5s							
I56US	**NEWPORT INFRAS**	**9.50**	**304**	I		I	19 49 30.0	
	baz=118,slow=304,SNR=1.4							

*IDC **31** 18:58:47.4±0.8, 30.33N×94.87E, h0km, mb3.9/16, mbtmp3.9/19, ML3.7/3, MS3.1/1, Error ellipse: s-maj=26.5km s-min=15.0km az=53.0*
*MOS **31** 18:58:48.0±1.4, 30.35N×94.74E, h13km, mb4.5/19, Error ellipse: s-maj=9.7km s-min=5.1km az=121.1*
*NEIC **31** 18:58:48.8±1.4, 30.36N±0.08×94.77E±0.09, h10km±1km, mb4.2/43, Error ellipse: s-maj=15.0km s-min=11.5km az=31.0*
*NDI **31** 18:58:49.7±1.8, 30.46N×95.00E, h10km, ML3.9, MW3.9, Presumed earthquake*
ISC 31 18:58:48.8±0.4, 30.36N±0.05×94.74E±0.05, h10km, n129, σ1s23/129, mb4.1/31, 9C-7D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.18**	**259**	*e*Pn		**Pn**	**18 59 40.0**	**+0.7**
LSA					Sn	**Sn**	**19 00 15.3**	**-2.2**
LSA					smax	smax		
	comp=N,23nm,1.0s							
LSA					smax	smax		
	comp=E,13nm,0.7s							
LSA	**Lhasa**	**3.18**	**259**	P		**Pn**	**18 59 39.0**	**-0.3**
LSA							19 00 19.1	
LSA	**Lhasa**	**3.18**	**259**			**Pn**	**18 59 39.0**	**-0.3**
LSA					Sn	**Sn**	**19 00 19.1**	**+1.6**
TAWA	**Tawang**	**3.73**	**223**	*e*P		**Pn**	**18 59 50.7**	**+3.9**
MOKO	**MOKOCHONG**	**4.03**	**183**	*e*P		**Pn**	**18 59 53.0**	**+2.3**
MOKO				*i* x		x	19 00 04.9	
MOKO				*e*S		**Sn**	**19 00 40.4**	**+2.4**
KOHI	**KOHIMA**	**4.65**	**187**	*e*P		**Pn**	**19 00 01.6**	**+2.3**
KOHI				*i* x		x	19 00 14.0	
SHL	**Shillong**	**5.40**	**209**	P		**Pn**	**19 00 09.7**	**+0.1**
SHL	**Shillong**	**5.40**	**209**	Pn		**Pn**	**19 00 09.7**	**+0.1**
SHL	**Shillong**	**5.40**	**209**	*e*P		**Pn**	**19 00 11.1**	**+1.5**
SHL				*e*S		**Sn**	**19 01 11.8**	**-0.1**
IMP	**Imphal**	**5.55**	**187**	*e*P		**Pn**	**19 00 13.6**	**+2.1**
DHUB	**DHUBRI**	**6.01**	**225**	*e*P		Pn	19 00 23.0	+5.2
MORE	**Moreh**	**6.11**	**184**			**Pn**	**19 00 19.1**	**-0.1**
TNCH	**TengChong**	**6.28**	**147**	P		Pn	19 00 27.5	+5.8
TNCH				sP		Pb	19 00 35.3	-3.1
TNCH				S		**Sn**	**19 01 31.8**	**-1.8**
TNCH				pmax		pmax		
	comp=Z,15nm,1.6s							
TNCH				pmax		pmax		
	comp=Z,140nm,3.3s							
TNCH				LR		LR		
	comp=N,310nm,2.7s							
TNCH				LR		LR		
	comp=E,200nm,2.9s							
TNCH				LR		LR		
	comp=Z,80nm,6.4s							
GTA2	**Gaotai**	**9.99**	**23**	*e*P		**Pn**	**19 01 15.0**	**+2.4**
GTA2				sP			19 01 27.0	
GTA2				pmax		pmax		
	comp=Z,1.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**12.45**	**161**	Pn		**Pn**	**19 01 45.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=332,slow=12,SNR=4.7							
	comp=Z,0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**12.45**	**161**	*ce*P		**Pn**	**19 01 48.9**	**+2.7**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**12.45**	**161**	Pn		**Pn**	**19 01 46.8**	**+0.7**
BTO2	**Baotou**	**16.08**	**46**	*e*P		**Pn**	**19 02 35.5**	**+0.4**
BTO2				S		**Sn**	**19 05 35.5**	**+2.0**
BTO2				pmax		pmax		
	comp=Z,8.0nm,0.6s							
BTO2				pmax		pmax		
	comp=Z,160nm,4.6s							
BTO2				LR		LR		
	comp=N,210nm,5.1s							
BTO2				LR		LR		
	comp=E,130nm,5.3s							
BTO2				LR		LR		
	comp=Z,140nm,5.6s							
WUS	**Wushi**	**16.57**	**315**			**Pn**	**19 02 41.8**	**+0.4**
WUS				IAmb		IAmb	19 02 47.8	
	comp=Z,26nm,0.8s							
HHC	**Hu-ho-hao-te**	**17.20**	**48**	*e*P		**P**	**19 02 50.8**	**-0.1**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,100nm,4.8s							
TARG	**Taragay, Kyrgy**	**17.75**	**314**	P		**Pn**	**19 02 54.5**	**-1.9**
TARG				pmax		pmax		
	comp=Z,14nm,1.2s							
TARG	**Taragay, Kyrgy**	**17.75**	**314**			**Pn**	**19 02 54.5**	**-1.9**
PDGK	**Podgornoye**	**17.75**	**321**	P		**Pn**	**19 02 54.7**	**-1.5**
PDGK	**Podgornoye**	**17.75**	**321**			**Pn**	**19 02 54.7**	**-1.5**
PRZ	**Przheval'sk**	**17.83**	**317**	P		**Pn**	**19 02 57.6**	**+0.4**
PRZ				pmax		pmax		
	comp=Z,23nm,1.1s							
PRZ	**Przheval'sk**	**17.83**	**317**	P		**Pn**	**19 02 57.6**	**+0.4**
PRZ				IAmb		IAmb	19 03 04.3	
	comp=Z,22nm,1.1s							
KSH2	**Kashi**	**18.00**	**304**	P		**P**	**19 03 02.3**	**+2.5**
KSH2				pmax		pmax		
	comp=Z,4.0nm,0.7s							
KDJ	**Kajisay**	**18.36**	**315**	P		**Pn**	**19 03 02.9**	**-0.8**
KDJ				pmax		pmax		
	comp=Z,12nm,1.0s							
KDJ	**Kajisay**	**18.36**	**315**	P		**Pn**	**19 03 02.9**	**-0.8**
KDJ				IAmb		IAmb	19 03 10.2	
	comp=Z,12nm,1.0s							
NIL	**Nilore**	**18.51**	**286**	P		**P**	**19 03 04.5**	**-0.8**
NIL				pmax		pmax		
	comp=Z,7.0nm,0.7s							
NIL	**Nilore**	**18.51**	**286**			**P**	**19 03 04.5**	**-0.8**
MK31	**Makanchi Array**	**19.04**	**333**	*d*	*i*	**Pn**	**19 03 11.8**	**+0.1**
MKAR	**Makanchi Array**	**19.04**	**333**		P	**P**	**19 03 11.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=134,slow=14,SNR=12							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**19.04**	**333**			**P**	**19 03 10.8**	**-0.2**
MAKZ	**Makanchi**	**19.17**	**332**	P		**P**	**19 03 12.1**	**-0.4**
MAKZ				pmax		pmax		
	comp=Z,10.0nm,1.4s							
MAKZ	**Makanchi**	**19.17**	**332**			**P**	**19 03 12.1**	**-0.4**
BOOM	**Boomskoye usch**	**19.32**	**314**	P		**P**	**19 03 15.0**	**+0.7**
BOOM				pmax		pmax		
	comp=Z,7.0nm,1.0s							
BOOM	**Boomskoye usch**	**19.32**	**314**			**P**	**19 03 15.0**	**+0.7**
SONM	**Songino Array**	**19.62**	**24**	P		**Pn**	**19 03 18.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=20							
	comp=Z,4.3nm,1.0s							
SONM	**Songino Array**	**19.62**	**24**	*e*P		**Pn**	**19 03 18.9**	**+0.1**
SONM	**Songino Array**	**19.62**	**24**			**P**	**19 03 16.7**	**-0.7**
ULN	**Ulaanbaatar**	**19.88**	**25**	*i*	*i*	**Pn**	**19 03 21.2**	**-0.7**
ULN				pmax		pmax		
	comp=Z,4.0nm,1.1s							
ULN	**Ulaanbaatar**	**19.88**	**25**			**P**	**19 03 19.8**	**-0.6**
DGZ	**Jazzator, Alta**	**20.09**	**346**	*e*	P	Pn	19 03 27.2	+2.8
DGZ				pmax		pmax		
	comp=Z,9.0nm,1.2s							
AAK	**Ala-Archa**	**20.31**	**313**	P		Pn	19 03 27.6	+0.6
	comp=Z,6.2nm,0.7s,baz=130,slow=12,SNR=13							
	comp=Z,6.2nm,0.7s							
AAK	**Ala-Archa**	**20.31**	**313**	*c*	*i*	Pn	19 03 29.5	+2.4
AAK				pmax		pmax		
	comp=Z,24nm,1.3s							
AAK	**Ala-Archa**	**20.31**	**313**			**P**	**19 03 25.3**	**+0.3**
AAK				IAmb		IAmb	19 03 32.8	
	comp=Z,20nm,1.1s							
FRU1	**Bishkek**	**20.31**	**313**	P		**P**	**19 03 26.0**	**+1.0**
FRU1				pmax		pmax		
	comp=Z,9.0nm,0.8s							
FRU1	**Bishkek**	**20.31**	**313**	P		**P**	**19 03 26.0**	**+1.0**
FRU1				IAmb		IAmb	19 03 29.8	
	comp=Z,8.9nm,0.8s							
KNGR	**Kungurtug, Tuv**	**20.33**	**5**	*e*	P	Pn	19 03 27.4	+0.2
KNGR				pmax		pmax		
	comp=Z,7.0nm,1.3s							
MANEM	**Manem**	**20.39**	**297**	P		**P**	**19 03 26.3**	**+0.2**
MANEM				IAmb		IAmb	19 03 35.5	
	comp=Z,24nm,1.1s							
ARSB	**Arslanbob**	**20.70**	**308**	P		**P**	**19 03 29.6**	**+0.3**
ARSB				pmax		pmax		
	comp=Z,12nm,1.3s							
ARSB	**Arslanbob**	**20.70**	**308**	P		**P**	**19 03 29.6**	**+0.3**
ARSB				IAmb		IAmb	19 03 33.3	
	comp=Z,12nm,1.3s							
DRK	**Karamyk**	**20.85**	**302**	P		**P**	**19 03 31.0**	**-0.1**
DRK				pmax		pmax		
	comp=Z,26nm,1.5s							
DRK	**Karamyk**	**20.85**	**302**	P		**P**	**19 03 31.0**	**-0.1**
DRK				IAmb		IAmb	19 03 45.4	
	comp=Z,26nm,1.5s							
BTK	**Batken**	**21.75**	**303**	P		**P**	**19 03 41.1**	**+0.5**
BTK				pmax		pmax	

BTK	**Batken**	**21.75**	**303**			**P**	**19 03 41.1**	**+0.5**
BTK				IAmb		IAmb	19 03 45.5	
	comp=Z,15nm,1.2s							
MOY	**Mondy**	**21.79**	**11**	*e*	P	**P**	**19 03 42.5**	**+1.6**
MOY				pmax		pmax		
	comp=Z,16nm,1.9s							
GAR	**Garm**	**21.81**	**300**			**P**	**19 03 40.7**	**-0.5**
GAR				IAmb		IAmb	19 03 43.9	
	comp=Z,14nm,1.0s							
KBL	**Kabul**	**22.06**	**288**		P	**P**	**19 03 44.1**	**0.0**
KBL				pmax		pmax		
	comp=Z,22nm,1.1s							
KBL	**Kabul**	**22.06**	**288**			**P**	**19 03 44.1**	**0.0**
CHGR	**Chuyangaron**	**22.59**	**298**	*c*	*i*P	**P**	**19 03 50.6**	**+1.0**
CHGR				pmax		pmax		
	comp=Z,53nm,1.1s							
CHGR	**Chuyangaron**	**22.59**	**298**			**P**	**19 03 49.0**	**-0.6**
KK31	**Karatay Array**	**23.12**	**310**		P	**P**	**19 03 54.8**	**-0.2**
KK31	**Karatay Array**	**23.12**	**310**			**P**	**19 03 54.8**	**-0.2**
KK31				IAmb		IAmb	19 03 59.0	
	comp=Z,5.8nm,1.2s							
KKAR	**Karatay Array**	**23.12**	**310**		P	**P**	**19 03 54.4**	**-0.6**
KKAR	**Karatay Array**	**23.12**	**310**			**P**	**19 03 54.4**	**-0.6**
SHAA	**Shahritus**	**23.16**	**295**			**P**	**19 03 55.2**	**-0.4**
SHAA				IAmb		IAmb	19 03 59.7	
	comp=Z,10nm,0.8s							
KURBB	**Kurchatov Arra**	**23.60**	**334**		P	**P**	**19 04 00.2**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=144,slow=10,SNR=22							
	comp=Z,2.8nm,0.8s							
KURK	**Kurchatov**	**23.64**	**334**	*d*	*i*P	**P**	**19 04 01.1**	**+1.0**
KURK				pmax		pmax		
	comp=Z,12nm,1.6s							
KURK	**Kurchatov**	**23.64**	**334**			**P**	**19 03 60.0**	**-0.1**
KURK				IAmb		IAmb	19 04 03.4	
	comp=Z,4.8nm,0.8s							
ZAA0	**Zalesovo Array**	**24.64**	**346**			**P**	**19 04 08.2**	**-1.2**
ZAA0				IAmb		IAmb	19 04 12.2	
	comp=Z,4.3nm,1.1s							
ZALV	**Zalesovo Beam**	**24.64**	**346**		P	**P**	**19 04 10.7**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=166,slow=9.4,SNR=9.1							
	comp=Z,1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**24.64**	**346**			**P**	**19 04 09.2**	**-0.2**
HILR	**Hailar Array B**	**26.91**	**37**		P	**P**	**19 04 30.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=214,slow=10,SNR=1.7							
	comp=Z,0.5nm,0.3s							
KS19	**Wonju Array Si**	**28.30**	**66**		P	**P**	**19 04 42.3**	**-0.2**
KSAR	**Wonju Array Be**	**28.30**	**67**		P	**P**	**19 04 42.2**	**-0.4**
KSAR	**Wonju Array Be**	**28.30**	**67**		P	**P**	**19 04 42.2**	**-0.4**
BVAR	**Borovoye Array**	**28.78**	**329**		P	**P**	**19 04 48.0**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=137,slow=11,SNR=9.0							
	comp=Z,1.4nm,0.8s							
AB31	**Akbulak array**	**32.33**	**316**		P	**P**	**19 05 18.3**	**+0.3**
AB31				IAmb		IAmb	19 05 30.7	
	comp=Z,4.7nm,1.5s							
ABKAR	**Akbulak array**	**32.33**	**316**		P	**P**	**19 05 18.1**	**+0.1**
ARTI	**Arti**	**36.38**	**326**		P	**P**	**19 05 53.8**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=123,slow=4.0,SNR=5.2							
	comp=Z,2.4nm,0.7s							
ARTI	**Arti**	**36.38**	**326**	*c*	*i*P	**P**	**19 05 54.8**	**+1.8**
ARTI							19 07 12.0	
ARTI							19 08 14.8	
ARTI					S	**S**	**19 11 36.0**	**+1.9**
ARTI					SS	**SnSn**	**19 14 02.2**	**+0.7**
ARTI					pmax	pmax		
	comp=Z,3.0nm,0.8s							
ARTI	**Arti**	**36.38**	**326**			**P**	**19 05 52.8**	**-0.3**
ARTI				IAmb		IAmb	19 05 55.5	
	comp=Z,4.1nm,0.7s							
MJAR	**Matsushiro Arr**	**36.56**	**68**		LR	LR	19 20 08.9	
	comp=Z,26nm,18.0s,baz=193,slow=35							
YAK	**Yakutsk**	**38.97**	**25**	*de*	P	**P**	**19 06 14.7**	**-0.1**
YAK				pmax		pmax		
	comp=Z,4.0nm,0.7s							
YAK	**Yakutsk**	**38.97**	**25**		P	**P**	**19 06 13.3**	**-1.5**
YAK				IAmb		IAmb	19 06 16.1	
	comp=Z,3.6nm,0.7s							
YSS	**Yuzhno-Sakhali**	**40.32**	**52**	ǁ *e*	P	**P**	**19 06 28.1**	**+1.8**
YSS				pmax		pmax		
	comp=Z,33nm,1.4s							
YSS	**Yuzhno-Sakhali**	**40.32**	**52**		P	**P**	**19 06 25.2**	**-1.1**
BELG	**Belogornoye**	**40.72**	**317**	ǁ *e*	P	**P**	**19 06 32.2**	**+2.7**
BELG				pmax		pmax		
	comp=Z,2.0nm,1.3s							
KIRV	**Kirov**	**41.69**	**326**	*de*	P	**P**	**19 06 39.1**	**+1.7**
JAGI	**Jajag, Banyuwa**	**42.88**	**151**		P	**P**	**19 06 44.5**	**-3.1**
KIV	**Kislovodsk**	**42.97**	**303**	*e*	P	**P**	**19 06 50.5**	**+2.3**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.1s							
KIV	**Kislovodsk**	**42.97**	**303**		P	**P**	**19 06 48.0**	**-0.1**
KLMR	**Klimovskoe**	**47.16**	**327**	*e*	P	**P**	**19 07 20.0**	**-1.2**
KLMR				pmax		pmax		
	comp=Z,18nm,1.4s							
OBN	**Obninsk**	**47.66**	**319**	*de*	P	**P**	**19 07 26.6**	**+1.5**
OBN				*e*			19 08 55.7	
OBN				*e*			19 09 18.2	
OBN				*e*	PPP	PPP	19 10 02.9	
OBN				pmax		pmax		
	comp=Z,28nm,2.2s							
BNN	**Bunyan**	**48.48**	**297**		P	**P**	**19 07 31.4**	**-0.5**
BR131	**Keskin Array S**	**50.04**	**298**	ǁ	*i*P	**P**	**19 07 46.2**	**+2.4**
BR131	**Keskin Array S**	**50.04**	**298**		P	**P**	**19 07 42.5**	**-1.3**
BR131				IAmb		IAmb	19 07 56.4	
	comp=Z,3.1nm,1.3s							
BRTR	**Keskin Array B**	**50.04**	**298**		P	**P**	**19 07 44.5**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=128,slow=8.0,SNR=6.8							
	comp=Z,0.9nm,0.9s							
BRTR	**Keskin Array B**	**50.04**	**298**	*e*	P	**P**	**19 07 45.3**	**+1.5**
BRTR	**Keskin Array B**	**50.04**	**298**		P	**P**	**19 07 42.6**	**-1.2**
PETK	**Petropavlovsk-**	**50.35**	**44**		P	**P**	**19 07 44.3**	**-1.5**
PETK	**Petropavlovsk-**	**50.35**	**44**		P	**P**	**19 07 44.3**	**-1.5**
MDUB	**Mudurnu**	**51.76**	**300**		P	**P**	**19 07 55.3**	**-1.4**
AKASG	**Malin Array Be**	**51.98**	**313**		P	**P**	**19 07 58.8**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=88,slow=6.2,SNR=5.0							
	comp=Z,2.1nm,0.8s							
AKASG	**Malin Array Be**	**51.98**	**313**	*e*	P	**P**	**19 07 59.9**	**+1.9**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.8s							
AKBB	**Malin Array Si**	**51.98**	**313**	ǁ *e*	P	**P**	**19 08 00.0**	**+2.0**
AKBB				pmax		pmax		
	comp=Z,10.0nm,1.5s							
AKBB	**Malin Array Si**	**51.98**	**313**		P	**P**	**19 07 57.3**	**-0.8**
AKBB				IAmb		IAmb	19 08 01.0	
	comp=Z,3.3nm,0.7s							
KIEV	**Kiev**	**51.99**	**313**		P	**P**	**19 07 56.9**	**-1.2**
KIEV				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KIEV	**Kiev**	**51.99**	**313**		P	**P**	**19 07 56.9**	**-1.2**
KIEV				IAmb		IAmb	19 08 01.0	
	comp=Z,3.0nm,0.7s							
FINES	**FINESS Array B**	**53.69**	**326**		P	**P**	**19 08 10.0**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=176,slow=8.4,SNR=1.7							
	comp=Z,1.5nm,0.9s							
RDO	**Rodhopi**	**55.84**	**301**		P	**P**	**19 08 26.1**	**-0.4**
NC405	**NORSAR Array S**	**60.62**	**326**		P	**P**	**19 08 58.6**	**-0.9**
NB2	**NORSAR Subarra**	**60.87**	**326**		P	**P**	**19 09 01.6**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=79,slow=7.4							
NOA	**NORSAR Array B**	**60.87**	**326**		P	**P**	**19 09 01.7**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=80,slow=6.8,SNR=8.0							
	comp=Z,1.1nm,0.7s							
GERES	**GERESS Array B**	**62.19**	**312**		P	**P**	**19 09 11.7**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=87,slow=4.5,SNR=6.8							
	comp=Z,0.7nm,0.7s							
GERES	**GERESS Array B**	**62.19**	**312**		P	**P**	**19 09 10.7**	**+0.1**
WRA	**Warramunga Arr**	**62.87**	**138**		P	**P**	**19 09 14.7**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=323,slow=8.3,SNR=4.8							
	comp=Z,0.7nm,0.9s							
WRA	**Warramunga Arr**	**62.87**	**138**	*e*	P	**P**	**19 09 15.6**	**+0.4**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
WRA	**Warramunga Arr**	**62.87**	**138**		IAmb	IAmb	19 09 17.6	
	comp=Z,0.2nm,1.3s							
CEL	**Celeste**	**63.78**	**301**		P	**P**	**19 09 19.8**	**-1.5**
ASAR	**Alice Springs**	**65.56**	**140**		P	**P**	**19 09 32.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=322,slow=6.0,SNR=9.7							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**65.56**	**140**		P	**P**	**19 09 32.0**	**-0.9**
ILAR	**Eielson Array**	**73.84**	**23**		P	**P**	**19 10 22.5**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=304,slow=5.2,SNR=8.0							
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**73.84**	**23**	*e*	P	**P**	**19 10 24.1**	**+0.8**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ESDC	**Sonseca Array**	**77.36**	**309**		P	**P**	**19 10 45.8**	**+1.7**
	comp=Z,0.8nm,1.0s,baz=58,slow=6.6,SNR=6.1							
	comp=Z,0.8nm,1.0s							
ESDC	**Sonseca Array**	**77.36**	**309**		P	**P**	**19 10 44.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**86.04**	**283**		P	**P**	**19 11 30.6**	**+0.4**
	comp=Z,2.2nm,1.2s,baz=46,slow=4.2,SNR=3.8							
	comp=Z,2.2nm,1.2s							

IDC ***31*** *19:10:02.8±1.1,51.11N×168.61W,h0km,mb3.9/12, mbtmp3.9/12,MS2.9/8, Error ellipse: s-maj=37.0km s-min=19.6km az=13.0*

NEIC ***31*** *19:10:04.0±1.8,51.32N±0.07×168.58W±0.08,h10km±1km, mb3.9/77,ML3.8/16,ML3.5(AEIC),Error ellipse: s-maj=11.5km s-min=8.9km az=173.0*

AEIC ***31*** *19:10:08.7±2.0,51.31N±0.08×168.51W±0.08,h10km±5km, Error ellipse: s-maj=11.5km s-min=7.6km az=174.0*

ISC 31 19:10:04.3±0.7,**51.39N**±0.07×**168.56W**±0.05,**h10**km, **n169**,σ1§**31**/154,**mb4.0**/17,**MS2.8**/7,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**1.57**	**333**				**Pb**	**19 10 32.8**	**-0.7**
CLCO							**Sb**	**19 10 53.1**	**-0.3**
CLES	**Cleveland East**	**1.65**	**331**	Pn			**Pb**	**19 10 33.2**	**-1.6**
CLES				Sn			**Sb**	**19 10 54.6**	**-1.1**
CLES				IAML				19 10 58.8	
	comp=N,1μm,0.6s								
CLES				IAML				19 11 00.6	
	comp=E,987nm,0.5s								
OKSP	**Okmok Steeple**	**1.87**	**5**				**Pb**	**19 10 36.6**	**-2.0**
OKSP							**Sn**	**19 11 00.2**	**+0.1**
OKTU	**Okmok Mt. Tuli**	**2.02**	**9**				**Pb**	**19 10 39.2**	**-2.0**
OKCE	**Okmok Cone E**	**2.05**	**7**				**Pb**	**19 10 39.5**	**-2.2**
OKNC	**Okmok New Cone**	**2.09**	**7**				**Pb**	**19 10 40.3**	**-2.0**
MAPS	**Pakushin South**	**2.62**	**22**				**Pn**	**19 10 47.3**	**+0.6**
MAPS							**Sn**	**19 11 18.8**	**+0.4**
MGOD	**Makushin Gods**	**2.62**	**23**				**Pn**	**19 10 47.2**	**+0.5**
MREP	**Makushin Rep't**	**2.67**	**24**				**Pn**	**19 10 48.0**	**+0.6**
MNAT	**Makushin Natee**	**2.75**	**24**				**Pn**	**19 10 49.3**	**+0.9**
MNAT							**Sn**	**19 11 22.1**	**+0.4**
UNV	**Unalaska Valle**	**2.76**	**26**	P			**Pn**	**19 10 49.7**	**+1.1**
UNV	**Unalaska Valle**	**2.76**	**26**	Pn			**Pn**	**19 10 49.5**	**+1.0**
UNV				Sn			**Sn**	**19 11 21.8**	**-0.2**
AKRB	**Akutan Reef Bi**	**3.13**	**28**				**Pn**	**19 10 54.9**	**+1.2**
LVA	**Lava Point**	**3.17**	**28**	Pn			**Pn**	**19 10 55.5**	**+1.3**
LVA				IAML				19 11 40.4	
	comp=N,312nm,0.8s								
LVA				IAML				19 11 43.6	
	comp=E,185nm,0.8s								
AKUT	**Akutan**	**3.23**	**31**	P			**Pn**	**19 10 56.8**	**+1.8**
AKUT	**Akutan**	**3.23**	**31**	Pn			**Pn**	**19 10 56.1**	**+1.1**
AKUT				IAML				19 11 38.1	
	comp=E,99nm,1.1s								
KOSE	**Korovin Southe**	**3.53**	**288**				**Pn**	**19 10 59.8**	**+0.6**
KOFP	**Korovin Flat P**	**3.54**	**287**				**Pn**	**19 10 59.6**	**+0.2**
KOFP							**Sn**	**19 11 39.6**	**-1.7**
KONE	**Korovin Northe**	**3.58**	**288**				**Pn**	**19 11 00.5**	**+0.6**
ATKA	**Atka Island**	**3.59**	**285**	P			**Pn**	**19 10 59.3**	**-0.6**
ATKA	**Atka Island**	**3.59**	**285**	Pn			**Pn**	**19 10 59.4**	**-0.6**
ATKA				IAML				19 11 47.3	
	comp=E,82nm,0.5s								
KOKV	**Korovin Volcan**	**3.60**	**288**				**Pn**	**19 11 00.7**	**+0.5**
KONW	**Korovin Northw**	**3.64**	**288**				**Pn**	**19 11 01.4**	**+0.7**
KOWE	**Korovin West**	**3.66**	**288**				**Pn**	**19 11 01.6**	**+0.6**
GSIG	**Igitkin Island**	**4.62**	**280**				**Pn**	**19 11 13.6**	**-0.5**
GSMY	**Great Sitkin M**	**4.70**	**281**				**Pn**	**19 11 15.4**	**+0.1**
GSTR	**Great Sitkin T**	**4.71**	**282**	Pn			**Pn**	**19 11 15.1**	**-0.3**
GSTD	**Great Sitkin T**	**4.76**	**281**				**Pn**	**19 11 16.1**	**-0.1**
GSSP	**Great Sitkin S**	**4.78**	**281**				**Pn**	**19 11 16.7**	**+0.3**
ETKA	**Kagalaska Isla**	**4.91**	**279**				**Pn**	**19 11 17.7**	**-0.5**
ADAG	**Mount Adagdak**	**5.04**	**280**				**Pn**	**19 11 20.4**	**+0.6**
ADK	**Adak**	**5.08**	**279**	P			**Pn**	**19 11 20.2**	**-0.3**
ADK	**Adak**	**5.08**	**279**	Pn			**Pn**	**19 11 20.0**	**-0.4**
DT1	**Dutton Round H**	**5.30**	**43**				**Pn**	**19 11 24.4**	**+1.0**
DTNA	**Dutton South F**	**5.34**	**43**				**Pn**	**19 11 25.3**	**+1.3**
KIWB	**Kanaga Island**	**5.37**	**278**	Pn			**Pn**	**19 11 24.3**	**-0.1**
KIWB				IAML				19 12 28.0	
	comp=E,93nm,0.6s								
KIWB				IAML				19 12 28.9	
	comp=N,97nm,0.5s								
KIKV	**Kanaga Island**	**5.38**	**279**				**Pn**	**19 11 24.9**	**+0.2**
KIMD	**Kanaga Island**	**5.42**	**277**				**Pn**	**19 11 25.2**	**0.0**
PS1A	**Pavlof South-1**	**5.74**	**43**				**Pn**	**19 11 30.9**	**+1.4**
TAFL	**Tanaga Flats**	**5.83**	**277**				**Pn**	**19 11 31.0**	**+0.2**
SPIA	**Saint Paul Isl**	**5.88**	**351**	P			**Pn**	**19 11 33.8**	**+2.4**
SPIA	**Saint Paul Isl**	**5.88**	**351**	Pn			**Pn**	**19 11 33.2**	**+1.8**
TAFP	**Tanaga Falls P**	**5.89**	**279**				**Pn**	**19 11 31.9**	**+0.3**
TASE	**Tanaga Southea**	**5.92**	**278**				**Pn**	**19 11 32.5**	**+0.5**
SDPT	**Sand Point**	**6.25**	**48**	P			**Pn**	**19 11 37.2**	**+0.6**
SDPT	**Sand Point**	**6.25**	**48**	Pn			**Pn**	**19 11 37.6**	**+1.1**
CNBA	**Chernabura Isl**	**6.40**	**54**	Pn			**Pn**	**19 11 39.0**	**+0.4**
GAKI	**Gareloi-Kavalg**	**6.41**	**275**				**Pn**	**19 11 38.7**	**+0.1**
CHNA	**Chernobura Isl**	**6.41**	**54**	P			**Pn**	**19 11 38.7**	**0.0**
VNFG	**Fog Glacier, M**	**7.24**	**44**	Pn			**Pn**	**19 11 51.8**	**+1.7**
CEPE	**Senis' Perret**	**7.35**	**279**				**Pn**	**19 11 51.9**	**+0.2**
AMKA	**Amchitka**	**7.59**	**275**				**Pn**	**19 11 53.1**	**-1.9**
O14K	**Tigyukauivet M**	**8.90**	**25**				**Pn**	**19 12 14.1**	**+1.2**
O15K	**Ungalikthiuk R**	**9.25**	**29**				**Pn**	**19 12 18.8**	**+1.2**
N14K	**Kuskokwak Cree**	**9.39**	**22**				**Pn**	**19 12 20.4**	**+1.0**
M13K	**Dall Lake**	**9.50**	**16**				**Pn**	**19 12 22.1**	**+1.0**
P16K	**Nushagak River**	**9.74**	**34**				**Pn**	**19 12 24.9**	**+0.5**
SII	**Sitkinak Islan**	**9.92**	**53**				**Pn**	**19 12 26.4**	**-0.5**
N15K	**Kwethluk River**	**10.00**	**25**				**Pn**	**19 12 29.2**	**+1.3**
M14K	**Bethel**	**10.08**	**19**				**Pn**	**19 12 31.1**	**+2.3**
O16K	**Kokwok River B**	**10.13**	**32**				**Pn**	**19 12 30.6**	**+1.0**
P17K	**Kvichak River**	**10.42**	**37**				**Pn**	**19 12 35.3**	**+1.6**
L14K	**Kuka Creek**	**10.49**	**16**				**Pn**	**19 12 36.4**	**+1.9**
OHAK	**Old Harbor**	**10.65**	**51**	P			**Pn**	**19 12 36.9**	**+0.1**
OHAK	**Old Harbor**	**10.65**	**51**	Pn			**Pn**	**19 12 37.0**	**+0.2**
SHEM	**Shemya Is, Ala**	**10.76**	**284**	Pn			**Pn**	**19 12 35.6**	**-2.7**
SMY	**Shemya**	**10.76**	**284**	Pn			**Pn**	**19 12 35.2**	**-3.1**
K13K	**Kusilvak Mount**	**10.78**	**10**				**Pn**	**19 12 39.2**	**+0.6**
M16K	**Timber Creek**	**11.02**	**25**				**Pn**	**19 12 42.0**	**+0.2**
KDAK	**Kodiak Island**	**11.25**	**49**	Pn			**Pn**	**19 12 45.4**	**+0.4**
	comp=N,1.4nm,0.3s,baz=195,slow=1.6,SNR=8.4								
O18K	**Koktuh Hills**	**11.33**	**36**	Pn			**Pn**	**19 12 46.1**	**-0.1**
Q19K	**Cape Douglas,**	**11.37**	**43**	Pn			**Pn**	**19 12 48.1**	**+1.4**
K15K	**Wolf Creek Mou**	**11.58**	**17**	Pn			**Pn**	**19 12 51.6**	**+2.1**
N18K	**Kilae Creek**	**11.68**	**32**	Pn			**Pn**	**19 12 50.9**	**0.0**
N19K	**Bonanza Creek**	**12.26**	**34**				**Pn**	**19 12 59.0**	**+0.2**
J20K	**Nowinta River**	**14.89**	**25**				**P**	**19 13 36.8**	**-3.6**
CAST	**Castle Rocks**	**14.91**	**30**				**P**	**19 13 37.3**	**-3.3**
HIN	**Hinchinbrook I**	**15.24**	**45**				**Pn**	**19 13 38.3**	**-1.1**
G18K	**Tagagawik**	**15.40**	**15**				**Pn**	**19 13 42.1**	**+0.7**
G18K				IAmb		IAmb		19 13 48.8	
	comp=Z,6.5nm,0.9s								
F17K	**Baldwin Pennin**	**15.54**	**11**				**P**	**19 13 44.4**	**-3.2**
G19K	**Purcell Mounta**	**15.90**	**17**				**P**	**19 13 49.4**	**-2.2**
I21K	**Tanana**	**16.26**	**25**	P			**P**	**19 13 54.5**	**-1.0**
I21K				IAmb		IAmb		19 13 59.5	
	comp=Z,7.6nm,0.8s								
IMAR	**Indian Mountai**	**16.46**	**22**	P			**P**	**19 13 56.8**	**-0.9**
G21K	**Allakaket**	**16.96**	**21**				**P**	**19 14 02.0**	**-1.3**
G21K				IAmb		IAmb		19 14 07.3	
	comp=Z,7.8nm,1.1s								
F20K	**Avaraart Lake**	**16.96**	**17**	P			**P**	**19 14 02.3**	**-1.0**
H22K	**Ishtalitna Cre**	**16.97**	**25**				**P**	**19 14 01.9**	**-1.5**
H22K				IAmb		IAmb		19 14 09.7	
	comp=Z,14nm,1.4s								
I23K	**Minto, Yukon-K**	**16.98**	**28**				**P**	**19 14 01.4**	**-2.1**
C16K	**Lisburne Hills**	**17.01**	**4**	Pn			**P**	**19 14 02.1**	**-1.7**
C16K				IAmb		IAmb		19 14 04.3	
	comp=Z,12nm,1.2s								
E19K	**Redstone River**	**17.06**	**15**				**P**	**19 14 02.7**	**-1.8**
ILAR	**Eielson Array**	**17.50**	**32**	P			**Pn**	**19 14 06.5**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=233,slow=11,SNR=5.6								
ILAR				LR		LR		19 20 27.6	
	comp=Z,21nm,21.6s,baz=266,slow=35								
ILAR	**Eielson Array**	**17.50**	**32**	P			**P**	**19 14 08.4**	**-1.0**
GRNC	**Granite Creek**	**17.53**	**47**	P			**P**	**19 14 08.8**	**-1.1**
GRNC				IAmb		IAmb		19 14 19.6	
	comp=Z,10nm,0.8s								
F21K	**Alatna River**	**17.55**	**20**				**P**	**19 14 09.0**	**-0.9**
M26K	**Nabesna, AK**	**17.65**	**42**	P			**P**	**19 14 09.6**	**-1.4**
H24K	**Noodor Dome**	**17.91**	**28**	P			**P**	**19 14 12.5**	**-1.3**
G23K	**Bananza Creek**	**17.95**	**24**				**P**	**19 14 13.6**	**-0.8**
G23K				IAmb		IAmb		19 14 19.0	
	comp=Z,11nm,1.4s								
PCA	**Pinnacle**	**18.03**	**50**	P			**P**	**19 14 13.9**	**-1.4**
PCA				IAmb		IAmb		19 14 25.5	
	comp=Z,7.7nm,0.8s								
M27K	**Edge Creek, AK**	**18.10**	**42**	P			**Pn**	**19 14 14.3**	**-1.4**
M27K				IAmb		IAmb		19 14 23.4	
	comp=Z,9.5nm,1.0s								
COLD	**Coldfoot**	**18.31**	**23**	P			**P**	**19 14 18.4**	**+0.3**
COLD				IAmb		IAmb		19 14 22.9	
	comp=Z,13nm,1.0s								
D20K	**Etivluk River**	**18.31**	**14**				**P**	**19 14 18.3**	**+0.1**
D20K				IAmb		IAmb		19 14 29.8	
	comp=Z,6.1nm,0.7s								
PRP	**Porcupine Dome**	**18.42**	**31**	P			**Pn**	**19 14 19.1**	**-0.5**
L27K	**Beaver Creek,**	**18.43**	**40**	P			**Pn**	**19 14 18.6**	**-1.1**
BCAR	**Beaver Creek A**	**18.45**	**40**	P			**Pn**	**19 14 19.1**	**-0.8**
E21K	**Killik River**	**18.51**	**17**	P			**Pn**	**19 14 20.5**	**0.0**
E21K				IAmb		IAmb		19 14 23.1	
	comp=Z,6.0nm,0.8s								
G24K	**Hadweenzic Riv**	**18.63**	**27**	P			**Pn**	**19 14 21.4**	**-0.6**
E22K	**Anaktuvuk Pass**	**18.67**	**20**	IAmb			IAmb	19 14 28.3	
	comp=Z,11nm,1.5s								
E23K	**Chandalar**	**19.10**	**22**				**Pn**	**19 14 26.7**	**-1.1**
E23K				IAmb		IAmb		19 14 31.5	
	comp=Z,8.0nm,0.8s								
F24K	**Squaw Lake**	**19.11**	**25**	P			**Pn**	**19 14 26.5**	**-1.4**
E24K	**Your Creek**	**19.38**	**23**	P			**Pn**	**19 14 29.4**	**-1.7**
B21K	**Ikpikpuk River**	**19.44**	**15**				**Pn**	**19 14 30.6**	**-1.1**
B21K				IAmb		IAmb		19 14 41.5	
	comp=Z,4.7nm,0.6s								
HYT	**Haines Junctio**	**19.54**	**49**				**Pn**	**19 14 31.5**	**-1.7**
HYT				IAmb		IAmb		19 14 42.2	
	comp=Z,8.1nm,0.8s								
D23K	**Nanushuk River**	**19.59**	**19**				**Pn**	**19 14 32.4**	**-1.2**
D23K				IAmb		IAmb		19 14 35.2	
	comp=Z,5.3nm,0.9s								
I27K	**Kandik River**	**19.79**	**34**				**Pn**	**19 14 34.1**	**-1.9**
I27K				IAmb		IAmb		19 14 39.6	
	comp=Z,11nm,1.5s								
DAWY	**Dawson**	**19.86**	**39**	IAmb		IAmb		19 14 49.1	
	comp=Z,5.2nm,1.1s								
G26K	**Porcupine Rive**	**19.88**	**29**				**Pn**	**19 14 36.2**	**-0.8**
G26K				IAmb		IAmb		19 15 02.1	
	comp=Z,6.2nm,1.4s								
N30M	**Aishikik Lake**	**19.91**	**47**				**Pn**	**19 14 35.3**	**-2.1**
N30M				IAmb		IAmb		19 14 43.0	
	comp=Z,13nm,1.3s								
L29M	**L29M**	**19.98**	**42**				Pn	19 14 36.2	-2.2
E25K	**Arctic Village**	**20.16**	**25**	IAmb			IAmb	19 14 44.0	
	comp=Z,4.8nm,0.8s								
H27K	**Steamboat Moun**	**20.17**	**32**	IAmb			IAmb	19 14 55.3	
	comp=Z,3.3nm,0.8s								
O30N	**Mendenhall**	**20.20**	**50**	P			Pn	19 14 39.5	-1.4
O30N				IAmb			IAmb	19 14 49.1	
	comp=Z,7.8nm,0.8s								
I28M	**Miner Creek**	**20.30**	**35**				Pn	19 14

2.6nm,0.3s,baz=41,slow=8.7,SNR=10
PMG Sn **Sn** 19 18 47.8 +6.3
6.2nm,0.3s,baz=160,slow=11,SNR=6.6
29nm,0.7s
PMG Port Moresby 5.79 227 Pn **Pn** 19 17 34.1 -0.9
PMG **Sn** 19 18 37.7 -3.9
CTA Charters Tower 15.39 199 LR LR 19 25 14.2
comp=Z,86nm,18.3s,baz=33,slow=35
EIDS Eidsvold 19.79 181 P **P** 19 20 37.6 -1.9
EIDS IAmb IAmb 19 20 42.6
comp=Z,14nm,1.1s
MTN Manton Dam 21.36 249 P **P** 19 20 57.9 +1.3
WR8 Warramunga Arr 21.90 227 P **P** 19 21 02.4 0.0
WR8 IAmb IAmb 19 21 36.8
comp=Z,17nm,1.4s
DZM Mont Dzumac 21.95 140 LR LR 19 28 53.3
comp=Z,71nm,18.9s,baz=172,slow=35
WRA Warramunga Arr 22.01 228 P **P** 19 21 05.7 +2.0
comp=Z,2.3nm,0.9s,baz=53,slow=10,SNR=12
comp=Z,2.3nm,0.9s
WRA Warramunga Arr 22.01 228 P **P** 19 21 01.4 -2.3
INKA Innaminka 24.38 204 P **P** 19 21 26.4 -1.1
INKA IAmb IAmb 19 21 29.5
comp=Z,4.4nm,0.8s
KNRA Kununurra 24.49 244 P **P** 19 21 29.0 +0.4
KNRA IAmb IAmb 19 21 35.7
comp=Z,5.3nm,0.8s
AS31 Alice Springs 24.77 221 P **P** 19 21 30.4 -0.7
ASAR Alice Springs 24.77 221 P **P** 19 21 32.0 +0.9
comp=Z,4.8nm,0.7s,baz=58,slow=8.6,SNR=59
ASAR LR LR 19 30 43.6
comp=Z,82nm,18.0s,baz=78,slow=35
comp=Z,4.8nm,0.7s
ASAR Alice Springs 24.77 221 P **P** 19 21 30.4 -0.7
FITZ Fitzroy Crossi 28.18 241 P **P** 19 22 01.1 -0.7
JOW Kunigami 39.19 326 LR LR 19 36 34.6
comp=Z,34nm,21.8s,baz=30,slow=31
MAJO Matsushiro 43.60 344 P **P** 19 24 13.4 0.0
MAJO IAmb IAmb 19 24 16.2
comp=Z,5.1nm,1.1s
MJB9 Matsu-Tunnel 43.61 344 P **P** 19 24 13.3 -0.3
MJB9 IAmb IAmb 19 24 17.1
comp=Z,5.3nm,1.2s
SONM Songino Array 66.20 329 P **P** 19 26 57.2 +0.2
comp=Z,0.9nm,0.6s,baz=129,slow=4.6,SNR=5.7
comp=Z,0.9nm,0.6s
SONM Songino Array 66.20 329 P **P** 19 26 56.2 -0.9
SONM IAmb IAmb 19 26 59.6
comp=Z,0.8nm,0.7s
L14K Kuka Creek 75.45 21 P **P** 19 27 52.8 -0.1
L14K IAmb IAmb 19 28 15.1
comp=Z,4.8nm,1.1s
K15K Wolf Creek Mou 76.49 21 P **P** 19 27 59.4 +0.6
CNPM China Poot 78.89 26 P **P** 19 28 11.2 -1.1
MKAR Makanchi Array 79.97 319 P **P** 19 28 18.9 +0.4
comp=Z,0.6nm,0.9s,baz=84,slow=5.0,SNR=5.0
comp=Z,0.6nm,0.9s
ZALV Zalesovo Beam 80.98 327 P **P** 19 28 22.8 -0.9
comp=Z,0.4nm,0.4s,baz=120,slow=8.5,SNR=2.6
comp=Z,0.4nm,0.4s
IMAR Indian Mountai 81.46 20 P **P** 19 28 25.6 -0.4
D19K Kuna River 81.61 17 P **P** 19 28 25.9 -0.9
ILAR Eielson Array 83.28 22 P **P** 19 28 33.8 -1.8
comp=Z,0.4nm,0.6s,baz=231,slow=5.4,SNR=4.2
comp=Z,0.4nm,0.6s
ILAR Eielson Array 83.28 22 P **P** 19 28 34.2 -1.3
KURK Kurchatov 83.49 322 P **P** 19 28 36.2 -0.7
KURBB Kurchatov Arra 83.52 322 P **P** 19 28 35.8 -1.3
comp=Z,0.4nm,0.7s,baz=123,slow=4.0,SNR=4.1
comp=Z,0.4nm,0.7s
J25K Salcha River, 83.78 23 P **P** 19 28 36.8 -1.5
J25K IAmb IAmb 19 28 37.6
comp=Z,1.5nm,0.6s
D23K Nanushuk River 84.09 18 P **P** 19 28 39.3 -0.4
QSPA South Pole Qui 84.49 180 P **P** 19 28 44.4 +2.4
comp=Z,0.8nm,0.7s,baz=31,slow=2.2,SNR=7.2
comp=Z,0.8nm,0.7s
DLBC Dease Lake 88.64 31 LR LR 20 04 30.5
comp=Z,19nm,18.2s,baz=248,slow=33
BVAR Borovoye Array 88.99 323 P **P** 19 29 03.3 -0.6
comp=Z,1.0nm,0.7s,baz=91,slow=7.4,SNR=6.1
comp=Z,1.0nm,0.7s
NEW Newport 94.98 42 LR LR 20 04 22.3
comp=Z,19nm,19.6s,baz=92,slow=30
GERES GERESS Array B 123.92 328 PKP **PKPdf** 19 35 07.0 -0.7
comp=Z,0.4nm,0.8s,baz=42,slow=2.2,SNR=3.8
TORD Torodi Ar. Bea 149.25 286 PKPbc **PKPbc** 19 35 58.1 -0.9
comp=Z,3.7nm,0.7s,baz=72,slow=2.8,SNR=19

YARS 31 19:36:02.0,72.06N×115.94E,h3km,mb3.9/1,ML2.4/3, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**4.06**	**90**	*i* Pg	Pg	19 37 16.9	-2.8
	0.3nm,0.6s,baz=90						
TIXI				*e*Sg	Sg	19 38 15.3	+3.0
	60nm,0.4s,baz=90						
Y451		**4.14**	**91**	*i* Pg	Pb	19 37 17.4	+2.1
	9.0nm,0.1s,baz=90						
Y451				*e*Lg	Lg	19 38 13.9	
	baz=90						
Y451				*e*Lg	Lg	19 38 13.9	
	baz=90						
Y451				*e*Sg	Sg	19 38 19.0	+4.2
	35nm,0.2s,baz=90						
Y457		**4.14**	**91**	*i* Pg	Pb	19 37 17.5	+2.0
	6.7nm,0.1s,baz=90						
Y457				*e*Lg	Lg	19 38 14.4	
	baz=90						
Y457				*e*Lg	Lg	19 38 14.4	
	baz=90						
Y457				*e*Sg	Sg	19 38 19.7	+4.8
	47nm,0.3s,baz=90						
Y458		**4.29**	**92**	*e*Pg	Pb	19 37 20.2	+2.3
	7.5nm,0.1s,baz=92						
Y458				*e*Sn	Sn	19 37 59.7	+1.3
	baz=92						
Y458				*e*Sn	Sn	19 37 59.7	+1.3
	baz=92						
Y458				*e*Lg	Lg	19 38 18.4	
	baz=92						
Y458				*e*Lg	Lg	19 38 18.4	
	baz=92						
Y458				*e*Sg	Sg	19 38 23.3	+3.8
	46nm,0.1s,baz=92						
DEPR	**Deputatskiy**	**8.33**	**97**	*e*Pg	Pg	19 38 34.7	-6.6
	0.2nm,0.6s,baz=97						
DEPR				*e*Lg	Lg	19 40 26.2	
	0.4nm,0.7s,baz=97						
MOMR	**Moma**	**11.08**	**107**	*e*Pg	Pn	19 39 24.0	+43
	0.5nm,1.6s,baz=107						
MOMR				*e*Lg	Lg	19 41 53.8	
	0.2nm,1.4s,baz=107						
MOMR				*e*Lg	Lg	19 41 53.8	
	0.5nm,1.1s,baz=107						

IDC ***31*** *19:45:19.2±11.0, 33.90N×83.52E, h0km, mb3.6/3, mbtmp3.5/5, ML2.8/2, MS2.8/1, Error ellipse: s-maj=226.3km s-min=63.5km az=123.0*

ISC 31 19:45:23.7±7.5, 34.1N±0.6×84.0E±0.9, h35km, n7, σ0°48/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.77**	**355**	Pn	**Pn**	**19 48 22.5**	**-0.3**
	0.1nm,0.3s,baz=180,slow=13,SNR=6.0						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**17.02**	**348**	Pn	**Pn**	**19 49 19.1**	**+0.4**
	baz=172,slow=11,SNR=9.3						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**19.88**	**1**	P	**Pn**	**19 49 53.9**	**+0.3**
	0.3nm,0.3s,baz=193,slow=12,SNR=3.5						
	0.3nm,0.3s						
SONM	**Songino Array**	**21.72**	**44**	LR	LR	19 58 57.0	
	comp=Z,25nm,20.8s,baz=210,slow=37						
FINES	**FINESS Array B**	**45.49**	**325**	P	**P**	**19 53 39.5**	**+0.4**
	2.1nm,0.9s,baz=92,slow=9.7,SNR=1.9						
	2.1nm,0.9s						
NB2	**NORSAR Subarra**	**52.63**	**324**	P	**P**	**19 54 33.5**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=86,slow=7.4						
NOA	**NORSAR Array B**	**52.63**	**324**	P	**P**	**19 54 33.7**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=86,slow=7.3,SNR=5.9						
	comp=Z,0.8nm,0.8s						

IDC ***31*** *19:47:57.3±1.0, 51.13N×168.56W, h0km, mb3.9/13, mbtmp3.9/13, Error ellipse: s-maj=36.4km s-min=17.2km az=17.0*

NEIC ***31*** *19:47:58.9±1.5, 51.39N±0.06×168.62W±0.08, h10km±1km, mb3.9/88, ML3.6/16, ML3.4(AEIC), Error ellipse: s-maj=10.6km s-min=8.3km az=162.0*

AEIC ***31*** *19:48:02.7±1.4, 51.29N±0.07×168.56W±0.08, h10km±3km, Error ellipse: s-maj=10.3km s-min=6.5km az=156.0*

ISC 31 19:47:57.9±4.2, 51.35N±0.08×168.60W±0.05, h5km±27km, n193, σ1°48/204, mb4.0/22, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**1.60**	**335**		**Pn**	**19 48 26.9**	**+0.1**
CLCO					**Sn**	**19 48 46.1**	**-1.7**
CLES	**Cleveland East**	**1.68**	**332**		**Pn**	**19 48 28.0**	**0.0**
CLES				Sn	**Sn**	**19 48 47.4**	**-2.4**
CLES				IAML		19 48 54.5	
	comp=N,942nm,0.3s						
OKSP	**Okmok Steeple**	**1.92**	**6**		**Pn**	**19 48 30.8**	**-0.5**
OKSP					**Sn**	**19 48 54.7**	**-1.1**
OKCE	**Okmok Cone E**	**2.10**	**7**		**Pn**	**19 48 33.6**	**-0.2**
OKFG	**Magazine Ridge**	**2.11**	**11**		**Pn**	**19 48 33.6**	**-0.2**
OKNC	**Okmok New Cone**	**2.13**	**8**		**Pn**	**19 48 34.6**	**+0.4**
OKNC					**Sn**	**19 48 59.2**	**-1.9**
MGOD	**Makushin Gods**	**2.67**	**23**		**Pn**	**19 48 41.2**	**-0.4**
MGOD					**Sn**	**19 49 12.6**	**-1.8**
MNAT	**Makushin Natee**	**2.80**	**24**		**Pn**	**19 48 43.2**	**-0.2**
MNAT					**Sn**	**19 49 15.9**	**-1.6**
UNV	**Unalaska Valle**	**2.81**	**26**	P	**Pn**	**19 48 42.8**	**-0.7**
UNV	**Unalaska Valle**	**2.81**	**26**		**Pn**	**19 48 42.9**	**-0.5**
UNV				Sn	**Sn**	**19 49 15.3**	**-2.4**
ZRO	**Akutan Zero**	**3.18**	**29**		**Pn**	**19 48 48.7**	**+0.1**
ZRO					**Sn**	**19 49 24.1**	**-2.7**
AKRB	**Akutan Reef Bi**	**3.19**	**28**		**Pn**	**19 48 49.2**	**+0.6**
AKRB					**Sn**	**19 49 24.6**	**-2.3**
AKBBA	**Akutan Broad B**	**3.20**	**29**		**Pn**	**19 48 48.9**	**0.0**
AKV	**Akutan Volcano**	**3.21**	**29**		**Pn**	**19 48 49.4**	**+0.3**
LVA	**Lava Point**	**3.22**	**28**		**Pn**	**19 48 49.5**	**+0.3**
LVA	**Lava Point**	**3.22**	**28**	IAML		19 49 30.4	
	comp=E,155nm,0.9s						
LVA				IAML		19 49 34.2	
	comp=N,213nm,0.8s						
AKLV	**Akutan Long Va**	**3.25**	**29**		**Pn**	**19 48 49.5**	**0.0**
AKGG	**Akutan Green G**	**3.27**	**28**		**Pn**	**19 48 50.1**	**+0.3**
AKUT	**Akutan**	**3.28**	**31**	S	**Sn**	**19 49 26.9**	**-2.4**
AKUT	**Akutan**	**3.28**	**31**	Pn	**Pn**	**19 48 49.4**	**-0.5**
AKUT				Sn	**Sn**	**19 49 26.5**	**-2.8**
AKUT				IAML		19 49 32.0	
	comp=E,79nm,0.5s						
KOSE	**Korovin Southe**	**3.52**	**289**		**Pn**	**19 48 54.0**	**+0.7**
KOFP	**Korovin Flat P**	**3.53**	**287**		**Pn**	**19 48 54.0**	**+0.5**
KONE	**Korovin Northe**	**3.58**	**289**		**Pn**	**19 48 54.6**	**+0.6**
ATKA	**Atka Island**	**3.58**	**286**	P	**Pn**	**19 48 53.8**	**-0.2**
ATKA	**Atka Island**	**3.58**	**286**		**Pn**	**19 48 53.8**	**-0.2**
ATKA				Sn	**Sn**	**19 49 32.7**	**-3.9**
ATKA				IAML		19 49 41.8	
	comp=E,62nm,2.0s						
KOKV	**Korovin Volcan**	**3.59**	**289**		**Pn**	**19 48 54.8**	**+0.4**
KOWE	**Korovin West**	**3.65**	**288**		**Pn**	**19 48 55.6**	**+0.6**
SSLS	**Shishaldin Sou**	**4.37**	**38**		**Pn**	**19 49 05.3**	**+0.4**
ISNN	**Isanotski Nort**	**4.54**	**38**		**Pn**	**19 49 08.1**	**+0.7**
GSIG	**Igitkin Island**	**4.60**	**281**		**Pn**	**19 49 08.2**	**+0.1**
GSMY	**Great Sitkin M**	**4.69**	**281**		**Pn**	**19 49 09.8**	**+0.5**
GSTR	**Great Sitkin T**	**4.70**	**282**	Pn	**Pn**	**19 49 09.5**	**+0.1**
GSTR				Sn	**Sn**	**19 50 01.9**	**-2.4**
GSCK	**Great Sitkin C**	**4.75**	**281**		**Pn**	**19 49 10.2**	**+0.1**
GSSP	**Great Sitkin S**	**4.77**	**282**		**Pn**	**19 49 11.1**	**+0.7**
ETKA	**Kagalaska Isla**	**4.89**	**279**		**Pn**	**19 49 12.0**	**-0.1**
ADK	**Adak**	**5.06**	**279**	P	**Pn**	**19 49 14.9**	**+0.5**
ADK	**Adak**	**5.06**	**279**	Pn	**Pn**	**19 49 14.4**	**0.0**
ADK				Sn	**Sn**	**19 50 08.1**	**-5.2**
ADK				IAML		19 50 12.6	
	comp=E,46nm,0.9s						
ADK				IAML		19 50 13.5	
	comp=E,49nm,0.6s						
DT1	**Dutton Round H**	**5.35**	**43**		**Pn**	**19 49 18.7**	**+0.4**
KIWB	**Kanaga Island**	**5.35**	**279**	Pn	**Pn**	**19 49 18.4**	**0.0**
KIWB				IAML		19 50 19.0	
	comp=N,39nm,0.6s						
DTNA	**Dutton South F**	**5.39**	**43**		**Pn**	**19 49 19.4**	**+0.5**
KIMD	**Kanaga Island**	**5.40**	**278**		**Pn**	**19 49 19.7**	**+0.6**
DOL	**Dolgoi Island**	**5.55**	**44**		**Pn**	**19 49 21.5**	**+0.3**
PN7A	**Pavlof North-7**	**5.69**	**41**		**Pn**	**19 49 22.1**	**-0.9**
PS1A	**Pavlof South-1**	**5.79**	**42**		**Pn**	**19 49 24.4**	**0.0**
TAFP	**Tanaga Falls P**	**5.87**	**279**		**Pn**	**19 49 25.9**	**+0.3**
TASE	**Tanaga Southea**	**5.90**	**278**		**Pn**	**19 49 26.0**	**0.0**
SPIA	**Saint Paul Isl**	**5.92**	**351**	Pn	**Pn**	**19 49 26.7**	**+0.6**
SDPT	**Sand Point**	**6.30**	**47**	P	**Pn**	**19 49 31.4**	**-0.1**
SDPT	**Sand Point**	**6.30**	**47**	Pn	**Pn**	**19 49 30.8**	**-0.1**
GAKI	**Gareloi-Kavalg**	**6.38**	**276**		**Pn**	**19 49 33.1**	**+0.5**
CNBA	**Chernabura Isl**	**6.45**	**54**	Pn	**Pn**	**19 49 33.0**	**-0.5**
CHNA	**Chernabura Isl**	**6.45**	**54**	P	**Pn**	**19 49 32.9**	**-0.6**
VNFG	**Fog Glacier, M**	**7.29**	**44**		**Pn**	**19 49 45.2**	**+0.1**
CEPE	**Semis' Perret**	**7.33**	**279**		**Pn**	**19 49 46.3**	**+0.7**
AMKA	**Amchitka**	**7.57**	**275**	Pn	**Pn**	**19 49 47.1**	**-1.8**
ANNE	**Aniakchak Nort**	**8.33**	**44**		**Pn**	**19 50 00.1**	**+0.8**
O14K	**Tigyukauivet M**	**8.96**	**25**	Pn	**Pn**	**19 50 07.5**	**-0.3**
M11K	**Mekoryuk**	**9.16**	**8**	Pn	**Pn**	**19 50 10.2**	**-0.4**
O15K	**Ungalikthiuk R**	**9.30**	**29**	Pn	**Pn**	**19 50 12.1**	**-0.4**
N14K	**Kuskokwak Cree**	**9.44**	**22**	Pn	**Pn**	**19 50 13.2**	**-1.2**
PLK1	**Peulik 1**	**9.49**	**42**		**Pn**	**19 50 14.6**	**-0.6**
R17L	**Mt. Peulik Vol**	**9.50**	**44**		**Pn**	**19 50 15.4**	**+0.2**
M13K	**Dall Lake**	**9.55**	**16**	Pn	**Pn**	**19 50 16.5**	**+0.6**
PLK2	**Peulik 2**	**9.59**	**43**		**Pn**	**19 50 15.6**	**-1.0**
P16K	**Nushagak River**	**9.79**	**34**	Pn	**Pn**	**19 50 19.2**	**-0.1**
SII	**Sitkinak Islan**	**9.97**	**53**	P	**Pn**	**19 50 21.4**	**-0.3**
SII	**Sitkinak Islan**	**9.97**	**53**	Pn	**Pn**	**19 50 21.0**	**-0.7**
N15K	**Kwethluk River**	**10.05**	**25**	Pn	**Pn**	**19 50 24.0**	**+1.2**
O16K	**Kokwok River B**	**10.18**	**32**	Pn	**Pn**	**19 50 25.4**	**+0.9**
P17K	**Kvichak River**	**10.47**	**37**	Pn	**Pn**	**19 50 29.6**	**+1.1**
OHAK	**Old Harbor**	**10.70**	**51**	P	**Pn**	**19 50 31.3**	**-0.4**
OHAK	**Old Harbor**	**10.70**	**51**	Pn	**Pn**	**19 50 30.6**	**-1.1**
M16K	**Timber Creek**	**11.07**	**25**	Pn	**Pn**	**19 50 36.6**	**-0.2**
N17K	**Nushagak Hills**	**11.19**	**30**	Pn	**Pn**	**19 50 35.9**	**-2.5**
KDAK	**Kodiak Island**	**11.30**	**49**	Pn	**Pn**	**19 50 38.8**	**-1.1**
	comp=N,1.7nm,0.3s,baz=167,slow=2.5,SNR=9.8						
Q19K	**Cape Douglas,**	**11.42**	**43**	Pn	**Pn**	**19 50 41.2**	**-0.4**
K15K	**Wolf Creek Mou**	**11.63**	**17**	Pn	**Pn**	**19 50 44.2**	**-0.1**
ILSW	**Iliamna Southw**	**12.26**	**39**	Pn	**Pn**	**19 50 53.4**	**+0.3**
K17K	**Iditarod**	**12.68**	**22**	Pn	**Pn**	**19 50 58.7**	**-0.1**
CNPM	**China Poot**	**12.79**	**43**	Pn	**Pn**	**19 50 58.6**	**-1.6**
L19K	**White Mountain**	**13.18**	**29**	Pn	**Pn**	**19 51 00.6**	**-0.7**
M20K	**Styx River**	**13.52**	**33**		**Pn**	**19 51 09.7**	**-0.5**
STLK	**Strandline Lak**	**13.72**	**36**	Pn	**Pn**	**19 51 09.7**	**-3.3**
SEW	**Seward**	**13.86**	**43**	Pn	**Pn**	**19 51 11.7**	**-3.1**
H17K	**Granite Mounta**	**14.36**	**15**	Pn	**Pn**	**19 51 19.8**	**-1.8**
J19K	**Poorman**	**14.41**	**23**	Pn	**Pn**	**19 51 21.7**	**-0.6**
P23K	**Montague Islan**	**14.71**	**46**	Pn	**Pn**	**19 51 23.3**	**-3.1**
PWL	**Port Wells**	**14.72**	**42**	Pn	**Pn**	**19 51 22.7**	**-3.9**
H18K	**Honhosa River**	**14.82**	**17**		**Pn**	**19 51 27.1**	**-0.9**
J20K	**Nowinta River**	**14.94**	**25**		**Pn**	**19 51 28.5**	**-1.1**
CAST	**Castle Rocks**	**14.96**	**30**		**Pn**	**19 51 28.0**	**-1.8**
SML	**Sawmill**	**15.24**	**39**		**Pn**	**19 51 30.5**	**-3.0**
SML				IAmb	IAmb	19 52 08.9	
	comp=Z,3.8nm,0.7s						
HIN	**Hinchinbrook I**	**15.29**	**45**		**Pn**	**19 51 30.9**	**-3.4**
KTH	**Kantishna Hill**	**15.42**	**31**		**Pn**	**19 51 34.0**	**-2.0**
KTH				IAmb	IAmb	19 51 37.3	
	comp=Z,7.2nm,0.8s						
G18K	**Tagagawik**	**15.45**	**15**		**Pn**	**19 51 34.4**	**-1.9**
G18K				IAmb	IAmb	19 51 42.9	
	comp=Z,4.2nm,0.8s						
SCM	**Sheep Creek Mo**	**15.65**	**40**		**Pn**	**19 51 35.6**	**-3.4**
G19K	**Purcell Mounta**	**15.95**	**17**	IAmb	IAmb	19 51 58.7	
	comp=Z,6.3nm,1.1s						
RND	**Reindeer**	**16.01**	**33**	Pn	**Pn**	**19 51 40.3**	**-3.4**
KLU	**Klutina**	**16.05**	**42**		**Pn**	**19 51 40.8**	**-3.4**
I21K	**Tanana**	**16.31**	**25**		**Pn**	**19 51 45.0**	**-2.3**
I21K				IAmb	IAmb	19 52 02.9	
	comp=Z,6.3nm,0.6s						
BMRM	**Bremner River**	**16.38**	**45**		**Pn**	**19 51 44.5**	**-3.9**
BMRM				IAmb	IAmb	19 51 57.4	
	comp=Z,8.9nm,1.0s						
H21K	**Melozitna Rive**	**16.47**	**23**		**Pn**	**19 51 46.7**	**-2.8**
H21K				IAmb	IAmb	19 52 04.8	
	comp=Z,8.6nm,0.7s						
GLB	**Gilahina Butte**	**16.93**	**44**		**Pn**	**19 51 52.3**	**-3.1**
GLB				IAmb	IAmb	19 52 03.6	
	comp=Z,12nm,1.3s						
VRDI	**Verde Repeater**	**17.00**	**45**		**Pn**	**19 51 54.1**	**-2.2**
VRDI				IAmb	IAmb	19 52 03.9	
	comp=Z,20nm,1.4s						
G21K	**Allakaket**	**17.01**	**21**		**Pn**	**19 51 53.8**	**-2.5**
G21K				IAmb	IAmb	19 52 00.8	
	comp=Z,8.4nm,1.3s						
F20K	**Avaraart Lake**	**17.01**	**17**	P	**Pn**	**19 51 54.4**	**-1.8**
H22K	**Ishtalitna Cre**	**17.02**	**25**	P	**Pn**	**19 51 54.5**	**-2.0**
H22K				IAmb	IAmb	19 52 03.7	
	comp=Z,9.2nm,1.2s						
I23K	**Minto, Yukon-K**	**17.03**	**28**	P	**Pn**	**19 51 55.3**	**-1.2**
TGL	**Tana Glacier**	**17.09**	**47**	P	**Pn**	**19 51 56.9**	**-0.6**
TGL				IAmb	IAmb	19 52 08.1	
	comp=Z,8.8nm,1.0s						
E19K	**Redstone River**	**17.11**	**15**		**Pn**	**19 51 57.9**	**+0.3**
E19K				IAmb	IAmb	19 52 02.2	
	comp=Z,8.6nm,0.9s						
CCB	**Clear Creek Bu**	**17.17**	**31**		**Pn**	**19 51 56.2**	**-2.1**
MCARA	**McCarthy VSAT**	**17.25**	**45**	P	**Pn**	**19 51 57.8**	**-1.6**
MCARA				IAmb	IAmb	19 52 05.9	
	comp=Z,13nm,1.0s						
H23K	**Yukon River**	**17.47**	**27**	P	**Pn**	**19 52 02.1**	**+0.1**
H23K				IAmb	IAmb	19 52 15.9	
	comp=Z,13nm,1.4s						
IL31		**17.55**	**32**	P	**Pn**	**19 52 03.0**	**0.0**
ILAR	**Eielson Array**	**17.55**	**32**	P	**Pn**	**19 52 00.9**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=221,slow=9.5,SNR=6.5						
ILAR	**Eielson Array**	**17.55**	**32**	P	**Pn**	**19 52 03.2**	**+0.1**
GRNC	**Granite Creek**	**17.57**	**47**	P	**Pn**	**19 52 03.6**	**0.0**
GRNC				IAmb	IAmb	19 52 13.6	
	comp=Z,7.9nm,0.8s						
F21K	**Alatna River**	**17.60**	**20**		**Pn**	**19 52 03.1**	**-0.6**
F21K				IAmb	IAmb	19 52 08.4	
	comp=Z,6.7nm,1.1s						
RIDG	**Independent Ri**	**17.65**	**36**	P	**Pn**	**19 52 03.5**	**-0.8**
M26K	**Nabesna, AK**	**17.70**	**41**	P	**Pn**	**19 52 03.5**	**-1.5**
C18K	**Utukok River**	**17.72**	**9**		**Pn**	**19 52 03.9**	**-1.3**
D19K	**Kuna River**	**17.94**	**13**	P	**Pn**	**19 52 05.4**	**-2.4**
D19K				IAmb	IAmb	19 52 10.6	
	comp=Z,8.3nm,1.4s						
H24K	**Noodor Dome**	**17.95**	**28**		**Pn**	**19 52 04.8**	**-3.2**
J25K	**Salcha River,**	**17.97**	**33**		**Pn**	**19 52 04.9**	**-3.4**
G23K	**Bananza Creek**	**18.00**	**24**		**Pn**	**19 52 06.9**	**-1.7**
G23K				IAmb	IAmb	19 52 22.4	
	comp=Z,8.7nm,1.2s						
M27K	**Edge Creek, AK**	**18.15**	**42**	P	**Pn**	**19 52 09.9**	**-0.7**
D20K	**Etivluk River**	**18.36**	**14**		**P**	**19 52 12.8**	**-0.2**
D20K				IAmb	IAmb	19 52 24.2	
	comp=Z,7.6nm,0.6s						
COLD	**Coldfoot**	**18.36**	**23**	P	**P**	**19 52 13.2**	**+0.2**
COLD				IAmb	IAmb	19 52 17.0	
	comp=Z,9.6nm,1.0s						
PNL	**Peninsula**	**18.39**	**52**	P	**P**	**19 52 13.3**	**-0.1**
L27K	**Beaver Creek,**	**18.48**	**40**		**P**	**19 52 12.4**	**-2.1**
BCAR	**Beaver Creek A**	**18.50**	**40**	P	**P**	**19 52 12.3**	**-2.4**
E21K	**Killik River**	**18.55**	**17**	P	**P**	**19 52 14.2**	**-1.1**
E21K				IAmb	IAmb	19 52 26.9	
	comp=Z,5.1nm,0.7s						
G24K	**Hadweenzic Riv**	**18.68**	**27**	P	**P**	**19 52 15.0**	**-1.6**
E23K	**Chandalar**	**19.15**	**22**		**P**	**19 52 20.7**	**-1.2**
E23K				IAmb	IAmb	19 52 25.6	
	comp=Z,7.5nm,0.8s						
F24K	**Squaw Lake**	**19.16**	**24**	P	**P**	**19 52 21.2**	**-0.7**
E24K	**Your Creek**	**19.43**	**23**	P	**P**	**19 52 24.5**	**-0.4**
B21K	**Ikpikpuk River**	**19.49**	**15**		**P**	**19 52 25.0**	**-0.4**
HYT	**Haines Junctio**	**19.59**	**49**		**P**	**19 52 26.8**	**0.0**
D23K	**Nanushuk River**	**19.64**	**19**		**P**	**19 52 25.5**	**-1.6**
D23K				IAmb	IAmb	19 52 29.8	
	comp=Z,10nm,1.4s						
M29M	**Somme Creek**	**19.65**	**44**		**P**	**19 52 26.5**	**-0.9**
F25K	**Christian Rive**	**19.82**	**26**	P	**P**	**19 52 28.2**	**-0.9**
I27K	**Kandik River**	**19.84**	**34**		**P**	**19 52 28.4**	**-0.9**
I27K				IAmb	IAmb	19 52 42.0	
	comp=Z,11nm,1.5s						
G26K	**Porcupine Rive**	**19.93**	**29**	P	**P**	**19 52 29.9**	**-0.4**
N30M	**Aishikik Lake**	**19.95**	**47**		**P**	**19 52 30.5**	**-0.1**
N30M				IAmb	IAmb	19 52 46.9	
	comp=Z,5.7nm,0.7s						
L29M	**L29M**	**20.03**	**42**		**P**	**19 52 31.2**	**-0.2**
D24K	**Happy Valley**	**20.19**	**21**	P	**P**	**19 52 33.0**	**-0.1**
E25K	**Arctic Village**	**20.21**	**25**	P	**P**	**19 52 32.7**	**-0.7**
E25K				IAmb	IAmb	19 52 36.7	
	comp=Z,3.8nm,0.8s						
H27K	**Steamboat Moun**	**20.22**	**32**	P	**P**	**19 52 32.6**	**-0.9**
O30N	**Mendenhall**	**20.25**	**50**	P	**P**	**19 52 34.2**	**+0.4**
O30N				IAmb	IAmb	19 52 45.6	
	comp=Z,9.4nm,1.1s						
F26K	**Sheenjek River**	**20.31**	**27**		**P**	**19 52 34.6**	**+0.2**
B22K	**Teshekpuk Lake**	**20.32**	**15**		**P**	**19 52 33.9**	**-0.5**
I28M	**Miner Creek**	**20.35**	**35**		**P**	**19 52 34.4**	**-0.6**
I28M				IAmb	IAmb	19 52 45.8	
	comp=Z,7.2nm,1.2s						
C23K	**Itkillik River**	**20.38**	**18**		**P**	**19 52 34.6**	**-0.5**
M30M	**Minto, Yukon**	**20.42**	**44**		**P**	**19 52 35.9**	**+0.2**
M30M				IAmb	IAmb	19 52 49.5	
	comp=Z,4.

comp=Z,0.3nm,0.4s
ZALV Zalesovo Beam 58.50 318 P **P** **19 57 56.0 +1.4**
KURK Kurchatov 63.45 319 P **P** **19 58 29.4 +1.0**
KURBB Kurchatov Arra 63.56 319 P **P** **19 58 30.0 +0.9**
comp=Z,1.9nm,1.0s,baz=43,slow=6.9,SNR=7.4
comp=Z,1.9nm,1.0s
BVAR Borovoye Array 64.81 325 P **P** **19 58 38.5 +1.2**
comp=Z,1.6nm,0.5s,baz=41,slow=6.8,SNR=12
comp=Z,1.6nm,0.5s
MKAR Makanchi Array 64.86 314 P **P** **19 58 39.0 +1.3**
comp=Z,0.5nm,0.7s,baz=38,slow=6.1,SNR=5.1
comp=Z,0.5nm,0.7s
FINES FINESS Array B 66.95 352 P **P** **19 58 52.5 +1.6**
comp=Z,2.6nm,1.1s,baz=2.1,slow=11,SNR=4.3
comp=Z,2.6nm,1.1s
HFS Hagfors 68.86 359 P **P** **19 59 03.3 +0.3**
comp=Z,0.7nm,0.5s,baz=90,slow=3.0,SNR=5.2
comp=Z,0.7nm,0.5s
ASAR Alice Springs 90.11 231 P **P** **20 00 58.0 -0.8**
comp=Z,1.2nm,0.6s,baz=32,slow=4.6,SNR=15
comp=Z,1.2nm,0.6s

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*NEIC **31** 19:50:58.9±1.3, 11°.21'N±0'.05×125°.8E±0'.1, h35km±2km, mb4.4/25, Error ellipse: s-maj=26.0km s-min=3.2km az=70.0*
*IDC **31** 19:51:00.6±1.1, 11°.13N×125°.75E, h53km±7km, mb3.6/8, mbtmp3.9/8, MS2.4/3, Error ellipse: s-maj=49.8km s-min=14.4km az=65.0*
*MAN **31** 19:51:00.0, 11°.20N×125°.82E, h51km, MS4.2*
MAN INTENSITY III - MERCEDES AND SALCEDO EASTERN SAMAR; . INTENSITY II - GUIUAN EASTERN SAMAR.
ISC 31 19:51:00.4±0.8, 11°.25N±0'.04×125°.85E±0'.07, h55km±7km, n55, σ1§22/62, mb4.3/20, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLP	**Palo**	**0.86**	**265**	*i* P		**Pn**	**19 51 16.2**	**-0.2**
PLP				*e*S		**Sn**	**19 51 26.1**	**-2.1**
LLP	**Lapu-Lapu**	**2.07**	**244**	*i* P		**Pn**	**19 51 32.9**	**+0.1**
LLP				*i* S		**Sn**	**19 51 56.8**	**-0.6**
MMPH	**Masbate**	**2.44**	**297**	*i* P		**Pn**	**19 51 40.0**	**+2.2**
MMPH				*i* S		**Sn**	**19 52 08.8**	**+2.2**
TBP	**Tagbilaran**	**2.49**	**232**	*e*P		**Pn**	**19 51 39.3**	**+0.7**
TBP				*i* S		**Sn**	**19 52 09.8**	**+2.0**
LSIP	**Lazi, Siquijor**	**3.03**	**226**	*e*P		**Pn**	**19 51 46.3**	**+0.4**
LSIP				*e*S		**Sn**	**19 52 21.0**	**0.0**
BIPH	**Bislig**	**3.08**	**171**	*i* P		**Pn**	**19 51 46.7**	**+0.1**
BUKP	**Musuan**	**3.44**	**193**	*e*P		**Pn**	**19 51 53.9**	**+2.3**
BUKP				*e*S		**Sn**	**19 52 34.2**	**+3.2**
CDOP	**Cateel, Davao**	**3.49**	**170**	*i* P		**Pn**	**19 51 52.5**	**+0.3**
CDOP				*i* S		**Sn**	**19 52 29.8**	**-2.5**
GQP	**Guinayangan**	**4.24**	**309**	*i* P		**Pn**	**19 52 03.9**	**+1.4**
GQP				*e*S		**Sn**	**19 52 51.9**	**+1.1**
LQP	**Lukban**	**5.08**	**305**	*e*P		**Pn**	**19 52 11.8**	**-2.4**
YULB	**Yu-li**	**12.83**	**341**	Pn		**Pn**	**19 53 59.0**	**-1.2**
SIJI	**Sorong**	**13.19**	**156**	LR		LR	20 00 27.3	
	comp=Z,8.6nm,19.7s,baz=124,slow=43							
QIZ	**Qiongzhong**	**17.27**	**299**			**Pn**	**19 54 57.4**	**-0.5**
GUMO	**Guam**	**18.72**	**81**	LR		LR	20 01 01.8	
	comp=Z,18nm,20.2s,baz=216,slow=32							
MYKOM	**Kota Tinggi**	**23.77**	**248**	P		**P**	**19 56 07.4**	**-0.7**
MYKOM				IAmb		IAmb	19 56 25.6	
	comp=Z,17nm,1.2s							
ENH	**Enshi**	**24.28**	**324**	P		**P**	**19 56 12.1**	**-0.6**
ENH				IAmb		IAmb	19 56 27.2	
	comp=Z,12nm,1.0s							
MTN	**Manton Dam**	**24.50**	**167**	P		**P**	**19 56 13.8**	**-0.9**
MTN				IAmb		IAmb	19 56 53.6	
	comp=Z,16nm,1.4s							
KULM	**Kulim**	**25.62**	**259**	P		**P**	**19 56 24.1**	**-0.8**
KNRA	**Kununurra**	**26.91**	**174**	P		**P**	**19 56 35.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**26.95**	**289**	P		**P**	**19 56 36.6**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=95,slow=7.6,SNR=6.6							
CMAR				pP		**pP**	**19 56 51.0**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=107,slow=6.8,SNR=3.0							
CMAR				LR		LR	20 06 41.4	
	comp=Z,11nm,18.6s,baz=250,slow=35							
	comp=Z,0.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**26.95**	**289**	P		**P**	**19 56 35.7**	**-1.3**
FITZ	**Fitzroy Crossi**	**29.16**	**180**	P		**P**	**19 56 55.8**	**-0.8**
WB0	**Warramunga Arr**	**31.95**	**165**	P		**P**	**19 57 19.2**	**-2.0**
WB0				IAmb		IAmb	19 57 51.4	
	comp=Z,9.9nm,1.4s							
WRA	**Warramunga Arr**	**32.10**	**165**	P		**P**	**19 57 20.9**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=346,slow=9.2,SNR=5.7							
	comp=Z,0.4nm,0.6s							
WR8	**Warramunga Arr**	**32.16**	**165**	P		**P**	**19 57 21.2**	**-1.8**
WR8				IAmb		IAmb	19 57 59.8	
	comp=Z,9.7nm,1.4s							
MORE	**Moreh**	**32.61**	**298**	P		**P**	**19 57 25.3**	**-1.7**
AS31	**Alice Springs**	**35.58**	**167**	P		**P**	**19 57 52.5**	**-0.3**
ASAR	**Alice Springs**	**35.58**	**167**	P		**P**	**19 57 52.4**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=348,slow=6.6,SNR=17							
	comp=Z,0.4nm,0.4s							
ASAR	**Alice Springs**	**35.58**	**167**	P		**P**	**19 57 52.2**	**-0.6**
JKA	**Kamikawa-asahi**	**35.80**	**21**	P		**P**	**19 57 54.0**	**-0.3**
YSS	**Yuzhno-Sakhali**	**38.36**	**19**	P		**P**	**19 58 16.2**	**+0.3**
SONM	**Songino Array**	**39.97**	**340**	P		**P**	**19 58 31.1**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=160,slow=9.4,SNR=6.1							
	comp=Z,0.6nm,0.4s							
SONM	**Songino Array**	**39.97**	**340**	P		**P**	**19 58 30.5**	**+0.9**
EVN	**Everest**	**40.14**	**300**	P		**P**	**19 58 31.5**	**-0.4**
EVN				IAmb		IAmb	19 58 53.7	
	comp=Z,4.5nm,0.8s							
H11N1	**WAKE ISLAND Hy**	**40.35**	**73**	T		T	20 41 57.9	
	baz=265,slow=75,SNR=32							
H11N2	**WAKE ISLAND Hy**	**40.36**	**73**	T		T	20 41 59.7	
	baz=265,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**40.37**	**73**	T		T	20 41 59.5	
	baz=265,slow=75,SNR=27							
FORT	**Forrest**	**41.84**	**177**	P		**P**	**19 58 45.1**	**+0.2**
FORT				IAmb		IAmb	19 58 47.2	
	comp=Z,18nm,1.4s							
BBOO	**Buckleboo**	**44.88**	**168**	P		**P**	**19 59 09.4**	**-0.2**
STKA	**Stephens Creek**	**45.45**	**161**	P		**P**	**19 59 14.7**	**+0.6**
	comp=Z,2.2nm,0.4s,baz=345,slow=7.5,SNR=10							
	comp=Z,2.2nm,0.4s							
MKAR	**Makanchi Array**	**51.01**	**322**	P		**P**	**19 59 57.6**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=114,slow=8.3,SNR=17							
MKAR				pP		**pP**	**20 00 11.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=120,slow=8.5,SNR=4.4							
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**51.01**	**322**	P		**P**	**19 59 57.2**	**+0.4**
MAKZ	**Makanchi**	**51.20**	**322**	P		**P**	**19 59 58.9**	**+0.7**
MAKZ				IAmb		IAmb	20 00 23.2	
	comp=Z,4.5nm,1.5s							
PDGK	**Podgornoye**	**51.20**	**317**	P		**P**	**19 59 58.4**	**0.0**
ZALV	**Zalesovo Beam**	**53.58**	**331**	P		**P**	**20 00 15.8**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=112,slow=6.8,SNR=4.4							
ZALV				pP		**pP**	**20 00 30.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=109,slow=8.0,SNR=3.9							
	comp=Z,0.7nm,0.4s							
KURK	**Kurchatov**	**55.03**	**325**	P		**P**	**20 00 27.0**	**+0.7**
KURK				IAmb		IAmb	20 00 27.8	
	comp=Z,5.0nm,1.2s							
KURBB	**Kurchatov Arra**	**55.04**	**325**	P		**P**	**20 00 26.7**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=123,slow=7.1,SNR=14							
KURBB				pP		**pP**	**20 00 41.5**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=125,slow=6.9,SNR=6.8							
	comp=Z,1.1nm,0.4s							
GAR	**Garm**	**56.35**	**309**	P		**P**	**20 00 35.3**	**-0.9**
KKAR	**Karatay Array**	**57.28**	**314**	P		**P**	**20 00 43.3**	**+0.8**
AB31	**Akbulak array**	**65.87**	**319**	P		**P**	**20 01 40.0**	**-0.2**
AB31				IAmb		IAmb	20 01 40.7	
	comp=Z,3.4nm,1.4s							
ABKAR	**Akbulak array**	**65.87**	**319**	P		**P**	**20 01 40.0**	**-0.2**
H17K	**Granite Mounta**	**73.21**	**25**	P		**P**	**20 02 25.2**	**0.0**
H17K				IAmb		IAmb	20 02 26.0	
	comp=Z,8.7nm,1.4s							
IMAR	**Indian Mountai**	**75.89**	**25**	P		**P**	**20 02 43.2**	**+2.4**
B22K	**Teshekpuk Lake**	**76.36**	**20**	P		**P**	**20 02 44.5**	**+1.2**
B22K				IAmb		IAmb	20 02 46.1	
	comp=Z,6.0nm,1.1s							
C23K	**Itkillik River**	**77.29**	**21**	P		**P**	**20 02 49.1**	**+0.5**

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*IDC **31** 19:51:37.6±0.7, 51°.07N×168°.67W, h0km, mb4.1/27, mbtmp4.1/27, MS3.1/17, Error ellipse: s-maj=20.5km s-min=13.2km az=177.0*
*NEIC **31** 19:51:39.4±1.9, 51°.31N±0'.06×168°.56W±0'.08, h10km±1km, mb4.3/182, ML4.1/16, ML3.7(AEIC), Error ellipse: s-maj=11.1km s-min=8.4km az=160.0*

*AEIC **31** 19:51:40.2±2.6, 51°.27N±0'.07×168°.50W±0'.08, h12km±4km, Error ellipse: s-maj=10.2km s-min=7.3km az=164.0*
ISC 31 19:51:38.7±3.8, 51°.28N±0'.07×168°.57W±0'.04, h7km±23km, n300, σ1§42/243, mb4.3/78, MS3.2/16, 1D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CLCO	**Concord Point,**	**1.67**	**335**			**Pn**	**19 52 07.8**	**-0.6**
CLCO						**Sn**	**19 52 28.4**	**-1.6**
CLES	**Cleveland East**	**1.75**	**333**			**Pn**	**19 52 08.8**	**-0.6**
CLES				Sn		**Sn**	**19 52 29.2**	**-2.8**
CLES				IAML			19 52 35.6	
	comp=E,3µm,0.2s							
CLES				IAML			19 52 38.8	
	comp=N,2µm,0.5s							
OKCE	**Okmok Cone E**	**2.17**	**6**			**Pn**	**19 52 14.6**	**-0.6**
OKWR	**Okmok West Rim**	**2.17**	**6**			**Pn**	**19 52 14.8**	**-0.6**
OKFG	**Magazine Ridge**	**2.17**	**11**			**Pn**	**19 52 14.4**	**-0.9**
OKNC	**Okmok New Cone**	**2.20**	**7**			**Pn**	**19 52 15.3**	**-0.4**
OKNC						**Sn**	**19 52 42.6**	**-0.5**
MAPS	**Pakushin South**	**2.72**	**21**			**Pn**	**19 52 22.5**	**-0.3**
MAPS						**Sn**	**19 52 53.1**	**-3.0**
MGOD	**Makushin Gods**	**2.73**	**22**			**Pn**	**19 52 21.9**	**-1.1**
MREP	**Makushin Rep't**	**2.77**	**23**			**Pn**	**19 52 22.9**	**-0.7**
MNAT	**Makushin Natee**	**2.85**	**23**			**Pn**	**19 52 24.0**	**-0.7**
UNV	**Unalaska Valle**	**2.87**	**25**	P		**Pn**	**19 52 24.5**	**-0.3**
UNV	**Unalaska Valle**	**2.87**	**25**			**Pn**	**19 52 23.6**	**-1.2**
UNV				Sn		**Sn**	**19 52 55.4**	**-4.1**
ZRO	**Akutan Zero**	**3.23**	**28**			**Pn**	**19 52 29.3**	**-0.6**
AKRB	**Akutan Reef Bi**	**3.24**	**27**			**Pn**	**19 52 29.4**	**-0.5**
LVA	**Lava Point**	**3.28**	**27**			**Pn**	**19 52 29.2**	**-1.3**
LVA				Sn		**Sn**	**19 53 06.7**	**-3.0**
LVA				IAML			19 53 13.8	
	comp=E,291nm,0.8s							
LVA				IAML			19 53 19.5	
	comp=N,364nm,0.9s							
AHB	**Akutan Harbor**	**3.30**	**29**			**Pn**	**19 52 30.2**	**-0.6**
AKGG	**Akutan Green G**	**3.32**	**27**			**Pn**	**19 52 30.5**	**-0.6**
AKUT	**Akutan**	**3.33**	**30**	Pn		**Pn**	**19 52 28.7**	**-2.4**
AKUT				Sn		**Sn**	**19 53 07.9**	**-3.0**
KOFP	**Korovin Flat P**	**3.57**	**288**			**Pn**	**19 52 34.5**	**0.0**
ATKA	**Atka Island**	**3.62**	**287**	P		**Pn**	**19 52 35.0**	**-0.1**
ATKA	**Atka Island**	**3.62**	**287**			**Pn**	**19 52 34.6**	**-0.5**
ATKA				Sn		**Sn**	**19 53 13.5**	**-4.5**
ATKA				IAML			19 53 15.7	
	comp=N,154nm,1.1s							
ATKA				IAML			19 53 22.7	
	comp=E,168nm,0.8s							
KONE	**Korovin Northe**	**3.62**	**290**			**Pn**	**19 52 35.4**	**+0.3**
KONW	**Korovin Northw**	**3.67**	**290**			**Pn**	**19 52 36.2**	**+0.3**
SSLS	**Shishaldin Sou**	**4.41**	**37**			**Pn**	**19 52 45.9**	**-0.3**
ISNN	**Isanotski Nort**	**4.59**	**37**			**Pn**	**19 52 48.5**	**0.0**
GSIG	**Igitkin Island**	**4.63**	**282**			**Pn**	**19 52 48.9**	**-0.3**
GSMY	**Great Sitkin M**	**4.72**	**282**			**Pn**	**19 52 50.9**	**+0.6**
GSTR	**Great Sitkin T**	**4.73**	**283**	Pn		**Pn**	**19 52 49.5**	**-0.9**
GSTR						**Pn**	**19 52 51.5**	**+1.1**
GSTR				Sn		**Sn**	**19 53 42.9**	**-2.6**
GSCK	**Great Sitkin C**	**4.78**	**282**			**Pn**	**19 52 51.3**	**+0.1**
GSSP	**Great Sitkin S**	**4.80**	**283**			**Pn**	**19 52 51.9**	**+0.5**
ETKA	**Kagalaska Isla**	**4.92**	**280**			**Pn**	**19 52 52.9**	**-0.2**
ADK	**Adak**	**5.09**	**280**	P		**Pn**	**19 52 55.8**	**+0.4**
ADK	**Adak**	**5.09**	**280**			**Pn**	**19 52 55.8**	**+0.4**
ADK						**Sn**	**19 53 50.5**	**-3.9**
ADK				IAML			19 53 57.7	
	comp=E,159nm,0.4s							
KIWB	**Kanaga Island**	**5.38**	**279**			**Pn**	**19 52 59.9**	**+0.5**
KIWB				IAML			19 54 05.8	
	comp=N,165nm,0.6s							
DT1	**Dutton Round H**	**5.39**	**42**			**Pn**	**19 52 59.4**	**0.0**
DTNA	**Dutton South F**	**5.43**	**42**			**Pn**	**19 52 59.8**	**-0.3**
DOL	**Dolgoi Island**	**5.59**	**43**			**Pn**	**19 53 02.1**	**-0.1**
TAFL	**Tanaga Flats**	**5.84**	**278**			**Pn**	**19 53 06.1**	**+0.4**
TAFP	**Tanaga Falls P**	**5.90**	**280**			**Pn**	**19 53 07.0**	**+0.5**
SPIA	**Saint Paul Isl**	**5.99**	**351**	Pn		**Pn**	**19 53 07.4**	**-0.3**
SDPT	**Sand Point**	**6.34**	**47**	P		**Pn**	**19 53 13.1**	**+0.6**
SDPT	**Sand Point**	**6.34**	**47**	Pn		**Pn**	**19 53 12.6**	**+0.1**
GAEA	**Gareloi East**	**6.37**	**279**			**Pn**	**19 53 13.4**	**+0.4**
GAKI	**Gareloi-Kavalg**	**6.41**	**276**			**Pn**	**19 53 13.6**	**+0.1**
CNBA	**Chernabura Isl**	**6.47**	**53**			**Pn**	**19 53 13.8**	**-0.6**
VNFG	**Fog Glacier, M**	**7.33**	**43**			**Pn**	**19 53 27.3**	**+1.2**
AMKA	**Amchitka**	**7.60**	**275**	Pn		**Pn**	**19 53 29.8**	**+0.1**
O14K	**Tigyukauivet M**	**9.01**	**25**	Pn		**Pn**	**19 53 49.5**	**+0.4**
M11K	**Mekoryuk**	**9.23**	**7**	Pn		**Pn**	**19 53 53.0**	**+0.9**
O15K	**Ungalikthiuk R**	**9.35**	**29**			**Pn**	**19 53 54.0**	**+0.2**
N14K	**Kuskokwak Cree**	**9.50**	**21**			**Pn**	**19 53 56.3**	**+0.5**
M13K	**Dall Lake**	**9.61**	**16**	Pn		**Pn**	**19 53 57.7**	**+0.3**
P16K	**Nushagak River**	**9.84**	**34**			**Pn**	**19 54 00.8**	**+0.4**
SII	**Sitkinak Islan**	**9.99**	**52**	Pn		**Pn**	**19 54 01.8**	**-0.8**
N15K	**Kwethluk River**	**10.10**	**25**	Pn		**Pn**	**19 54 02.5**	**-1.6**
M14K	**Bethel**	**10.19**	**19**	Pn		**Pn**	**19 54 04.9**	**-0.3**
O16K	**Kokwok River B**	**10.23**	**31**			**Pn**	**19 54 05.3**	**-0.5**
ACHA	**Angle Creek He**	**10.32**	**43**	Pn		**Pn**	**19 54 07.6**	**+0.4**
P17K	**Kvichak River**	**10.52**	**36**	Pn		**Pn**	**19 54 09.0**	**-0.7**
L14K	**Kuka Creek**	**10.60**	**16**			**Pn**	**19 54 09.7**	**-1.2**
QHAK	**Old Harbor**	**10.73**	**50**	Pn		**Pn**	**19 54 11.4**	**-1.3**
K13K	**Kusilvak Mount**	**10.90**	**10**	Pn		**Pn**	**19 54 14.7**	**-0.2**
M16K	**Timber Creek**	**11.13**	**25**	Pn		**Pn**	**19 54 17.6**	**-0.5**
KDAK	**Kodiak Island**	**11.33**	**49**	Pn		**Pn**	**19 54 19.4**	**-1.4**
	comp=N,1.4nm,0.3s,baz=195,slow=4.3,SNR=10							
KDAK	**Kodiak Island**	**11.33**	**49**	Pn		**Pn**	**19 54 19.1**	**-1.7**
O18K	**Koktuh Hills**	**11.43**	**36**	Pn		**Pn**	**19 54 22.4**	**+0.2**
Q19K	**Cape Douglas,**	**11.46**	**42**			**Pn**	**19 54 22.4**	**-0.3**
L16K	**Owhat River**	**11.59**	**22**			**Pn**	**19 54 24.7**	**+0.3**
J14K	**Nanvaranak Lak**	**11.82**	**11**	Pn		**Pn**	**19 54 26.6**	**-0.8**
M17K	**Holitna River**	**11.86**	**27**	Pn		**Pn**	**19 54 27.3**	**-0.7**
L18K	**Granite Mounta**	**12.73**	**26**			**Pn**	**19 54 39.8**	**-0.2**
K17K	**Iditarod**	**12.74**	**22**	Pn		**Pn**	**19 54 39.3**	**-0.8**
CNPM	**China Poot**	**12.82**	**43**	Pn		**Pn**	**19 54 39.6**	**-1.7**
J17K	**VABM Dome**	**13.17**	**19**	Pn		**Pn**	**19 54 45.5**	**-0.4**
L19K	**White Mountain**	**13.23**	**29**	Pn		**Pn**	**19 54 47.1**	**+0.3**
J18K	**Innoko River**	**13.76**	**23**			**Pn**	**19 54 53.6**	**-0.3**
SLKM	**Skilak Lake**	**13.79**	**41**			**Pn**	**19 54 52.7**	**-1.8**
SEW	**Seward**	**13.89**	**43**			**Pn**	**19 54 53.6**	**-2.2**
K20K	**Telida**	**14.37**	**27**			**Pn**	**19 55 01.5**	**-0.8**
PPLA	**Purkeypile**	**14.60**	**31**	P		**Pn**	**19 55 06.4**	**+0.7**
P23K	**Montague Islan**	**14.74**	**45**	Pn		**Pn**	**19 55 04.6**	**-2.8**
L22K	**Petersville**	**14.82**	**34**	Pn		**Pn**	**19 55 07.3**	**-1.2**
H18K	**Honhosa River**	**14.88**	**17**			**Pn**	**19 55 09.1**	**-0.2**
J20K	**Nowinta River**	**15.00**	**25**			**Pn**	**19 55 09.6**	**-1.3**
HIN	**Hinchinbrook I**	**15.32**	**45**			**Pn**	**19 55 12.1**	**-3.2**
I20K	**Naaghedeneel**	**15.41**	**23**	IAmb		IAmb	19 55 32.5	
	comp=Z,24nm,1.1s							
KTH	**Kantishna Hill**	**15.47**	**31**	IAmb		IAmb	19 55 18.2	
	comp=Z,21nm,0.8s							
FID	**Port Fidalgo**	**15.50**	**44**			**Pn**	**19 55 13.4**	**-4.1**
FID				IAmb		IAmb	19 55 26.2	
	comp=Z,16nm,1.0s							
G18K	**Tagagawik**	**15.51**	**15**			**Pn**	**19 55 17.1**	**-0.5**
G18K				IAmb		IAmb	19 55 23.8	
	comp=Z,17nm,0.9s							
TRF	**Thorofare Moun**	**15.61**	**32**	Pn		**Pn**	**19 55 18.1**	**-0.9**
F17K	**Baldwin Pennin**	**15.65**	**11**	IAmb		IAmb	19 55 25.9	
	comp=Z,23nm,0.8s							
SCM	**Sheep Creek Mo**	**15.69**	**39**			**Pn**	**19 55 16.8**	**-3.3**
SCM				IAmb		IAmb	19 55 19.1	
	comp=Z,17nm,0.9s							
EYAK	**Cordova Ski Ar**	**15.73**	**45**	P		**Pn**	**19 55 20.8**	**+0.4**
EYAK	**Cordova Ski Ar**	**15.73**	**45**	IAmb		IAmb	19 55 29.0	
	comp=Z,21nm,1.2s							
DIV	**Divide**	**15.98**	**43**	IAmb		IAmb	19 55 22.6	
	comp=Z,14nm,0.8s							
KAIM	**Kayak Island**	**16.08**	**48**			**Pn**	**19 55 22.4**	**-2.6**
KAIM				IAmb		IAmb	19 55 41.3	
	comp=Z,29nm,1.0s							
KLU	**Klutina**	**16.09**	**42**			**Pn**	**19 55 21.8**	**-3.4**
KLU				IAmb		IAmb	19 55 25.6	
	comp=Z,18nm,0.5s							
I21K	**Tanana**	**16.36**	**25**	IAmb		IAmb	19 55 34.5	
	comp=Z,22nm,0.9s							
DHY	**Denali Highway**	**16.38**	**36**			**Pn**	**19 55 25.4**	**-3.6**
BMRM	**Bremner River**	**16.41**	**45**			**Pn**	**19 55 26.3**	**-3.1**
IMAR	**Indian Mountai**	**16.57**	**22**			**Pn**	**19 55 31.6**	**+0.4**
BERG	**Berg Lake**	**16.59**	**47**			**Pn**	**19 55 29.1**	**-2.5**
BERG				IAmb		IAmb	19 55 49.2	
	comp=Z,16nm,0.6s							
E18K	**Tukpahlearik C**	**16.67**	**11**	IAmb		IAmb	19 55 37.4	
	comp=Z,14nm,0.8s							
GLB	**Gilahina Butte**	**16.97**	**44**			**Pn**	**19 55 34.0**	**-2.3**
GLB				IAmb		IAmb	19 55 44.4	
	comp=Z,38nm,1.1s							
CRQM	**Cirque**	**16.98**	**46**	IAmb		IAmb	19 55 47.6	
	comp=Z,44nm,1.2s							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VRDI	**Verde Repeater**	**17.03**	**45**			**Pn**	**19 55 34.6**	**-2.7**
G21K	**Allakaket**	**17.07**	**21**	IAmb		IAmb	19 55 41.6	
	comp=Z,33nm,1.4s							
H22K	**Ishtalitna Cre**	**17.08**	**24**	IAmb		IAmb	19 55 44.6	
	comp=Z,35nm,1.3s							
I23K	**Minto, Yukon-K**	**17.08**	**28**			**Pn**	**19 55 36.3**	**-1.4**
TGL	**Tana Glacier**	**17.12**	**46**	IAmb		IAmb	19 55 48.5	
	comp=Z,15nm,0.7s							
E19K	**Redstone River**	**17.17**	**15**			**Pn**	**19 55 37.7**	**-1.2**
E19K				IAmb		IAmb	19 55 43.1	
	comp=Z,19nm,0.9s							
CCB	**Clear Creek Bu**	**17.22**	**31**	P		**Pn**	**19 55 36.6**	**-2.9**
COLA	**College**	**17.36**	**30**	P		**Pn**	**19 55 41.8**	**+0.7**
H23K	**Yukon River**	**17.52**	**26**	P		**Pn**	**19 55 41.5**	**-1.7**
IL31		**17.60**	**32**	P		**Pn**	**19 55 41.8**	**-2.4**
ILAR	**Eielson Array**	**17.60**	**32**	P		**Pn**	**19 55 41.1**	**-3.1**
	comp=Z,1.0nm,0.7s,baz=231,slow=13,SNR=7.5							
ILAR				LR		LR	20 03 10.9	
	comp=Z,68nm,18.9s,baz=254,slow=39							
GRNC	**Granite Creek**	**17.61**	**47**			**Pn**	**19 55 43.1**	**-1.4**
GRNC				IAmb		IAmb	19 55 54.0	
	comp=Z,25nm,0.7s							
F21K	**Alatna River**	**17.66**	**20**	IAmb		IAmb	19 55 49.8	
	comp=Z,20nm,1.1s							
RIDG	**Independent Ri**	**17.70**	**36**	P		**Pn**	**19 55 43.0**	**-2.4**
BARN	**Barnard Glacie**	**17.77**	**46**	IAmb		IAmb	19 55 54.3	
	comp=Z,12nm,0.7s							
C18K	**Utukok River**	**17.79**	**9**			**P**	**19 55 47.9**	**+0.6**
LOGN	**Logan Glacier**	**17.99**	**47**	IAmb		IAmb	19 55 58.1	
	comp=Z,19nm,1.0s							
D19K	**Kuna River**	**18.00**	**13**			**Pn**	**19 55 48.9**	**-0.3**
H24K	**Noodor Dome**	**18.01**	**28**			**Pn**	**19 55 47.2**	**-2.1**
J25K	**Salcha River,**	**18.02**	**33**			**Pn**	**19 55 46.4**	**-3.0**
G23K	**Bananza Creek**	**18.06**	**24**	IAmb		IAmb	19 55 54.0	
	comp=Z,21nm,1.2s							
PCA	**Pinnacle**	**18.11**	**50**	IAmb		IAmb	19 55 55.7	
	comp=Z,20nm,1.1s							
M27K	**Edge Creek, AK**	**18.19**	**42**	IAmb		IAmb	19 55 58.3	
	comp=Z,37nm,1.1s							
O28M	**Mount Upton**	**18.35**	**48**	IAmb		IAmb	19 56 10.2	
	comp=Z,10nm,0.6s							
C19K	**Lookout Ridge**	**18.40**	**10**	P		**Pn**	**19 55 53.4**	**-0.6**
PNL	**Peninsula**	**18.41**	**52**	P		**P**	**19 55 56.4**	**+2.1**
D20K	**Etivluk River**	**18.42**	**14**			**P**	**19 55 54.3**	**+0.1**
D20K				IAmb		IAmb	19 55 55.8	
	comp=Z,17nm,0.8s							
BCAR	**Beaver Creek A**	**18.54**	**40**	P		**P**	**19 55 54.4**	**-1.3**
E21K	**Killik River**	**18.62**	**17**	P		**P**	**19 55 56.4**	**-0.1**
E21K				IAmb		IAmb	19 56 07.7	
	comp=Z,21nm,0.9s							
G24K	**Hadweenzic Riv**	**18.73**	**26**	IAmb		IAmb	19 55 59.9	
	comp=Z,13nm,0.9s							
K27K	**Chicken**	**18.89**	**37**	P		**P**	**19 55 58.4**	**-1.1

comp=Z,4.9nm,0.9s,baz=290,slow=8.6,SNR=22
comp=Z,4.9nm,0.9s
NV11 Mina Array Sit 37.25 90 IAmb IAmb 19 58 53.4
comp=Z,6.2nm,1.2s
DSP Deep Springs 38.01 91 IAmb IAmb 19 59 00.3
comp=Z,6.3nm,1.0s
TPH Tonopah 38.05 90 IAmb IAmb 19 59 00.1
comp=Z,6.8nm,1.1s
YHH Holmes Hill 38.26 76 P **P** **19 59 00.1 +0.4**
GMN Gold Mountain 38.50 91 IAmb IAmb 19 59 04.0
comp=Z,5.4nm,0.9s
HVU Hansel Valley 38.69 82 IAmb IAmb 19 59 01.8
comp=Z,6.7nm,1.1s
BGU Big Grassy Mou 39.01 83 IAmb IAmb 19 59 08.1
comp=Z,6.5nm,0.8s
HEH HeiHe 39.35 294 *e*P **P** **19 59 08.0 -0.3**
HEH pmax pmax
comp=Z,5.0nm,1.0s
TPNV Topopah Spring 39.35 90 IAmb IAmb 19 59 12.8
comp=Z,8.2nm,0.8s
GWY Greenwater Val 39.56 92 P **P** **19 59 10.5 -0.1**
GWY IAmb IAmb 19 59 12.5
comp=Z,6.2nm,1.2s
PD31 Pinedale Array 40.13 78 **P** **19 59 14.8 -0.5**
PDAR Pinedale Array 40.13 78 P **P** **19 59 15.8 +0.6**
comp=Z,1.3nm,0.7s,baz=305,slow=4.7,SNR=13
comp=Z,1.3nm,0.7s
PDAR Pinedale Array 40.13 78 **P** **19 59 14.6 -0.7**
MJAR Matsushiro Arr 40.17 270 P **P** **19 59 15.0 -0.4**
comp=Z,1.8nm,0.7s,baz=46,slow=6.5,SNR=10
comp=Z,1.8nm,0.7s
MJAR Matsushiro Arr 40.17 270 P **P** **19 59 15.8 +0.4**
MTPU Mount Pierson 41.23 86 IAmb IAmb 19 59 31.4
comp=Z,4.7nm,1.0s
BNX BinXian 41.57 288 ⇓P **P** **19 59 27.8 +1.0**
BNX pmax pmax
comp=Z,6.0nm,0.7s
U15A North Rim 42.16 88 IAmb IAmb 19 59 34.3
comp=Z,5.8nm,1.1s
BLYC Blythe 42.48 93 **P** **19 59 35.0 +0.7**
PV23 Carpenter Ridg 42.97 83 IAmb IAmb 19 59 40.7
comp=Z,5.9nm,0.8s
PV10 Paradox Valley 43.00 83 IAmb IAmb 20 00 03.8
comp=Z,12nm,1.3s
PV04 Paradox Valley 43.07 83 IAmb IAmb 19 59 41.0
comp=Z,8.8nm,1.2s
PV18 Skein Mesa, Pa 43.16 83 IAmb IAmb 19 59 41.2
comp=Z,11nm,1.2s
PV13 Radium Mtn., P 43.27 84 IAmb IAmb 19 59 43.8
comp=Z,9.2nm,1.1s
Y14A Wickenburg 43.31 91 **P** **19 59 41.3 +0.2**
Y14A IAmb IAmb 19 59 42.8
comp=Z,7.2nm,1.2s
PV01 Paradox Valley 43.44 83 IAmb IAmb 19 59 43.5
comp=Z,3.8nm,0.9s
HILR Hailar Array 44.02 297 P **P** **19 59 46.2 -0.4**
comp=Z,1.2nm,0.5s,baz=73,slow=11,SNR=4.3
comp=Z,1.2nm,0.5s
NEEM North Greenlan 45.91 16 *i* P **P** **20 00 02.9 +1.3**
NEEM IAmb IAmb 20 00 05.8
comp=Z,14nm,1.0s
KSRS Korea Array 46.04 278 P **P** **20 00 03.0 +0.2**
comp=Z,0.8nm,0.8s,baz=49,slow=8.3,SNR=4.1
comp=Z,0.8nm,0.8s
NRIK Noril'sk 47.62 332 LR LR 20 21 12.9
comp=Z,26nm,21.0s,baz=58,slow=37
VHRN Van Horn 50.45 88 IAmb IAmb 20 00 40.0
comp=Z,2.7nm,1.0s
SPITS Spitsbergen Ar 50.77 359 P **P** **20 00 39.5 +0.7**
comp=Z,0.9nm,0.4s,baz=9.6,slow=7.0,SNR=6.0
comp=Z,0.9nm,0.4s
128A Castleberry Fa 50.78 85 IAmb IAmb 20 00 41.4
comp=Z,4.1nm,0.9s
DAG Danmarks Havn 50.80 9 *i* P **P** **20 00 40.1 +1.1**
DAG IAmb IAmb 20 00 43.0
comp=Z,7.6nm,1.1s
POST Post 51.10 84 IAmb IAmb 20 00 43.0
comp=Z,4.6nm,0.7s
WMOK Wichita Mounta 51.68 80 P **P** **20 00 45.1 -1.1**
WMOK IAmb IAmb 20 00 49.3
comp=Z,2.7nm,0.8s
SUMG Summit 51.68 17 **P** **20 00 46.3 +0.2**
SUMG Summit 51.68 17 *i* P **P** **20 00 47.0 +0.9**
SUMG IAmb IAmb 20 00 50.8
comp=Z,4.3nm,0.7s
TX31 Lajitas Ar. Si 52.28 89 IAmb IAmb 20 00 53.0
comp=Z,5.4nm,1.1s
TXAR Lajitas Array 52.28 89 P **P** **20 00 50.9 +0.1**
comp=Z,2.3nm,0.9s,baz=302,slow=5.0,SNR=13
comp=Z,2.3nm,0.9s
TXAR Lajitas Array 52.28 89 **P** **20 00 49.8 -1.0**
SONM Songino Array 52.29 302 P **P** **20 00 50.7 0.0**
comp=Z,4.1nm,1.2s,baz=76,slow=6.3,SNR=12
SONM PcP **PcP** **20 02 01.6 -0.3**
comp=Z,1.1nm,0.9s,baz=51,slow=3.9,SNR=4.1
SONM LR LR 20 24 22.4
comp=Z,21nm,19.0s,baz=52,slow=38
comp=Z,4.1nm,1.2s
SONM Songino Array 52.29 302 **P** **20 00 50.4 -0.3**
SONM IAmb IAmb 20 00 54.4
comp=Z,4.0nm,1.2s
SONM PcP **PcP** **20 02 01.8 -0.1**
P40A Paris 52.66 71 P **P** **20 00 51.8 -1.6**
DBG Daneborg 52.90 10 *i* P **P** **20 00 54.9 +0.3**
DBG IAmb IAmb 20 00 57.9
comp=Z,4.9nm,0.7s
HHC Hu-ho-hao-te 53.78 292 *e*P **P** **20 01 03.0 +1.2**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,41nm,3.9s
BRDY Brady 53.86 83 IAmb IAmb 20 01 04.2
comp=Z,3.8nm,0.9s
SCHQ Schefferville 55.89 43 LR LR 20 25 23.7
comp=Z,16nm,21.2s,baz=310,slow=36
ZALV Zalesovo Beam 58.57 318 P **P** **20 01 36.5 +0.9**
comp=Z,0.4nm,0.4s,baz=71,slow=5.5,SNR=3.7
ZALV PcP **PcP** **20 02 26.6 +0.8**
comp=Z,1.1nm,0.6s,baz=42,slow=2.3,SNR=4.1
ZALV LR LR 20 27 42.1
comp=Z,20nm,20.9s,baz=20,slow=37
comp=Z,0.4nm,0.4s
ZALV Zalesovo Beam 58.57 318 P **P** **20 01 35.7 +0.1**
ARCES ARCESS Array B 59.06 354 P **P** **20 01 39.8 +0.9**
comp=Z,2.3nm,0.8s,baz=41,slow=8.3,SNR=4.4
ARCES LR LR 20 27 51.5
comp=Z,21nm,20.7s,baz=22,slow=37
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 59.06 354 P **P** **20 01 39.3 +0.5**
GTA2 Gaotai 61.40 298 *e*P **P** **20 01 56.0 +0.5**
GTA2 pmax pmax
comp=Z,3.0nm,0.8s
BORG Borgarnes 61.56 15 LR LR 20 30 59.6
comp=Z,14nm,20.2s,baz=339,slow=38
KURK Kurchatov 63.52 319 **P** **20 02 09.4 +0.2**
KURBB Kurchatov Arra 63.63 319 P **P** **20 02 11.1 +1.1**
comp=Z,5.4nm,0.9s,baz=45,slow=7.3,SNR=29
comp=Z,5.4nm,0.9s
BVAR Borovoye Array 64.88 325 P **P** **20 02 19.4 +1.3**
comp=Z,3.0nm,0.5s,baz=48,slow=5.8,SNR=20
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 64.92 314 P **P** **20 02 19.1 +0.6**
comp=Z,1.6nm,0.8s,baz=54,slow=6.2,SNR=9.5
comp=Z,1.6nm,0.8s
MKAR Makanchi Array 64.92 314 P **P** **20 02 18.8 +0.3**
CMIG Matias Romero 66.67 92 LR LR 20 29 17.6
comp=Z,12nm,18.7s,baz=0.0,slow=34
FINES FINESS Array B 67.02 352 P **P** **20 02 32.5 +0.7**
comp=Z,2.3nm,0.8s,baz=350,slow=7.7,SNR=5.7
FINES LR LR 20 33 52.1
comp=Z,13nm,20.1s,baz=14,slow=38
comp=Z,2.3nm,0.8s
NB2 NORSAR Subarra 68.03 0 P **P** **20 02 39.6 +1.3**
comp=Z,3.2nm,1.1s,baz=1.5,slow=6.5
NOA NORSAR Array B 68.03 0 P **P** **20 02 39.8 +1.5**
comp=Z,0.9nm,0.9s,baz=0.9,slow=6.3,SNR=4.0
NOA LR LR 20 30 52.6
comp=Z,7.6nm,21.9s,baz=325,slow=34
comp=Z,0.9nm,0.9s
HFS Hagfors 68.93 359 P **P** **20 02 44.4 +0.6**
comp=Z,1.3nm,0.4s,baz=348,slow=3.6,SNR=11
HFS LR LR 20 33 09.5
comp=Z,14nm,19.0s,baz=28,slow=36
comp=Z,1.3nm,0.4s
PPT Papeete 70.54 161 LR LR 20 25 37.9
comp=Z,45nm,21.6s,baz=202,slow=29
EKA Eskdalemuir Ar 73.07 9 P **P** **20 03 11.1 +2.1**
comp=Z,2.7nm,0.9s,baz=8.8,slow=6.5,SNR=2.9
comp=Z,2.7nm,0.9s
KSH2 Kashi 73.97 313 P **P** **20 03 16.0 +1.2**
KSH2 sP pwP 20 03 25.5 +2.8
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 77.28 349 P **P** **20 03 34.5 +1.2**
comp=Z,1.0nm,0.6s,baz=15,slow=5.9,SNR=4.1
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 77.28 349 IAmb IAmb 20 04 11.2
comp=Z,2.4nm,0.9s
CMAR Chiang Mai Arr 77.35 284 P **P** **20 03 34.6 +0.4**
comp=Z,1.3nm,0.4s,baz=25,slow=6.8,SNR=7.0
comp=Z,1.3nm,0.4s
BRG Berggiesshubel 78.20 358 *e*P P 20 03 44.4 +5.9
BRG Amp 20 03 45.4
comp=Z,3.2nm,1.1s
GERES GERESS Array B 80.24 358 P **P** **20 03 51.1 +1.4**
comp=Z,0.1nm,0.4s,baz=9.9,slow=6.1,SNR=4.9
comp=Z,0.1nm,0.4s
CONA Conrad Observa 81.10 357 *e*PcP **P** **20 03 57.5 +3.1**
comp=Z,2.7nm,1.3s
MOA Molin 81.22 358 *e*PcP **PcP** **20 03 58.5 -2.7**
comp=Z,0.7nm,0.4s
RONA Rosalia, Austr 81.31 357 *e*P **P** **20 03 56.2 +0.7**
comp=Z,2.4nm,1.1s
KVAR Kislovodsk Arr 81.34 338 LR LR 20 43 54.3
comp=Z,16nm,18.7s,baz=276,slow=38
BIOA Bad Ischl, Aus 81.39 358 *e*PcP **PcP** **20 04 01.5 -0.5**
comp=Z,1.2nm,0.8s
LESA Schwarzleotal 81.67 359 *i* PcP **PcP** **20 04 01.6 -1.7**
comp=Z,2.3nm,0.9s
MOTA Moosalm 81.76 0 *i* PcP **P** **20 04 00.8 +2.8**
comp=Z,4.9nm,1.1s
WATA Walderalm 81.77 360 *e*PcP **PcP** **20 04 01.3 -2.5**
comp=Z,3.3nm,1.1s
ARSA Arzberg 81.79 357 *e*PcP **P** **20 03 59.5 +1.5**
comp=Z,1.6nm,1.1s
DAVA Damuels 81.81 1 *e*pP pP 20 04 06.0 +7.3
comp=Z,2.7nm,1.1s
WTTA Wattenberg 81.84 360 *e*PcP **PcP** **20 04 02.0 -2.2**
comp=Z,5.0nm,1.4s
SQTA Sankt Quirin 81.88 0 *e*PcP **PcP** **20 04 02.9 -1.4**
comp=Z,1.9nm,0.9s
KBA Koelnbreinsper 82.01 359 *e*PcP **PcP** **20 04 02.4 -2.5**
comp=Z,5.9nm,0.7s
FETA Feichten 82.08 0 *e*pP pP 20 04 05.6 +5.4
comp=Z,5.0nm,1.3s
ABTA Abfaltersbach 82.35 359 *e*PcP **PcP** **20 04 04.7 -1.6**
comp=Z,2.7nm,1.4s
SOKA Soboth 82.38 357 *i* PcP **PcP** **20 04 04.6 -1.8**
comp=Z,0.2nm,0.3s
MTN Manton Dam 82.43 239 P **P** **20 04 00.5 -1.1**
MYKA Terra Mystica 82.45 358 *e*PcP **PcP** **20 04 05.2 -1.6**
comp=Z,1.7nm,1.1s
OBKA Obir 82.56 358 *e*PcP **PcP** **20 04 05.0 -2.1**
comp=Z,3.8nm,1.1s
WRA Warramunga Arr 86.72 232 P **P** **20 04 21.4 -1.8**
comp=Z,1.7nm,0.9s,baz=36,slow=6.1,SNR=7.3
comp=Z,1.7nm,0.9s
WRA Warramunga Arr 86.72 232 IAmb IAmb 20 04 21.5
comp=Z,0.2nm,1.1s
BRTR Keskin Array B 87.31 343 P **P** **20 04 27.9 +1.7**
comp=Z,1.0nm,1.1s,baz=215,slow=32,SNR=2.7
comp=Z,1.0nm,1.1s
BRTR Keskin Array B 87.31 343 P **P** **20 04 26.0 -0.2**
ESDC Sonseca Array 88.43 12 P **P** **20 04 33.8 +2.3**
comp=Z,0.4nm,0.9s,baz=346,slow=5.0,SNR=5.8
comp=Z,0.4nm,0.9s
FITZ Fitzroy Crossi 89.73 240 P **P** **20 04 36.6 -1.0**
comp=Z,2.0nm,0.6s,baz=33,slow=7.2,SNR=6.3
comp=Z,2.0nm,0.6s
FITZ Fitzroy Crossi 89.73 240 IAmb IAmb 20 05 05.6
comp=Z,2.5nm,1.4s
AS31 Alice Springs 90.08 231 **P** **20 04 37.5 -1.7**
AS31 IAmb IAmb 20 04 39.4
comp=Z,1.1nm,0.7s
ASAR Alice Springs 90.08 231 P **P** **20 04 38.6 -0.6**
comp=Z,3.7nm,0.7s,baz=33,slow=4.9,SNR=35
comp=Z,3.7nm,0.7s
ASAR Alice Springs 90.08 231 **P** **20 04 38.0 -1.2**
EIL Eilat 96.78 340 LR LR 20 53 47.2
comp=Z,19nm,18.1s,baz=98,slow=38
TORD Torodi Ar. Bea 115.29 10 PKP **PKiKP** **20 10 20.1 -1.1**
comp=Z,0.3nm,0.6s,baz=344,slow=1.8,SNR=1.8

*ISK **31** 20:00:58.8, 40°.93N×43°.51E, h6km, ML2.8/9*
*AFAD **31** 20:00:59.7, 40°.84N×43°.49E, h7km±4km, ML2.7*
ISC 31 20:00:59.4±1.3, 40°.89N±0°.04×43°.51E±0°.03, h8km±10km, n20, σ0°.54/31, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAK	**Akyaka**	**0.21**	**160**	P	**Pg**	**20 01 04.6**	**+0.8**
EAK				IAML		20 01 12.0	
	comp=N,7μm,0.4s						
KARS	**Kars**	**0.42**	**232**	Pg	**Pg**	**20 01 07.9**	**+0.3**
DIGO	**Kars**	**0.48**	**192**	P	**Pb**	**20 01 09.4**	**-0.9**
DIGO				S	**Sg**	**20 01 14.6**	**-0.6**
DIGO				IAML		20 01 22.0	
	comp=N,2μm,0.5s						
BOZK	**Kars-Merkez-Bo**	**0.50**	**234**	P	**Pg**	**20 01 09.3**	**+0.1**
BOZK				S	**Sg**	**20 01 16.0**	**+0.2**
GOLE	**Ardahan-G¶le**	**0.69**	**266**	P	**Pb**	**20 01 13.4**	**-0.5**
GOLE				S	**Sb**	**20 01 23.9**	**+0.2**
GOLE				IAML		20 01 27.0	
	comp=N,310nm,0.5s						
AHAN	**Ardahan-Merkez**	**0.72**	**293**	P	**Pb**	**20 01 14.0**	**-0.5**
AHAN				S	**Sb**	**20 01 24.3**	**-0.2**
AHAN				IAML		20 01 25.0	
	comp=N,852nm,0.5s						
AHAN				IAML		20 01 33.0	
	comp=E,444nm,0.7s						
EPOS	**Posof**	**0.85**	**316**	P	**Pb**	**20 01 17.0**	**+0.4**
EPOS				S	**Sb**	**20 01 28.5**	**+0.3**
EPOS				IAML		20 01 30.0	
	comp=N,362nm,0.4s						
EPOS				IAML		20 01 30.0	
	comp=E,252nm,0.7s						
TASB	**TASBURUN-IGDIR**	**1.06**	**148**	Pn	**Pg**	**20 01 19.5**	**-0.3**
TASB				Sn	**Sn**	**20 01 35.9**	**+0.3**
IGDI	**IGDIR**	**1.11**	**157**	P	**Pg**	**20 01 20.1**	**-0.5**
IGDI				S	**Sb**	**20 01 35.6**	**+0.1**
IGDI				IAML		20 01 40.0	
	comp=E,153nm,0.8s						
GNI	**Garni**	**1.19**	**128**	Pn	**Pn**	**20 01 22.7**	**+0.1**
GNI				Sn	**Sn**	**20 01 39.8**	**+0.7**
EOLT	**Oltu**	**1.22**	**254**	P	**Pb**	**20 01 22.5**	**-0.2**
DAGI	**Agillar**	**1.22**	**279**	P	**Pn**	**20 01 22.9**	**0.0**
DAGI				S	**Sb**	**20 01 38.7**	**-0.1**
TBLG	**Delisi**	**1.25**	**47**	Pn	**Pn**	**20 01 22.6**	**-0.7**
TBLG				Sn	**Sb**	**20 01 40.2**	**+0.6**
DDEM	**Demirkent**	**1.33**	**271**	P	**Pn**	**20 01 24.4**	**-0.1**
DDEM				IAML		20 01 49.0	
	comp=E,121nm,0.5s						
DDEM				IAML		20 01 50.0	
	comp=N,179nm,0.4s						
DBAD	**Bademkaya**	**1.38**	**276**	P	**Pg**	**20 01 25.5**	**-0.4**
BATM	**Batumi**	**1.54**	**298**	Pn	**Pn**	**20 01 27.4**	**+0.1**
BATM				Sn	**Sb**	**20 01 47.8**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**1.55**	**235**	Pn	**Pb**	**20 01 28.2**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.89**	**203**	Pn	**Pb**	**20 01 33.4**	**-0.9**
CHOM	**Cayeli-Rize**	**2.09**	**277**	Pn	**Pn**	**20 01 35.3**	**+0.5**
AKDM	**Akdamar-Van**	**2.59**	**189**	Pn	**Pn**	**20 01 43.1**	**+1.3**

IDC 31 20:01:52.1±5.4, 7°.03S×122°.94E, h174km±61km, mb2.8/2, mbtmp3.4/6, Error ellipse: s-maj=173.9km s-min=26.9km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.24**	**167**	P	Pn	20 02 43.6	+0.1
	14nm,0.3s,baz=101,slow=2.1,SNR=9.1						
BATI				S	Sn	20 03 16.6	-7.0
	31nm,0.3s,baz=177,slow=23,SNR=8.8						
FITZ	**Fitzroy Crossi**	**11.31**	**167**	P	Pn	20 04 28.5	-0.4
	1.9nm,1.0s,baz=358,slow=12,SNR=3.1						
FITZ				S	Sn	20 06 20.1	-15
	0.9nm,0.3s,baz=123,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**16.95**	**140**	P		20 05 37.1	-1.2
	0.8nm,1.1s,baz=312,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**19.61**	**149**	P		20 06 07.8	+0.5
	1.4nm,0.7s,baz=327,slow=12,SNR=16						
MKAR	**Makanchi Array**	**64.59**	**330**	P		20 12 10.3	-0.5
	0.1nm,0.5s,baz=125,slow=8.7,SNR=2.2						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**69.03**	**331**	P	P	20 12 39.2	+0.4
	0.2nm,0.6s,baz=128,slow=6.3,SNR=4.5						
	0.2nm,0.6s						

*NEIC **31** 20:20:19.5±1.8, 7°.48S±0°.07×128°.26E±0°.06, h153km±8km, mb4.2/21, Error ellipse: s-maj=10.0km s-min=8.3km az=154.0*
*IDC **31** 20:20:20.0±1.6, 7°.50S×127°.95E, h152km±16km, mb3.6/9, mbtmp4.2/14, Error ellipse: s-maj=17.1km s-min=13.5km az=87.0*
*DJA **31** 20:20:20.1±0.4, 7°.S±3°×127°.8E±°, h224km±13km, M4.5/15, mb4.5/10, mB4.8/6, MLv4.7/15, Mw(mB)4.1/6*
ISC 31 20:20:19.1±0.4, 7°.54S±0°.04×128°.25E±0°.04, h150km, n73, σ2s06/80, mb4.1/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.06**	**98**	P	**Pn**	**20 21 10.9**	**+3.7**
SAUI	**Saumlaki**	**3.06**	**98**	Pn	**Pn**	**20 21 07.7**	**+0.5**
SAUI				Sn	**Sn**	**20 21 42.5**	**-1.9**
SAUI	**Saumlaki**	**3.06**	**98**	P	Pn	20 21 13.3	+6.1
SOEI	**Soe**	**4.51**	**240**	P	**Pn**	**20 21 29.2**	**+3.0**
SOEI	**Soe**	**4.51**	**240**		**Pn**	**20 21 29.0**	**+2.9**
SOEI				Sn	**Sn**	**20 22 19.6**	**+1.3**
SOEI	**Soe**	**4.51**	**240**	P	**Pn**	**20 21 29.6**	**+3.4**
BATI	**Baumata**	**5.25**	**239**	P	**Pn**	**20 21 35.2**	**-0.6**
	414nm,0.4s,baz=82,slow=3.4,SNR=178						
BATI				S	**Sn**	**20 22 31.0**	**-4.7**
	121nm,0.5s,baz=119,slow=4.3,SNR=4.8						
BATI	**Baumata**	**5.25**	**239**	P	**Pn**	**20 21 34.8**	**-1.0**
DRS	**Darwin Rock St**	**5.52**	**152**	P	**Pn**	**20 21 40.9**	**+1.5**
MTN	**Manton Dam**	**5.99**	**152**		**Pn**	**20 21 47.1**	**+1.4**
MTN				Sn	**Sn**	**20 22 53.9**	**+0.5**
MMRI	**Maumere**	**6.05**	**259**	P	**Pn**	**20 21 49.5**	**+3.0**
MMRI	**Maumere**	**6.05**	**259**	Pn	**Pn**	**20 21 48.6**	**+2.1**
MMRI					**Sn**	**20 22 56.0**	**+1.2**
MMRI	**Maumere**	**6.05**	**259**	P	**Pn**	**20 21 48.3**	**+1.8**
	0.3nm51nm,1.2s						
FAKI	**Fak Fak**	**6.08**	**41**		**Pn**	**20 21 46.2**	**-0.7**
FAKI				Sn	**Sn**	**20 22 52.6**	**-3.0**
FAKI	**Fak Fak**	**6.08**	**41**	P	**Pn**	**20 21 46.6**	**-0.3**
	0.3nm56nm,0.8s						
SIJI	**Sorong**	**7.28**	**25**	P	**Pn**	**20 22 04.0**	**+1.0**
	46nm,0.3s,baz=215,slow=11,SNR=57						
SIJI				S	**Sn**	**20 23 22.9**	**-1.5**
	9.3nm,0.6s,baz=236,slow=23,SNR=2.1						
SIJI	**Sorong**	**7.28**	**25**	P	**Pn**	**20 22 04.3**	**+1.4**
	0.3nm2μm80nm,0.7s						
SWI	**Sorong**	**7.28**	**25**	P	**Pn**	**20 22 04.5**	**+1.5**
	1μm138nm,0.7s						
KNRA	**Kununurra**	**8.10**	**176**		**Pn**	**20 22 15.6**	**+1.7**
KAPI	**Kappang**	**8.81**	**286**	Pn	**Pn**	**20 22 23.5**	**+0.2**
PLAI	**Plampang**	**10.44**	**262**	P	**Pn**	**20 22 46.3**	**+1.3**
FITZ	**Fitzroy Crossi**	**10.80**	**193**	P	**Pn**	**20 22 49.5**	**-0.2**
	28nm,0.5s,baz=21,slow=11,SNR=126						
FITZ				S	**Sn**	**20 24 46.3**	**-2.8**
	20nm,0.3s,baz=100,slow=22,SNR=6.5						
FITZ	**Fitzroy Crossi**	**10.80**	**193**		**Pn**	**20 22 49.0**	**-0.6**
TOLI2	**Tolitoli**	**11.37**	**319**	P	**Pn**	**20 22 58.9**	**+1.7**
JAY	**Jayapura**	**13.38**	**69**	P	**P**	**20 23 28.5**	**+1.1**
	4.0nm,0.4s,baz=203,slow=4.7,SNR=7.0						
WRA	**Warramunga Arr**	**13.67**	**155**	P	**Pn**	**20 23 28.4**	**+1.4**
	2.3nm,0.5s,baz=323,slow=14,SNR=46						
WRA				S	**Sn**	**20 25 52.7**	**-5.8**
	15nm,0.6s,baz=324,slow=27,SNR=15						
WRA	**Warramunga Arr**	**13.67**	**155**	Pn	**Pn**	**20 23 25.4**	**-1.6**
WR8	**Warramunga Arr**	**13.75**	**154**		**Pn**	**20 23 28.4**	**+0.5**
JAGI	**Jajag, Banyuwa**	**13.99**	**265**	P	**P**	**20 23 33.1**	**-1.1**
JAGI	**Jajag, Banyuwa**	**13.99**	**265**	Pn	**Pn**	**20 23 30.8**	**-0.2**
MBWA	**Marble Bar**	**15.84**	**210**	P	**P**	**20 23 56.5**	**+1.8**
MBWA	**Marble Bar**	**15.84**	**210**		**Pn**	**20 23 53.6**	**-0.4**
MBWA				IAmb	IAmb	20 24 12.0	
	comp=Z,20nm,1.5s						
COEN	**Coen**	**15.99**	**115**	P	**P**	**20 23 59.3**	**+2.9**
COEN	**Coen**	**15.99**	**115**		**P**	**20 23 57.1**	**+0.7**
AS31	**Alice Springs**	**16.93**	**162**		**Pn**	**20 24 09.0**	**+1.7**
ASAR	**Alice Springs**	**16.93**	**162**	P	**Pn**	**20 24 10.1**	**+2.8**
	comp=Z,6.5nm,0.5s,baz=340,slow=12,SNR=144						
ASAR				S	**S**	**20 27 08.8**	**-6.8**
	comp=Z,2.1nm,0.5s,baz=352,slow=26,SNR=4.9						
ASAR	**Alice Springs**	**16.93**	**162**		**Pn**	**20 24 09.5**	**+2.3**
AS01	**Alice Springs**	**16.94**	**162**	P	**Pn**	**20 24 10.7**	**+3.3**
QIS	**Mount Isa**	**16.98**	**141**	P	**Pn**	**20 24 11.7**	**+3.8**
SMRI	**Semarang**	**17.67**	**270**	P	**Pn**	**20 24 18.9**	**+2.8**
MTSU	**Mount Surprise**	**18.86**	**125**	P	**Pn**	**20 24 33.4**	**+3.2**
GIRL	**Giralia**	**20.18**	**220**	P	**P**	**20 24 42.6**	**+0.5**
BBJI	**Bungbulang**	**20.42**	**269**	P	Pn	20 24 48.8	+0.2
BBJI	**Bungbulang**	**20.42**	**269**	P	**P**	**20 24 43.2**	**-1.6**
FORT	**Forrest**	**23.12**	**180**	P	**P**	**20 25 12.4**	**+0.4**
FORT				IAmb	IAmb	20 25 14.8	
	comp=Z,11nm,1.2s						
MORW	**Morawa**	**24.31**	**207**	P	**P**	**20 25 23.2**	**+0.4**
STKA	**Stephens Creek**	**27.23**	**155**	P	**P**	**20 25 52.0**	**+2.9**
	comp=Z,0.9nm,0.5s,baz=331,slow=12,SNR=4.2						
	comp=Z,0.9nm,0.5s						
NWAO	**Narrogin (SRO)**	**27.25**	**201**	P	**P**	**20 25 49.4**	**+0.1**
KULM	**Kulim**	**30.34**	**294**	P	**P**	**20 26 16.3**	**-0.5**
KULM				IAmb	IAmb	20 26 17.3	
	comp=Z,3.5nm,0.9s						
GSI	**Gunungsitoli**	**31.83**	**285**	P	**P**	**20 26 28.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**36.77**	**312**	P	**P**	**20 27 29.2**	**0.0**
	comp=Z,0.6nm,0.4s,baz=150,slow=8.2,SNR=5.4						
	comp=Z,0.6nm,0.4s						
KSRS	**Korea Array**	**44.76**	**360**	P	**P**	**20 28 18.2**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=163,slow=10.0,SNR=5.3						
	comp=Z,0.8nm,0.4s						
MORE	**Moreh**	**45.76**	**315**	P	**P**	**20 28 24.4**	**-1.4**
MORE				IAmb	IAmb	20 28 25.0	
	comp=Z,12nm,1.5s						
SONM	**Songino Array**	**58.42**	**343**	P	**P**	**20 29 58.8**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=167,slow=7.3,SNR=6.8						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**58.42**	**343**	IAmb	IAmb	20 30 00.7	
	comp=Z,1.9nm,1.1s						
MKAR	**Makanchi Array**	**67.73**	**328**	P	**P**	**20 30 60.0**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=122,slow=8.2,SNR=27						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**67.73**	**328**	P	**P**	**20 30 59.3**	**-1.2**
MAKZ	**Makanchi**	**67.91**	**328**	P	**P**	**20 31 00.7**	**-0.9**
MAKZ				IAmb	IAmb	20 31 01.9	
	comp=Z,5.0nm,1.4s						
ARSB	**Arslanbob**	**70.14**	**319**	P	**P**	**20 31 14.2**	**-1.4**
ARSB				IAmb	IAmb	20 31 15.7	
	comp=Z,2.1nm,0.5s						
ZAA0	**Zalesovo Array**	**71.31**	**335**	P	**P**	**20 31 20.6**	**-1.6**
ZAA0				IAmb	IAmb	20 31 22.4	
	comp=Z,5.9nm,1.4s						
ZALV	**Zalesovo Beam**	**71.31**	**335**	P	**P**	**20 31 20.7**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=144,slow=5.5,SNR=6.2						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**71.31**	**335**	P	**P**	**20 31 20.2**	**-2.0**
KURBB	**Kurchatov Arra**	**72.07**	**329**	P	**P**	**20 31 26.3**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=130,slow=5.2,SNR=35						
	comp=Z,2.3nm,0.5s						
KURK	**Kurchatov**	**72.08**	**329**	P	**P**	**20 31 25.7**	**-1.2**
KURK				IAmb	IAmb	20 31 27.6	
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**77.60**	**328**	P	**P**	**20 31 58.1**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=128,slow=8.8,SNR=16						
	comp=Z,1.5nm,0.5s						
AB31	**Akbulak array**	**81.85**	**322**	P	**P**	**20 32 20.0**	**-1.6**
**

az=45.0

ISC 31 20:37:26.3±0.6,**9°03S**±0.09×**152°63E**±0.10,**h35**km,**n55**, σ2**26**/37,**mb4.0**/16,**MS3.3**/16,**D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.73**	**353**	LR	LR	20 40 23.4	
	comp=Z,66nm,20.8s,baz=104,slow=38						
RABL	**Rabaul**	**4.83**	**354**	Pn	Sn	20 39 22.0	-9.4
PMG	**Port Moresby**	**5.41**	**266**	P	Pn	20 38 51.9	+7.3
PMG	**Port Moresby**	**5.41**	**266**	Pn	**Pn**	**20 38 46.7**	**+2.1**
	4.2nm,0.3s,baz=60,slow=21,SNR=10						
PMG				LR	LR	20 40 57.5	
	comp=Z,391nm,19.5s,baz=70,slow=38						
	18nm,0.8s						
PMG	**Port Moresby**	**5.41**	**266**		**Pn**	**20 38 45.8**	**+1.2**
TATA	**Tatamba Isabel**	**7.12**	**85**	P	Pn	**20 39 09.6**	**+1.5**
HNR	**Honiara**	**7.23**	**94**	LR	LR	20 41 18.4	
	comp=Z,17nm,21.5s,baz=28,slow=35						
COEN	**Coen**	**10.48**	**241**	Pn	Pn	20 39 42.5	-12
CTA	**Charters Tower**	**12.60**	**209**	Pn	**Pn**	**20 40 22.0**	**-1.3**
	0.6nm,0.3s,baz=348,slow=20,SNR=2.6						
CTA				LR	LR	20 44 59.6	
	comp=Z,166nm,19.3s,baz=30,slow=36						
	3.1nm,0.4s						
CTAO	**Charters Tower**	**12.60**	**209**	Pn	**Pn**	**20 40 19.7**	**-3.6**
QIS	**Mount Isa**	**17.01**	**226**	P	**P**	**20 41 26.2**	**+3.0**
QLP	**Quilpie**	**19.18**	**203**	P	**Pn**	**20 41 50.4**	**+2.2**
WR0	**Warramunga Arr**	**20.59**	**236**	P	**P**	**20 41 58.3**	**-4.1**
WR0				IAmb	IAmb	20 42 07.2	
	comp=Z,39nm,1.3s						
WRAB	**Tennant Creek**	**20.73**	**236**	P	Pn	20 42 08.6	+2.1
WRA	**Warramunga Arr**	**20.74**	**236**	P	**P**	**20 42 04.3**	**+0.1**
	comp=Z,8.2nm,1.0s,baz=61,slow=11,SNR=22						
	comp=Z,8.2nm,1.0s						
WRA	**Warramunga Arr**	**20.74**	**236**	P	**P**	**20 41 59.9**	**-4.3**
AULRC	**Lightning Ridg**	**20.76**	**192**	P	Pn	20 42 06.2	-0.5
ARMA	**Armidale**	**21.30**	**182**	P	**P**	**20 42 11.2**	**+1.0**
ARMA				IAmb	IAmb	20 42 16.4	
	comp=Z,32nm,1.3s						
MTN	**Manton Dam**	**21.44**	**258**	P	**P**	**20 42 11.9**	**+0.2**
MTN				IAmb	IAmb	20 42 13.2	
	comp=Z,7.4nm,0.9s						
INKA	**Innaminka**	**21.73**	**210**		**P**	**20 42 11.0**	**-3.7**
SIJI	**Sorong**	**22.76**	**290**	LR	LR	20 53 28.4	
	comp=Z,124nm,18.9s,baz=84,slow=42						
AS01	**Alice Springs**	**23.04**	**229**	P	**P**	**20 42 33.2**	**+4.5**
AS31	**Alice Springs**	**23.08**	**229**		**P**	**20 42 29.0**	**-0.1**
ASAR	**Alice Springs**	**23.08**	**229**	P	**P**	**20 42 29.6**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=62,slow=9.0,SNR=22						
ASAR				LR	LR	20 50 09.6	
	comp=Z,146nm,20.9s,baz=32,slow=33						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**23.08**	**229**	P	**P**	**20 42 28.9**	**-0.2**
AUALC	**St Philip's Co**	**23.11**	**229**	P	**P**	**20 42 33.8**	**+4.4**
AUDCS	**Dubbo College**	**23.38**	**189**	P	**P**	**20 42 34.9**	**+2.9**
GUMO	**Guam**	**23.76**	**341**	LR	LR	20 51 05.8	
	comp=Z,22nm,19.3s,baz=164,slow=34						
KNRA	**Kununurra**	**24.22**	**252**		**P**	**20 42 39.1**	**-0.9**
KNRA				IAmb	IAmb	20 42 44.9	
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**24.94**	**203**	P	**P**	**20 42 45.6**	**-0.7**
	comp=Z,7.3nm,0.6s,baz=33,slow=12,SNR=24						
STKA				LR	LR	20 52 28.2	
	comp=Z,121nm,18.8s,baz=24,slow=36						
	comp=Z,7.3nm,0.6s						
MSVF	**Nonsavu**	**26.17**	**112**	LR	LR	20 51 07.9	
	comp=Z,124nm,21.5s,baz=95,slow=32						
CAN	**Canberra**	**26.38**	**187**	P	**P**	**20 43 00.5**	**+1.1**
AUJCS	**Jamestown Cent**	**27.31**	**206**	P	**P**	**20 43 11.1**	**+3.2**
FITZ	**Fitzroy Crossi**	**27.71**	**248**	P	**P**	**20 43 10.5**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=76,slow=8.3,SNR=9.7						
FITZ				LR	LR	20 53 44.9	
	comp=Z,124nm,21.6s,baz=244,slow=35						
	comp=Z,2.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**27.71**	**248**	P	**P**	**20 43 10.8**	**-0.8**
FITZ				IAmb	IAmb	20 43 45.2	
	comp=Z,1.9nm,1.2s						
BBOO	**Buckleboo**	**28.19**	**211**	P	**P**	**20 43 15.5**	**-0.3**
BATI	**Baumata**	**28.58**	**265**	LR	LR	20 57 32.4	
	comp=Z,188nm,19.8s,baz=62,slow=42						
FORT	**Forrest**	**31.51**	**223**	P	**P**	**20 43 45.1**	**0.0**
FORT				IAmb	IAmb	20 43 50.4	
	comp=Z,7.0nm,0.9s						
KAPI	**Kappang**	**32.86**	**275**	LR	LR	21 00 54.3	
	comp=Z,45nm,18.2s,baz=134,slow=43						
AFI	**Afiamalu**	**35.19**	**101**	LR	LR	20 56 33.4	
	comp=Z,38nm,22.0s,baz=290,slow=33						
URZ	**Urewera**	**36.50**	**147**	LR	LR	20 58 10.4	
	comp=Z,95nm,18.5s,baz=318,slow=34						
RPZ	**Rata Peaks**	**38.10**	**158**	LR	LR	20 58 58.5	
	comp=Z,26nm,19.2s,baz=188,slow=34						
JNU	**Nakatsue**	**46.76**	**335**	LR	LR	21 02 38.3	
	comp=Z,19nm,20.8s,baz=210,slow=32						
MJAR	**Matsushiro Arr**	**47.31**	**344**	P	**P**	**20 45 56.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=169,slow=8.1,SNR=5.2						
MJAR				LR	LR	21 06 43.2	
	comp=Z,12nm,18.2s,baz=174,slow=37						
	comp=Z,1.3nm,0.9s						
KSRS	**Korea Array**	**51.71**	**335**	P	**P**	**20 46 29.4**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=158,slow=9.0,SNR=4.4						
KSRS				LR	LR	21 06 46.0	
	comp=Z,12nm,19.9s,baz=220,slow=34						
	comp=Z,1.3nm,0.9s						
ASAJ	**Asahikawa**	**53.67**	**351**	LR	LR	21 09 23.7	
	comp=Z,13nm,19.0s,baz=190,slow=36						
PPT	**Papeete**	**56.70**	**105**	LR	LR	21 05 37.5	
	comp=Z,33nm,21.5s,baz=198,slow=30						
CMAR	**Chiang Mai Arr**	**59.59**	**298**	P	**P**	**20 47 27.0**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=103,slow=6.3,SNR=4.4						
	comp=Z,0.9nm,1.0s						
GTA2	**Gaotai**	**68.74**	**319**	*e*P	**P**	**20 48 30.0**	**+3.1**
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	**Songino Array**	**69.81**	**329**	P	**P**	**20 48 33.2**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=150,slow=4.4,SNR=9.3						
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**80.96**	**180**	P	**P**	**20 49 34.4**	**-2.7**
	comp=Z,0.6nm,0.8s,baz=227,slow=1.8,SNR=7.6						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**83.39**	**319**	P	**P**	**20 49 50.5**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=146,slow=3.0,SNR=7.0						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**84.56**	**327**	P	**P**	**20 49 55.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=112,slow=6.2,SNR=6.6						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**86.12**	**22**	P	**P**	**20 50 00.8**	**-2.6**
	comp=Z,0.3nm,0.7s,baz=237,slow=5.6,SNR=2.6						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.20**	**281**	PKPbc	**PKPbc**	**20 57 16.1**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=93,slow=2.9,SNR=8.5						

*NEIC **31** 21:19:48.0±1.7,54°33N±0°06×161°00W±0°05,h25km±7km, mb4.2/53,ML4.1/23,Mwr4.2/35,ML4.0(AEIC),Error ellipse: s-maj=8.4km s-min=4.3km az=172.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.67; $M_{\theta\theta}$-1.35; $M_{\phi\phi}$-0.32; $M_{r\theta}$1.82; $M_{\theta\phi}$0.14; $M_{\phi r}$1.16; Fault plane solution: M_o2.65000×10^{15} NP1:ϕ_s66.63000°, δ73.34000°,λ77.90000°. NP2:ϕ_s283.41000°,δ20.49000°, λ125.01000°. Principal axes: T 2.9049, Plg60.0000°, Azm319.0000°; N -0.6209, Plg12.0000°, Azm70.0000°; P -2.2840, Plg27.0000°, Azm166.0000°;*

*AEIC **31** 21:19:47.9±1.6,54°33N±0°03×161°02W±0°05,h30km±7km Error ellipse: s-maj=4.8km s-min=3.8km az=218.0*

*NEIC **31** 21:19:47.8,54°37N×161°03W,h21km*

*IDC **31** 21:19:48.4±0.8,55°18N×161°94W,h0km,mb4.2/25, mbtmp4.1/28,ML3.8/3,MS3.5/40,Error ellipse: s-maj=22.9km s-min=12.0km az=175.0*

ISC 31 21:19:46.4±1.9,**54°32N**±0°05×**161°03W**±0°03, **h17**km±11km,**n297,**σ1**9**17/259,**mb4.3**/51,**MS3.5**/38,**1C, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.96**	**330**		**Pb**	**21 20 04.4**	**-0.1**
DOL					**Sg**	**21 20 17.5**	**-0.2**
CNBA	**Chernabura Isl**	**0.98**	**59**		**Pb**	**21 20 04.6**	**-0.2**
CNBA					**Sb**	**21 20 17.4**	**+0.1**
CNBA				IAML		21 20 26.4	
	comp=N,4μm,0.6s						
CNBA				IAML		21 20 29.5	
	comp=E,3μm,1.0s						
CHNA	**Chernabura Isl**	**0.98**	**58**	P	**Pb**	**21 20 04.1**	**-0.8**
DT1	**Dutton Round H**	**1.07**	**318**		**Pb**	**21 20 06.0**	**-0.5**
DT1					**Sb**	**21 20 20.6**	**+0.4**
SDPT	**Sand Point**	**1.08**	**17**	P	**Pb**	**21 20 05.6**	**-1.0**
SDPT	**Sand Point**	**1.08**	**17**		**Pb**	**21 20 06.1**	**-0.5**
SDPT					**Sb**	**21 20 18.6**	**-1.8**
SDPT				IAML		21 20 23.9	
	comp=E,5μm,0.5s						
SDPT				IAML		21 20 30.3	
	comp=N,5μm,0.6s						
DTNA	**Dutton South F**	**1.09**	**320**		**Pb**	**21 20 06.4**	**-0.4**
DTNA					**Sn**	**21 20 21.8**	**+0.2**
HAG	**Hague Volcano**	**1.12**	**333**		**Pn**	**21 20 07.3**	**0.0**
PS4A	**Pavlof South-4**	**1.14**	**335**		**Pn**	**21 20 07.5**	**0.0**
PS4A					**Sg**	**21 20 23.4**	**+0.2**
PVV	**Pavlof Volcano**	**1.15**	**338**		**Pn**	**21 20 07.5**	**-0.1**
PS1A	**Pavlof South-1**	**1.18**	**340**		**Pn**	**21 20 08.1**	**0.0**
PS1A					**Sn**	**21 20 24.0**	**+0.3**
PN7A	**Pavlof North-7**	**1.25**	**334**		**Pb**	**21 20 09.5**	**0.0**
PN7A					**Sn**	**21 20 26.2**	**+0.7**
ISNN	**Isanotski Nort**	**1.68**	**289**		**Pb**	**21 20 16.7**	**-0.1**
SSLS	**Shishaldin Sou**	**1.78**	**284**		**Pb**	**21 20 18.0**	**-0.5**
SSLS					**Sb**	**21 20 40.5**	**+0.1**
SSBA	**Shishaldin**	**1.86**	**285**		**Pb**	**21 20 18.8**	**-1.2**
SSBA					**Pn**	**21 20 19.3**	**+1.8**
SSBA					**Sb**	**21 20 42.6**	**-0.2**
VNKR	**Veniaminof 5**	**1.96**	**28**		**Pn**	**21 20 19.9**	**+1.0**
VNKR					**Sb**	**21 20 45.2**	**-0.6**
VNSS	**Veniaminof 8**	**2.11**	**25**		**Pn**	**21 20 22.8**	**-1.4**
VNSG	**Veniaminof 6**	**2.12**	**31**		**Pn**	**21 20 22.6**	**+1.5**
VNFG	**Fog Glacier, M**	**2.14**	**23**		**Pn**	**21 20 21.7**	**+0.3**
VNFG					**Sb**	**21 20 49.4**	**-1.6**
VNFG	**Fog Glacier, M**	**2.14**	**23**		**Pb**	**21 20 23.2**	**-1.5**
VNFG					**Pn**	**21 20 23.7**	**+2.3**
VNHG	**Veniaminof 1**	**2.18**	**28**		**Pb**	**21 20 23.8**	**-1.6**
AKSA	**Akutan Strait**	**2.75**	**268**		**Pn**	**21 20 31.0**	**+1.4**
AKSA					**Sn**	**21 21 03.6**	**+1.3**
AKUT	**Akutan**	**2.79**	**268**	P	**Pn**	**21 20 31.4**	**+1.2**
AKUT	**Akutan**	**2.79**	**268**		**Pn**	**21 20 31.7**	**+1.5**
AKUT					**Sn**	**21 21 03.8**	**+0.4**
AKUT				IAML		21 21 20.0	
	comp=N,592nm,1.1s						
AHB	**Akutan Harbor**	**2.82**	**268**		**Pn**	**21 20 31.9**	**+1.3**
AHB					**Pb**	**21 20 32.3**	**-3.9**
AHB					**Sn**	**21 21 05.0**	**+0.9**
AKBBA	**Akutan Broad B**	**2.89**	**268**		**Pn**	**21 20 33.0**	**+1.4**
AKLV	**Akutan Long Va**	**2.90**	**269**		**Pn**	**21 20 33.1**	**+1.4**
AKV	**Akutan Volcano**	**2.90**	**268**		**Pn**	**21 20 33.5**	**+1.7**
AKGG	**Akutan Green G**	**2.92**	**270**		**Pn**	**21 20 33.4**	**+1.5**
ANPB	**Aniakchak Plen**	**2.94**	**31**		**Pn**	**21 20 33.9**	**+1.7**
LVA	**Lava Point**	**2.94**	**269**	Pn	**Pn**	**21 20 33.3**	**+1.0**
LVA				IAML		21 21 29.7	
	comp=E,391nm,0.9s						
AKRB	**Akutan Reef Bi**	**2.97**	**268**		**Pn**	**21 20 34.2**	**+1.6**
AZAC	**Aniakchak**	**3.03**	**30**		**Pn**	**21 20 35.5**	**+2.0**
ANNW	**Aniakchak Nort**	**3.09**	**30**		**Pn**	**21 20 36.3**	**+1.9**
UNV	**Unalaska Valle**	**3.26**	**264**	P	**Pn**	**21 20 37.4**	**+0.8**
UNV	**Unalaska Valle**	**3.26**	**264**		**Pn**	**21 20 37.5**	**+0.9**
UNV	**Unalaska Valle**	**3.26**	**264**		**Sn**	**21 21 15.7**	**+0.7**
MNAT	**Makushin Natee**	**3.36**	**265**		**Pn**	**21 20 39.1**	**+1.1**
MNAT					**Sn**	**21 21 17.6**	**+0.2**
MREP	**Makushin Rep't**	**3.41**	**264**		**Pn**	**21 20 39.8**	**+1.0**
MGOD	**Makushin Gods**	**3.48**	**264**		**Pn**	**21 20 40.7**	**+0.9**
MGOD					Pb	21 20 40.9	-6.7
MGOD					**Sn**	**21 21 22.0**	**+1.4**
MAPS	**Pakushin South**	**3.52**	**264**		**Pn**	**21 20 40.8**	**+0.5**
MAPS					**Sn**	**21 21 23.3**	**+1.8**
PLBL	**Peulik Blue Cr**	**4.13**	**33**		**Pn**	**21 20 50.3**	**+1.7**
PLBL					**Sn**	**21 21 38.5**	**+2.0**
OKFG	**Magazine Ridge**	**4.18**	**260**		**Pn**	**21 20 50.5**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**4.26**	**260**		**Pn**	**21 20 52.0**	**+1.6**
PLK3	**Peulik 3**	**4.30**	**36**		**Pn**	**21 20 52.5**	**+1.5**
OKWR	**Okmok West Rim**	**4.34**	**261**		**Pn**	**21 20 53.1**	**+1.5**
PLK2	**Peulik 2**	**4.34**	**35**		**Pn**	**21 20 53.4**	**+1.9**
PLK5	**Peulik 5**	**4.36**	**30**		**Pn**	**21 20 53.1**	**+1.5**
SII	**Sitkinak Islan**	**4.50**	**57**	P	**Pn**	**21 20 53.6**	**0.0**
SII	**Sitkinak Islan**	**4.50**	**57**	Pn	**Pn**	**21 20 53.7**	**+0.1**
SII				IAML		21 22 26.7	
	comp=E,354nm,0.9s						
Q17K	**Contact Creek**	**4.88**	**34**		**Pn**	**21 21 00.0**	**+1.0**
O15K	**Ungalikthiuk R**	**4.91**	**7**		**Pn**	**21 20 59.7**	**+0.3**
O15K				IAML		21 22 31.7	
	comp=E,149nm,1.0s						
O15K				IAML		21 22 45.7	
	comp=N,97nm,1.0s						
O14K	**Tigyukauivet M**	**4.95**	**359**		**Pn**	**21 21 00.3**	**+0.5**
O14K				IAML		21 22 32.1	
	comp=E,146nm,1.1s						
O14K				IAML		21 22 43.7	
	comp=N,163nm,1.0s						
P16K	**Nushagak River**	**5.01**	**18**		**Pn**	**21 21 01.4**	**+0.7**
ACHA	**Angle Creek He**	**5.03**	**37**		**Pn**	**21 21 01.4**	**+0.4**
MGLS	**Mageik Landsli**	**5.03**	**38**		**Pn**	**21 21 02.1**	**+1.1**
KAKN	**Katmai Knife C**	**5.19**	**37**		**Pn**	**21 21 04.2**	**+1.0**
KAKN					**Pn**	**21 21 05.0**	**+1.8**
OHAK	**Old Harbor**	**5.25**	**53**	P	**Pn**	**21 21 03.1**	**-0.8**
OHAK	**Old Harbor**	**5.25**	**53**		**Pn**	**21 21 03.7**	**-0.2**
OHAK				IAML		21 22 44.5	
	comp=N,116nm,0.9s						
OHAK				IAML		21 23 00.3	
	comp=E,68nm,1.0s						
CLCO	**Concord Point,**	**5.41**	**257**		**Pn**	**21 21 07.5**	**+1.4**
KARR	**Katmai Rainbow**	**5.46**	**37**		**Pn**	**21 21 08.3**	**+1.4**
Q18K	**Katmai Hardscr**	**5.47**	**35**		**Pn**	**21 21 08.7**	**+1.6**
P17K	**Kvichak River**	**5.50**	**25**		**Pn**	**21 21 07.8**	**+0.4**
KAHG	**Katmai Hook Gl**	**5.52**	**38**		**Pn**	**21 21 09.2**	**+1.5**
O16K	**Kokwok River B**	**5.53**	**16**		**Pn**	**21 21 08.6**	**+0.8**
N14K	**Kuskokwak Cree**	**5.63**	**357**		**Pn**	**21 21 10.0**	**+0.8**
KDAK	**Kodiak Island**	**5.87**	**50**	Pn	**Pn**	**21 21 12.3**	**-0.1**
	comp=E,1.1nm,0.3s,baz=37,slow=1.7,SNR=12						
KDAK				Sn	**Sn**	**21 22 15.0**	**-4.1**
	comp=E,1.9nm,0.3s,baz=333,slow=0.9,SNR=1.3						
KDAK	**Kodiak Island**	**5.87**	**50**		**Pn**	**21 21 12.7**	**+0.3**
O17K	**Koliganek Bris**	**5.87**	**20**		**Pn**	**21 21 13.7**	**+1.2**
N15K	**Kwethluk River**	**5.89**	**5**		**Pn**	**21 21 12.6**	**-0.2**
SPIA	**Saint Paul Isl**	**5.94**	**303**	P	**Pn**	**21 21 15.3**	**+1.9**
SPIA	**Saint Paul Isl**	**5.94**	**303**	Pn	**Pn**	**21 21 15.3**	**+1.9**
P18K	**Big Mountain,**	**6.00**	**30**		**Pn**	**21 21 15.6**	**+1.4**
Q19K	**Cape Douglas,**	**6.16**	**38**		**Pn**	**21 21 16.8**	**+0.3**
M13K	**Dall Lake**	**6.24**	**349**		**Pn**	**21 21 18.7**	**+1.2**
N16K	**Nishlik Lake**	**6.29**	**10**		**Pn**	**21 21 20.0**	**+1.7**
O18K	**Koktuh Hills**	**6.39**	**27**		**Pn**	**21 21 19.8**	**+0.2**
M14K	**Bethel**	**6.47**	**356**		**Pn**	**21 21 4**	**+0.7**
N17K	**Nushagak Hills**	**6.56**	**17**		**Pn**	**21 21 23.2**	**+1.3**
M11K	**Mekoryuk**	**6.69**	**337**		**Pn**	**21 21 25.0**	**+1.3**
M16K	**Timber Creek**	**6.81**	**9**		**Pn**	**21 21 26.4**	**+1.1**
O19K	**Port Alsworth**	**6.92**	**29**		**Pn**	**21 21 27.8**	**+0.9**
N18K	**Kilae Creek**	**6.95**	**21**		**Pn**	**21 21 28.6**	**+1.3**
L14K	**Kuka Creek**	**7.10**	**354**		**Pn**	**21 21 29.5**	**+0.2**
ILSW	**Iliamna Southw**	**7.11**	**34**		**Pn**	**21 21 30.0**	**+0.4**
IVE	**Iliamna Volcan**	**7.18**	**34**		**Pn**	**21 21 32.2**	**+1.7**
M17K	**Holitna River**	**7.35**	**14**		**Pn**	**21 21 33.1**	**+0.3**
N19K	**Bonanza Creek**	**7.40**	**26**		**Pn**	**21 21 34.7**	**+1.2**
L16K	**Owhat River**	**7.46**	**6**		**Pn**	**21 21 34.1**	**-0.1**
CNPM	**China Poot**	**7.47**	**42**		**Pn**	**21 21 36.4**	**+1.9**
RED	**Redoubt Volcan**	**7.56**	**33**		**Pn**	**21 21 37.0**	**+1.2**
BRLK	**Bradley Lake**	**7.76**	**41**	Pn	**Pn**	**21 21 40.1**	**+1.6**
RDT	**Redoubt**	**7.80**	**33**		**Pn**	**21 21 40.6**	**+1.6**
BRSE	**Bradley Lake S**	**7.81**	**42**		**Pn**	**21 21 39.5**	**+0.5**
K13K	**Kusilvak Mount**	**7.87**	**347**		**Pn**	**21 21 41.0**	**+1.1**
L17K	**Donlin**	**7.97**	**9**		**Pn**	**21 21 41.6**	**+0.4**
K15K	**Wolf Creek Mou**	**8.00**	**358**		**Pn**	**21 21 42.5**	**+0.8**
KOFP	**Korovin Flat P**	**8.10**	**261**		**Pn**	**21 21 44.7**	**+1.6**
ATKA	**Atka Island**	**8.18**	**260**	P	**Pn**	**21 21 45.4**	**+1.3**
ATKA	**Atka Island**	**8.18**	**260**	Pn	**Pn**	**21 21 44.4**	**+0.3**
L18K	**Granite Mounta**	**8.24**	**14**		**Pn**	**21 21 45.3**	**+0.3**
SPU	**Mount Spurr**	**8.38**	**31**		**Pn**	**21 21 47.3**	**+0.3**
SLKM	**Skilak Lake**	**8.51**	**39**		**Pn**	**21 21 50.0**	**+1.3**
L19K	**White Mountain**	**8.53**	**20**		**Pn**	**21 21 50.1**	**+1.2**
K17K	**Iditarod**	**8.54**	**8**		**Pn**	**21 21 49.8**	**+0.7**
SEW	**Seward**	**8.54**	**43**	Pn	**Pn**	**21 21 49.4**	**+0.4**
J14K	**Nanvaranak Lak**	**8.56**	**352**		**Pn**	**21 21 49.9**	**+0.6**
M20K	**Styx River**	**8.65**	**26**		**Pn**	**21 21 53.4**	**+2.7**
O22K	**Cooper Landing**	**8.67**	**40**	Pn	**Pn**	**21 21 50.5**	**-0.4**
STLK	**Strandline Lak**	**8.70**	**30**		**Pn**	**21 21 53.3**	**+2.0**
J16K	**Anvik River**	**8.99**	**1**		**Pn**	**21 21 56.6**	**+1.3**
RC01	**Rabbit Creek A**	**9.08**	**37**	Pn	**Pn**	**21 21 57.4**	**+1.0**
J17K	**VABM Dome**	**9.16**	**6**		**Pn**	**21 21 57.5**	**0.0**
SKT	**Skwentna**	**9.16**	**29**		**Pn**	**21 21 59.6**	**+2.0**
GSMY	**Great Sitkin M**	**9.31**	**262**		**Pn**	**21 22 01.2**	**+1.6**
P23K	**Montague Islan**	**9.33**	**47**	Pn	**Pn**	**21 22 00.3**	**+0.5**
J18K	**Innoko River**	**9.44**	**12**		**Pn**	**21 22 01.8**	**+0.5**
PWL	**Port Wells**	**9.44**	**41**		**Pn**	**21 22 01.5**	**+0.1**
ETKA	**Kagalaska Isla**	**9.57**	**261**		**Pn**	**21 22 04.6**	**+1.3**
I17K	**Unalakleet**	**9.60**	**1**		**Pn**	**21 22 04.0**	**+0.4**
ADK	**Adak**	**9.73**	**262**	P	**Pn**	**21 22 06.3**	**+0.9**
ADK	**Adak**	**9.73**	**262**	Pn	**Pn**	**21 22 06.2**	**+0.8**
K20K	**Telida**	**9.75**	**19**		**Pn**	**21 22 06.3**	**+0.7**
PPLA	**Purkeypile**	**9.75**	**25**		**Pn**	**21 22 07.3**	**+1.6**
L22K	**Petersville**	**9.82**	**29**		**Pn**	**21 22 07.3**	**+0.7**
GHO	**Glory Hole Cre**	**9.83**	**36**	Pn	**Pn**	**21 22 07.4**	**+0.5**
HIN	**Hinchinbrook I**	**9.92**	**46**		**Pn**	**21 22 07.3**	**-0.6**
GLI	**Glacier Island**	**9.94**	**43**	Pn	**Pn**	**21 22 08.5**	**+0.2**
KIWB	**Kanaga Island**	**10.01**	**262**	Pn	**Pn**	**21 22 10.2**	**+0.9**
SML	**Sawmill**	**10.06**	**37**	Pn	**Pn**	**21 22 09.9**	**-0.1**
J19K	**Poorman**	**10.09**	**14**		**Pn**	**21 22 10.7**	**+0.5**
FID	**Port Fidalgo**	**10.12**	**45**		**Pn**	**21 22 10.1**	**-0.6**
CAST	**Castle Rocks**	**10.22**	**23**		**Pn**	**21 22 13.5**	**+1.5**
EYAK	**Cordova Ski Ar**	**10.32**	**47**		**Pn**	**21 22 13.2**	**-0.2**
SCM	**Sheep Creek Mo**	**10.44**	**38**		**Pn**	**21 22 14.8**	**-0.3**
J20K	**Nowinta River**	**10.49**	**17**		**Pn**	**21 22 16.6**	**+0.9**
KTH	**Kantishna Hill**	**10.61**	**25**		**Pn**	**21 22 18.9**	**+1.4**
DIV	**Divide**	**10.62**	**44**	Pn	**Pn**	**21 22 17.9**	**+0.4**
KAIM	**Kayak Island**	**10.62**	**51**		**Pn**	**21 22 18.2**	**+0.7**
H17K	**Granite Mounta**	**10.67**	**3**		**Pn**	**21 22 19.0**	**+0.8**
TRF	**Thorofare Moun**	**10.69**	**27**		**Pn**	**21 22 19.4**	**+0.8**
RAGM	**Ragged Mountai**	**10.70**	**49**		**Pn**	**21 22 18.5**	**-0.3**
KLU	**Klutina**	**10.76**	**42**		**Pn**	**21 22 18.8**	**-0.7**
H18K	**Honhosa River**	**10.95**	**6**		**Pn**	**21 22 22.7**	**+0.6**
I20K	**Naaghedeneel**	**11.01**	**15**		**Pn**	**21 22 22.4**	**-0.4**
BMRM	**Bremner River**	**11.01**	**46**		**Pn**	**21 22 23.0**	**0.0**
RND	**Reindeer**	**11.05**	**30**	Pn	**Pn**	**21 22 22.5**	**-1.0**
G16K	**Koyuk River**	**11.13**	**357**	Pn	**Pn**	**21 22 25.1**	**+0.6**
BERG	**Berg Lake**	**11.14**	**50**	Pn	**Pn**	**21 22 24.5**	**-0.2**
DHY	**Denali Highway**	**11.26**	**33**		**Pn**	**21 22 25.7**	**-0.7**
MCK	**McKinley**	**11.28**	**28**	Pn	**Pn**	**21 22 27.6**	**+0.9**
H19K	**Roundabout Mou**	**11.47**	**10**		**Pn**	**21 22 30.3**	**+1.2**
BWN	**Browne**	**11.49**	**26**	Pn	**Pn**	**21 22 29.6**	**+0.1**
CRQM	**Cirque**	**11.55**	**49**		**Pn**	**21 22 30.2**	**-0.2**
F15K	**North Star Dit**	**11.56**	**353**	Pn	**Pn**	**21 22 31.4**	**+1.0**
GLB	**Gilahina Butte**	**11.59**	**45**		**Pn**	**21 22 29.6**	**-1.2**
HARP	**HAARP**	**11.59**	**39**	Pn	**Pn**	**21 22 30.8**	**0.0**
GRNC	**Granite Creek**	**12.16**	**50**		**Pn**	**21 22 39.0**	**+0.2**
IMAR	**Indian Mountai**	**12.24**	**14**		**Pn**	**21 22 40.9**	**+1.3**
K24K

H11N1 WAKE ISLAND Hy 42.32 228 T T 22 12 48.4
baz=28,slow=76,SNR=84
USRK Ussuriysk Ar. 43.30 285 LR LR 21 45 56.1
comp=Z,104nm,21.1s,baz=51,slow=37
H11S1 WAKE ISLAND Hy 43.47 227 T T 22 14 25.2
baz=27,slow=76,SNR=102
H11S2 WAKE ISLAND Hy 43.48 227 T T 22 14 30.5
baz=27,slow=76,SNR=61
H11S3 WAKE ISLAND Hy 43.49 227 T T 22 14 29.5
baz=27,slow=76,SNR=46
FRB Frobisher Bay 44.39 39 LR LR 21 47 06.3
comp=Z,102nm,21.4s,baz=288,slow=37
MJAR Matsushiro Arr 44.69 272 P **P 21 27 58.1 -0.1**
MJAR LR LR 21 45 45.2
comp=Z,24nm,19.5s,baz=50,slow=35
comp=Z,0.7nm,0.4s
MJAR Matsushiro Arr 44.69 272 IAmb IAmb 21 27 59.2
comp=Z,7.4nm,1.4s
BNX BinXian 44.91 290 ⇑P **P 21 27 59.3 -0.5**
BNX pmax pmax
comp=Z,6.0nm,0.8s
NRIK Noril'sk 47.02 333 LR LR 21 50 59.2
comp=Z,114nm,18.1s,baz=42,slow=41
TXAR Lajitas Array 47.86 97 P P 21 28 32.8 +10
comp=Z,1.4nm,0.7s,baz=316,slow=4.8,SNR=5.7
comp=Z,1.4nm,0.7s
LPIG La Paz 48.08 108 LR LR 21 47 08.2
comp=Z,31nm,18.3s,baz=348,slow=34
SFJD Kangerlussuaq 48.32 30 LR LR 21 50 52.9
comp=Z,42nm,18.9s,baz=318,slow=39
JCJ Chichijima 49.22 260 LR LR 21 46 18.4
comp=Z,28nm,22.0s,baz=340,slow=32
KSRS Korea Array 50.05 281 P **P 21 28 40.0 +0.2**
comp=Z,1.9nm,0.5s,baz=56,slow=6.9,SNR=10
KSRS LR LR 21 48 47.6
comp=Z,18nm,21.1s,baz=100,slow=35
comp=Z,1.9nm,0.5s
SCHQ Schefferville 50.49 48 LR LR 21 48 48.3
comp=Z,51nm,20.6s,baz=293,slow=35
SADO Sadowa 51.12 65 LR LR 21 50 21.8
comp=Z,33nm,18.4s,baz=204,slow=36
TLY Talaya 53.11 309 LR LR 21 53 14.5
comp=Z,63nm,18.2s,baz=44,slow=38
SONM Songino Array 54.47 304 P **P 21 29 11.7 -1.0**
comp=Z,1.9nm,0.7s,baz=44,slow=6.6,SNR=11
SONM LR LR 21 55 10.4
comp=Z,78nm,19.0s,baz=52,slow=40
comp=Z,1.9nm,0.7s
SONM Songino Array 54.47 304 IAmb IAmb 21 29 13.2
comp=Z,2.2nm,0.8s
TRO Tromso 56.36 0 eP **P 21 29 25.5 -0.3**
ARCES ARCESS Array B 56.36 357 P **P 21 29 24.2 -1.6**
comp=Z,1.9nm,0.8s,baz=34,slow=8.8,SNR=7.4
ARCES LR LR 21 56 32.1
comp=Z,28nm,18.6s,baz=340,slow=40
comp=Z,1.9nm,0.8s
JETT Jettan, Norway 56.43 359 eP **P 21 29 26.4 +0.1**
HHC Hu-ho-hao-te 56.76 295 eP **P 21 29 30.8 +1.6**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,52nm,3.9s
KTK1 Kautokeino 56.94 358 eP **P 21 29 29.7 -0.2**
BORG Borgarnes 57.29 19 LR LR 21 55 11.6
comp=Z,27nm,20.2s,baz=337,slow=38
STEI Steigen 58.03 2 eP **P 21 29 36.5 -1.1**
VAGH Vaagaholmen 59.20 3 eP **P 21 29 46.2 +0.5**
ZALV Zalesovo Beam 59.20 321 P **P 21 29 44.7 -1.3**
comp=Z,1.2nm,0.5s,baz=26,slow=7.1,SNR=8.1
ZALV LR LR 21 57 39.9
comp=Z,183nm,18.0s,baz=40,slow=39
comp=Z,1.2nm,0.5s
KONS Konsvik 59.42 3 eP **P 21 29 45.4 -1.9**
STOK Stokkvaagen 59.59 3 eP **P 21 29 47.9 -0.5**
LEIR Leirfjorden 59.81 3 eP **P 21 29 49.4 -0.6**
NSS Namsos 61.36 3 eP **P 21 29 59.6 -0.9**
NSS IAmb IAmb 21 30 00.7
comp=Z,8.2nm,1.1s
MOL Molde 63.10 6 eP **P 21 30 12.2 0.0**
AKN Aaknes 63.46 6 eP **P 21 30 14.8 +0.1**
AKN IAmb IAmb 21 30 15.6
comp=Z,17nm,1.1s
DOMB Dombas 63.72 5 eP **P 21 30 15.8 -0.6**
DOMB IAmb IAmb 21 30 16.6
comp=Z,5.8nm,0.7s
GTA2 Gaotai 63.85 302 P **P 21 30 17.0 -0.8**
GTA2 sP PcP 21 30 42.0 -11
GTA2 pmax pmax
comp=Z,8.0nm,1.3s
GTA2 LR LR
comp=N,89nm,15.5s
GTA2 LR LR
comp=E,89nm,15.2s
GTA2 LR LR
comp=Z,120nm,18.7s
KURBB Kurchatov Arra 64.17 322 P **P 21 30 18.0 -1.5**
comp=Z,3.6nm,1.1s,baz=50,slow=7.9,SNR=12
comp=Z,3.6nm,1.1s
FINES FINESS Array B 64.44 356 P **P 21 30 19.4 -1.6**
comp=Z,2.7nm,0.5s,baz=17,slow=7.6,SNR=41
comp=Z,2.7nm,0.5s
KIRV Kirov 64.80 343 LR LR 22 04 54.8
comp=Z,29nm,18.1s,baz=13,slow=42
NB2 NORSAR Subarra 64.82 4 P **P 21 30 22.7 -1.0**
comp=Z,3.0nm,0.7s,baz=358,slow=6.5
NB2 NORSAR Subarra 64.82 4 P **P 21 30 22.7 -1.0**
NOA NORSAR Array B 64.82 4 P **P 21 30 23.4 -0.3**
comp=Z,3.5nm,0.9s,baz=356,slow=6.6,SNR=18
comp=Z,3.5nm,0.9s
BVAR Borovoye Array 64.84 329 P **P 21 30 21.9 -1.9**
comp=Z,6.3nm,0.6s,baz=40,slow=6.5,SNR=31
comp=Z,6.3nm,0.6s
SKAR Skarslia 65.03 6 eP **P 21 30 24.9 -0.1**
SKAR IAmb IAmb 21 30 25.4
comp=Z,6.3nm,0.7s
ARTI Arti 65.05 337 LR LR 22 01 45.2
comp=Z,26nm,18.5s,baz=28,slow=39
NC602 NORSAR Array S 65.14 4 eP **P 21 30 24.7 -1.0**
HFS Hagfors 65.82 3 P **P 21 30 29.2 -0.9**
comp=Z,5.2nm,0.6s,baz=12,slow=3.5,SNR=26
comp=Z,5.2nm,0.6s
MKAR Makanchi Array 65.91 318 P **P 21 30 28.9 -2.1**
comp=Z,1.0nm,0.7s,baz=47,slow=6.2,SNR=11
MKAR LR LR 22 01 03.2
comp=Z,90nm,20.3s,baz=48,slow=38
comp=Z,1.0nm,0.7s
WMQ Urumqi 66.09 312 eP **P 21 30 33.5 +1.3**
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ LR LR
comp=Z,72nm,24.2s
EKA Eskdalemuir Ar 69.20 13 P **P 21 30 51.0 -0.5**
comp=Z,1.5nm,0.6s,baz=338,slow=4.1,SNR=6.0
comp=Z,1.5nm,0.6s
AKTO Aktyubinsk 70.61 335 LR LR 22 04 47.5
comp=Z,45nm,18.4s,baz=29,slow=39
PPT Papeete 72.27 169 LR LR 21 57 01.3
comp=Z,44nm,21.0s,baz=287,slow=30
AAK Ala-Archa 72.41 320 LR LR 22 06 11.4
comp=Z,120nm,18.8s,baz=48,slow=39
AKASG Malin Array Be 75.00 353 P **P 21 31 24.5 -1.7**
comp=Z,3.6nm,0.4s,baz=11,slow=5.9,SNR=23
comp=Z,3.6nm,0.4s
AKASG Malin Array Be 75.00 353 IAmb IAmb 21 31 24.8
comp=Z,4.5nm,1.4s
KSH2 Kashi 75.01 318 P **P 21 31 27.5 +0.8**
KSH2 pP sP 21 31 34.5 +0.1
KSH2 pmax pmax
comp=Z,11nm,1.0s
CHVC Chvalec 75.44 2 eP **P 21 31 27.7 -1.1**
DPC Dobruska-Polom 75.68 2 eP **P 21 31 30.1 -0.2**
KRLC Kraliky 75.96 1 eP **P 21 31 31.0 -0.9**
PRU Pruhonice 76.00 3 epP pP 21 31 42.6 +5.0
STEB Steborice 76.11 1 eP **P 21 31 32.4 -0.3**
MORC Moravsky Berou 76.27 1 eP **P 21 31 33.2 -0.4**
ZVC Zvikov 76.53 3 eP **P 21 31 34.8 -0.3**
MAUC Maruska 76.68 1 eP **P 21 31 36.0 0.0**
VRAC Vranov 76.72 2 eP **P 21 31 36.0 -0.2**
KHC Kasperske Hory 76.82 4 eP **P 21 31 36.9 +0.1**
LANS Liptovska Anna 76.90 360 eP **P 21 31 38.5 +1.3**
GERES GERESS Array B 77.11 4 P **P 21 31 37.4 -1.1**
comp=Z,0.7nm,0.7s,baz=0.0,slow=4.0,SNR=7.6
comp=Z,0.7nm,0.7s
CONA Conrad Observa 78.09 2 *i* P **P 21 31 44.4 +0.4**
comp=Z,3.5nm,1.2s
RONA Rosalia, Austr 78.33 2 *i* P **P 21 31 45.6 +0.4**
comp=Z,2.1nm,1.2s
LESA Schwarzleotal 78.49 4 *e*P **P 21 31 46.4 +0.2**
comp=Z,4.1nm,1.3s
MOTA Moosalm 78.49 5 *i* P **P 21 31 44.8 -1.5**
comp=Z,4.1nm,1.2s
WATA Walderalm 78.53 5 *e*P **P 21 31 45.8 -0.7**
comp=Z,1.1nm,0.6s
WTTA Wattenberg 78.60 5 *i* P **P 21 31 46.9 0.0**
comp=Z,1.2nm,0.5s
SQTA Sankt Quirin 78.62 5 *e*P **P 21 31 46.6 -0.3**
comp=Z,3.6nm,1.1s
ARSA Arzberg 78.76 2 *i* P **P 21 31 48.2 +0.7**
comp=Z,2.0nm,0.8s
FETA Feichten 78.79 6 *i* P **P 21 31 48.8 +0.8**
comp=Z,2.5nm,0.7s
KBA Koelnbreinsper 78.86 4 *e*P **P 21 31 48.9 +0.5**
comp=Z,3.6nm,0.5s
SOKA Soboth 79.32 3 *e*P **P 21 31 51.7 +0.9**
comp=Z,4.0nm,1.3s
MYKA Terra Mystica 79.32 4 *e*P **P 21 31 51.2 +0.5**
comp=Z,2.8nm,1.0s
OBKA Obir 79.47 3 *e*P **P 21 31 51.5 -0.1**
comp=Z,8.6nm,1.0s
KBZ Khabaz 80.21 343 P **P 21 31 55.5 0.0**
comp=Z,3.6nm,0.9s,baz=13,slow=2.4,SNR=7.4
comp=Z,3.6nm,0.9s
CMAR Chiang Mai Arr 80.90 289 P **P 21 31 59.0 -0.6**
comp=Z,2.3nm,0.9s,baz=22,slow=5.6,SNR=11
CMAR LR LR 22 10 01.0
comp=Z,9.4nm,19.6s,baz=15,slow=38
comp=Z,2.3nm,0.9s
ESDC Sonseca Array 84.32 18 P **P 21 32 17.6 +0.4**
comp=Z,1.3nm,0.9s,baz=345,slow=4.9,SNR=9.4
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 85.48 349 P **P 21 32 22.6 -0.5**
comp=Z,1.3nm,1.0s,baz=20,slow=1.4,SNR=8.8
BRTR LR LR 22 13 37.8
comp=Z,27nm,20.2s,baz=294,slow=38
comp=Z,1.3nm,1.0s

*IDC **31** 21:21:42.4±0.9, 30.˚27N×138.˚94E, h412km±17km, mb2.9/6, mbtmp3.7/10, Error ellipse: s-maj=47.3km s-min=12.4km az=69.0*
ISC 31 21:21:42.3±0.8, 30.˚2N±0.˚1×138.˚8E±0.˚2, h400km, n10, σ1ˢ26/12, mb3.2/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.06**	**16**	P			**Pn**	**21 22 47.3**	**+1.4**
	95nm,0.8s,baz=337,slow=18,SNR=9.3								
JHJ				S			**S**	**21 23 37.6**	**+0.1**
	123nm,0.9s,baz=77,slow=22,SNR=4.5								
JCJ	**Chichijima**	**4.30**	**135**	P			**Pn**	**21 22 58.0**	**+0.6**
	36nm,0.5s,baz=356,slow=20,SNR=11								
JCJ				S			**S**	**21 23 57.6**	**-0.7**
	42nm,0.3s,baz=309,slow=23,SNR=9.1								
KSRS	**Korea Array**	**11.56**	**312**	P			**P**	**21 24 18.4**	**+1.4**
	1.1nm,0.5s,baz=123,slow=12,SNR=6.1								
KLR	**Kul'dur**	**19.76**	**346**	P			**P**	**21 25 44.1**	**-0.2**
	0.8nm,0.6s,baz=172,slow=10,SNR=3.6								
ZALV	**Zalesovo Beam**	**45.19**	**318**	P			**P**	**21 29 20.2**	**-1.0**
	0.4nm,0.4s,baz=64,slow=8.2,SNR=2.4								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**46.20**	**307**	P			**P**	**21 29 28.3**	**-0.9**
	0.6nm,0.7s,baz=95,slow=10,SNR=6.6								
	0.6nm,0.7s								
KURBB	**Kurchatov Arra**	**48.74**	**313**	P			**P**	**21 29 47.1**	**-1.2**
	0.6nm,0.5s,baz=92,slow=9.7,SNR=15								
	0.6nm,0.5s								
WRA	**Warramunga Ar**	**50.01**	**185**	P			**P**	**21 29 59.4**	**+1.3**
	0.2nm,0.5s,baz=1.9,slow=7.8,SNR=1.9								
	0.2nm,0.5s								
FINES	**FINESS Array B**	**73.85**	**333**	P			**P**	**21 32 32.7**	**-1.5**
	0.4nm,0.4s,baz=63,slow=9.4,SNR=3.6								
	0.4nm,0.4s								
HFS	**Hagfors**	**79.39**	**335**	P			**P**	**21 33 03.4**	**-1.5**
	0.6nm,0.5s,baz=81,slow=9.2,SNR=1.9								
	0.6nm,0.5s								

*MEX **31** 21:30:41.7±0.7, 15.˚18N×92.˚69W, h108km±12km, MD4.1*
*GCG **31** 21:30:43.7±0.7, 15.˚29N×92.˚65W, h73km±18km, MD3.8, Presumed earthquake*
ISC 31 21:30:38.4±1.5, 15.˚04N±0.˚06×92.˚79W±0.˚04, h114km±10km, n18, σ2ˢ27/30, 2C, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THIG		**0.52**	**105**	*e*P			**Pn**	**21 30 57.2**	**+1.5**
THIG				*e*S			**Sn**	**21 31 09.0**	**+0.1**
PATR	**El Naranjo**	**0.54**	**82**	*e*P			**Pn**	**21 30 56.8**	**+0.6**
PATR				*e*S			**Sn**	**21 31 08.6**	**-1.0**
PAVE	**Pavencul**	**0.61**	**75**	*e*P			**Pn**	**21 30 57.5**	**+0.9**
PAVE				*e*S			**Sn**	**21 31 09.9**	**-0.5**
CHUJ	**Union Juarez**	**0.66**	**85**	*e*P			**Pn**	**21 30 57.9**	**+0.8**
CHUJ				*e*S			**Sn**	**21 31 10.5**	**-0.6**
SMCA	**Catarina**	**0.71**	**105**	*e*P			**Pn**	**21 30 58.8**	**+1.6**
SMCA				*e*S			**Sn**	**21 31 11.7**	**+0.3**
STG8	**El Palmar, Qui**	**1.51**	**113**	*e*P			**Pn**	**21 31 04.8**	**-0.9**
STG8				*e*S			**Sn**	**21 31 22.4**	**-4.1**
STG5	**El Palmar, Qui**	**1.53**	**114**	*e*S			**Sn**	**21 31 22.7**	**-4.0**
TGIG		**1.76**	**349**	*e*P			**Pn**	**21 31 09.7**	**+1.0**
TGIG				*e*S			**Sn**	**21 31 28.8**	**-2.9**
TGIG		**1.76**	**349**	*e*P			**Pn**	**21 31 09.7**	**+1.0**
TGIG				*e*S			**Sn**	**21 31 30.1**	**-1.6**
APG	**El Apazote**	**2.24**	**91**	⇑*i*P			**Pn**	**21 31 17.8**	**+2.9**
APG				*e*S			**Sn**	**21 31 44.6**	**+1.8**
CMIG	**Matias Romero**	**2.87**	**316**	*e*P			**Pn**	**21 31 24.9**	**+2.1**
CMIG				*e*S			Sn	21 31 48.6	-8.4
HUIG	**Huatulco**	**3.29**	**283**	*e*P			**Pn**	**21 31 30.5**	**+2.2**
HUIG				*e*S			Sn	21 32 00.6	-6.3
PETF	**Flores**	**3.37**	**56**	⇑*e*P			**Pn**	**21 31 31.7**	**+2.3**
PETF				*e*S			**Sn**	**21 32 07.1**	**-1.7**
NEUV	**Arroyo Zacate**	**3.93**	**313**	*e*P			**Pn**	**21 31 41.0**	**+4.1**
NEUV				*e*S			**Sn**	**21 32 21.2**	**-1.1**
SCIG	**Sabancuy**	**4.20**	**21**	*e*P			**Pn**	**21 31 41.0**	**+0.6**
SCIG				*e*S			**Sn**	**21 32 25.4**	**-3.2**
PEIG	**Puerto Escondi**	**4.31**	**283**	*e*P			**Pn**	**21 31 43.0**	**+1.0**
PEIG				*e*S			Sn	21 32 26.7	-4.8
YOIG	**Yosondua**	**4.92**	**292**	*e*S			**Sn**	**21 32 42.6**	**-3.9**
TOIG	**Toxpalan**	**5.11**	**307**	*e*S			**Sn**	**21 32 48.6**	**-2.2**

*IDC **31** 21:32:45.3±7.3, 54.˚56N×158.˚26W, h0km, mb3.7/7, mbtmp3.7/9, ML3.3/2, MS3.3/4, Error ellipse: s-maj=168.6km s-min=25.5km az=151.0*
*AEIC **31** 21:32:53.3±1.2, 55.˚09N±0.˚03×158.˚38W±0.˚08, h3km±6km, Error ellipse: s-maj=7.2km s-min=3.3km az=118.0*
*NEIC **31** 21:32:54.3±0.9, 55.˚13N±0.˚03×158.˚39W±0.˚06, h27km±11km, mb3.5/11, ML3.5/36, ML3.4(AEIC), Error ellipse: s-maj=4.7km s-min=3.9km az=119.0*
ISC 31 21:32:51.4±1.9, 55.˚08N±0.˚06×158.˚32W±0.˚04, h16km±11km, n120, σ1ˢ43/129, mb3.9/7, MS3.2/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.78**	**251**				**Pn**	**21 33 07.7**	**-0.1**
CNBA							**Sn**	**21 33 19.7**	**+0.6**
CNBA					IAML			21 33 21.1	
	comp=E,1μm,0.6s								
VNKR	**Veniaminof 5**	**1.12**	**328**				**Pn**	**21 33 12.7**	**+0.2**
VNSG	**Veniaminof 6**	**1.13**	**338**				**Pn**	**21 33 12.9**	**+0.2**
VNSG							**Sg**	**21 33 28.1**	**+0.1**
VNHG	**Veniaminof 1**	**1.24**	**338**				**Pg**	**21 33 15.0**	**-0.3**
VNHG							**Sg**	**21 33 30.9**	**-0.5**
SDPT	**Sand Point**	**1.27**	**283**				**Pn**	**21 33 14.1**	**-0.3**
SDPT							**Sn**	**21 33 30.8**	**-0.4**
SDPT					IAML			21 33 32.1	
	comp=E,633nm,1.0s								
SDPT					IAML			21 33 40.1	
	comp=N,978nm,1.0s								
VNSS	**Veniaminof 8**	**1.31**	**331**				**Pb**	**21 33 16.2**	**+0.4**
VNNF	**Veniaminof 3**	**1.33**	**335**				**Pb**	**21 33 16.5**	**+0.4**
VNFG	**Fog Glacier, M**	**1.39**	**330**				**Pb**	**21 33 17.1**	**0.0**
VNFG	**Fog Glacier, M**	**1.39**	**330**				**Sg**	**21 33 35.3**	**-1.1**
VNFG	**Fog Glacier, M**	**1.39**	**330**				**Pb**	**21 33 17.6**	**+0.5**
VNFG	**Fog Glacier, M**	**1.39**	**330**		IAML			21 33 40.3	
	comp=E,2μm,0.6s								
VNFG					IAML			21 33 41.8	
	comp=N,3μm,0.8s								
BPBCA	**Veniaminof**	**1.51**	**357**				**Pb**	**21 33 19.1**	**-0.1**

ANPB Aniakchak Plen 1.72 1 **Pb 21 33 22.3 -0.4**
ANPB **Sb 21 33 44.1 -0.1**
AZAC Aniakchak 1.82 2 **Pb 21 33 23.7 -0.6**
AZAC **Sb 21 33 47.8 +0.9**
ANNE Aniakchak Nort 1.84 4 **Pn 21 33 23.5 +1.1**
PS1A Pavlof South-1 1.99 281 **Pn 21 33 25.4 +1.0**
PS1A **Pb 21 33 25.6 -1.6**
PS1A **Sb 21 33 51.4 -0.3**
PVV Pavlof Volcano 2.01 280 **Pn 21 33 25.9 +1.2**
DOL Dolgoi Island 2.04 273 **Pn 21 33 26.4 +1.3**
DOL **Sb 21 33 52.3 -0.9**
PS4A Pavlof South-4 2.04 279 **Sb 21 33 53.0 -0.4**
HAG Hague Volcano 2.07 278 **Pb 21 33 27.3 -1.3**
PN7A Pavlof North-7 2.14 281 **Pn 21 33 27.6 +1.1**
PN7A **Sb 21 33 55.5 -0.6**
DTNA Dutton South F 2.26 273 **Pn 21 33 29.4 +1.3**
DTNA **Sb 21 33 57.5 -2.0**
DT1 Dutton Round H 2.28 272 **Sn 21 33 57.4 +1.3**
PLBL Peulik Blue Cr 2.75 17 **Pn 21 33 36.3 +1.4**
PLBL **Pb 21 33 36.5 -3.8**
SII Sitkinak Islan 2.76 56 **Pn 21 33 36.4 +1.3**
PLK1 Peulik 1 2.89 19 **Pn 21 33 38.3 +1.6**
PLK5 Peulik 5 3.03 15 **Pn 21 33 41.0 +2.4**
ISNN Isanotski Nort 3.16 268 **Pn 21 33 42.5 +2.0**
SSLS Shishaldin Sou 3.30 266 **Pn 21 33 44.0 +1.5**
CAHL Cahill 3.41 28 **Pn 21 33 44.9 +0.9**
ANCK Angle Creek 3.49 25 **Pn 21 33 46.3 +1.2**
MGLS Mageik Landsli 3.52 28 **Pn 21 33 47.5 +2.0**
OHAK Old Harbor 3.54 51 **Pn 21 33 46.2 +0.6**
OHAK IAML 21 34 55.7
comp=E,71nm,1.1s
OHAK IAML 21 34 58.1
comp=N,70nm,1.0s
ACHA Angle Creek He 3.54 27 **Pn 21 33 46.8 +0.9**
KABU Katmai Buttres 3.61 26 **Pn 21 33 48.9 +2.1**
KAWH Katmai 3.83 29 **Pn 21 33 51.7 +1.9**
KAWH **Pn 21 33 52.0 +2.2**
P16K Nushagak River 3.96 2 Pn **Pn 21 33 51.7 +0.2**
KDAK Kodiak Island 4.18 47 Pn **Pn 21 33 55.3 +0.9**
comp=N,1.1nm,0.3s,baz=156,slow=1.4,SNR=9.6
KDAK Sn **Sn 21 34 38.8 -4.1**
comp=N,2.1nm,0.3s,baz=231,slow=11,SNR=3.6
comp=N,3.5nm,0.3s
KDAK Kodiak Island 4.18 47 **Pn 21 33 55.8 +1.3**
O15K Ungalikthiuk R 4.19 349 **Pn 21 33 54.4 -0.2**
O15K IAML 21 34 45.2
comp=E,51nm,0.6s
O15K IAML 21 34 45.7
comp=N,58nm,0.7s
P17K Kvichak River 4.25 13 **Pn 21 33 57.2 +1.8**
P17K IAML 21 35 33.4
comp=E,92nm,1.1s
AKUT Akutan 4.44 261 Pn **Pn 21 34 00.1 +2.1**
AKUT IAML 21 34 31.2
comp=E,64nm,0.1s
AKUT IAML 21 35 15.6
comp=N,58nm,1.1s
O14K Tigyukauivet M 4.48 340 **Pn 21 33 59.3 +0.8**
O14K IAML 21 34 53.2
comp=E,45nm,0.8s
O14K IAML 21 34 54.0
comp=N,36nm,0.6s
O16K Kokwok River B 4.53 1 **Pn 21 34 00.6 +1.4**
Q19K Cape Douglas, 4.62 32 **Pn 21 34 02.3 +1.6**
UNV Unalaska Valle 4.93 259 Pn **Pn 21 34 04.4 -0.4**
UNV IAML 21 36 54.4
comp=N,34nm,0.2s
UNV IAML 21 37 03.0
comp=E,30nm,0.2s
O18K Koktuh Hills 5.07 18 **Pn 21 34 07.6 +0.8**
N14K Kuskokwak Cree 5.18 341 **Pn 21 34 08.7 +0.5**
N14K IAML 21 35 59.8
comp=N,44nm,1.2s
N14K IAML 21 36 06.8
comp=E,46nm,1.2s
N15K Kwethluk River 5.19 350 **Pn 21 34 09.2 +0.9**
N15K IAML 21 46.9
comp=E,50nm,0.8s
N15K IAML 21 55.3.2
comp=N,33nm,0.7s
N17K Nushagak Hills 5.49 6 **Pn 21 34 13.4 +0.9**
ILSW Iliamna Southw 5.65 27 **Pn 21 34 16.2 +1.4**
N18K Kilae Creek 5.76 12 **Pn 21 34 17.3 +1.1**
CNPM China Poot 5.88 38 Pn **Pn 21 34 18.9 +1.0**
M16K Timber Creek 5.97 357 **Pn 21 34 19.7 +0.7**
M13K Dall Lake 5.99 335 **Pn 21 34 20.3 +1.1**
M14K Bethel 6.01 343 **Pn 21 34 20.1 +0.6**
N19K Bonanza Creek 6.10 18 **Pn 21 34 22.2 +1.3**
RED Redoubt Volcan 6.12 27 **Pn 21 34 22.6 +1.4**
M17K Holitna River 6.35 4 **Pn 21 34 25.8 +1.5**
L16K Owhat River 6.67 355 **Pn 21 34 28.8 +0.1**
L14K Kuka Creek 6.69 342 **Pn 21 34 29.3 +0.5**
M11K Mekoryuk 6.79 325 **Pn 21 34 30.2 +0.1**
SEW Seward 6.93 40 Pn **Pn 21 34 34.8 +2.6**
SLKM Skilak Lake 6.95 35 Pn **Pn 21 34 34.9 +2.4**
SPIA Saint Paul Isl 6.99 292 Pn **Pn 21 34 33.8 +0.7**
L18K Granite Mounta 7.21 6 **Pn 21 34 37.5 +1.4**
STLK Strandline Lak 7.28 25 Pn **Pn 21 34 38.5 +1.4**
M20K Styx River 7.34 20 **Pn 21 34 39.8 +1.9**
L19K White Mountain 7.34 13 **Pn 21 34 39.6 +1.6**
K15K Wolf Creek Mou 7.42 348 **Pn 21 34 39.9 +0.9**
K13K Kusilvak Mount 7.63 337 **Pn 21 34 42.7 +1.0**
K17K Iditarod 7.66 0 **Pn 21 34 42.7 +0.5**
SKT Skwentna 7.77 24 Pn **Pn 21 34 45.1 +1.3**
PWL Port Wells 7.85 38 Pn **Pn 21 34 46.0 +1.2**
J14K Nanvaranak Lak 8.15 343 Pn **Pn 21 34 48.9 0.0**
GHO Glory Hole Cre 8.32 32 Pn **Pn 21 34 52.0 +0.7**
J17K VABM Dome 8.35 358 **Pn 21 34 52.2 +0.5**
J18K Innoko River 8.45 5 **Pn 21 34 54.4 +1.3**
RAGM Ragged Mountai 9.02 48 Pn **Pn 21 35 02.5 +1.6**
J19K Poorman 9.04 8 **Pn 21 35 01.9 +0.7**
J20K Nowinta River 9.36 11 **Pn 21 35 07.8 +2.3**
RND Reindeer 9.64 26 Pn **Pn 21 35 10.8 +1.4**
ILAR Eielson Array 11.26 26 Pn **Pn 21 35 27.9 -3.6**
comp=N,0.2nm,0.3s,baz=216,slow=13,SNR=14
comp=N,0.5nm,0.4s
F19K Shaleruckik Mo 11.79 1 **Pn 21 35 39.7 +1.0**
F20K Ayaraarit Lake 12.07 5 **Pn 21 35 42.5 +1.0**
E19K Redstone River 12.43 2 Pn **Pn 21 35 48.6 +1.2**
S31K Pelican 12.51 68 Pn **Pn 21 35 50.1 +1.5**
M29M Somme Creek 12.63 46 Pn **Pn 21 35 51.5 +1.2**
L29M L29M 13.07 44 Pn **Pn 21 35 59.3 +3.0**
E22K Anaktuvuk Pass 13.45 11 Pn **Pn 21 36 03.2 +1.8**
D19K Kuna River 13.46 0 Pn **Pn 21 36 02.7 +1.1**
K29M Barlow Dome 13.68 42 Pn **Pn 21 36 08.6 +4.0**
C18K Utukok River 13.68 356 Pn **Pn 21 36 05.6 +1.0**
D20K Etivluk River 13.70 3 Pn **Pn 21 36 07.1 +2.2**
I28M Miner Creek 13.76 34 Pn **Pn 21 36 06.5 +0.8**
C19K Lookout Ridge 14.09 358 Pn **Pn 21 36 11.8 +1.8**
I29M Ogilvie Camp, 14.24 36 P **P 21 36 21.6 +2.2**
B20K Meade River 14.99 2 Pn **Pn 21 36 23.6 +1.3**
C23K Itkillik River 15.21 10 P **P 21 36 30.0 -0.2**
C23K IAmb IAmb 21 36 30.8
comp=Z,2.9nm,0.6s
F28M Old Crow 15.27 27 Pn **Pn 21 36 27.3 +1.2**
F28M IAmb IAmb 21 36 38.4
comp=Z,1.2nm,1.1s
D25K Kavik River 15.29 16 Pn **Pn 21 36 27.4 +1.1**
B22K Teshekpuk Lake 15.47 6 Pn **Pn 21 36 29.3 +0.7**
B22K IAmb IAmb 21 36 37.6
comp=Z,2.0nm,0.8s
MOBC Moresby Island 15.54 86 Pn **Pn 21 36 31.7 +2.0**
H31M Peel River 15.85 38 Pn **Pn 21 36 35.6 +2.0**
H31M IAmb IAmb 21 36 39.7
comp=Z,2.7nm,0.8s
G30M tAoh Zrail Nji 15.90 33 Pn **Pn 21 36 35.4 +1.1**
G30M IAmb IAmb 21 36 39.3
comp=Z,3.2nm,0.7s
E29M Blow River 16.35 27 Pn **Pn 21 36 40.9 +1.0**
F30M Barrier River 16.42 31 P **P 21 36 44.9 +1.2**
F30M IAmb IAmb 21 36 49.6
comp=Z,5.7nm,1.1s
G31M Satah River 16.48 34 Pn **Pn 21 36 43.0 +1.3**
G31M IAmb IAmb 21 36 49.2
comp=Z,2.4nm,0.8s
PETK Petropavlovsk- 25.55 284 P **P 21 38 17.9 -1.3**
comp=Z,3.0nm,0.8s,baz=68,slow=11,SNR=2.7
comp=Z,3.0nm,0.8s
PFO Pinyon Flats O 36.08 109 LR LR 21 51 11.8
comp=Z,59nm,20.2s,baz=190,slow=31
ASAJ Asahikawa 38.71 279 LR LR 21 56 15.9
comp=Z,12nm,20.6s,baz=186,slow=36
SONM Songino Array 55.33 305 P **P 21 42 23.5 -0.7**

comp=Z,0.7nm,0.6s,baz=53,slow=6.7,SNR=6.2
comp=Z,0.7nm,0.6s

GUMO	**Guam**	**60.20**	**250**	LR	LR	22 04 32.9		
	comp=Z,11nm,20.4s,baz=132,slow=32							
FINES	**FINESS Array B**	**63.77**	**358**	P	**P**	**21 43 20.3**	**-1.6**	
	comp=Z,0.8nm,0.6s,baz=33,slow=7.3,SNR=6.0							
	comp=Z,0.8nm,0.6s							
FINES	**FINESS Array B**	**63.77**	**358**	P	**P**	**21 43 20.6**	**-1.4**	
NOA	**NORSAR Array B**	**63.92**	**6**	P	**P**	**21 43 23.3**	**+0.2**	
	comp=Z,0.3nm,0.7s,baz=12,slow=8.4,SNR=1.9							
	comp=Z,0.3nm,0.7s							
KURBB	**Kurchatov Array**	**64.50**	**324**	P	**P**	**21 43 25.9**	**-1.0**	
	comp=Z,0.2nm,0.4s,baz=52,slow=6.3,SNR=1.7							
	comp=Z,0.2nm,0.4s							
BVAR	**Borovoye Array**	**64.99**	**330**	P	**P**	**21 43 29.5**	**-0.6**	
	comp=Z,0.9nm,0.6s,baz=26,slow=8.2,SNR=5.3							
	comp=Z,0.9nm,0.6s							
MKAR	**Makanchi Array**	**66.39**	**319**	P	**P**	**21 43 38.0**	**-1.3**	
	comp=Z,0.2nm,0.5s,baz=39,slow=5.1,SNR=4.7							
	comp=Z,0.2nm,0.5s							
MDP	**Montagnes des**	**94.73**	**74**	LR	LR	22 26 34.9		
	comp=Z,69nm,21.9s,baz=114,slow=34							

*NOU **31** 22:10:27.5, 39.°27S×174.°66E, h188km, MLv3.7/16, North Island, New Zealand*
*WEL **31** 22:10:29.7±1.0, 39.°S±8.°×17.°5E±.°, h183km±6km, M2.9/7, ML2.5/8, MLv2.9/7, Error ellipse: s-maj=10.0km s-min=7.8km az=177.5*
ISC 31 22:10:24.4±2.1, 39.°20S±0.°07×174.°73E±0.°06, h221km±12km, n34, σ1s60/47, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.08**	**15**	P	**Pn**	**22 10 53.9**	**+0.8**
MHEZ	**Mangahewa**	**0.34**	**292**	P	**Pn**	**22 10 54.9**	**+1.4**
MHEZ				S	**S**	**22 11 15.1**	**-1.1**
LREZ	**Lake Rotokare**	**0.36**	**225**	P	**Pn**	**22 10 54.8**	**+1.4**
LREZ				S	**S**	**22 11 16.5**	**+0.2**
DREZ	**Durham Road**	**0.41**	**272**	P	**Pn**	**22 10 55.1**	**+1.5**
DREZ				S	**S**	**22 11 16.2**	**-0.3**
PREZ	**Palmer Road**	**0.47**	**252**	S	**S**	**22 11 15.4**	**-1.5**
NEZ	**North Egmont**	**0.50**	**262**	P	**Pn**	**22 10 55.7**	**+1.7**
NEZ				S	**S**	**22 11 16.2**	**-0.9**
KHEZ	**Kahui Hut**	**0.56**	**260**	P	**Pn**	**22 10 55.9**	**+1.6**
WAZ	**Wanganui**	**0.58**	**160**	P	**Pn**	**22 10 56.1**	**+1.9**
WAZ				S	**S**	**22 11 17.4**	**-0.2**
COVZ	**Chateau Observ**	**0.63**	**90**	P	**Pn**	**22 10 56.0**	**+1.5**
FWVZ	**Far West T-bar**	**0.64**	**95**	P	**Pn**	**22 10 56.2**	**+1.5**
FWVZ				S	**S**	**22 11 16.7**	**-1.7**
MAVZ	**Matarangi**	**0.65**	**96**	P	**Pn**	**22 10 56.4**	**+1.5**
MAVZ				S	**S**	**22 11 16.8**	**-1.7**
NGZ	**Ngauruhoe**	**0.68**	**88**	P	**Pn**	**22 10 56.5**	**+1.7**
NGZ				S	**S**	**22 11 15.6**	**-2.9**
NMEZ	**Namu Road**	**0.69**	**252**	P	**Pn**	**22 10 56.3**	**+1.7**
NMEZ				S	**S**	**22 11 17.8**	**-0.4**
HIZ	**Hauiti**	**0.70**	**8**	P	**Pn**	**22 10 55.7**	**+0.9**
HIZ	**Hauiti**	**0.70**	**8**	P	**S**	**22 11 17.0**	**-1.4**
HIZ	**Hauiti**	**0.70**	**8**	P	**Pn**	**22 11 55.1**	**+0.9**
HIZ				S	**S**	**22 11 16.9**	**-1.4**
SNVZ	**South Ngauruho**	**0.71**	**89**	P	**Pn**	**22 10 56.7**	**+1.8**
SNVZ				S	**S**	**22 11 17.0**	**-1.7**
RITZ	**Rihia Road**	**0.91**	**76**	P	**Pn**	**22 10 57.5**	**+1.7**
TLZ	**Tolley Road**	**1.08**	**36**	P	**Pn**	**22 10 58.2**	**+1.3**
TLZ				S	**S**	**22 11 20.2**	**-2.0**
TSZ	**Takapari Road**	**1.28**	**132**	P	**Pn**	**22 11 00.2**	**+2.0**
TSZ				S	**S**	**22 11 23.3**	**-1.3**
BKZ	**Black Stump Fm**	**1.37**	**89**	P	**Pn**	**22 11 00.4**	**+1.4**
BKZ	**Black Stump Fm**	**1.37**	**89**	P	**S**	**22 11 23.8**	**-2.0**
BFZ	**Birch Farm**	**1.88**	**142**	P	**Pn**	**22 11 04.9**	**+1.6**
BFZ	**Birch Farm**	**1.88**	**142**	S	**S**	**22 11 32.6**	**-1.0**
URZ	**Urewera**	**2.09**	**64**	P	**Pn**	**22 11 06.1**	**+0.8**
SNZO	**South Karori**	**2.10**	**181**	P	**Pn**	**22 11 06.7**	**+1.3**
SNZO	**South Karori**	**2.10**	**181**	P	**S**	**22 11 35.0**	**-2.5**
QRZ	**Quartz Range**	**2.34**	**226**	P	**Pn**	**22 11 08.3**	**+0.4**
QRZ	**Quartz Range**	**2.34**	**226**	P	**S**	**22 11 39.3**	**-2.5**
MXZ	**Matakaoa Point**	**3.25**	**61**	P	**Pn**	**22 11 19.4**	**+1.4**
KHZ	**Kahutara**	**3.33**	**195**	P	**Pn**	**22 11 20.9**	**+2.0**
KHZ	**Kahutara**	**3.33**	**195**	S	**S**	**22 11 59.6**	**-2.1**
RPZ	**Rata Peaks**	**5.29**	**210**	P	**Pn**	**22 11 43.8**	**+1.0**
ODZ	**Otahua Downs**	**6.58**	**206**	P	**Pn**	**22 12 00.3**	**+1.1**

*BKK **31** 22:31:12.6±3.1, 21.°N±14.°×10.°5E±1.°9, h1km±7km, M3.9/6, Mjma3.9/6, ML3.9/4, MLv4.0/3*
PLV 31 22:31:13.9±1.1, 20.°92N×104.°70E, h10km±5km, ML3.7, MW3.6, Presumed earthquake, Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCVV	**Moc Chau**	**0.12**	**202**	*i* Pg	Pg	22 31 16.4	-0.6
MCVV				*e*Sg	Sg	22 31 18.0	-1.1
MCVV				IAML		22 31 18.1	
	comp=N,72μm,0.2s						
MCVV				IAML		22 31 18.1	
	comp=E,111μm,0.2s						
HBVN	**Hoa-Binh**	**0.62**	**98**	*i* Pg	Pg	22 31 25.3	-0.5
HBVN				IAML		22 31 40.5	
	comp=N,5μm,0.3s						
HBVN				IAML		22 31 41.2	
	comp=E,7μm,0.3s						
SLVN	**Son La**	**0.85**	**299**	*i* Pg	Pg	22 31 30.0	-0.3
MLVB	**It Ong**	**0.86**	**313**	*e*Pg	Pn	22 31 48.5	+17
MLVB				IAML		22 32 18.1	
	comp=N,534nm,0.8s						
MLVB				IAML		22 32 23.5	
	comp=E,395nm,0.6s						
THV	**Thanh Hoa**	**1.47**	**136**	*e*Pg	Pb	22 31 41.6	+0.4
DBV	**Dienbien**	**1.63**	**287**	*e*Pg	Pg	22 31 44.8	-0.5
DBV				IAML		22 32 13.8	
	comp=E,1μm,0.4s						
DBV				IAML		22 32 15.0	
	comp=N,1μm,0.4s						
CCVB	**Con Cuong**	**1.87**	**175**	*e*Pg	Pg	22 31 49.0	-0.7
CCVB				IAML		22 32 19.7	
	comp=N,189nm,0.6s						
CCVB				IAML		22 32 23.2	
	comp=E,264nm,1.0s						
CBVB	**Cao Bang**	**2.22**	**39**	*e*Pg	Pg	22 31 56.8	+0.4
CBVB				*e*Sg	Sg	22 32 25.7	+0.5
CBVB				IAML		22 32 32.7	
	comp=N,347nm,0.4s						
CBVB				IAML		22 32 34.6	
	comp=E,454nm,0.7s						

JMA 31 22:50:36.8±0.2, 36.°2N±0.°4×137.°7E±0.°9, h6km±3km, MV0.2/14, HIDA MOUNTAINS REGION, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.40**	**64**	*e*P	Pg	22 50 44.7	+0.1

*TAP **31** 22:52:50.3, 21.°14N×122.°05E, h192km, ML4.1, D*
ISC 31 22:52:49.1±1.7, 21.°07N±0.°05×121.°94E±0.°07, h197km±10km, n79, σ1s41/158, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.98**	**340**	*i* P	**Pn**	**22 53 18.9**	**+0.5**
LYUB				*i* S	**S**	**22 53 40.6**	**-0.7**
LAY	**Lan-yu**	**1.03**	**339**	*i* P	**Pn**	**22 53 18.8**	**0.0**
LAY				*i* S	**S**	**22 53 41.4**	**-0.5**
TSEB	**Hengchuen, Pin**	**1.27**	**310**	*i* P	**Pn**	**22 53 22.7**	**+2.1**
TSEB				*i* S	**S**	**22 53 46.2**	**+1.2**
TWKBT	**Hengchun**	**1.36**	**310**	*i* P	**Pn**	**22 53 22.9**	**+1.6**
TWKBT				*i* S	**S**	**22 53 46.5**	**+0.2**
TWK1	**Hengchun**	**1.37**	**309**	*i* P	**Pn**	**22 53 23.0**	**+1.6**
TWK1				*i* S	**S**	**22 53 46.1**	**-0.3**
SMST	**Manzhou Townsh**	**1.40**	**313**	*i* P	**Pn**	**22 53 22.9**	**+1.3**
SMST				*i* S	**S**	**22 53 46.6**	**-0.2**
HEN	**Hengchun**	**1.46**	**310**	*i* P	**Pn**	**22 53 23.8**	**+1.7**
HEN				*i* S	**S**	**22 53 47.5**	**-0.2**
SLIU	**Shizi**	**1.56**	**317**	*i* P	**Pn**	**22 53 24.3**	**+1.2**
SLIU				*i* S	**S**	**22 53 49.8**	**+0.3**
TAW	**Tawu**	**1.61**	**323**	*i* P	**Pn**	**22 53 24.1**	**+0.6**
TAW				*i* S	**S**	**22 53 48.9**	**-1.4**
LDUT	**Ludao**	**1.65**	**345**	*i* P	**Pn**	**22 53 24.0**	**+0.1**
LDUT				S	**S**	**22 53 51.5**	**+0.3**
EAST	**Anshuo**	**1.66**	**322**	*i* P	**Pn**	**22 53 24.8**	**+0.8**
EAST				*i* S	**S**	**22 53 48.5**	**-2.7**
ECL	**Taimali**	**1.77**	**329**	*i* P	**Pn**	**22 53 25.0**	**-0.1**
ECL				*i* S	**S**	**22 53 50.9**	**-2.2**
SCZT	**Fangliau**	**1.79**	**317**	*i* P	**Pn**	**22 53 26.3**	**+1.1**
SCZT				*i* S	**S**	**22 53 52.8**	**-0.5**
SSPT	**Xinbi**	**1.90**	**318**	*i* P	**Pn**	**22 53 28.2**	**+1.9**
SSPT				*e*S	**S**	**22 53 53.8**	**-1.6**
TWGBT	**Beinan**	**1.91**	**335**	*i* P	**Pn**	**22 53 26.7**	**+0.2**
TWGBT				*i* S	**S**	**22 53 54.2**	**-1.5**
TWG	**Pinlang**	**1.92**	**335**	*i* P	**Pn**	**22 53 26.6**	**+0.1**
TWG				*i* S	**S**	**22 53 53.9**	**-1.9**
TWP	**Hsiaoliuchiu**	**1.94**	**311**	P	**Pn**	**22 53 28.9**	**+2.2**
TWP				S	**S**	**22 53 54.4**	**-1.7**
MASBT	**Mashibuluo**	**1.96**	**322**	*i* P	**Pn**	**22 53 28.0**	**+1.1**
MASBT				*i* S	**S**	**22 53 54.1**	**-2.4**
LONT	**Longtian**	**1.98**	**338**	*i* P	**Pn**	**22 53 26.9**	**-0.2**
LONT				S	**S**	**22 53 54.2**	**-2.6**
SSD	**Sandimen**	**2.06**	**324**	*i* P	**Pn**	**22 53 29.2**	**+1.2**
SSD				*i* S	**S**	**22 53 56.3**	**-2.1**
ECS	**Chishang**	**2.12**	**342**	P	**Pn**	**22 53 29.8**	**+1.1**
ECS				S	**S**	**22 54 00.3**	**+0.7**
CHKH	**Chenggong**	**2.17**	**347**	*i* P	**Pn**	**22 53 29.9**	**+0.7**
CHKH				*i* S	**S**	**22 54 00.1**	**-0.3**
FULB	**Fuli**	**2.20**	**344**	*i* P	**Pn**	**22 53 30.4**	**+0.8**
FULB				*i* S	**S**	**22 54 01.4**	**+0.2**
WSSB	**Gushan**	**2.21**	**315**	*i* P	**Pn**	**22 53 32.0**	**+2.4**
WSSB				S	**S**	**22 54 00.4**	**-0.8**
TWM1	**Shoushan**	**2.24**	**321**	*i* P	**Pn**	**22 53 32.1**	**+2.1**
TWM1				*e*S	**S**	**22 54 01.6**	**-0.2**
SLGT	**Liugui**	**2.26**	**328**	*i* P	**Pn**	**22 53 31.4**	**+1.2**
SLGT				S	**S**	**22 54 02.1**	**-0.1**
ELDTW	**Lidau**	**2.27**	**338**	*i* P	**Pn**	**22 53 31.5**	**+1.1**
ELDTW				*i* S	**S**	**22 54 02.1**	**-0.6**
EYUL	**Yuli**	**2.34**	**346**	*i* P	**Pn**	**22 53 31.3**	**+0.3**
EYUL				S	**S**	**22 54 01.9**	**-1.9**
TWF1	**Yuli**	**2.35**	**345**	*i* P	**Pn**	**22 53 31.6**	**+0.5**
TWF1				*i* S	**S**	**22 54 03.2**	**-0.7**
STYH	**Taoyuan**	**2.35**	**333**	*i* P	**Pn**	**22 53 32.2**	**+1.1**
STYH				*i* S	**S**	**22 54 01.4**	**-2.6**
YULB	**Yu-li**	**2.39**	**346**	*i* P	**Pn**	**22 53 32.0**	**+0.5**
YULB				*i* S	**S**	**22 54 02.4**	**-2.3**
HGSD	**Ruisui**	**2.46**	**349**	*i* P	**Pn**	**22 53 33.6**	**+1.3**
HGSD				*i* S	**S**	**22 54 07.5**	**+1.4**
CHN1	**Nanshi**	**2.48**	**328**	*i* P	**Pn**	**22 53 33.6**	**+1.0**
CHN1				*i* S	**S**	**22 54 05.5**	**-1.1**
EHY	**Hungye**	**2.49**	**347**	*i* P	**Pn**	**22 53 32.1**	**-0.6**
EHY				S	**S**	**22 54 05.1**	**-1.7**
WTP	**Ta-pu**	**2.49**	**331**	*i* P	**Pn**	**22 53 33.6**	**+0.9**
WTP				*i* S	**S**	**22 54 05.8**	**-1.1**
TPUB	**Ta-pu**	**2.53**	**331**	*i* P	**Pn**	**22 53 33.9**	**+0.7**
TPUB				*i* S	**S**	**22 54 05.7**	**-2.0**
TWK	**Hsinying**	**2.57**	**329**	*i* P	**Pn**	**22 53 34.4**	**+0.8**
TWK				*i* S	**S**	**22 54 07.6**	**-0.8**
CHN4	**Tsaushan**	**2.59**	**331**	*i* P	**Pn**	**22 53 34.6**	**+0.8**
CHN4				*i* S	**S**	**22 54 07.3**	**-1.5**
ALS	**Alishan**	**2.65**	**337**	*i* P	**Pn**	**22 53 35.7**	**+0.9**
ALS				*i* S	**S**	**22 54 09.4**	**-1.1**
PACPP	**Pamplona Cagay**	**2.66**	**192**	*e*P	**Pn**	**22 53 35.3**	**+0.6**
PACPP				*i* S	**S**	**22 54 07.9**	**-2.2**
WARBT	**Fenglin Townsh**	**2.68**	**349**	*i* P	**Pn**	**22 53 35.1**	**+0.2**
WARBT				*i* S	**S**	**22 54 07.0**	**-3.8**
TSCK	**Chigu Township**	**2.69**	**321**	*i* P	**Pn**	**22 53 36.4**	**+1.5**
TSCK				S	**S**	**22 54 09.5**	**-1.3**
SHUL	**Shoufeng**	**2.73**	**353**	*i* P	**Pn**	**22 53 36.5**	**+1.1**
SHUL				S	**S**	**22 54 11.2**	**-0.4**
ICHU	**Yijhu**	**2.75**	**326**	*i* P	**Pn**	**22 53 36.6**	**+1.0**
ICHU				S	**S**	**22 54 11.6**	**-0.5**
VWDT	**VWDT**	**2.77**	**345**	*i* P	**Pn**	**22 53 37.5**	**+1.7**
VWDT				S	**S**	**22 54 09.9**	**-2.6**
CHN5	**Tsauling**	**2.77**	**335**	*i* P	**Pn**	**22 53 36.8**	**+0.8**
CHN5				*i* S	**S**	**22 54 10.9**	**-1.8**
CHN8	**Yiju**	**2.77**	**325**	*i* P	**Pn**	**22 53 36.8**	**+0.9**
CHN8				*e*S	**S**	**22 54 12.5**	**0.0**
CHY	**Chiayi**	**2.79**	**330**	P	**Pn**	**22 53 36.4**	**+0.3**
CHY				*i* S	**S**	**22 54 11.8**	**-1.1**
SSLB	**Suanglung**	**2.85**	**341**	*i* P	**Pn**	**22 53 37.7**	**+0.8**
SSLB				*i* S	**S**	**22 54 13.2**	**-1.1**
ETM	**Tongmen**	**2.91**	**352**	P	**Pn**	**22 53 38.3**	**+0.8**
ETM				*e*S	**S**	**22 54 14.5**	**-1.0**
WDLH	**Douliu**	**2.91**	**334**	*i* P	**Pn**	**22 53 38.3**	**+0.8**
WDLH				*i* S	**S**	**22 54 13.9**	**-1.5**
WSL	**Shuilin Townsh**	**2.91**	**327**	*i* P	**Pn**	**22 53 38.2**	**+0.7**
WSL				*i* S	**S**	**22 54 14.6**	**-0.9**
OWD	**Renai**	**2.96**	**346**	*i* P	**Pn**	**22 53 39.5**	**+1.3**
OWD				S	**S**	**22 54 15.9**	**-0.8**
WJS	**Zhushan**	**2.96**	**338**	*i* P	**Pn**	**22 53 38.5**	**+0.4**
WJS				*i* S	**S**	**22 54 16.1**	**-0.3**
SMLT	**Sun Moon Lake**	**2.96**	**341**	*i* P	**Pn**	**22 53 39.0**	**+0.8**
SMLT				*i* S	**S**	**22 54 15.9**	**-0.8**
LXIB	**Xiulin Townshi**	**2.98**	**351**	*i* P	**Pn**	**22 53 38.6**	**+0.2**
LXIB				*i* S	**S**	**22 54 14.9**	**-2.2**
TYC	**Yuchr**	**2.99**	**341**	*i* P	**Pn**	**22 53 38.9**	**+0.4**
TYC				S	**S**	**22 54 15.7**	**-1.4**
WUSB	**Renai**	**3.00**	**345**	*i* P	**Pn**	**22 53 40.0**	**+1.3**
WUSB				*i* S	**S**	**22 54 16.6**	**-1.1**
WNT	**Mingjian**	**3.03**	**338**	*i* P	**Pn**	**22 53 40.0**	**+1.2**
WNT				*i* S	**S**	**22 54 16.8**	**-1.1**
WDGT	**Dungji**	**3.04**	**316**	*i* P	**Pn**	**22 53 40.2**	**+1.2**
WDGT				*i* S	**S**	**22 54 17.6**	**-0.5**
NACB	**Ninganchiao**	**3.10**	**354**	*e*P	**Pn**	**22 53 40.4**	**+0.5**
NACB				S	**S**	**22 54 17.2**	**-2.3**
WCS	**Beigang Elemen**	**3.12**	**342**	*i* P	**Pn**	**22 53 40.8**	**+0.8**
WCS				*i* S	**S**	**22 54 19.1**	**-0.8**
WHF	**Hehuan Shan**	**3.12**	**349**	*i* P	**Pn**	**22 53 41.0**	**+0.5**
WHF				*i* S	**S**	**22 54 20.2**	**-0.5**
ETLH	**Xiulin Townshi**	**3.15**	**352**	*i* P	**Pn**	**22 53 41.1**	**+0.7**
ETLH				S	**S**	**22 54 19.8**	**-0.9**
VCHM	**Qimei**	**3.15**	**313**	*i* P	**Pn**	**22 53 41.5**	**+1.0**
VCHM				*e*S	**S**	**22 54 15.5**	**-5.1**
WRL	**Guolierlin Hig**	**3.17**	**333**	*i* P	**Pn**	**22 53 40.8**	**+0.3**
WRL				*i* S	**S**	**22 54 18.8**	**-2.1**
WHP	**Taichung City**	**3.32**	**344**	*i* P	**Pn**	**22 53 43.7**	**+1.2**
WHP				*i* S	**S**	**22 54 24.6**	**+0.2**
PNG	**Penghu**	**3.33**	**319**	*i* P	**Pn**	**22 53 43.4**	**+1.0**
PNG				*i* S	**S**	**22 54 22.9**	**-1.4**
NNSB	**Datong**	**3.38**	**351**	*i* P	**Pn**	**22 53 44.8**	**+1.5**
NNSB				S	**S**	**22 54 25.1**	**-0.7**
LATG	**Datong**	**3.47**	**354**	P	**Pn**	**22 53 45.1**	**+0.8**
LATG				*e*S	**S**	**22 54 26.7**	**-1.0**
YHNB	**Yeheng**	**3.62**	**352**	*i* P	**Pn**	**22 53 48.1**	**+1.9**
YHNB				*i* S	**S**	**22 54 31.9**	**+1.0**
NFF	**Wufeng Townshi**	**3.62**	**348**	*i* P	**Pn**	**22 53 46.7**	**+0.5**
NFF				*i* S	**S**	**22 54 29.8**	**-1.2**
NSK	**Sanguang**	**3.63**	**352**	*i* P	**Pn**	**22 53 48.5**	**+2.3**
NSK				S	**S**	**22 54 31.0**	**-0.1**
LIOB	**Emei**	**3.66**	**347**	P	**Pn**	**22 53 47.6**	**+1.1**
LIOB				*e*S	**S**	**22 54 28.1**	**-3.6**
FUSB	**Fushanzhiwuyua**	**3.69**	**355**	*i* P	**Pn**	**22 53 49.3**	**+2.4**
FUSB				S	**S**	**22 54 31.7**	**-0.7**
NWLT	**Wulai**	**3.71**	**354**	*i* P	**Pn**	**22 53 49.4**	**+2.2**
NWLT				S	**S**	**22 54 32.3**	**-0.6**
TIPB	**Shuangxi**	**3.88**	**358**	P	**Pn**	**22 53 51.9**	**+2.6**
TIPB				S	**S**	**22 54 34.6**	**-2.1**
VWUC	**VWUC**	**4.53**	**330**	*i* P	**Pn**	**22 53 58.5**	**+1.1**
VWUC				S	**S**	**22 54 49.9**	**-1.2**
PTMZ	**Houxiangcun**	**4.73**	**327**	P	**Pn**	**22 54 01.9**	**+2.0**
PTMZ				S	**S**	**22 54 53.2**	**-2.6**

*IDC **31** 22:53:53.2±1.3, 23.°42N×101.°92E, h0km, mb3.6/7, mbtmp3.6/8, ML3.4/1, MS3.3/24, Error ellipse: s-maj=36.9km s-min=17.2km az=97.0*
*BKK **31** 22:53:56.0±0.9, 23.°N±7.°×10.°2E±.°, h10km, MLv4.5/6*
ISC 31 22:53:56.5±0.8, 23.°47N±0.°05×101.°8E±0.°2, h10km, n38, σ2s37/19, mb3.5/7, MS3.3/24, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**3.02**	**359**	Pn	**Pn**	**22 54 44.8**	**+0.3**
PZH				Pg	**Pb**	**22 54 50.3**	**-0.2**
PZH				Sg	**Sb**	**22 55 31.0**	**+3.5**
PZH				smax	smax		
	comp=N,390nm,0.8s						
PZH				smax	smax		
	comp=E,700nm,1.0s						
TNCH	**TengChong**	**3.40**	**298**	Pn	Pn	22 54 46.5	-3.2
TNCH				Pg	Pb	22 54 57.3	+0.4
TNCH				Sn	Sn	22 55 25.5	-4.7
TNCH				Sg	Sb	22 55 36.0	-2.3
TNCH				smax	smax		
	comp=N,2μm,1.3s						
TNCH				smax	smax		
	comp=E,1μm,1.8s						
TNCH				LR	LR		
	comp=N,3μm,2.9s						
TNCH				LR	LR		
	comp=E,2μm,2.8s						
TNCH				LR	LR		
	comp=Z,190nm,3.8s						
CRAI	**Chiangrai**	**3.50**	**203**	P	Pn	22 54 37.5	-13
CMAI	**Chiengmai2**	**4.37**	**217**	P	**Pb**	**22 55 14.3**	**+0.8**
LAMP	**Lampang**	**5.33**	**203**	P	**Pn**	**22 55 13.8**	**-2.4**
LAMP				S	**Sb**	**22 56 37.9**	**+4.0**
CHTO	**Chiang Mai**	**5.36**	**211**	P	**Pb**	**22 55 29.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**5.67**	**209**	Pn	**Pn**	**22 55 18.0**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=24,slow=12,SNR=7.0						
CMAR				Pg	**Pb**	**22 55 37.8**	**+2.2**
	comp=Z,2.4nm,0.3s,baz=39,slow=18,SNR=31						
CMAR				Lg	Lg	22 56 52.2	
	comp=Z,1.9nm,0.3s,baz=24,slow=30,SNR=8.5						
CMAR				LR	LR	22 58 00.9	
	comp=Z,60nm,18.7s,baz=25,slow=44						
	comp=Z,1.5nm,0.6s						
UTTA	**Uttaradit**	**5.82**	**192**	P	**Pb**	**22 55 40.8**	**+2.7**
CD2	**Chengdu**	**7.61**	**13**	P	**Pn**	**22 55 51.5**	**+4.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=N,2μm,8.1s						
CD2				LR	LR		
	comp=E,3μm,8.8s						
CD2				LR	LR		
	comp=Z,1μm,10.2s						
WMQ	**Urumqi**	**23.40**	**334**	*e*P	**P**	**22 59 06.0**	**+0.4**
WMQ				LR	LR		
	comp=N,230nm,14.5s						
WMQ				LR	LR		
	comp=E,300nm,13.9s						
WMQ				LR	LR		
	comp=Z,64nm,15.7s						
SONM	**Songino Array**	**24.59**	**7**	P	**P**	**22 59 15.4**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=187,slow=11,SNR=4.1						
SONM				LR	LR	23 10 27.4	
	comp=Z,62nm,19.6s,baz=195,slow=40						
	comp=Z,0.6nm,0.7s						
KSRS	**Korea Array**	**26.36**	**52**	LR	LR	23 11 17.8	
	comp=Z,63nm,19.3s,baz=255,slow=40						
JNU	**Nakatsue**	**27.25**	**63**	LR	LR	23 10 21.3	
	comp=Z,41nm,19.3s,baz=234,slow=36						
MKAR	**Makanchi Array**	**28.08**	**331**	P	**P**	**22 59 47.5**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=137,slow=10,SNR=5.5						
MKAR				LR	LR	23 11 31.8	
	comp=Z,52nm,19.8s,baz=134,slow=38						
	comp=Z,0.3nm,0.5s						
TLY	**Talaya**	**28.20**	**2**	LR	LR	23 12 52.2	
	comp=Z,31nm,21.7s,baz=178,slow=40						
AAK	**Ala-Archa**	**29.63**	**317**	LR	LR	23 12 21.8	
	comp=Z,43nm,19.4s,baz=150,slow=37						
KURBB	**Kurchatov Arra**	**32.60**	**332**	P	P	23 00 25.3	-2.8
	comp=Z,0.5nm,0.2s,baz=139,slow=8.6,SNR=1.3						
	comp=Z,0.5nm,0.2s						
ZALV	**Zalesovo Beam**	**33.02**	**342**	P	**P**	**23 00 29.1**	**-2.6**
	comp=Z,1.2nm,0.9s,baz=151,slow=9.5,SNR=5.6						
ZALV				LR	LR	23 14 58.3	
	comp=Z,35nm,21.2s,baz=162,slow=38						
	comp=Z,1.2nm,0.9s						
KAPI	**Kappang**	**33.28**	**146**	LR	LR	23 16 05.3	
	comp=Z,35nm,20.0s,baz=291,slow=40						
MJAR	**Matsushiro Arr**	**33.89**	**59**	LR	LR	23 14 28.4	
	comp=Z,49nm,18.4s,baz=216,slow=36						
JCJ	**Chichijima**	**36.56**	**76**	LR	LR	23 16 06.6	
	comp=Z,28nm,20.3s,baz=306,slow=36						
BVAR	**Borovoye Array**	**37.92**	**329**	P	**P**	**23 01 14.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=123,slow=11,SNR=4.5						
	comp=Z,0.6nm,0.7s						
YAK	**Yakutsk**	**42.95**	**19**	LR	LR	23 19 05.6	
	comp=Z,28nm,19.8s,baz=232,slow=35						
AKTO	**Aktyubinsk**	**43.26**	**320**	LR	LR	23 23 12.2	
	comp=Z,23nm,18.8s,baz=74,slow=41						
ARTI	**Arti**	**45.58**	**328**	LR	LR	23 22 59.1	
	comp=Z,35nm,18.5s,baz=122,slow=38						
MA2	**Magadan**	**49.62**	**30**	LR	LR	23 25 23.4	
	comp=Z,38nm,18.2s,baz=290,slow=38						
TIXI	**Tiksi**	**50.60**	**11**	LR	LR	23 26 33.9	
	comp=Z,28nm,18.8s,baz=198,slow=39						
PETK	**Petropavlovsk-**	**51.20**	**40**	LR	LR	23 26 41.9	
	comp=Z,42nm,18.3s,baz=261,slow=38						
KBZ	**Khabaz**

M11K	**Mekoryuk**	**13.16**	**44**	Pn		**Pn**	**23 02 00.6**	**+0.2**
MA2	**Magadan**	**15.62**	**308**	LR		LR	23 08 34.8	
	comp=N,20nm,18.1s,baz=144,slow=37							
F21K	**Alatna River**	**21.49**	**33**	P		**P**	**23 03 40.8**	**+1.1**
F21K				IAmb		IAmb	23 03 47.7	
	comp=Z,2.6nm,0.7s							
E23K	**Chandalar**	**23.19**	**33**	P		**P**	**23 03 58.6**	**+1.0**
E23K				IAmb		IAmb	23 04 03.1	
	comp=Z,2.2nm,0.8s							
B22K	**Teshekpuk Lake**	**23.20**	**26**	P		**P**	**23 03 57.4**	**-0.1**
D23K	**Nanushuk River**	**23.26**	**31**	P		**P**	**23 03 58.9**	**+0.7**
D23K				IAmb		IAmb	23 04 04.0	
	comp=Z,3.9nm,1.2s							
E24K	**Your Creek**	**23.58**	**34**	P		**P**	**23 04 02.2**	**+1.0**
E24K				IAmb		IAmb	23 04 15.2	
	comp=Z,4.2nm,1.4s							
J25K	**Salcha River,**	**23.65**	**43**	P		**P**	**23 04 01.8**	**-0.1**
J25K				IAmb		IAmb	23 04 37.0	
	comp=Z,3.2nm,1.4s							
C23K	**Itkillik River**	**23.72**	**29**	P		**P**	**23 04 00.8**	**-1.6**
G26K	**Porcupine Rive**	**24.88**	**38**	P		**P**	**23 04 14.2**	**+1.3**
G26K				IAmb		IAmb	23 04 18.2	
	comp=Z,1.6nm,0.7s							
L27K	**Beaver Creek,**	**24.94**	**47**	P		**P**	**23 04 15.8**	**+2.2**
L27K				IAmb		IAmb	23 04 24.9	
	comp=Z,2.6nm,1.3s							
K27K	**Chicken**	**24.95**	**45**	P		**P**	**23 04 14.7**	**+1.0**
BCAR	**Beaver Creek A**	**24.96**	**47**	P		**P**	**23 04 15.3**	**+1.5**
F26K	**Sheenjek River**	**24.97**	**36**	P		**P**	**23 04 14.3**	**+0.5**
G27K	**Doyon Strip**	**25.66**	**39**	P		**P**	**23 04 21.8**	**+1.8**
C27K	**Jago River**	**25.79**	**32**	P		**P**	**23 04 22.8**	**+1.7**
C27K				IAmb		IAmb	23 04 39.7	
	comp=Z,3.6nm,1.1s							
E27K	**Coleen River**	**26.04**	**36**	P		**P**	**23 04 23.6**	**+0.2**
E27K				IAmb		IAmb	23 04 53.6	
	comp=Z,3.0nm,1.2s							
I28M	**Miner Creek**	**26.08**	**42**	P		**P**	**23 04 24.5**	**+0.6**
I28M				IAmb		IAmb	23 04 38.7	
	comp=Z,4.9nm,1.5s							
K29M	**Barlow Dome**	**26.93**	**46**	P		**P**	**23 04 30.2**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**32.98**	**195**	T		T	23 40 07.6	
	baz=9.8,slow=76,SNR=105							
H11N3	**WAKE ISLAND Hy**	**32.99**	**195**	T		T	23 40 05.1	
	baz=9.8,slow=76,SNR=112							
H11N1	**WAKE ISLAND Hy**	**33.00**	**195**	T		T	23 40 26.4	
	baz=9.8,slow=76,SNR=87							
H11S1	**WAKE ISLAND Hy**	**34.21**	**195**	T		T	23 41 54.9	
	baz=9.2,slow=76,SNR=42							
H11S3	**WAKE ISLAND Hy**	**34.23**	**195**	T		T	23 41 57.8	
	baz=9.2,slow=76,SNR=30							
H11S2	**WAKE ISLAND Hy**	**34.23**	**195**	T		T	23 41 53.1	
	baz=9.2,slow=76,SNR=25							
RES	**Resolute Bay**	**40.58**	**24**	LR		LR	23 25 46.7	
	comp=Z,11nm,18.6s,baz=22,slow=40							
SPITS	**Spitsbergen Ar**	**49.34**	**354**	P		**P**	**23 07 38.8**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=48,slow=8.7,SNR=5.1							
	comp=Z,0.7nm,0.4s							
NOQ	**North Oquirrh**	**49.34**	**73**	P		**P**	**23 07 39.2**	**-0.2**
KURK	**Kurchatov**	**55.81**	**310**	P		**P**	**23 08 27.6**	**+0.8**
KURBB	**Kurchatov Arra**	**55.92**	**310**	P		**P**	**23 08 28.1**	**+0.6**
	comp=Z,0.6nm,0.2s,baz=41,slow=6.8,SNR=8.7							
	comp=Z,0.6nm,0.2s							
MKAR	**Makanchi Array**	**56.66**	**305**	P		**P**	**23 08 33.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=37,slow=5.9,SNR=9.5							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**56.66**	**305**	P		**P**	**23 08 32.9**	**-0.1**
ARCES	**ARCESS Array B**	**56.67**	**348**	P		**P**	**23 08 30.9**	**-1.8**
BVAR	**Borovoye Array**	**57.91**	**316**	P		**P**	**23 08 42.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=46,slow=7.8,SNR=6.4							
	comp=Z,0.7nm,0.4s							
HFS	**Hagfors**	**67.14**	**350**	P		**P**	**23 09 42.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=46,slow=4.2,SNR=4.3							
	comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**80.15**	**219**	P		**P**	**23 10 59.3**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=29,slow=6.6,SNR=4.9							
	comp=Z,0.6nm,0.7s							
WRA	**Warramunga Arr**	**80.15**	**219**	P		**P**	**23 10 58.7**	**-1.0**
ASAR	**Alice Springs**	**83.69**	**218**	P		**P**	**23 11 19.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=22,slow=5.4,SNR=5.0							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**83.69**	**218**	P		**P**	**23 11 18.7**	**+0.5**

*NEIC **31** 23:22:34.7±2.5, 15°.33N±0°.06×94°.83W±0°.06, h35km±2km, mb4.3/4, Md4.4/61(MEX), Error ellipse: s-maj=12.7km s-min=6.5km az=38.0*

*IDC **31** 23:22:36.5±5.6, 15°.49N×94°.82W, h38km±35km, mb3.4/4, mbtmp3.5/6, ML3.1/2, MS3.0/5, Error ellipse: s-maj=61.8km s-min=22.8km az=37.0*

*MEX **31** 23:22:36.8±1.1, 15°.44N×94°.84W, h21km±39km, MD4.4*

ISC 31 23:22:33.0±1.7, **15°.32N**±0°.05×**94°.85W**±0°.03, **h24**km±14km, **n80**, σ**2s73**/125, **mb3.9**/5, **MS2.9**/4, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**1.29**	**290**	*i* P		**Pb**	**23 22 56.8**	**+0.1**
HUIG				*e*S		**Sn**	**23 23 10.5**	**-1.6**
HUIG	**Huatulco**	**1.29**	**290**			**Pb**	**23 22 56.8**	**+0.1**
HUIG						**Sn**	**23 23 10.5**	**-1.6**
CMIG	**Matias Romero**	**1.76**	**359**	P		**Pn**	**23 23 02.3**	**+0.3**
	32nm,0.3s,baz=184,slow=16,SNR=263							
CMIG				Sn		**Sn**	**23 23 21.3**	**-2.4**
	82nm,0.3s,baz=151,slow=23,SNR=4.3							
CMIG				LR		LR	23 23 53.3	
	comp=Z,194nm,20.2s,baz=169,slow=48							
CMIG	**Matias Romero**	**1.76**	**359**	*e*P		**Pn**	**23 23 02.2**	**+0.3**
CMIG				*e*S		**Sn**	**23 23 20.7**	**-2.9**
CMIG	**Matias Romero**	**1.76**	**359**			**Pn**	**23 23 02.2**	**+0.3**
CMIG						**Sn**	**23 23 20.7**	**-2.9**
TGIG		**2.20**	**49**	*e*P		**Pn**	**23 23 09.1**	**+0.9**
TGIG				*e*S		**Sn**	**23 23 33.0**	**-1.7**
TGIG		**2.20**	**49**			**Pn**	**23 23 09.1**	**+0.9**
TGIG						**Sn**	**23 23 33.0**	**-1.7**
PEIG	**Puerto Escondi**	**2.31**	**287**	*e*P		**Pn**	**23 23 11.2**	**+1.6**
PEIG				*e*S		**Sn**	**23 23 34.1**	**-3.3**
PEIG	**Puerto Escondi**	**2.31**	**287**			**Pn**	**23 23 11.2**	**+1.6**
PEIG						**Sn**	**23 23 34.1**	**-3.3**
OXLC	**Oaxaca**	**2.49**	**314**	*e*P		Pn	23 23 08.3	-3.8
OXLC				*e*S		**Sn**	**23 23 40.8**	**-1.0**
OXLC	**Oaxaca**	**2.49**	**314**			Pn	23 23 08.3	-3.8
OXLC						**Sn**	**23 23 40.8**	**-1.0**
OXIG	**Oaxaca**	**2.51**	**314**			**Pn**	**23 23 15.0**	**+2.5**
OXIG						**Sn**	**23 23 41.5**	**-0.9**
VHO	**Vista Hermosa**	**2.51**	**314**	*e*P		**Pn**	**23 23 15.0**	**+2.5**
VHO				*e*S		**Sn**	**23 23 41.5**	**-0.9**
THIG		**2.53**	**99**	*e*P		**Pn**	**23 23 13.9**	**+1.3**
THIG				*e*S		**Sn**	**23 23 42.4**	**-0.2**
THIG		**2.53**	**99**			**Pn**	**23 23 13.9**	**+1.3**
THIG						**Sn**	**23 23 42.4**	**-0.2**
PATR	**El Naranjo**	**2.53**	**94**	*e*P		**Pn**	**23 23 13.9**	**+1.1**
PATR				*e*S		**Sn**	**23 23 41.0**	**-2.1**
PATR	**El Naranjo**	**2.53**	**94**			**Pn**	**23 23 13.9**	**+1.1**
PATR						**Sn**	**23 23 41.0**	**-2.1**
NEUV	**Arroyo Zacate**	**2.55**	**339**	*e*P		**Pn**	**23 23 13.7**	**+0.8**
NEUV				*e*S		**Sn**	**23 23 40.6**	**-2.4**
NEUV	**Arroyo Zacate**	**2.55**	**339**			**Pn**	**23 23 13.7**	**+0.8**
NEUV						**Sn**	**23 23 40.6**	**-2.4**
PAVE	**Pavencul**	**2.58**	**92**	*e*P		**Pn**	**23 23 15.2**	**+1.7**
PAVE				*e*S		**Sn**	**23 23 41.6**	**-2.6**
PAVE	**Pavencul**	**2.58**	**92**			**Pn**	**23 23 15.2**	**+1.7**
PAVE						**Sn**	**23 23 41.6**	**-2.6**
CHUJ	**Union Juarez**	**2.66**	**95**	*e*P		**Pn**	**23 23 15.6**	**+1.1**
CHUJ				*e*S		**Sn**	**23 23 43.9**	**-2.2**
YOIG	**Yosondua**	**3.01**	**301**	*e*P		**Pn**	**23 23 21.6**	**+2.2**
YOIG				*e*S		**Sn**	**23 23 54.4**	**-0.5**
YOIG	**Yosondua**	**3.01**	**301**			**Pn**	**23 23 21.6**	**+2.2**
YOIG						**Sn**	**23 23 54.4**	**-0.5**
RTAL	**Retalhuleu**	**3.15**	**104**			**Pn**	**23 23 20.7**	**-0.4**
HUEH	**Huehuetenango**	**3.23**	**90**	Pn		**Pn**	**23 23 22.4**	**+0.1**
TXIG	**Tlaxiaco**	**3.40**	**305**	*e*P		**Pn**	**23 23 27.5**	**+2.7**
TXIG				*e*S		**Sn**	**23 24 03.2**	**-1.3**
TXIG	**Tlaxiaco**	**3.40**	**305**			**Pn**	**23 23 27.5**	**+2.7**
TXIG						**Sn**	**23 24 03.2**	**-1.3**
TOIG	**Toxpalan**	**3.48**	**323**	*e*P		**Pn**	**23 23 28.2**	**+2.4**
TOIG				*e*S		**Sn**	**23 24 05.0**	**-1.2**
TOIG	**Toxpalan**	**3.48**	**323**			**Pn**	**23 23 28.2**	**+2.4**
TOIG						**Sn**	**23 24 05.0**	**-1.2**
HLIG	**Huajuapan de L**	**3.77**	**312**	*e*P		**Pn**	**23 23 33.4**	**+3.5**
HLIG				*e*S		**Sn**	**23 24 13.4**	**-0.3**
HLIG	**Huajuapan de L**	**3.77**	**312**			**Pn**	**23 23 33.4**	**+3.5**
HLIG						**Sn**	**23 24 13.4**	**-0.3**
TPIG	**Tehuac#an**	**3.91**	**322**	*e*P		**Pn**	**23 23 34.2**	**+2.5**
TPIG				*e*S		**Sn**	**23 24 19.1**	**+2.2**
TPIG	**Tehuac#an**	**3.91**	**322**			**Pn**	**23 23 34.2**	**+2.5**
TPIG						**Sn**	**23 24 19.1**	**+2.2**
FTIG	**Fresnillo de T**	**4.07**	**310**	*e*P		**Pn**	**23 23 37.1**	**+3.3**
FTIG				*e*S		**Sn**	**23 24 17.1**	**-3.6**
FTIG	**Fresnillo de T**	**4.07**	**310**			**Pn**	**23 23 37.1**	**+3.3**
FTIG						**Sn**	**23 24 17.1**	**-3.6**
MGIG	**Malinaltepec**	**4.10**	**298**	*e*P		**Pn**	**23 23 36.3**	**+2.0**
MGIG				*e*S		**Sn**	**23 24 19.8**	**-1.9**
MGIG	**Malinaltepec**	**4.10**	**298**			**Pn**	**23 23 36.3**	**+2.0**
MGIG						**Sn**	**23 24 19.8**	**-1.9**
TLIG	**Tlapa**	**4.21**	**303**	*e*P		**Pn**	**23 23 36.8**	**+1.1**
TLIG				*e*S		Sn	23 24 14.4	-10
TLIG	**Tlapa**	**4.21**	**303**			**Pn**	**23 23 36.0**	**+0.2**
APG	**El Apazote**	**4.25**	**94**	Pn		**Pn**	**23 23 39.0**	**+2.6**
	0.5nm,0.3s,baz=91,slow=15,SNR=16							
APG				Sn		**Sn**	**23 24 27.9**	**+2.6**
	0.9nm,0.3s,baz=68,slow=21,SNR=5.9							
	1.8nm,0.4s							
CRIG	**Cruz Grande**	**4.35**	**289**	*e*P		**Pn**	**23 23 39.7**	**+2.1**
CRIG				*e*S		**Sn**	**23 24 23.5**	**-4.1**
CRIG	**Cruz Grande**	**4.35**	**289**			**Pn**	**23 23 39.7**	**+2.1**
CRIG						**Sn**	**23 24 23.5**	**-4.1**
LVIG	**Laguna Verde**	**4.63**	**341**	*e*P		**Pb**	**23 23 51.6**	**-1.8**
LVIG				*e*S		**Sn**	**23 24 28.2**	**-6.2**
LVIG	**Laguna Verde**	**4.63**	**341**			**Sn**	**23 24 28.2**	**-6.2**
DAIG	**Los Arroyos**	**4.91**	**291**	*e*P		**Pn**	**23 23 46.7**	**+1.3**
DAIG				*e*S		**Sn**	**23 24 34.7**	**-6.8**
DAIG	**Los Arroyos**	**4.91**	**291**			**Pn**	**23 23 46.7**	**+1.3**
DAIG						**Sn**	**23 24 34.7**	**-6.8**
PETF	**Flores**	**5.04**	**71**			**Pn**	**23 23 47.0**	**-0.2**
PPM	**Popocatepetl**	**5.19**	**316**	*e*P		Pn	23 23 55.0	+5.5
PPM				*e*S		**Sn**	**23 24 47.6**	**-1.3**
PPIG	**Popocatepetl**	**5.19**	**316**			Pn	23 23 55.0	+5.4
PPIG						**Sn**	**23 24 47.6**	**-1.4**
MEIG	**Mezcala**	**5.25**	**300**	*e*P		**Pn**	**23 23 53.8**	**+3.7**
MEIG				*e*S		**Sn**	**23 24 48.5**	**-1.6**
MEIG	**Mezcala**	**5.25**	**300**			**Pn**	**23 23 53.8**	**+3.7**
MEIG						**Sn**	**23 24 48.5**	**-1.6**
YAIG	**Yautepec**	**5.35**	**312**	*e*P		**Pn**	**23 23 55.0**	**+3.5**
YAIG				*e*S		**Sn**	**23 24 49.0**	**-3.5**
YAIG	**Yautepec**	**5.35**	**312**			**Pn**	**23 23 55.0**	**+3.5**
YAIG						**Sn**	**23 24 49.0**	**-3.5**
ESQI	**Esquipulas**	**5.38**	**97**	Pn		**Pn**	**23 23 51.2**	**-0.6**
MTO3	**Montecristo**	**5.39**	**99**			**Pn**	**23 23 51.5**	**-0.6**
PLIG	**Platanillo**	**5.40**	**305**	*e*P		**Pn**	**23 23 56.9**	**+4.8**
PLIG				*e*S		**Sn**	**23 24 51.9**	**-1.7**
PLIG	**Platanillo**	**5.40**	**305**			**Pn**	**23 23 56.9**	**+4.8**
PLIG						**Sn**	**23 24 51.9**	**-1.7**
CAIG	**El Cayaco**	**5.48**	**289**	*e*P		**Pn**	**23 23 56.3**	**+3.1**
CAIG				*e*S		**Sn**	**23 24 50.1**	**-5.4**
CAIG	**El Cayaco**	**5.48**	**289**			**Pn**	**23 23 56.3**	**+3.1**
CAIG						**Sn**	**23 24 50.1**	**-5.4**
ARIG	**Puente Sto Nin**	**6.03**	**300**	*e*P		**Pn**	**23 24 05.1**	**+4.3**
ARIG				*e*S		**Sn**	**23 25 02.4**	**-6.7**
ARIG	**Puente Sto Nin**	**6.03**	**300**			**Pn**	**23 24 05.1**	**+4.3**
ARIG						**Sn**	**23 25 02.4**	**-6.7**
DHIG	**Demacu**	**6.36**	**322**			**Sn**	**23 25 21.2**	**+3.8**
DEIG	**Demacu**	**6.36**	**322**	*e*S		**Sn**	**23 25 21.2**	**+3.8**
TEIG	**Tepich**	**7.94**	**51**			**Pn**	**23 24 25.2**	**-1.7**
HNDO	**Hondo**	**14.72**	**345**	Pn		**Pn**	**23 25 59.2**	**-0.5**
441A	**DeRidder**	**15.43**	**5**	Pn		**Pn**	**23 26 08.7**	**-0.5**
TXAR	**Lajitas Array**	**16.14**	**331**	Pn		**Pn**	**23 26 19.8**	**+1.3**
	baz=153,slow=9.8,SNR=4.8							
	0.4nm,0.8s							
OZNA	**Ozona**	**16.56**	**341**			**Pn**	**23 26 22.7**	**-1.0**
LPIG	**La Paz**	**16.96**	**303**	LR		LR	23 32 31.1	
	comp=Z,33nm,21.5s,baz=70,slow=35							
PH02	**Texas Public H**	**20.98**	**344**	P		**P**	**23 27 13.7**	**-0.8**
PH02				IAmb		IAmb	23 27 19.1	
	comp=Z,9.2nm,0.6s							
TKL	**Tuckaleechee C**	**22.55**	**24**	LR		LR	23 36 20.6	
	comp=Z,21nm,19.8s,baz=158,slow=37							
SDCO	**Great Sand Dun**	**24.25**	**339**	P		**P**	**23 27 46.8**	**-1.7**
SDCO				IAmb		IAmb	23 27 53.1	
	comp=Z,15nm,1.5s							
PFO	**Pinyon Flats O**	**26.71**	**317**	LR		LR	23 40 08.0	
	comp=Z,23nm,18.6s,baz=249,slow=40							
NVAR	**Mina Array Bea**	**30.93**	**323**	LR		LR	23 41 41.1	
	comp=Z,30nm,18.2s,baz=164,slow=37							
SCHQ	**Schefferville**	**45.01**	**23**	LR		LR	23 51 29.0	
	comp=Z,40nm,18.1s,baz=204,slow=39							
YKA	**Yellowknife Ar**	**49.14**	**348**	P		**P**	**23 31 18.7**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=153,slow=7.6,SNR=4.0							
	comp=Z,1.2nm,0.8s							
ILAR	**Eielson Array**	**60.55**	**337**	P		**P**	**23 32 43.0**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=128,slow=7.6,SNR=4.0							
	comp=Z,0.3nm,0.7s							
ESDC	**Sonseca Array**	**81.06**	**51**	P		**P**	**23 34 46.5**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=283,slow=5.0,SNR=7.6							
	comp=Z,1.0nm,0.9s							
NOA	**NORSAR Array B**	**84.29**	**28**	P		**P**	**23 35 03.5**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=293,slow=5.4,SNR=2.2							
	comp=Z,0.3nm,0.6s							

*JMA **31** 23:26:39.8±0.7, 22°.N±3°.×122°.2E±°, h0km, MV3.9/14, TAIWAN REGION*

ISC 31 23:26:45.3±1.6, **21°.5N**±0°.1×**122°.1E**±0°.3, **h35**km, **n9**, σ**0s78**/14, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HATJ	**Hateruma jima**	**3.04**	**32**	*e*P		**Pn**	**23 27 31.2**	**+0.3**
HATJ				*e*S		**Sn**	**23 28 06.2**	**+0.1**
PACPP	**Pamplona Cagay**	**3.06**	**193**	*e*P		**Pn**	**23 27 30.3**	**-0.9**
PACPP				*i* S		**Sn**	**23 28 07.9**	**+1.3**
JYNG	**Yonagunijimaku**	**3.08**	**15**	*e*S		**Sn**	**23 28 07.2**	**+0.1**
YOJ	**Yonaguni jima**	**3.11**	**16**	*e*S		**Sn**	**23 28 07.3**	**-0.5**
IRIF	**Iriomote-Funau**	**3.25**	**28**	*e*P		**Pn**	**23 27 33.7**	**0.0**
IRIF				*e*S		**Sn**	**23 28 12.2**	**+1.1**
JKRS	**Kuro-shima**	**3.29**	**33**	P		**Pn**	**23 27 35.0**	**+0.6**
JKRS				*e*S		**Sn**	**23 28 12.7**	**+0.3**
JIJ	**Ishigaki jima**	**3.47**	**33**	P		**Pn**	**23 27 36.8**	**+0.1**
JIJ				S		**Sn**	**23 28 15.3**	**-1.3**
JISG	**Ishigakijimahi**	**3.74**	**33**	S		**Sn**	**23 28 22.6**	**-0.7**
JTJ	**Tarama**	**3.99**	**37**	*e*S		**Sn**	**23 28 29.2**	**-0.2**

*IDC **31** 23:34:08.3±1.8, 7°.59S×127°.52E, h135km±16km, mb3.7/10, mbtmp4.3/15, Error ellipse: s-maj=18.5km s-min=11.2km az=77.0*

*NEIC **31** 23:34:08.9±2.3, 7°.55S±0°.08×127°.57E±0°.07, h137km±7km, mb4.2/12, Error ellipse: s-maj=12.0km s-min=10.0km az=153.0*

*DJA **31** 23:34:10.5±0.4, 8°.S±5°.×12°.8E±°, h192km±20km, M4.7/13, mb4.5/6, mB5.2/7, MLv4.9/13, Mw(mB)4.5/7*

ISC 31 23:34:10.4±0.5, **7°.73S**±0°.05×**127°.65E**±0°.05, **h162**km, **n57**, σ**2s04**/62, **mb4.1**/17, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**3.63**	**94**	Pn		**Pn**	**23 35 05.4**	**-0.8**
SAUI	**Saumlaki**	**3.63**	**94**	P		**Pn**	**23 35 07.5**	**+1.3**
SOEI	**Soe**	**3.90**	**239**			**Pn**	**23 35 09.3**	**-0.5**
SOEI				Sn		**Sn**	**23 35 56.3**	**+0.2**
SOEI	**Soe**	**3.90**	**239**	P		**Pn**	**23 35 11.6**	**+1.8**
BATI	**Baumata**	**4.64**	**238**	P		**Pn**	**23 35 15.9**	**-3.5**
	295nm,0.6s,baz=108,slow=1.8,SNR=40							
BATI				S		**Sn**	**23 36 09.8**	**-3.4**
	266nm,0.5s,baz=238,slow=23,SNR=15							
BATI	**Baumata**	**4.64**	**238**	P		**Pn**	**23 35 17.0**	**-2.4**
MMRI	**Maumere**	**5.43**	**260**	Pn		**Pn**	**23 35 27.0**	**-2.7**
MMRI	**Maumere**	**5.43**	**260**	P		**Pn**	**23 35 30.9**	**+1.2**
	0.4nm4μm44nm,0.8s							
DRS	**Darwin Rock St**	**5.66**	**146**	P		**Pn**	**23 35 34.2**	**+1.4**
DRS	**Darwin Rock St**	**5.66**	**146**	S		**Sn**	**23 36 34.5**	**-2.9**
MTN	**Manton Dam**	**6.13**	**146**			**Pn**	**23 35 39.2**	**+0.2**
FAKI	**Fak Fak**	**6.62**	**44**	Pn		**Pn**	**23 35 43.0**	**-2.5**
WSI	**Waingapu**	**7.52**	**255**	P		**Pn**	**23 35 57.3**	**-0.1**
SIJI	**Sorong**	**7.71**	**28**	P		**Pn**	**23 35 58.4**	**-1.6**
	9.7nm,0.3s,baz=251,slow=23,SNR=25							
SIJI				S		**Sn**	**23 37 24.4**	**-2.0**
	5.2nm,0.4s,baz=246,slow=23,SNR=2.5							
SIJI	**Sorong**	**7.71**	**28**	P		**Pn**	**23 35 59.6**	**-0.4**
KNRA	**Kununurra**	**7.97**	**172**			**Pn**	**23 36 03.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**10.49**	**191**	P		**Pn**	**23 36 35.7**	**-1.0**
	16nm,0.4s,baz=25,slow=11,SNR=92							
FITZ				S		**Sn**	**23 38 28.9**	**-4.1**
	10nm,0.3s,baz=80,slow=23,SNR=4.5							
FITZ	**Fitzroy Crossi**	**10.49**	**191**			**Pn**	**23 36 35.9**	**-0.8**
WB0	**Warramunga Arr**	**13.64**	**152**			**Pn**	**23 37 16.6**	**-0.7**
WRAB	**Tennant Creek**	**13.76**	**153**	P		**Pn**	**23 37 17.9**	**-1.0**
WRAB	**Tennant Creek**	**13.76**	**153**	Pn		**Pn**	**23 37 19.2**	**+0.3**
WRA	**Warramunga Arr**	**13.77**	**153**	P		**Pn**	**23 37 18.2**	**-0.7**
	4.3nm,0.4s,baz=321,slow=14,SNR=56							
WRA				S		**Sn**	**23 39 45.1**	**-6.7**
	14nm,0.6s,baz=328,slow=23,SNR=11							
WRA	**Warramunga Arr**	**13.77**	**153**			**Pn**	**23 37 17.9**	**-1.1**
WR8	**Warramunga Arr**	**13.85**	**152**			**Pn**	**23 37 19.6**	**-0.5**
MBWA	**Marble Bar**	**15.39**	**209**			**P**	**23 37 40.4**	**+0.3**
MBWA				IAmb		IAmb	23 38 06.0	
	comp=Z,12nm,1.2s							
COEN	**Coen**	**16.45**	**113**			**Pn**	**23 37 53.1**	**+0.9**
COEN				IAmb		IAmb	23 38 24.8	
	comp=Z,23nm,1.4s							
AS31	**Alice Springs**	**16.95**	**160**			**Pn**	**23 38 00.0**	**+1.9**
ASAR	**Alice Springs**	**16.95**	**160**	P		**Pn**	**23 38 00.3**	**+2.2**
	comp=Z,12nm,0.3s,baz=341,slow=12,SNR=165							
ASAR				S		**S**	**23 41 01.6**	**-4.2**
	comp=Z,2.7nm,0.5s,baz=316,slow=17,SNR=8.1							
ASAR	**Alice Springs**	**16.95**	**160**			**Pn**	**23 38 00.8**	**+2.7**
AS01	**Alice Springs**	**16.96**	**160**	P		**Pn**	**23 38 01.2**	**+2.9**
AUALC	**St Philip's Co**	**16.96**	**160**	P		**Pn**	**23 38 01.3**	**+3.0**
FORT	**Forrest**	**22.93**	**179**	P		**P**	**23 39 02.7**	**+2.2**
FORT				IAmb		IAmb	23 39 40.6	
	comp=Z,8.8nm,0.9s							
INKA	**Innaminka**	**23.45**	**150**			**P**	**23 39 08.2**	**+3.0**
INKA				IAmb		IAmb	23 39 10.7	
	comp=Z,5.8nm,0.8s							
MORW	**Morawa**	**23.88**	**206**	P		**P**	**23 39 11.6**	**+2.4**
BBOO	**Buckleboo**	**26.15**	**164**	P		**P**	**23 39 32.2**	**+2.6**
STKA	**Stephens Creek**	**27.32**	**153**	P		**P**	**23 39 42.1**	**+2.0**
	comp=Z,3.7nm,0.5s,baz=326,slow=7.5,SNR=11							
	comp=Z,3.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**38.46**	**313**	P		**P**	**23 41 17.4**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=139,slow=7.3,SNR=4.5							
	comp=Z,0.6nm,0.4s							
KSRS	**Korea Array**	**44.95**	**0**	P		**P**	**23 42 07.9**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=180,slow=8.8,SNR=2.0							
	comp=Z,0.6nm,0.5s							
HHC	**Hu-ho-hao-te**	**50.56**	**344**	*e*P		**P**	**23 42 53.0**	**+0.5**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,33nm,5.5s							
GTA2	**Gaotai**	**53.61**	**333**	*e*P		**P**	**23 43 15.5**	**+0.4**
GTA2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SONM	**Songino Array**	**58.43**	**343**	P		**P**	**23 43 48.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=178,slow=8.1,SNR=4.6							
	comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**58.43**	**343**	IAmb		IAmb	23 43 50.4	
	comp=Z,1.4

ISC Computed Locations for July 2020

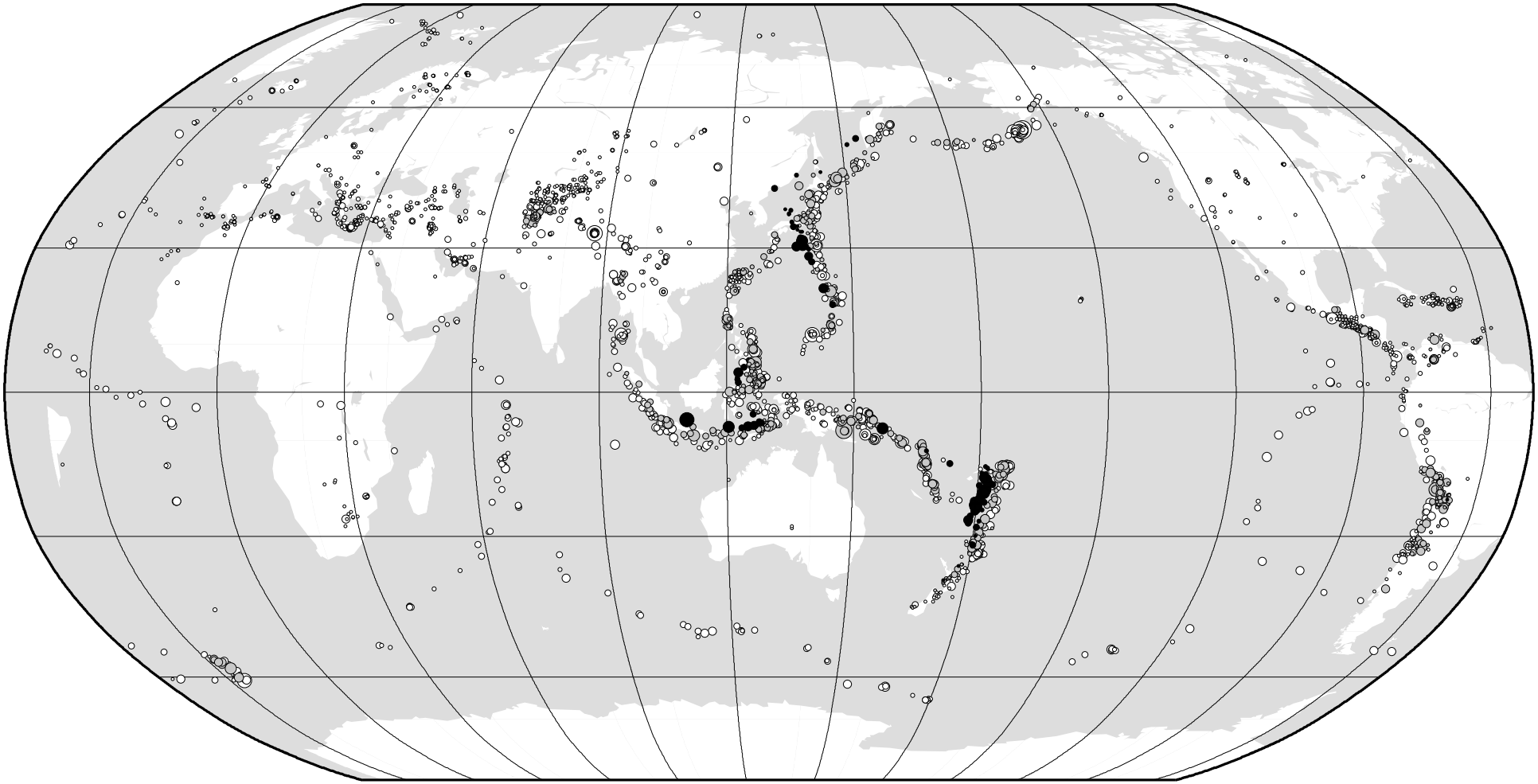

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3296 Events